NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

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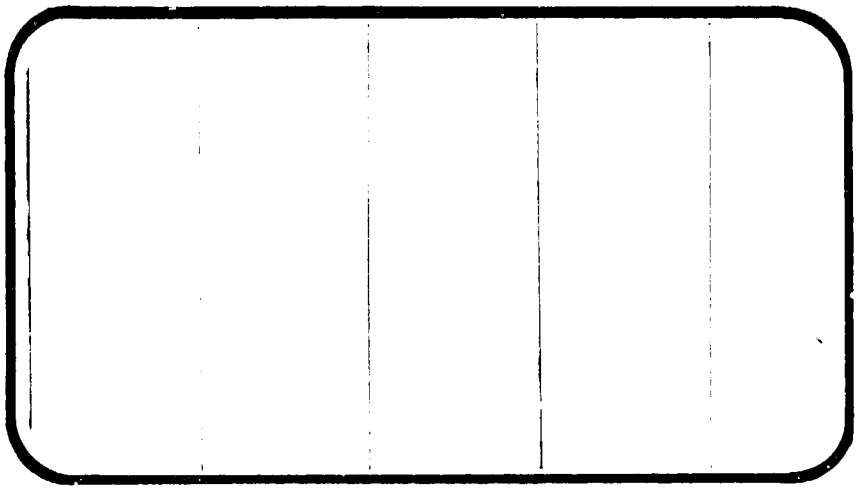

SPACE SHUTTLE

AEROTHERMODYNAMIC DATA REPORT

JOHNSON SPACE CENTER

HOUSTON, TEXAS

DATA MANagement services

SPACE DIVISION CHRYSLER CORPORATION

July, 1975

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AERODYNAMIC RESULTS OF A SEPARATION EFFECTS TEST CONDUCTED IN THE AEDC 40 x 40 INCH TUNNEL A FACILITY ON THE ROCKWELL INTERNATIONAL LAUNCH CONFIGURATION 3 (MODEL 32-OTS) INTEGRATED VEHICLE (IA13)

Vol. I of III

J. H. Campbell, II
Rockwell International Space Division

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

TUNNEL TEST SPECIFICS:

Test Number: AEDC VA-323
NASA Series Number: IA13
Test Dates: July 5-17, 1973

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AERODYNAMIC RESULTS OF A SEPARATION EFFECTS TEST CONDUCTED IN THE AEDC 40 x 40 INCH TUNNEL A FACILITY ON THE ROCKWELL INTERNATIONAL LAUNCH CONFIGURATION 3 (MODEL 32-OTS) INTEGRATED VEHICLE (IA13)

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ABSTRACT

Experimental aerodynamic investigations were conducted from July 5 through July 17, 1973, in the AEDC/VKF tunnel A facility, on a 0.01 scale model (Model 32-OTS) of the Rockwell International launch configuration 3 Integrated Vehicle (excluding the left-hand booster). The AEDC captive trajectory system was utilized in conjunction with the tunnel primary sector to obtain "grid-type" data for tank (ET) abort from the Orbiter (SSV), and for nominal separation of one Booster (SRB) from the Orbiter-Tank combination. Booster separation was investigated with and without separation motors plume simulation. The plumes were generated by eight M_j = 2.15 nozzles using a 1500 psia cold air supply.

Free stream data were obtained for all models (orbiter, tank, orbiter-tank, and right-hand booster) to provide baselines for evaluation of proximity effects.

The entire investigation was conducted at a nominal free stream Mach number of 4.5 and at Reynolds number per foot ranging from approximately 7.0×10^5 to 6.6×10^6.

This report is published in three volumes. Volume I contains data figures through page 894. Volume II contains the remaining data figures and the appendix (tabulated source data) is found in Volume III.

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C) CN, CA, CLM, CBL, CY, CYN vs Z

D) CN, CLM, CY, CYN vs Z

NOMENCLATURE

SYMBOL	PLOT SYMBOL	DEFINITION
a		speed of sound; ft/sec
V		velocity; ft/sec
M	MACH	Mach number, V/a
q_∞	Q(PSF)	dynamic pressure, $\rho V^2/2$; psf
ρ	RHO	mass density; slugs/ft^3
A_b		base area; ft^2
C_{A_b}	CAB	base force coefficient, $-A_b(P_b - P_\infty)/q_\infty S_w$; $\frac{\text{base force}}{q_\infty S_w}$
C_{A_f}	CAF	forebody axial force coefficient; $C_A - C_{A_b}$
C_A	CA	axial force coefficient excluding adjustments for base and sting/balance cavity pressure measurements; $\frac{\text{axial force}}{q_\infty S_w}$
C_N	CN	normal force coefficient; $\frac{\text{normal force}}{q_\infty S_w}$
C_ℓ	CBL	rolling moment coefficient; $\frac{\text{rolling moment}}{q_\infty S_w \ell_{ref}}$
C_m	CLM	pitching moment coefficient; $\frac{\text{pitching moment}}{q_\infty S_w \ell_{ref}}$
C_Y	CY	side force coefficient; $\frac{\text{side force}}{q_\infty S_w}$
C_n	CYN	yawing moment coefficient; $\frac{\text{yawing moment}}{q_\infty S_w \ell_{ref}}$

NOMENCLATURE (Continued)

SYMBOL	PLOT SYMBOL	DEFINITION
S_w	SREF	reference wing area; ft^2
CPS		captive trajectory system
P_{b1}/P_∞	PB1/P	number one base pressure ratio
P_{b2}/P_∞	PB2/P	number two base pressure ratio
P_c/P_∞	PC/P	sting/balance cavity pressure ratio
P_{b1}	PB1	number one base pressure; psia
P_{b2}	PB2	number two base pressure; psia
P_c	PC	SRB separation nozzle chamber pressure; psia
P_∞	P	freestream static pressure, psia
$P_{t\infty}$	PTOTAL	freestream total pressure, psia
$C_{P_{b1}}$	CPB1	number one orbiter base pressure coefficient, $(P_{b1} - P_\infty)/q_\infty$
$C_{P_{b2}}$	CPB2	number two orbiter base pressure coefficient, $(P_{b2} - P_\infty)/q_\infty$
C_{P_c}	CPC	sting balance cavity pressure coefficient, $(P_c - P_\infty)/q_\infty$
R/ℓ	RN/L	freestream unit Reynolds number x 10^{-6}; per foot
ℓ_{ref}	LREF BREF	reference dimension used to reduce the measured balance moment data to coefficient form, orbiter model body length, inches
δ_a	AILRON	aileron deflection; degrees
δ_e	ELEVTR	elevon deflection; degrees

NOMENCLATURE (Continued)

SYMBOL	PLOT SYMBOL	DEFINITION
δ_r	RUDDER	rudder deflection; degrees
$\Delta\alpha$	DALPHA	parameter name for nominal angle of attack difference, ($\Delta\alpha = \alpha_{SRB} - \alpha_{OT}$) or ($\Delta\alpha = \alpha_{ET} - \alpha_O$); degrees
$\Delta\beta$	DBETA	parameter name for nominal angle of sideslip difference, ($\Delta\beta = \beta_{SRB} - \beta_{O/T}$) or ($\Delta\beta = \beta_{ET} - \beta_O$); degrees
$\alpha_{O/T}$	ALPHA	orbiter tank angle of attack. All source data are presented as a function of $\alpha_{O/T}$, except for isolated tests and those where the tank is separating from the orbiter; degrees $\alpha_{SRB} = \alpha_{O/T} + \Delta\alpha$
α_O	ALPHA	orbiter angle of attack. Source data are presented as a function of α_C for isolated tests and those where the tank is separating from the orbiter; degrees $\alpha_{ET} = \alpha_O + \Delta\alpha$
α_{ET}	ALPHA	external tank angle of attack. Source data are presented as a function of α_{ET}, only, for tests of the isolated external tank, degrees
α_{SRB}	ALPHA	solid rocket booster angle of attack, source data are presented as a function of α_{SRB}, only, for tests of the isolated SRB, degrees
$\beta_{O/T}$	BETA	orbiter tank angle of sideslip. All source data are presented as a function of $\beta_{O/T}$ except for isolated tests and those where the tank is separating from the orbiter; degrees $\beta_{SRB} = \beta_{O/T} + \Delta\beta$
β_O	BETA	orbiter angle of sideslip. Source data are presented as a function of β_O for isolated tests and those where the tank is separating from the orbiter; degrees $\beta_{ET} = \beta_O + \Delta\beta$

NOMENCLATURE (Concluded)

SYMBOL	PLOT SYMBOL	DEFINITION
β_{ET}	BETA	external tank angle of sideslip. Source data are presented as a function of β_{ET}, only, for tests of the isolated external tank, degrees
β_{SRB}	BETA	solid rocket booster angle of sideslip. Source data are presented as a function of β_{SRB}, only, for tests of the isolated SRB, degrees
δ_{SB}	SPDBRK	speed brake flare angle, degrees
c.g.		center of gravity
T_{t_∞}	TTOTL	freestream total temperature; °R
T_∞	T	freestream static temperature; °R
ΔX	X	separation distance measured along the longitudinal, X axis; inches. See figures 2d and 2e
	XMRP	X station of the moment reference center; inches. See figures 2b and 2c
ΔY	Y	separation distance measured along the lateral, Y axis; inches. See figures 2d and 2e.
	YMRP	Y station of the moment reference center; inches. See figures 2b and 2c.
	ZMRP	Z station of the moment reference center; inches. See figures 2b and 2c.
ΔZ	Z	separation distance measured along the vertical Z axis; inches. See figures 2d and 2e.

INTRODUCTION

The NASA Space Shuttle Integrated Vehicle (SSV) is comprised of four components: an orbiter (O), an external fuel tank (ET) for the orbiter, and two solid rocket boosters (SRB's). During the ascent phase of the SSV the ET and SRB's are separated from the orbiter, and return to earth. In order to assure clean separation of the ET and the SRB's from the orbiter it is necessary to know the aerodynamic forces acting on these components, and the orbiter, during the separation procedure. This test was conducted to determine the interacting aerodynamic effects for two situations: 1) nominal abort of the SRB from the orbiter/external tank combination and 2) emergency abort of the external tank from the orbiter.

Data were obtained at a freestream Mach number of 4.5 with Reynolds number varying from 7.0×10^5 to 6.6×10^6 per foot. The SRB has small rocket motors which are utilized to assure positive separation. During these tests motor operation was simulated by using cold air jets and data were recorded with and without these motor plume simulations.

The isolated vehicle components were tested over an angle of attack and sideslip range as shown below:

Vehicle Component	α Range	β Values
Orbiter	-10° to 30°	0°, 5°, 10°
External Tank	-40° to 10°	0°, 5°
Orbiter/External Tank	-10° to 30°	0°, 5°
Solid Rocket Booster	-30° to 15°	-10°, 0°, 5°, 10°, 20°, 30°

In order to examine the interacting flow field effects during the two abort situations, the separating component was held at attitudes relative to the parent configuration and moved to various field positions to record aerodynamic data. The relative attitudes tested were:

Vehicle Component	$\Delta\alpha$ Range	$\Delta\beta$ Values
External Tank	-30° to 5°	0°, $\pm5^\circ$
Solid Rocket Booster	-20° to 5°	0°, $\pm5^\circ$, -10 , -20°

where for external tank $\Delta\alpha = (\alpha_{ET} - \alpha_O)$, $\Delta\beta = (\beta_{ET} - \beta_O)$ and for solid rocket booster $\Delta\alpha = (\alpha_{SRB} - \alpha_{O/ET})$, $\Delta\beta = (\beta_{SRB} - \beta_{O/ET})$.

The vertical (Z), longitudinal (X) and lateral (Y) separation distance ranges were:

Vehicle Component	X-Inches(f.s.)	Y-Inches(f.s.)	Z-Inches(f.s.)
External Tank	0 to 1200	-200 to 200	0 to 1300
Solid Rocket Booster	0 to 1600	0 to 800	0 to 100

where for the external tank, X, Y, and Z = 0 when the ET nose is in the mated position with respect to the orbiter. (See figure 2d.) For the SRB, X, Y, and Z = 0 when the SRB nose is in the mated position with respect to the Orbiter/External Tank. (See figure 2e.)

During SRB separation testing (see figure 2e.) the external tank was rigidly attached to the orbiter, which was supported inverted on the tunnel primary sector. The booster was supported on the CTS via a flow-through balance and sting.

During external tank separation testing (see figure 2d.), the

orbiter was supported inverted on the primary sector and the ET was supported on the CTS.

No base or cavity pressure taps were built into the models. To obtain these pressures (two base, one cavity per model), hardline tubing was routed to the vicinity of the model bases and bent into areas where pressures were desired.

As an aid in clarifying the interdependence of the test configuration with the tabulated source data in the Appendix, the following array is a necessary adjunct to the Run Summary Schedule of Table II.

DATASET	BALANCE	TEST CONFIGURATION	APPENDIX PAGE NUMBER
RTJ001 through RTJ099	Orbiter	Tank Separating From Orbiter	1 – 89
RTJT01 through RTJT99	Tank	Tank Separating From Orbiter	90 – 178
RTJ100 through RTJ283	Orbiter Tank	SRB Separating From Orbiter Tank	179 – 361
RTJ300 through RTJ483	SRB	SRB Separating From Orbiter Tank	362 – 543
RTJ500	Tank	Isolated	543
RTJ501	Tank	Isolated	544
RTJ502 through RTJ507	Orbiter	Isolated	545 – 550
RTJ508	Orbiter Tank	Isolated	551
RTJ509	Orbiter Tank	Isolated	552
RTJ510 through RTJ536	SRB	Isolated	553 – 565

CONFIGURATIONS INVESTIGATED

The 0.01-scale 32-OTS models consists of an orbiter, tank, and one booster (with metric high-pressure separation thrusters, fore and aft). See figures 2b and 2c.

The configuration of each vehicle component tested is given below. Pertinent dimensional data for these model components may be found in Table III.

Orbiter 09 = $(B_{19}C_7F_5M_4)$ $(W_{107}E_{23})$ (V_7R_5) where:

Component	Definition
B_{19}	Fuselage per Rockwell line VL70-000139B. (Model drawing SS-A00062)
C_7	Canopy per Rockwell Lines VL70-000139B. (Model drawing SS-A00062)
E_{23}	Elevons per Rockwell lines VL70-000139B. (Model drawing SS-A00109)
F_5	Body flap per Rockwell lines VL70-000139B. (Model drawing SS-A00062)
M_4	Orbital Maneuvering System per Rockwell lines VL70-000139B. (Model drawing SS-A00062)
R_5	Rudder per Rockwell lines VL70-000139B and VL70-000095. (Model drawing SS-A00062)
V_7	Vertical tail per Rockwell lines VL70-000139B and VL70-000095. (Model drawing SS-A00062)
W_{107}	Wing per Rockwell lines VL70-000130B. (Model drawing SS-A00109)

The external tank (T_{10}) is not broken down into subassemblies and was constructed to Rockwell lines VL72-000088 and VL78-000041 (Model Drawing SS-A-00108).

CONFIGURATIONS INVESTIGATED
(Concluded)

The solid rocket booster (S_8) is not broken down into subassemblies and was constructed to Rockwell lines VL72-000088 and VL77-000036 (Model Drawing SS-A-00113).

TEST FACILITY DESCRIPTION

The AEDC von Karman Facility (VKF) Tunnel A is a continuous, closed-circuit, variable density wind tunnel with an automatically driven flexible-plate-type nozzle and a 40- by 40-in. test section (see Figure 3). The tunnel can be operated at Mach numbers from 1.5 to 6 at maximum stagnation pressures from 29 to 200 psia, respectively, and stagnation temperatures up to 750°R (M = 6). Minimum operating pressures range from about one-tenth to one-twentieth of the maximum at each Mach number. A description of the tunnel and airflow calibration information may be found in the Test Facilities Handbook*.

*Test Facilities Handbook (Ninth Edition). "von Karman Gas Dynamics Facility, Vol. 3", Arnold Engineering Development Center, July 1971.

DATA REDUCTION

Six-component aerodynamic force and moment data were recorded for the Orbiter, External Tank, and Orbiter/ET. Four-component force and moment data were recorded for the SRB. Thrust loads generated by the SRB separation motors were treated as tares and were subtracted from balance recorded loads before computing coefficients. For Orbiter freestream and ET abort testing, the Orbiter was mounted on the AEDC 0.85-inch 4.00-Y-36-037 balance. For ET freestream and ET abort, the ET was mounted on the AEDC 0.85-inch 4.00-H-36-049 balance. For SRB separation, the Orbiter/ET was mounted on the 4.00-Y-36-049 balance. For SRB freestream and separation, the SRB was mounted on the Rockwell 0.625-inch 4.00-H-34-065 flow-through balance.

All force and moment data were reduced to coefficient form in the body axis system. Base and balance cavity pressures were recorded. However, no pressure adjustments were made to the force and moment data. All coefficients are based on the following reference dimensions.

S_{REF} = orbiter wing reference area = 0.269 ft^2

$\ell_{REF} = b_{REF}$ = orbiter body length = 12.903 inches

Moments are about the following reference c.g. locations:

Orbiter (Isolated and with ET separating):

XMRP = 8.516 inches aft of orbiter nose (see figure 2c)

ZMRP = 4.0 (fuselage reference line 4.0)

External Tank (Isolated and while separating from orbiter):

XMRP = 10.94 inches aft of ET nose (see figure 2c

ZMRP = 0.0 (tank centerline)

Orbiter/ET (Isolated and with SRB separating)

XMRP = 7.43 inches aft of ET nose (see figure 2b)

ZMRP = 0.47 inches above ET centerline

SRB (Isolated and while separating from Orbiter/ET)

XMRP = 9.67 inches aft of SRB nose (see figure 2b)

ZMRP = 0.0 (SRB centerline)

TEST : IA13 (VA 323) | DATE : POST-TEST

TEST CONDITIONS

MACH NUMBER	TOTAL PRESSURE (Pounds/Sq. Inch)	DYNAMIC PRESSURE (pounds/sq. inch)	STAGNATION TEMPERATURE (degrees Fahrenheit)
4.53	110	5.27	145
4.52	80	3.85	↓
↓	58	2.80	
4.51	28.9	1.41	
4.48	11.6	0.58	
↓	10.8	0.54	

BALANCE UTILIZED: 4.00-Y-36-037; 4.00-Y-36-049; 4.00-Y-34-065

	CAPACITY:			ACCURACY:			COEFFICIENT TOLERANCE: ~ (ACCURACY / 800)
NF	±150	±200	±135	±0.2	±0.3	±0.25	
SF	±75	±100	±100	±0.15	±0.3	±0.2	
AF	±25	±50	–	±0.15	±0.3	–	
PM	±300	±380	±360	±0.5	±1.0	±1.0	
RM	±20	±80	–	±0.2	±0.4	–	
YM	±150	±190	±275	±0.5	±1.0	±0.75	

COMMENTS:

1). THE -037 MOUNTED IN ORBITER FOR "ORBITER-ISOLATED" AND "TANK SEPARATION."

2). THE -049 MOUNTED IN ORBITER FOR "ORBITER-TANK ISOLATED" AND "BOOSTER SEPARATION." ALSO MOUNTED IN TANK FOR "TANK ISOLATED" AND "TANK SEPARATION."

3). THE -065 MOUNTED IN BOOSTER FOR "BOOSTER ISOLATED" AND "BOOSTER SEPARATION."

EXTERNAL TANK SEPARATION DATA

TABLE II.

TEST: IA13

DATA SET RUN NUMBER COLLATION SUMMARY

LATE POST-TEST

DATA SET IDENTIFIER	CONFIGURATION	SCHD. α	SCHD. β	PARAMETERS/VALUES DX	DB	Y	Z	MACH	PT	DEL	DER	RF	NO. OF RUNS	X MACH NUMBER → 0	400	800	1200
RTJO*01	O9/T10	0	0	5	0	0	A	4.53	110	0	0	0		1	2	3	4
002				0		↓	B							5	6	7	8
003					↓	200	B							12	11	10	9
004					5	↓	B							13	14	15	16
005				↓	↓	0	B							20	19	18	17
006				-5	0	|	C						21	22	23	24
007				-10	↓	↓	D							25	26	27	28
008				↓	↓	200	D							32	31	30	29
009				↓	5	↓	D							33	34	35	36
010				↓	↓	0	D							40	39	38	37
011				-20	0	↓	E							41	42	43	44
012				↓	↓	200	E							48	47	46	45
013				↓	5	↓	E							49	50	51	52
014				↓	↓	0	E							56	55	54	53
015		↓		-30	0	|	1300							57	58	59	60
016		-5		5	↓	↓	A							61	62	63	64
017		↓		0	↓	↓	F							65	66	67	–
018	↓	↓	↓	↓	↓	↓	F	↓	↓	↓	↓	↓		68	69	70	71

TEST RUN NUMBERS

CN ... ICLM ... ICY ... ICYN ... ICBL ... ICA ... X ... Z ... 6

A) = 0, 100, 200, 300, 400, 600 INCHES (FULL SCALE)

B) = 0, 100, 200, 300, 400, 600, 800, 1000

C) = 200, 300, 400, 600, 800, 1000, 1300

D) = 300, 400, 600, 800, 1000, 1300

E) = 600, 800, 1000, 1300

F) = 0, 100, 200, 300, 400, 600, 800

α, β, DX, DB – DEGREES ; X, Y – INCHES (FULL SCALE) ; DEL, DER – DEGREES ; PT – PSIA ; RF – DEGREES (RUDDER FLARE)

* O DATA – ORBITER DATA, T DATA – EXTERNAL TANK DATA

EXTERNAL TANK SEPARATION DATA

TABLE II. (Continued)

TEST : IA13 — DATA SET RUN NUMBER COLLATION SUMMARY — DATE : POSTTEST

DATA SET IDENTIFIER	CONFIGURATION	SCHD. α	SCHD. β	PARAMETERS/VALUES Dα	Dβ	Y	Z	MACH	PT	DEL	DER	RF	NO. OF RUNS	X — MACH NUMBERS → 0	400	800	1200
RTJ 019	D_9/T_{10}	-5	0	0	0	200	F	4.53	110	0	0	0		75	74	73	72
020					5	↓	F							76	77	78	79
021				↓	↓	0	F							83	82	81	80
022				-5	0		C							84	85	86	87
023				-10		↓	D							88	89	90	91
024					↓	200	D							95	94	93	92
025					5	↓	D							96	97	98	99
026				↓	↓	0	D							103	102	101	100
027				-20	0	↓	E							104	105	106	107
028					↓	200	E							111	110	109	108
029					5	↓	E							112	113	114	115
030				↓		0	E							119	118	117	116
031		↓		-30	↓		1300	↓	↓					120	121	122	123
032		-10		5	0		A	4.52	80					124	125	126	127
033				0		↓	B							128	129	130	131
034					↓	200	B							135	134	133	132
035					5	↓	B							136	137	138	139
↓ 036	↓	↓	↓	↓	↓	0	B	↓	↓	↓	↓	↓		143	142	141	140

TEST RUN NUMBERS

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

CN CLM CY CYN CBL CA X Z 6

Z SCHEDULES

COEFFICENTS — IDEAL (1) — IDEAL (2) — NOS

A) = 0, 100, 200, 300, 400, 600 INCHES (FULLSCALE)

B) = 0, 100, 200, 300, 400, 600, 800, 1000

C) = 200, 300, 400, 600, 800, 1000, 1300

D) = 300, 400, 600, 800, 1000, 1300

E) = 600, 800, 1000, 1300

F) = 0, 100, 200, 300, 400, 600, 800

α, β, Dα, Dβ — DEGREES ; X, Y — INCHES (FULLSCALE) ; DEL, DER — DEGREES ; PT — PSIA ; RF - DEGREES (RUDDER FLARE)

EXTERNAL TANK SEPARATION DATA

TABLE II. (Continued)

TEST: 2A13

DATA SET RUN NUMBER COLLATION SUMMARY

DATE: POST-TEST

DATA SET IDENTIFIER	CONFIGURATION	SCHD. α	SCHD. β	PARAMETERS/VALUES Dα	Dβ	Y	Z	MACH	PT	DEL	DER	RF	NO. OF RUNS	X — MACH NUMBERS 0	400	800	1200
RTJ037	09/T10	-10	0	-5	0	0	C	4.52	80	0	0	0		144	145	146	147
038				-10	↓	↓	D	↓	↓	↓	↓	↓		148	149	150	151
039				↓	↓	200	D	↓	↓	↓	↓	↓		155	154	153	152
040				↓	5	↓	D	↓	↓	↓	↓	↓		156	157	158	159
041				↓	↓	0	D	↓	↓	↓	↓	↓		163	162	161	160
042				-20	0	↓	G	↓	↓	↓	↓	↓		164	165	166	167
043				↓	↓	200	G	↓	↓	↓	↓	↓		171	170	169	168
044				↓	5	↓	G	↓	↓	↓	↓	↓		172	173	174	175
045				↓	↓	0	G	↓	↓	↓	↓	↓		179	178	177	176
046				-30	0		1300							180	-	-	-
047		-21		6	↓	↓	B							181	182	183	184
048		↓		1	↓	↓	B							188	187	186	185
049		↓		-4	↓	↓	H,I*							189	190	191	192*
050		↓		-9	↓	↓	I,J,K**							193	194*	195*	196**
051		↓	↓	-19	↓	↓	1000	↓	↓	↓	↓	↓		197	-	-	-

TEST RUN NUMBERS

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

CN CLA CY CYN CBL CBA X Z b

INCREMENTS — ISAR 11 ISAR 12 NDI

Z — B) 0, 100, 200, 300, 400, 600, 800, 1000 INCHES (FULL SCALE)

C) 200, 300, 400, 600, 800, 1000, 1300

D) 300, 400, 600, 800, 1000, 1300

G) 800, 1000, 1300

H) 200, 300, 400, 600, 800, 1000

I) 400, 600, 800, 1000

J) 600, 800, 1000

K) 800, 1000

α, β, Dα, Dβ - DEGREES; X, Y - INCHES (FULL SCALE); DEL, DER - DEGREES; PT - PSIA, RF - DEGREES (RUDDER FLARE)

EXTERNAL TANK SEPARATION DATA

TABLE II. (Continued)

TEST: IA-13

DATA SET RUN NUMBER COLLATION SUMMARY

DATE: Aug 7 '77

DATA SET IDENTIFIER	CONFIGURATION	SCHD. α	SCHD. β	PARAMETERS/VALUES Dα	Dβ	Y	Z	Mach	Ft	Dγ	Dγ N	X MAC NUMBERS → α	100	200	1300
RTJ052	T_9/T_{10}	0	0	0	0	-200	E	2.53	110	10	-10	199			
053	"	"	"	"	"	"	B					"			
054				0	0	200	B					200			
055					-5	-200	B					201			
056					5	0	B					202			
057					5	200	B					203			
058				-10	0	-200	D					204			
059					0	0	D					205			
060					0	200	D					206			
061					-5	-200	D					207			
062					5	0	D					208			
063					5	200	D					209			
064				-20	0	-200	E					210			
065					0	0	E					211			
066					0	200	E					212			
067					-5	-200	E					213			
068					5	0	E					214			
069					5	200	E					215			

C,N, C,L,M, C,Y, K,Y,N, C,B,L, C,A, X, Z, 6

α β

B) 0, 100, 200, 300, 400, 600 kts Tunnel (FS)

E) 600, 400, 200, 100

D) 200

EXTERNAL TANK SEPARATION DATA

TABLE II. (Continued)

TEST : IA 13

DATA SET RUN NUMBER COLLATION SUMMARY

DATE : POST-TEST

DATA SET IDENTIFIER	CONFIGURATION	SCHD. α	SCHD. β	PARAMETERS/VALUES Dα	Dβ	Y	Z	MACH	PT	DEL	DER	RF	NO. OF RUNS	X — MACH NUMBER: 0	400	800	1200
RTJ 070	09/T10	-5	0	0	0	-200	F	4.52	80	+10	-10	0		216			
071						0	F							217			
072					↑	200	F							218			
073					-5	-200	F							219			
074					5	0	F							220			
075					↓	200	F							221			
076				-10	0	-200	D							222			
077						0	D							223			
078					↑	200	D							224			
079					-5	-200	D							225			
080					5	0	D							226			
081					↓	200	D							227			
082				-10	0	-200	E							228			
083						0	E							229			
084					↑	200	E							230			
085					-5	-200	E							231			
086					5	0	E							232			
↓ 087	↓	↓	↓		↓	200	E	↓	↓	↓	↓	↓		233			

TEST RUN NUMBERS

CN ... EM ... CV ... CYN ... CBL ... CA

6

α OR β

D) = 300, 400, 600, 800, 1000, 1300 INCHES (FULL SCALE)

E) = 600, 800, 1000, 1300

F) = 0, 100, 200, 300, 400, 600, 800

D, E, F - INCHES ; X, Y - INCHES (FULL SCALE) , DEL, DER - DEGREES ; PT - PSIA ; RF - DEGREES (RUDDER FLARE)

EXTERNAL TANK SEPARATION DATA

TABLE II. (Continued)

TEST : IA13

DATA SET RUN NUMBER COLLATION SUMMARY

DATE : POST-TEST

DATA SET IDENTIFIER	CONFIGURATION	SCHD. α	SCHD. β	Dx	Dβ	Y	Z	MACH	PT	DEL	DER	RF	NO. OF RUNS	X — MACH NUMBERS → 0	400	800	1200
RTJ 088	O_9/T_{10}	0	0	0	0	0	B	4.53	110	+10	+10	0		234	235	236	237
089				-10			D							238	239	240	241
090				-20		↓	E							242	243	244	245
091				0		200	B							246	247	248	249
092				-10			D							250	251	252	253
093				-20			E			↓	↓			254	255	256	257
094				0			B			-40	-40			258	259	260	261
095				-10			D							262	263	264	265
096				-20		↓	E							266	267	268	269
097				0		0	B							270	271	272	273
098				-10			D							274	275	276	277
↓ 099	↓	↓	↓	-20	↓	↓	E	↓	↓	↓	↓	↓		278	279	280	281

TEST RUN NUMBERS

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

CN, CLM, CY, CYN, CBL, CA, X, Z, 6

COEFFICENTS IDVAR(1) IDVAR(2) NDV

α OR β Z SCHEDULES

B) = 0, 100, 200, 300, 400, 600, 800, 1000 INCHES (FULLSCALE)

D) = 300, 400, 600, 800, 1000, 1300

E) = 600, 800, 1000, 1300

α, β, Dx, Dβ – DEGREES ; X, Y – INCHES (FULLSCALE) ; DEL, DER – DEGREES ; PT – PSIA ; RF – DEGREES (RUDDER FLARE)

Booster (SRB) Separation

TABLE II. (Continued)

TEST: IA13

DATA SET/RUN NUMBER COLLATION SUMMARY

DATE: POST_TEST

DATA SET IDENTIFIER	CONFIGURATION	SCHD. α	SCHD. β	PARAMETERS/VALUES Dx	Dβ	Y	Z	MACH	PT	PCH	RF	NO. OF RUNS	TEST RUN NUMBERS (X MACH NUMBERS →) 0	300	600	900
RTJ 100	OMT10/S8	0	0	0	0	0	A	4.48	11.6	1500	0		303	304	305	-
101	(PLUMES ON)					200	A	↓	10.8	↓			-	-	306	-
102						0	A	4.51	29	750			307	308	309	310
103						200	A						314	313	312	311
104						400	A						315	316	317	318
105						800	800			↓			319	320	321	322
106						0	A			1500			323	324	325	326
107						200	A						330	329	328	327
108						400	A						331	332	333	334
109						800	800	↓	↓				335	336	337	338
110						0	A	4.52	58				339	340	341	342
111						200	A						346	345	344	343
112						400	A						347	348	349	350
113						800	800	↓	↓				351	352	353	354
114						0	A	4.53	110				355	356	357	-
115						5	A						358	359	360	-
116						10	A						361	362	363	364
117	↓	↓	↓	↓	↓	200	A	↓	↓	↓	↓		368	367	366	365

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

CNI ICLM ICY ICYN ICBL ICA X Z

COEFFICENTS IDVAR (1) IDVAR (2) NDV

~~α or β~~ Z SCHEDULES

A) = 0, 50, 100, 150, 200, 300, 400, 600, 800, 1000 INCHES (FULL SCALE)

*RTJ100 THROUGH RTJ283 - ORBITER/TANK DATA
RTJ300 THROUGH RTJ423 - SRB DATA

BOOSTER (SRB) SEPARATION

TABLE II. (Continued)

TEST: IA 13

DATA SET RUN NUMBER COLLATION SUMMARY

DATE: POST-TEST

DATA SET IDENTIFIER	CONFIGURATION	SCHD. α	SCHD. β	PARAMETERS/VALUES Dα	Dβ	Y	Z	MACH	PT	PCH	RF	NO. OF RUNS	X — MACH NUMBERS 0	300	600	900
RTJ 118	Ja Tio/S8 (PLUMES ON)	0	0	0	0	400	A	4.53	110	1500	0		369	370	371	372
119	↓					800	800			↓			373	374	375	376
120	(PLUMES OFF)					0	A			—			377	378	379	380
121						200	A						384	383	382	381
122						400	A						385	386	387	388*
123						800	800						389	390	391	392
124						↓	↓						-	-	-	-
125				↓		400	A						-	-	-	-
126				5		0	B						395	-	-	398
127						200	B						396	-	-	399
128				↓		400	B						397	-	-	400
129				-5		0	A,C*						411*	409	401	402
130						200	A,C*						412*	403	404	405
131						400	A						410	408	407	406
132				↓		800	800						413	414	415	416
133				-10		↓	↓						417	418	419	420
134						400	A						421	422	423	424
135	↓	↓	↓	↓	↓	0	D,E*	F**	↓	↓	↓	↓	425	427*	429**	432

TEST RUN NUMBERS

X=1600: 393, 394

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

CN CLM CY CYN CBL CA X Z 6

(DVAR (1) (DVAR (2) NDV

COEFFICENTS

~~α OR β~~ Z SCHEDULES

A) = 0, 50, 100, 150, 200, 300, 400, 600, 800, 1000 INCHES (FULL SCALE)

B) = 0, 50, 100, 150, 200, 300, 400, 600

C) 50, 100, 150, 200, 300, 400, 600, 800, 1000

Dj = 200, 300, 400, 600, 800, 1000

E) = 100, 150, 200, 300, 400, 600, 800, 1000

F) = 150, 200, 300, 400, 600, 800, 1000

BOOSTER (SRB) SEPARATION

TABLE II. (Continued)

TEST: IA13

DATA SET/RUN NUMBER COLLATION SUMMARY

DATE: POST-TEST

DATA SET IDENTIFIER	CONFIGURATION	SCHD. α	SCHD. β	PARAMETERS/VALUES Dα	Dβ	Y	Z		MACH	PT	PCH	RF	NO. OF RUNS	X MACH NUMBERS 0	300	600	900
RTJ 136	09T10/58	0	0	-10	0	200	D,E*,	C**,A***	4.53	110	—	0		426	428*	430**	431***
137	(PLUMES OFF)			-20		0	G							433	434	435	436
138						200	G							440	439	438	437
139						400	G							441	442	443	444
140				↓	↓	800	800							445	446	447	448
141				0	5	0	A							449	-	-	452
142						200	A							450	-	-	453
143					↓	400	A							451			454
144					-5	200	A							455	456	457	458
145						400	A							462	461	460	459
146						0	H							463	464	465	466
147					↓	800	800							467	468	469	470
148					-10	0	H							471	472	473	474
149						200	D,A*							475	477*	478*	479*
150						400	A							476	482	481	480
151					↓	800	800							483	484	485	486
152					-20	↓	↓							487	488	489	490
↓ 153	↓	↓	↓	↓	↓	400	A,I*		↓	↓	↓	↓		494*	491	492	493

TEST RUN NUMBERS

1 7 13 19 25 31 37 43 49 55 61 67 72 78

C,N C,L,M C,Y C,Y,N C,BL C,A X Z 6

COEFFICIENTS

α OR β

Z SCHEDULES

A) = 0, 50, 100, 150, 200, 300, 400, 600, 800, 1000 INCHES (FULLSCALE)

C) 50, 100, 150, 200, 300, 400, 600, 800, 1000

D) = 200, 300, 400, 600, 800, 1000

E) 100, 150, 200, 300, 400, 600, 800, 1000

G) = 600, 800, 1000

H) = 400, 600, 800, 1000

I) = 300, 400, 600, 800, 1000

BOOSTER (SRB) SEPARATION

TABLE II. (Continued)

TEST: IA13

DATA SET RUN NUMBER COLLATION SUMMARY

DATE: POST-TEST

DATA SET IDENTIFIER	CONFIGURATION	SCHD. α	SCHD. β	PARAMETERS/VALUES Dα	Dβ	Y	Z	MACH	PT	PCH	RF	NO. OF RUNS	X — MACH NUMBERS → 0	300	600	900
RTJ 154	$O_9 T_{10}/S_8$	0	0	0	-20	0	H	4.53	110	—	0		495	496	499	500
155	(PLUMES OFF)	↓	↓	↓	↓	200	H, A*	↓	↓	↓	↓		498	497	502*	501*
158	(PLUMES ϕN)			5	0	0	B	4.51	28.9	1500			511	-	-	514
159				↓		200	B						512	-	-	515
160						400	B						513	-	-	516
161				-5		0	C, A*						527	525*	517	518
162						200	A, C*						528*	519	520	521
163						400	A						526	524	523	522
164				↓		800	800						529	530	531	532
165				-10		↓	↓						533	534	535	536
166						400	A						537	538	539	540
167						0	D, E*, F**						541	543*	545**	548
168				↓		200	D, E*, C**, A***						542	544*	546**	547***
169				-20		0	G						549	550	551	552
170						200	G						556	555	554	553
171						400	G	↓					557	558	559	560
172						800	800						561	562	563	564

TEST RUN NUMBERS

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

CN SLM CY EYN CBL CA X Z 6

α OR β

Z SUBSCRIPT

A) = 0, 50, 100, 150, 200, 300, 400, 600, 800, 1000 INCHES (FULL SCALE)

B) = 0, 50, 100, 150, 200, 300, 400, 600

C) = 50, 100, 150, 200, 300, 400, 600, 800, 1000

D) = 200, 300, 400, 600, 800, 1000

E) = 100, 150, 200, 300, 400, 600, 800, 1000

F) = 150, 200, 300, 400, 600, 800, 1000

G) = 600, 800, 1000

H) = 400, 600, 800, 1000

BOOSTER (SRB) SEPARATION

TABLE II. (Continued)

TEST: IA 13

DATA SET RUN NUMBER COLLATION SUMMARY

DATE: POSTTEST

DATA SET IDENTIFIER	CONFIGURATION	SCHD. α	SCHD. β	PARAMETERS/VALUES Δx	Δβ	Y	Z	MACH	PT	PCH	RF	NO. OF RUNS	X MACH NUMBERS 0	300	600	900
RTJ 173	OgTio/S8	0	0	5	5	0	B	4.53	110	—	0		565	-	-	568
174	(PLUMES OFF)					200	B						566	-	-	569
175					↓	400	B						567	-	-	570
176					-5	200	B						575	-	-	571
177						400	B						576	-	-	572
178					↓	0	J						574	-	-	573
179					-10	400	B						577	-	-	582
180						200	K,B*						578	-	-	581*
181					↓	0	J						579	-	-	580
182					-20	200	B,J*						587*	-	-	583
183						400	B,L*						588*	-	-	584
184				↓	↓	0	J						586	-	-	585
185				-5	5	↓	C						589	-	-	-
186						200	C						590	-	-	-
187						0	C,A*						591	-	-	594*
188						200	C,A*						592	-	-	595*
189					↓	400	A						593	-	-	596
↓ 190	↓	↓	↓	↓	-5	0	H	↓	↓	↓	↓		597	598	599	600

TEST RUN NUMBERS

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

GN GLM GY GYM GQL GA X Z 6

Z SCHEDULES

A) = 0, 50, 100, 150, 200, 300, 400, 600, 800, 1000 INCHES (FULLSCALE)

B) = 0, 50, 100, 150, 200, 300, 400, 600

C) = 50, 100, 150, 200, 300, 400, 600, 800, 1000

H) = 400, 600, 800, 1000

J) = 400, 600

K) = 200, 300, 400, 600

L) = 300, 400, 600

BOOSTER (SRB) SEPARATION

TABLE II. (Continued)

TEST : IA13 | DATA SET RUN NUMBER COLLATION SUMMARY | DATE : POST-TEST

DATA SET IDENTIFIER	CONFIGURATION	SCHD. α	SCHD. β	PARAMETERS/VALUES Dα	Dβ	Y	Z		MACH	PT	PCH	RF	NO. OF RUNS	X – MACH NUMBERS 0	300	600	900
RTJ 191	09 T10 / S8	0	0	-5	-5	200	C, A*		4.53	110	–	0		601	602	605*	606*
192	(PLUMES OFF)					400	A							603	604	608	607
193					▼	800	800							609	610	611	612
194					-10	|	|						613	614	615	616
195						400	A, C*							620*	617	618	619
196						200	I, C*,	E**						621	622*	623**	624**
197					▼	0	H							625	626	627	628
198					-20	|	H						629	630	631	638
199						200	H, I*	E**						632	631	636*	639**
200						400	H, C*	E**						633	634*	635*	640**
201				▼	▼	800	800							641	642	643	644
202				-10	5	0	D, A*							645	–	–	648*
203						200	D, A*							646	–	–	649*
204					▼	400	A							647	–	–	650
205					-5	0	G, H*							651	652	653*	654
206						200	A, C*,	D**, E***						662**	659**	658*	655
207						400	A, E*,	F**						661*	660**	657	656
208		▼	▼	▼	▼	800	800		▼	▼	▼	▼		663	664	665	666

TEST RUN NUMBERS

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

CN | GLM | CY | SYN | CAL | GA | X | Z | 6

Z – MEDIUM

A) = 0, 5*, 50, 150, 200, 300, 400, 600, 800, 1000 INCHES (FULLSCALE) C) = 50, 100, 150, 200, 300, 400, 600, 800, 1000

D) = 20, 300, 400, 600, 800, 1000

E) = 100, 150, 200, 300, 400, 600, 800, 1000

F) = 1 5, 200, 300, 400, 600, 800, 1000

G) = 600, 800, 1000

H) = 400, 600, 800, 1000

I) = 300, 400, 600, 800, 1000

BOOSTER (SRB) SEPARATION

TABLE II. (Continued)

TEST: IA13

DATA SET/RUN NUMBER COLLATION SUMMARY

DATE: POST TEST

DATA SET IDENTIFIER	CONFIGURATION	SCHD. α	SCHD. β	PARAMETERS/VALUES Dα	Dβ	Y	Z		MACH	PT	PCH	RF	NO. OF RUNS	X — MACH NUMBERS → 0	300	600	900
RTJ 209	Og T10/S8	0	0	-10	-10	800	800		4.53	110	—	0		667	668	669	670
210	(PLUMES OFF)					400	A, D*, E**, I***							680***	677*	676**	671
211						200	D, H*, I**							679*	678**	672	673
212					↓	0	I, G*, H**							681*	682*	675**	674
213					-20	↓	H, G*							689*	690*	683	684
214						200	D, G*, H**							692*	691*	688**	685
215						400	D, G*, H**							694*	693**	687	686
216				↓	↓	800	800							695	696	697	698
217				-20	5	0	G							699	-	-	702
218						200	G							700	-	-	703
219					↓	400	G							701	-	-	704
220					-5	0	G, M*							714*	713*	705	706
221						200	G, M*							715*	711	708	707
222						400	G							716	712	709	710
223					↓	800	800							717	718	719	720
224					-10	↓	↓							721	722	723	724
225						0	G, M*							734*	733*	725	726
226	↓	↓	↓	↓	↓	200	G		↓	↓	↓	↓		735	731	728	727

TEST RUN NUMBERS

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

CN IGM IGY IGYN EBL IGA X Z

α OR β SCHEDULE: A) = 0, 50, 100, 150, 200, 300, 400, 600, 800, 1000, INCHES (FULLSCALE) D) = 200, 300, 400, 600, 800, 1000

E) = 100, 150, 200, 300, 400, 600, 800, 1000 G) = 600, 800, 1000

H) = 400, 600, 800, 1000 I) = 300, 400, 600, 800, 1000

J) = 600, 800, 1000 K) = 800, 1000

M) = 800, 1000

BOOSTER (SRB) SEPARATION

TABLE II. (Continued)

TEST : IA13

DATA SET RUN NUMBER COLLATION SUMMARY

DATE POSTTEST

DATA SET IDENTIFIER	CONFIGURATION	SCHD. α	SCHD. β	PARAMETERS/VALUES Dα	Dβ	Y	Z		MACH	PT	PCH	RF	NO. OF RUNS	X — MACH NUMBERS → 0	300	600	900
RTJ 227	O9 T10/S8	0	0	-20	-10	400	G, M*	1000**	4.53	110	—	0		736*	732**	729	730
228	(PLUMES OFF)				-20	0	M							737	738	743	744
229						200	M							740	739	746	745
230						400	M							741	742	747	748
231						800	800							749	750	751	752

TEST RUN NUMBERS

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

CN ICLM ICY ICYN ICOL ICA X Z

EXPERIMENTER

α β

BOOSTER (SRB) SEPARATION

TABLE II. (Continued)

TEST : IA13

DATA SET RUN NUMBER COLLATION SUMMARY

DATE POST-TEST

DATA SET IDENTIFIER	CONFIGURATION	SCHD. α	SCHD. β	PARAMETERS/VALUES Dα	Dβ	χ	Z			MACH	PT	PCH	RF	NO. OF RUNS	Y — MACH NUMBERS → 0	200	400	800
RTJ 232	O9 T10/S8	0	5	5	5	0	B			4.51	28.9	1500	0		853	854	855	
233	(PUMPS ON)				0		B								858	857	856	
234					-5		J, B*								899	902*	903*	
235					-10		J, B*								900	925*	924*	
236					-20		J								901	942	943	
237				0	5		A								859	860	861	
238					0		A, 800*								864	863	862	883*
239					-5		H, A*, 800**								906	904*	905*	890**
240					-10		H, D*, A**, 800***								909	926*	927*	891*
241					-20		H, I*, 800**								910	941*	940*	898
242				-5	5		C, A*								865	866	869*	
243					0		C, A*, 800**								868	867	872*	884*
244					-5		H, C*, A**, 800***								907	912*	913*	889**
245					-10		H, C*, 800**								908	929*	928*	892**
246					-20		H, 800*								911	938	939	897*
247				-10	5		D, A*								873	874	876*	
248					0		D, A*, 800**								876	875	871*	885**
249					-5		G, D*, F**, 800***								916	915*	914*	888***

CN KLM GX GYN GBL GA Y Z 6

α β

Booster (SRB) Separation

TABLE II. (Continued)

TEST: IA13

DATA SET RUN NUMBER COLLATION SUMMARY

DATE: POST-TEST

DATA SET IDENTIFIER	CONFIGURATION	SCHD. α	SCHD. β	PARAMETERS/VALUES Dα	Dβ	X	Z			MACH	PT	PCH	RF	NO. OF RUNS	Y — MACH NUMBERS → 0	200	400	800
RTJ250	OG T10/S8	0	5	-10	-10	0	G,H*,I**,800***			4.51	28.9	1500	0		917	930*	931**	932***
251	(PLUMES ON)			↓	-20		G,800*								918	936	937	896*
252				-20	5		G								877	878	879	
253					0		G,800*								882	880	881	886*
254					-5		M,G*,800**								919	922*	923*	887**
255					-10		M,800*								920	932	933	894*
256	↓			↓	-20		M,800*						↓		921	935	934	895*
257	(PLUMES OFF)			0	0		A						—		945	–	–	–
258	↓	↓	↓	↓	5	↓	A			↓	↓	↓			944	–	–	–

TEST RUN NUMBERS

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

GM GLM GLY GLYM GAL GA Y Z 6

EVENT

α β

REMARKS

BOOSTER (SRB) SEPARATION

TABLE II. (Continued)

TEST: IA13

DATA SET RUN NUMBER COLLATION SUMMARY

DATE POST-TEST

DATA SET IDENTIFIER	CONFIGURATION	SCHD. α	SCHD. β	PARAMETERS/VALUES Dα	Dβ	X	Z	MACH	PT	PCH	RF	NO. OF RUNS	Y — MACH NUMBERS → 0	200	400	800
RTJ 259	$O_9 T_{10} / S_8$	0	-5	5	5	0	B	4.51	28.9	1500	0		1041	1042	1043	–
260	(PLUMES ON)				0		B						1046	1045	1044	–
261					-5		J, B*						1091	1094*	1095*	–
262					-10		J, K*, B**						1092	1115*	1114**	–
263				↓	-20		J, K**						1093	1132	1133*	–
264				0	5		A, 800*						1047	1048	1049	1071*
265					0		A, 800*						1052	1051	1050	1078**
266					-5		H, A*, 800**						1098	1096*	1097**	1079**
267					-10		H, D*, A**, 800***						1101	1116*	1117**	1086***
268				↓	-20		H, 800*						1102	1131	1130	1087*
269				-5	5		C, A*, 800**						1053	1054	1057*	1072**
270					0		C, A*, 800**						1056	1055	1060*	1077**
271					-5		H, C*, A**, 800***						1099	1104**	1105**	1080***
272					-10		H, I*, B**, 800***						1100	1119*	1118**	1085***
273				↓	-20		H, 800*						1103	1128	1129	1088*
274				-10	5		D, A*, 800**						1061	1062	1058*	1073**
275					0		D, A*, 800**						1064	1063	1059*	1076**
↓ 276		↓	↓	↓	-5	↓	G, D, F**, 800***	↓	↓	↓	↓		1108	1107**	1106**	1081***

α = _____ β = _____

BOOSTER (SRB) SEPARATION

TABLE II. (Continued)

TEST : IA13

DATA SET RUN NUMBER COLLATION SUMMARY

DATE POST-TEST

DATA SET IDENTIFIER	CONFIGURATION	SCHD. α	SCHD. β	PARAMETERS/VALUES Dx	Dp	X	Z			MACH	PT	PCH	RF	NO. OF RUNS	Y MACH NUMBERS → 0	200	400	800
RTJ 277	O9 T10/S8	0	-5	-10	-10	0	G,H*,I**,800***			4.51	28.9	1500	0		1109	1120*	1121**	1084***
278	(PLUMES ON)				-20		G,800*								-	1126	1127	1089*
279				-20	5		G,800*								1065	1066	1067	1074*
280					0		M,G*,800**								1070	1068*	1069*	1075**
281					-5		M,G*,800**								1110	1112*	1113*	1082**
282					-10		M,800*								1111	1122	1123	1083*
283					-20		M,800*								-	1125	1124	1090*

TEST RUN NUMBERS

GN ... GLM ... GY ... GYN ... GBG ... GA ... Y ... Z

α ... β

ISOLATED ET, Φ, and ΦET TABLE II. (Continued)

TEST: IA 13 — DATA SET RUN NUMBER COLLATION SUMMARY — DATE: POST-TEST

DATA SET IDENTIFIER	CONFIGURATION	SCHD. α	SCHD. β	PARAMETERS/VALUES P_T	DEL	DER	NO. OF RUNS	MACH NUMBERS
RTJ 500	T_{10}	A	0	110	-	-		.53
50		A	5	110	-	-		282
RTJ 502	Φ_9	B	0	80	-40	-40		283
503					10	10		291
504					+10	-10		293
505			0		0	0		295
506			5		0	0		297
507			10		0	0		299
RTJ 508	$\Phi_9 T_{10}$	B	0	28.9	0	0		301
509		B	5	28.9	0	0		1136
								1134

TEST RUN NUMBER

1 13 19 25 31 37 43 49 55 61 67

CM IGM IGY IGYM IGBL IGA MACH ALPHA 6

α β

A) -40, -30, -20, -15, -10, -5, 0, 5, 10

B) -11 → 27, Δ = 1°

ISOLATED SRE

TABLE II. (Continued)

TEST: TA13

DATA SET RUN NUMBER COLLATION SUMMARY

DATE: POST-TEST

DATA SET IDENTIFIER	CONFIGURATION	SCHD. α	SCHD. β	PARAMETERS/VALUES P_T	PARAMETERS/VALUES PC4	NO. OF RUNS	MACH NUMBERS 4.51	TEST RUN NUMBERS
RTJ 510	S_8 (Plumes off)	A	-10	110	—		753	
511			0		—		763	
512			5		—		773	
513			10		—		783	
514			20		—		793	
515			-10	58	—		803	
516			0		—		813	
517			5		—		823	
518			10		—		833	
519			20		—		843	
520			-10	28.9	—		946	
521			0		—		952	
522			5		—		958	
523			10		—		964	
524			20		—		970	
525		B	20		—		977	

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

CN CLM CY CYM MACH ALPHA 4

α & β SCHEDULES

COEFFICIENTS

A) -30°, -25°, -20°, -15°, -10°, -5°, 0°, 5°, 10°, 15°

B) -30°, -25°, -20°, -15°, -10°

C) 10°, 15°

ISOLATED SRB

TABLE II. (Concluded)

TEST: IA-13 DATA SET/RUN NUMBER COLLATION SUMMARY LATE: POST-TEST

DATA SET IDENTIFIER	CONFIGURATION	SCHD. α	SCHD. β	PARAMETERS/VALUES PT	PARAMETERS/VALUES PCH	NO. OF RUNS	MACH NUMBERS	TEST RUN NUMBERS
RTJ527	S8 (PLUMES ON)	A	-10	28.9	750		4.51	981
528			0					987
529			5					993
530			10					999
531			20					1005
532			-10		1500			1011
533			0					1017
534			5					1022
535			10					1029
536			20					1035

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

CN CLM CY CYN COEFFICIENTS MACH ALPHA

α OR β SCHEDULES A) $-30° \rightarrow 15°$, $\Delta\alpha = 5°$

TABLE III. MODEL DIMENSIONAL DATA

MODEL COMPONENT: BODY (E_{19})

GENERAL DESCRIPTION: Configuration 3 lightweight Orbiter fuselage

Model Scale = 0.010 Model Drawing No. SS-A00062

DRAWING NUMBER: VL70-000139B

DIMENSIONS:	FULL-SCALE	MODEL SCALE
Length ~ in.	1290.3	12.903
Max. Width ~ in. (@ X_o = 1528.3 in.)	267.6	2.676
Max. Depth ~ in. (@ X_o = 1480.52 in.)	244.5	2.445
* Fineness Ratio	4.846	4.846
Area ~ ft^2		
Max. Cross-Sectional (@ X_o = 1480.52 in.)	386.67	0.03867
Planform		
Wetted		
Base		

* Fineness Ratio is the fuselage length divided by the equivalent diameter for the maximum cross-sectional area.

TABLE III. MODEL DIMENSIONAL DATA (CONTINUED)

MODEL COMPONENT: Canopy (C7)

GENERAL DESCRIPTION: Configuration 3 lightweight Orbiter Canopy

Model Scale = 0.010 Model Drawing No. SS-A00062

DRAWING NUMBER VL70-000139B

DIMENSION:	FULL SCALE	MODEL SCALE
Length (X_o = 433 IN. to X_o = 670 IN.)	237	2.370
Max Width		
Max Depth		
Fineness Ratio		
Area		
Max Cross-Sectional		
Planform		
Wetted		
Base		

TABLE III. MODEL DIMENSIONAL DATA (CONTINUED)

MODEL COMPONENT: Elevon (E_{23})

GENERAL DESCRIPTION: Configuration 3 lightweight orbiter elevons

Data for (1) of (2) sides

Model Scale = 0.010 Model Drawing No. SS-A00109

DRAWING NUMBER: VL70-000139B

DIMENSIONS:	FULL-SCALE	MODEL SCALE
Area ~ $ft.^2$	205.52	0.02055
Span (equivalent)~in.	353.34	3.5334
Inb'd equivalent chord ~ in.	114.78	1.1478
Outb'd equivalent chord~ in.	55.00	0.550
Ratio movable surface chord/ total surface chord		
At Inb'd equiv. chord	0.208	0.208
At Outb'd equiv. chord	0.400	0.400
Sweep Back Angles, deg		
Leading Edge	0.00	0.00
Tailing Edge	-10.24	-10.24
Hingeline	0.00	0.00
Area Moment (Normal to hinge line)~ft^3	1548.07	0.00155

TABLE III. MODEL DIMENSIONAL DATA (CONTINUED)

MODEL COMPONENT: Body Flap (F_5)

GENERAL DESCRIPTION: Configuration 3 lightweight orbiter body flap

Model Scale = 0.010 Model Drawing No. SS-A00062

DRAWING NUMBER VL70-000139P

DIMENSION:	FULL SCALE	MODEL SCALE
Length ~ in.	84.70	0.8470
Max Width ~ in.	267.6	2.6760
Max Depth		
Fineness Ratio		
Area ~ ft.^{2}		
Max Cross-Sectional		
Planform	142.5195	0.01425195
Wetted		
Base	38.0958	0.00380958

TABLE III. MODEL DIMENSIONAL DATA (CONTINUED)

MODEL COMPONENT: OMS Pod (M_4)

GENERAL DESCRIPTION: Configuration 3 lightweight Orbiter Orbital Manuevering System Pod.

Model Scale = 0.010 Model Drawing No. SS-A00062

DRAWING NUMBER VL70-000139B

DIMENSION:	FULL SCALE	MODEL SCALE
Length~in.	346.0	3.460
Max Width~in.	108.0	1.080
Max Depth~in.	113.0	1.13
Fineness Ratio		
Area		
Max Cross-Sectional		
Planform		
Wetted		
Base		

TABLE III. MODEL DIMENSIONAL DATA (CONTINUED)

MODEL COMPONENT: Rudder (R_5)

GENERAL DESCRIPTION: Configuration 3 lightweight Orbiter rudder

Model Scale = 0.010 Model Drawing No. SS-A00062

DRAWING NUMBER: VL70-000139B
VL70-000095

DIMENSIONS:	FULL-SCALE	MODEL SCALE
Area~ft.^{2}	106.38	0.010638
Span (equivalent)~in.	201.0	2.010
Inb'd equivalent chord~in.	91.585	0.91585
Outb'd equivalent chord~in.	50.833	0.50833
Ratio movable surface chord/ total surface chord		
At Inb'd equiv. chord	0.400	0.400
At Outb'd equiv. chord	0.400	0.400
Sweep Back Angles, deg.		
Leading Edge	34.83	34.83
Tailing Edge	26.25	26.25
Hingeline	34.83	34.83
Area Moment (Normal to hinge line)~ft^3	526.13	0.00053

TABLE III. MODEL DIMENSIONAL DATA (CONTINUED)

MODEL COMPONENT: VERTICAL TAIL (V_7)

GENERAL DESCRIPTION: Configuration 3 lightweight orbiter vertical tail, double wedge airfoil sections with rounded leading edge.

Model Scale = 0.010 Model Drawing No. SS-A00062

DRAWING NUMBER: VL70-000139 B
VL70-000095,

DIMENSIONS:	FULL-SCALE	MODEL SCALE
TOTAL DATA		
Area (Theo)~ ft^2	413.25	0.01,132
Planform		
Span (Theo)~in.	315.72	3.1572
Aspect Ratio	1.675	1.675
Rate of Taper	0.507	0.507
Taper Ratio	.404	.404
Sweep Back Angles~deg.		
Leading Edge	45.000	45.000
Trailing Edge	26.249	26.249
0.25 Element Line	41.130	41.130
Chords:		
Root (Theo) WP	268.50	2.6850
Tip (Theo) WP	108.47	1.0847
MAC	199.81	1.9981
Fus. Sta. of .25 MAC	1463.50	14.6350
W. P. of .25 MAC	635.522	6.35522
B. L. of .25 MAC	0.00	0.00
Airfoil Section		
Leading Wedge Angle ~deg.	10.000	10.000
Trailing Wedge Angle~deg.	14.920	14.920
Leading Edge Radius ~in.	2.00	0.020
Void Area ~ ft^2	13.17	0.0013
Blanketed Area ~ ft^2	12.67	0.0012

TABLE III. MODEL DIMENSIONAL DATA (CONTINUED)

MODEL COMPONENT: WING (W_{107})

GENERAL DESCRIPTION: Configuration 3 lightweight Orbiter wing

Model Scale = 0.010 Model Drawing No. SS-A00109

DWG. NO. VL70-000139B

DIMENSIONS:	FULL-SCALE	MODEL SCALE
TOTAL DATA		
Area (Theo.)~ft^2		
Planform	2690.00	0.2690
Span (Theo) ~ in.	936.68	9.3668
Aspect Ratio	2.265	2.265
Rate of Taper	1.177	1.177
Taper Ratio	0.200	0.200
Dihedral Angle, deg. (@ T.E. of Elevon)	3.500	3.500
Incidence Angle, deg.	0.500	0.500
Aerodynamic Twist, deg.	+3.000	+3.000
Sweep Back Angles, deg.		
Leading Edge	45.000	45.000
Trailing Edge	-10.24	-10.24
0.25 Element Line	35.209	35.209
Chords: ~ in.		
Root (Theo) B.P.O.O.	689.24	6.8924
Tip, (Theo) B.P.	137.85	1.3785
MAC	474.21	4.7421
Fus. Sta. of .25 MAC	1136.89	11.3689
W.P. of .25 MAC	299.20	2.9920
B.L. of .25 MAC	182.13	1.8213
EXPOSED DATA		
Area (Theo) ~ ft^2	1752.29	0.17523
Span, (Theo)~ in. (From B.P. 108 in.)	720.68	7.2068
Aspect Ratio	2.058	2.058
Taper Ratio	0.2451	0.2451
Chords: ~ in.		
Root (@ B.P. 108)	562.40	5.6240
Tip	137.85	1.3785
MAC	393.03	3.9303
Fus. Sta. of .25 MAC	1185.31	11.8531
W.P. of .25 MAC	300.20	3.0020
B.L. of .25 MAC	251.76	2.5176
Airfoil Section (Rockwell Mod NASA) XXXX-64		
Root $\frac{T}{c}$ = @ Y_o 199 to NACA 0010	0.10	0.10
Tip $\frac{T}{c}$ =	0.12	0.12
Data for (1) of (2) Sides		
Leading Edge Cuff		
Planform Area ~ ft^2	18.33	0.00183
Leading Edge Intersects Fus M. L. @ Sta	502	5.02
Leading Edge Intersects Wing @ Sta	1083.7	10.837

TABLE III. MODEL DIMENSIONAL DATA (CONTINUED)

MODEL COMPONENT: External Tank (T_{10})

GENERAL DESCRIPTION: Configuration 3 External Oxygen Hydrogen Tank

Model Scale = 0.010 Model Drawing No. SS-A00108

DRAWING NUMBER VL72-000038
VL78-000041

DIMENSION:	FULL SCALE	MODEL SCALE
Length~in.	1865	18.65
Max Diameter~in.	324	3.24
Max Depth		
Fineness Ratio (Length/Max. Dia.)	5.75617	5.75617
Area~ft^2		
Max Cross-Sectional	572.555	0.05726
Planform		
Wetted		
Base		

TABLE III. MODEL DIMENSIONAL DATA (CONCLUDED)

MODEL COMPONENT: Booster (S_8)

GENERAL DESCRIPTION: Configuration 3 Booster Solid Rocket Motor
Data for 1 of 2 Boosters

Model Scale 0.010 Model Drawing No. SSA-00113

DRAWING NUMBER VL72-000088
VL77-000036

DIMENSION:	FULL SCALE	MODEL SCALE
Length (Includes Nozzle)~in.	1741.0	17.410
Max Width (Tank Dia.)~in.	142.0	1.420
Max Dia. (Max. Nozzle Shroud Dia.)~in.	205.0	2.050
* Fineness Ratio	8.49268	8.49268
Area~ft^2		
Max Cross-Sectional (Nozzle Shroud)	229.21	0.02292
Planform		
Wetted		
Base		

* Length divided by nozzle shroud diameter.

Notes:

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

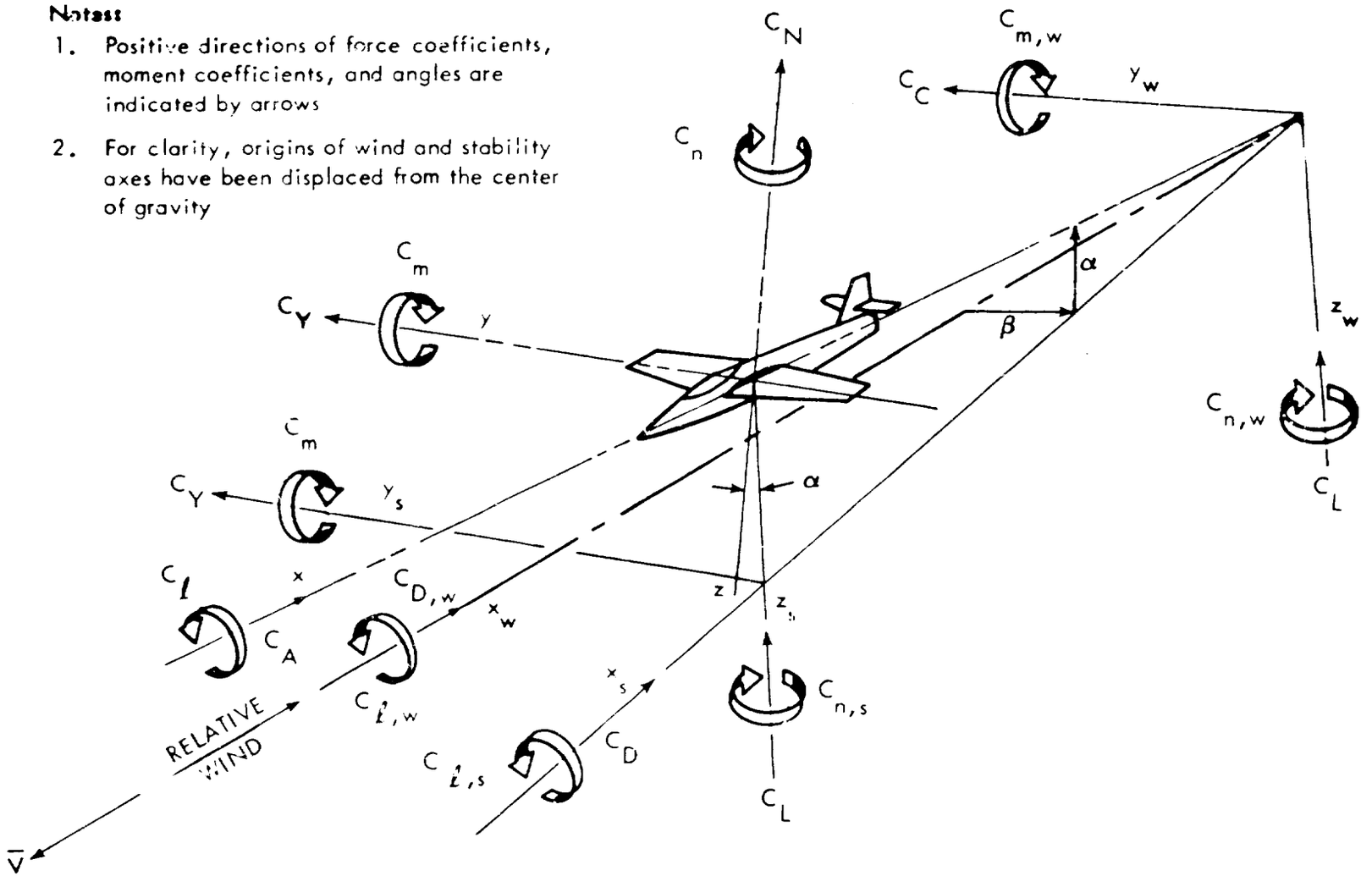
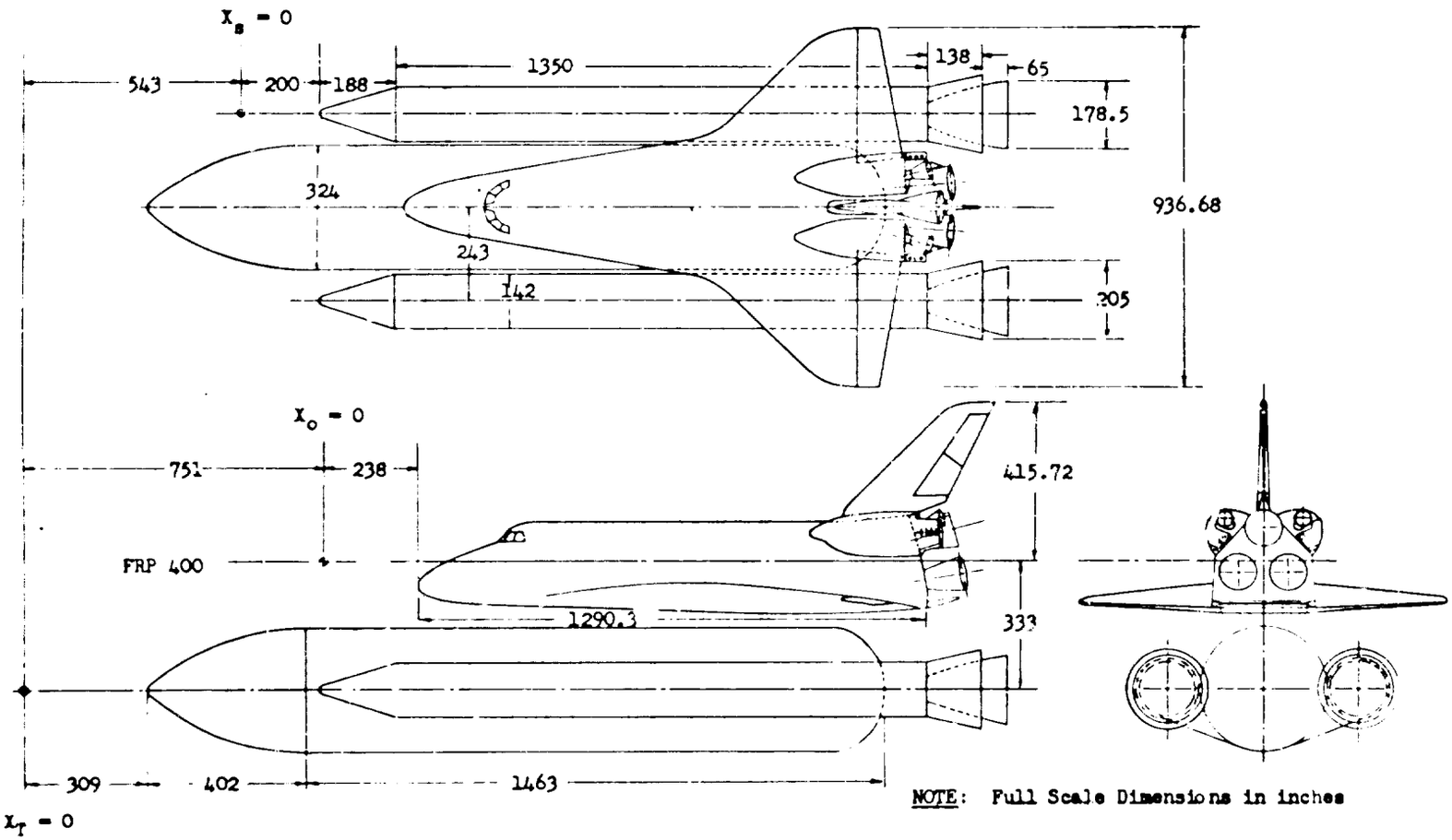
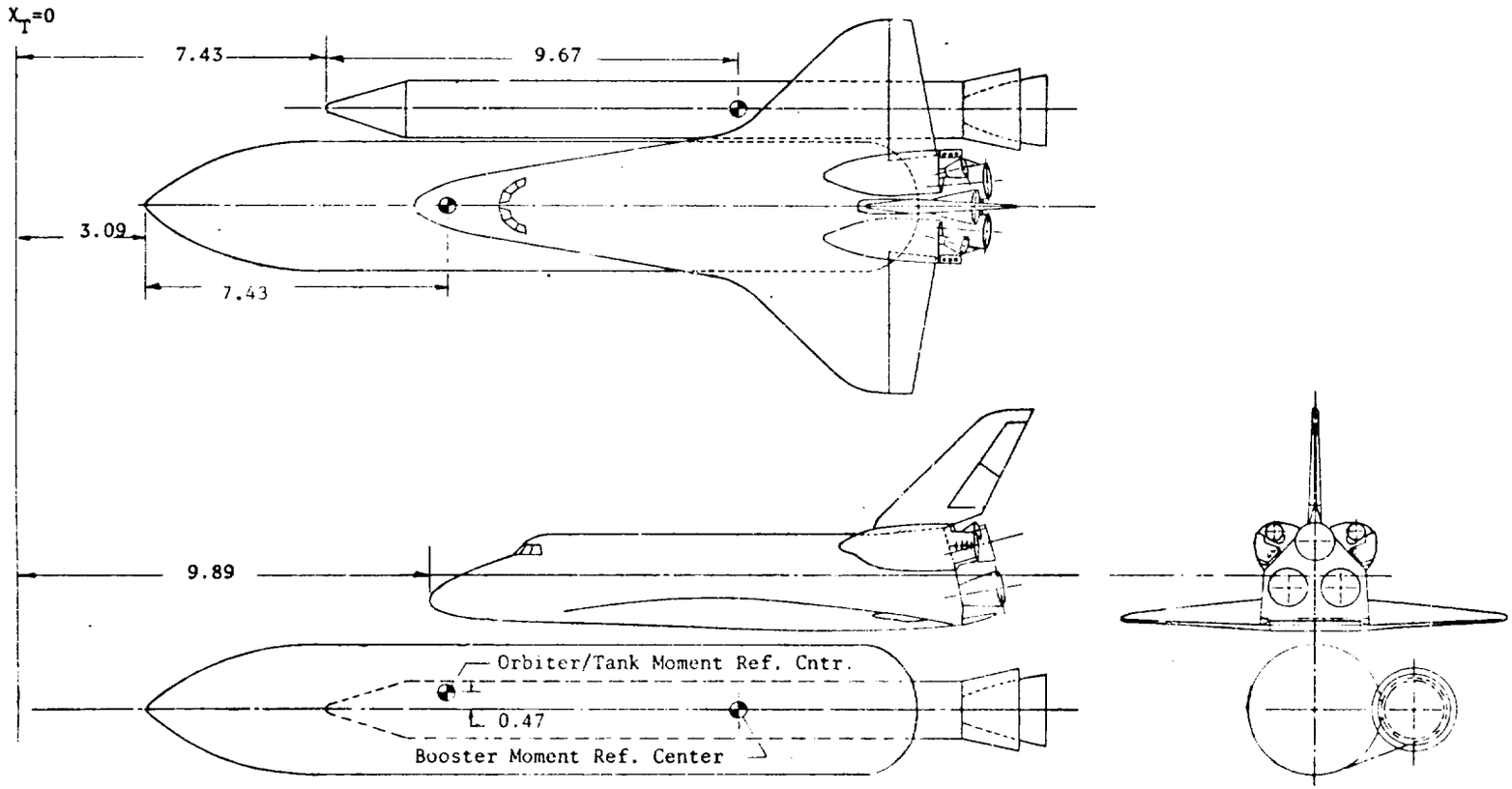


Figure 1. Axis Systems



a. Integrated Vehicle Configuration 3 (Mated)

Figure 2. Model Sketches

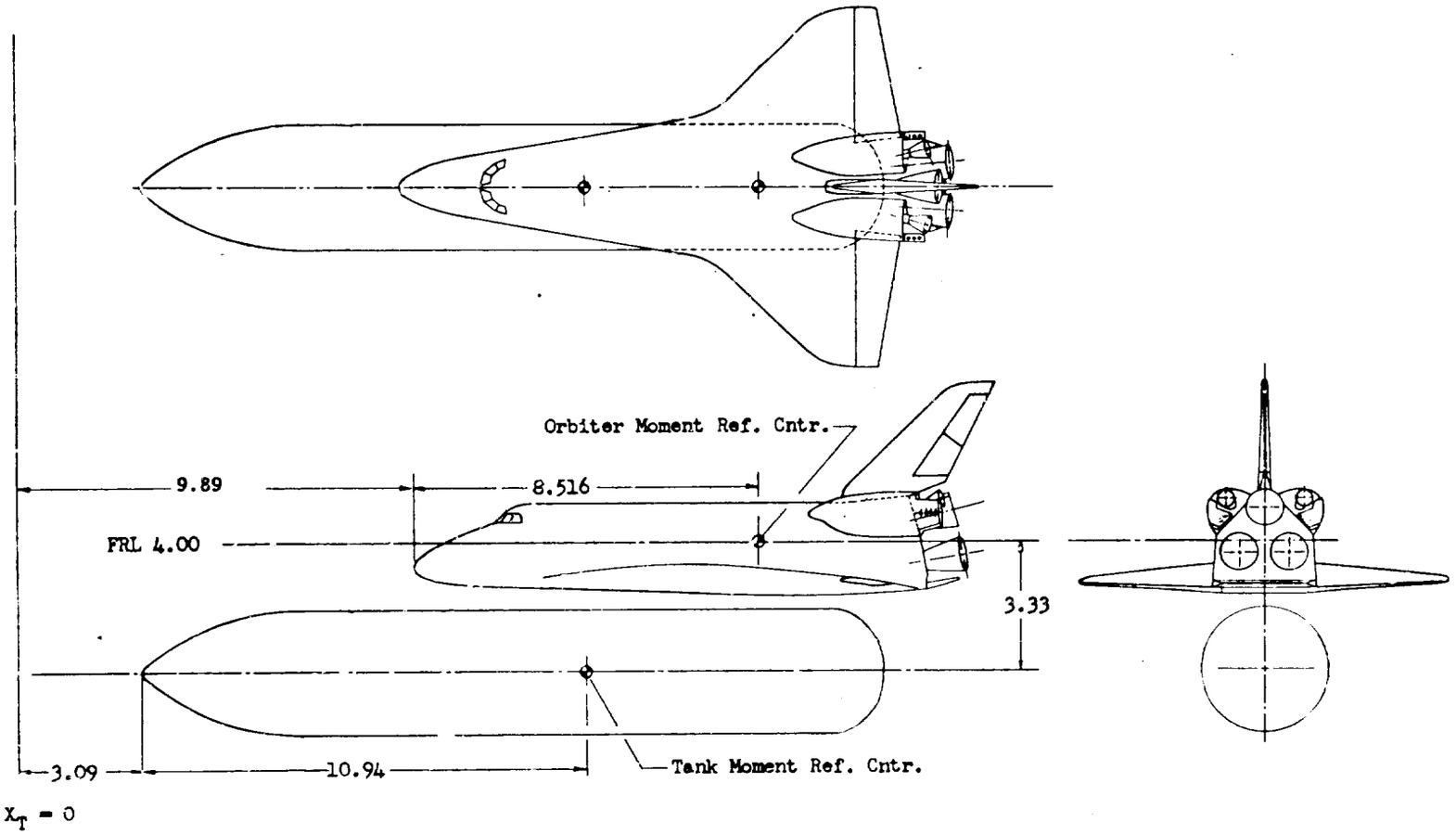


NOTES:

1. Only righthand booster used for Booster Separation testing.
2. Orbiter rigidly attached to tank.
3. Mated position shown.
4. All dimensions in inches.

b. Model 32-OTS Integrated Vehicle Configuration 3

Figure 2. - Continued



NOTES:

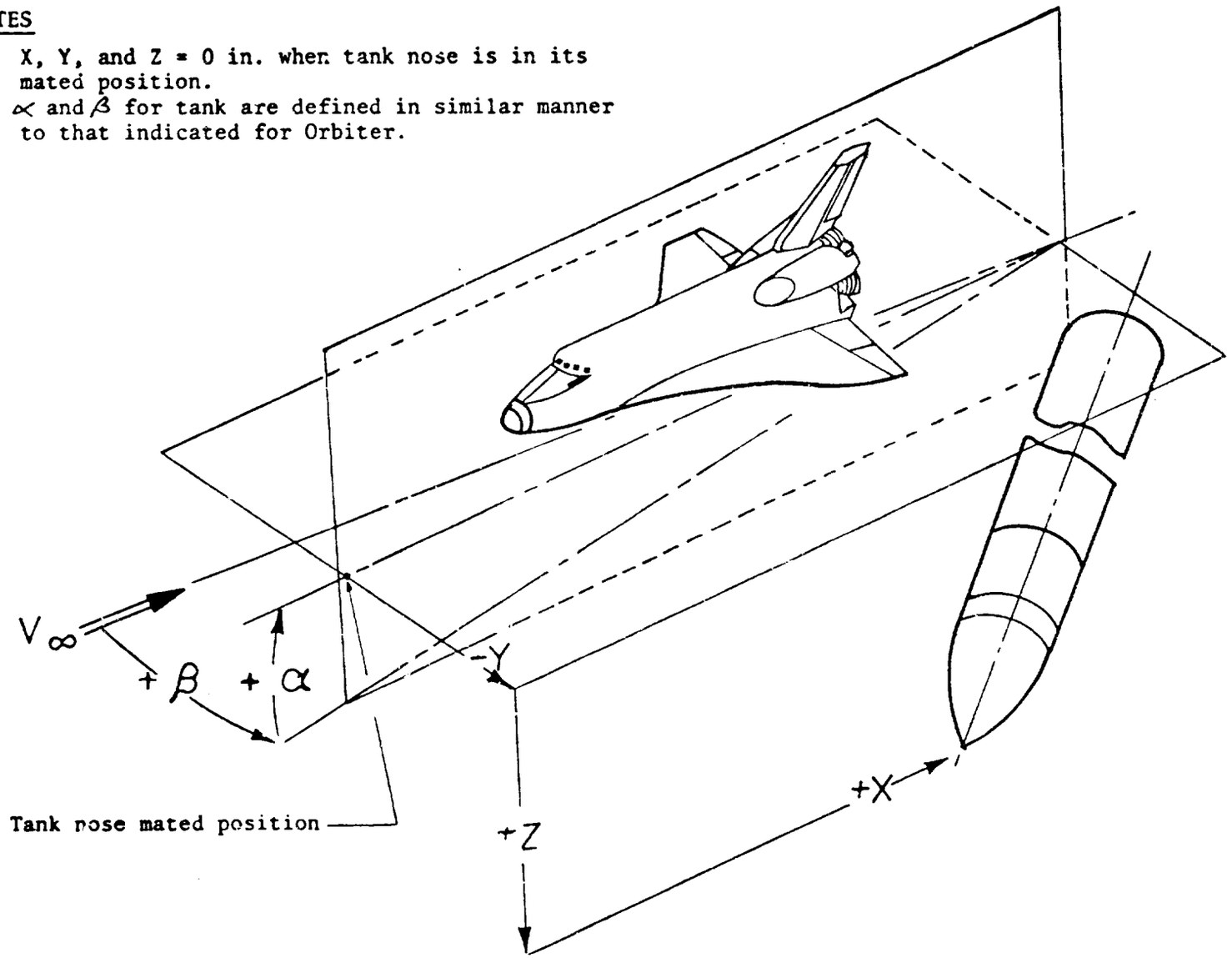
1. Models for Tank separation from Orbiter testing.
2. Mated position shown.
3. All dimensions in inches.

c. Model 32-OTS Orbiter and Tank Configuration 3

Figure 2. - Continued

NOTES

1. X, Y, and Z = 0 in. when tank nose is in its mated position.
2. α and β for tank are defined in similar manner to that indicated for Orbiter.

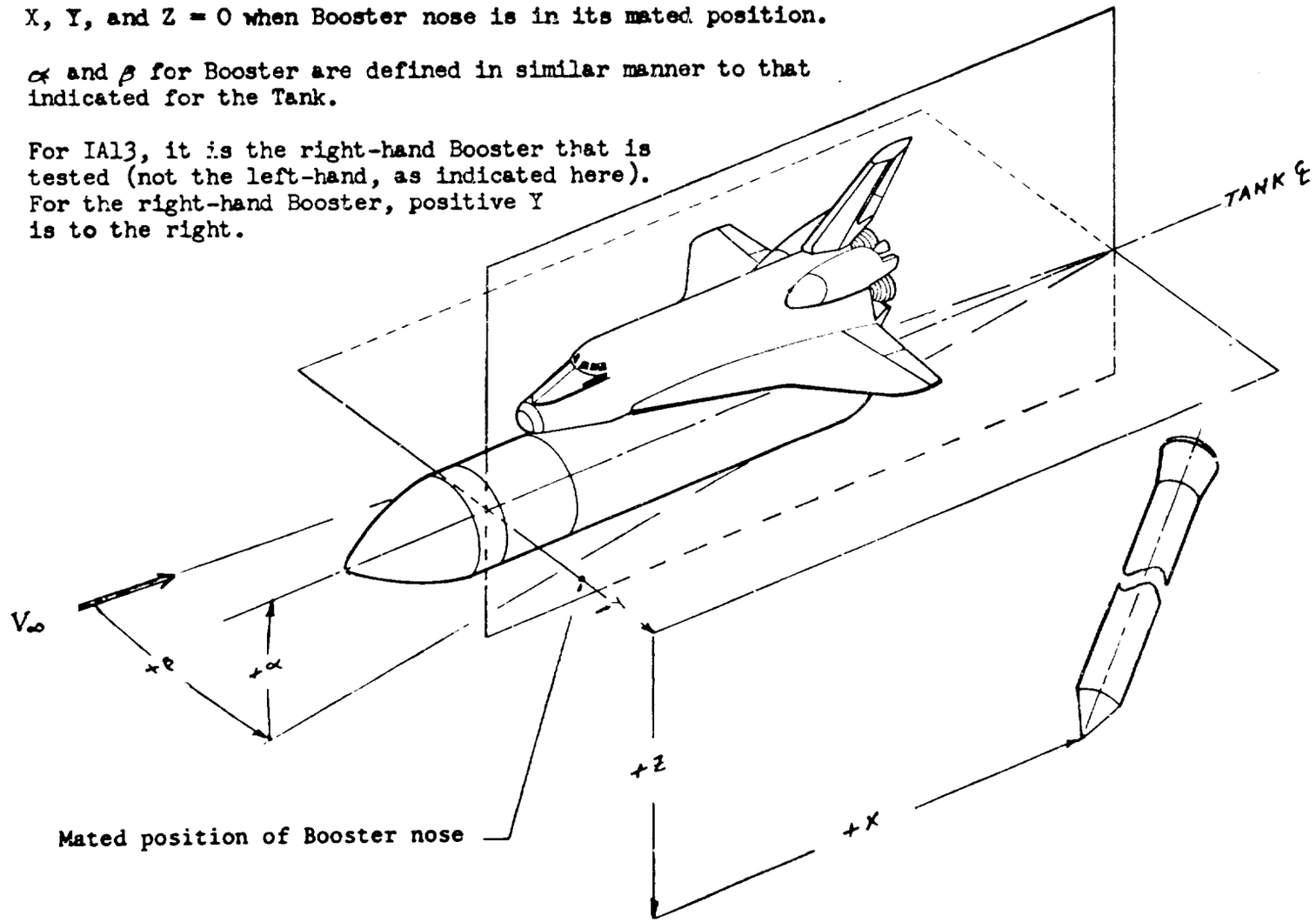


d. Tank Separation from Orbiter

Figure 2. - Continued

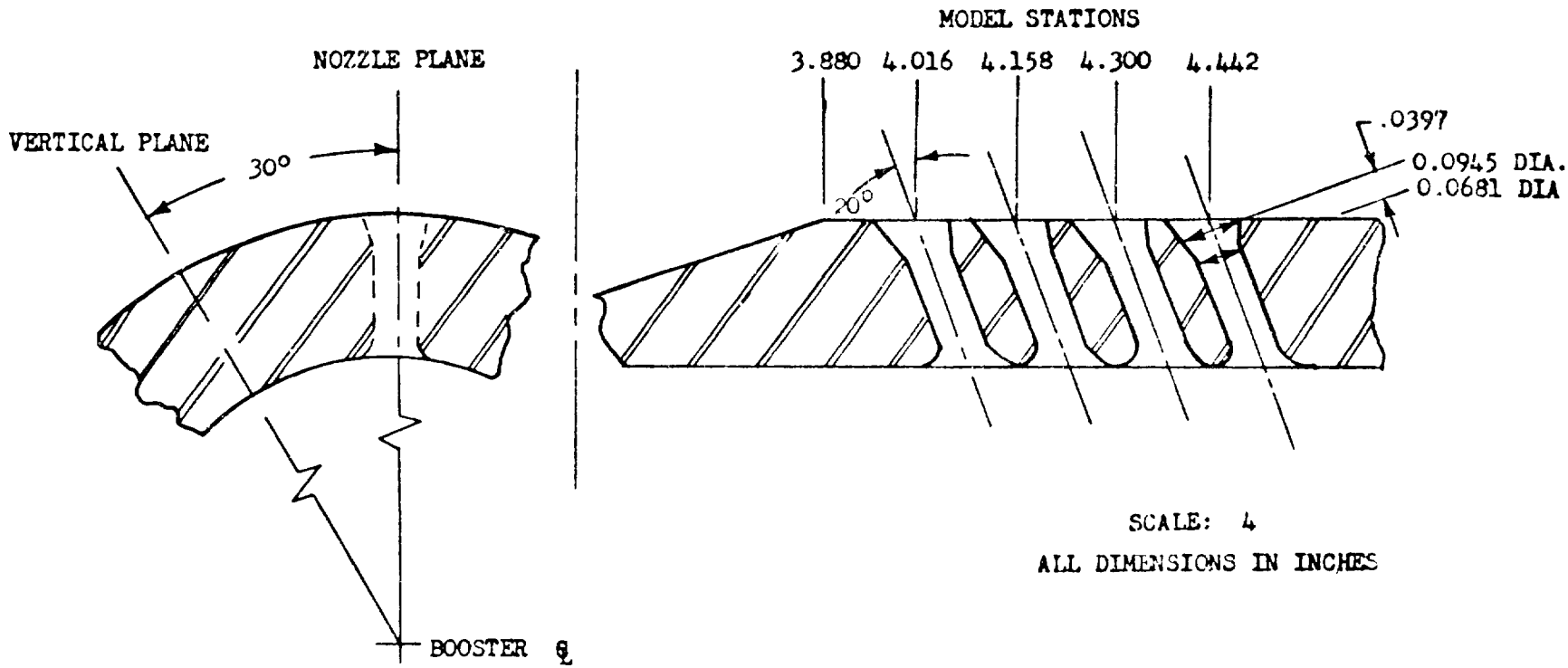
NOTES:

1. X, Y, and Z = 0 when Booster nose is in its mated position.
2. α and β for Booster are defined in similar manner to that indicated for the Tank.
3. For IA13, it is the right-hand Booster that is tested (not the left-hand, as indicated here). For the right-hand Booster, positive Y is to the right.



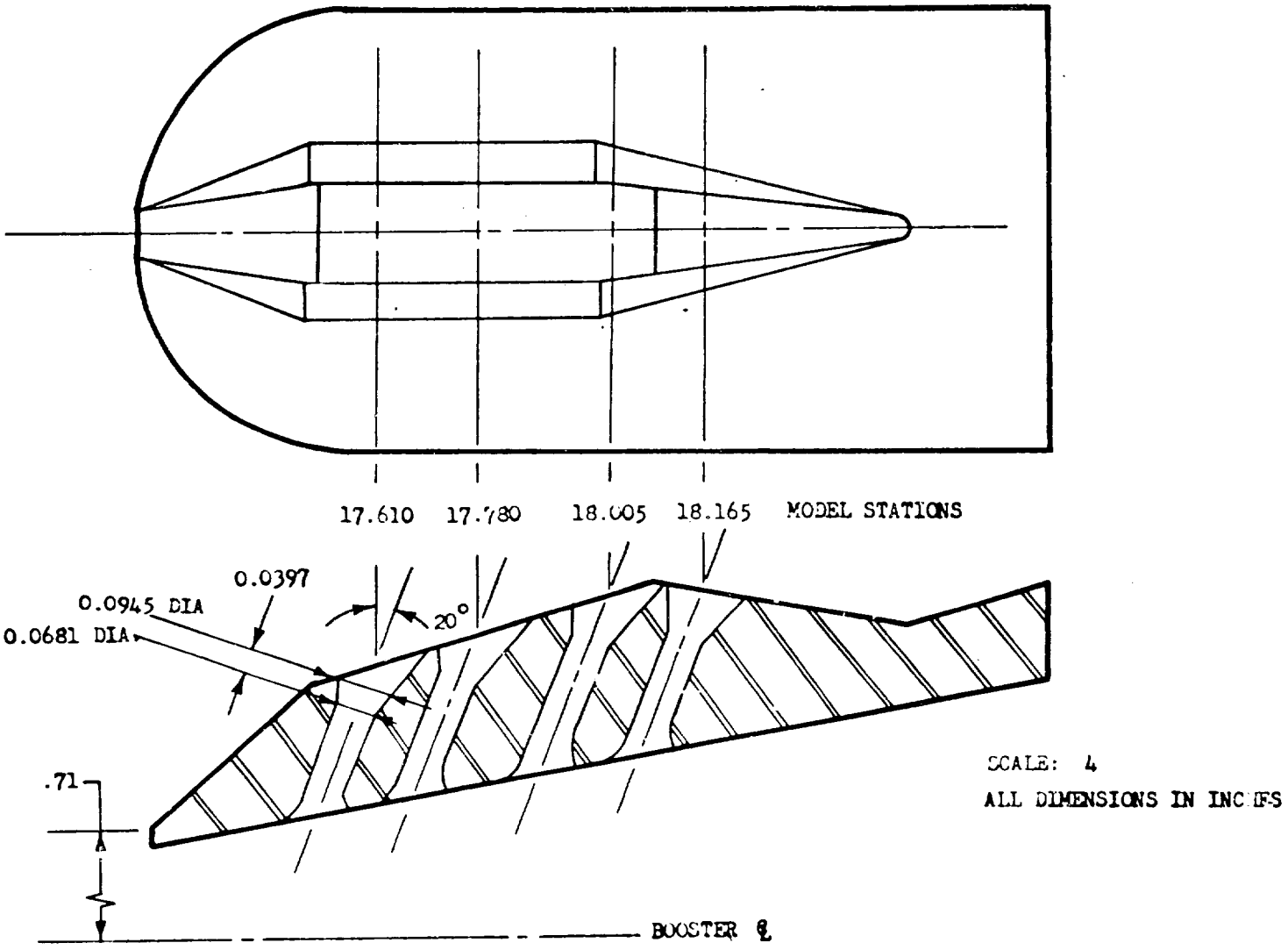
e. Booster Separation from Orbiter/Tank

Figure 2. - Continued



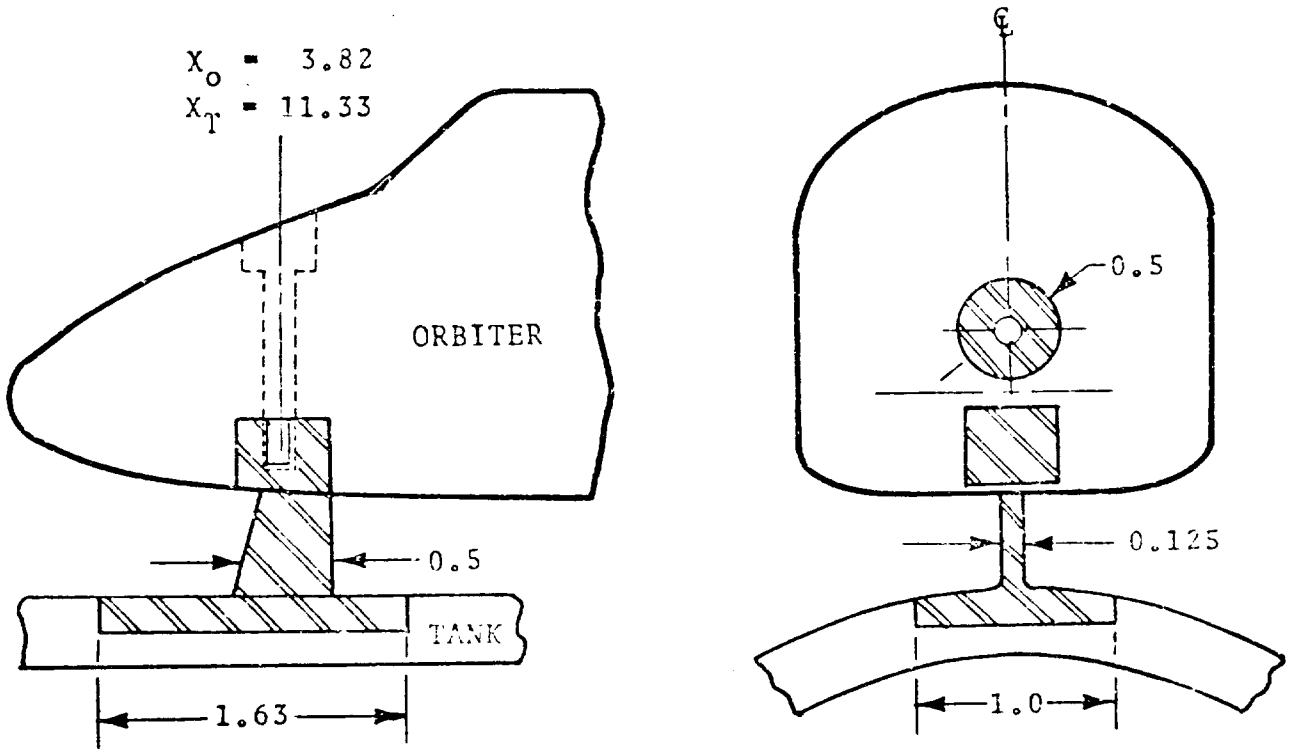
f. 32-OTS Booster Model Forward Thruster Nozzle Block

Figure 2. - Continued



g. 32-OTS Booster Model Aft Thruster Nozzle Block

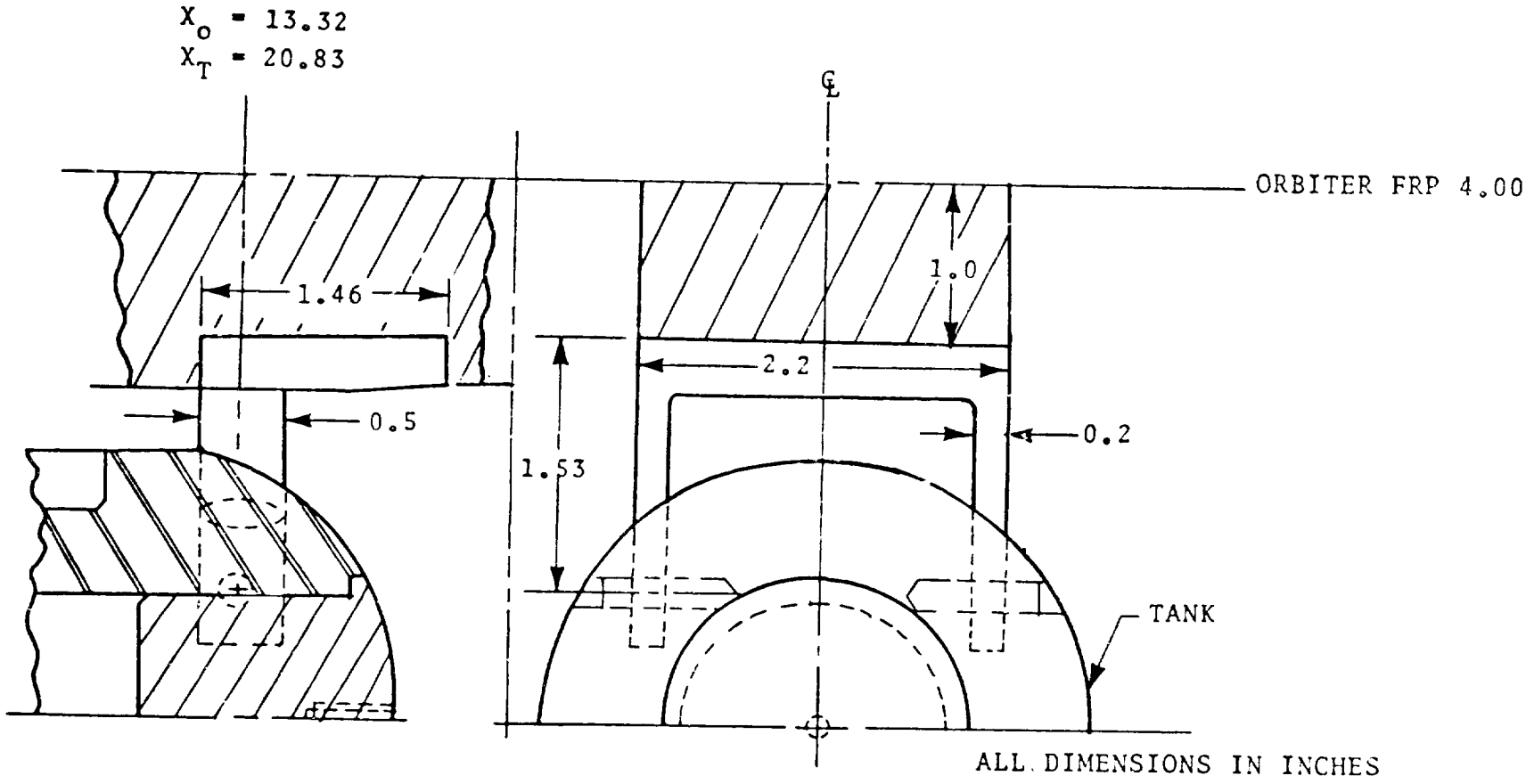
Figure 2. - Continued



ALL DIMENSIONS IN INCHES

h. 32-OTS Orbiter/Tank Forward Attachment

Figure 2. - Continued



i. 32-OTS Orbiter/Tank Aft Attachment

Figure 2. - Continued

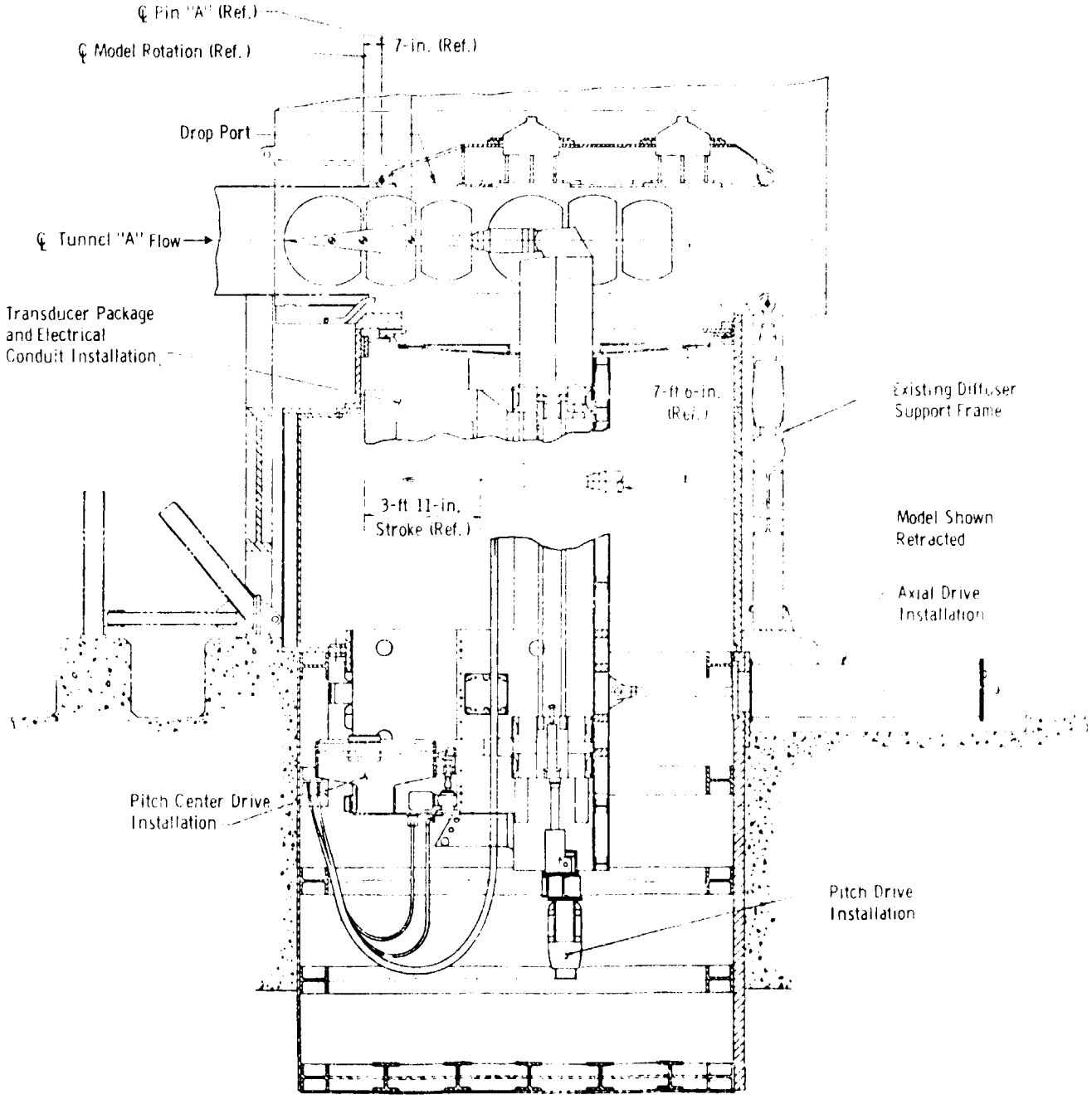


FIGURE 3. AEDC von Karman Gas Dynamic Facility Tunnel A

Volume	Description
I	Data Figures (pages 1 through 894)
II	Data Figures (pages 895 through 1498)
III	Tabulated Source Data

DATA FIGURES

VOLUME I

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(RY4505)	□	(A)3 ISOLATED ORBITER (09)
(RY4506)	◇	(A)3 ISOLATED ORBITER (09)
(RY4507)	◇	(A)3 ISOLATED ORBITER (09)

BETA	ELEVTR	AILRON	PTOTAL	SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS
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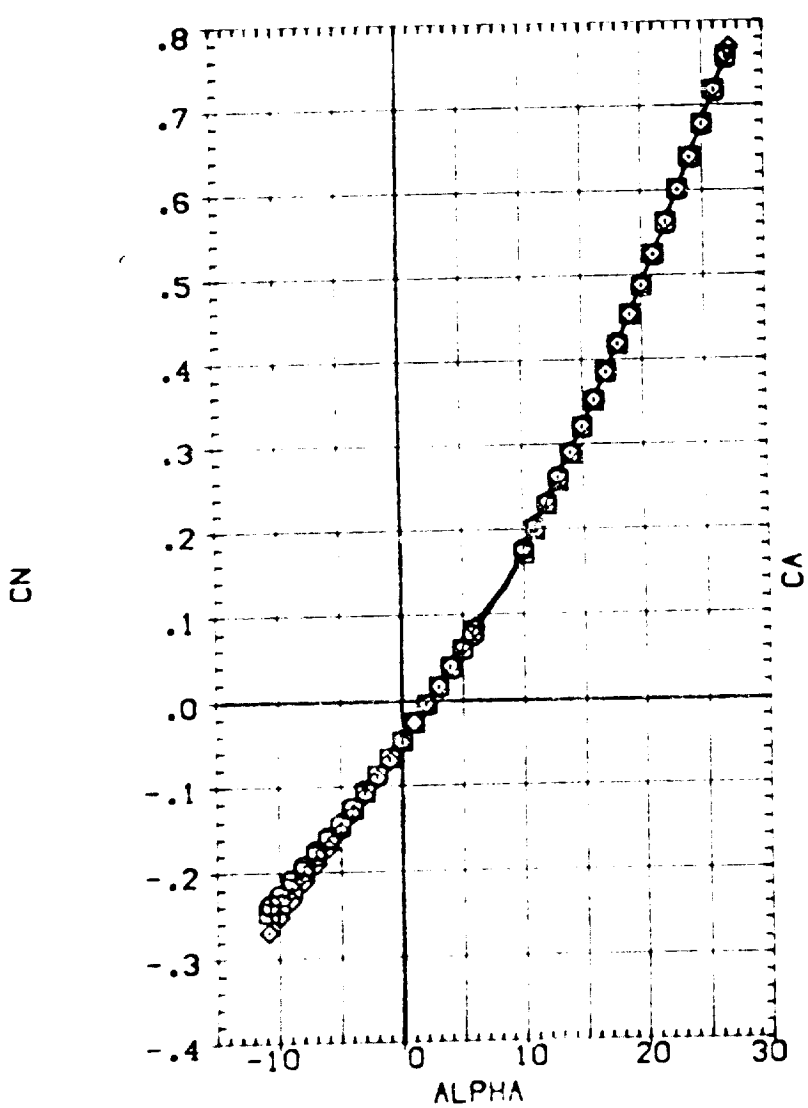
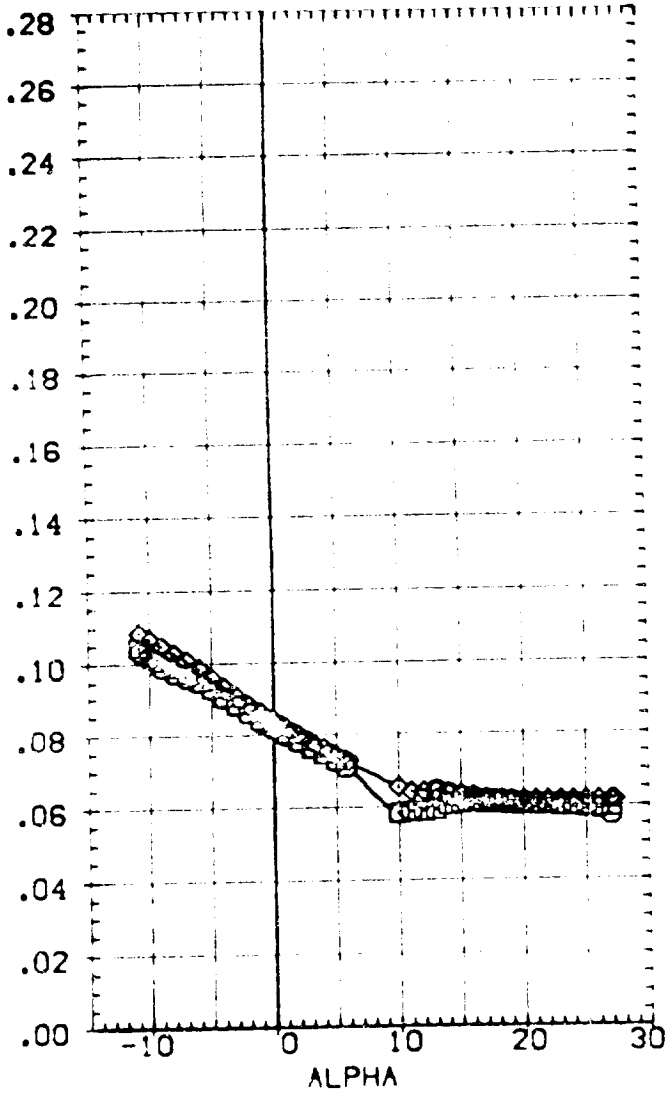
5.000	.000	.000	80.000	
10.000	.000	.000	80.000	



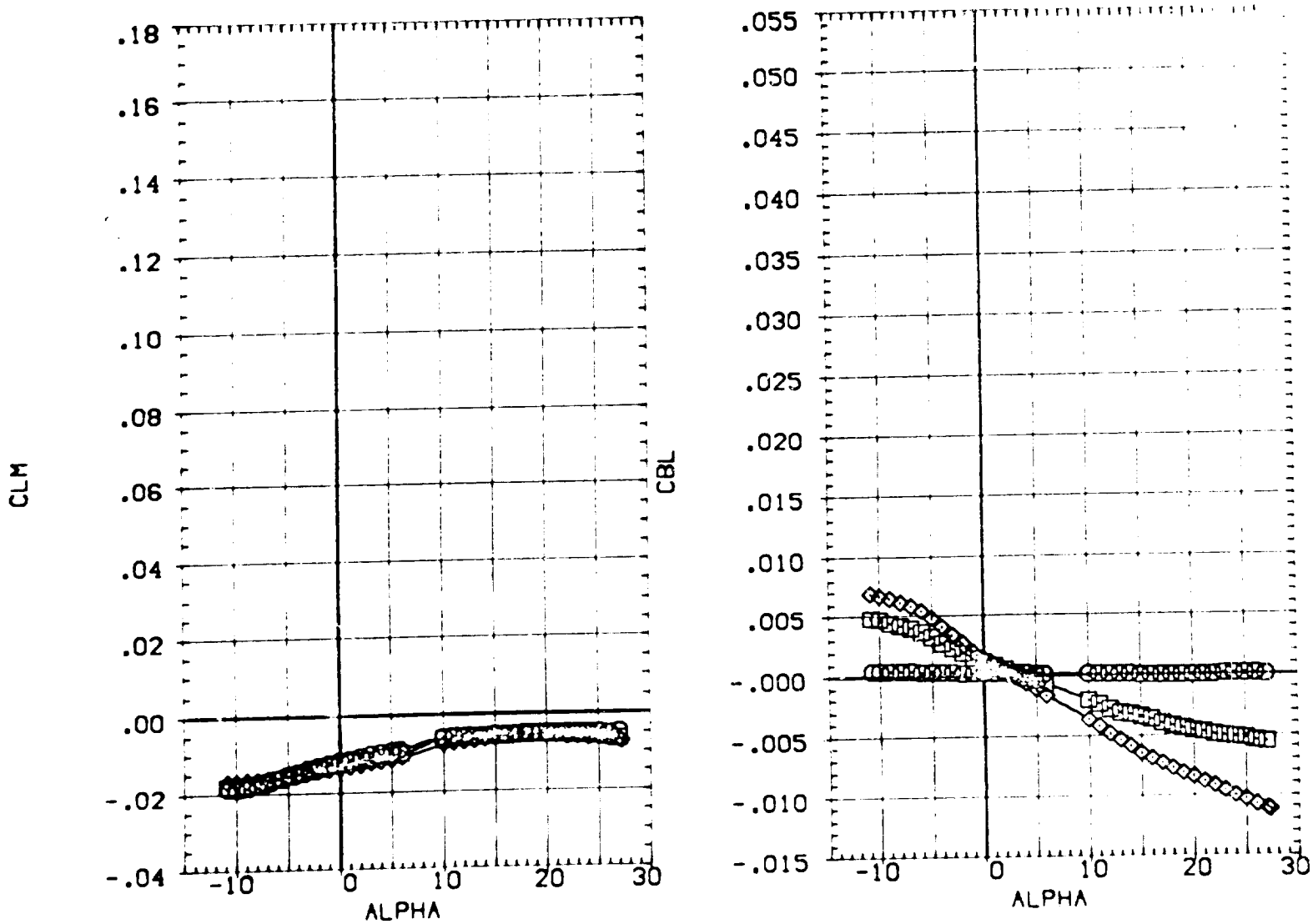


ISOLATED ORBITER AERODYNAMIC CHARACTERISTICS

(A)MACH = 4.52

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
[RT#5C5]	□	[A]3 ISOLATED ORBITER (09)
[RT#5C6]	○	[A]3 ISOLATED ORBITER (09)
[RT#5C7]	◇	[A]3 ISOLATED ORBITER (09)

BETA	ELEVTR	AILRON	PTOTAL
.000	.000	.000	80.000
5.000	.000	.000	80.000
10.000	.000	.000	80.000



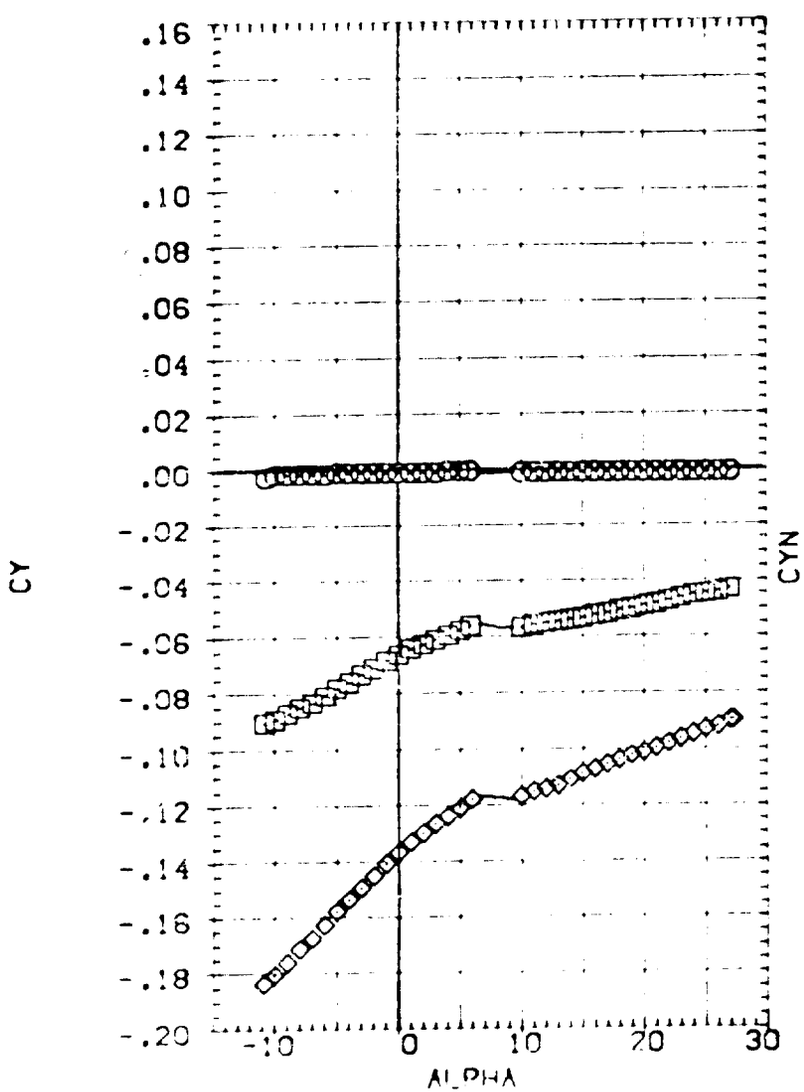
ISOLATED ORBITER AERODYNAMIC CHARACTERISTICS

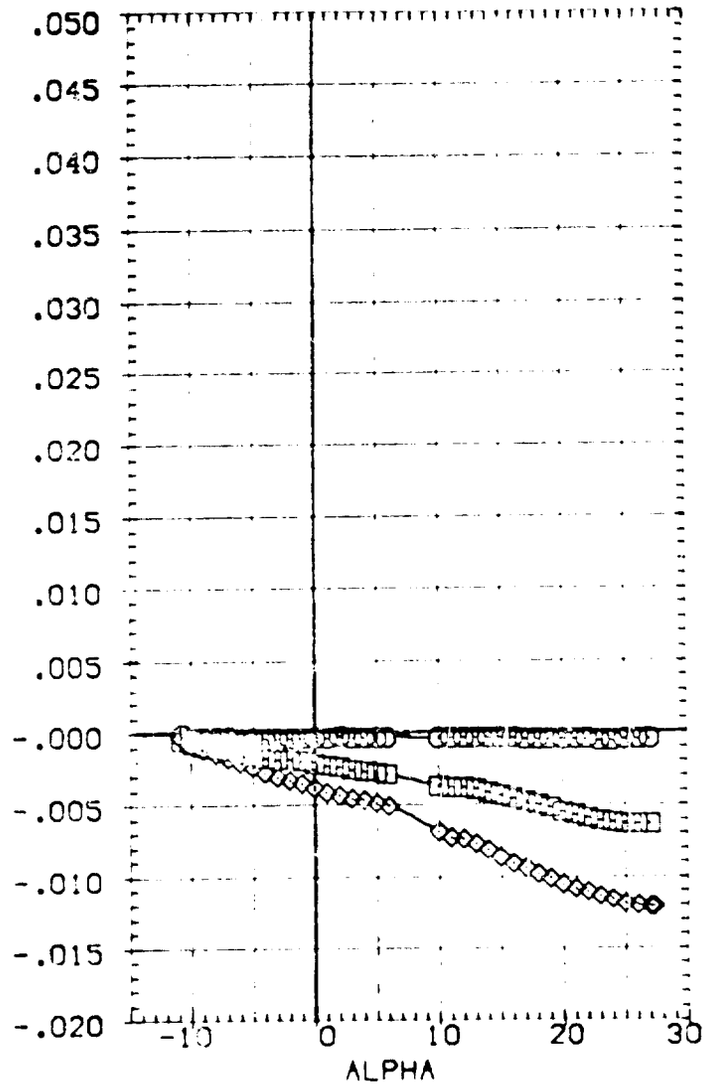
(A)MACH = 4.52

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
[illegible]	□	[illegible] ISOLATED ORBITER (09)
[illegible]	◇	[illegible] ISOLATED ORBITER (09)
[illegible]		[illegible] ISOLATED ORBITER (09)

BETA	ELEVTR	AILRON	PTOTAL
.000	.000	.000	80.000
5.000	.000	.000	80.000
10.000	.000	.000	80.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



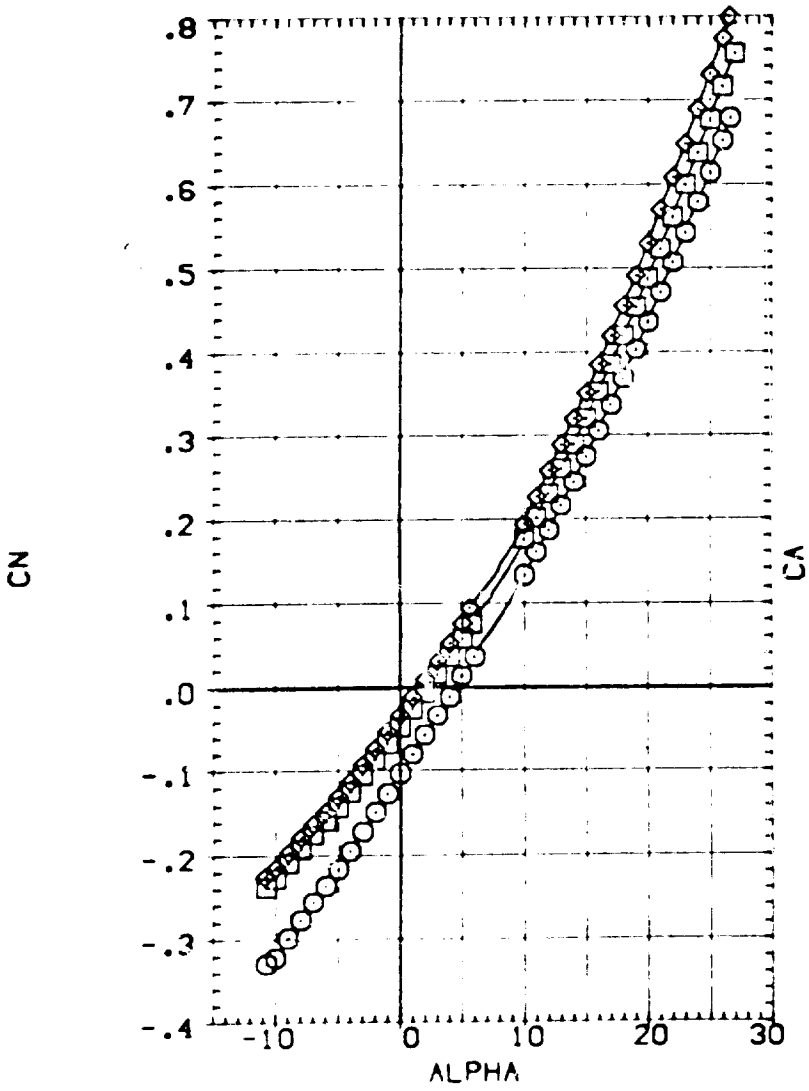


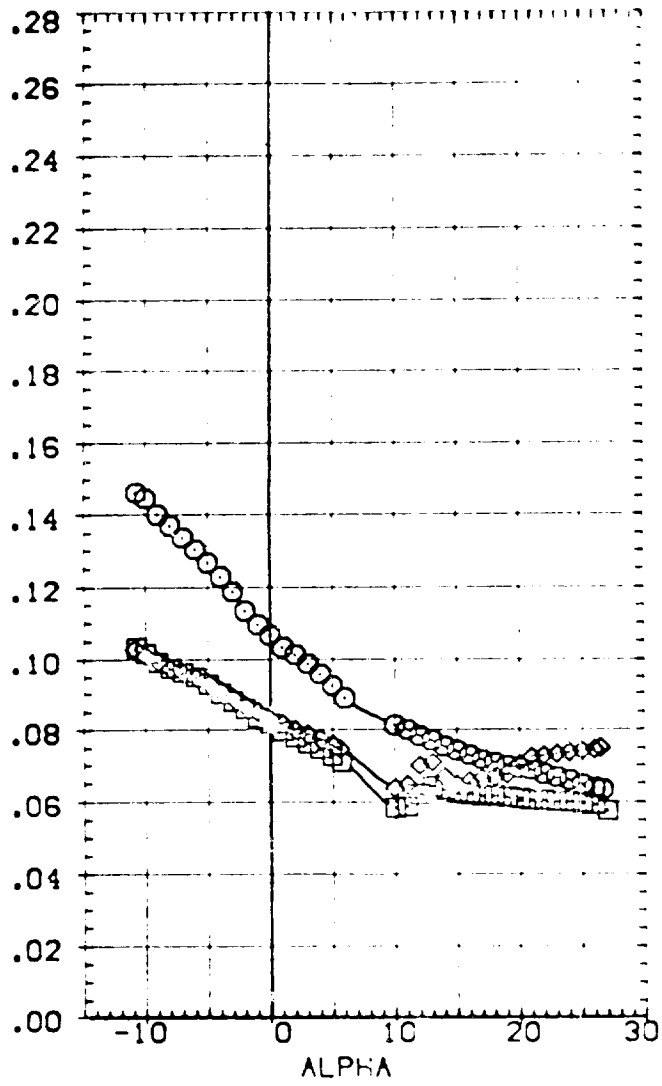
ISOLATED ORBITER AERODYNAMIC CHARACTERISTICS

(A)MACH = 4.52

DATA SET	SYMBOL	CONFIGURATION	DESCRIPTION
[illegible]	□	[A:3	ISOLATED ORBITER (09)
[illegible]	○	[A:3	ISOLATED ORBITER (09)
[illegible]	◇	[A:3	ISOLATED ORBITER (09)

BETA	ELEVTR	AILRON	PTOTAL
.000	-10.000	.000	80.000
.000	.000	.000	80.000
.000	10.000	.000	80.000





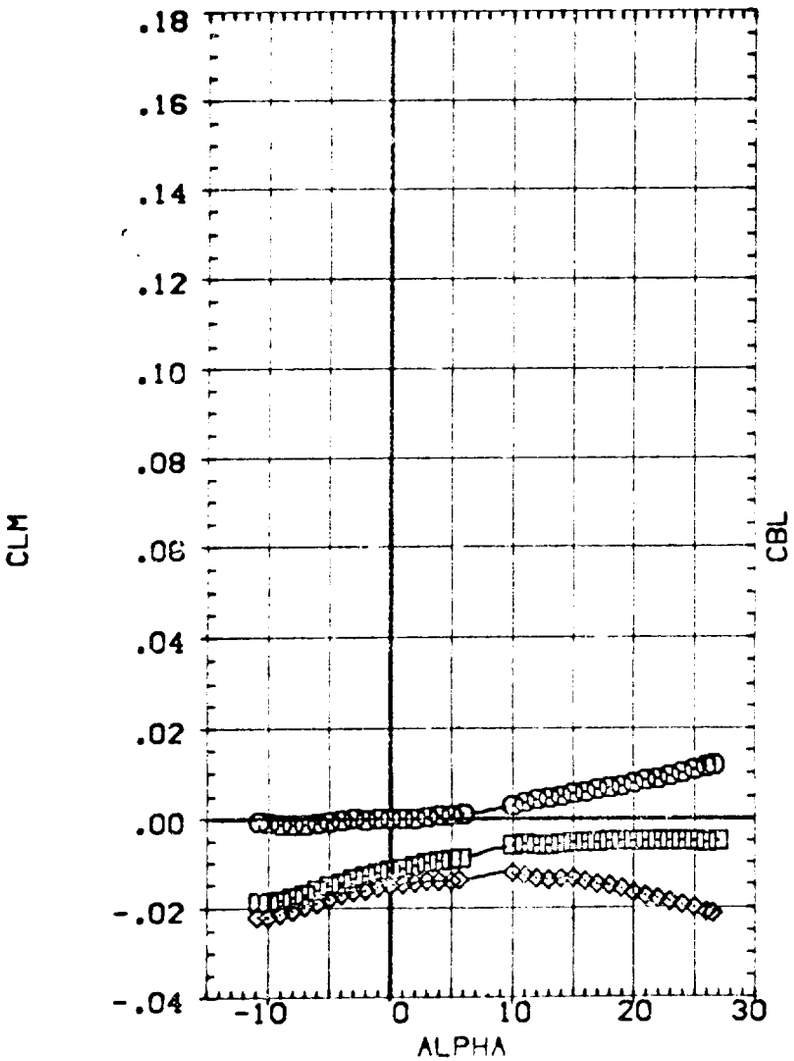
ISOLATED ORBITER AERODYNAMIC CHARACTERISTICS

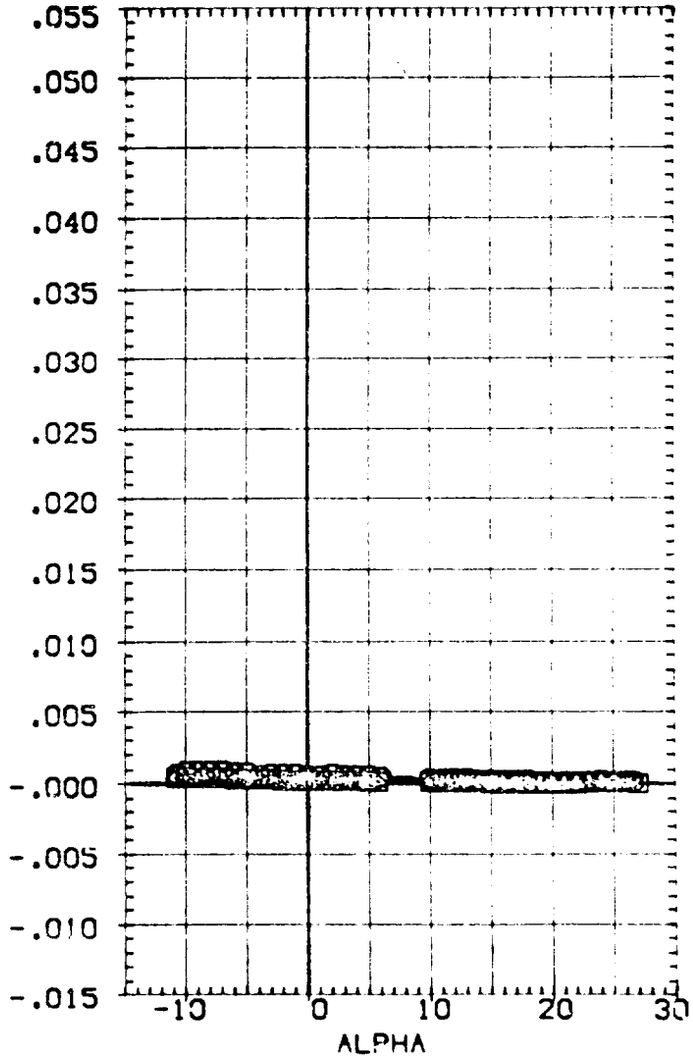
(A)MACH = 4.52

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(RTJ502)	□	(A)3 ISOLATED ORBITER (09)
(RTJ505)	○	(A)3 ISOLATED ORBITER (09)
(RTJ503)	◇	(A)3 ISOLATED ORBITER (09)

BETA	ELEVTR	AILRON	PTOTAL
.000	-40.000	.000	80.000
.000	.000	.000	80.000
.000	10.000	.000	80.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS





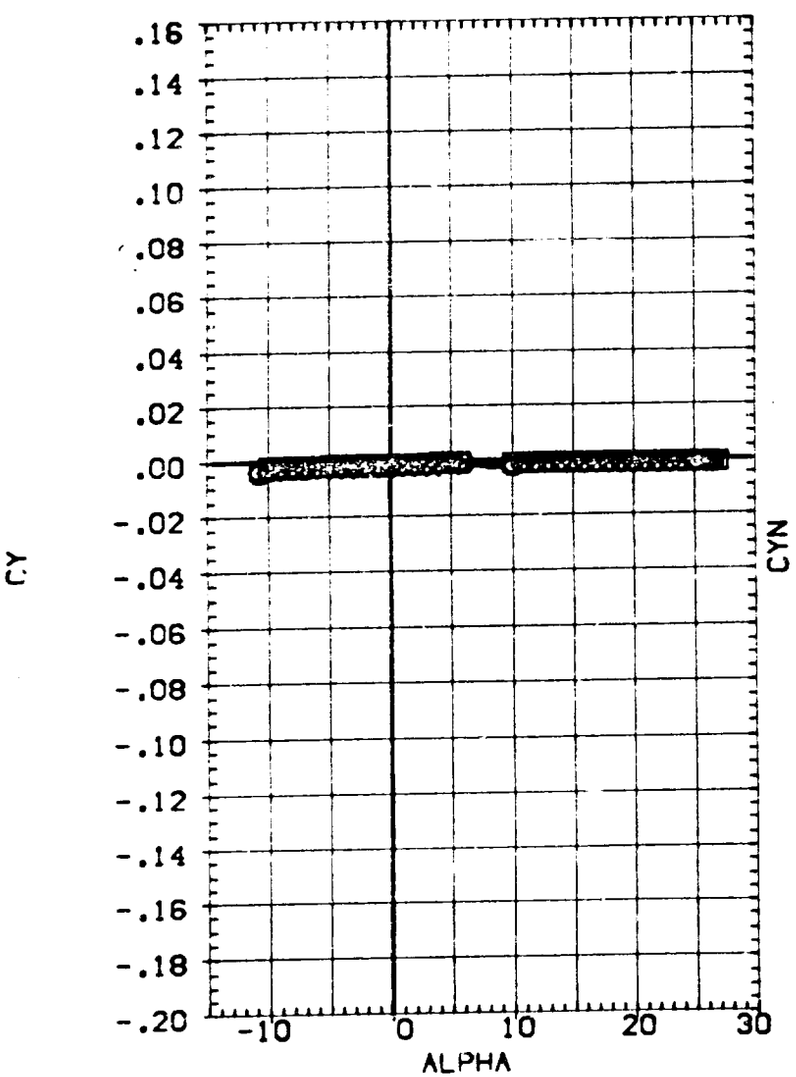
ISOLATED ORBITER AERODYNAMIC CHARACTERISTICS

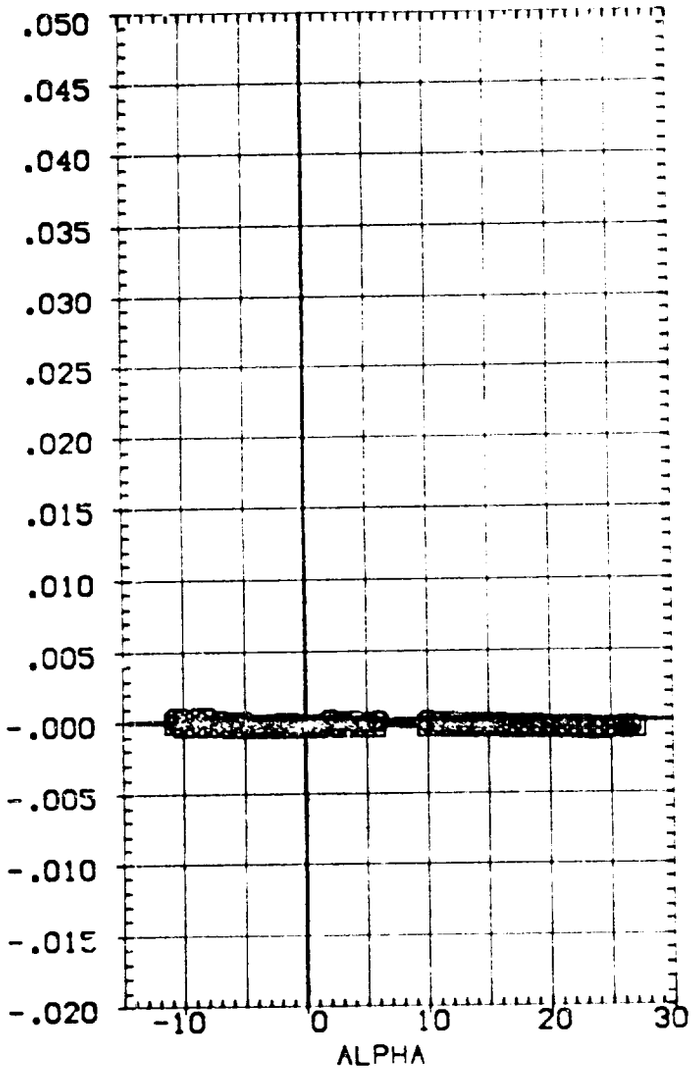
(A)MACH = 4.52

DAT SET	SYMBOL	CONFIGURATION	DESCRIPTION
(RTJSC2)	○	(A)3	ISOLATED ORBITER (OS)
(RTJSC5)	□	(A)3	ISOLATED ORBITER (OS)
(RTJSC3)	◇	(A)3	ISOLATED ORBITER (OS)

BETA	ELEVTR	AILRON	PTOTAL
.000	-40.000	.000	80.000
.000	.000	.000	80.000
.000	10.000	.000	80.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS





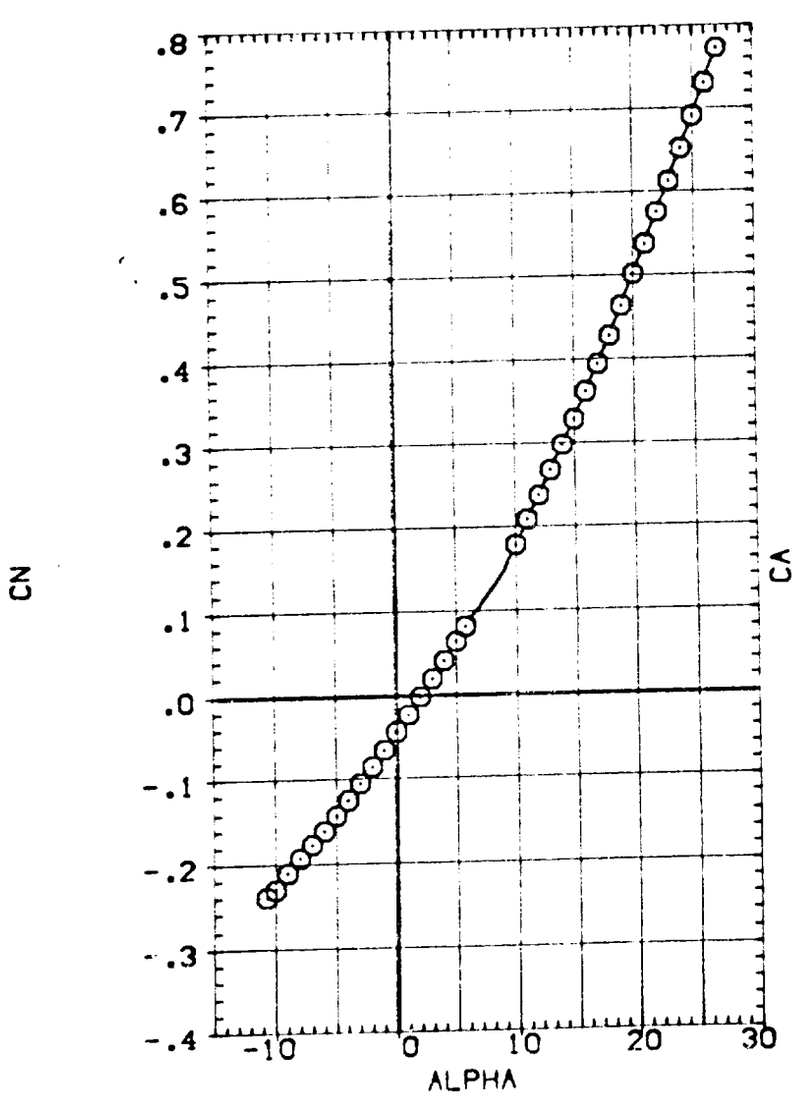
ISOLATED ORBITER AERODYNAMIC CHARACTERISTICS

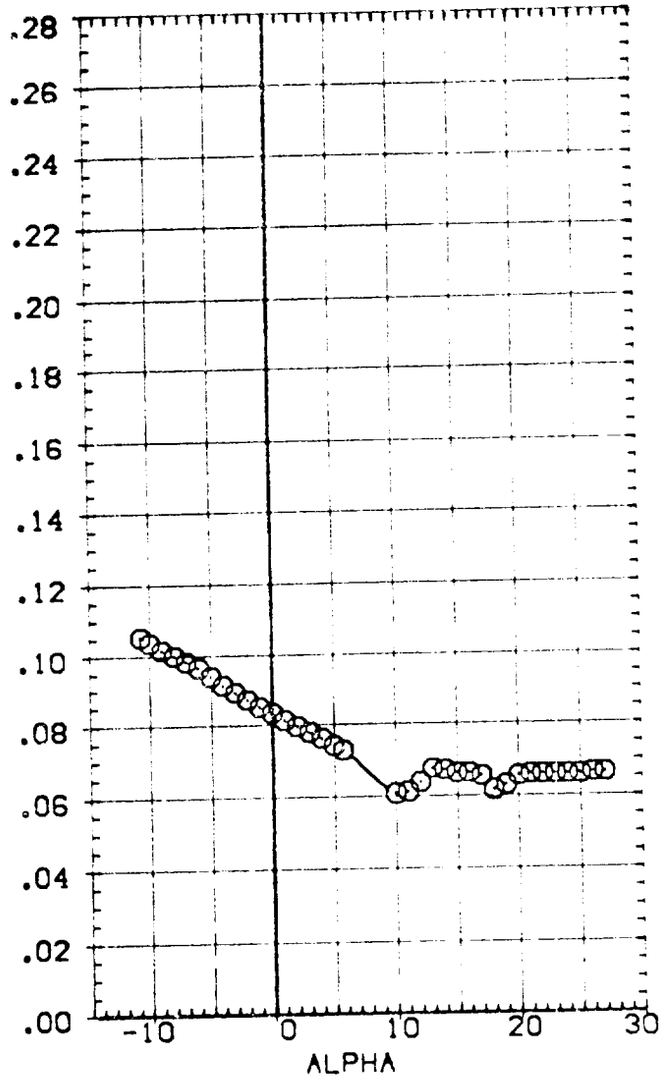
(A)MACH = 4.52

DATA SET SYMBOL CONFIGURATION DESCRIPTION
(RT#504) ○ IA13 ISOLATED ORBITER (09)

BETA	ELEVTR	AILRON	PTOTAL
.000	.000	10.000	80.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS





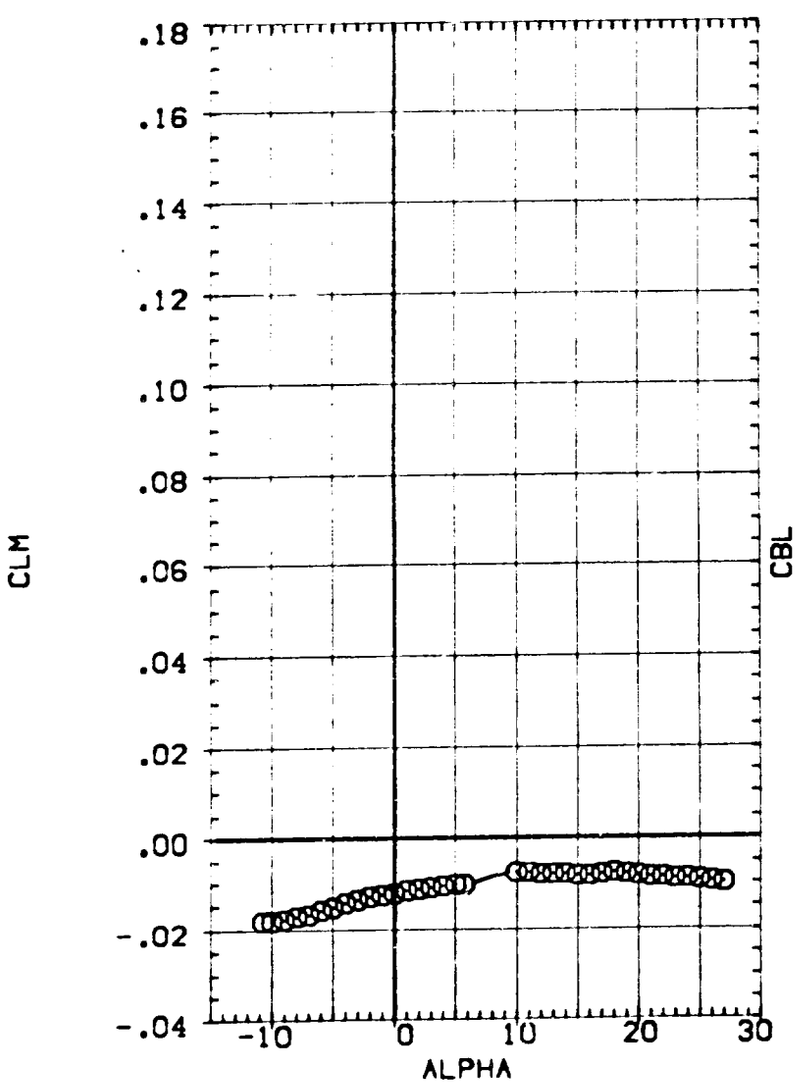
ISOLATED ORBITER AERODYNAMIC CHARACTERISTICS

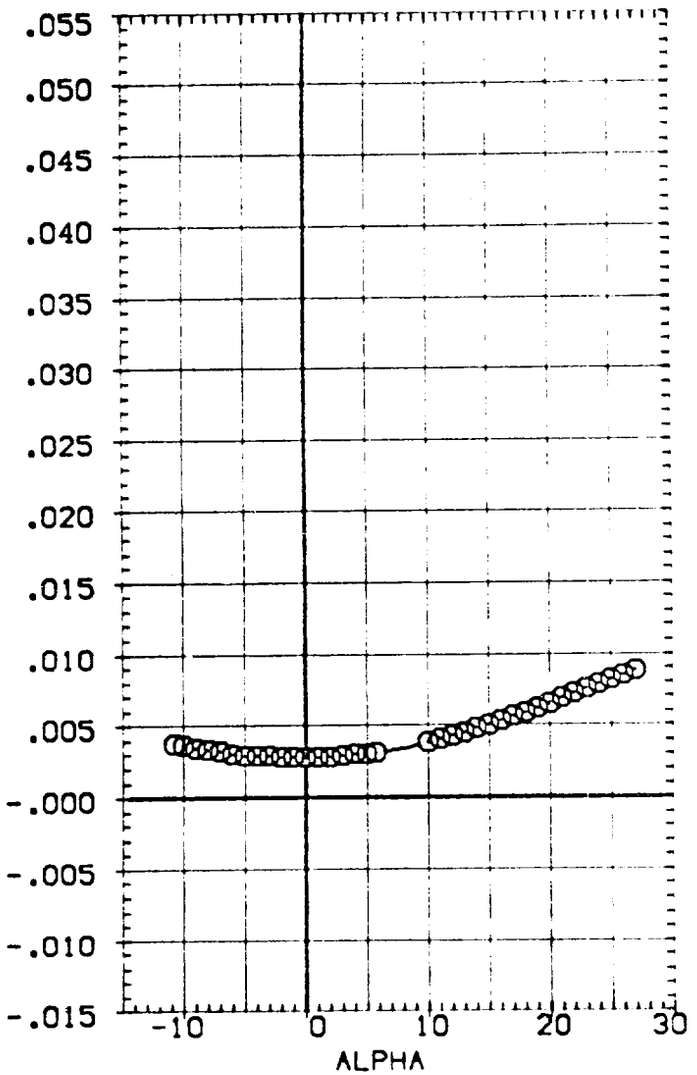
(A)MACH = 4.52

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(RT#504)	○	IA13 ISOLATED ORBITER (09)

BETA	ELEVTR	AILRON	PTOTAL
.000	.000	10.000	80.000

SEE THE ALPHABETICAL DOCUMENT FOR GENERAL CHARACTERISTICS FOR INDIVIDUAL DATASETS





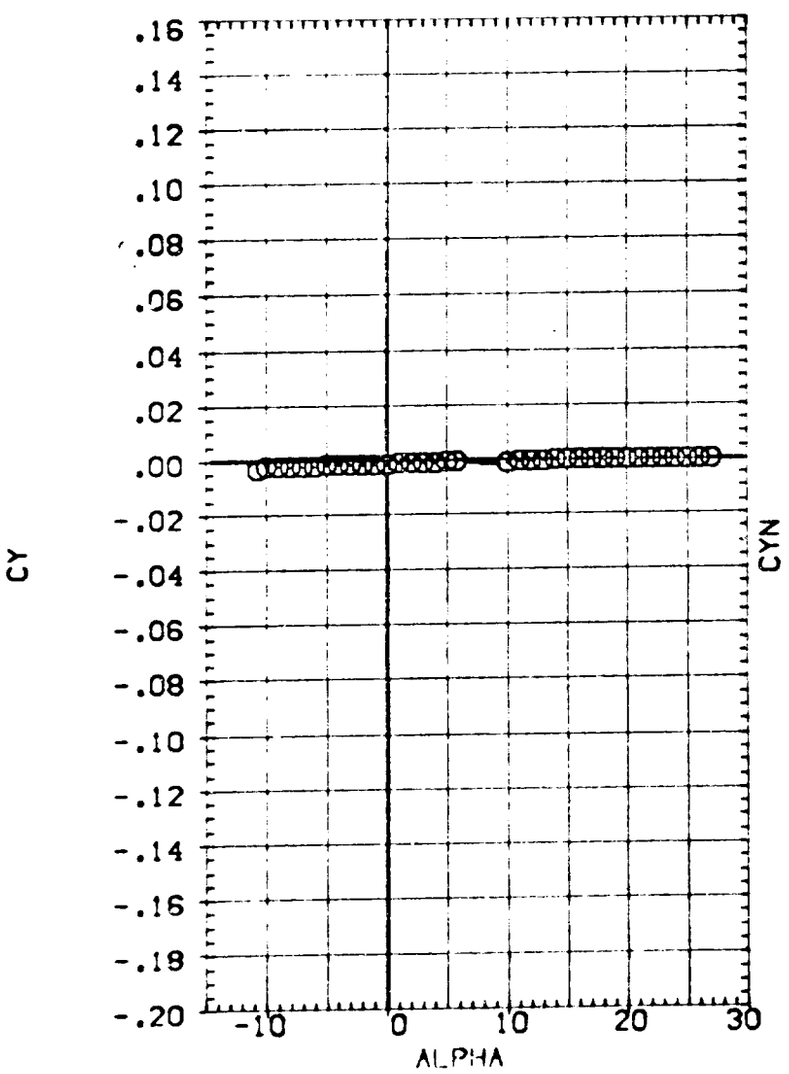
ISOLATED ORBITER AERODYNAMIC CHARACTERISTICS

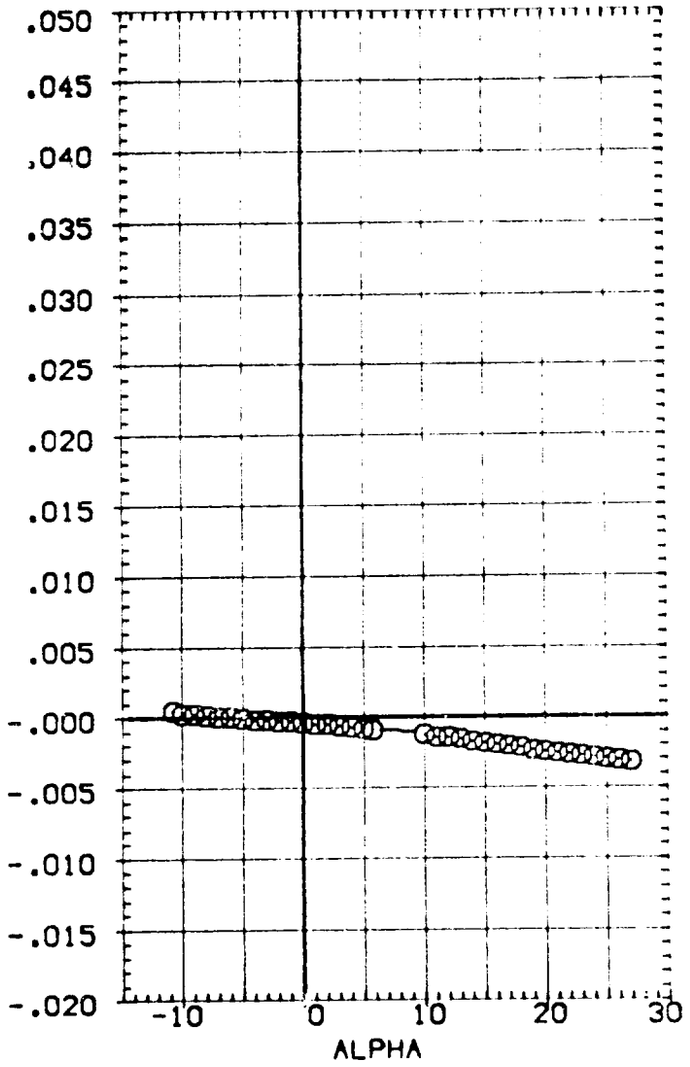
(A)MACH = 4.52

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(RTJ504)	○	(A13 ISOLATED ORBITER (09)

BETA	ELEVTR	AILRON	PTOTAL
.000	.000	10.000	80.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS





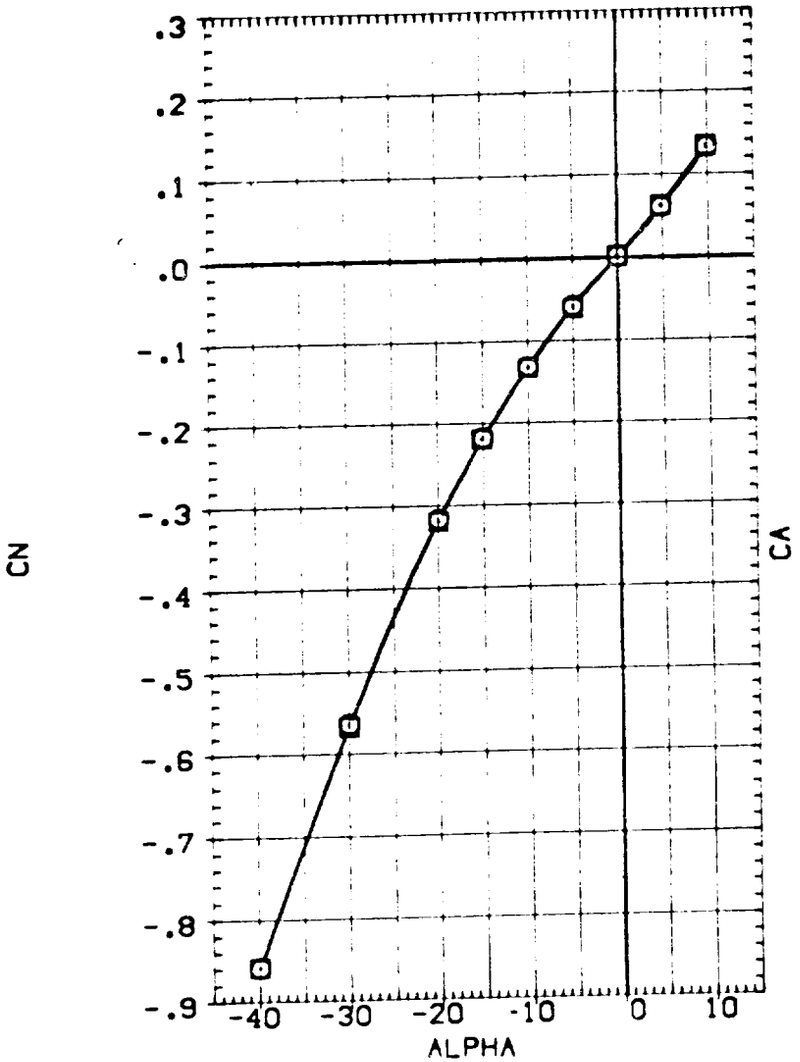
ISOLATED ORBITER AERODYNAMIC CHARACTERISTICS

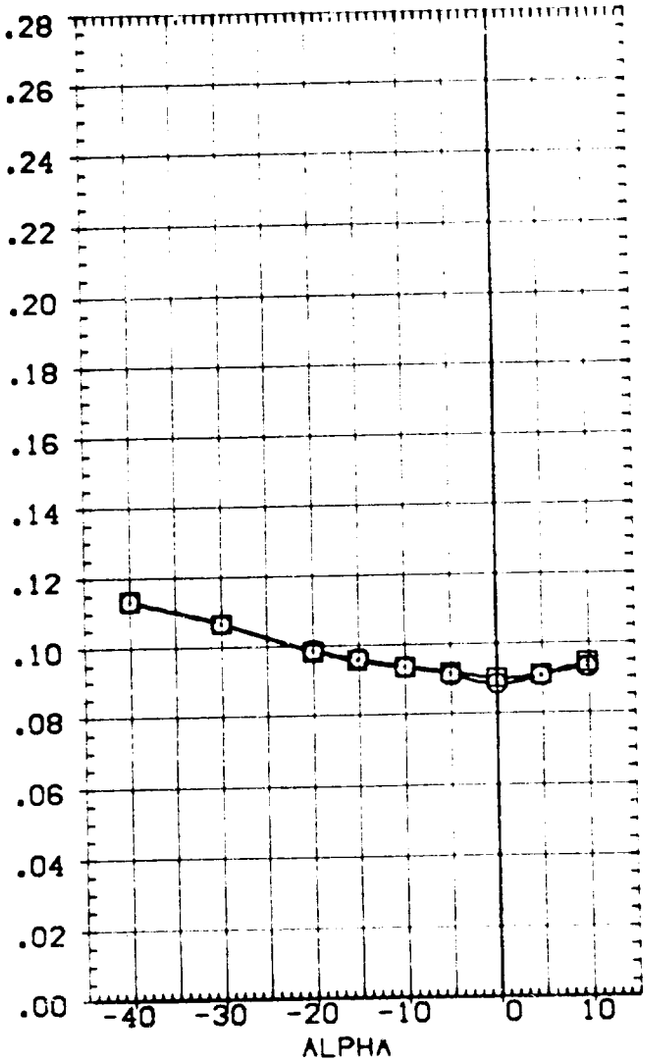
(A)MACH = 4.52

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(RT/500)	○	(A)3 ISOLATED EXTERNAL TANK (T10)
(RT/501)	□	(A)3 ISOLATED EXTERNAL TANK (T10)

BETA	PTOTAL
.000	110.000
5.000	110.000

SEE THE ... DOCUMENT FOR ... CHARACTERISTICS FOR INDIVIDUAL DATASETS





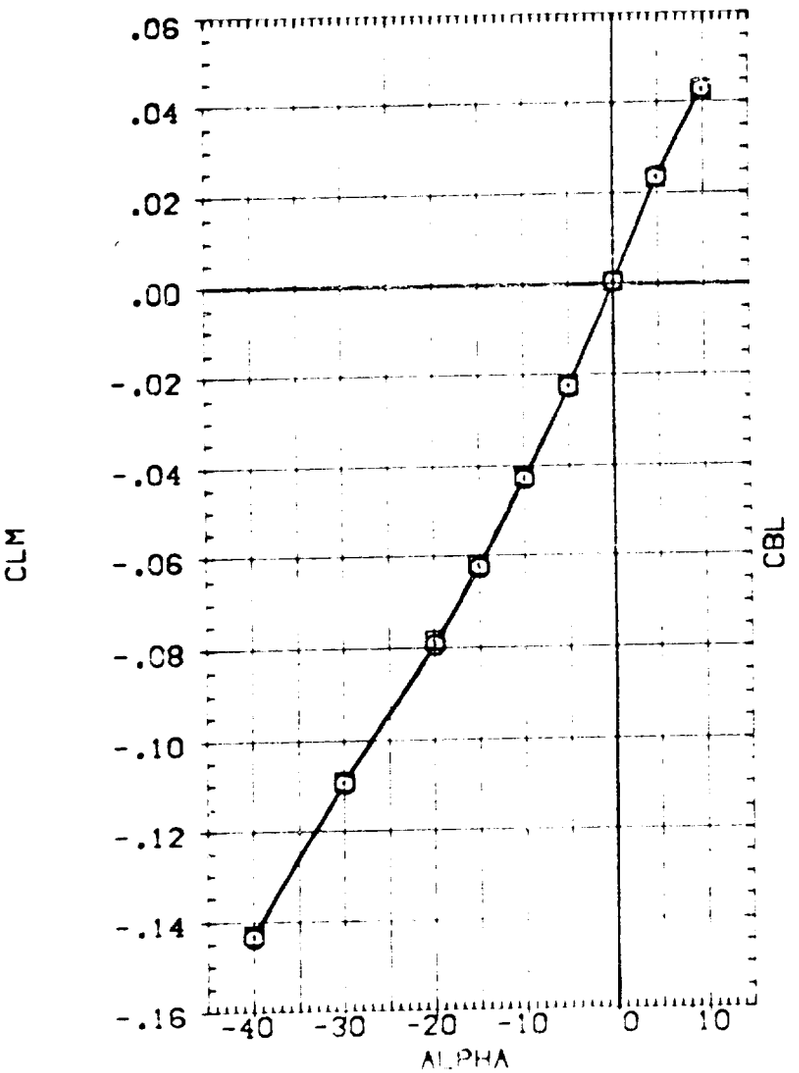
ISOLATED EXTERNAL TANK AERODYNAMIC CHARACTERISTICS

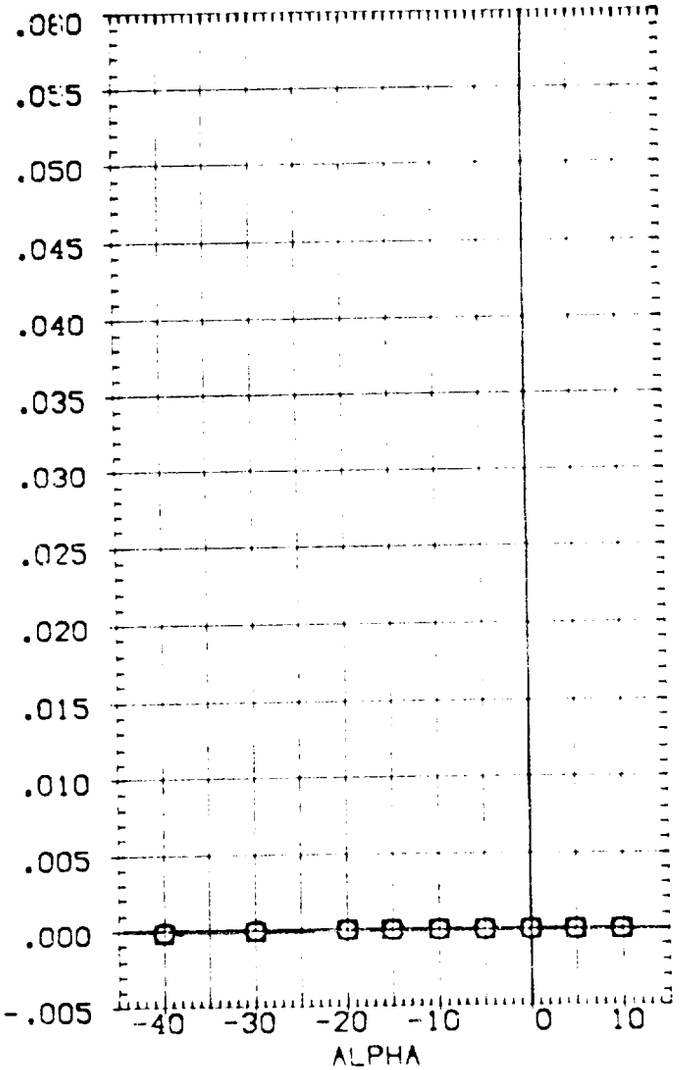
(A)MACH = 4.53

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(RUN500)	☐	(A13 ISOLATED EXTERNAL TANK (TIO)
(RUN501)	☐	(A13 ISOLATED EXTERNAL TANK (TIO)

BETA	PTOTAL
.000	110.000
5.000	110.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS





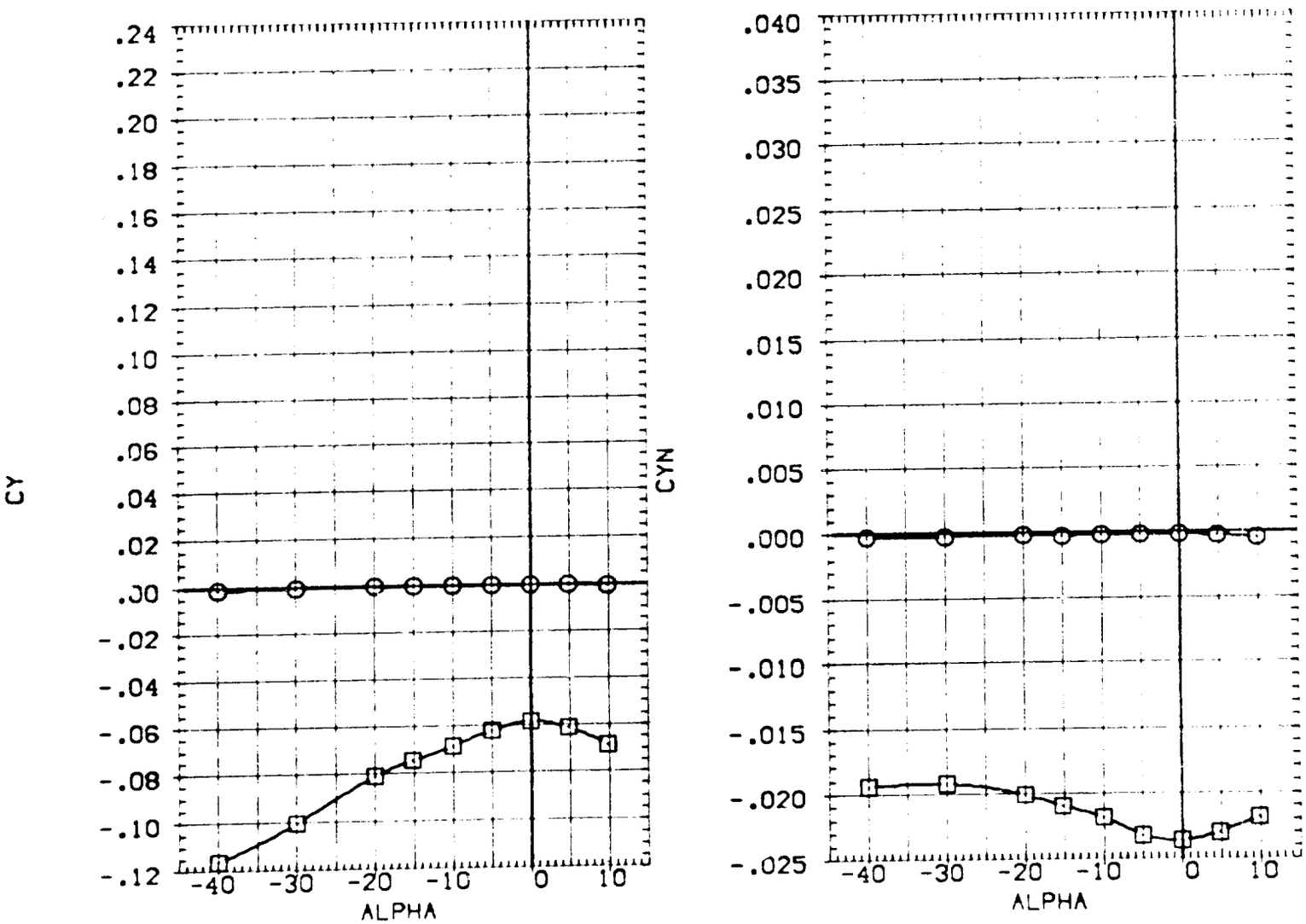
ISOLATED EXTERNAL TANK AERODYNAMIC CHARACTERISTICS

(A)MACH = 4.53

DATA SET SYMBOL		CONFIGURATION DESCRIPTION	
[RY6500]	○	[A]3	ISOLATED EXTERNAL TANK (T10)
[RY6501]	—	[A]3	ISOLATED EXTERNAL TANK (T10)

BETA	PTOTAL
.000	110.000
5.000	110.000

SEE THE ASSOCIATED DOCUMENT FOR CHARACTERISTICS FOR INDIVIDUAL DATASETS

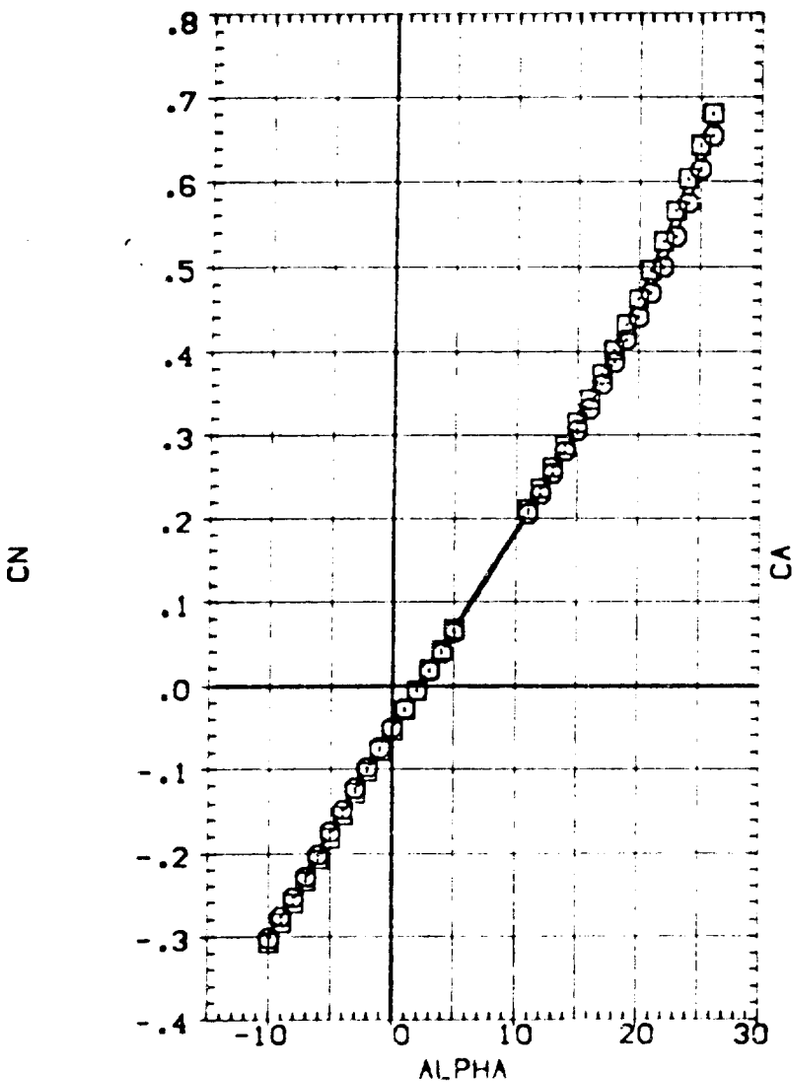


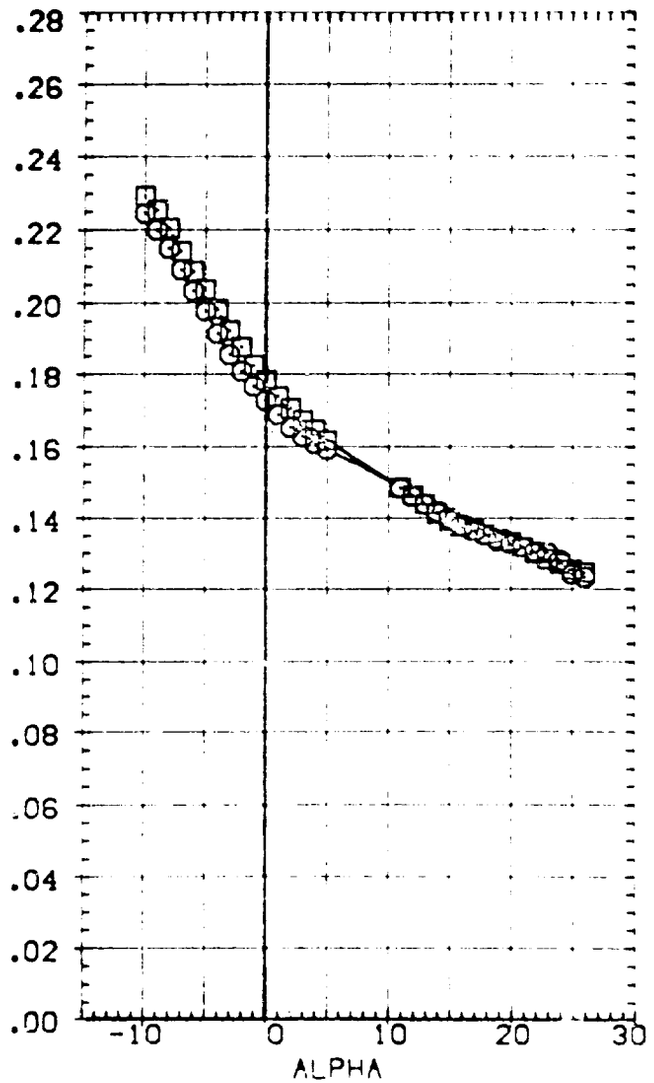
ISOLATED EXTERNAL TANK AERODYNAMIC CHARACTERISTICS

(A)MACH = 4.53

DATA SET	SYMBOL	CONFIGURATION	DESCRIPTION	BETA	ELEVTR	AILRON	PTOTAL
(RT/508)	○	IA13	ISOLATED ORBITER WITH EXTERNAL TANK(09T10)	.000	.000	.000	28.900
(RT/509)	□	IA13	ISOLATED ORBITER WITH EXTERNAL TANK(09T10)	5.000	.000	.000	28.900

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

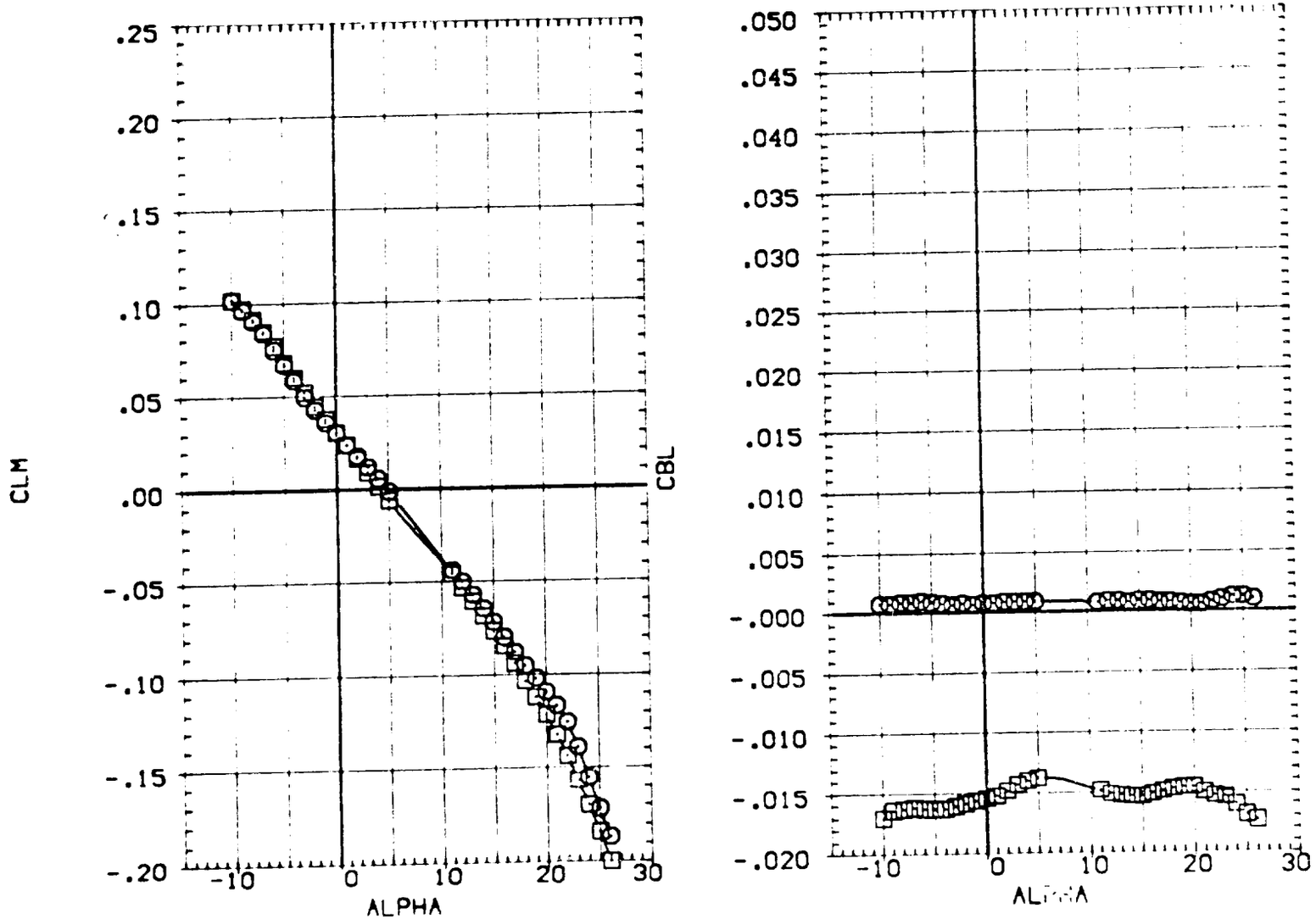




ISOLATED ORBITER/EXTERNAL TANK AERODYNAMIC CHARACTERISTICS

(A)MACH = 4.51

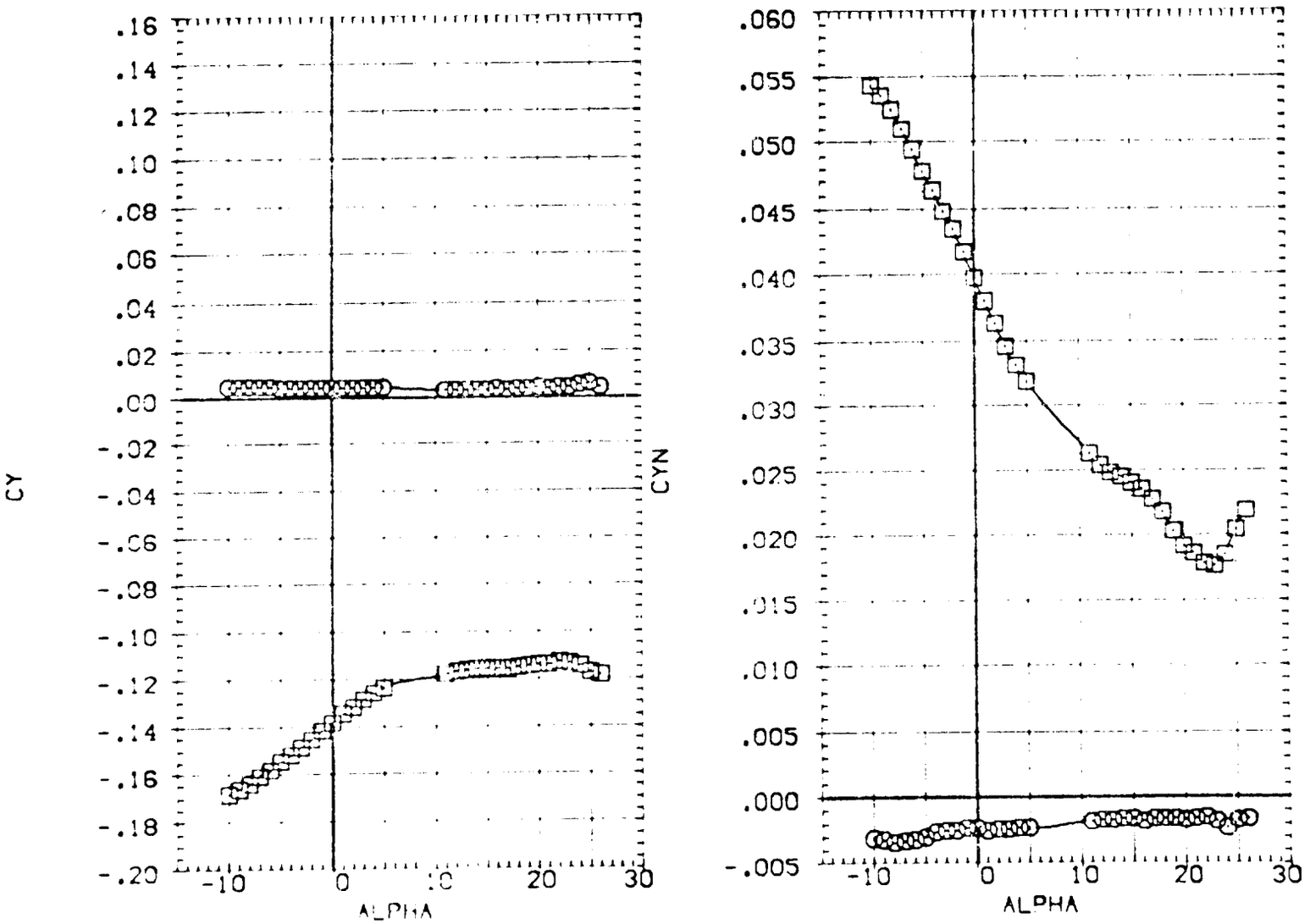
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	AILRON	PTOTAL	SEE THIS AS FIG. DOCUMENT FOR CHARACTERISTICS FOR INDIVIDUAL DATASETS
(RTJ508)	□	(A)3 ISOLATED ORBITER WITH EXTERNAL TANK(09T10)	.000	.000	.000	28.900	
(RTJ509)	□	(A)3 ISOLATED ORBITER WITH EXTERNAL TANK(09T10)	5.000	.000	.000	28.900	



ISOLATED ORBITER/EXTERNAL TANK AERODYNAMIC CHARACTERISTICS

(A)MACH = 4.5

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	AILRON	PTOTAL	SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS
(RTV508)	□	(A)3 ISOLATED ORBITER WITH EXTERNAL TANK(09T10)	.000	.000	.000	28.900	
(RTV509)	○	(A)3 ISOLATED ORBITER WITH EXTERNAL TANK(09T10)	5.000	.000	.000	28.900	

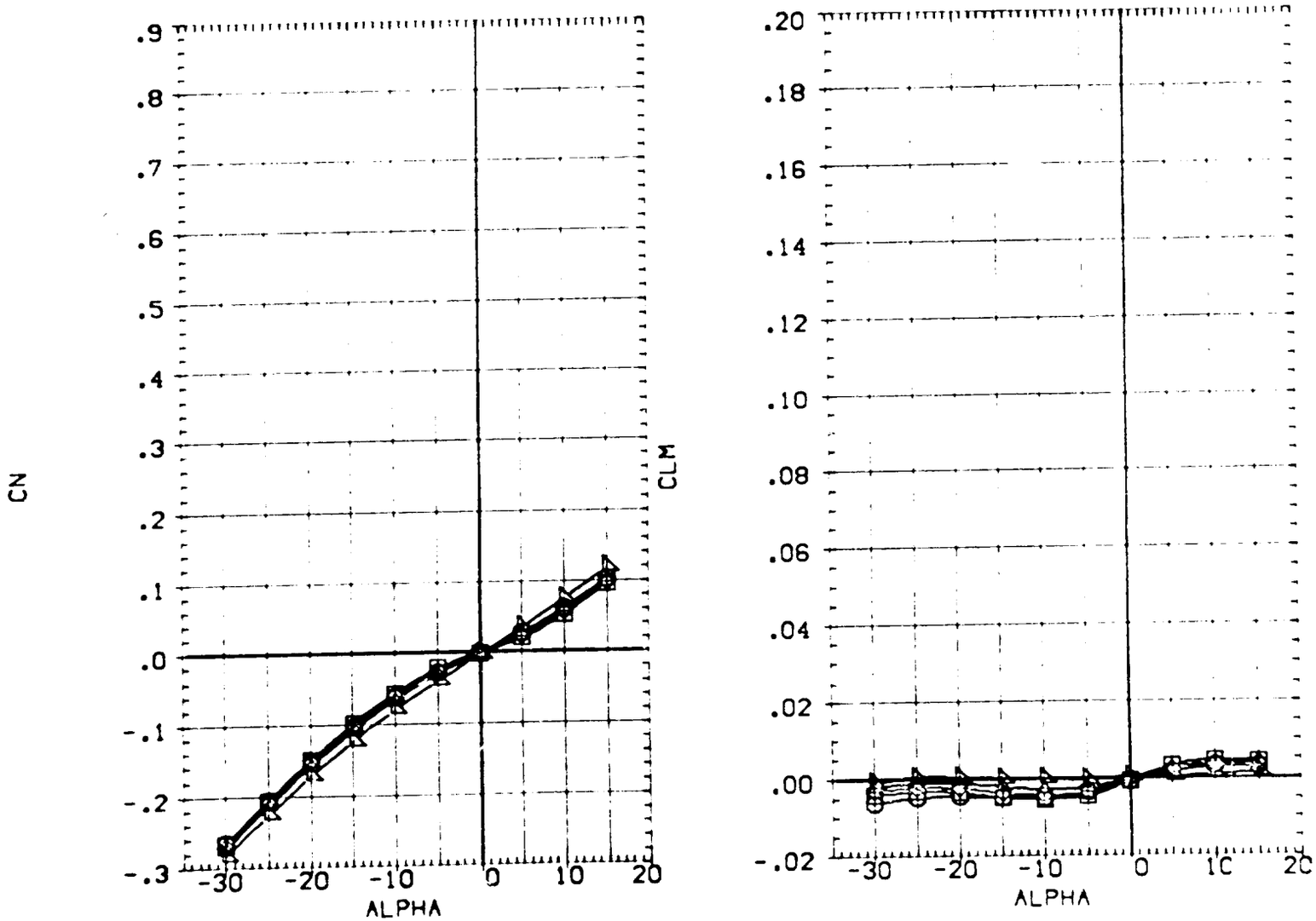


ISOLATED ORBITER W/ EXTERNAL TANK AERODYNAMIC CHARACTERISTICS

(A)MACH = 4.01

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	BETA	PTOTAL	PCHMBR
(R*S,1)	○	(A)3 ISOLATED SOLID ROCKET BOOSTER(SB)W/OPLUMES	-10.000	110.000	.000
(R*S,2)	□	(A)3 ISOLATED SOLID ROCKET BOOSTER(SB)W/OPLUMES	.000	110.000	.000
(R*S,3)	◇	(A)3 ISOLATED SOLID ROCKET BOOSTER(SB)W/OPLUMES	5.000	110.000	.000
(R*S,3)	△	(A)3 ISOLATED SOLID ROCKET BOOSTER(SB)W/OPLUMES	10.000	110.000	.000
(R*S,4)	▽	(A)3 ISOLATED SOLID ROCKET BOOSTER(SB)W/OPLUMES	20.000	110.000	.000

SEE THE AS[illegible] IN A DOCUMENT FOR[illegible] CHARACTERISTICS FOR INDIVIDUAL CA[illegible]S

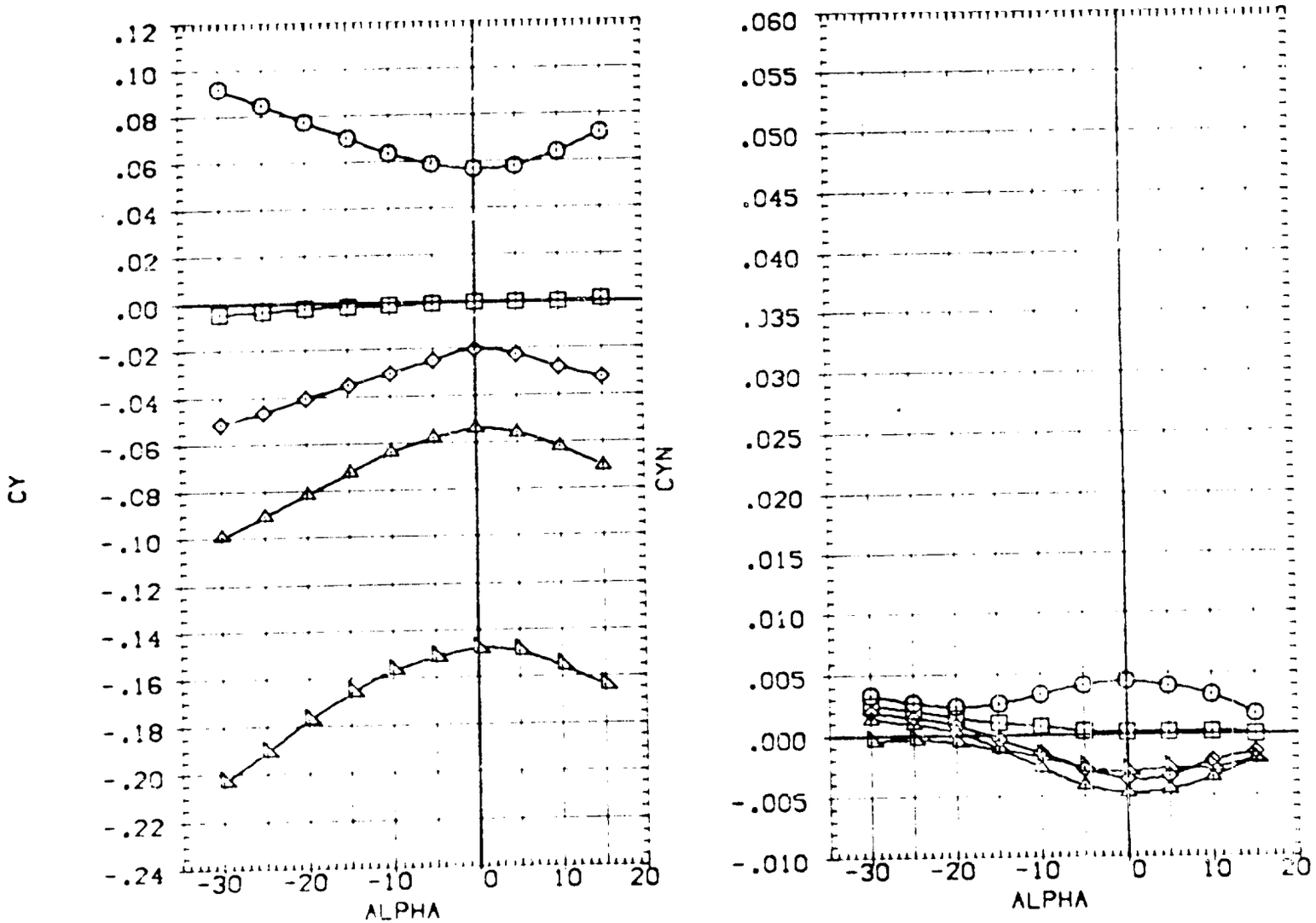


ISOLATED SOLID ROCKET BOOSTER W/O PLUMES AERODYNAMIC CHARACTERISTICS

(A)MACH = 4.53

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	BETA	PTOTAL	POWER
(RTJS:0)	□	(A)3 ISOLATED SOLID ROCKET BOOSTER(SB)W/OPLUMES	-10.000	110.000	.000
(RTJS:1)	◇	(A)3 ISOLATED SOLID ROCKET BOOSTER(SB)W/OPLUMES	.000	110.000	.000
(RTJS:2)	⊠	(A)3 ISOLATED SOLID ROCKET BOOSTER(SB)W/OPLUMES	5.000	110.000	.000
(RTJS:3)	△	(A)3 ISOLATED SOLID ROCKET BOOSTER(SB)W/OPLUMES	10.000	110.000	.000
(RTJS:4)	▽	(A)3 ISOLATED SOLID ROCKET BOOSTER(SB)W/OPLUMES	20.000	110.000	.000

SEE THE ASSOCIATED DATA DOCUMENT OR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

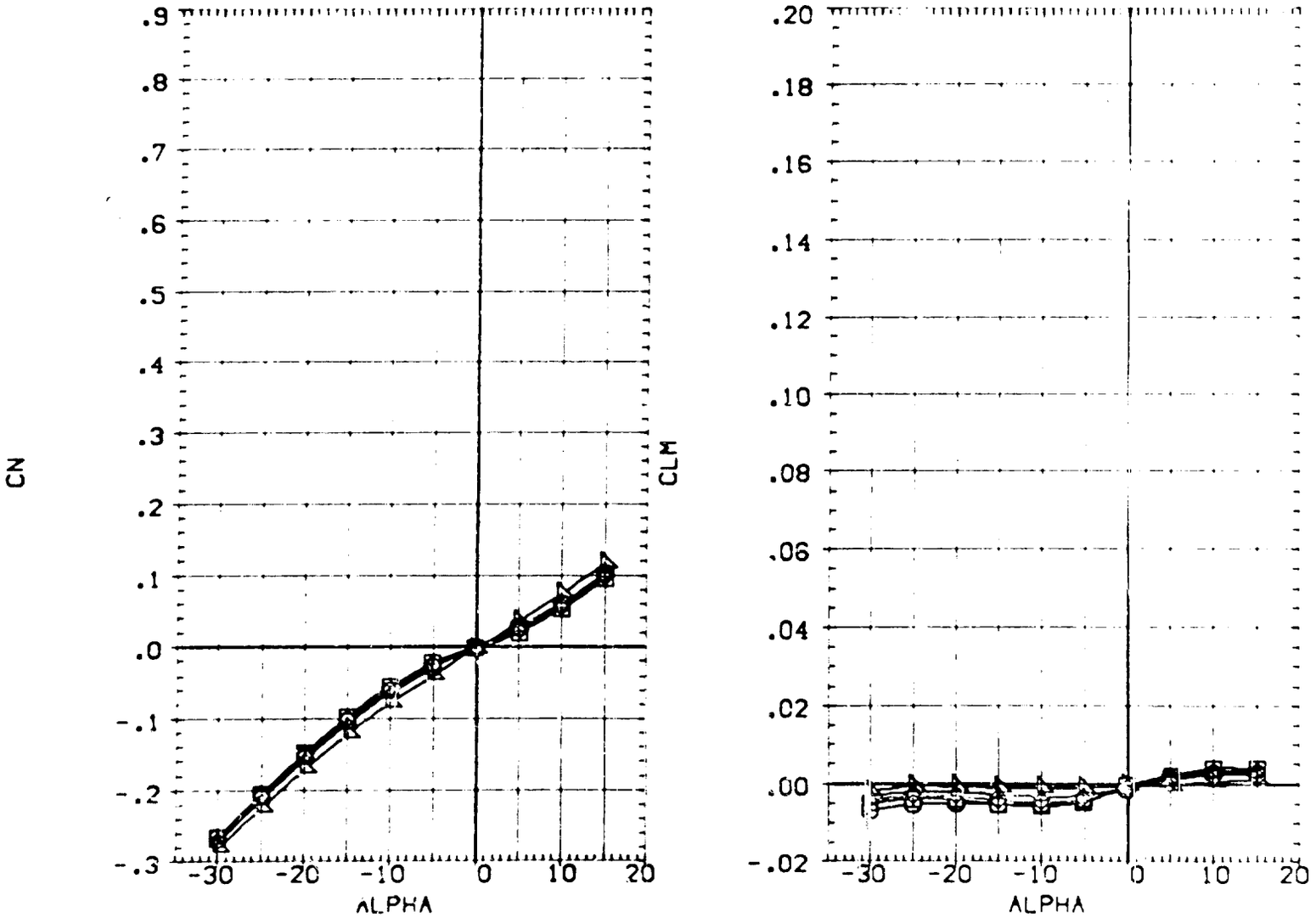


ISOLATED SOLID ROCKET BOOSTER W/O PLUMES AERODYNAMIC CHARACTERISTICS

(A)MACH = 4.63

DATA SET	SYMBOL	CONFIGURATION	DESCRIPTION	BETA	PTOTAL	PCHMBR
(R*,S,5)	◻	(A,3	ISOLATED SOLID ROCKET BOOSTER(SB)W/OPLUMES	-10.000	58.000	.000
(R*,S,6)	◇	(A,3	ISOLATED SOLID ROCKET BOOSTER(SB)W/OPLUMES	.000	58.000	.000
(R*,S,7)	◇	(A,3	ISOLATED SOLID ROCKET BOOSTER(SB)W/OPLUMES	5.000	58.000	.000
(R*,S,8)	△	(A,3	ISOLATED SOLID ROCKET BOOSTER(SB)W/OPLUMES	10.000	58.000	.000
(R*,S,9)	▽	(A,3	ISOLATED SOLID ROCKET BOOSTER(SB)W/OPLUMES	20.000	58.000	.000

SEE THE A... DOCUMENT ... CHARAC... TIC/DUAL ...

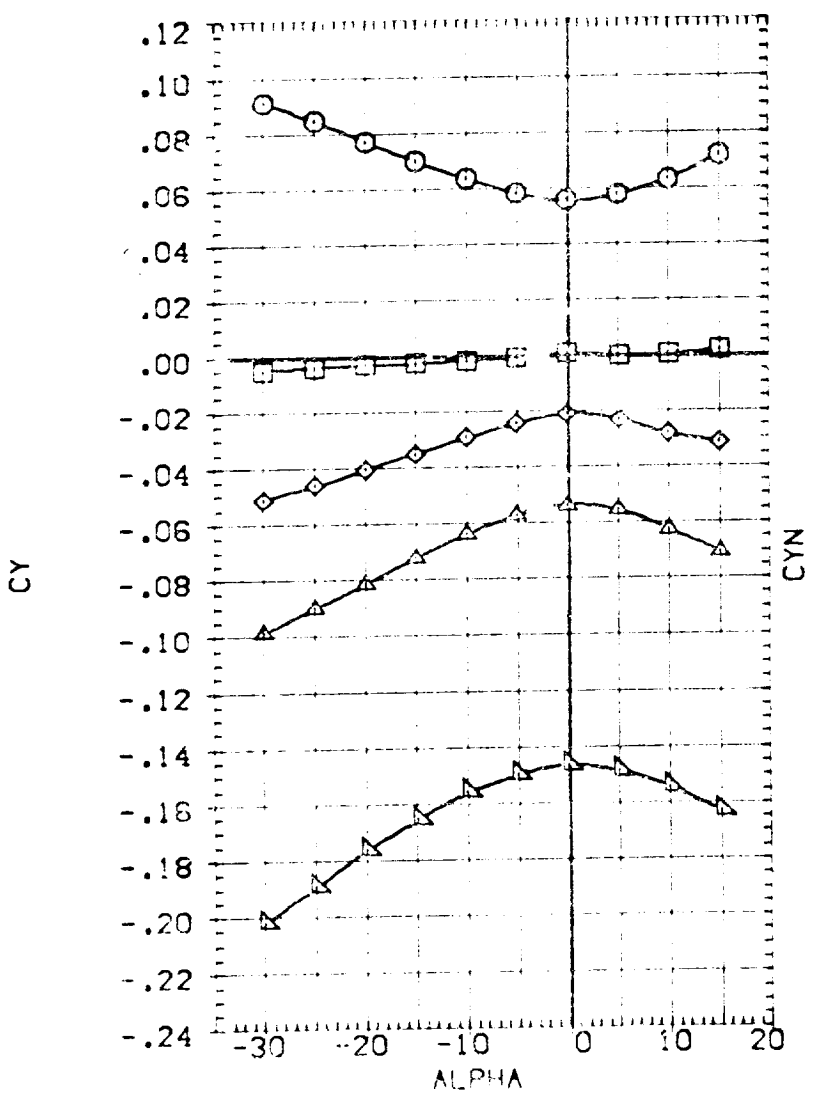


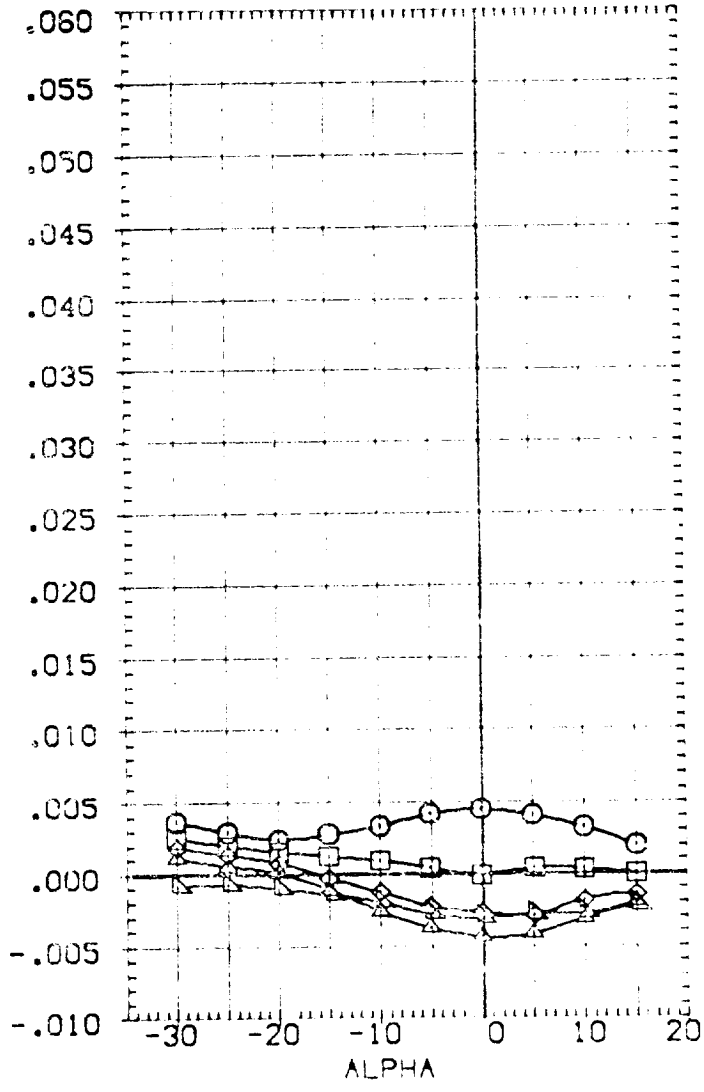
ISOLATED SOLID ROCKET BOOSTER W/O PLUMES AERODYNAMIC CHARACTERISTICS

(A)MACH = 4.52

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	BETA	PTOTAL	PCHMBR
[RT#5[5]		[A[3 [SOLATED SOLID ROCKET BOOSTER(SB)W/OPLUMES	-10.000	58.000	.000
[		[A[3 [SOLATED SOLID ROCKET BOOSTER(SB)W/OPLUMES	.000	58.000	.000
[		[A[3 [SOLATED SOLID ROCKET BOOSTER(SB)W/OPLUMES	5.000	58.000	.000
[		[A[3 [SOLATED SOLID ROCKET BOOSTER(SB)W/OPLUMES	10.000	58.000	.000
[		[A[3 [SOLATED SOLID ROCKET BOOSTER(SB)W/OPLUMES	20.000	58.000	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



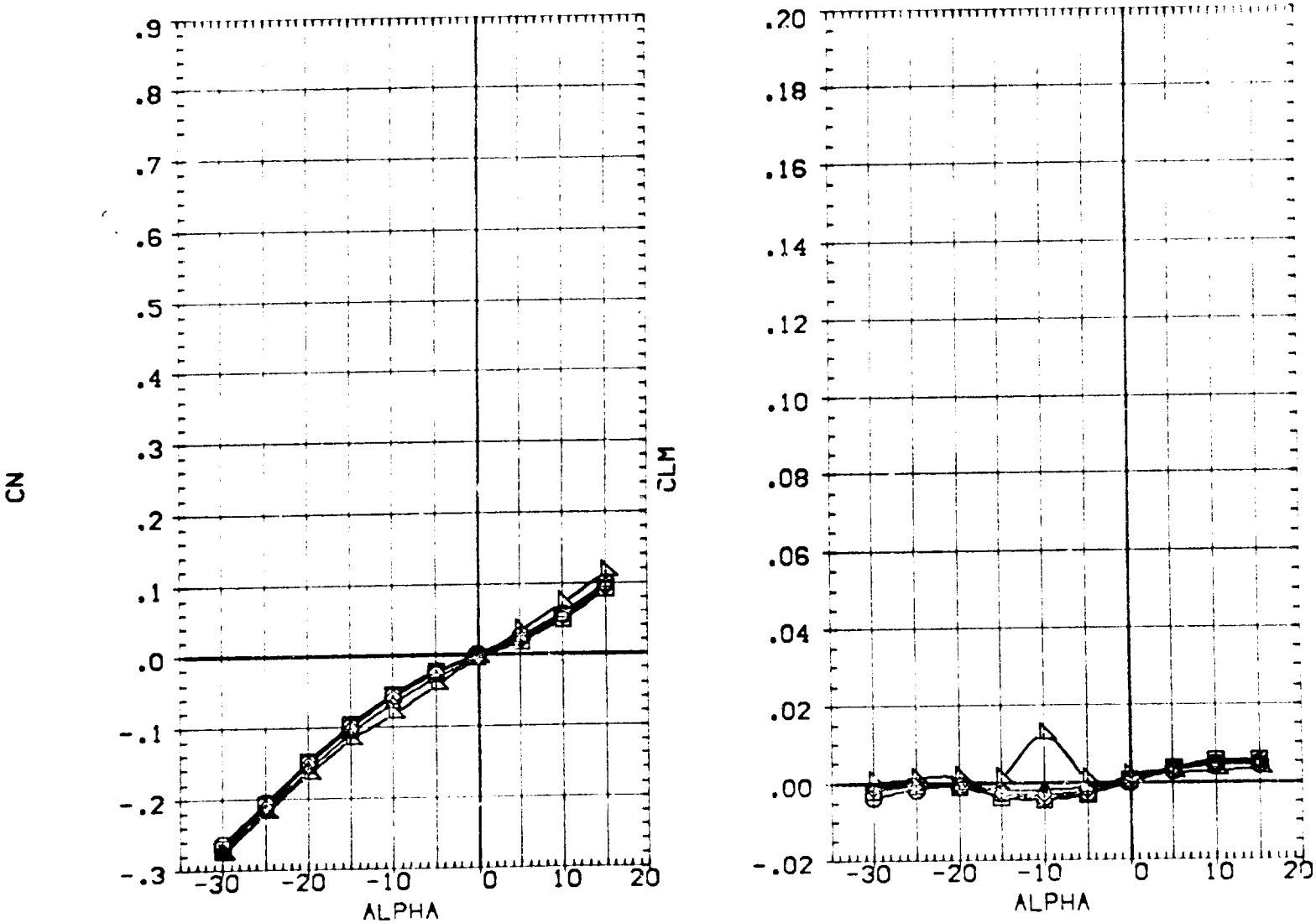


ISOLATED SOLID ROCKET BOOSTER W/O PLUMES AERODYNAMIC CHARACTERISTICS

(A)MACH = 4.52

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	BETA	PTOTAL	PCHMBR
(RUN520)	□	(A)3 ISOLATED SOLID ROCKET BOOSTER(SB)W/OPLUMES	-10.000	28.900	.000
(RUN521)	◇	(A)3 ISOLATED SOLID ROCKET BOOSTER(SB)W/OPLUMES	.000	28.900	.000
(RUN522)	⊠	(A)3 ISOLATED SOLID ROCKET BOOSTER(SB)W/OPLUMES	5.000	28.900	.000
(RUN523)	⊠	(A)3 ISOLATED SOLID ROCKET BOOSTER(SB)W/OPLUMES	10.000	28.900	.000
(RUN524)	△	(A)3 ISOLATED SOLID ROCKET BOOSTER(SB)W/OPLUMES	20.000	28.900	.000

SEE THE ASSOCIA
DOCUMENT FOR
CHARACTERISTICS
INDIVIDUAL DATA

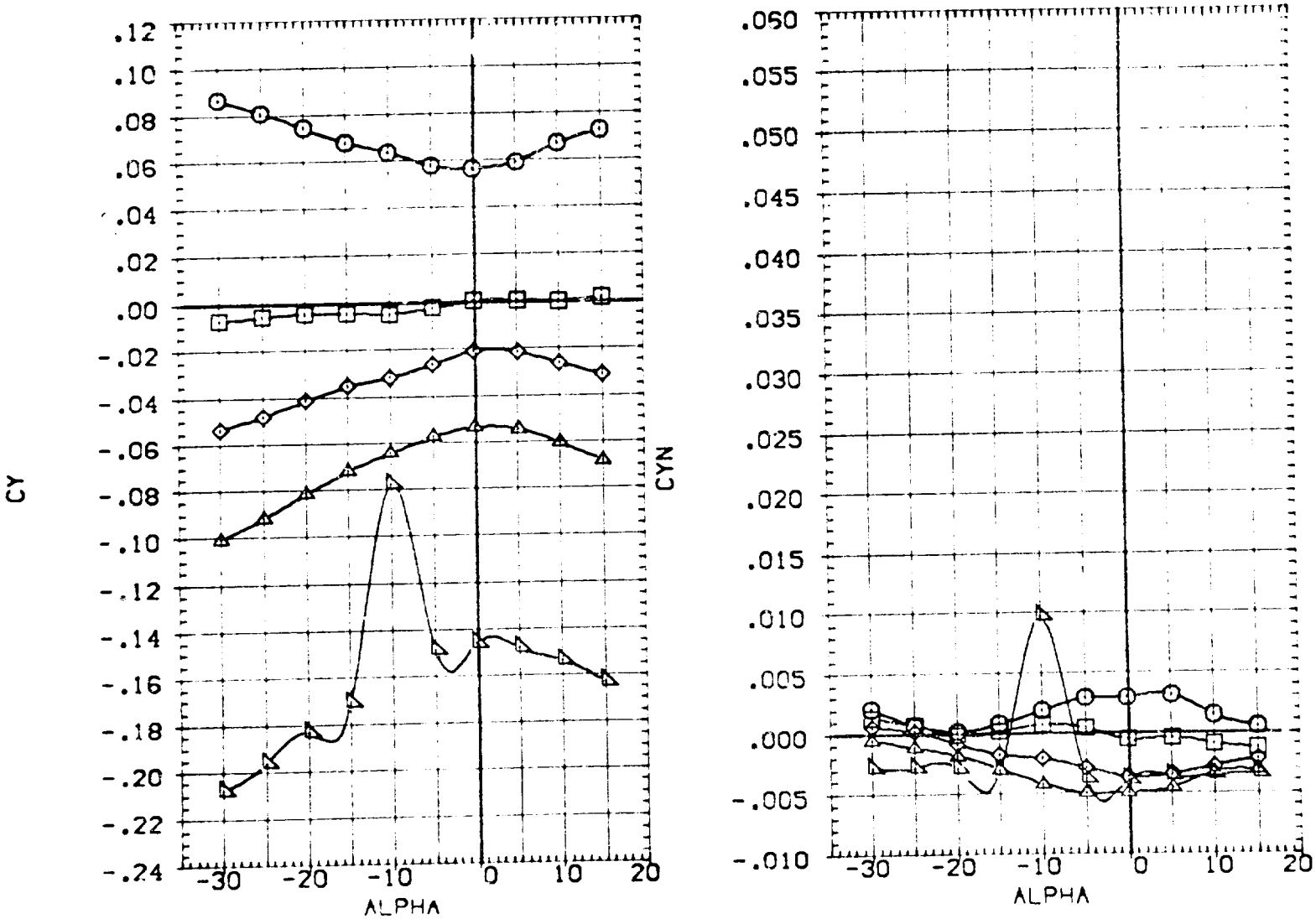


ISOLATED SOLID ROCKET BOOSTER W/O PLUMES AERODYNAMIC CHARACTERISTICS

(A)MACH = 4.51

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	BETA	PTOTAL	PCHBR
(RT,520)	□	(A)3 ISOLATED SOLID ROCKET BOOSTER(S-)W/OPLUMES	-10.000	28.900	.000
(RT,521)	○	(A)3 ISOLATED SOLID ROCKET BOOSTER(SB)W/OPLUMES	.000	28.900	.000
(RT,522)	◇	(A)3 ISOLATED SOLID ROCKET BOOSTER(SB)W/OPLUMES	5.000	28.900	.000
(RT,523)	⋈	(A)3 ISOLATED SOLID ROCKET BOOSTER(SB)W/OPLUMES	10.000	28.900	.000
(RT,524)	△	(A)3 ISOLATED SOLID ROCKET BOOSTER(SB)W/OPLUMES	20.000	28.900	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

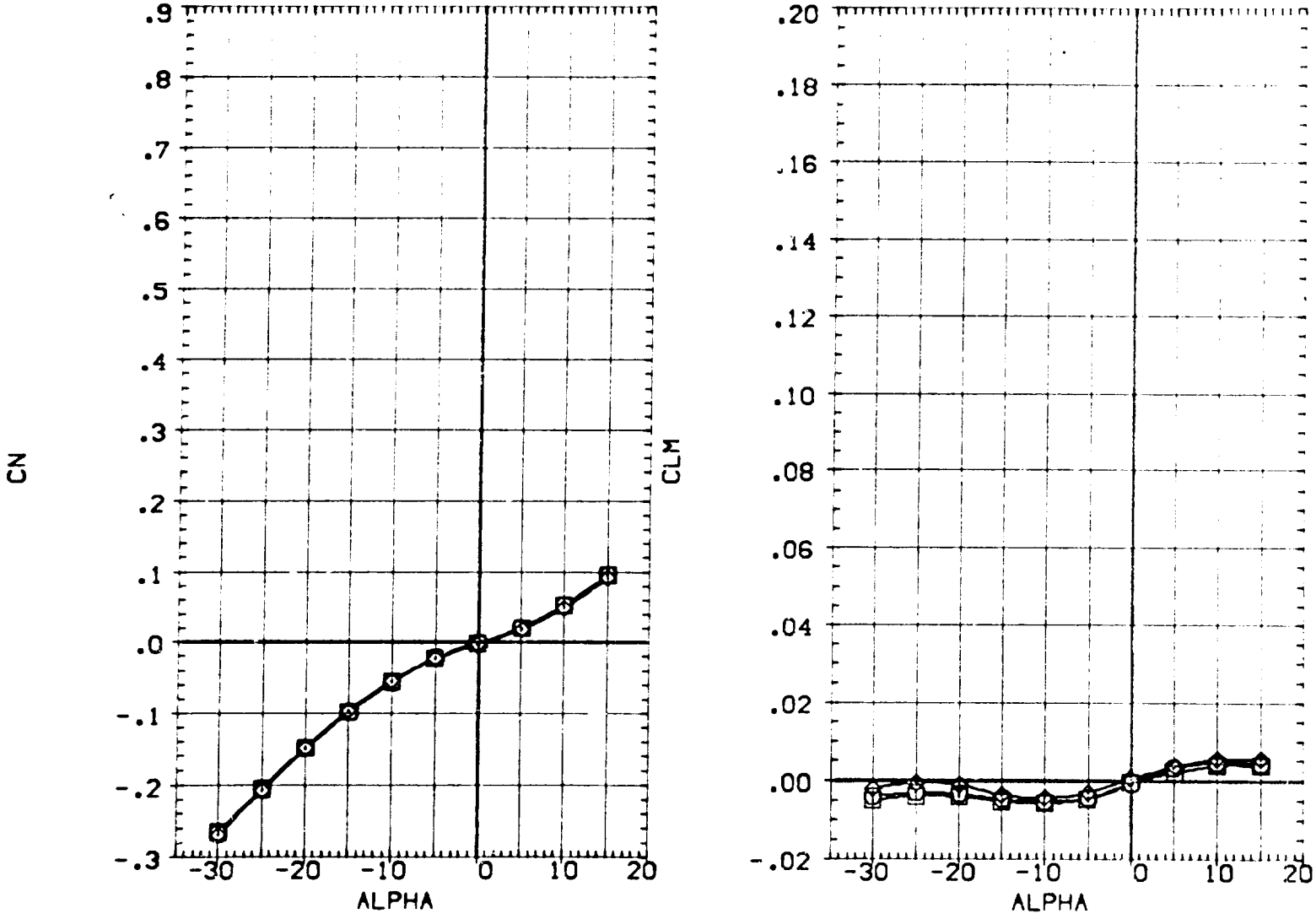


ISOLATED SOLID ROCKET BOOSTER W/O PLUMES AERODYNAMIC CHARACTERISTICS

(A)MACH = 4.51

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	BETA	PTOTAL	PCHMBR
[PTJ511]	□	[A]3 ISOLATED SOLID ROCKET BOOSTER(SB)W/OPLUMES	.000	110.000	.000
[PTJ516]	○	[A]3 ISOLATED SOLID ROCKET BOOSTER(SB)W/OPLUMES	.000	58.000	.000
[PTJ521]	◇	[A]3 ISOLATED SOLID ROCKET BOOSTER(SB)W/OPLUMES	.000	28.900	.000

SEE THE ASSOCIATED DOCUMENT FOR ADDITIONAL CHARACTERISTICS FOR INDIVIDUAL DATASETS

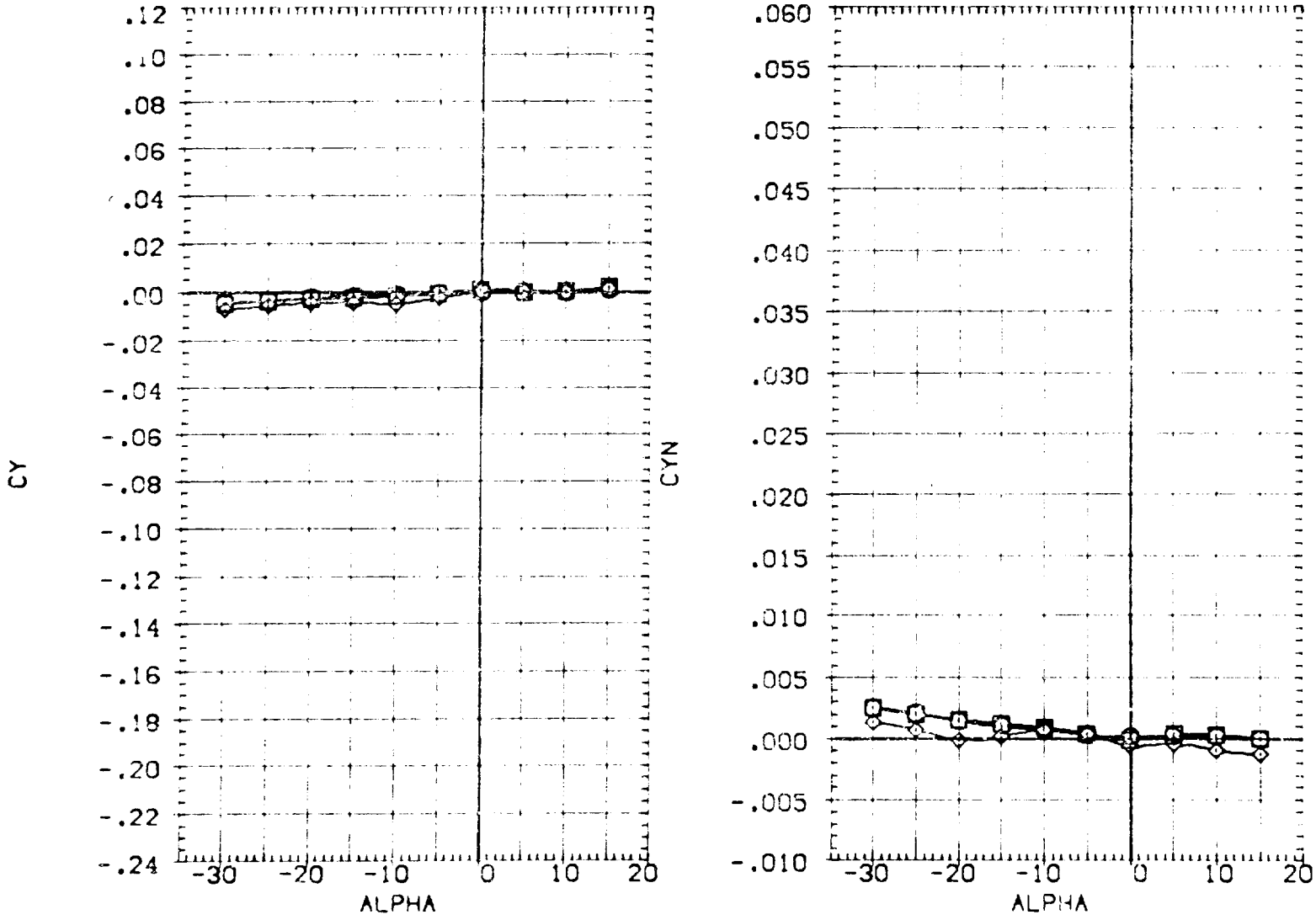


ISOLATED SOLID ROCKET BOOSTER W/O PLUMES AERODYNAMIC CHARACTERISTICS

[A]MACH = 4.53

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	BETA	PTOTAL	PCHMBR
(RTV511)	○	(A)3 ISOLATED SOLID ROCKET BOOSTER(S8)W/OPLUMES	.000	110.000	.000
(RTV516)		(A)3 ISOLATED SOLID ROCKET BOOSTER(S8)W/OPLUMES	.000	58.000	.000
(RTV521)	◇	(A)3 ISOLATED SOLID ROCKET BOOSTER(S8)W/OPLUMES	.000	28.900	.000

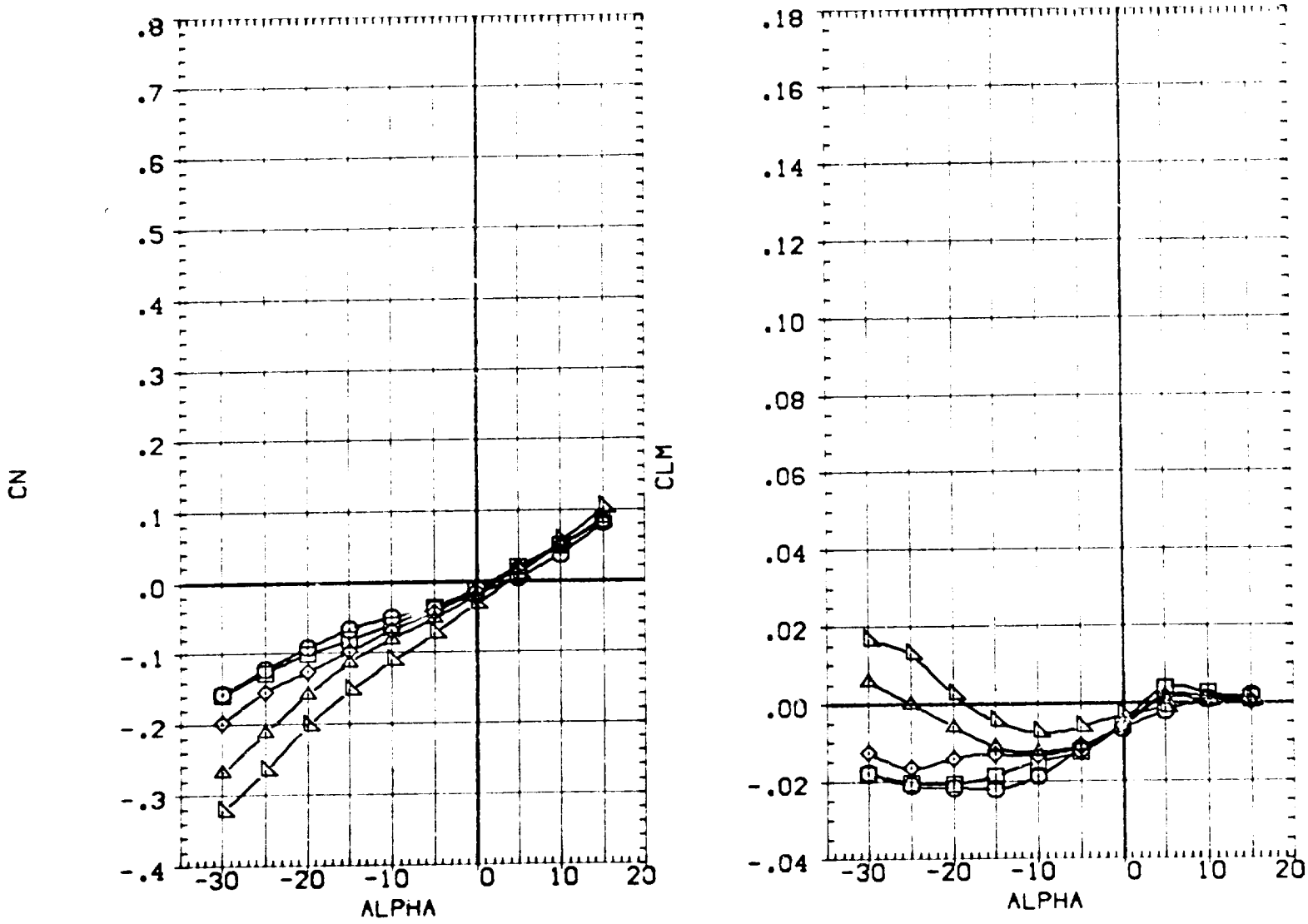
SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



ISOLATED SOLID ROCKET BOOSTER W/O PLUMES AERODYNAMIC CHARACTERISTICS

(A)MACH = 4.53

DATA SET	SYMBOL	CONFIGURATION	DESCRIPTION	BETA	PTOTAL	MACH
(R)527	○	(A)3	ISOLATED SOLID ROCKET BOOSTER(SB)W/PLUMES	-10.000	28.900	750.000
(R)528	□	(A)3	ISOLATED SOLID ROCKET BOOSTER(SB)W/PLUMES	.000	28.900	750.000
(R)529	◇	(A)3	ISOLATED SOLID ROCKET BOOSTER(SB)W/PLUMES	5.000	28.900	750.000
(R)530	△	(A)3	ISOLATED SOLID ROCKET BOOSTER(SB)W/PLUMES	10.000	28.900	750.000
(R)531	▷	(A)3	ISOLATED SOLID ROCKET BOOSTER(SB)W/PLUMES	20.000	28.900	750.000

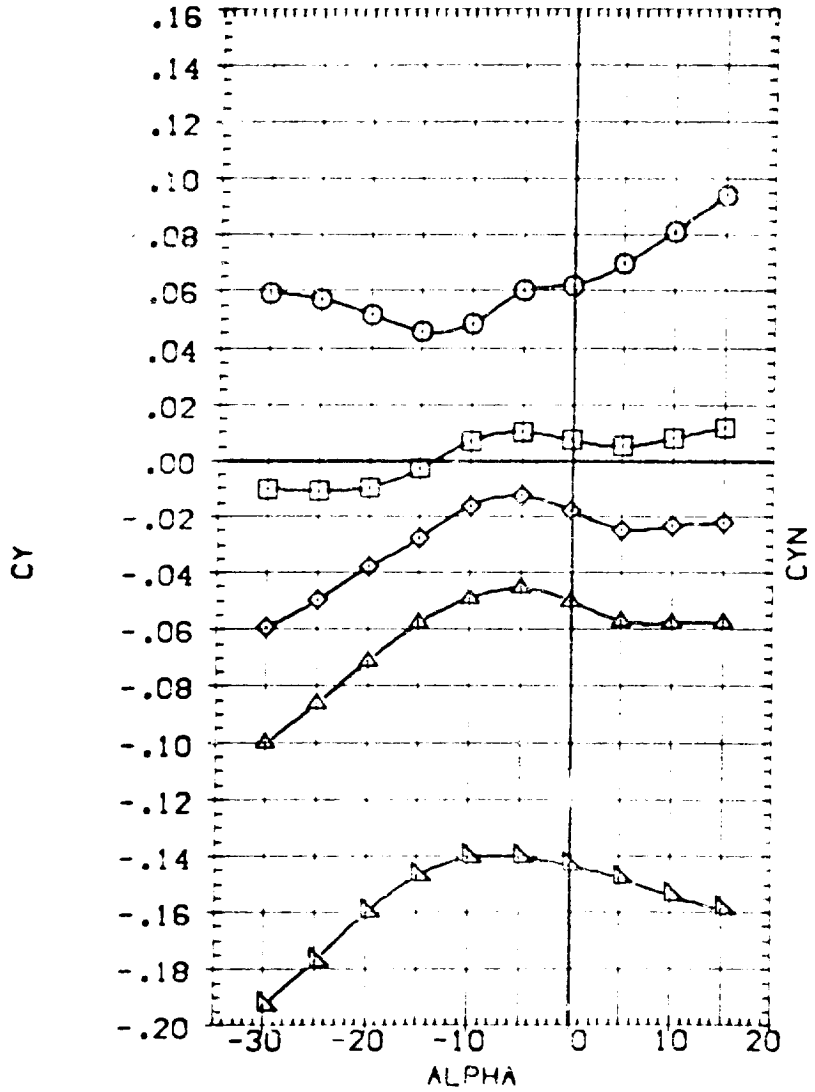


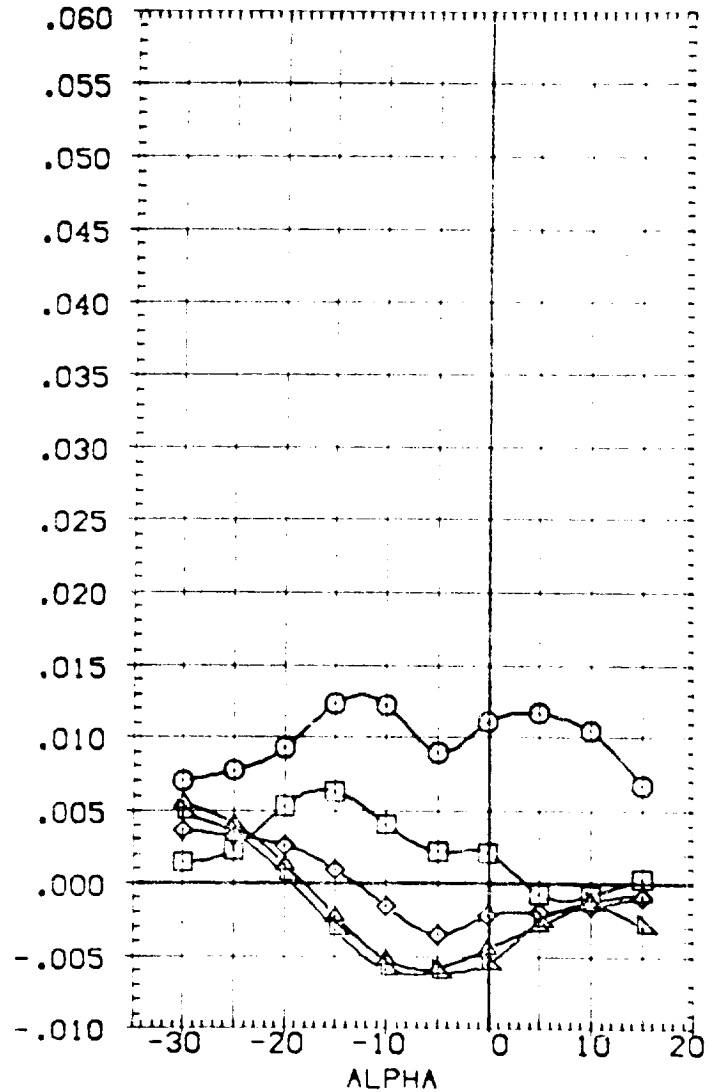
ISOLATED SOLID ROCKET BOOSTER W/PLUMES AERODYNAMIC CHARACTERISTICS

(A)MACH = 4.51

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	BETA	PTOTAL	PCHMBR
(RY6527)	○	(A13 ISOLATED SOLID ROCKET BOOSTER(S8)W/PLUMES	-10.000	28.900	750.000
(RY6528)	□	(A13 ISOLATED SOLID ROCKET BOOSTER(S8)W/PLUMES	.000	28.900	750.000
(RY6529)	◇	(A13 ISOLATED SOLID ROCKET BOOSTER(S8)W/PLUMES	5.000	28.900	750.000
(RY6530)	△	(A13 ISOLATED SOLID ROCKET BOOSTER(S8)W/PLUMES	10.000	28.900	750.000
(RY6531)	▽	(A13 ISOLATED SOLID ROCKET BOOSTER(S8)W/PLUMES	20.000	28.900	750.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



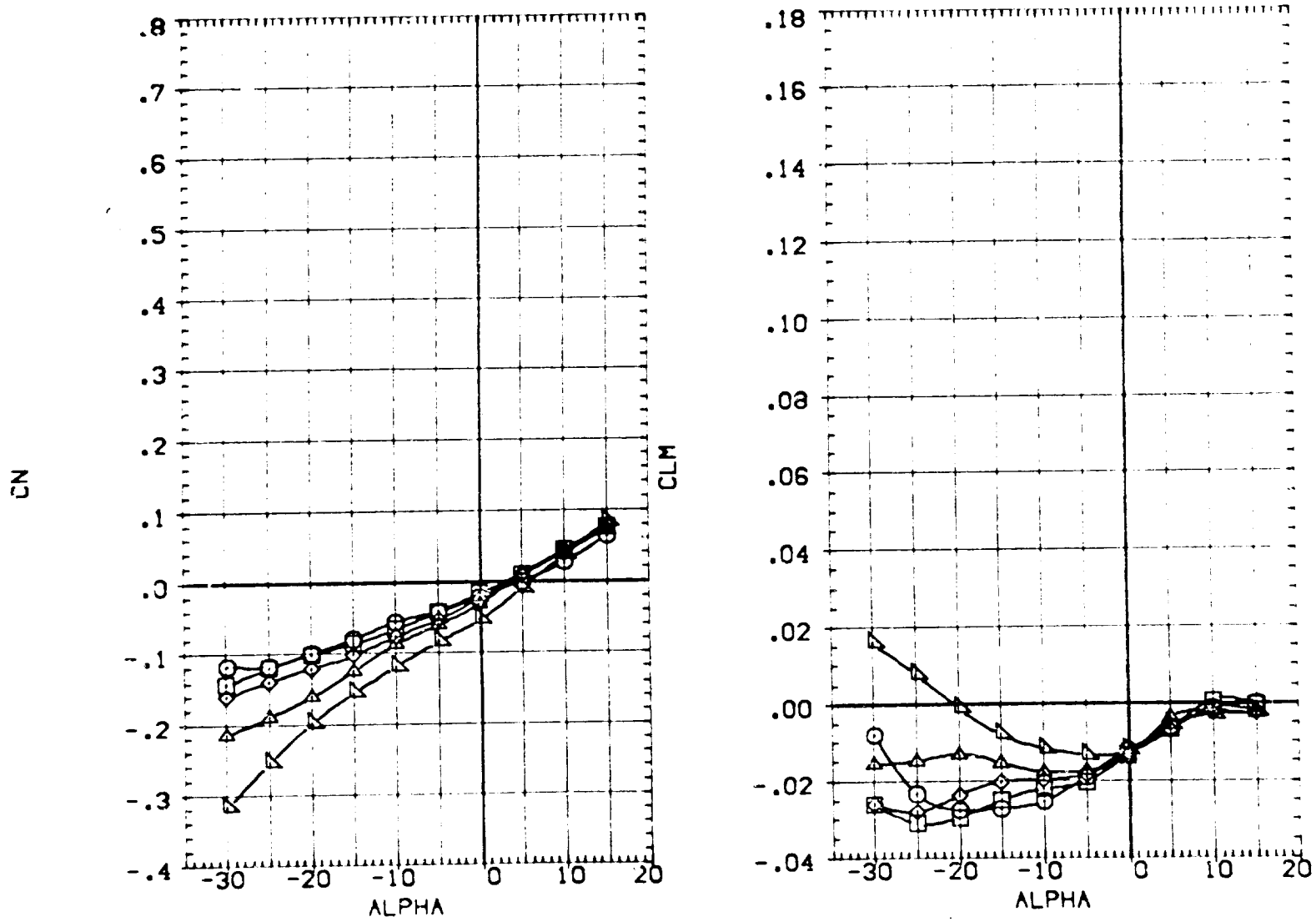


ISOLATED SOLID ROCKET BOOSTER W/PLUMES AERODYNAMIC CHARACTERISTICS

(A)MACH = 4.5

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	DETA	PTOTAL	PCHMBR
(RT/5532)	○	(A)3 ISOLATED SOLID ROCKET BOOSTER(SB)W/PLUMES	-10.000	28.900	1500.000
(RT/5533)	□	(A)3 ISOLATED SOLID ROCKET BOOSTER(SB)W/PLUMES	.000	28.900	1500.000
(RT/5534)	◇	(A)3 ISOLATED SOLID ROCKET BOOSTER(SB)W/PLUMES	5.000	28.900	1500.000
(RT/5535)	△	(A)3 ISOLATED SOLID ROCKET BOOSTER(SB)W/PLUMES	10.000	28.900	1500.000
(RT/5536)	▽	(A)3 ISOLATED SOLID ROCKET BOOSTER(SB)W/PLUMES	20.000	28.900	1500.000

SEE THE [illegible] DOCUMENT [illegible] CHARACTERISTICS FOR INDIVIDUAL DATASETS

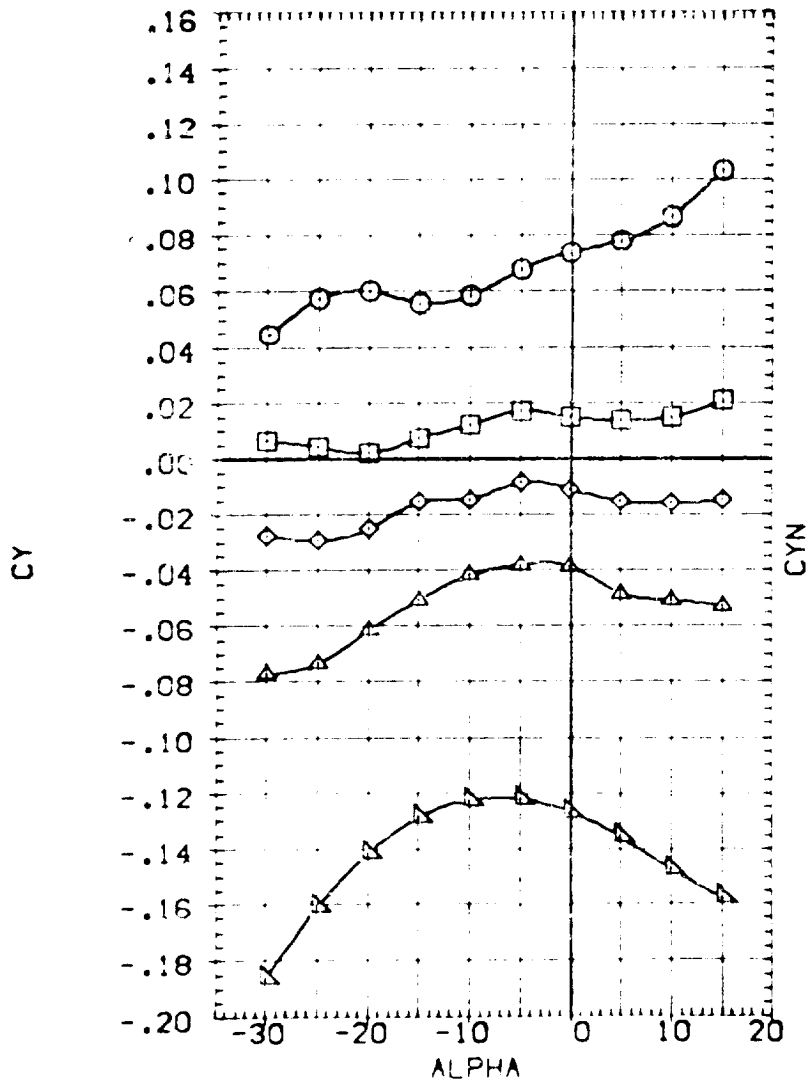


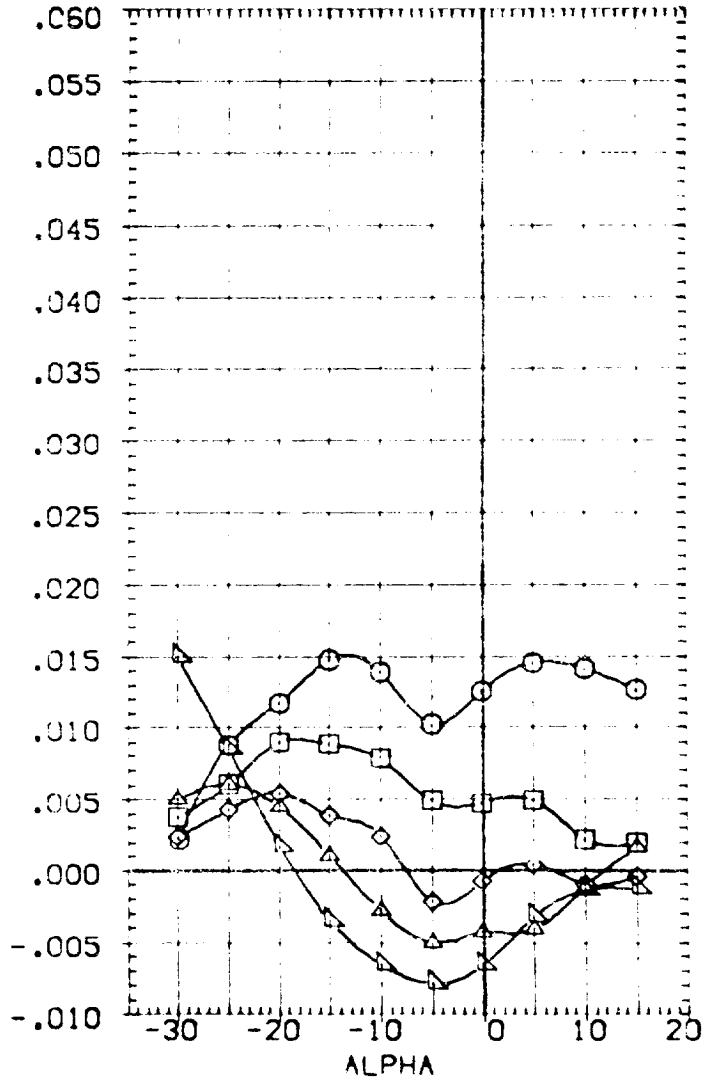
ISOLATED SOLID ROCKET BOOSTER W/PLUMES AERODYNAMIC CHARACTERISTICS

(A)MACH = 4.51

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	BETA	PTOTAL	PCHMBR
[RT#532]	○	[A]3 ISOLATED SOLID ROCKET BOOSTER(SB)W/PLUMES	-10.000	28.900	1500.000
[RT#533]	□	[A]3 ISOLATED SOLID ROCKET BOOSTER(SB)W/PLUMES	.000	28.900	1500.000
[RT#534]	◇	[A]3 ISOLATED SOLID ROCKET BOOSTER(SB)W/PLUMES	5.000	28.900	1500.000
[RT#535]	△	[A]3 ISOLATED SOLID ROCKET BOOSTER(SB)W/PLUMES	10.000	28.900	1500.000
[RT#536]	▽	[A]3 ISOLATED SOLID ROCKET BOOSTER(SB)W/PLUMES	20.000	28.900	1500.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS





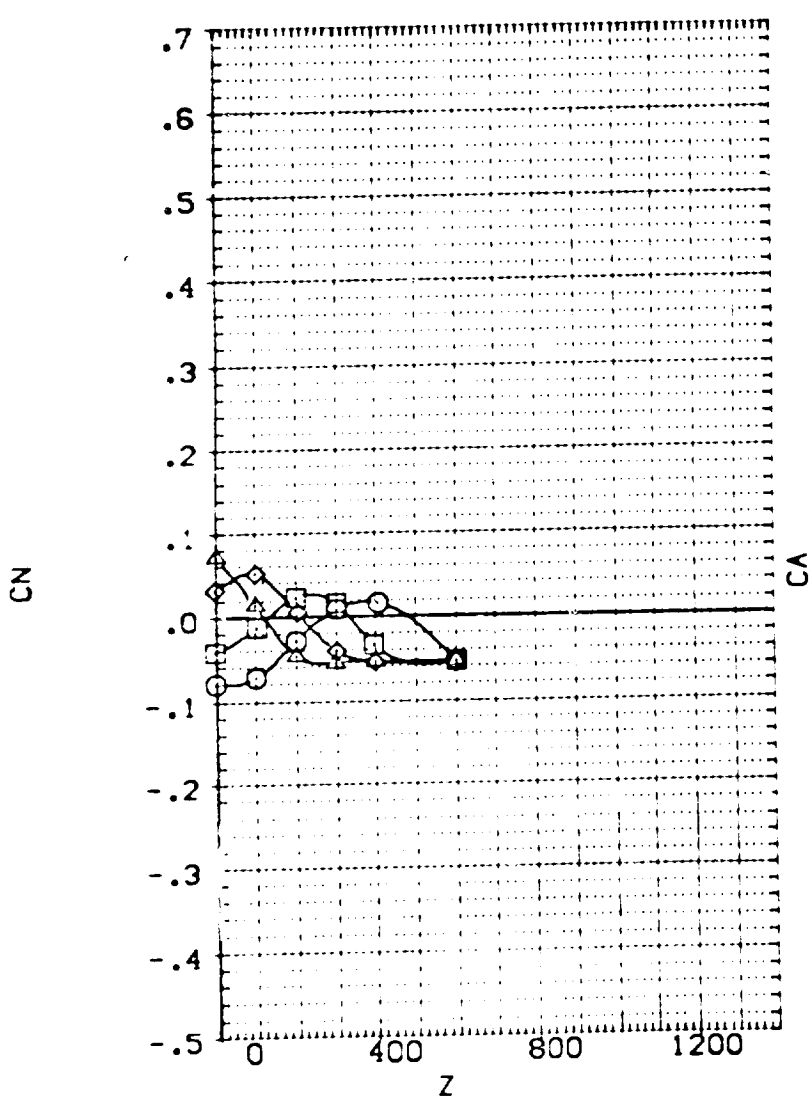
ISOLATED SOLID ROCKET BOOSTER W/PLUMES AERODYNAMIC CHARACTERISTICS

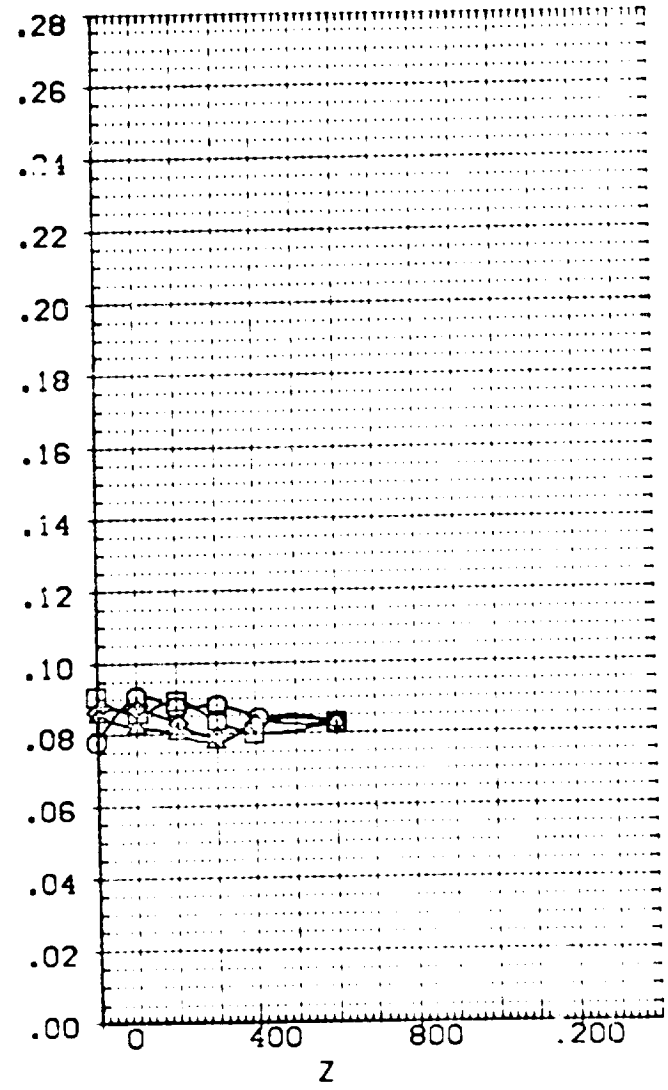
[A]MACH = 4.51

:A:3.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ001)

SYMBOL	X		PARAMETRIC VALUES		
○	.290	MACH	4.530	PTOTAL	110.000
□	400.480	ALPHA	.000	BETA	.000
◇	800.610	DALPHA	5.000	DBETA	.000
△	1200.500	ELEVTR	.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



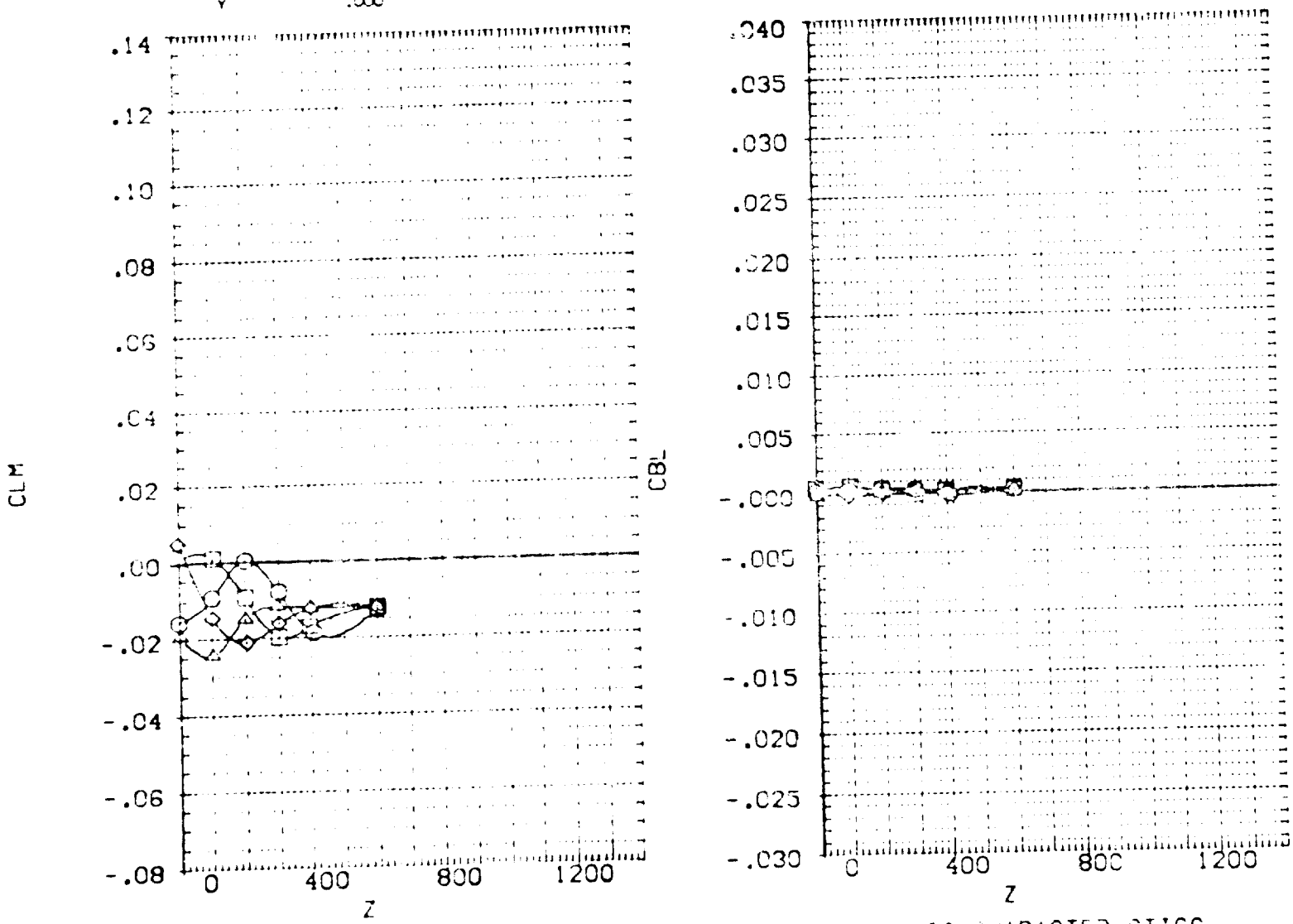


EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

!A13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ001)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

SYMBOL	X		PARAMETRIC VALUES		
	.290	MACH	4.530	PTOTAL	110.000
	400.480	ALPHA	.000	BETA	.000
	800.610	DALPHA	5.000	DBETA	.000
	1200.500	ELEVR	.000	AILRON	.000
		Y	.000		

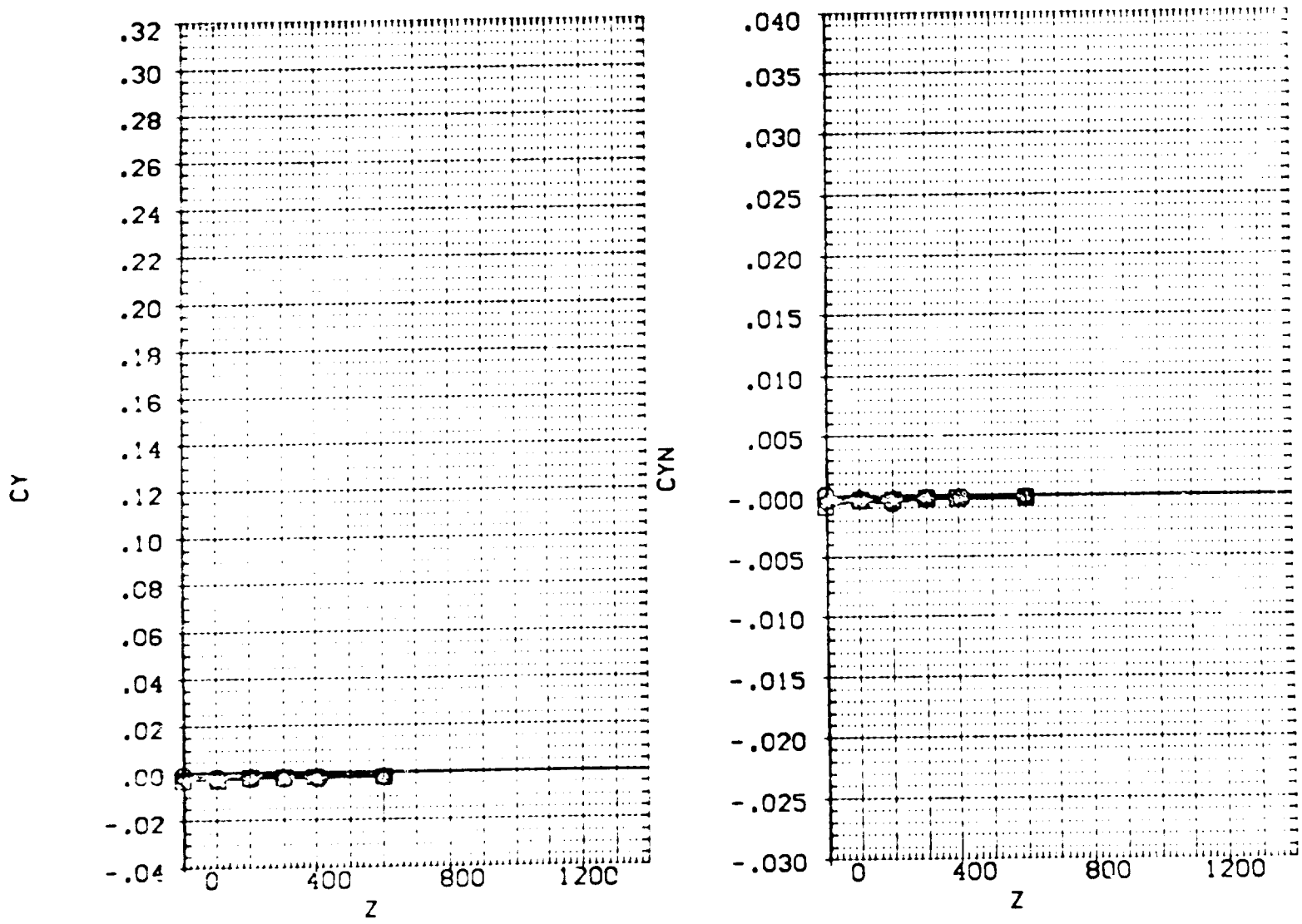


EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

[A13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ001)

SYMBOL	X		PARAMETRIC VALUES		
○	.290	MACH	4.530	PTOTAL	110.000
	400.480	ALPHA	.000	BETA	.000
◇	800.610	DALPHA	5.000	DBETA	.000
	1200.500	ELEVTR	.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED [illegible] DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

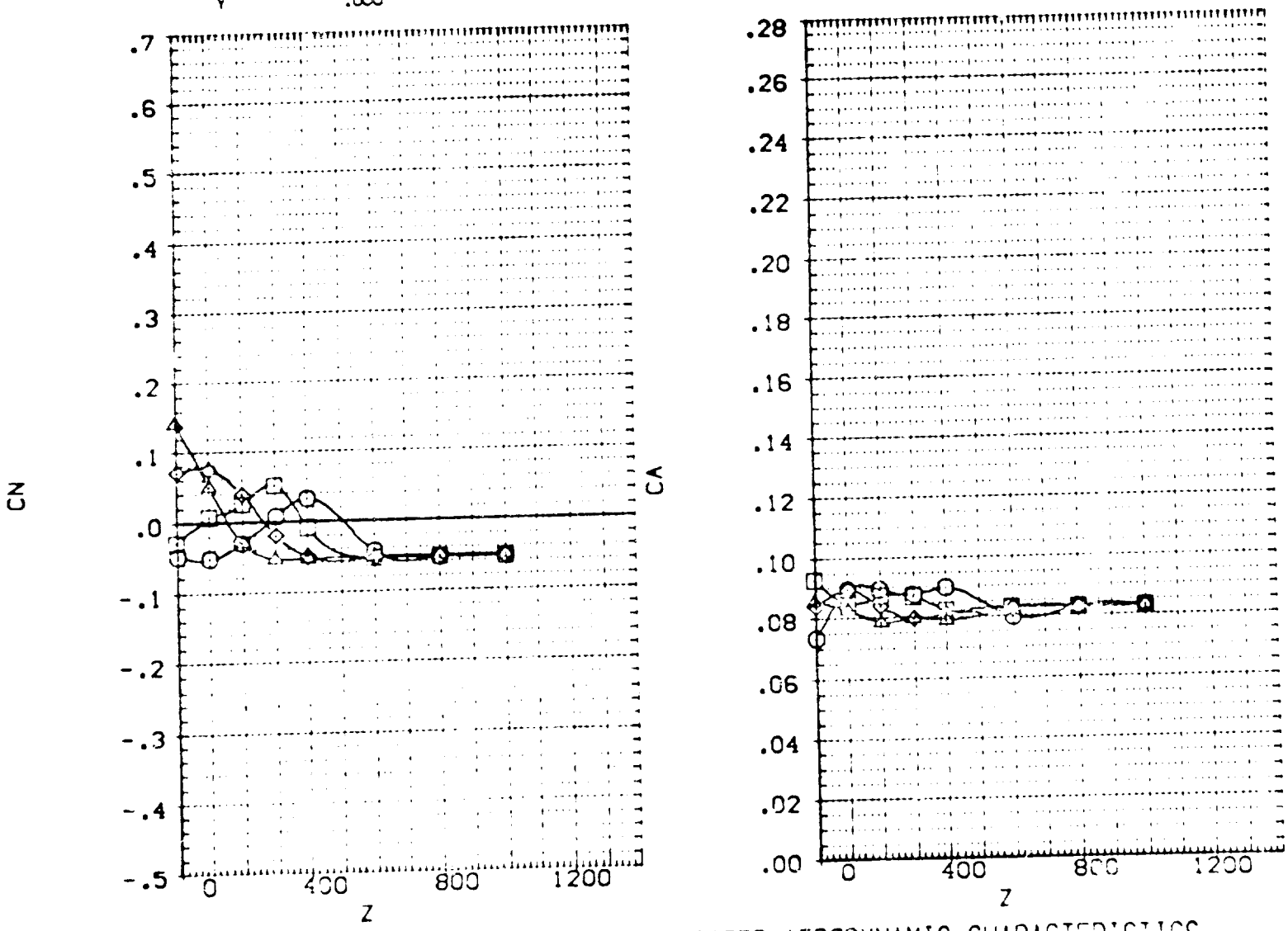


EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

[A13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ002)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

SYMBOL	X	PARAMETRIC VALUES			
○	.046	MACH	4.530	PTOTAL	110.000
◇	400.180	ALPHA	.000	BETA	.000
△	800.460	DALPHA	.000	DBETA	.000
	1200.800	ELEVTR	.000	AILRON	.000
		Y	.000		

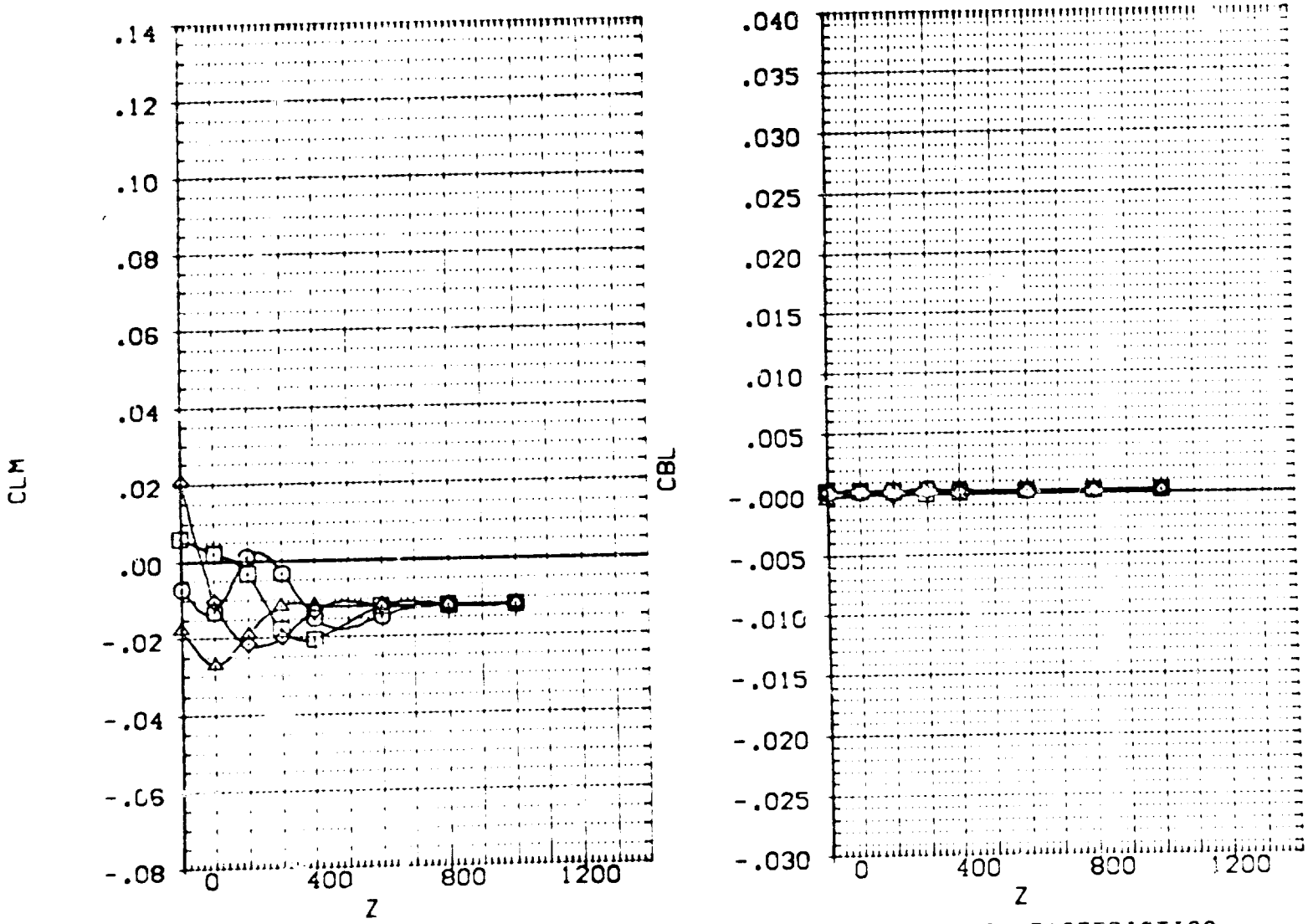


EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

!A13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ002)

SYMBOL	X		PARAMETRIC VALUES		
○	.046	MACH	4.530	PTOTAL	110.000
◇	400.180	ALPHA	.000	BETA	.000
△	800.460	DALPHA	.000	DBETA	.000
	1200.800	ELEVTR	.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED [illegible] DOCUMENT FOR [illegible] CHARACTERISTICS [illegible] INDIVIDUAL DATA [illegible]

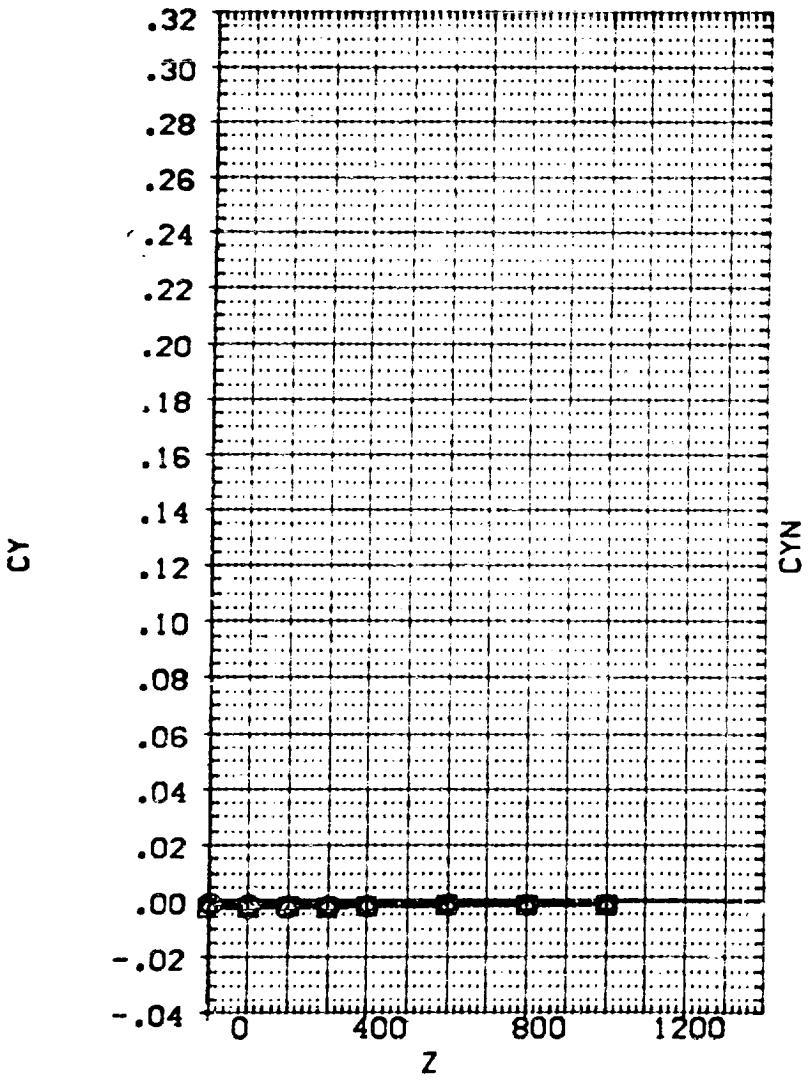


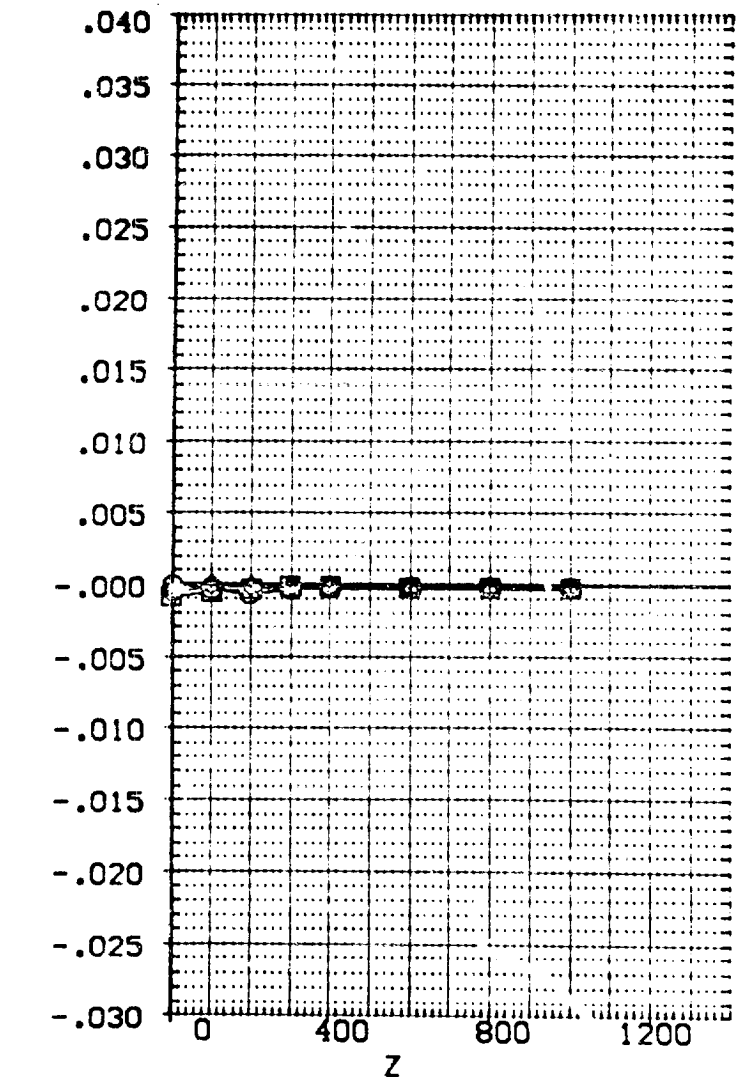
EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ002)

SYMBOL	X		PARAMETRIC VALUES		
○	.046	MACH	4.530	PTOTAL	110.000
□	400.180	ALPHA	.000	BETA	.000
◇	800.460	DALPHA	.000	DBETA	.000
△	1200.800	ELEVTR	.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



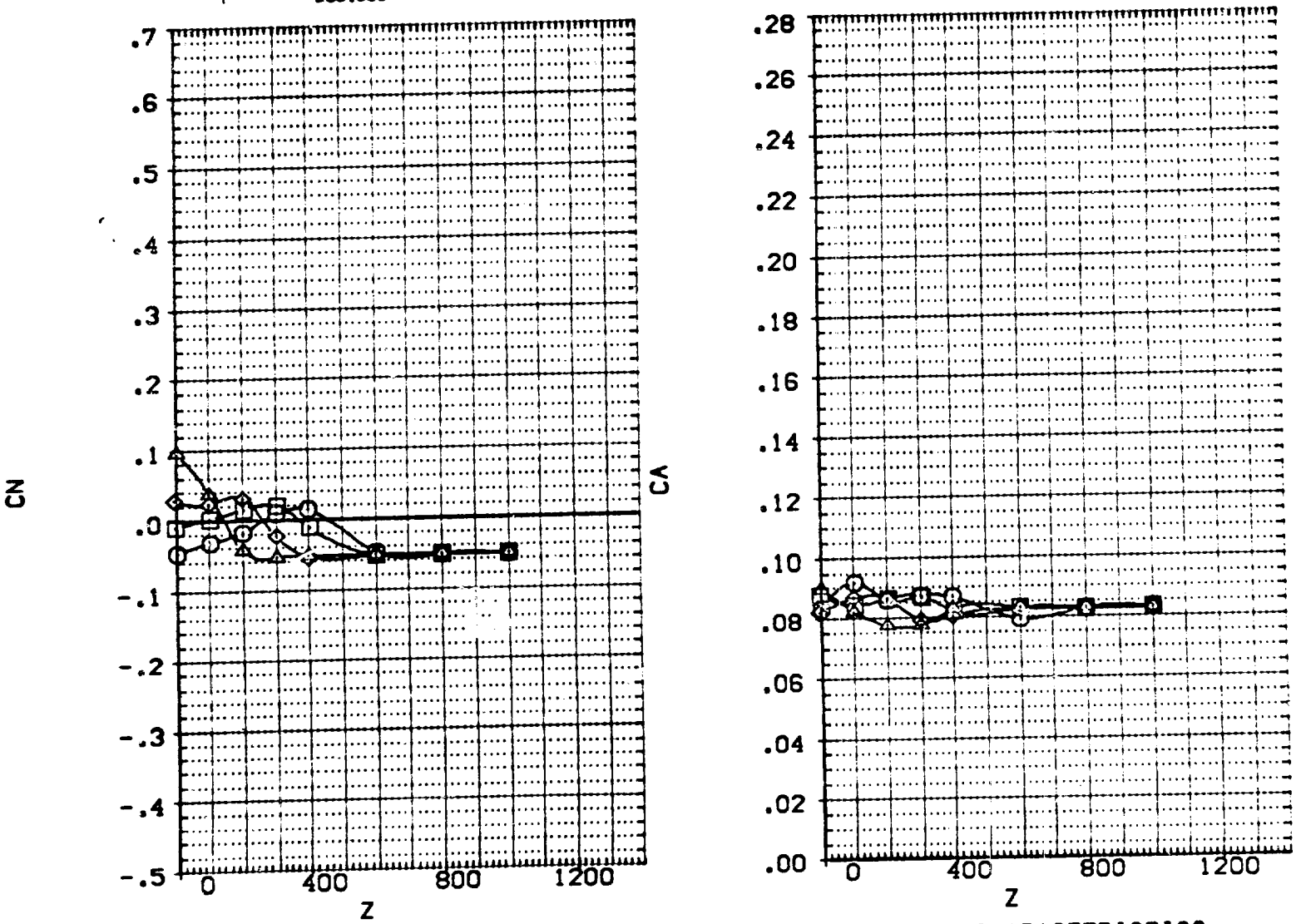


EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ003)

SYMBOL	X		PARAMETRIC VALUES		
○	-.003	MACH	4.530	PTOTAL	110.000
□	400.330	ALPHA	.000	BETA	.000
◇	800.510	DALPHA	.000	DBETA	.000
△	1200.700	ELEVTR	.000	AILRON	.000
		Y	200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

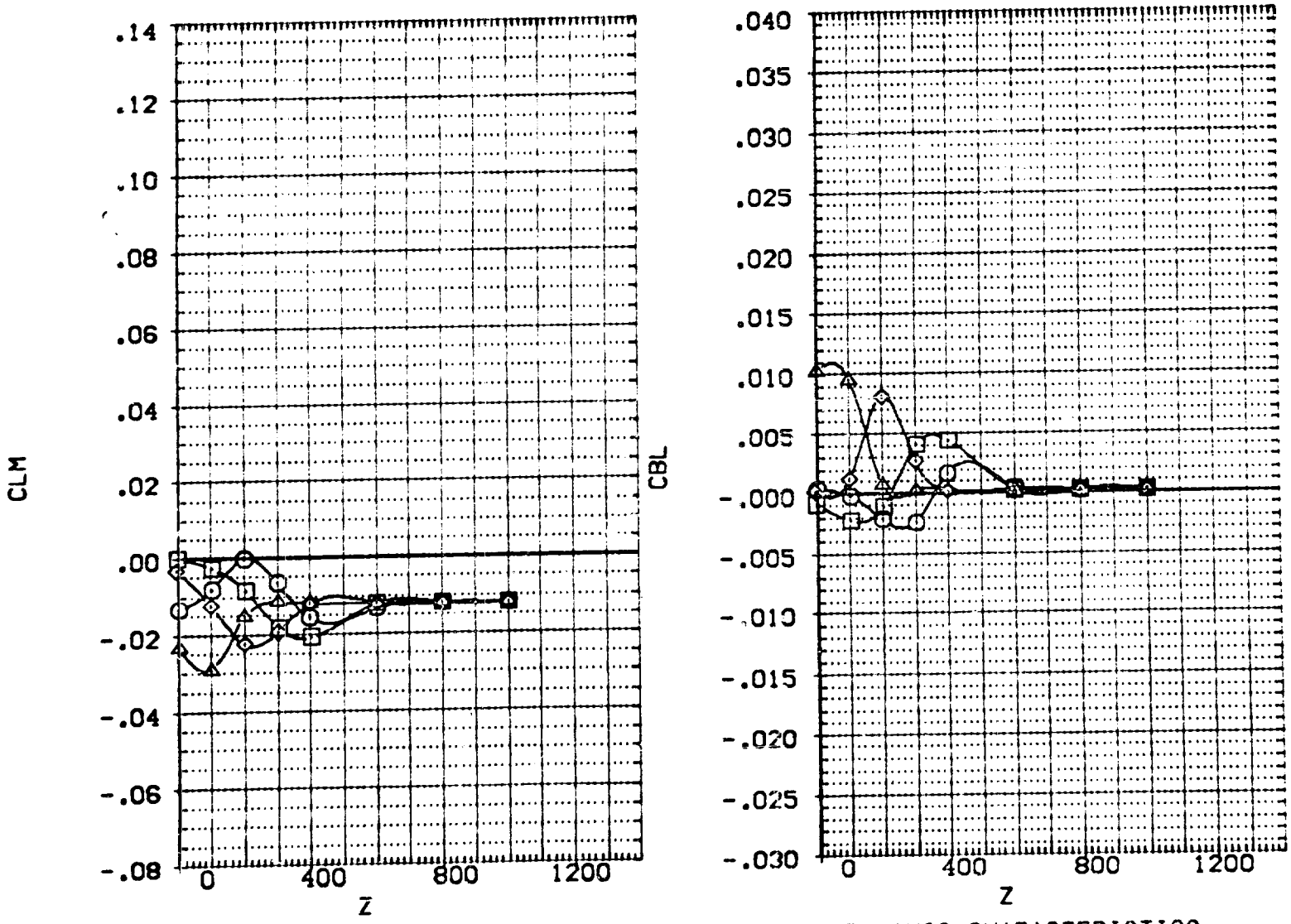


EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ003)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

SYMBOL	X		PARAMETRIC VALUES		
○	-.003	MACH	4.530	PTOTAL	110.000
□	400.330	ALPHA	.000	BETA	.000
◇	800.510	DALPHA	.000	DBETA	.000
△	1200.700	ELEVTR	.000	AILRON	.000
		Y	200.000		

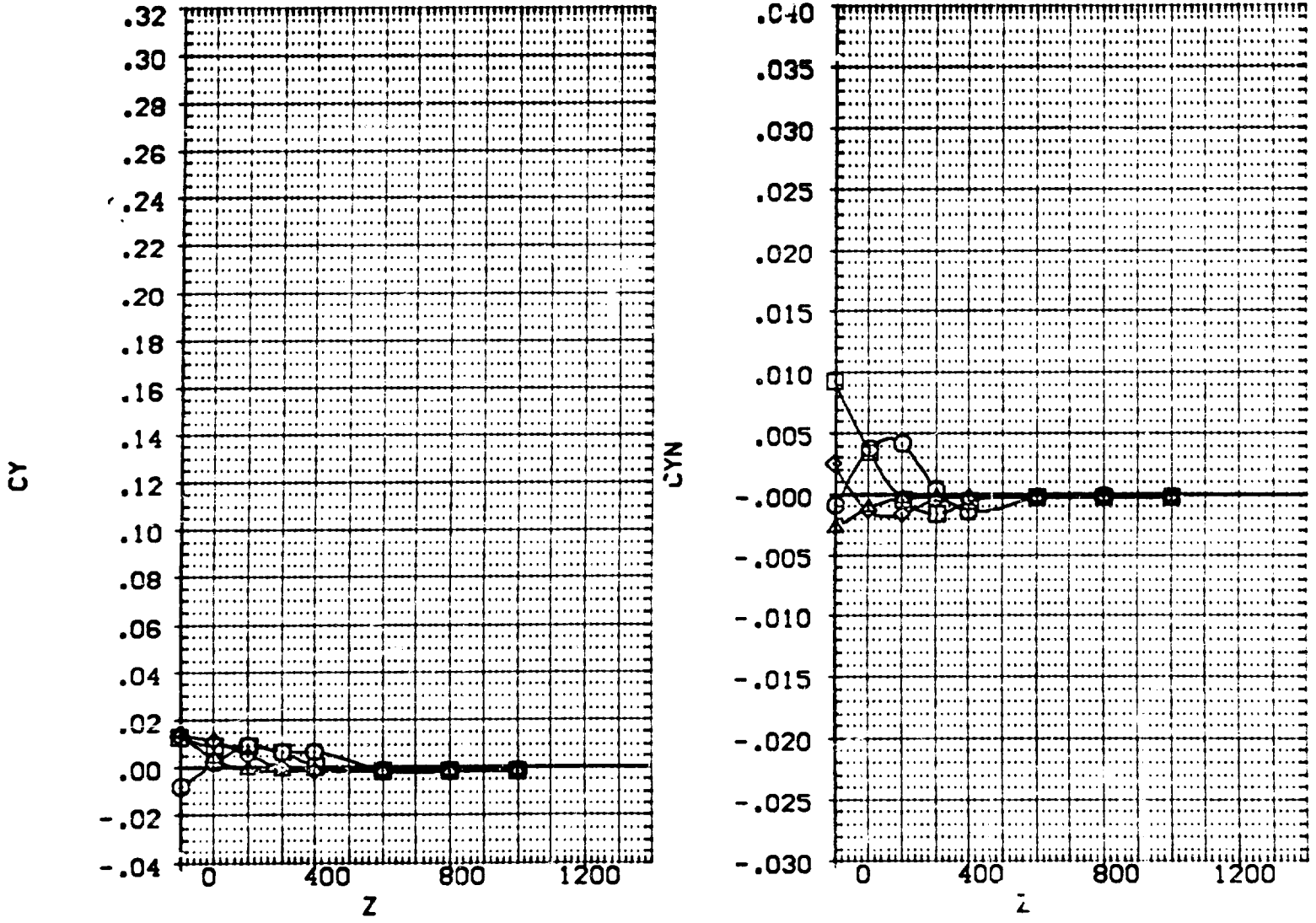


EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

1A13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ003)

SYMBOL	X		PARAMETRIC VALUES		
○	-.003	MACH	4.530	PTOTAL	110.000
□	400.330	ALPHA	.000	BETA	.000
◇	800.510	DALPHA	.000	DBETA	.000
△	1200.700	ELEVTR	.000	AILRON	.000
		Y	200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

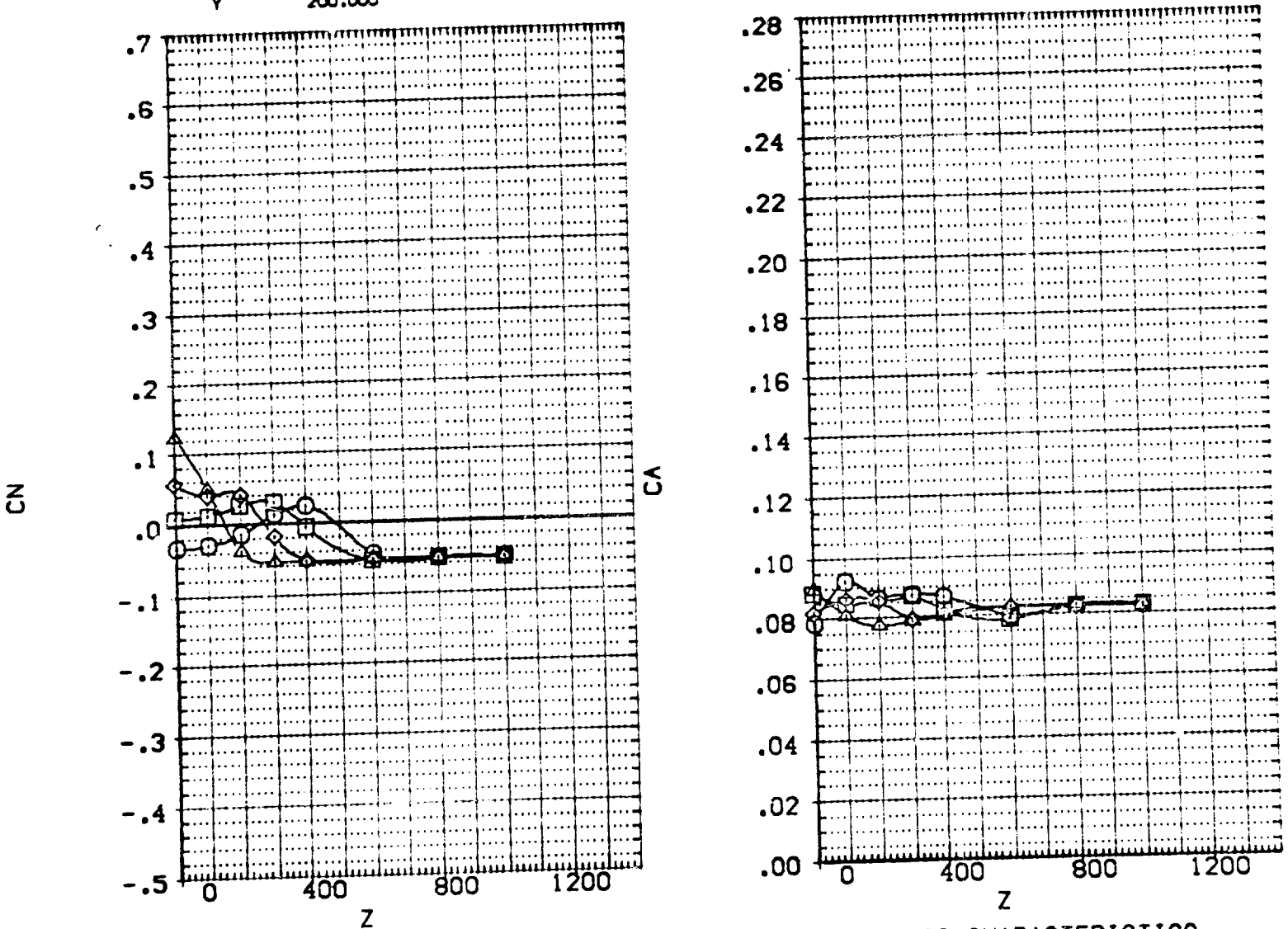


EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ004)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

SYMBOL	X	PARAMETRIC VALUES			
○	.088	MACH	4.530	PTOTAL	110.000
□	400.280	ALPHA	.000	BETA	.000
◇	800.430	DALPHA	.000	DBETA	5.000
△	1200.700	ELEVTR	.000	AILRON	.000
		Y	200.000		

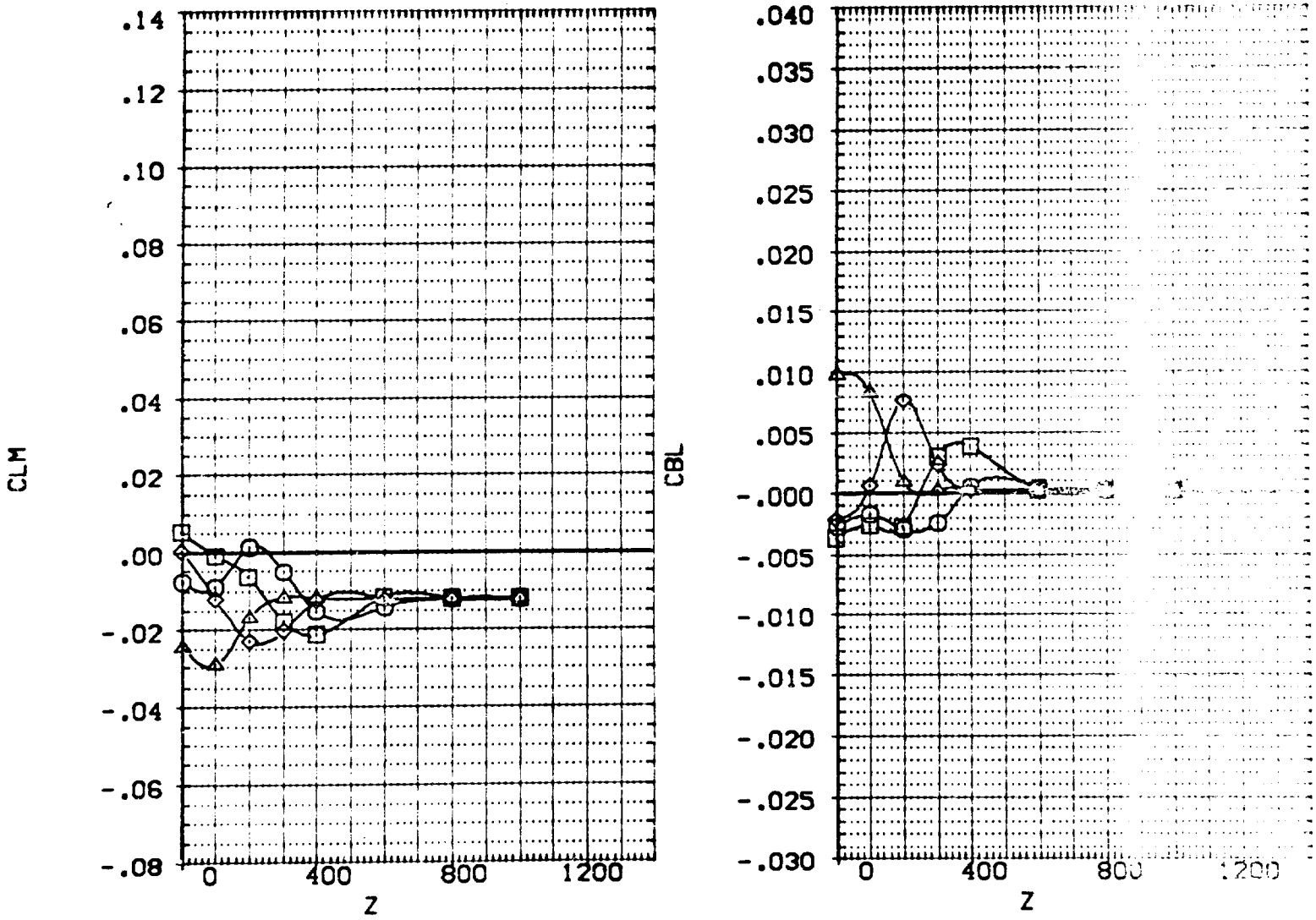


EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ004)

SYMBOL	X		PARAMETRIC VALUES		
○	.088	MACH	4.530	PTOTAL	110.000
□	400.280	ALPHA	.000	BETA	.000
◇	800.430	DALPHA	.000	DBETA	5.000
△	1200.700	ELEVTR	.000	AILRON	.000
		Y	200.000		

SEE THE ASSOCIATED DOCUMENT FOR BASIC CHARACTERISTICS FOR INDIVIDUAL DATASETS

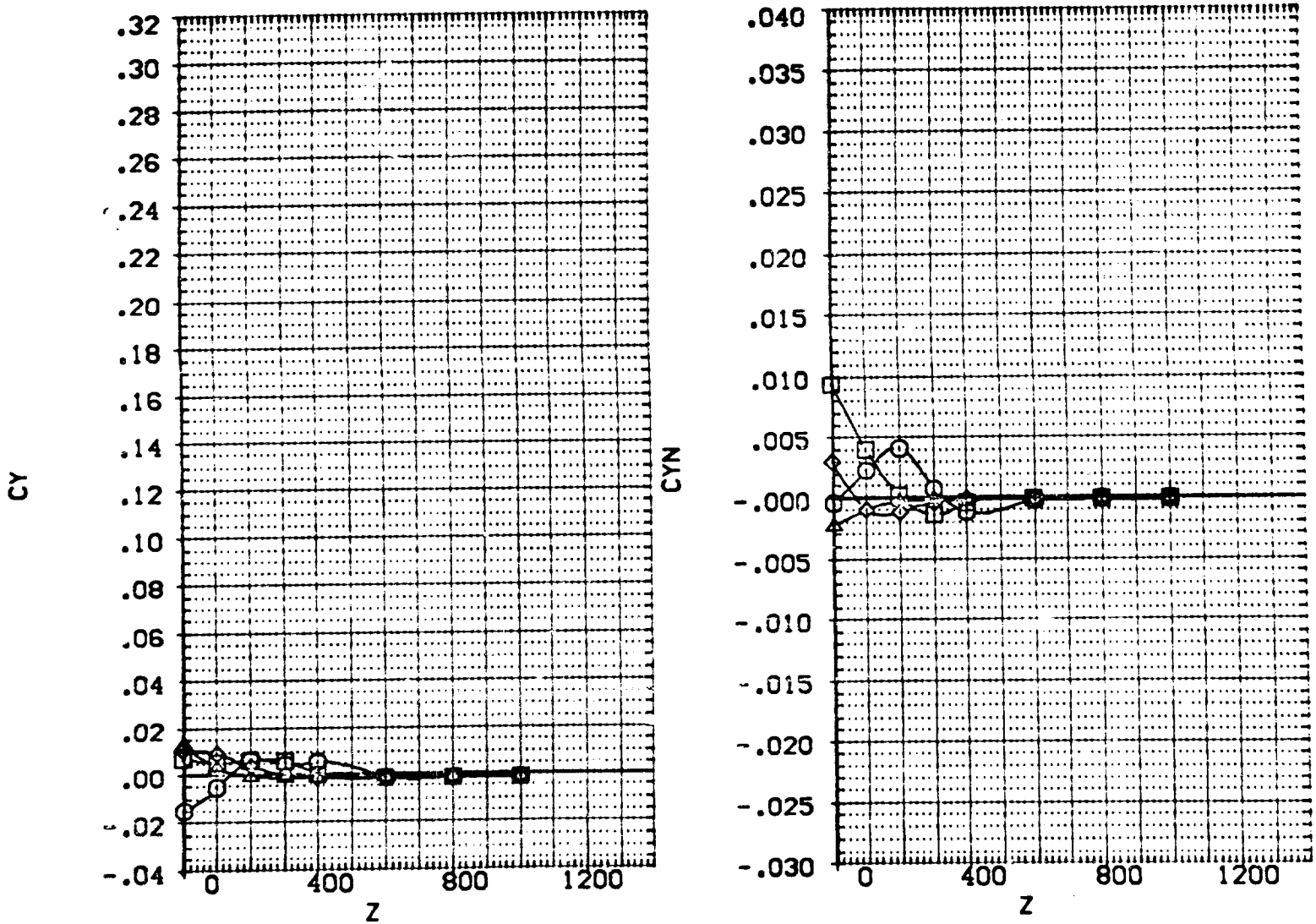


EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

!A13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ004)

SYMBOL	X		PARAMETRIC VALUES		
○	.088	MACH	4.530	PTOTAL	110.000
□	400.280	ALPHA	.000	BETA	.000
◇	800.430	DALPHA	.000	DBETA	5.000
△	1200.700	ELEVTR	.000	AILRON	.000
		Y	200.000		

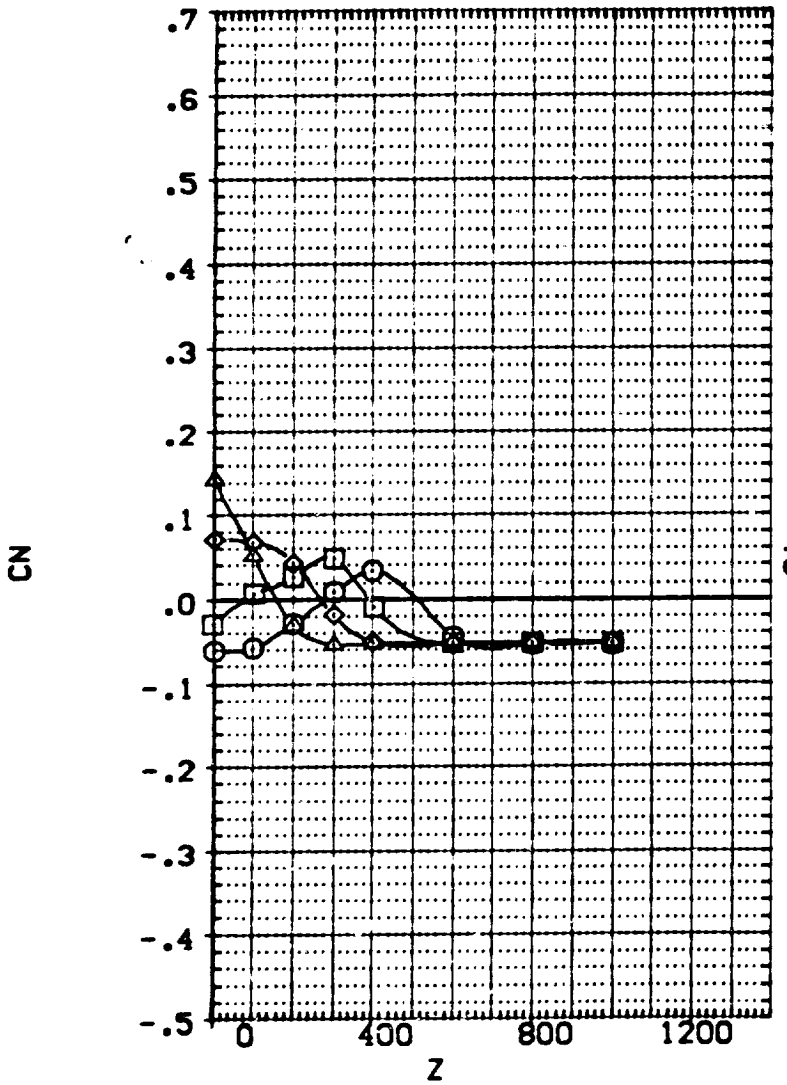
SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

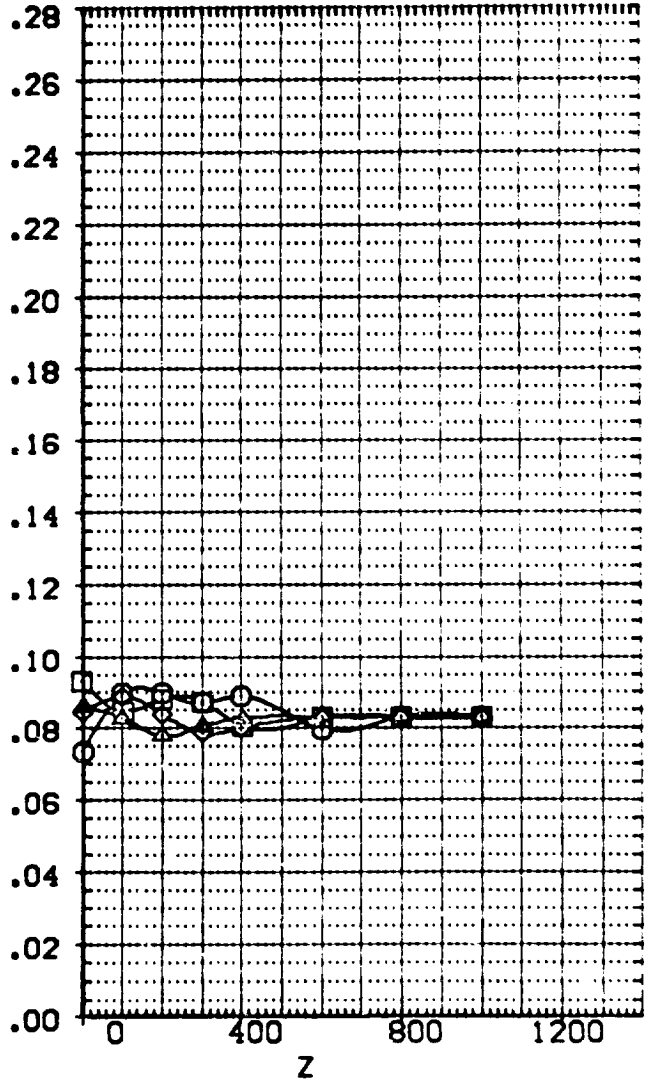


EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

SYMBOL	X		PARAMETRIC VALUES		
○	-.057	MACH	4.530	PTOTAL	110.000
□	400.480	ALPHA	.000	BETA	.000
◇	800.570	DALPHA	.000	DBETA	5.000
△	1200.600	ELEVTR	.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



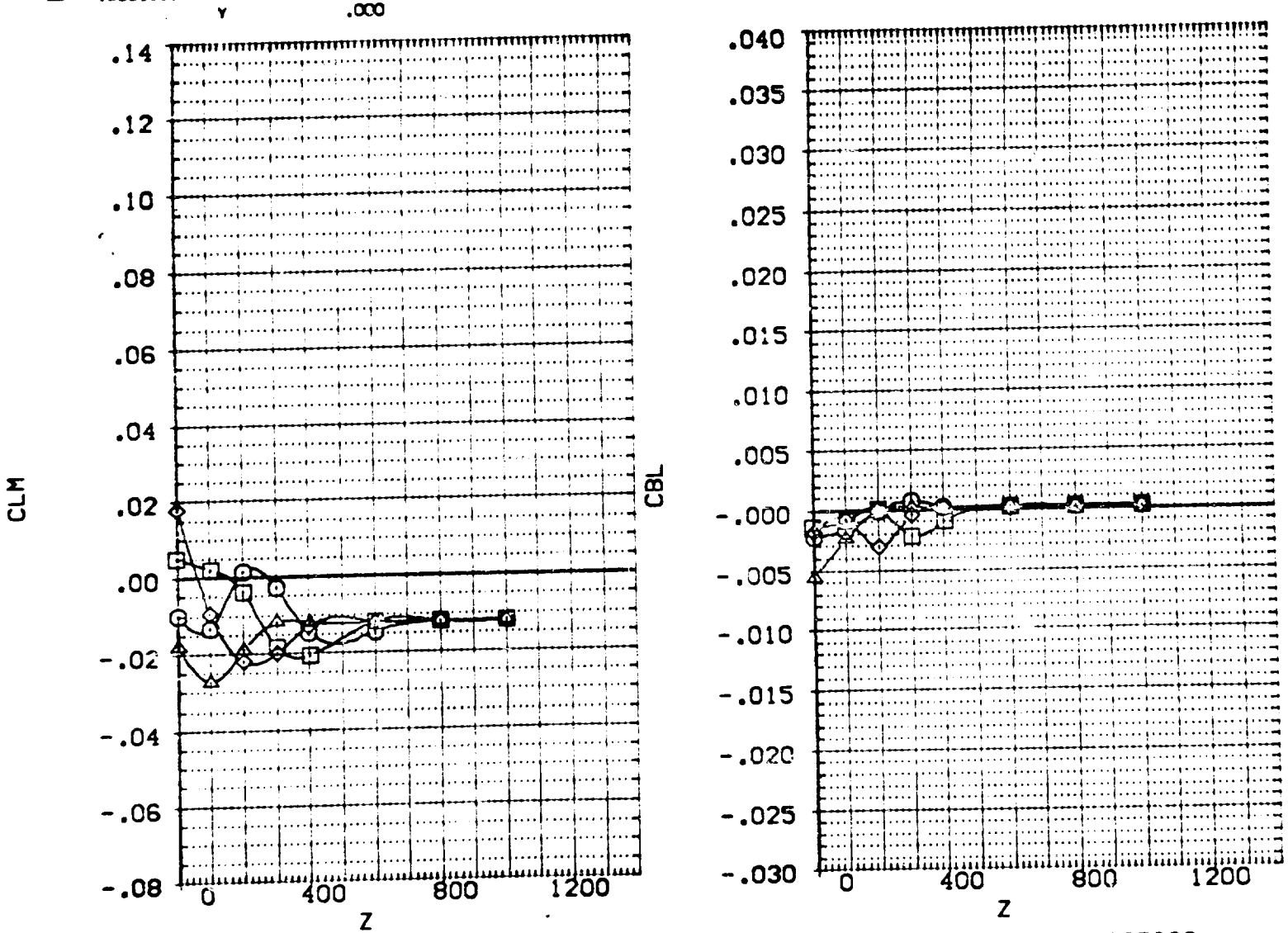


EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ005)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

SYMBOL	X		PARAMETRIC VALUES		
○	-.057	MACH	4.530	PTOTAL	110.000
◇	400.480	ALPHA	.000	BETA	.000
□	800.570	DALPHA	.000	DBETA	5.000
△	1200.600	ELEVTR	.000	AILRON	.000
		Y	.000		

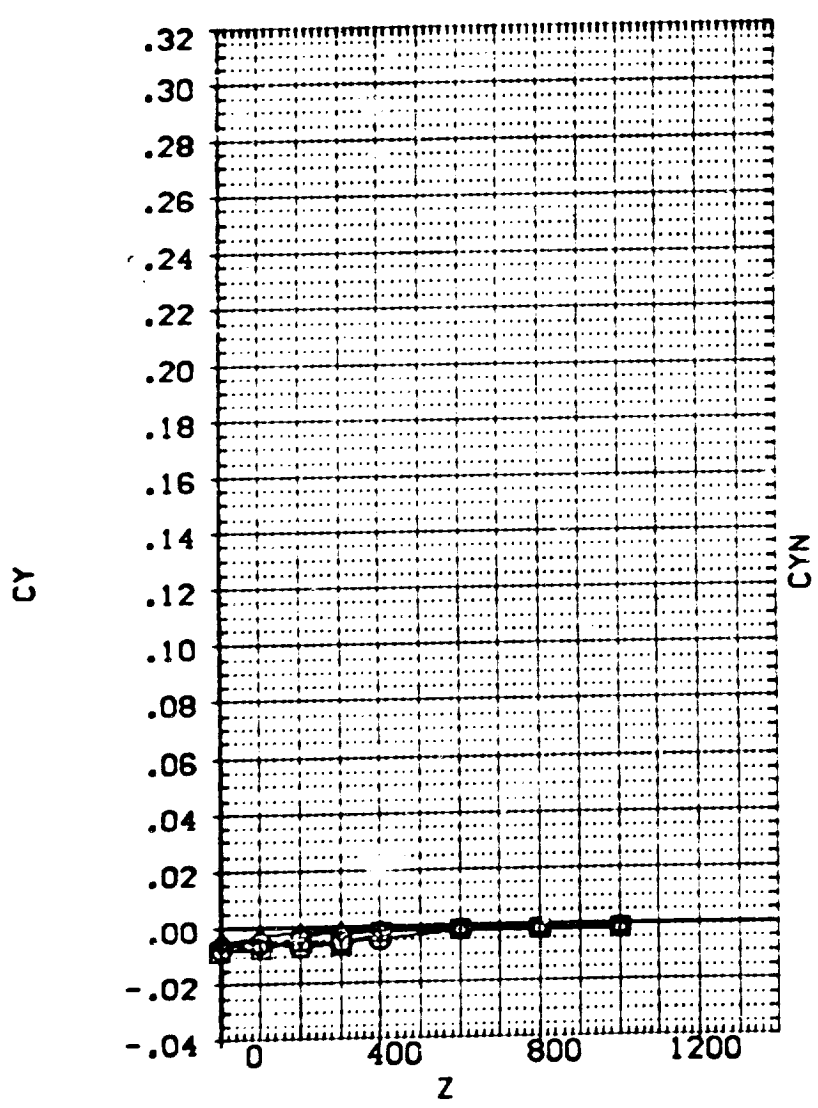


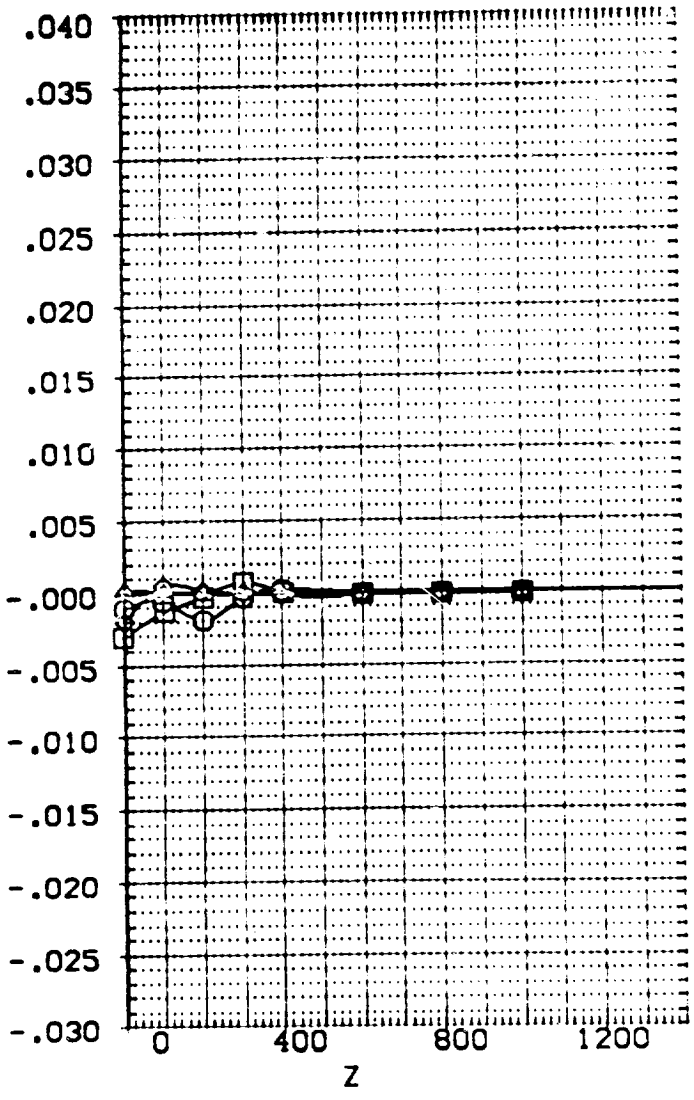
EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

!A13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ005)

SYMBOL	X		PARAMETRIC VALUES		
○	-.057	MACH	4.530	PTOTAL	110.000
□	400.480	ALPHA	.000	BETA	.000
◇	800.570	DALPHA	.000	DBETA	5.000
△	1200.600	ELEVTR	.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



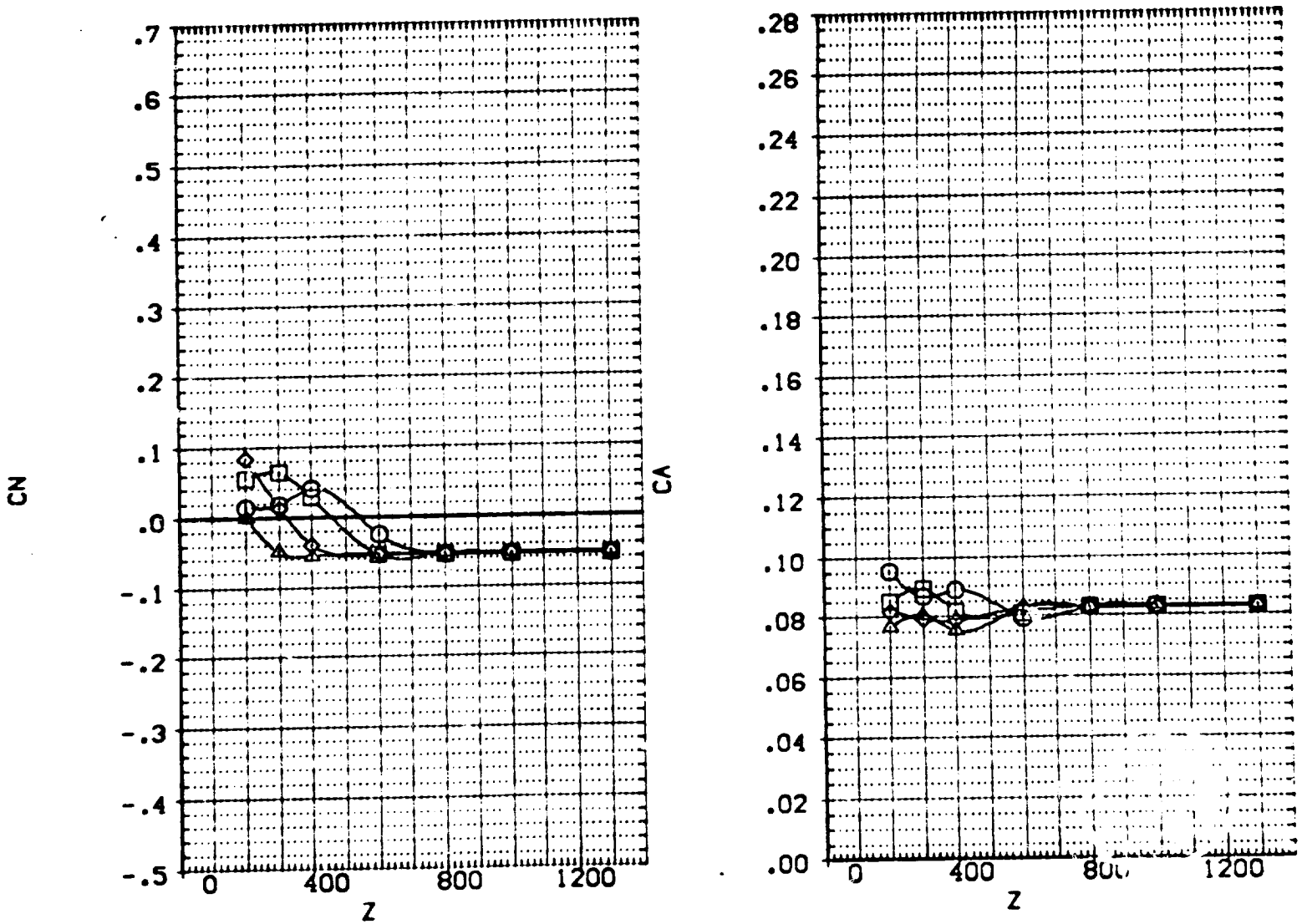


EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

!A13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ006)

SYMBOL	X		PARAMETRIC VALUES		
○	.117	MACH	4.530	PTOTAL	110.000
□	400.310	ALPHA	.000	BETA	.000
◇	800.510	DALPHA	-5.000	DBETA	.000
△	1200.900	ELEVTR	.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

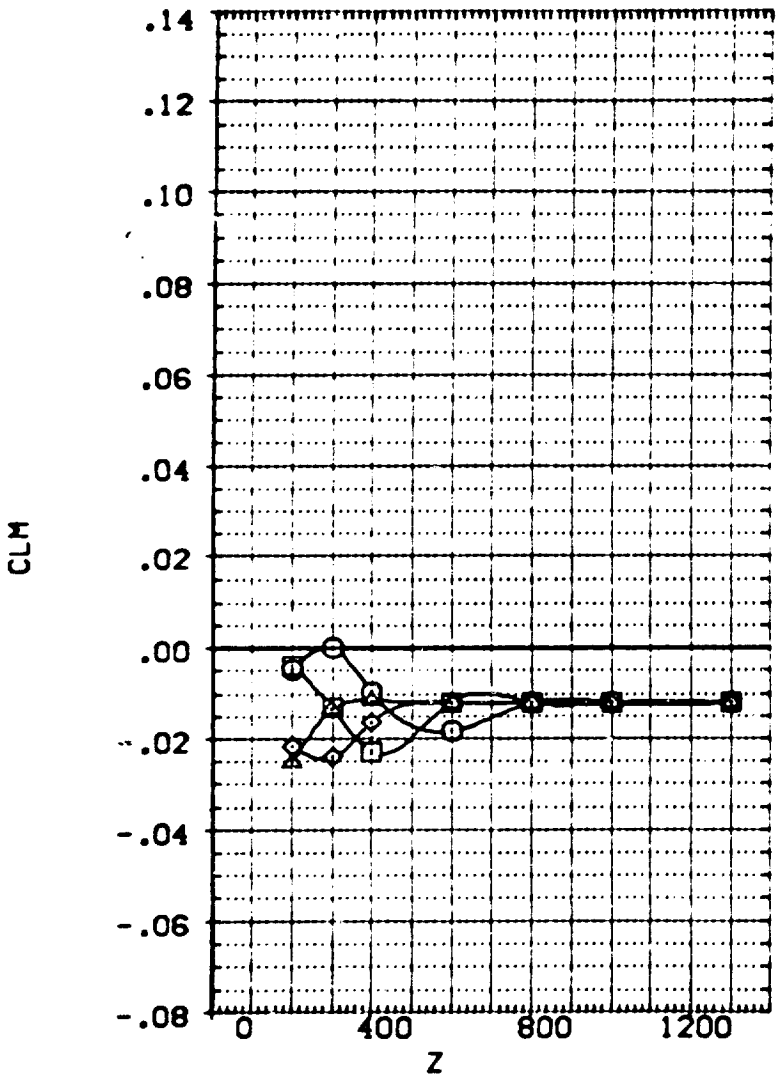


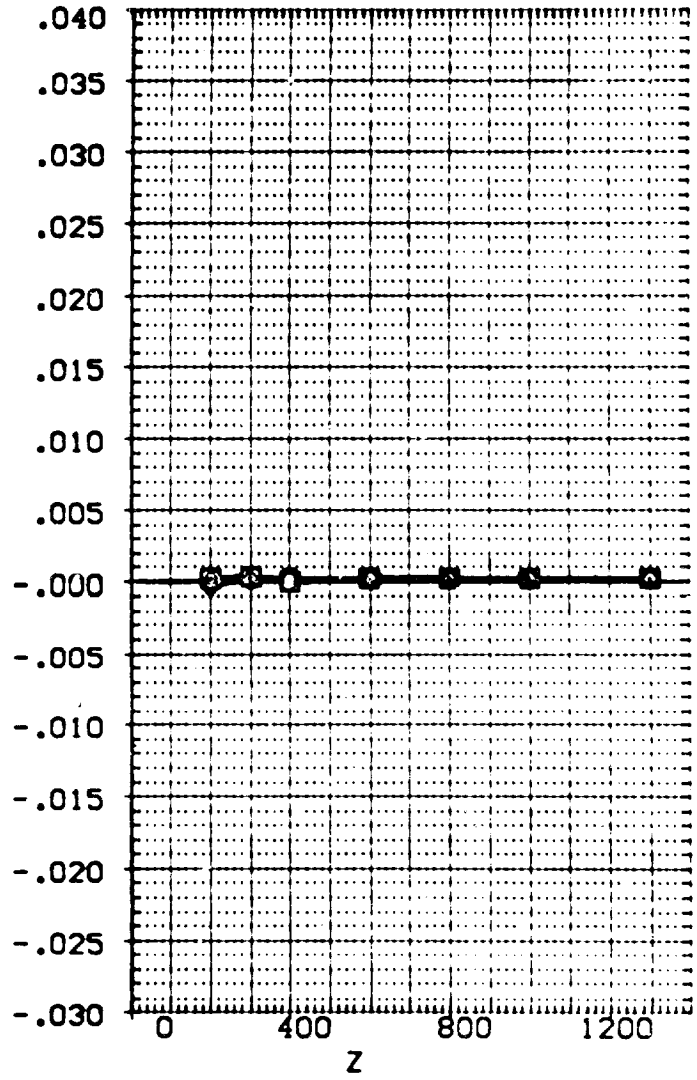
EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

!A13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ006)

SYMBOL	X		PARAMETRIC VALUES		
○	.117	MACH	4.530	PTOTAL	110.000
□	400.310	ALPHA	.000	BETA	.000
◇	800.510	DALPHA	-5.000	DBETA	.000
△	1200.900	ELEVTR	.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



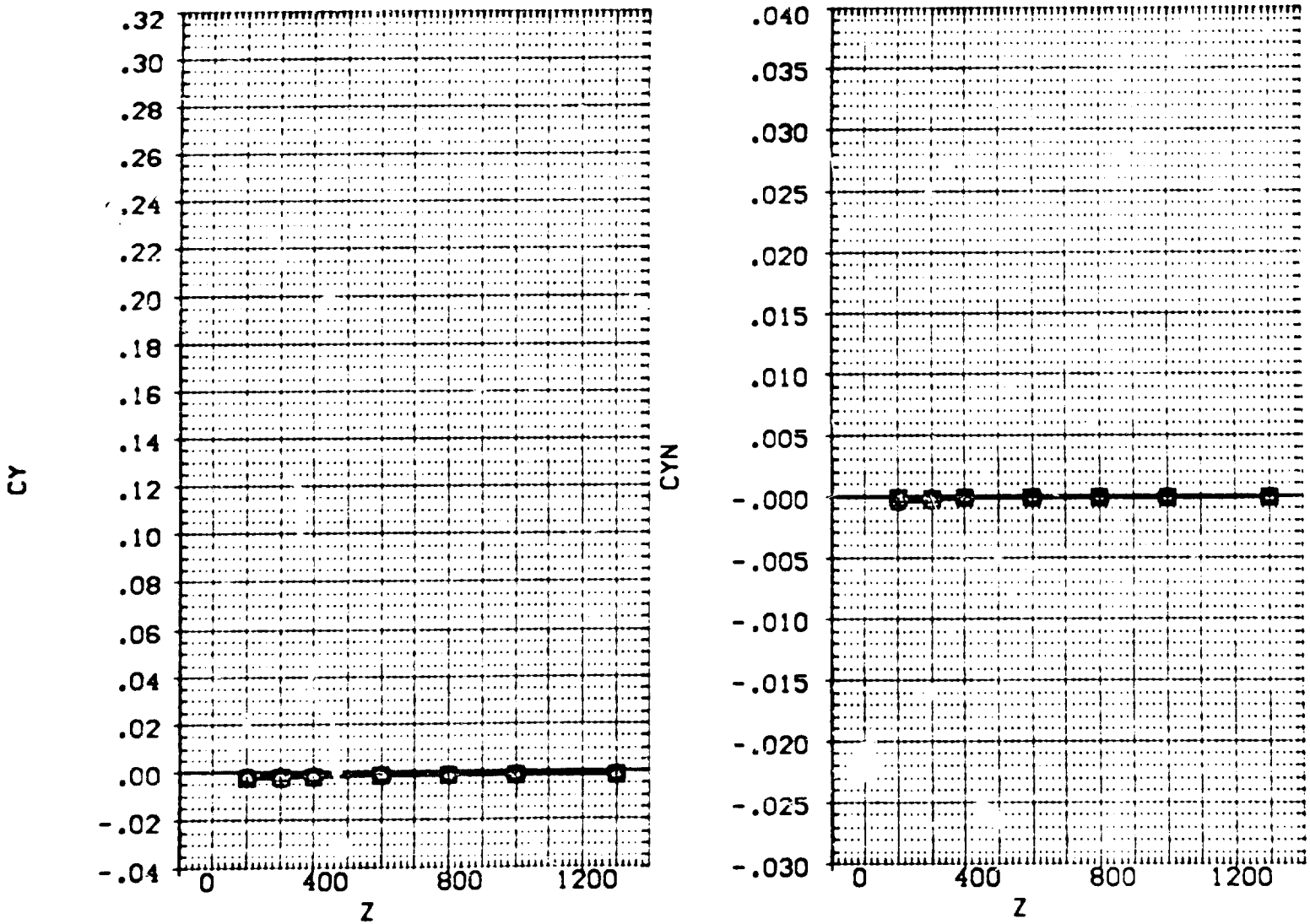


EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

!A13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ006)

SYMBOL	X		PARAMETRIC VALUES		
○	.117	MACH	4.530	PTOTAL	110.000
□	400.310	ALPHA	.000	BETA	.000
◇	800.510	DALPHA	-5.000	DBETA	.000
△	1200.900	ELEVTR	.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

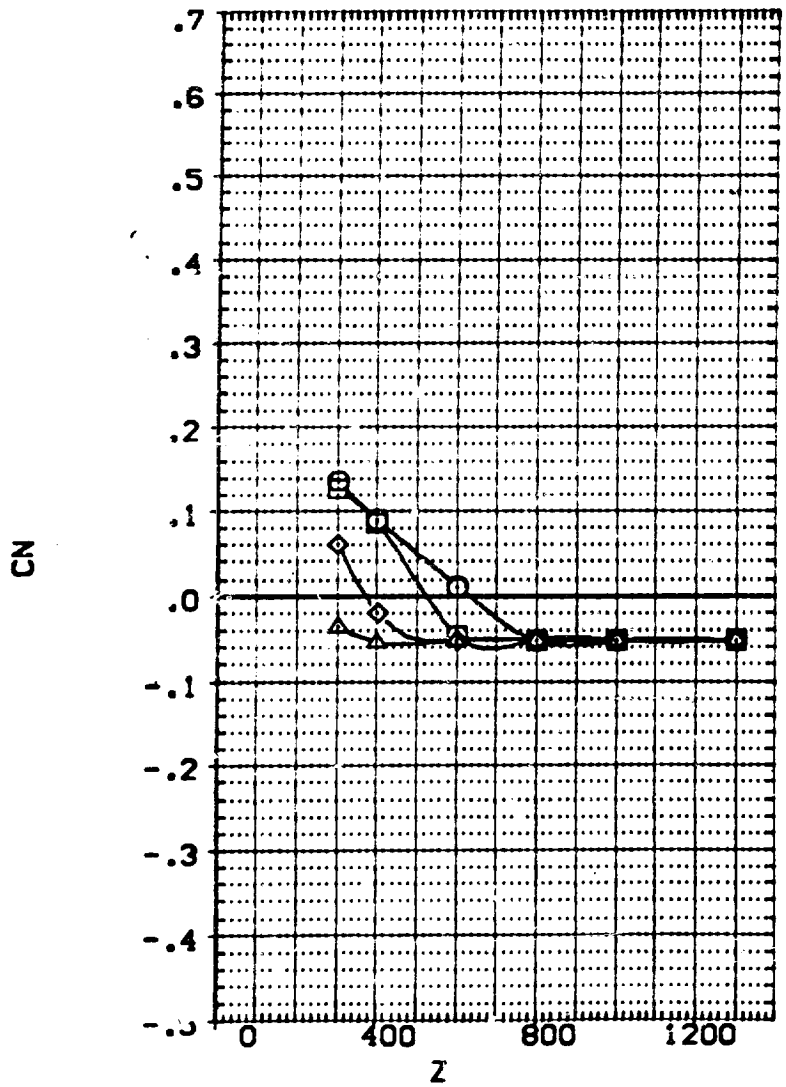


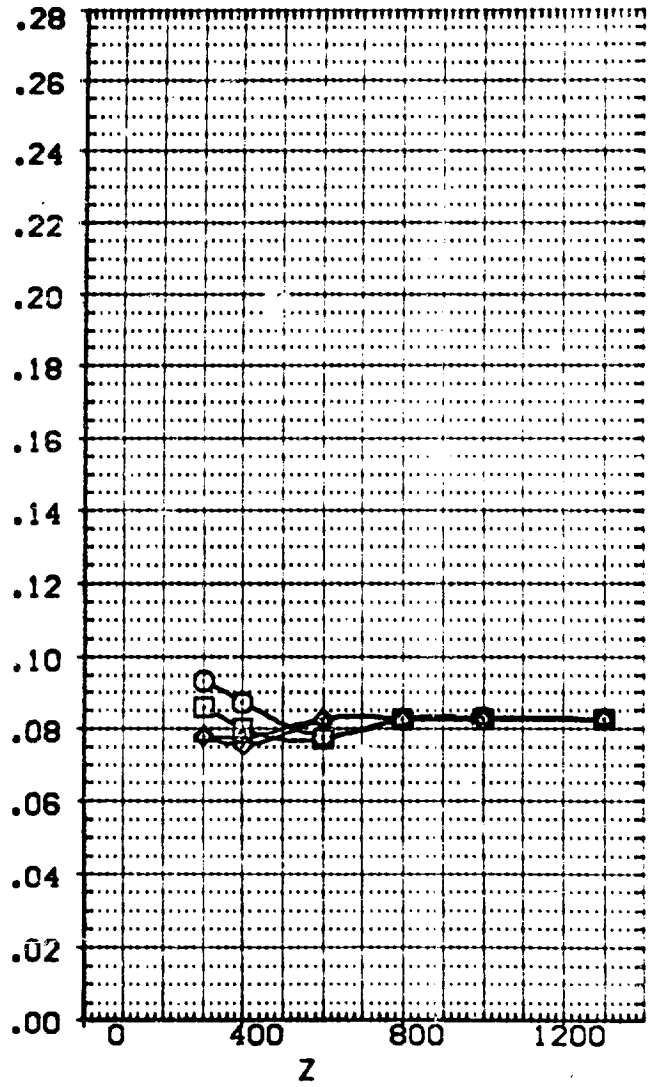
EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ007)

SYMBOL	X		PARAMETRIC VALUES		
○	.057	MACH	4.530	PTOTAL	110.000
□	400.430	ALPHA	.000	BETA	.000
◇	800.500	DALPHA	-10.000	DBETA	.000
△	1200.700	ELEVTR	.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



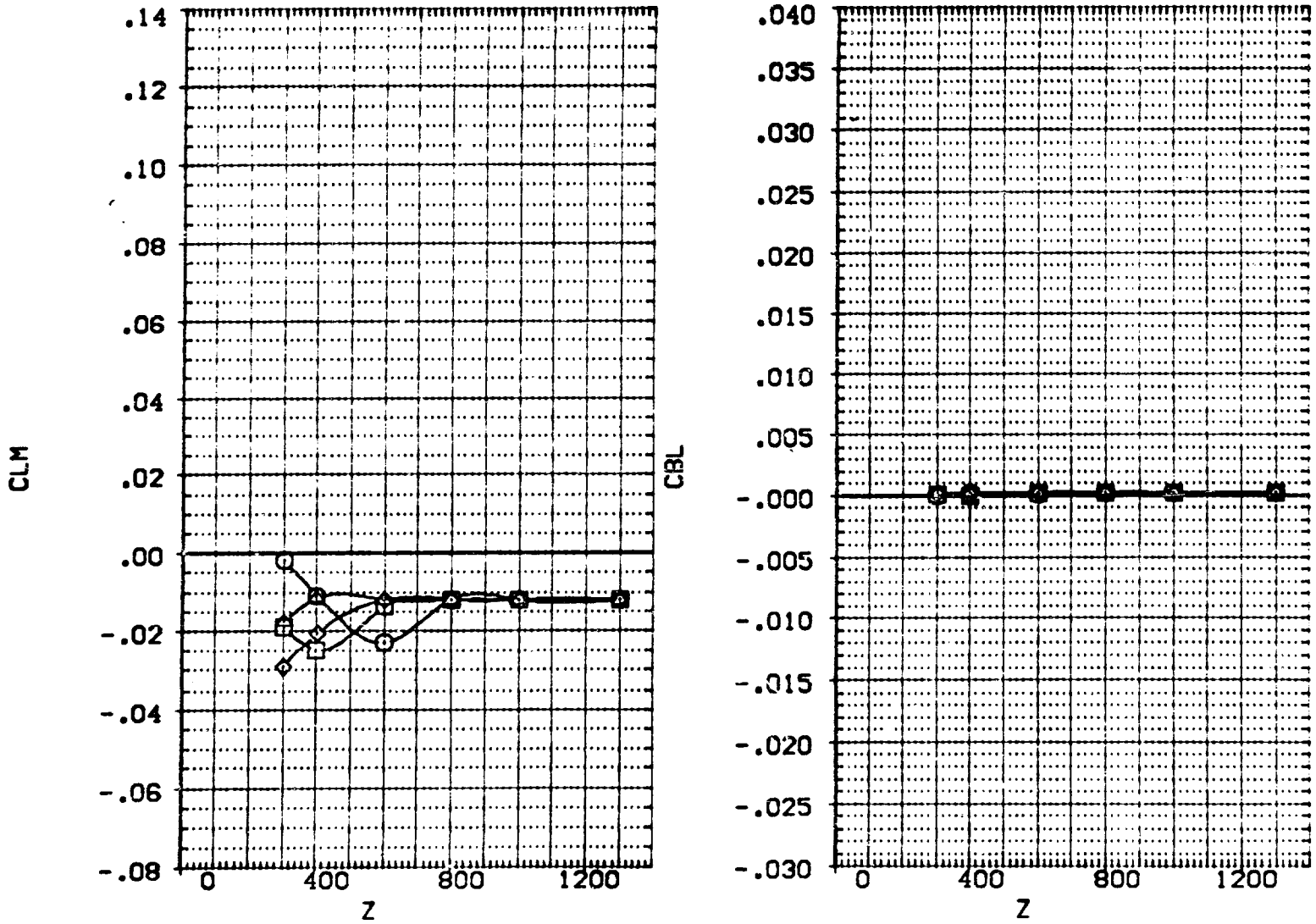


EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ007)

SYMBOL	X		PARAMETRIC VALUES		
○	.057	MACH	4.530	PTOTAL	110.000
□	400.430	ALPHA	.000	BETA	.000
◇	800.500	DALPHA	-10.000	DBETA	.000
△	1200.700	ELEVTR	.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

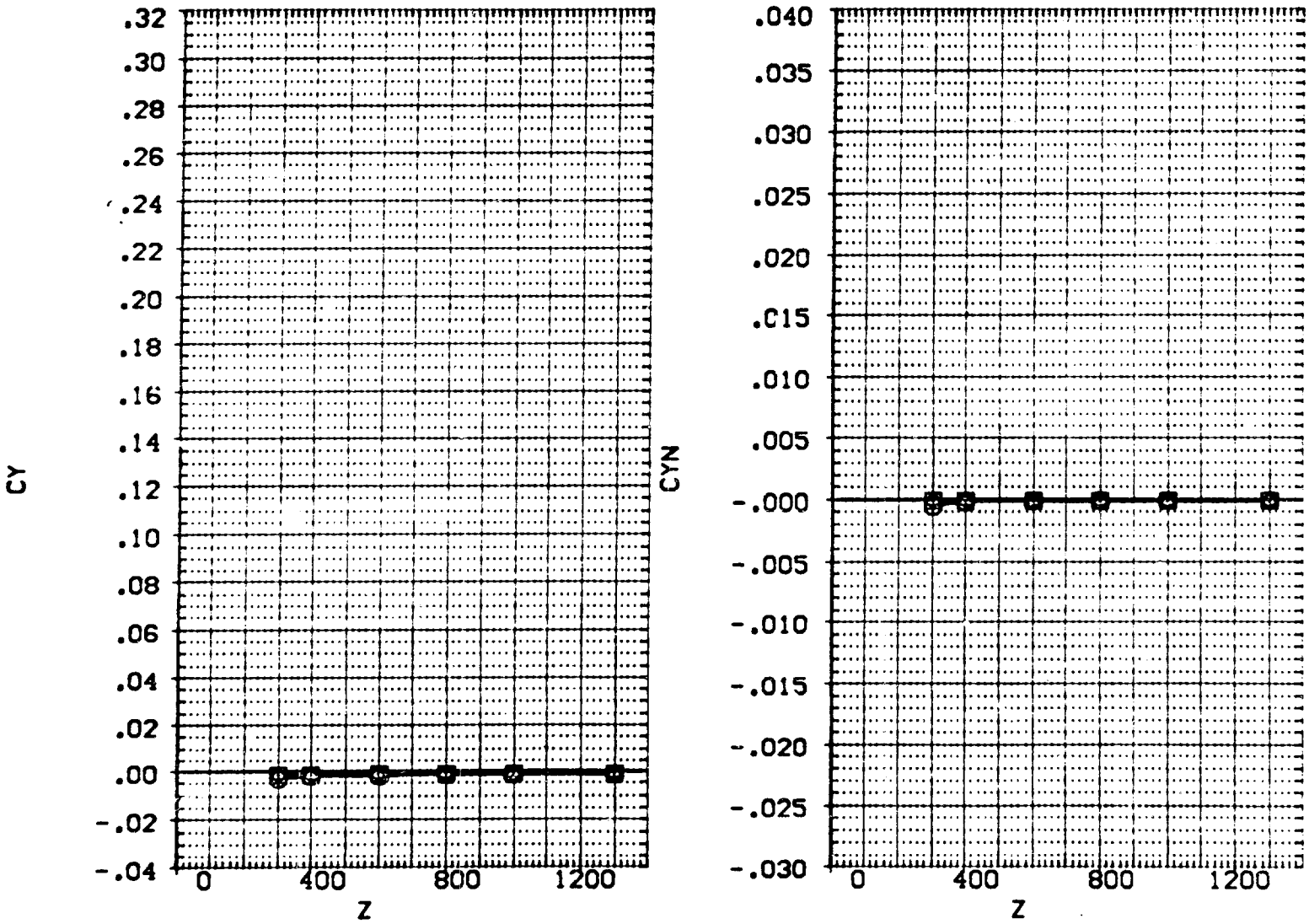


EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ007)

SYMBOL	X		PARAMETRIC VALUES		
○	.057	MACH	4.530	PTOTAL	110.000
□	400.430	ALPHA	.000	BETA	.000
◇	800.500	DALPHA	-10.000	DBETA	.000
△	1200.700	ELEVTR	.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

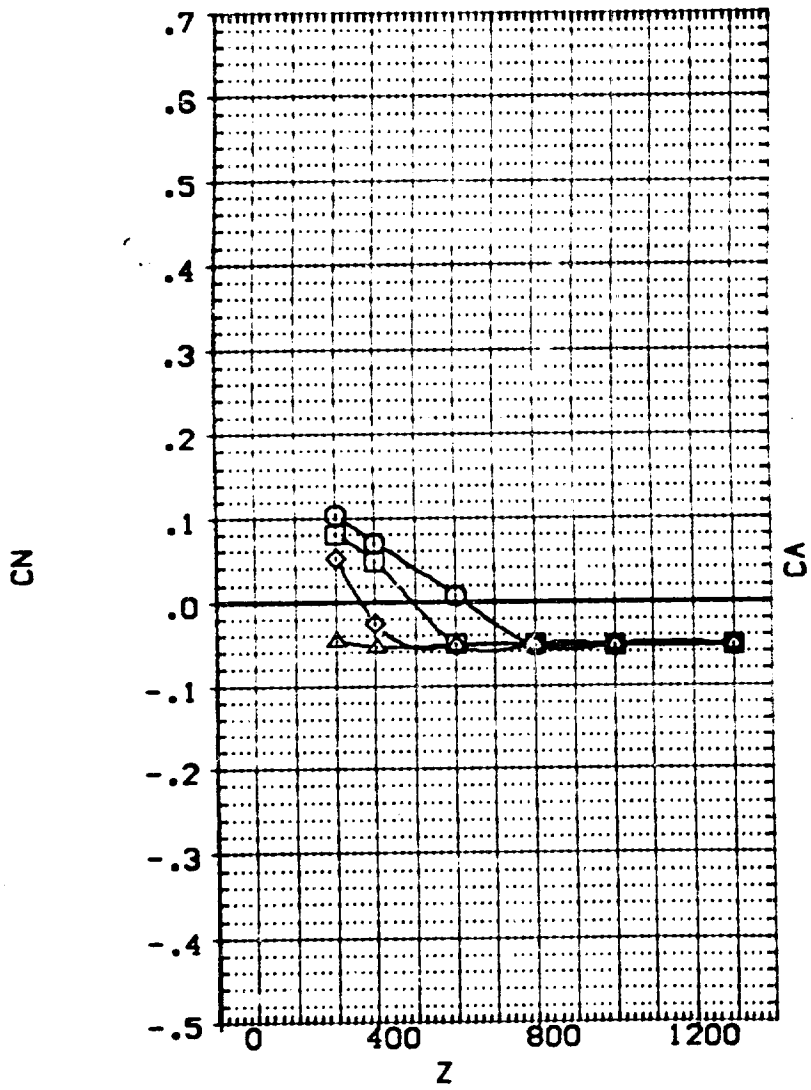


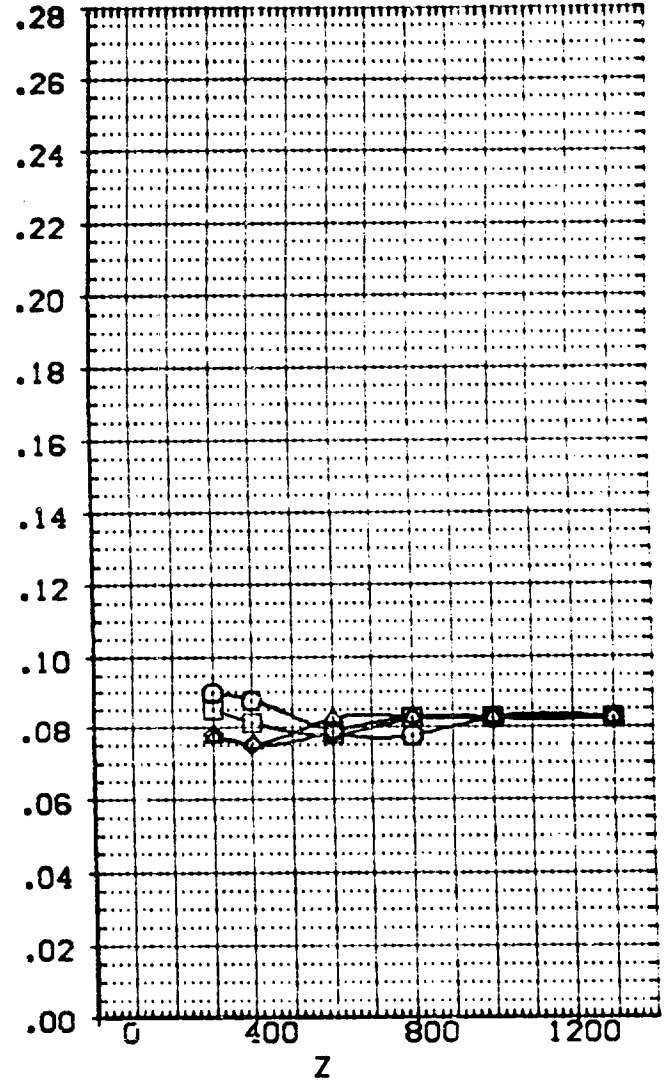
EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ008)

SYMBOL	X		PARAMETRIC VALUES		
○	.062	MACH	4.530	PTOTAL	110.000
□	400.260	ALPHA	.000	BETA	.000
◇	800.620	DALPHA	-10.000	DBETA	.000
△	1200.700	ELEVTR	.000	AILRON	.000
		Y	200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



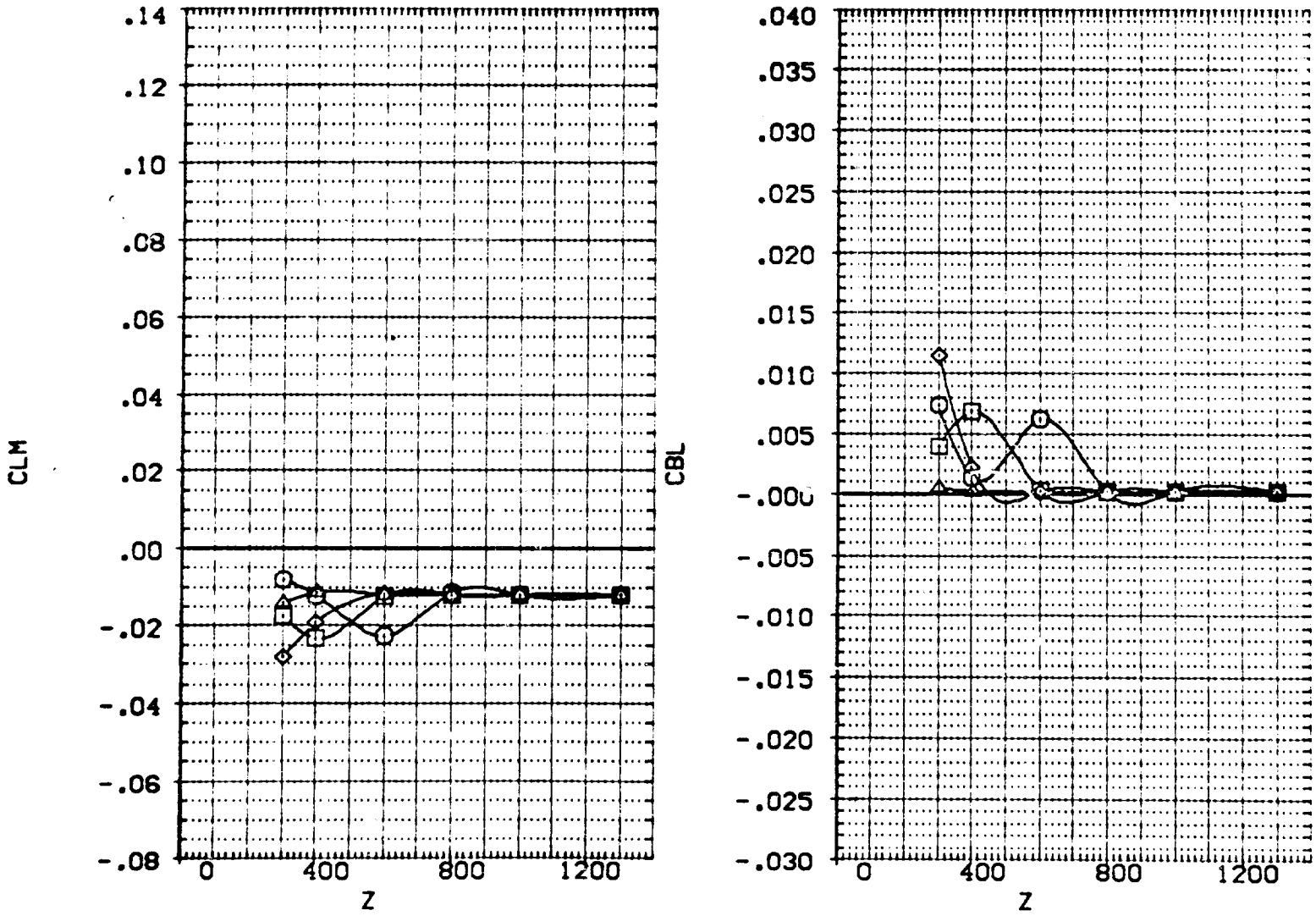


EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ008)

SYMBOL	X		PARAMETRIC VALUES		
○	.062	MACH	4.530	PTOTAL	110.000
□	400.260	ALPHA	.000	BETA	.000
◇	800.620	DALPHA	-10.000	DBETA	.000
△	1200.700	ELEVTR	.000	AILRON	.000
		Y	200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

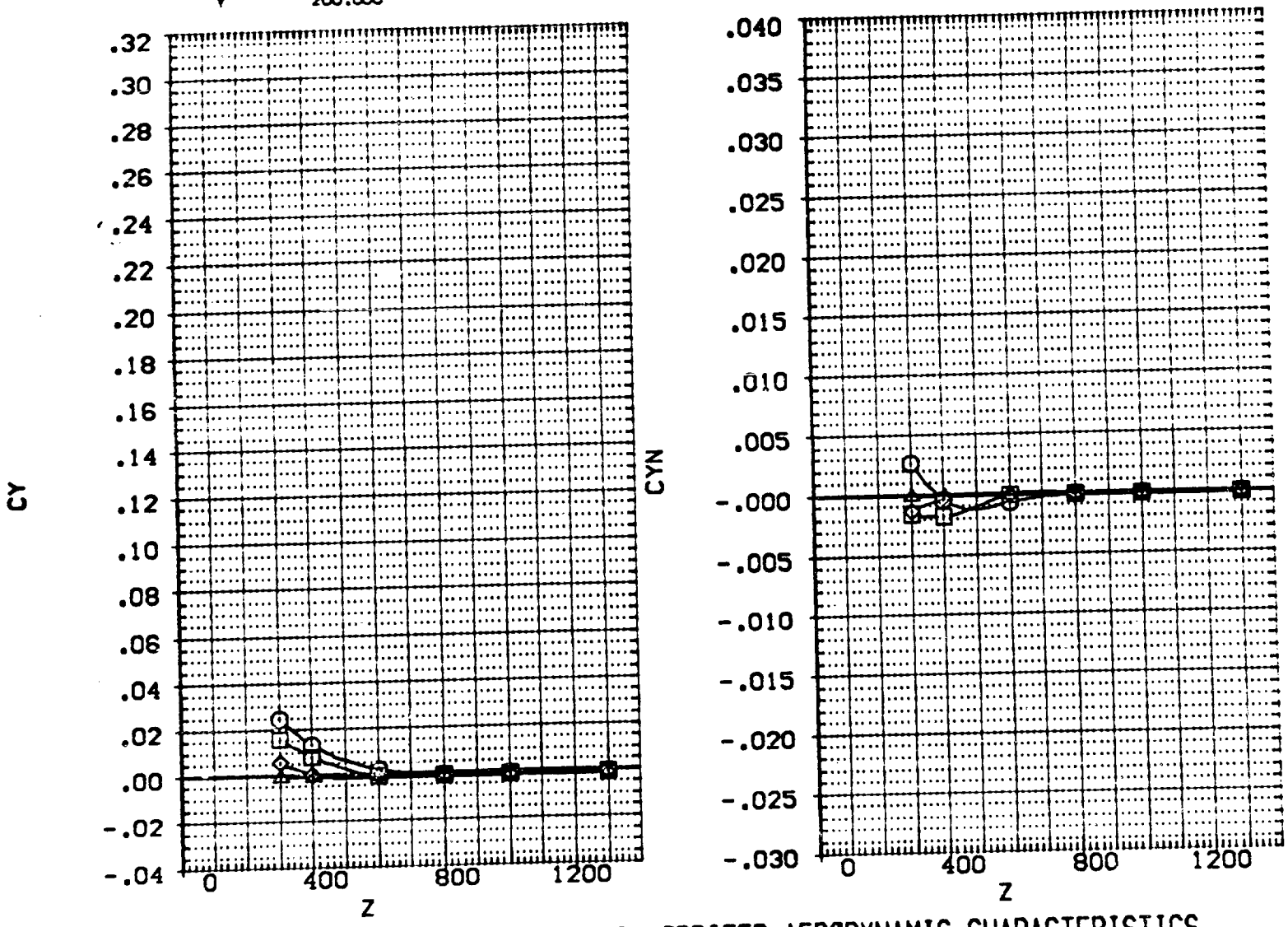


EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ008)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

SYMBOL	X		PARAMETRIC VALUES		
○	.062	MACH	4.530	PTOTAL	110.000
□	400.260	ALPHA	.000	BETA	.000
◇	800.620	DALPHA	-10.000	DBETA	.000
△	1200.700	ELEVTR	.000	AILRON	.000
		Y	200.000		

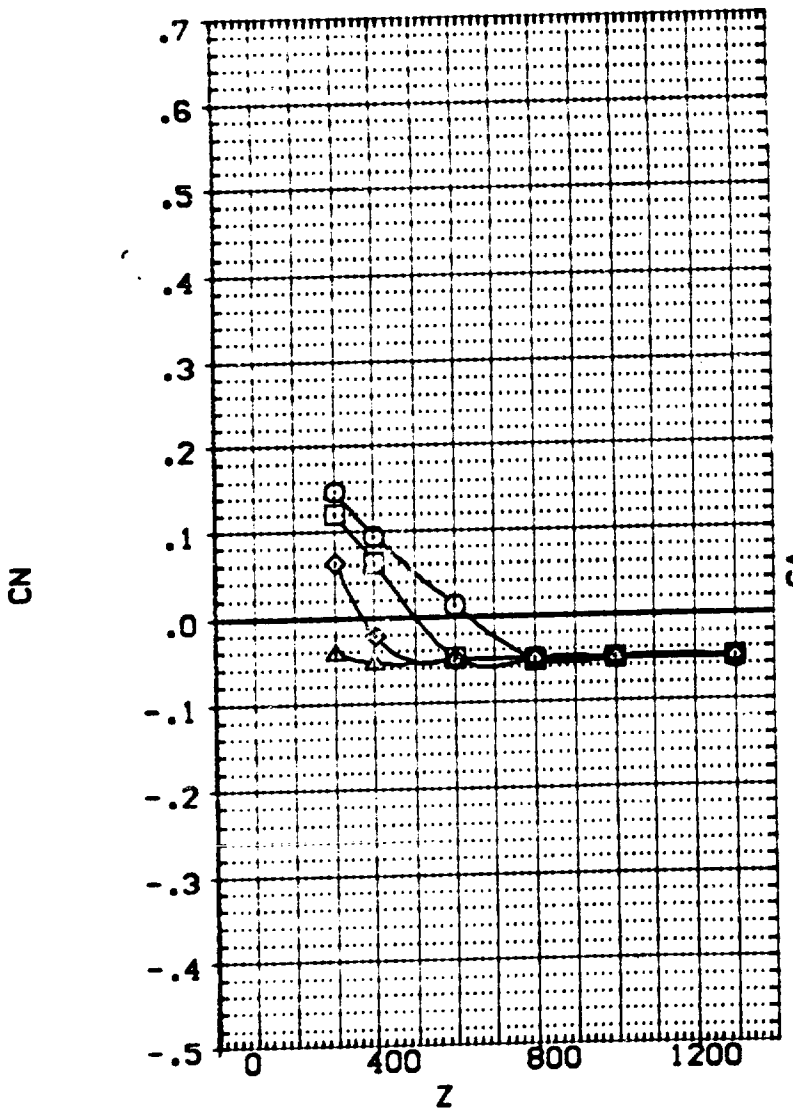


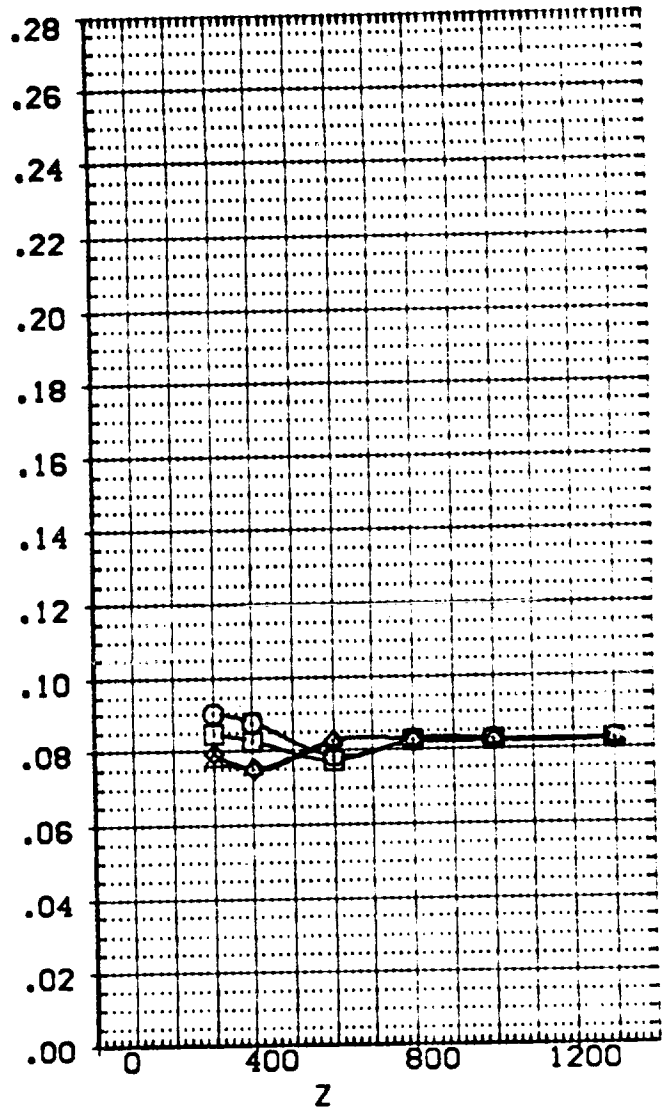
EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ009)

SYMBOL	X		PARAMETRIC VALUES		
○	-.033	MACH	4.530	PTOTAL	110.000
□	400.510	ALPHA	.000	BETA	.000
◇	800.420	DALPHA	-10.000	DBETA	5.000
△	1200.800	ELEVTR	.000	AILRON	.000
		Y	200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



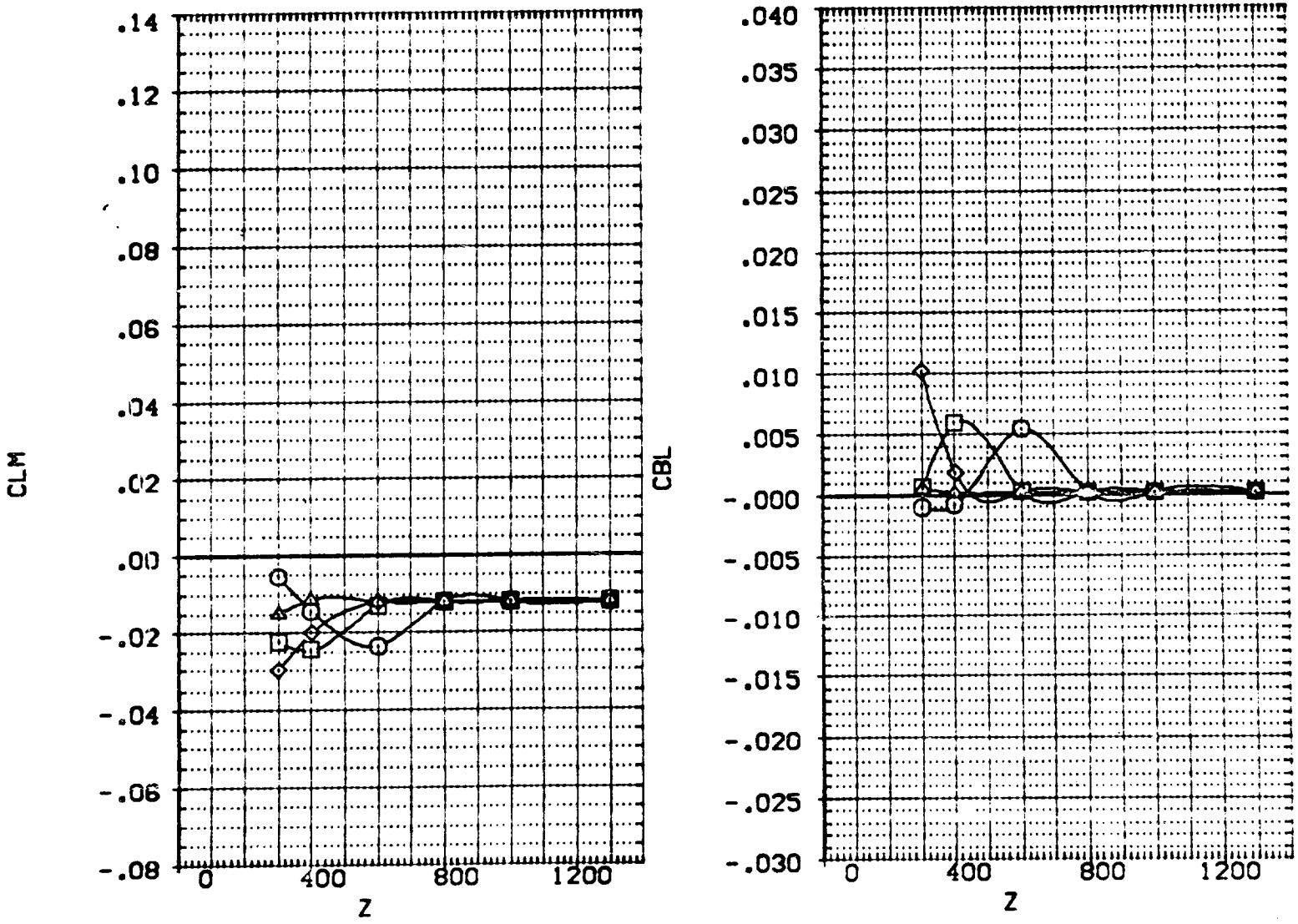


EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ009)

SYMBOL	X		PARAMETRIC VALUES		
○	-.033	MACH	4.530	PTOTAL	110.000
□	400.510	ALPHA	.000	BETA	.000
◇	800.420	DALPHA	-10.000	DBETA	5.000
△	1200.800	ELEVTR	.000	AILRON	.000
		Y	200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

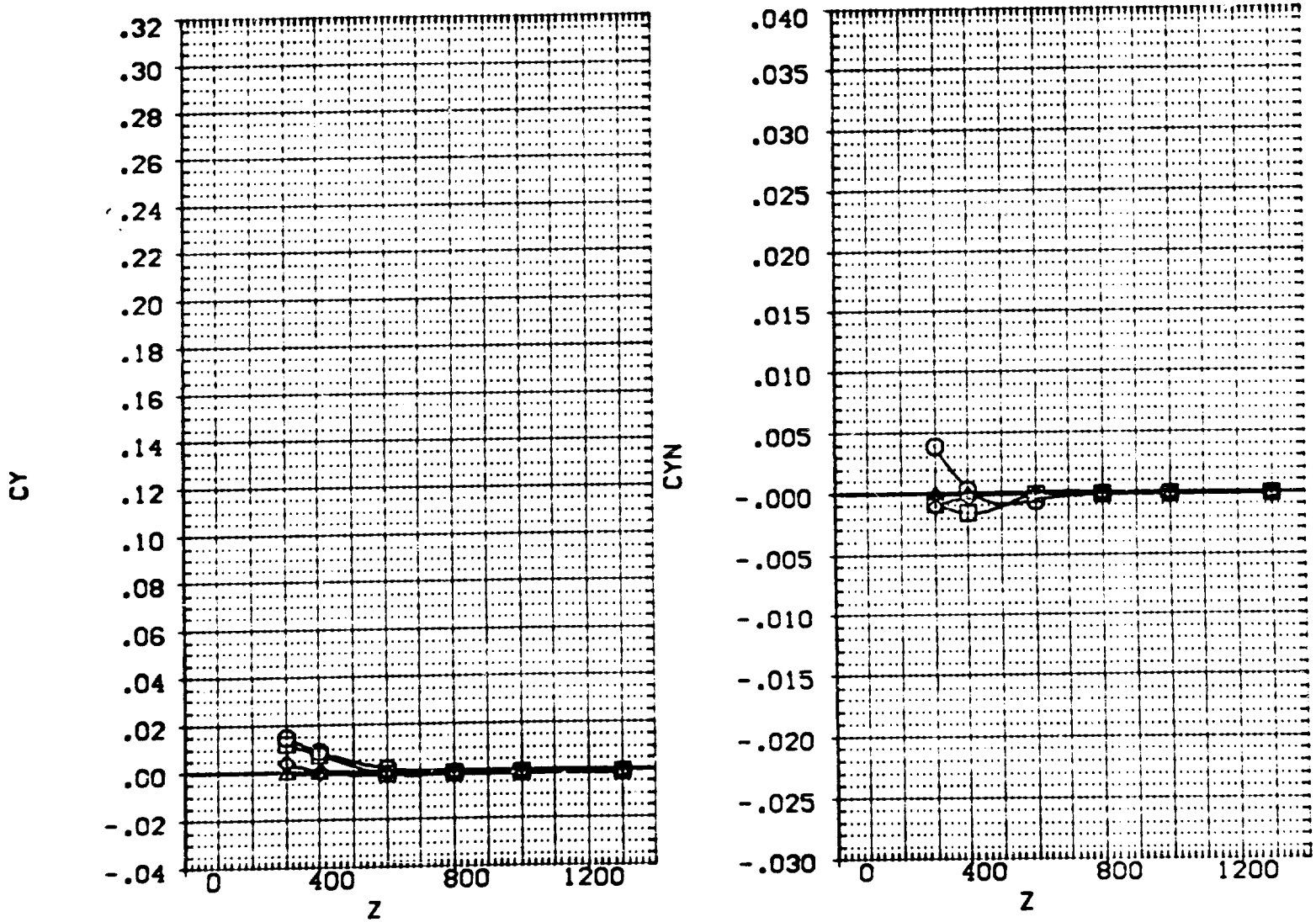


EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ009)

SYMBOL	X		PARAMETRIC VALUES		
○	-.033	MACH	4.530	PTOTAL	110.000
□	400.510	ALPHA	.000	BETA	.000
◇	800.420	DALPHA	-10.000	DBETA	5.000
△	1200.800	ELEVTR	.000	AILRON	.000
		Y	200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

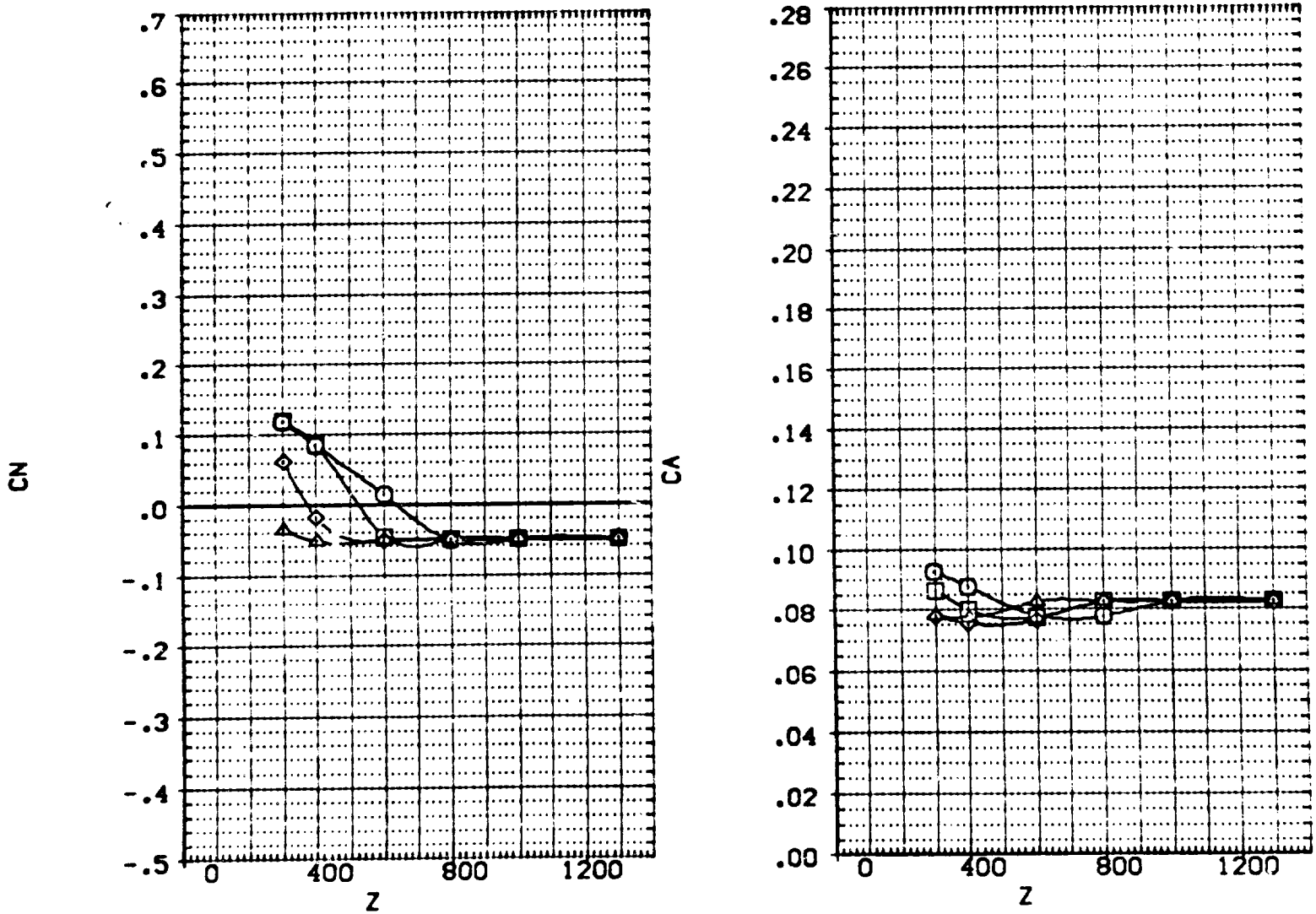


EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

!A13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ010)

SYMBOL	X		PARAMETRIC VALUES		
○	-.043	MACH	4.530	PTOTAL	110.000
◇	400.200	ALPHA	.000	BETA	.000
□	800.550	DALPHA	-10.000	DBETA	5.000
△	1200.800	ELEVTR	.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

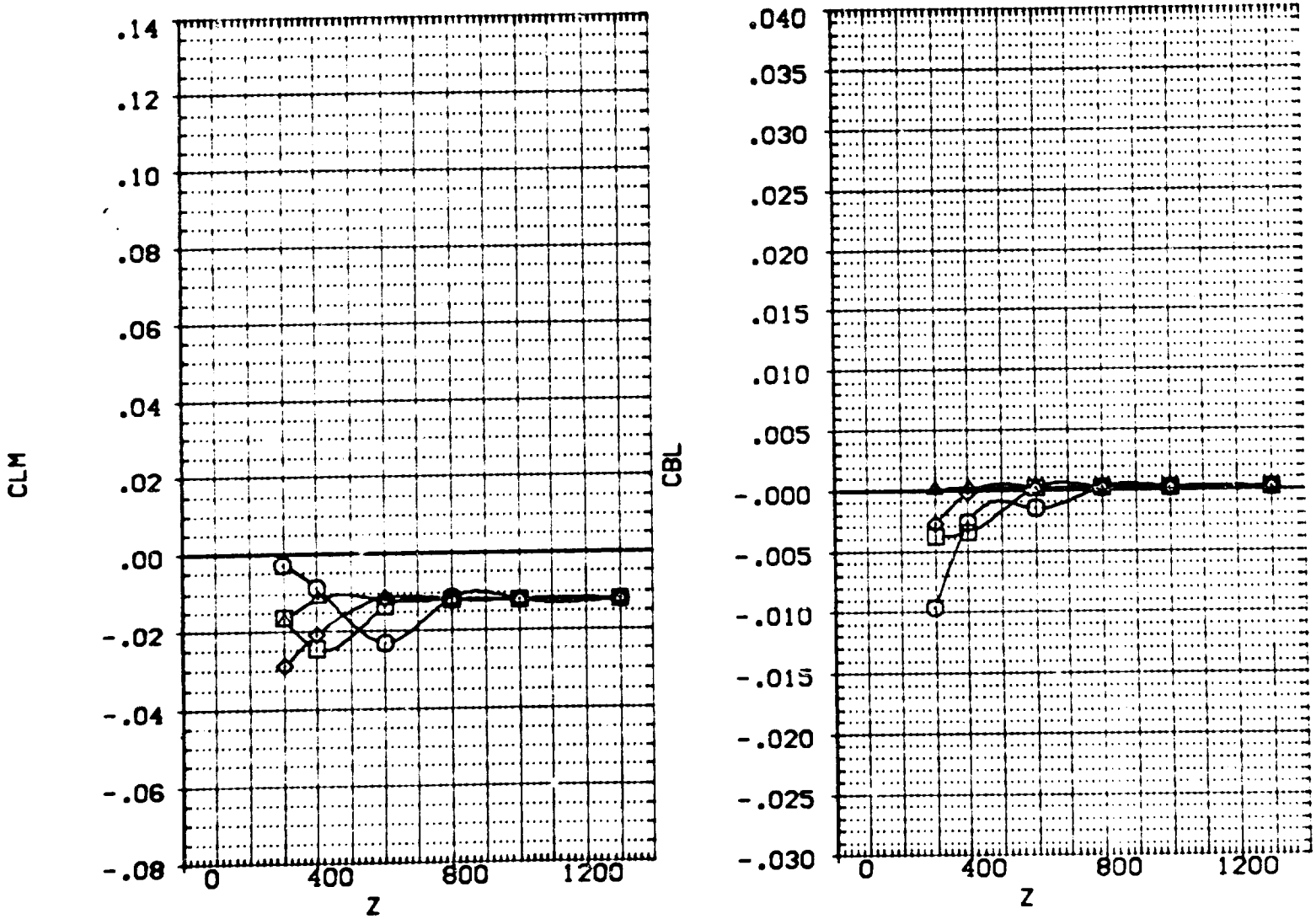


EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

!A13,EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ010)

SYMBOL	X	PARAMETRIC VALUES			
○	-.043	MACH	4.530	PTOTAL	110.000
□	400.200	ALPHA	.000	BETA	.000
◇	800.550	DALPHA	-10.000	DBETA	5.000
△	1200.800	ELEVTR	.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

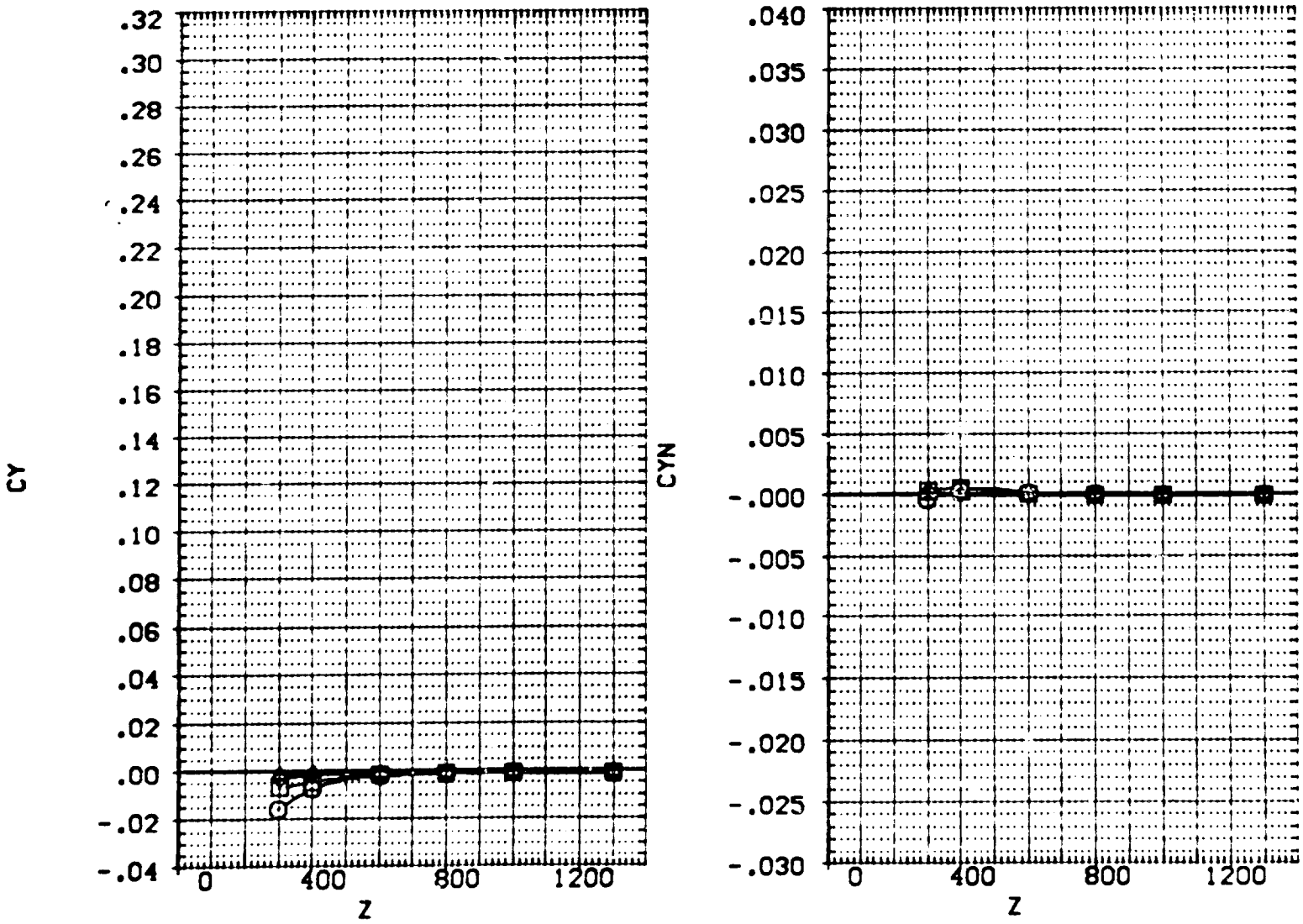


EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ010)

SYMBOL	X		PARAMETRIC VALUES		
○	-.043	MACH	4.530	PTOTAL	110.000
□	400.200	ALPHA	.000	BETA	.000
◇	800.550	DALPHA	-10.000	DBETA	5.000
△	1200.800	ELEVTR	.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED DA A DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

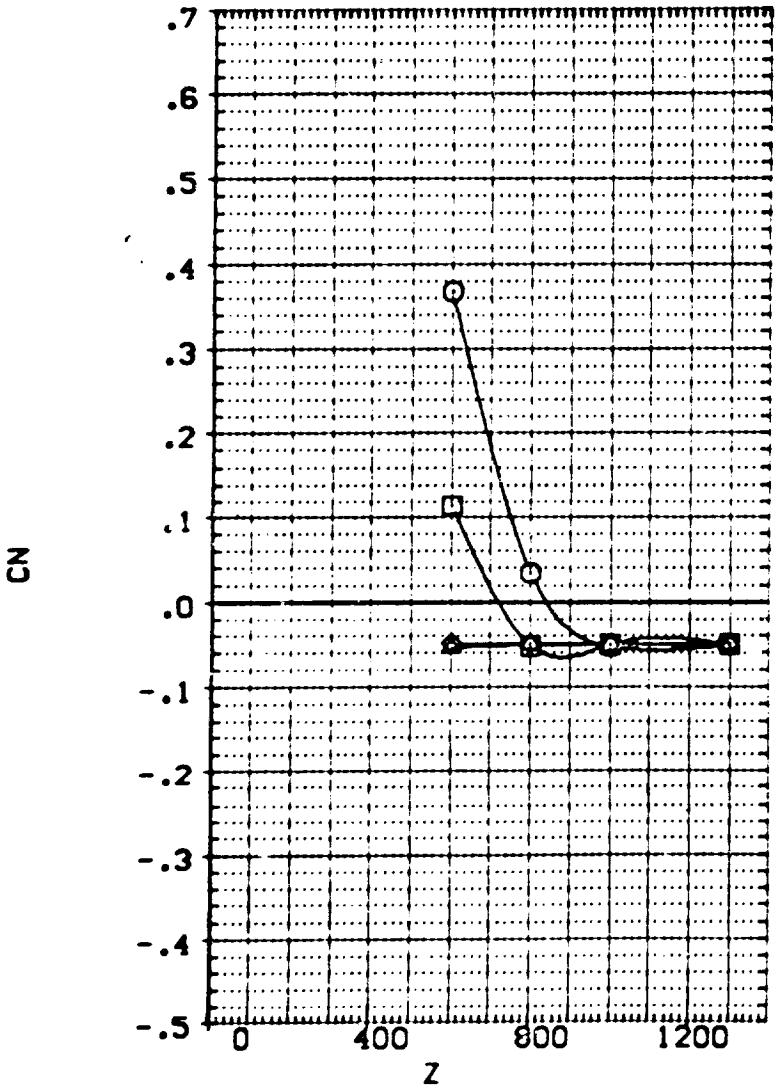


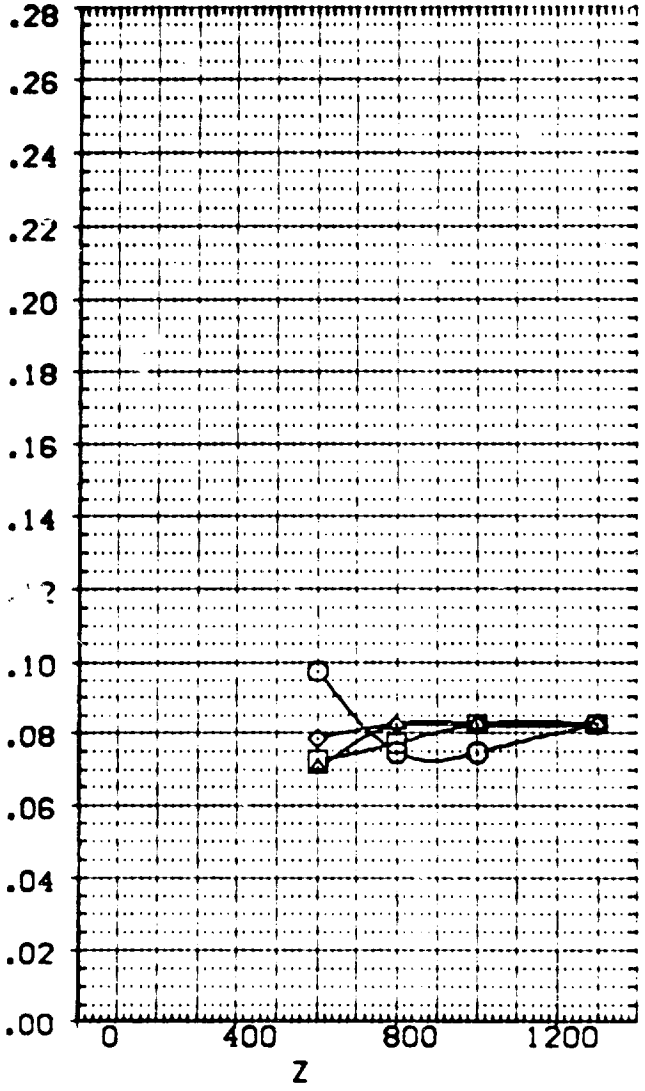
EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

IA13,EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ011)

SYMBOL	X		PARAMETRIC VALUES		
○	-.876	MACH	4.530	PTOTAL	110.000
□	401.340	ALPHA	.000	BETA	.000
◇	800.910	DALPHA	-20.000	DBETA	.000
△	1200.800	ELEVTR	.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



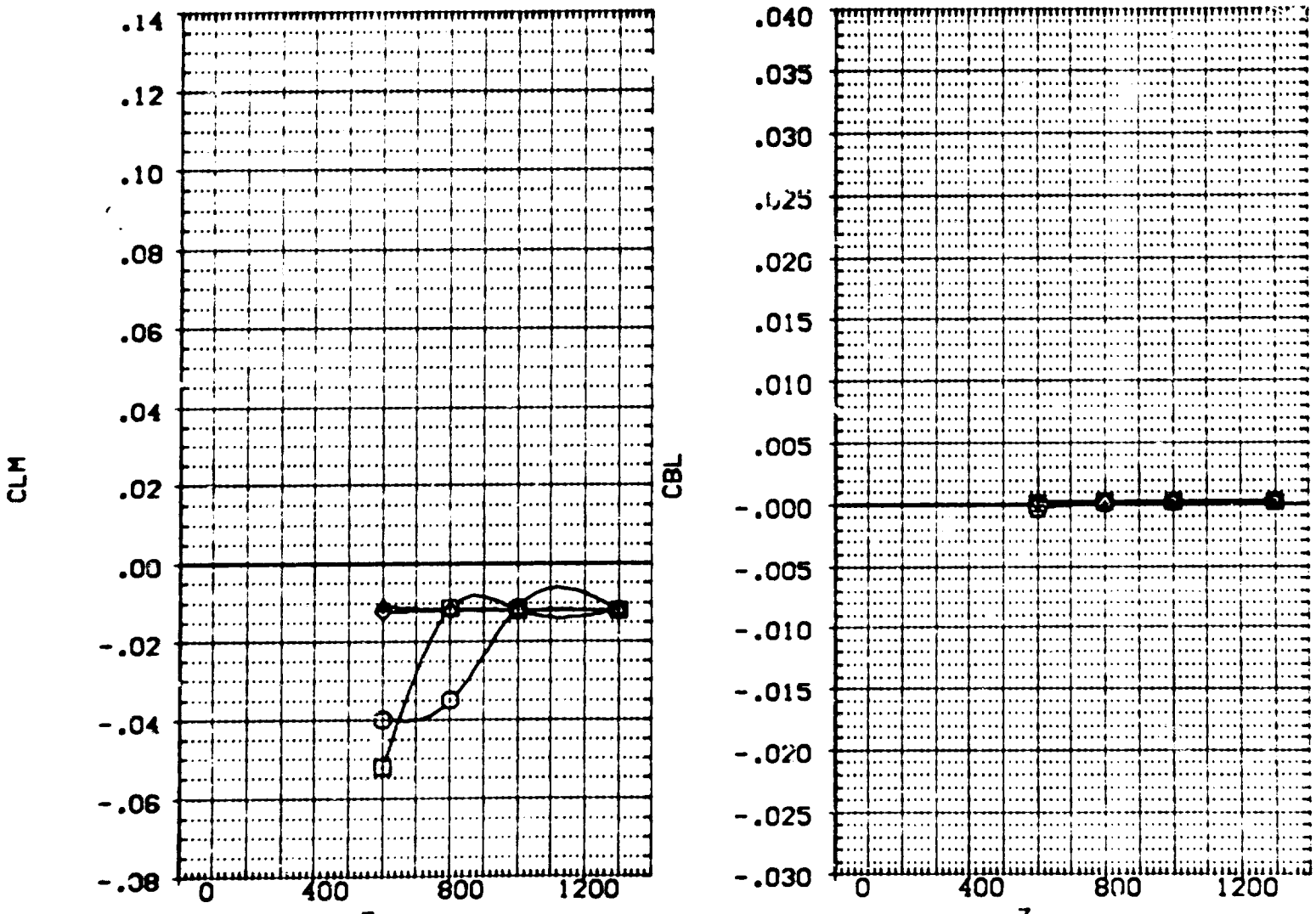


EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ011)

SYMBOL	X		PARAMETRIC VALUES		
○	-.876	MACH	4.530	PTOTAL	110.000
□	401.340	ALPHA	.000	BETA	.000
◇	800.910	DALPHA	-20.000	DBETA	.000
△	1200.800	ELEVTR	.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

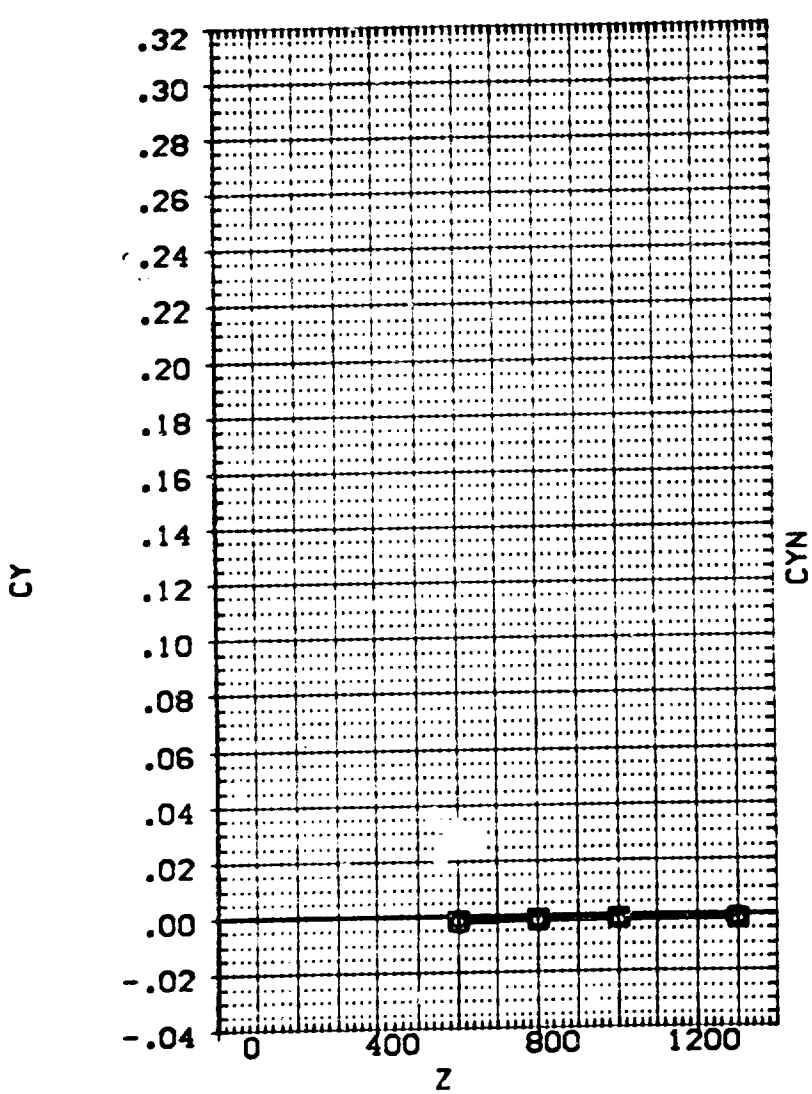


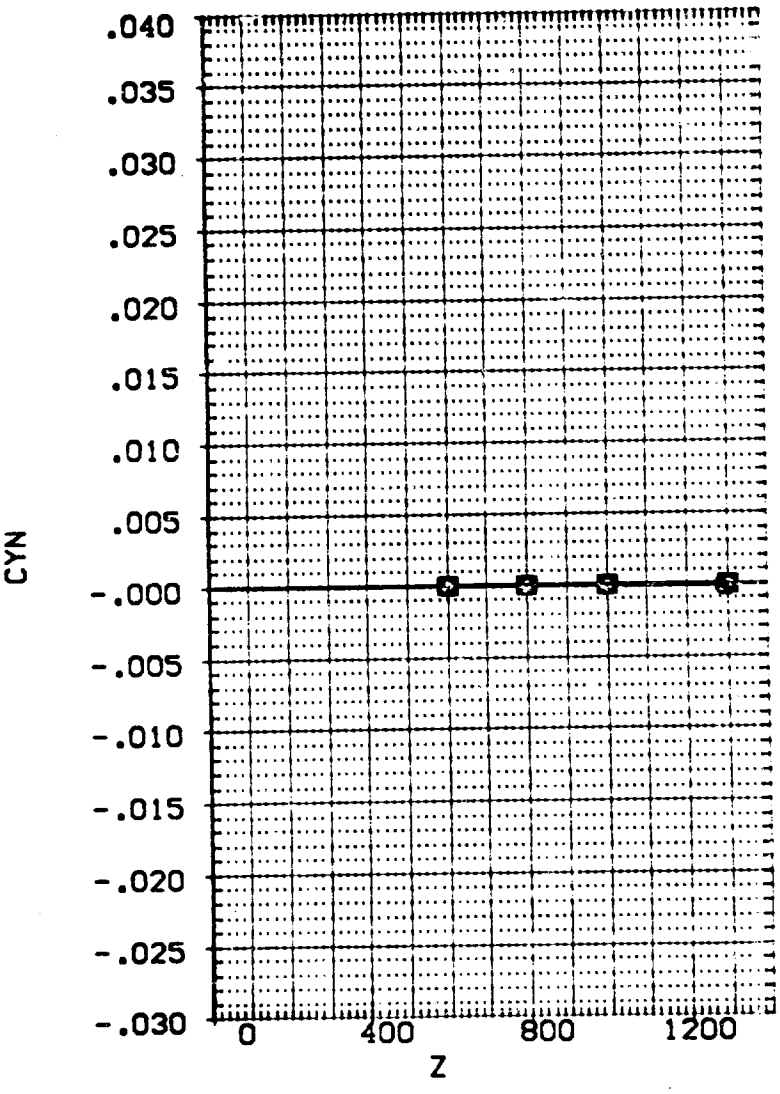
EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ011)

SYMBOL	X		PARAMETRIC VALUES		
○	-.876	MACH	4.530	PTOTAL	110.000
□	401.340	ALPHA	.000	BETA	.000
◇	800.910	DALPHA	-20.000	DBETA	.000
△	1200.800	ELEVTR	.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



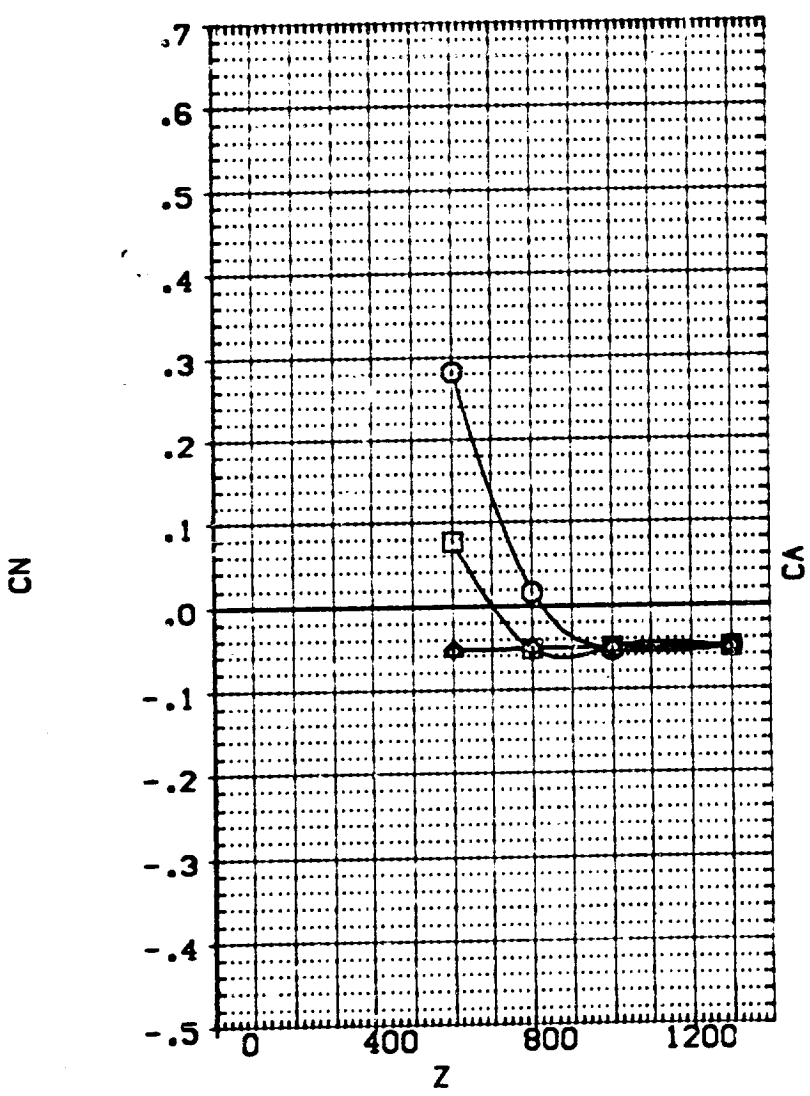


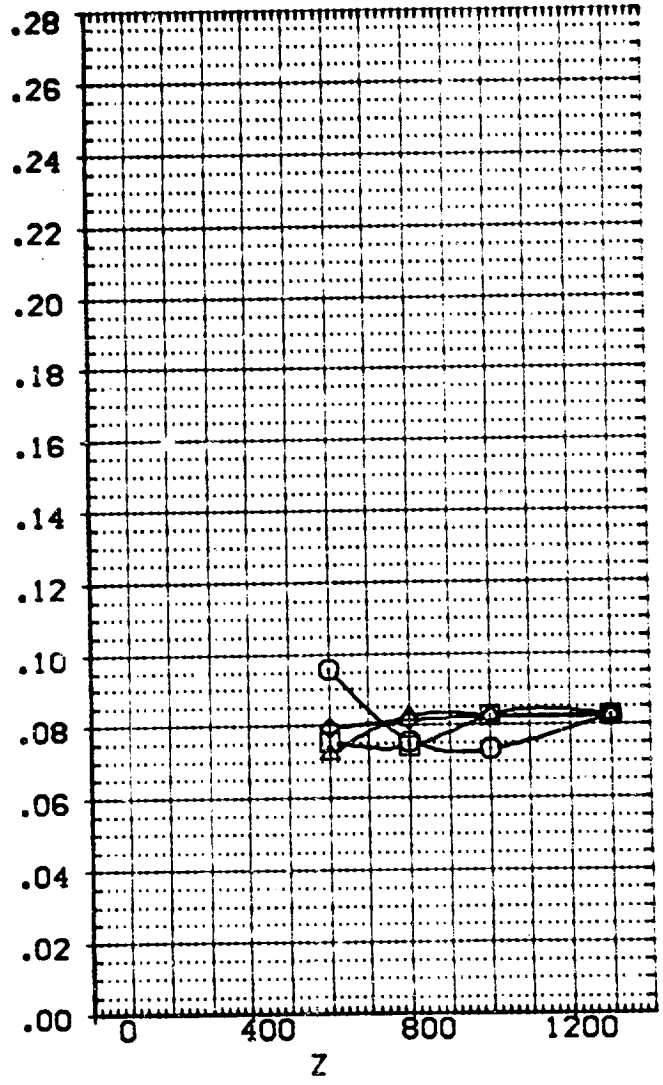
EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ012)

SYMBOL	X		PARAMETRIC VALUES		
○	-.503	MACH	4.530	PTOTAL	110.000
□	400.530	ALPHA	.000	BETA	.000
◇	800.210	DALPHA	-20.000	DBETA	.000
△	1201.000	ELEVTR	.000	AILRON	.000
		Y	200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



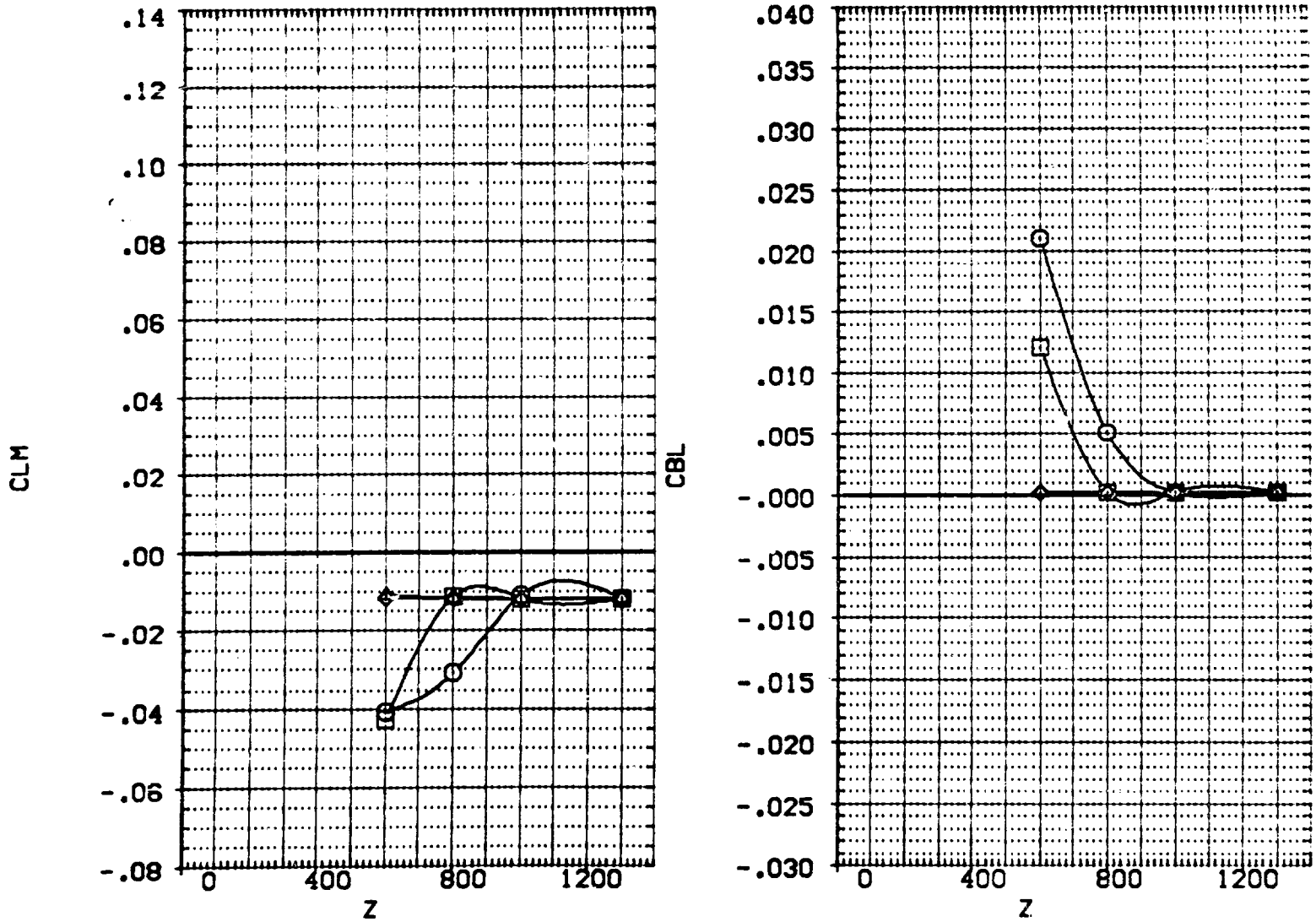


EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ012)

SYMBOL	X		PARAMETRIC VALUES		
○	-.503	MACH	4.530	PTOTAL	110.000
□	400.530	ALPHA	.000	BETA	.000
◇	800.210	DALPHA	-20.000	DBETA	.000
△	1201.000	ELEVTR	.000	AILRON	.000
		Y	200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

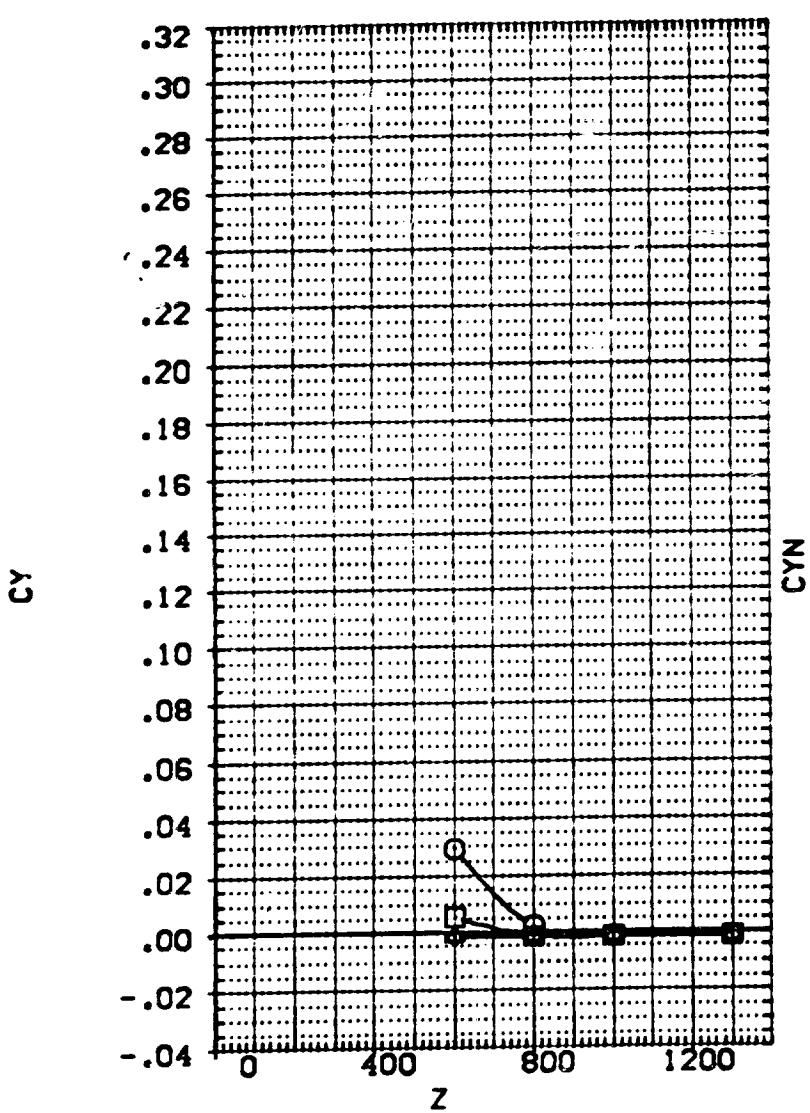


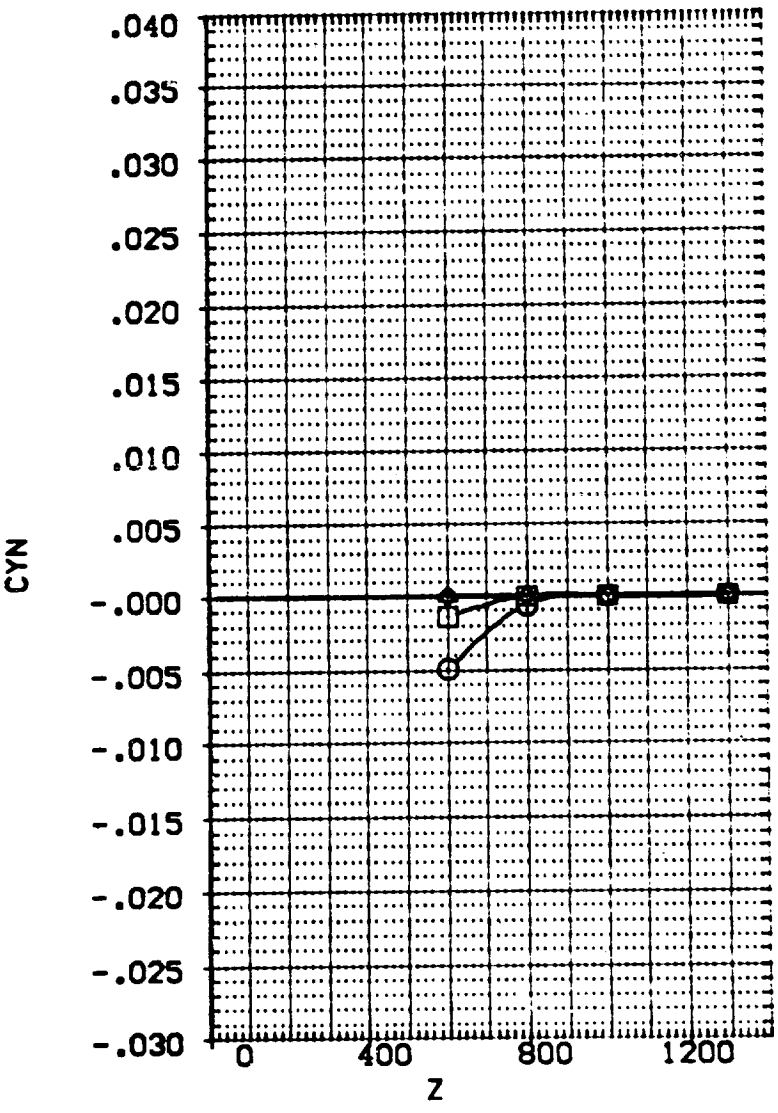
EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ012)

SYMBOL	X		PARAMETRIC VALUES		
○	-.503	MACH	4.530	PTOTAL	110.000
□	400.530	ALPHA	.000	BETA	.000
◇	800.210	DALPHA	-20.000	DBETA	.000
△	1201.000	ELEVTR	.000	AILRON	.000
		Y	200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



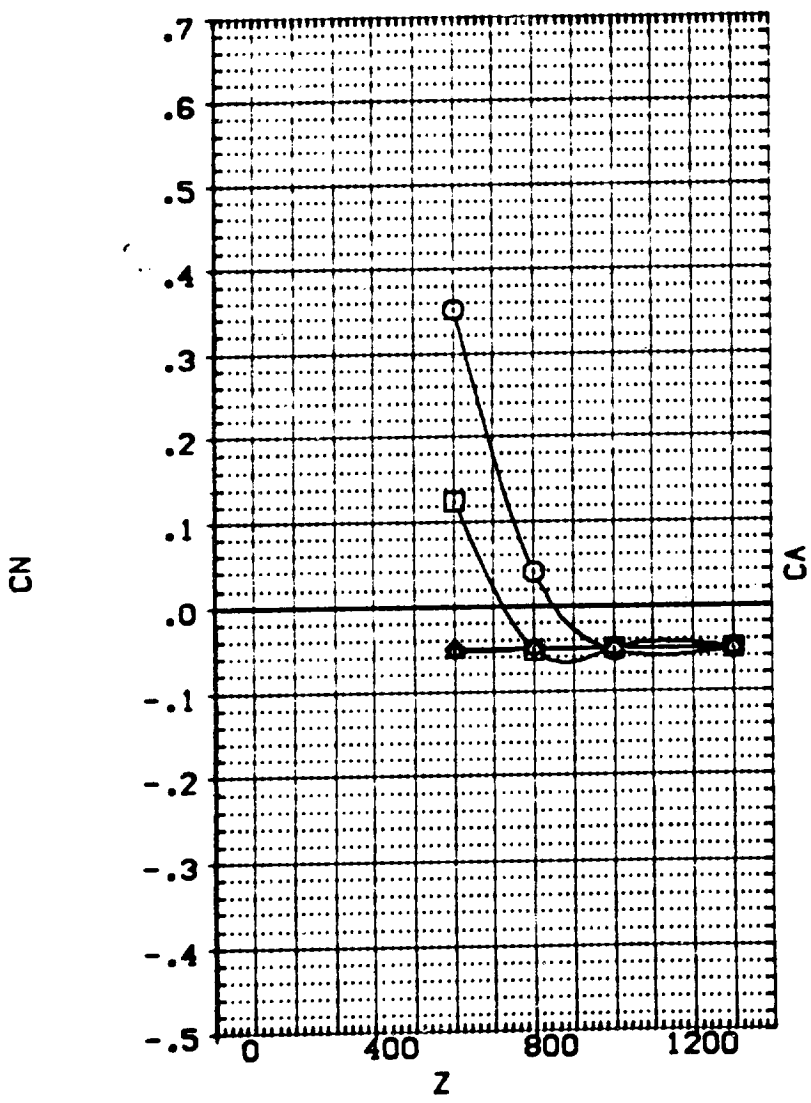


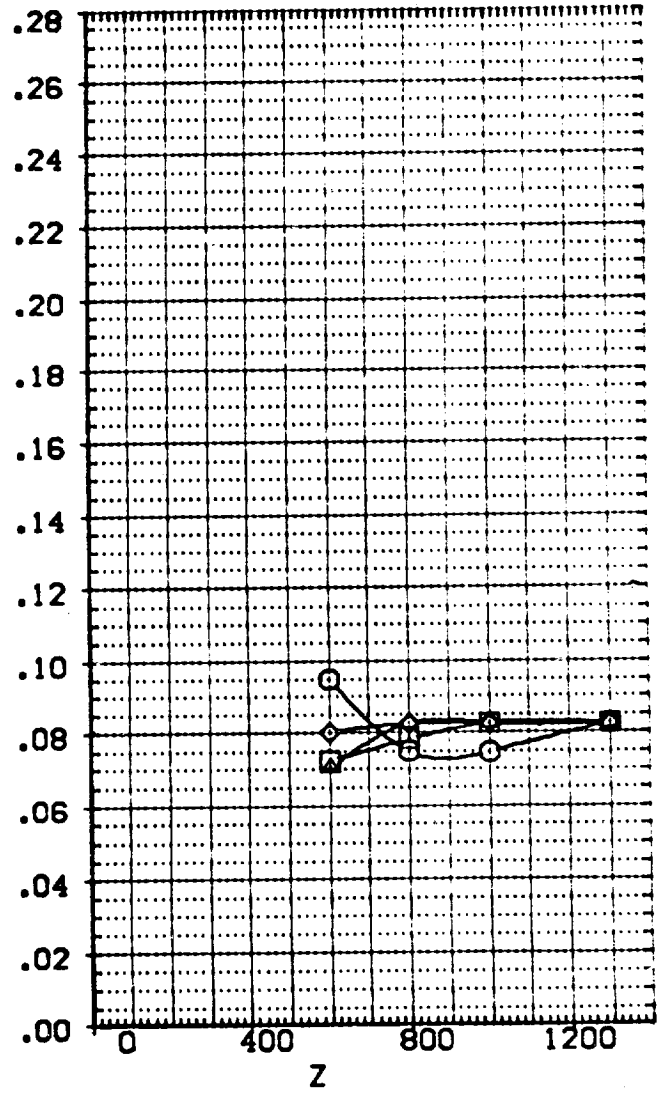
EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ013)

SYMBOL	X		PARAMETRIC VALUES		
○	-.706	MACH	4.530	PTOTAL	110.000
□	401.230	ALPHA	.000	BETA	.000
◇	800.840	DALPHA	-20.000	DBETA	5.000
△	1200.600	ELEVTR	.000	AILRON	.000
		Y	200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



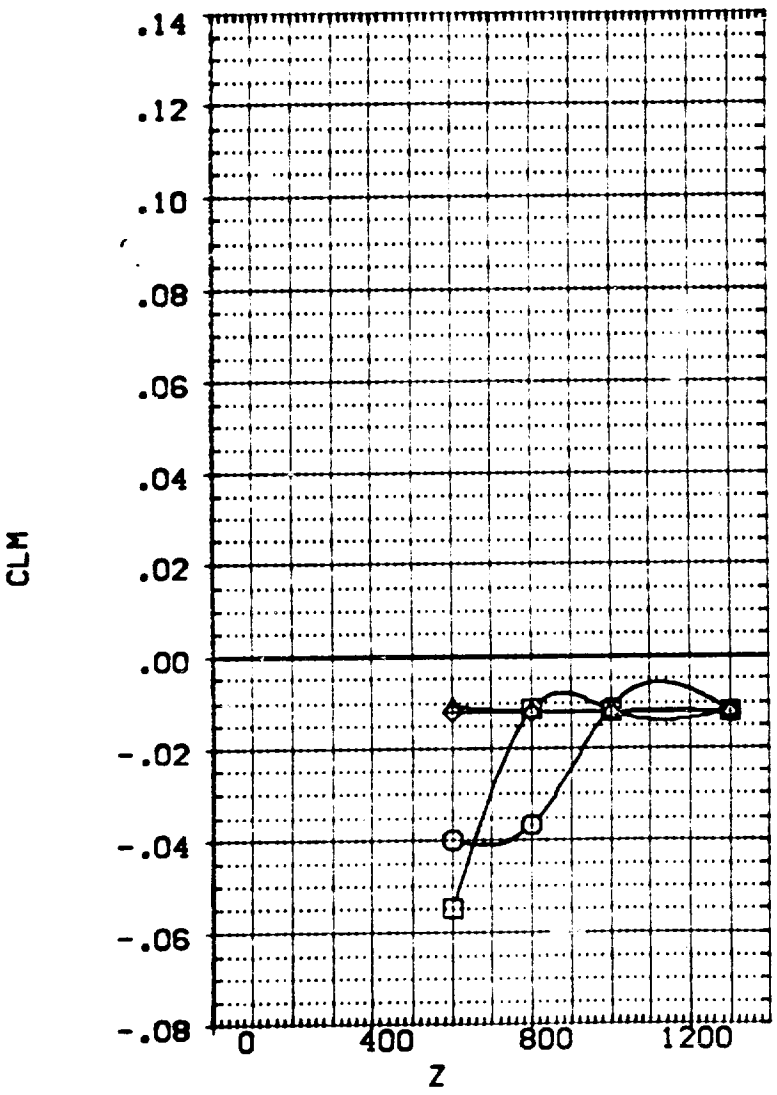


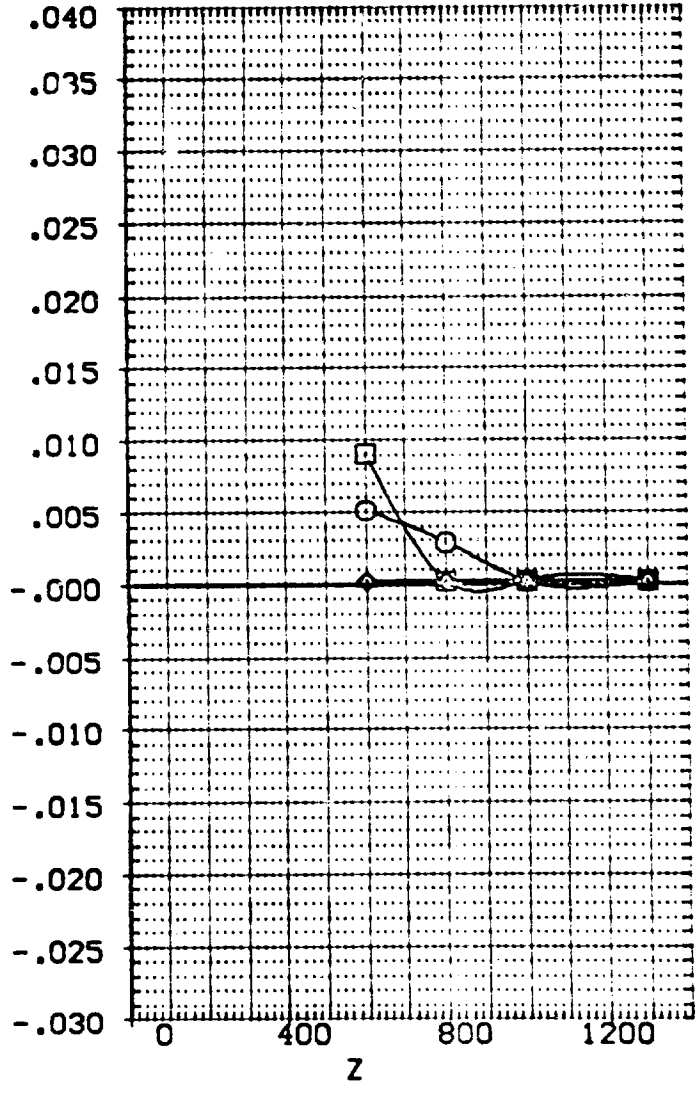
EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ013)

SYMBOL	X		PARAMETRIC VALUES		
○	-.706	MACH	4.530	PTOTAL	110.000
□	401.230	ALPHA	.000	BETA	.000
◇	800.840	DALPHA	-20.000	DBETA	5.000
△	1200.600	ELEVTR	.000	AILRON	.000
		Y	200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



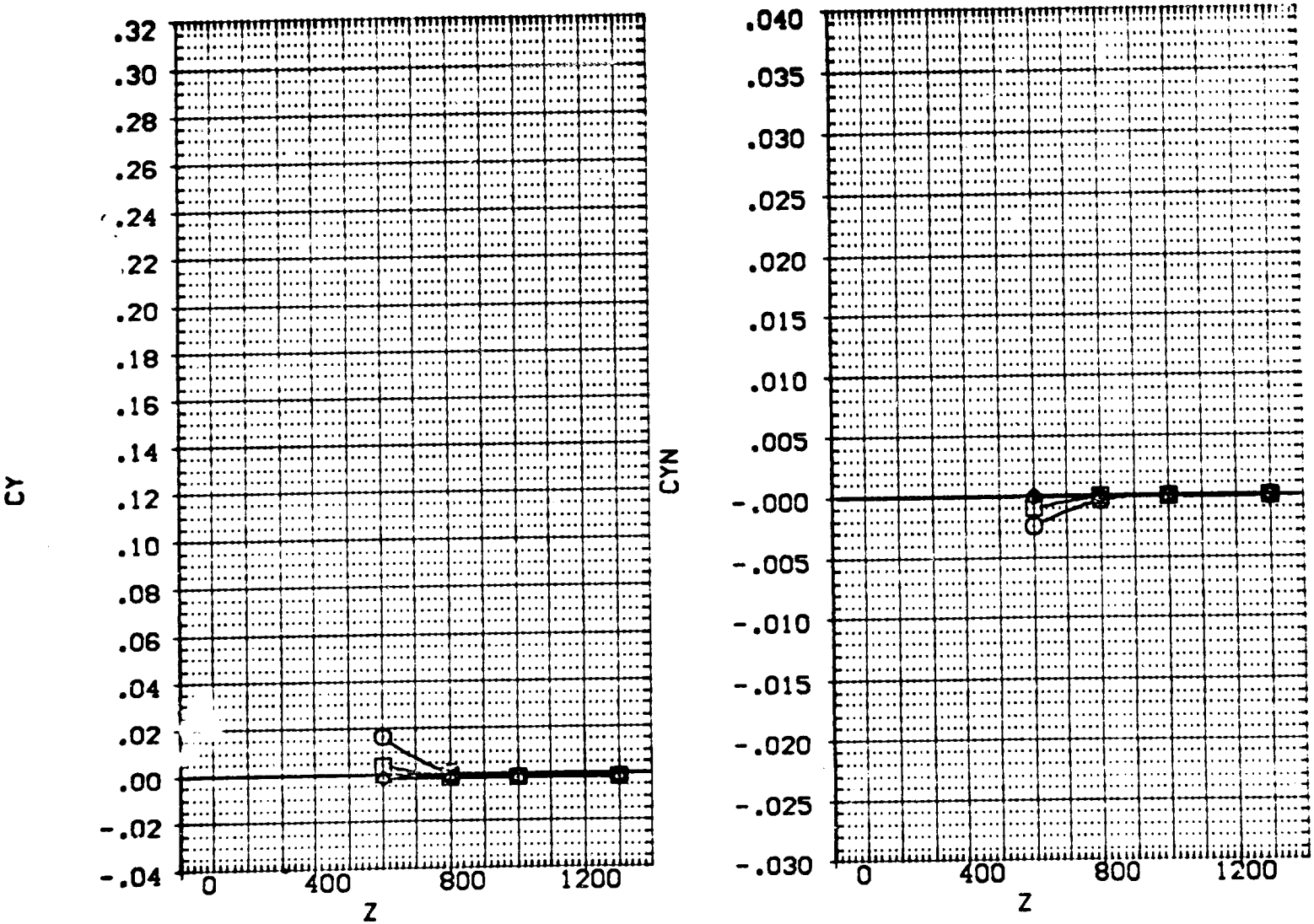


EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ013)

SYMBOL	X		PARAMETRIC VALUES		
○	-.706	MACH	4.530	PTOTAL	110.000
□	401.230	ALPHA	.000	BETA	.000
◇	800.840	DALPHA	-20.000	DBETA	5.000
△	1200.600	ELEVTR	.000	AILRON	.000
		Y	200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

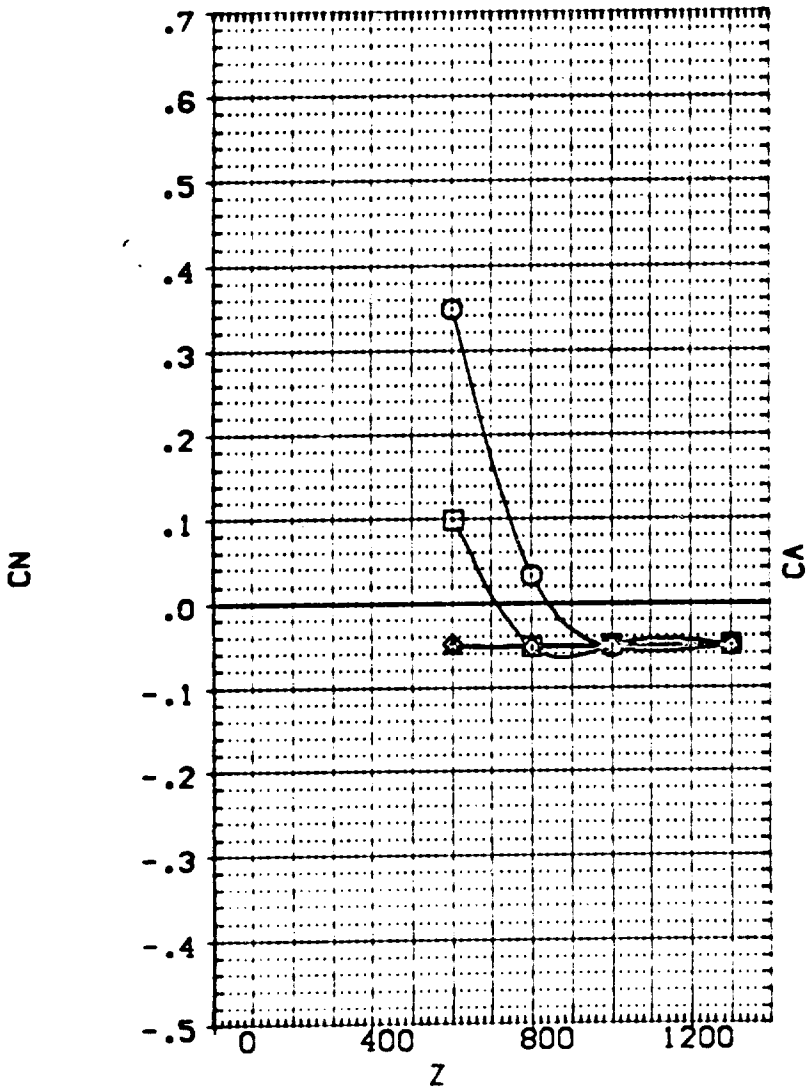


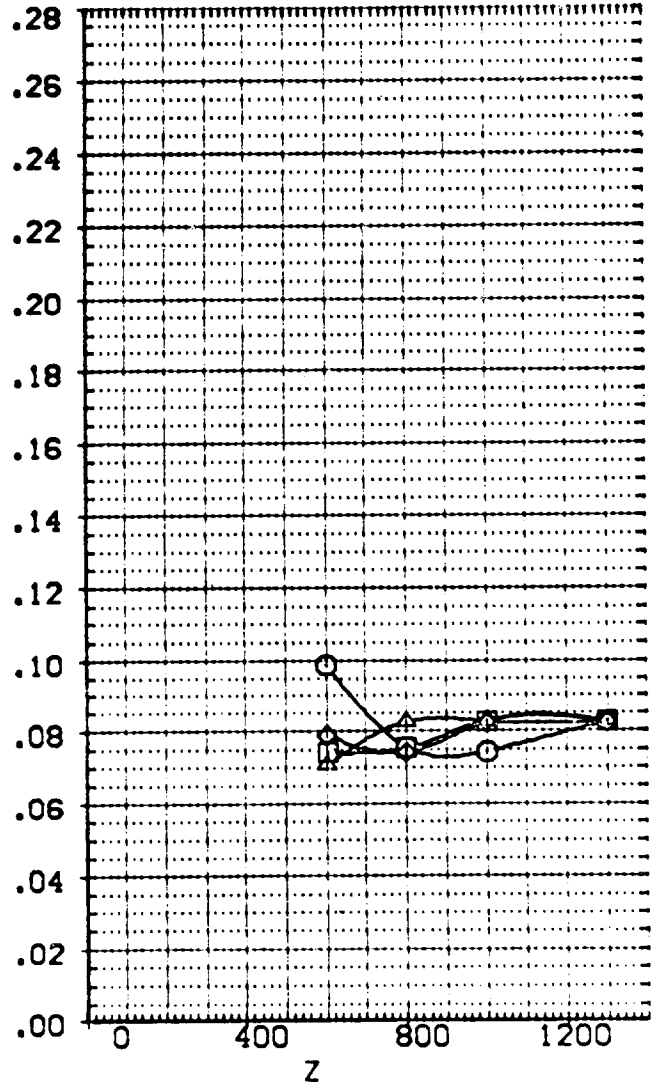
EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ014)

SYMBOL	X		PARAMETRIC VALUES		
○	-.921	MACH	4.530	PTOTAL	110.000
□	400.550	ALPHA	.000	BETA	.000
◇	800.340	DALPHA	-20.000	DBETA	5.000
△	1201.000	ELEVTR	.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



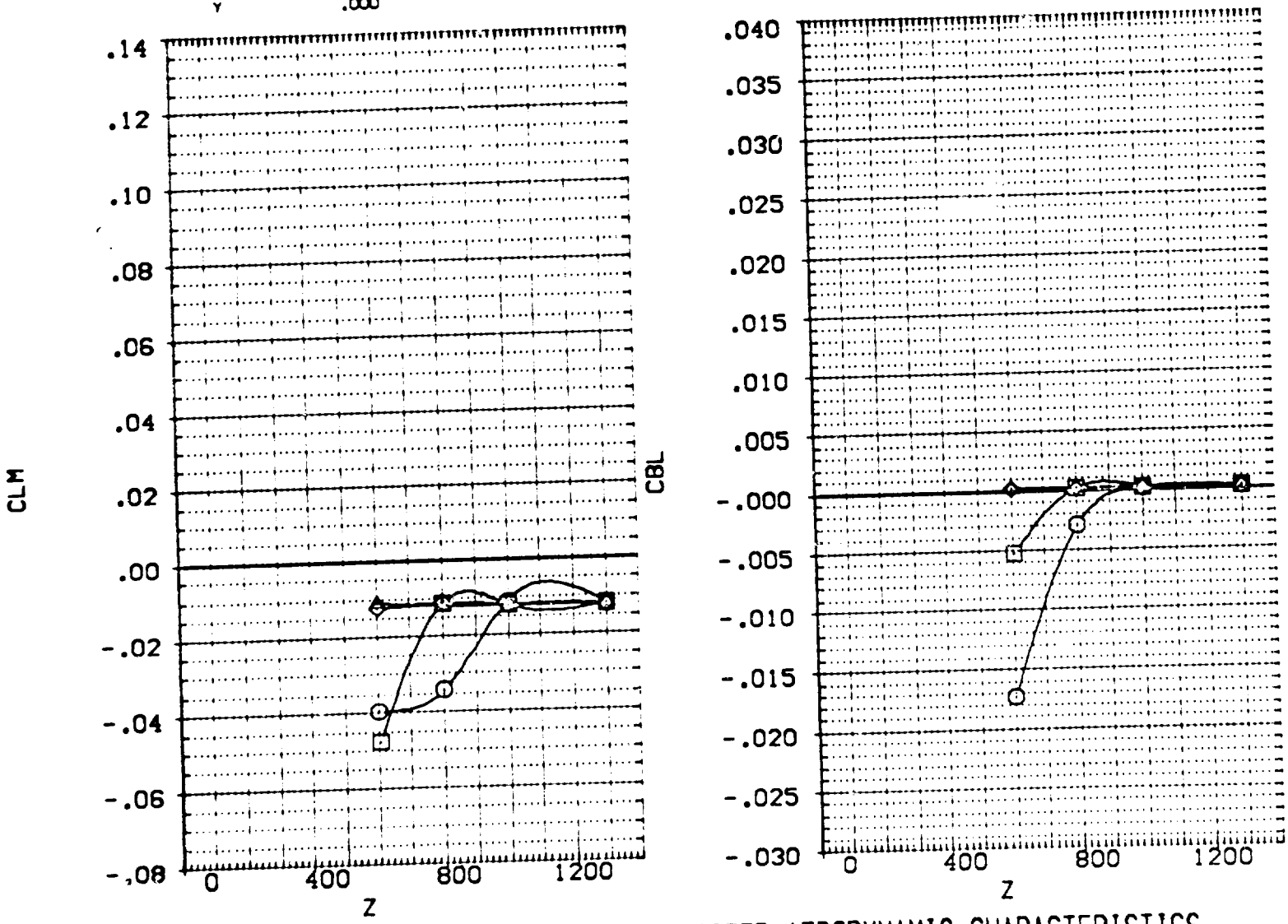


EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

!A13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ014)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

SYMBOL	X		PARAMETRIC VALUES		
○	-.921	MACH	4.530	PTOTAL	110.000
□	400.550	ALPHA	.000	BETA	.000
◁	800.340	DALPHA	-20.000	DBETA	5.000
△	1201.000	ELEVTR	.000	AILRON	.000
		Y	.000		

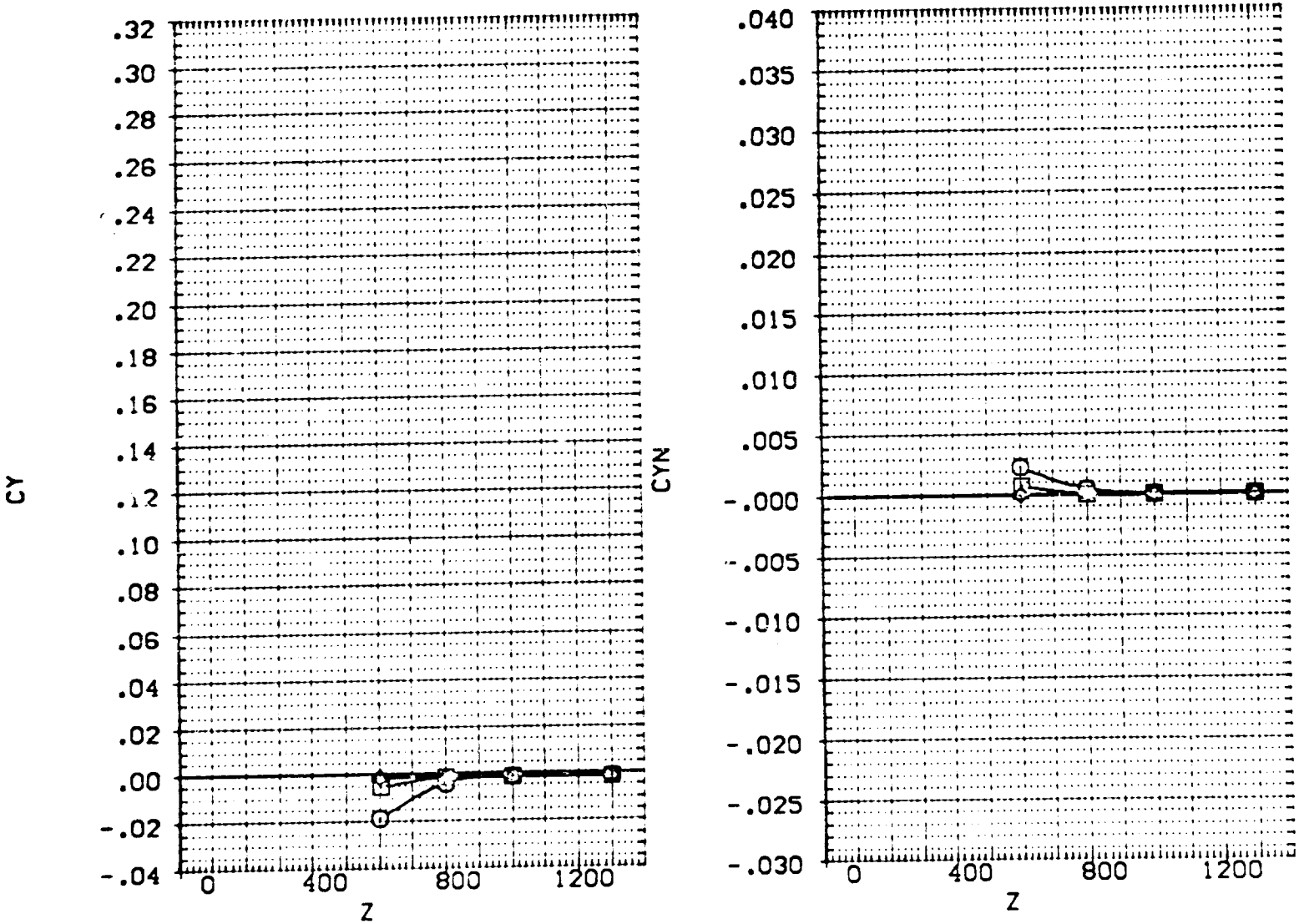


EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ014)

SYMBOL	X		PARAMETRIC VALUES		
○	-.921	MACH	4.530	PTOTAL	110.000
◇	400.550	ALPHA	.600	BETA	.000
□	800.340	DALPHA	-20.000	DBETA	5.000
△	1201.000	ELEVTR	.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

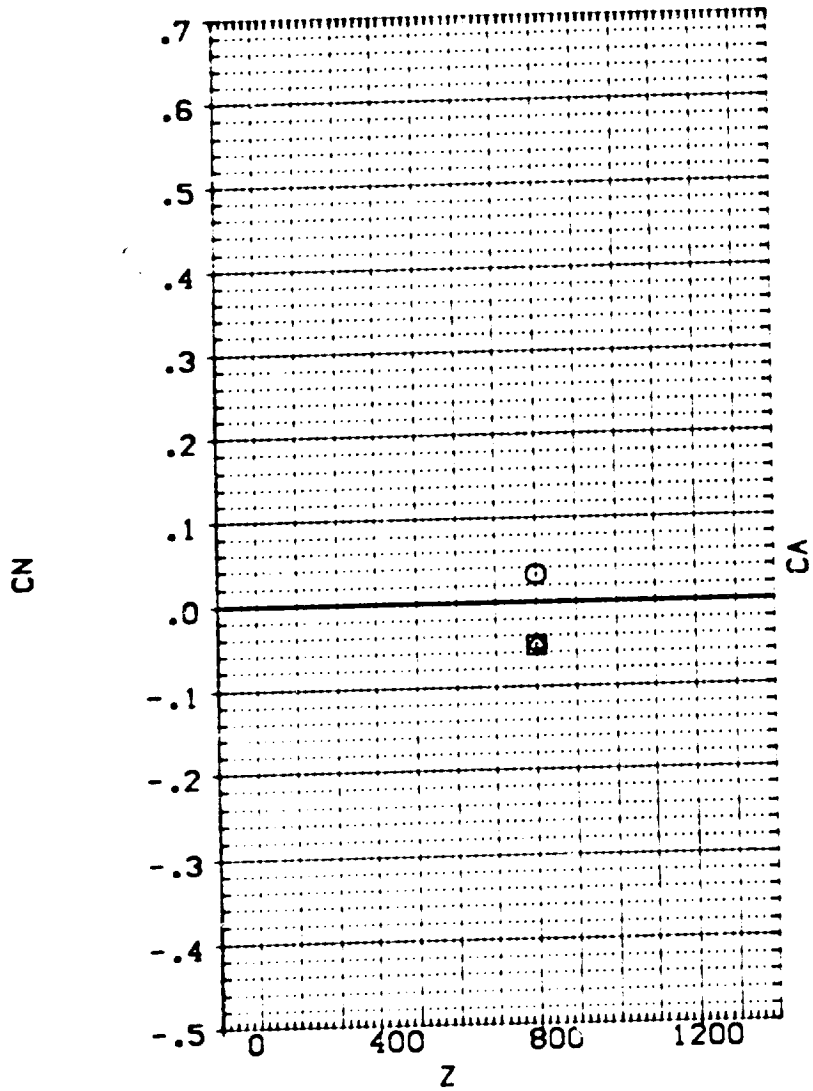


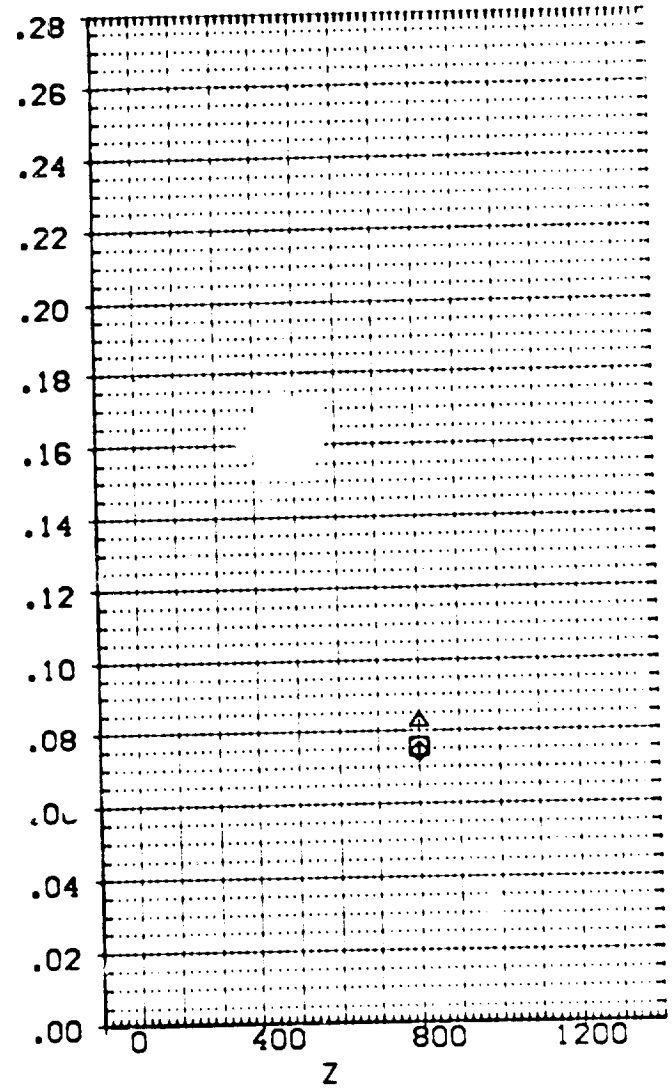
EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ015)

SYMBOL	X		PARAMETRIC VALUES		
○	.861	MACH	4.530	PTOTAL	110.000
◇	400.230	ALPHA	.000	BETA	.000
△	800.060	DALPHA	-30.000	DBETA	.000
	1200.900	ELEVTR	.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



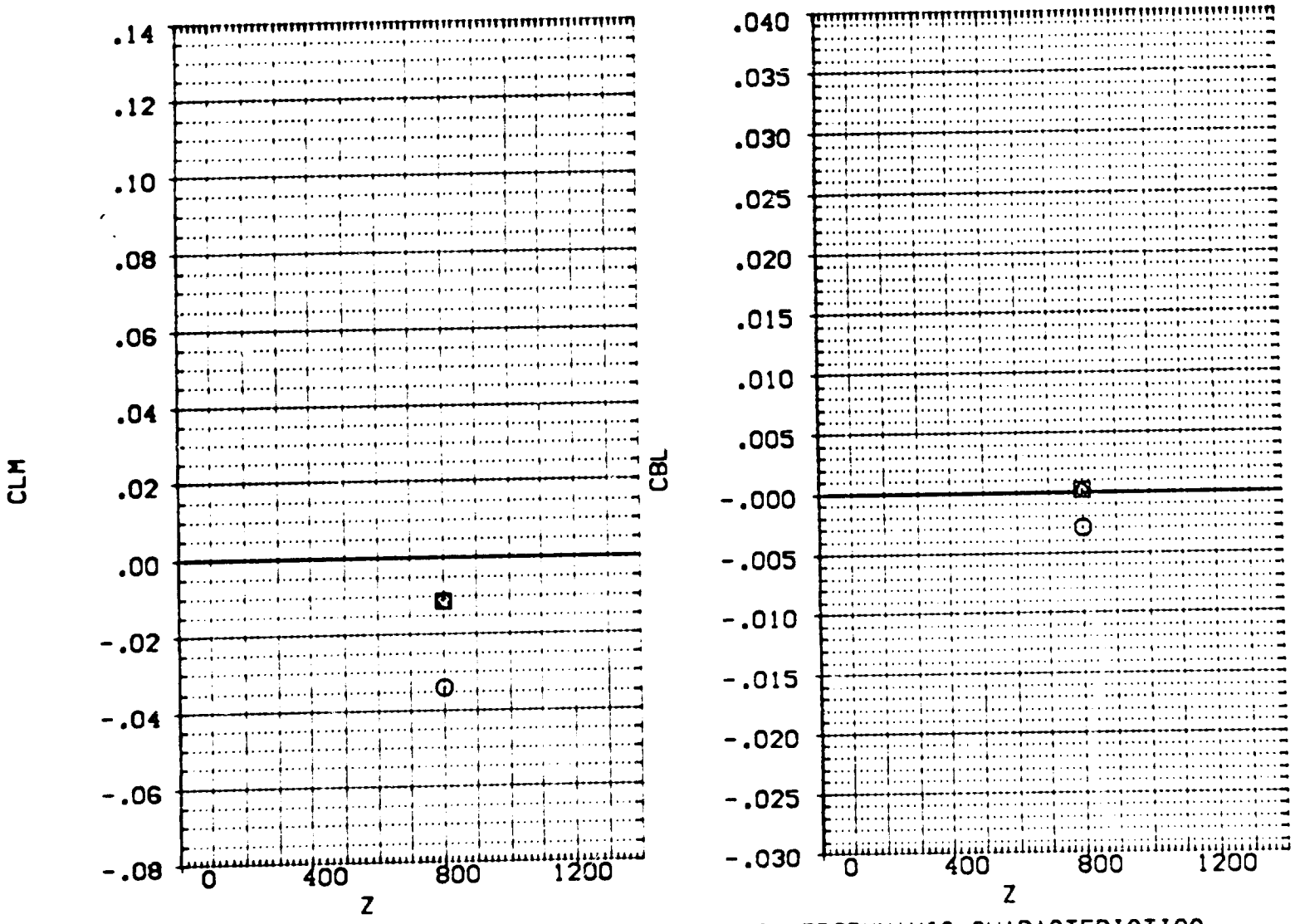


EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

!A13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ015)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

SYMBOL	X		PARAMETRIC VALUES		
○□10	.561	MACH	4.530	PTOTAL	110.000
	400.230	ALPHA	.000	BETA	.000
	800.060	DALPHA	-30.000	DBETA	.000
△	1200.900	ELEVTR	.000	AILRON	.000
		Y	.000		

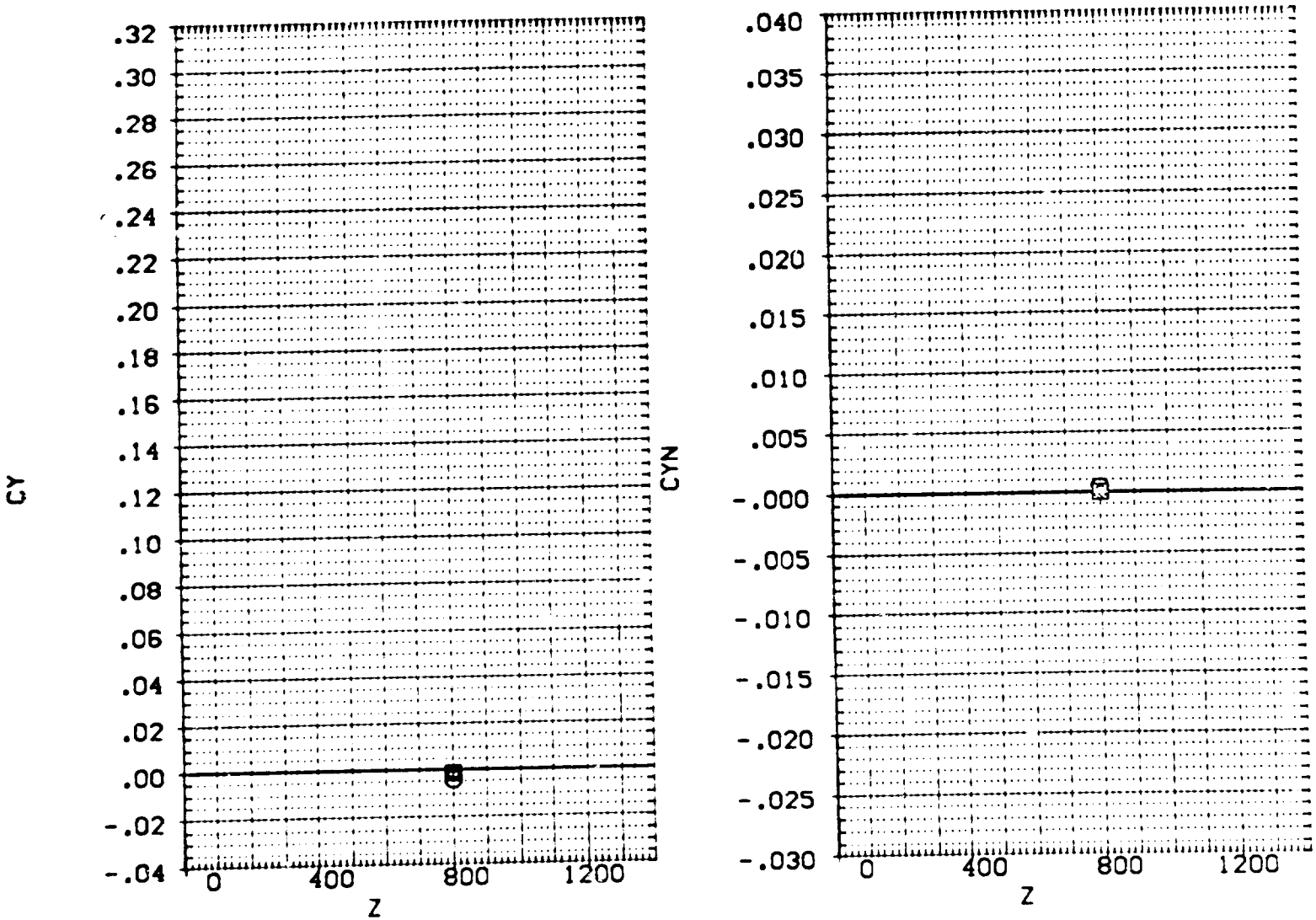


EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

!A13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ015)

SYMBOL	X		PARAMETRIC VALUES		
○	.861	MACH	4.530	PTOTAL	110.000
◇	400.230	ALPHA	.000	BETA	.000
□	800.060	DALPHA	-30.000	DBETA	.000
△	1200.900	ELEVTR	.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

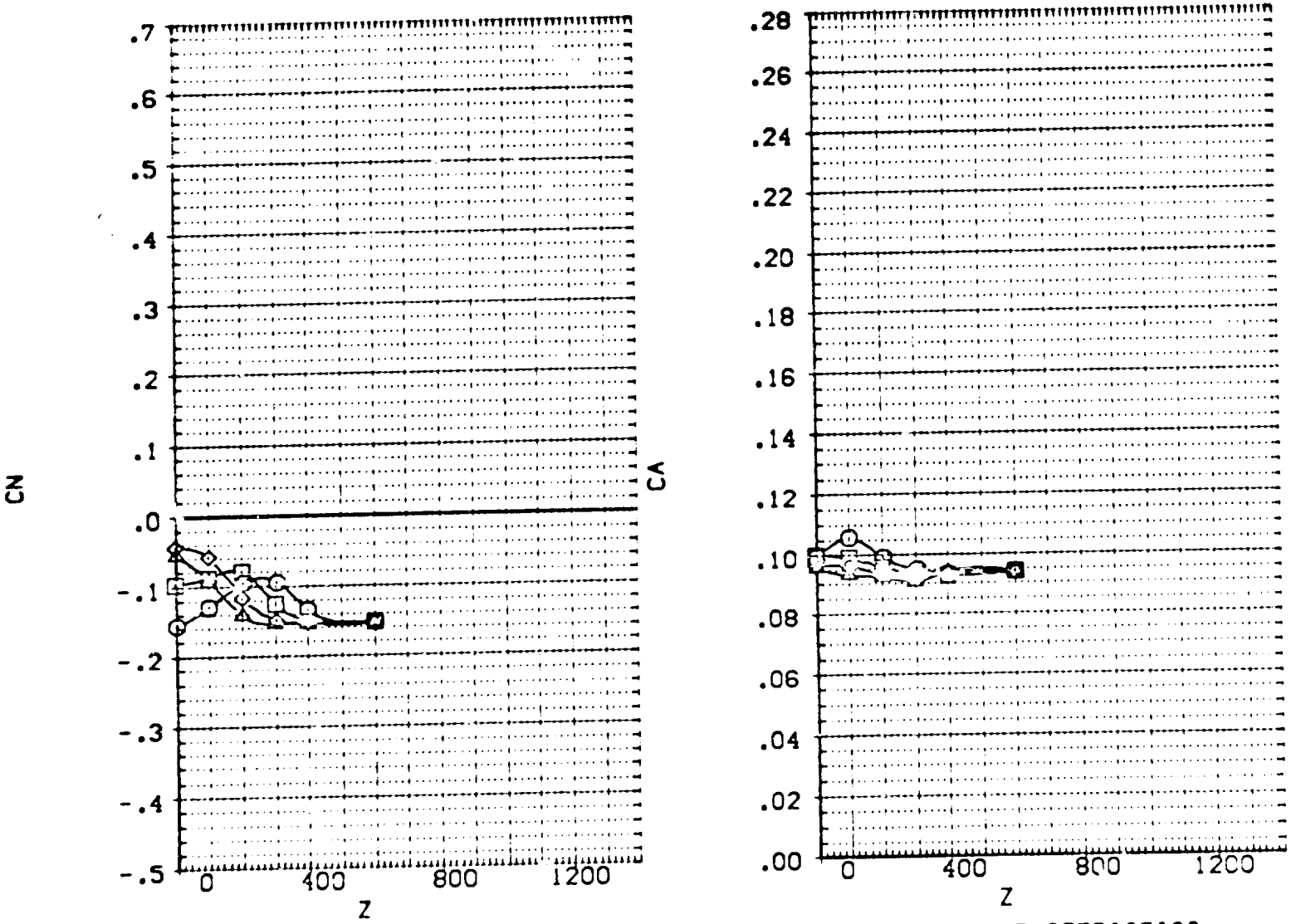


EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

[A]3.EXTERNAL TANK(T10)SEPARATING FROM ORB. 03 (RTJ016)

SYMBOL	X		PARAMETRIC VALUES		
○	.278	MACH	4.530	PTOTAL	110.000
□	400.460	ALPHA	-5.000	BETA	.000
◇	800.590	DALPHA	5.000	DBETA	.000
△	1200.600	ELEVTR	.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

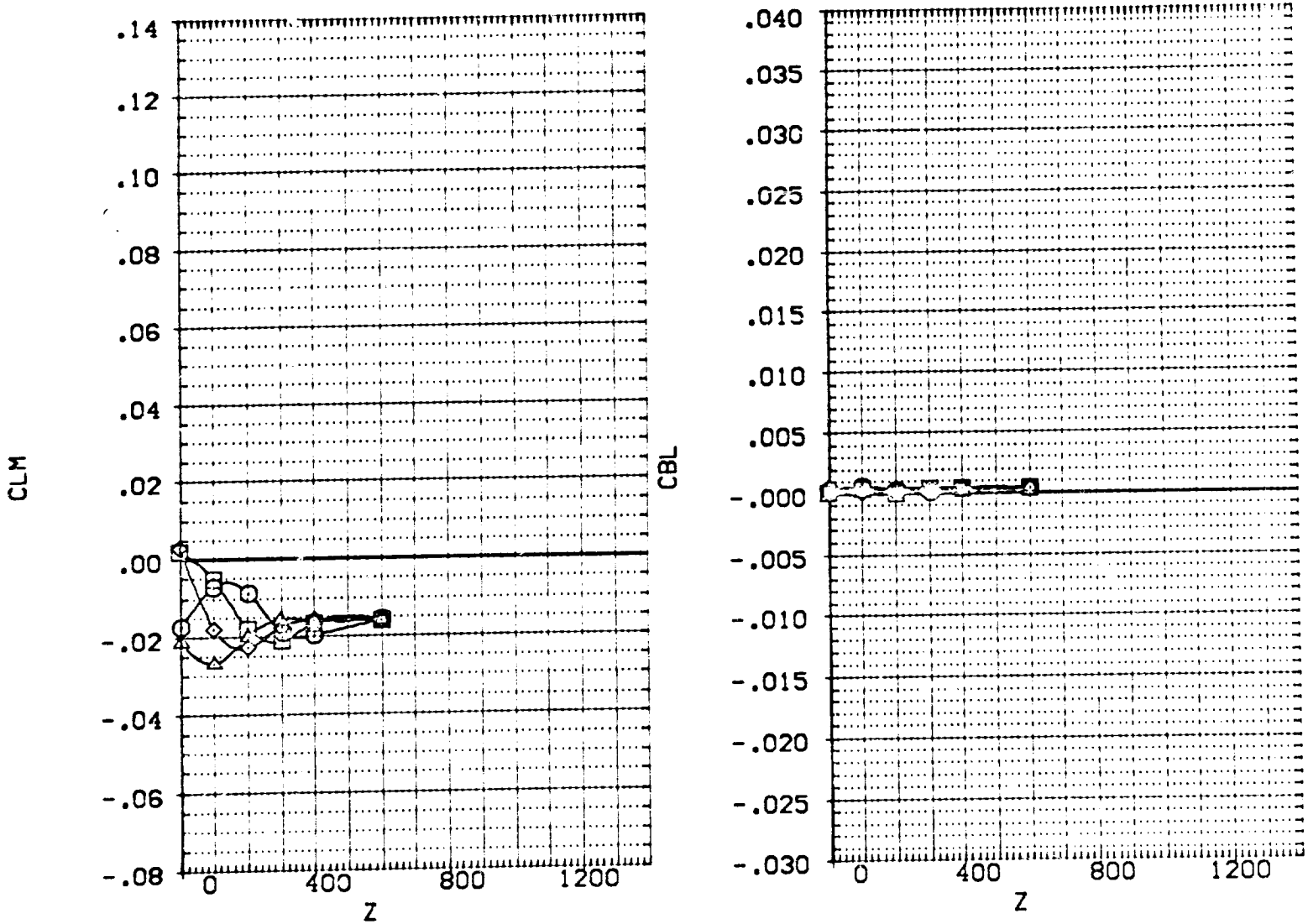


EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

!A13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ016)

SYMBOL	X		PARAMETRIC VALUES		
○	.228	MACH	4.530	PTOTAL	110.000
◇	400.460	ALPHA	-5.000	BETA	.000
△	800.590	DALPHA	5.000	DBETA	.000
	1200.600	ELEVTR	.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED L... DOCUMENT FOR REF... CHARACTERISTICS FOR INDIVIDUAL DATASETS

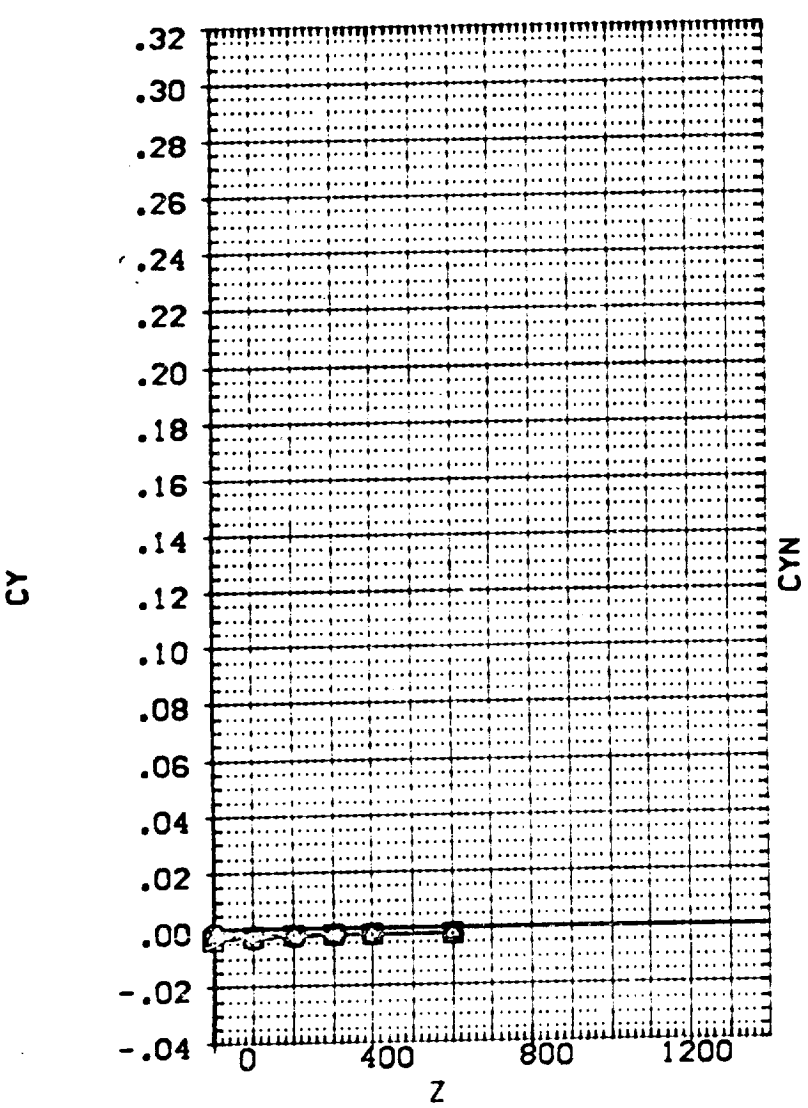


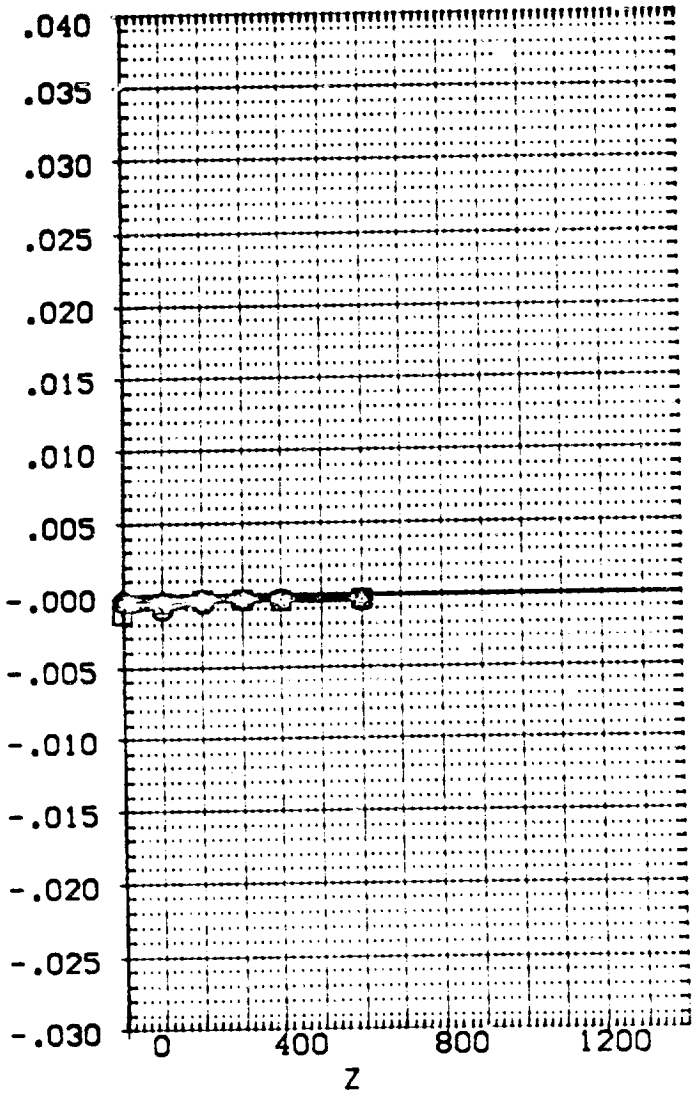
EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTER'STICS

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ016)

SYMBOL	X		PARAMETRIC VALUES		
○	.228	MACH	4.530	PTOTAL	110.000
□	400.460	ALPHA	-5.000	BETA	.000
◇	800.590	DALPHA	5.000	DBETA	.000
△	1200.600	ELEVTR	.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



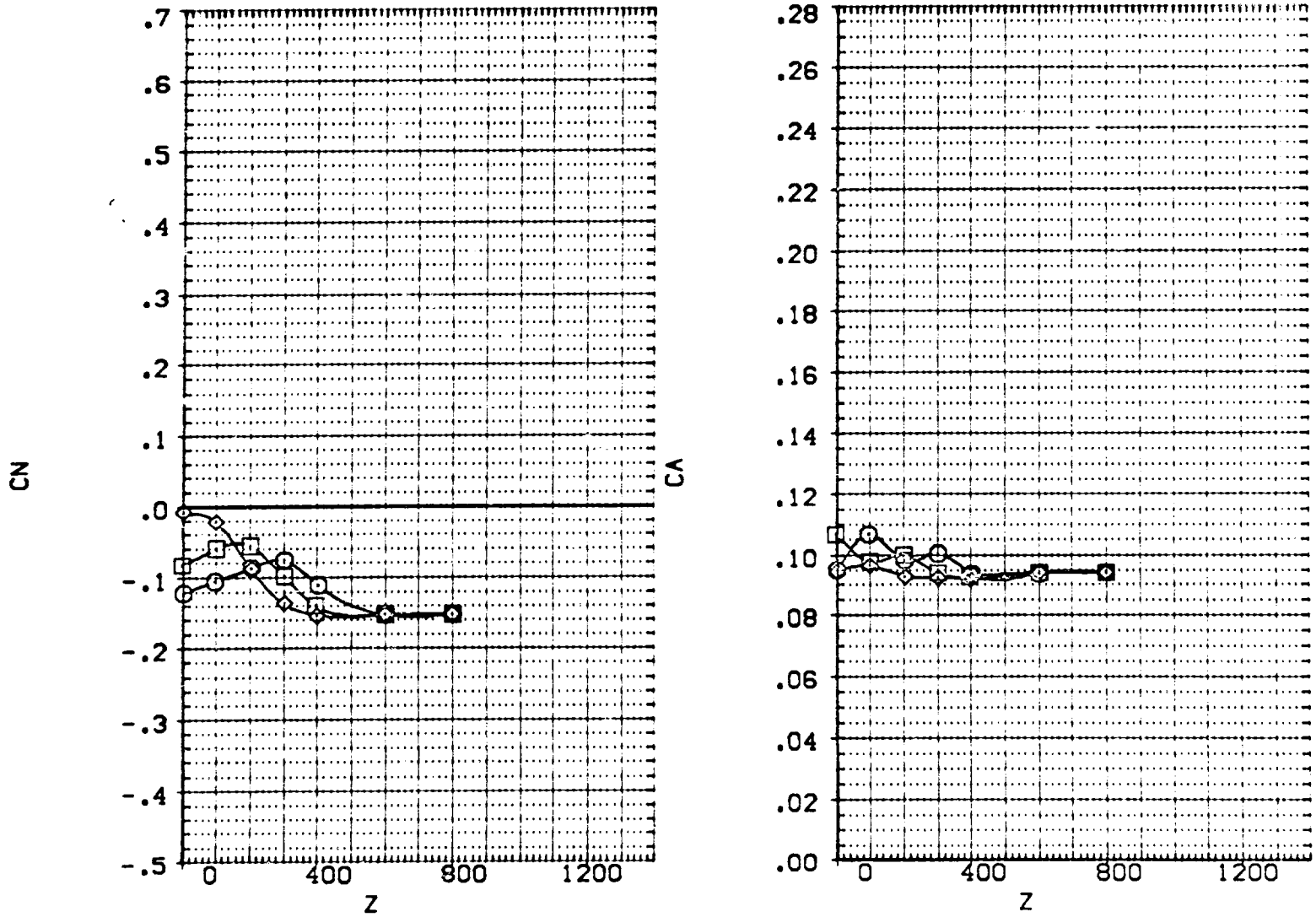


EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ017)

SYMBOL	X		PARAMETRIC VALUES		
○	.155	MACH	4.530	PTOTAL	110.000
□	400.390	ALPHA	-5.000	BETA	.000
◇	800.620	DALPHA	.000	DBETA	.000
		ELEVTR	.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

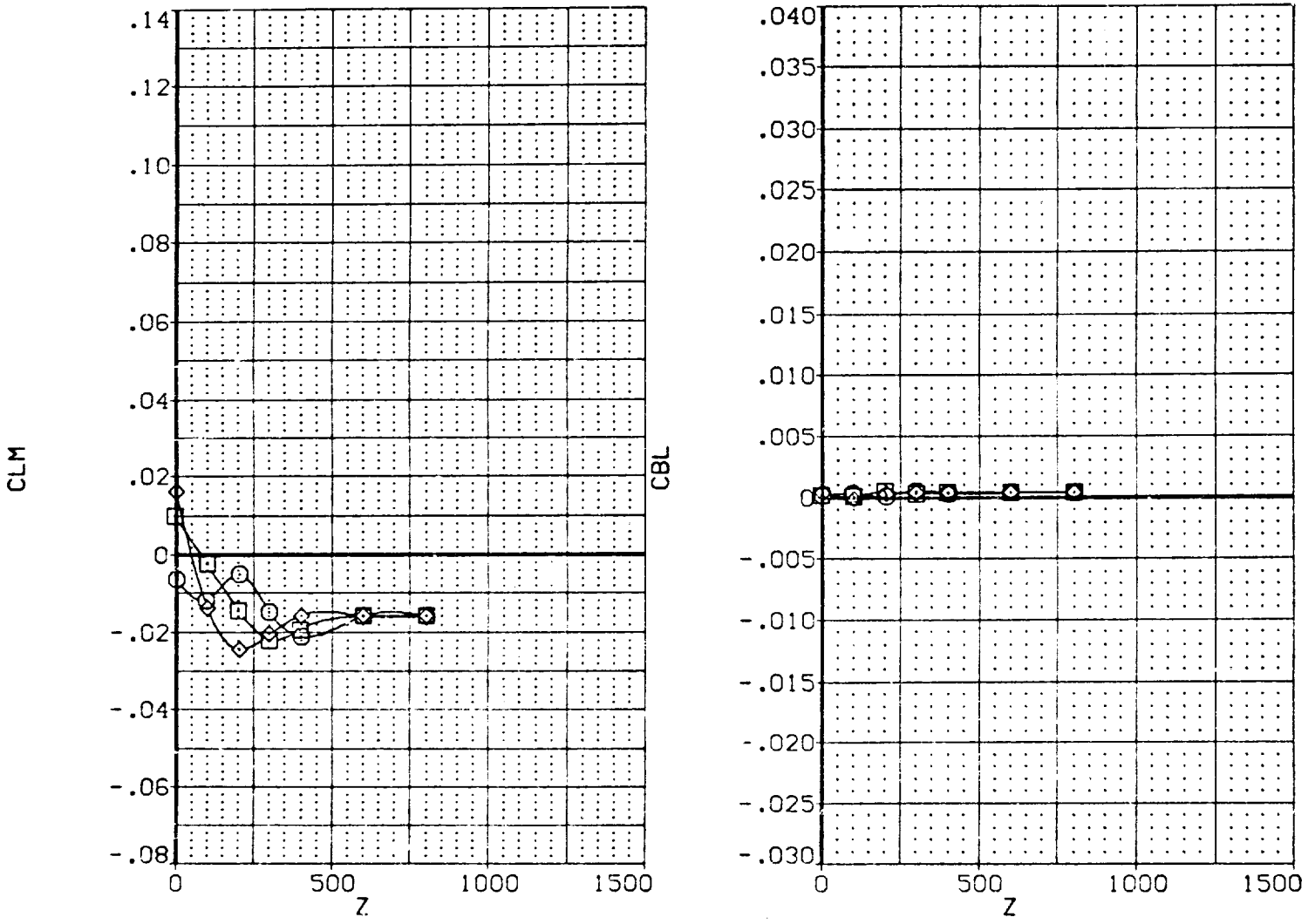


EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

IA13,EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ017)

SYMBOL	X		PARAMETRIC VALUES		
○	.155	MACH	4.530	PTOTAL	110.000
□	400.390	ALPHA	-5.000	BETA	.000
◇	800.620	DALPHA	.000	DBETA	.000
		ELEVTR	.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

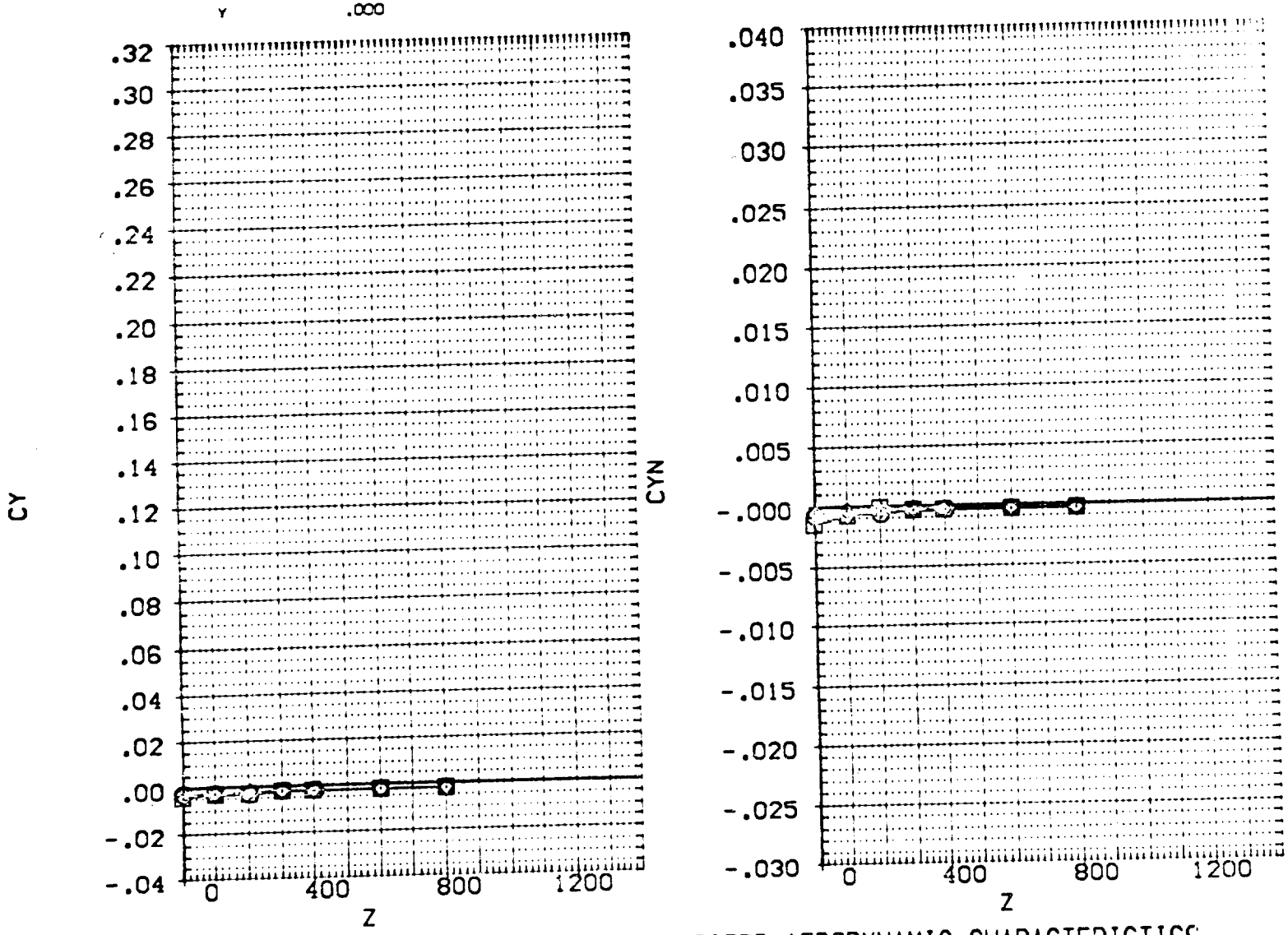


EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

!A!3.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ017)

SEE THE ASSOCIATED DATA DOCUMENT FOR REMAINING CHARACTERISTICS FOR INDIVIDUAL DATASETS

SYMBOL	X	PARAMETRIC VALUES			
◇ 110	.155	MACH	4.530	PTOTAL	110.000
	400.390	ALPHA	-5.000	BETA	.000
	800.620	DALPHA	.000	DBETA	.000
		ELEVTR	.000	AILRON	.000
		Y	.000		

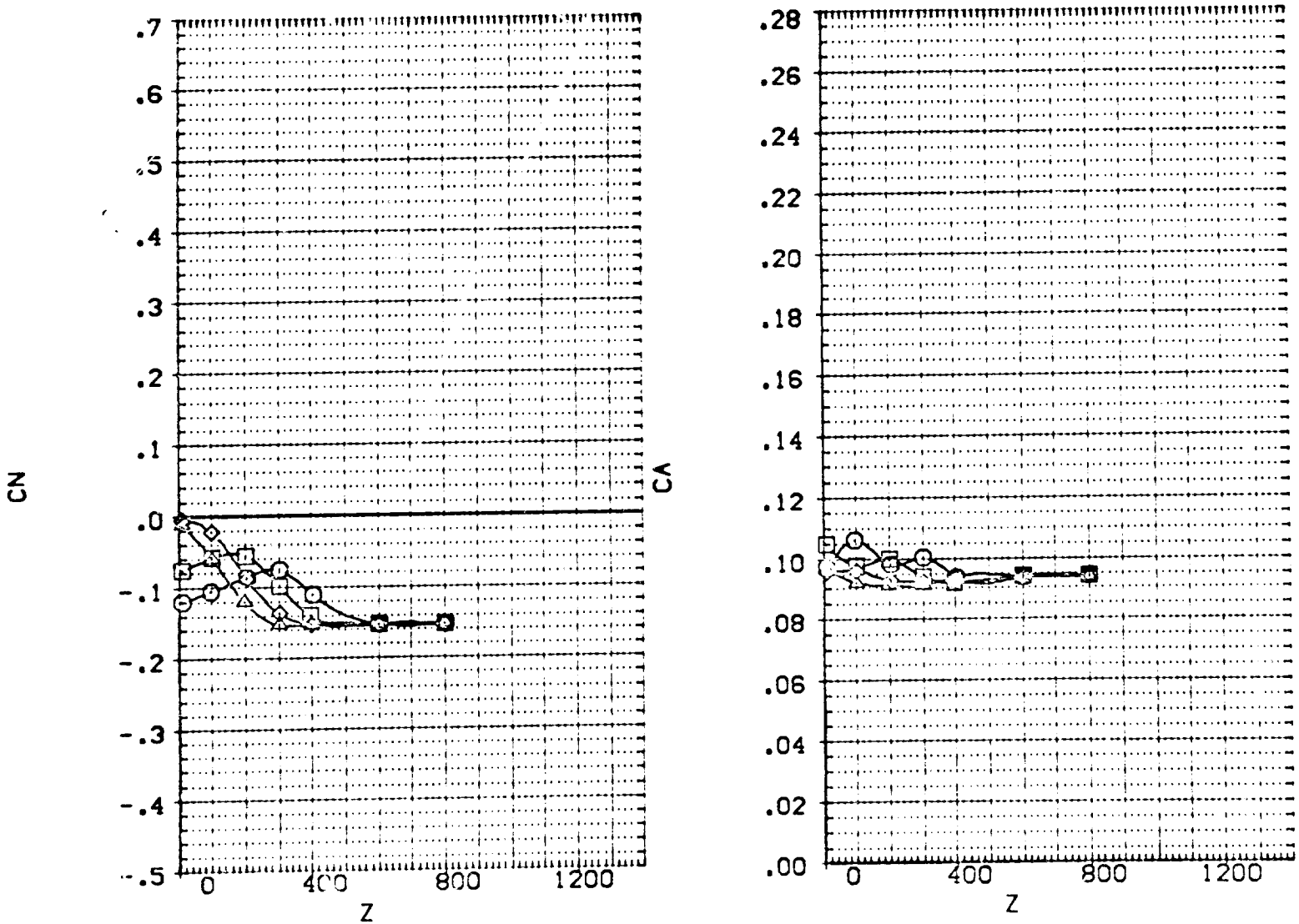


EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ018)

SYMBOL	X		PARAMETRIC VALUES		
○	.170	MACH	4.530	PTOTAL	110.000
◇□	400.300	ALPHA	-5.000	BETA	.000
◇	800.530	DALPHA	.000	DBETA	.000
△	1200.900	ELEVTR	.000	AILRON	.000
		Y	.000		

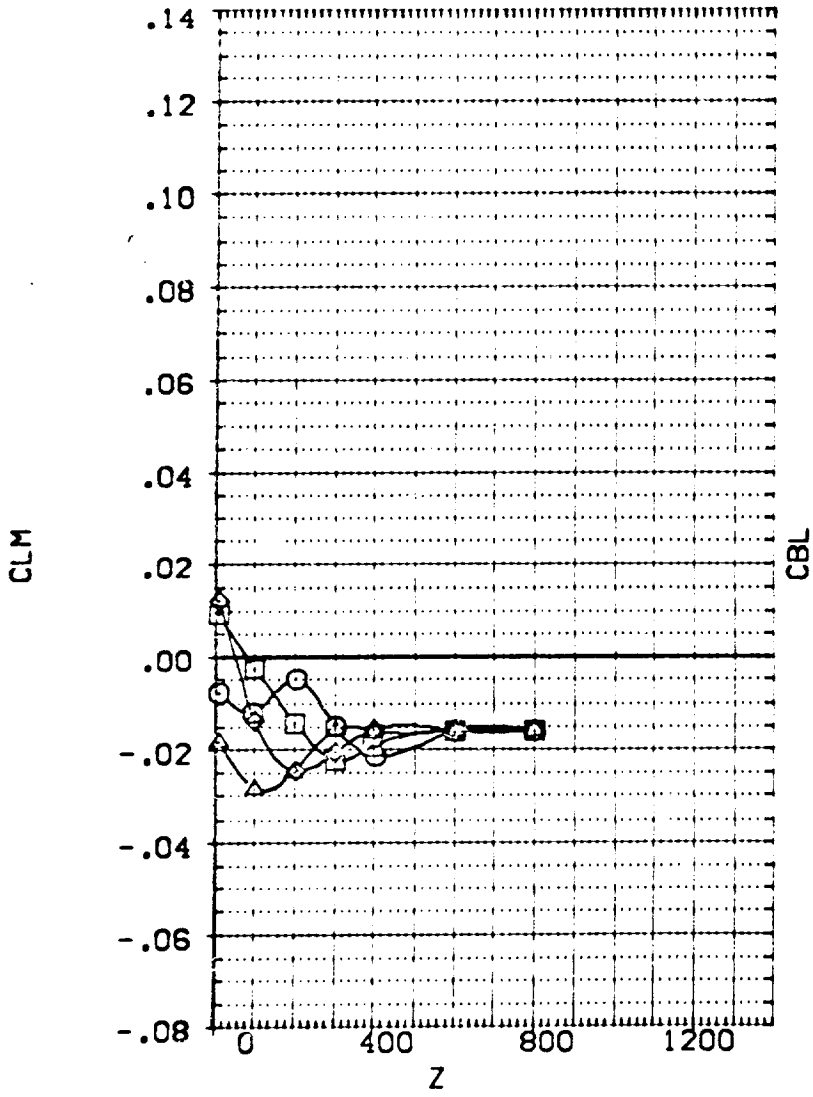
SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

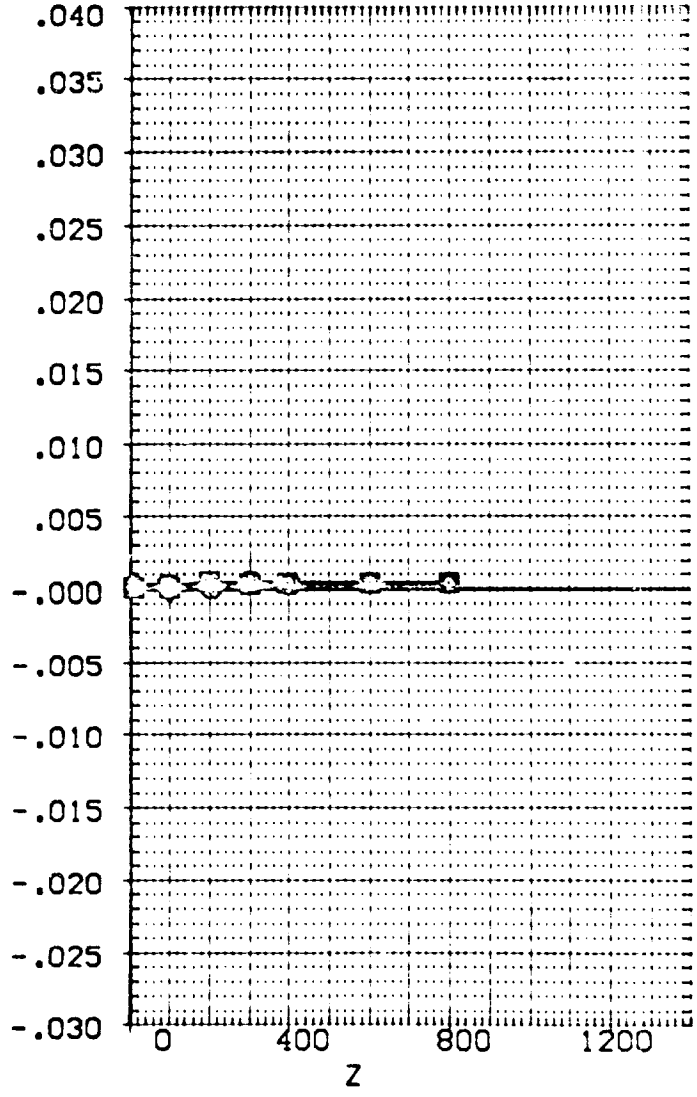


EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

SYMBOL	X		PARAMETRIC VALUES		
○	.170	MACH	4.530	PTOTAL	110.000
◇□	400.300	ALPHA	-5.000	BETA	.000
◇	800.530	DALPHA	.000	DBETA	.000
△	1200.900	ELEVTR	.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR ADDITIONAL CHARACTERISTICS FOR INDIVIDUAL DATASETS



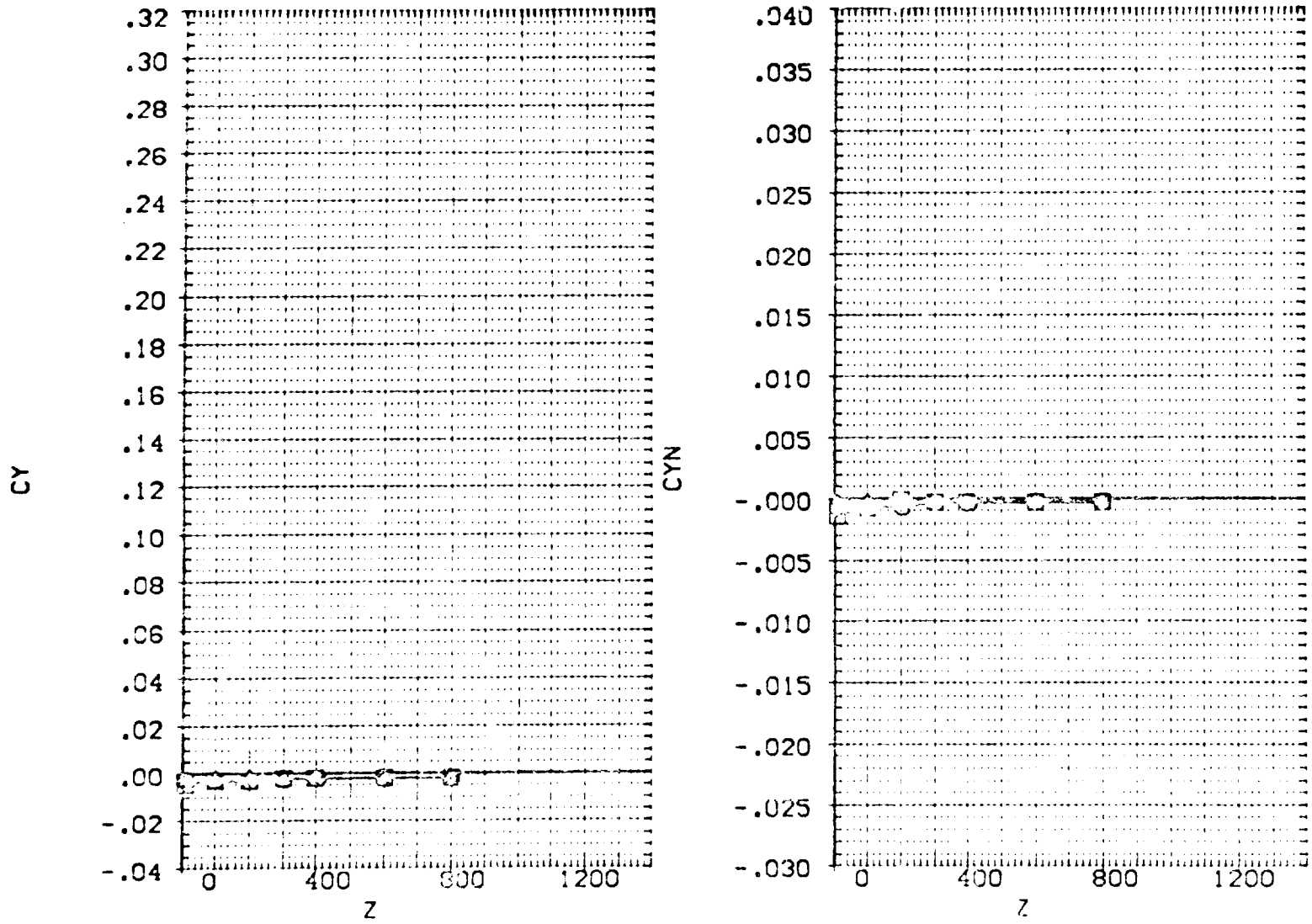


EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

!A13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ018)

SYMBOL	X		PARAMETRIC VALUES		
○	.170	MACH	4.530	PTOTAL	110.000
□	400.300	ALPHA	-5.000	BETA	.000
◇	800.530	DALPHA	.000	DBETA	.000
△	1200.900	ELEVTR	.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

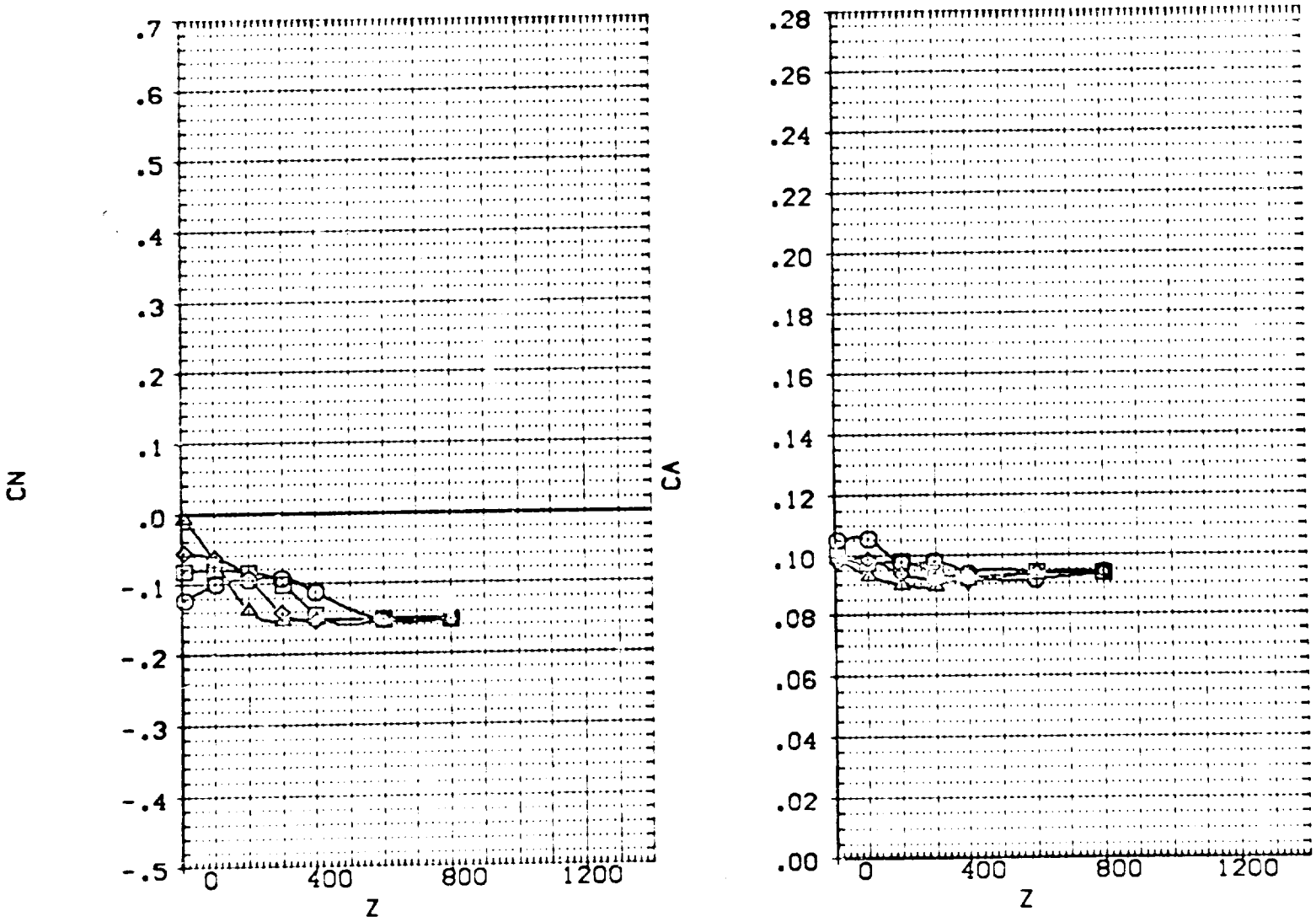


EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

:A13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ019)

SYMBOL	X		PARAMETRIC VALUES		
○	.223	MACH	4.530	PTOTAL	110.000
□	400.420	ALPHA	-5.000	BETA	.000
◇	800.600	DALPHA	.000	DBETA	.000
△	1200.700	ELEVTR	.000	AILRON	.000
		Y	200.000		

SEE THE ASSOCIATED [illegible] DOCUMENT FOR [illegible] CHARACTERISTICS FOR INDIVIDUAL DATASETS

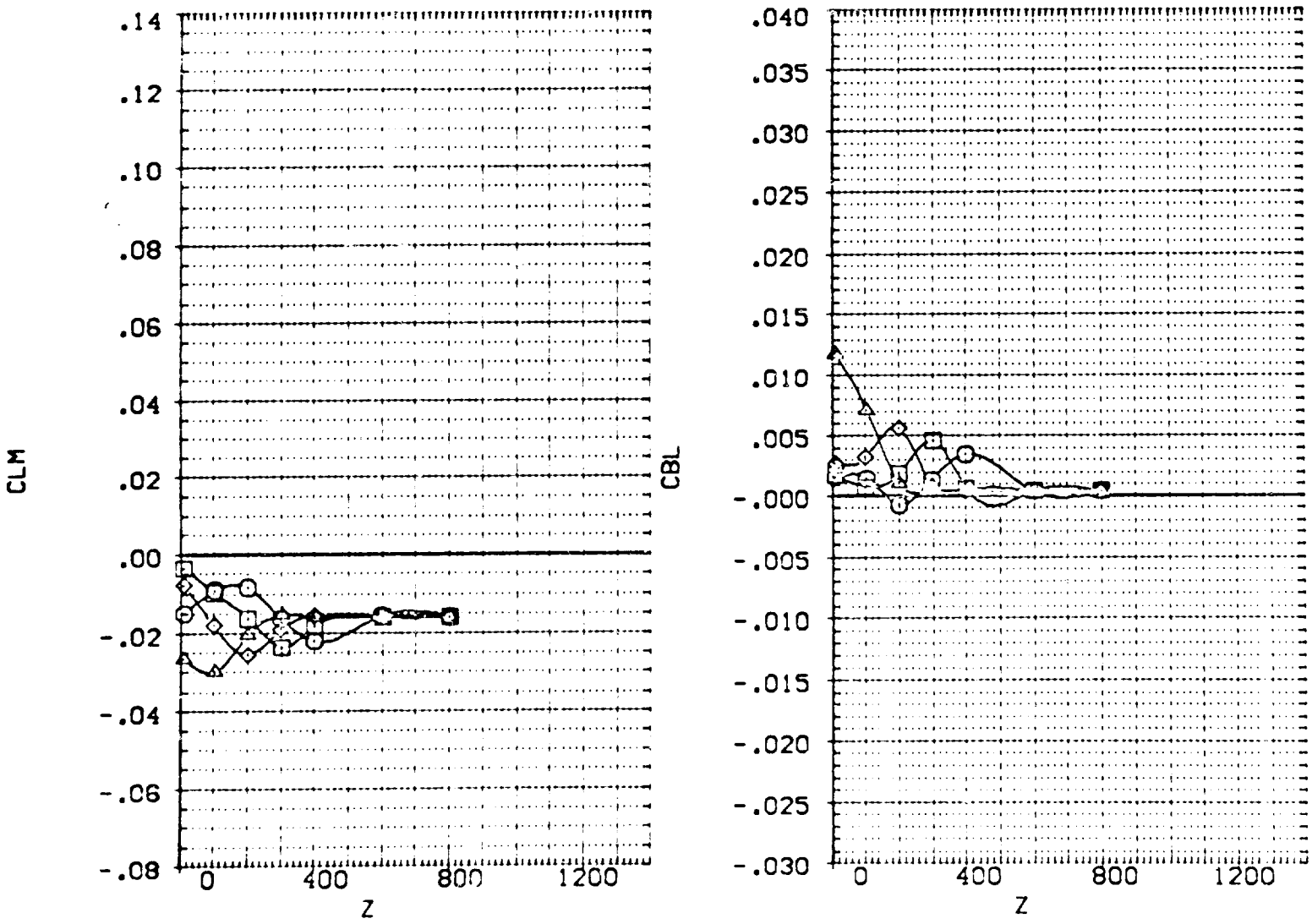


EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ019)

SYMBOL	X		PARAMETRIC VALUES		
○	.223	MACH	4.530	PTOTAL	110.000
□	400.420	ALPHA	-5.000	BETA	.000
◇	800.600	DALPHA	.000	DBETA	.000
△	1200.700	ELEVTR	.000	AILRON	.000
		Y	200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

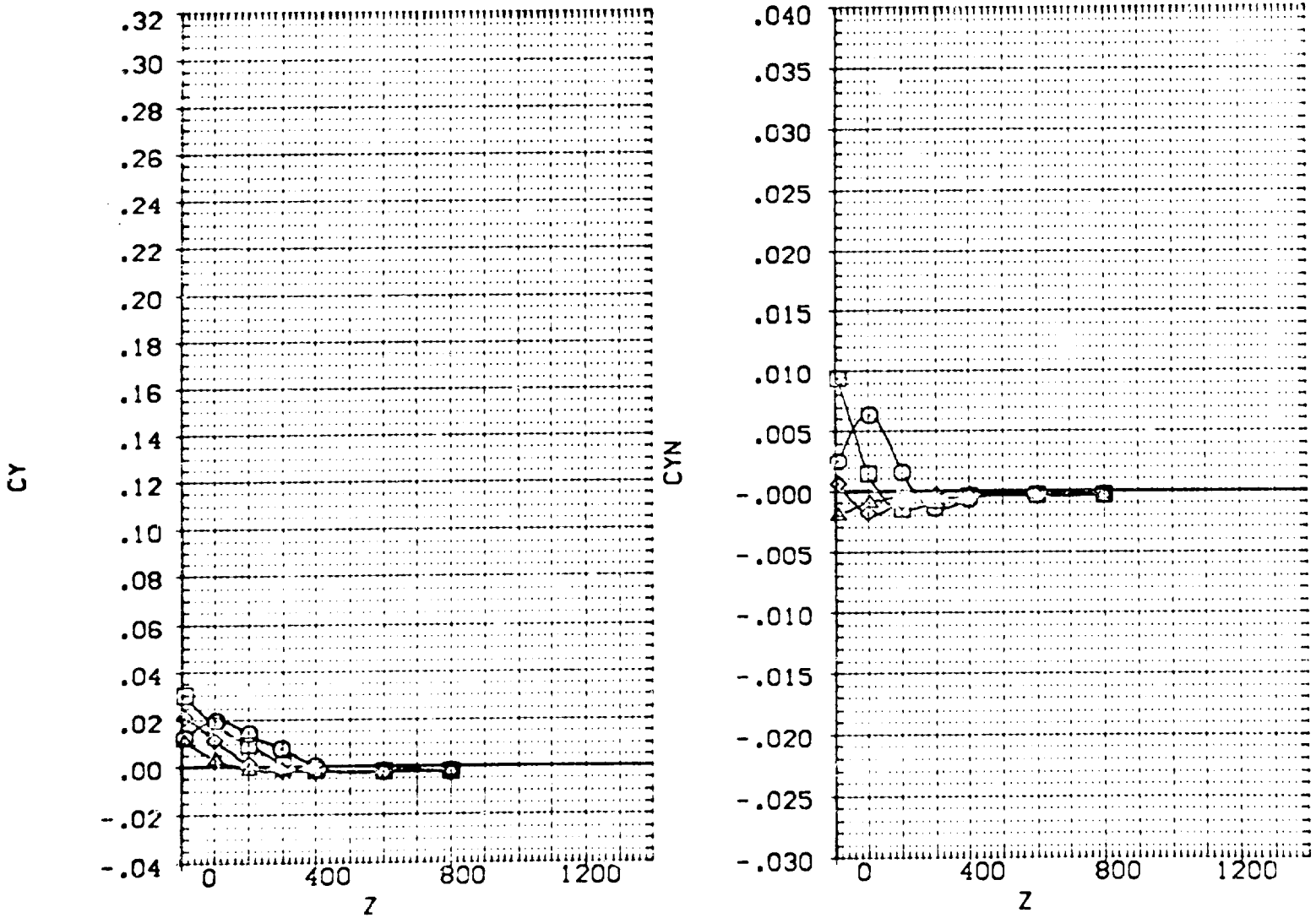


EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

!A13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ019)

SYMBOL	X		PARAMETRIC VALUES		
○□	.223	MACH	4.530	PTOTAL	110.000
◇	400.420	ALPHA	-5.000	BETA	.000
	800.600	DALPHA	.000	DBETA	.000
△	1200.700	ELEVTR	.000	AILRON	.000
		Y	200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

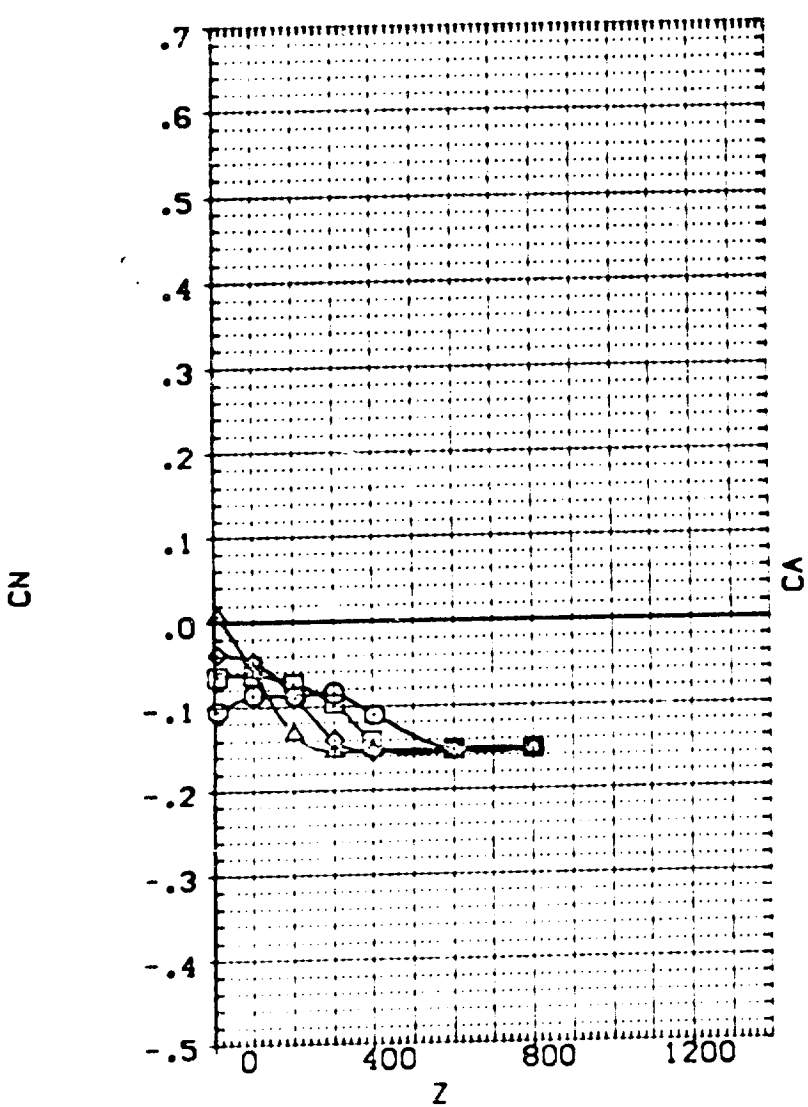


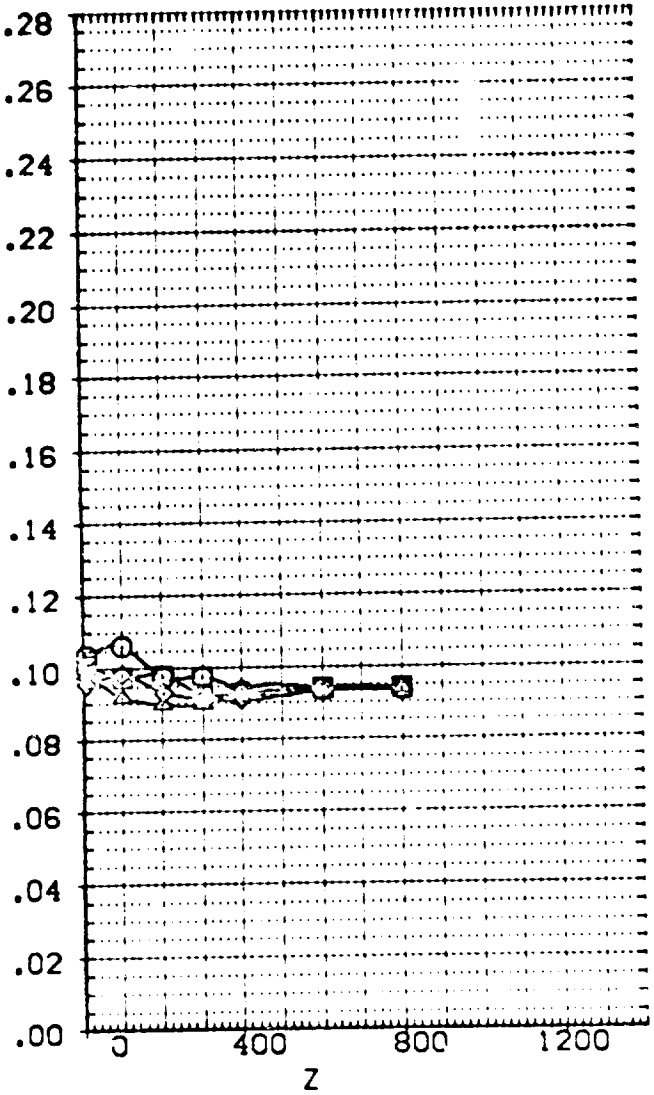
EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

!A13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ020)

SYMBOL	X		PARAMETRIC VALUES		
○	.175	MACH	4.530	PTOTAL	110.000
□	400.230	ALPHA	-5.000	BETA	.000
◇	800.370	DALPHA	.000	DBETA	5.000
△	1200.900	ELEVTR	.000	AILRON	.000
		Y	200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



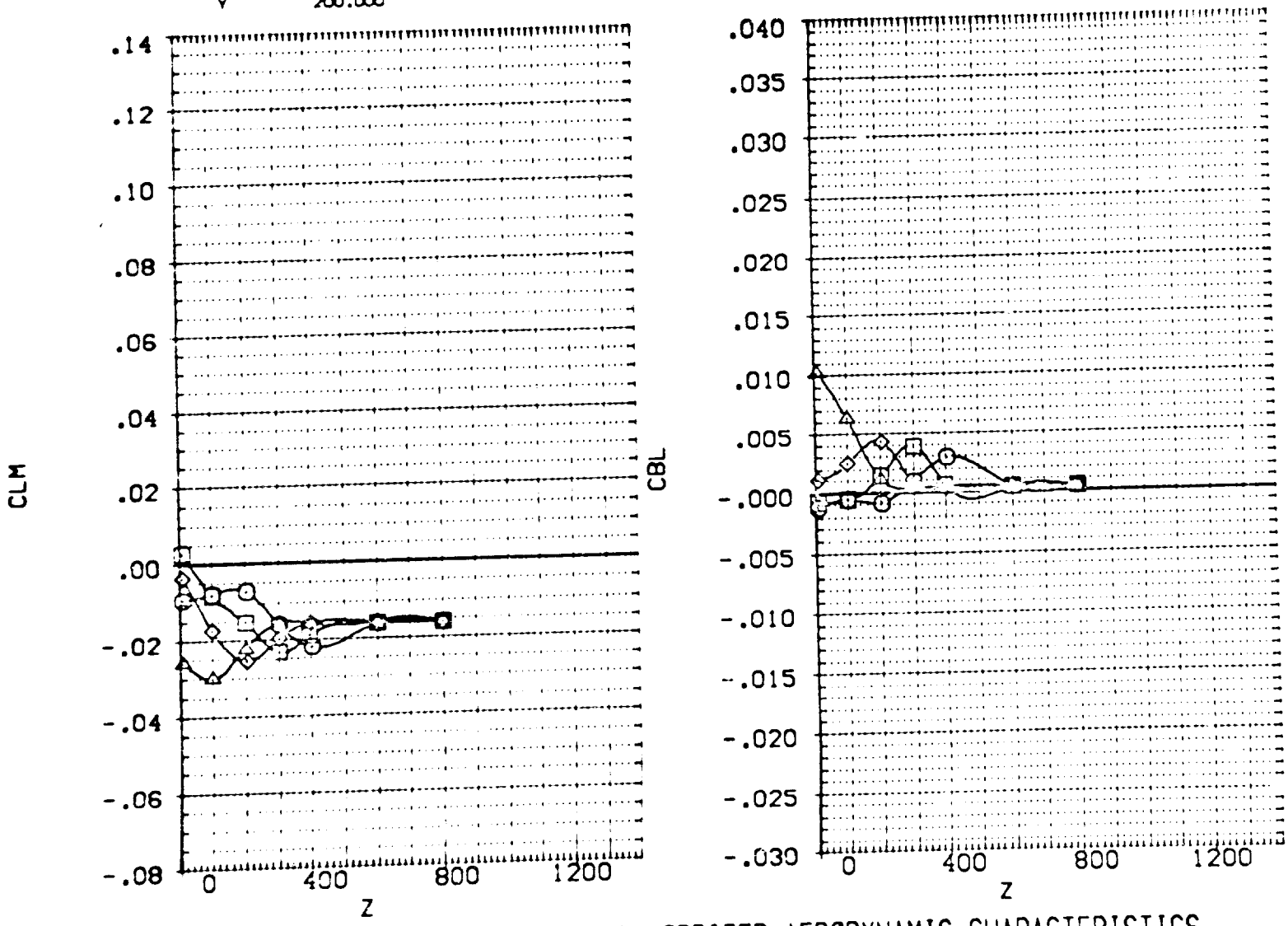


EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

[A13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ020)

SEE THE ASSOCIATED DOCUMENT FOR CHARACTERISTICS OF INDIVIDUAL DATA SETS

SYMBOL	X		PARAMETRIC VALUES		
◇	.175	MACH	4.530	PTOTAL	110.000
◇	400.230	ALPHA	-5.000	BETA	.000
◇	800.370	DALPHA	.000	DBETA	5.000
◇	1200.900	ELEVTR	.000	AILRON	.000
		Y	200.000		

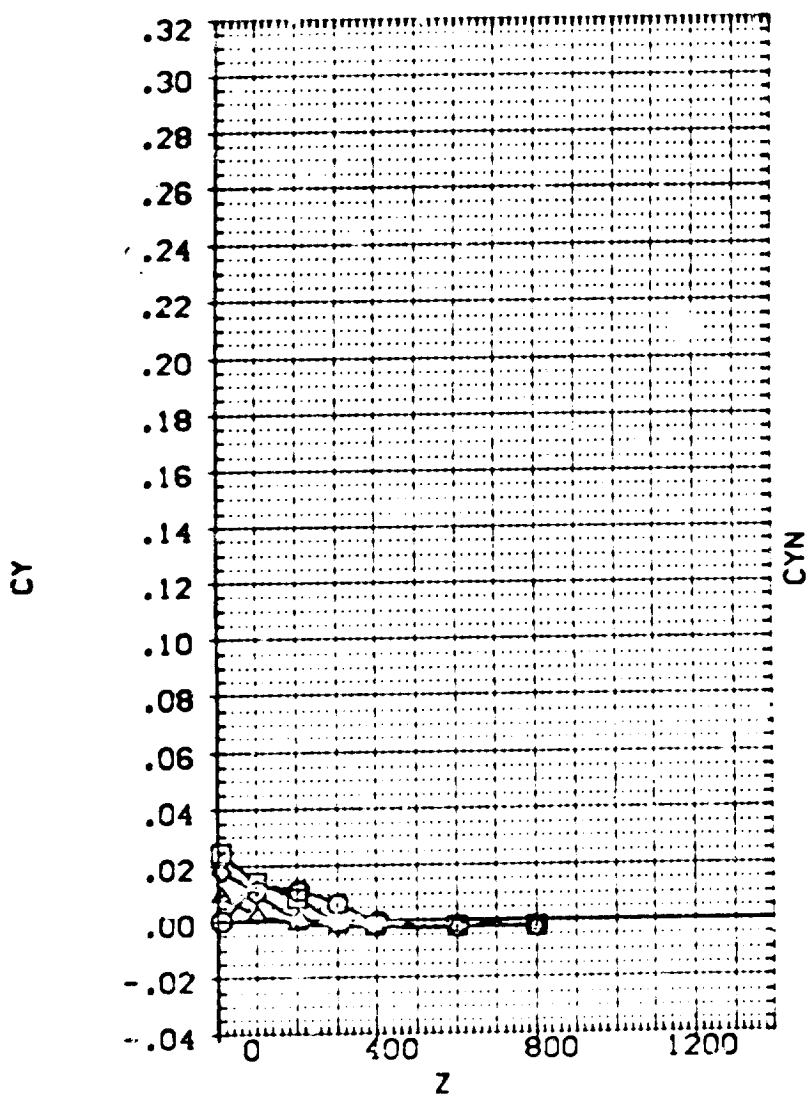


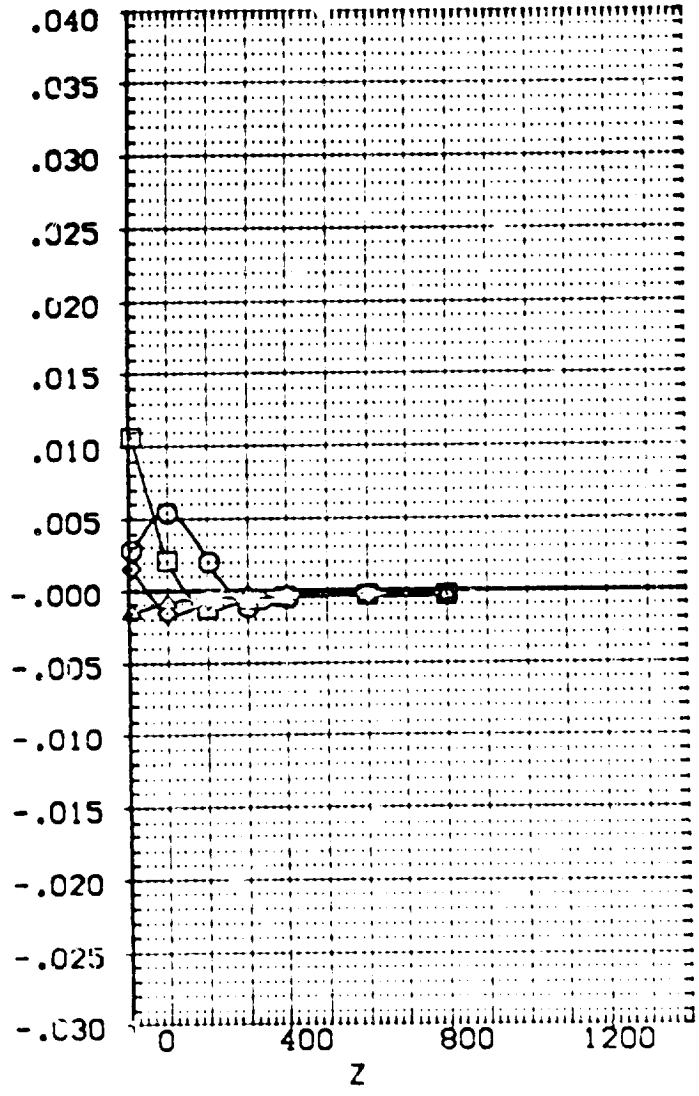
EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

!A!3.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ020)

SYMBOL	X		PARAMETRIC VALUES		
○	.175	MACH	4.530	PTOTAL	110.000
□◇	400.230	ALPHA	-5.000	BETA	.000
△	800.370	DALPHA	.000	DBETA	5.000
	1200.900	ELEVTR	.000	AILRON	.000
		Y	200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



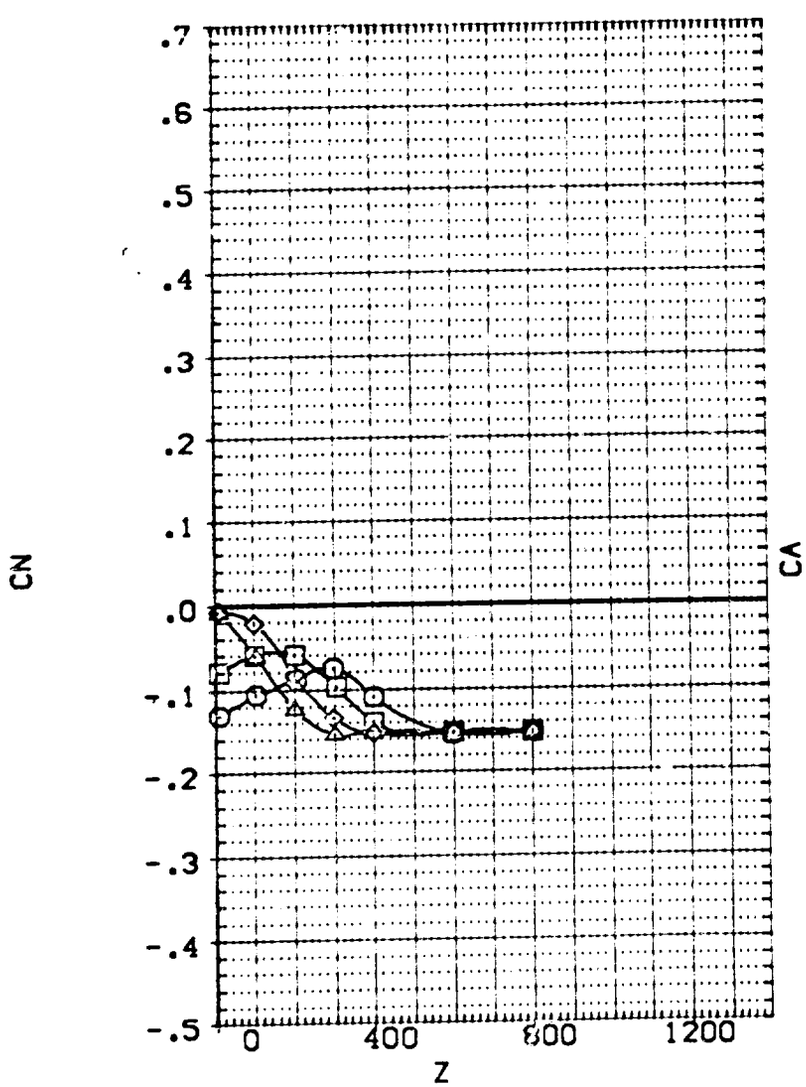


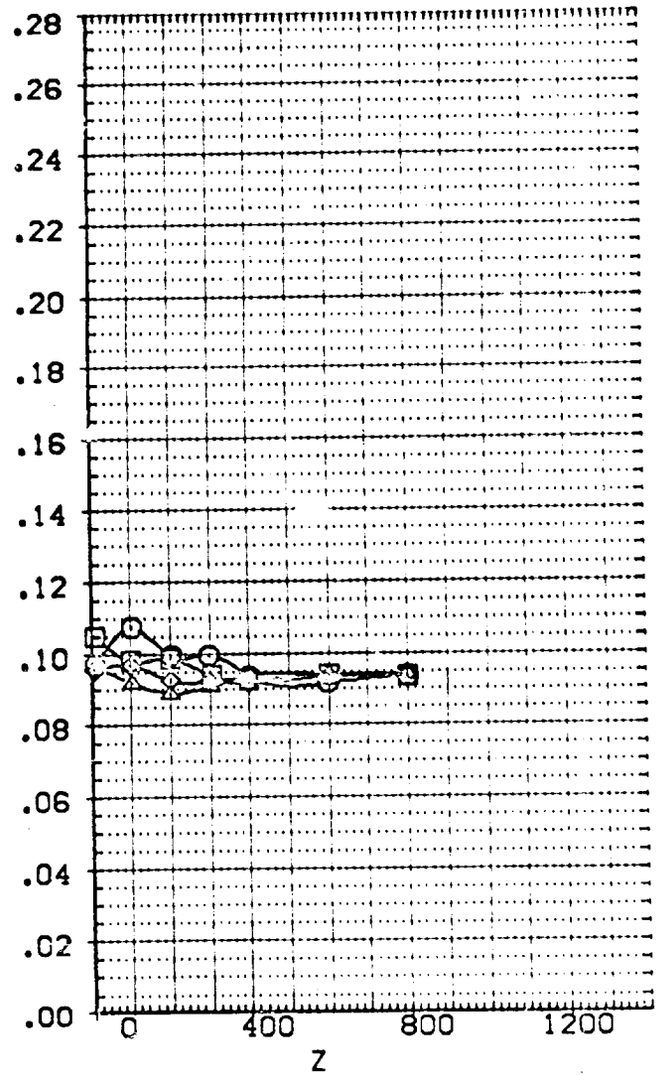
EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

IA13.EXTERNAL TANK(110)SEPARATING FROM ORB. 09 (RTJ021)

SYMBOL	X		PARAMETRIC VALUES		
○	.308	MACH	4.530	PTOTAL	110.000
□	400.370	ALPHA	-5.000	BETA	.000
◇	800.700	DALPHA	.000	DBETA	5.000
△	1200.800	ELEVTR	.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



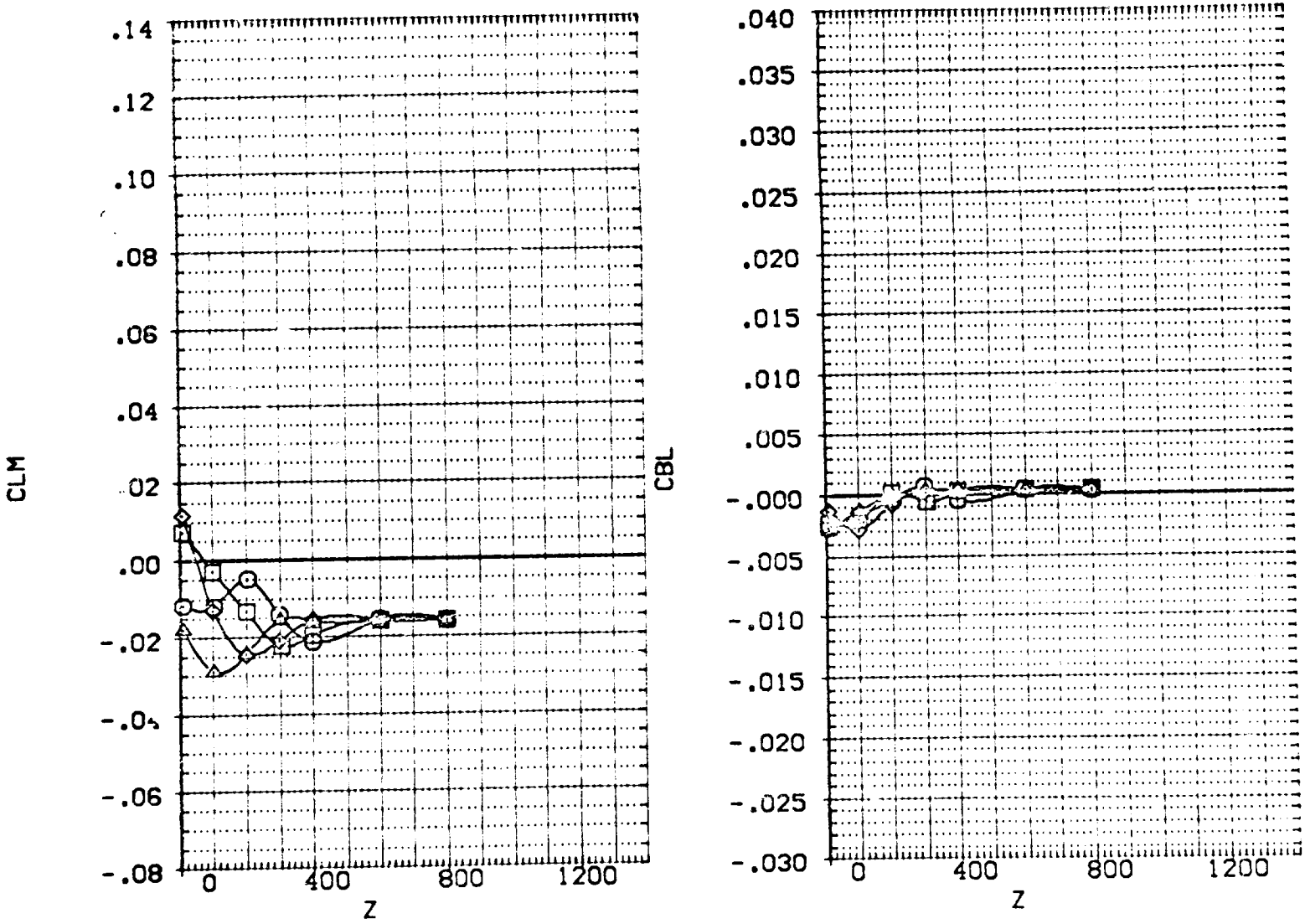


EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

!A13,EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ021)

SYMBOL	X		PARAMETRIC VALUES		
○	.308	MACH	4.530	PTOTAL	110.000
□	400.300	ALPHA	-5.000	BETA	.000
◇	800.700	DALPHA	.000	DBETA	5.000
△	1200.800	ELEVTR	.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

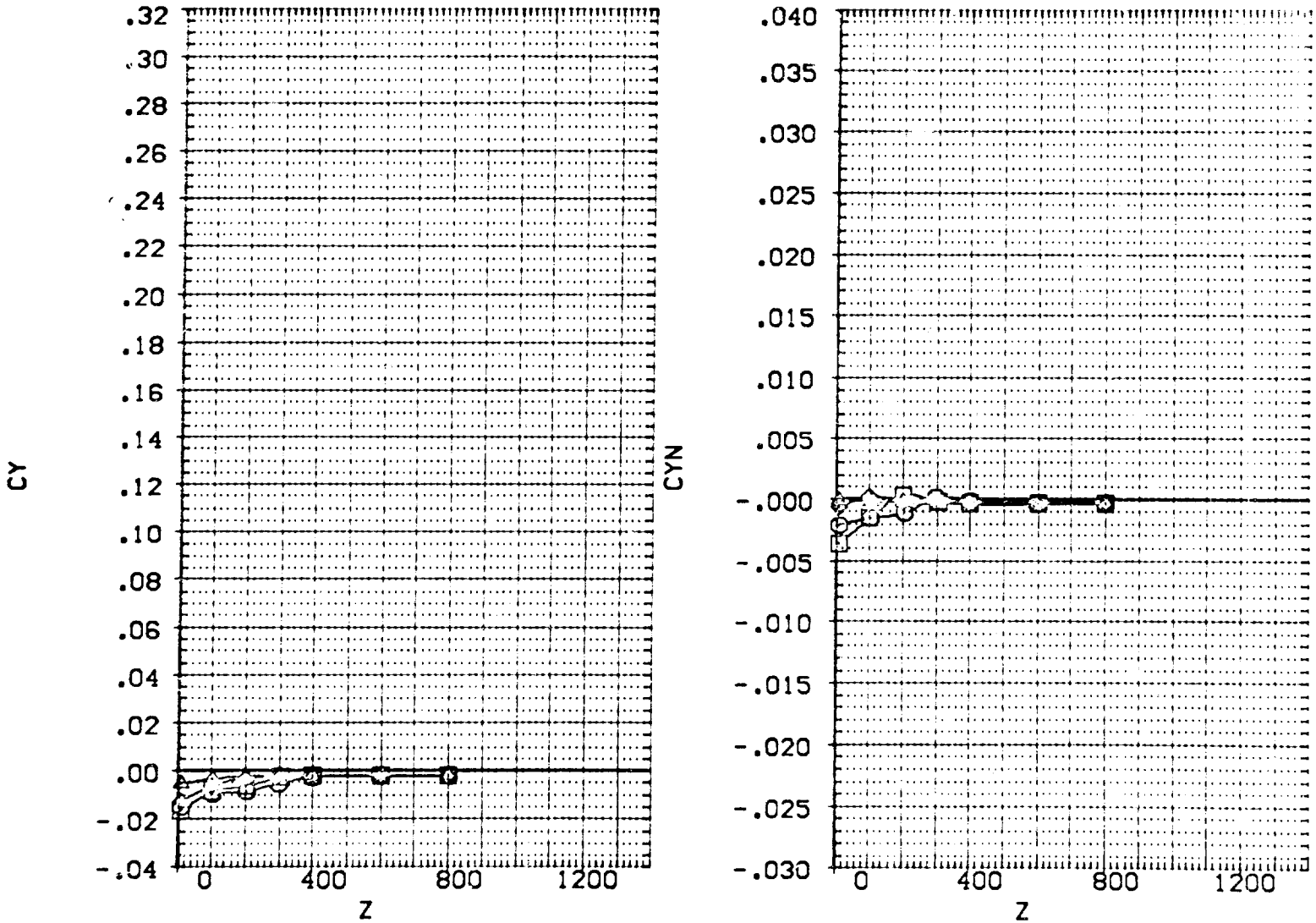


EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

IA13,EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ021)

SYMBOL	X		PARAMETRIC VALUES		
○	.308	MACH	4.530	PTOTAL	110.000
□	400.370	ALPHA	-5.000	BETA	.000
◇	800.700	DALPHA	.000	DBETA	5.000
△	1200.800	ELEVTR	.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

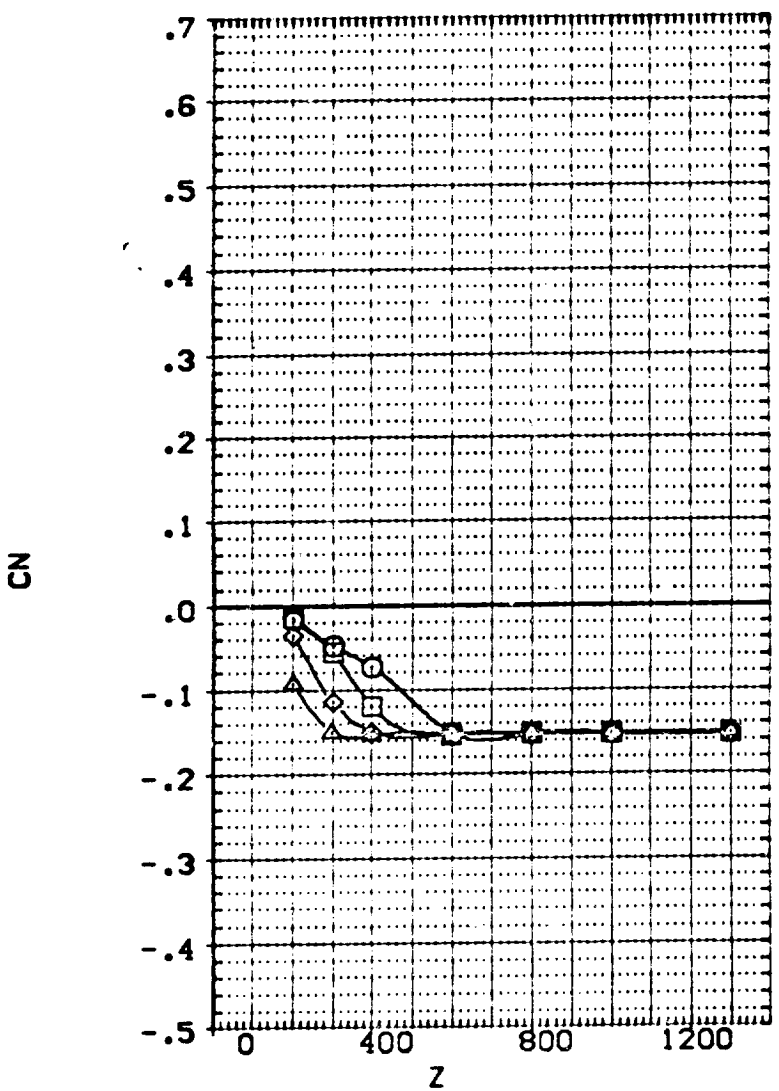


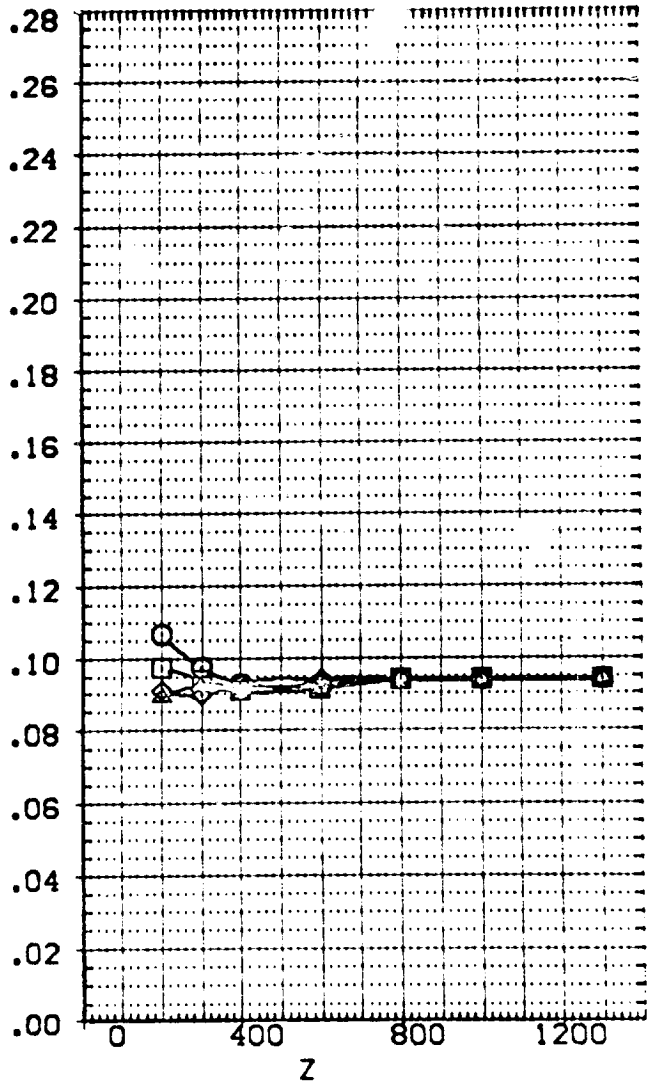
EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ022)

SYMBOL	X		PARAMETRIC VALUES		
○	.089	MACH	4.530	PTOTAL	110.000
□	400.520	ALPHA	-5.000	BETA	.000
◇	800.490	DALPHA	-5.000	DBETA	.000
△	1200.800	ELEVTR	.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



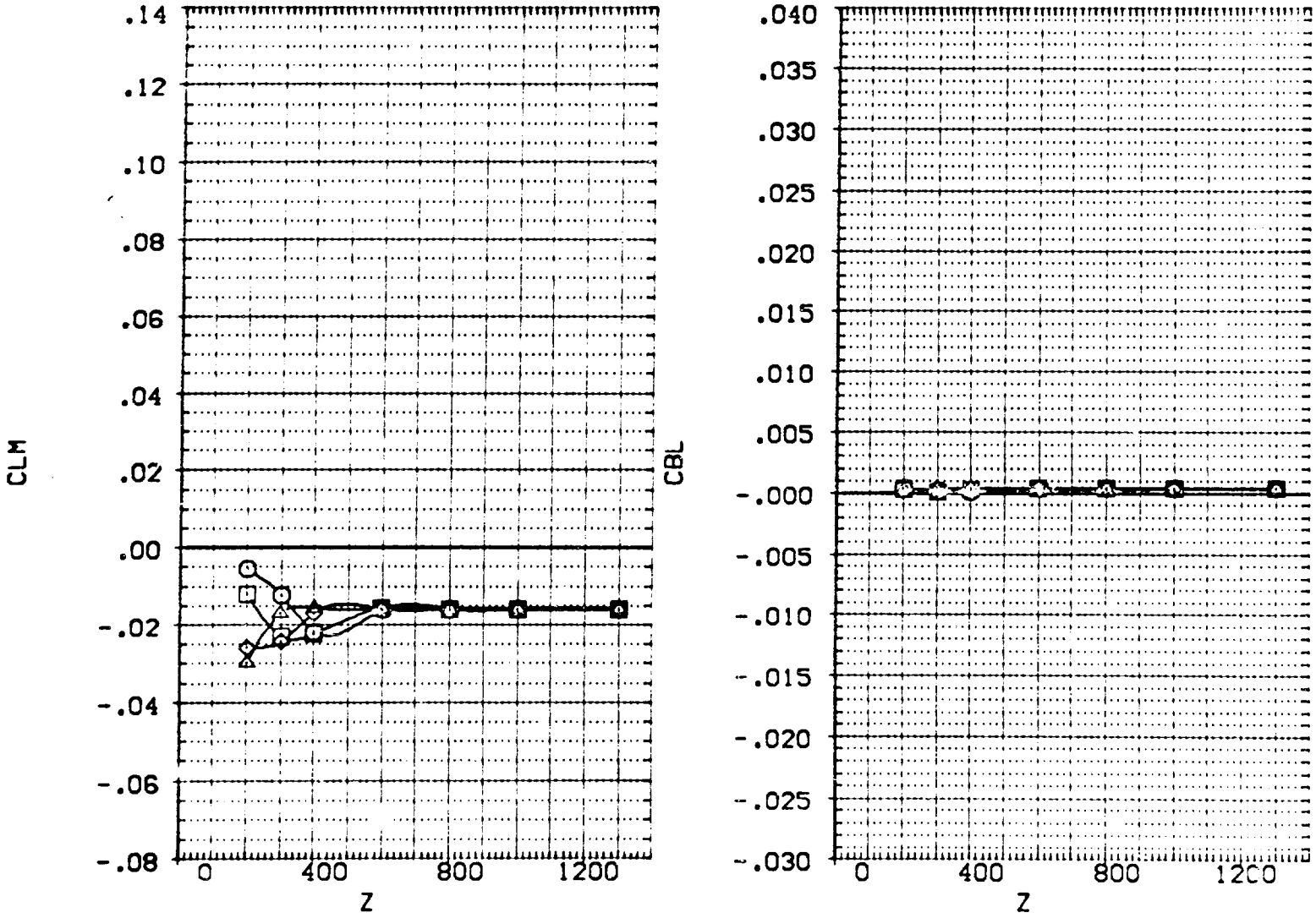


EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ022)

SYMBOL	X		PARAMETRIC VALUES		
○	.089	MACH	4.530	PTOTAL	110.000
◇□	400.520	ALPHA	-5.000	BETA	.000
△	800.490	DALPHA	-5.000	DBETA	.000
	1200.800	ELEVTR	.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

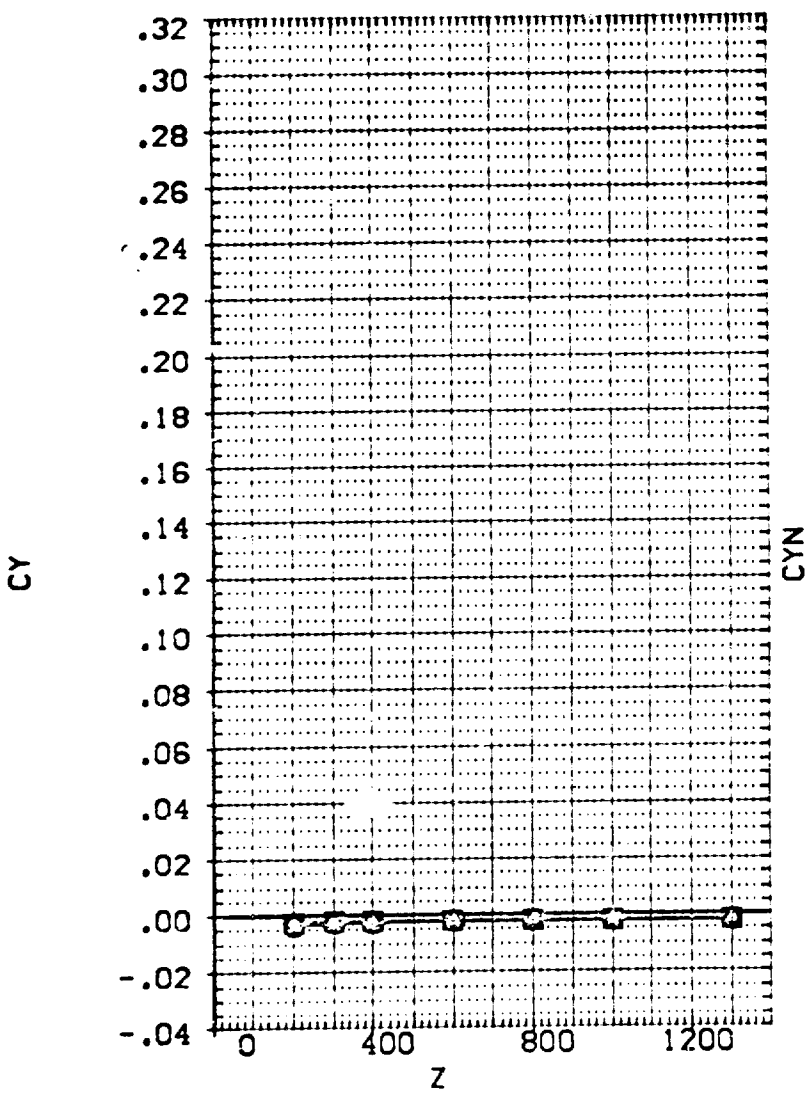


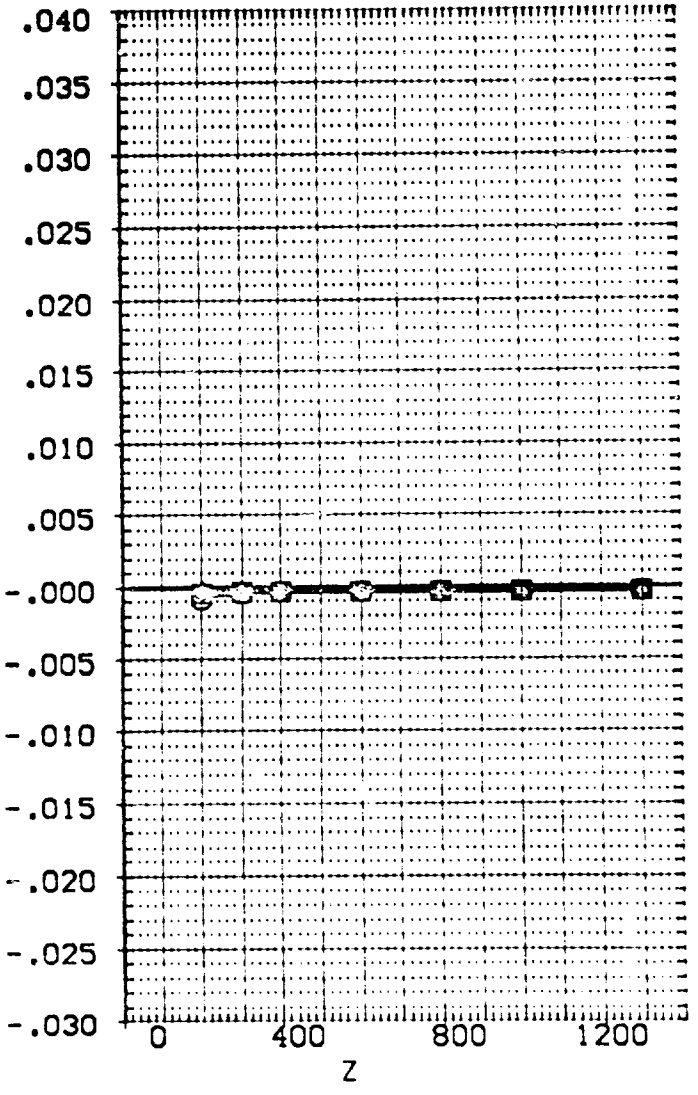
EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

!A13,EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ022)

SYMBOL	X		PARAMETRIC VALUES		
○	.089	MACH	4.530	PTOTAL	110.000
◇□	400.520	ALPHA	-5.000	BETA	.000
◇	800.490	DALPHA	-5.000	DBETA	.000
△	1200.800	ELEVTR	.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



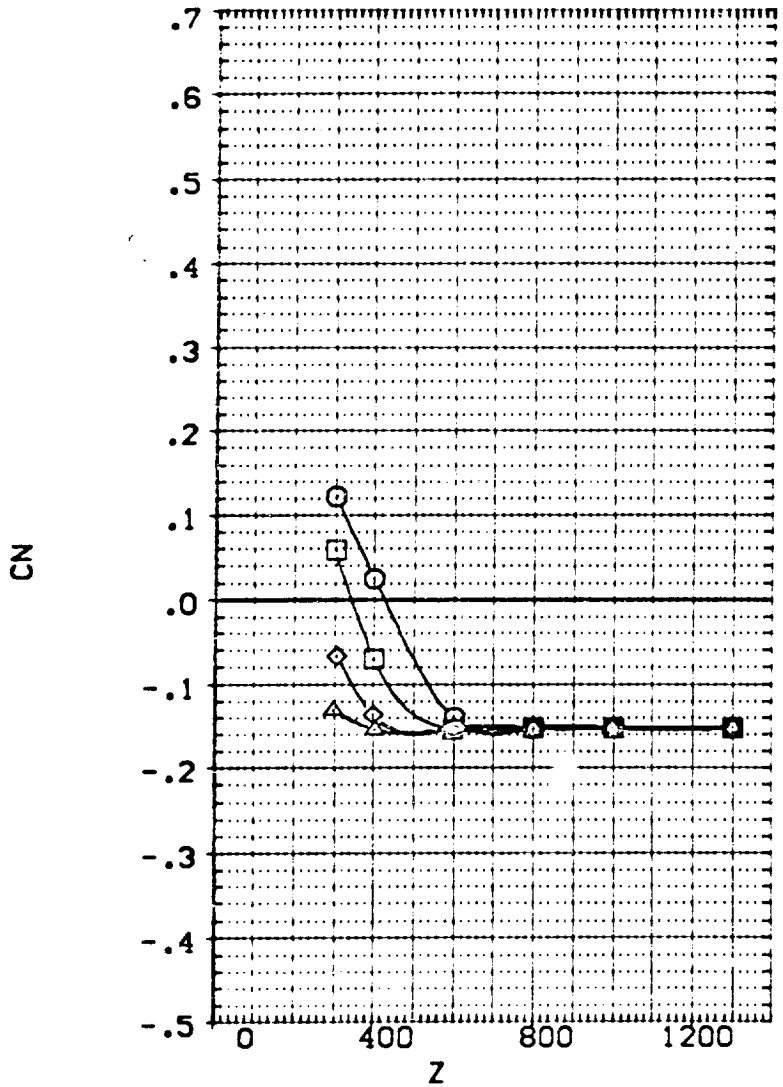


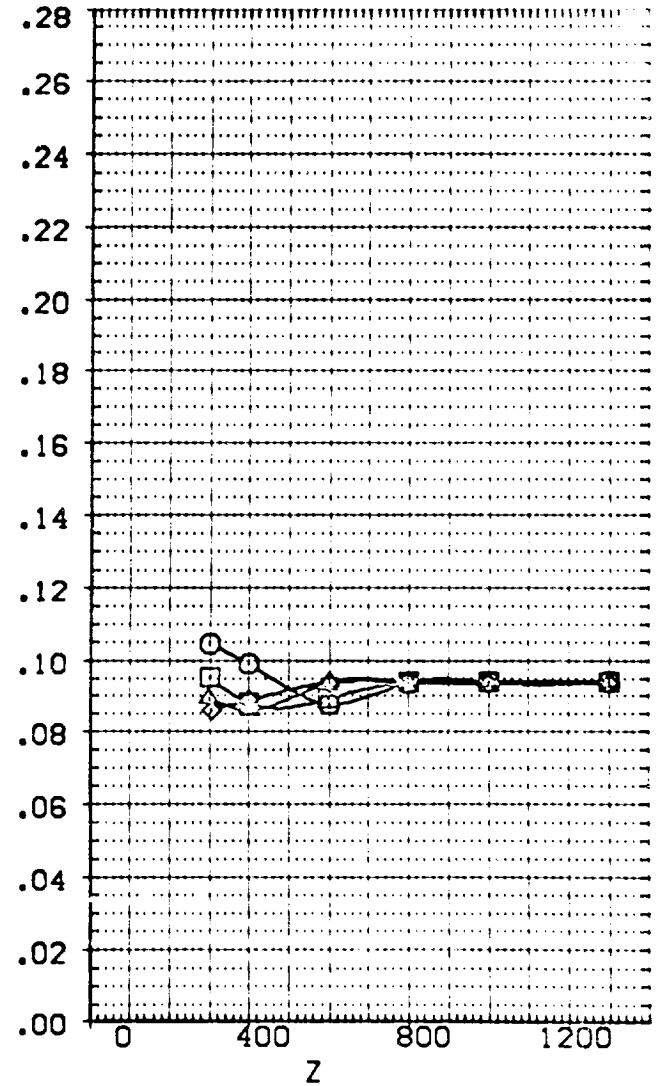
EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

IA13,EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ023)

SYMBOL	X		PARAMETRIC VALUES		
○	-.023	MACH	4.530	PTOTAL	110.000
◇	400.600	ALPHA	-5.000	BETA	.000
□	800.730	DALPHA	-10.000	DBETA	.000
△	1200.500	ELEVTR	.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED DOCUMENT FOR CHARACTERISTICS FOR INDIVIDUAL DATASETS



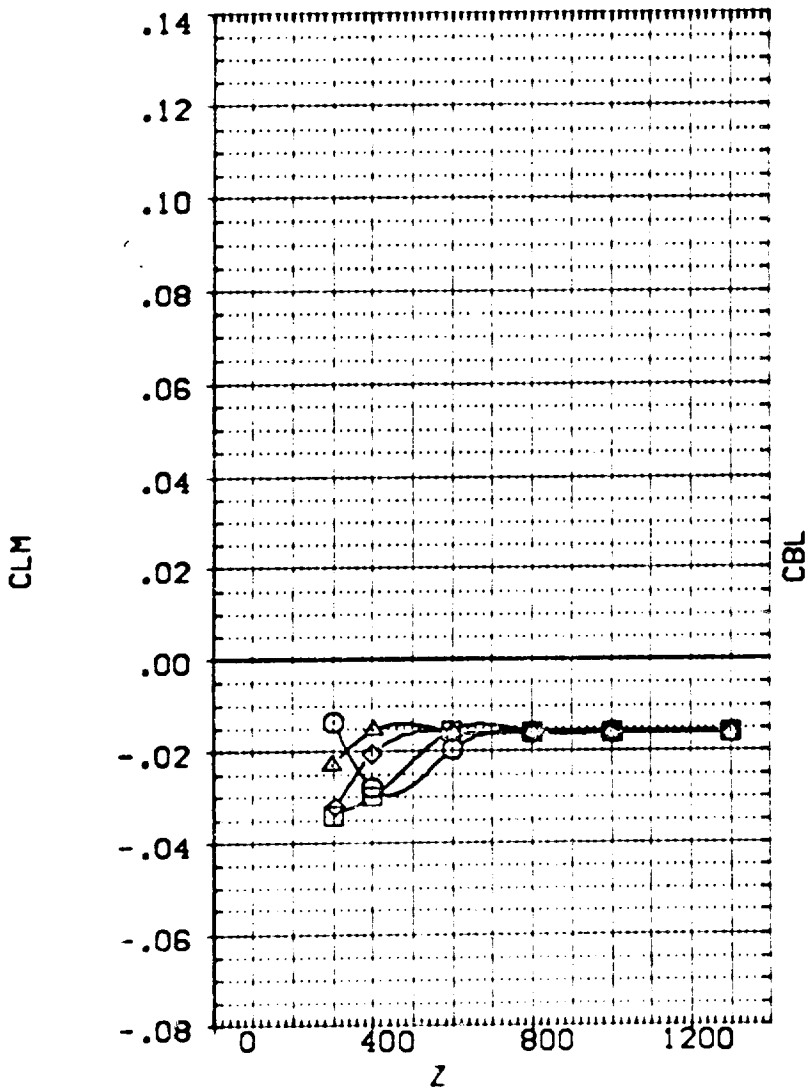


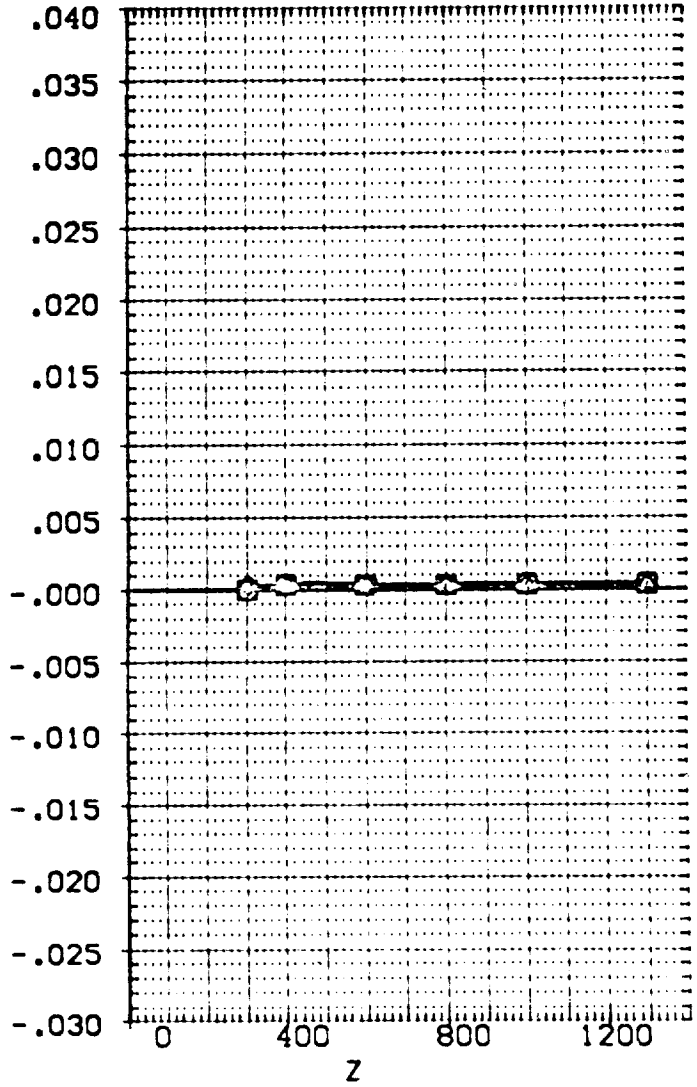
EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

!A13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ023)

SYMBOL	X		PARAMETRIC VALUES		
○	-.023	MACH	4.530	PTOTAL	110.000
□	400.600	ALPHA	-5.000	BETA	.000
◇	800.730	DALPHA	-10.000	DBETA	.000
△	1200.500	ELEVTR	.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



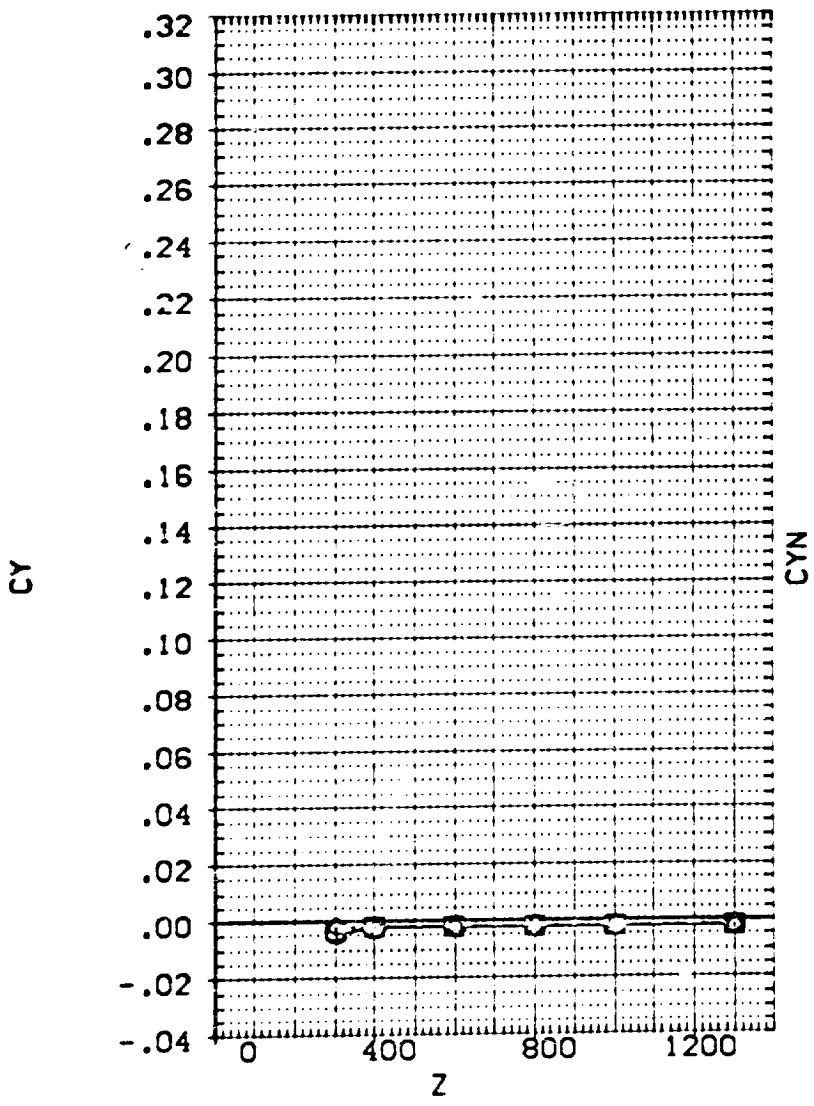


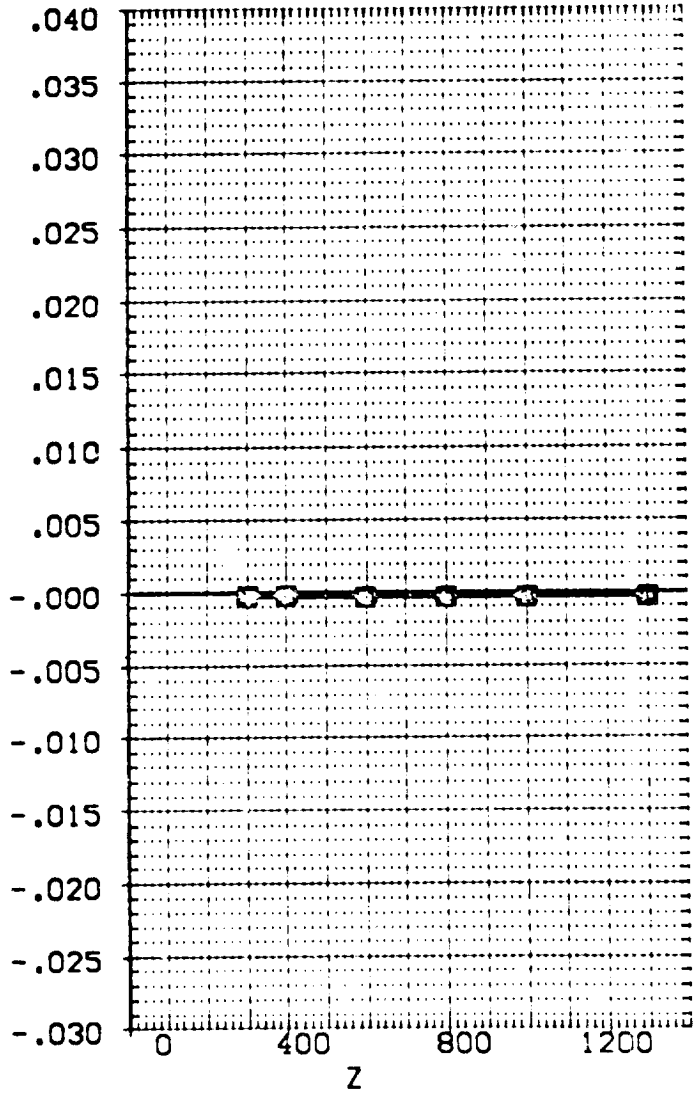
EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

!A13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ023)

	X		PARAMETRIC VALUES		
△	-.023	MACH	4.530	PTOTAL	110.000
	400.600	ALPHA	-5.000	BETA	.000
	800.730	DALPHA	-10.000	DBETA	.000
	1200.500	ELEVTR	.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



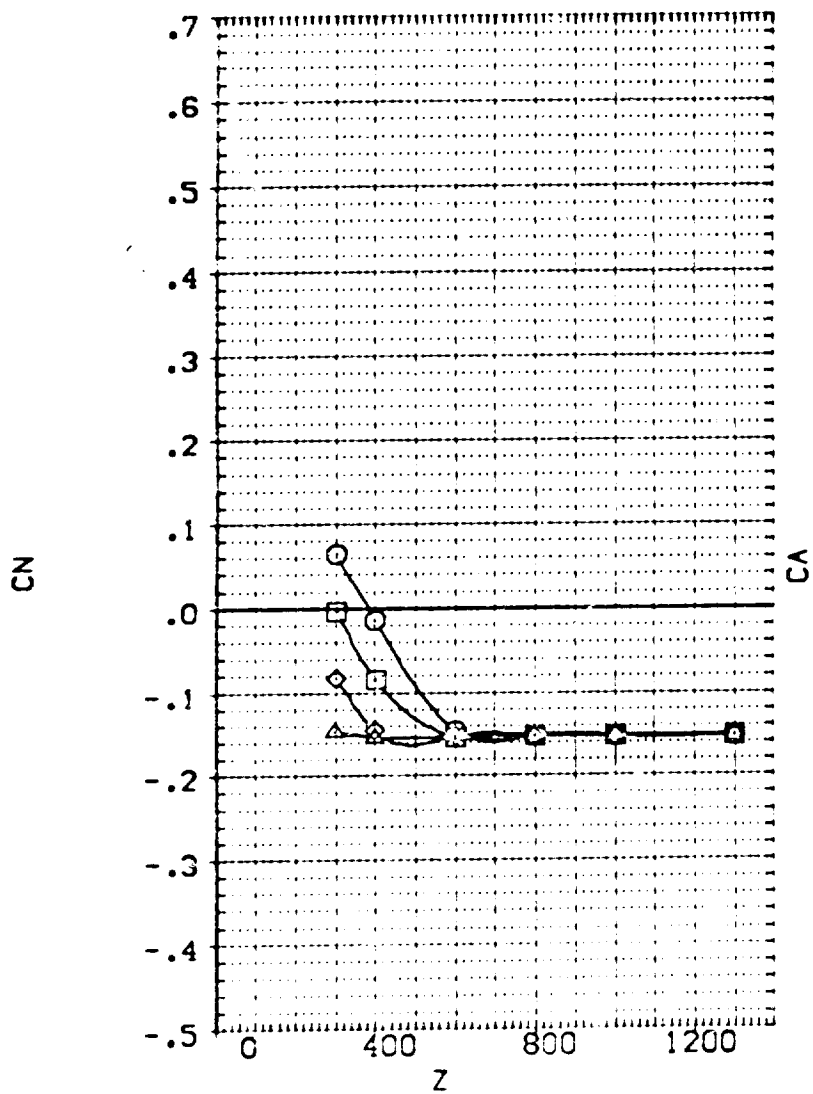


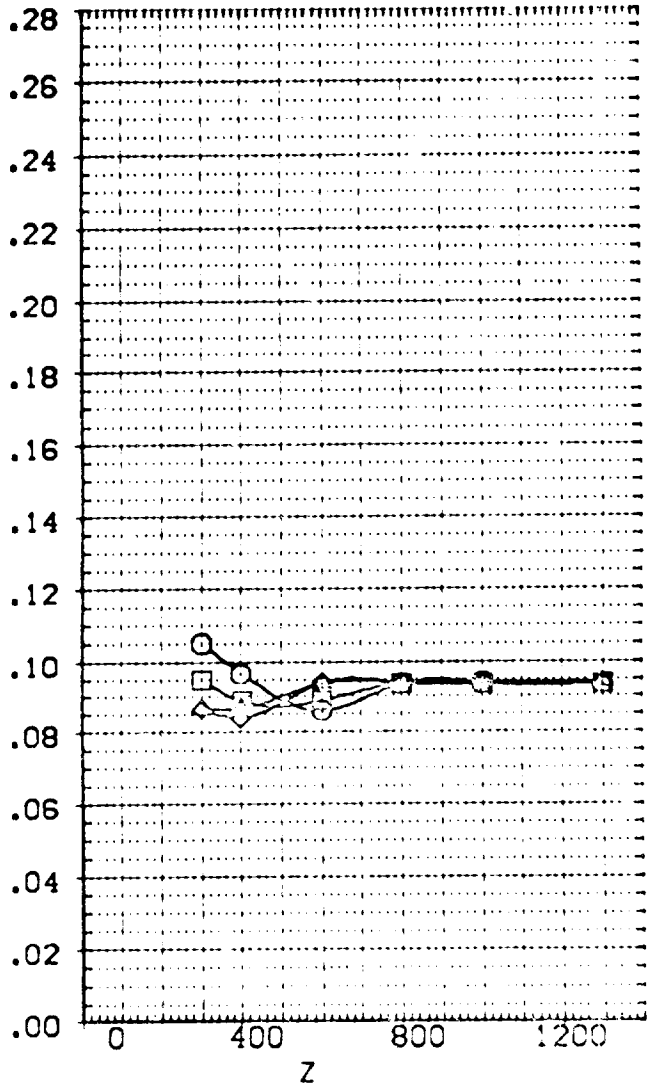
EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

!A13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ024)

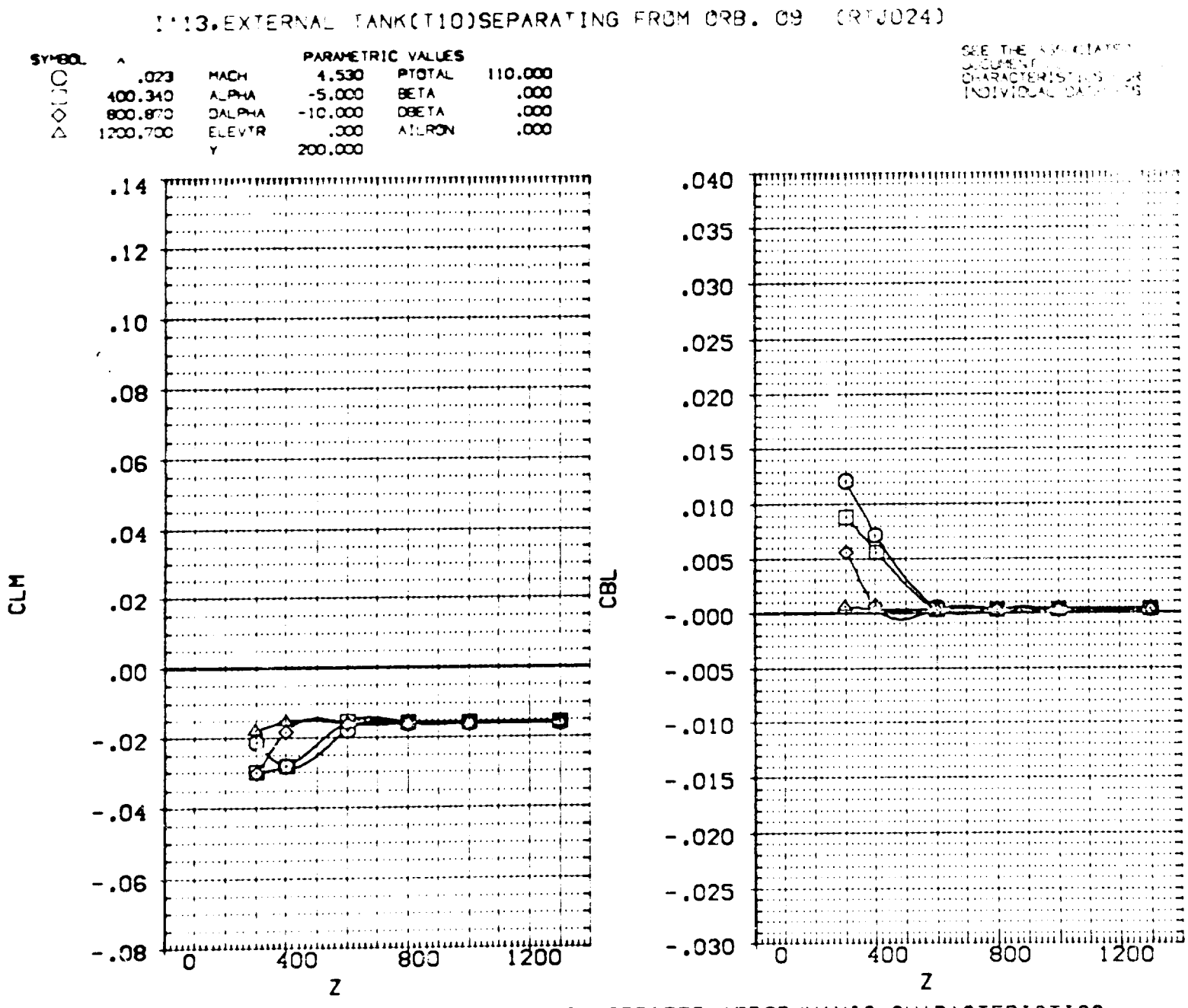
SYMBOL	X		PARAMETRIC VALUES		
○□	.023	MACH	4.530	PTOTAL	110.000
◇	400.340	ALPHA	-5.000	BETA	.000
	800.870	DALPHA	-10.000	DBETA	.000
△	1200.700	ELEVTR	.000	AILRON	.000
		Y	200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS





EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

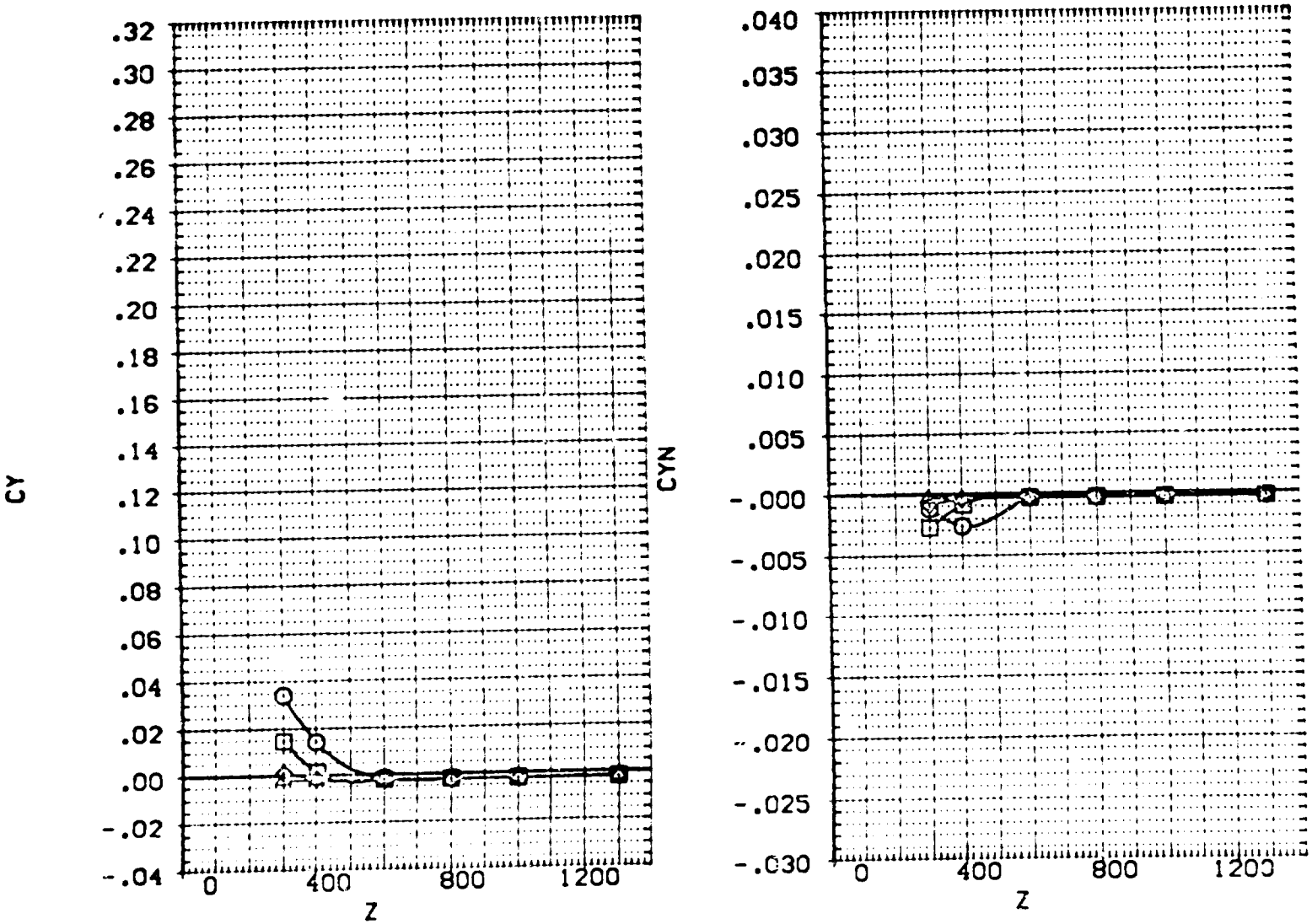


EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ024)

SYMBOL	X		PARAMETRIC VALUES		
○	.023	MACH	4.530	PTOTAL	110.000
□	400.340	ALPHA	-5.000	BETA	.000
◇	800.670	DALPHA	-10.000	DBETA	.000
△	1200.700	ELEVTR	.000	AILRON	.000
		Y	200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

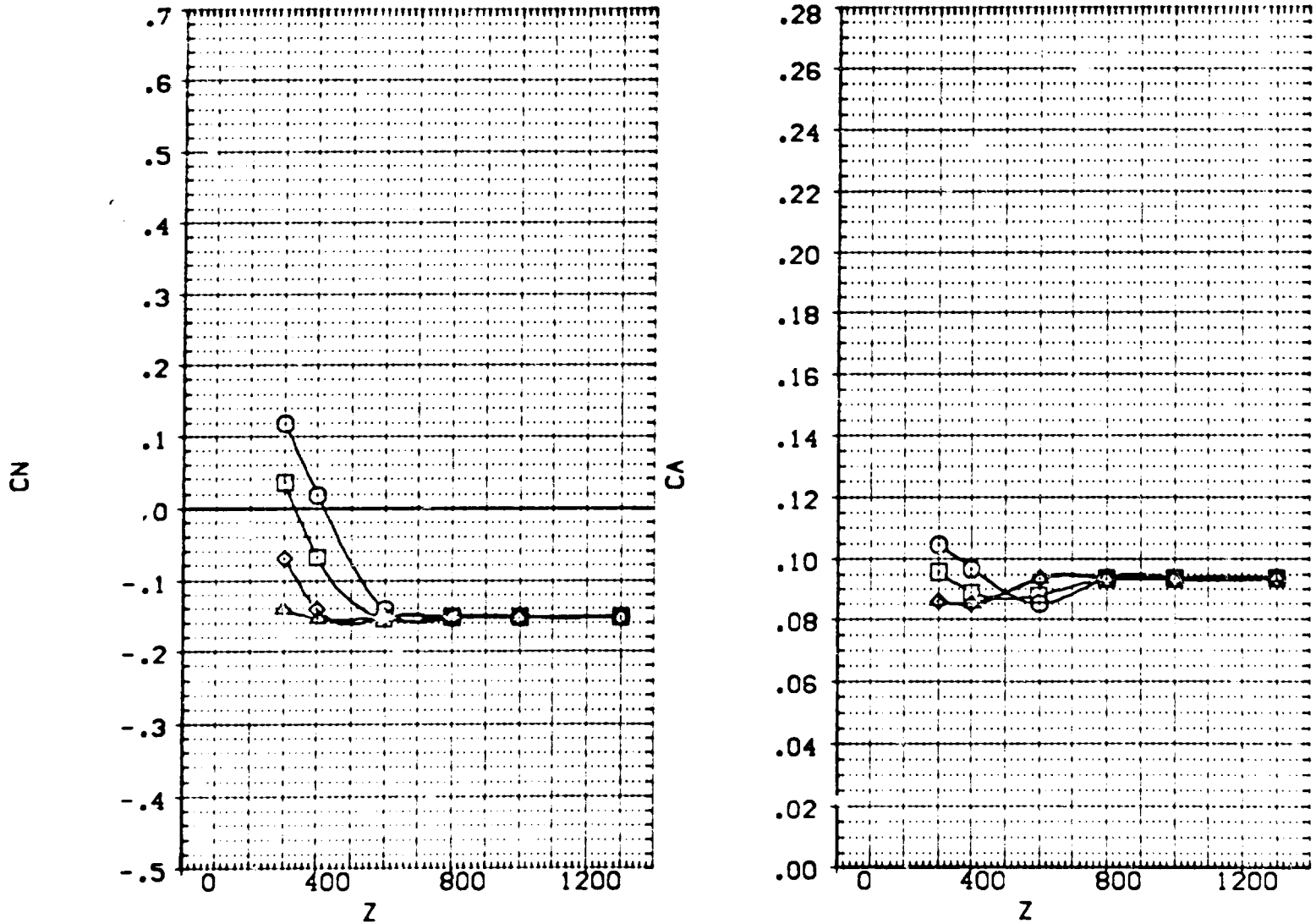


EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

[A13,EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ025)

SYMBOL	X		PARAMETRIC VALUES		
○	-.076	MACH	4.530	PTOTAL	110.000
□	400.690	ALPHA	-5.000	BETA	.000
◇	800.560	DALPHA	-10.000	DBETA	5.000
△	1200.500	ELEVTR	.000	AILRON	.000
		Y	200.000		

SEE THE ASSOCIATED [illegible] DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

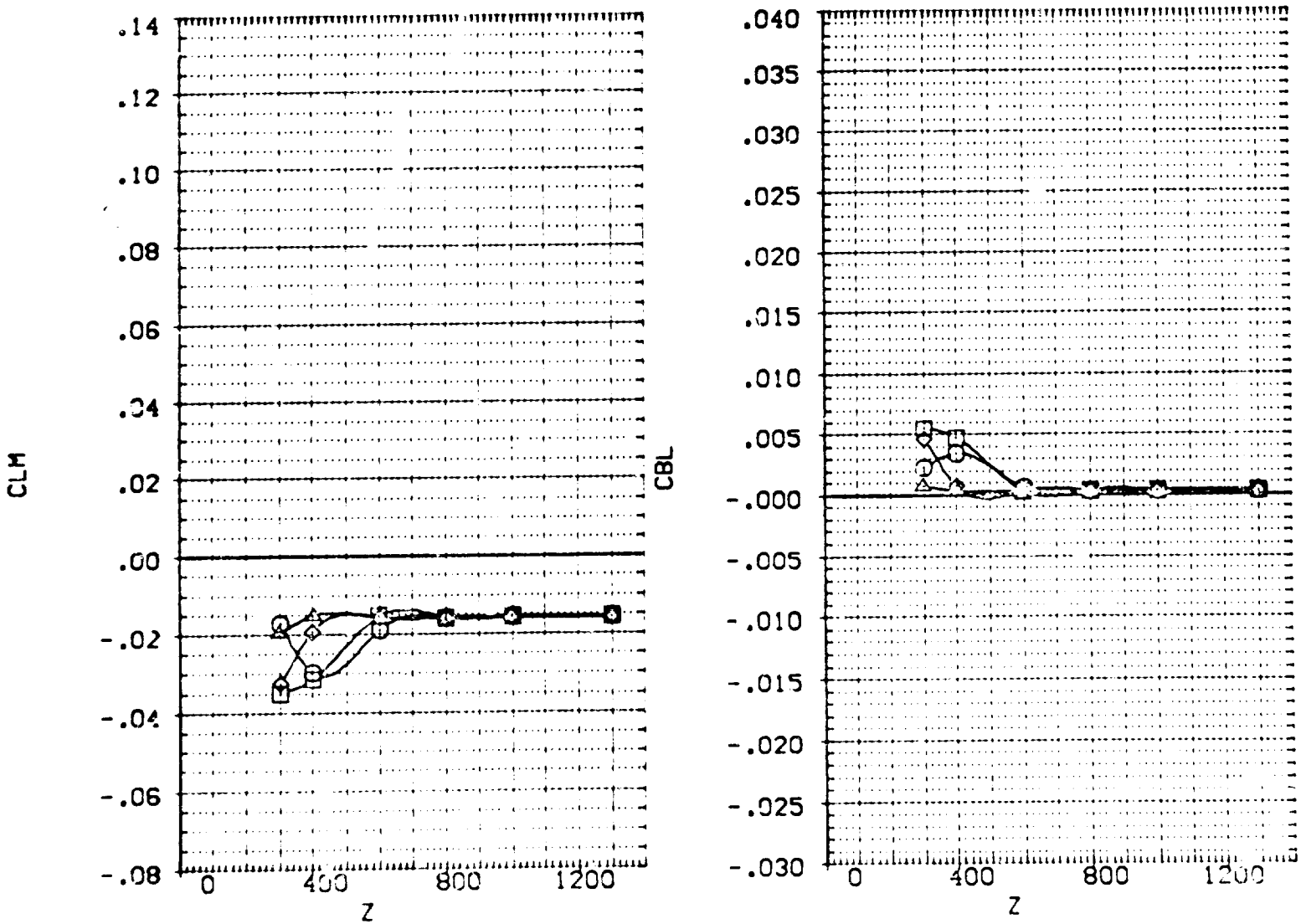


EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

!A13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ025)

SYMBOL	X		PARAMETRIC VALUES		
○	-.076	MACH	1.530	PTOTAL	110.000
◇	400.690	ALPHA	-5.000	BETA	.000
△	800.560	DALPHA	-10.000	DBETA	5.000
	1200.500	ELEVTR	.000	AILRON	.000
		Y	200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

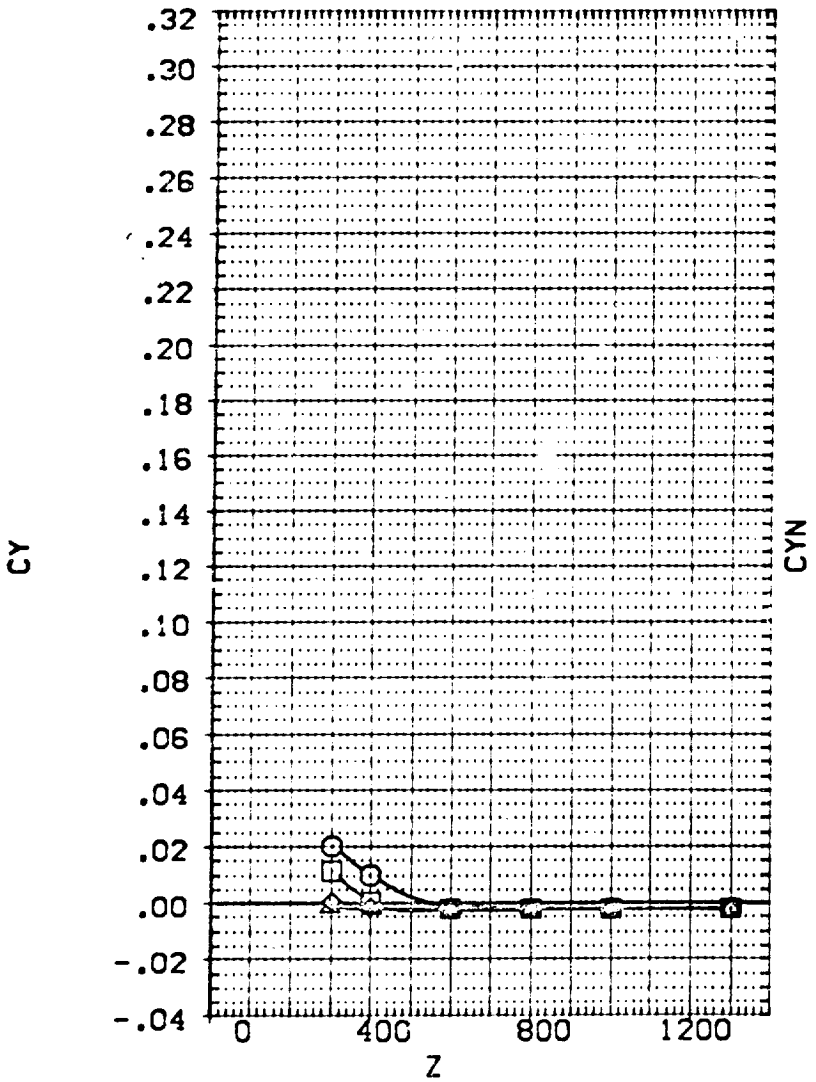


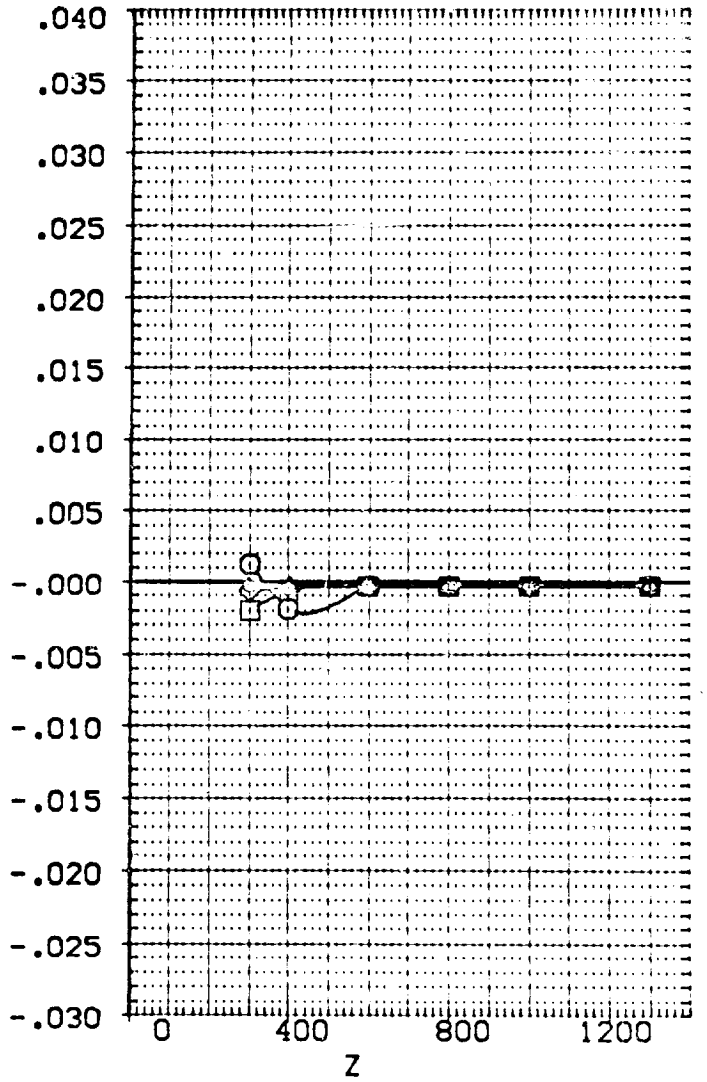
EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ025)

SYMBOL	X		PARAMETRIC VALUES		
○	-.076	MACH	4.530	PTOTAL	110.000
□	400.690	ALPHA	-5.000	BETA	.000
◇	800.560	DALPHA	-10.000	DBETA	5.000
△	1200.500	ELEVTR	.000	AILRON	.000
		Y	200.000		

SEE THE ASSOCIATED DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



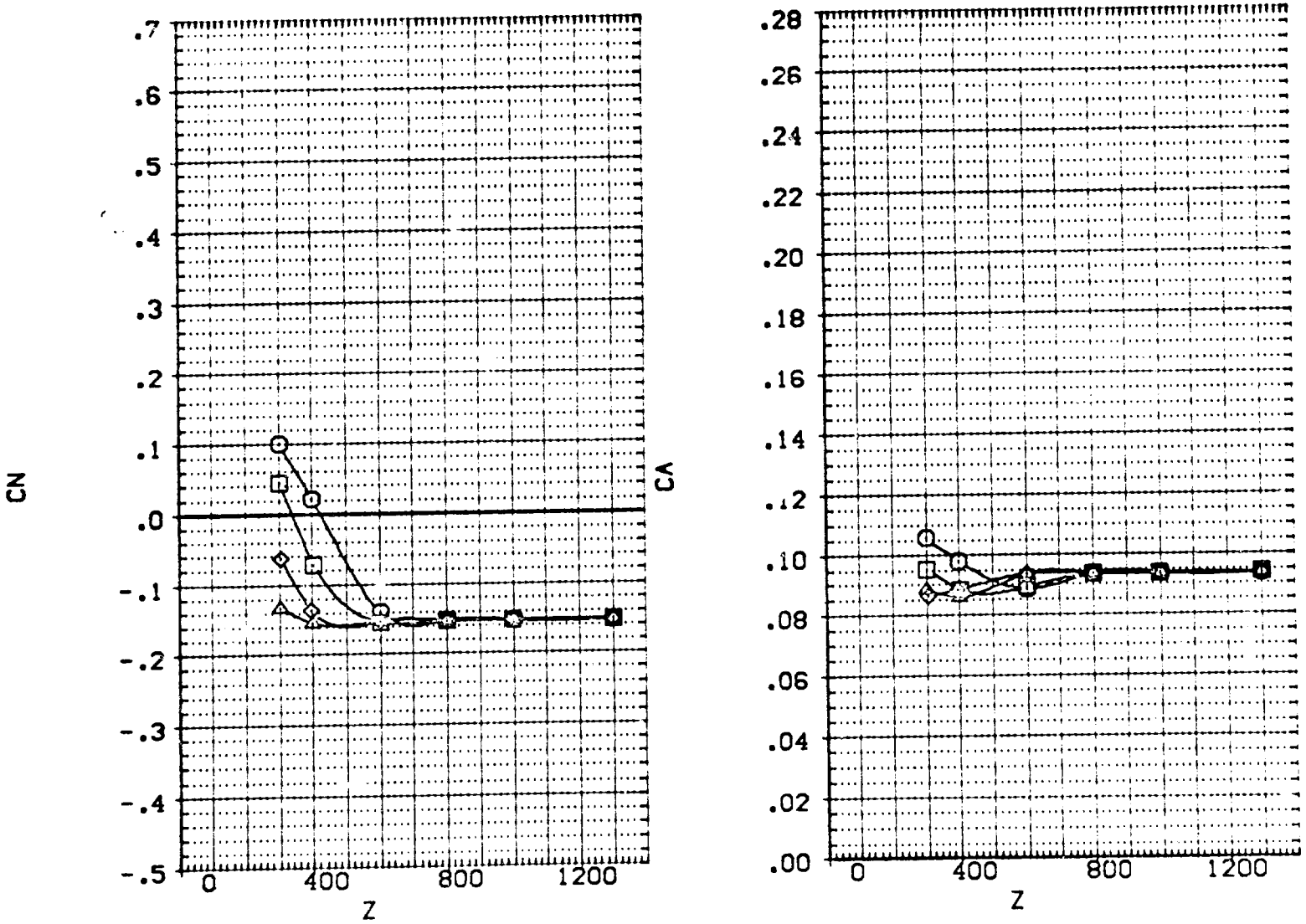


EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ026)

SYMBOL	X		PARAMETRIC VALUES		
○	.074	MACH	4.530	PTOTAL	110.000
□	400.230	ALPHA	-5.000	BETA	.000
◇	800.780	DALPHA	-10.000	DBETA	5.000
△	1200.800	ELEVTR	.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

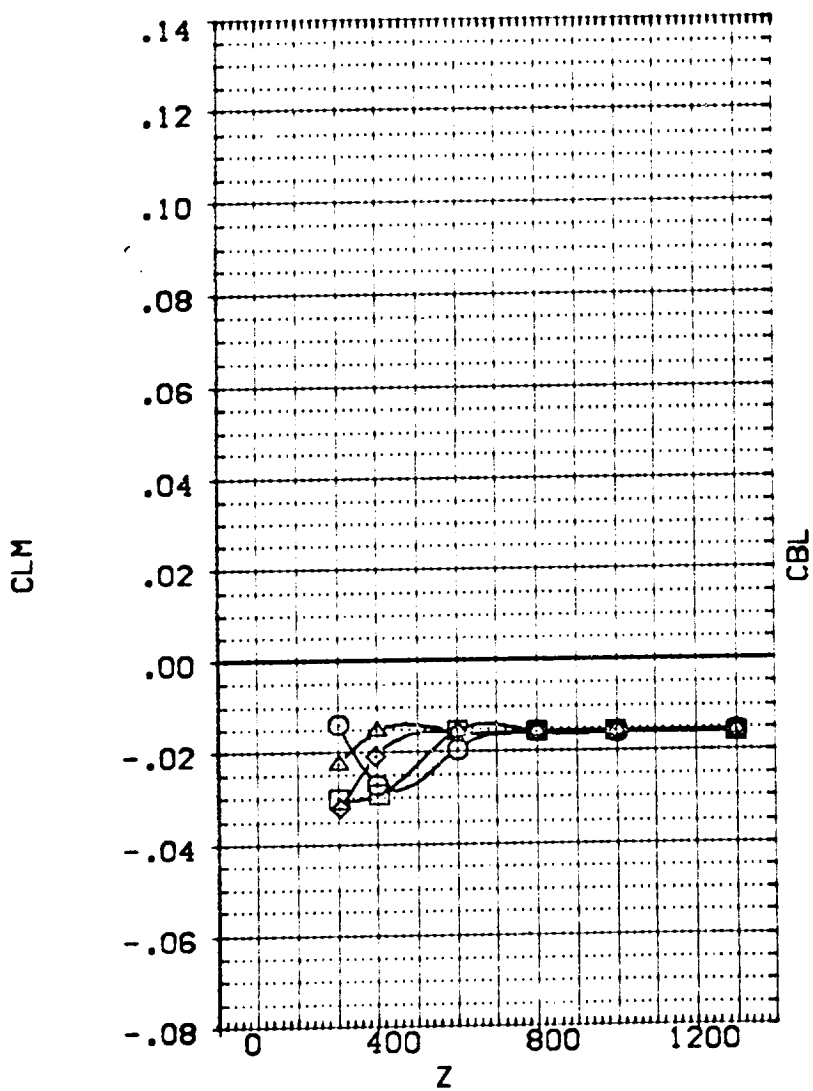


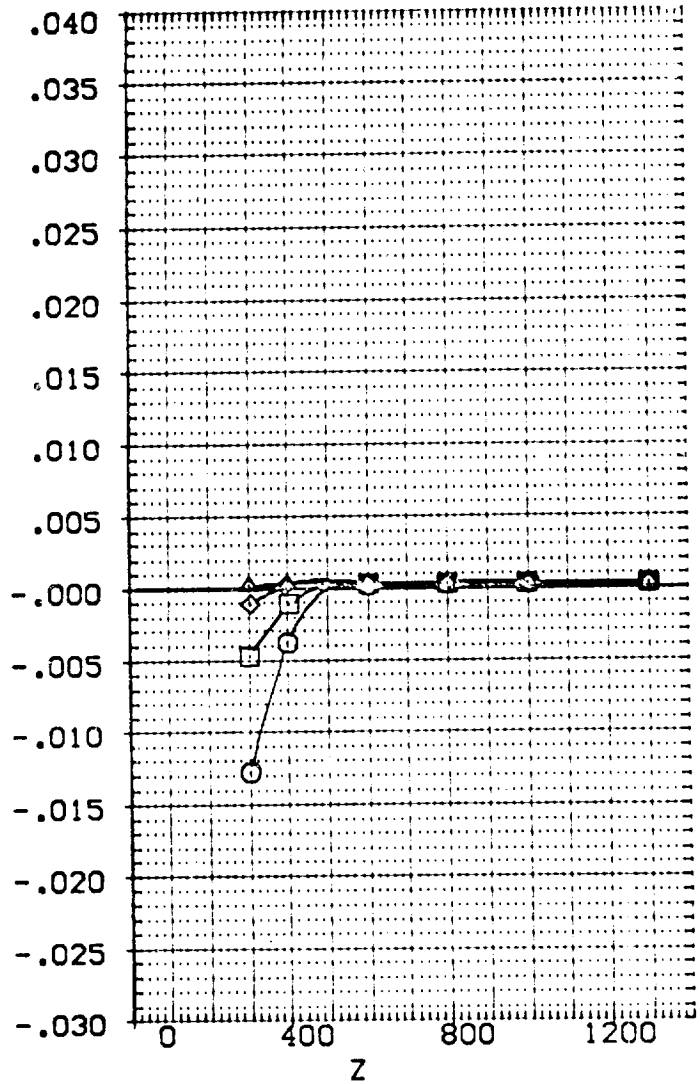
EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ026)

SYMBOL	X		PARAMETRIC VALUES		
○□	.074	MACH	4.530	PTOTAL	110.000
◇	400.230	ALPHA	-5.000	BETA	.000
◇□	800.780	DALPHA	-10.000	DBETA	5.000
△	1200.800	ELEVTR	.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



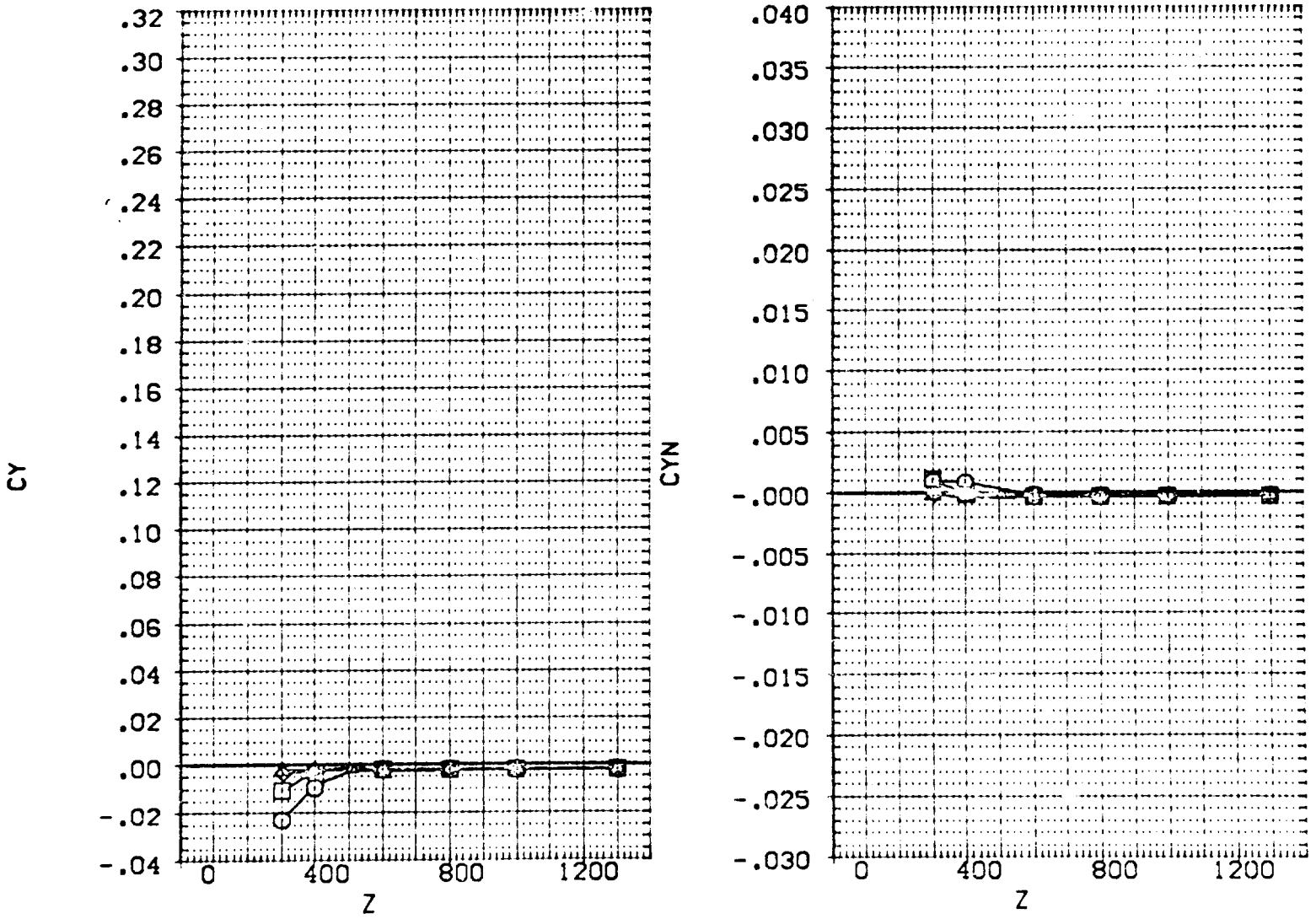


EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ026)

SYMBOL	X		PARAMETRIC VALUES		
○	.074	MACH	4.530	PTOTAL	110.000
□	400.230	ALPHA	-5.000	BETA	.000
◇	800.780	DALPHA	-10.000	DBETA	5.000
△	1200.800	ELEVTR	.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

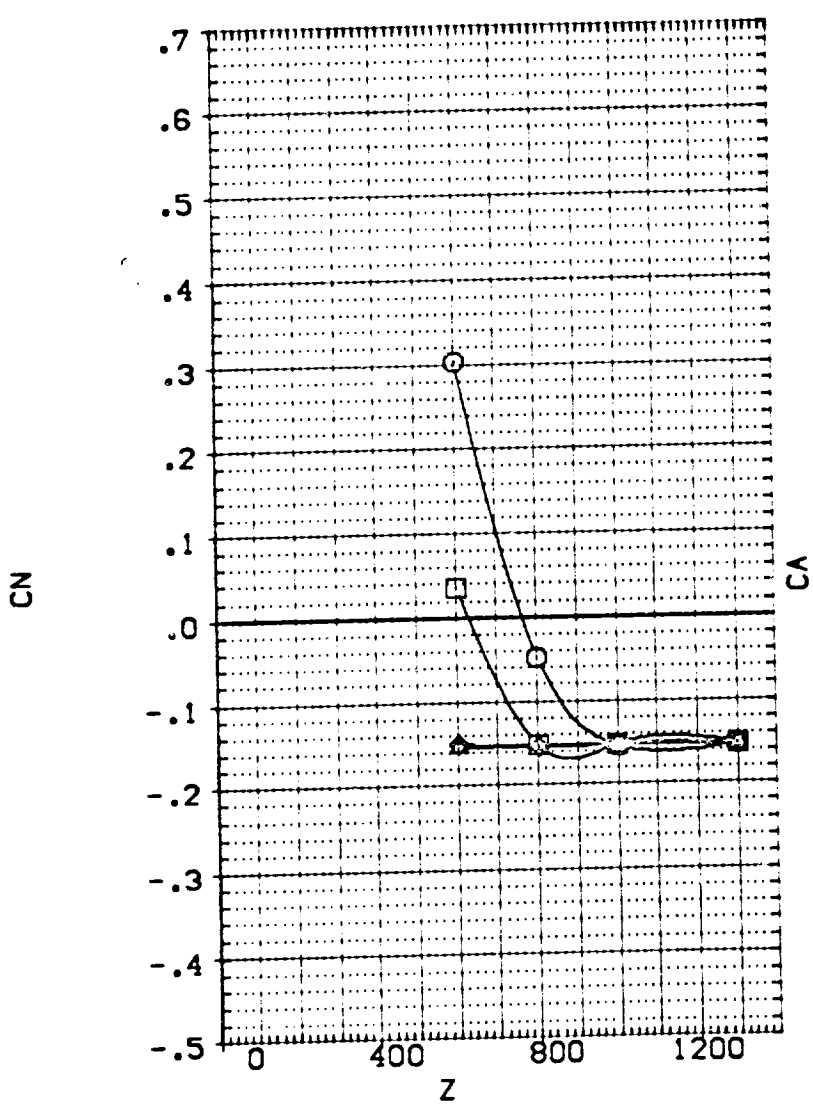


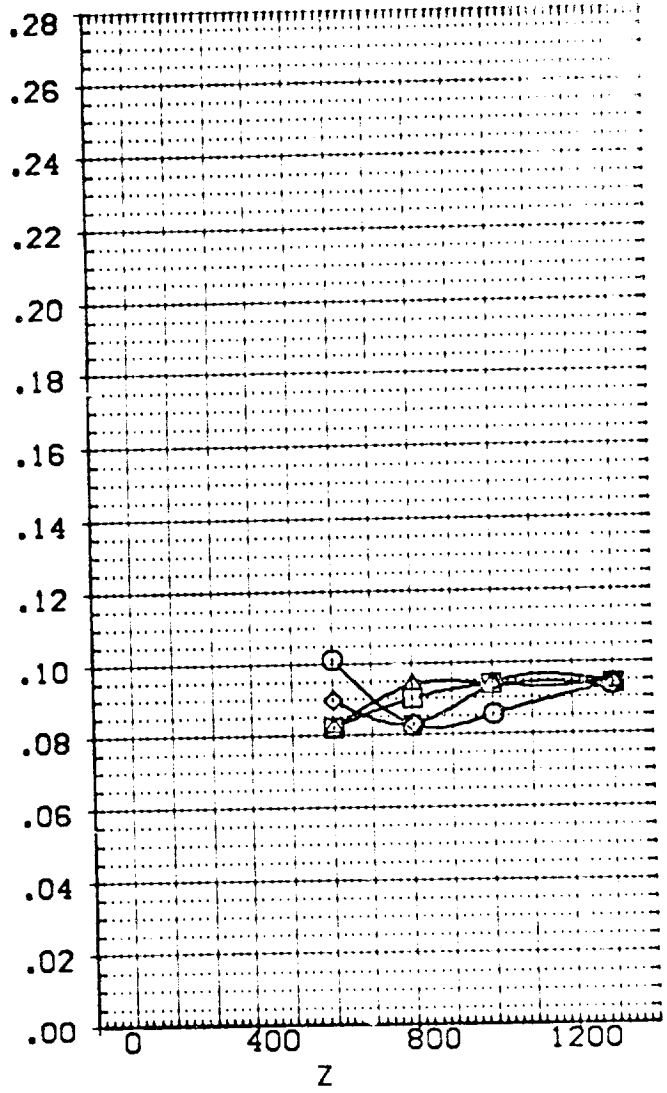
EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

:A13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ027)

SEE THE ASSOCIATED DATA DOCUMENT FOR CHARACTERISTICS OF INDIVIDUAL PARTS

SYMBOL	X	PARAMETRIC VALUES			
○	-1.133	MACH	4.530	PTOTAL	110.000
□	401.620	ALPHA	-5.000	BETA	.000
◇	800.510	DALPHA	-20.000	DBETA	.000
△	1200.400	ELEVTR	.000	AILRON	.000
		Y	.000		



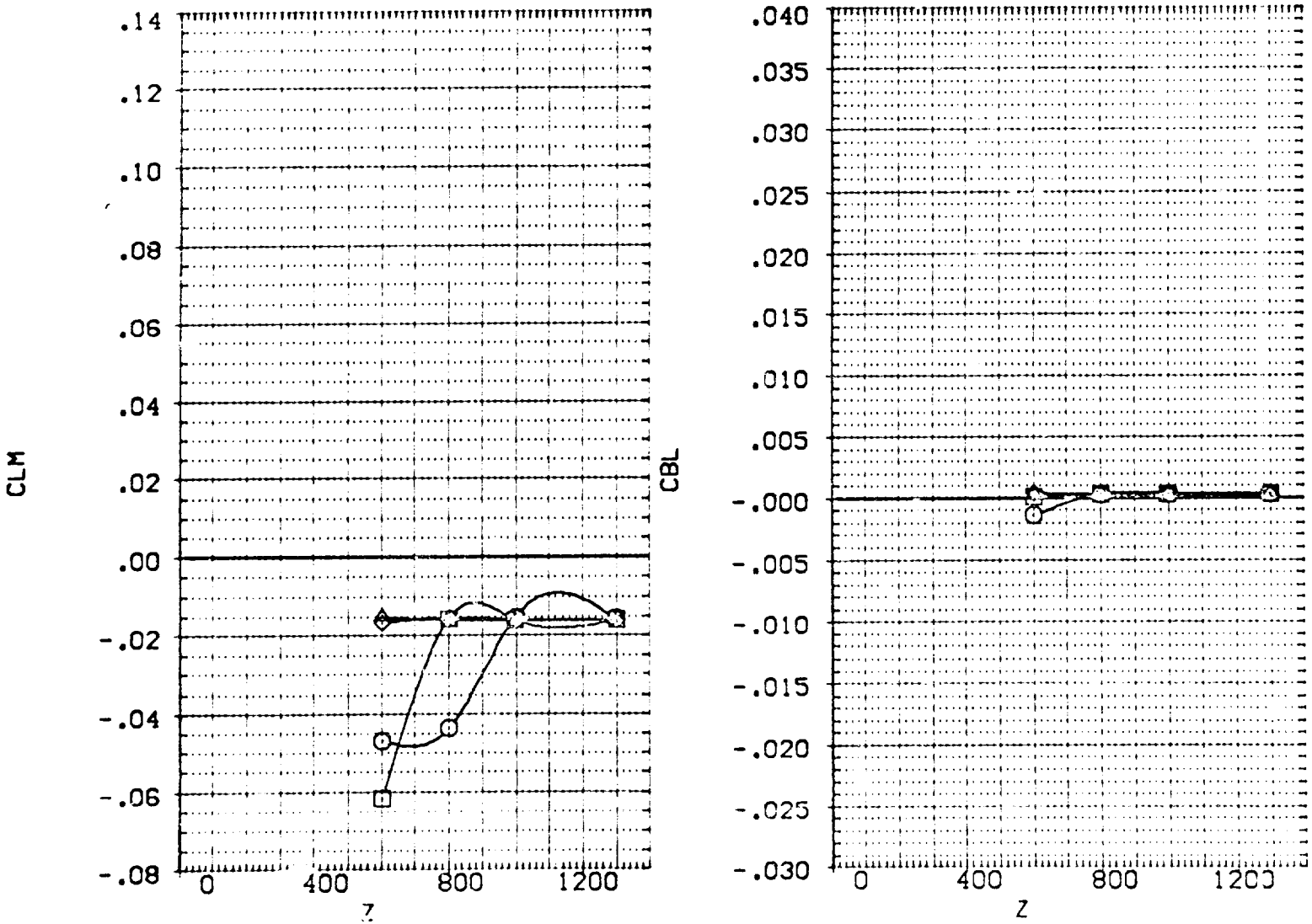


EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

!A13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ027)

SYMBOL	X		PARAMETRIC VALUES		
○	-1.133	MACH	4.530	PTOTAL	110.000
□	401.620	ALPHA	-5.000	BETA	.000
◇	800.510	DALPHA	-20.000	DBETA	.000
△	1200.400	ELEVTR	.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

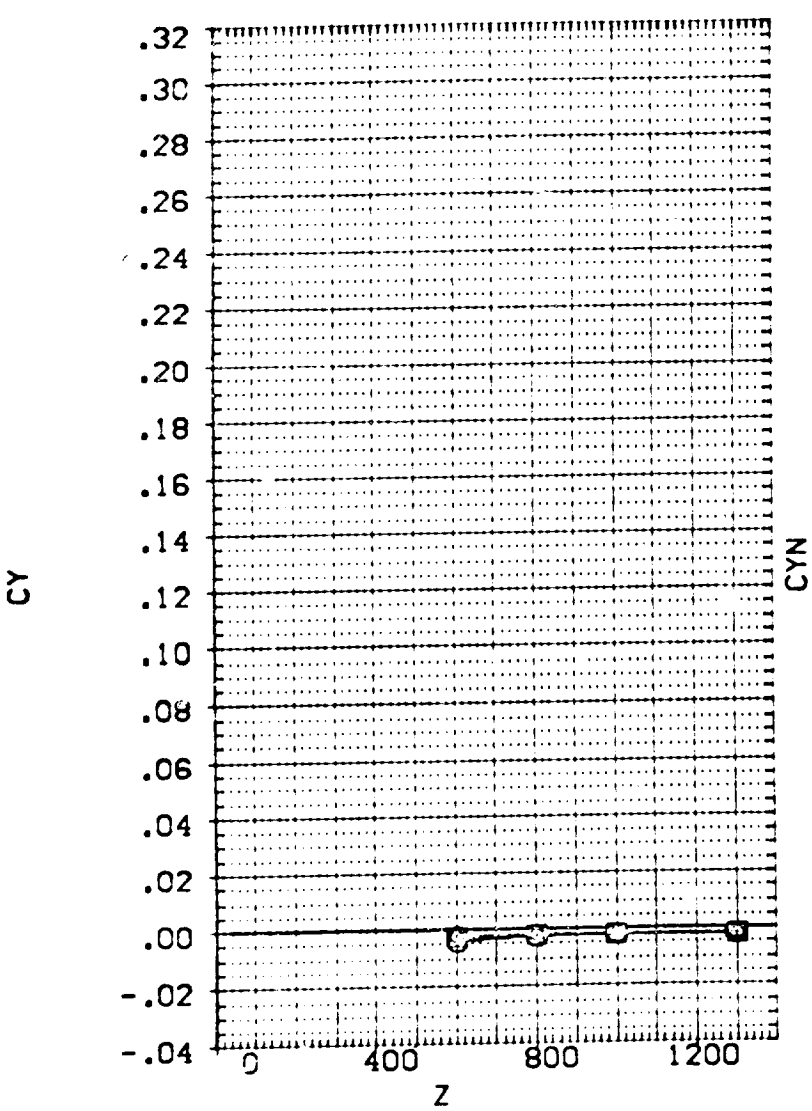


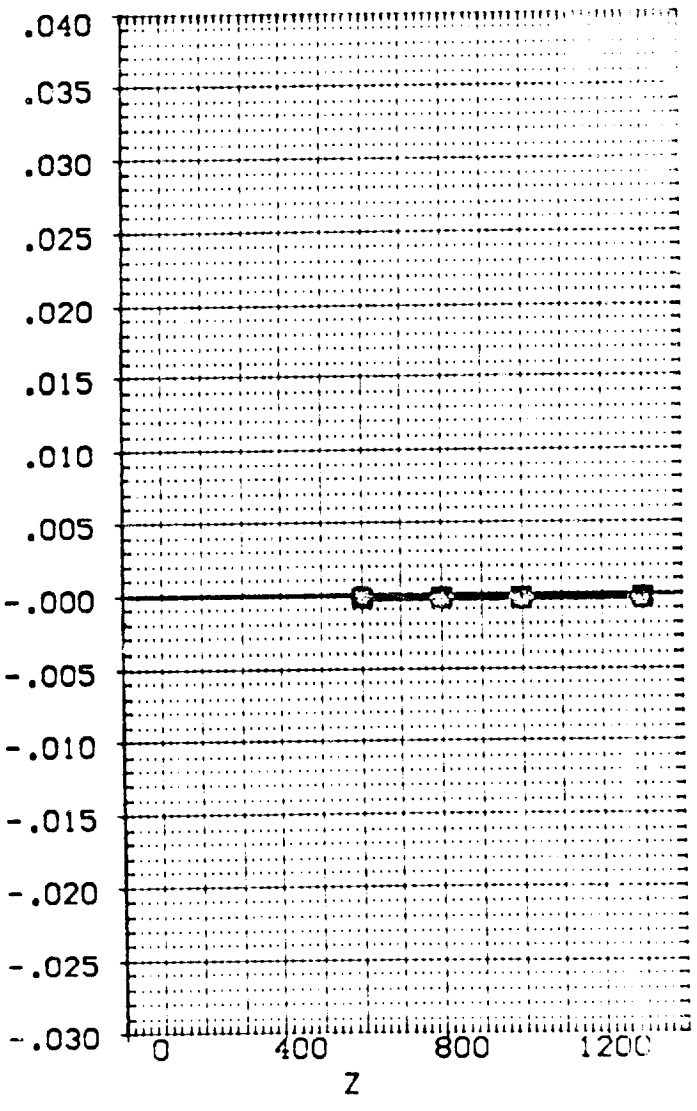
EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

!A13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ027)

SYMBOL	X		PARAMETRIC VALUES		
○	-1.133	MACH	4.530	PTOTAL	110.000
□	401.620	ALPHA	-5.000	BETA	.000
◇	800.510	DALPHA	-20.000	DBETA	.000
△	1200.400	ELEVTR	.000	AILRON	.000
		Y	.000		

SEE THE ANALYSIS DOCUMENT FOR [illegible] CHARACTERISTICS FOR INDIVIDUAL CATEGORIES



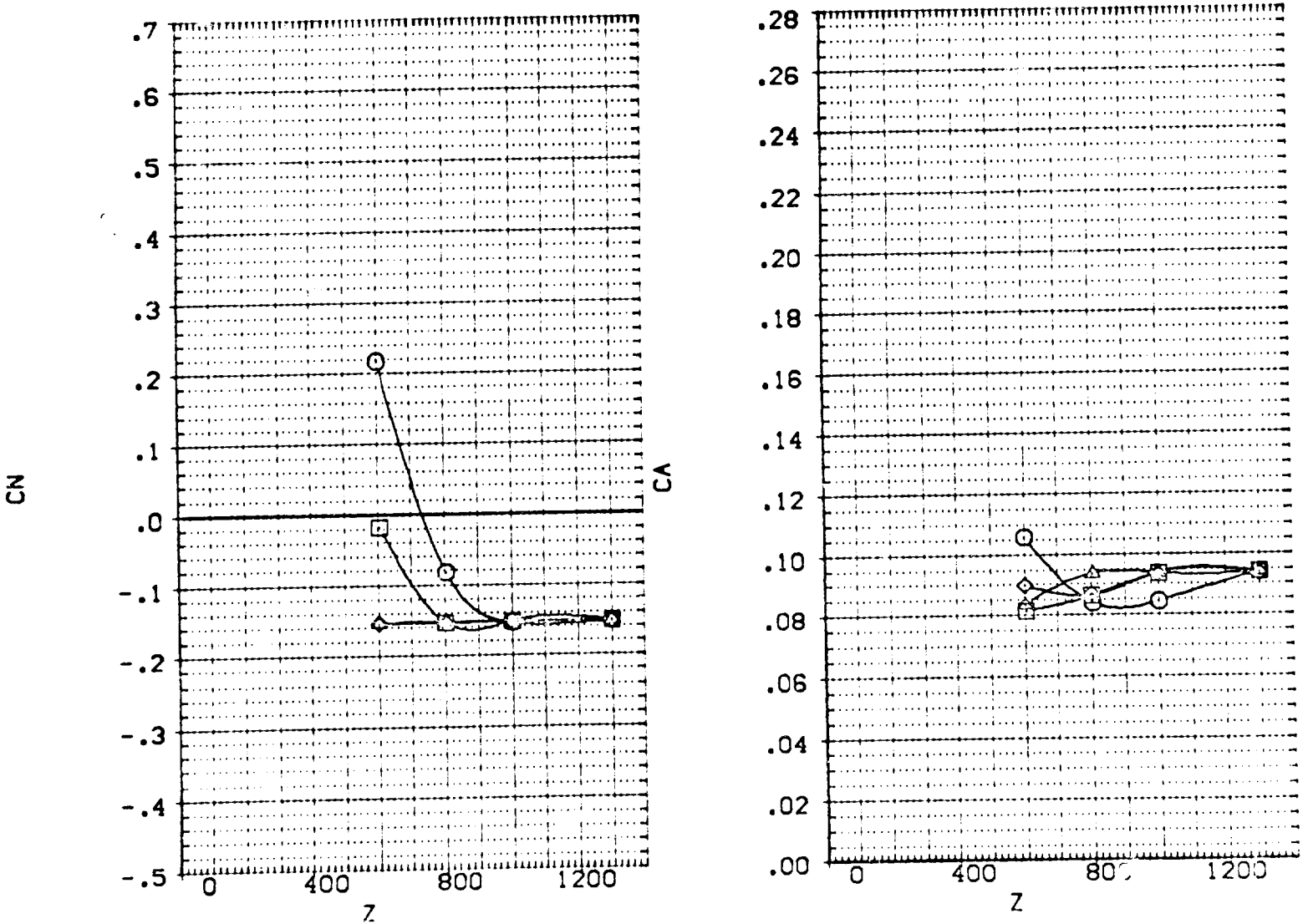


EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

!A13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ028)

SYMBOL	X		PARAMETRIC VALUES		
○	-.582	MACH	1.530	PTOTAL	110.000
◇	400.610	ALPHA	-5.000	BETA	.000
□	800.600	DALPHA	-20.000	DBETA	.000
△	1200.700	ELEVTR	.000	AILRON	.000
		Y	200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

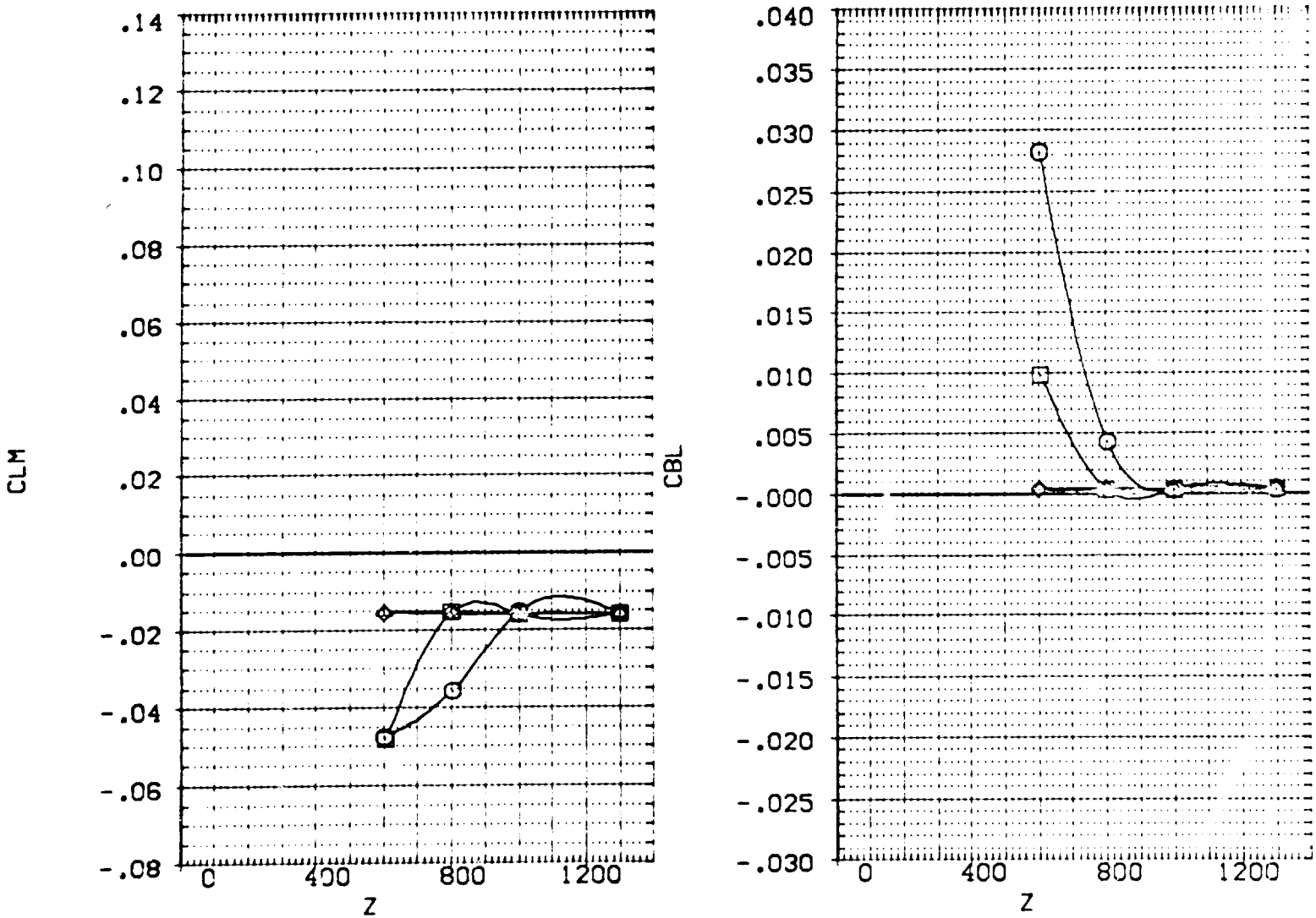


EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ028)

SYMBOL	X		PARAMETRIC VALUES		
○	-.582	MACH	4.530	PTOTAL	110.000
□ | ◇	400.610	ALPHA	-5.000	BETA	.000
	800.600	DALPHA	-20.000	DBETA	.000
△	1200.700	ELEVTR	.000	AILRON	.000
		Y	200.000		

SEE THE ASSOCIATED [illegible] DOCUMENT [illegible] CHARACTERISTICS [illegible] INDIVIDUAL [illegible]

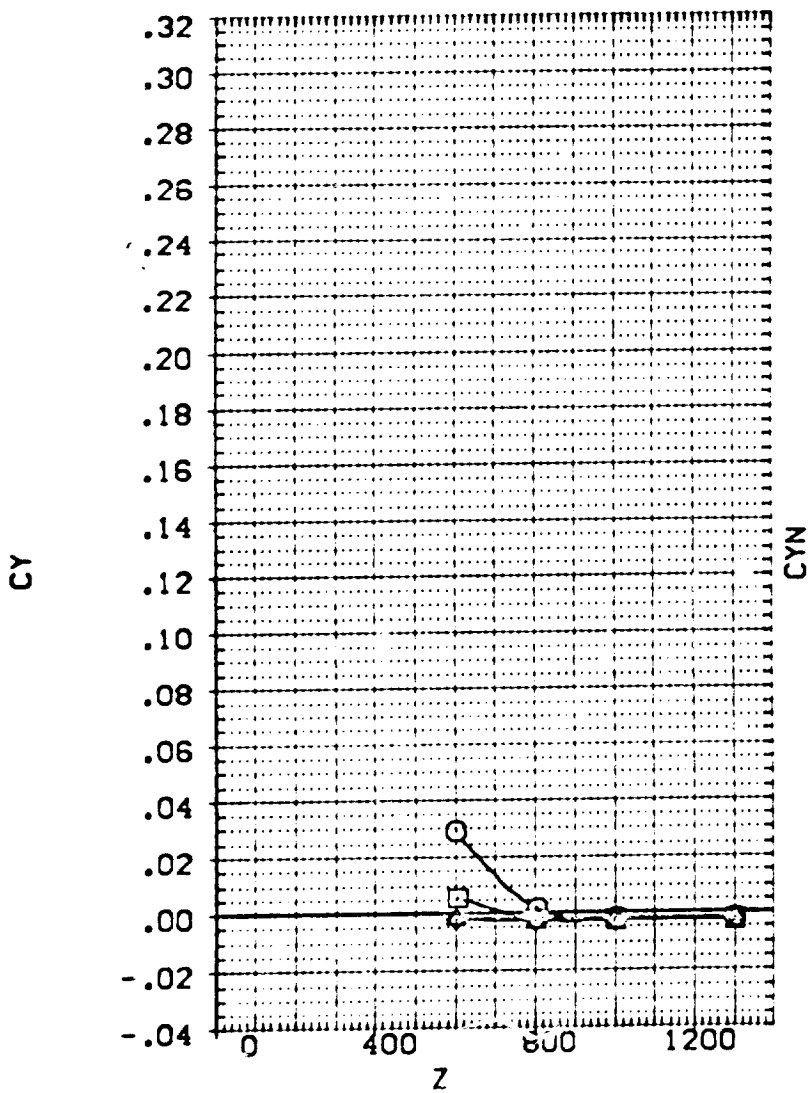


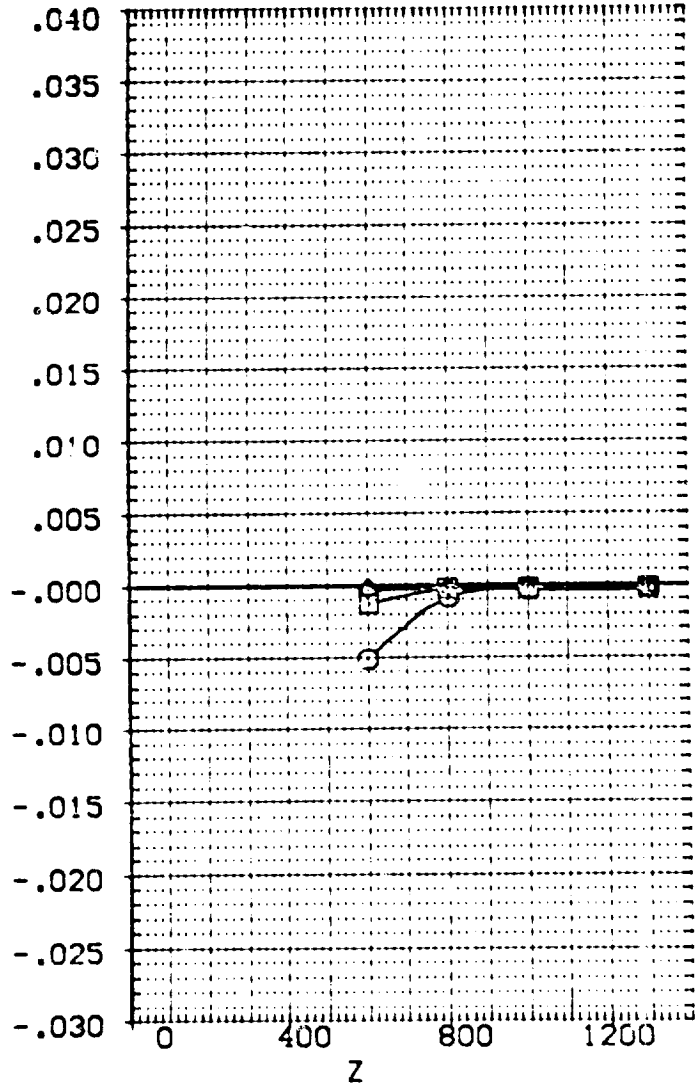
EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

!A13,EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ028)

SYMBOL	X		PARAMETRIC VALUES		
○	-.582	MACH	4.530	PTOTAL	110.000
□	400.600	ALPHA	-5.000	BETA	.000
◇	800.600	DALPHA	-20.000	DBETA	.000
△	1200.700	ELEVTR	.000	AILRON	.000
		Y	200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



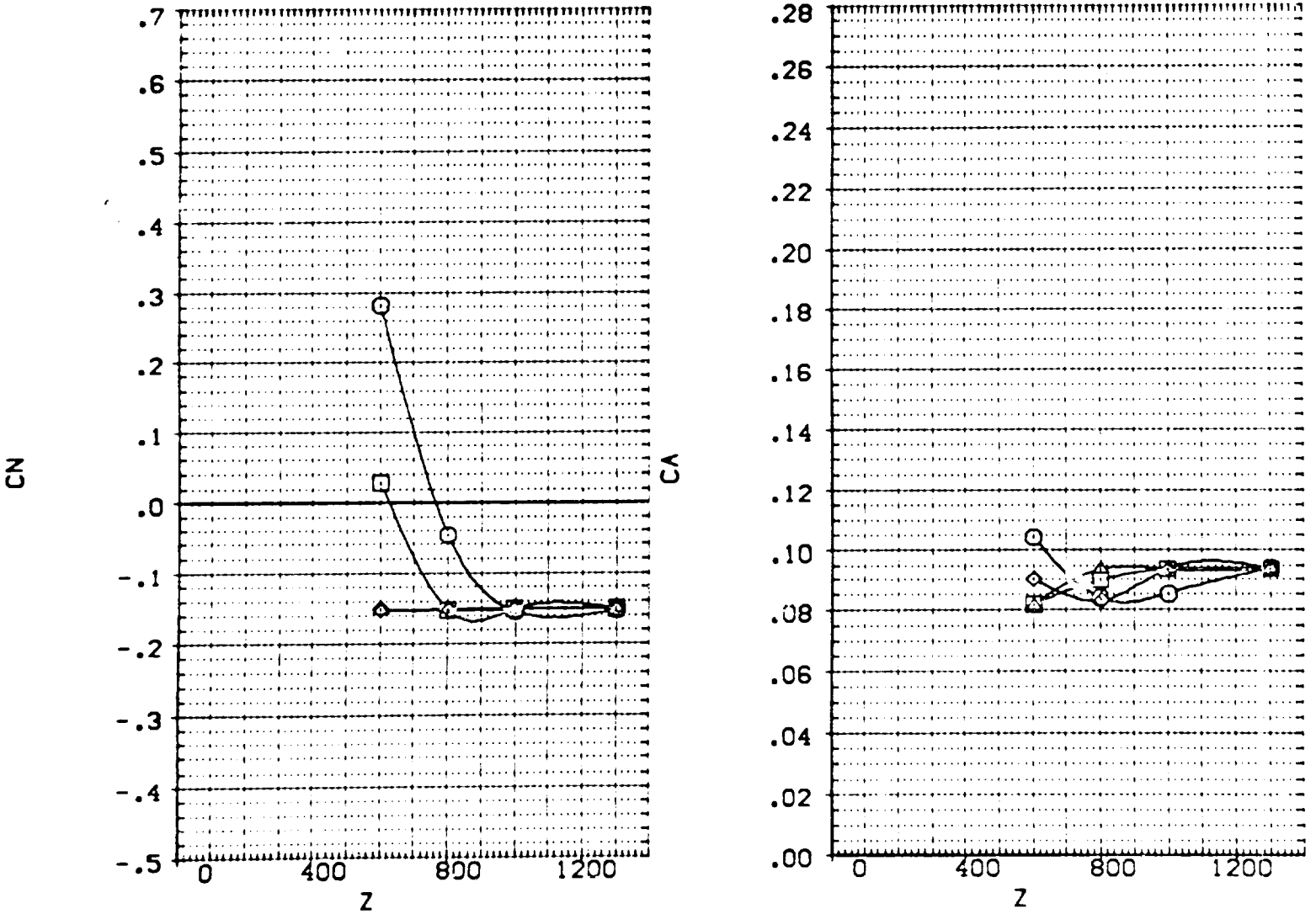


EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

[A13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ029)

SYMBOL	X		PARAMETRIC VALUES		
○	-1.217	MACH	4.530	PTOTAL	110.000
□	401.690	ALPHA	-5.000	BETA	.000
◇	800.780	DALPHA	-20.000	DBETA	5.000
△	1200.500	ELEVTR	.000	AILRON	.000
		Y	200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR [illegible] CHARACTERISTICS FOR INDIVIDUAL DATASETS

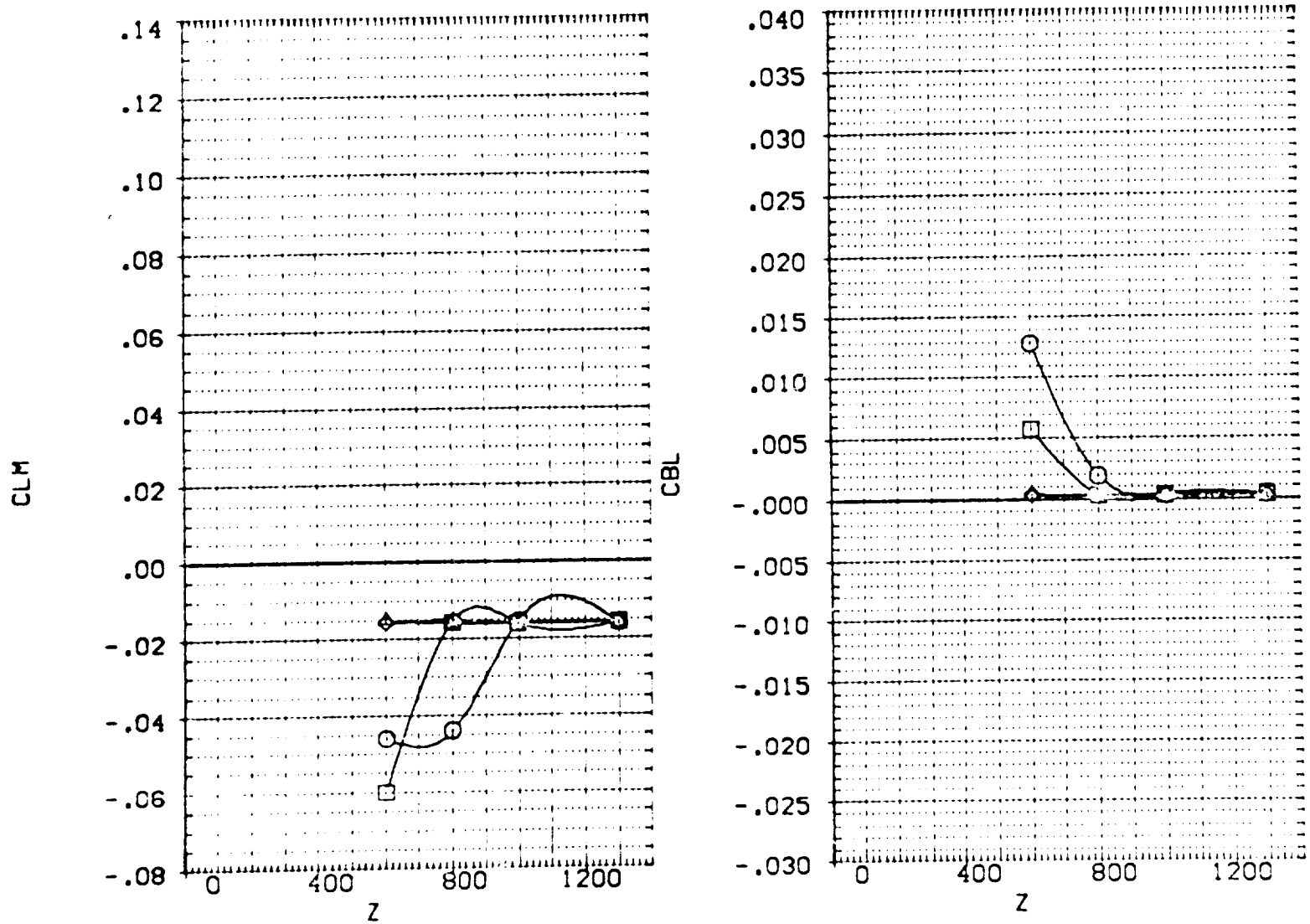


EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

!A!3.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ029)

SYMBOL	X	PARAMETRIC VALUES			
○	-1.217	MACH	4.530	PTOTAL	110.000
□	401.690	ALPHA	-5.000	BETA	.000
◇	800.780	DALPHA	-20.000	DBETA	5.000
△	1200.500	ELEVTR	.000	AILRON	.000
		Y	200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

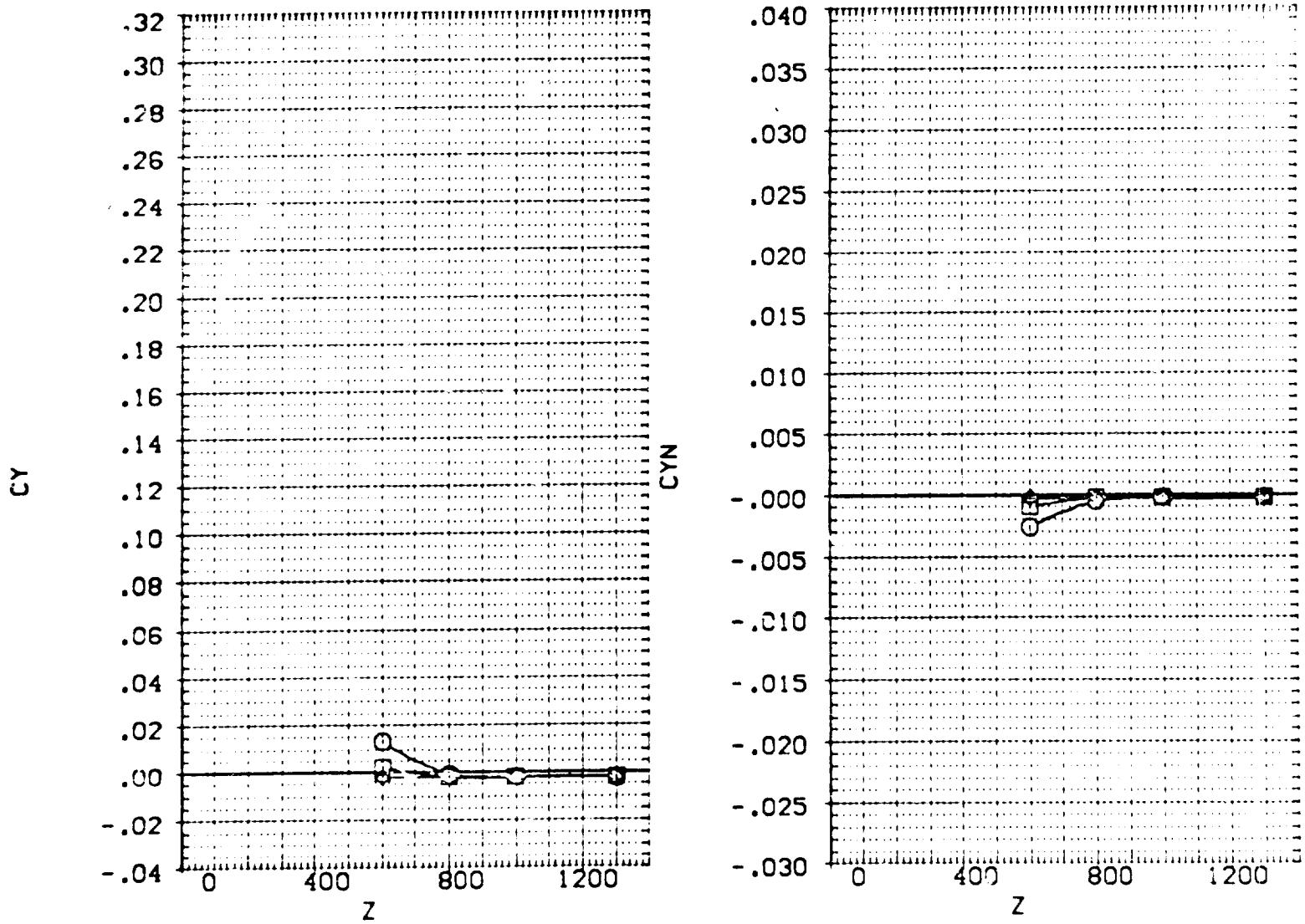


EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

!A13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ029)

SYMBOL	X		PARAMETRIC VALUES		
○	-1.217	MACH	4.530	PTOTAL	110.000
	401.690	ALPHA	-5.000	BETA	.000
◇	800.780	DALPHA	-20.000	DBETA	5.000
△	1200.500	ELEVTR	.000	AILRON	.000
		Y	200.000		

SEE THE AS... DOCUMENT FOR A... CHARACTERIST... FOR INDIVIDUAL ...

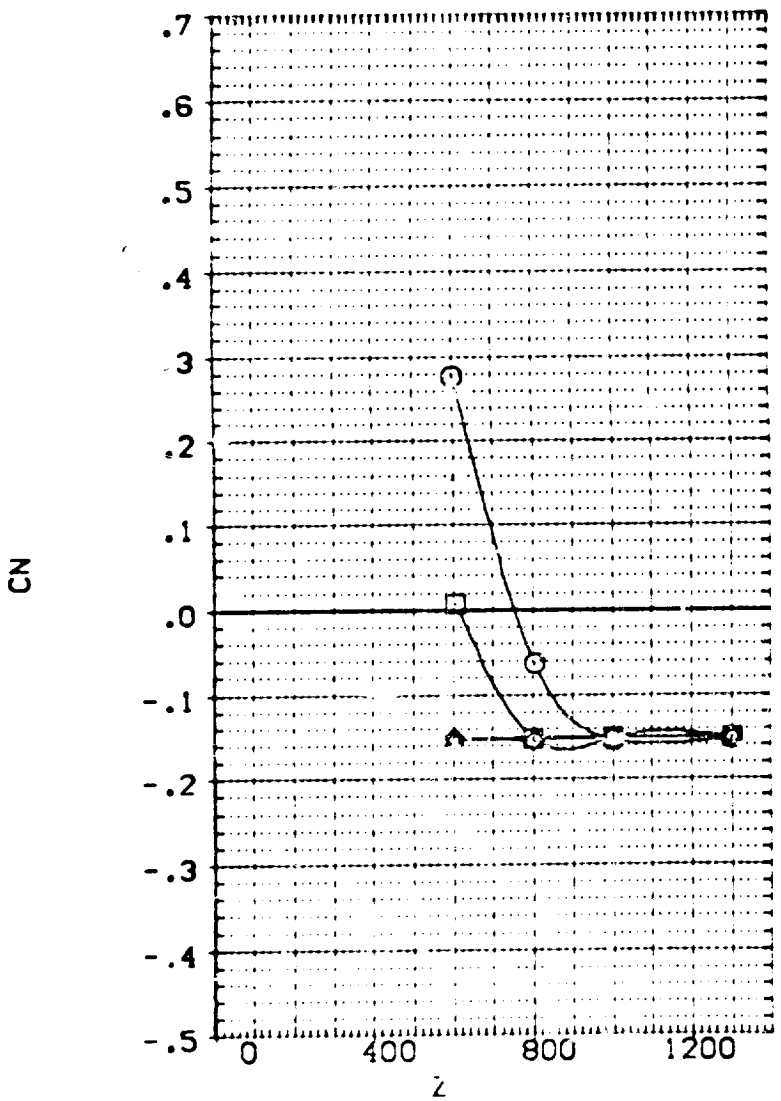


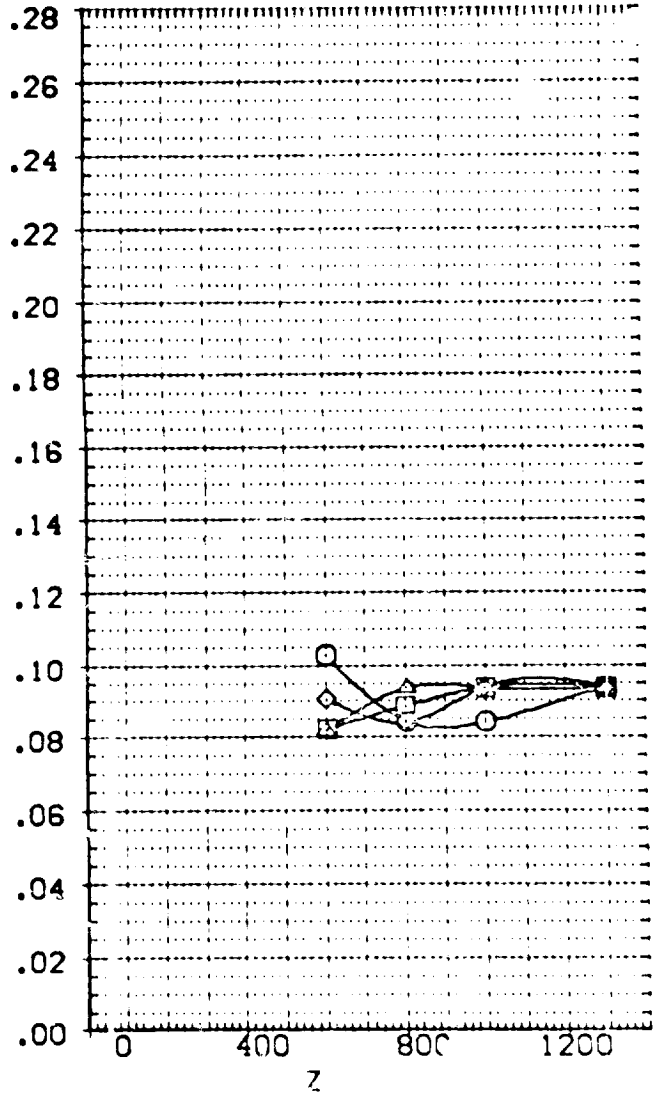
EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

!A13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ030)

SYMBOL	X		PARAMETRIC VALUES		
○	-.917	MACH	4.530	PTOTAL	110.000
□	400.550	ALPHA	-5.000	BETA	.000
◇	800.400	DALPHA	-20.000	DBETA	5.000
△	1200.700	ELEVTR	.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



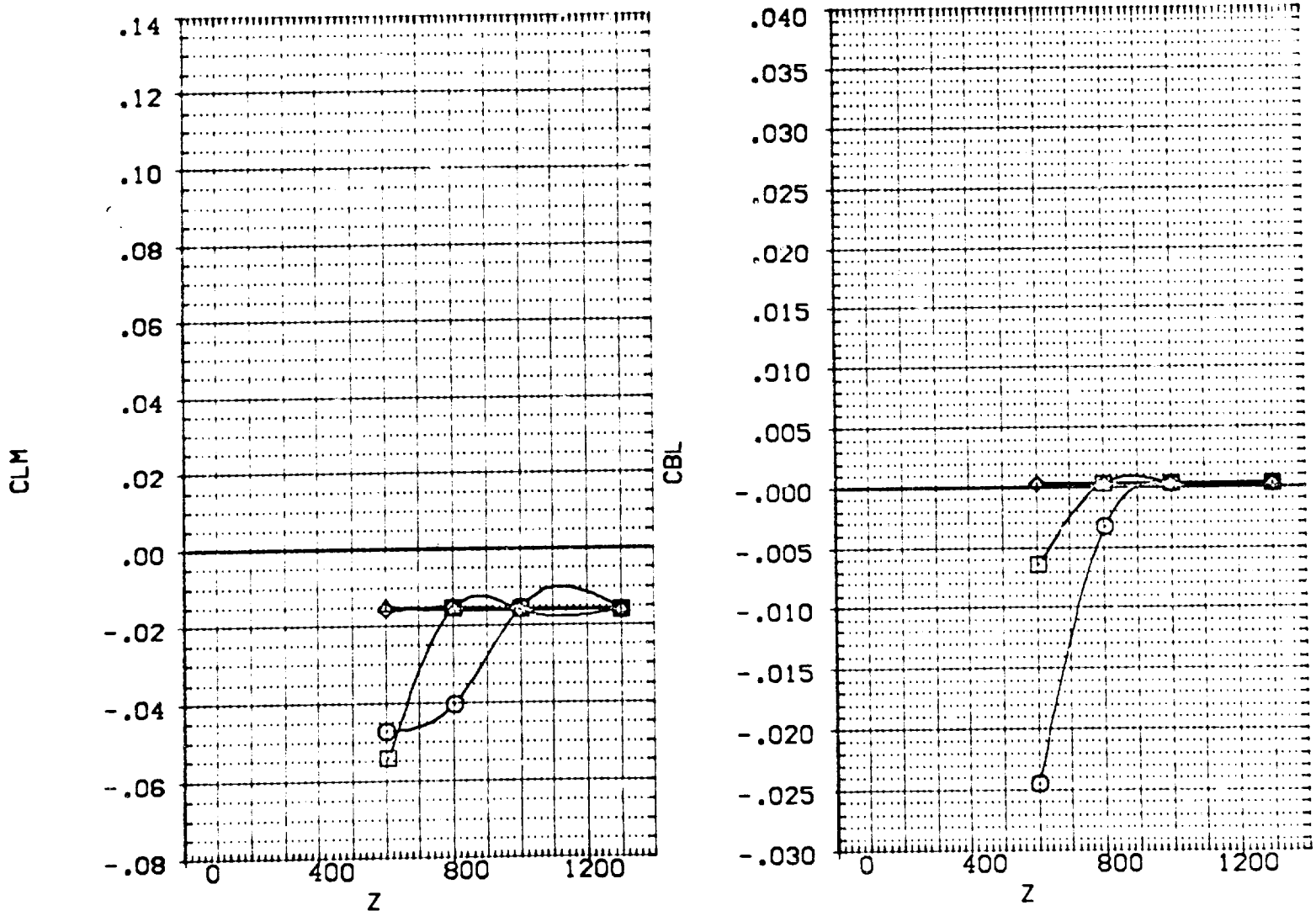


EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ030)

SYMBOL	X		PARAMETRIC VALUES		
○	-.917	MACH	4.530	PTOTAL	110.000
◇	400.550	ALPHA	-5.000	BETA	.000
□	800.400	DALPHA	-20.000	DBETA	5.000
△	1200.700	ELEVTR	.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

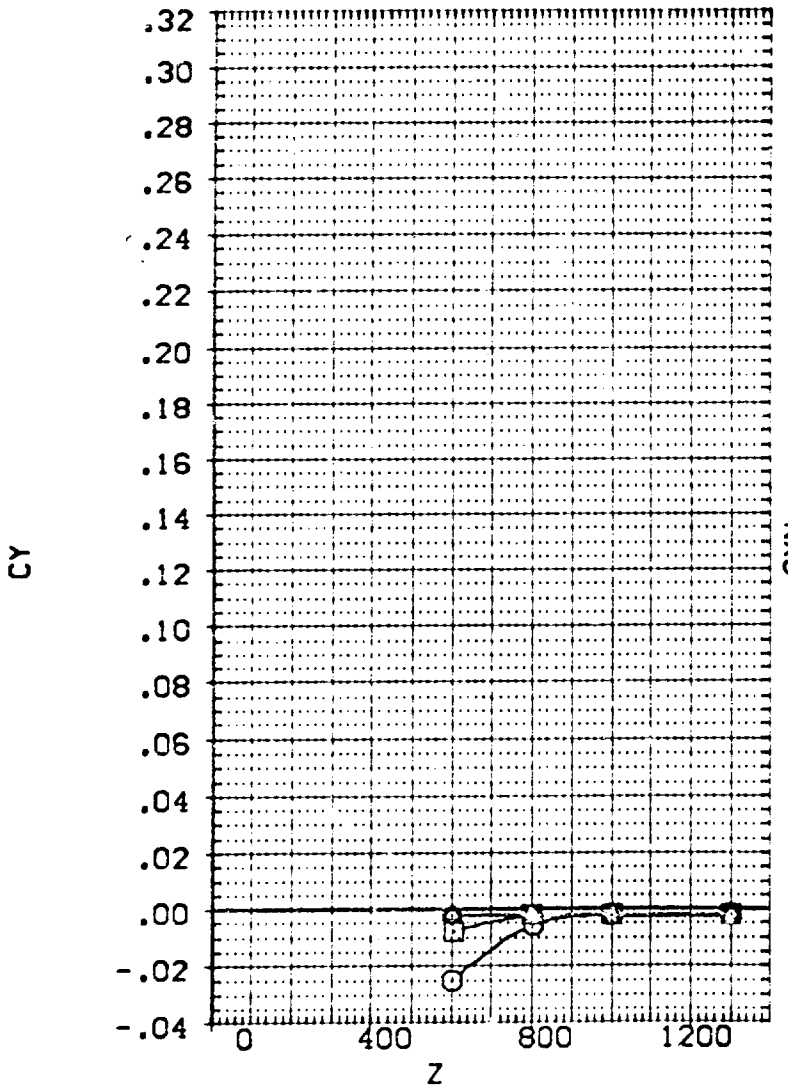


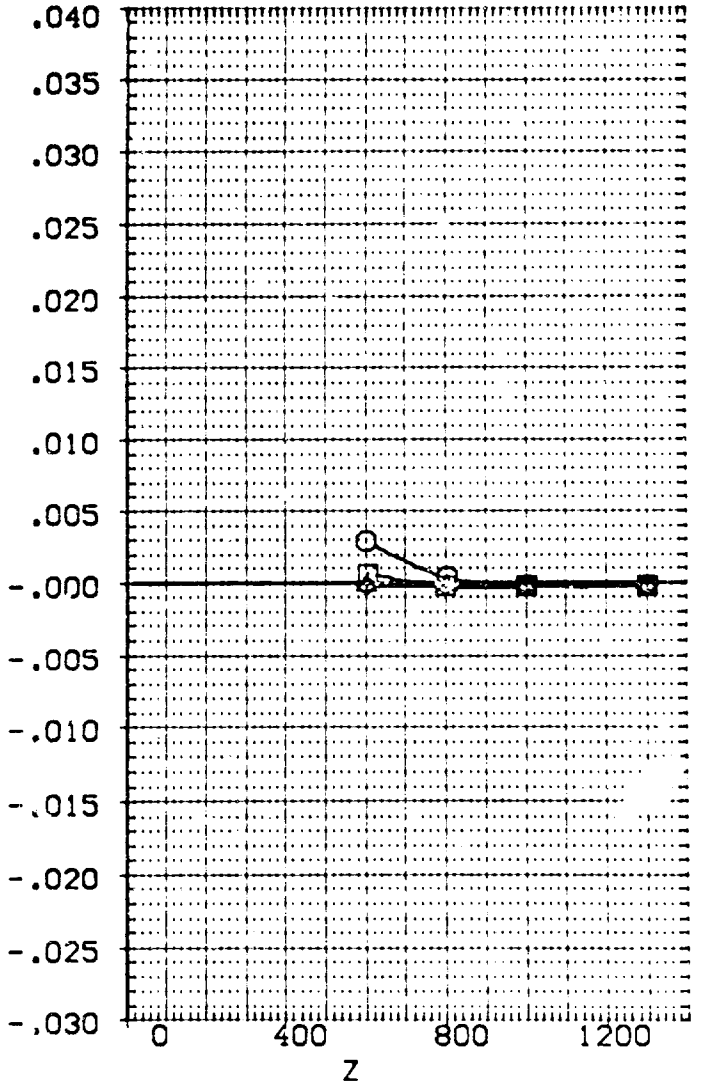
EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

!A13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ030)

SYMBOL	X		PARAMETRIC VALUES		
○	-.917	MACH	4.530	PTOTAL	110.000
□	400.550	ALPHA	-5.000	BETA	.000
◇	800.400	DALPHA	-20.000	DBETA	5.000
△	1200.700	ELEVTR	.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



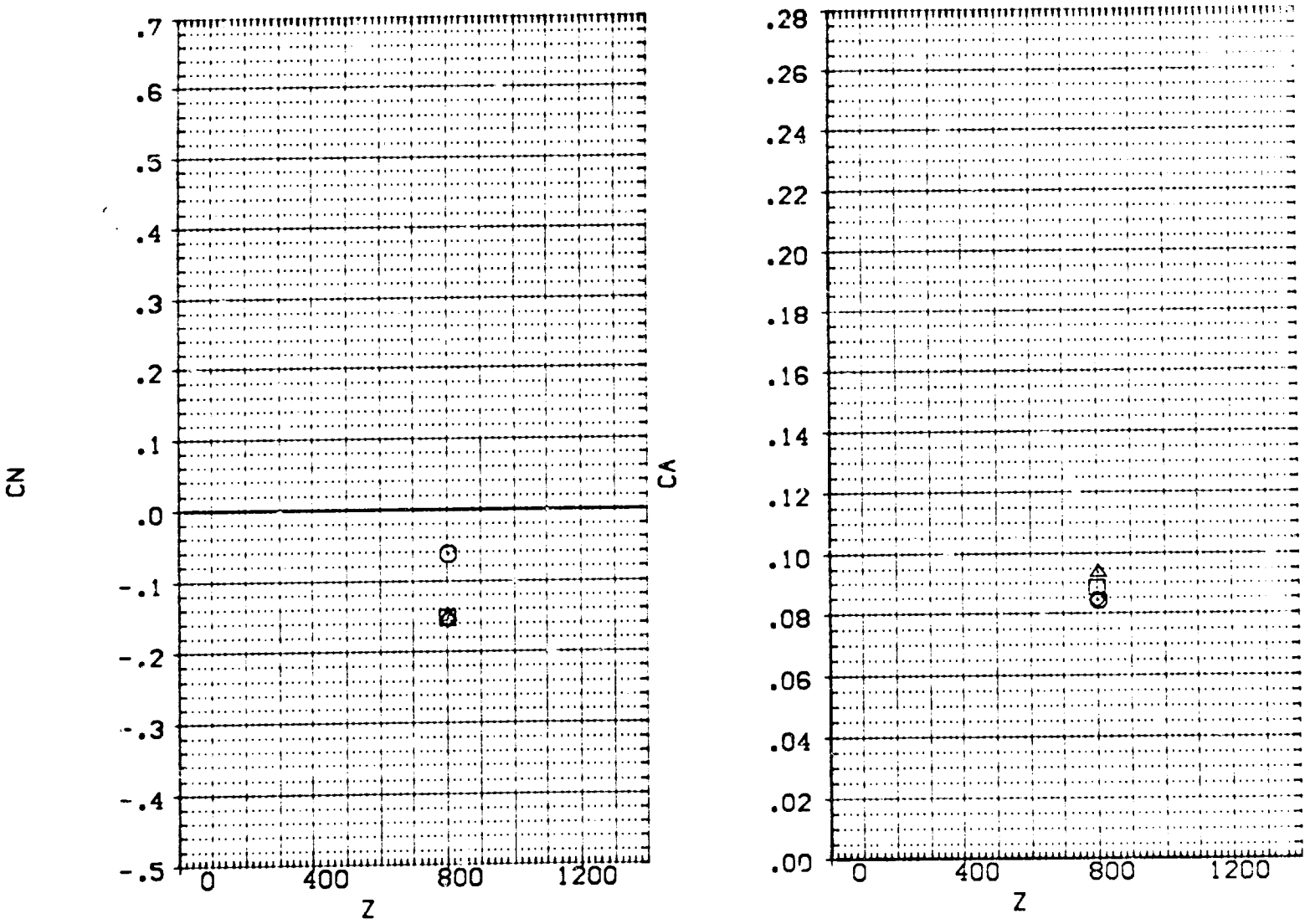


EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

!A13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ031)

SYMBOL	X		PARAMETRIC VALUES		
○	1.175	MACH	4.530	PTOTAL	110.000
◇	400.570	ALPHA	-5.000	BETA	.000
□	800.760	DALPHA	-30.000	DBETA	5.000
△	1201.100	ELEVTR	.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED DOCUMENT FOR [illegible] CHARACTERISTICS FOR INDIVIDUAL DATASETS

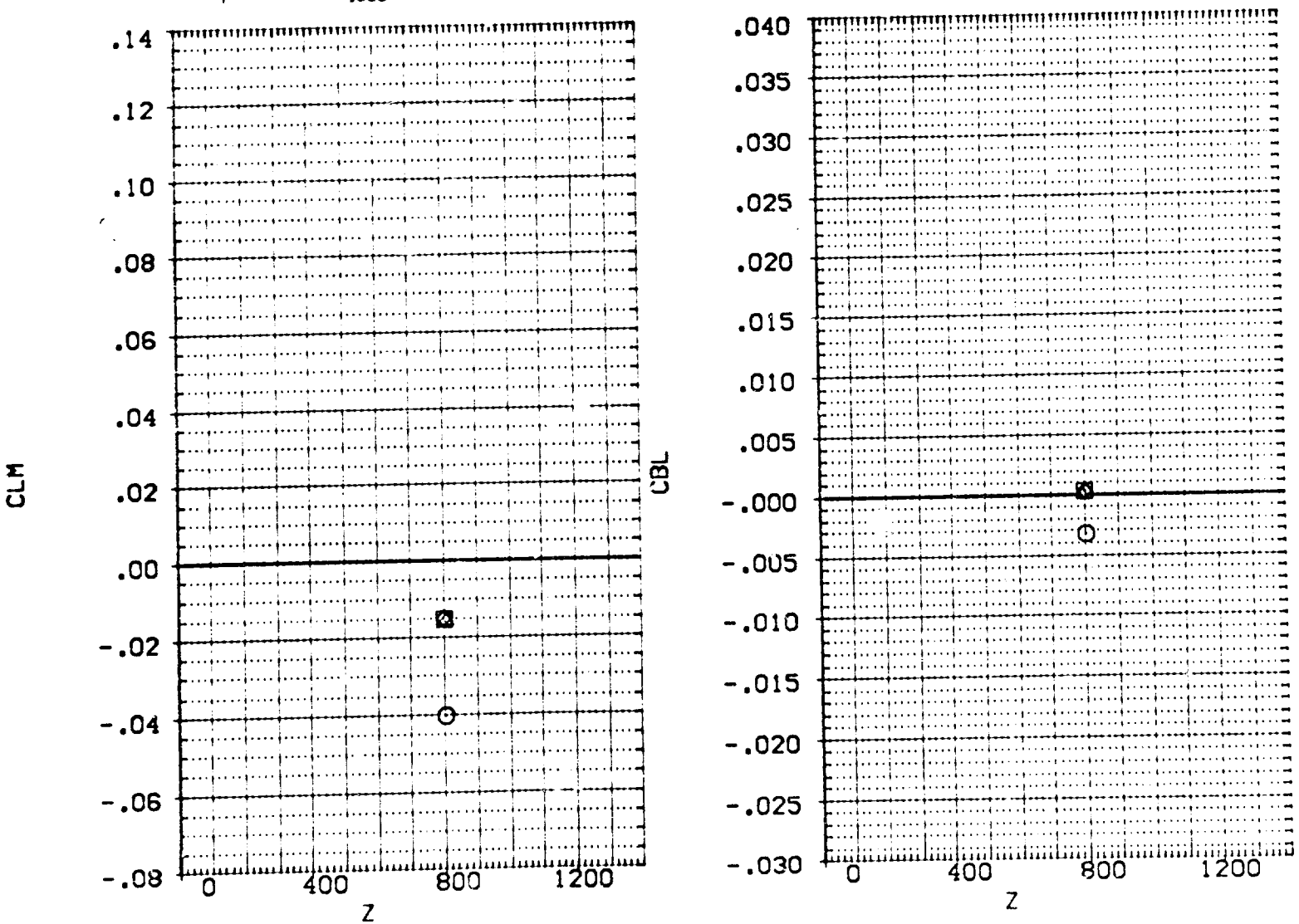


EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ031)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

SYMBOL	X		PARAMETRIC VALUES		
○	1.165	MACH	4.530	PTOTAL	110.000
□	400.570	ALPHA	-5.000	BETA	.000
◇	800.760	DALPHA	-30.000	DBETA	5.000
△	1201.100	ELEVTR	.000	AILRON	.000
		Y	.000		

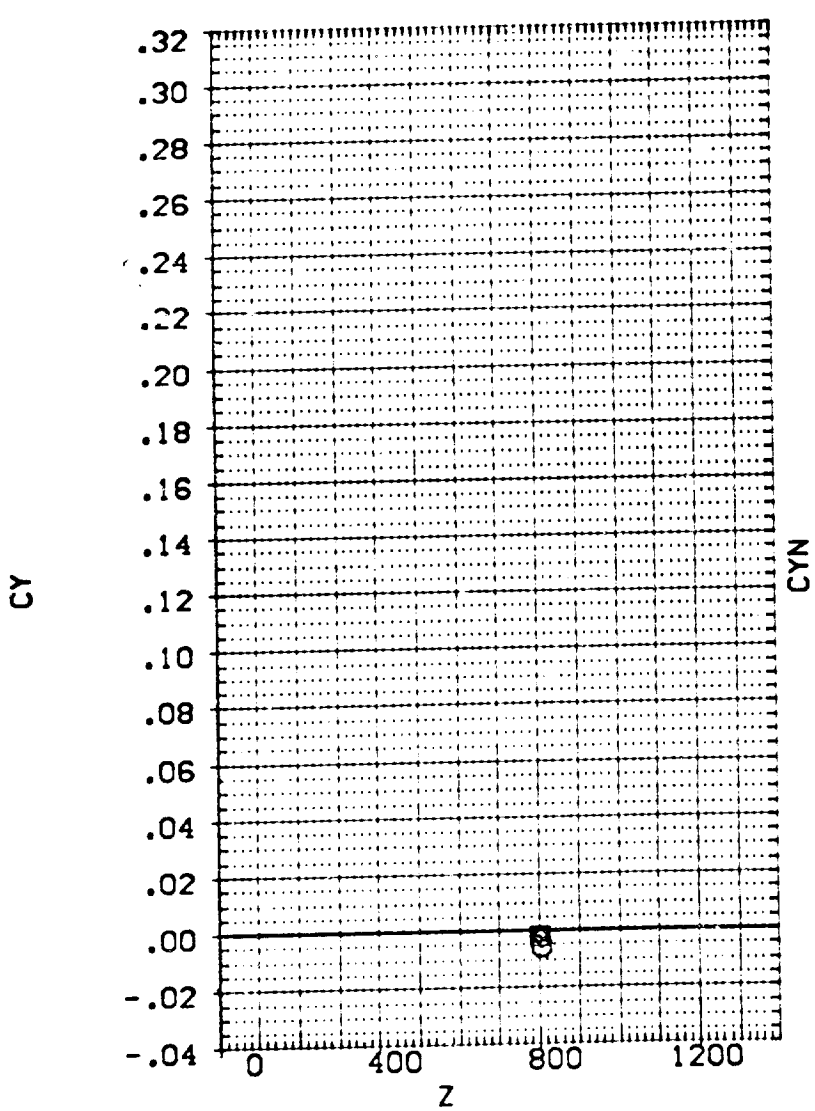


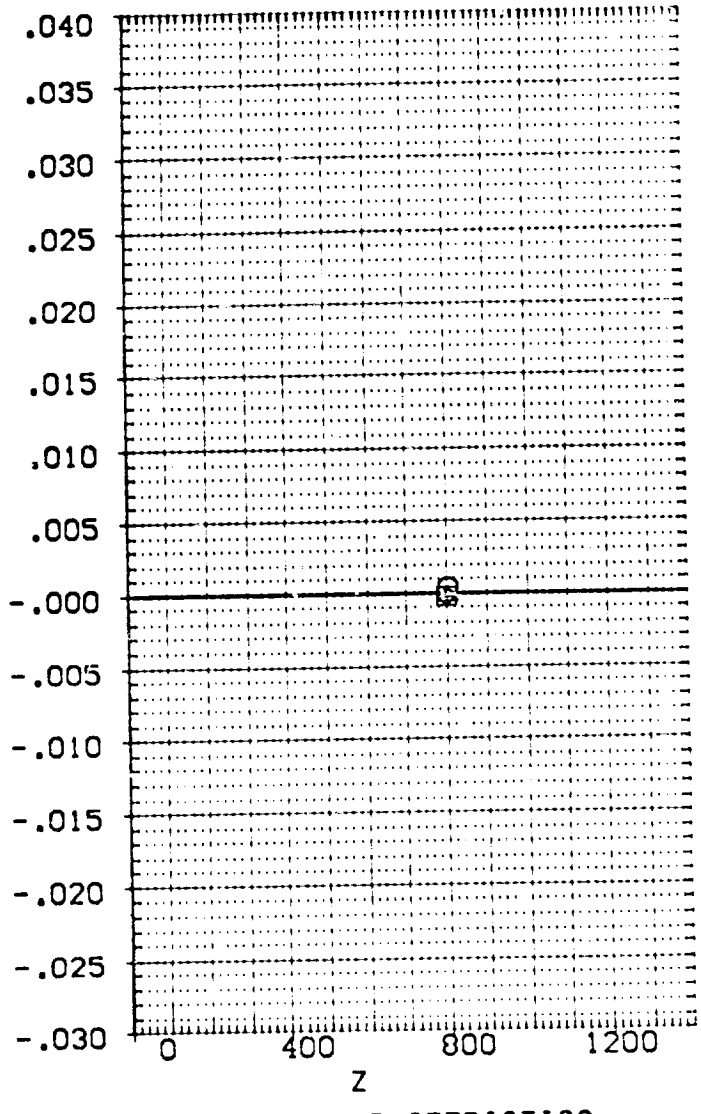
EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

!A13.EXTERNAL TANK(T10)SEPARATING FROM OR3. 09 (RTJ031)

SYMBOL	X	PARAMETRIC VALUES			
○	1.165	MACH	4.530	PTOTAL	110.000
□	400.570	ALPHA	-5.000	BETA	.000
◇	800.760	DALPHA	-30.000	DBETA	5.000
△	1201.100	ELEVTR	.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



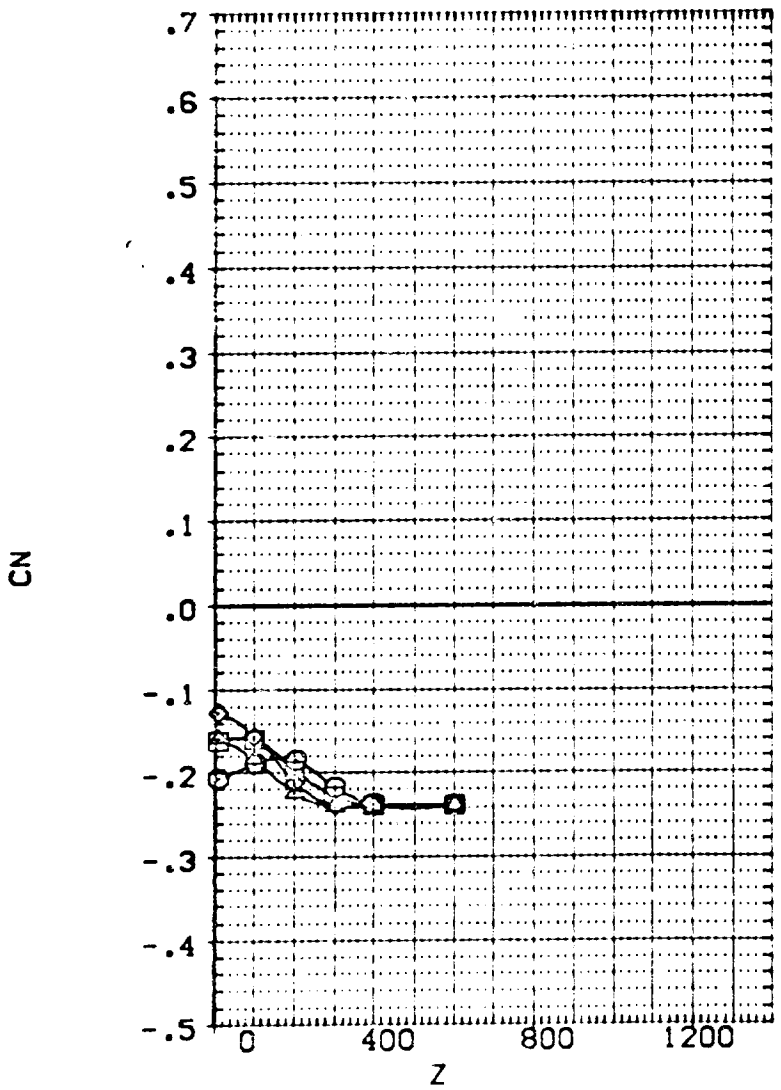


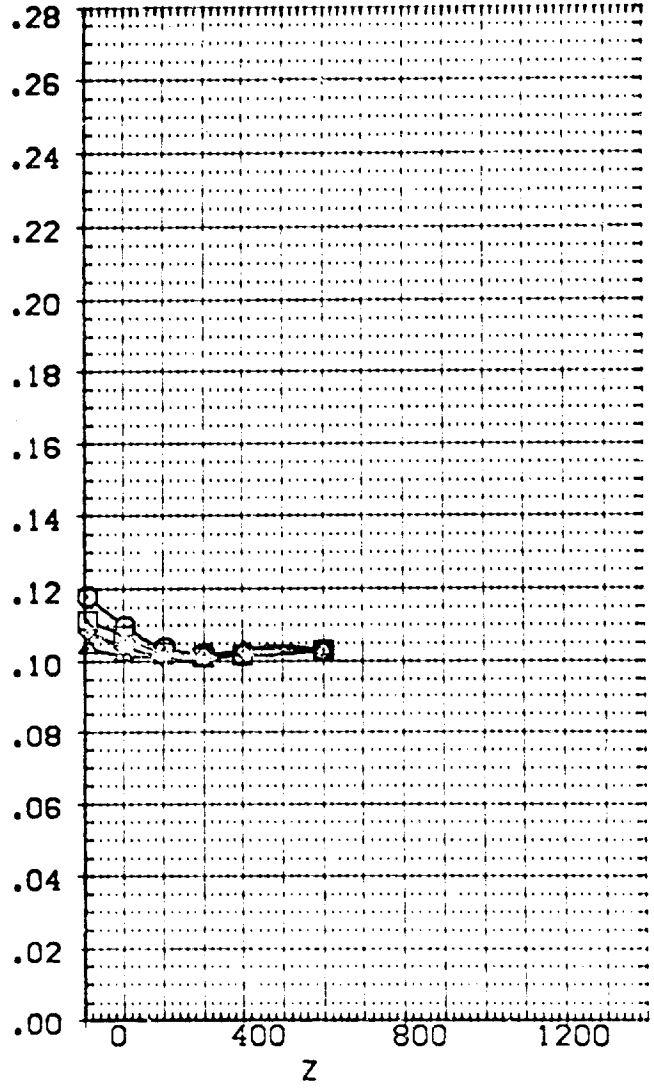
EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

!A13,EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ032)

SYMBOL	X		PARAMETRIC VALUES		
○	.290	MACH	4.520	PTOTAL	80.000
□	400.490	ALPHA	-10.000	BETA	.000
◇	800.360	DALPHA	5.000	DBETA	.000
△	1200.700	ELEVTR	.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

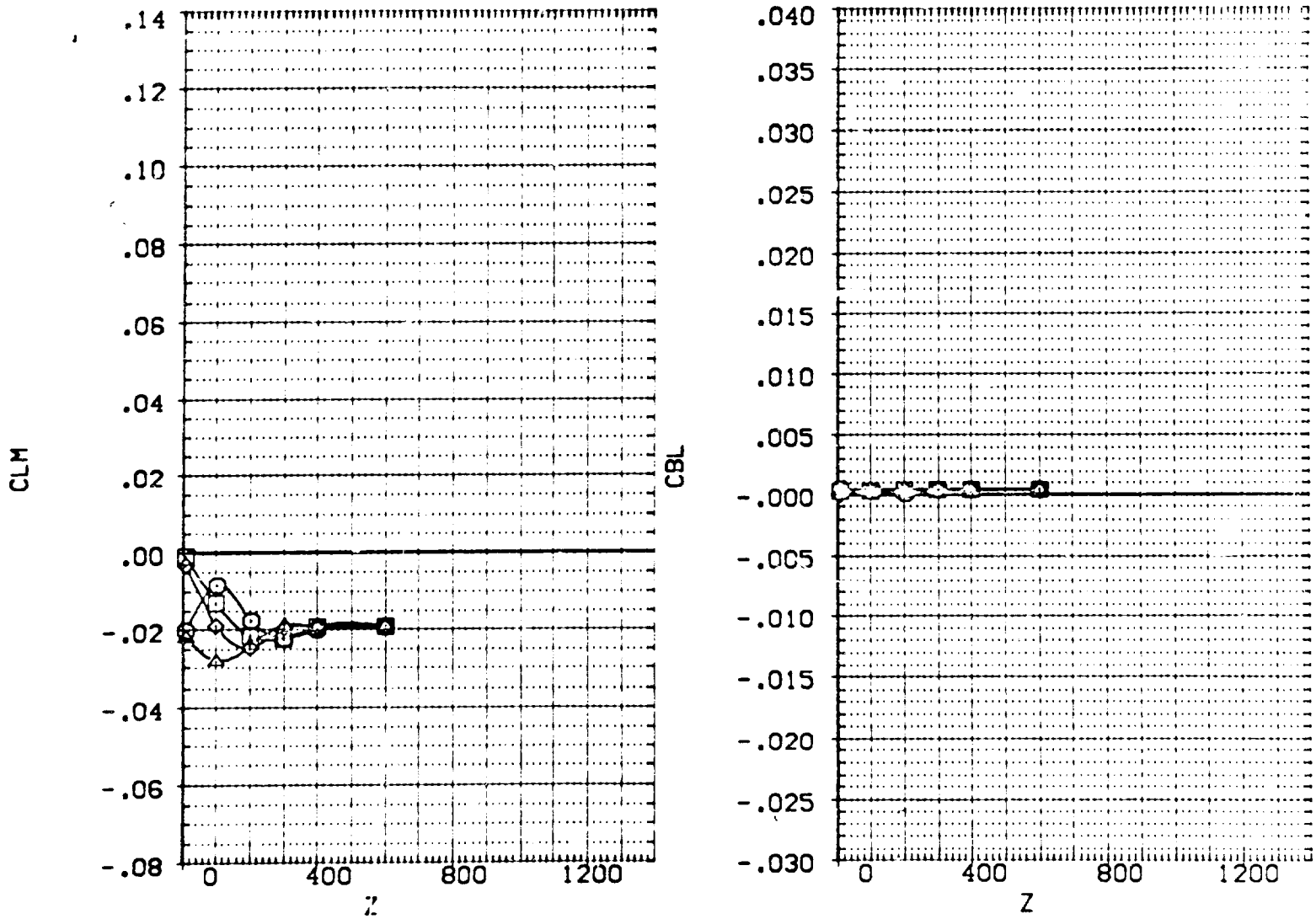




EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

SYMBOL	X		PARAMETRIC VALUES		
○	.290	MACH	4.520	PTOTAL	80.000
□	400.490	ALPHA	-10.000	BETA	.000
◇	800.660	DALPHA	5.000	DBETA	.000
△	1200.700	ELEVTR	.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED DOCUMENT FOR ADDITIONAL CHARACTERISTICS FOR INDIVIDUAL DATASETS

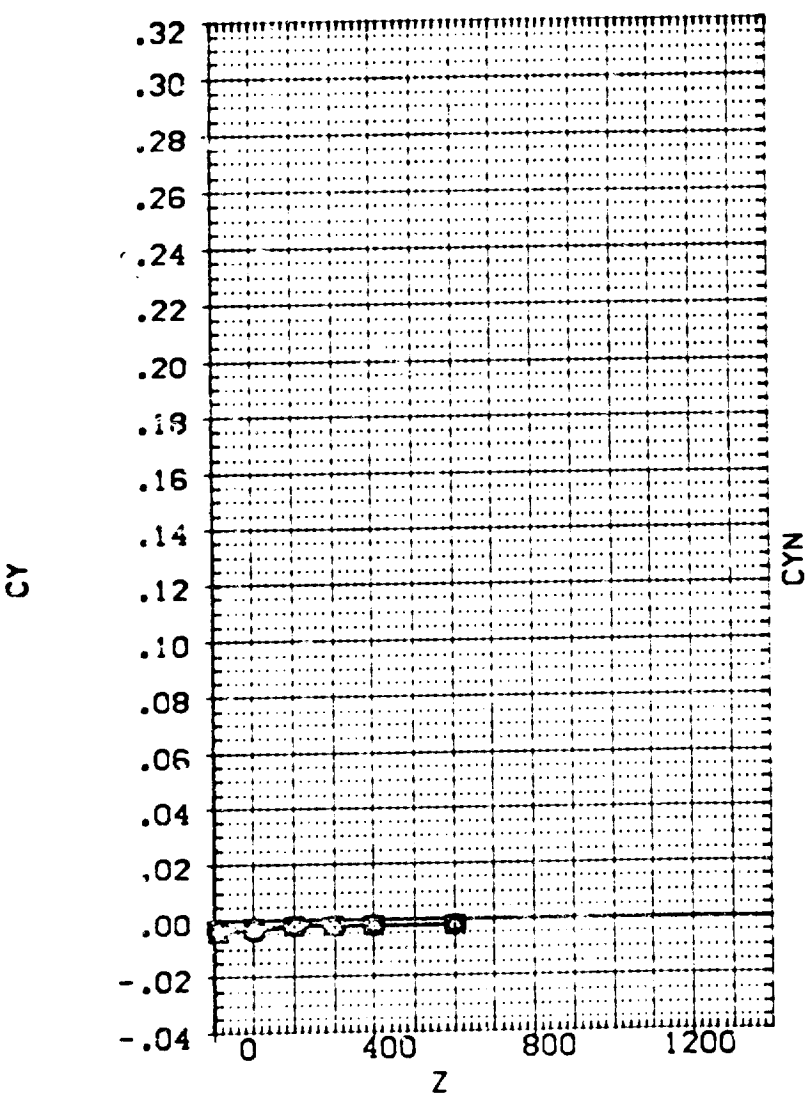


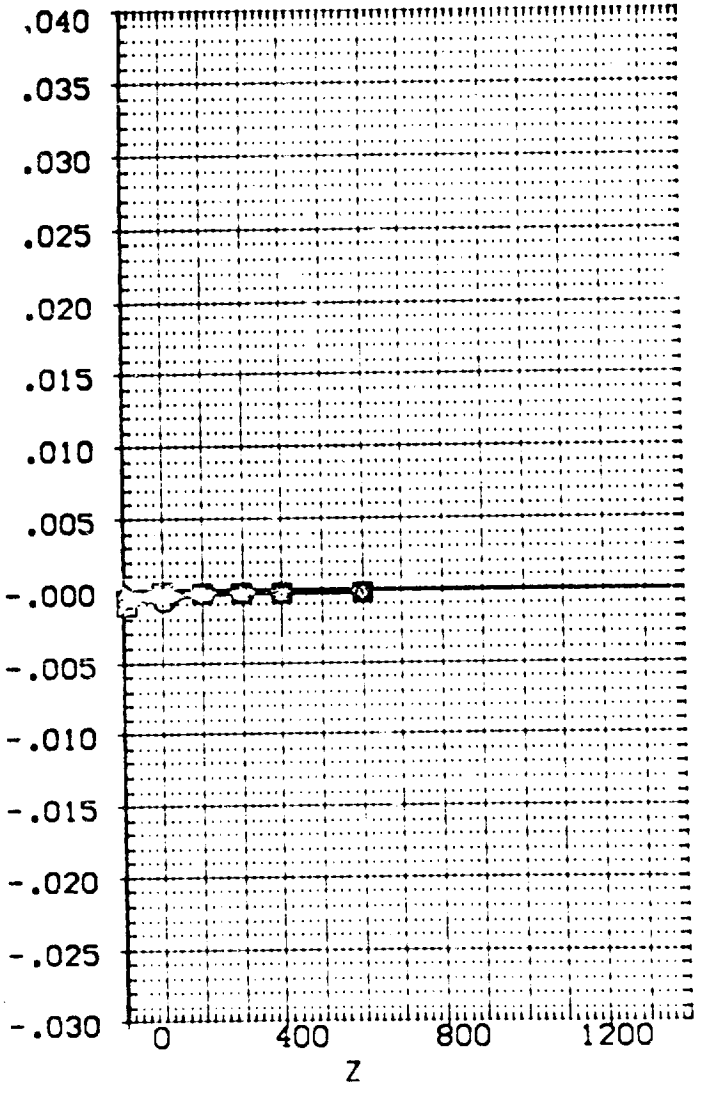
EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ032)

SYMBOL	X		PARAMETRIC VALUES		
○	.290	MACH	4.520	PTOTAL	80.000
□	400.490	ALPHA	-10.000	BETA	.000
◇	800.660	DALPHA	5.000	DBETA	.000
△	1200.700	ELEVTR	.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



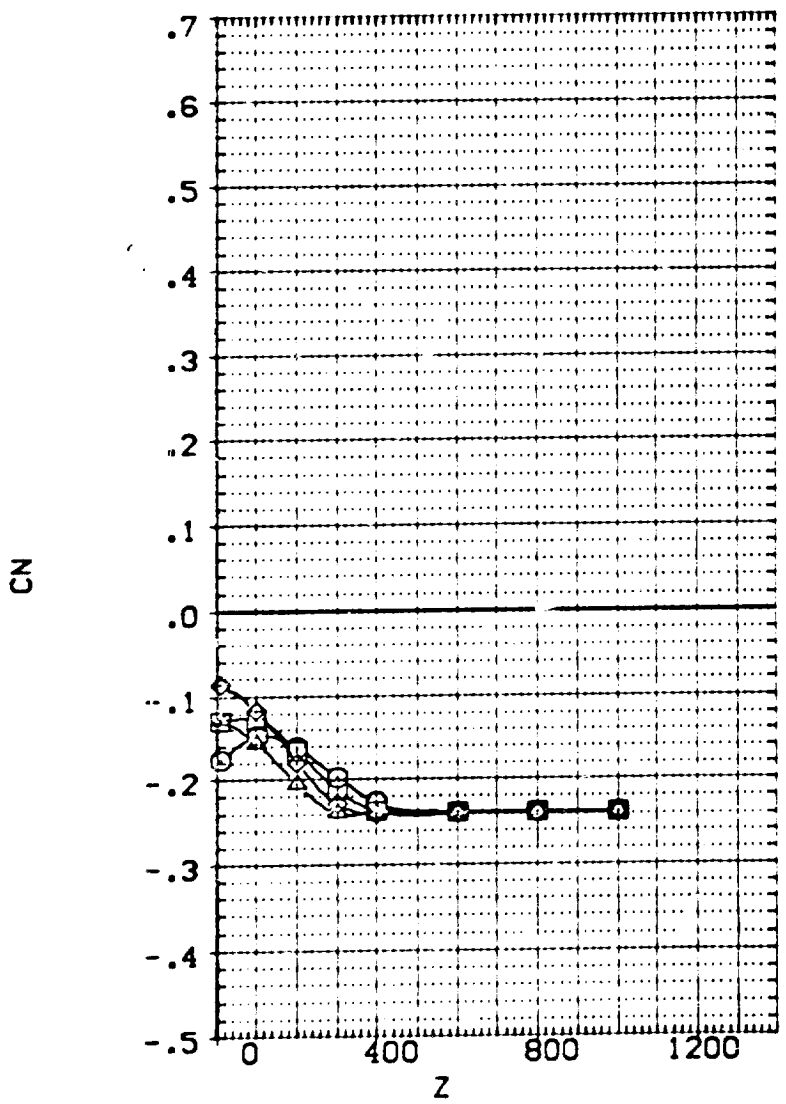


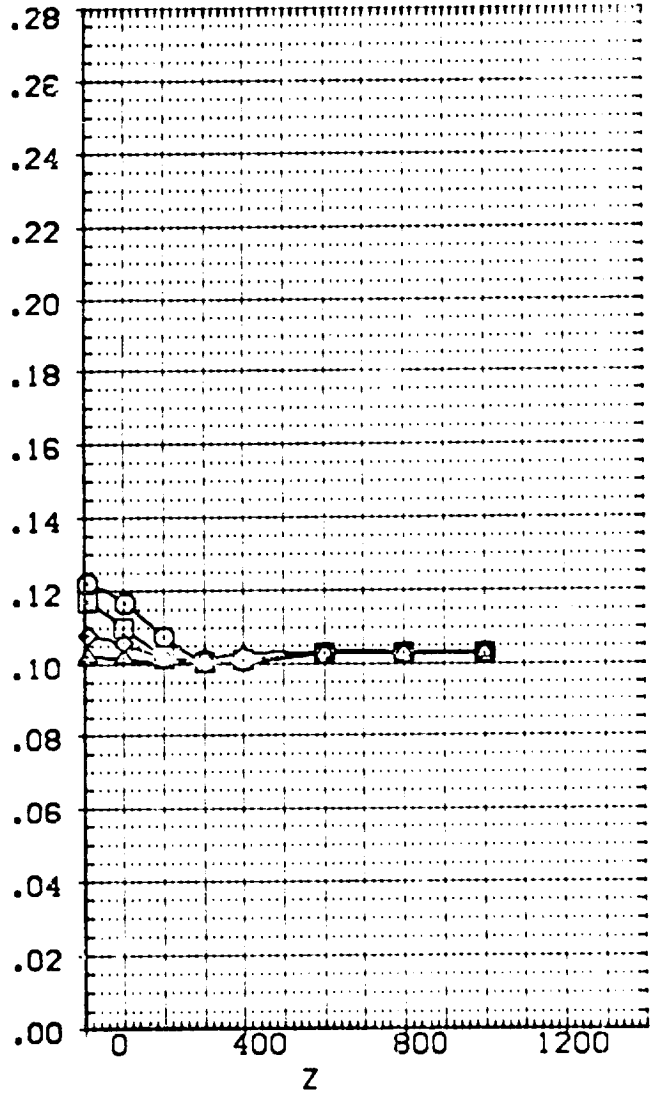
EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ033)

SYMBOL	X		PARAMETRIC VALUES		
○	.248	MACH	4.520	PTOTAL	80.000
◇	400.440	ALPHA	-10.000	BETA	.000
□	800.560	DALPHA	.000	DBETA	.000
△	1201.000	ELEVTR	.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR [illegible] CHARACTERISTICS FOR INDIVIDUAL DATASETS



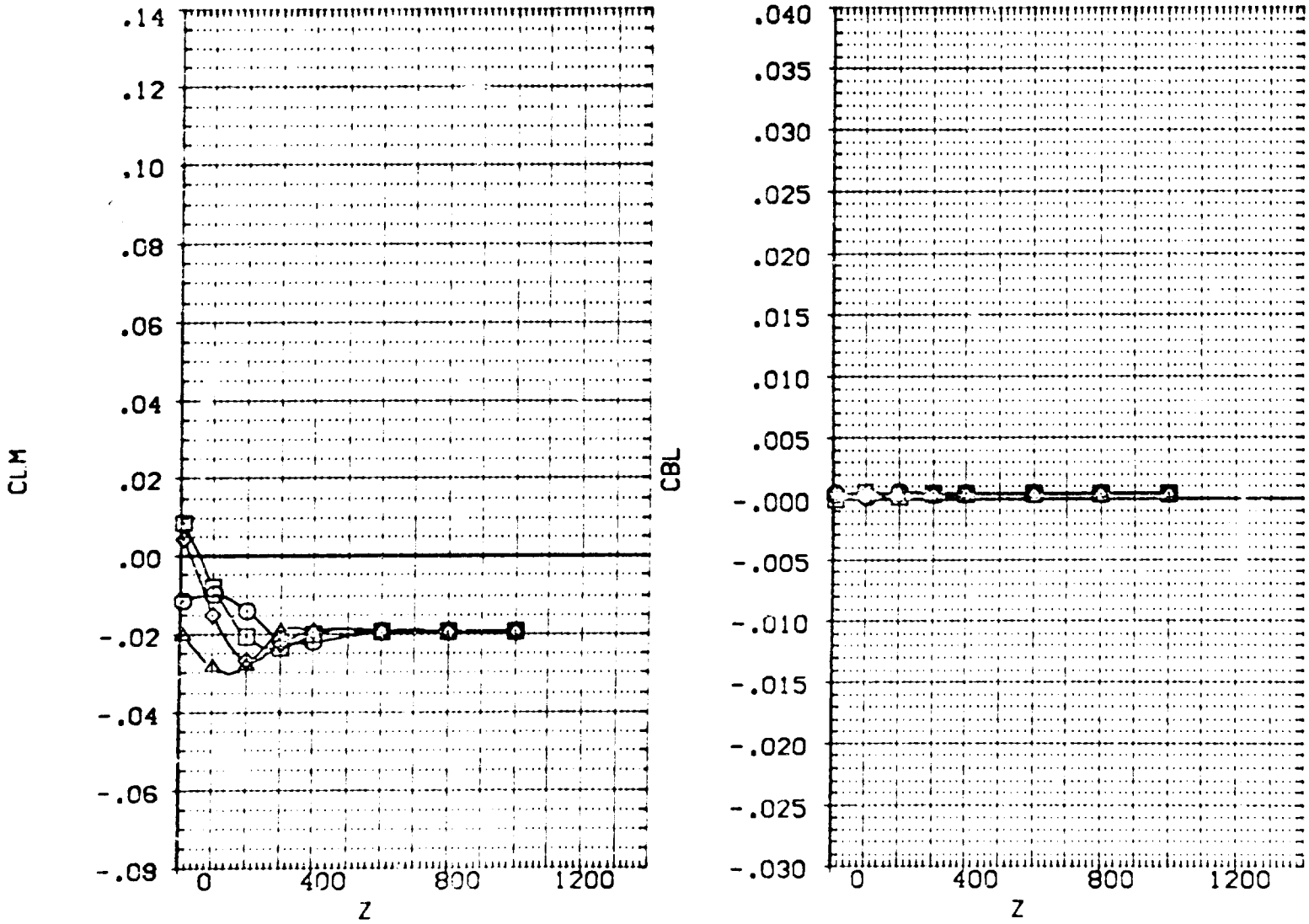


EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

!A13,EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ033)

SYMBOL	X		PARAMETRIC VALUES		
○	.248	MACH	4.520	PTOTAL	80.000
◇	400.440	ALPHA	-10.000	BETA	.000
□	800.560	DALPHA	.000	DBETA	.000
△	1201.000	ELEVTR	.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

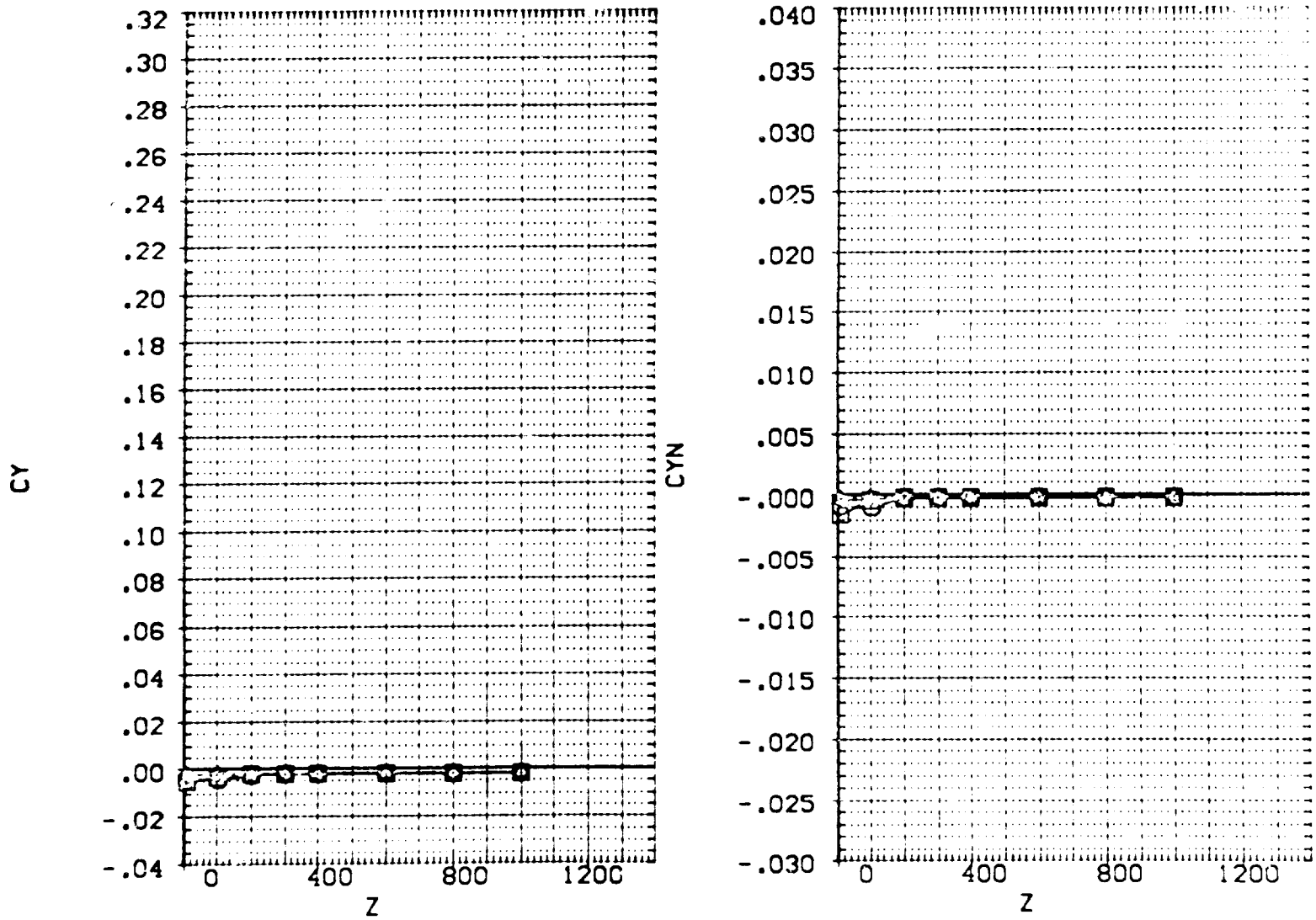


EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. C9 (RTJ033)

SYMBOL	X		PARAMETRIC VALUES		
○	.248	MACH	4.520	PTOTAL	80.000
◇	400.440	ALPH	-10.000	BETA	.000
□	800.560	CALPHA	.000	DBETA	.000
△	1201.000	ELEVTR	.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR CHARACTERISTICS AND INDIVIDUAL DATASETS

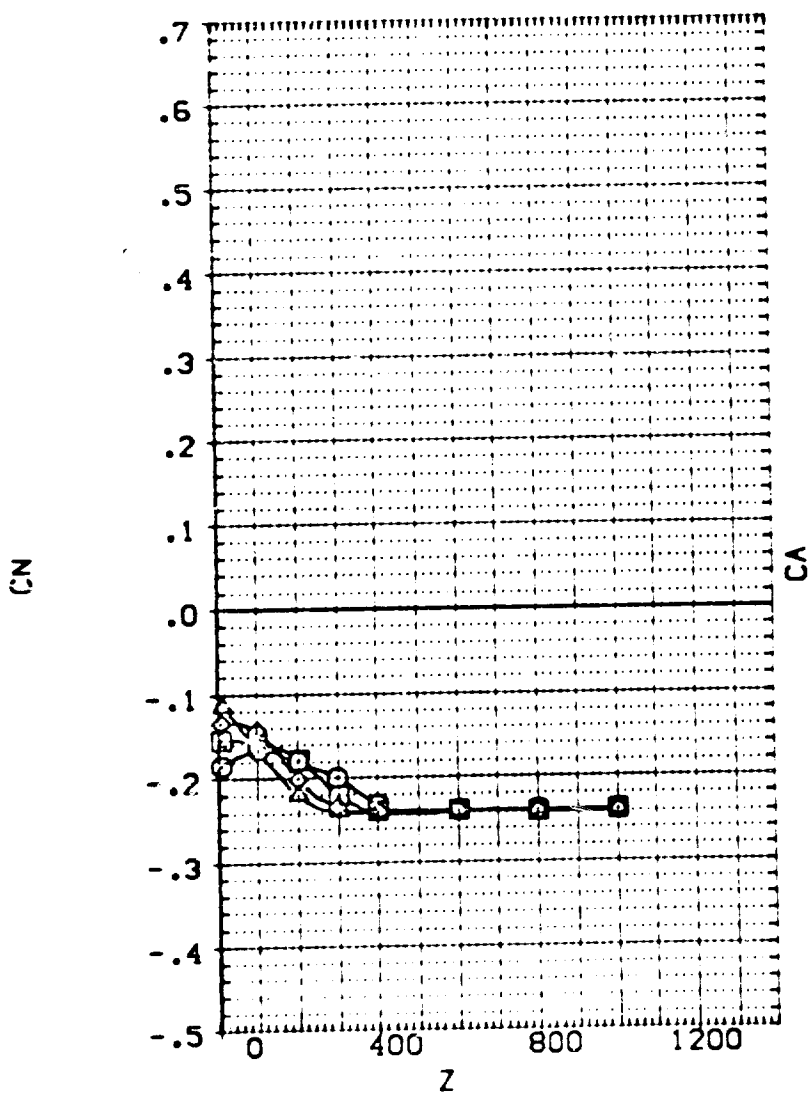


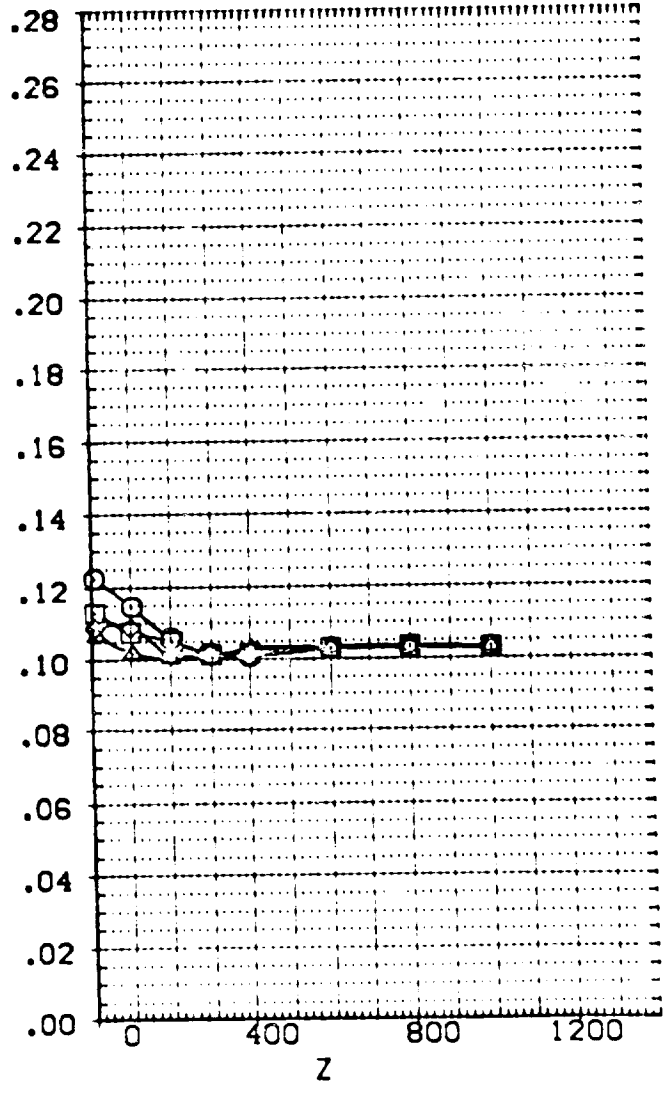
EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

!A13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ034)

SYMBOL	X		PARAMETRIC VALUES		
○	.210	MACH	4.520	PTOTAL	80.000
◇	400.460	ALPHA	-10.000	BETA	.000
□	800.610	DALPHA	.000	DBETA	.000
△	1200.900	ELEVTR	.000	AILRON	.000
		Y	200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



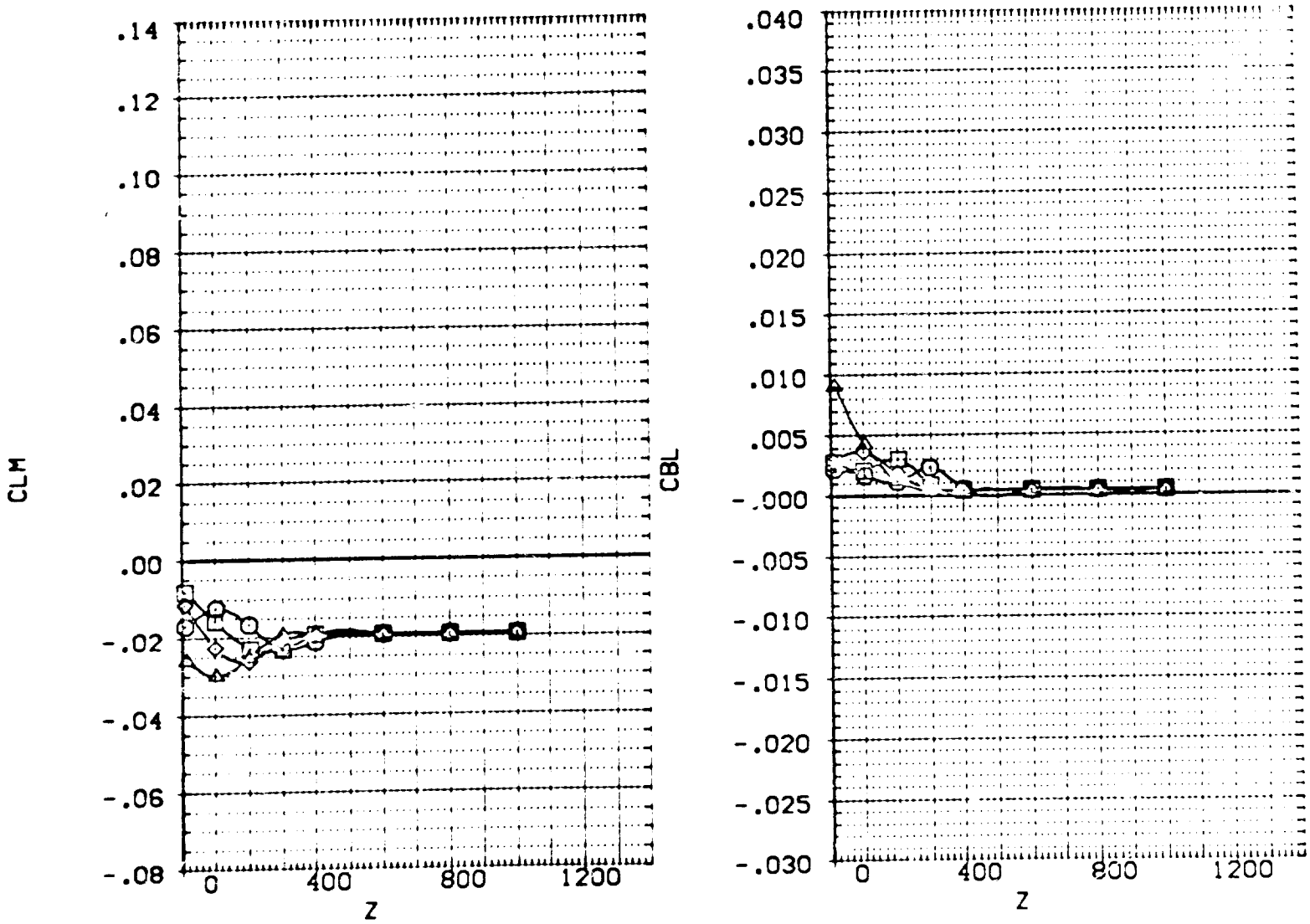


EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

[A13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ034)

SYMBOL	X		PARAMETRIC VALUES		
○	.210	MACH	4.520	PTOTAL	80.000
◇	400.460	ALPHA	-10.000	BETA	.000
□	800.610	DALPHA	.000	DBETA	.000
△	1200.900	ELEVTR	.000	AILRON	.000
		Y	200.000		

SEE THE ASSOCIATED DOCUMENT FOR FULL CHARACTERISTICS FOR INDIVIDUAL DATASETS

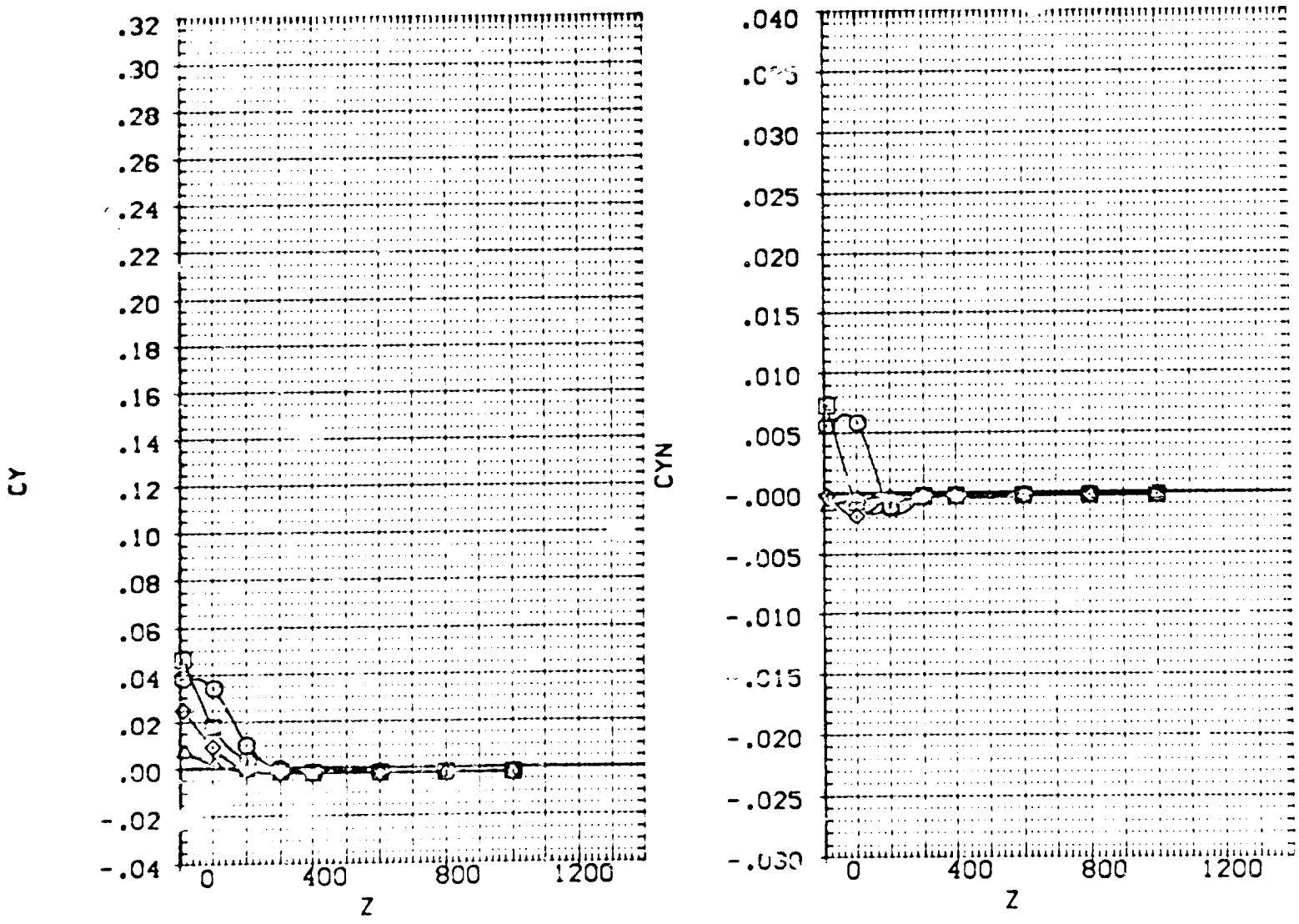


EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

!A13,EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ034)

SYMBOL	X		PARAMETRIC VALUES		
○	.210	MACH	4.520	PTOTAL	80.000
◇	400.460	ALPHA	-10.000	BETA	.000
□	800.610	DALPHA	.000	DBETA	.000
△	1200.900	ELEVTR	.000	AILRON	.000
		Y	200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

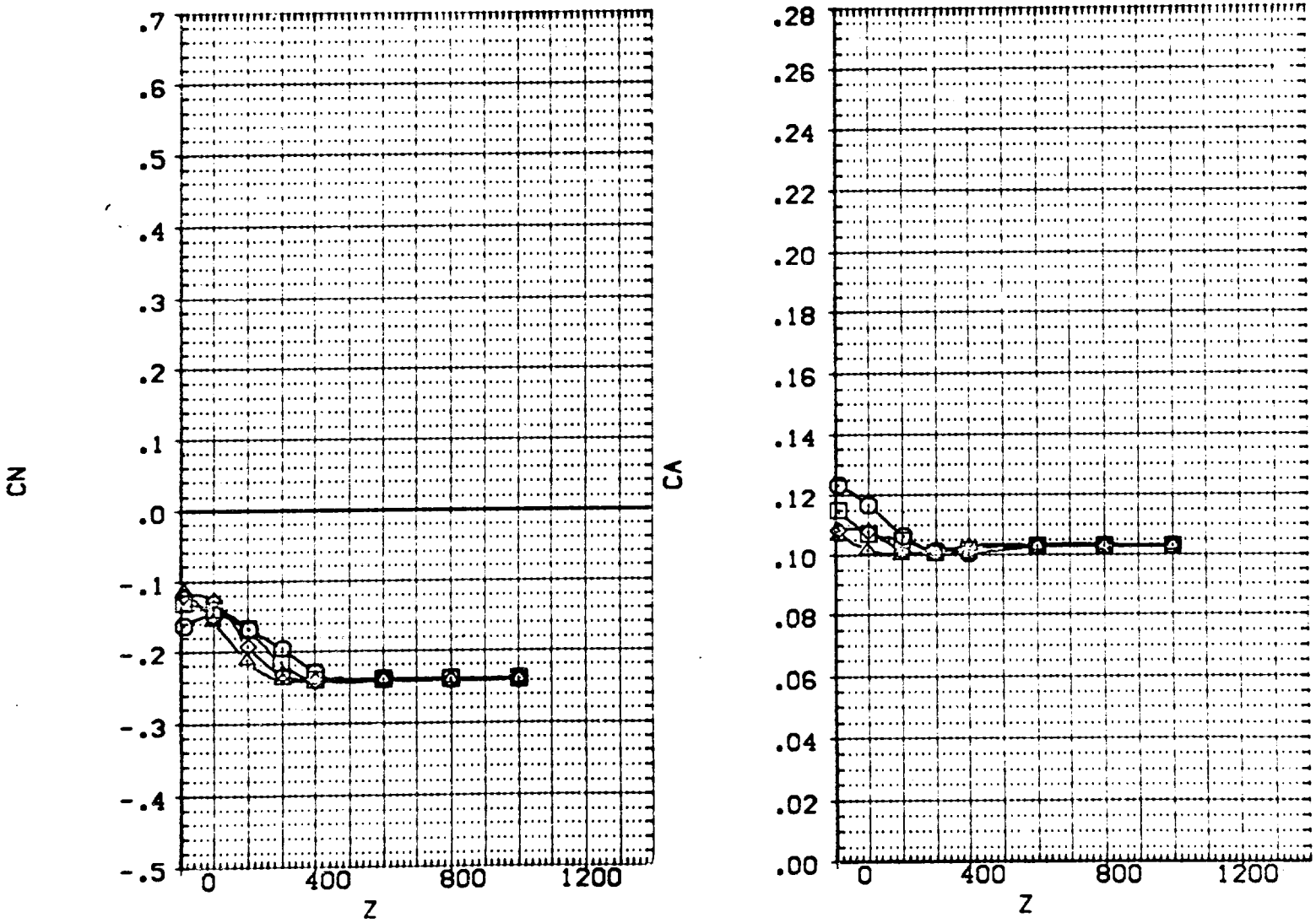


EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

!A13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ035)

SYMBOL	X		PARAMETRIC VALUES		
○	.154	MACH	4.520	PTOTAL	80.000
□	400.360	ALPHA	-10.000	BETA	.000
◇	800.550	DALPHA	.000	DBETA	5.000
△	1200.900	ELEVTR	.000	AILRON	.000
		Y	200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

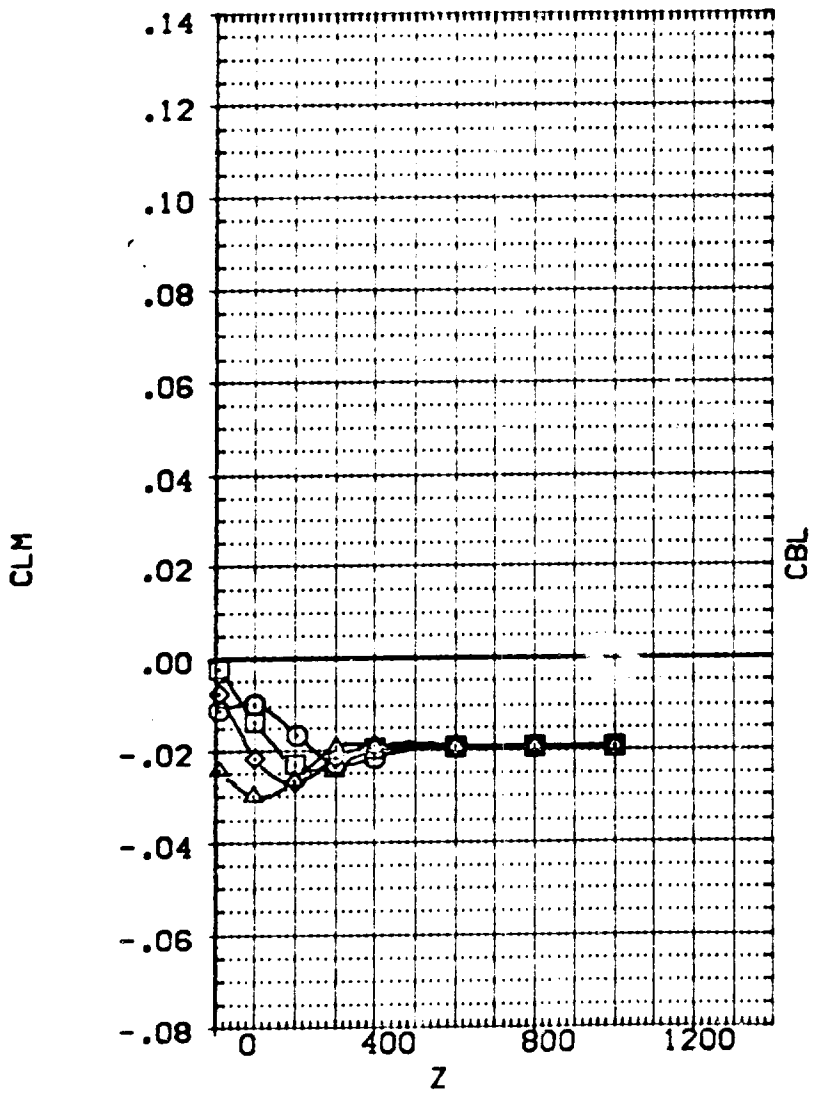


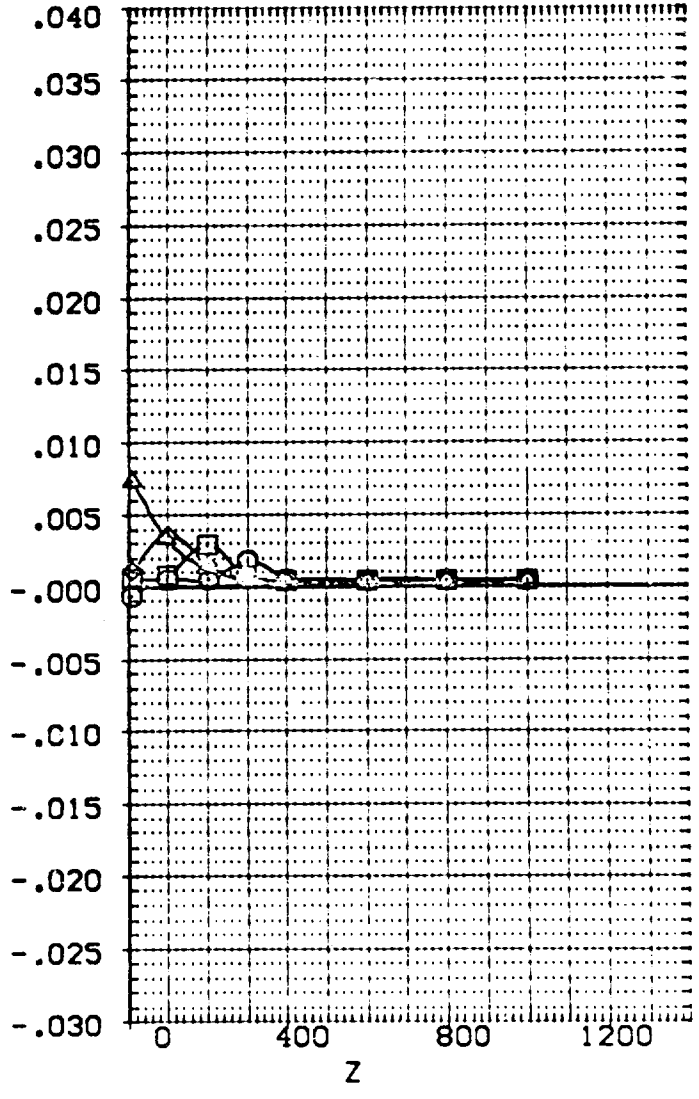
EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

!A13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ035)

SYMBOL	X		PARAMETRIC VALUES		
○	.154	MACH	4.520	PTOTAL	80.000
□	400.360	ALPHA	-10.000	BETA	.000
◇	800.550	DALPHA	.000	DBETA	5.000
△	1200.900	ELEVTR	.000	AILRON	.000
		Y	200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



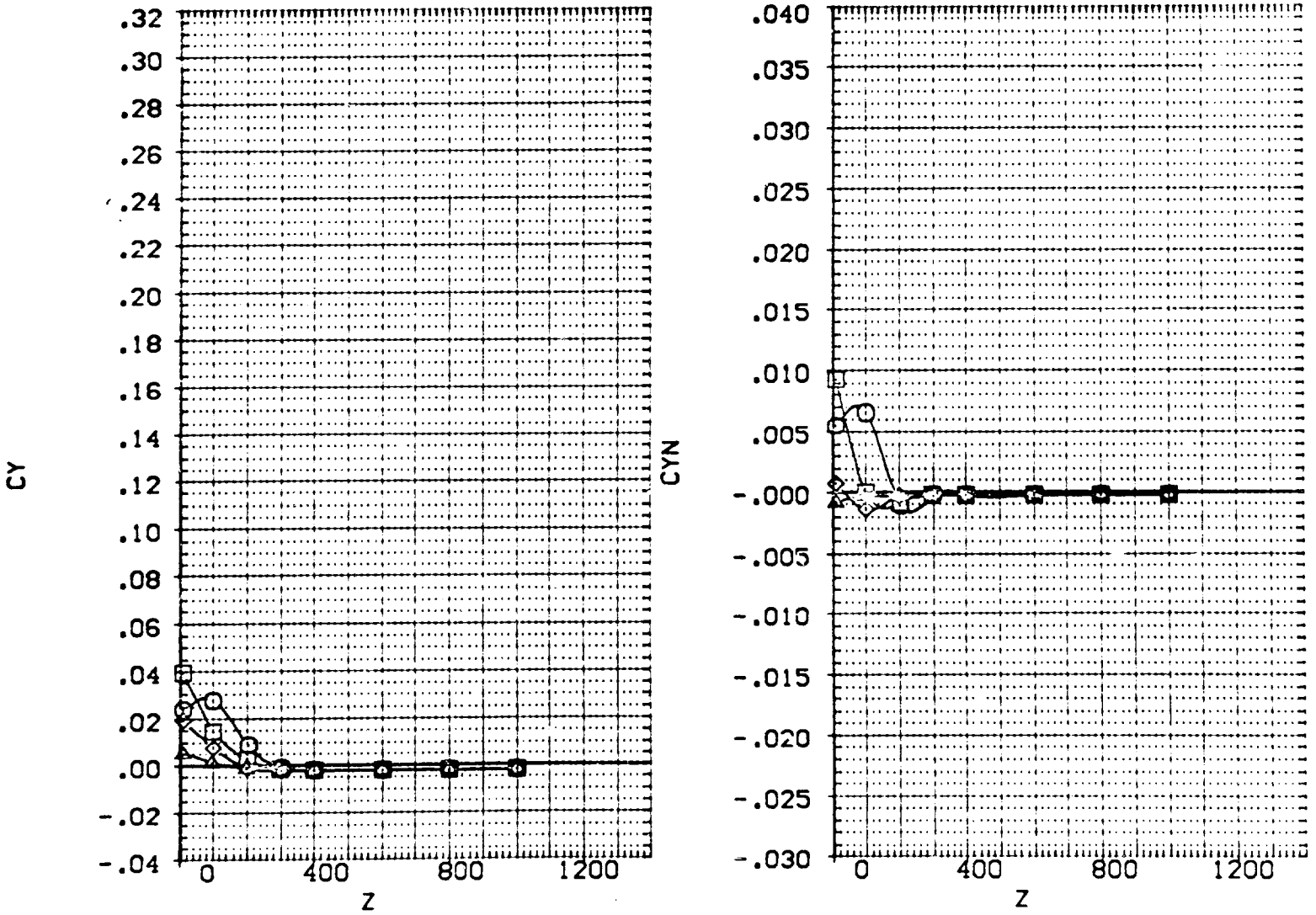


EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

!A13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ035)

SYMBOL	X		PARAMETRIC VALUES		
○	.154	MACH	4.520	PTOTAL	80.000
□	400.360	ALPHA	-10.000	BETA	.000
◇	800.550	DALPHA	.000	DBETA	5.000
△	1200.900	ELEVTR	.000	AILRON	.000
		Y	200.000		

SEE THE ASSOCIATED DOCUMENT FOR FULL CHARACTERISTICS FOR INDIVIDUAL DATASETS

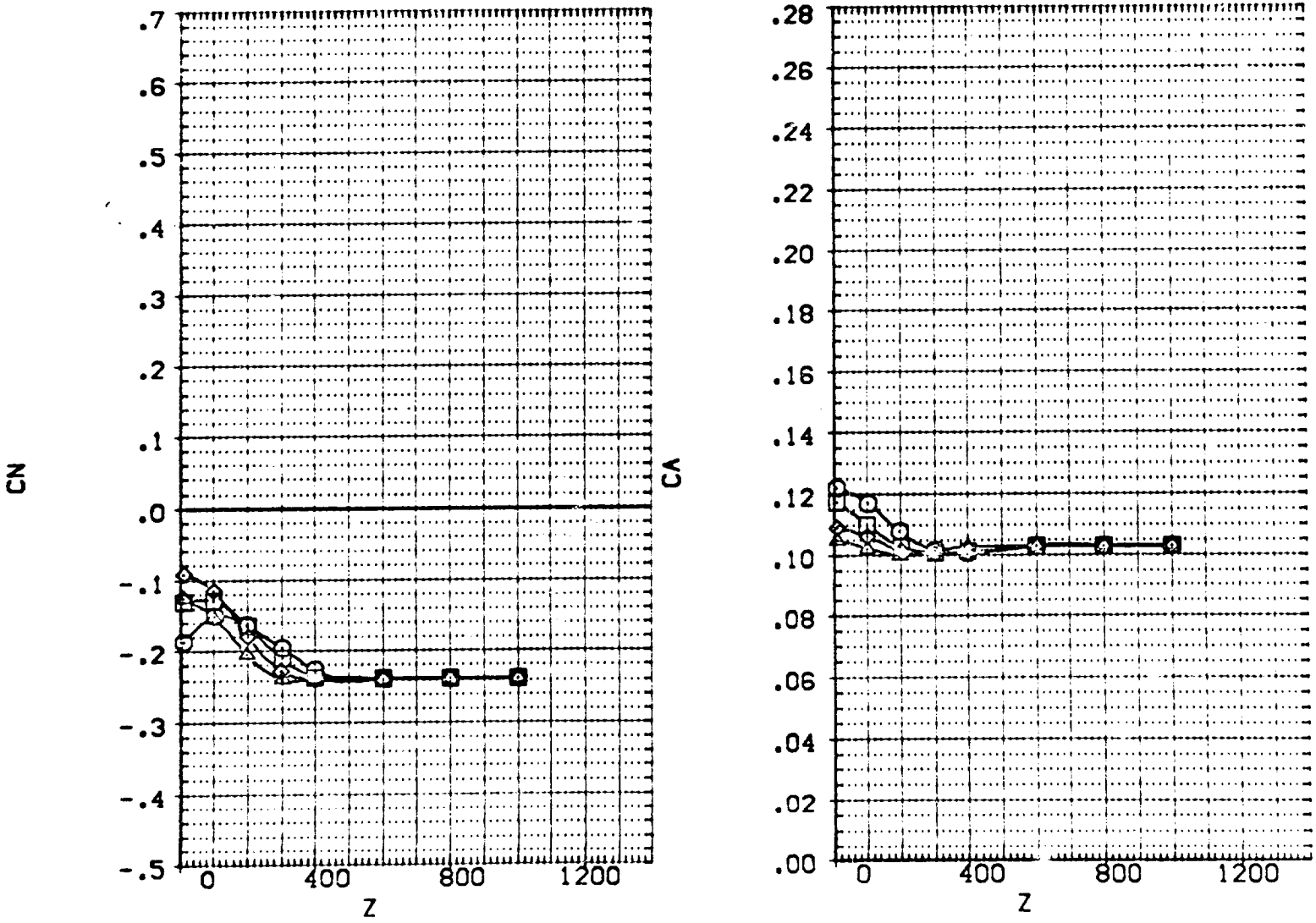


EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

[A13,EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ036)

SYMBOL	X		PARAMETRIC VALUES		
○	.237	MACH	4.520	PTOTAL	80.000
□	400.460	ALPHA	-10.000	BETA	.000
◇	800.530	DALPHA	.000	DBETA	5.000
△	1200.700	ELEVTR	.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

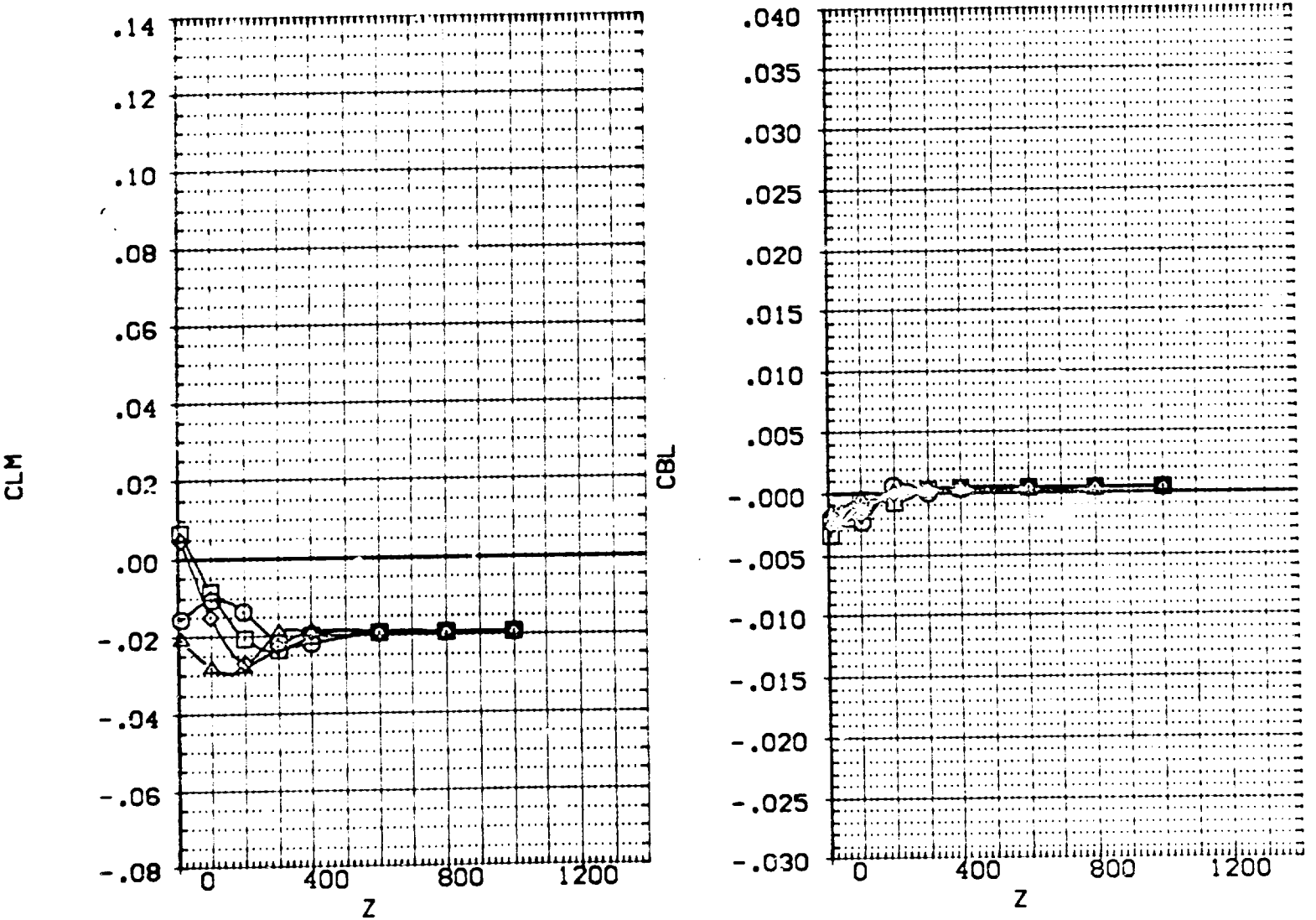


EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

!A13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ036)

SYMBOL	X		PARAMETRIC VALUES		
○	.237	MACH	4.520	PTOTAL	80.000
□	400.460	ALPHA	-10.000	BETA	.000
◇	800.530	DALPHA	.000	DBETA	5.000
△	1200.700	ELEVTR	.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED DOCUMENT FOR REMAINING CHARACTERISTICS FOR INDIVIDUAL DATASETS

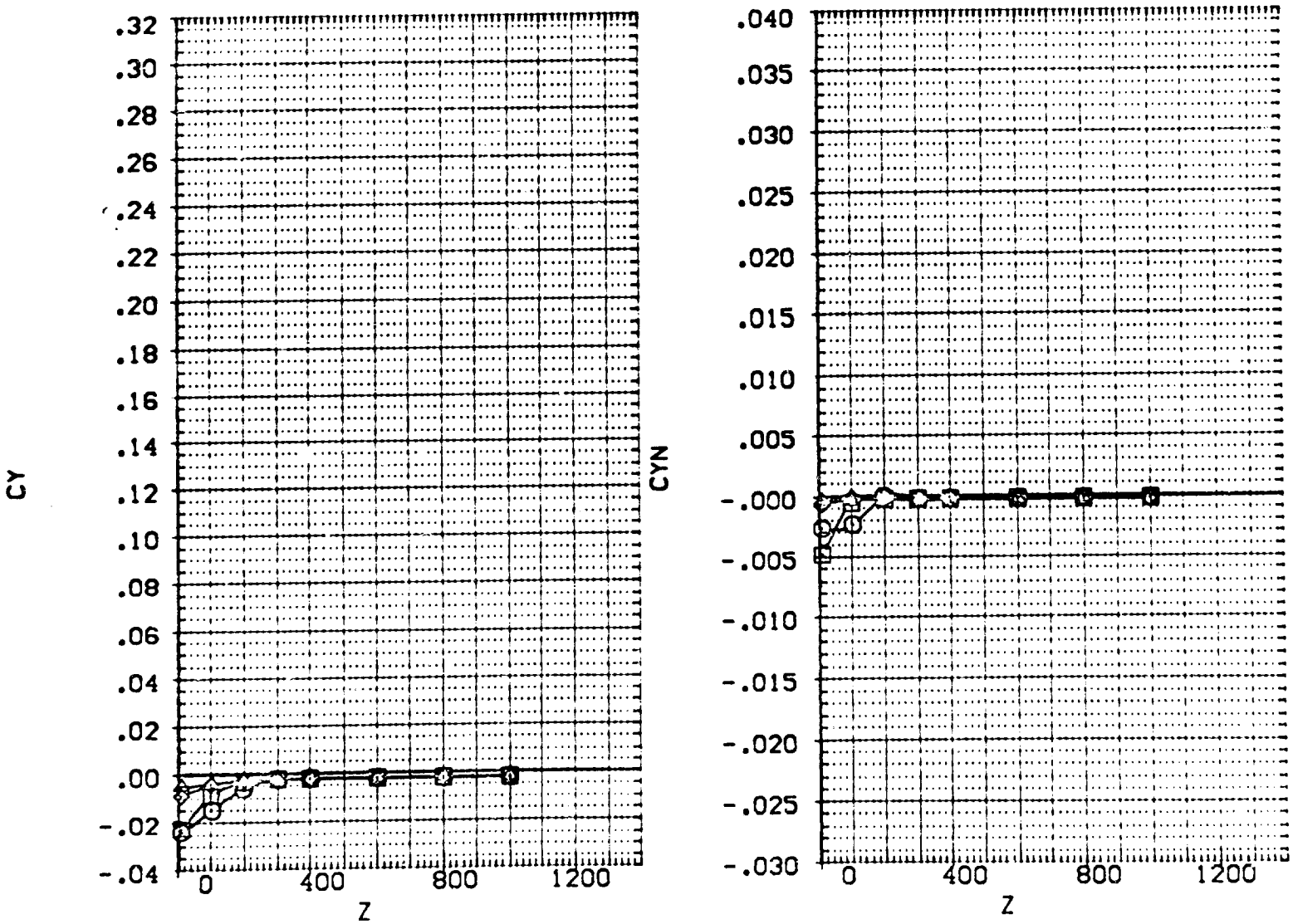


EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

!A13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ036)

SYMBOL	X	PARAMETRIC VALUES			
○□○	.237	MACH	4.520	PTOTAL	80.000
◇□△	400.460	ALPHA	-10.000	BETA	.000
	800.530	DALPHA	.000	DBETA	5.000
△	1200.700	ELEVTR	.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

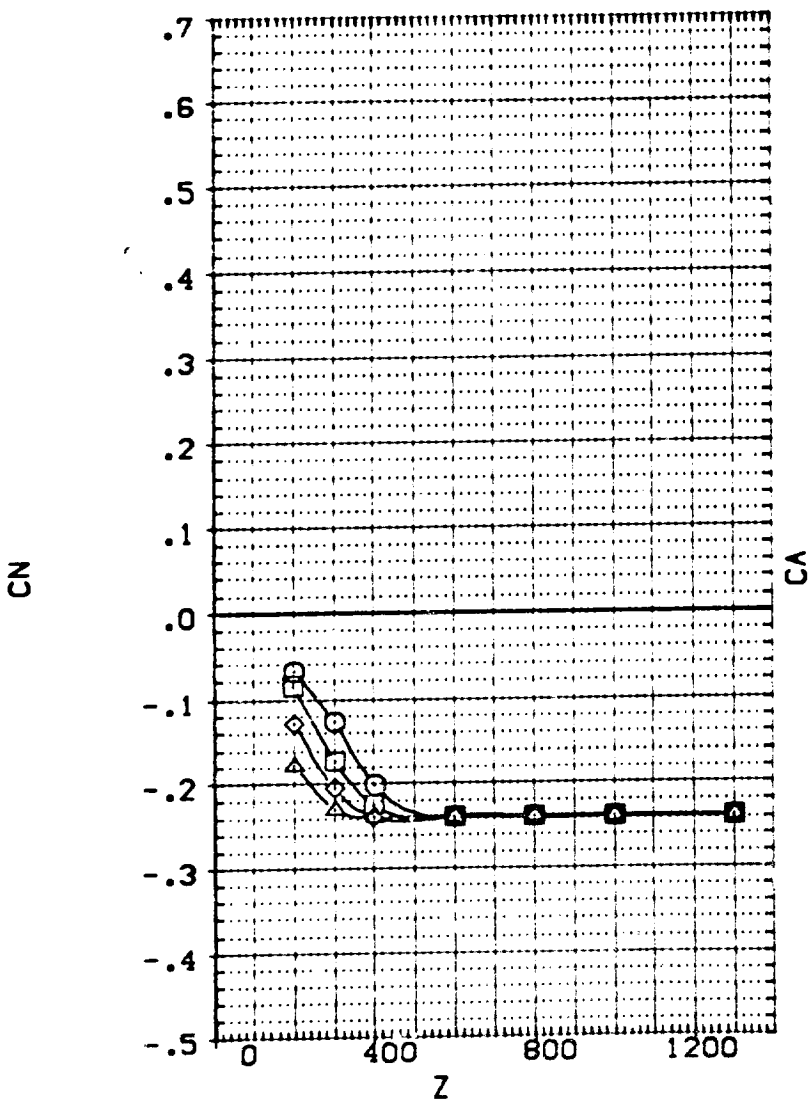


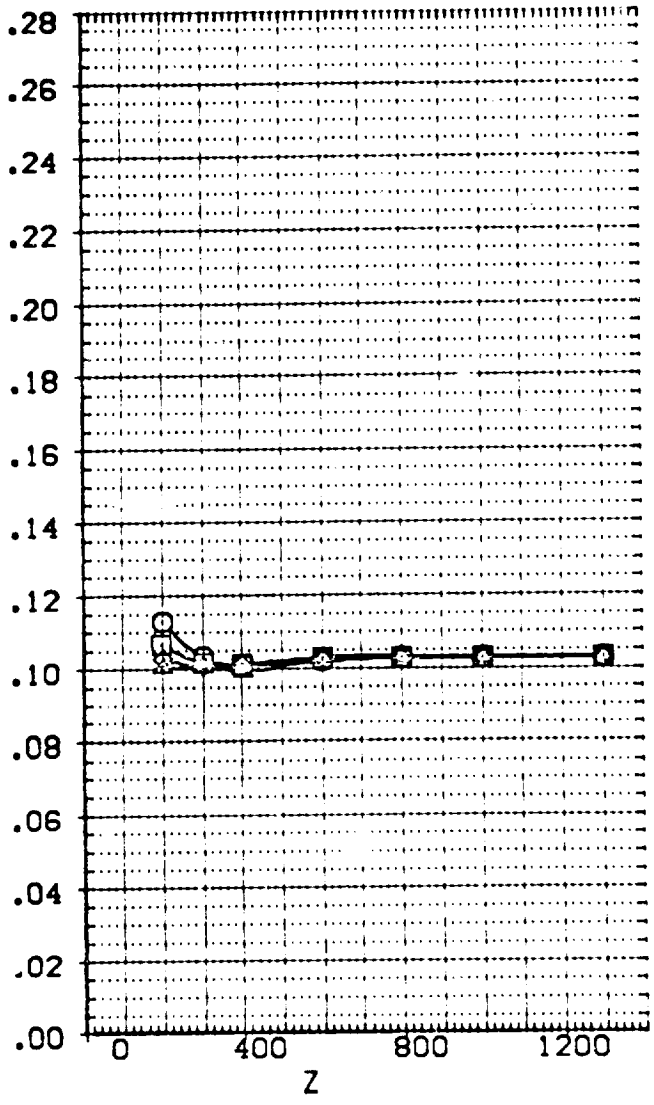
EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ037)

SYMBOL	X		PARAMETRIC VALUES		
○	.201	MACH	4.520	PTOTAL	80.000
□	400.450	ALPHA	-10.000	BETA	.000
◇	800.550	DALPHA	-5.000	DBETA	.000
△	1201.000	ELEVTR	.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



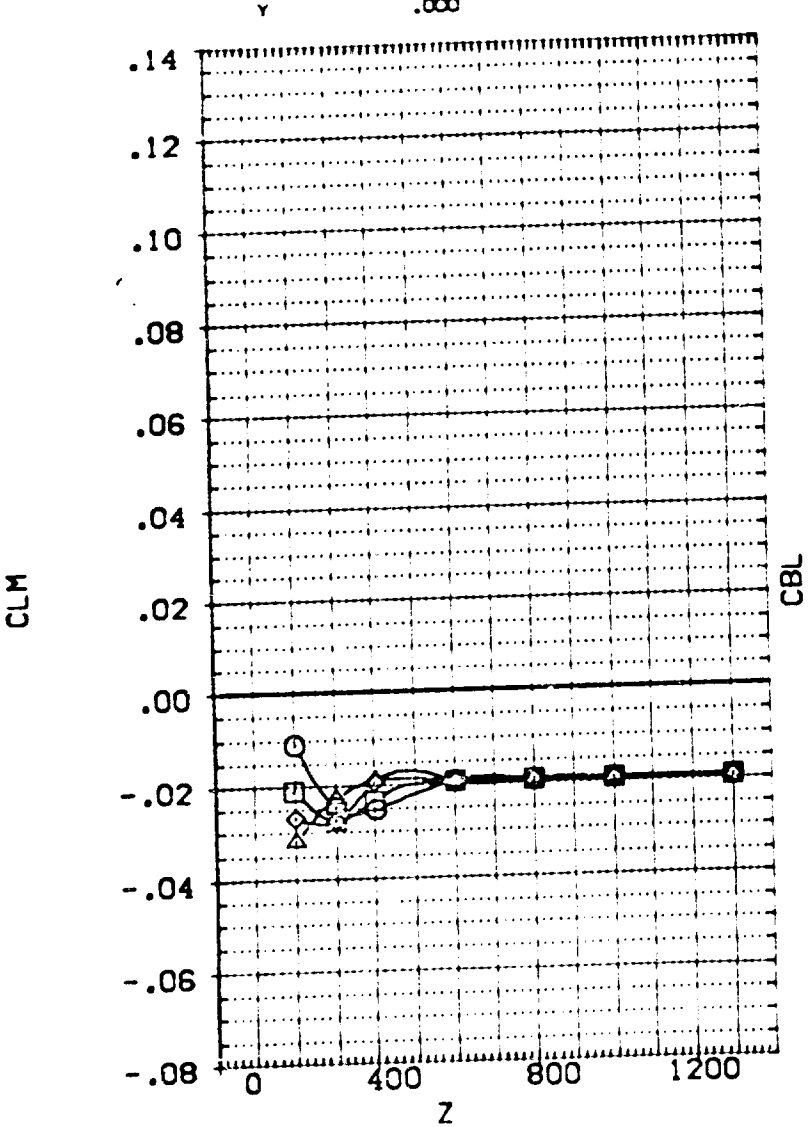


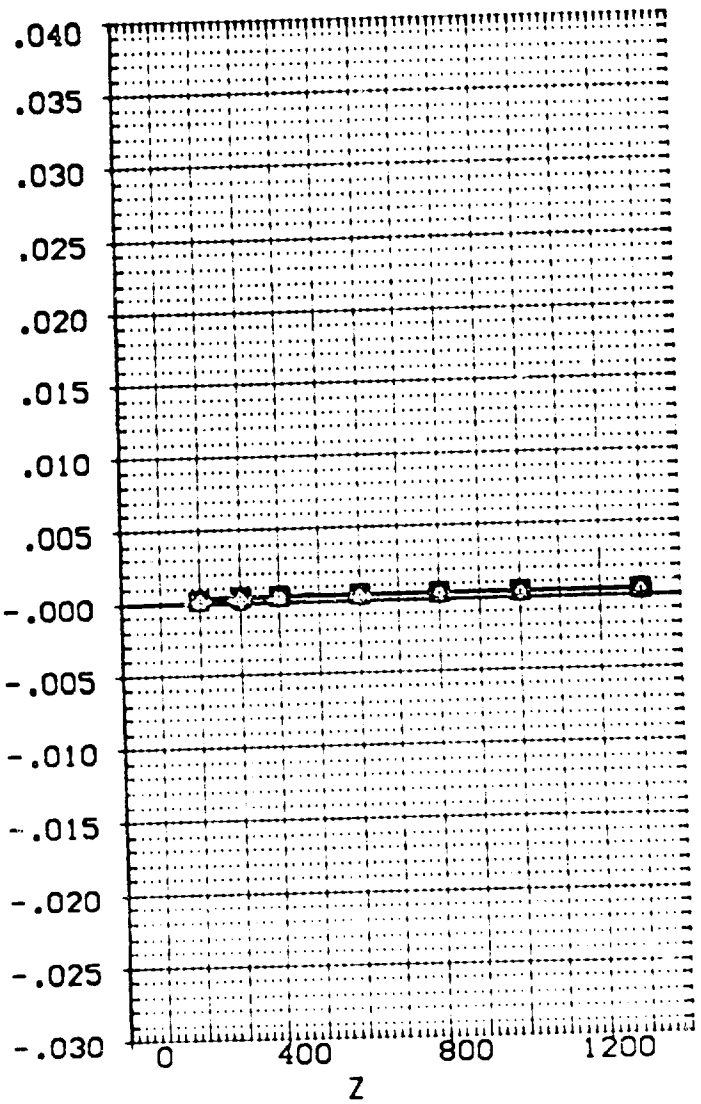
EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ037)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

SYMBOL	X		PARAMETRIC VALUES		
○	.201	MACH	4.520	PTOTAL	80.000
□	400.450	ALPHA	-10.000	BETA	.000
◇	800.550	DALPHA	-5.000	DBETA	.000
△	120:.000	ELEVTR	.000	AILRON	.000
		Y	.000		



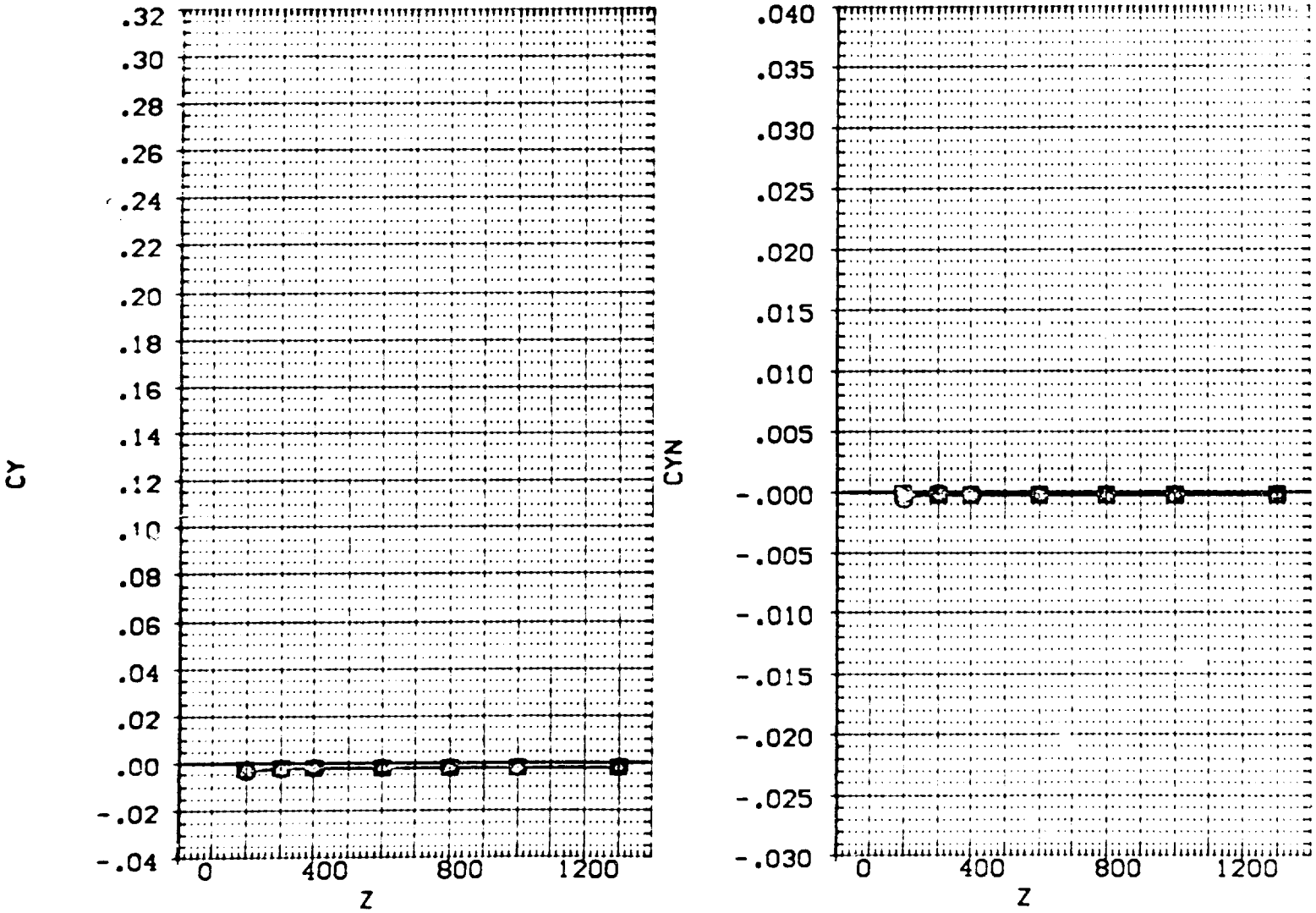


EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

!A!3.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ037)

SYMBOL	X		PARAMETRIC VALUES		
○	.201	MACH	4.520	PTOTAL	80.000
□	400.450	ALPHA	-10.000	BETA	.000
◇	800.550	DALPHA	-5.000	DBETA	.000
△	1201.000	ELEVTR	.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED [illegible] DOCUMENT FOR [illegible] CHARACTERISTICS FOR INDIVIDUAL DATASETS

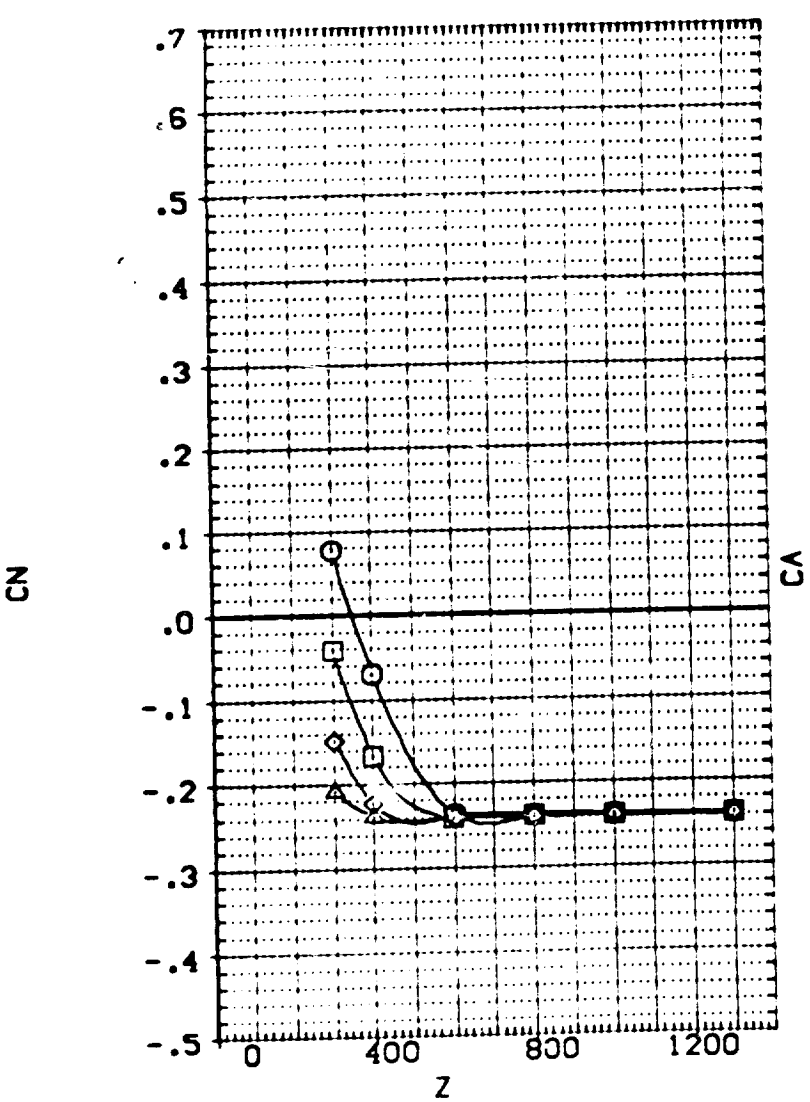


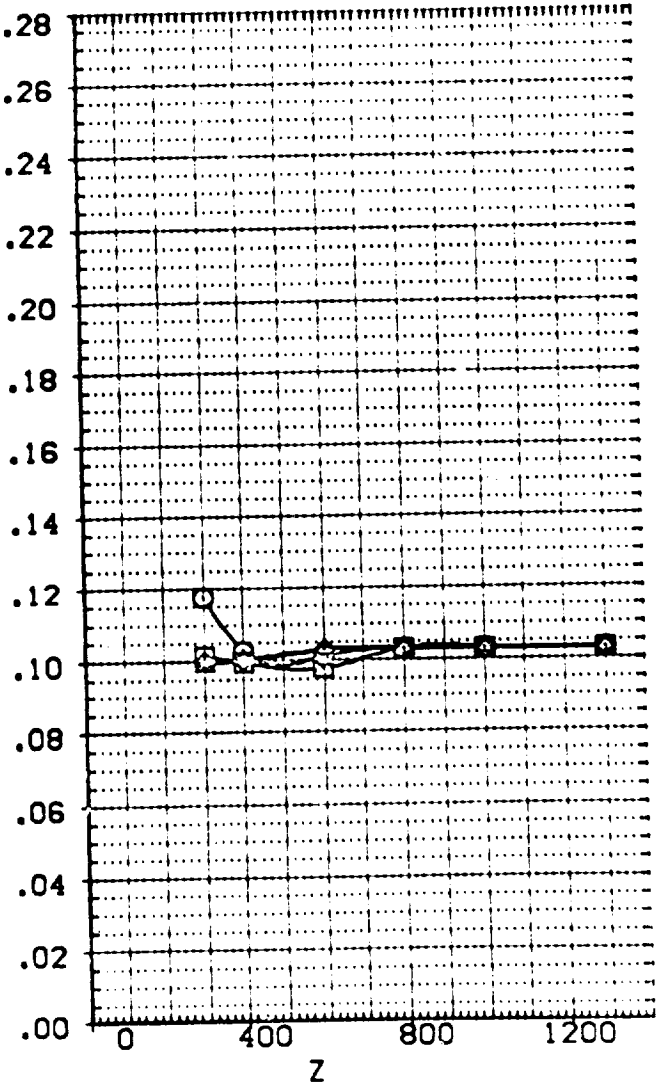
EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ038)

SYMBOL	X		PARAMETRIC VALUES		
○	.123	MACH	4.520	PTOTAL	80.000
□	400.560	ALPHA	-10.000	BETA	.000
◇	800.420	DALPHA	-10.000	DBETA	.000
△	1200.900	ELEVTR	.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



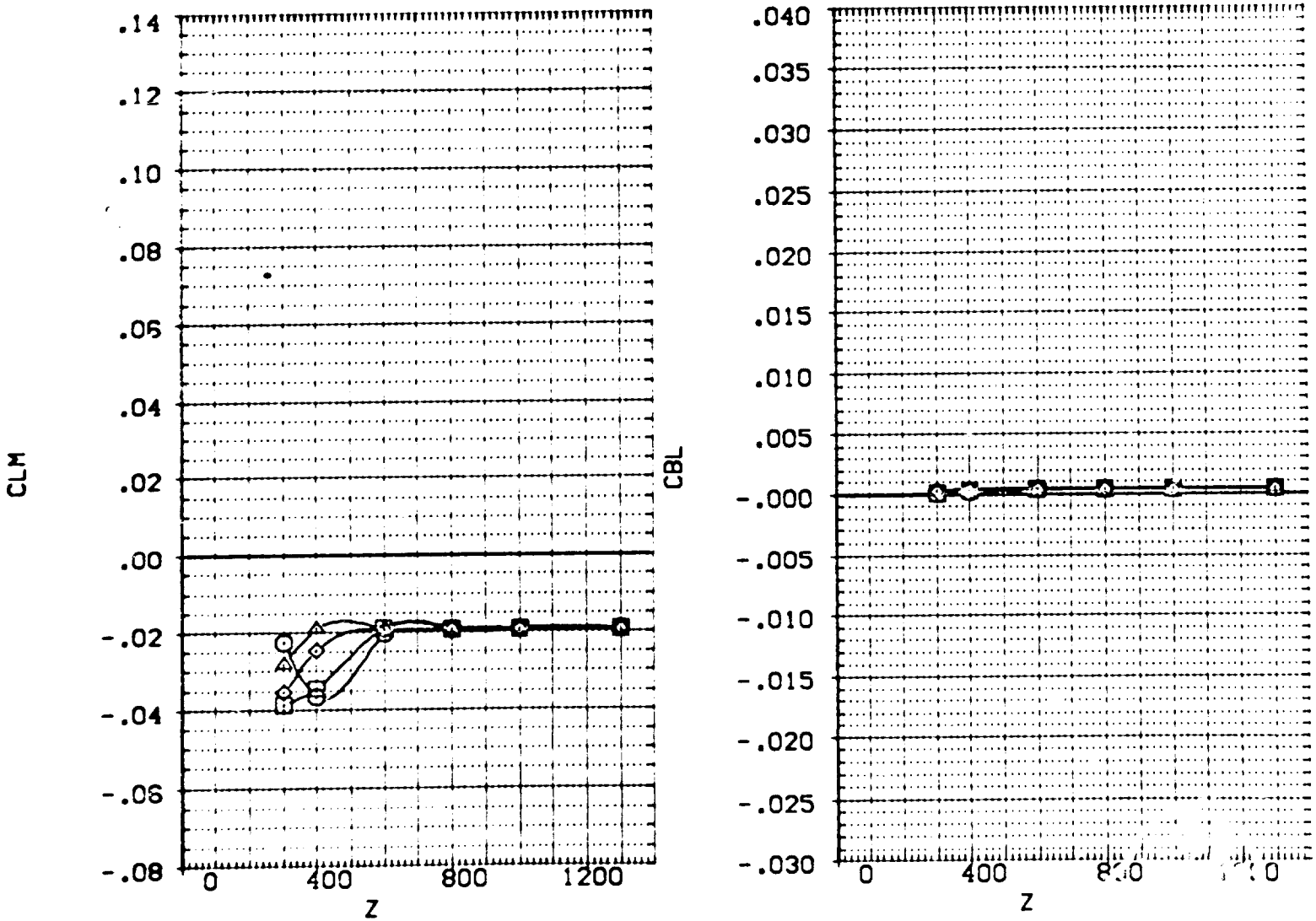


EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

!A13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ038)

SYMBOL	X		PARAMETRIC VALUES		
○	.123	MACH	4.520	PTOTAL	80.000
□	400.560	ALPHA	-10.000	BETA	.000
◇	800.420	DALPHA	-10.000	DBETA	.000
△	1200.900	ELEVTR	.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED DOCUMENT FOR RF CHARACTERISTICS FOR INDIVIDUAL DATASETS

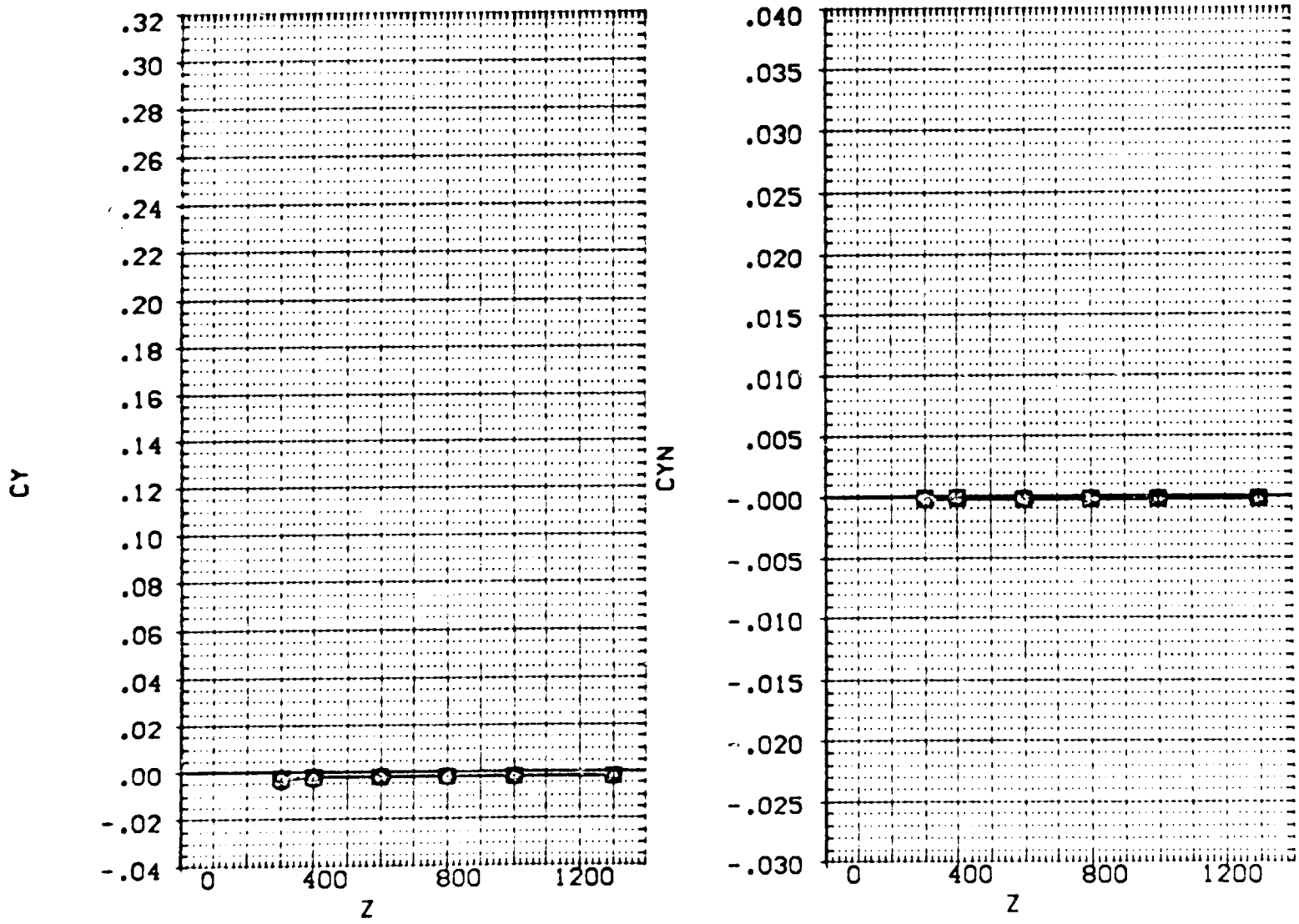


EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

!A13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ038)

SYMBOL	X		PARAMETRIC VALUES		
○	.123	MACH	4.520	PTOTAL	80.000
□	400.560	ALPHA	-10.000	BETA	.000
◇	800.420	DALPHA	-10.000	DBETA	.000
△	1200.900	ELEVTR	.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

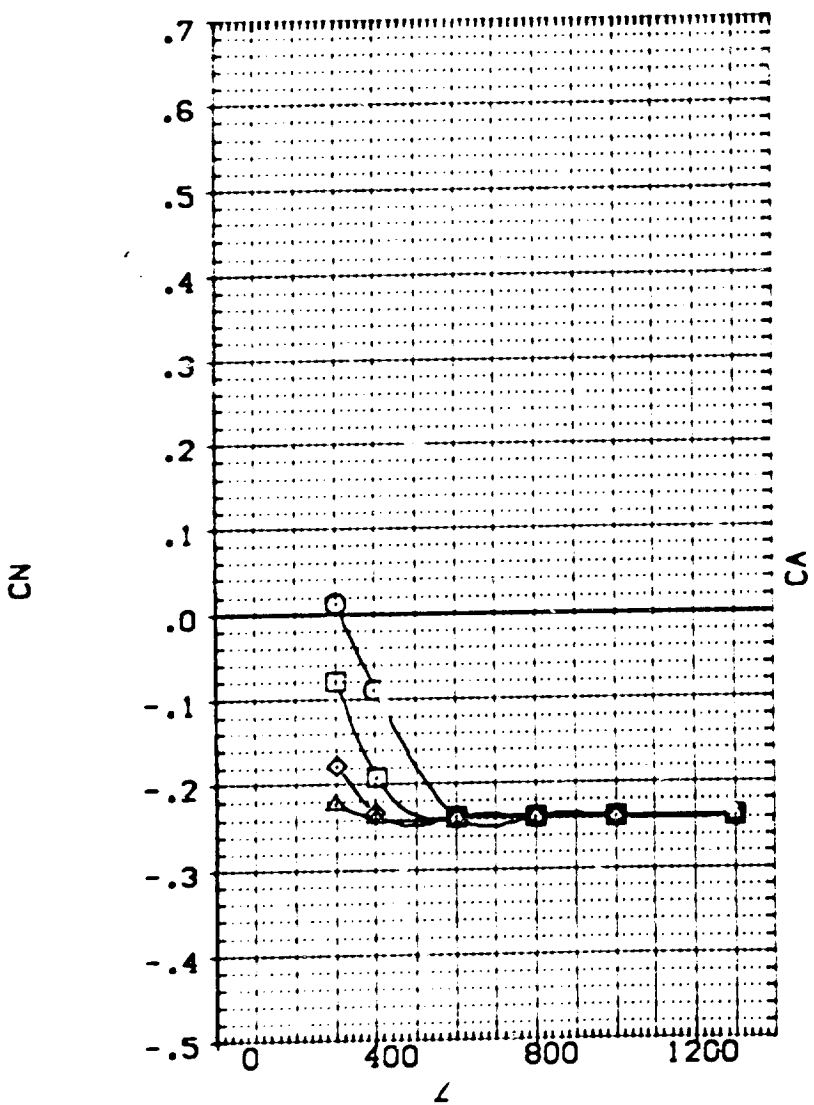


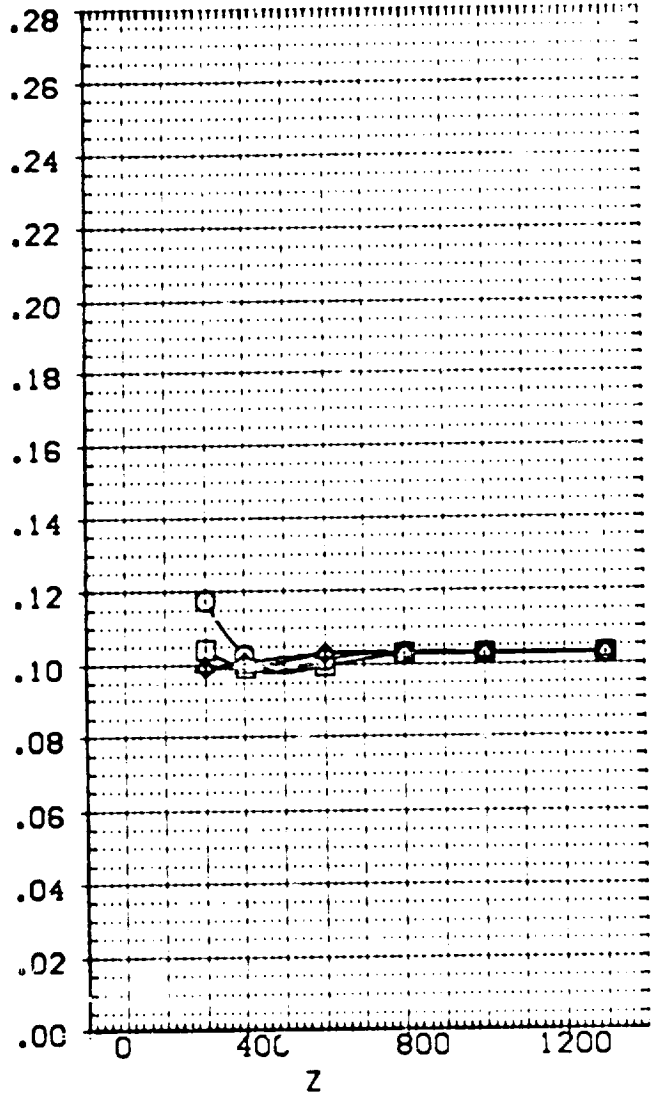
EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

[A13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ039)

SYMBOL	X		PARAMETRIC VALUES		
○	.215	MACH	4.520	PTOTAL	80.000
□	400.370	ALPHA	-10.000	BETA	.000
◇	800.850	DALPHA	-10.000	DBETA	.000
△	1200.600	ELEVTR	.000	AILRON	.000
		Y	200.000		

SEE THE ASSOCIATED DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



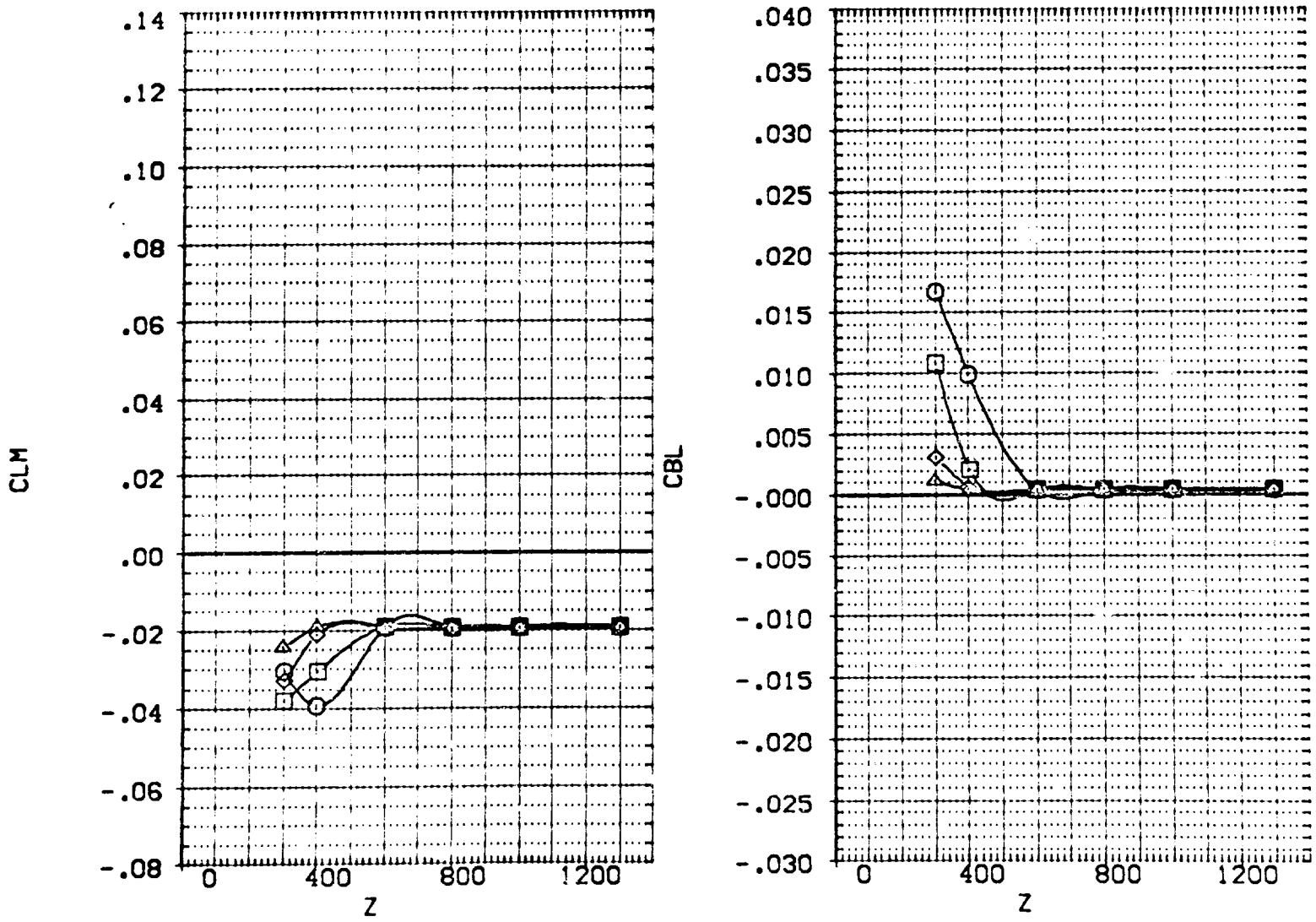


EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ039)

SYMBOL	X		PARAMETRIC VALUES		
○	.215	MACH	4.520	PTOTAL	80.000
□	400.370	ALPHA	-10.000	BETA	.000
◇	800.850	DALPHA	-10.000	DBETA	.000
△	1200.600	ELEVTR	.000	AILRON	.000
		Y	200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

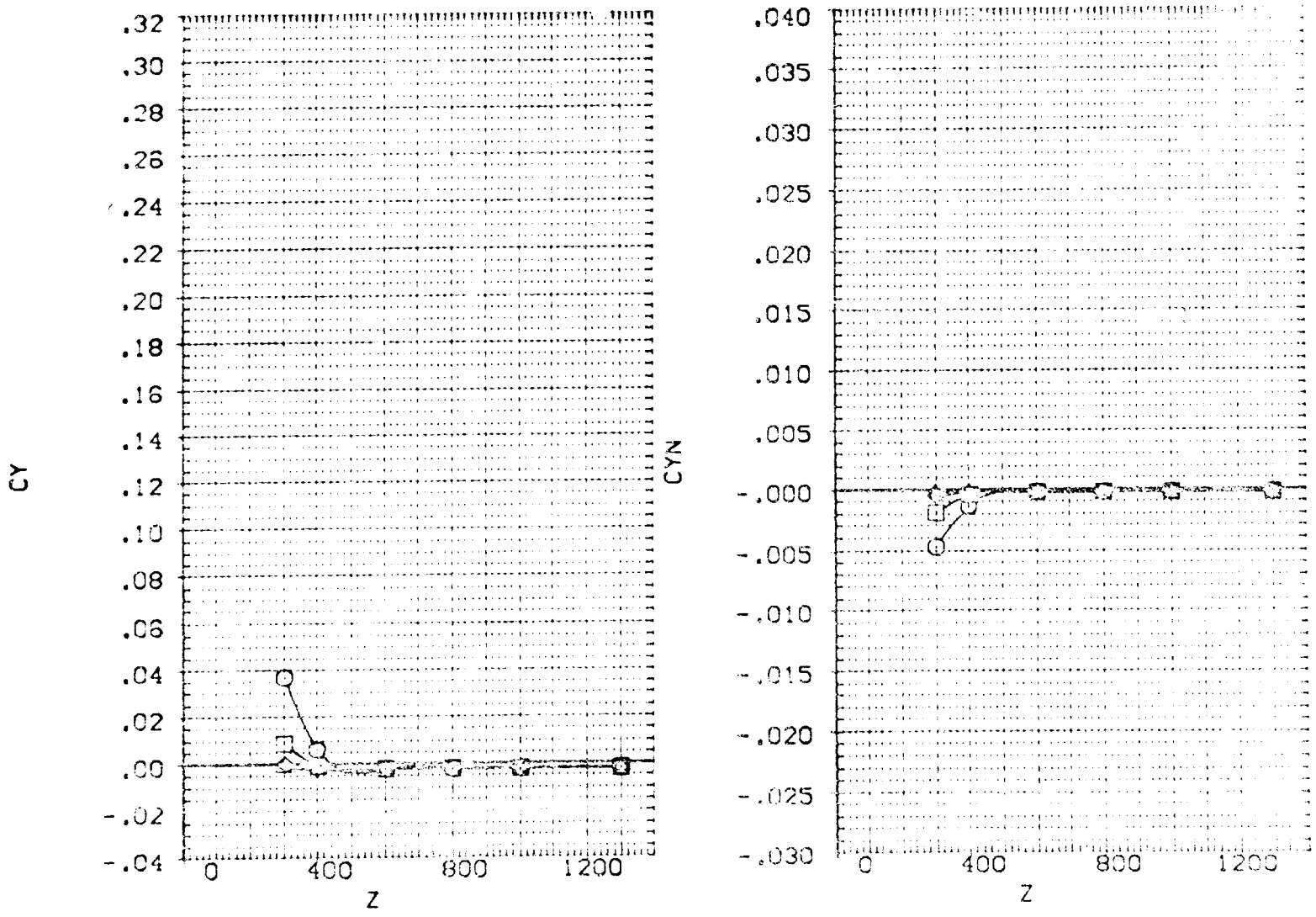


EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

[A13.EXTERNAL TANK(FTD)SEPARATING FROM ORB. 09 (RUN039)

SYMBOL	X		PARAMETRIC VALUES		
○	.215	MACH	4.520	PHITAL	80.000
□	400.370	ALPHA	-10.000	BETA	.000
◇	800.850	DALPHA	-10.000	DBETA	.000
△	1200.600	ELEVTR	.000	AILRON	.000
		Y	200.000		

SEE THE APPROPRIATE DOCUMENT FOR CHARACTERISTICS INDIVIDUAL DATA POINTS

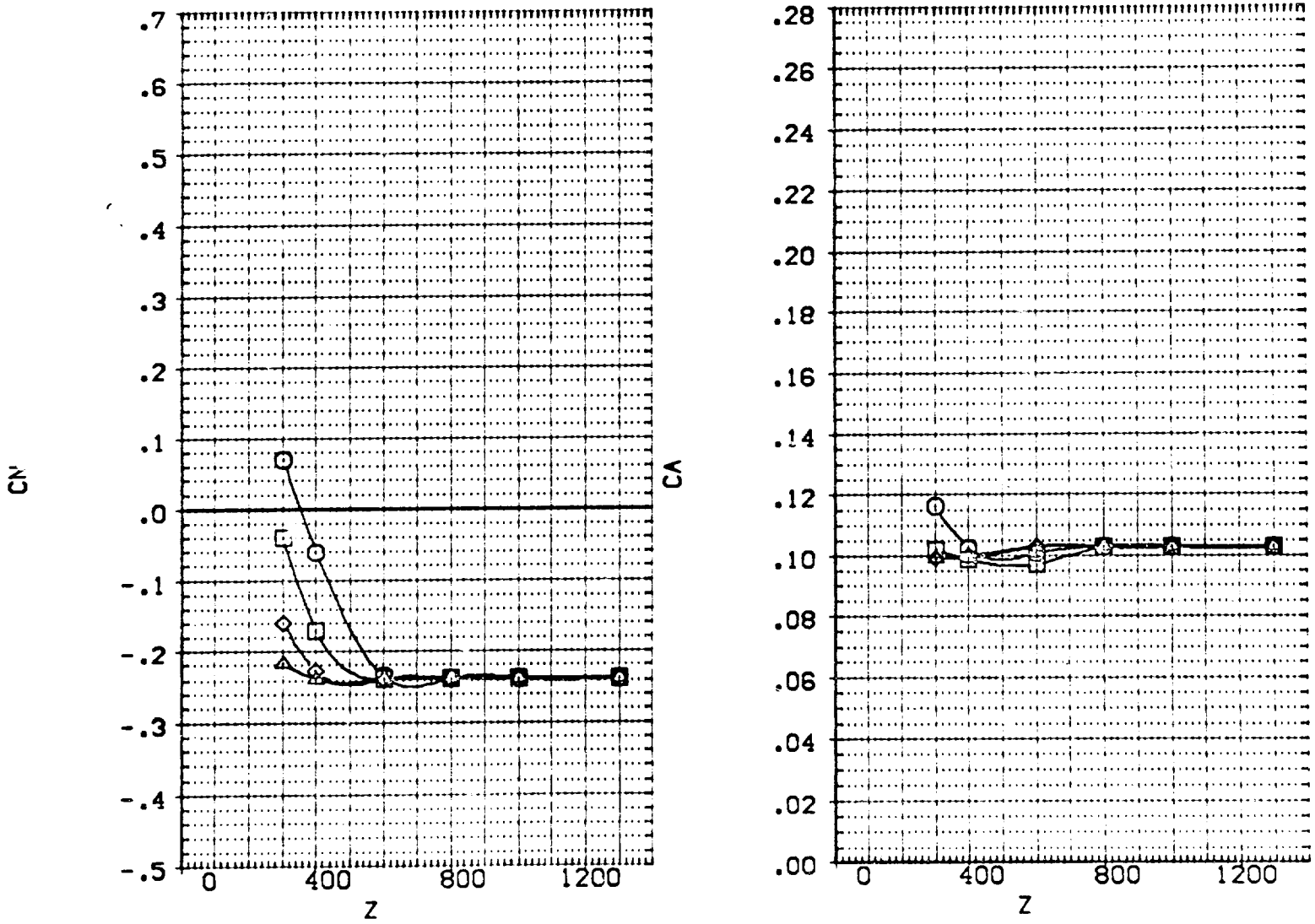


EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ040)

SYMBOL	X		PARAMETRIC VALUES		
○	.034	MACH	4.520	PTOTAL	80.000
◇□	400.570	ALPHA	-10.000	BETA	.000
◇	800.420	DALPHA	-10.000	DBETA	5.000
△	1201.000	ELEVTR	.000	AILRON	.000
		Y	200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

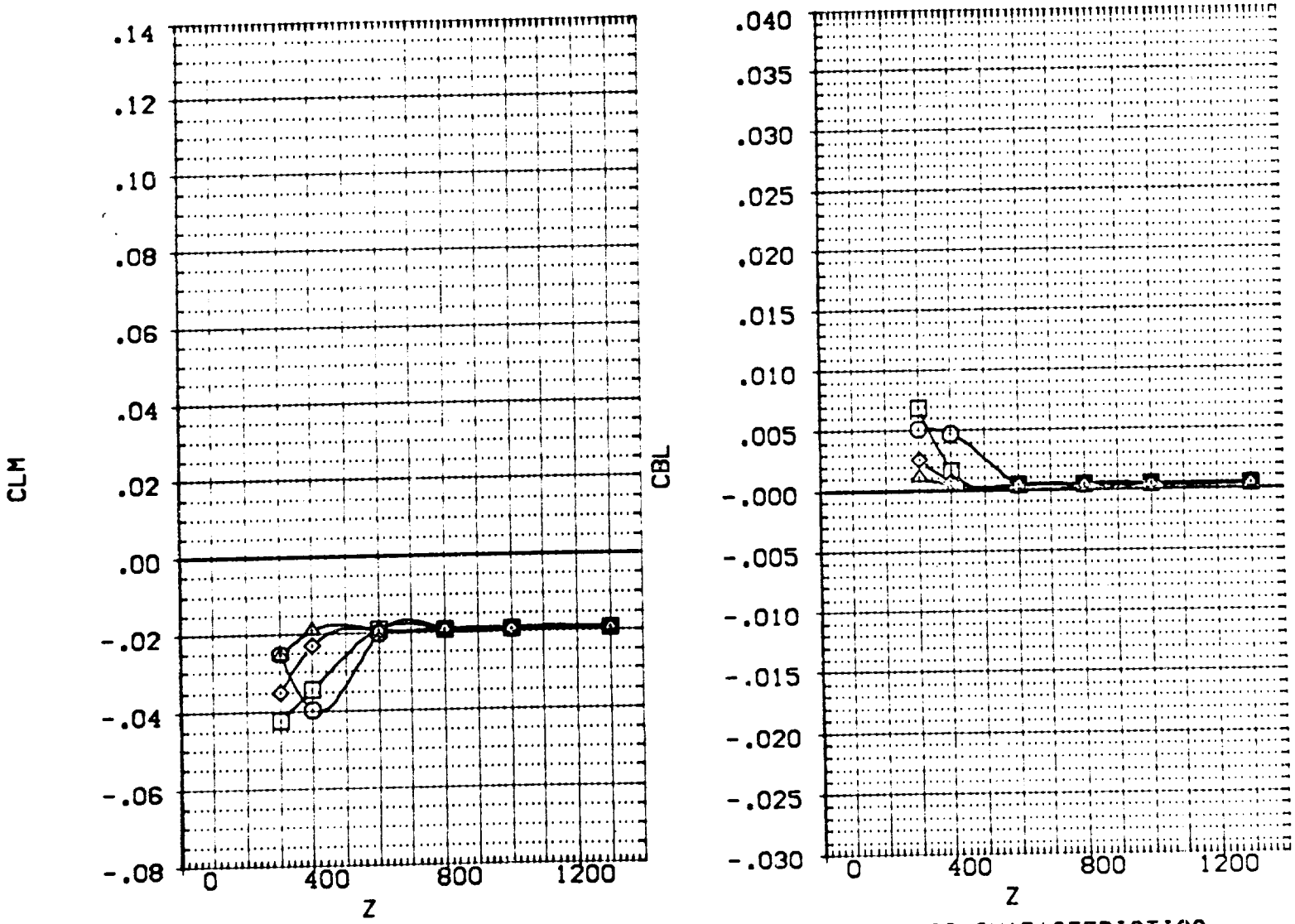


EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

!A13,EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ040)

SYMBOL	X		PARAMETRIC VALUES		
○	.034	MACH	4.520	PTOTAL	80.000
□	400.570	ALPHA	-10.000	BETA	.000
◇	800.420	DALPHA	-10.000	DBETA	5.000
△	1201.000	ELEVTR	.000	AILRON	.000
		Y	200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

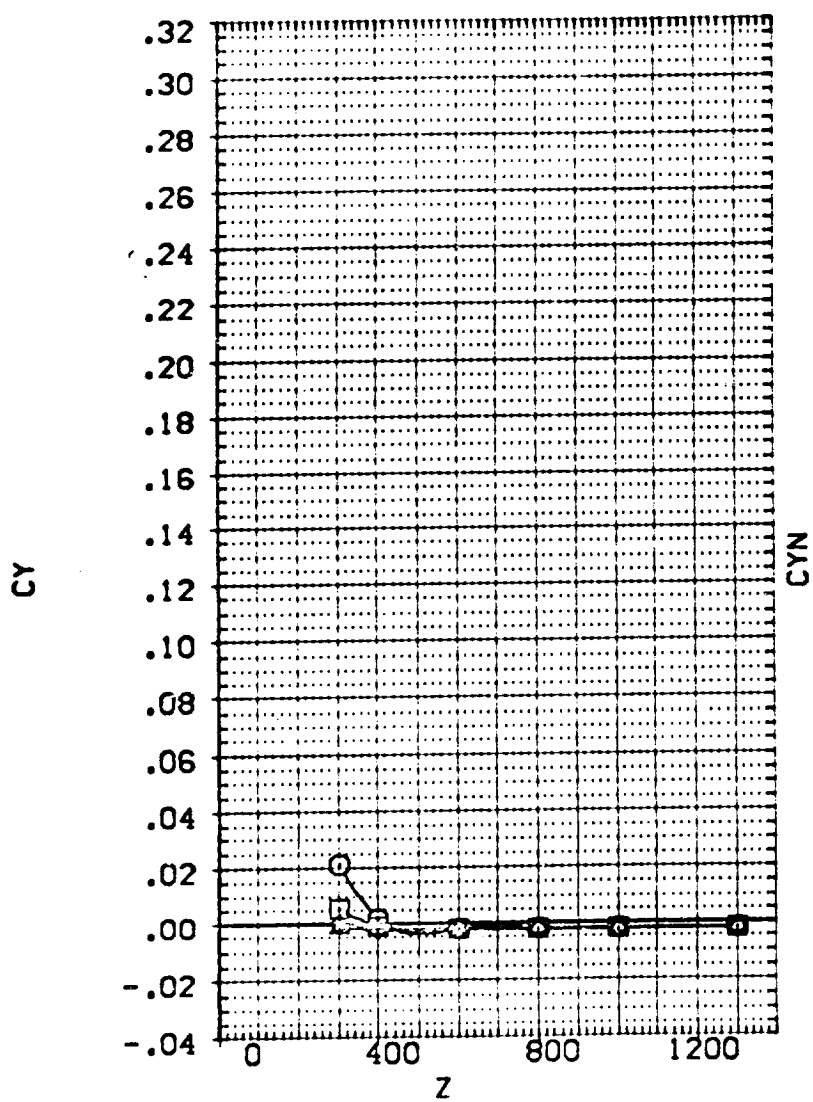


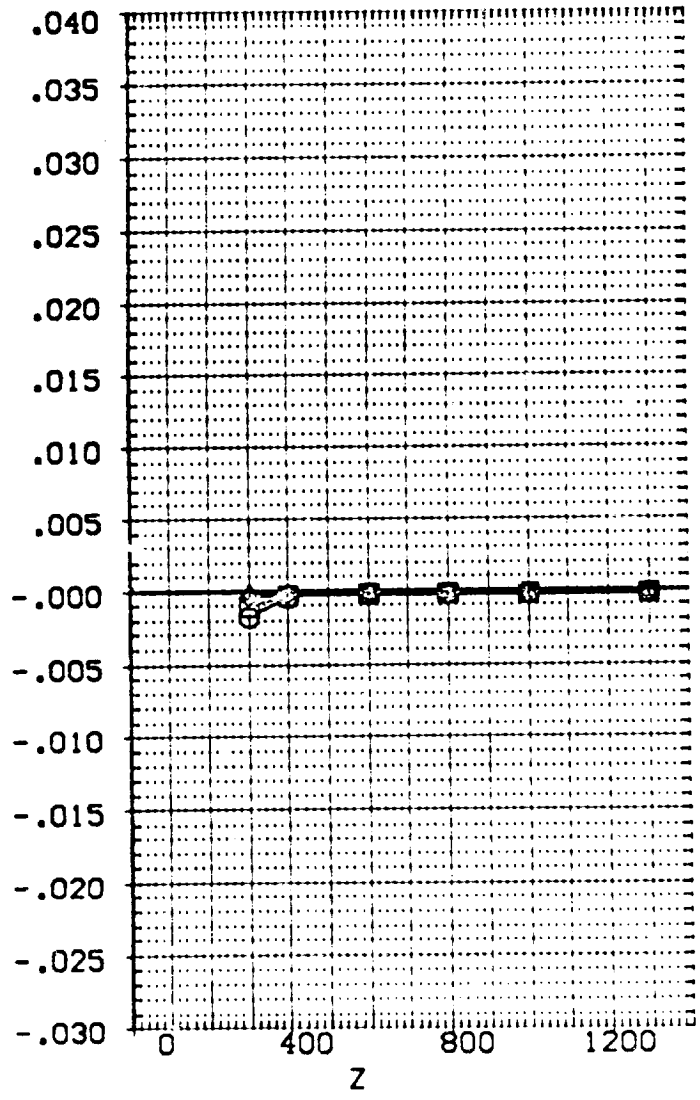
EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ040)

S	BOL	X		PARAMETRIC VALUES		
		.034	MACH	4.520	PTOTAL	80.000
		400.570	ALPHA	-10.000	BETA	.000
		800.420	DALPHA	-10.000	DBETA	5.000
		1201.000	ELEVTR	.000	AILRON	.000
			Y	200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



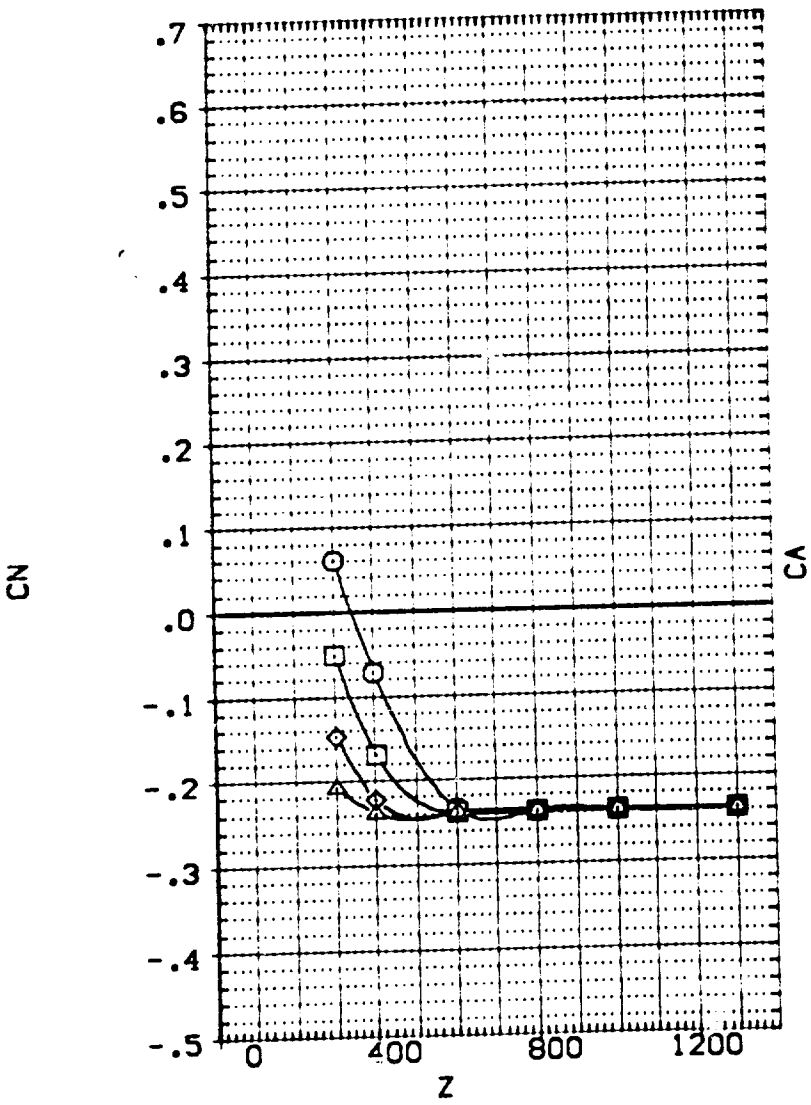


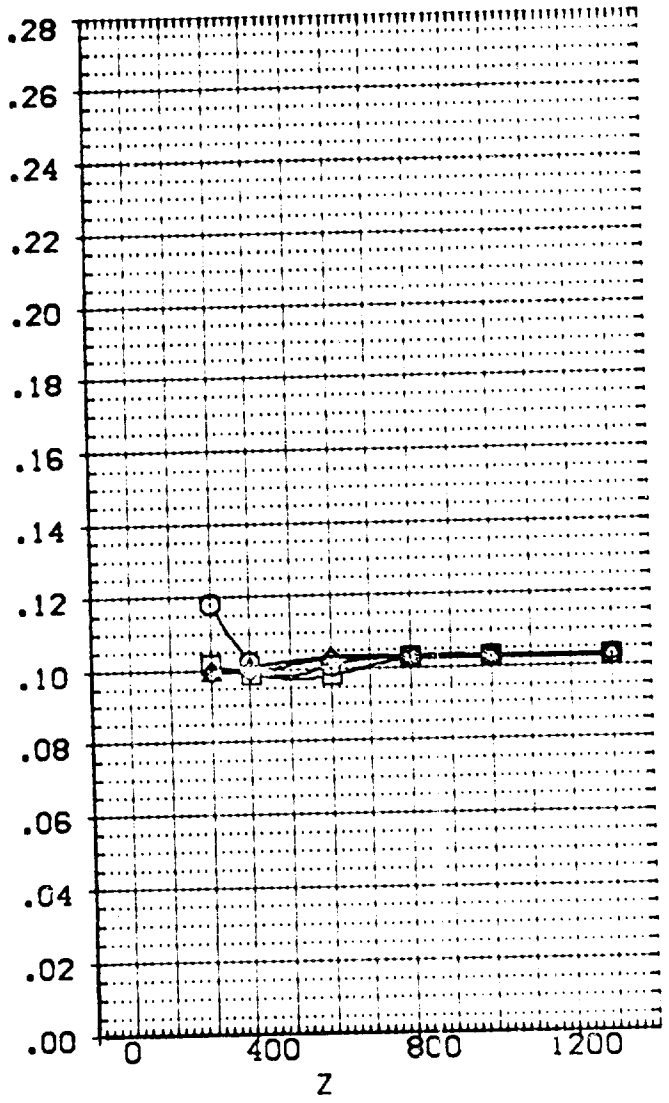
EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ041)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

SYMBOL	X		PARAMETRIC VALUES		
○	.128	MACH	4.520	PTOTAL	80.000
□	400.290	ALPHA	-10.000	BETA	.000
◇	800.420	DALPHA	-10.000	DBETA	5.000
△	1200.800	ELEVTR	.000	AILRON	.000
		Y	.000		



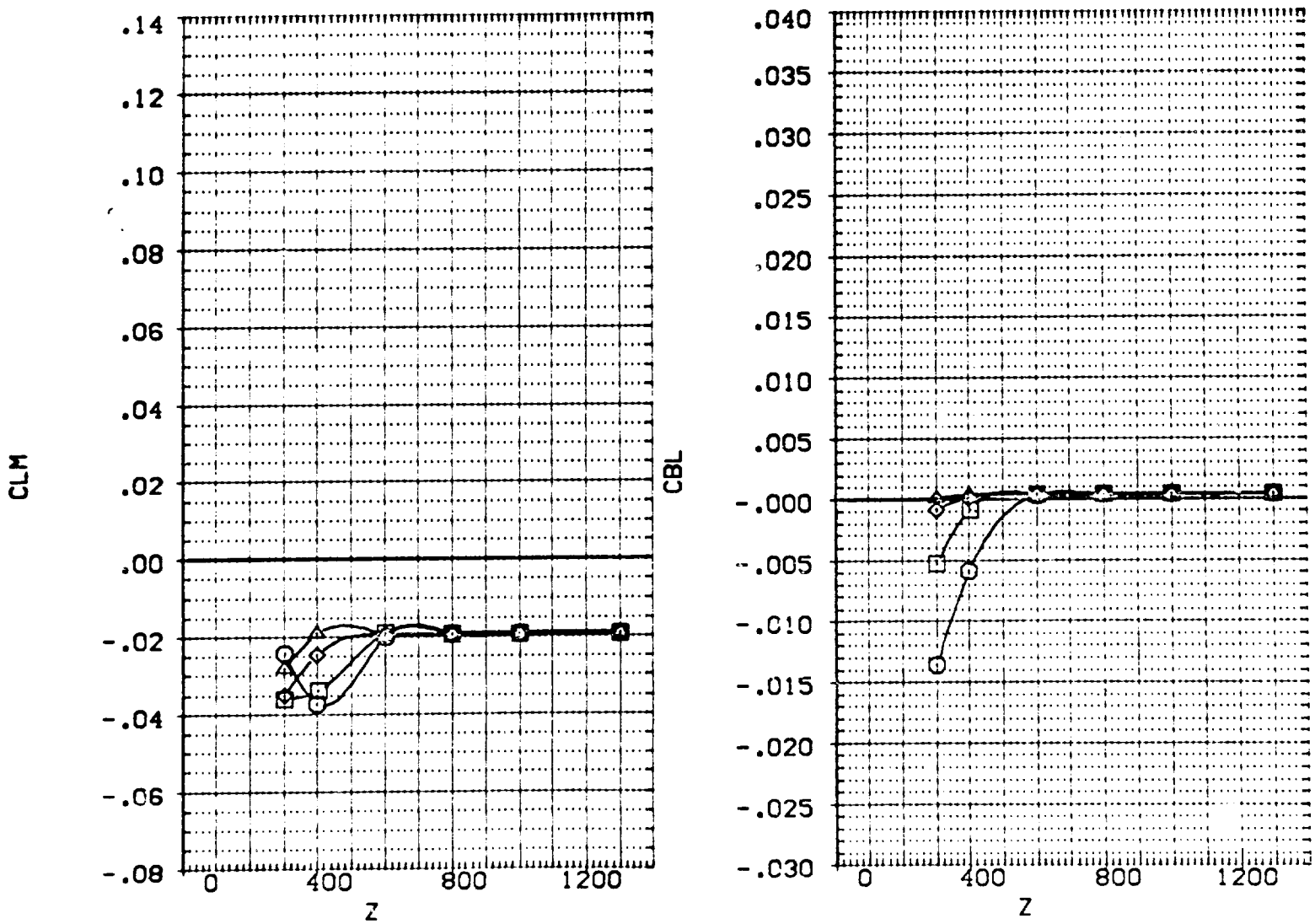


EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ041)

SYMBOL	X		PARAMETRIC VALUES		
○	.128	MACH	4.520	PTOTAL	80.000
□	400.290	ALPHA	-10.000	BETA	.000
◇	800.420	DALPHA	-10.000	DBETA	5.000
△	1200.800	ELEVTR	.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

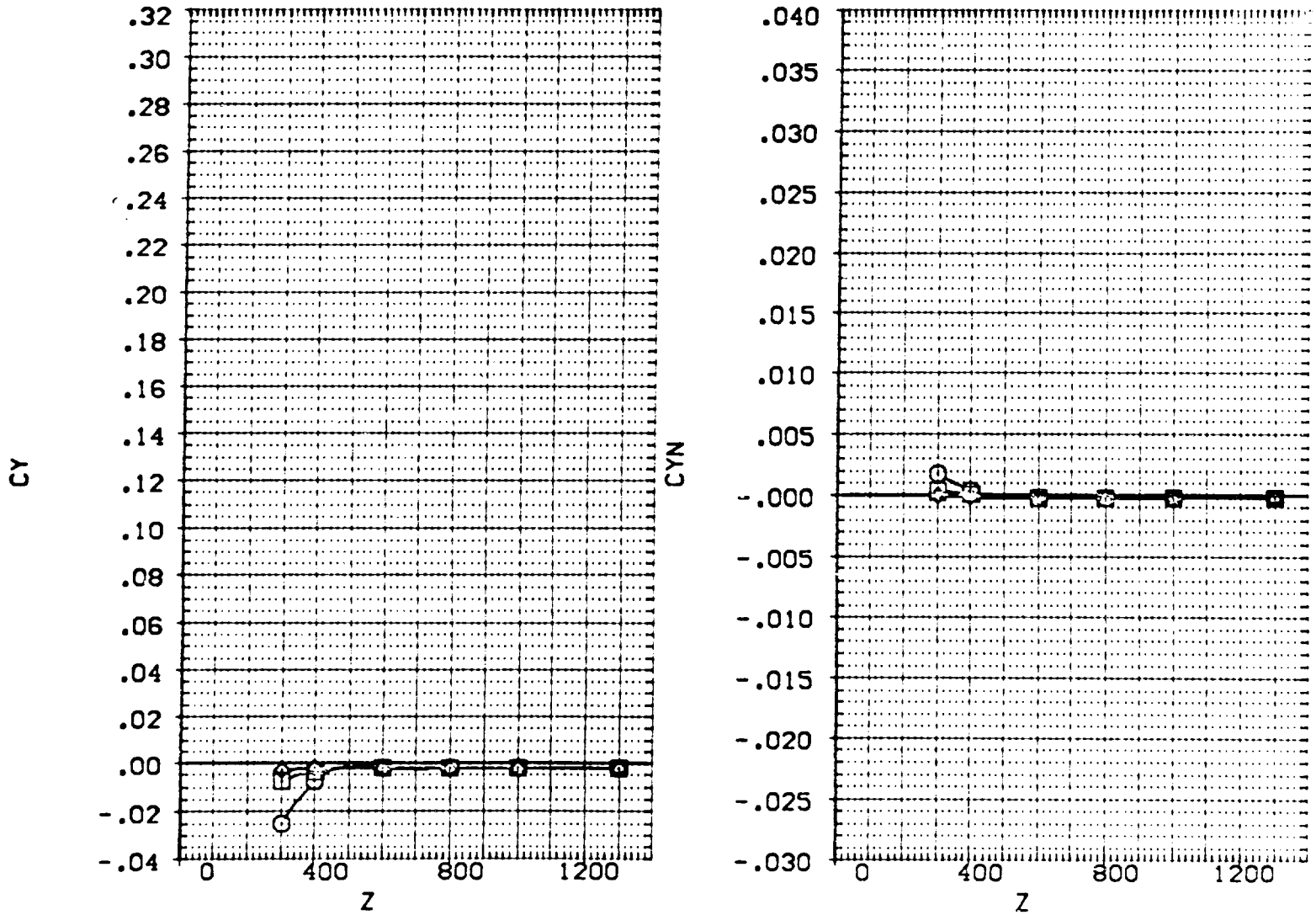


EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ041)

SYMBOL	X		PARAMETRIC VALUES		
○	.128	MACH	4.520	PTOTAL	80.000
□	400.290	ALPHA	-10.000	BETA	.000
◇	800.420	DALPHA	-10.000	DBETA	5.000
△	1200.800	ELEVTR	.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

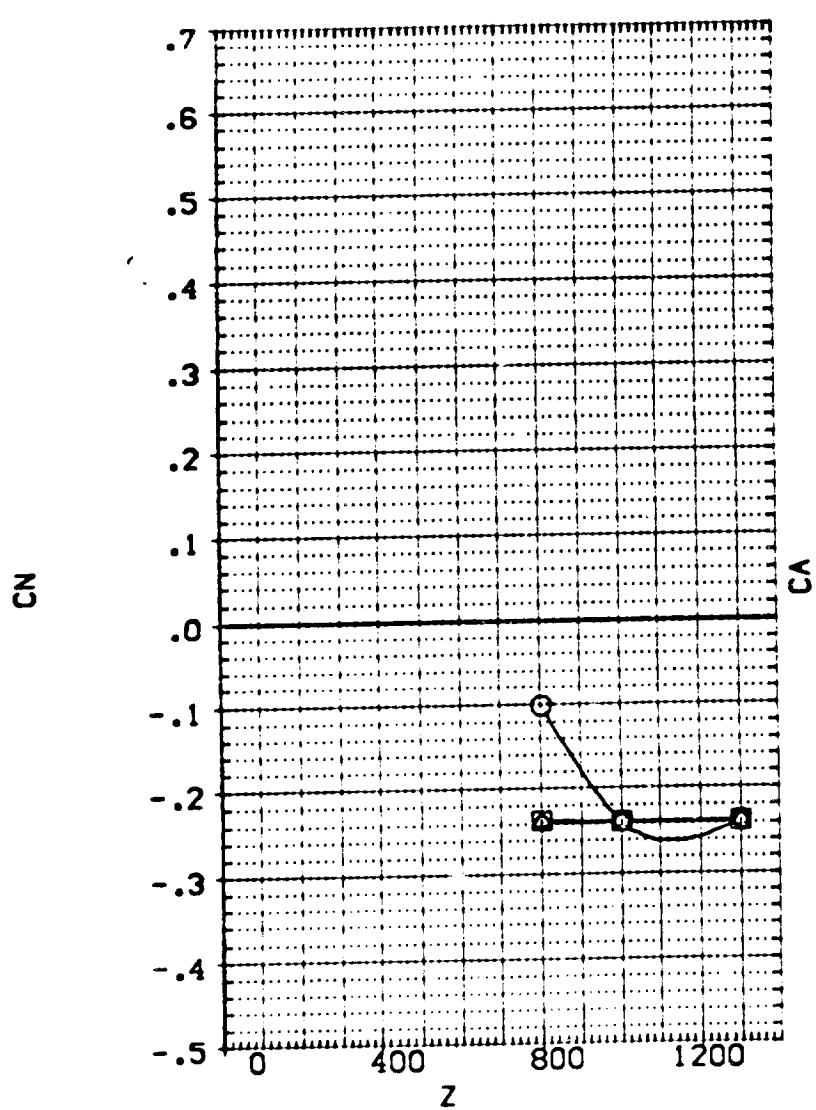


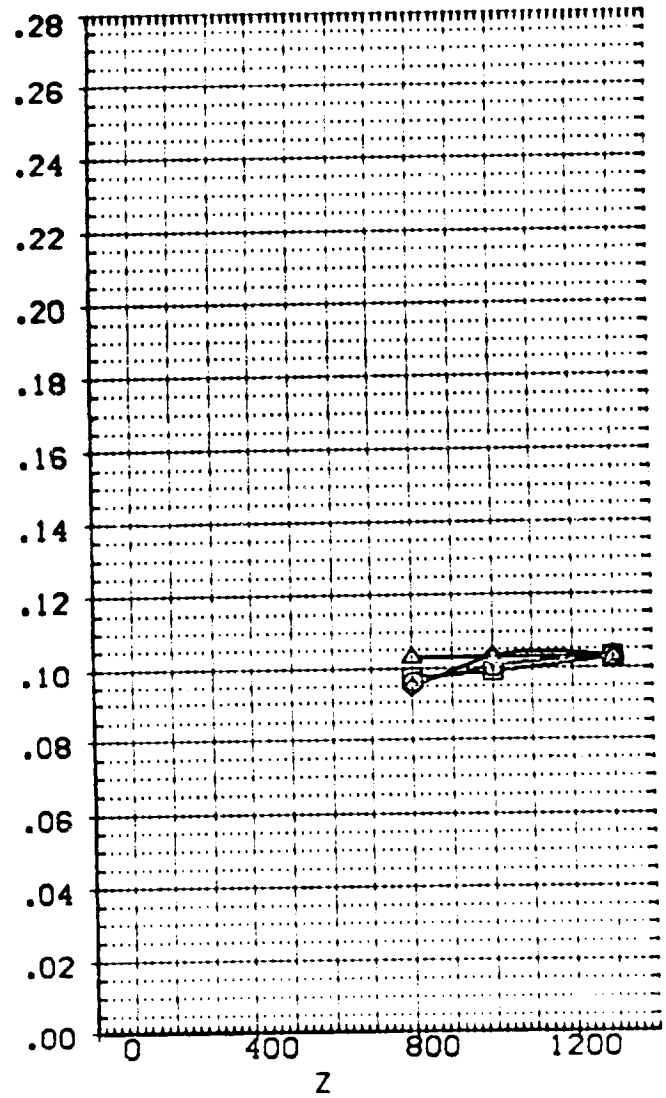
EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

!A13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ042)

SYMBOL	X		PARAMETRIC VALUES		
○	.164	MACH	4.520	PTOTAL	80.000
□	400.680	ALPHA	-10.000	BETA	.000
◇	800.610	DALPHA	-20.000	DBETA	.000
△	1200.500	ELEVTR	.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMEN FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



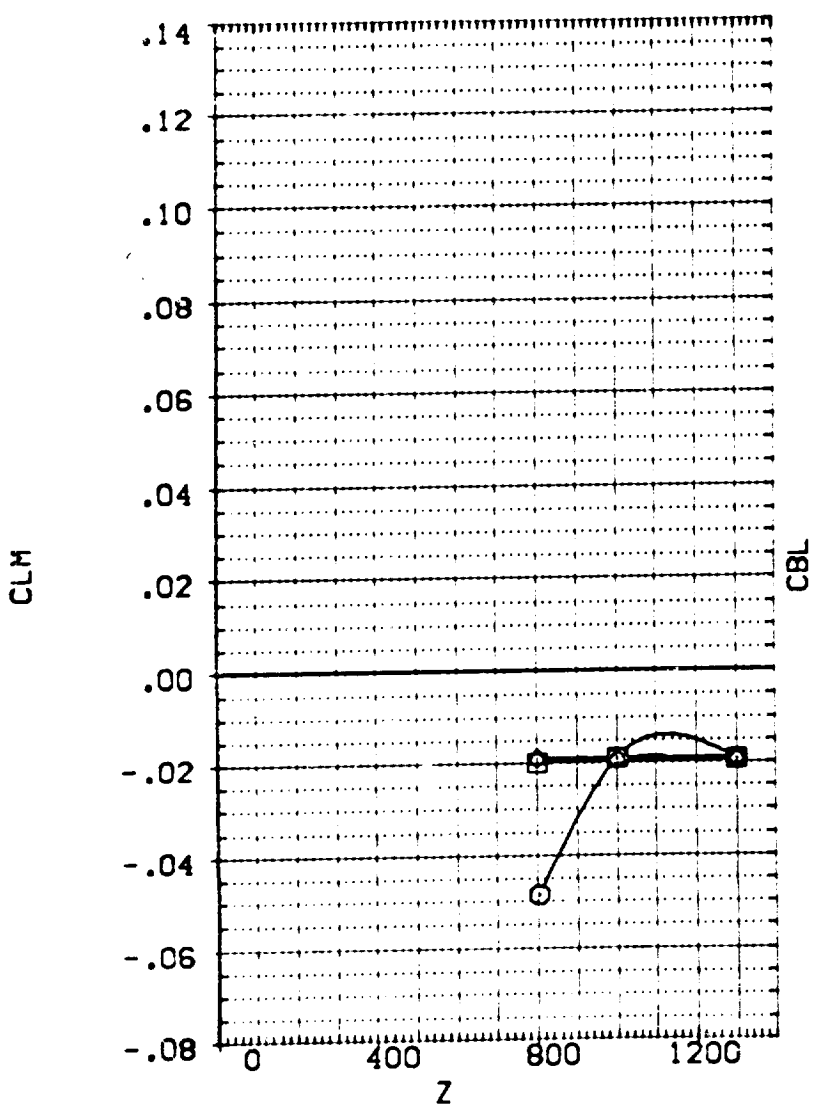


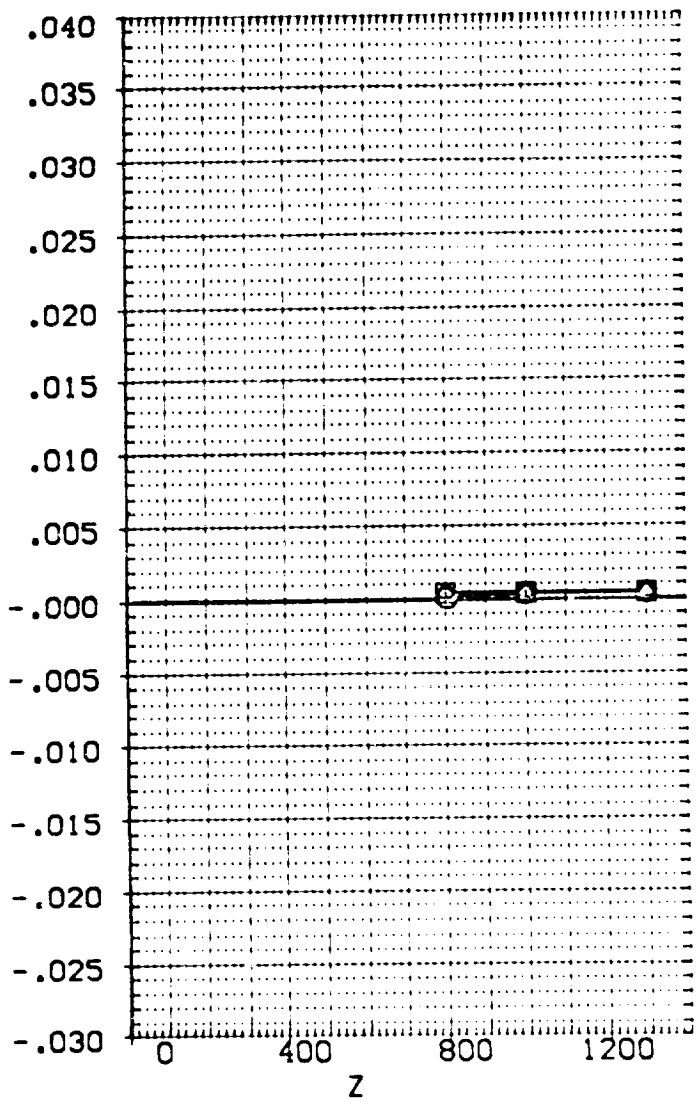
EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

!A13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ042)

SYMBOL	X		PARAMETRIC VALUES		
○	.164	MACH	4.520	PTOTAL	80.000
□	400.680	ALPHA	-10.000	BETA	.000
◇	800.610	DALPHA	-20.000	DBETA	.000
△	1200.500	ELEVTR	.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



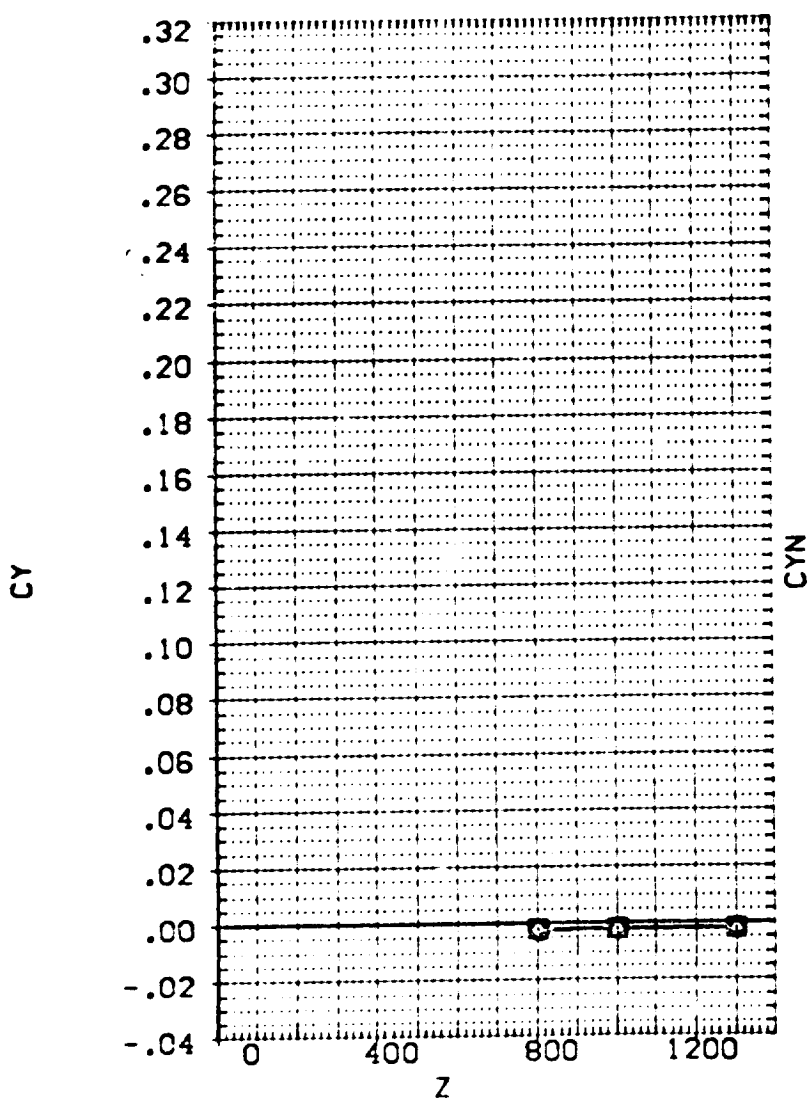


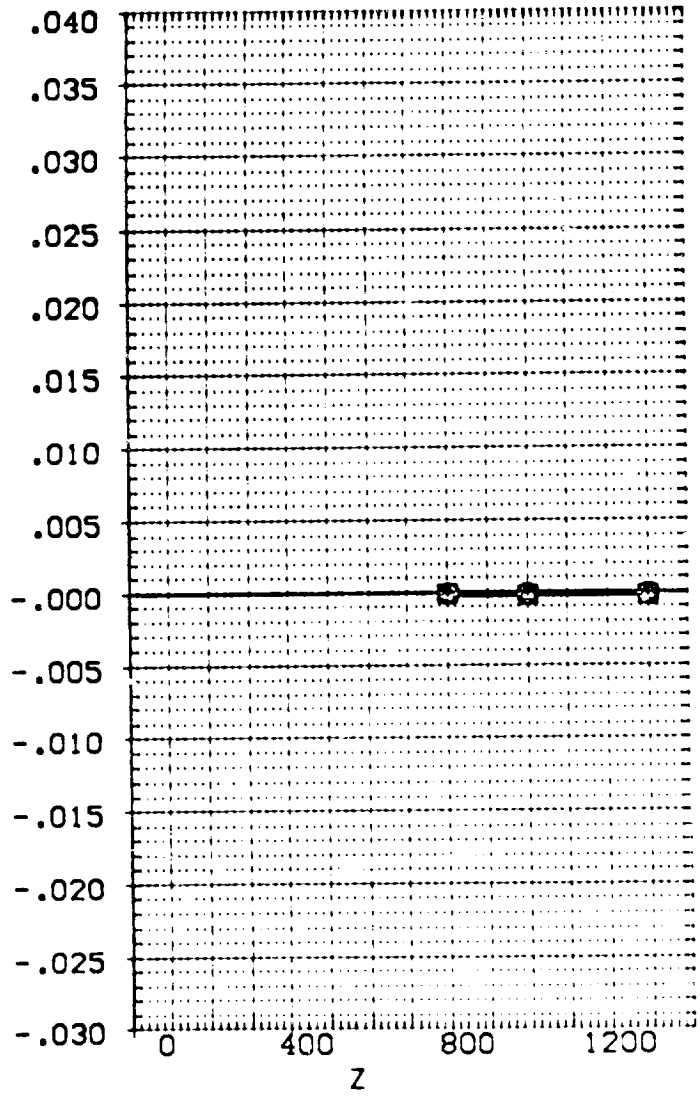
EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ042)

SYMBOL	X		PARAMETRIC VALUES		
○	.164	MACH	4.520	PTOTAL	80.000
□	400.680	ALPHA	-10.000	BETA	.000
◇	800.610	DALPHA	-20.000	DBETA	.000
△	1200.500	ELEVTR	.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



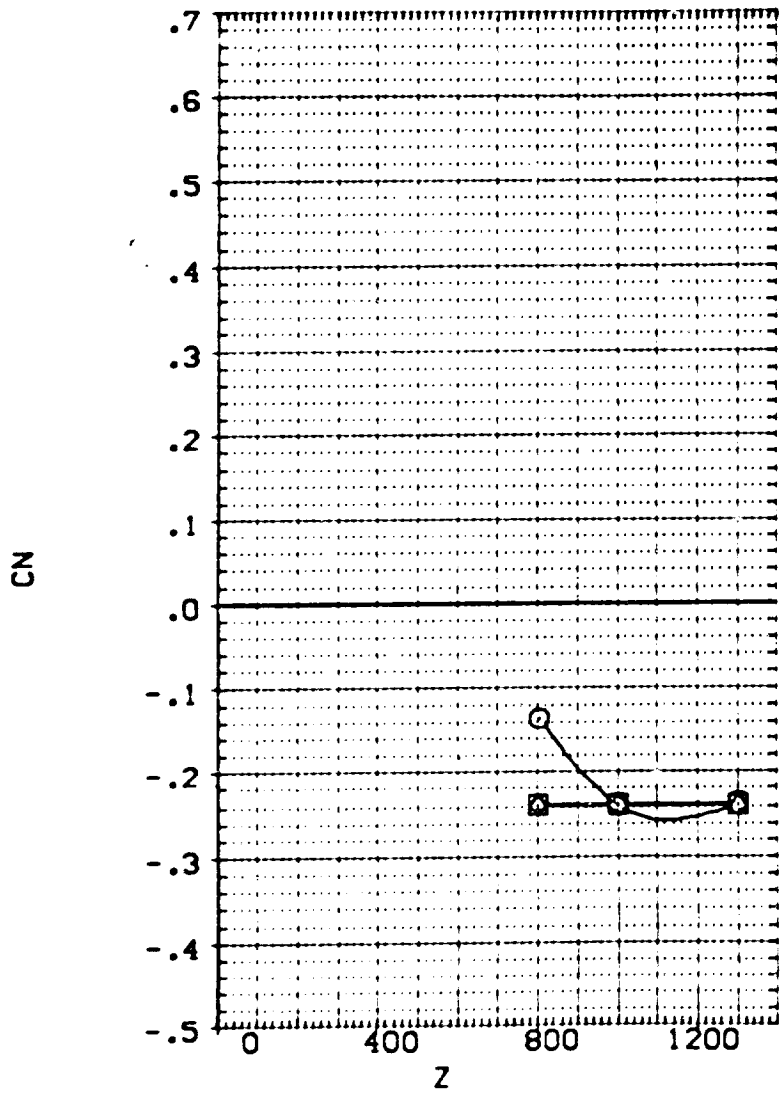


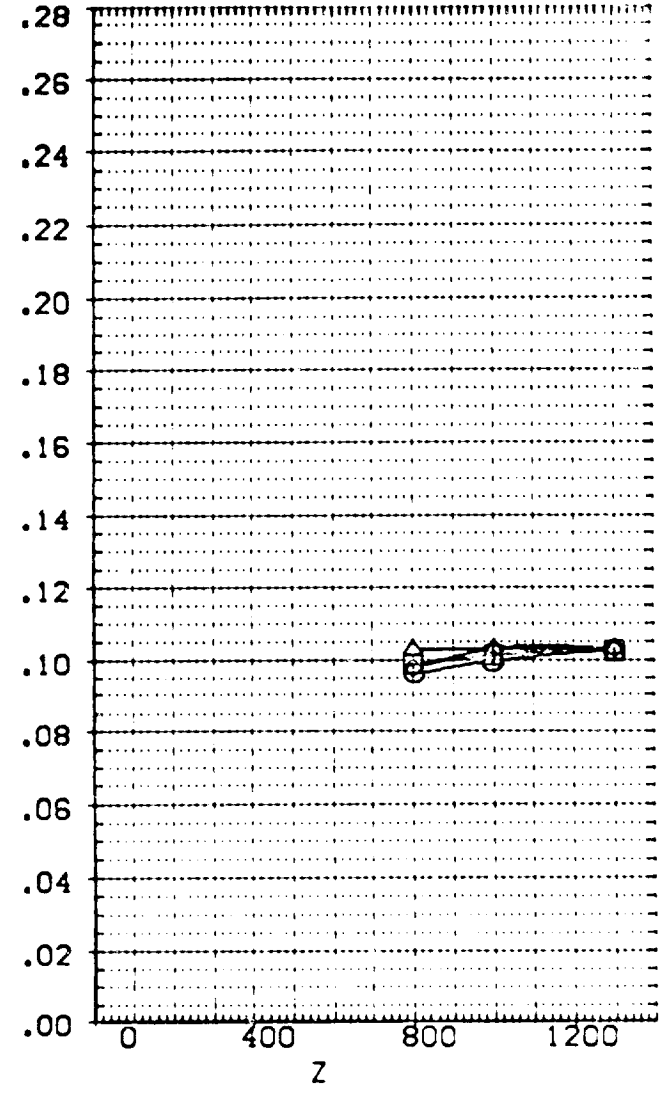
EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

!A13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ043)

SYMBOL	x		PARAMETRIC VALUES		
	.054	MACH	4.520	PTOTAL	80.000
◇	400.490	ALPHA	-10.000	BETA	.000
□	800.440	DALPHA	-20.000	DBETA	.000
△	1200.700	ELEVTR	.000	AILRON	.000
		Y	200.000		

SEE THE ASSOCI... DOCUMENT FOR R... CHARACTERISTICS F... INDIVIDUAL DATASETS



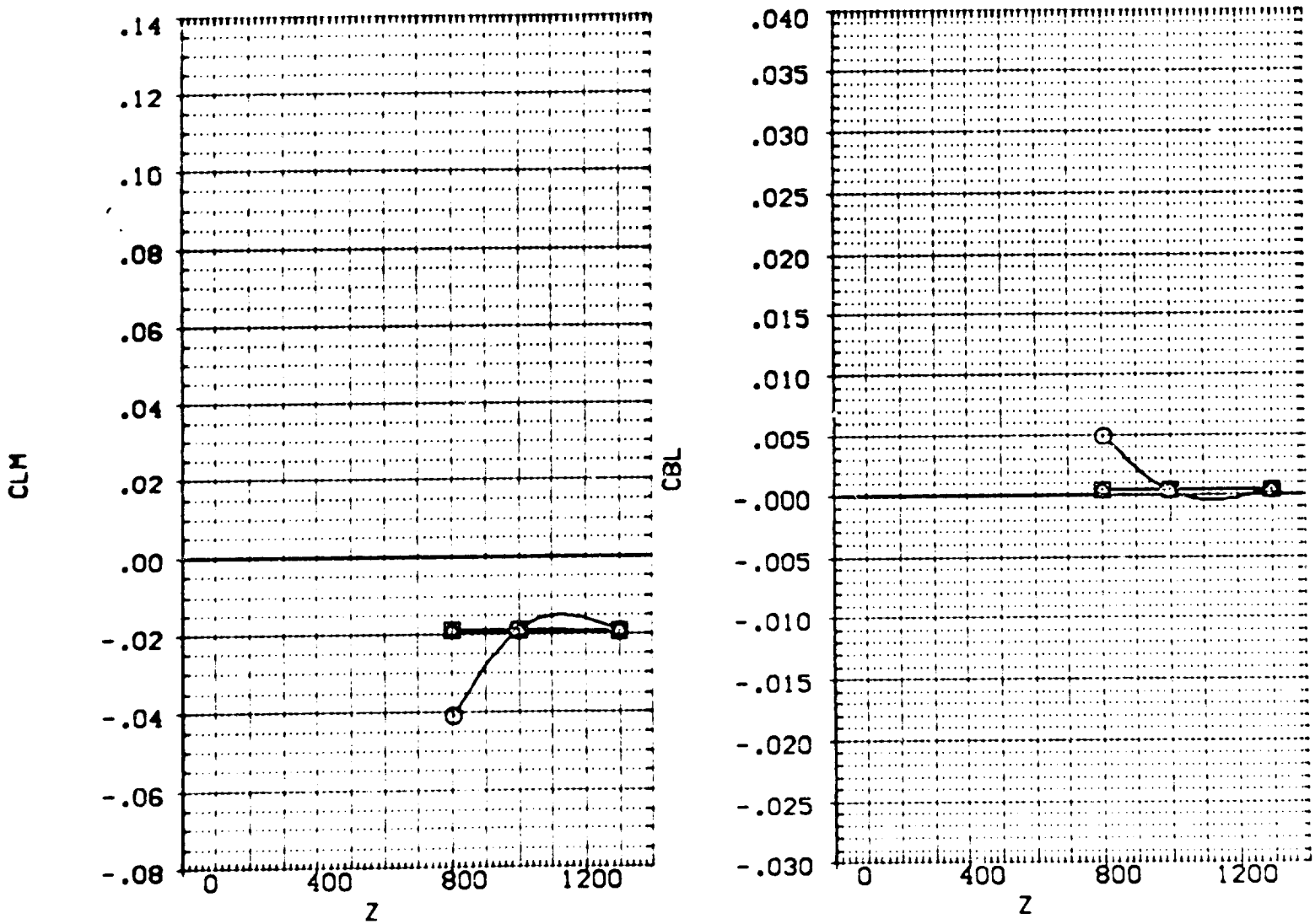


EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

!A13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ043)

SYMBOL	X		PARAMETRIC VALUES		
○	.054	MACH	4.570	PTOTAL	80.000
◇	400.490	ALPHA	-10.000	BETA	.000
□	800.440	DALPHA	-20.000	DBETA	.000
△	1200.700	ELEVTR	.000	AILRON	.000
		Y	200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

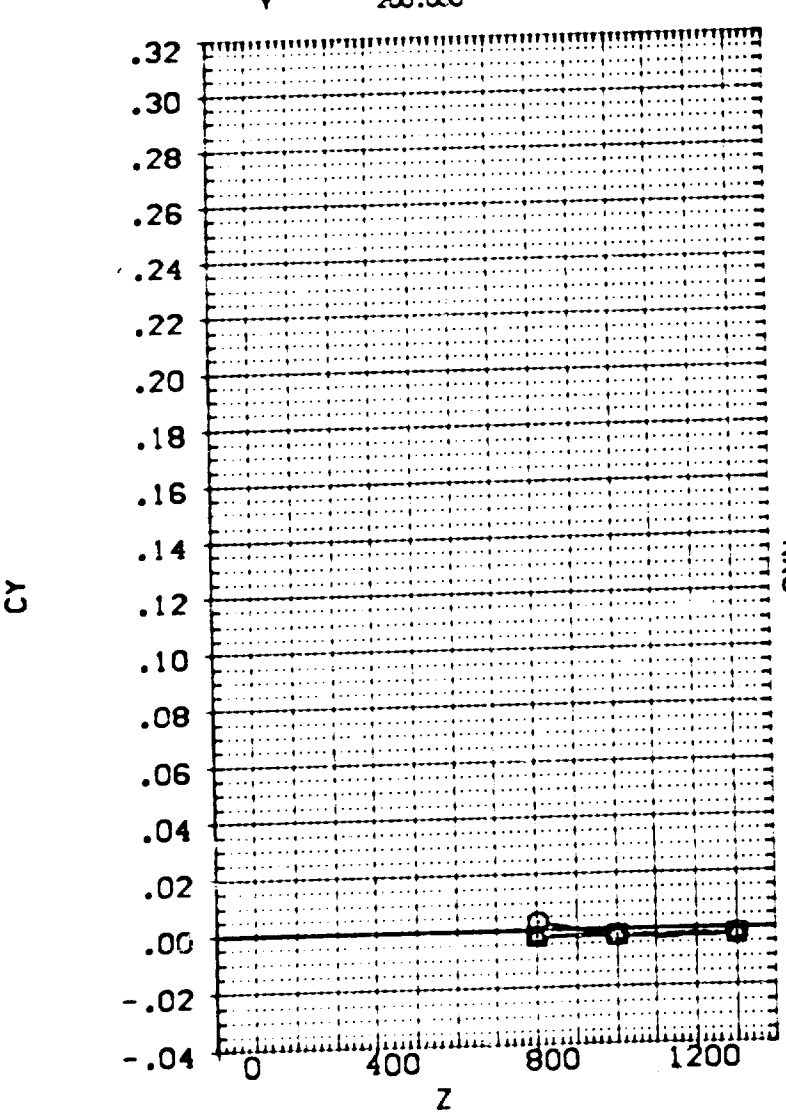


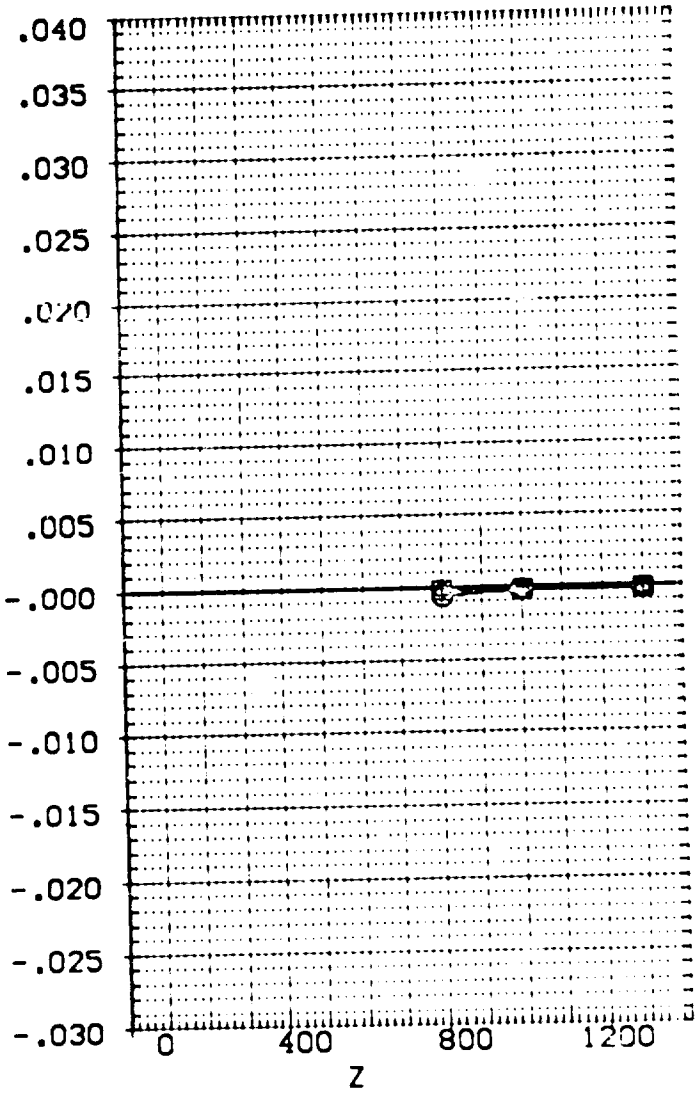
EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

!A13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ043)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

SYMBOL	X		PARAMETRIC VALUES		
○	.054	MACH	4.520	PTOTAL	80.000
◇	400.490	ALPHA	-10.000	BETA	.000
□	800.440	DALPHA	-20.000	DBETA	.000
△	1200.700	ELEVTR	.000	AILRON	.000
		Y	200.000		



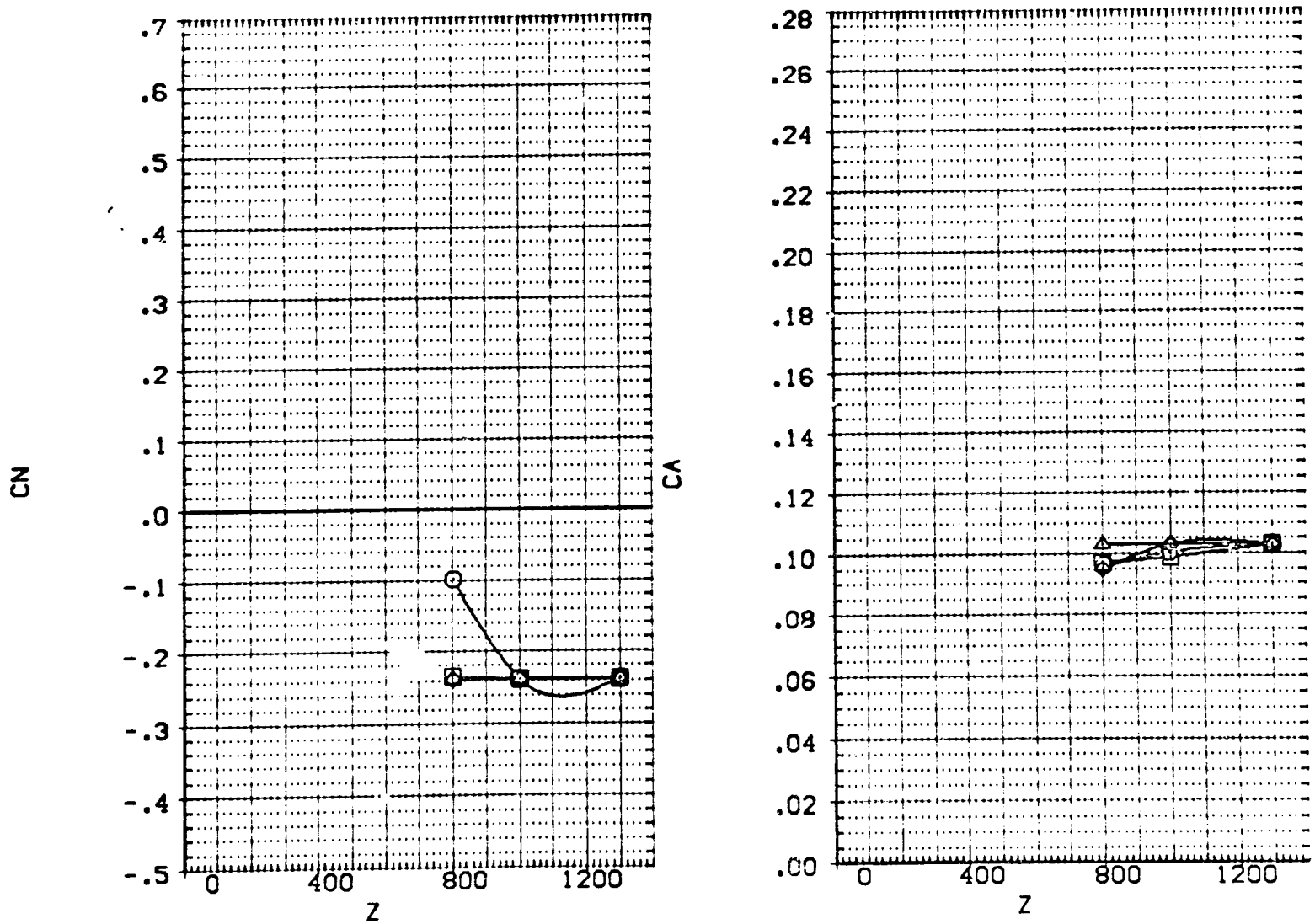


EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

!A13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ044)

SYMBOL	X		PARAMETRIC VALUES		
○	.094	MACH	4.520	PTOTAL	80.000
◇	400.710	ALPHA	-10.000	BETA	.000
□	800.610	DALPHA	-20.000	DBETA	5.000
△	1200.400	ELEVTR	.000	AILRON	.000
		Y	200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

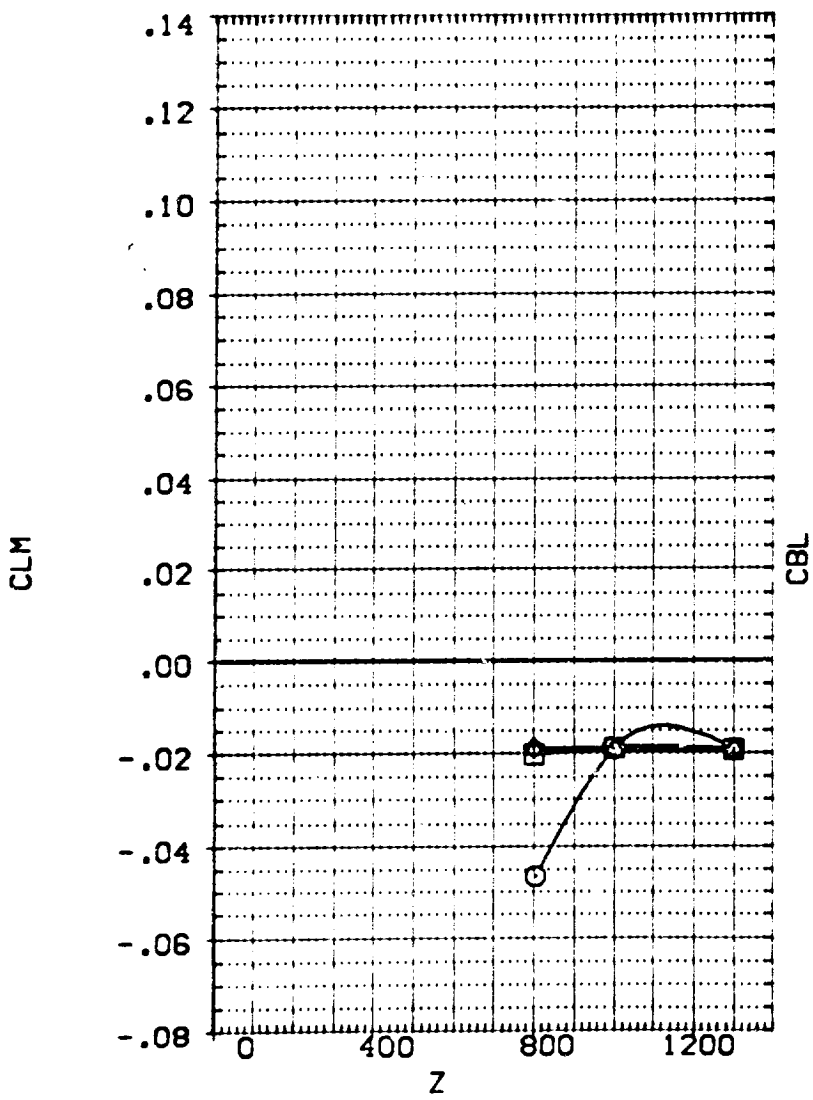


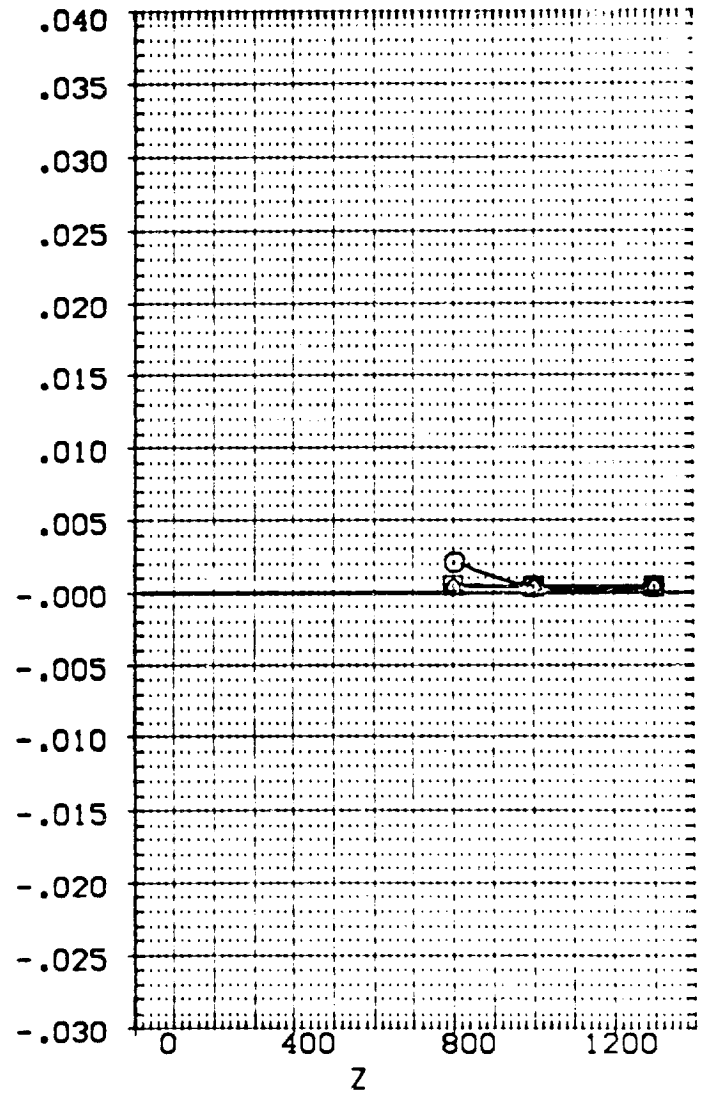
EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ044)

SYMBOL	X		PARAMETRIC VALUES		
○	.094	MACH	4.520	PTOTAL	80.000
□	400.710	ALPHA	-10.000	BETA	.000
◇	800.610	DALPHA	-20.000	DBETA	5.000
△	1200.400	ELEVTR	.000	AILRON	.000
		Y	200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL OFFSETS



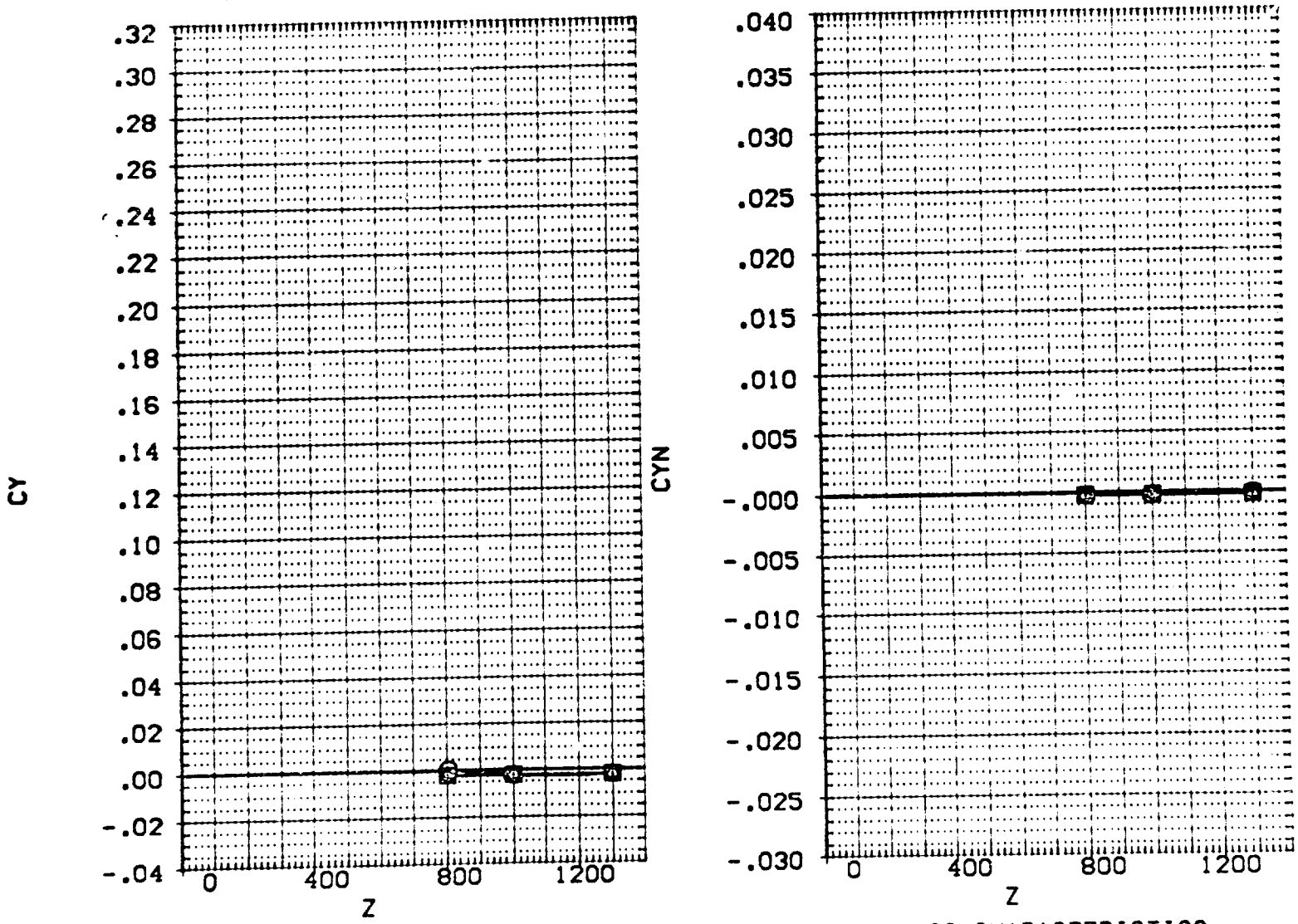


EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

!A13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ044)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

SYMBOL	X		PARAMETRIC VALUES		
○	.094	MACH	4.520	PTOTAL	80.000
□	400.710	ALPHA	-10.000	BETA	.000
◇	800.610	DALPHA	-20.000	DBETA	5.000
△	1200.400	ELEVTR	.000	AILRON	.000
		Y	200.000		

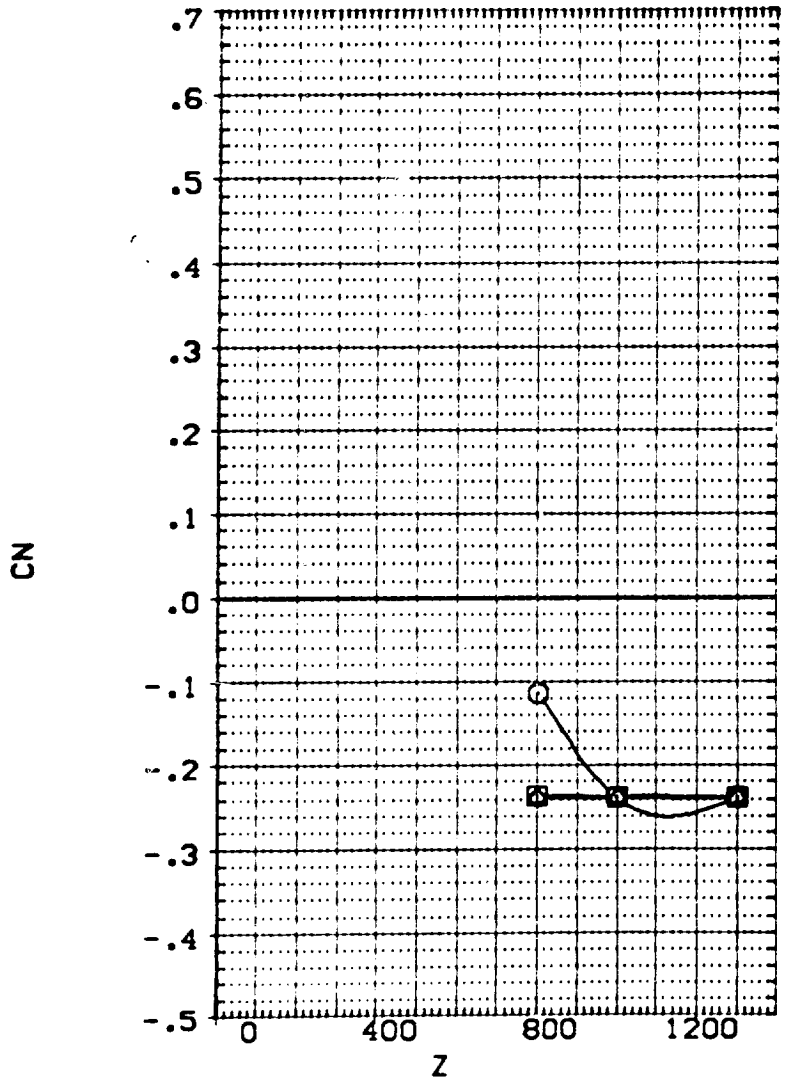


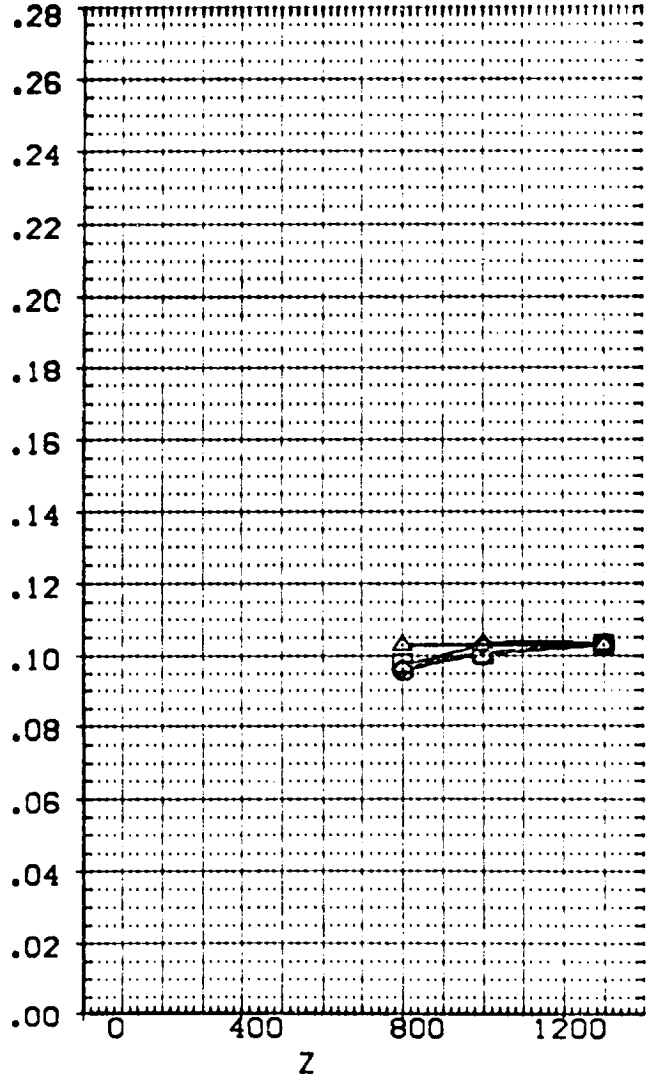
EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ045)

SYMBOL	X		PARAMETRIC VALUES		
○	.110	MACH	4.520	PTOTAL	80.000
□	400.660	ALPHA	-10.000	BETA	.000
◇	800.230	DALPHA	-20.000	DBETA	5.000
△	1200.600	ELEVTR	.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED [illegible] DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



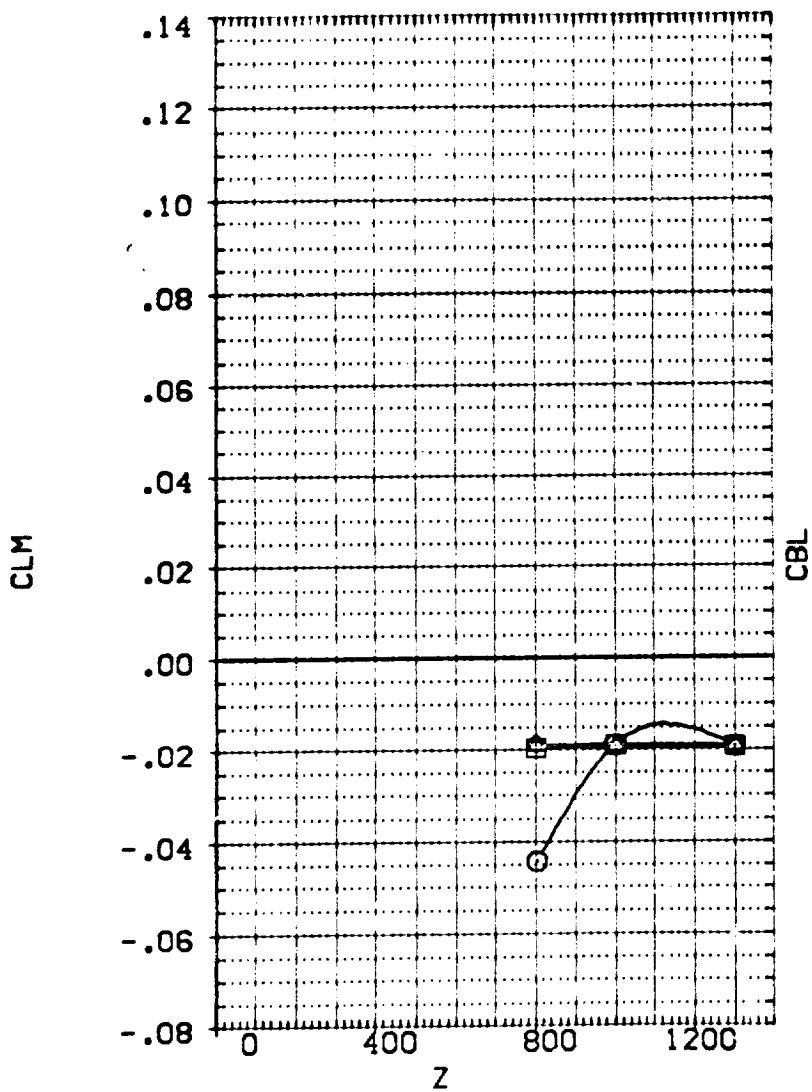


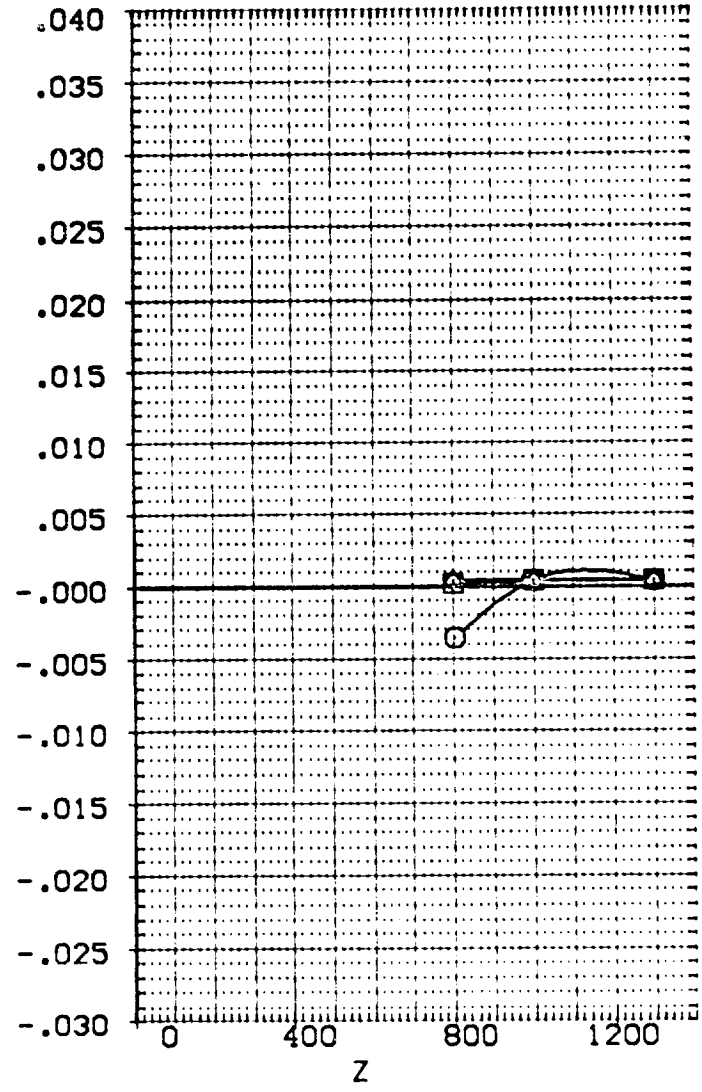
EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

!A13,EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ045)

SYMBOL	X		PARAMETRIC VALUES		
○	.110	MACH	4.520	PTOTAL	80.000
□	400.660	ALPHA	-10.000	BETA	.000
◇	800.230	DALPHA	-20.000	DBETA	5.000
△	1200.600	ELEVTR	.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



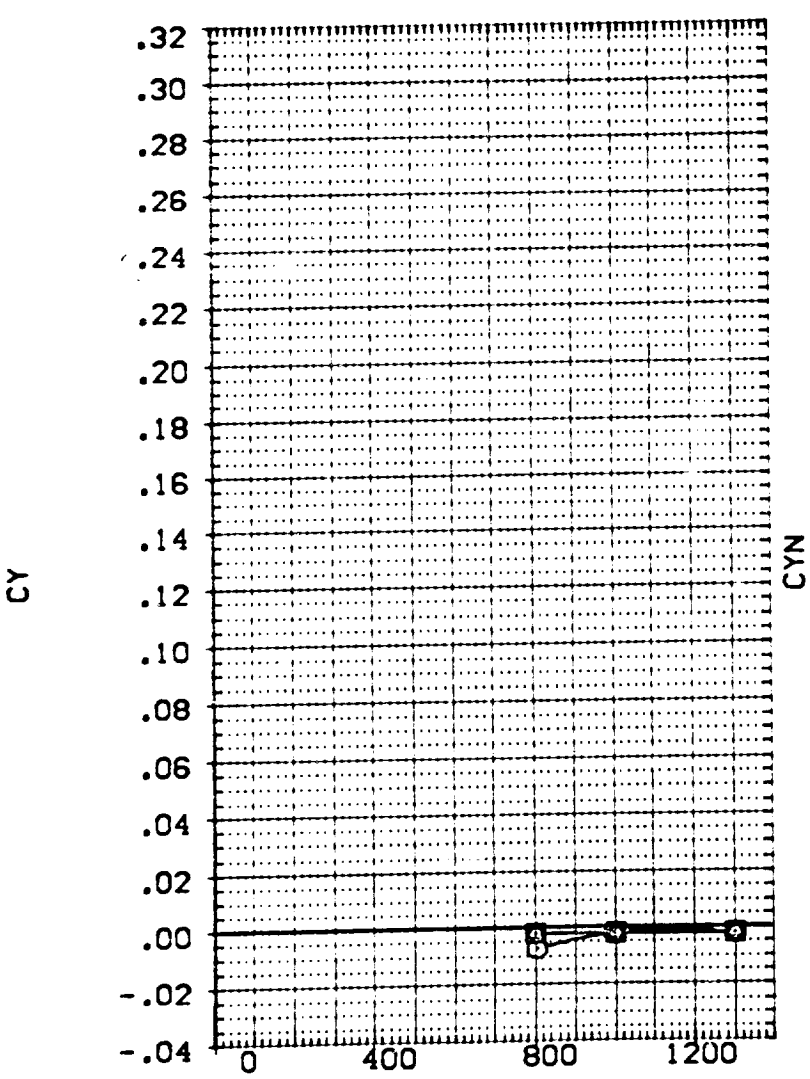


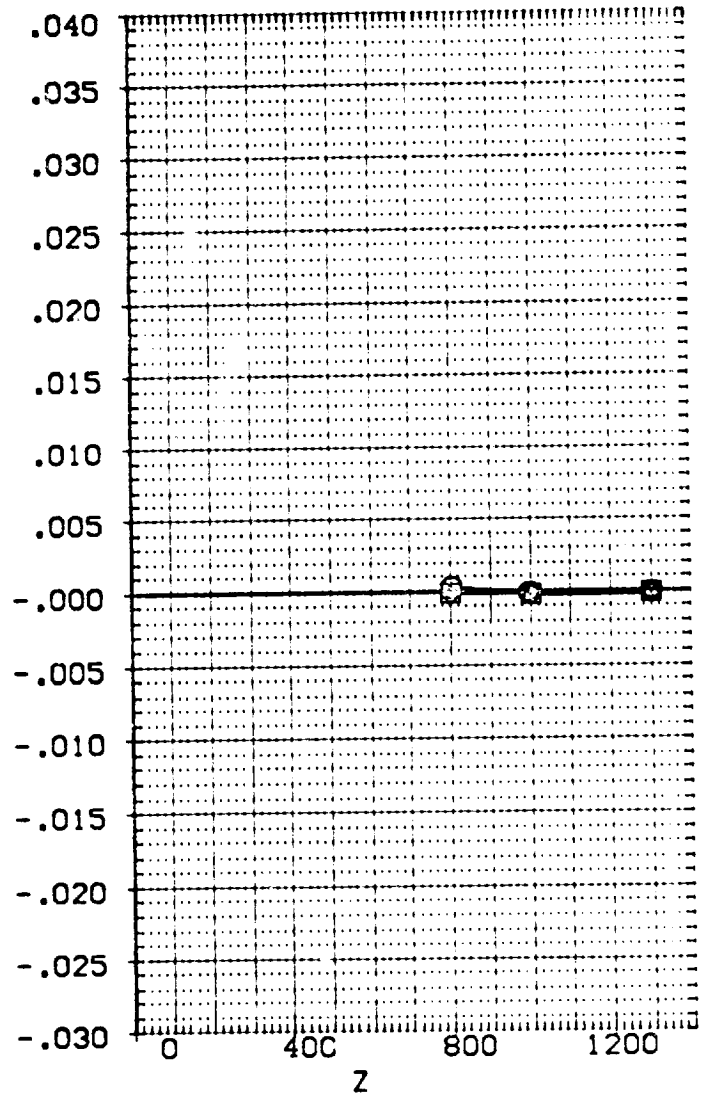
EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

!A13.EXTERNAL TANK(T10)SEPARATING FROM ORB. C9 (RTJ045)

SYMBOL	X		PARAMETRIC VALUES		
○	.110	MACH	4.520	PTOTAL	80.000
□	400.660	ALPHA	-10.000	BETA	.000
◇	800.230	DALPHA	-20.000	DBETA	5.000
△	1200.600	ELEVTR	.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



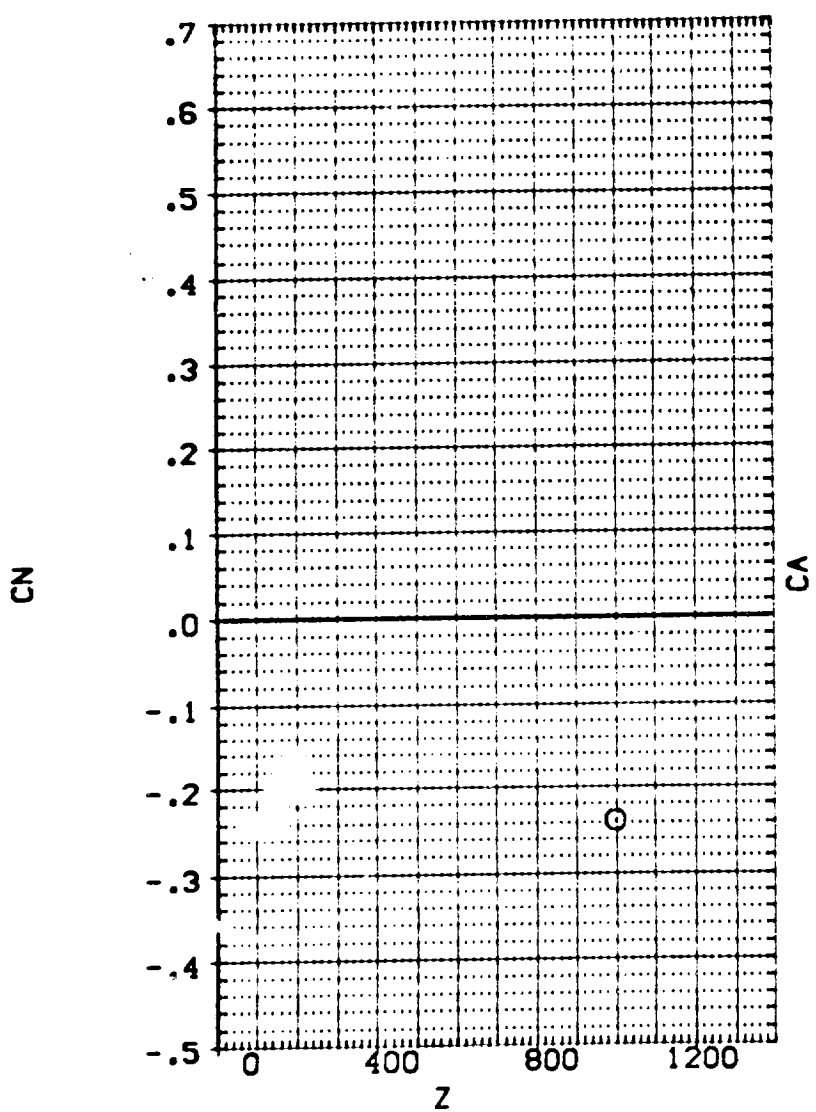


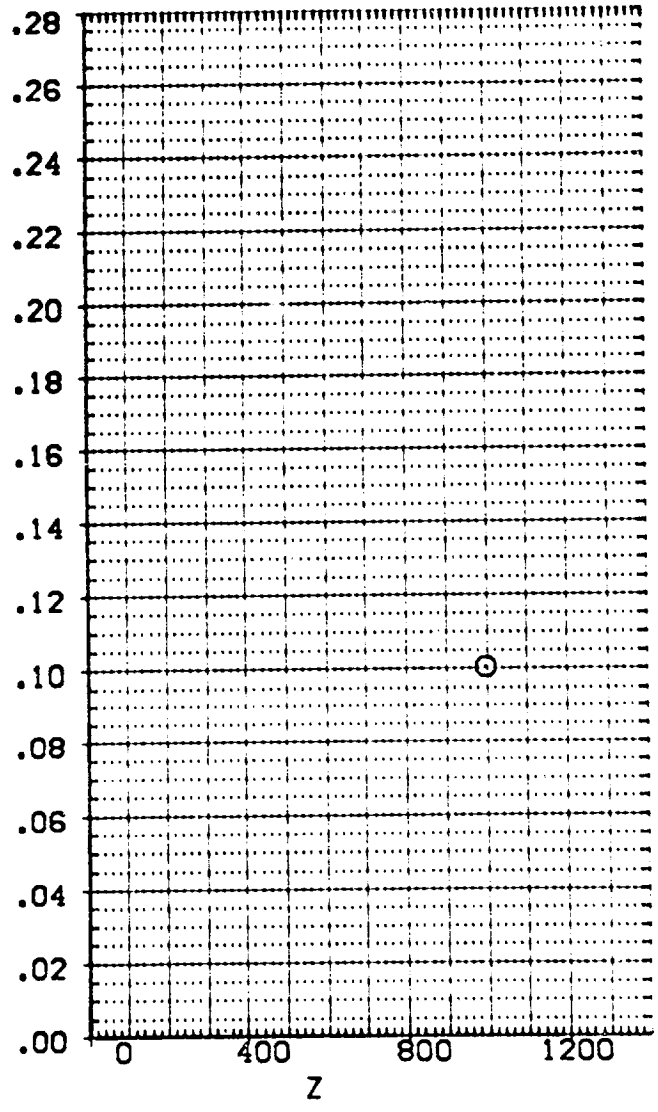
EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ046)

SYMBOL	X	PARAMETRIC VALUES			
O	.356	MACH	4.520	PTOTAL	80.000
		ALPHA	-10.000	BETA	.000
		DALPHA	-30.000	DBETA	.000
		ELEVTR	.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



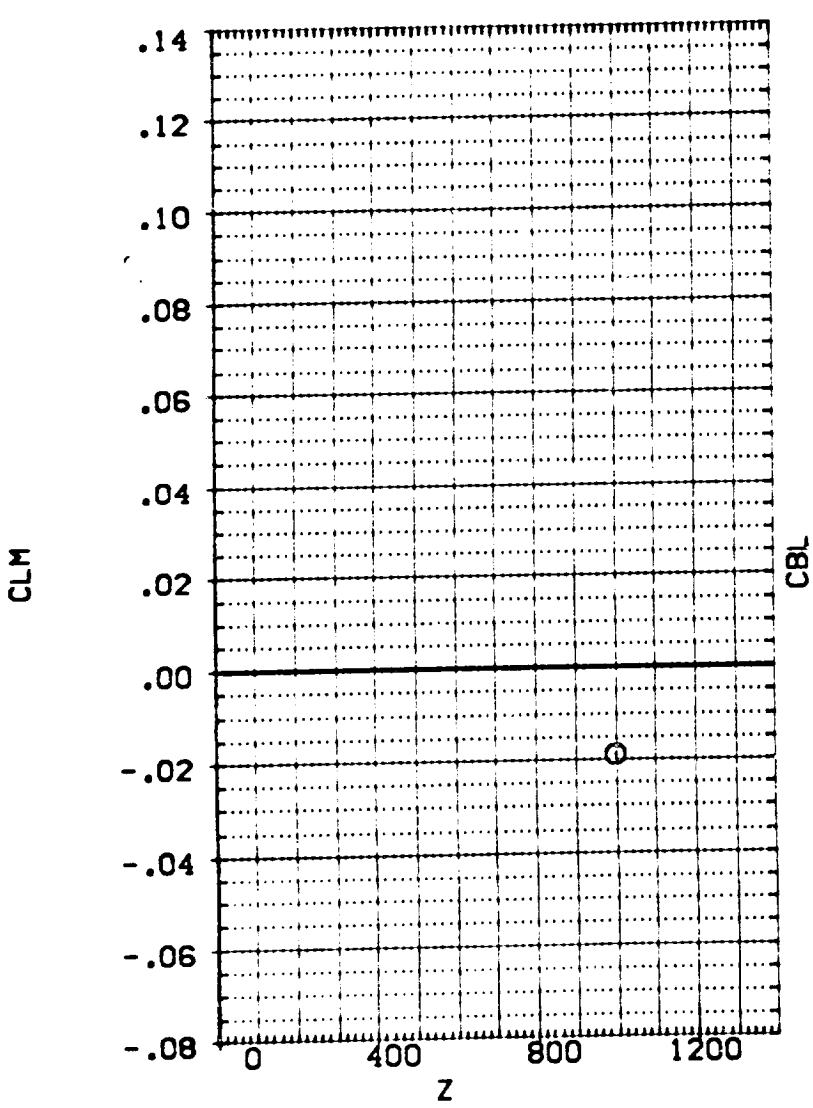


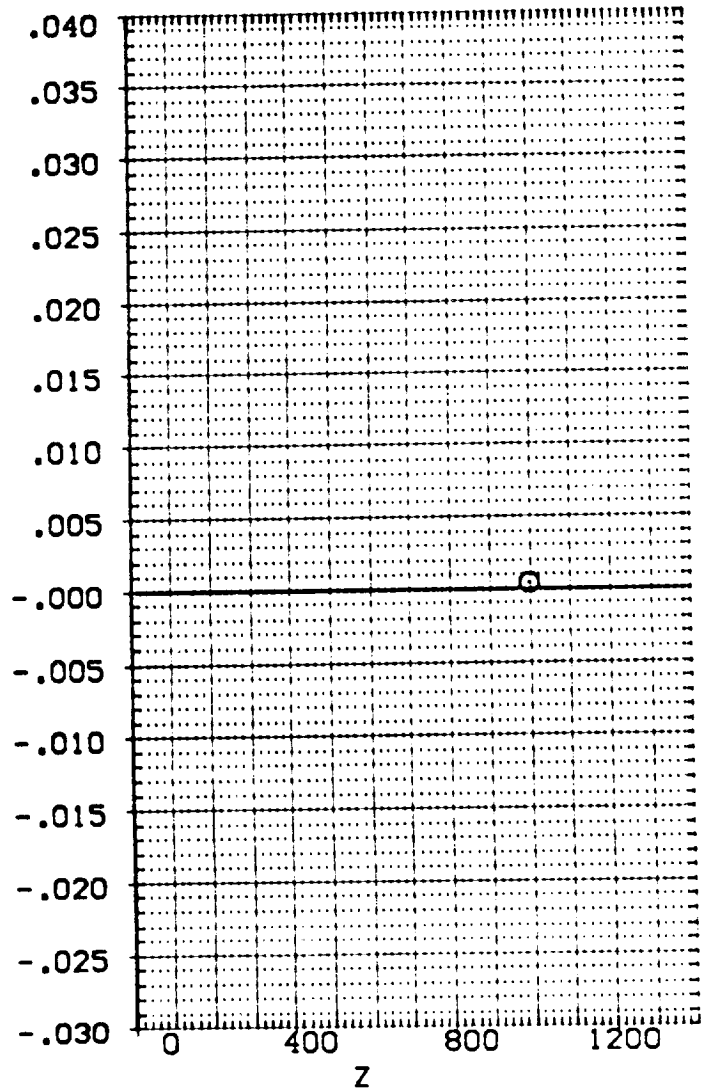
EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ046)

SYMBOL	X	PARAMETRIC VALUES			
O	.356	MACH	4.520	PTOTAL	80.000
		ALPHA	-10.000	BETA	.000
		DALPHA	-30.000	DBETA	.000
		ELEVTR	.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR [illegible] CHARACTERISTICS FOR INDIVIDUAL DATASETS



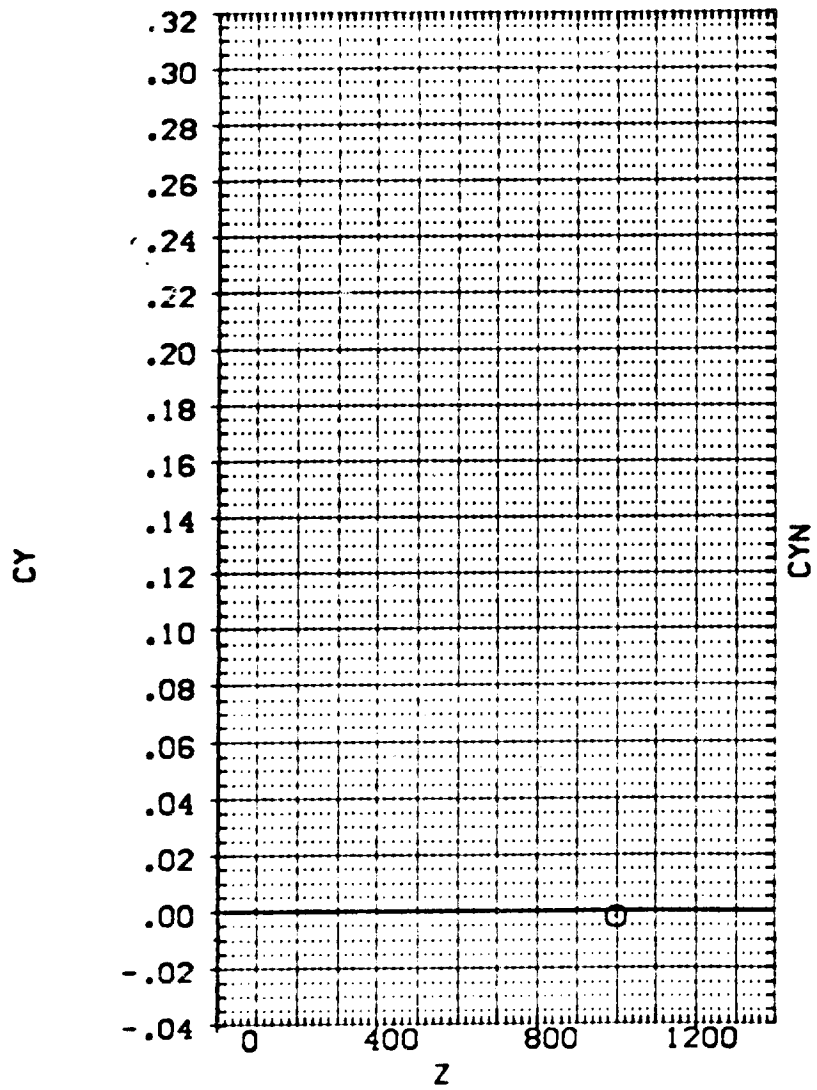


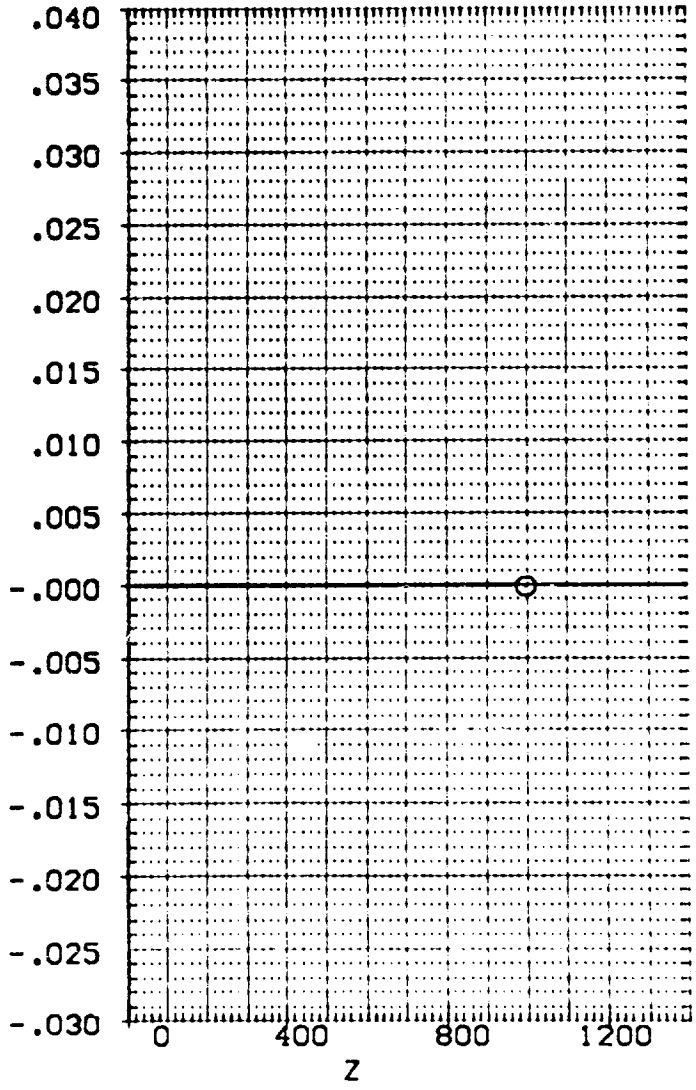
EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ046)

SYMBOL	X		PARAMETRIC VALUES		
○	.356	MACH	4.520	PTOTAL	80.000
		ALPHA	-10.000	BETA	.000
		DALPHA	-30.000	DBETA	.000
		ELEVTR	.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



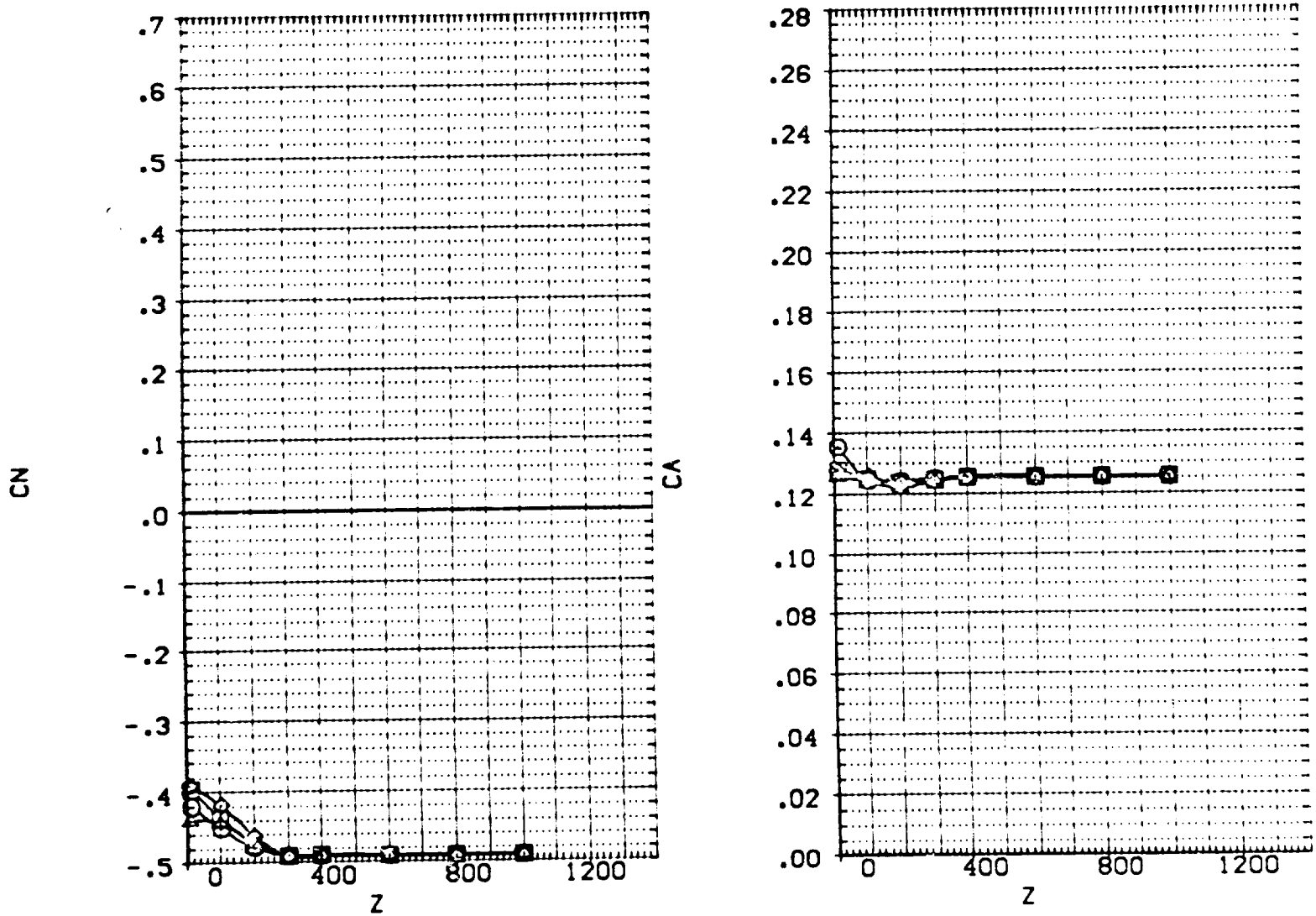


EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

!A13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ047)

SYMBOL	X		PARAMETRIC VALUES		
	.405	MACH	4.520	PTOTAL	80.000
◇	400.680	ALPHA	-21.000	BETA	.000
△	800.710	DALPHA	6.000	DBETA	.000
	1200.800	ELEVTR	.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR THE CHARACTERISTICS FOR INDIVIDUAL DATASETS

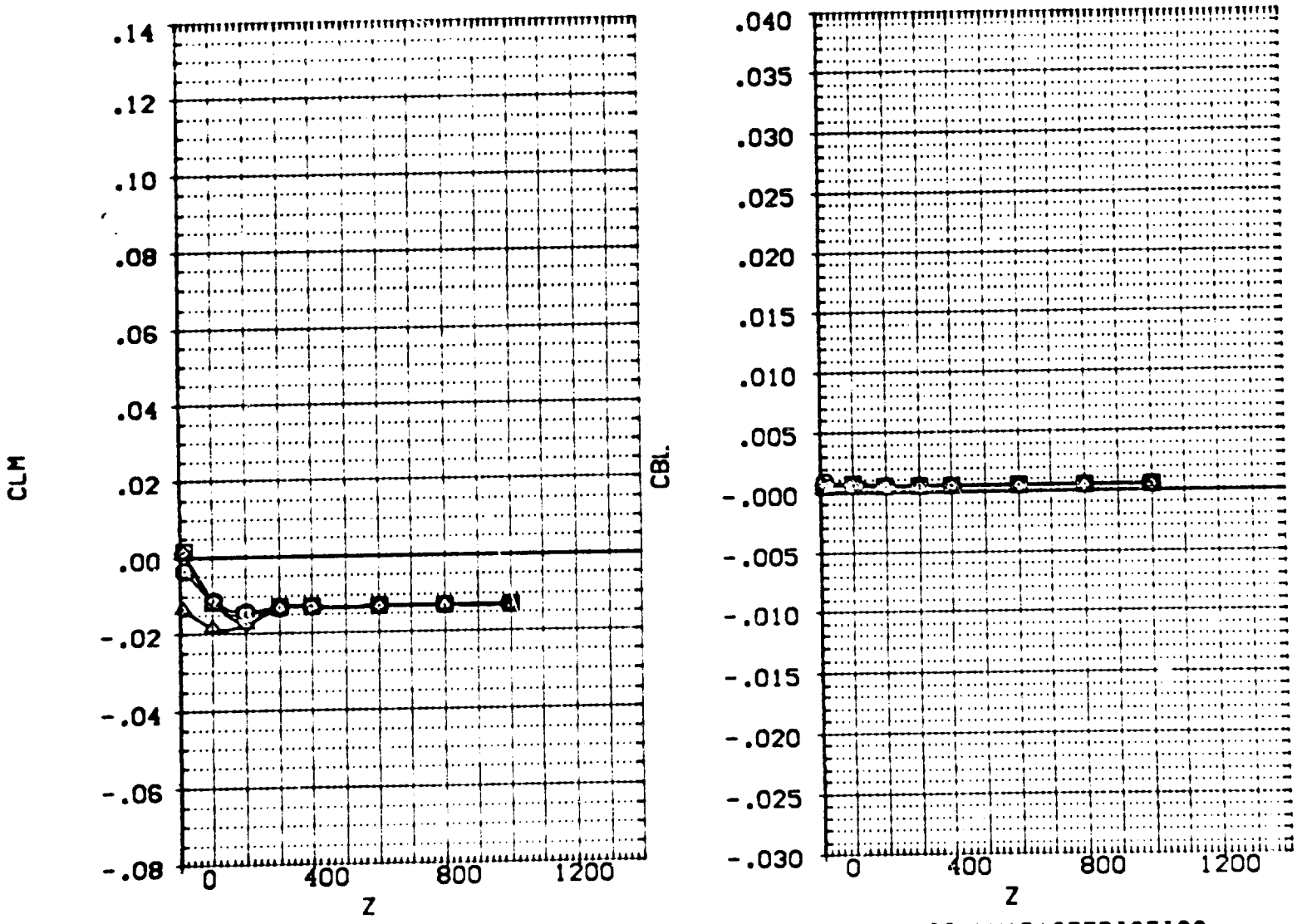


EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

!A13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ047)

SYMBOL	X		PARAMETRIC VALUES		
○	.405	MACH	4.520	PTOTAL	80.000
□	400.680	ALPHA	-21.000	BETA	.000
◇	800.710	DALPHA	6.000	DBETA	.000
△	1200.800	ELEVTR	.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

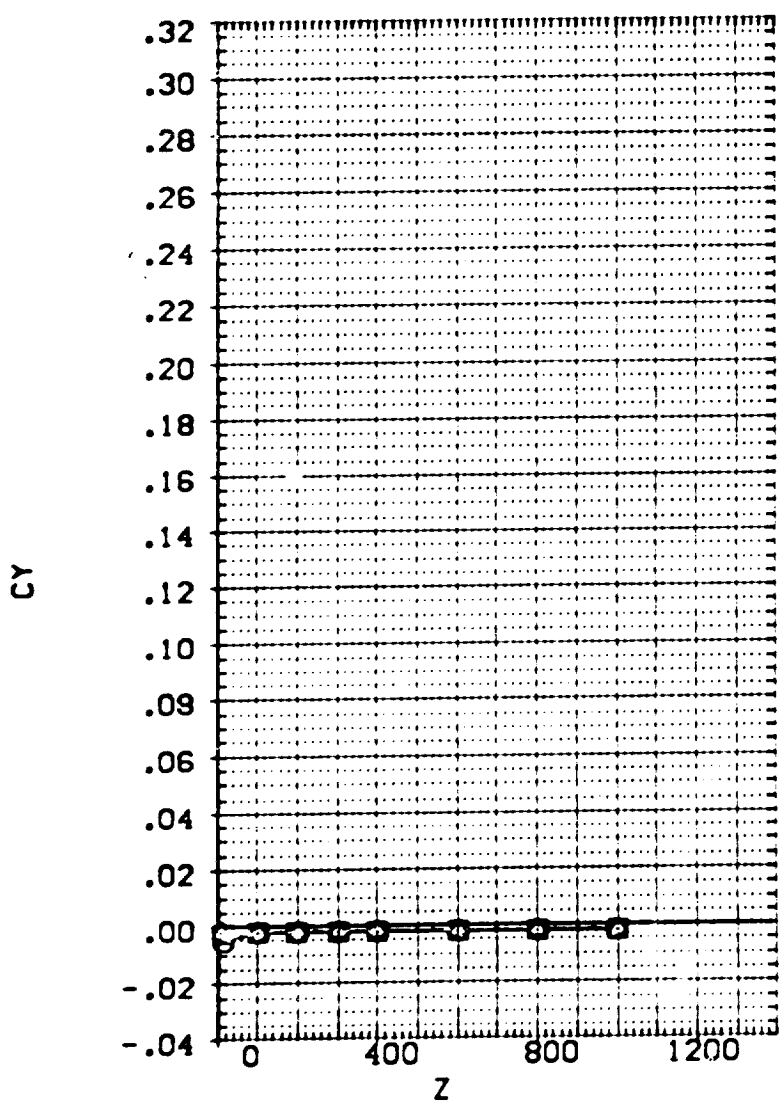


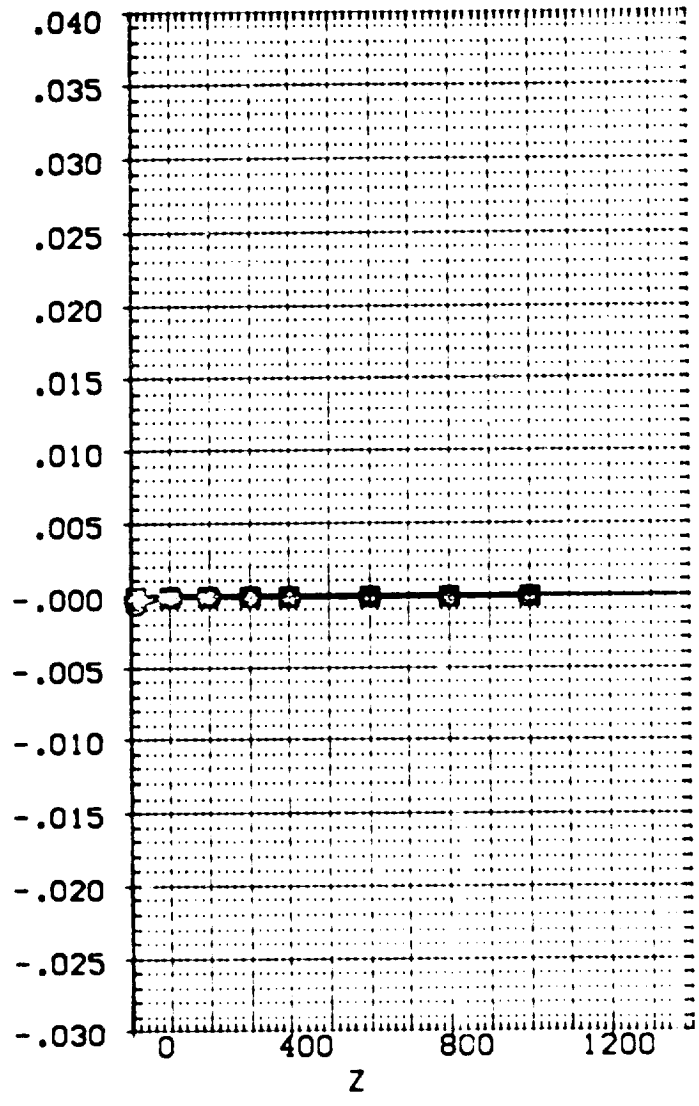
EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

!A13,EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ047)

	X		PARAMETRIC VALUES		
	.405	MACH	4.520	PTOTAL	80.000
◇	400.680	ALPHA	-21.000	BETA	.000
◇	800.710	DALPHA	6.000	DBETA	.000
△	1200.800	ELEVTR	.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



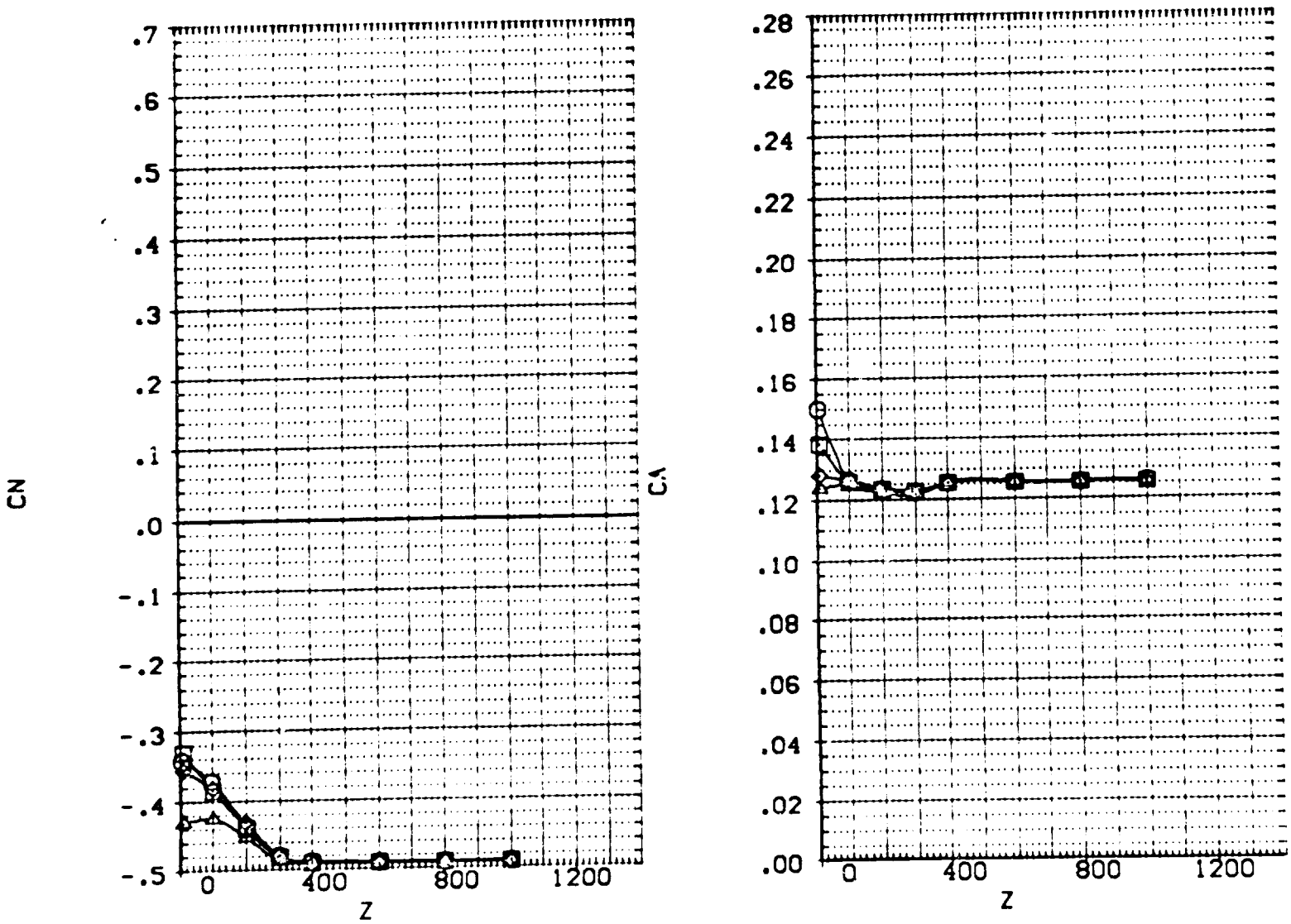


EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

!A!3.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ048)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

SYMBOL	X		PARAMETRIC VALUES		
○	.276	MACH	4.520	PTOTAL	80.000
□	400.440	ALPHA	-21.000	BETA	.000
◇	800.590	DALPHA	1.000	DBETA	.000
△	1200.700	ELEVTR	.000	AILRON	.000
		Y	.000		

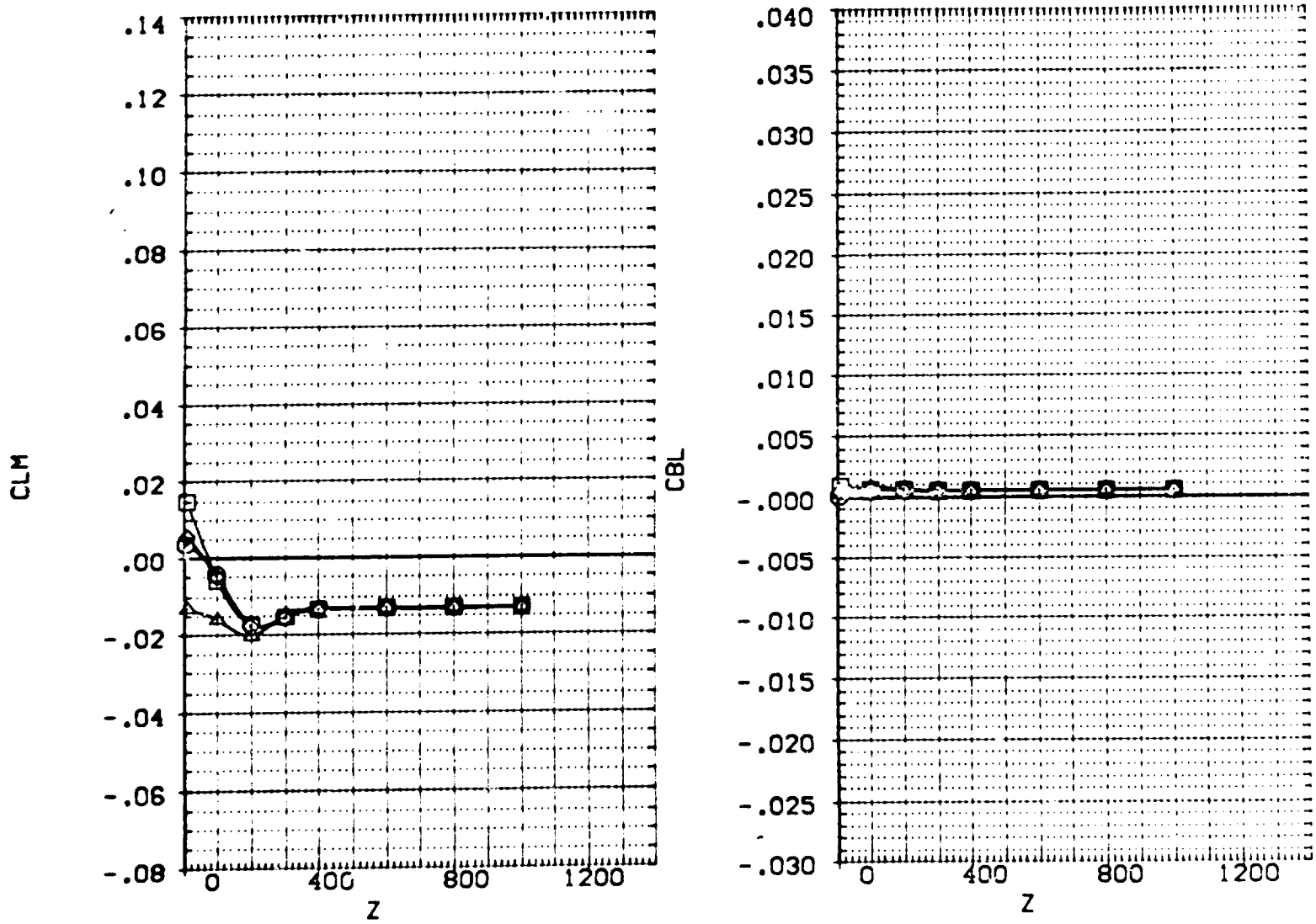


EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

!A13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ048)

SYMBOL	X	PARAMETRIC VALUES			
○	.276	MACH	4.520	PTOTAL	80.000
◇	400.440	ALPHA	-21.000	BETA	.000
△	800.590	DALPHA	1.000	DBETA	.000
	1200.700	ELEVTR	.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

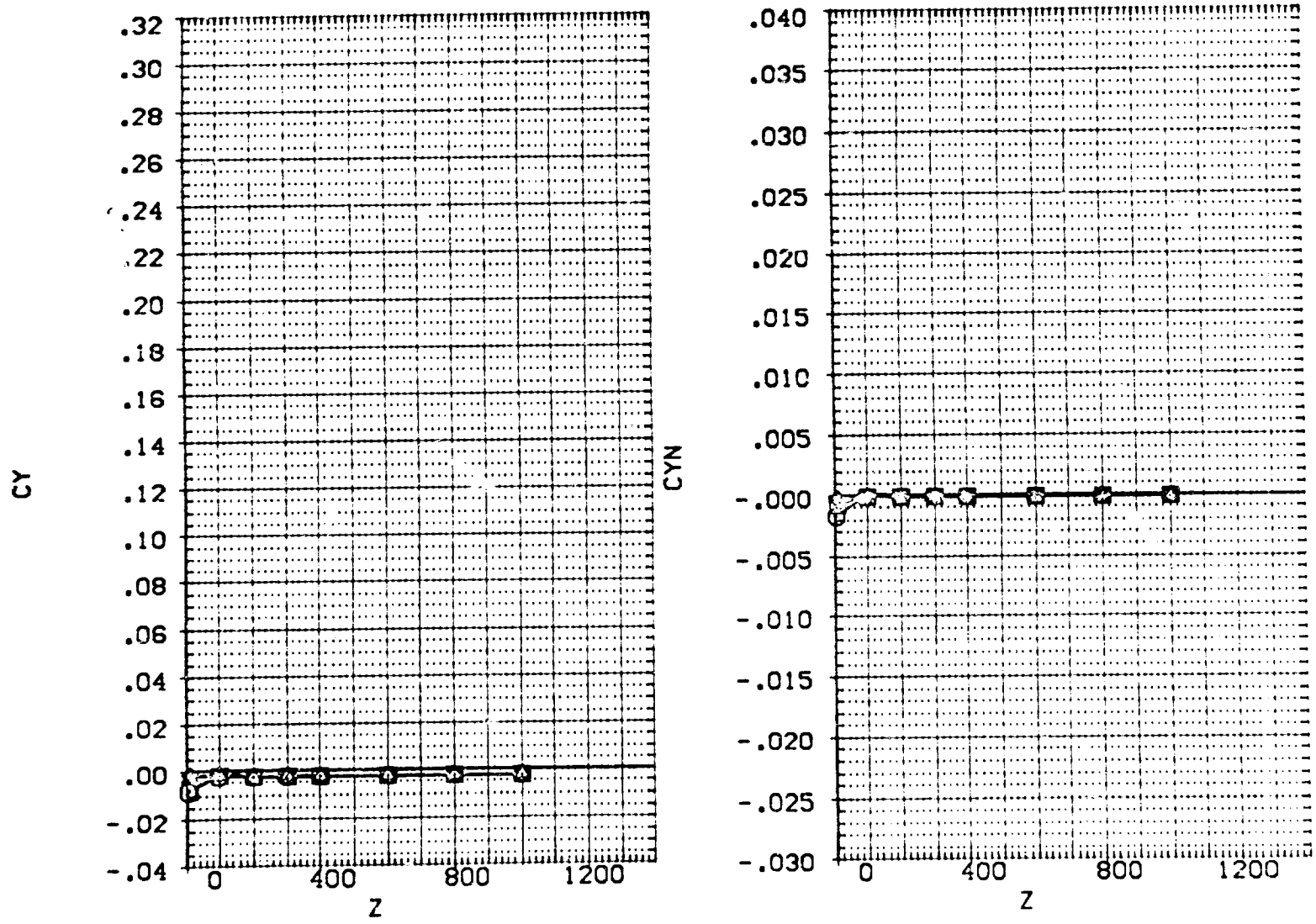


EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ048)

SYMBOL	X		PARAMETRIC VALUES		
○	.276	MACH	4.520	PTOTAL	80.000
□	400.440	ALPHA	-21.000	BETA	.000
◇	800.590	DALPHA	1.000	DBETA	.000
△	1200.700	ELEVTR	.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

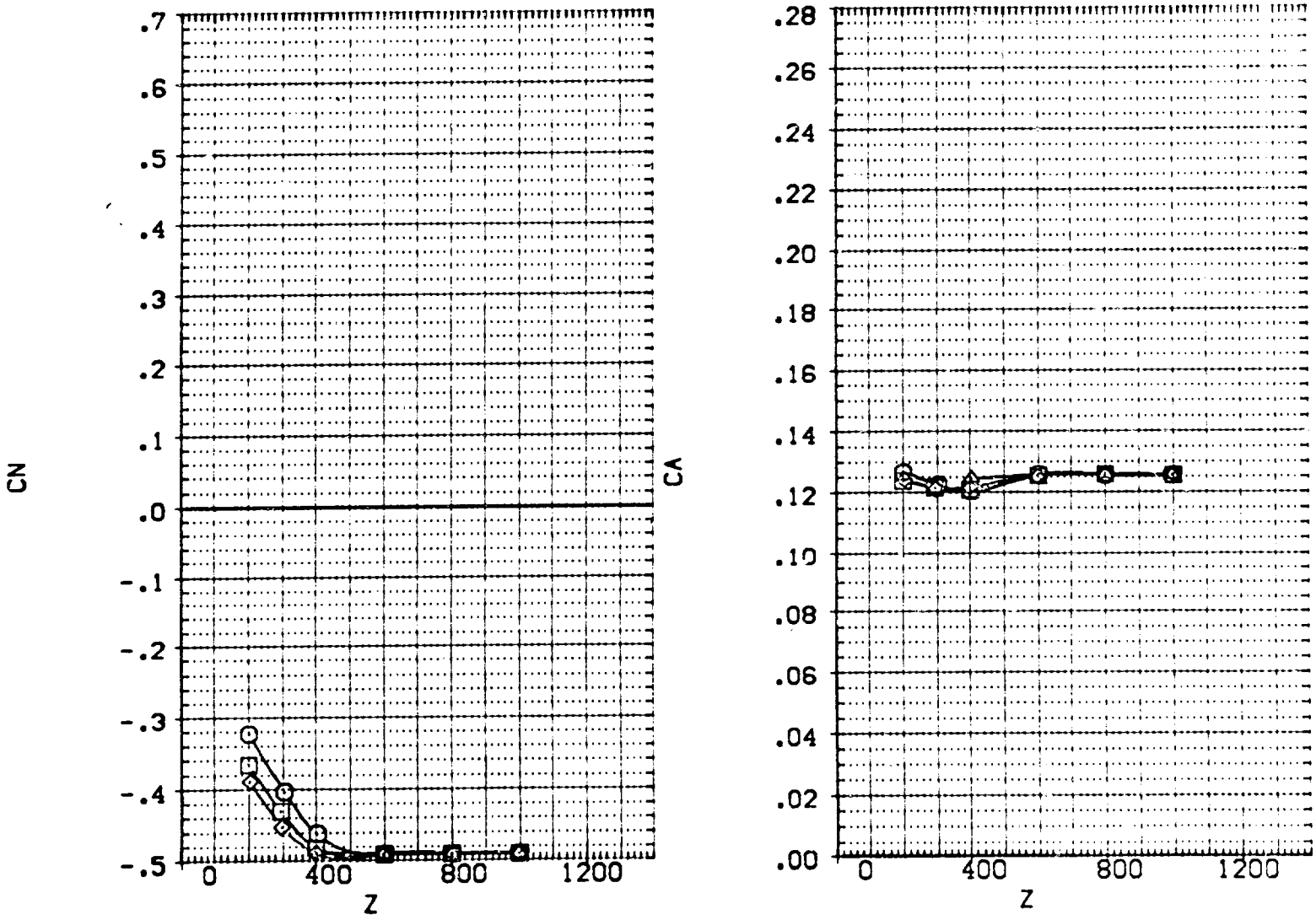


EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ049)

SYMBOL	X		PARAMETRIC VALUES		
○	.285	MACH	4.520	PTOTAL	80.000
□	400.570	ALPHA	-21.000	BETA	.000
◇	800.340	DALPHA	-4.000	DBETA	.000
△	1200.800	ELEVTR	.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

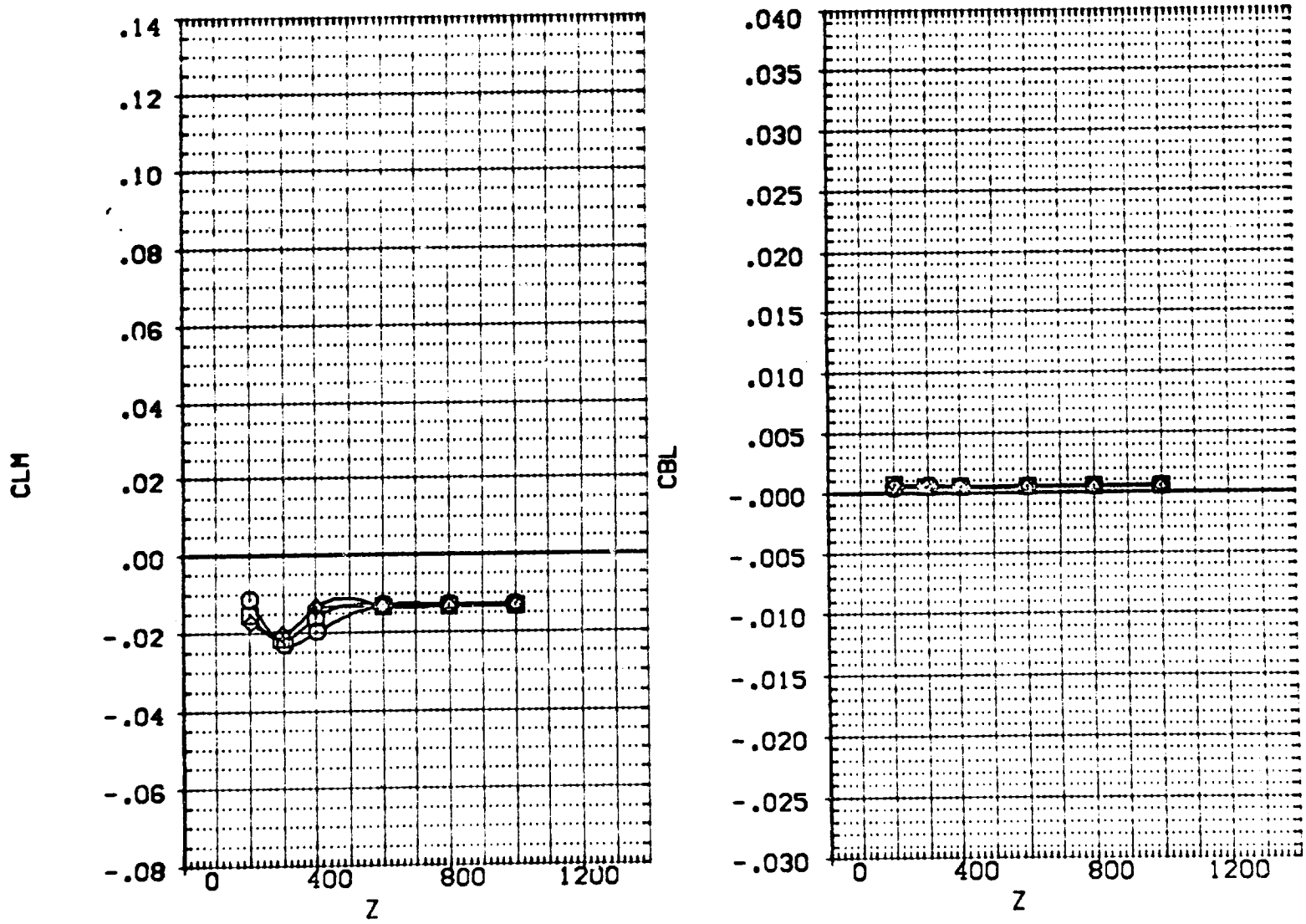


EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ049)

SYMBOL	X		PARAMETRIC VALUES		
○	.285	MACH	4.520	PTOTAL	80.000
□	400.570	ALPHA	-21.000	BETA	.000
◇	800.340	DALPHA	-4.000	DBETA	.000
△	1200.800	ELEVTR	.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

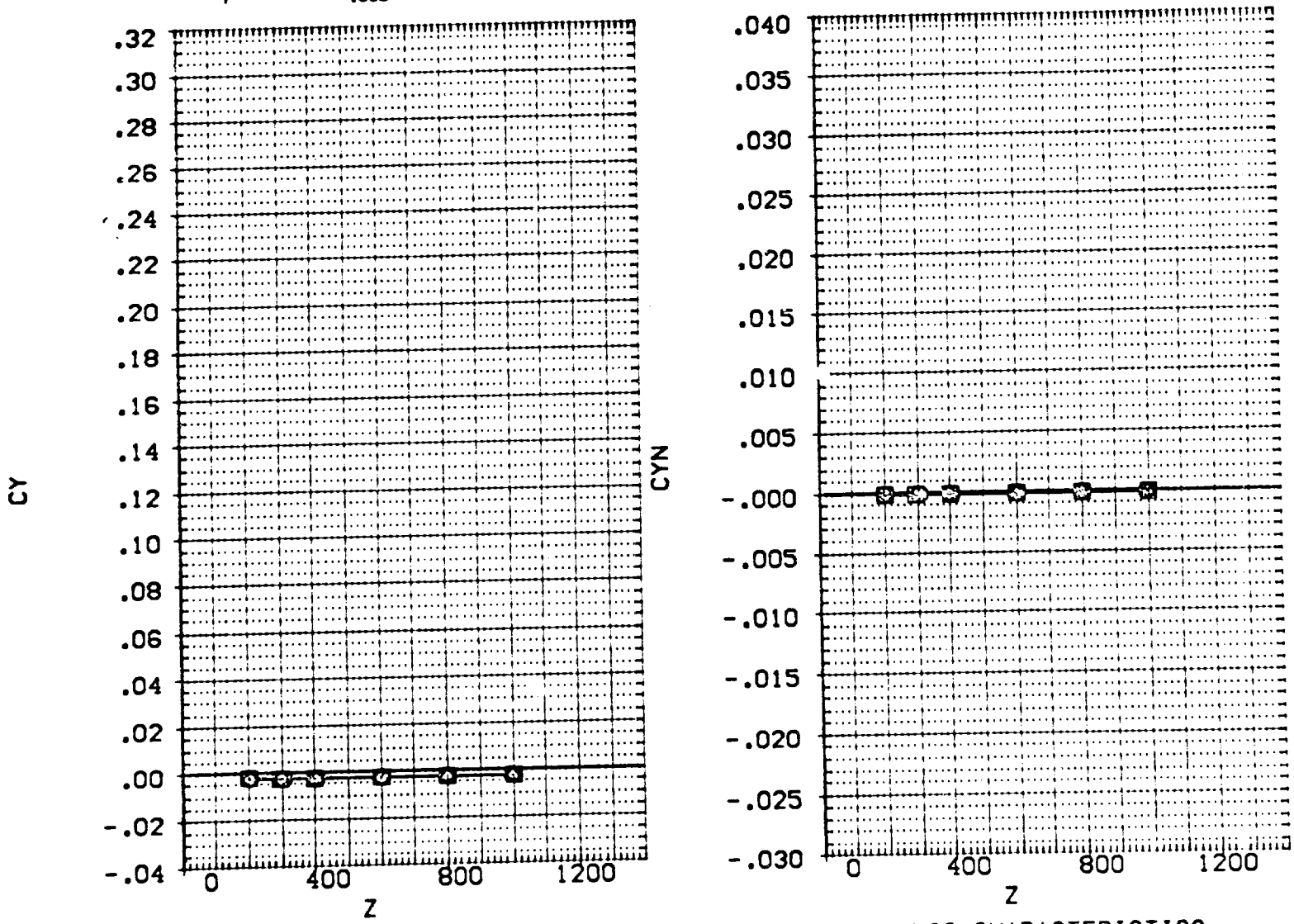


EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

IA13. EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ049)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

SYMBOL	X	PARAMETRIC VALUES			
○	.285	MACH	4.520	PTOTAL	80.000
□	400.570	ALPHA	-21.000	BETA	.000
◇	800.340	DALPHA	-4.000	DBETA	.000
△	1200.800	ELEVTR	.000	AILRON	.000
		Y	.000		

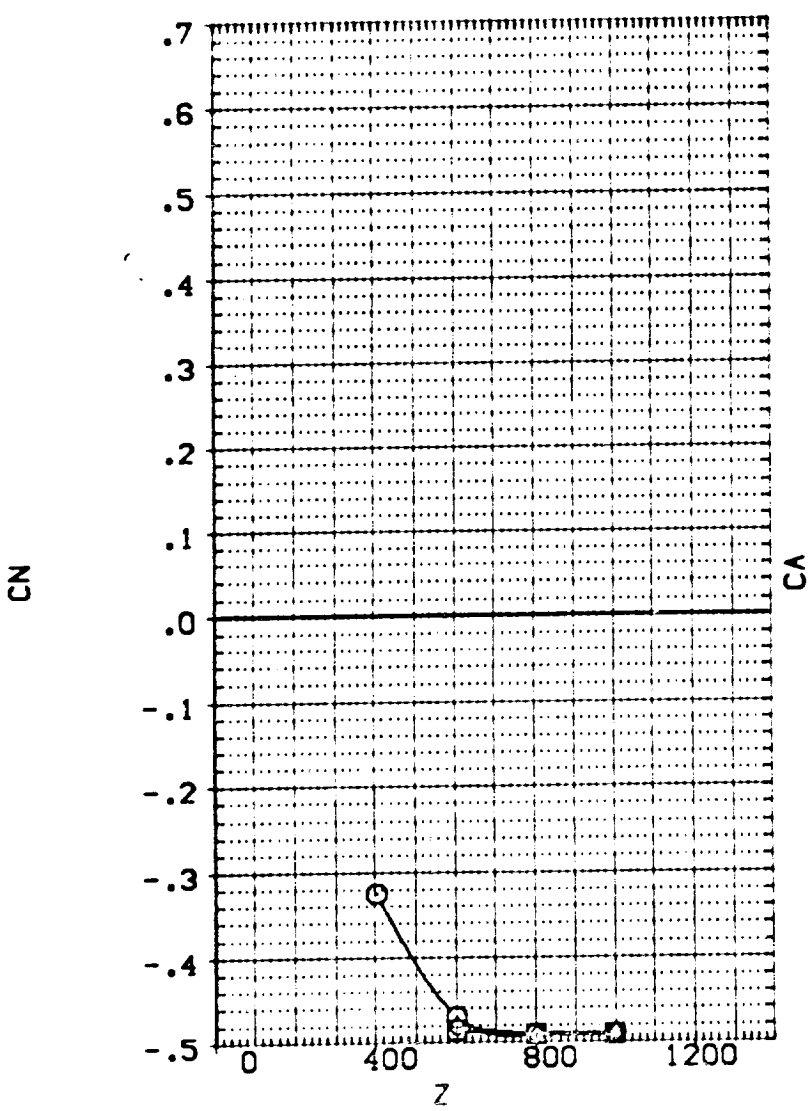


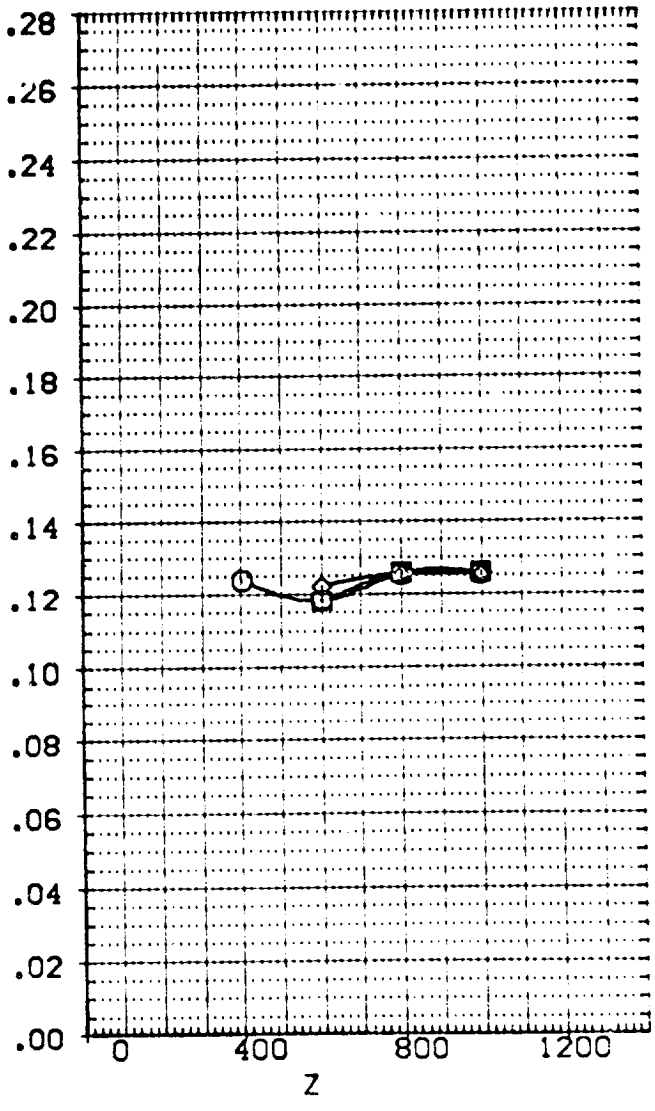
EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

!A13.EXTERNAL TANK(10)SEPARATING FROM ORB. 09 (RTJ050)

SYMBOL	X	PARAMETRIC VALUES			
○	.174	MACH	4.520	PTOTAL	80.000
◇	400.460	ALPHA	-21.000	BETA	.000
△	800.230	DALPHA	-9.000	DBETA	.000
	1200.600	ELEVTR	.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



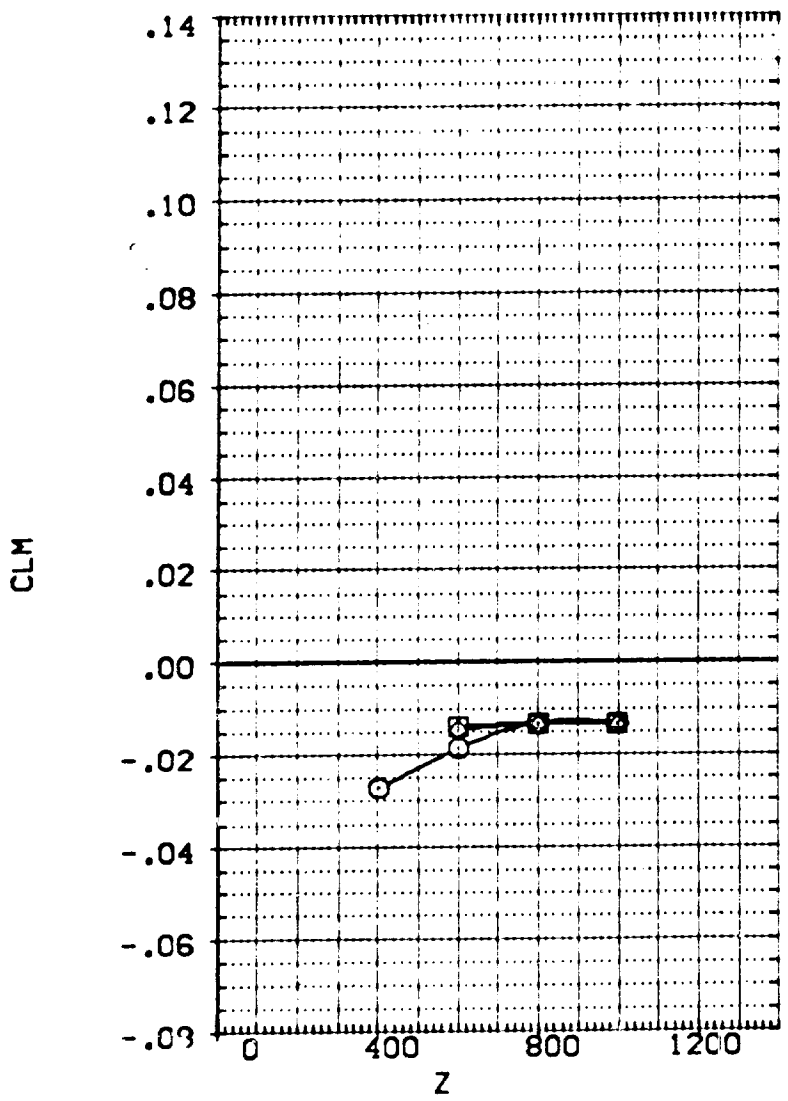


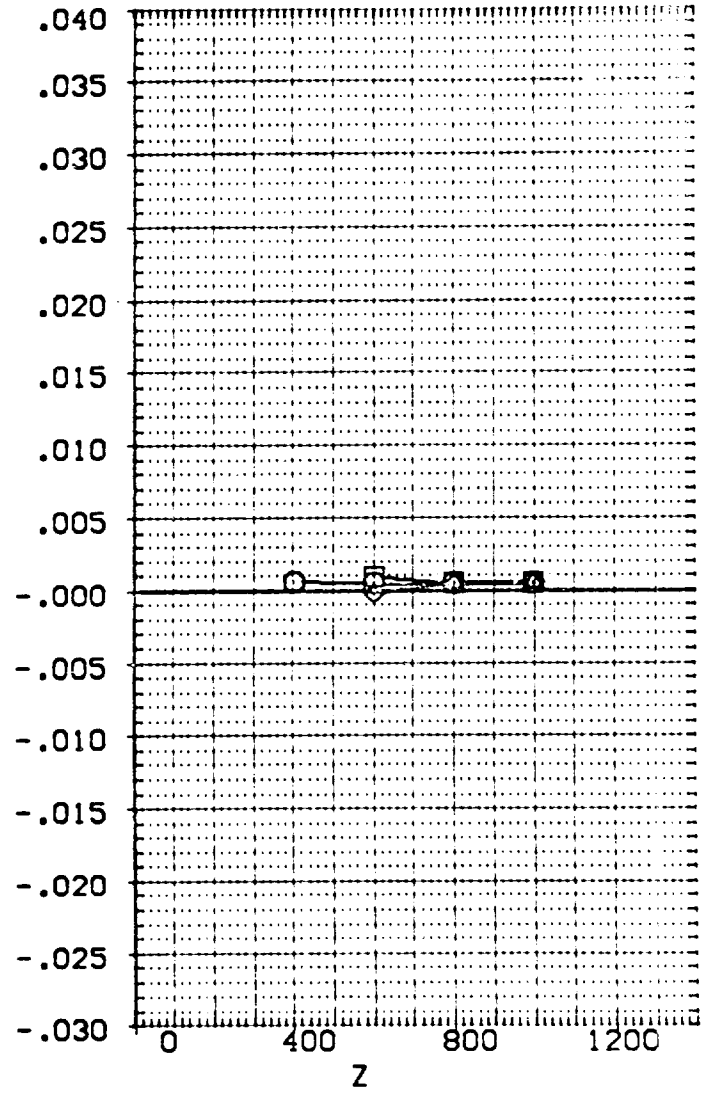
EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

!A13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ050)

SYMBOL	X		PARAMETRIC VALUES		
○	.174	MACH	4.520	PTOTAL	80.000
◇	400.460	ALPHA	-21.000	BETA	.000
△	800.230	DALPHA	-9.000	DBETA	.000
	1200.600	ELEVTR	.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



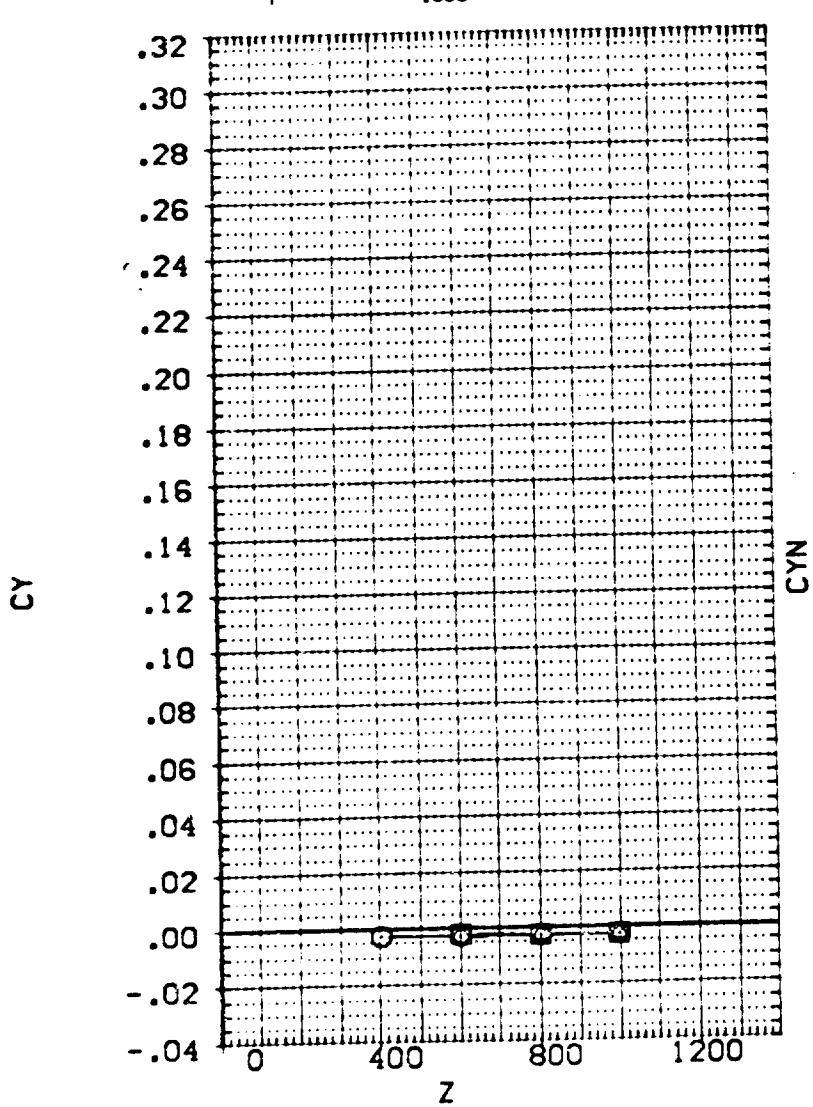


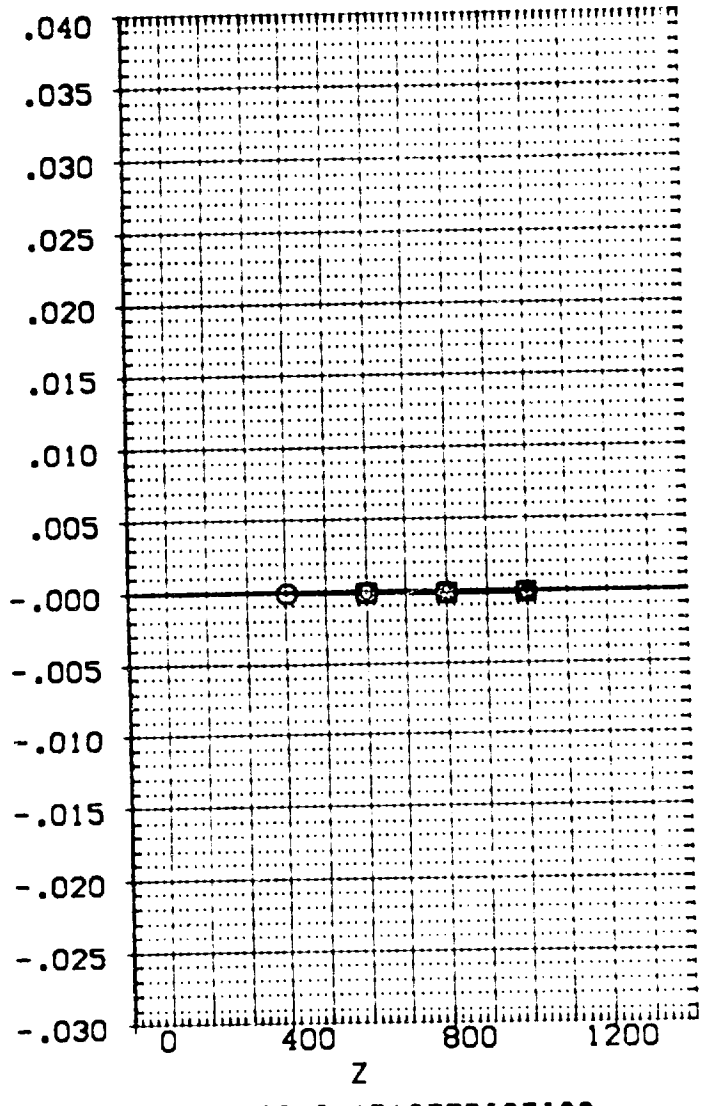
EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ050)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

SYMBOL	X		PARAMETRIC VALUES		
○	.174	MACH	4.520	PTOTAL	80.000
□	400.460	ALPHA	-21.000	BETA	.000
◇	800.230	DALPHA	-9.000	DBETA	.000
△	1200.600	ELEVTR	.000	AILRON	.000
		Y	.000		



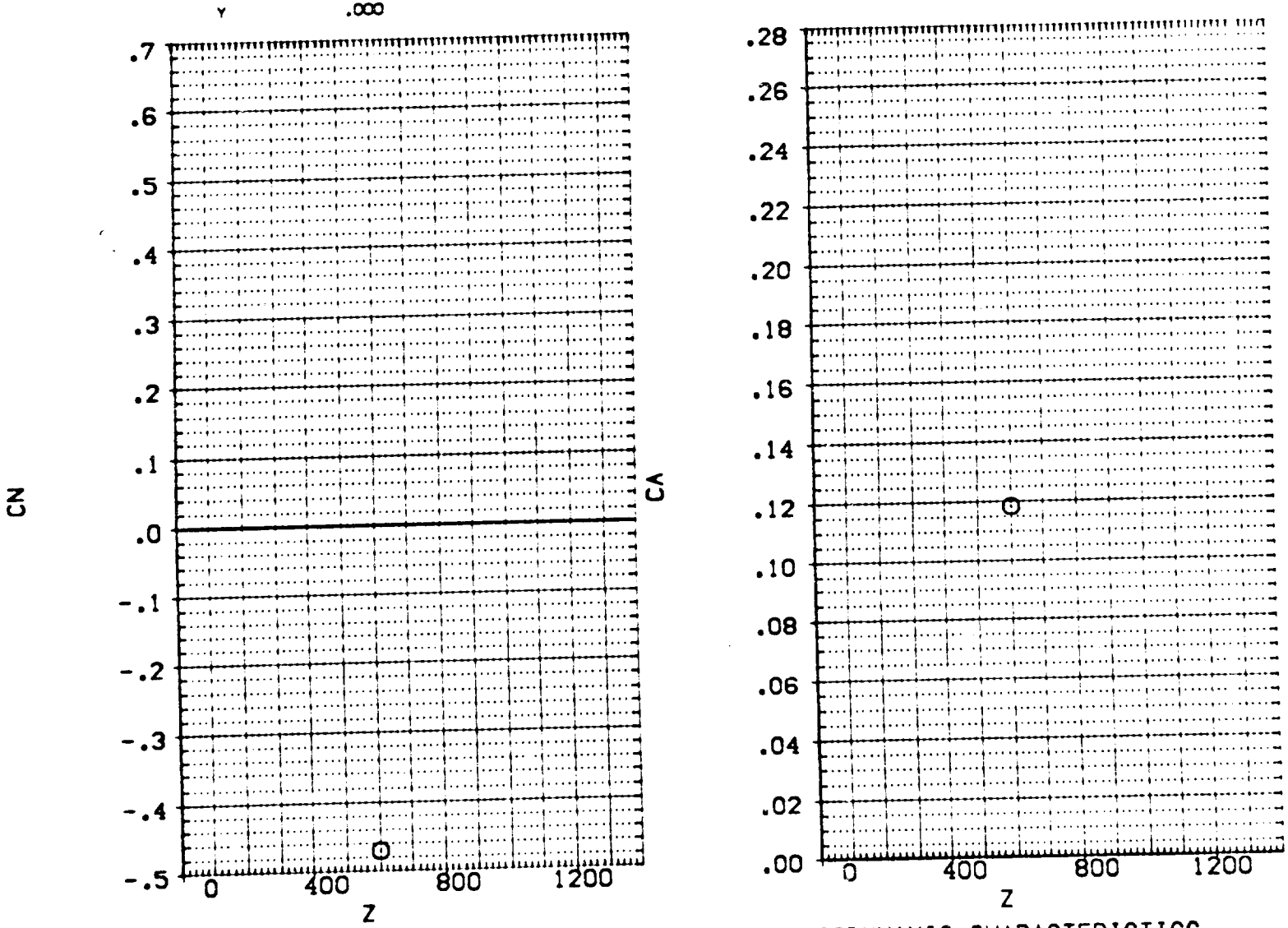


EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

!A13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ051)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

SYMBOL	X		PARAMETRIC VALUES		
○	.299	MACH	4.520	PTOTAL	80.000
		ALPHA	-21.000	BETA	.000
		DALPHA	-19.000	DBETA	.000
		ELEVTR	.000	AILRON	.000
		Y	.000		

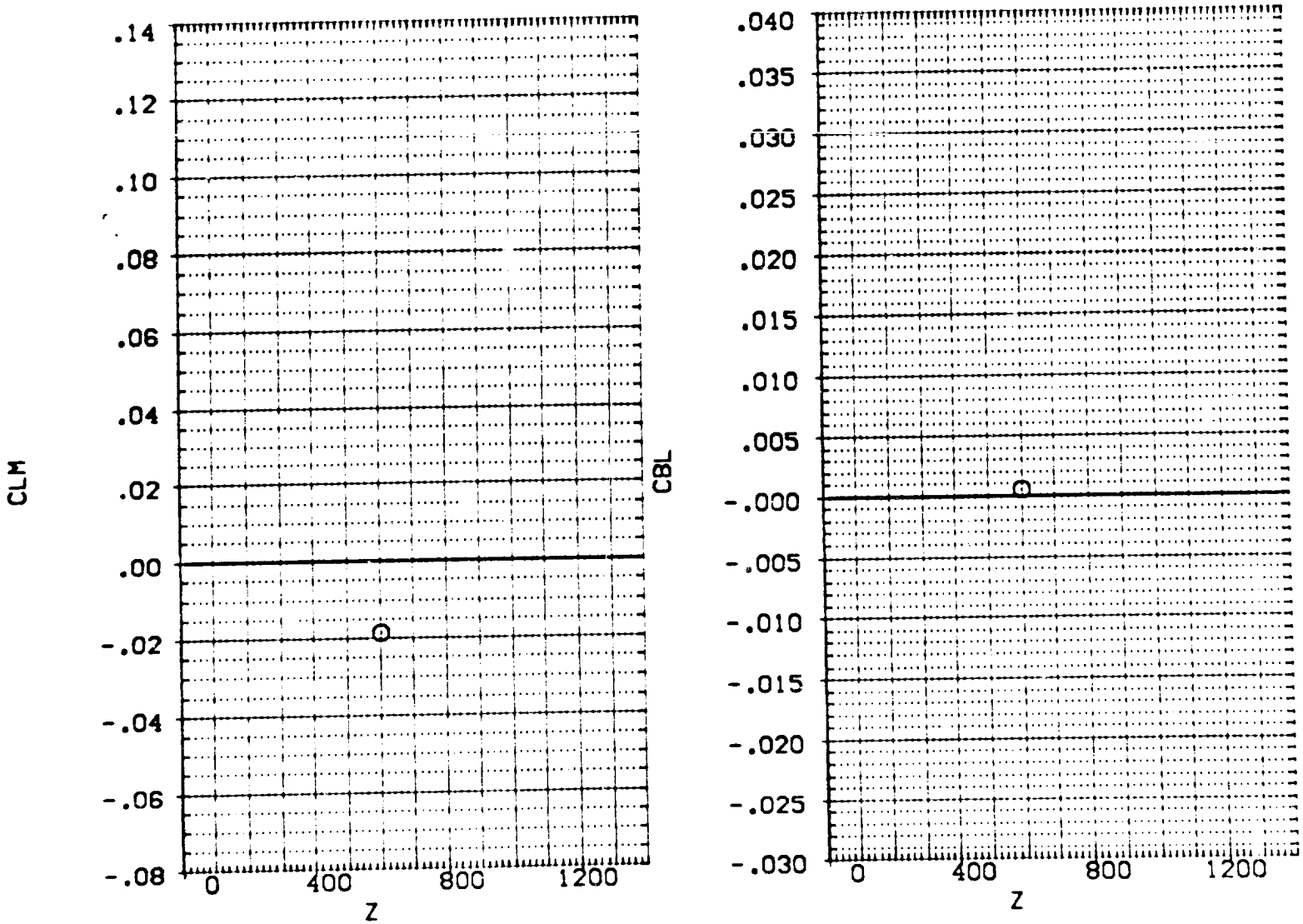


EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

IA13. EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ051)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

SYMBOL	X	PARAMETRIC VALUES			
O	.299	MACH	4.520	PTOTAL	80.000
		ALPHA	-21.000	BETA	.000
		DALPHA	-19.000	DBETA	.000
		ELEVTR	.000	AILRON	.000
		Y	.000		

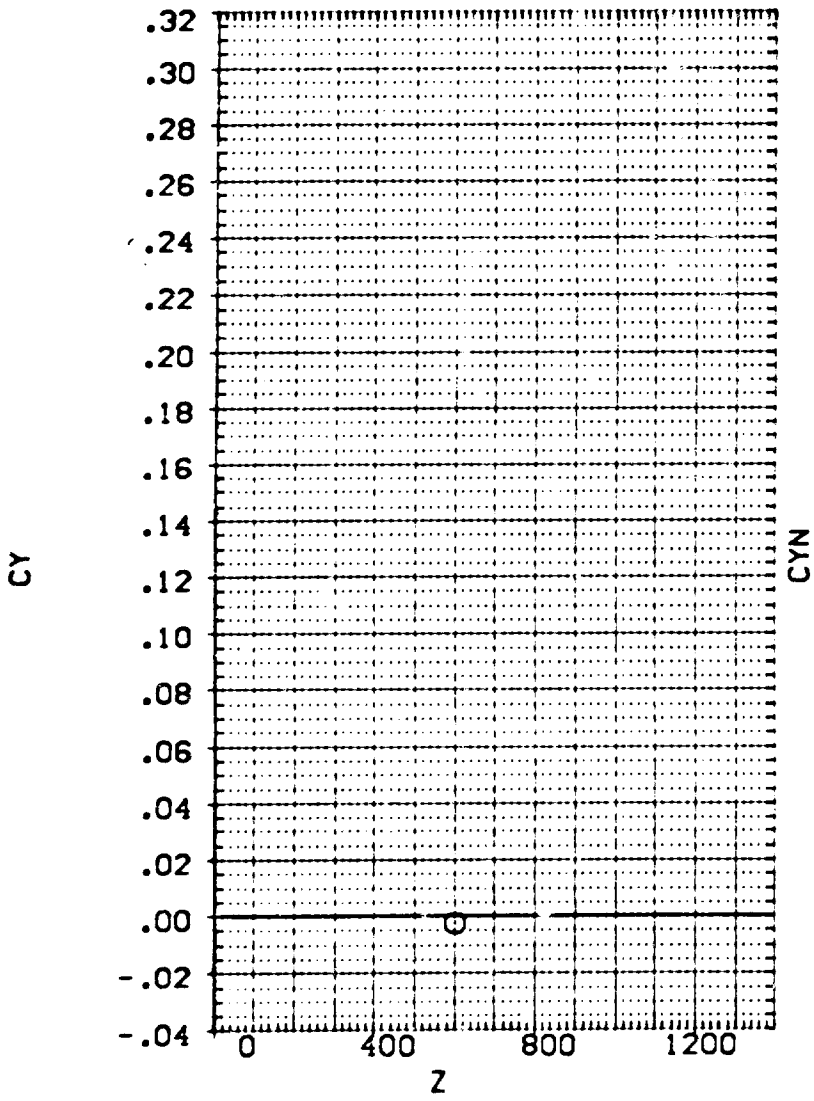


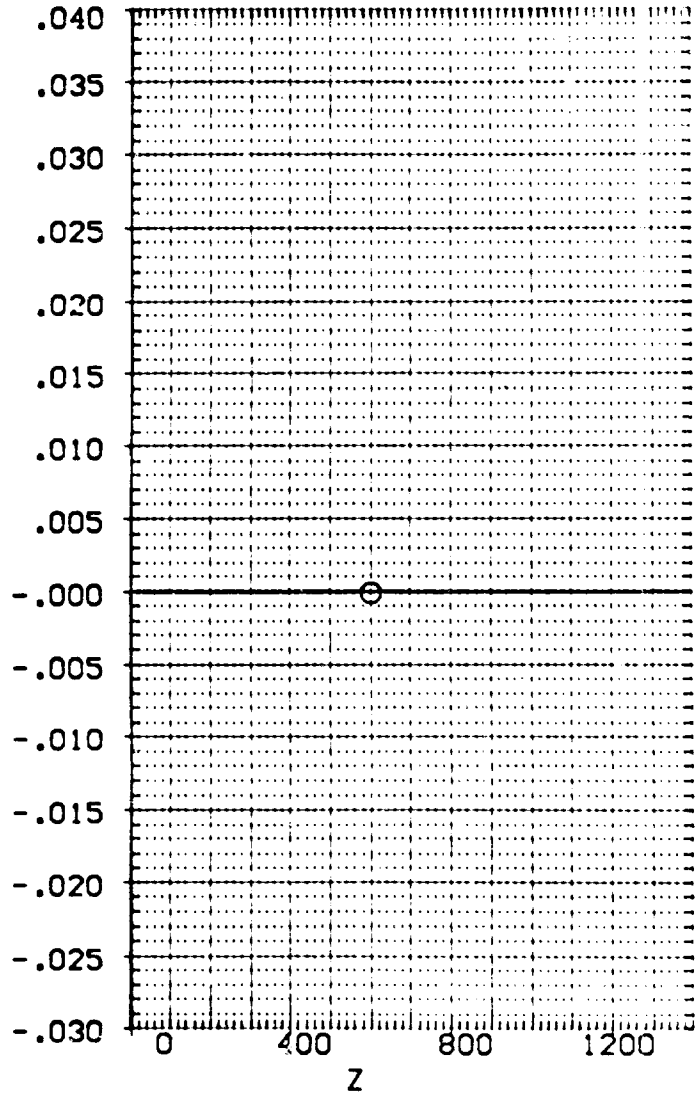
EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

!A13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ051)

SYMBOL	x	PARAMETRIC VALUES			
○	.299	MACH	4.520	PTOTAL	80.000
		ALPHA	-21.000	BETA	.000
		DALPHA	-19.000	DBETA	.000
		ELEVTR	.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



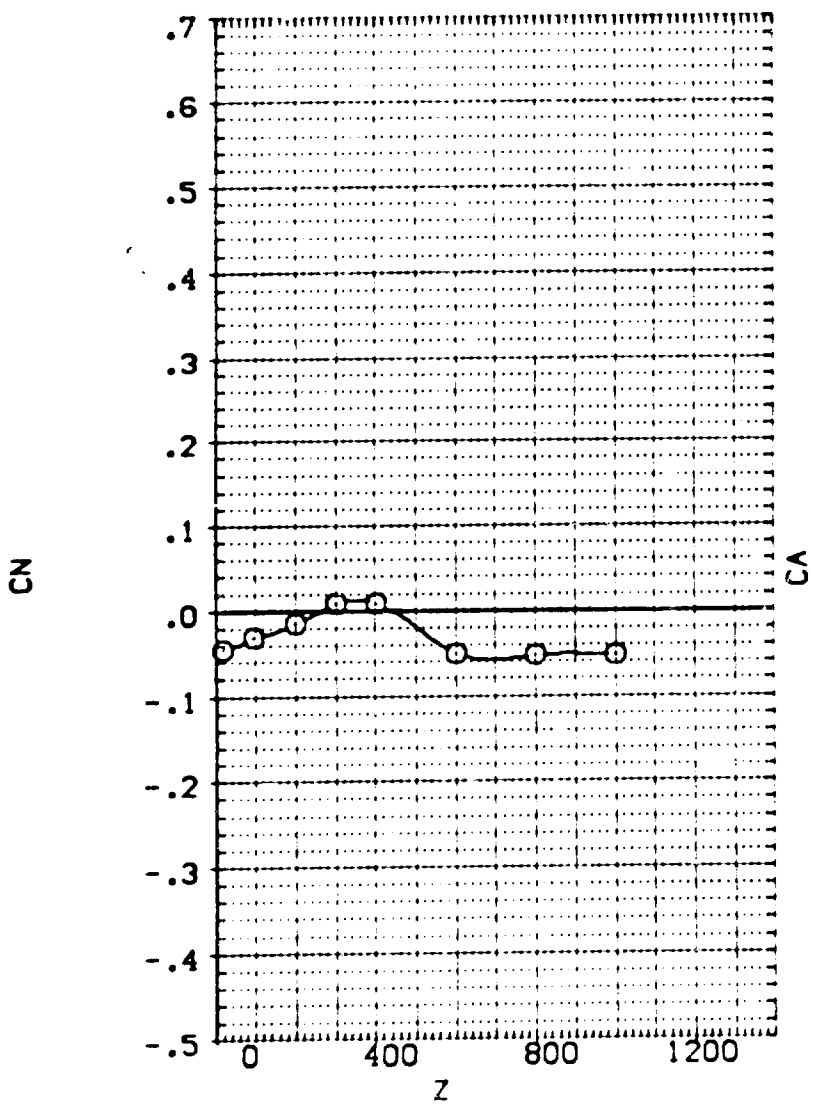


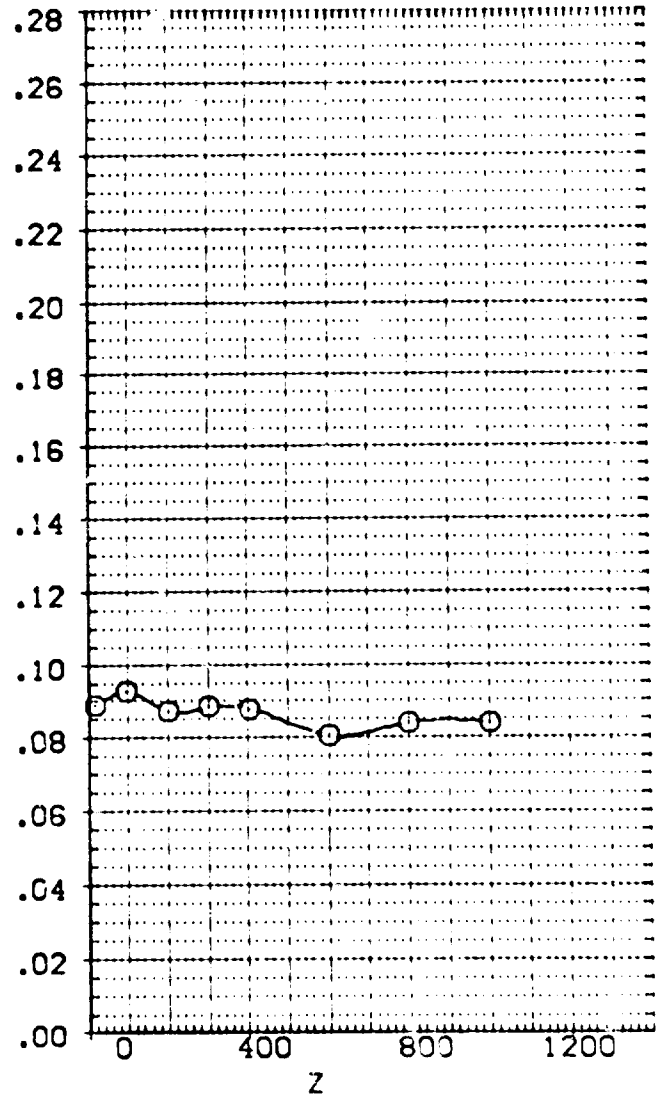
EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

[A13.EXTERNAL TANK(T1C)SEPARATING FROM ORB. 09 (RTJ052)

SYMBOL	X	PARAMETRIC VALUES			
○	.102	MACH	4.530	PTOTAL	110.000
		ALPHA	.000	BETA	.000
		DALPHA	.000	DBETA	.000
		ELEVTR	.000	AILRON	10.000
		Y	-200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



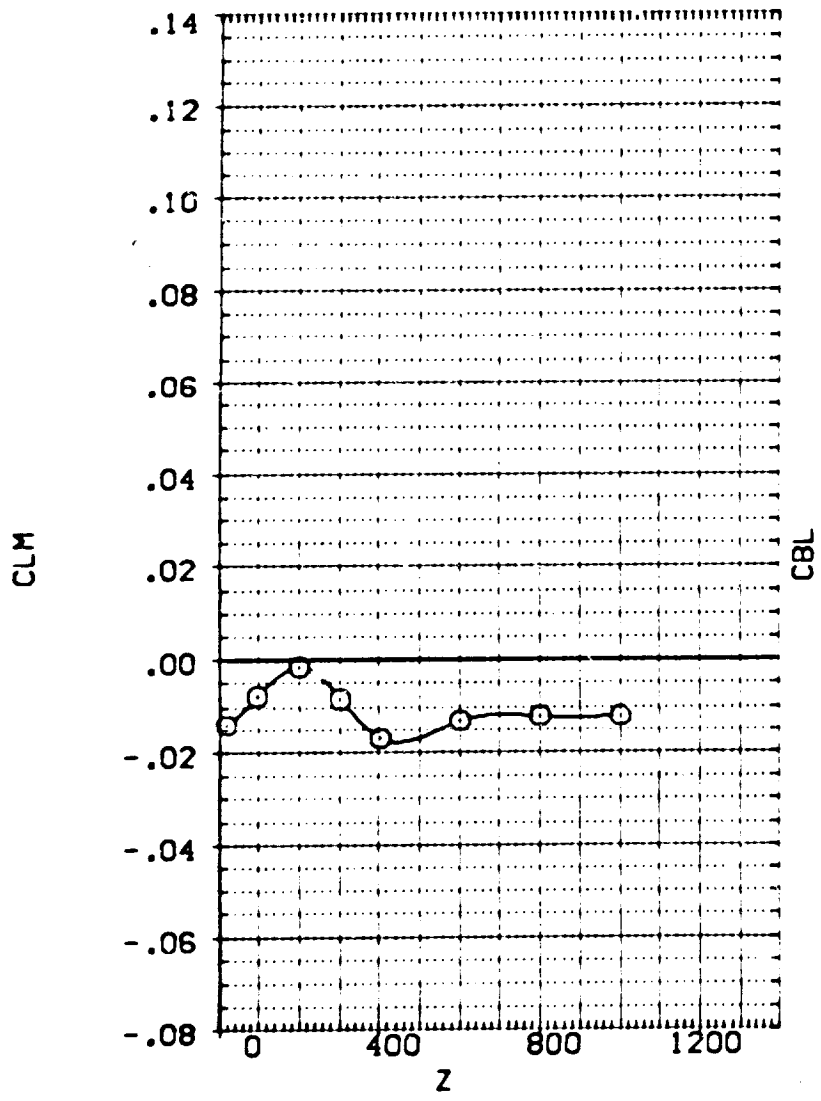


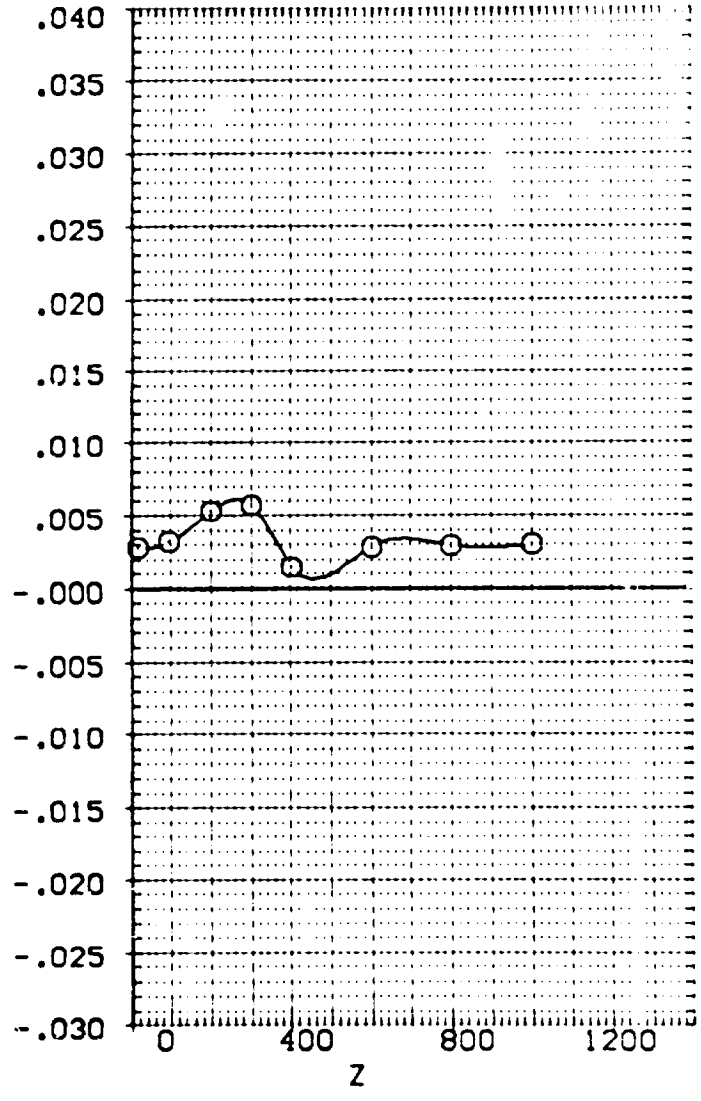
EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

[A13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ052)

SYMBOL	X		PARAMETRIC VALUES		
O	.102	MACH	4.530	PTOTAL	110.000
		ALPHA	.000	BETA	.000
		DALPHA	.000	DBETA	.000
		ELEVTR	.000	AILRON	10.000
		Y	-200.000		

SEE THE ASSOC[illegible]
DOCUMENT [illegible]
CHARACTERISTICS [illegible]
INDIVIDUAL [illegible]



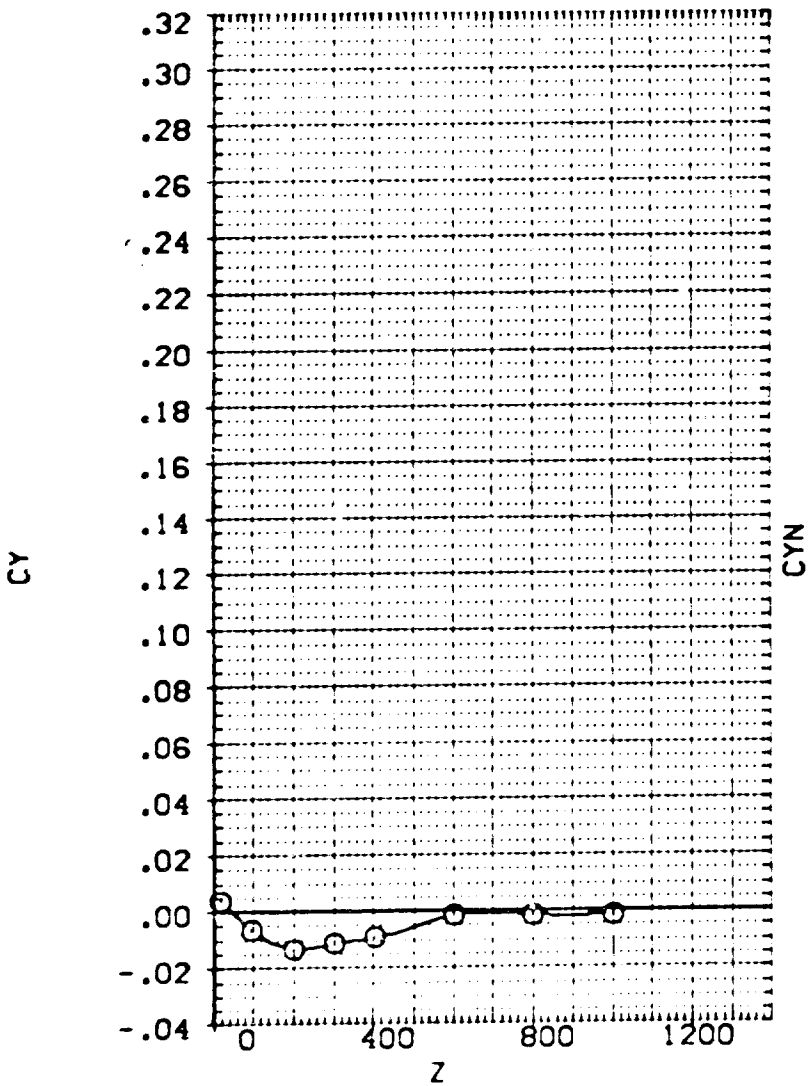


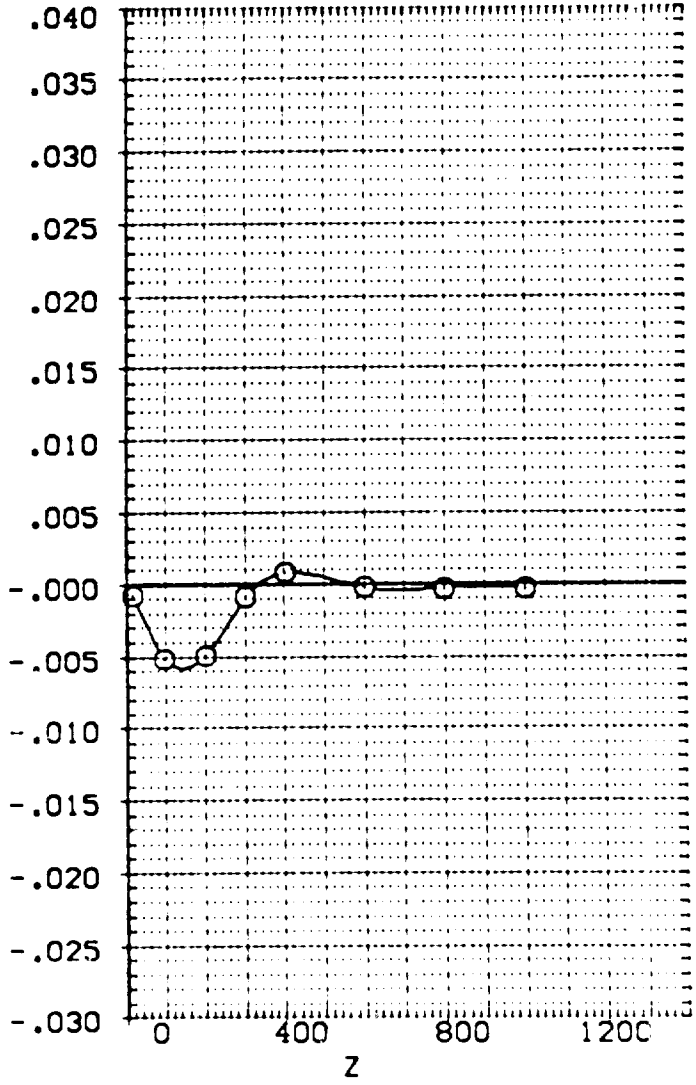
EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

!A13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ052)

SYMBOL	X	PARAMETRIC VALUES			
○	.102	MACH	4.530	PTOTAL	110.000
		ALPHA	.000	BETA	.000
		DALPHA	.000	DBETA	.000
		ELEVTR	.000	AILRON	10.000
		Y	-200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



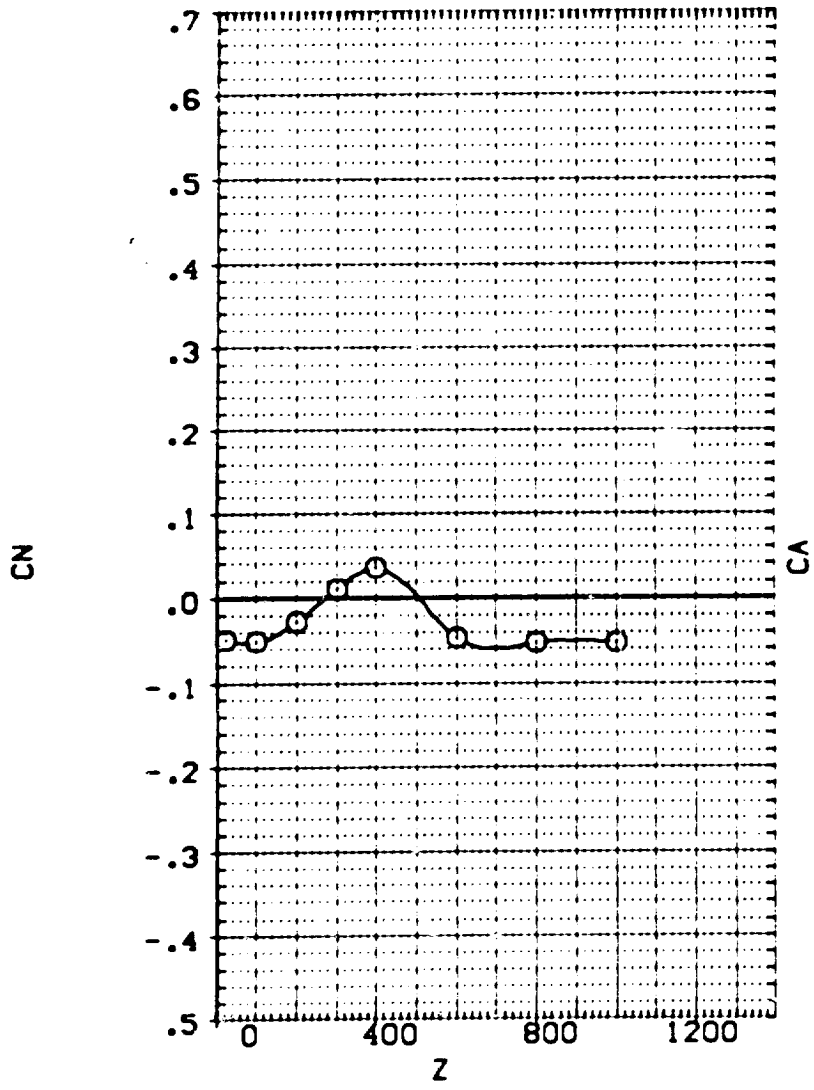


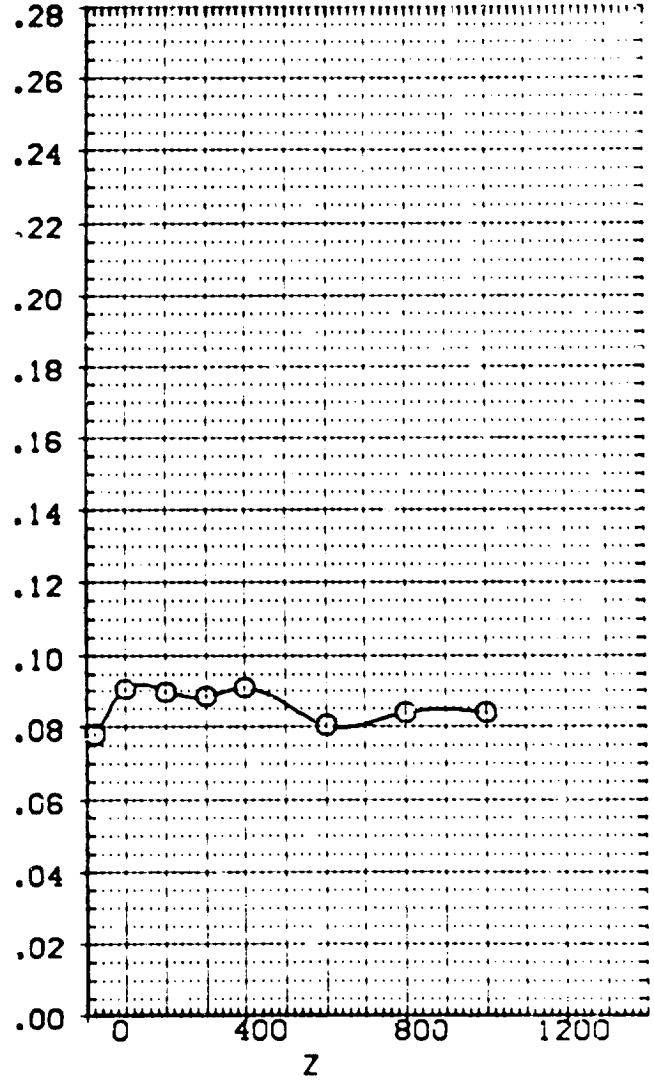
EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

!A!3.EXTERNAL TANK(T!O)SEPARATING FROM ORB. 09 (RTJ053)

SYMBOL	X	PARAMETRIC VALUES			
O	.136	MACH	4.530	PTOTAL	110.000
		ALPHA	.000	BETA	.000
		DALPHA	.000	DBETA	.000
		ELEVTR	.000	AILRON	10.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR CHARACTERISTICS FOR INDIVIDUAL DATASETS



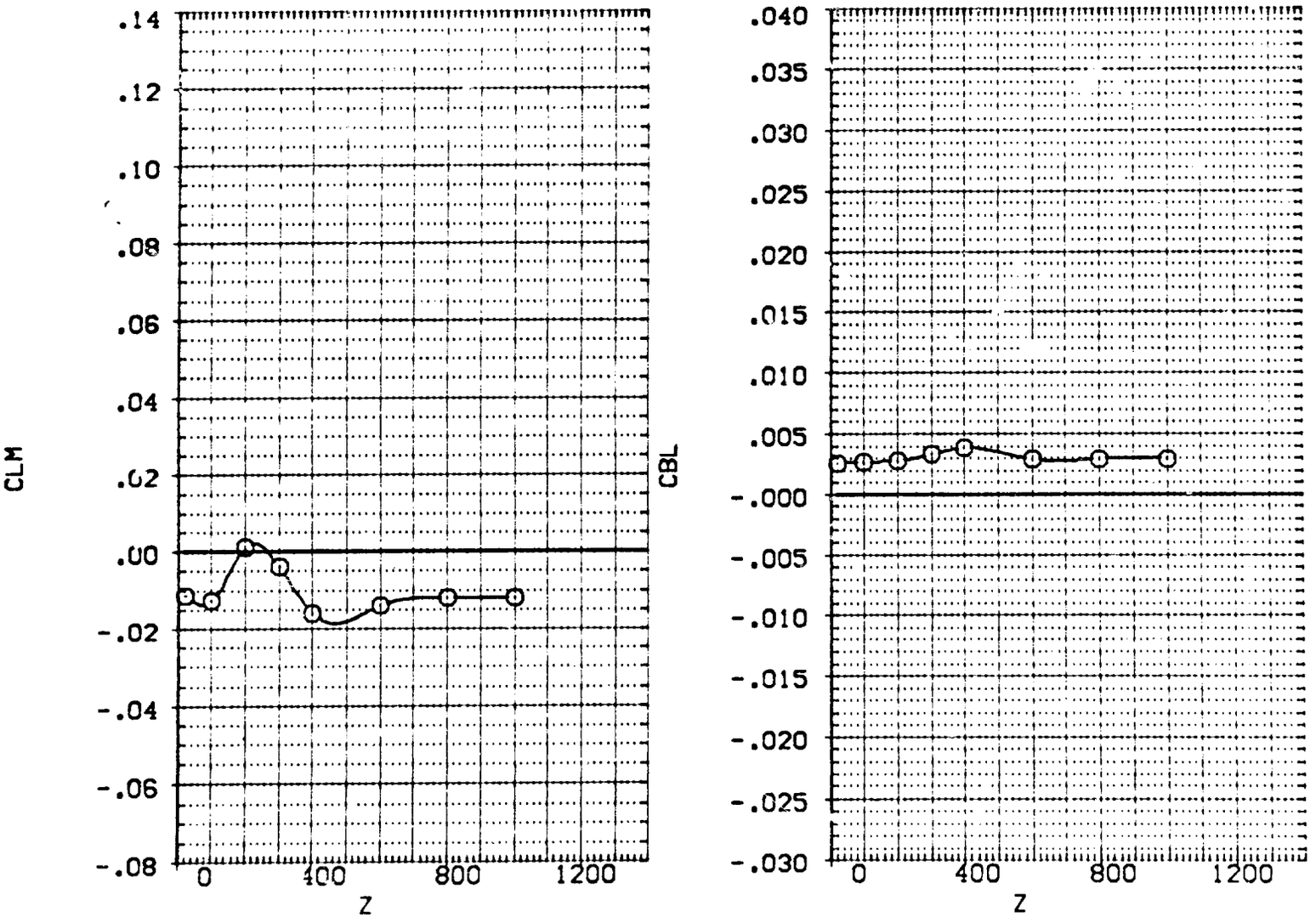


EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

!A13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ053)

SYMBOL	X		PARAMETRIC VALUES		
○	.136	MACH	4.530	PTOTAL	110.000
		ALPHA	.000	BETA	.000
		DALPHA	.000	DBETA	.000
		ELEVTR	.000	AILRON	10.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

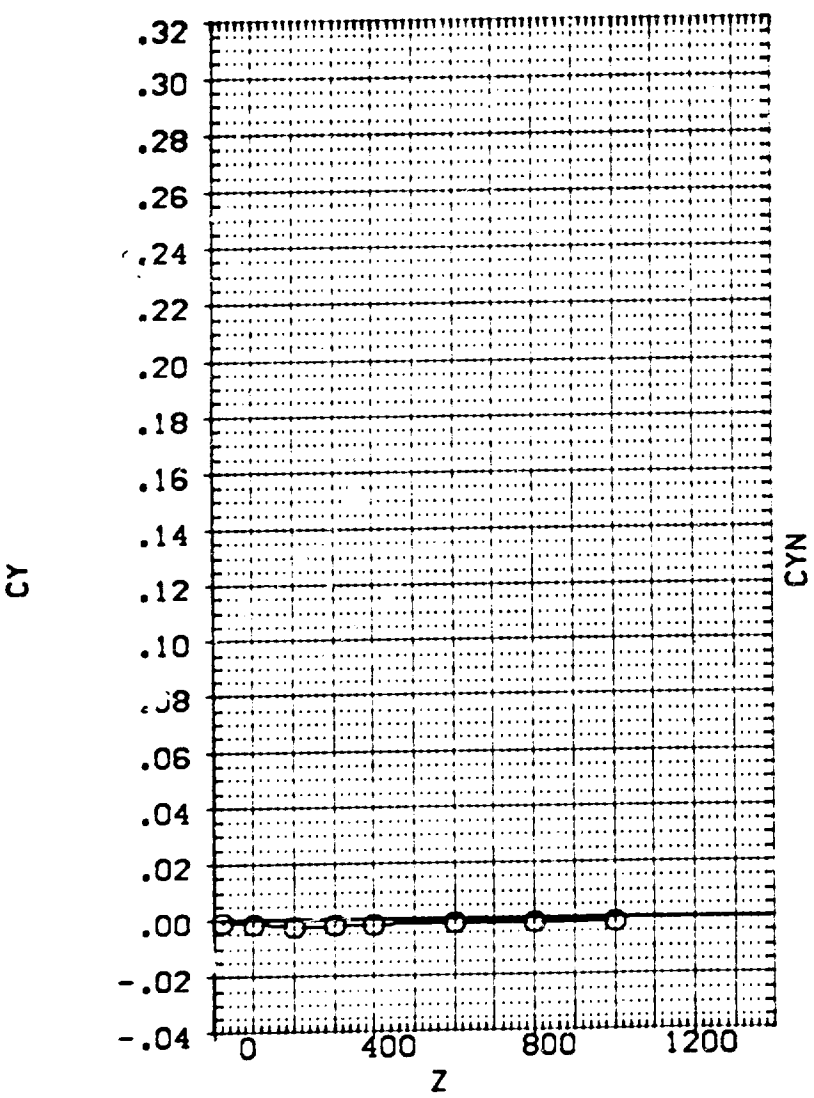


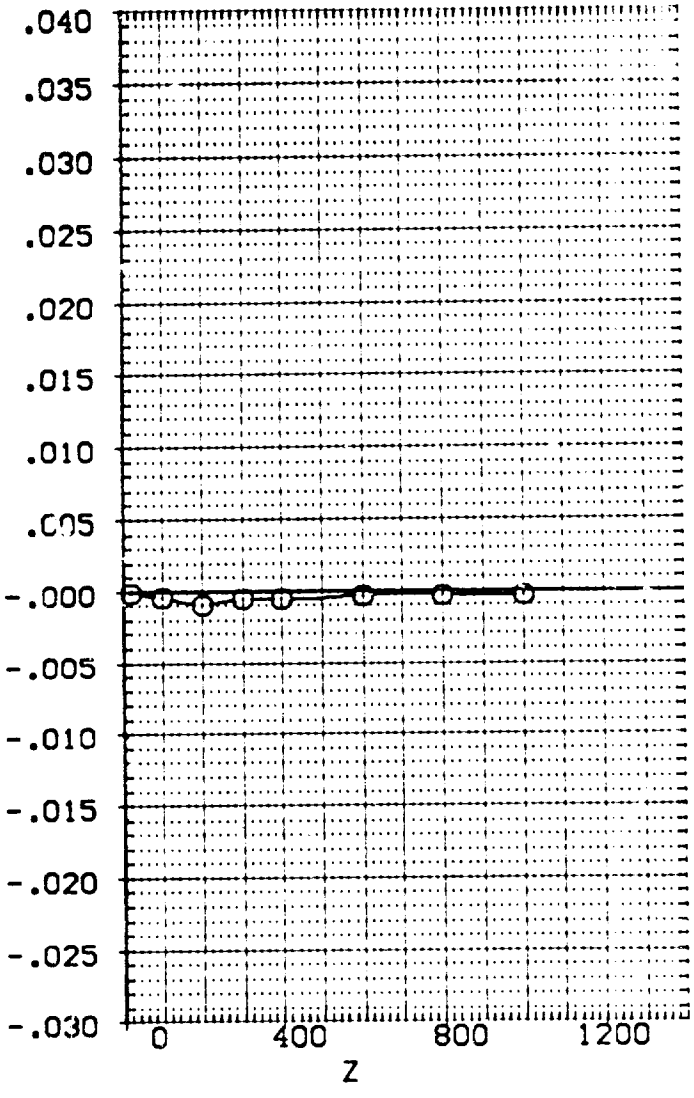
EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ053)

SYMBOL	X	PARAMETRIC VALUES			
O	.136	MACH	4.530	PTOTAL	110.000
		ALPHA	.000	BETA	.000
		DALPHA	.000	DBETA	.000
		ELEVTR	.000	AILRON	10.000
		Y	.000		

SEE THE ASSOCIATED DOCUMENT FOR ... CHARACTERISTICS FOR INDIVIDUAL DATASETS



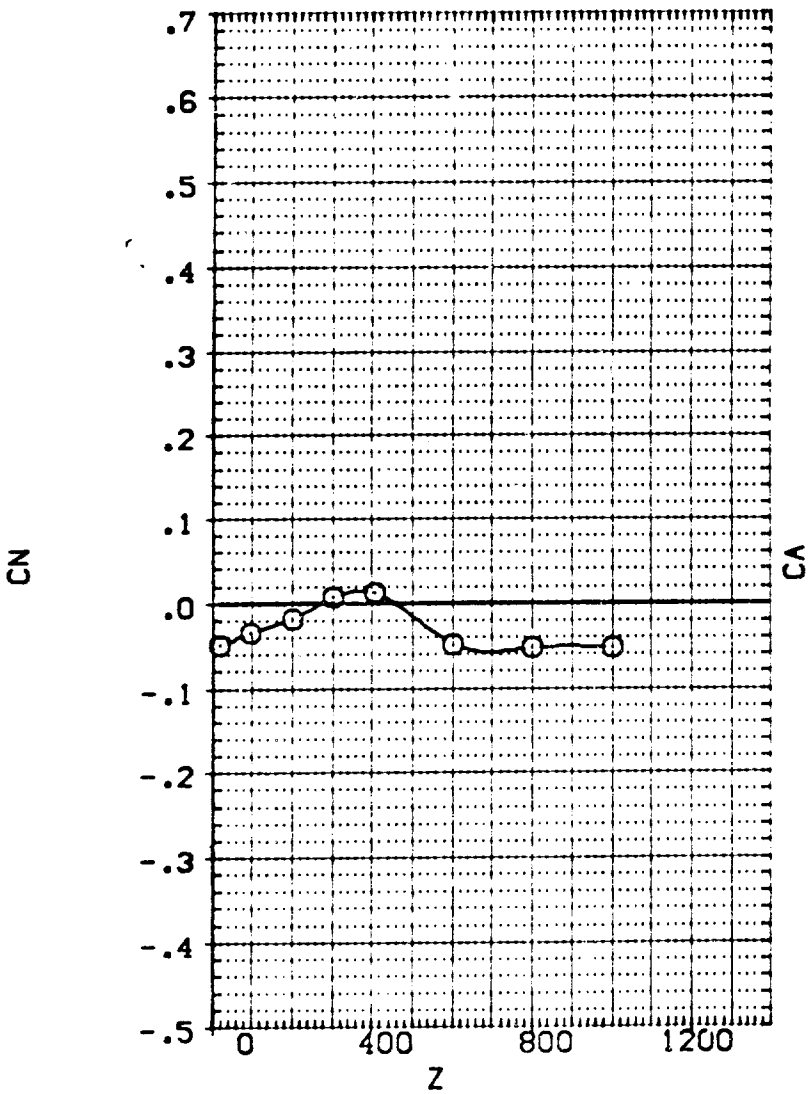


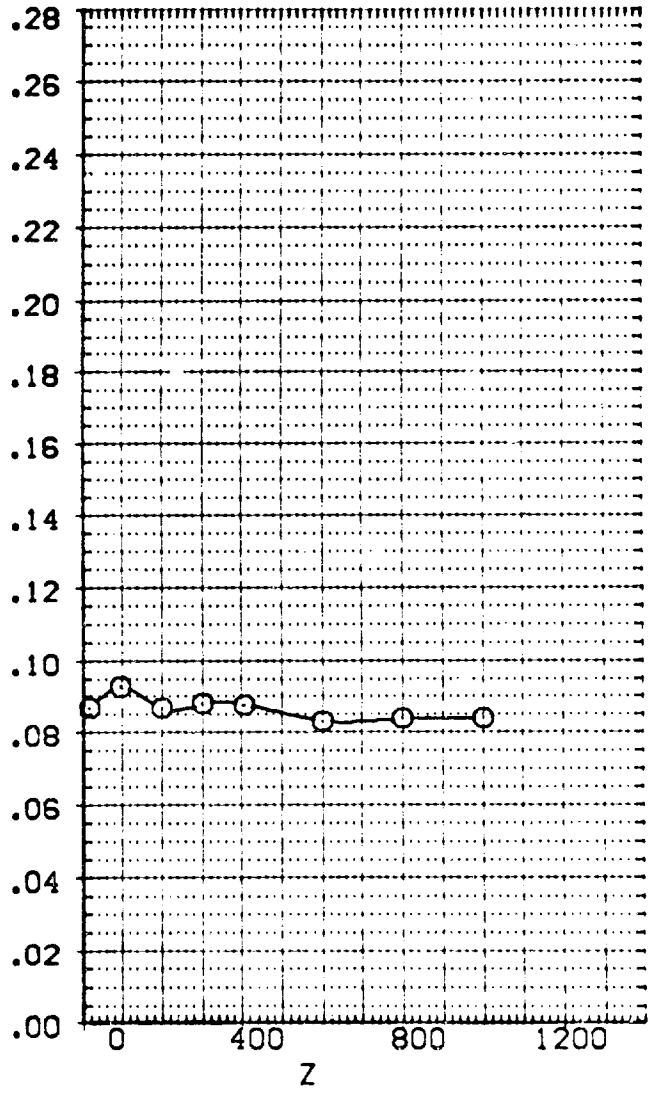
EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ054)

SYMBOL	X		PARAMETRIC VALUES		
O	.020	MACH	4.530	PTOTAL	0.000
		ALPHA	.000	BETA	.000
		DALPHA	.000	DBETA	.000
		ELEVTR	.000	AILRON	10.000
		Y	200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



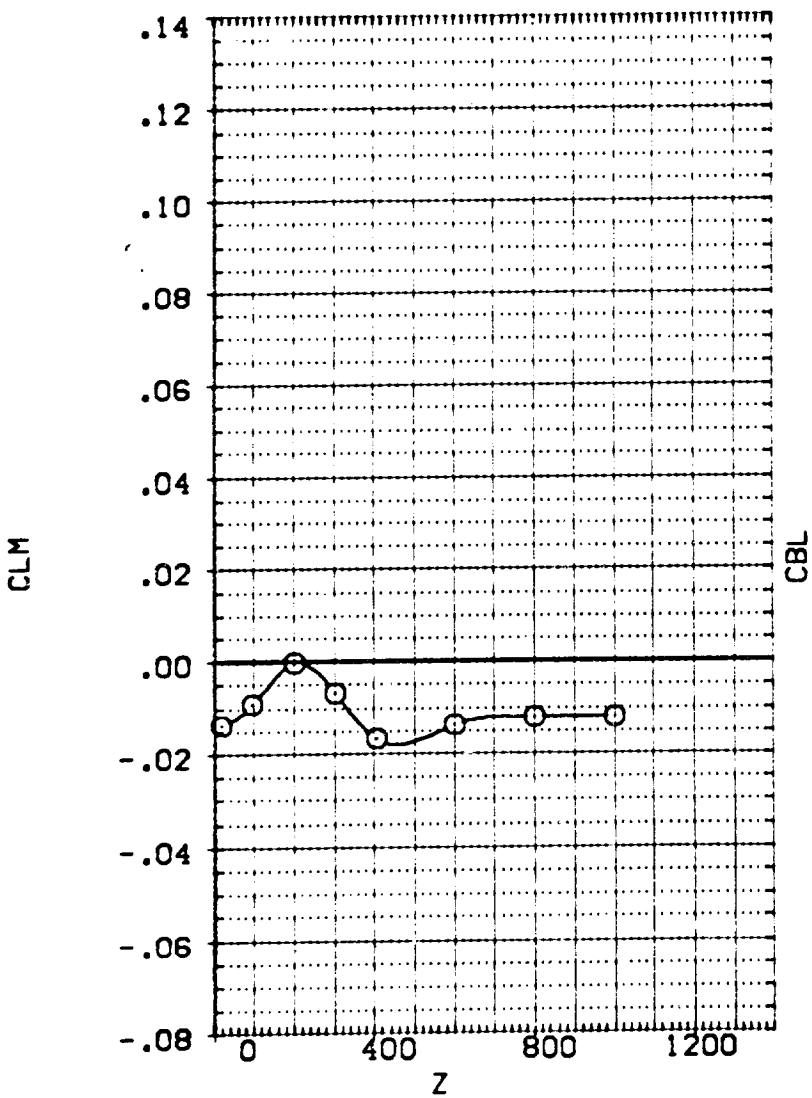


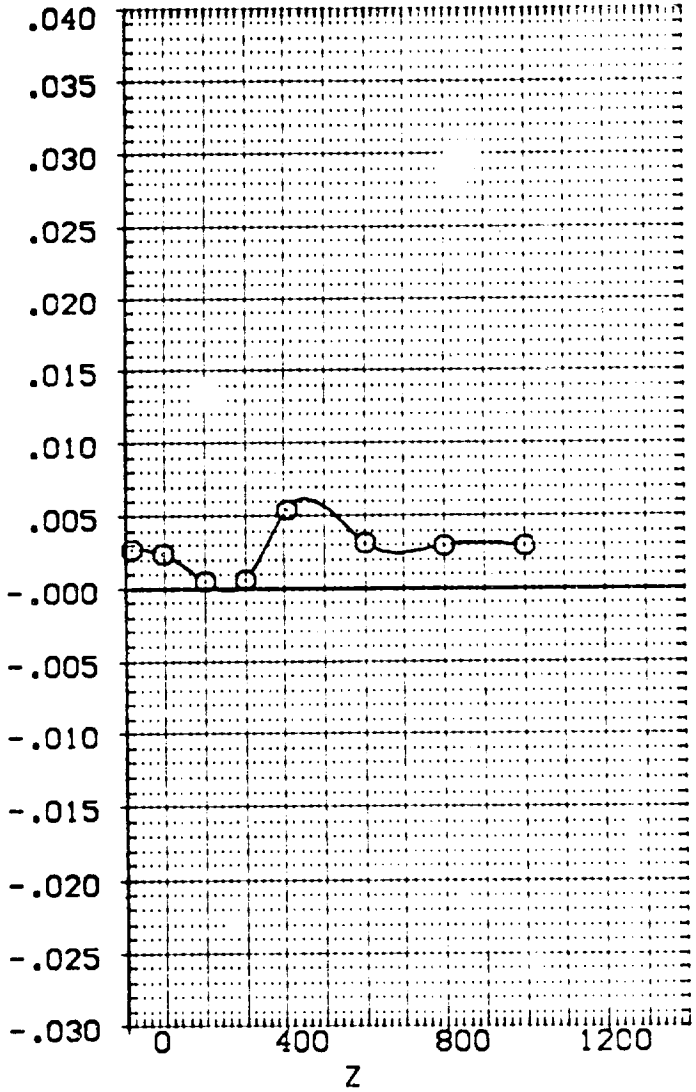
EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ054)

SYMBOL		PARAMETRIC VALUES			
O	.020	MACH	4.530	PTOTAL	110.000
		ALPHA	.000	BETA	.000
		DALPHA	.000	DBETA	.000
		ELEVTR	.000	AILRON	10.000
		Y	200.000		

SEE THE ASSOCIATED DOCUMENT FOR [illegible] CHARACTERISTICS FOR INDIVIDUAL DATASETS



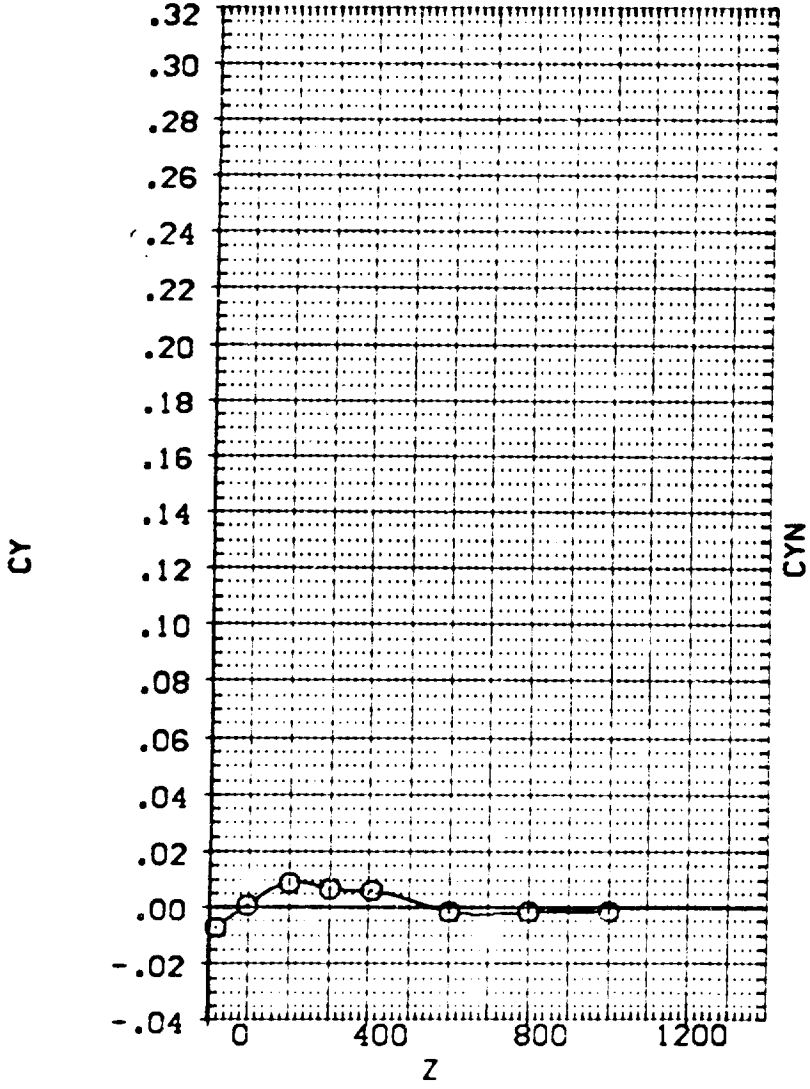


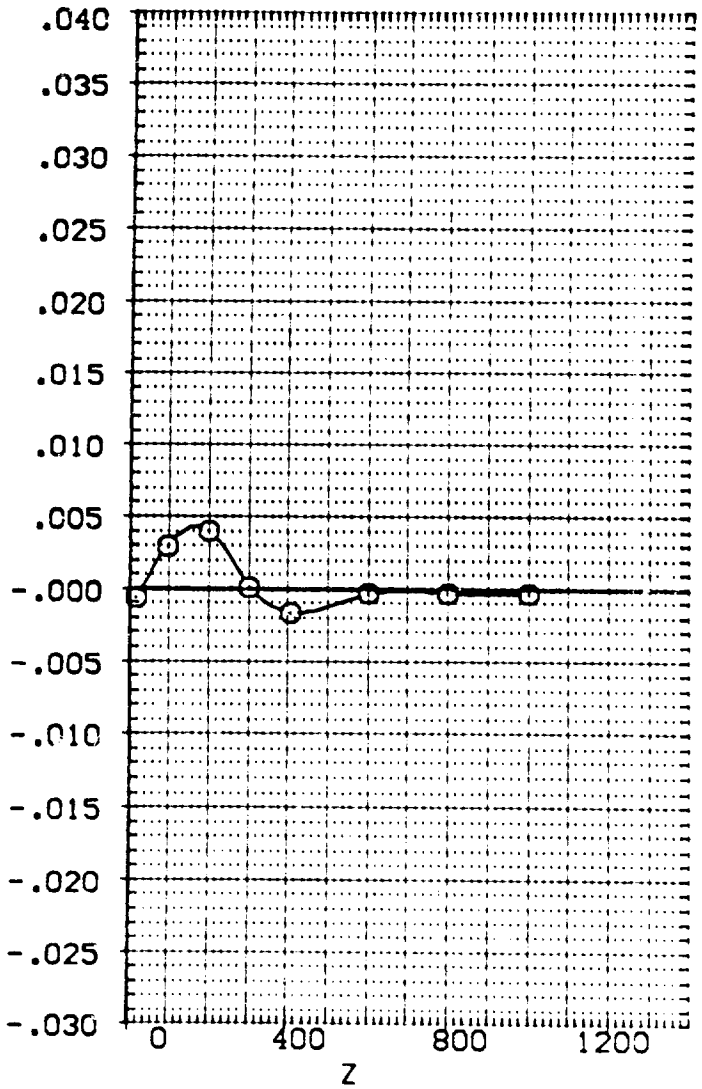
EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ054)

SYMBOL	X	PARAMETRIC VALUES			
○	.020	MACH	4.530	PTOTAL	110.000
		ALPHA	.000	BETA	.000
		DALPHA	.000	DBETA	.000
		ELEVTR	.000	AILRON	10.000
		Y	200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



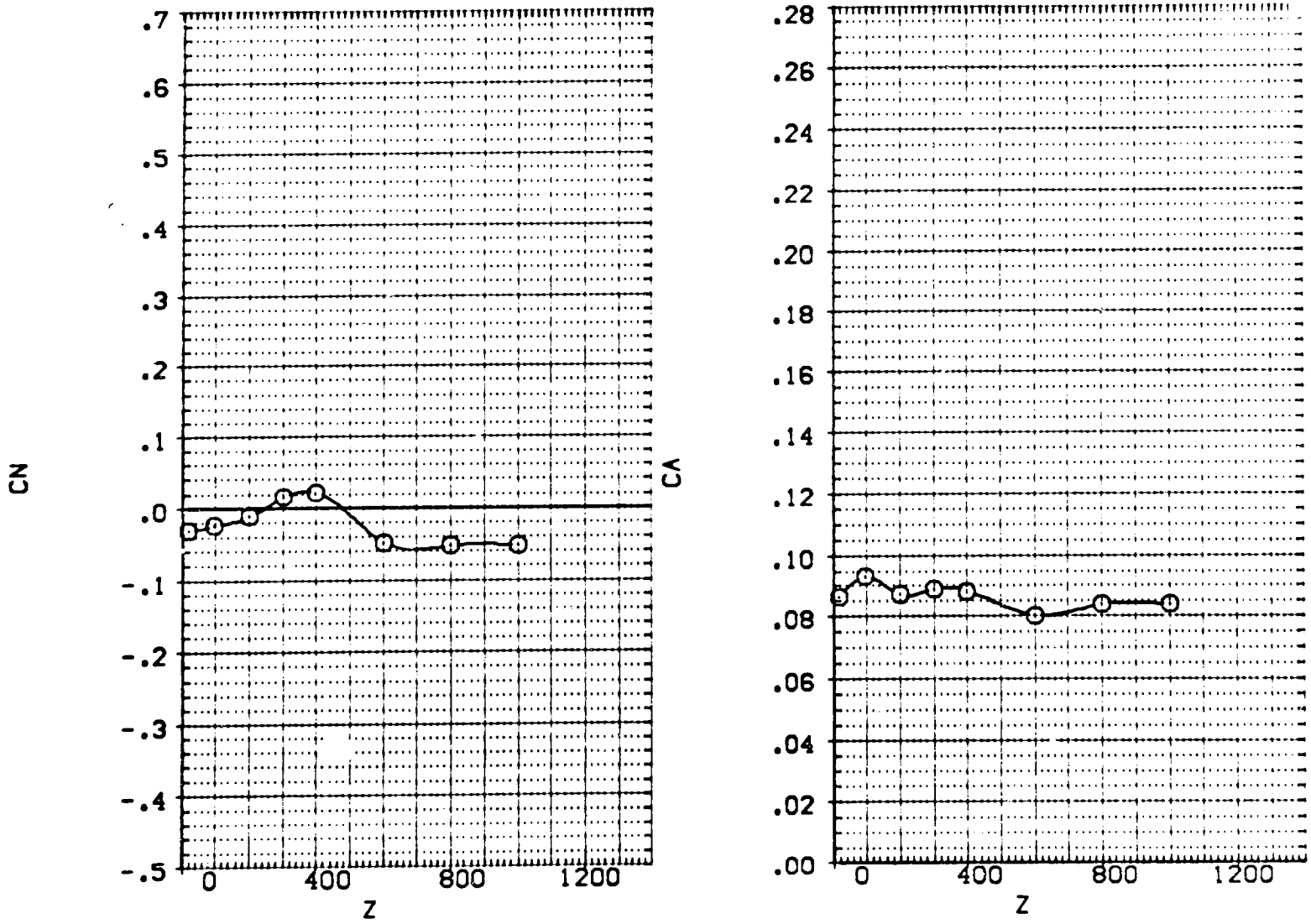


EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

!A13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ055)

SYMBOL	X		PARAMETRIC VALUES		
O	.051	MACH	4.530	PTOTAL	110.000
		ALPHA	.000	BETA	.000
		DALPHA	.000	DBETA	-5.000
		ELEVTR	.000	AILRON	10.000
		Y	-200.000		

SEE THE ASSOCIATED DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

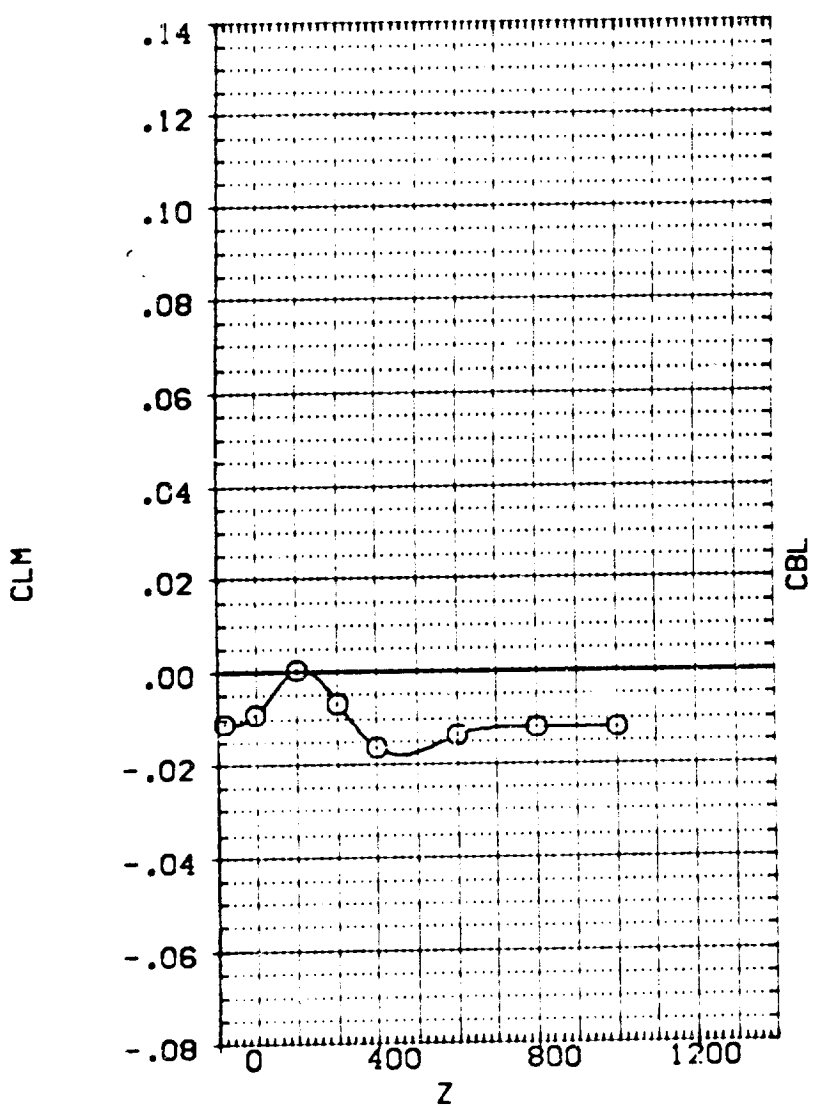


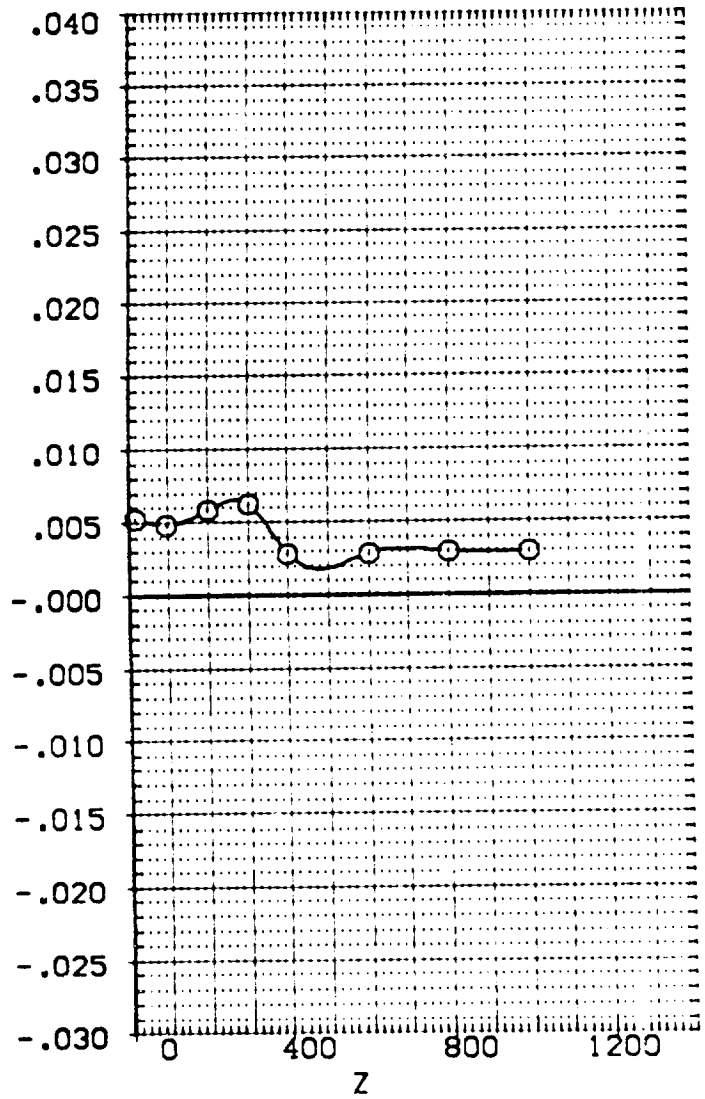
EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

!A13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ055)

SYMBOL	X	PARAMETRIC VALUES			
○	.051	MACH	4.530	PTOTAL	110.000
		ALPHA	.000	BETA	.000
		DALPHA	.000	DBETA	-5.000
		ELEVTR	.000	AILRON	10.000
		Y	-200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



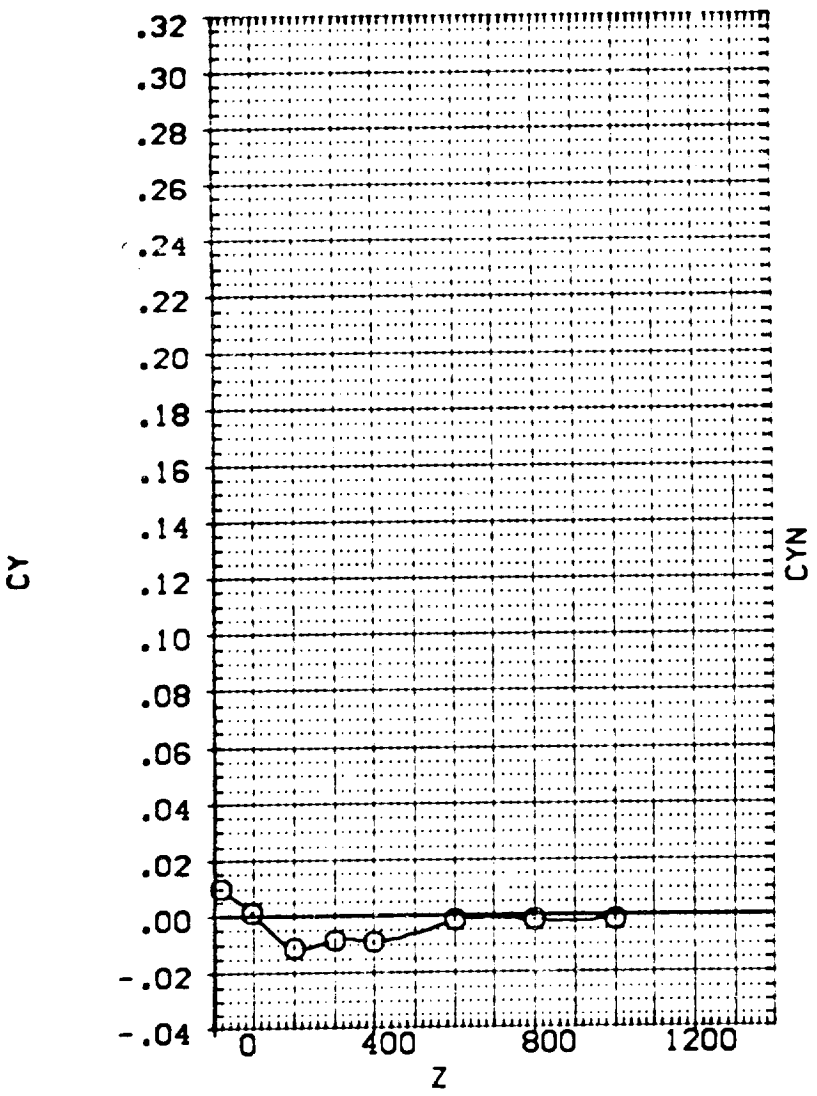


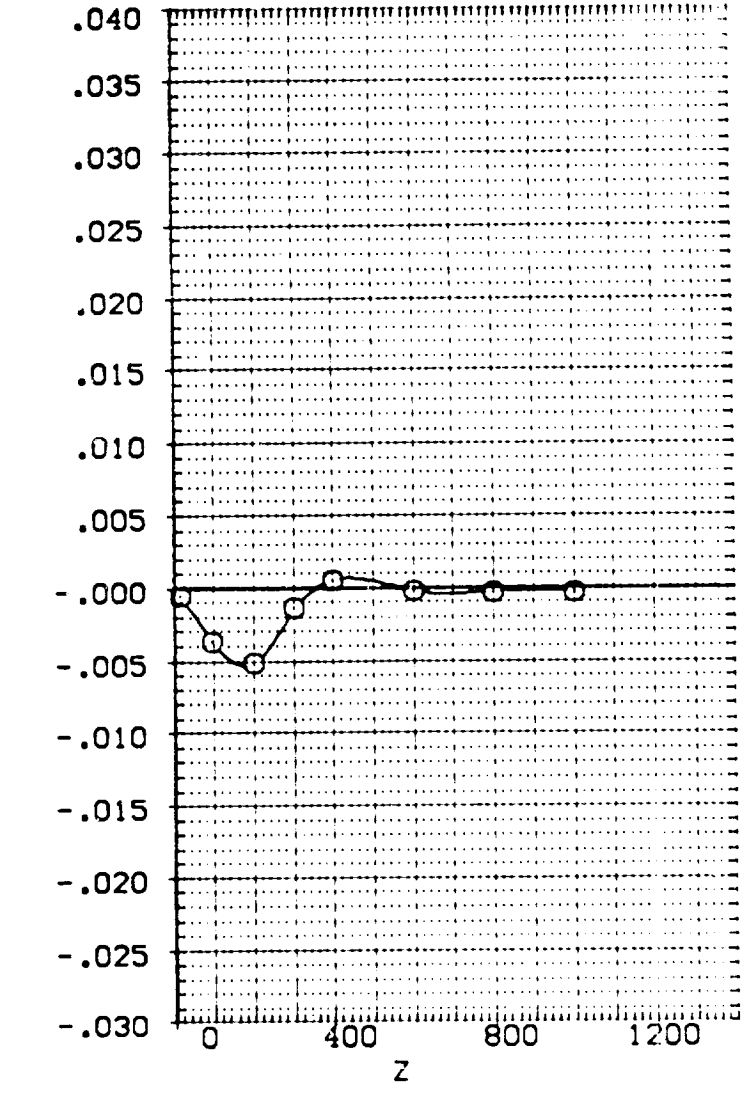
EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ055)

SYMBOL	X	PARAMETRIC VALUES			
O	.051	MACH	4.530	PTOTAL	110.000
		ALPHA	.000	BETA	.000
		DALPHA	.000	DBETA	-5.000
		ELEVTR	.000	AILRON	10.000
		Y	-200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



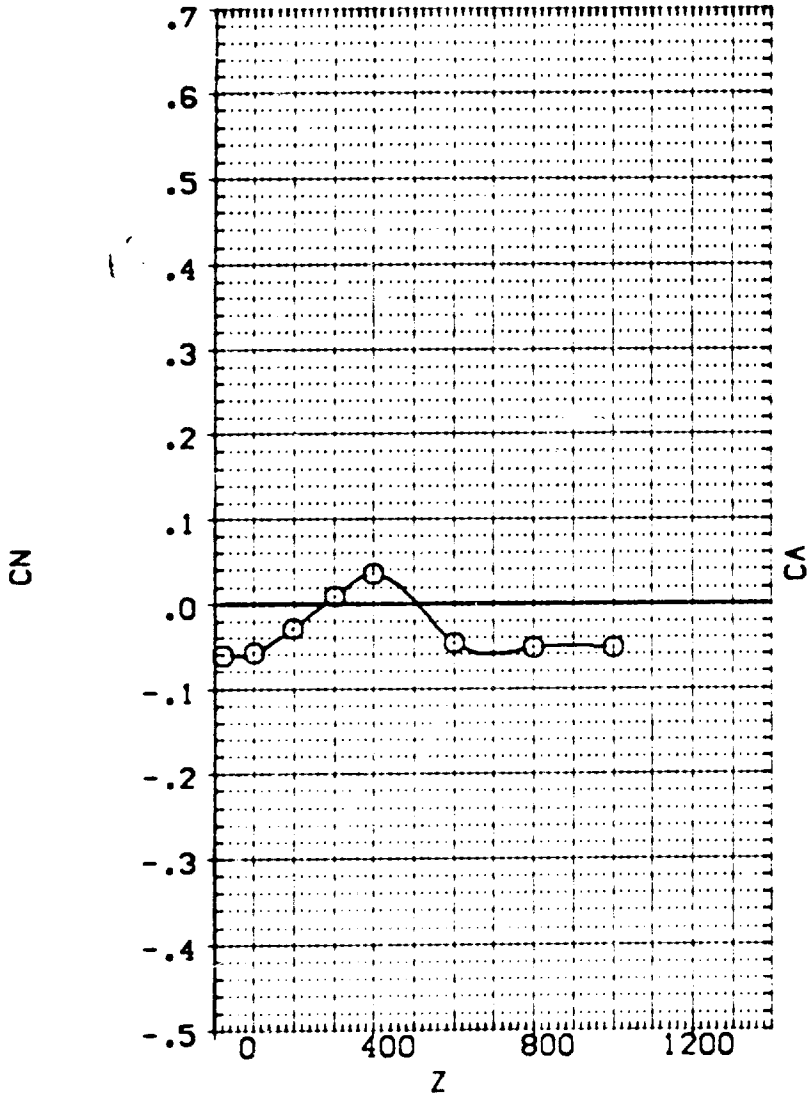


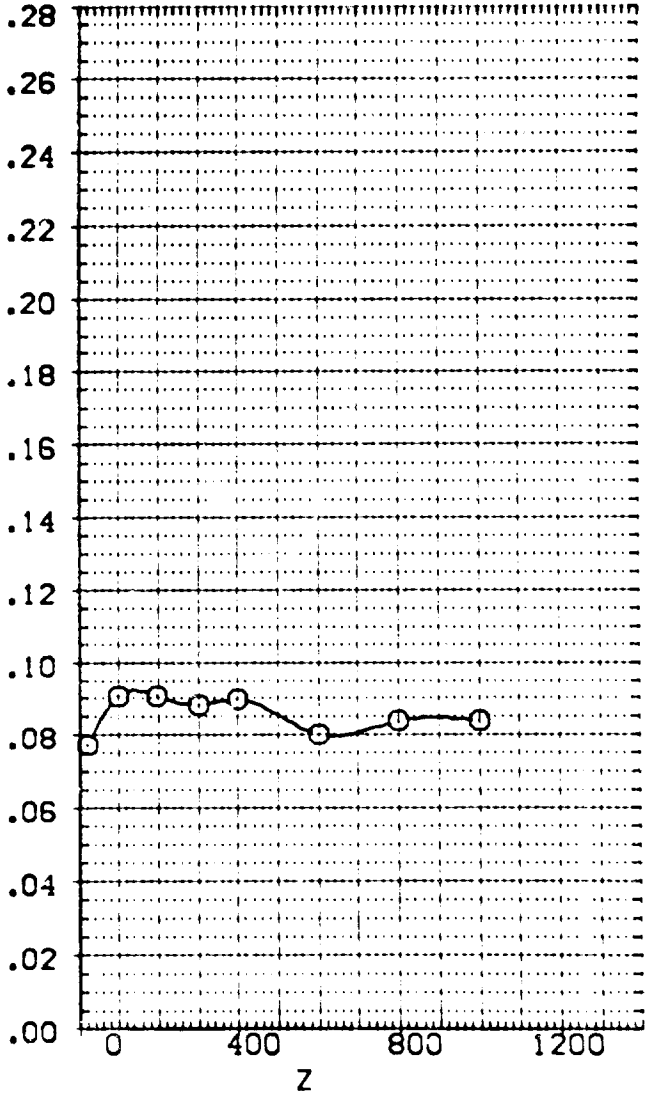
EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

!A13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ056)

SYMBOL	X	PARAMETRIC VALUES			
O	.106	MACH	4.530	PTOTAL	110.000
		ALPHA	.000	BETA	.000
		DELTA	.000	DBETA	5.000
		ELEVTR	.000	AILRON	10.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



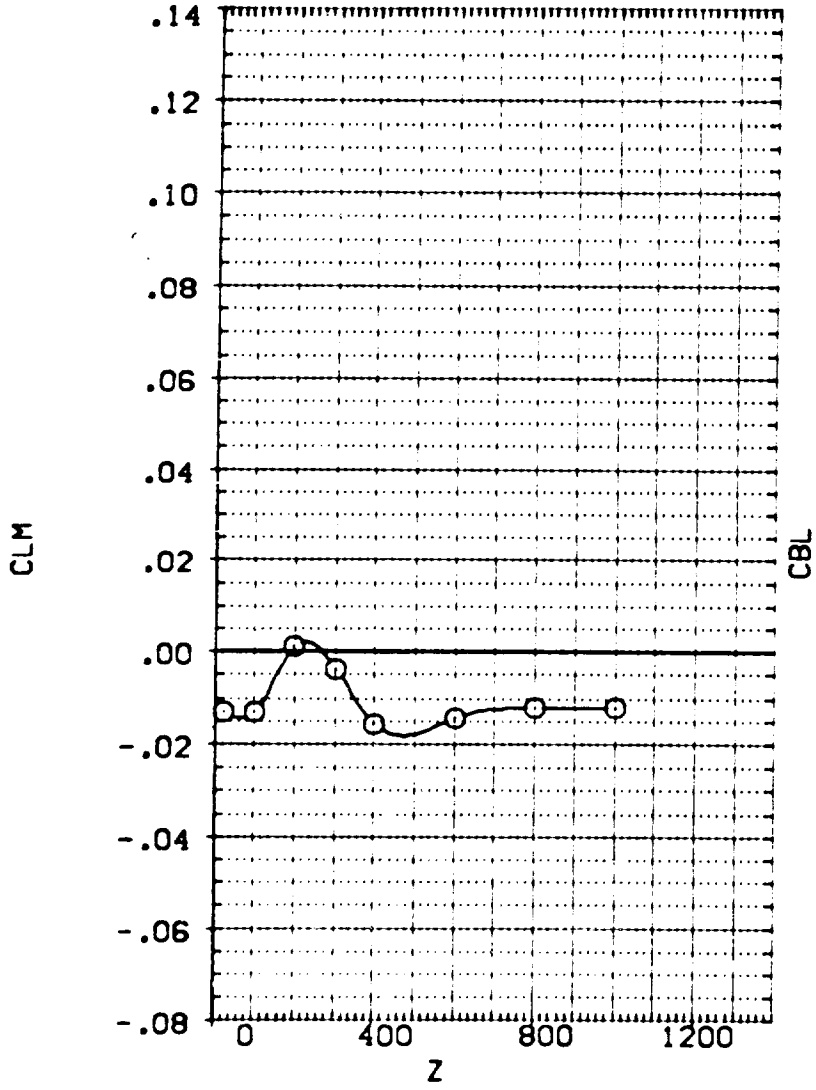


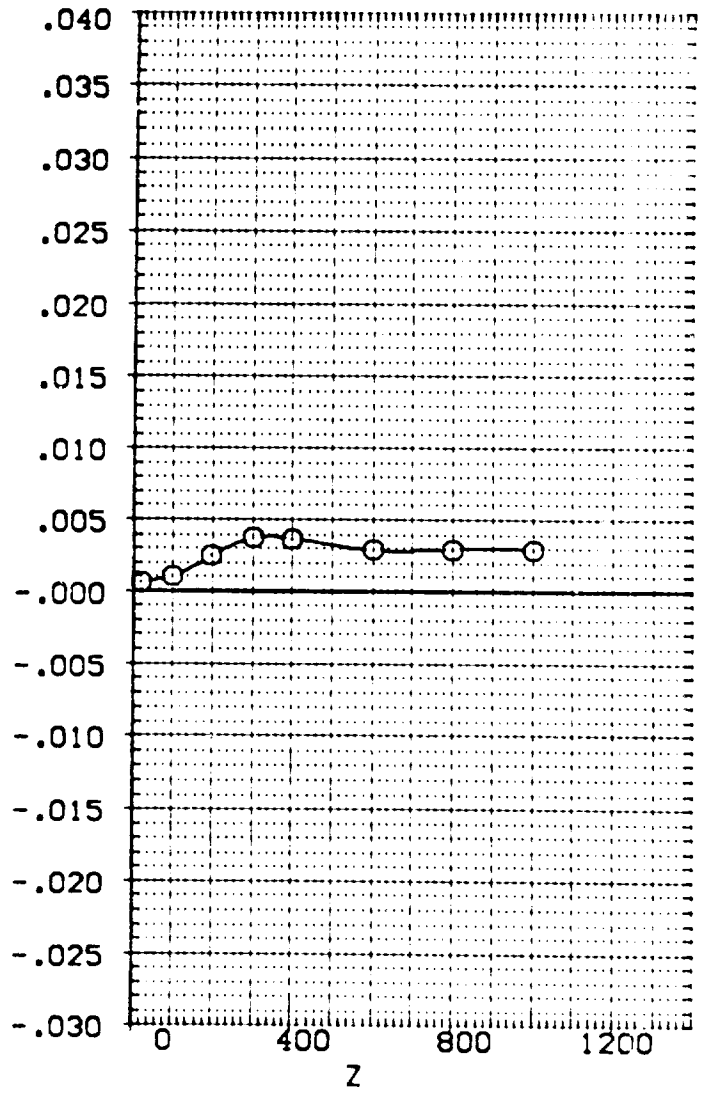
EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

!A13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ056)

SYMBOL	X		PARAMETRIC VALUES		
O	.106	MACH	4.530	PTOTAL	110.000
		ALPHA	.000	BETA	.000
		DALPHA	.000	DBETA	5.000
		ELEVTR	.000	AILRON	10.000
		Y	.000		

SEE THE ASSOCIATED DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



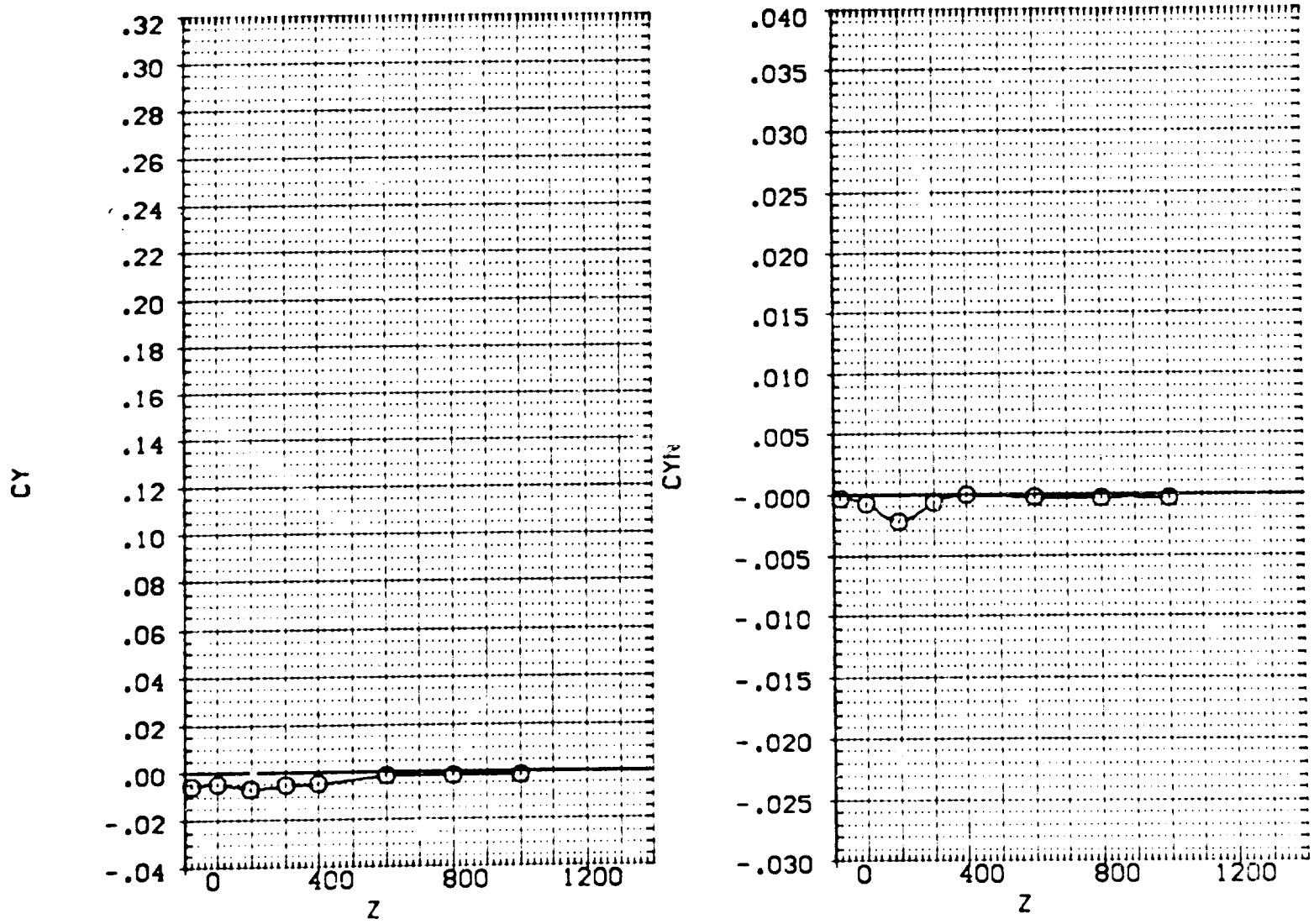


EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

!A!3.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ056)

SYMBOL	X	PARAMETRIC VALUES			
O	.106	MACH	4.530	PTOTAL	110.000
		ALPHA	.000	BETA	.000
		DALPHA	.000	DBETA	5.000
		ELE R	.000	AILRON	10.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

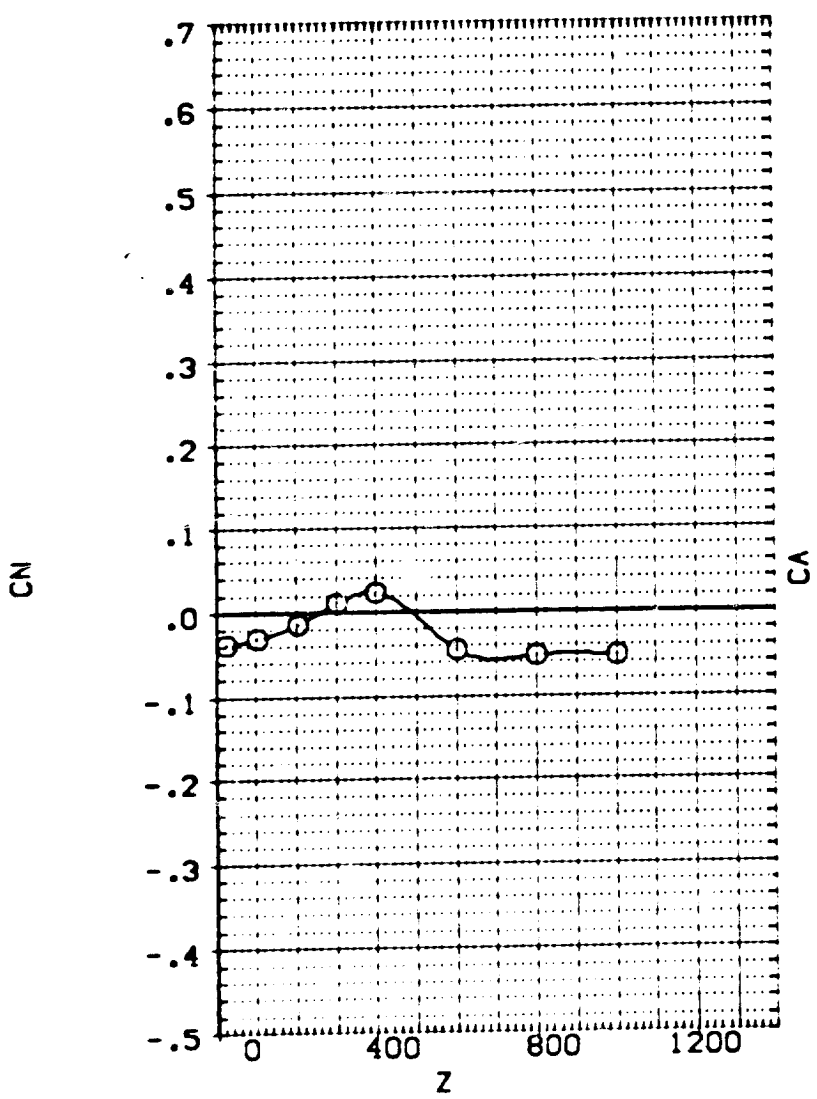


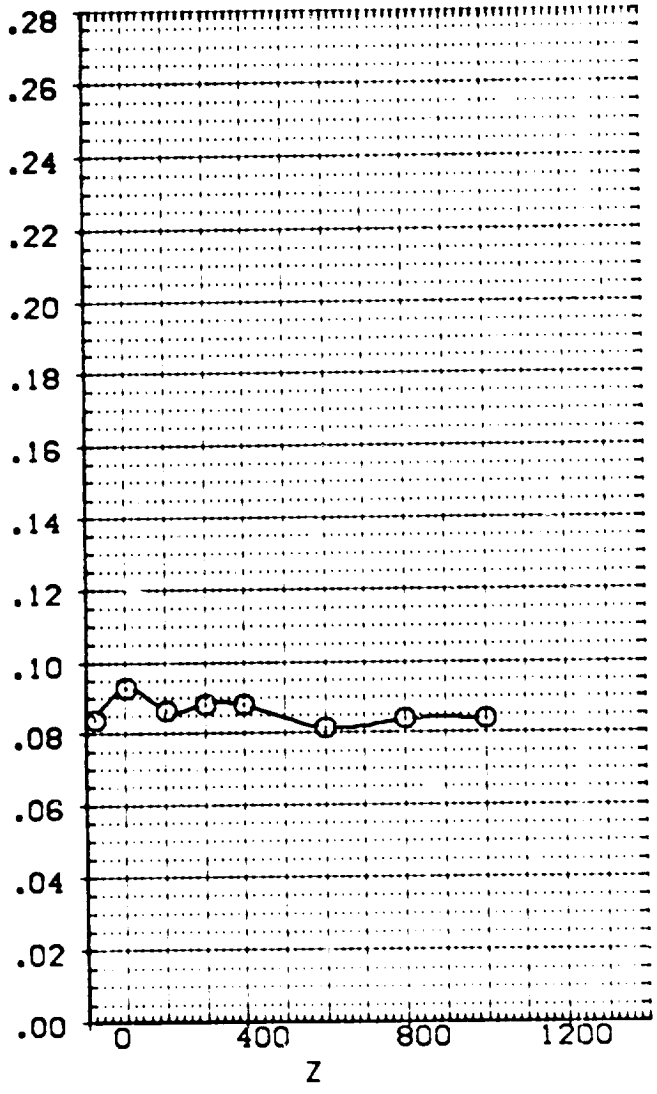
EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

!A!3.EXTERNAL TANK(T10)SEPARATING FROM ORB. OS (RTJ057)

SYMBOL	X	PARAMETRIC VALUES			
O	.268	MACH	4.530	PTOTAL	110.000
		ALPHA	.000	BETA	.000
		DALPHA	.000	DBETA	5.000
		ELEVTR	.000	AILRON	10.000
		Y	200.000		

SEE THE ASSOCIATED [illegible] DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



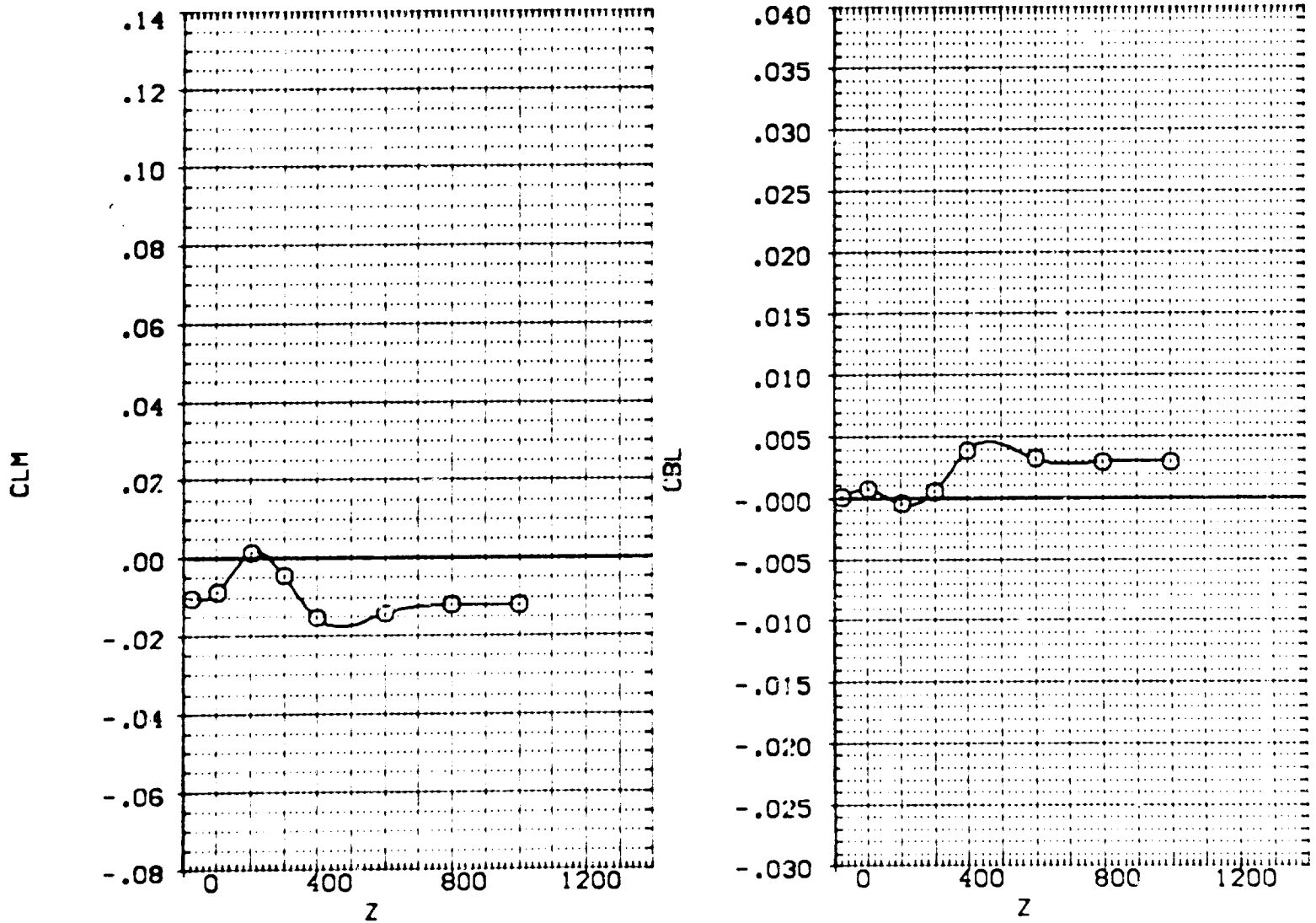


EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

!A13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (R;J057)

SYMBOL	X	PARAMETRIC VALUES			
O	.268	MACH	4.530	PTOTAL	110.000
		ALPHA	.000	BETA	.000
		DALPHA	.000	DBETA	5.000
		ELEVTR	.000	AILRON	10.000
		Y	200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

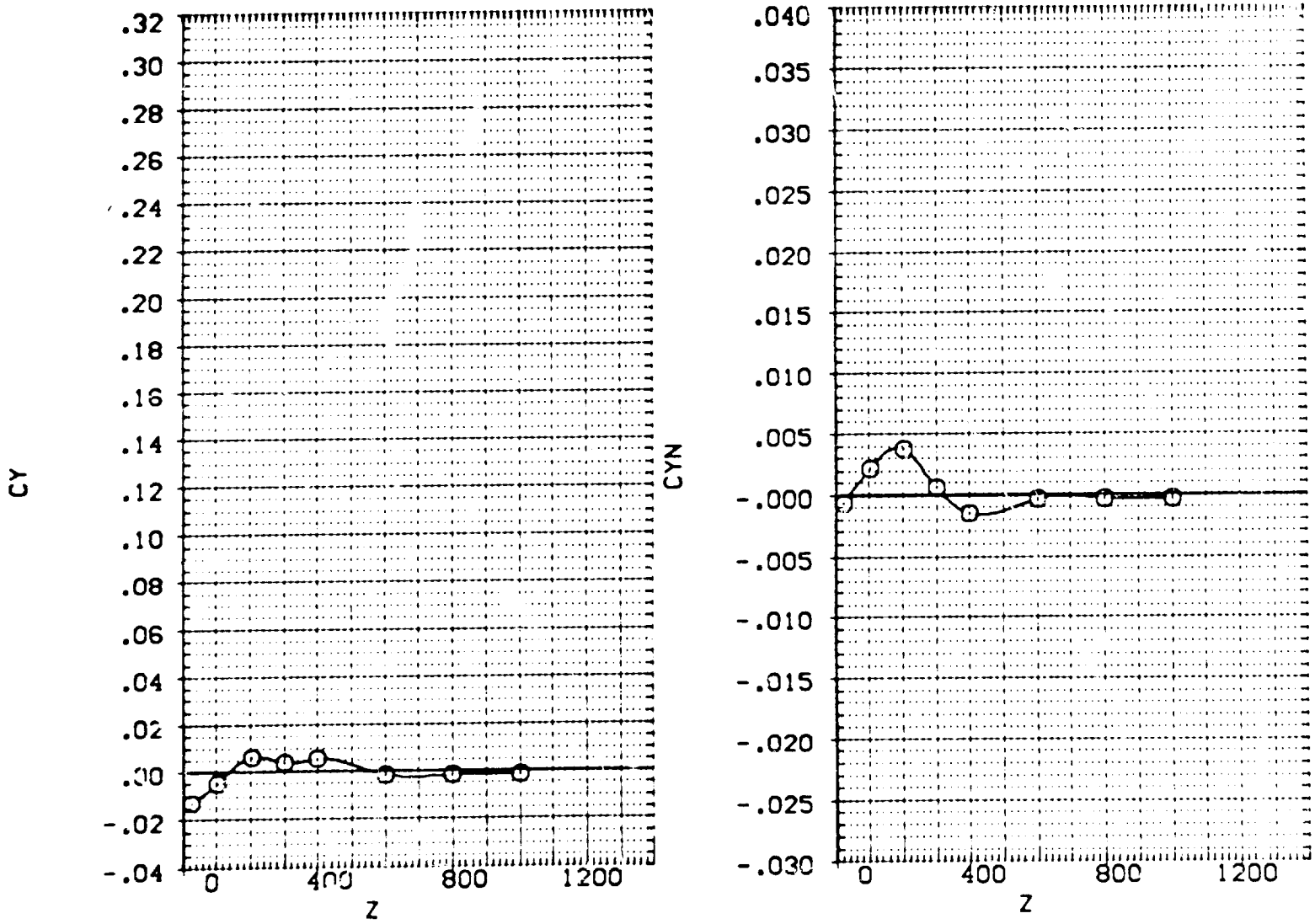


EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ057)

SYMBOL	x				
O	.268	PARAMETRIC VALUES			
		MACH	4.530	PTOTAL	110.000
		ALPHA	.000	BETA	.000
		DALPHA	.000	DBETA	5.000
		ELEVTR	.000	AILRON	10.000
		Y	200.000		

SEE THE [illegible] DOCUMENT FOR [illegible] CHARACTERISTICS FOR INDIVIDUAL DATASETS

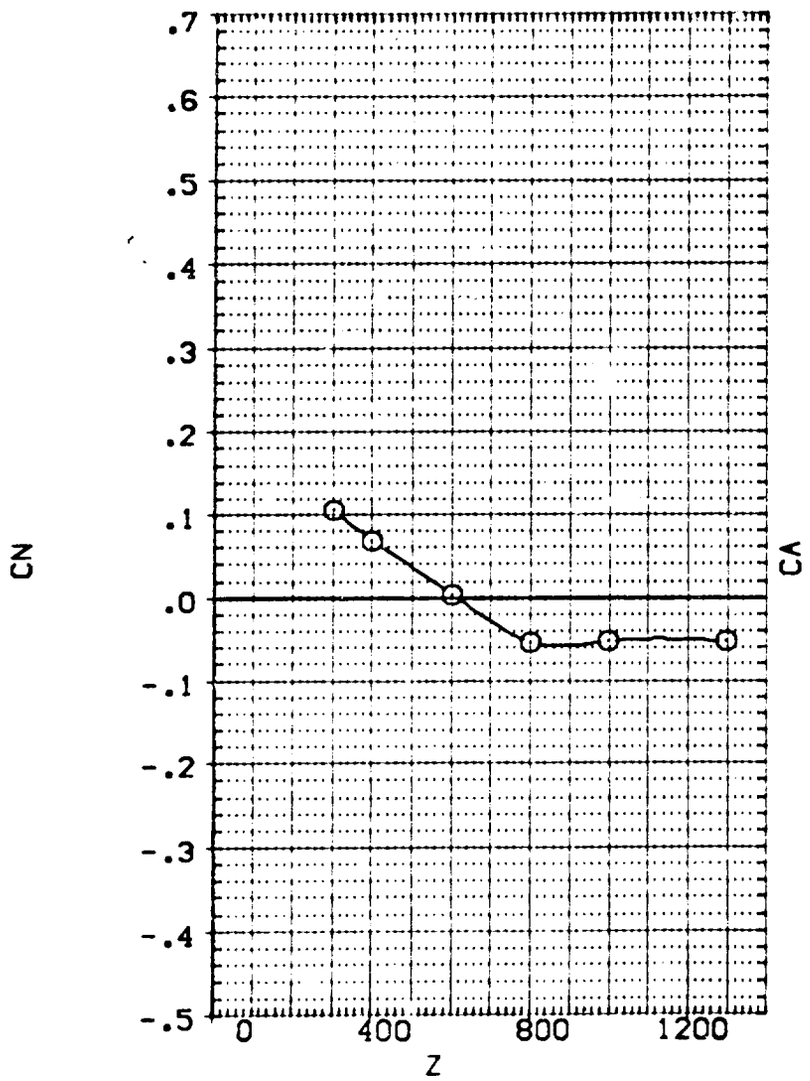


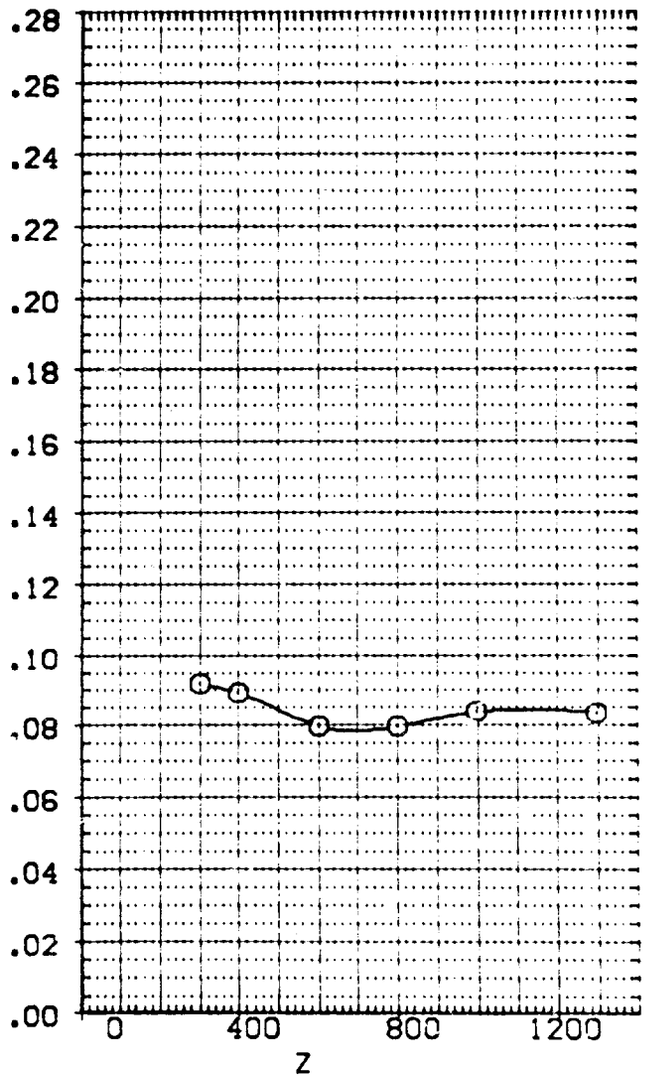
EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

IA13,EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ058)

SYMBOL	X	PARAMETRIC VALUES			
O	.158	MACH	4.530	P.OTAL	110.200
		ALPHA	.000	BETA	.000
		DALPHA	-10.000	DBETA	.000
		ELEVTR	.000	AILRON	10.000
		Y	-200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



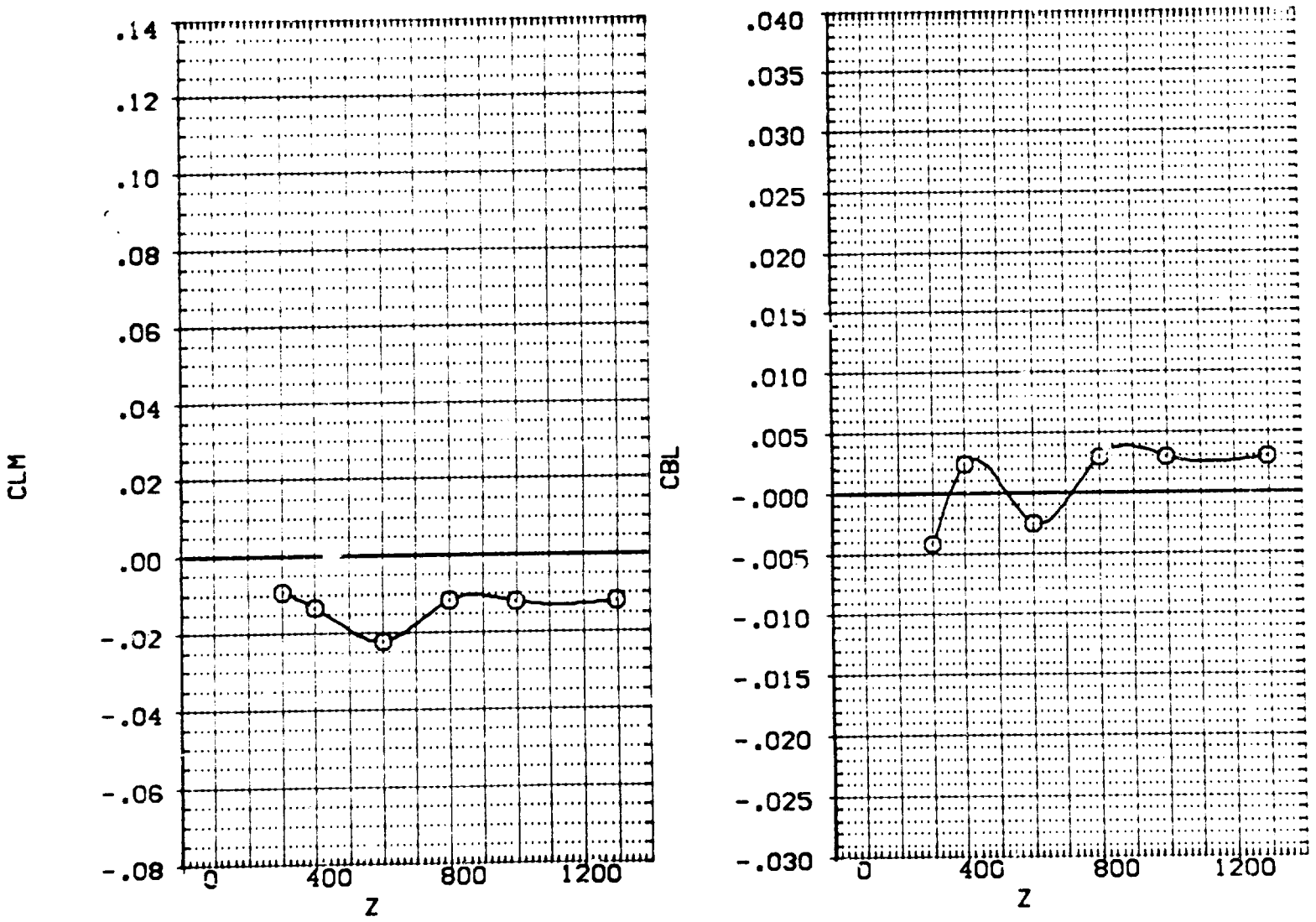


EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ058)

SYMBOL	X	PARAMETRIC VALUES			
○	.158	MACH	4.530	PTOTAL	110.000
		ALPHA	.000	BETA	.000
		DALPHA	-10.000	DBETA	.000
		ELEVTR	.000	AILRON	10.000
		Y	-200.000		

SEE THE ASSOCIATED DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

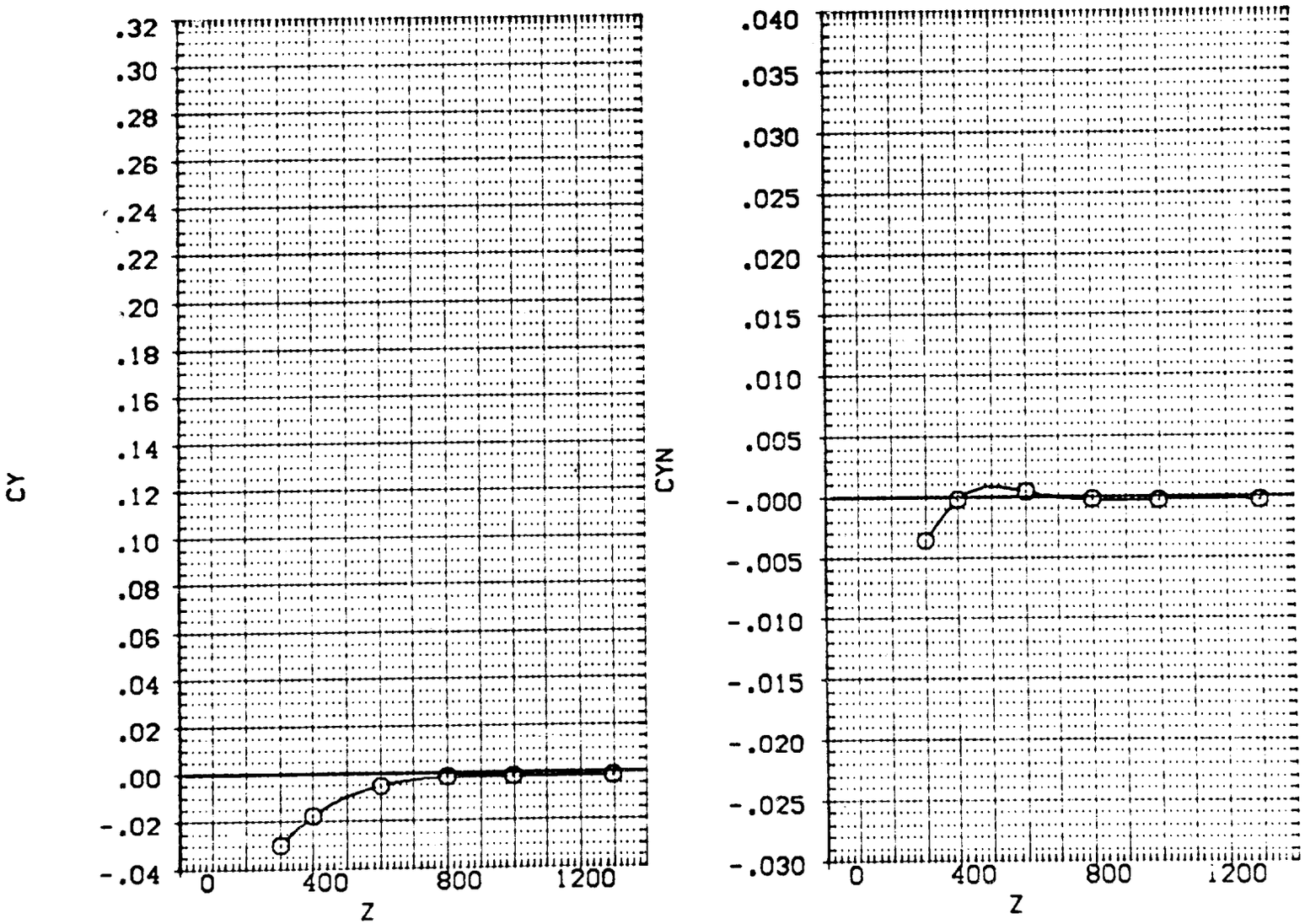


EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ058)

SYMBOL	X	PARAMETRIC VALUES			
O	.158	MACH	4.530	PTOTAL	110.000
		ALPHA	.000	BETA	.000
		DALPHA	-10.000	DBETA	.000
		ELEVTR	.000	AILRON	10.000
		Y	-200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

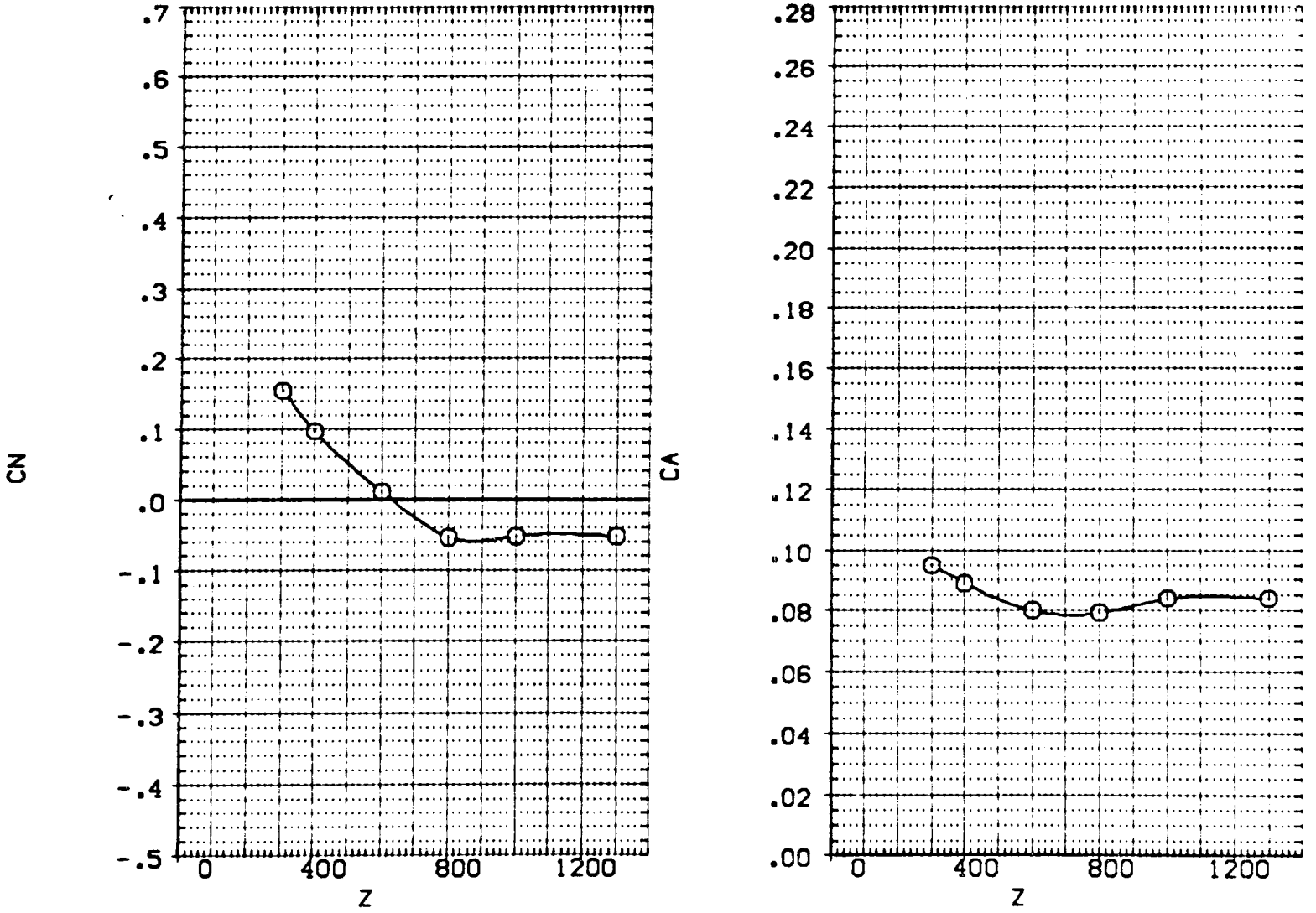


EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ059)

SYMBOL	X	PARAMETRIC VALUES			
○	.151	MACH	4.530	PTOTAL	110.000
		ALPHA	.000	BETA	.000
		DALPHA	-10.000	DBETA	.000
		ELEVTR	.000	AILRON	10.000
		Y	.000		

SEE THE ASSOCIATED [illegible] DOCUMENT FOR [illegible] CHARACTERISTICS FOR INDIVIDUAL DATASETS

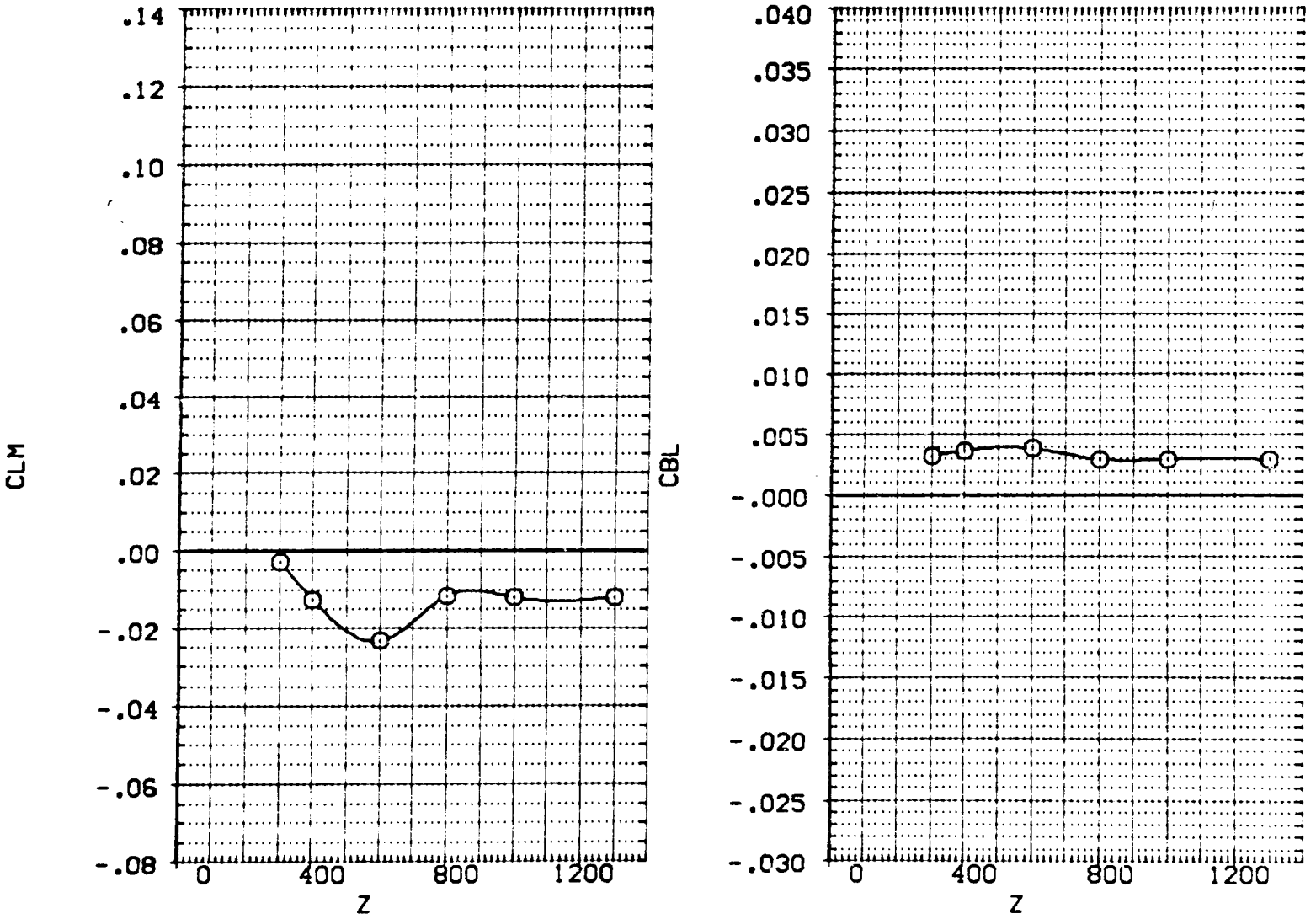


EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

!A13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ059)

SYMBOL	X	PARAMETRIC VALUES			
○	.151	MACH	4.530	PTOTAL	110.000
		ALPHA	.000	BETA	.000
		DALPHA	-10.000	DBETA	.000
		ELEVTR	.000	AILRON	10.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

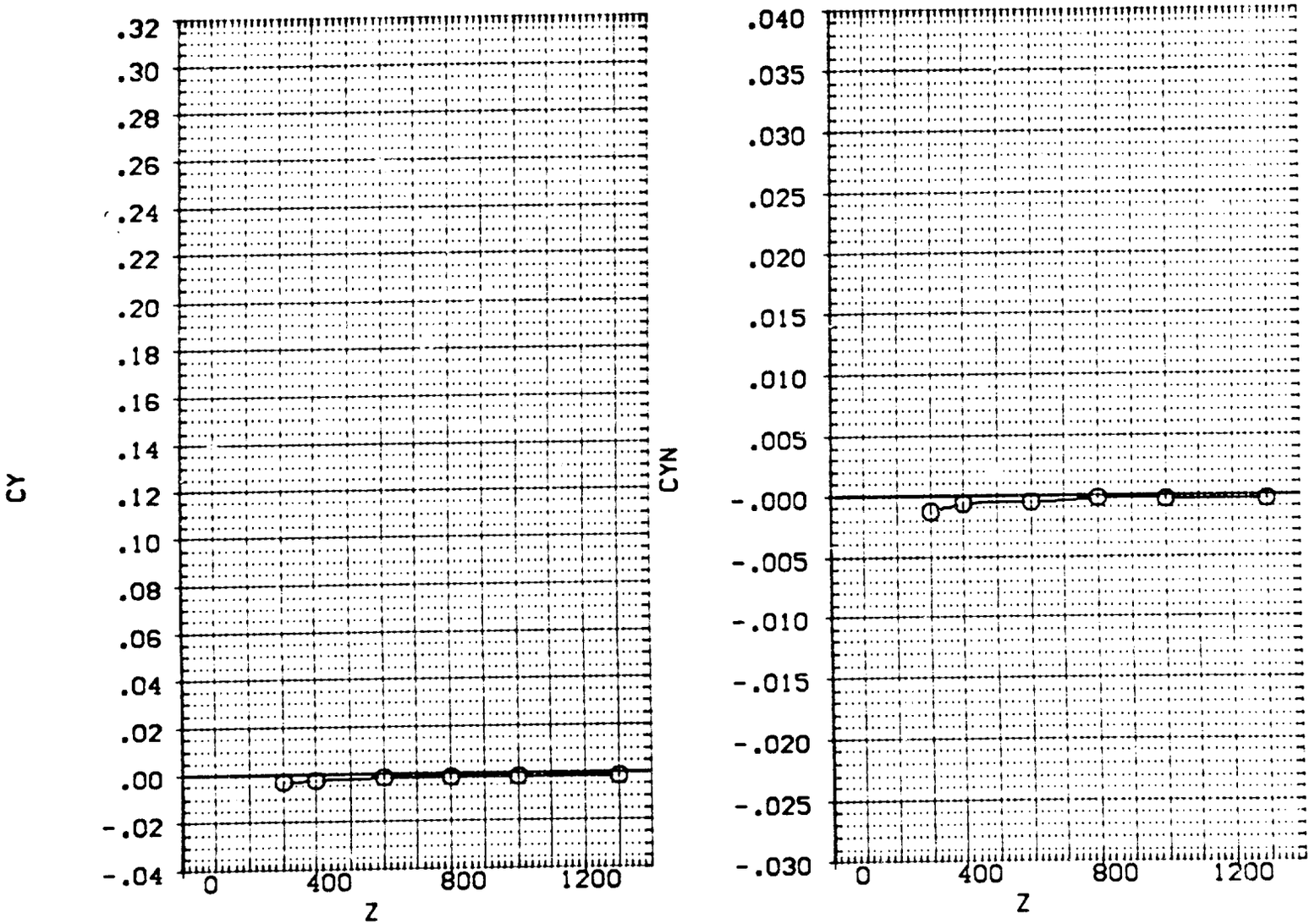


EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

!A13,EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ059)

SYMBOL	X	PARAMETRIC VALUES			
O	.151	MACH	4.530	PTOTAL	110.000
		ALPHA	.000	BETA	.000
		DALPHA	-10.000	DBETA	.000
		ELEVTR	.000	AILRON	10.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

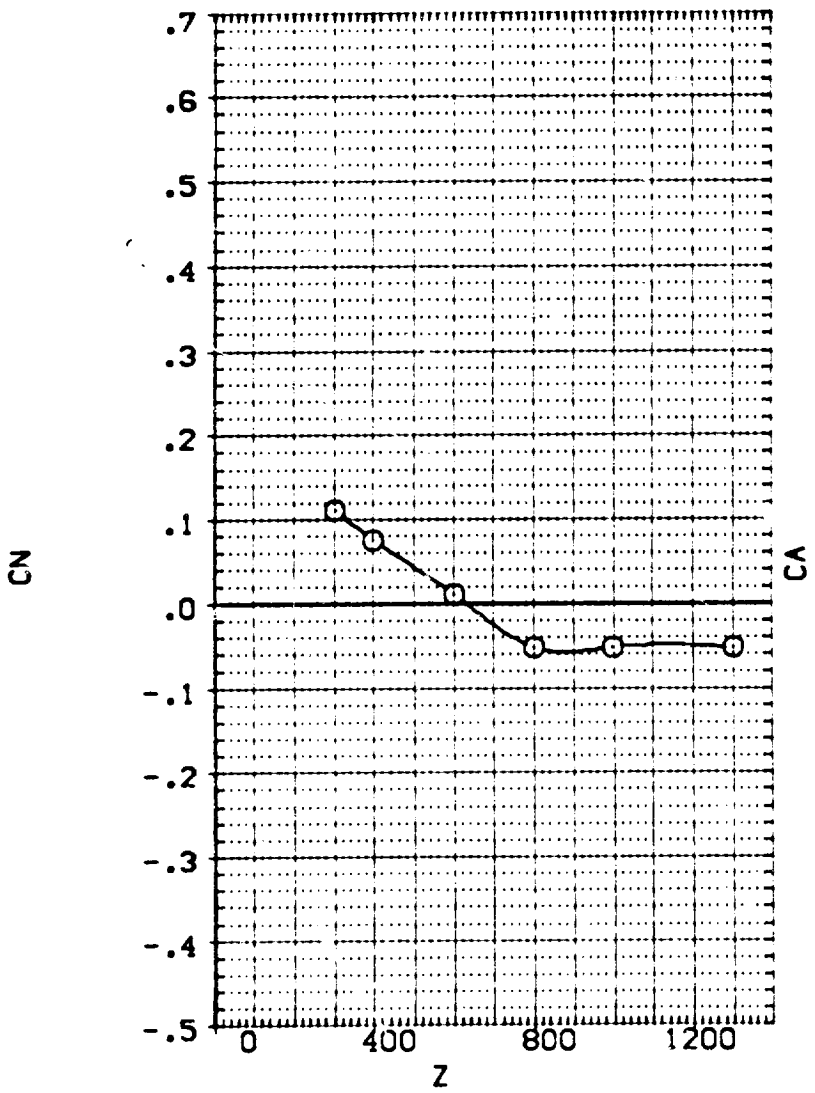


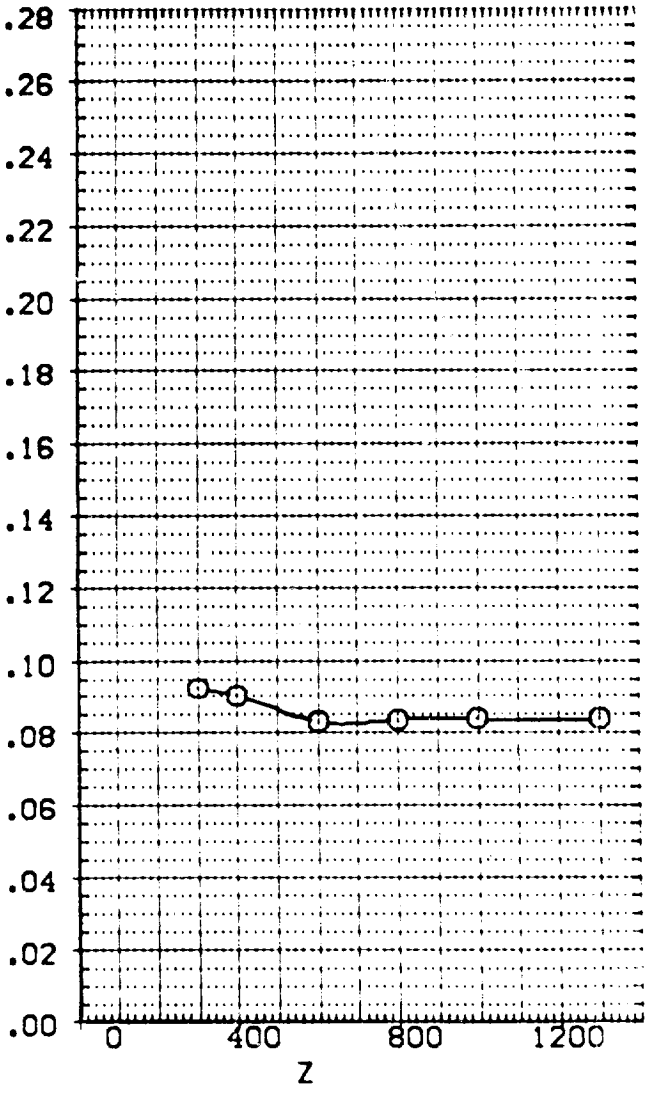
EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ060)

SYMBOL	X		PARAMETRIC VALUES		
O	.174	MACH	4.530	PTOTAL	110.000
		ALPHA	.000	BETA	.000
		DALPHA	-10.000	DBETA	.000
		ELEVTR	.000	AILRON	10.000
		Y	200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



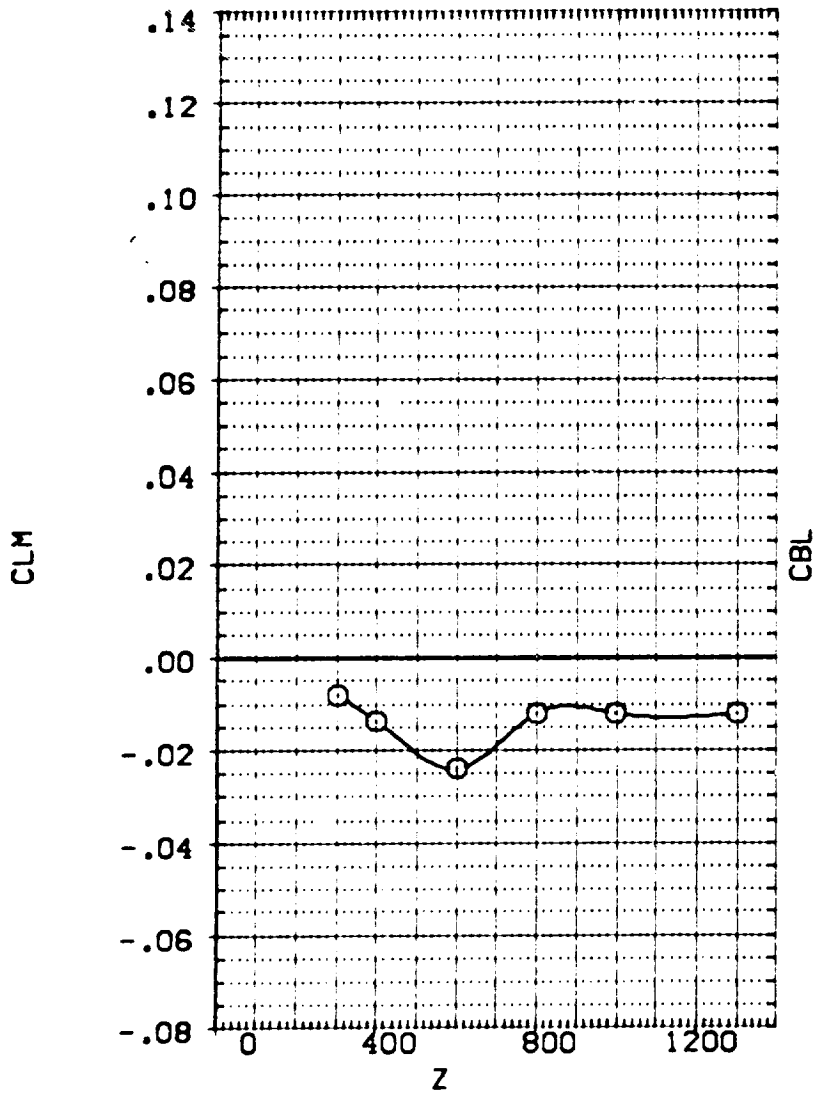


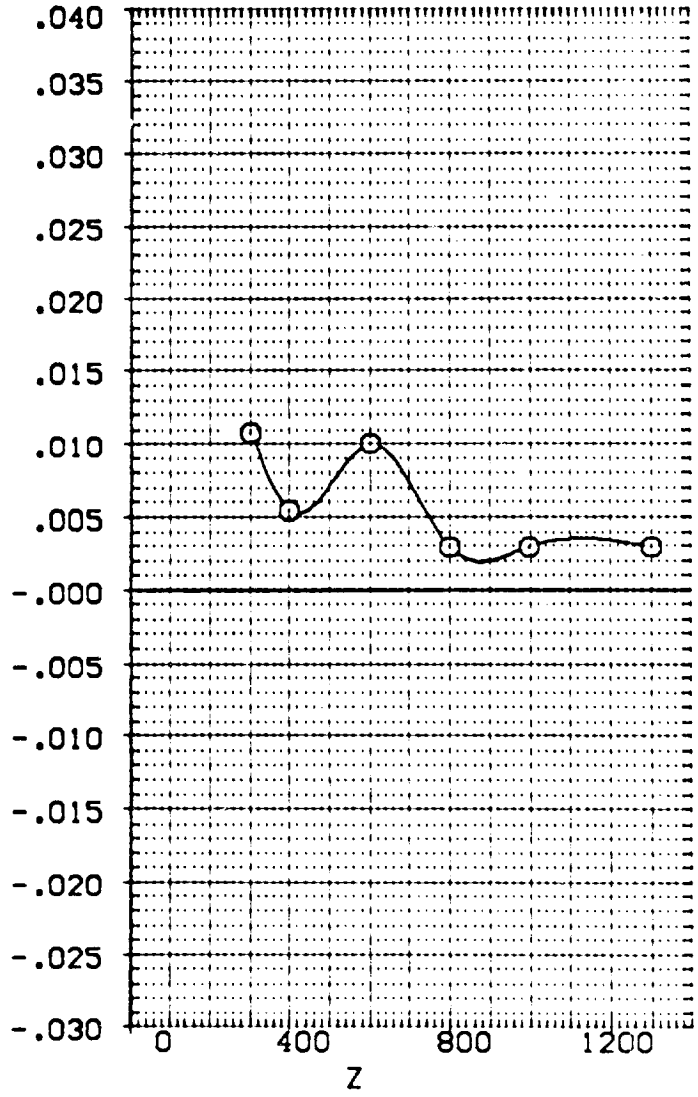
EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

!A13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ060)

SYMBOL	X	PARAMETRIC VALUES			
O	.17q	MACH	4.530	PTOTAL	110.000
		ALPHA	.000	BETA	.000
		DALPHA	-10.000	DBETA	.000
		ELEVTR	.000	AILRON	10.000
		Y	200.000		

SEE THE ASSOCIATED [illegible] DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



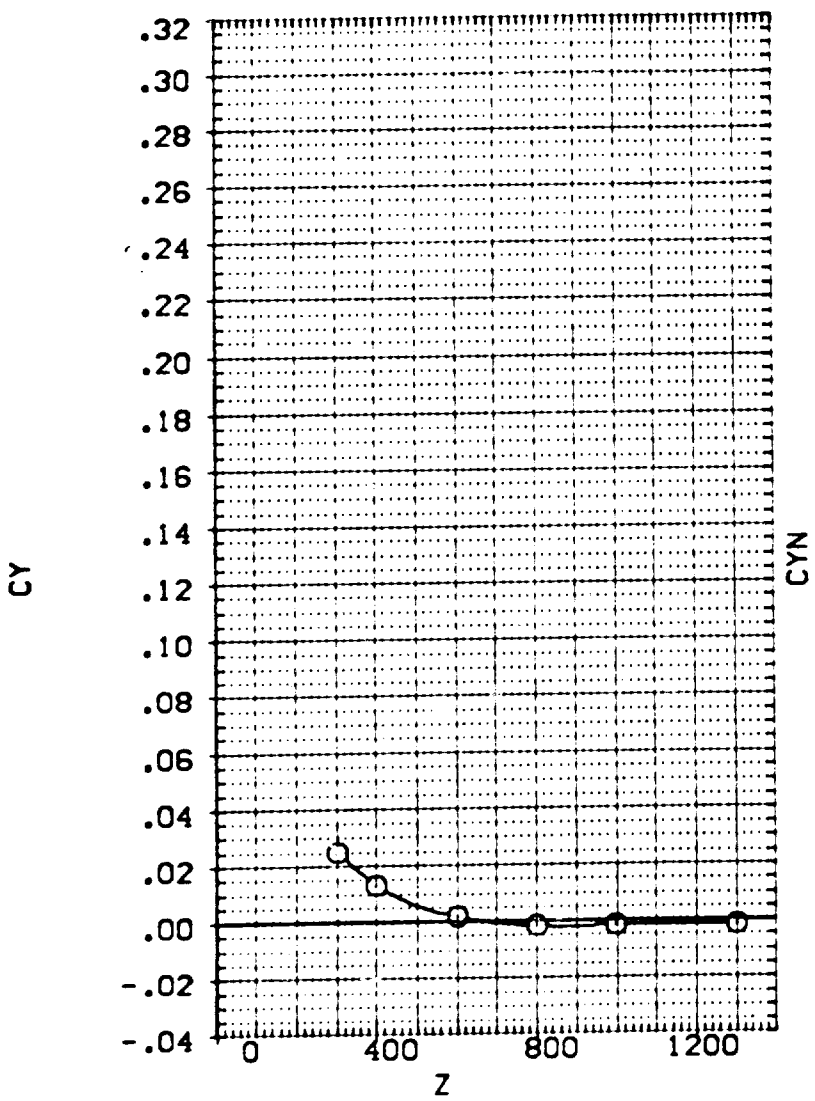


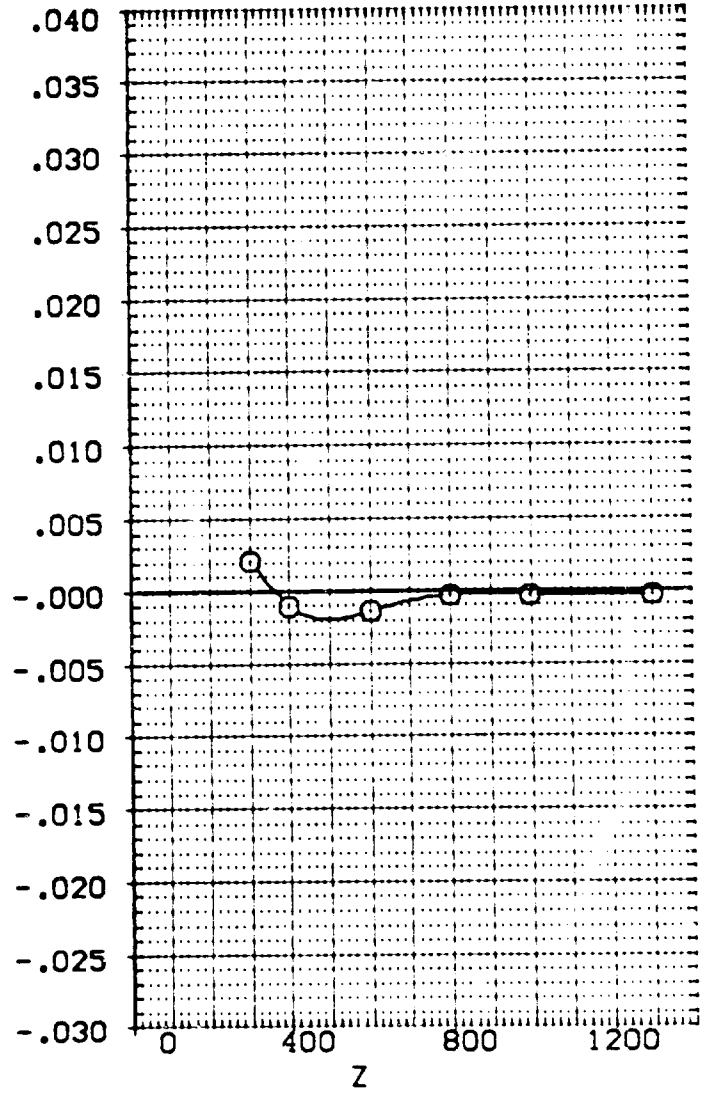
EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ060)

SYMBOL	X	PARAMETRIC VALUES			
○	.174	MACH	4.530	PTOTAL	110.000
		ALPHA	.000	BETA	.000
		DALPHA	-10.000	DBETA	.000
		ELEVTR	.000	AILRON	10.000
		Y	200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



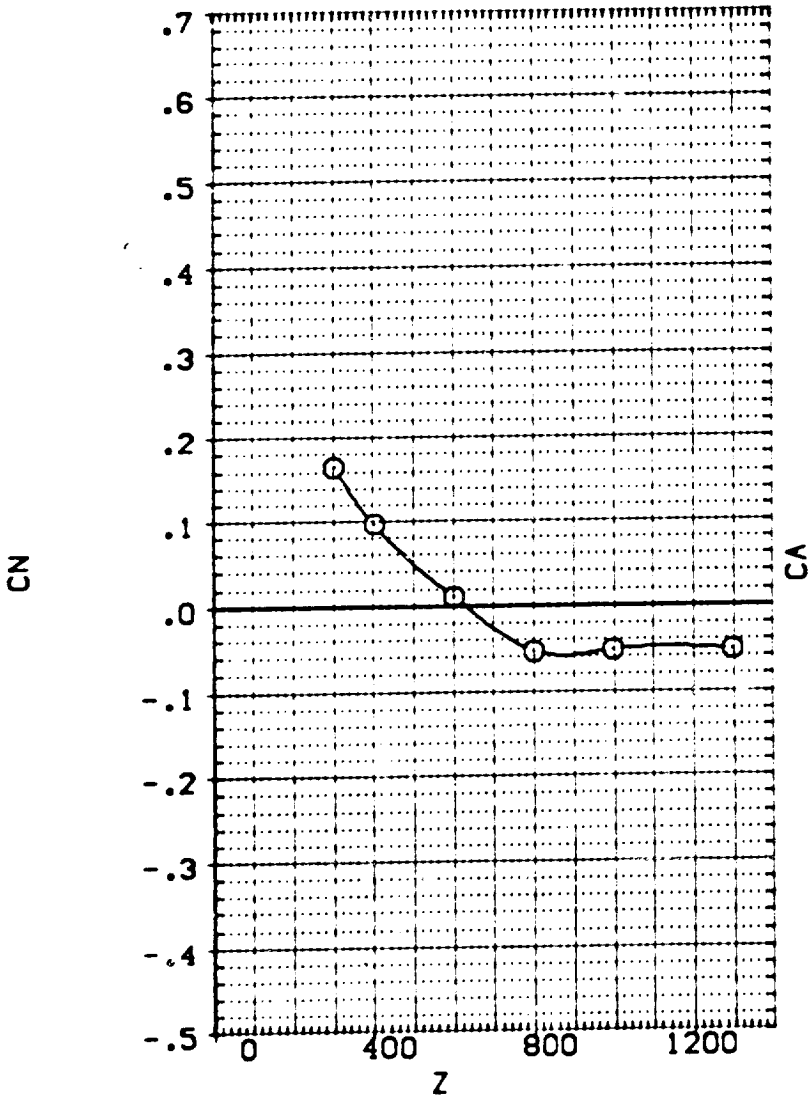


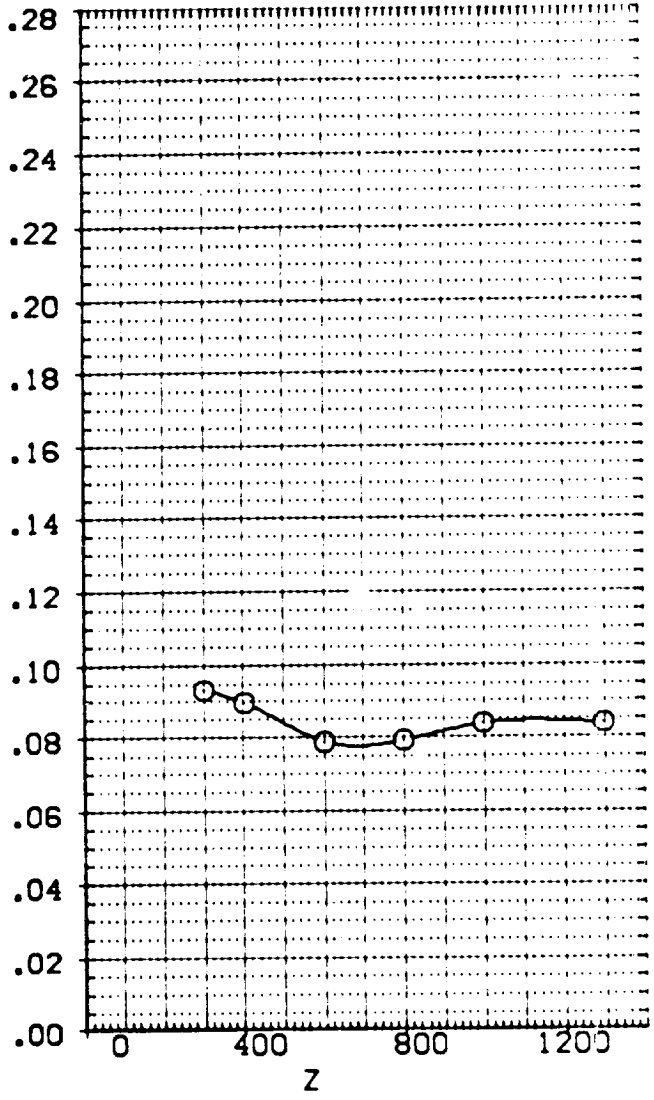
EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

!A!3.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ061)

SYMBOL	X	PARAMETRIC VALUES			
O	.246	MACH	4.530	PTOTAL	110.000
		ALPHA	.000	BETA	.000
		DALPHA	-10.000	DBETA	-5.000
		ELEVTR	.000	AILRON	10.000
		Y	-200.000		

SEE THE ASSOCIATED DOCUMENT FOR RE... CHARACTERISTICS FOR INDIVIDUAL DATASETS



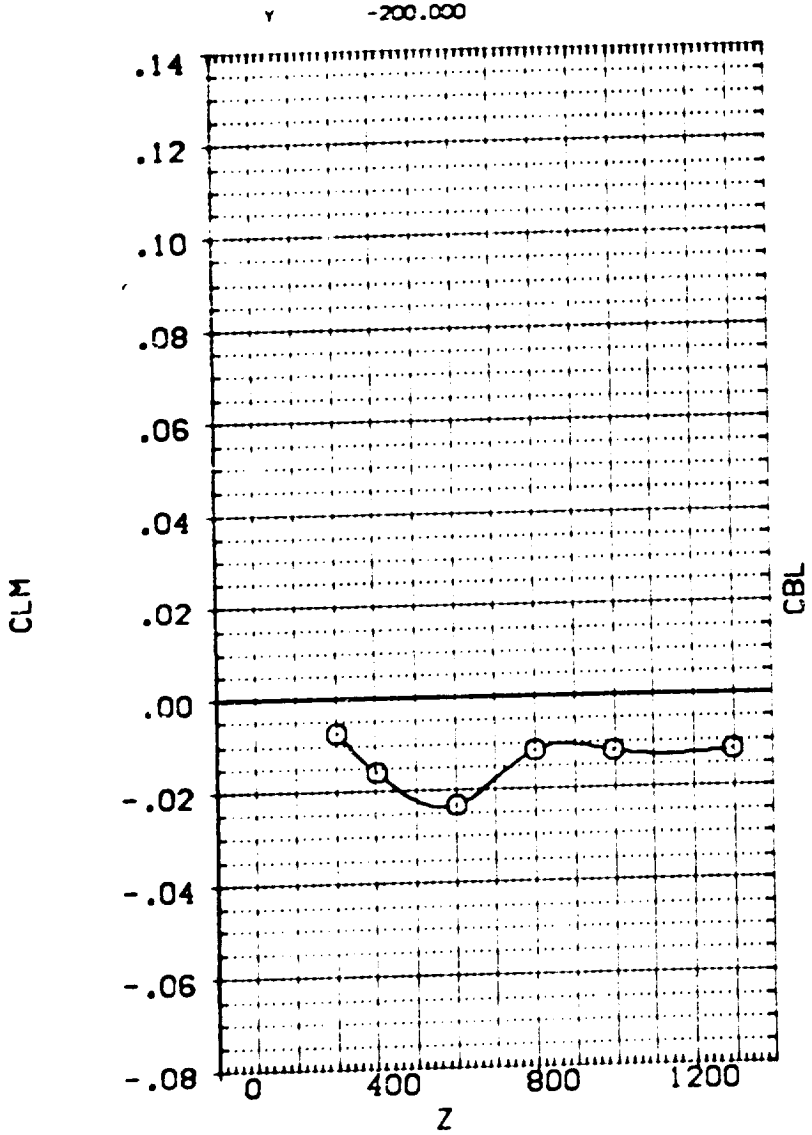


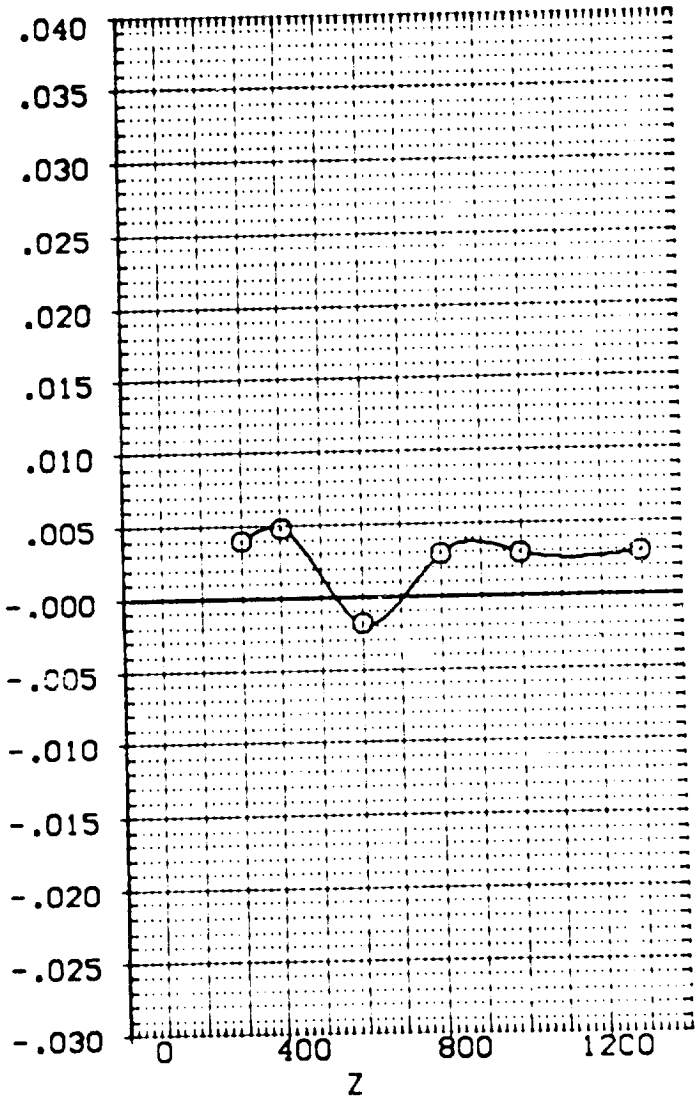
EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

!A13,EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ061)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

SYMBOL	X	PARAMETRIC VALUES			
O	.246	MACH	4.530	PTOTAL	110.000
		ALPHA	.000	BETA	.000
		DALPHA	-10.000	DBETA	-5.000
		ELEVTR	.000	AILRON	10.000
		Y	-200.000		



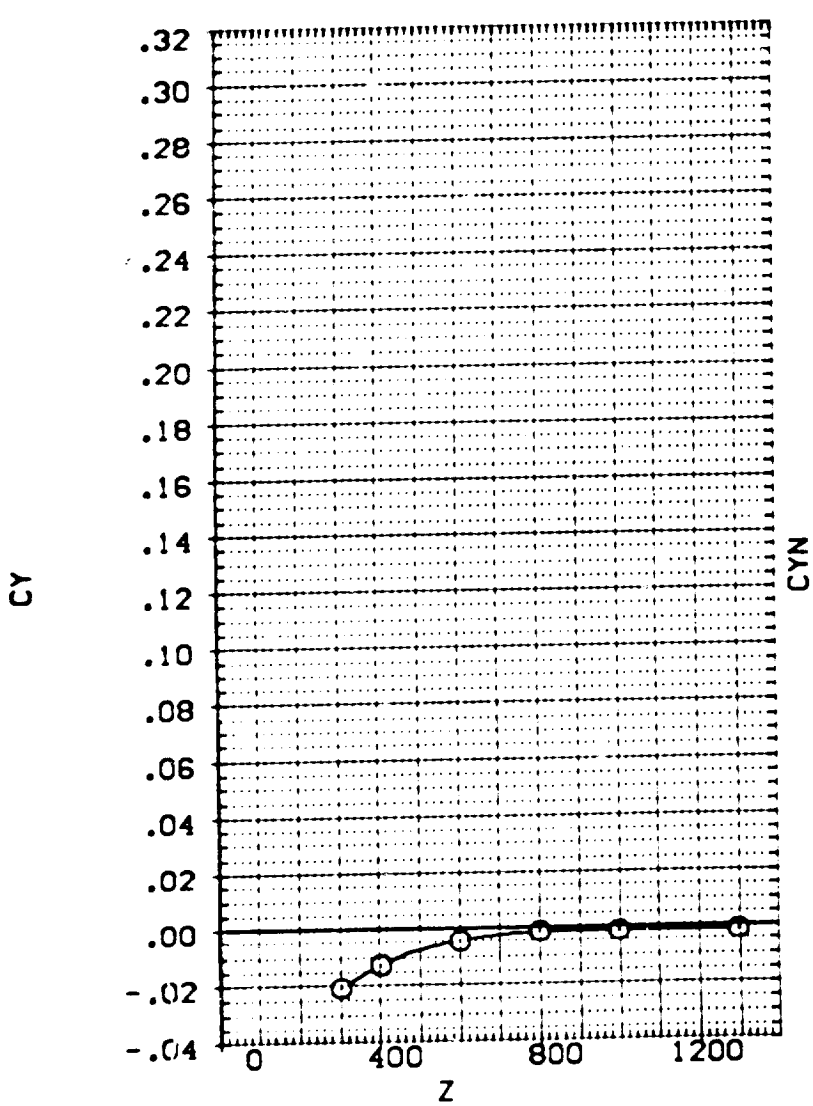


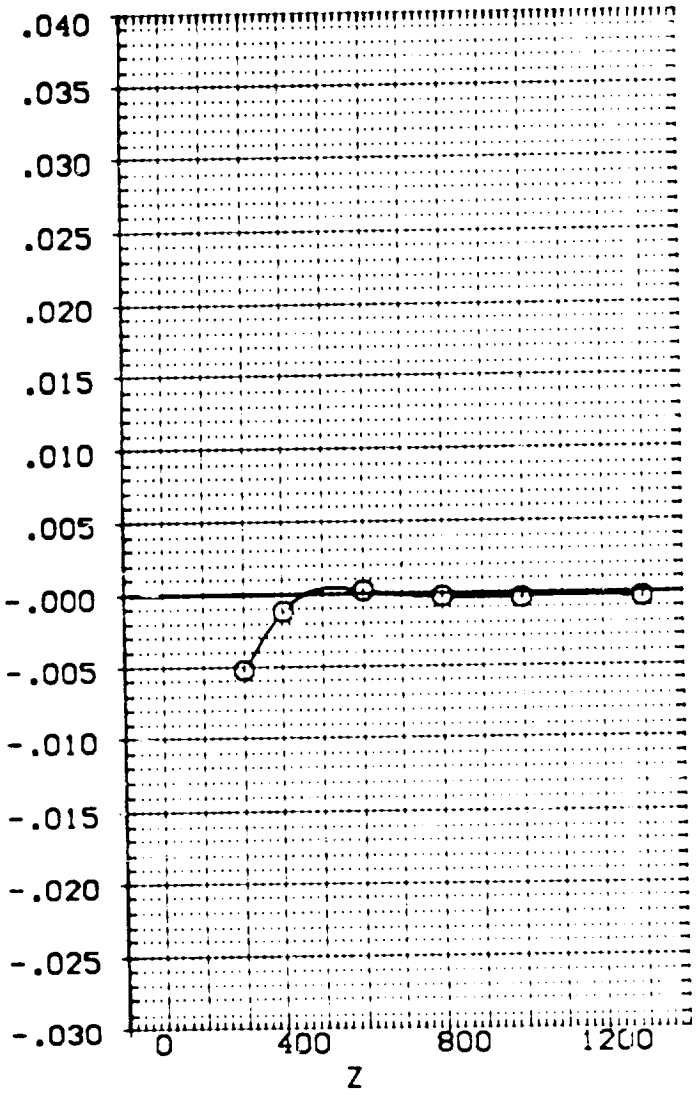
EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

!A!3.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ061)

SYMBOL	X	PARAMETRIC VALUES			
O	.246	MACH	4.530	PTOTAL	110.000
		ALPHA	.000	BETA	.000
		DALPHA	-10.000	DBETA	-5.000
		ELEVTR	.000	AILRON	10.000
		Y	-200.000		

SEE THE ASSOCIATED DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



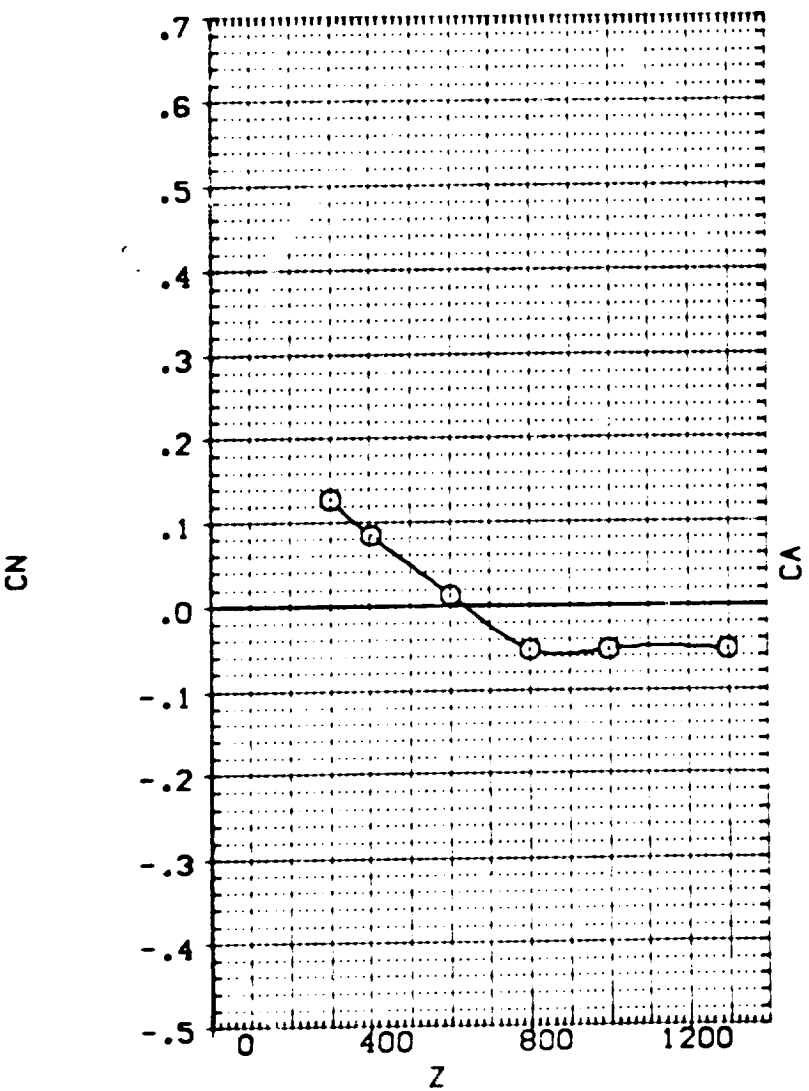


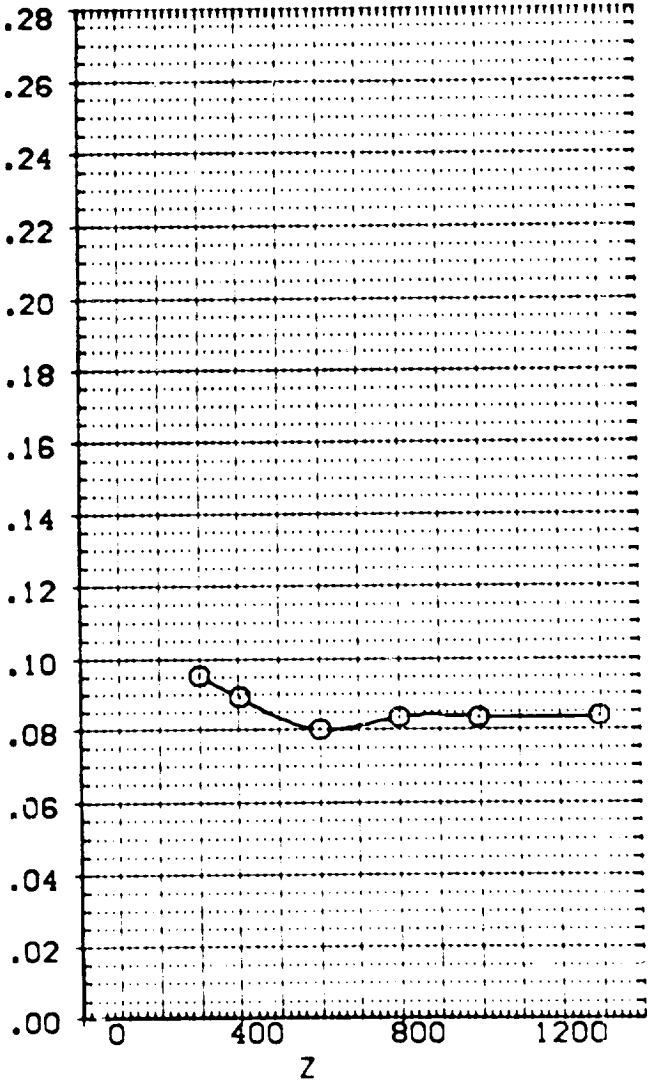
EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

!A!3.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ062)

SYMBOL	X	PARAMETRIC VALUES			
O	.172	MACH	4.530	PTOTAL	110.000
		ALPHA	.000	BETA	.000
		DALPHA	-10.000	DBETA	5.000
		ELEVTR	.000	AILRON	10.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



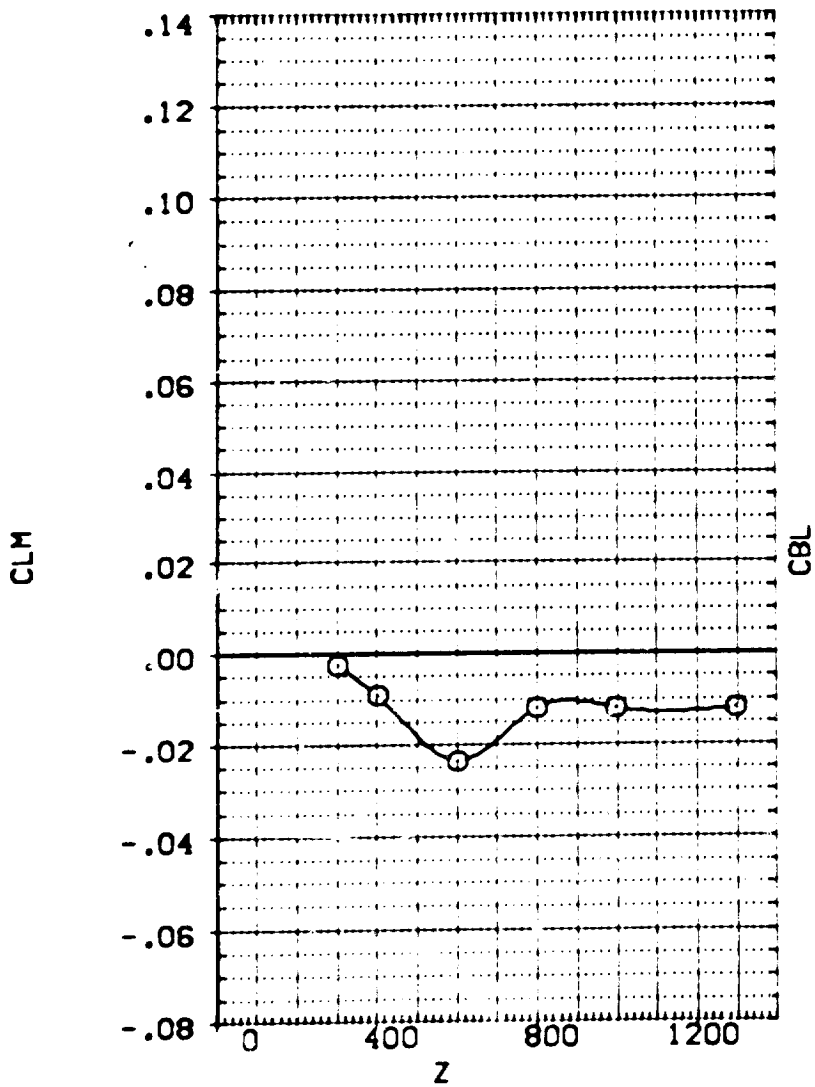


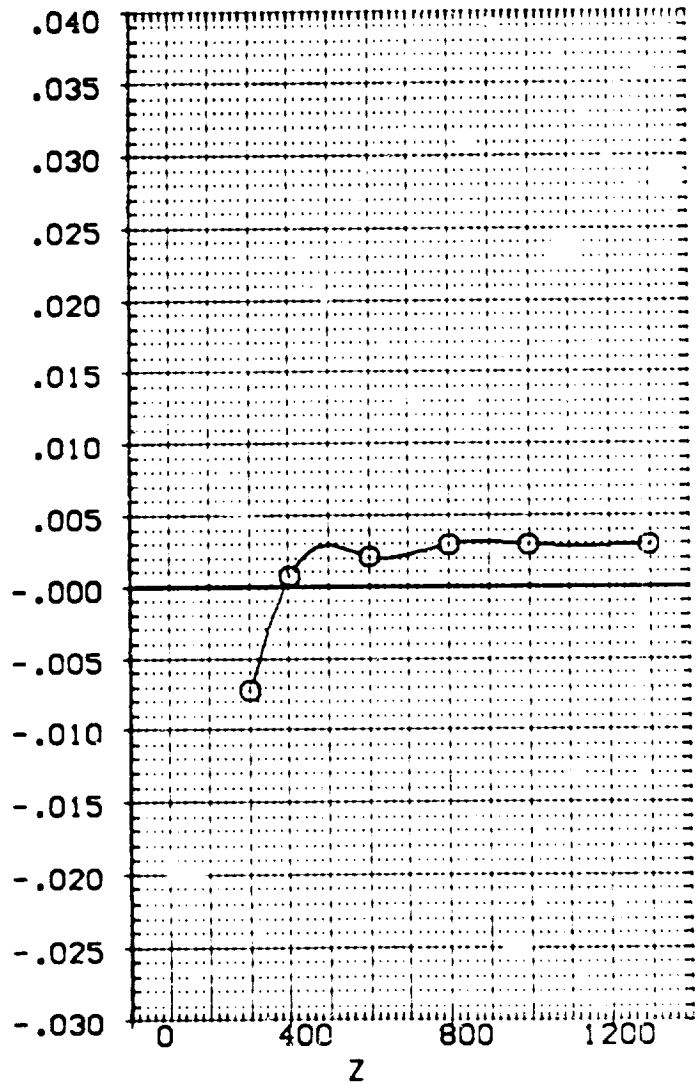
EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

!A13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ062)

SYMBOL	X	PARAMETRIC VALUES			
O	.172	MACH	4.530	PTOTAL	110.000
		ALPHA	.000	BETA	.000
		DALPHA	-10.000	DBETA	5.000
		ELEVTR	.000	AILRON	10.000
		Y	.000		

SEE THE ASSOCIATED DOCUMENT FOR DEFINITION CHARACTERISTICS FOR INDIVIDUAL DATASETS



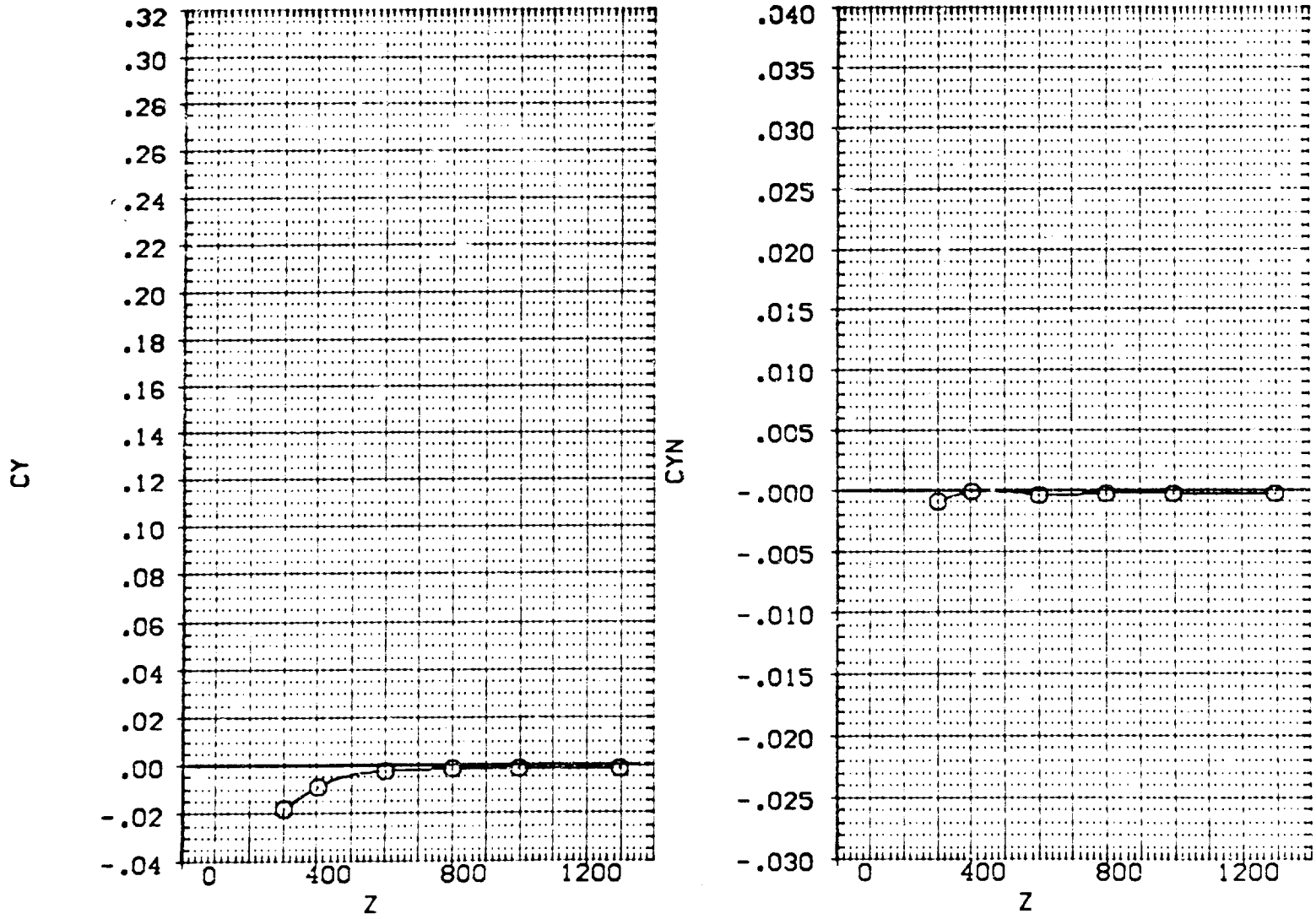


EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ062)

SYMBOL	X		PARAMETRIC VALUES		
○	.172	MACH	4.530	PTOTAL	110.000
		ALPHA	.000	BETA	.000
		DALPHA	-10.000	DBETA	5.000
		ELEVTR	.000	AILRON	10.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

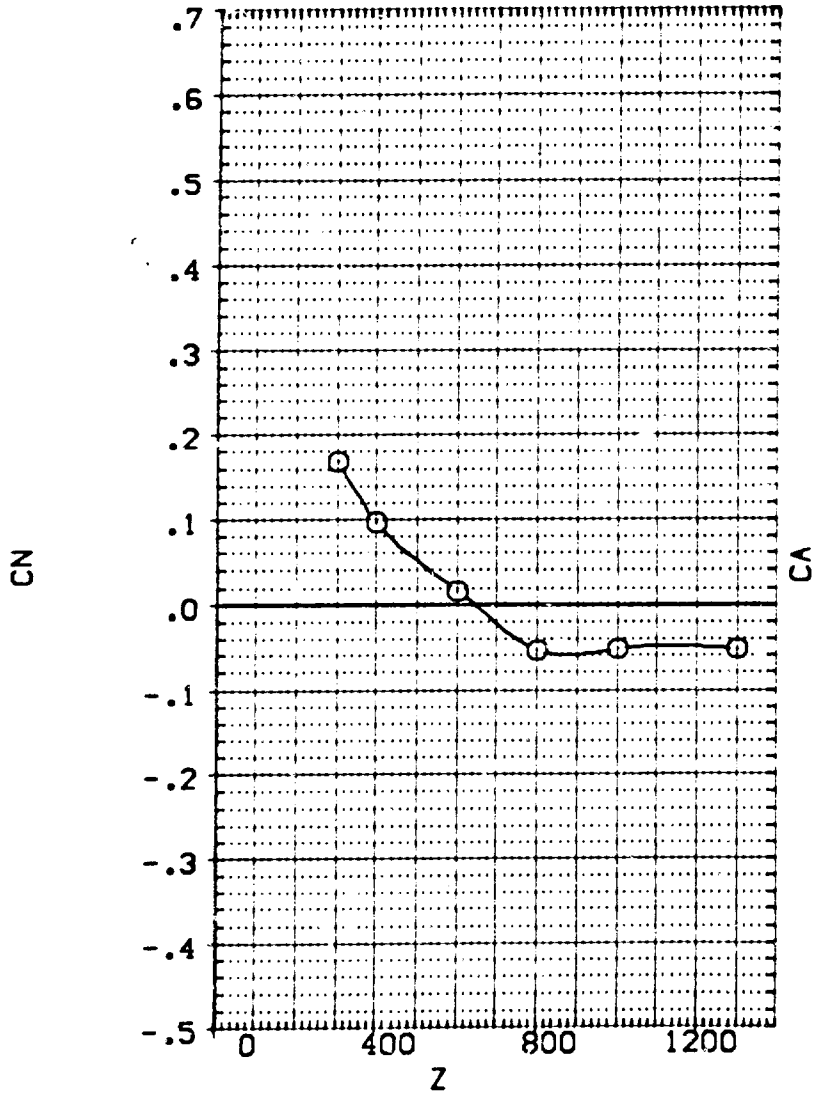


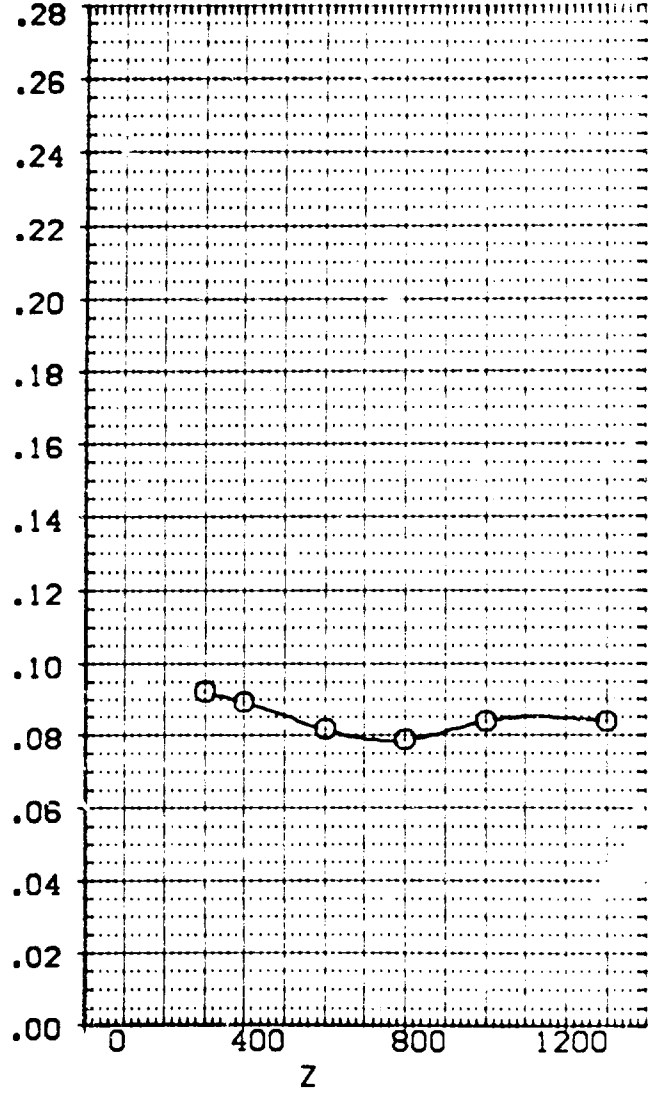
EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ063)

SYMBOL	X	PARAMETRIC VALUES			
O	.161	MACH	4.530	PTOTAL	110.000
		ALPHA	.000	BETA	.000
		DALPHA	-10.000	DBETA	5.000
		ELEVTR	.000	AILRON	10.000
		Y	200.000		

SEE THE ASSOCIATED [illegible] DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



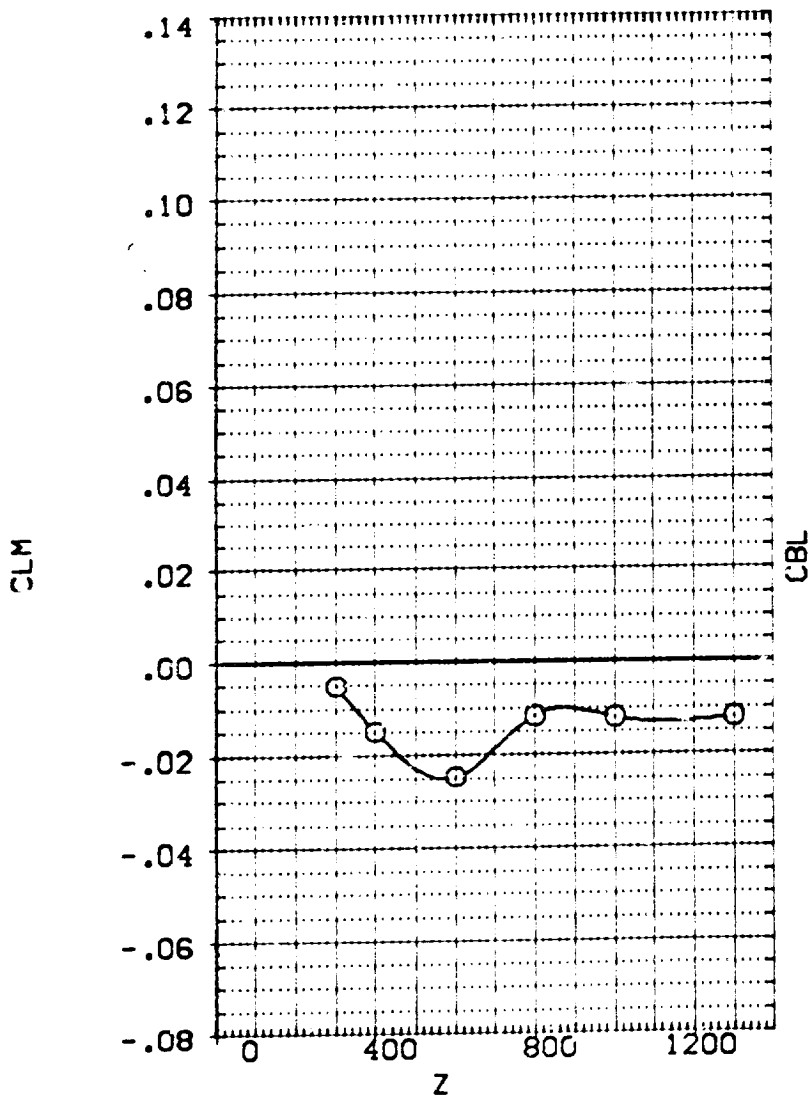


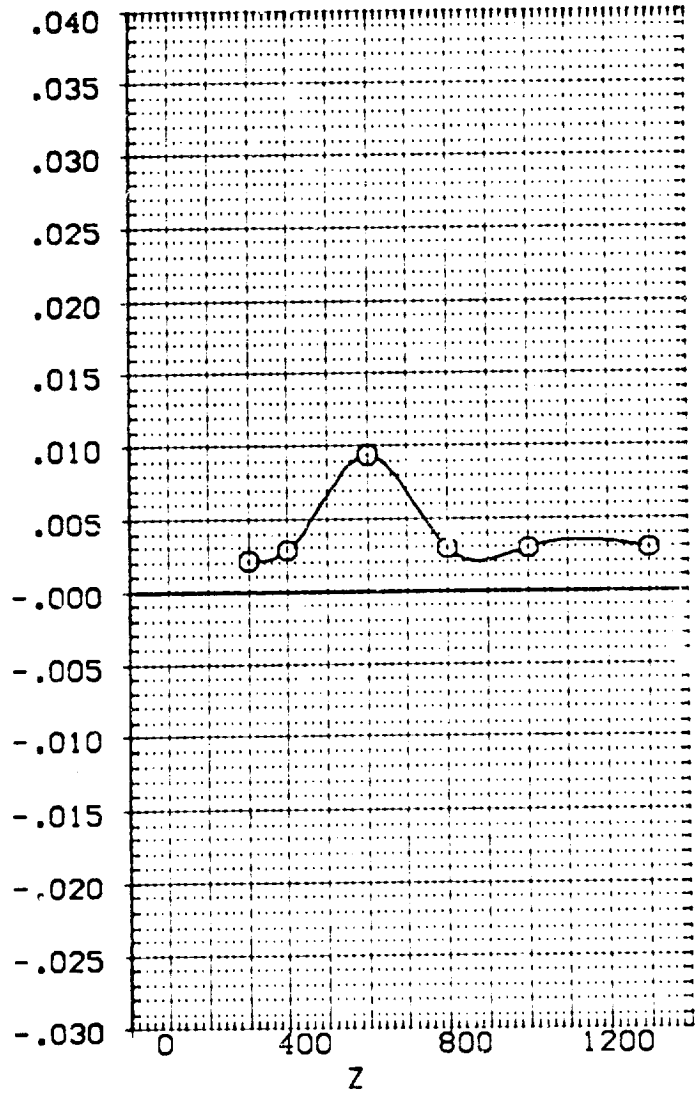
EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ063)

SYMBOL	X	PARAMETRIC VALUES			
○	.161	MACH	4.530	PTOTAL	110.000
		ALPHA	.000	BETA	.000
		DALPHA	-10.000	DBETA	5.000
		ELEVTR	.000	AILRON	10.000
		Y	200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



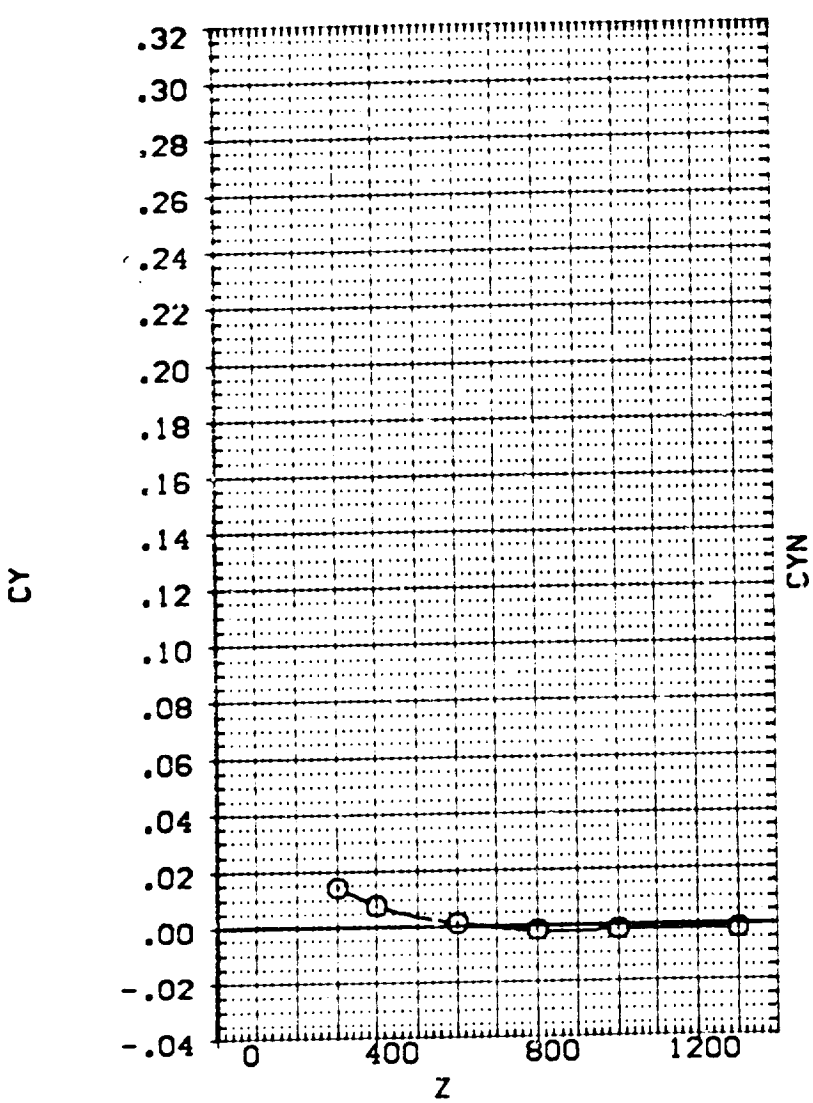


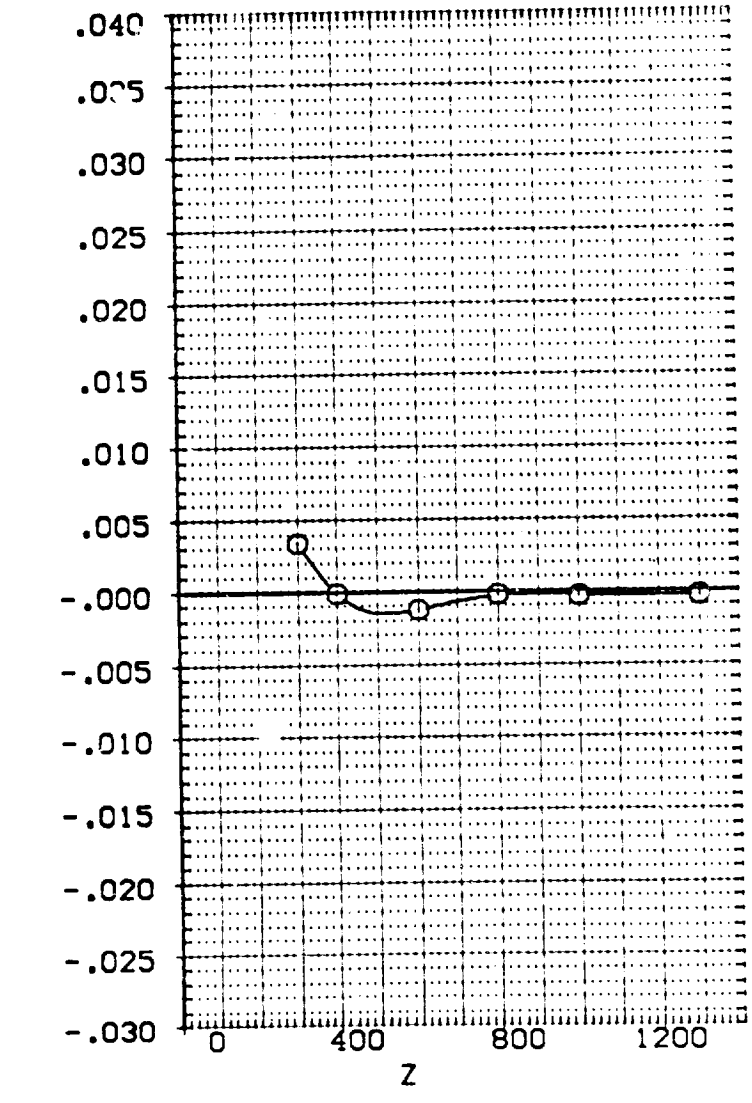
EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

IA13,EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ063)

SYMBOL	X	PARAMETRIC VALUES			
○	.161	MACH	4.530	PTOTAL	110.000
		ALPHA	.000	BETA	.000
		DALPHA	-10.000	DBETA	5.000
		ELEVTR	.000	AILRON	10.000
		Y	200.000		

SEE THE ASSOCIATED DOCUMENT FOR REMAINING CHARACTERISTICS FOR INDIVIDUAL DATASETS



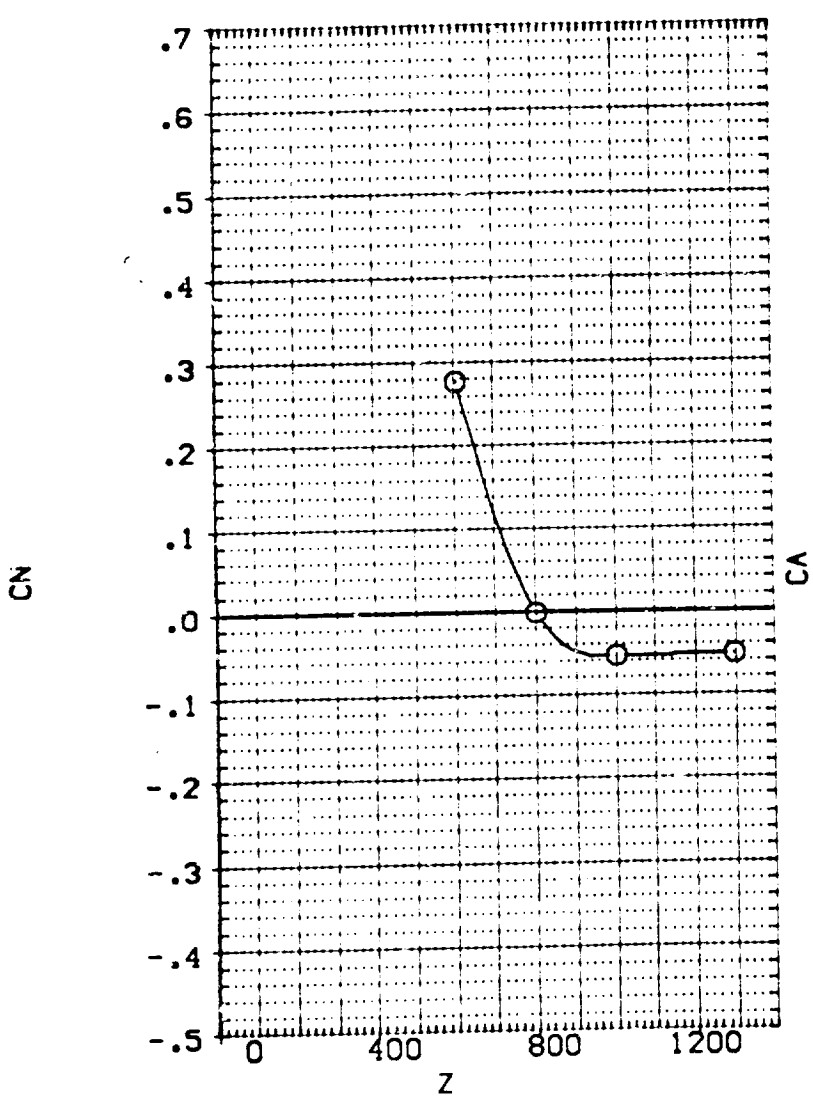


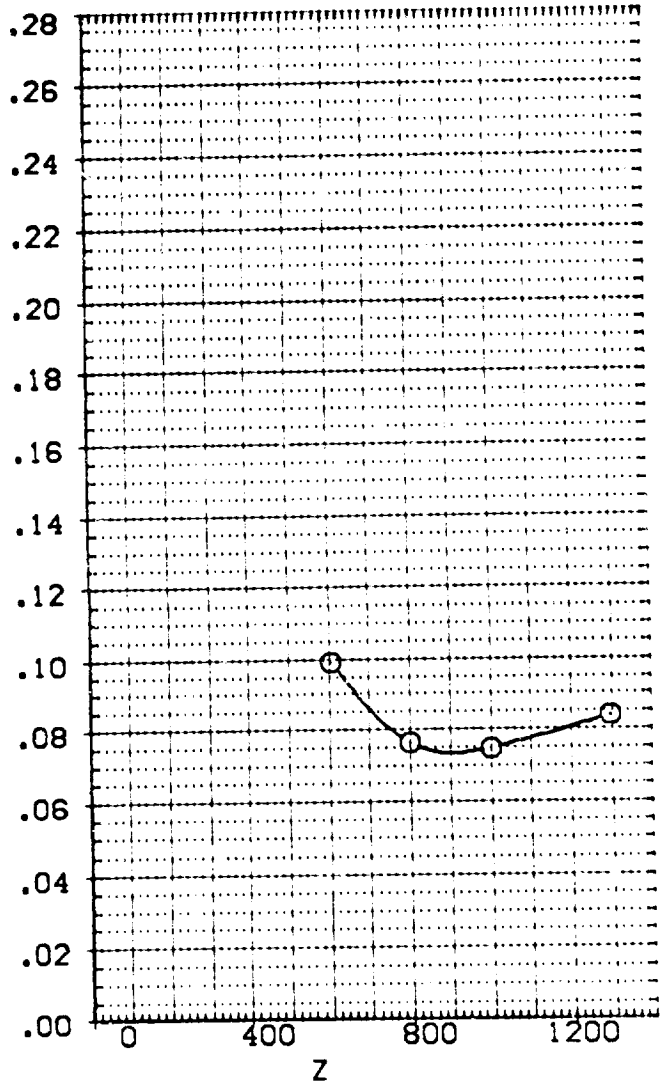
EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

!A13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ064)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

SYMBOL	X	PARAMETRIC VALUES			
○	.1"3	MACH	4.530	PTOTAL	110.000
		ALPHA	.000	BETA	.000
		DALPHA	-20.000	DBETA	.000
		ELEVTR	.000	AILRON	10.000
		Y	-200.000		



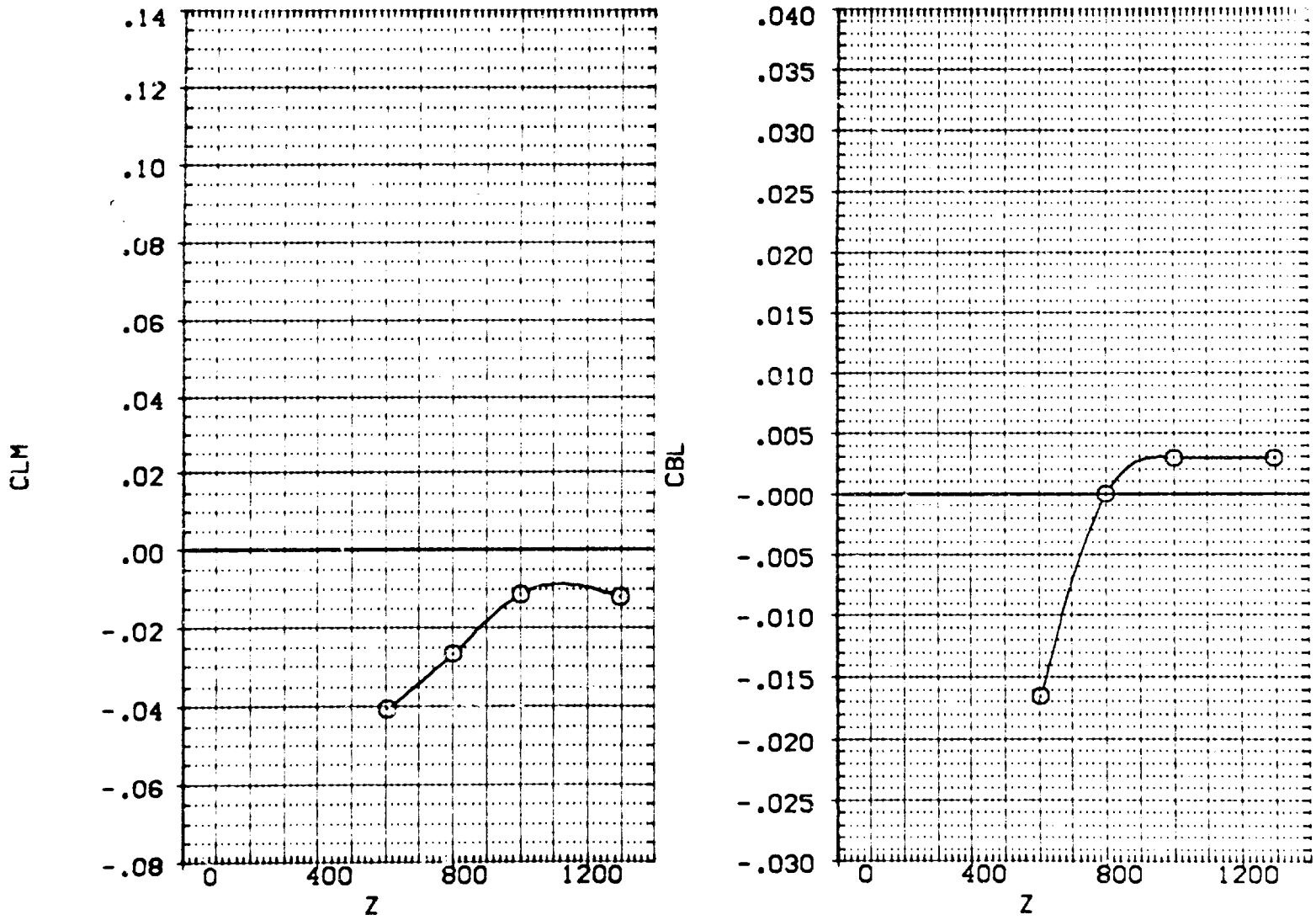


EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ064)

SYMBOL	X	PARAMETRIC VALUES			
O	.173	MACH	4.530	PTOTAL	110.000
		ALPHA	.000	BETA	.000
		DALPHA	-20.000	DBETA	.000
		ELEVTR	.000	AILRON	10.000
		Y	-200.000		

SEE THE ASSOCIATED DOCUMENT FOR KEY CHARACTERISTICS FOR INDIVIDUAL DATASETS

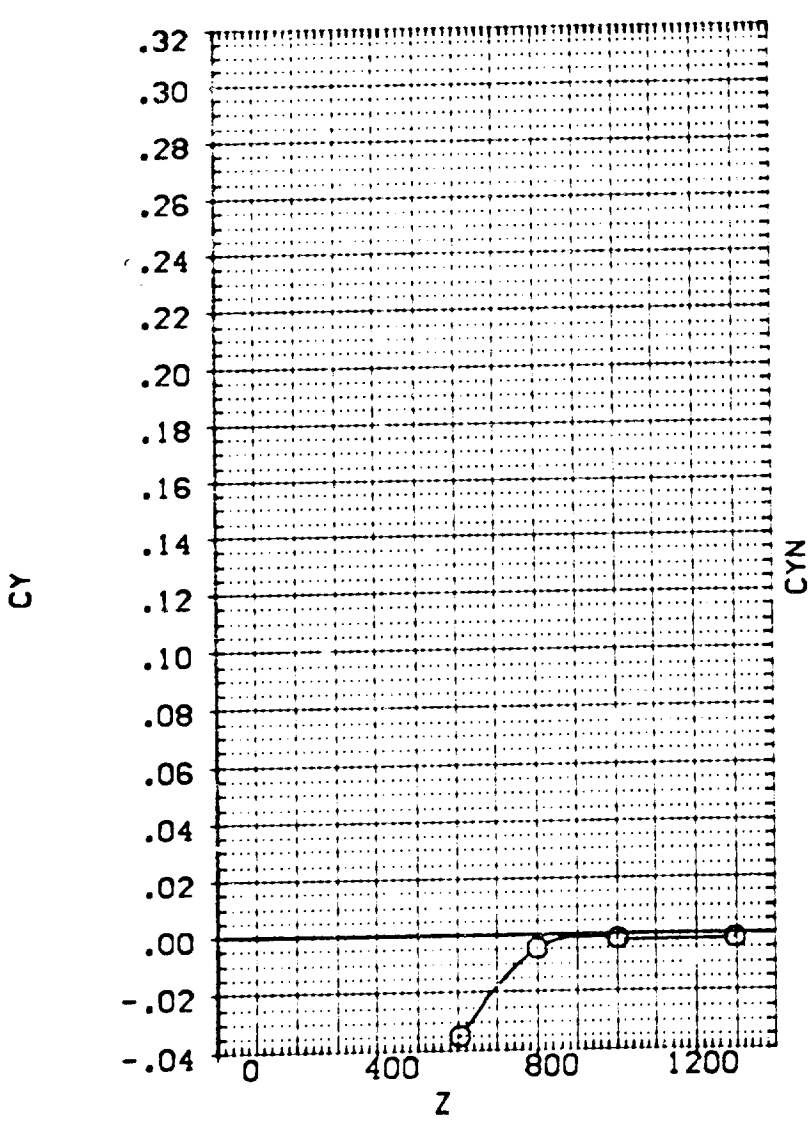


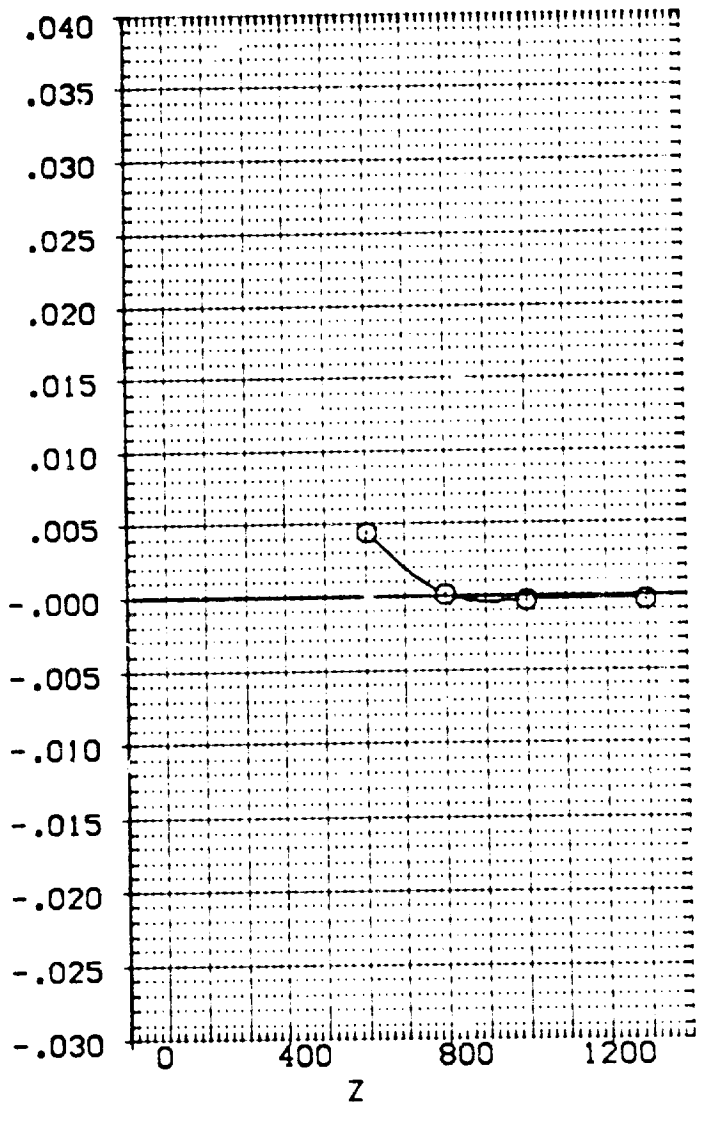
EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

!A13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ064)

SYMBOL	X	PARAMETRIC VALUES			
○	.173	MACH	4.530	PTOTAL	110.000
		ALPHA	.000	BETA	.000
		DALPHA	-20.000	DBETA	.000
		ELEVTR	.000	AILRON	10.000
		V	-200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



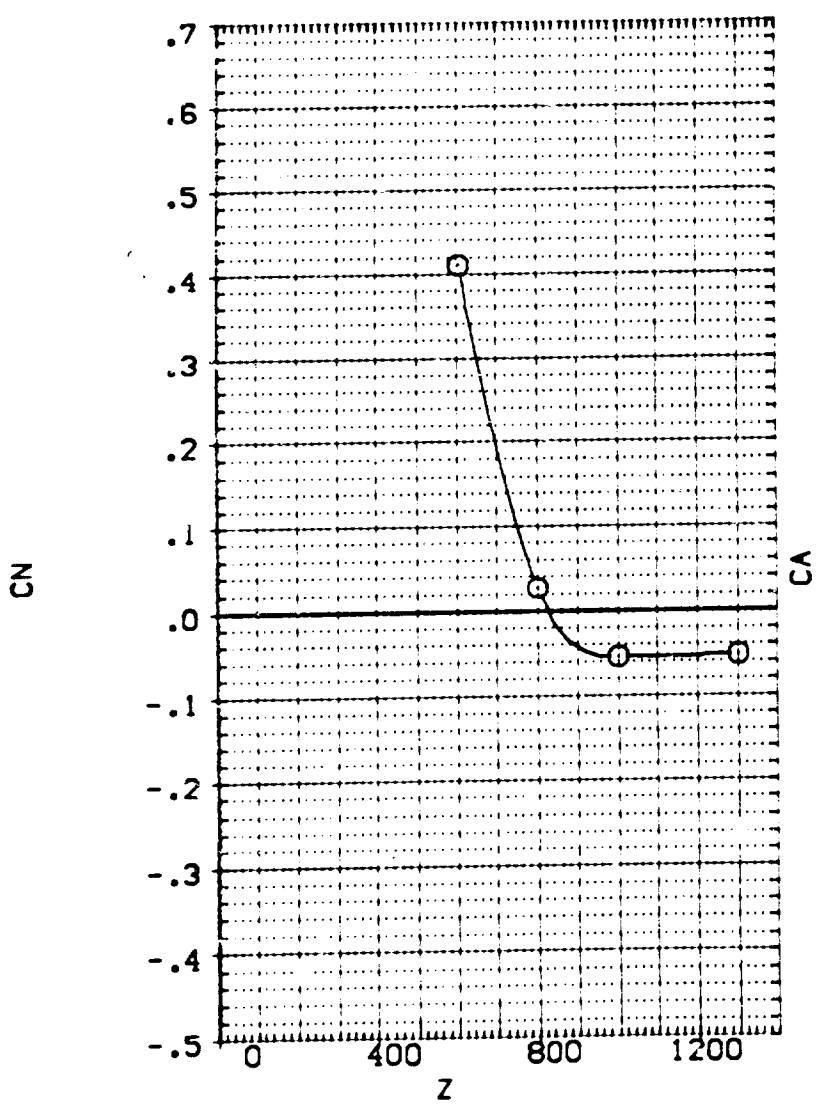


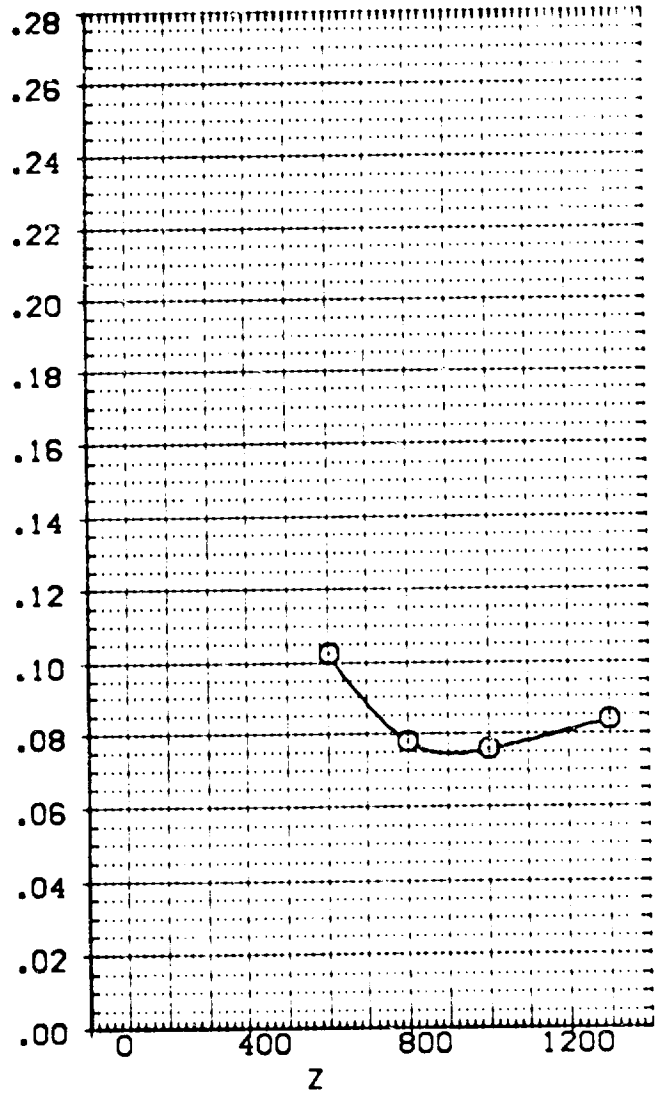
EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

!A13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ065)

SYMBOL	X	PARAMETRIC VALUES			
O	.040	MACH	4.530	PTOTAL	110.000
		ALPHA	.000	BETA	.000
		DALPHA	-20.000	DBETA	.000
		ELEVTR	.000	AILRON	10.000
		Y	.000		

SEE THE ASSOCIATED DOCUMENT FOR [illegible] CHARACTERISTICS FOR INDIVIDUAL DATASETS



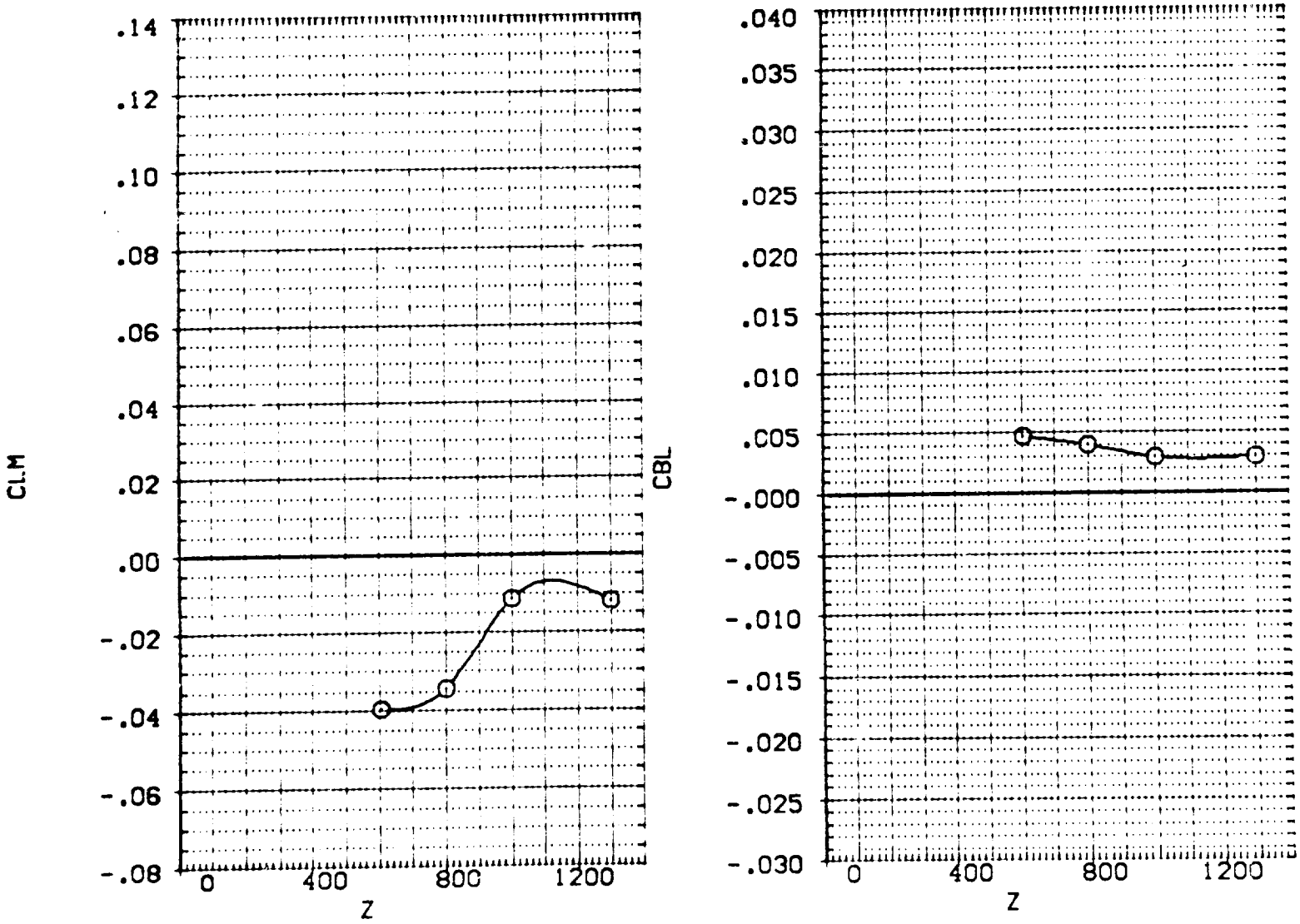


EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

!A13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ065)

SYMBOL	X	PARAMETRIC VALUES			
○	.040	MACH	4.530	PTOTAL	110.000
		ALPHA	.000	BETA	.000
		DALPHA	-20.000	DBETA	.000
		ELEVTR	.000	AILRON	10.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

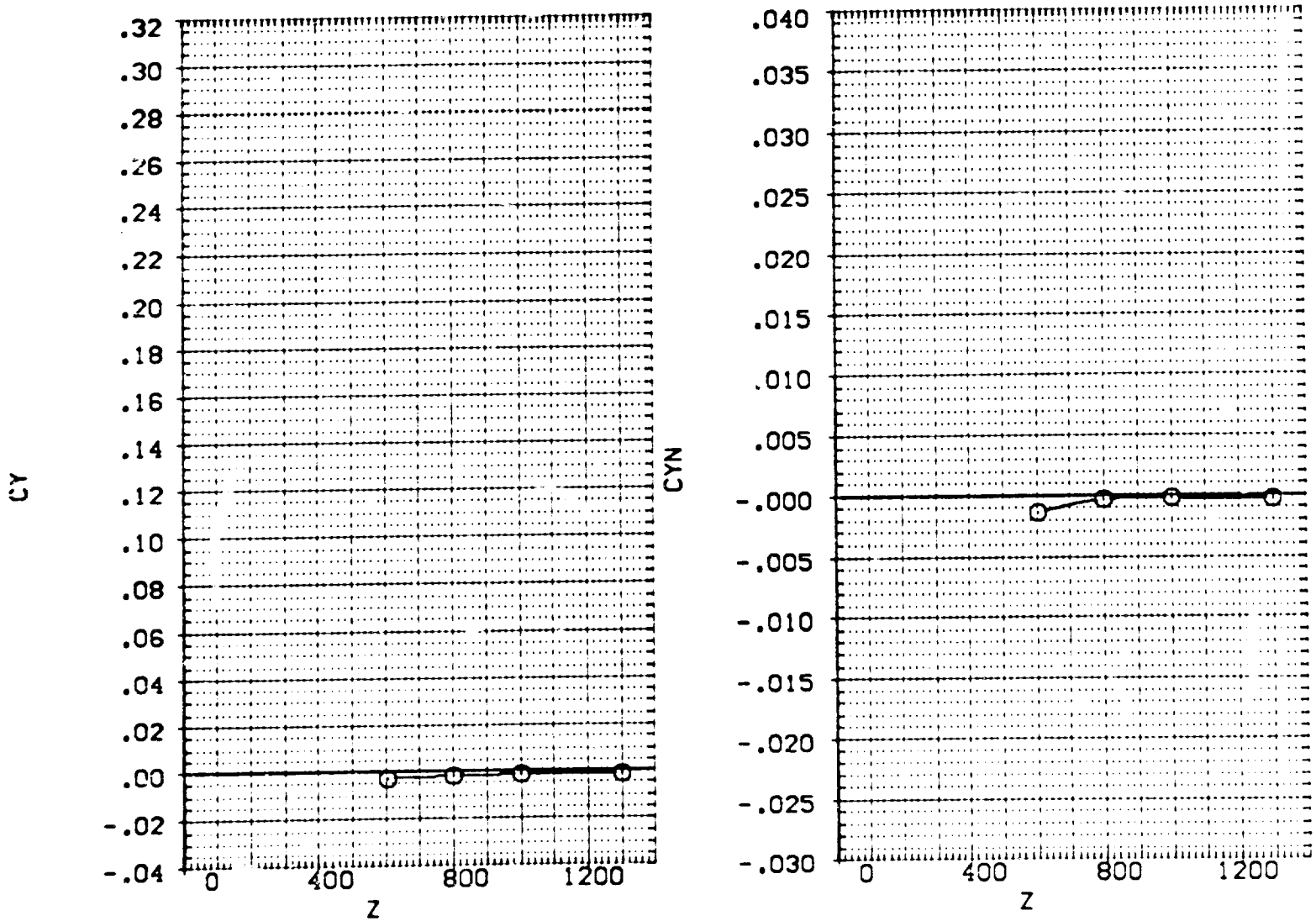


EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

!A13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ065)

SYMBOL	X	PARAMETRIC VALUES			
○	.040	MACH	4.530	PTOTAL	110.000
		ALPHA	.000	BETA	.000
		DALPHA	-20.000	DBETA	.000
		ELEVTR	.000	AILRON	10.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

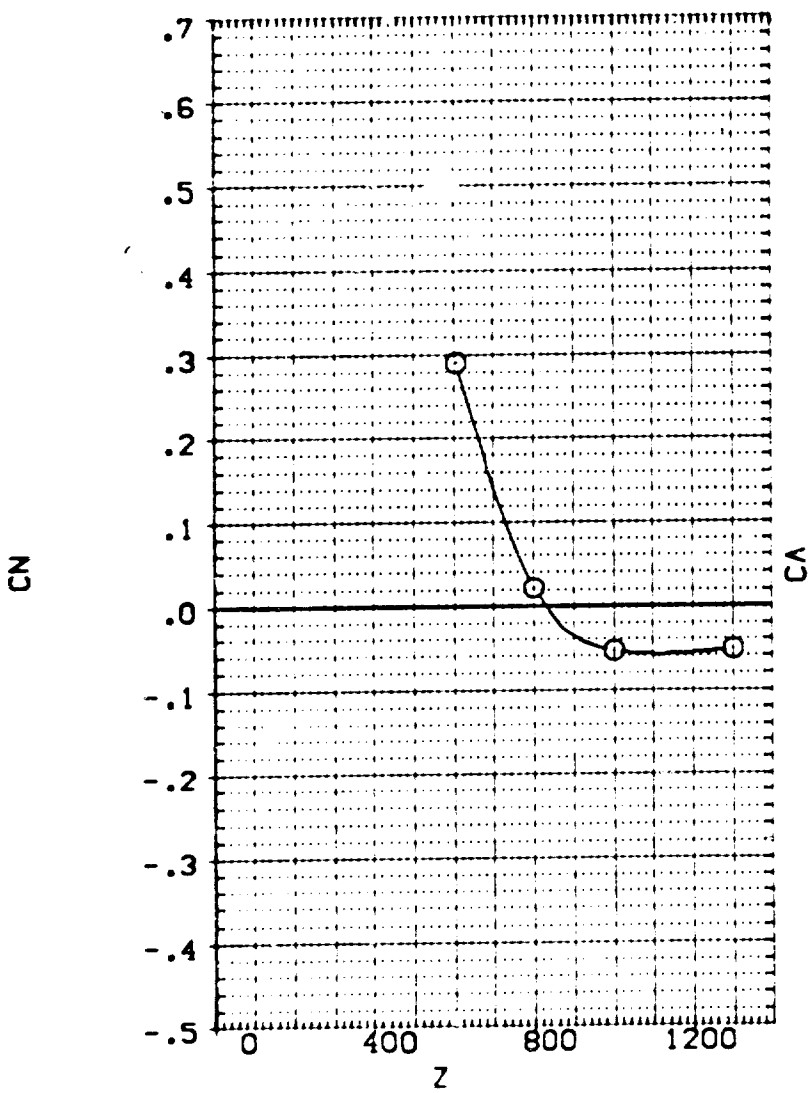


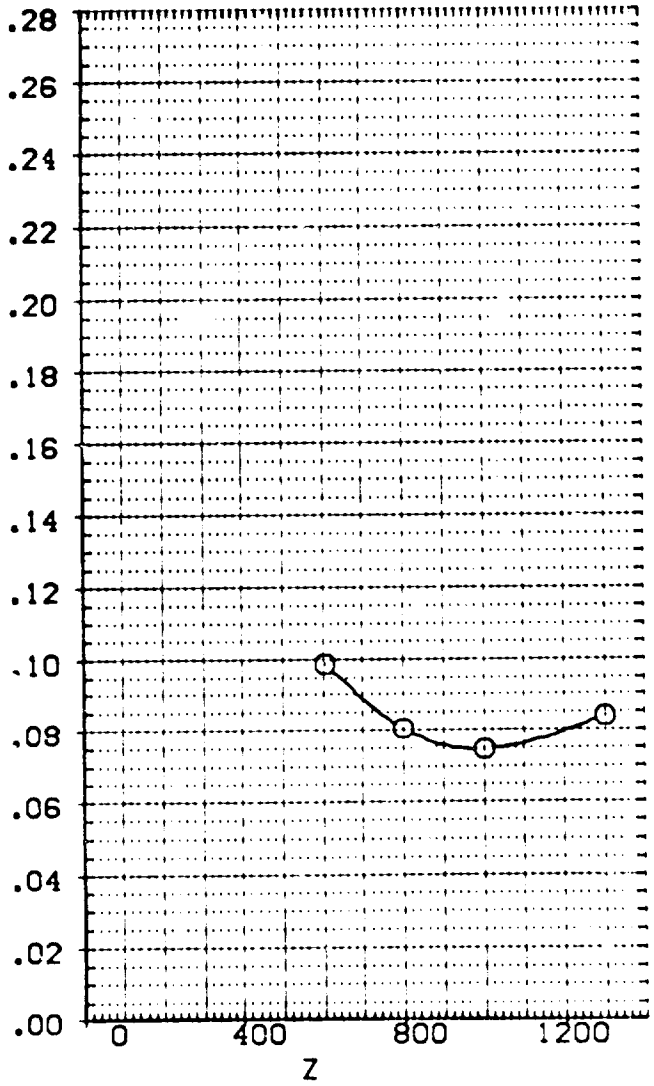
EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

!A13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ066)

SYMBOL	X		PARAMETRIC VALUES		
○	167	MACH	4.530	PTOTAL	110.000
		ALPHA	.000	BETA	.000
		DALPHA	-20.000	DBETA	.000
		ELEVTR	.000	AILRON	10.000
		Y	200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



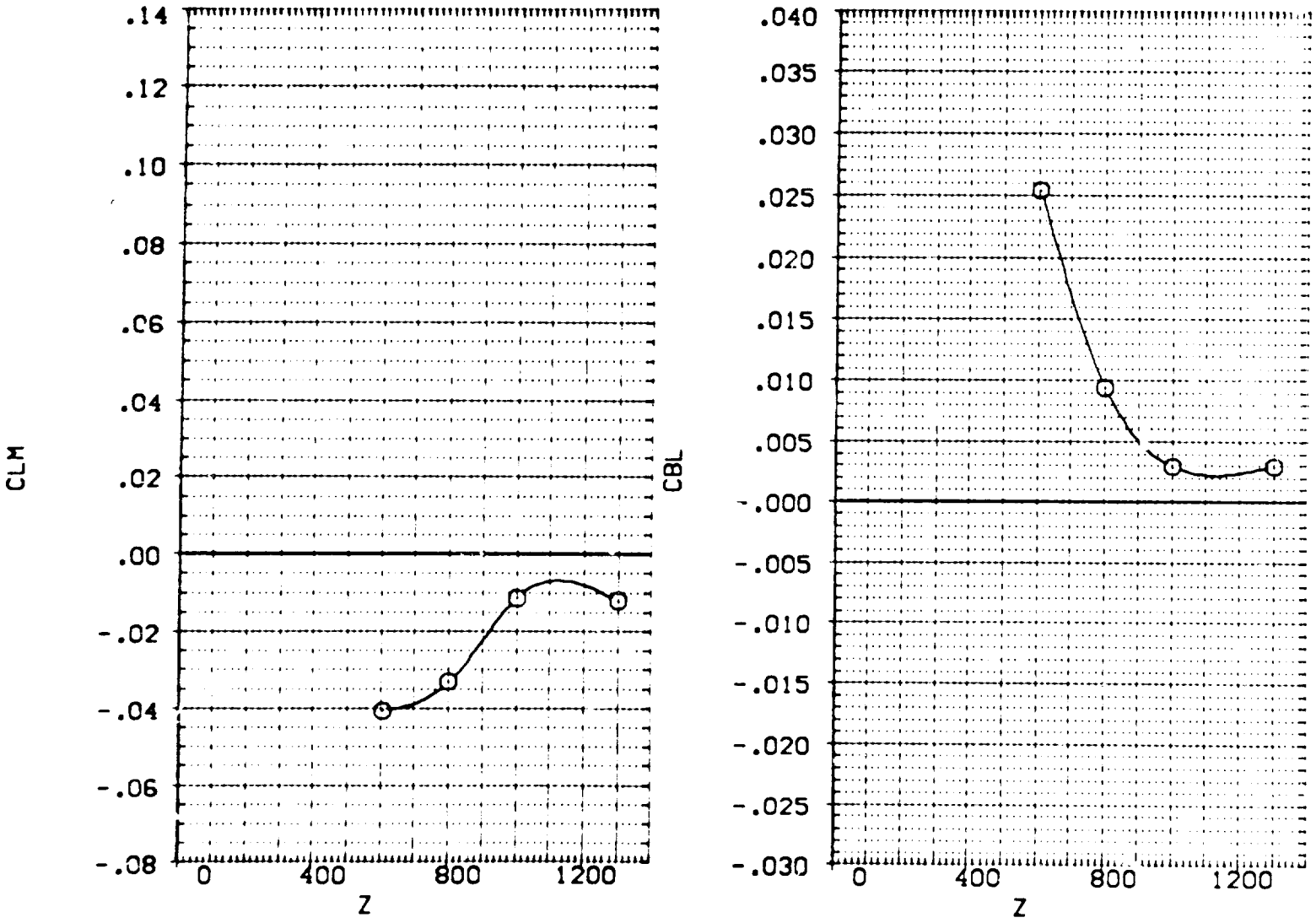


EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

!A13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ066)

SYMBOL	X	PARAMETRIC VALUES			
O	.167	MACH	4.530	PTOTAL	110.000
		ALPHA	.000	BETA	.000
		DALPHA	-20.000	DBETA	.000
		ELEVTR	.000	AILRON	10.000
		Y	200.000		

SEE THE ASSOCIATED DOCUMENT FOR KEY CHARACTERISTICS FOR INDIVIDUAL DATASETS

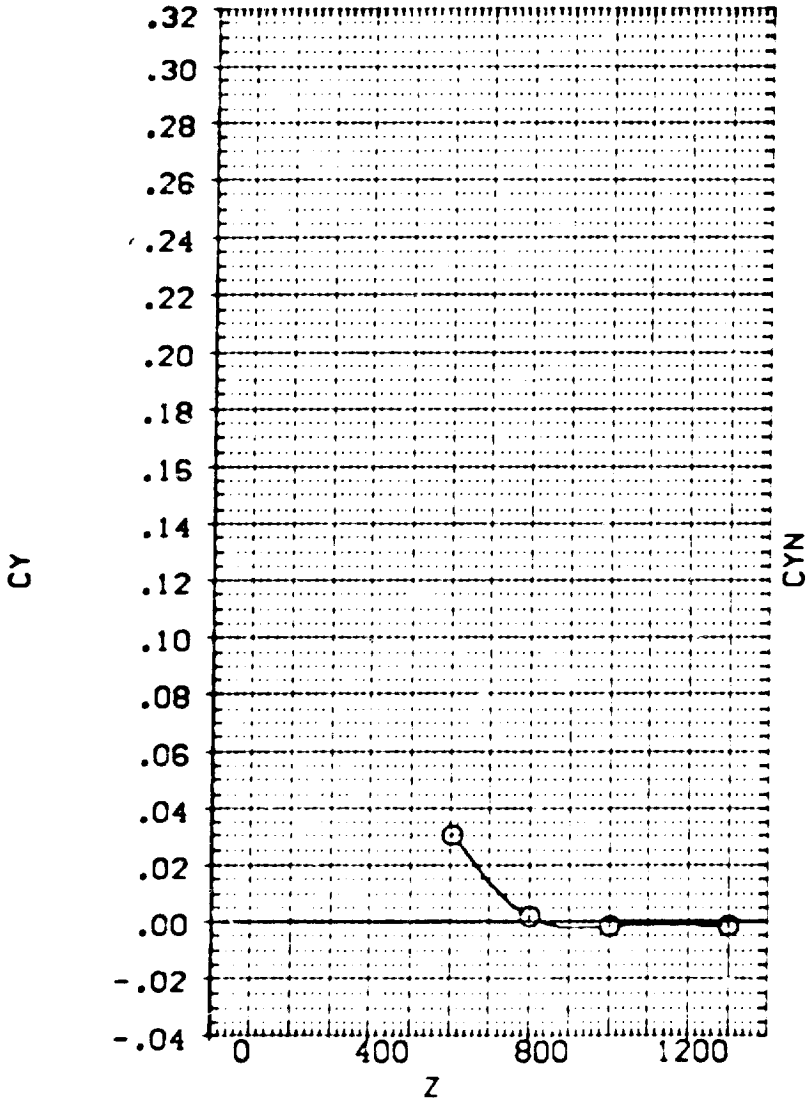


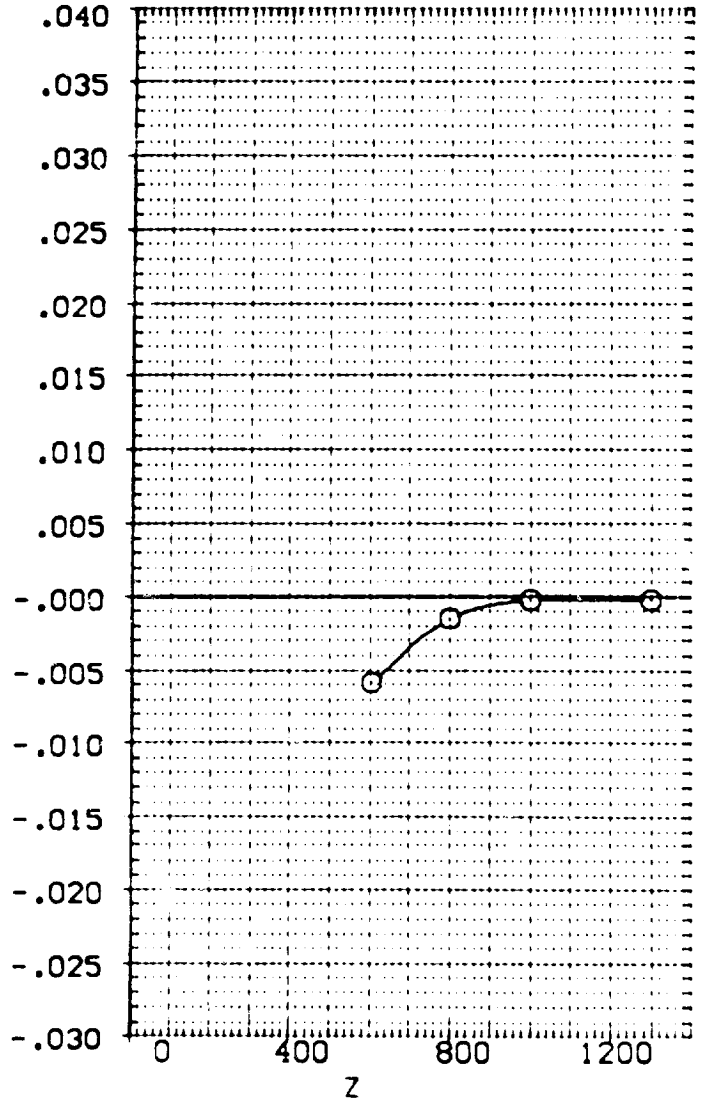
EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

!A!3.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ066)

SYMBOL	X	PARAMETRIC VALUES			
O	.167	MACH	4.530	PTOTAL	110.000
		ALPHA	.000	BETA	.000
		DALPHA	-20.000	DBETA	.000
		ELEVTR	.000	AILRON	10.000
		Y	200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



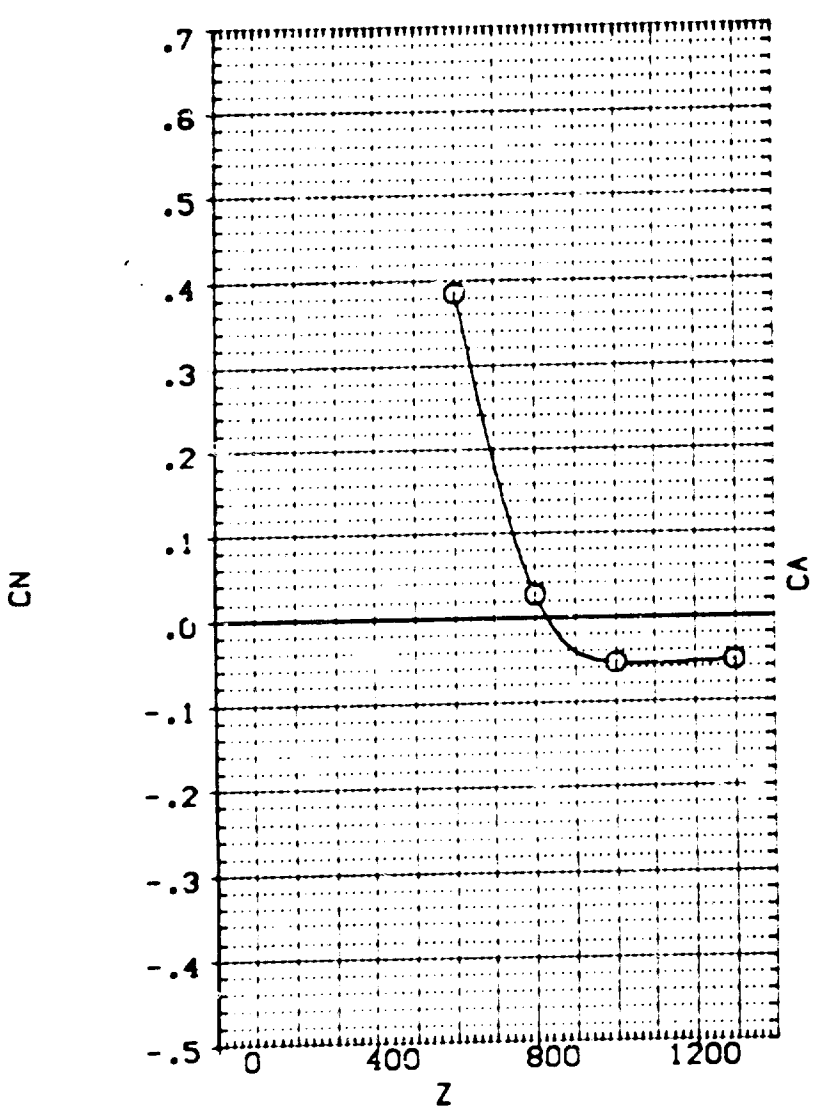


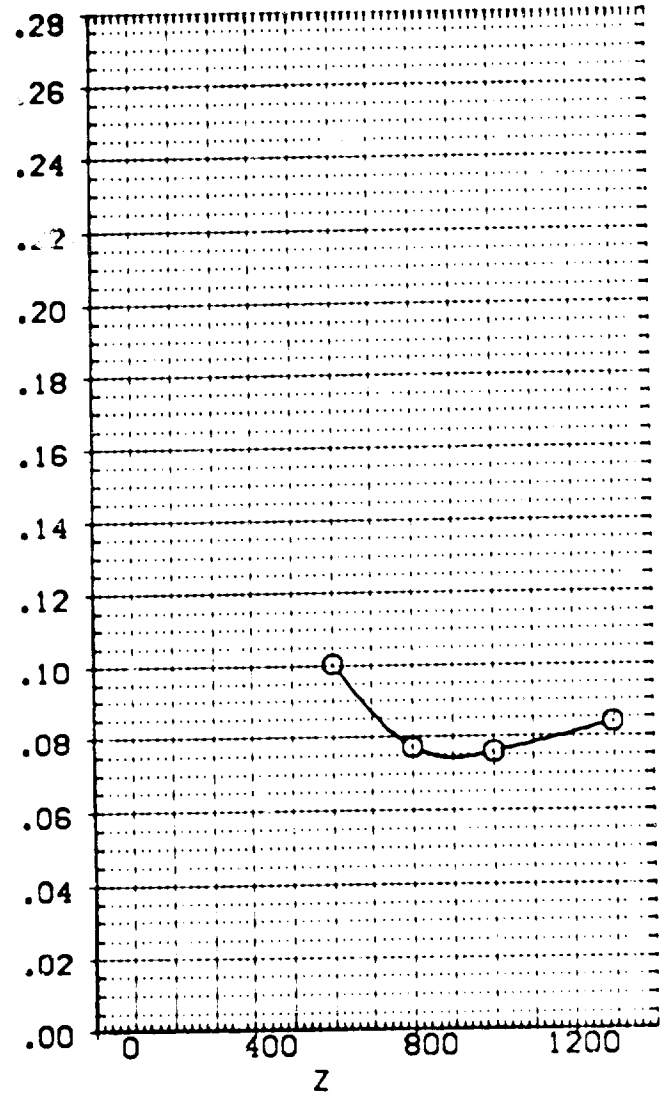
EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

[A13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ067)

SYMBOL	X	PARAMETRIC VALUES			
O	.142	MACH	4.530	PTOTAL	110.000
		ALPHA	.000	BETA	.000
		DALPHA	-20.000	DBETA	-5.000
		ELEVTR	.000	AILRON	10.000
		Y	-200.000		

SEE THE ASSOCIATED [illegible] DOCUMENT FOR REFER[illegible] CHARACTERISTICS FOR INDIVIDUAL DATASETS



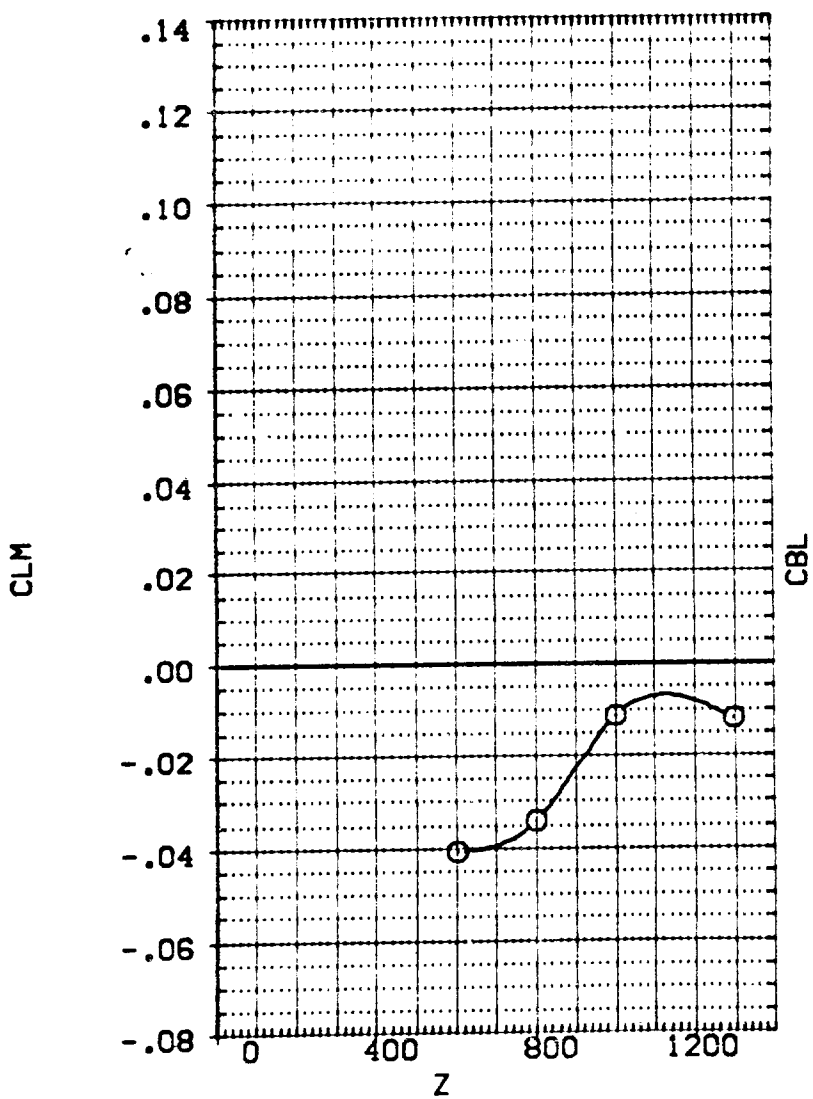


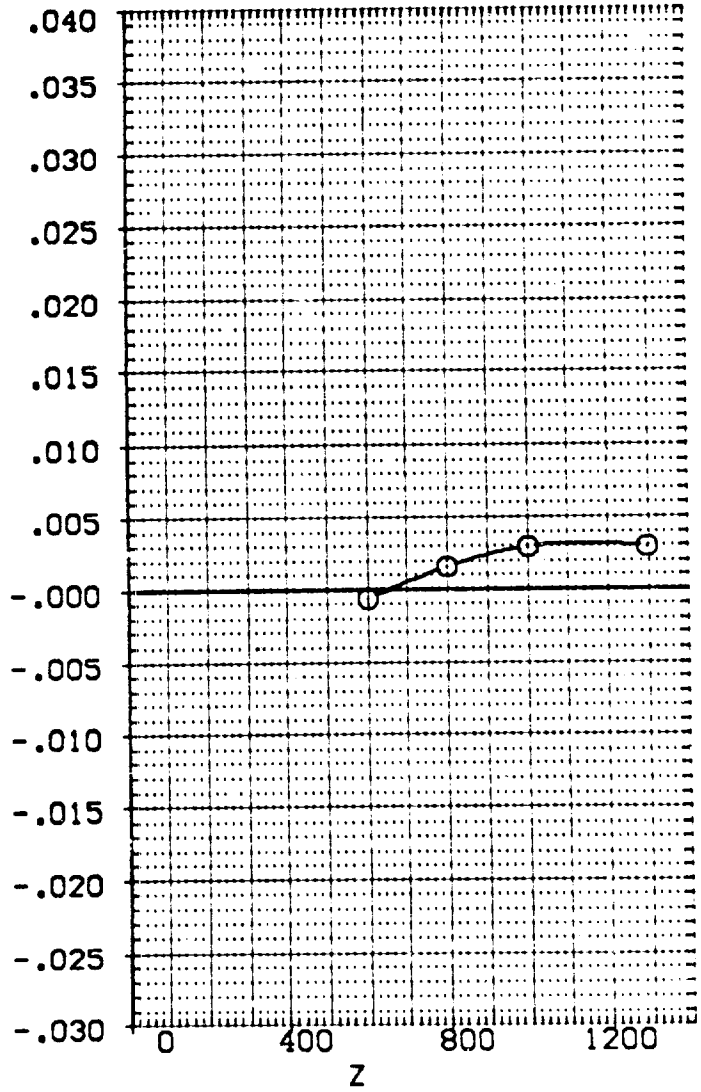
EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ067)

SYMBOL	X	PARAMETRIC VALUES			
O	.142	MACH	4.530	PTOTAL	110.000
		ALPHA	.000	BETA	.000
		DALPHA	-20.000	DBETA	-5.000
		ELEVTR	.000	AILRON	10.000
		Y	-200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



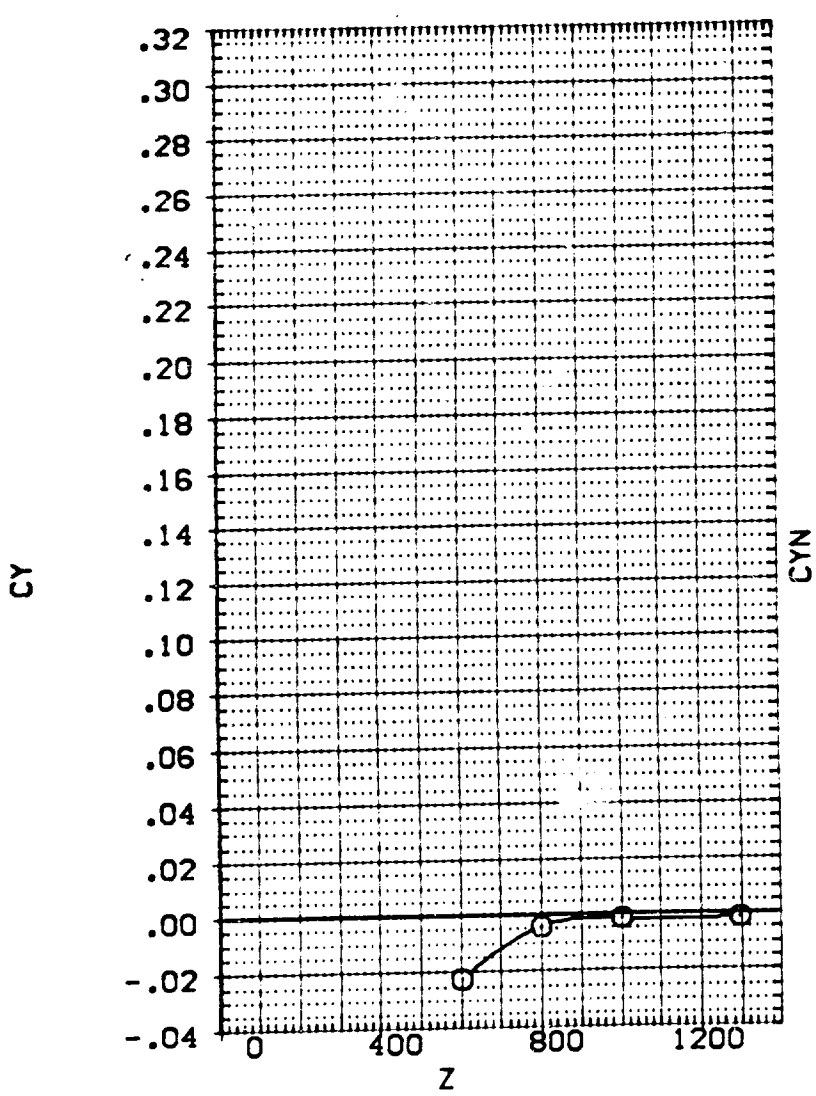


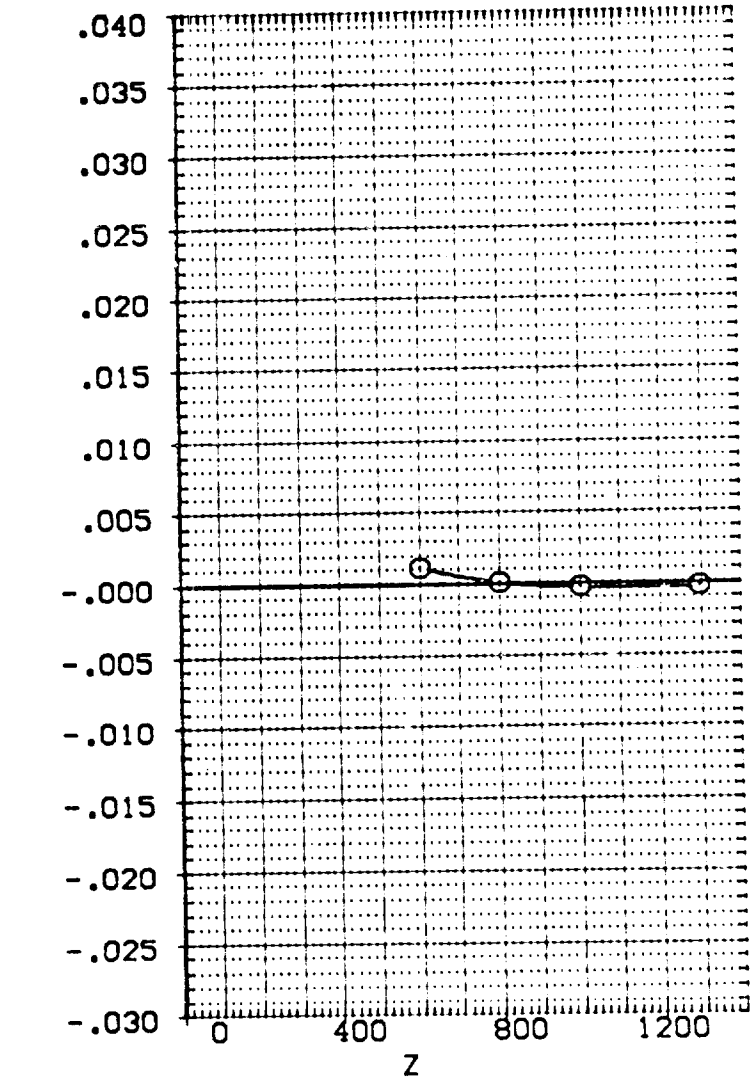
EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ067)

SYMBOL	X	PARAMETRIC VALUES			
O	.142	MACH	4.530	PTOTAL	110.000
		ALPHA	.000	BETA	.000
		DALPHA	-20.000	DBETA	-5.000
		ELEVTR	.000	AILRON	10.000
		Y	-200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



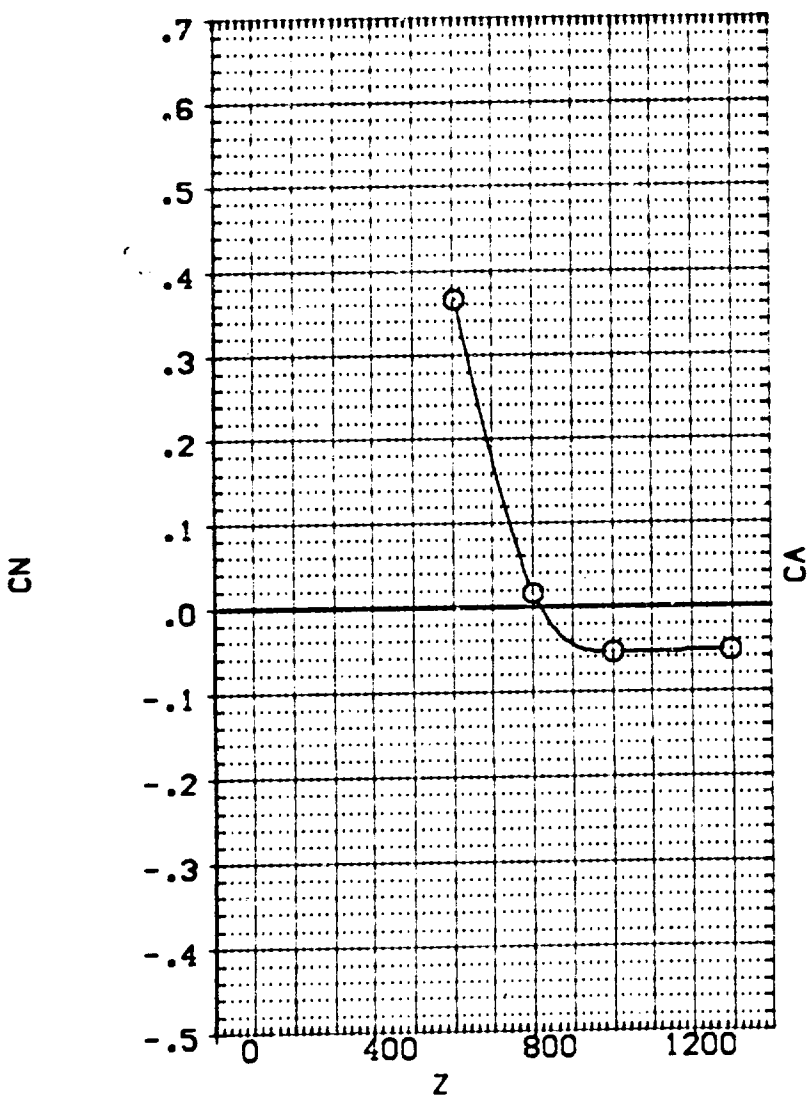


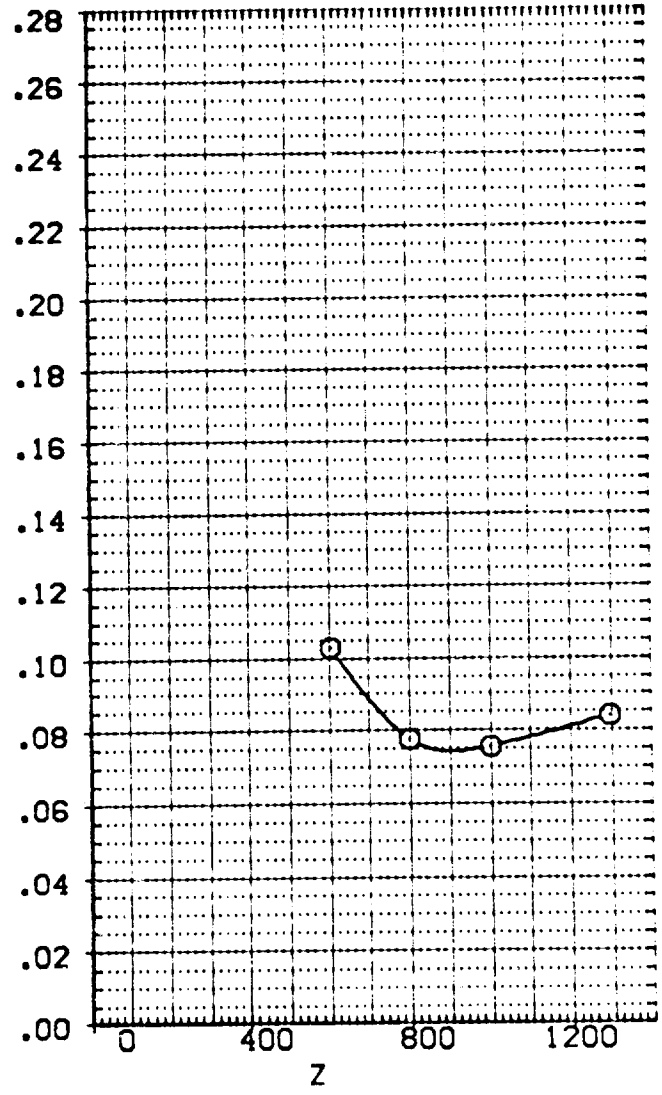
EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ068)

SYMBOL	X		PARAMETRIC VALUES		
○	.014	MACH	4.530	PTOTAL	110.000
		ALPHA	.000	BETA	.000
		DALPHA	-20.000	DBETA	5.000
		ELEVTR	.000	AILRON	10.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



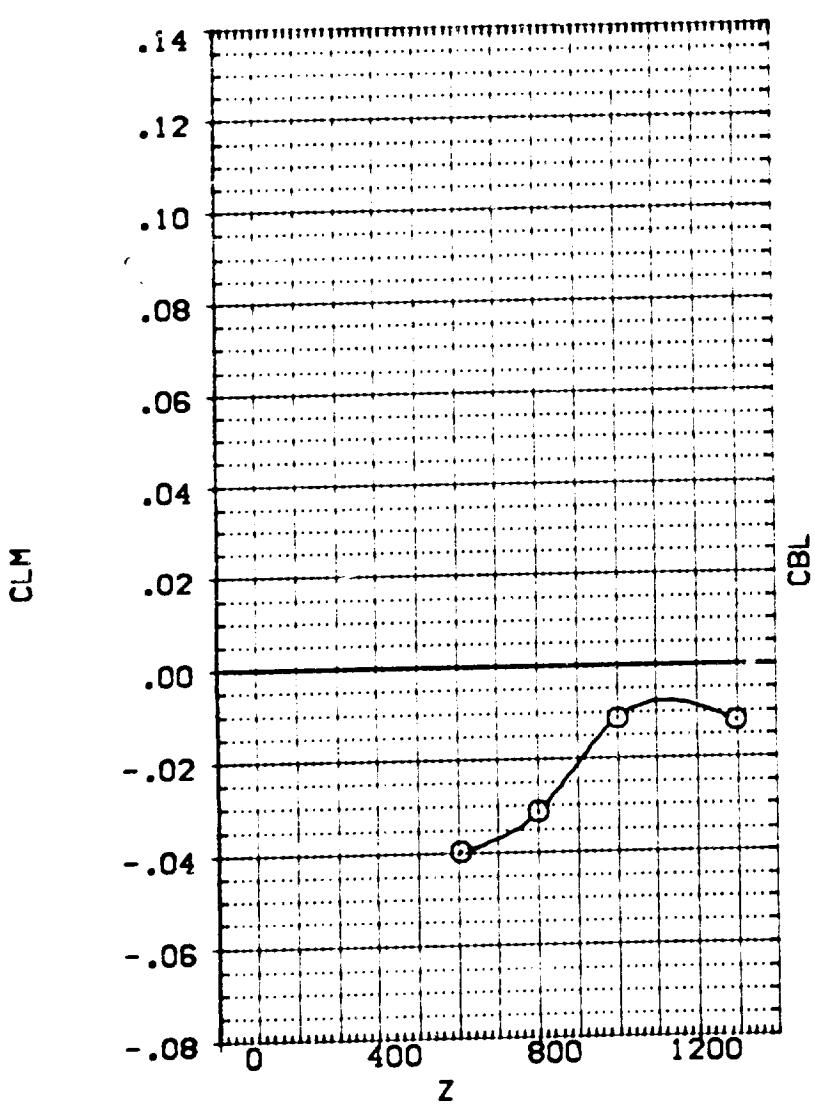


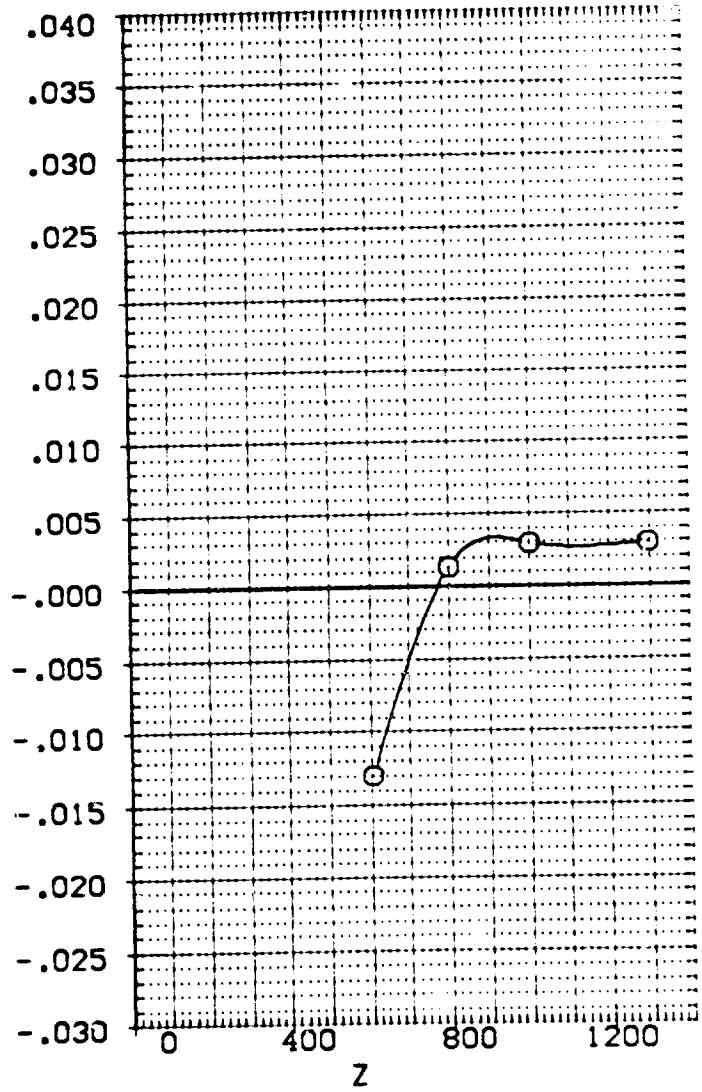
EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

!A13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ068)

SYMBOL	X	PARAMETRIC VALUES			
O	.014	MACH	4.530	PTOTAL	110.000
		ALPHA	.000	BETA	.000
		DALPHA	-20.000	DBETA	5.000
		ELEVTR	.000	AILRON	10.000
		Y	.000		

SEE THE ASSOCIATED DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



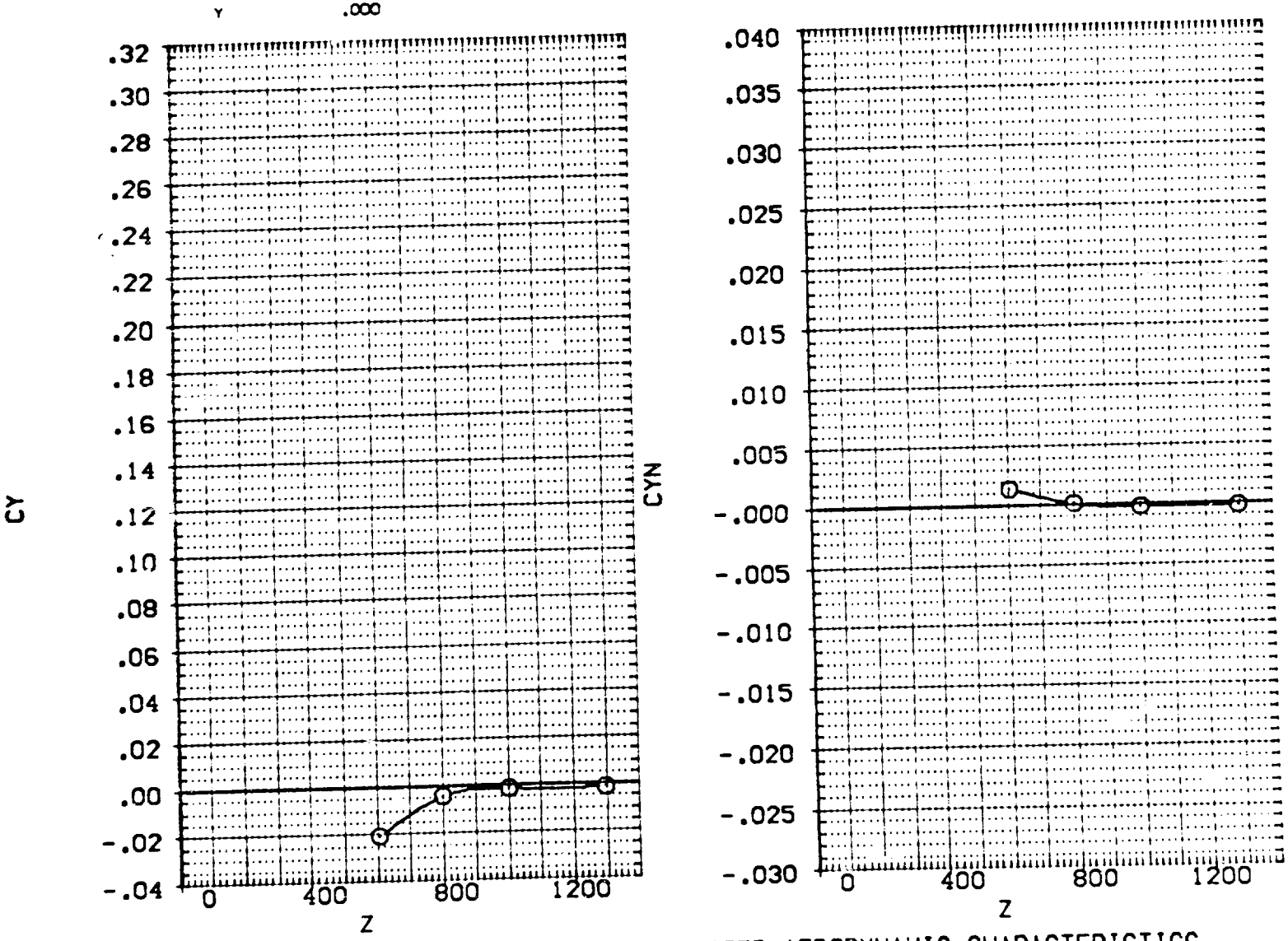


EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

!A13,EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ068)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

SYMBOL	X		PARAMETRIC VALUES		
O	.014	MACH	4.530	PTOTAL	110.000
		ALPHA	.000	BETA	.000
		DALPHA	-20.000	DBETA	5.000
		ELEVTR	.000	AILRON	10.000
		Y	.000		

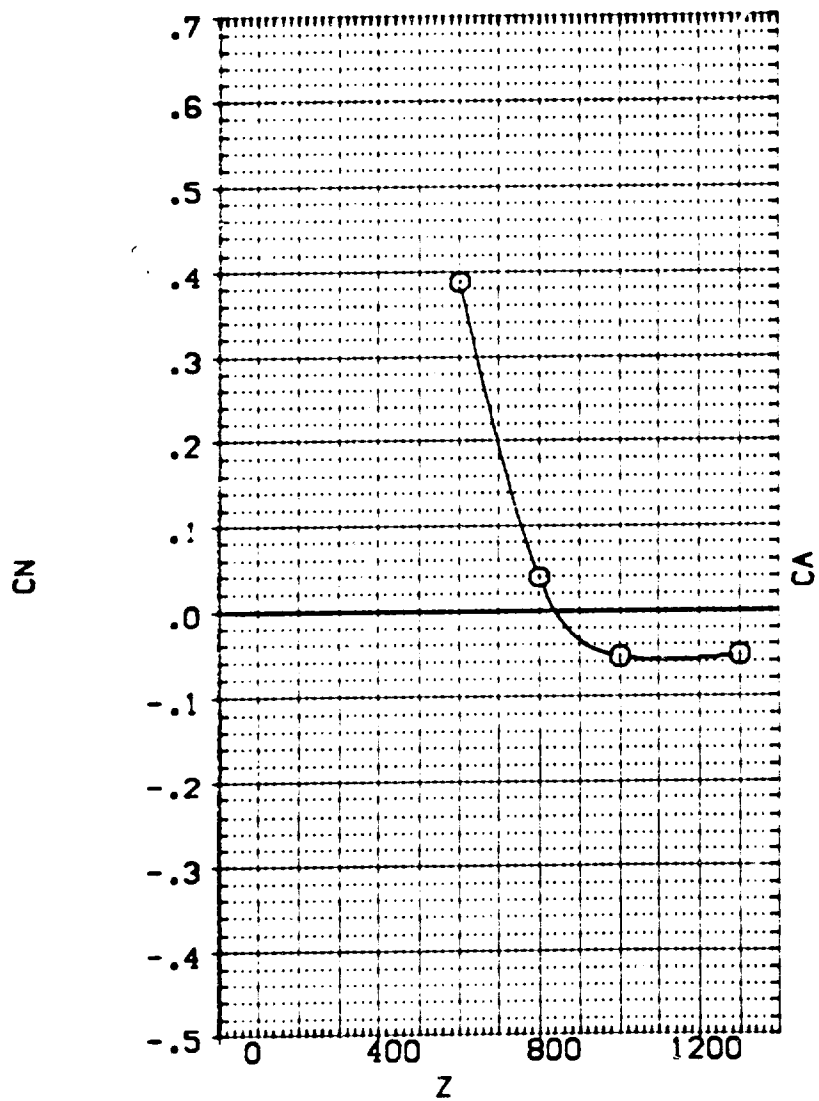


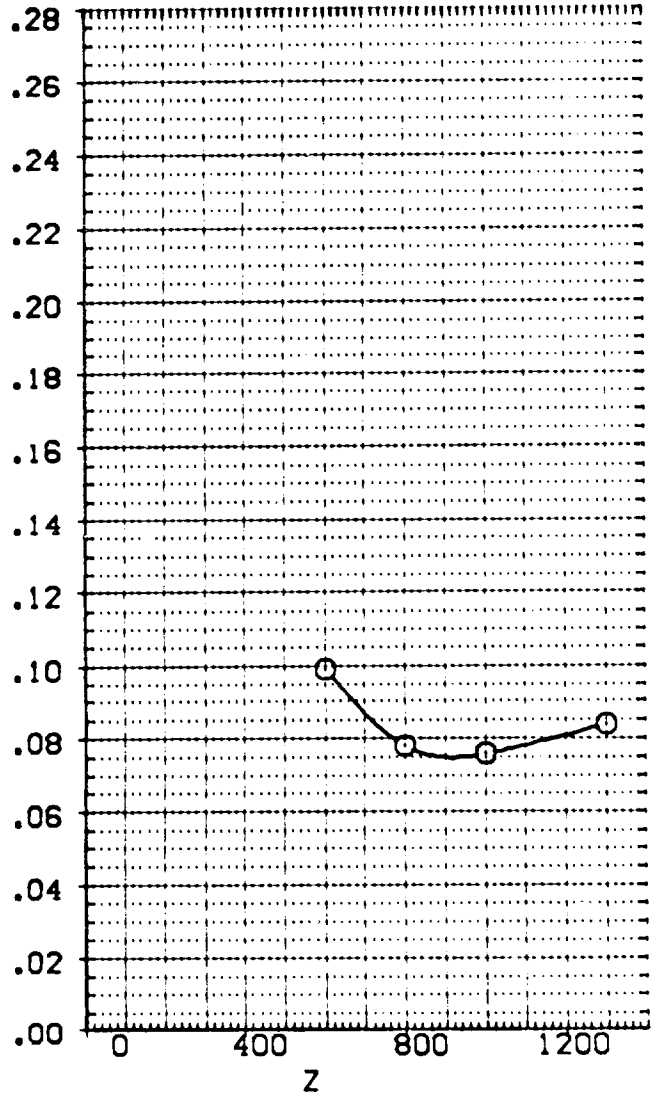
EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ069)

SYMBOL	X	PARAMETRIC VALUES			
O	.050	MACH	4.530	PTOTAL	110.000
		ALPHA	.000	BETA	.000
		DALPHA	-20.000	DBETA	5.000
		ELEVTR	.000	AILRON	10.000
		Y	200.000		

SEE THE ASSOCIATED DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



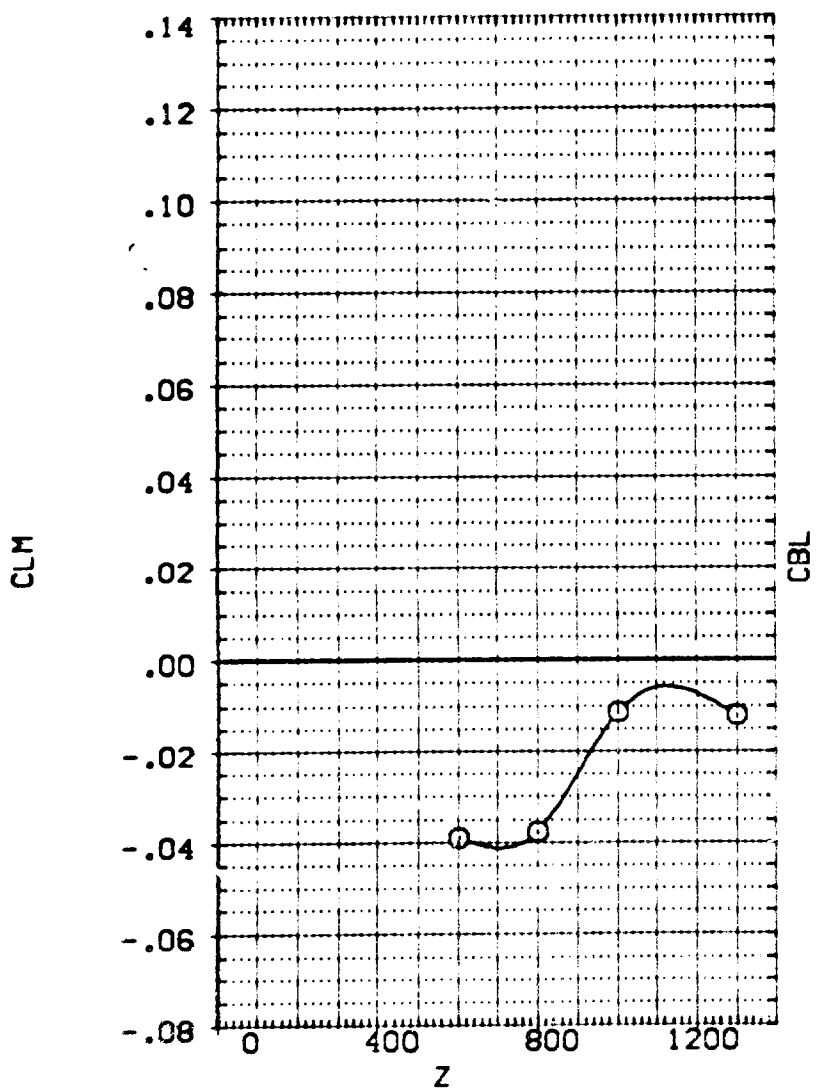


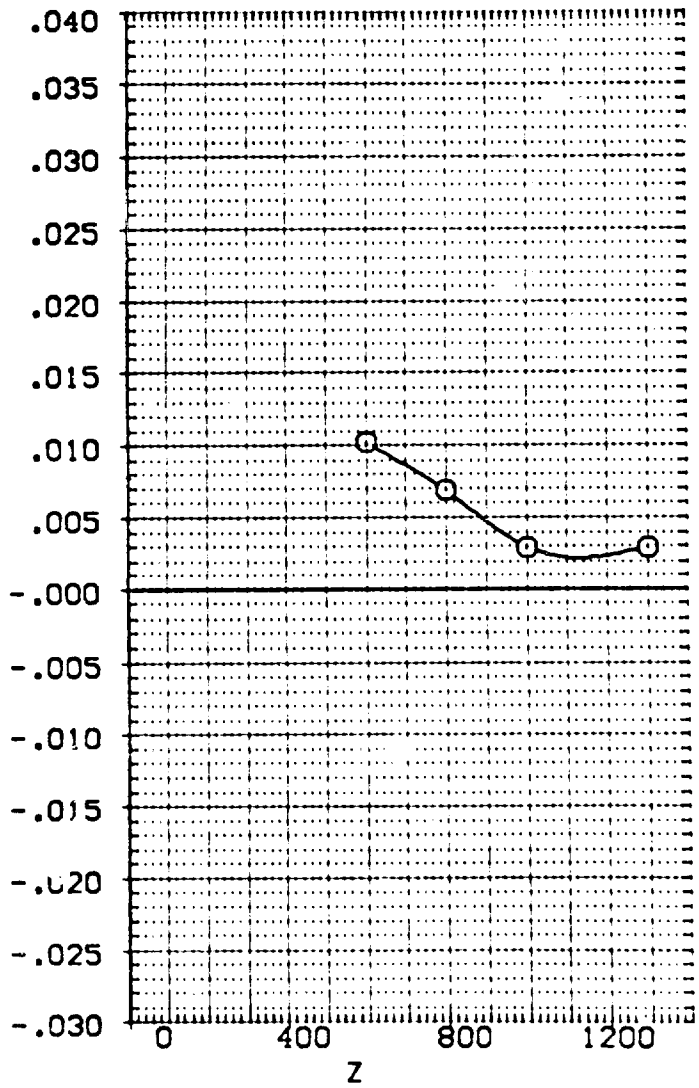
EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

!A13.EXTERNAL TANK(T10)SEPARATING FR.M ORB. 09 (RTJ069)

SYMBOL	X	PARAMETRIC VALUES			
○	.050	MACH	4.530	PTOTAL	110.000
		ALPHA	.000	BETA	.000
		DALPHA	-20.000	DBETA	5.000
		ELEVTR	.000	AILRON	10.000
		Y	200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



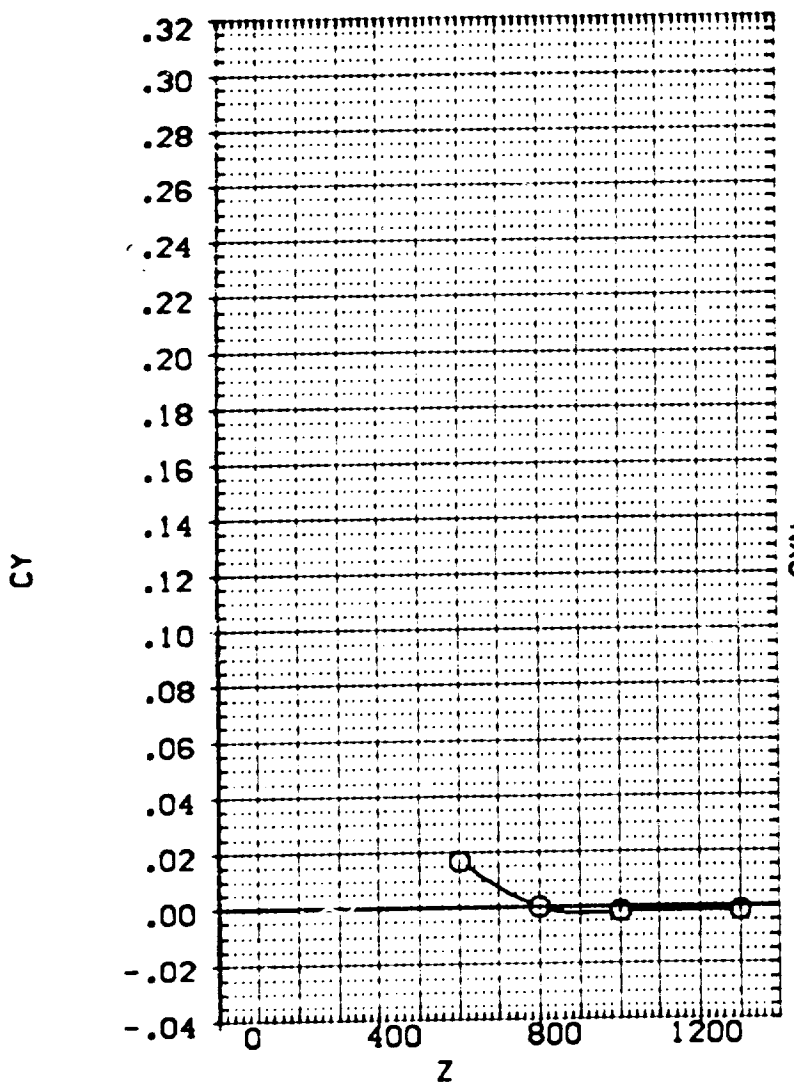


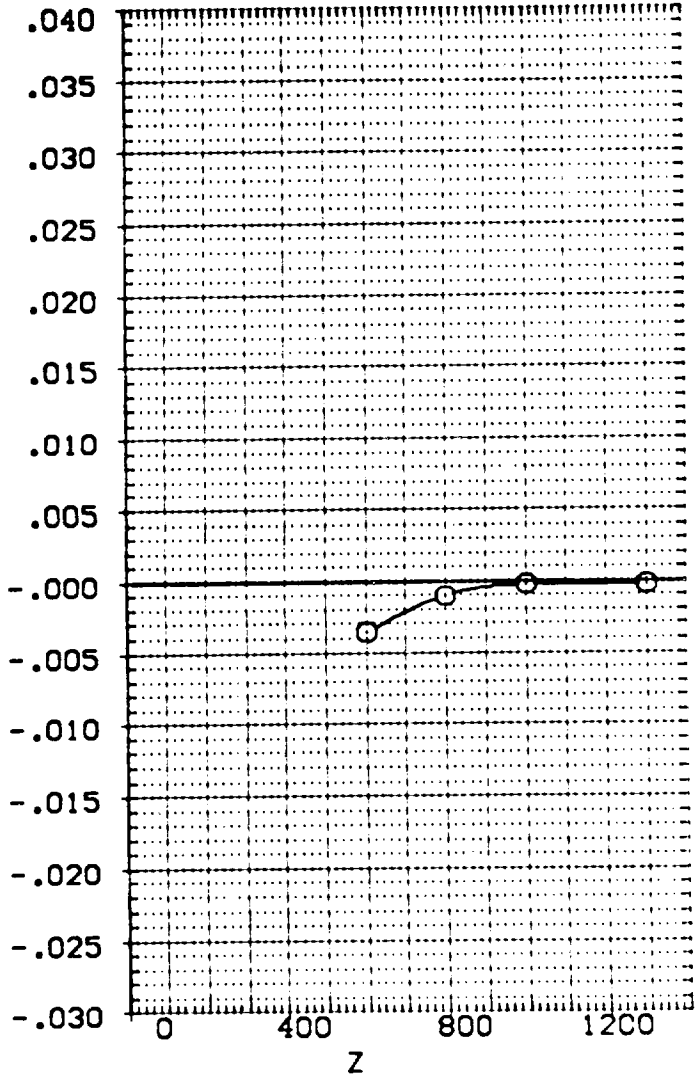
EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ069)

SYMBOL	X	PARAMETRIC VALUES			
○	.050	MACH	4.530	PTOTAL	110.000
		ALPHA	.000	BETA	.000
		DALPHA	-20.000	DBETA	5.000
		ELEVTR	.000	AILRON	10.000
		Y	200.000		

SEE THE ASSOCIATED DOCUMENT FOR REF. CHARACTERISTICS FOR INDIVIDUAL DATASETS



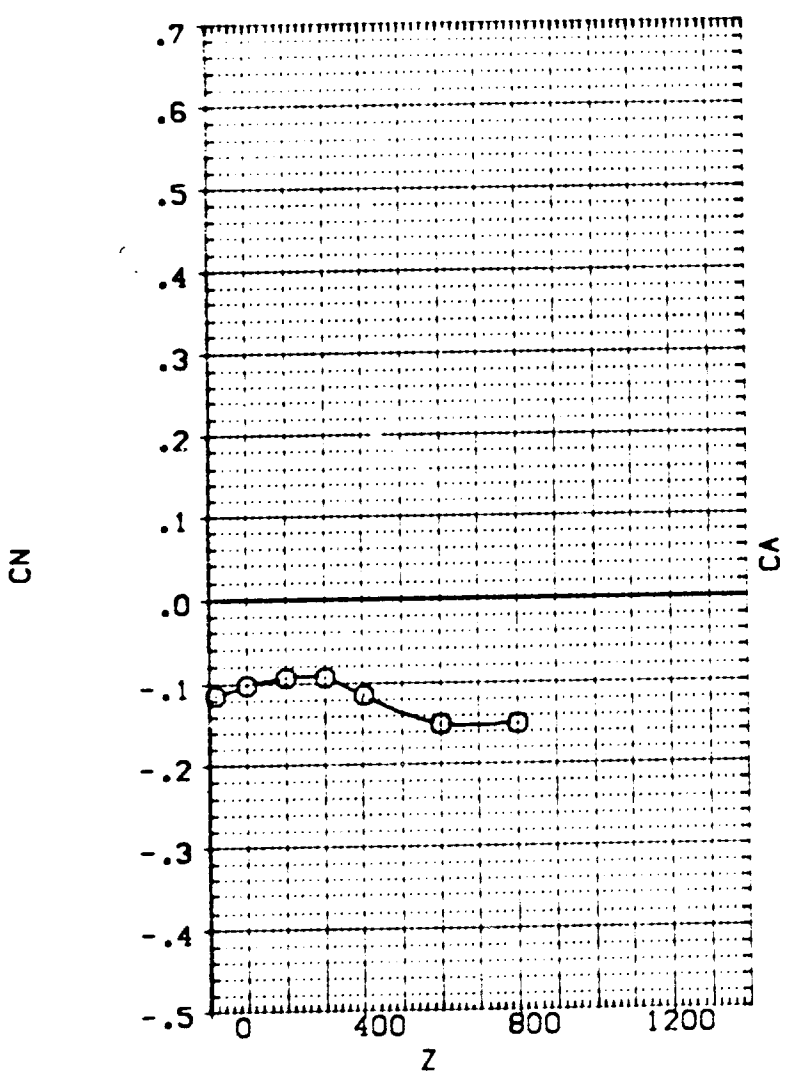


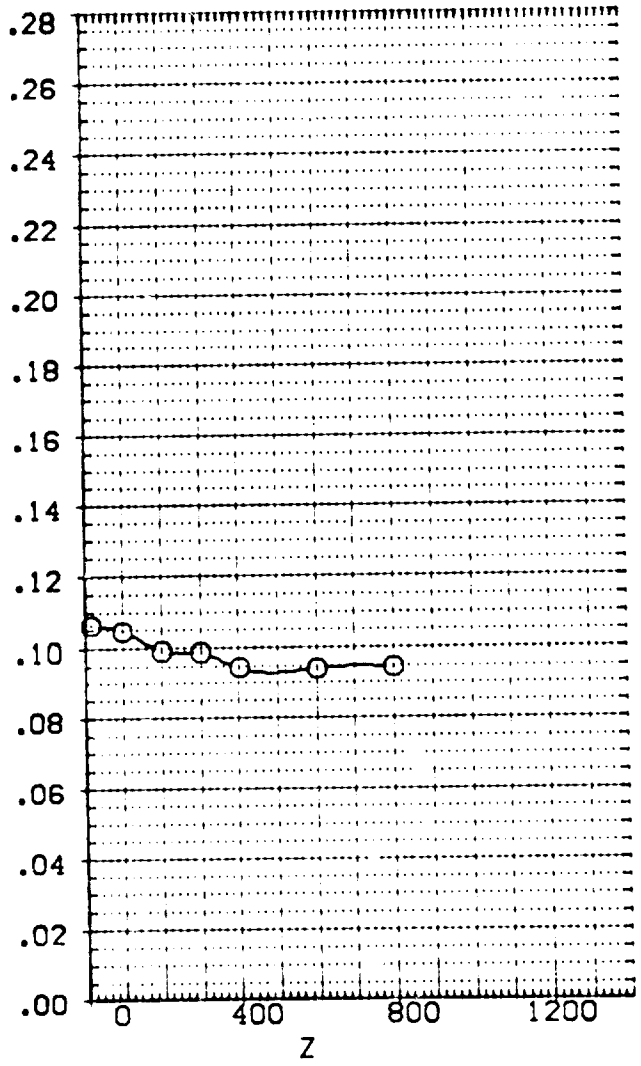
EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

!A13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ070)

SYMBOL	X		PARAMETRIC VALUES		
○	.256	MACH	4.520	PTOTAL	80.000
		ALPHA	-5.000	BETA	.000
		DALPHA	.000	DBETA	.000
		ELEVTR	.000	AILRON	10.000
		Y	-200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



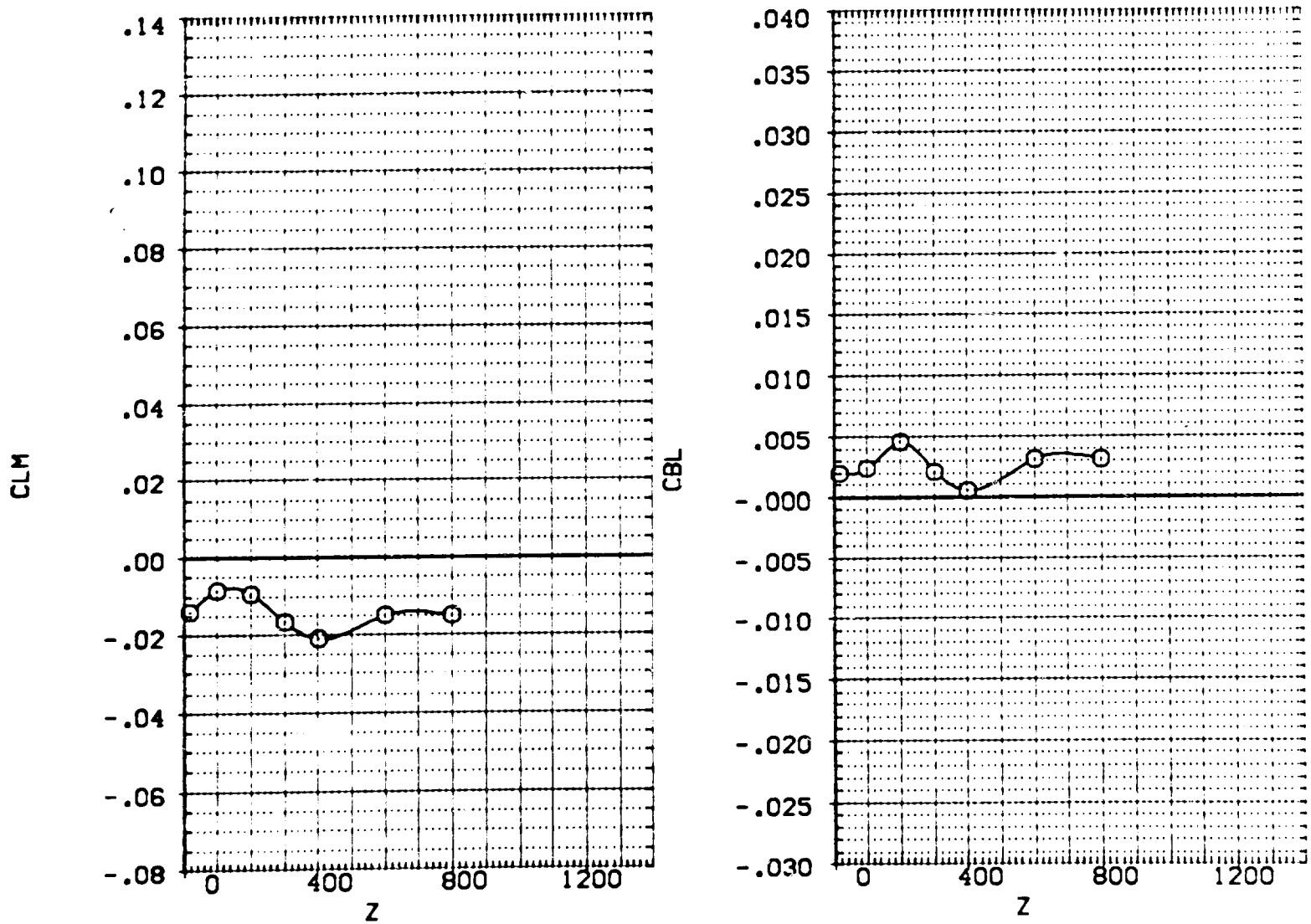


EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

!A13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ070)

SYMBOL	X	PARAMETRIC VALUES			
O	.256	MACH	4.520	PTOTAL	80.000
		ALPHA	-5.000	BETA	.000
		DALPHA	.000	DBETA	.000
		ELEVTR	.000	AILRON	10.000
		Y	-200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REMAINING CHARACTERISTICS FOR INDIVIDUAL DATASETS

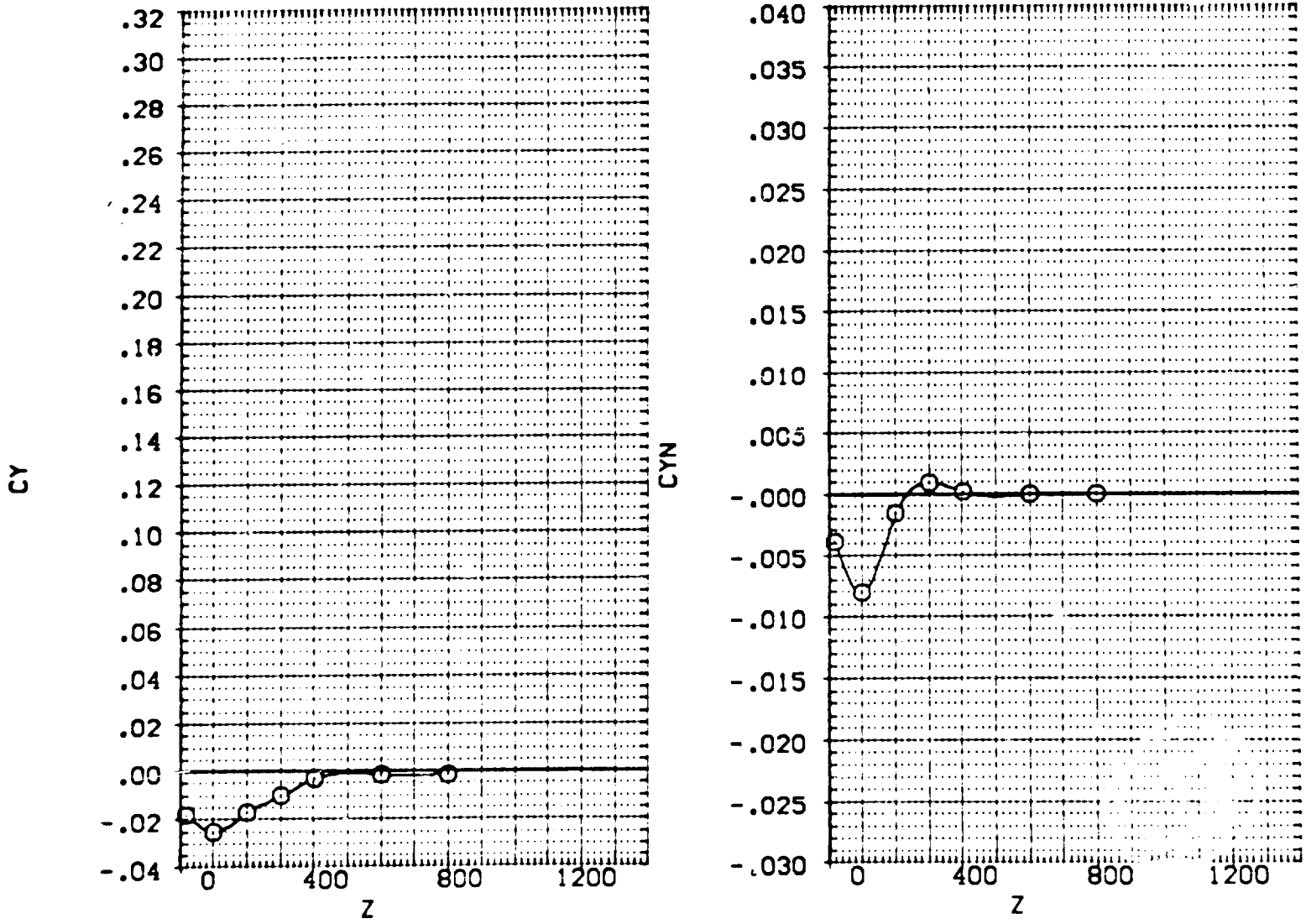


EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

!A13,EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ070)

SYMBOL	X	PARAMETRIC VALUES			
O	.256	MACH	4.520	PTOTAL	80.000
		ALPHA	-5.000	BETA	.000
		DALPHA	.000	DBETA	.000
		ELEVTR	.000	AILRON	10.000
		Y	-200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

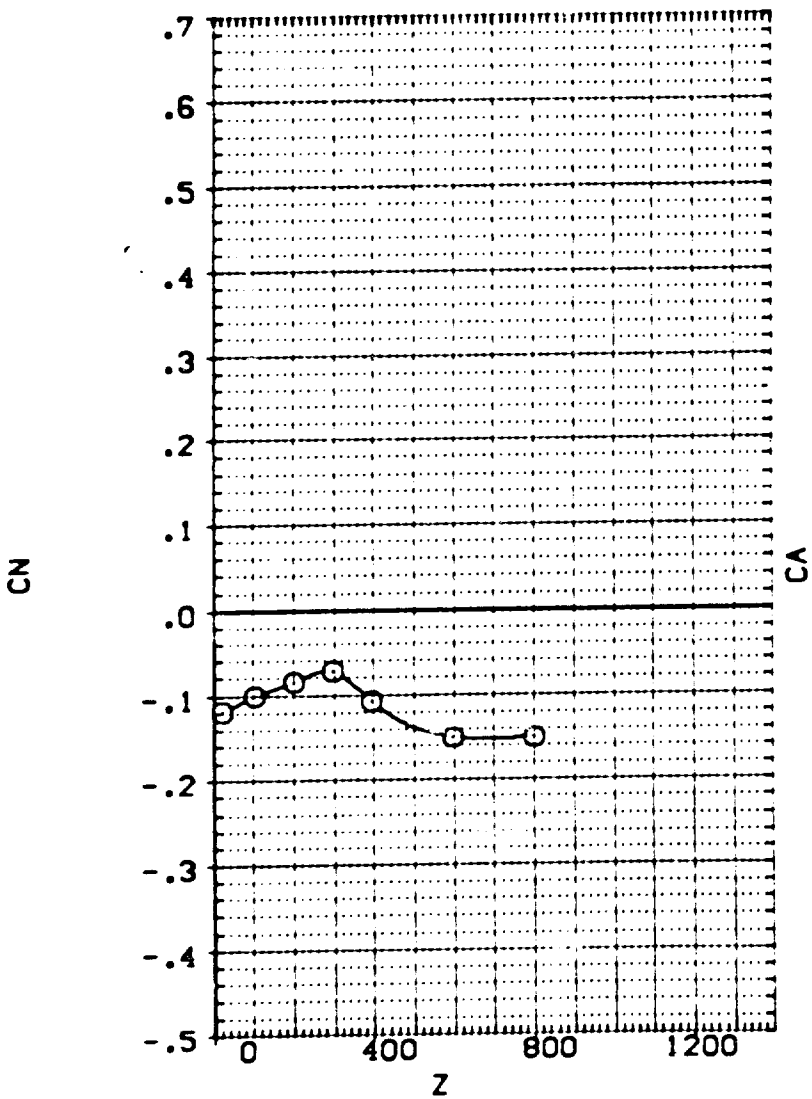


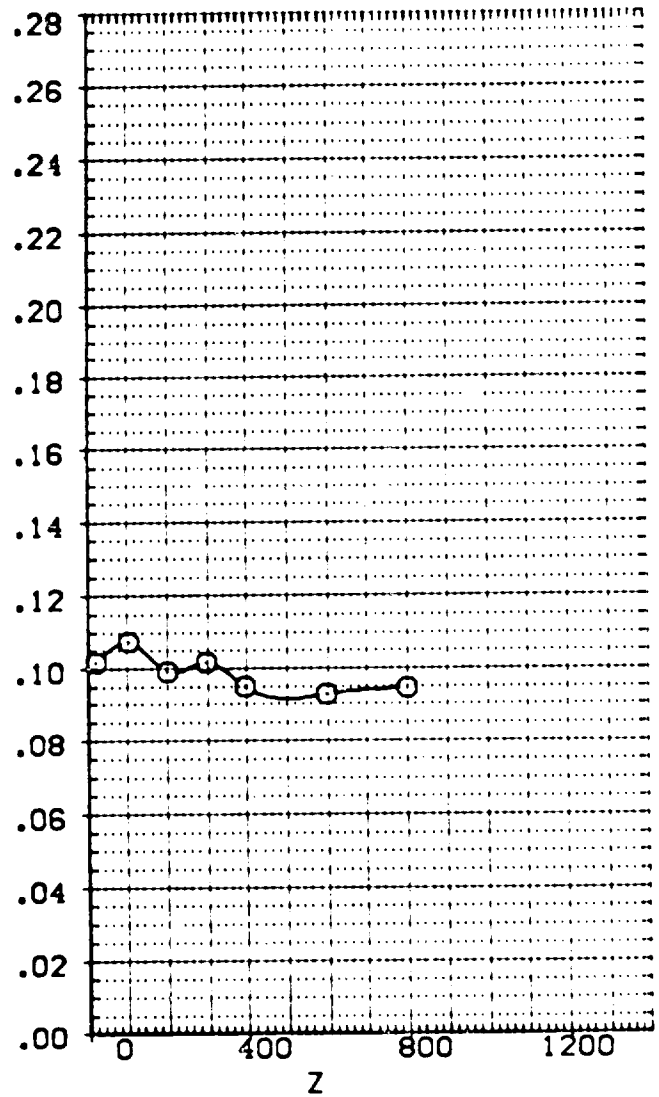
EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

[A13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ071)

SYMBOL	X	PARAMETRIC VALUES			
O	.191	MACH	4.520	PTOTAL	80.000
		ALPHA	-5.000	BETA	.000
		DALPHA	.000	DBETA	.000
		ELEVTR	.000	AILRON	10.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



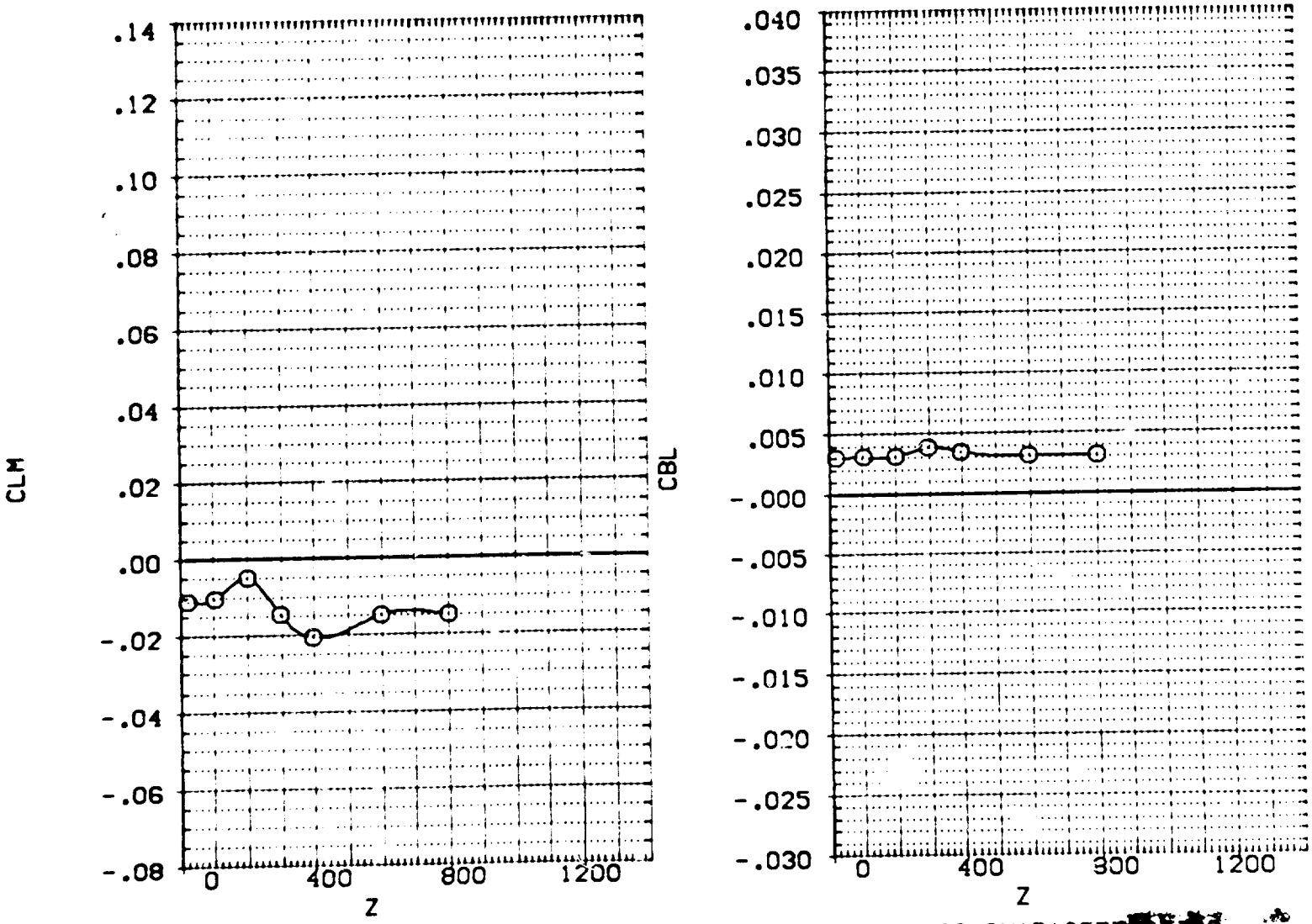


EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

!A!3.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ071)

SYMBOL	X	PARAMETRIC VALUES			
O	.191	MACH	4.500	PTOTAL	80.000
		ALPHA	-5.000	BETA	.000
		DALPHA	.000	DBETA	.000
		ELEVTR	.000	AILRON	10.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

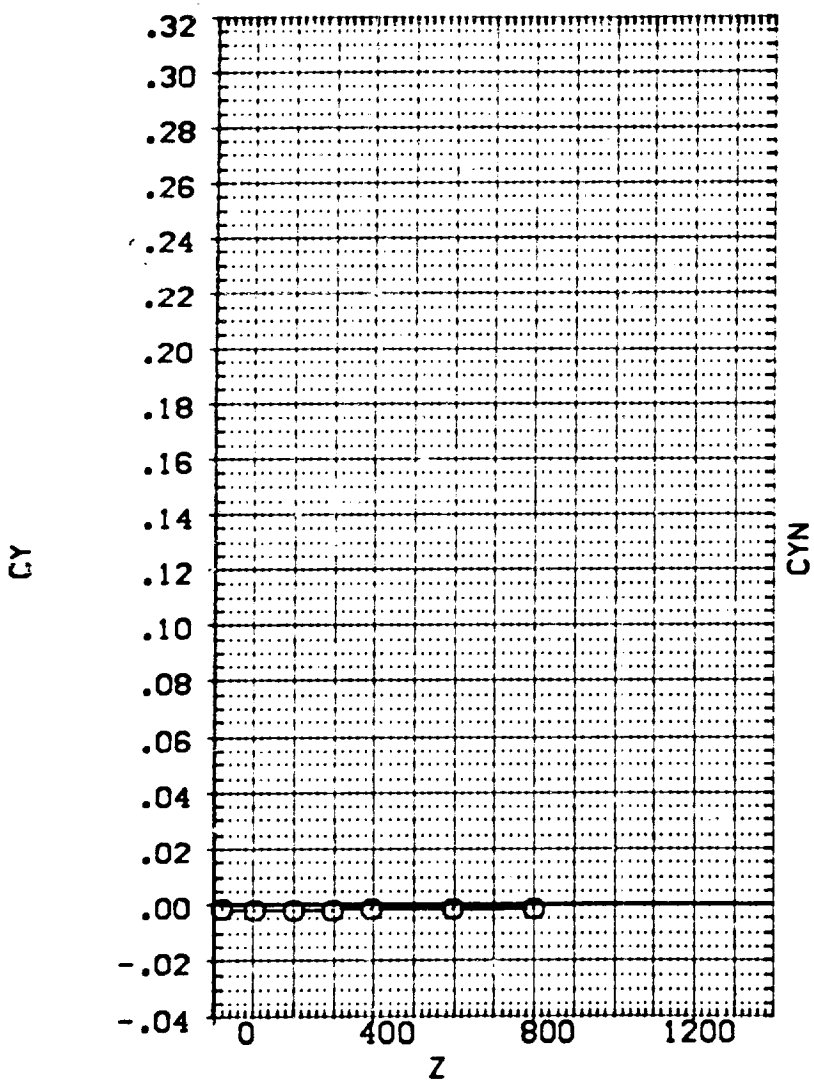


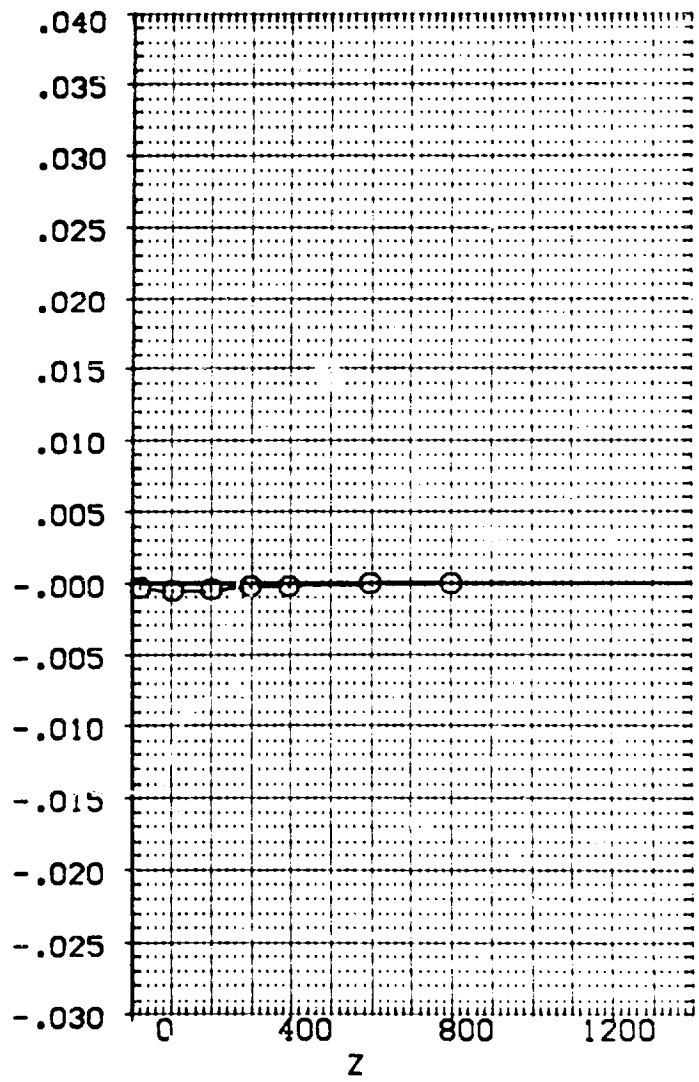
EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ071)

SYMBOL	X	PARAMETRIC VALUES			
O	.191	MACH	4.520	PTOTAL	80.000
		ALPHA	-5.000	BETA	.000
		DALPHA	.000	DBETA	.000
		ELEVTR	.000	AILRON	10.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



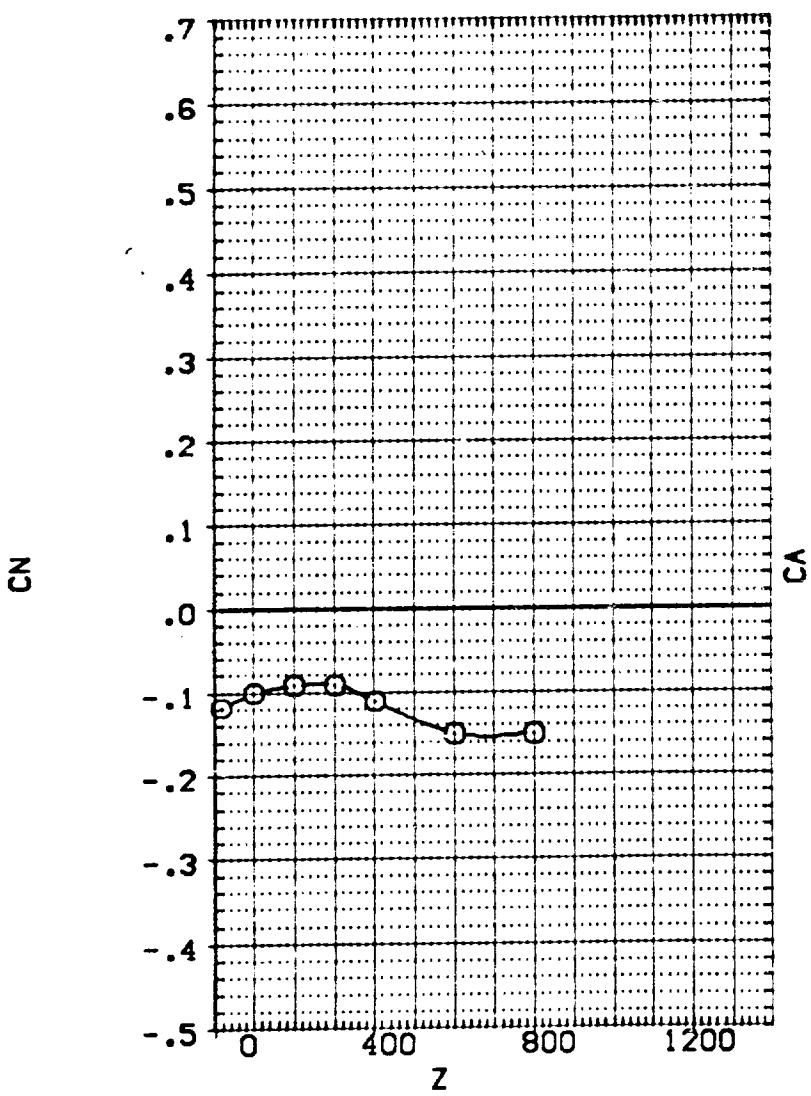


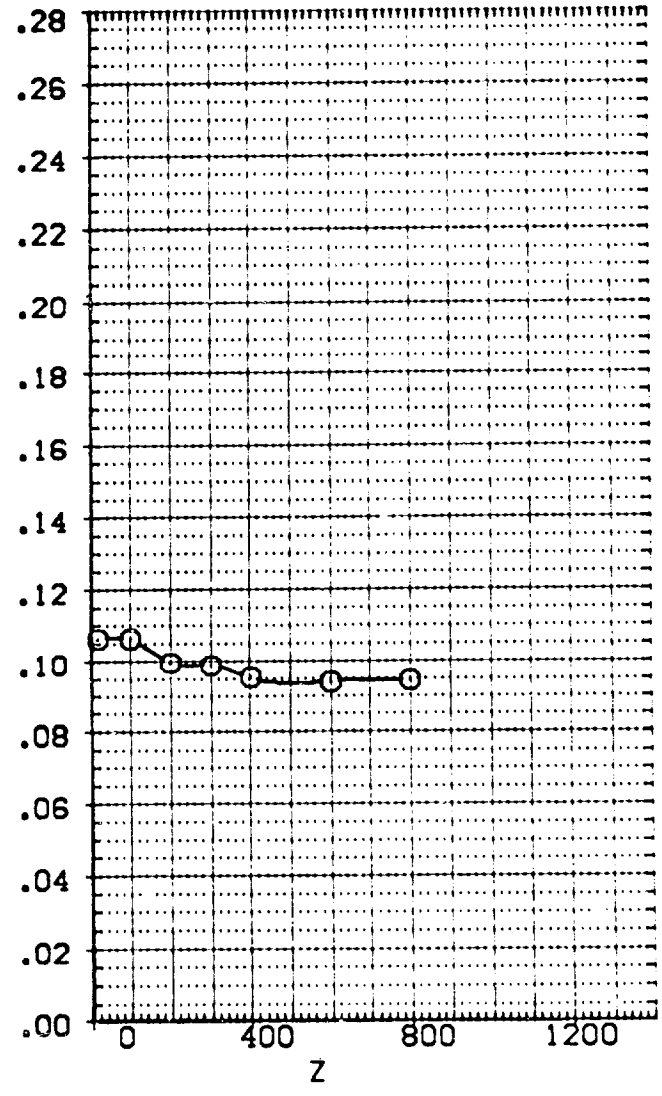
EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ072)

SYMBOL	X	PARAMETRIC VALUES			
O	.171	MACH	4.520	PTOTAL	80.700
		ALPHA	-5.000	BETA	.00
		DALPHA	.000	DBETA	.000
		ELEVTR	.000	AILRON	10.000
		Y	200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



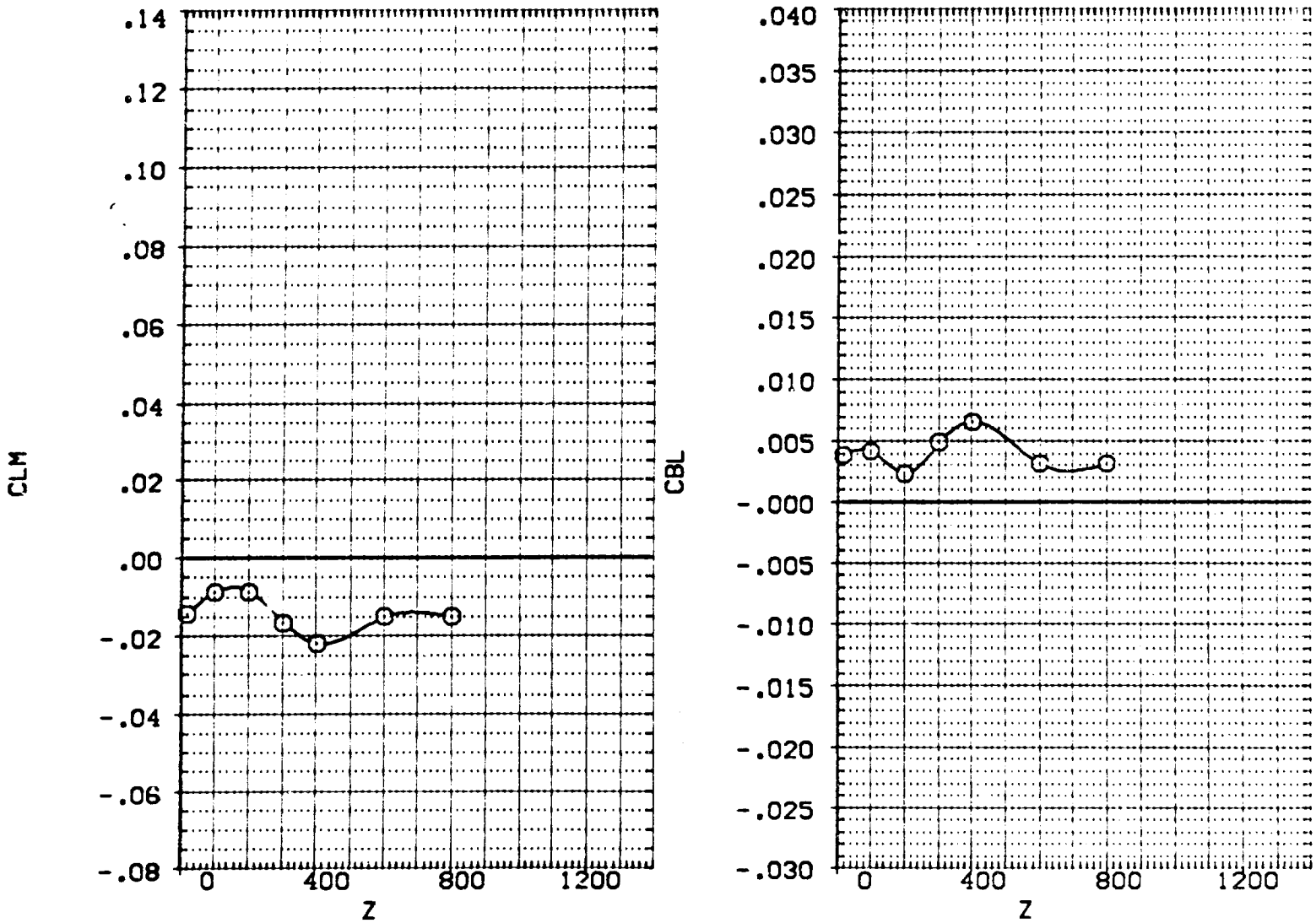


EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ072)

SYMBOL	X	PARAMETRIC VALUES			
○	.171	MACH	4.520	PTOTAL	80.000
		ALPHA	-5.000	BETA	.000
		DALPHA	.000	DBETA	.000
		ELEVTR	.000	AILRON	10.000
		Y	200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

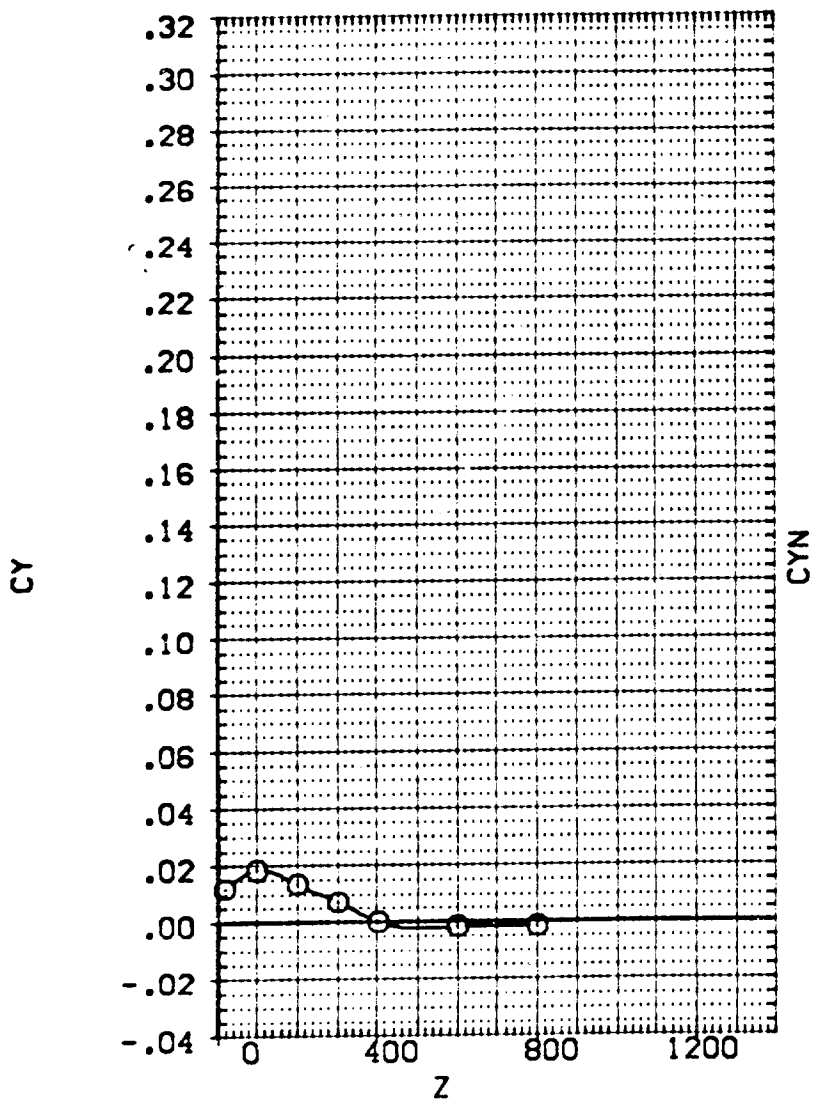


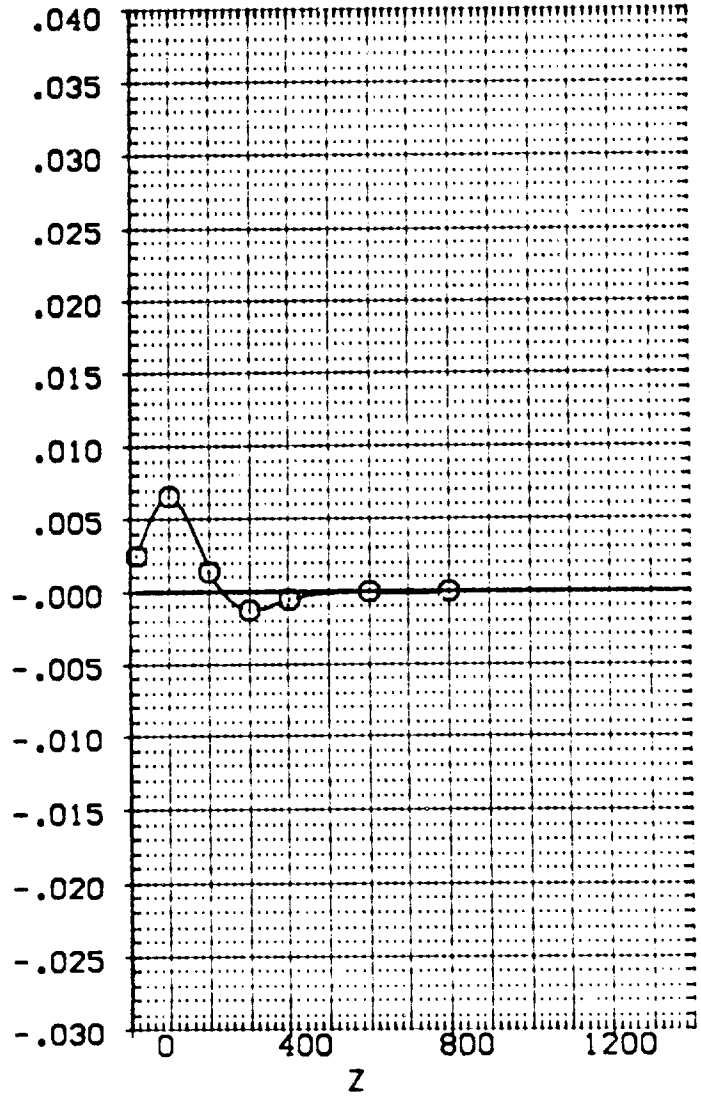
EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

IA:3.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ072)

SYMBOL	X	PARAMETRIC VALUES			
○	.171	MACH	4.520	PTOTAL	80.000
		ALPHA	-5.000	BETA	.000
		DALPHA	.000	DBETA	.000
		ELEVTR	.000	AILRON	10.000
		Y	200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



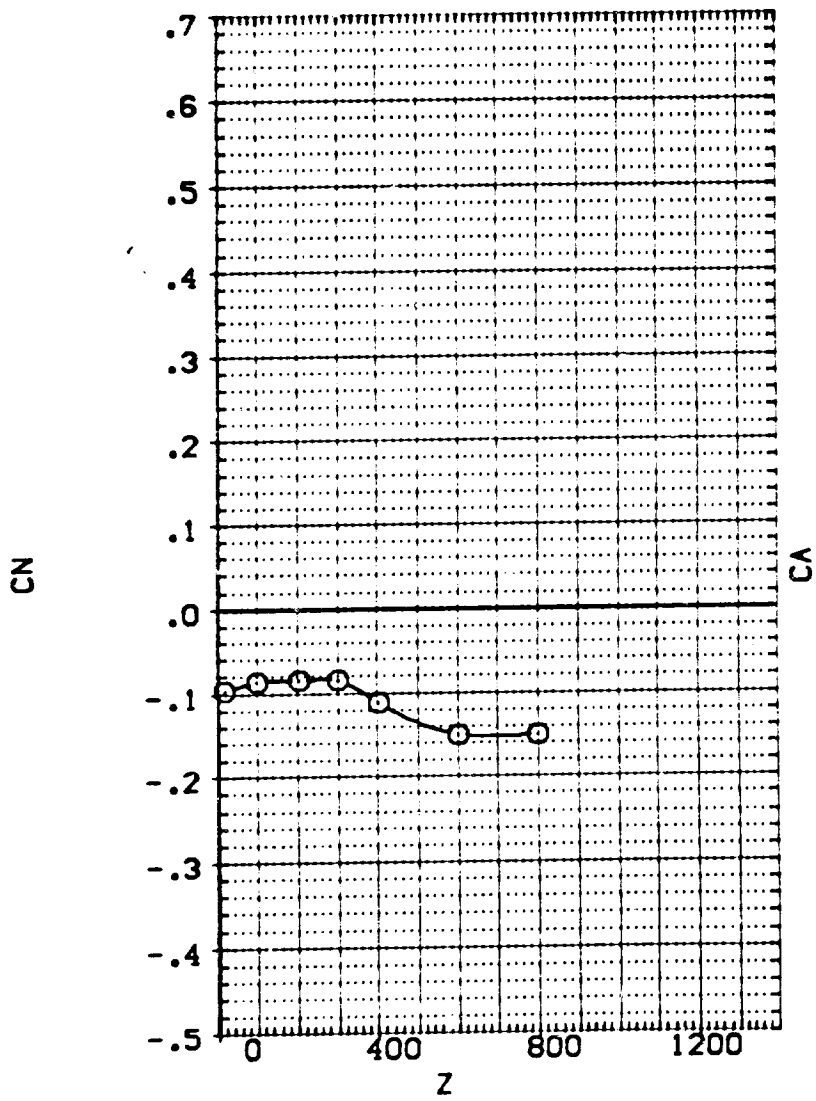


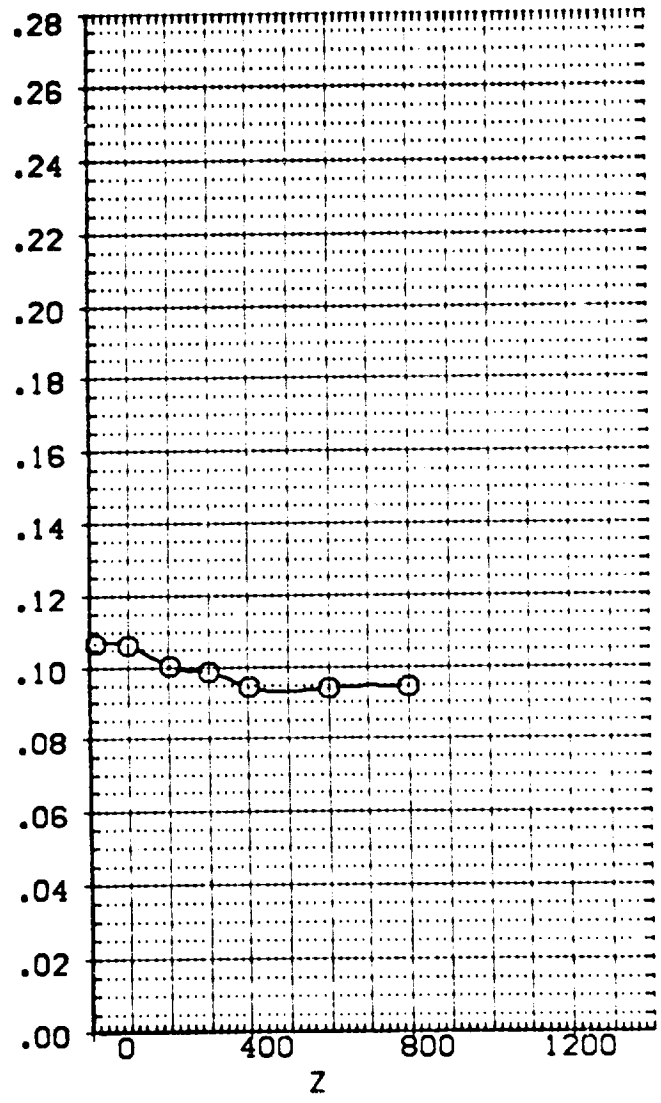
EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ073)

SYMBOL	X		PARAMETRIC VALUES		
O	.236	MACH	4.520	PTOTAL	80.000
		ALPHA	-5.000	BETA	.000
		DALPHA	.000	DBETA	-5.000
		ELEVTR	.000	AILRON	10.000
		Y	-200.000		

SEE THE ASSOCIATED DOCUMENT FOR REFE CHARACTERISTICS FOR INDIVIDUAL DATASETS



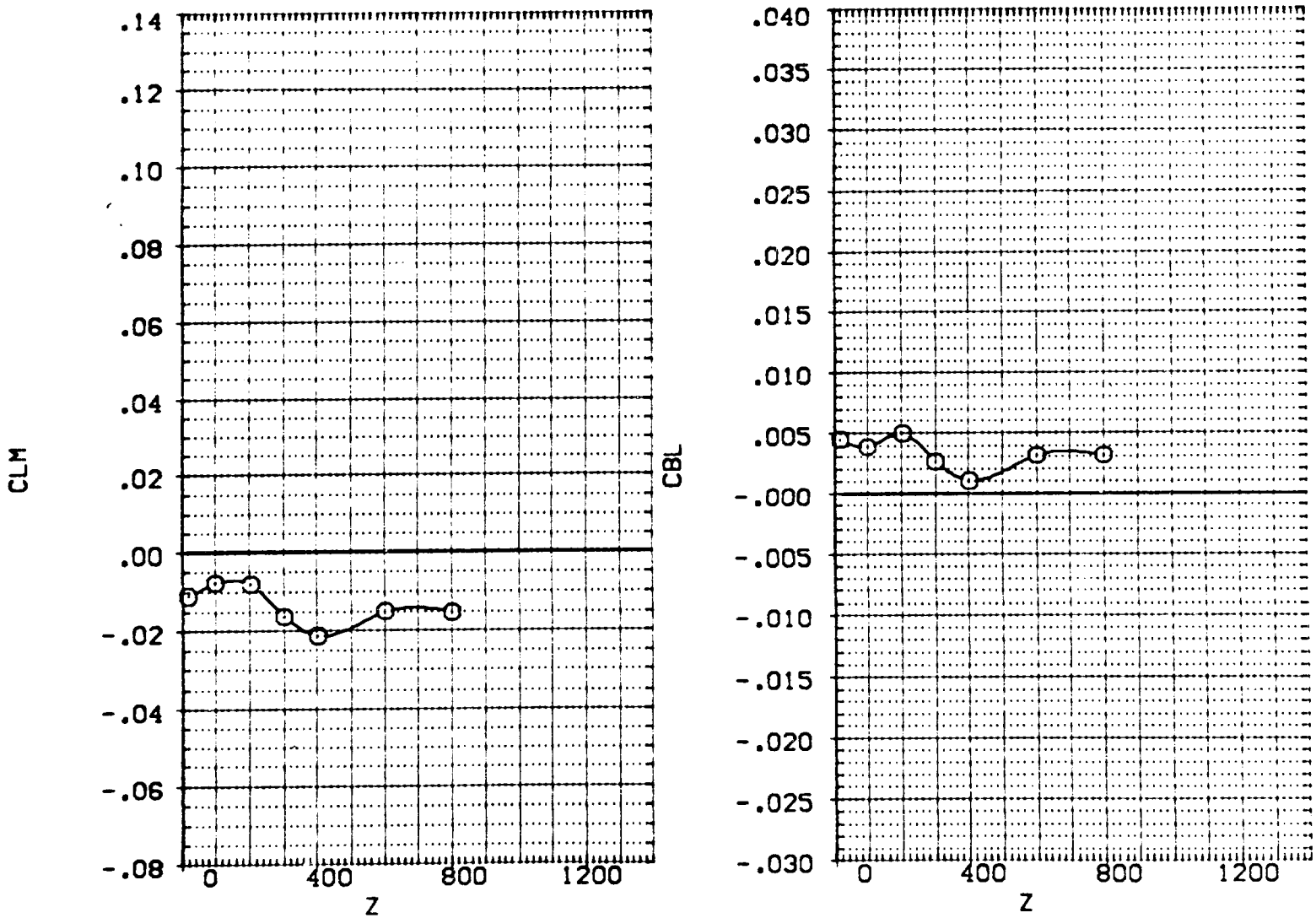


EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ073)

SYMBOL	X		PARAMETRIC VALUES		
O	.236	MACH	4.520	PTOTAL	80.000
		ALPHA	-5.000	BETA	.000
		DALPHA	.000	DBETA	-5.000
		ELEVTR	.000	AILRON	10.000
		Y	-200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

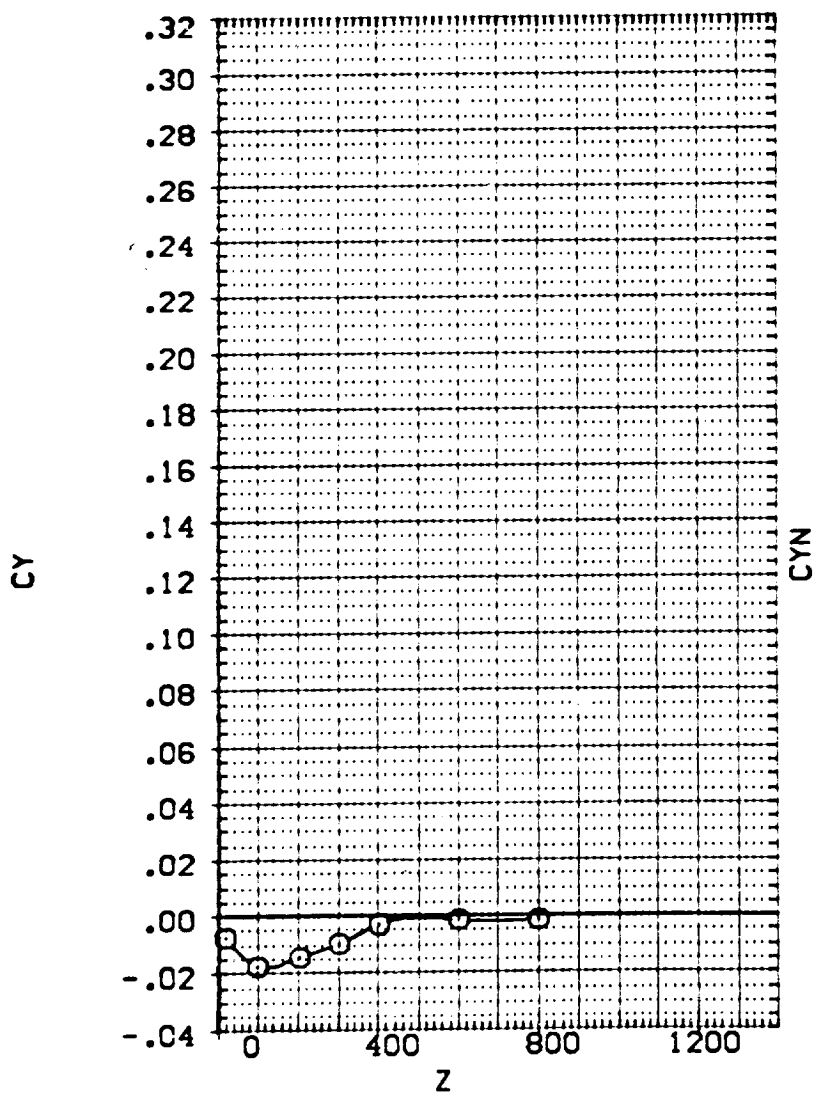


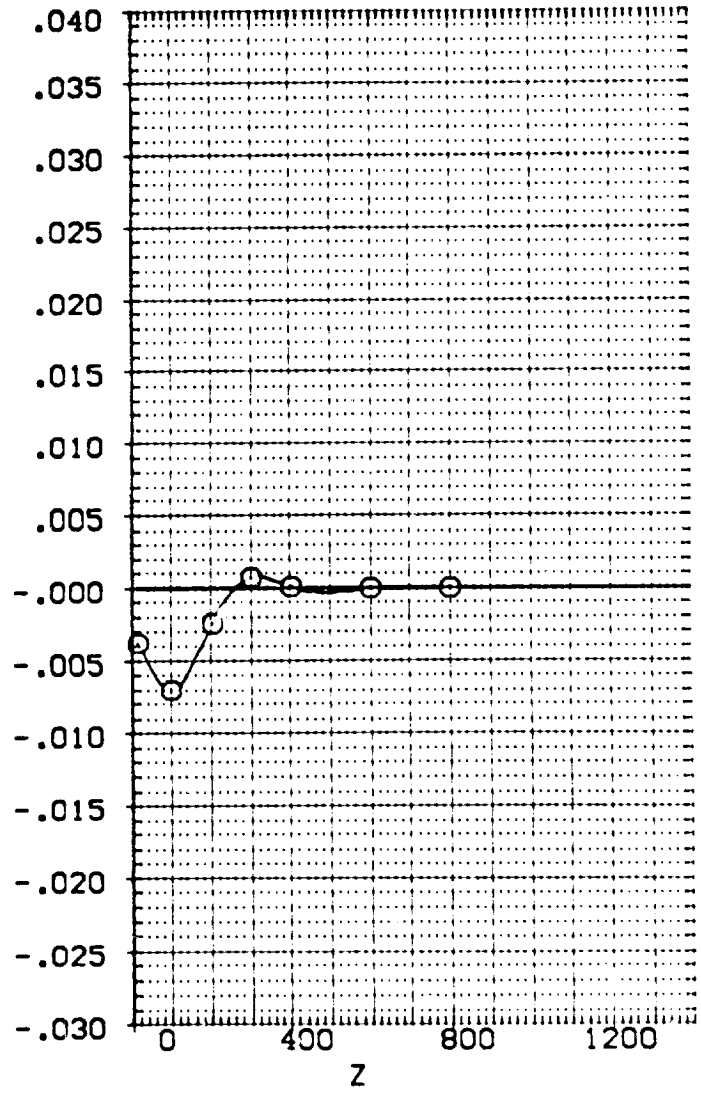
EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ073)

SYMBOL	X		PARAMETRIC VALUES		
O	.236	MACH	4.520	PTOTAL	80.000
		ALPHA	-5.000	BETA	.000
		DALPHA	.000	DBETA	-5.000
		ELEVTR	.000	AILRON	10.000
		Y	-200.000		

SEE THE ASSOCIATED D... DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



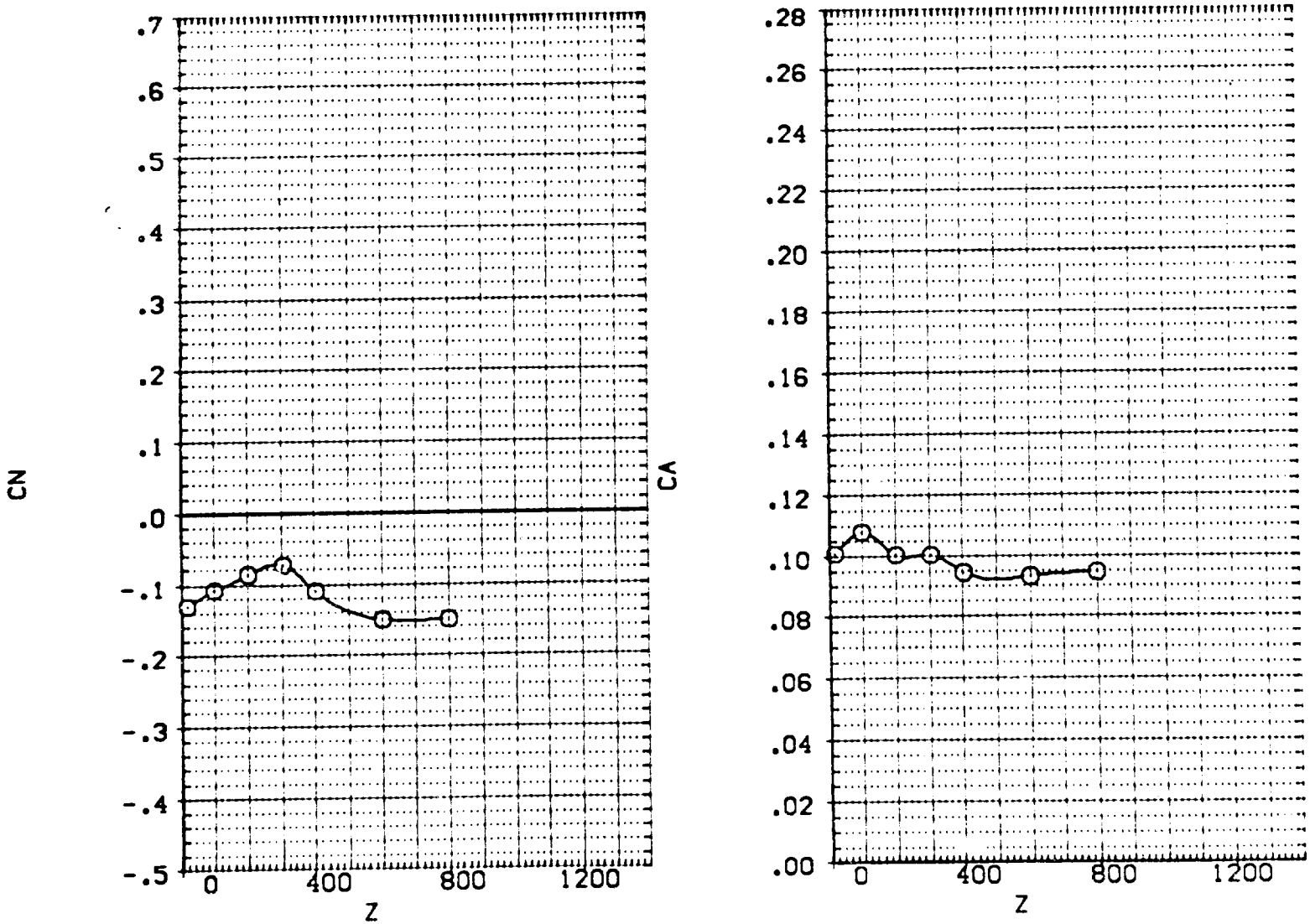


EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ074)

SYMBOL	X	PARAMETRIC VALUES			
O	.252	MACH	4.520	PTOTAL	80.000
		ALPHA	-5.000	BETA	.000
		DALPHA	.000	DBETA	5.000
		ELEVTR	.000	AILRON	10.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

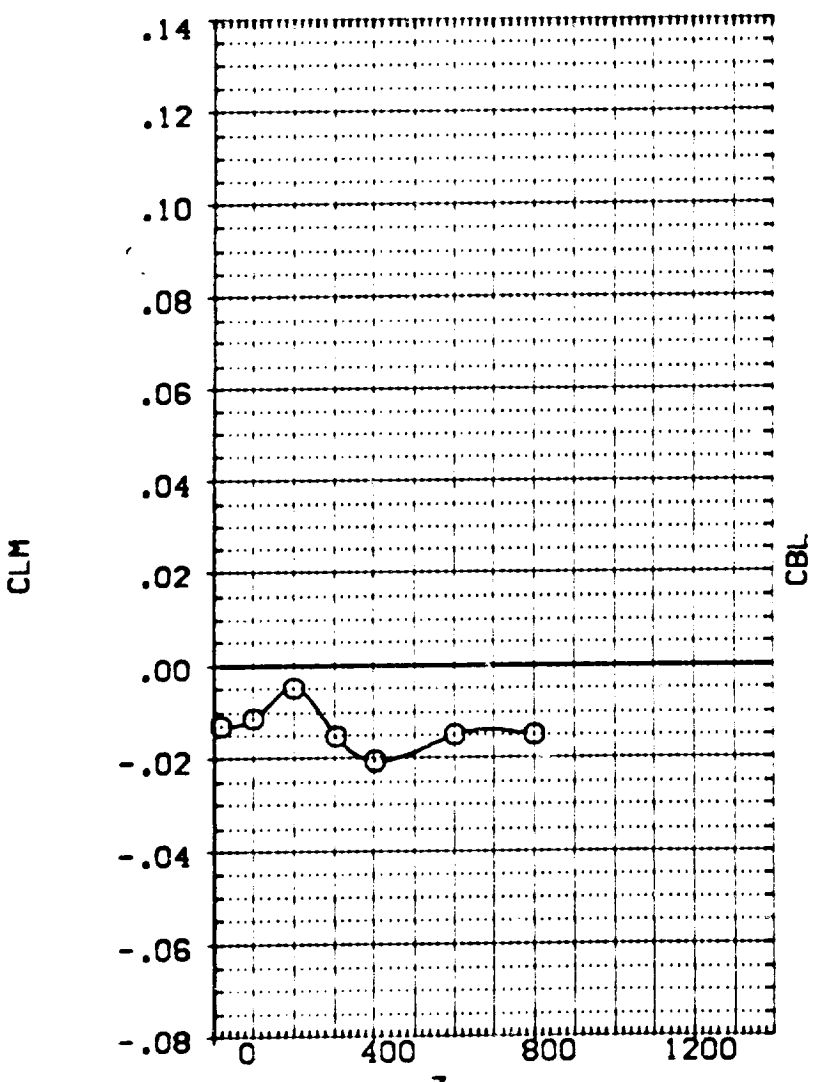


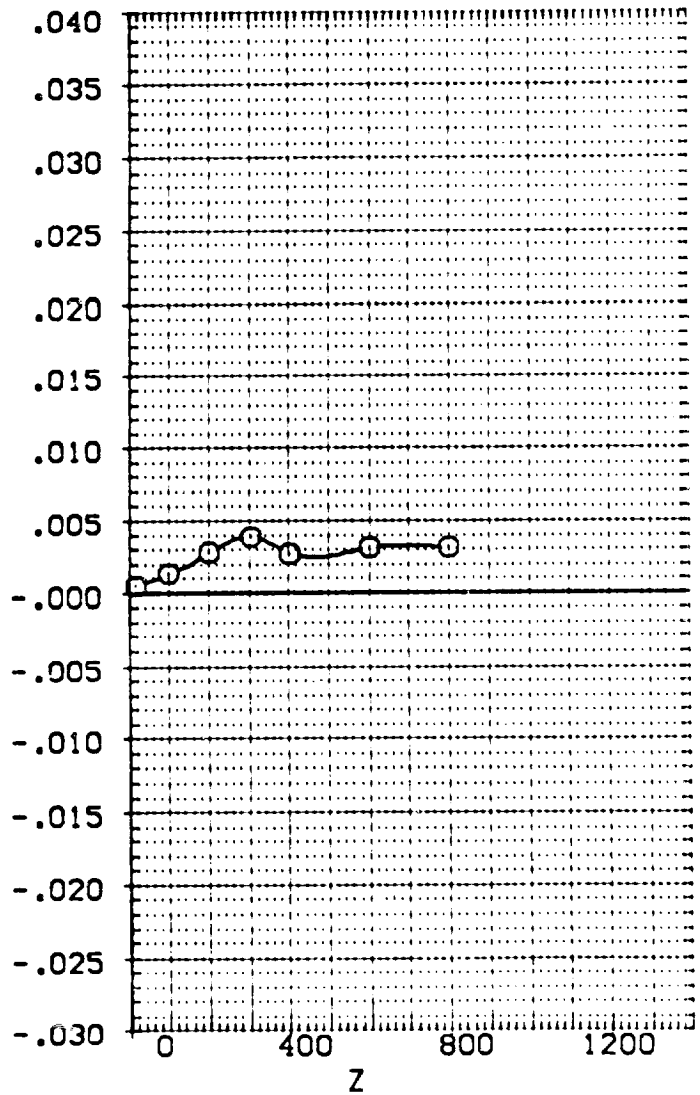
EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

!A13,EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ074)

SYMBOL	X	PARAMETRIC VALUES			
○	.252	MACH	4.520	PTOTAL	80.000
		ALPHA	-5.000	BETA	.000
		DALPHA	.000	DBETA	5.000
		ELEVTR	.000	AILRON	10.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



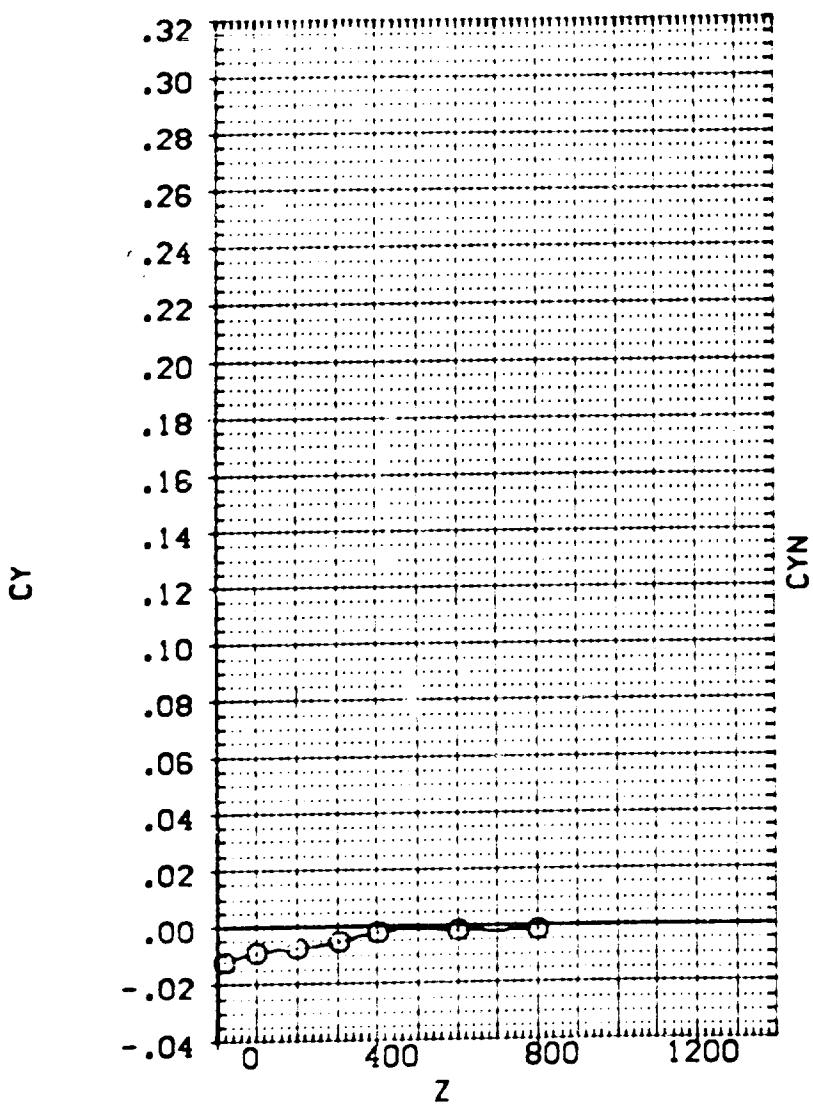


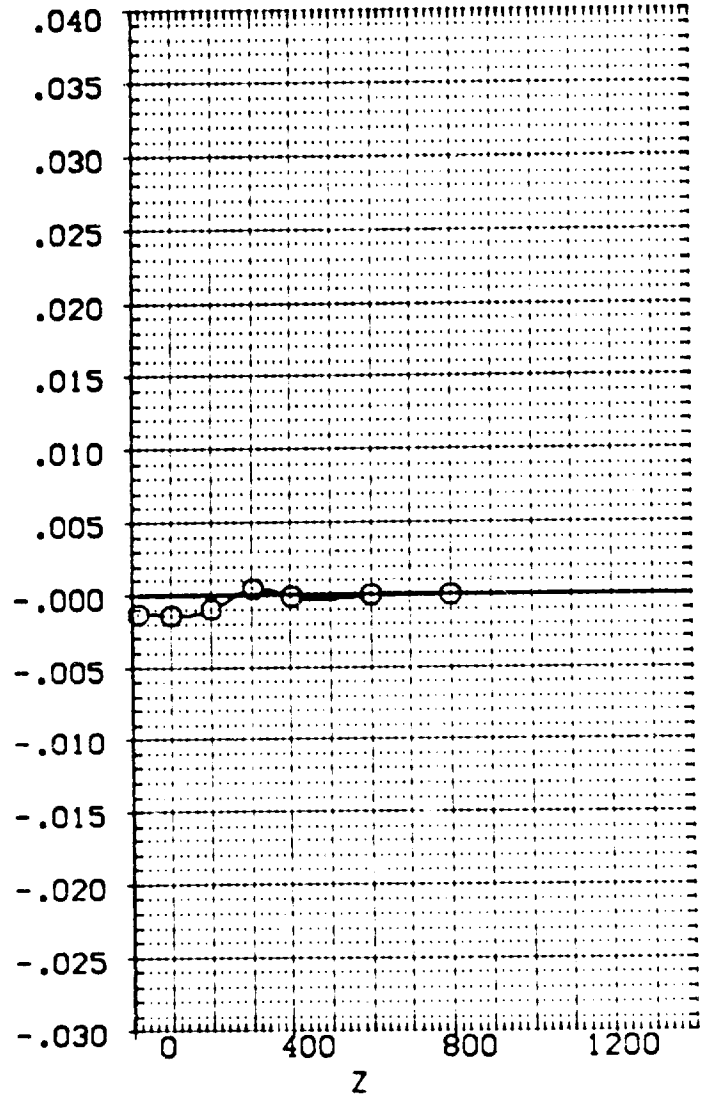
EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

!A13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ074)

SYMBOL	X	PARAMETRIC VALUES			
O	.252	MACH	4.520	PTOTAL	80.000
		ALPHA	-5.000	BETA	.000
		DA_PHA	.000	DBETA	5.000
		ELEVTR	.000	AILRON	10.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



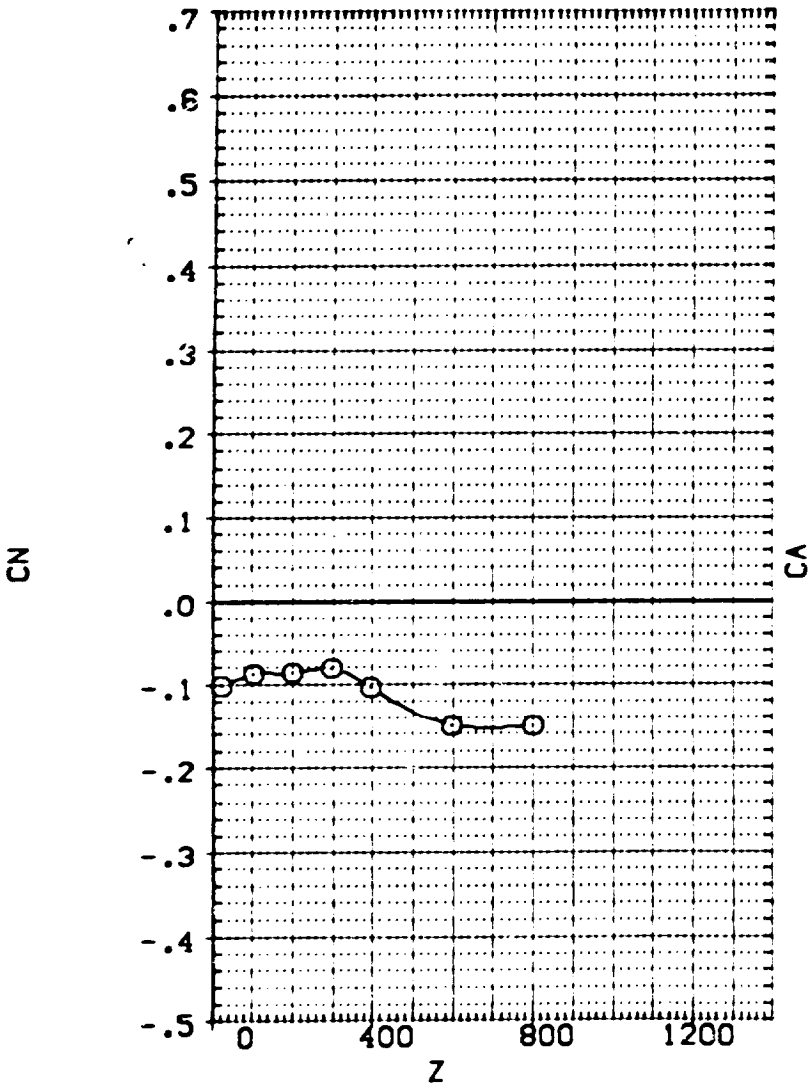


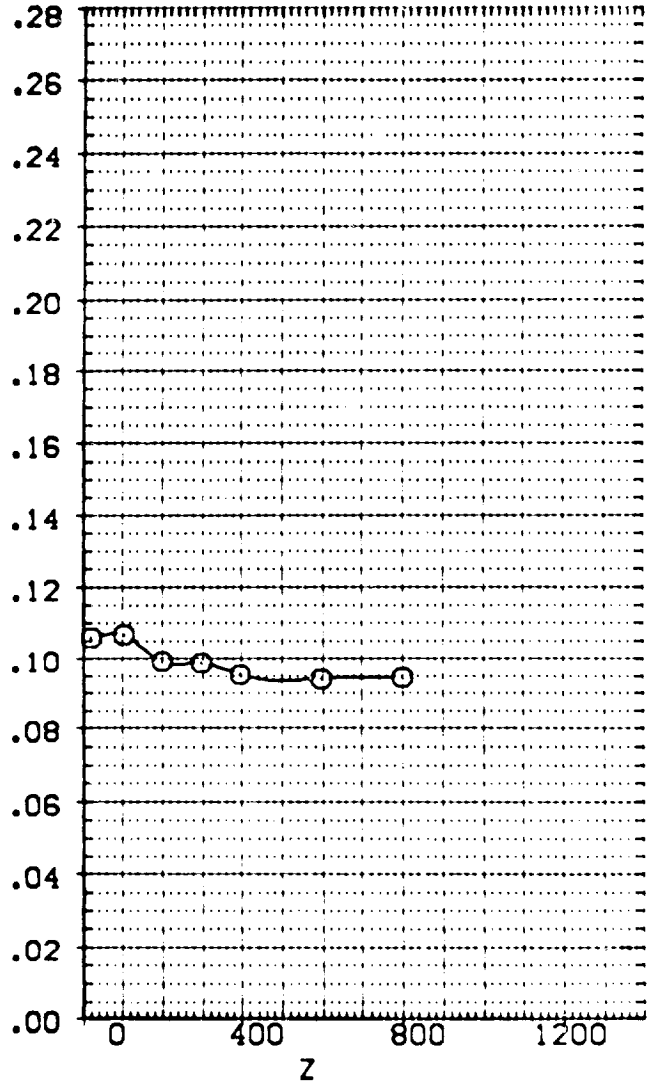
EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ075)

SYMBOL	X	PARAMETRIC VALUES			
O	.254	MACH	4.520	PTOTAL	80.000
		ALPHA	-5.000	BETA	.000
		DALPHA	.000	DBETA	5.000
		ELEVTR	.000	AILRON	10.000
		Y	200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



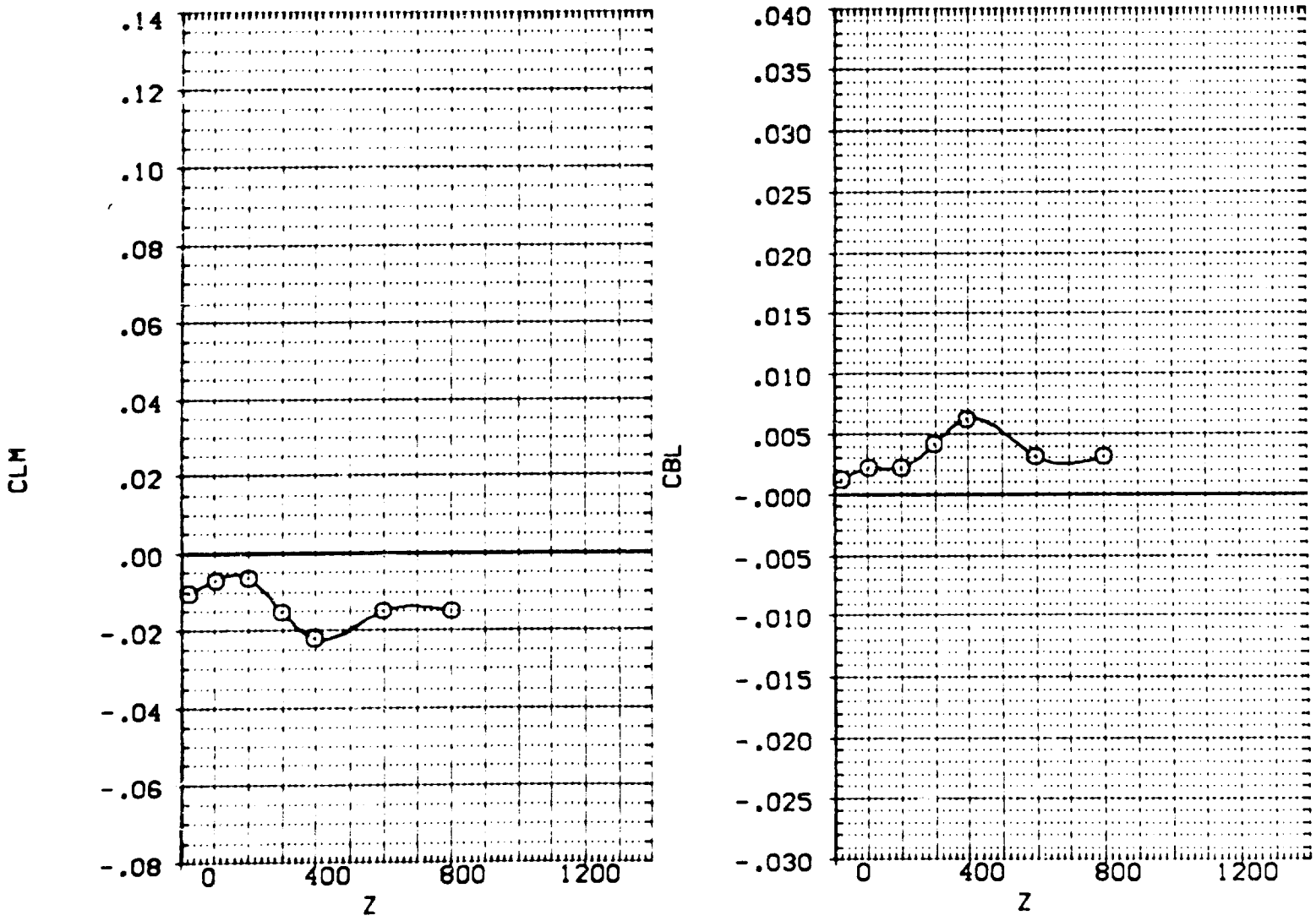


EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

!A13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ075)

SYMBOL	X	PARAMETRIC VALUES			
O	.254	MACH	4.520	PTOTAL	80.000
		ALPHA	-5.000	BETA	.000
		DALPHA	.000	DBETA	5.000
		ELEVTR	.000	AILRON	10.000
		Y	200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

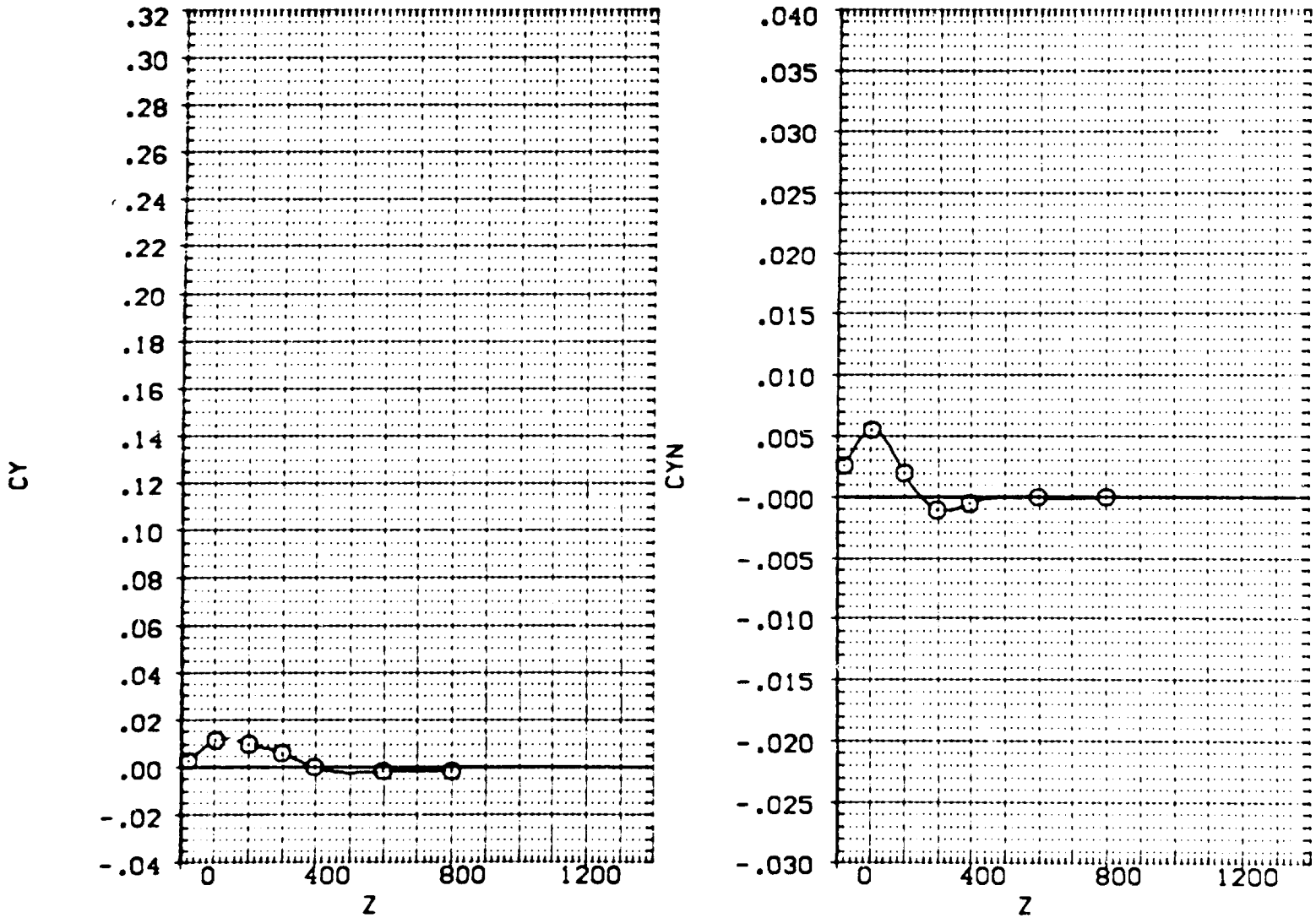


EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

[illegible]EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ075)

SYMBOL	X	PARAMETRIC VALUES			
○	.254	MACH	4.520	PTOTAL	80.000
		ALPHA	-5.000	BETA	.000
		DALPHA	.000	DBETA	5.000
		ELEVTR	.000	AILRON	10.000
		Y	200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

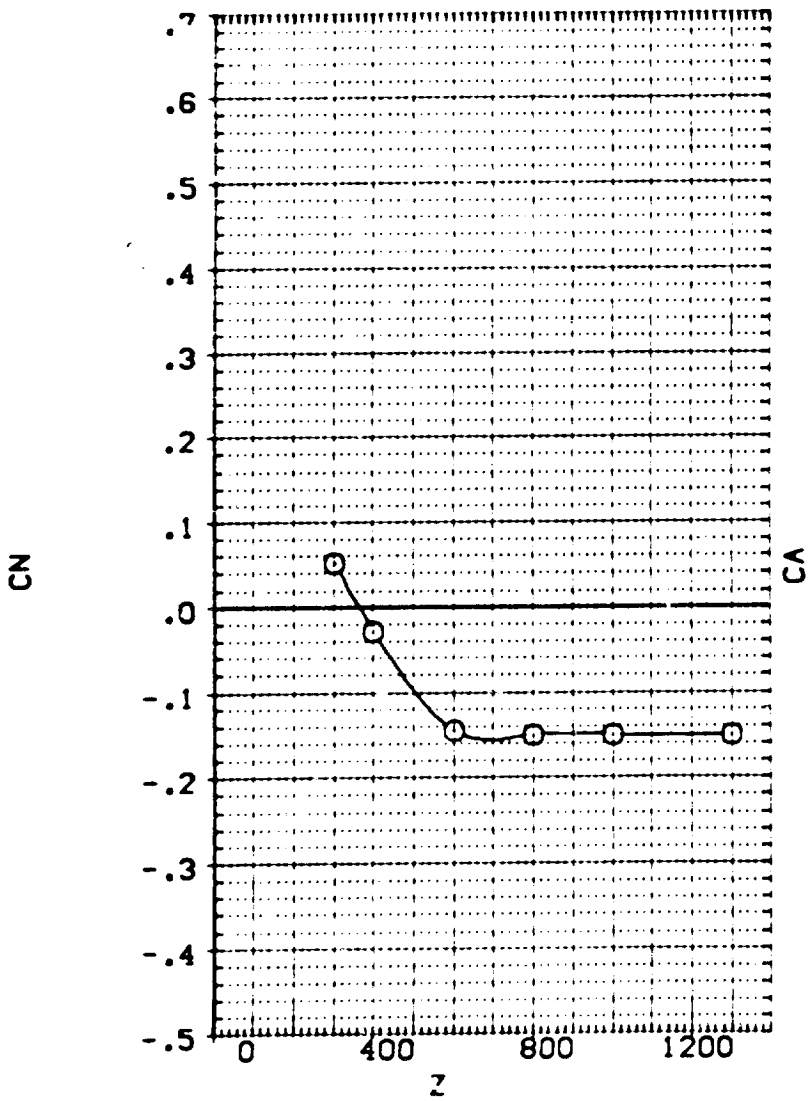


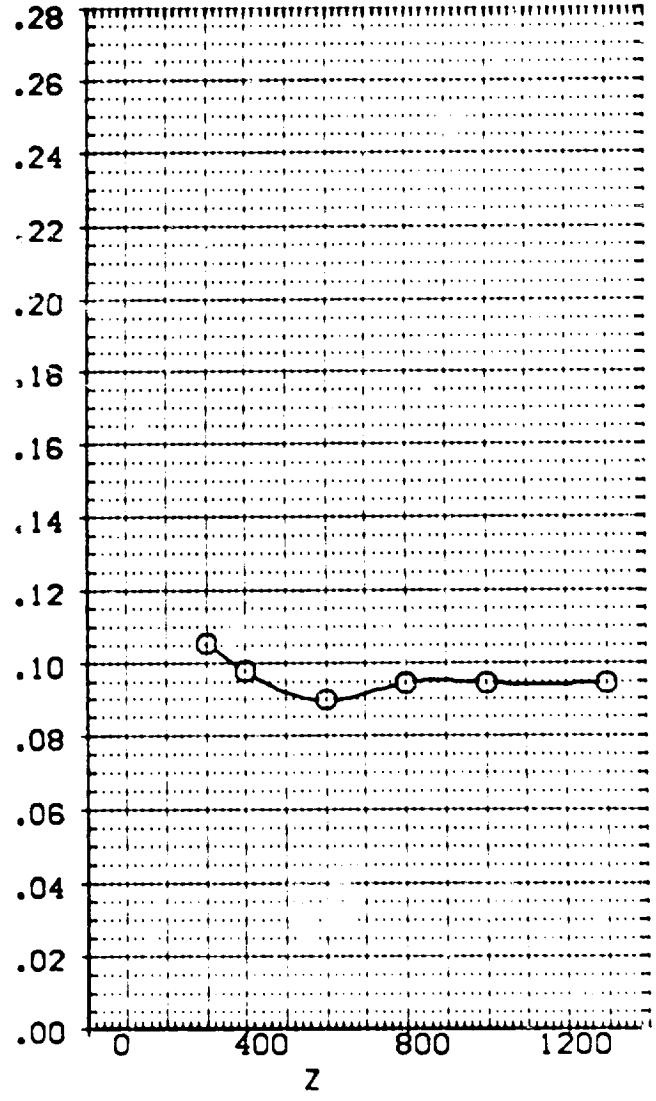
EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ076)

SYMBOL	X	PARAMETRIC VALUES			
○	.273	MACH	4.520	PTOTAL	80.000
		ALPHA	-5.000	BETA	.000
		DALPHA	-10.000	DBETA	.000
		ELEVTR	.000	AILRON	10.000
		Y	-200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



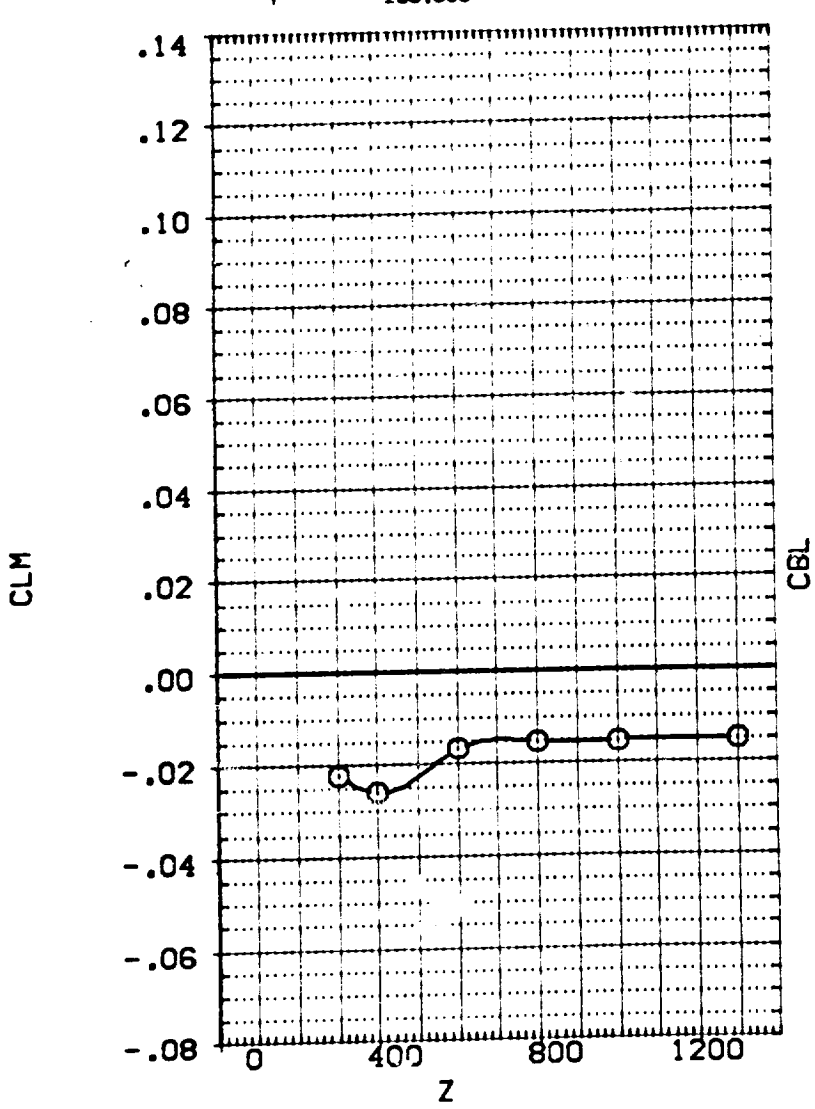


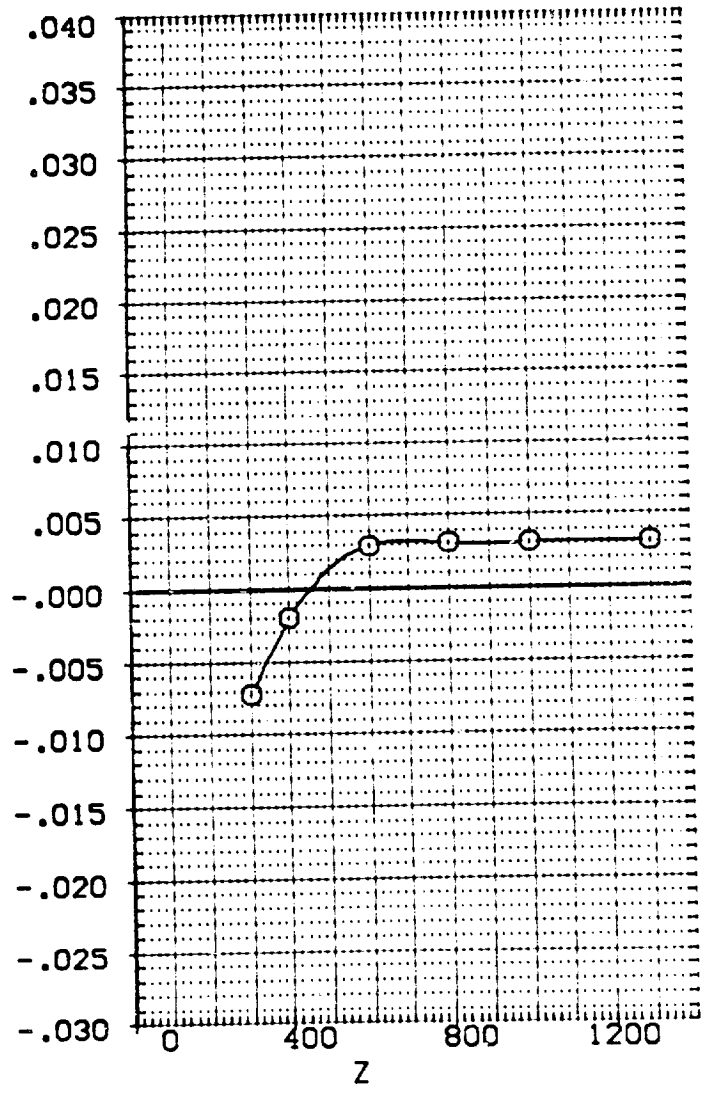
EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ076)

SYMBOL	X	PARAMETRIC VALUES			
O	.273	MACH	4.520	PTOTAL	80.000
		ALPHA	-5.000	BETA	.000
		DALPHA	-10.000	DBETA	.000
		ELEVTR	.000	AILRON	10.000
		Y	-200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



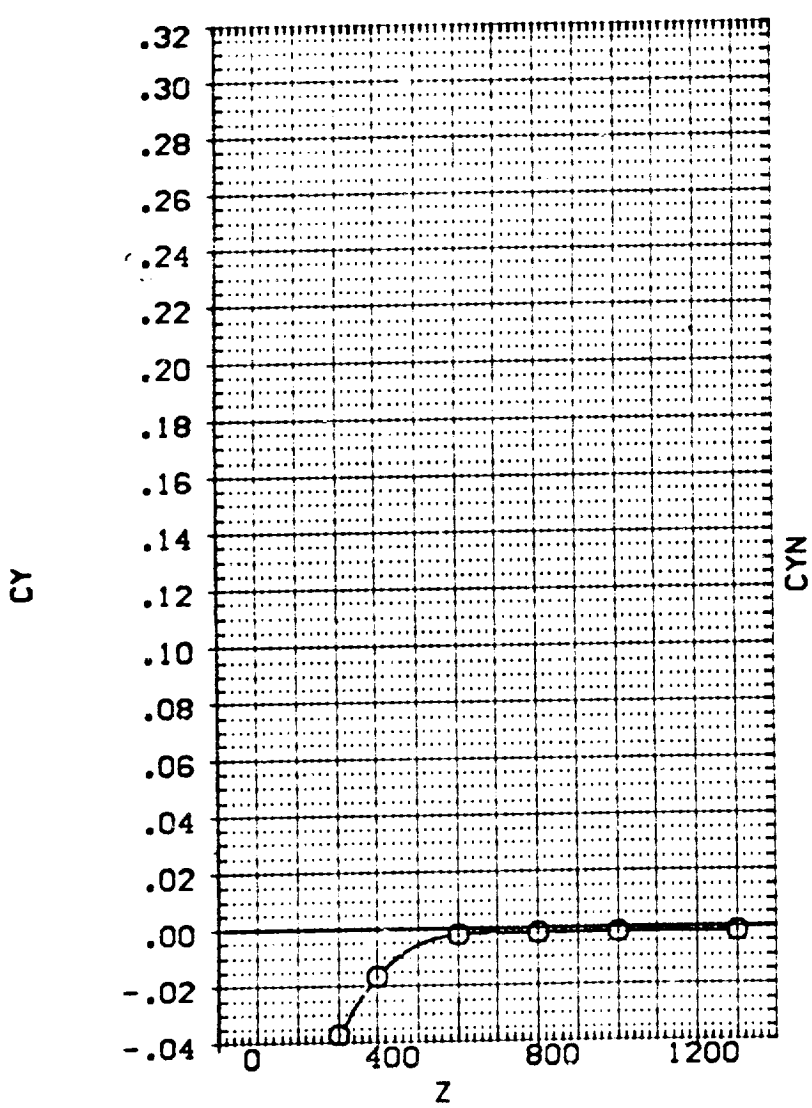


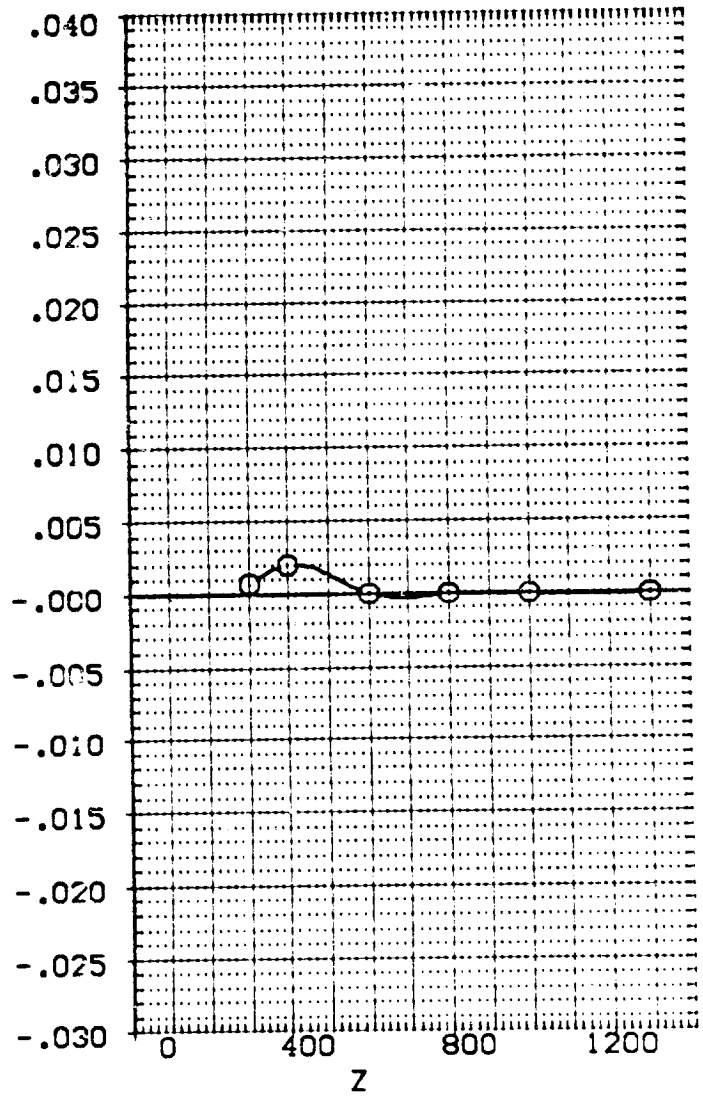
EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ076)

SYMBOL	X	PARAMETRIC VALUES			
O	.273	MACH	4.520	PTOTAL	80.000
		ALPHA	-5.000	BETA	.000
		DALPHA	-10.000	DBETA	.000
		ELEVTR	.000	AILRON	10.000
		Y	-200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



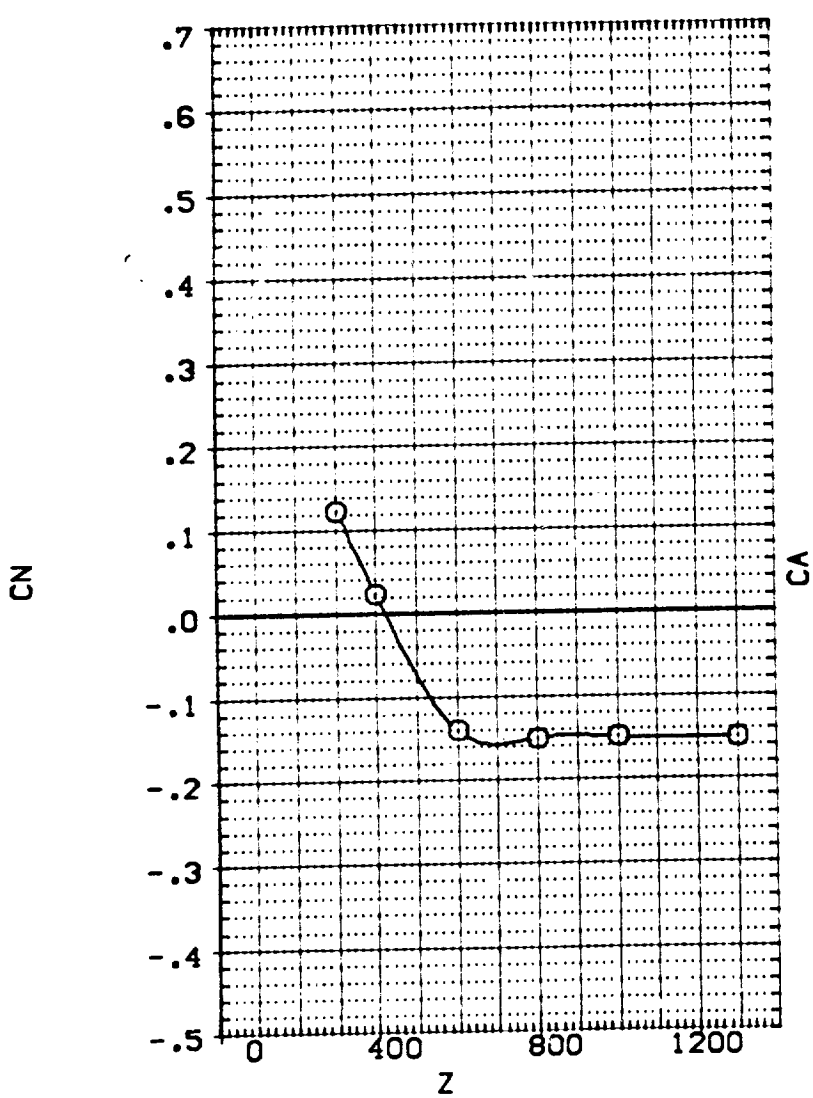


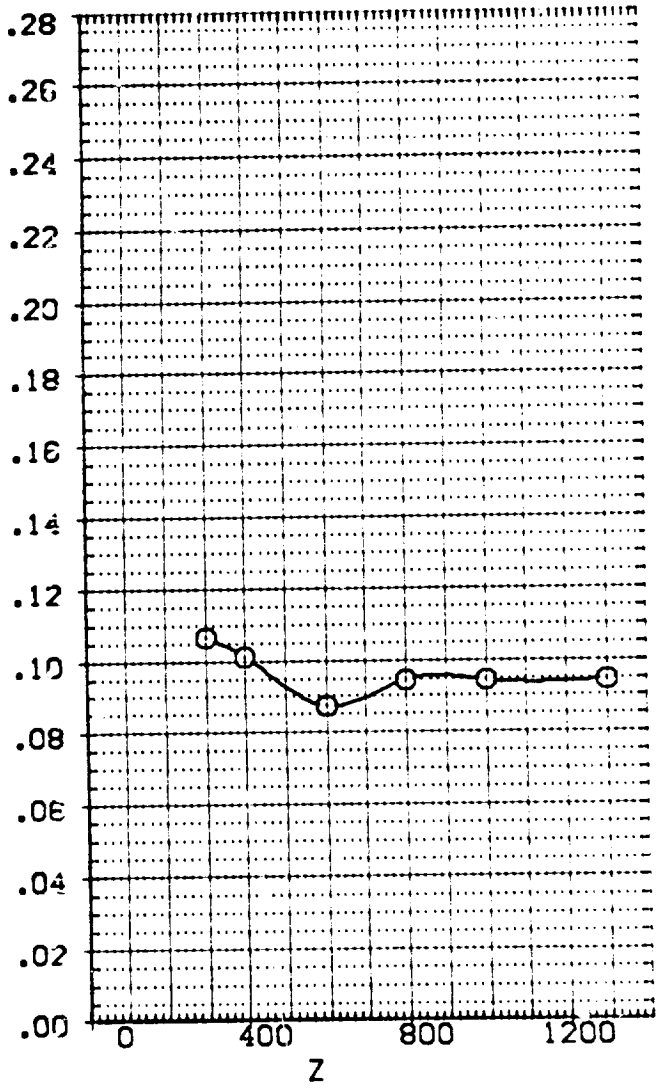
EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ077)

SYMBOL	X	PARAMETRIC VALUES			
O	.253	MACH	4.520	PTOTAL	80.000
		ALPHA	-5.000	BETA	.000
		DALPHA	-10.000	DBETA	.000
		ELEVTR	.000	AILRON	10.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



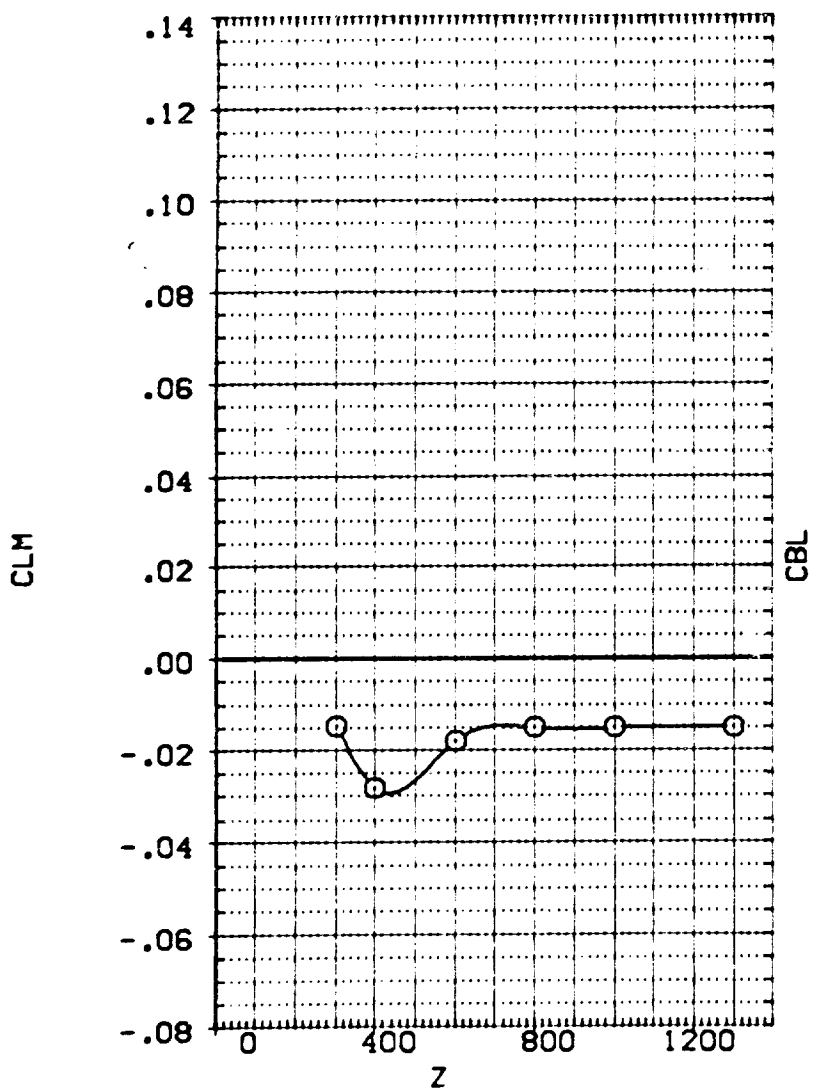


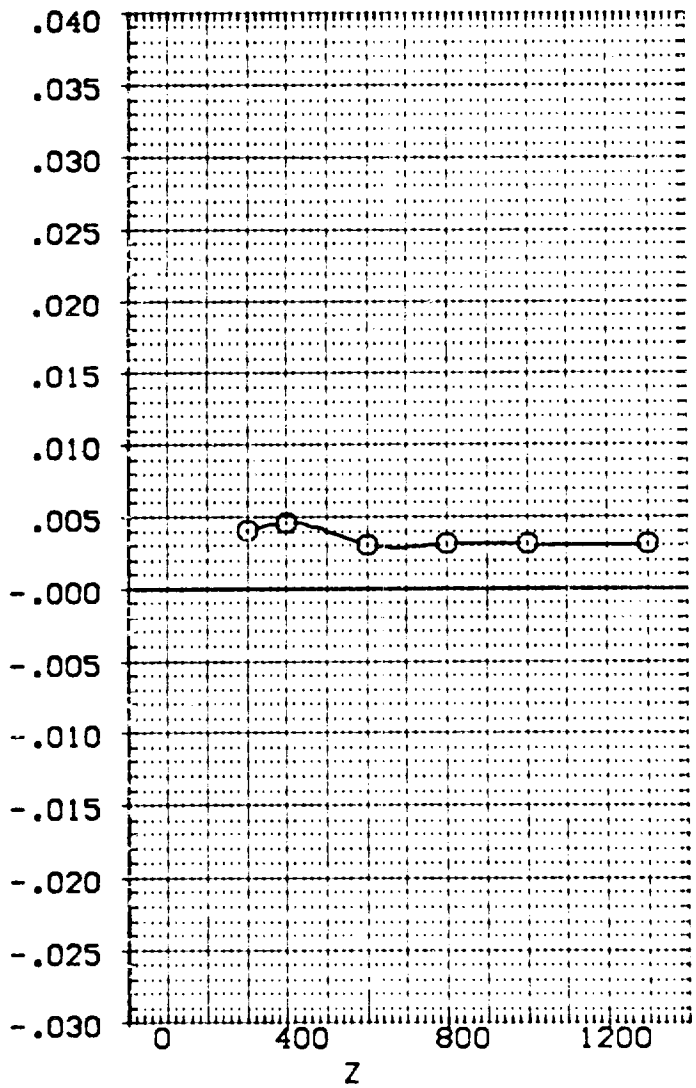
EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ077)

SYMBOL	X		PARAMETRIC VALUES		
○	.253	MACH	4.520	PTOTAL	80.000
		ALPHA	-5.000	BETA	.000
		DALPHA	-10.000	DBETA	.000
		ELEVTR	.000	AILRON	10.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



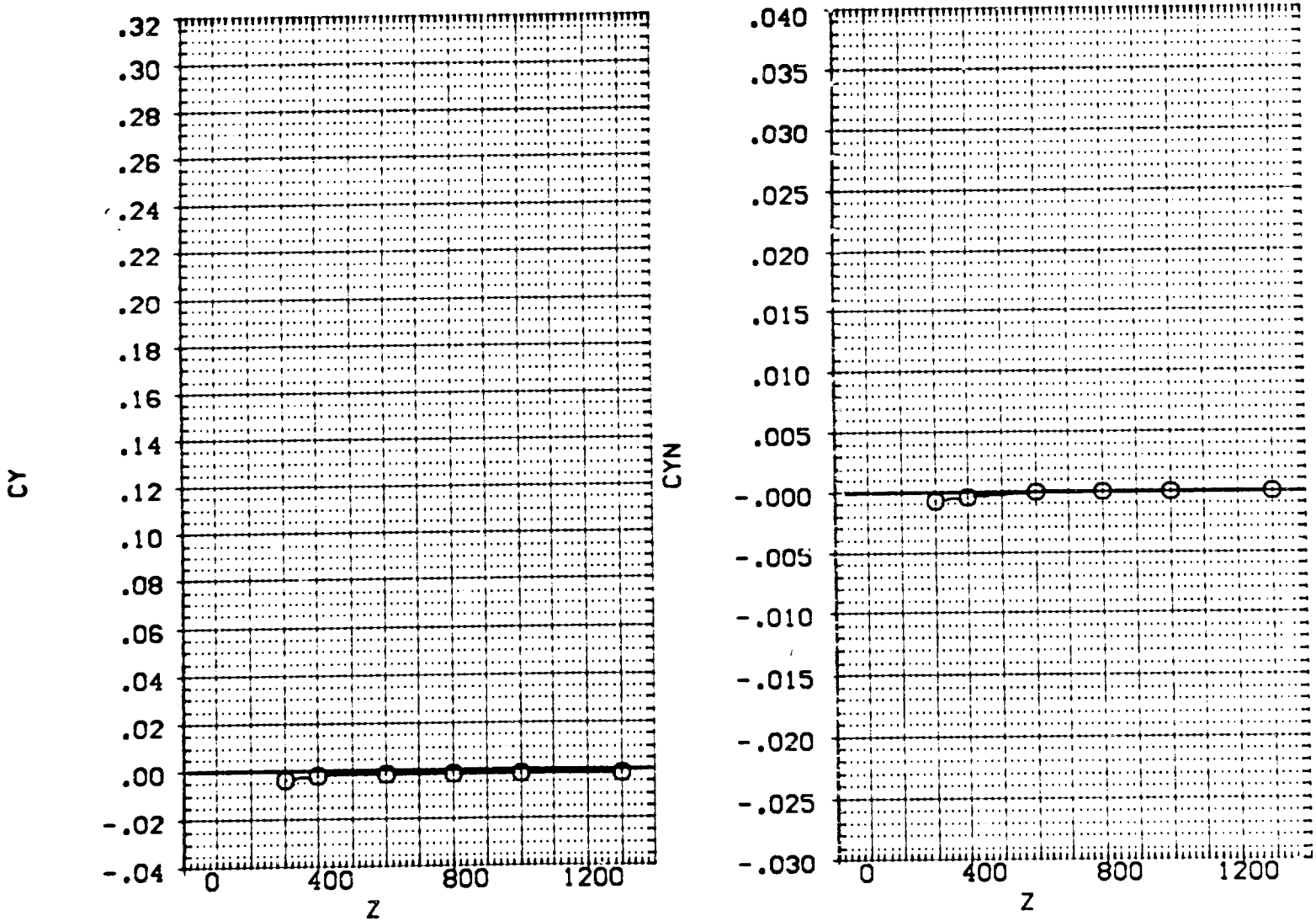


EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ077)

SYMBOL	X	PARAMETRIC VALUES			
C	.253	MACH	4.520	PTOTAL	80.000
		ALPHA	-5.000	BETA	.000
		DALPHA	-10.000	DBETA	.000
		ELEVTR	.000	AILRON	10.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

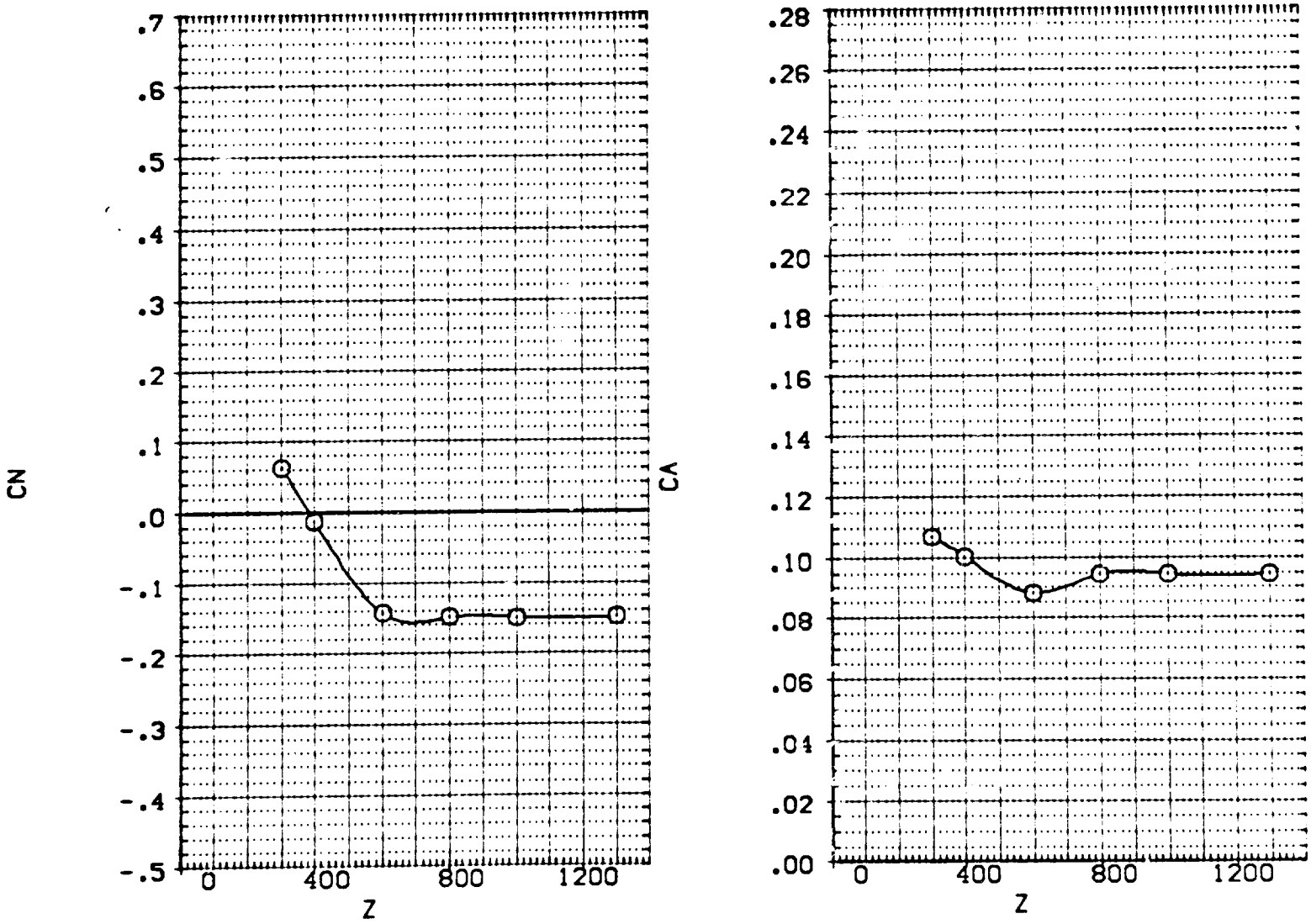


EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ078)

SYMBOL	X		PARAMETRIC VALUES		
○	.219	MACH	4.520	PTOTAL	80.000
		ALPHA	-5.000	BETA	.000
		DALPHA	-10.000	DBETA	.000
		ELEVTR	.000	AILRON	10.000
		Y	200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

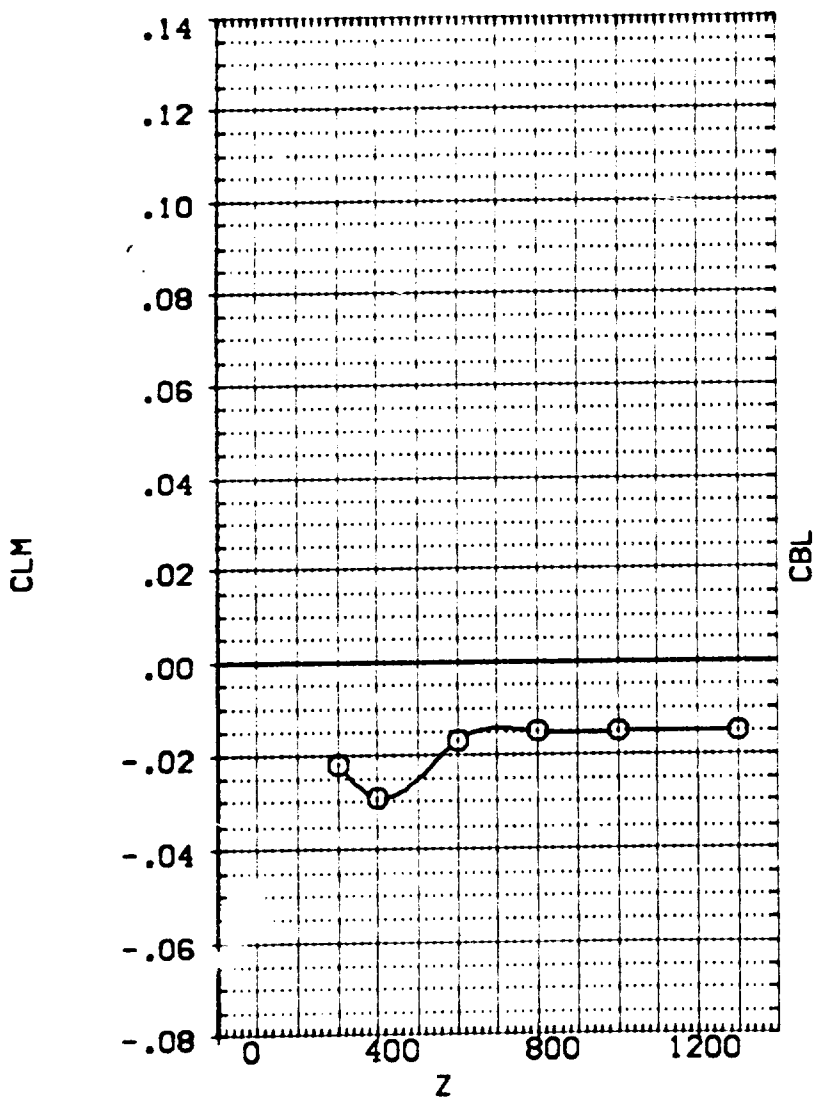


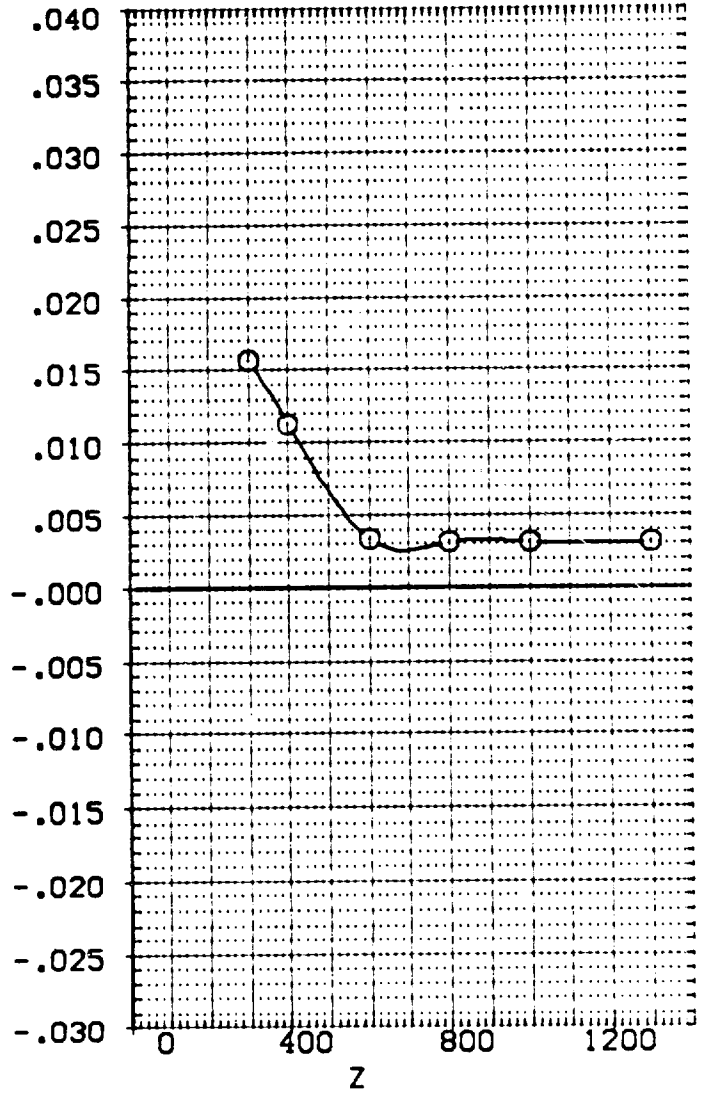
EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ078)

SYMBOL	X	PARAMETRIC VALUES			
O	.219	MACH	4.520	PTOTAL	80.000
		ALPHA	-5.000	BETA	.000
		DALPHA	-10.000	DBETA	.000
		ELEVTR	.000	AILRON	10.000
		Y	200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



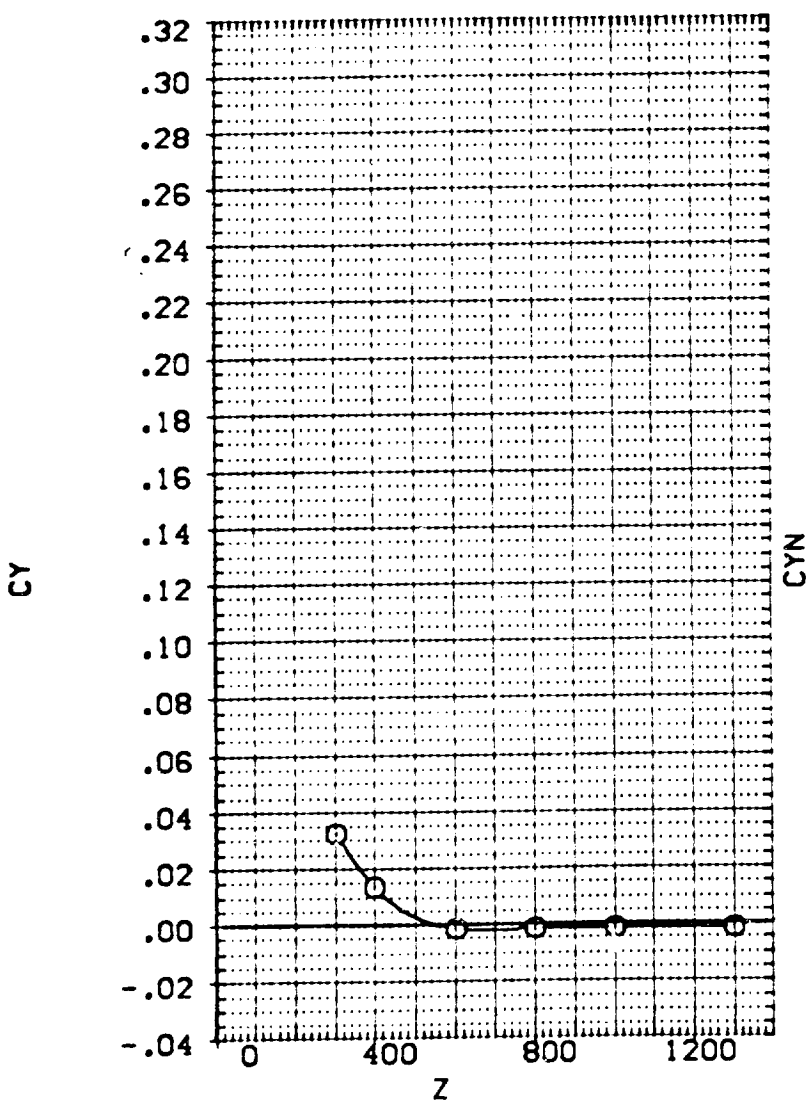


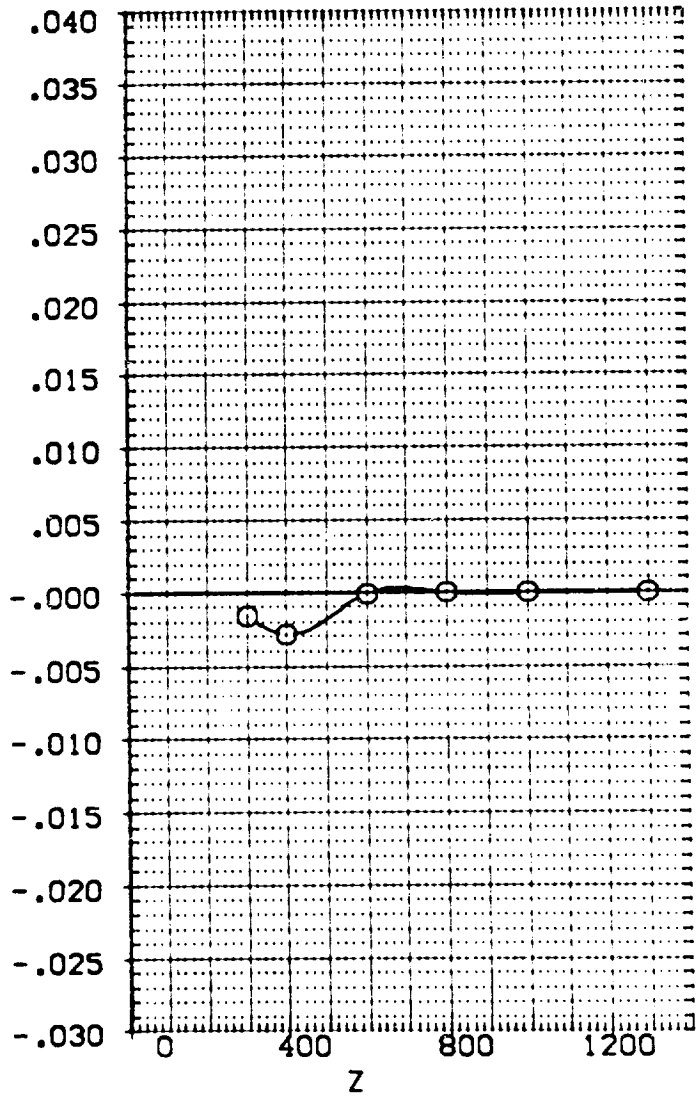
EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ078)

SYMBOL	X	PARAMETRIC VALUES			
○	.219	MACH	4.520	PTOTAL	80.000
		ALPHA	-5.000	BETA	.000
		DALPHA	-10.000	DBETA	.000
		ELEVTR	.000	AILRON	10.000
		Y	200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



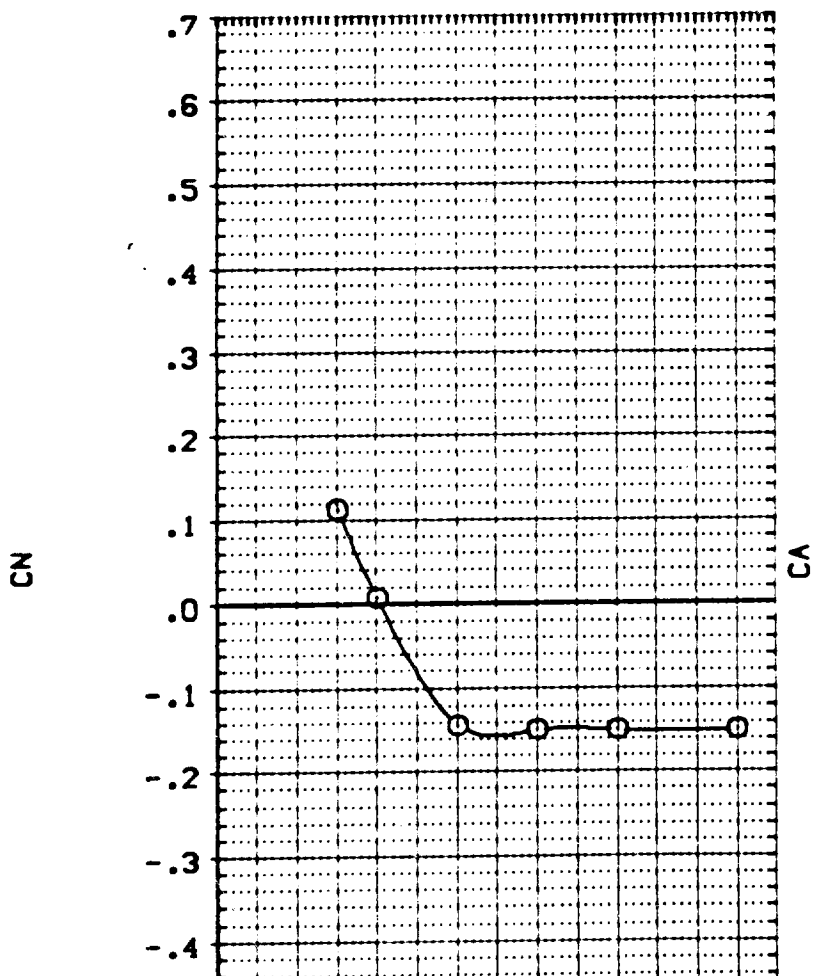


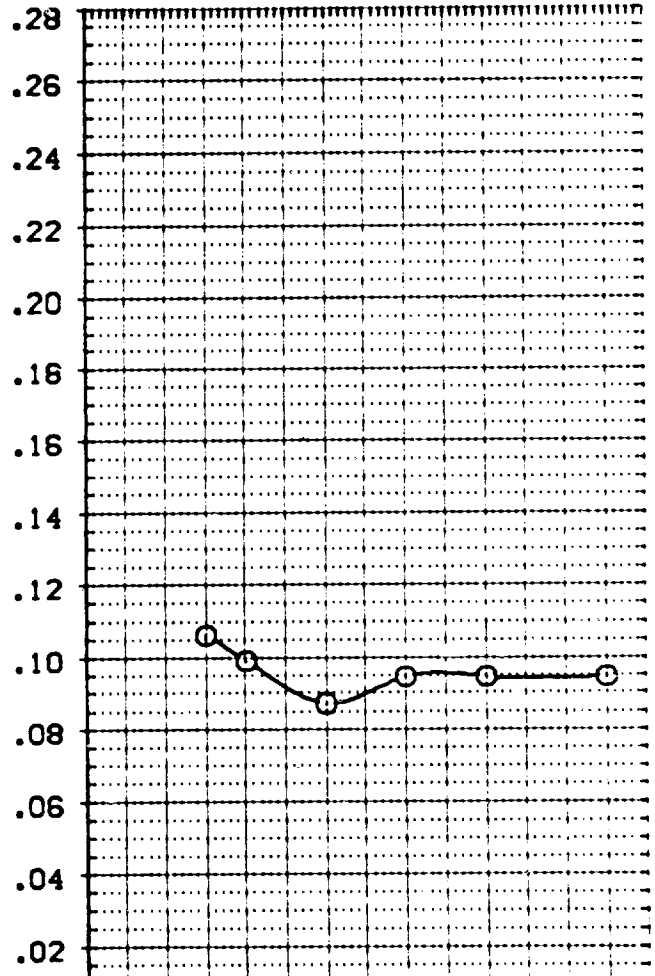
EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ079)

SYMBOL	X	PARAMETRIC VALUES			
O	.255	MACH	4.520	PTOTAL	80.000
		ALPHA	-5.000	BETA	.000
		DALPHA	-10.000	DBETA	-5.000
		ELEVTR	.000	AILRON	10.000
		Y	-200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



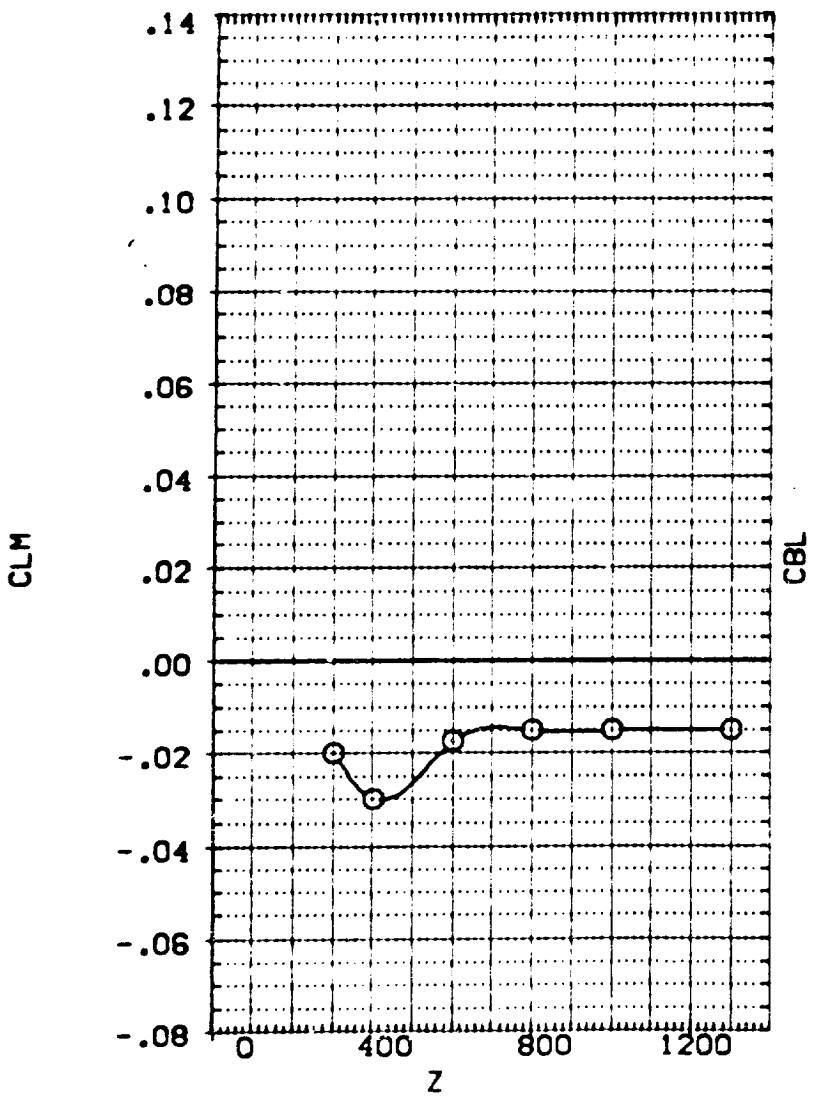


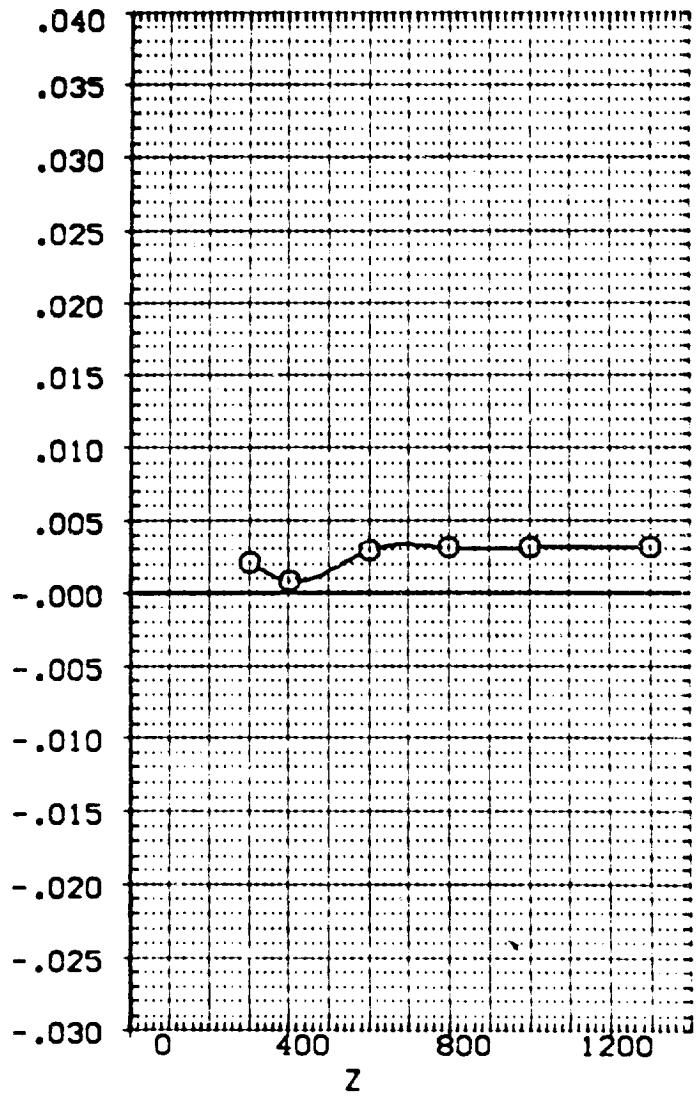
EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

IA13 EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ079)

SYMBOL	X		PARAMETRIC VALUES		
O	.255	MACH	4.520	PTOTAL	80.000
		ALPHA	-5.000	BETA	.000
		DALPHA	-10.000	DBETA	-5.000
		ELEVTR	.000	AILRON	10.000
		Y	-200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



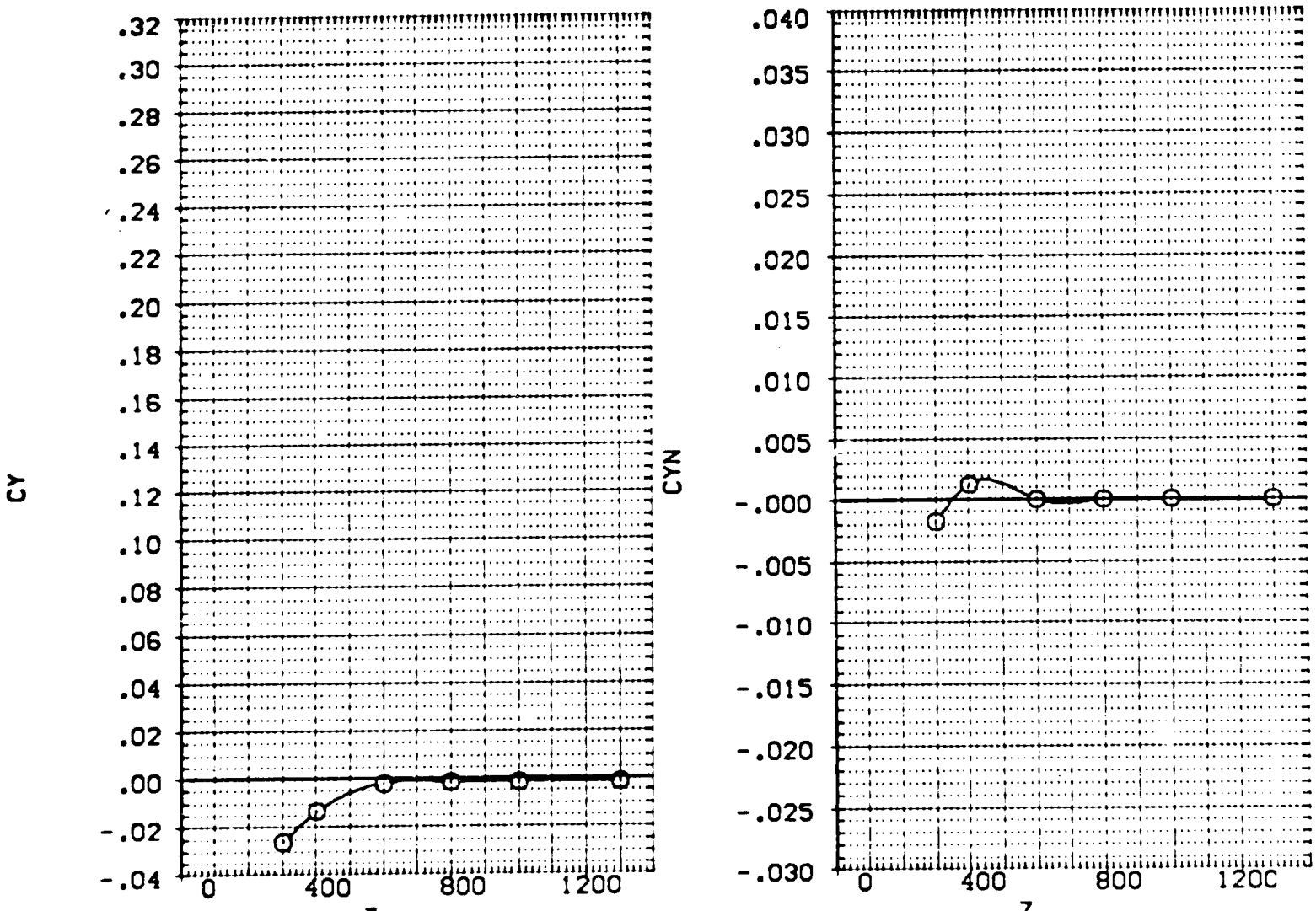


EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ079)

SYMBOL	X		PARAMETRIC VALUES		
○	.256	MACH	4.520	PTOTAL	80.000
		ALPHA	-5.000	BETA	.000
		DALPHA	-10.000	DBETA	-5.000
		ELEVTR	.000	AILRON	10.000
		Y	-200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

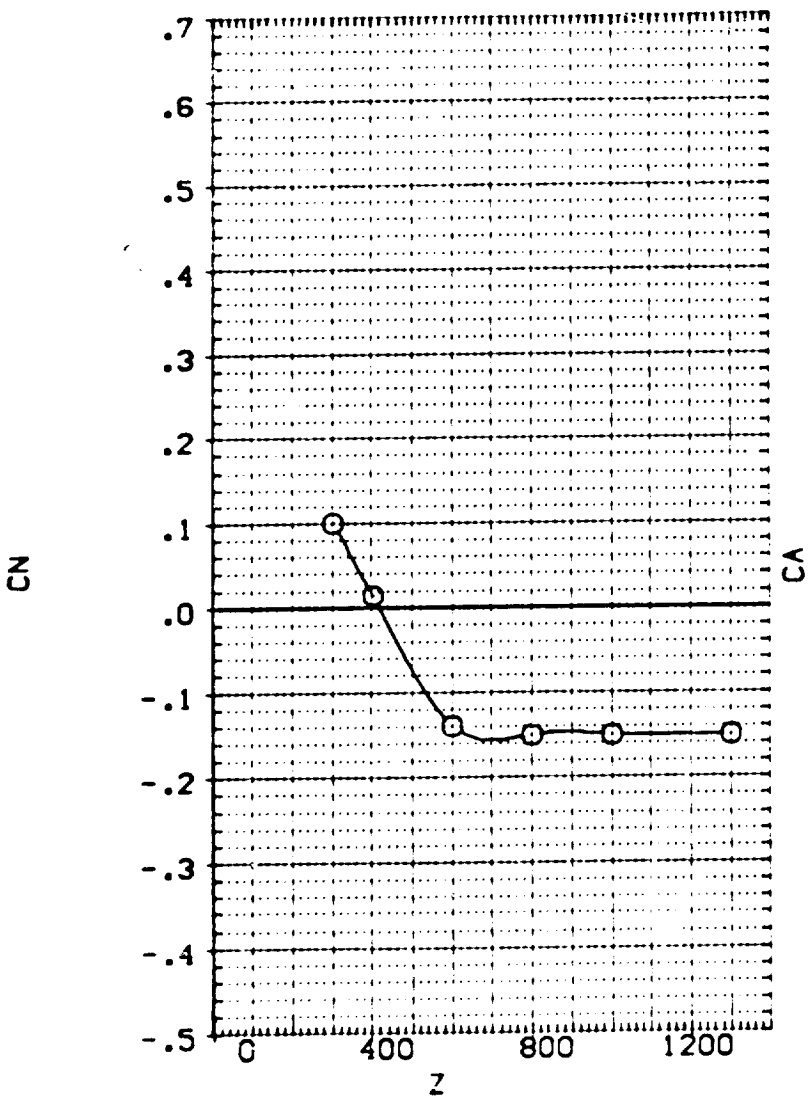


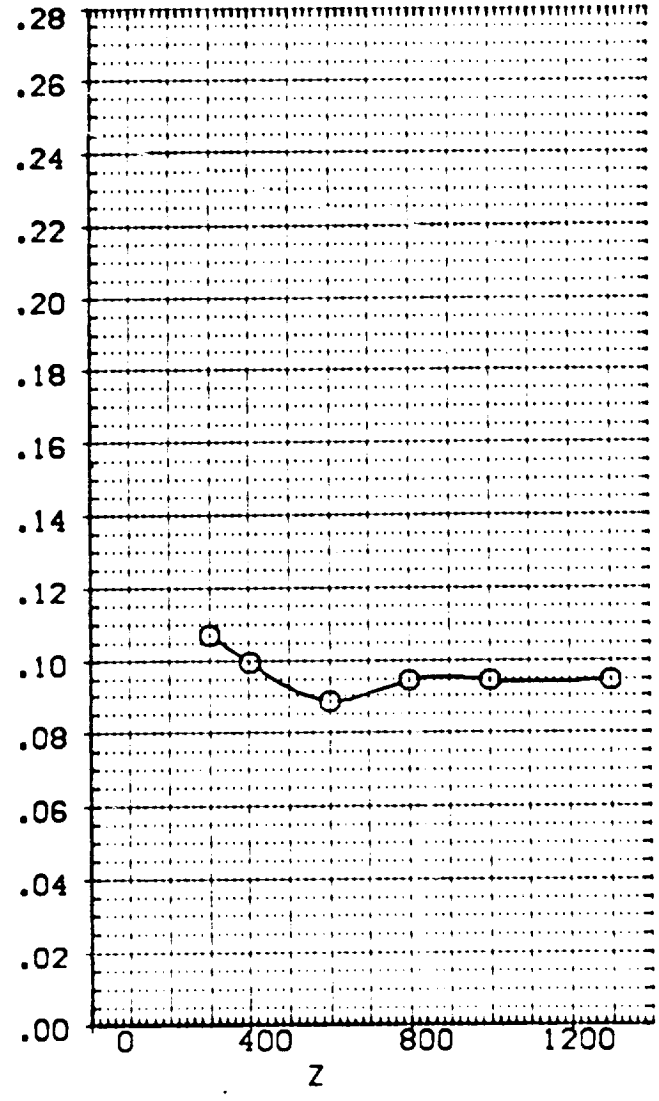
EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

!A13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ080)

SYMBOL	X	PARAMETRIC VALUES			
O	.300	MACH	4.520	PTOTAL	80.000
		ALPHA	-5.000	BETA	.000
		DALPHA	-10.000	DBETA	5.000
		ELEVTR	.000	AILRON	10.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



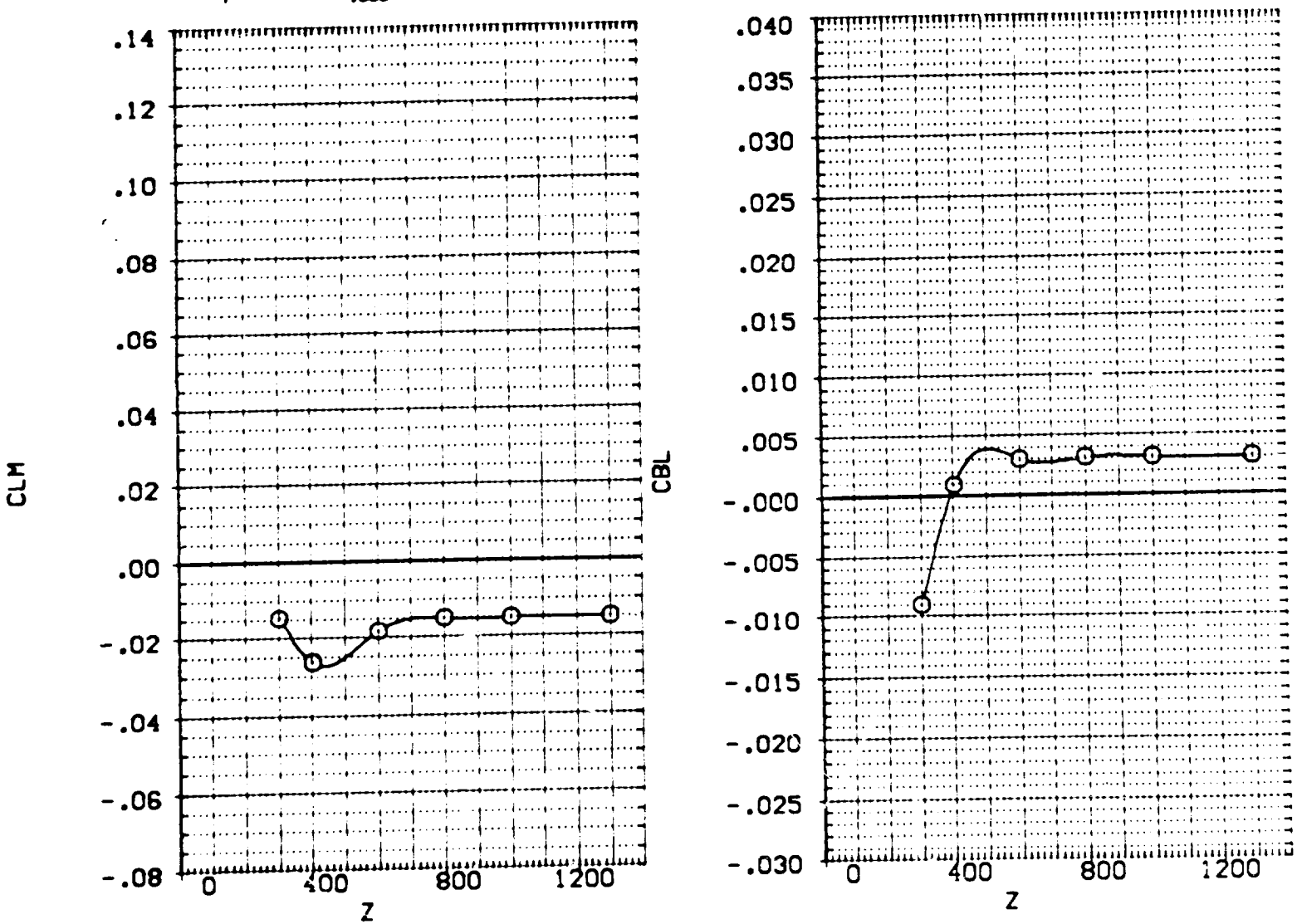


EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

!A13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ080)

SYMBOL	x	PARAMETRIC VALUES			
○	.300	MACH	4.520	PTOTAL	80.000
		ALPHA	-5.000	BETA	.000
		DALPHA	-10.000	DBETA	5.000
		ELEVTR	.000	AILRON	10.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

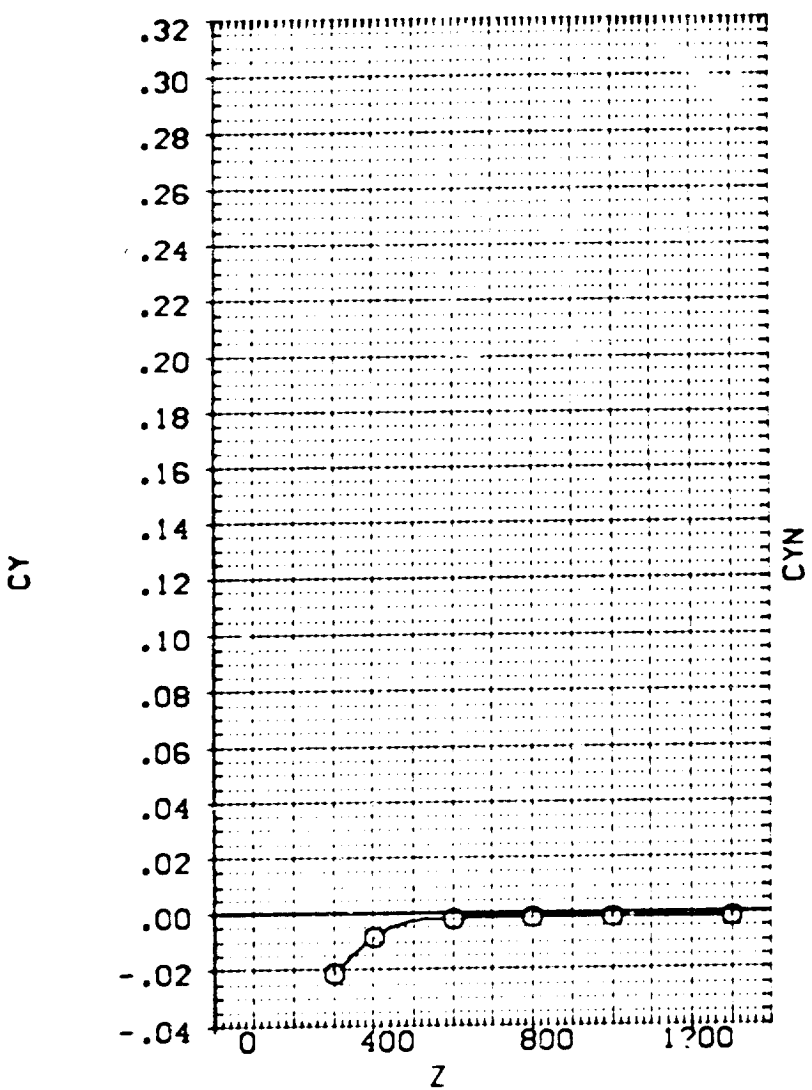


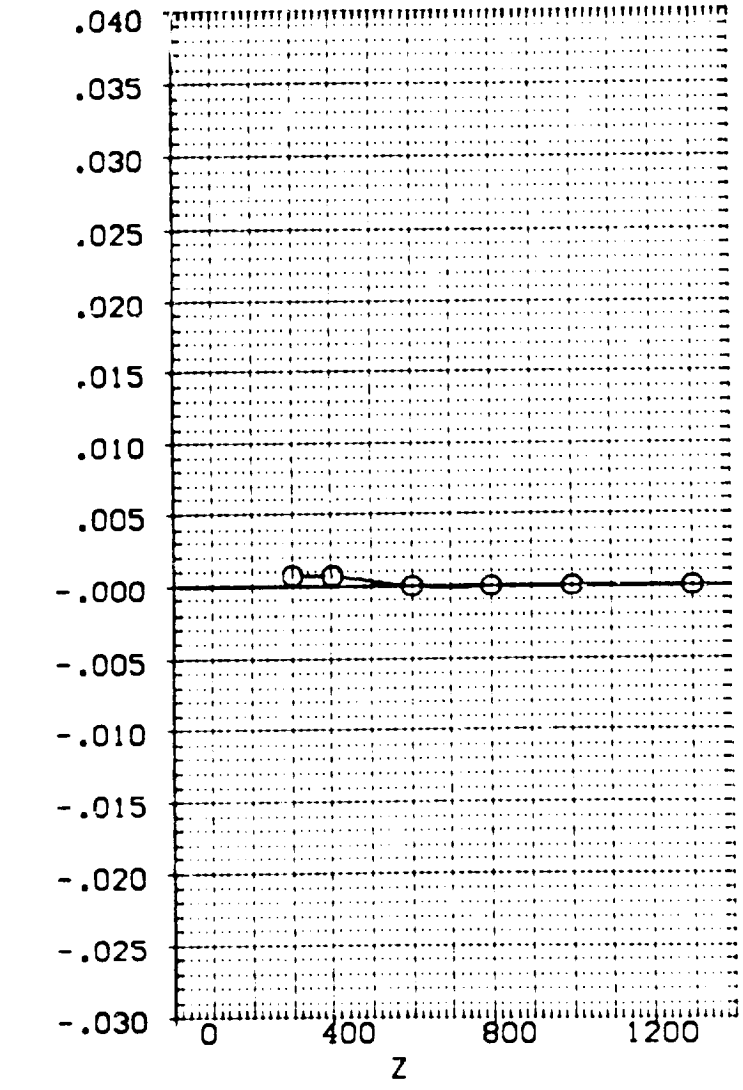
EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

[A]3.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ080)

SYMBOL	X	PARAMETRIC VALUES			
○	.300	MACH	4.520	PTOTAL	80.000
		ALPHA	-5.000	BETA	.000
		DALPHA	-10.000	DBETA	5.000
		ELEVTR	.000	AILRON	10.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



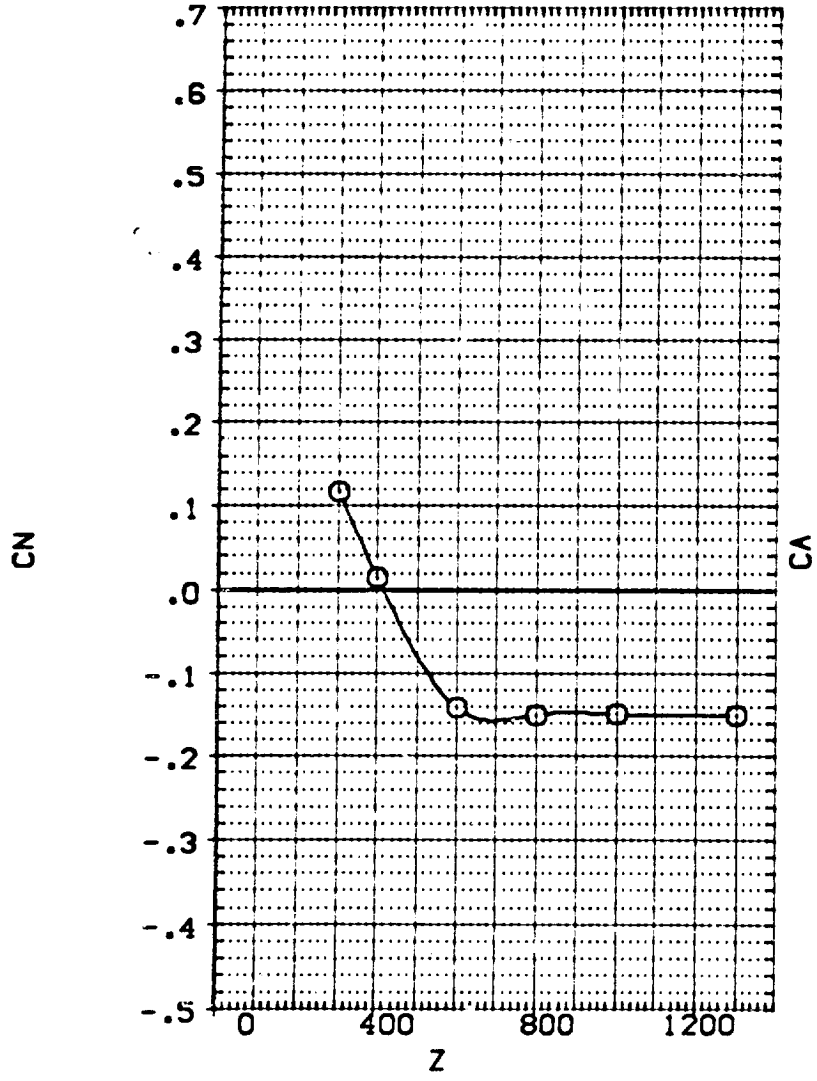


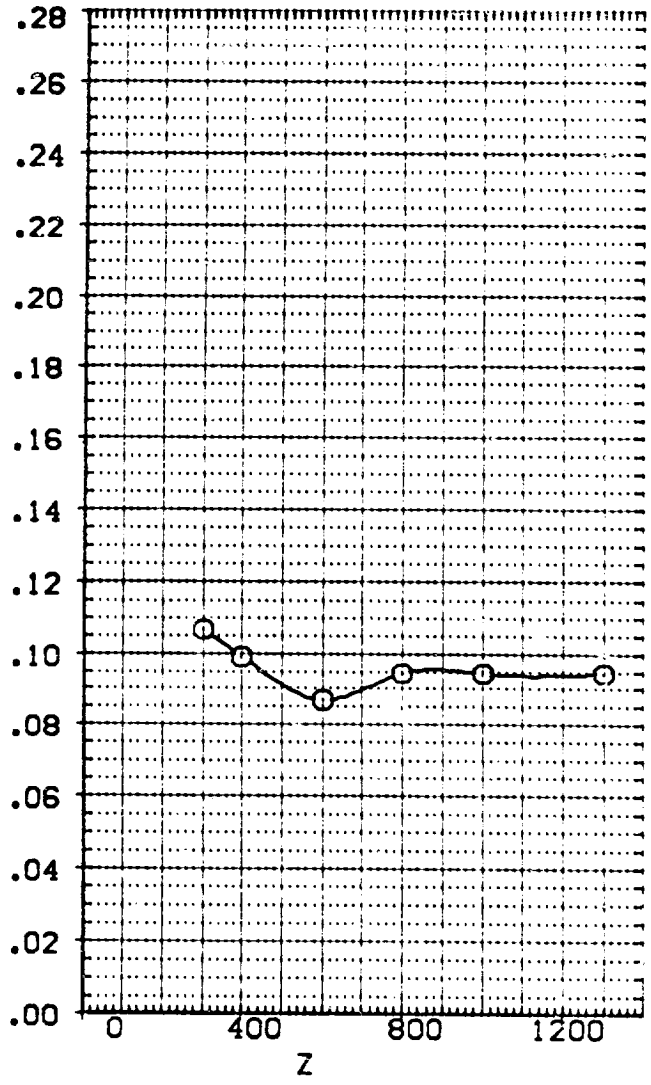
EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ081)

SYMBOL	X		PARAMETRIC VALUES		
O	.140	MACH	4.520	PTOTAL	80.000
		ALPHA	-5.000	BETA	.000
		DALPHA	-10.000	DBETA	5.000
		ELEVTR	.000	AILRON	10.000
		Y	200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



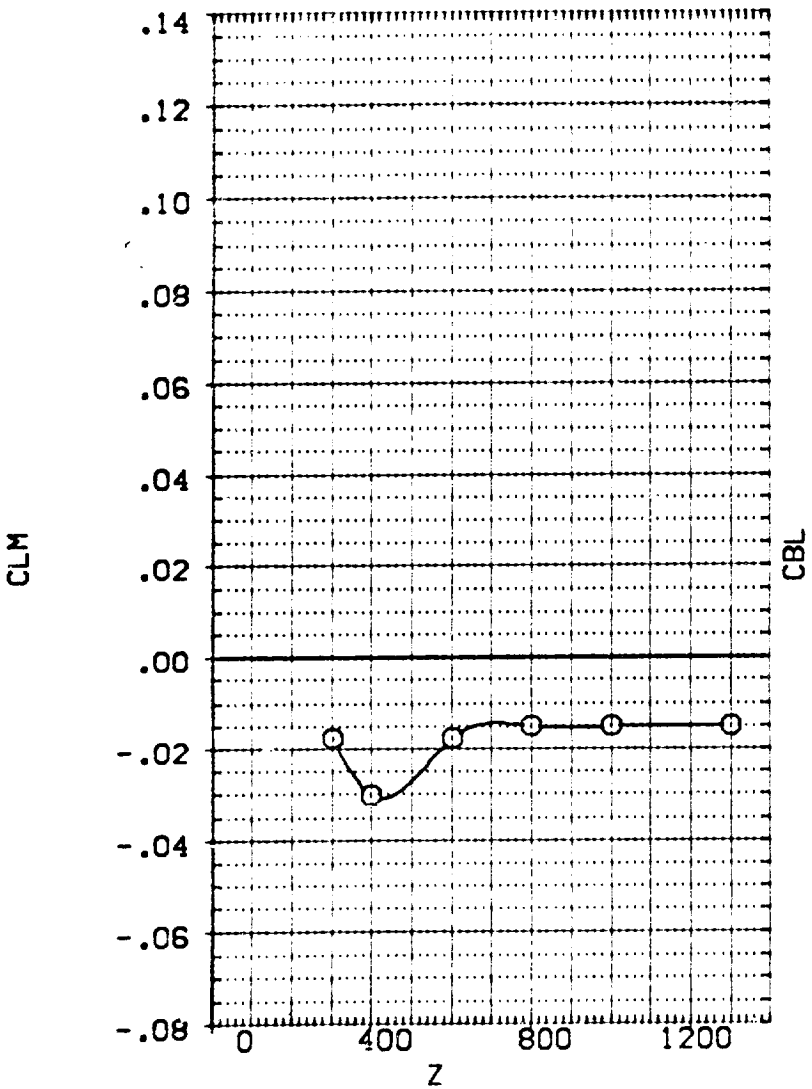


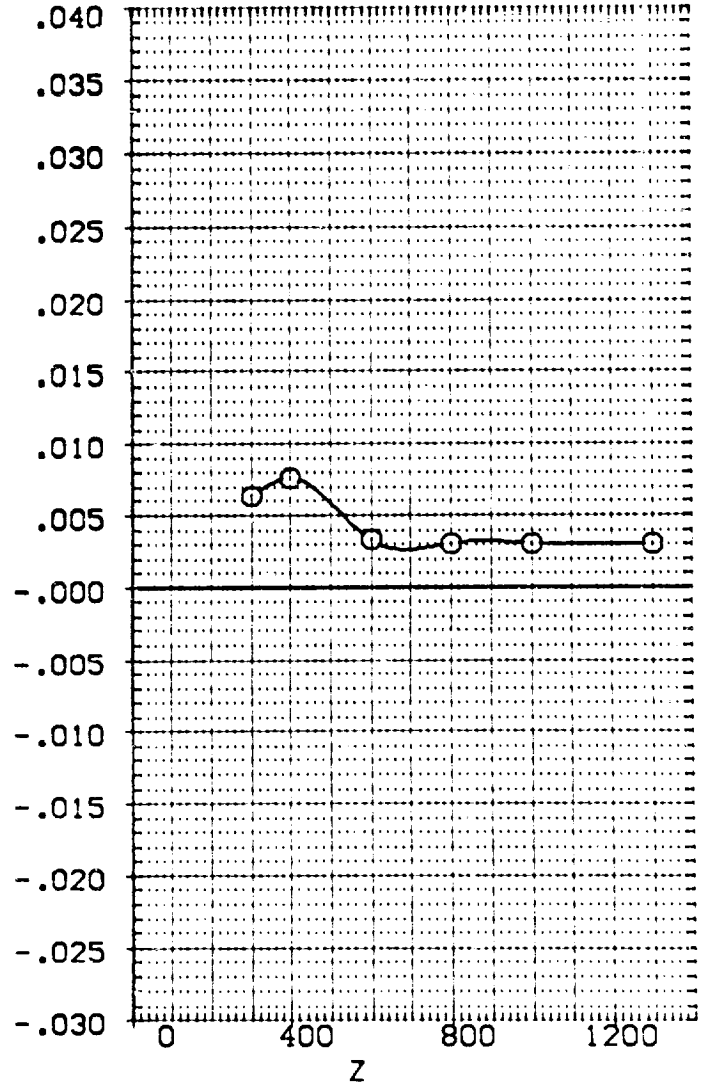
EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

!A13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ081)

SYMBOL	X	PARAMETRIC VALUES			
○	.140	MACH	4.520	PTOTAL	80.000
		ALPHA	-5.000	BETA	.000
		DALPHA	-10.000	DBETA	5.000
		ELEVTR	.000	AILRON	10.000
		Y	200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



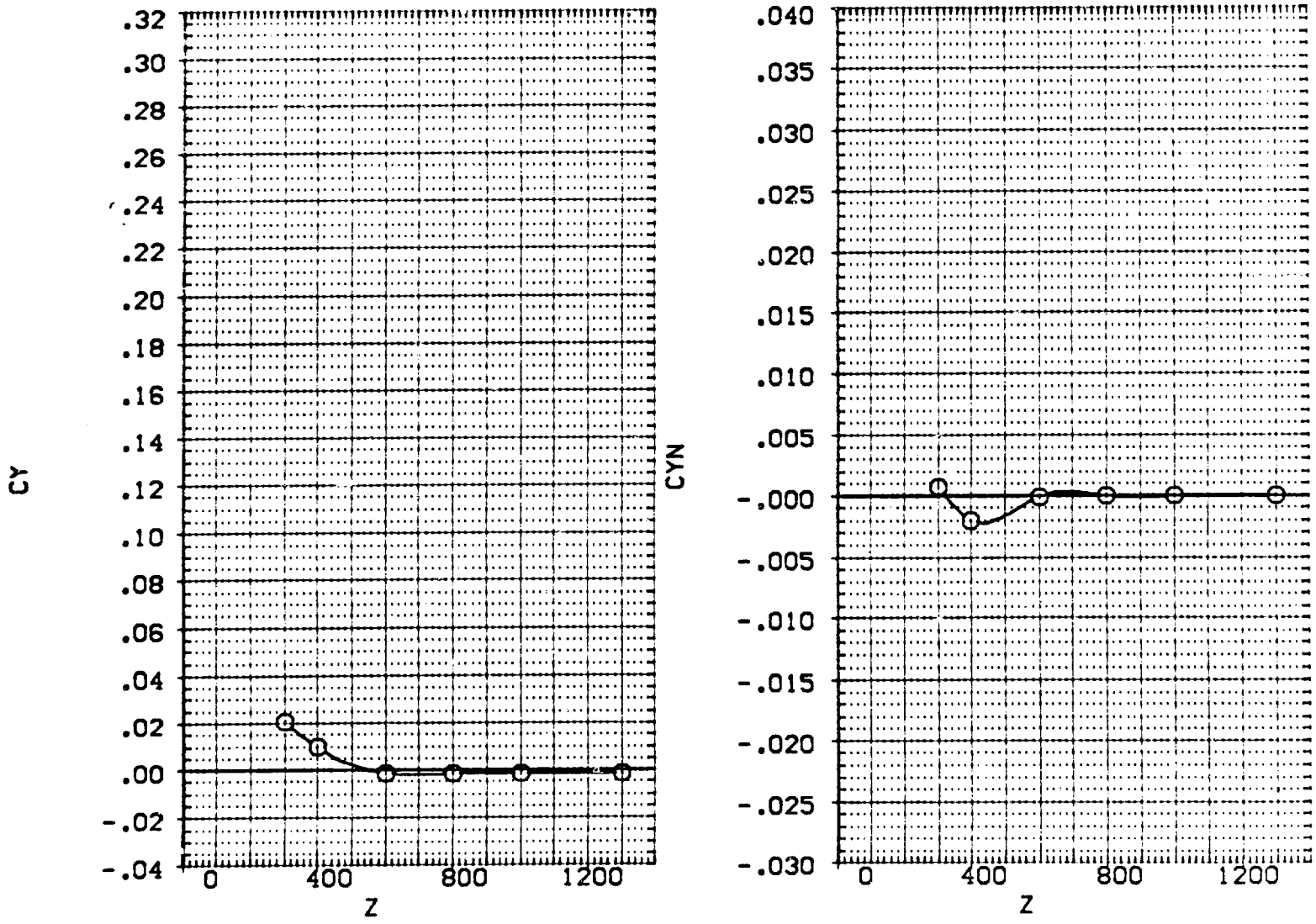


EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ081)

SYMBOL	X		PARAMETRIC VALUES		
○	.140	MACH	4.520	PTOTAL	80.000
		ALPHA	-5.000	BETA	.000
		DALPHA	-10.000	DBETA	5.000
		ELEVTR	.000	AILRON	10.000
		Y	200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

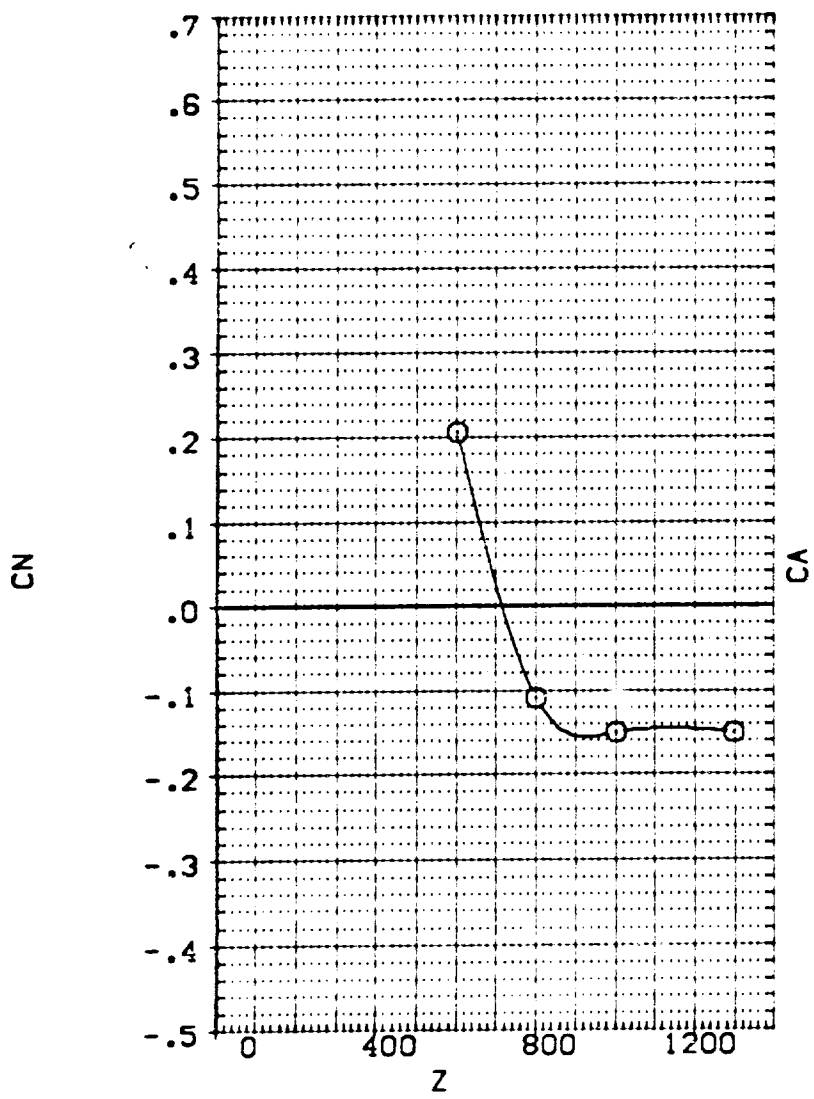


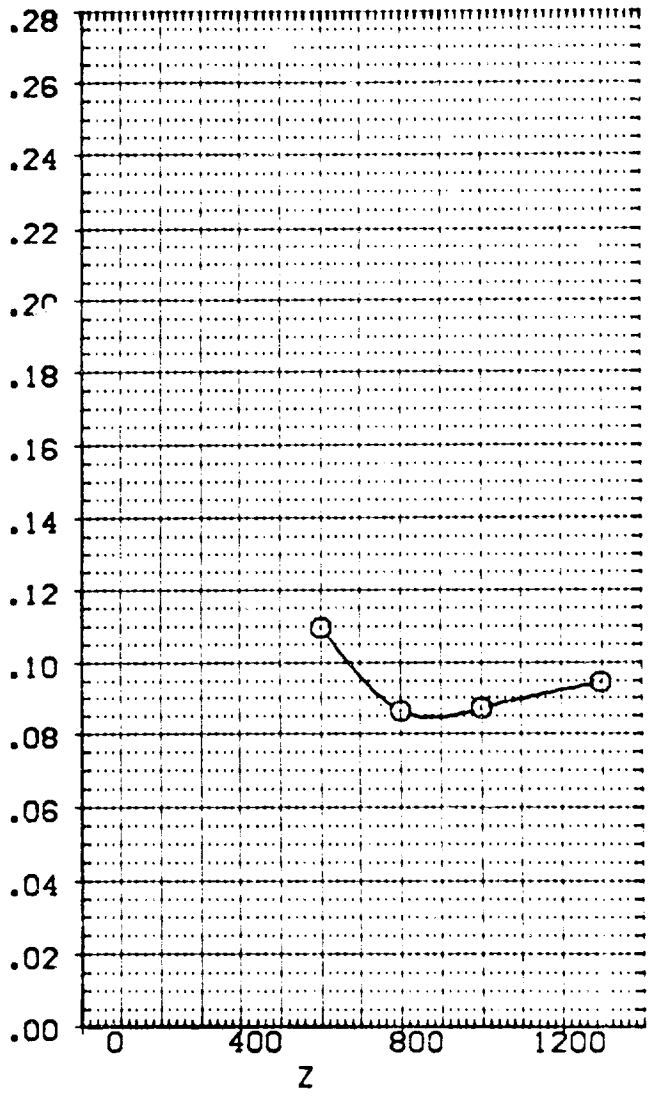
EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

!A13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ082)

SYMBOL	X		PARAMETRIC VALUES		
○	.178	MACH	4.520	PTOTAL	80.000
		ALPHA	-5.000	BETA	.000
		DALPHA	-20.000	DBETA	.000
		ELEVTR	.000	AILRON	10.000
		Y	-200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



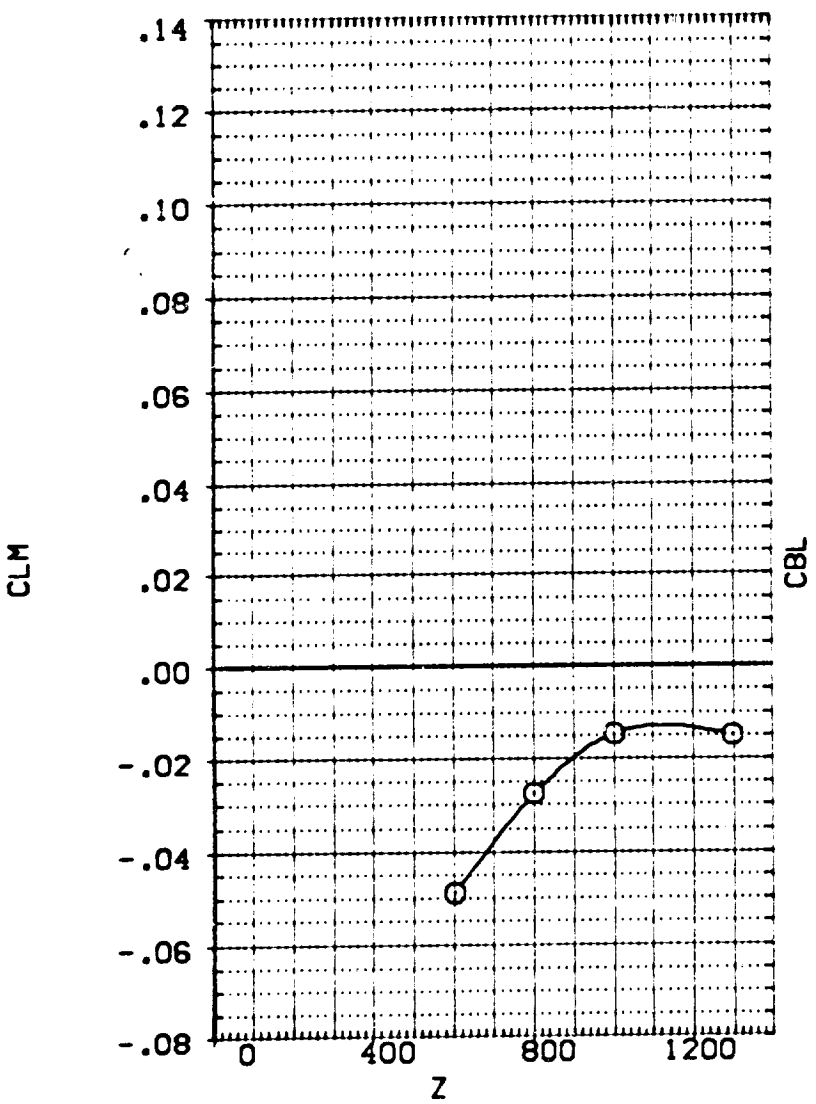


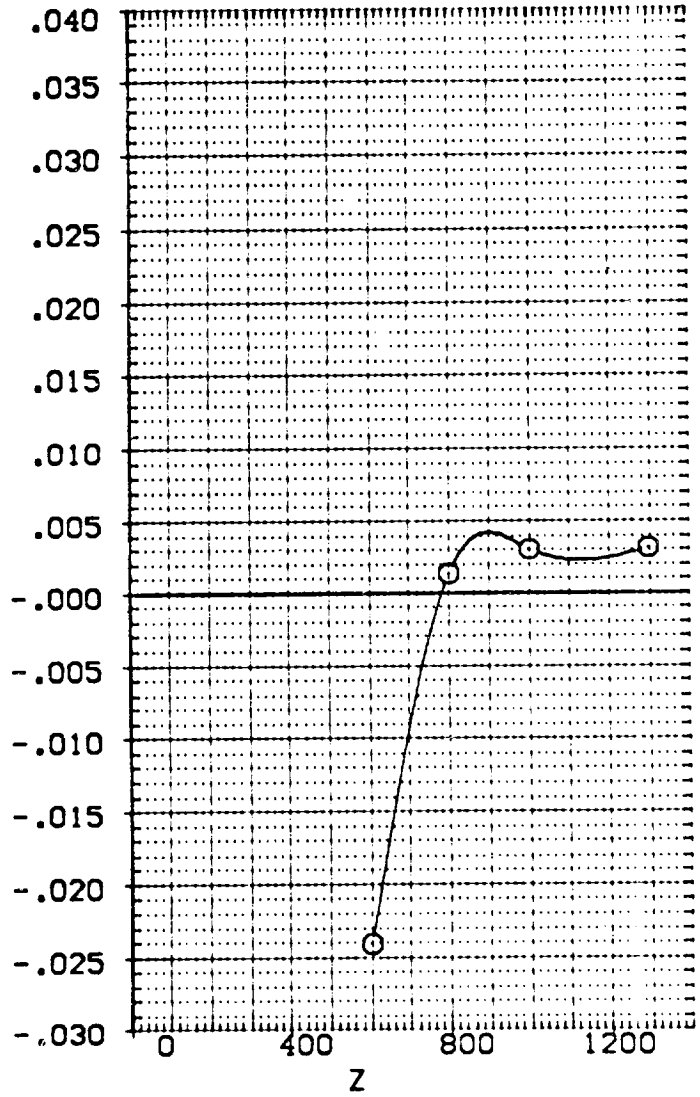
EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ082)

SYMBOL	X	PARAMETRIC VALUES			
O	.178	MACH	4.520	PTOTAL	80.000
		ALPHA	-5.000	BETA	.000
		DALPHA	-20.000	DBETA	.000
		ELEVTR	.000	AILRON	10.000
		Y	-200.000		

SEE THE ASSOCIATED [illegible]TA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



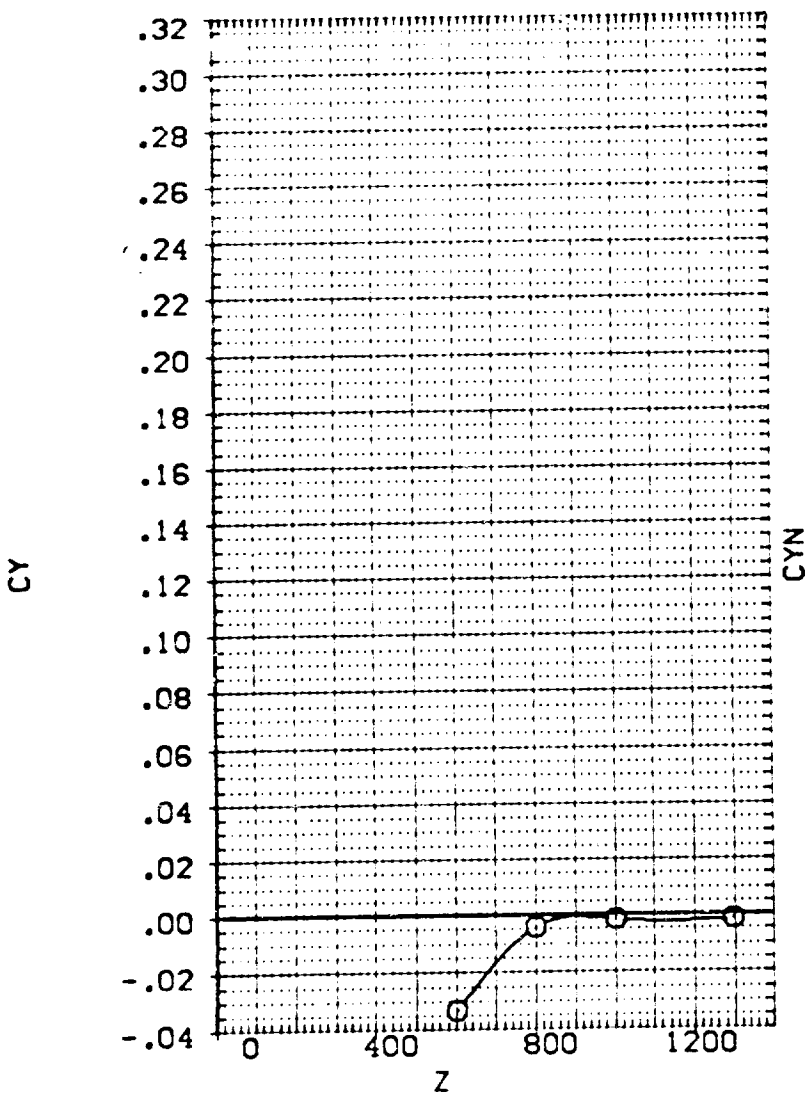


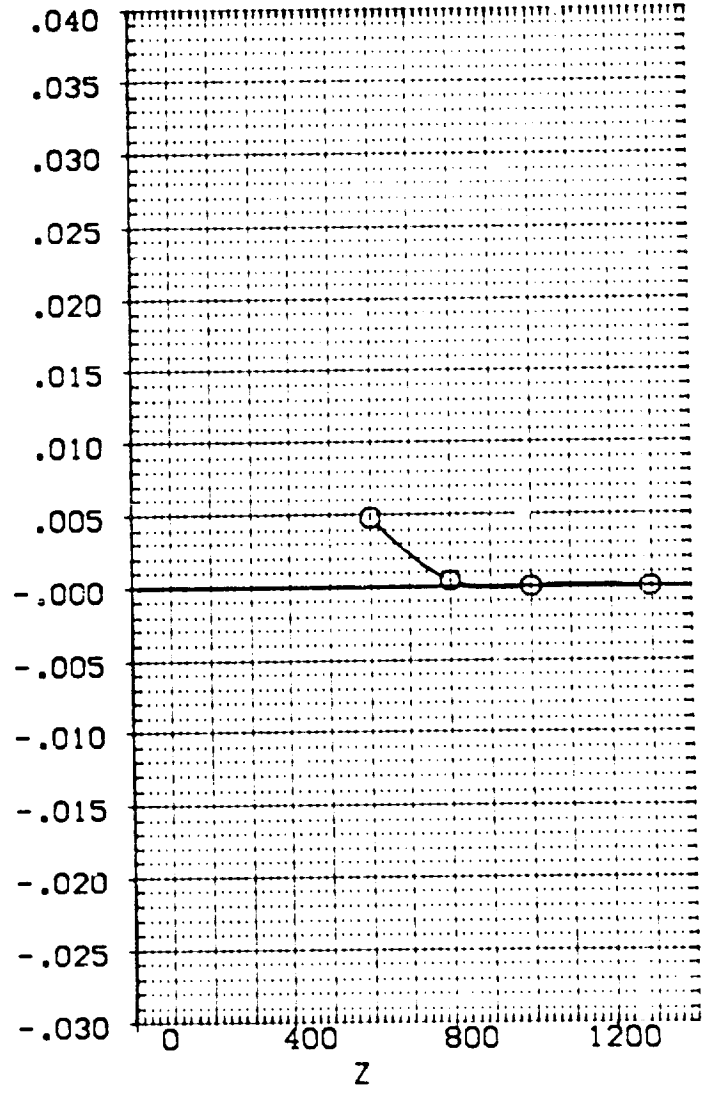
EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

!A13,EXTERNAL TANK(T1G)SEPARATING FROM ORB. 09 (RTJ082)

SYMBOL	X	PARAMETRIC VALUES			
○	.178	MACH	4.520	PTOTAL	80.000
		ALPHA	-5.000	BETA	.000
		DALPHA	-20.000	DBETA	.000
		ELEVTR	.000	AILRON	10.000
		Y	-200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



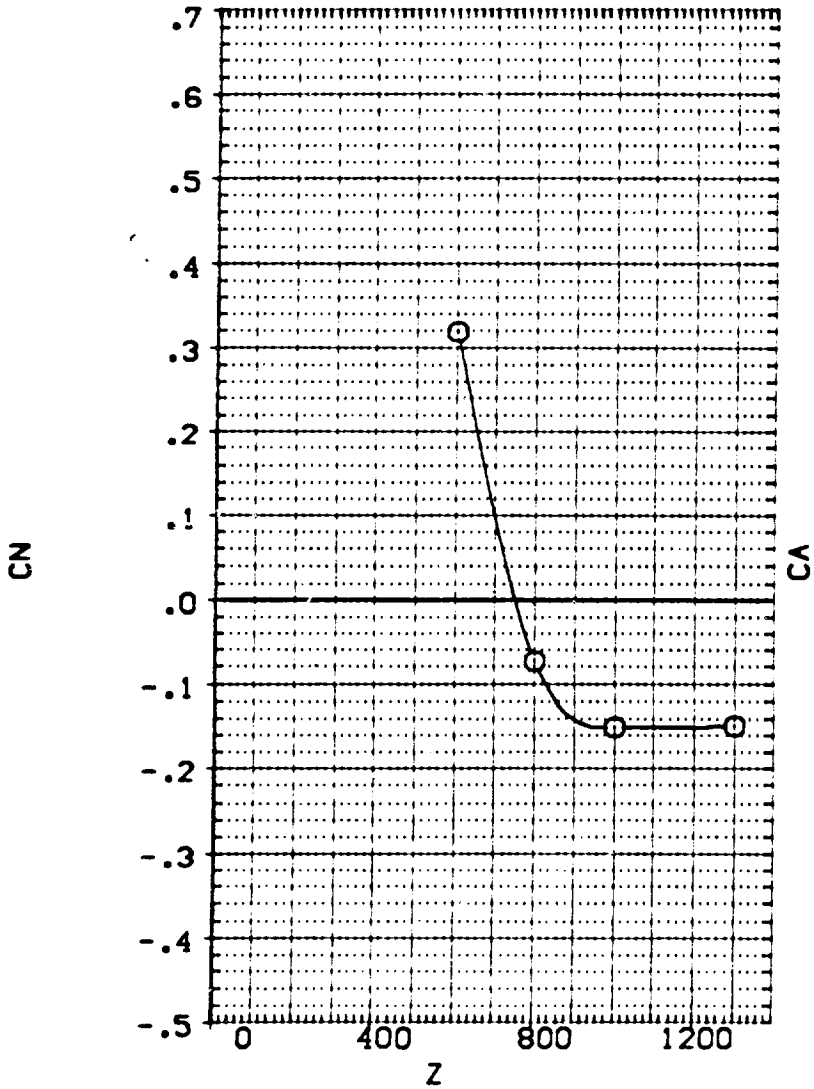


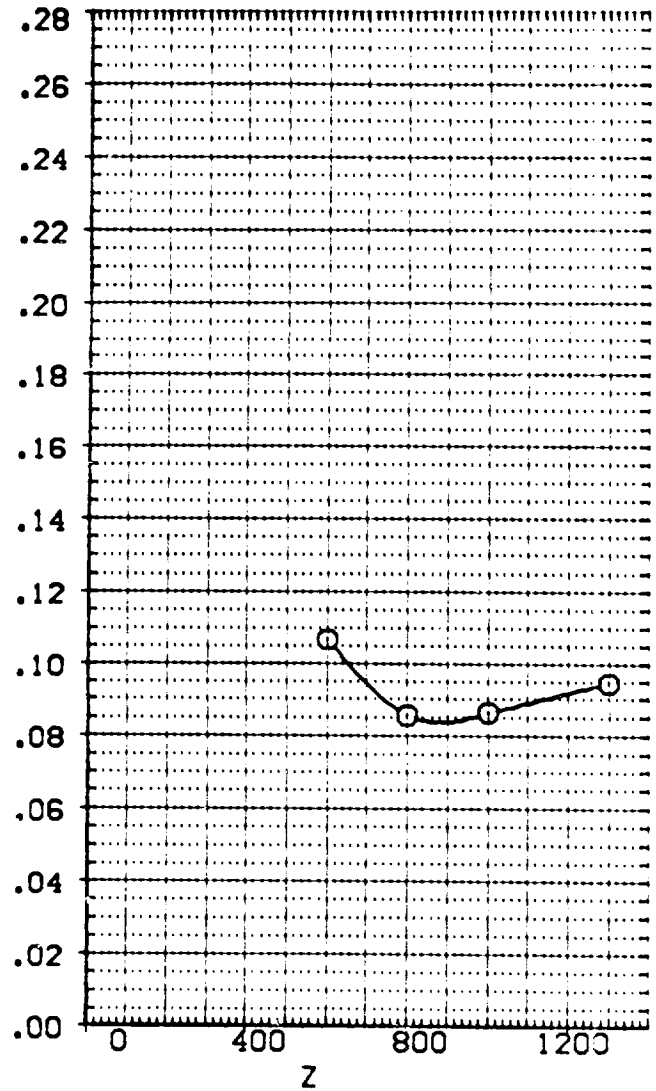
EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

!A13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ083)

SYMBOL	X	PARAMETRIC VALUES			
O	.165	MACH	4.520	PTOTAL	80.000
		ALPHA	-5.000	BETA	.000
		DALPHA	-20.000	DBETA	.000
		ELEVTR	.000	AILRON	10.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



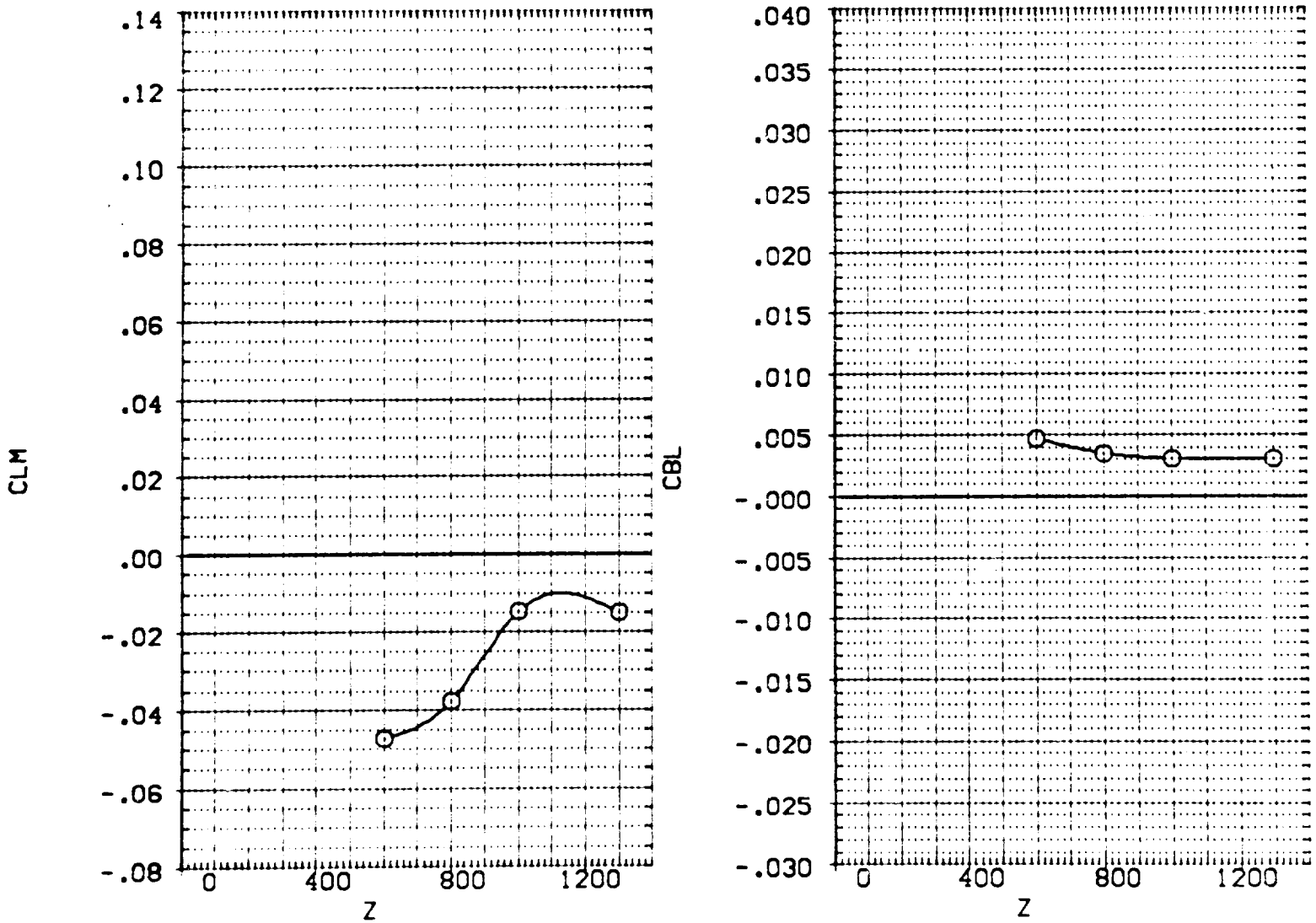


EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

!A13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ083)

SYMBOL	X	PARAMETRIC VALUES			
○	.165	MACH	4.520	PTOTAL	80.000
		ALPHA	-5.000	BETA	.000
		DALPHA	-20.000	DBETA	.000
		ELEVTR	.000	AILRON	10.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

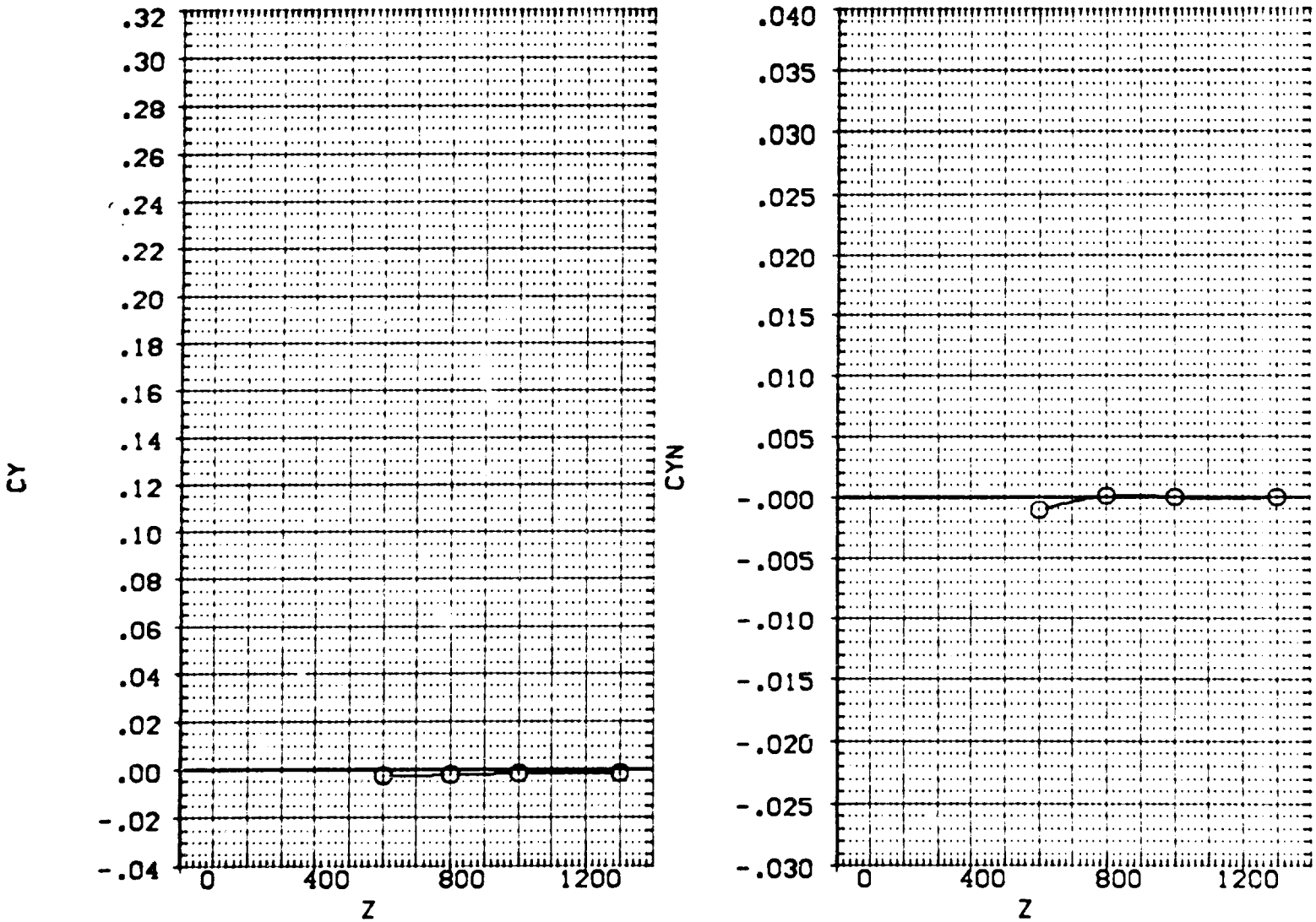


EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ083)

SYMBOL	X	PARAMETRIC VALUES			
O	.165	MACH	4.520	PTOTAL	80.000
		ALPHA	-5.000	BETA	.000
		DALPHA	-20.000	DBETA	.000
		ELEVTR	.000	AILRON	10.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

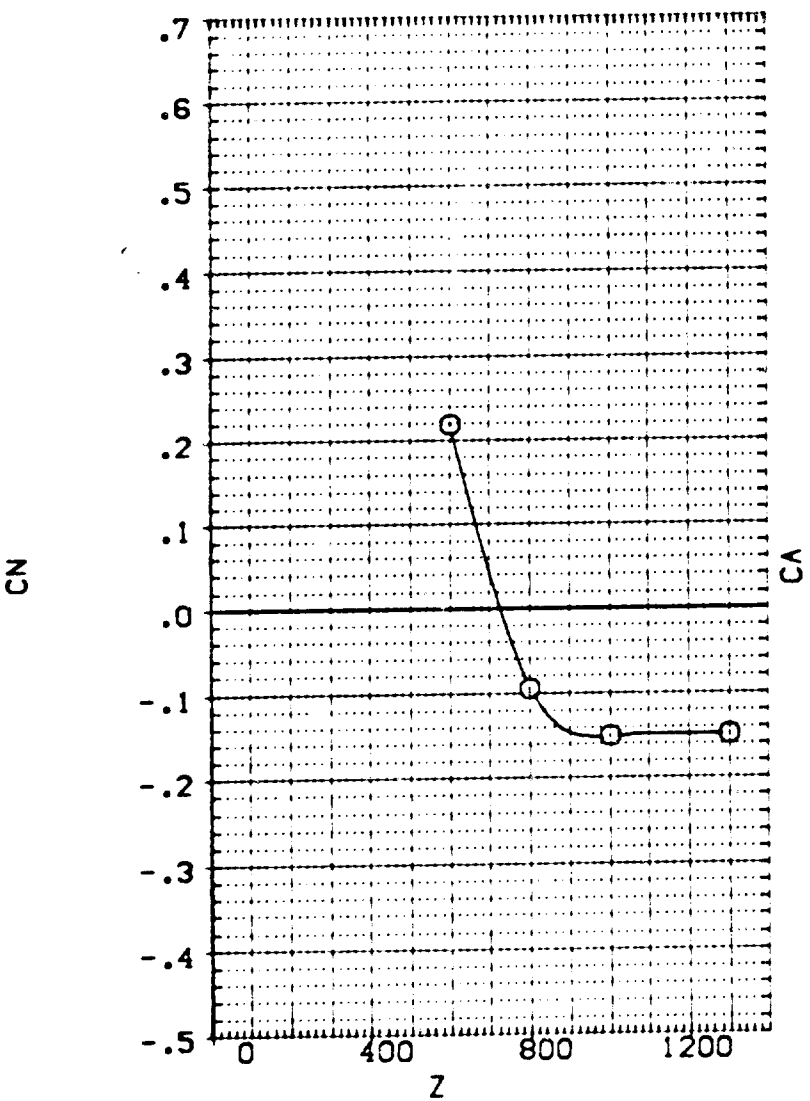


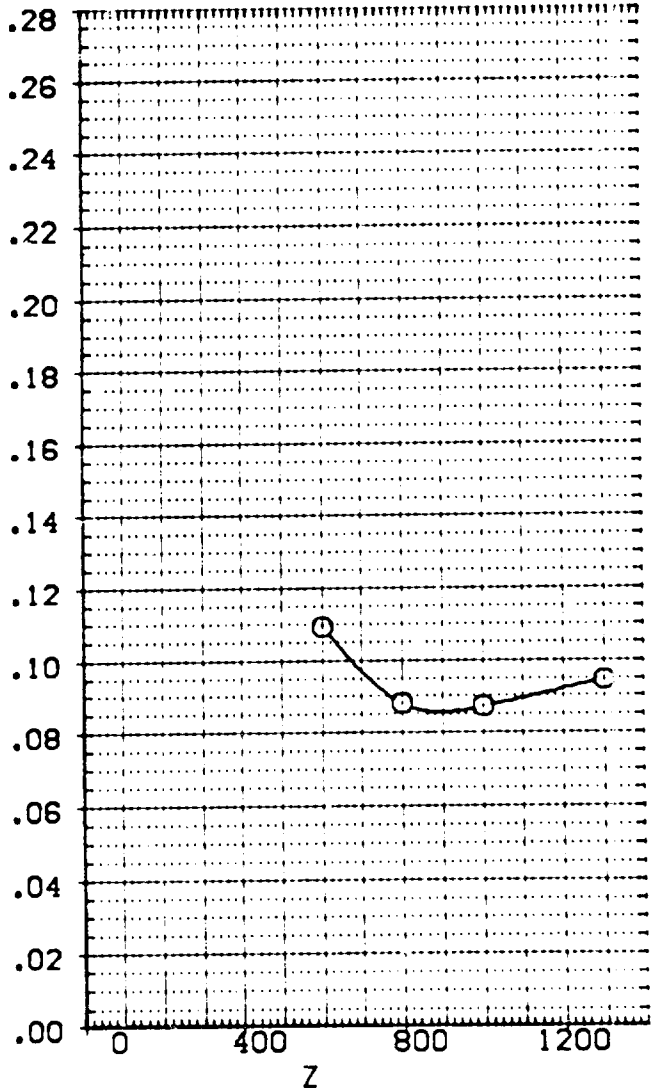
EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

[A13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ084)

SYMBOL	X	PARAMETRIC VALUES			
○	.218	MACH	4.520	PTOTAL	80.000
		ALPHA	-5.000	BETA	.000
		DALPHA	-20.000	DBETA	.000
		ELEVTR	.000	AILRON	10.000
		Y	200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



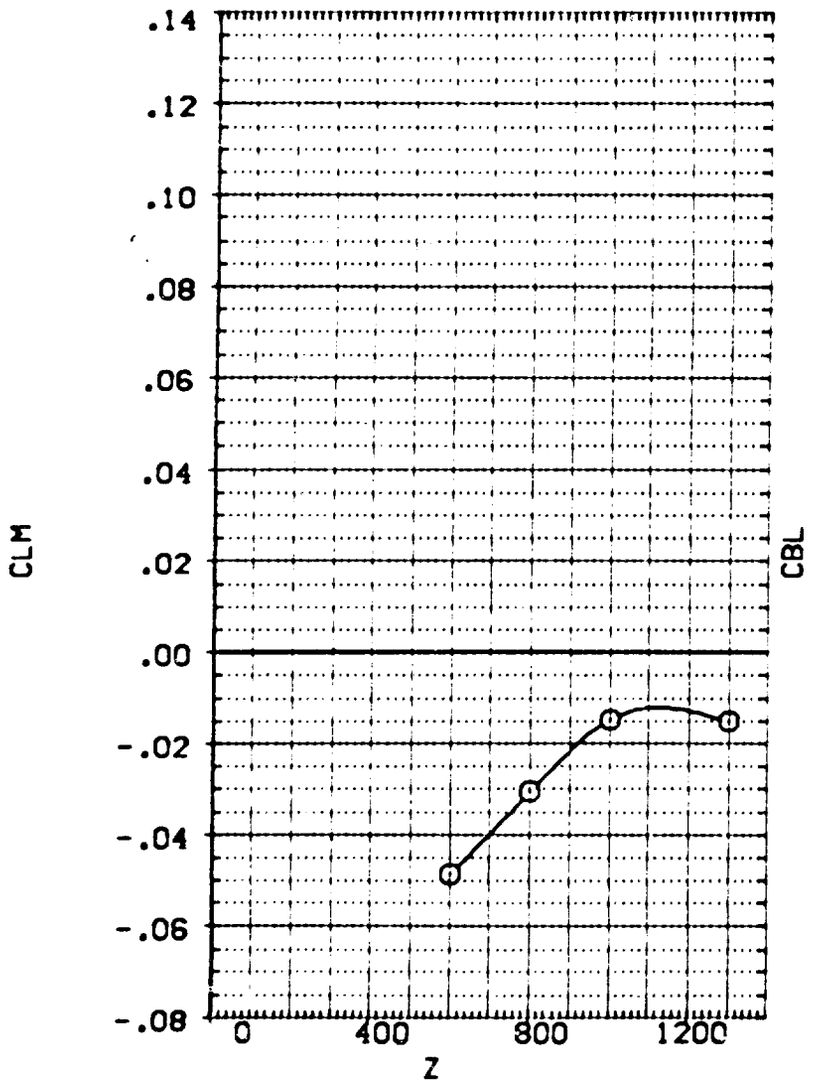


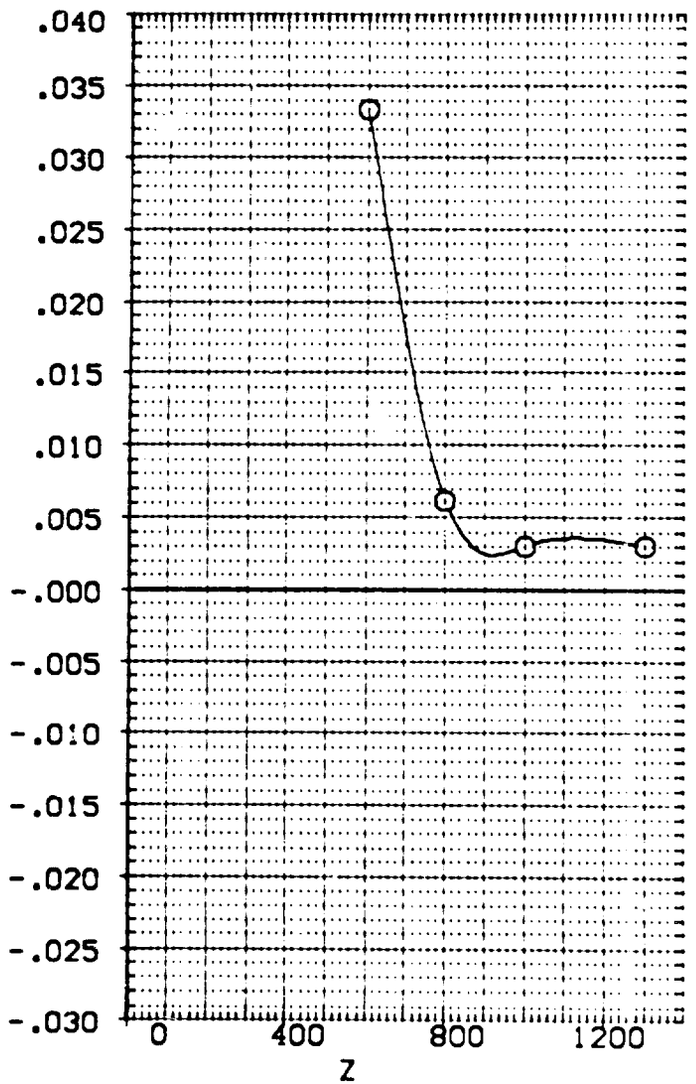
EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ084)

SYMBOL	X	PARAMETRIC VALUES			
○	.218	MACH	4.520	PTOTAL	80.000
		ALPHA	-5.000	BETA	.000
		DALPHA	-20.000	DBETA	.000
		ELEVTR	.000	AILRON	10.000
		Y	200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



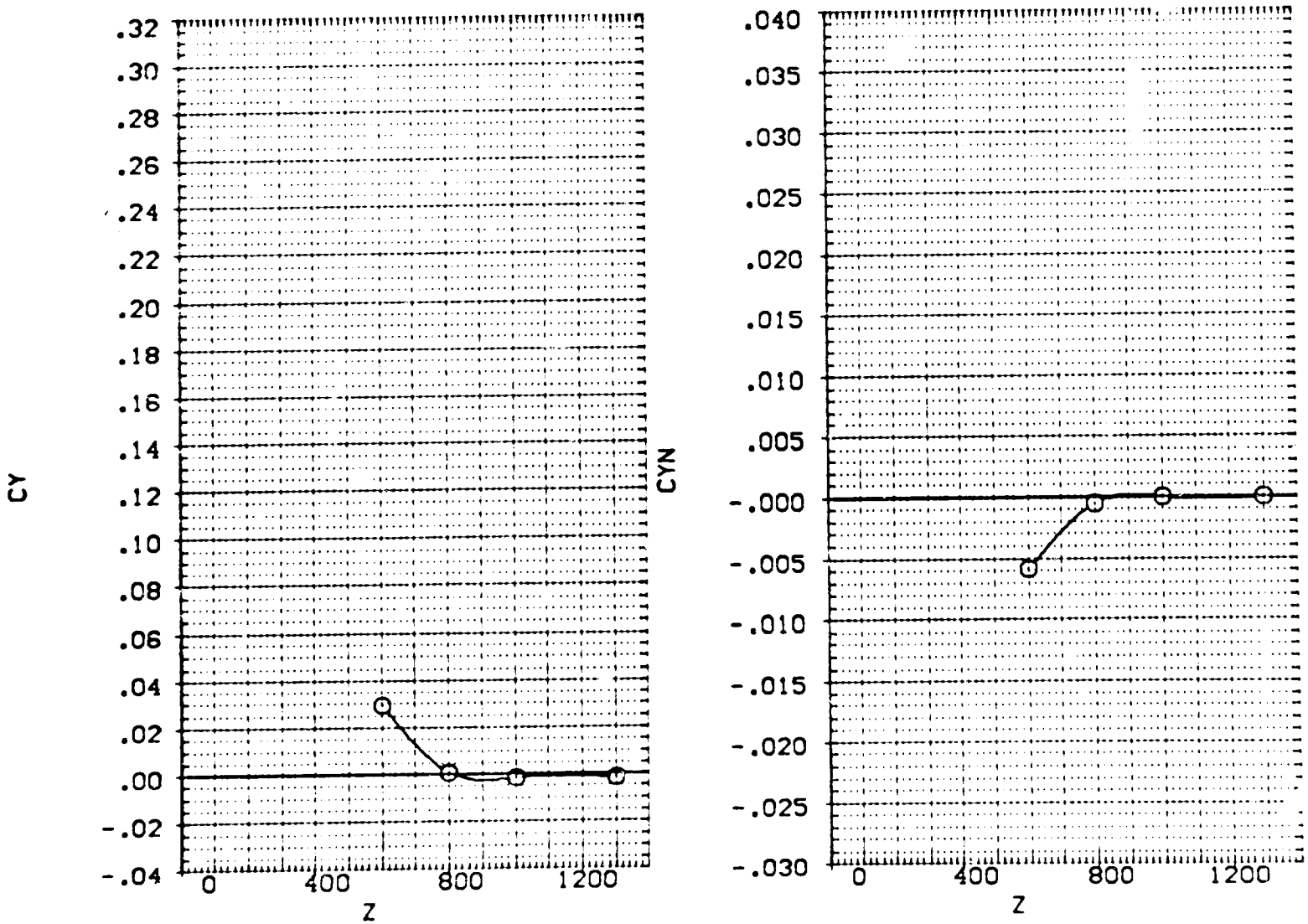


EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

[A13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ084)

SYMBOL	X	PARAMETRIC VALUES			
○	.218	MACH	4.520	PTOTAL	80.000
		ALPHA	-5.000	BETA	.000
		DALPHA	-20.000	DBETA	.000
		ELEVTR	.000	AILRON	10.000
		Y	200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

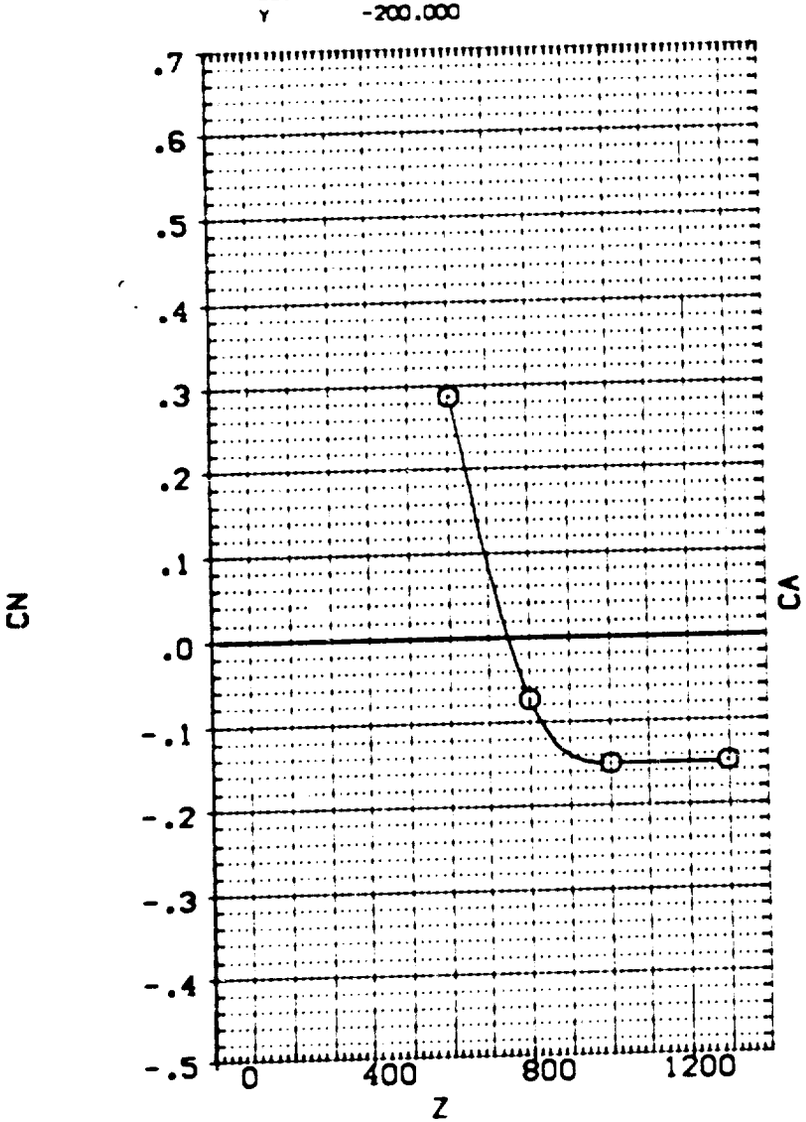
!A13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ085)

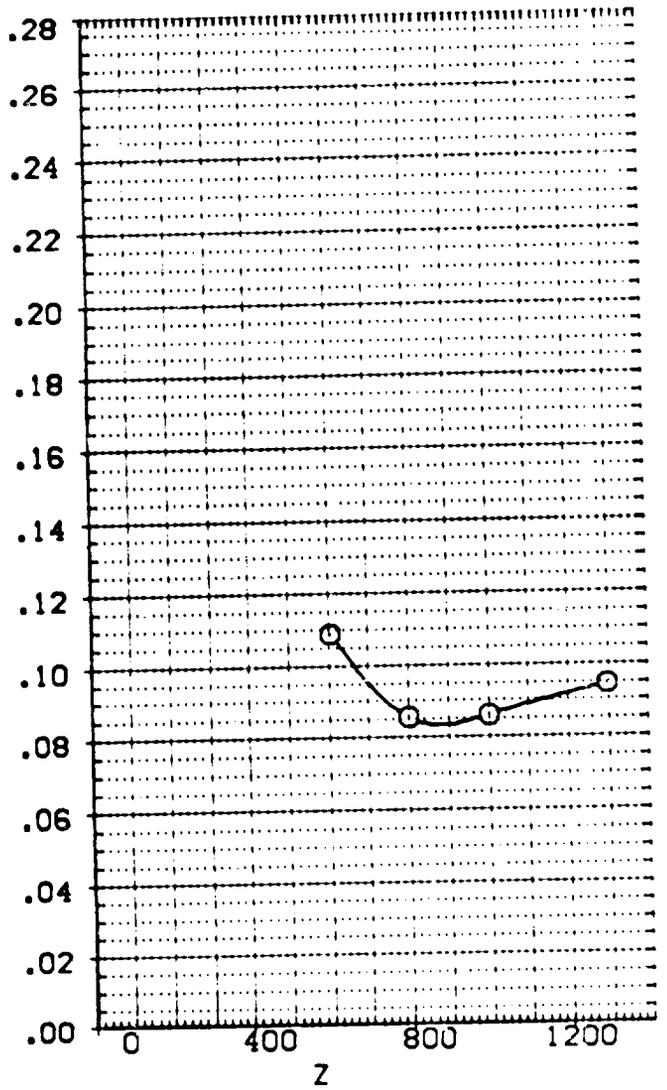
SEE THE ASSOCIATED [illegible]A DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

SYMBOL	X
○	-.007

PARAMETRIC VALUES

MACH	4.520	PTOTAL	80.000
ALPHA	-5.000	BETA	.000
DALPHA	-20.000	DBETA	-5.000
ELEVTR	.000	AILRON	10.000
Y	-200.000		



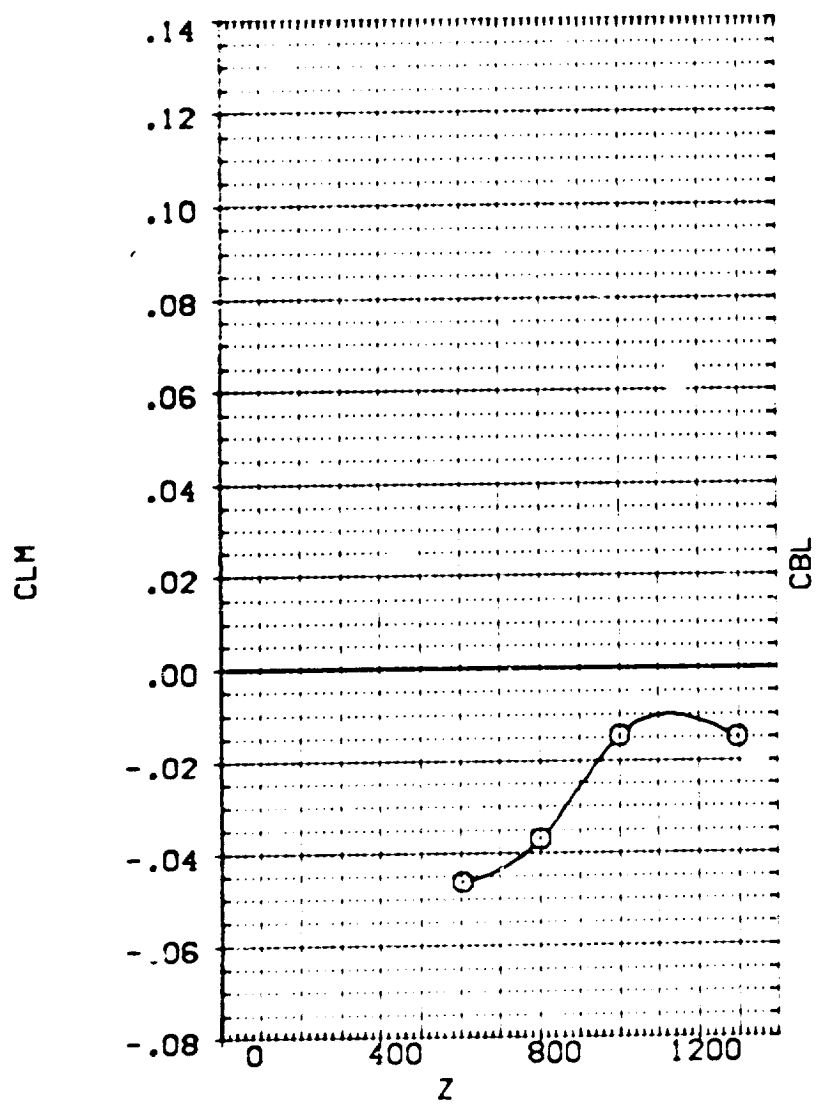


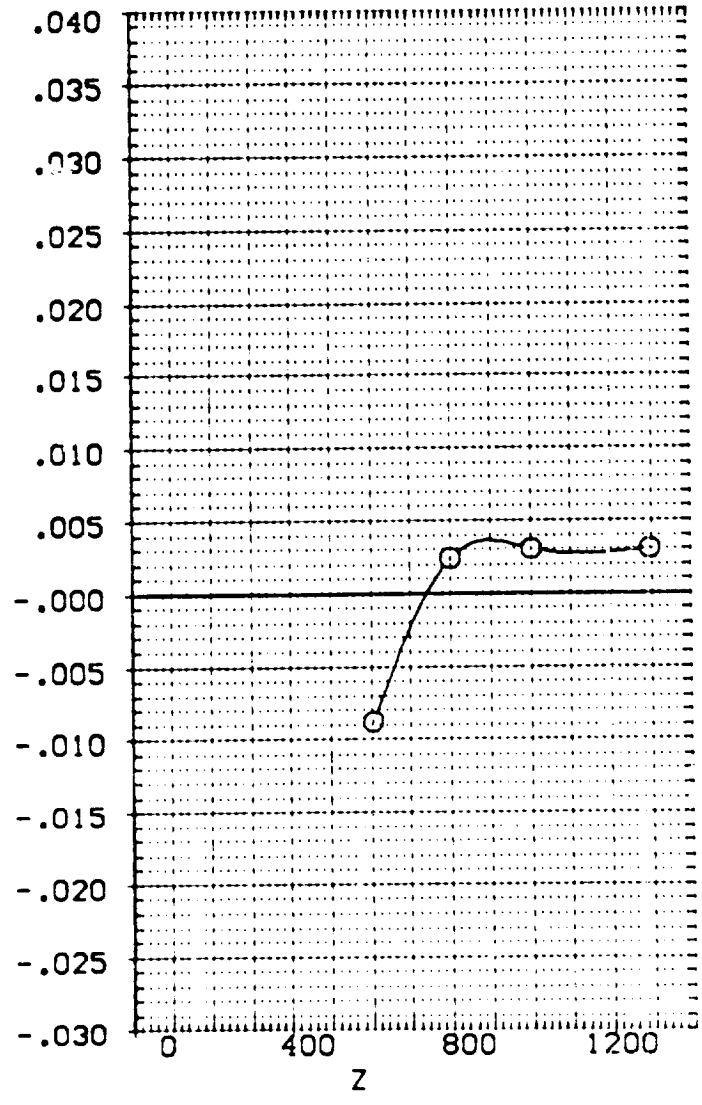
EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

!A13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ085)

SYMBOL	X	PARAMETRIC VALUES			
○	-.007	MACH	4.520	PTOTAL	80.000
		ALPHA	-5.000	BETA	.000
		DALPHA	-20.000	DBETA	-5.000
		ELEVTR	.000	AILRON	10.000
		Y	-200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



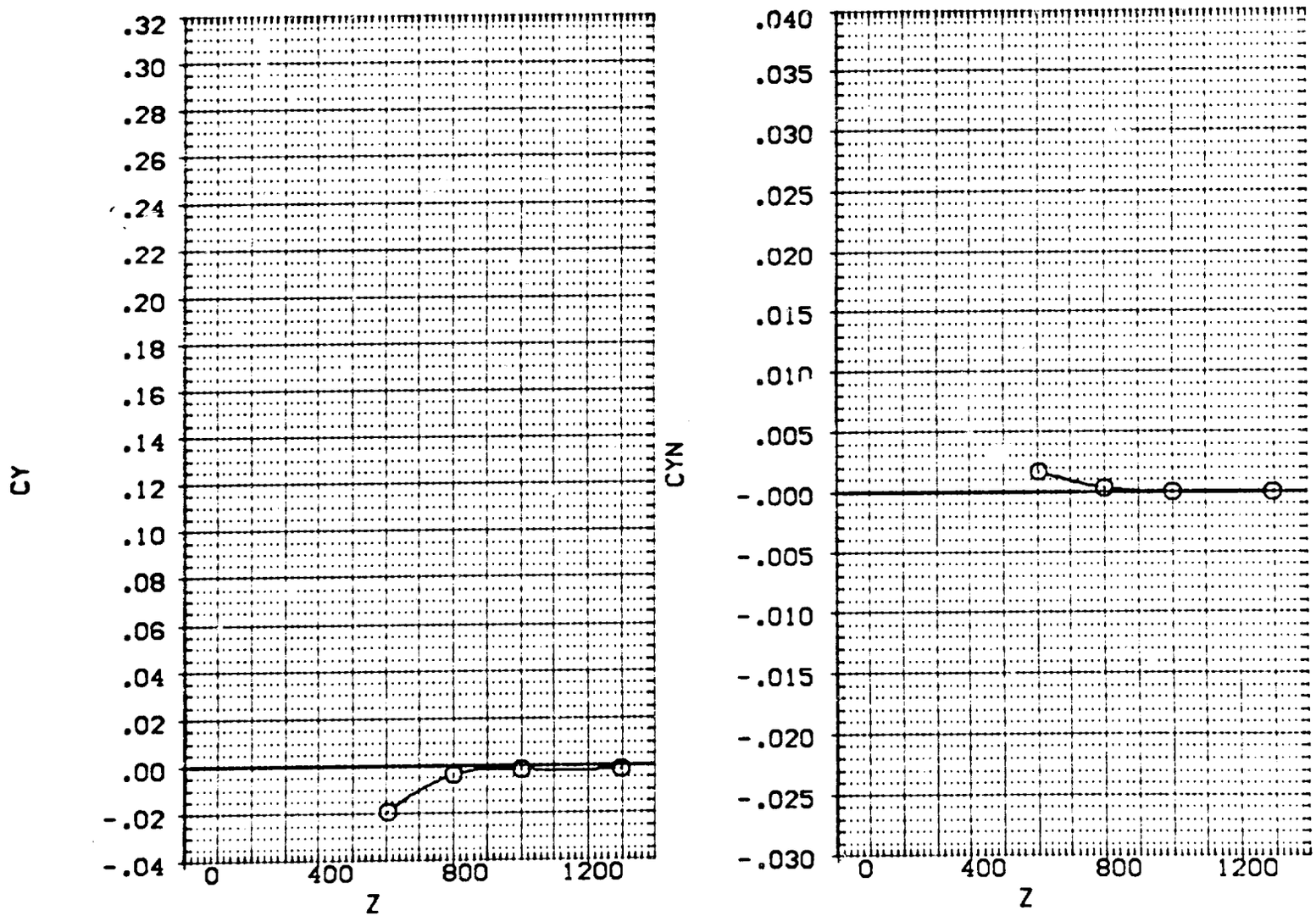


EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

IA13.EXTERNAL TANK (T10) SEPARATING FROM ORB. 09 (RTJ085)

SYMBOL	X	PARAMETRIC VALUES			
O	-.007	MACH	4.520	PTOTAL	80.000
		ALPHA	-5.000	BETA	.000
		DALPHA	-20.000	DBETA	-5.000
		ELEVTR	.000	AILRON	10.000
		Y	-200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

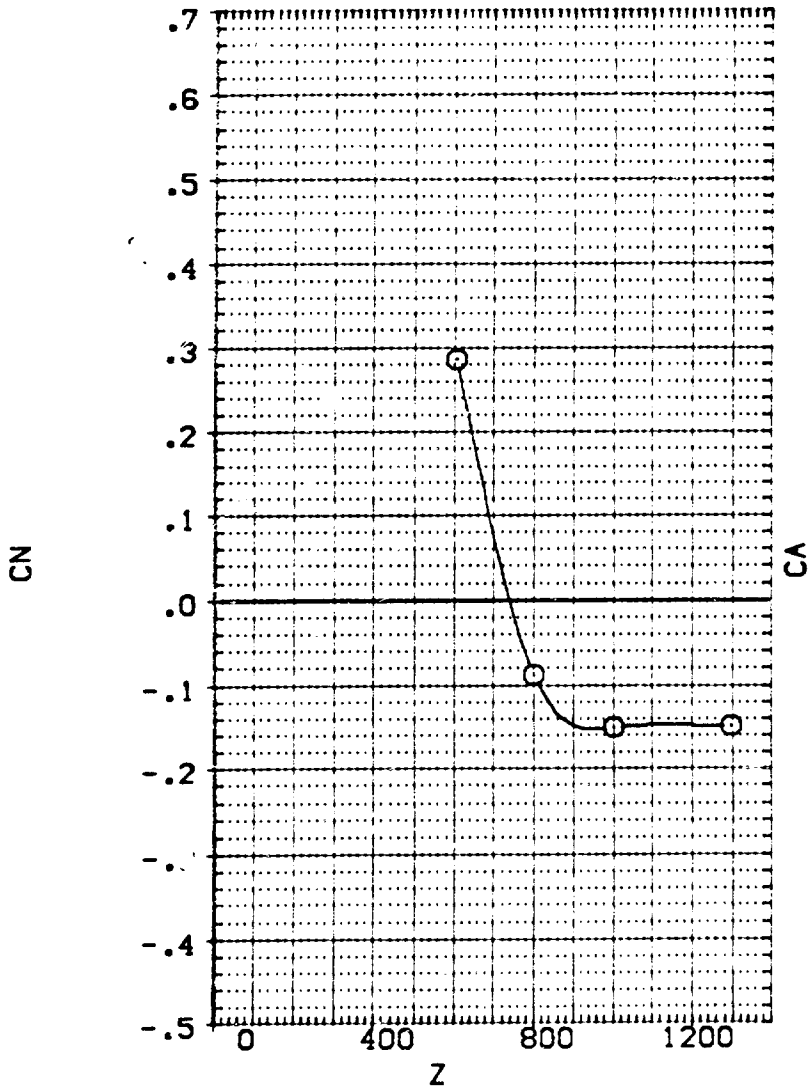


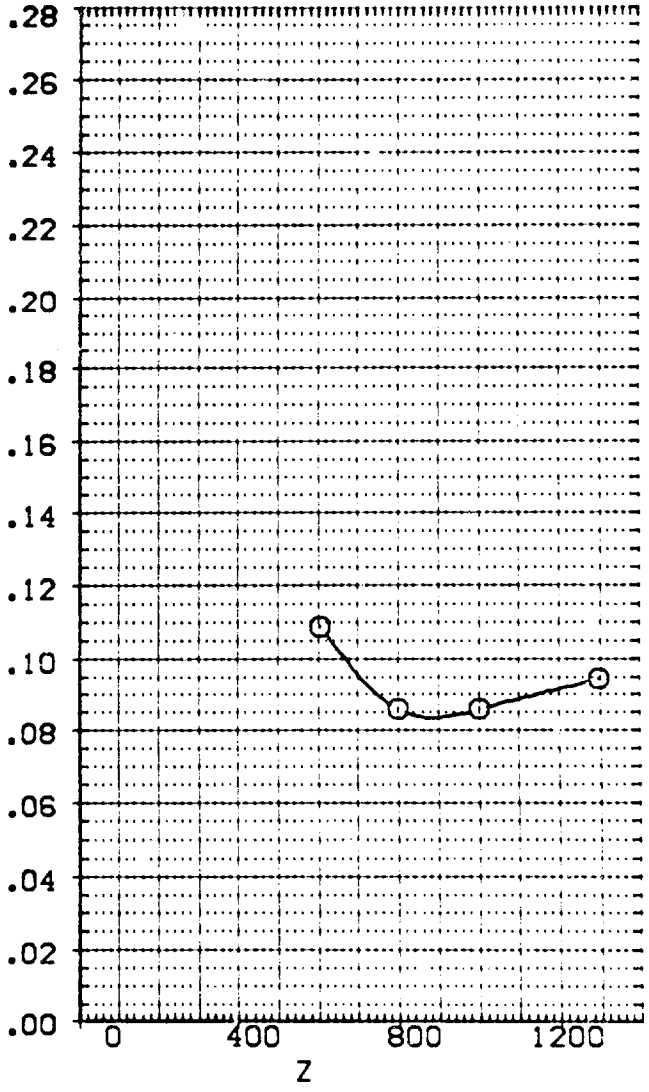
EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ086)

SYMBOL	X		PARAMETRIC VALUES		
○	.205	MACH	4.520	PTOTAL	80.000
		ALPHA	-5.000	BETA	.000
		DALPHA	-20.000	DBETA	5.000
		ELEVTR	.000	AILRON	10.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



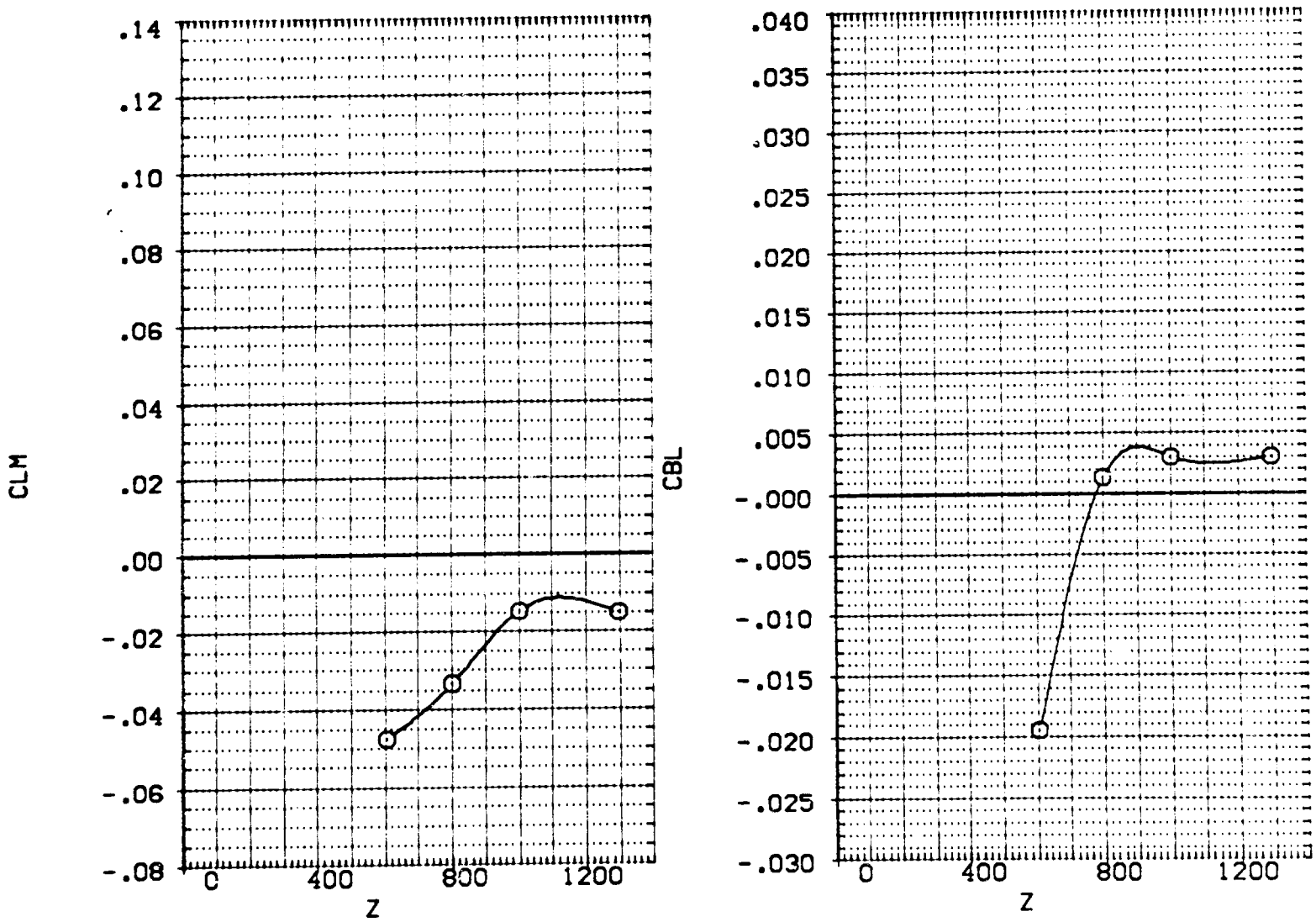


EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ086)

SYMBOL	X	PARAMETRIC VALUES			
O	.205	MACH	4.520	PTOTAL	80.000
		ALPHA	-5.000	BETA	.000
		DALPHA	-20.000	DBETA	5.000
		ELEVTR	.000	AILRT	10.000
		Y	.000		

SEE THE ASSOCIATED A DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

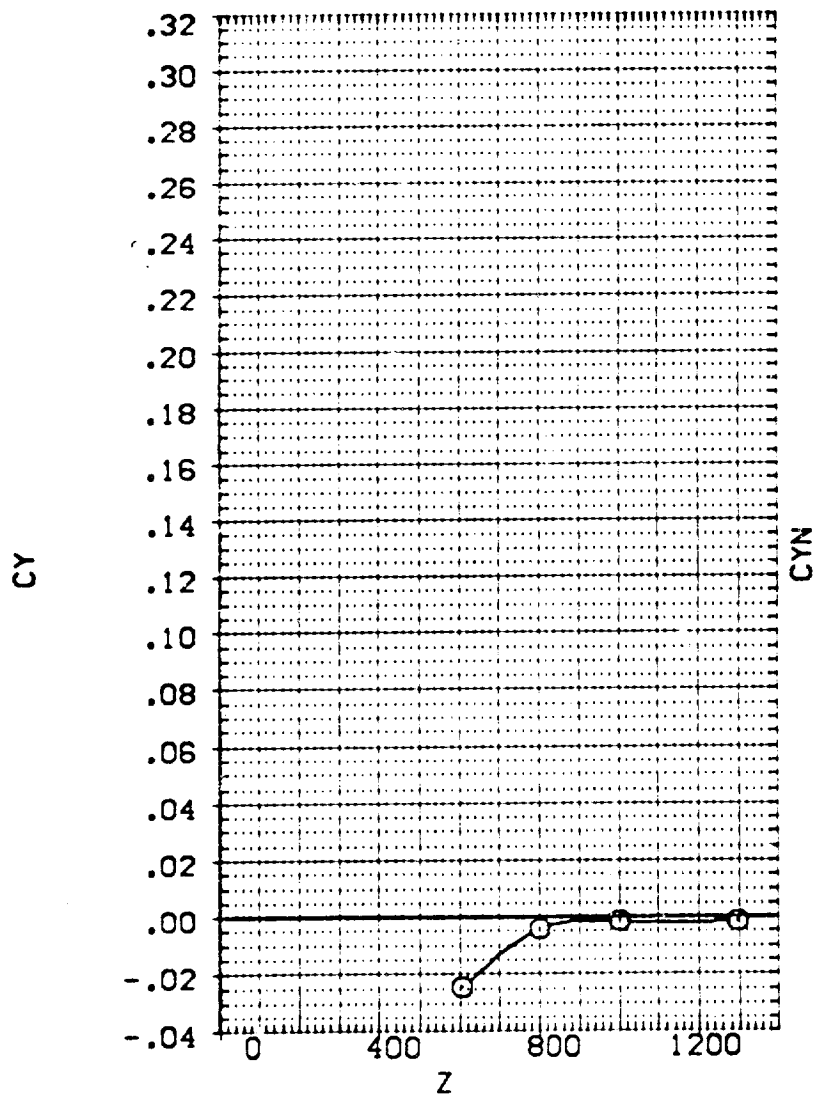


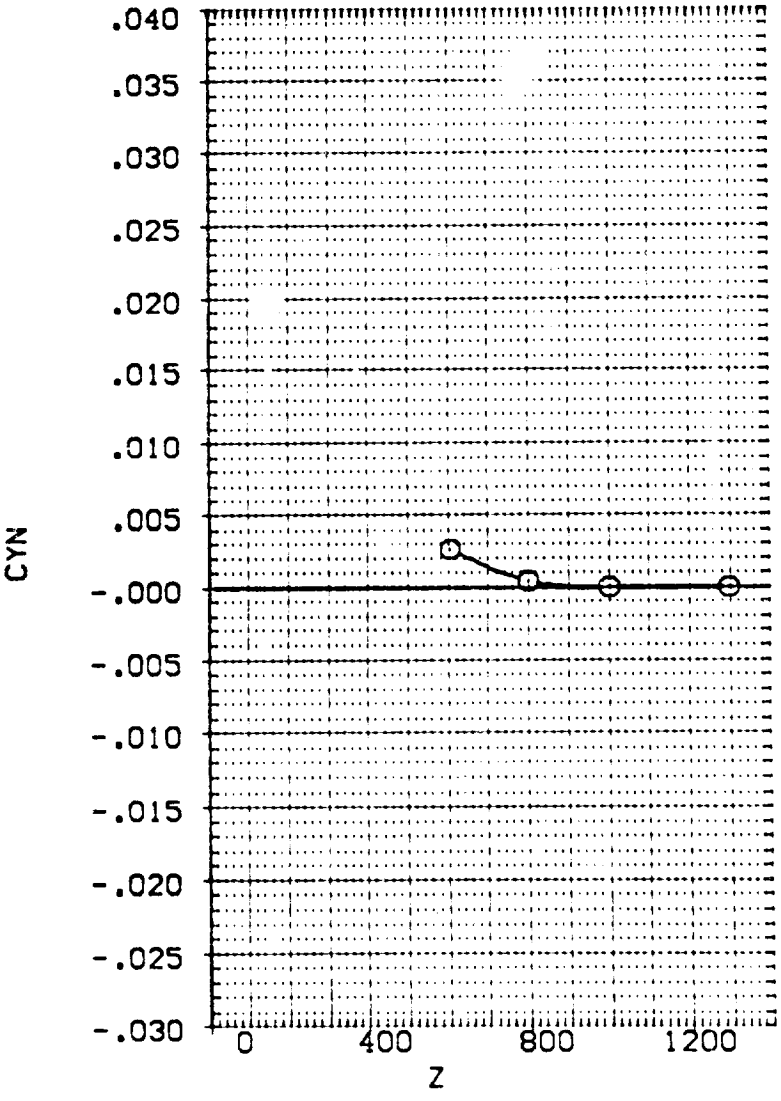
EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (R:J086)

SYMBOL	X	PARAMETRIC VALUES			
○	.205	MACH	4.520	PTOTAL	80.000
		ALPHA	-5.000	BETA	.000
		DALPHA	-20.000	DBETA	5.000
		ELEVTR	.000	AILRON	10.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



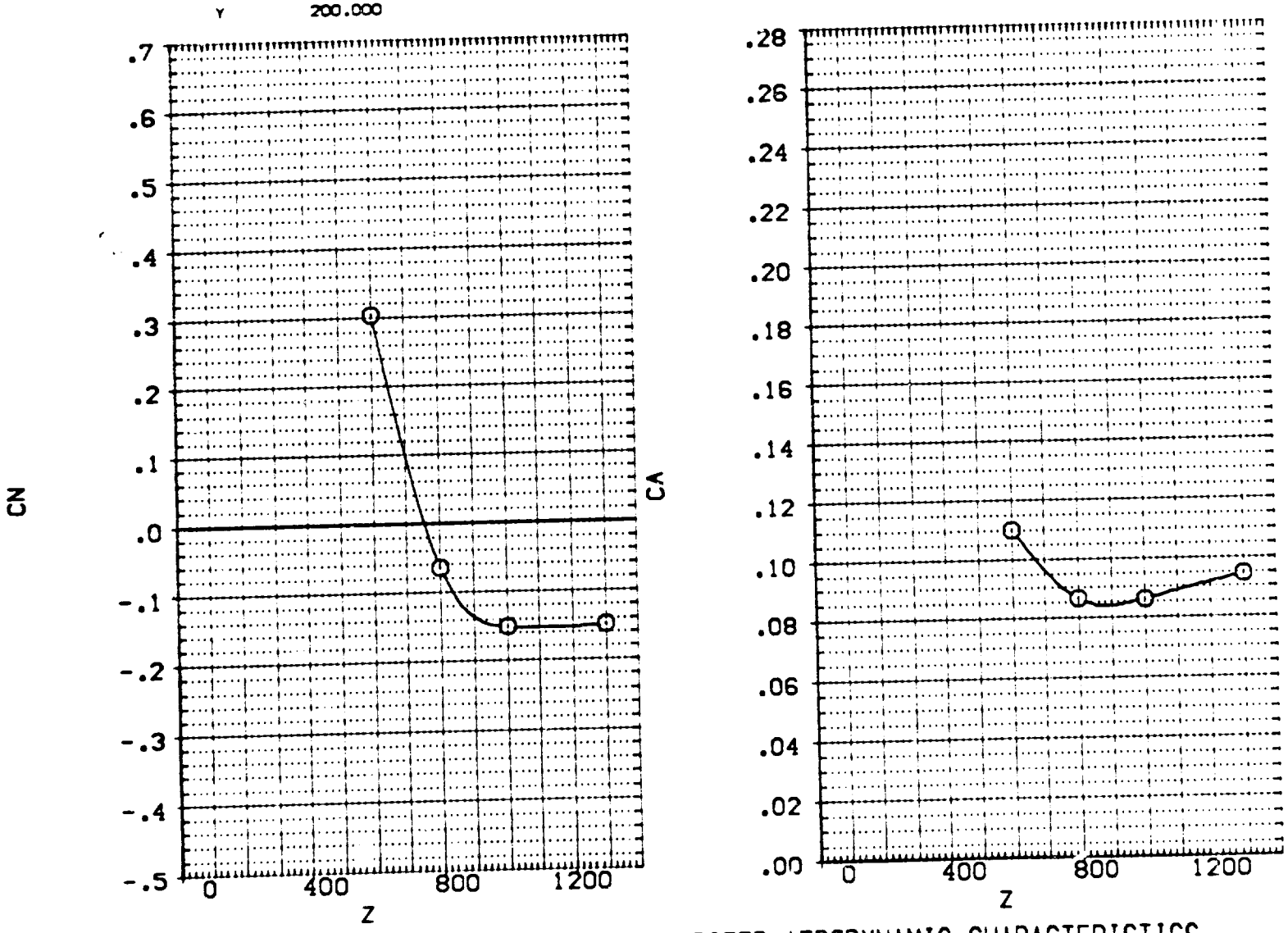


EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

!A13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ087)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

SYMBOL	X	PARAMETRIC VALUES			
O	,227	MACH	4.520	PTOTAL	80.000
		ALPHA	-5.000	BETA	.000
		DALPHA	-20.000	DBETA	5.000
		ELEVTR	.000	AILRON	10.000
		Y	200.000		

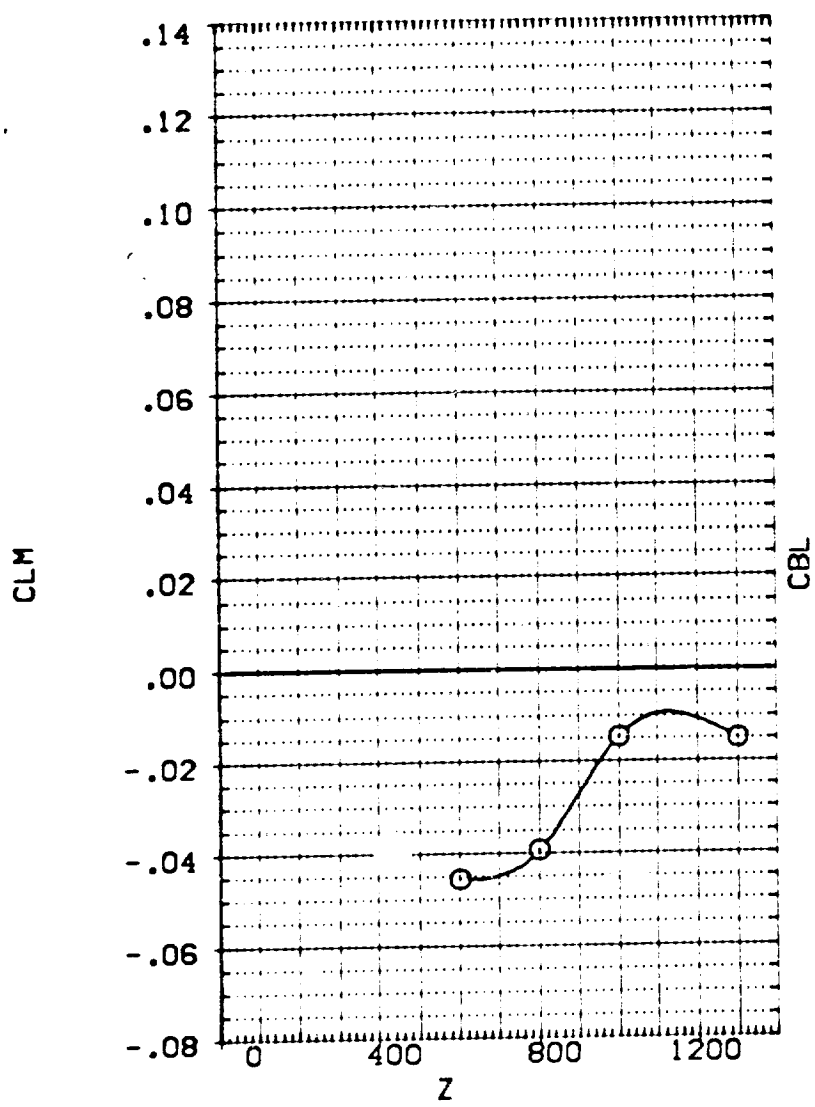


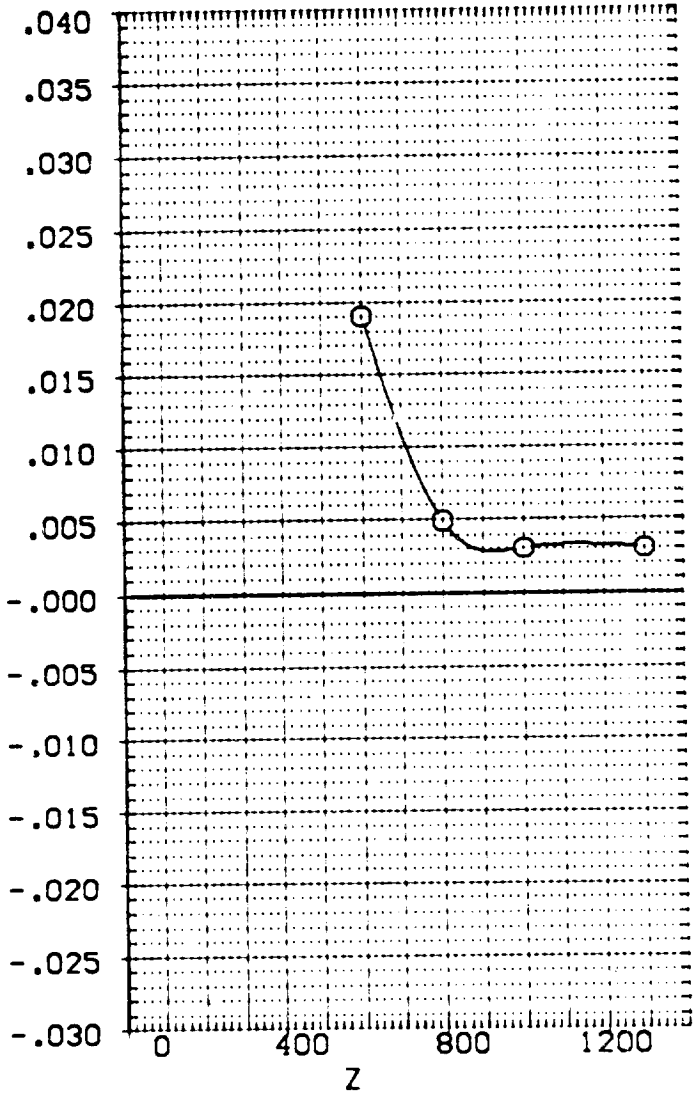
EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

!A13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ087)

SYMBOL	X	PARAMETRIC VALUES			
○	.227	MACH	4.520	PTOTAL	80.000
		ALPHA	-5.000	BETA	.000
		DALPHA	-20.000	DBETA	5.000
		ELEVTR	.000	AILRON	10.000
		Y	200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



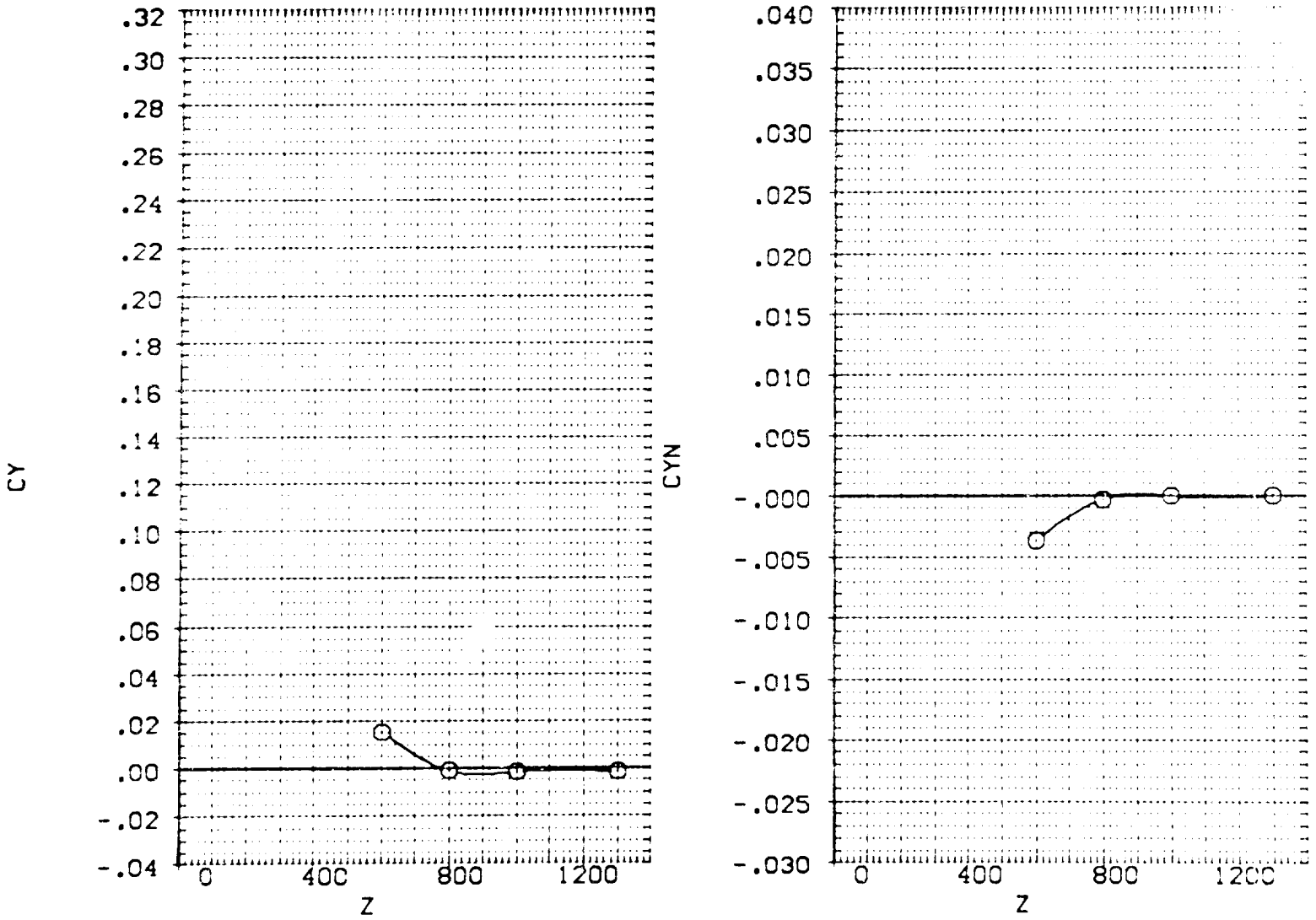


EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ087)

SYMBOL	x	PARAMETRIC VALUES			
○	.227	MACH	4.520	PTOTAL	80.000
		ALPHA	-5.000	BETA	.000
		DALPHA	-20.000	DBETA	5.000
		ELEVTR	.000	AILRON	10.000
		Y	200.000		

SEE THE ASSOCIATED DOCUMENT FOR ADDITIONAL CHARACTERISTICS AND INDIVIDUAL DATA SETS

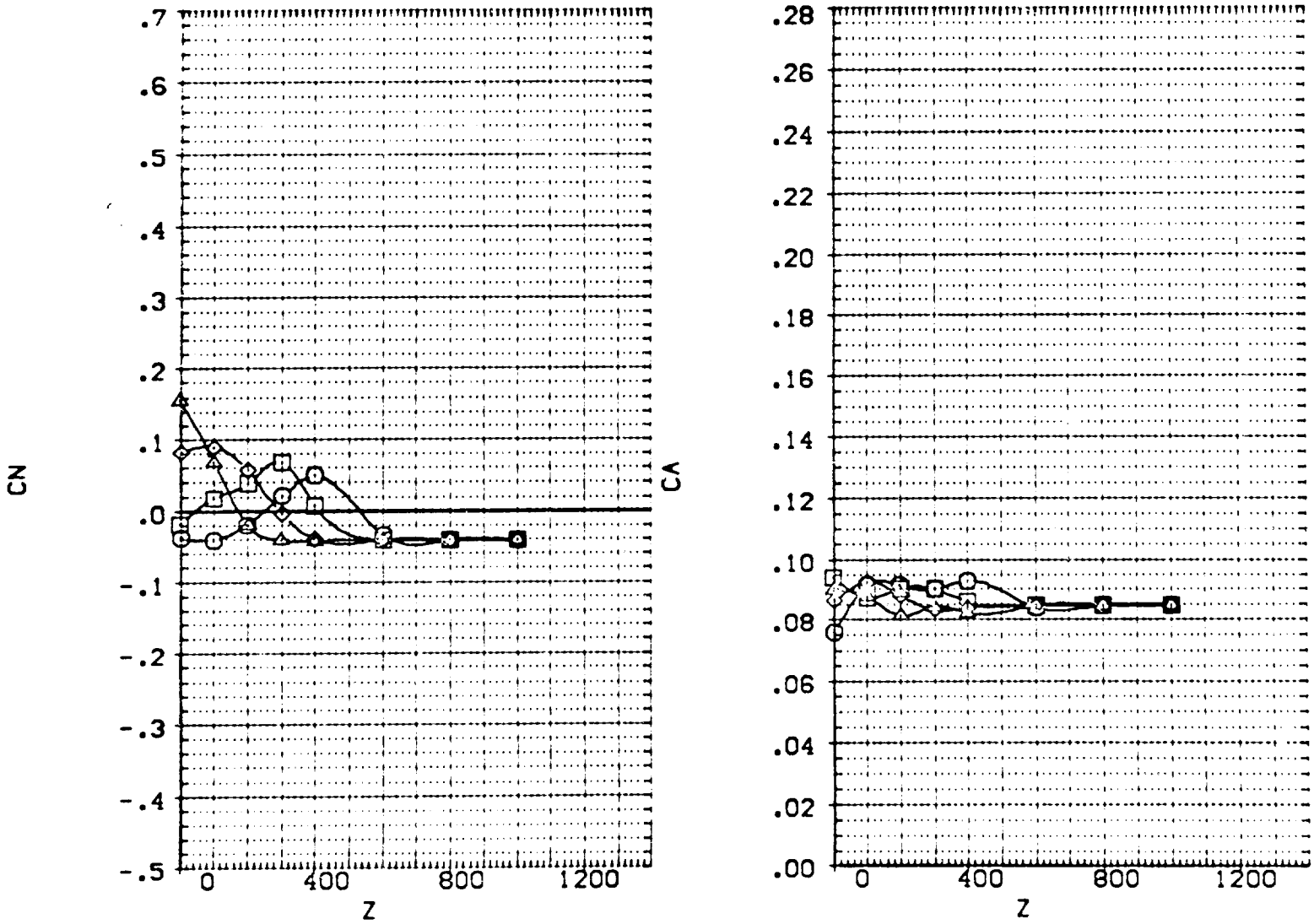


EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

[A13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ088)

SYMBOL	X		PARAMETRIC VALUES		
○	.123	MACH	4.530	PTOTAL	110.000
□	400.390	ALPHA	.000	BETA	.000
◇	800.600	DALPHA	.000	DBETA	.000
△	1200.800	ELEVTR	10.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

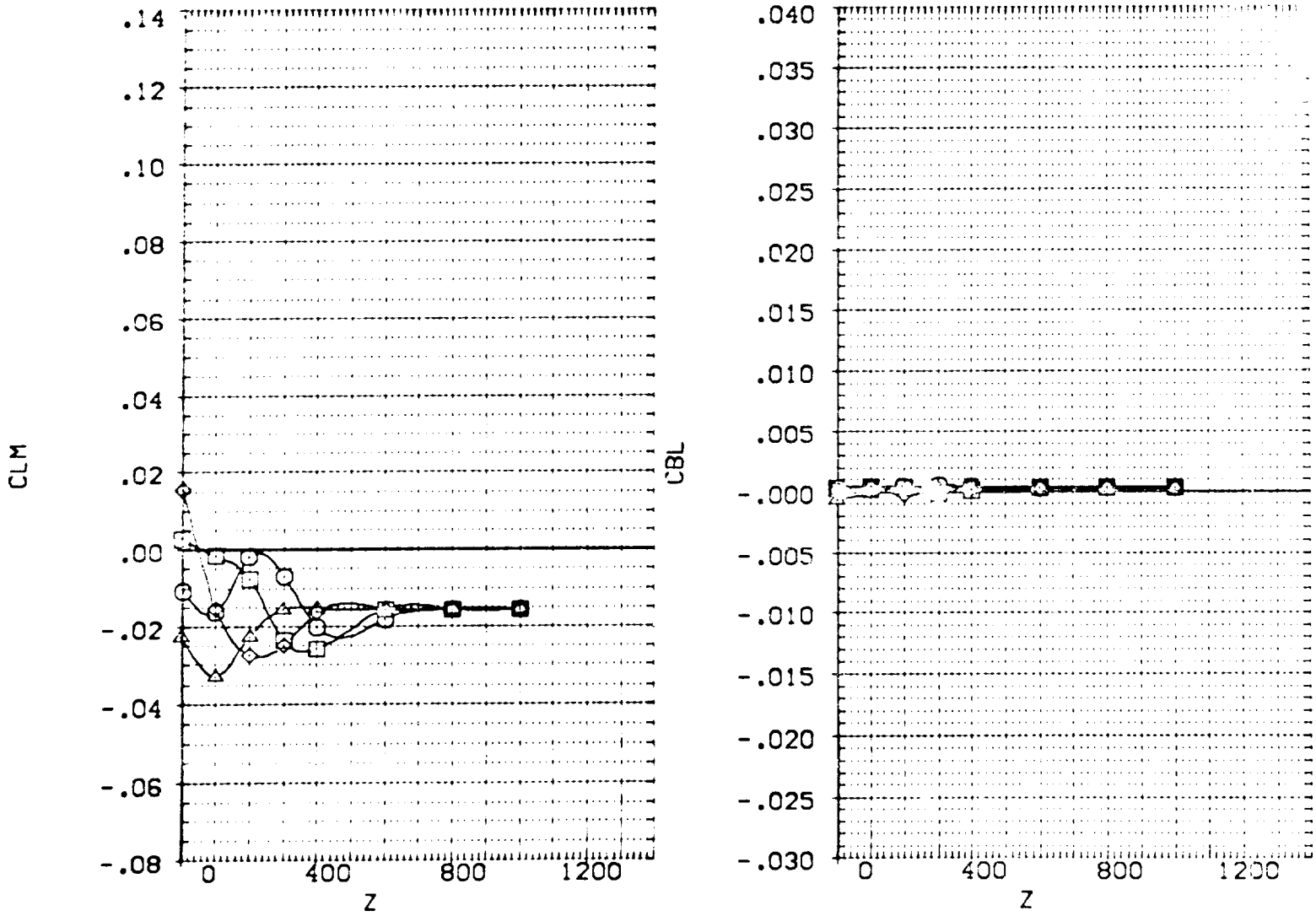


EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

!A!3.EXTERNAL TANK(T10)SEPARATING FROM ORB. C9 (RTJ088)

SYMBOL	X		PARAMETRIC VALUES		
○	.123	MACH	4.530	PTOTAL	110.000
◇	400.390	ALPHA	.000	BETA	.000
□	800.600	DALPHA	.000	DBETA	.000
△	1200.800	ELEVTR	10.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIA
DOCUMENT FOR A
CHARACTERISTICS OR
INDIVIDUAL DATA

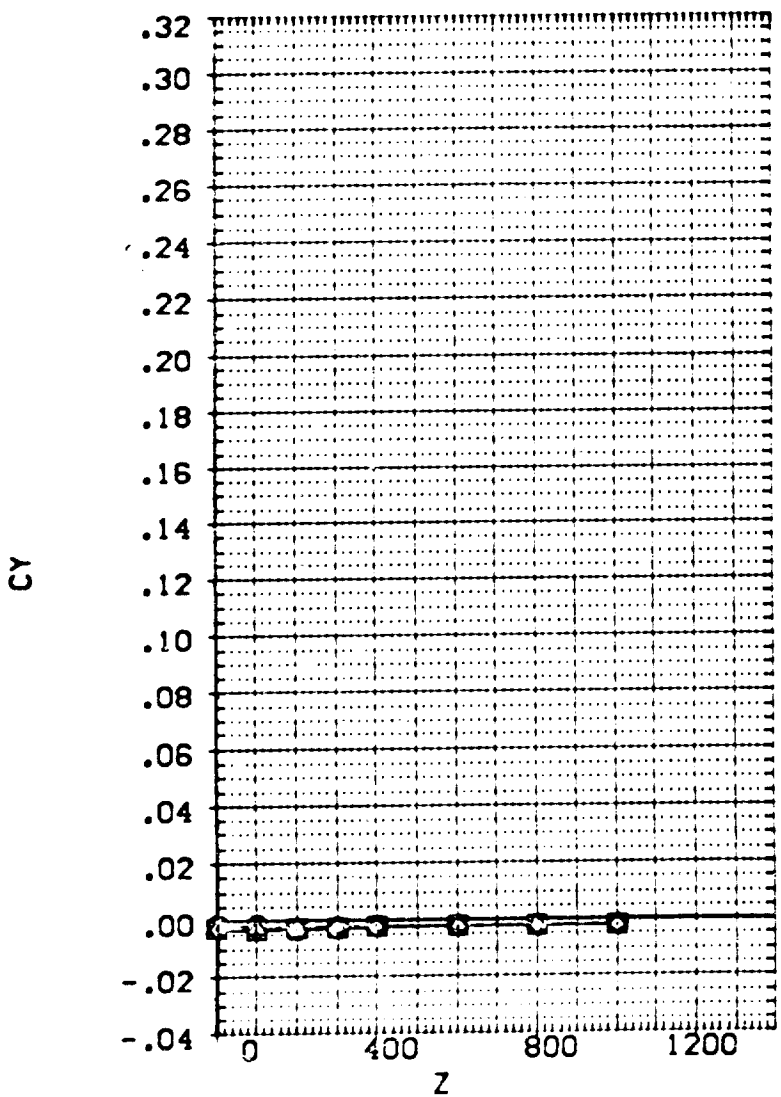


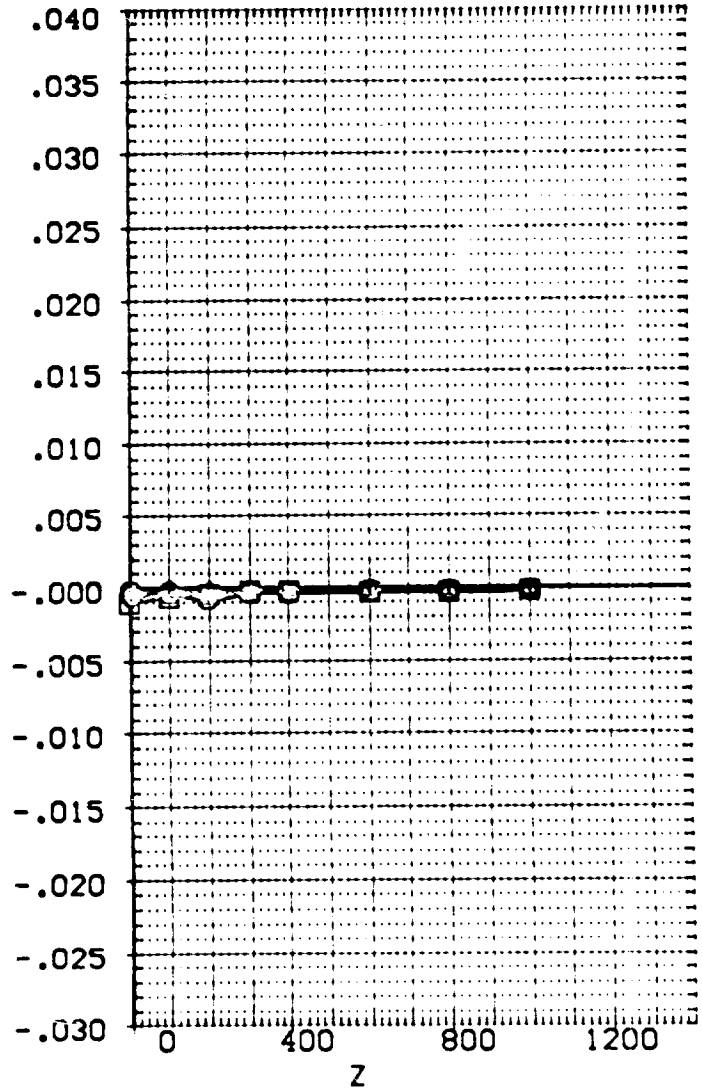
EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

!A13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ088)

SYMBOL	X		PARAMETRIC VALUES		
	.123	MACH	4.530	PTOTAL	110.000
	400.390	ALPHA	.000	BETA	.000
	800.600	DALPHA	.000	DBETA	.000
	1200.800	ELEVTR	10.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



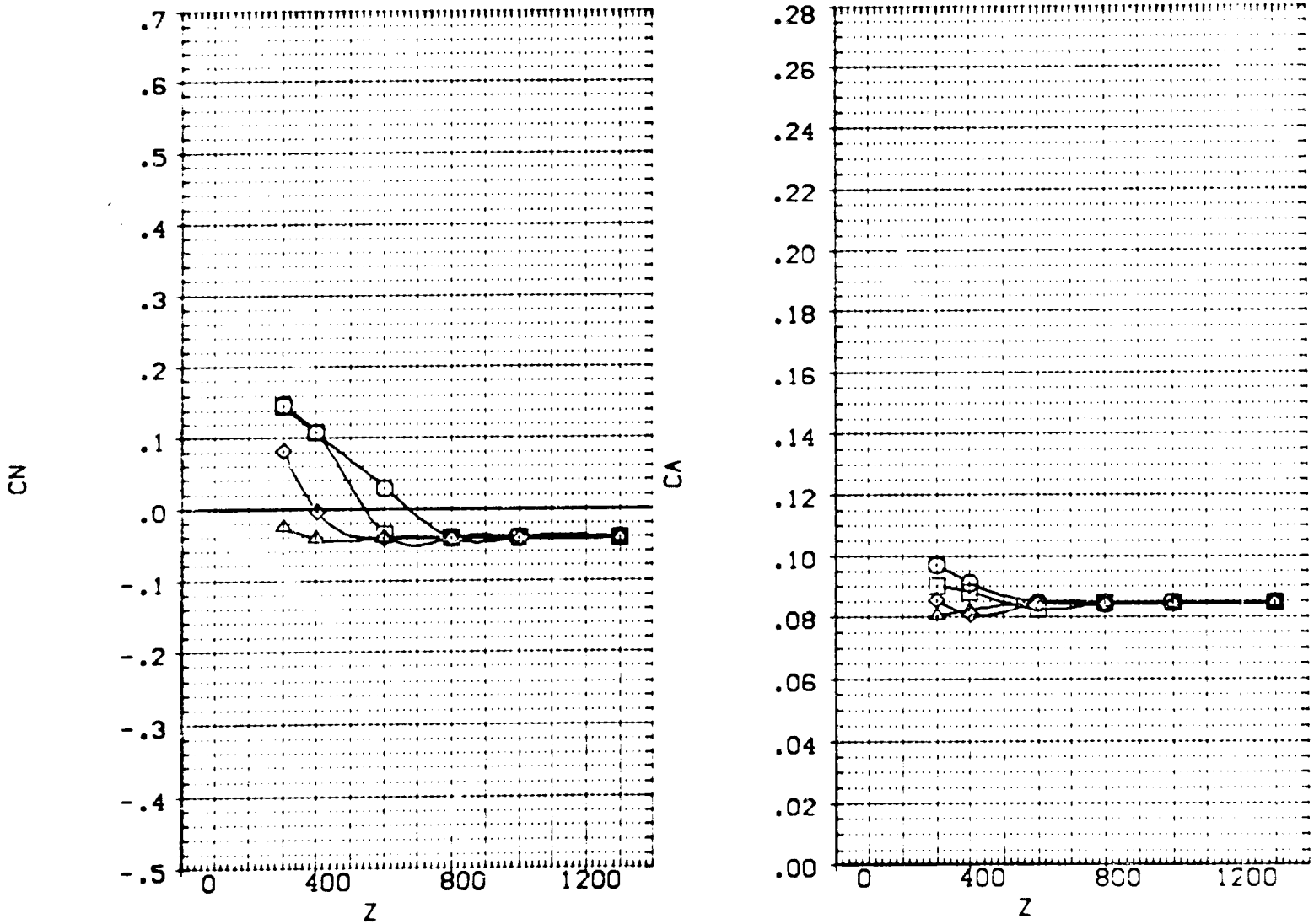


EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

!A!3.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ089)

SYMBOL	X	PARAMETRIC VALUES			
○	.185	MACH	4.530	PTOTAL	110.000
□	400.440	ALPHA	.000	BETA	.000
◇	800.750	DALPHA	-10.000	DBETA	.000
△	1200.900	ELEVTR	10.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED [illegible] DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

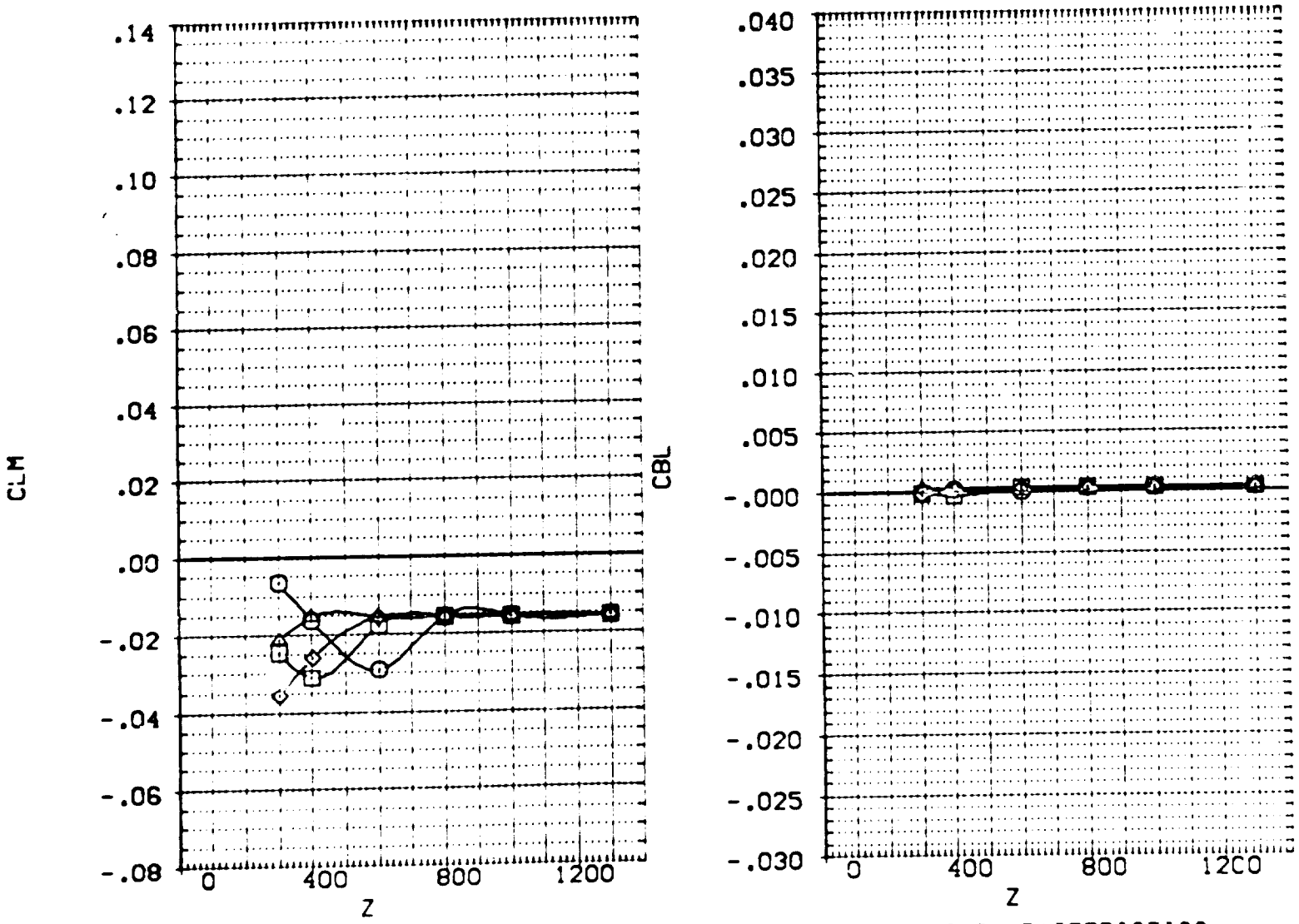


EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

!A13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ089)

SYMBOL	X		PARAMETRIC VALUES		
○	.185	MACH	4.530	PTOTAL	110.000
□	400.440	ALPHA	.000	BETA	.000
◇	800.750	DALPHA	-10.000	DBETA	.000
△	1200.900	ELEVTR	10.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

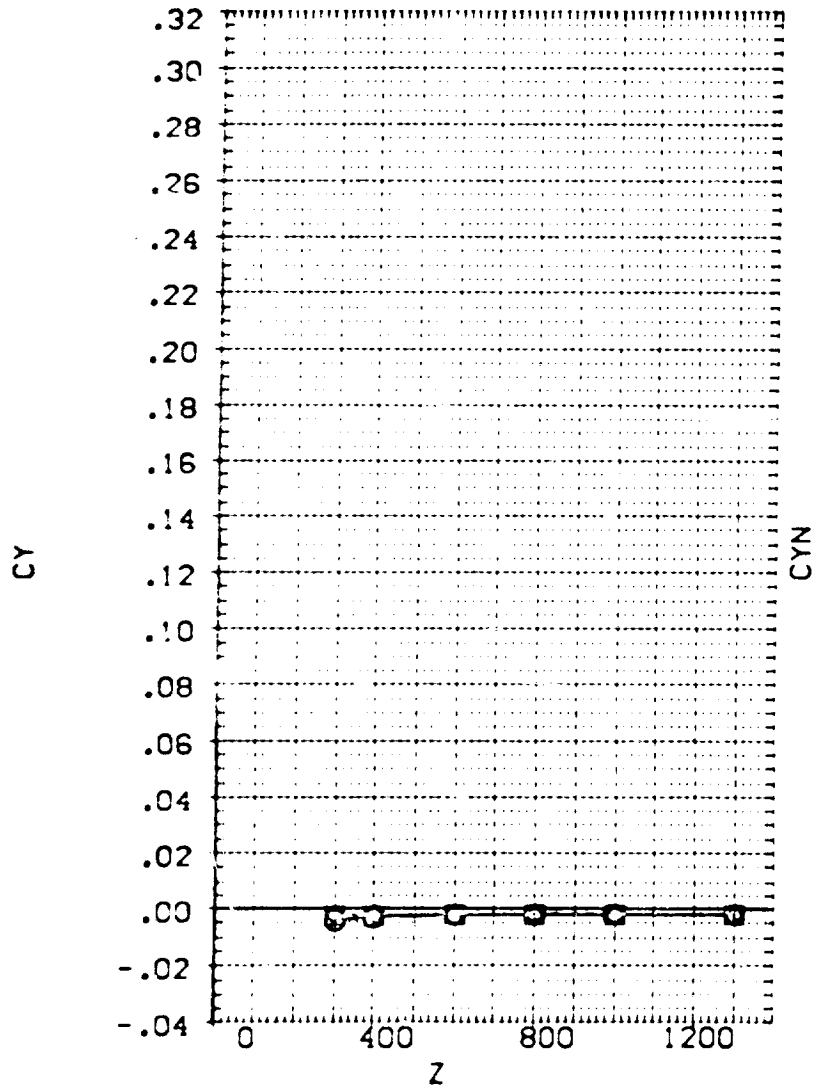


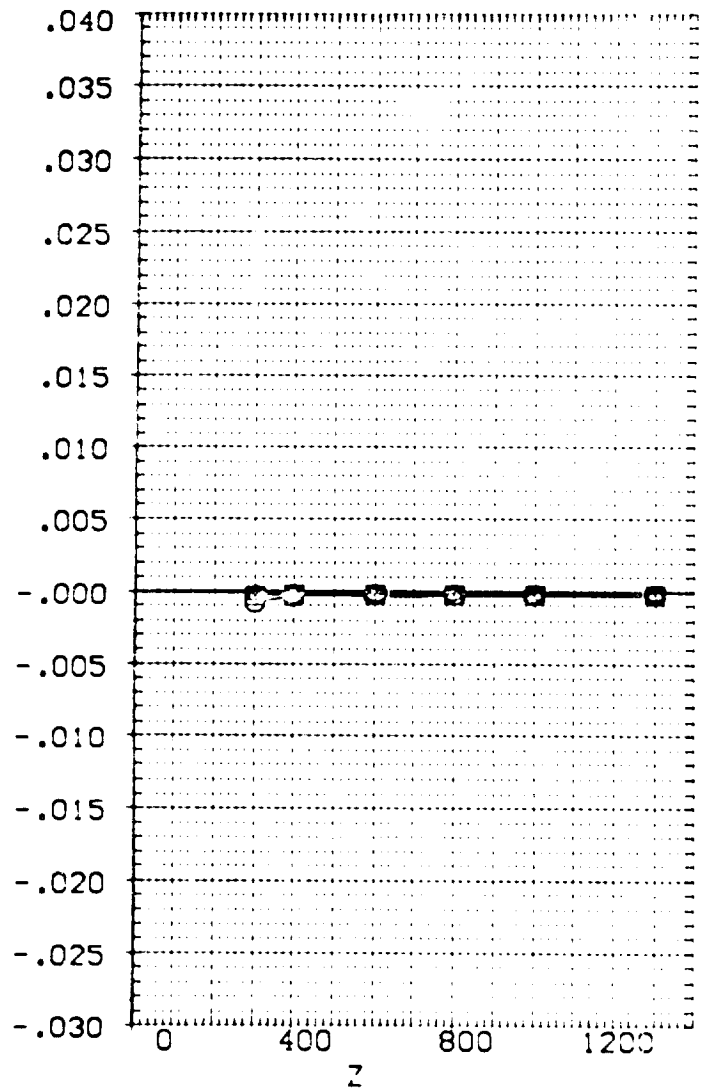
EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

[A13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ089)

SYMBOL	X		PARAMETRIC VALUES		
○	.185	MACH	4.530	PTOTAL	110.000
□	400.440	ALPHA	.000	BETA	.000
◇	800.750	DALPHA	-10.000	DBETA	.000
△	1200.900	ELEVTR	10.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED DOCUMENT FOR REFERENCE CHARACTERISTICS AND INDIVIDUAL DATASETS



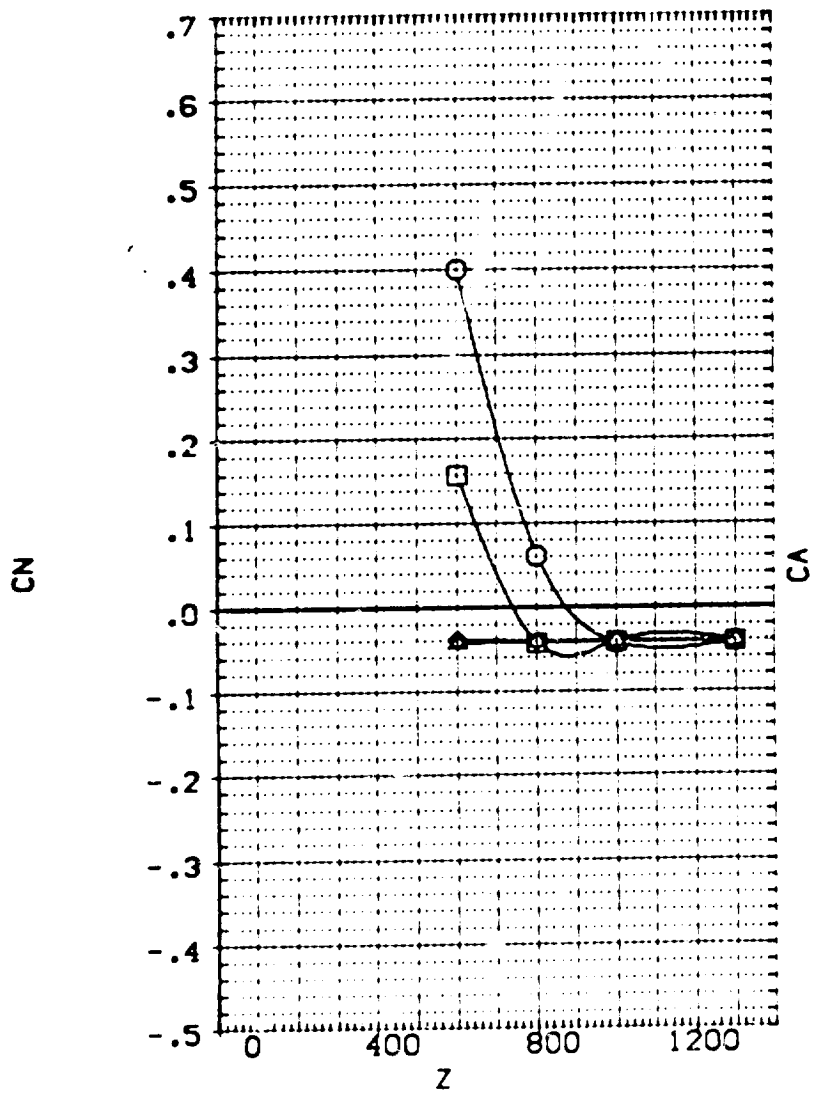


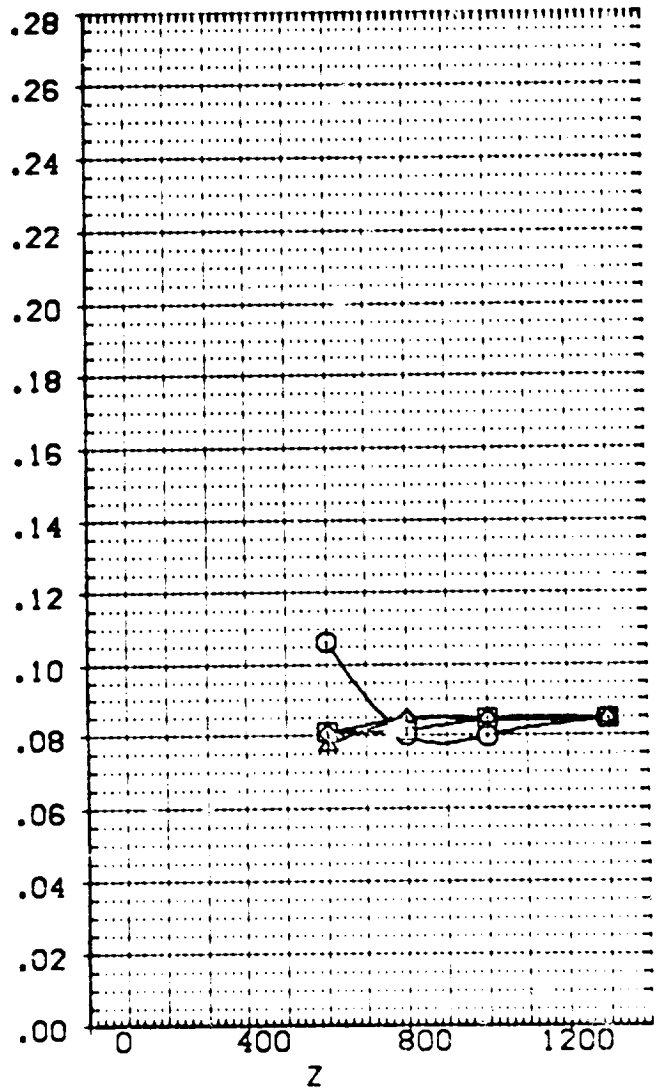
EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

!A13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ090)

SYMBOL	X		PARAMETRIC VALUES		
○	-.643	MACH	4.530	PTOTAL	110.000
□	401.500	ALPHA	.000	BETA	.000
◇	800.470	DALPHA	-20.000	DBETA	.000
△	1200.800	ELEVTR	10.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



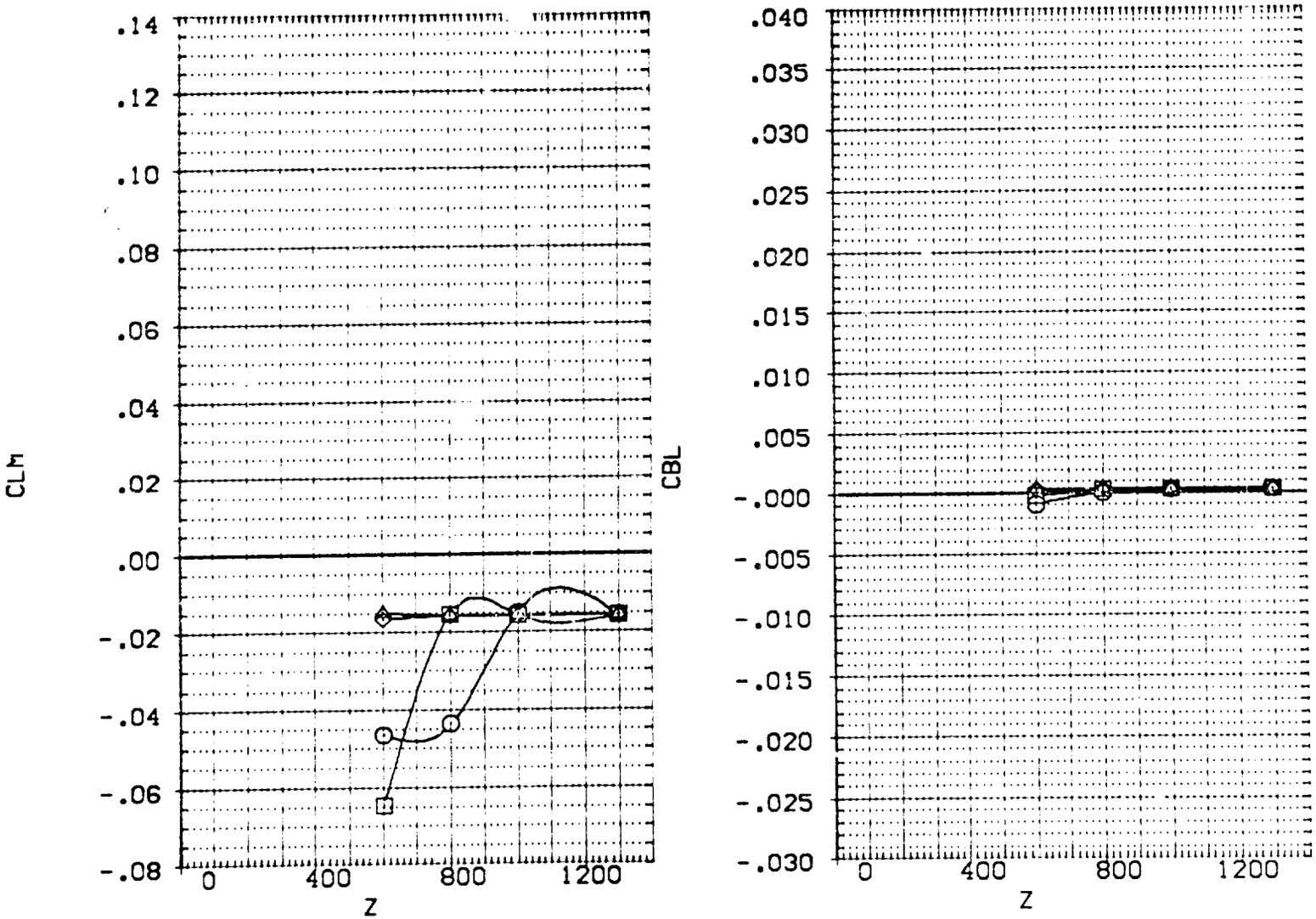


EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ090)

SYMBOL	X		PARAMETRIC VALUES		
○	-.643	MACH	4.530	PTOTAL	1.0.000
◇	401.500	ALPHA	.000	BETA	.000
□	800.970	DALPHA	-20.000	DBETA	.000
△	1200.800	ELEVTR	10.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED [illegible] DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

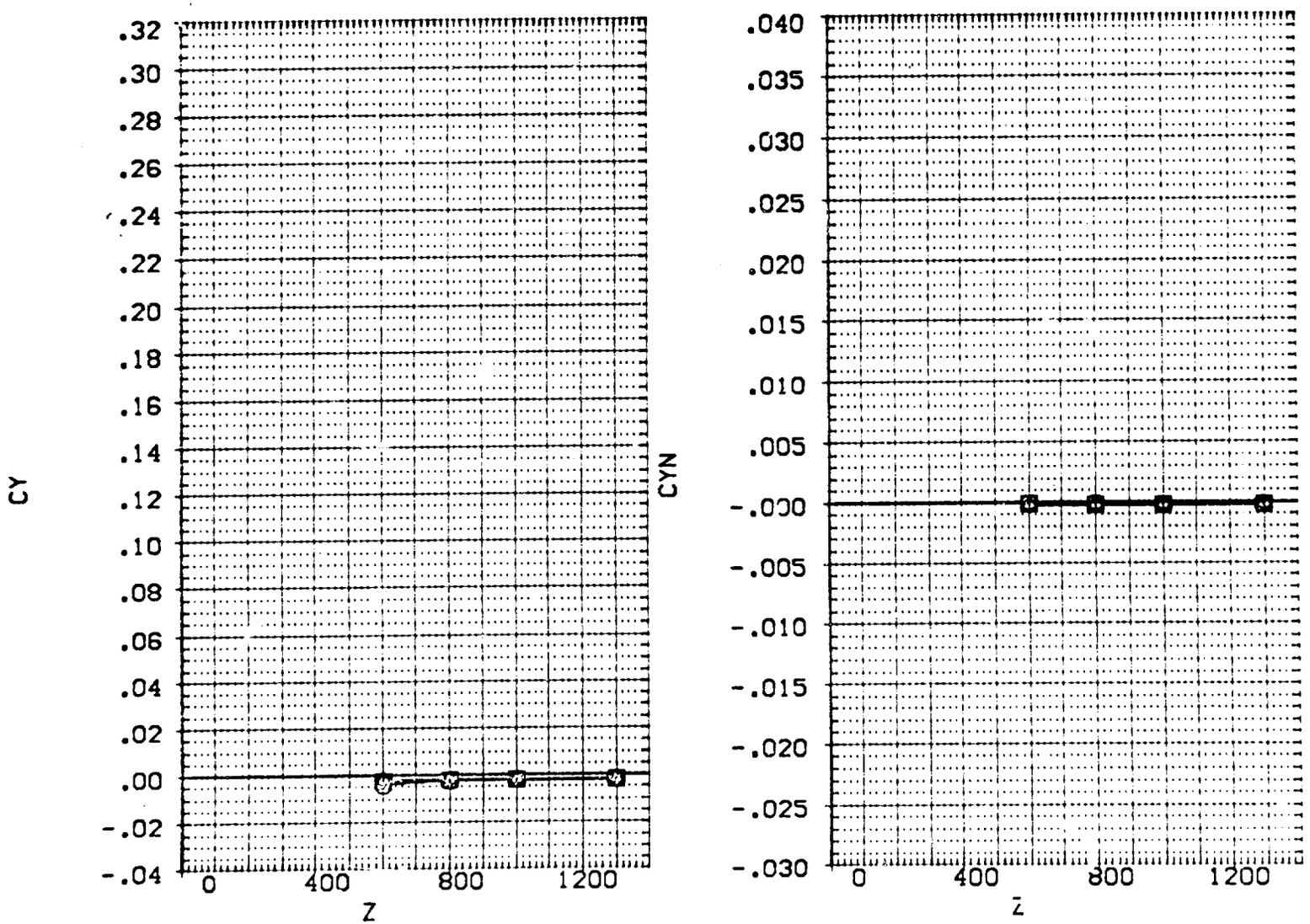


EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ090)

SYMBOL	X		PARAMETRIC VALUES		
○	-.643	MACH	4.530	PTOTAL	110.000
◇□	401.500	ALPHA	.000	BETA	.000
◇	800.970	DALPHA	-20.000	DBETA	.000
△	1200.800	ELEVTR	10.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

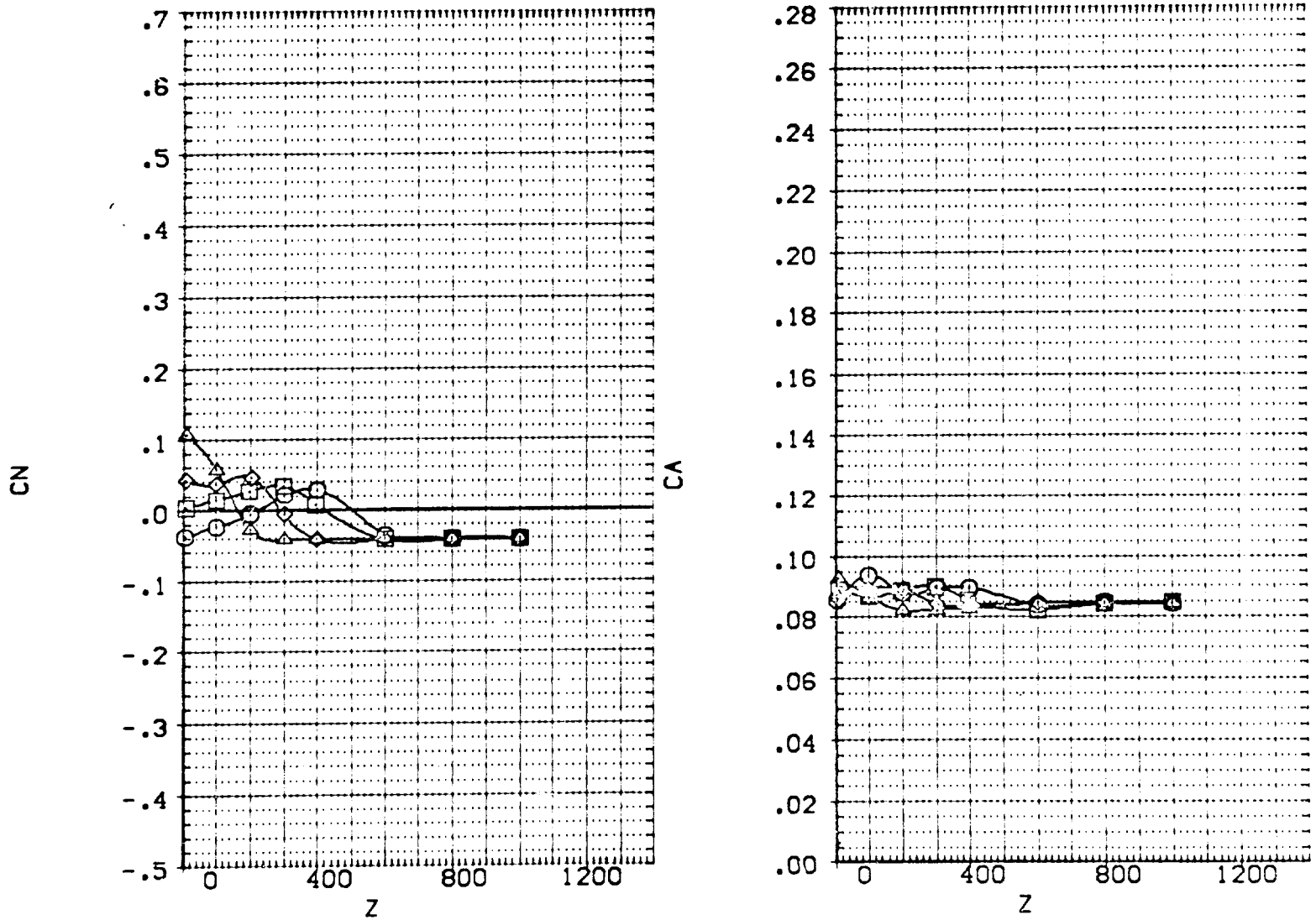


EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ091)

SYMBOL	X		PARAMETRIC VALUES		
○	.097	MACH	4.530	PTOTAL	110.000
□	400.350	ALPHA	.000	BETA	.000
◇	800.660	DALPHA	.000	DBETA	.000
△	1200.700	ELEVTR	10.000	AILRON	.000
		Y	200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

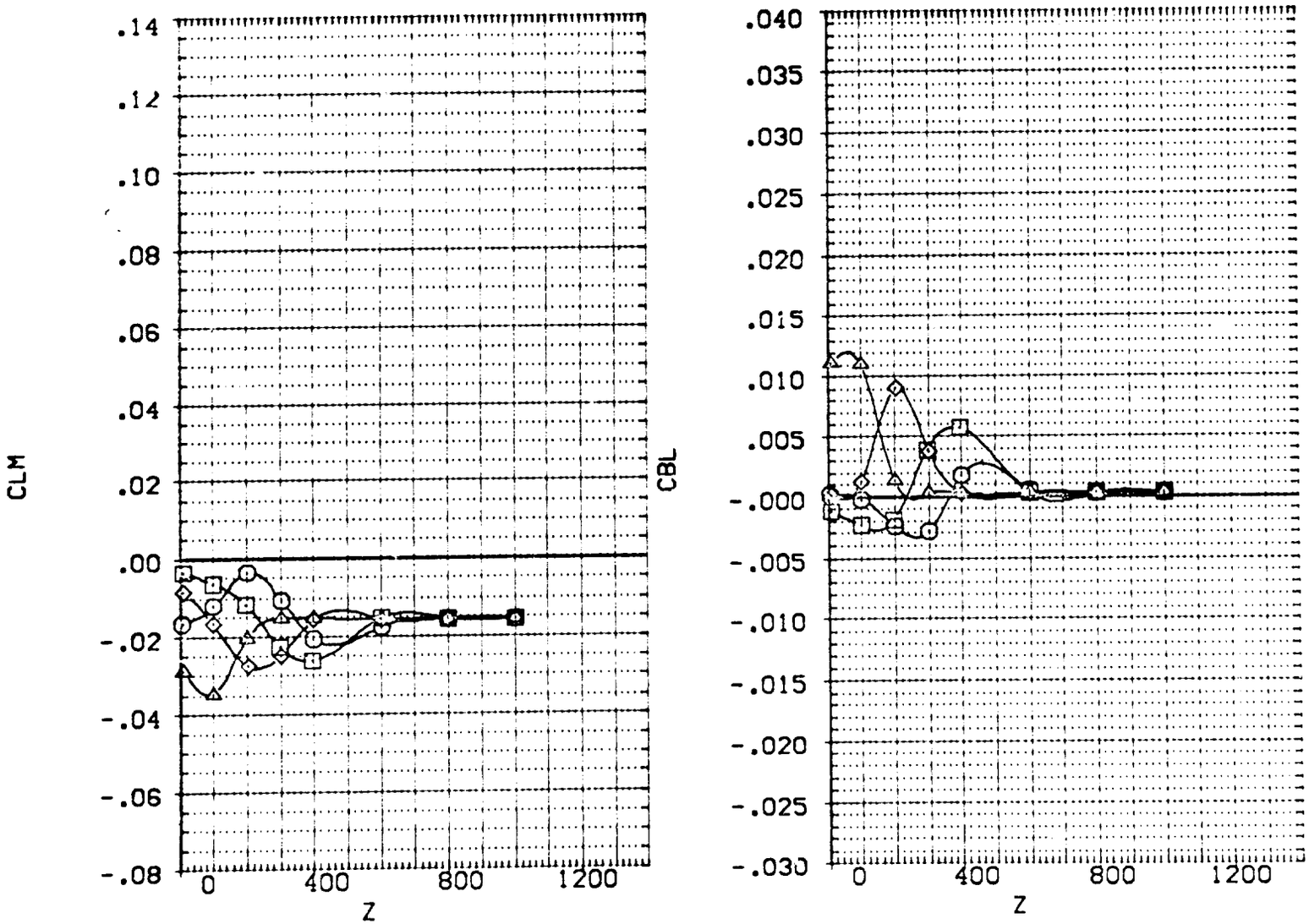


EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ091)

SYMBOL	X		PARAMETRIC VALUES		
○	.097	MACH	4.530	PTOTAL	110.000
□	400.350	ALPHA	.000	BETA	.000
◇	800.660	DALPHA	.000	DBETA	.000
△	1200.700	E EVTR	10.000	AILRON	.000
		Y	200.000		

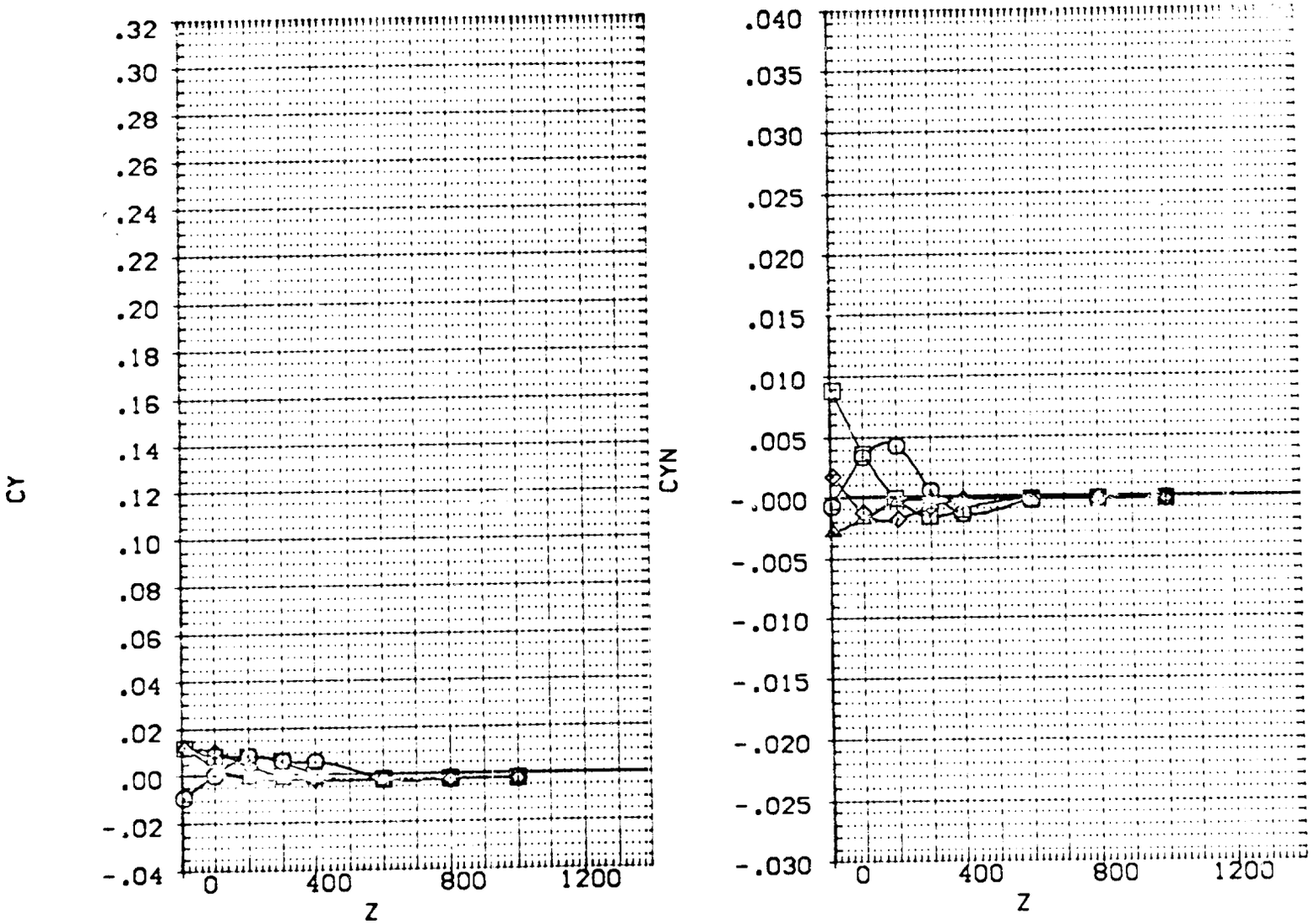
SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

SYMBOL	X		PARAMETRIC VALUES		
○	.097	MACH	4.530	PTOTAL	110.000
□	400.350	ALPHA	.000	BETA	.000
◇	800.660	DALPHA	.000	DBETA	.000
△	1200.700	ELEVTR	10.000	AILRON	.000
		Y	200.000		

SEE THE ASSOCIATED DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATA SETS

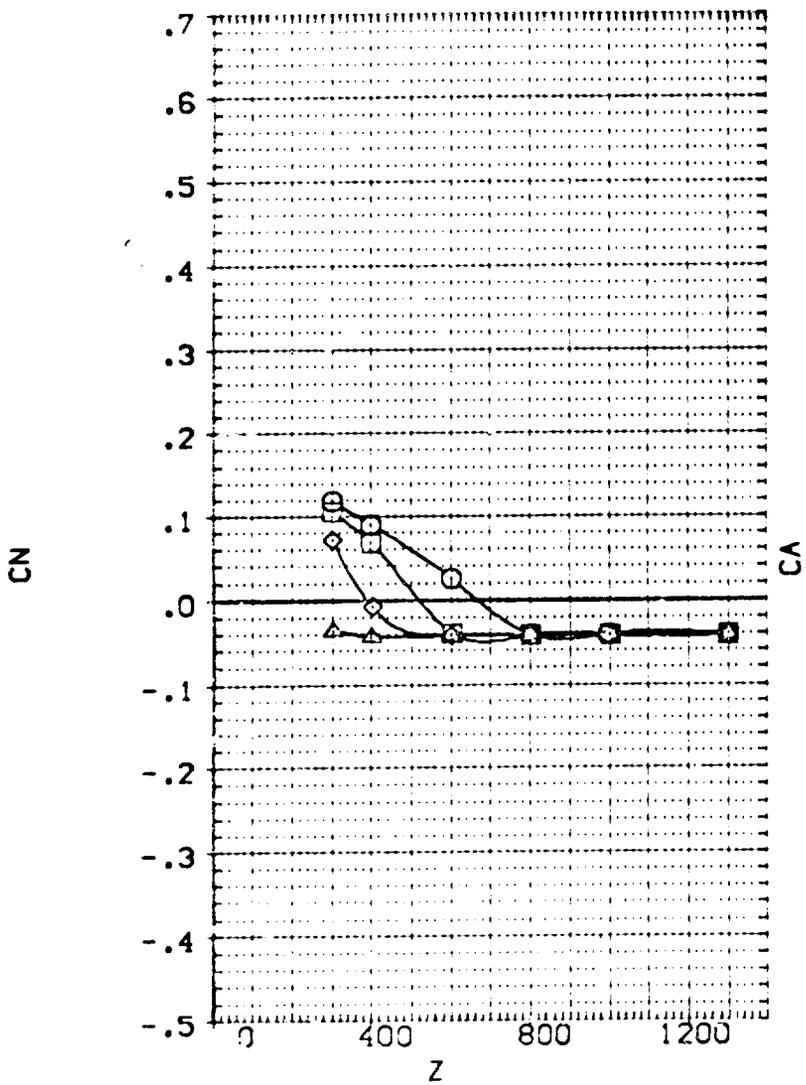


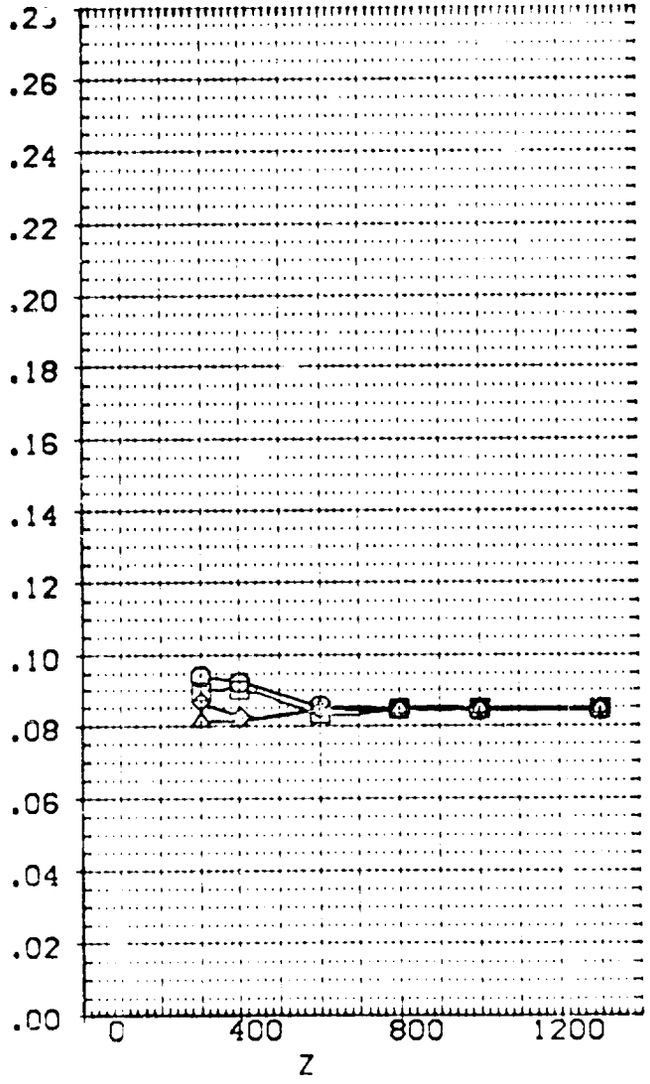
EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ092)

SYMBOL	X		PARAMETRIC VALUES		
○	.115	MACH	4.530	PTOTAL	110.000
	400.440	ALPHA	.000	BETA	.000
◇	800.600	DALPHA	-10.000	DBETA	.000
△	1200.800	ELEVTR	10.000	AILRON	.000
		Y	200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



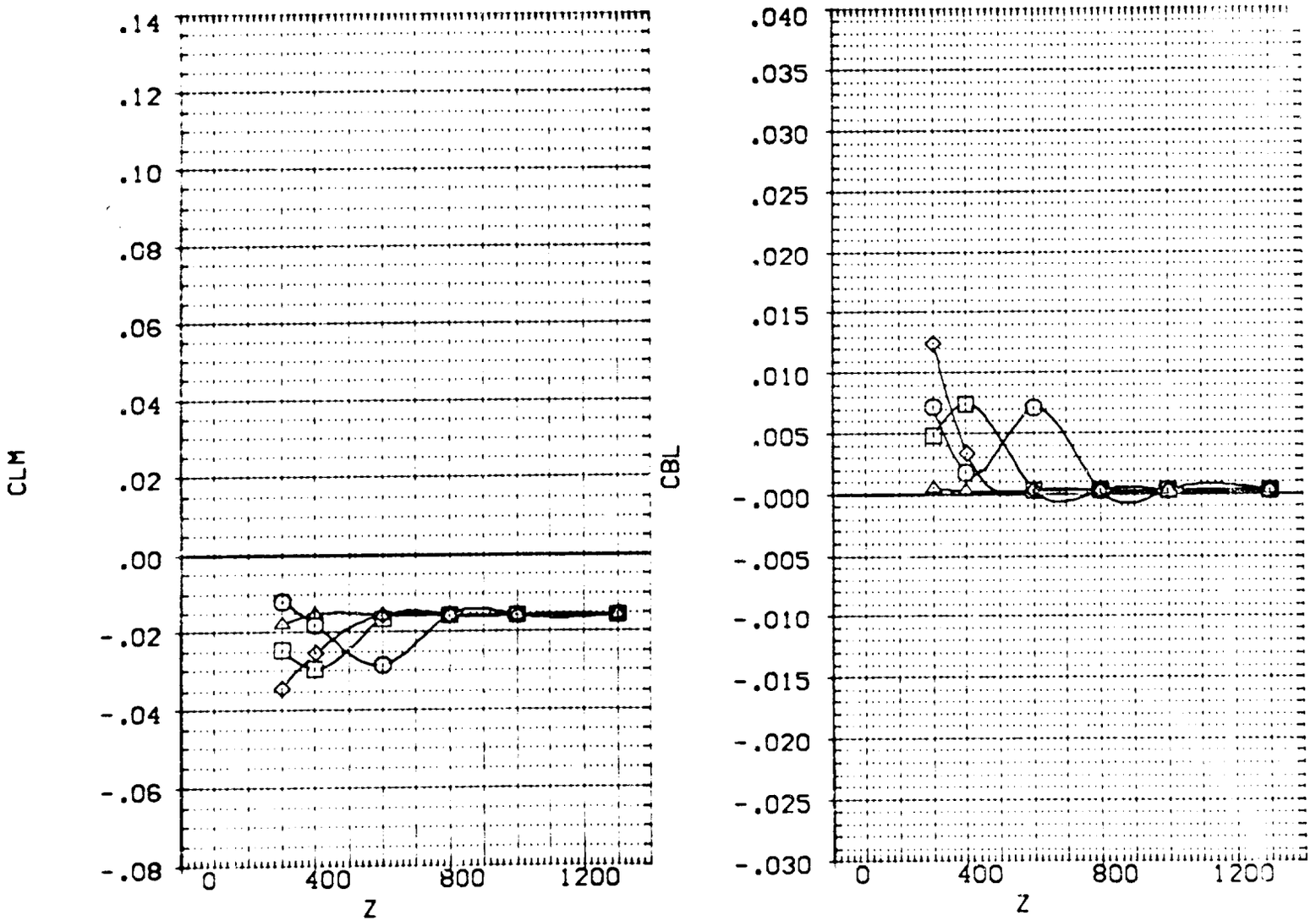


EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ092)

SYMBOL	X		PARAMETRIC VALUES		
○	.115	MACH	4.530	PTOTAL	110.000
□	400.440	ALPHA	.000	BETA	.000
◇	800.600	DALPHA	-10.000	DBETA	.000
△	1200.800	ELEVTR	10.000	AILRON	.000
		Y	200.000		

SEE THE ASSOCIATED DOCUMENT FOR ADDITIONAL CHARACTERISTICS FOR INDIVIDUAL DATA SETS

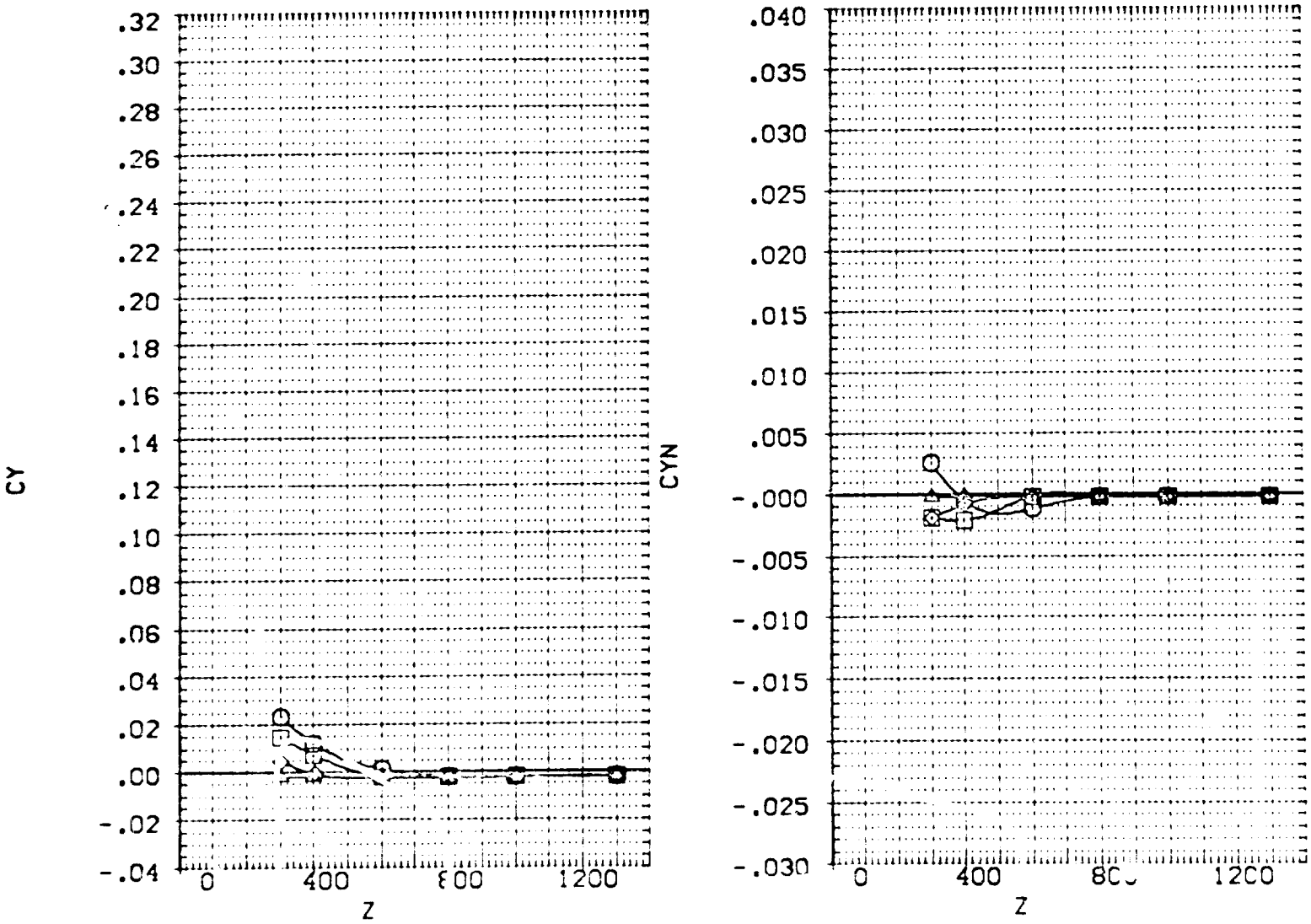


EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

:A13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ092)

SYMBOL	X		PARAMETRIC VALUES		
○	.115	MACH	4.530	PTOTAL	110.000
□	400.440	ALPHA	.000	BETA	.000
◇	800.600	DALPHA	-10.000	DBETA	.000
△	1200.800	ELEVTR	10.000	AILRON	.000
		Y	200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

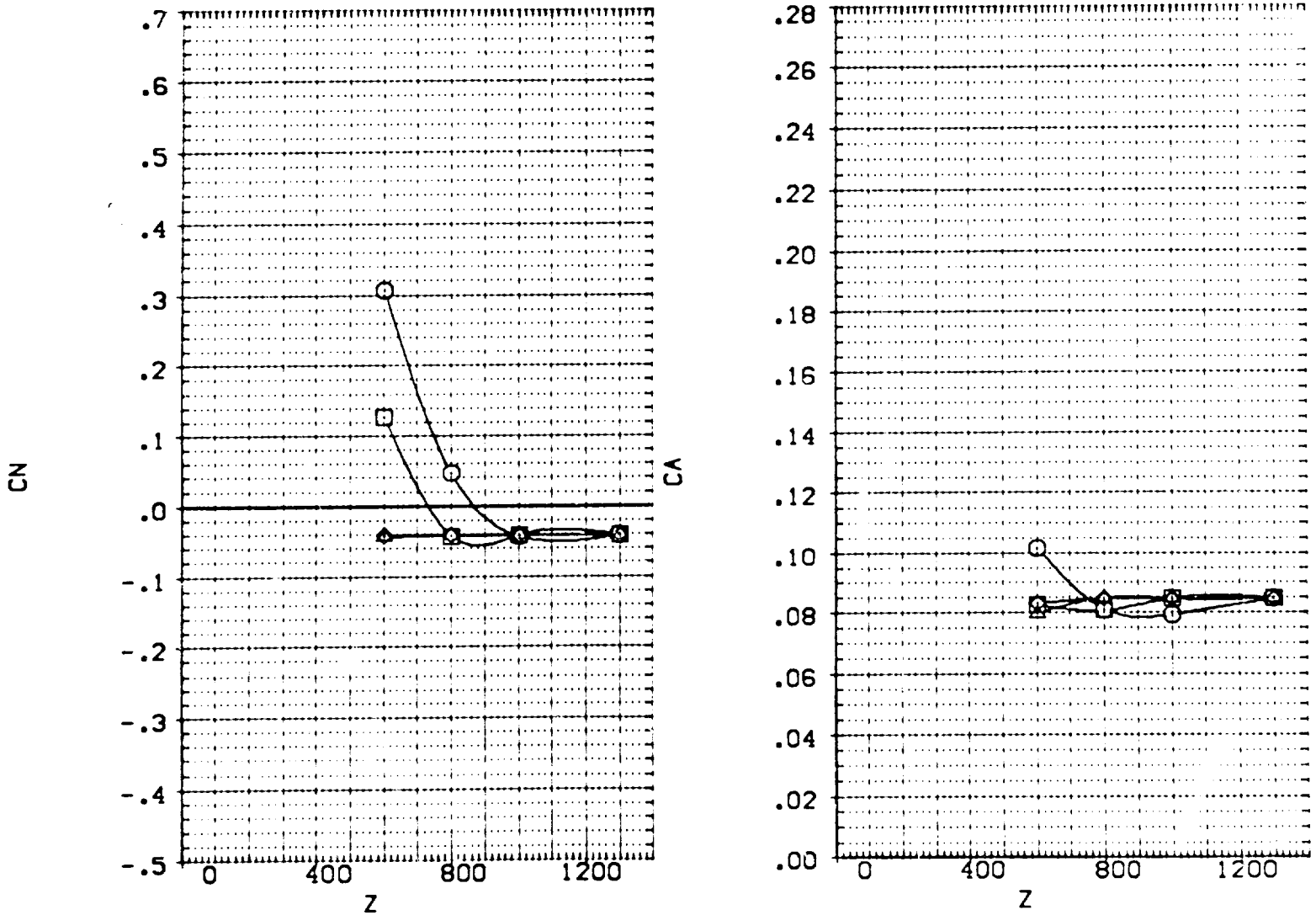


EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

!A13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ093)

SYMBOL	X		PARAMETRIC VALUES		
○	-.395	MACH	4.530	PTOTAL	110.000
□	401.110	ALPHA	.000	BETA	.000
◇	800.890	DALPHA	-20.000	DBETA	.000
△	1200.900	ELEVTR	10.000	AILRON	.000
		Y	200.000		

SEE THE ASSOCIATED DOCUMENT FOR RELATED CHARACTERISTICS FOR INDIVIDUAL DATASETS

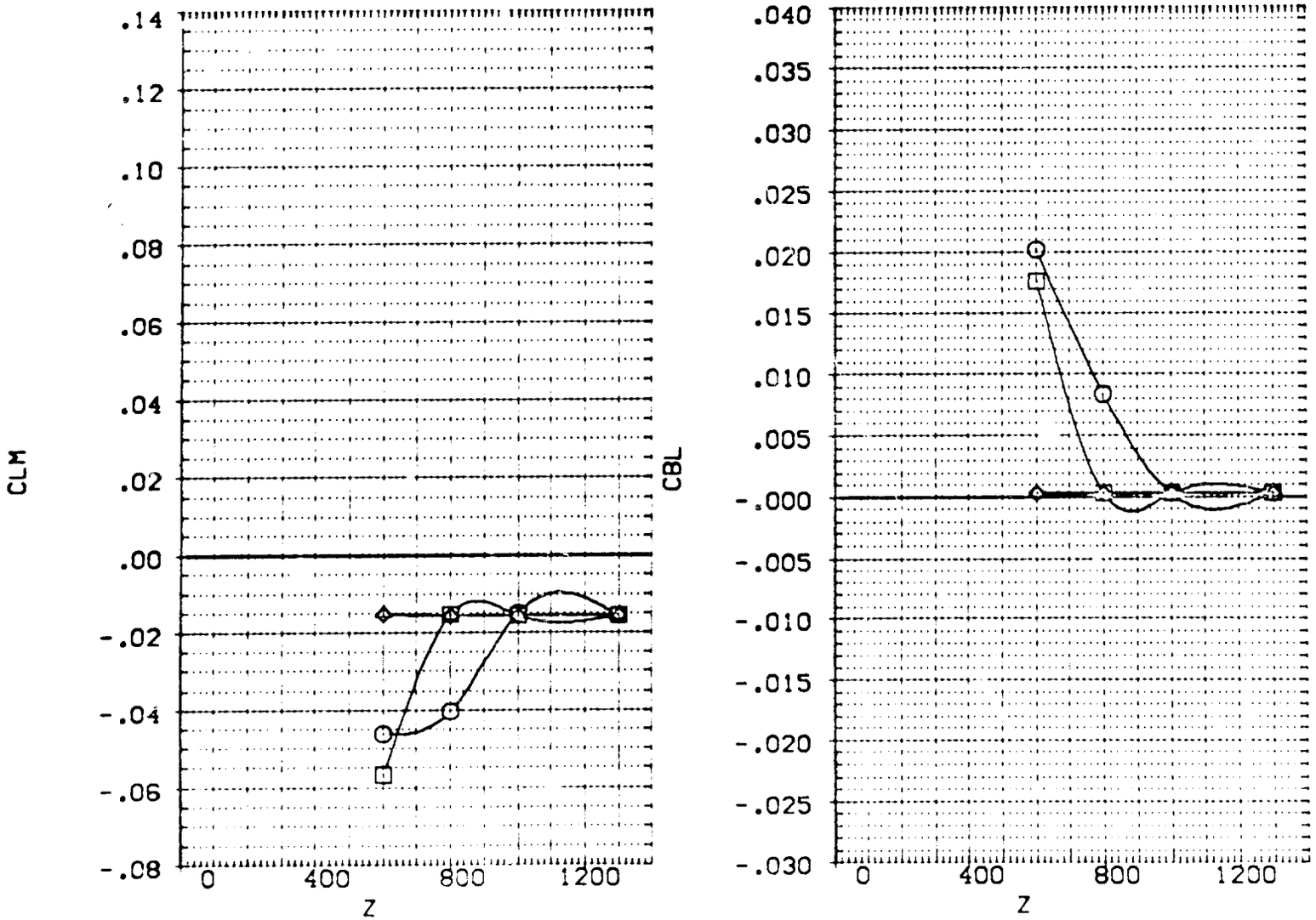


EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

[A13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ093)

SYMBOL	X		PARAMETRIC VALUES		
○	-.395	MACH	4.530	PTOTAL	110.000
□	401.110	ALPHA	.000	BETA	.000
◇	800.890	DALPHA	-20.000	DBETA	.000
△	1200.900	ELEVTR	10.000	AILRON	.000
		Y	200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

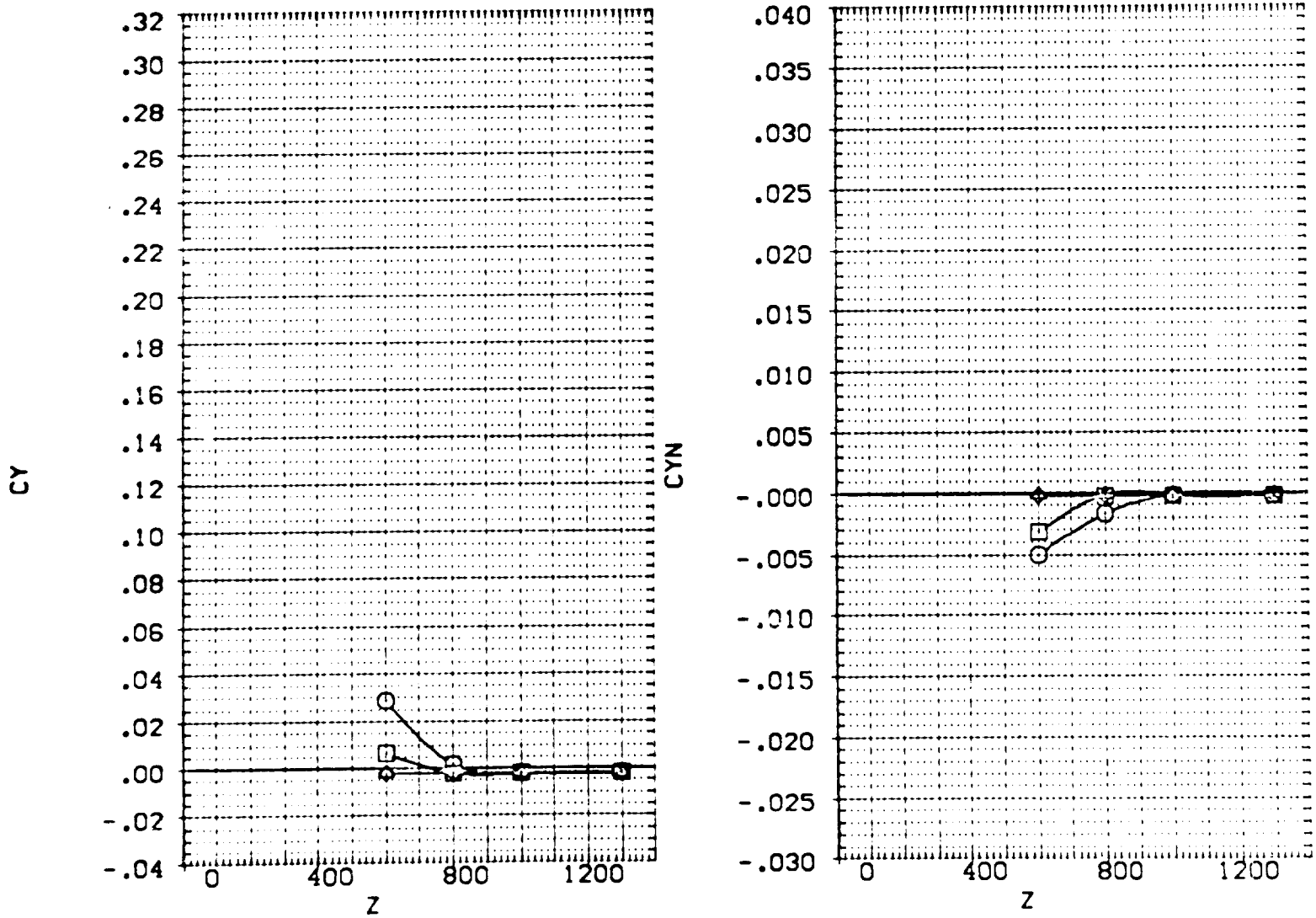


EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

IA!2,EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ093)

SYMBOL	X		PARAMETRIC VALUES		
○	-.395	MACH	4.530	PTOTAL	110.000
□	401.110	ALPHA	.000	BETA	.000
◇	800.890	DALPHA	-20.000	DBETA	.000
△	1200.900	ELEVTR	10.000	AILRON	.000
		Y	200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

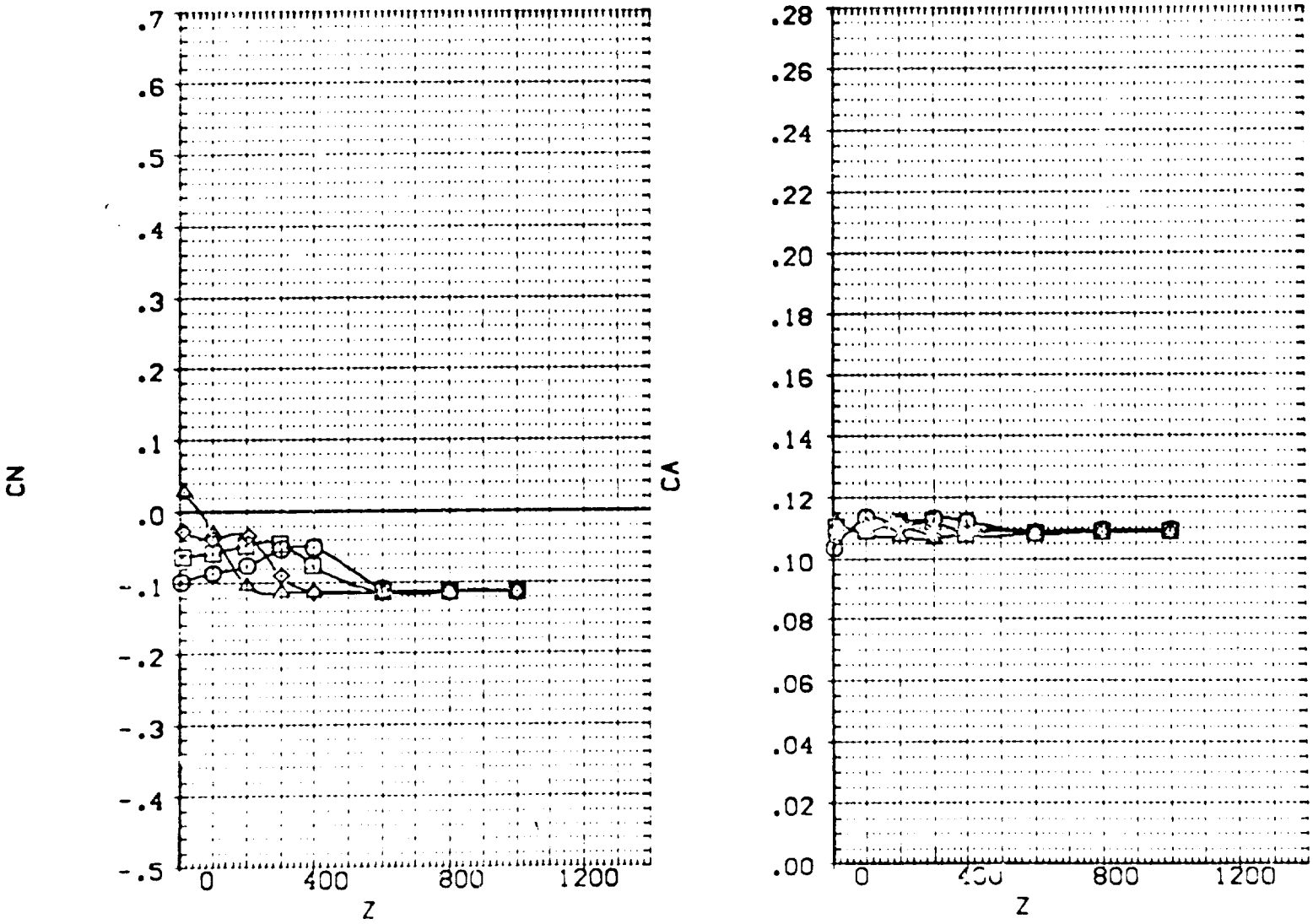


EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

!A!3.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ094)

SYMBOL	X		PARAMETRIC VALUES		
○	.009	MACH	4.530	PTOTAL	110.000
◇	400.360	ALPHA	.000	BETA	.000
◇	800.580	DALPHA	.000	DBETA	.000
△	1200.800	ELEVTR	-40.000	AILRON	.000
		Y	200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

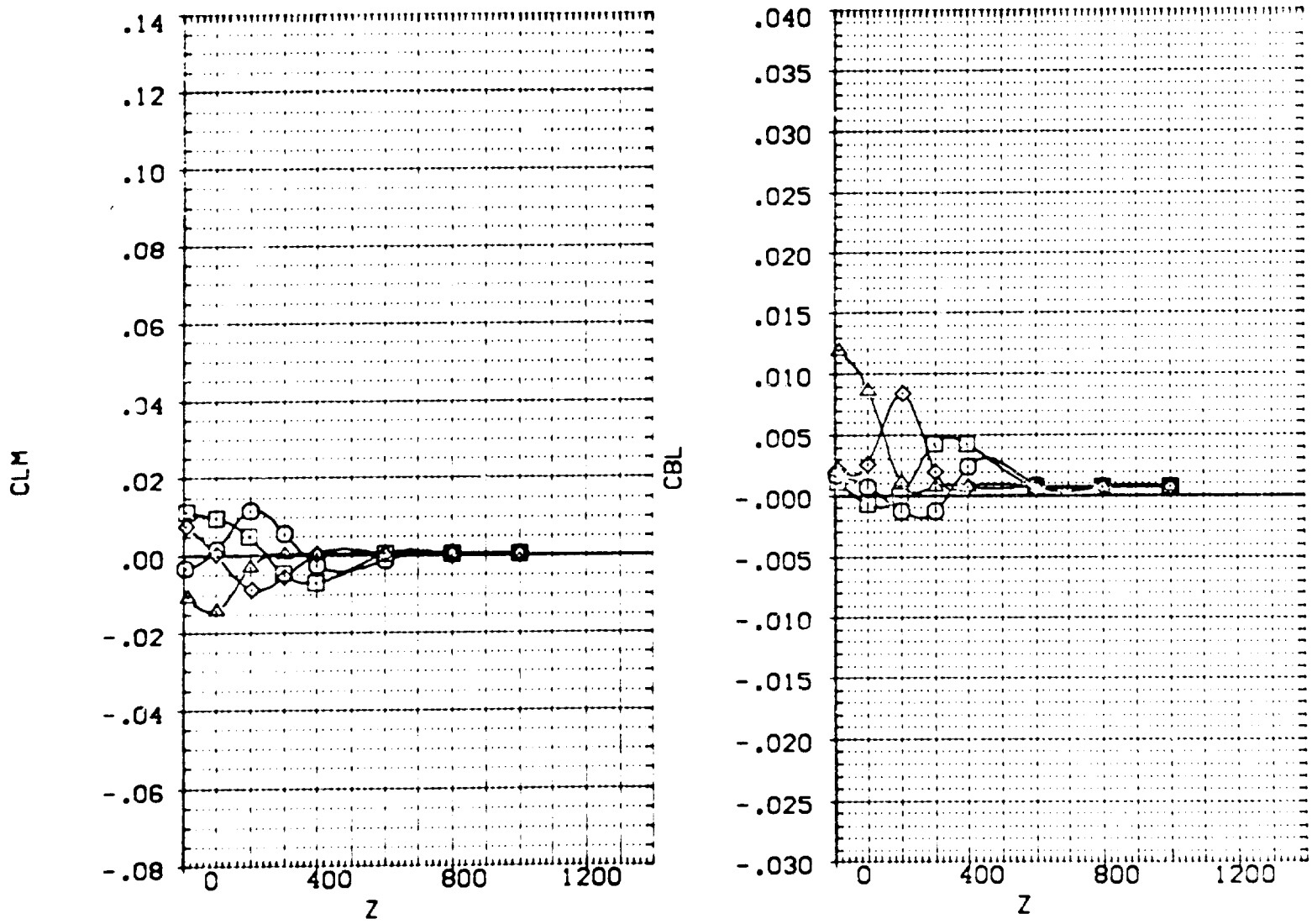


EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

!A13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ094)

SYMBOL	X		PARAMETRIC VALUES		
○	.009	MACH	4.530	PTOTAL	110.000
□	400.360	ALPHA	.000	BETA	.000
◇	800.580	DALPHA	.000	DBETA	.000
△	1200.800	ELEVTR	-40.000	AILRON	.000
		Y	200.000		

SEE THE ASSOCIATED DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

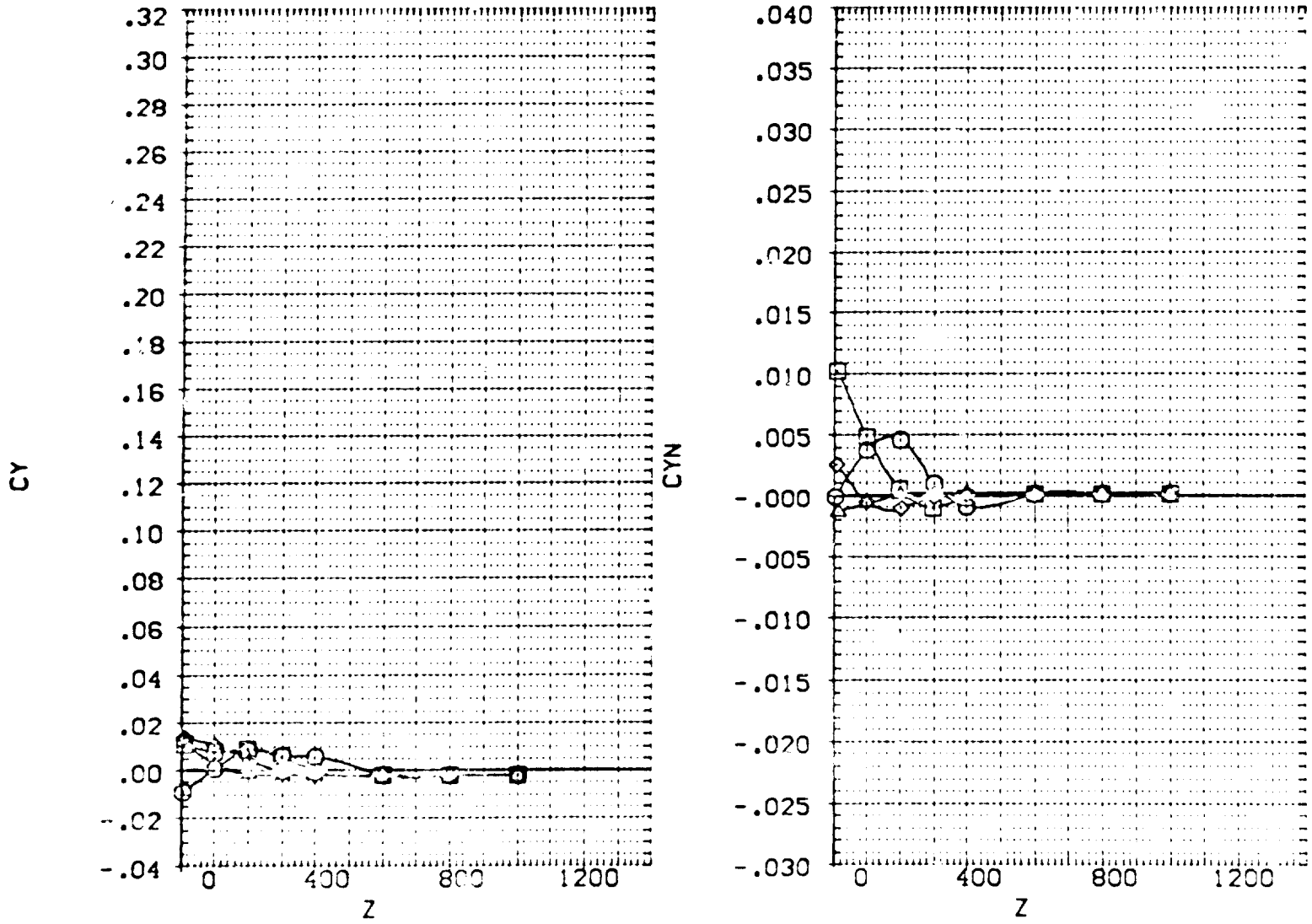


EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

[A13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ094)

SYMBOL	X		PARAMETRIC VALUES		
○	.009	MACH	4.530	PTOTAL	110.000
□	400.360	ALPHA	.000	BETA	.000
◇	600.580	DALPHA	.000	DBETA	.000
△	1200.800	ELEVTR	-40.000	AILRON	.000
		Y	200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

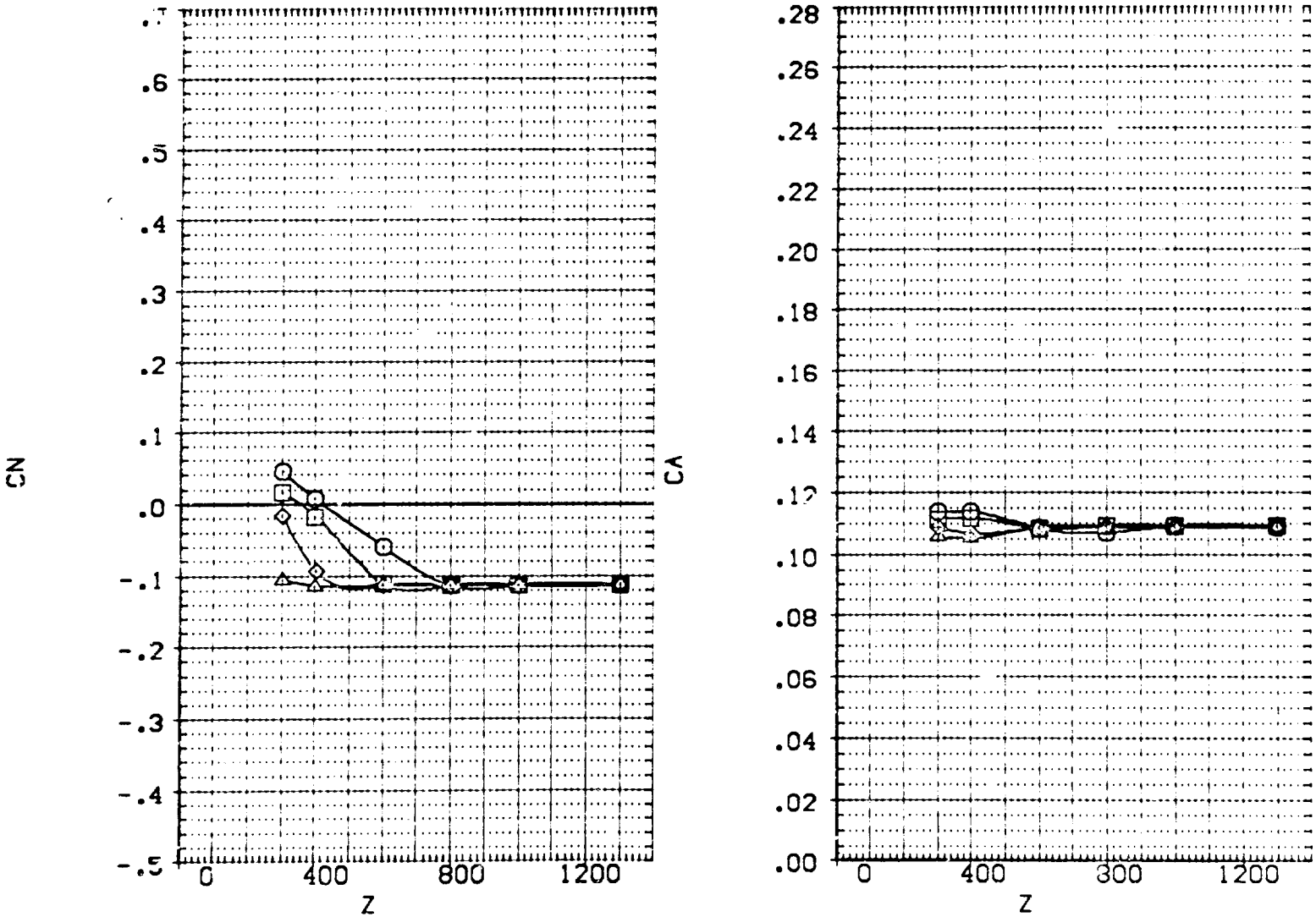


EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

A13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ095)

SYMBOL	X		PARAMETRIC VALUES		
○	.214	MACH	4.530	PTOTAL	110.000
□	400.170	ALPHA	.000	BETA	.000
◇	800.380	DALPHA	-10.000	DBETA	.000
△	1200.600	ELEVTR	-40.000	AILRON	.000
		Y	200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

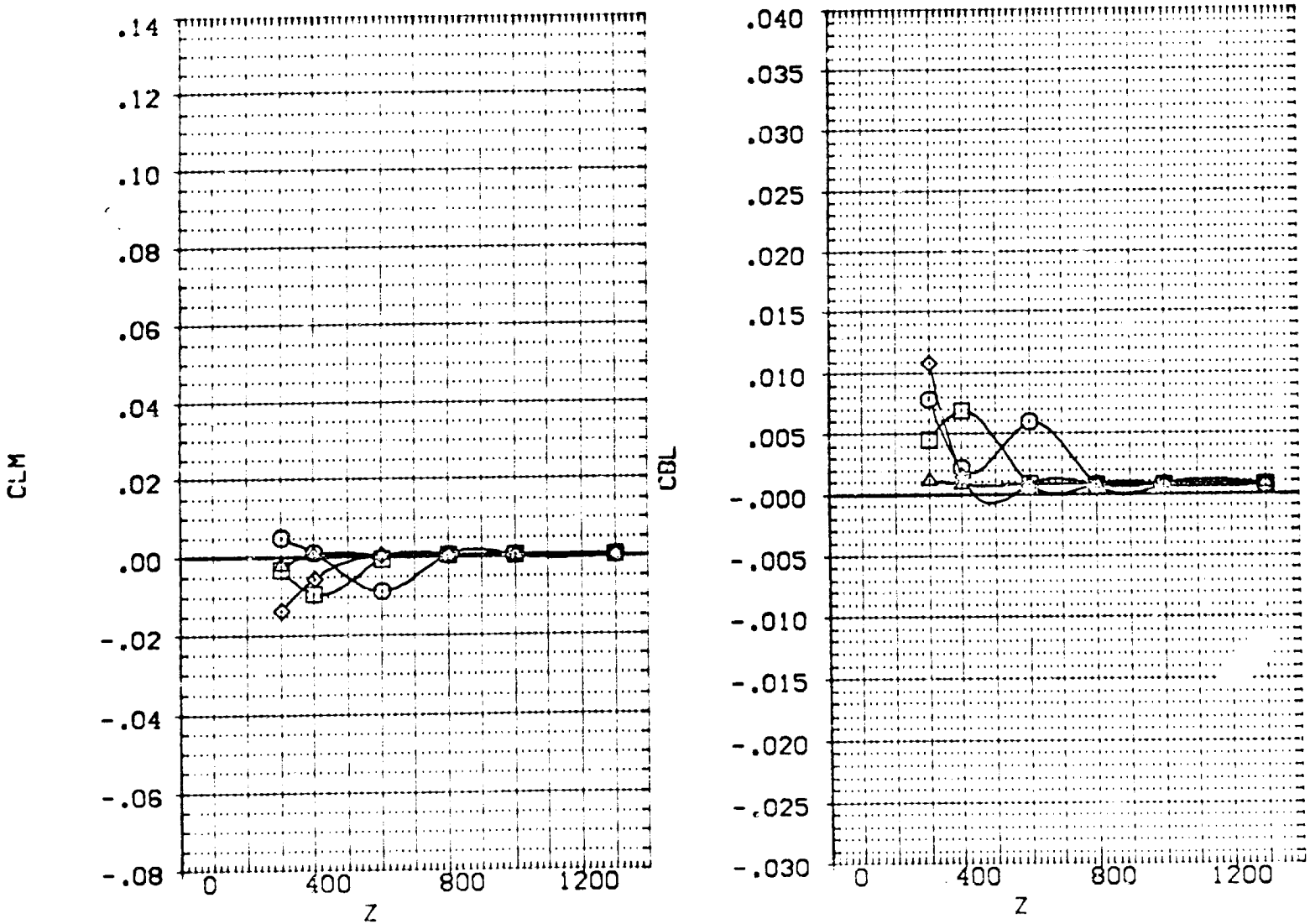


EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

!A13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ095)

SYMBOL	X		PARAMETRIC VALUES		
○	.214	MACH	4.530	PTOTAL	110.000
◇	400.370	ALPHA	.000	BETA	.000
□	800.680	DALPHA	-10.000	DBETA	.000
△	1200.800	ELEVTR	-40.000	AILRON	.000
		Y	200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

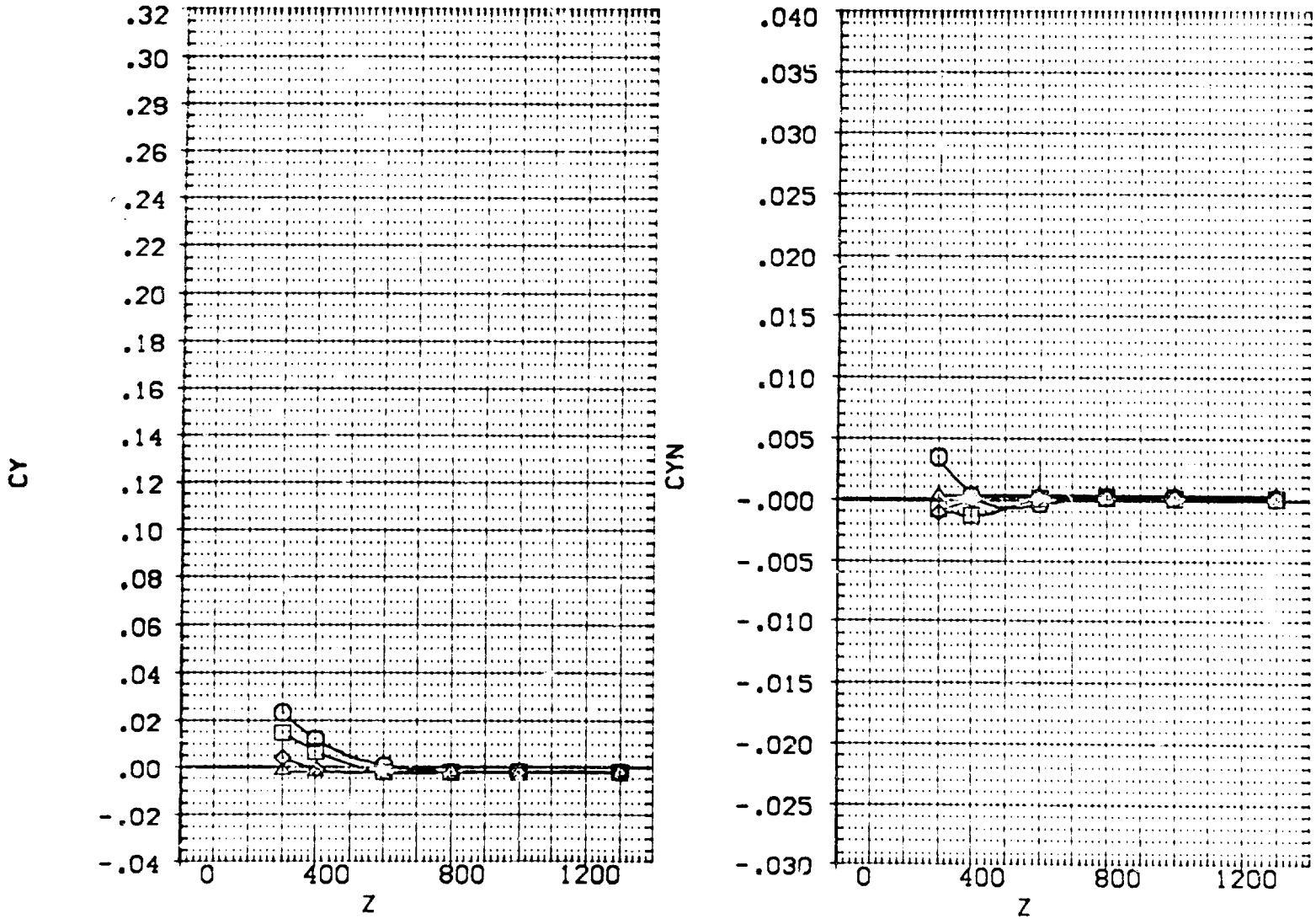


EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ095)

SYMBOL	X		PARAMETRIC VALUES		
○	.214	MACH	4.530	P/OTAL	110.000
□	400.370	ALPHA	.000	LETA	.000
◇	800.680	DALPHA	-10.000	DBETA	.000
△	1200.800	ELEVTR	-40.000	AILRON	.000
		Y	200.000		

SEE THE ASSOCIATED DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

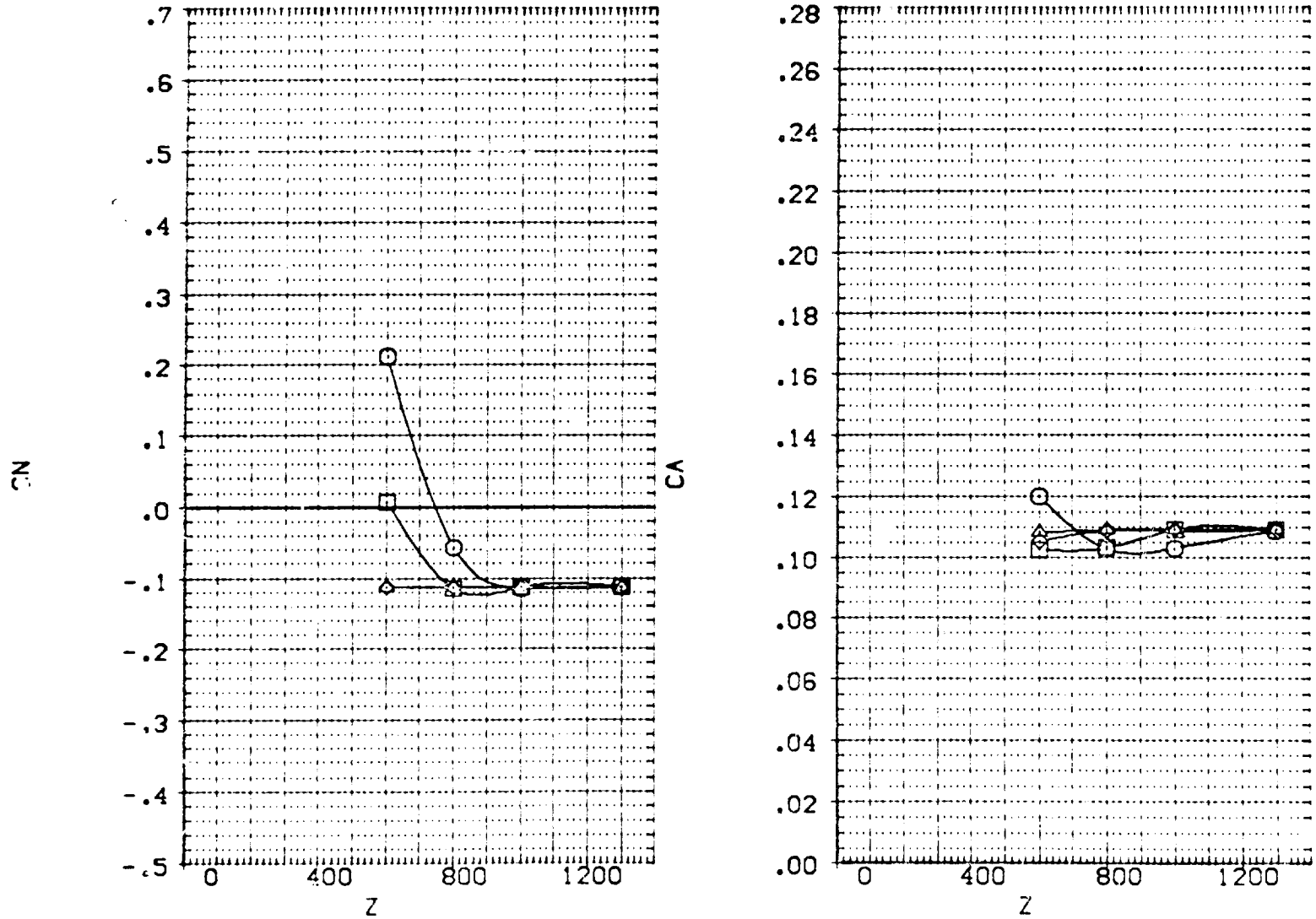


EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

!A13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ096)

SYMBOL	X		PARAMETRIC VALUES		
○	-.505	MACH	4.530	PTOTAL	110.000
□	401.110	ALPHA	.000	BETA	.000
◇	800.940	DALPHA	-20.000	DBETA	.000
△	1201.000	ELEVTR	-40.000	AILRON	.000
		Y	200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

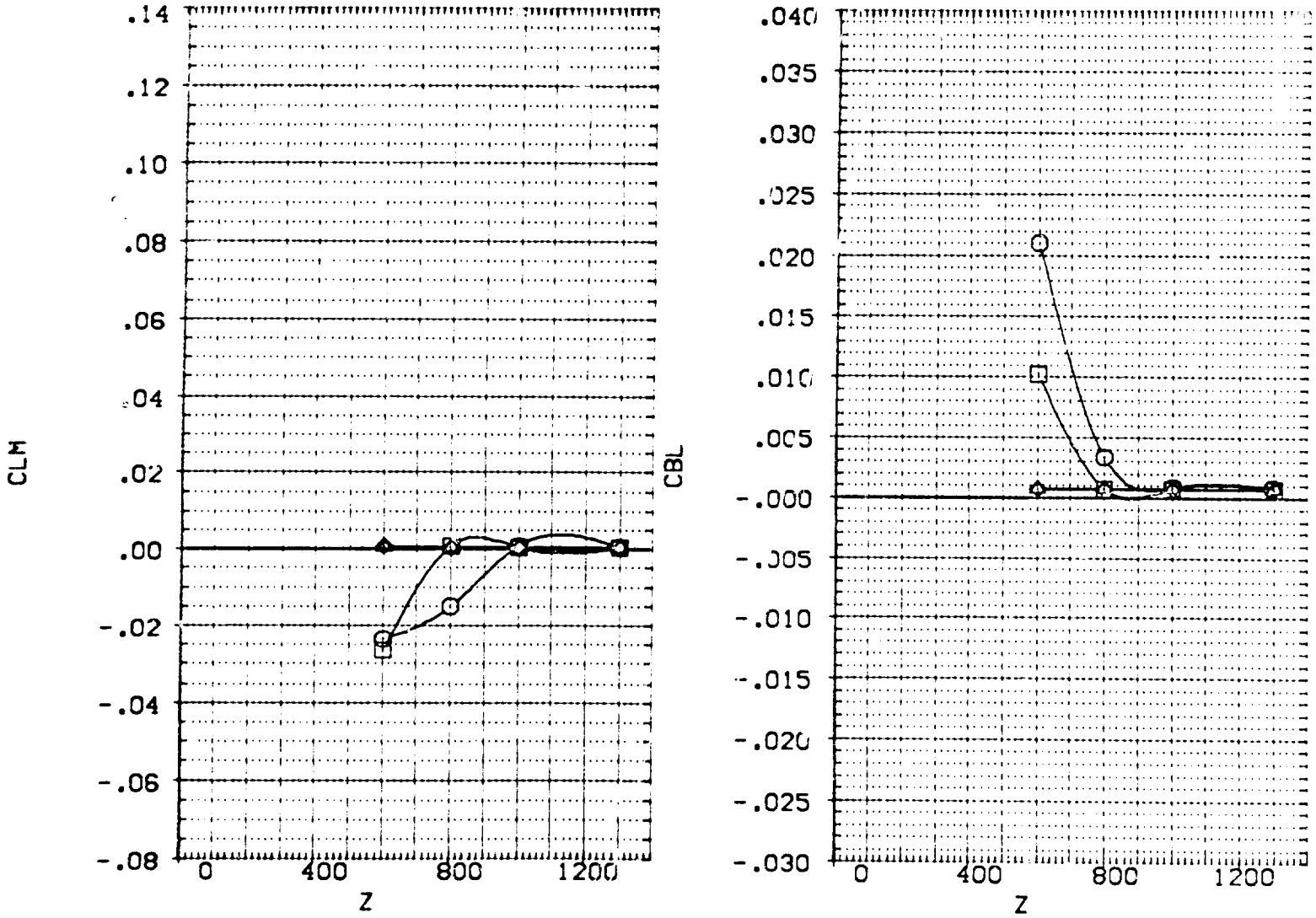


EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

!A13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ096)

SYMBOL	X		PARAMETRIC VALUES		
○	-.505	MACH	4.530	PTOTAL	110.000
□	401.110	ALPHA	.000	BETA	.000
◇	800.940	DALPHA	-20.000	DBETA	.000
△	1201.000	ELEVTR	-40.000	AILRON	.000
		Y	200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATA SETS

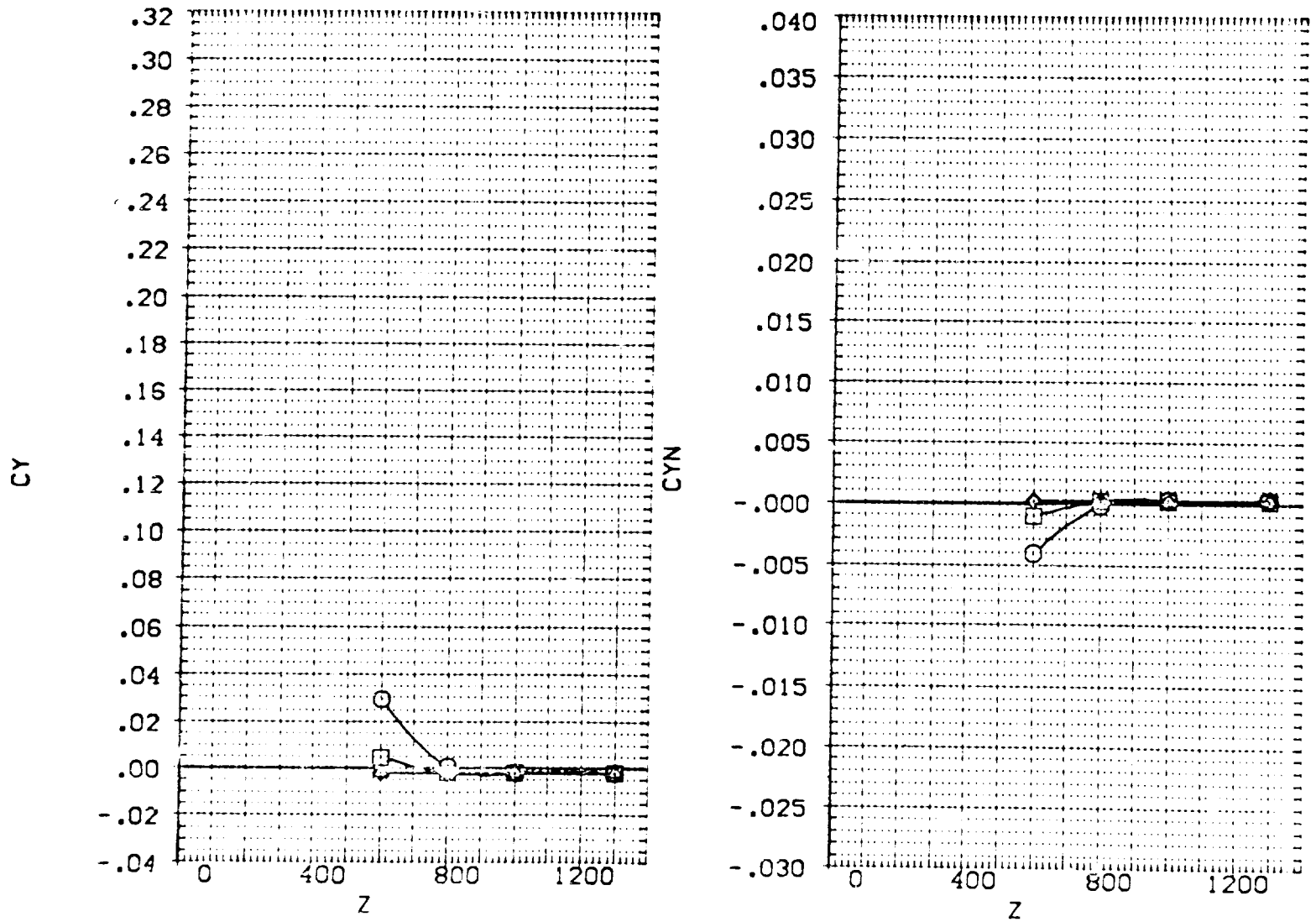


EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

!A13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ096)

SYMBOL	X		PARAMETRIC VALUES		
○	-.505	MACH	4.530	PTOTAL	110.000
◇	401.110	ALPHA	.000	BETA	.000
□	800.940	DALPHA	-20.000	DBETA	.000
△	1201.000	ELEVTR	-40.000	AILRON	.000
		Y	200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

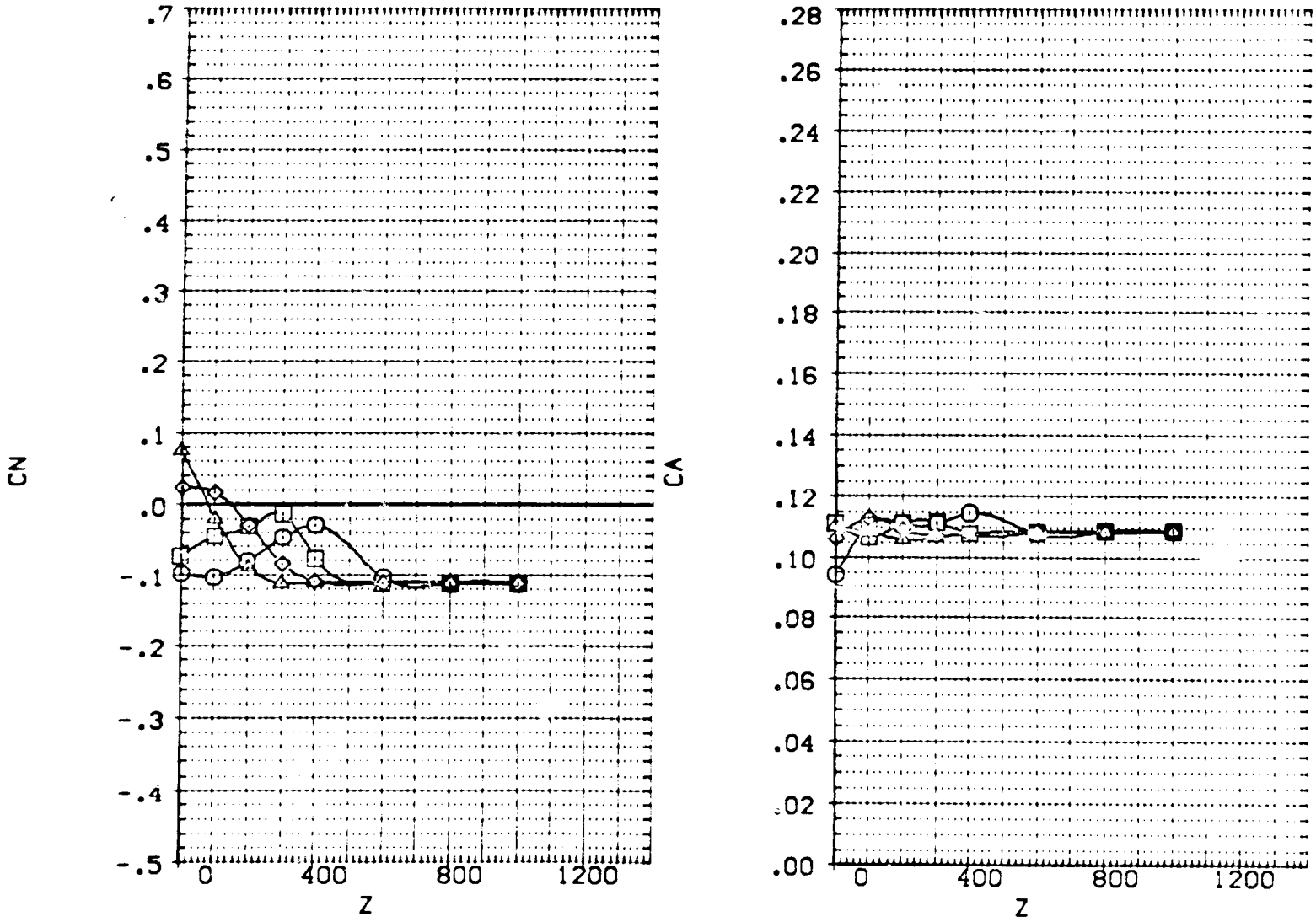


EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

!A13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ097)

SYMBOL	X		PARAMETRIC VALUES		
○	.174	MACH	4.530	PTOTAL	110.000
□	400.390	ALPHA	.000	BETA	.000
◇	800.520	DALPHA	.000	DBETA	.000
△	1200.800	ELEVTR	-40.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

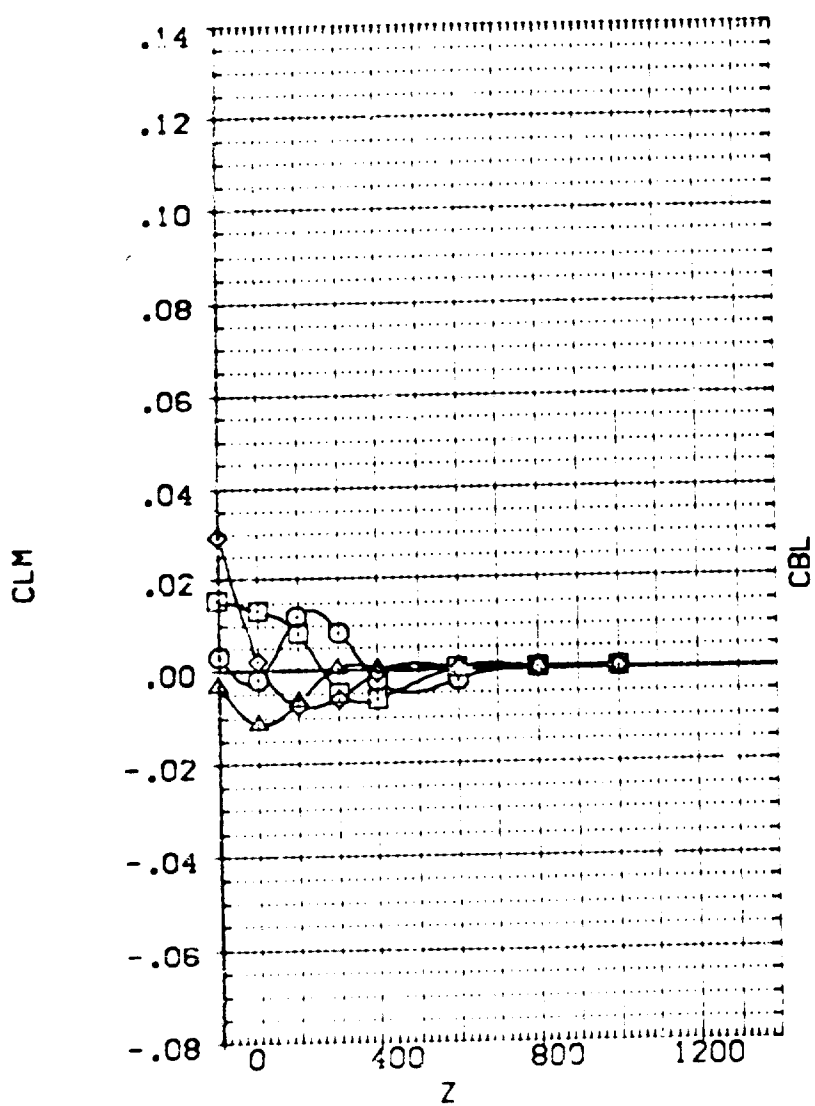


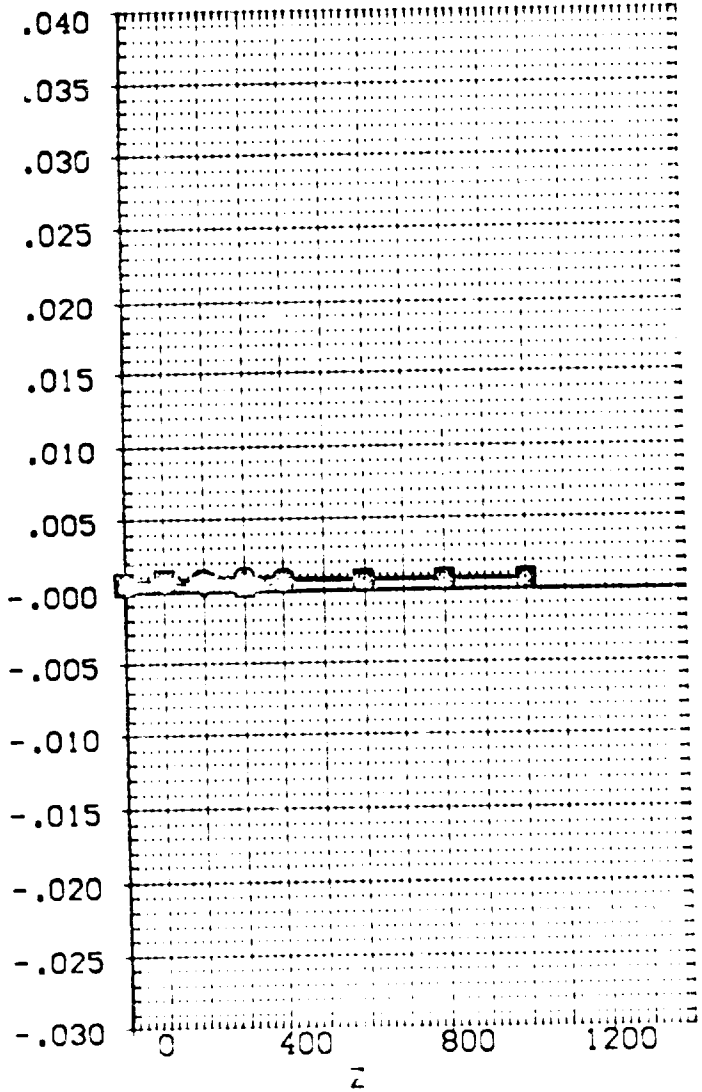
EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ097)

SYMBOL	X		PARAMETRIC VALUES		
○	.174	MACH	4.530	PTOTAL	110.000
□	400.390	ALPHA	.000	BETA	.000
◇	800.520	DALPHA	.000	DBETA	.000
△	1200.800	ELEVTR	-40.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



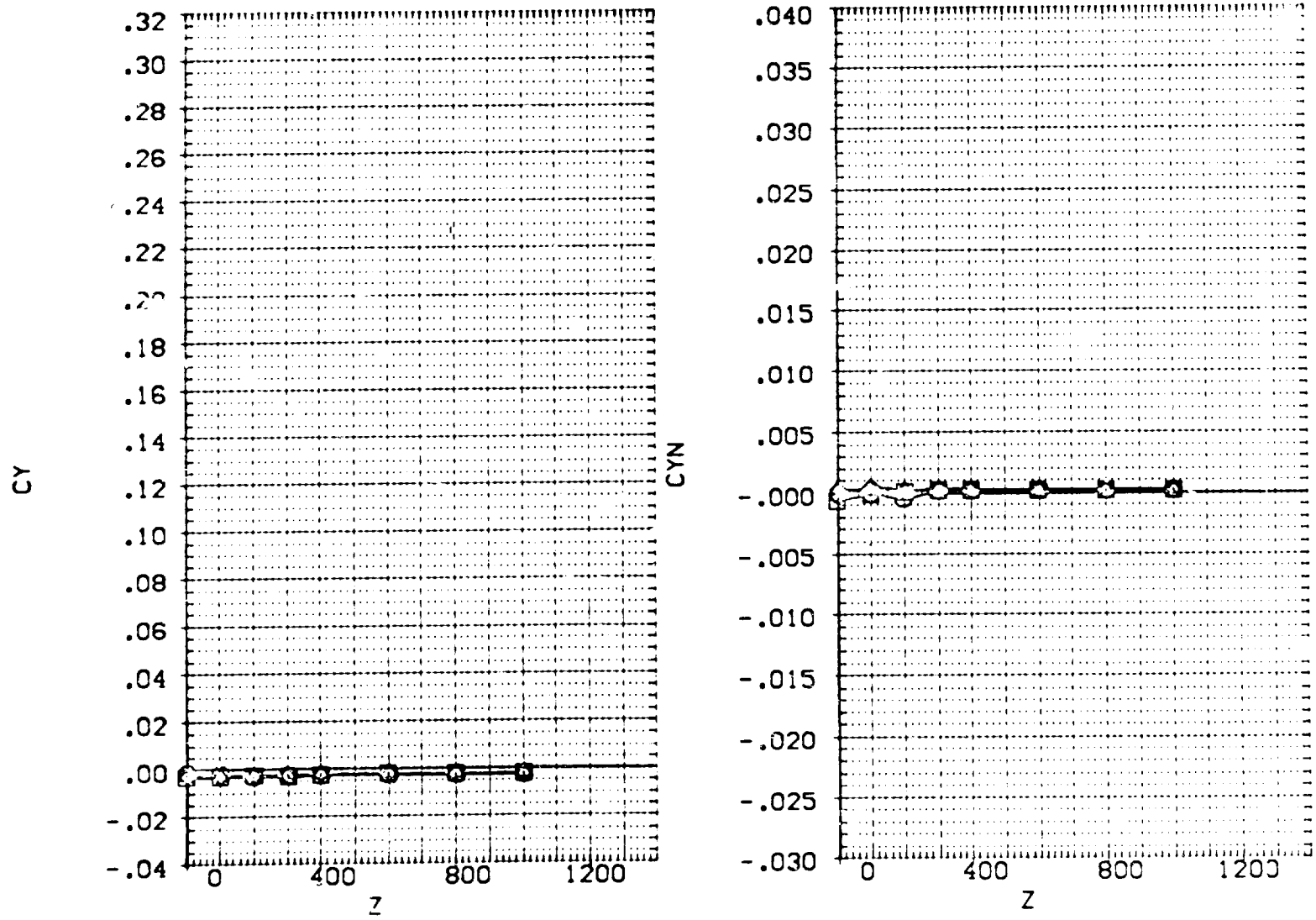


EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ097)

SYMBOL	X		PARAMETRIC VALUES		
○	.174	MACH	4.530	PTOTAL	110.000
◇	400.390	ALPHA	.000	BETA	.000
△	800.520	DALPHA	.000	DBETA	.000
	1200.800	ELEVTR	-40.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

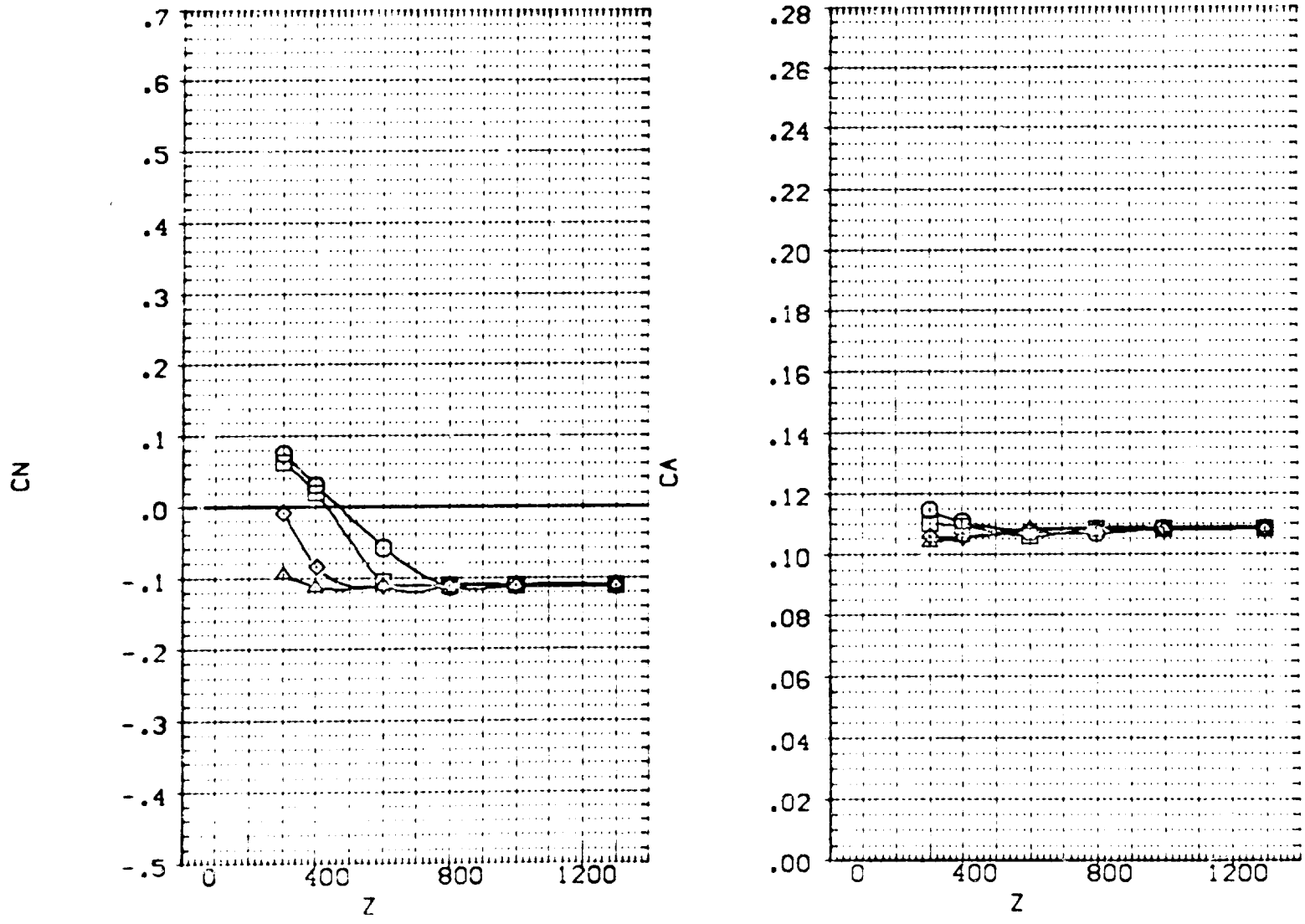


EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

[A13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ098)

SYMBOL	X		PARAMETRIC VALUES		
○	.150	MACH	4.530	PTOTAL	110.000
□	400.460	ALPHA	.000	BETA	.000
◇	800.710	DALPHA	-10.000	DBETA	.000
△	1200.900	ELEVTR	-40.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

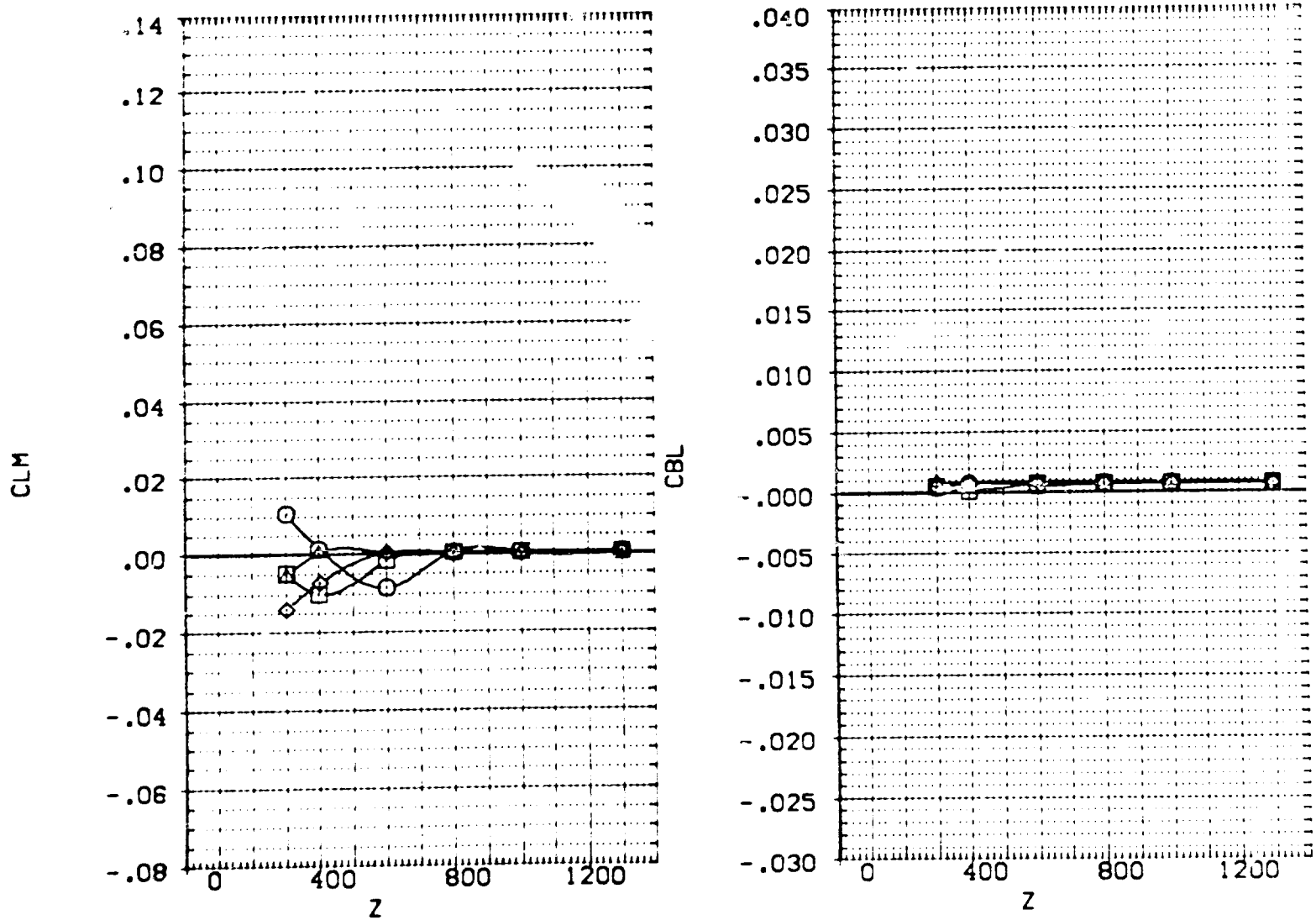


EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

!A13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ098)

SYMBOL	X		PARAMETRIC VALUES		
○	.150	MACH	4.530	PTOTAL	110.600
◇	400.460	ALPHA	.000	BETA	.000
△	800.710	DALPHA	-10.000	DBETA	.000
	1200.900	ELEVTR	-40.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

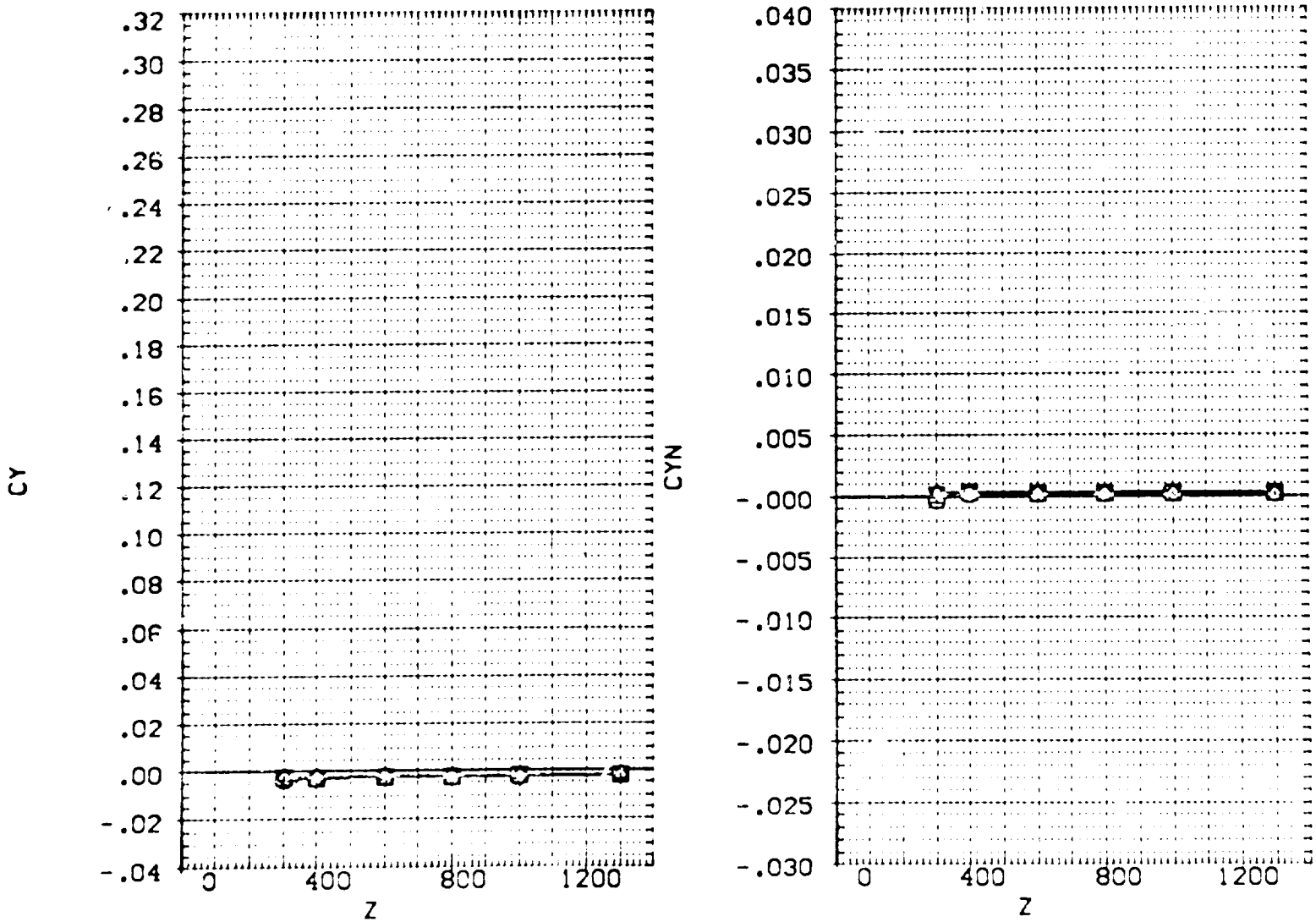


EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

!A13,EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ098)

SYMBOL	X		PARAMETRIC VALUES		
○	.150	MACH	4.530	PTOTAL	110.000
◇	400.460	ALPHA	.000	BETA	.000
△	800.710	DALPHA	-10.000	DBETA	.000
	1200.900	ELEVTR	-40.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

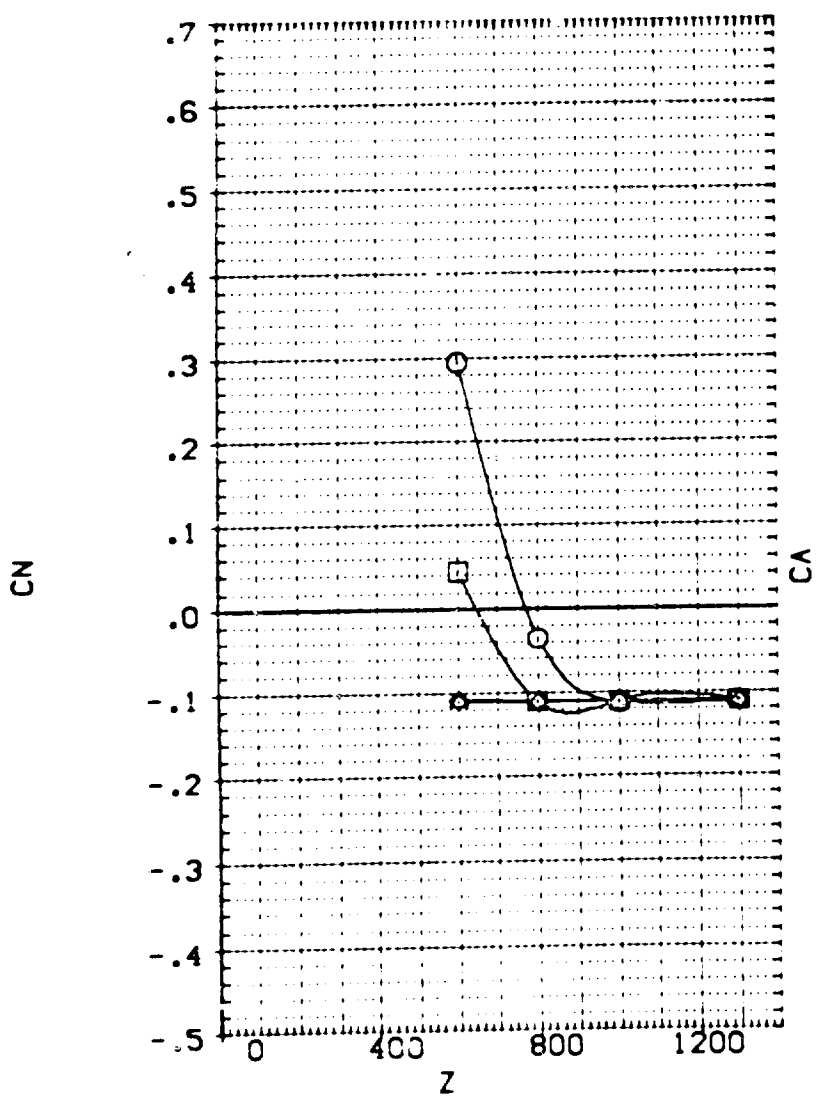


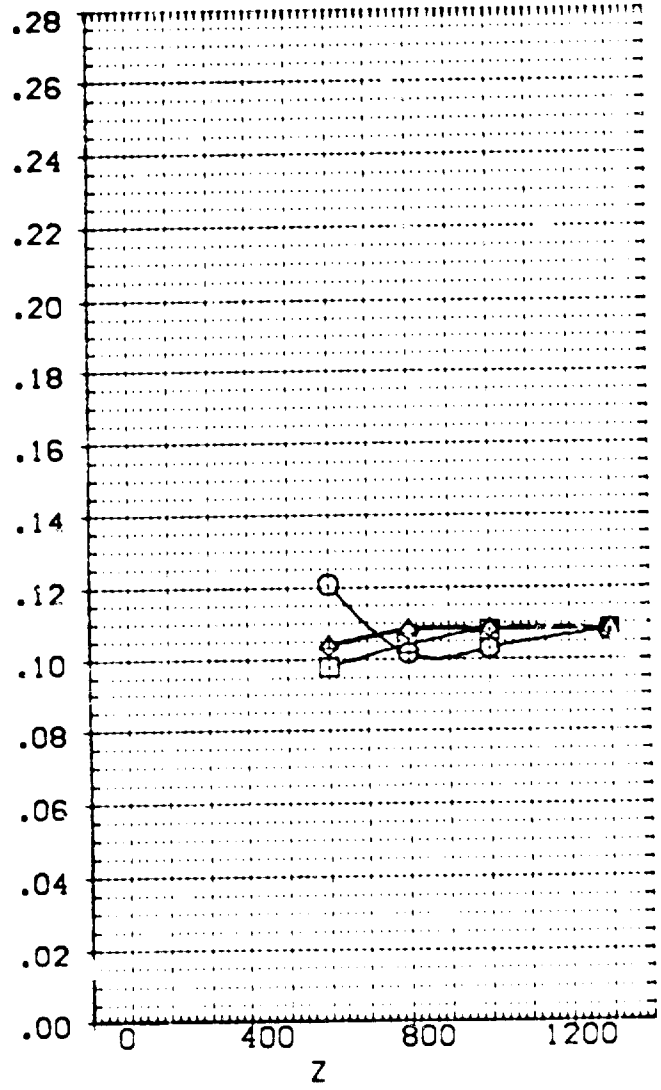
EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

!A:3.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ099)

SYMBOL	X		PARAMETRIC VALUES		
○	-.717	MACH	4.530	PTOTAL	110.000
◇	401.410	ALPHA	.000	BETA	.000
△	801.010	DALPHA	-20.000	DBETA	.000
	1200.800	ELEVTR	-40.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATA SETS



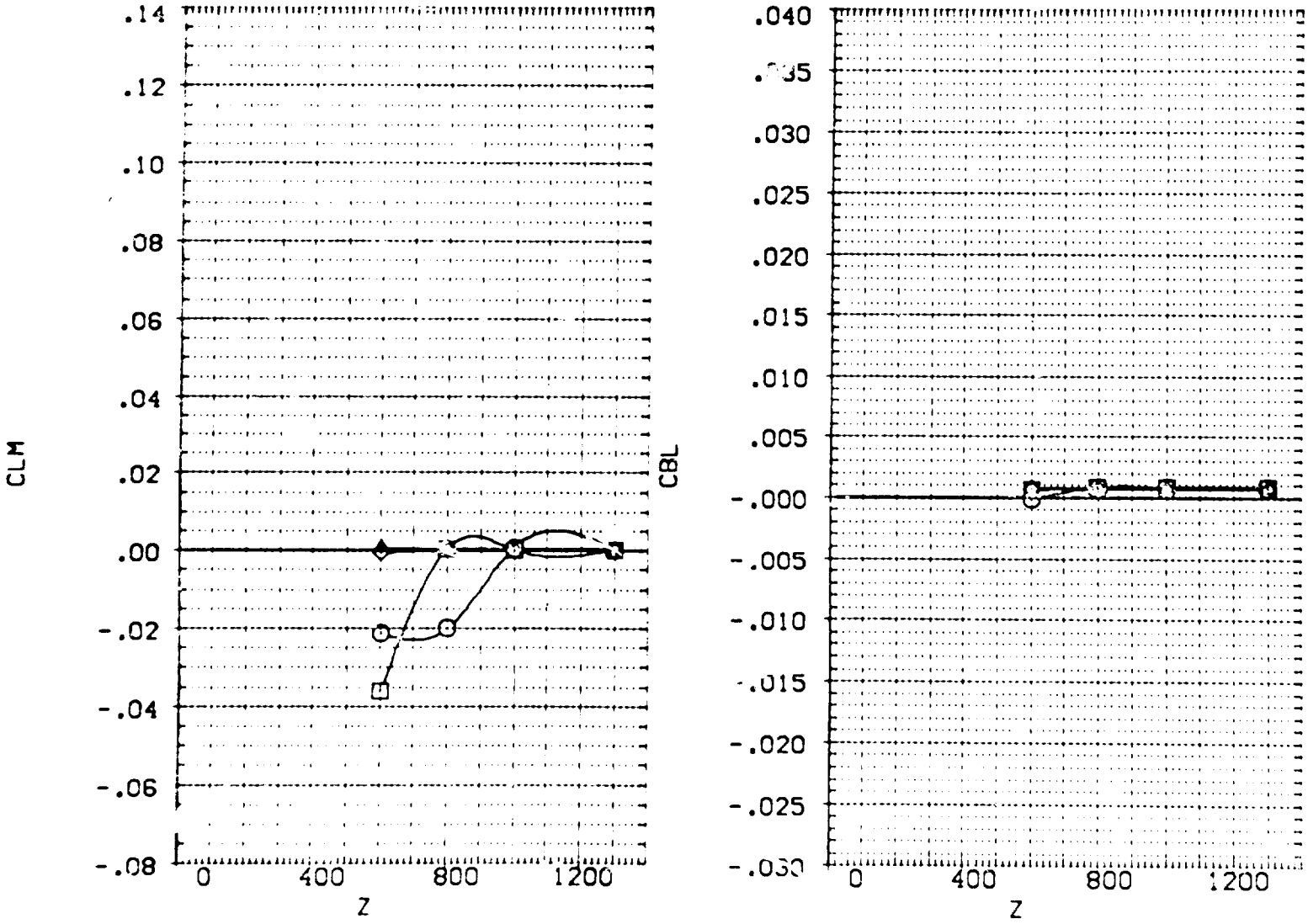


EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

[A13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ099)

SYMBOL	X		PARAMETRIC VALUES		
○	-.717	MACH	4.530	PTOTAL	110.000
	401.410	ALPHA	.000	BETA	.000
◇	801.010	DALPHA	-20.000	DBETA	.000
△	1200.800	ELEVTR	-40.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

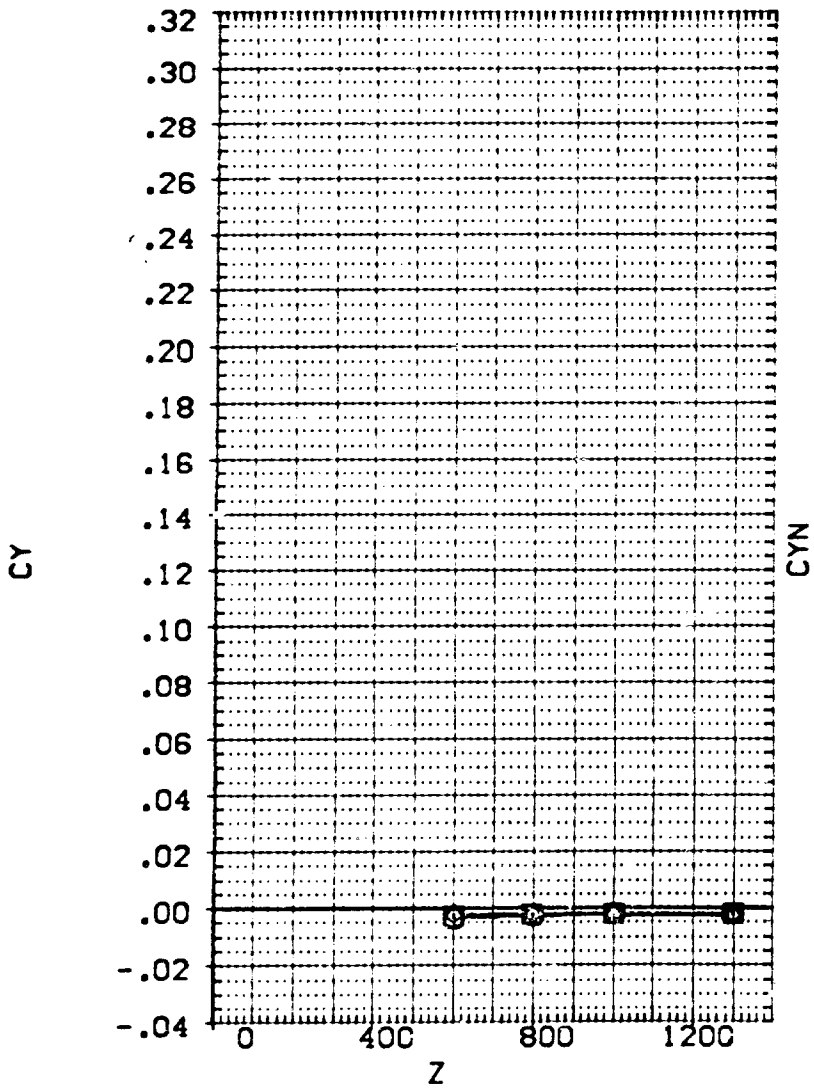


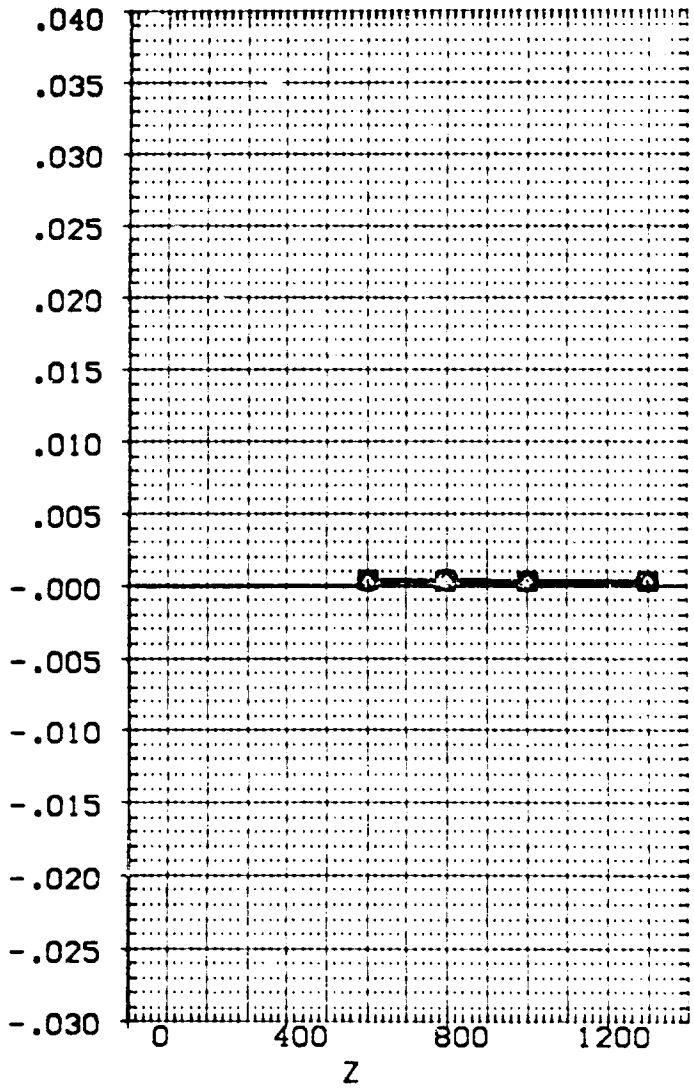
EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ099)

SYMBOL	X		PARAMETRIC VALUES		
○	-.717	MACH	4.530	PTOTAL	110.000
□	401.410	ALPHA	.000	BETA	.000
◇	801.010	DALPHA	-20.000	DBETA	.000
△	1200.800	ELEVTR	-40.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



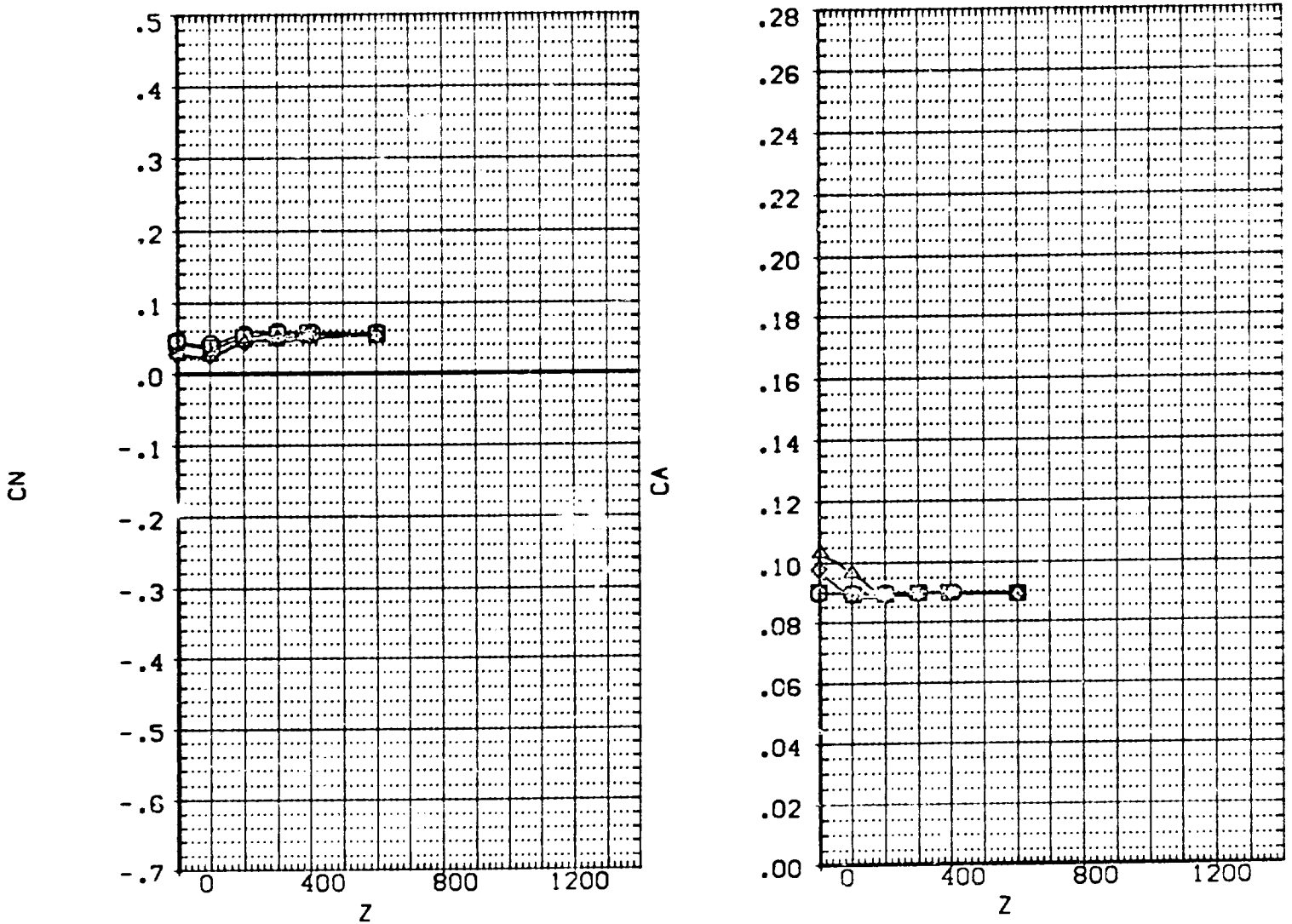


EFFECT OF EXTERNAL TANK SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

!A13,EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT01)

SYMBOL	X		PARAMETRIC VALUES		
○	.290	MACH	4.530	PTOTAL	110.000
□	400.480	ALPHA	.000	BETA	.000
◇	800.610	DALPHA	5.000	DBETA	.000
△	1200.500	ELEVTR	.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

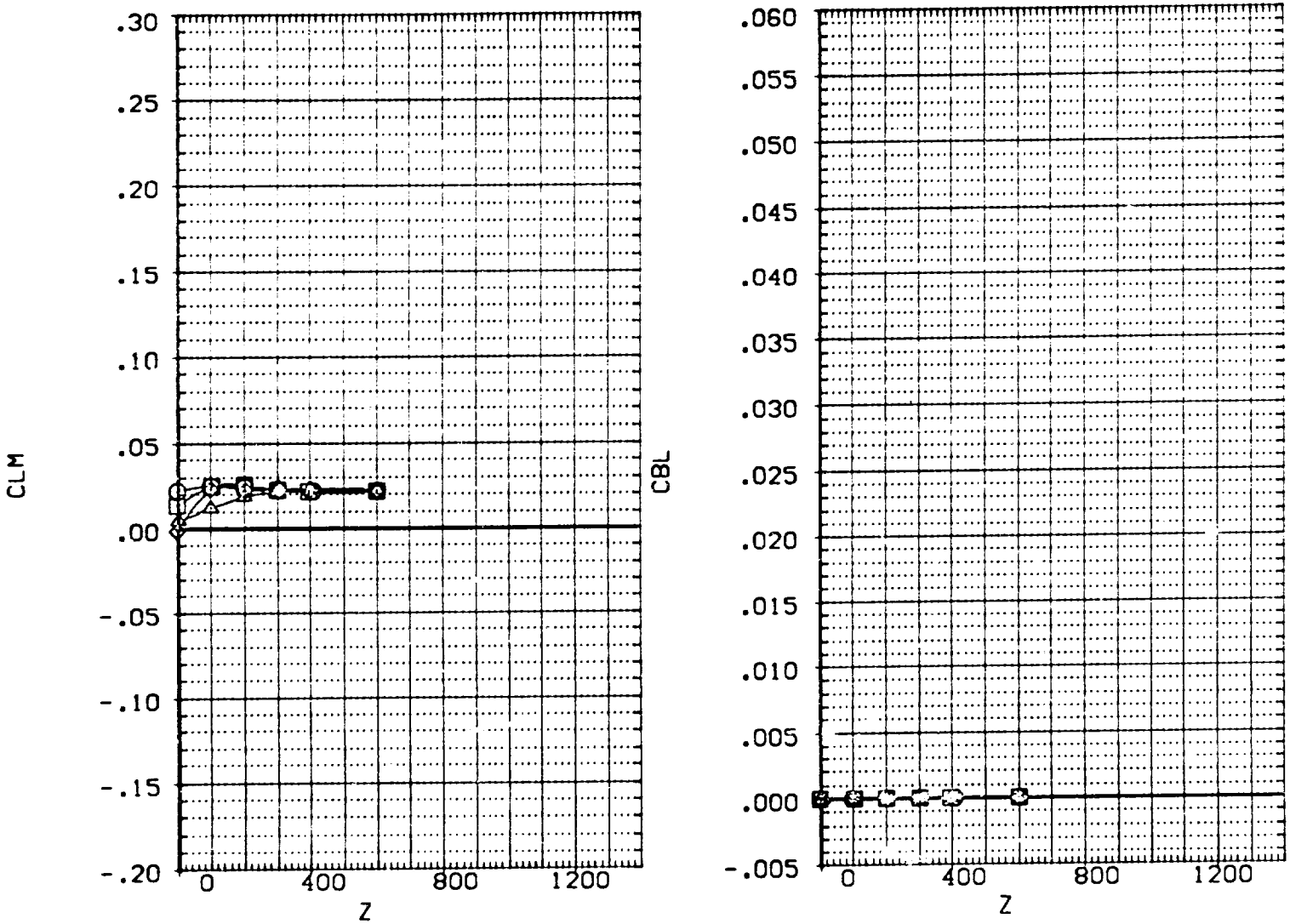


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT01)

SYMBOL	X		PARAMETRIC VALUES		
○	.290	MACH	4.530	PTOTAL	110.000
□	400.480	ALPHA	.000	BETA	.000
◇	800.610	DALPHA	5.000	DBETA	.000
△	1200.500	ELEVTR	.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

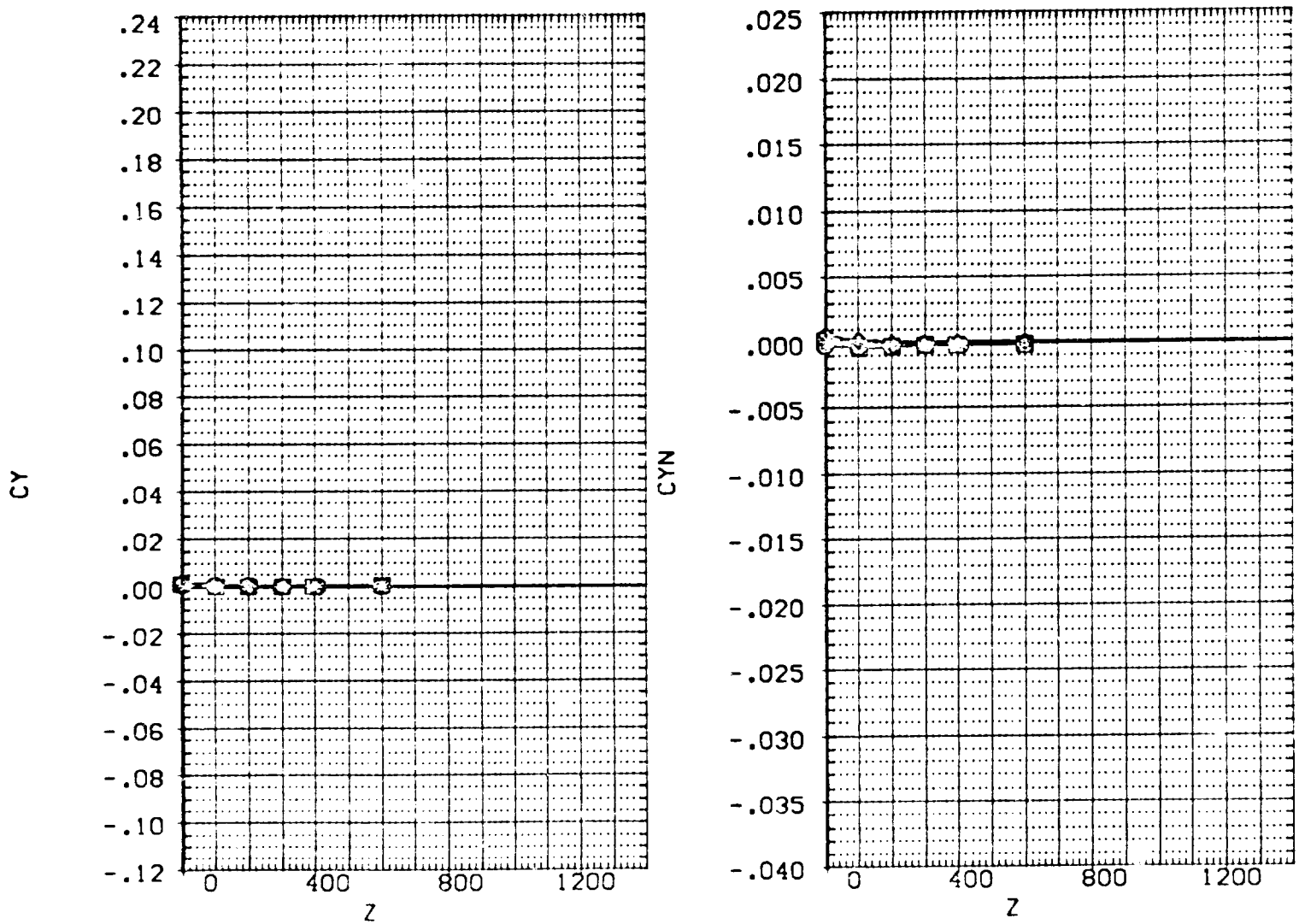


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT01)

SYMBOL	X		PARAMETRIC VALUES		
○	.290	MACH	4.530	PTOTAL	110.000
□	400.480	ALPHA	.000	BETA	.000
◇	800.610	DALPHA	5.000	DBETA	.000
△	1200.500	ELEVTR	.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

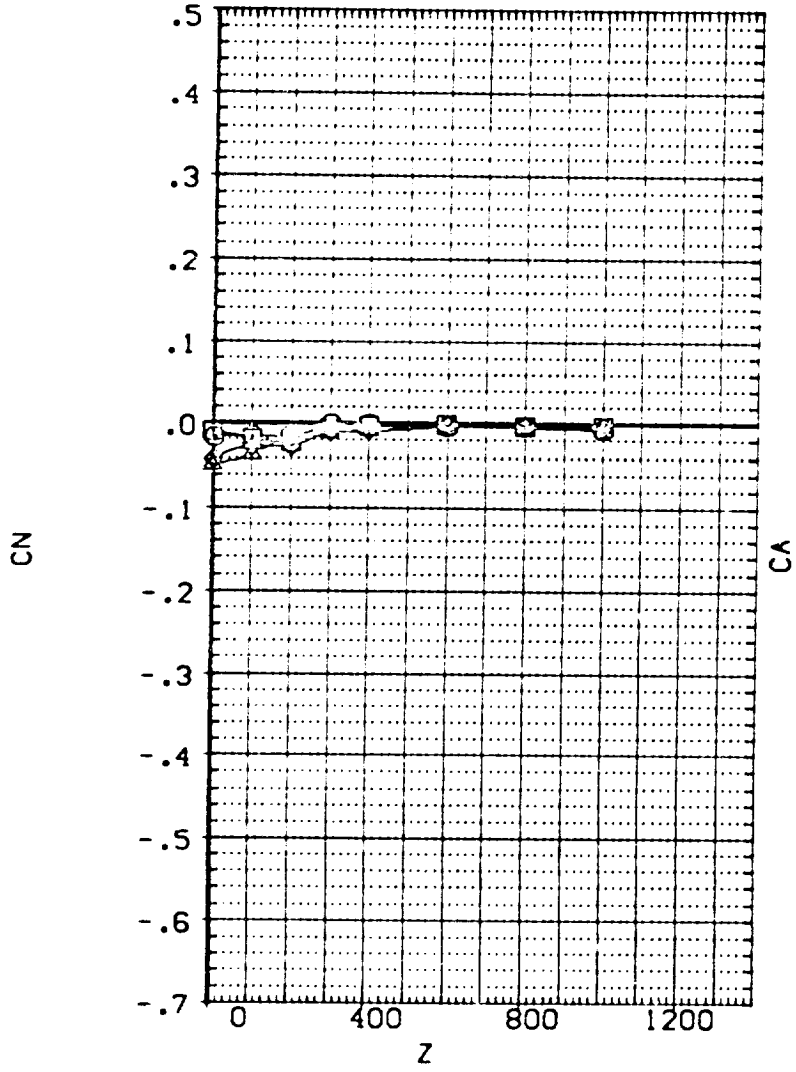


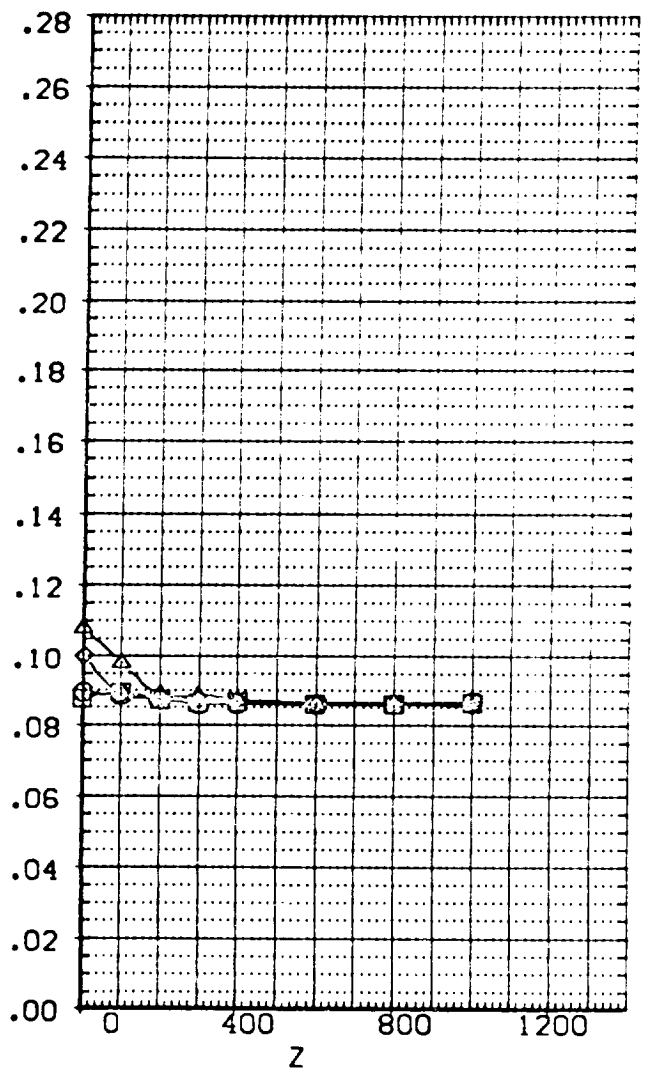
EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT02)

SYMBOL	X		PARAMETRIC VALUES		
○	.046	MACH	4.530	PTOTAL	110.000
□	400.180	ALPHA	.000	BETA	.000
◇	800.460	DALPHA	.000	DBETA	.000
△	1200.800	ELEVTR	.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



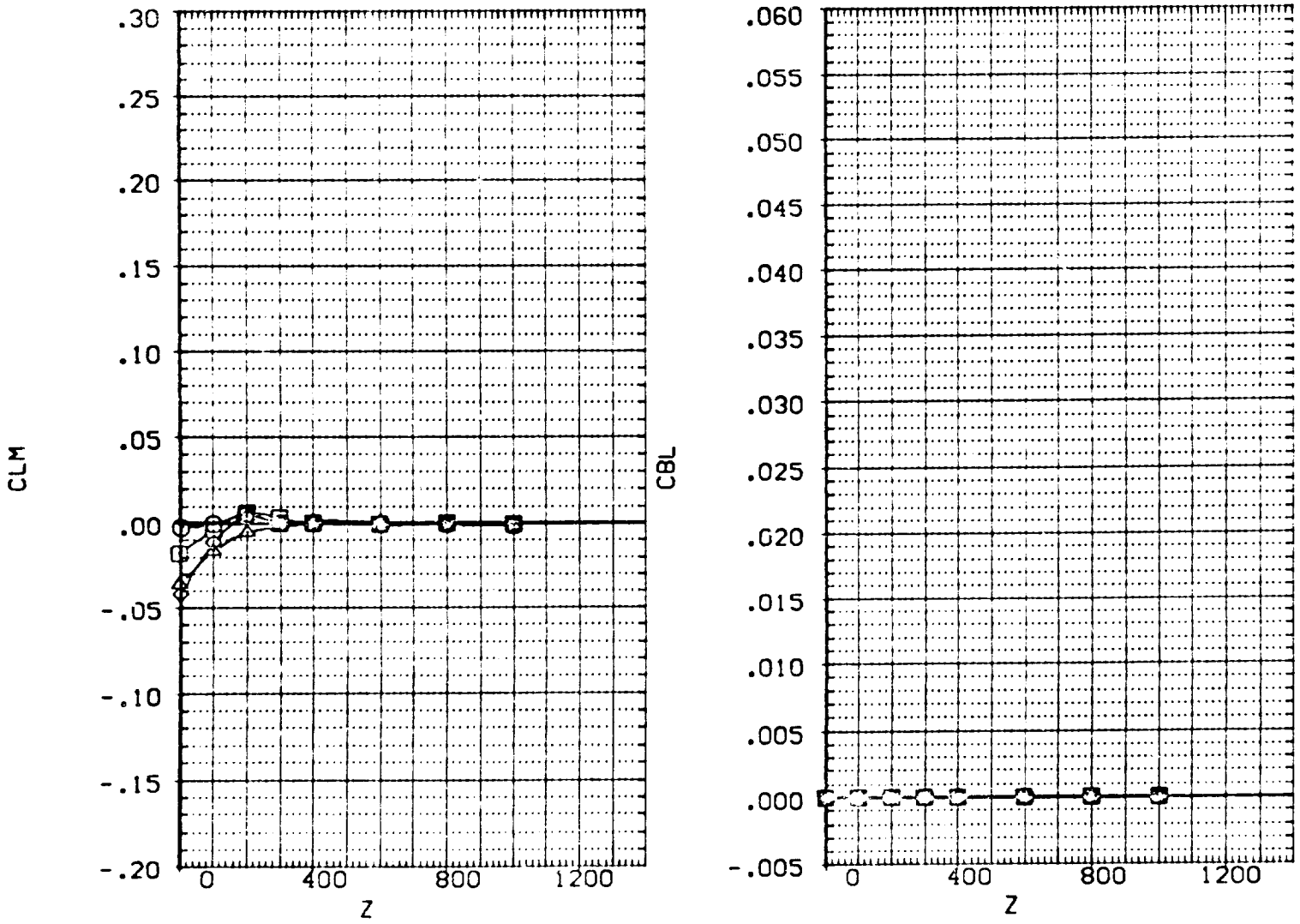


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RT,T02)

SYMBOL	X		PARAMETRIC VALUES		
○	.046	MACH	4.530	PTOTAL	110.000
□	400.180	ALPHA	.000	BETA	.000
◇	800.460	DALPHA	.000	DBETA	.000
△	1200.800	ELEVTR	.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

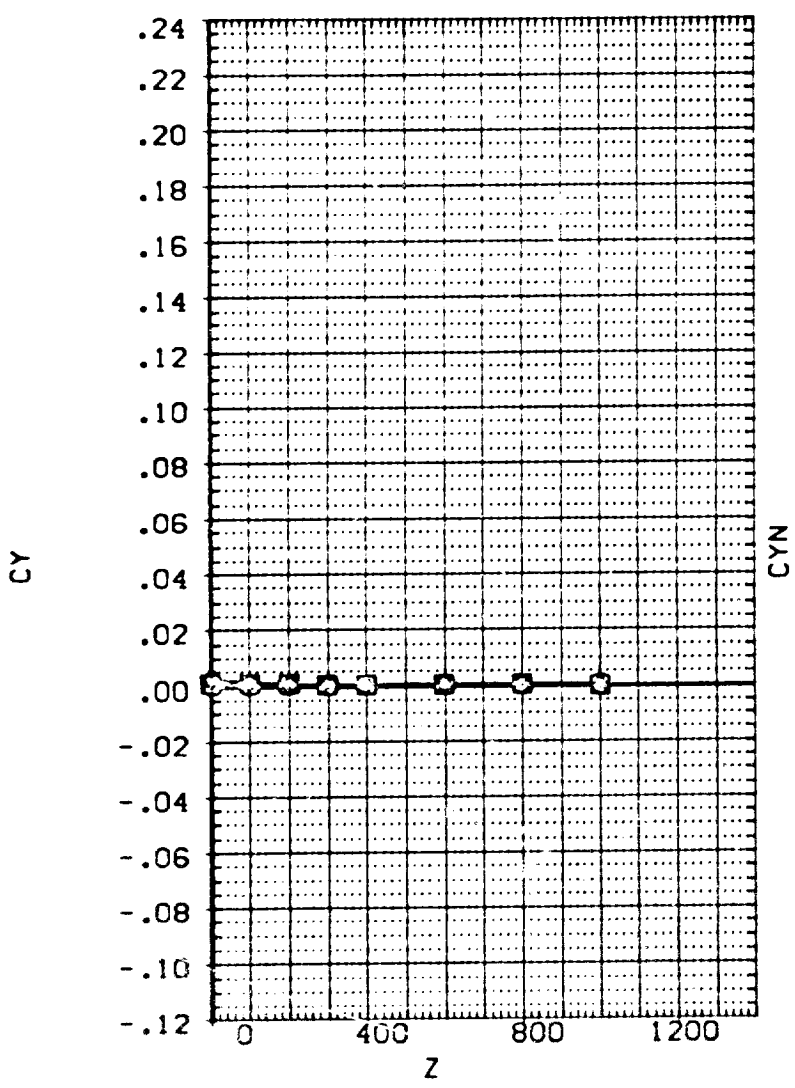


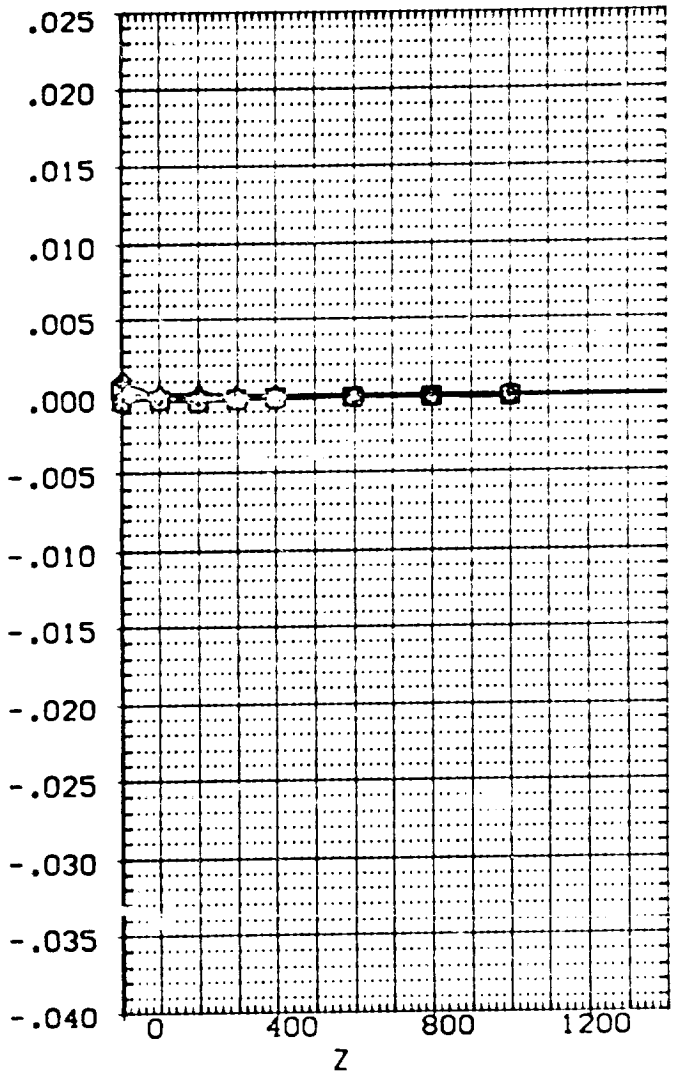
EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT02)

SYMBOL	X		PARAMETRIC VALUES		
○	.046	MACH	4.530	PTOTAL	110.000
□	400.180	ALPHA	.000	BETA	.000
◇	800.460	DALPHA	.000	DBETA	.000
△	1200.800	ELEVTR	.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



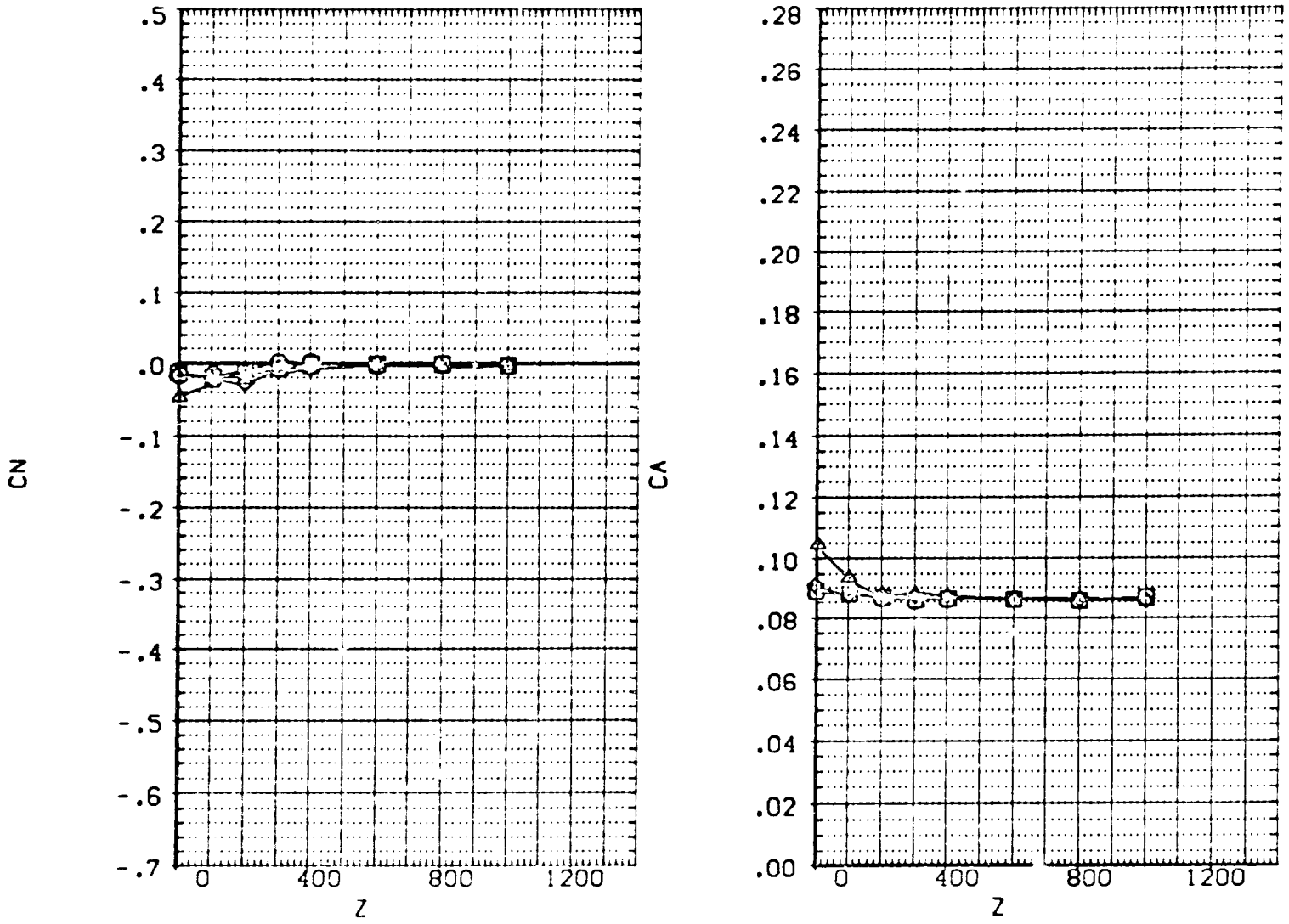


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

[A13,EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT03)

SYMBOL	X		PARAMETRIC VALUES		
○	-.003	MACH	4.530	PTOTAL	110.000
□	400.330	ALPHA	.000	BETA	.000
◇	800.510	DALPHA	.000	DBETA	.000
△	1200.700	ELEVTR	.000	AILRON	.000
		Y	200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

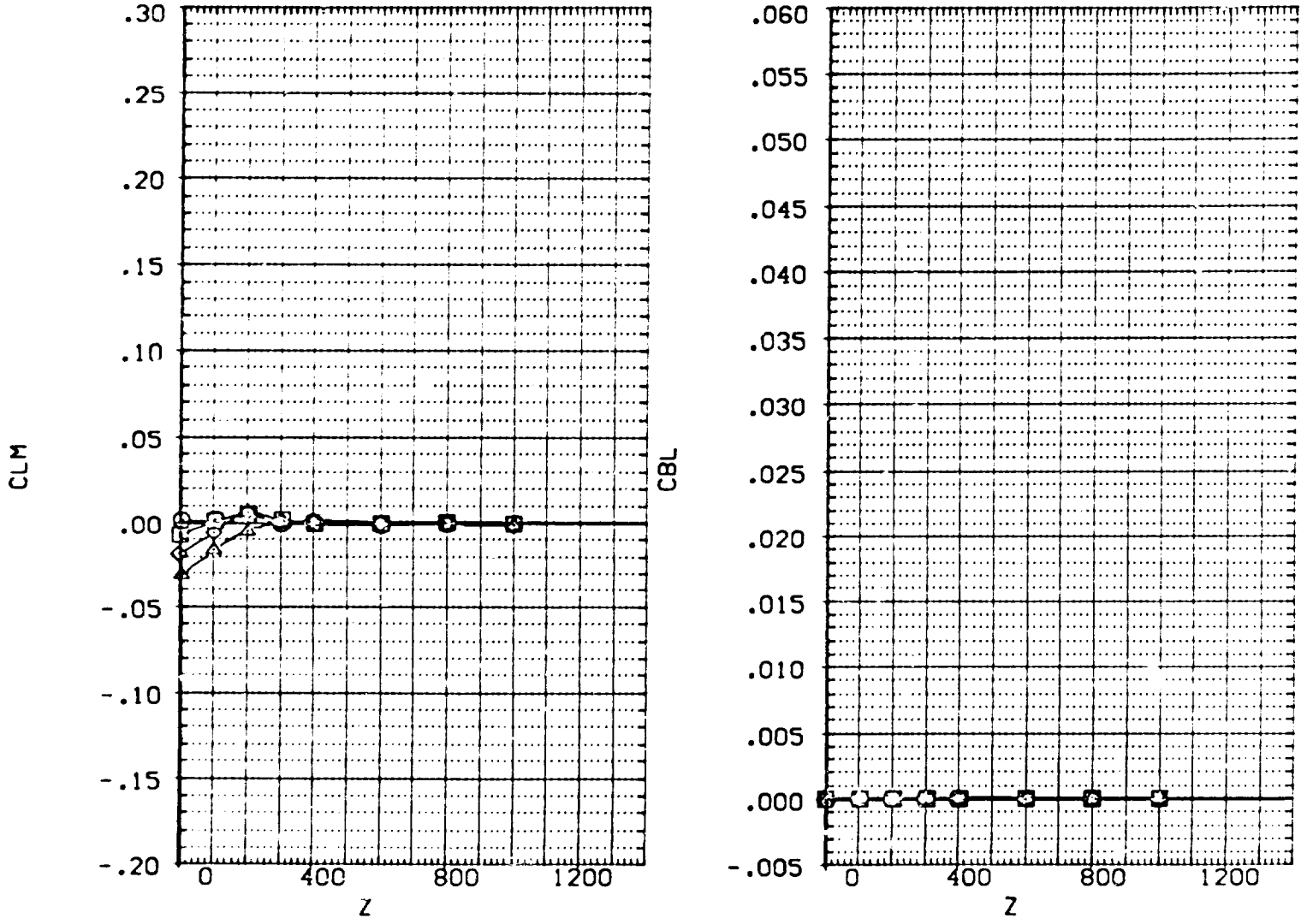


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT03)

SYMBOL	X		PARAMETRIC VALUES		
○	-.003	MACH	4.530	PTOTAL	110.000
□	400.330	ALPHA	.000	BETA	.000
◇	800.510	DALPHA	.000	DBETA	.000
△	1200.700	ELEVTR	.000	AILRON	.000
		Y	200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

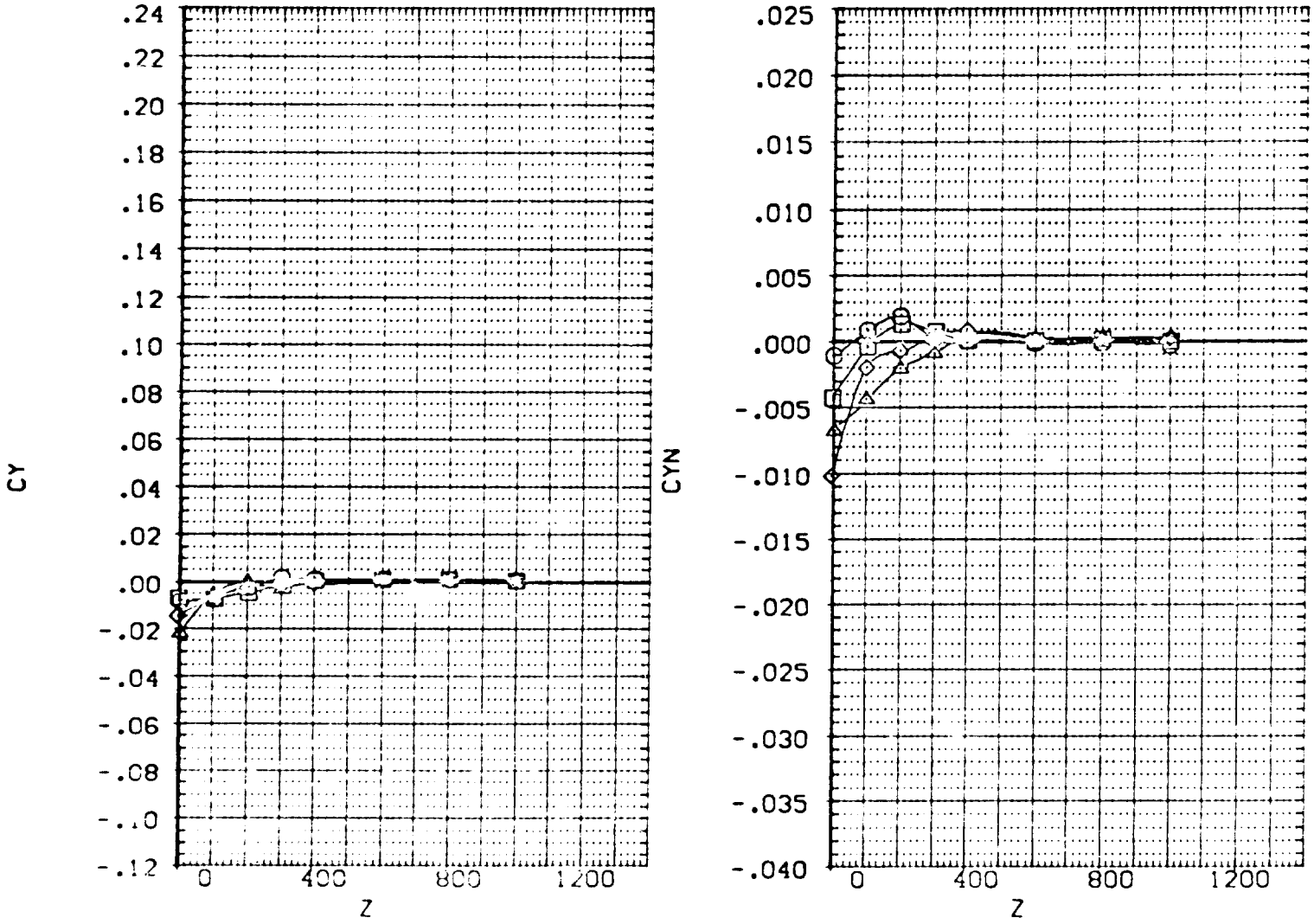


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

!A!3.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT03)

SYMBOL	X		PARAMETRIC VALUES		
○	-.003	MACH	4.530	PTOTAL	110.000
□	400.330	ALPHA	.000	BETA	.000
◇	800.510	DALPHA	.000	DBETA	.000
△	1200.700	ELEVTR	.000	AILRON	.000
		Y	200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

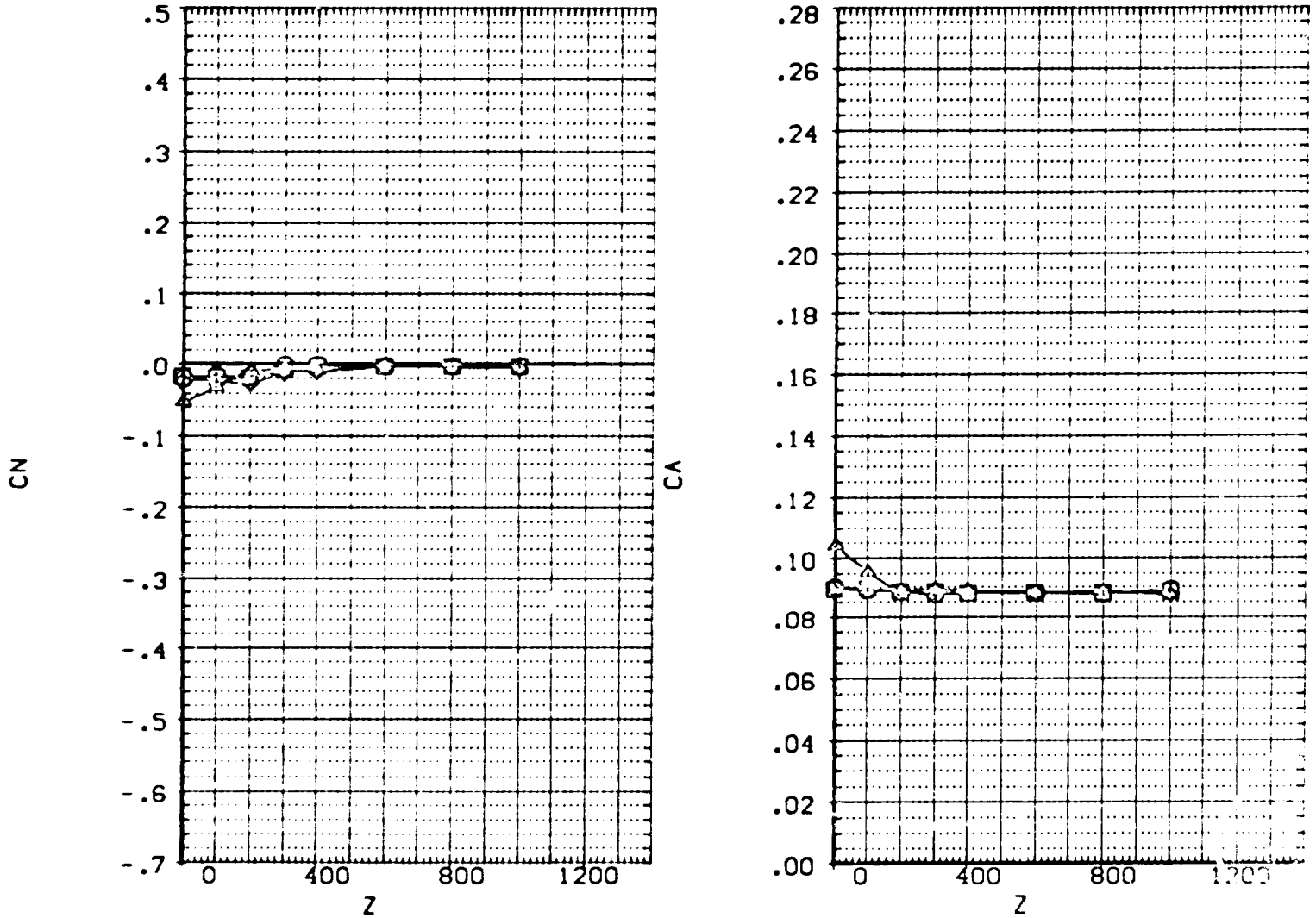


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

IA13.EXTERNAL TANK(T1U)SEPARATING FROM ORB. 09 (RTJT04)

SYMBOL	X		PARAMETRIC VALUES		
○	.088	MACH	4.530	PTOTAL	110.000
□	400.280	ALPHA	.000	BETA	.000
◇	800.430	DALPHA	.000	DBETA	5.000
△	1200.700	ELEVTR	.000	AILRON	.000
		Y	200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

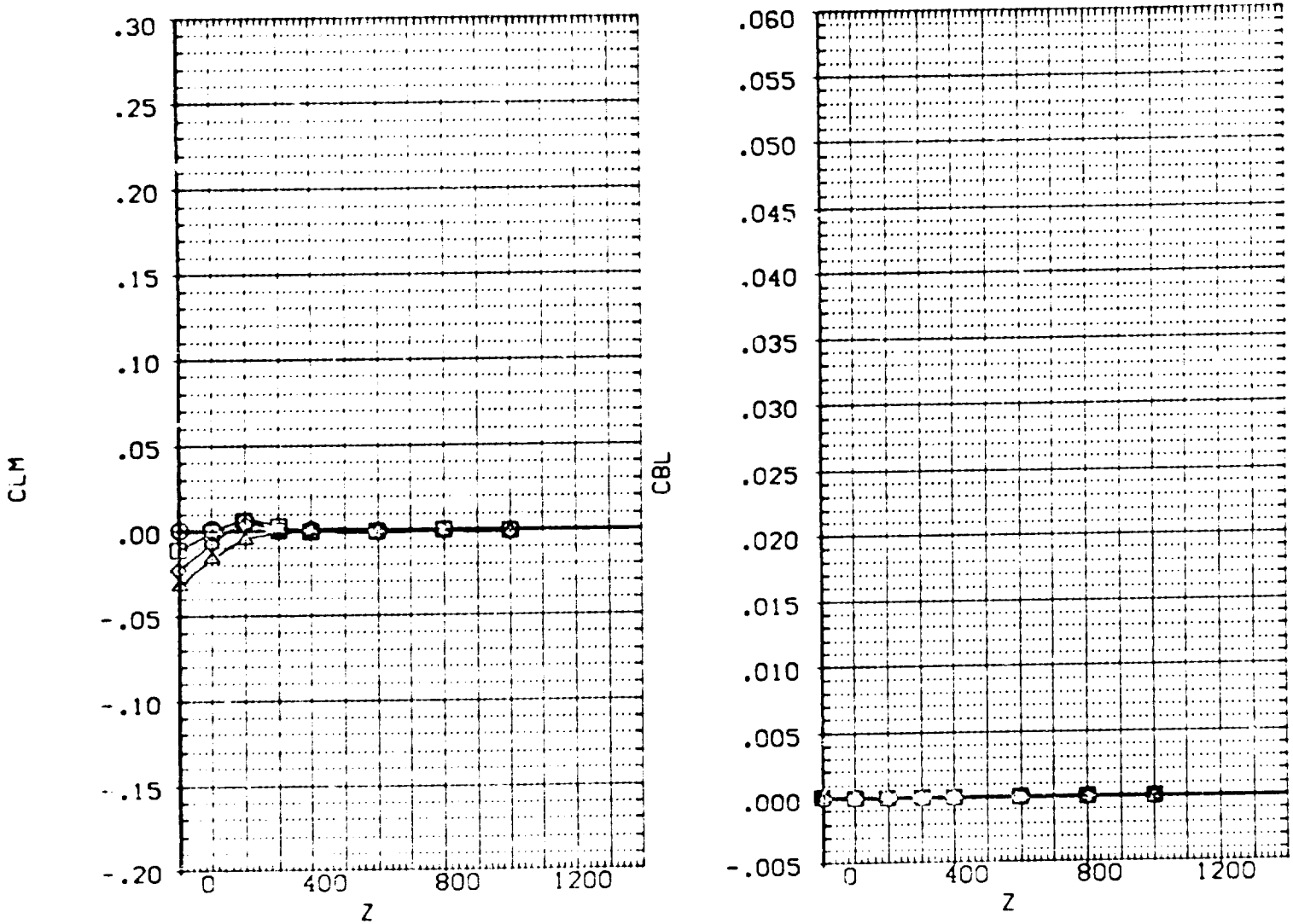


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

!A!3.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT04)

SYMBOL	X		PARAMETRIC VALUES		
○	.088	MACH	4.530	PTOTAL	110.000
□	400.280	ALPHA	.000	BETA	.000
◇	800.430	DALPHA	.000	DBETA	5.000
△	1200.200	ELEVTR	.000	AILRON	.000
		Y	200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTER.STICS FOR INDIVIDUAL DATASETS

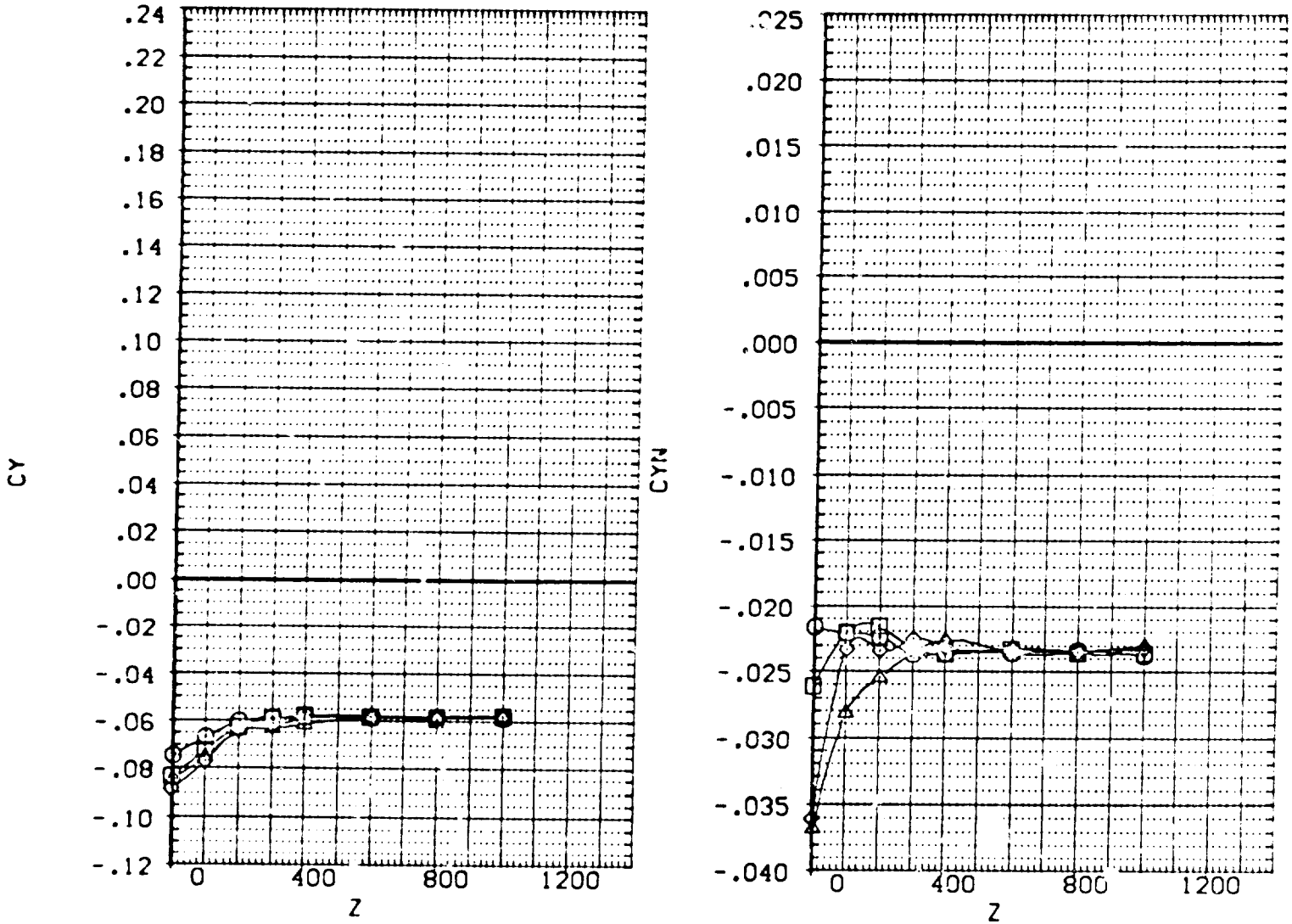


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

!A13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT04)

SYMBOL	X		PARAMETRIC VALUES		
○	.088	MACH	4.530	PTOTAL	110.000
□	400.200	ALPHA	.000	BETA	.000
◇	800.430	DALPHA	.000	DBETA	5.000
△	1200.700	ELEVTR	.000	AILRON	.000
		Y	200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

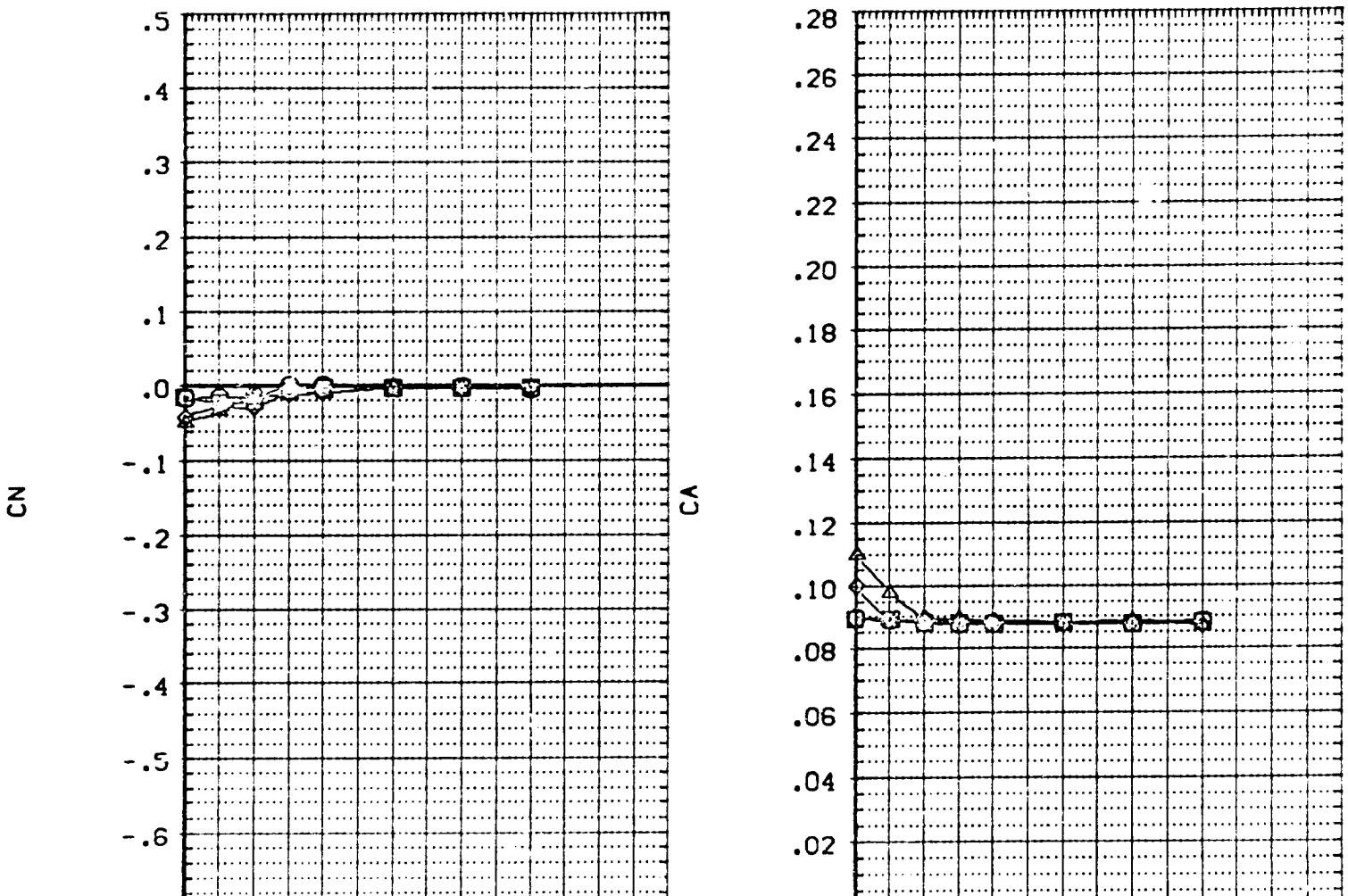


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

IA13,EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT05)

SYMBOL	X		PARAMETRIC VALUES		
○	-.057	MACH	4.530	PTOTAL	110.000
□	400.480	ALPHA	.000	BETA	.000
◇	800.570	DALPHA	.000	DBETA	5.000
△	1200.600	ELEVTR	.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

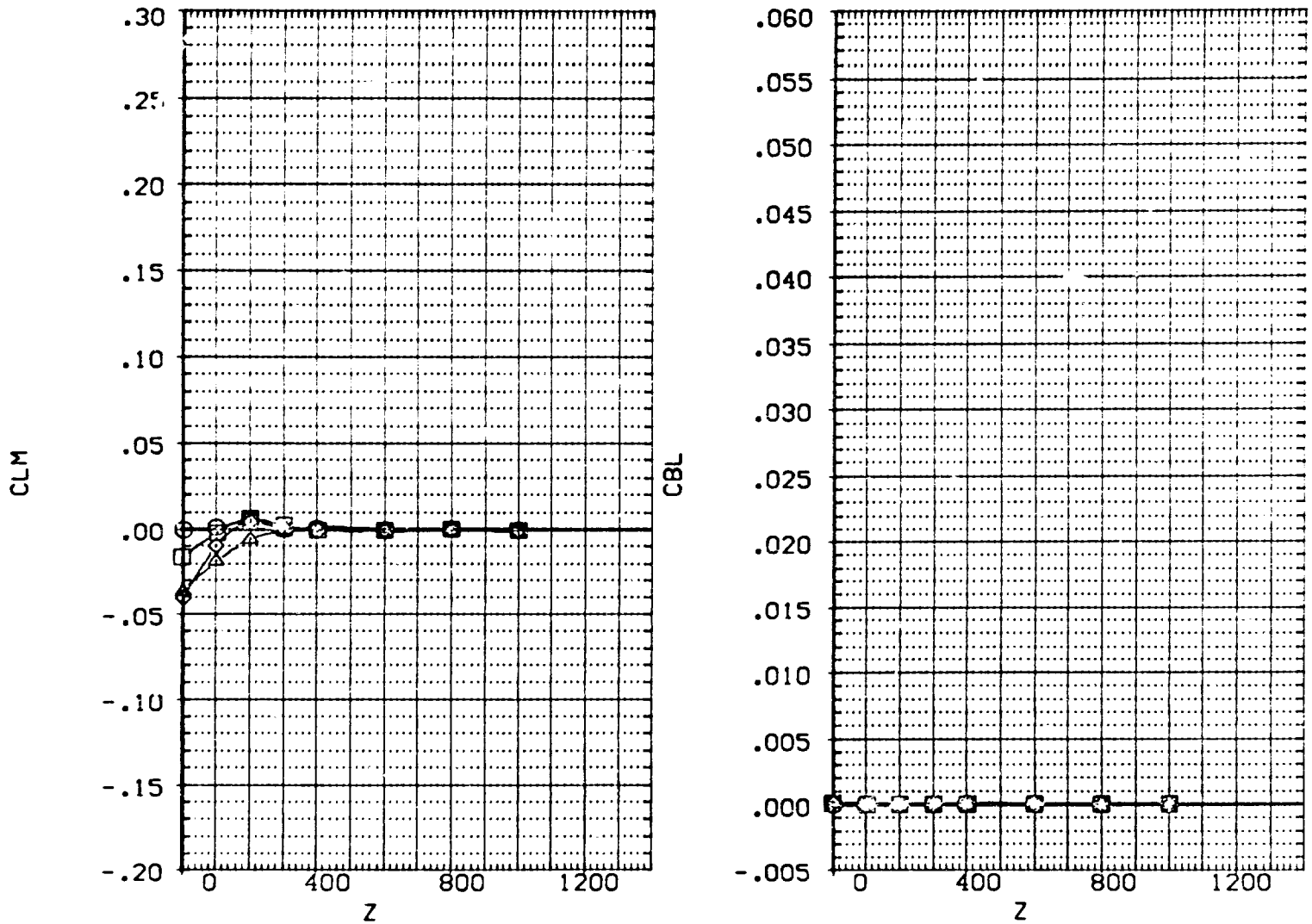


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

IA13,EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT05)

SYMBOL	X		PARAMETRIC VALUES		
○	-.057	MACH	4.530	PTOTAL	110.000
□	400.480	ALPHA	.000	BETA	.000
◇	800.570	DALPHA	.000	DBETA	5.000
△	1200.600	ELEVTR	.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

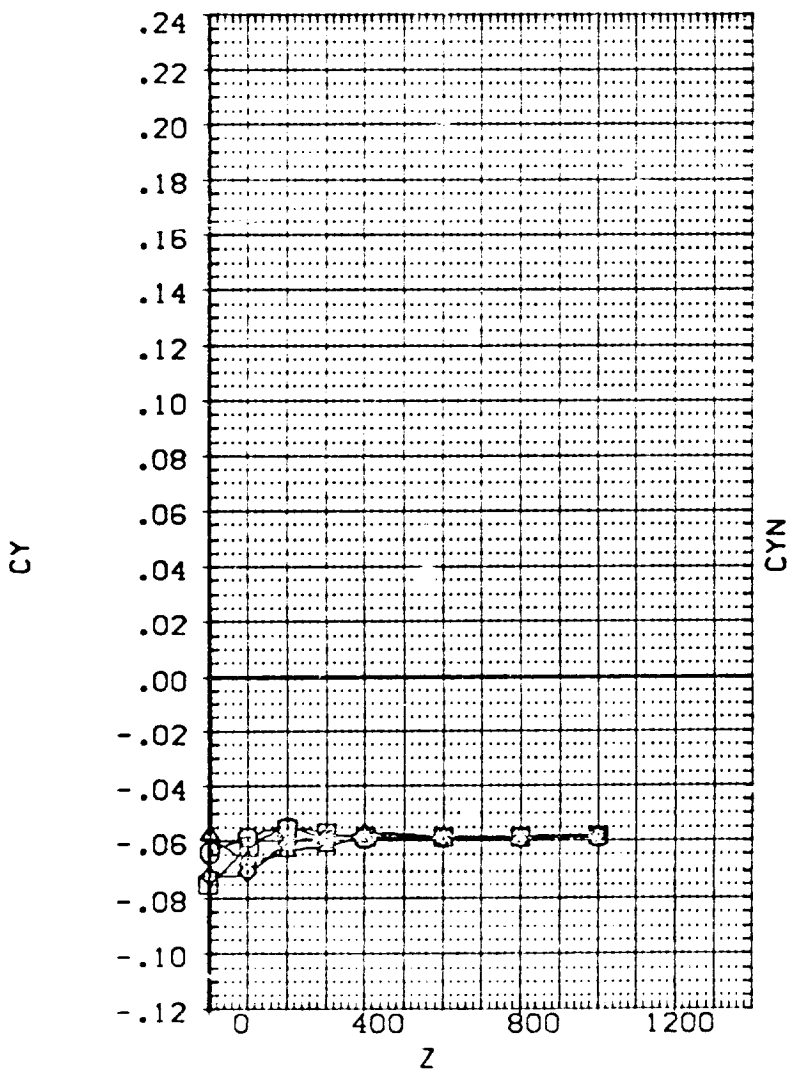


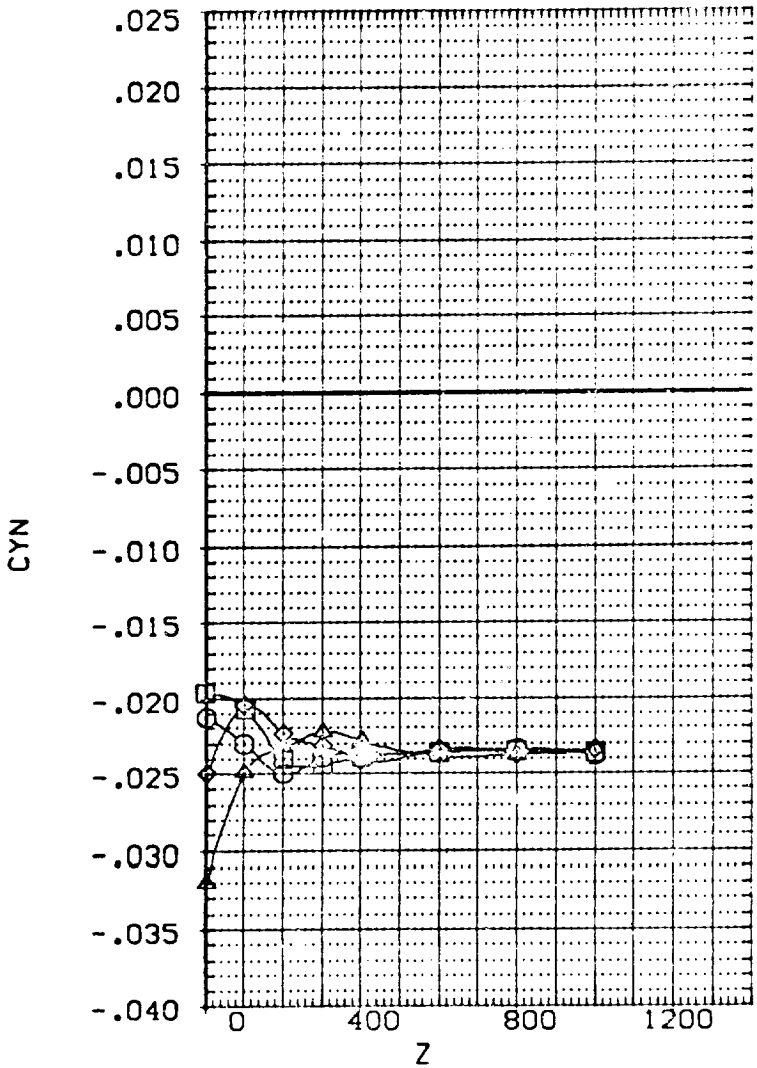
EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

!A13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT05)

SYMBOL	X		PARAMETRIC VALUES		
○	-.057	MACH	4.530	PTOTAL	110.000
□	400.480	ALPHA	.000	BETA	.000
◇	800.570	DALPHA	.000	DBETA	5.000
△	1200.600	ELEVTR	.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



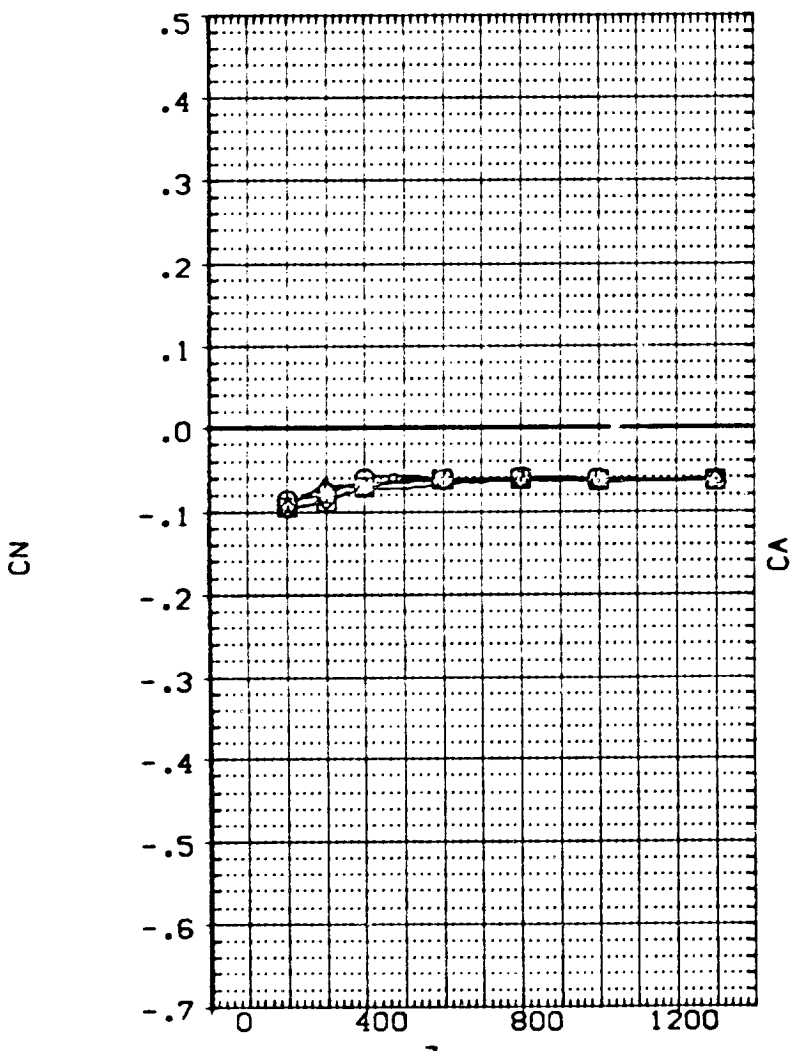


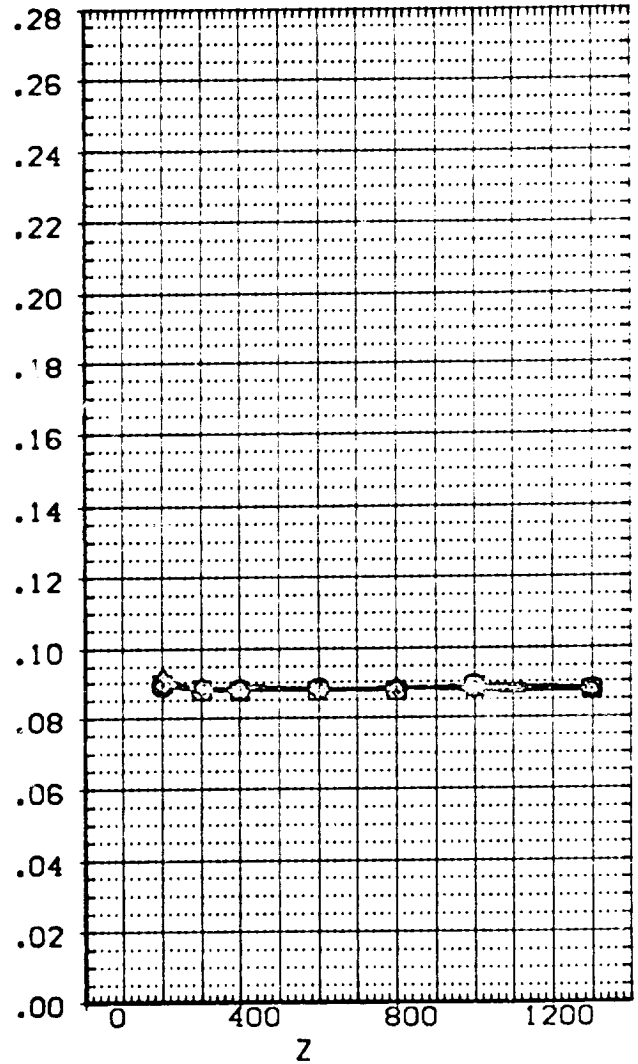
EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

IA13,EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT06)

SYMBOL	X		PARAMETRIC VALUES		
○	.117	MACH	4.530	PTOTAL	110.000
□	400.310	ALPHA	.000	BETA	.000
◇	800.510	DELPHA	-5.000	DBETA	.000
△	1200.900	ELEVTR	.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



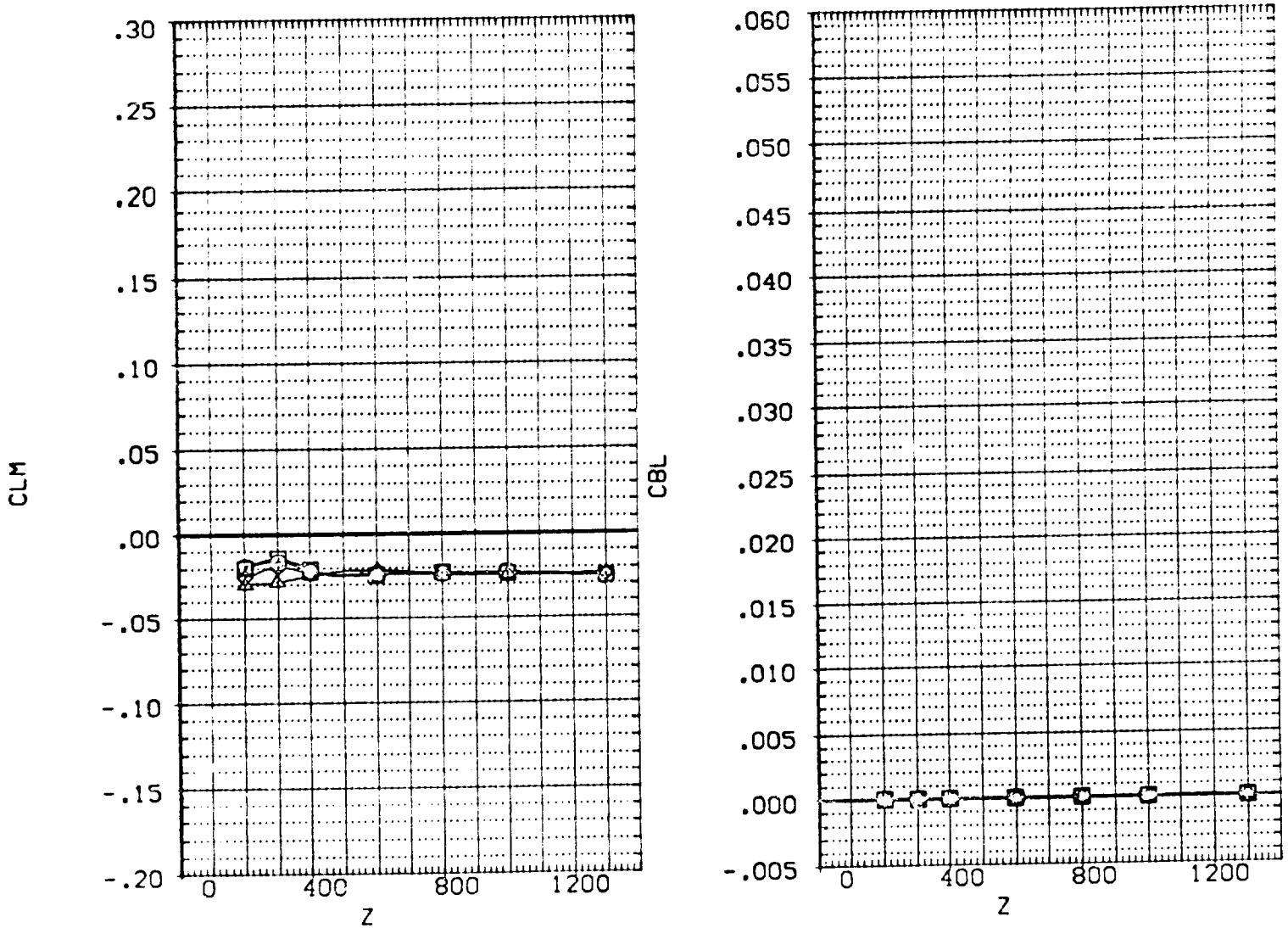


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

[A13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT06)

SYMBOL	X		PARAMETRIC VALUES		
○	..17	MACH	4.530	PTOTAL	110.000
□	400.310	ALPHA	.000	BETA	.000
◇	800.510	DALPHA	-5.000	DBETA	.000
△	1200.900	ELEVTR	.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

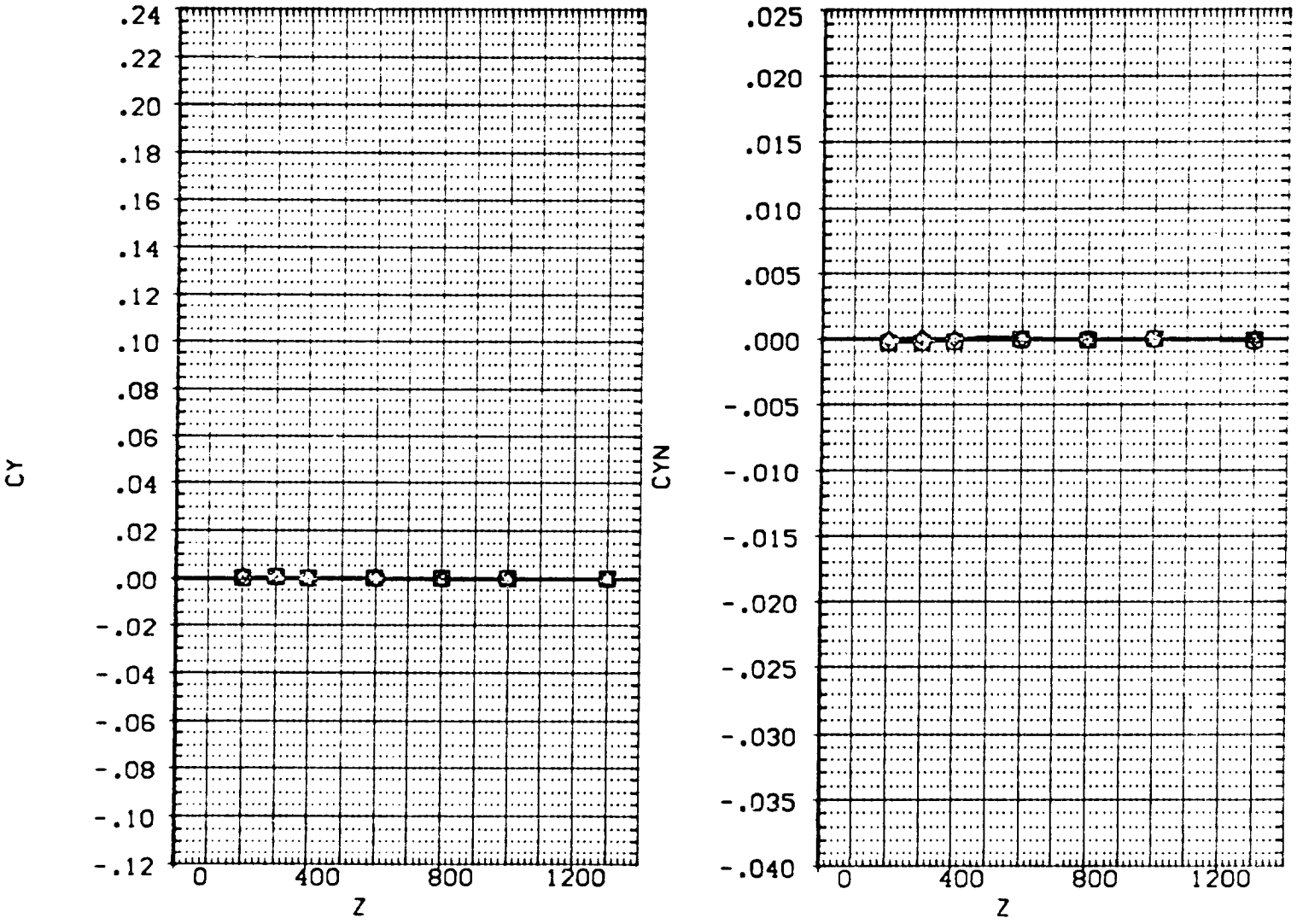


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT06)

SYMBOL	X		PARAMETRIC VALUES		
○	.117	MACH	4.530	PTOTAL	110.000
□	400.310	ALPHA	.000	BETA	.000
◇	800.510	DALPHA	-5.000	DBETA	.000
△	1200.900	ELEVTR	.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

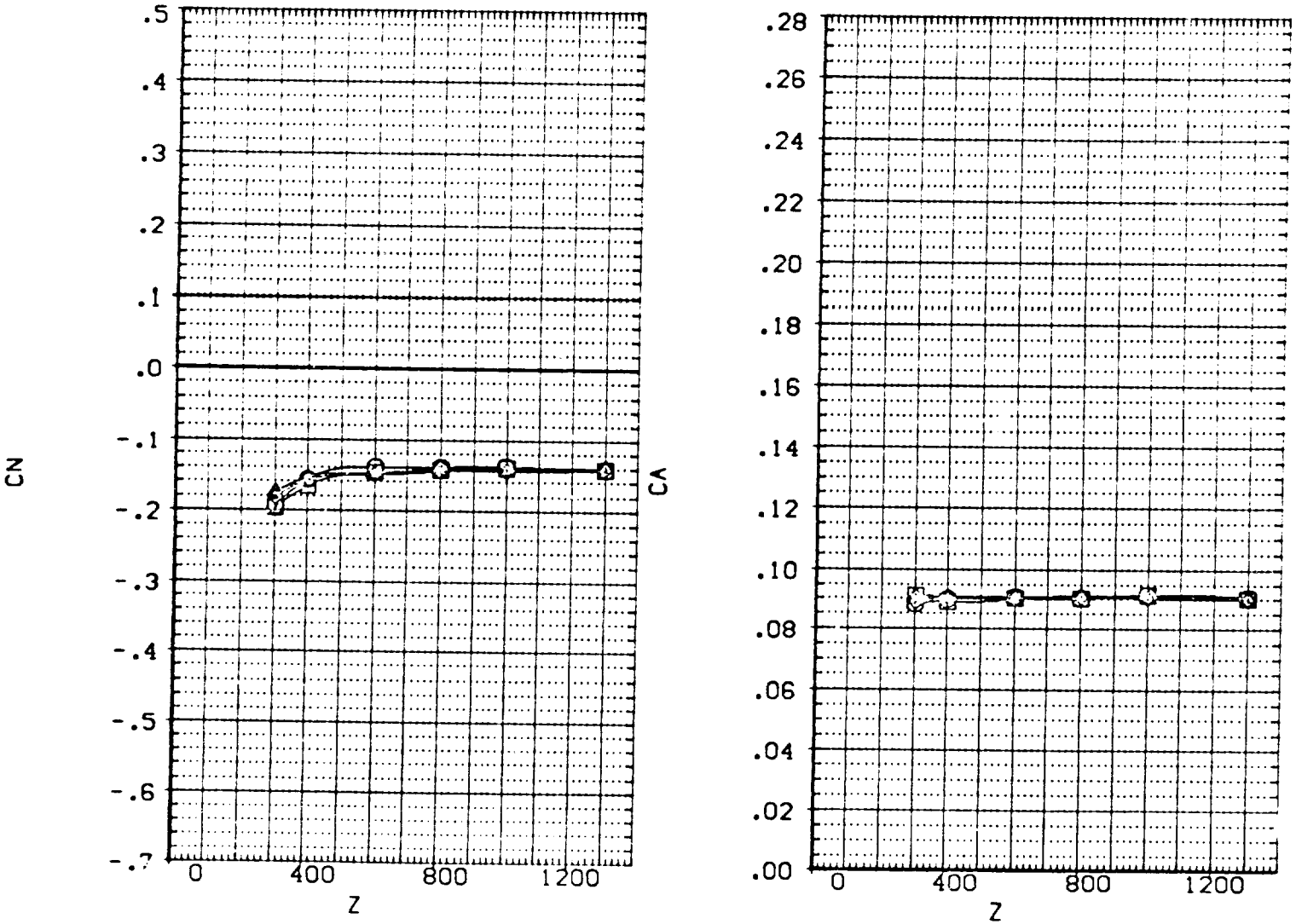


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT07)

SYMBOL	X	PARAMETRIC VALUES			
○	.057	MACH	4.530	PTOTAL	110.000
□	400.400	ALPHA	.000	BETA	.000
◇	800.500	DALPHA	-10.000	DBETA	.000
△	1200.700	ELEVTR	.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

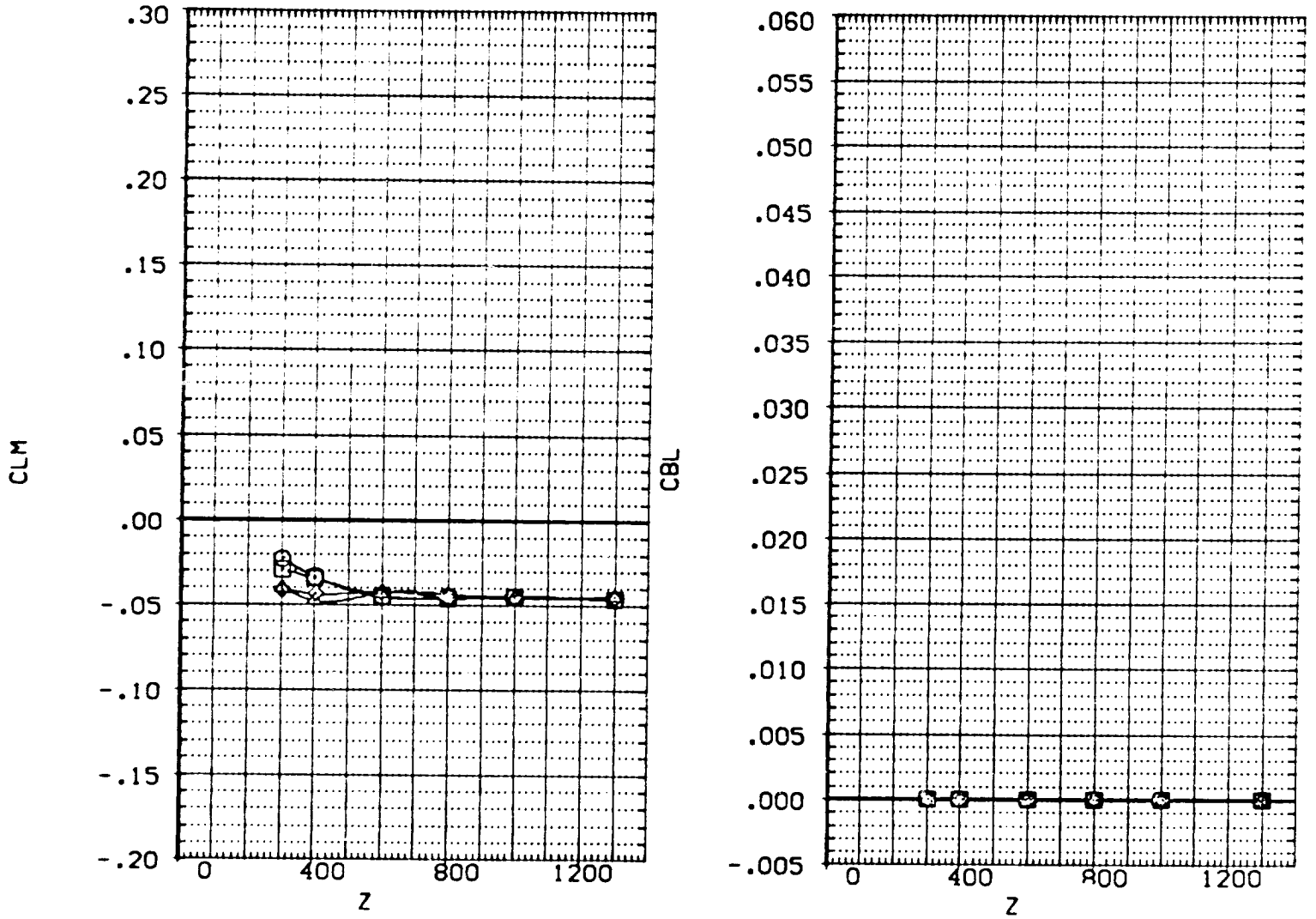


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT07)

SYMBOL	X		PARAMETRIC VALUES		
○	.057	MACH	4.530	PTOTAL	110.000
□	400.430	ALPHA	.000	BETA	.000
◇	800.500	DALPHA	-10.000	DBETA	.000
△	1200.700	ELEVTR	.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

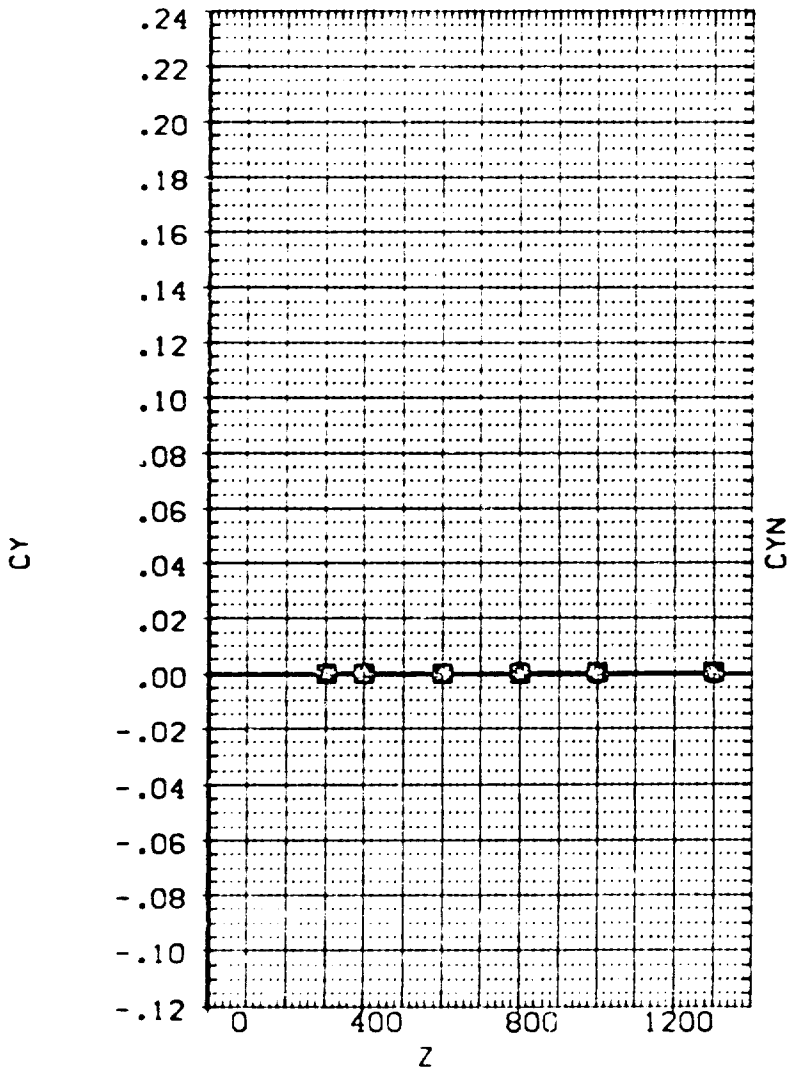


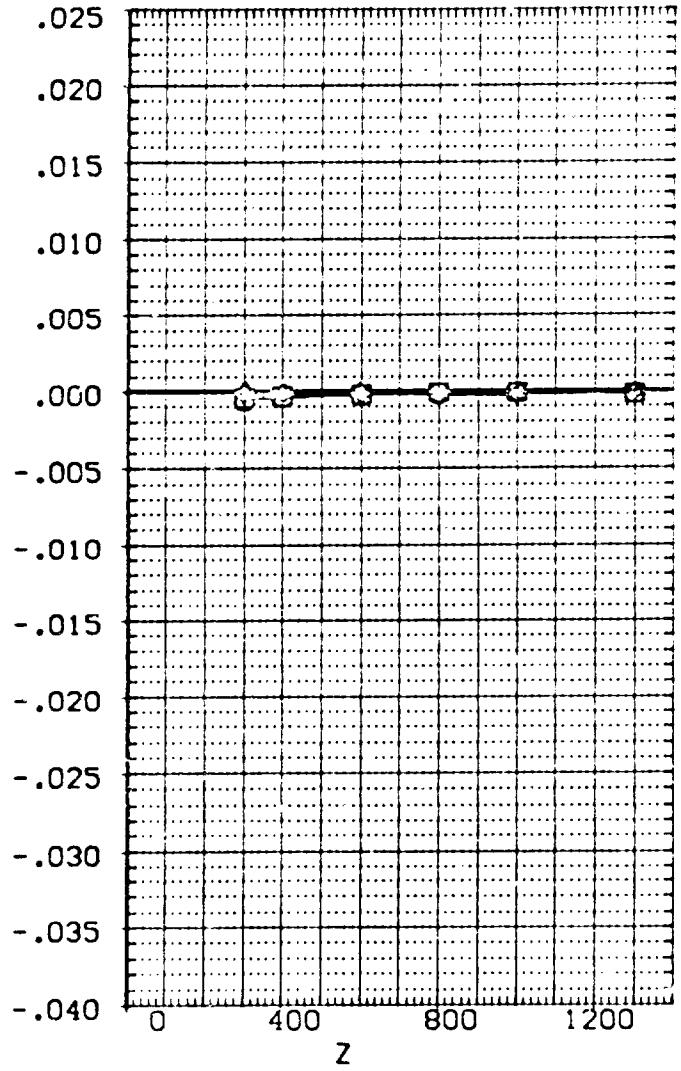
EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

!A13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT07)

SYMBOL	X		PARAMETRIC VALUES		
○□	.057	MACH	4.530	PTOTAL	110.000
◇	400.430	ALPHA	.000	BETA	.000
△	800.500	DALPHA	-10.000	DBETA	.000
	1200.700	ELEVTR	.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



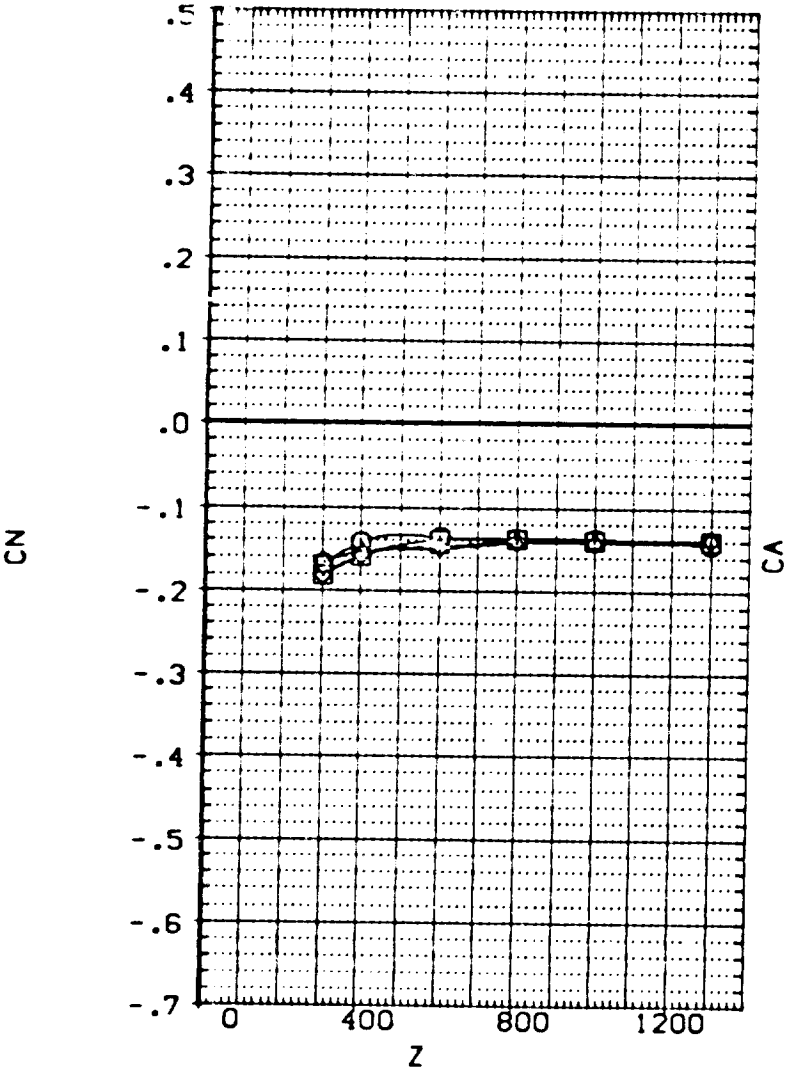


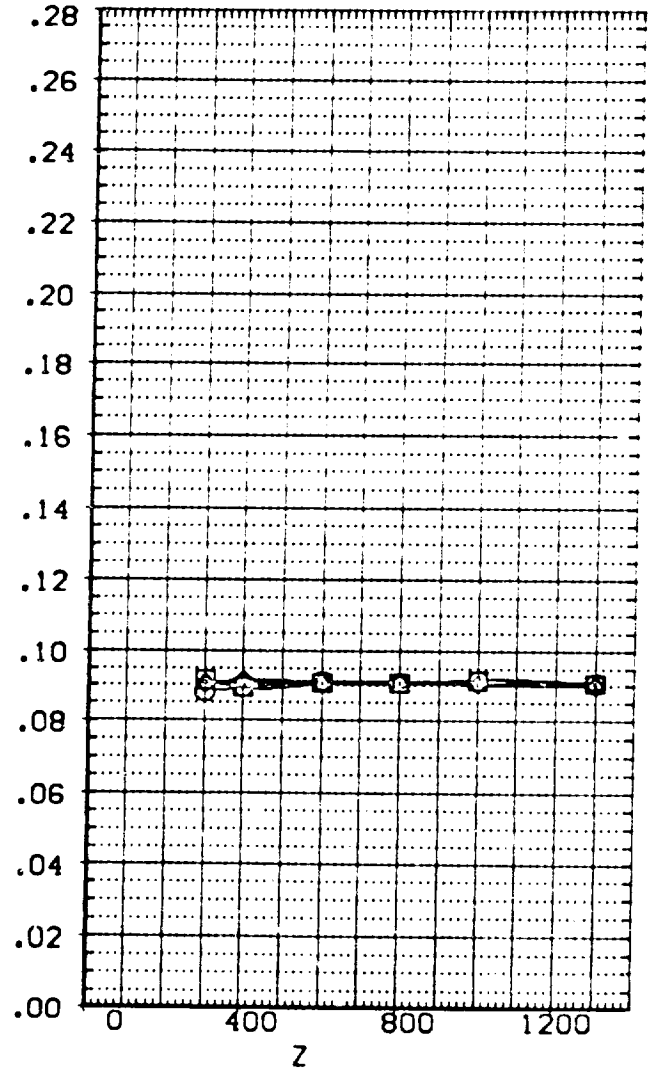
EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

IA!3.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT08)

SYMBOL	X		PARAMETRIC VALUES		
○	.062	MACH	4.530	PTOTAL	110.000
□	400.260	ALPHA	.000	BETA	.000
◇	800.620	DALPHA	-10.000	DBETA	.000
△	1200.700	ELEVTR	.000	AILRON	.000
		Y	200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



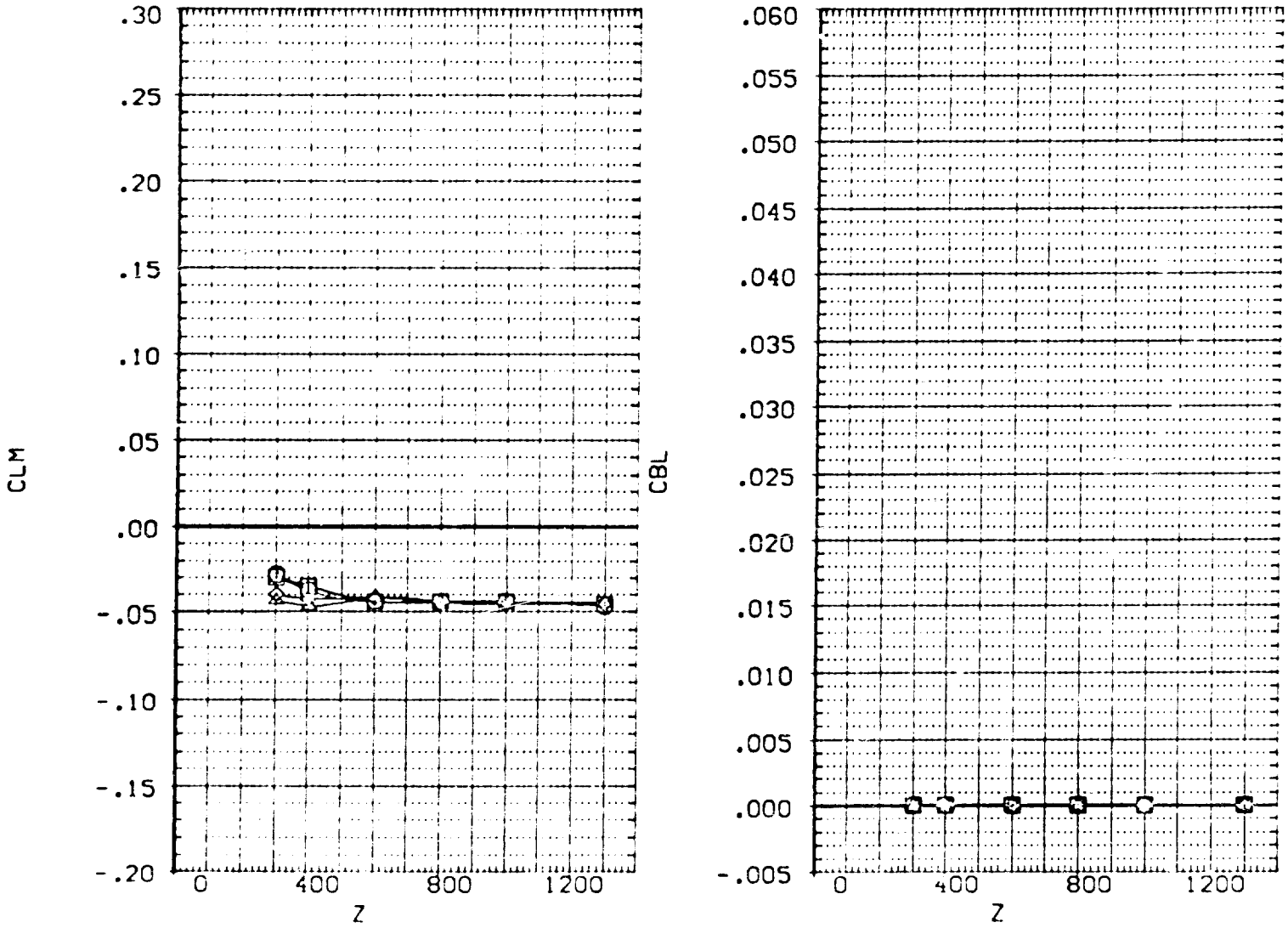


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

[A:3.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT08)

SYMBOL	X		PARAMETRIC VALUES		
○	.062	MACH	4.530	PTOTAL	110.000
□	400.260	ALPHA	.000	BETA	.000
◇	800.620	DALPHA	-10.000	DBETA	.000
△	1200.700	ELEVTR	.000	AILRON	.000
		Y	200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

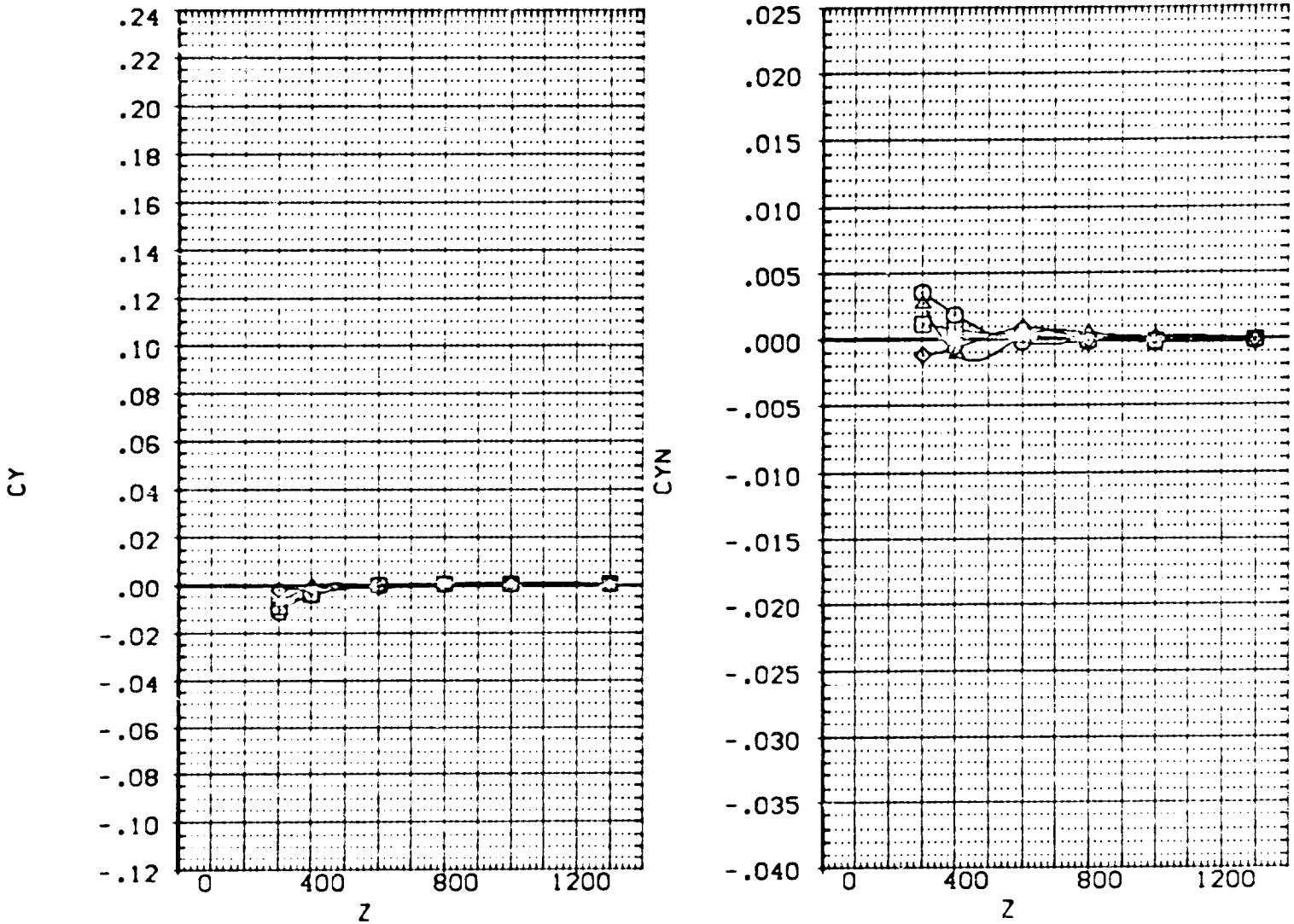


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

!A13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT08)

SYMBOL	X		PARAMETRIC VALUES		
○	.062	MACH	4.530	PTOTAL	110.000
□	400.260	ALPHA	.000	BETA	.000
◇	800.620	DALPHA	-10.000	DBETA	.000
△	1200.700	ELEVTR	.000	AILRON	.000
		Y	200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

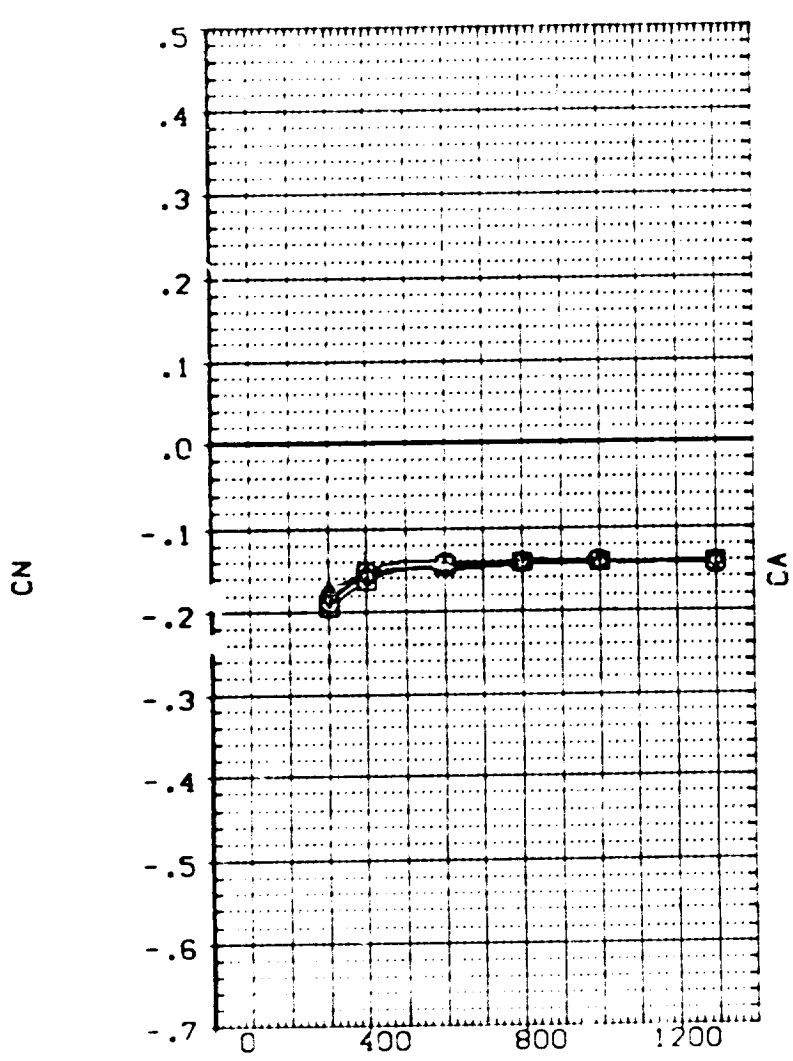


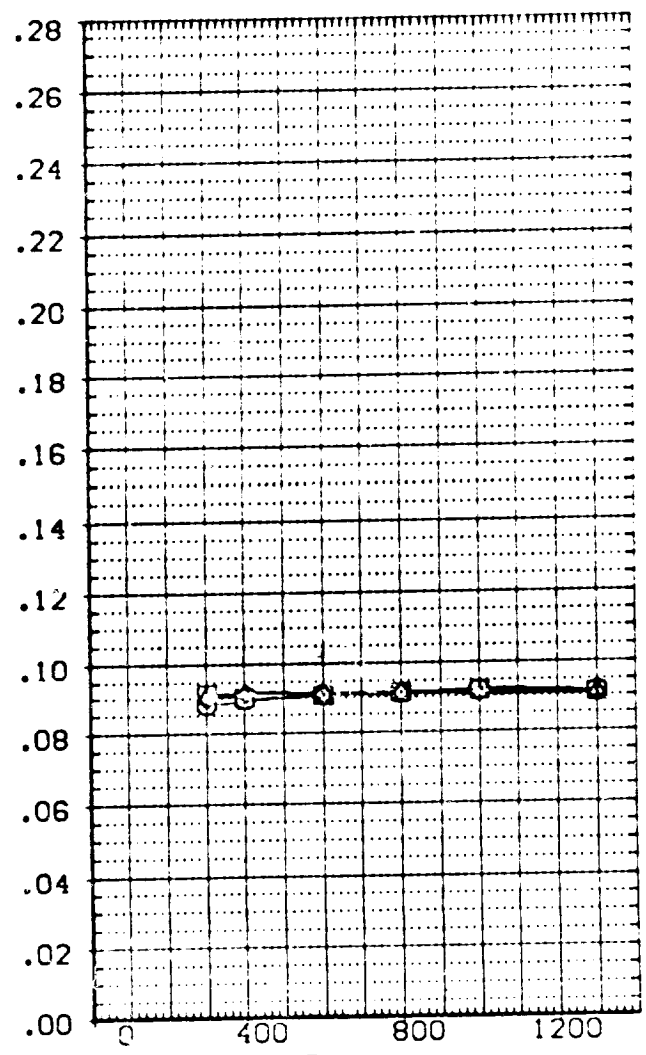
EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

[A13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT09)

SYMBOL	X		PARAMETRIC VALUES		
○	-.033	MACH	4.530	PTOTAL	110.000
	400.510	ALPHA	.000	BETA	.000
◇	800.420	DALPHA	-10.000	DBETA	5.000
△	1200.860	ELEVTR	.000	AILRON	.000
		Y	200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



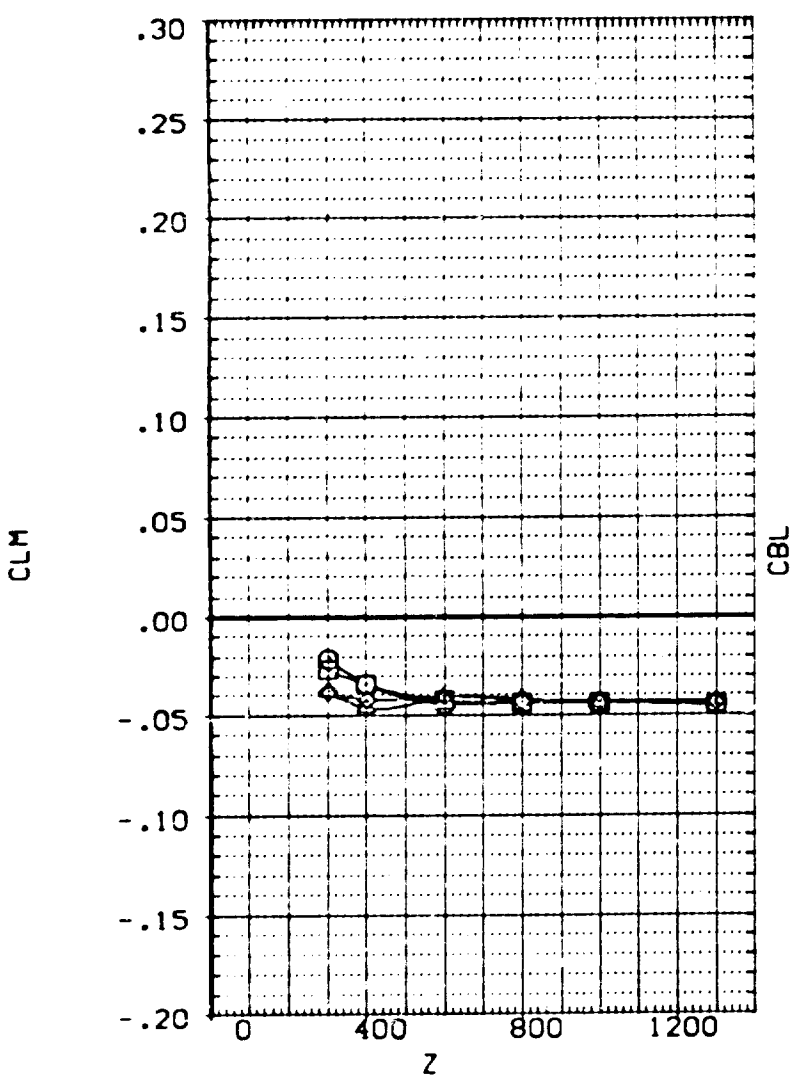


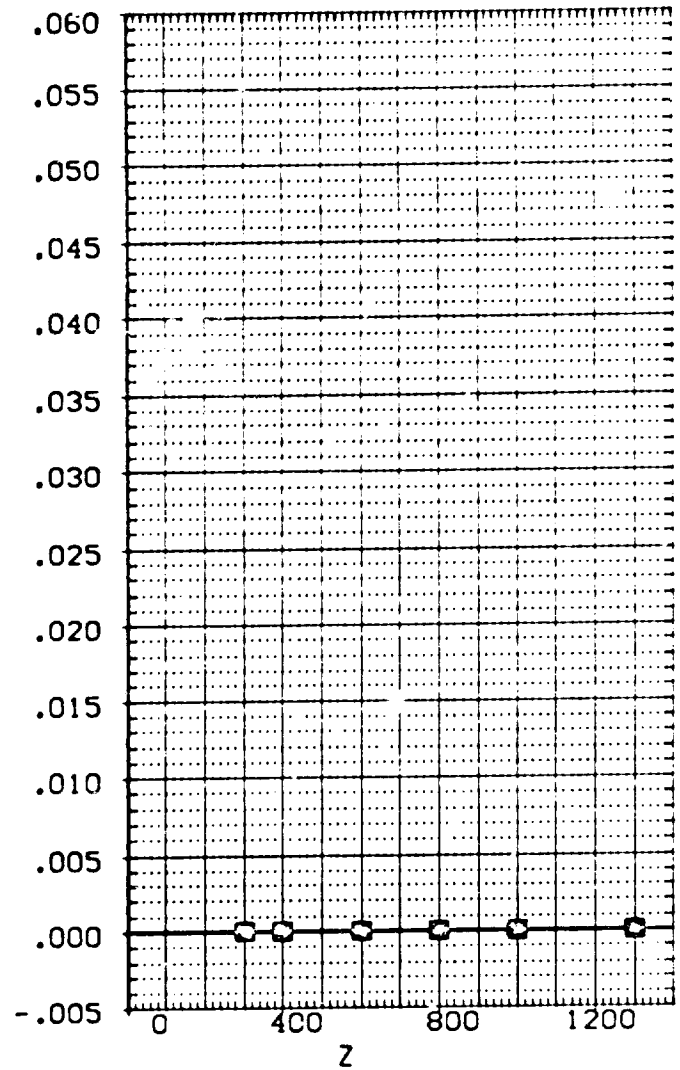
EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

:A13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT09)

SYMBOL	X		PARAMETRIC VALUES		
○	-.033	MACH	4.530	PTOTAL	110.000
□	400.510	ALPHA	.000	BETA	.000
◇	800.420	DALPHA	-10.000	DBETA	5.000
△	1200.800	ELEVTR	.000	AILRON	.000
		Y	200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



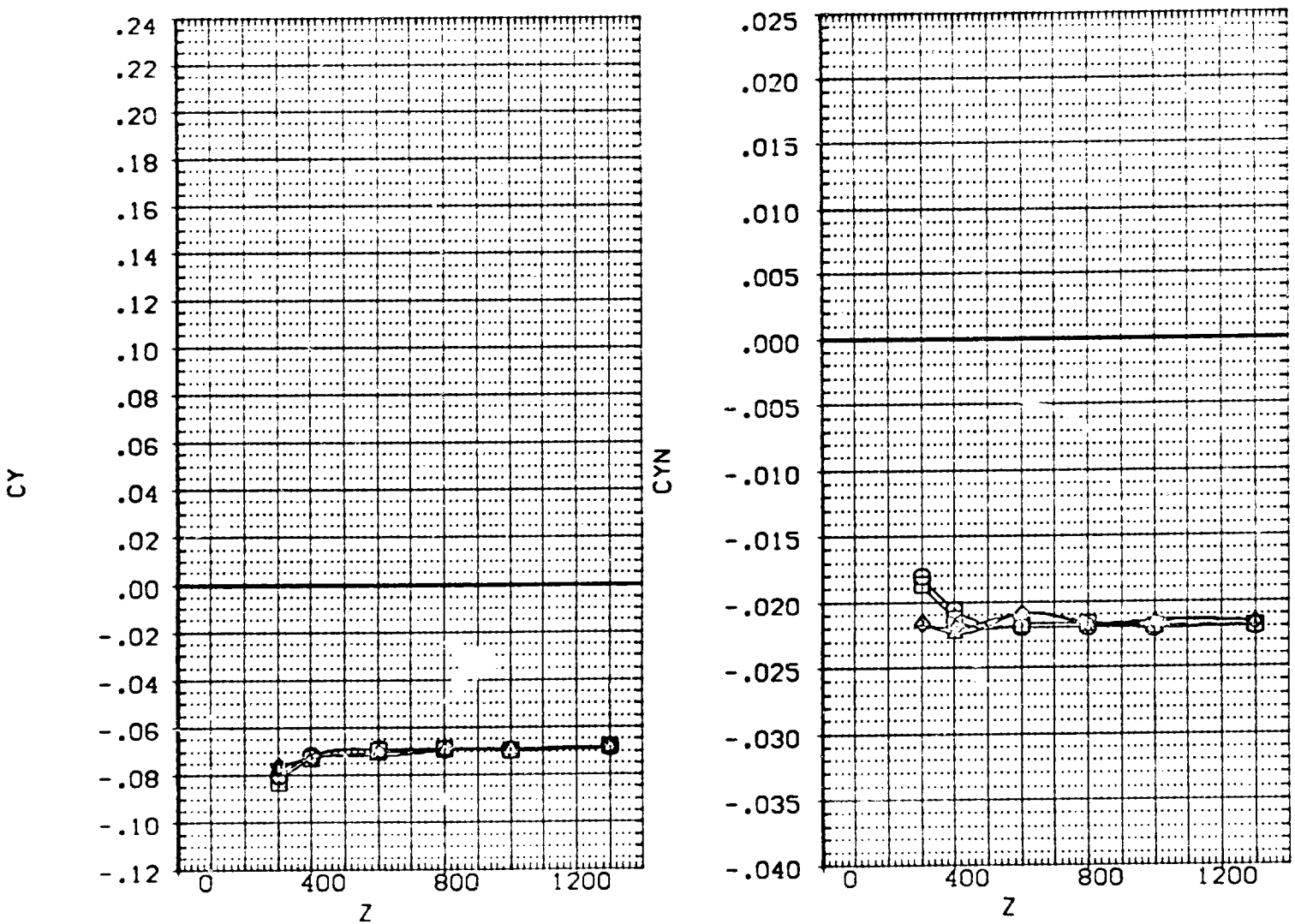


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT09)

SYMBOL	X		PARAMETRIC VALUES		
○	-.033	MACH	4.530	PTOTAL	110.000
□	400.510	ALPHA	.000	BETA	.000
◇	800.420	DALPHA	-10.000	DBETA	5.000
△	1200.800	ELEVTR	.000	AILRON	.000
		Y	200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

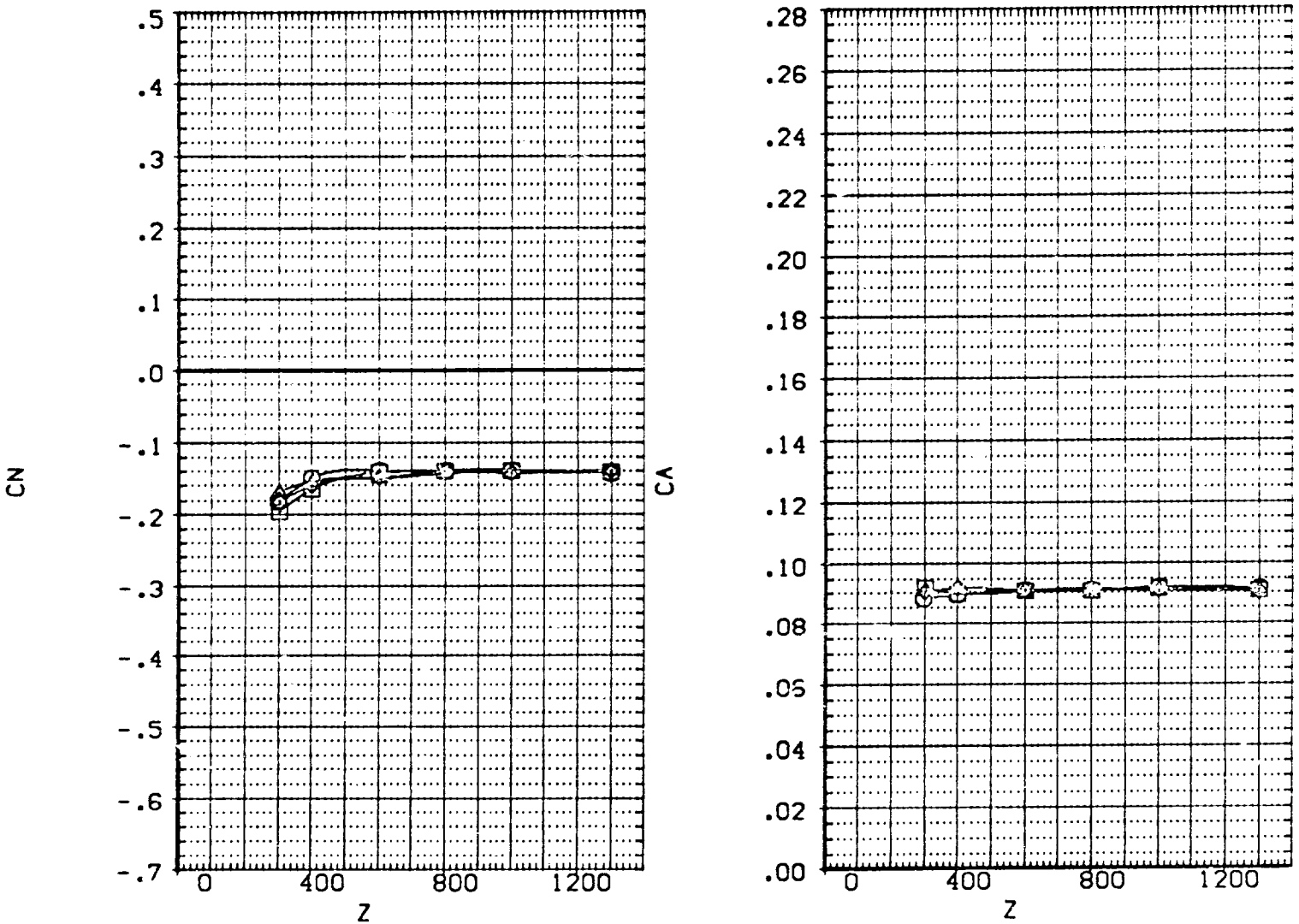


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT10)

SYMBOL	X		PARAMETRIC VALUES		
○	-.043	MACH	4.530	PTOTAL	110.000
□	400.200	ALPHA	.000	BETA	.000
◇	800.550	DALPHA	-10.000	DBETA	5.000
△	1200.800	ELEVTR	.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

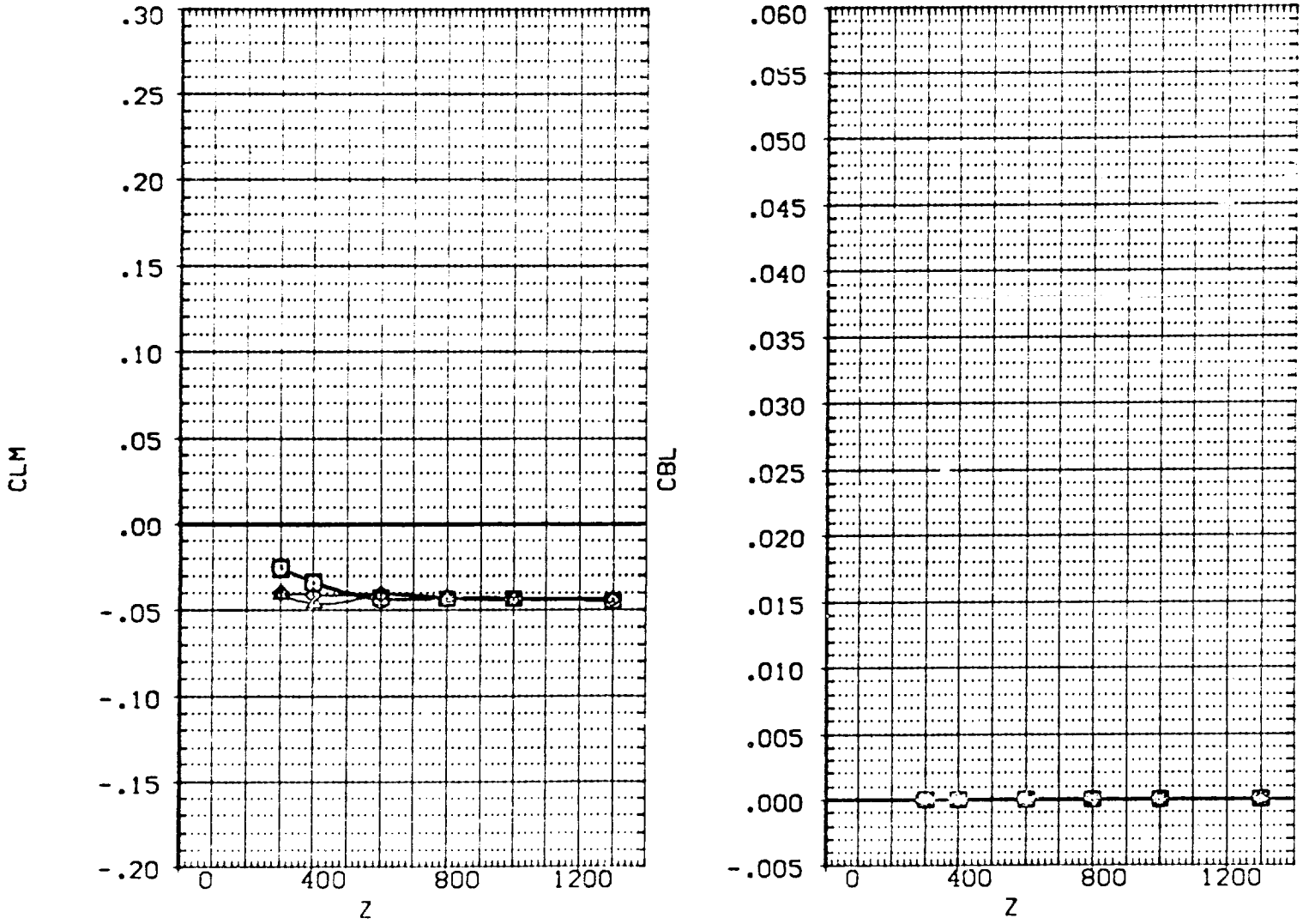


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT10)

SYMBOL	X		PARAMETRIC VALUES		
○	-.043	MACH	4.530	PTOTAL	110.000
□	400.200	ALPHA	.000	BETA	.000
◇	800.550	DALPHA	-10.000	DBETA	5.000
△	1200.800	ELEVTR	.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

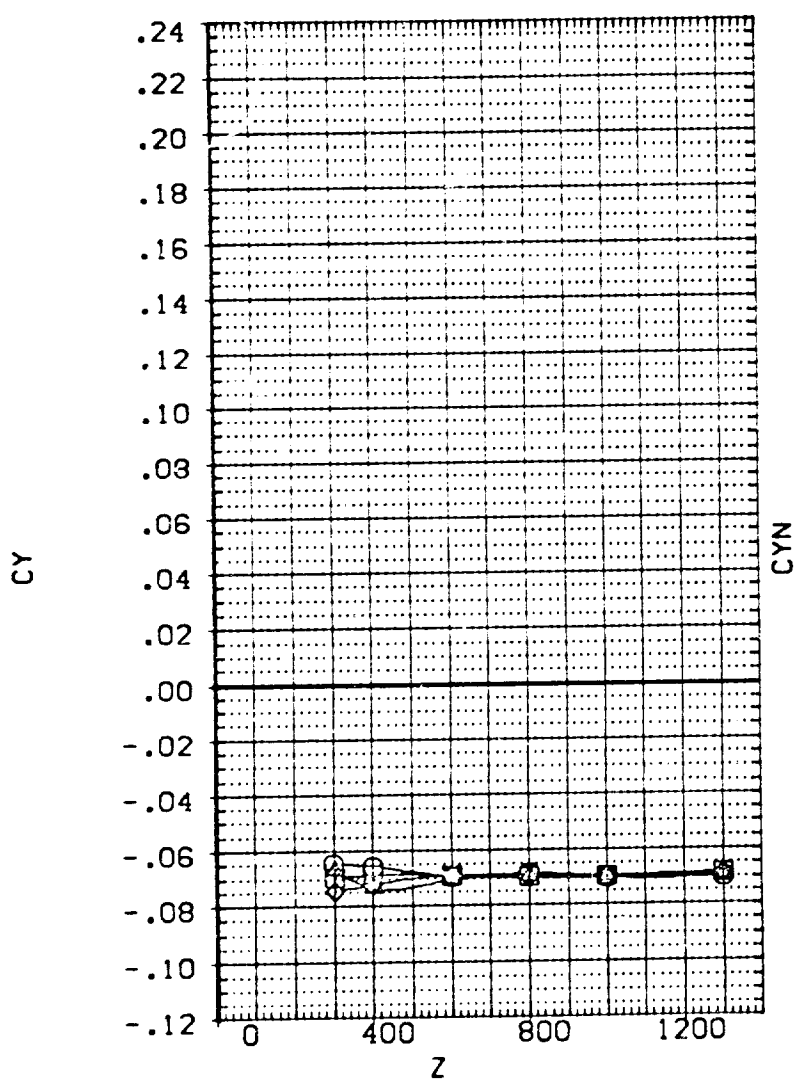


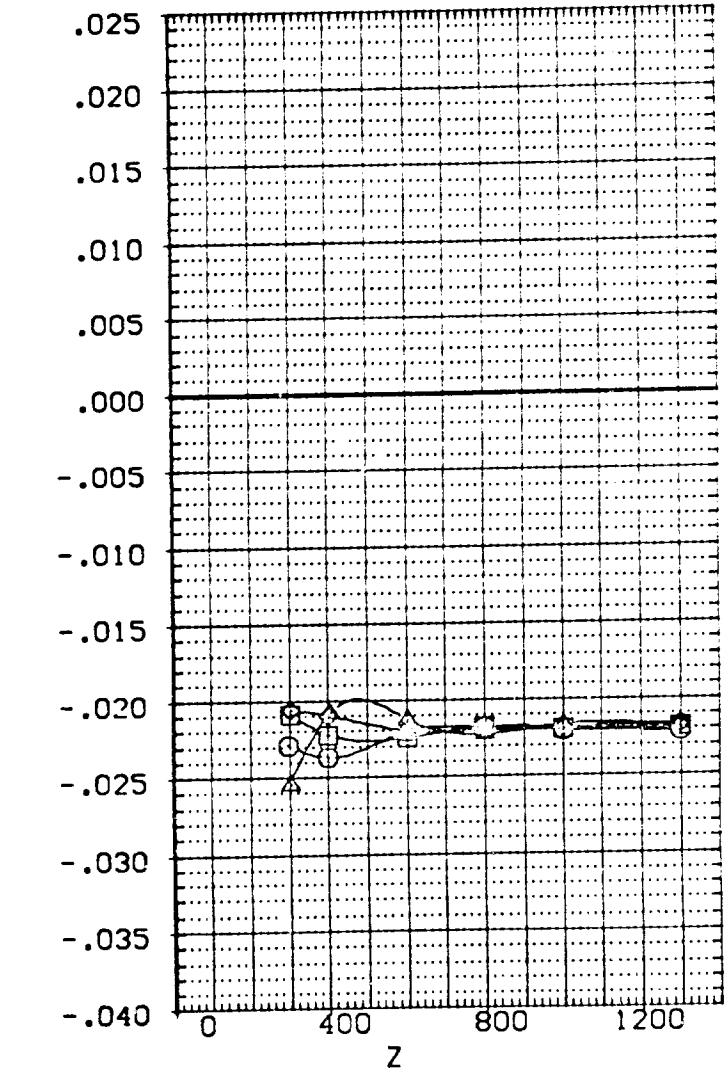
EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT10)

SYMBOL	X		PARAMETRIC VALUES		
○	-.043	MACH	4.530	PTOTAL	110.000
□	400.200	ALPHA	.000	BETA	.000
◇	800.550	DALPHA	-10.000	DBETA	5.000
△	1200.800	ELEVTR	.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



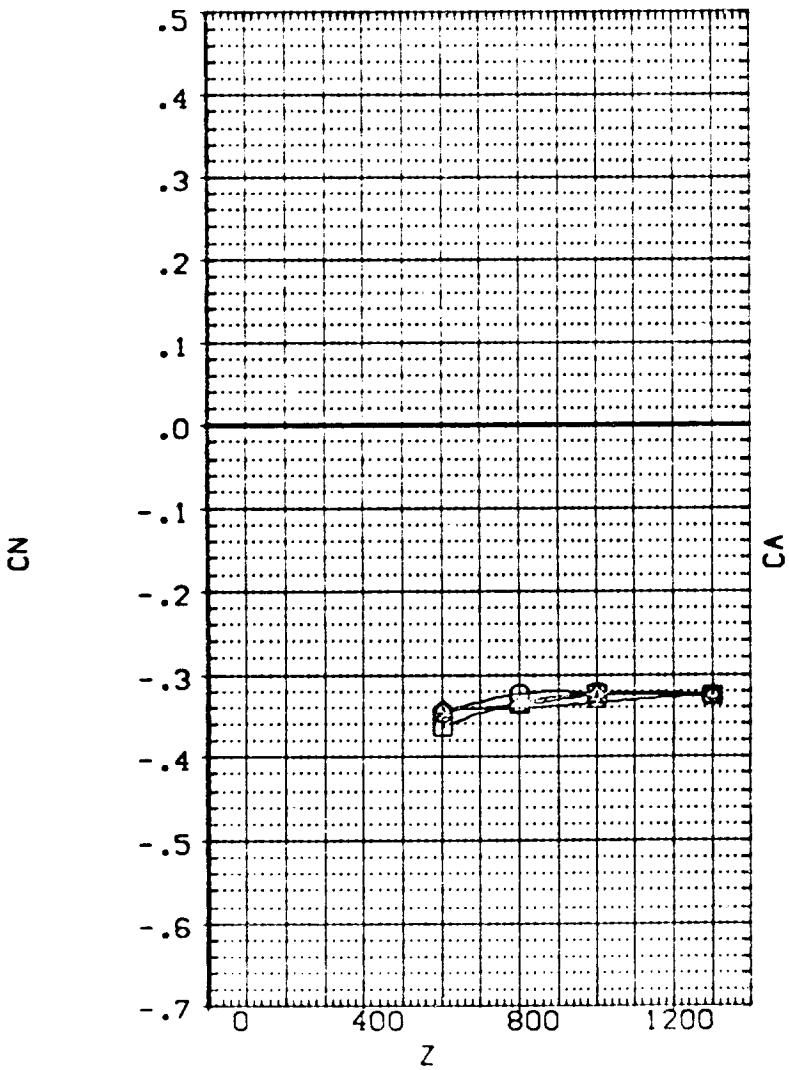


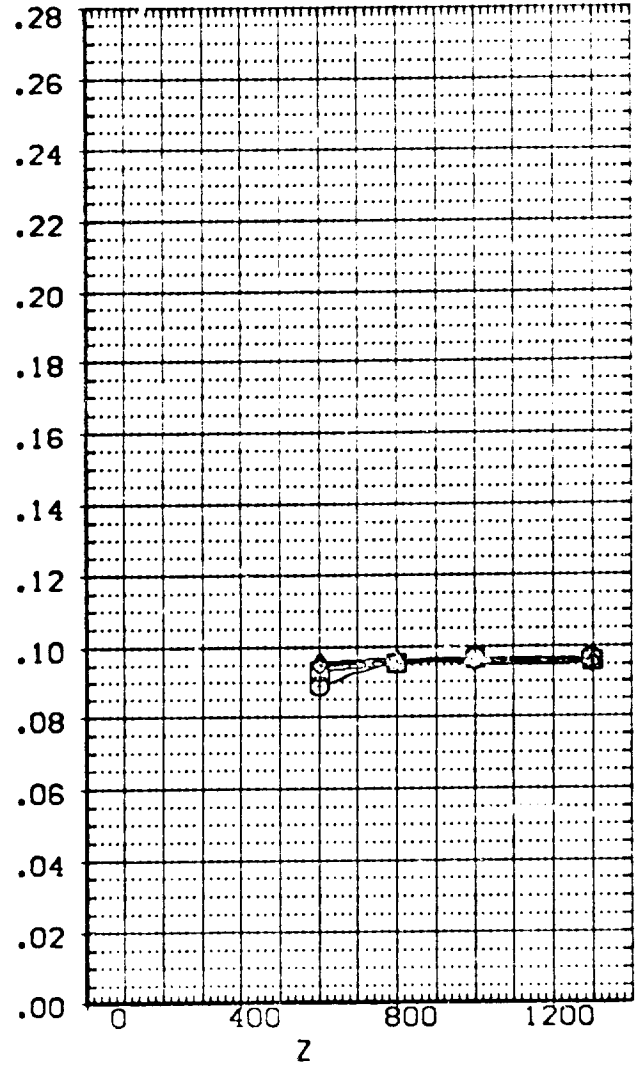
EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT11)

SYMBOL	X		PARAMETRIC VALUES		
○	-.876	MACH	4.530	PTOTAL	110.000
◇	401.340	ALPHA	.000	BETA	.000
△	800.910	DALPHA	-20.000	DBETA	.000
	1200.800	ELEVTR	.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



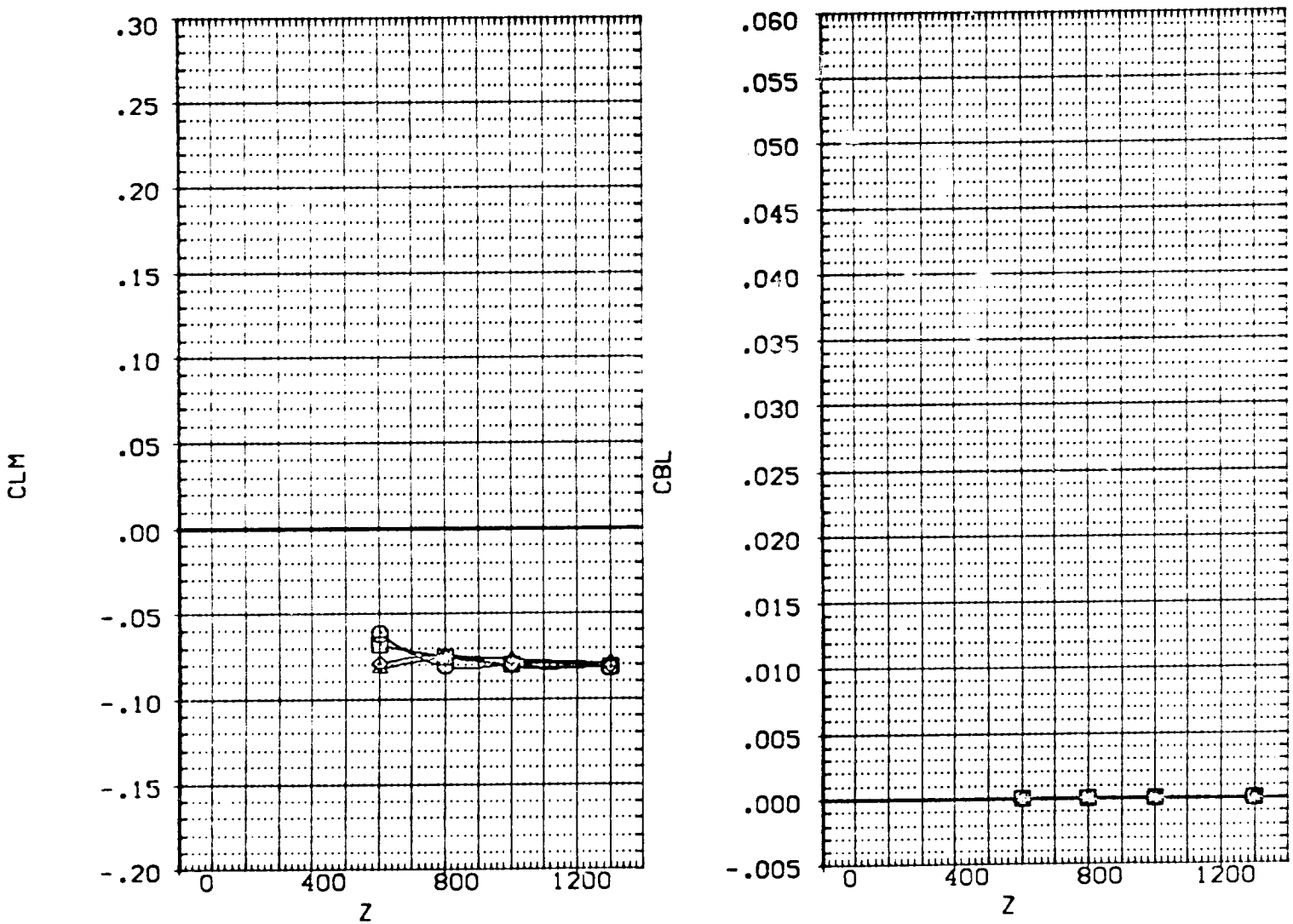


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

!A13,EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT11)

SYMBOL	X		PARAMETRIC VALUES		
○	-.876	MACH	4.530	PTOTAL	110.000
□	401.340	ALPHA	.000	BETA	.000
◇	800.910	DALPHA	-20.000	DBETA	.000
△	1200.800	ELEVTR	.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

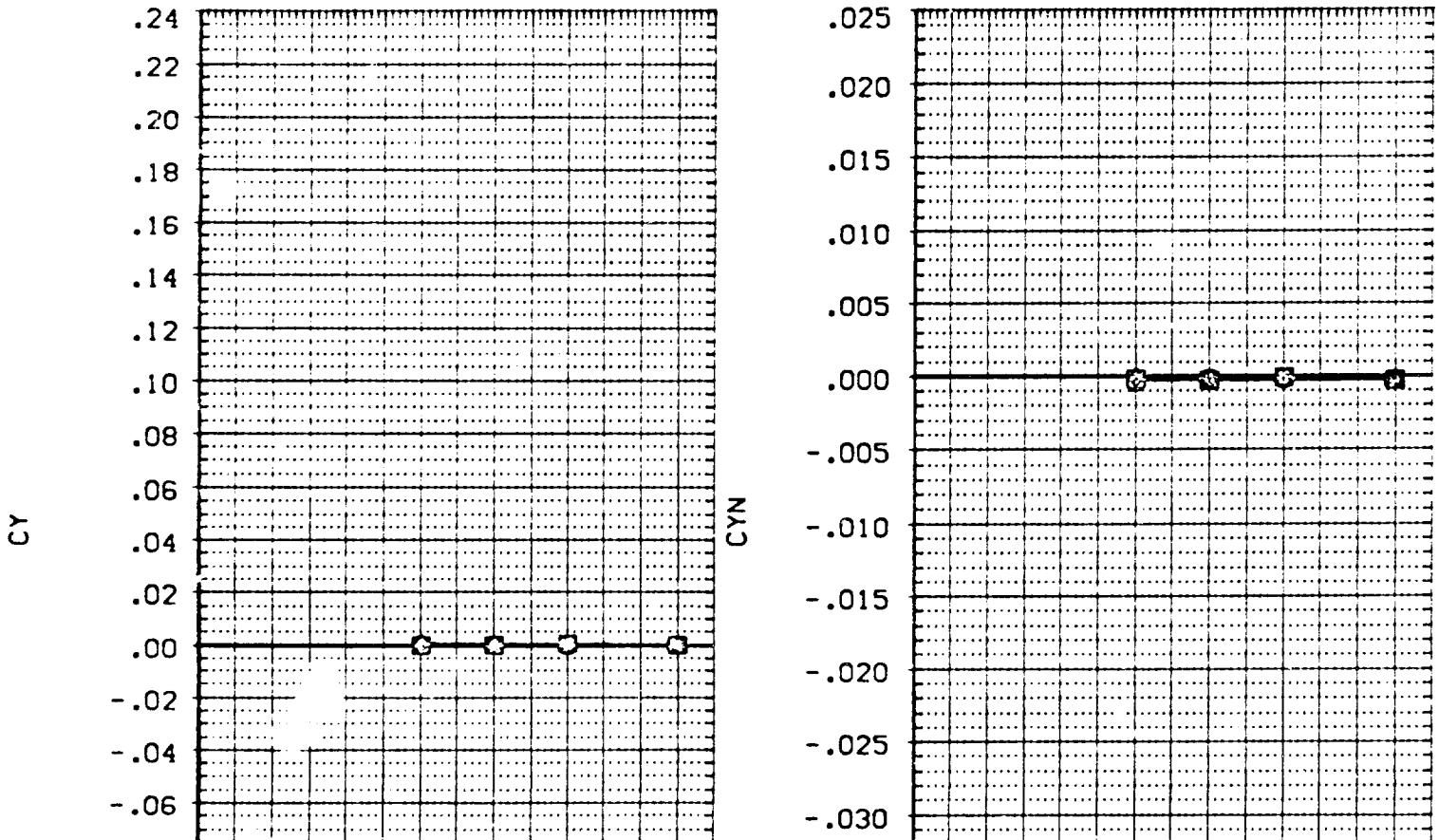


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

!A13,EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT11)

SYMBOL	X		PARAMETRIC VALUES		
○	-.876	MACH	4.530	PTOTAL	110.000
□	401.340	ALPHA	.000	BETA	.000
◇	800.910	DALPHA	-20.000	DBETA	.000
△	1200.800	ELEVTR	.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

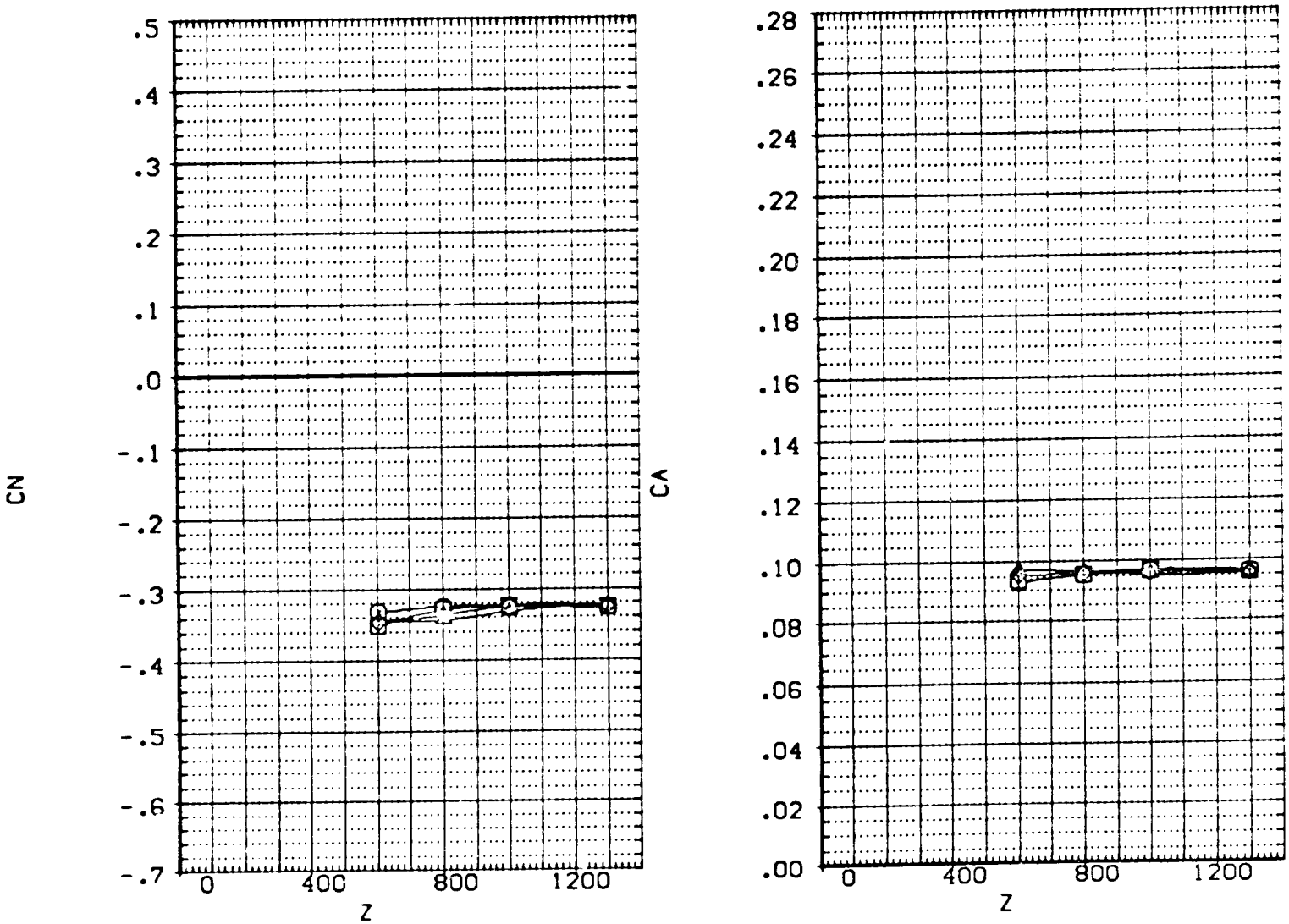


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT12)

SYMBOL	X		PARAMETRIC VALUES		
○	-.503	MACH	4.530	PTOTAL	110.000
◇	400.530	ALPHA	.000	BETA	.000
□	800.210	DALPHA	-20.000	DBETA	.000
△	1201.000	ELEVTR	.000	AILRON	.000
		Y	200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

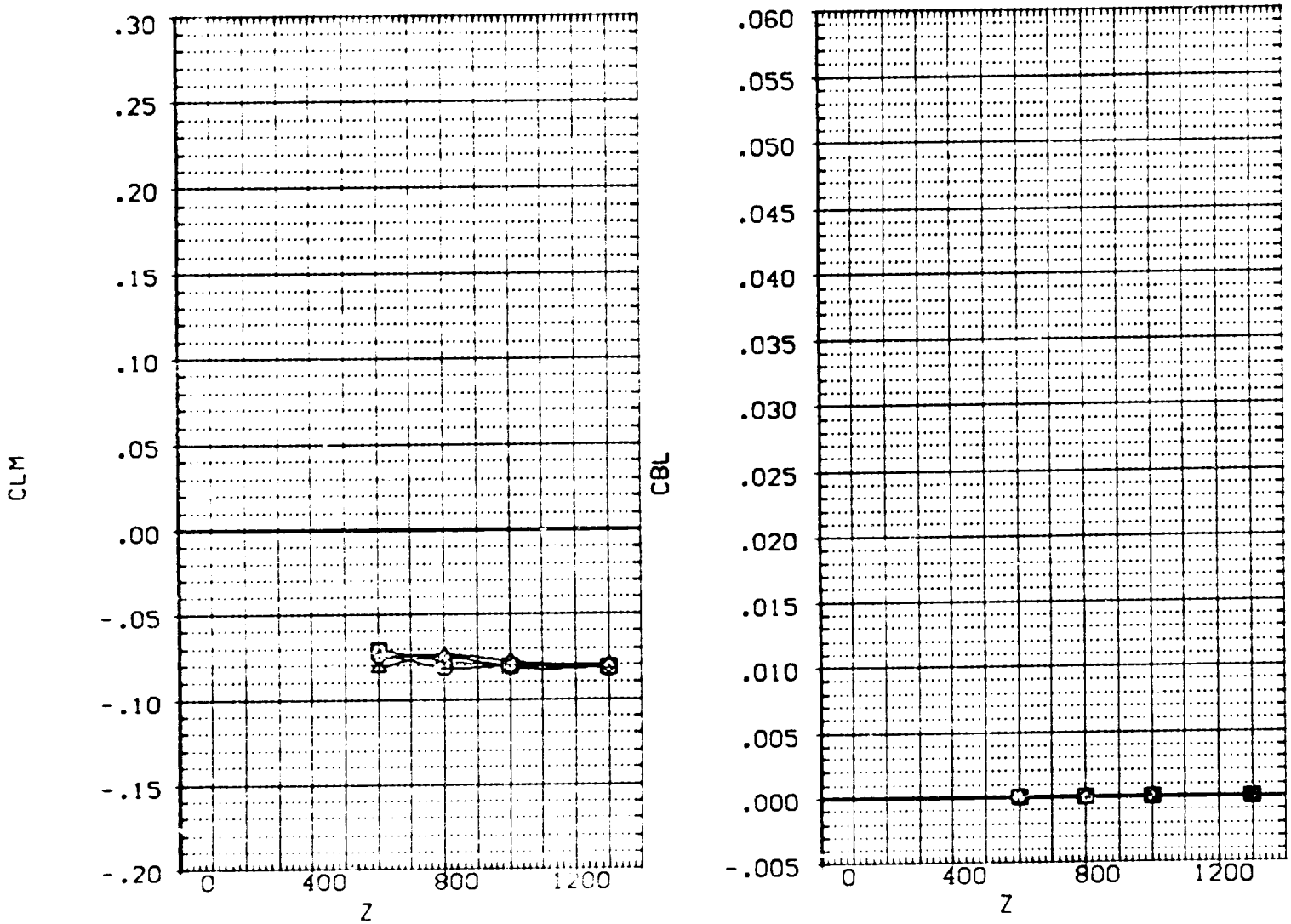


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

IA13,EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT12)

SYMBOL	X	PARAMETRIC VALUES			
○	-.503	MACH	4.530	PTOTAL	110.000
	400.530	ALPHA	.000	BETA	.000
◇	800.210	DALPHA	-20.000	DBETA	.000
△	1201.000	ELEVTR	.000	AILRON	.000
		Y	200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

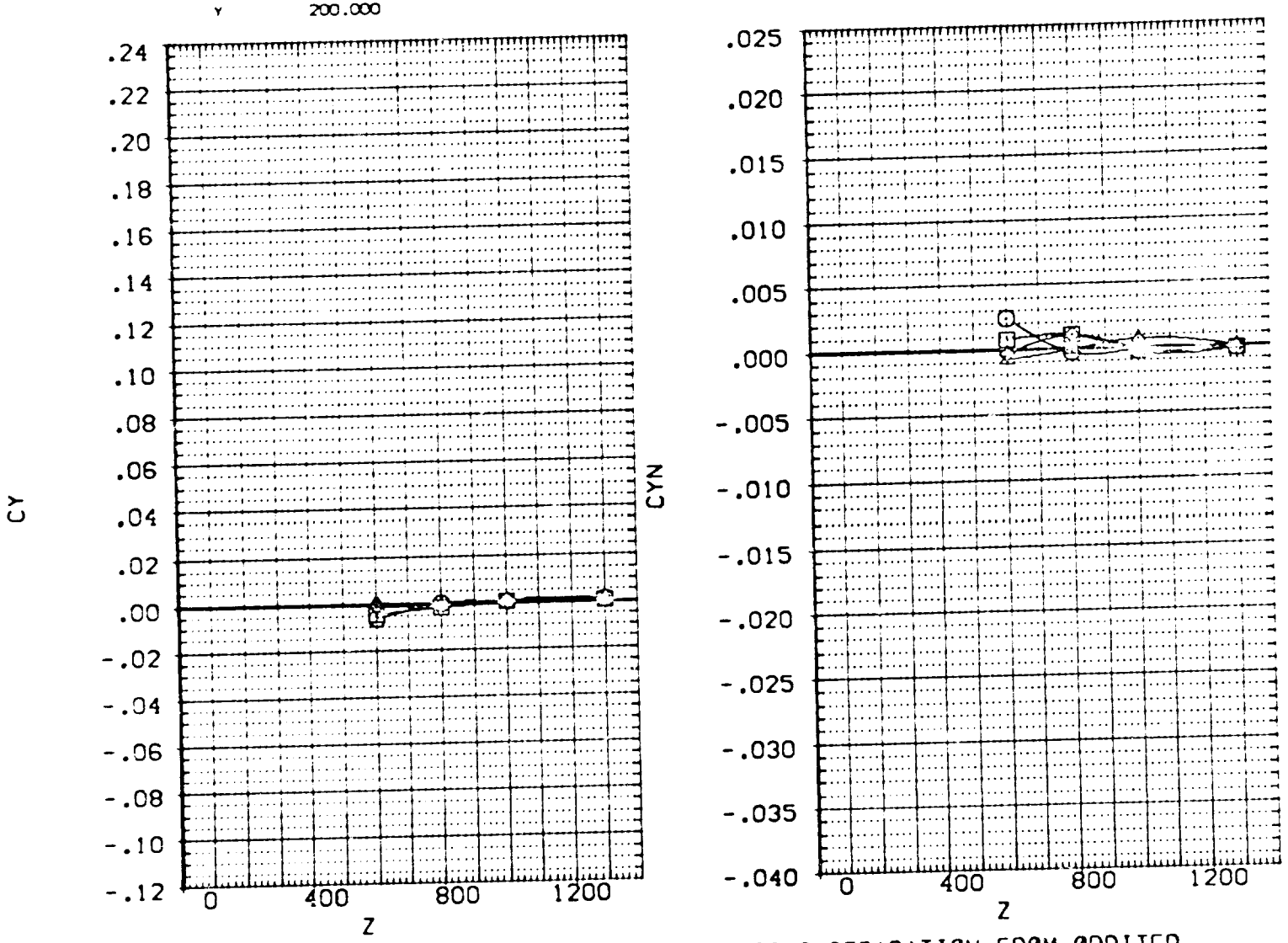


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

[A13,EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT12)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

SYMBOL	X		PARAMETRIC VALUES		
○	-.503	MACH	4.530	PTOTAL	110.000
□	400.530	ALPHA	.000	BETA	.000
◇	800.210	DALPHA	-20.000	DBETA	.000
△	1201.000	ELEVTR	.000	AILRON	.000
		Y	200.000		

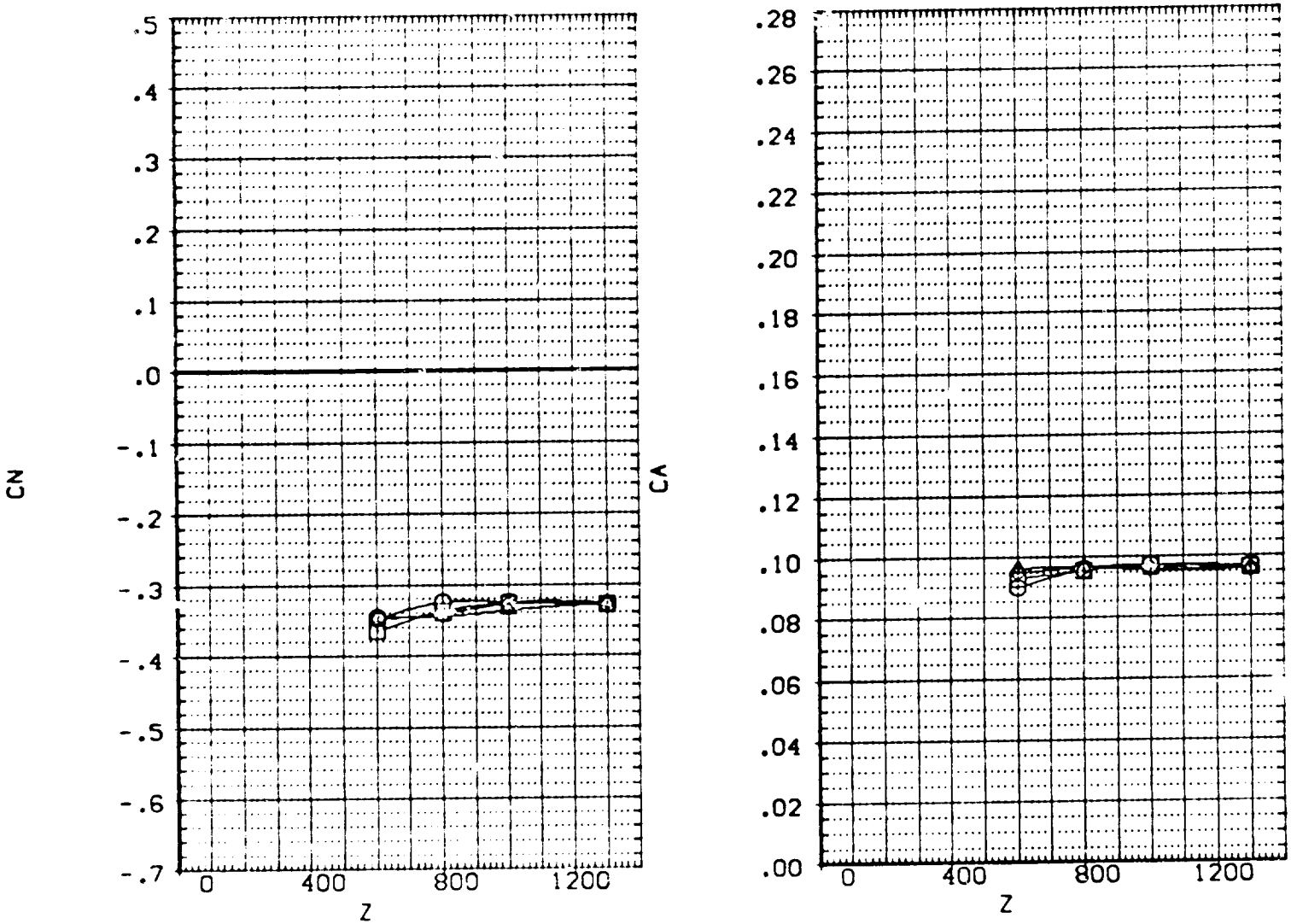


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

:A13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT13)

SYMBOL	X		PARAMETRIC VALUES		
○	-.706	MACH	4.530	PTOTAL	110.000
□	401.230	ALPHA	.000	BETA	.000
◇	800.840	DALPHA	-20.000	DBETA	5.000
△	1200.600	ELEVTR	.000	AILRON	.000
		Y	200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

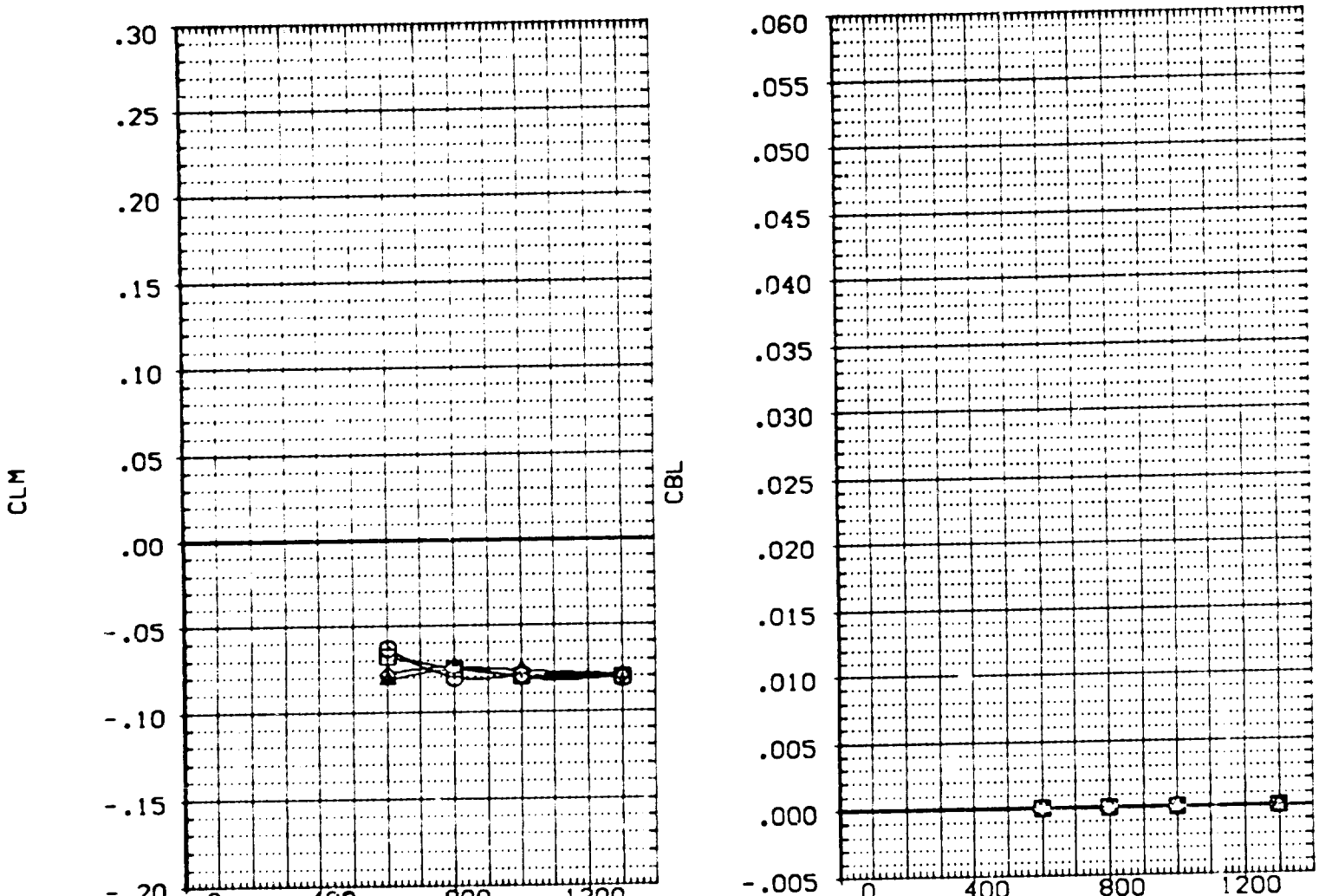


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT13)

SYMBOL	X		PARAMETRIC VALUES		
○□	-.706	MACH	4.530	PTOTAL	110.000
	401.230	ALPHA	.000	BETA	.000
◇	800.840	DALPHA	-20.000	DBETA	5.000
△	1200.600	ELEVTR	.000	AILRON	.000
		Y	200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

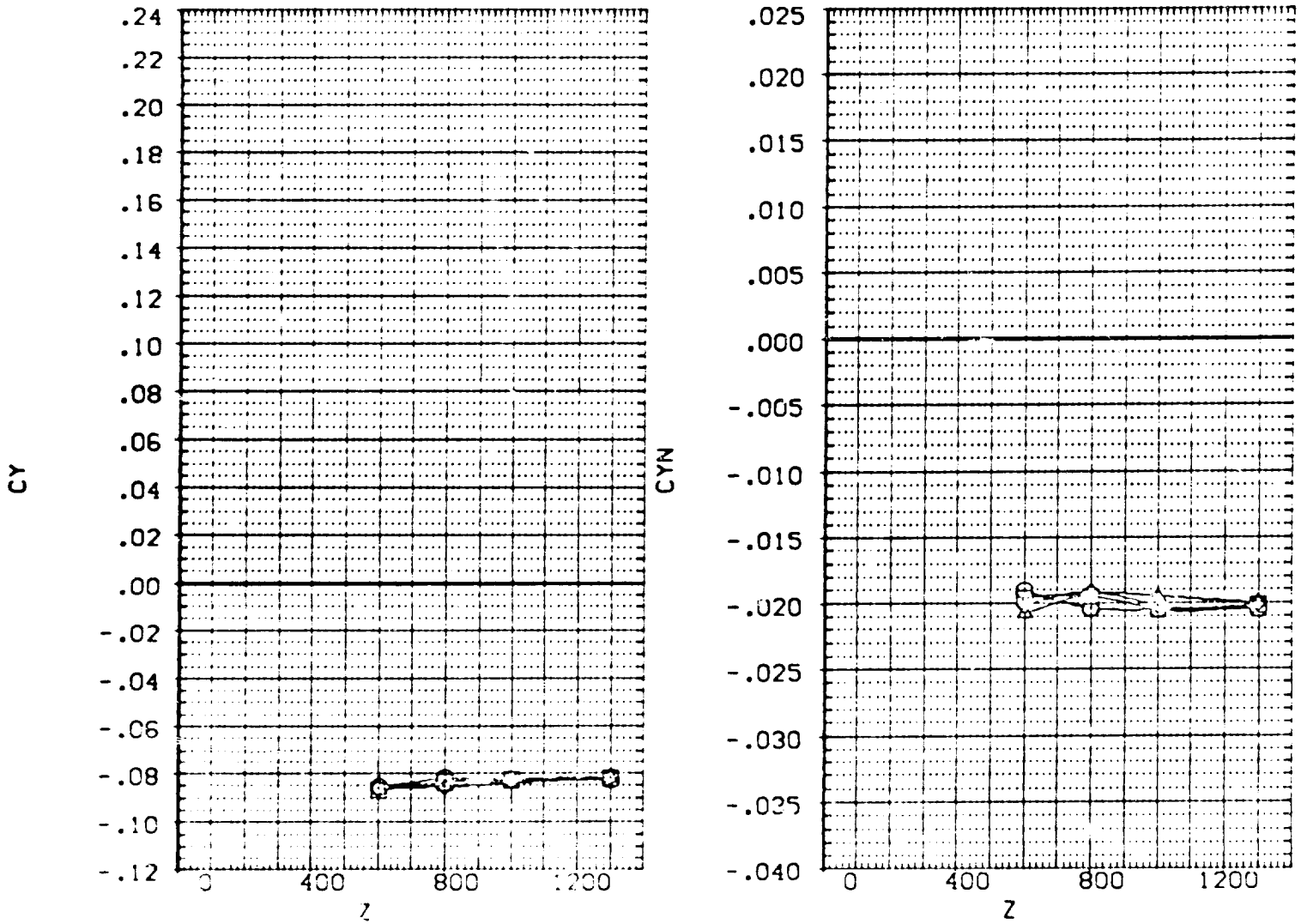


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

[A13,EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT13)

SYMBOL	X		PARAMETRIC VALUES		
○	-.706	MACH	4.530	PTOTAL	110.000
—	401.230	ALPHA	.000	BETA	.000
◇	800.840	DALPHA	-20.000	DBETA	5.000
△	1200.600	ELEVTR	.000	AILRON	.000
		Y	200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

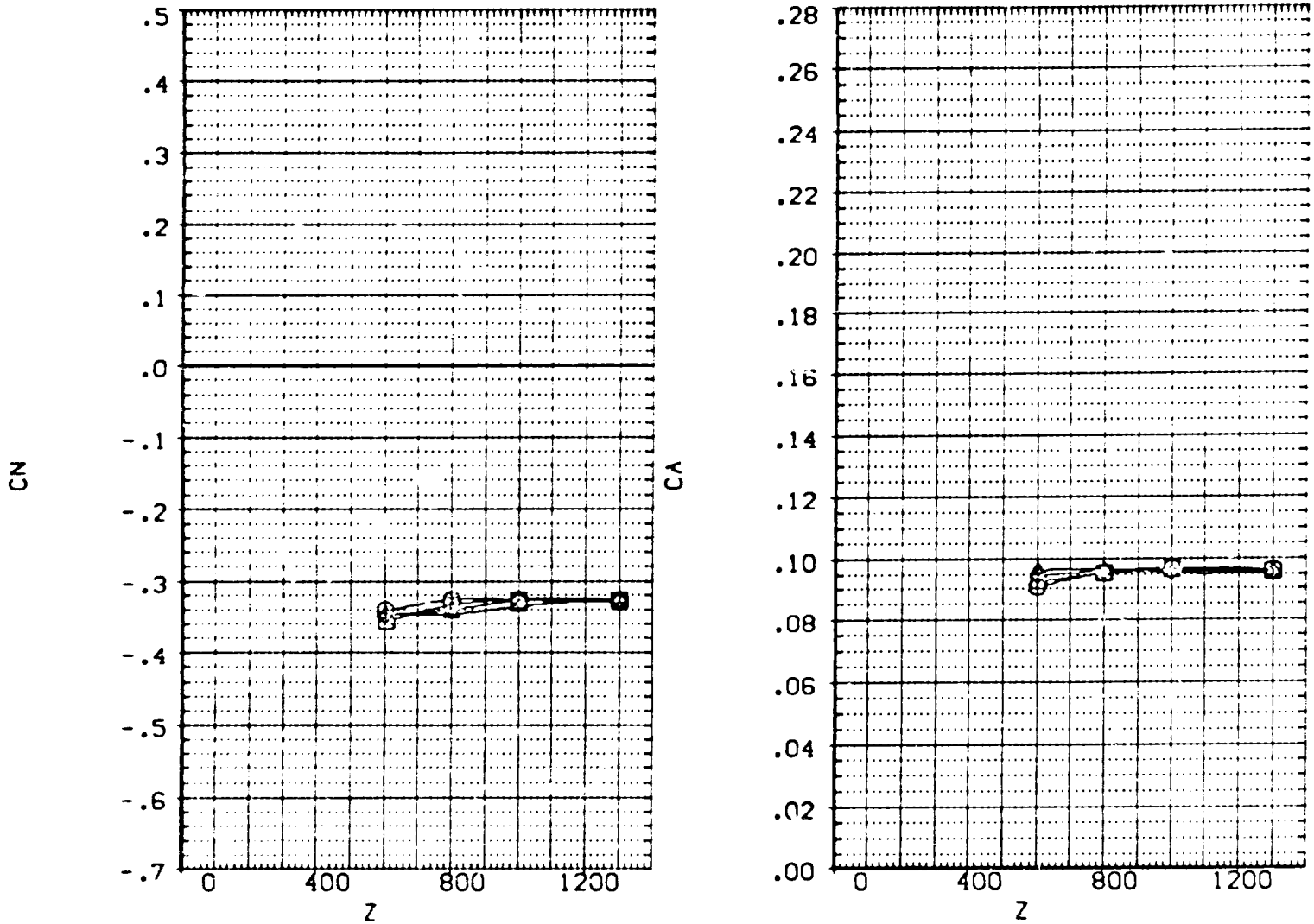


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

!A13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT14)

SYMBOL	X		PARAMETRIC VALUES		
○	-.921	MACH	4.530	PTOTAL	110.000
□	400.550	ALPHA	.000	BETA	.000
◇	800.340	DALPHA	-20.000	DBETA	5.000
△	1201.000	ELEVTR	.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

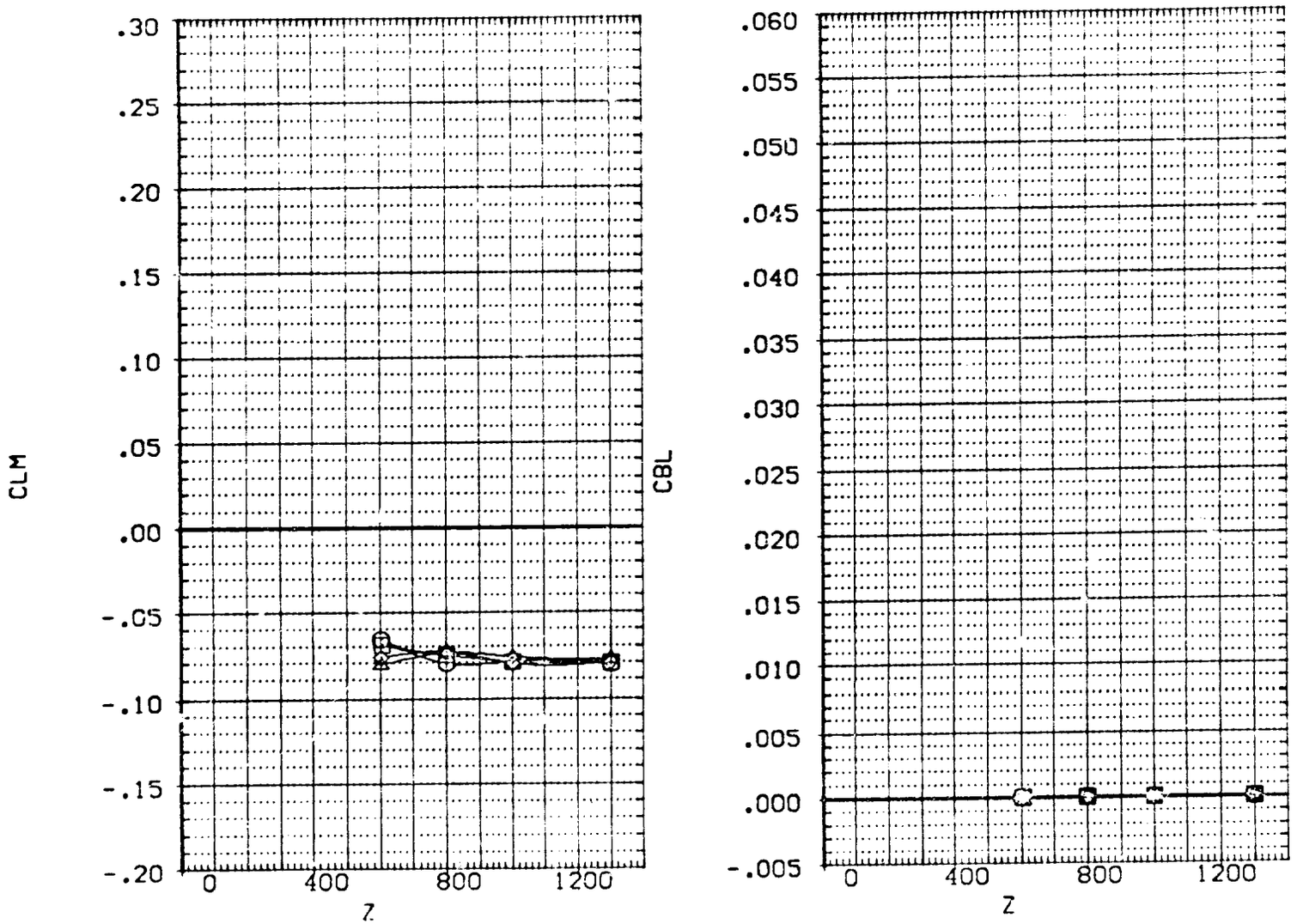


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT14)

SYMBOL	X		PARAMETRIC VALUES		
○	-.921	MACH	4.530	PTOTAL	110.000
□	400.550	ALPHA	.000	BETA	.000
◇	800.340	DALPHA	-20.000	DBETA	5.000
△	1201.000	ELEVTR	.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

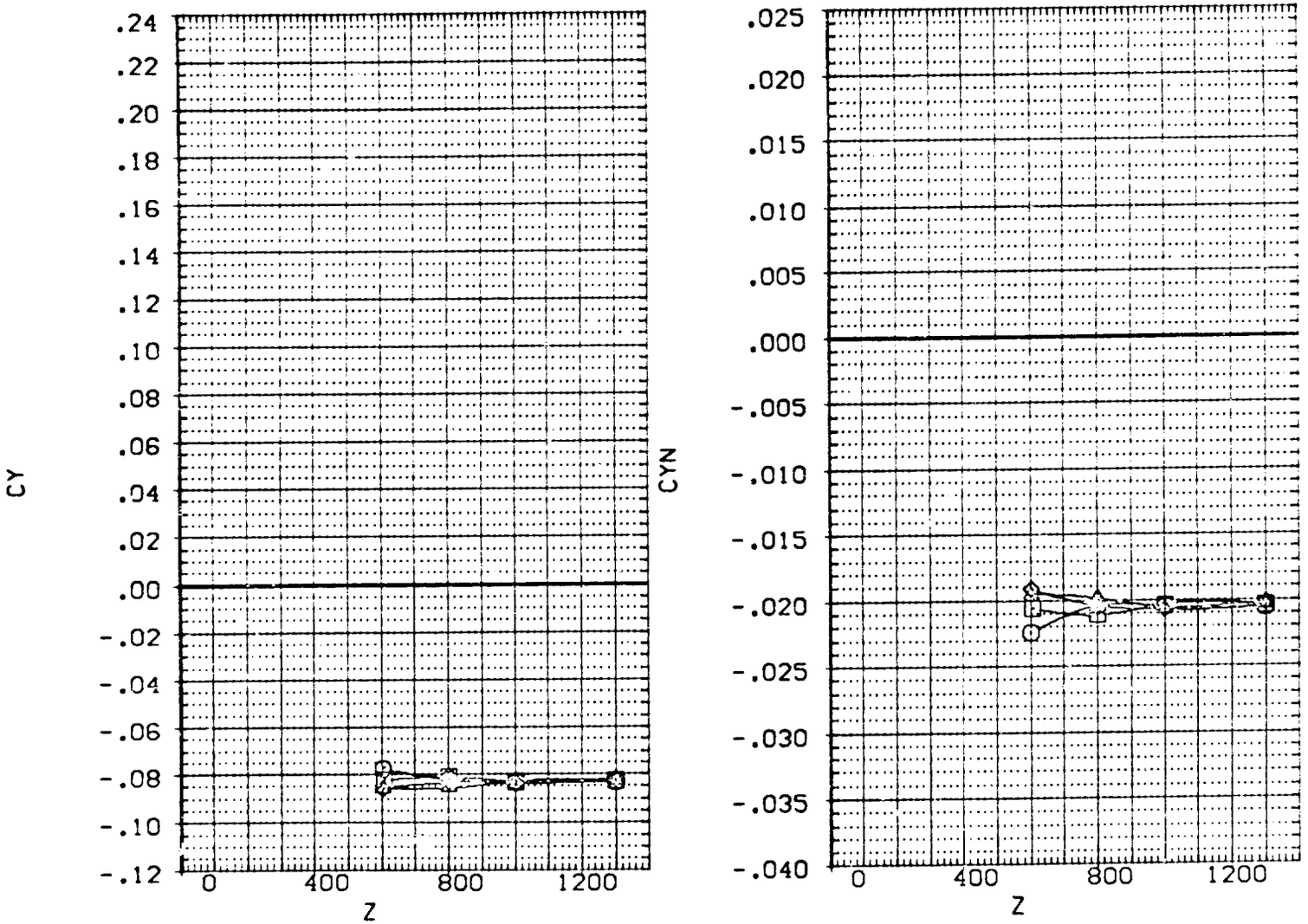


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT14)

SYMBOL	X		PARAMETRIC VALUES		
○	-.921	MACH	4.530	PTOTAL	110.000
□	400.550	ALPHA	.000	BETA	.000
◇	800.340	DALPHA	-20.000	DBETA	5.000
△	1201.000	ELEVTR	.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

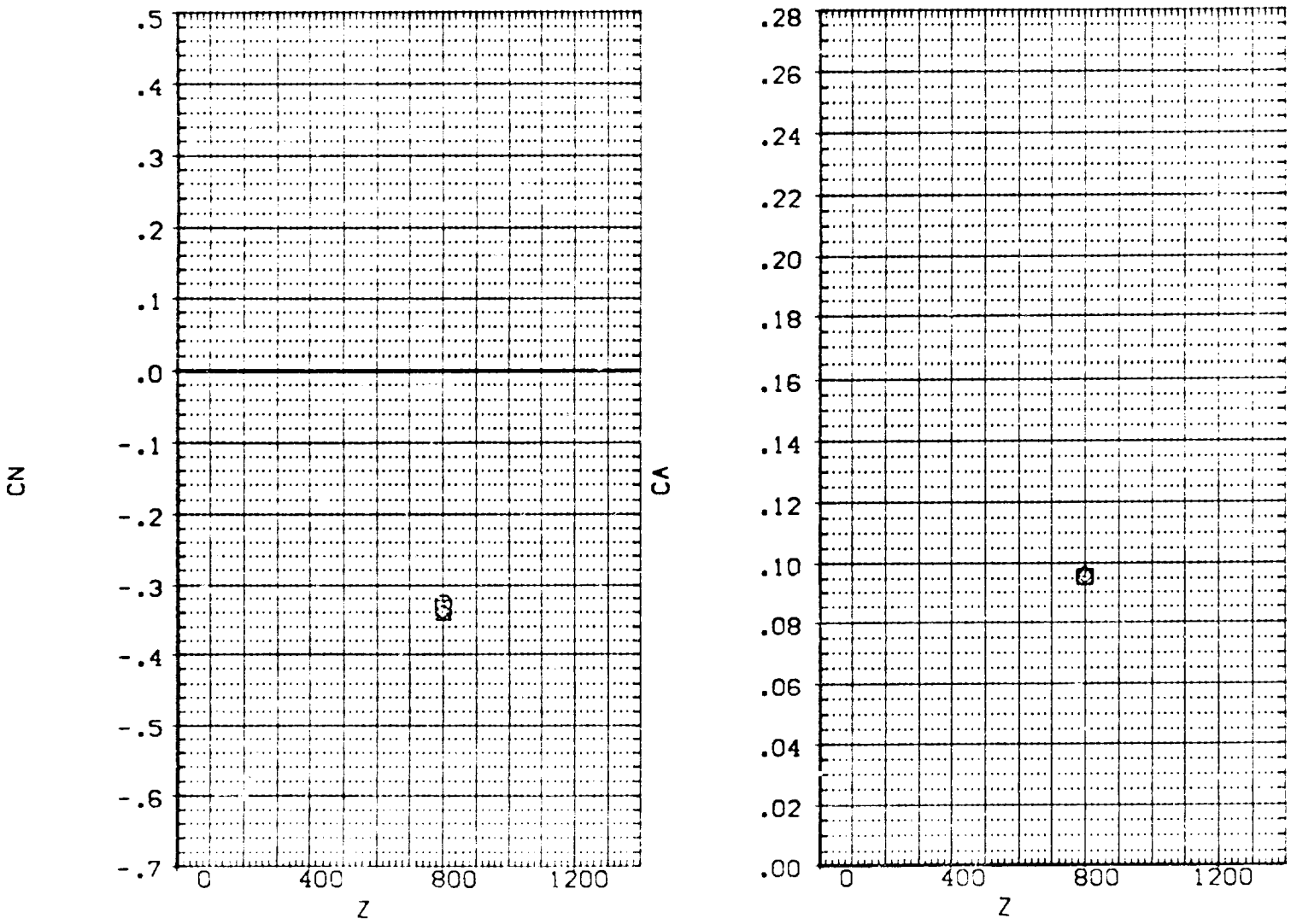


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

!A13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT15)

SYMBOL	X	PARAMETRIC VALUES			
○□	.861	MACH	4.530	PTOTAL	110.000
◇	400.230	ALPHA	.000	BETA	.000
▽	800.060	DALPHA	-30.000	DBETA	.000
△	1200.900	ELEVTR	.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

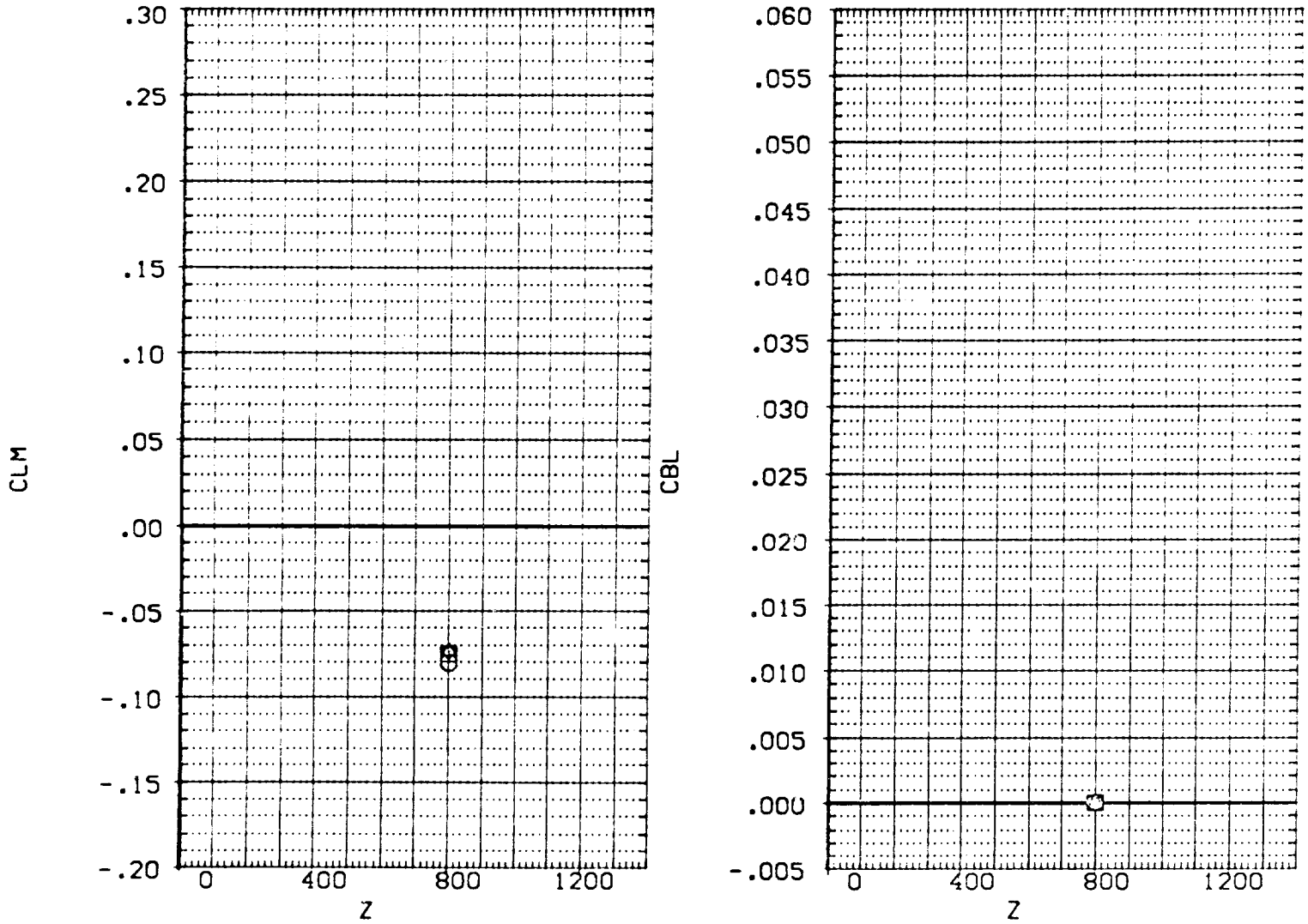


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT15)

SYMBOL	X		PARAMETRIC VALUES		
○	.861	MACH	4.530	PTOTAL	110.000
□	400.230	ALPHA	.000	BETA	.000
◇	800.060	DALPHA	-30.000	DBETA	.000
△	1200.900	ELEVTR	.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

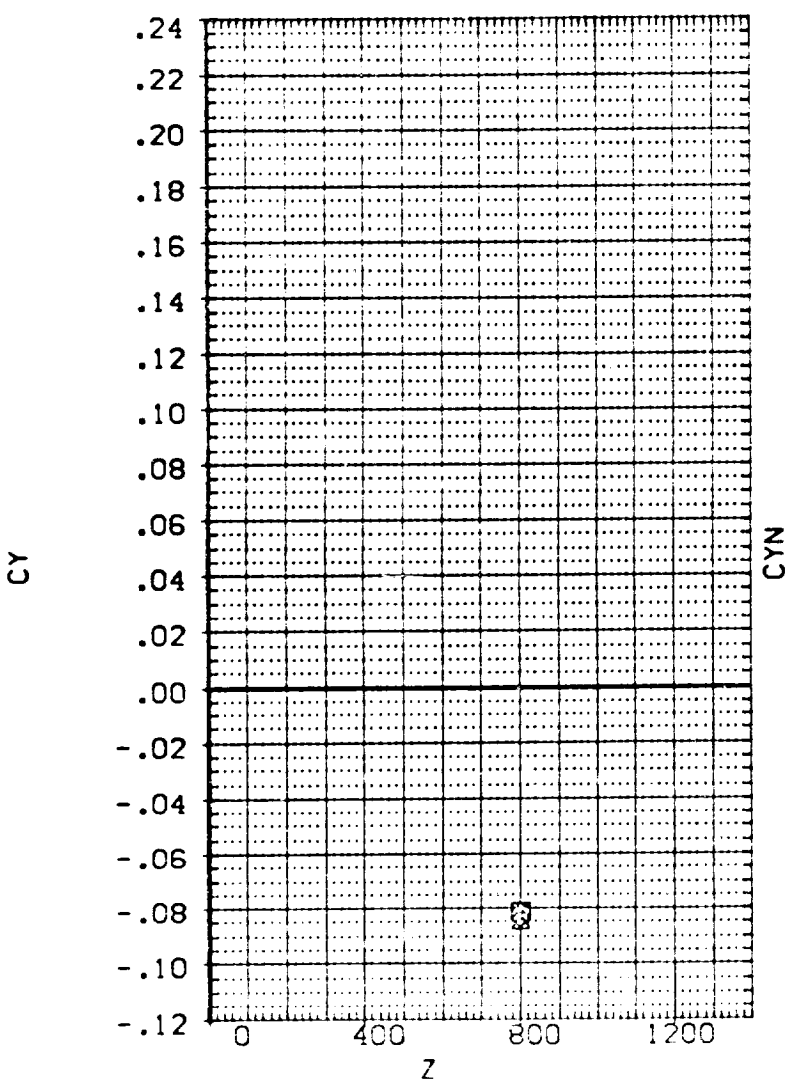


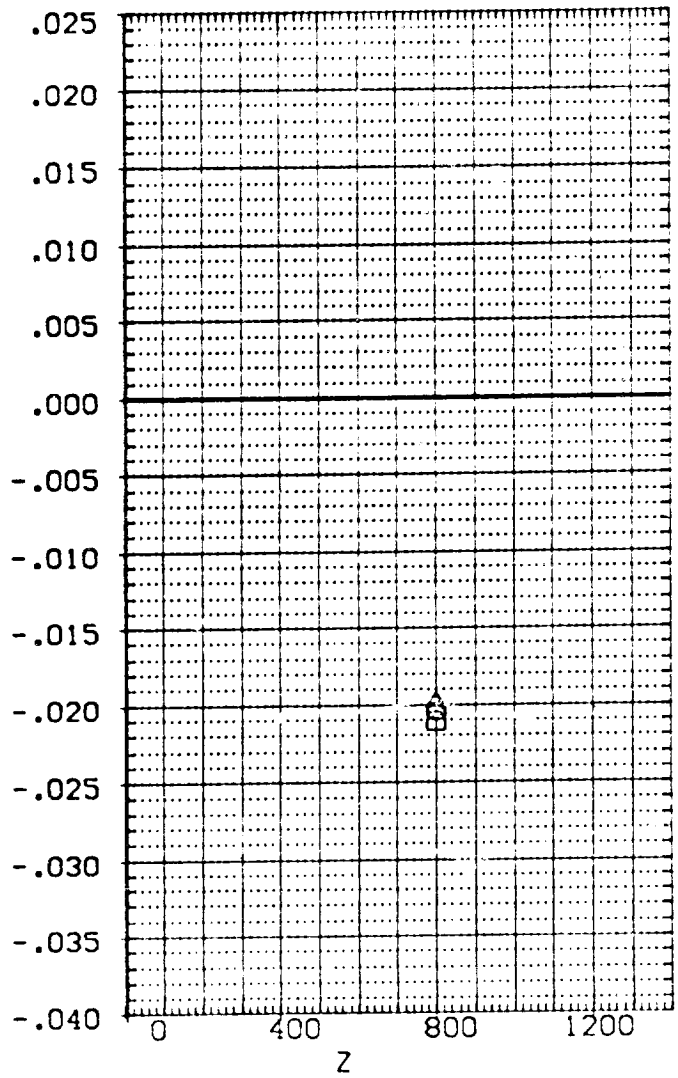
EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT15)

SYMBOL	X		PARAMETRIC VALUES		
○	.861	MACH	4.530	PTOTAL	110.000
◇	400.230	ALPHA	.000	BETA	.000
◇	800.060	DALPHA	-30.000	DBETA	.000
△	1200.900	ELEVTR	.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



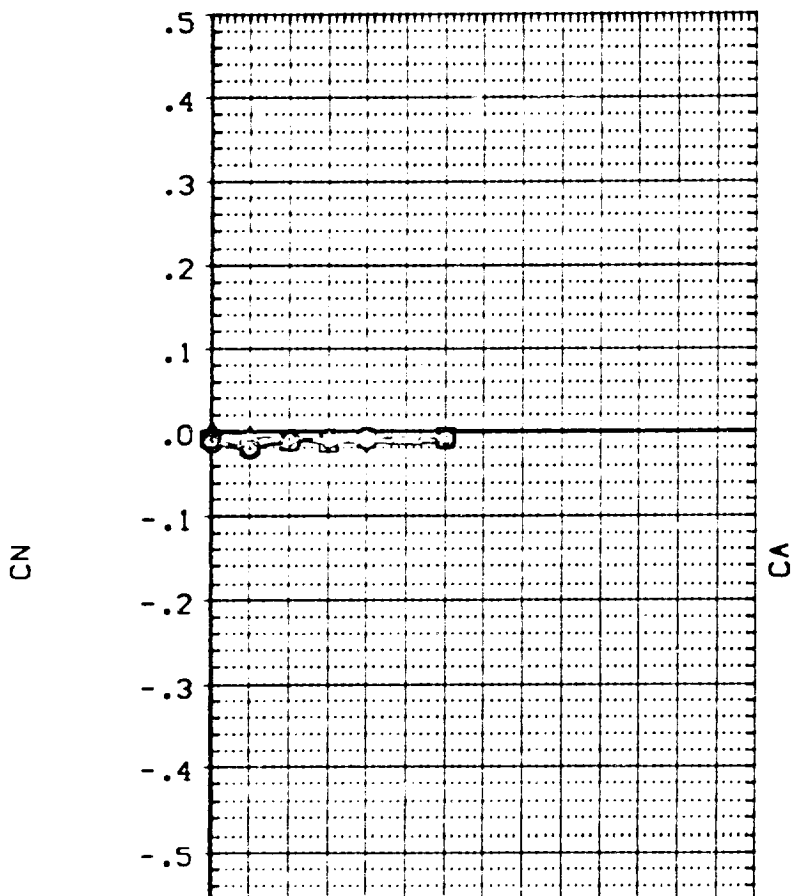


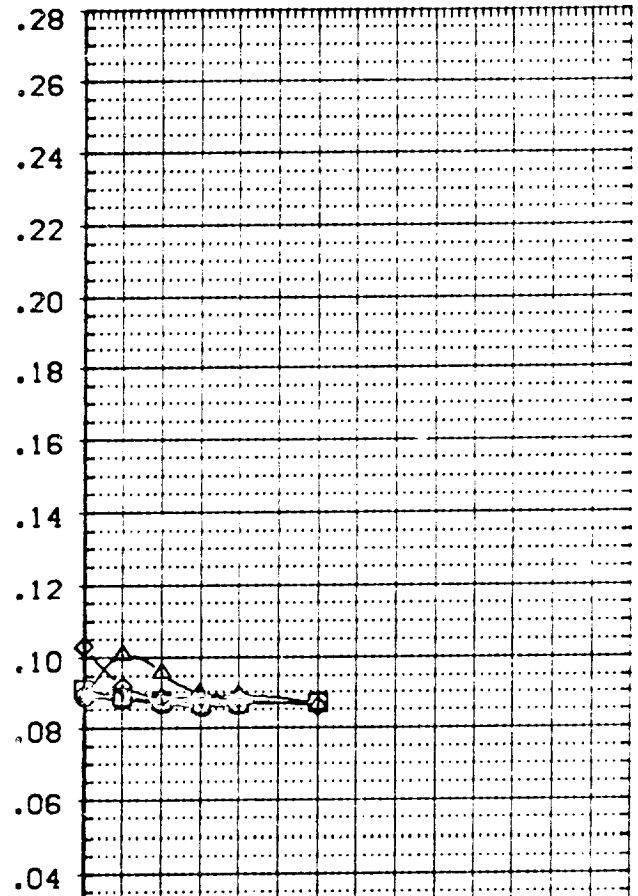
EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

IA13,EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT16)

SYMBOL	X		PARAMETRIC VALUES		
○	.228	MACH	4.530	PTOTAL	110.000
□	400.460	ALPHA	-5.000	BETA	.000
◇	800.590	DALPHA	5.000	DBETA	.000
△	1200.600	ELEVTR	.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



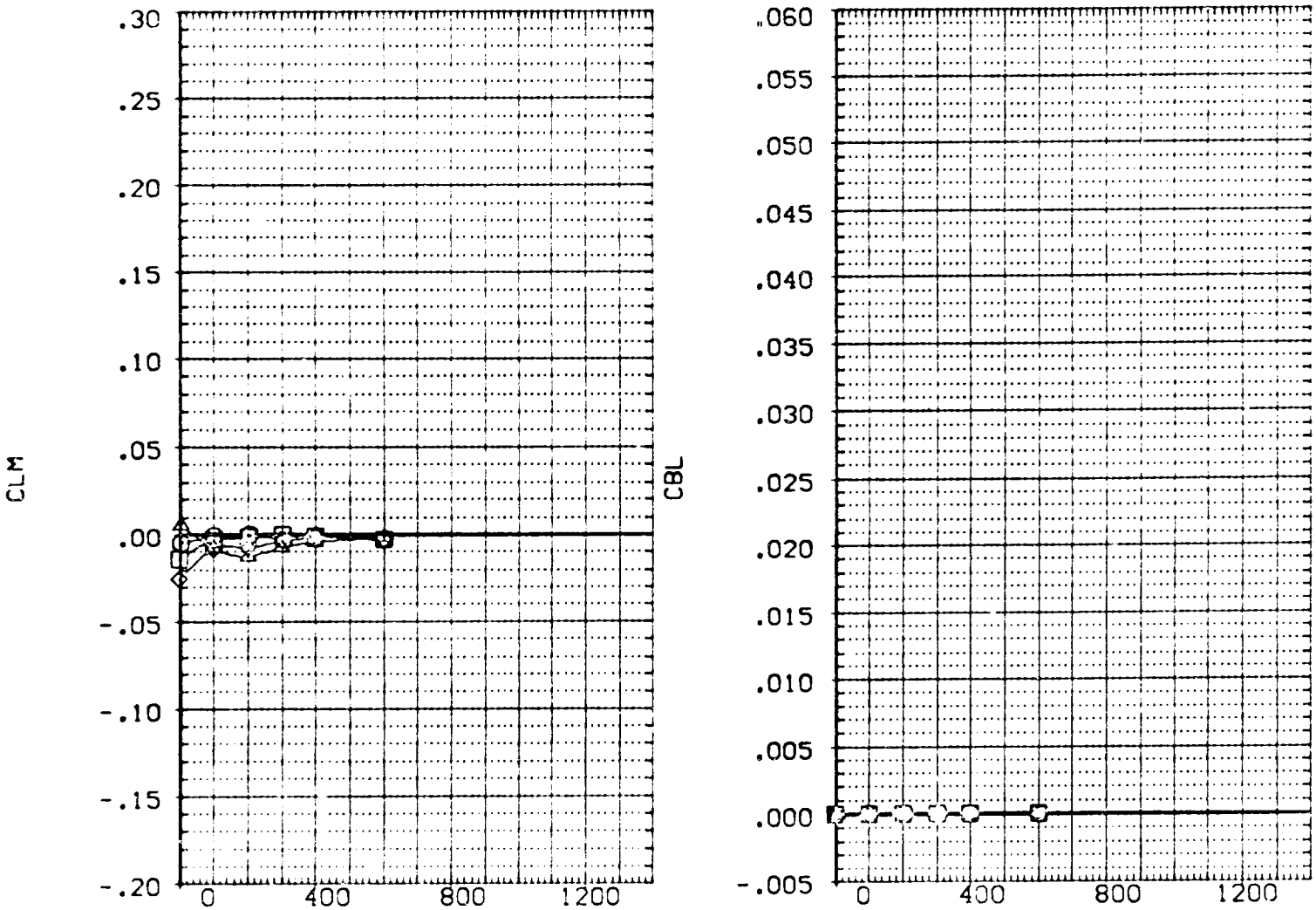


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT16)

SYMBOL	X		PARAMETRIC VALUES		
○	.228	MACH	4.530	PTOTAL	110.000
◇	400.460	ALPHA	-5.000	BETA	.000
△	800.590	DALPHA	5.000	DBETA	.000
	1200.600	ELEVTR	.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

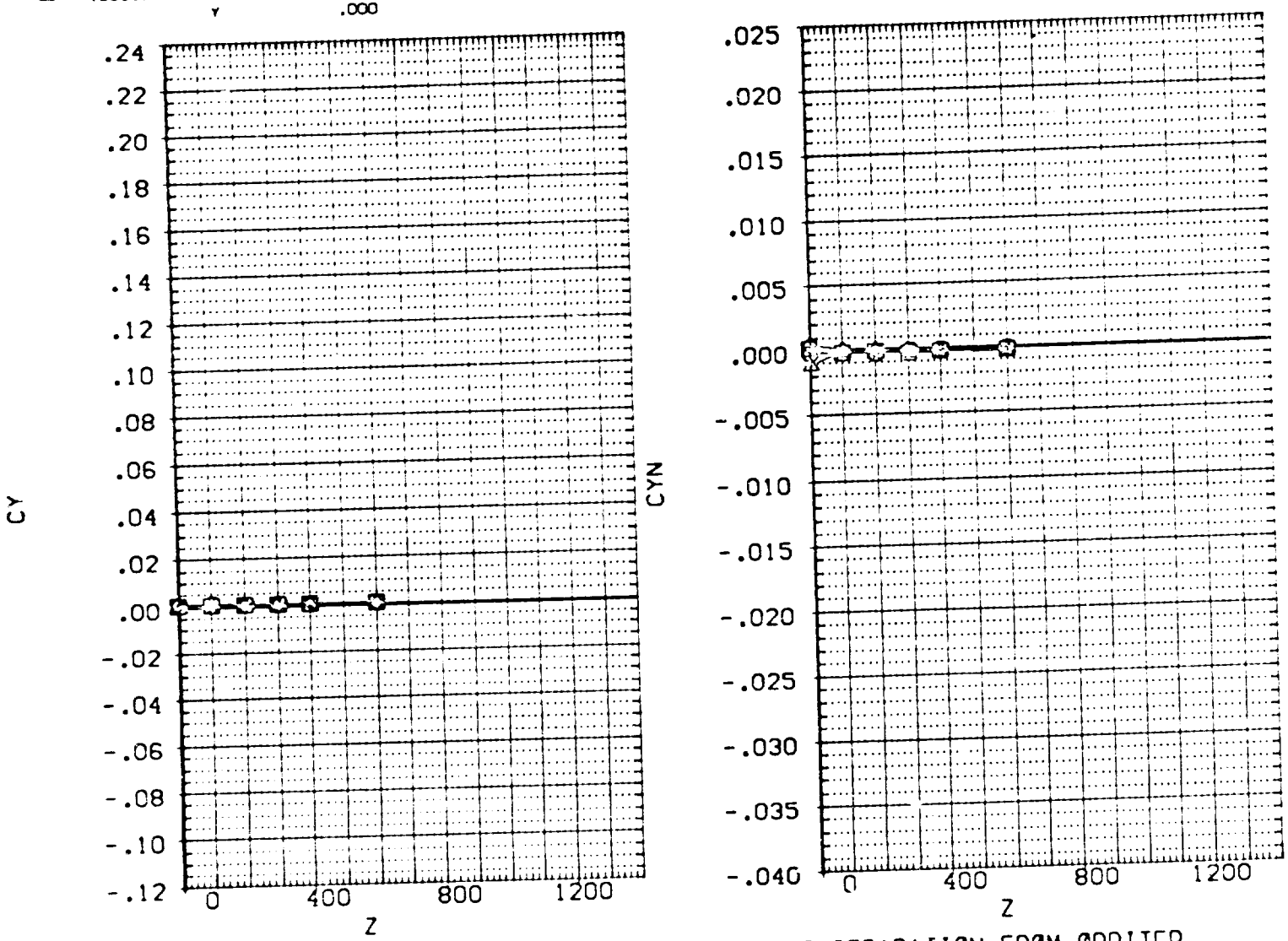


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT16)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

SYMBOL	X		PARAMETRIC VALUES		
○	.228	MACH	4.53	PTOTAL	110.000
□	400.460	ALPHA	-5.000	BETA	.000
◇	800.590	DALPHA	5.000	DBETA	.000
△	1200.600	ELEVTR	.000	AILRON	.000
		Y	.000		

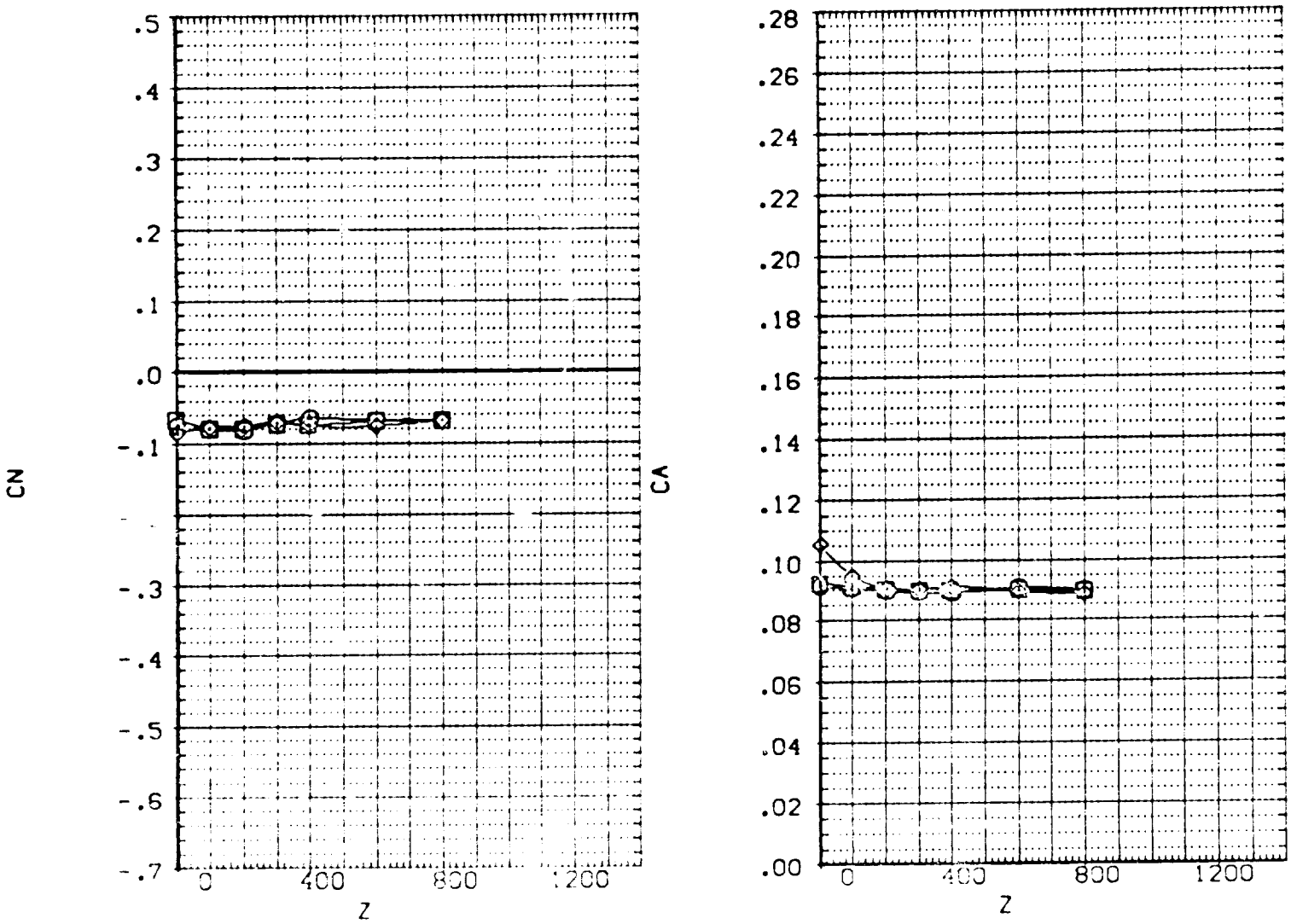


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

!A13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT17)

SYMBOL	X	PARAMETRIC VALUES			
○(JO)	.155	MACH	4.530	PTOTAL	110.000
◇	400.390	ALPHA	-5.000	BETA	.000
	800.620	DALPHA	.000	DBETA	.000
		ELEVTR	.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

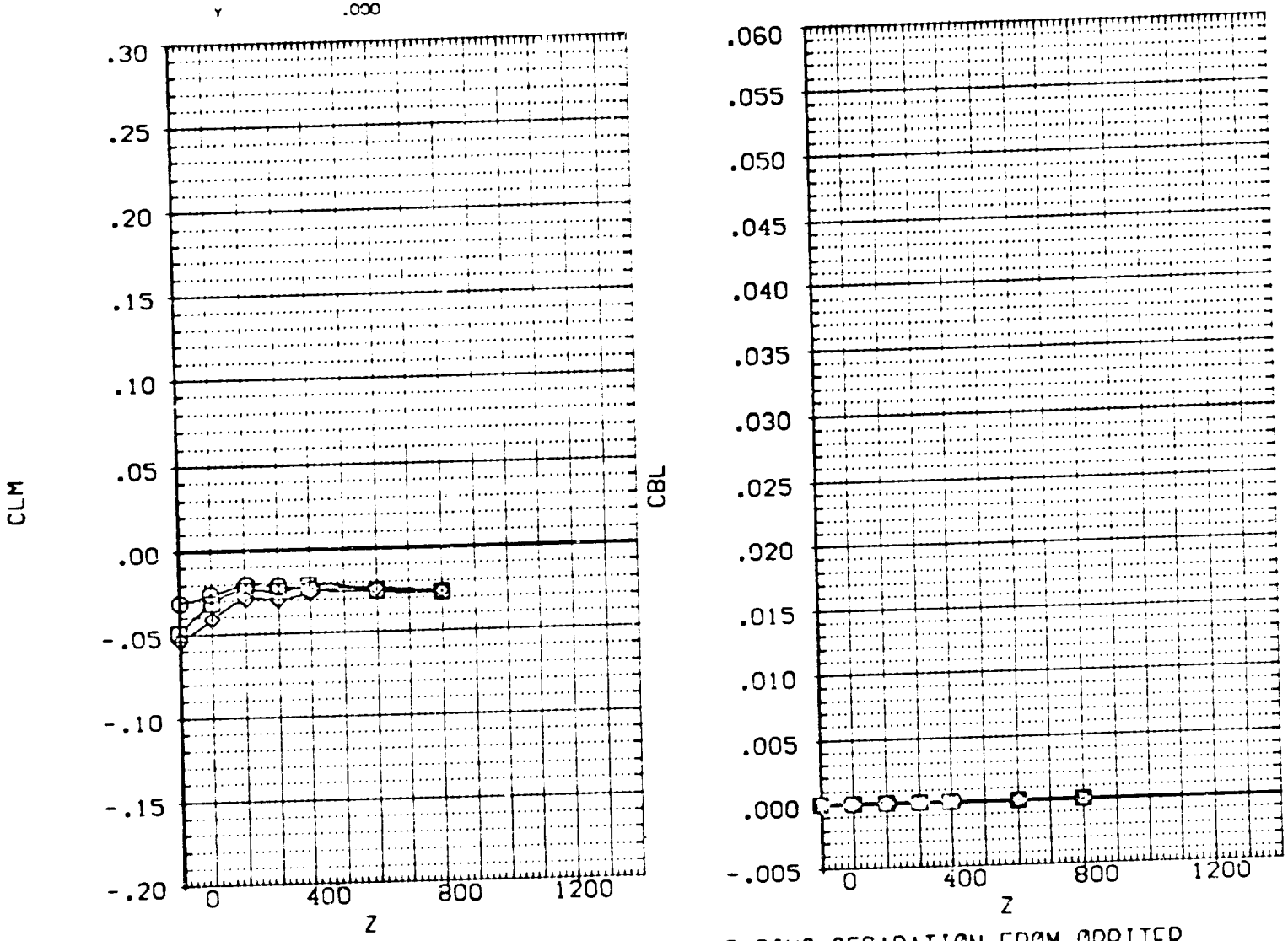


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

!A13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT17)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

SYMBOL	X	PARAMETRIC VALUES			
◇	.155	MACH	4.530	PTOTAL	110.000
□	400.390	ALPHA	-5.000	BETA	.000
○	800.620	DALPHA	.000	DBETA	.000
		ELEVTR	.000	AILRON	.000
		Y	.000		

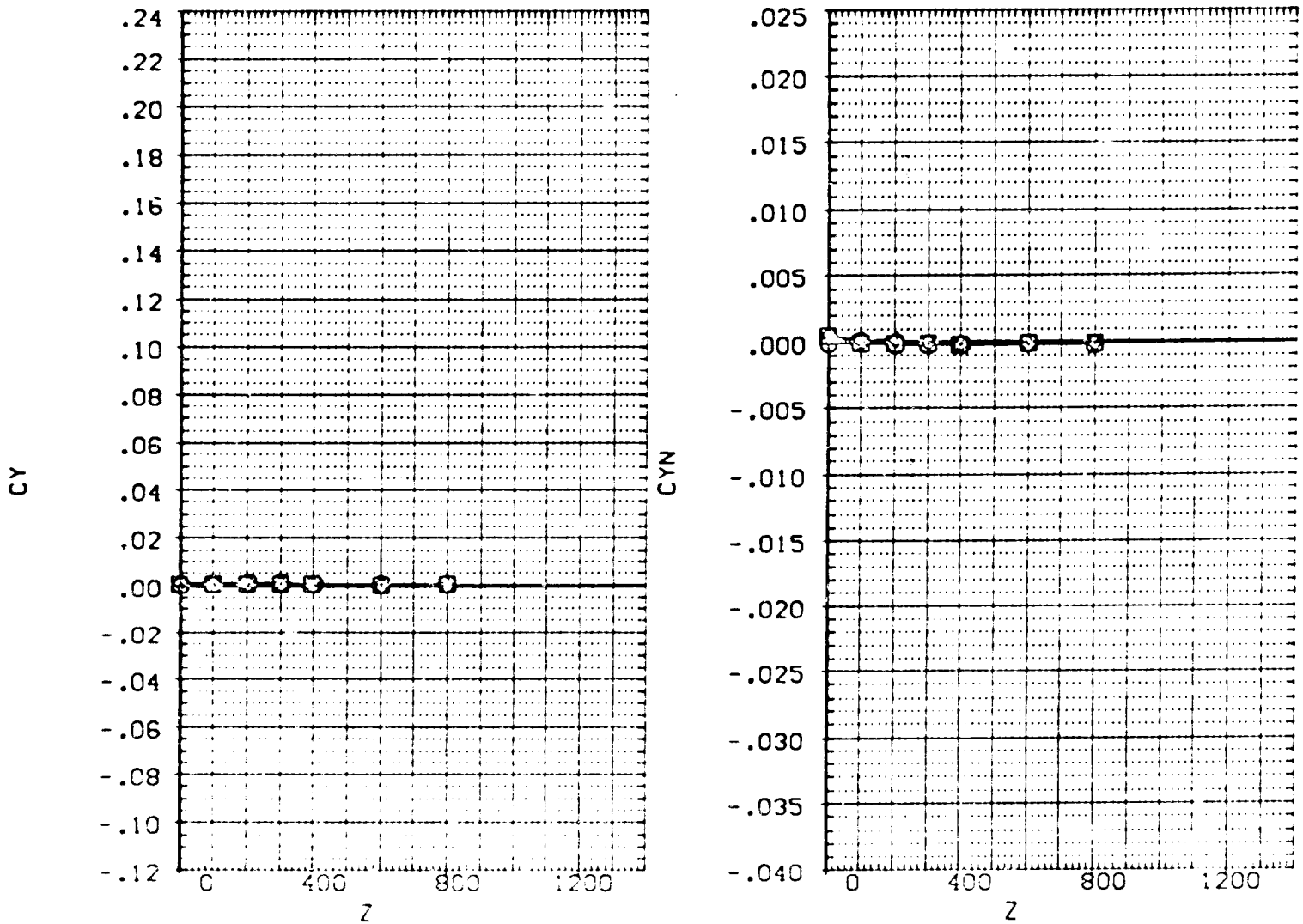


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

[A13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT17)

SYMBOL	X		PARAMETRIC VALUES		
○	.155	MACH	4.530	PTOTAL	110.000
□	400.390	ALPHA	-5.000	BETA	.000
◇	800.620	DALPHA	.000	DBETA	.000
		ELEVTR	.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

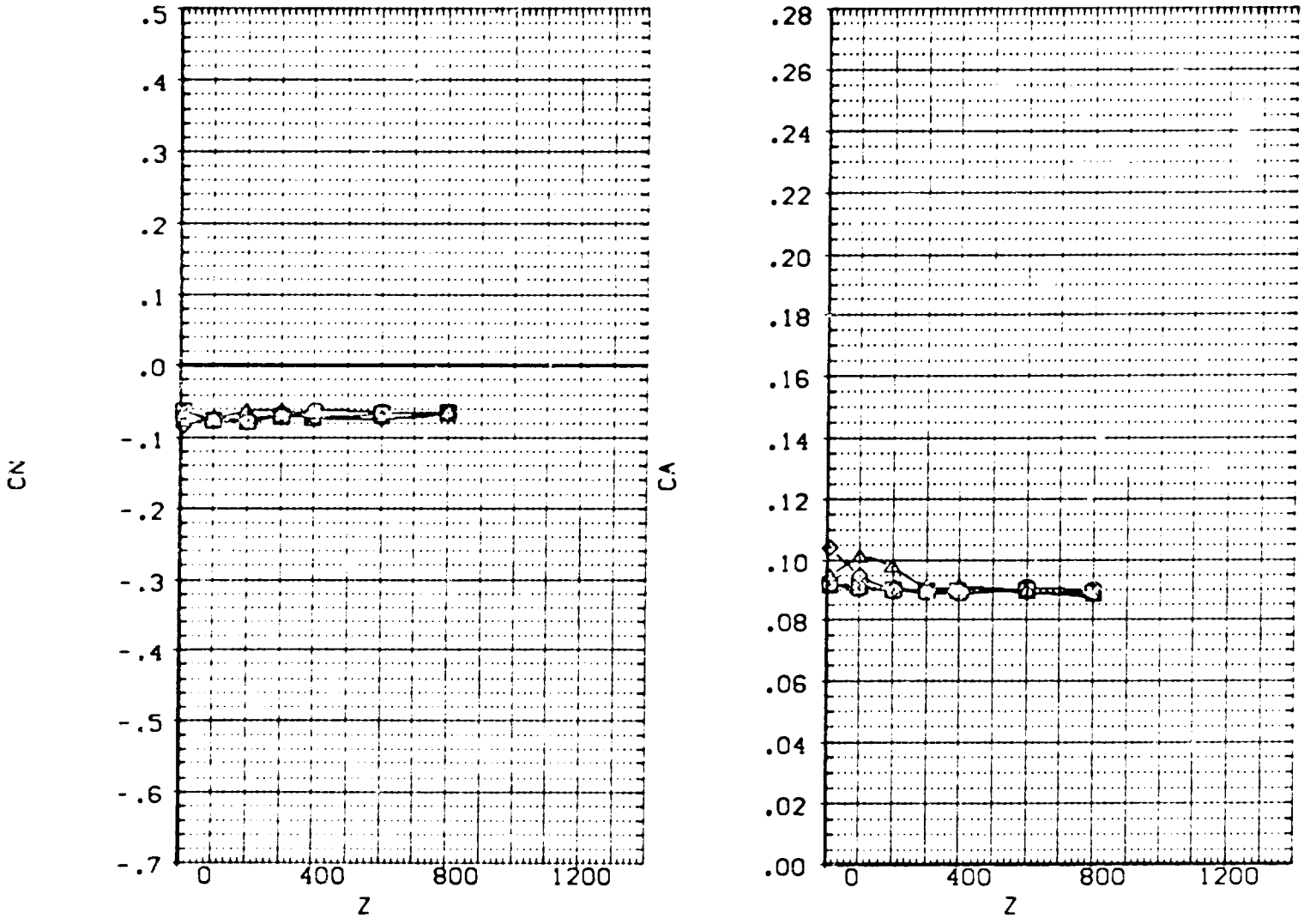


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

!A!3.EXTERNAL TANK(T!O)SEPARATING FROM ORB. 09 (RTJT18)

SYMBOL	X		PARAMETRIC VALUES		
○	.170	MACH	4.530	PTOTAL	110.000
□	400.300	ALPHA	-5.000	BETA	.000
◇	800.530	DALPHA	.000	DBETA	.000
△	1200.900	ELEVTR	.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

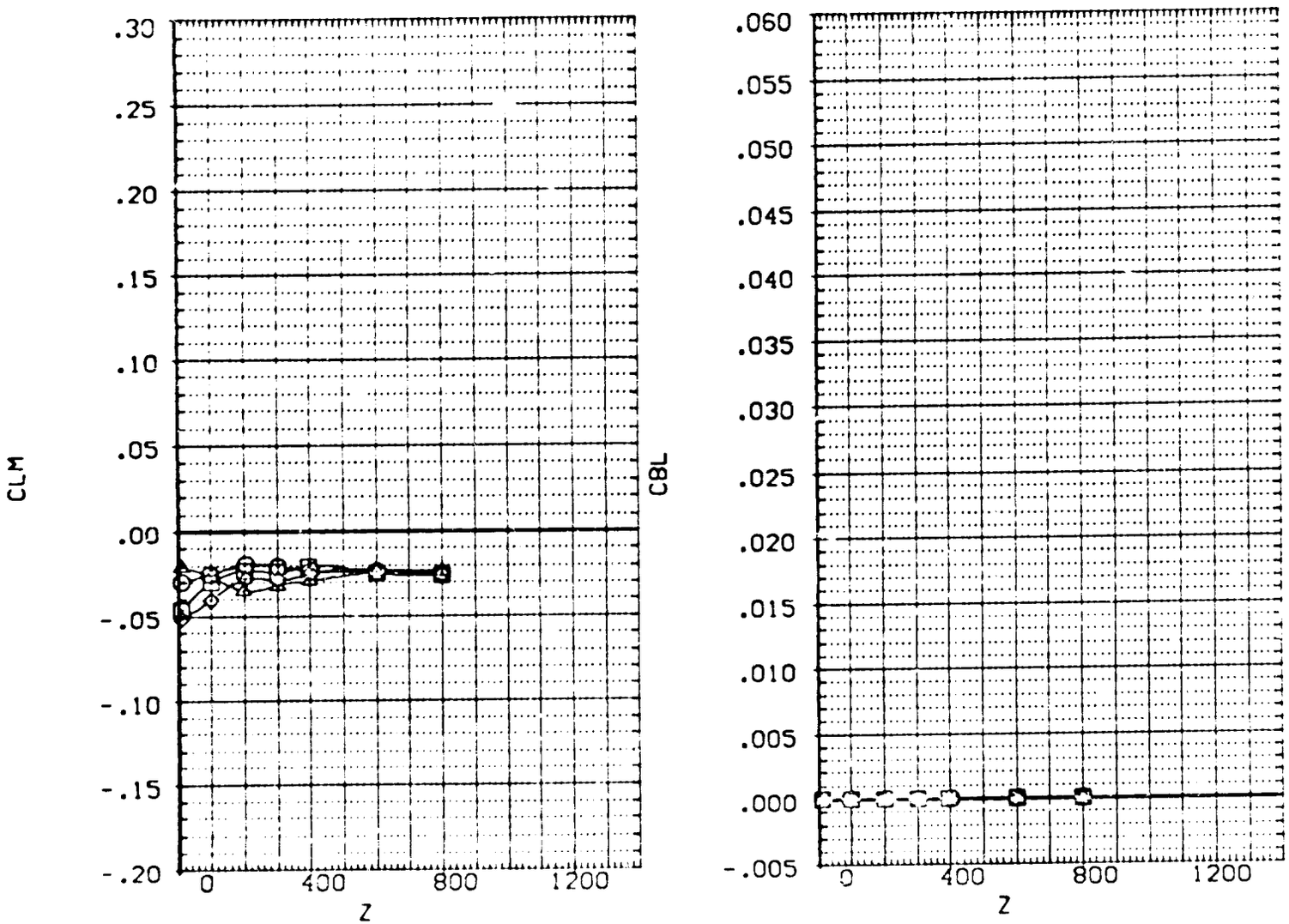


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

!A13,EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT18)

SYMBOL	X	PARAMETRIC VALUES			
○	.170	MACH	4.530	PTOTAL	110.000
◇	400.300	ALPHA	-5.000	BETA	.000
	800.530	DALPHA	.000	DBETA	.000
△	1200.900	ELEVTR	.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

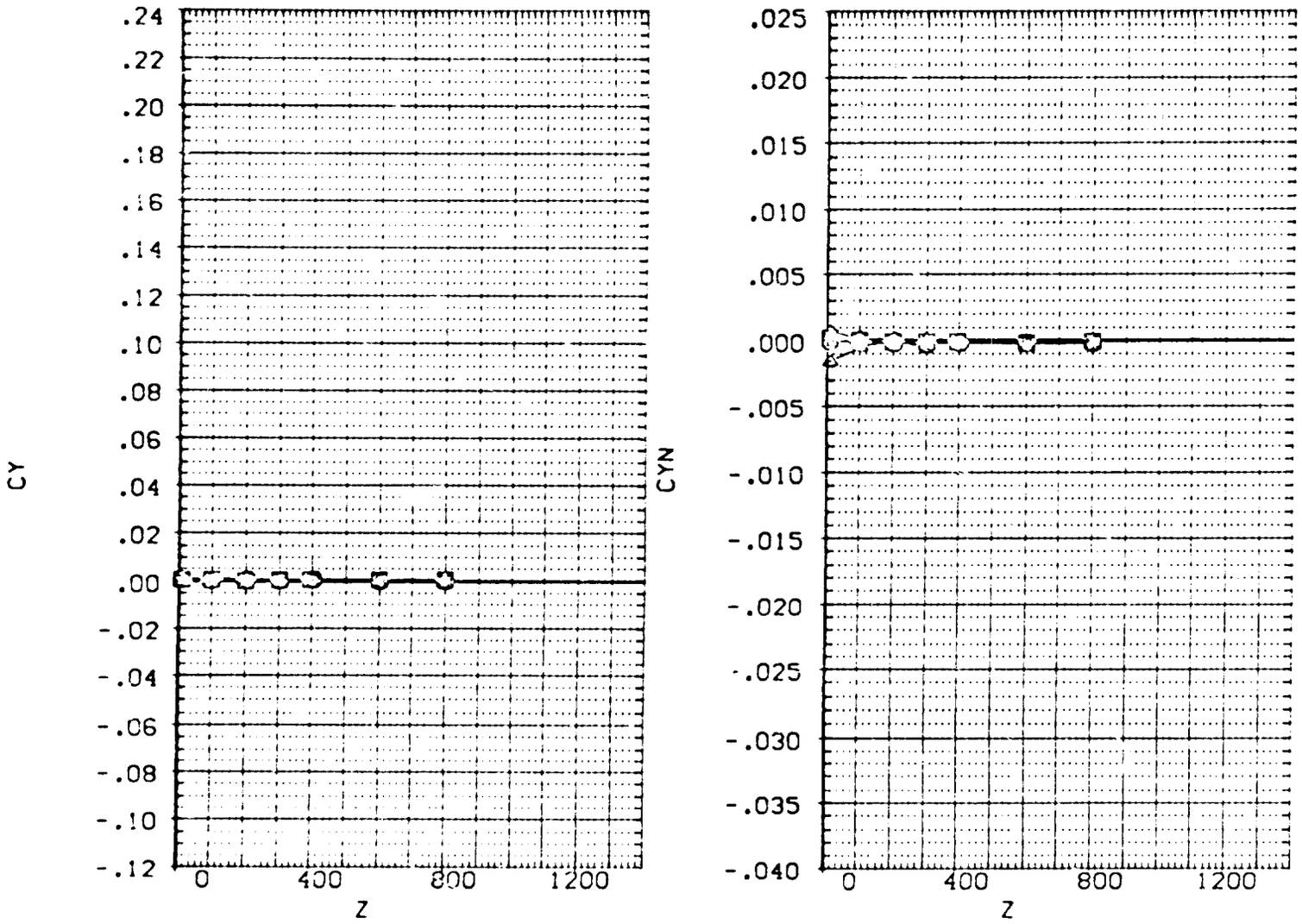


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

!A13.EXTERNAL TANK(T10)SEPARATING FROM ORB. C9 (RTJT18)

SYMBOL	X		PARAMETRIC VALUES		
○	.170	MACH	4.530	PTOTAL	110.000
□	400.300	ALPHA	-5.000	BETA	.000
◇	800.530	DALPHA	.000	DBETA	.000
△	1200.900	ELEVTR	.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

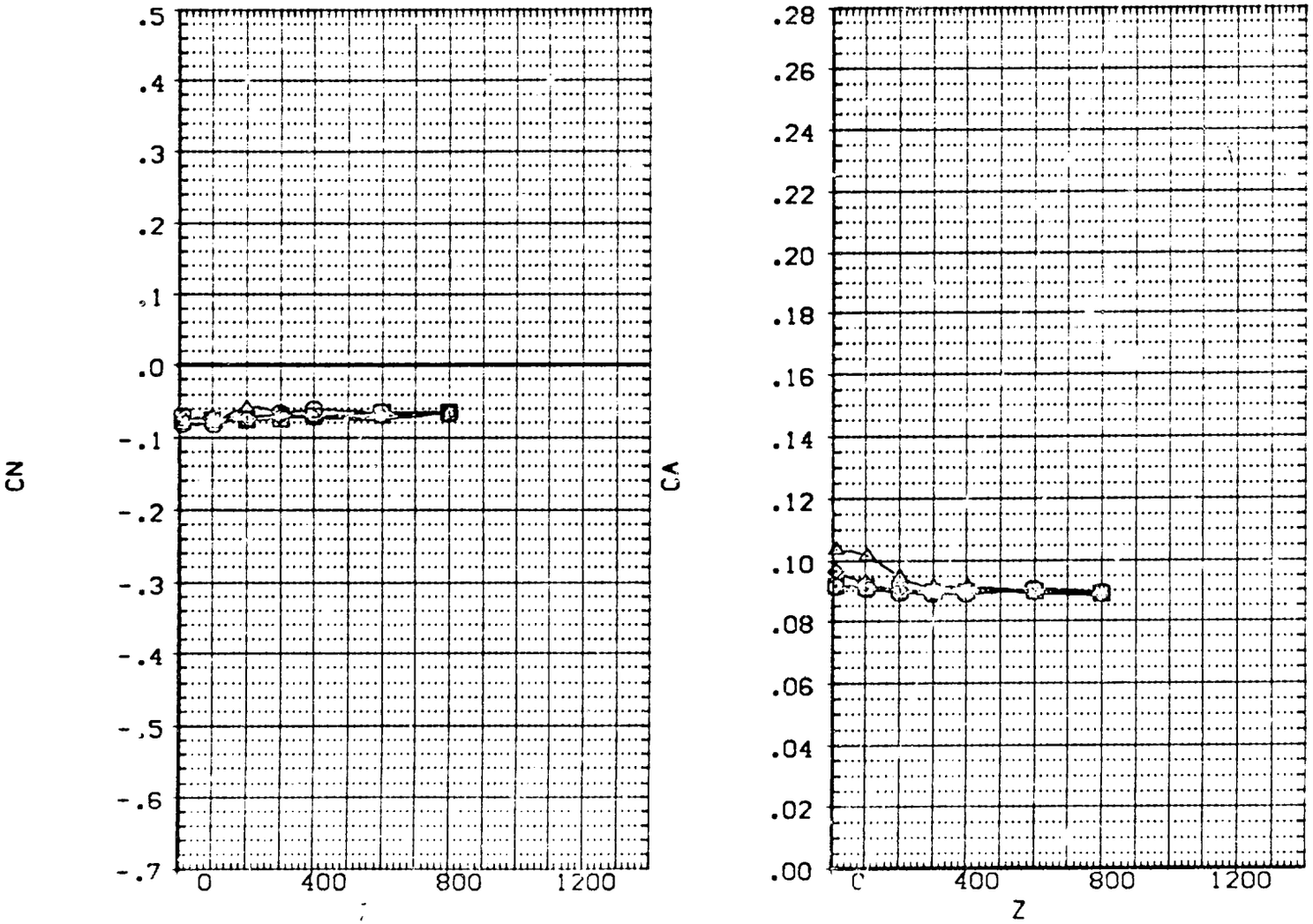


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT19)

SYMBOL	X		PARAMETRIC VALUES		
○	.223	MACH	4.530	PTOTAL	110.000
□	400.420	ALPHA	-5.000	BETA	.000
◇	800.600	DALPHA	.000	DBETA	.000
△	1200.700	ELEVTR	.000	AILRON	.000
		Y	200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

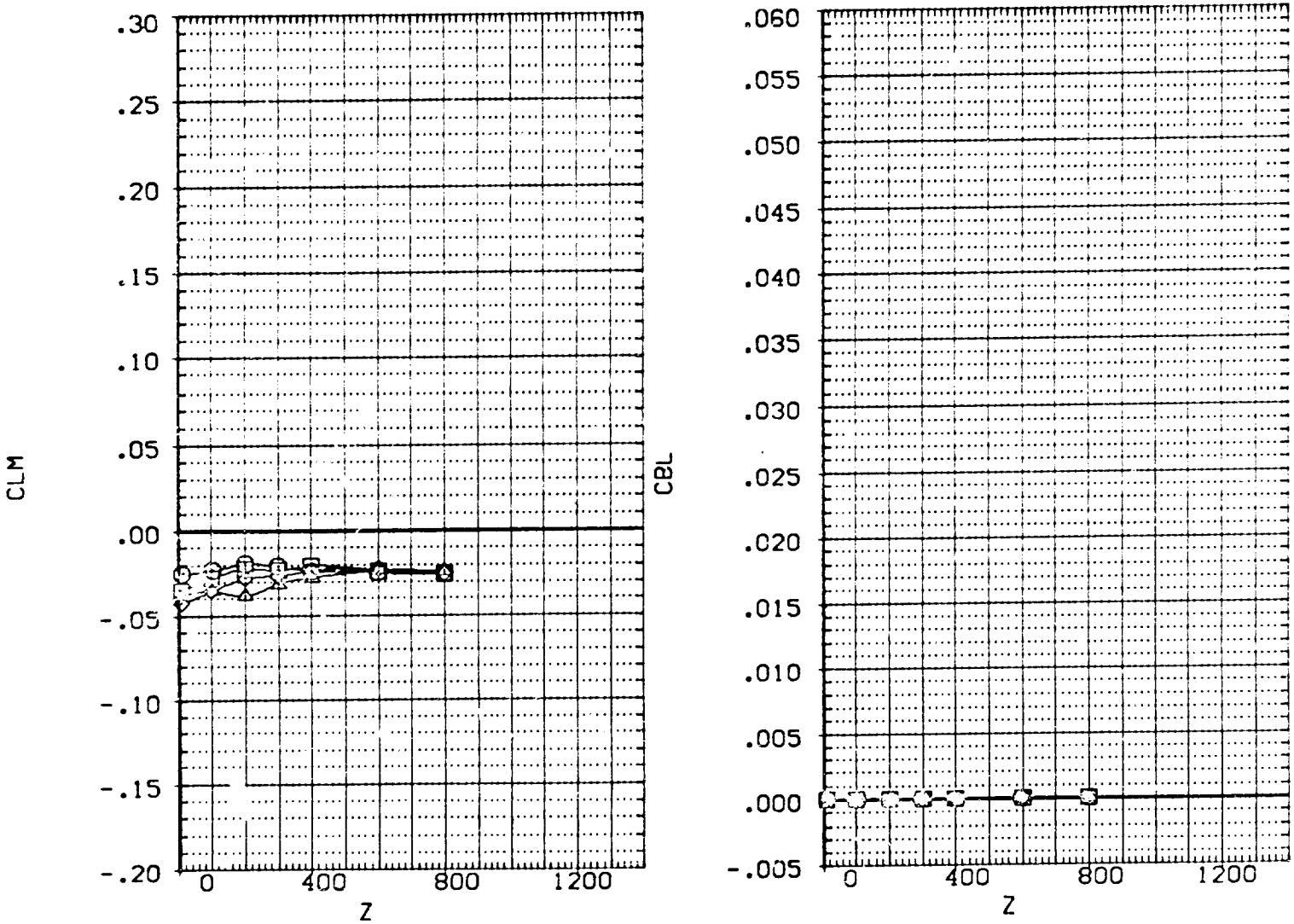


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

IA13,EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT19)

SYMBOL	X		PARAMETRIC VALUES		
○	.222	MACH	4.530	PTOTAL	110.000
□	400.420	ALPHA	-5.000	BETA	.000
◇	800.600	DALPHA	.000	DBETA	.000
△	1200.700	ELEVTR	.000	AILRON	.000
		Y	200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

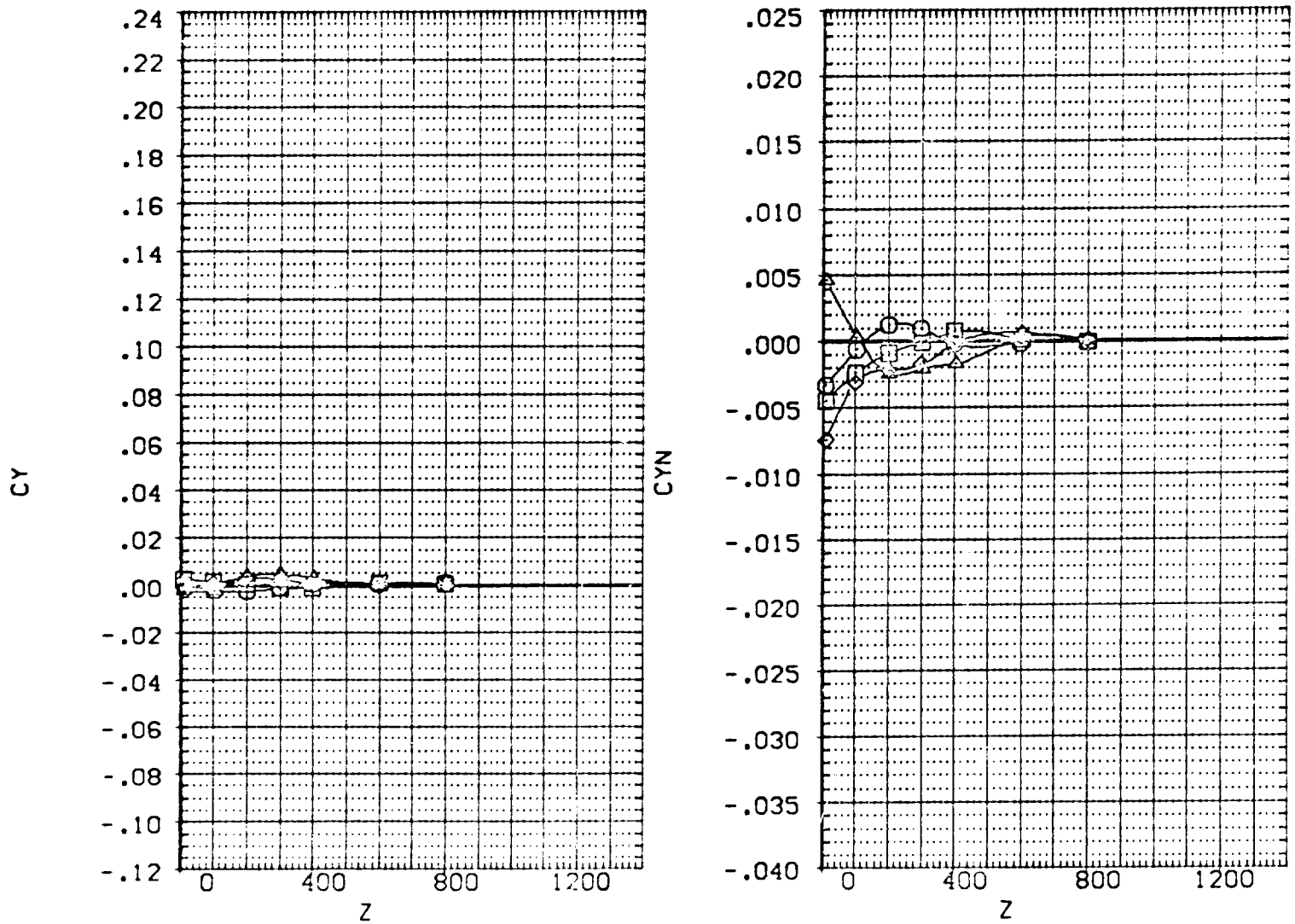


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

[A13,EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT19)

SYMBOL	X		PARAMETRIC VALUES		
○	.223	MACH	4.530	PTOTAL	110.000
□	400.420	ALPHA	-5.000	BETA	.000
◇	800.600	DALPHA	.000	DBETA	.000
△	1200.700	ELEVTR	.000	AILRON	.000
		Y	200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

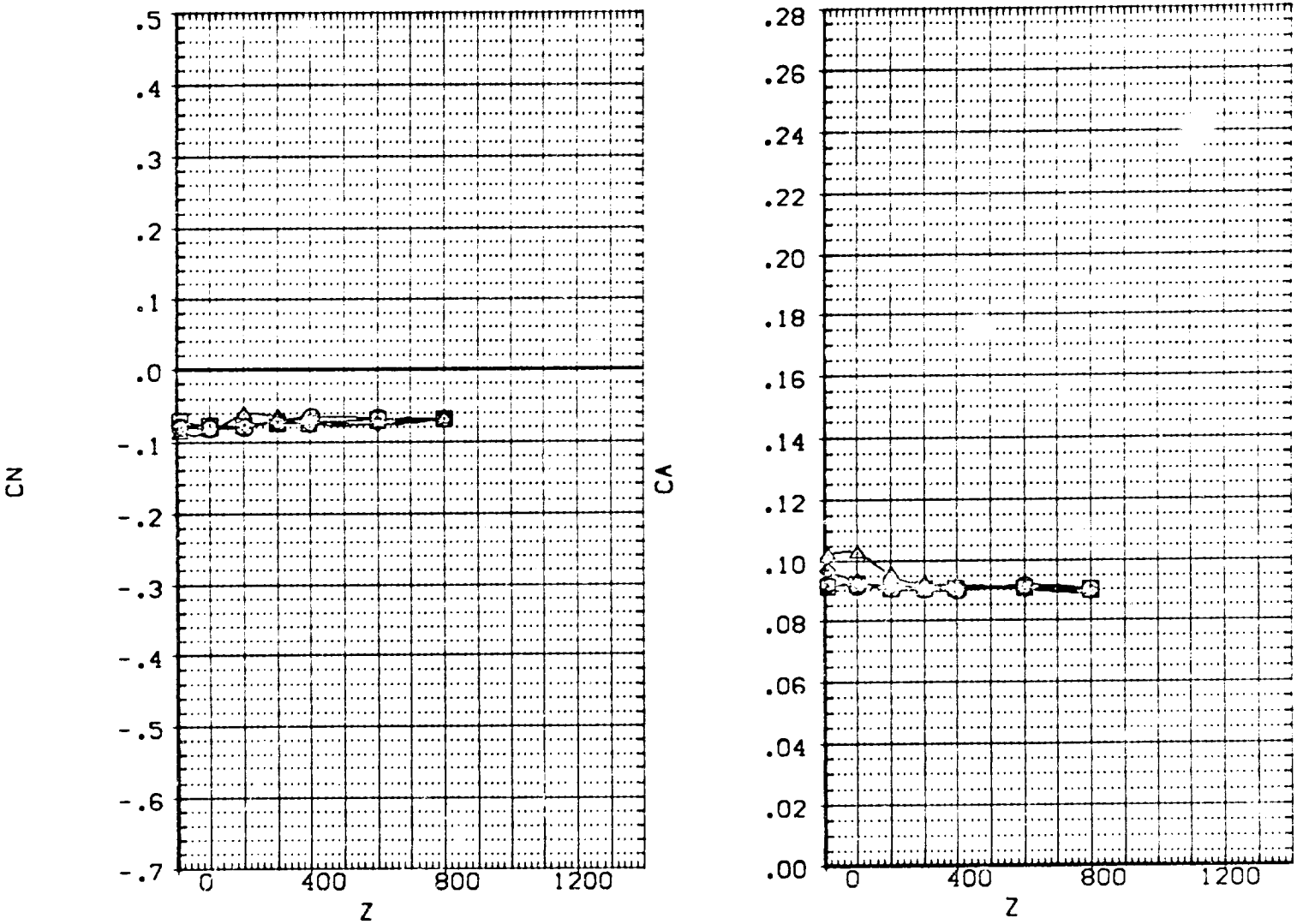


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

IA13,EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT20)

SYMBOL	X		PARAMETRIC VALUES		
○	.175	MACH	.530	PTOTAL	110.000
□	400.230	ALPHA	-5.000	BETA	.000
◇	800.370	DALPHA	.000	DBETA	5.000
△	1200.900	ELEVTR	.000	AILRON	.000
		Y	200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

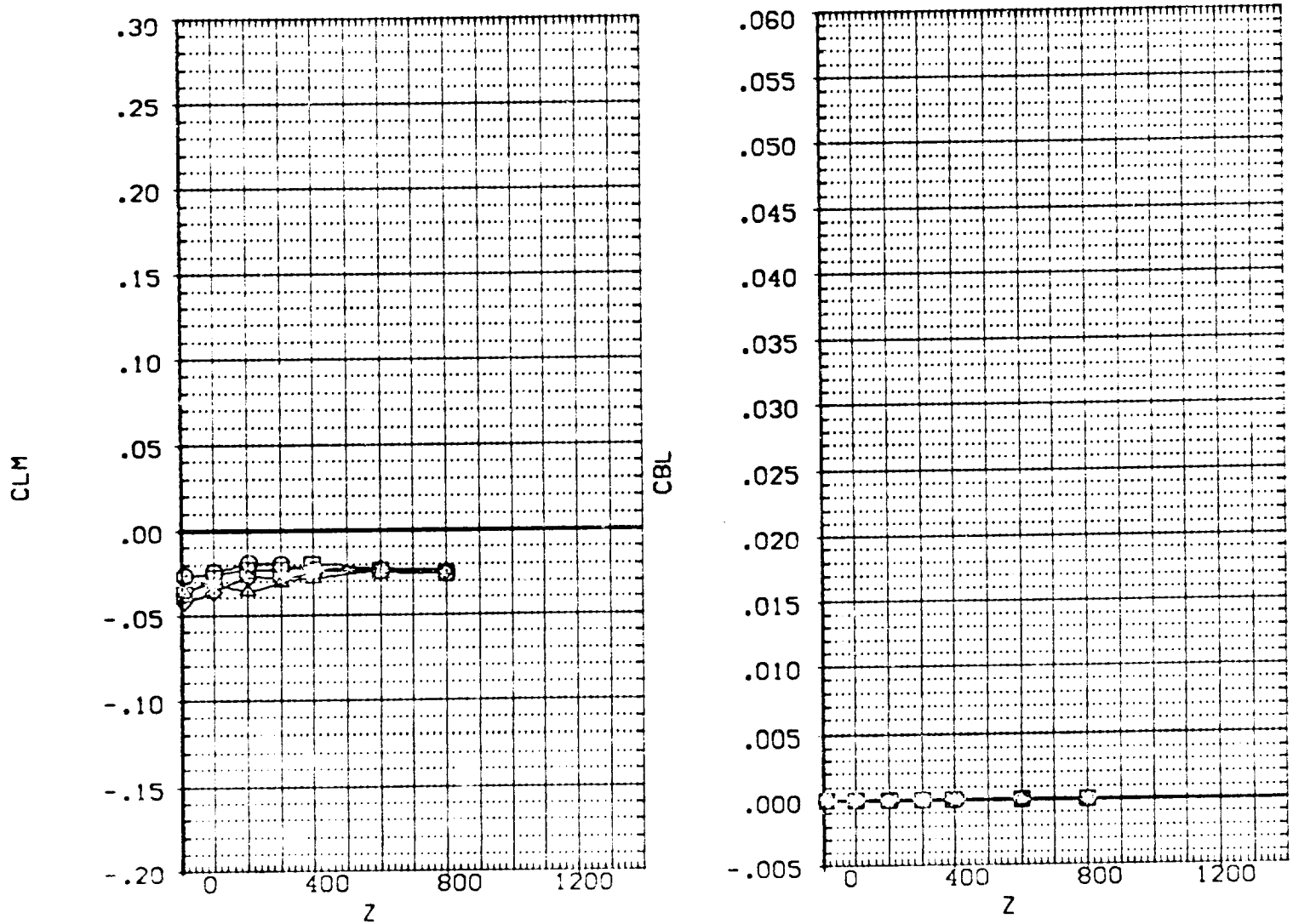


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

IA13,EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT20)

SYMBOL	X		PARAMETRIC VALUES		
○	.175	MACH	4.530	PTOTAL	110.000
□	400.230	ALPHA	-5.000	BETA	.000
◇	800.370	DALPHA	.000	DBETA	5.000
△	1200.900	ELEVTR	.000	AILRON	.000
		Y	200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

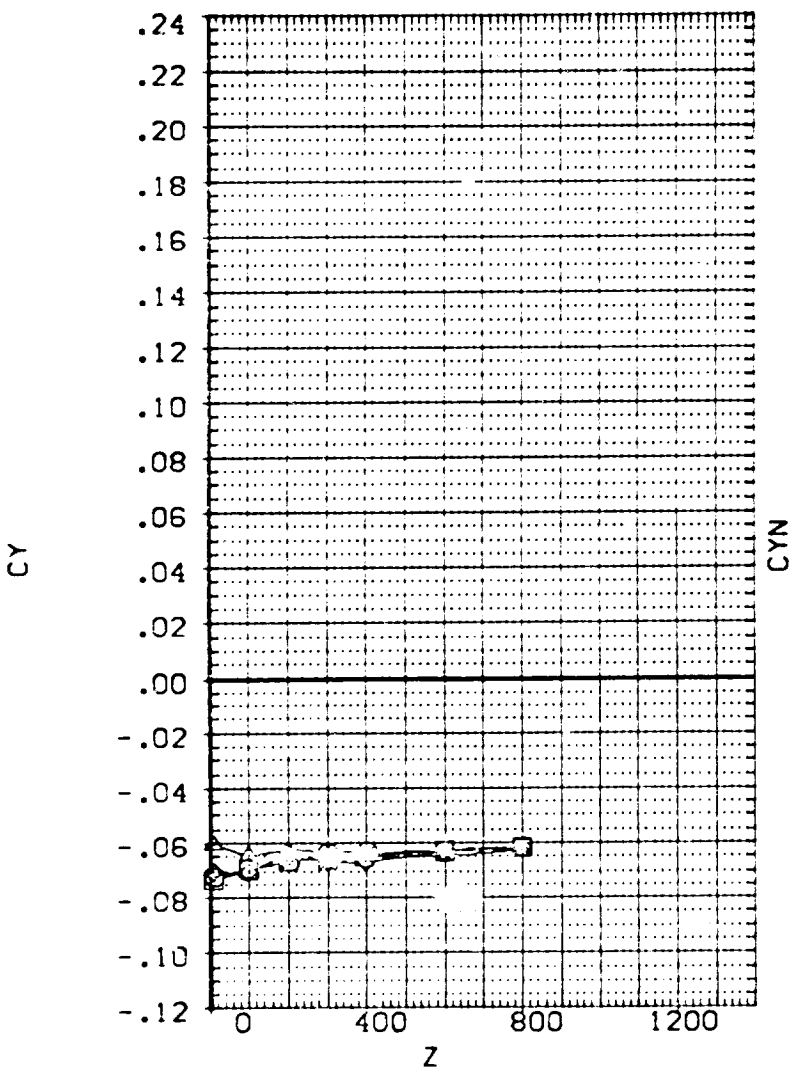


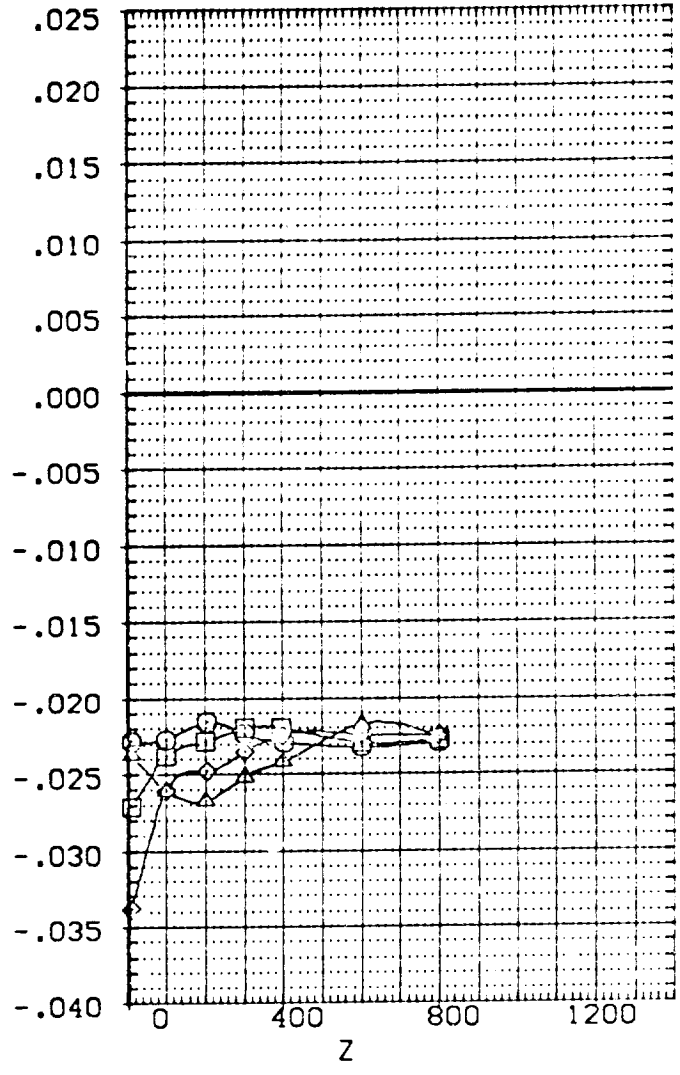
EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT20)

SYMBOL	X		PARAMETRIC VALUES		
○	.175	MACH	4.530	PTOTAL	110.000
◇	400.230	ALPHA	-5.000	BETA	.000
△	800.370	DALPHA	.000	DBETA	5.000
	1200.900	ELEVTR	.000	AILRON	.000
		Y	200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



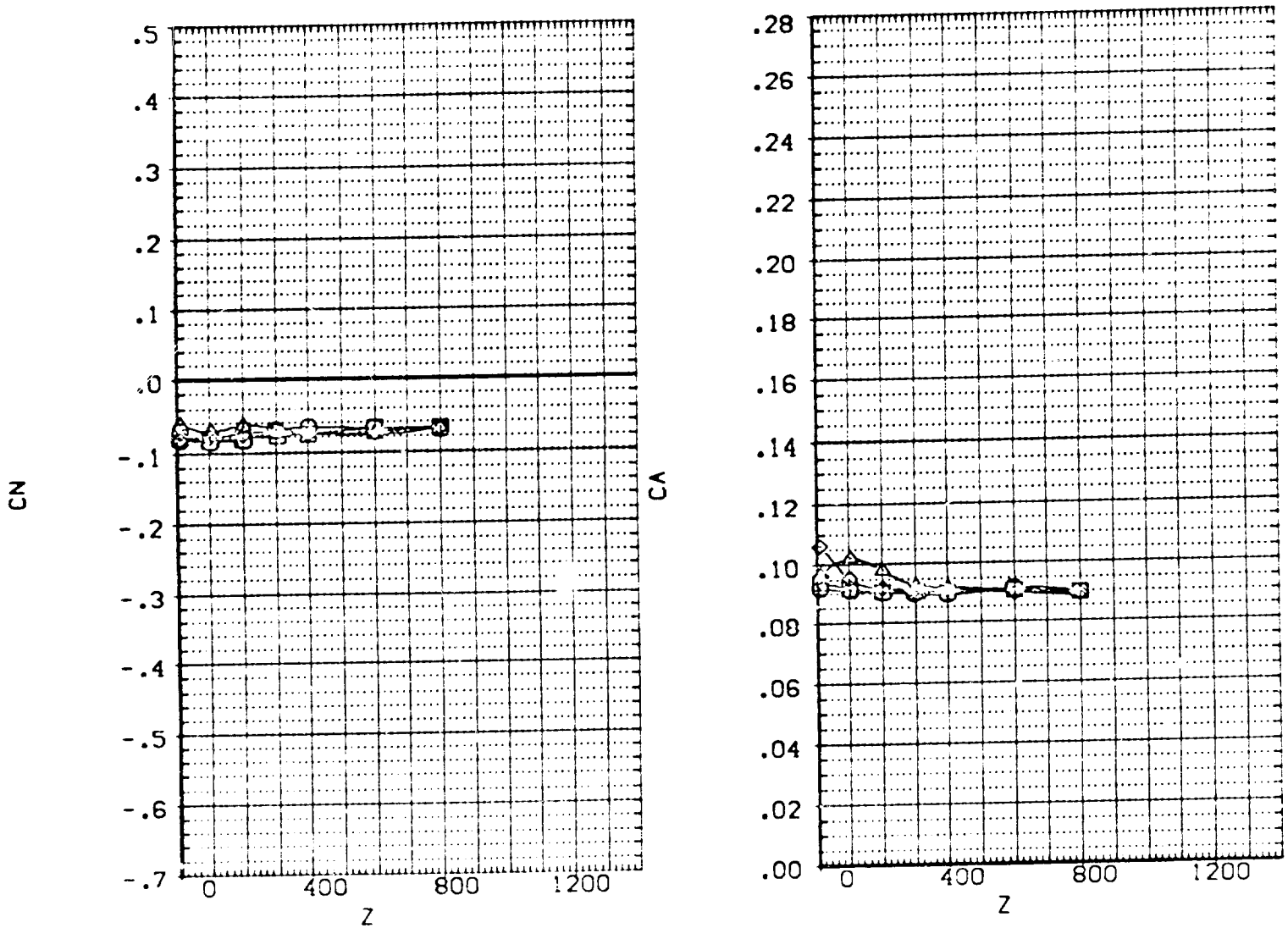


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT21)

SYMBOL	X		PARAMETRIC VALUES		
○	.308	MACH	4.530	PTOTAL	110.000
□	400.370	ALPHA	-5.000	BETA	.000
◇	800.700	DALPHA	.000	DBETA	5.000
△	1200.800	ELEVTR	.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

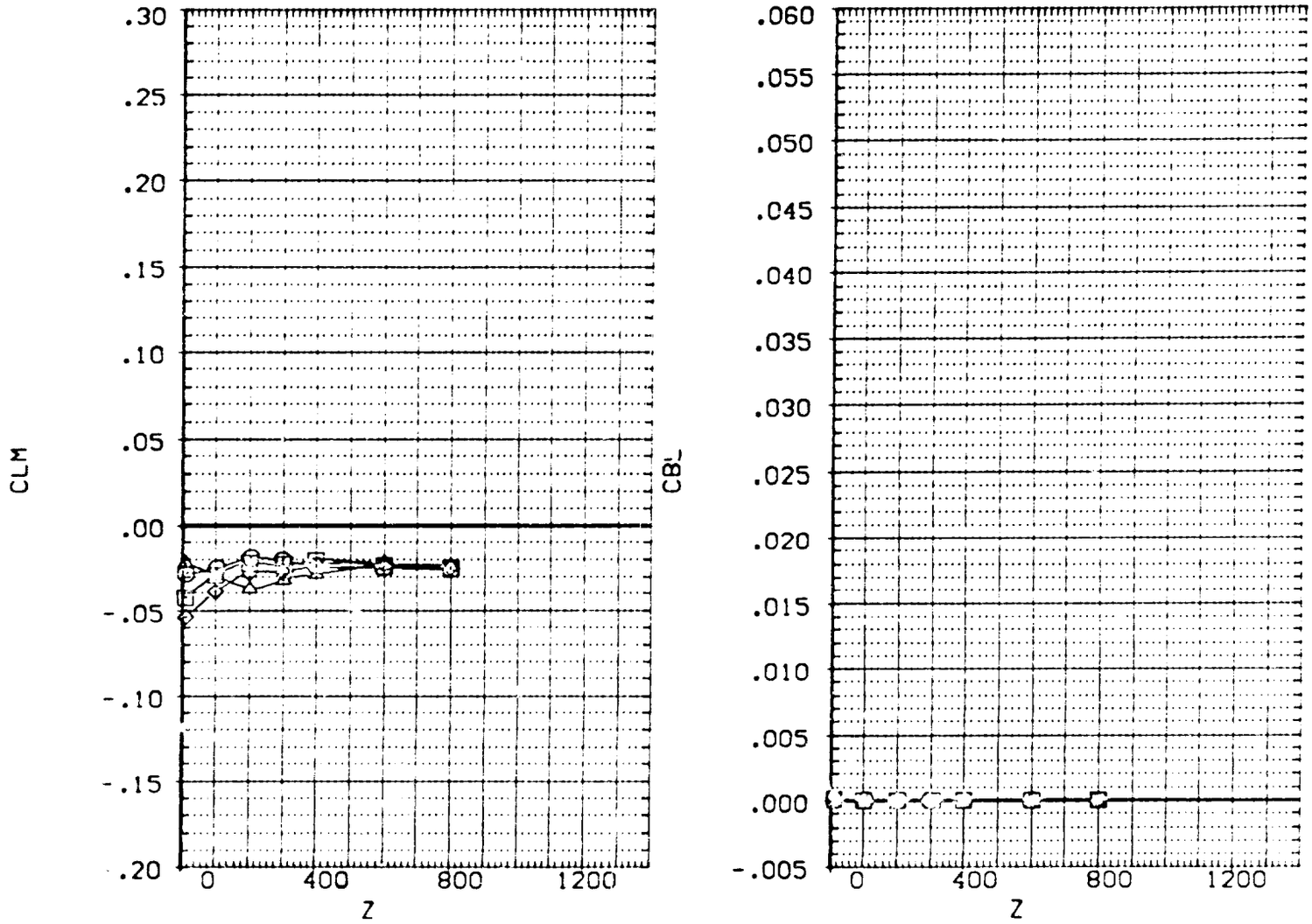


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT21)

SYMBOL	X		PARAMETRIC VALUES		
○	.308	MACH	4.530	PTOTAL	110.000
◇	400.370	ALPHA	-5.000	BETA	.000
△	800.700	DALPHA	.000	DBETA	5.000
	1200.800	ELEVTR	.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

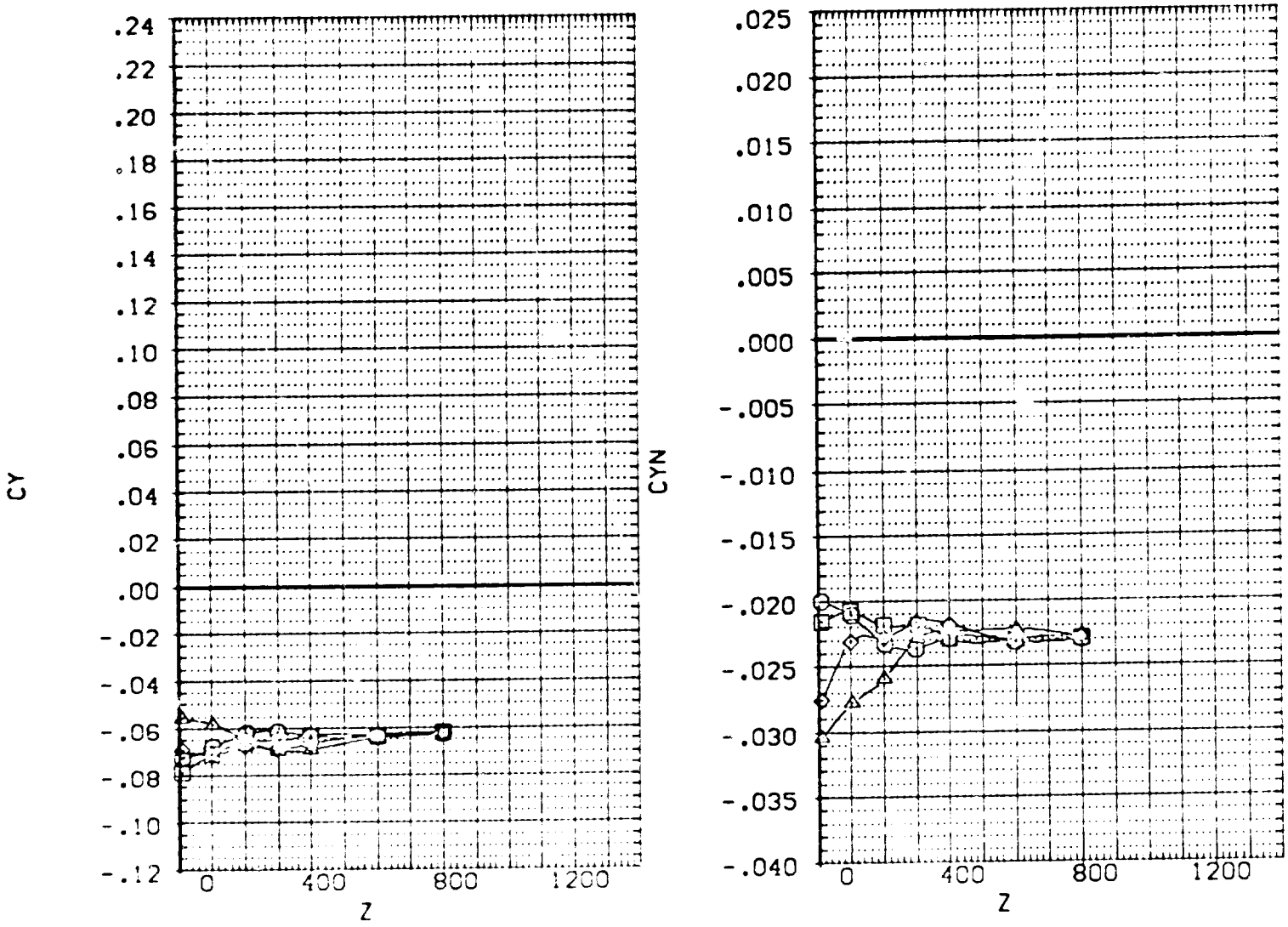


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT21)

SYMBOL	X		PARAMETRIC VALUES		
○	.308	MACH	4.530	PTOTAL	110.000
□	400.370	ALPHA	-5.000	BETA	.000
◇	800.700	DALPHA	.000	DBETA	5.000
△	1200.800	ELEVTR	.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

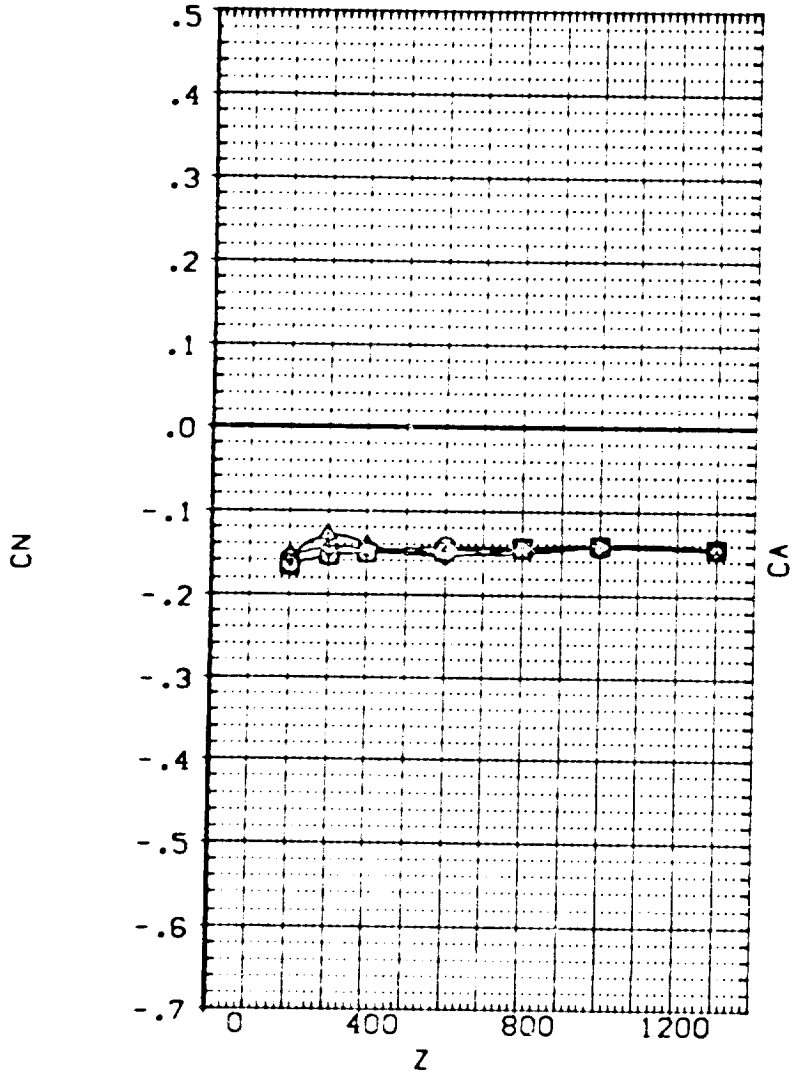


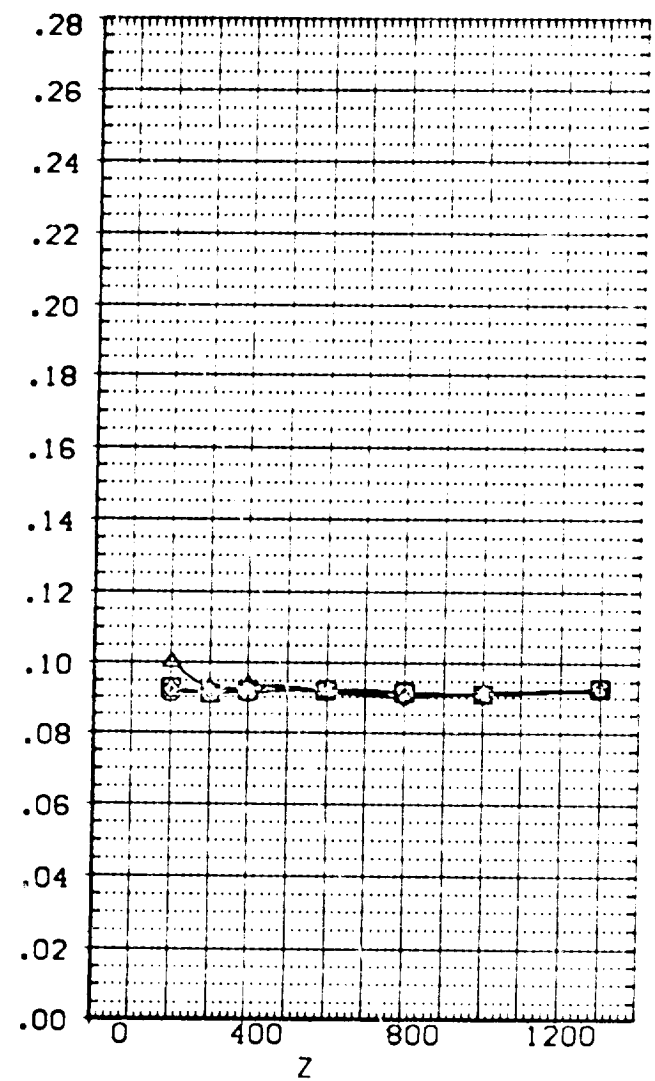
EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

!A13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT22)

SYMBOL	X		PARAMETRIC VALUES		
○	.089	MACH	4.530	PTOTAL	110.000
□	40'..520	ALPHA	-5.000	BETA	.000
◇	800.490	DALPHA	-5.000	DBETA	.000
△	1200.800	ELEVTR	.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



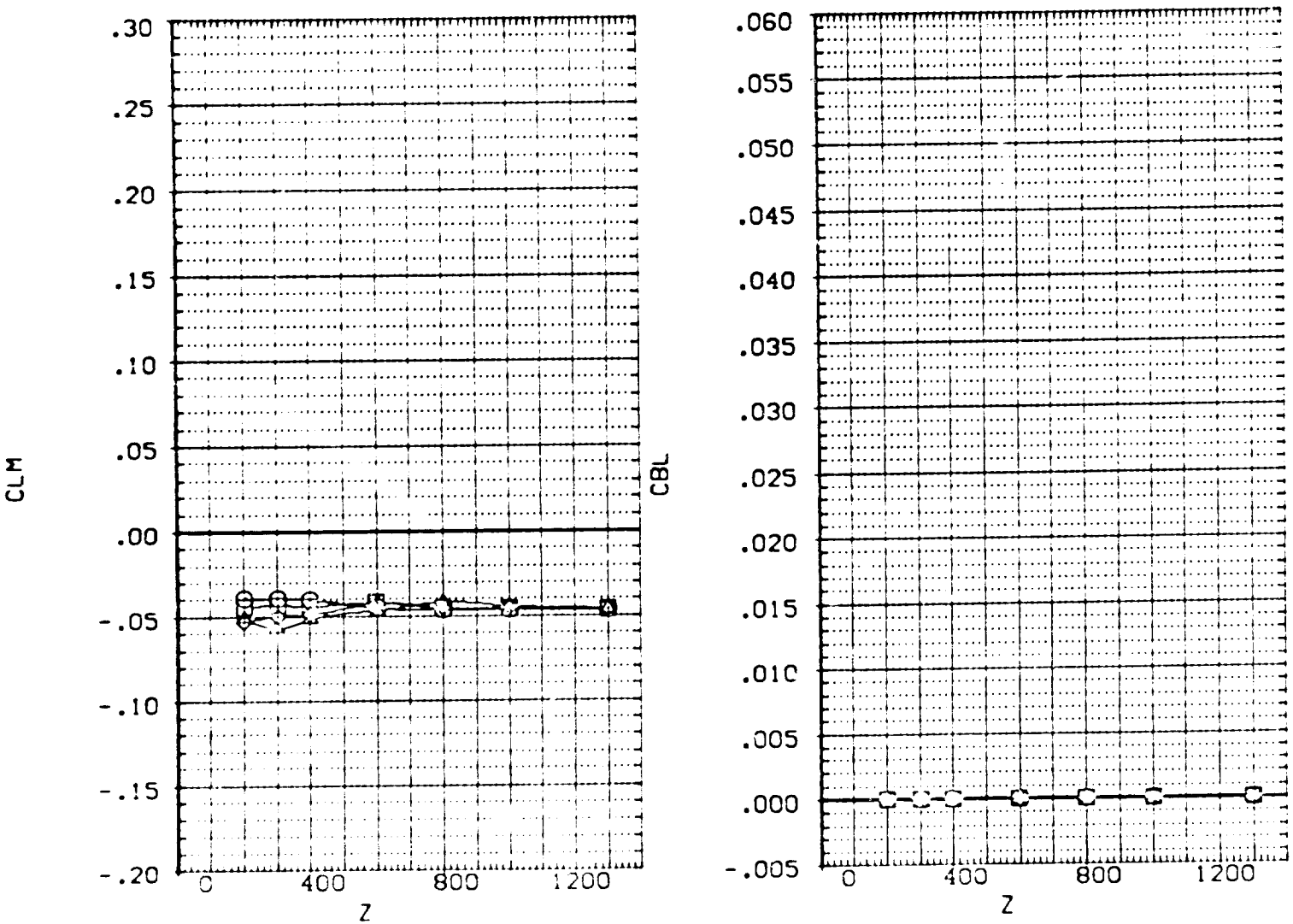


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

!A13,EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT22)

SYMBOL	X		PARAMETRIC VALUES		
○	.089	MACH	4.530	PTOTAL	110.000
□	400.520	ALPHA	-5.000	BETA	.000
◇	800.490	DALPHA	-1.000	DBETA	.000
△	1200.800	ELEVTR	.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

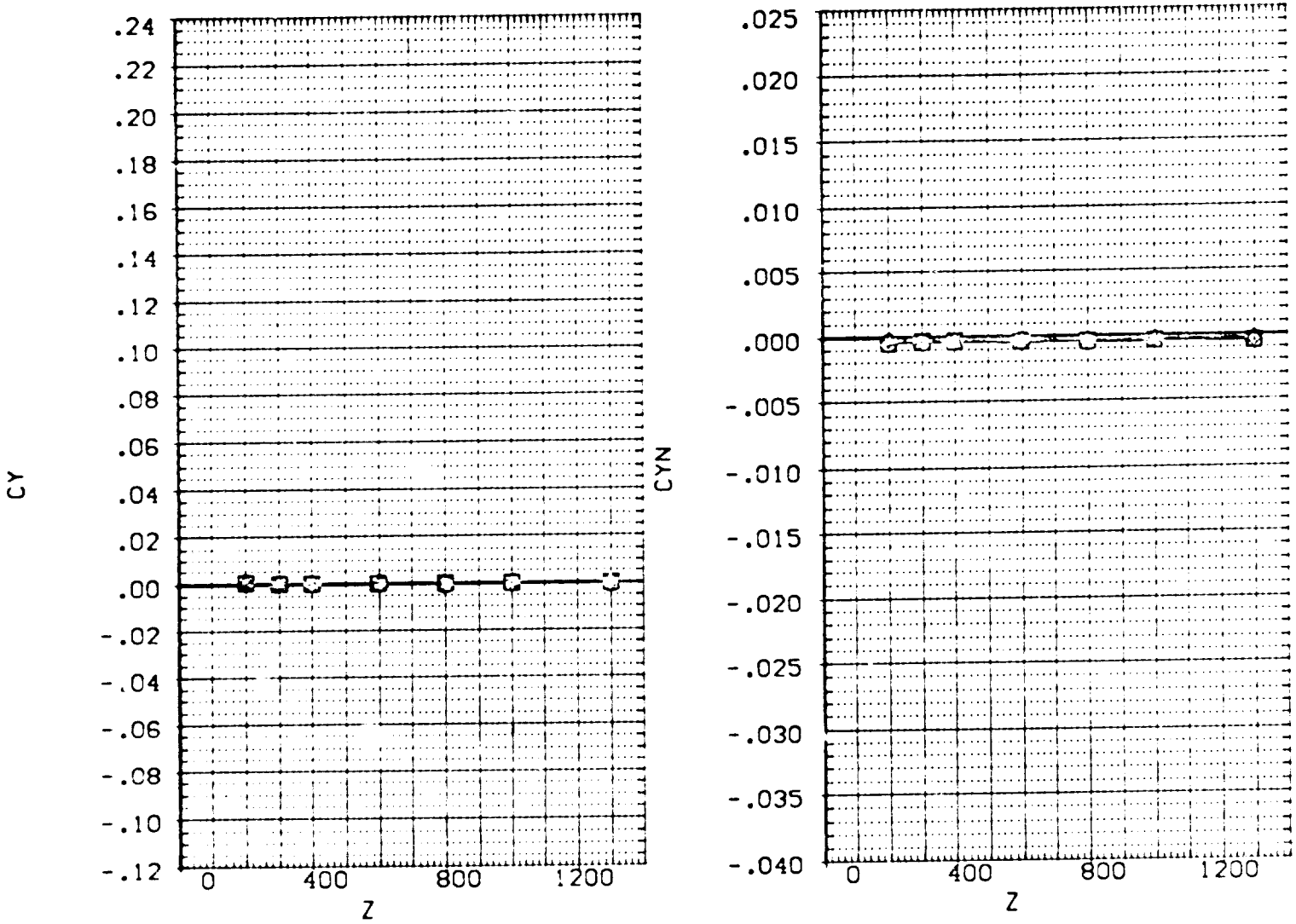


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

!A13.EXTERNAL TANK(110)SEPARATING FROM ORB. 09 (RTJT22)

SYMBOL	X		PARAMETRIC VALUES		
○	.089	MACH	4.530	PTOTAL	110.000
◇	400.520	ALPHA	-5.000	BETA	.000
□	800.490	DALPHA	-5.000	DBETA	.000
△	1200.800	ELEVTR	.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

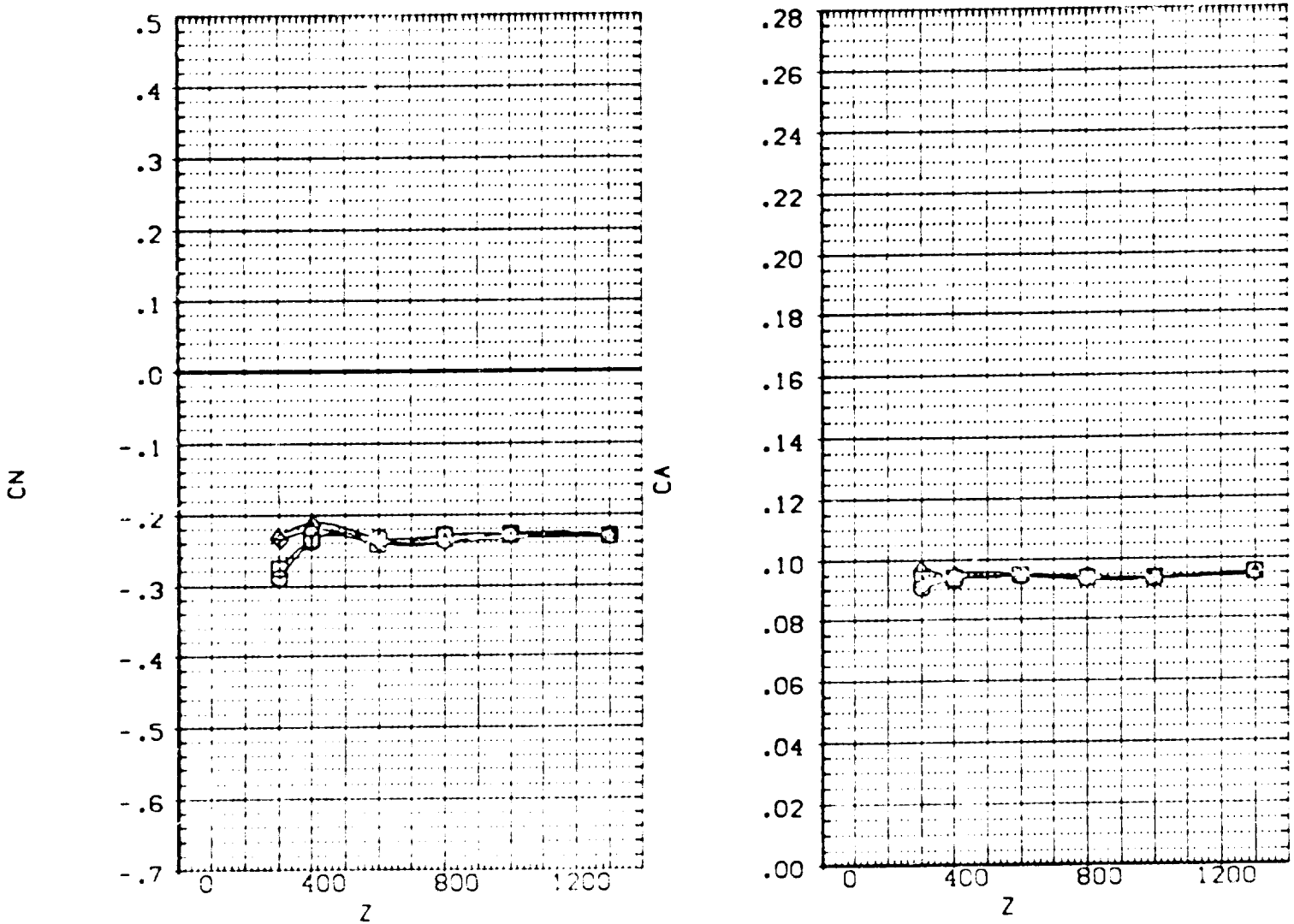


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

!A13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT23)

SYMBOL	X	PARAMETRIC VALUES			
○	-.023	MACH	4.530	PTOTAL	110.000
◇	400.600	ALPHA	-5.000	BETA	.000
△	800.730	DALPHA	-10.000	DBETA	.000
	1200.500	ELEVTR	.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

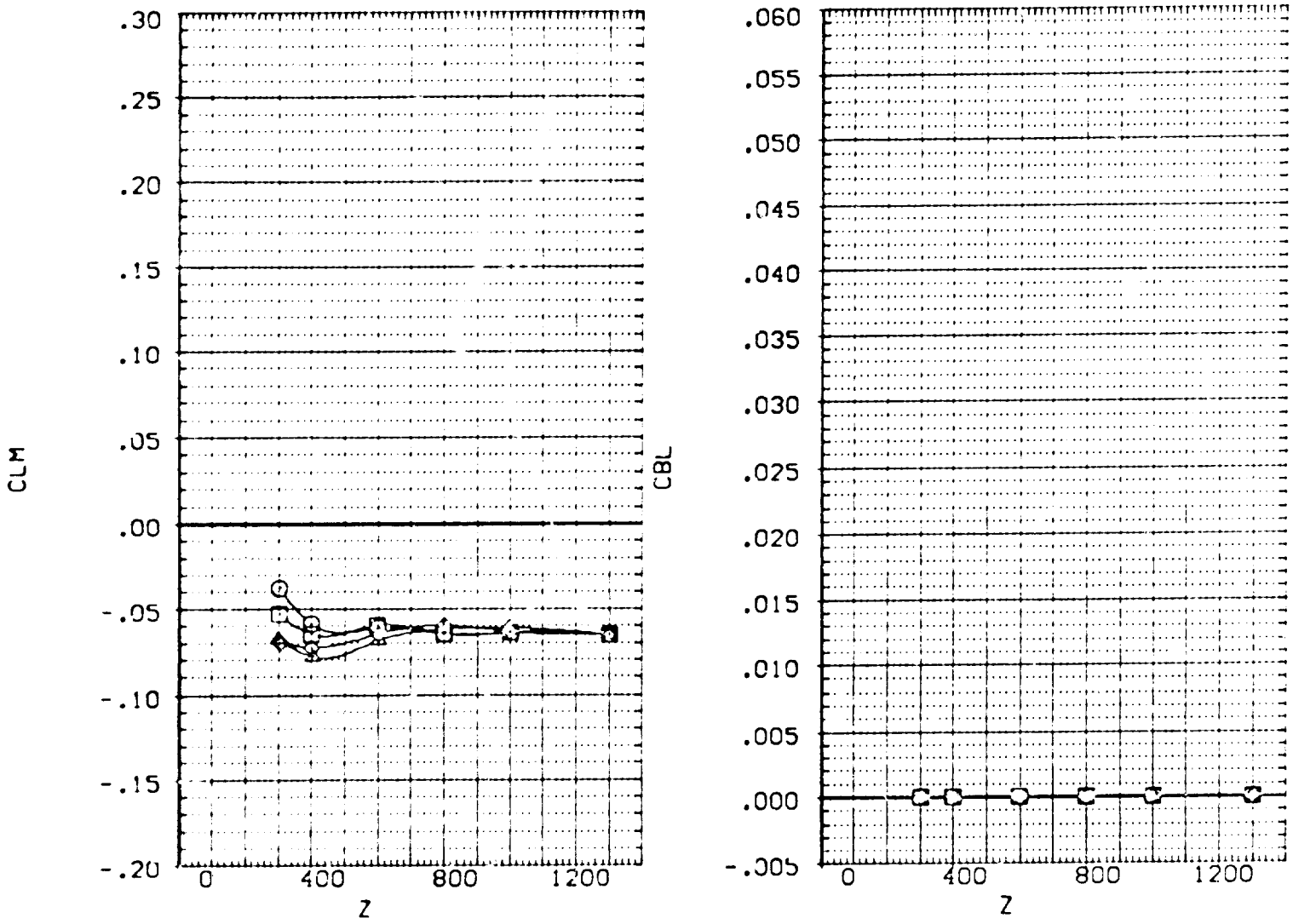


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

[A13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ123)

SYMBOL	X	PARAMETRIC VALUES			
○	-.023	MACH	4.530	PTOTAL	110.000
□	400.600	ALPHA	-5.000	BETA	.000
◇	800.730	DALPHA	-10.000	DBETA	.000
△	1200.500	ELEVTR	.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

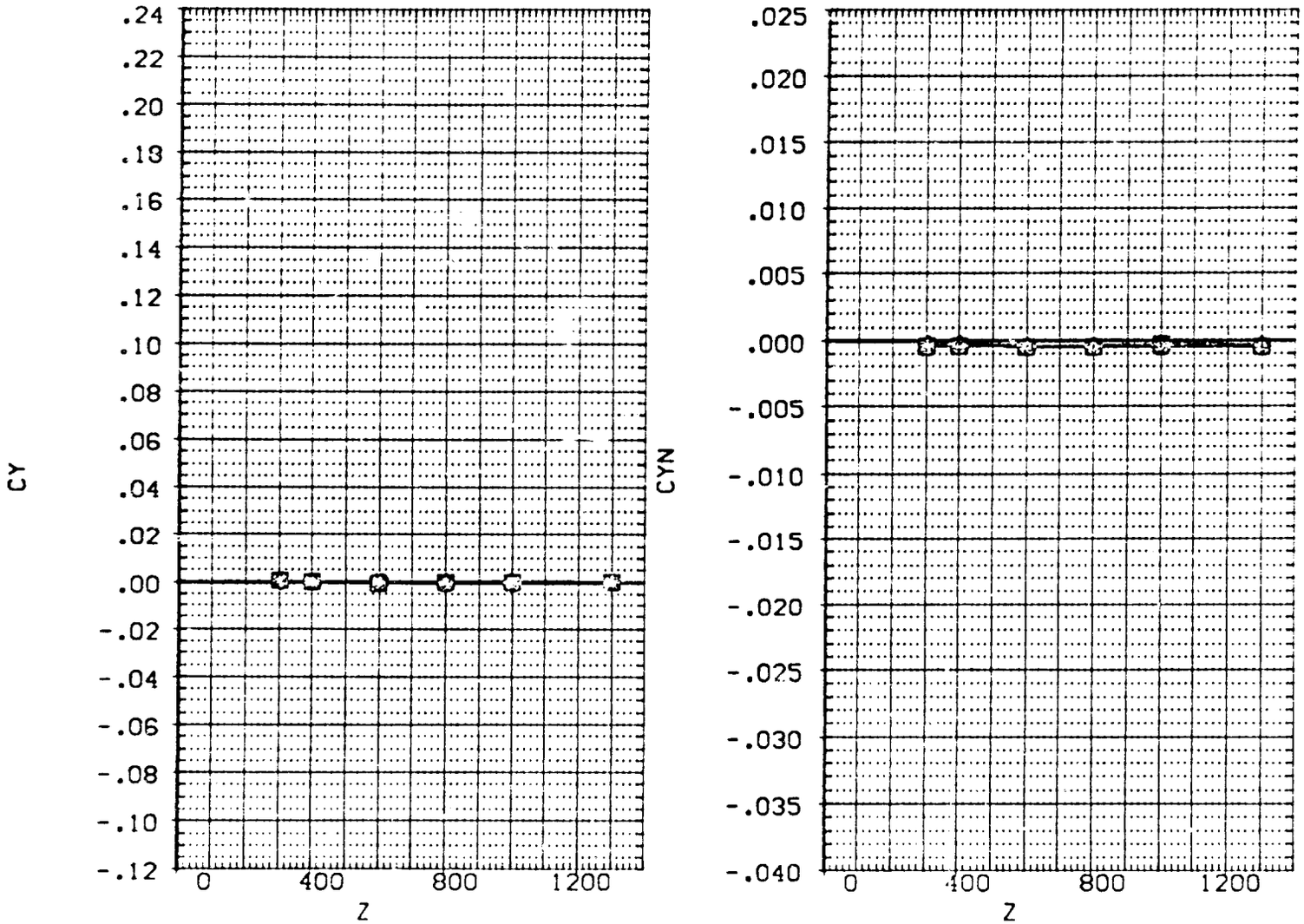


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

!A13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT23)

SYMBOL	X		PARAMETRIC VALUES		
○	-.023	MACH	4.530	PTOTAL	110.000
□	400.600	ALPHA	-5.000	BETA	.000
◇	800.730	DALPHA	-10.000	DBETA	.000
△	1200.500	ELEVTR	.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

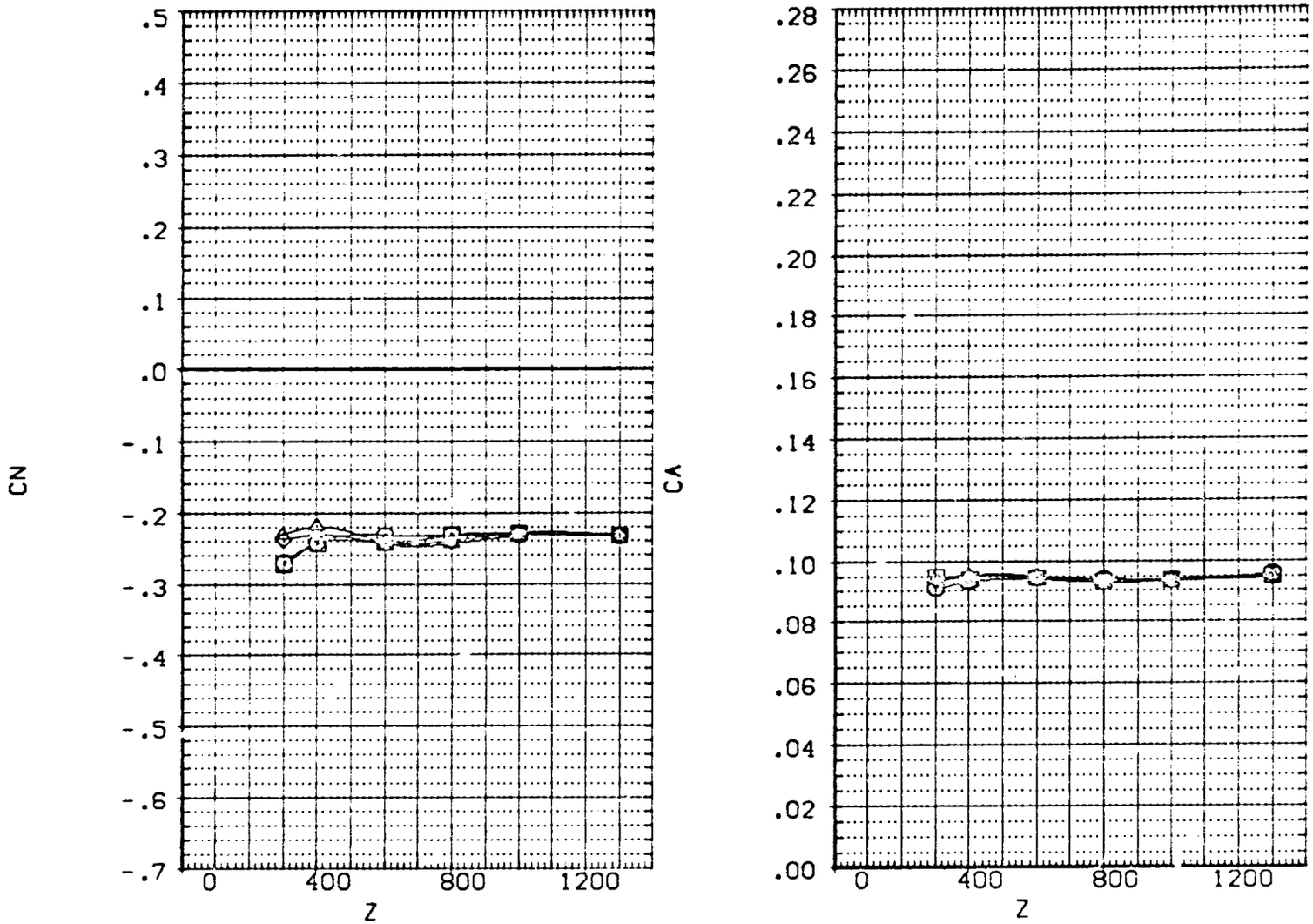


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

!A13,EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT24)

SYMBOL	X		PARAMETRIC VALUES		
○	.023	MACH	4.530	PTOTAL	110.000
□	400.340	ALPHA	-5.000	BETA	.000
◇	800.870	DALPHA	-10.000	DBETA	.000
△	1200.700	ELEVTR	.000	AILRON	.000
		Y	200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

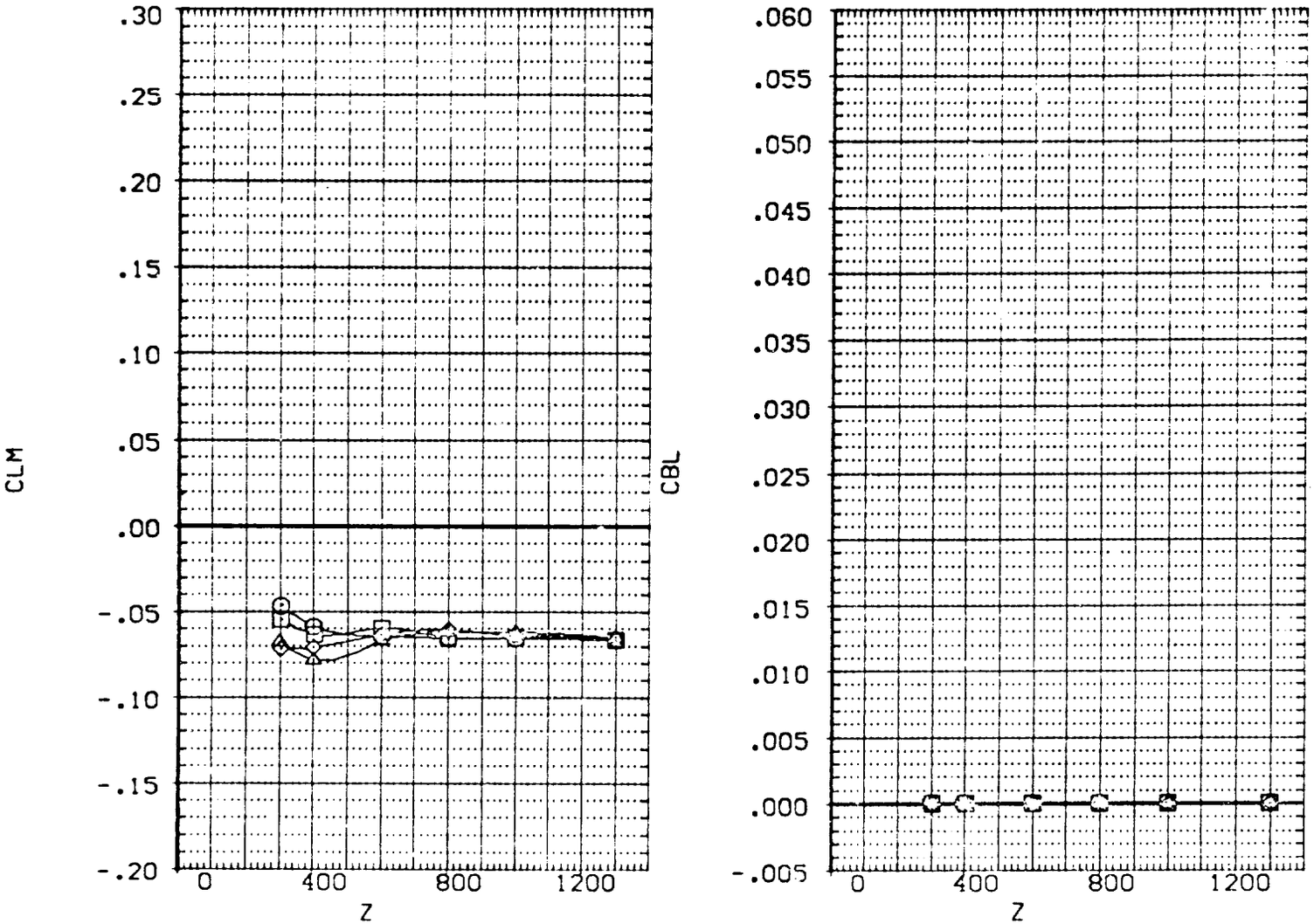


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

[A13,EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT24)

SYMBOL	X		PARAMETRIC VALUES		
○	.023	MACH	4.530	PTOTAL	110.000
□	400.340	ALPHA	-5.000	BETA	.000
◇	800.870	DALPHA	-10.000	DBETA	.000
△	1200.700	ELEVTR	.000	AILRCN	.000
		Y	200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL UNITS

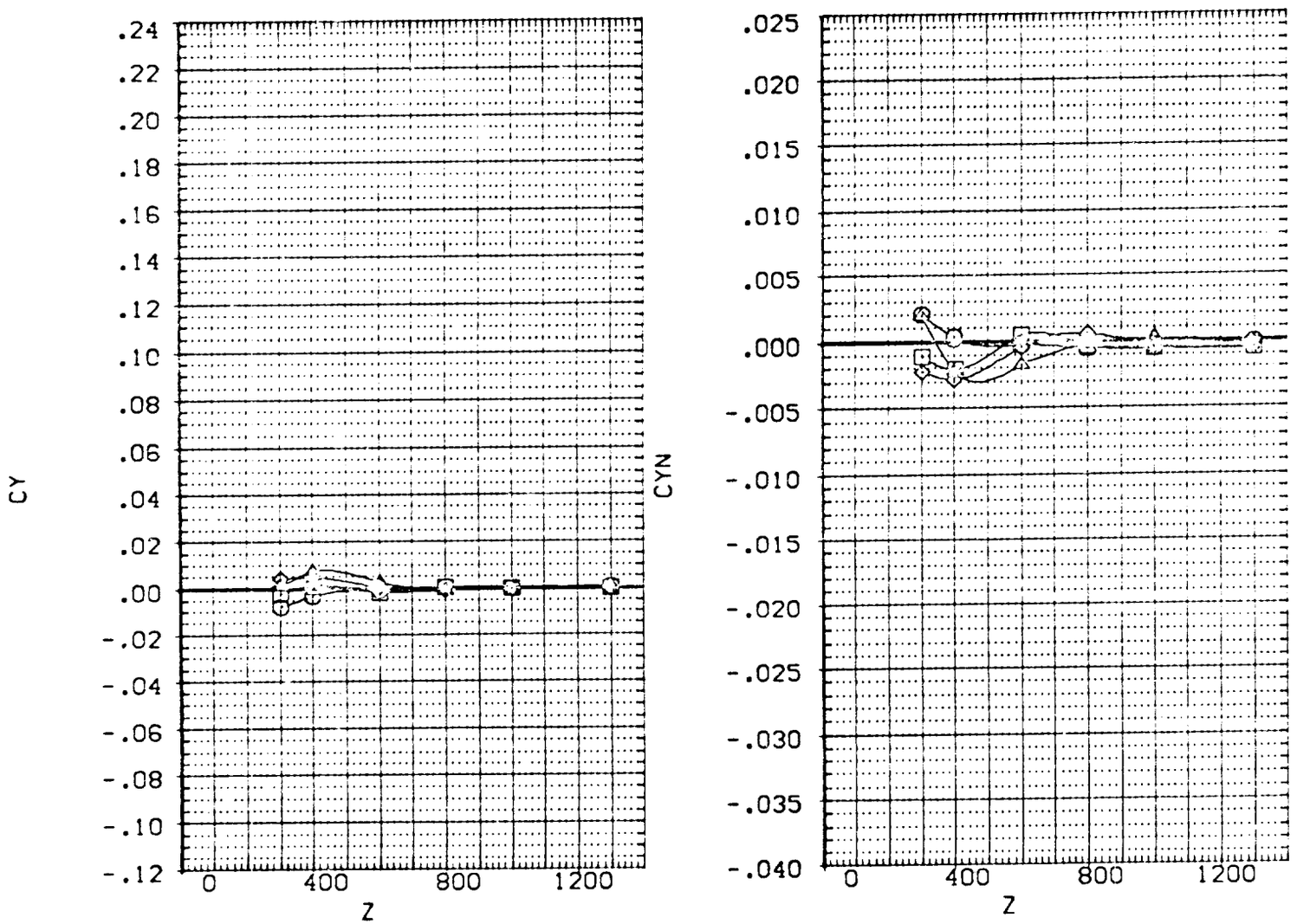


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT24)

SYMBOL	X		PARAMETRIC VALUES		
○□	.023	MACH	4.530	PTOTAL	110.000
△◇	400.340	ALPHA	-5.000	BETA	.000
	800.870	DALPHA	-10.000	DBETA	.000
△	1200.700	ELEVTR	.000	AILRON	.000
		Y	200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

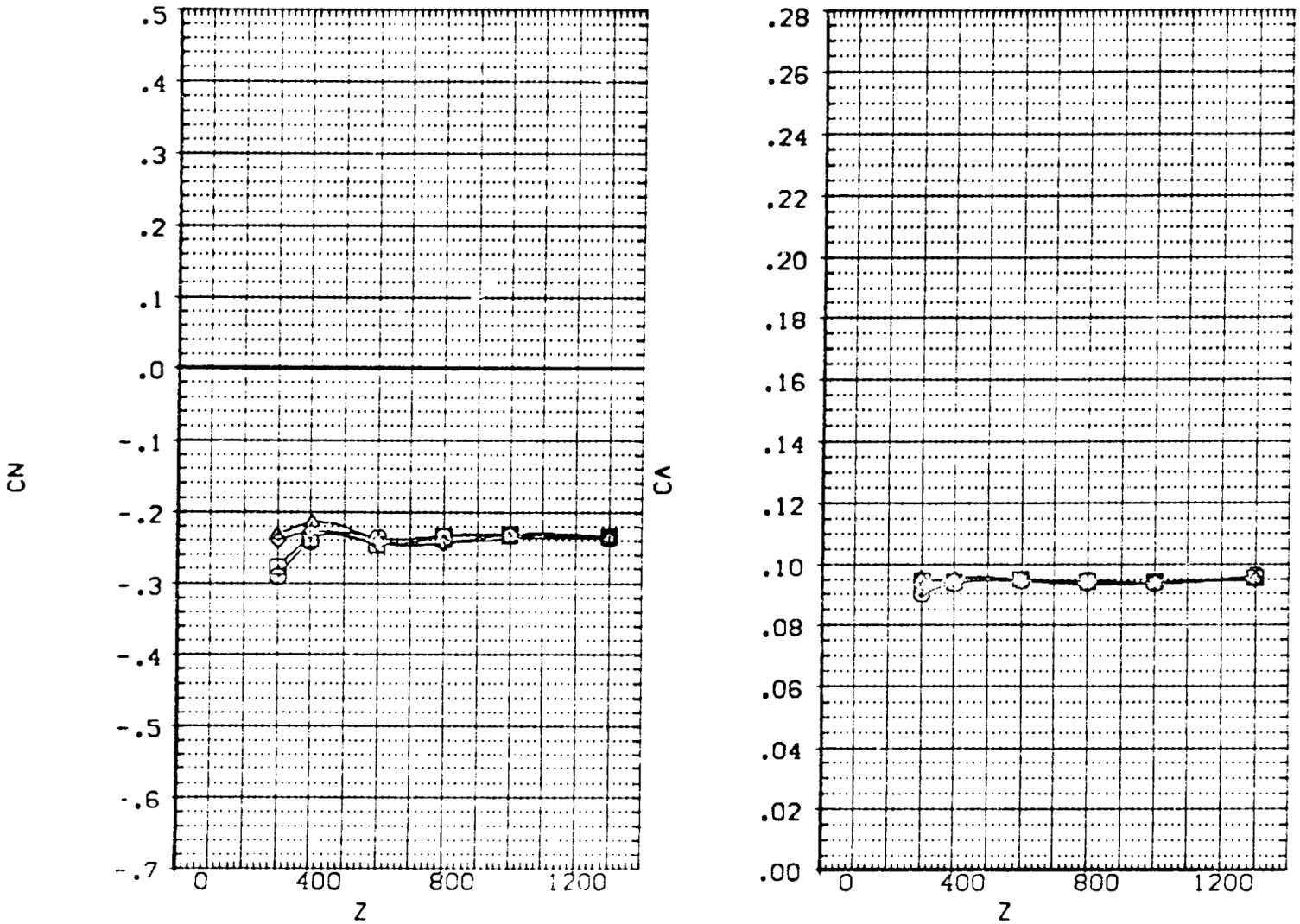


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

[A13.EXTERNAL TANK(10)SEPARATING FROM ORB. 09 (RTJT25)

SYMBOL	X		PARAMETRIC VALUES		
○	-.076	MACH	4.030	PTOTAL	110.000
□	400.690	ALPHA	-5.000	BETA	.000
◇	800.560	DALPHA	-10.000	DBETA	5.000
△	1200.500	ELEVTR	.000	AILRON	.000
		Y	200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

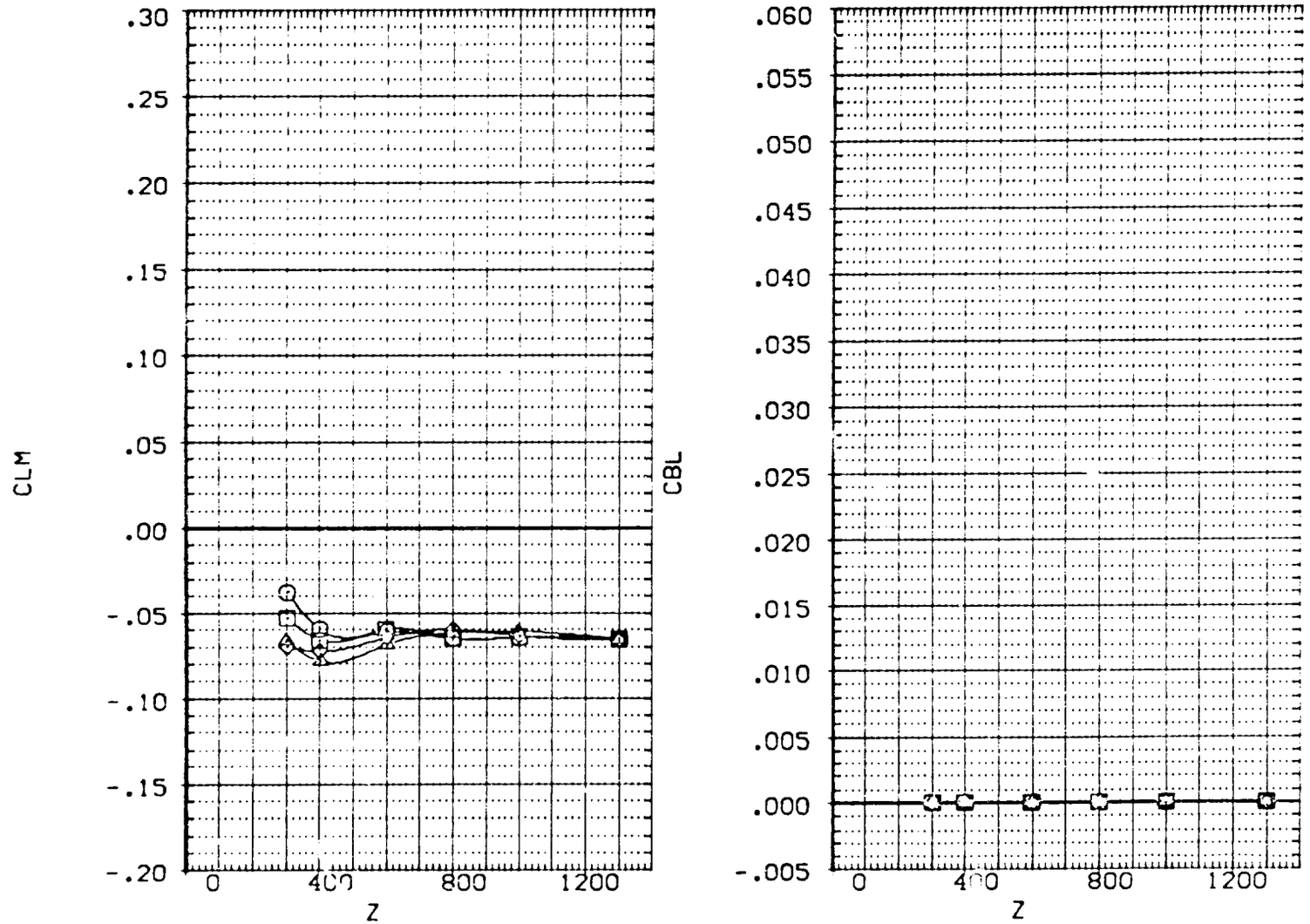


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT25)

SYMBOL	X		PARAMETRIC VALUES		
○	-.076	MACH	4.530	PTOTAL	110.000
□	400.690	ALPHA	-5.000	BETA	.000
◇	800.560	DALPHA	-10.000	DBETA	5.000
△	1200.500	ELEVTR	.000	AILRON	.000
		Y	200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

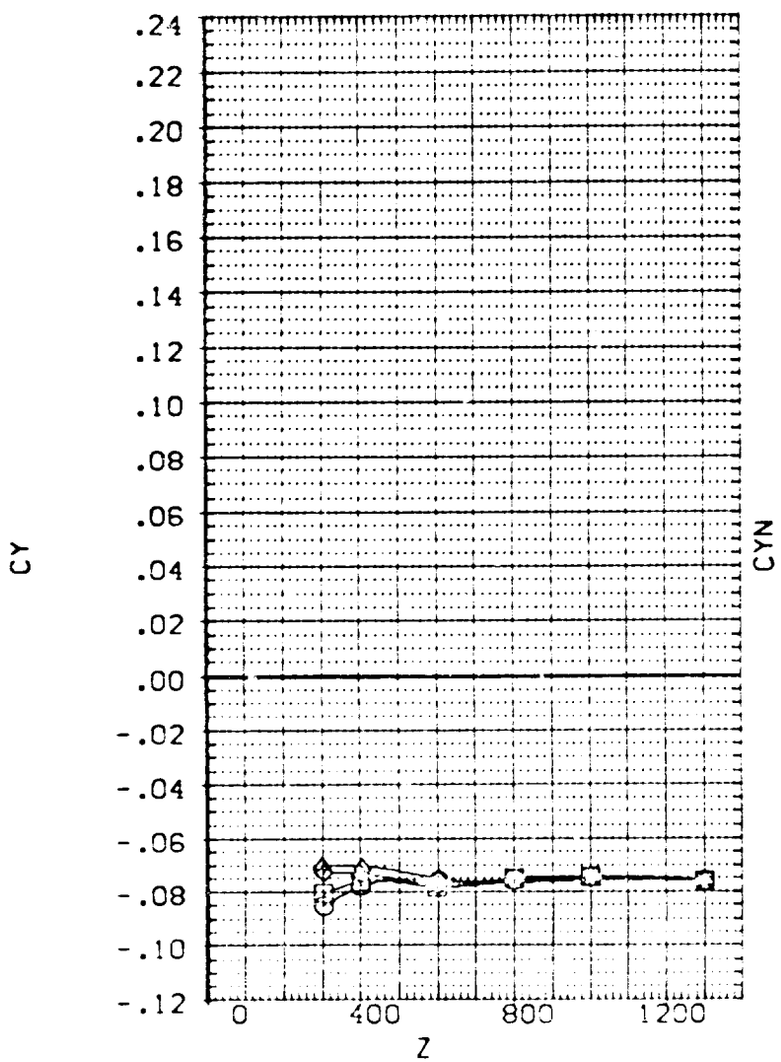


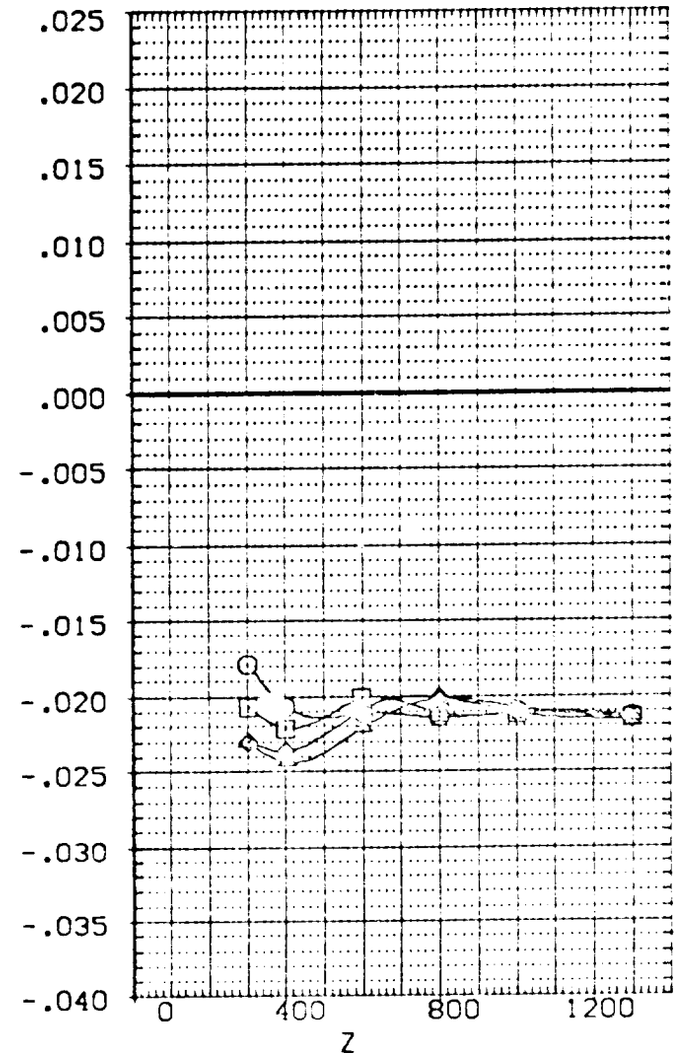
EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

!A13,EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT25)

SYMBOL	X		PARAMETRIC VALUES		
○	-.076	MACH	4.530	PTOTAL	110.000
◇	400.690	ALPHA	-5.000	BETA	.000
△	800.560	DALPHA	-10.000	DBETA	5.000
	1200.500	ELEVTR	.000	AILRON	.000
		Y	200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



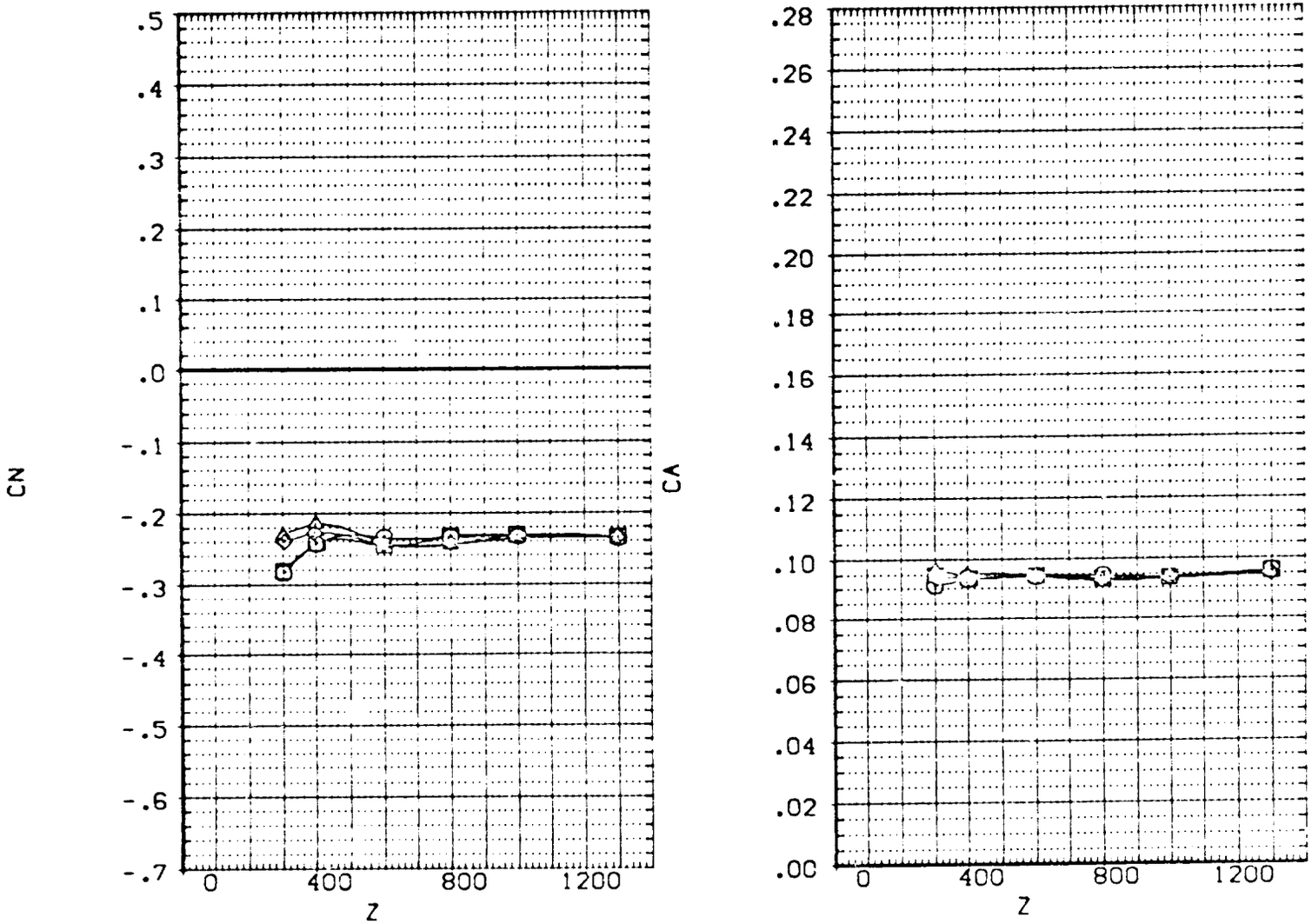


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT26)

SYMBOL	X		PARAMETRIC VALUES		
○	.074	MACH	4.530	PTOTAL	110.000
□	400.230	ALPHA	-5.000	BETA	.000
◇	800.780	DALPHA	-10.000	DBETA	5.000
△	1200.800	ELEVTR	.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

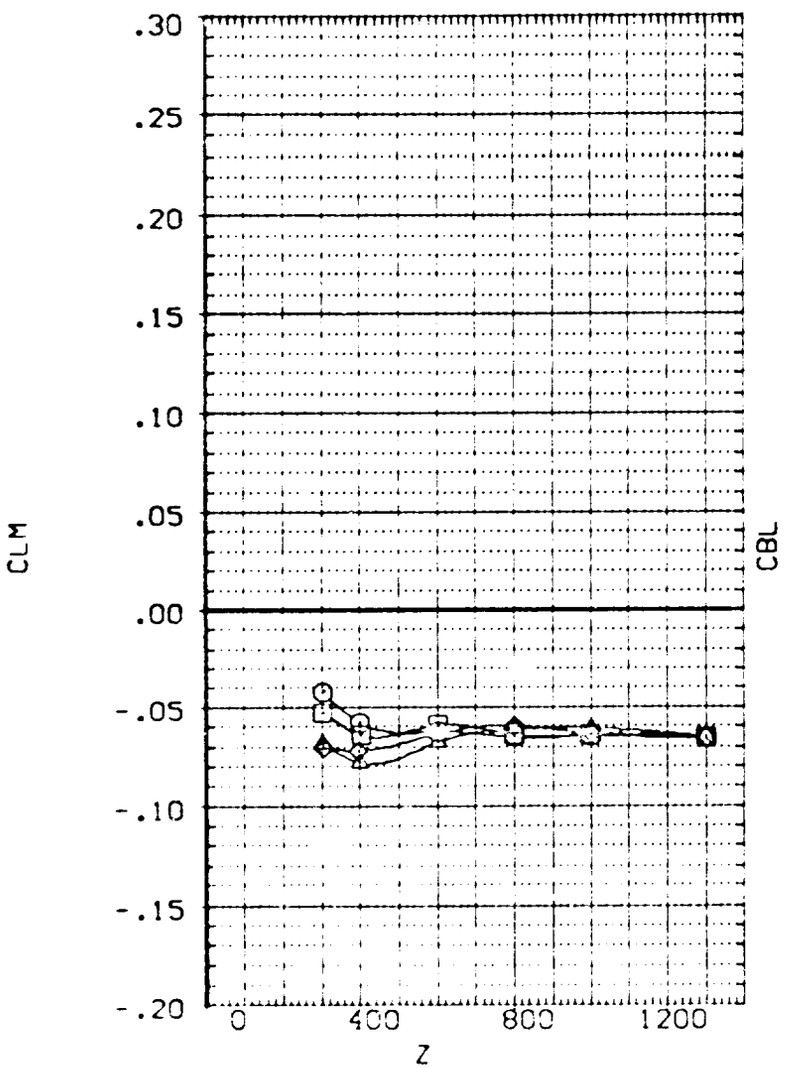


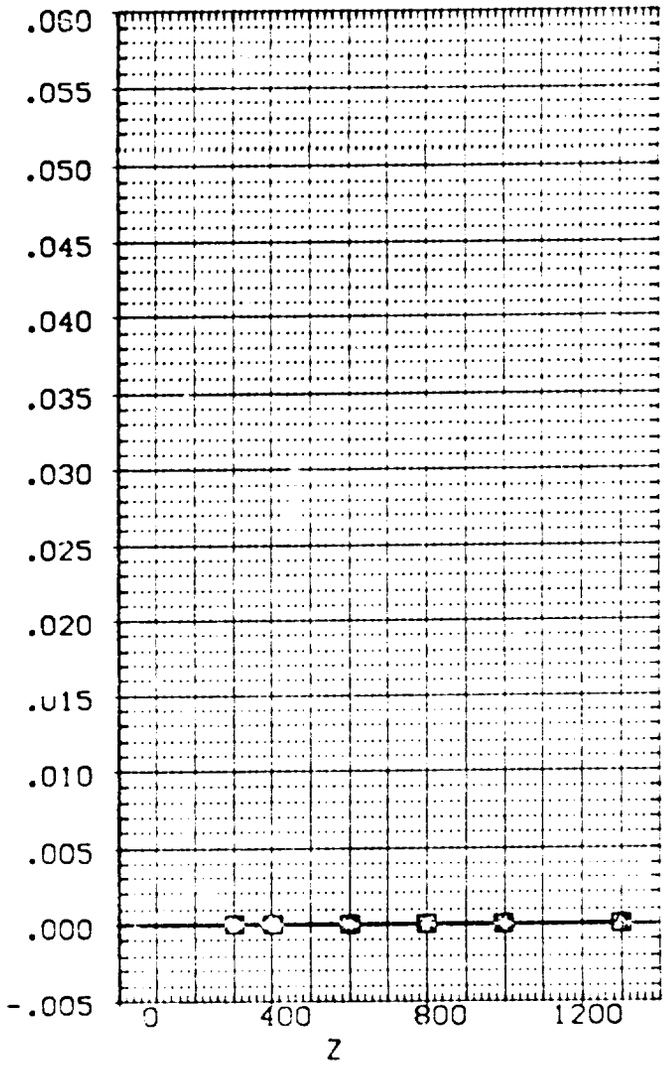
EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT26)

SYMBOL	X		PARAMETRIC VALUES		
○	.074	MACH	4.530	PTOTAL	110.000
□	400.230	ALPHA	-5.000	BETA	.000
◇	800.780	DALPHA	-10.000	DBETA	5.000
△	1200.800	ELEVTR	.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



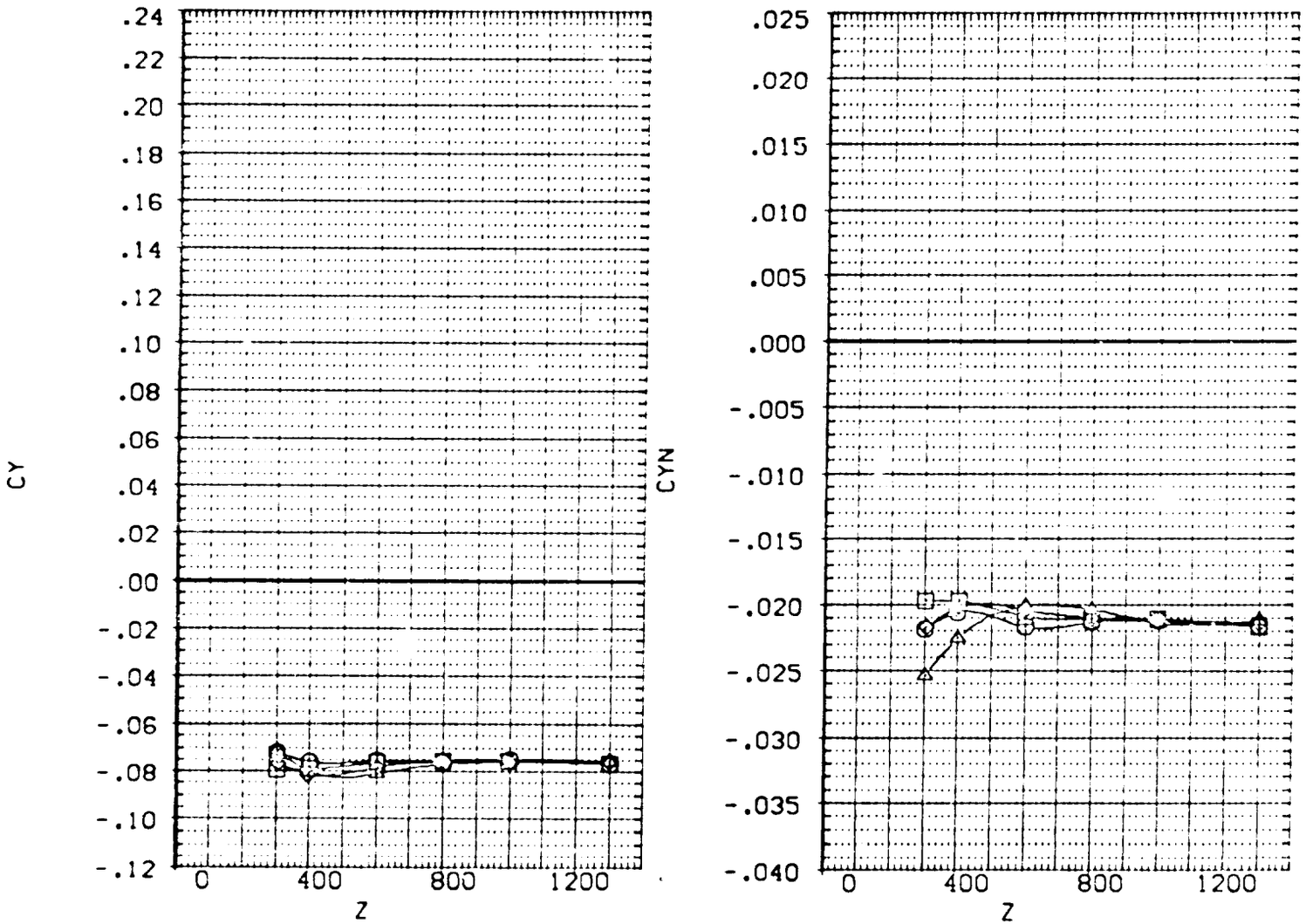


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT26)

SYMBOL	X		PARAMETRIC VALUES		
○	.074	MACH	4.530	PTOTAL	110.000
△	400.230	ALPHA	-5.000	BETA	.000
◇	800.780	DALPHA	-10.000	DBETA	5.000
□	1200.800	ELEVTR	.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

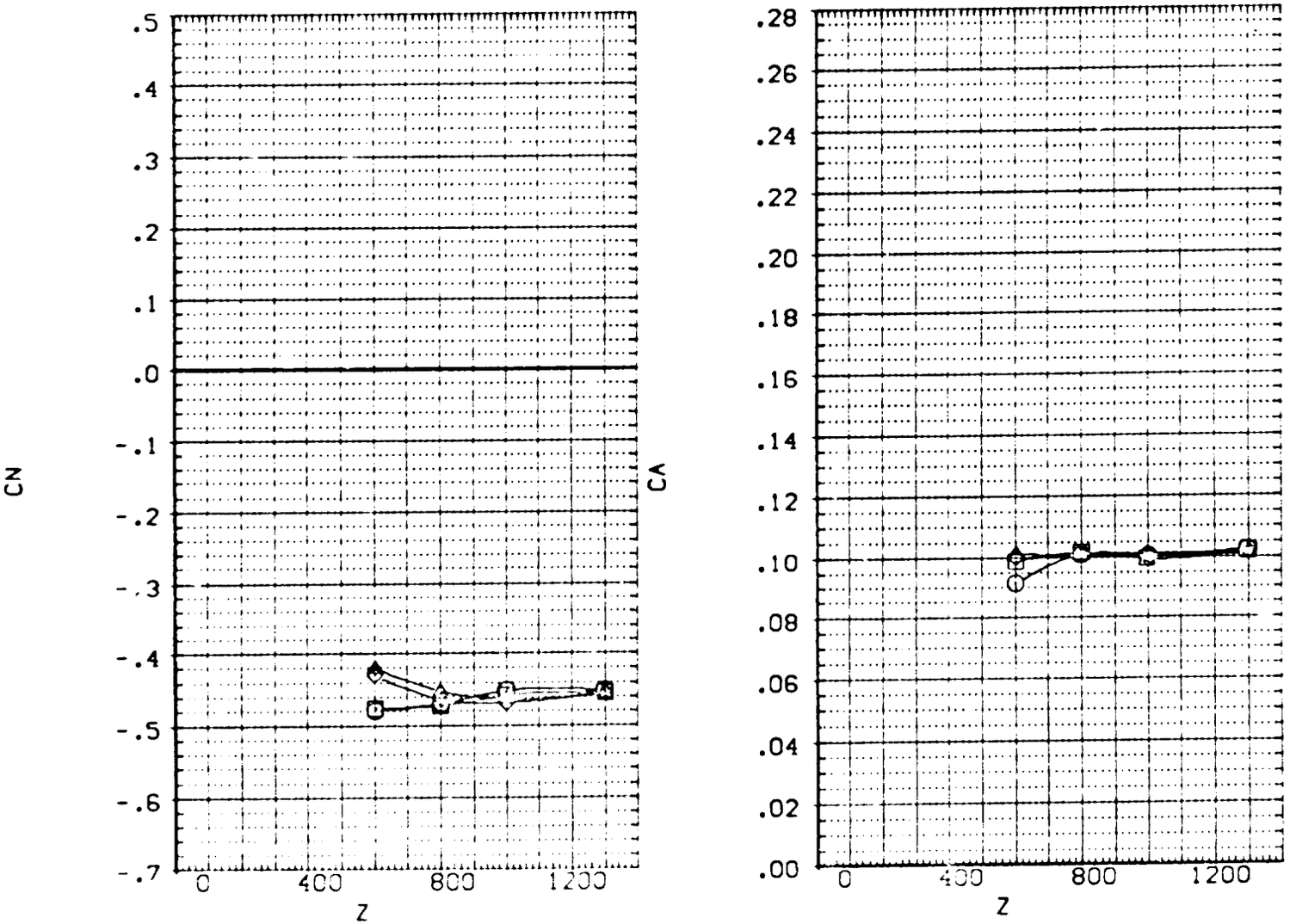


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

!A!3.EXTERNAL TANK(T!0)SEPARATING FROM ORB. 09 (RTJT27)

SYMBOL	X		PARAMETRIC VALUES		
○	-1.133	MACH	4.530	PTOTAL	110.000
□	401.620	ALPHA	-5.000	BETA	.000
◇	800.510	DALPHA	-20.000	DBETA	.000
△	1200.400	ELEVTR	.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS OR INDIVIDUAL DATASETS

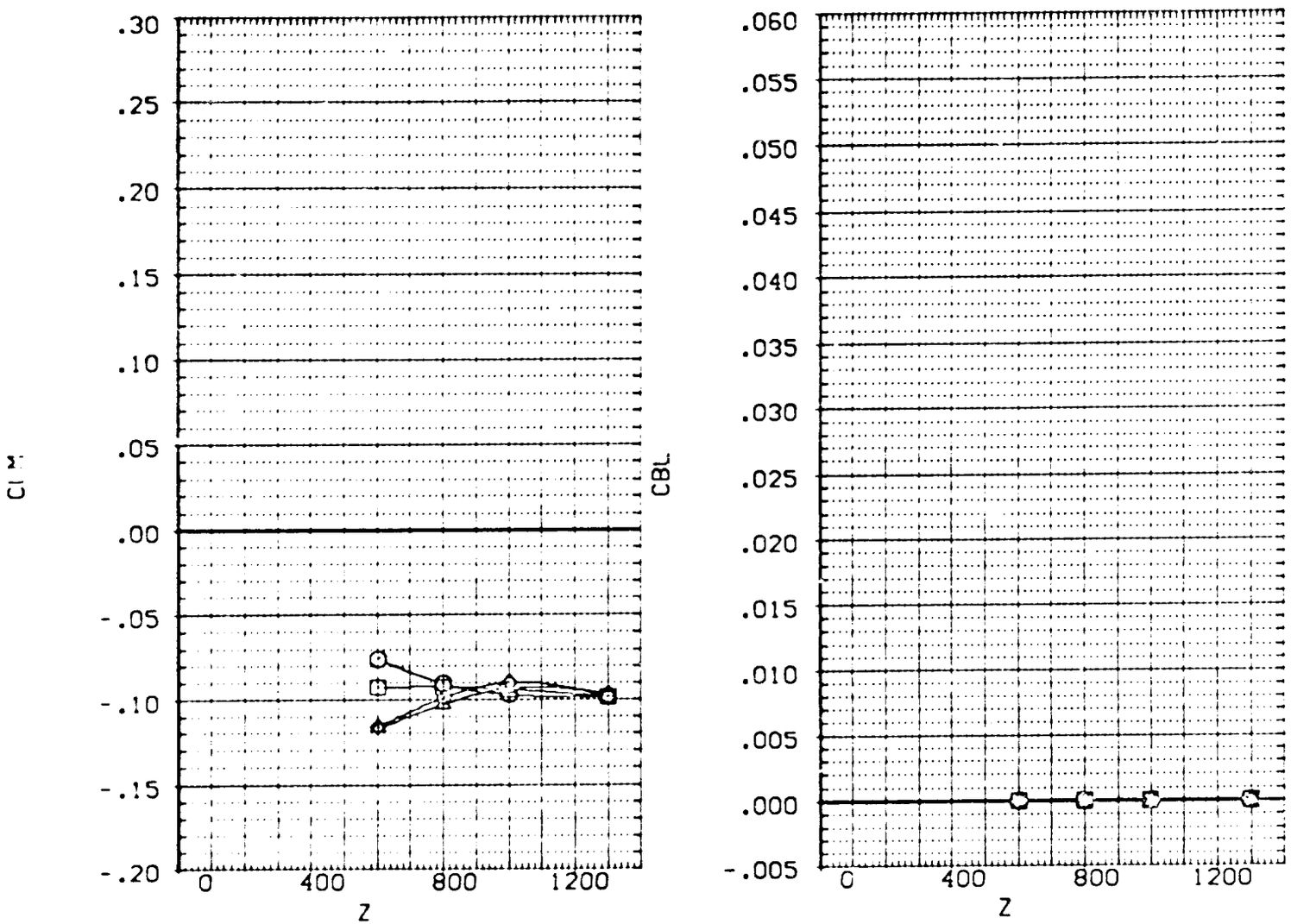


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

[A13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT27)

SYMBOL	X		PARAMETRIC VALUES		
○	-1.133	MACH	4.530	PTOTAL	110.000
□	401.620	ALPHA	-5.000	BETA	.000
◇	800.510	DALPHA	-20.000	DBETA	.000
△	1200.400	ELEVTR	.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
ALL DATASETS

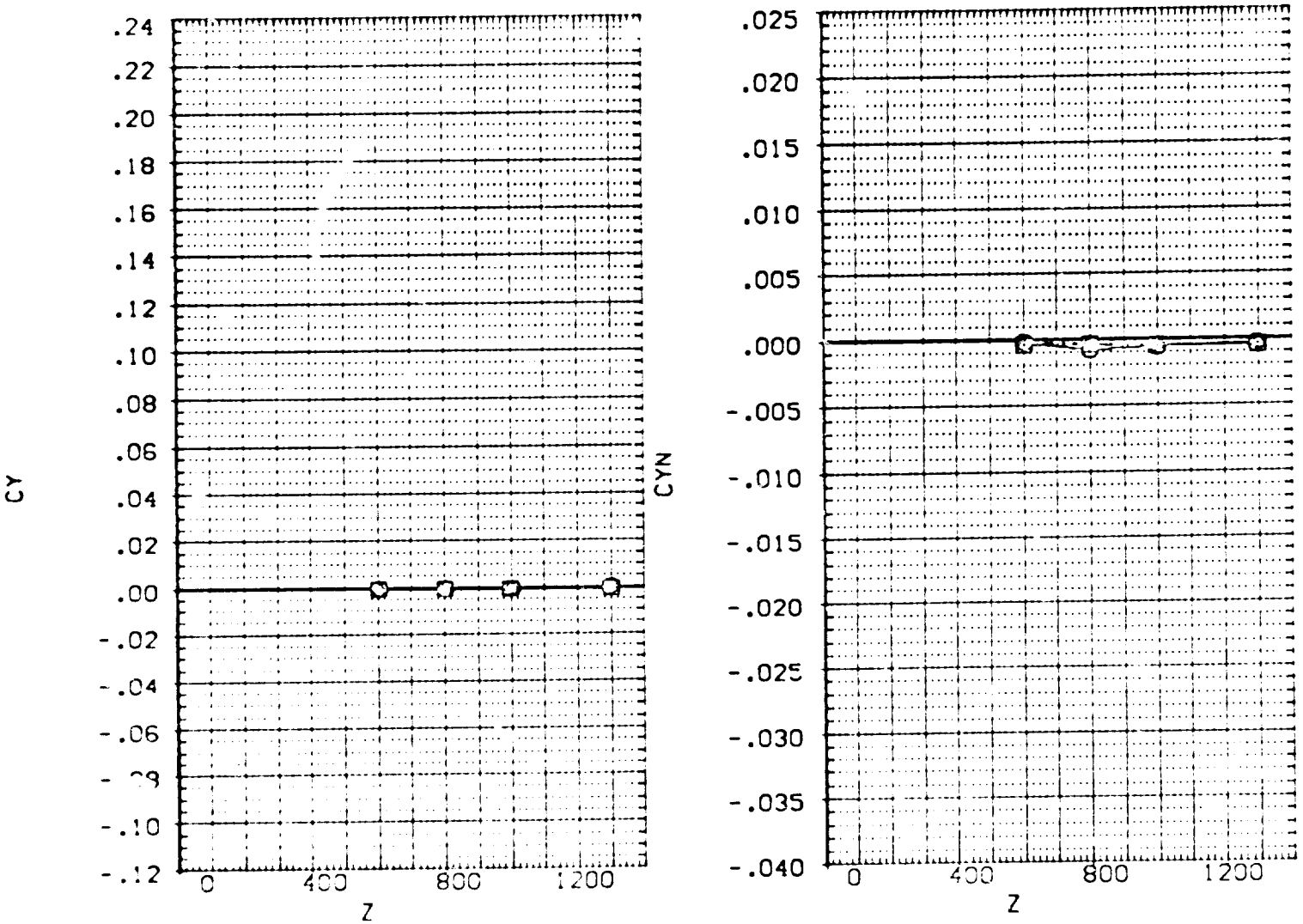


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

!A13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT27)

SYMBOL	X		PARAMETRIC VALUES		
○	-1.133	MACH	4.530	PTOTAL	110.000
◇	401.620	ALPHA	-5.000	BETA	.000
□	800.510	DALPHA	-20.000	DBETA	.000
△	1200.400	ELEVTR	.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

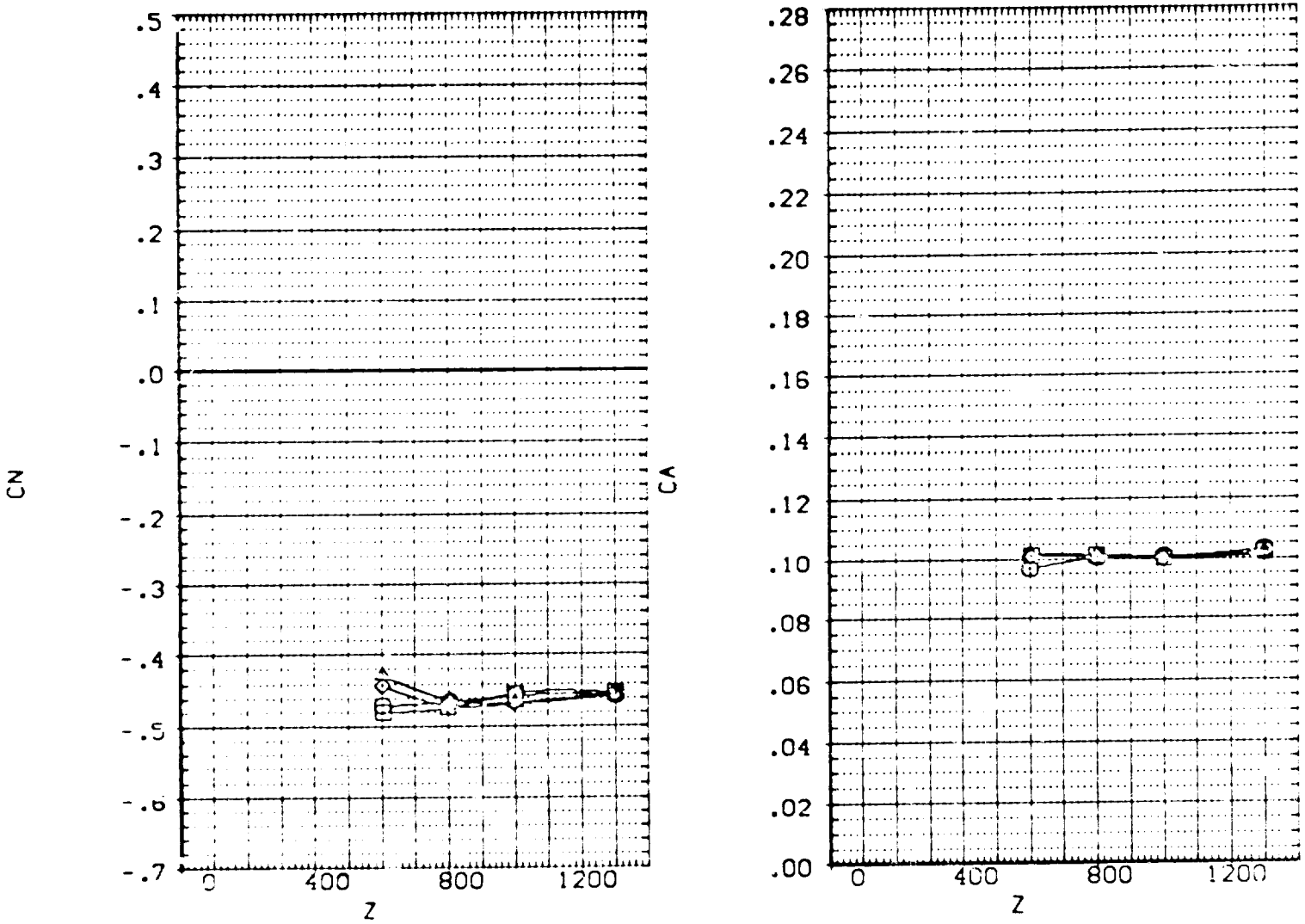


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

!A13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT28)

SYMBOL	X		PARAMETRIC VALUES		
○	-.582	MACH	4.530	PTOTAL	110.000
◇	400.610	ALPHA	-5.000	BETA	.000
△	800.600	DALPHA	-20.000	DBETA	.000
	1200.700	ELEVTR	.000	AILRON	.000
		Y	200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

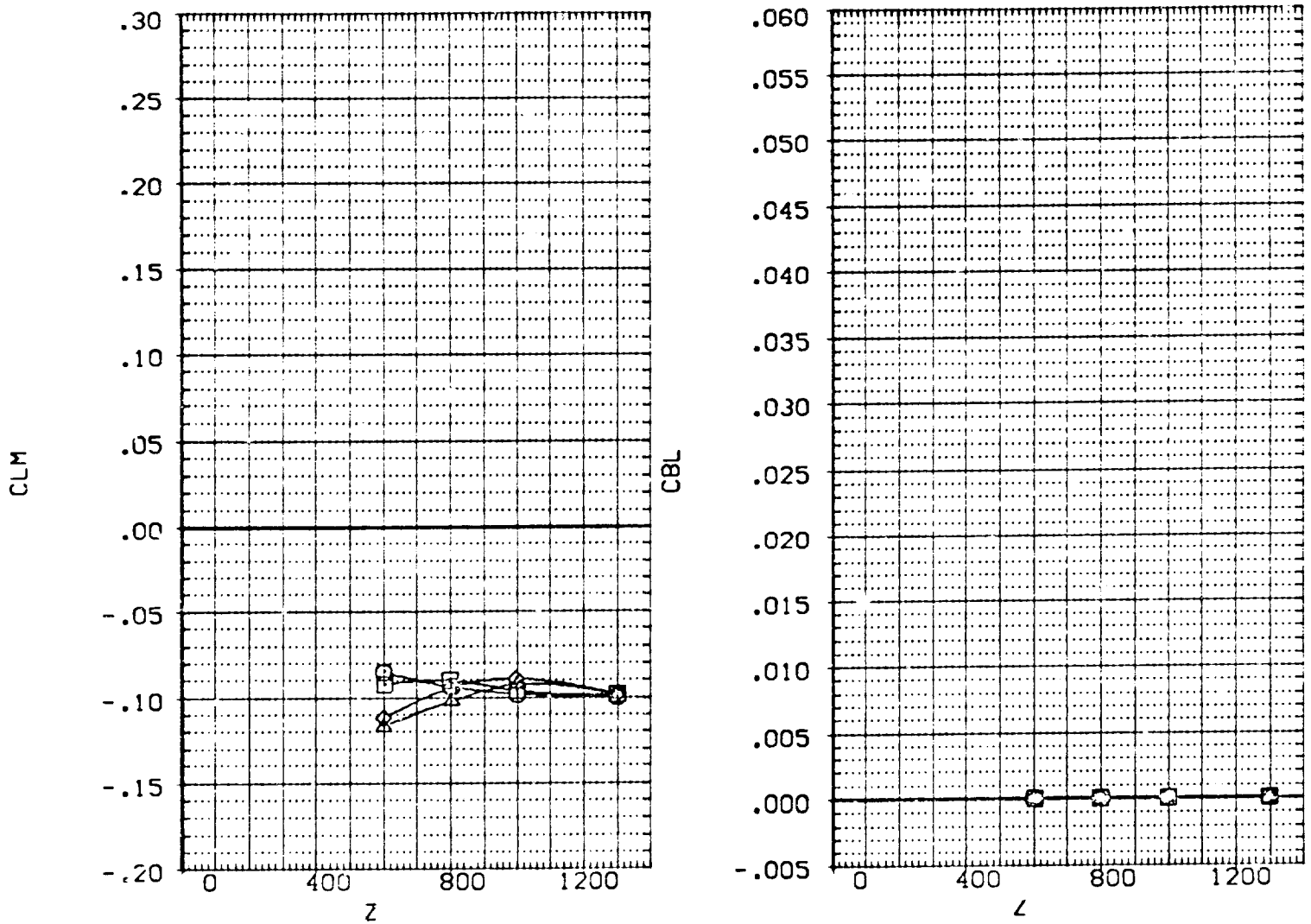


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

[A13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT28)

SYMBOL	X		PARAMETRIC VALUES		
○	-.582	MACH	4.530	PTOTAL	110.000
□	400.610	ALPHA	-5.000	BETA	.000
◇	800.600	DALPHA	-20.000	DBETA	.000
△	1200.700	ELEVTR	.000	AILRON	.000
		Y	200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

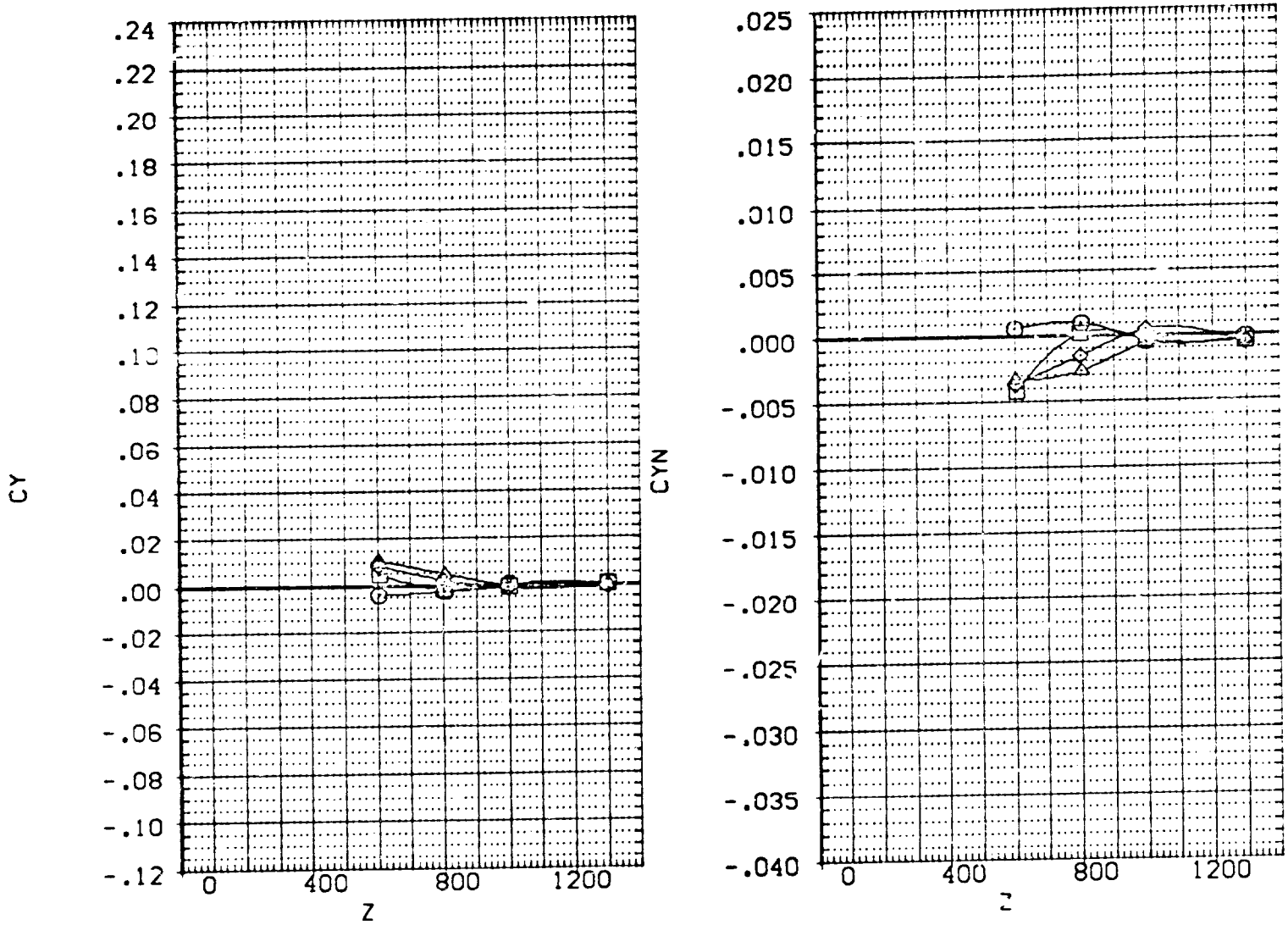


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT28)

SYMBOL	X		PARAMETRIC VALUES		
○	-.582	MACH	4.530	PTOTAL	110.000
□	400.610	ALPHA	-5.000	BETA	.000
◇	800.600	[illegible]PHA	-20.000	DBETA	.000
△	1200.700	ELEVTR	.000	AILRON	.000
		Y	200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

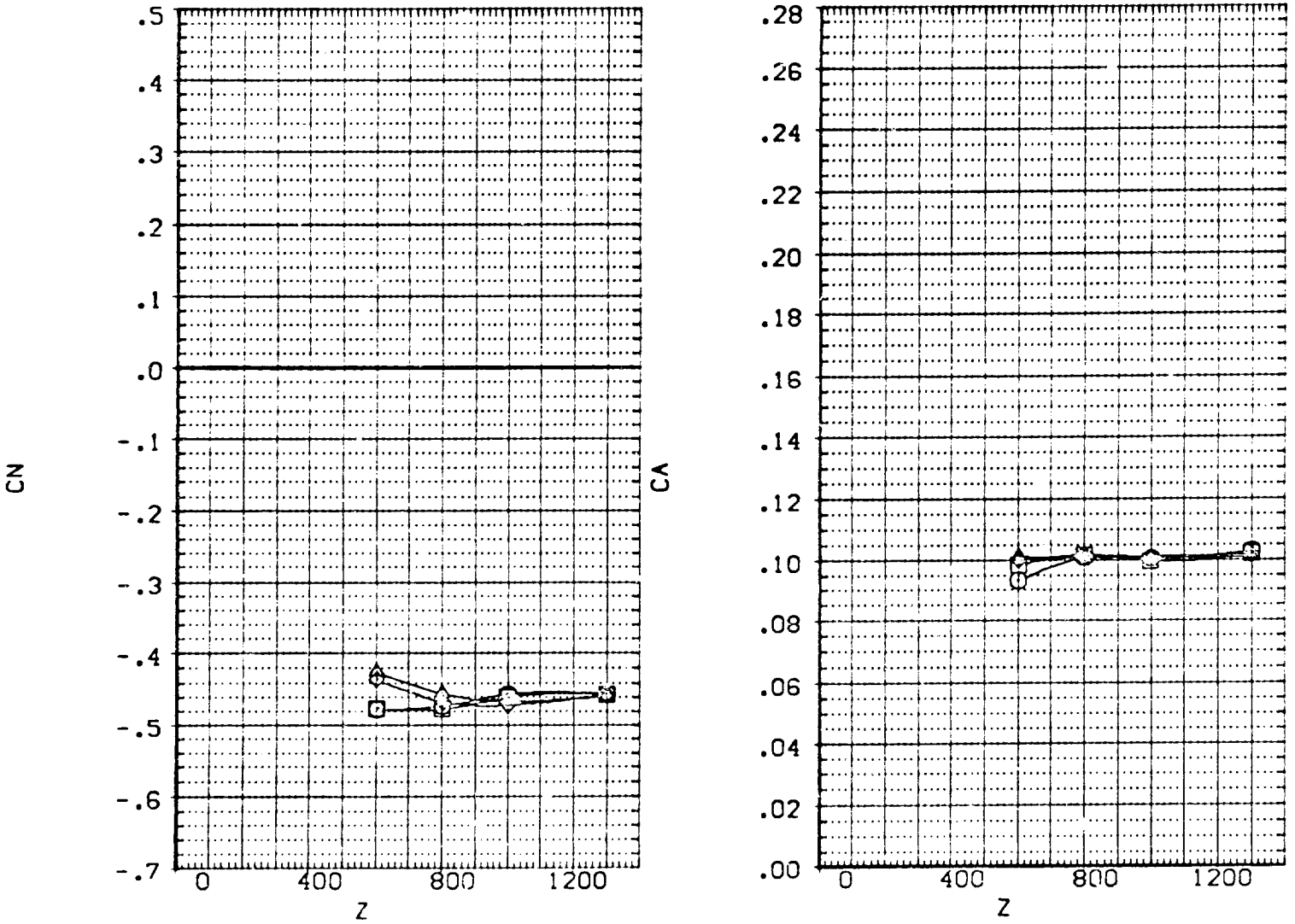


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT29)

SYMBOL	X		PARAMETRIC VALUES		
○	-1.217	MACH	4.530	PTOTAL	110.000
□	401.690	ALPHA	-5.000	BETA	.000
◇	800.780	DALPHA	-20.000	DBETA	5.000
△	1200.500	ELEVTR	.000	AILRON	.000
		Y	200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

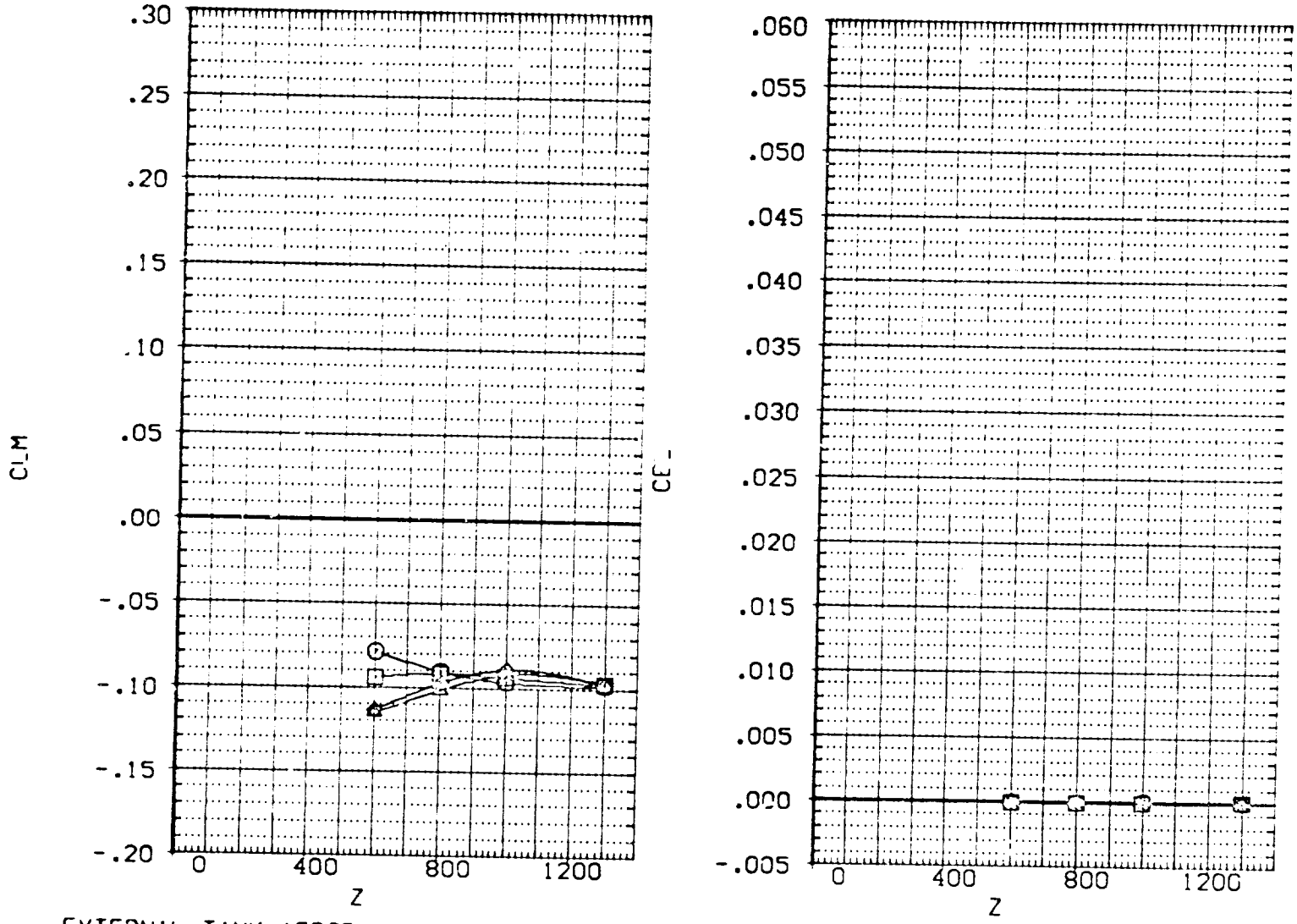
IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT29)

SYMBOL	X
○	-1.217
□	401.690
◇	800.780
△	1200.500

PARAMETRIC VALUES

MACH	4.530	PTOTAL	110.000
ALPHA	-5.000	BETA	.000
DALPHA	-20.000	DBETA	5.000
ELEVTR	.000	AILRON	.000
Y	200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

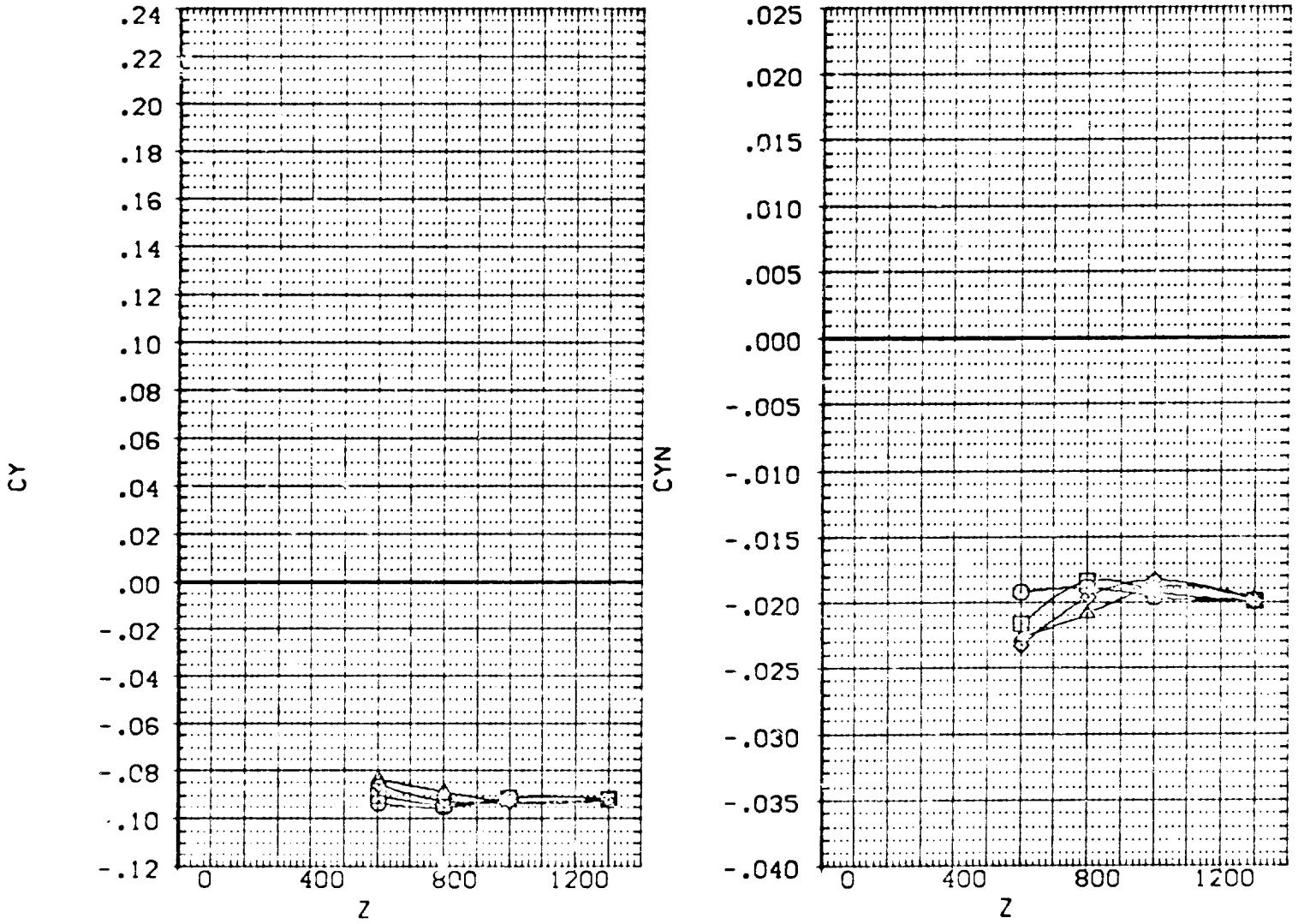


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

:A13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT29)

SYMBOL	X		PARAMETRIC VALUES		
○	-1.217	MACH	4.530	PITOTAL	110.000
◇	401.630	ALPHA	-5.000	BETA	.000
□	800.780	DALPHA	-20.000	DBETA	5.000
△	1200.500	ELEVTR	.000	AILRON	.000
		Y	200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

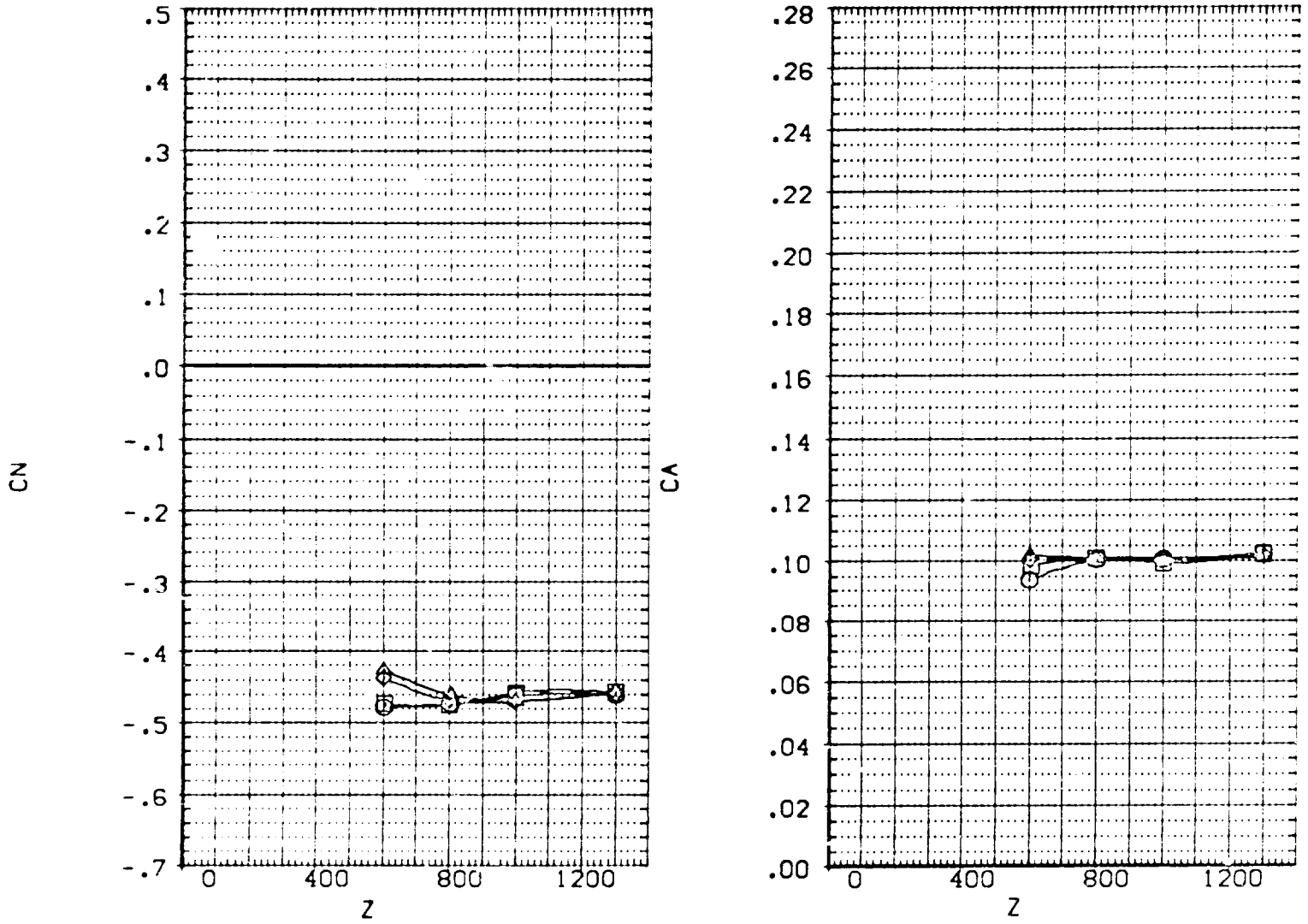


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT30)

SYMBOL	X		PARAMETRIC VALUES		
○	-.917	MACH	4.530	PTOTAL	110.000
□	400.550	ALPHA	-5.000	BETA	.000
◇	800.400	DALPHA	-20.000	DBETA	5.000
△	1200.700	ELEVTR	.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

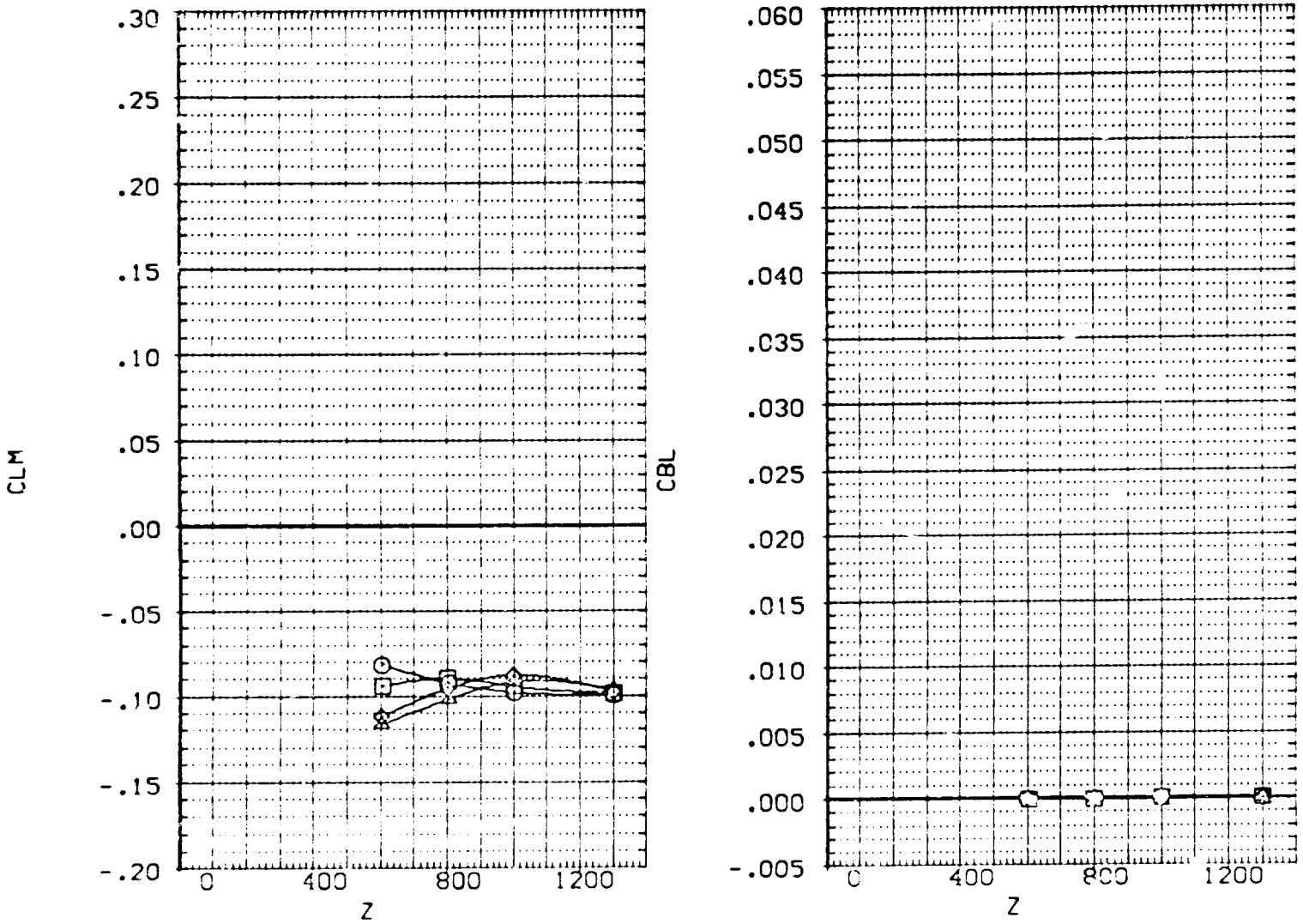


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

[A13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT30)

SYMBOL	X	PARAMETRIC VALUES			
○	-.917	MACH	4.530	PTOTAL	110.000
◇	400.550	ALPHA	-5.000	BETA	.000
□	800.400	DALPHA	-20.000	DBETA	5.000
△	1200.700	ELEVTR	.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

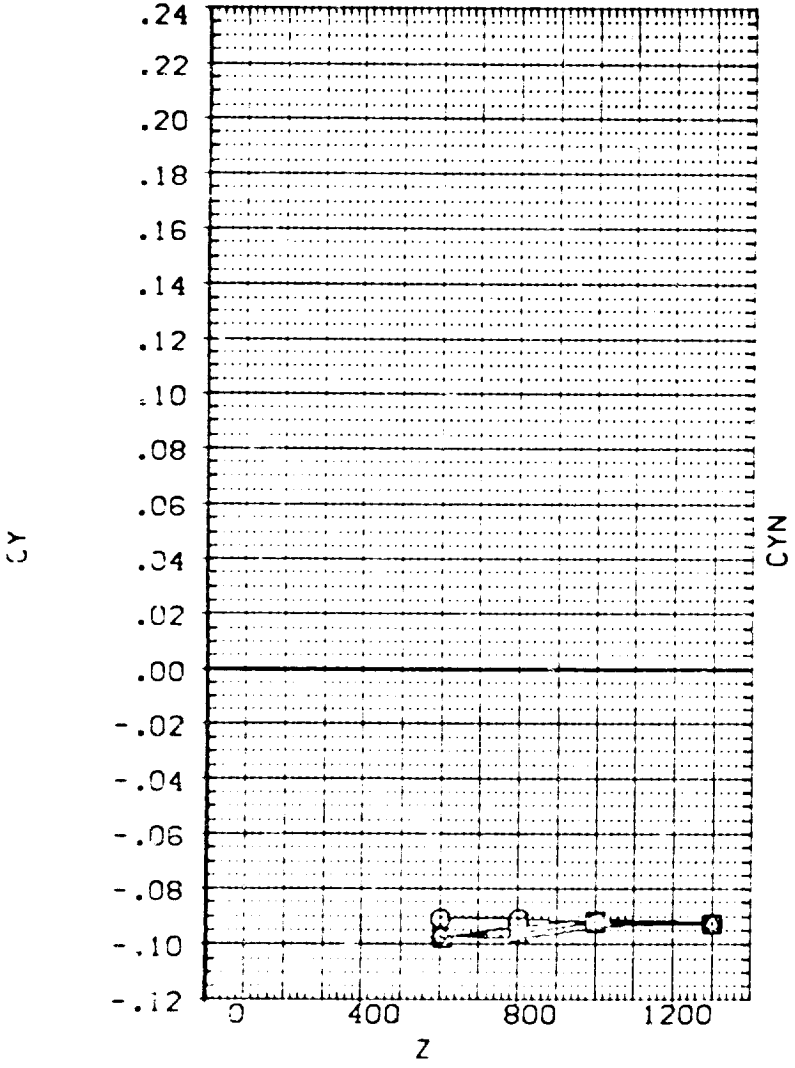


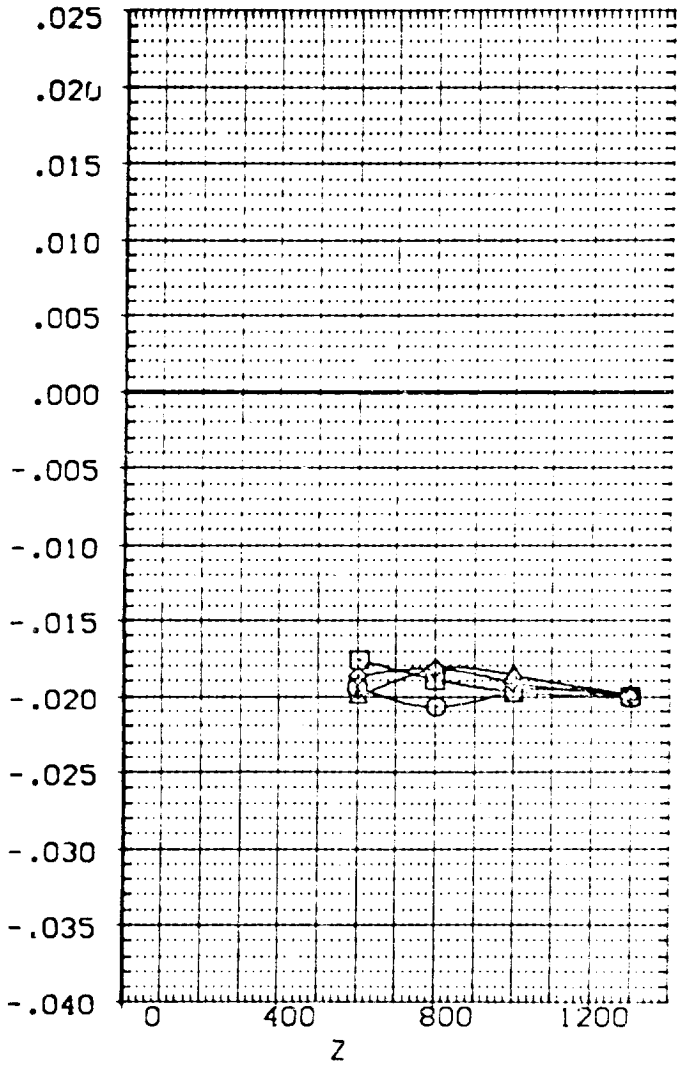
EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

IA13,EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT30)

SYMBOL	X		PARAMETRIC VALUES		
○	-.917	MACH	4.530	PTOTAL	110.000
□	400.550	ALPHA	-5.000	BETA	.000
◇	800.400	DALPHA	-20.000	DBETA	5.000
△	1200.700	ELEVTR	.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



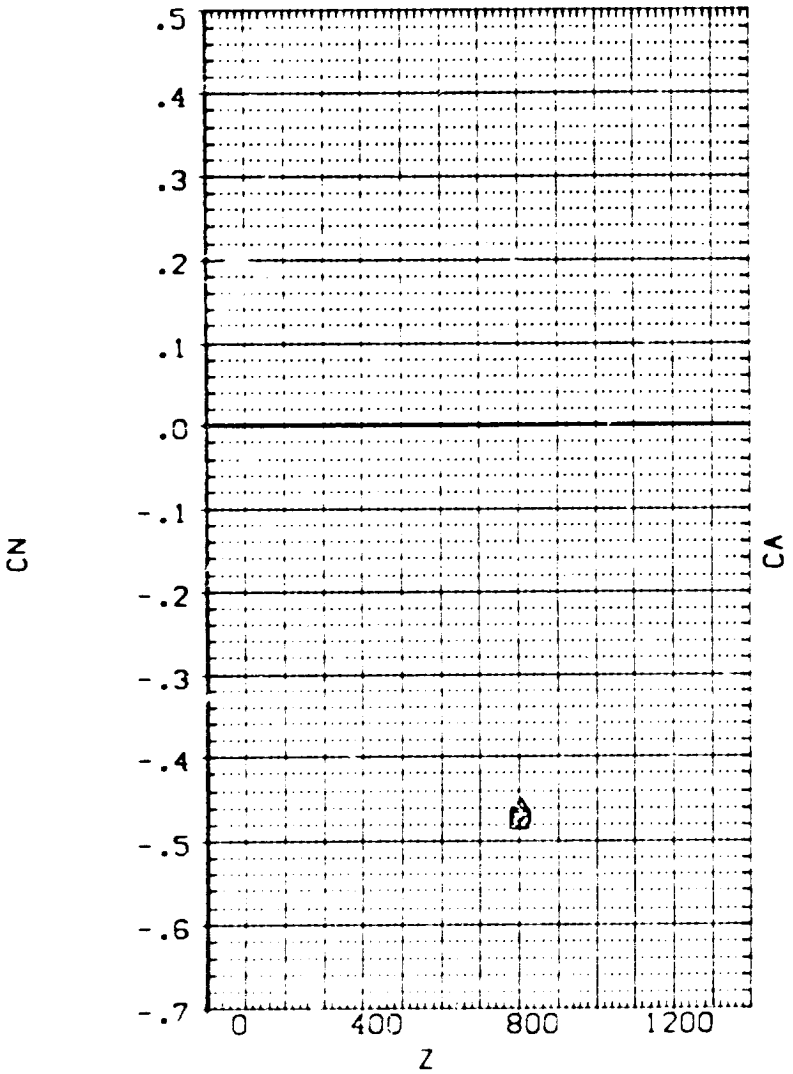


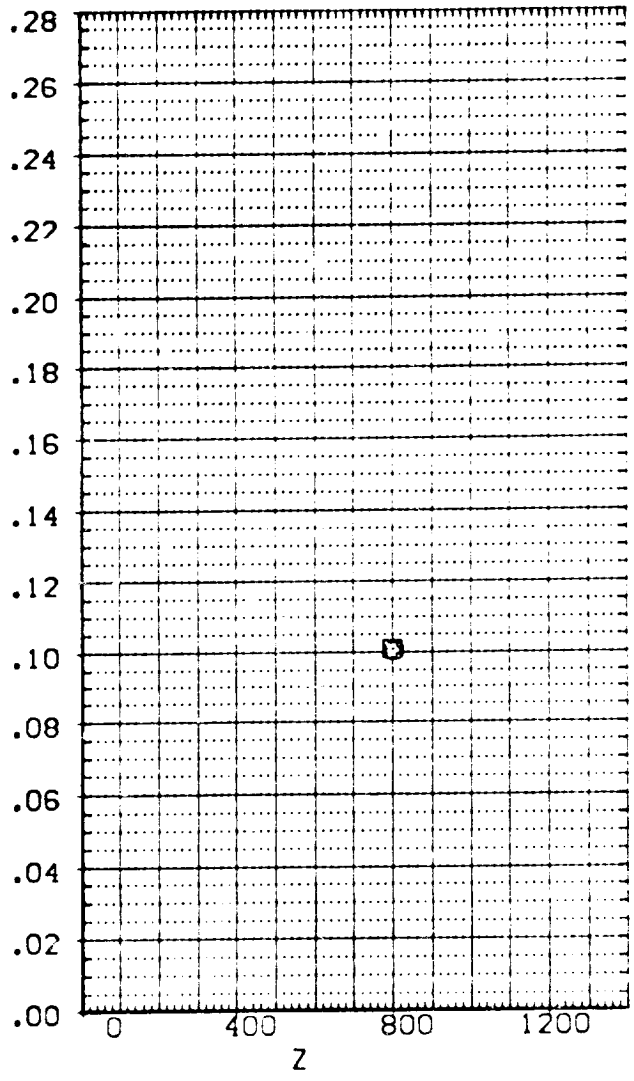
EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

!A13,EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT31)

SYMBOL	X		PARAMETRIC VALUES		
○	1.165	MACH	4.530	PTOTAL	110.000
□	400.570	ALPHA	-5.000	BETA	.000
◇	800.760	DALPHA	-30.000	DBETA	5.000
△	1201.100	ELEVTR	.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



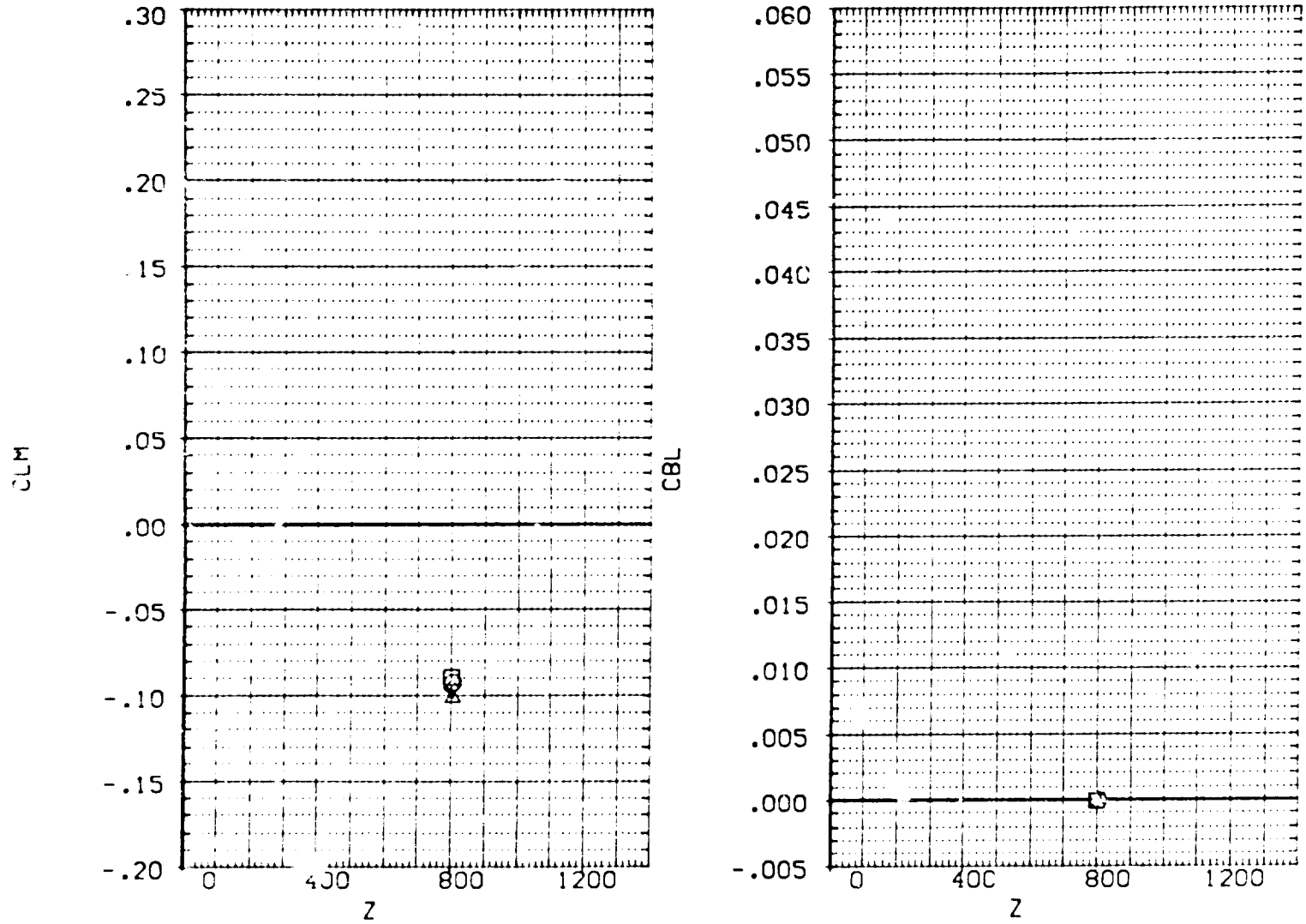


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT31)

SYMBOL	X		PARAMETRIC VALUES		
○	1.165	MACH	4.530	PTOTAL	110.000
□	400.570	ALPHA	-5.000	BETA	.000
◇	800.760	DALPHA	-30.000	DBETA	5.000
△	1201.100	ELEVTR	.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

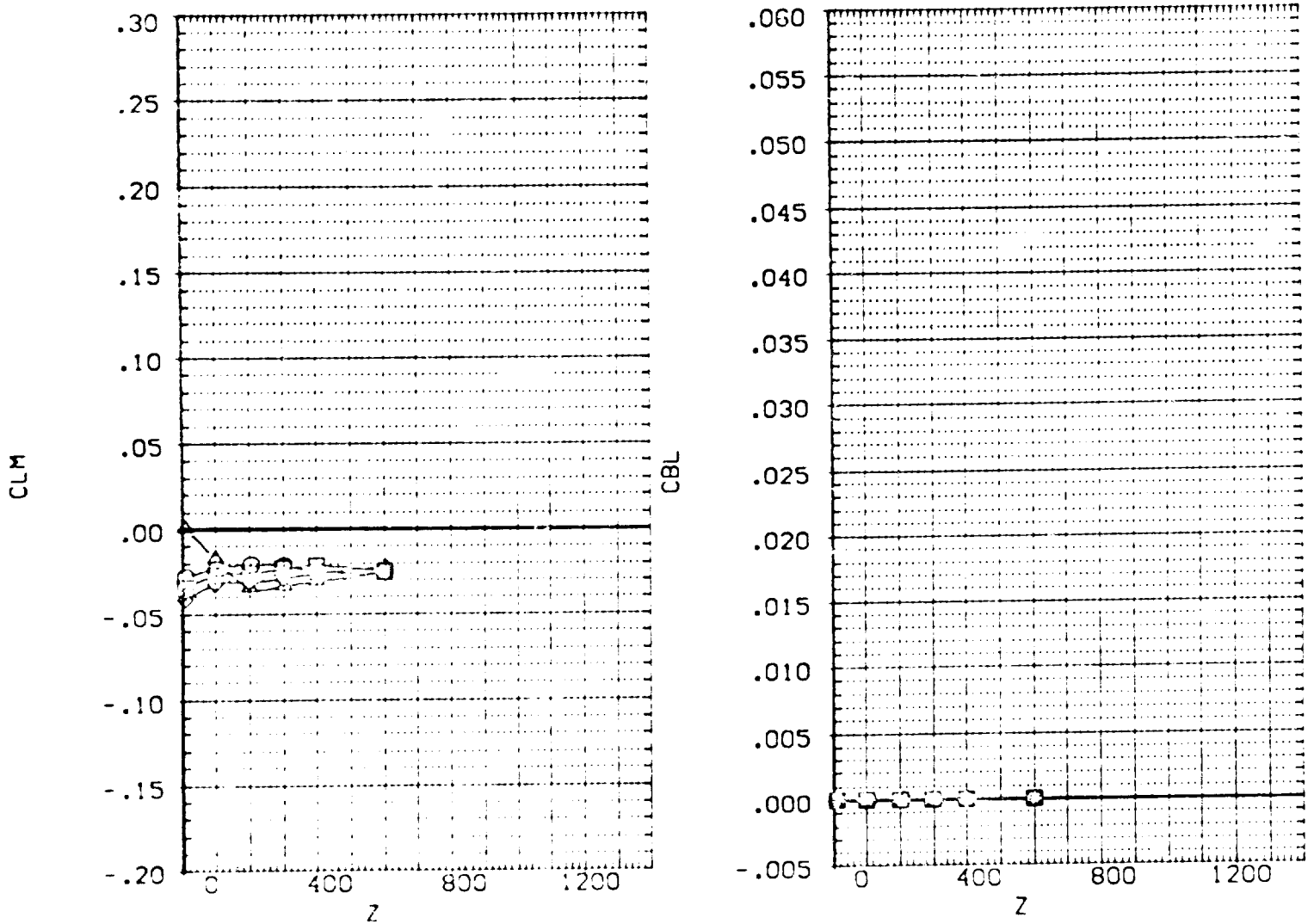


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

[A13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT32)

SYMBOL	x		PARAMETRIC VALUES		
	.290	MACH	4.520	PTOTAL	80.000
	400.490	ALPHA	-10.000	BETA	.000
◇	800.660	ALPHA	5.000	DELTA	.000
△	1200.700	ELEVTR	.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

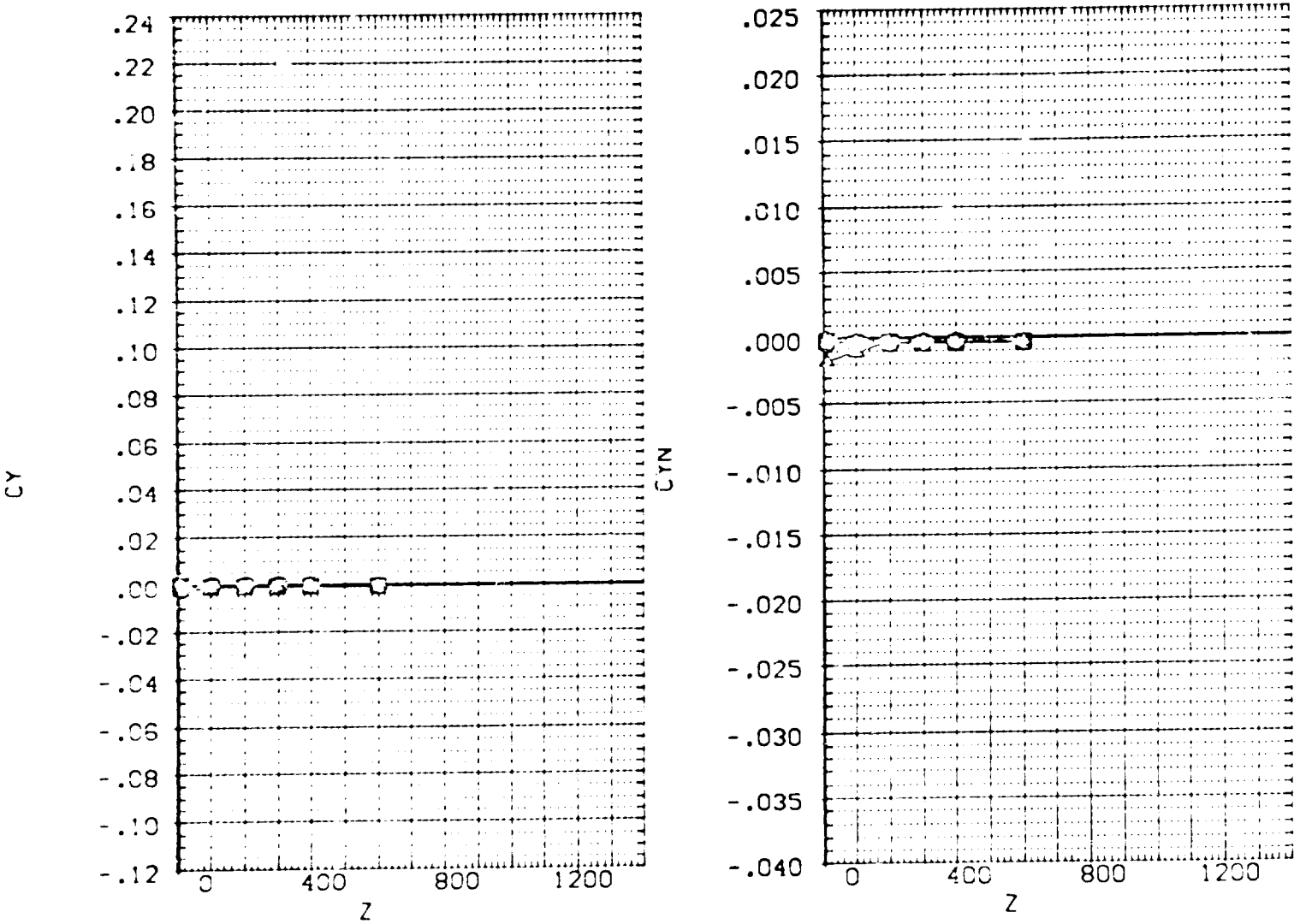


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

[A13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT32)

SYMBOL	x		PARAMETRIC VALUES		
○	.290	MACH	4.520	PTOTAL	80.000
◇	400.490	ALPHA	-10.000	BETA	.000
□	800.650	DALPHA	5.000	DBETA	.000
△	1200.700	ELEVTR	.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

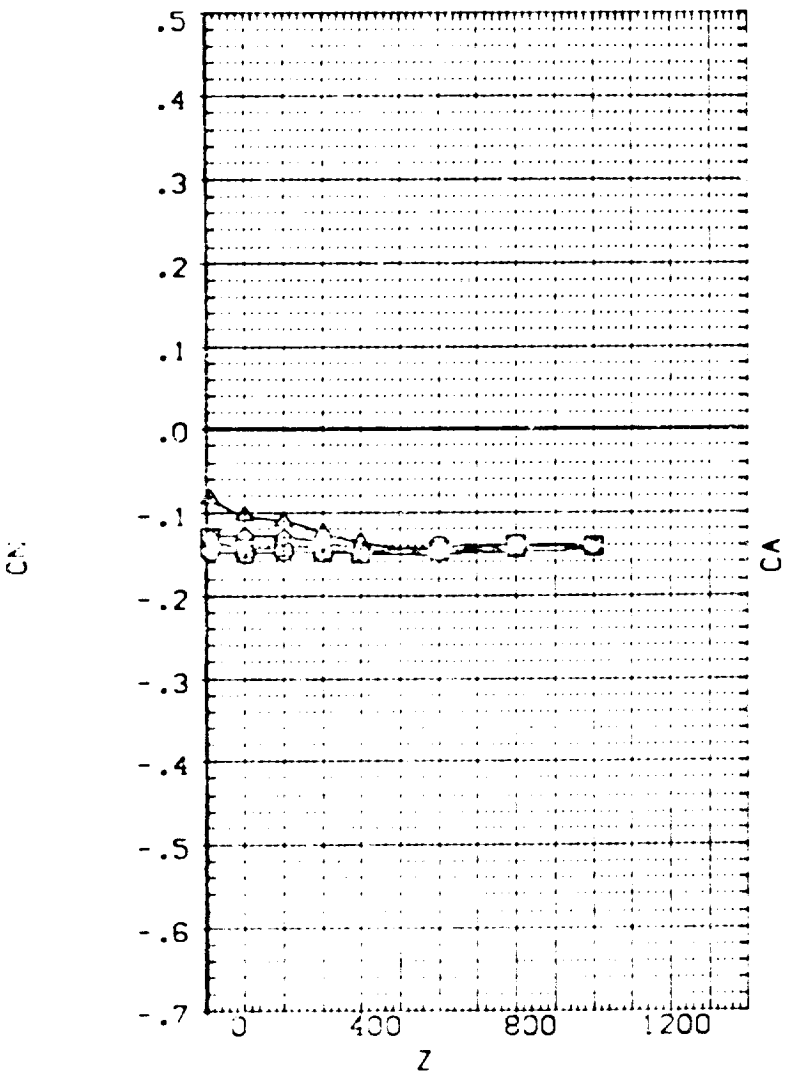


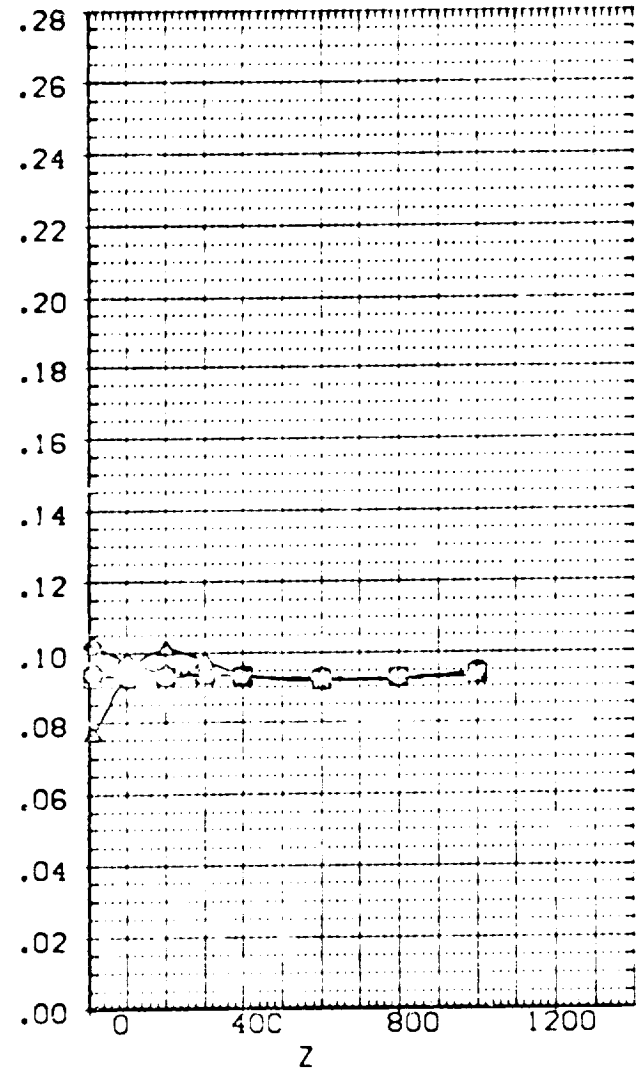
EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

[A]3.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT33)

SYMBOL	X		PARAMETRIC VALUES		
	.248	MACH	4.520	PTOTAL	80.000
◇	400.440	ALPHA	-10.000	BETA	.000
	800.560	DALPHA	.000	DBETA	.000
△	1201.000	ELEVTR	.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



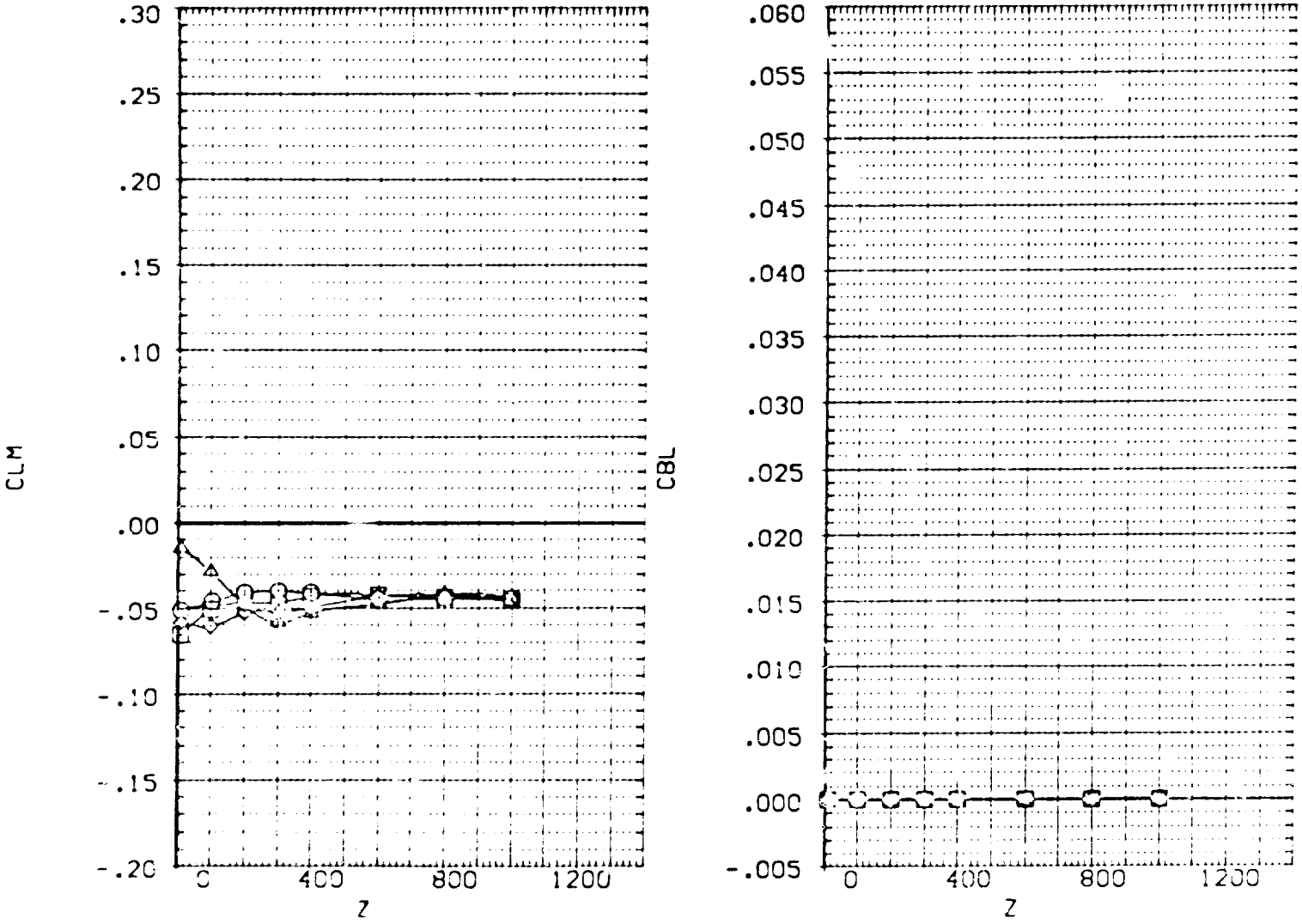


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT33)

SYMBOL			PARAMETRIC VALUES		
○	.248	MACH	4.520	PTOTAL	80.000
◇	400.440	ALPHA	-10.000	BETA	.000
△	800.560	DALPH	.000	DBETA	.000
	1201.000	ELEVTR	.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

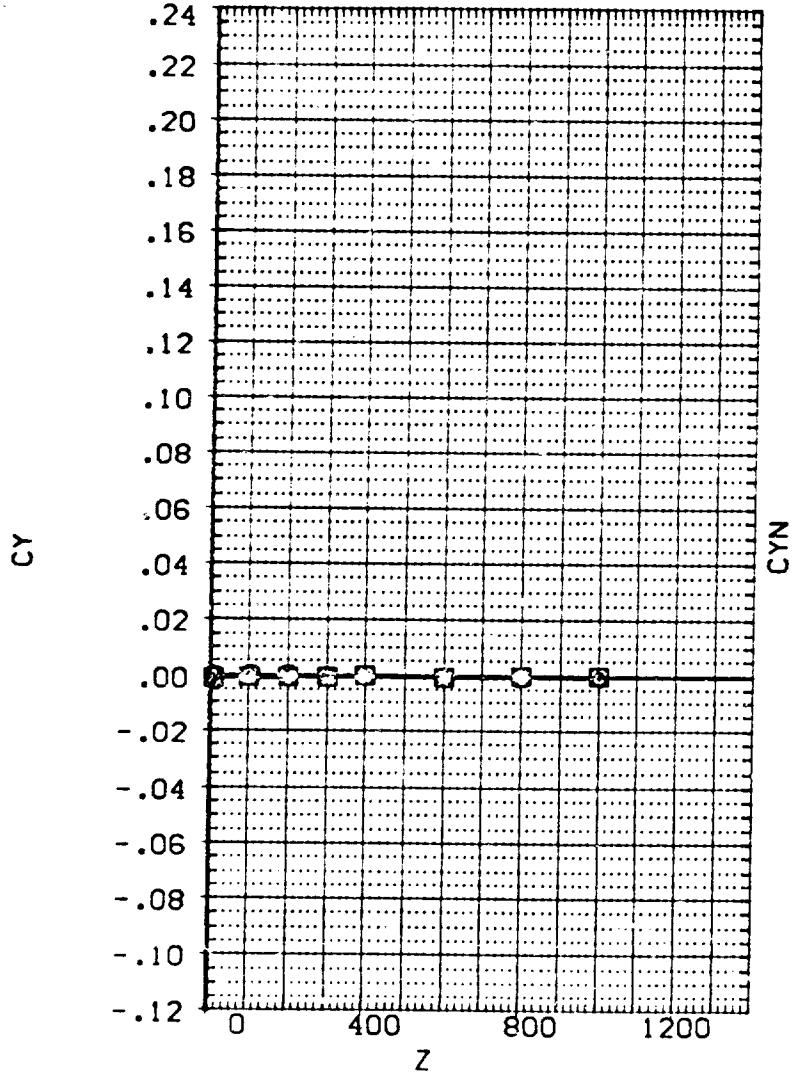


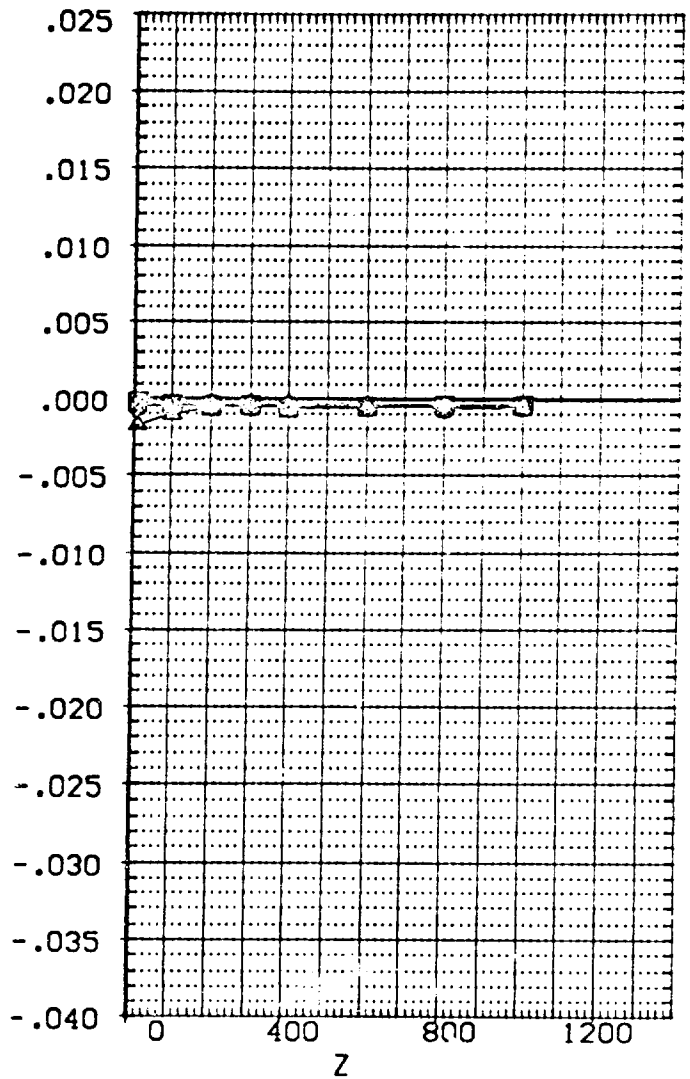
EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT33)

SYMBOL	X		PARAMETRIC VALUES		
○	.248	MACH	4.520	PTOTAL	80.000
□	400.440	ALPHA	-10.000	BETA	.000
◇	800.560	DALPHA	.000	DBETA	.000
△	1201.000	ELEVTR	.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



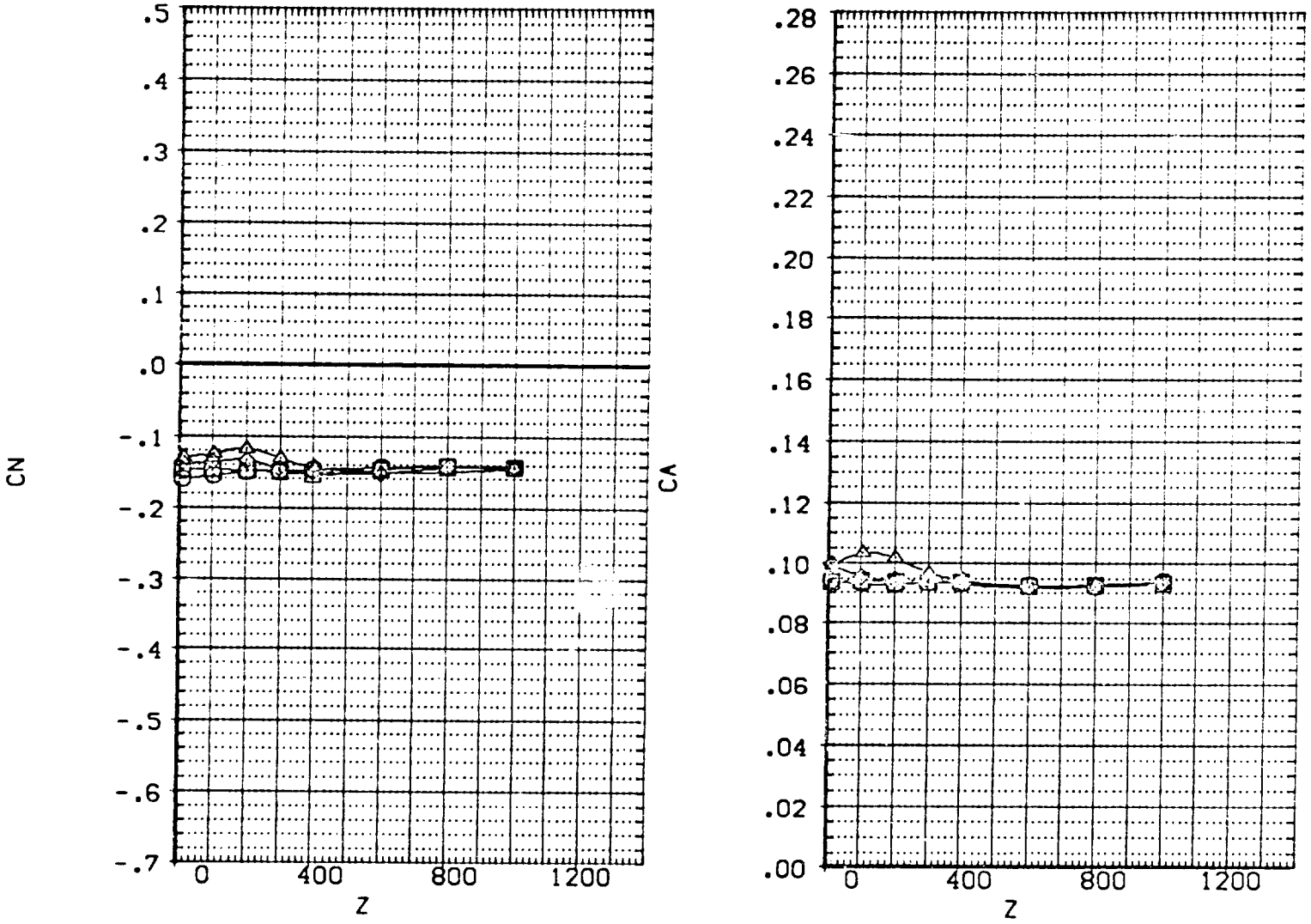


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT34)

SYMBOL			PARAMETRIC VALUES		
○	.210	MACH	4.520	PTOTAL	80.000
□	40..460	ALPHA	-10.000	BETA	.000
◇	80J.610	DALPHA	.000	DBETA	.000
△	1200.900	ELEVTR	.000	AILRON	.000
		Y	200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

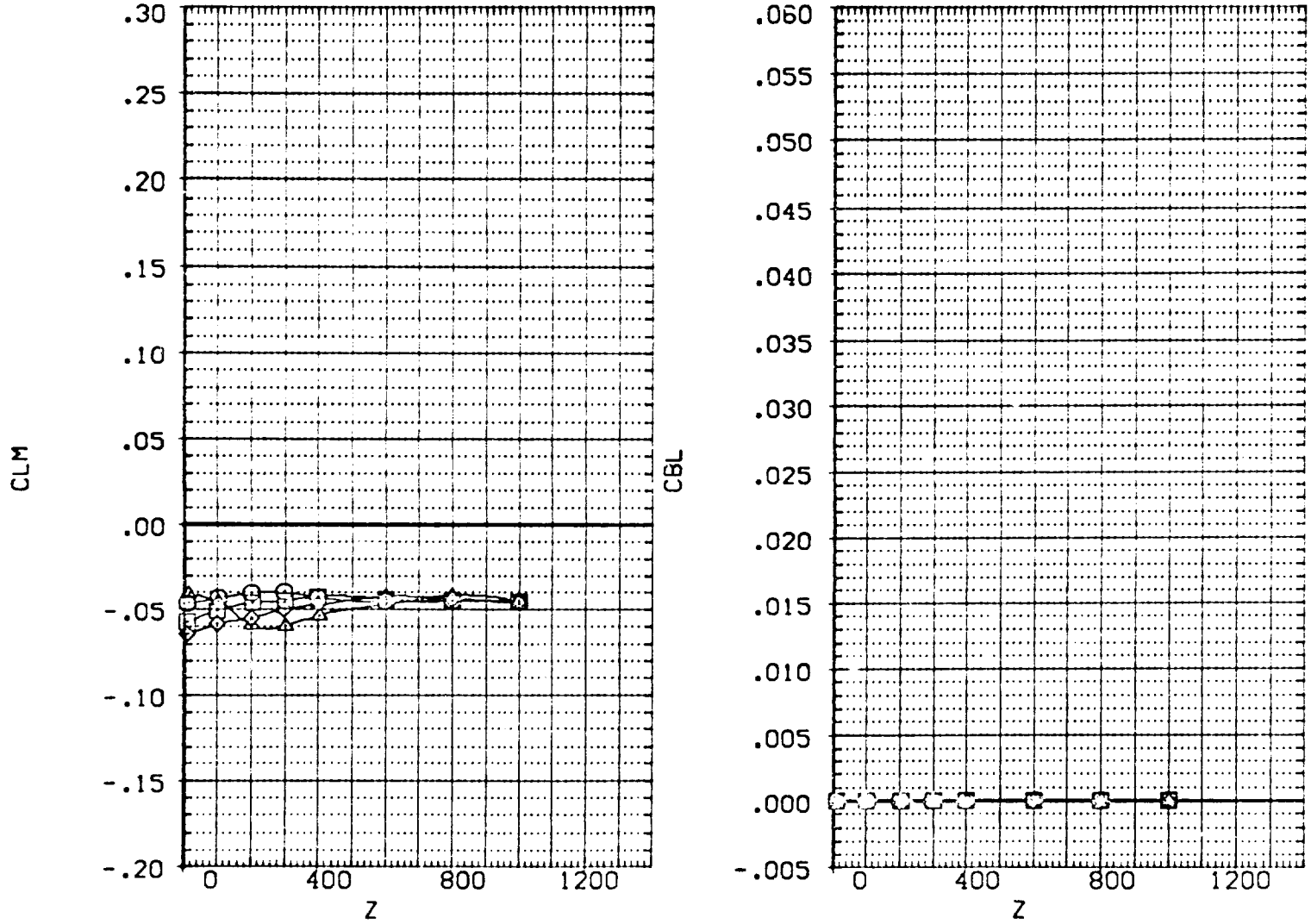


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT34)

SYMBOL	X		PARAMETRIC VALUES		
○	.210	MACH	4.520	PTOTAL	80.000
□	400.460	ALPHA	-10.000	BETA	.000
◇	800.610	DALPHA	.000	DBETA	.000
△	1200.900	ELEVTR	.000	AILRON	.000
		Y	200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

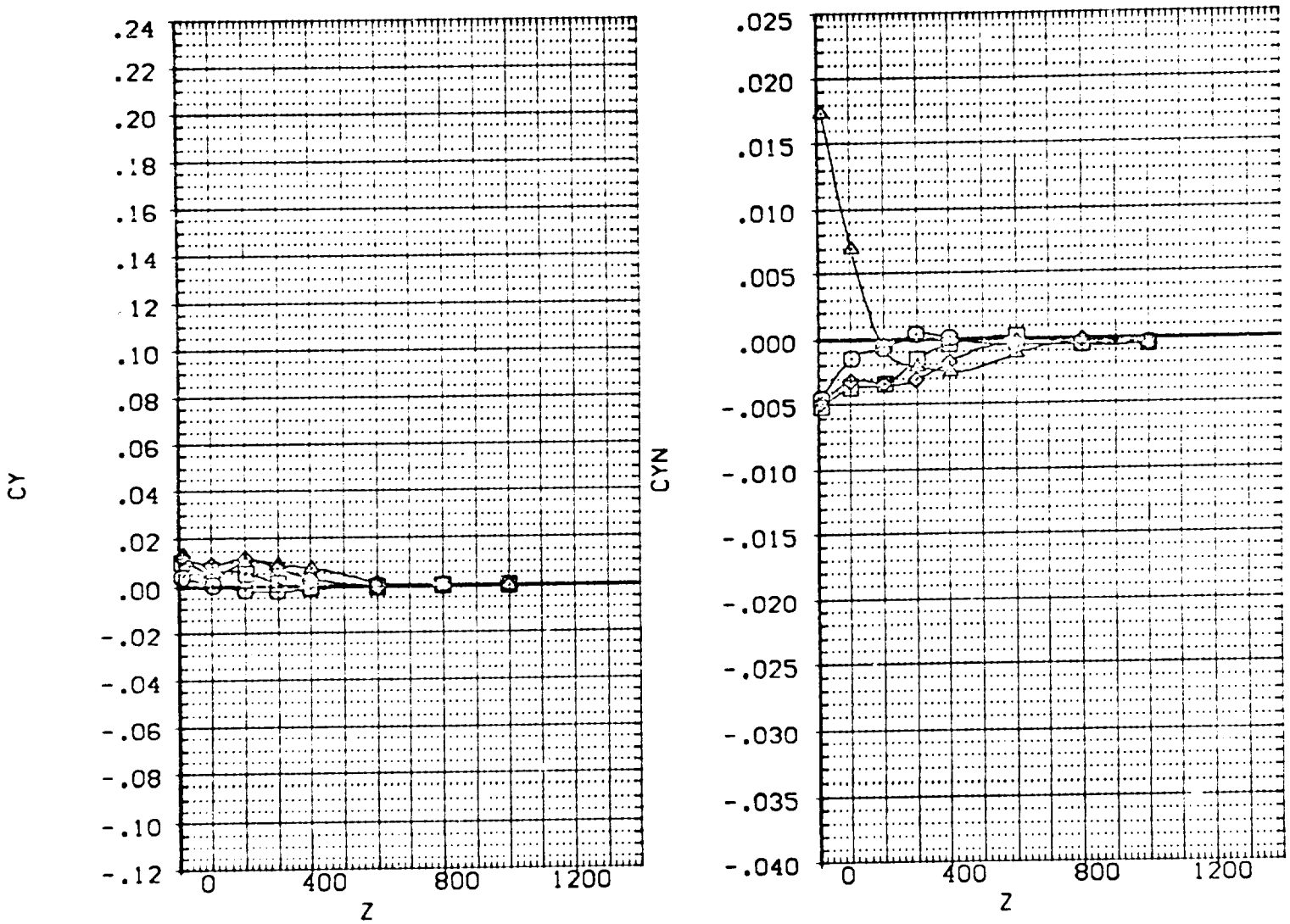


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

IA13,EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT34)

SYMBOL	X		PARAMETRIC VALUES		
○	.210	MACH	4.520	PTOTAL	80.000
□	400.460	ALPHA	-10.000	BETA	.000
◇	800.610	DALPHA	.000	DBETA	.000
△	1200.900	ELEVTR	.000	AILRON	.000
		Y	200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

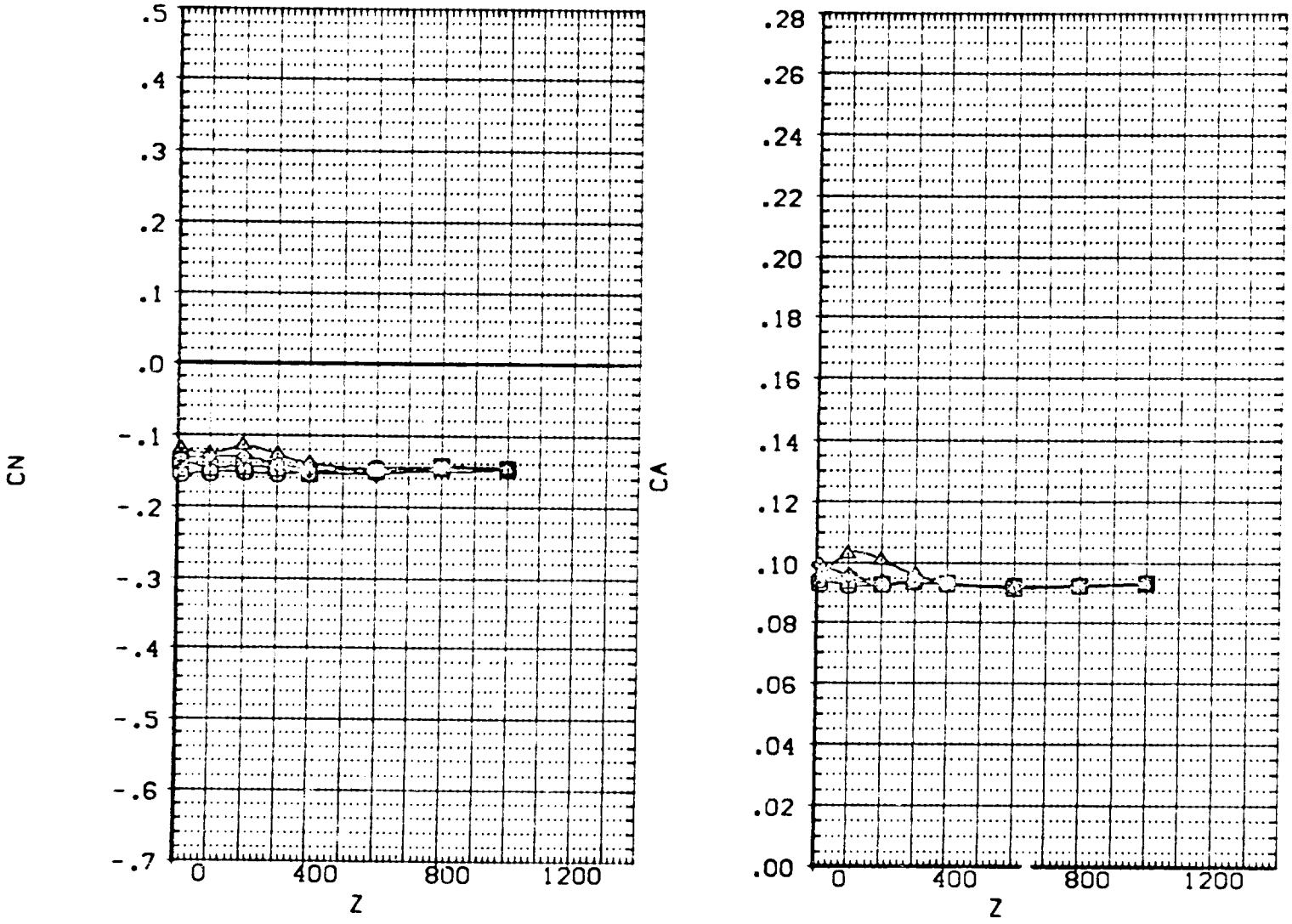


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT35)

SYMBOL	X		PARAMETRIC VALUES		
○	.154	MACH	4.520	PTOTAL	80.000
◇□	400.360	ALPHA	-10.000	BETA	.000
◇	800.550	DALPHA	.000	DBETA	5.000
△	1200.900	ELEVTR	.000	AILRON	.000
		Y	200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

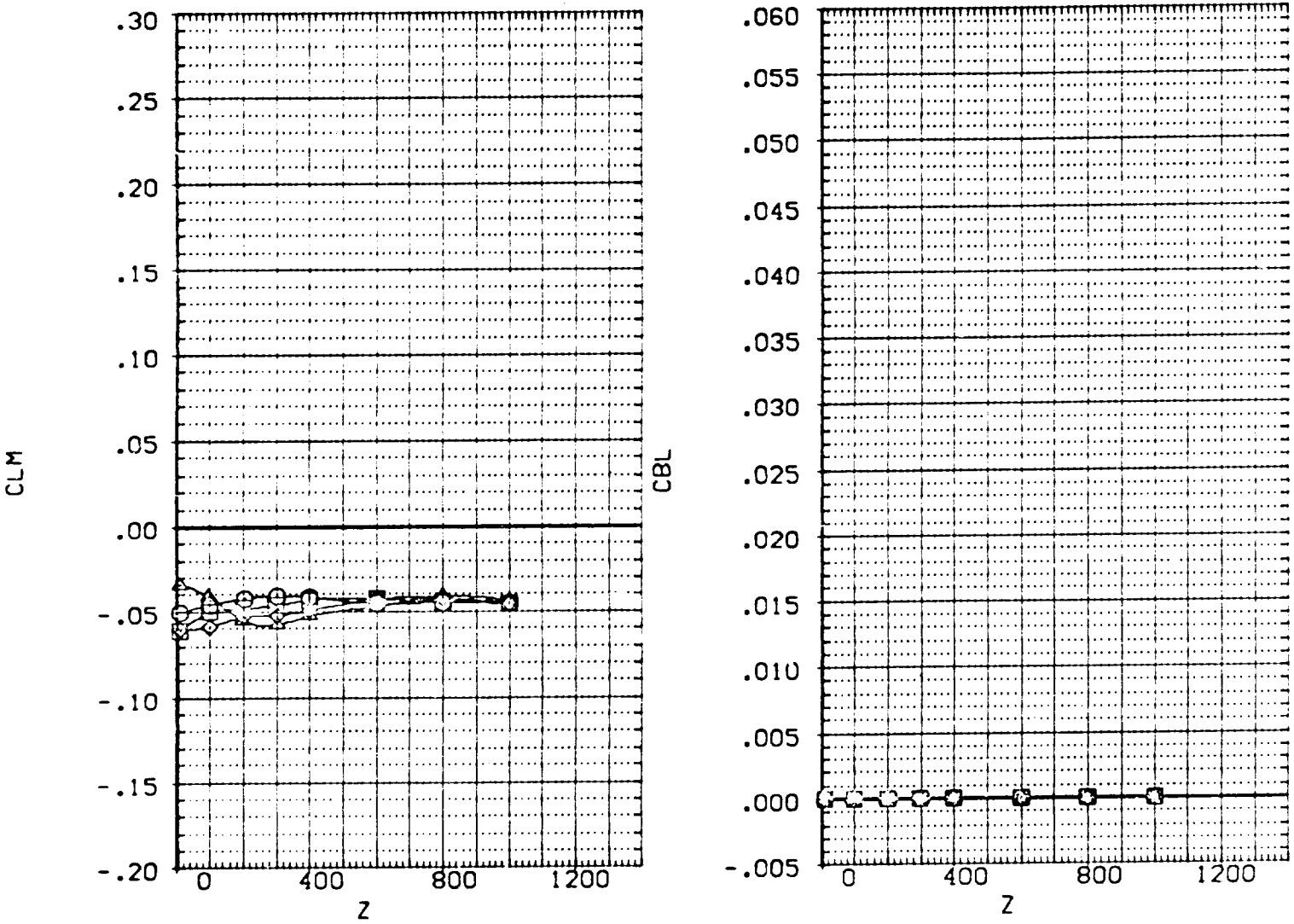


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT35)

SYMBOL	X		PARAMETRIC VALUES		
○	.154	MACH	4.520	PTOTAL	80.000
□	400.360	ALPHA	-10.000	BETA	.000
◇	800.550	DALPHA	.000	DBETA	5.000
△	1200.900	ELEVTR	.000	AILRON	.000
		Y	200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

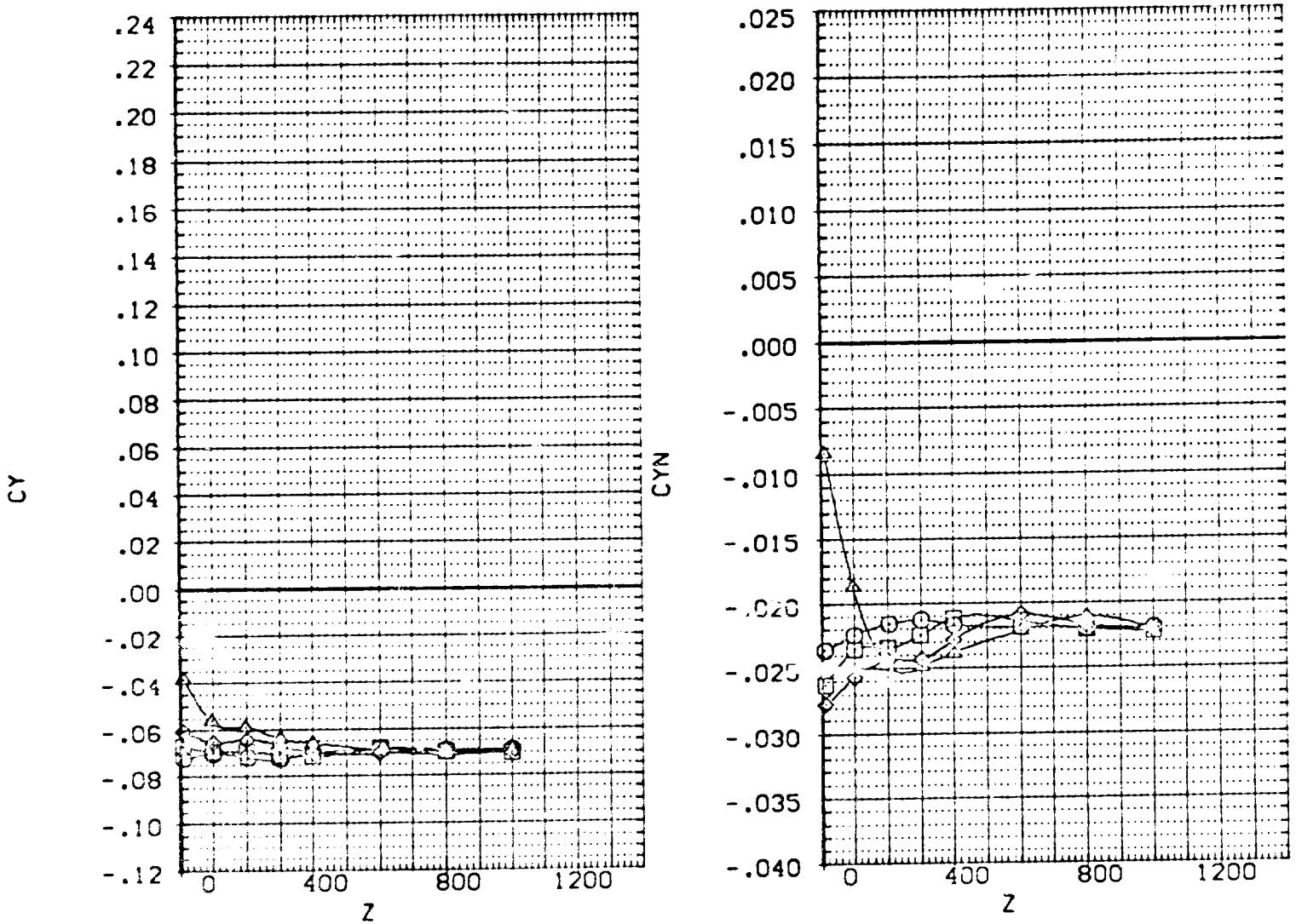


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

!A13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT35)

SYMBOL	X		PARAMETRIC VALUES		
○□	.154	MACH	4.520	PTOTAL	80.000
◇	400.360	ALPHA	-10.000	BETA	.000
	800.550	DALPHA	.000	DBETA	5.000
△	1200.900	ELEVTR	.000	AILRON	.000
		Y	200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

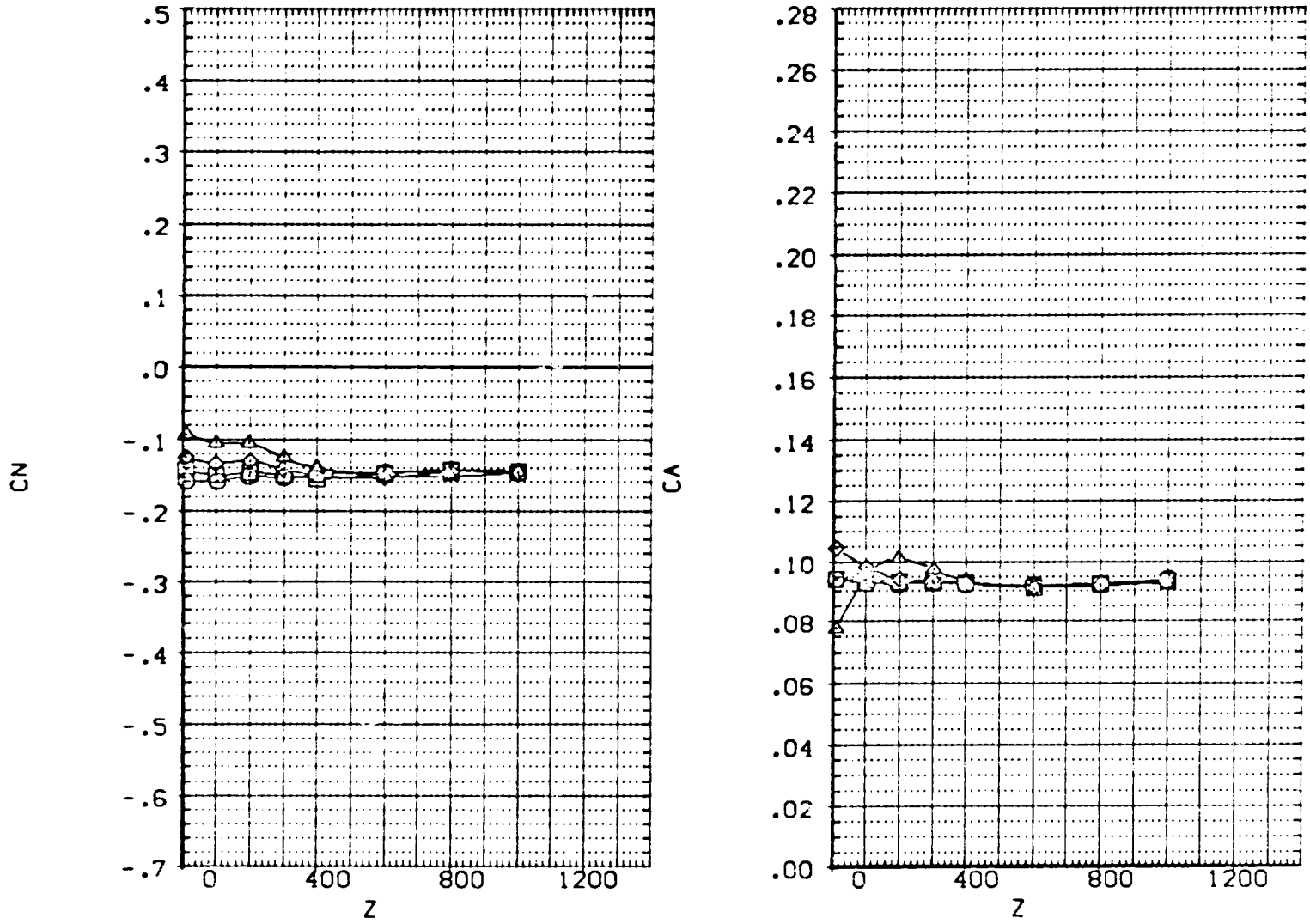


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT36)

SYMBOL	X		PARAMETRIC VALUES		
○	.237	MACH	4.520	PTOTAL	80.000
◇	400.460	ALPHA	-10.000	BETA	.000
△	800.530	DALPHA	.000	DBETA	5.000
	1200.700	ELEVTR	.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

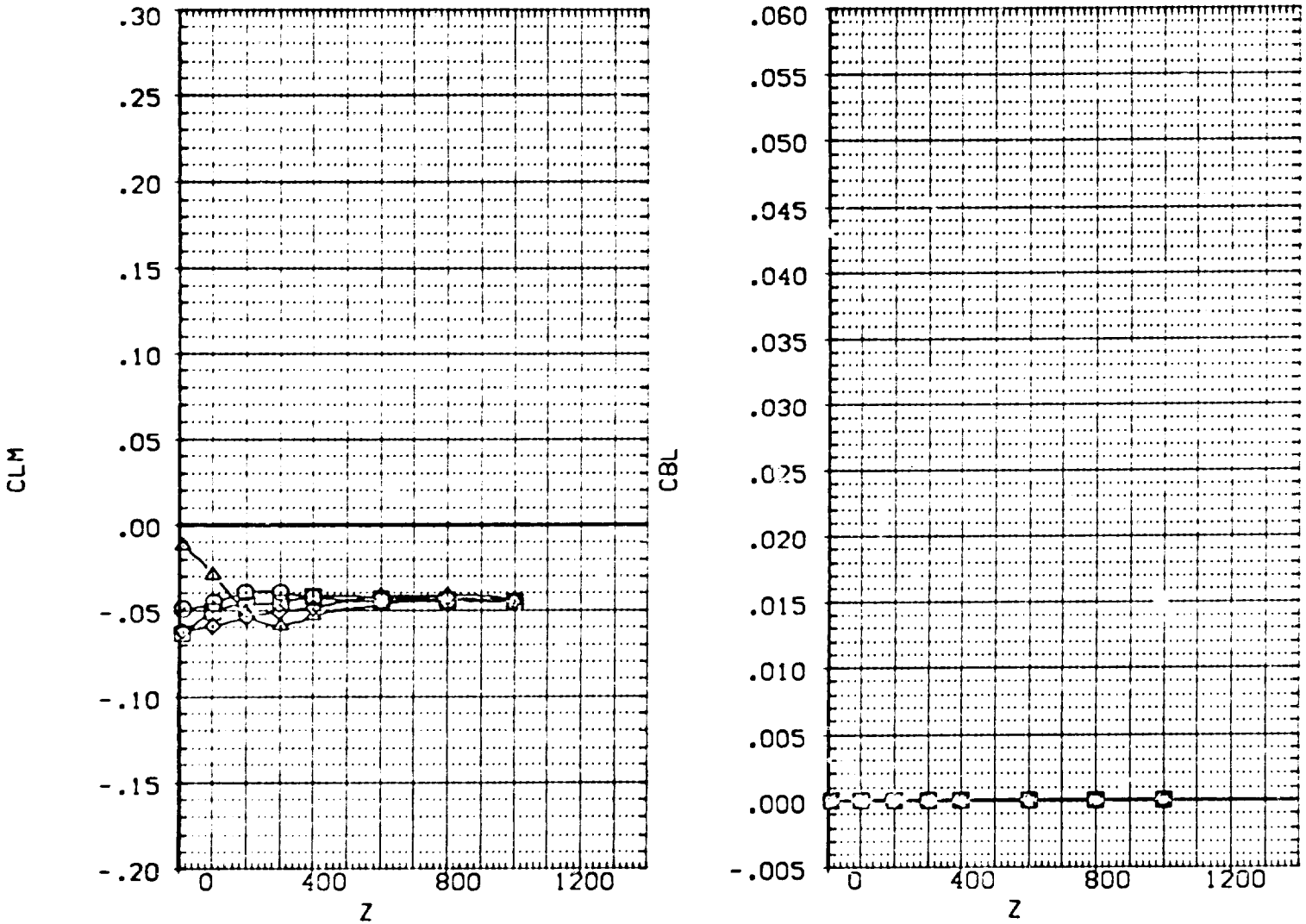


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT36)

SYMBOL	X		PARAMETRIC VALUES		
○	.237	MACH	4.520	PTOTAL	80.000
□	400.460	ALPHA	-10.000	BETA	.000
◇	800.530	DALPHA	.000	DBETA	5.000
△	1200.700	ELEVTR	.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

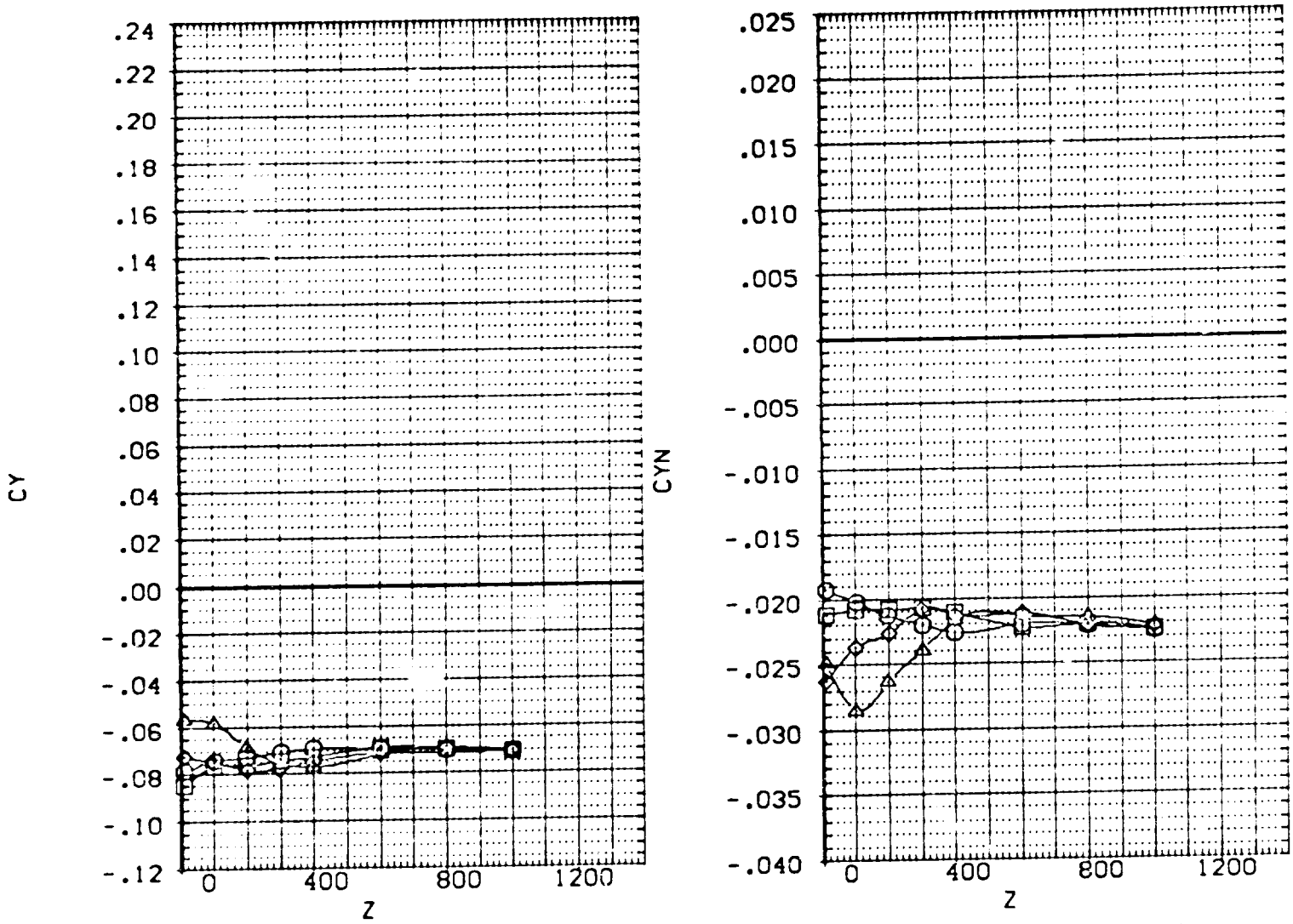


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT36)

SYMBOL	X		PARAMETRIC VALUES		
○	.237	MACH	4.520	PTOTAL	80.000
◇□	400.460	ALPHA	-10.000	BETA	.000
	800.530	DALPHA	.000	DBETA	5.000
△	1200.700	ELEVTR	.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

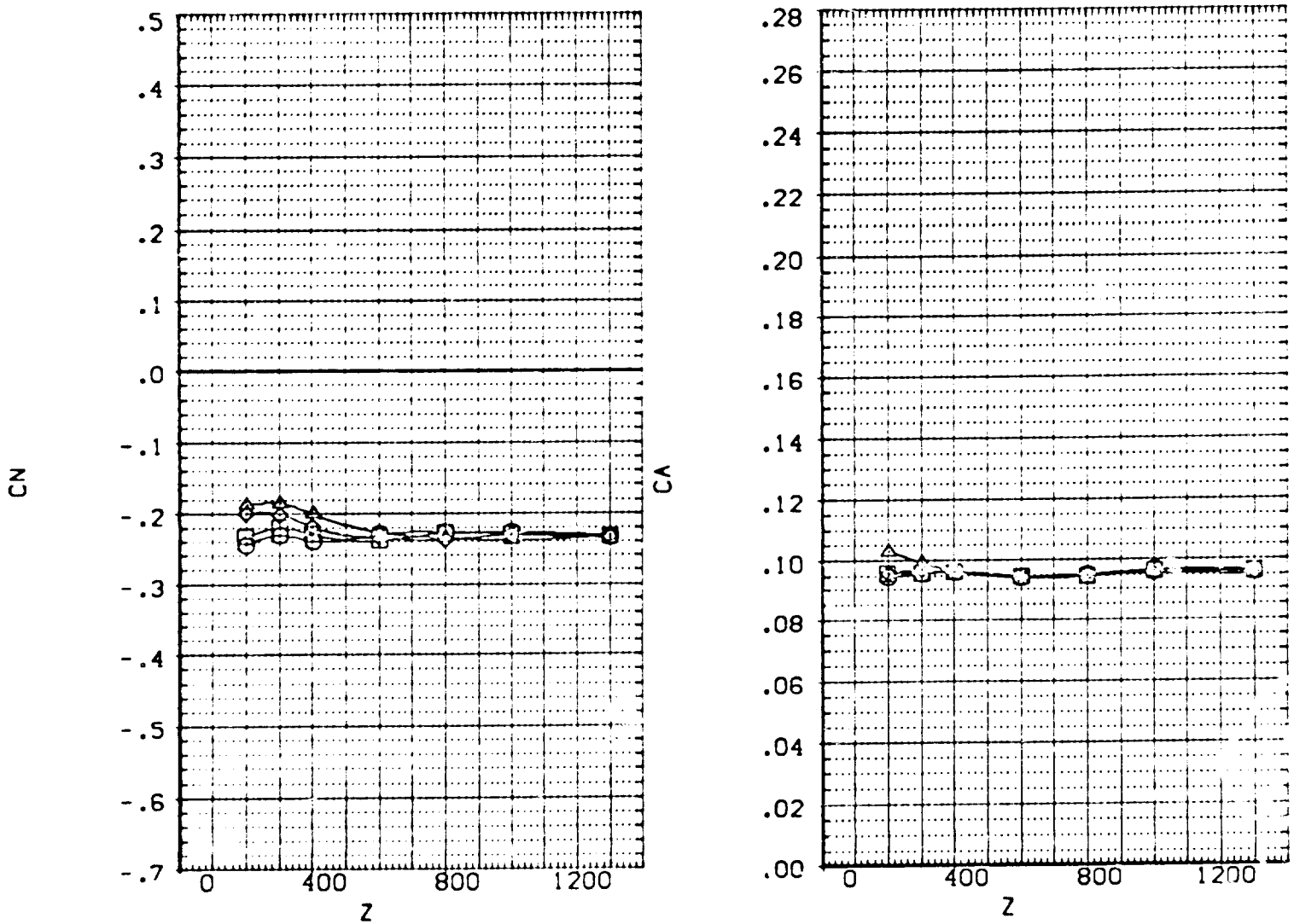


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

:A13.EXTERNAL TANK(10)SEPARATING FROM ORB. 09 (RTJT37)

SYMBOL	X	PARAMETRIC VALUES			
○	.201	MACH	4.520	PTOTAL	80.000
□	400.450	ALPHA	-10.000	BETA	.000
◇	800.550	DALPHA	-5.000	DBETA	.000
△	1201.000	ELEVTR	.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

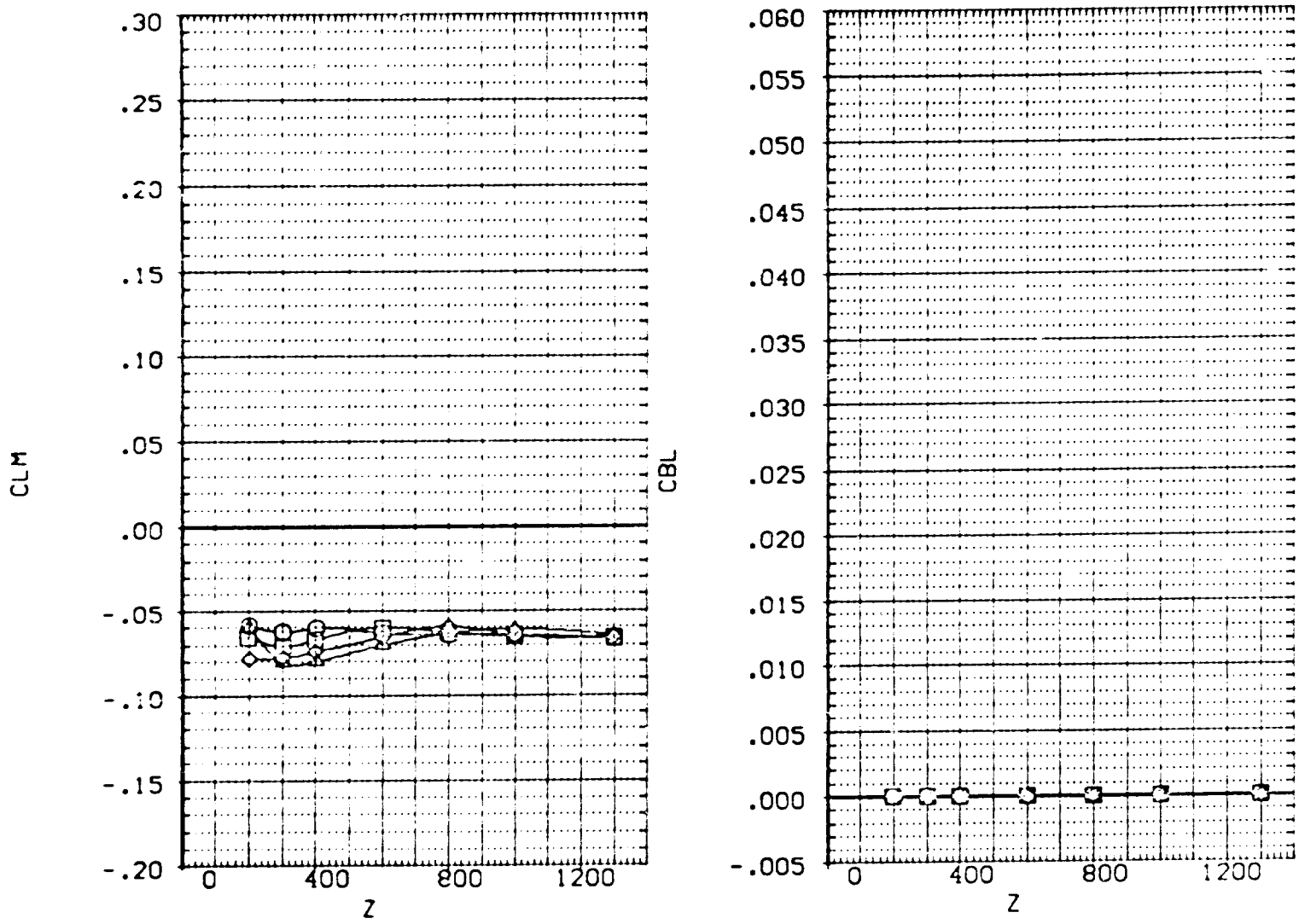


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

!A!3.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT37)

SYMBOL	X	PARAMETRIC VALUES			
○	.201	MACH	4.520	PTOTAL	80.000
◇	400.450	ALPHA	-10.000	BETA	.000
□	800.550	DALPHA	-5.000	DBETA	.000
△	1201.000	ELEVTR	.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

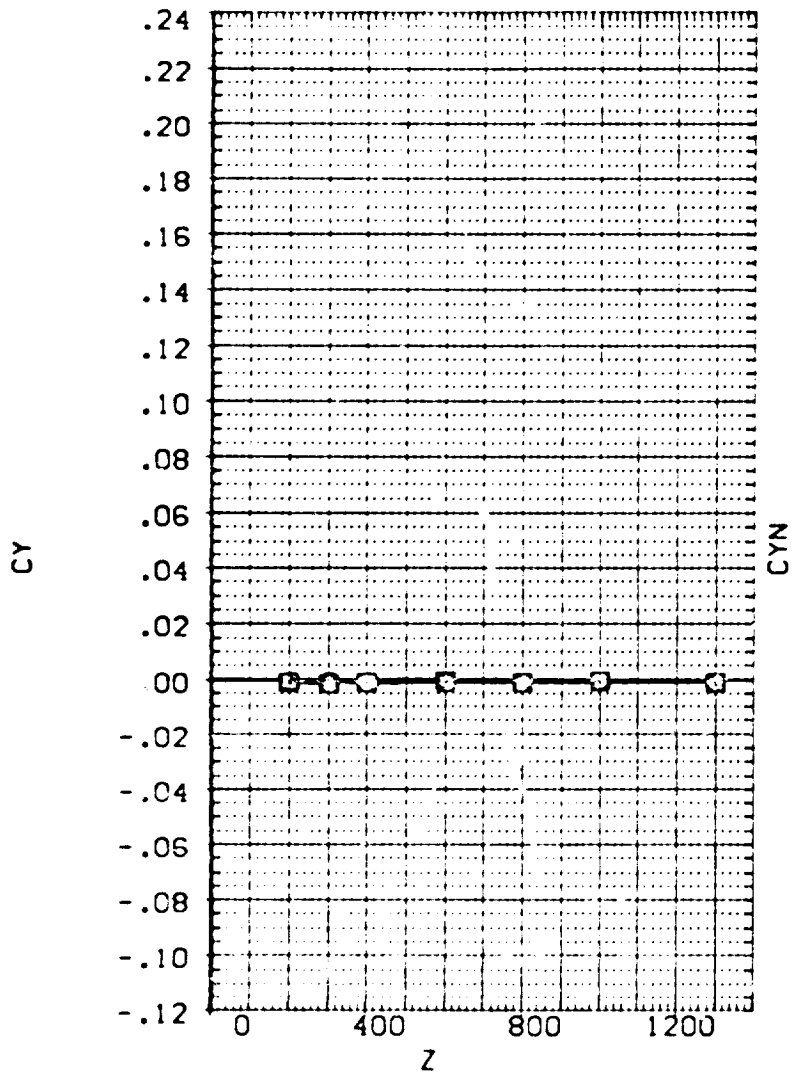


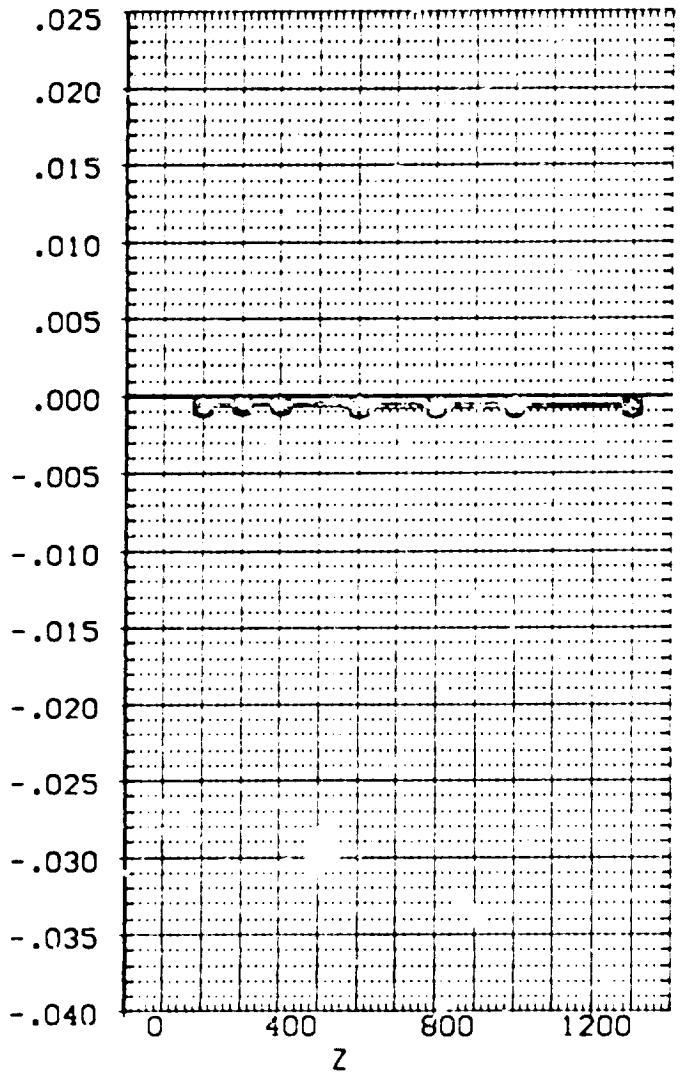
EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

[A13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT37)

SYMBOL	X		PARAMETRIC VALUES		
○	.201	MACH	4.520	PTOTAL	80.000
□	400.450	ALPHA	-10.000	BETA	.000
◇	800.550	DALPHA	-5.000	DBETA	.000
△	1201.000	ELEVTR	.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



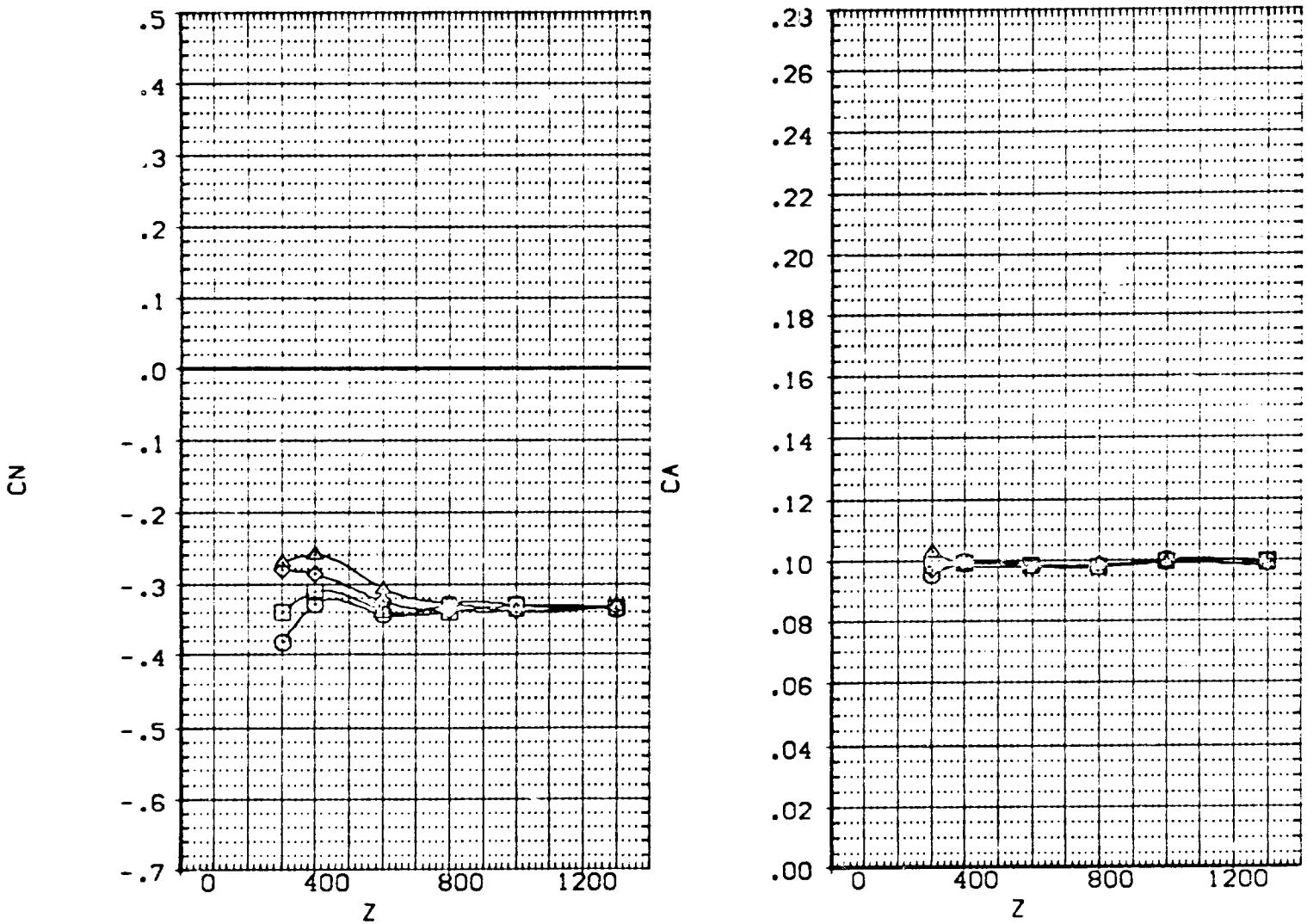


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT38)

SYMBOL	X		PARAMETRIC VALUES		
○	.123	MACH	4.520	PTOTAL	80.000
□	400.560	ALPHA	-10.000	BETA	.000
◇	800.420	DALPHA	-10.000	DBETA	.000
△	1200.900	ELEVTR	.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

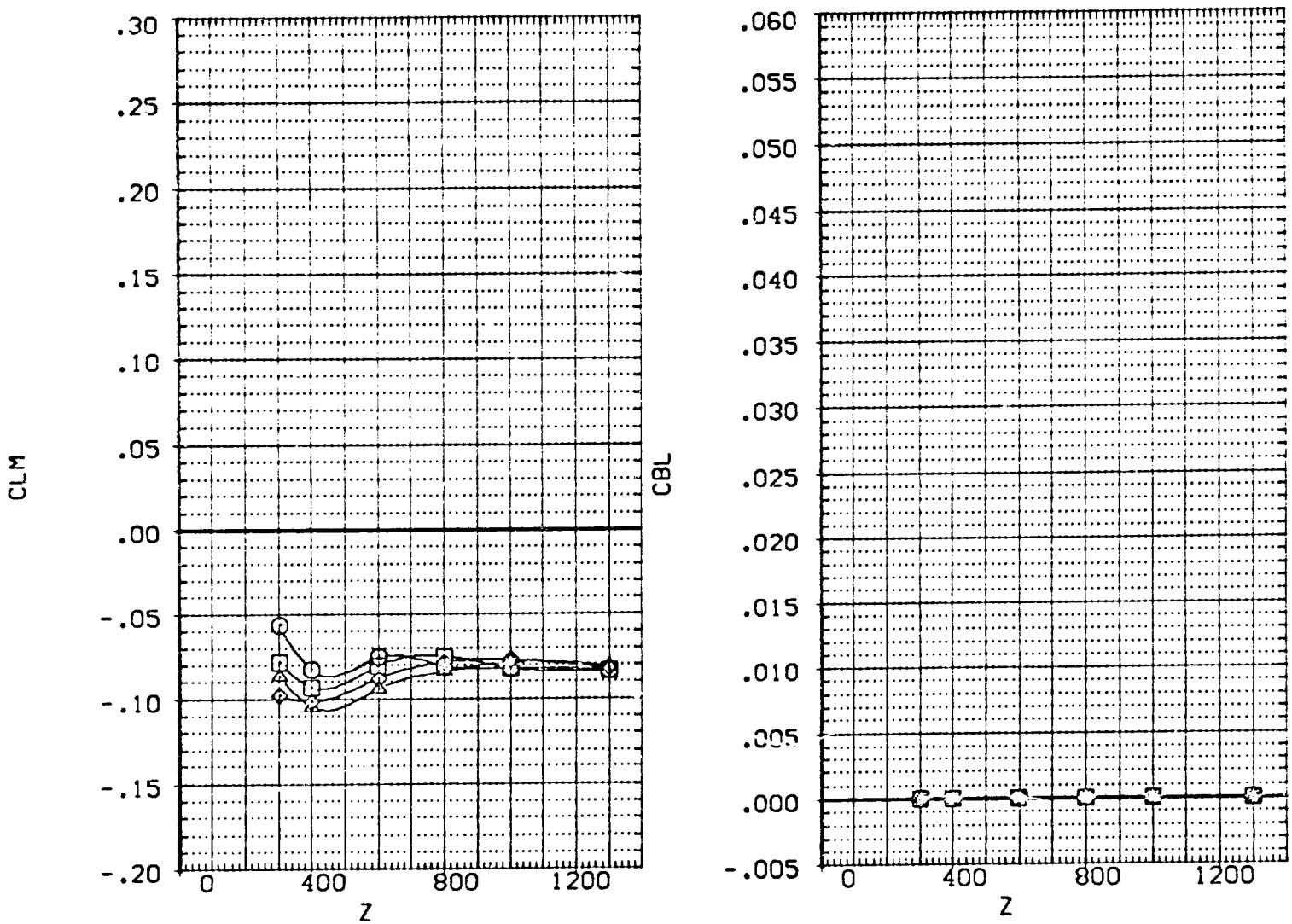


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT38)

SYMBOL	X		PARAMETRIC VALUES		
□○	.123	MACH	4.520	PTOTAL	80.000
◇	400.560	ALPHA	-10.000	BETA	.000
△	800.420	DALPHA	-10.000	DBETA	.000
	1200.900	ELEVTR	.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

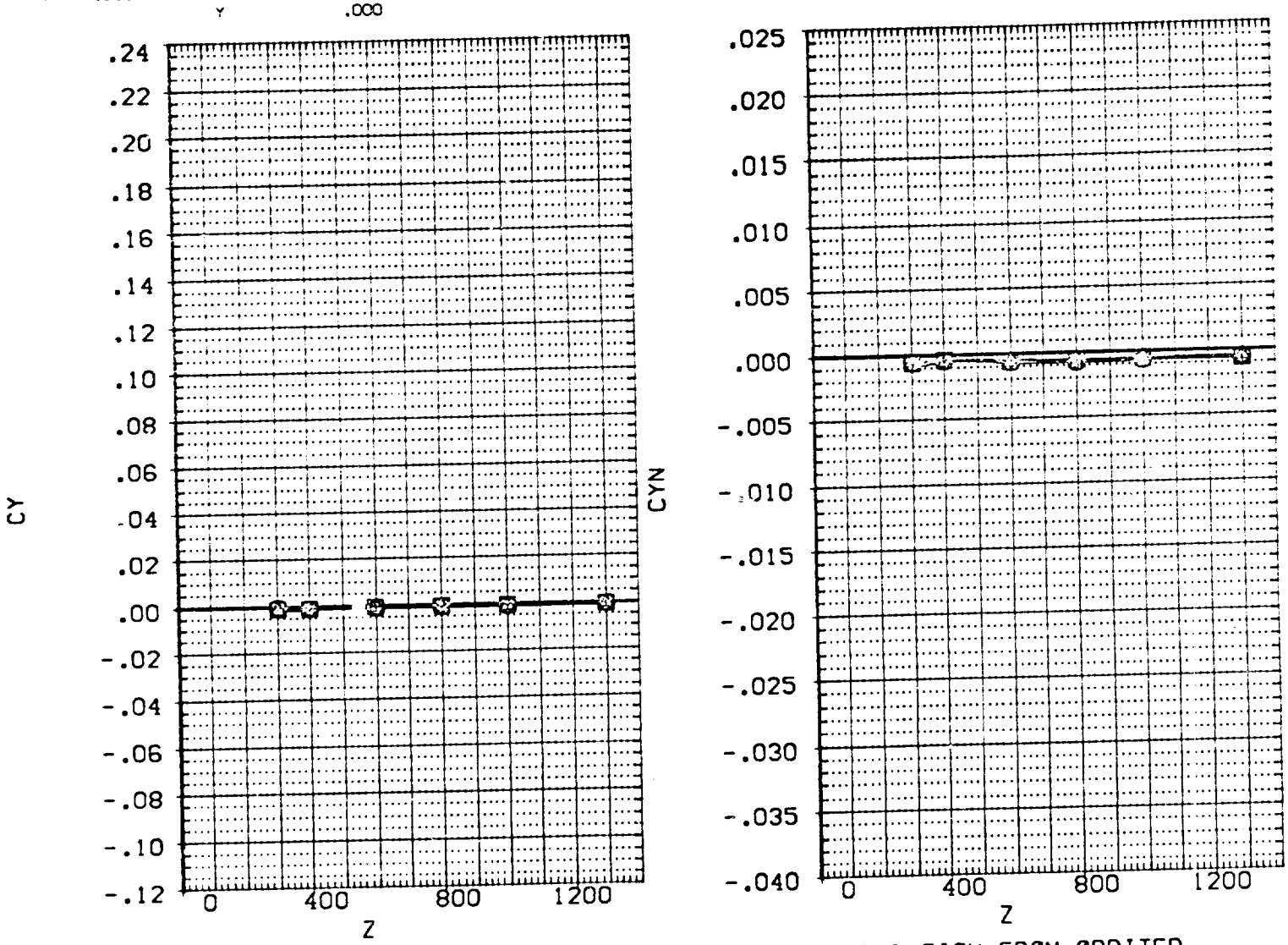


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT38)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

SYMBOL	X	PARAMETRIC VALUES			
○	.123	MACH	4.520	PTOTAL	80.000
□	400.560	ALPHA	-10.000	BETA	.000
◇	800.420	DALPHA	-10.000	DBETA	.000
△	1200.900	ELEVTR	.000	AILRON	.000
		Y	.000		

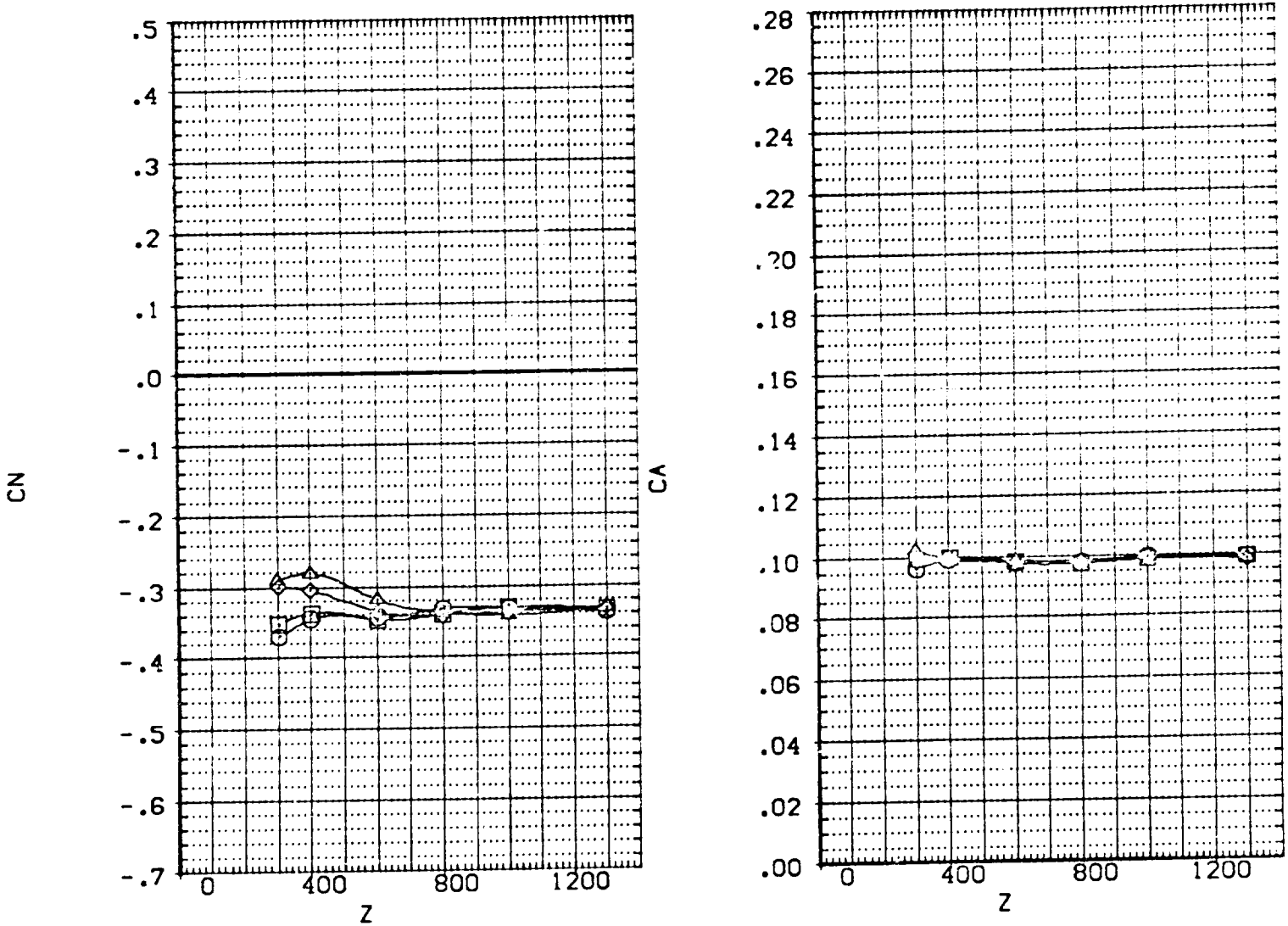


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT39)

SYMBOL	X		PARAMETRIC VALUES		
○	.215	MACH	4.520	PTOTAL	80.000
□	400.370	ALPHA	-10.000	BETA	.000
◇	800.850	DALPHA	-10.000	DBETA	.000
△	1200.600	ELEVTR	.000	AILRON	.000
		Y	200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

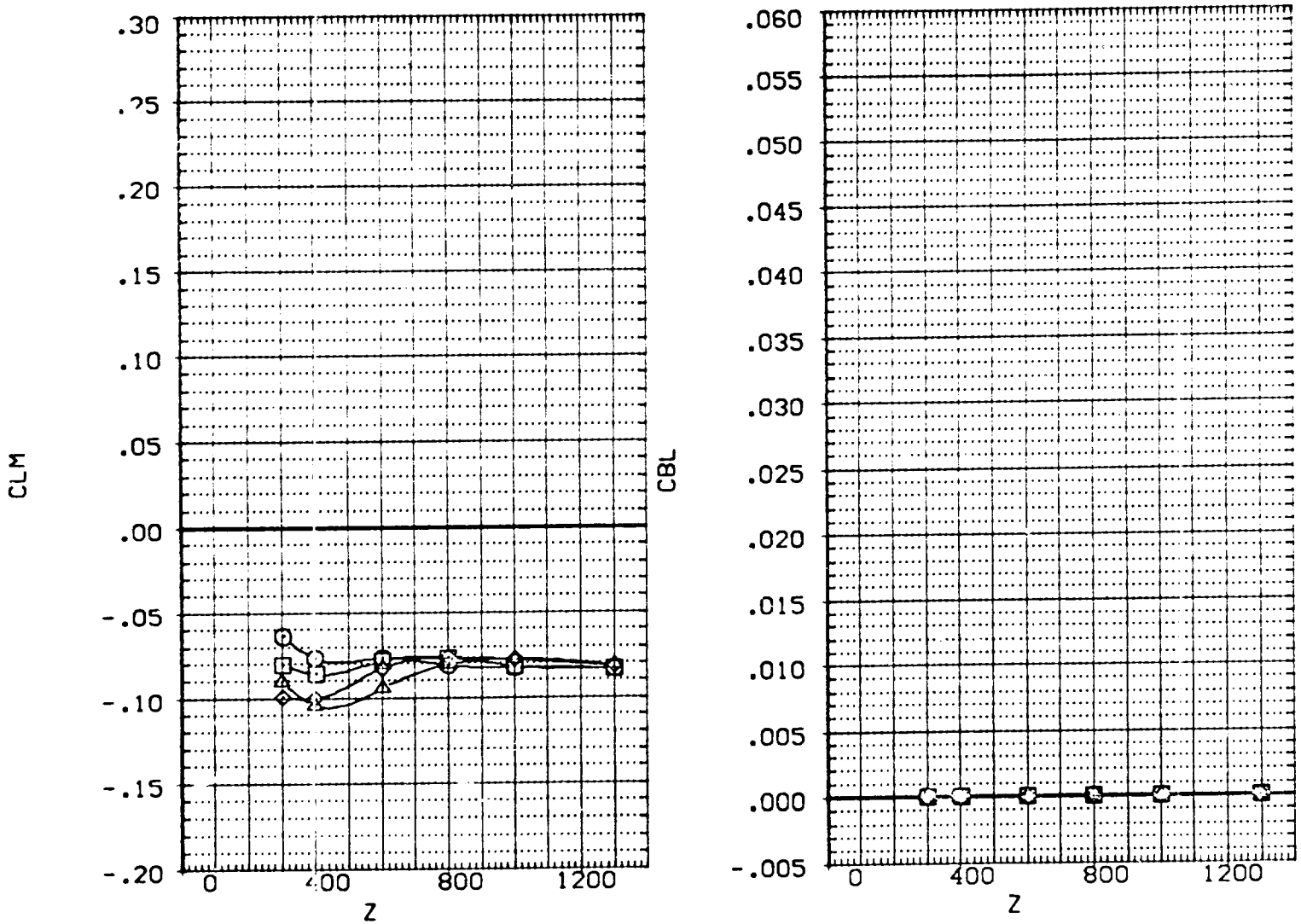


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT39)

SYMBOL	X	PARAMETRIC VALUES			
○	215	MACH	4.520	PTOTAL	90.000
□	400.370	ALPHA	-10.000	BETA	.000
◇	800.850	DALPHA	-10.000	DBETA	.000
△	1200.600	ELEVTR	.000	AILRON	.000
		Y	200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

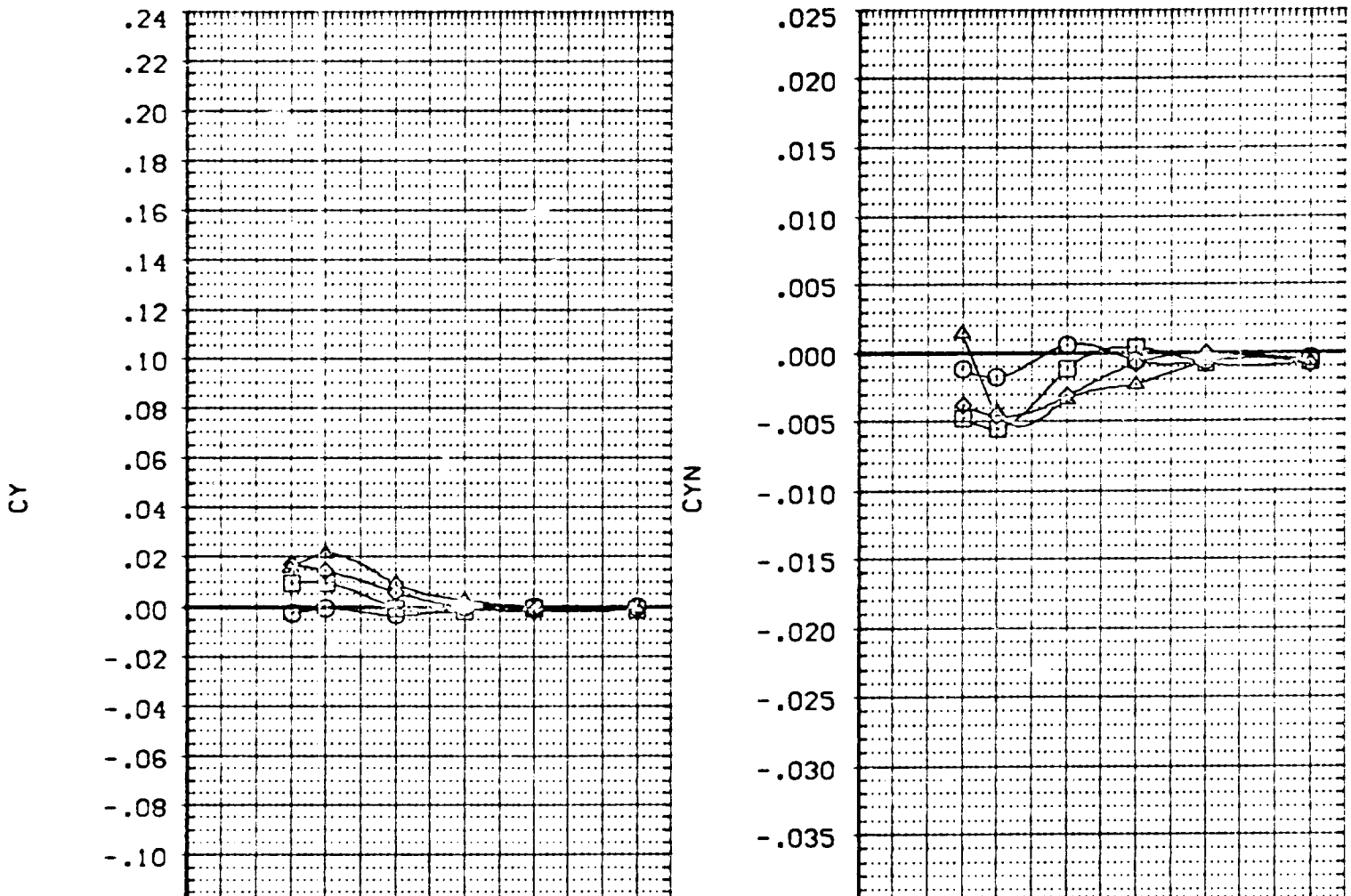


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

!A13,EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT39)

SYMBOL	X		PARAMETRIC VALUES		
○	.215	MACH	4.520	PTOTAL	80.000
□	400.370	ALPHA	-10.000	BETA	.000
◇	800.850	DALPHA	-10.000	DBETA	.000
△	1200.600	ELEVTR	.000	AILRON	.000
		Y	200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

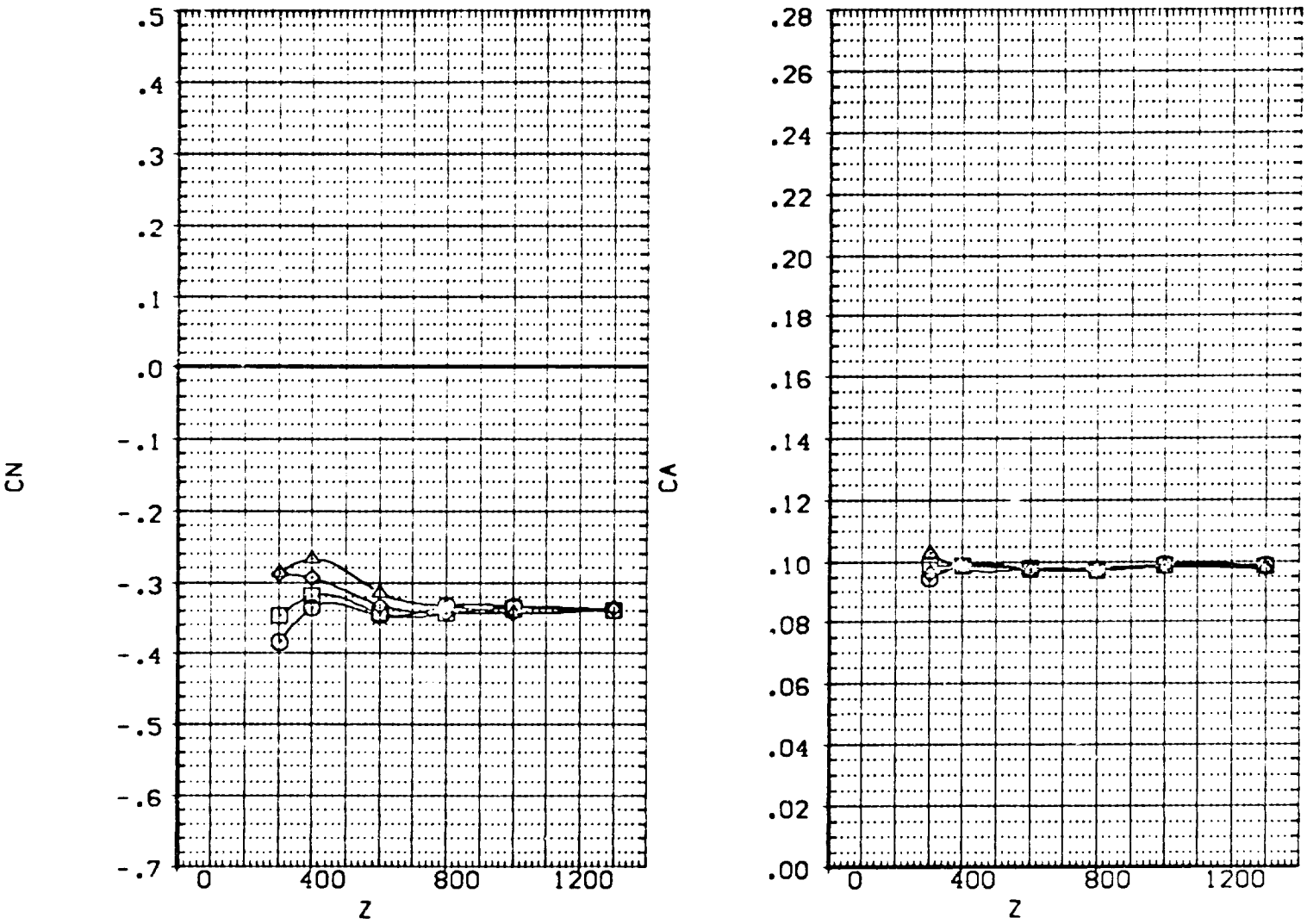


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT40)

SYMBOL	X		PARAMETRIC VALUES		
○	.034	MACH	4.520	PTOTAL	80.000
□	400.570	ALPHA	-10.000	BETA	.000
◇	800.420	DALPHA	-10.000	DBETA	5.000
△	1201.000	ELEVTR	.000	AILRON	.000
		Y	200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

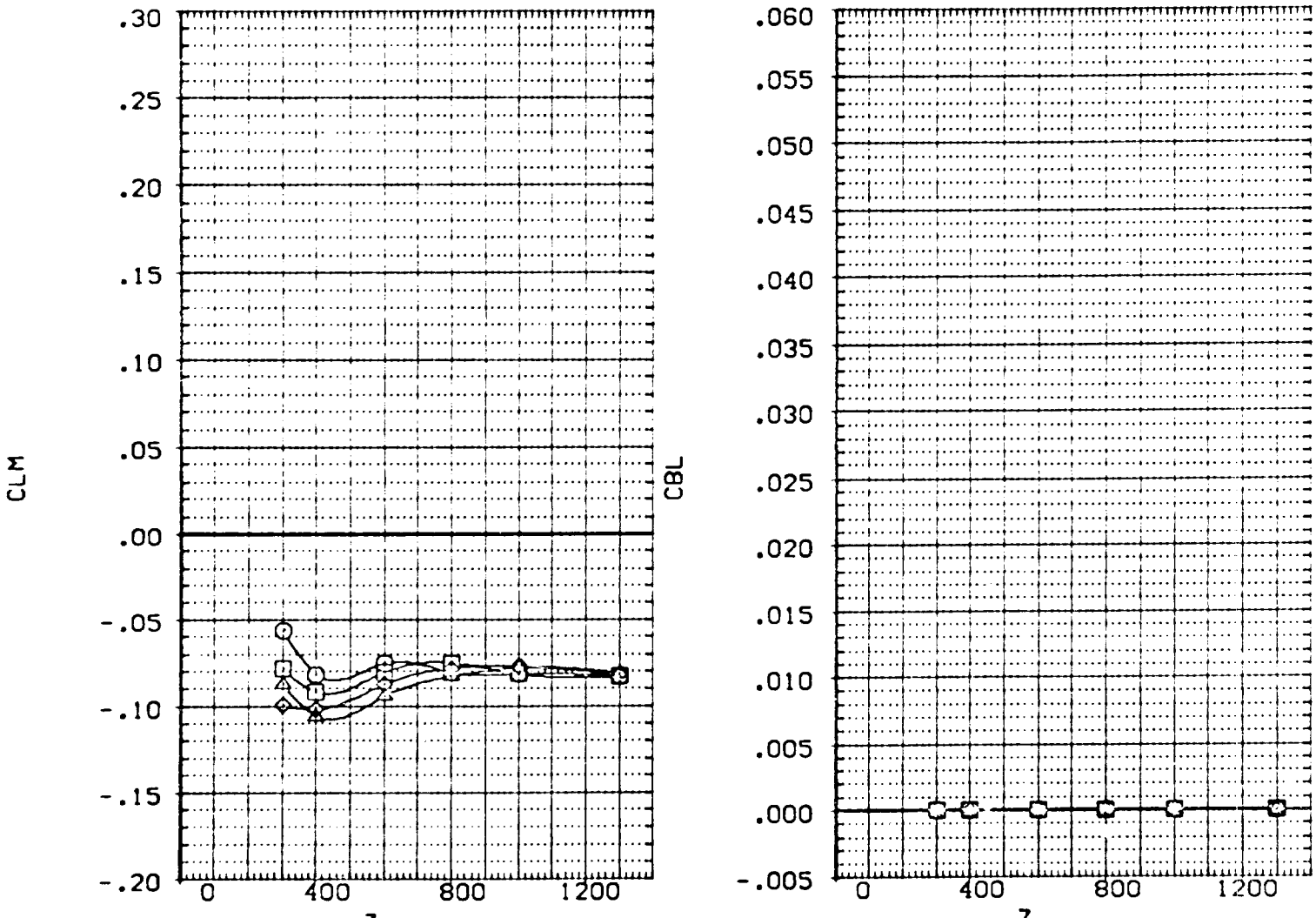


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

[A:3.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT40)

SYMBOL	X		PARAMETRIC VALUES		
○	.034	MACH	4.520	PTOTAL	80.000
□	400.570	ALPHA	-10.000	BETA	.000
◇	800.420	DALPHA	-10.000	DBETA	5.000
△	1201.000	ELEVTR	.000	AILRON	.000
		Y	200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

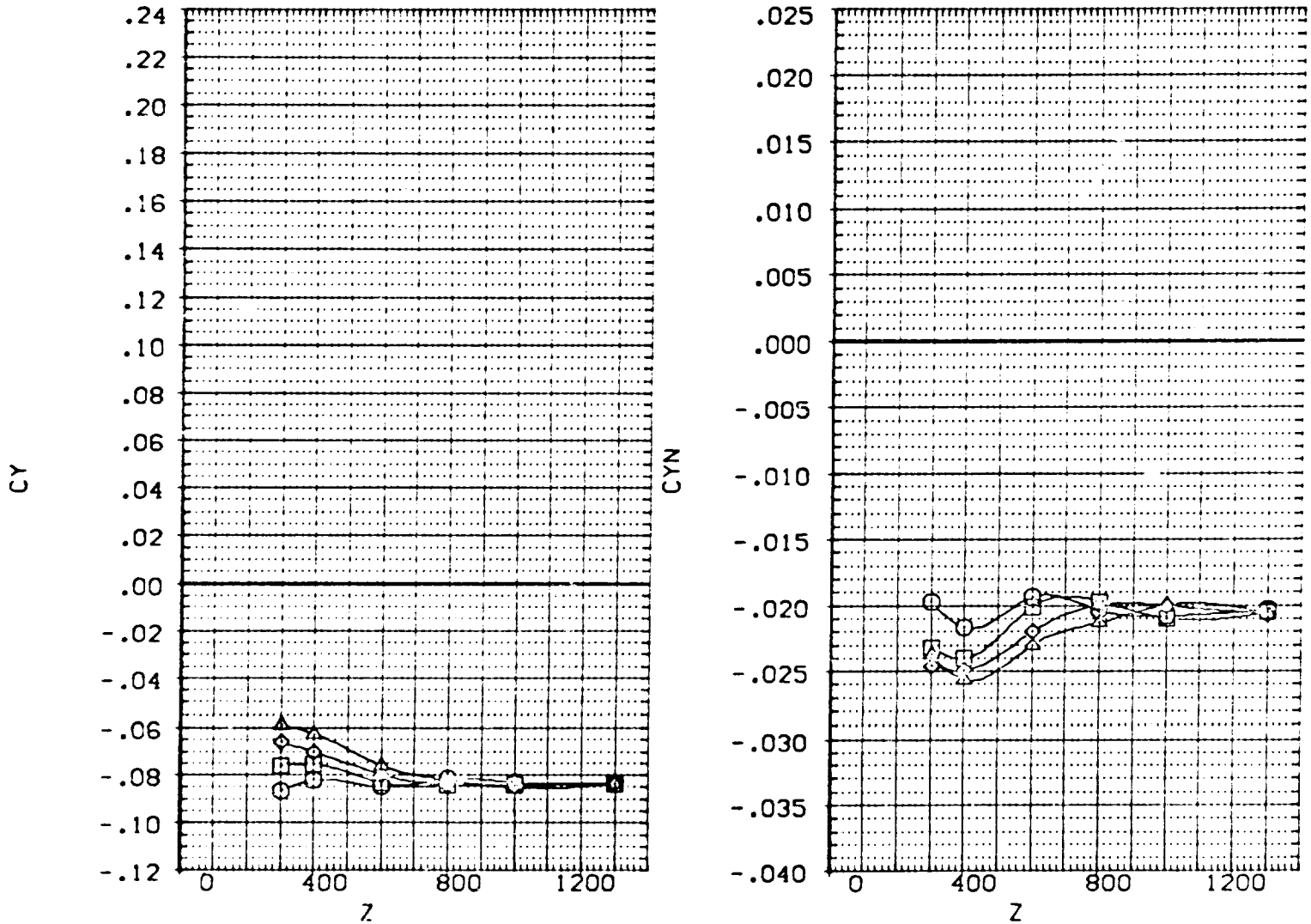


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

IA:3,EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT40)

SYMBOL	X		PARAMETRIC VALUES		
○	.034	MACH	4.520	PTOTAL	80.000
◇	400.570	ALPHA	-10.000	BETA	.000
□	800.420	DALPHA	-10.000	DBETA	5.000
△	1201.000	ELEVTR	.000	AILRON	.000
		Y	200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DAT SETS

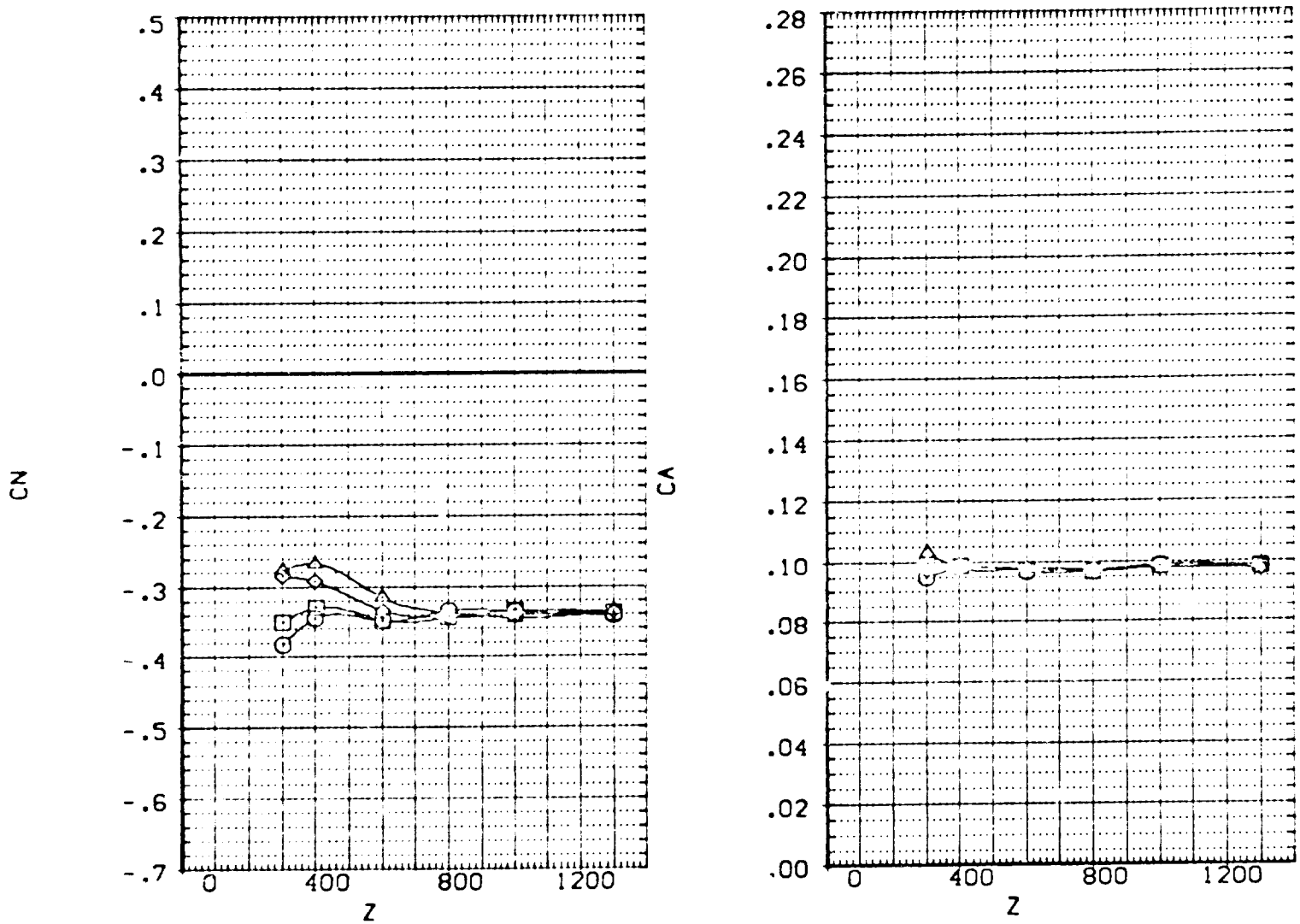


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

[A13,EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT41)

SYMBOL	X		PARAMETRIC VALUES		
○	.126	MACH	4.520	PTOTAL	80.000
	400.280	ALPHA	-10.000	BETA	.000
◇	800.420	DALPHA	-10.000	DBETA	5.000
△	1200.800	ELEVTR	.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

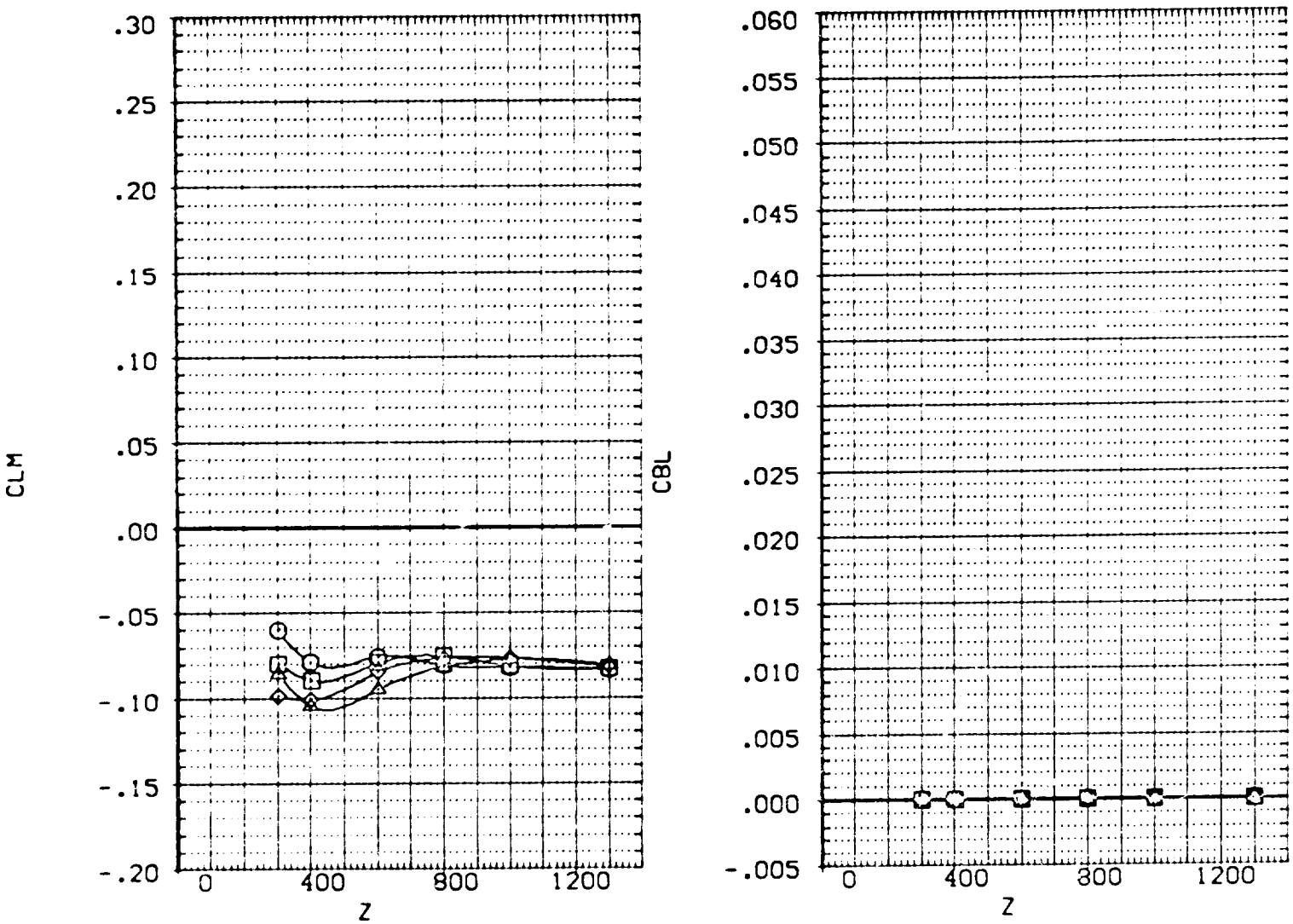


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT41)

SYMBOL	X		PARAMETRIC VALUES		
○	.128	MACH	4.520	PTOTAL	80.000
□	400.290	ALPHA	-10.000	BETA	.000
◇	800.420	DALPHA	-10.000	DBETA	5.000
△	1200.800	ELEVTR	.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

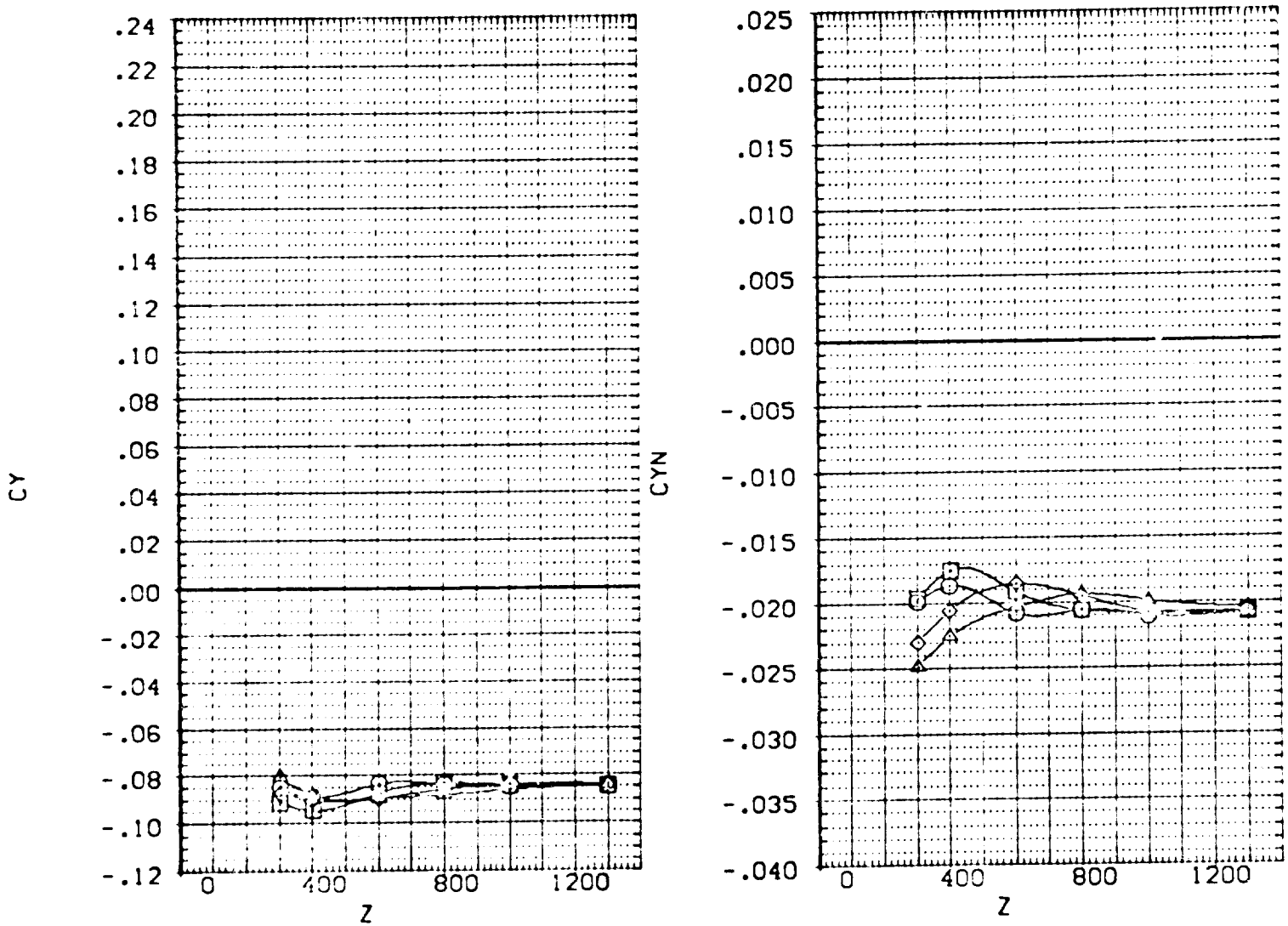


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

!A13,EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT41)

SYMBOL	X		PARAMETRIC VALUES		
	.128	MACH	4.520	PTOTAL	80.000
◇	400.290	ALPHA	-10.000	BETA	.000
	800.420	DALPHA	-10.000	DBETA	5.000
△	1200.800	ELEVTR	.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

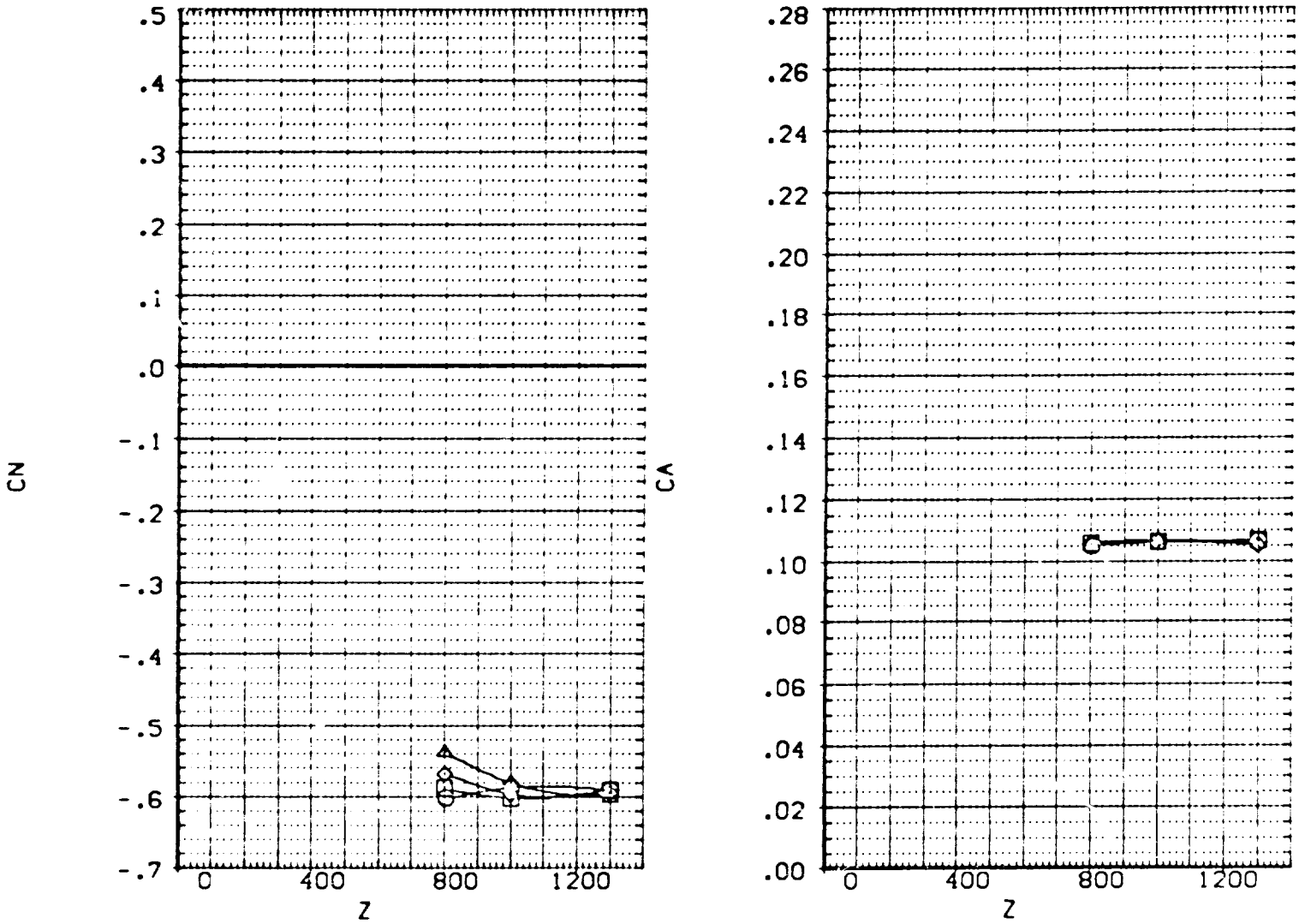


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT42)

SYMBOL	X		PARAMETRIC VALUES		
○	.164	MACH	4.520	PTOTAL	80.000
□	400.680	ALPHA	-10.000	BETA	.000
◇	800.610	DALPHA	-20.000	DBETA	.000
△	1200.500	ELEVTR	.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

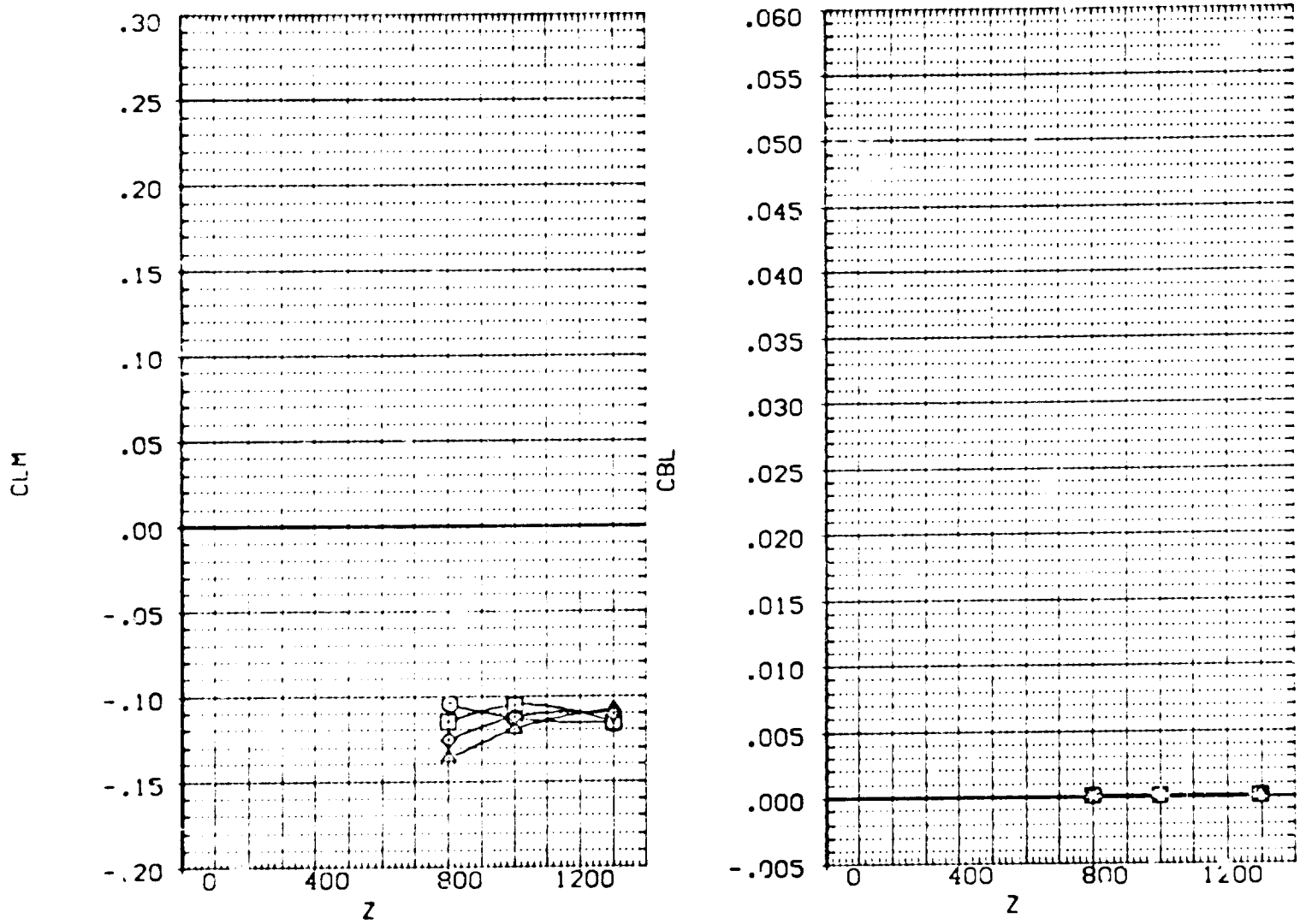


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

!A13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT42)

SYMBOL	X		PARAMETRIC VALUES		
○	.164	MACH	4.520	PTOTAL	80.000
	400.680	ALPHA	-10.000	BETA	.000
◇	800.610	DALPHA	-20.000	DBETA	.000
△	1200.500	ELEVTR	.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

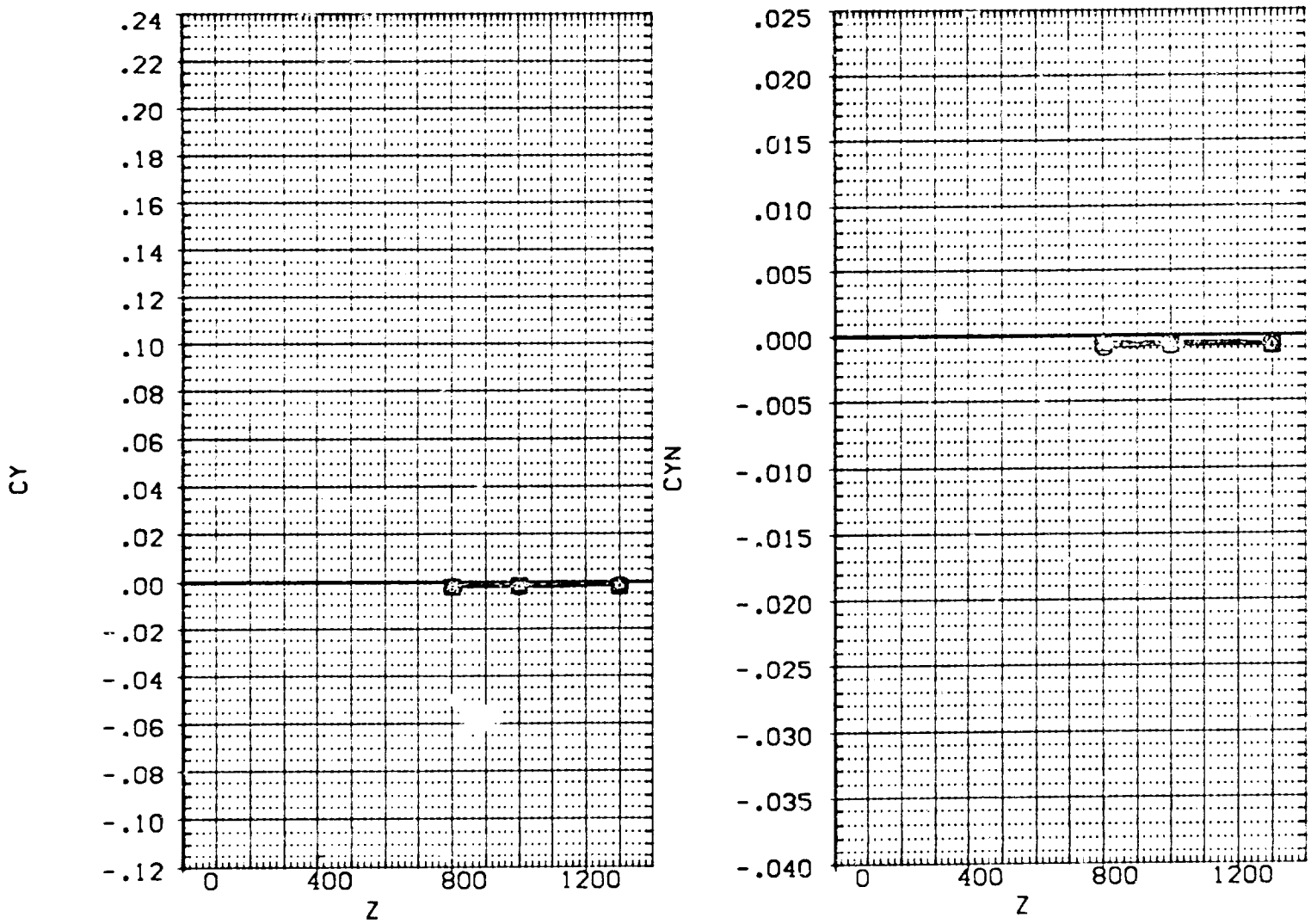


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT42)

SYMBOL	X		PARAMETRIC VALUES		
○	.164	MACH	4.520	PTOTAL	80.000
□	400.680	ALPHA	-10.000	BETA	.000
◇	800.610	DALPHA	-20.000	DBETA	.000
△	1200.500	ELEVTR	.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

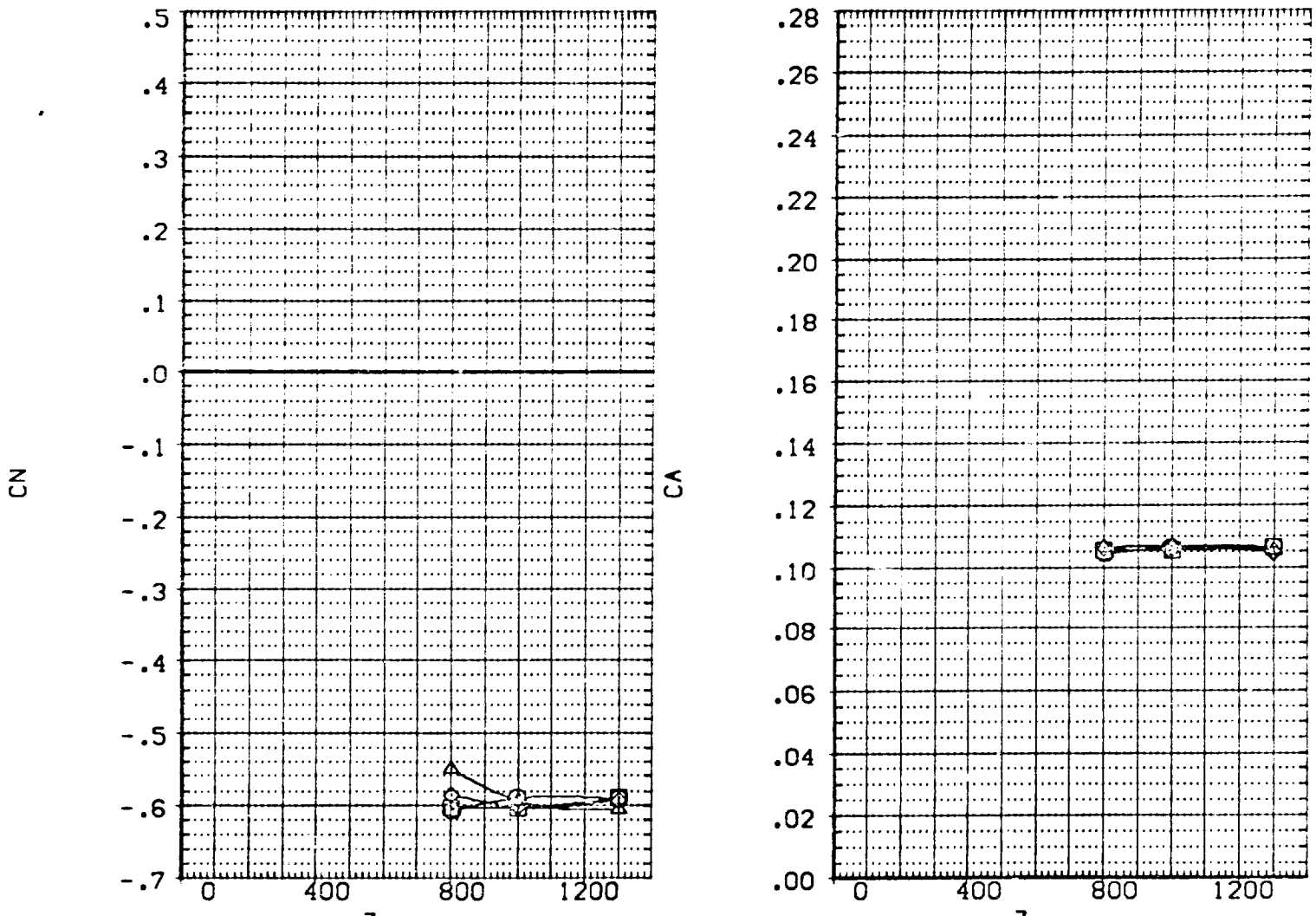


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT43)

SYMBOL	X		PARAMETRIC VALUES		
○□	.054	MACH	4.520	PTOTAL	80.000
◇	400.490	ALPHA	-10.000	BETA	.000
△	800.440	DALPHA	-20.000	DBETA	.000
	1200.700	ELEVTR	.000	AILRON	.000
		Y	200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

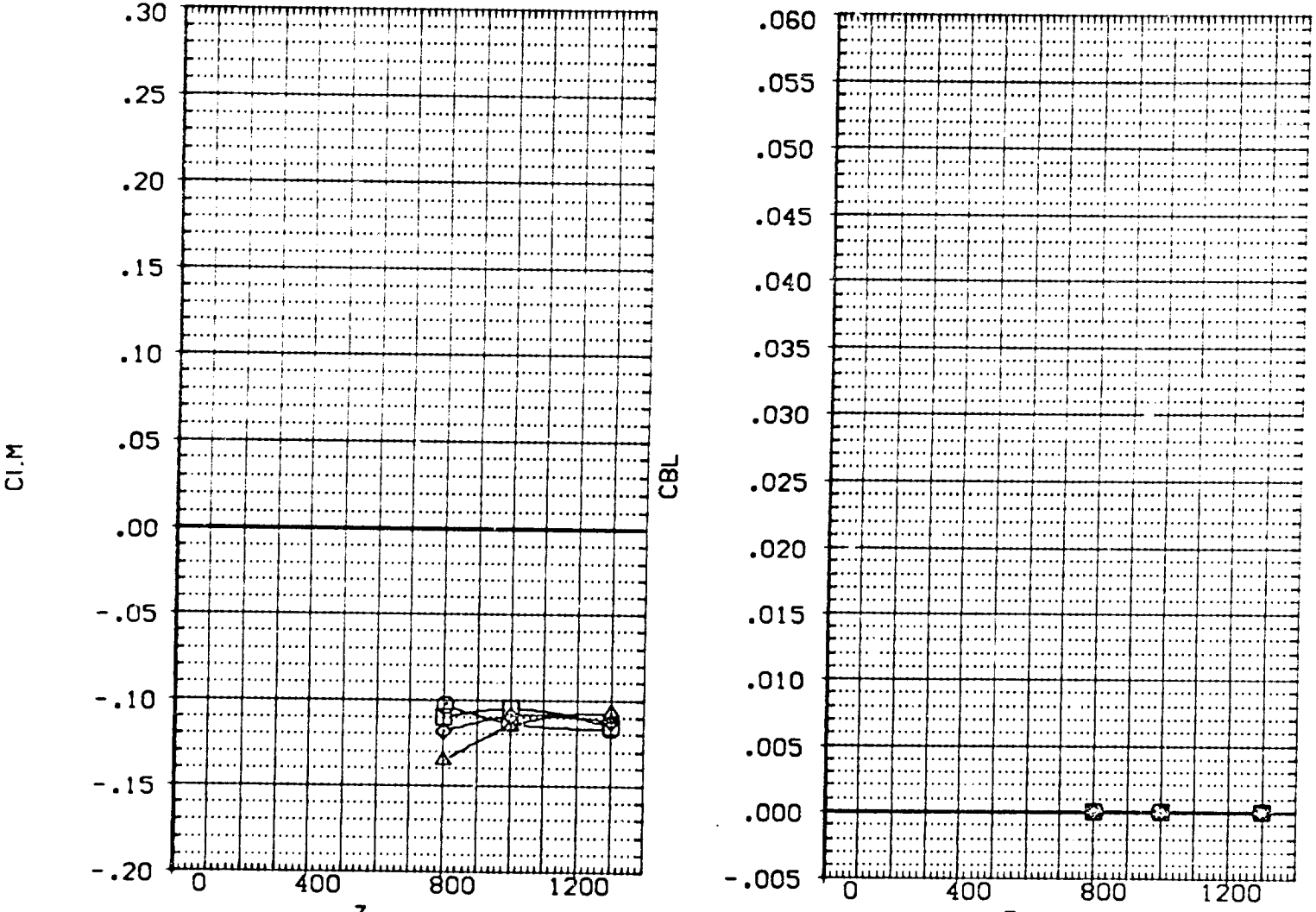


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

IA13,EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT43)

SYMBOL	X		PARAMETRIC VALUES		
○	.054	MACH	4.520	PTOTAL	80.000
□	400.490	ALPHA	-10.000	BETA	.000
◇	800.440	DALPHA	-20.000	DBETA	.000
△	1200.700	ELEVTR	.000	AILRON	.000
		Y	200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

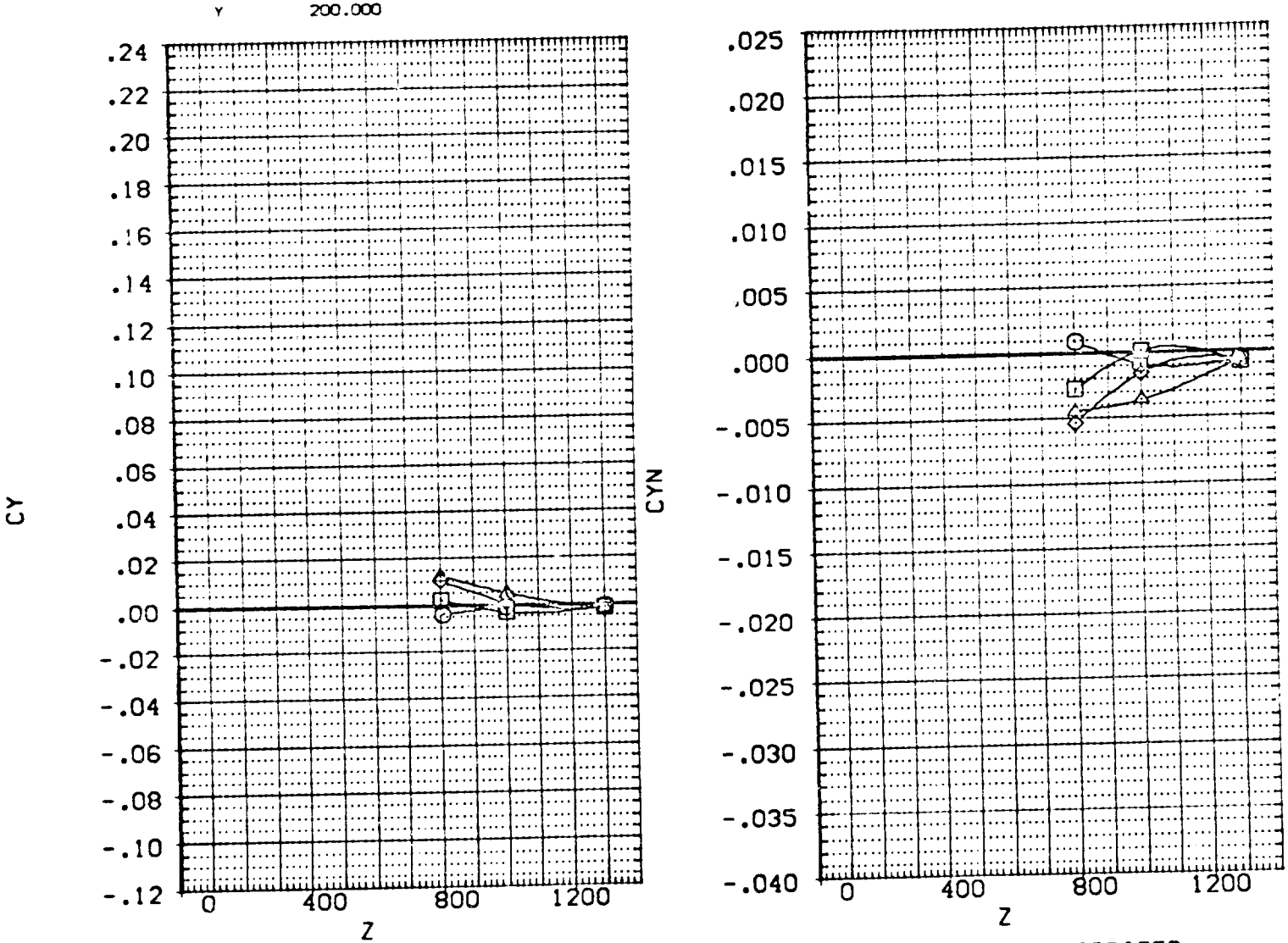


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT43)

SYMBOL	X		PARAMETRIC VALUES		
○	.054	MACH	4.520	PTOTAL	80.000
□	400.490	ALPHA	-10.000	BETA	.000
◇	800.440	DALPHA	-20.000	DBETA	.000
△	1200.700	ELEVTR	.000	AILRON	.000
		Y	200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

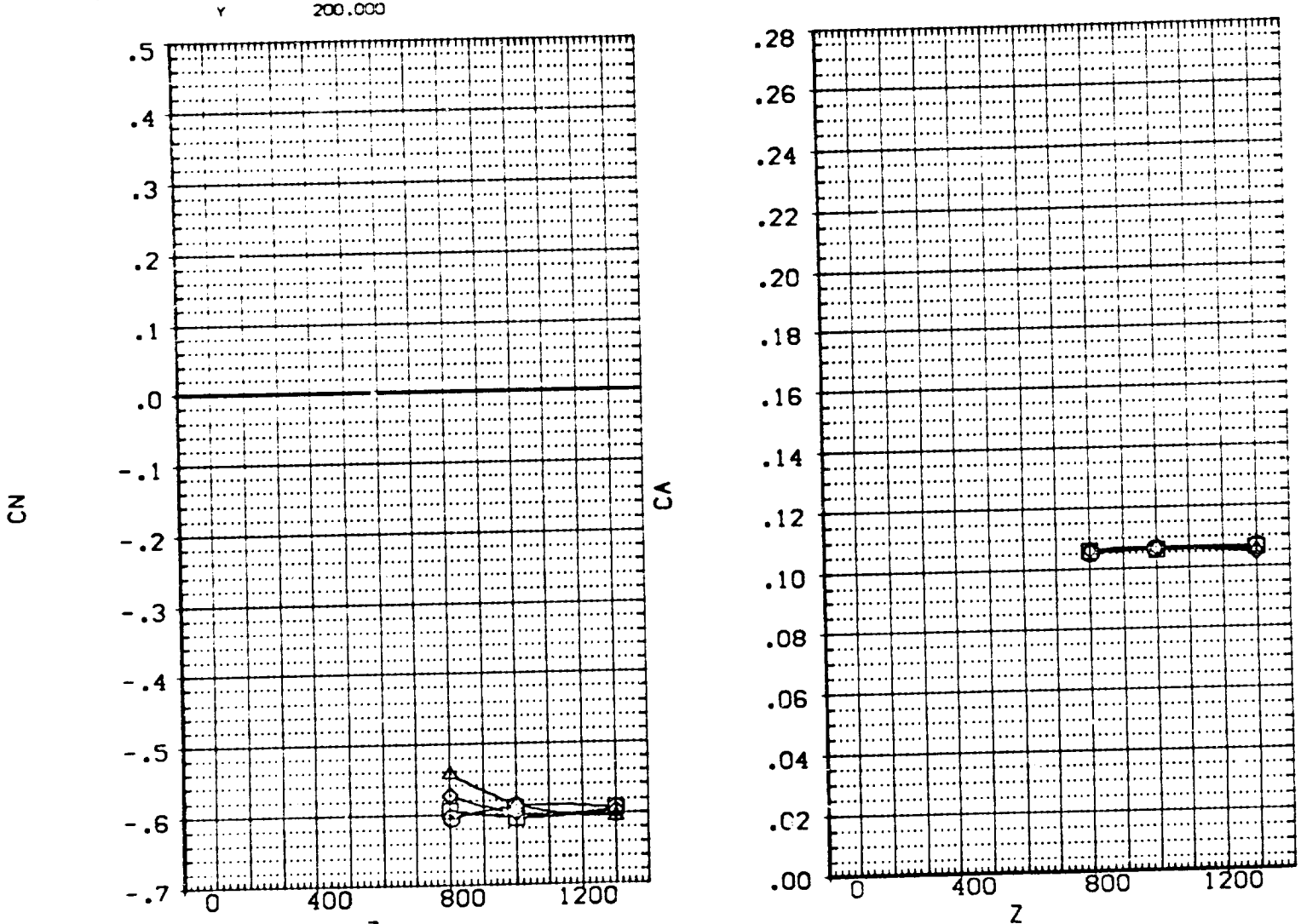


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

[A13,EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT44)

SYMBOL	X		PARAMETRIC VALUES		
○	.094	MACH	4.520	PTOTAL	80.000
□	400.710	ALPHA	-10.000	BETA	.000
◇	800.610	DALPHA	-20.000	DBETA	5.000
△	1200.400	ELEVTR	.000	AILRON	.000
		Y	200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

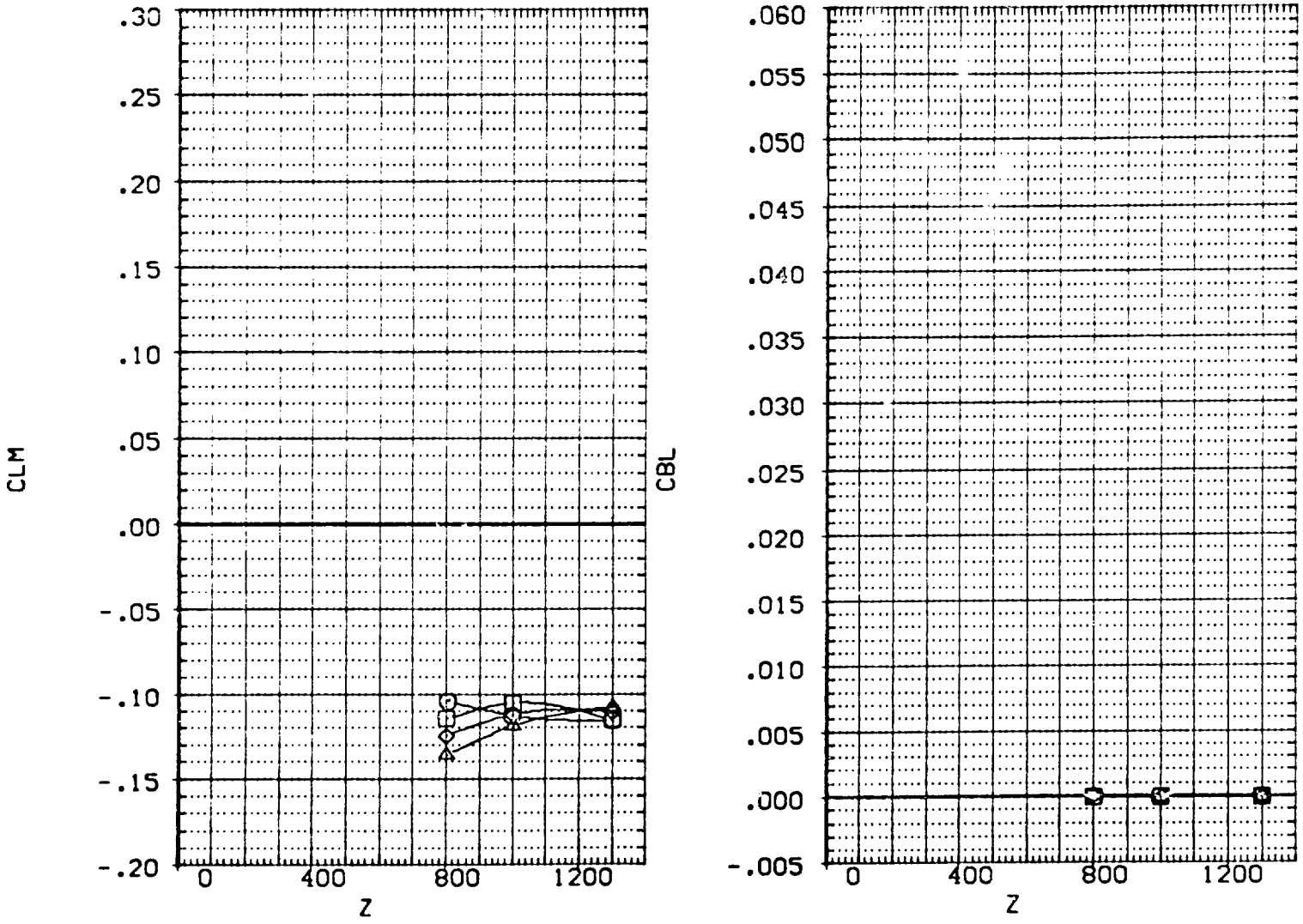


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT44)

SYMBOL	X		PARAMETRIC VALUES		
○	.094	MACH	4.520	PTOTAL	80.000
□	400.710	ALPHA	-10.000	BETA	.000
◇	800.610	DALPHA	-20.000	DBETA	5.000
△	1200.400	ELEVTR	.000	AILRON	.000
		Y	200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

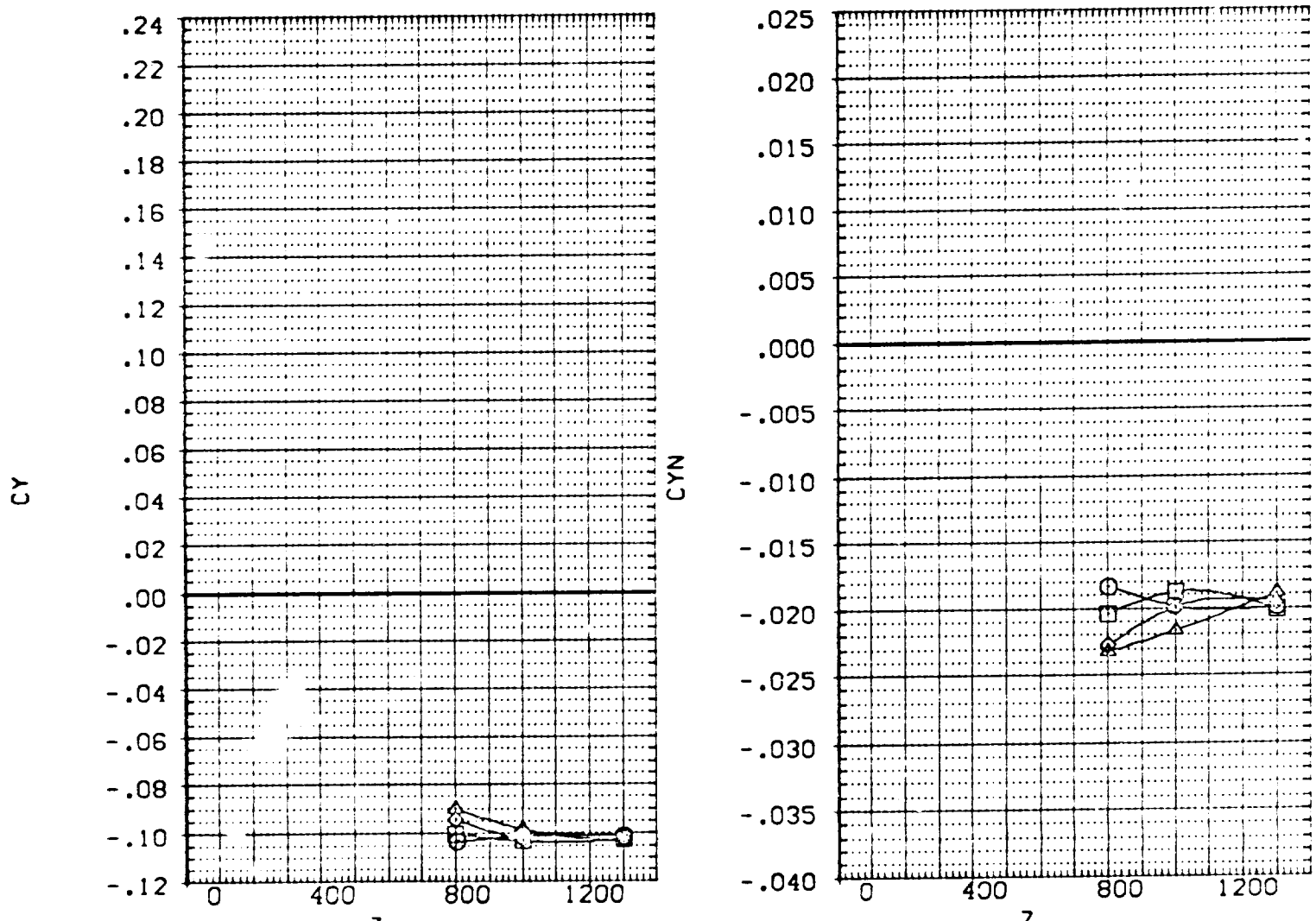


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT44)

SYMBOL	X		PARAMETRIC VALUES		
○	.094	MACH	4.520	PTOTAL	80.000
□	400.710	ALPHA	-10.000	BETA	.000
◇	800.610	DALPHA	-20.000	DBETA	5.000
△	1200.400	ELEVTR	.000	AILRON	.000
		Y	200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

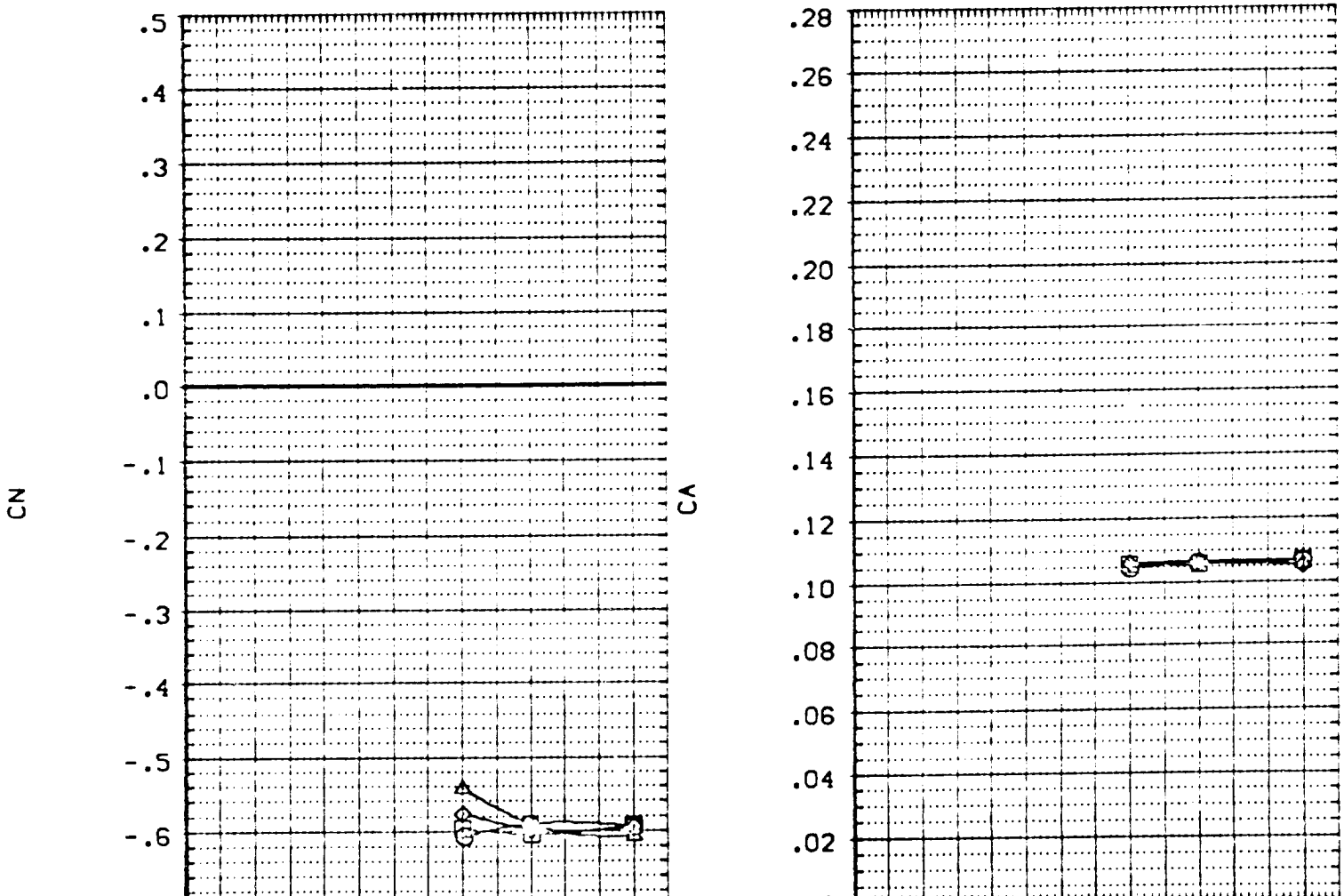


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

[A13,EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT45)

SYMBOL	X		PARAMETRIC VALUES		
○(10)	.110	MACH	4.520	PTOTAL	80.000
◇	400.660	ALPHA	-10.000	BETA	.000
△	800.230	DALPHA	-20.000	DBETA	5.000
	1200.600	ELEVTR	.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

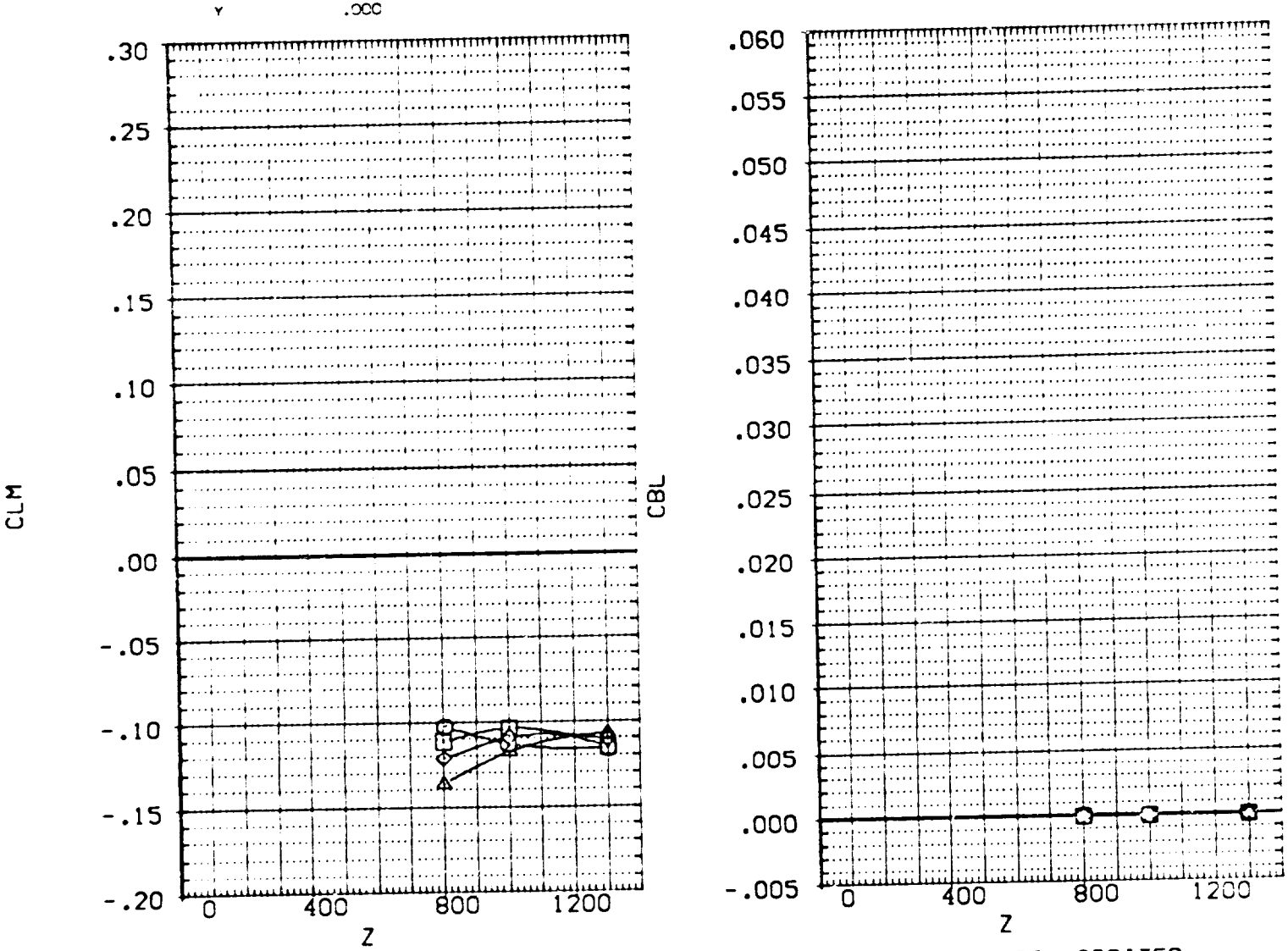


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

!A13,EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT45)

SYMBOL	X		PARAMETRIC VALUES		
○	.110	MACH	4.520	PTOTAL	80.000
□	400.660	ALPHA	-10.000	BETA	.000
◇	800.230	DALPHA	-20.000	DBETA	5.000
△	1200.600	ELEVTR	.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

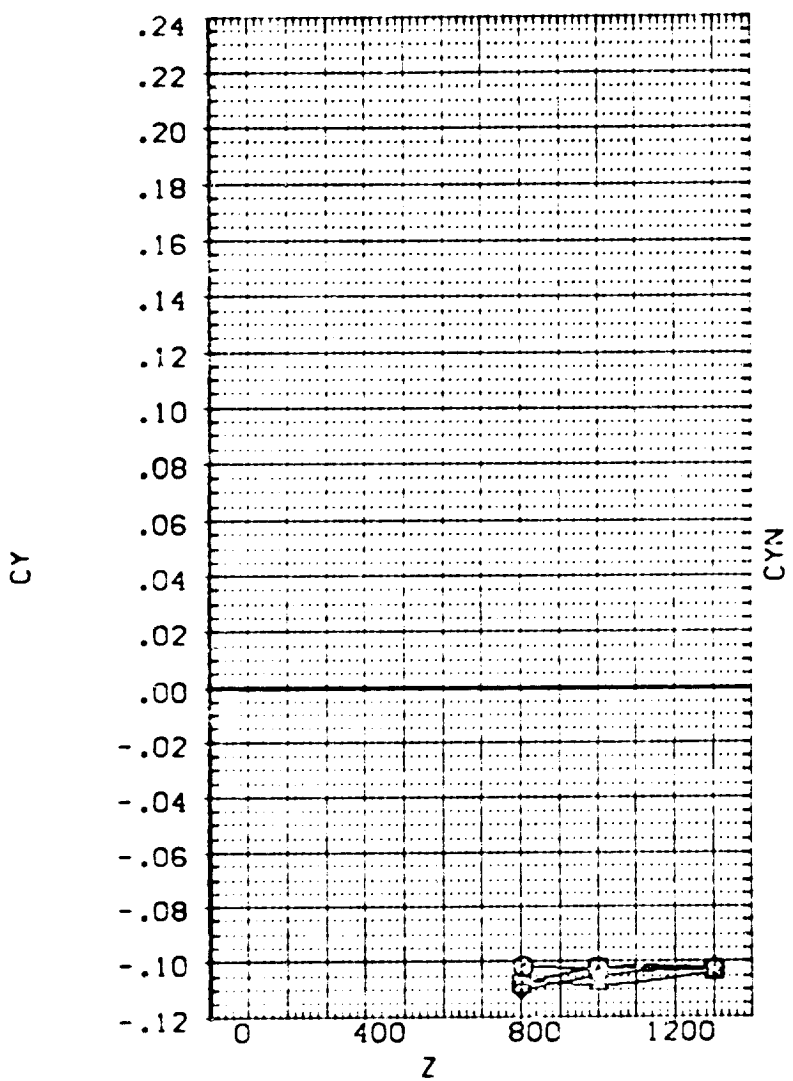


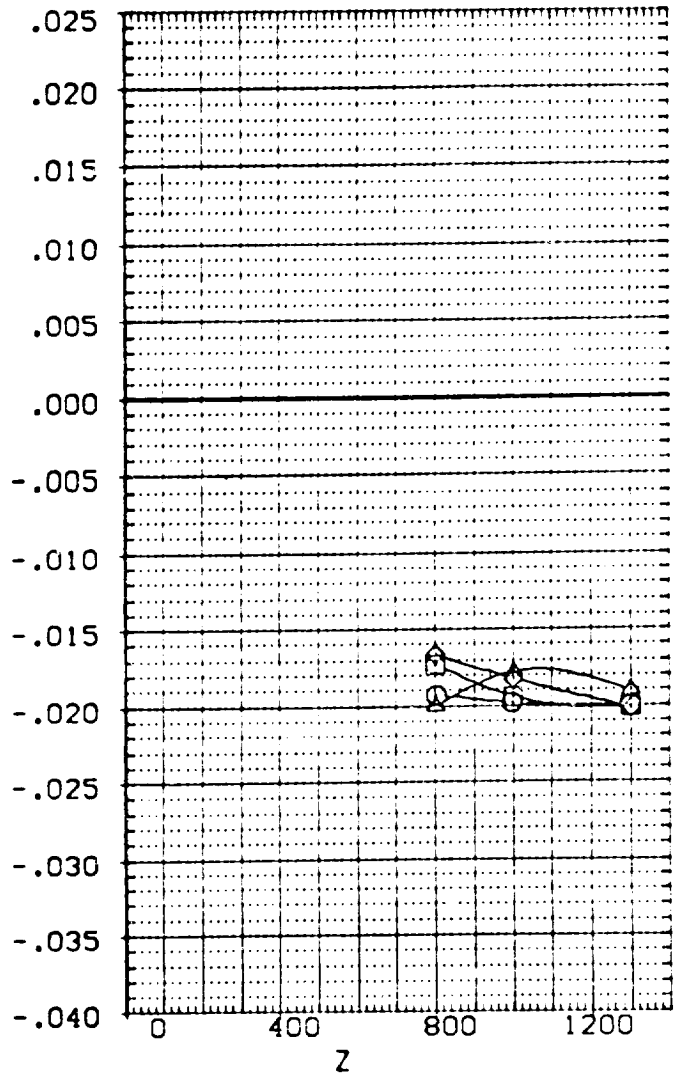
EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

[A13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT45)

SYMBOL	X		PARAMETRIC VALUES		
○	.110	MACH	4.520	PTOTAL	80.000
◇	400.660	ALPHA	-10.000	BETA	.000
△	800.230	DALPHA	-20.000	DBETA	5.000
	1200.600	ELEVTR	.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



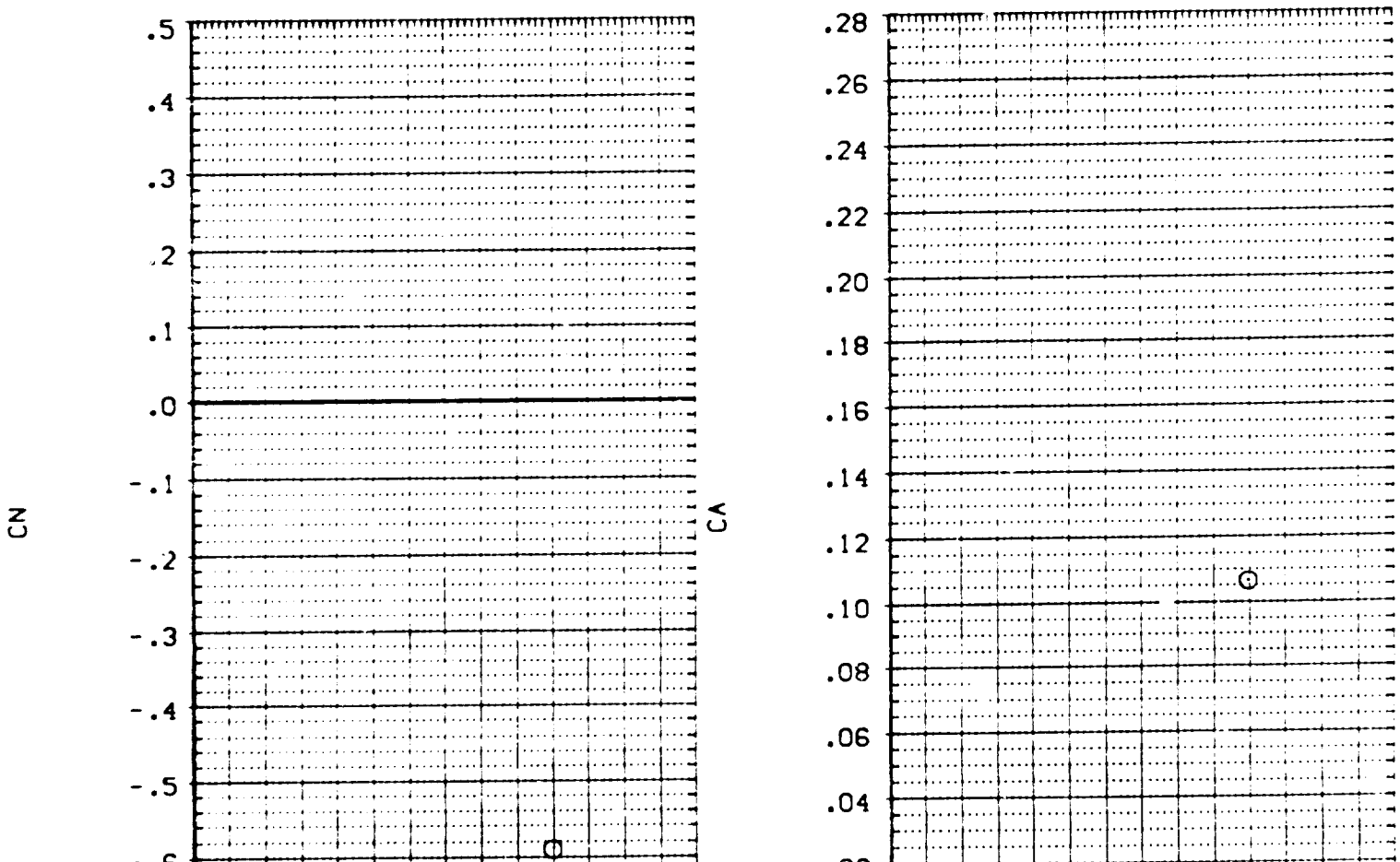


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

[A:3,EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT46)

SYMBOL	X	PARAMETRIC VALUES			
○	.356	MACH	4.520	PTOTAL	80.000
		ALPHA	-10.000	BETA	.000
		DALPHA	-30.000	DBETA	.000
		ELEVTR	.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

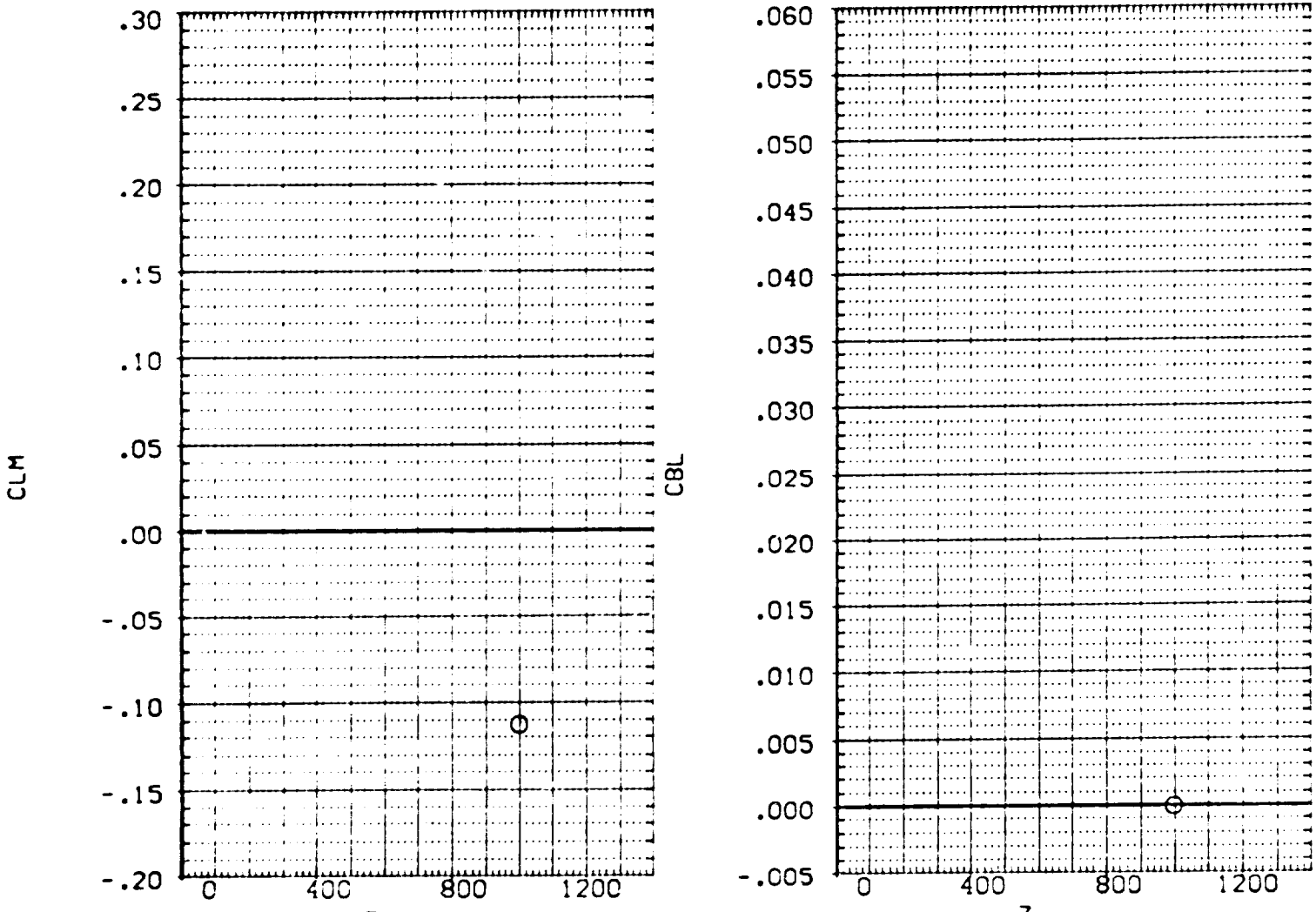


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

[A:3.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT46)

SYMBOL	X	PARAMETRIC VALUES			
○	.356	MACH	4.520	PTOTAL	80.000
		ALPHA	-10.000	BETA	.000
		DALPHA	-30.000	DBETA	.000
		ELEVTR	.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

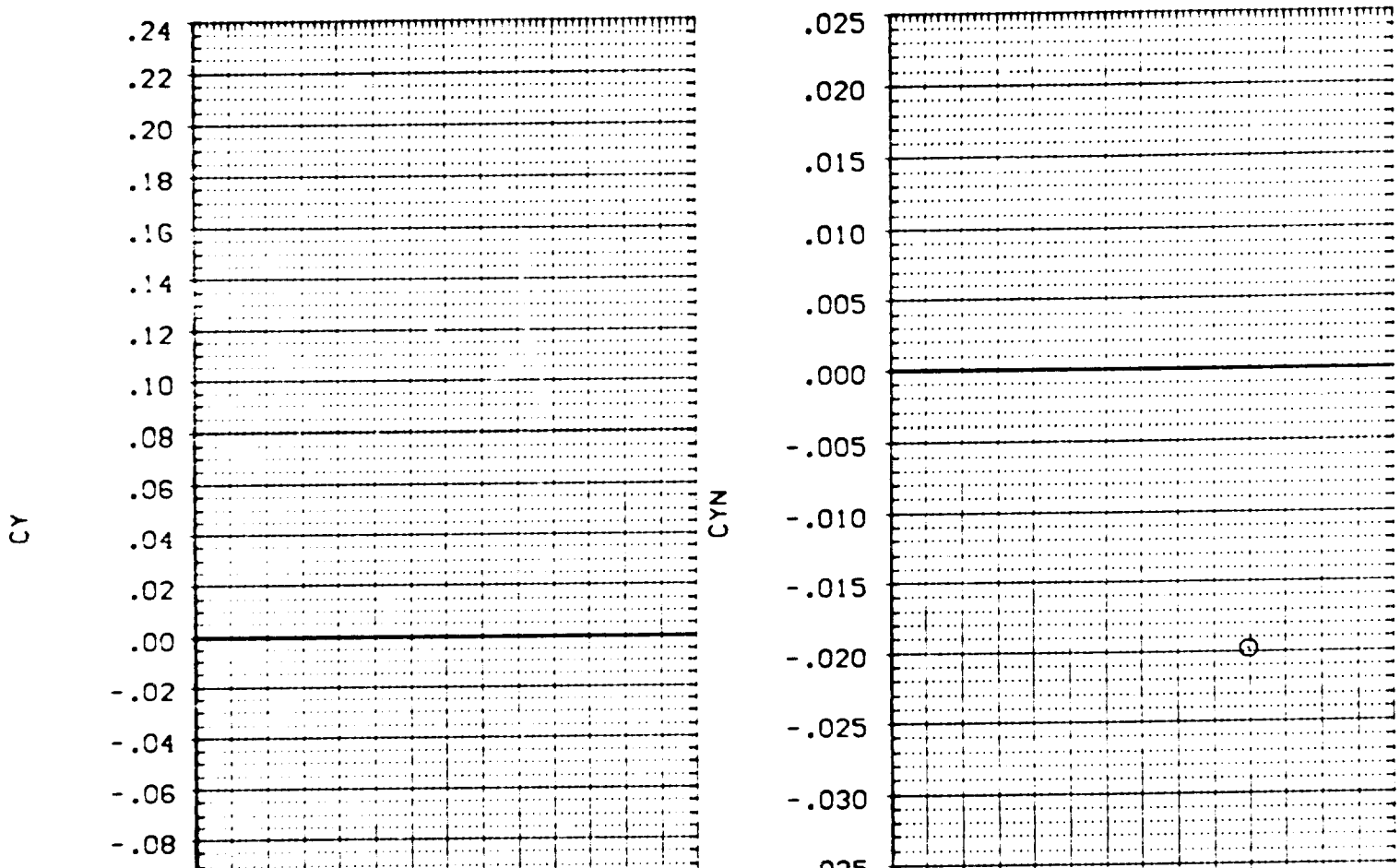


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

[A]3.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT46)

SYMBOL	x	PARAMETRIC VALUES			
○	.356	MACH	4.520	PTOTAL	80.000
		ALPHA	-10.000	BETA	.000
		DALPHA	-30.000	DBETA	.000
		ELEVTR	.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

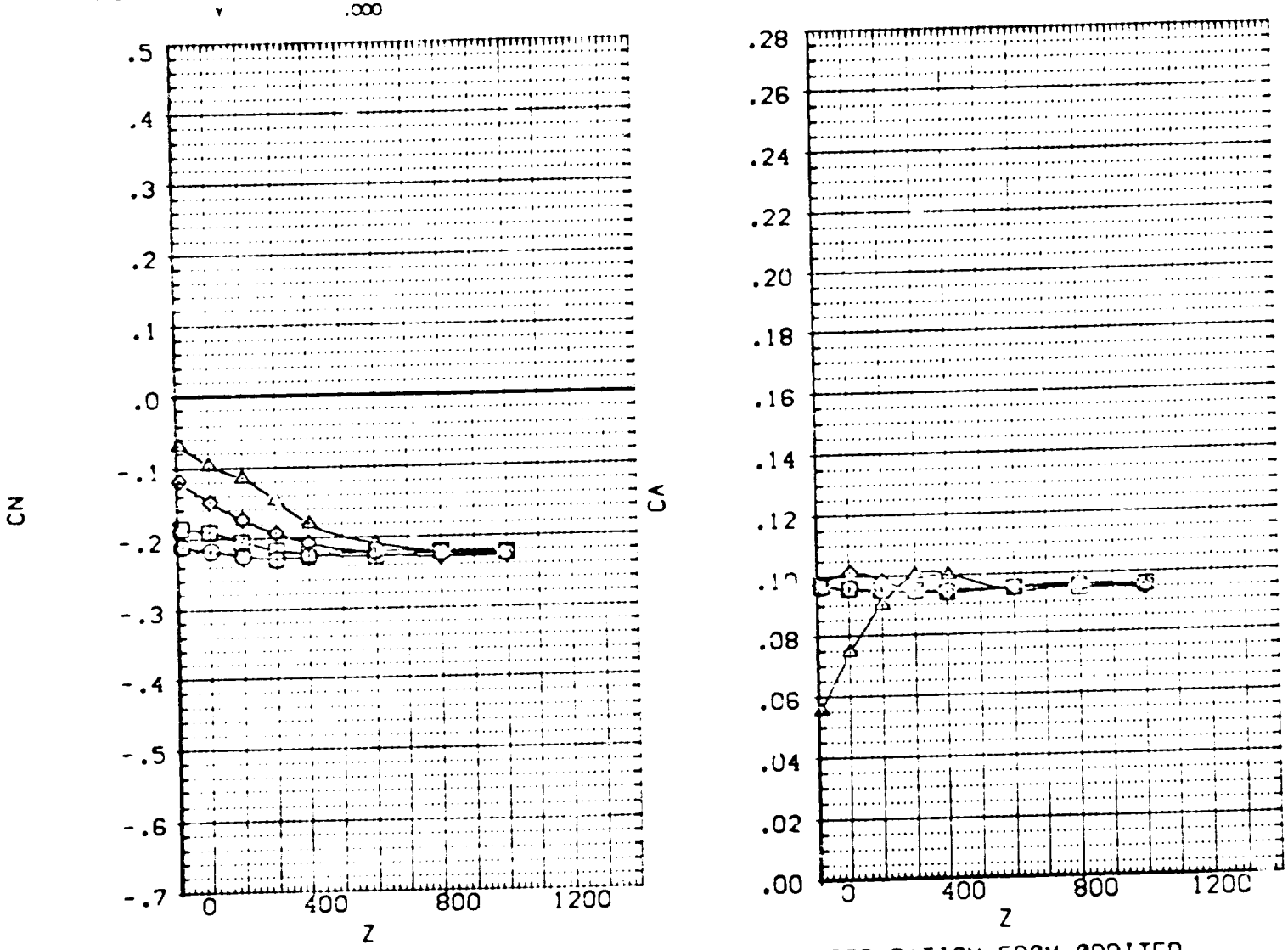


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

[A13,EXTERNAL TANK(T10)SEPARATING FROM ORB. C9 (RTJT47)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

SYMBOL	X		PARAMETRIC VALUES		
	.405	MACH	4.520	PTOTAL	80.000
	400.680	ALPHA	-2'.000	BETA	.000
	800.710	DALPHA	6.000	DBETA	.000
	1200.800	ELEVTR	.000	AILRON	.000
		Y	.000		

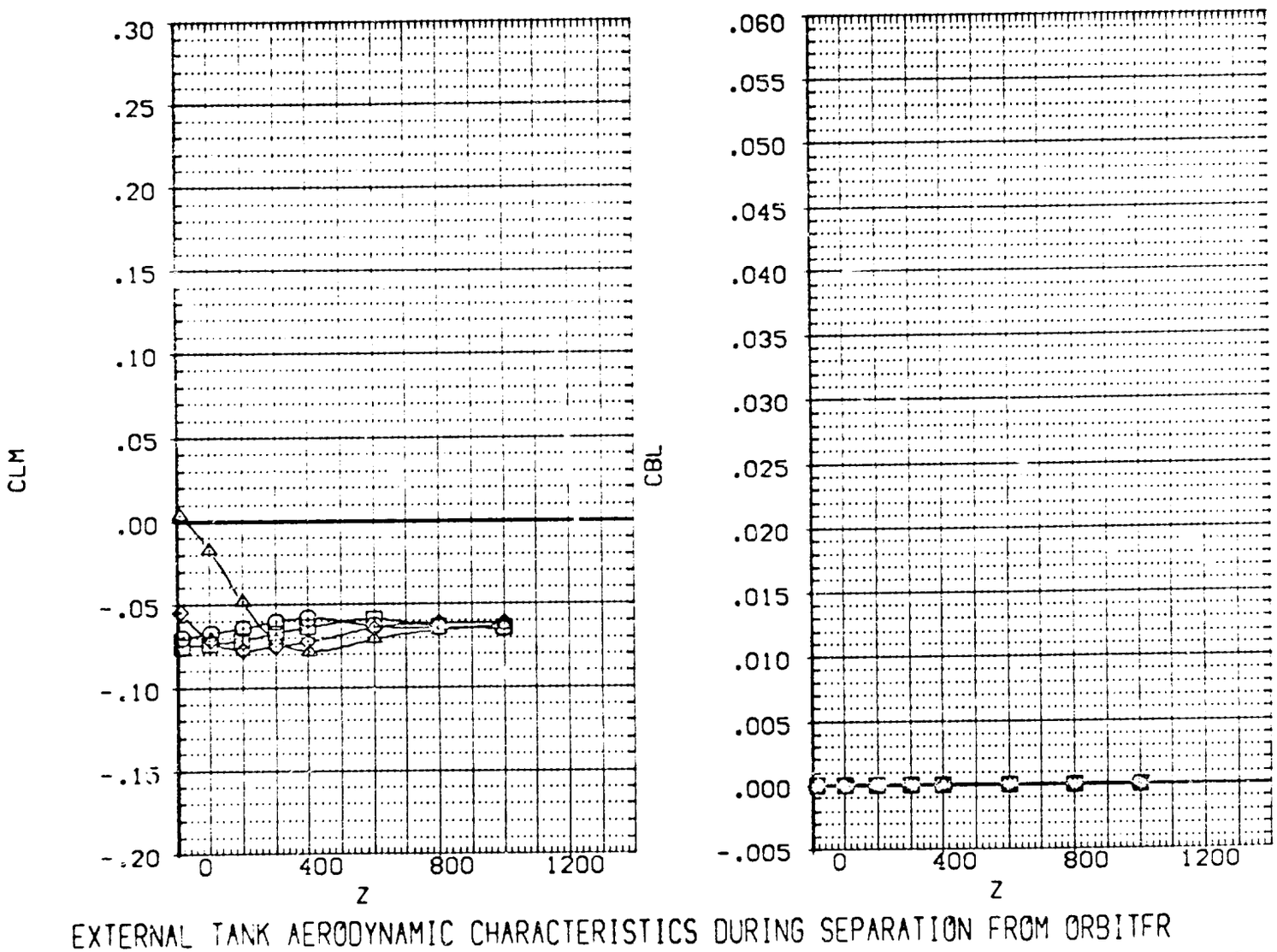


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

!A13,EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT47)

SYMBOL	X		PARAMETRIC VALUES		
○	.405	MACH	4.520	PTOTAL	80.000
◇	470.680	ALPHA	-21.000	BETA	.000
□	800.710	DALPHA	6.000	DBETA	.000
△	1200.800	ELEVTR	.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

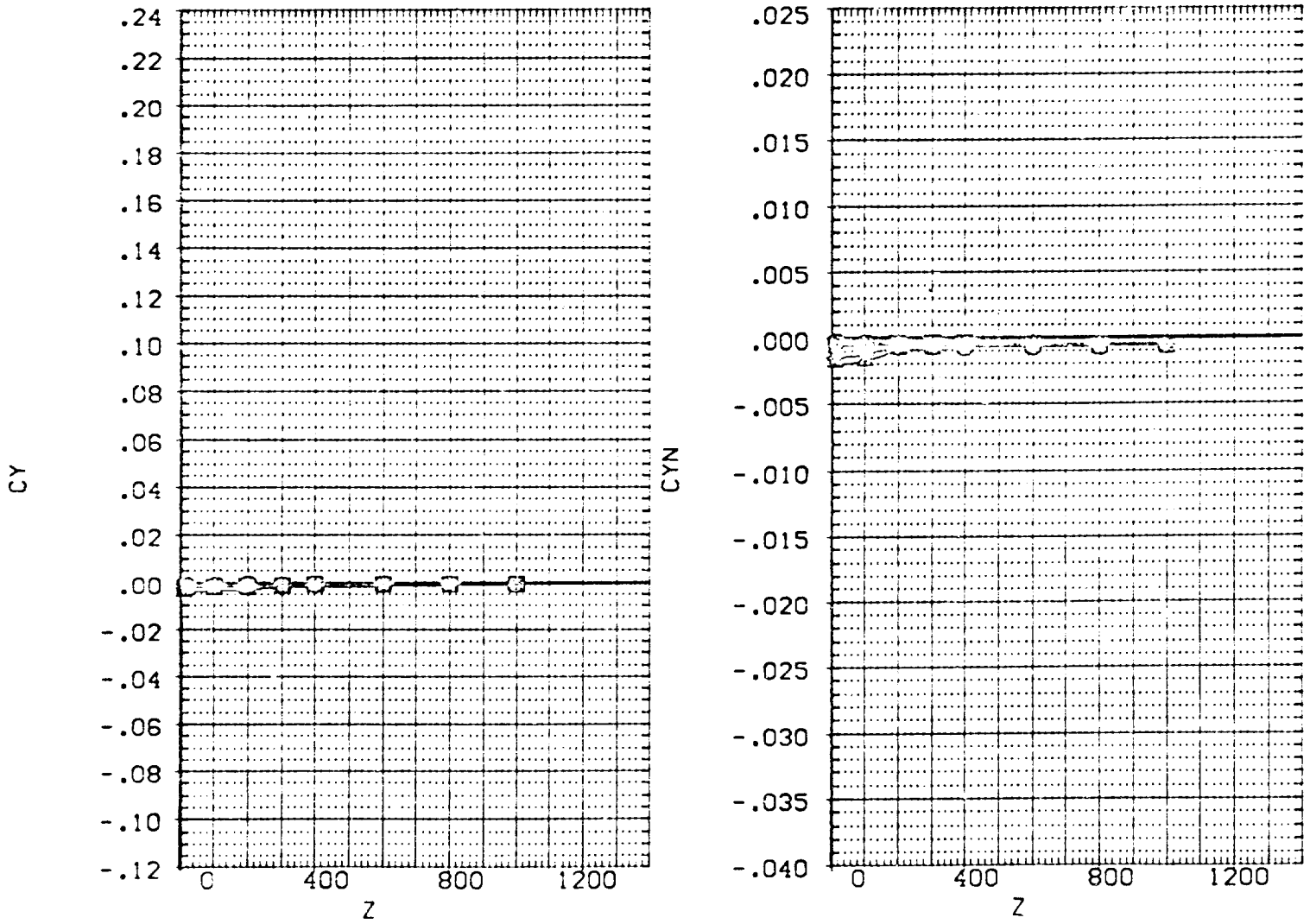


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

[A13,EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT47)

SYMBOL	X	PARAMETRIC VALUES			
○□	.405	MACH	4.520	PTOTAL	80.000
◇	400.680	ALPHA	-21.000	BETA	.000
	800.710	DALPHA	6.000	DBETA	.000
△	1200.800	ELEVTR	.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

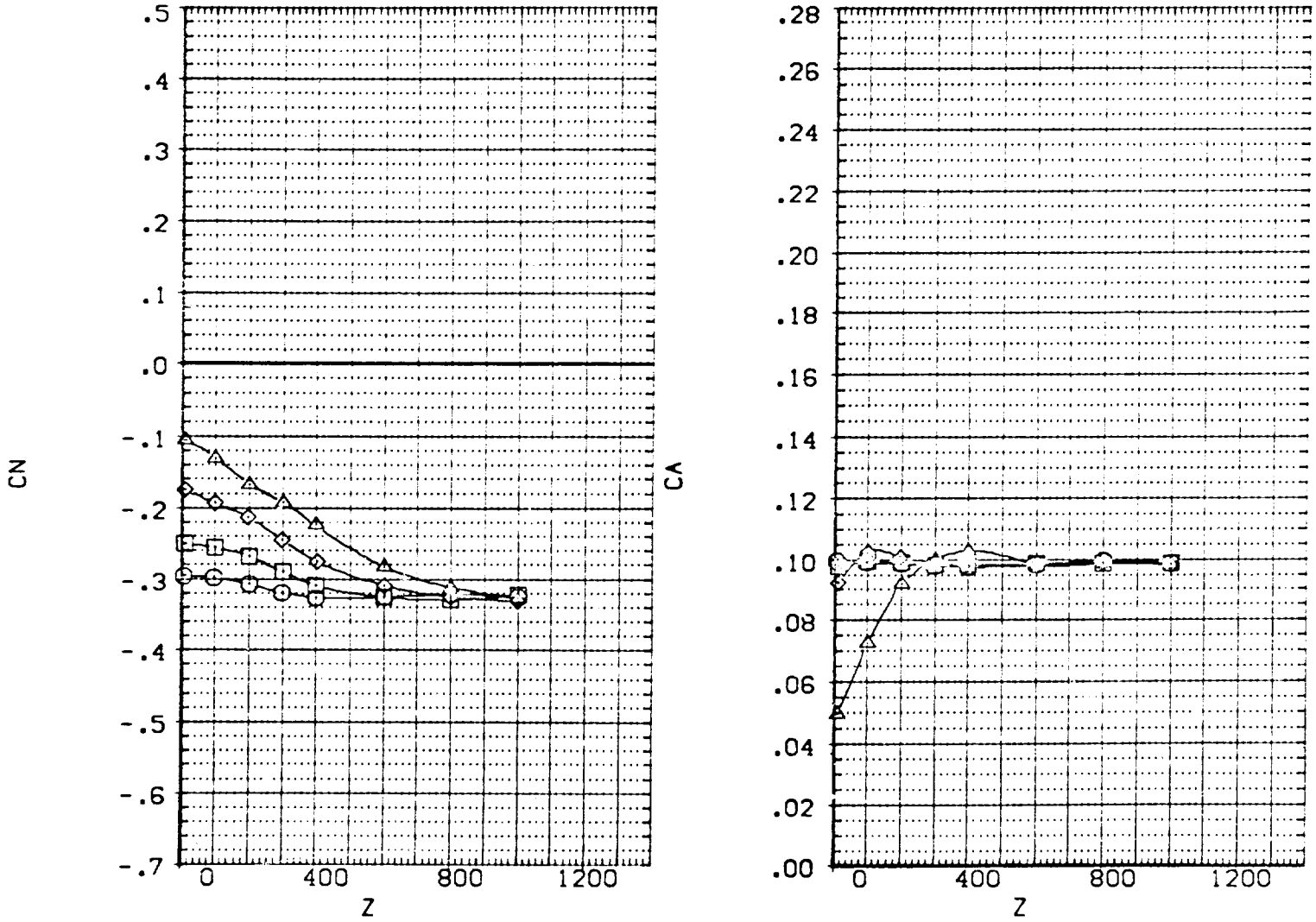


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT48)

SYMBOL	X		PARAMETRIC VALUES		
○	.276	MACH	4.520	PTOTAL	80.000
□	400.440	ALPHA	-21.000	BETA	.000
◇	800.590	DALPHA	1.000	DBETA	.000
△	1200.700	ELEVTR	.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

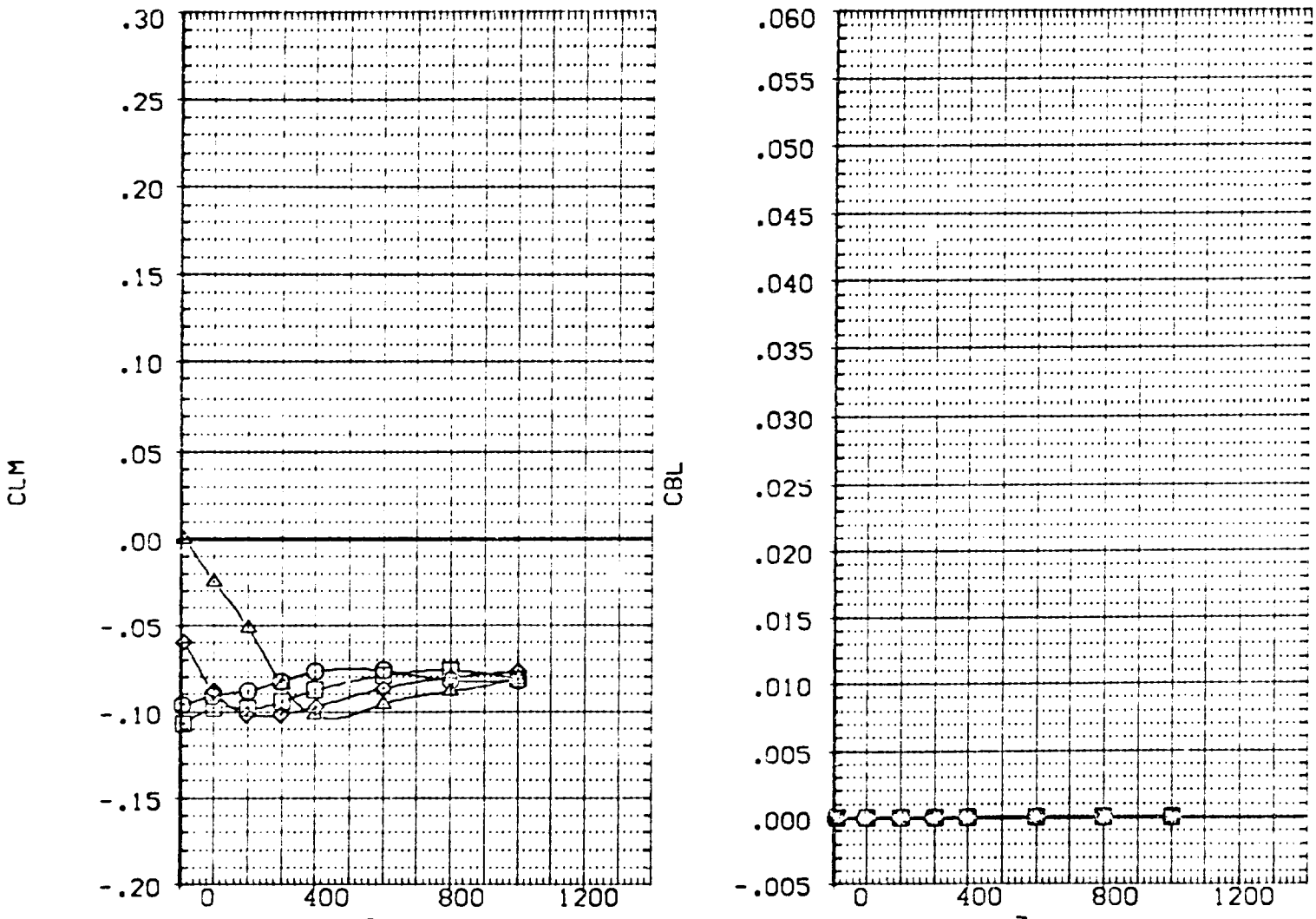


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

[A13,EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT48)

SYMBOL	X		PARAMETRIC VALUES		
○	.276	MACH	4.520	PTOTAL	80.000
□	400.440	ALPHA	-21.000	BETA	.000
◇	800.590	DALPHA	1.000	DBETA	.000
△	1200.700	ELEVTR	.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

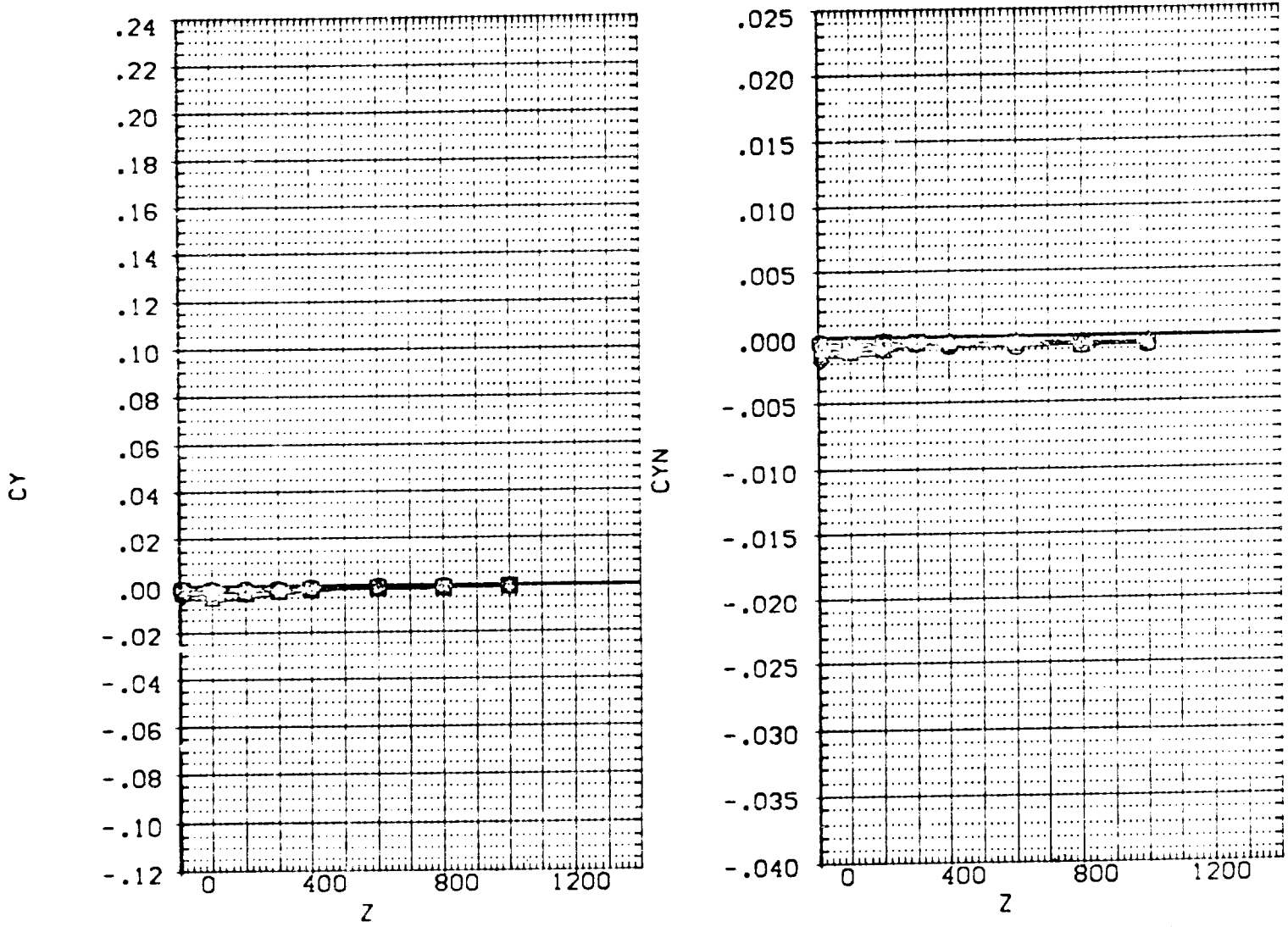


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

[A13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT48)

SYMBOL	X		PARAMETRIC VALUES		
○	.276	MACH	4.520	PTOTAL	80.000
□	400.440	ALPHA	-21.000	BETA	.000
◇	800.590	DALPHA	1.000	DBETA	.000
△	1200.700	ELEVTR	.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

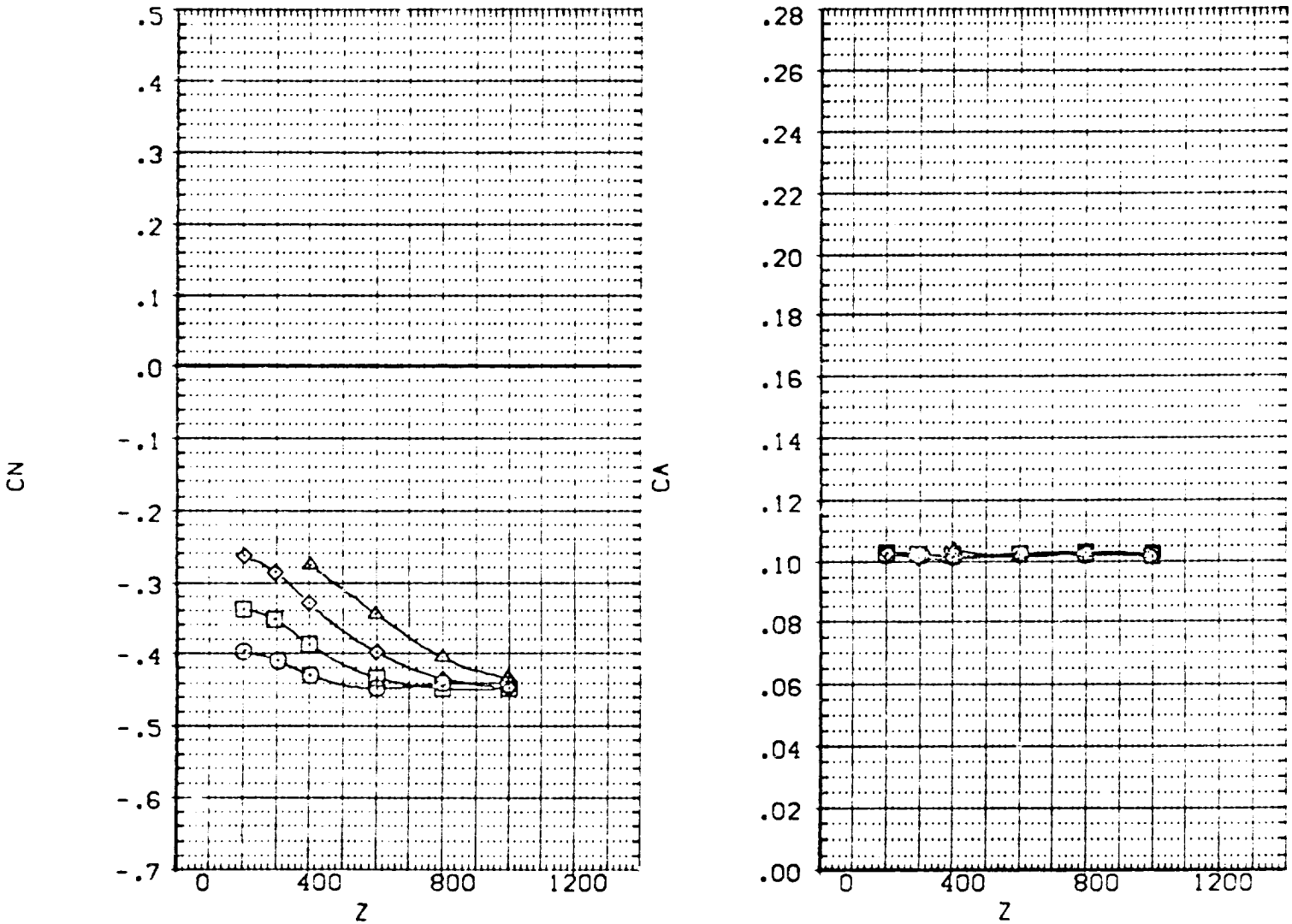


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

[A13,EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT49)

SYMBOL	X		PARAMETRIC VALUES		
○	.285	MACH	4.520	PTOTAL	80.000
◇	400.570	ALPHA	-21.000	BETA	.000
△	800.340	DALPHA	-4.000	DBETA	.000
	1200.800	ELEVTR	.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

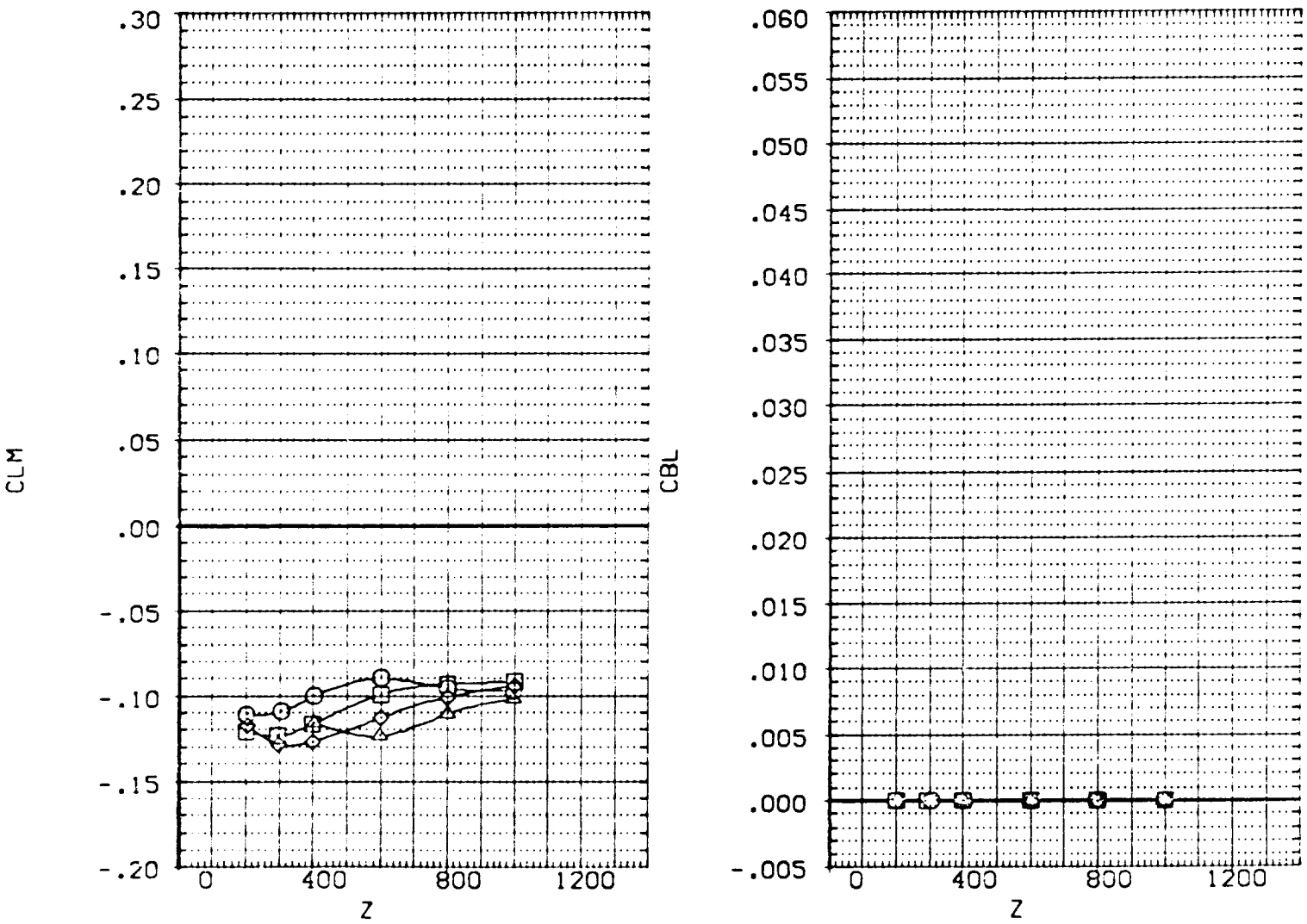


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

[A13,EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT49)

SYMBOL	X		PARAMETRIC VALUES		
○	.285	MACH	4.520	PTOTAL	80.000
◇	400.570	ALPHA	-21.000	BETA	.000
△	800.340	DALPHA	-4.000	DBETA	.000
	1200.800	ELEVTR	.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

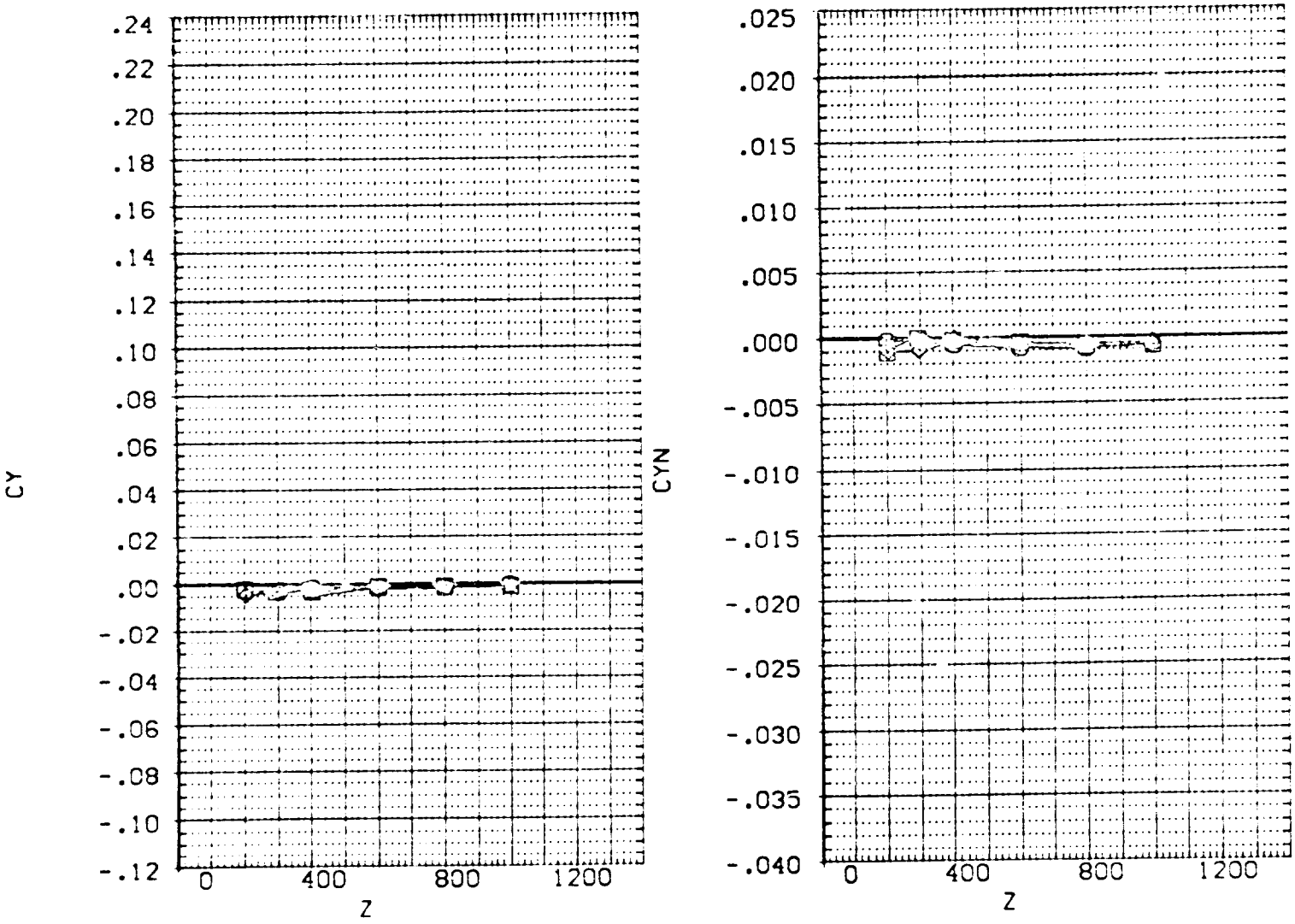


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

IA13.EXTERNAL TANK(T1O)SEPARATING FROM ORB. 09 (RTJT49)

SYMBOL	X		PARAMETRIC VALUES		
○	.285	MACH	4.520	PTOTAL	80.000
□	400.570	ALPHA	-21.000	BETA	.000
◇	800.340	DALPHA	-4.000	DBETA	.000
△	1200.800	ELEVTR	.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

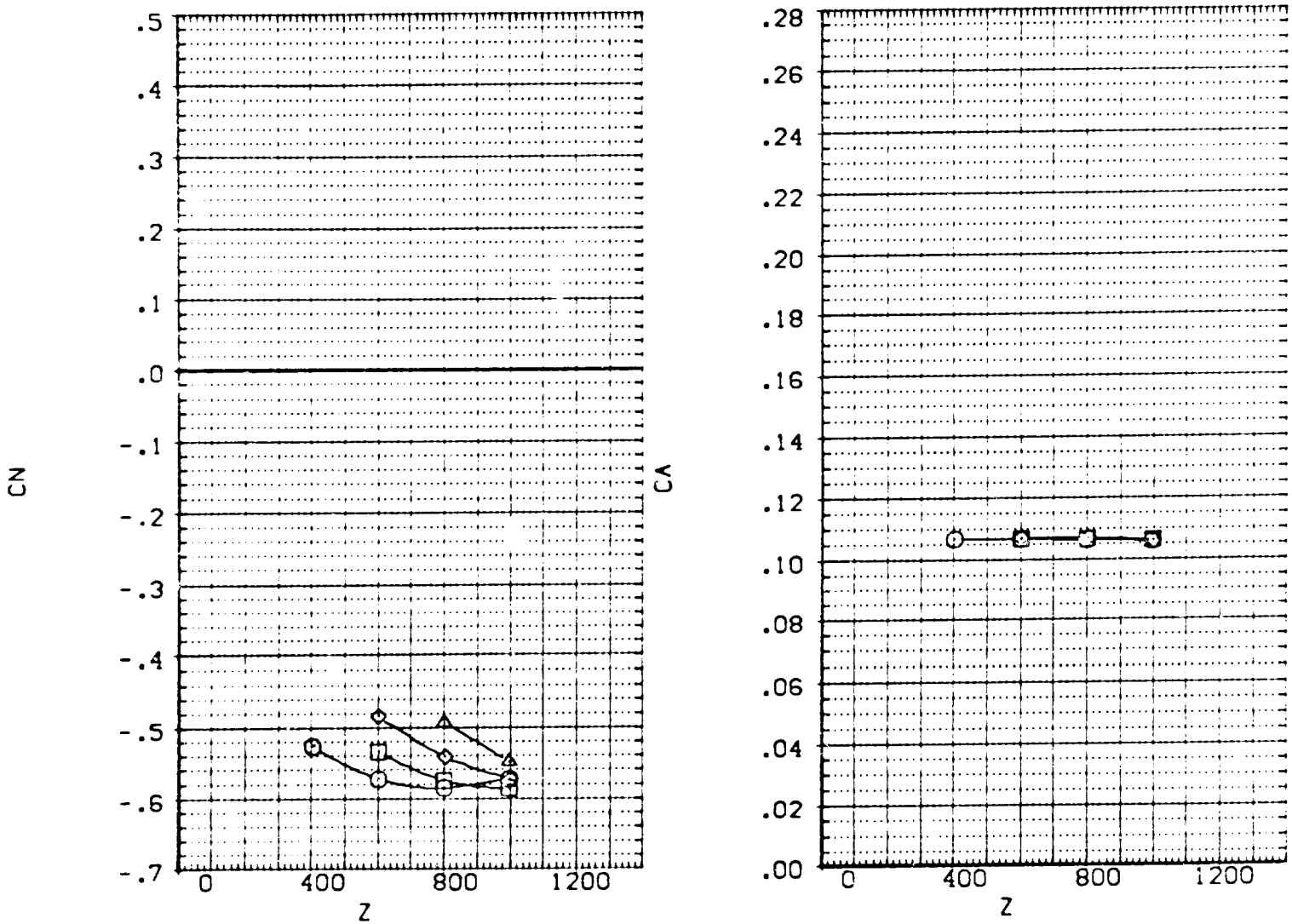


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

!A13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT50)

SYMBOL	X		PARAMETRIC VALUES		
○	.174	MACH	4.520	PTOTAL	80.000
□	400.460	ALPHA	-21.000	BETA	.000
◇	800.230	DALPHA	-9.000	DBETA	.000
△	1200.600	ELEVTR	.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

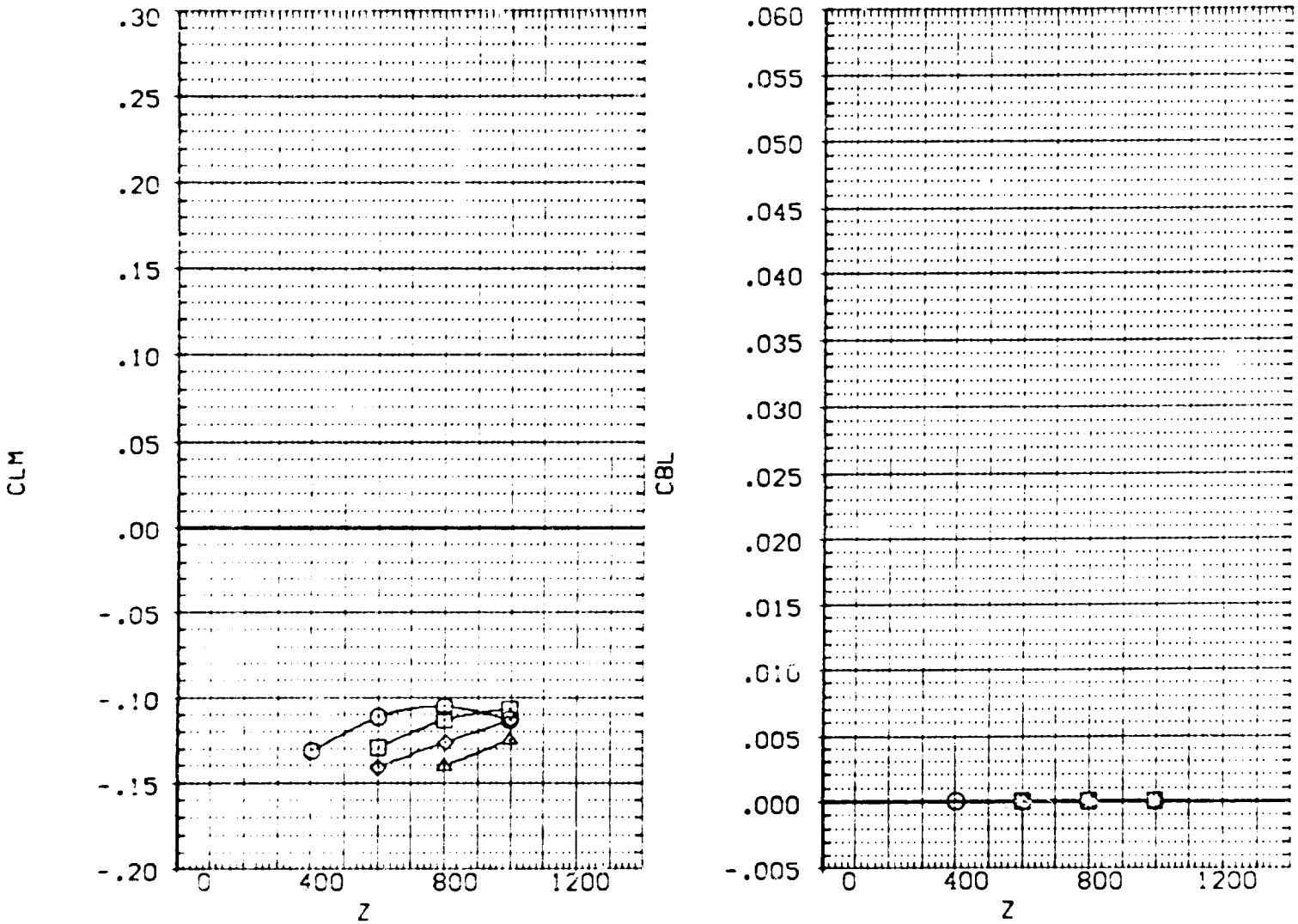


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

[illegible] TANK(TIO)SEPARATING FROM ORB. OB (RTJT00)

SYMBOL	X		PARAMETRIC VALUES		
	.174	MACH	4.520	PTOTAL	80.000
	400.460	ALPHA	-21.000	BETA	.000
	800.230	DALPHA	-9.000	DBETA	.000
△	1200.600	ELEVTR	.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

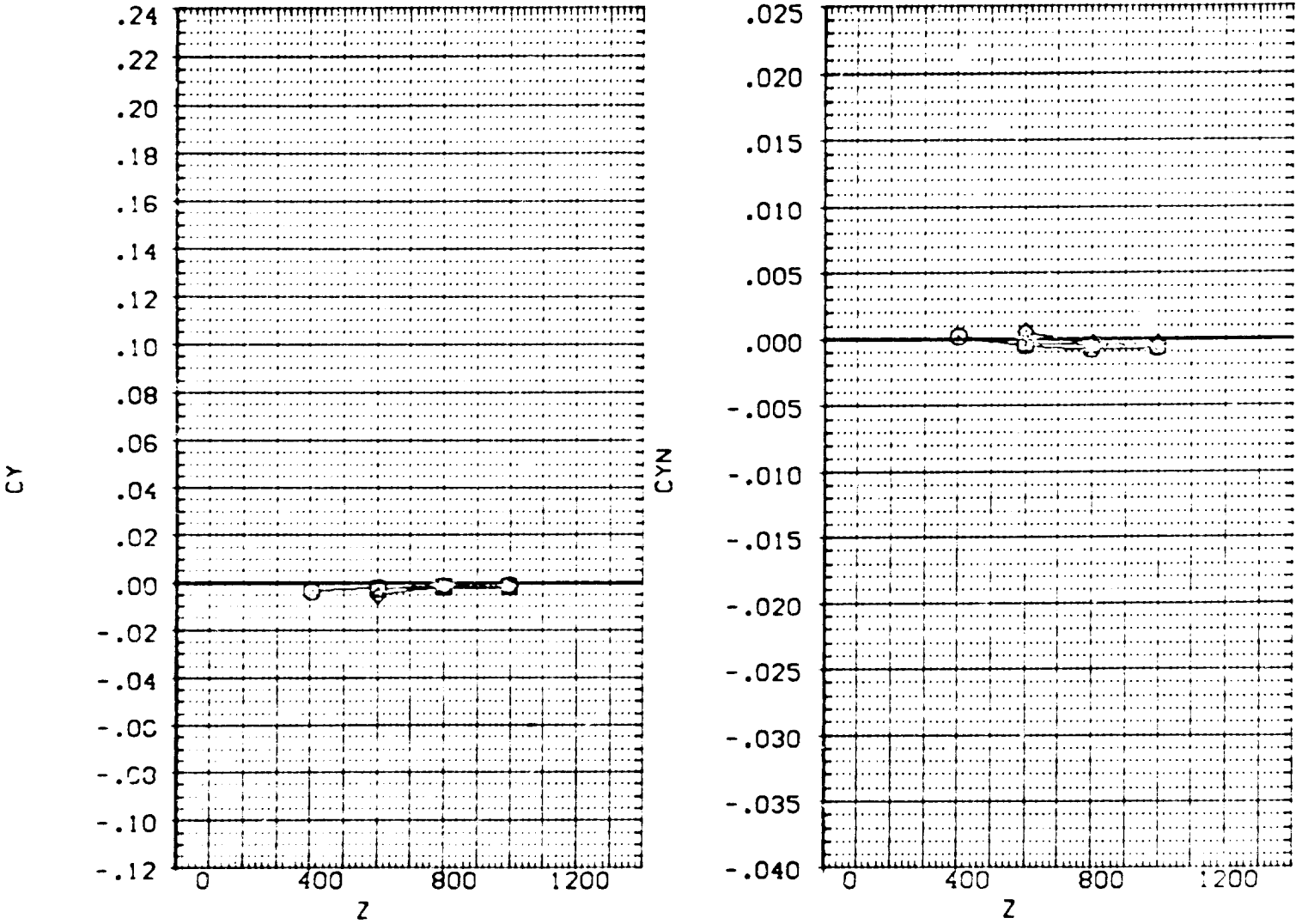


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

[A:3,EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT50)

SYMBOL	X		PARAMETRIC VALUES		
○	.174	MACH	4.520	PTOTAL	80.000
◇	400.460	ALPHA	-21.000	BETA	.000
△	800.230	DALPHA	-9.000	DBETA	.000
	1200.600	ELEVTR	.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

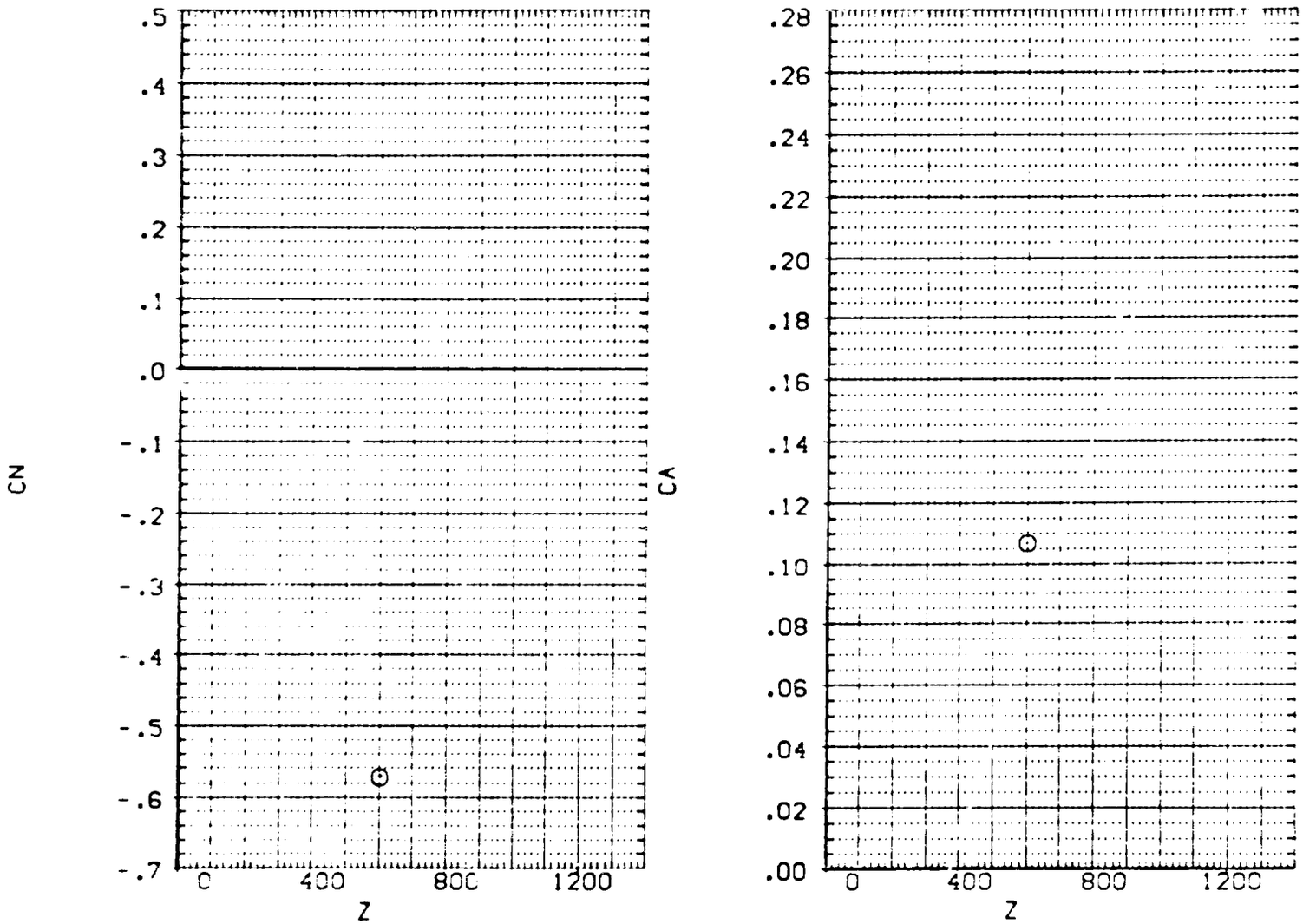


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

[illegible] EXTERNAL TANK SEPARATING FROM ORB. 09 (RTLS1)

SYMBOL	X		PARAMETRIC VALUES		
C	.099	MACH	4.520	PTOTAL	80.000
		ALPHA	-21.000	BETA	.000
		DALPHA	-19.000	DBETA	.000
		ELEVTR	.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

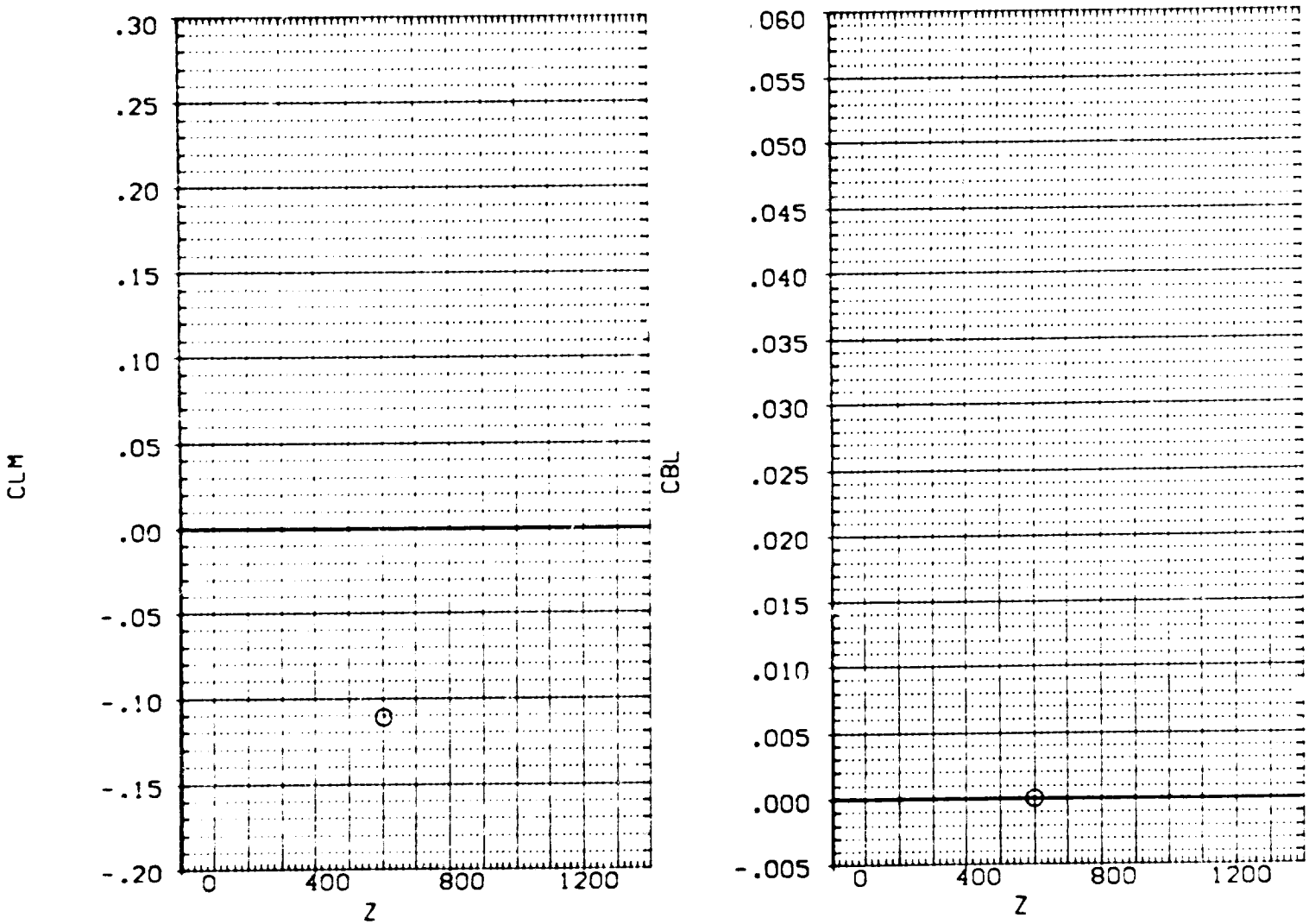


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

[A13,EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT51)

SYMBOL	X	PARAMETRIC VALUES			
○	.299	MACH	4.520	PTOTAL	80.000
		ALPHA	-21.000	BETA	.000
		DALPHA	-19.000	DBETA	.000
		ELEVTR	.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

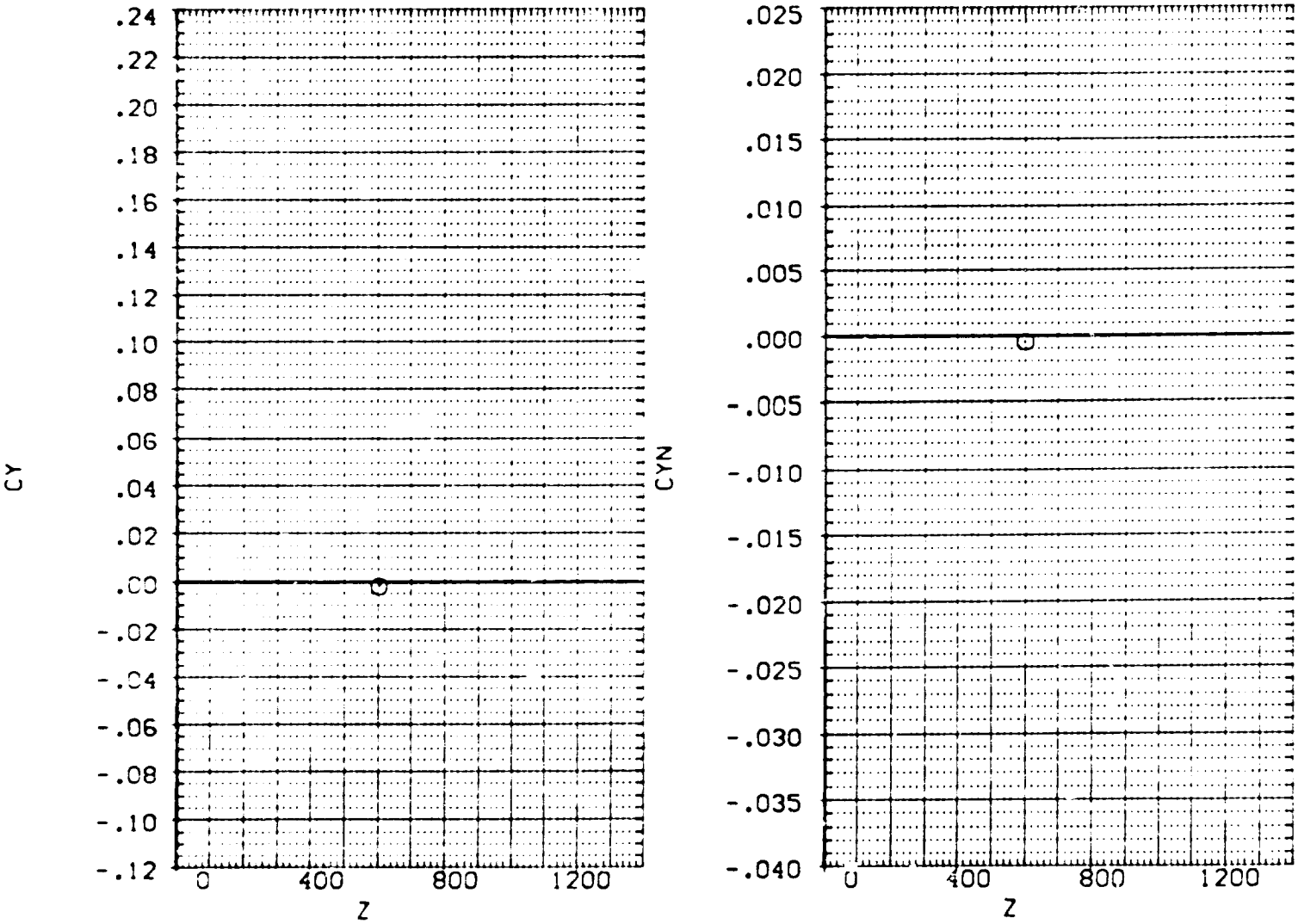


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

[A13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT51)

SYMBOL	x	PARAMETRIC VALUES			
○	.299	MACH	4.520	P'TOTAL	80.000
		ALPHA	-21.000	BETA	.000
		DALPHA	-19.000	DBETA	.000
		ELEVTR	.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

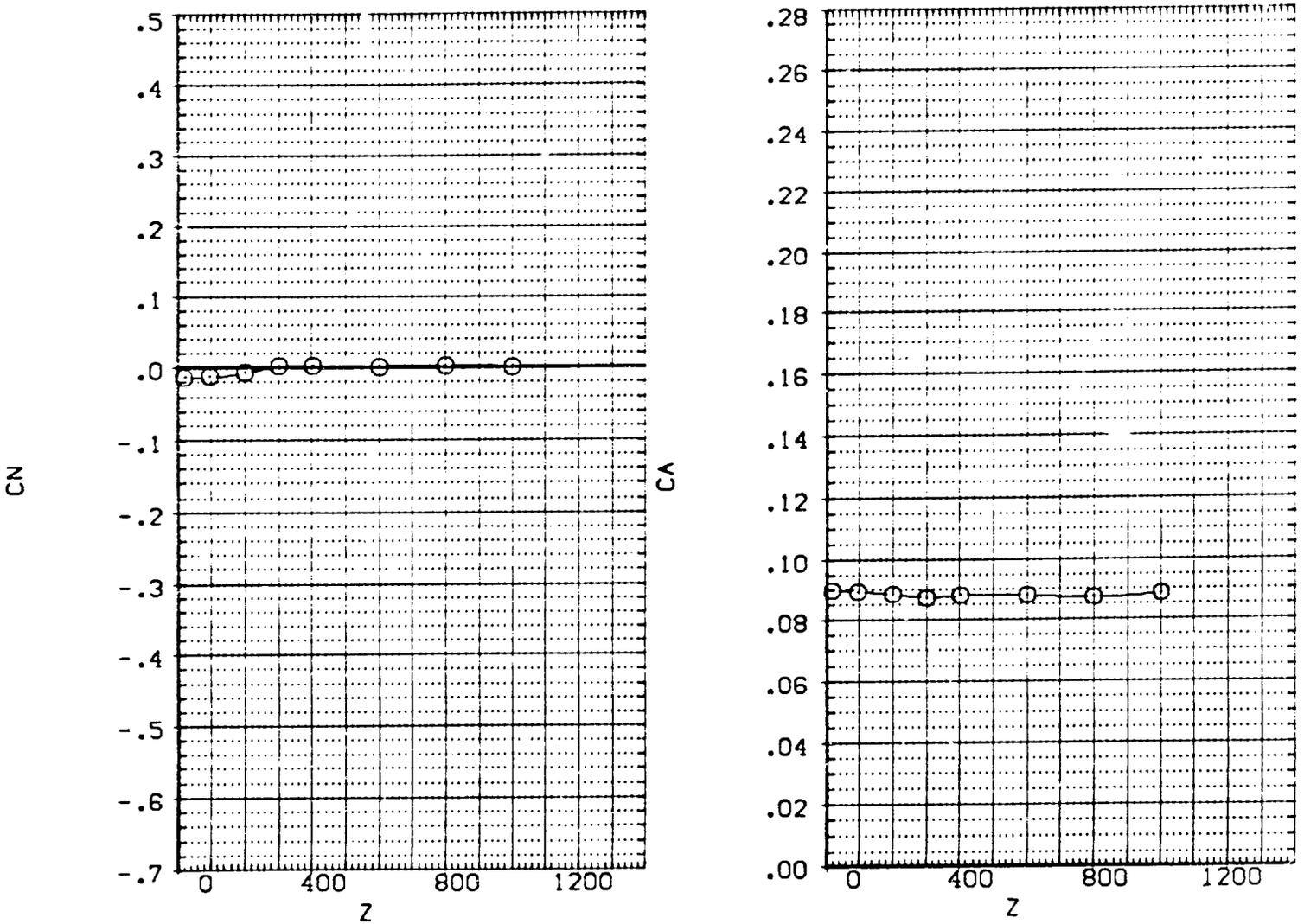


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

:A13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJTS2)

SYMBOL	X		PARAMETRIC VALUES		
○	.102	MACH	4.530	PTOTAL	110.000
		ALPHA	.000	BETA	.000
		DALPHA	.000	DBETA	.000
		ELEVTR	.000	AILRON	10.000
		Y	-200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

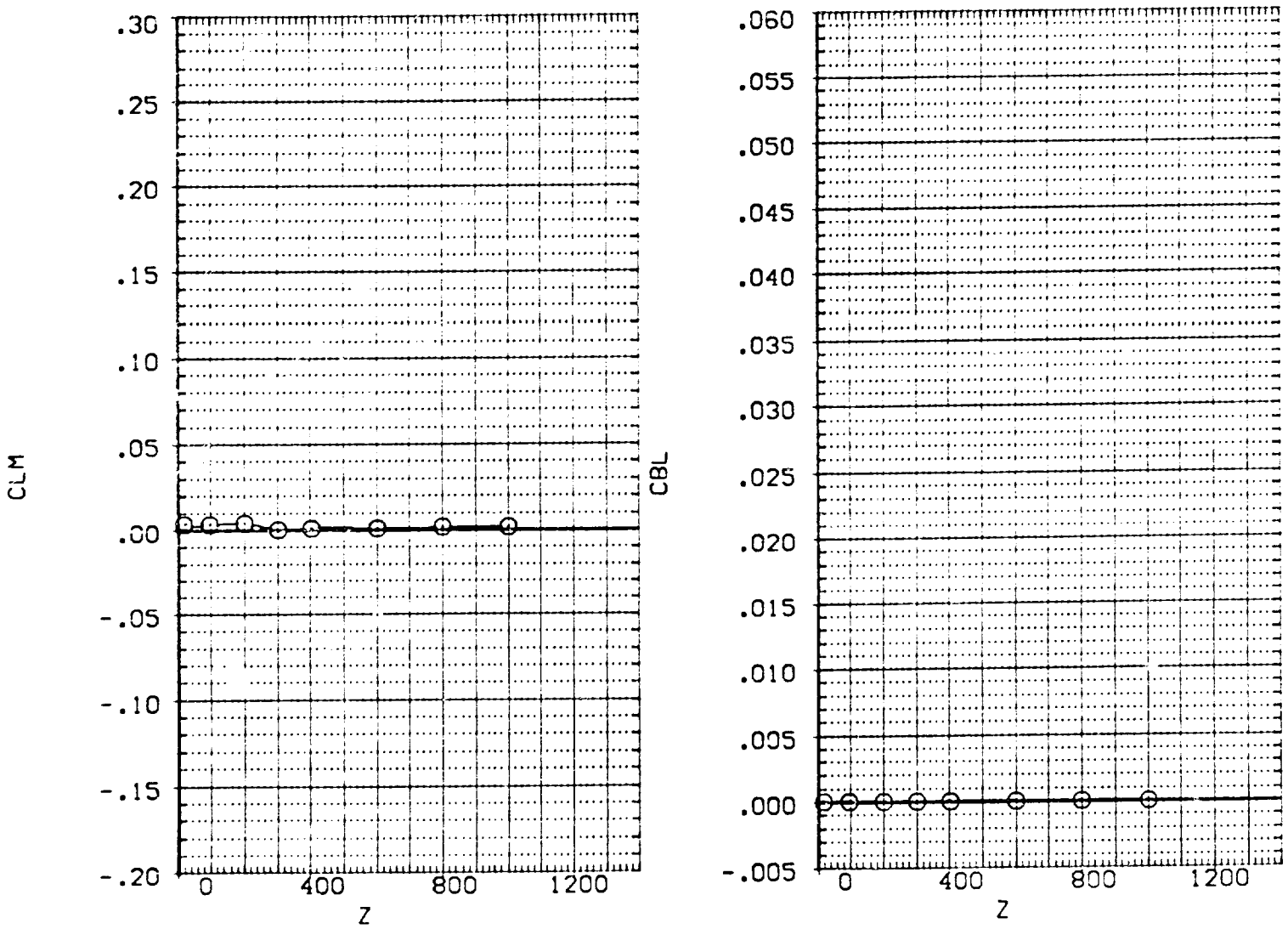


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

[A13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT52)

SYMBOL	X	PARAMETRIC VALUES			
○	.102	MACH	4.530	PTOTAL	110.000
		ALPHA	.000	BETA	.000
		DALPHA	.000	DBETA	.000
		ELEVTR	.000	AILRON	10.000
		Y	-200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

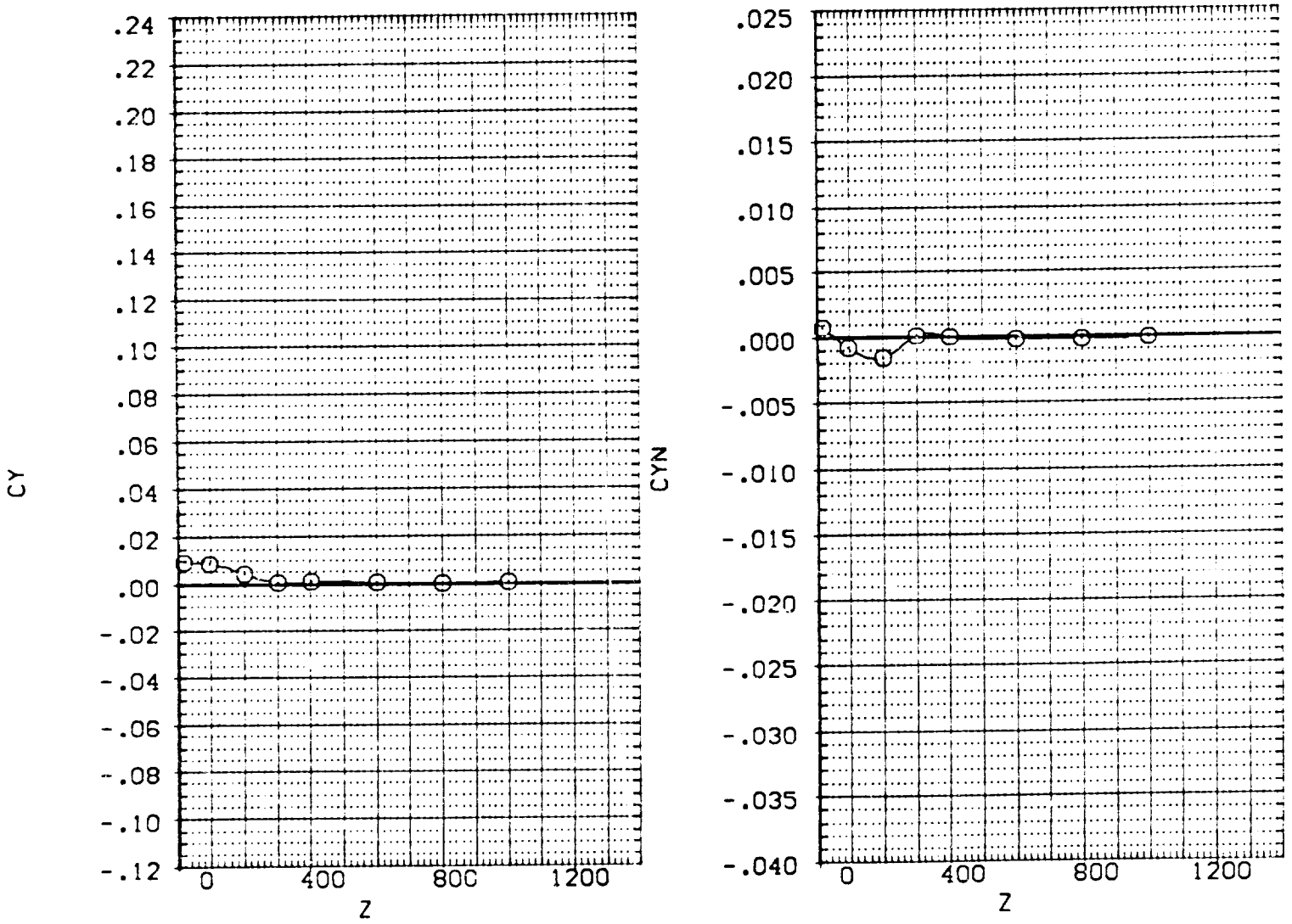


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT52)

SYMBOL	X	PARAMETRIC VALUES			
○	.102	MACH	4.530	PTOTAL	110.000
		ALPHA	.000	BETA	.000
		DALPHA	.000	DBETA	.000
		ELEVTR	.000	AILRON	10.000
		Y	-200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

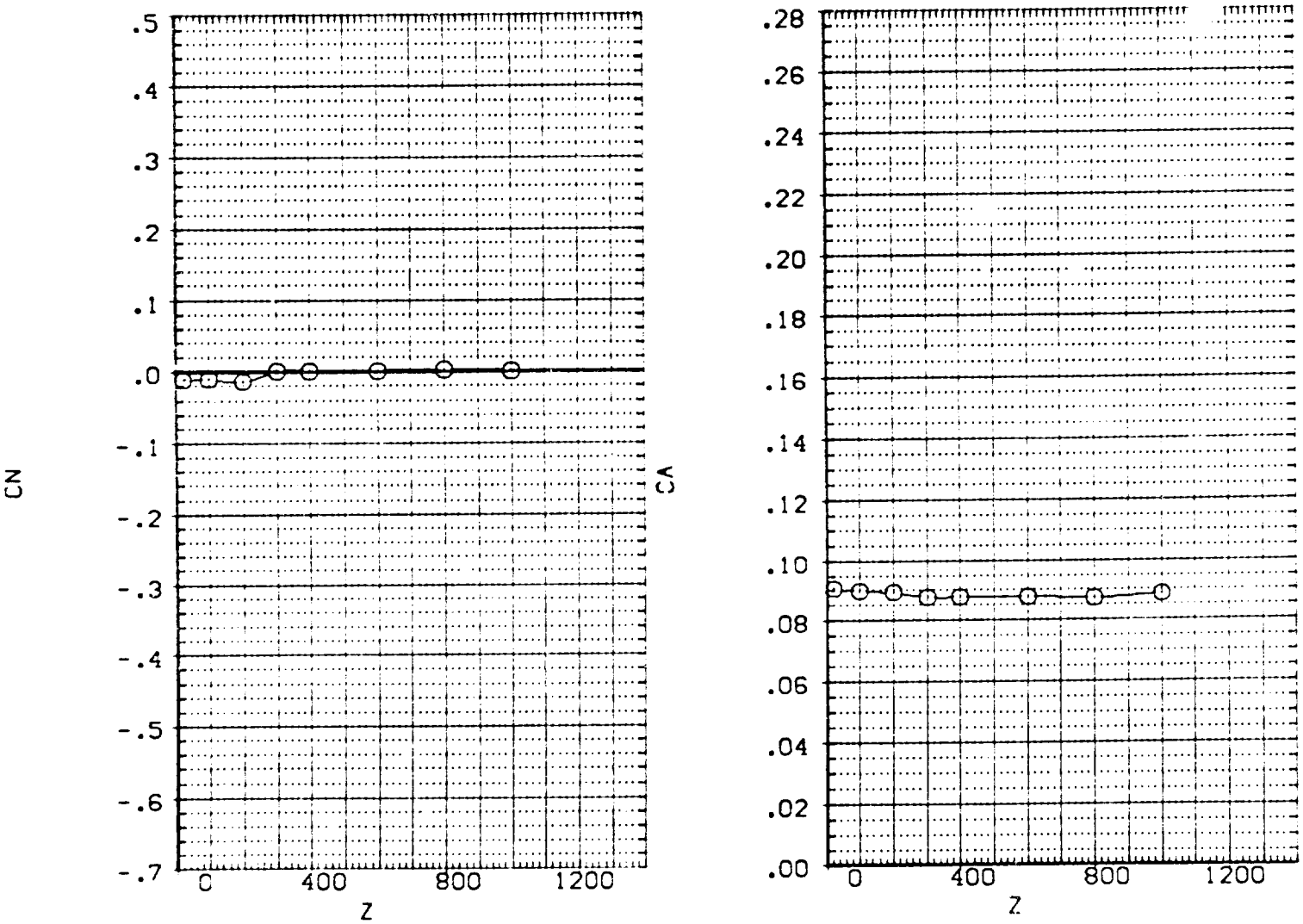


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

[A13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT53)

SYMBOL	X	PARAMETRIC VALUES			
○	.136	MACH	4.530	PTOTAL	110.000
		ALPHA	.000	BETA	.000
		DALPHA	.000	DBETA	.000
		ELEVTR	.000	AILRON	10.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

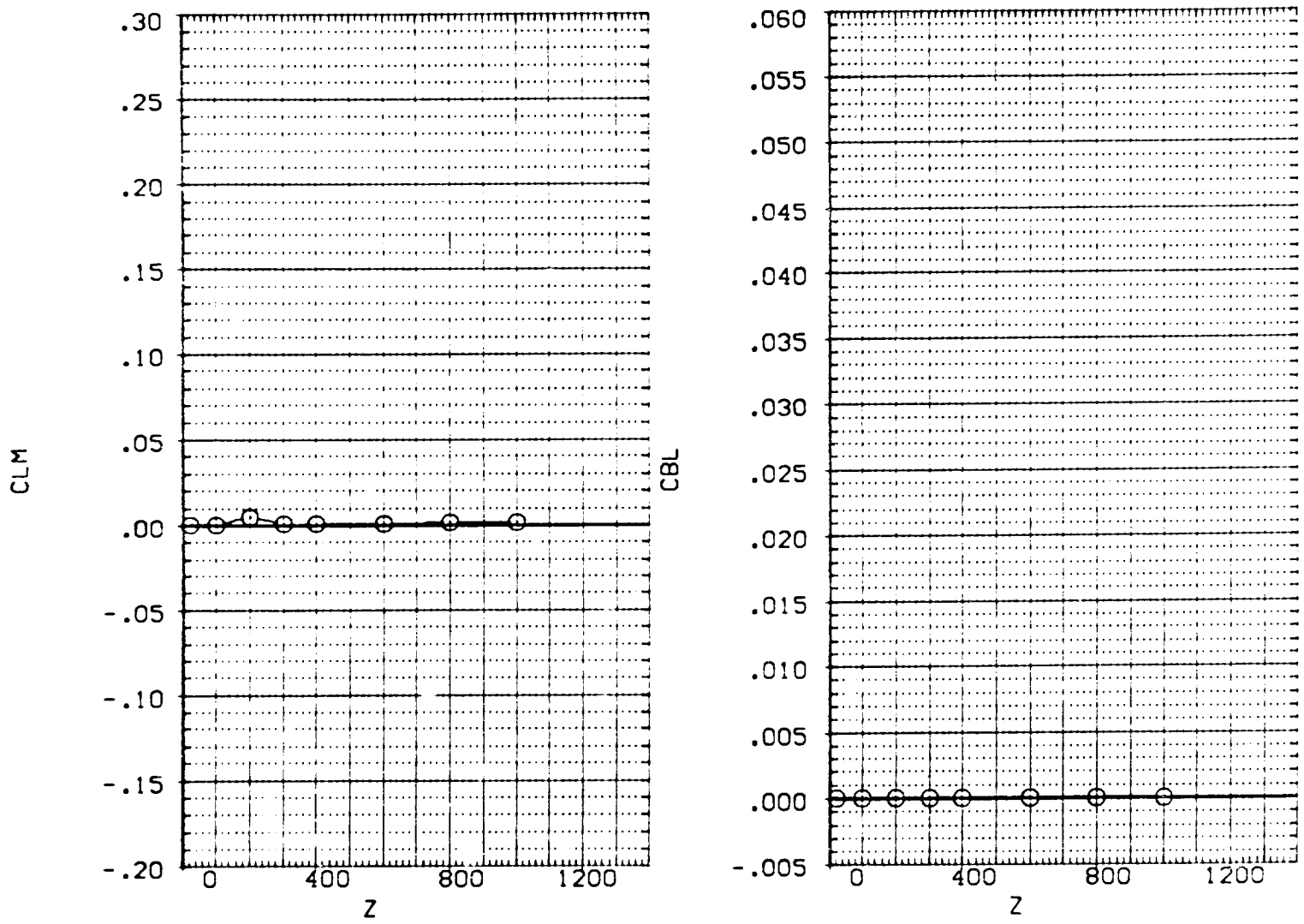


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT53)

SYMBOL	X	PARAMETRIC VALUES			
○	.136	MACH	4.530	PTOTAL	110.000
		ALPHA	.000	BETA	.000
		DALPHA	.000	DBETA	.000
		ELEVTR	.000	AILRON	10.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

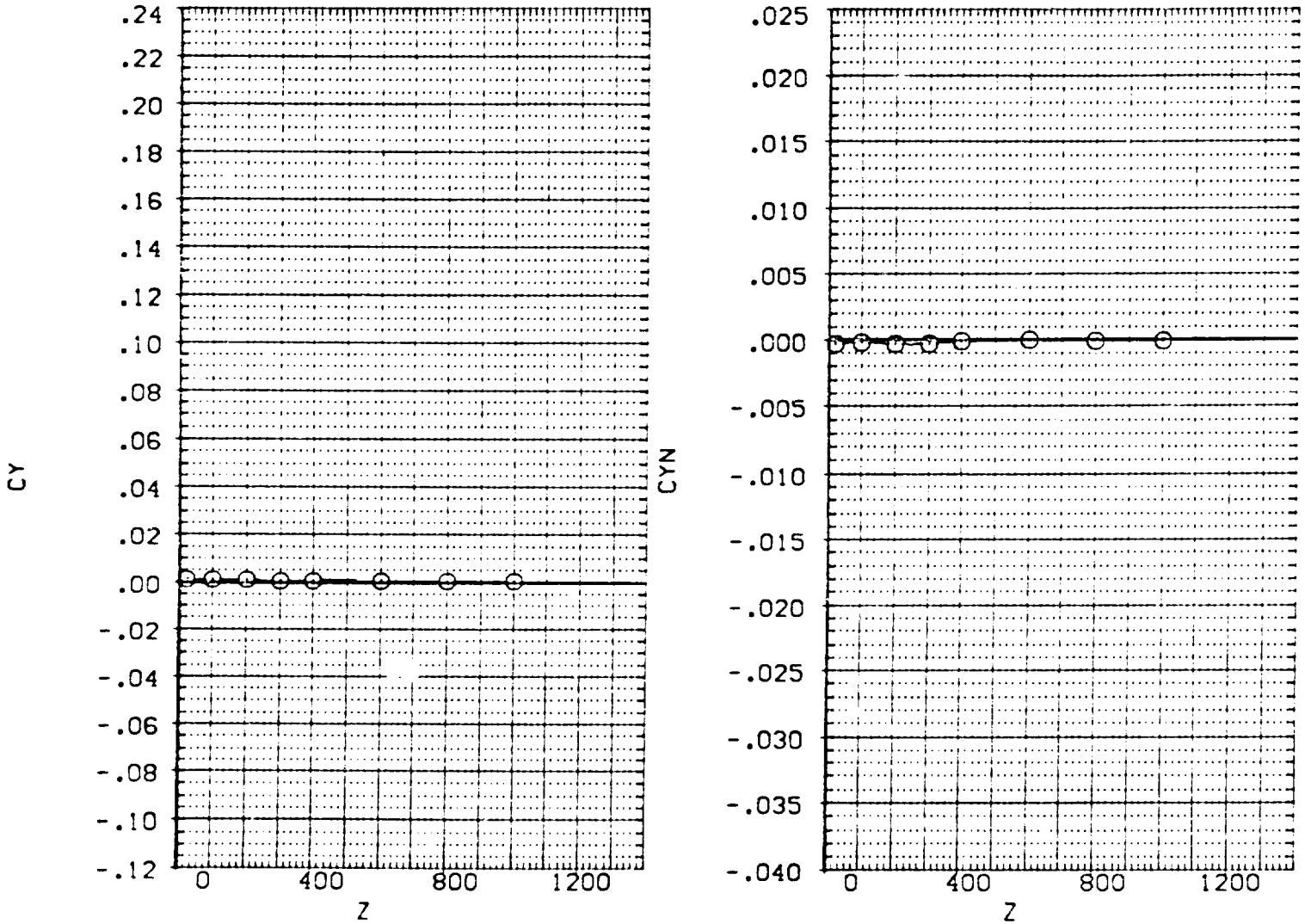


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

[A:3.EXTERNAL TANK(T:0)SEPARATING FROM ORB. 09 (RTJT53)

SYMBOL	X	PARAMETRIC VALUES			
○	.136	MACH	4.530	PTOTAL	110.000
		ALPHA	.000	BETA	.000
		DALPHA	.000	DBETA	.000
		ELEVTR	.000	AILRON	10.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

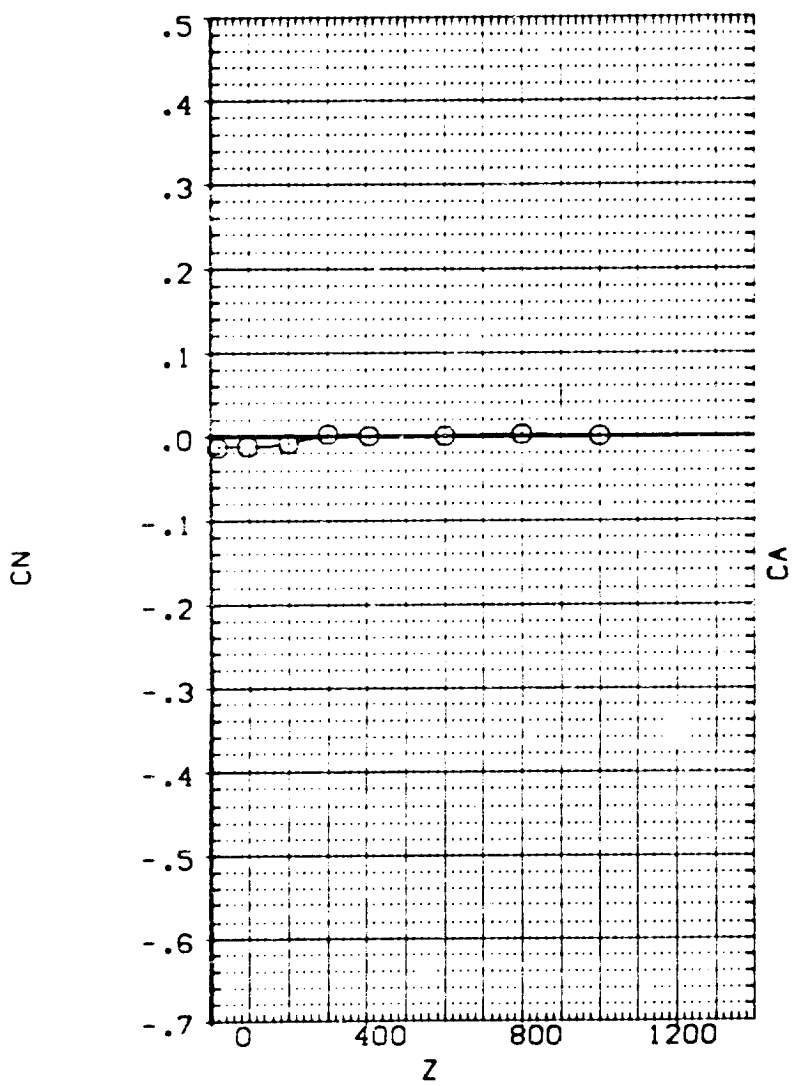


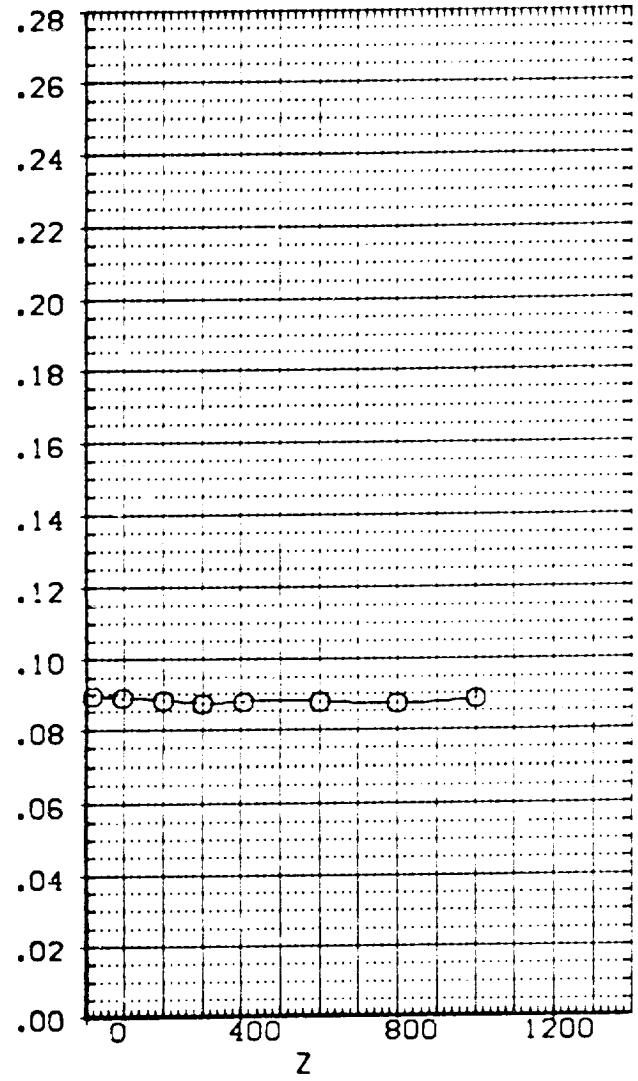
EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

[A13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT54)

SYMBOL	X		PARAMETRIC VALUES		
C	.020	MACH	4.530	PTOTAL	110.000
		ALPHA	.000	BETA	.000
		DALPHA	.000	DBETA	.000
		ELEVTR	.000	AILRON	10.000
		Y	200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



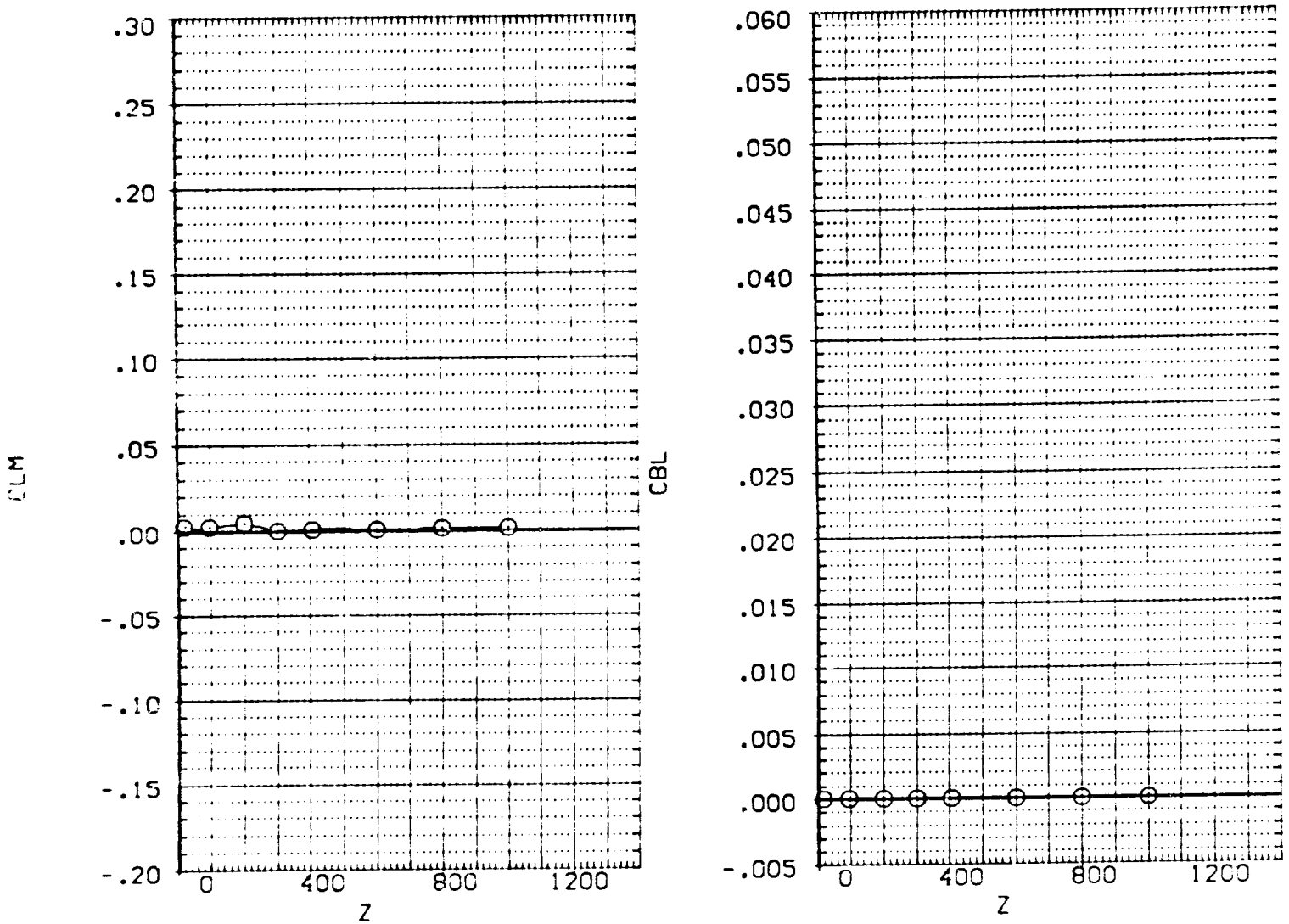


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

[A13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT54)

SYMBOL	X		PARAMETRIC VALUES		
○	.020	MACH	4.530	PTOTAL	110.000
		ALPHA	.000	BETA	.000
		DALPHA	.000	DBETA	.000
		ELEVTR	.000	AILRON	10.000
		Y	200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

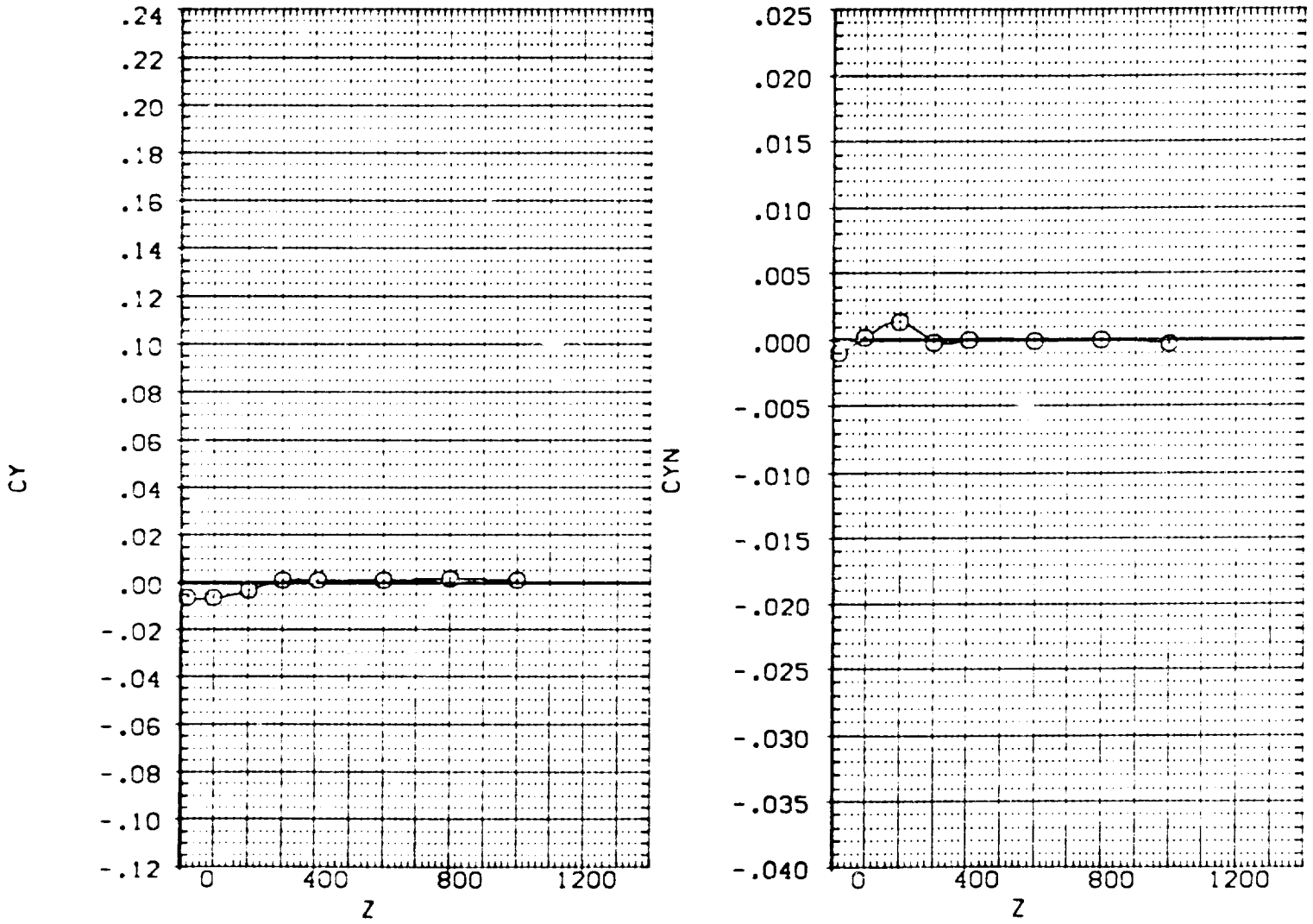


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

!A13,EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT54)

SYMBOL	X	PARAMETRIC VALUES			
○	.020	MACH	4.630	PTOTAL	110.000
		ALPHA	.000	BETA	.000
		DALPHA	.000	DBETA	.000
		ELEVTR	.000	AILRON	10.000
		Y	200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

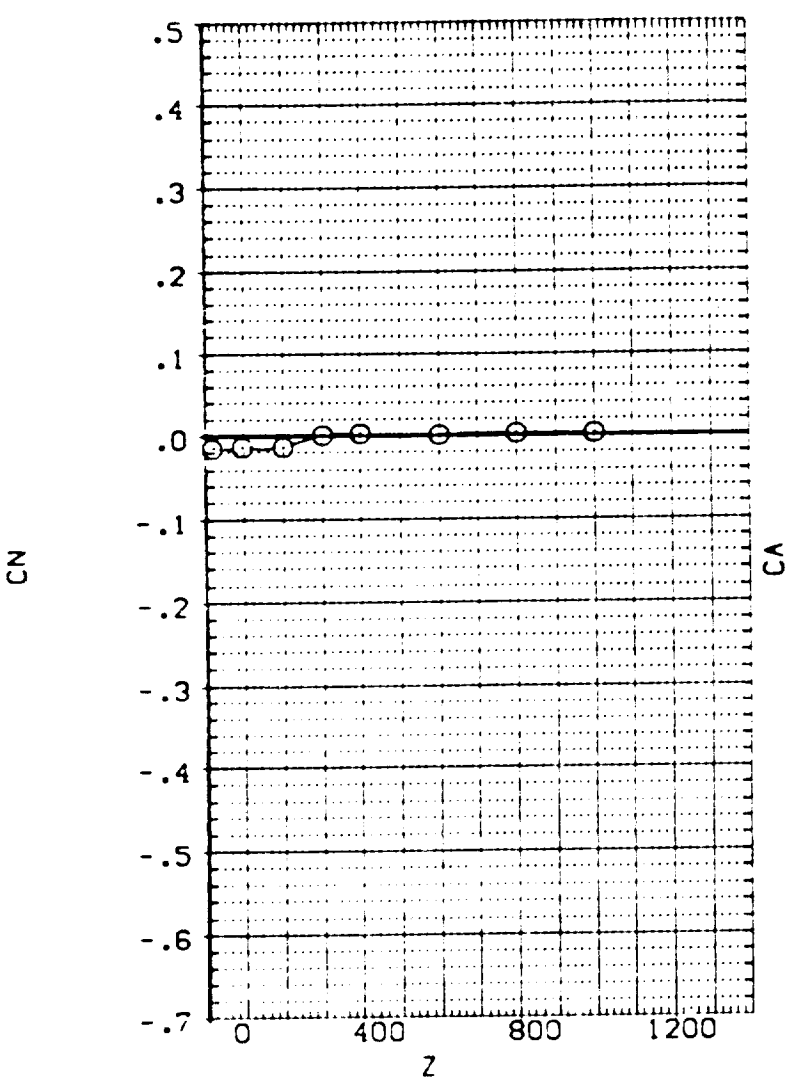


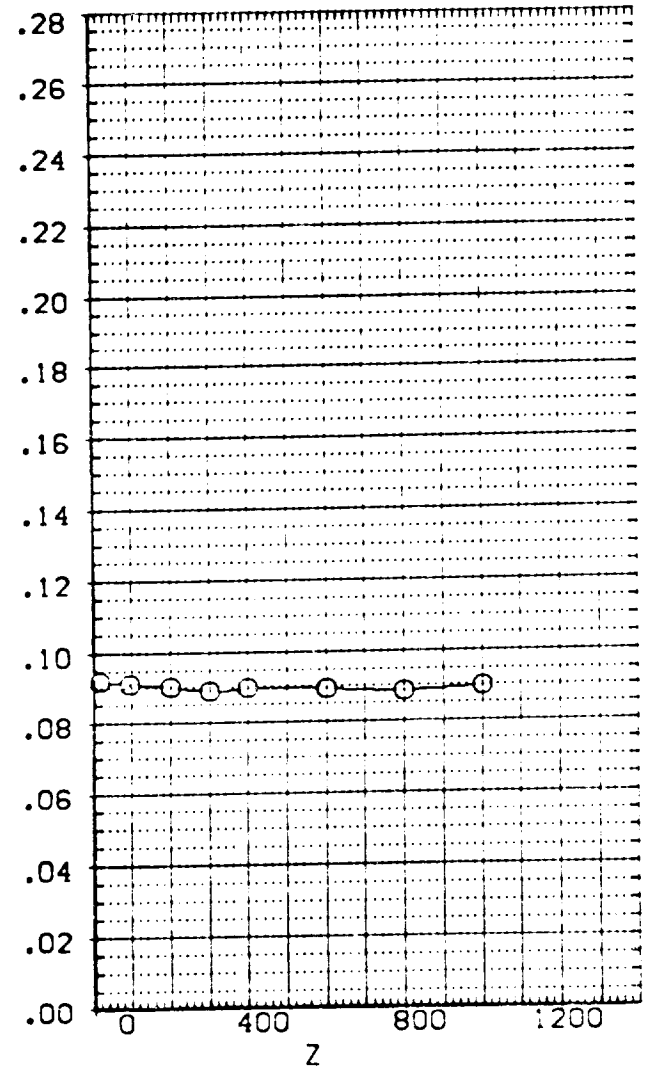
EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

PARAMETRIC VALUES

.05	MACH	4.530	PTOTAL	110.000
	ALPHA	.000	BETA	.000
	DALPHA	.000	DBETA	-5.000
	ELEVTR	.000	AILRON	10.000
	Y	-200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

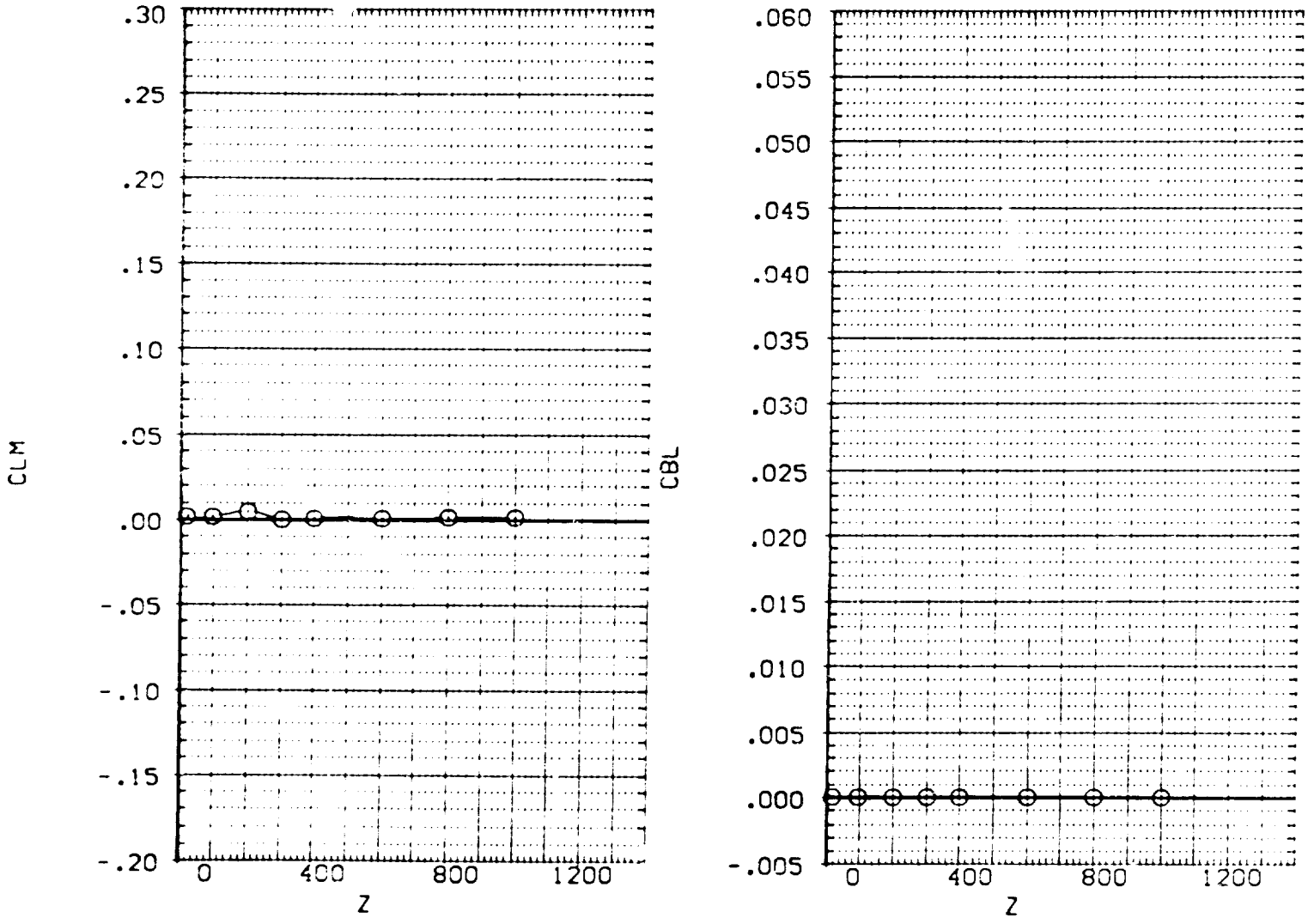




EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

SYMBOL	x	PARAMETRIC VALUES			
○	.05	MACH	4.530	PTOTAL	110.000
		ALPHA	.000	BETA	.000
		DALPHA	.000	DBETA	-5.000
		ELEVTR	.000	AILRON	10.000
		Y	-200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

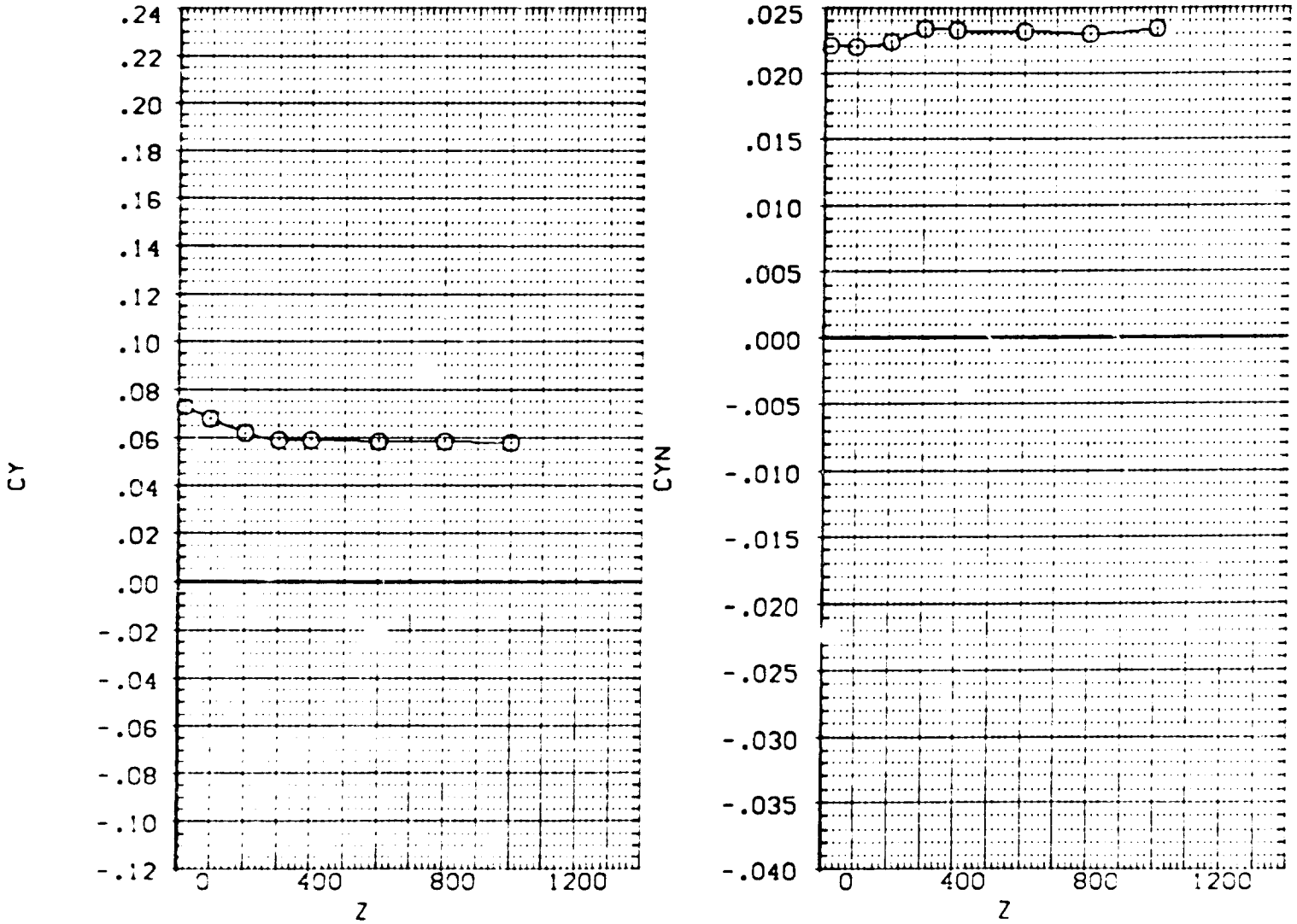
[A13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT55)

SYMBOL x

PARAMETRIC VALUES

.051			
MACH	4.530	PTOTAL	110.000
ALPHA	.000	BETA	.000
DALPHA	.000	DBETA	-5.000
ELEVTR	.000	AILRON	10.000
Y	-200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

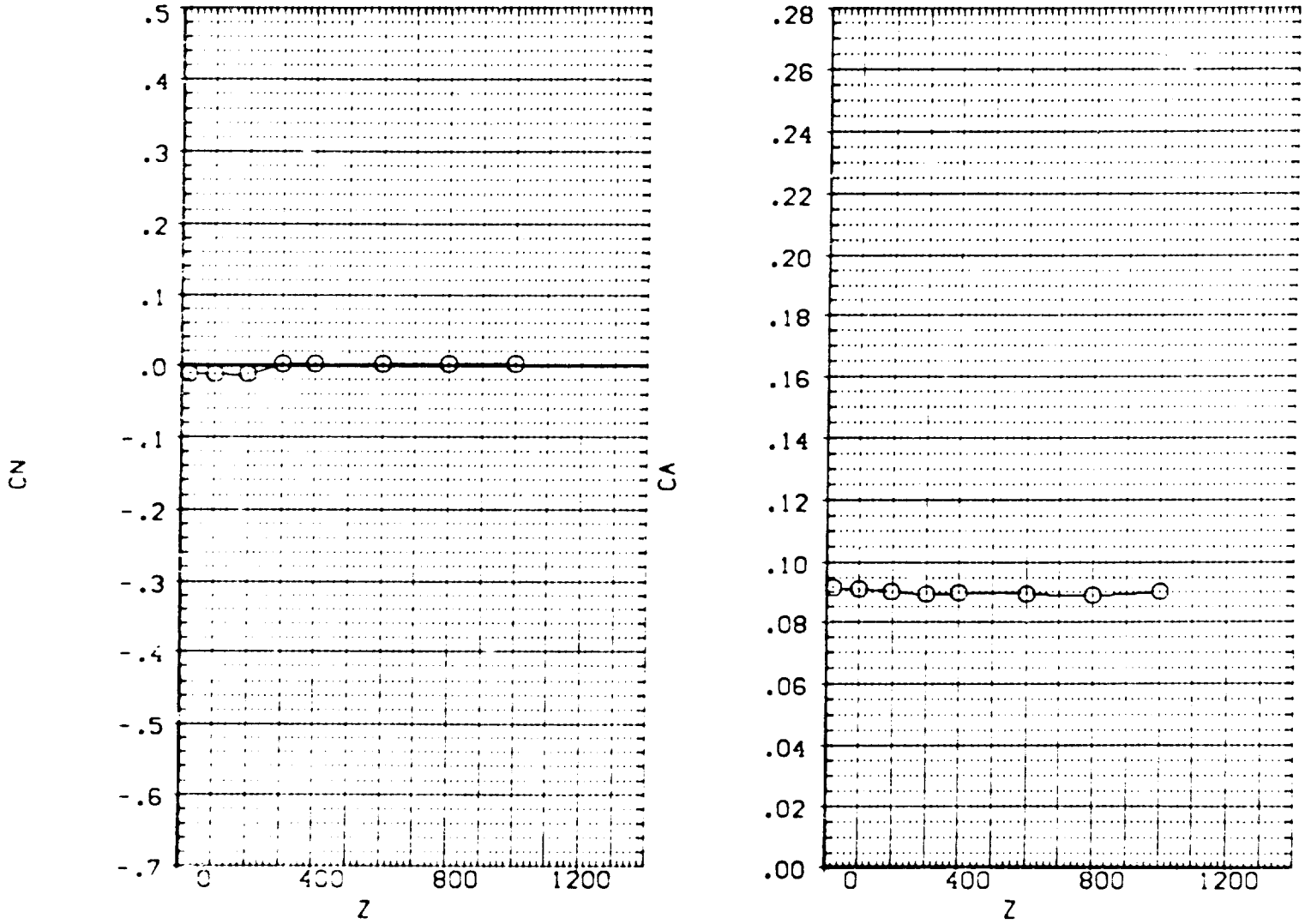


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

!A!3.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT56)

SYMBOL	X	PARAMETRIC VALUES			
○	.106	MACH	4.530	PTOTAL	110.000
		ALPHA	.000	BETA	.000
		DALPHA	.000	DBETA	5.000
		ELEVTR	.000	AILRON	10.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

[A:3.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT56)

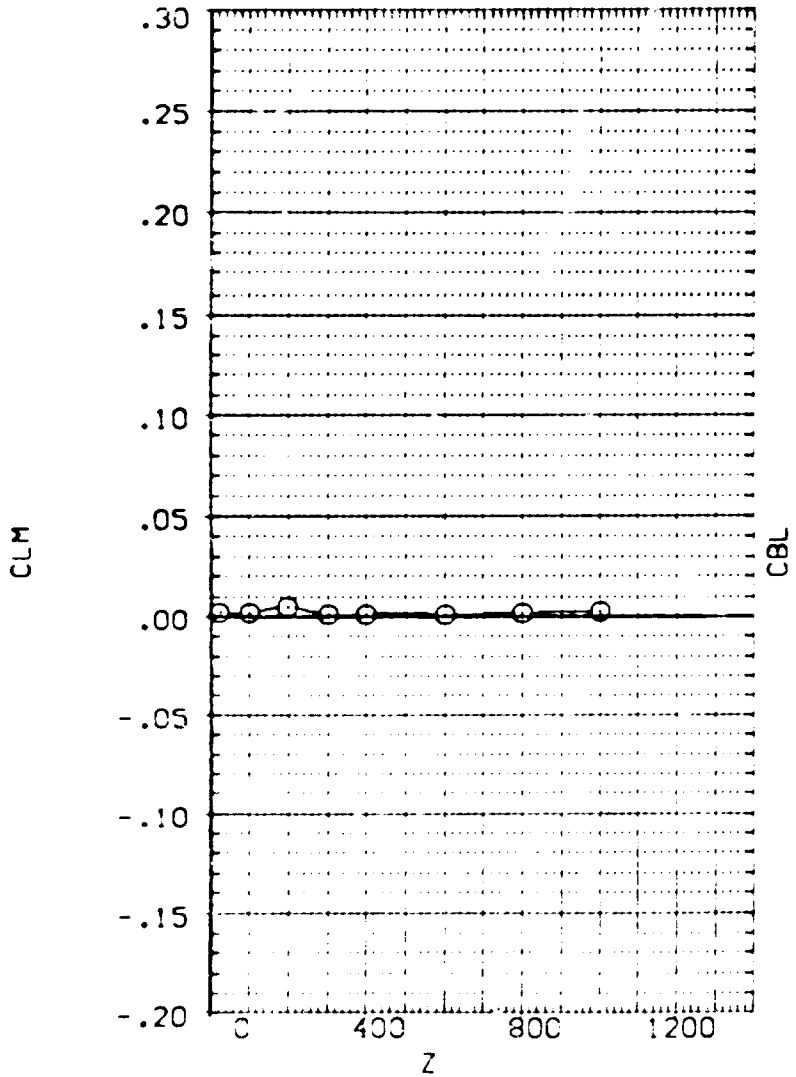
SYMBOL x

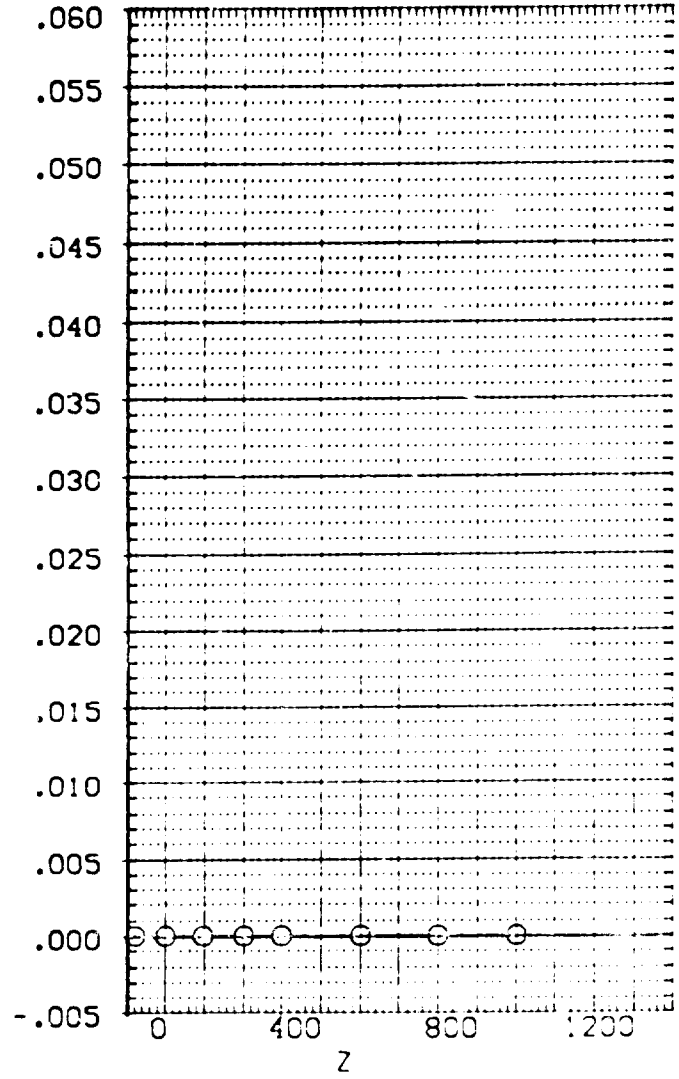
○ .106

PARAMETRIC VALUES

MACH	4.530	PTOTAL	110.000
ALPHA	.000	BETA	.000
DALPHA	.000	DBETA	5.000
ELEVTR	.000	AILRON	10.000
Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



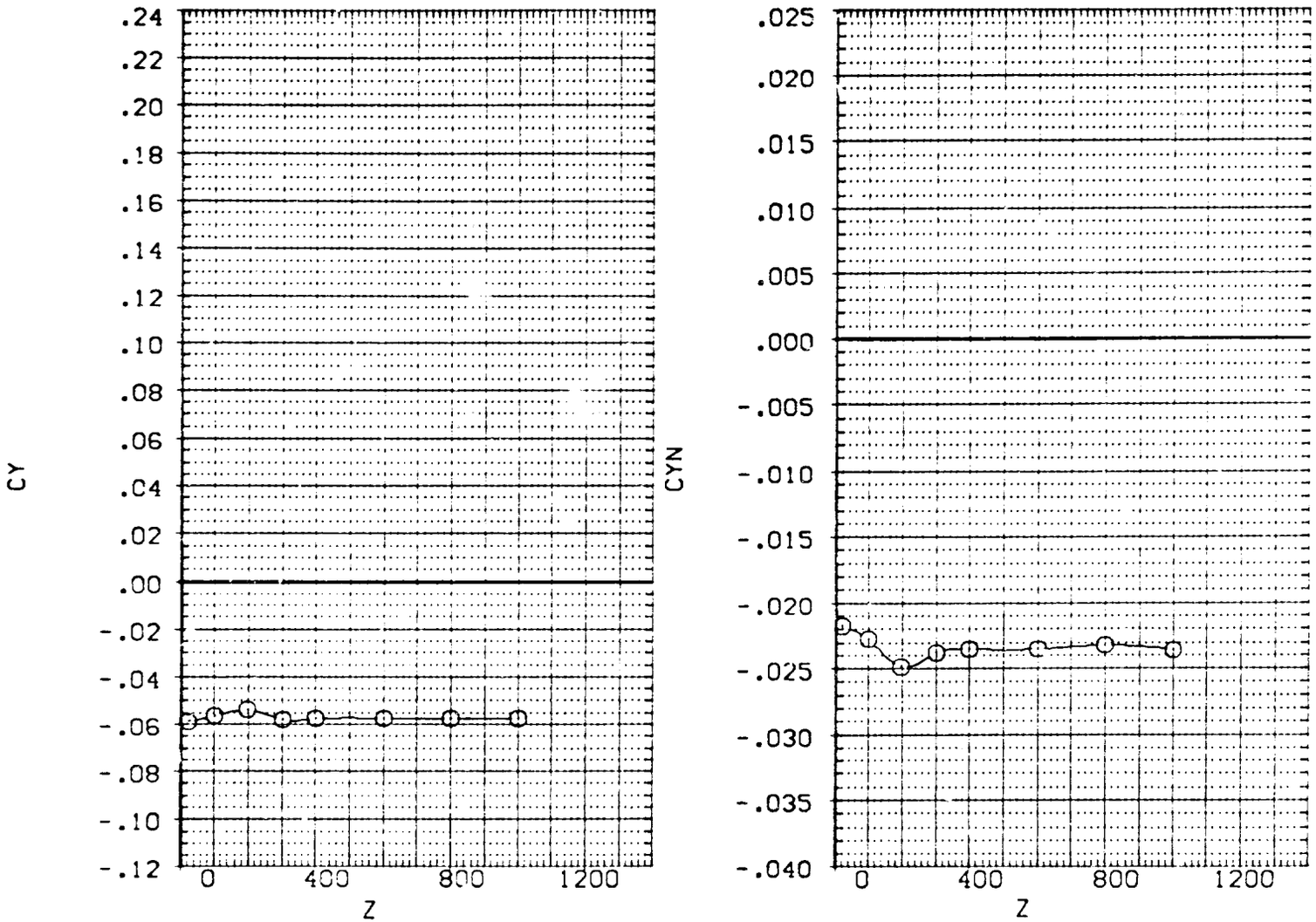


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

[A13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT56)

SYMBOL	X	PARAMETRIC VALUES			
○	.106	MACH	4.530	PTOTAL	110.000
		ALPHA	.000	BETA	.000
		DALPHA	.000	DBETA	5.000
		ELEVTR	.000	AILRON	10.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

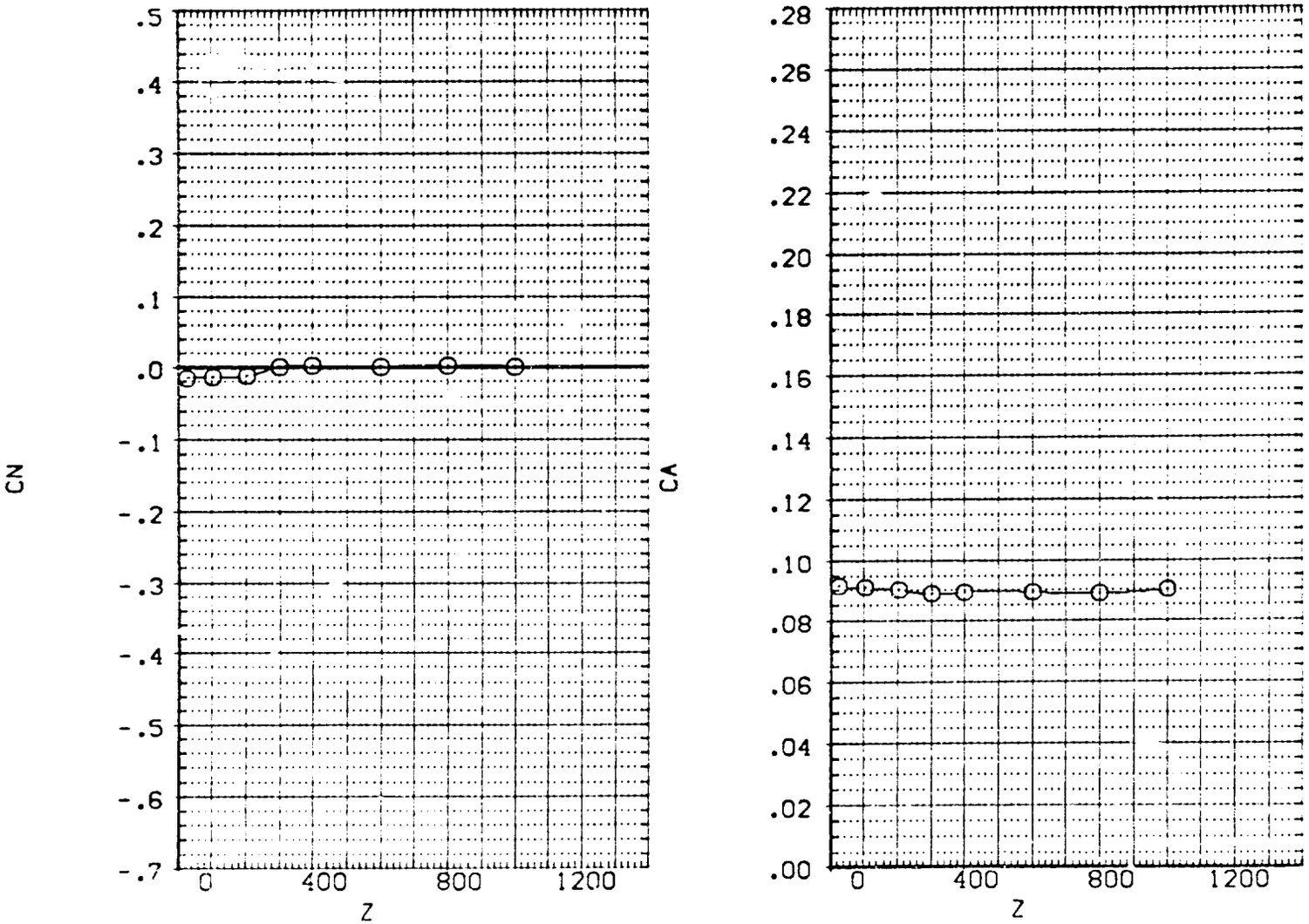


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

[A13,EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT57)

SYMBOL	X	PARAMETRIC VALUES			
○	.268	MACH	4.530	PTOTAL	110.000
		ALPHA	.000	BETA	.000
		DALPHA	.000	DBETA	5.000
		ELEVTR	.000	AILRON	10.000
		Y	200.000		

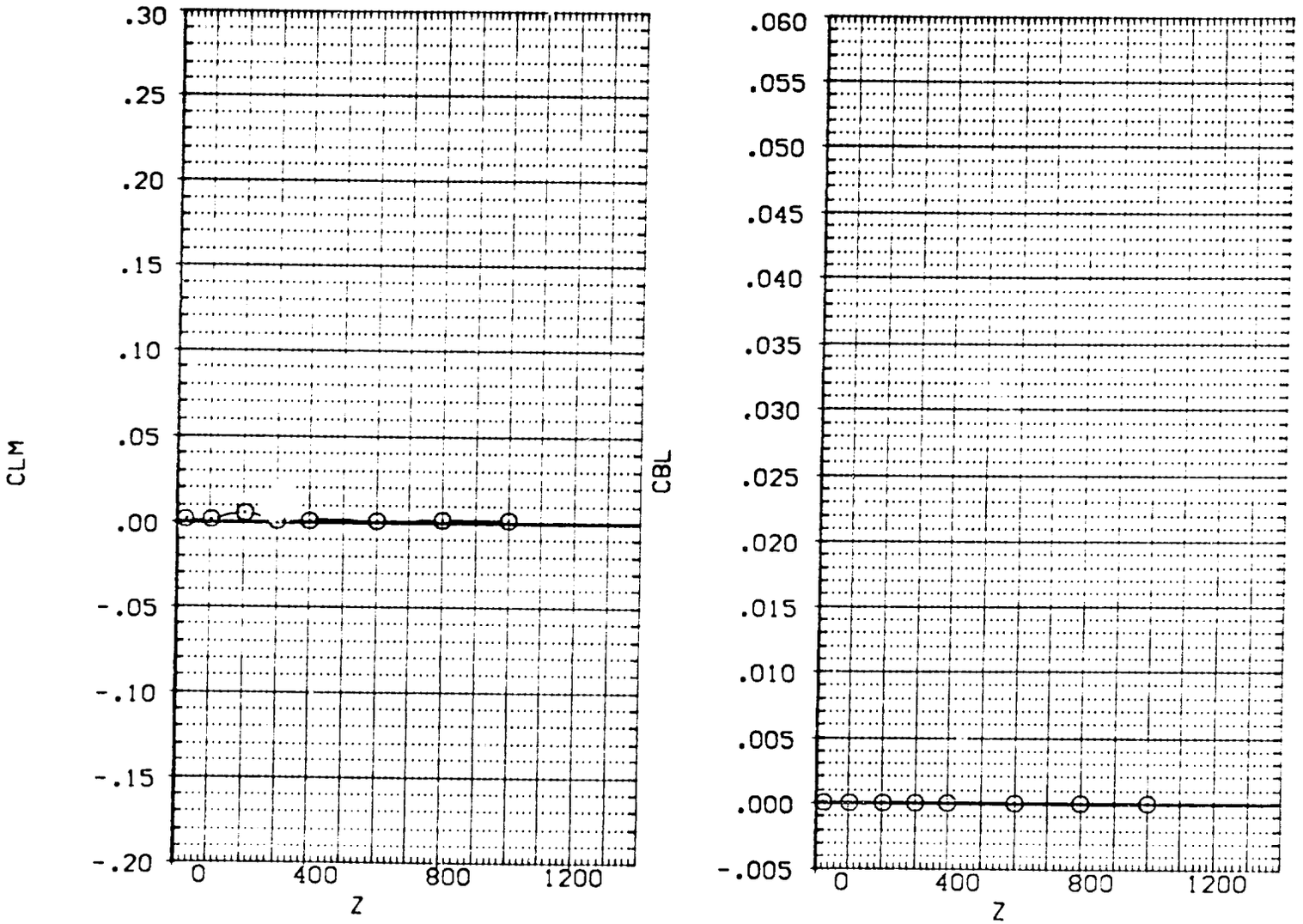
SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

SYMBOL	X	PARAMETRIC VALUES			
○	.268	MACH	4.530	PTOTAL	110.000
		ALPHA	.000	BETA	.000
		DALPHA	.000	DBETA	5.000
		ELEVTR	.000	AILRON	10.000
		Y	200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

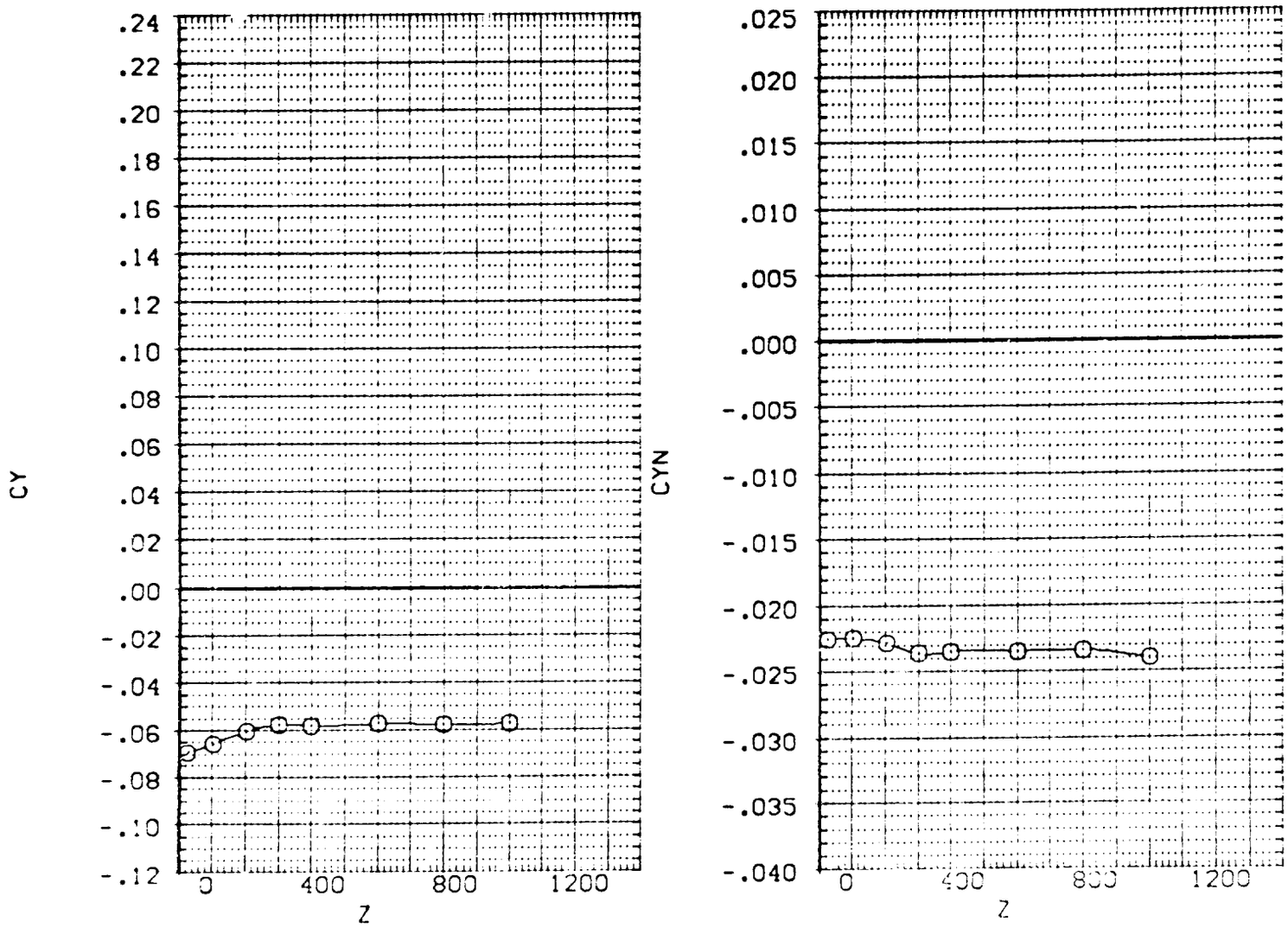


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

!A13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT57)

SYMBOL	X	PARAMETRIC VALUES			
○	.268	MACH	4.530	PTOTAL	110.000
		ALPHA	.000	BETA	.000
		DALPHA	.000	DBETA	5.000
		ELEVTR	.000	AILRON	10.000
		Y	200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

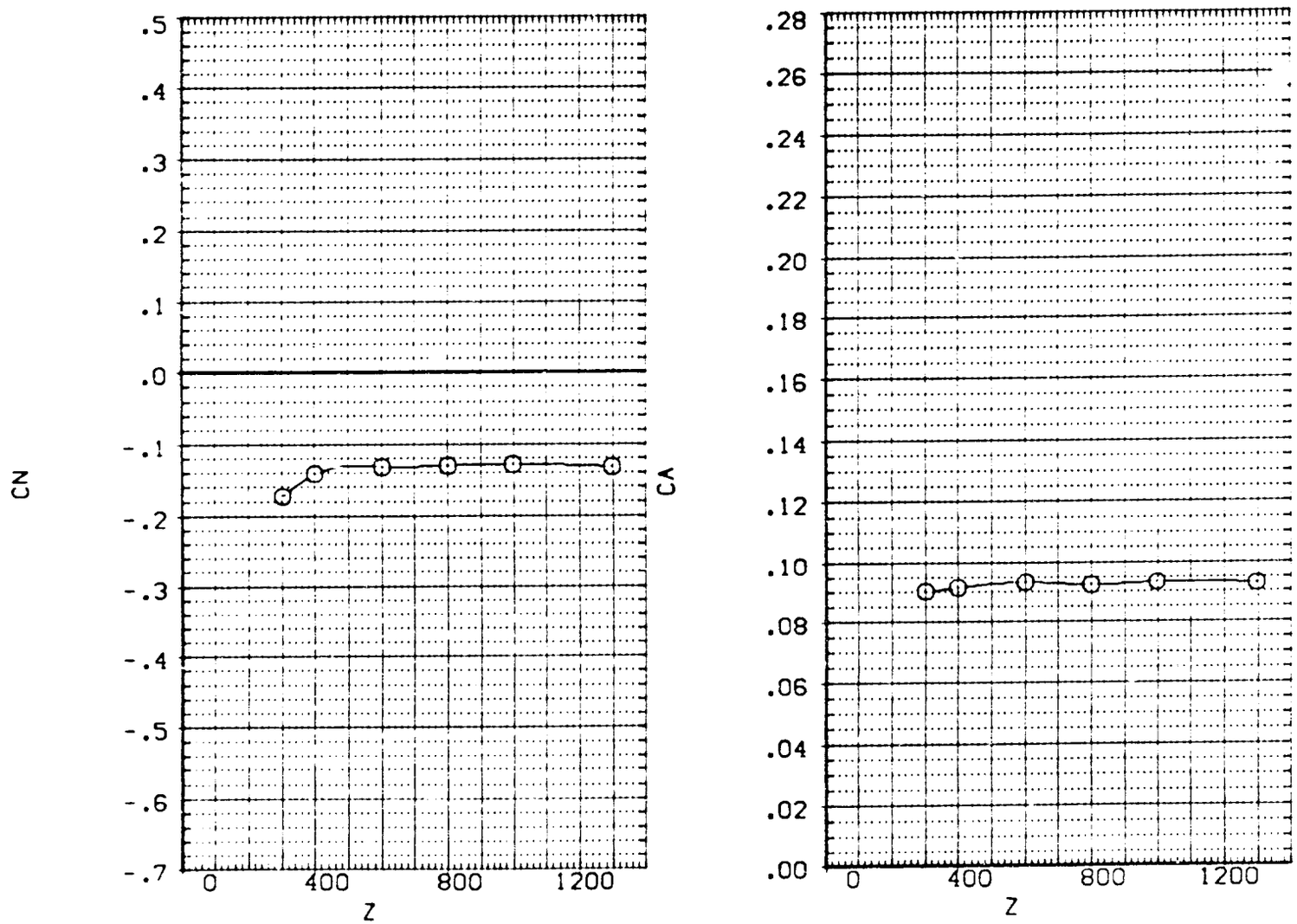


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

!A13,EXTERNAL TANK(110)SEPARATING FROM ORB. 09 (RTJT58)

SYMBOL	X	PARAMETRIC VALUES			
○	.158	MACH	4.530	PTOTAL	110.000
		ALPHA	.000	BETA	.000
		DALPHA	-10.000	DBETA	.000
		ELEVTR	.000	AILRON	10.000
		Y	-200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

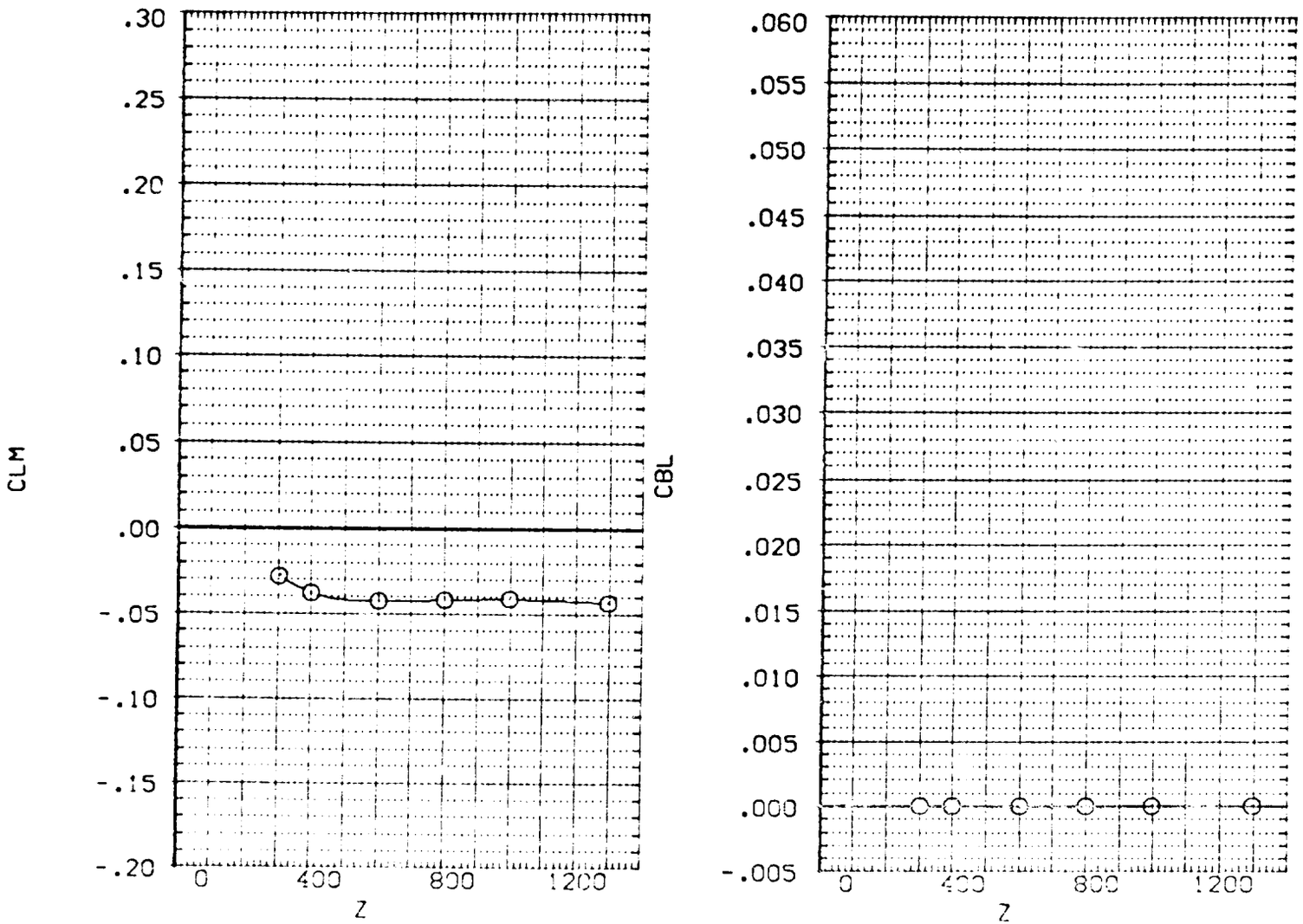


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT58)

SYMBOL	X	PARAMETRIC VALUES			
○	.158	MACH	4.530	PTOTAL	110.000
		ALPHA	.000	BETA	.000
		DALPHA	-10.000	DBETA	.000
		ELEVTR	.000	AILRON	10.000
		Y	-200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

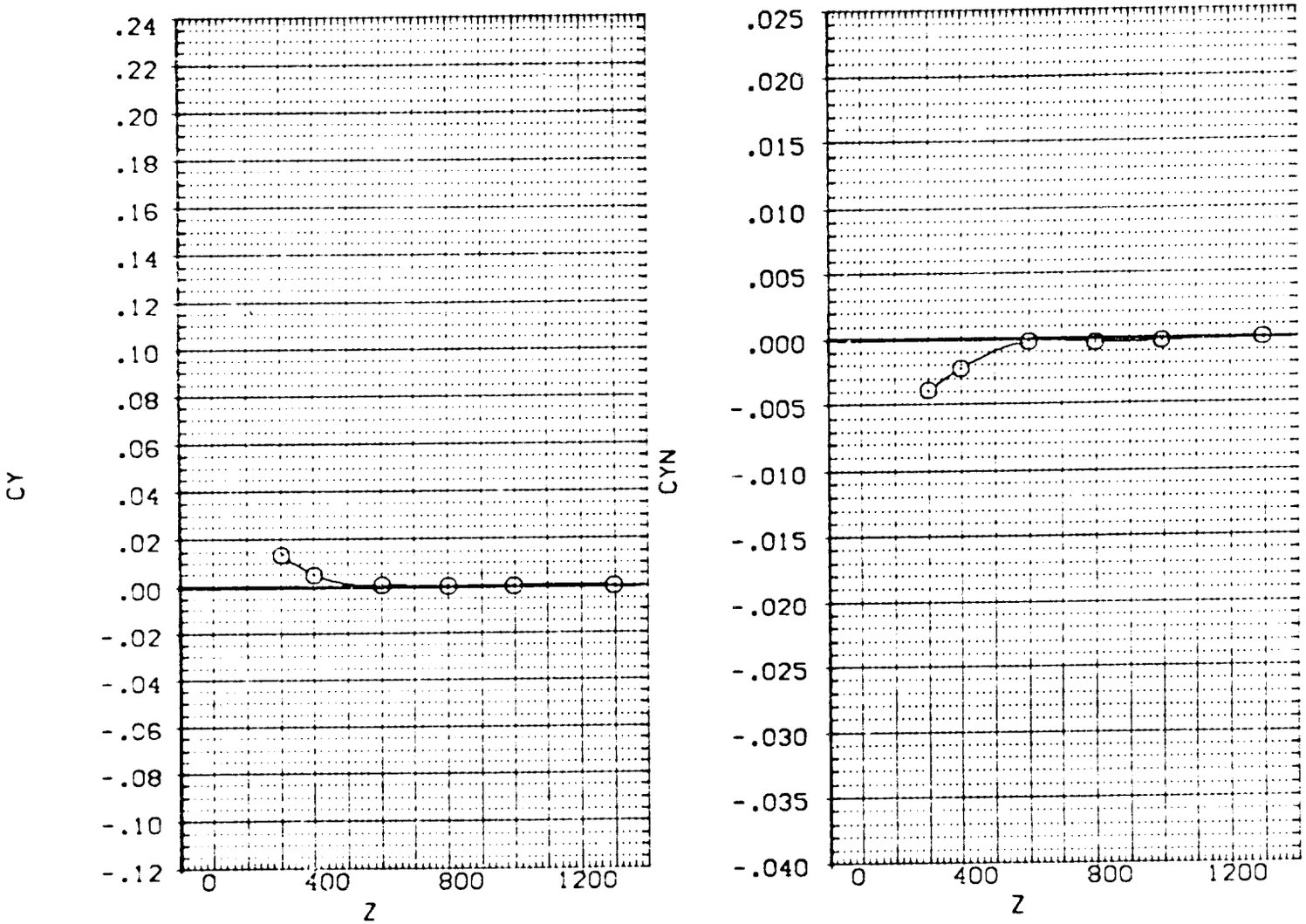
[A13,EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT58)

SYMBOL X

PARAMETRIC VALUES

○	.158	MACH	4.530	PTOTAL 110.000
		ALPHA	.000	BETA .000
		DALPHA	-10.000	DBETA .000
		ELEVTR	.000	AILERON 10.000
		Y	-200.000	

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

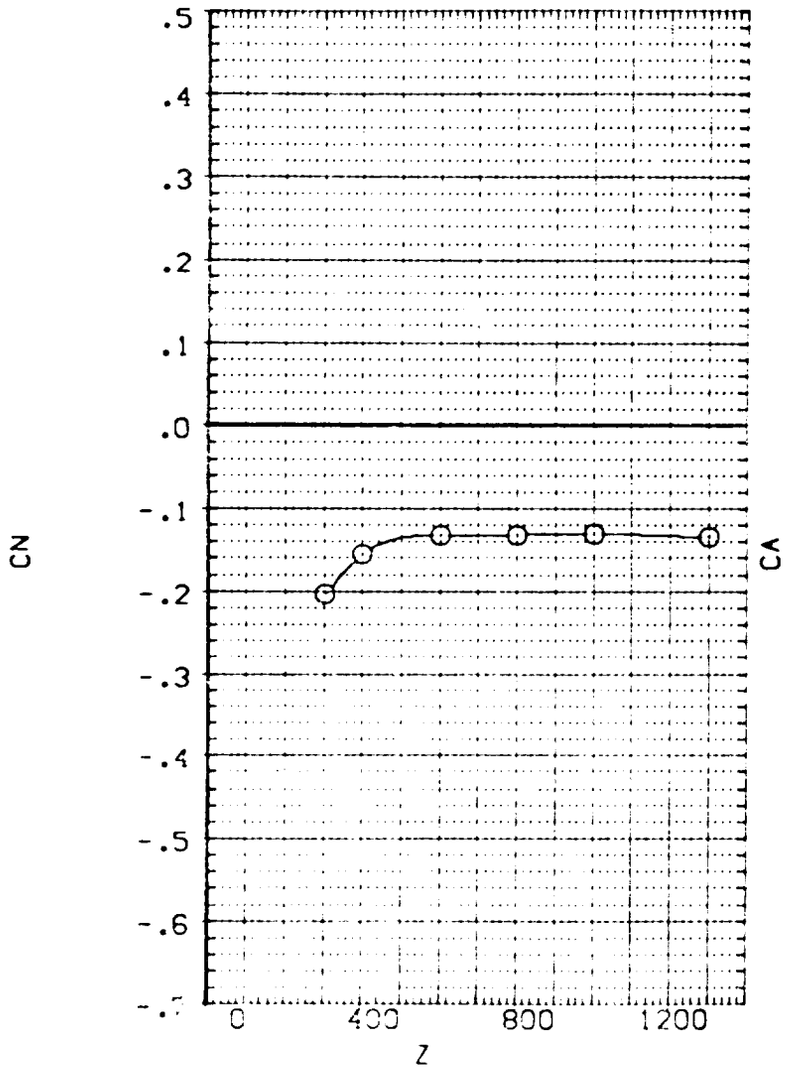
[A13,EXTERNAL TANK(TIO)SEPARATING FROM ORB. 09 (RTJT59)

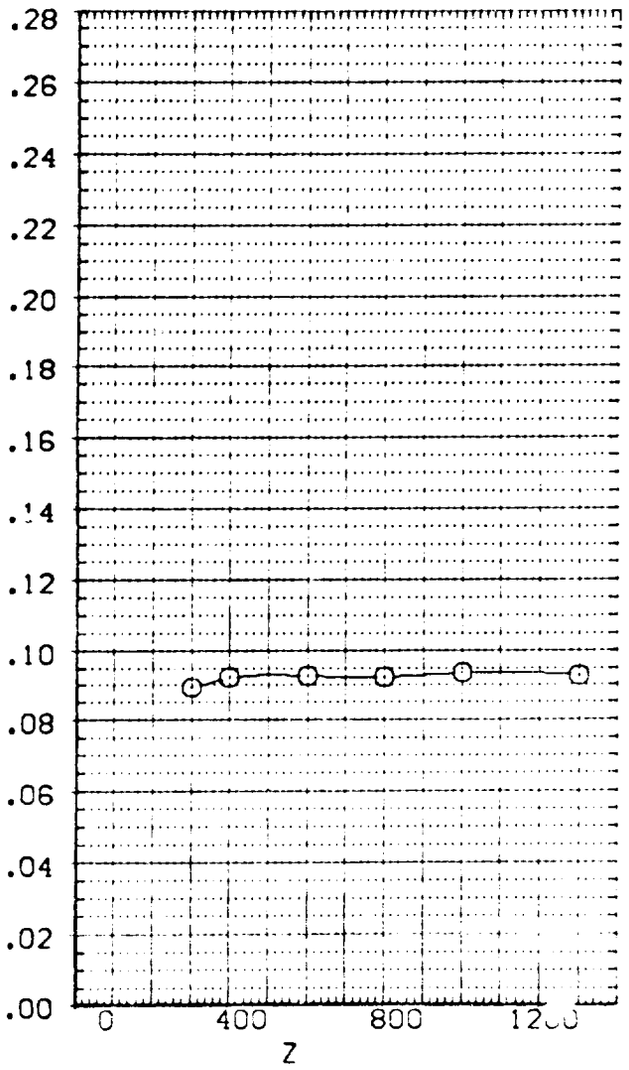
SYMBOL

PARAMETRIC VALUES

.151	MACH	4.580	PTOTAL	110.000
	ALPHA	.000	BETA	.000
	DALPHA	-10.000	DBETA	.000
	ELEVTR	.000	AILRON	10.000
	Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



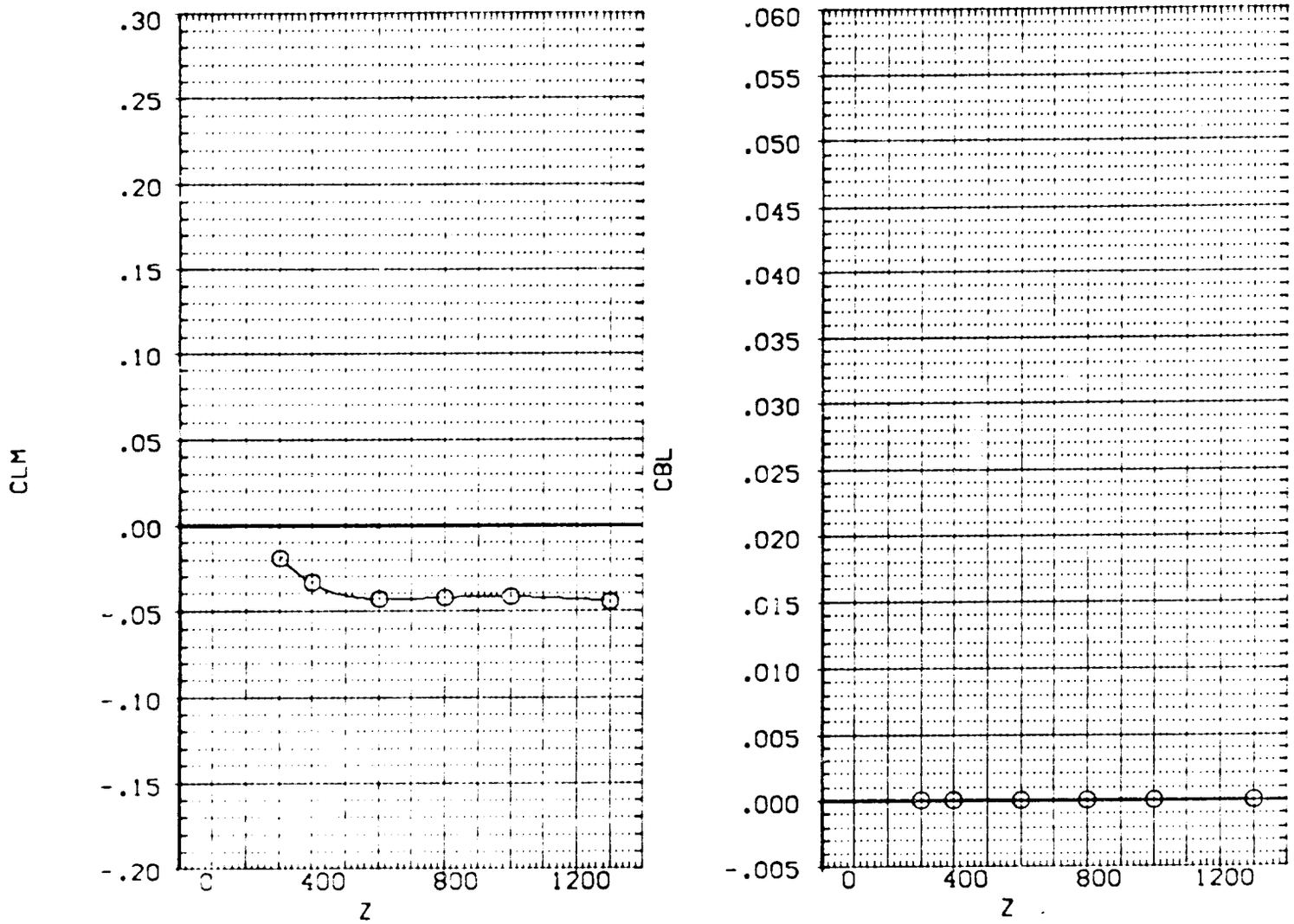


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

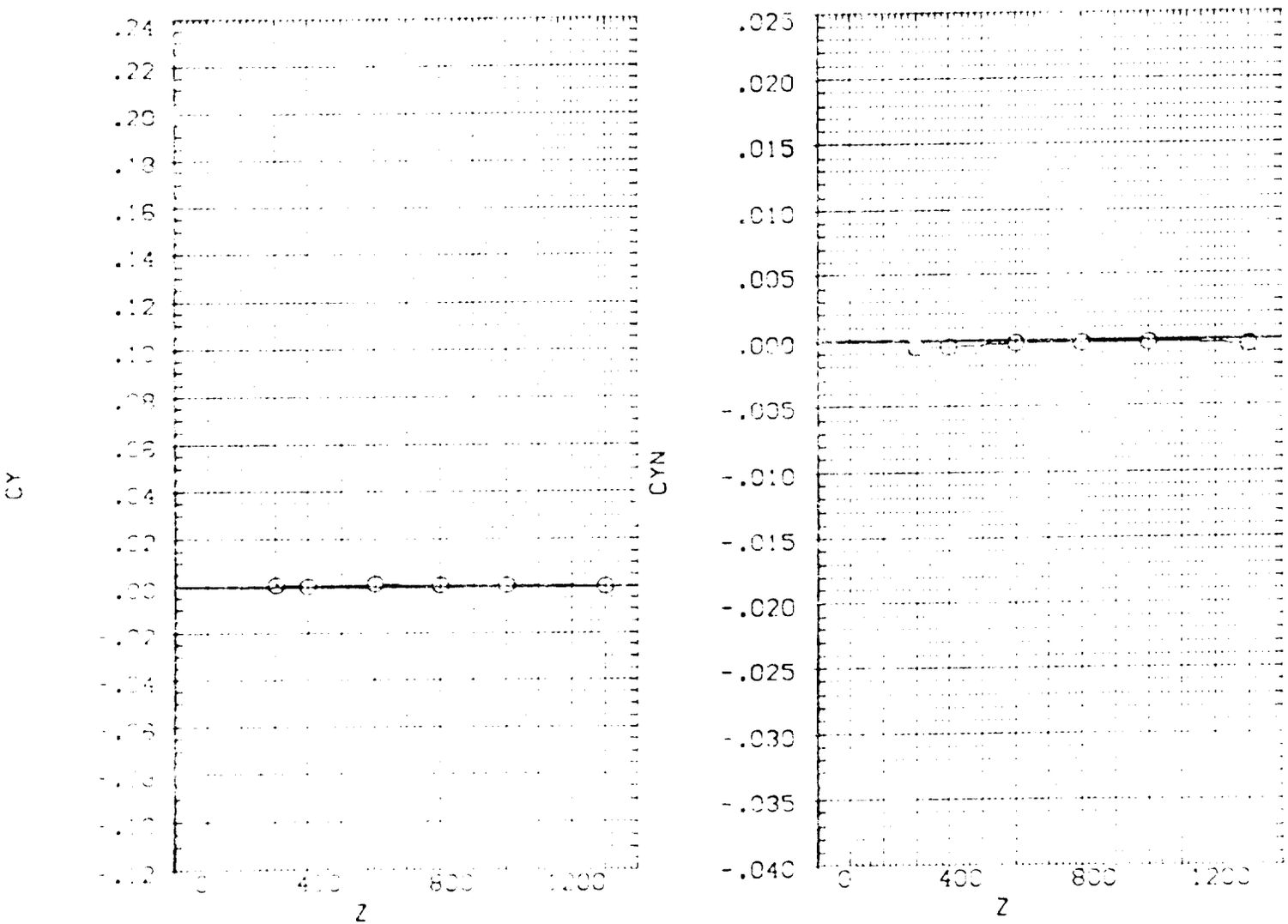
[A13.EXTERNAL TANK(TIO)SEPARATING FROM ORB. 09 (RTJT59)

SYMBOL	X	PARAMETRIC VALUES			
○	.151	MACH	4.530	PTOTAL	110.000
		ALPHA	.000	BETA	.000
		DALPHA	-10.000	DBETA	.000
		ELEVTR	.000	AILRON	10.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



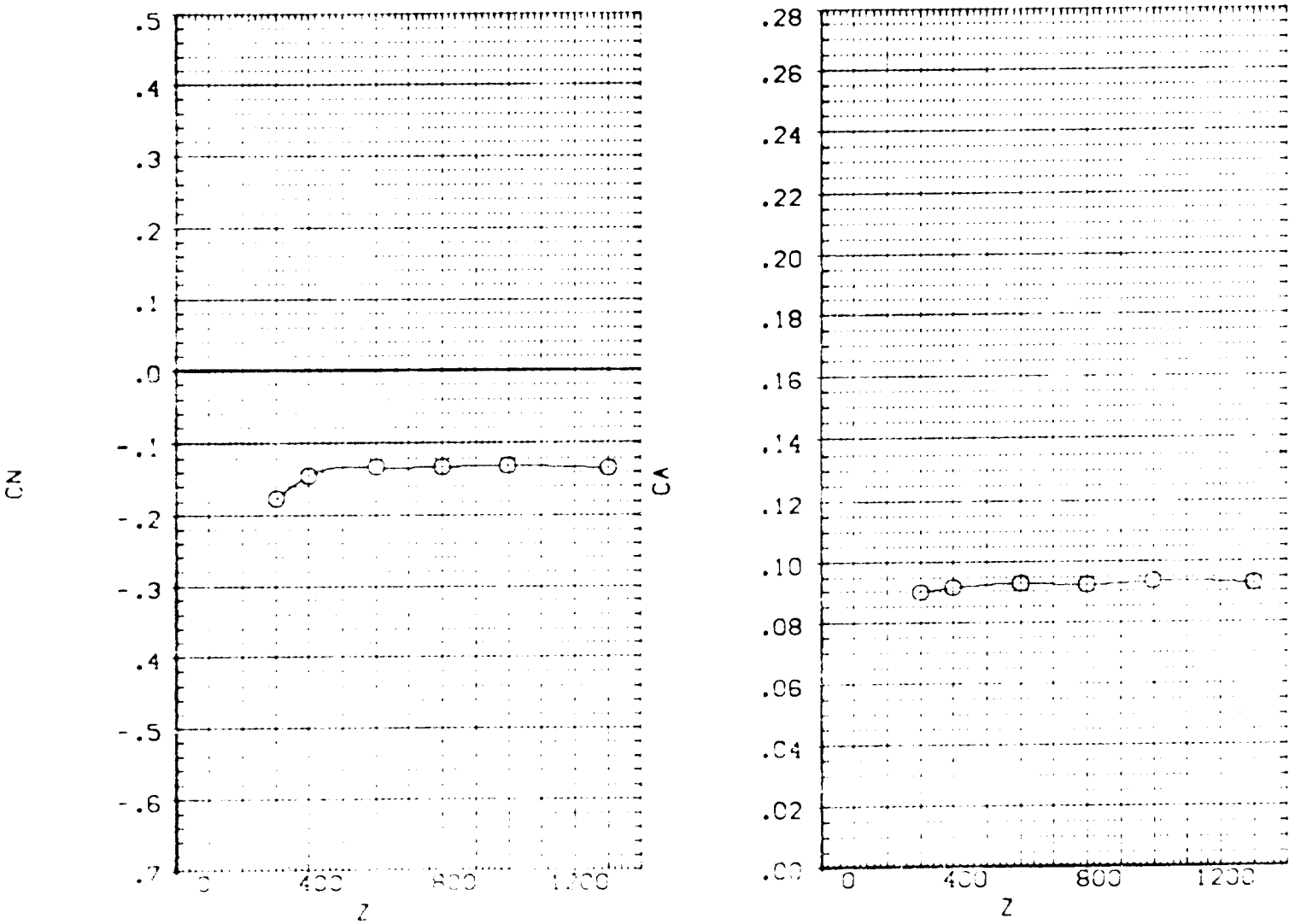
EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER


CY
Z
CYN
Z

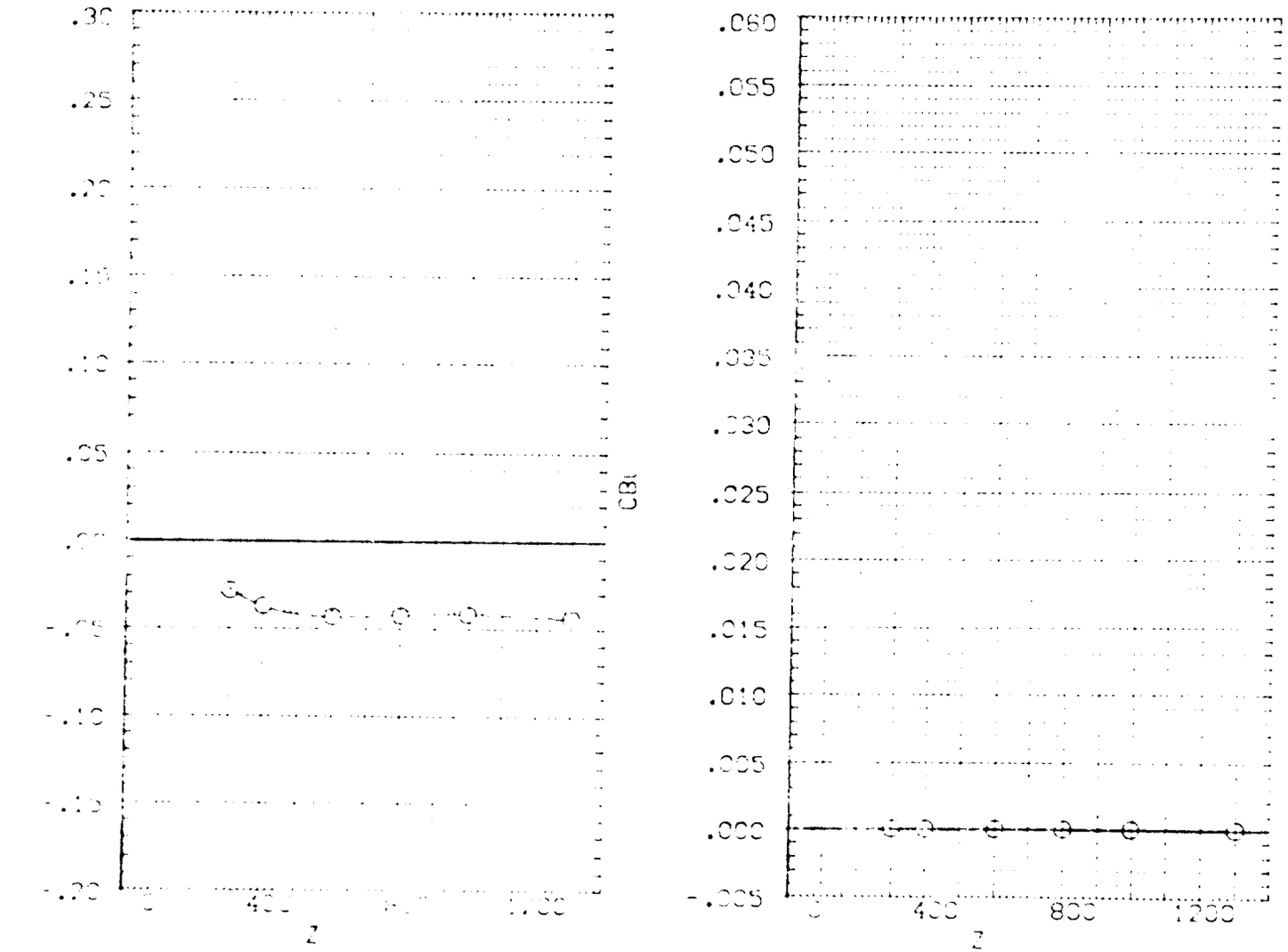
[A13,EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT60)

SYMBOL	X	PARAMETRIC VALUES			
○	.174	MACH	4.530	PTOTAL	110.000
		ALPHA	.000	BETA	.000
		DALPHA	-10.000	DBETA	.000
		ELEVTR	.000	AILRON	10.000
		Y	200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER



[illegible] DURING SEPARATION FROM BOOSTER

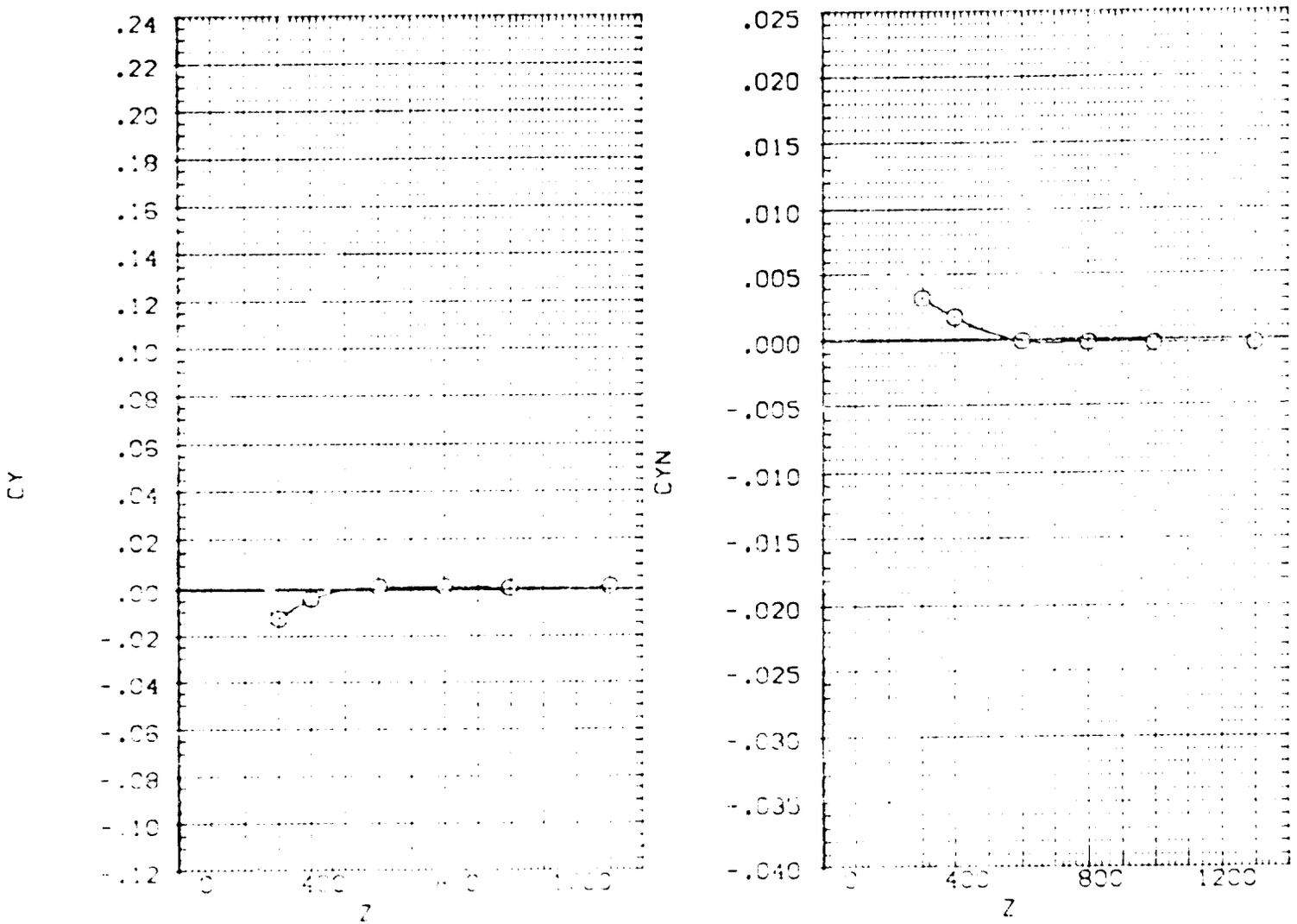
[A13,EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT60)

SYMBOL X

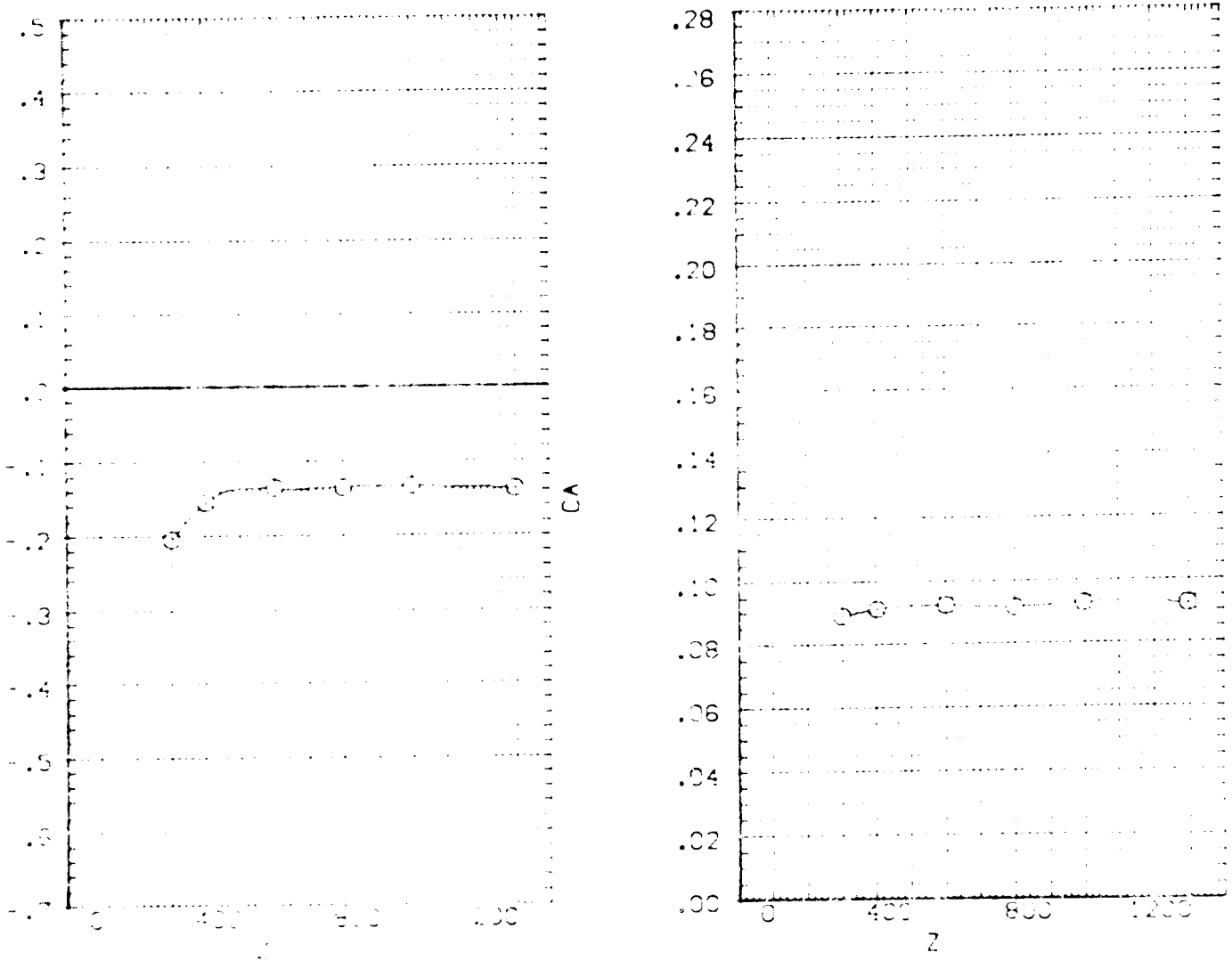
PARAMETRIC VALUES

.1?4	MACH	4.630	PTOTAL 110.000
	ALPHA	.000	BETA .000
	DALPHA	-10.000	DBETA .000
	FILTR	.000	ALPHA 10.000
	Y	200.000	

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

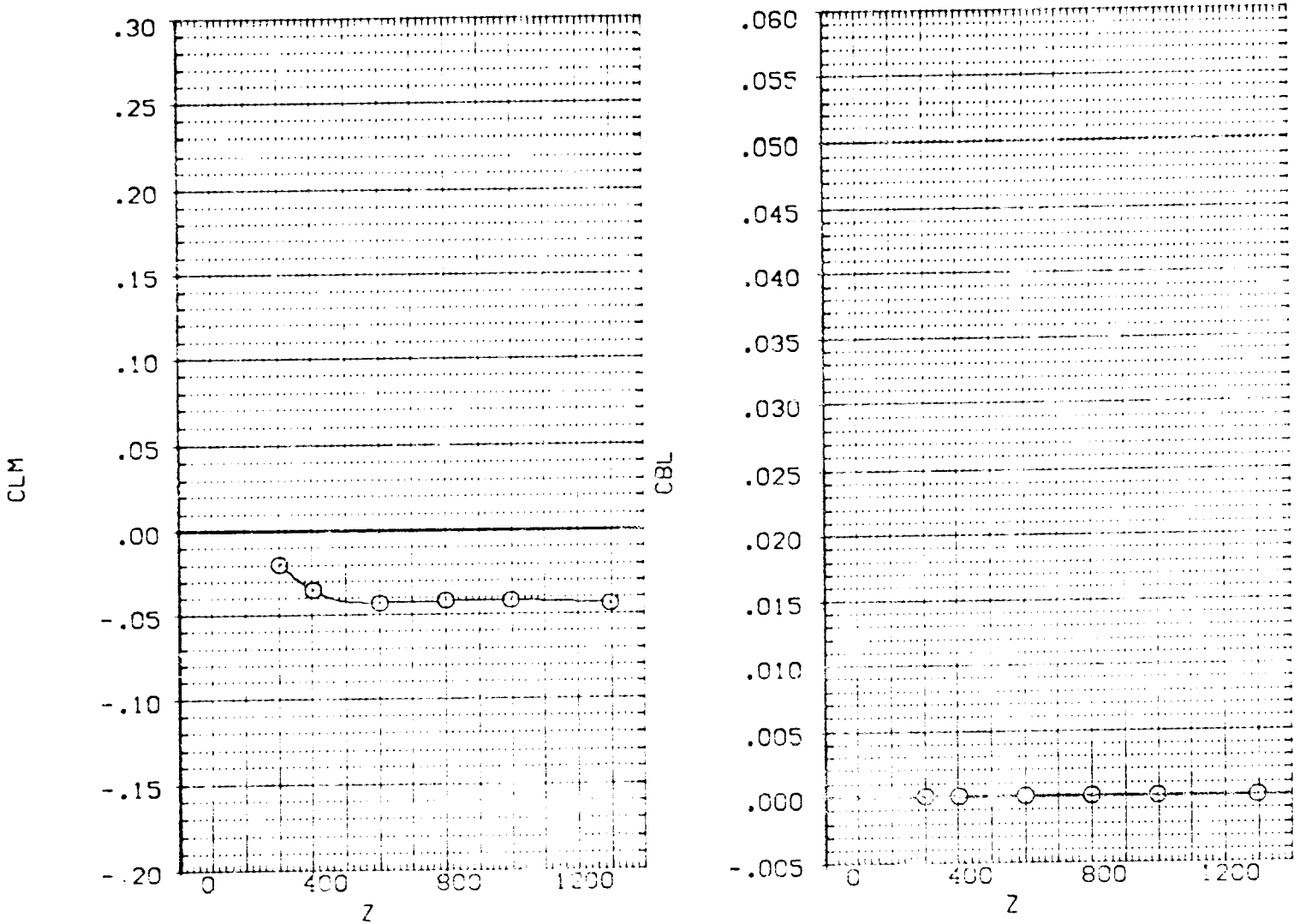


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

!A13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT61)

SYMBOL	X	PARAMETRIC VALUES			
○	.246	MACH	4.530	PTOTAL	110.000
		ALPHA	.000	BETA	.000
		DALPHA	-10.000	DBETA	-5.000
		ELEVTR	.000	AILRON	10.000
		Y	-200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

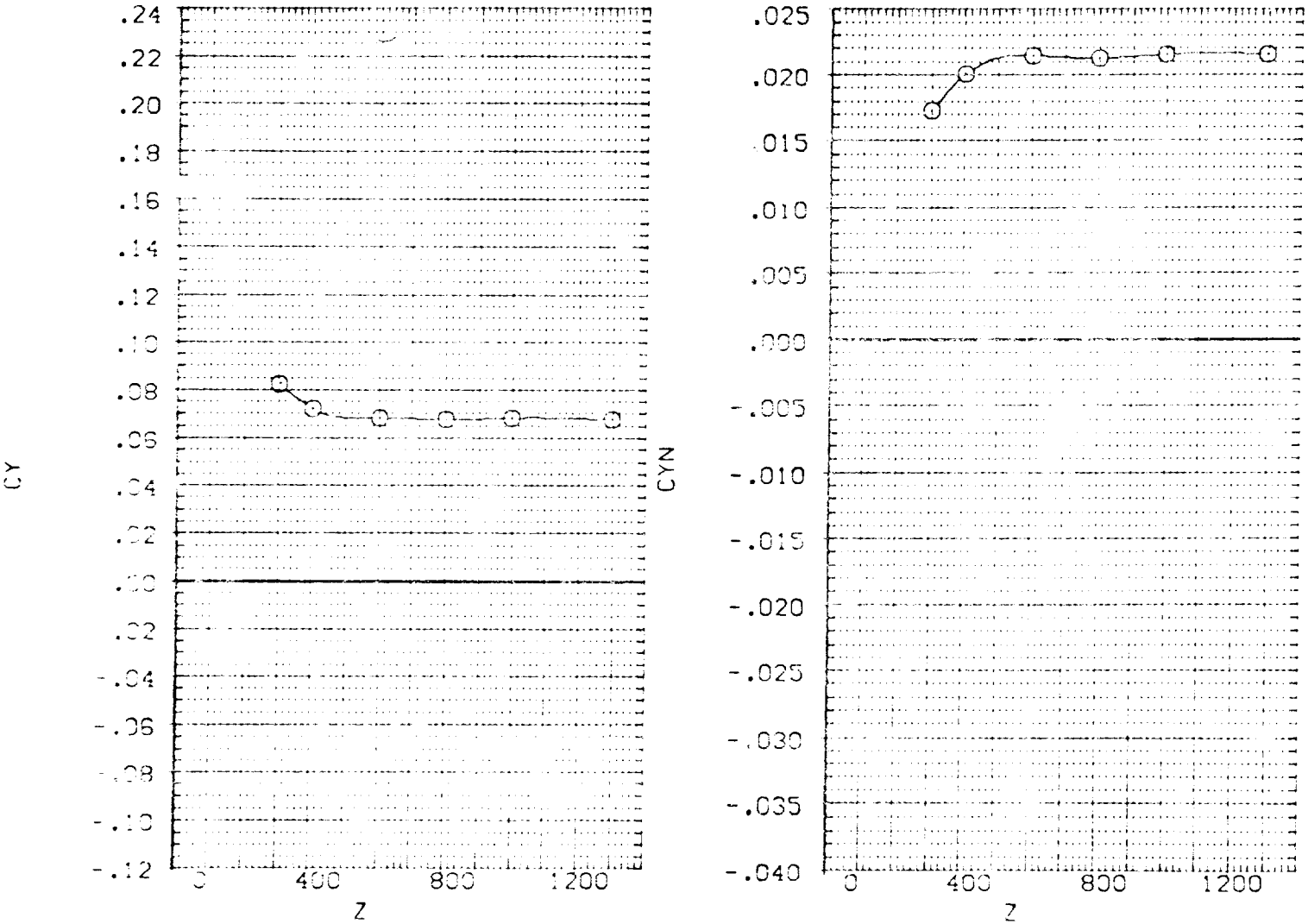


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

[A13,EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RT(T61)

SYMBOL		PARAMETRIC VALUES			
○	.246	MACH	4.530	P_TOTAL	[illegible].000
		ALPHA	.000	BETA	.000
		DALPHA	-10.000	DBETA	-5.000
		ELEVTR	.000	AILRON	10.000
		Y	-200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR NONDIMENSIONALIZATIONS

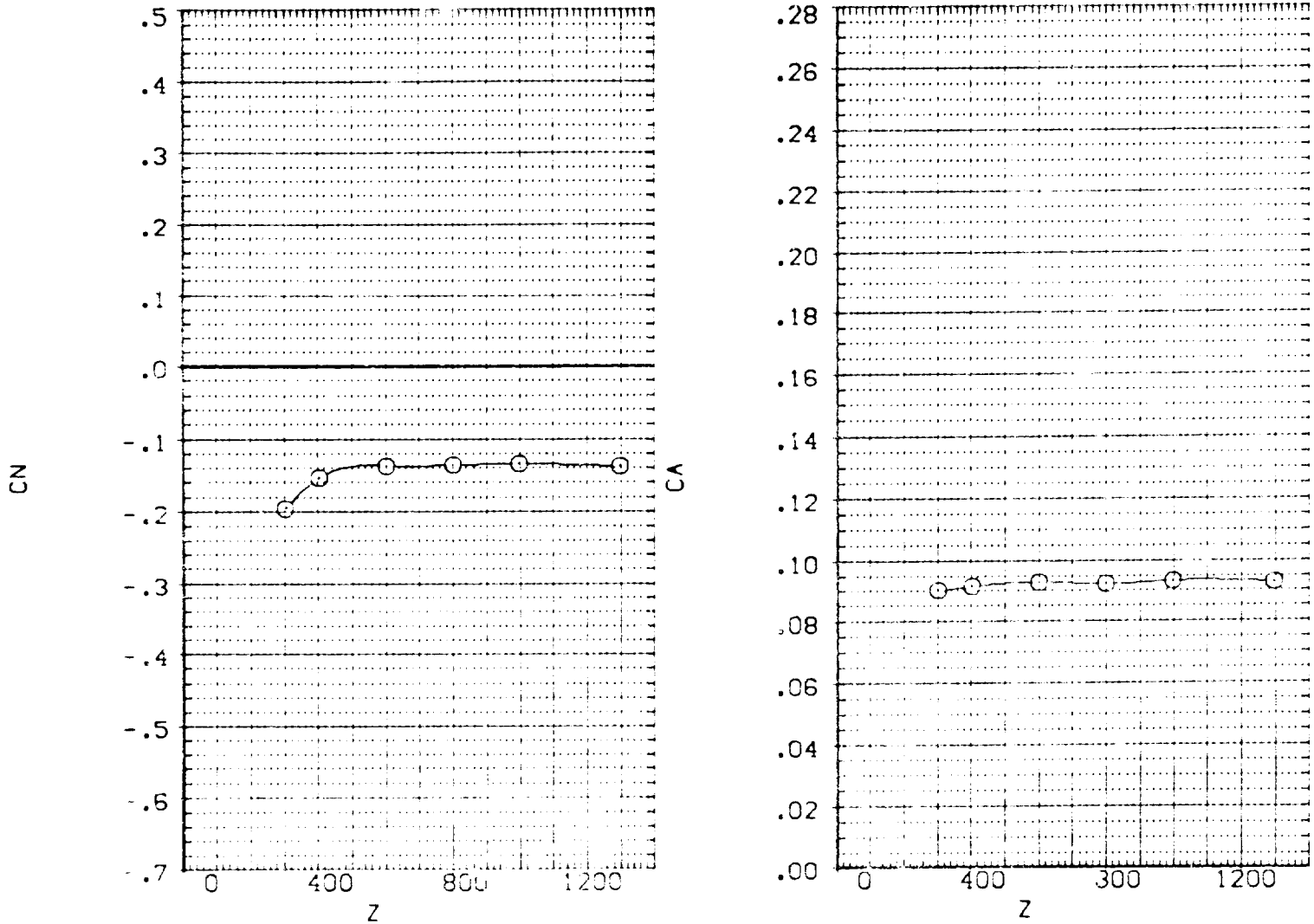


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

[A13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT62)

SYMBOL	X	PARAMETRIC VALUES			
○	.172	MACH	4.530	PTOTAL	110.000
		ALPHA	.000	BETA	.000
		DALPHA	-10.000	DBETA	5.000
		ELEVTR	.000	AILRON	10.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



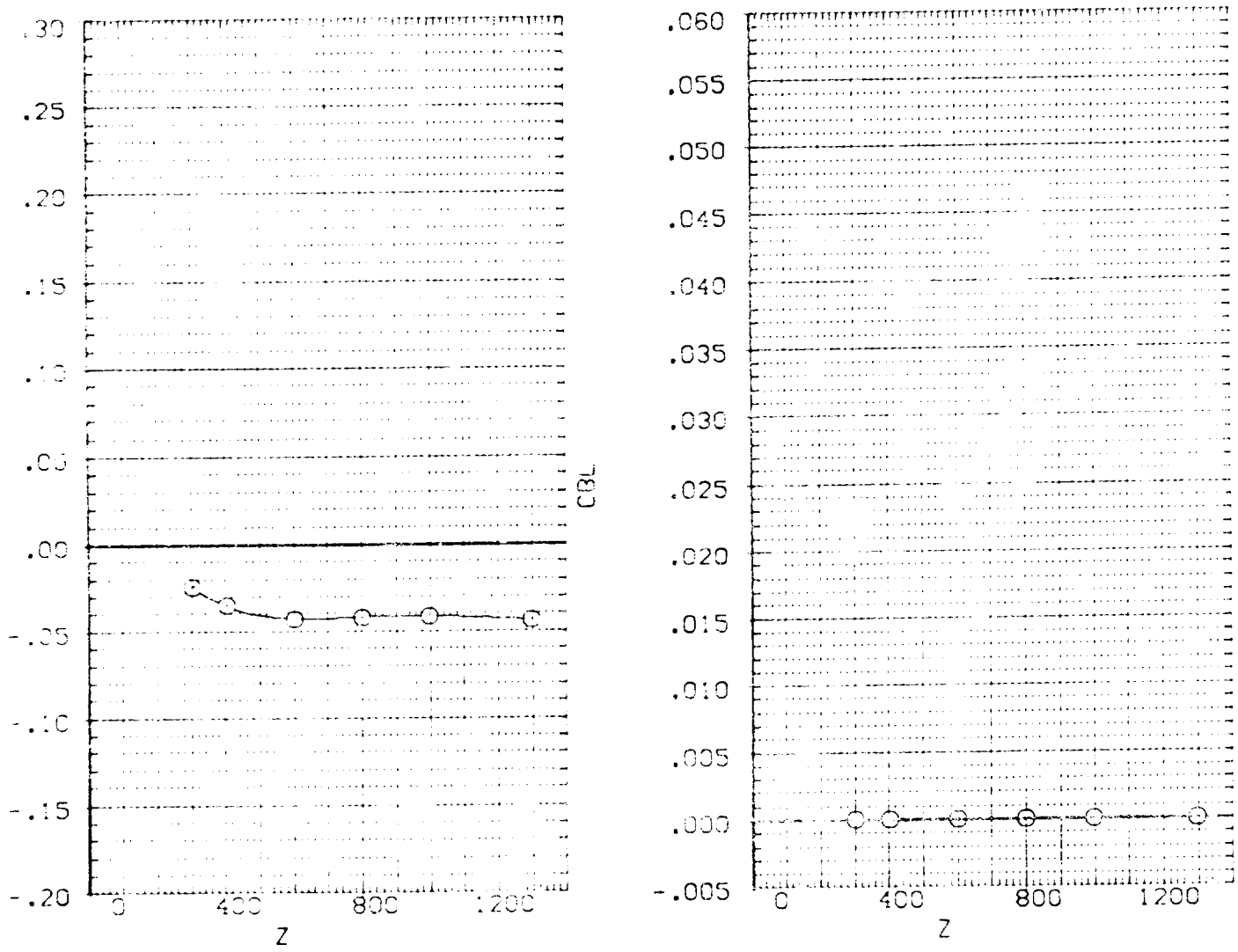
EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

[13, EXTERNAL TANK AERODYNAMICS-SEPARATING FROM ORB. 09 (RTJ182)

PARAMETER VALUES

	MACH			
	ALPHA			
	DELTA			
	FLAPS			
	Y			

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

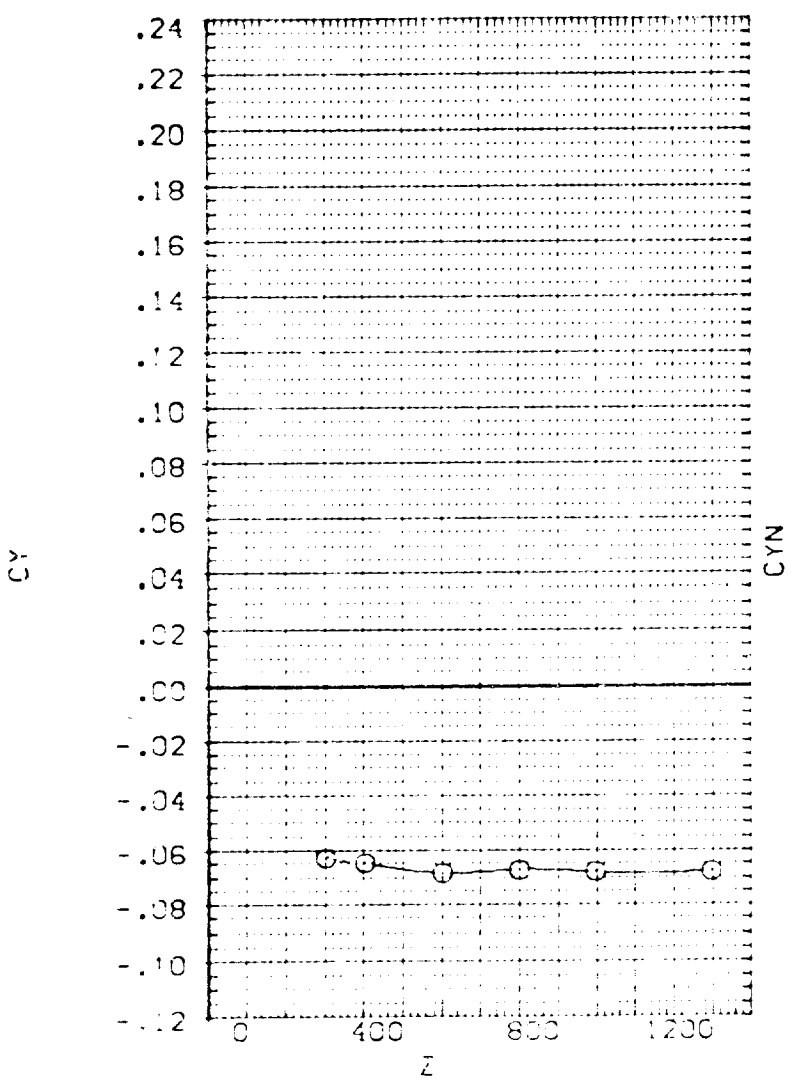


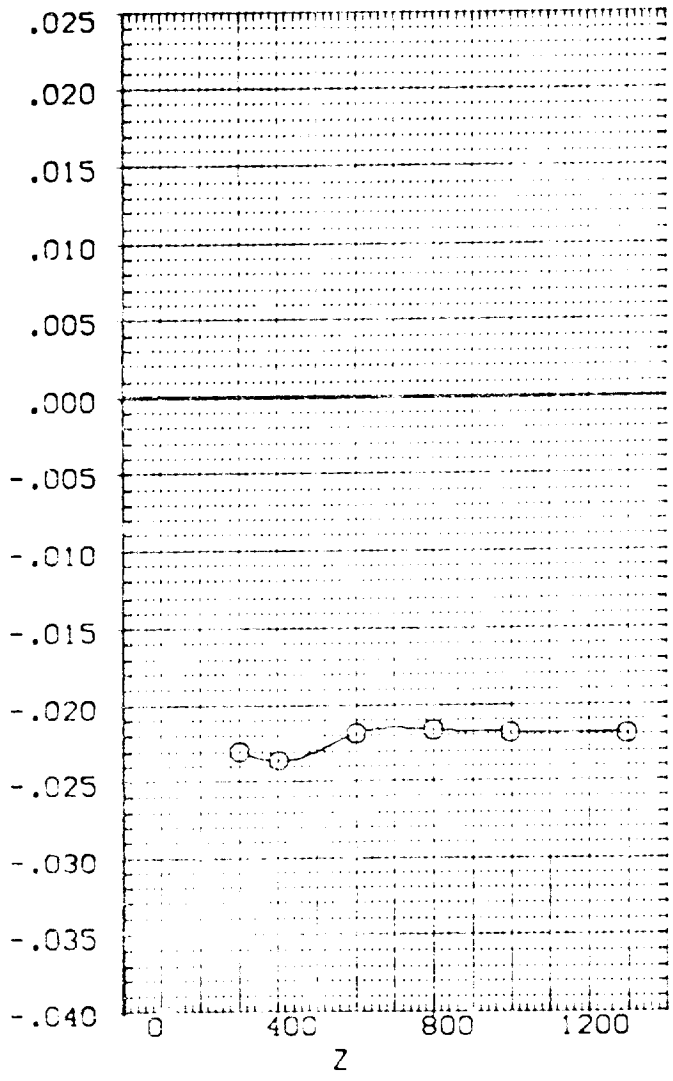
EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

[A13,EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT62)

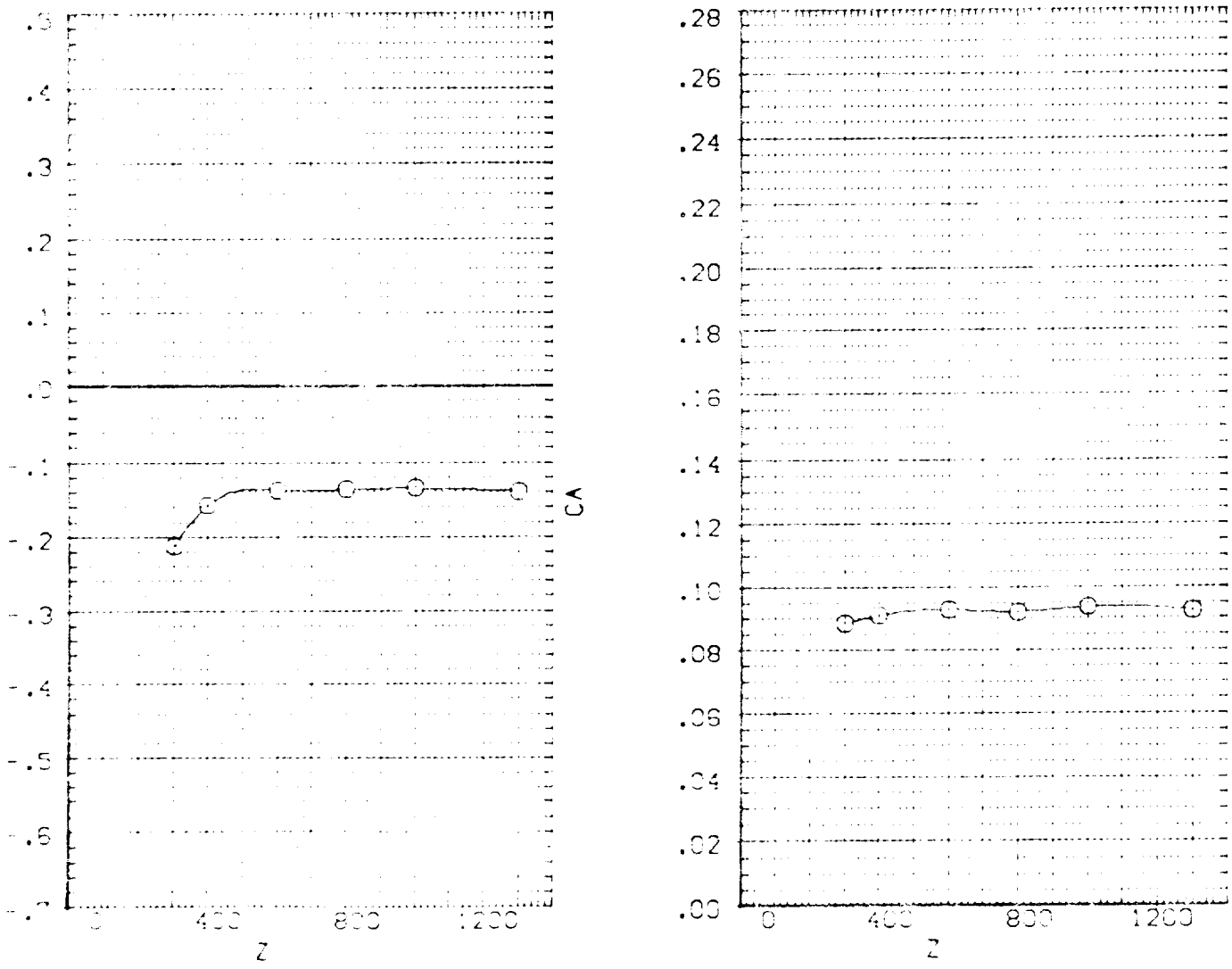
SYMBOL	X	PARAMETRIC VALUES			
○	.172	MACH	4.530	PTOTAL	110.000
		ALPHA	.000	BETA	.000
		DALPHA	-10.000	DBETA	5.000
		ELEVTR	.000	AILRON	10.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS





EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

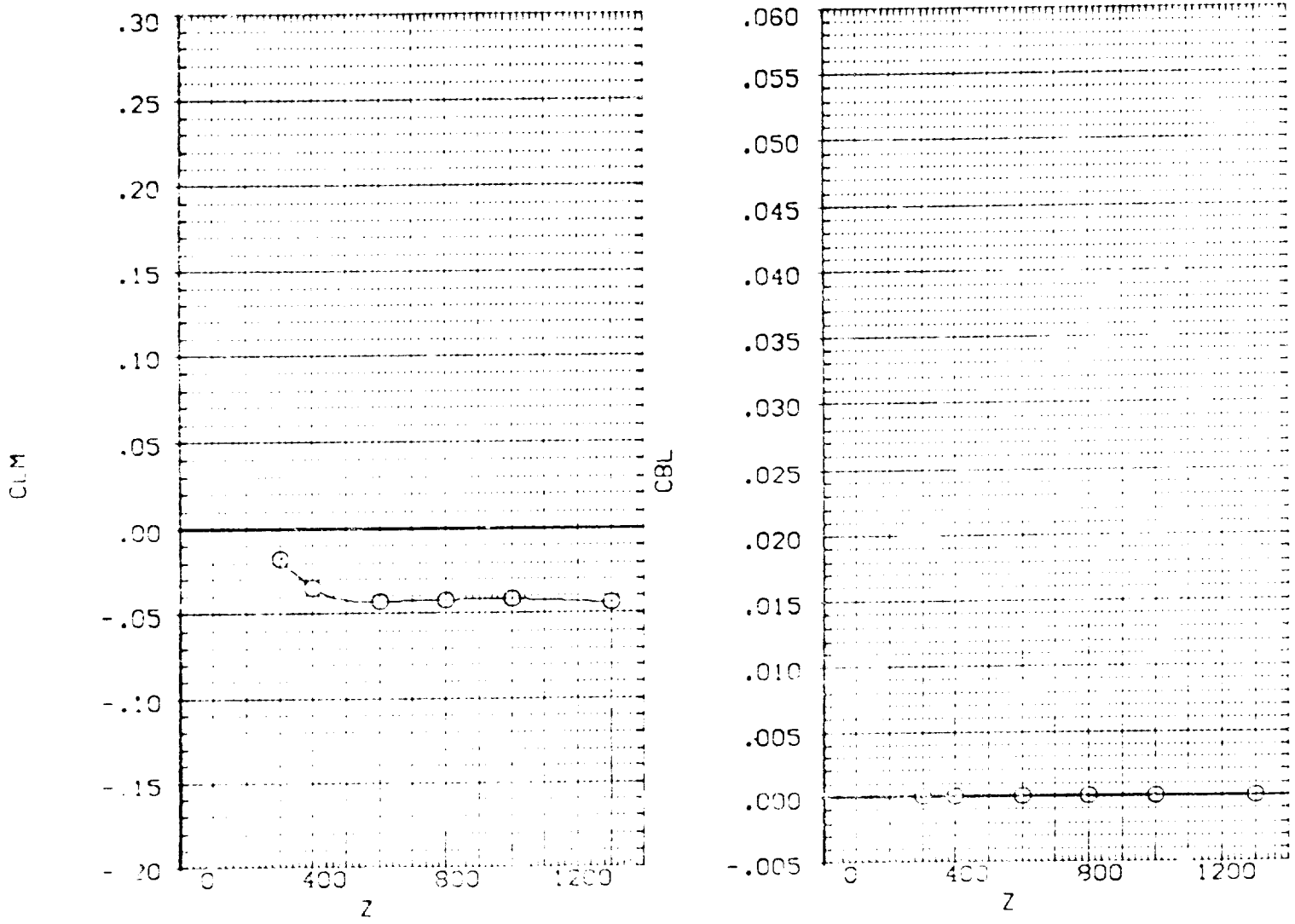


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

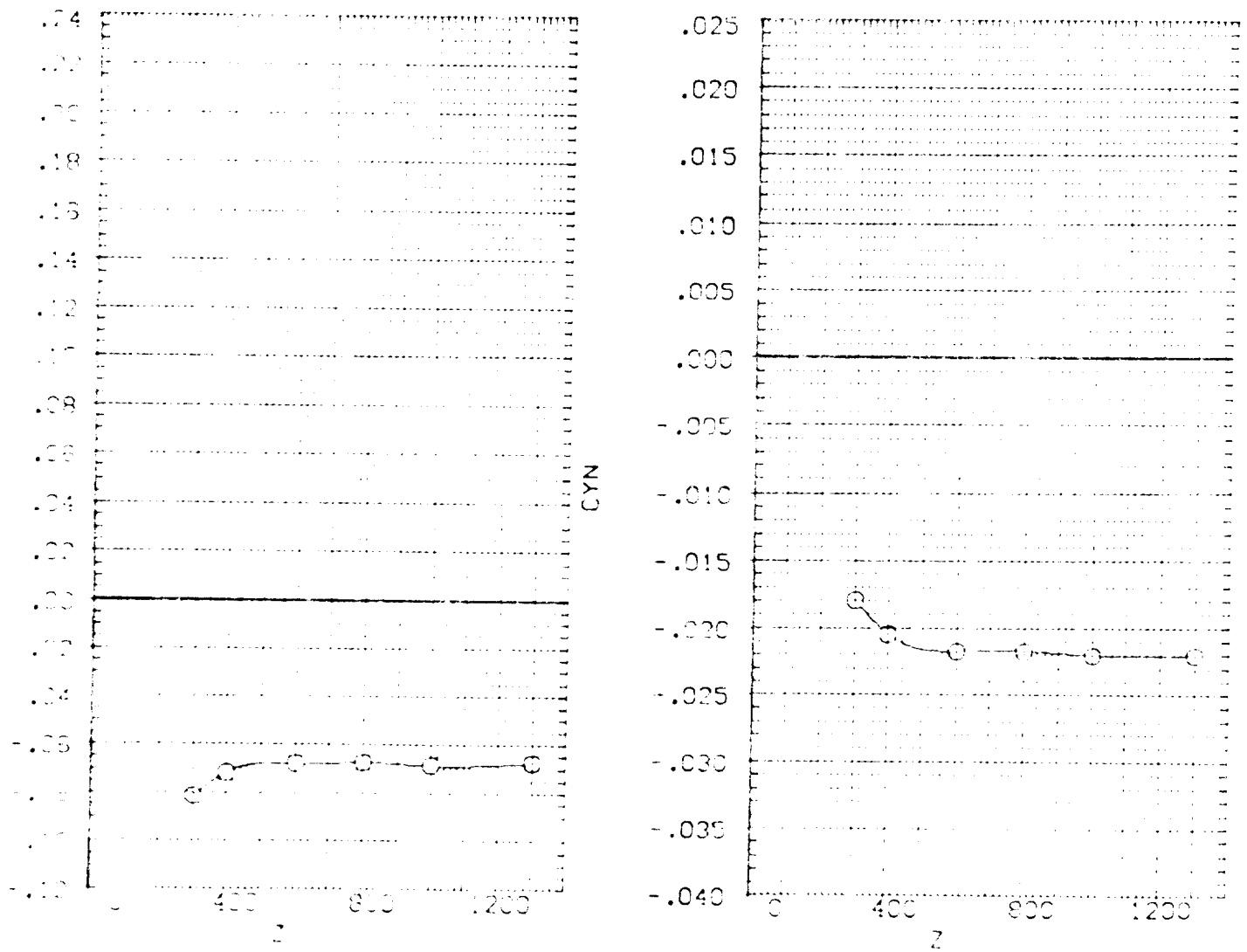
[A13,EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ163)

SYMBOL	X	PARAMETRIC VALUES			
○	.161	MACH	4.530	PTOTAL	110.000
		ALPHA	.000	BETA	.000
		DALPHA	-10.000	DBETA	5.000
		ELEVTR	.000	AILRON	10.000
		Y	200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASET'S



EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER



CY

...SEPARATING FROM CRP, 09 (R1...83)

...AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

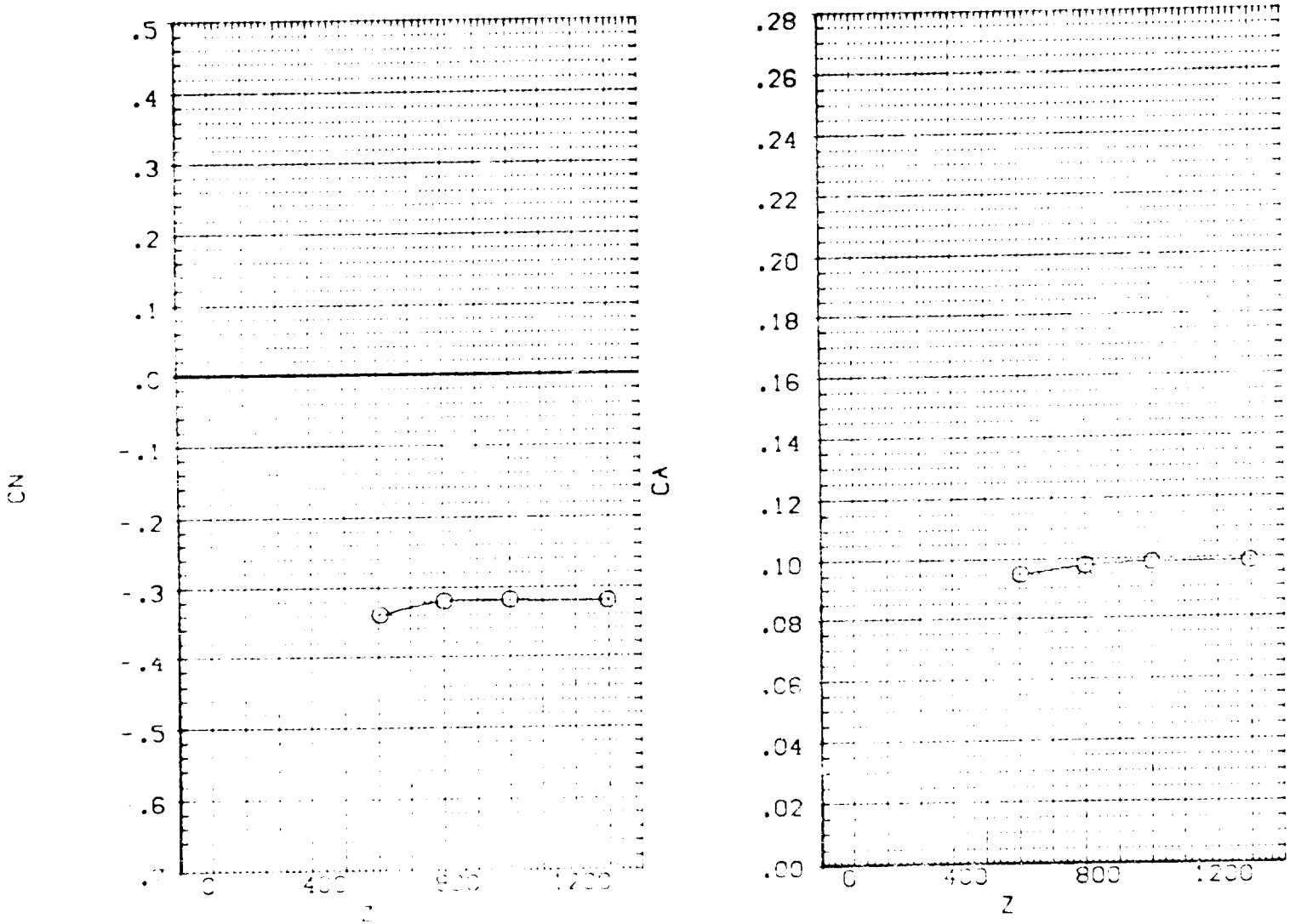
[413. EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT64)

SYMBOL X

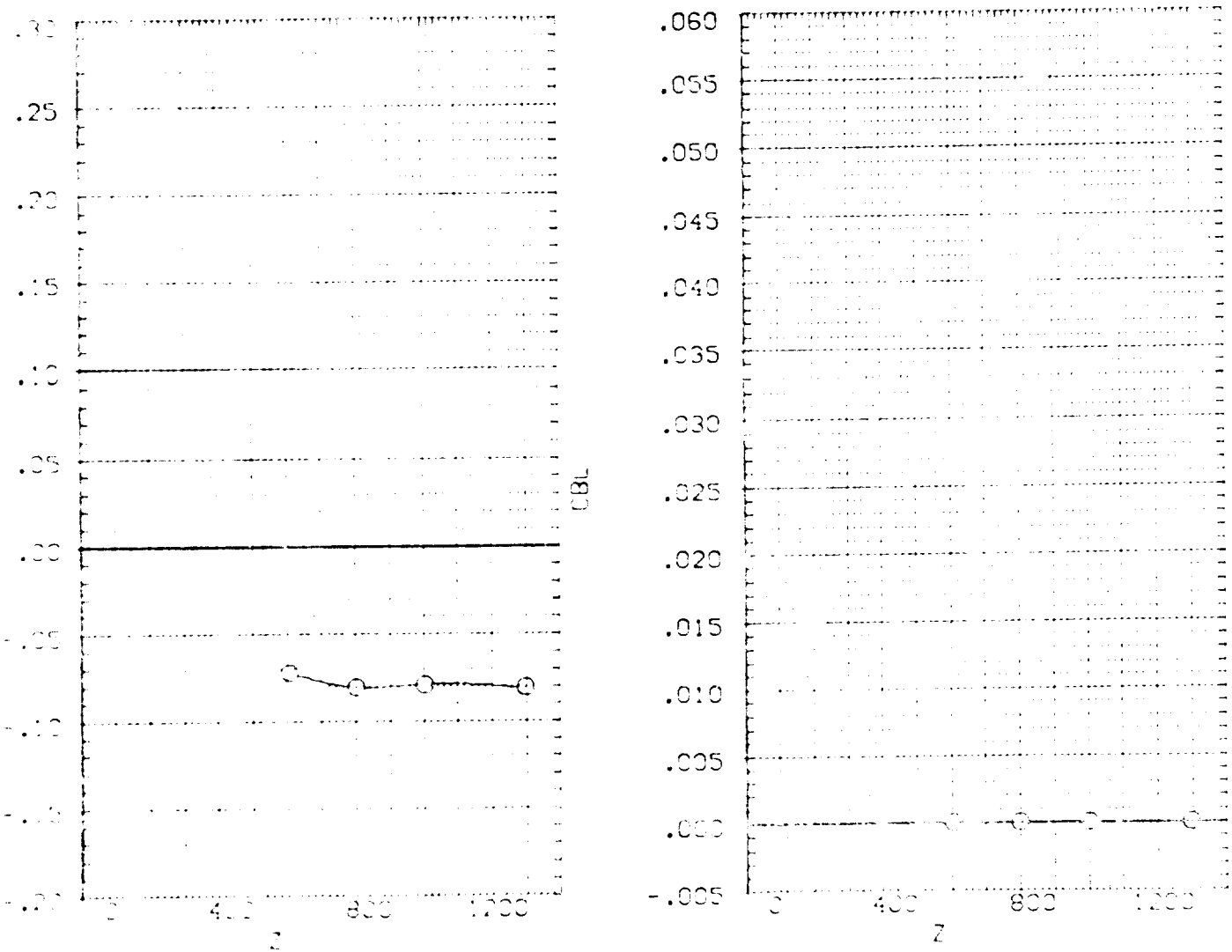
PARAMETRIC VALUES

○	.173	MACH	4.630	PTOTAL 110.000
		ALPHA	.000	BETA .000
		DALPHA	-20.000	DBETA .000
		ELEVTR	.000	AILRON 10.000
		Y	-200.000	

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

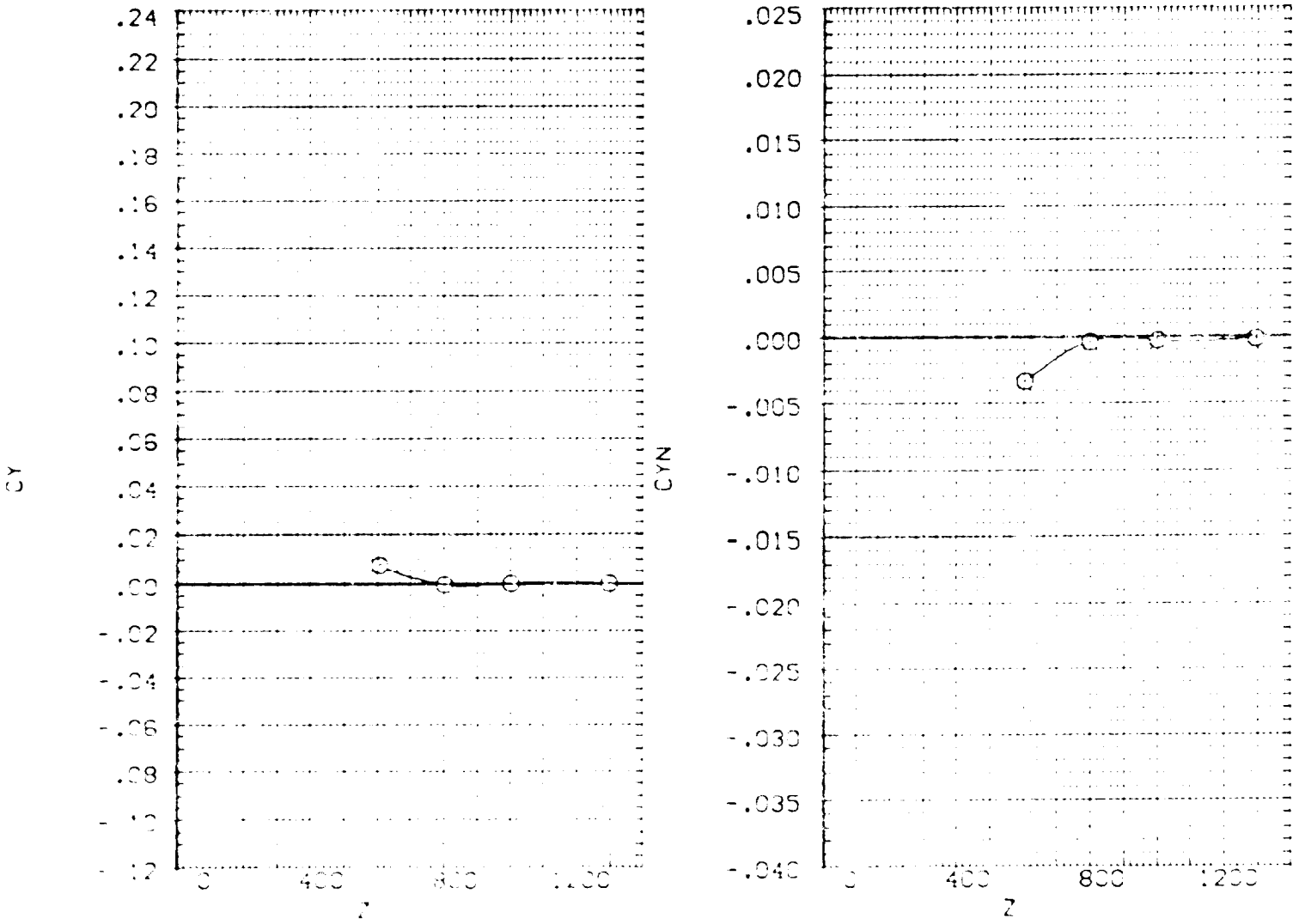


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

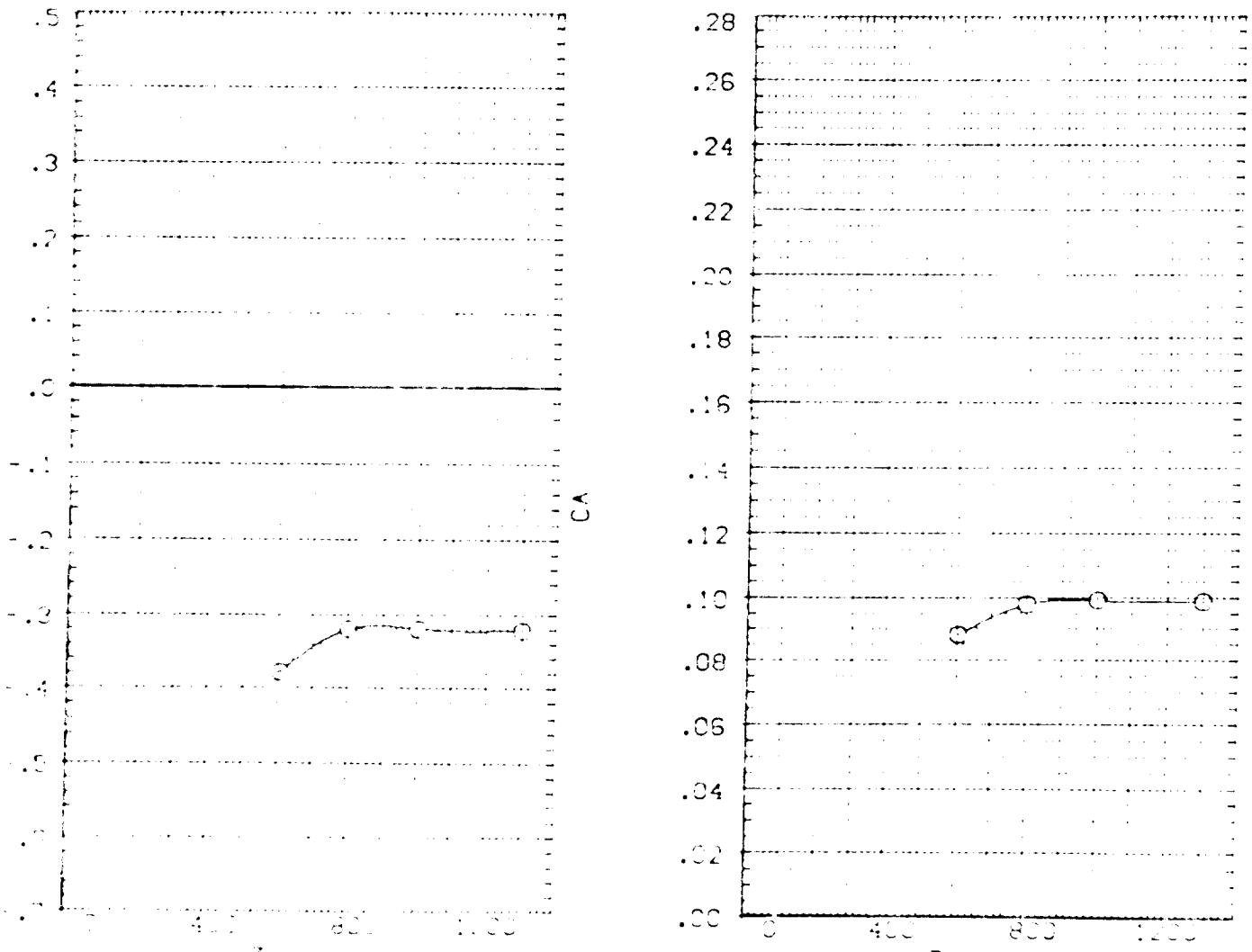
[A13.EXTERNAL TANK(10)SEPARATING FROM ORB. 09 (RTJT64)

SYMBOL	X	PARAMETRIC VALUES			
□	.073	MACH	4.530	PTOTAL	110.000
		ALPHA	.000	BETA	.000
		DALPHA	-20.000	DBETA	.000
		ELEVTR	.000	AILRON	10.000
		Y	-200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

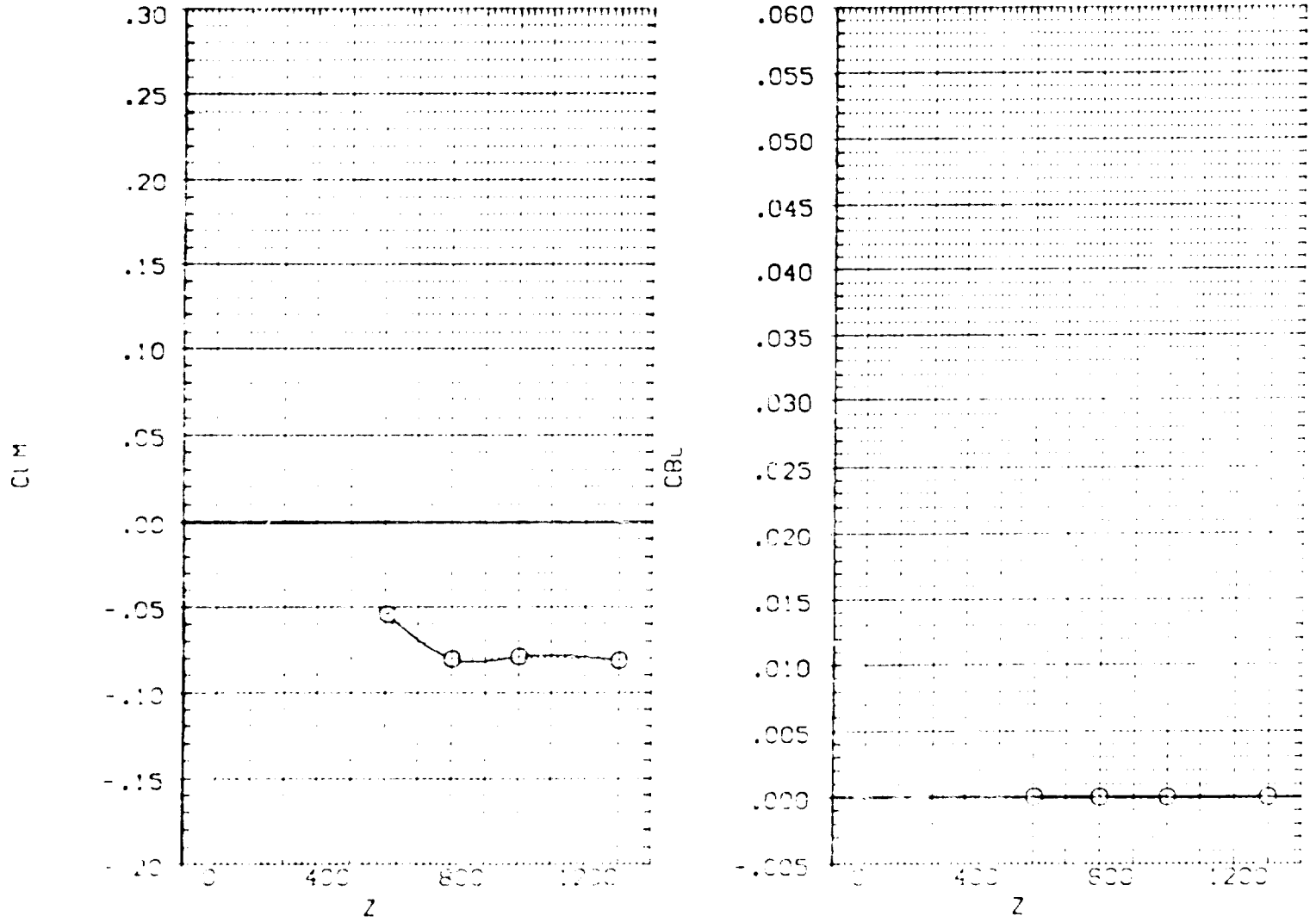


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

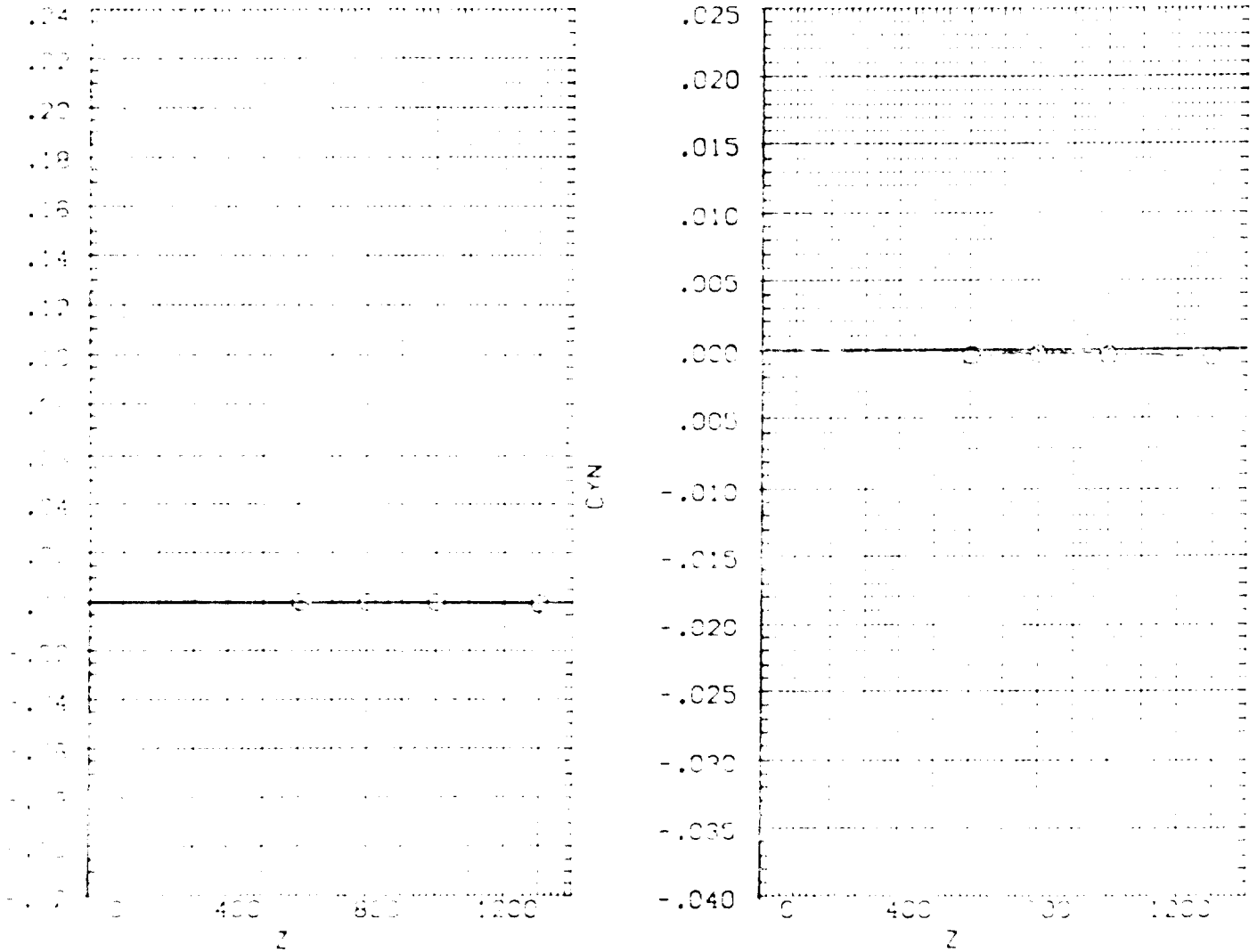
[A13,EXTERNAL TANK(TIO)SEPARATING FROM ORB. OB (RTJT65)

SYMBOL	X	PARAMETRIC VALUES			
O	.040	MACH	4.530	PITOT	110.000
		ALPHA	.000	BETA	.000
		DALPHA	-20.000	DBETA	.000
		ELEVTR	.000	AILERON	10.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

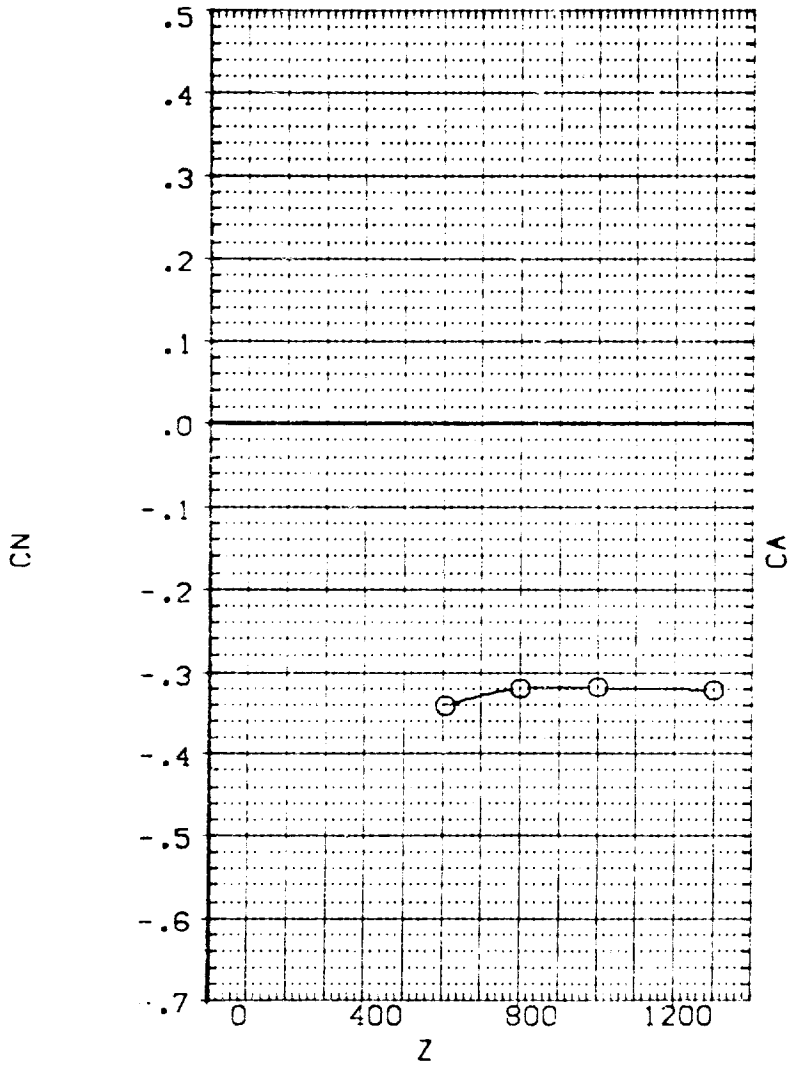


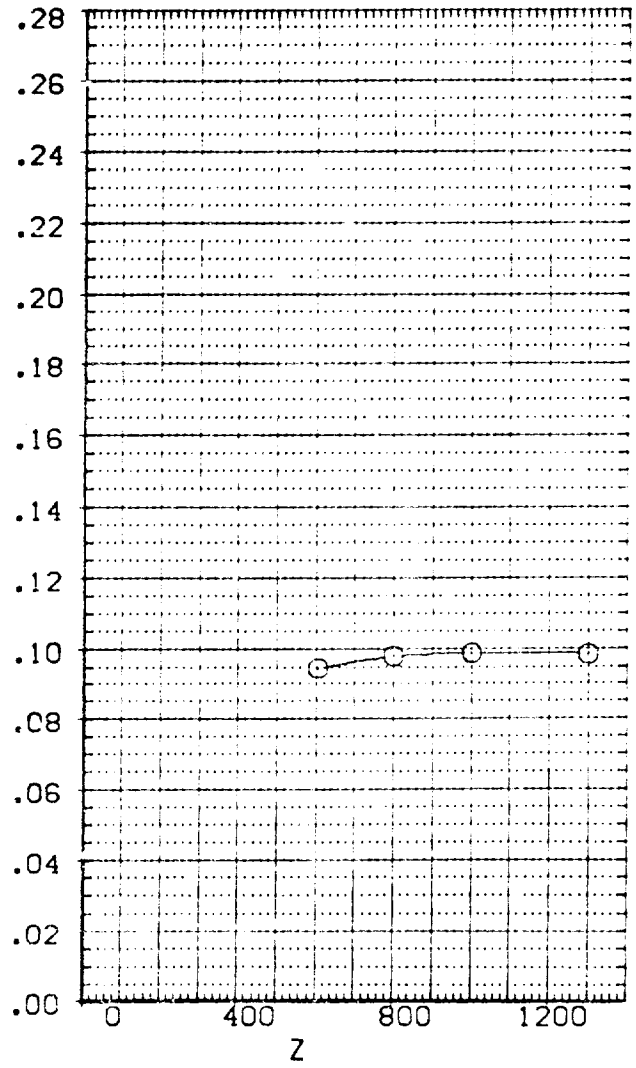
NOMINAL TAIL AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT66)

SYMBOL	X	PARAMETRIC VALUES			
○	.167	MACH	4.530	PTOTAL	110.000
		ALPHA	.000	BETA	.000
		DALPHA	-20.000	DBETA	.000
		ELEVTR	.000	AILRON	10.000
		Y	200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



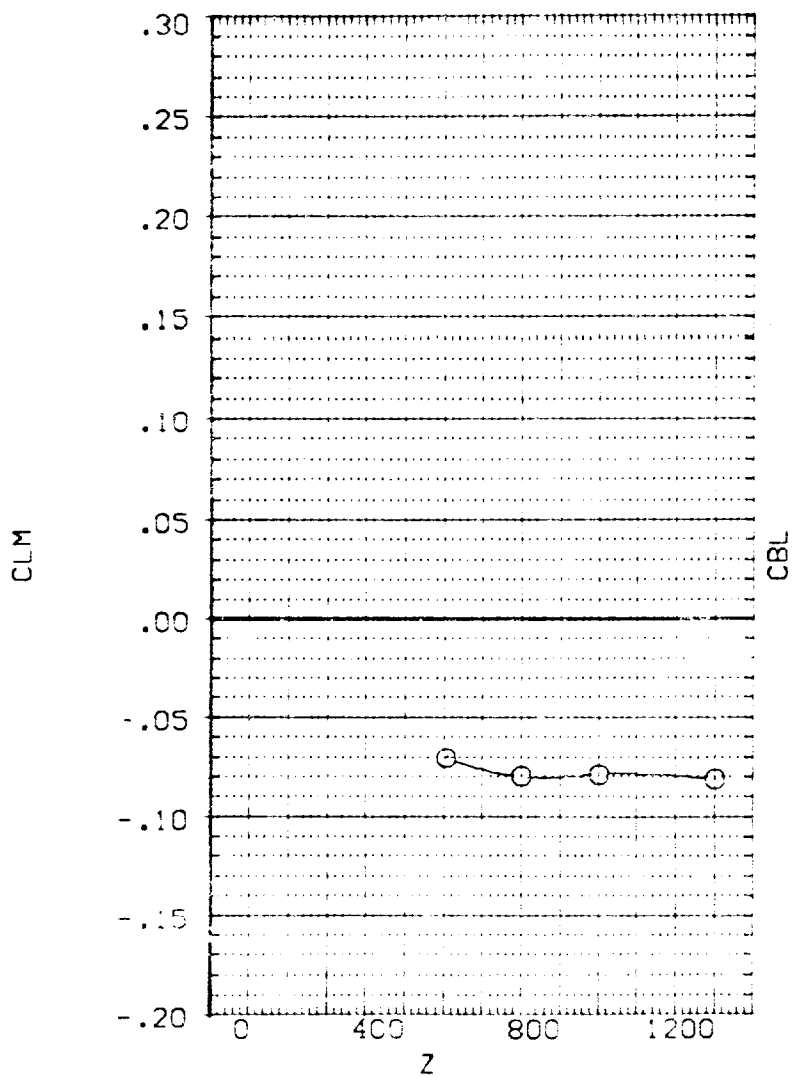


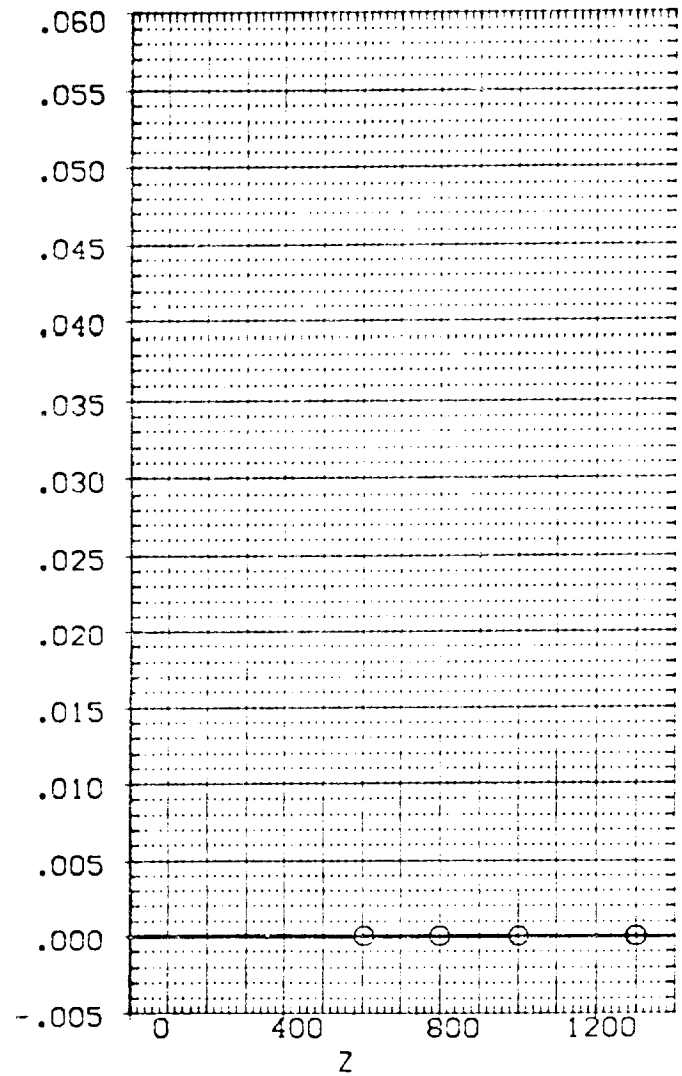
EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

[A13,EXTERNAL TANK(-10)SEPARATING FROM ORB, 09 (RTJT66)

SYMBOL		PARAMETRIC VALUES		
	.167	MACH	4.530	PTOTAL	110.000
		ALPHA	.000	BETA	.000
		DALPHA	-20.000	DBETA	.000
		ELEVTR	.000	AILRON	10.000
		Y	200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



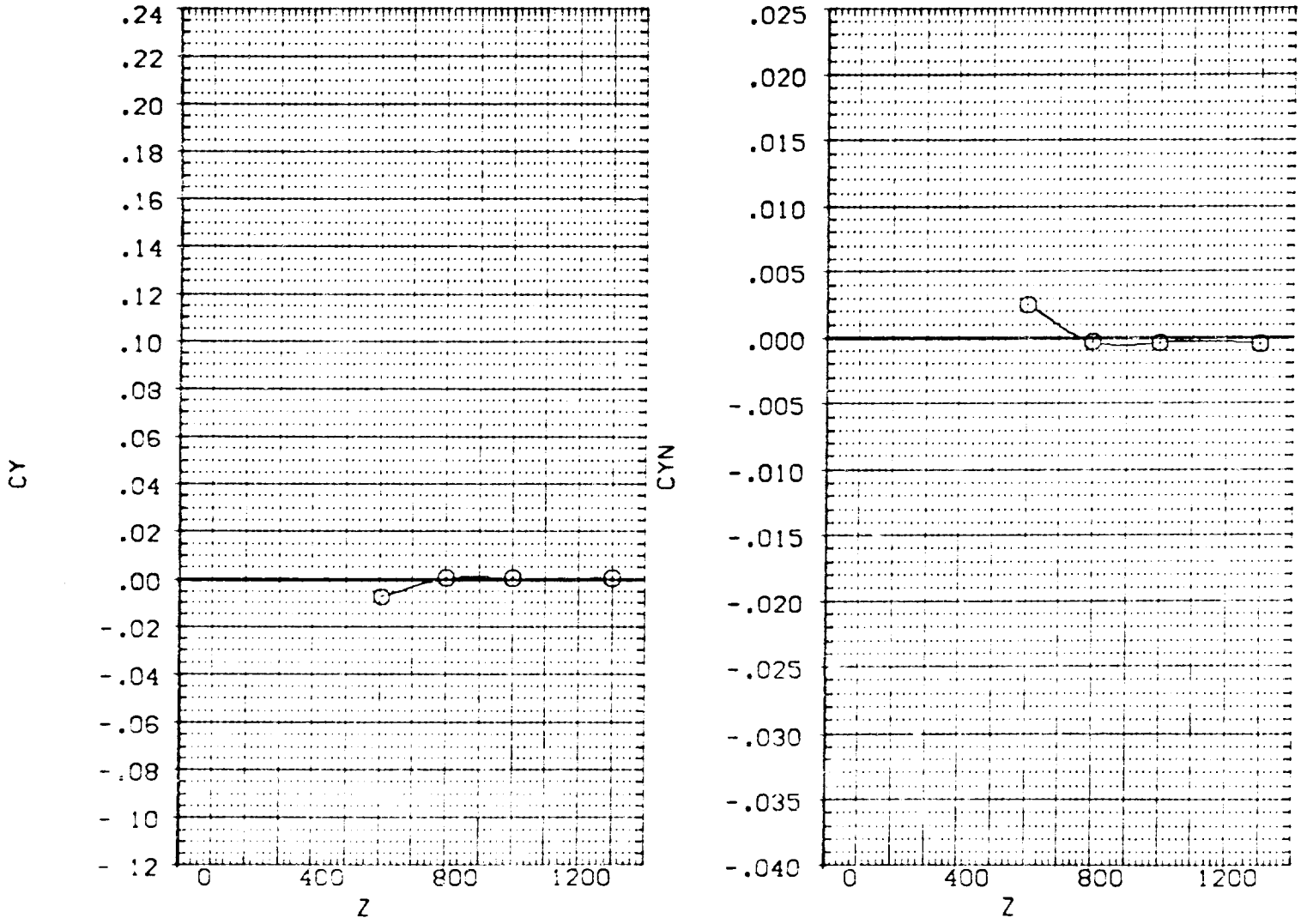


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT66)

SYMBOL	X	PARAMETRIC VALUES			
○	.167	MACH	4.530	PTOTAL	110.000
		ALPHA	.000	BETA	.000
		DALPHA	-20.000	DBETA	.000
		ELEVTR	.000	AILRON	10.000
		Y	200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

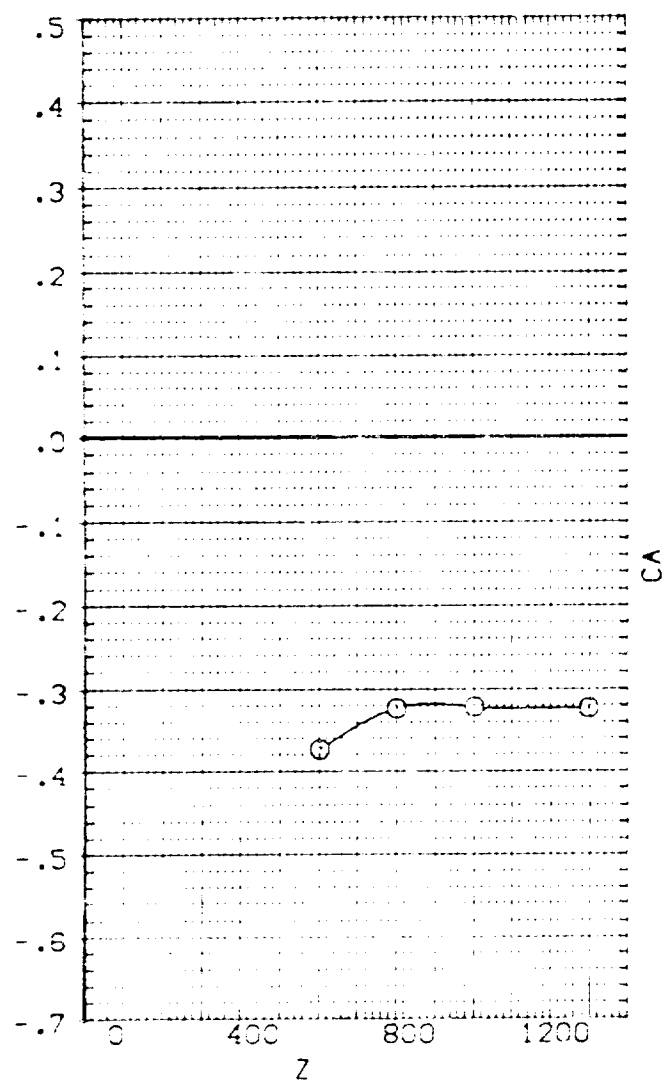


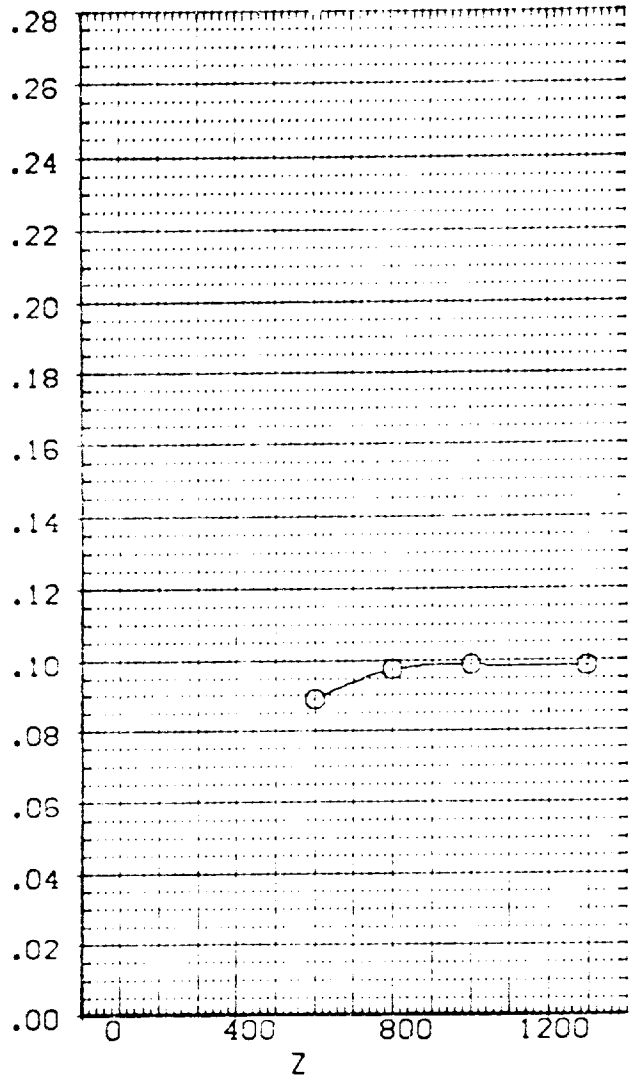
EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

[A13,EXTERNAL [illegible]CTIC]SEPARATING FROM ORB. 09 (RTJT67)

SYMBOL		PARAMETRIC VALUES		
	142	MACH	4.530	PHI
		ALPHA	.000	BETA
		DALPHA	-20.000	DBETA
		ELEVTR	.000	AILRON
		Y	-200.000	

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



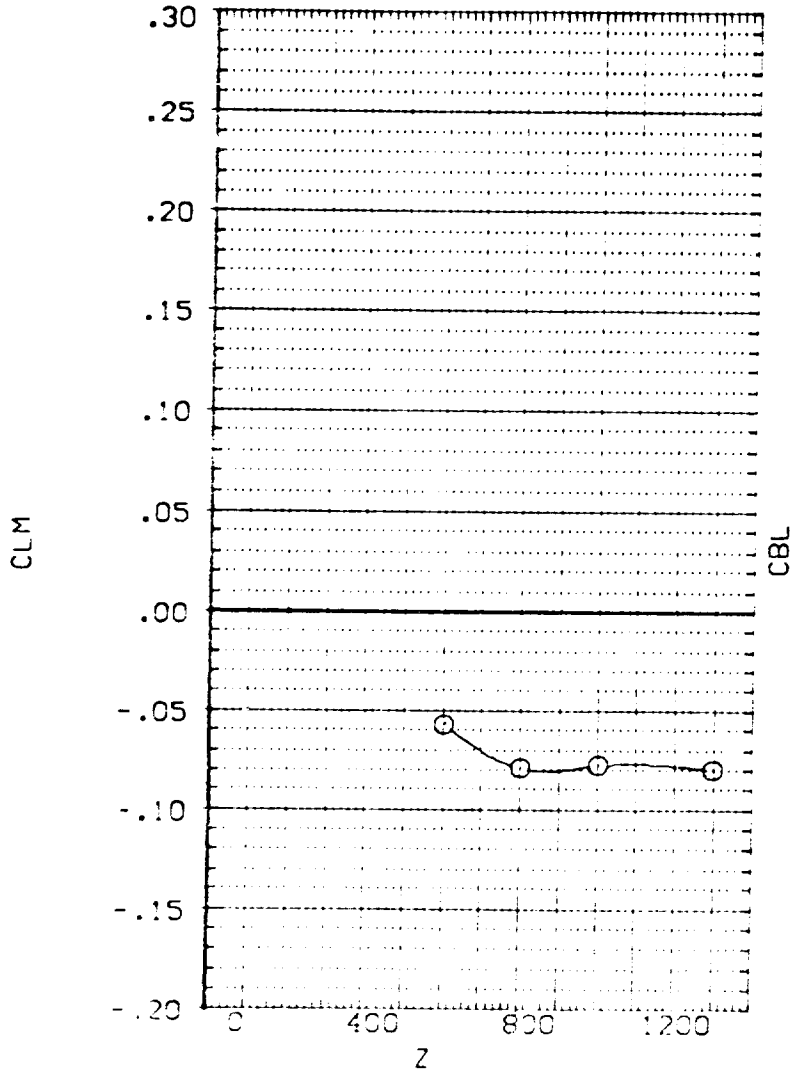


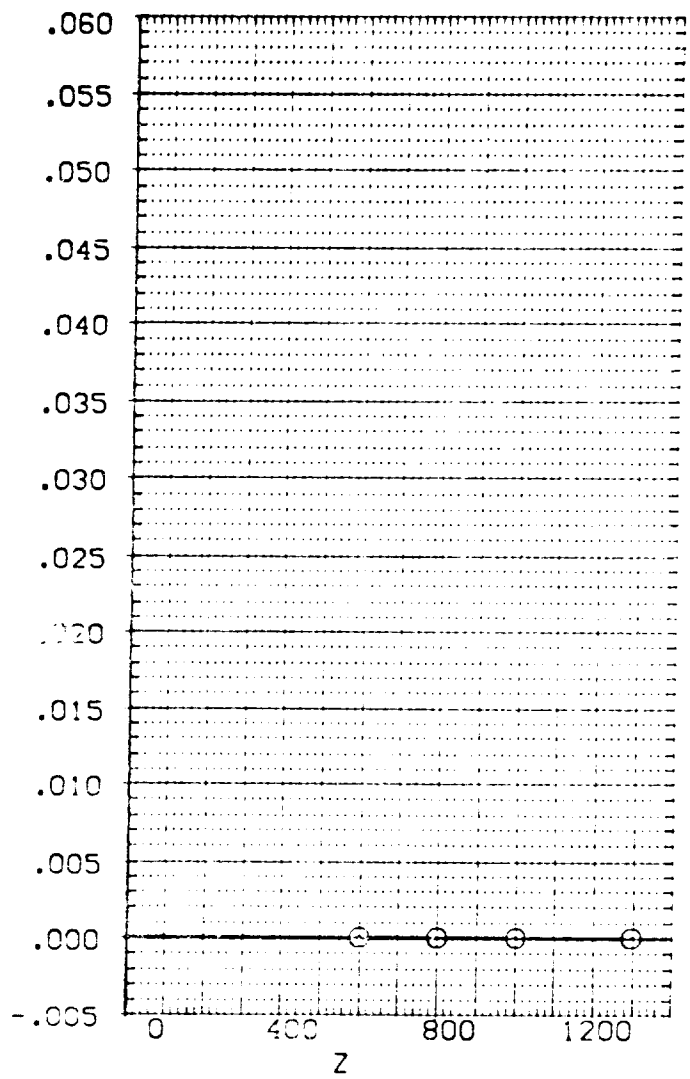
EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT67)

SYMBOL	X	PARAMETRIC VALUES			
○	.142	MACH	4.530	PTOTAL	110.000
		ALPHA	.000	BETA	.000
		DALPHA	-20.000	DBETA	-5.000
		ELEVTR	.000	AILRON	10.000
		Y	-200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



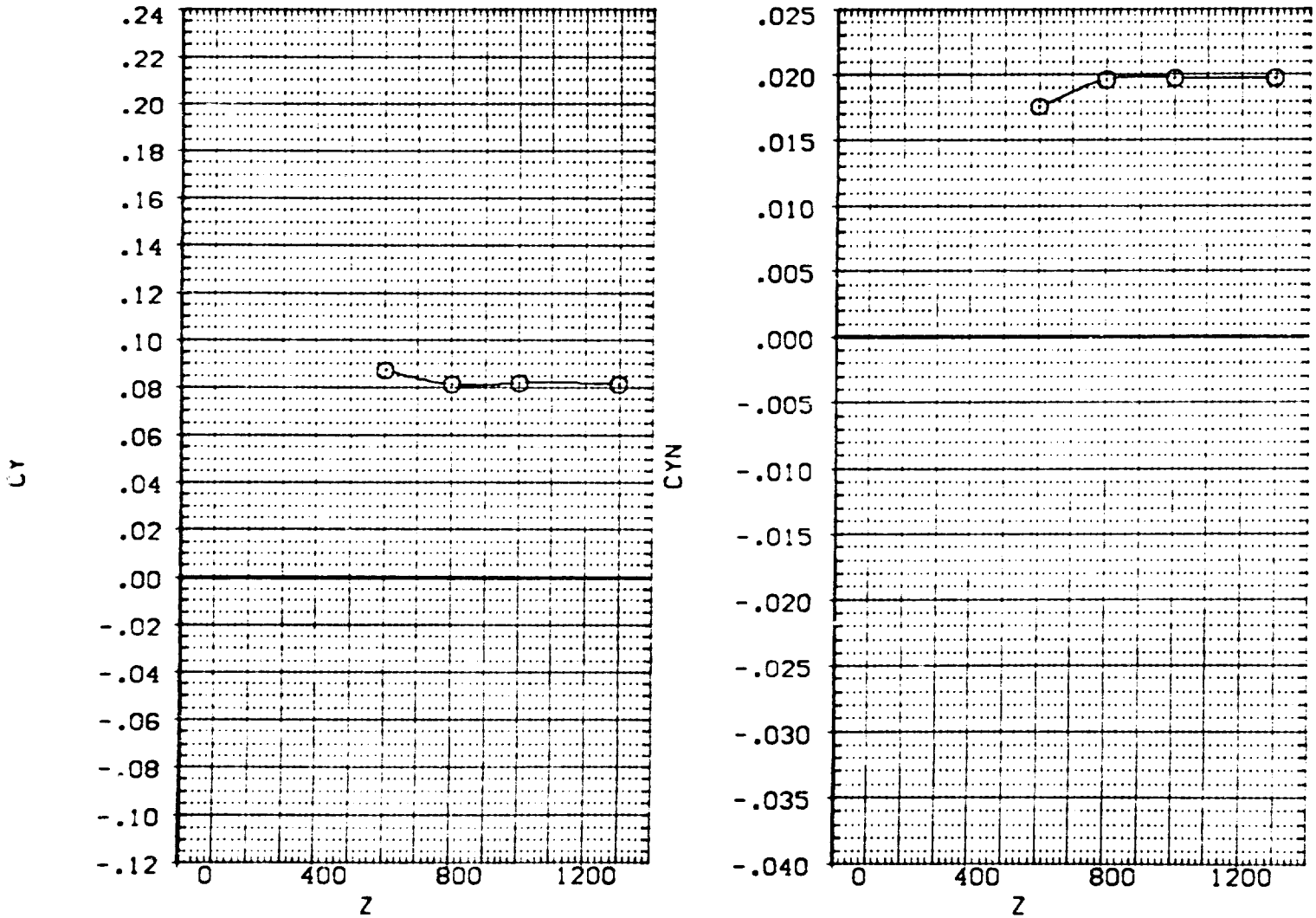


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

!A13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT67)

SYMBOL	X		PARAMETRIC VALUES		
○	.142	MACH	4.530	PTOTAL	110.000
		ALPHA	.000	BETA	.000
		DALPHA	-20.000	DBETA	-5.000
		ELEVTR	.000	AILRON	10.000
		Y	-200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

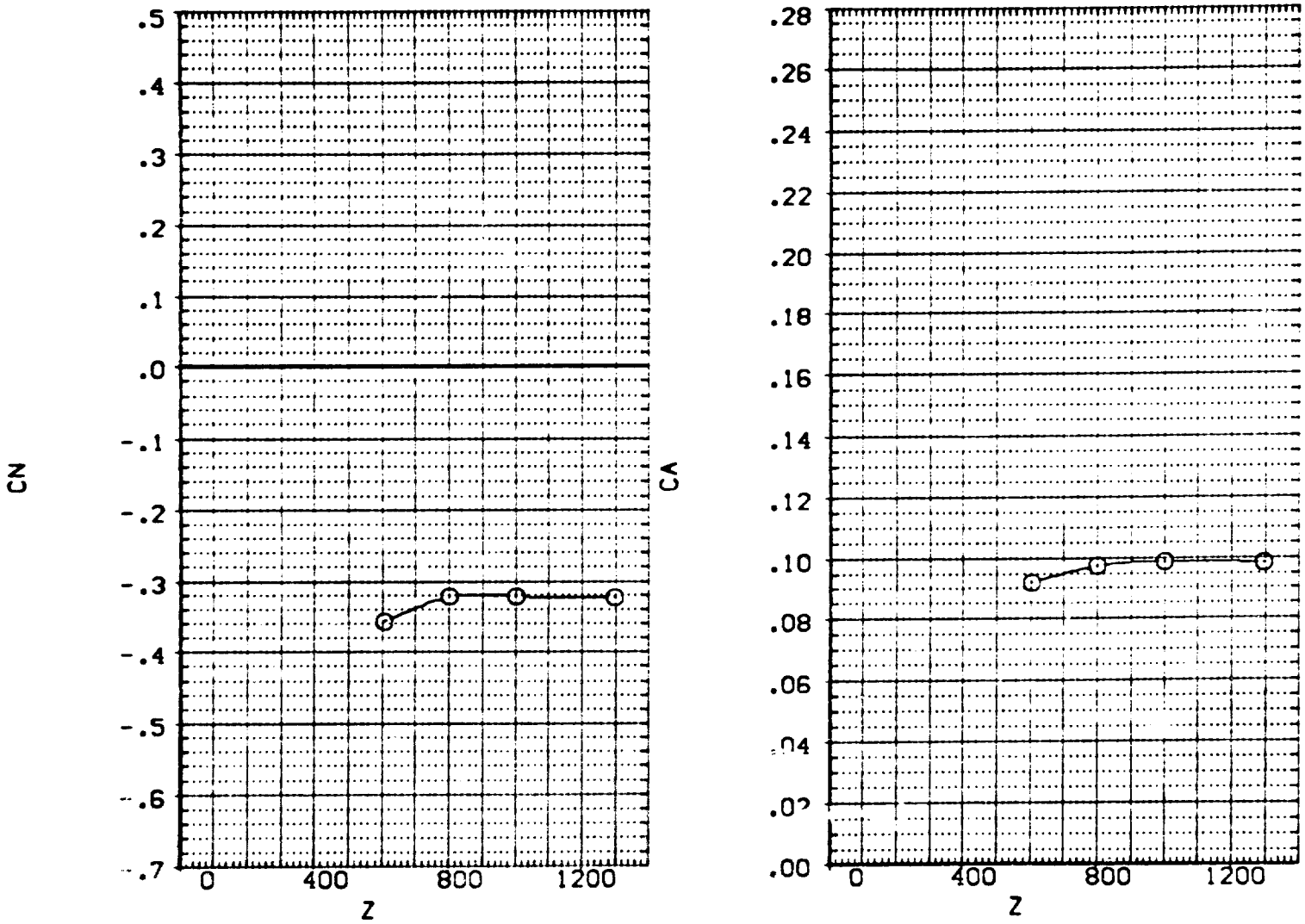


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

IA13.EXTERNAL TANK(-10)SEPARATING FROM ORB. 09 (RTJT68)

SYMBOL	X		PARAMETRIC VALUES		
○	.014	MACH	4.530	PTOTAL	110.000
		ALPHA	.000	BETA	.000
		DALPHA	-20.000	DBETA	5.000
		ELEVTR	.000	AILRON	10.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

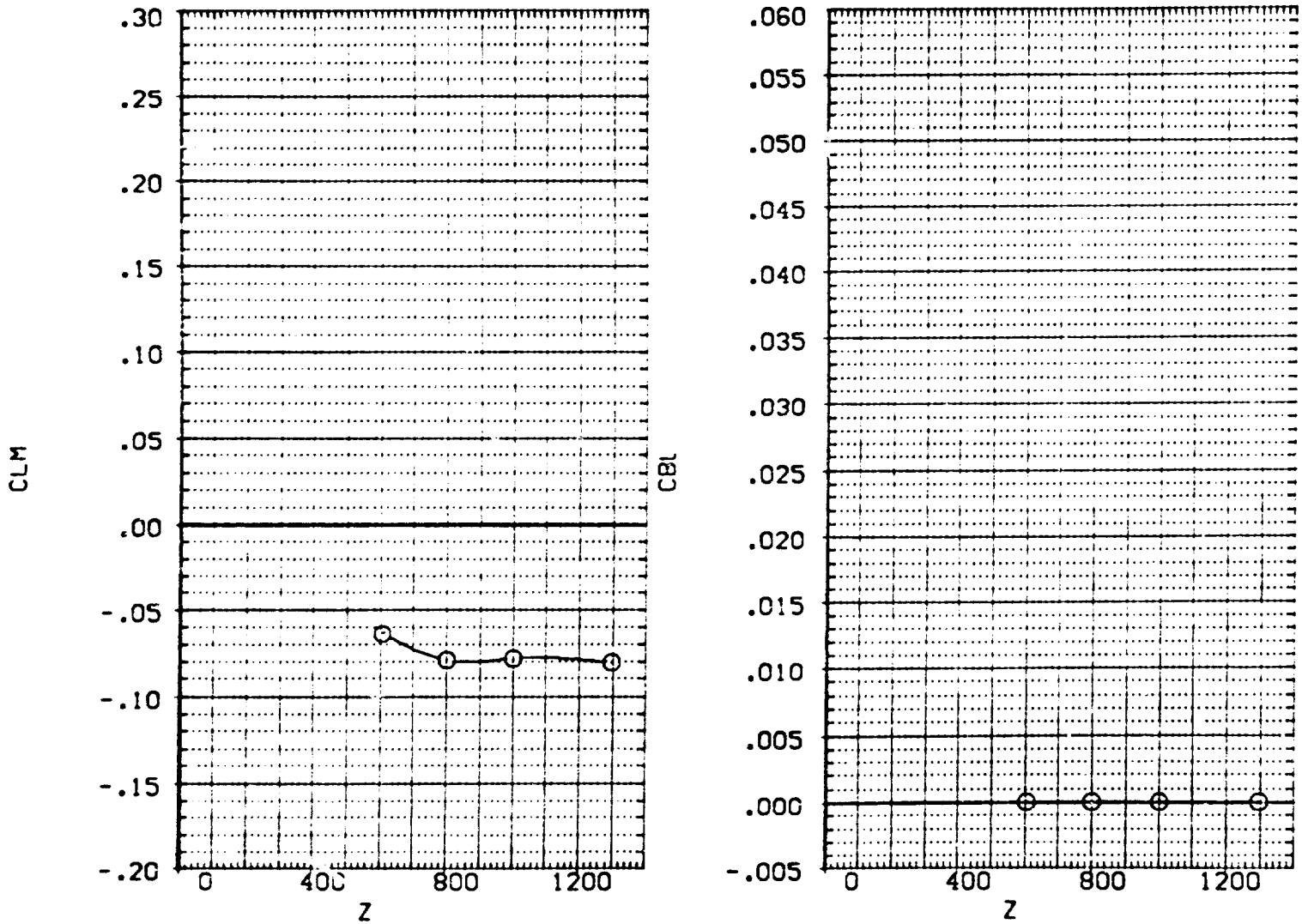


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

!A13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT68)

SYMBOL	X	PARAMETRIC VALUES			
○	.014	MACH	4.530	PTOTAL	110.000
		ALPHA	.000	BETA	.000
		DALPHA	-20.000	DBETA	5.000
		ELEVTR	.000	AILRON	10.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

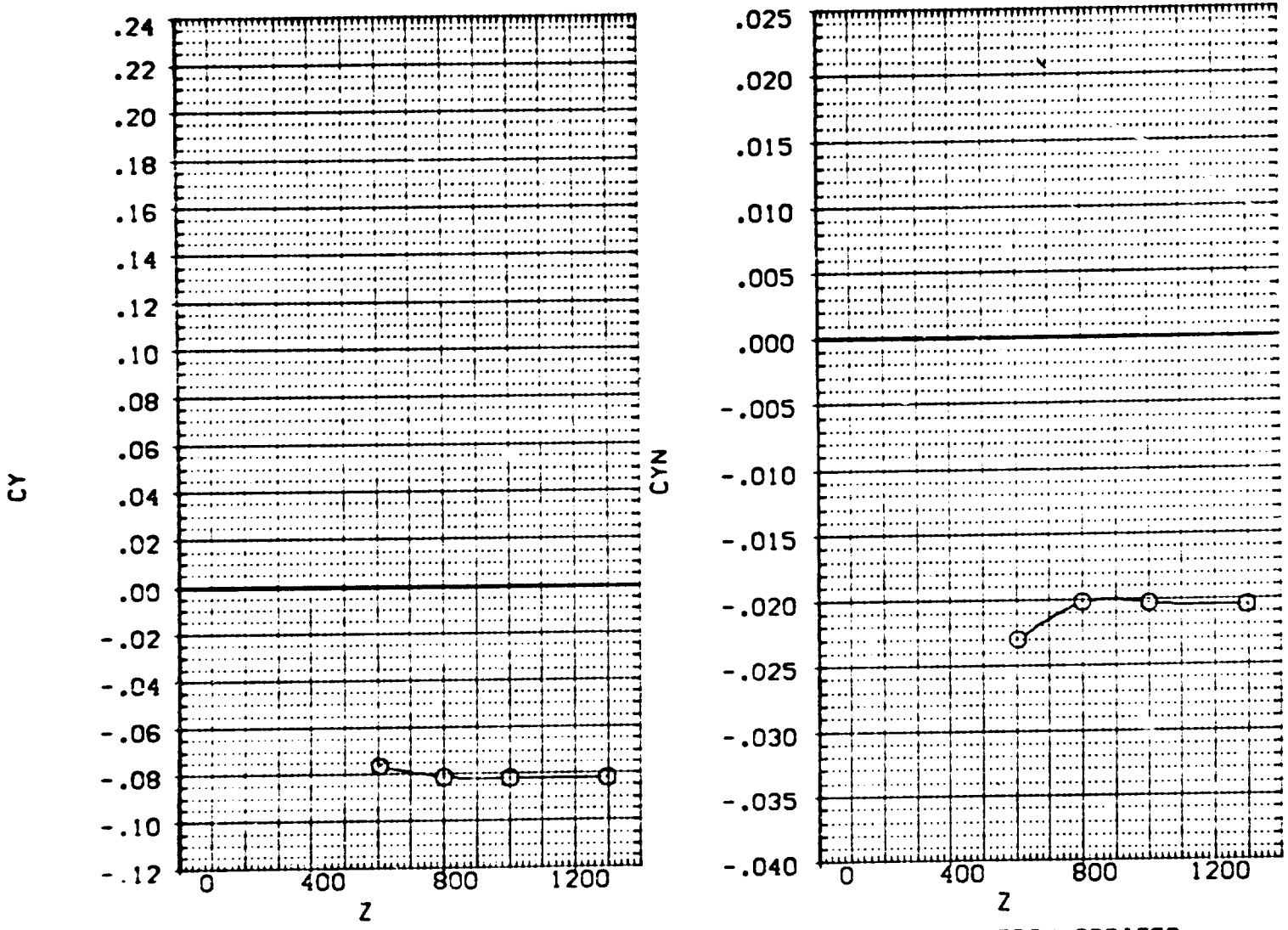


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

!A13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT68)

SYMBOL	X	PARAMETRIC VALUES			
C	.014	MACH	4.530	PTOTAL	110.000
		ALPHA	.000	BETA	.000
		DALPHA	-20.000	DBETA	5.000
		ELEVTR	.000	AILRON	10.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

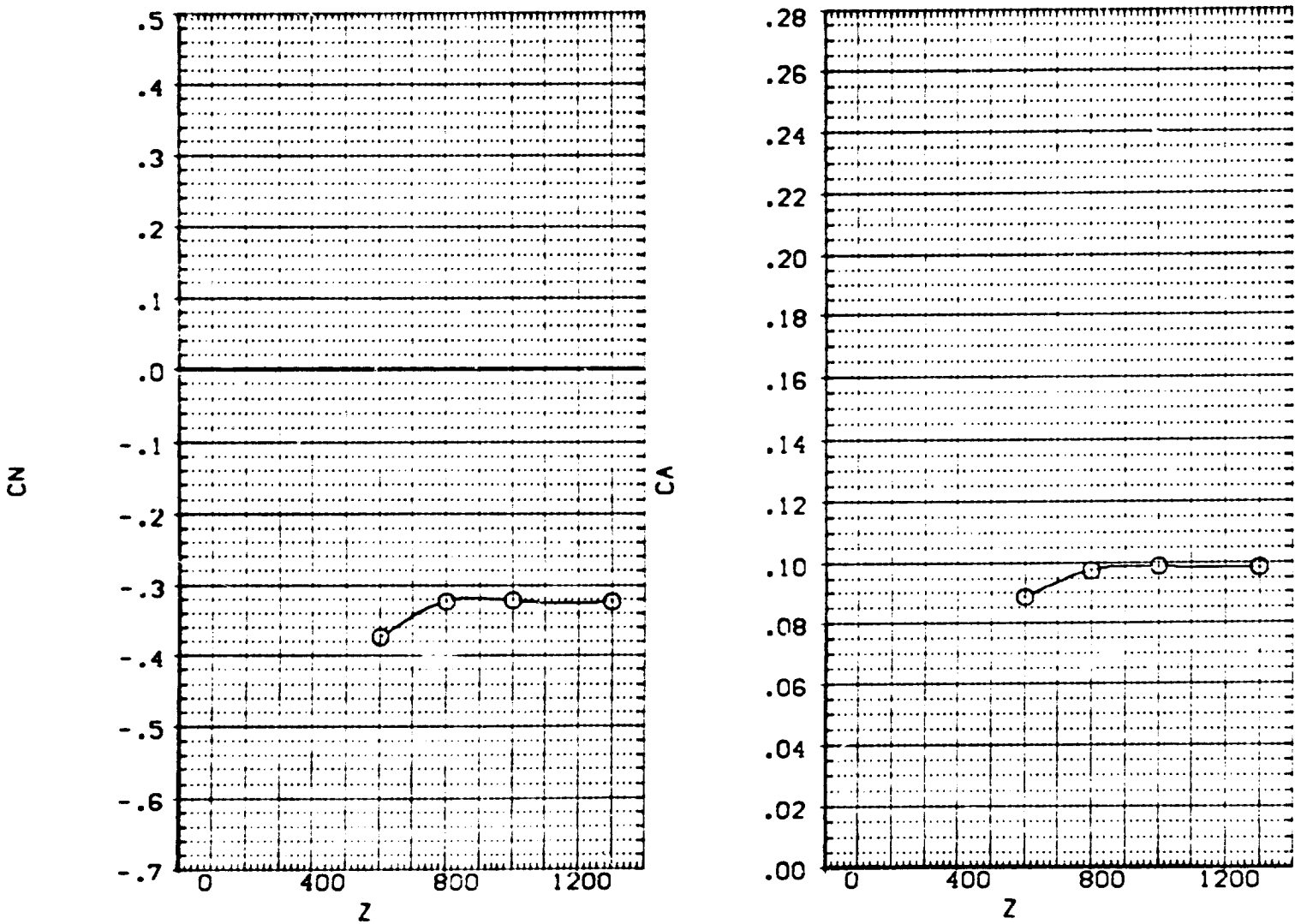


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

!A!3.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT69)

SYMBOL	X		PARAMETRIC VALUES		
C	.050	MACH	4.530	PTOTAL	110.000
		ALPHA	.000	BETA	.000
		DALPHA	-20.000	DBETA	5.000
		ELEVTR	.000	AILRON	10.000
		Y	200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

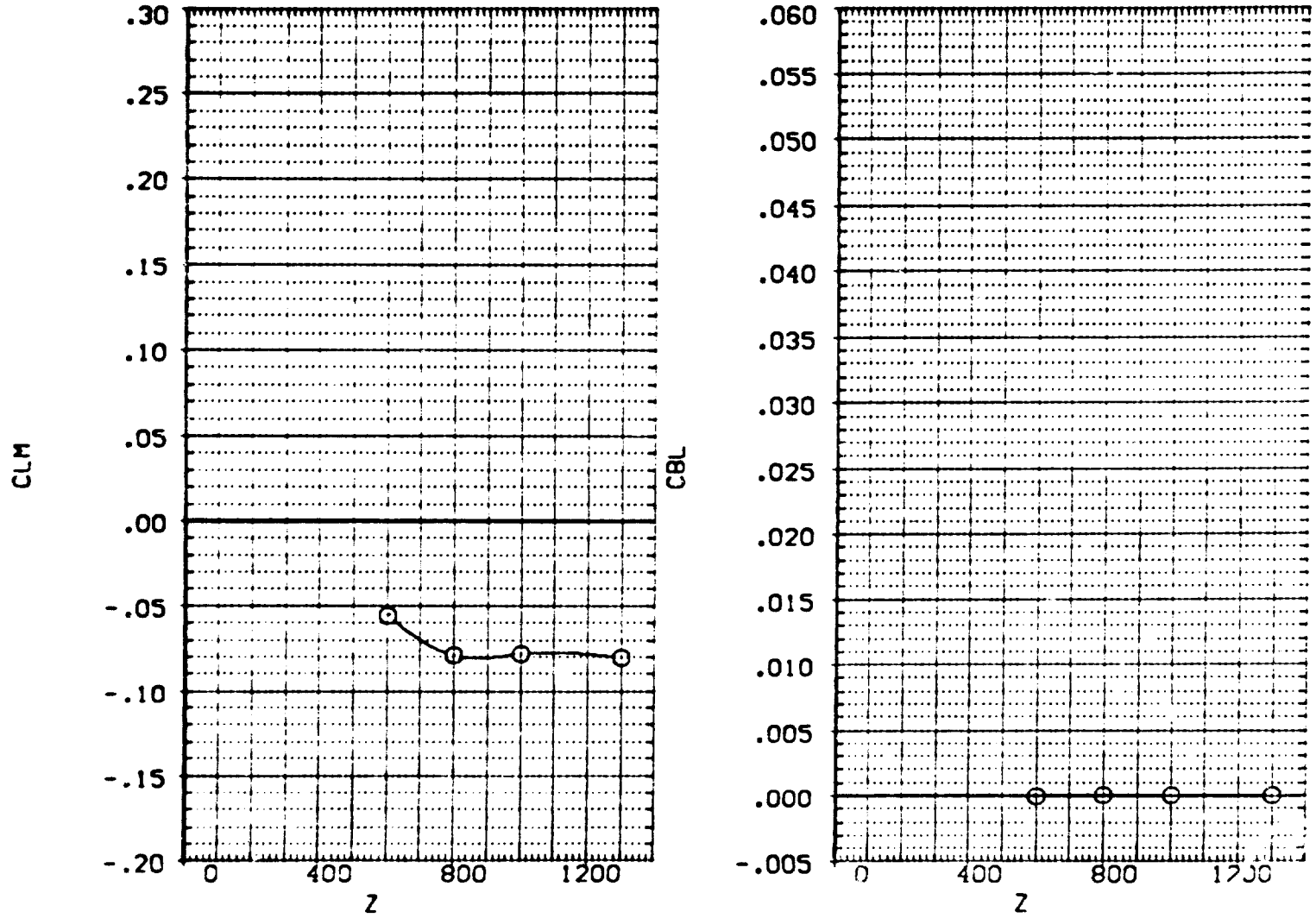


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

!A!3.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT69)

SYMBOL	X	PARAMETRIC VALUES			
○	.050	MACH	4.530	PTOTAL	1:0.000
		ALPHA	.000	BETA	.000
		DALPHA	-20.000	DBETA	5.000
		ELEVTR	.000	AILRON	10.000
		Y	200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

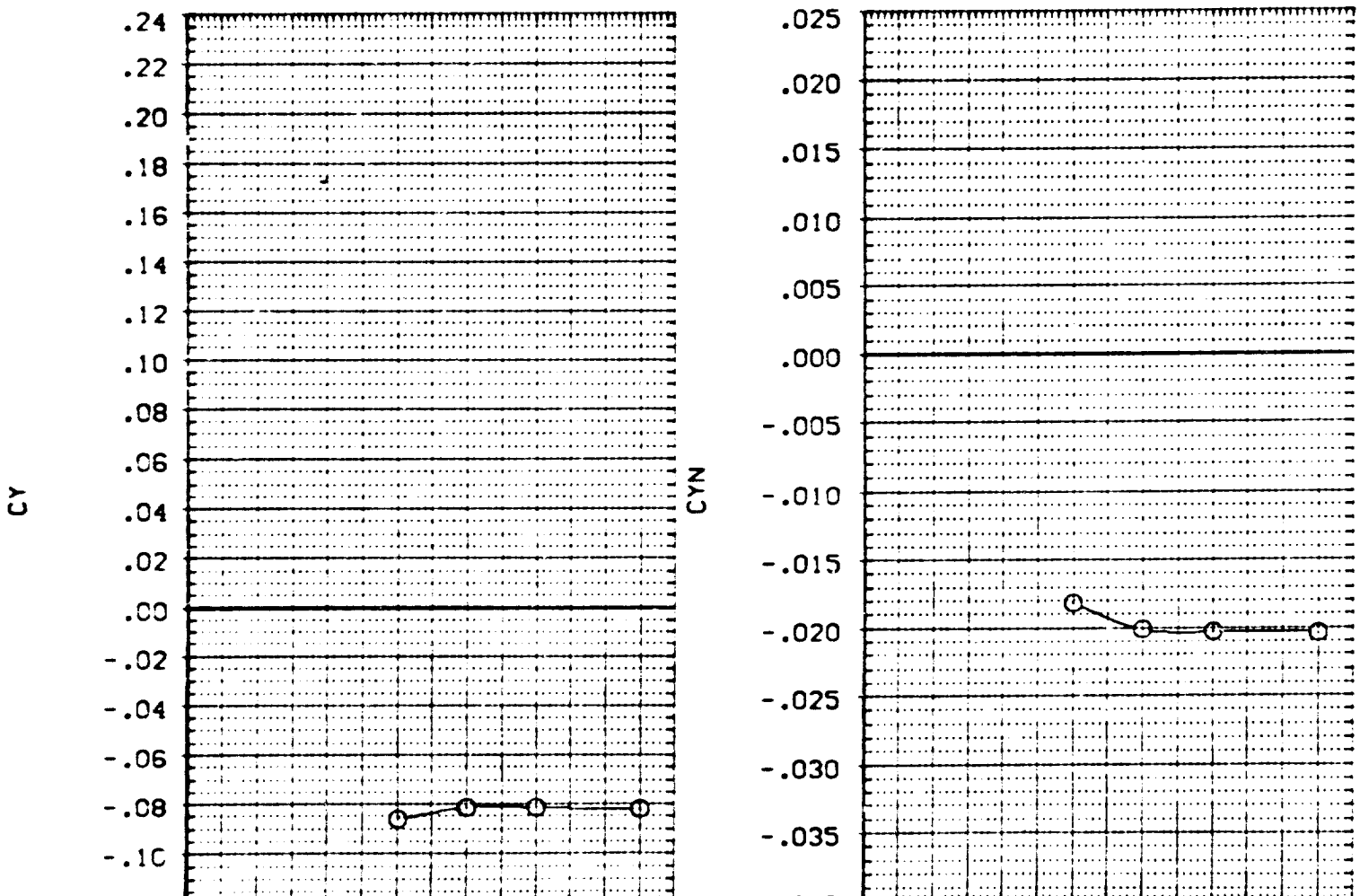


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

!A!3.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT69)

SYMBOL	Y	PARAMETRIC VALUES			
○	.050	MACH	4.530	PTOTAL	110.000
		ALPHA	.000	BETA	.000
		DALPHA	-20.000	DBETA	5.000
		ELEVTR	.000	AILRON	10.000
		Y	200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

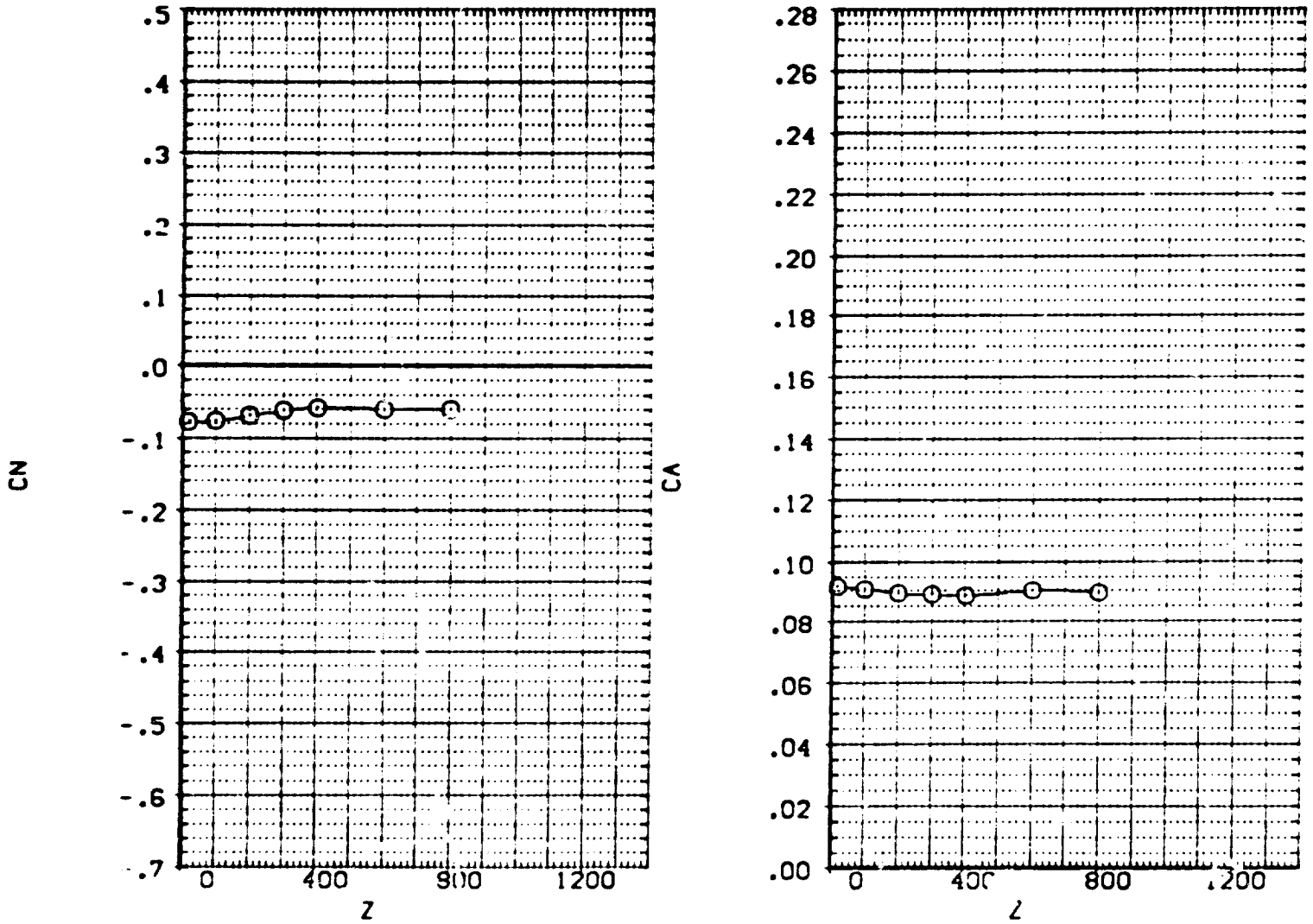


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

!A13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT70)

SYMBOL	X	PARAMETRIC VALUES			
○	.256	MACH	4.520	PTOTAL	80.000
		ALPHA	-5.000	BETA	.000
		DALPHA	.000	DBETA	.000
		ELEVTR	.000	AILRON	10.000
		Y	-200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

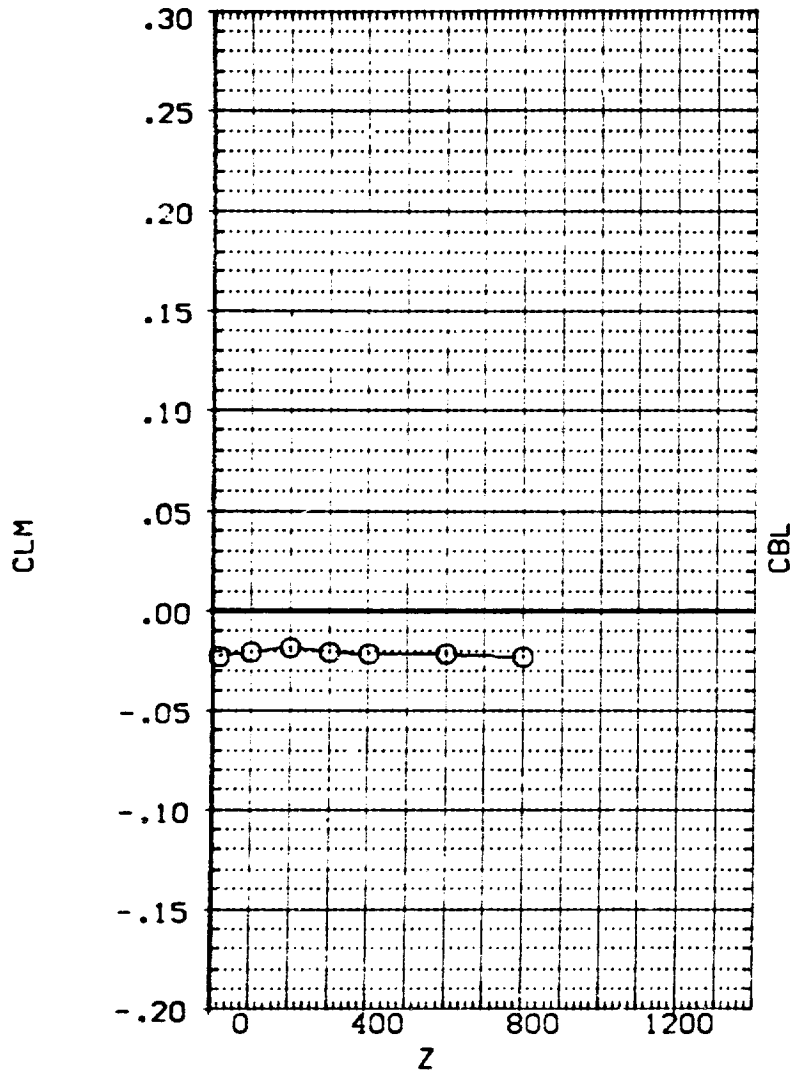


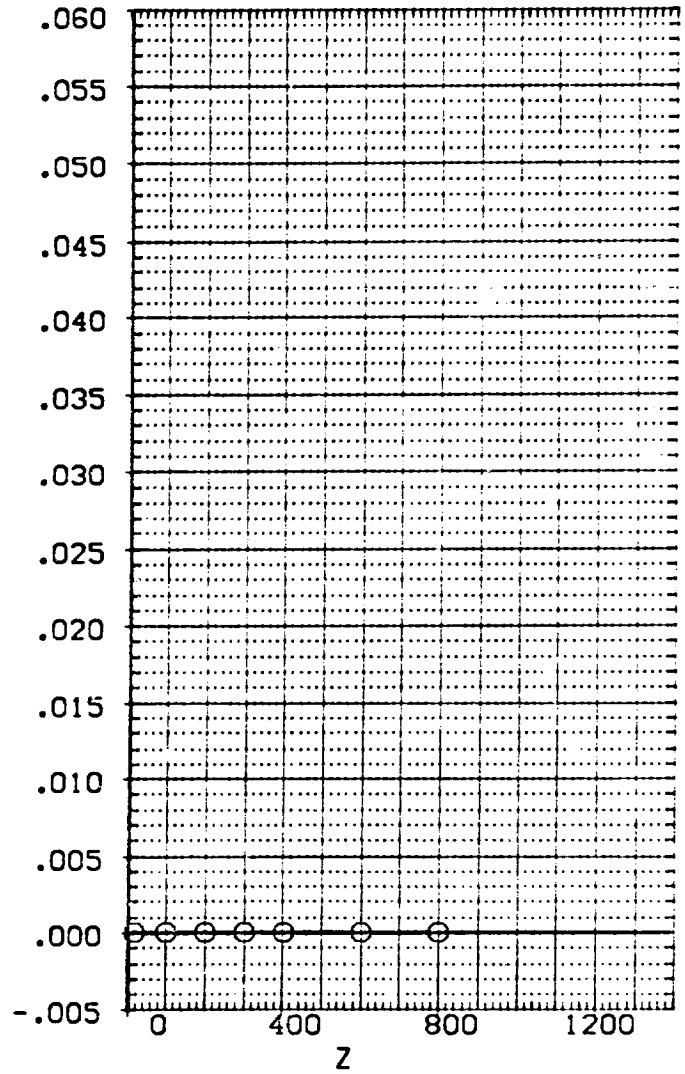
EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT70)

SYMBOL	X	PARAMETRIC VALUES			
○	.256	MACH	4.520	PTOTAL	80.000
		ALPHA	-5.000	BETA	.000
		DALPHA	.000	DBETA	.000
		ELEVTR	.000	AILRON	10.000
		Y	-200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



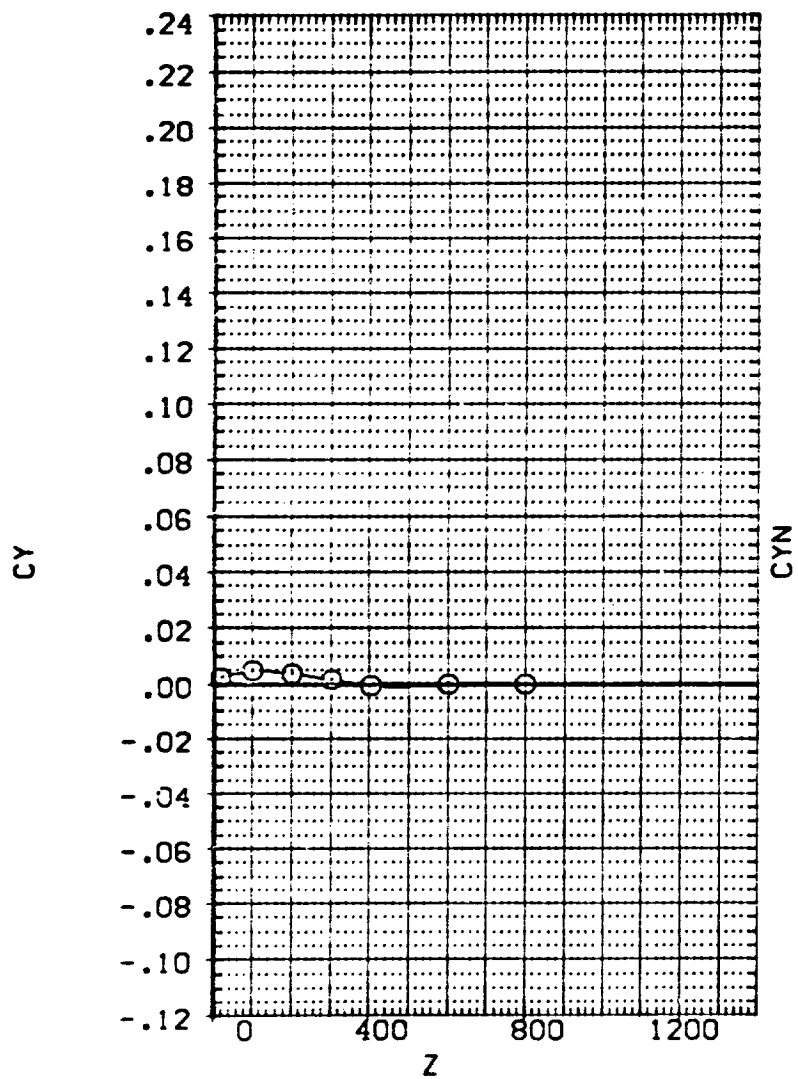


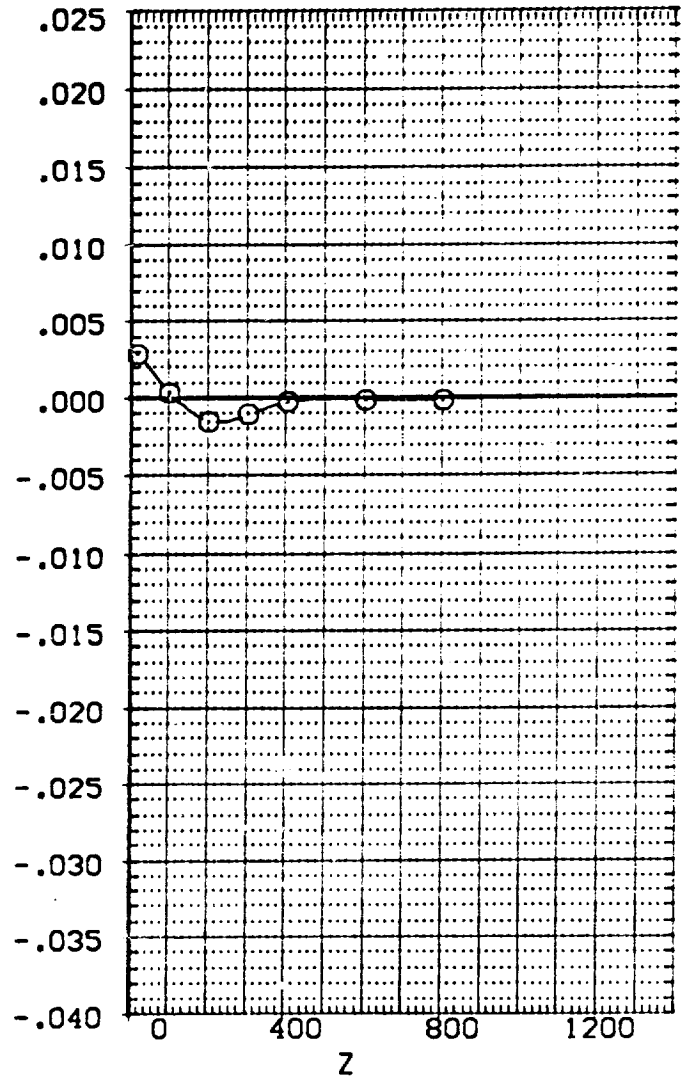
EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT70)

SYMBOL	X		PARAMETRIC VALUES		
○	.256	MACH	4.520	PTOTAL	80.000
		ALPHA	-5.000	BETA	.000
		DALPHA	.000	DBETA	.000
		ELEVTR	.000	AILRON	10.000
		Y	-200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



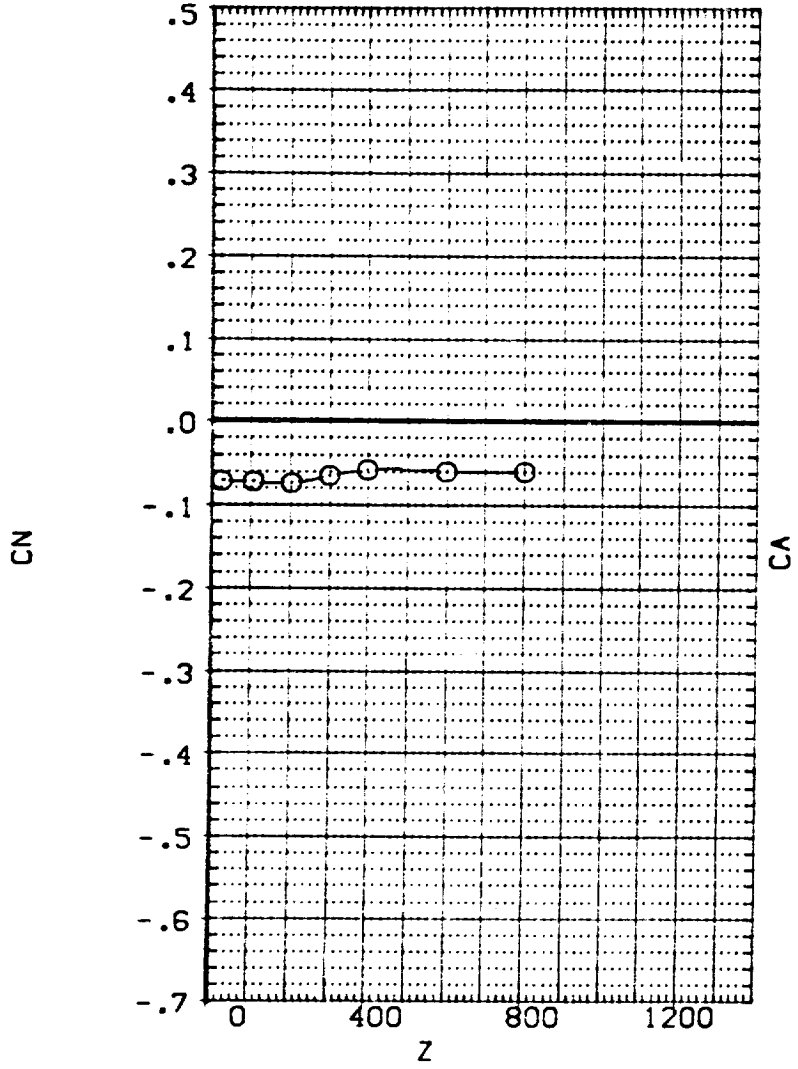


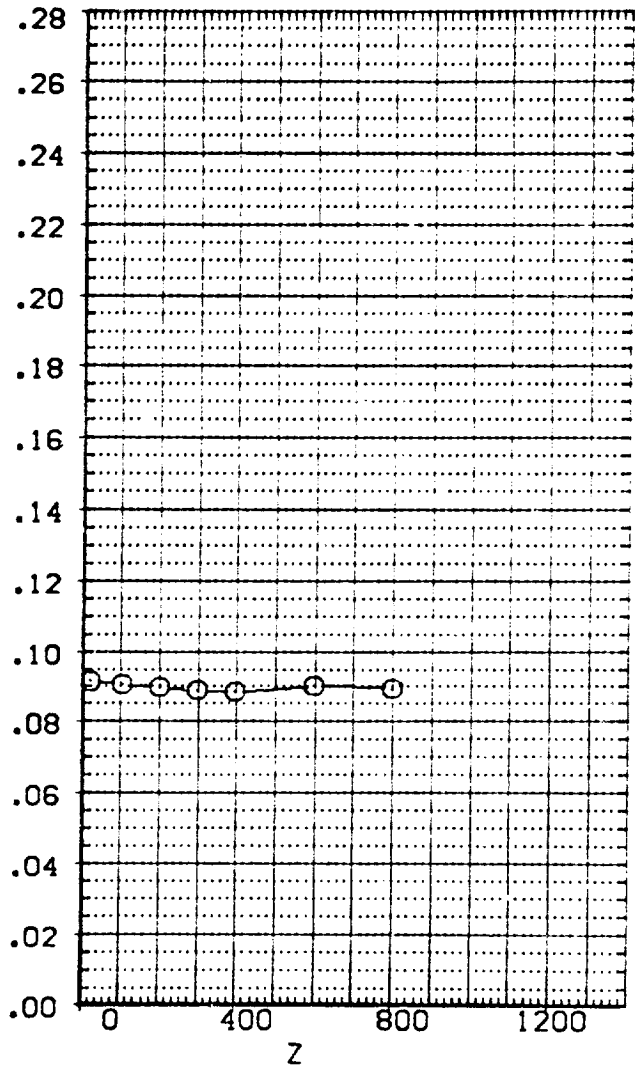
EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT71)

SYMBOL	X		PARAMETRIC VALUES		
C	.191	MACH	4.520	PTOTAL	80.000
		ALPHA	-5.000	BETA	.000
		DALPHA	.000	DBETA	.000
		ELEVTR	.000	AILRON	10.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



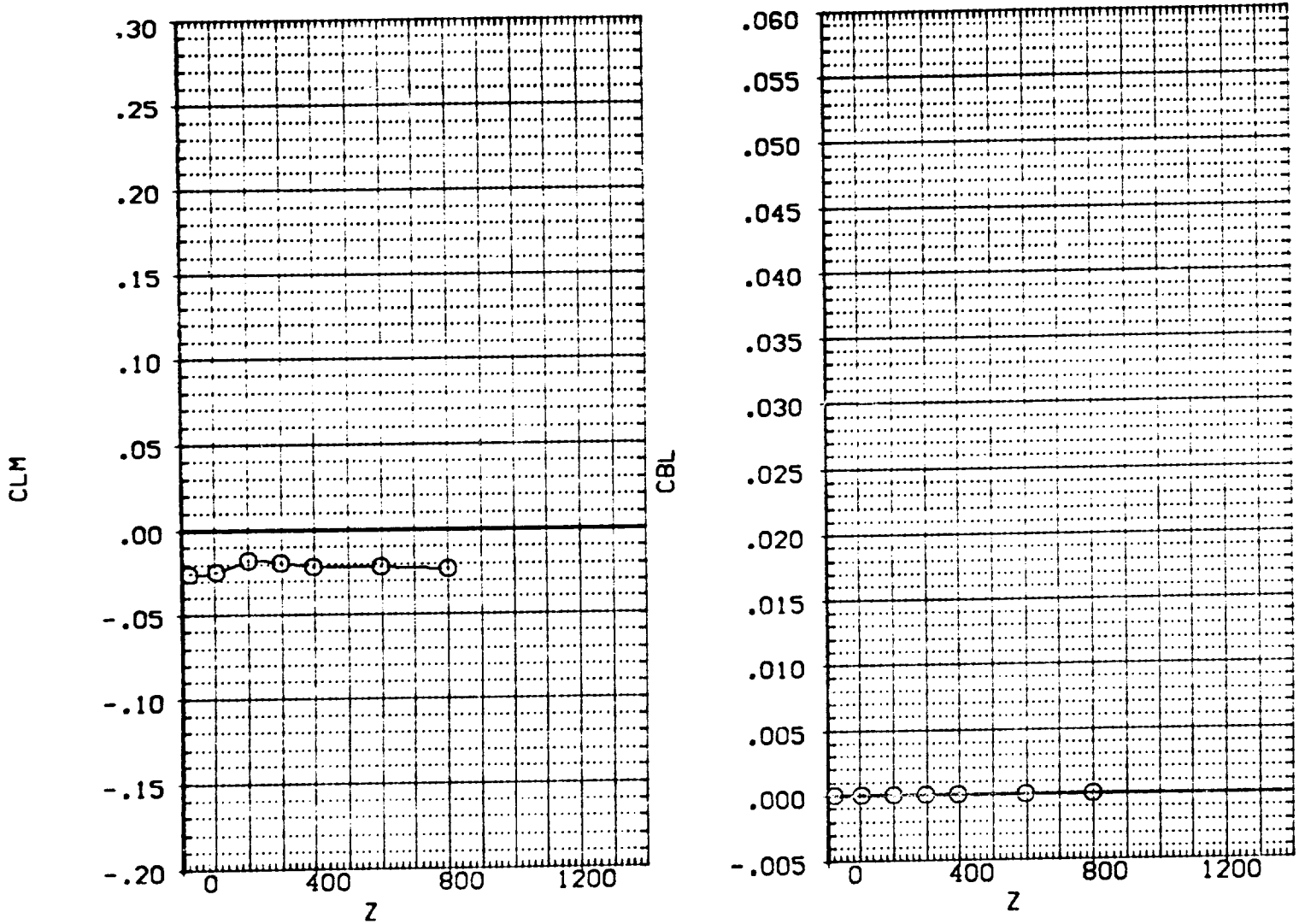


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT71)

SYMBOL	X	PARAMETRIC VALUES			
O	.191	MACH	4.520	PTOTAL	80.000
		ALPHA	-5.000	BETA	.000
		DALPHA	.000	DBETA	.000
		ELEVTR	.000	AILRON	10.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

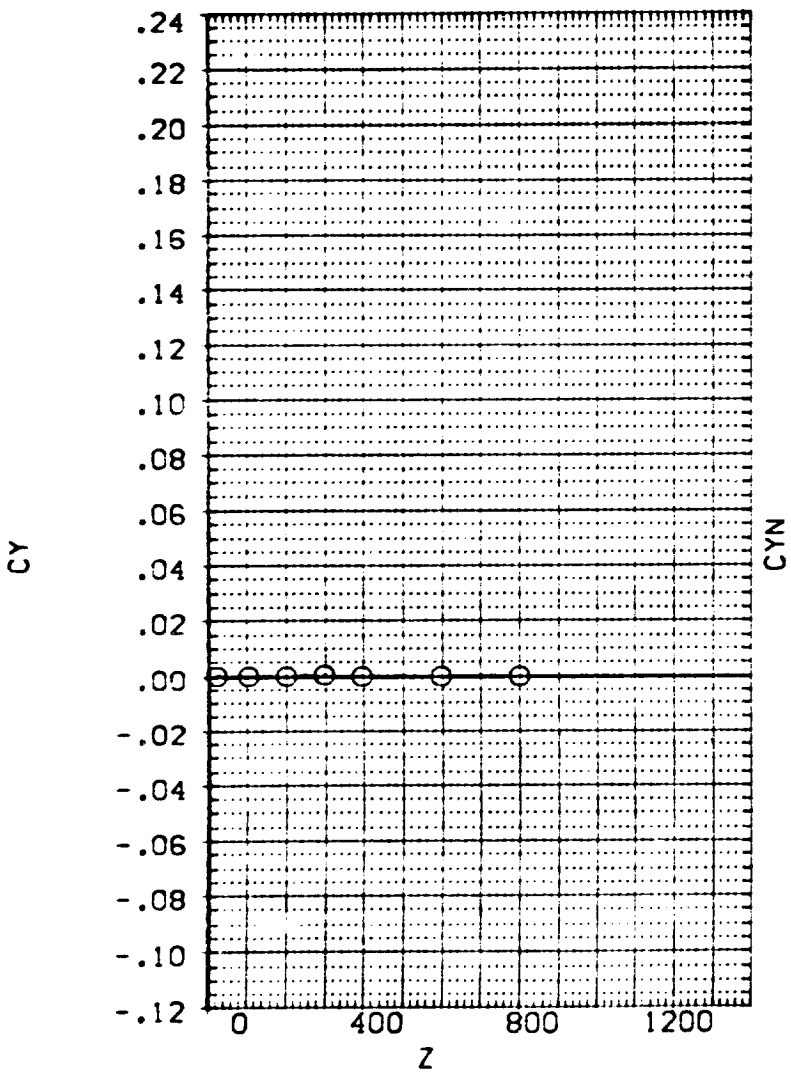


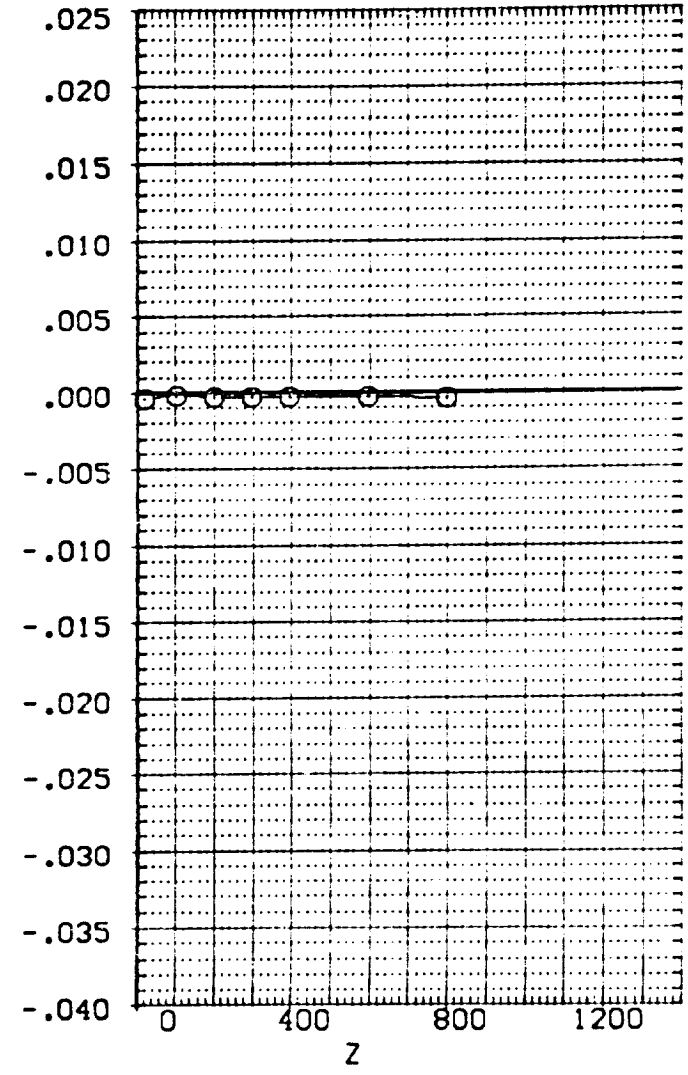
EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

!A!3.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT71)

SYMBOL		PARAMETRIC VALUES			
○	.191	MACH	4.520	PTOTAL	80.000
		ALPHA	-5.000	BETA	.000
		DALPHA	.000	DBETA	.000
		ELEVTR	.000	AILRON	10.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



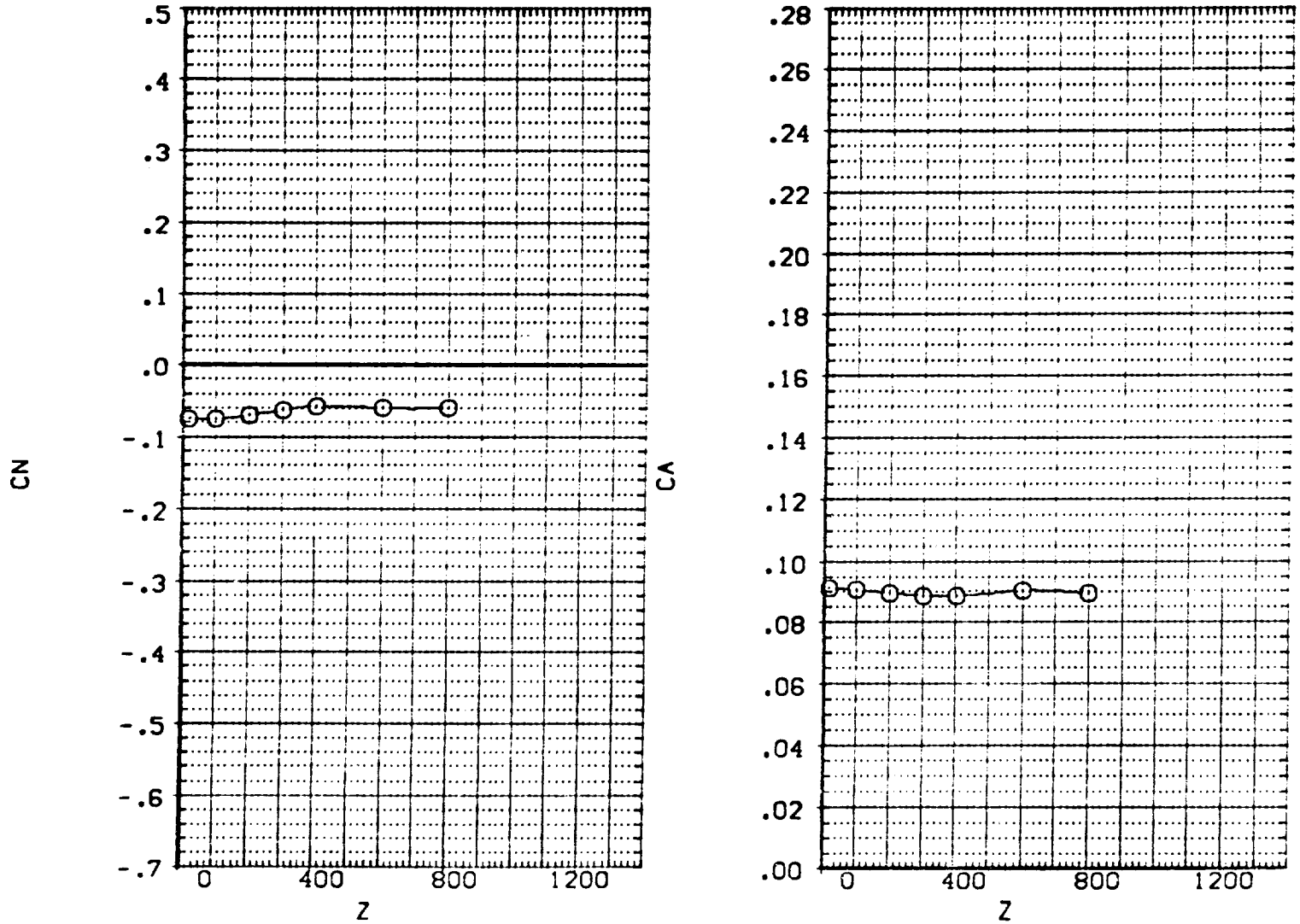


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT72)

SYMBOL	X		PARAMETRIC VALUES		
O	.171	MACH	4.520	PTOTAL	80.000
		ALPHA	-5.000	BETA	.000
		DALPHA	.000	DBETA	.000
		ELEVTR	.000	AILRON	10.000
		Y	200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

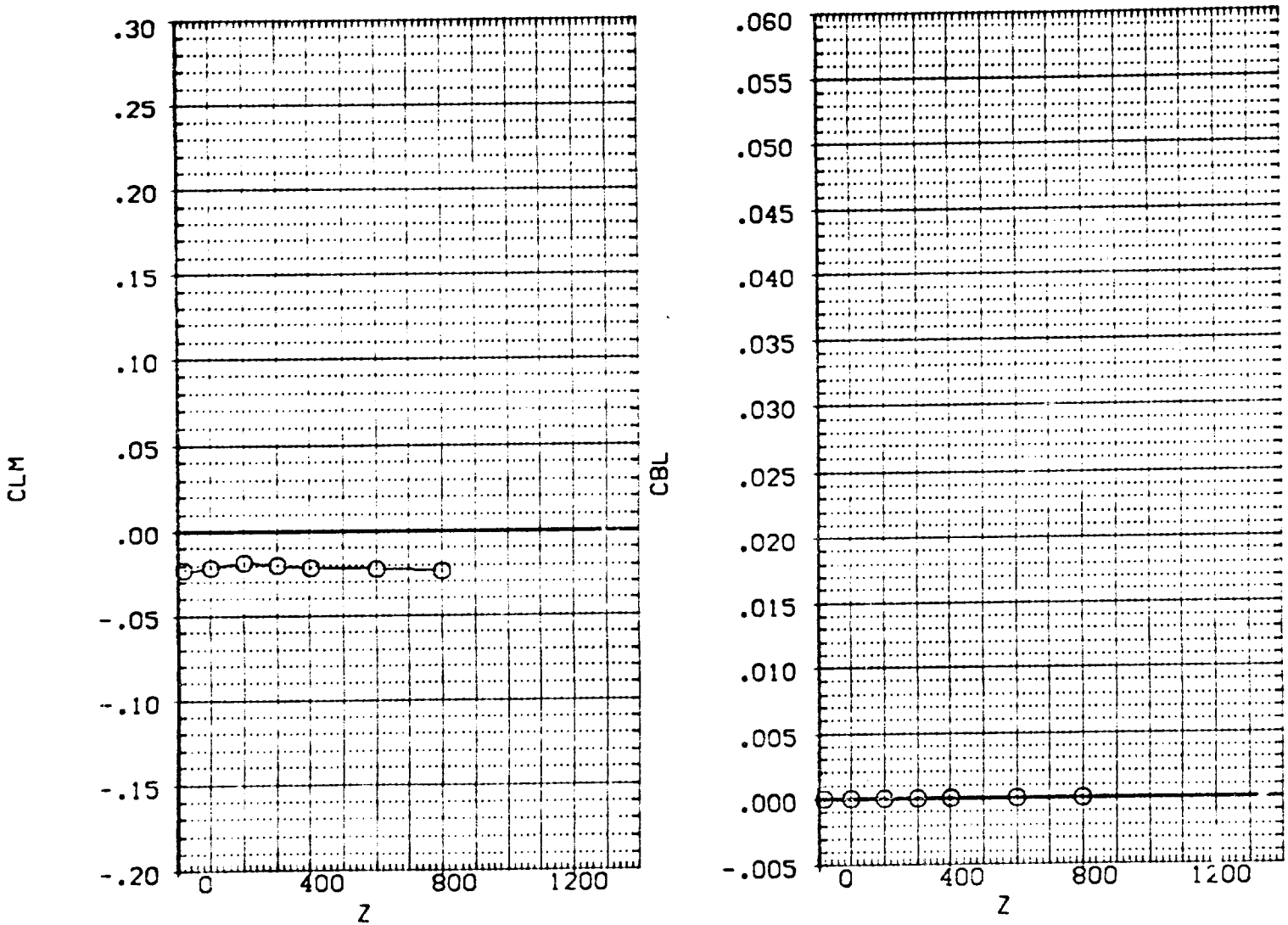


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

IA13,EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT72)

SYMBOL	X		PARAMETRIC VALUES		
○	.171	MACH	4.520	PTOTAL	80.000
		ALPHA	-5.000	BETA	.000
		DALPHA	.000	DBETA	.000
		ELEVTR	.000	AILRON	10.000
		Y	200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

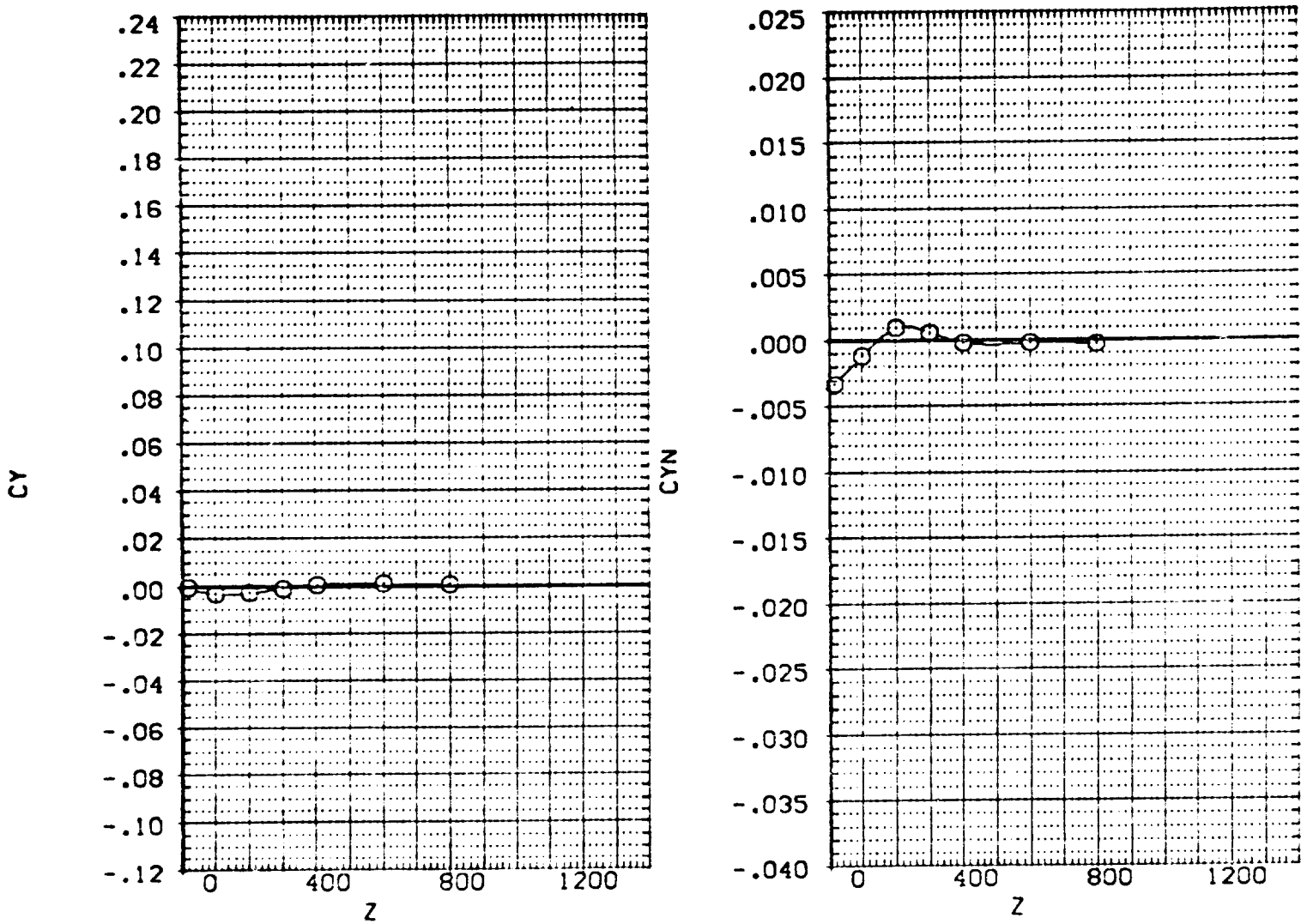


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

!A13,EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT72)

SYMBOL	X	PARAMETRIC VALUES			
O	.171	MACH	4.520	PTOTAL	80.000
		ALPHA	-5.000	BETA	.000
		DALPHA	.000	DBETA	.000
		ELEVTR	.000	AILRON	10.000
		Y	200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

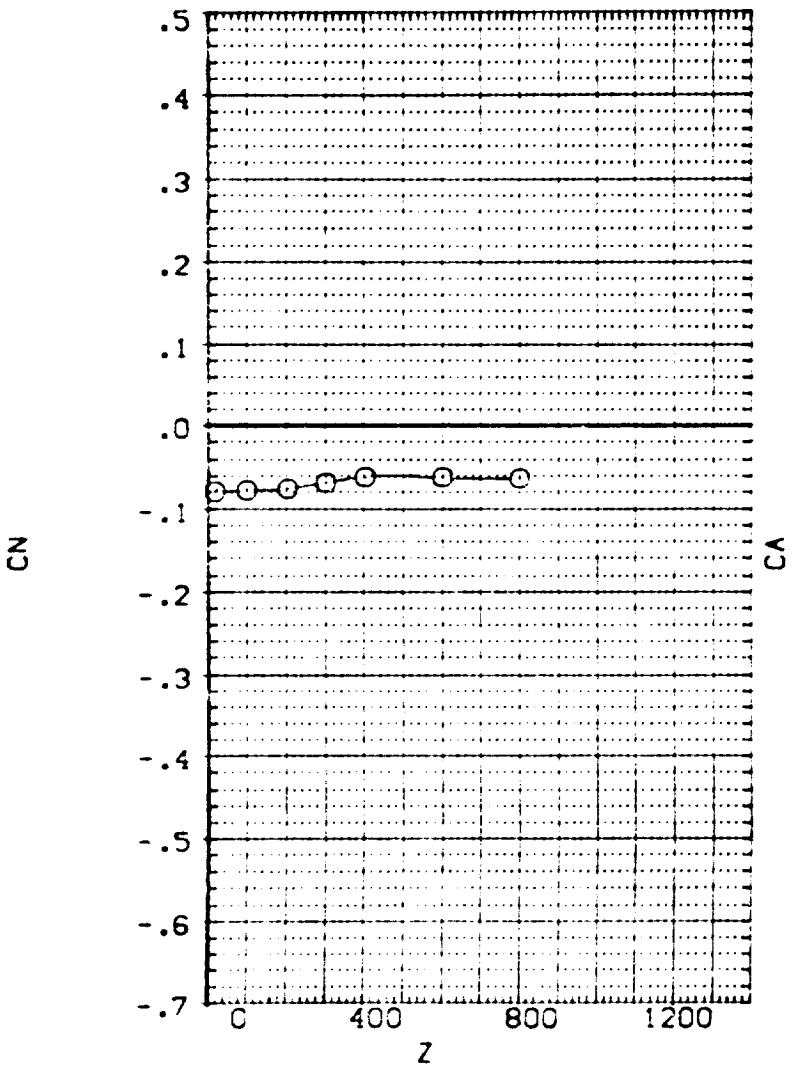


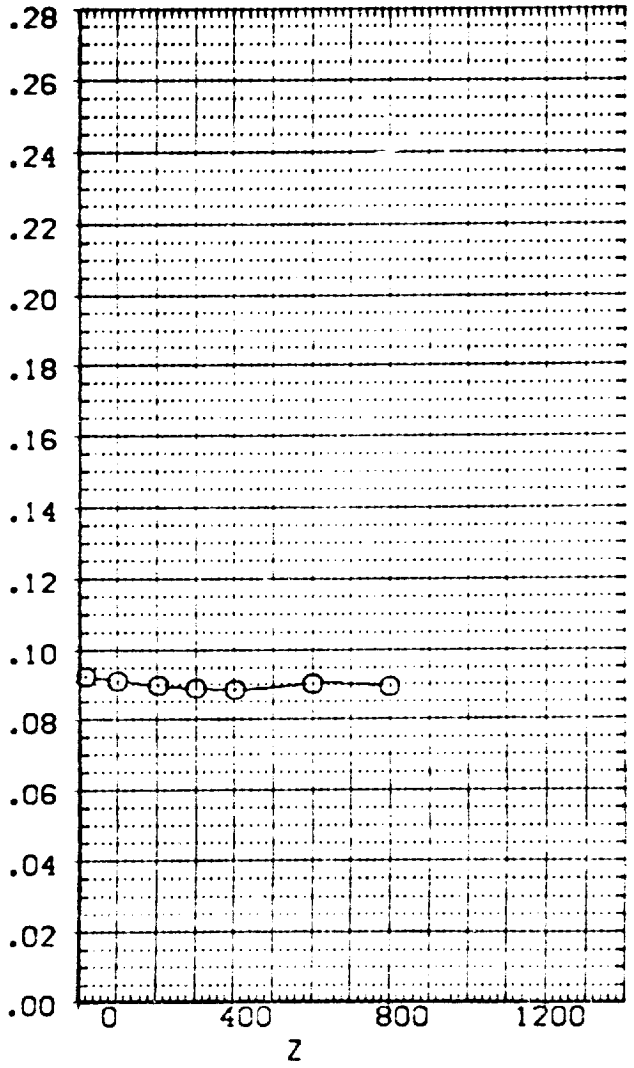
EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROm ORBITER

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT73)

SYMBOL	X		PARAMETRIC VALUES		
○	.236	MACH	4.520	PTOTAL	80.000
		ALPHA	-5.000	BETA	.000
		DALPHA	.000	DBETA	-5.000
		ELEVTR	.000	AILRON	10.000
		Y	-200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



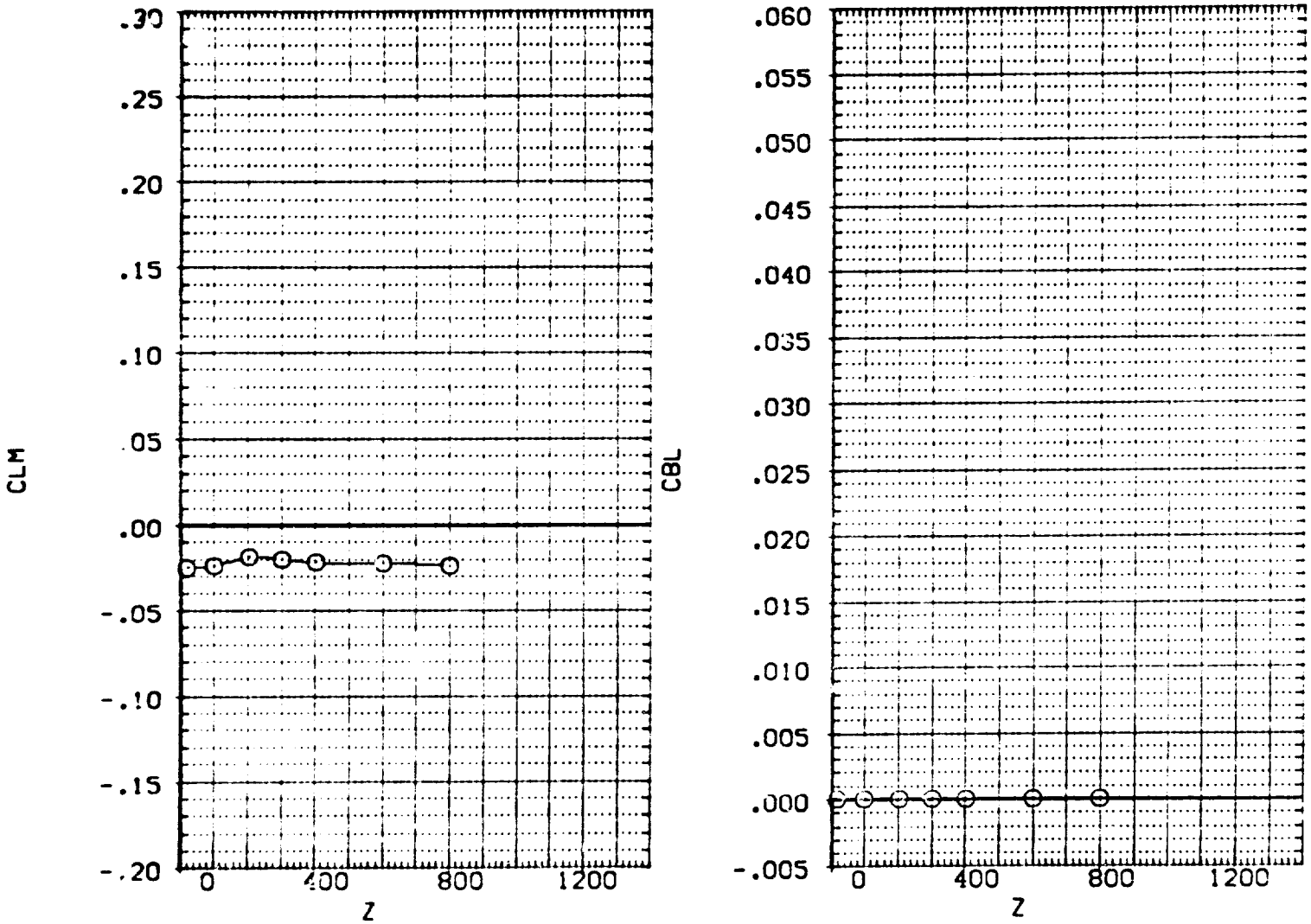


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT73)

SYMBOL	X	PARAMETRIC VALUES			
O	.236	MACH	4.520	PTOTAL	80.000
		ALPHA	-5.000	BETA	.000
		DALPHA	.000	DBETA	-5.000
		ELEVTR	.000	AILRON	10.000
		Y	-200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

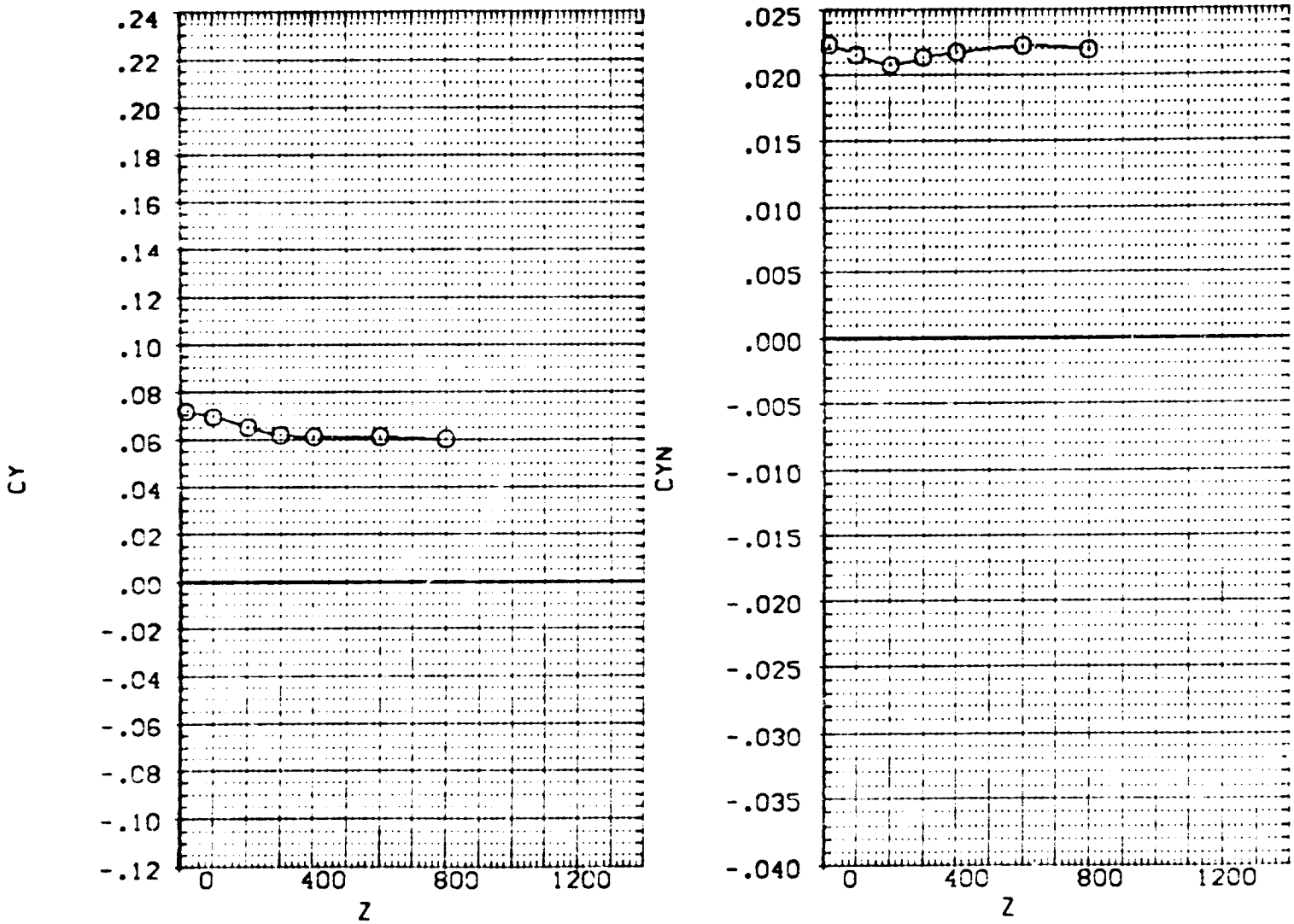


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

[A]3.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT73)

SYMBOL	X	PARAMETRIC VALUES			
	.236	MACH	4.520	PTOTAL	80.000
		ALPHA	-5.000	BETA	.000
		DALPHA	.000	DBETA	-5.000
		ELEVTR	.000	AILRON	10.000
		Y	-200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

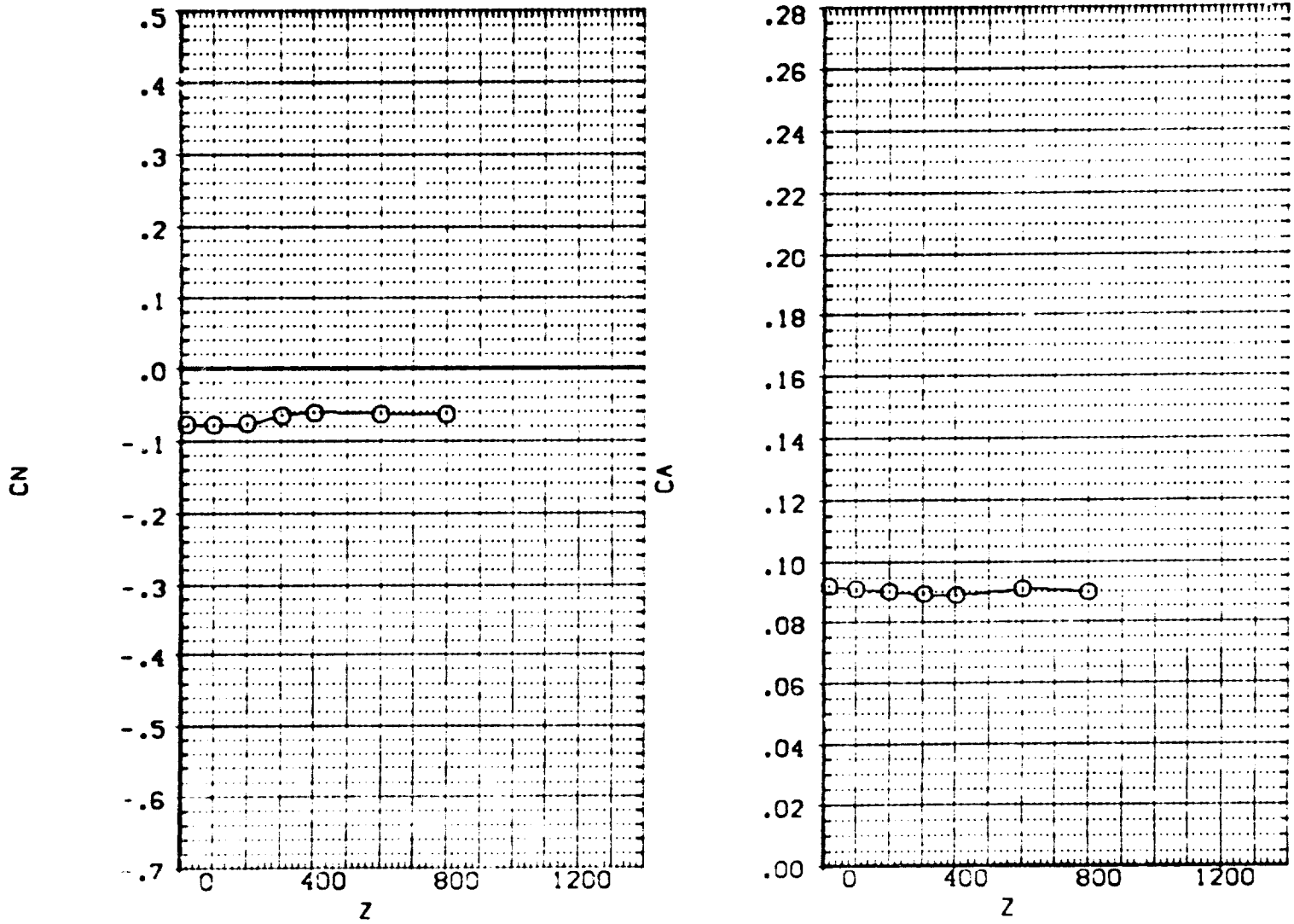


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DUPING SEPARATION FROM ORBITER

!A!3.EXTERNAL TANK(T!0)SEPARATING FROM ORB. 09 (RTJT74)

SYMBOL	X		PARAMETRIC VALUES		
○	.252	MACH	4.520	PTOTAL	80.000
		ALPHA	-5.000	BETA	.000
		DALPHA	.000	DBETA	5.000
		ELEVTR	.000	AILRON	10.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

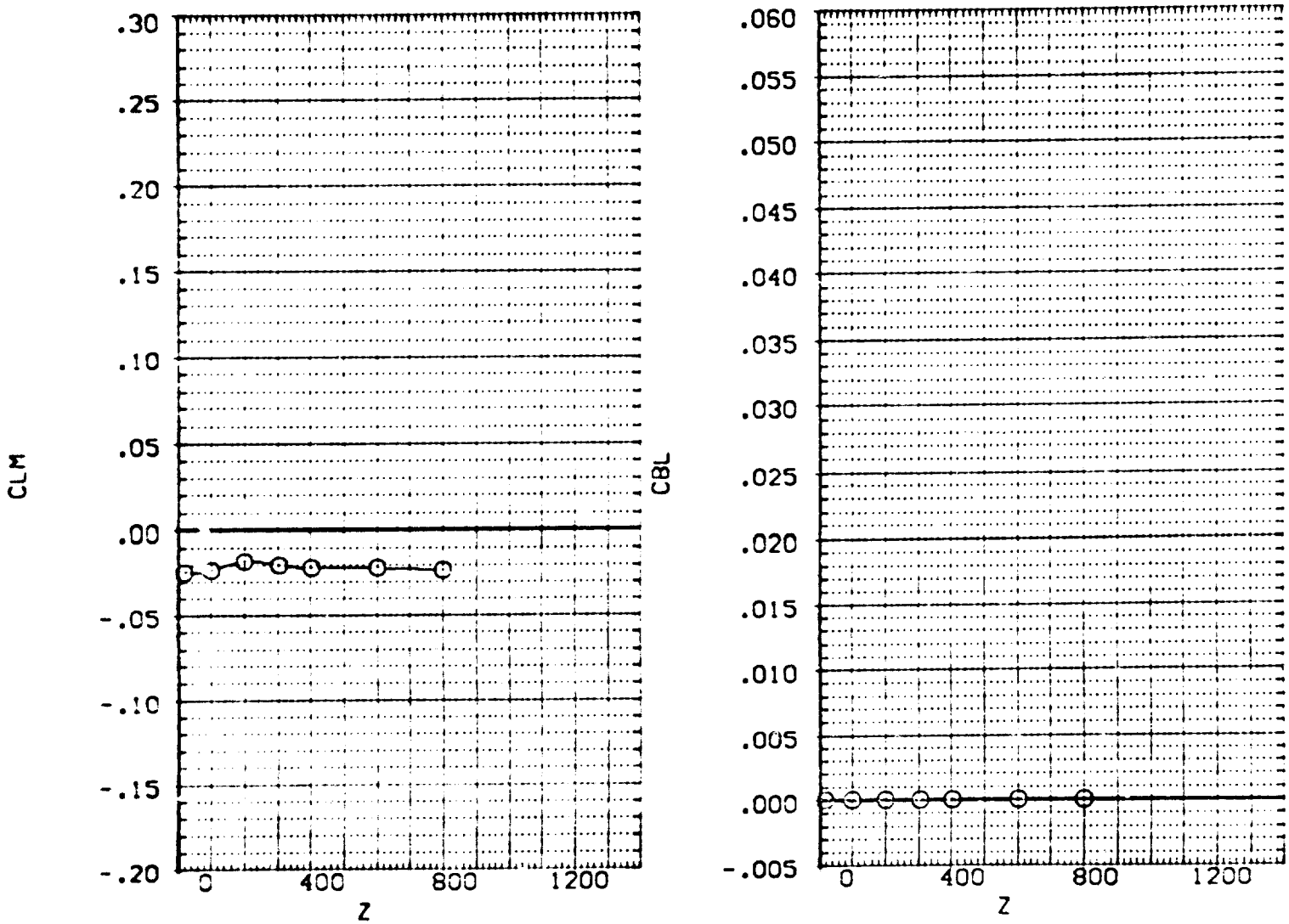


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

[A:3.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT74)

SYMBOL	X	PARAMETRIC VALUES			
○	.252	MACH	4.520	PTOTAL	80.000
		ALPHA	-5.000	BETA	.000
		DALPHA	.000	DBETA	5.000
		ELEVTR	.000	AILRON	10.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

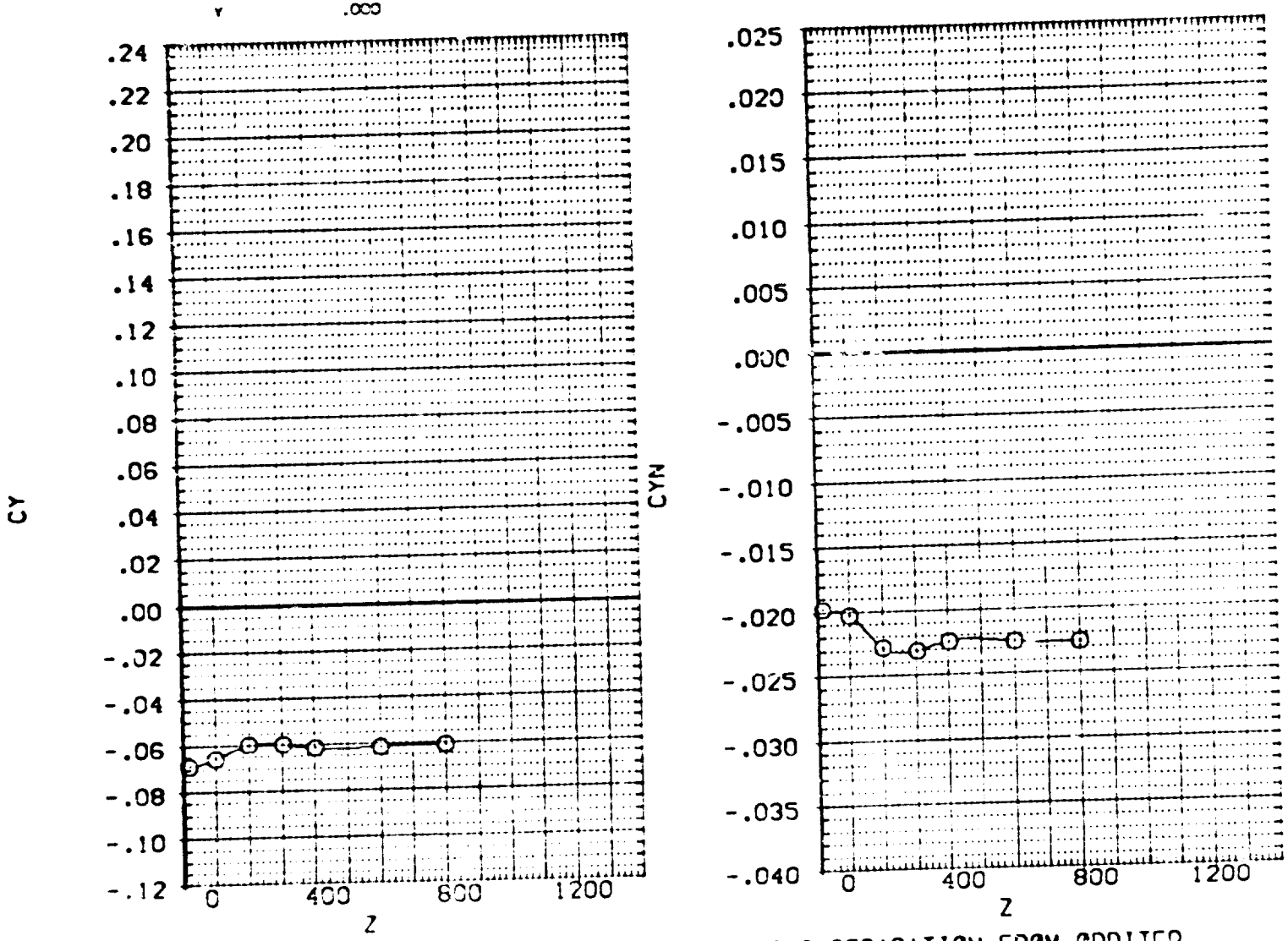


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

[A13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT74)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

SYMBOL	X	PARAMETRIC VALUES			
O	.252	MACH	4.520	PTOTAL	80.000
		ALPHA	-5.000	BETA	.000
		DALPHA	.000	DBETA	5.000
		ELEVTR	.000	AILRON	10.000
		Y	.000		

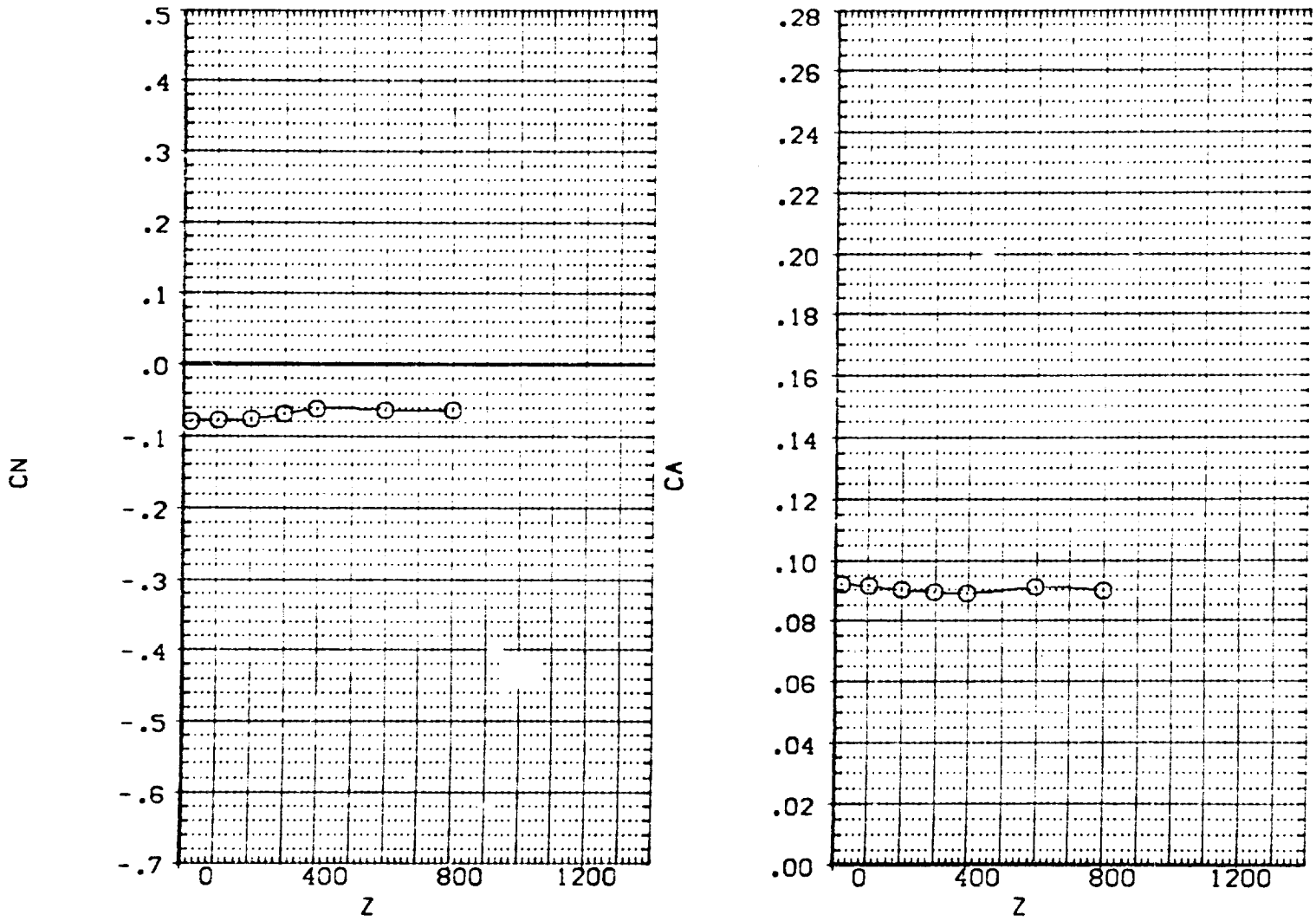


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

!A13,EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT75)

SYMBOL	X		PARAMETRIC VALUES		
○	.254	MACH	4.520	PTOTAL	80.000
		ALPHA	-5.000	BETA	.000
		DALPHA	.000	DBETA	5.000
		ELEVTR	.000	AILRON	10.000
		Y	200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

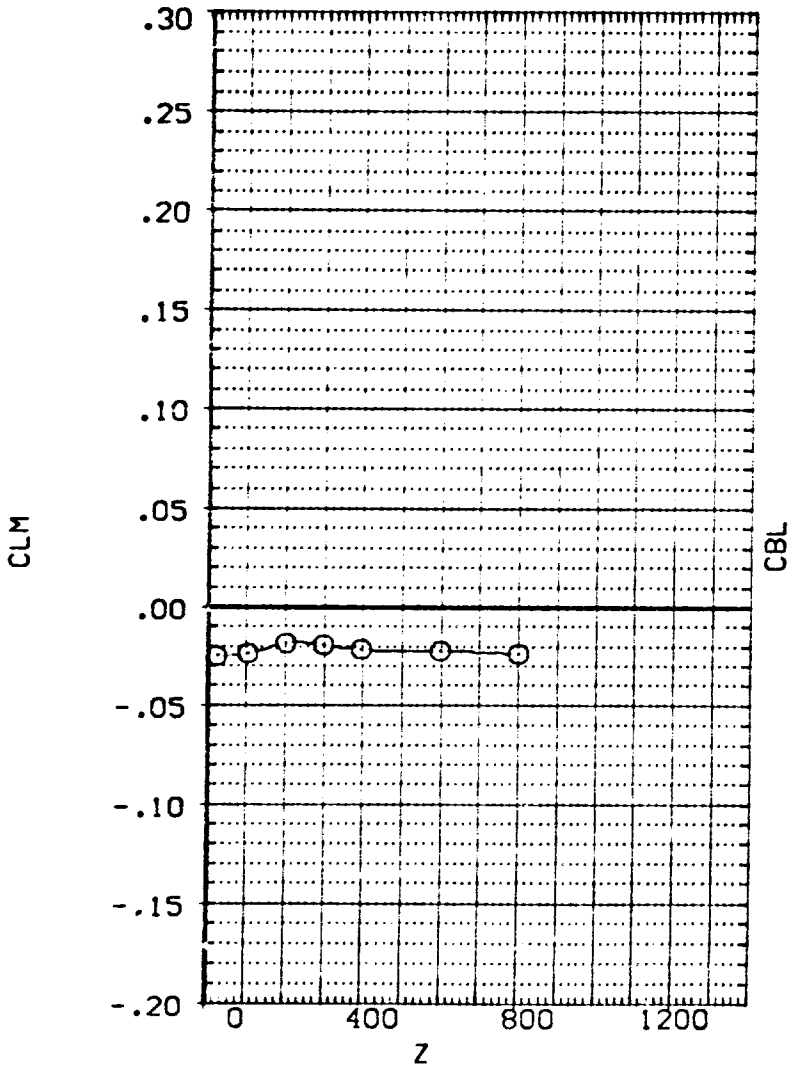


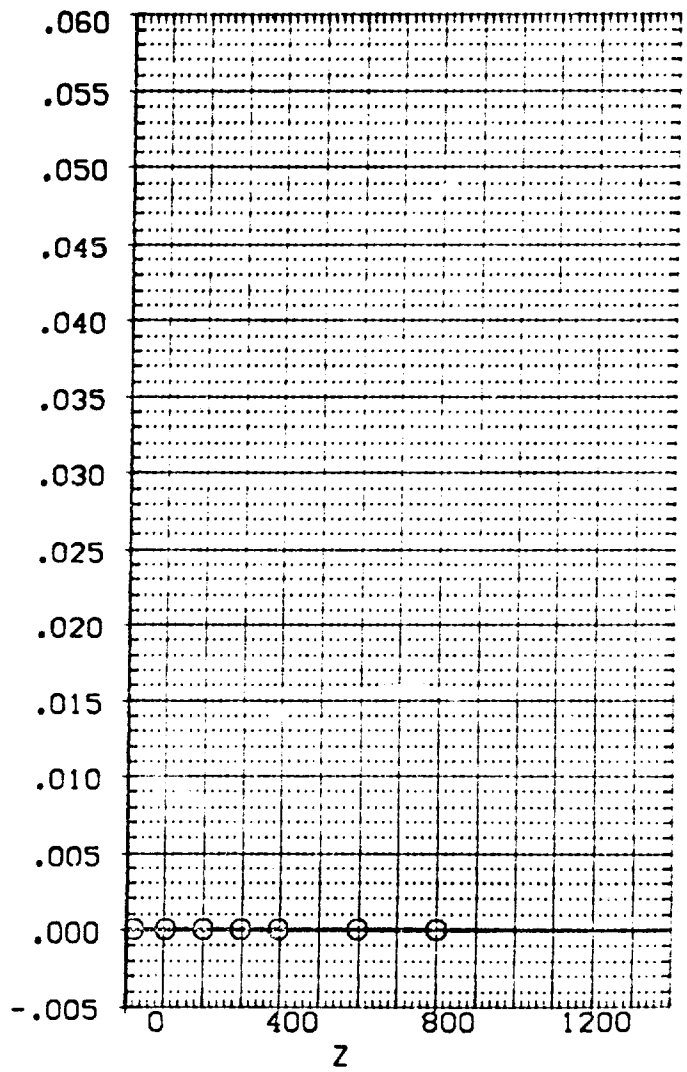
EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT75)

SYMBOL	X	PARAMETRIC VALUES			
○	.254	MACH	4.520	PTOTAL	80.000
		ALPHA	-5.000	BETA	.000
		DALPHA	.000	DBETA	5.000
		ELEVTR	.000	AILRON	10.000
		Y	200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



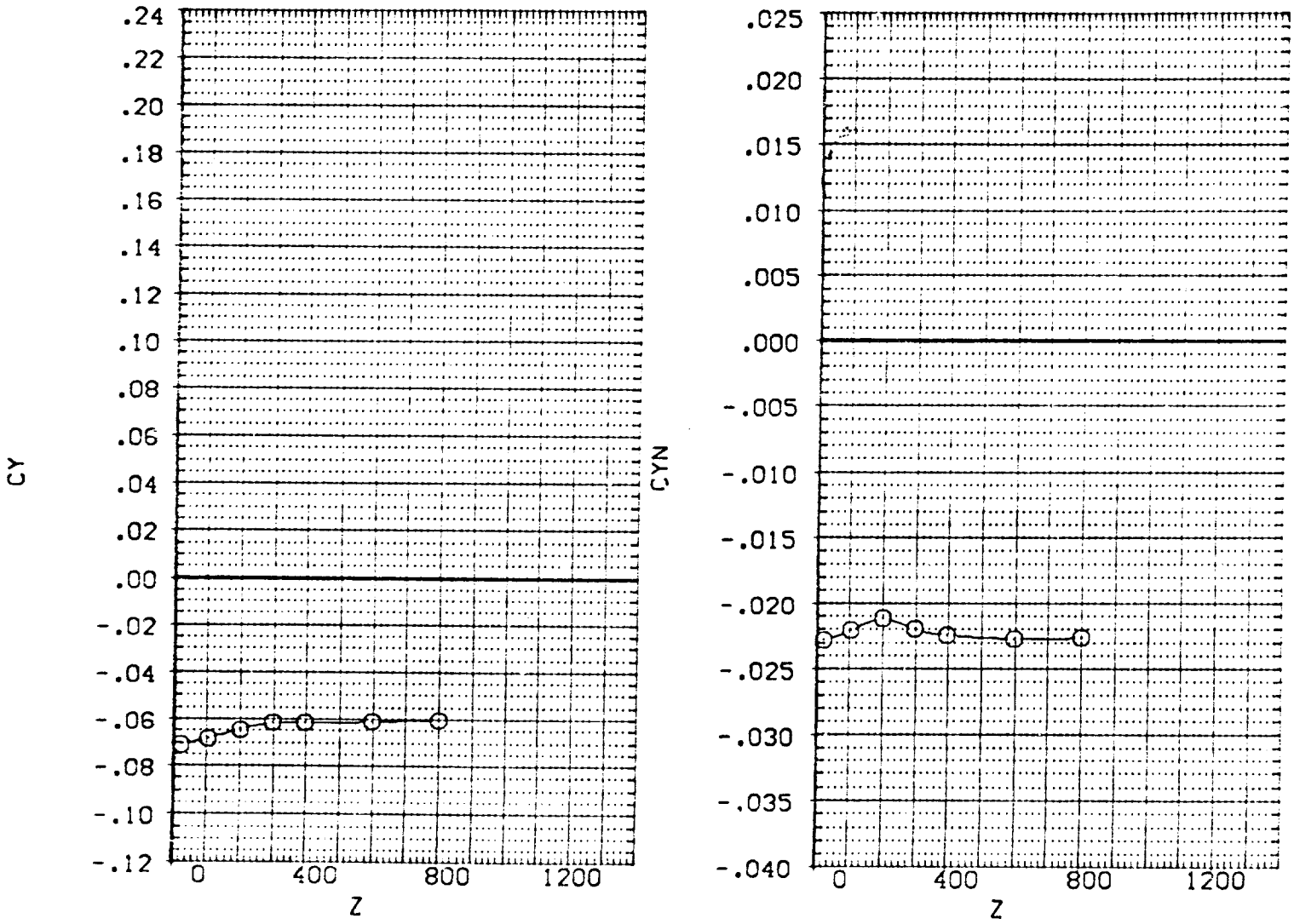


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

!A!3.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT75)

SYMBOL	X	PARAMETRIC VALUES			
○	.254	MACH	4.520	PTOTAL	80.000
		ALPHA	-5.000	BETA	.000
		DALPHA	.000	DBETA	5.000
		ELEVTR	.000	AILRON	10.000
		Y	200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

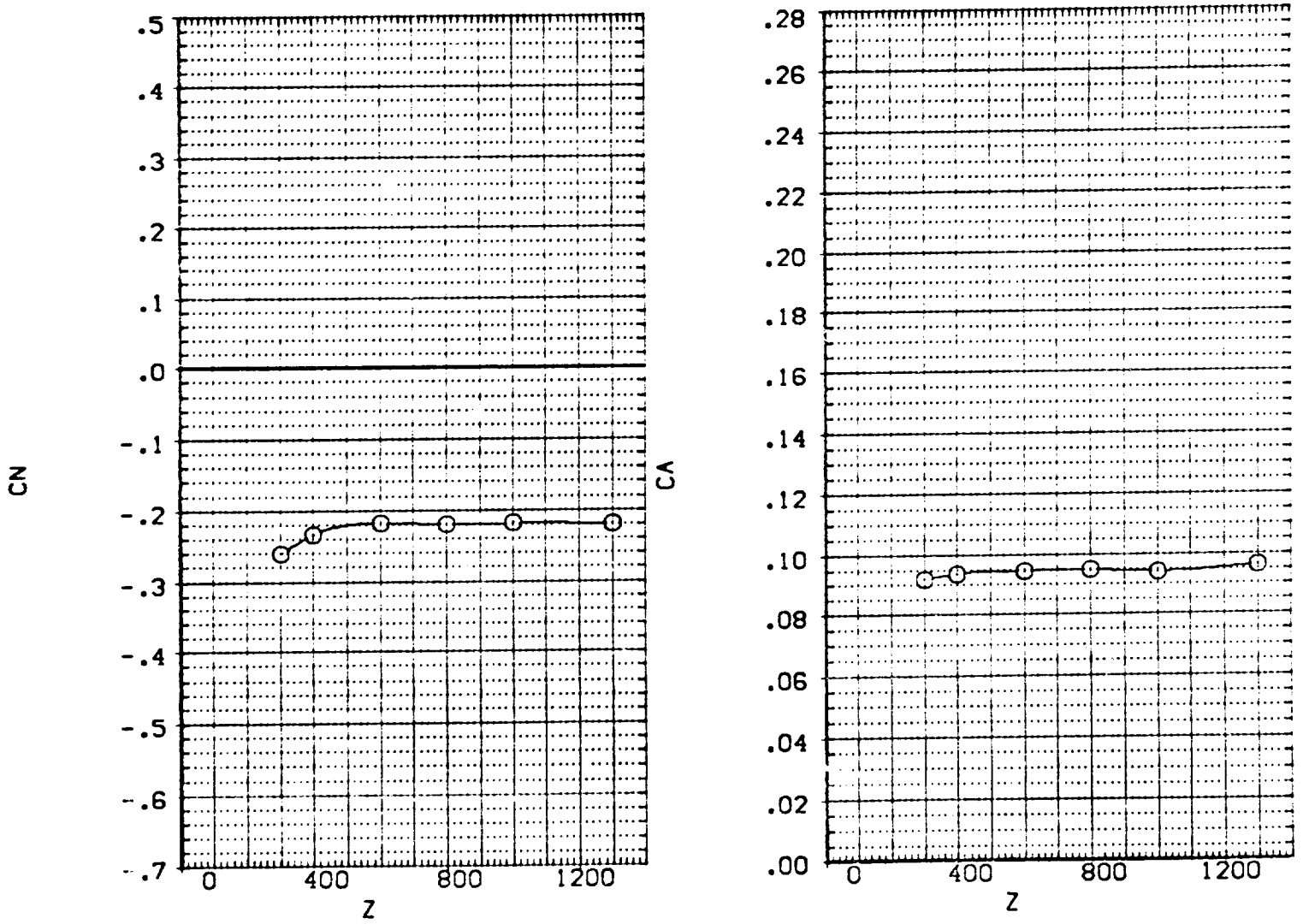


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT76)

SYMBOL	X	PARAMETRIC VALUES			
O	.273	MACH	4.520	PTOTAL	80.000
		ALPHA	-5.000	BETA	.000
		DALPHA	-10.000	DBETA	.000
		ELEVTR	.000	AILRON	10.000
		Y	-200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

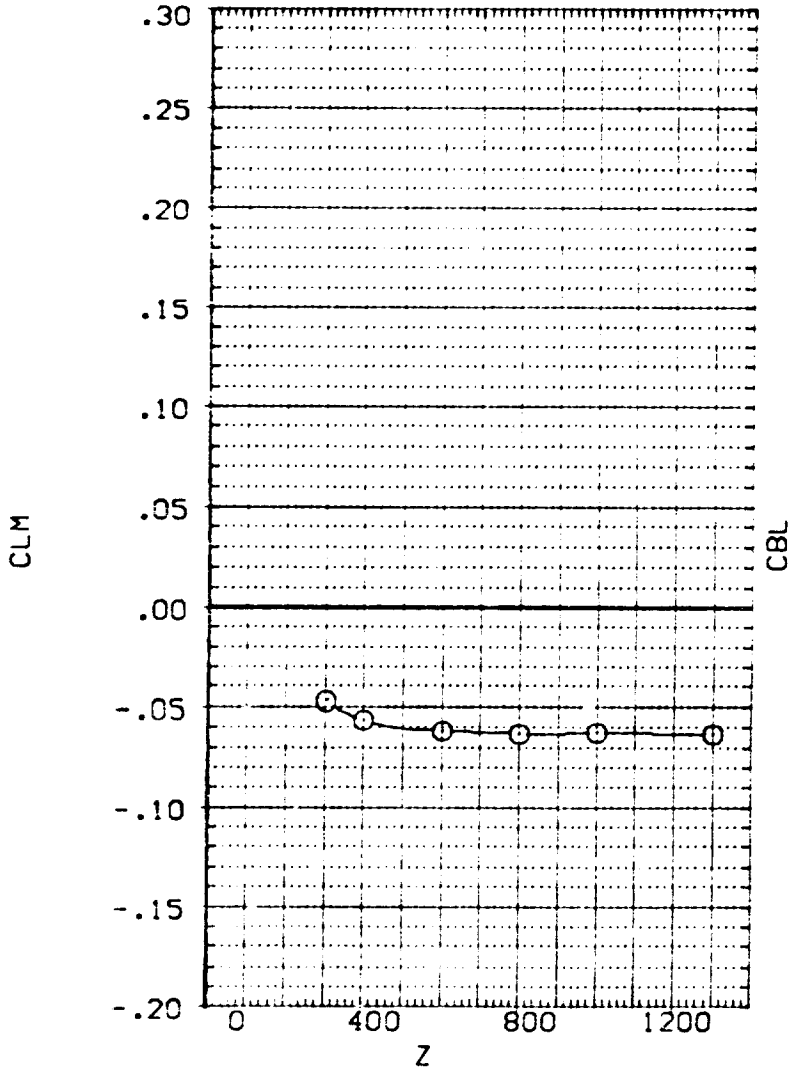


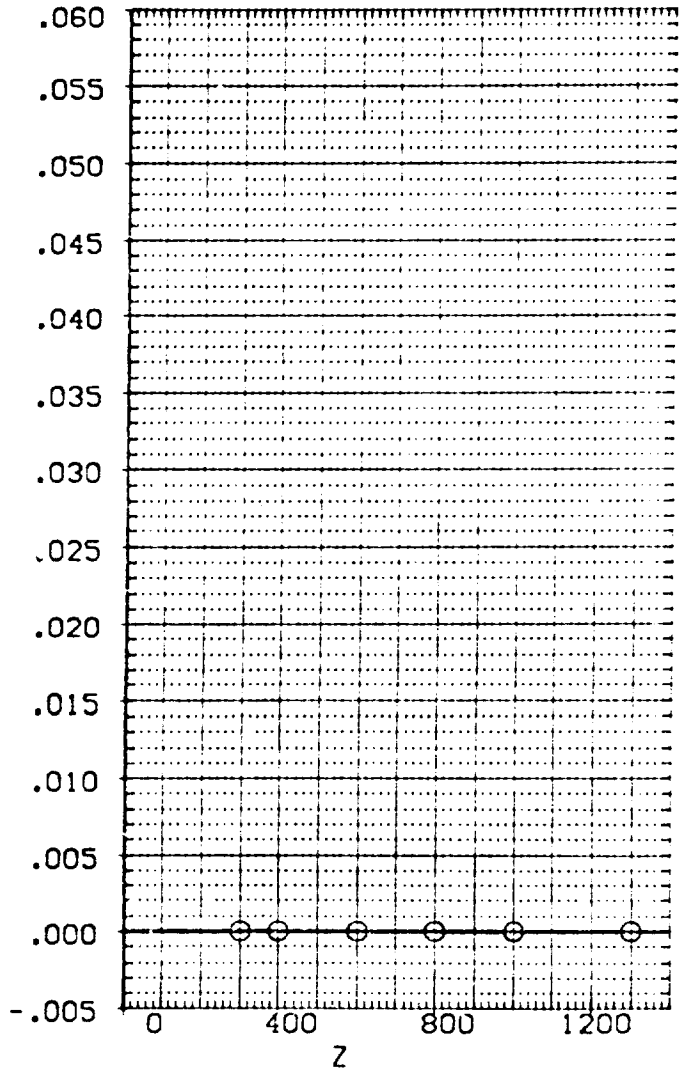
EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

[A13,EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT76)

SYMBOL	X		PARAMETRIC VALUES		
○	.273	MACH	4.520	PTOTAL	80.000
		ALPHA	-5.000	BETA	.000
		DALPHA	-10.000	DBETA	.000
		ELEVTR	.000	AILRON	10.000
		Y	-200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



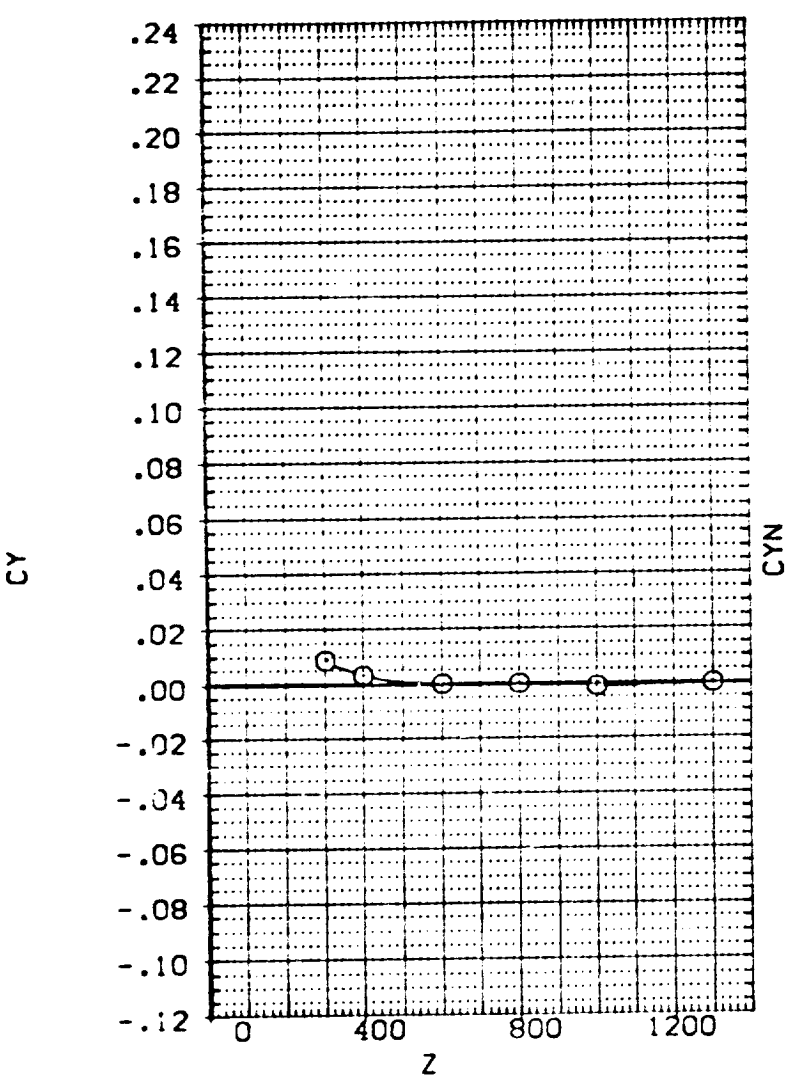


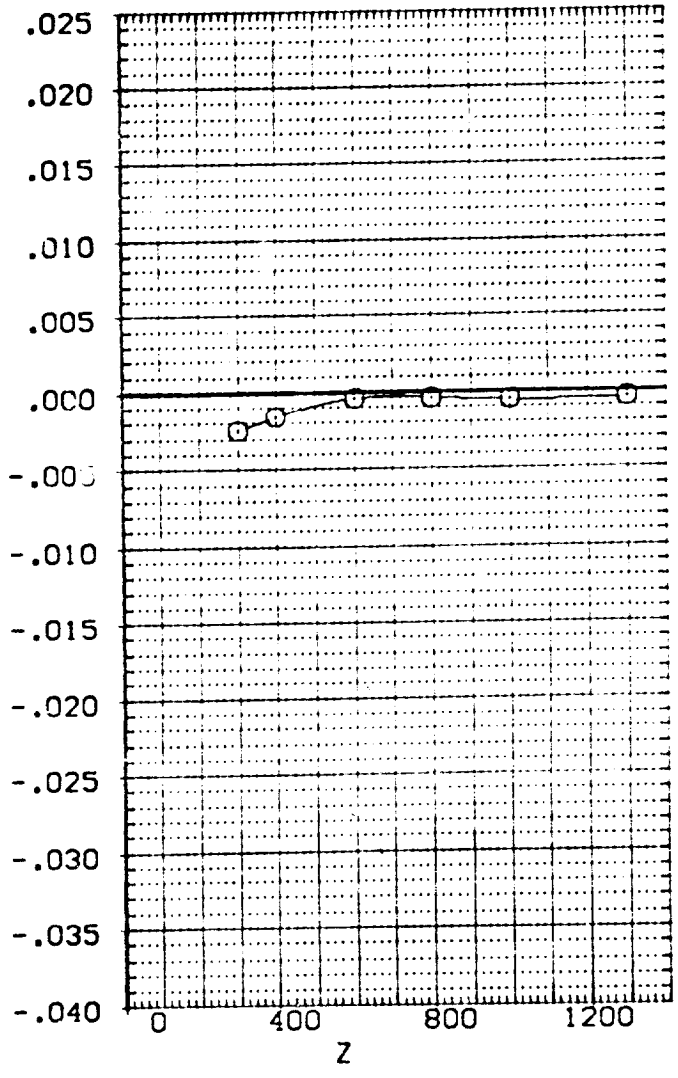
EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

IA13,EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT76)

SYMBOL	X		PARAMETRIC VALUES		
O	.273	MACH	4.520	PTOTAL	80.000
		ALPHA	-5.000	BETA	.000
		DALPHA	-10.000	DBETA	.000
		ELEVTR	.000	AILRON	10.000
		Y	-200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



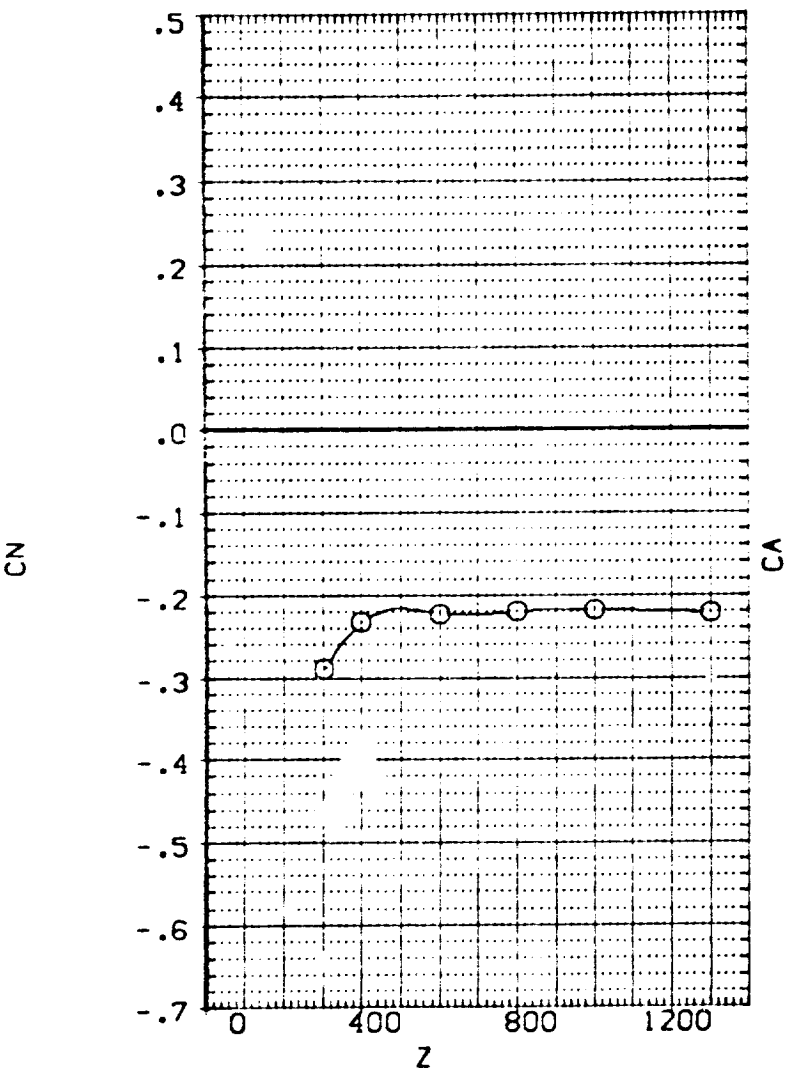


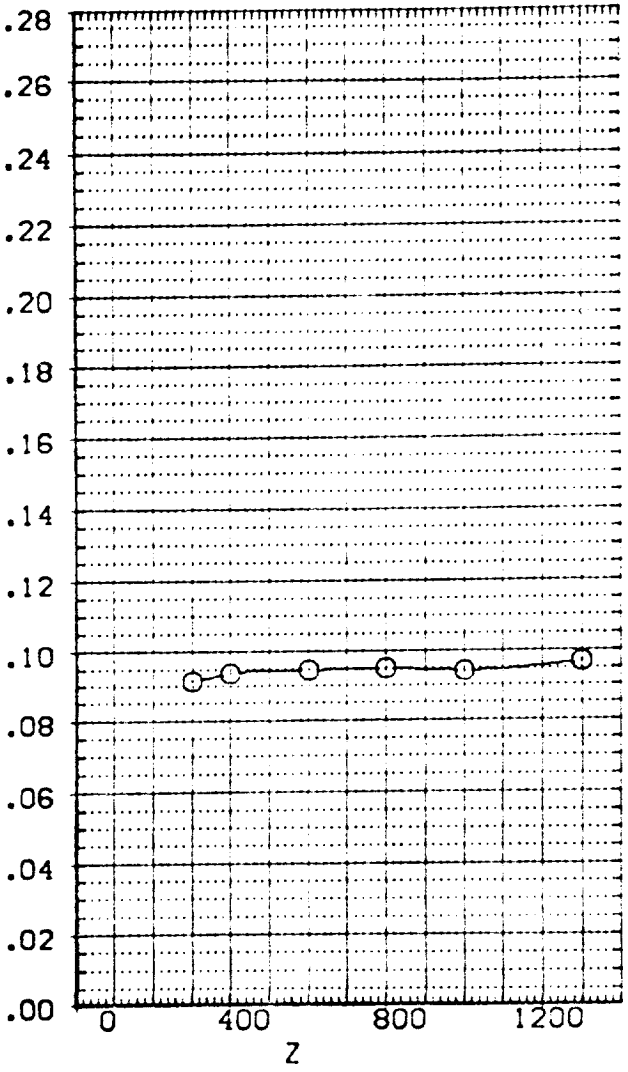
EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

[A13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT77)

SYMBOL	X	PARAMETRIC VALUES			
O	.253	MACH	4.520	PTOTAL	80.000
		ALPHA	-5.000	BETA	.000
		DALPHA	-10.000	DBETA	.000
		ELEVTR	.000	AILRON	10.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



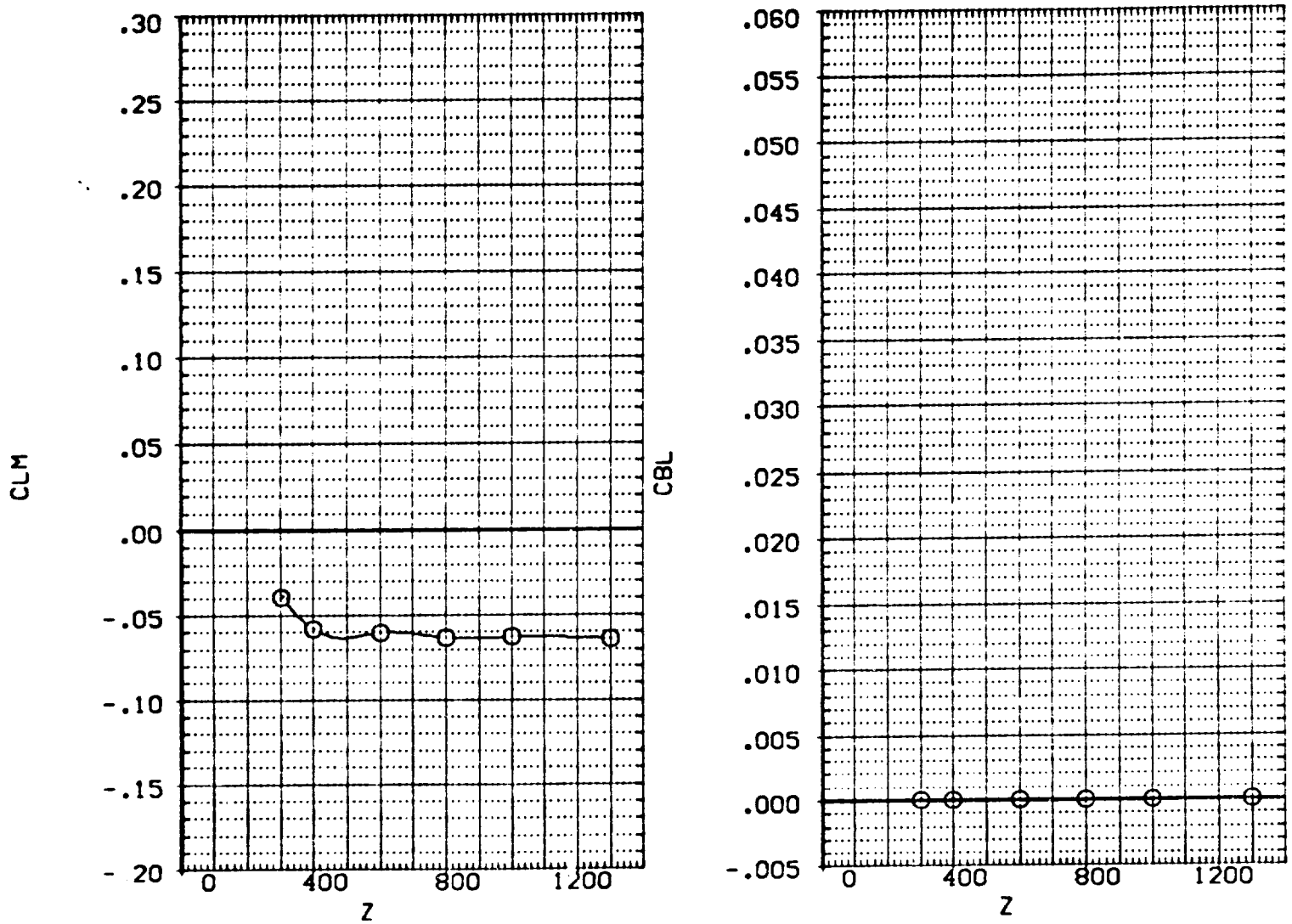


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT77)

SYMBOL	X	PARAMETRIC VALUES			
O	.253	MACH	4.520	PTOTAL	80.000
		ALPHA	-5.000	BETA	.000
		DALPHA	-10.000	DBETA	.000
		ELEVTR	.000	AILRON	10.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

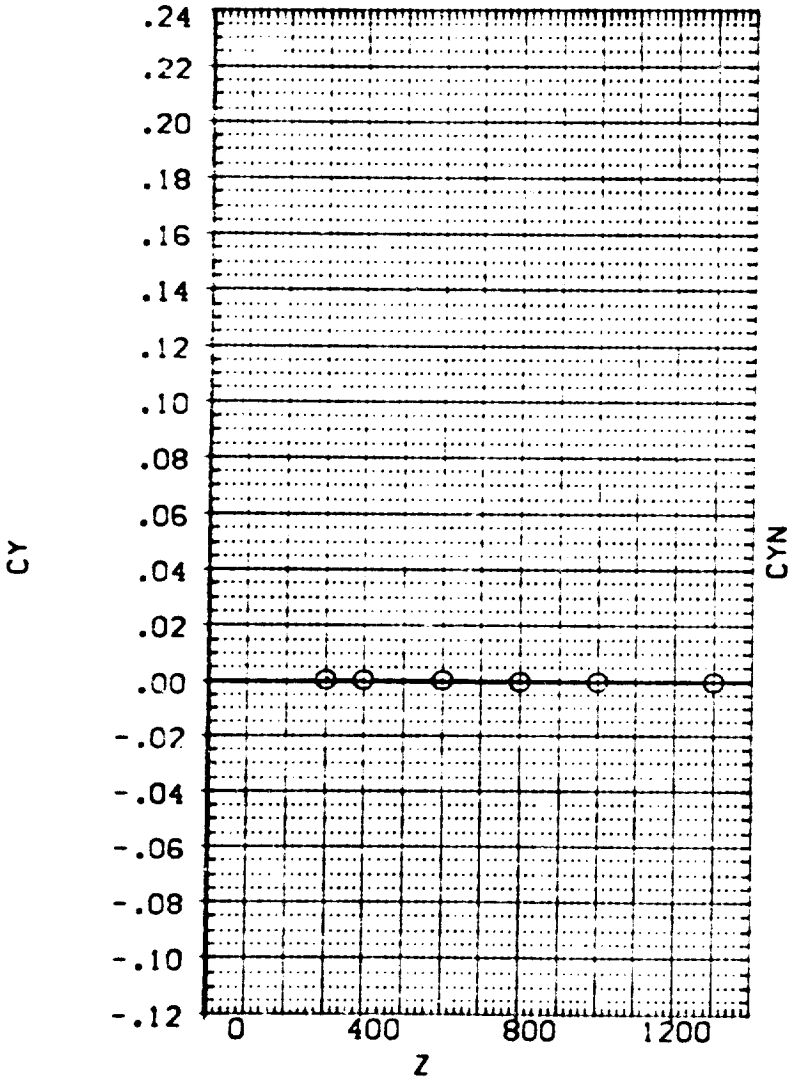


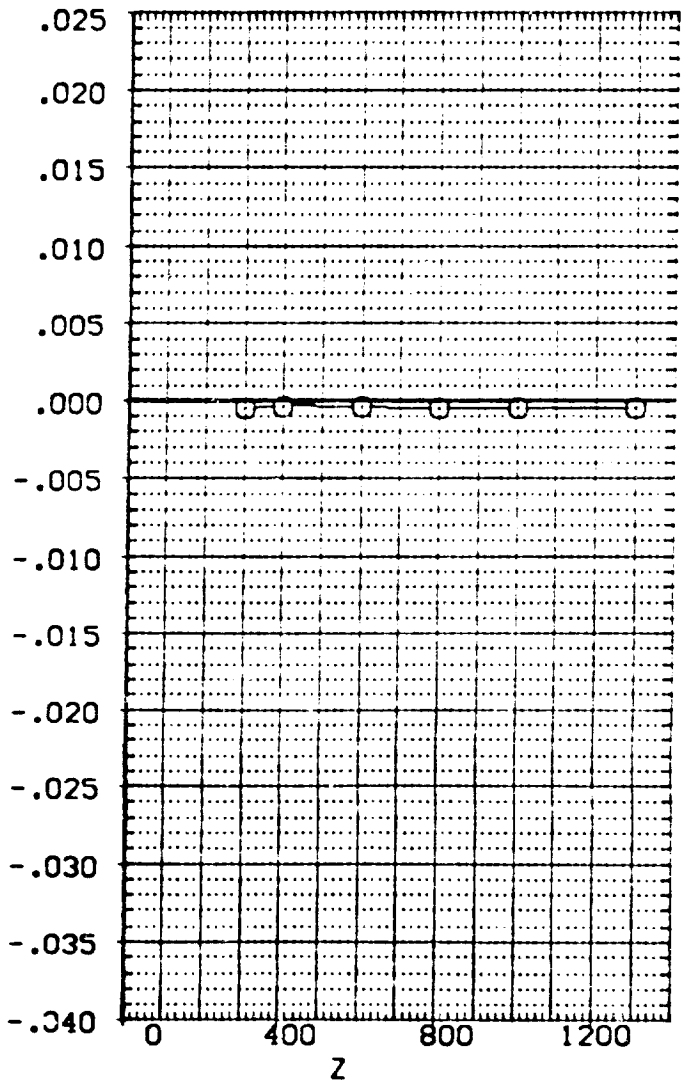
EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT77)

SYMBOL	X	PARAMETRIC VALUES			
○	.253	MACH	4.520	PTOTAL	80.000
		ALPHA	-5.000	BETA	.000
		DALPHA	-10.000	DBETA	.000
		ELEVTR	.000	AILRON	10.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



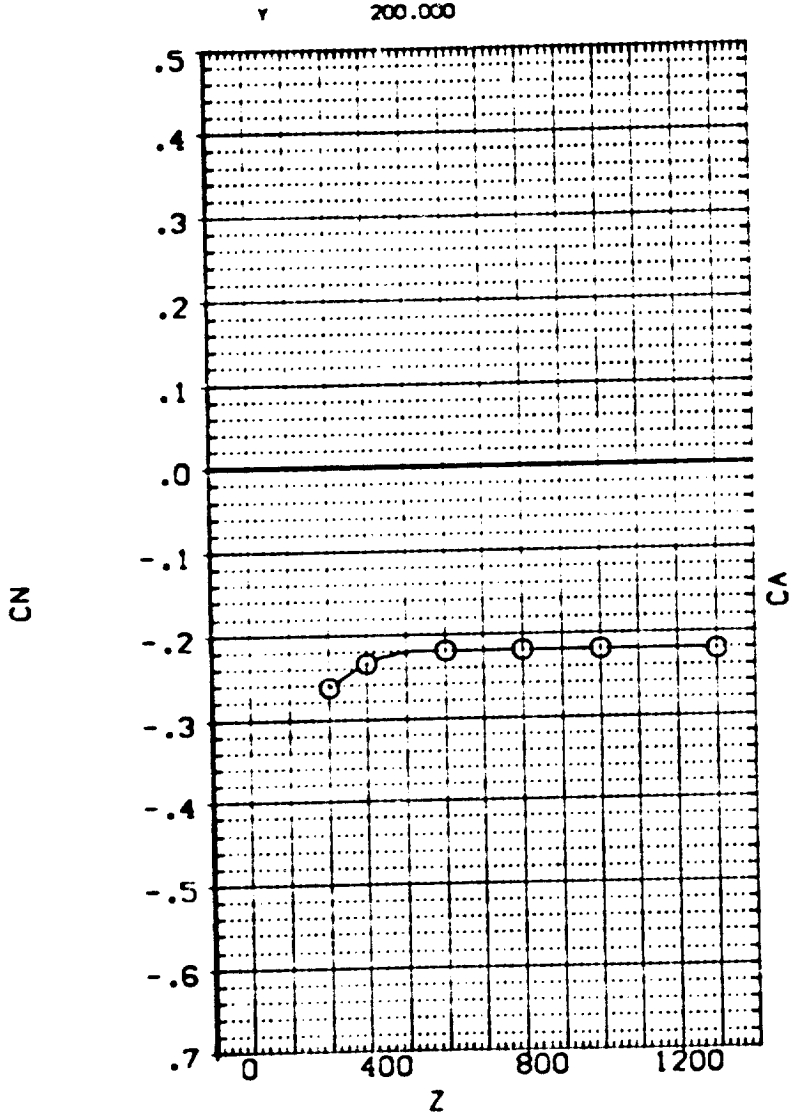


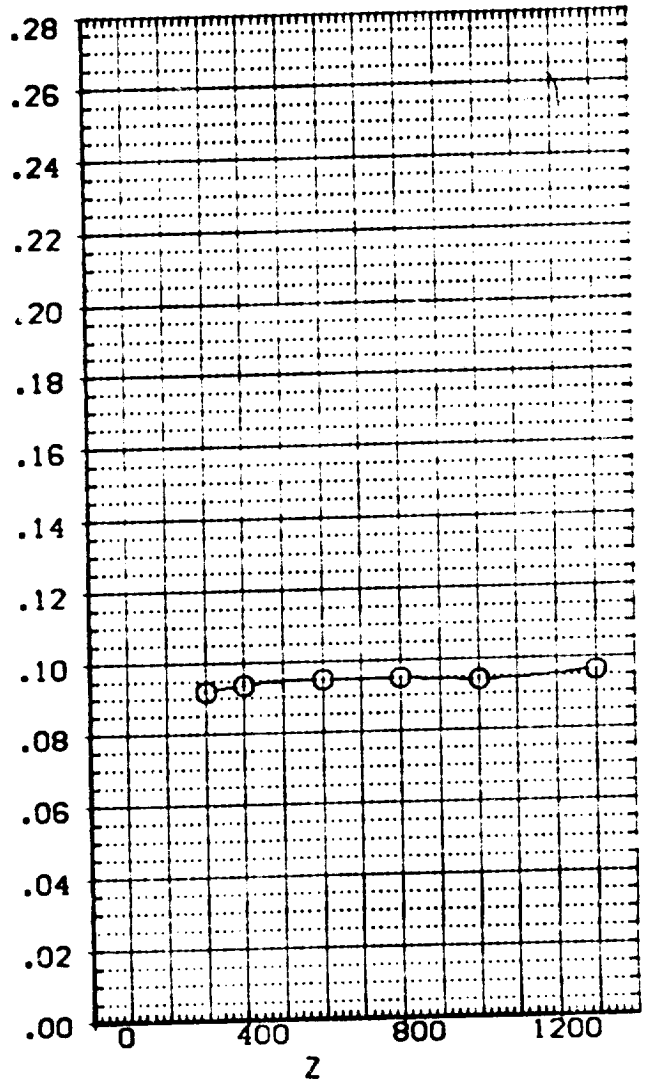
EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

!A13,EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT78)

SYMBOL	X	PARAMETRIC VALUES			
O	.219	MACH	4.520	PTOTAL	80.000
		ALPHA	-5.000	BETA	.000
		DALPHA	-10.000	DBETA	.000
		ELEVTR	.000	AILRON	10.000
		Y	200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



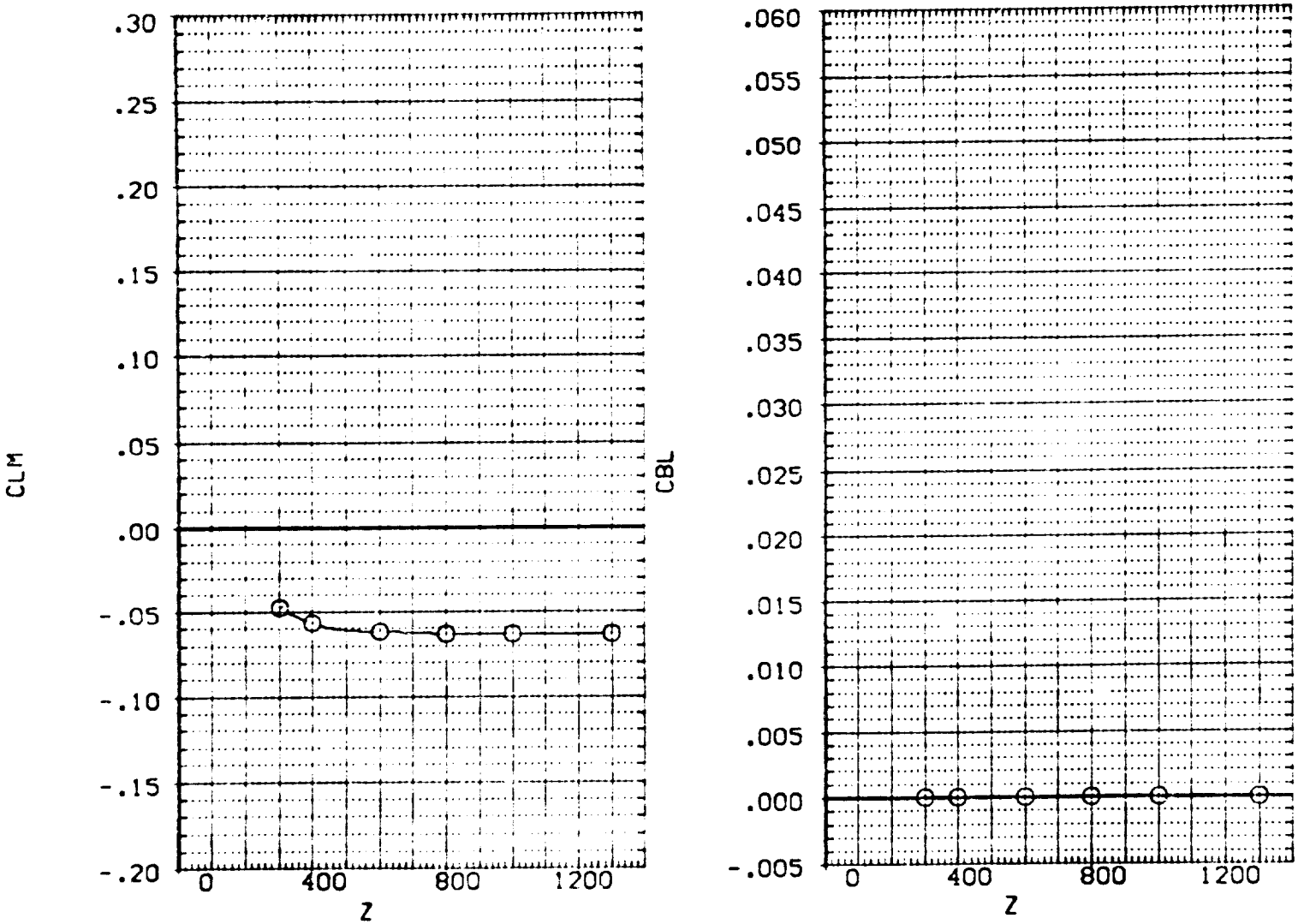


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT78)

SYMBOL	A				
○	.219	PARAMETRIC VALUES			
		MACH	4.520	PTOTAL	80.000
		ALPHA	-5.000	BETA	.000
		DALPHA	-10.000	DBETA	.000
		ELEVTR	.000	AILRON	10.000
		Y	200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

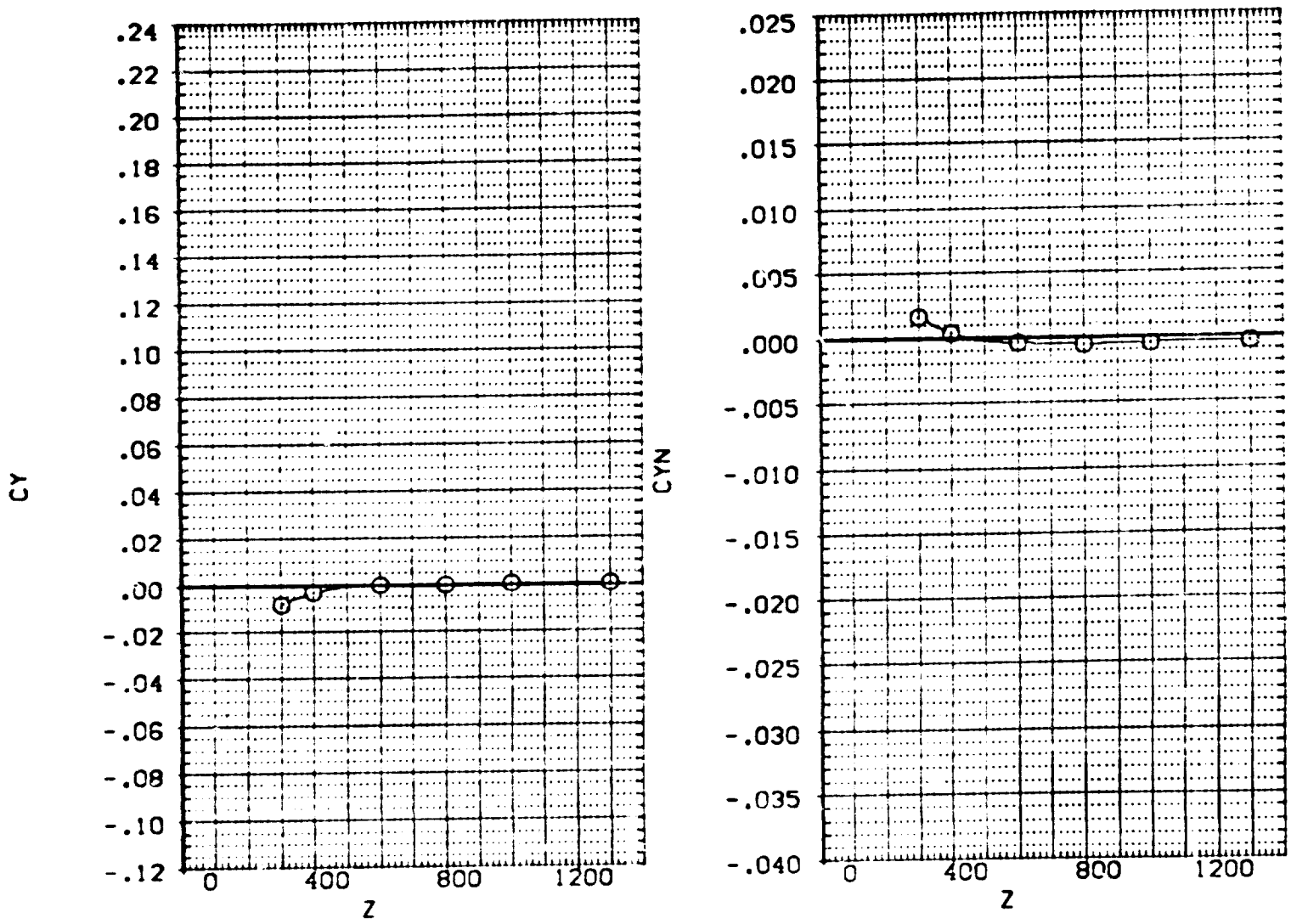


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT78)

SYMBOL	X	PARAMETRIC VALUES			
O	.219	MACH	4.520	PTOTAL	80.000
		ALPHA	-5.000	BETA	.000
		DALPHA	-10.000	DBETA	.000
		ELEVTR	.000	AILRON	10.000
		Y	200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

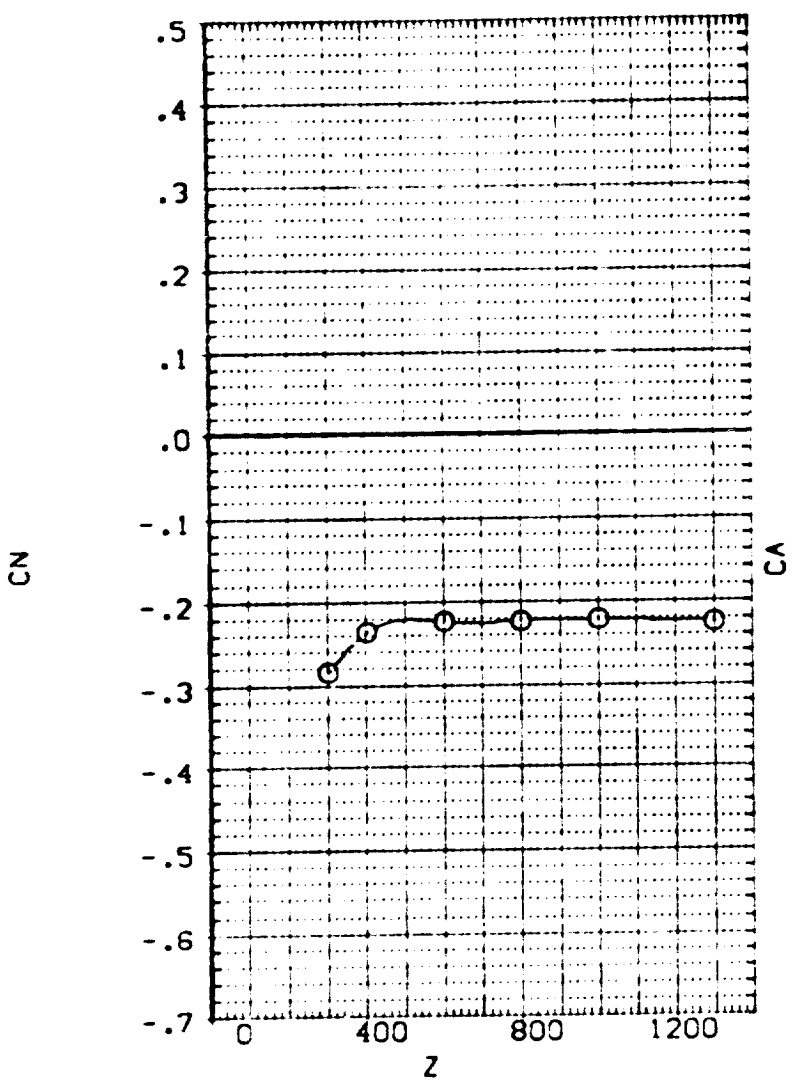


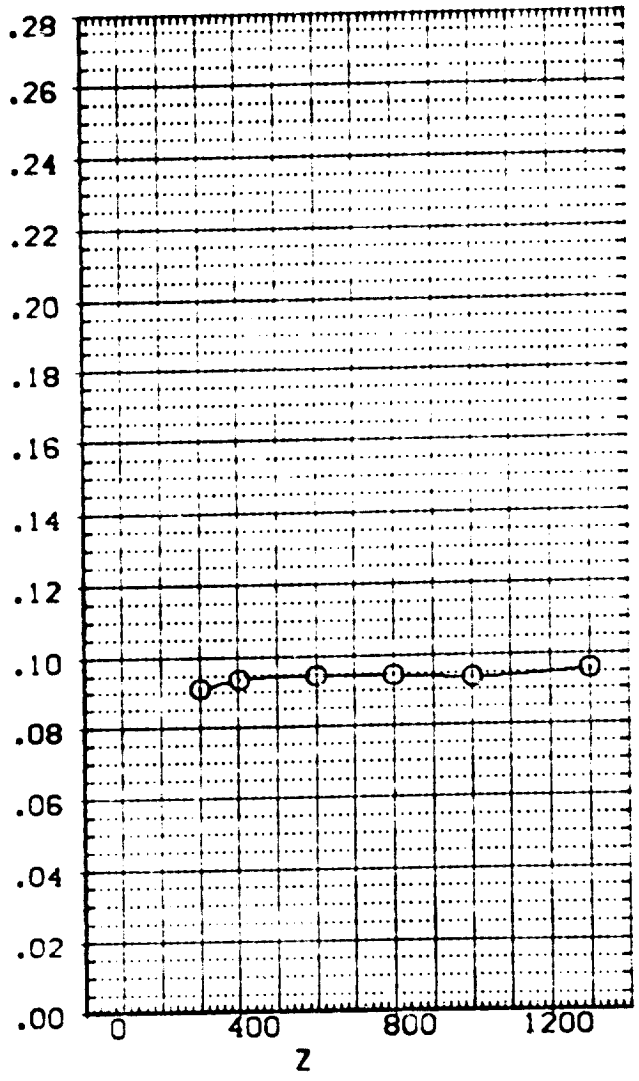
EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

:A13,EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT79)

SYMBOL	X	PARAMETRIC VALUES			
○	.255	MACH	4.520	PTOTAL	80.000
		ALPHA	-5.000	BETA	.000
		DALPHA	-10.000	DBETA	-5.000
		ELEVTR	.000	AILRON	10.000
		Y	-200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



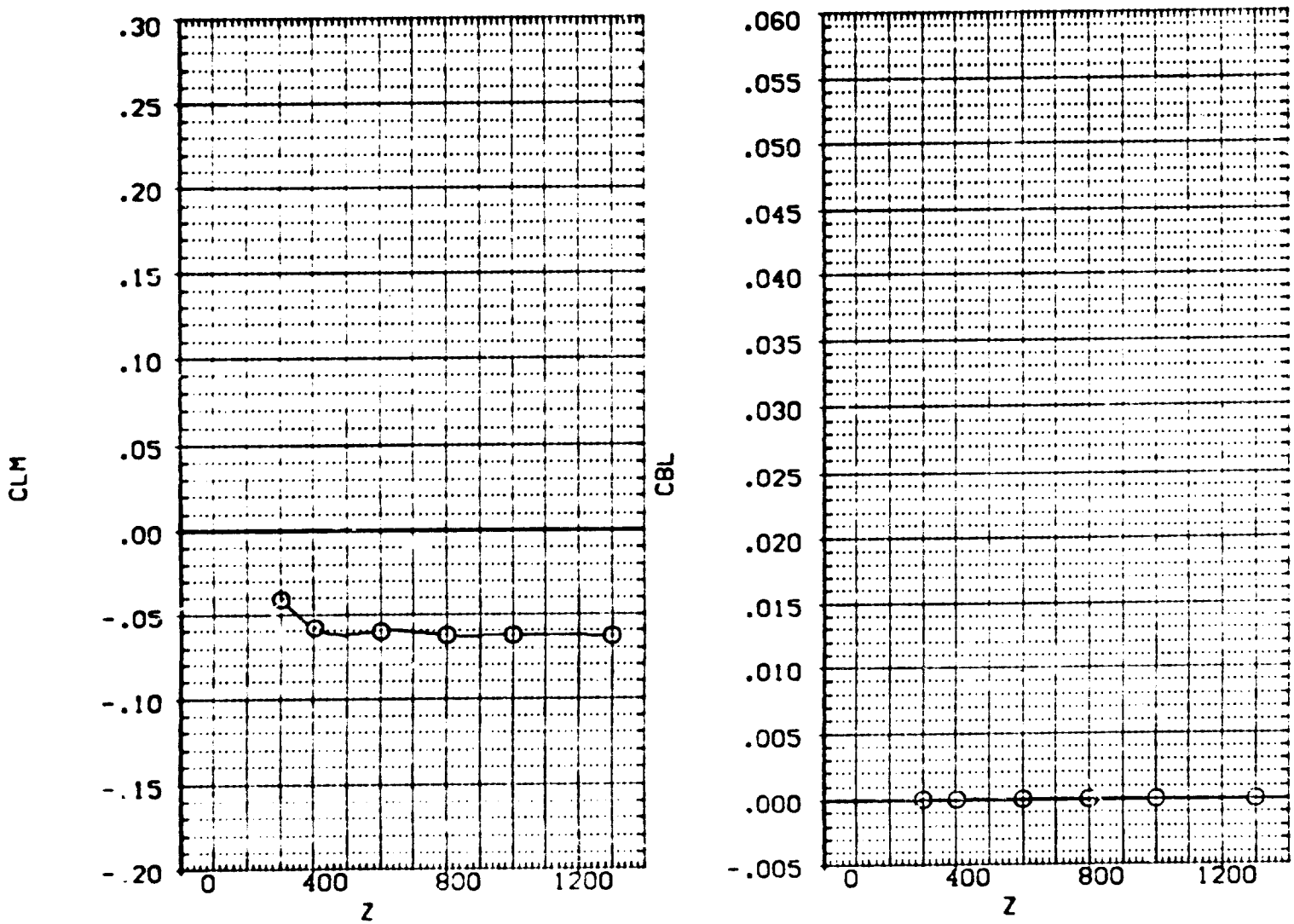


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT79)

SYMBOL	X	PARAMETRIC VALUES			
O	.255	MACH	4.520	PTOTAL	80.000
		ALPHA	-5.000	BETA	.000
		DALPHA	-10.000	DBETA	-5.000
		ELEVTR	.000	AILRON	10.000
		Y	-200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

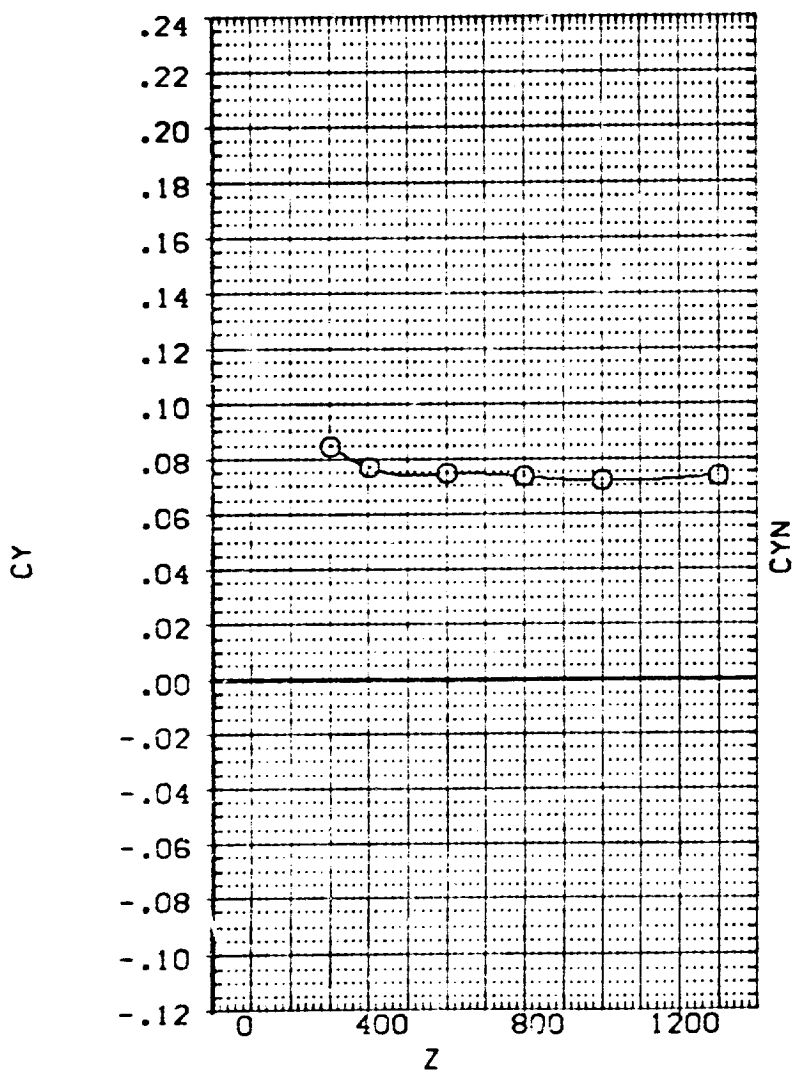


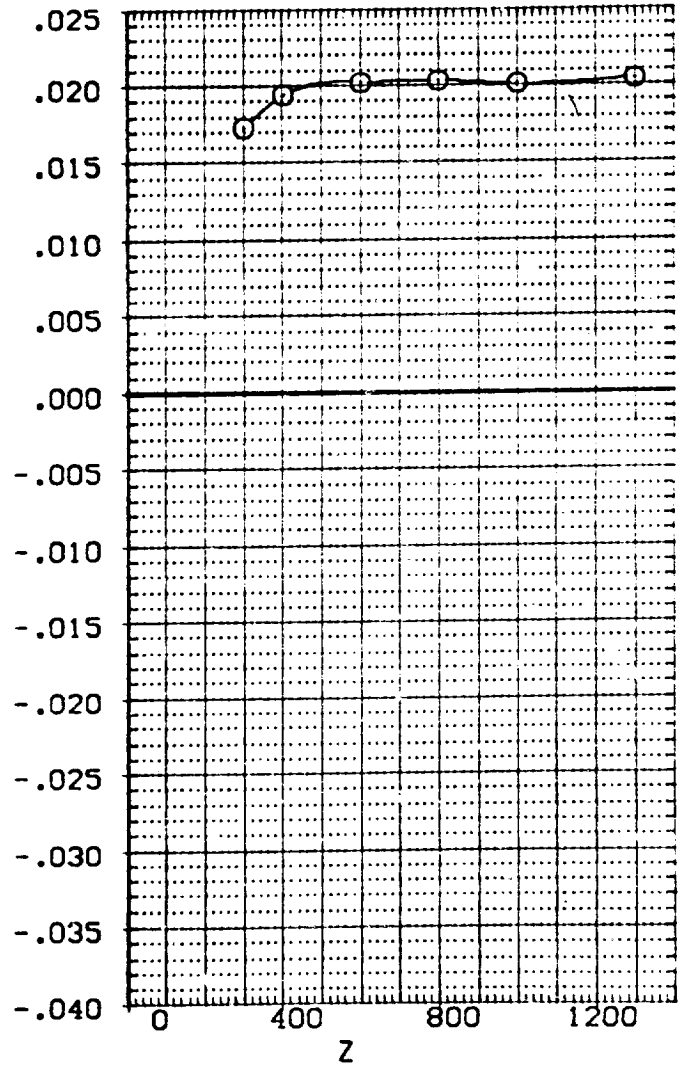
EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT79)

SYMBOL	X		PARAMETRIC VALUES		
○	.255	MACH	4.520	PTOTAL	80.000
		ALPHA	-5.000	BETA	.000
		DALPHA	-10.000	DBETA	-5.000
		ELEVTR	.000	AILRON	10.000
		Y	-200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



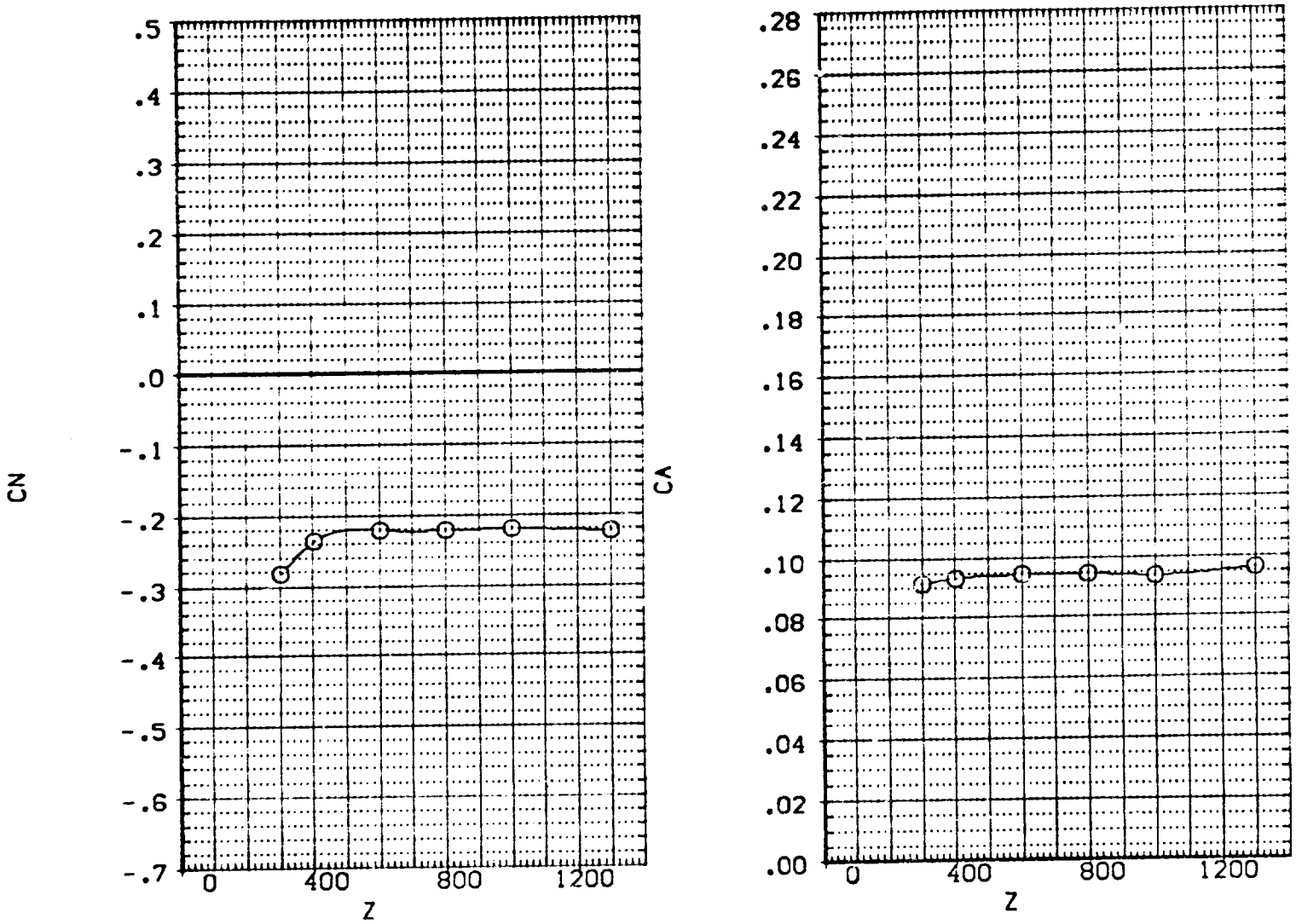


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT80)

SYMBOL	X	PARAMETRIC VALUES			
○	.300	MACH	4.520	PTOTAL	80.000
		ALPHA	-5.000	BETA	.000
		CALPHA	-10.000	DBETA	5.000
		ELEVTR	.000	AILRON	10.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

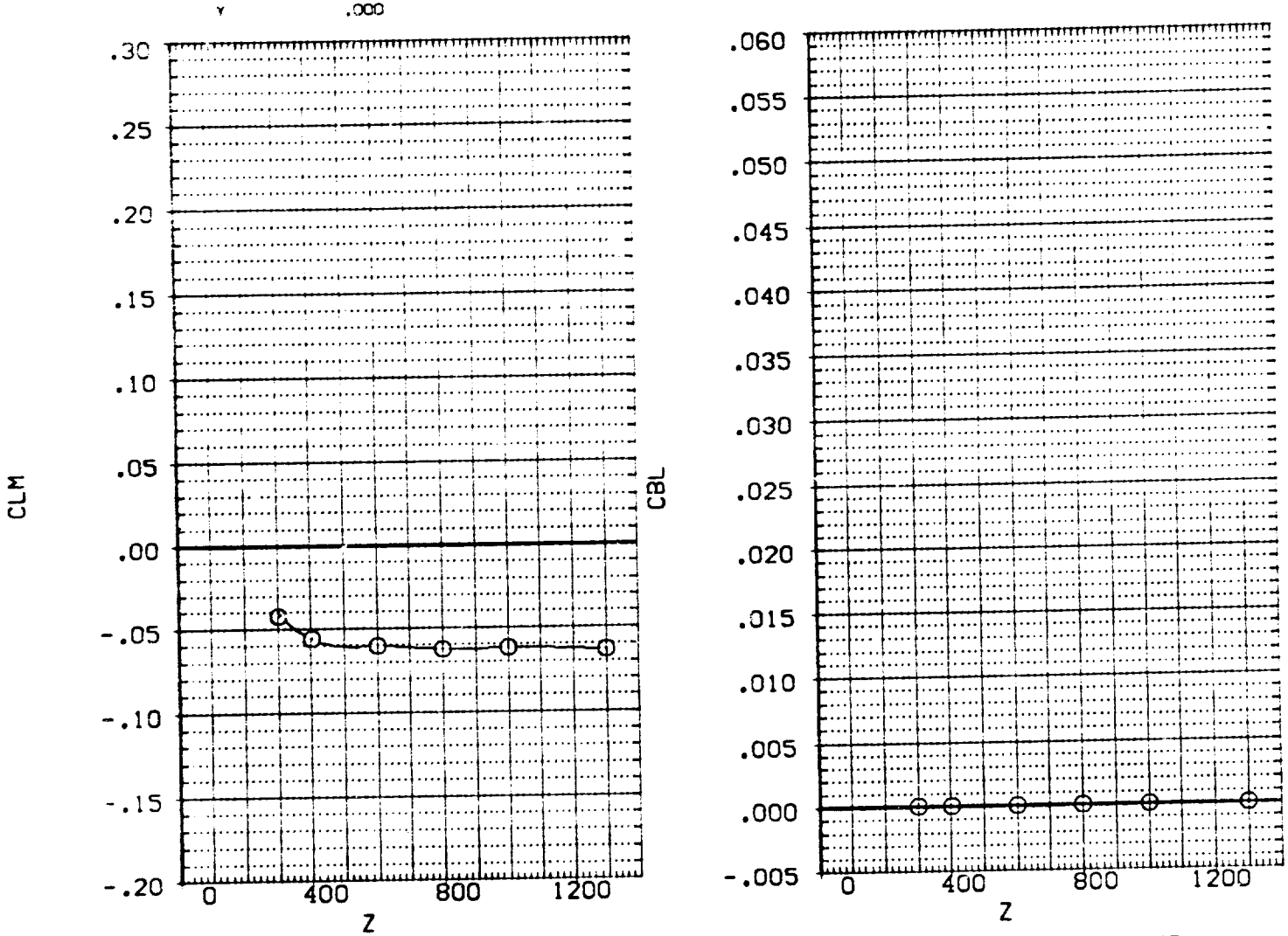


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

[A13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT80)

SYMBOL	X	PARAMETRIC VALUES			
○	.300	MACH	4.520	PTOTAL	80.000
		ALPHA	-5.000	BETA	.000
		DALPHA	-10.000	DBETA	5.000
		ELEVTR	.000	AILRON	10.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

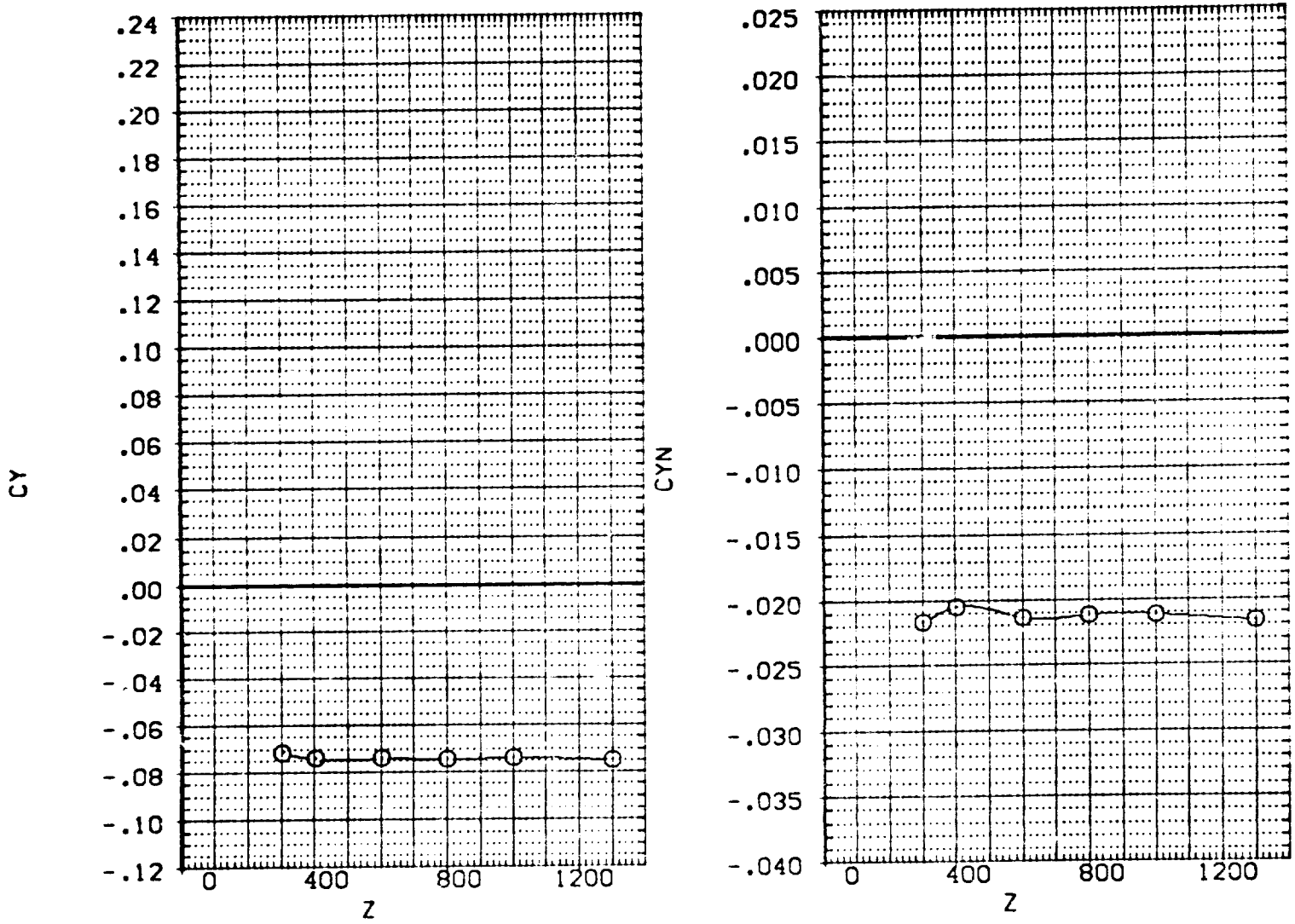


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT80)

SYMBOL	X	PARAMETRIC VALUES			
O	.300	MACH	4.520	PTOTAL	80.000
		ALPHA	-5.000	BETA	.000
		DALPHA	-10.000	DBETA	5.000
		ELEVTR	.000	AILRON	10.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

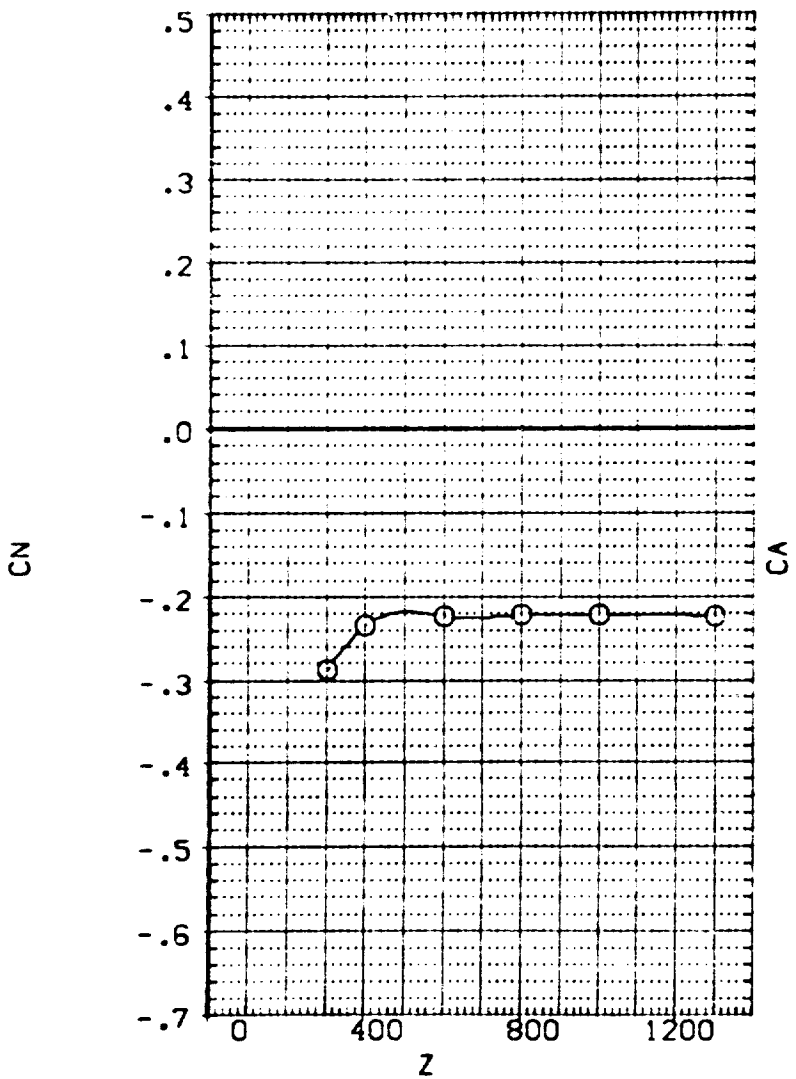


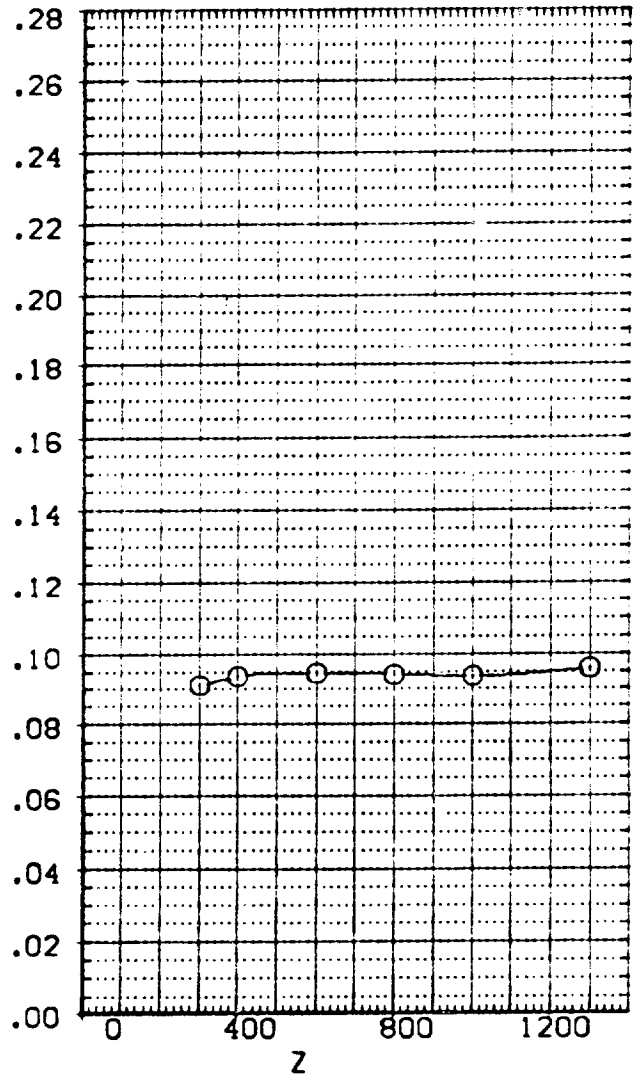
EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

!A13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT81)

SYMBOL	X	PARAMETRIC VALUES			
	.140	MACH	4.520	PTOTAL	80.000
		ALPHA	-5.000	BETA	.000
		DALPHA	-10.000	DBETA	5.000
		ELEVTR	.000	AILRON	10.000
		Y	200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



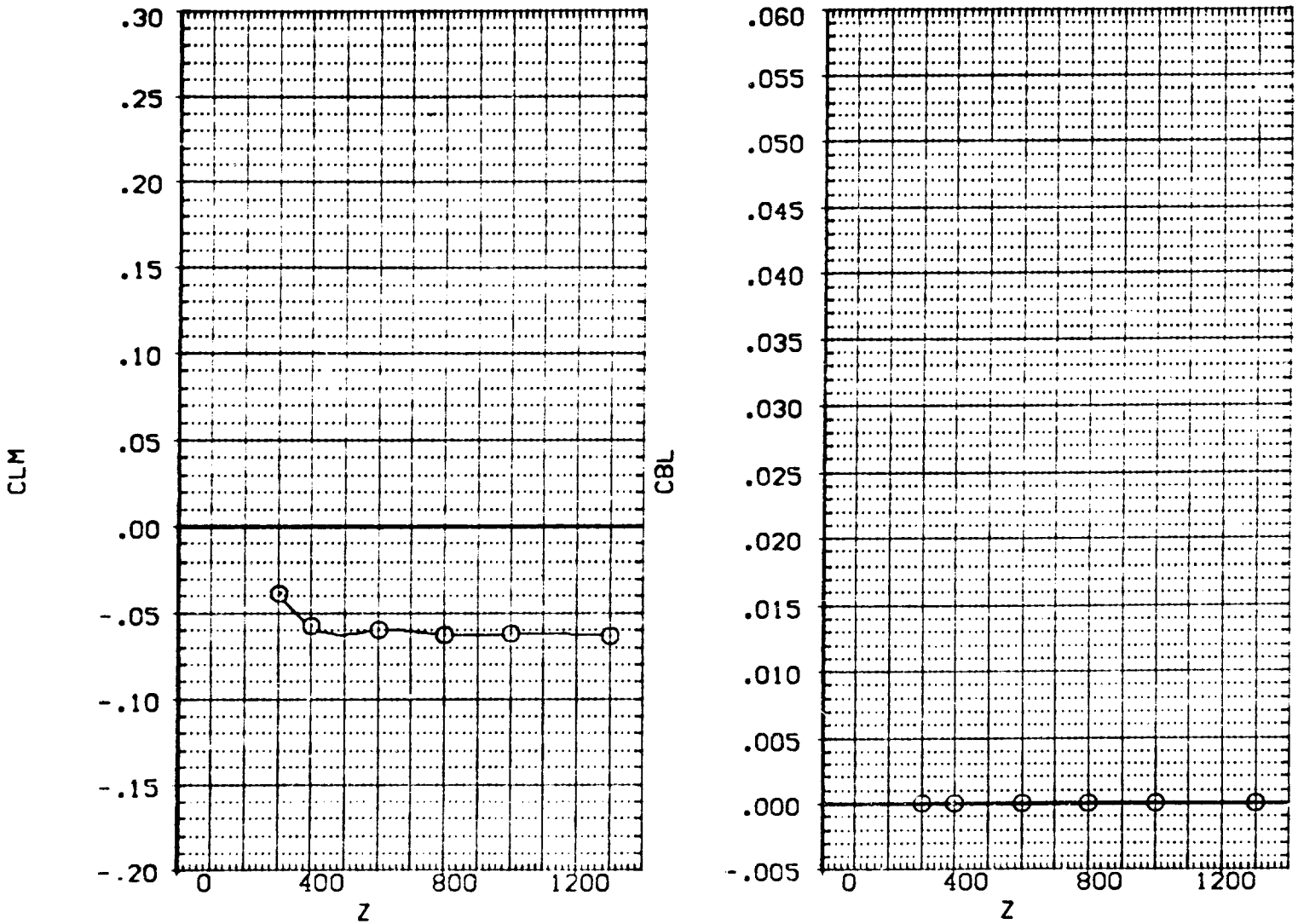


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT81)

SYMBOL	X	PARAMETRIC VALUES			
O	.140	MACH	4.520	PTOTAL	80.000
		ALPHA	-5.000	BETA	.000
		DALPHA	-10.000	DBETA	5.000
		ELEVTR	.000	AILRON	10.000
		Y	200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

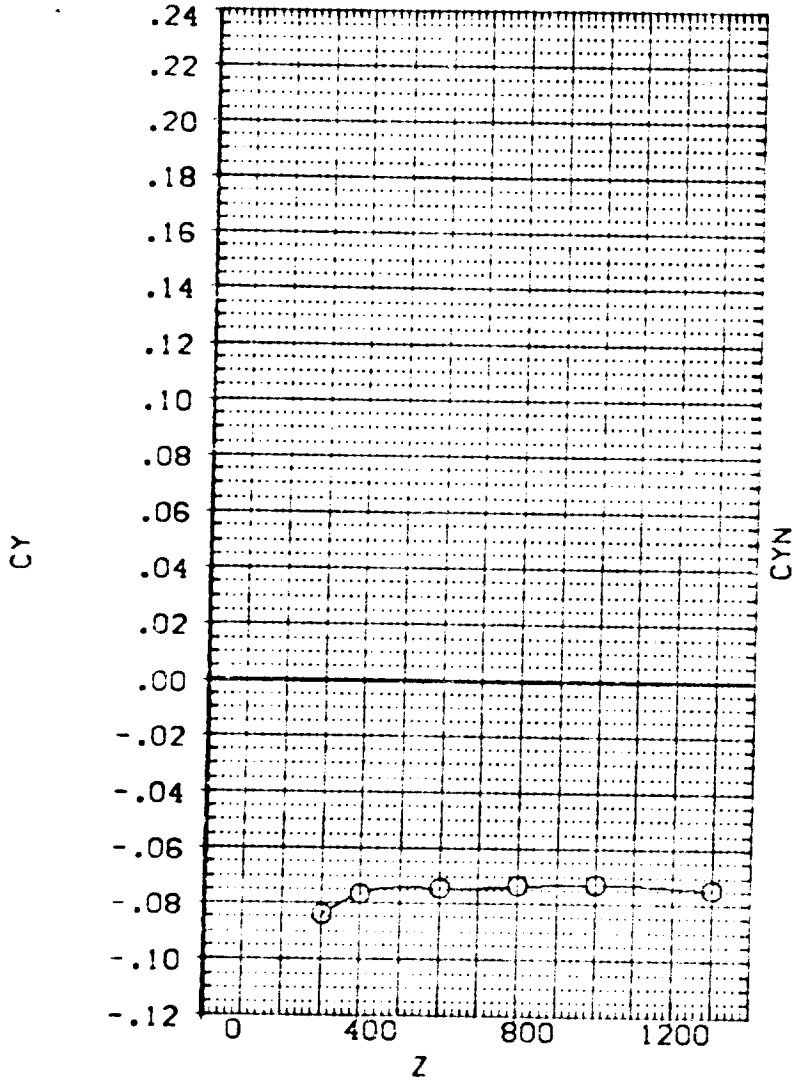


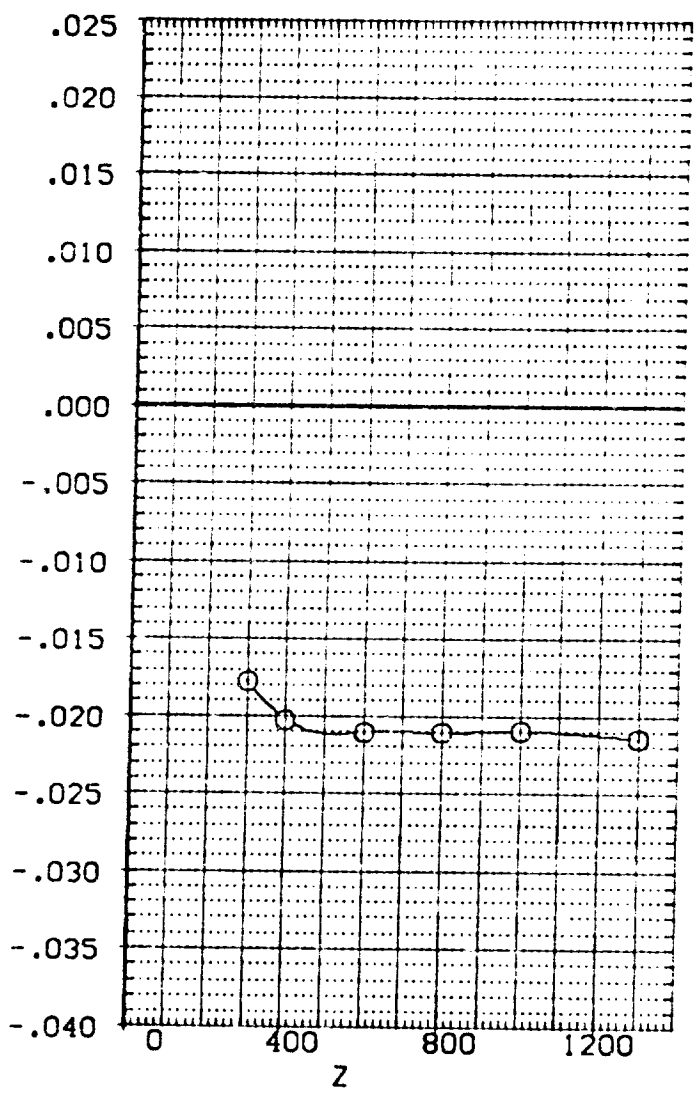
EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

!A13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT81)

SYMBOL	X		PARAMETRIC VALUES		
○	.140	MACH	4.520	PTOTAL	80.000
		ALPHA	-5.000	BETA	.000
		DALPHA	-10.000	DBETA	5.000
		ELEVTR	.000	AILRON	10.000
		Y	200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



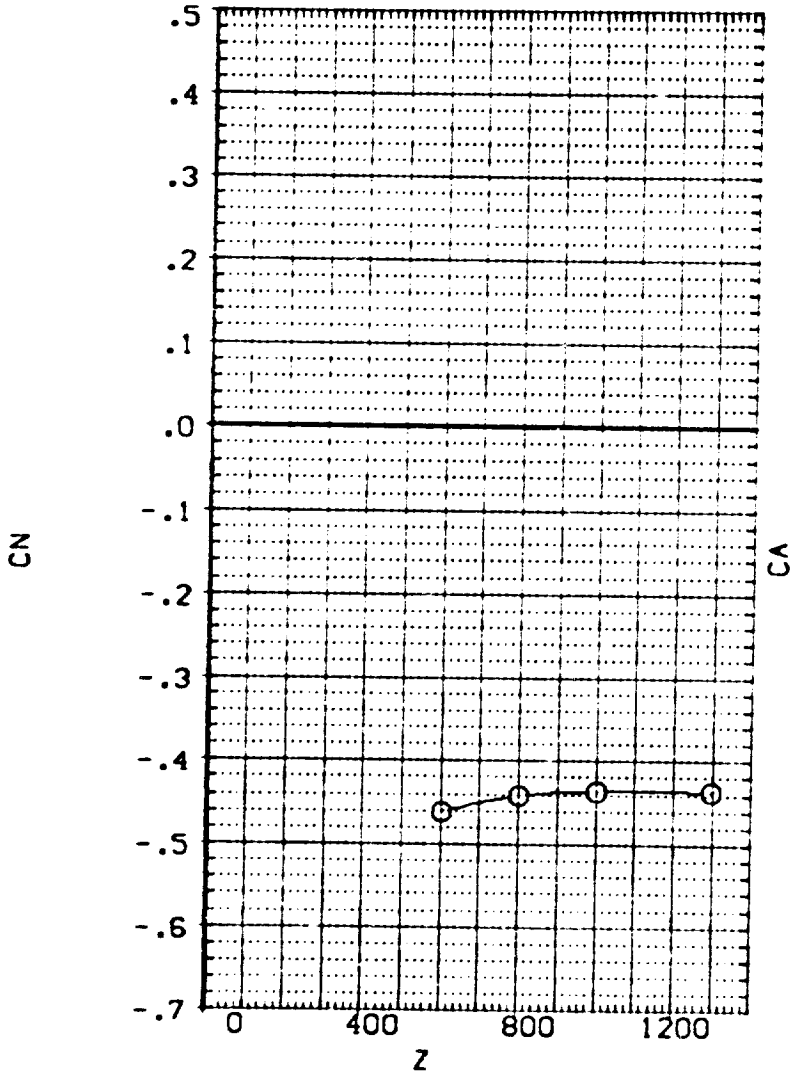


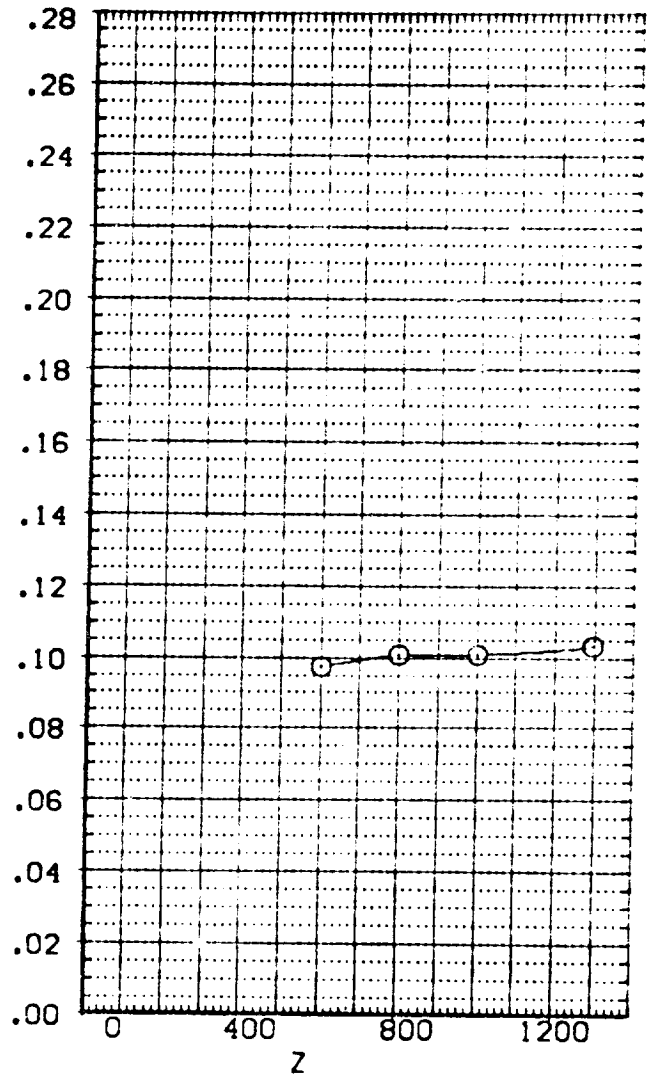
EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT82)

SYMBOL	X	PARAMETRIC VALUES			
O	.178	MACH	4.520	PTOTAL	80.000
		ALPHA	-5 000	BETA	.000
		DALPHA	-20.000	DBETA	.000
		ELEVTR	.000	AILRON	10.000
		Y	-200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



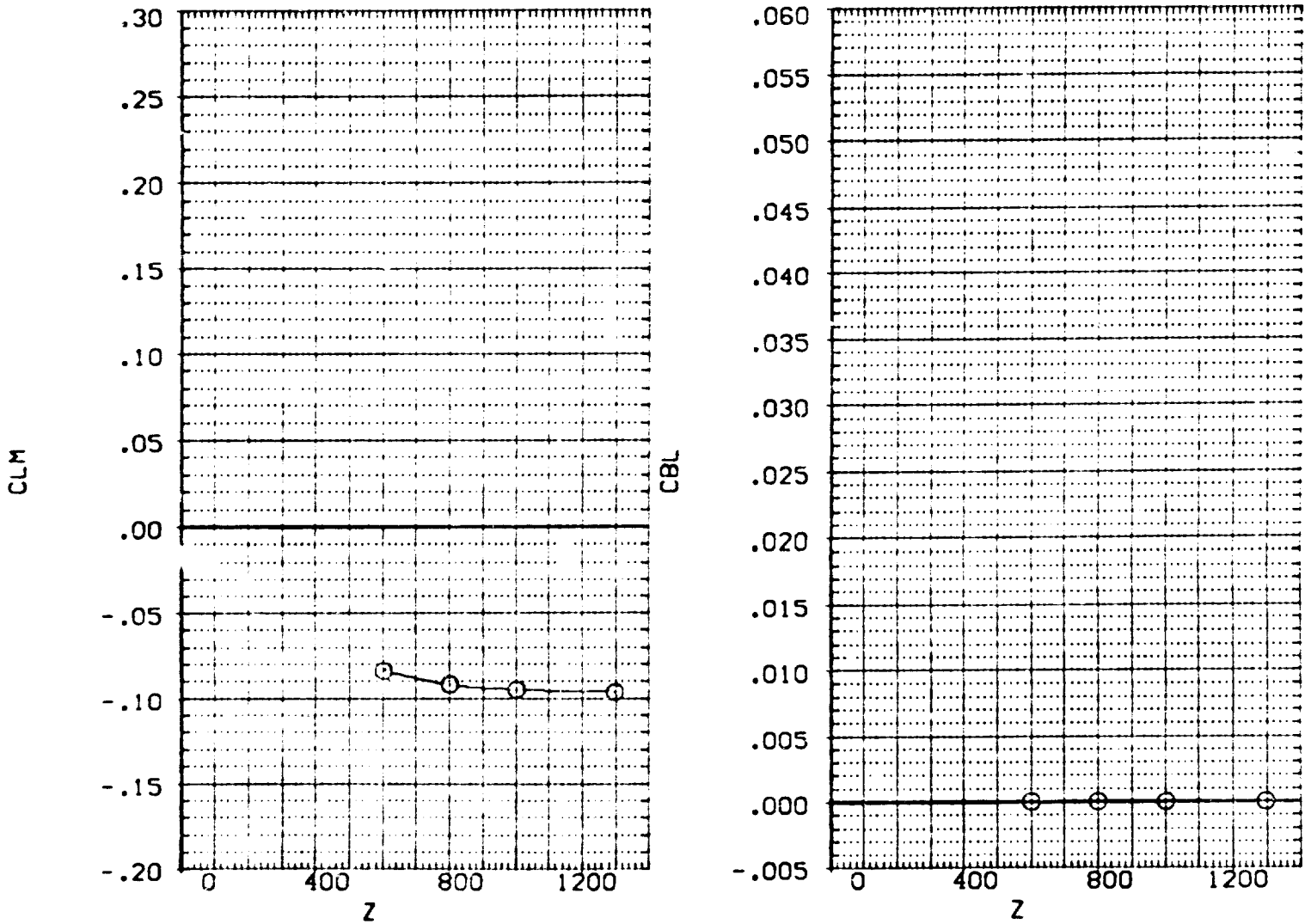


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

IA13,EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT82)

SYMBOL	X	PARAMETRIC VALUES			
○	.178	MACH	4.520	PTOTAL	80.000
		ALPHA	-5.000	BETA	.000
		DALPHA	-20.000	DBETA	.000
		ELEVTR	.000	AILRON	10.000
		Y	-200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

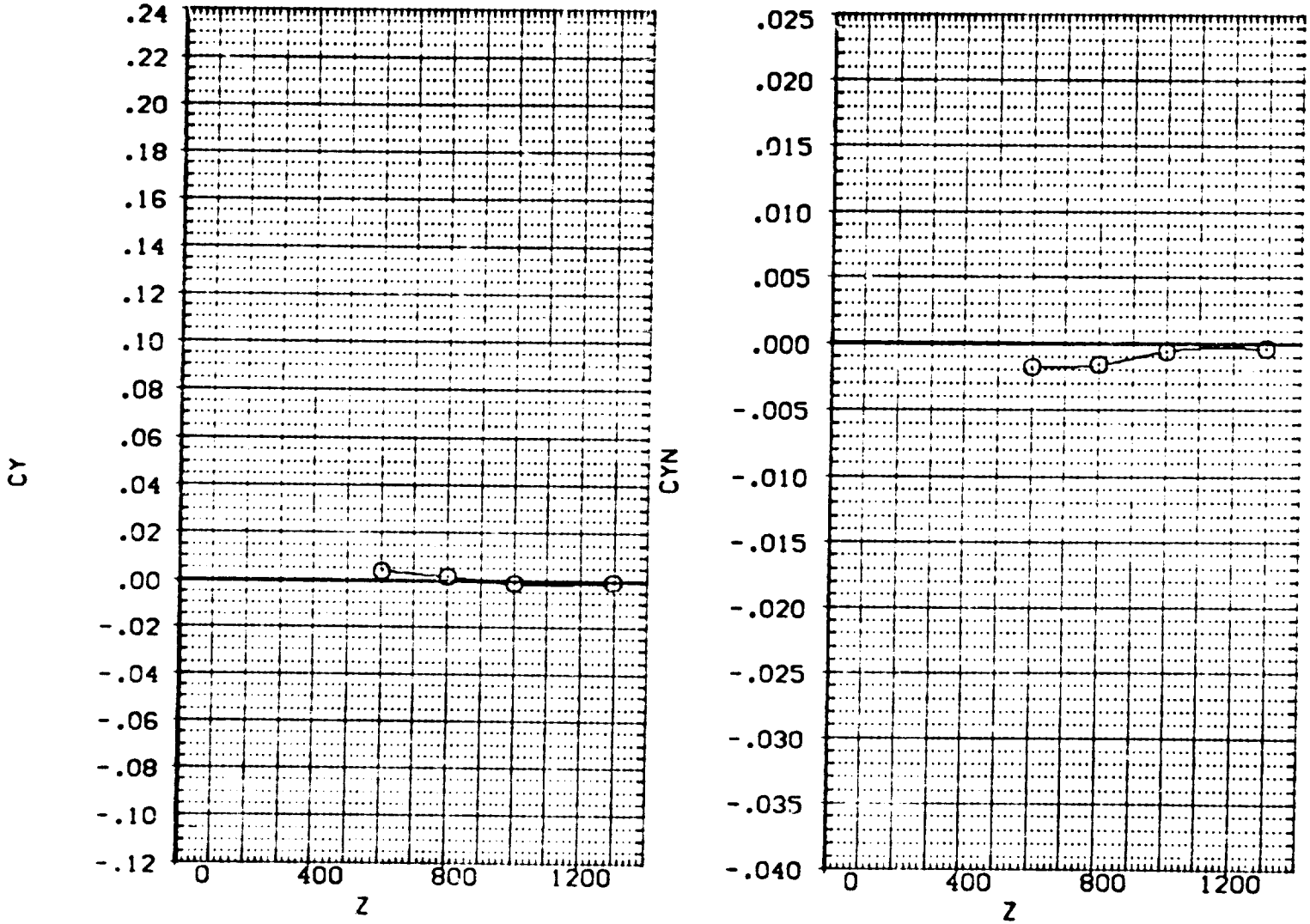


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT82)

SYMBOL	X		PARAMETRIC VALUES		
○	.178	MACH	4.520	PTOTAL	80.000
		ALPHA	-5.000	BETA	.000
		DALPHA	-20.000	DBETA	.000
		ELEVTR	.000	AILRON	10.000
		Y	-200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

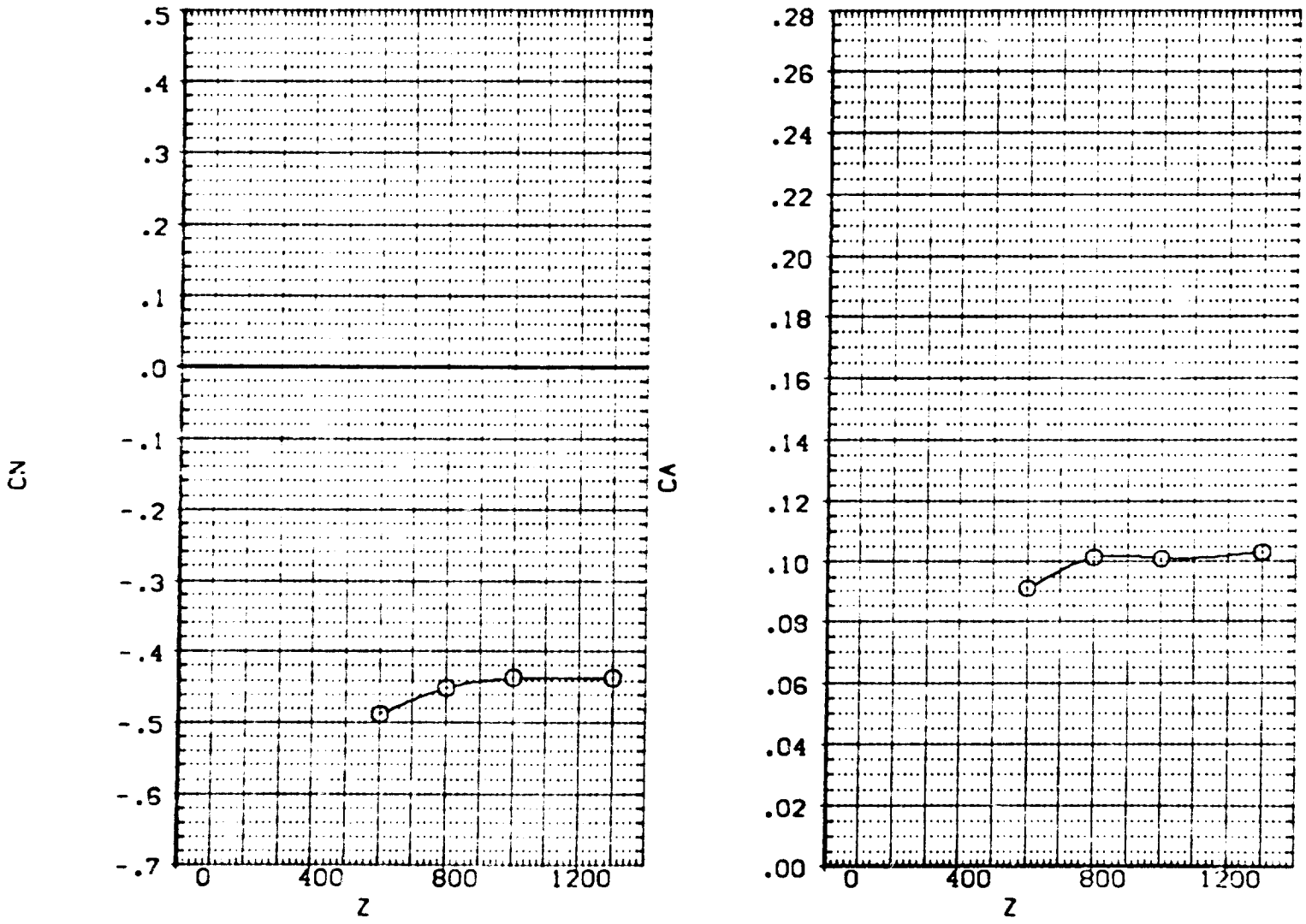


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

!A13,EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT83)

SYMBOL	X		PARAMETRIC VALUES		
○	.165	MACH	4.520	PITCH	80.000
		ALPHA	-5.000	BETA	.000
		DALPHA	-20.000	DBETA	.000
		ELEVTR	.000	AILRON	10.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

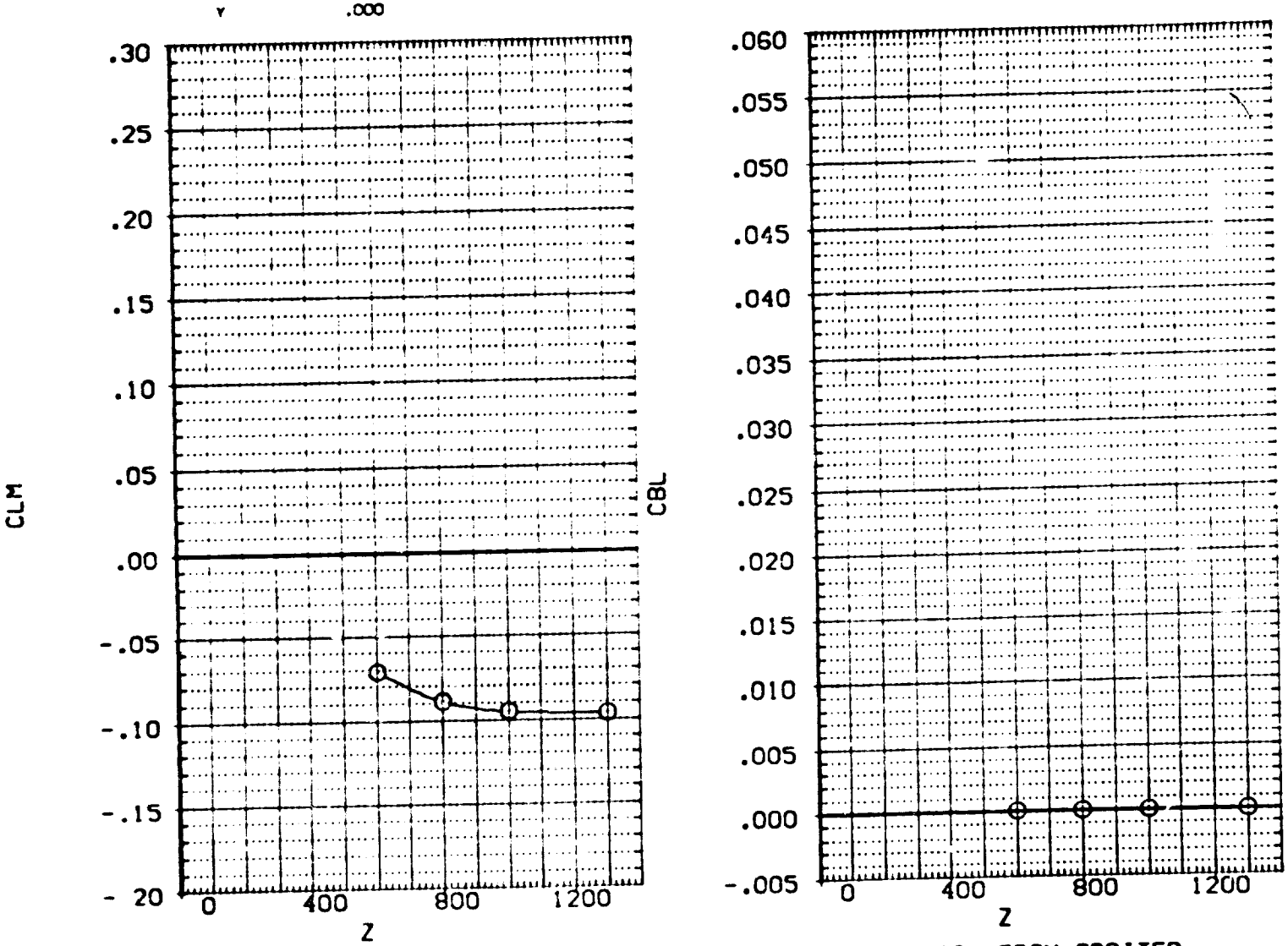


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

!A13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT83)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

SYMBOL	X	PARAMETRIC VALUES			
O	.165	MACH	4.520	PTOTAL	80.000
		ALPHA	-5.000	BETA	.000
		DALPHA	-20.000	DBETA	.000
		ELEVTR	.000	AILRON	10.000
		Y	.000		

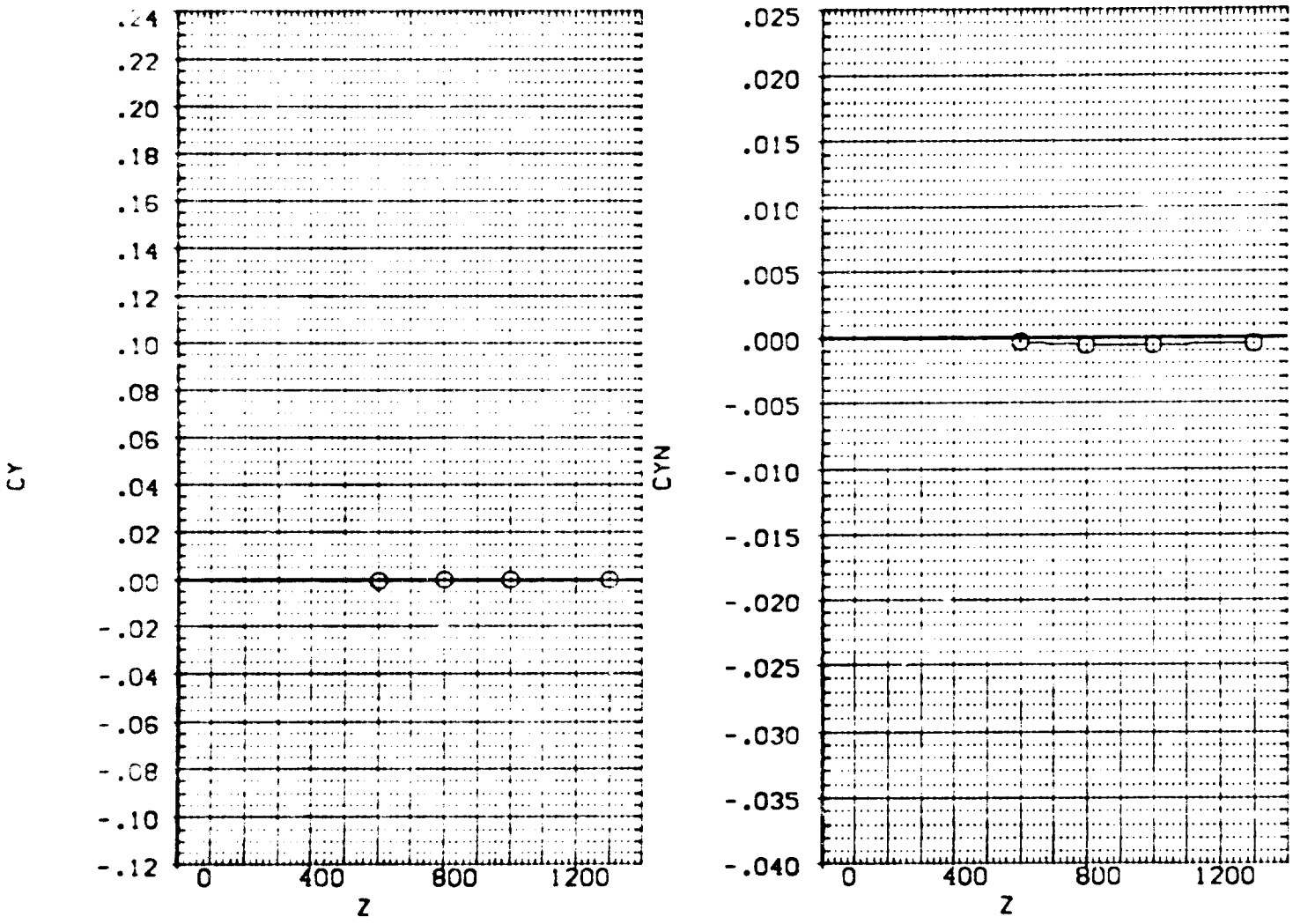


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

[A13,EXTERNAL TANK(T10)SEPARATING FROM ORB, C9 (RTJT83)

SYMBOL	X		PARAMETRIC VALUES		
	.165	MACH	4.520	PTOTAL	80.000
		ALPHA	-5.000	BETA	.000
		DALPHA	-20.000	DBETA	.000
		ELEVTR	.000	AILRON	10.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

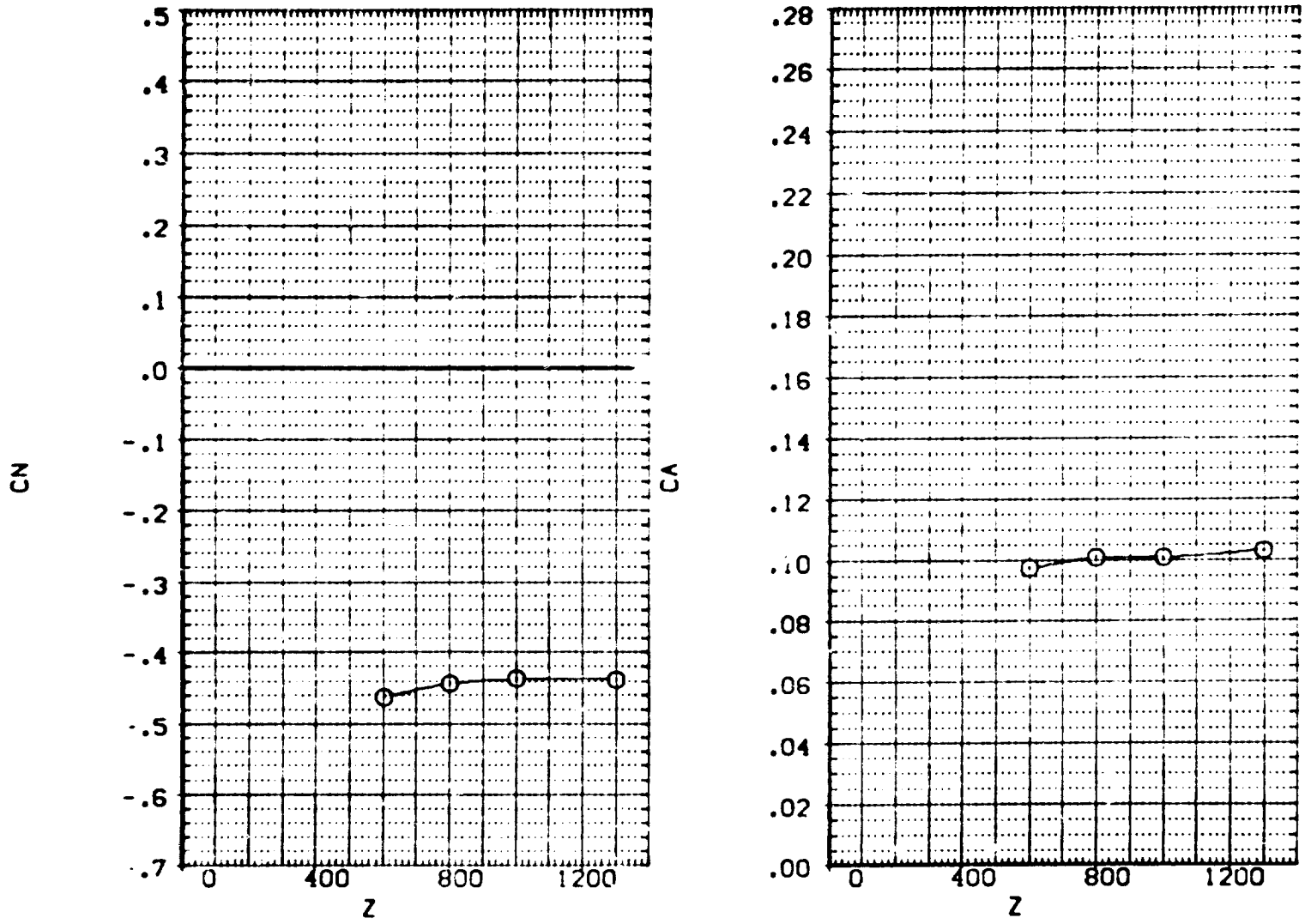


EXTERNAL TANK AERODYNAMIC CHARACTEPISTICS DURING SEPARATION FROM ORBITER

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT84)

SYMBOL	K		PARAMETRIC VALUES		
O	.218	MACH	4.520	PTOTAL	80.000
		ALPHA	-5.000	BETA	.000
		DALPHA	-20.000	DBETA	.000
		ELEVTR	.000	AILRON	10.000
		Y	200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

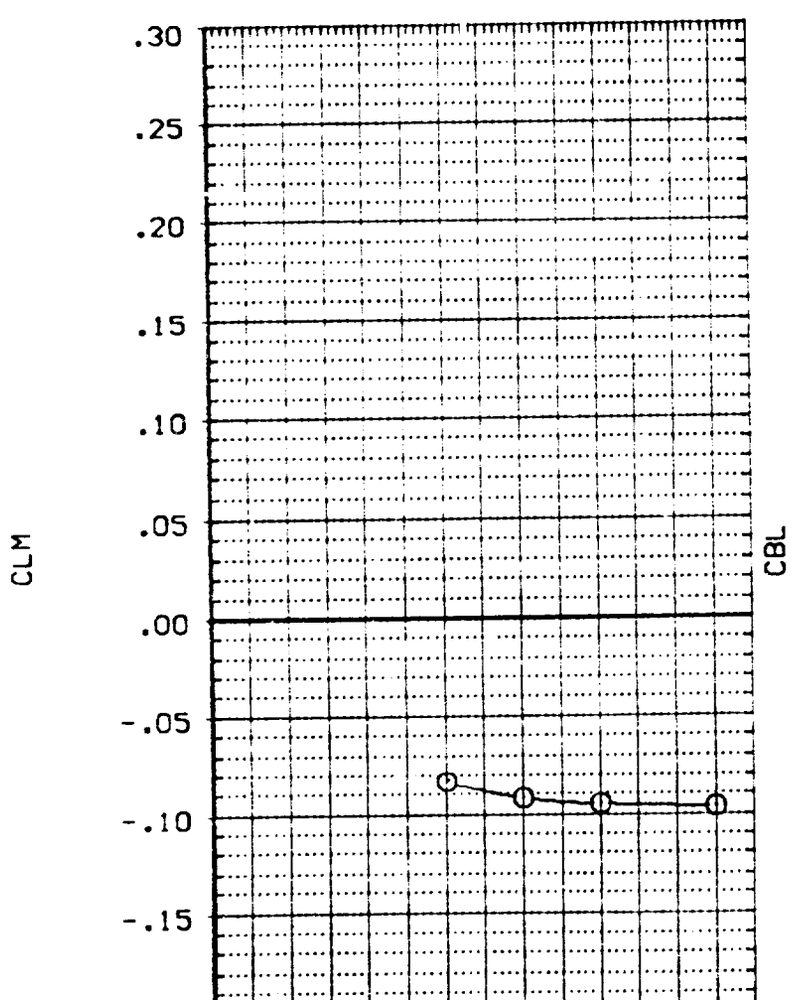


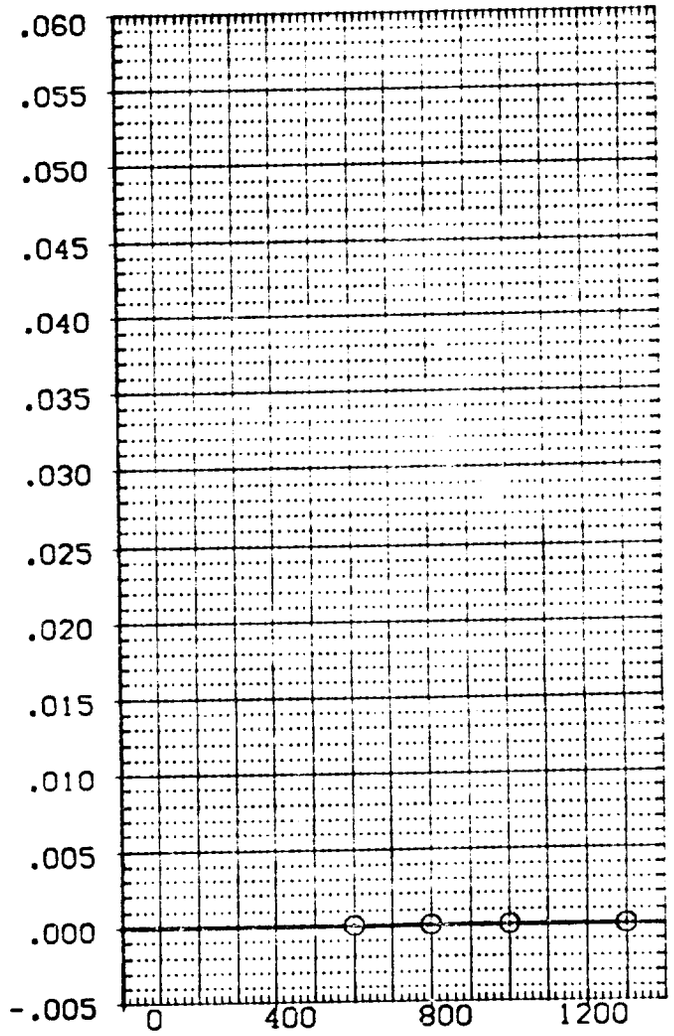
EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT84)

SYMBOL	X	PARAMETRIC VALUES			
○	.218	MACH	4.520	PTOTAL	80.000
		ALPHA	-5.000	BETA	.000
		DALPHA	-20.000	DBETA	.000
		ELEVTR	.000	AILRON	10.000
		Y	200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



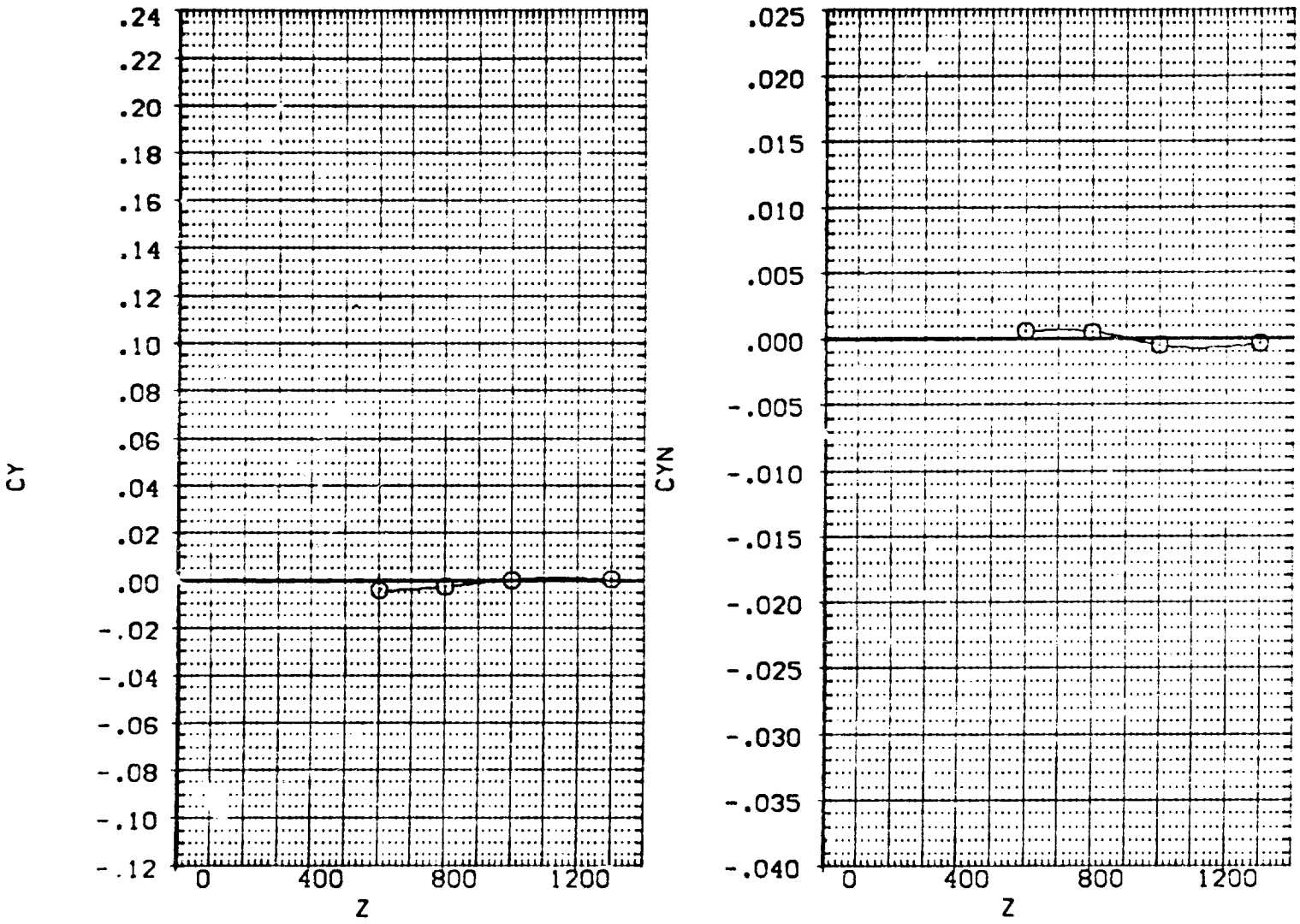


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT84)

SYMBOL	X	PARAMETRIC VALUES			
O	.218	MACH	4.520	PTOTAL	80.000
		ALPHA	-5.000	BETA	.000
		DALPHA	-20.000	DBETA	.000
		ELEVTR	.000	AILRON	10.000
		Y	200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

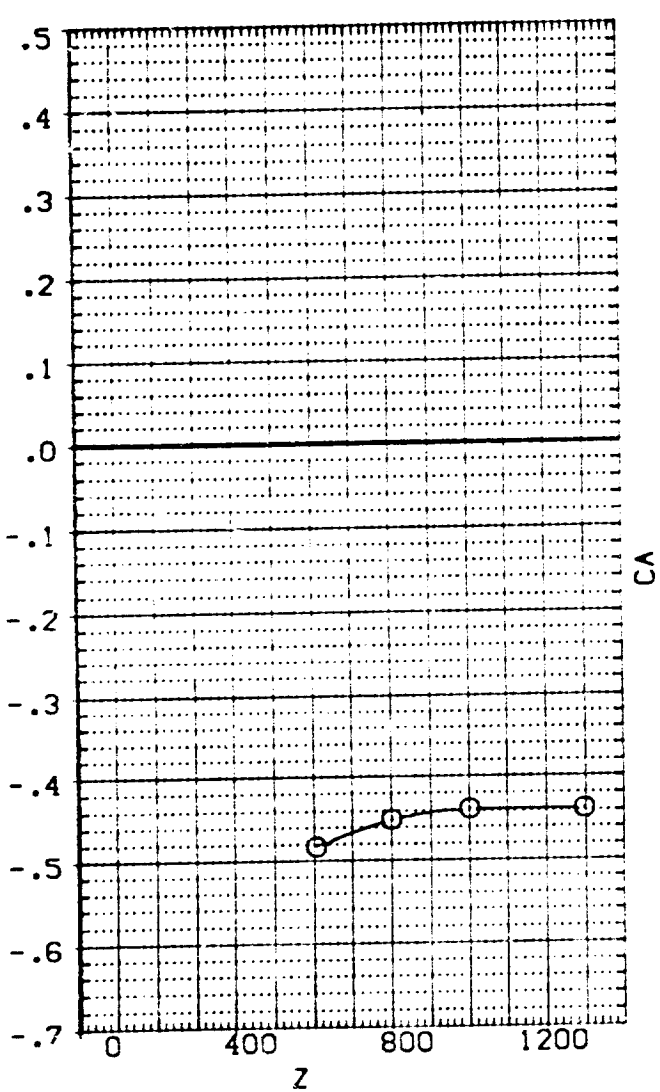


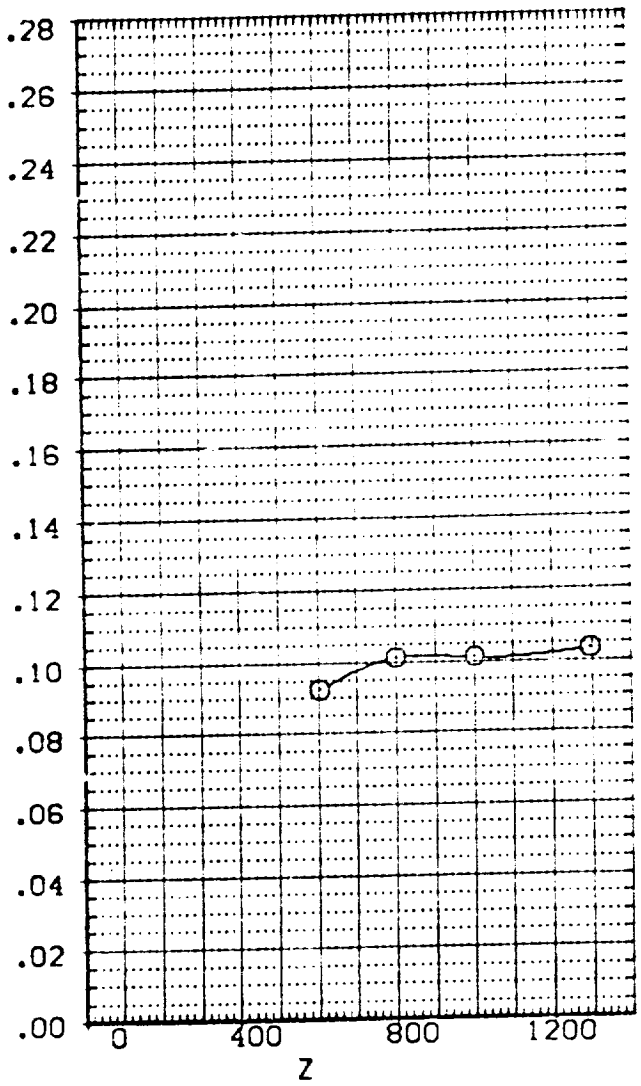
EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

!A13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT85)

SYMBOL		PARAMETRIC VALUES			
○	-.007	MACH	4.520	PTOTAL	80.000
		ALPHA	-5.000	BETA	.000
		DALPHA	-20.000	DBETA	-5.000
		ELEVTR	.000	AILRON	10.000
		Y	-200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



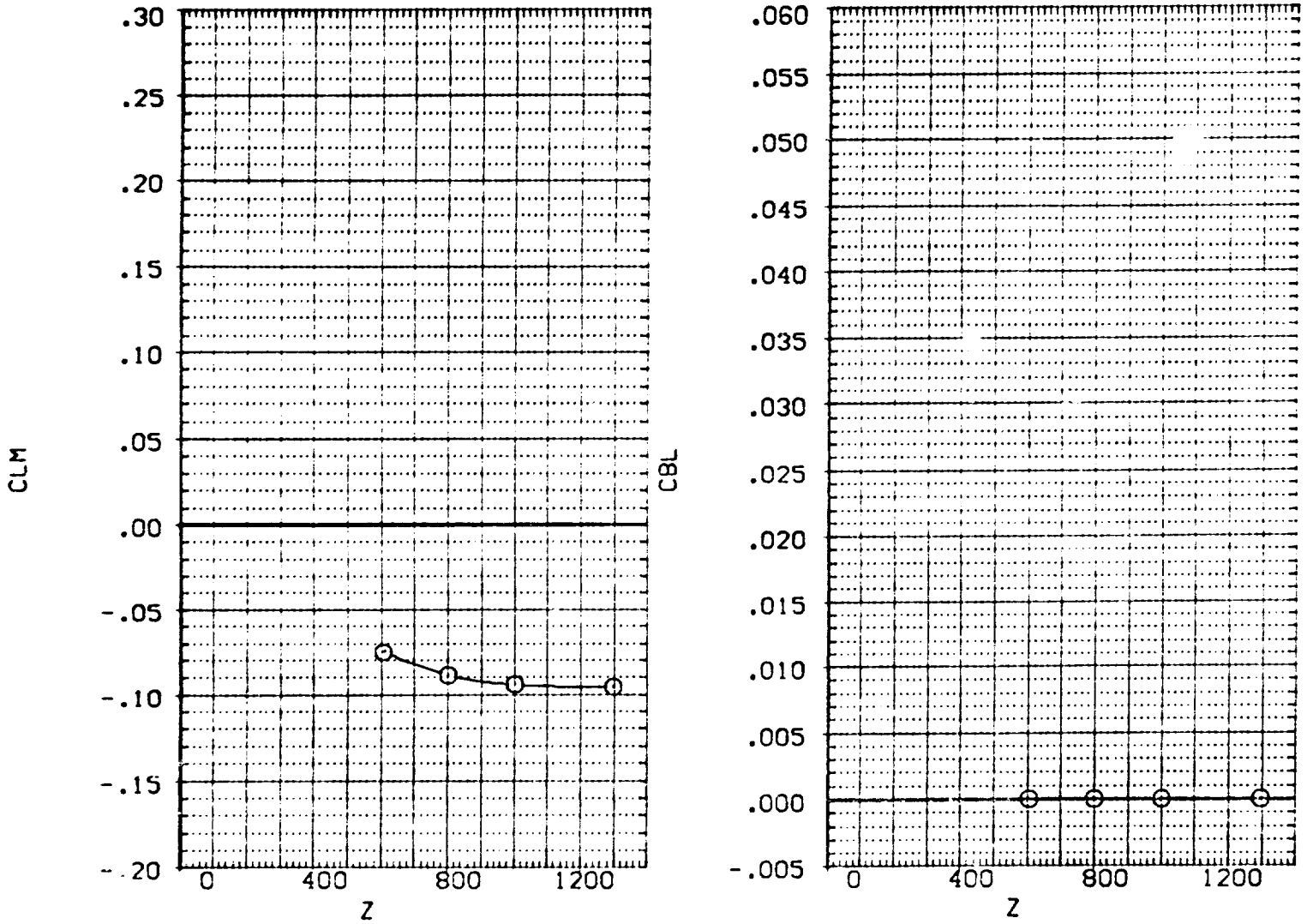


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT85)

SYMBOL	X	PARAMETRIC VALUES			
○	-.007	MACH	4.520	PTOTAL	80.000
		ALPHA	-5.000	BETA	.000
		DALPHA	-20.000	DBETA	-5.000
		ELEVTR	.000	AILRON	10.000
		Y	-200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

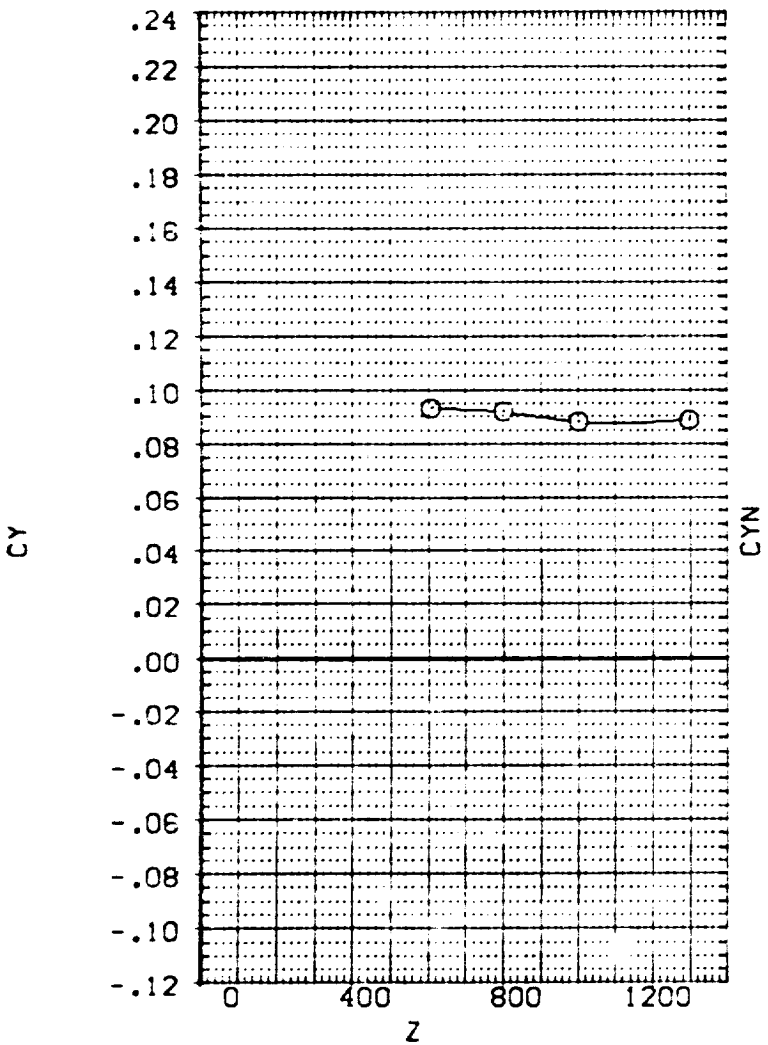


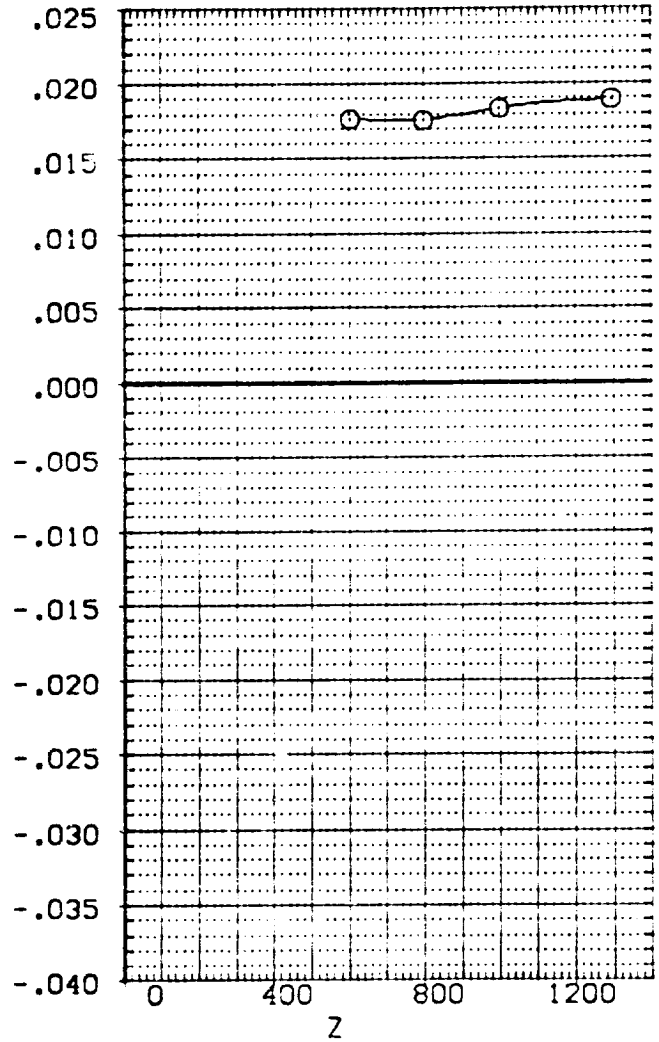
EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

[A13,EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT8S)

SYMBOL	X				
C	-.007	PARAMETRIC VALUES			
		MACH	4.520	PTOTAL	80.000
		ALPHA	-5.000	BETA	.000
		DALPHA	-20.000	DBETA	-5.000
		ELEVTR	.000	AILRON	10.000
		Y	-200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



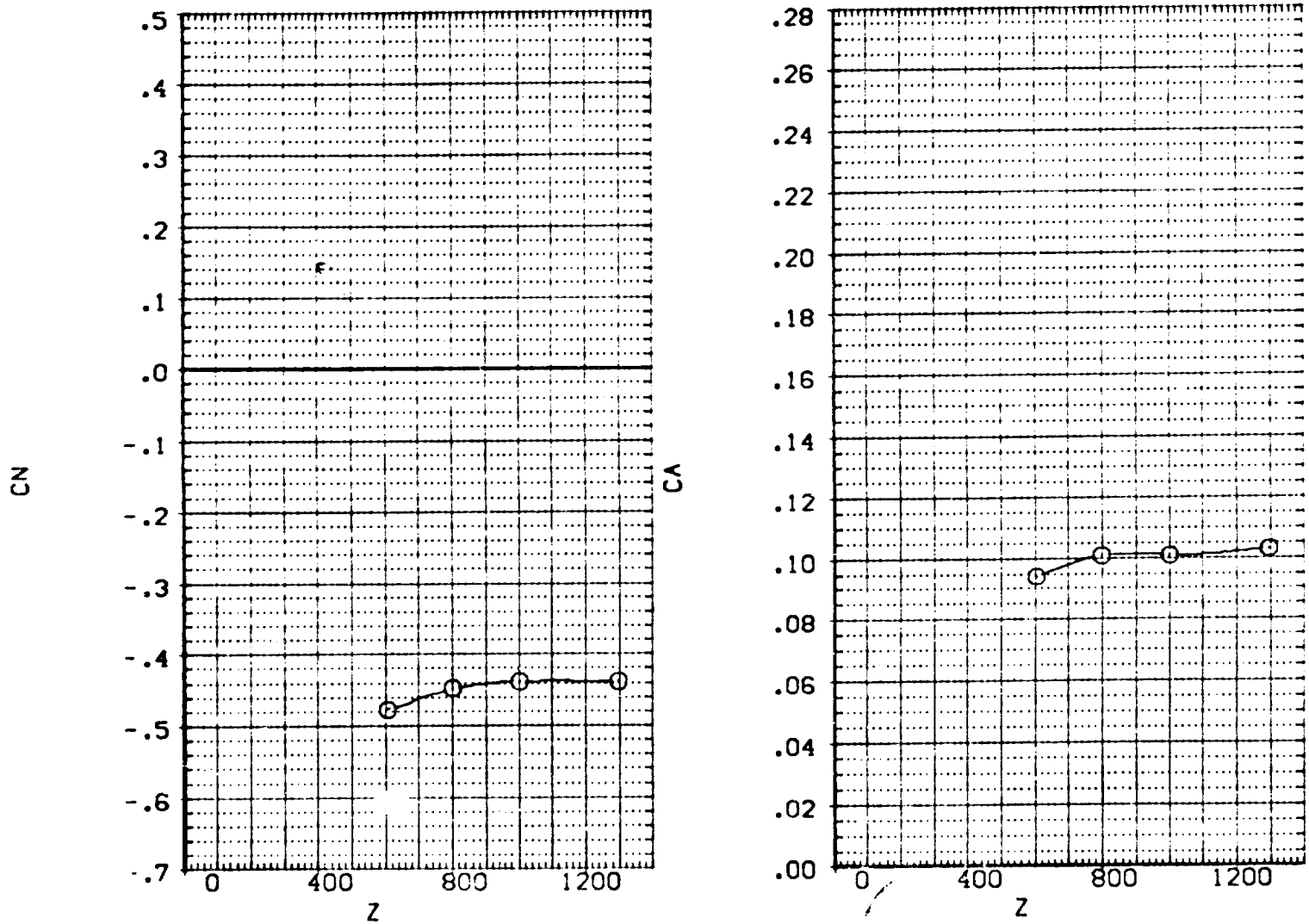


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

IA13, EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT86)

SYMBOL	X		PARAMETRIC VALUES		
○	.205	MACH	4.520	PTOTAL	80.000
		ALPHA	-5.000	BETA	.000
		DALPHA	-20.000	DBETA	5.000
		ELEVTR	.000	AILRON	10.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

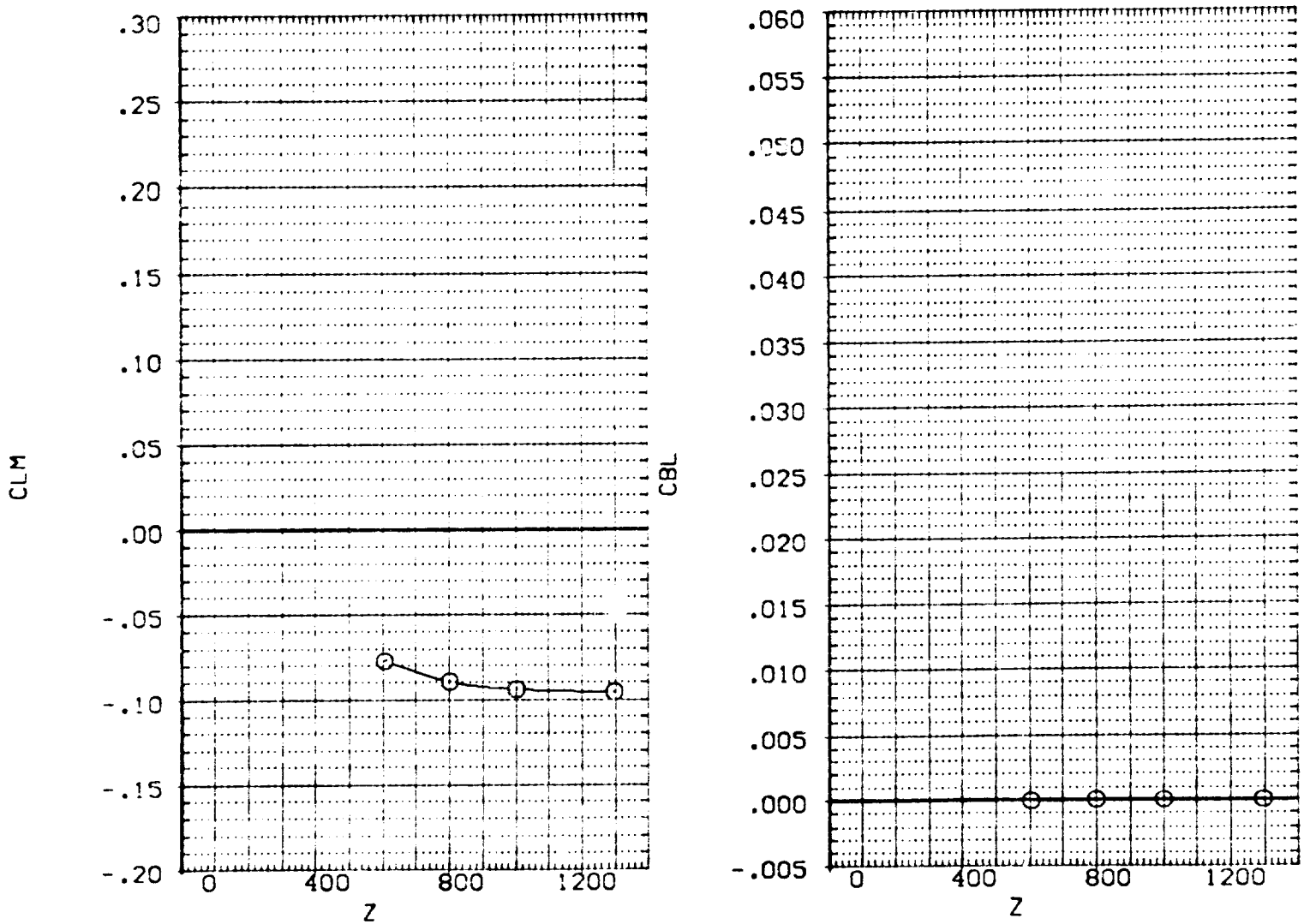


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

!A13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT86)

SYMBOL	x		PARAMETRIC VALUES		
○	.205	MACH	4.520	PTOTAL	80.000
		ALPHA	-5.000	BETA	.000
		DALPHA	-20.000	DBETA	5.000
		ELEVTR	.000	AILRON	10.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

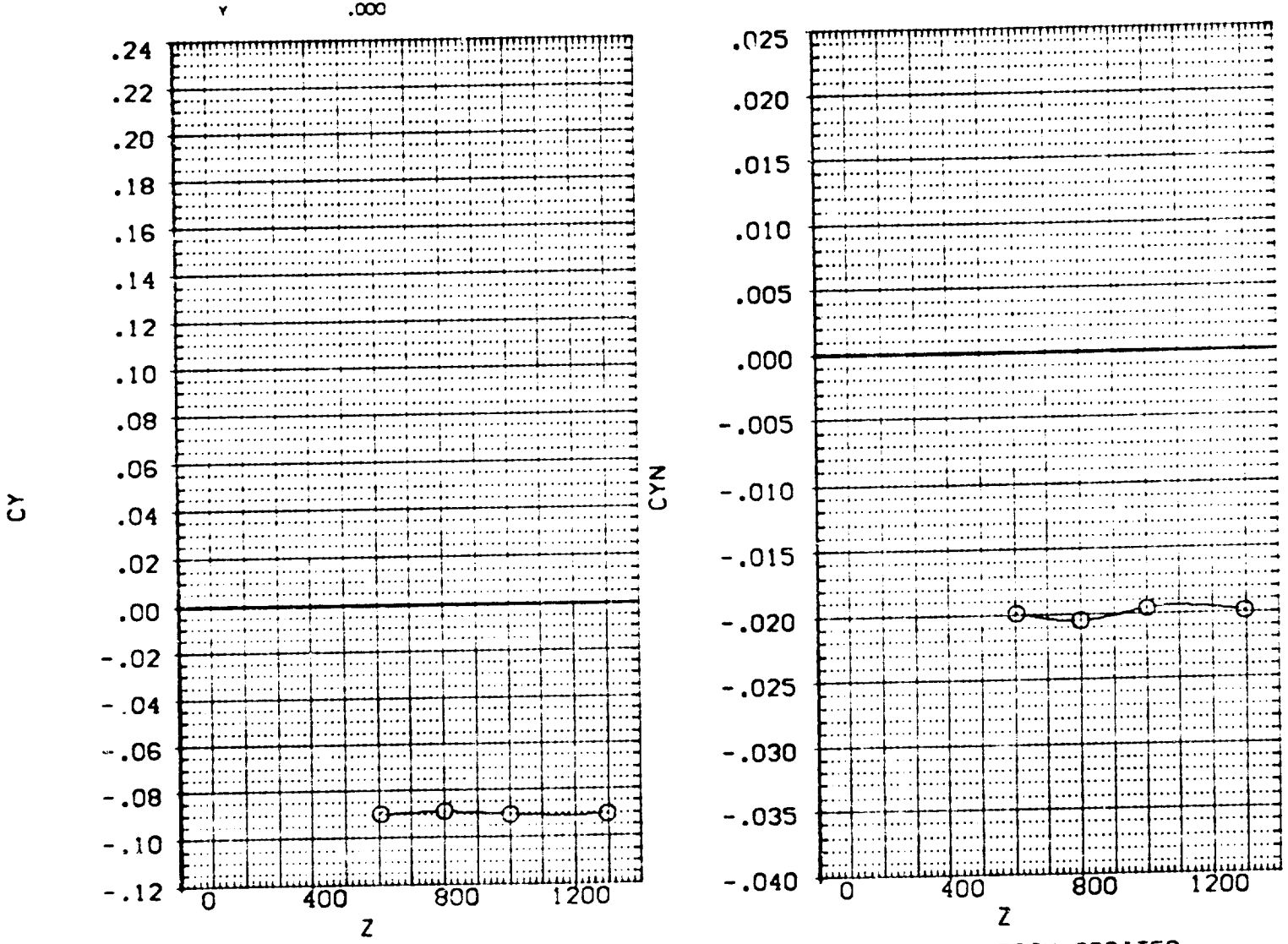


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT86)

SYMBOL	X	PARAMETRIC VALUES			
○	.205	MACH	4.520	PTOTAL	80.000
		ALPHA	-5.000	BETA	.000
		DALPHA	-20.000	DBETA	5.000
		ELEVTR	.000	AILRON	10.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

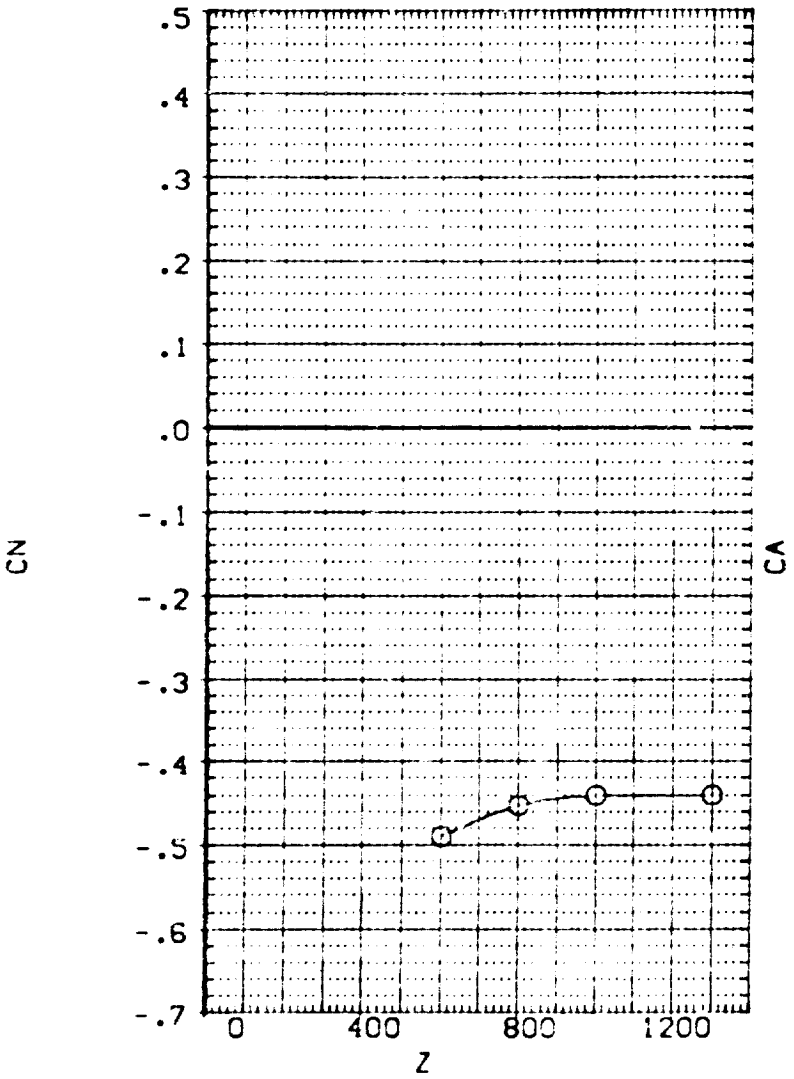


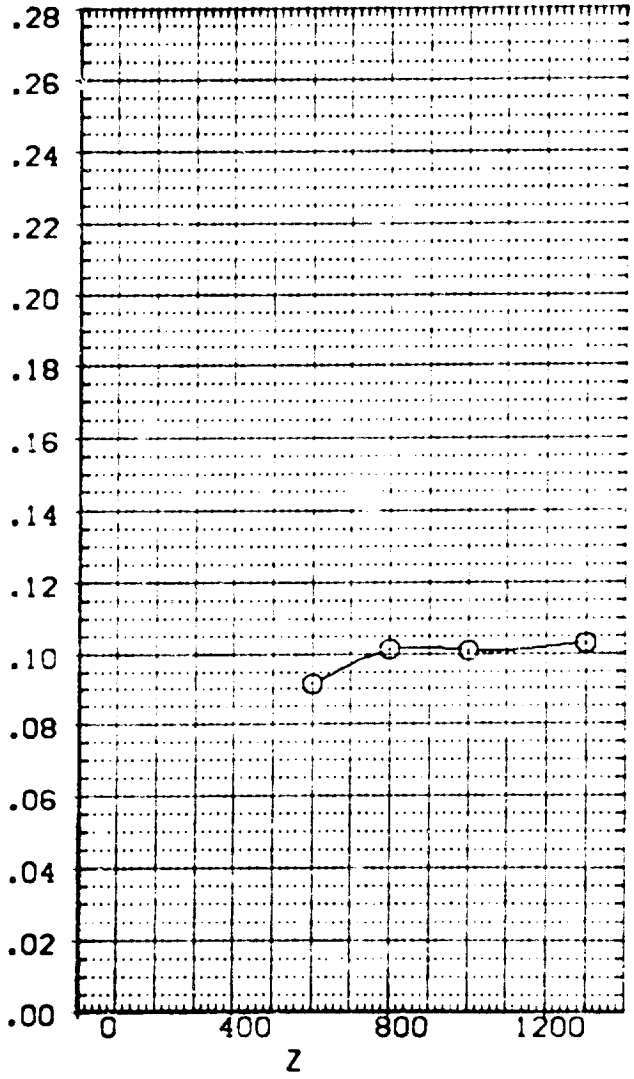
EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

[A13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT87)

SYMBOL	x	PARAMETRIC VALUES			
○	.227	MACH	4.520	PTOTAL	80.000
		ALPHA	-5.000	BETA	.000
		DALPHA	-20.000	DBETA	5.000
		ELEVTR	.000	AILRON	10.000
		Y	200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



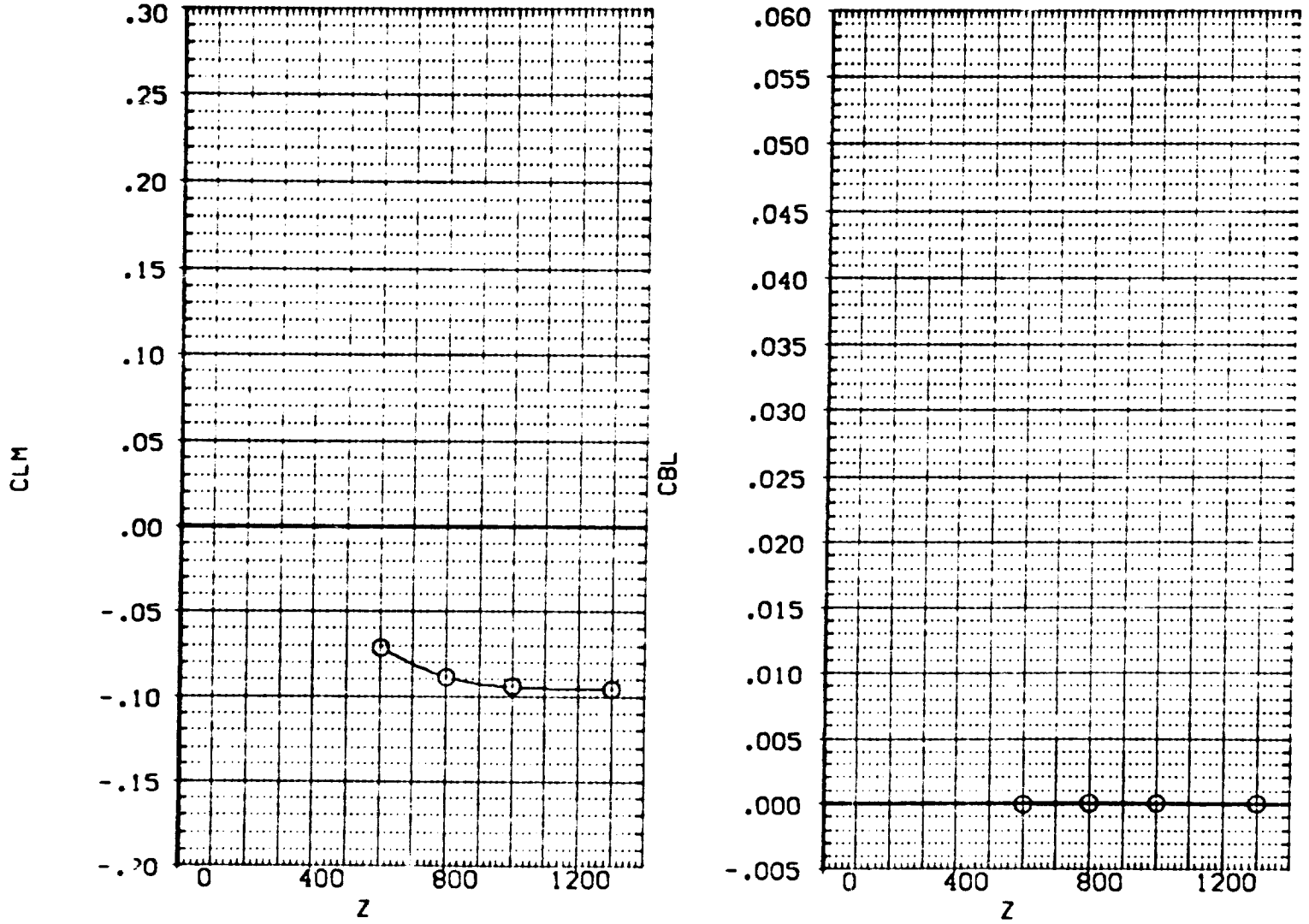


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT87)

SYMBOL	X		PARAMETRIC VALUES		
O	.227	MACH	4.520	PTOTAL	80.000
		ALPHA	-5.000	BETA	.000
		DALPHA	-20.000	DBETA	5.000
		ELEVTR	.000	AILRON	10.000
		Y	200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

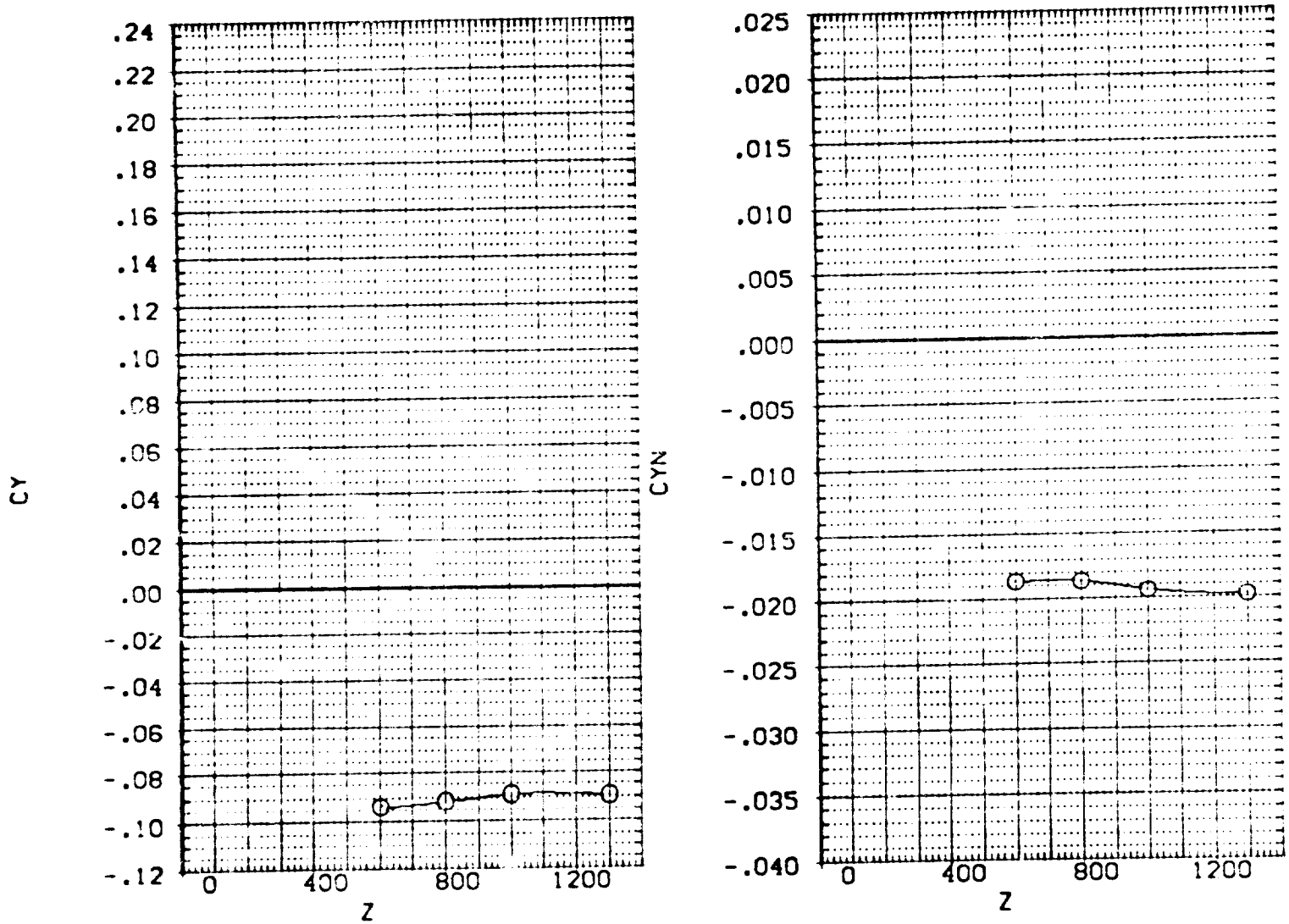


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

[A13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT87)

SYMBO	X		PARAMETRIC VALUES		
○	.227	MACH	4.520	PTOTAL	80.000
		ALPHA	-5.000	BETA	.000
		DALPHA	-20.000	DBETA	5.000
		ELEVTR	.000	AILRON	10.000
		Y	201.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

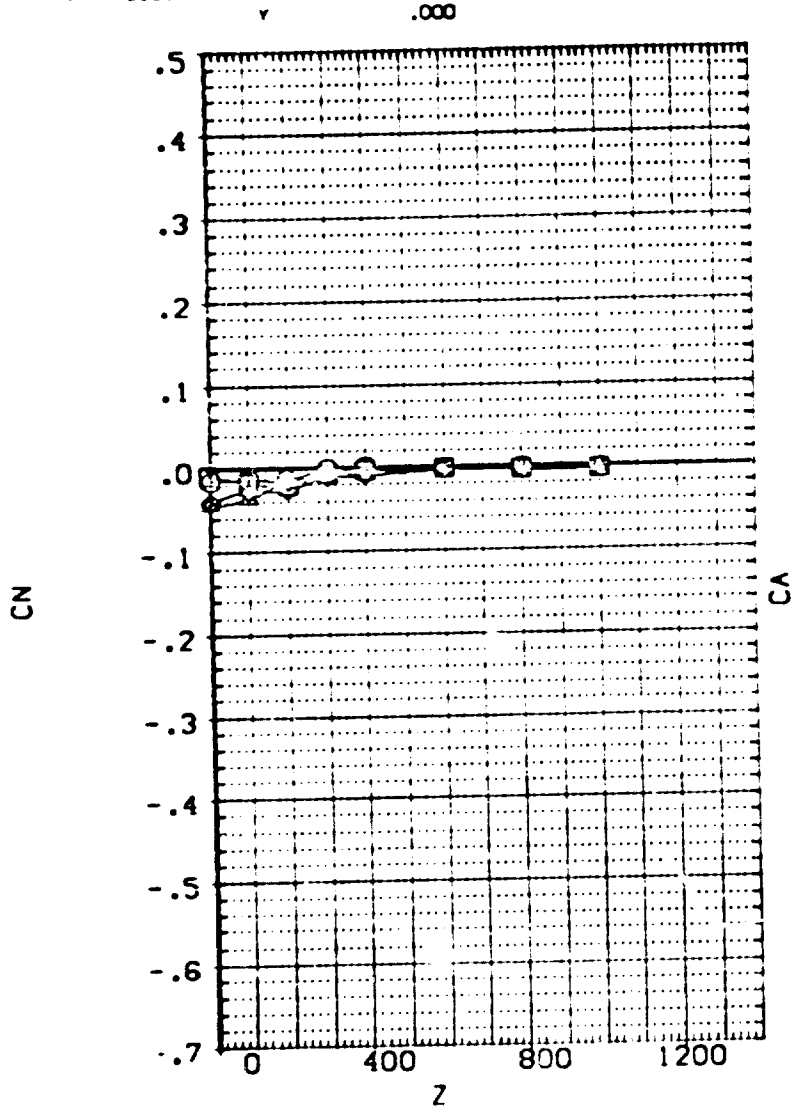


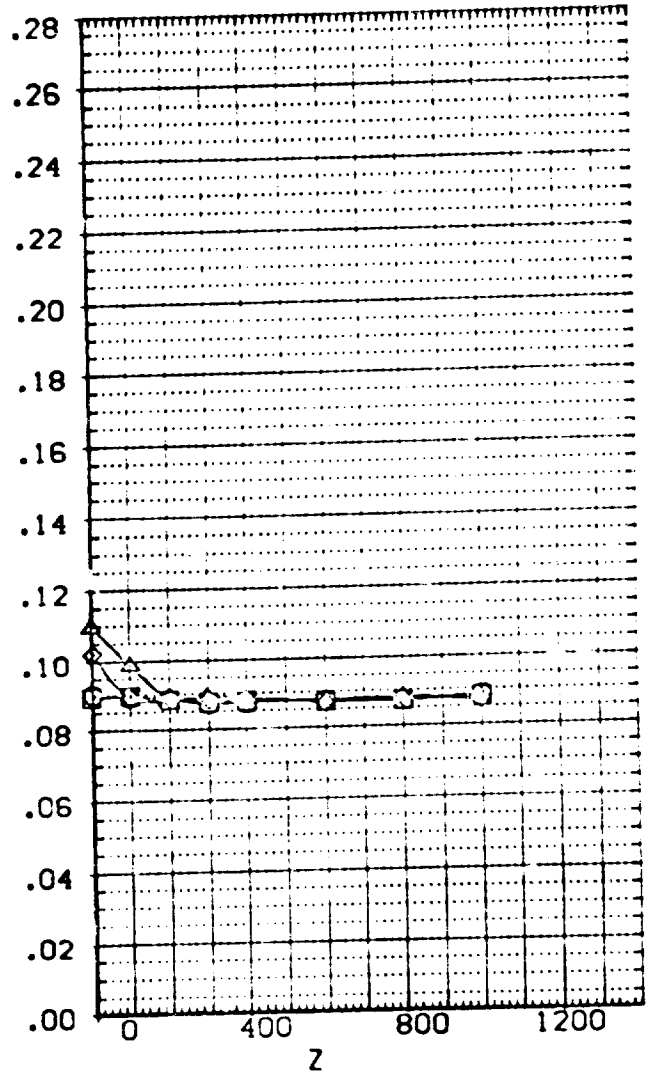
EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

!A13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJ'88)

SYMBOL	X		PARAMETRIC VALUES		
○	.123	MACH	4.530	PTOTAL	110.000
□	400.390	ALPHA	.000	BETA	.000
◇	800.600	DALPHA	.000	DBETA	.000
△	1200.800	ELEVTR	10.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



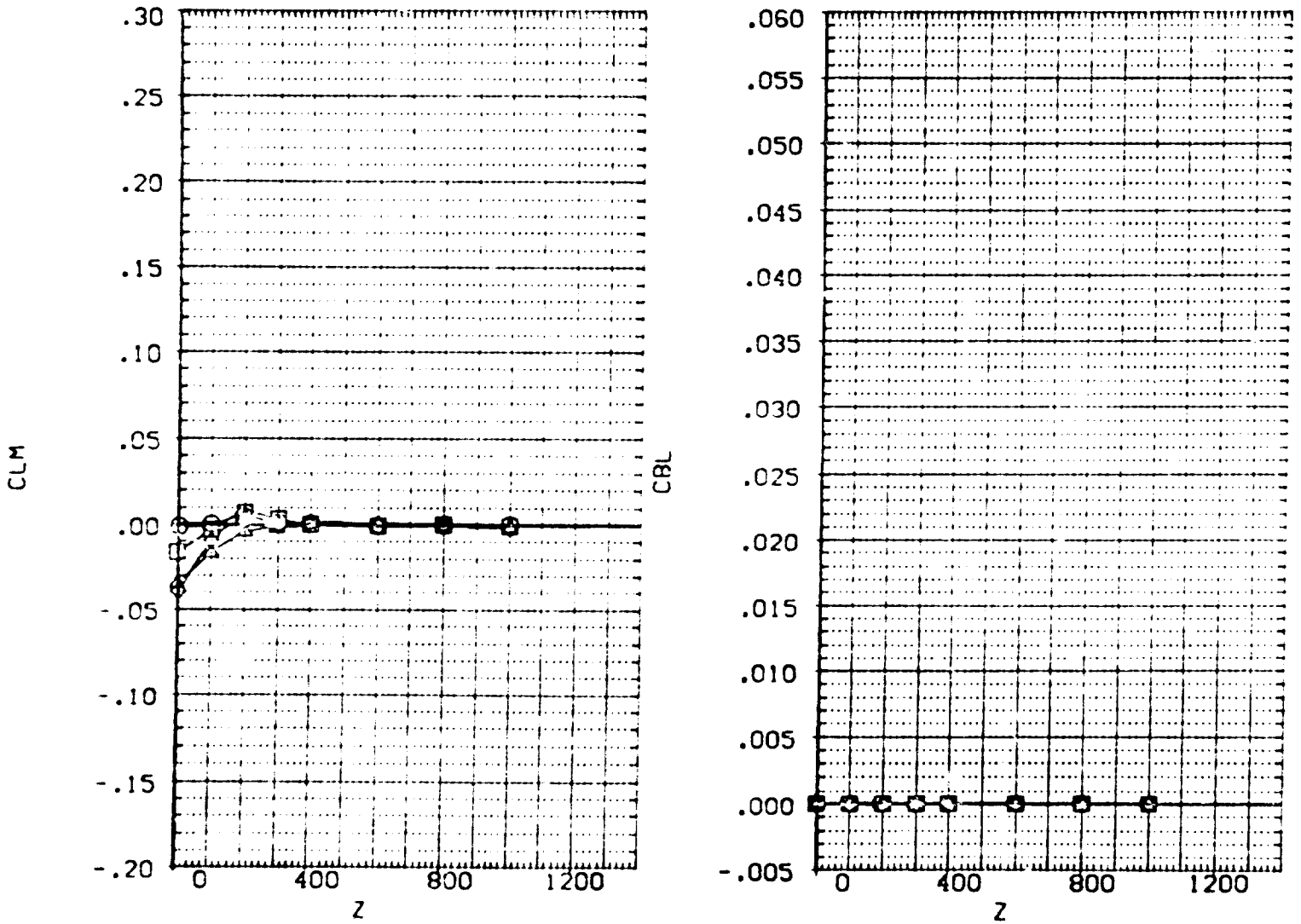


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

[A13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT88)

SYMBOL	X		PARAMETRIC VALUES		
	.123	MACH	4.530	PTOTAL	110.000
◇	400.390	ALPHA	.000	BETA	.000
□	800.600	DALPHA	.000	DBETA	.000
△	1200.800	ELEVTR	10.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

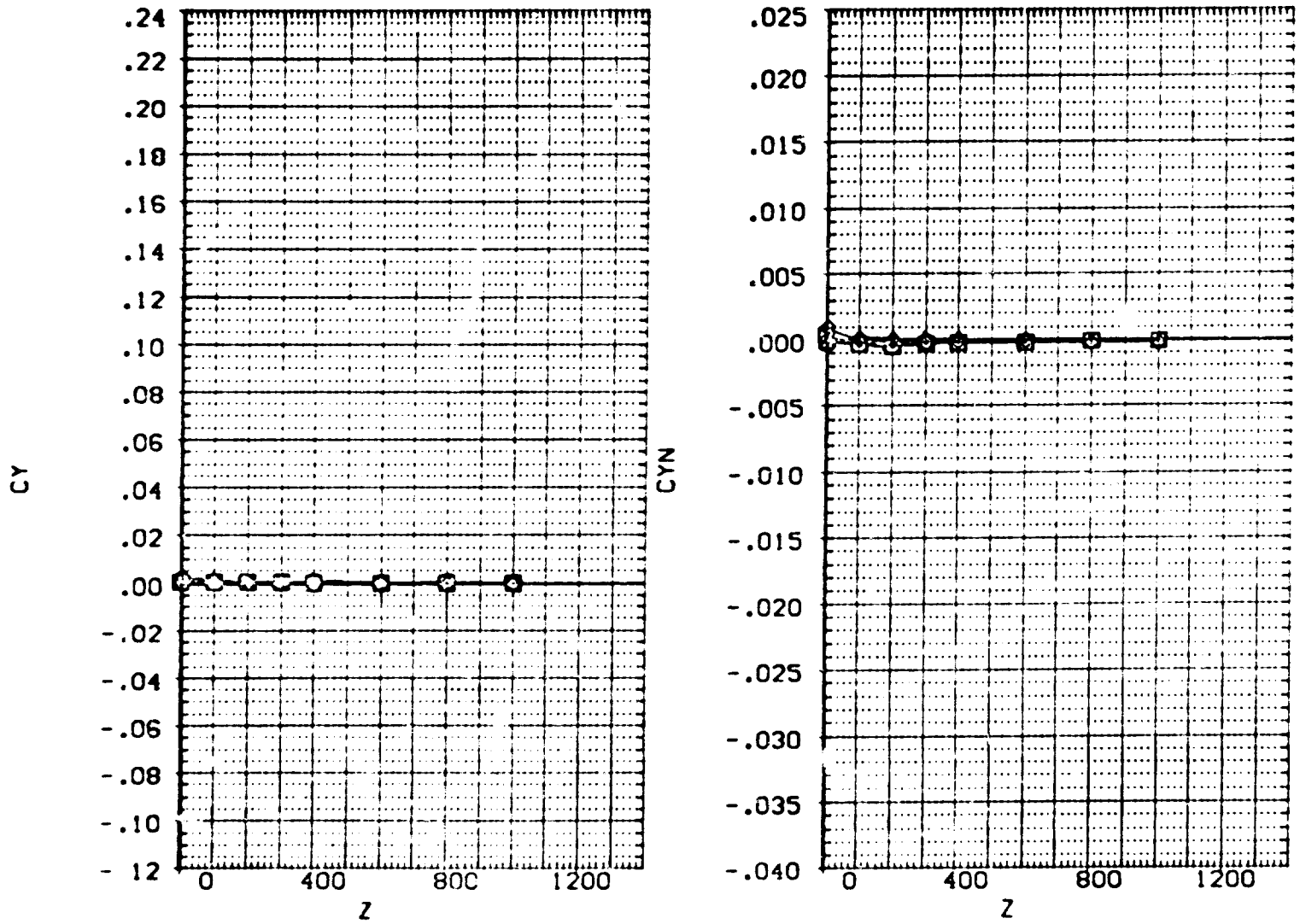


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

!A13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT88)

SYMBOL	X		PARAMETRIC VALUES		
○	.123	MACH	4.530	PTOTAL	110.000
□	400.390	ALPHA	.000	BETA	.000
◇	800.600	DALPHA	.000	DBETA	.000
△	1200.800	ELEVTR	10.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

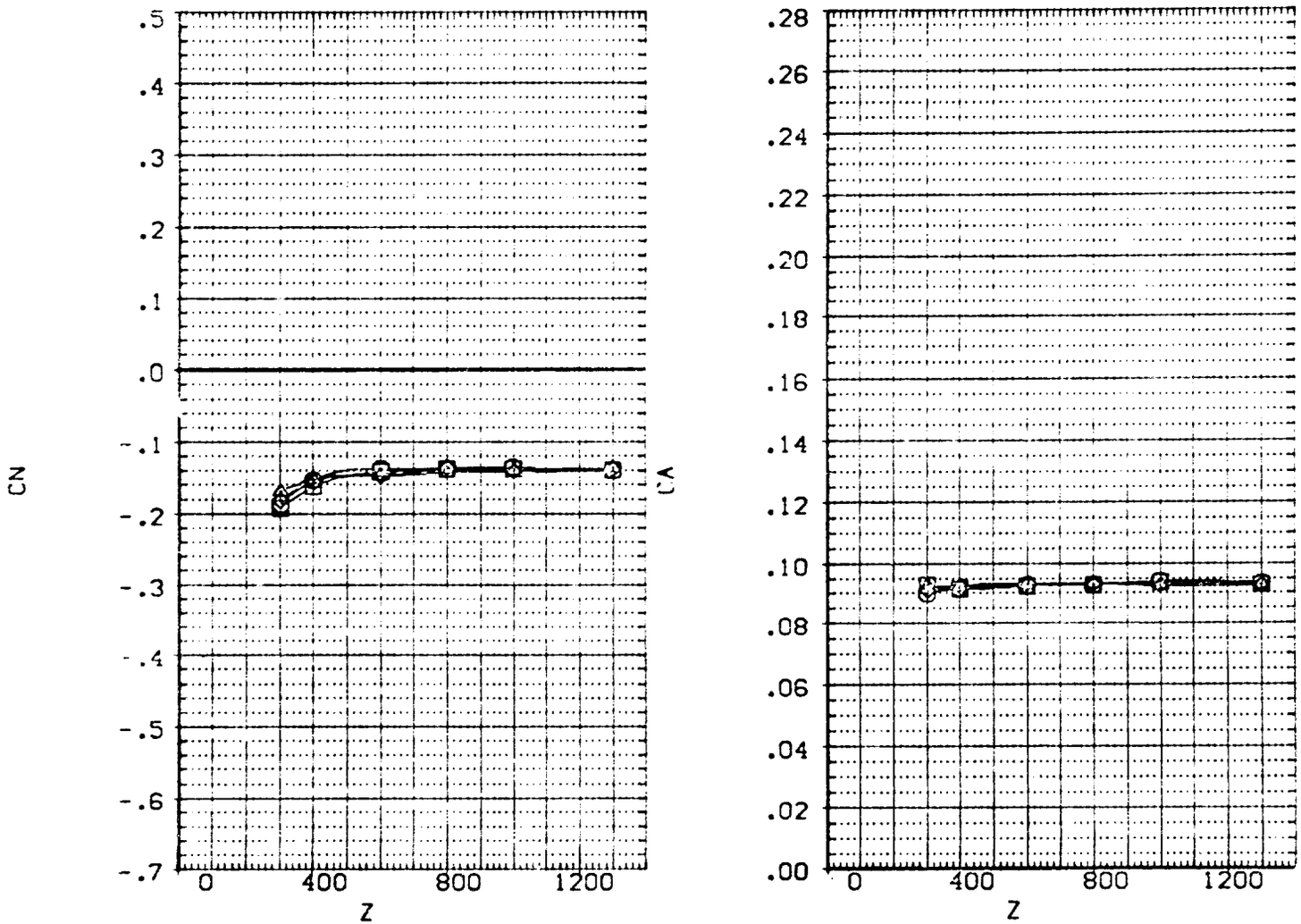


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

[A13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT89)

SYMBOL	X		PARAMETRIC VALUES		
	.185	MACH	4.530	PTOTAL	110.000
	400.440	ALPHA	.000	BETA	.000
	800.750	DALPHA	-10.000	DBETA	.000
	1200.900	ELEVTR	10.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

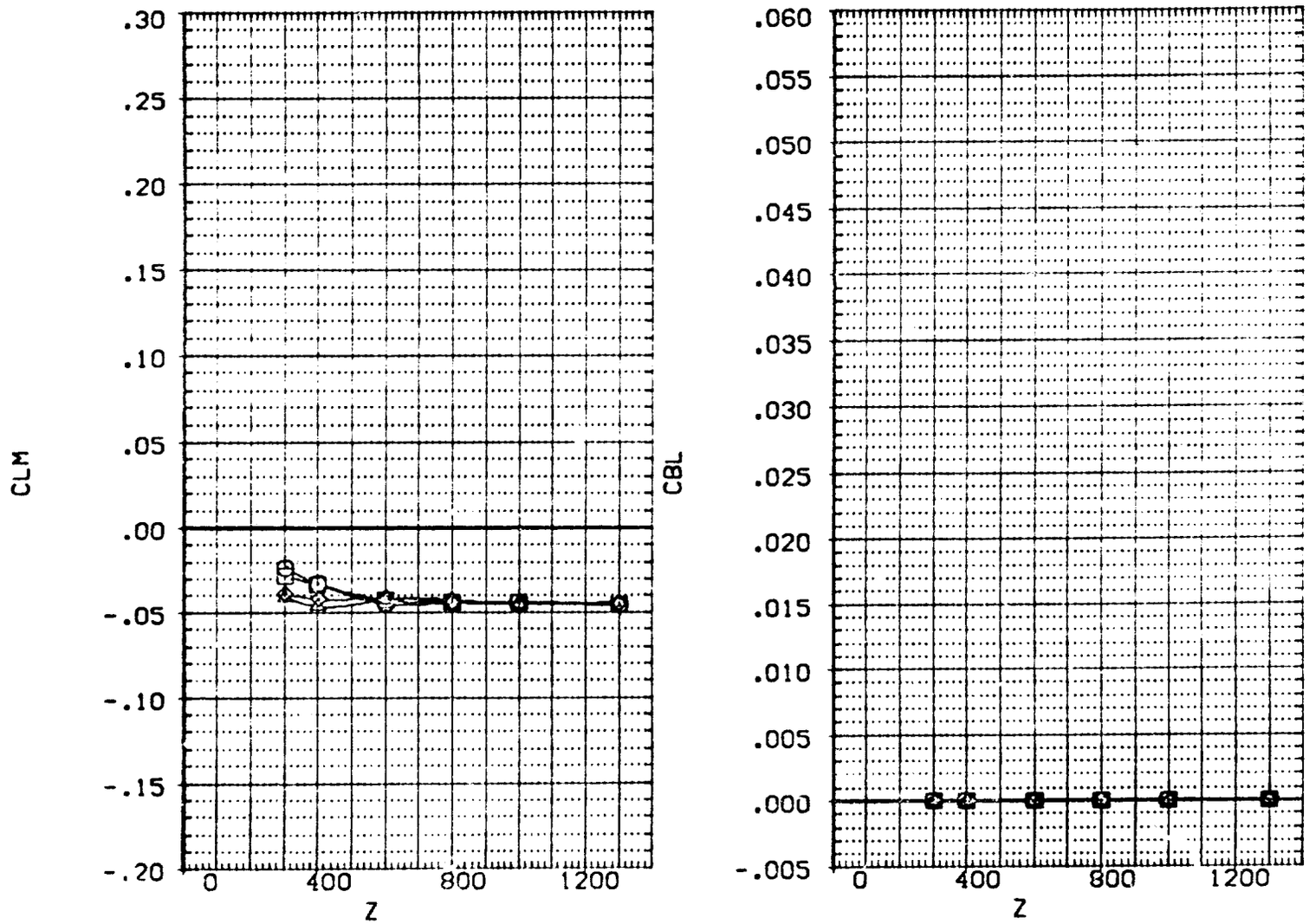


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT89)

SYMBOL	X		PARAMETRIC VALUES		
○	.185	MACH	4.530	PTOTAL	110.000
□	400.440	ALPHA	.000	BETA	.000
◇	800.750	DALPHA	-10.000	DBETA	.000
△	1200.900	ELEVTR	10.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

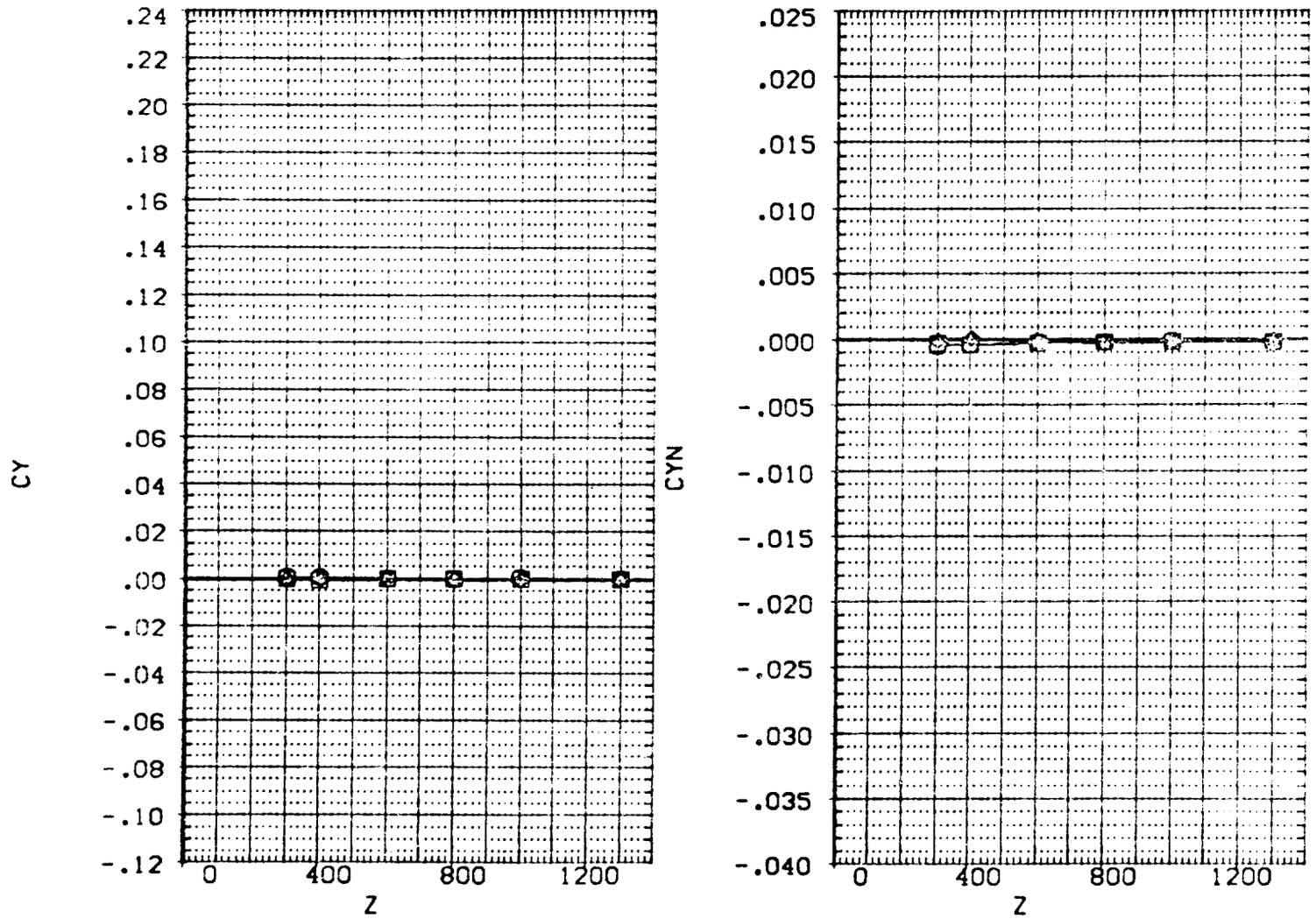


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

!A13,EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT89)

SYMBOL	X		PARAMETRIC VALUES		
○	.185	MACH	4.530	PTOTAL	110.000
□	400.440	ALPHA	.000	BETA	.000
◇	800.750	DALPHA	-10.000	DBETA	.000
△	1200.900	ELEVTR	10.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

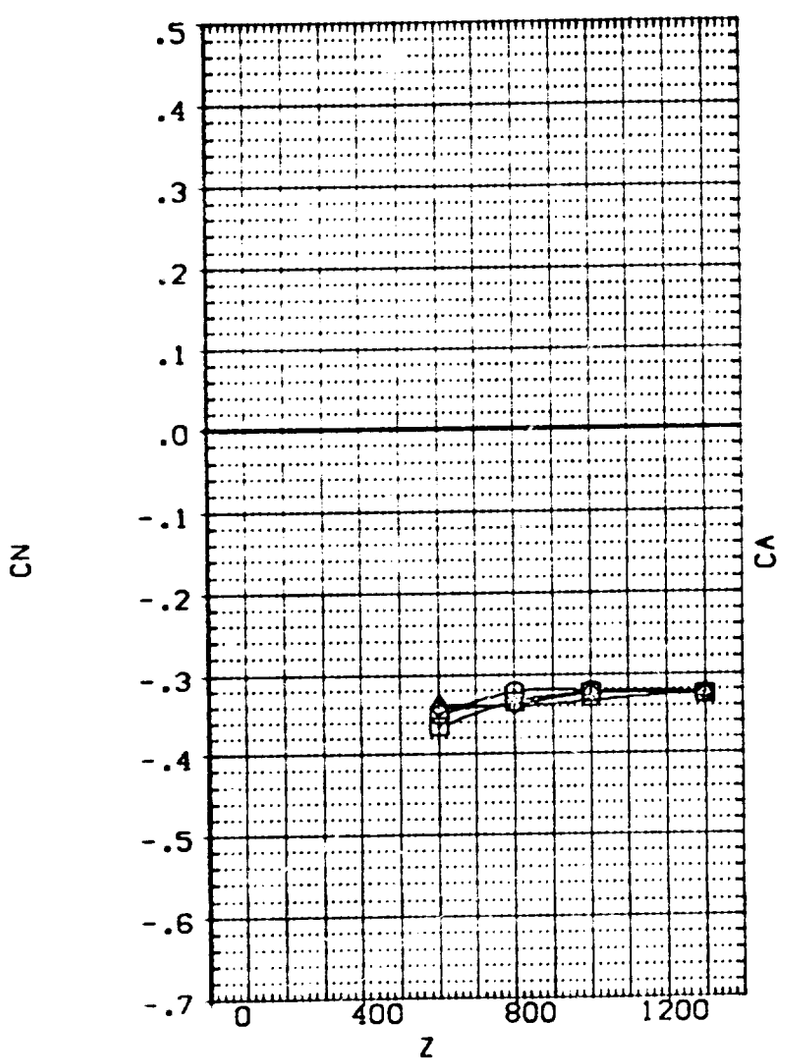


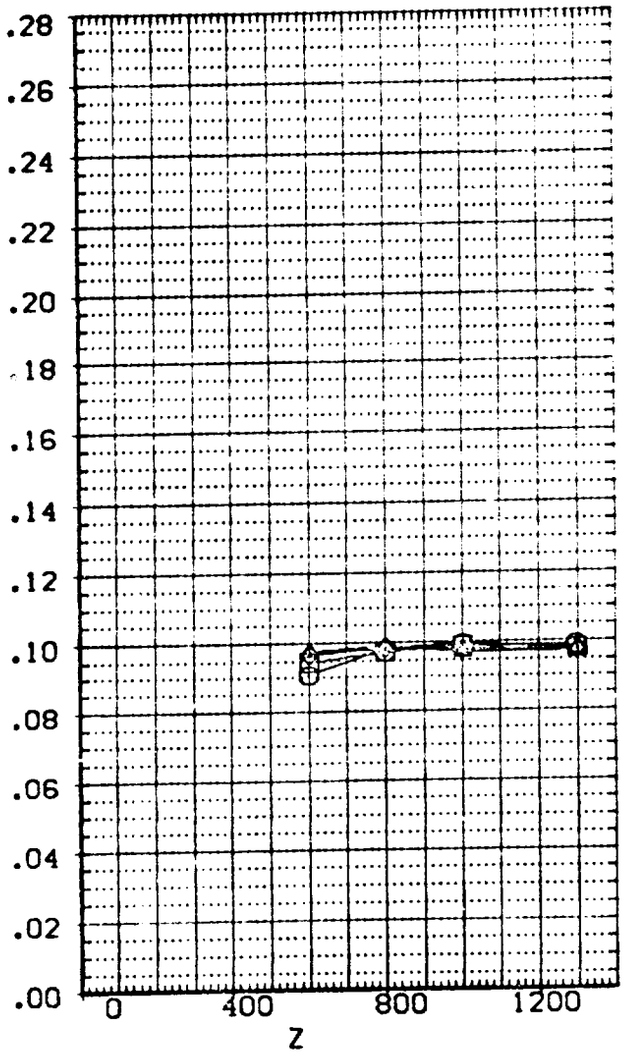
EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT90)

SYMBOL	X		PARAMETRIC VALUES		
○	-.643	MACH	4.530	PTOTAL	110.000
□	401.500	ALPHA	.000	BETA	.000
◇	800.970	DALPHA	-20.000	DBETA	.000
△	1200.800	ELEVTR	10.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



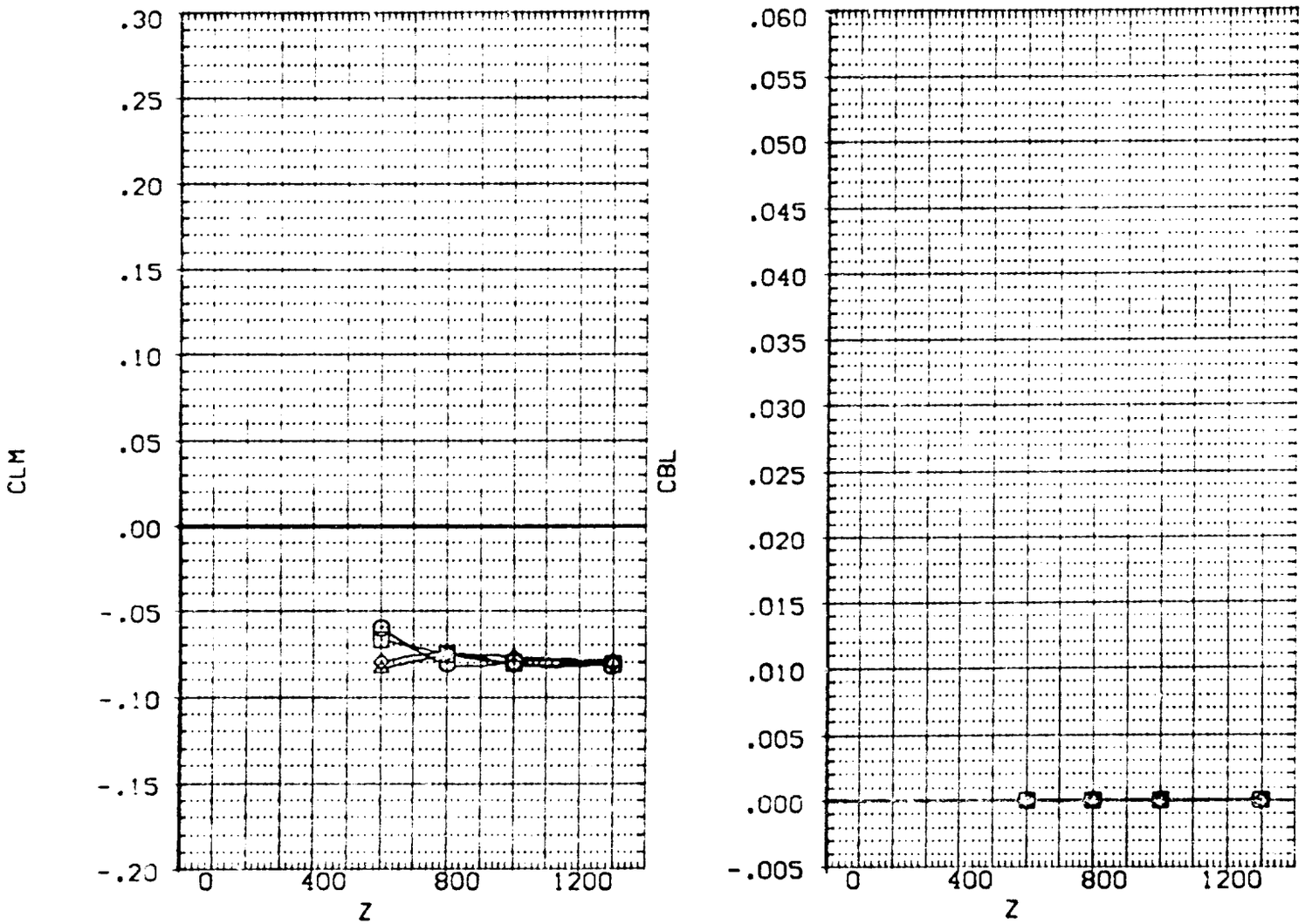


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT90)

SYMBOL		PARAMETRIC VALUES			
○	-.643	MACH	4.530	PTOTAL	110.000
◇	401.500	ALPHA	.000	BETA	.000
△	800.970	DALPHA	-20.000	DBETA	.000
	1200.800	ELEVTR	10.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

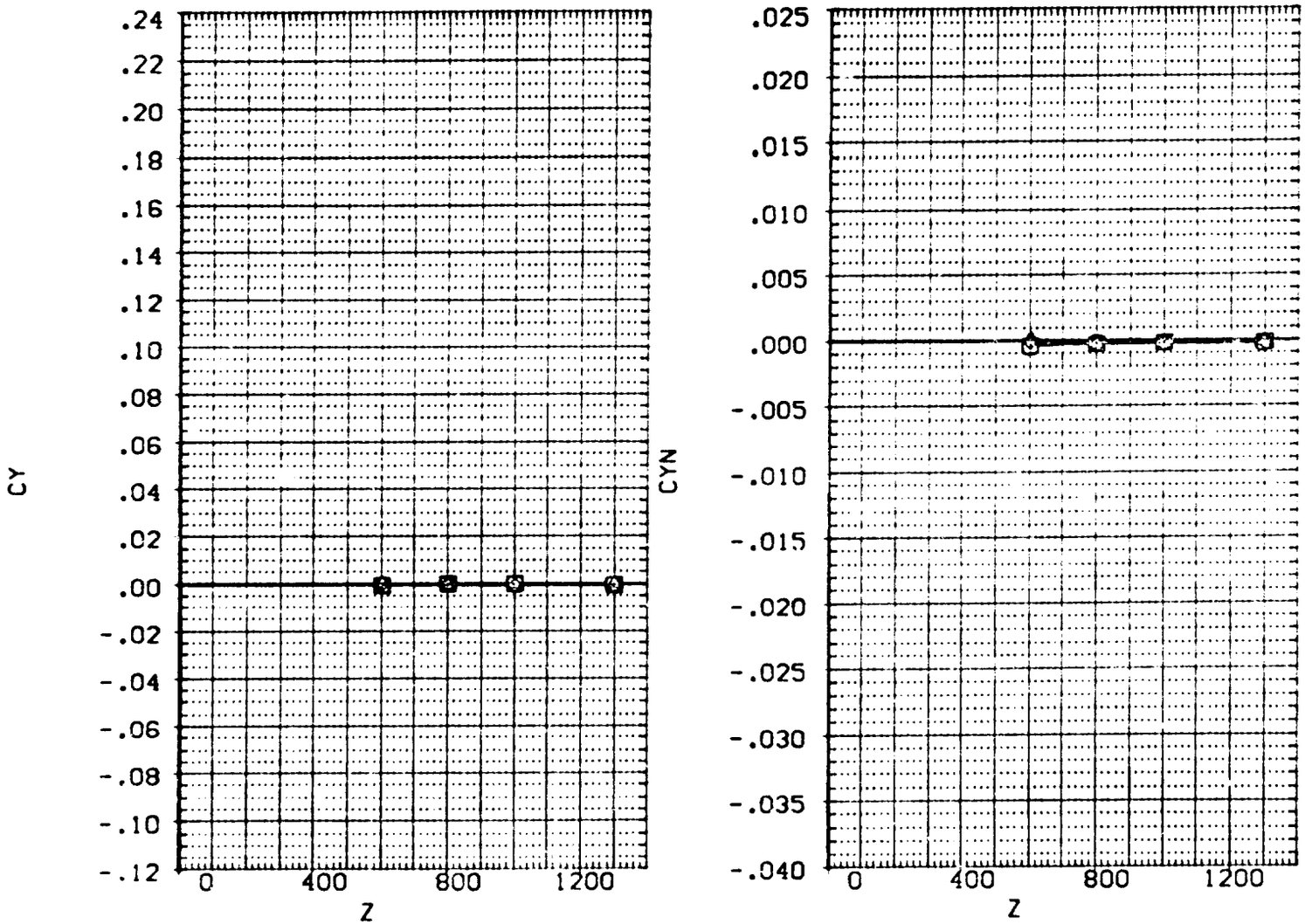


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT90)

SYMBOL	X		PARAMETRIC VALUES		
○	-.643	MACH	4.530	PTOTAL	110.000
□	401.500	ALPHA	.000	BETA	.000
◇	800.970	DALPHA	-20.000	DBETA	.000
△	1200.800	ELEVTR	10.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

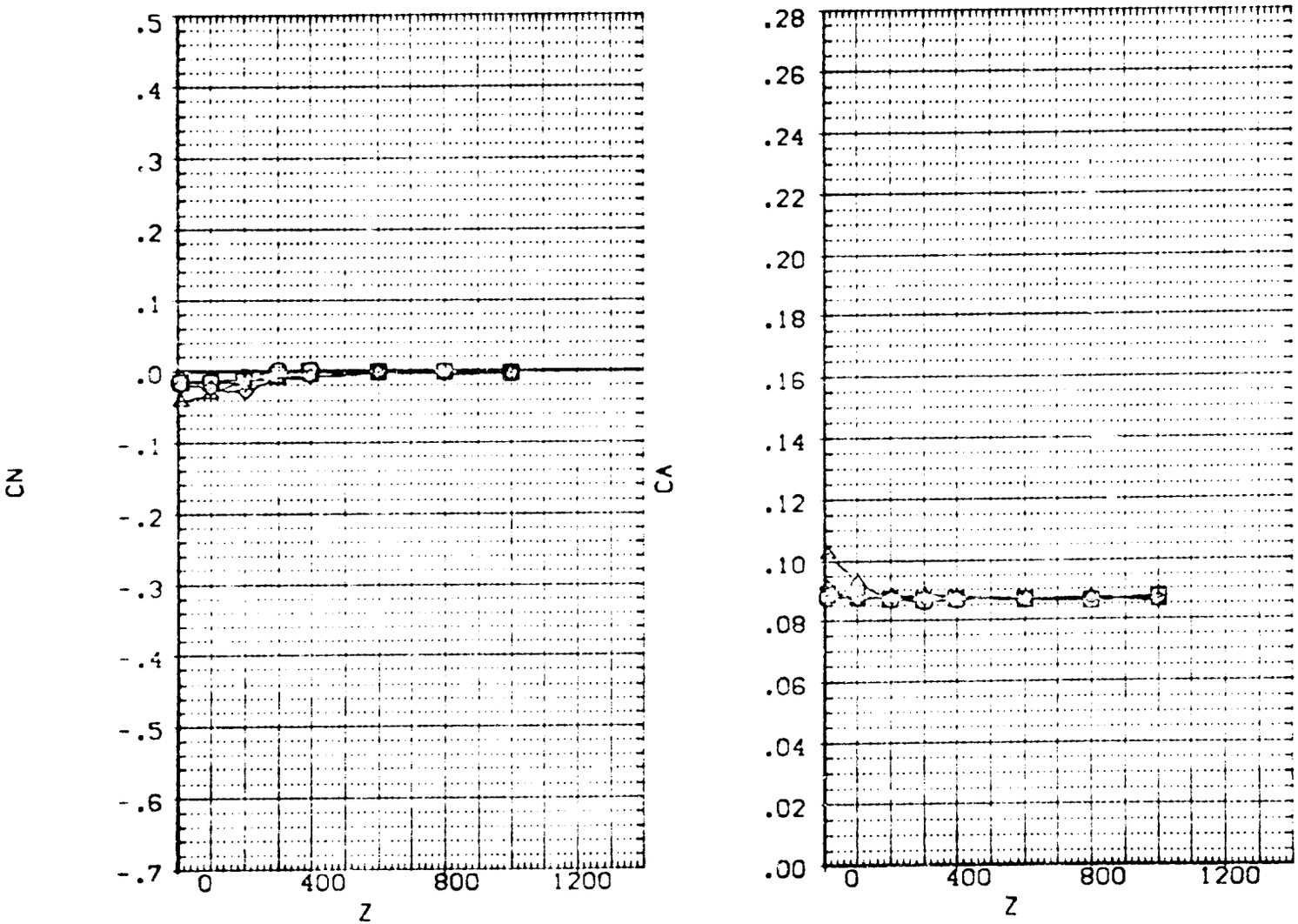


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

[A13,EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT91)

SYMBOL	X		PARAMETRIC VALUES		
□	.097	MACH	4.530	PTOTAL	110.000
◇	400.350	ALPHA	.000	BETA	.000
△	800.660	DALPHA	.000	DBETA	.000
	1200.700	ELEVTR	10.000	AILRON	.000
		Y	200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

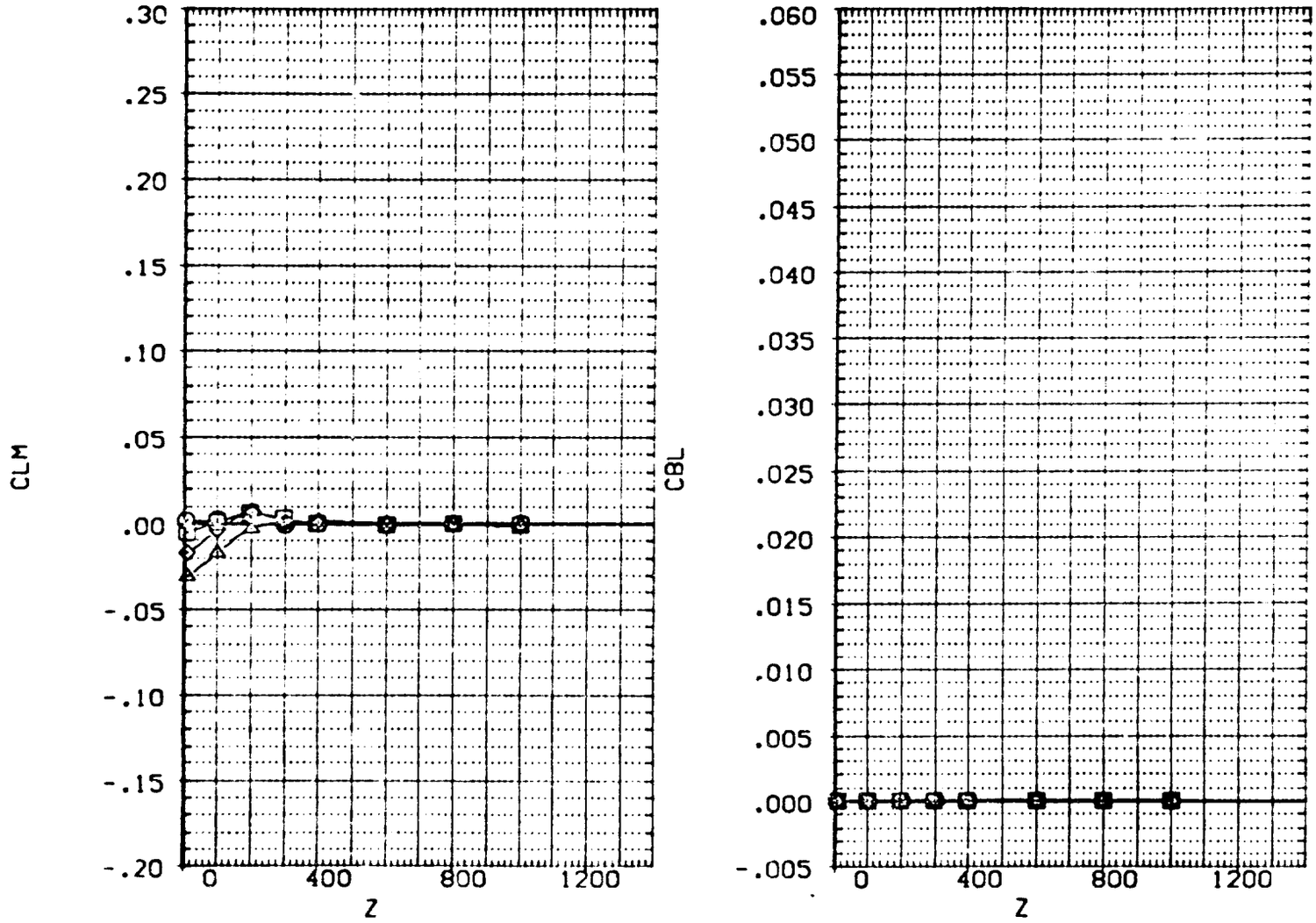


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT91)

SYMBOL	X		PARAMETRIC VALUES		
○	.097	MACH	4.530	PTOTAL	110.000
□	400.350	ALPHA	.000	BETA	.000
◇	800.660	DALPHA	.000	DBETA	.000
△	1200.700	ELEVTR	10.000	AILRON	.000
		Y	200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

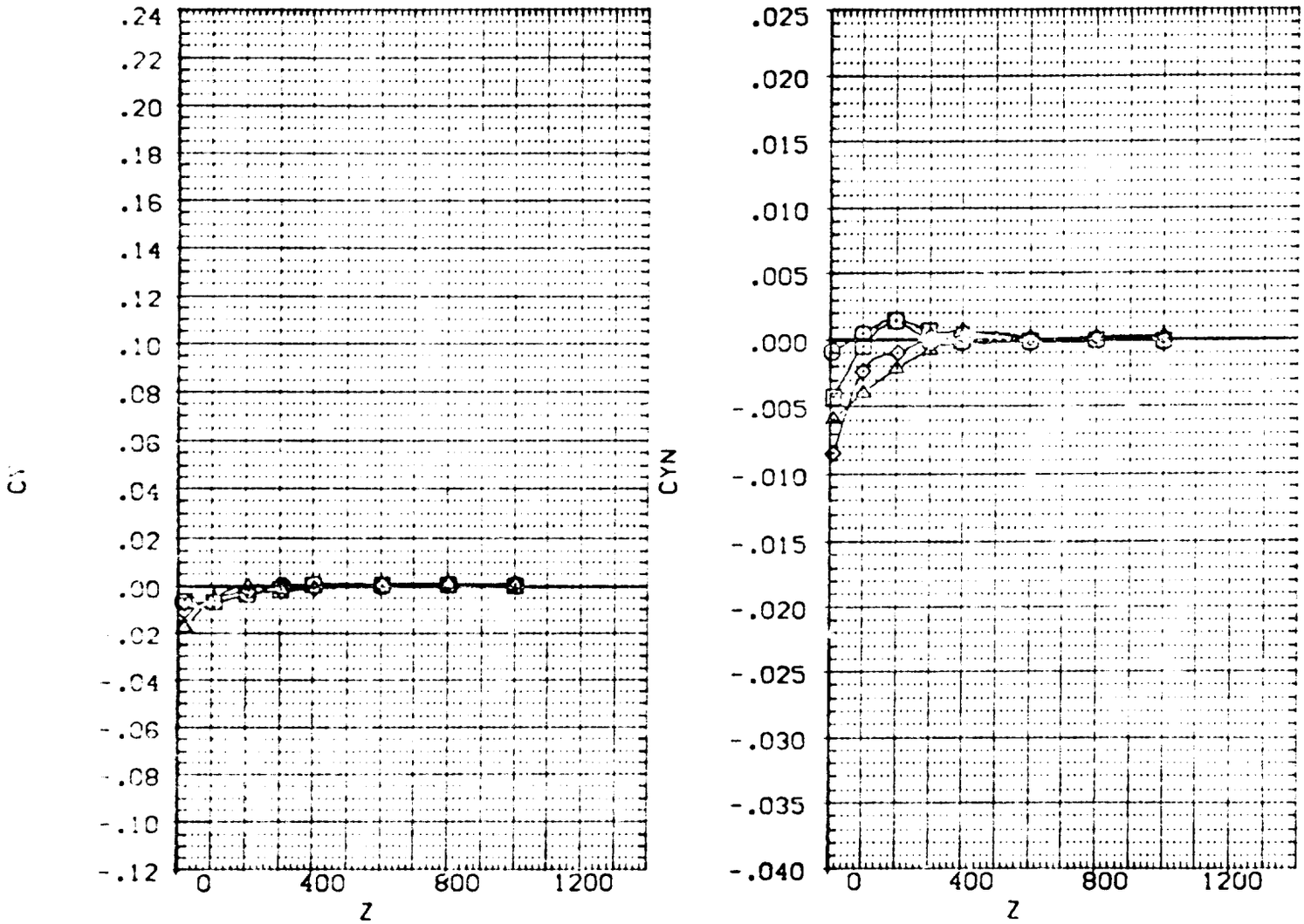


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

[A13,EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT91)

SYMBOL	X		PARAMETRIC VALUES		
○	.097	MACH	4.530	PTOTAL	110.000
□	400.350	ALPHA	.000	BETA	.000
△	800.660	DALPHA	.000	DBETA	.000
◇	1200.700	ELEVTR	10.000	AILRON	.000
		Y	200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

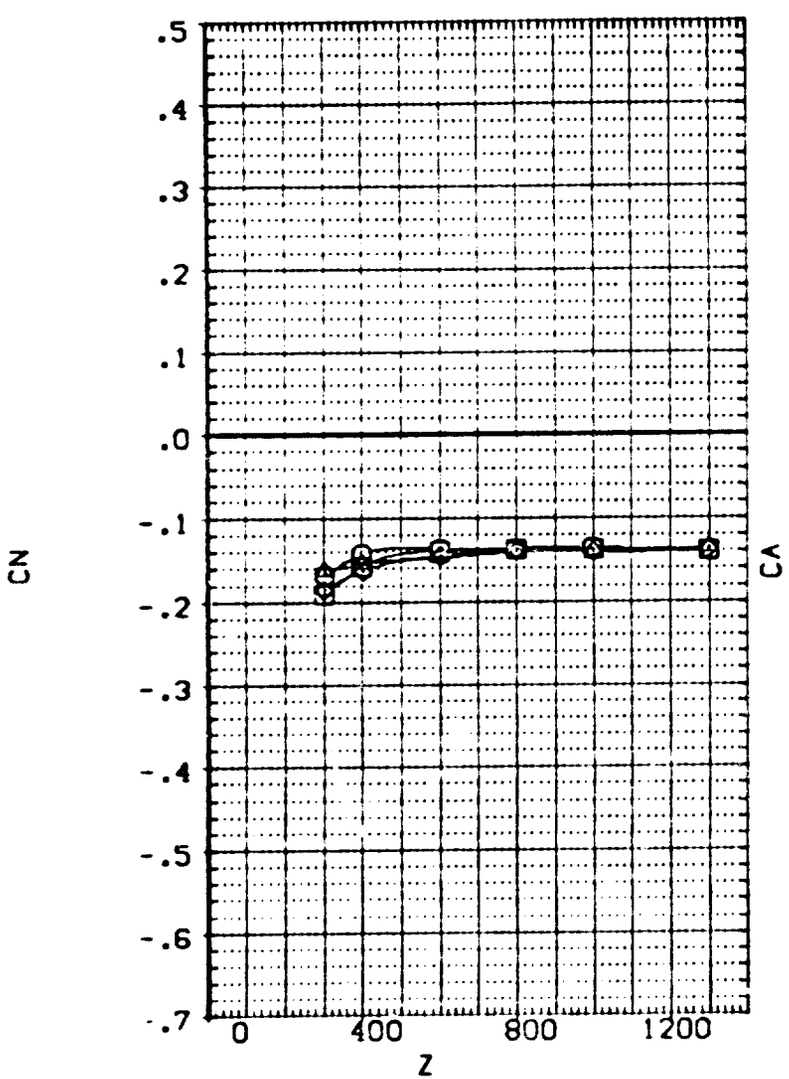


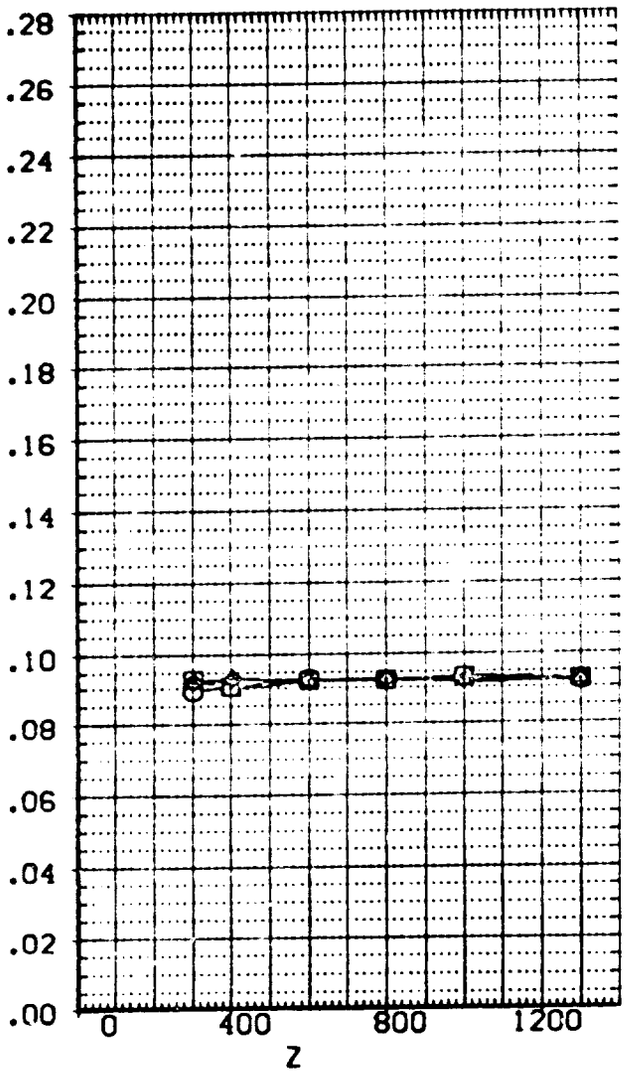
EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT92)

SYMBOL	X		PARAMETRIC VALUES		
○	.115	MACH	4.530	PTOTAL	110.000
□	400.440	ALPHA	.000	BETA	.000
◇	800.600	DALPHA	-10.000	DBETA	.000
△	1200.800	ELEVTR	10.000	AILRON	.000
		Y	200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



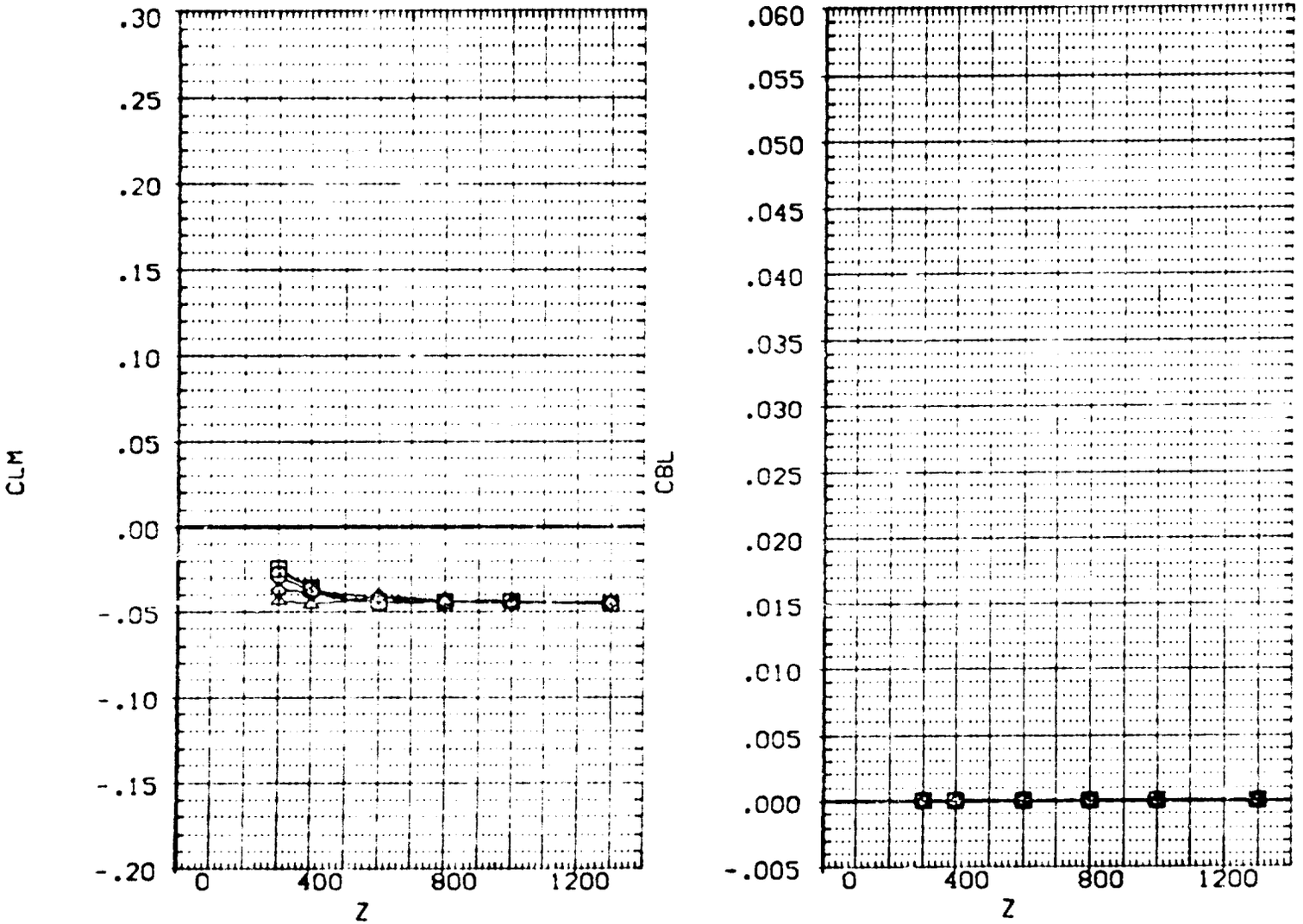


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

!A13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT92)

SYMBOL	X		PARAMETRIC VALUES		
	.115	MACH	4.530	PTOTAL	110.000
	400.440	ALPHA	.000	BETA	.000
◇	800.600	DALPHA	-10.000	DBETA	.000
△	1200.800	ELEVTR	10.000	AILRON	.000
		Y	200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

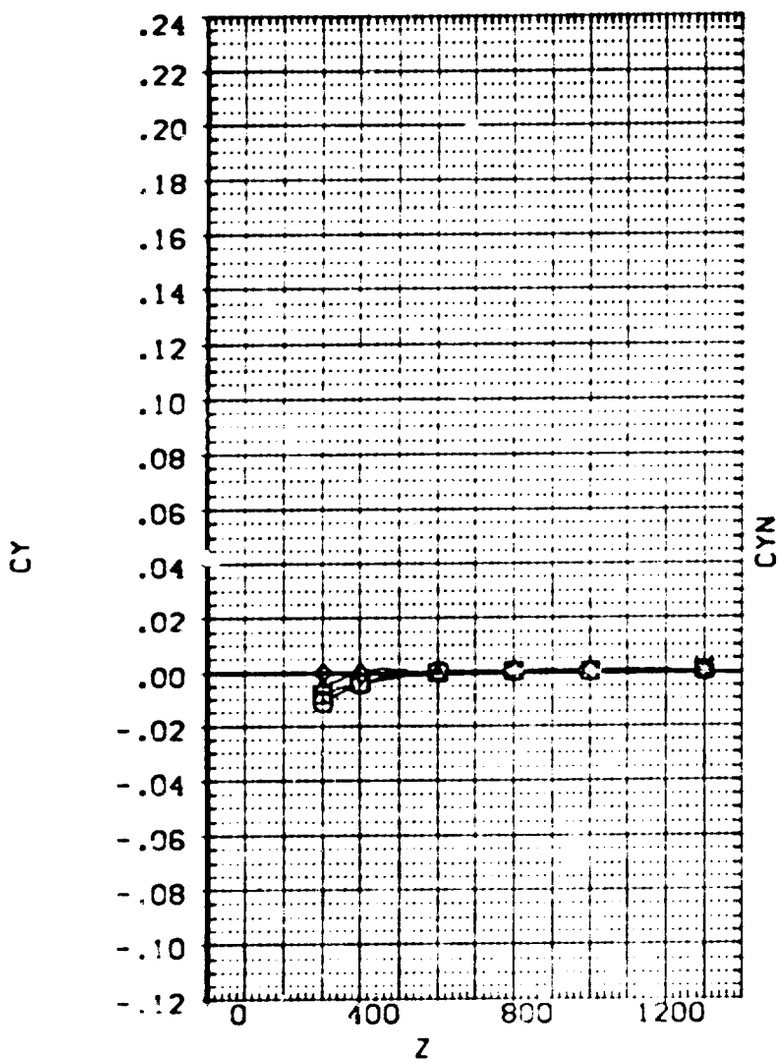


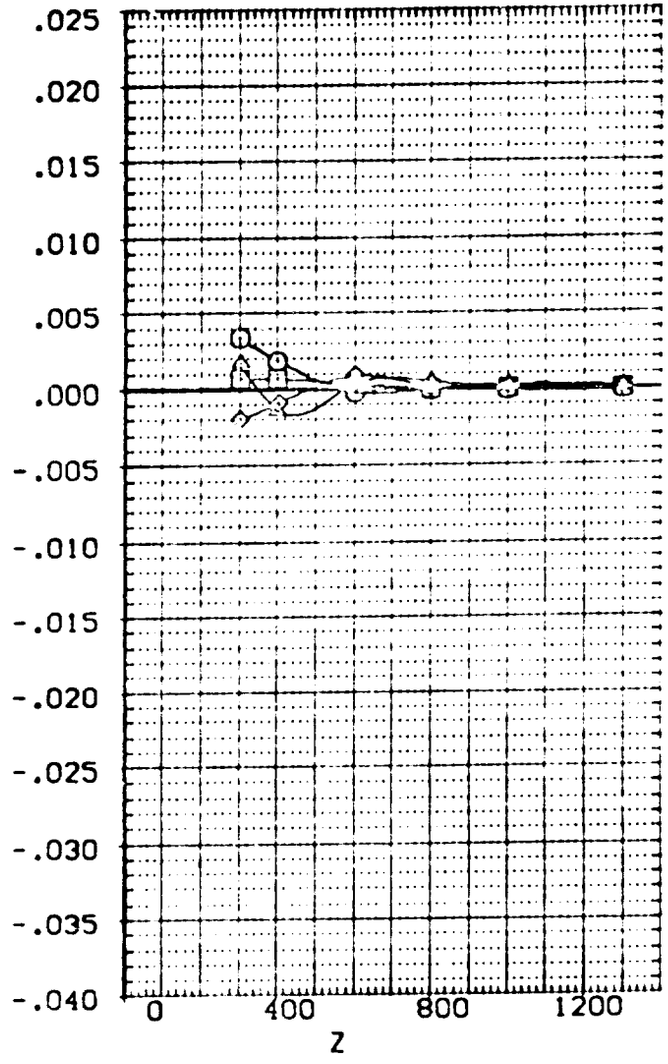
EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT92)

SYMBOL	X		PARAMETRIC VALUES		
○	.115	MACH	4.530	PTOTAL	110.000
□	400.440	ALPHA	.000	BETA	.000
◇	800.600	DALPHA	-10.000	DBETA	.000
△	1200.800	ELEVTR	10.000	AILRON	.000
		Y	200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



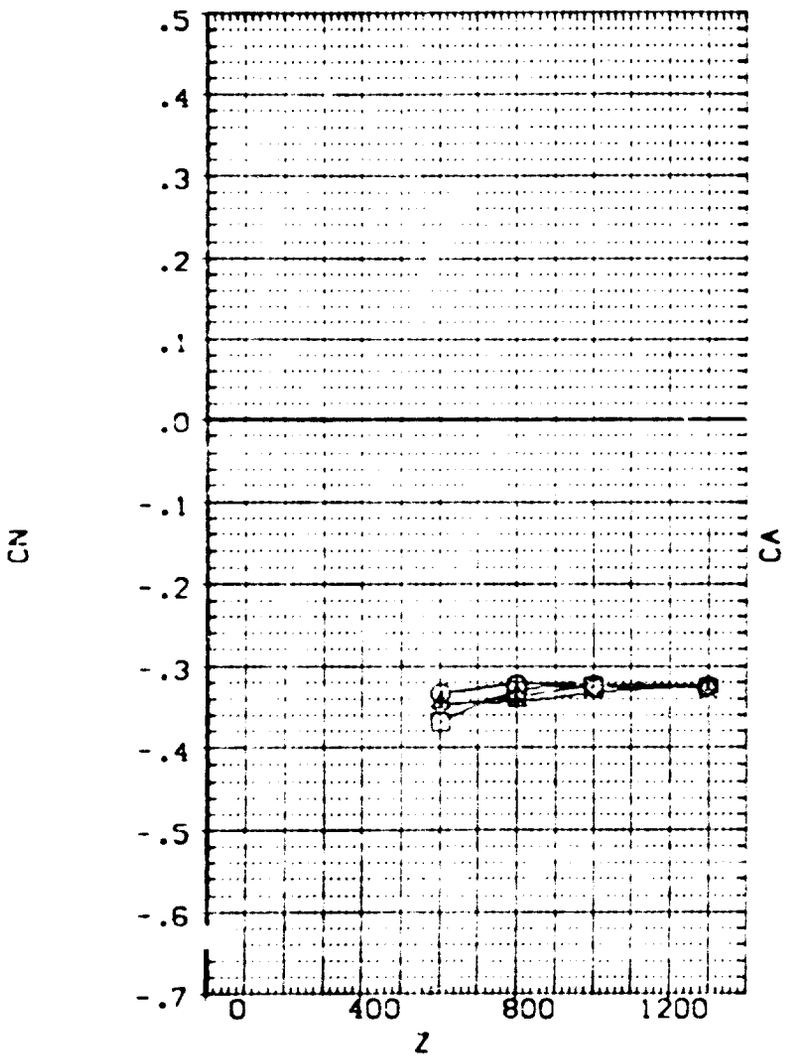


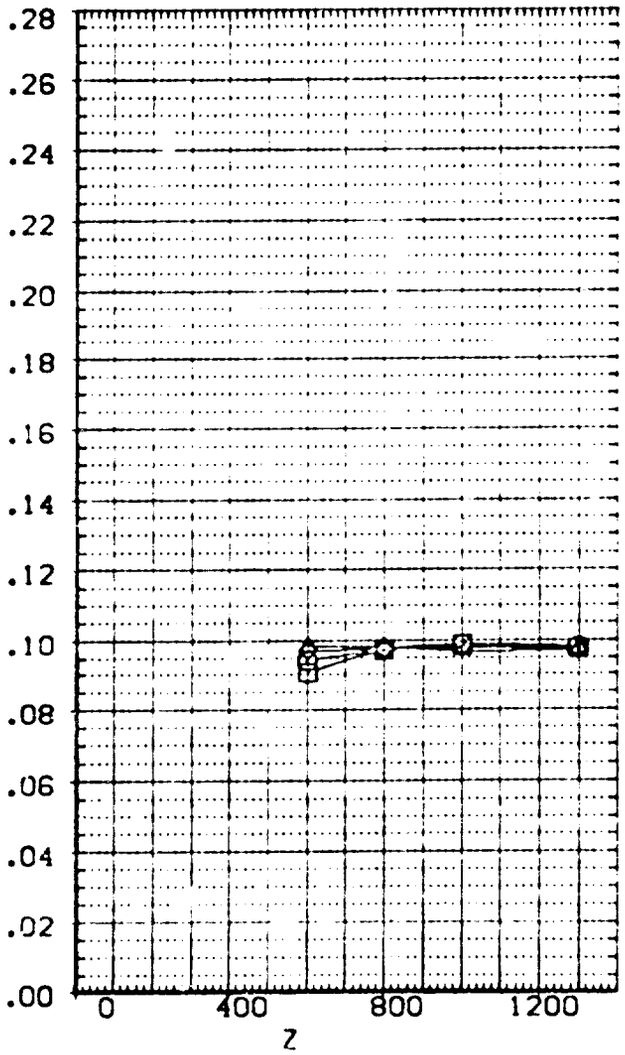
EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

!A!3.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT93)

SYMBOL	X		PARAMETRIC VALUES		
	-.395	MACH	4.530	PTOTAL	110.000
	401.110	ALPHA	.000	BETA	.000
	800.890	DALPHA	-20.000	DBETA	.000
△	1200.900	ELEVTR	10.000	AILRON	.000
		V	200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



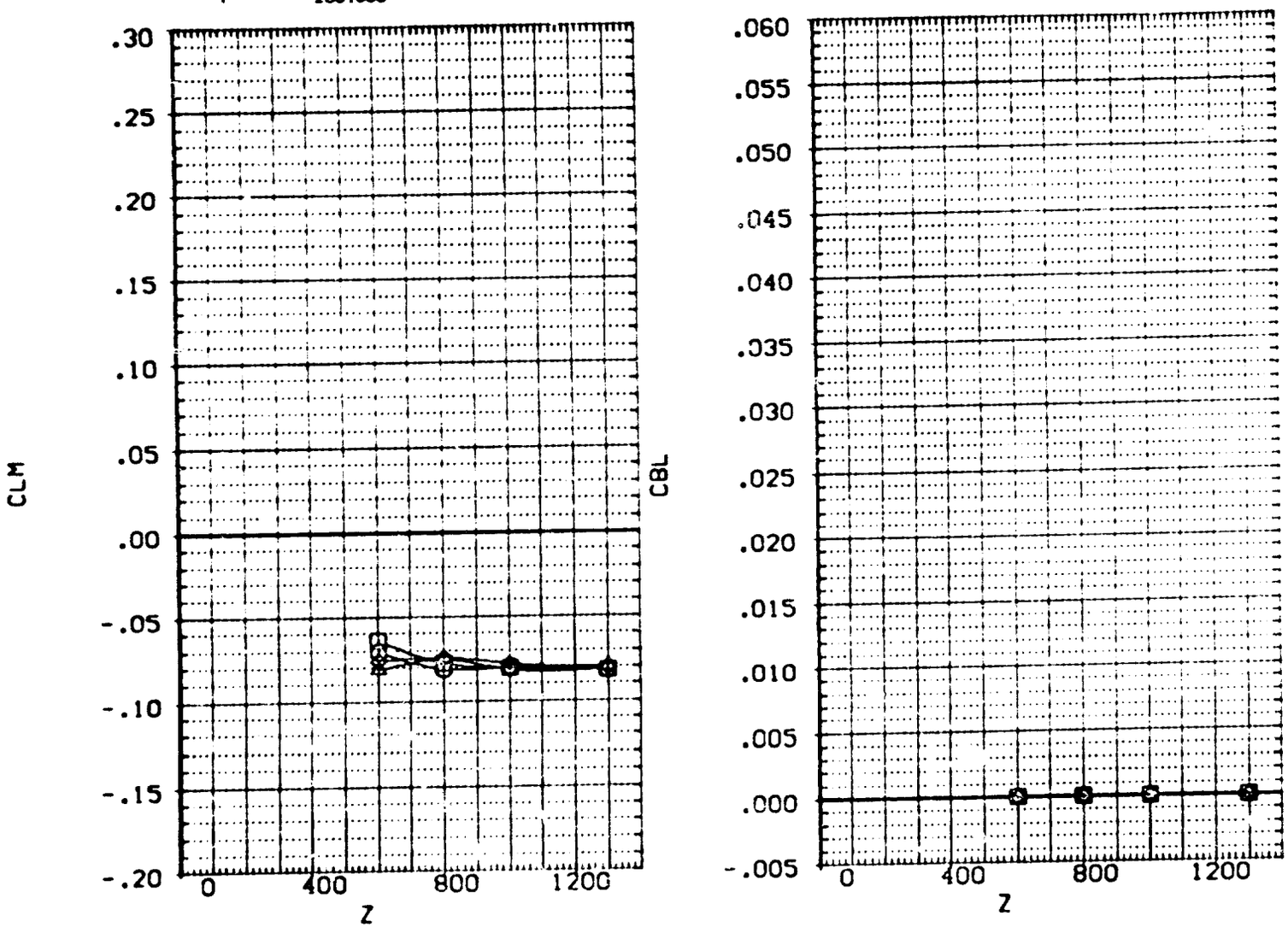


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT93)

SYMBOL	X		PARAMETRIC VALUES		
○	-.395	MACH	4.530	PTOTAL	110.000
□	401.110	ALPHA	.000	BETA	.000
◇	800.890	DALPHA	-20.000	DBETA	.000
△	1200.900	ELEVTR	10.000	AILRON	.000
		Y	200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

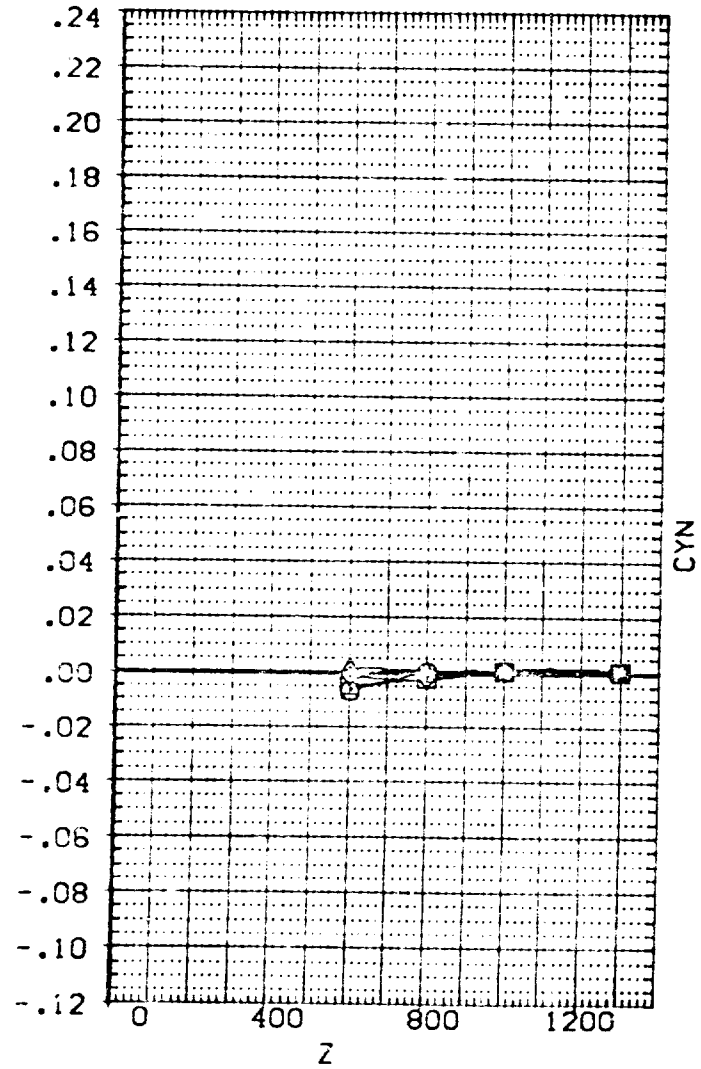


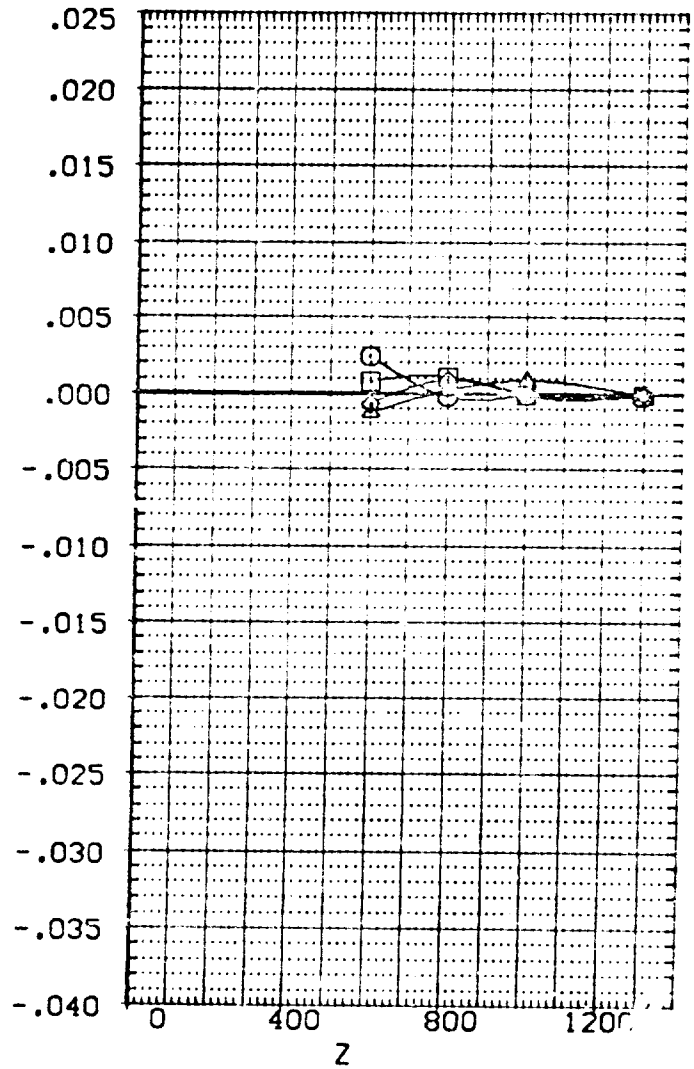
EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

IA13.EXTERNAL TANK(TIO)SEPARATING FROM ORB. 09 (RTJT93)

SYMBOL	X		PARAMETRIC VALUES		
○	-.795	MACH	4.530	PTOTAL	110.000
◇□	401.110	ALPHA	.000	BETA	.000
△	800.990	DALPHA	-20.000	DBETA	.000
	1200.900	DLGTR	10.000	AILRON	.000
		Y	200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



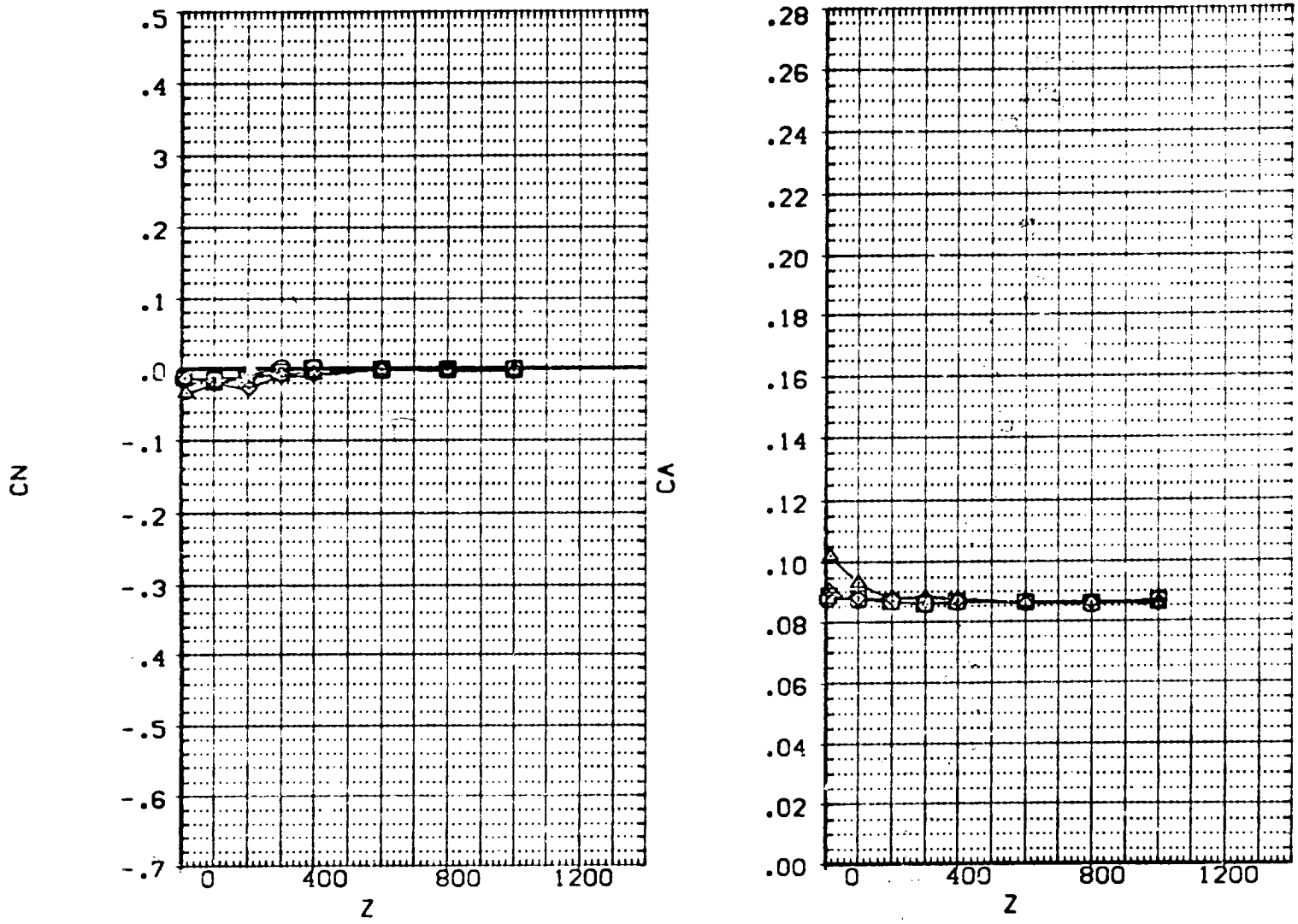


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT94)

SYMBOL	X	PARAMETRIC VALUES			
○	.009	MACH	4.530	PTOTAL	110.000
□	400.360	ALPHA	.000	BETA	.000
◇	800.530	DALPHA	.000	DBETA	.000
△	1200.800	.EVTR	-40.000	AILRON	.000
		Y	200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

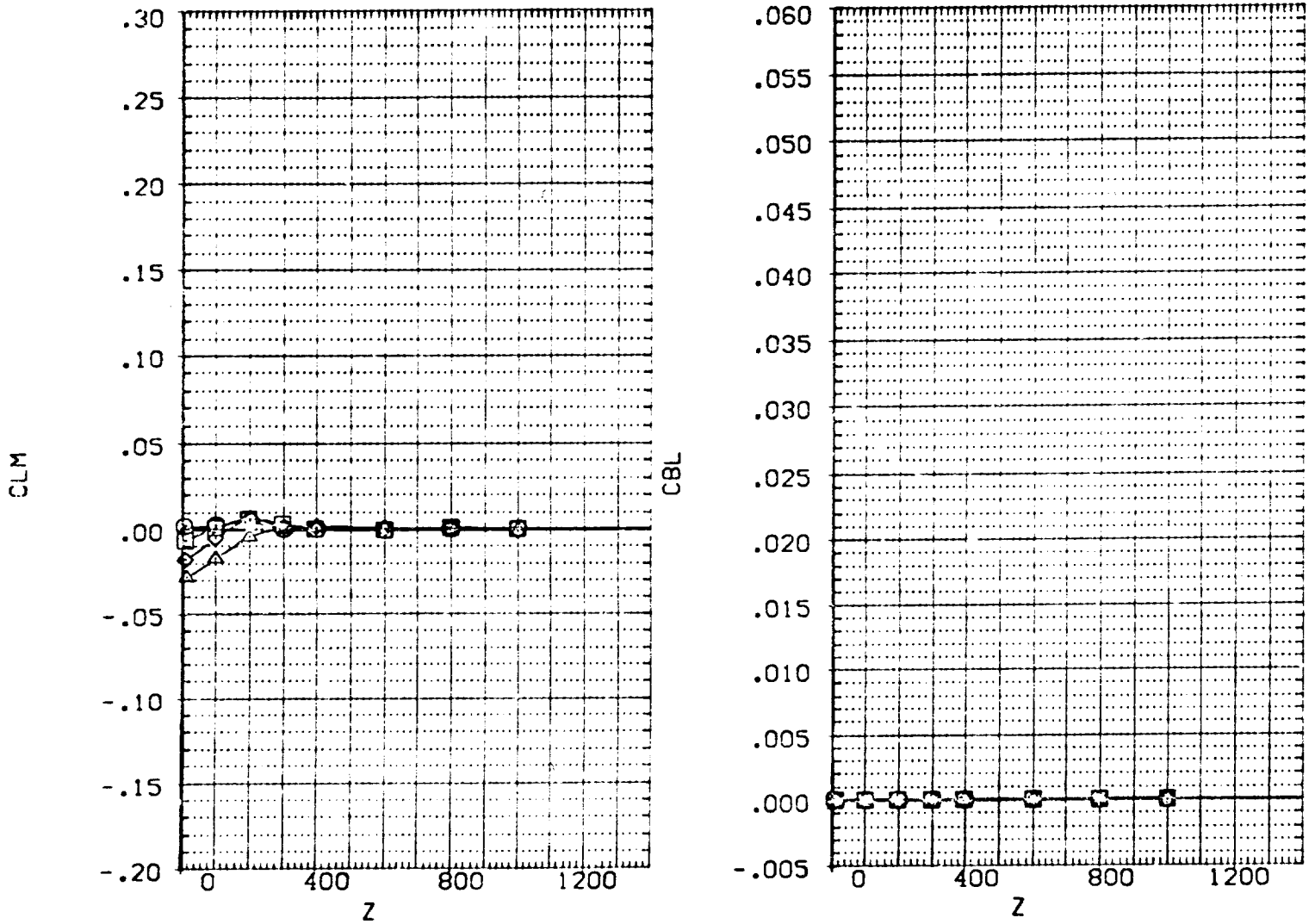


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT94)

SYMBOL	X		PARAMETRIC VALUES		
○	.009	MACH	4.530	PTOTAL	110.000
□	400.360	ALPHA	.000	BETA	.000
◇	800.590	DALPHA	.000	DBETA	.000
△	1200.800	ELEVTR	-40.000	AILRON	.000
		Y	200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

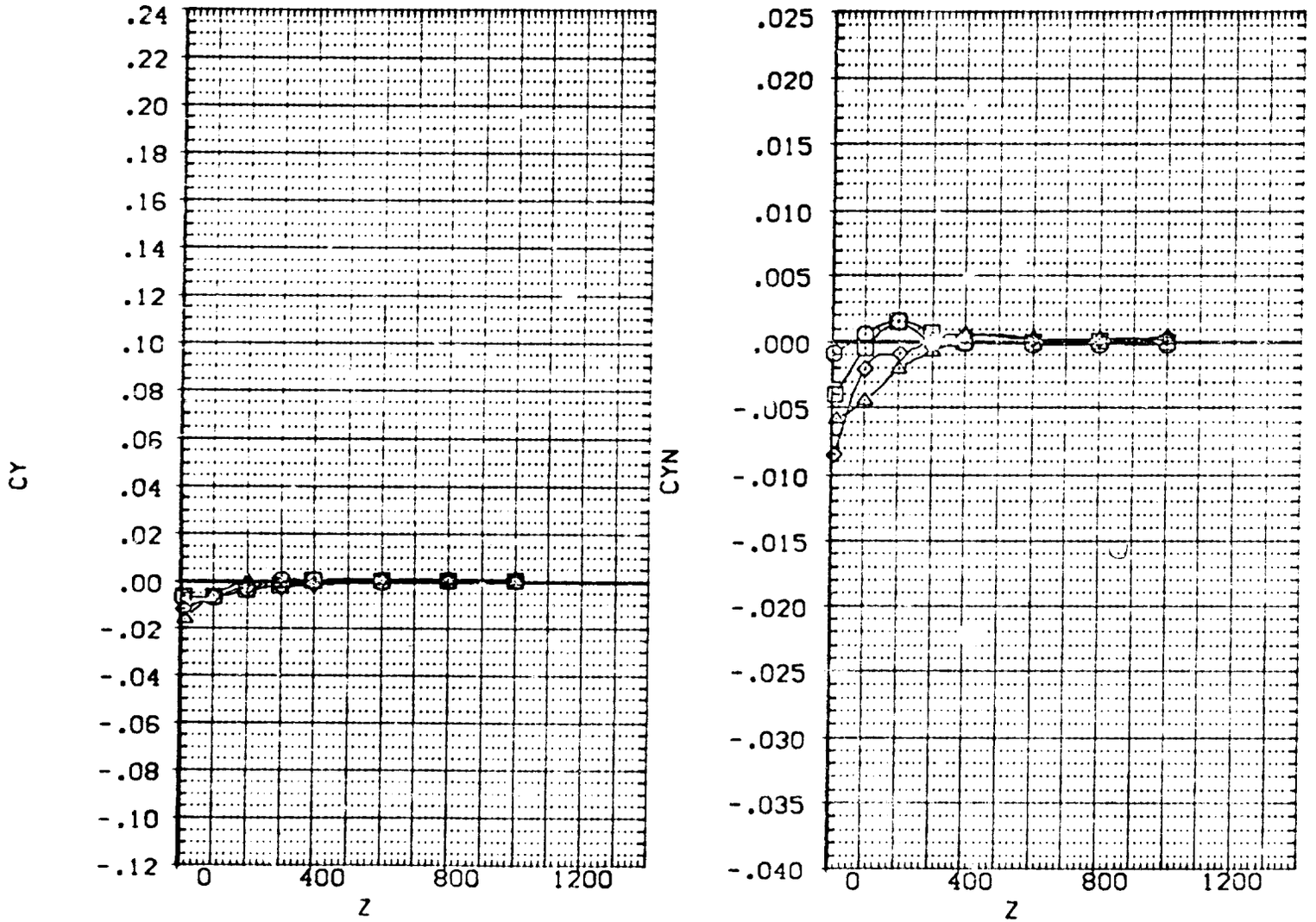


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT94)

SYMBOL	X		PARAMETRIC VALUES		
○	.009	MACH	4.530	PTOTAL	110.000
□	400.360	ALPHA	.000	BETA	.000
◇	800.580	DALPHA	.000	DBETA	.000
△	1200.800	ELEVTR	-40.000	AILRON	.000
		Y	200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

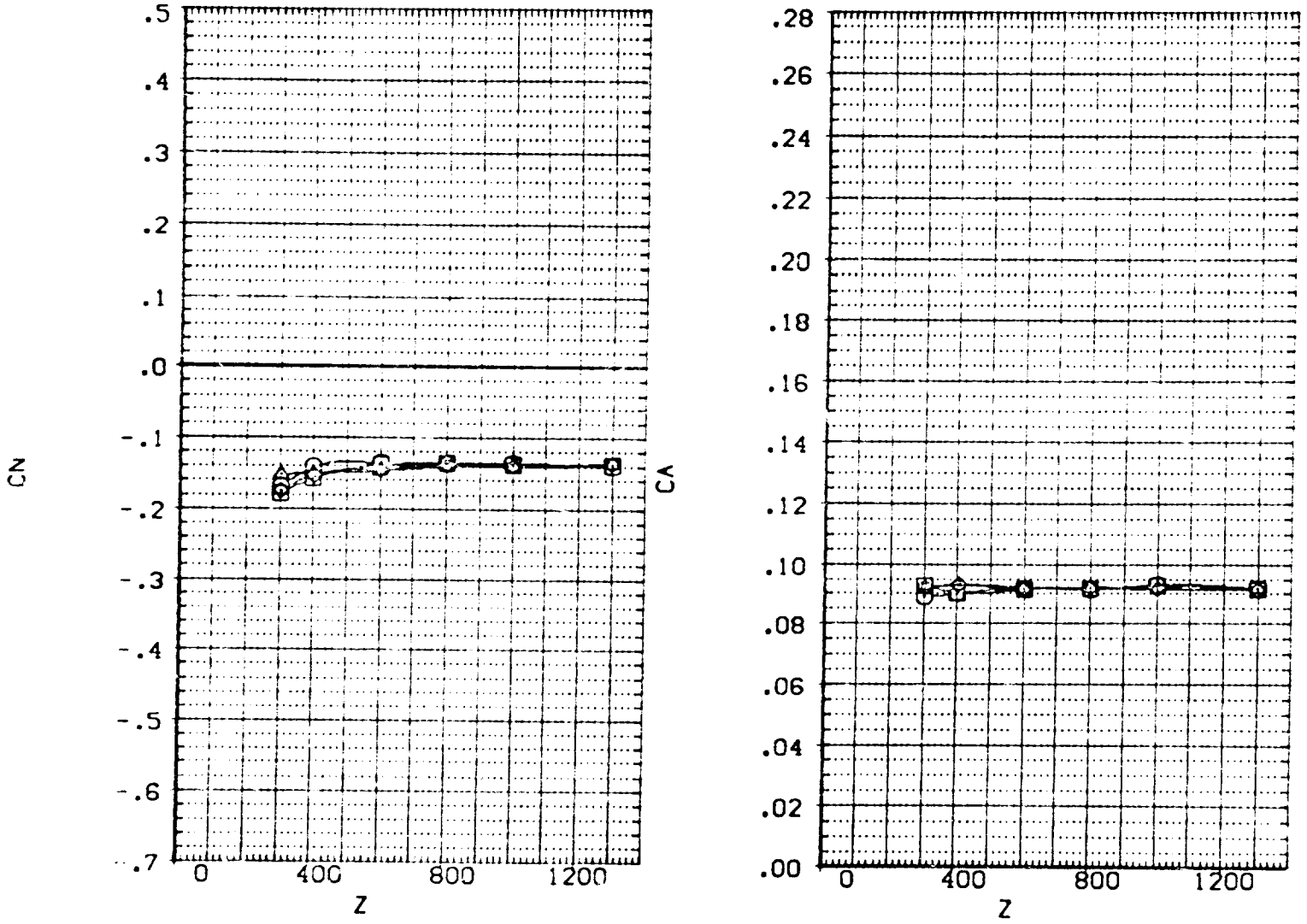


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT95)

SYMBOL	X		PARAMETRIC VALUES		
○	.214	MACH	4.530	PTOTAL	110.000
□	400.3/0	ALPHA	.000	BETA	.000
◇	800.680	DALPHA	-10.000	DBETA	.000
△	1200.800	ELEVTR	-40.000	AILRON	.000
		Y	200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

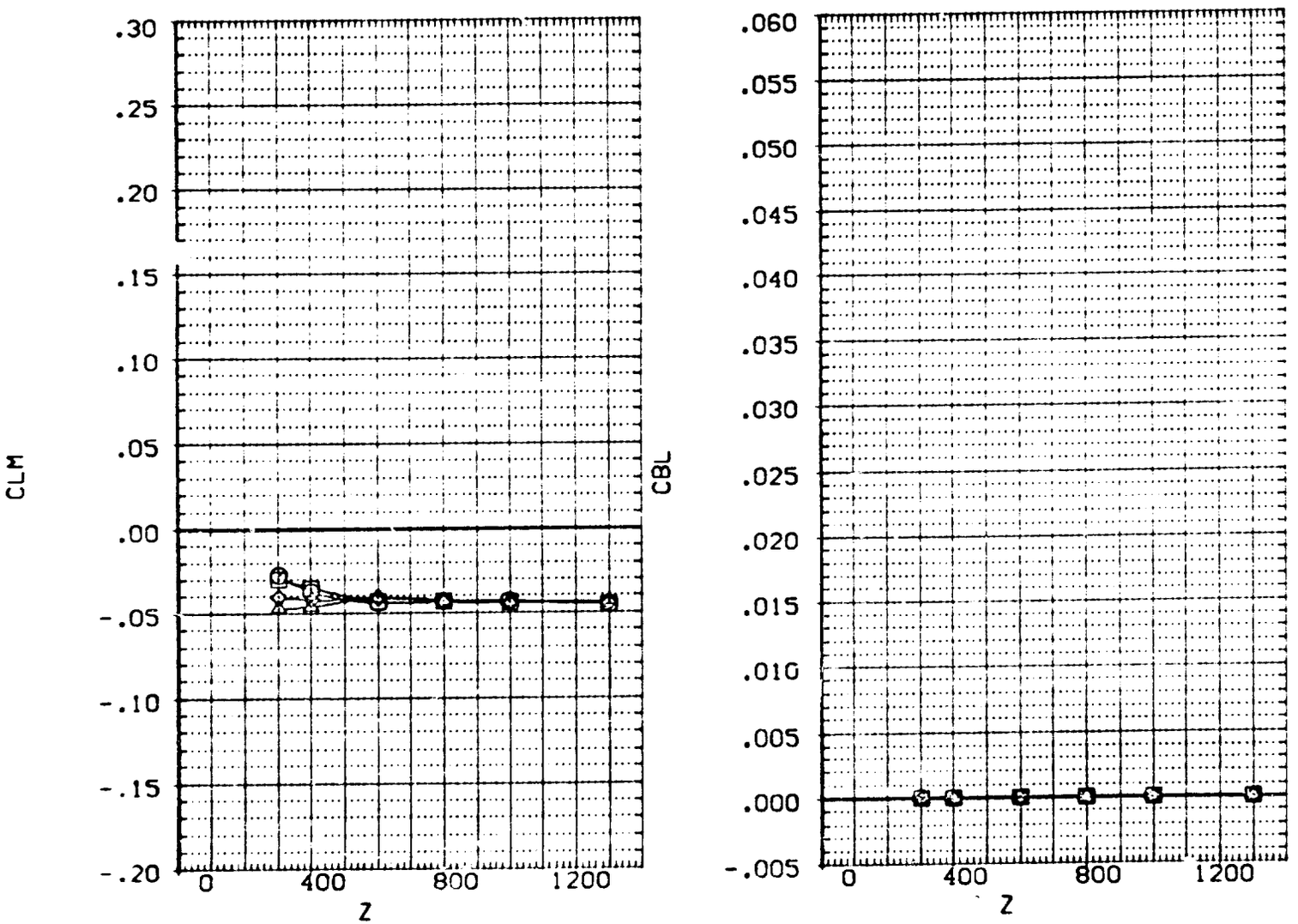


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

[A13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT95)

SYMBOL	X		PARAMETRIC VALUES		
○	.214	MACH	4.530	PTOTAL	110.000
□	400.370	ALPHA	.000	BETA	.000
◇	800.680	DALPHA	-10.000	DBETA	.000
△	1200.800	ELEVTR	-40.000	AILRON	.000
		Y	200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

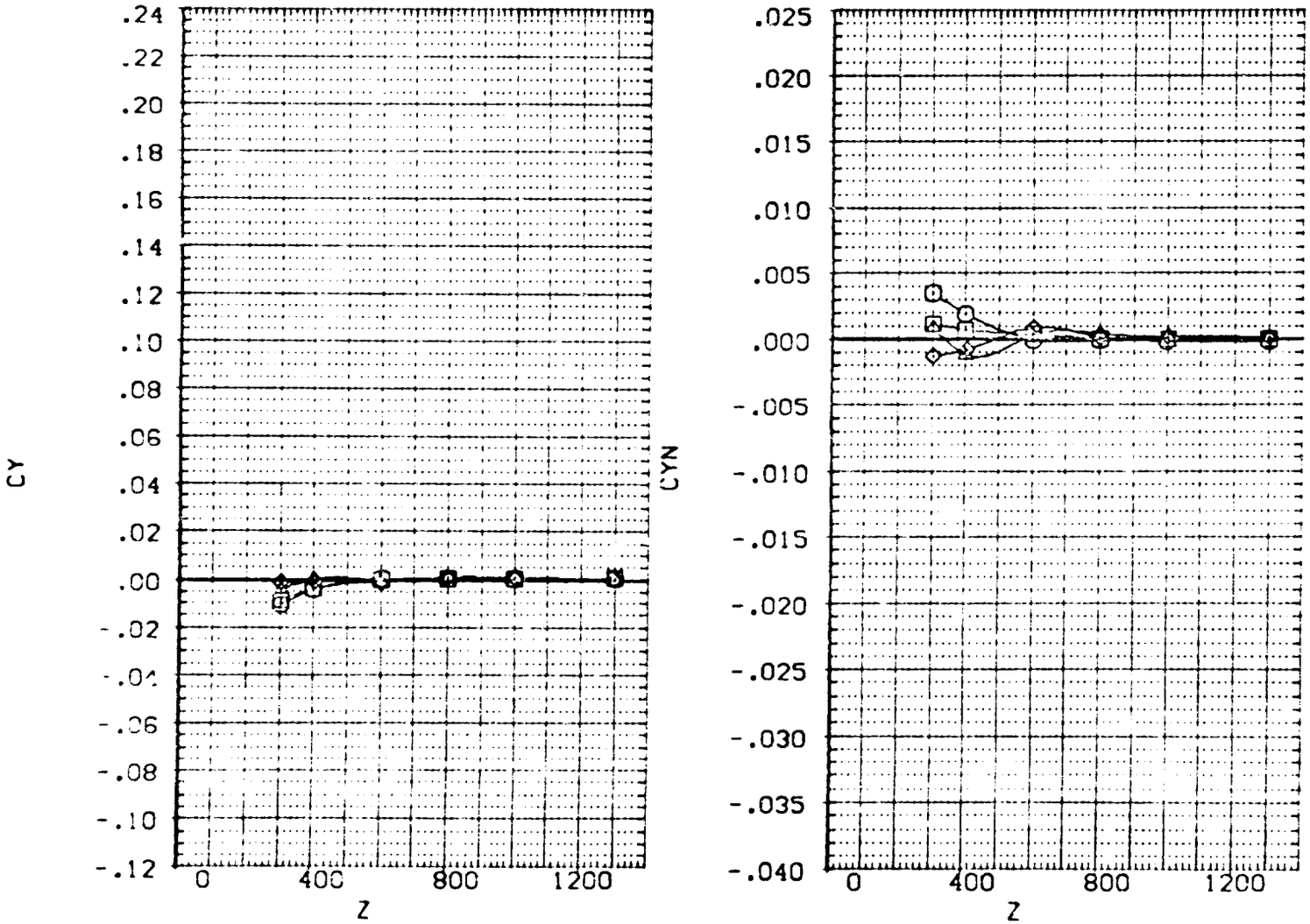


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

!A13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT95)

SYMBOL	X		PARAMETRIC VALUES		
○	.214	MACH	4.530	PTOTAL	110.000
□	400.370	ALPHA	.000	BETA	.000
◇	800.680	DALPHA	-10.000	DBETA	.000
△	1200.800	ELEVTR	-40.000	AILRON	.000
		Y	200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

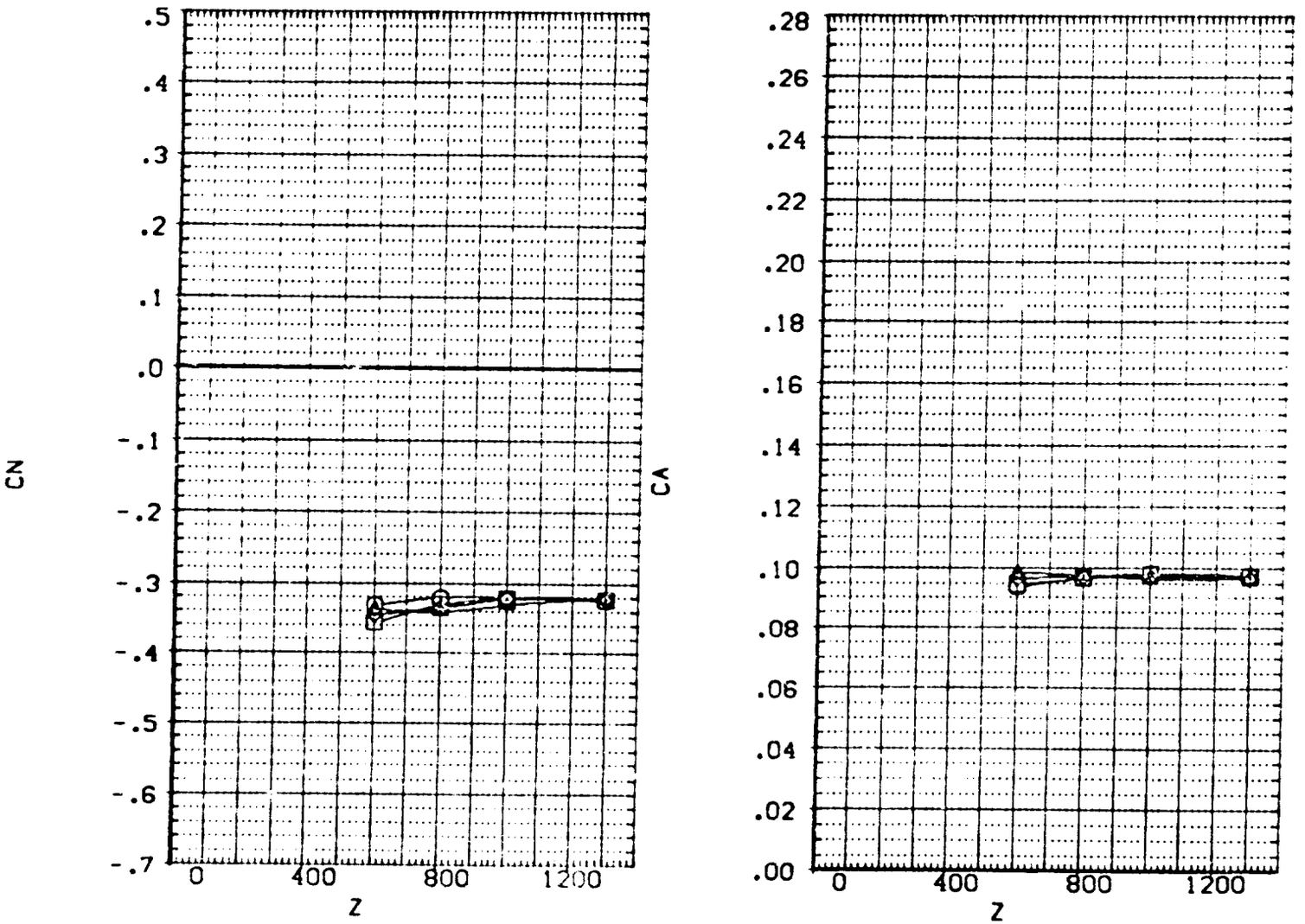


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

!A13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT96)

SYMBOL	X		PARAMETRIC VALUES		
○	-.505	MACH	4.530	PTOTAL	110.000
□	401.110	ALPHA	.000	BETA	.000
◇	800.940	DALPHA	-20.000	DBETA	.000
△	1201.000	ELEVTR	-40.000	AILRON	.000
		Y	200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

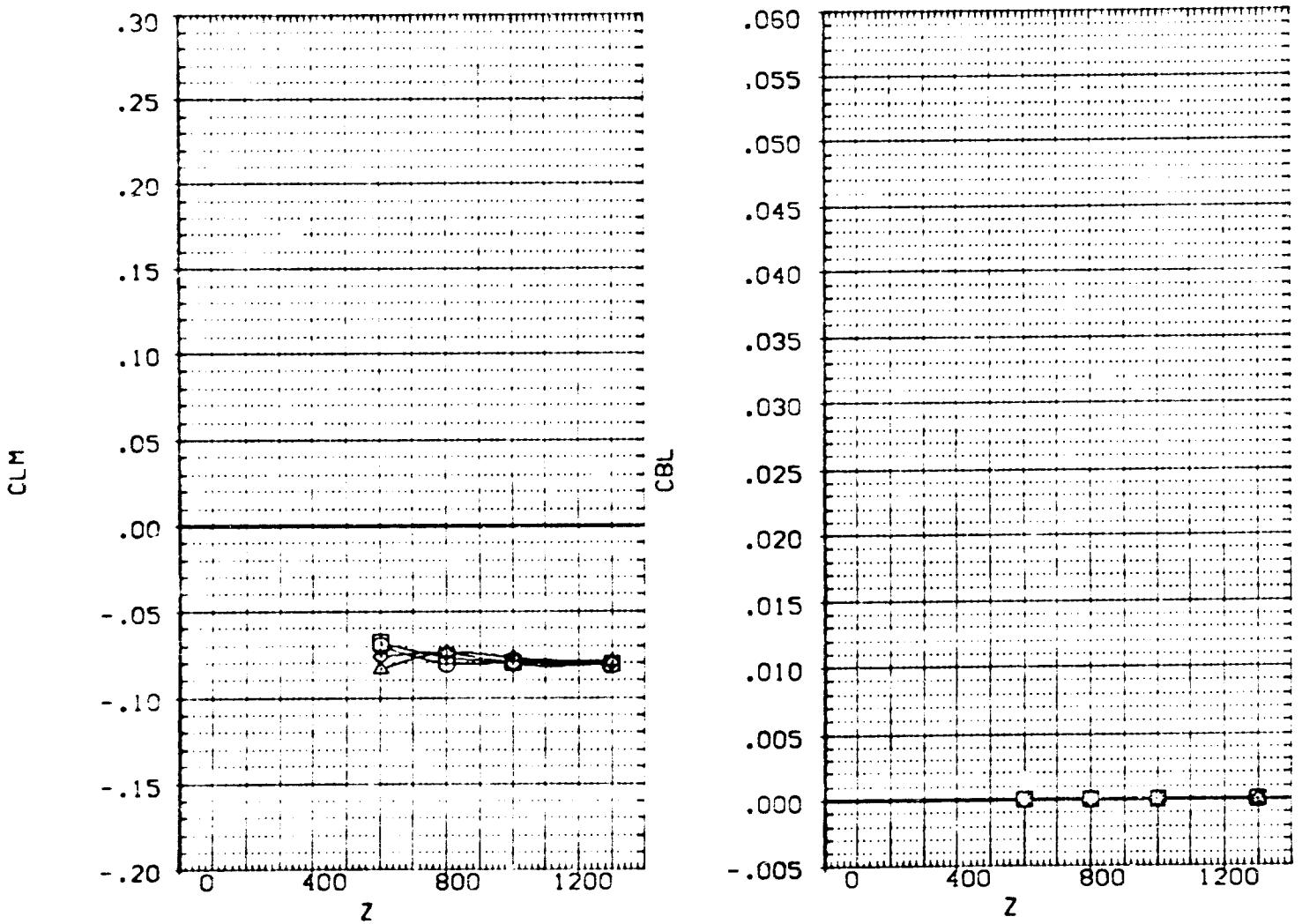


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

TAB, EXTERNAL TANK(TIC)SEPARATING FROM ORB. 09 (RTJT96)

SYMBOL	X		PARAMETRIC VALUES		
	.505	MACH	4.530	PTOTAL	110.000
	401.110	ALPHA	.000	BETA	.000
◇	800.940	DALPHA	-26.000	DBETA	.000
△	1201.000	ELEVTR	-40.000	AILRON	.000
		Y	200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

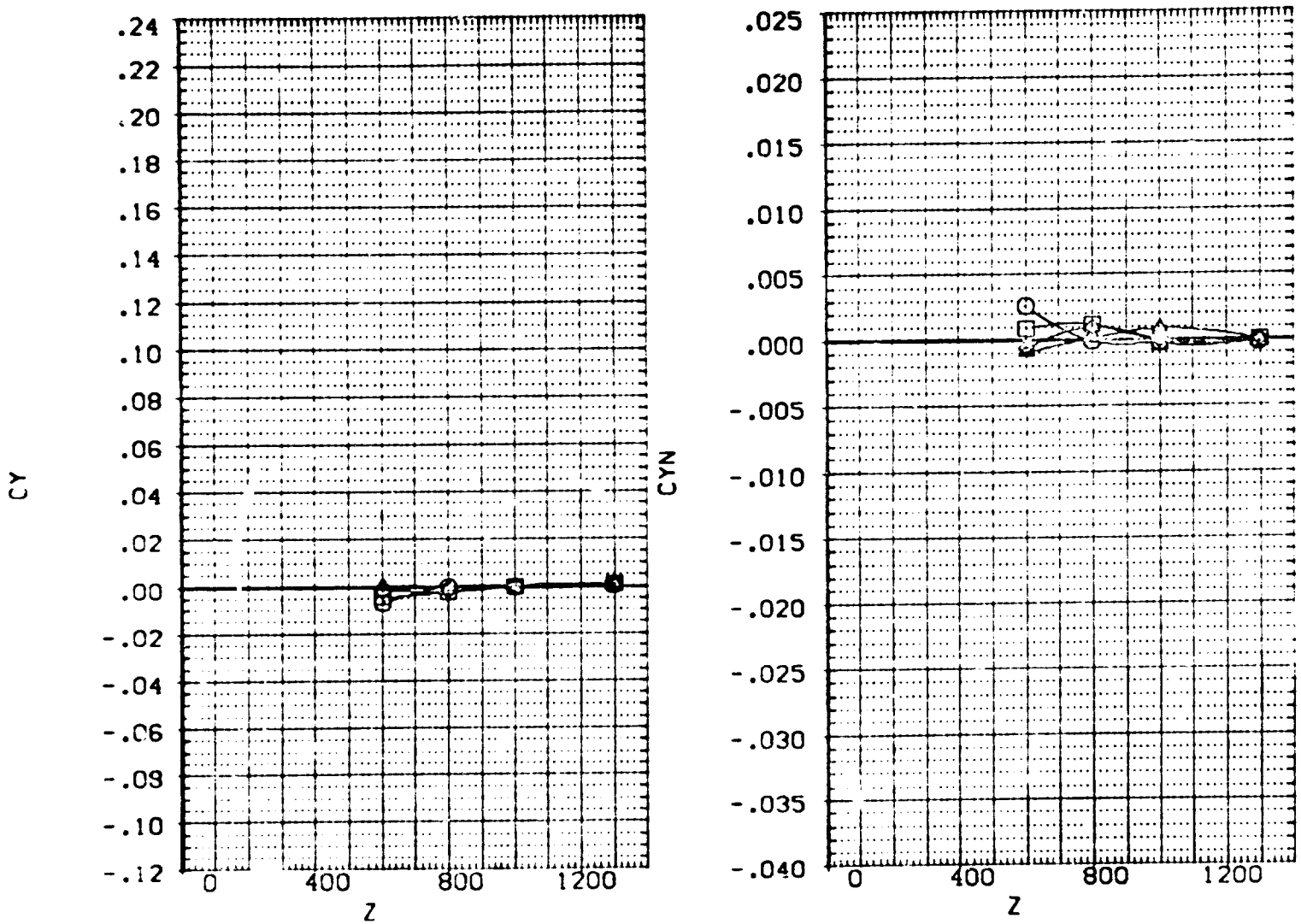


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT96)

SYMBOL	X		PARAMETRIC VALUES		
○	-.505	MACH	4.530	PTOTAL	110.000
□	401.110	ALPHA	.000	BETA	.000
◇	800.940	DALPHA	-20.000	DBETA	.000
△	1201.000	ELEVTR	-40.000	AILRON	.000
		Y	200.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

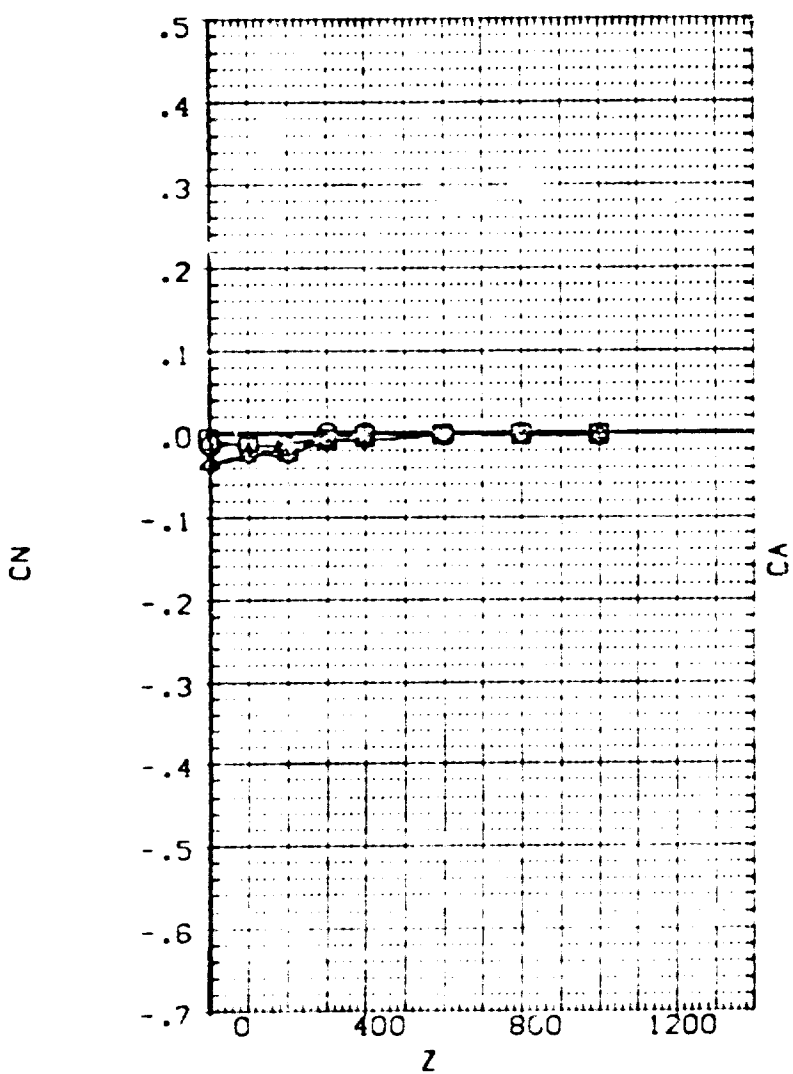


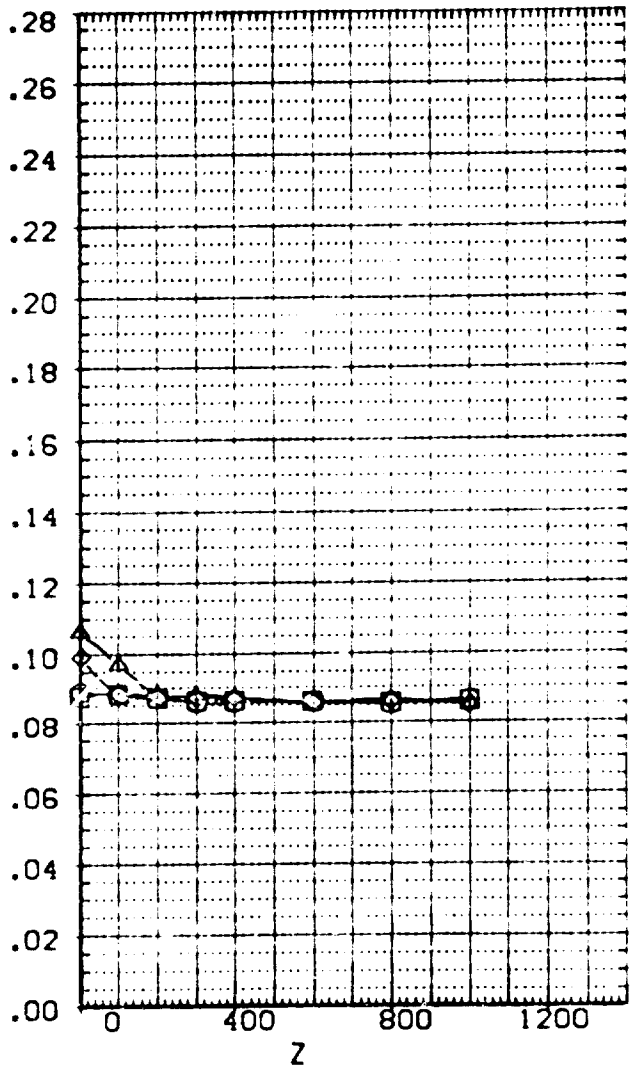
EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

:A13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT97)

SYMBOL	X	PARAMETRIC VALUES			
○	.174	MACH	4.530	PTOTAL	110.000
◇	400.390	ALPHA	.000	BETA	.000
△	600.520	DALPHA	.000	DBETA	.000
	1200.800	ELEVTR	-40.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



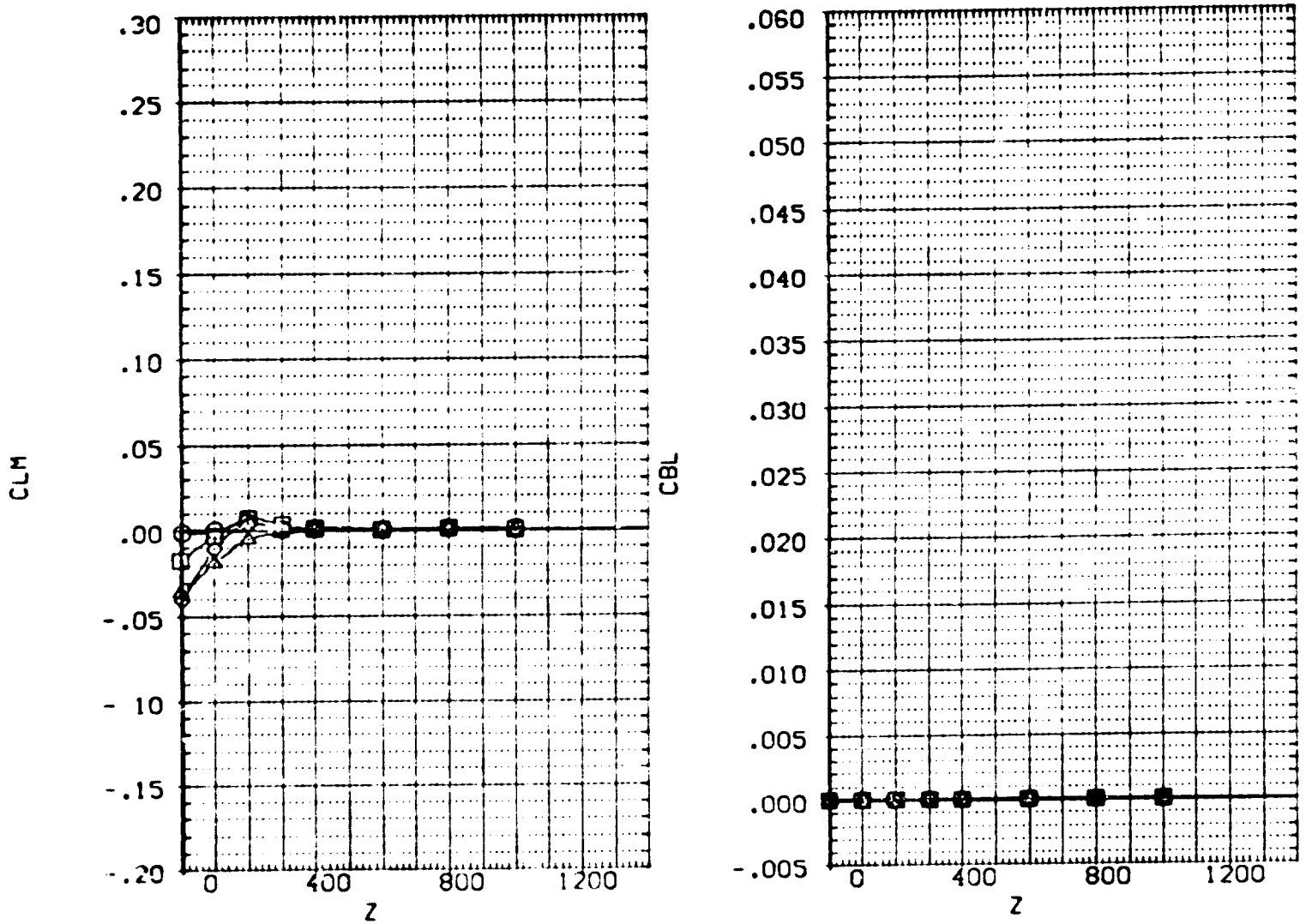


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

!A13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT97)

SYMBOL	X		PARAMETRIC VALUES		
○	.174	MACH	4.530	PTOTAL	110.000
□	400.390	ALPHA	.000	BETA	.000
◇	800.520	DALPHA	.000	DBETA	.000
△	1200.800	ELEVTR	-40.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

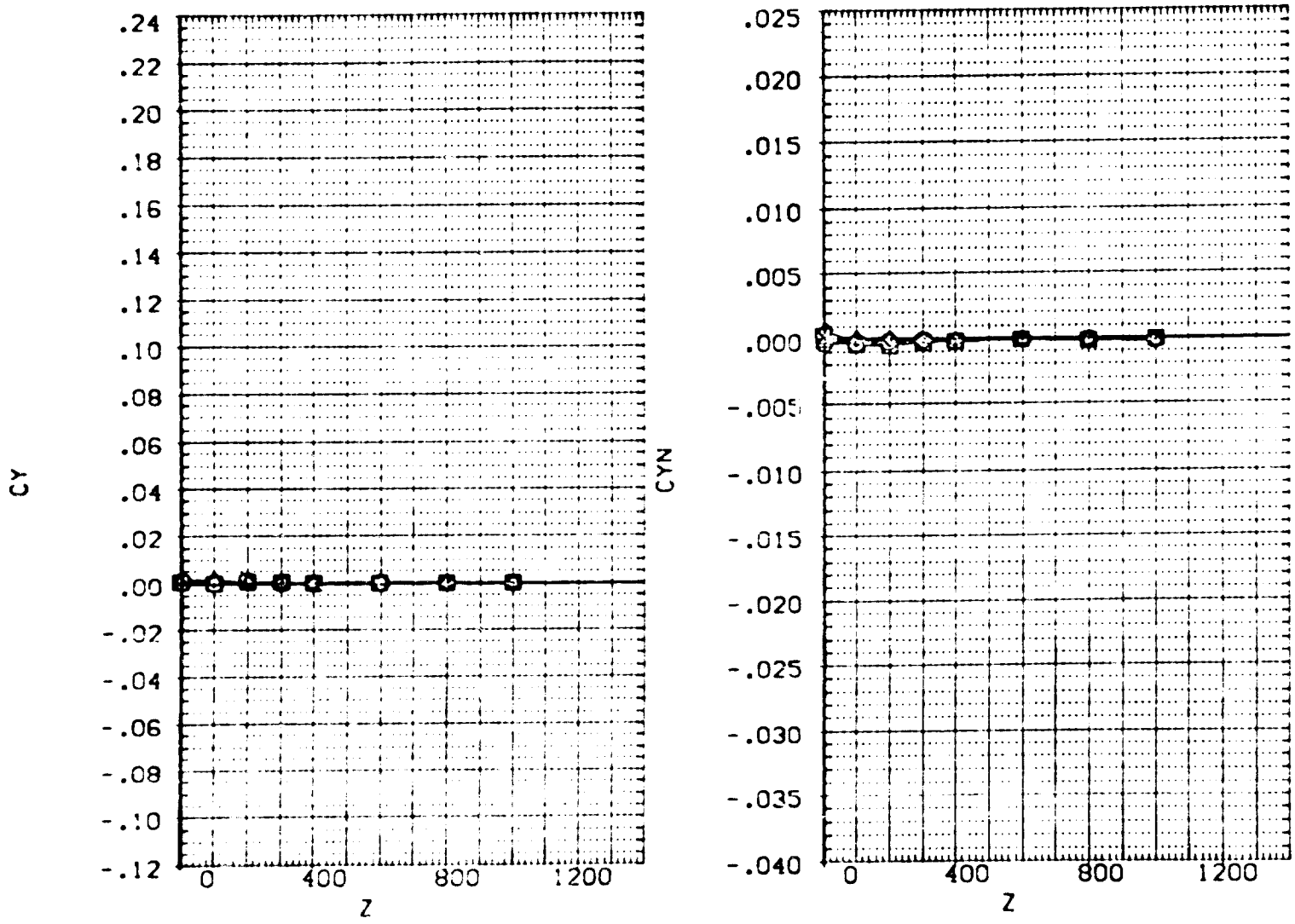


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

[A13,EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT97)

SYMBOL	X		PARAMETRIC VALUES		
	.174	MACH	4.530	PTOTAL	110.000
	400.390	ALPHA	.000	BETA	.000
◇	800.520	DALPHA	.000	DBETA	.000
△	1200.800	ELEVTR	-40.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

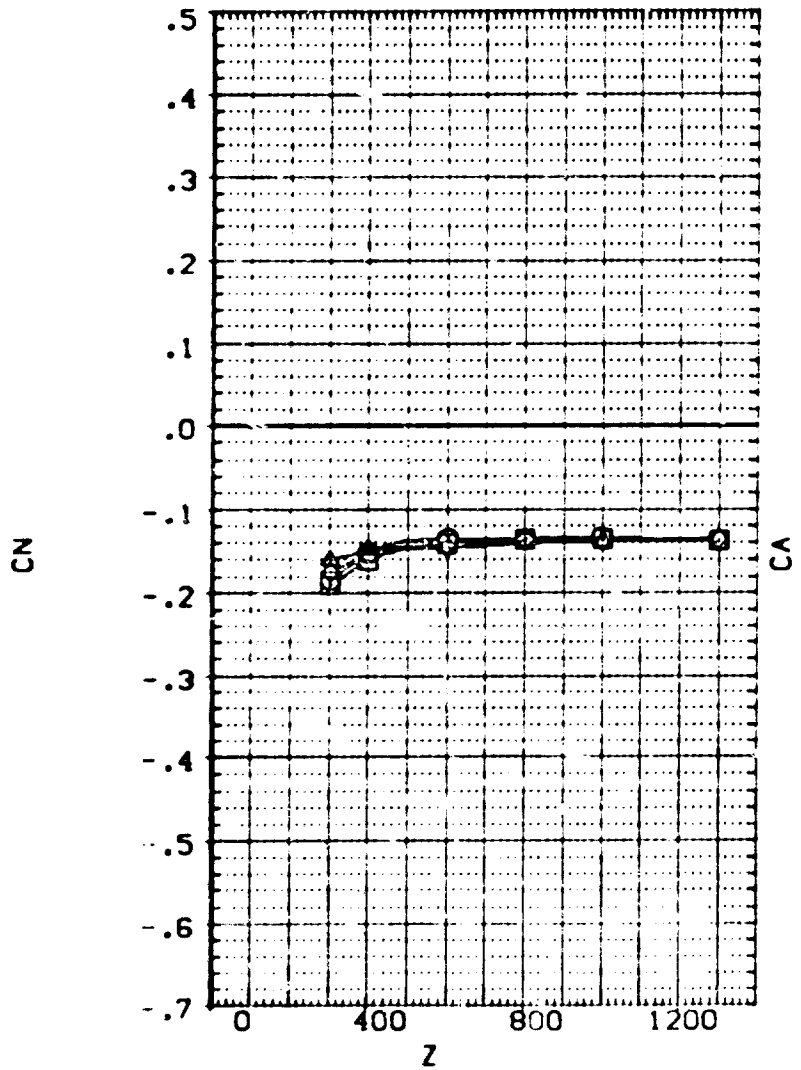


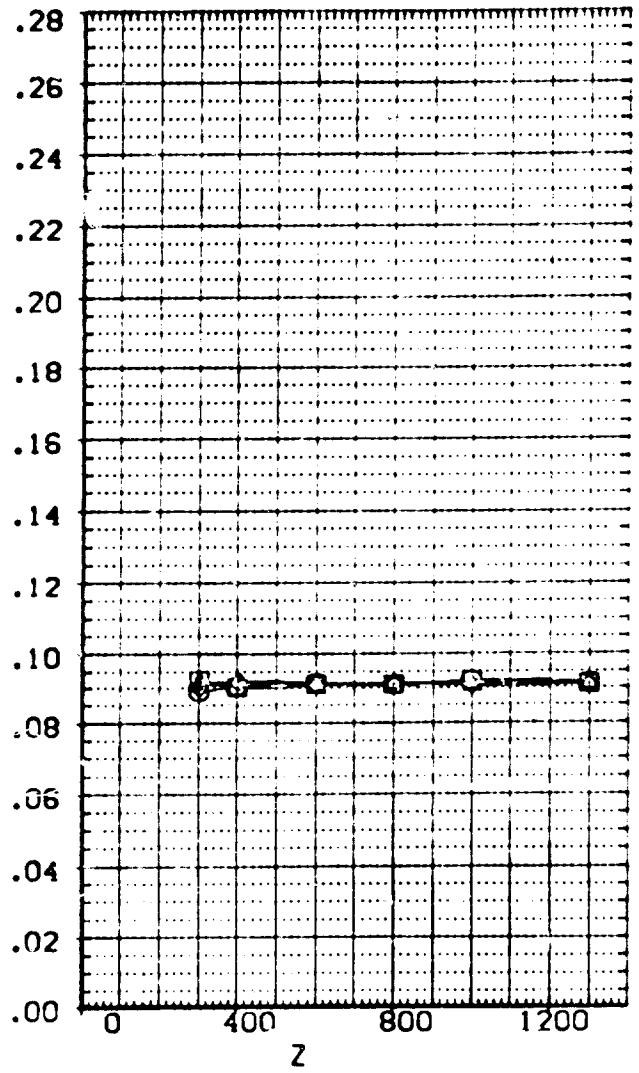
EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

!A13.EXTERNAL TANK(T10)SEPARATING FROM ORB. OS (RTJT98)

SYMBOL	X		PARAMETRIC VALUES		
○	.150	MACH	4.530	PTOTAL	110.000
□	400.460	ALPHA	.000	BETA	.000
◇	800.710	DALPHA	-10.000	DBETA	.000
△	1200.900	ELEVTR	-40.000	AILRON	.000
		V	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



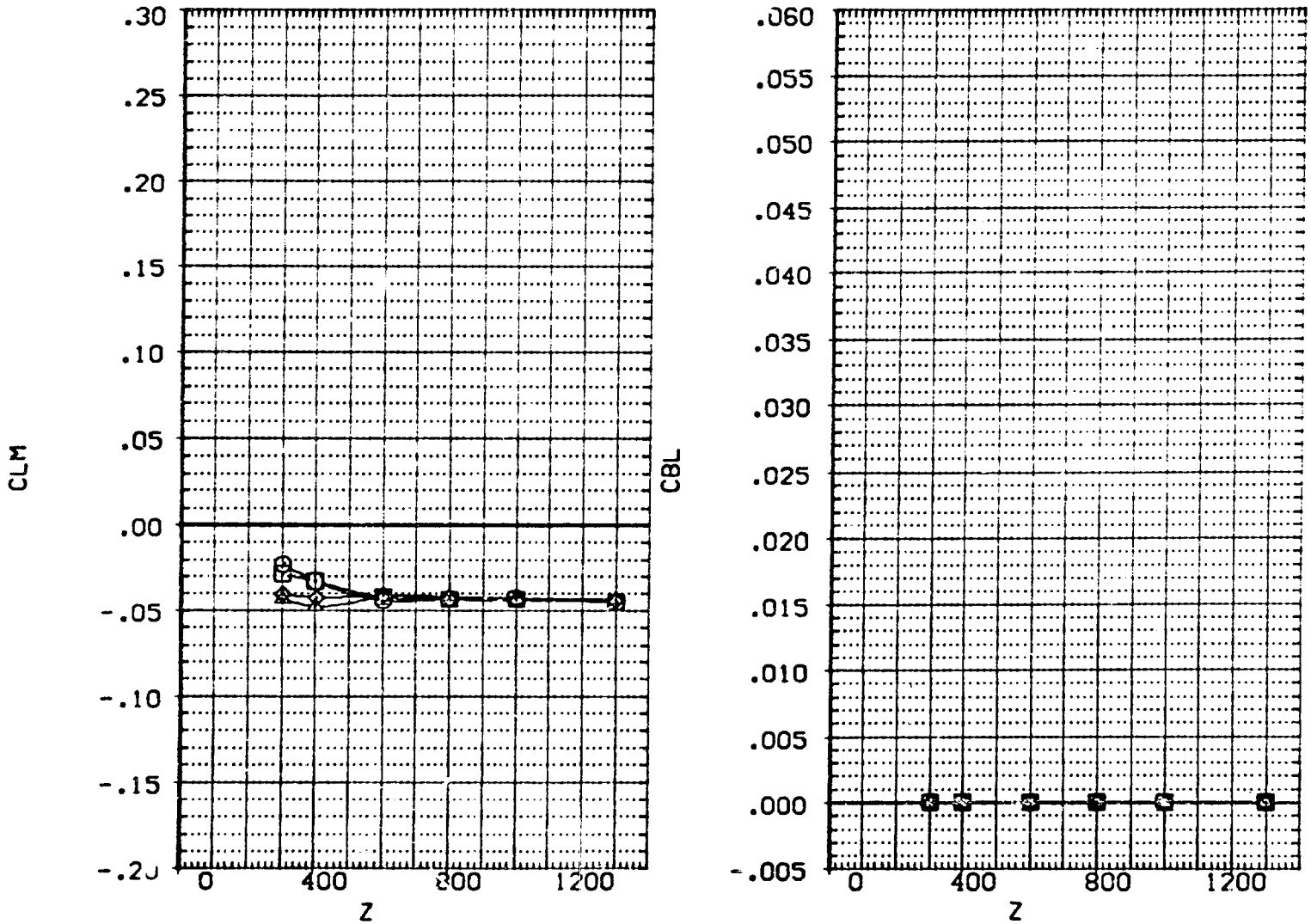


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT98)

SYMBOL	X		PARAMETRIC VALUES		
○	.150	MACH	4.530	PTOTAL	110.000
□	400.460	ALPHA	.000	BETA	.000
◇	800.710	DALPHA	-10.000	DBETA	.000
△	1200.900	ELEVTR	-40.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

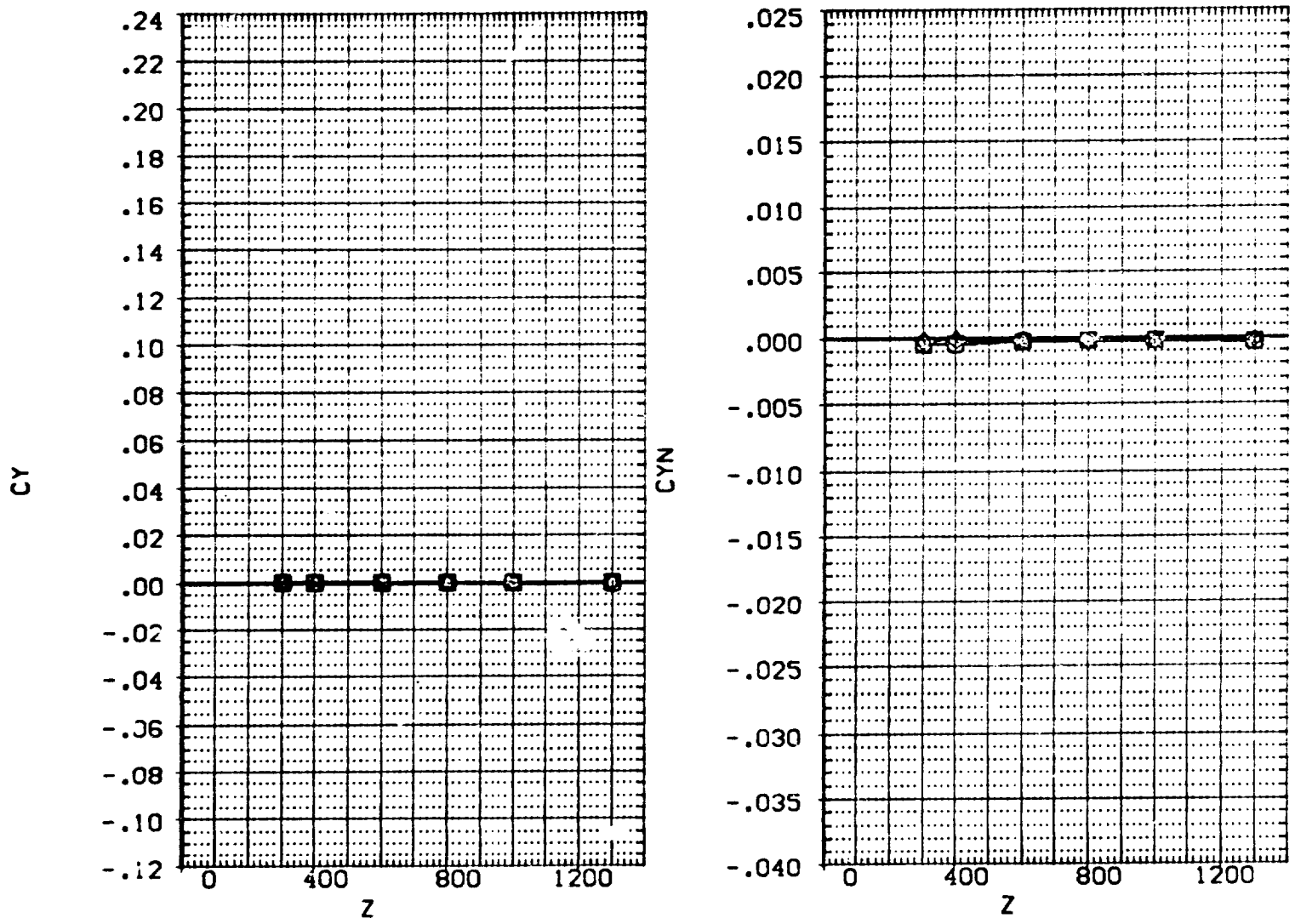


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT98)

SYMBOL	X		PARAMETRIC VALUES		
○	.150	MACH	4.530	PTOTAL	110.000
□	400.460	ALPHA	.000	BETA	.000
◇	800.710	DALPHA	-10.000	DBETA	.000
△	1200.900	ELEVTR	-40.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

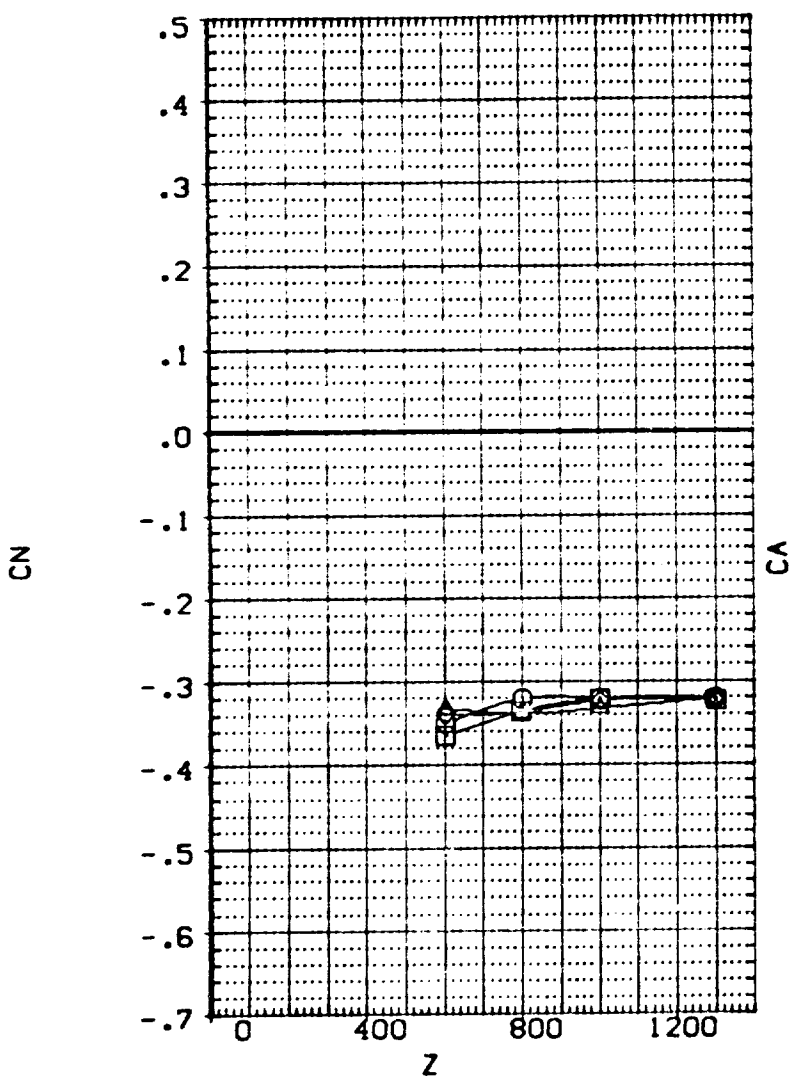


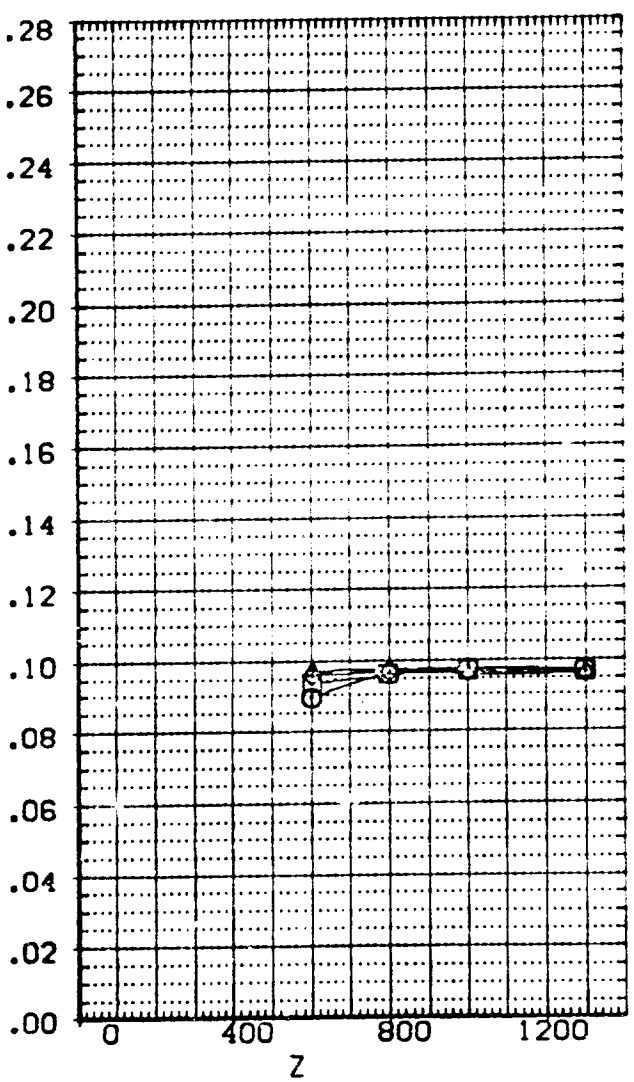
EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT99)

SYMBOL	X		PARAMETRIC VALUES		
○	-.717	MACH	4.530	PTOTAL	1:0.000
□	401.410	ALPHA	.000	BETA	.000
◇	801.010	DALPHA	-20.000	DBETA	.000
△	1200.800	ELEVTR	-40.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



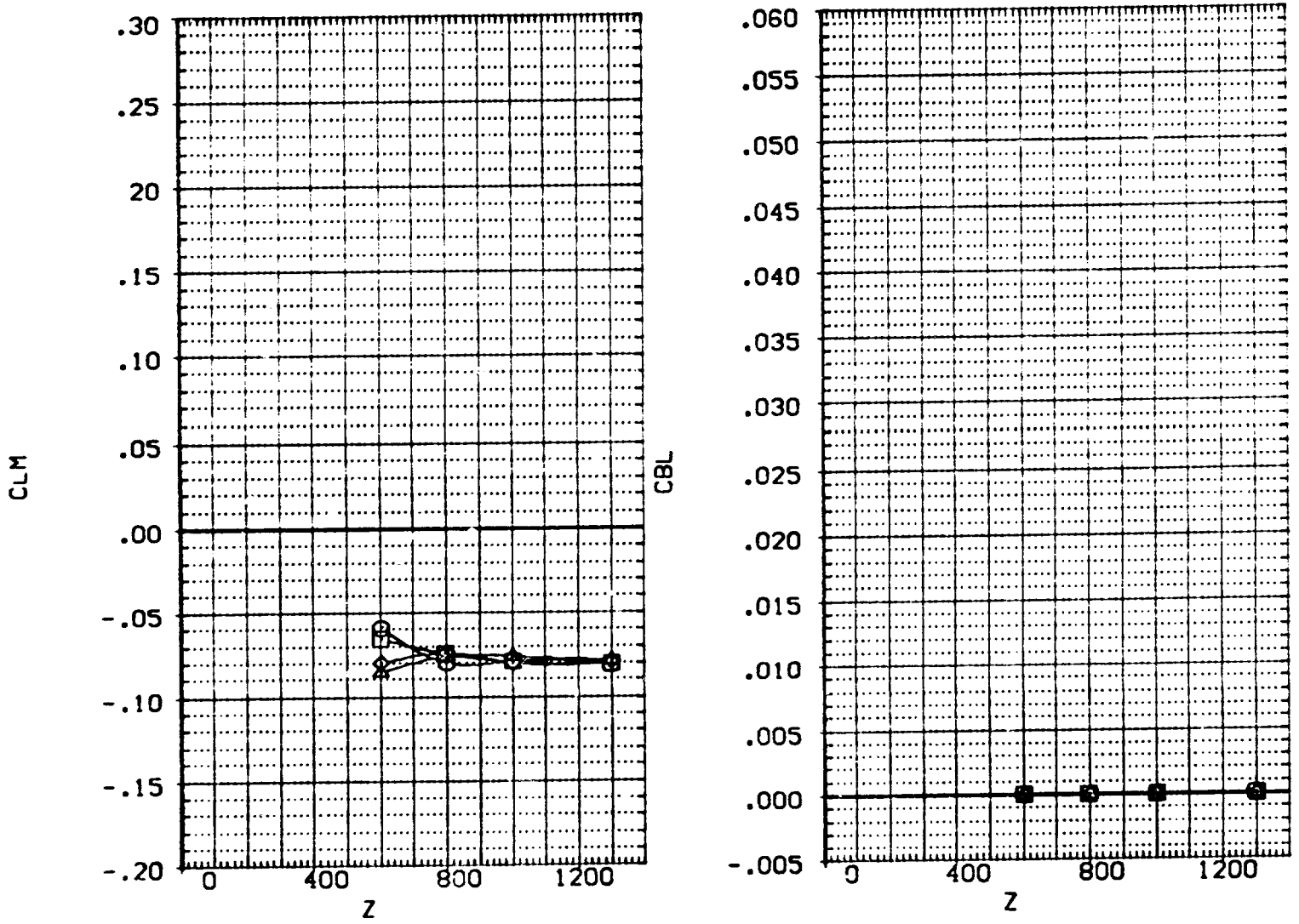


EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT99)

SYMBOL	X		PARAMETRIC VALUES		
○	-.717	MACH	4.530	PTOTAL	110.000
□	401.410	ALPHA	.000	BETA	.000
◇	801.010	DALPHA	-20.000	DBETA	.000
△	1200.800	ELEVTR	-40.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

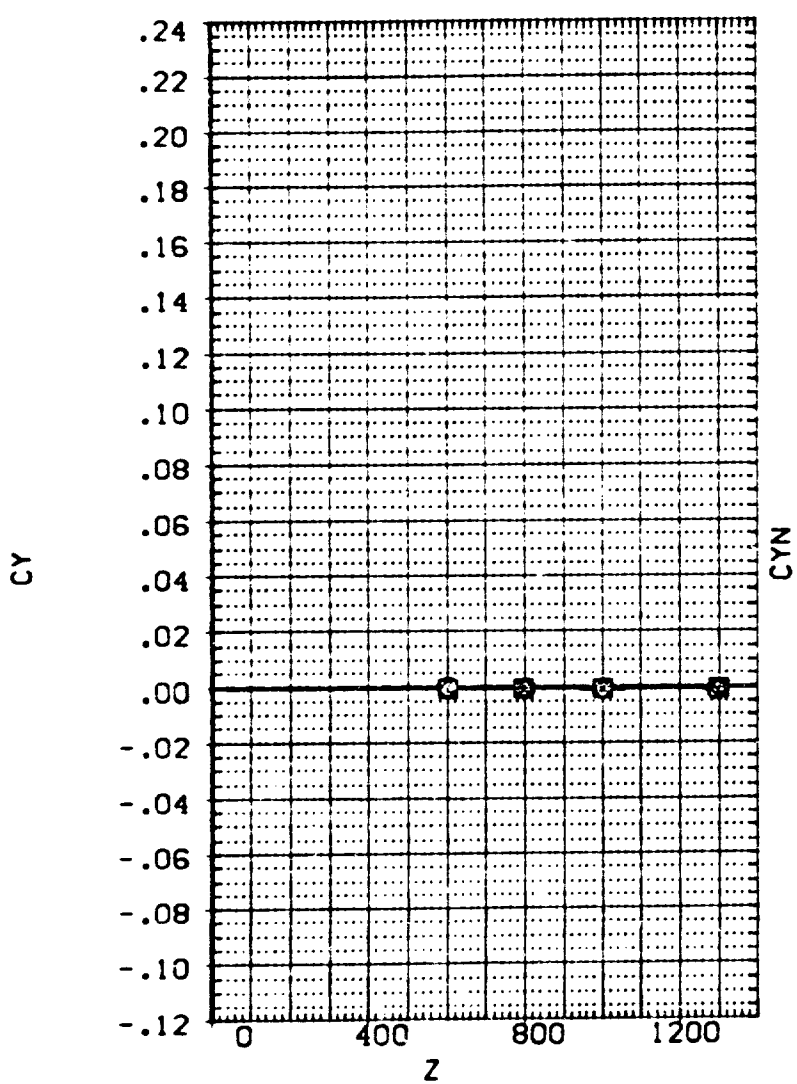


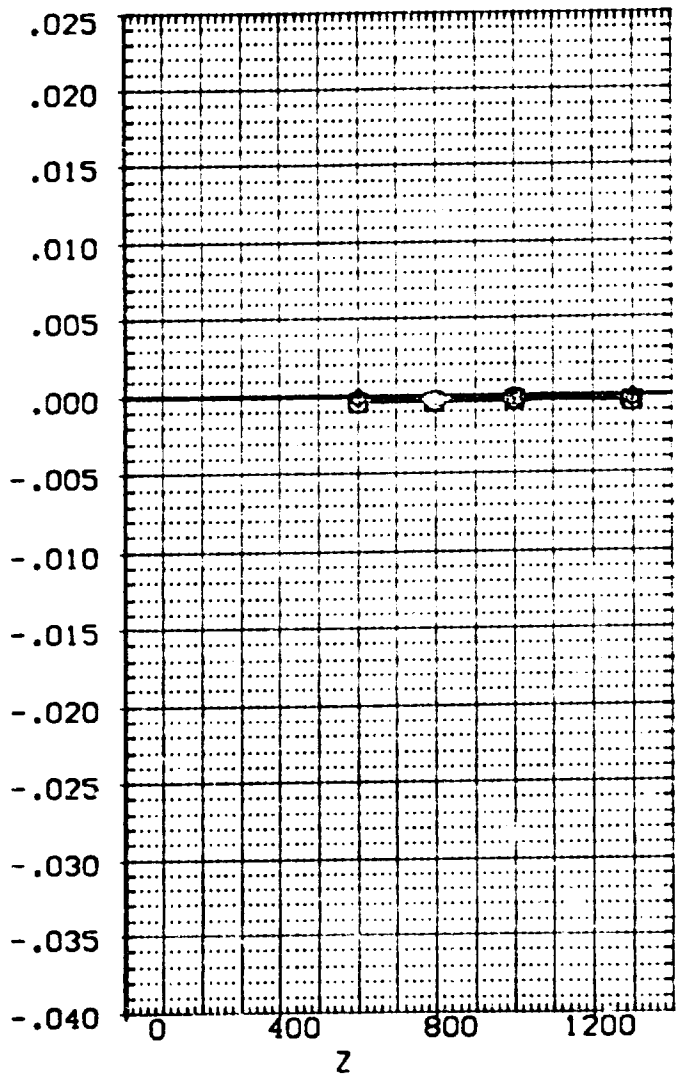
EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

IA13.EXTERNAL TANK(T10)SEPARATING FROM ORB. 09 (RTJT99)

SYMBOL	X		PARAMETRIC VALUES		
○	-.717	MACH	4.530	PTOTAL	110.000
□	401.410	ALPHA	.000	BETA	.000
◇	801.010	DALPHA	-20.000	DBETA	.000
△	1200.800	ELEVTR	-40.000	AILRON	.000
		Y	.000		

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



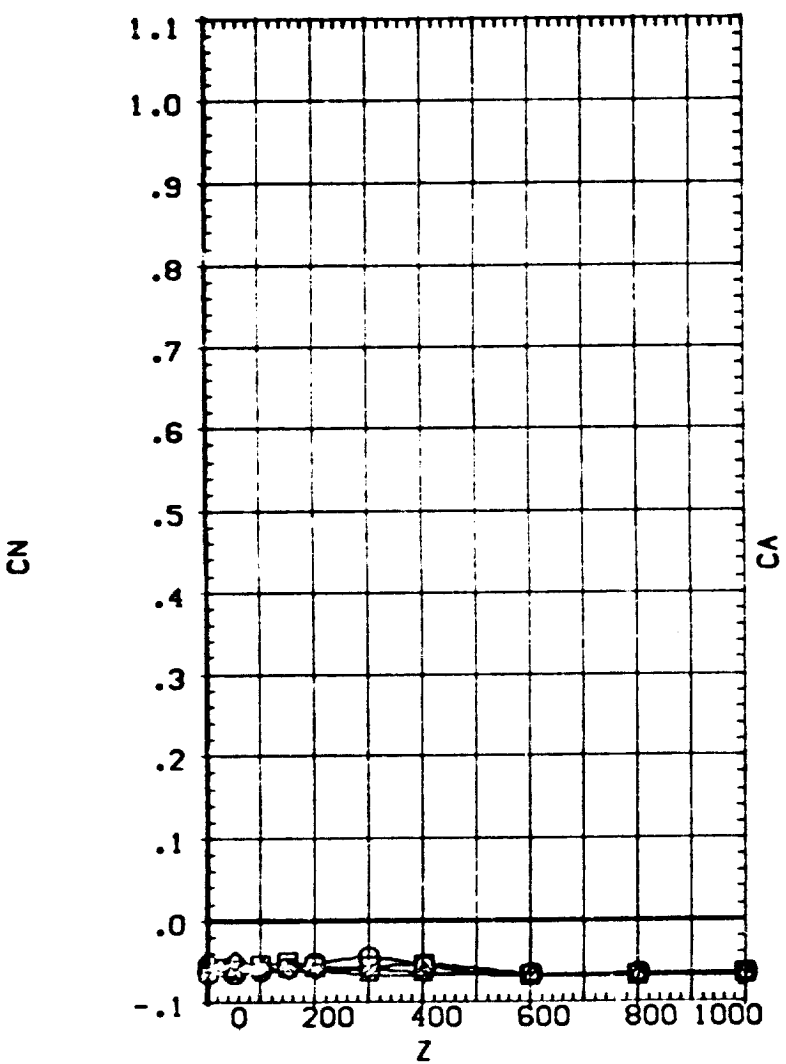


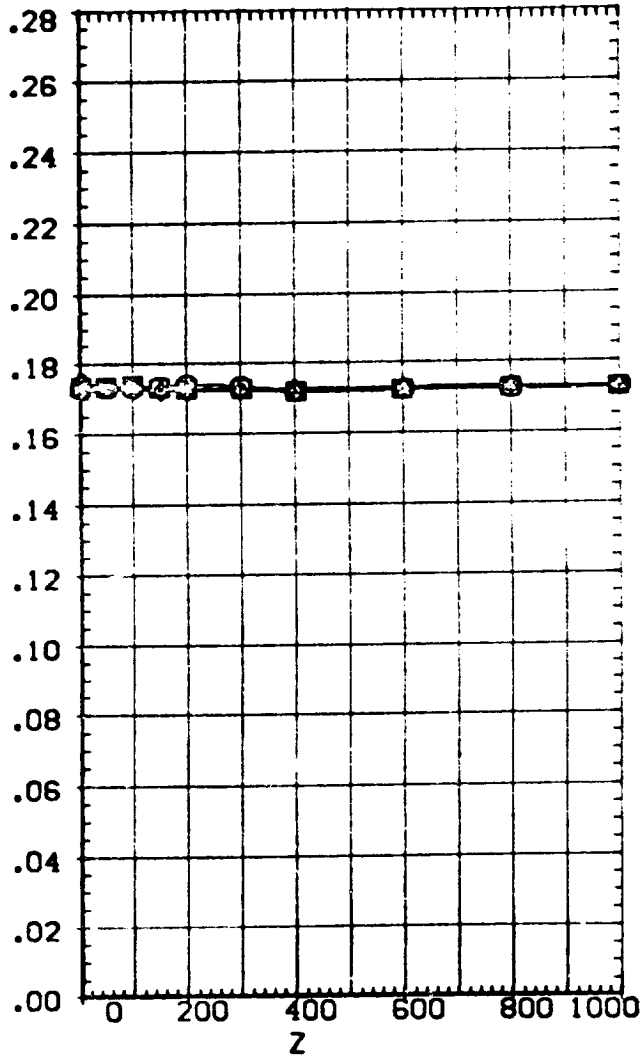
EXTERNAL TANK AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORBITER

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ120)

SYMBOL	X		PARAMETRIC VALUES		
○	.253	MACH	4.530	PTOTAL	110.000
□	300.420	ALPHA	.000	BETA	.000
◇	600.520	DALPHA	.000	DBETA	.000
△	900.740	Y	.000	PCHMBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



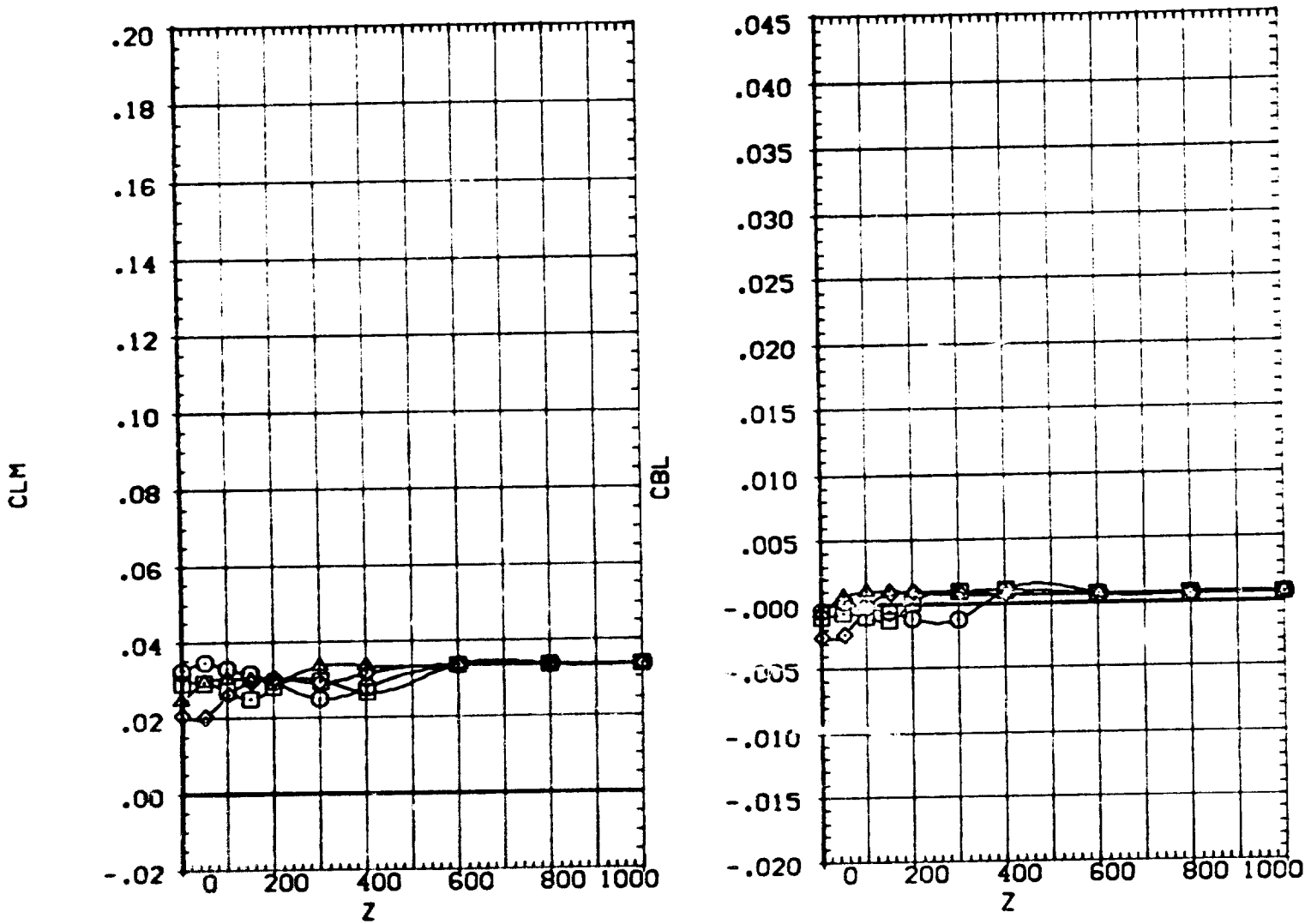


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T.0 (RTJ120)

SYMBOL	X		PARAMETRIC VALUES		
○	.253	MACH	4.530	PTOTAL	110.000
□	300.420	ALPHA	.000	BETA	.000
◇	600.520	DALPHA	.000	DBETA	.000
△	900.740	Y	.000	PCHMBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

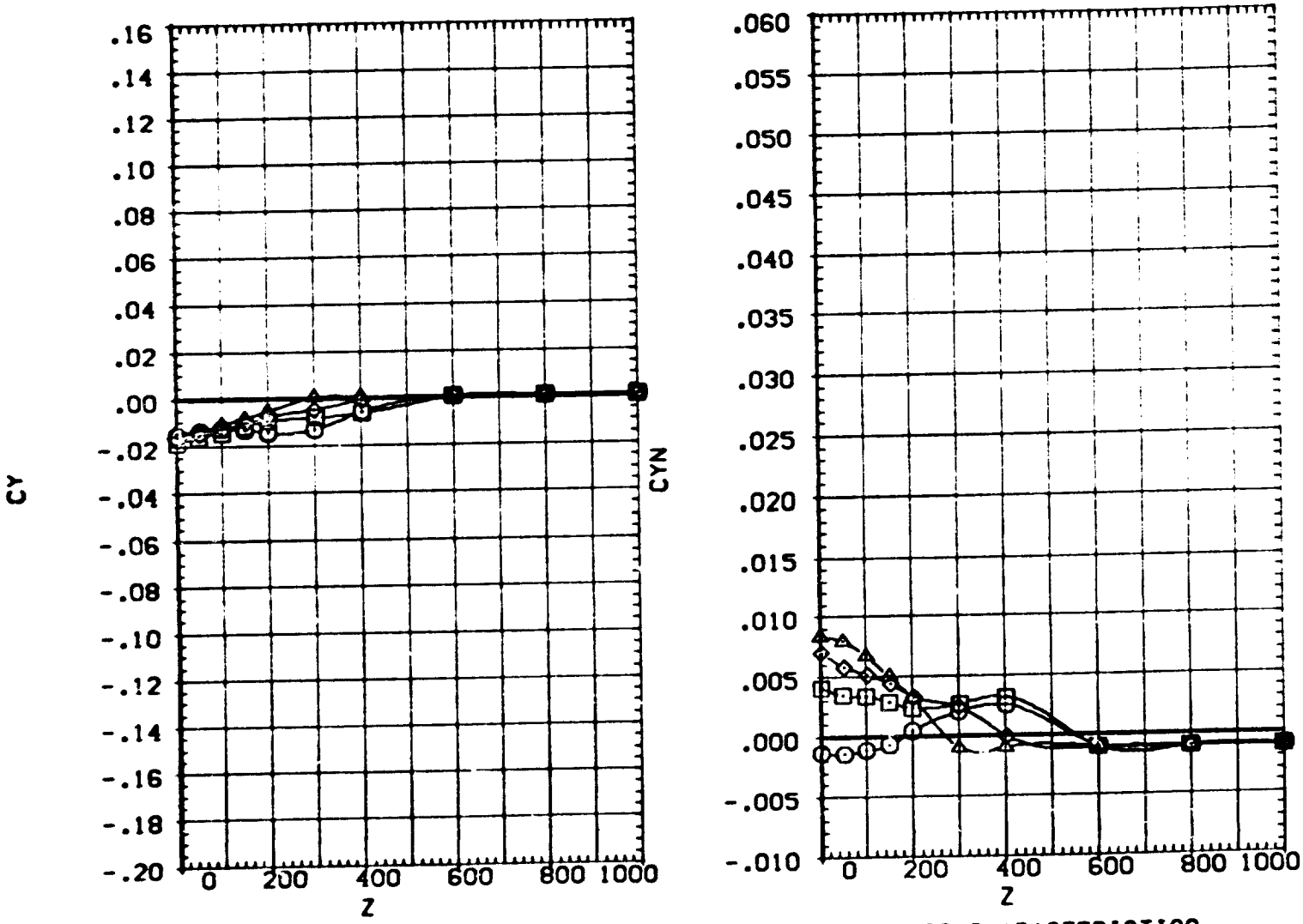


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ120)

SYMBOL	X		PARAMETRIC VALUES		
○	.253	MACH	.530	PTOTAL	110.000
□	300.420	ALPHA	.000	BETA	.000
◇	600.520	DALPHA	.000	DBETA	.000
△	900.740	Y	.000	PCHMBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

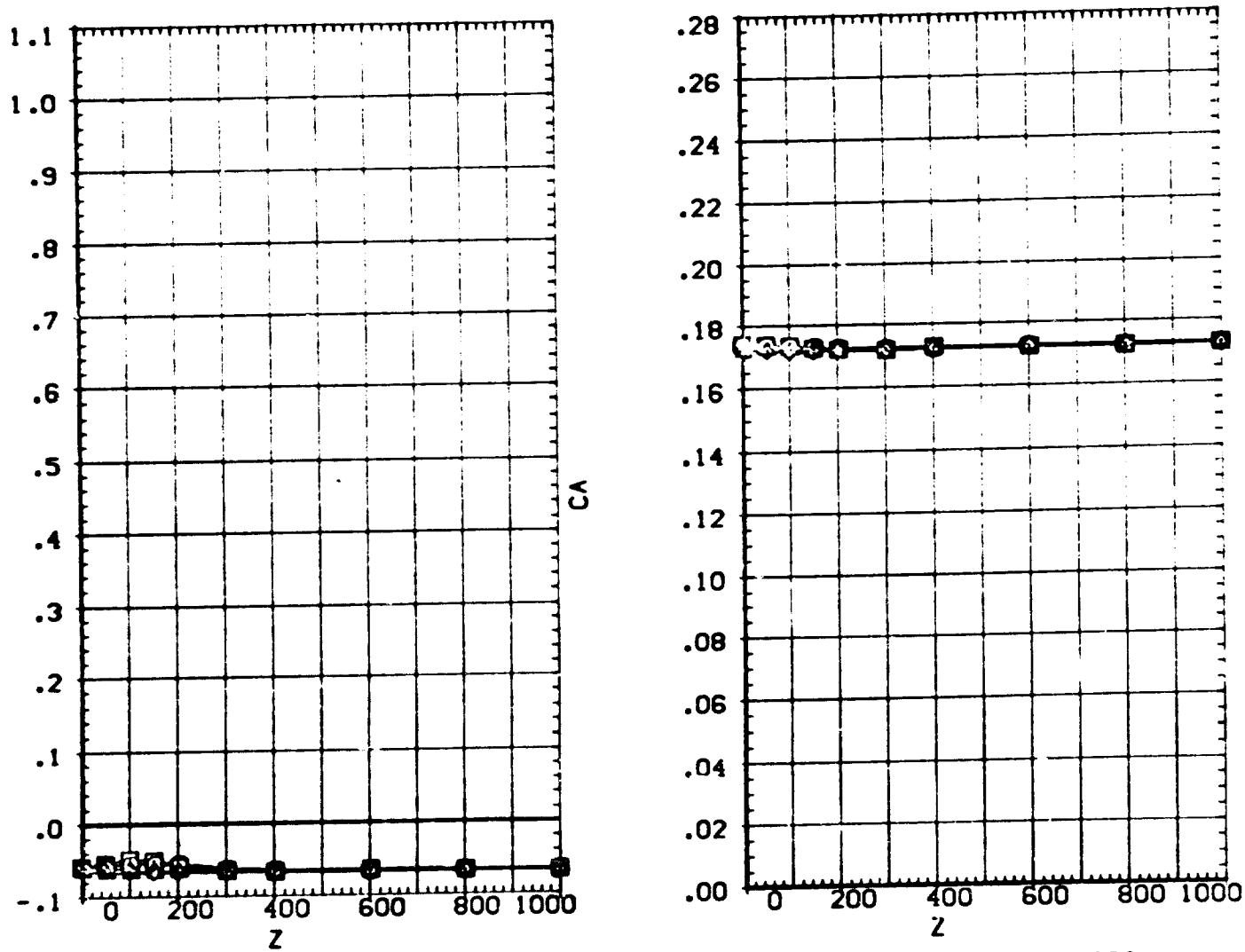


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM O9T10 (RTJ121)

SYMBOL	X		PARAMETRIC VALUES		
○	.318	MACH	4.530	PTOTAL	110.000
□	300.450	ALPHA	.000	BETA	.000
◇	600.480	DALPHA	.000	DBETA	.000
△	900.590	Y	200.000	PCHMBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

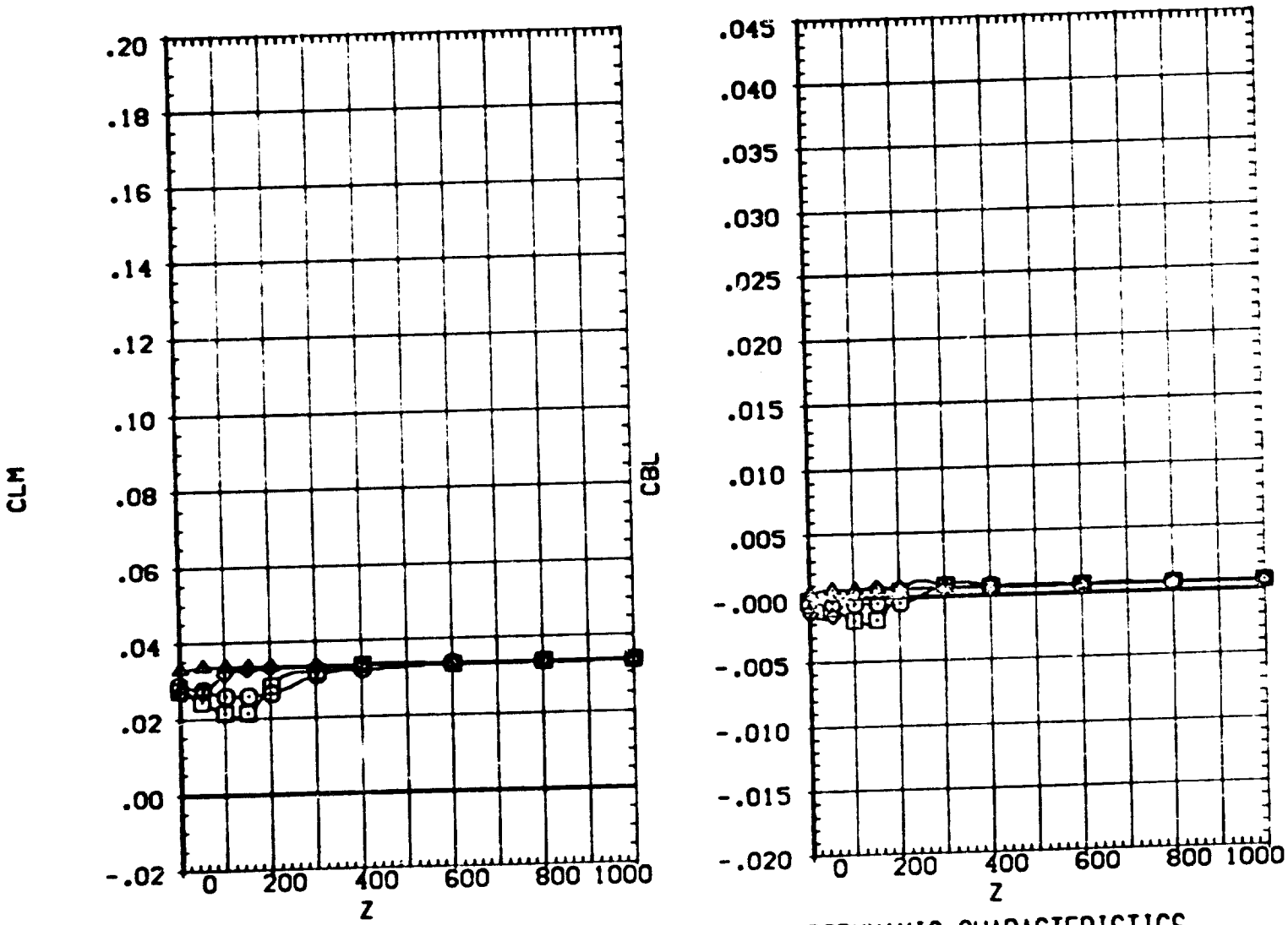


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

[A13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ121)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

SYMBOL	X		PARAMETRIC VALUES		
○	.318	MACH	4.530	PTOTAL	110.000
□	300.450	ALPHA	.000	BETA	.000
◇	600.480	DALPHA	.000	DBETA	.000
△	900.590	Y	200.000	PCHBR	.000

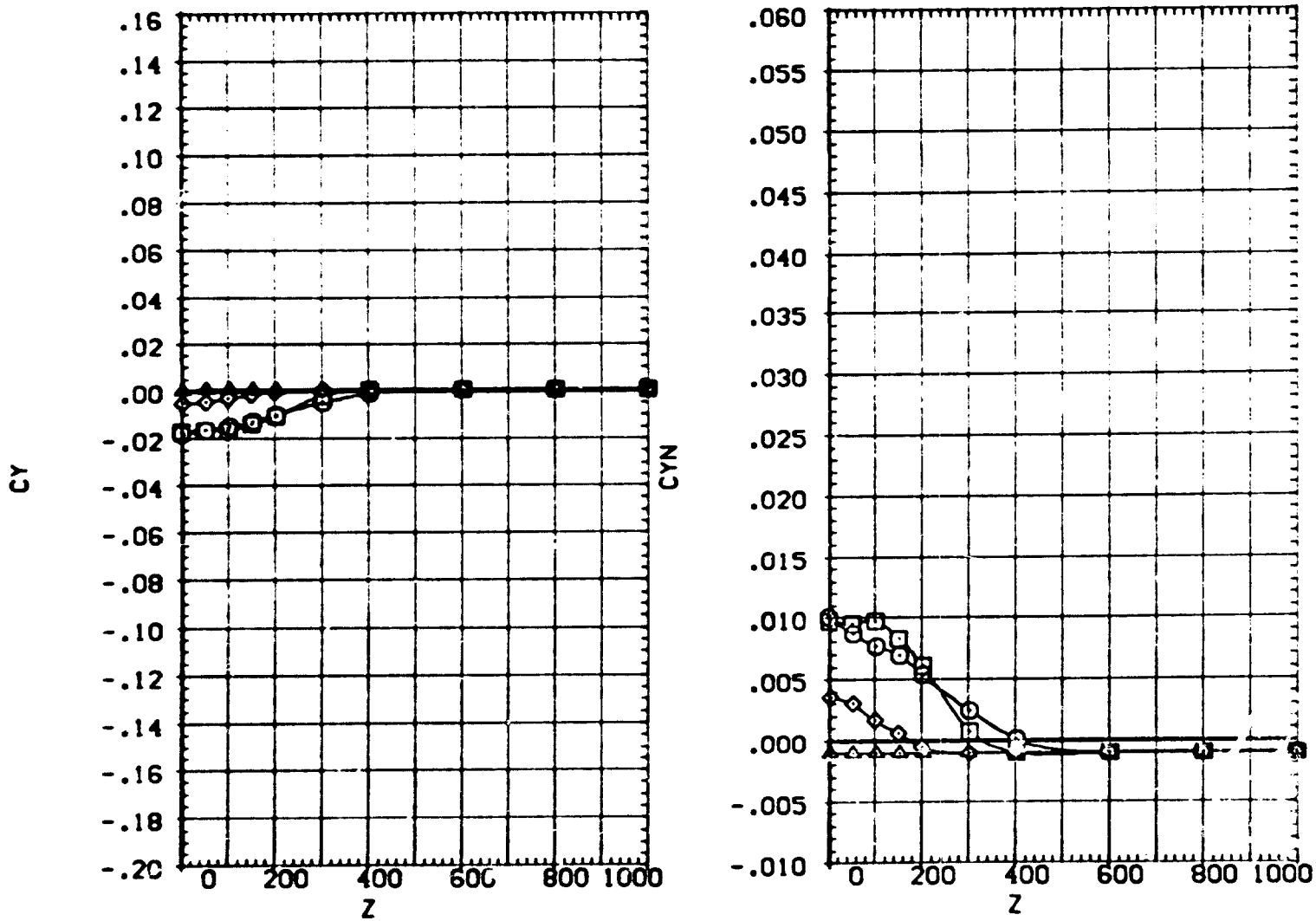


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ121)

SYMBOL	X		PARAMETRIC VALUES		
○	.318	MACH	4.530	PTOTAL	110.000
□	300.450	ALPHA	.000	BETA	.000
◇	609.480	DALPHA	.000	DBETA	.000
△	900.590	Y	200.000	PCHMBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

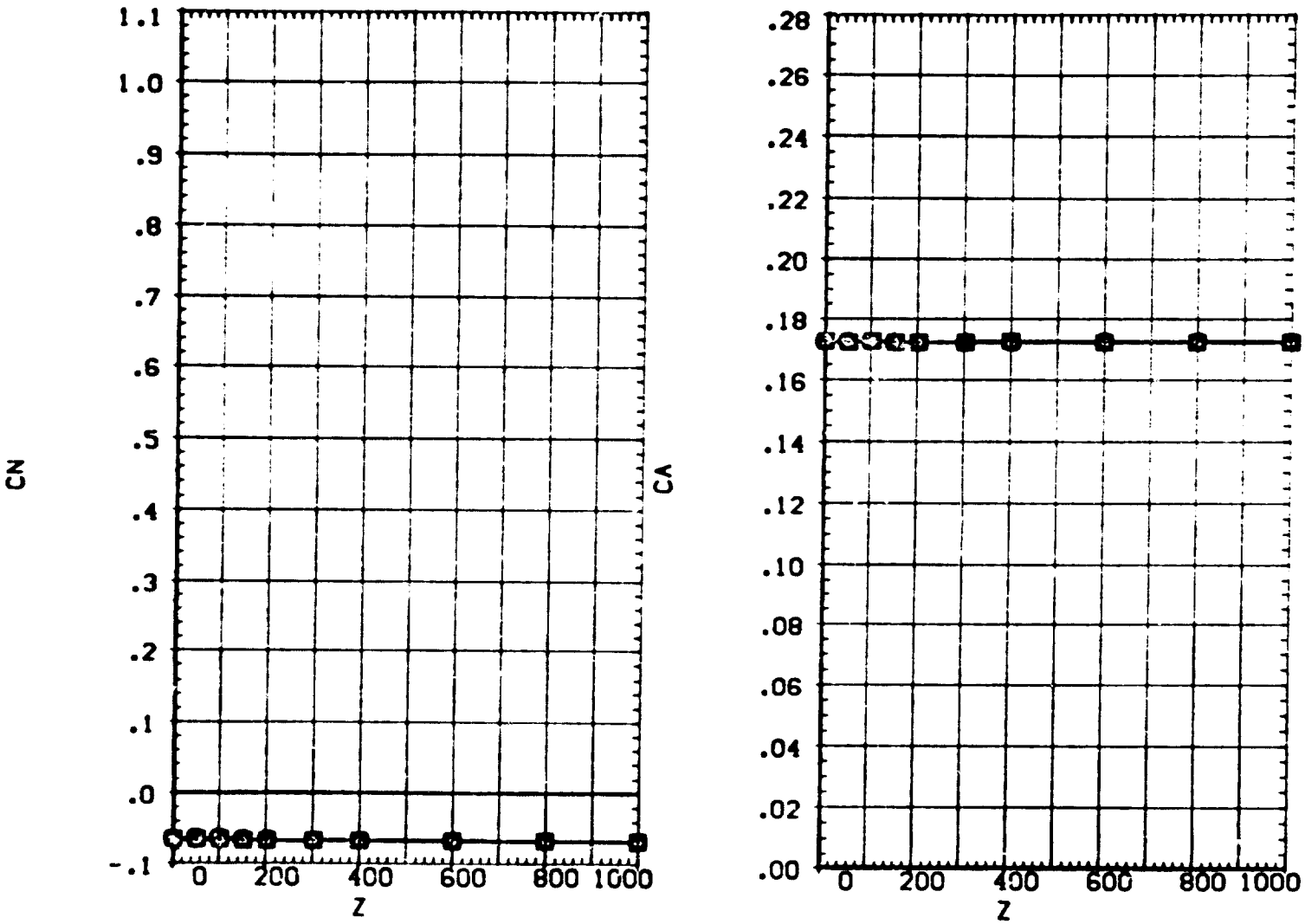


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T:0 (RTJ122)

SYMBOL	X		PARAMETRIC VALUES		
○	.248	MACH	4.530	PTOTAL	110.000
□	300.390	ALPHA	.000	BETA	.000
◇	600.530	DALPHA	.000	DBETA	.000
△	900.670	Y	400.000	POWER	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

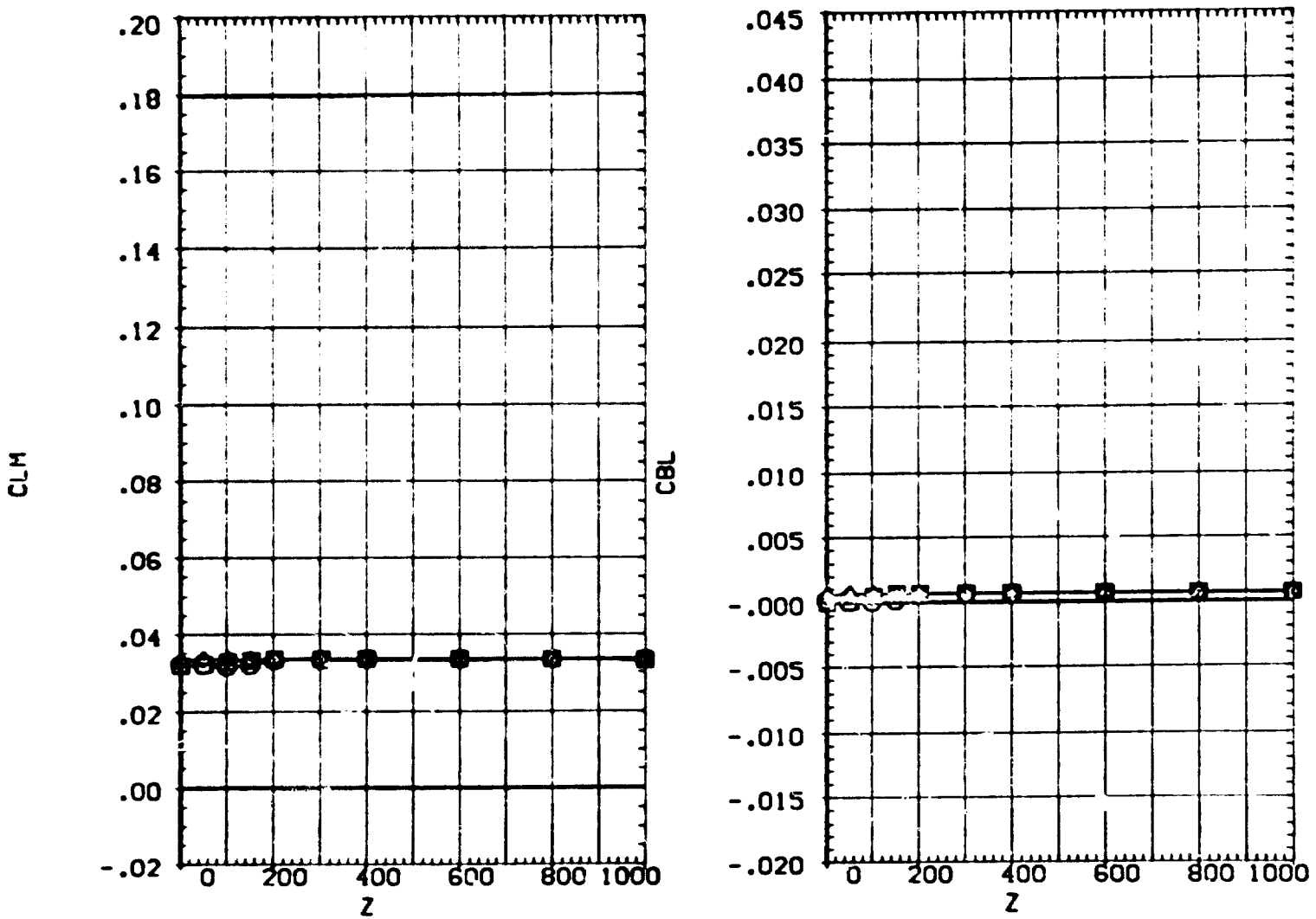


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ122)

SYMBOL	X		PARAMETRIC VALUES		
○	.248	MACH	4.530	PTOTAL	110.000
□	300.390	ALPHA	.000	BETA	.000
◇	600.530	DALPHA	.000	DBETA	.000
△	900.670	Y	400.000	PCHMBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

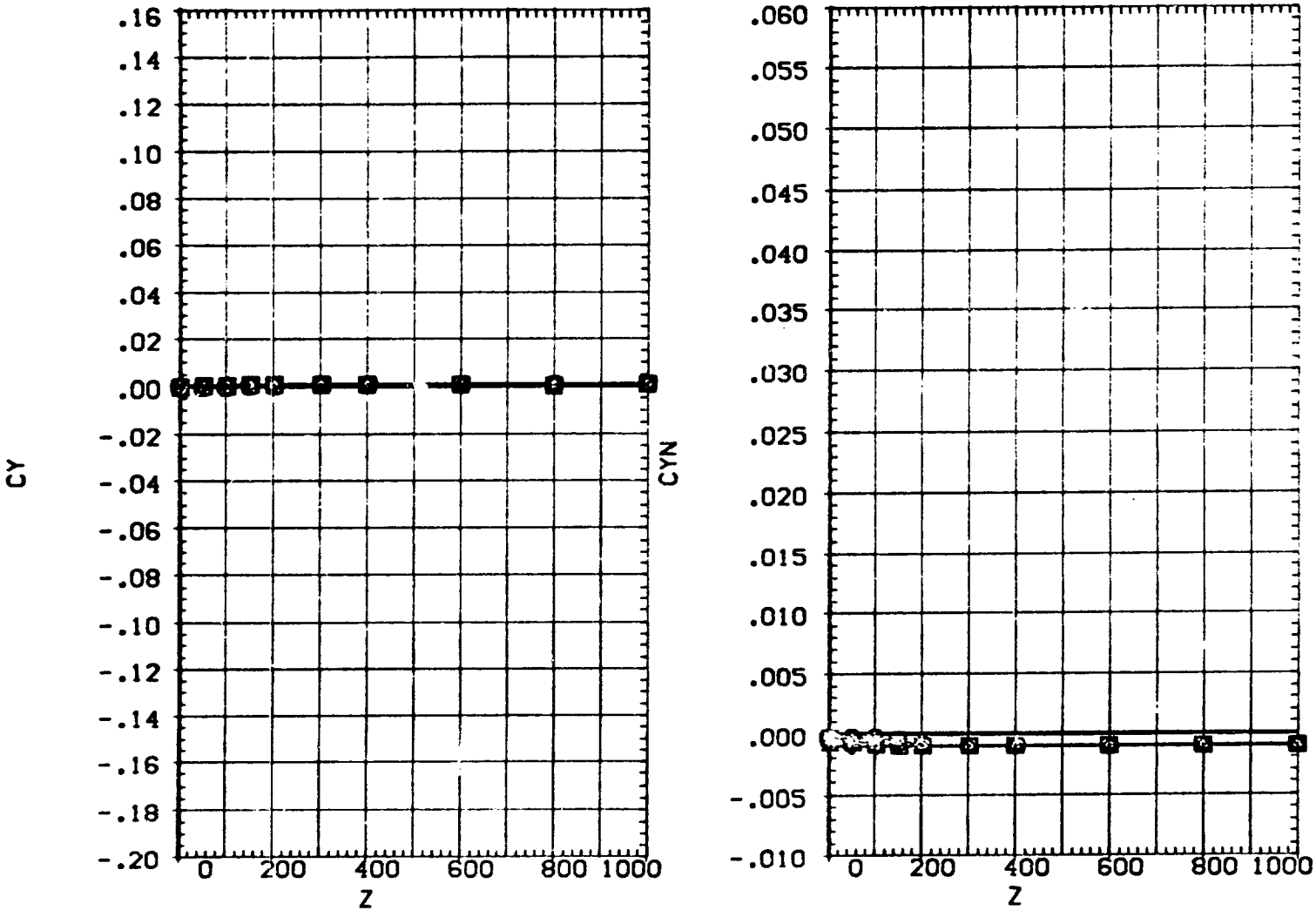


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ122)

SYMBOL	X		PARAMETRIC VALUES		
○	.248	MACH	4.530	PTOTAL	110.000
□	300.390	ALPHA	.000	BETA	.000
◇	600.530	DALPHA	.000	DBETA	.000
△	900.670	Y	400.000	PCHMBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

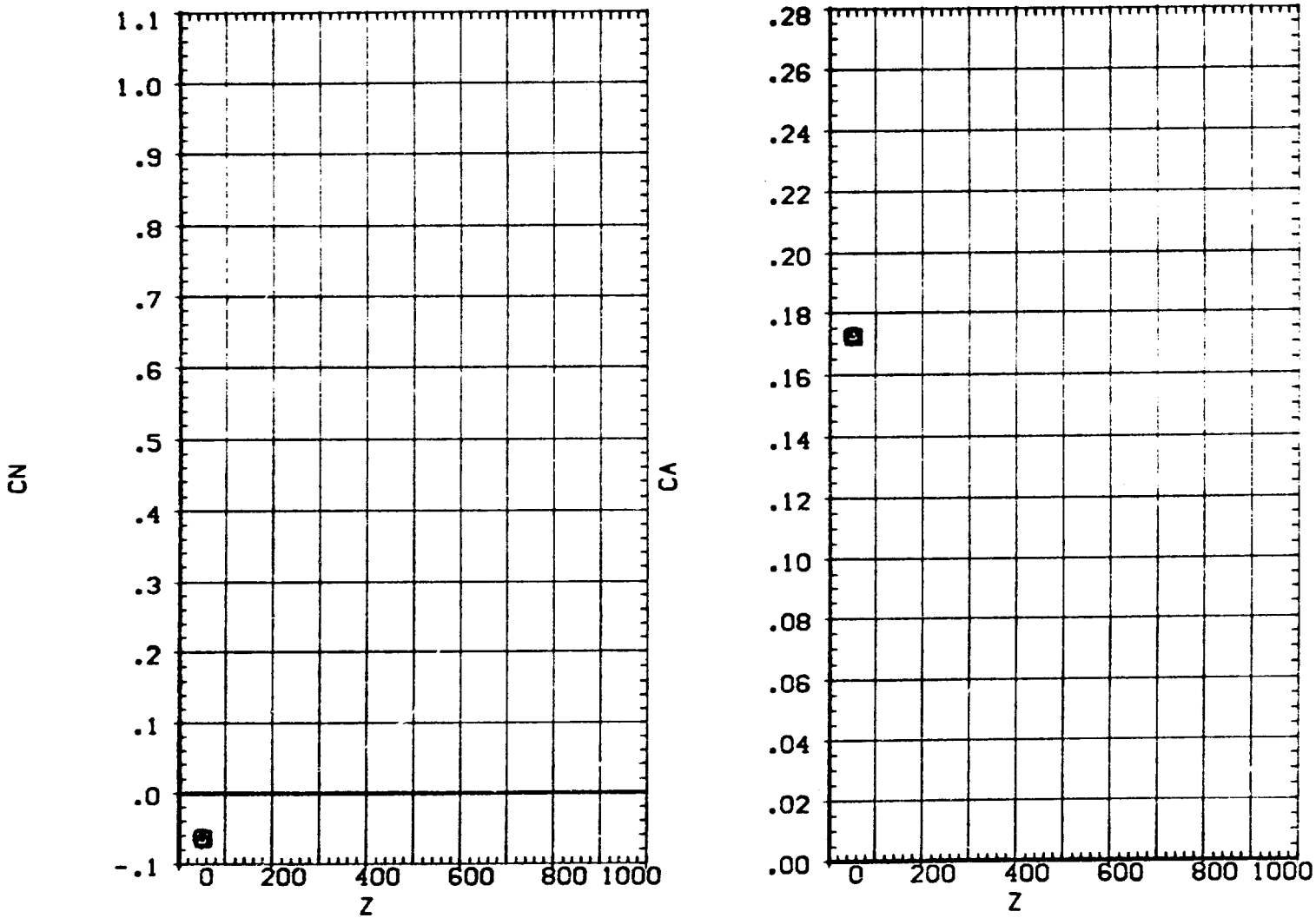


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ123)

SYMBOL	X		PARAMETRIC VALUES		
○	.238	MACH	4.530	PTOTAL	110.000
□	300.380	ALPHA	.000	BETA	.000
◇	600.510	DALPHA	.000	DBETA	.000
△	900.680	Y	800.000	PCHMBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

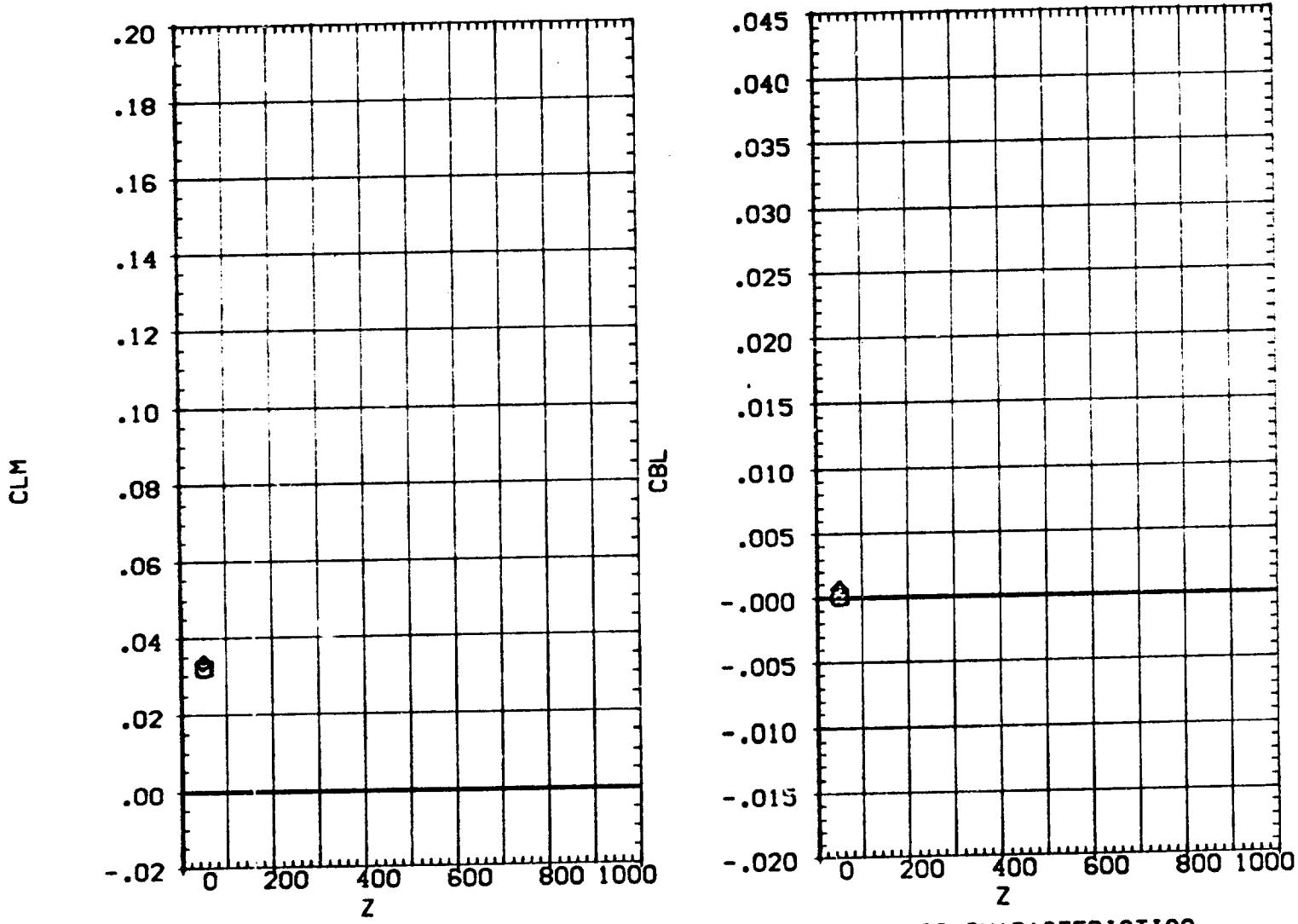


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ123)

SYMBOL	X		PARAMETRIC VALUES		
○	.238	MACH	4.530	PTOTAL	110.000
□	300.380	ALPHA	.000	BETA	.000
◇	600.510	DALPHA	.000	DBETA	.000
△	900.680	Y	800.000	PCHMBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

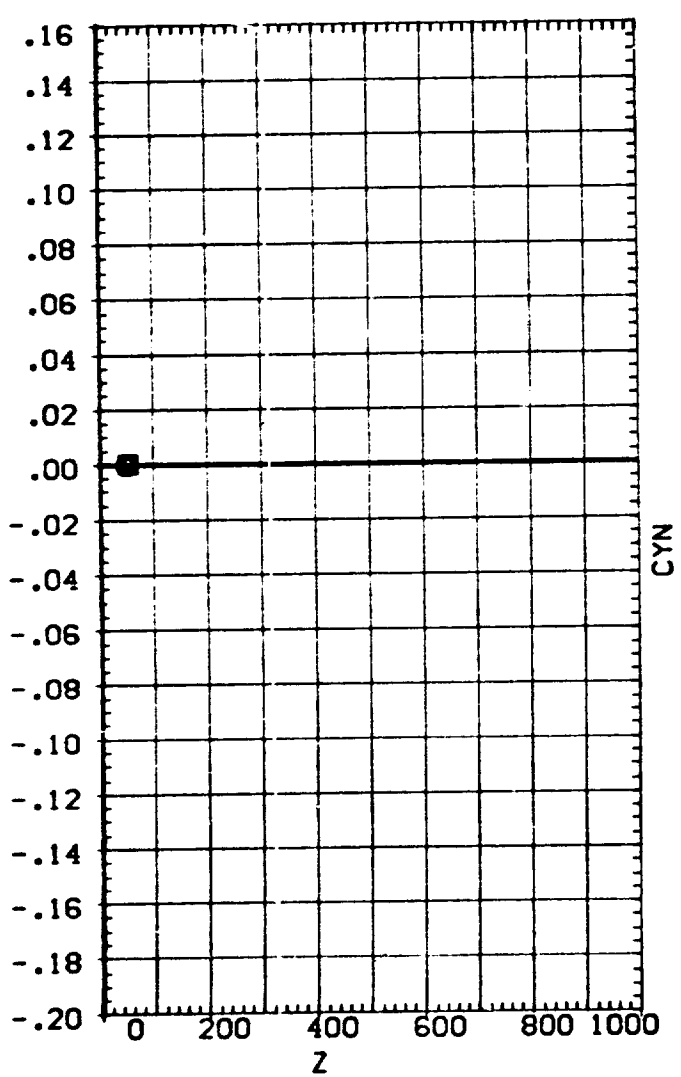


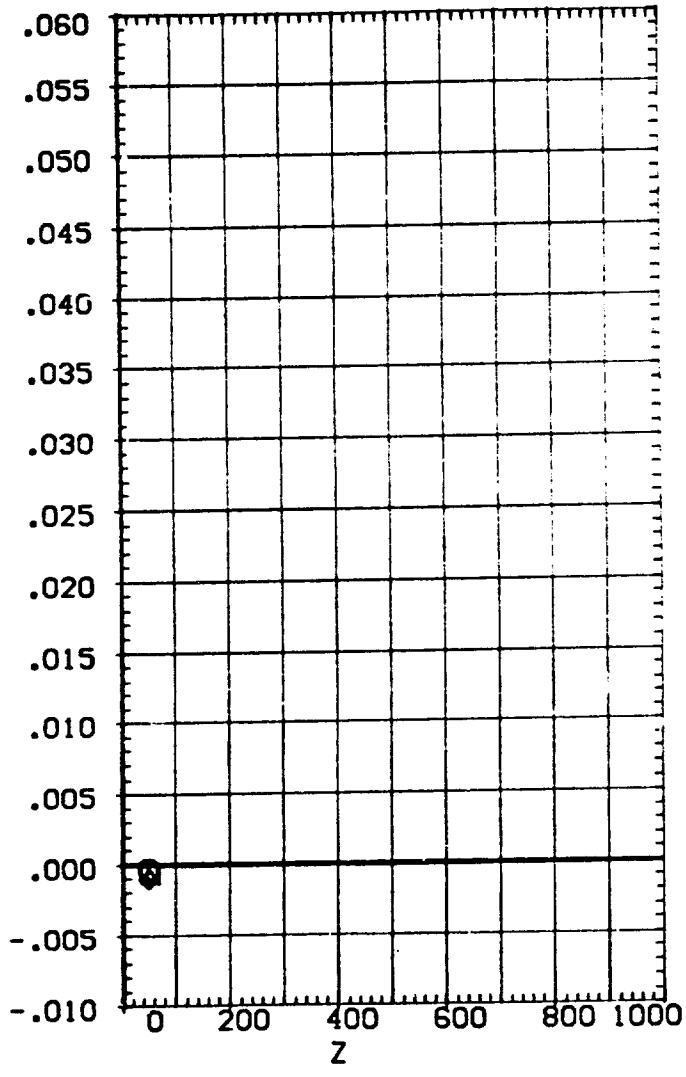
EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ123)

SYMBOL	X		PARAMETRIC VALUES		
○	.238	MACH	4.530	PTOTAL	110.000
□	300.380	ALPHA	.000	BETA	.000
◇	600.510	DALPHA	.000	DBETA	.000
△	900.680	Y	800.000	PCHMBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



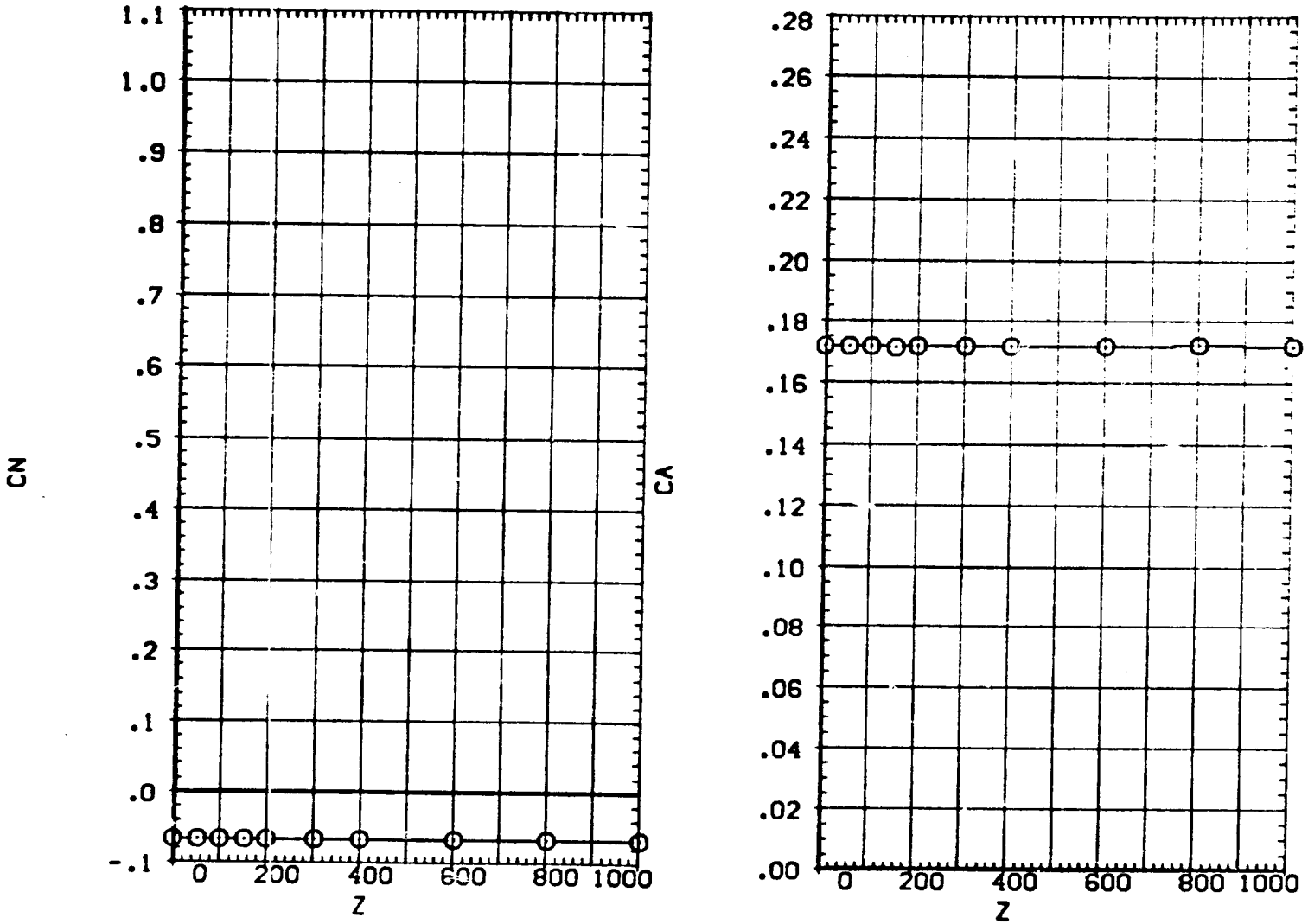


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ125)

SYMBOL	X		PARAMETRIC VALUES		
O	1600.900	MACH	4.530	PTOTAL	110.000
		ALPHA	.000	BETA	.000
		DALPHA	.000	DBETA	.000
		Y	400.000	PCHMBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

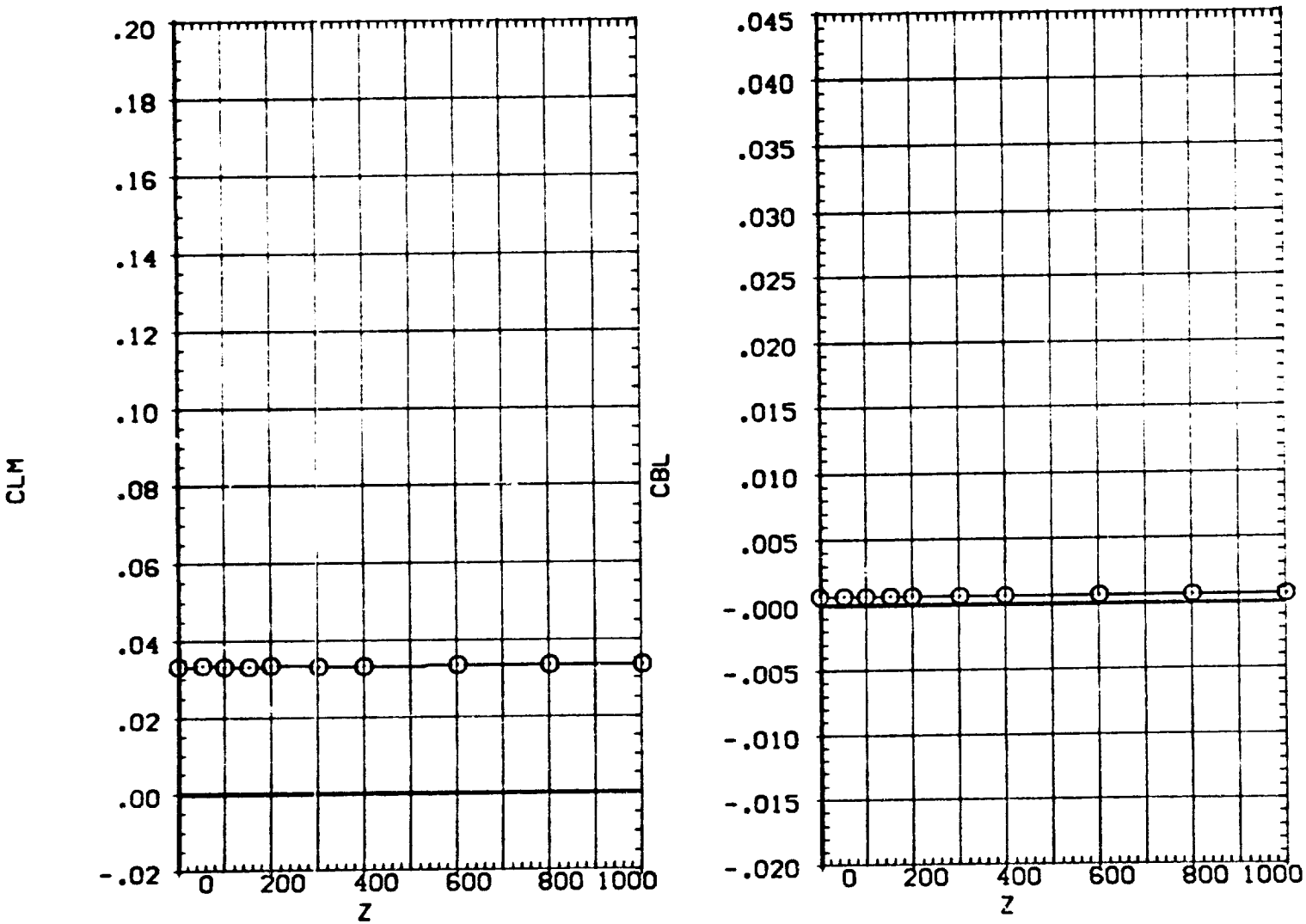


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ125)

SYMBOL	X		PARAMETRIC VALUES		
O	1600.900	MACH	4.530	PTOTAL	110.000
		ALPHA	.000	BETA	.000
		DALPHA	.000	DBETA	.000
		Y	400.000	PCHMBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

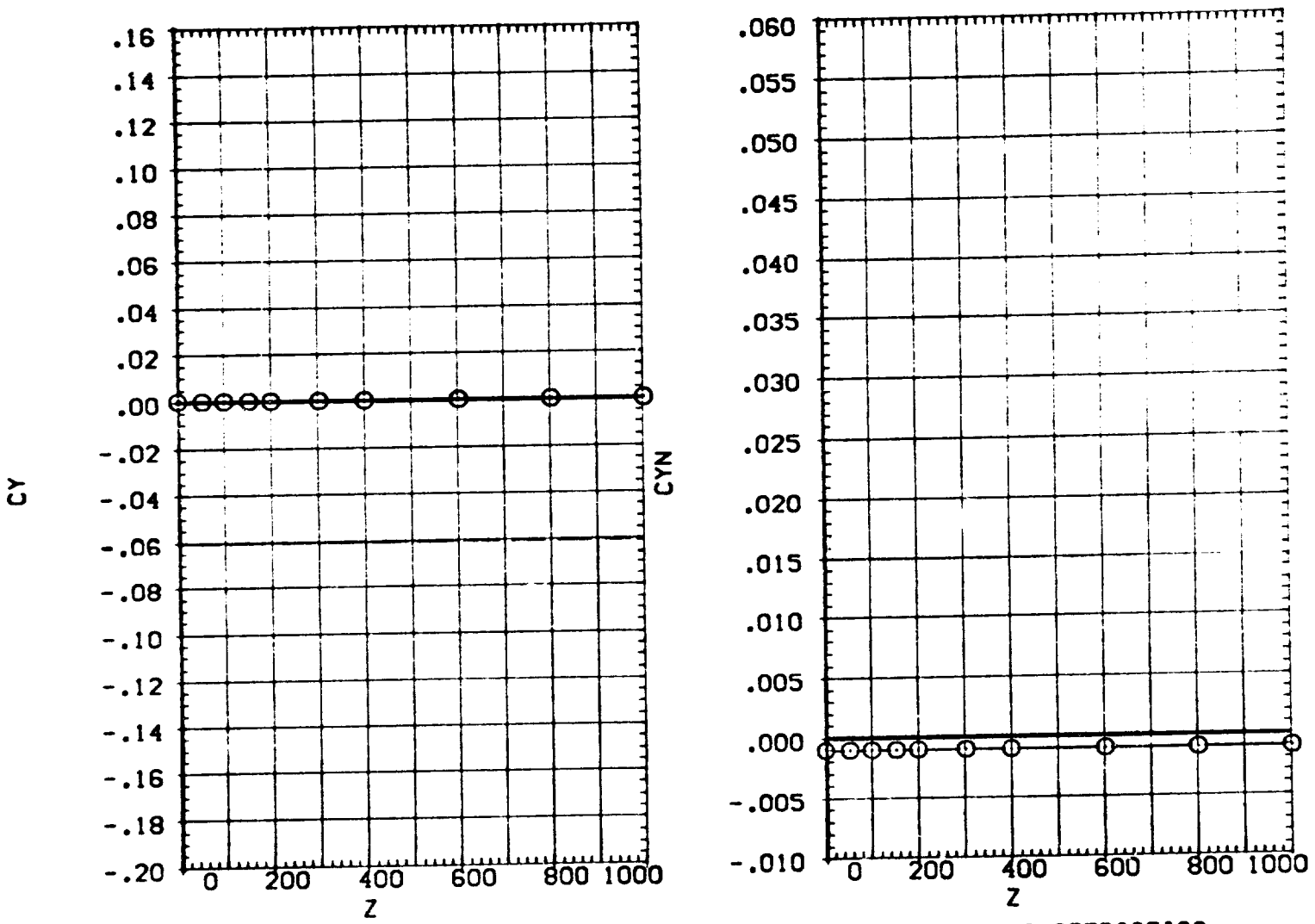


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ125)

SYMBOL	X	PARAMETRIC VALUES			
O	1600.900	MACH	4.530	PTOTAL	110.000
		ALPHA	.000	BETA	.000
		DALPHA	.000	DBETA	.000
		Y	400.000	PCHMBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

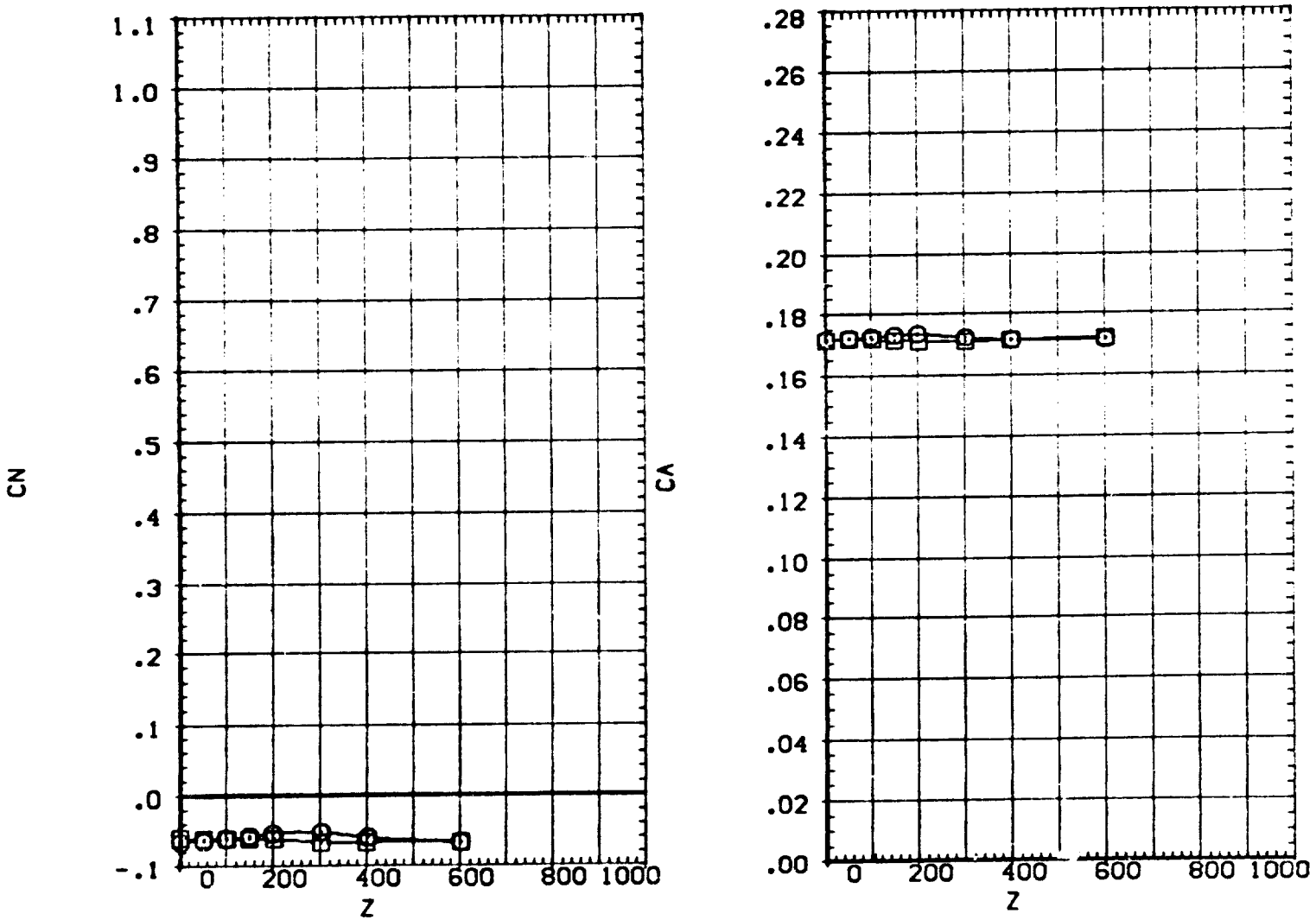


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

[A13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ126)

SYMBOL	X		PARAMETRIC VALUES		
○	.295	MACH	4.530	PTOTAL	110.000
□	900.670	ALPHA	.000	BETA	.000
		DALPHA	5.000	DBETA	.000
		Y	.000	PCHMBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

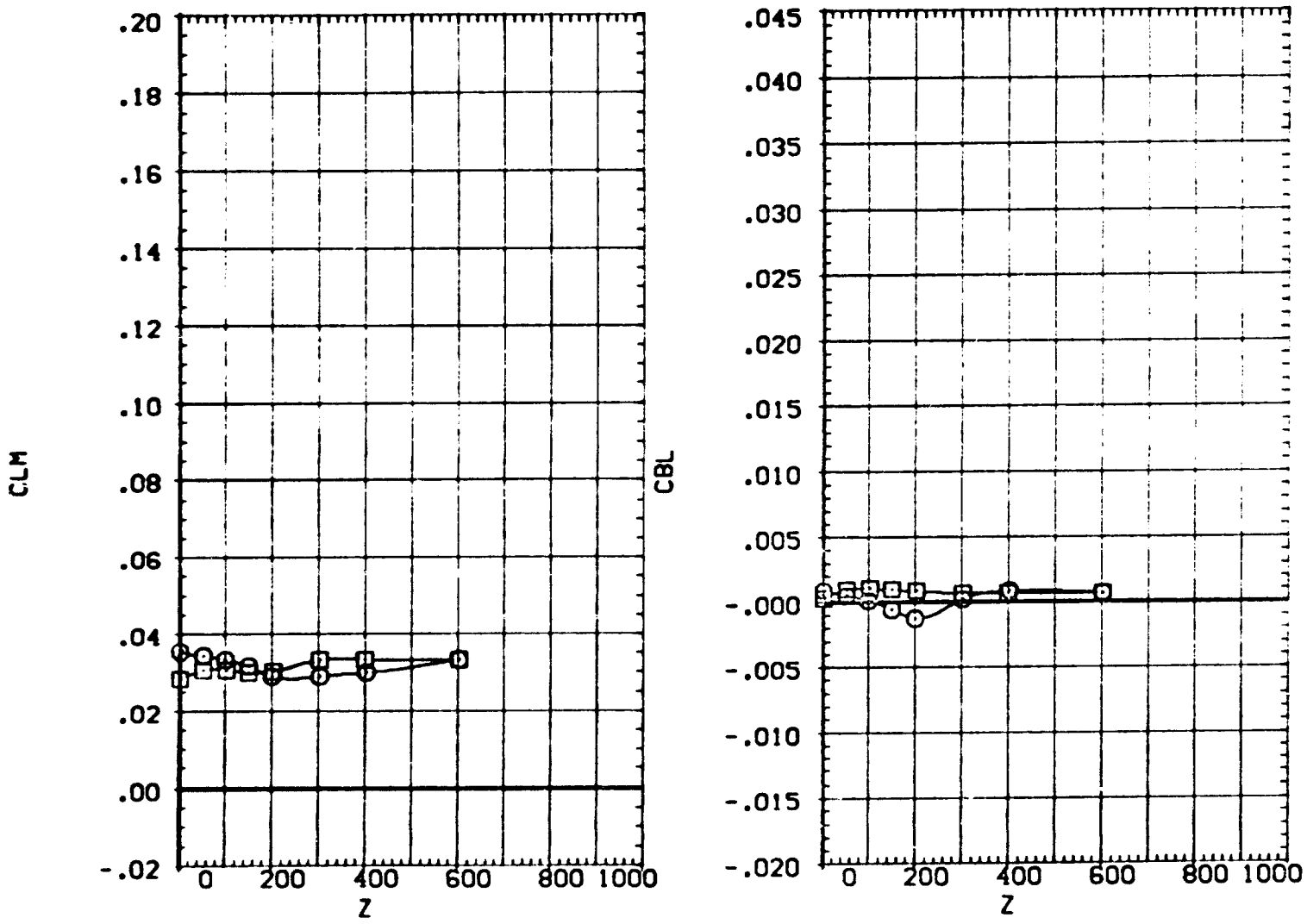


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ126)

SYMBOL	X	PARAMETRIC VALUES			
○	.295	MACH	4.530	PTOTAL	110.000
□	900.670	ALPHA	.000	BETA	.000
		DALPHA	5.000	DBETA	.000
		γ	.000	PCHMBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

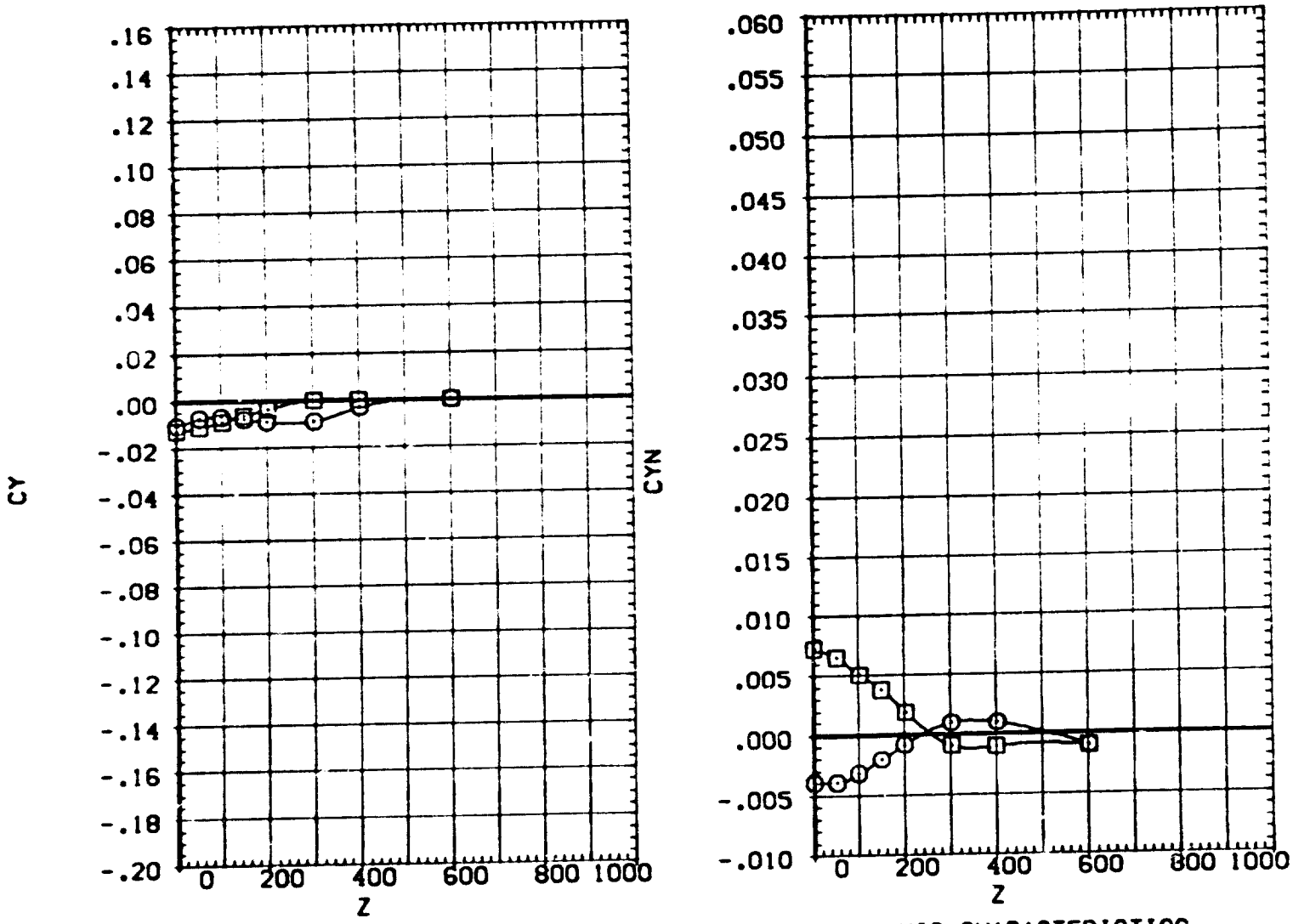


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ126)

SYMBOL	X		PARAMETRIC VALUES		
○	.795	MACH	4.530	PTOTAL	110.000
□	900.670	ALPHA	.000	BETA	.000
		DALPHA	5.000	DBETA	.000
		Y	.000	PCHMBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

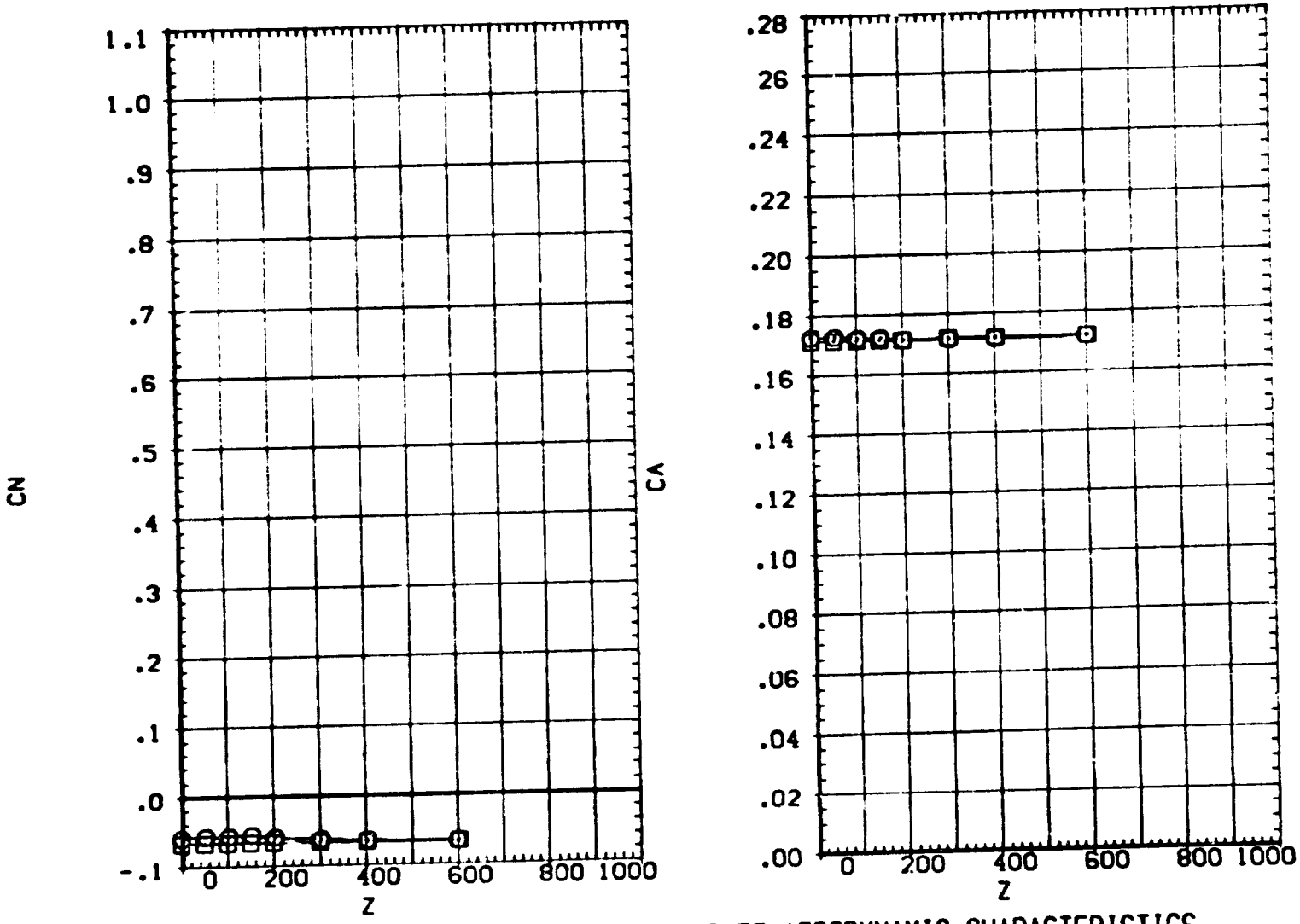


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ127)

SYMBOL	X		PARAMETRIC VALUES		
○	.440	MACH	4.530	PTOTAL	110.000
□	900.670	ALPHA	.000	BETA	.000
		DALPHA	5.000	DBETA	.000
		Y	200.000	PCHNBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

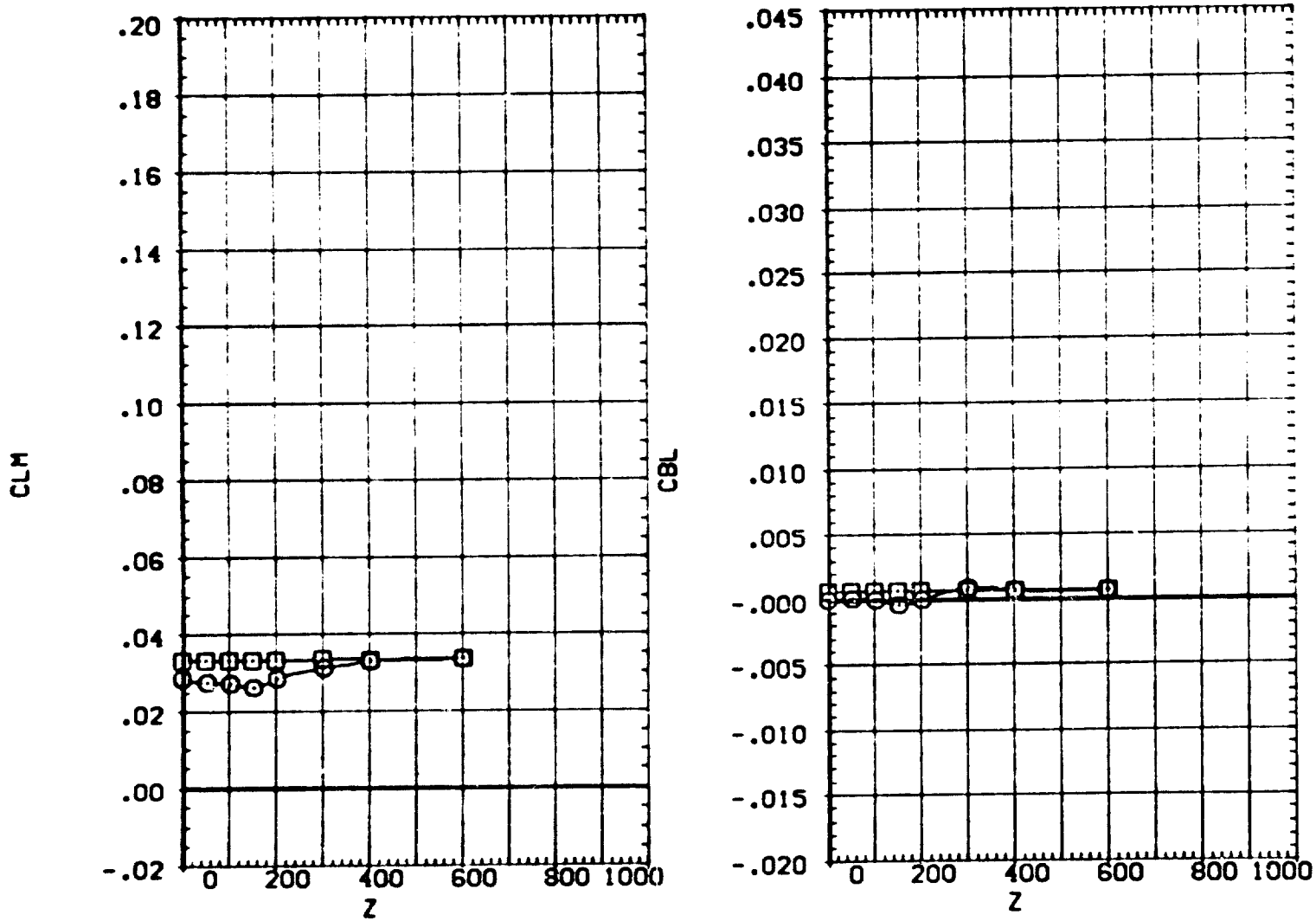


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ127)

SYMBOL	X		PARAMETRIC VALUES		
○	.440	MACH	4.530	PTOTAL	110.000
□	900.670	ALPHA	.000	BETA	.000
		DALPHA	5.000	DBETA	.000
		Y	200.000	POWER	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

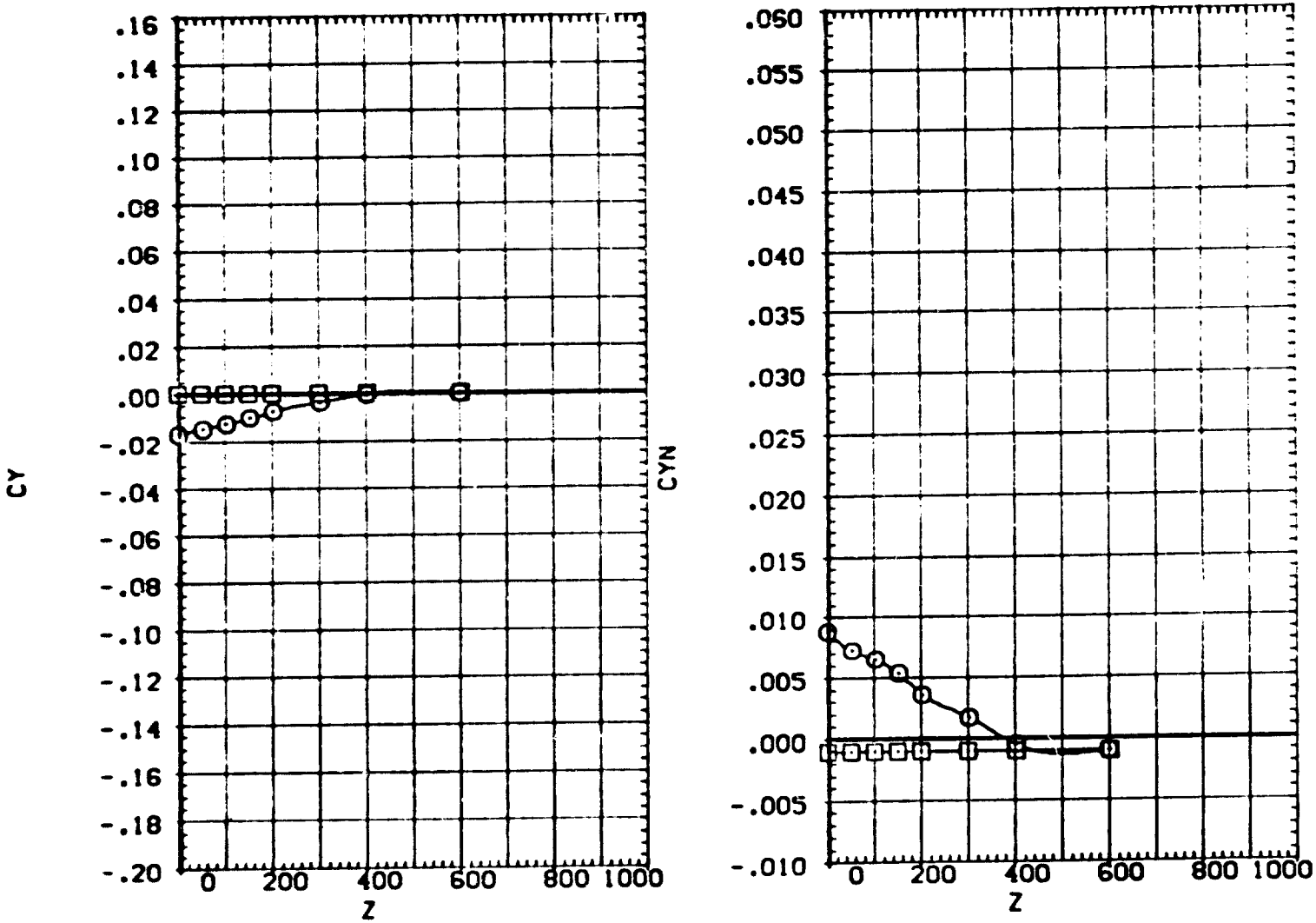


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

[A13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ127)

SYMBOL	X		PARAMETRIC VALUES		
○	.440	MACH	4.530	PTOTAL	110.000
□	900.670	ALPHA	.000	BETA	.000
		DALPHA	5.000	DBETA	.000
		Y	200.000	POWER	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

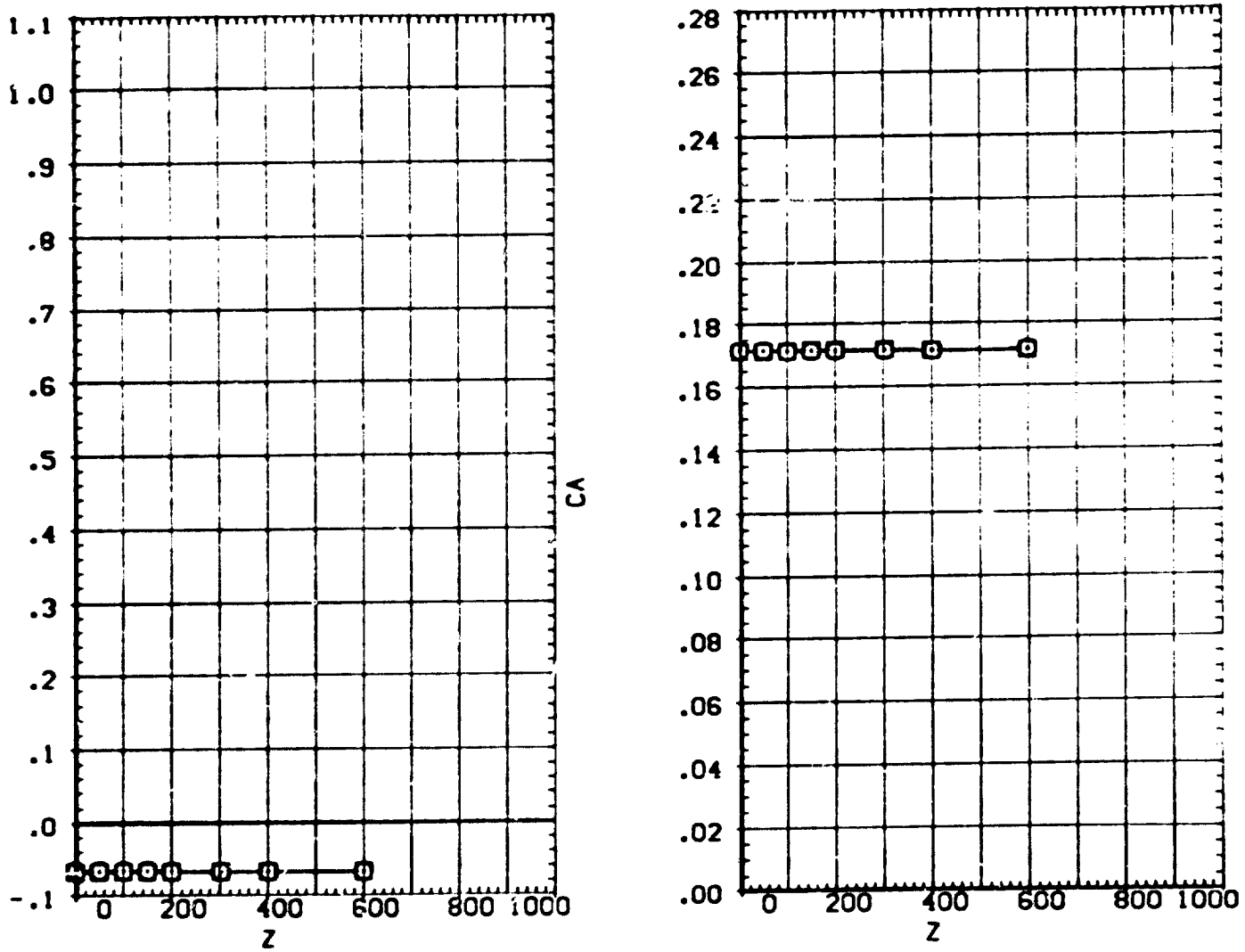


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

!A13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ128)

SYMBOL	X		PARAMETRIC VALUES		
	.303	MACH	4.530	PTOTAL	110.000
	900.580	ALPHA	.000	BETA	.000
		DALPHA	5.000	DBETA	.000
		V	400.000	PCHMBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

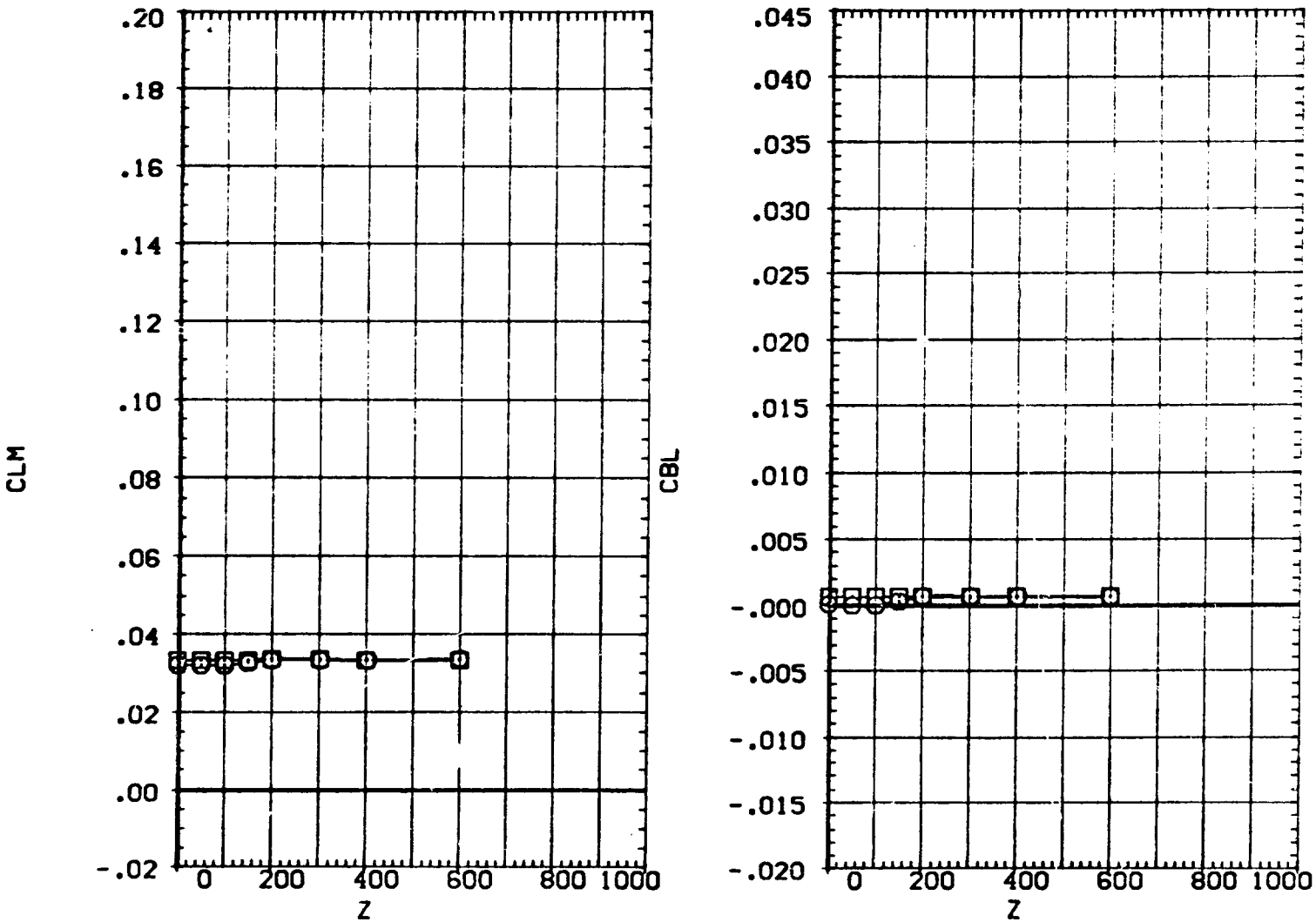


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ128)

SYMBOL	X		PARAMETRIC VALUES		
○	.303	MACH	4.530	PTOTAL	110.000
□	900.580	ALPHA	.000	BETA	.000
		DALPHA	5.000	DBETA	.000
		Y	400.000	PCHMBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

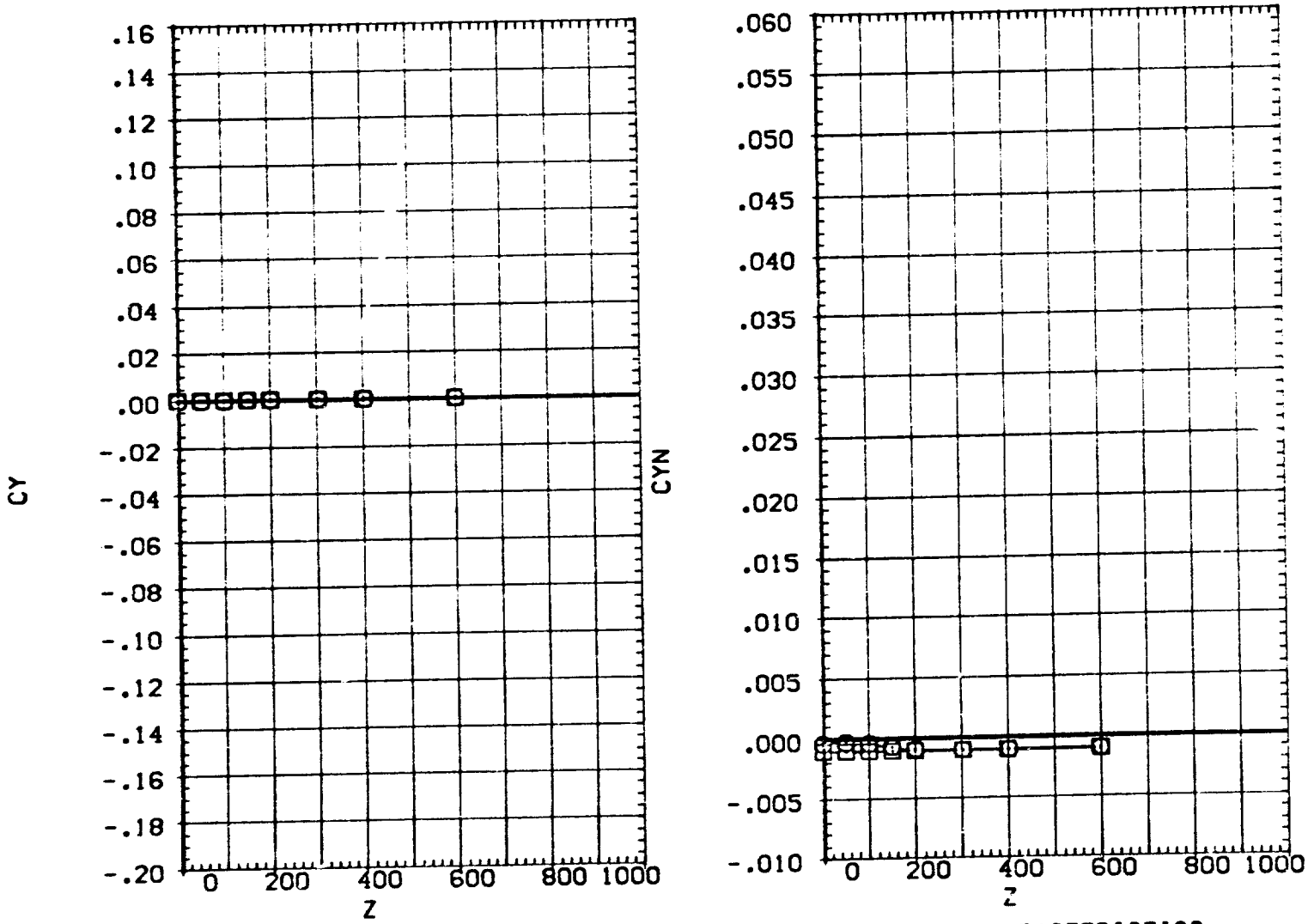


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ128)

SYMBOL	X		PARAMETRIC VALUES		
○	.303	MACH	4.530	PTOTAL	110.000
□	900.580	ALPHA	.000	BETA	.000
		DALPHA	5.000	DBETA	.000
		Y	400.000	PCHNBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

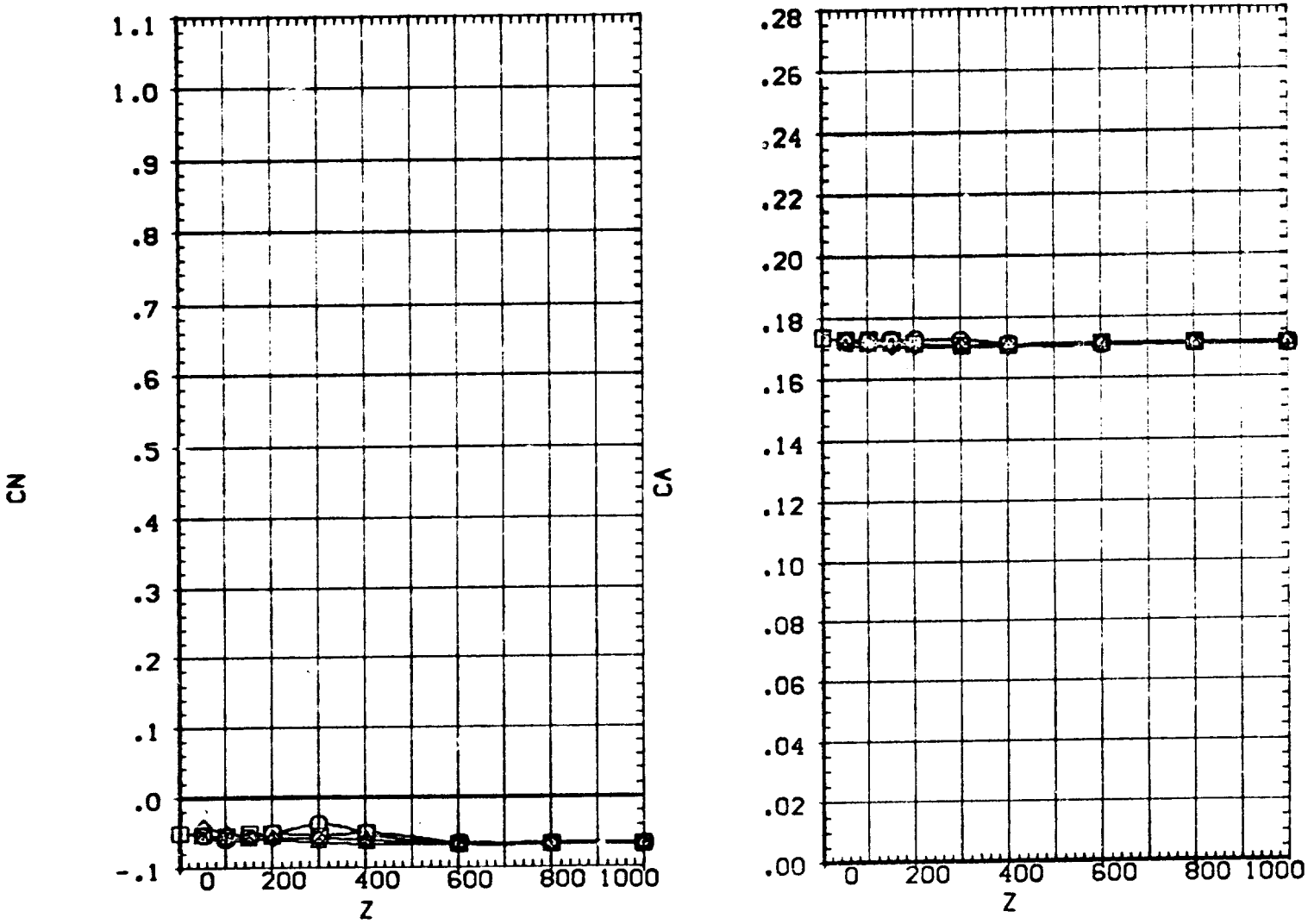


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ129)

SYMBOL	X		PARAMETRIC VALUES		
○	.343	MACH	4.530	PTOTAL	110.000
□	300.360	ALPHA	.000	BETA	.000
◇	600.660	DALPHA	-5.000	DBETA	.000
△	900.460	Y	.000	PCHNBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

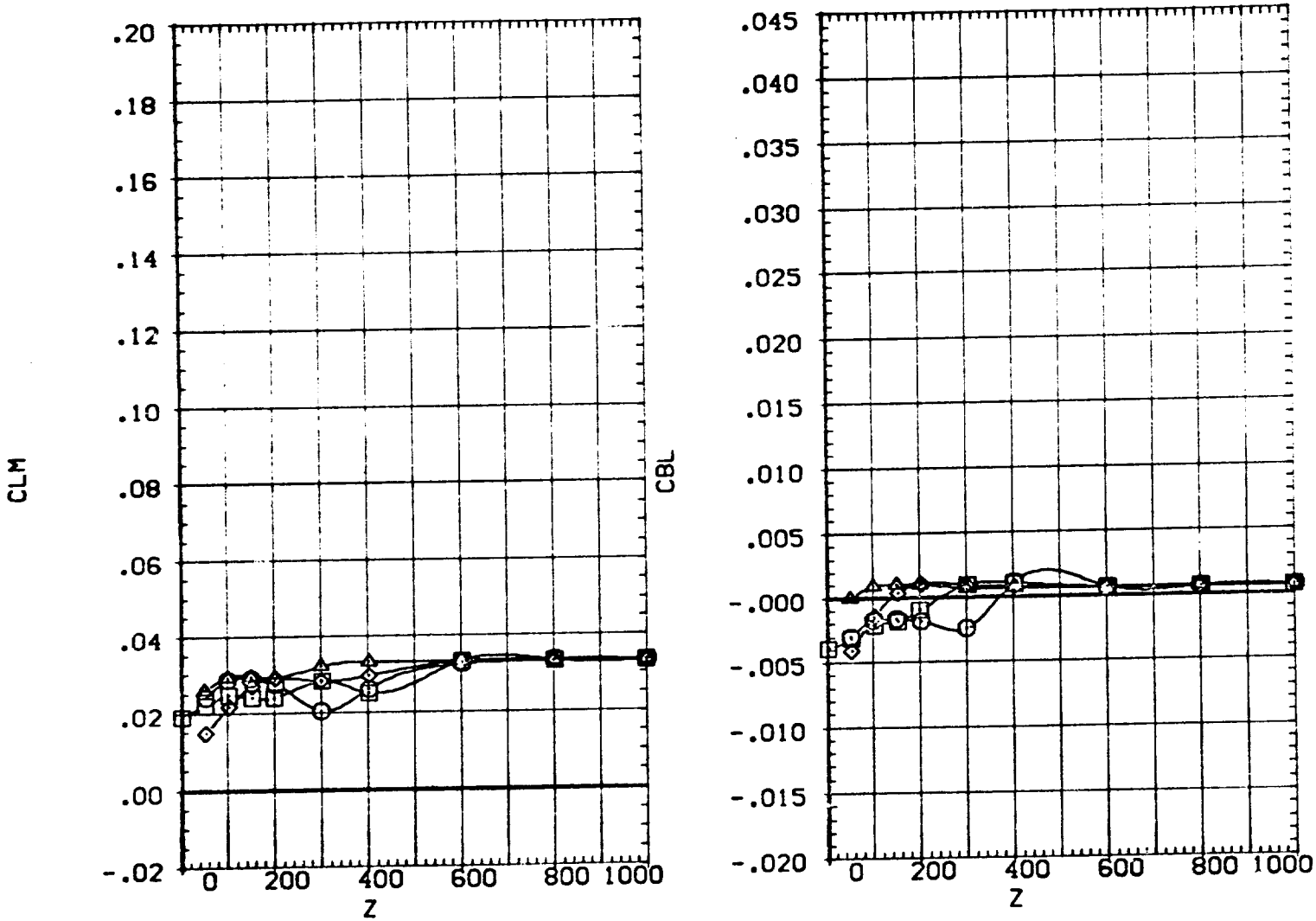


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ129)

SYMBOL	X		PARAMETRIC VALUES		
○	.343	MACH	4.530	PTOTAL	110.000
□	300.360	ALPHA	.000	BETA	.000
◇	600.660	DALPHA	-5.000	DBETA	.000
△	900.460	Y	.000	PCHMSR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

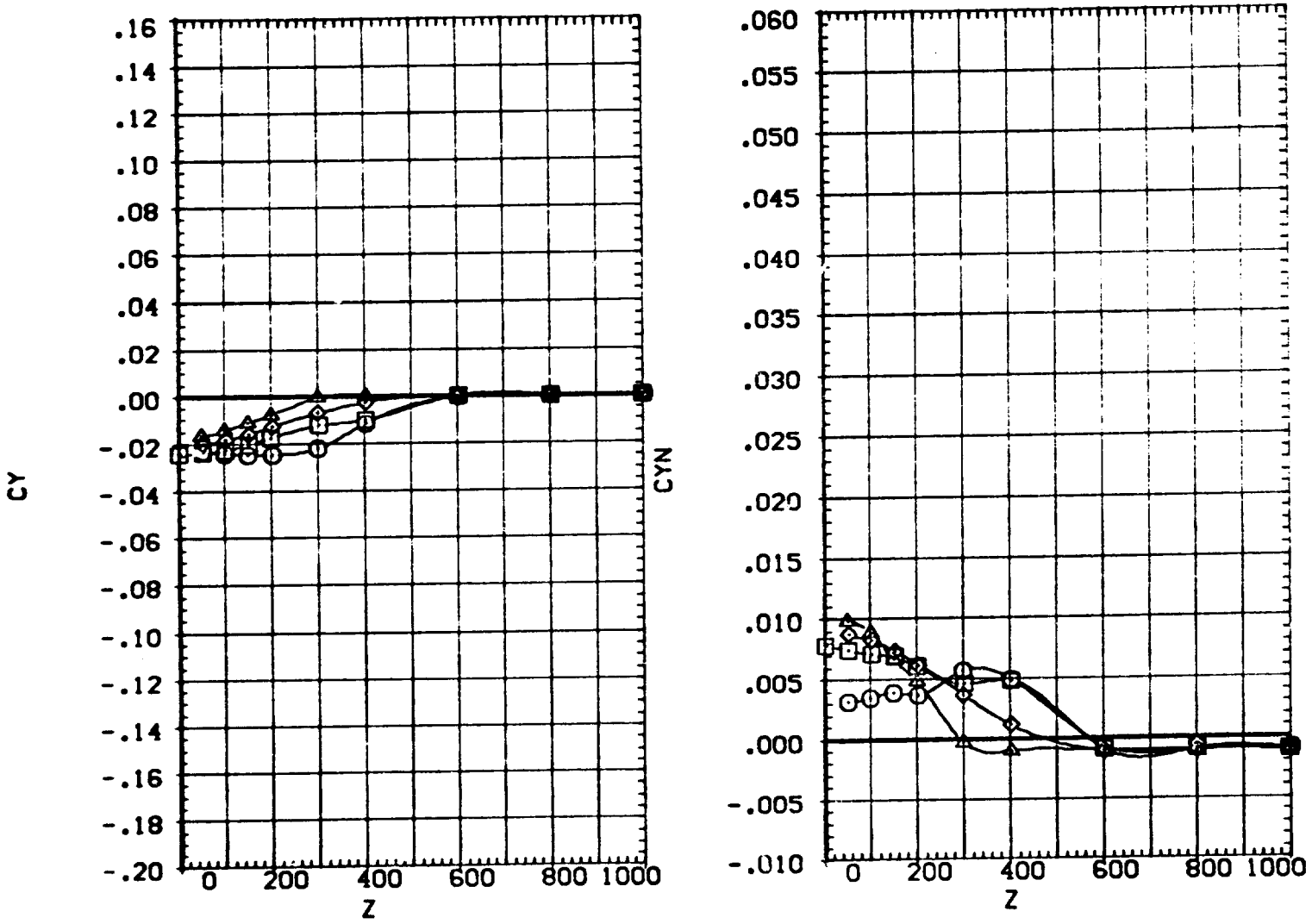


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ129)

SYMBOL	X		PARAMETRIC VALUES		
○	.343	MACH	4.530	PTOTAL	110.000
□	300.360	ALPHA	.000	BETA	.000
◇	600.660	DALPHA	-5.000	DBETA	.000
△	900.460	Y	.000	PCHMBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

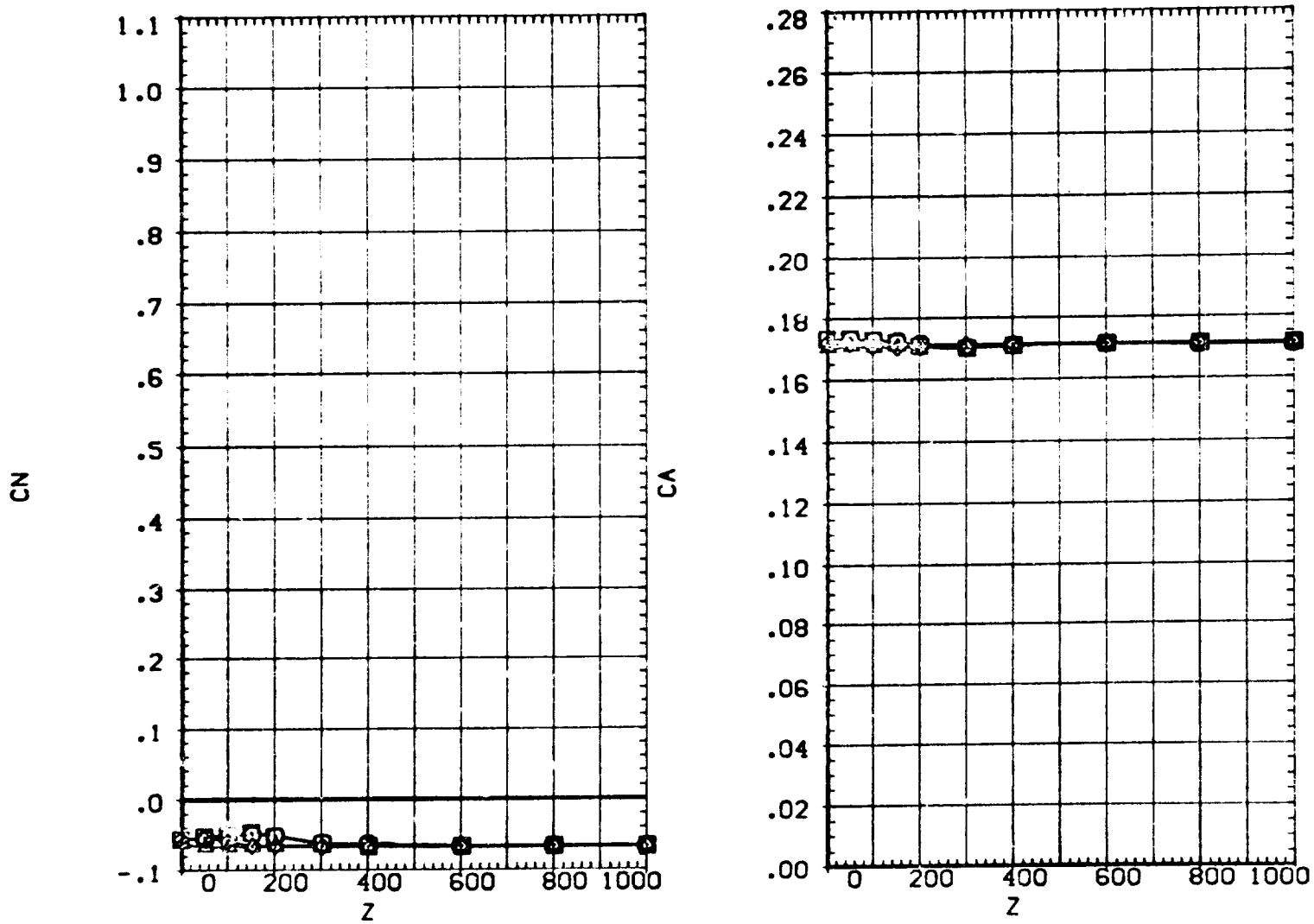


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ130)

SYMBOL	X		PARAMETRIC VALUES		
○	.340	MACH	4.530	PTOTAL	110.000
□	300.400	ALPHA	.000	BETA	.000
◇	600.490	DALPHA	-5.000	DBETA	.000
△	900.750	Y	200.000	PCHMBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

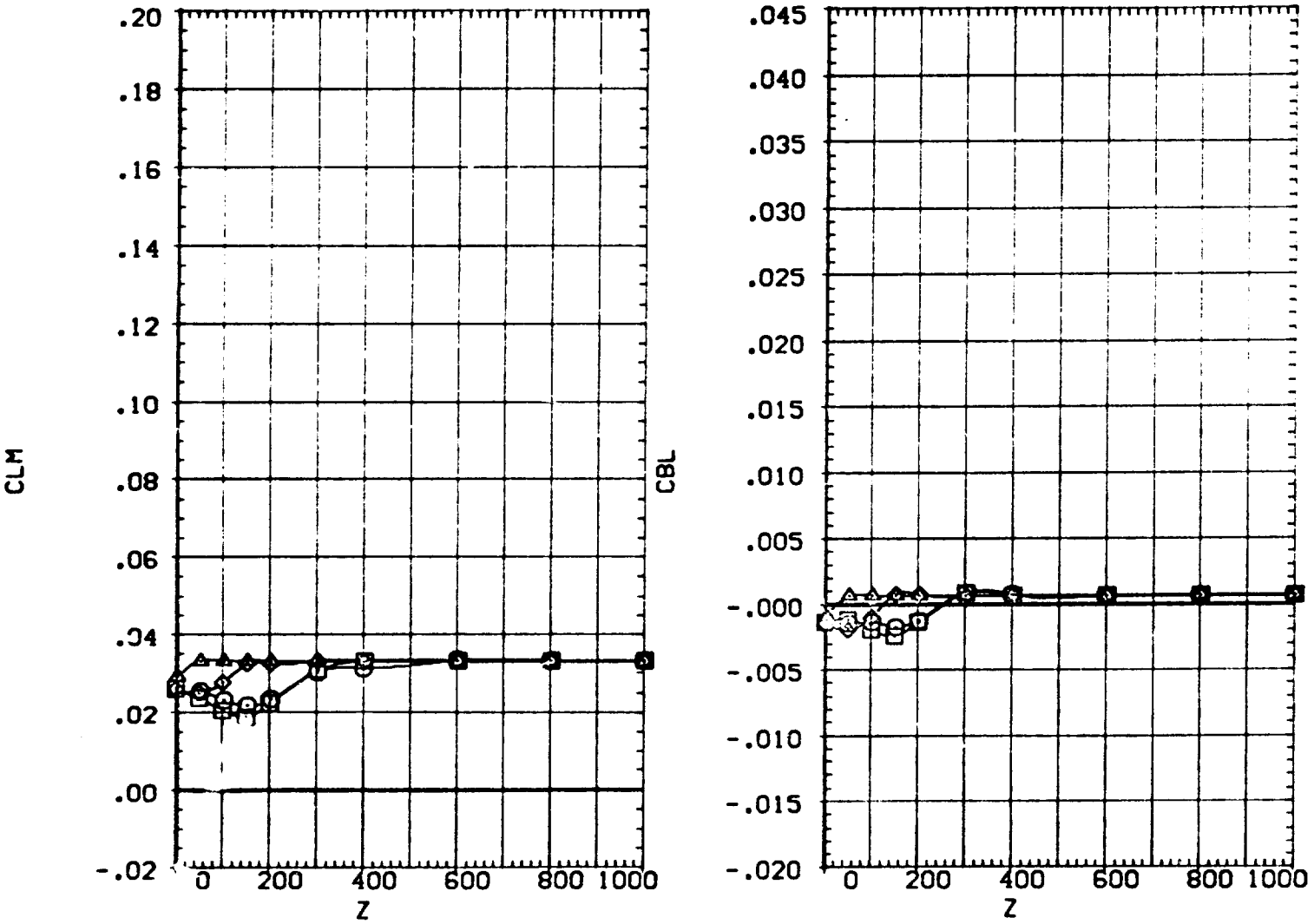


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T!0 (RTJ130)

SYMBOL	X		PARAMETRIC VALUES		
○	.340	MACH	4.530	PTOTAL	110.000
□	300.400	ALPHA	.000	BETA	.000
◇	600.490	DALPHA	-5.000	DBETA	.000
△	900.750	Y	200.000	PCHMBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

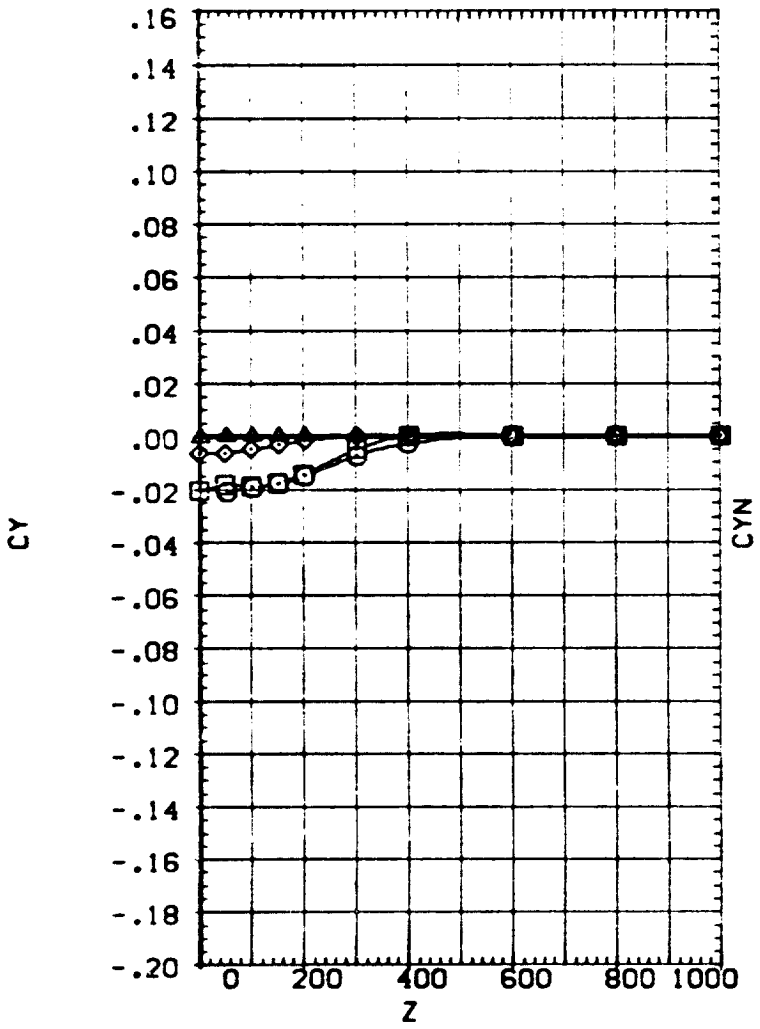


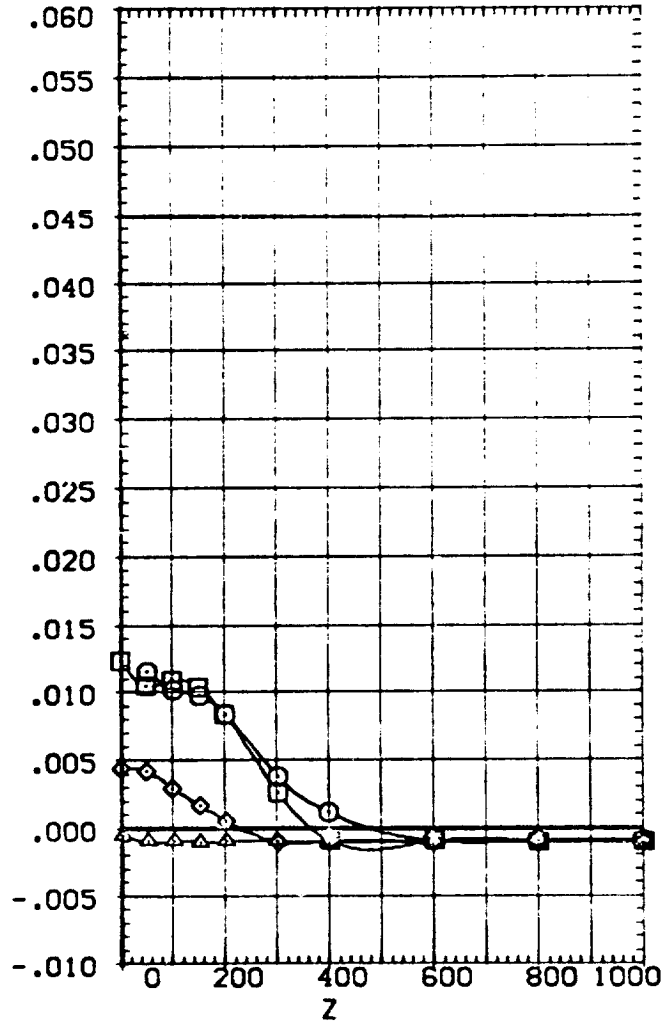
EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

[A13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ130)

SYMBOL	X		PARAMETRIC VALUES		
○	.340	MACH	4.530	PTOTAL	110.000
◇	300.400	ALPHA	.000	BETA	.000
△	600.490	DALPHA	-5.000	DBETA	.000
	900.750	Y	200.000	PCHMBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



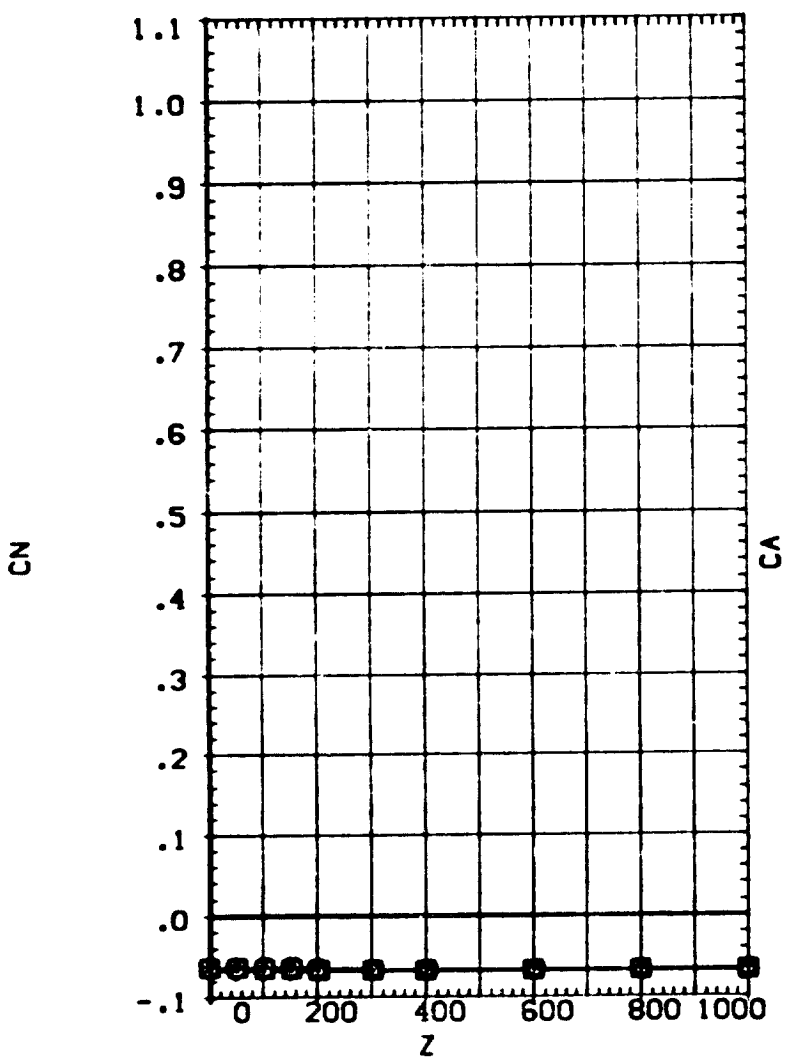


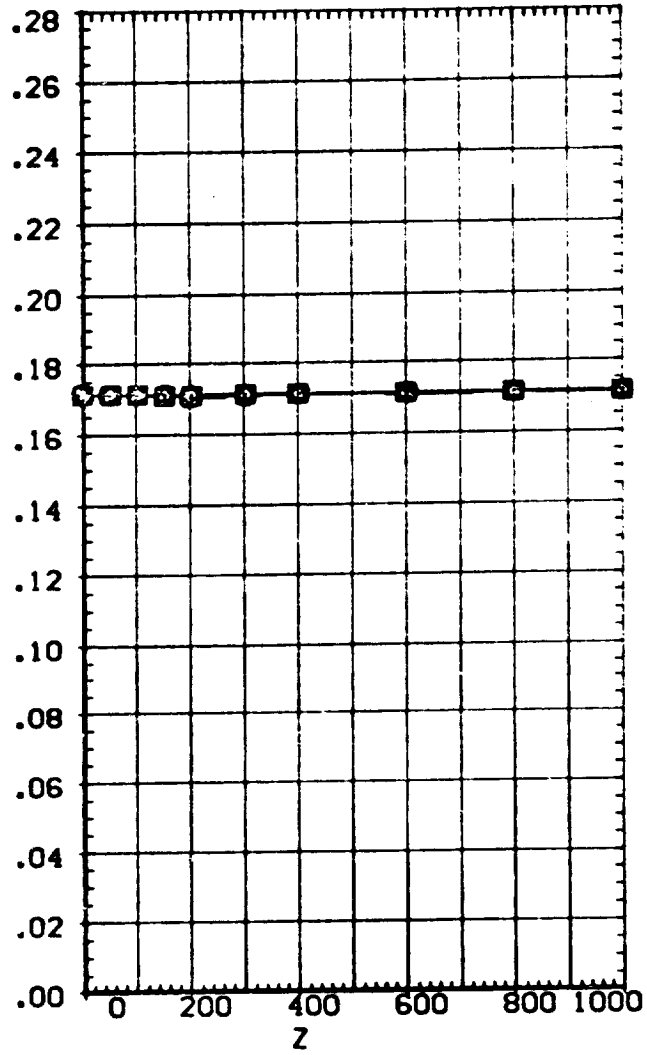
EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ131)

SYMBOL	X		PARAMETRIC VALUES		
○	.178	MACH	4.530	PTOTAL	110.000
□	300.370	ALPHA	.000	BETA	.000
◇	600.510	DALPHA	-5.000	DBETA	.000
△	900.600	Y	400.000	PCHMBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



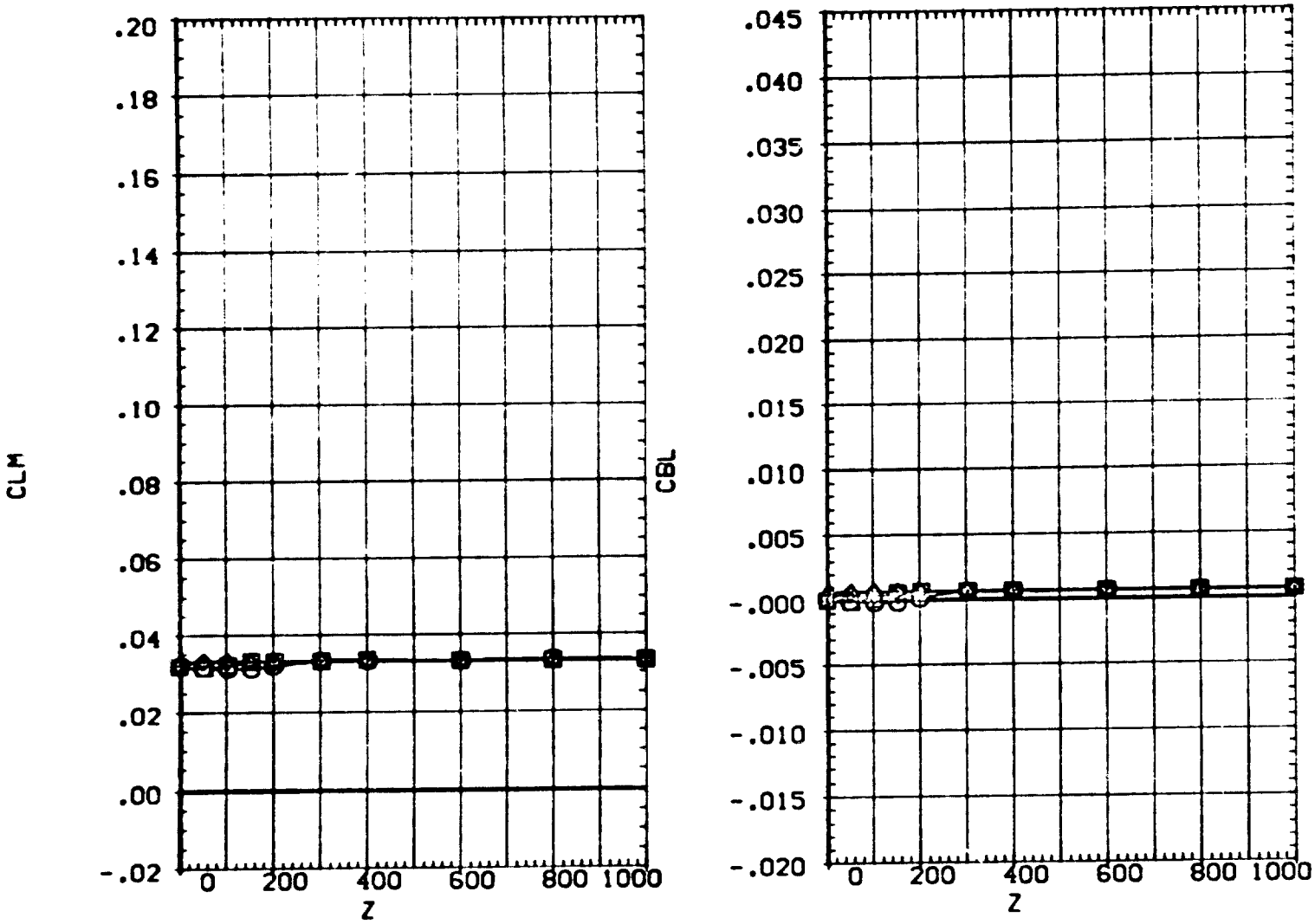


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ131)

SYMBOL	X		PARAMETRIC VALUES		
○	.178	MACH	4.530	PTOTAL	110.000
□	300.370	ALPHA	.000	BETA	.000
◇	600.510	DALPHA	-5.000	DBETA	.000
△	900.600	Y	400.000	PCHMBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

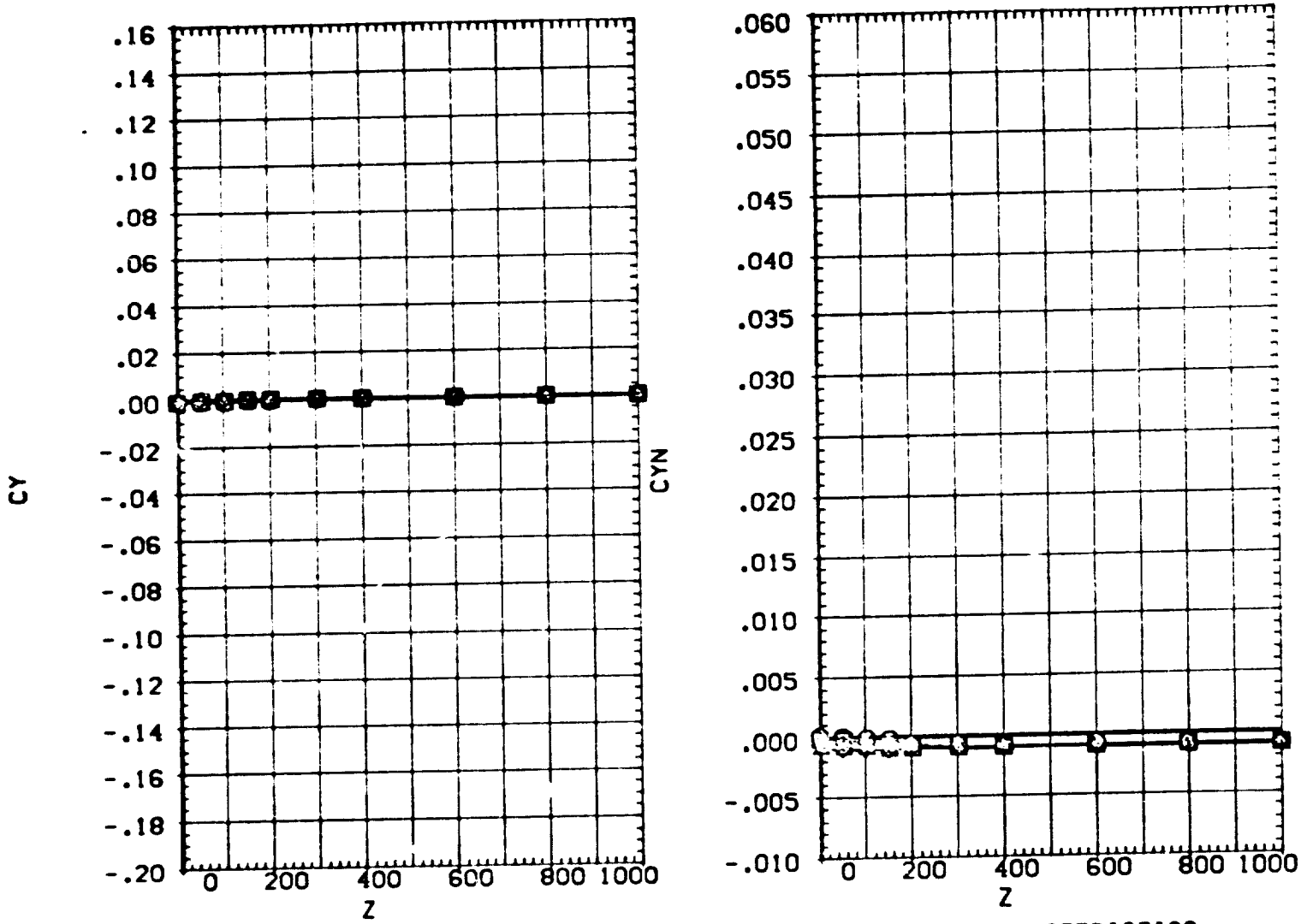


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ131)

SYMBOL	X		PARAMETRIC VALUES		
○	.178	MACH	4.530	PTOTAL	110.000
□	300.370	ALPHA	.000	BETA	.000
◇	600.510	DALPHA	-5.000	DBETA	.000
△	900.600	Y	400.000	PCHBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

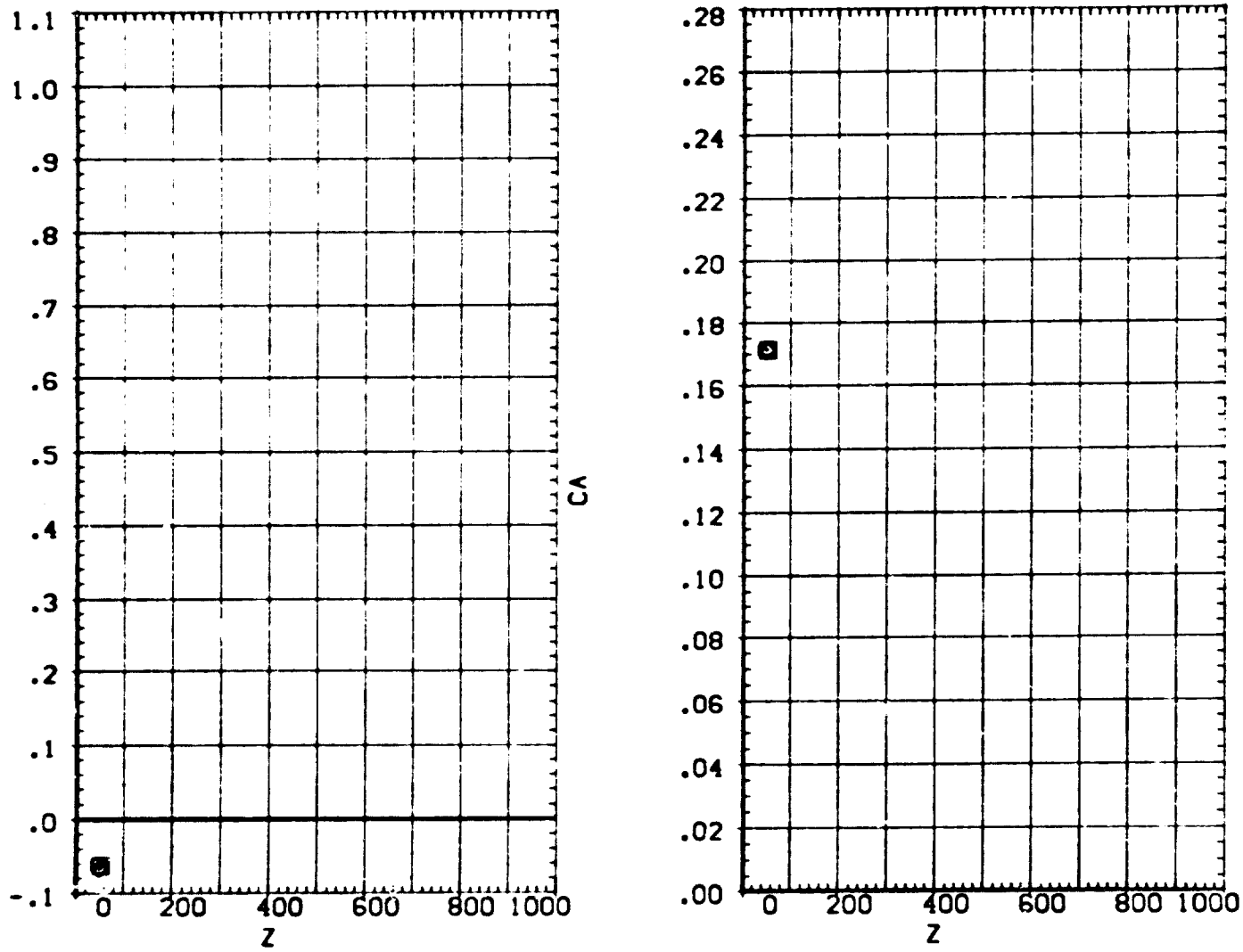


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ132)

SYMBOL	X		PARAMETRIC VALUES		
○	.117	MACH	4.530	PTOTAL	110.000
□	300.350	ALPHA	.000	BETA	.000
◇	600.520	DALPHA	-5.000	DBETA	.000
△	900.710	Y	800.000	PCHMBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

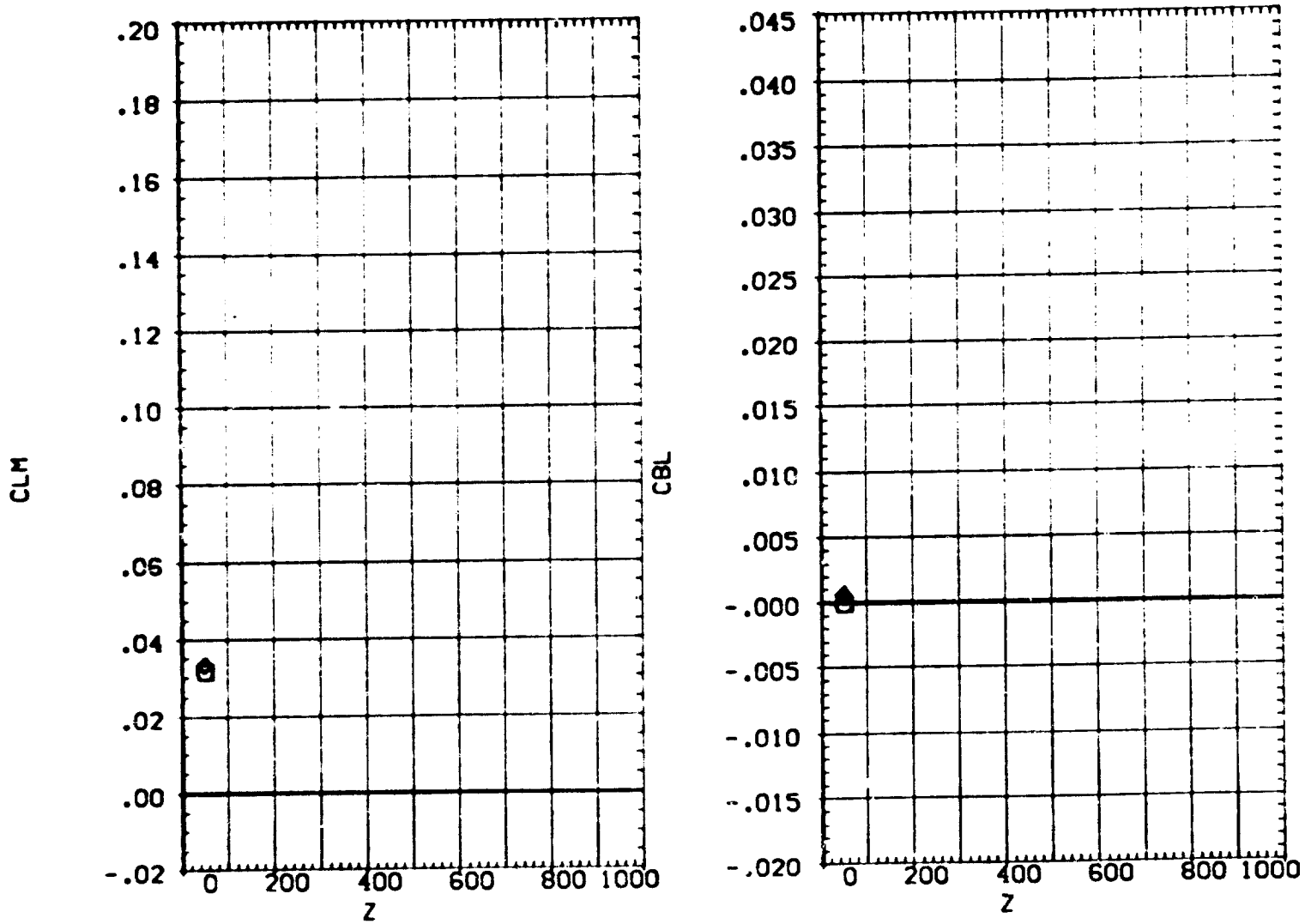


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ132)

SYMBOL	X		PARAMETRIC VALUES		
○	.117	MACH	4.530	PTOTAL	110.000
□	300.350	ALPHA	.000	BETA	.000
◇	600.520	DALPHA	-5.000	DBETA	.000
△	900.710	Y	800.000	PCHBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

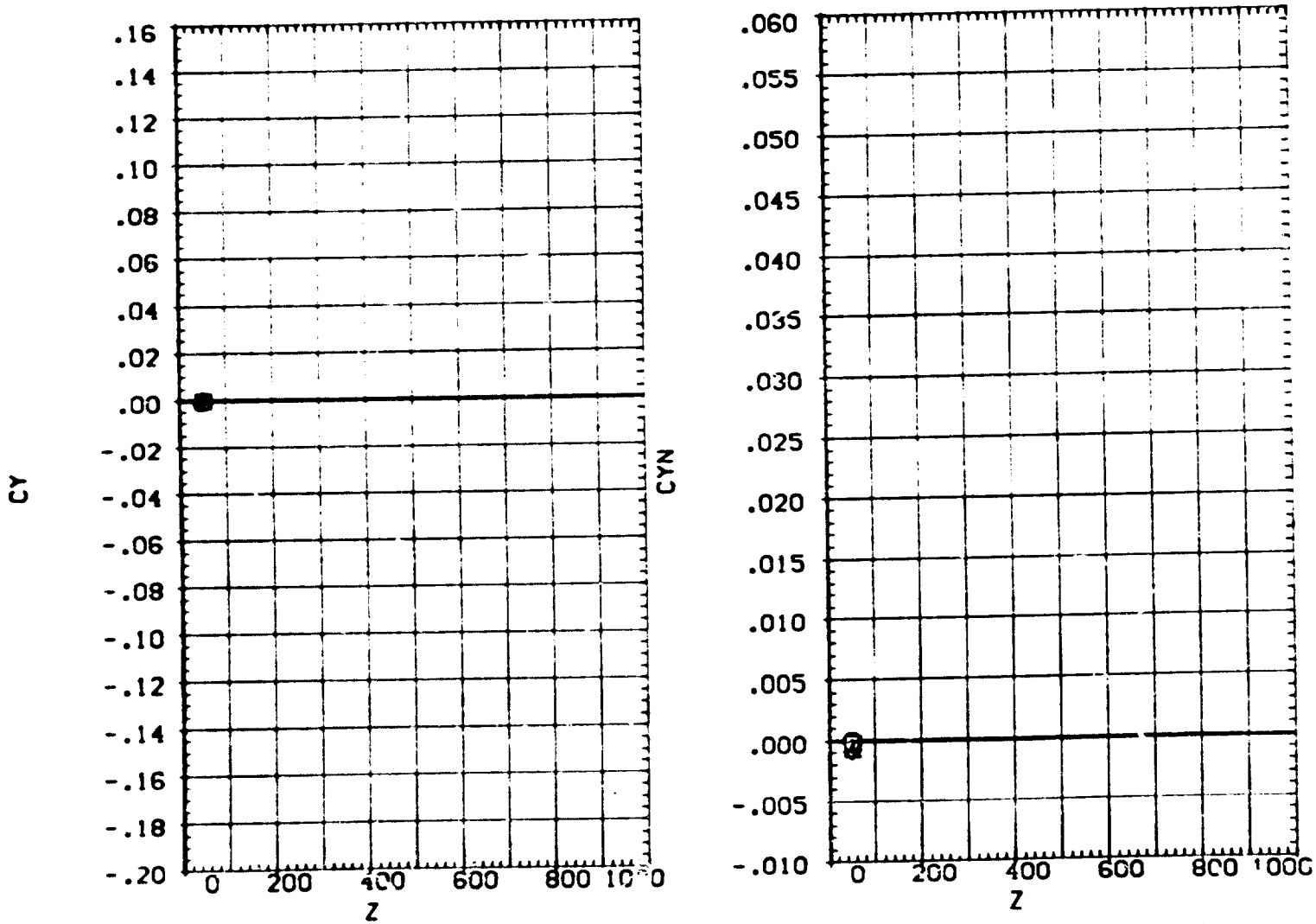


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ132)

SYMBOL	X		PARAMETRIC VALUES		
○	.117	MACH	4.530	PTOTAL	110.000
□	300.350	ALPHA	.000	BETA	.000
◇	600.520	DALPHA	-5.000	DBETA	.000
△	900.710	Y	800.000	PCHMBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

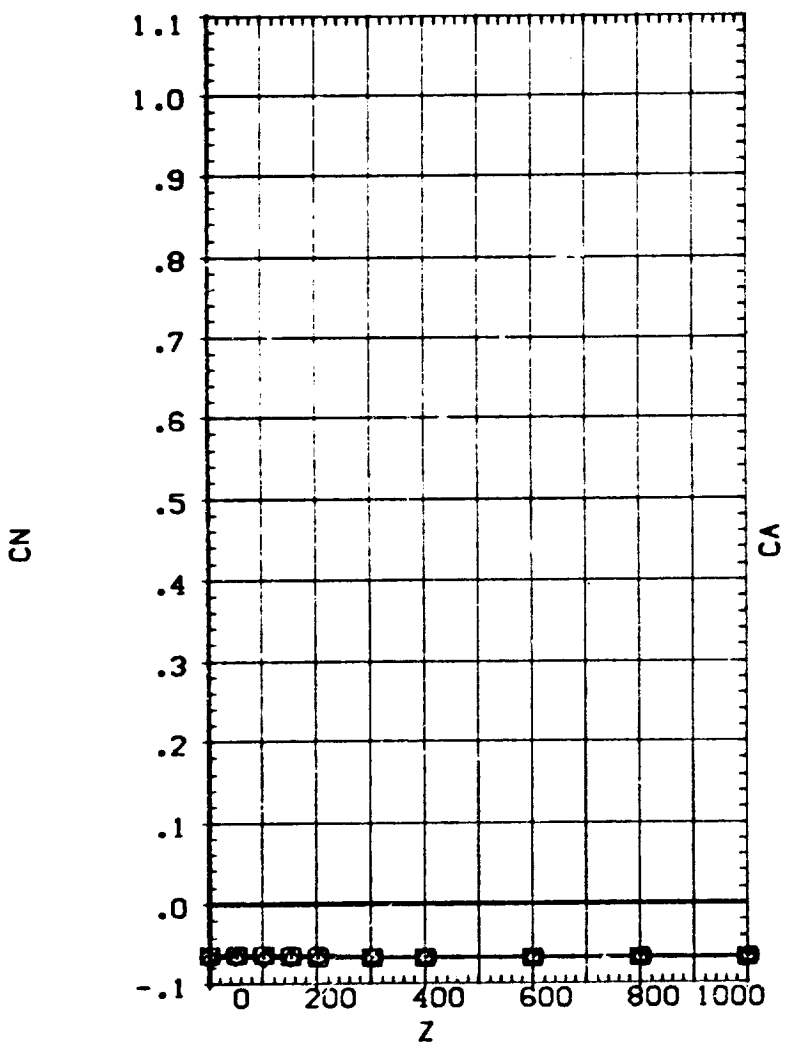


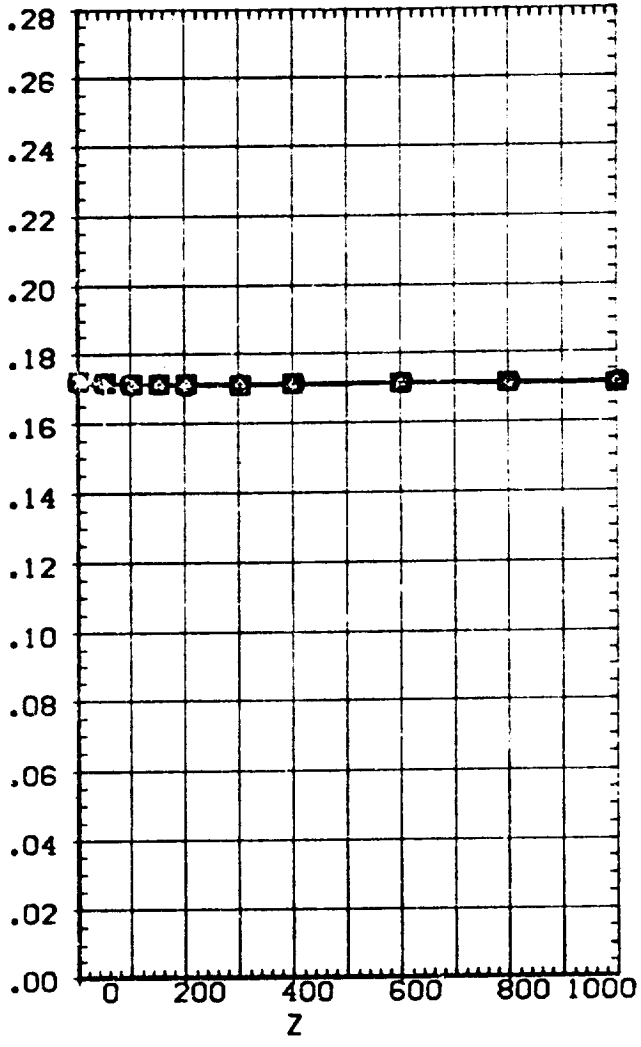
EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ134)

SYMBOL	X		PARAMETRIC VALUES		
○	.110	MACH	4.530	PTOTAL	110.000
□	300.530	ALPHA	.000	BETA	.000
◇	600.430	DALPHA	-10.000	DBETA	.000
△	900.820	Y	400.000	PCHMBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



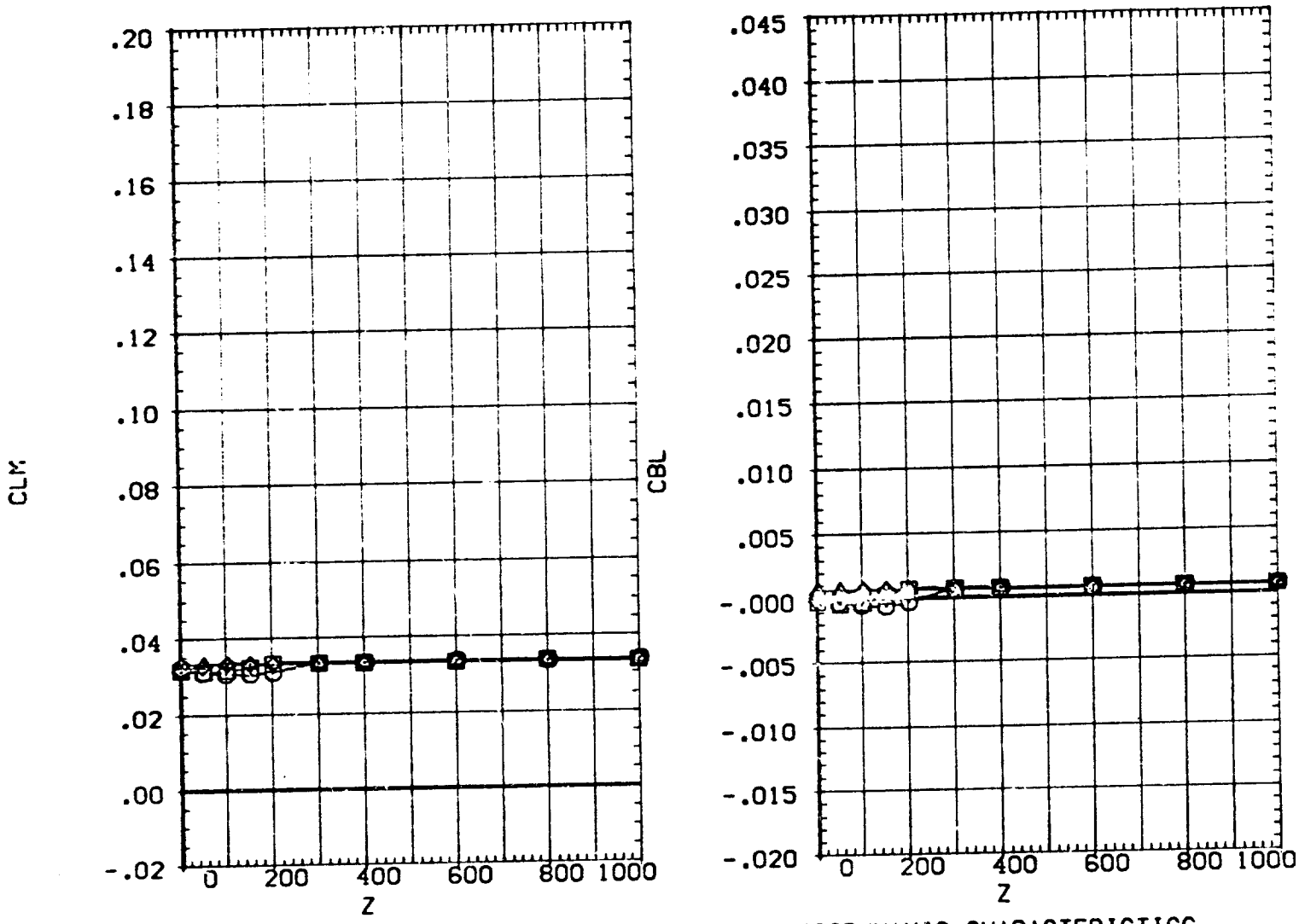


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ134)

SYMBOL	X		PARAMETRIC VALUES		
○	.110	MACH	4.530	PTOTAL	110.000
□	300.530	ALPHA	.000	BETA	.000
◇	600.430	DALPHA	-10.000	DBETA	.000
△	900.820	Y	400.000	PCHMBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

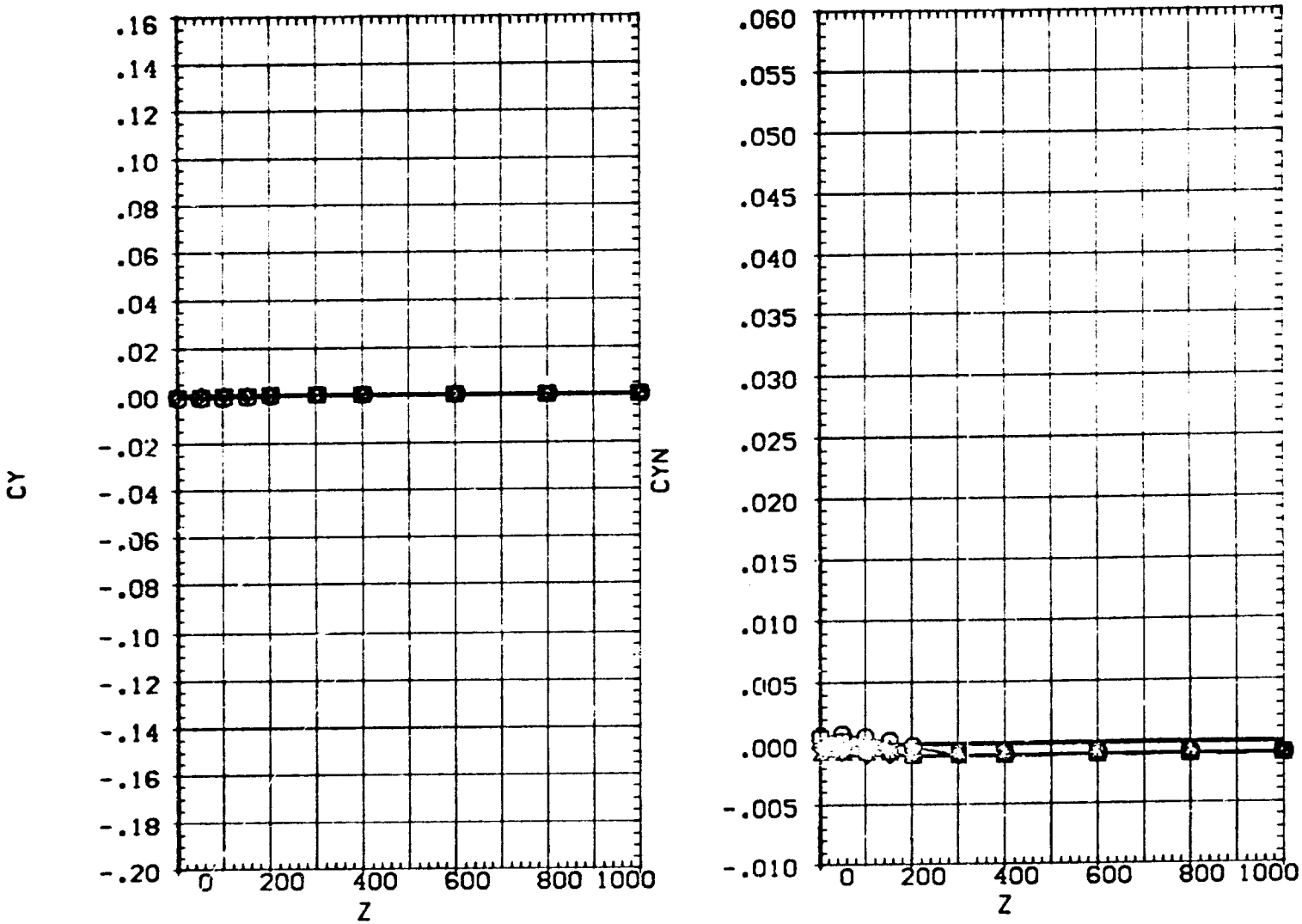


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ134)

SYMBOL	X		PARAMETRIC VALUES		
○	.110	MACH	4.530	PTOTAL	110.000
□	300.530	ALPHA	.000	BETA	.000
◇	600.430	DALPHA	-10.000	DBETA	.000
△	900.820	Y	400.000	PCHMBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

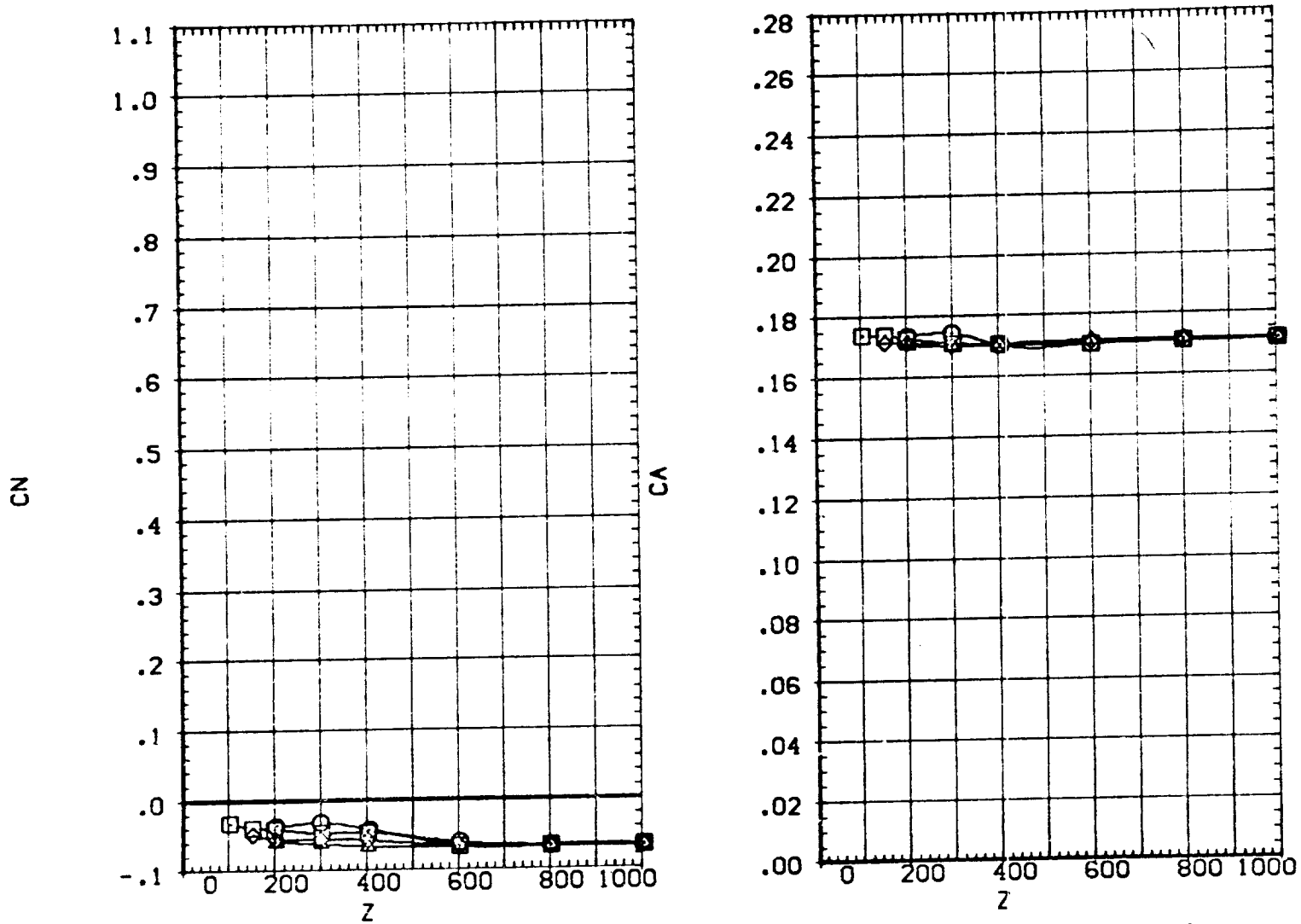


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ135)

SYMBOL	X		PARAMETRIC VALUES		
○	.315	MACH	4.530	PTOTAL	110.000
□	300.490	ALPHA	.000	BETA	.000
◇	600.610	DALPHA	-10.000	DBETA	.000
△	900.830	Y	.000	PCHMBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

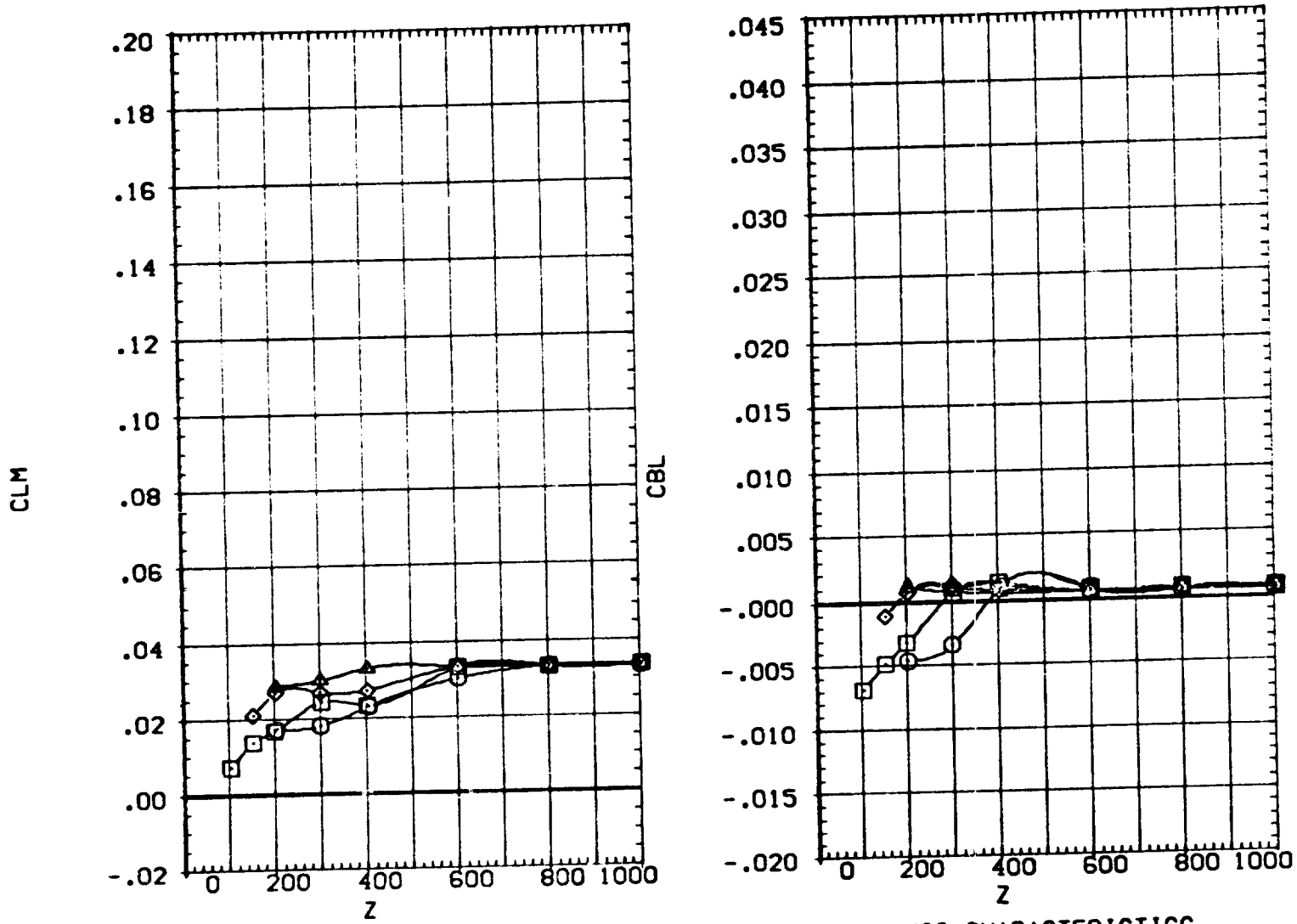


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ135)

SYMBOL	X		PARAMETRIC VALUES		
○	.315	MACH	4.530	PTOTAL	110.000
□	300.490	ALPHA	.000	BETA	.000
◇	600.610	DALPHA	-10.000	DBETA	.000
△	900.830	Y	.000	PCHMBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

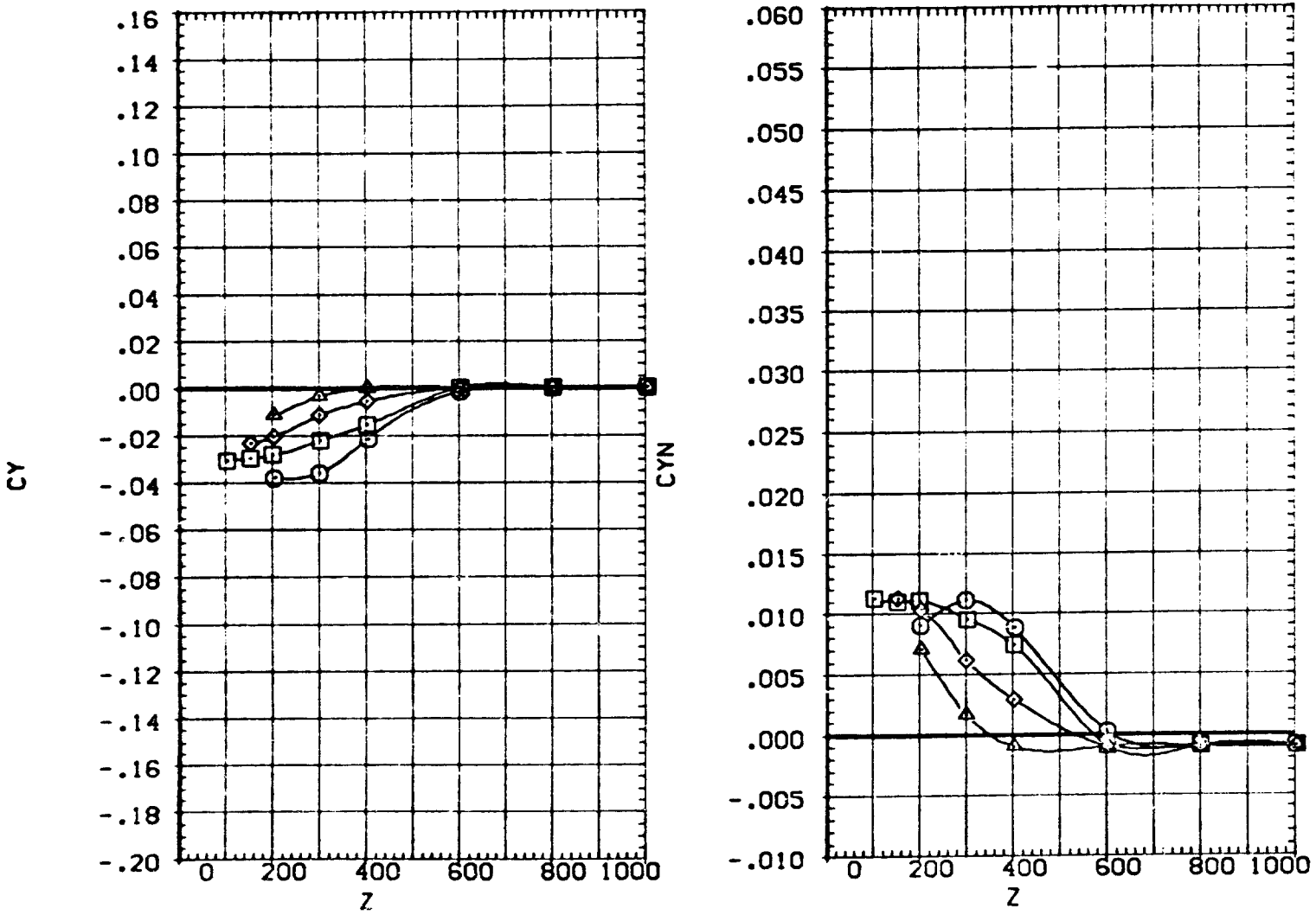


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ135)

SYMBOL	X		PARAMETRIC VALUES		
○	.315	MACH	4.530	PTOTAL	110.000
□	300.490	ALPHA	.000	BETA	.000
◇	600.610	DALPHA	-10.000	DBETA	.000
△	900.830	Y	.000	PCHMBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

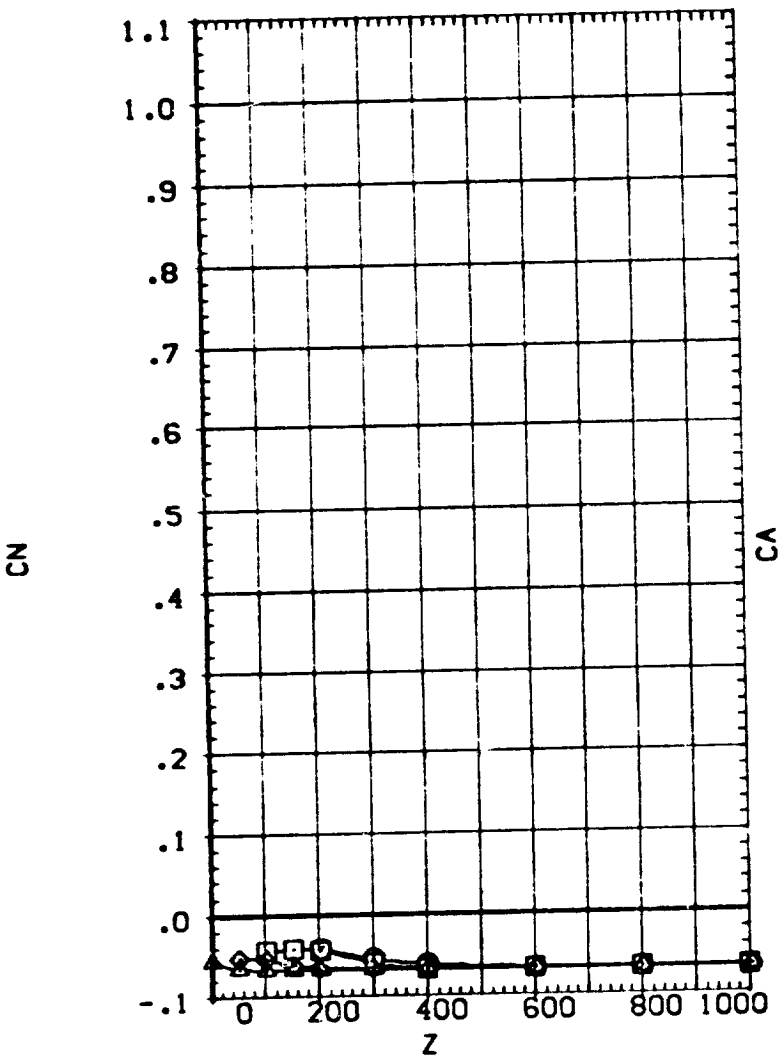


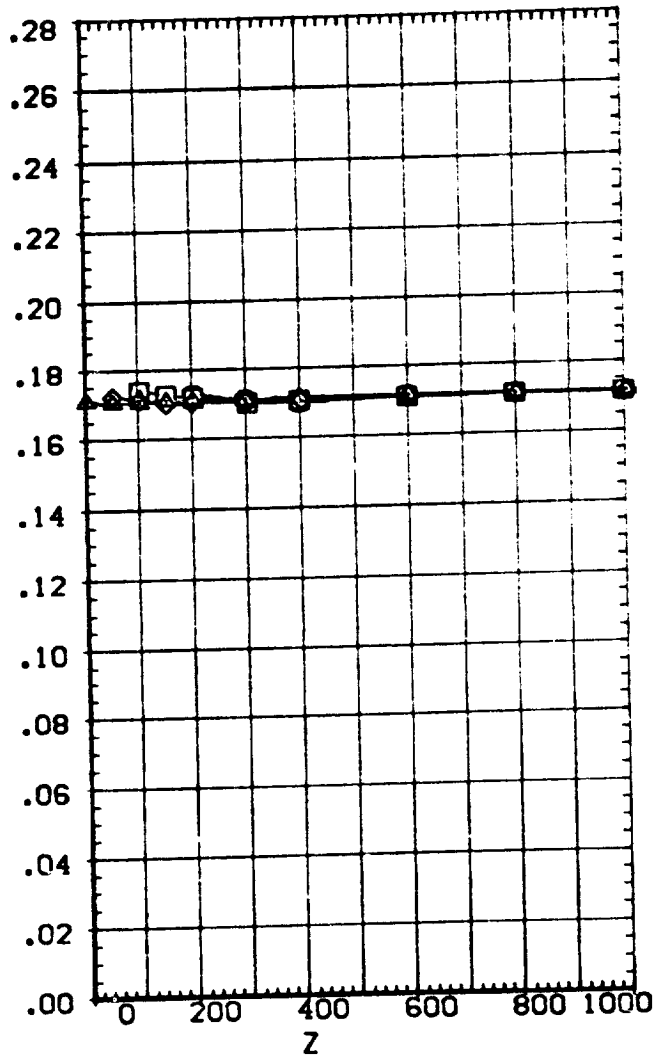
EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ136)

SYMBOL	X		PARAMETRIC VALUES		
○	.220	MACH	4.530	PTOTAL	110.000
□	300.650	ALPHA	.000	BETA	.000
◇	600.570	DALPHA	-10.000	DBETA	.000
△	900.770	Y	200.000	PCHNBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



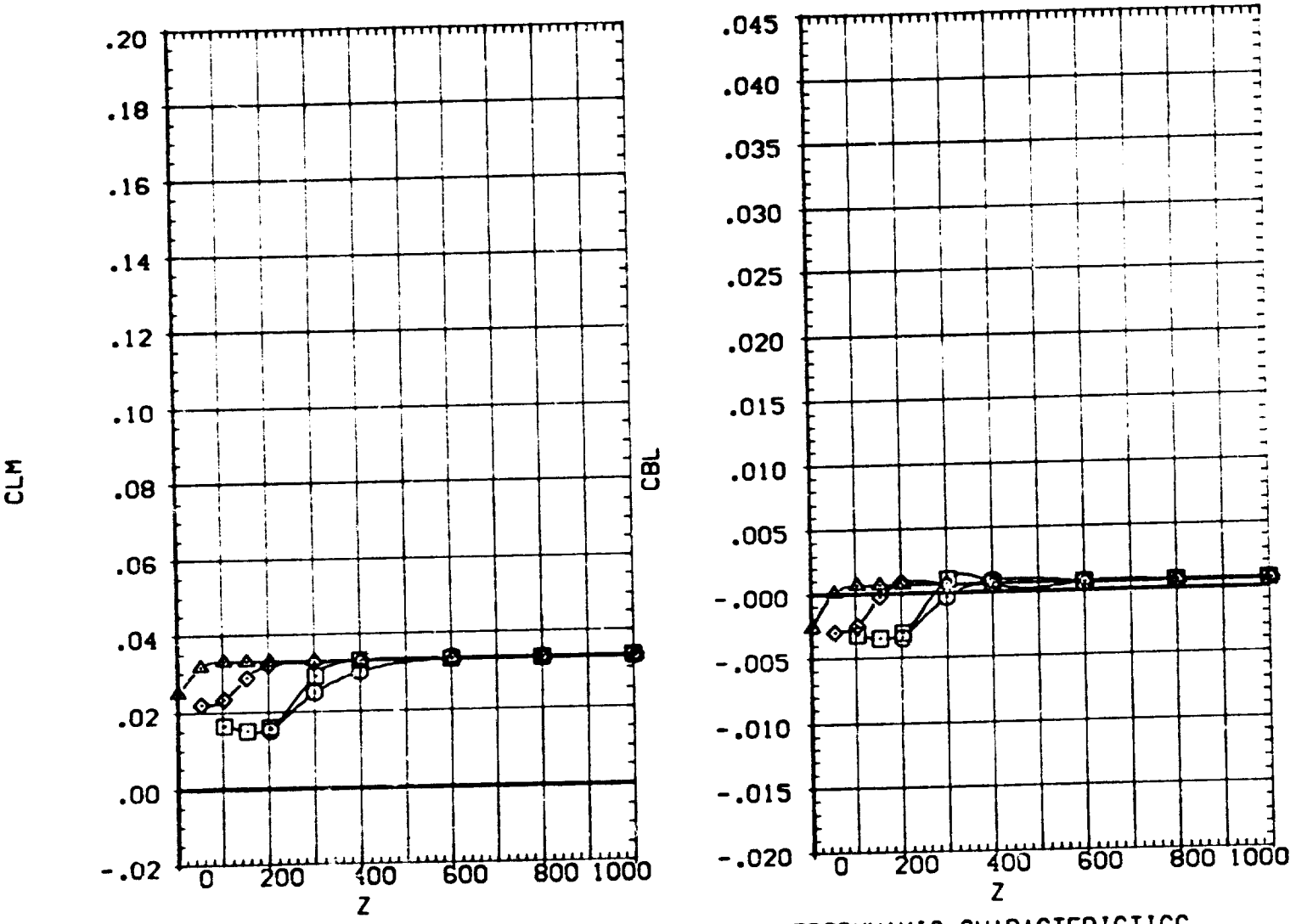


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ136)

SYMBOL	X		PARAMETRIC VALUES		
○	.220	MACH	4.530	PTOTAL	110.000
□	300.650	ALPHA	.000	BETA	.000
◇	600.570	DALPHA	-10.000	DBETA	.000
△	900.770	Y	200.000	PCHMBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

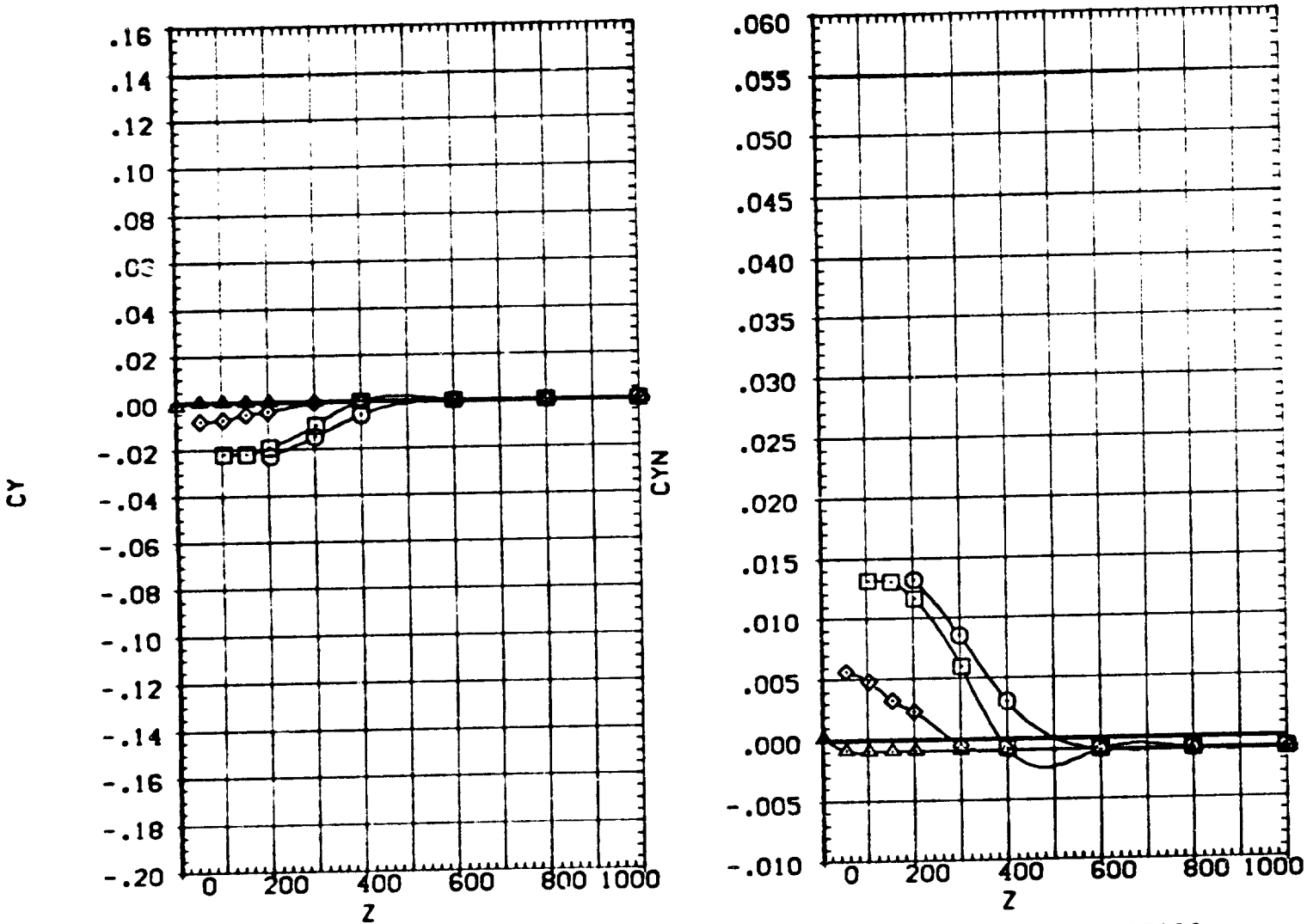


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ136)

SYMBOL	X		PARAMETRIC VALUES		
○	.220	MACH	4.530	PTOTAL	110.000
□	300.650	ALPHA	.000	BETA	.000
◇	600.570	DALPHA	-10.000	DBETA	.000
△	900.770	Y	200.000	PCHMBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

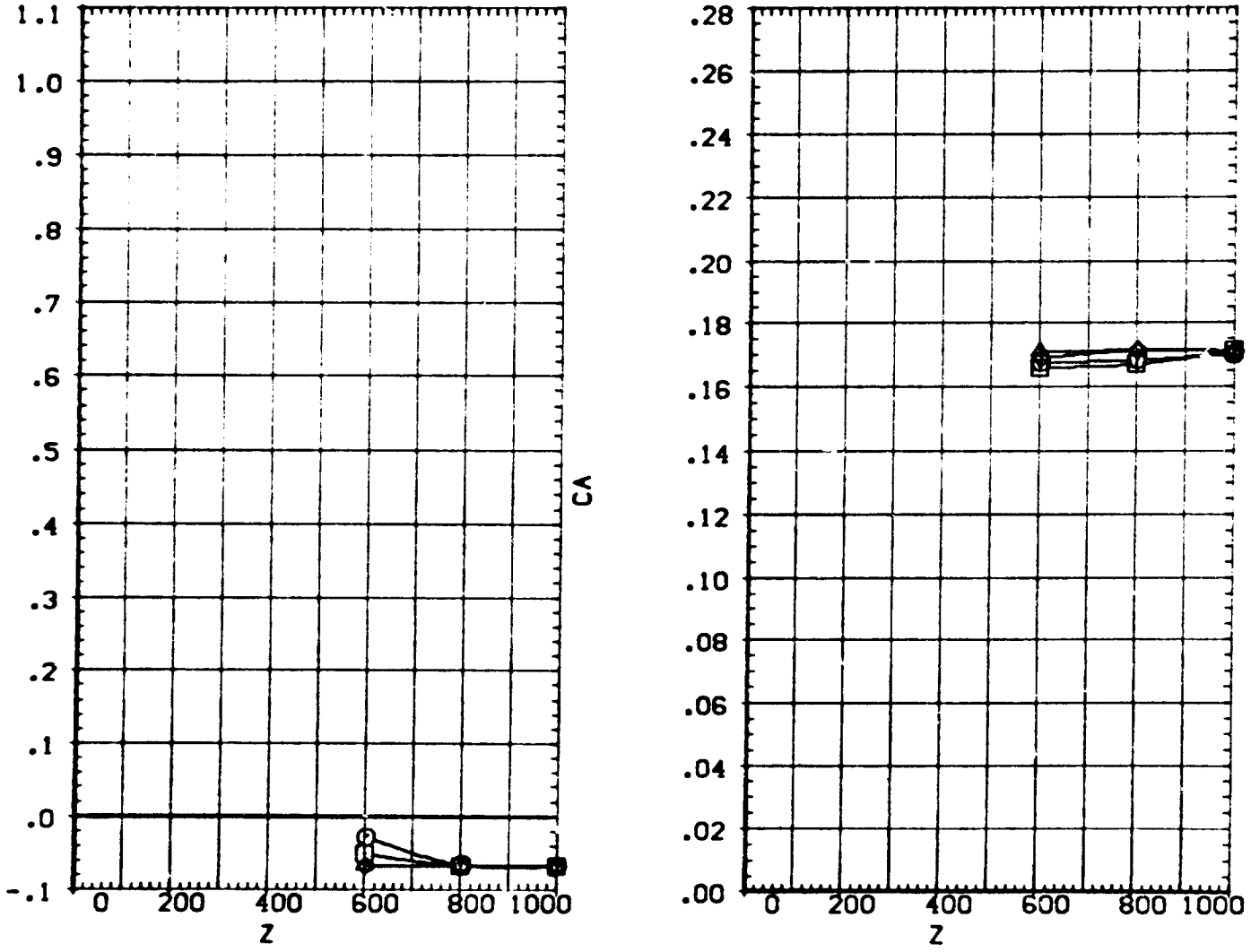


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ137)

SYMBOL	X		PARAMETRIC VALUES		
○	.471	MACH	4.530	PTOTAL	110.000
□	300.400	ALPHA	.000	BETA	.000
◇	600.700	DALPHA	-20.000	DBETA	.000
△	899.730	Y	.000	PCHMBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

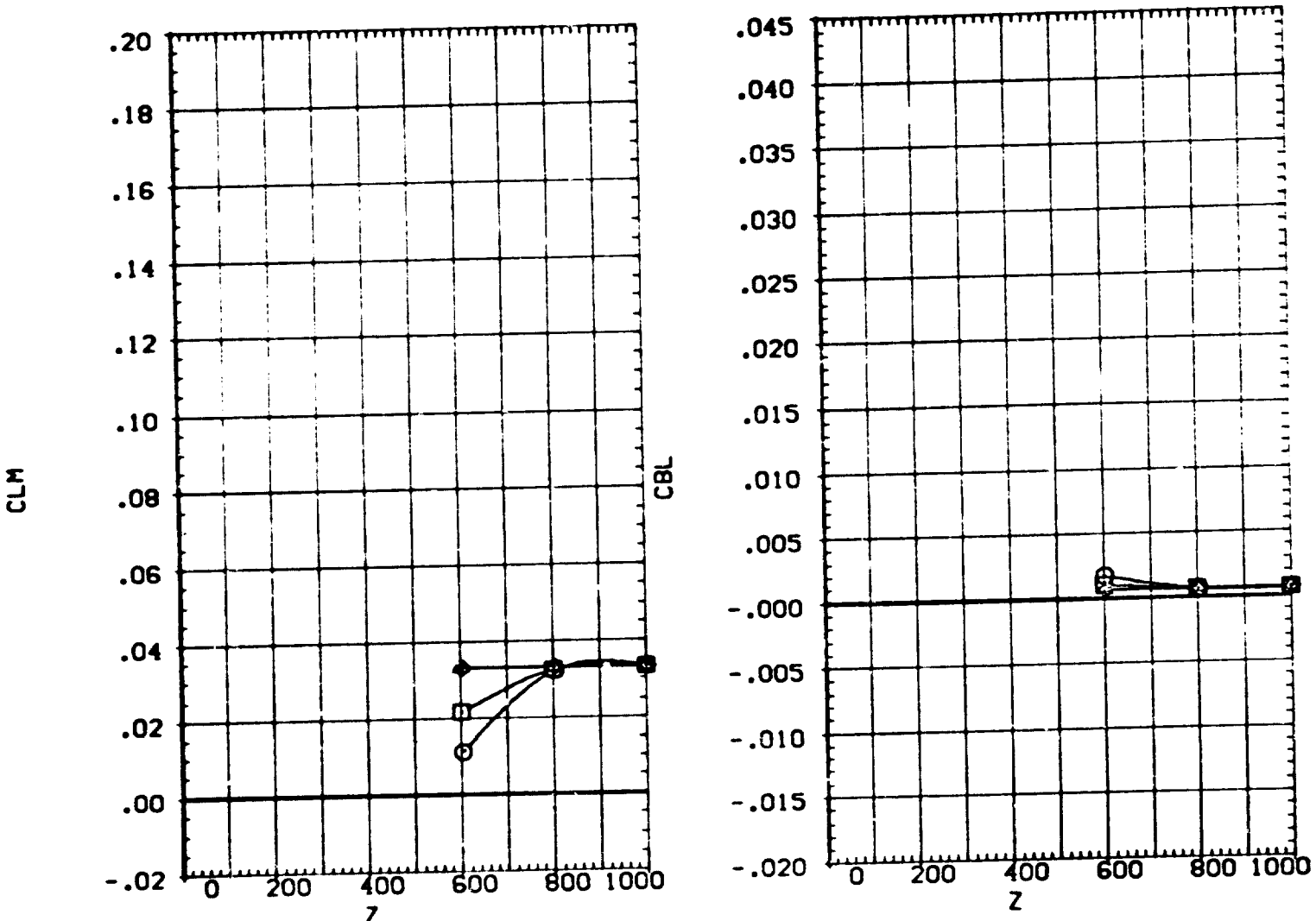


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ137)

SYMBOL	X		PARAMETRIC VALUES		
○	.471	MACH	4.530	PTOTAL	110.000
□	300.400	ALPHA	.000	BETA	.000
◇	600.700	DALPHA	-20.000	DBETA	.000
△	899.730	Y	.000	PCHNBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

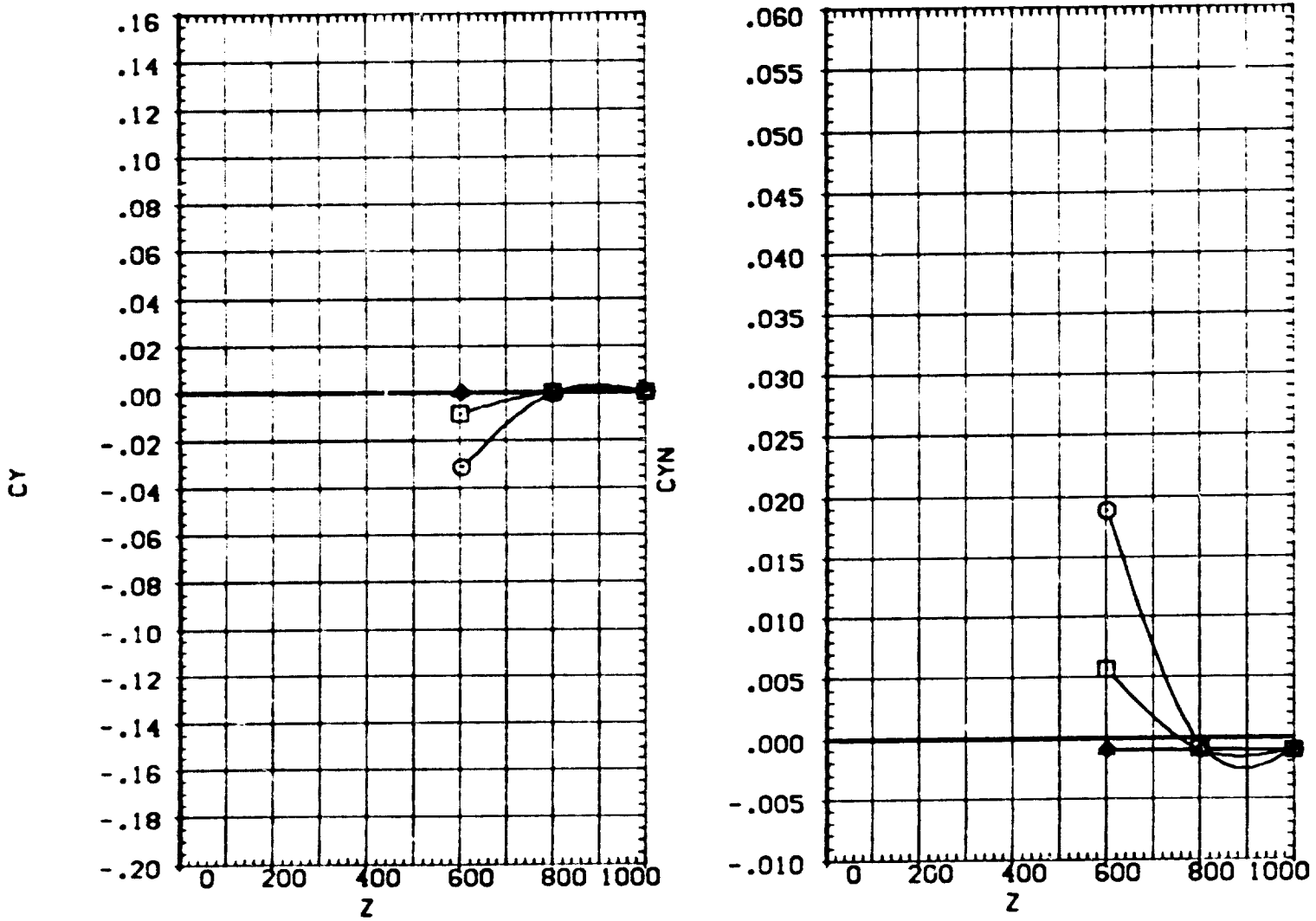


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

!A13 SRB(S3) W/O PLUMES SEPARATING FROM 09T10 (RTJ137)

SYMBOL	X		PARAMETRIC VALUES		
○	.471	MACH	4.530	PTOTAL	110.000
□	300.400	ALPHA	.000	BETA	.000
◇	600.700	DALPHA	-20.000	DBETA	.000
△	899.730	Y	.000	PCHMBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

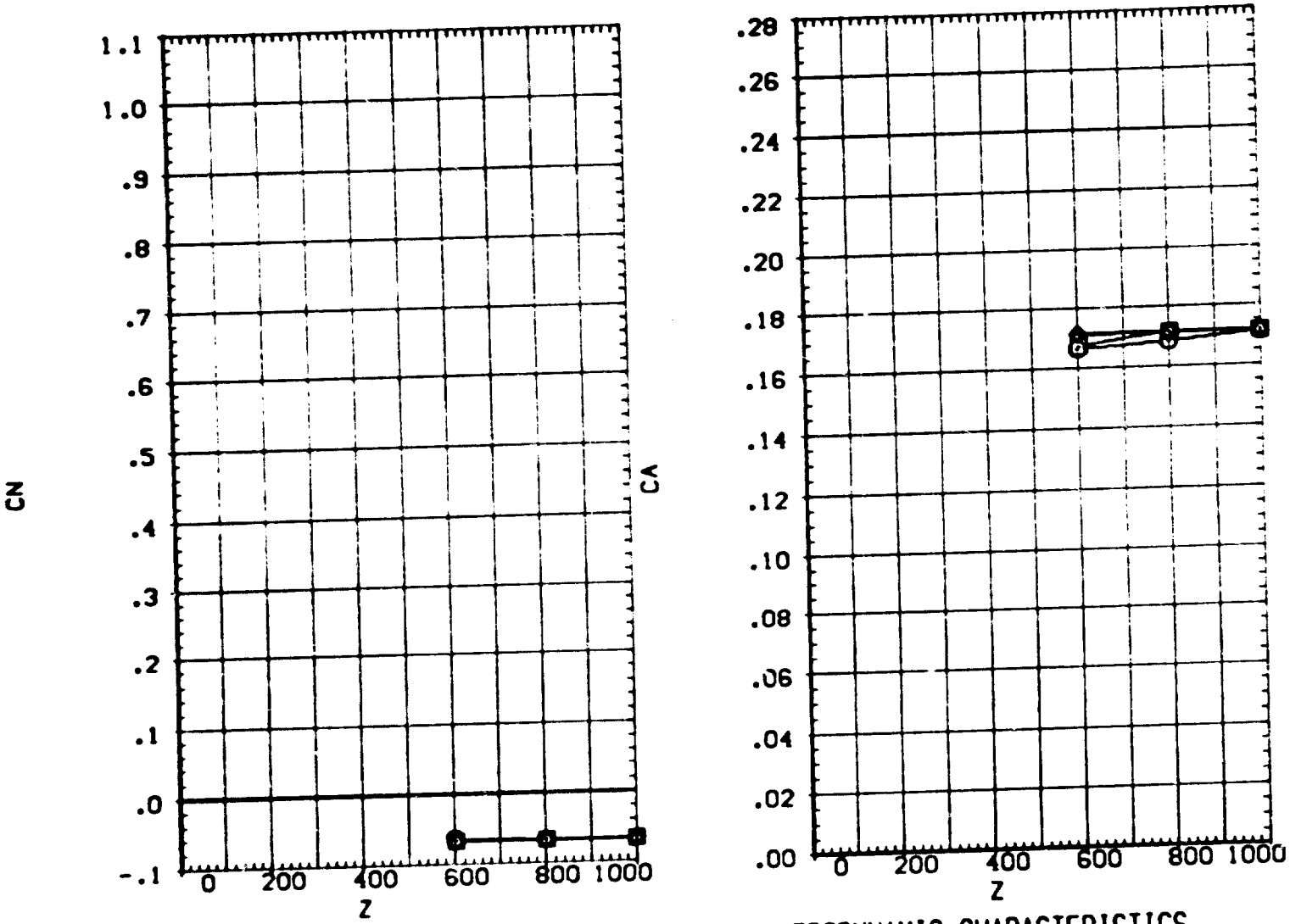


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

[A13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ138)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

SYMBOL	X		PARAMETRIC VALUES		
○	-.057	MACH	4.530	PTOTAL	110.000
□	300.640	ALPHA	.000	BETA	.000
◇	600.080	DALPHA	-20.000	DBETA	.000
△	901.080	Y	200.000	POWER	.000

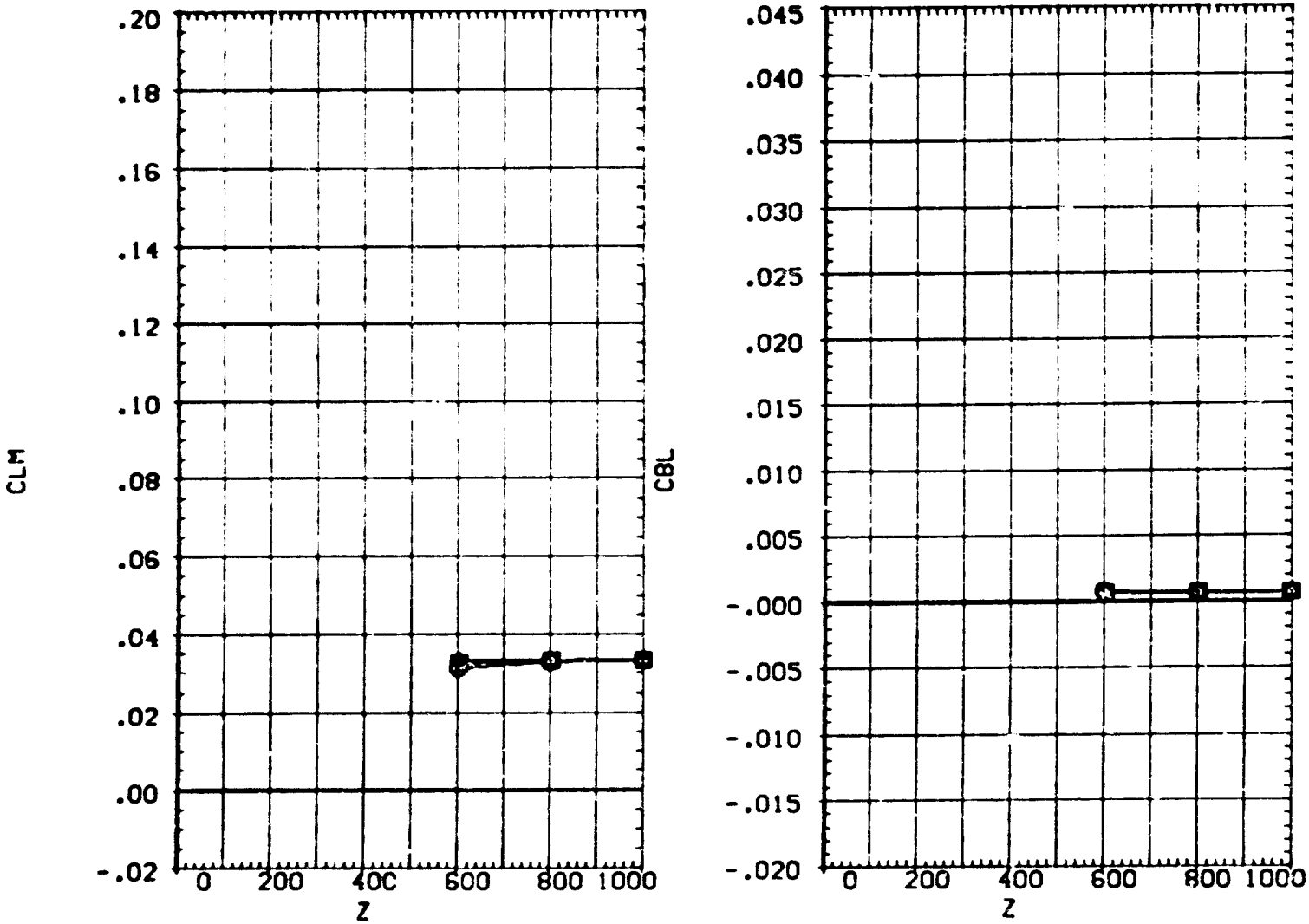


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ138)

SYMBOL	X		PARAMETRIC VALUES		
○	-.057	MACH	4.530	PTOTAL	110.000
□	309.640	ALPHA	.000	BETA	.000
◇	600.080	DALPHA	-20.000	DBETA	.000
△	901.080	Y	200.000	PCHMBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

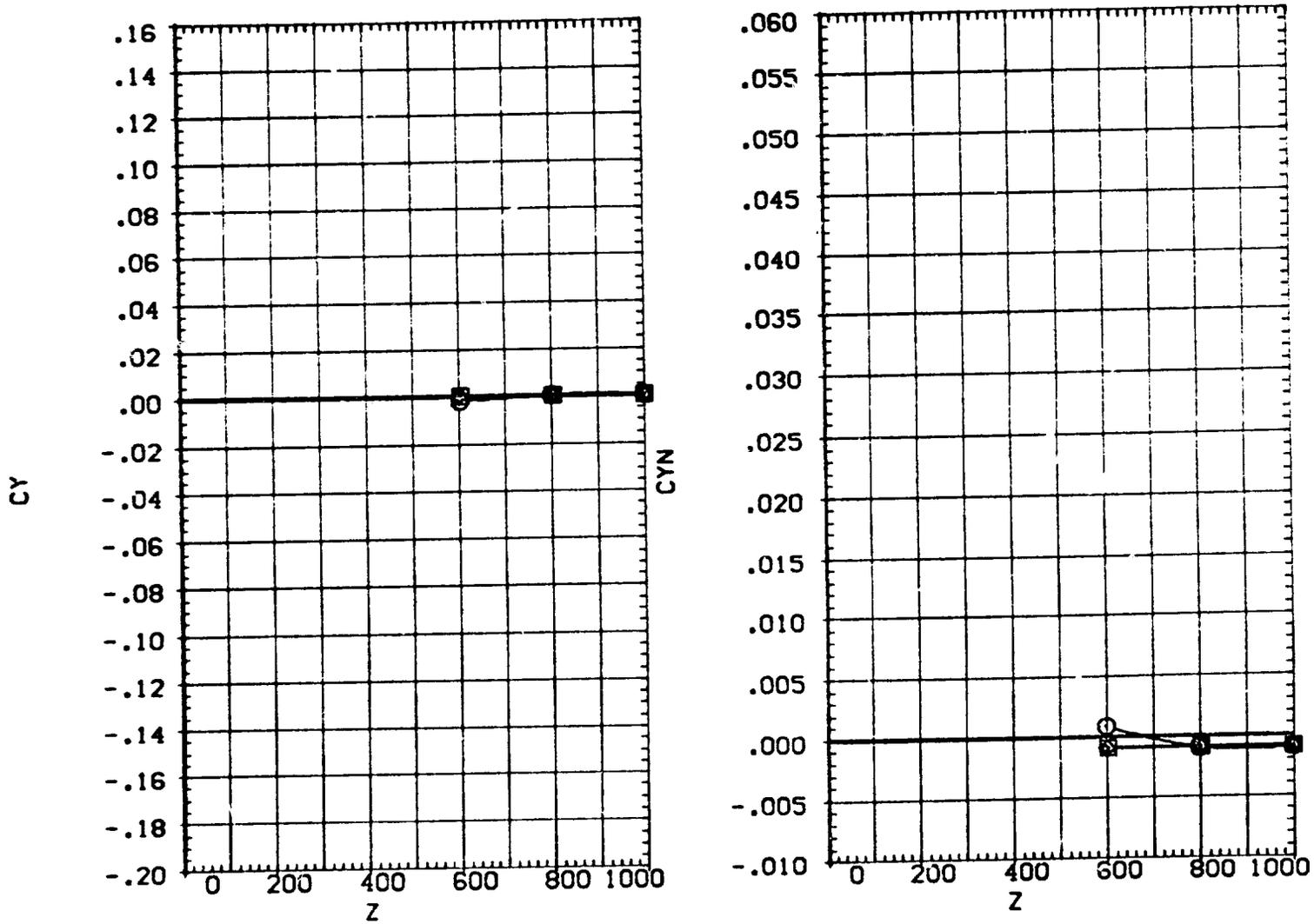


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ138)

SYMBOL	X		PARAMETRIC VALUES		
○	-.057	MACH	4.530	PTOTAL	10.000
□	300.640	ALPHA	.000	BETA	.000
◇	600.080	DALPHA	-20.000	DBETA	.000
△	901.080	Y	200.000	PCHMBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

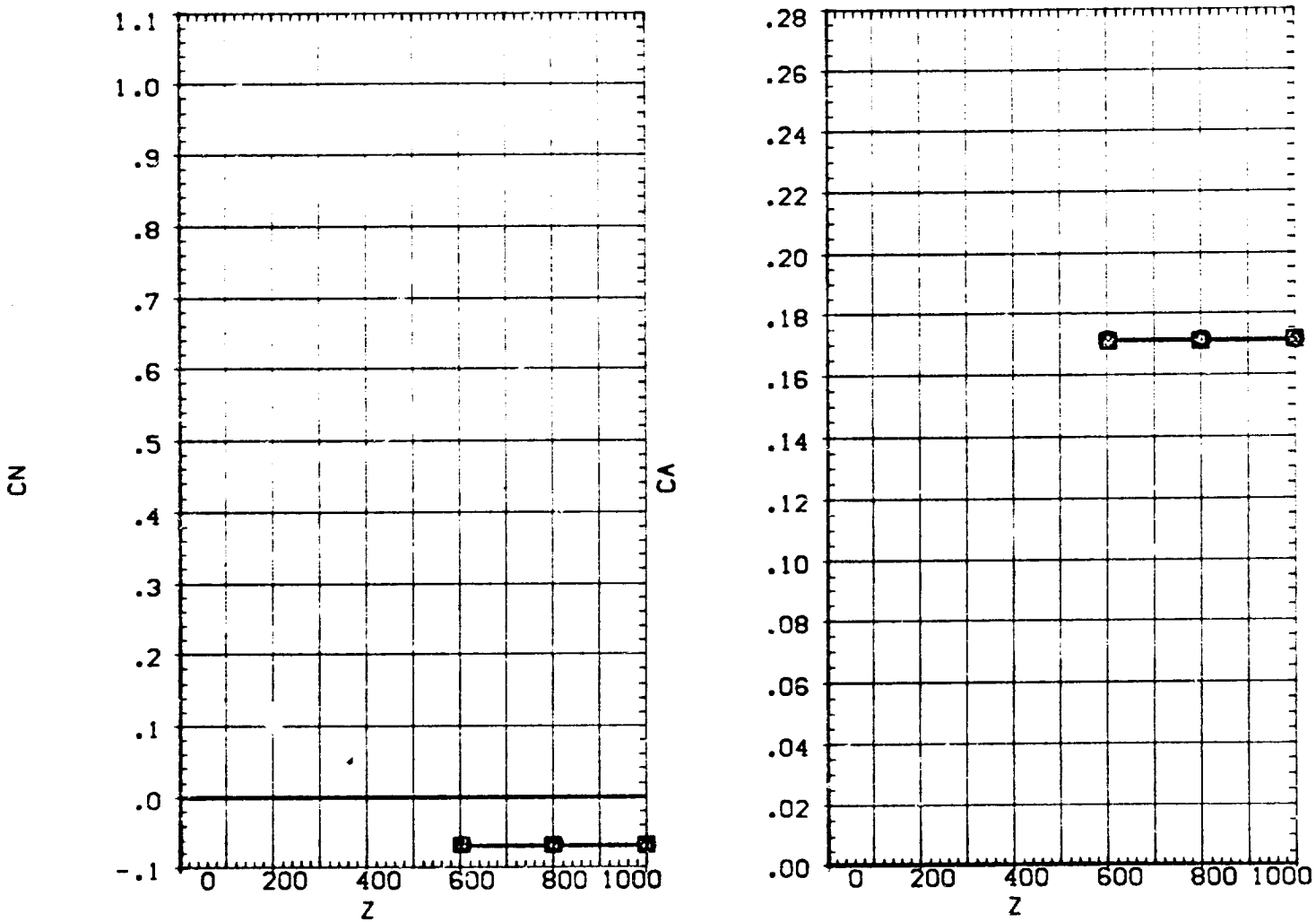


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

[A13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ139)

SYMBOL	X		PARAMETRIC VALUES		
○	.358	MACH	4.530	PTOTAL	110.000
◇	300.510	ALPHA	.000	BETA	.000
△	600.700	DALPHA	-20.000	DBETA	.000
	900.850	Y	400.000	PCHMBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

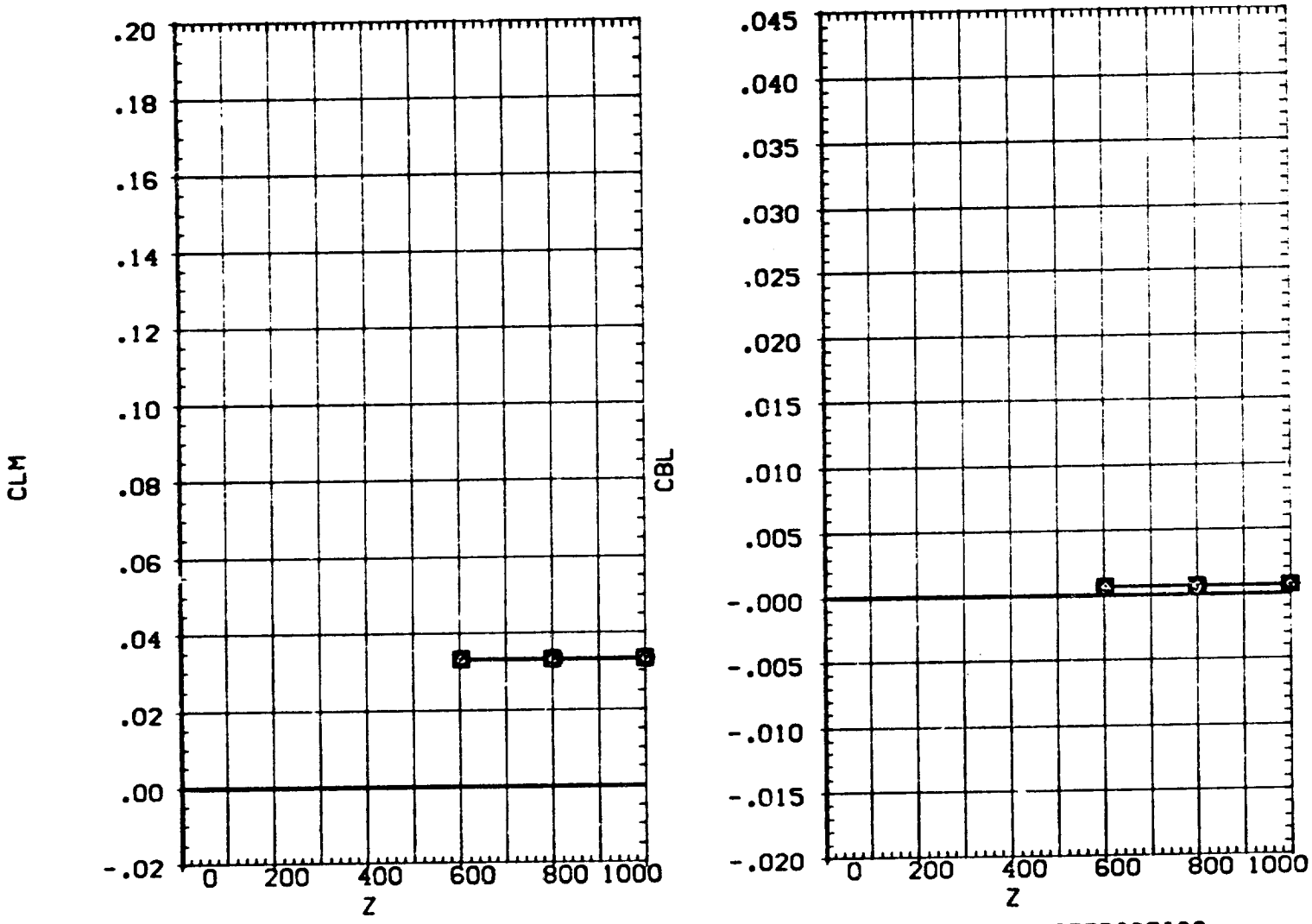


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ139)

SYMBOL	X		PARAMETRIC VALUES		
○	.358	MACH	4.530	PTOTAL	110.000
□	300.510	ALPHA	.000	BETA	.000
◇	600.700	DALPHA	-20.000	DBETA	.000
△	900.850	Y	400.000	PCHMBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

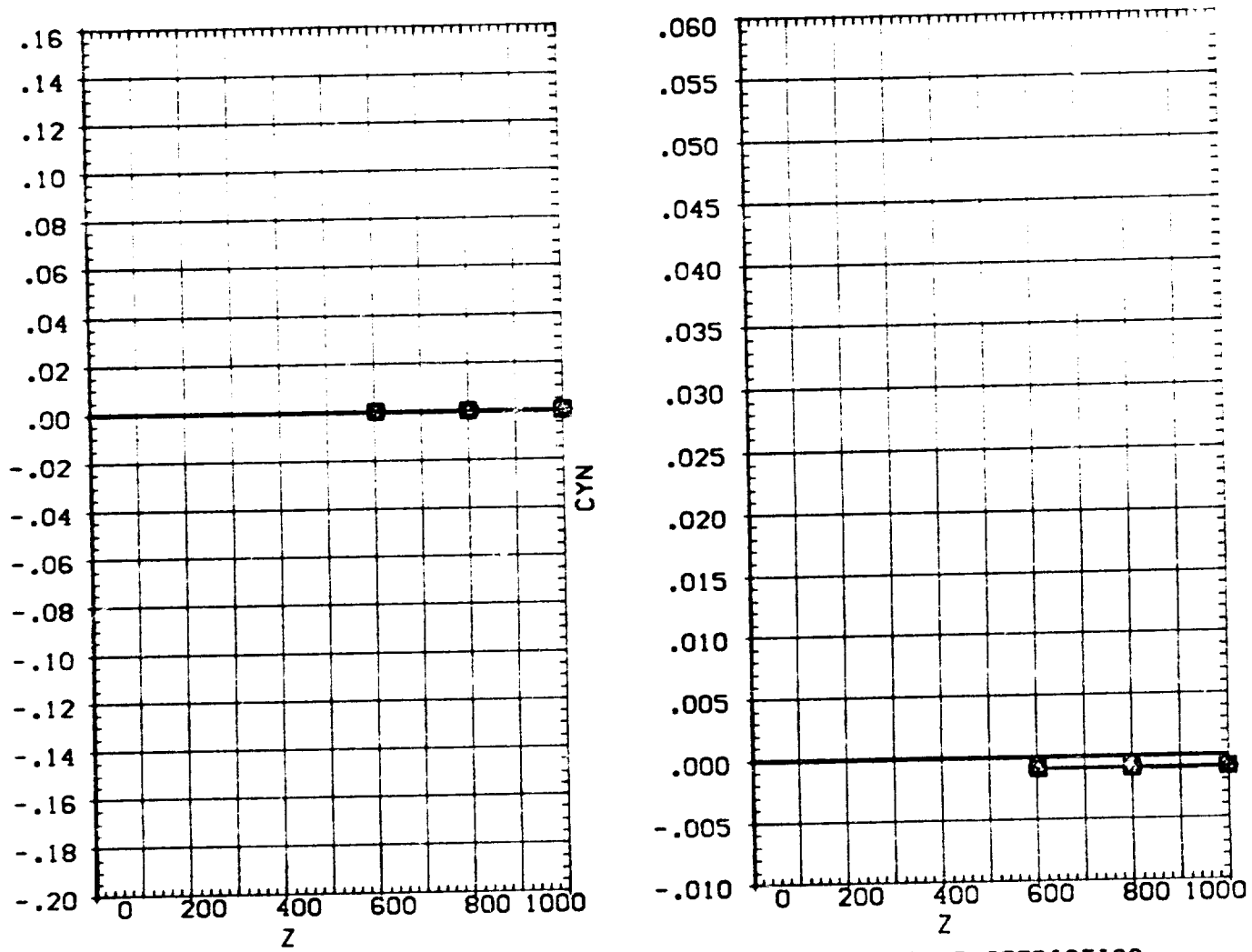


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

!A13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ139)

SYMBOL	X		PARAMETRIC VALUES		
	.358	MACH	4.530	PTOTAL	110.000
	300.510	ALPHA	.000	BETA	.000
	600.700	DALPHA	-20.000	DBETA	.000
	900.850	Y	400.000	PCHMBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

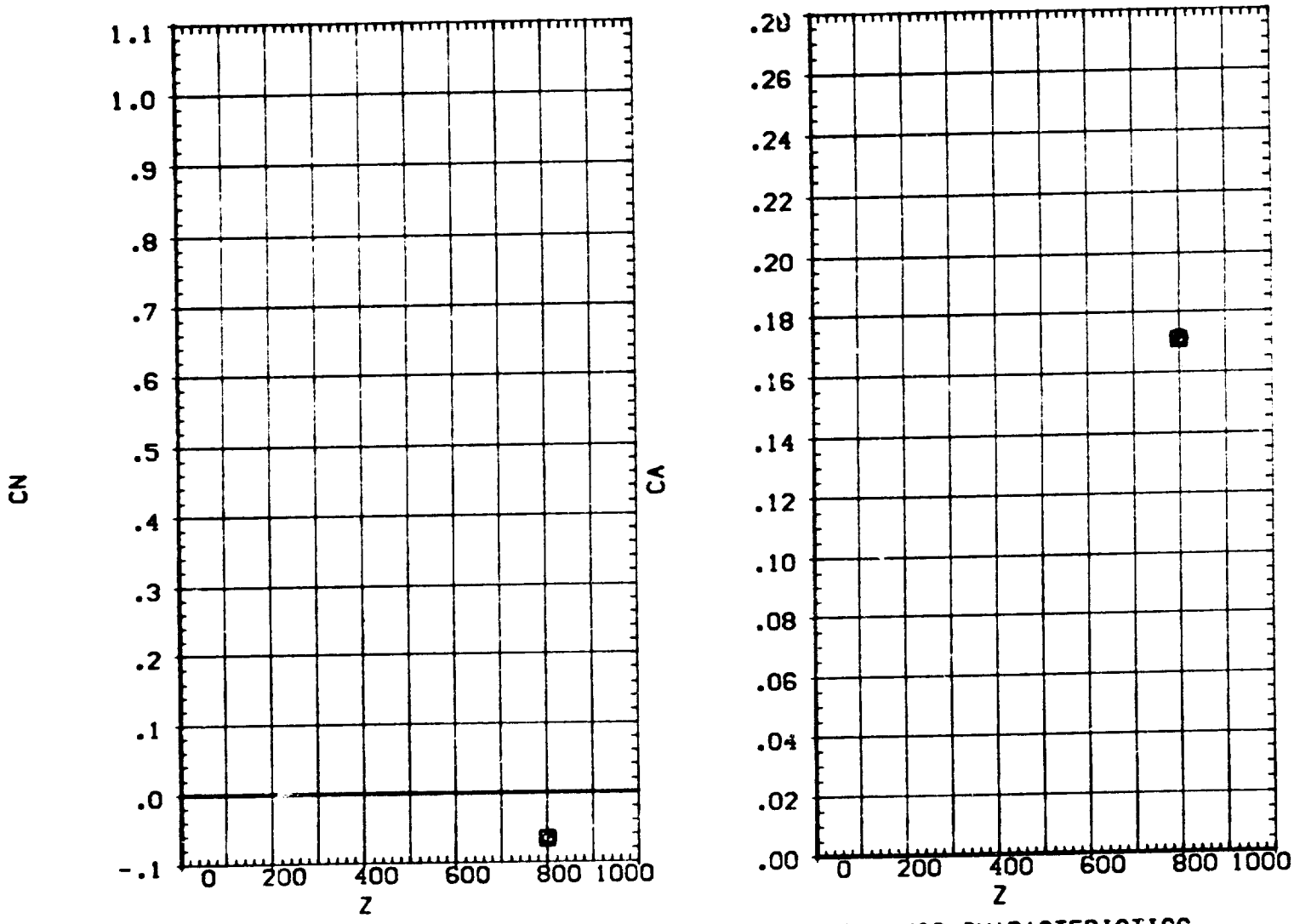


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ140)

SYMBOL	X		PARAMETRIC VALUES		
○	-.057	MACH	4.530	PTOTAL	110.000
□	300.110	ALPHA	.000	BETA	.000
◇	600.540	DALPHA	-20.000	DBETA	.000
△	900.280	Y	400.000	PCHMBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

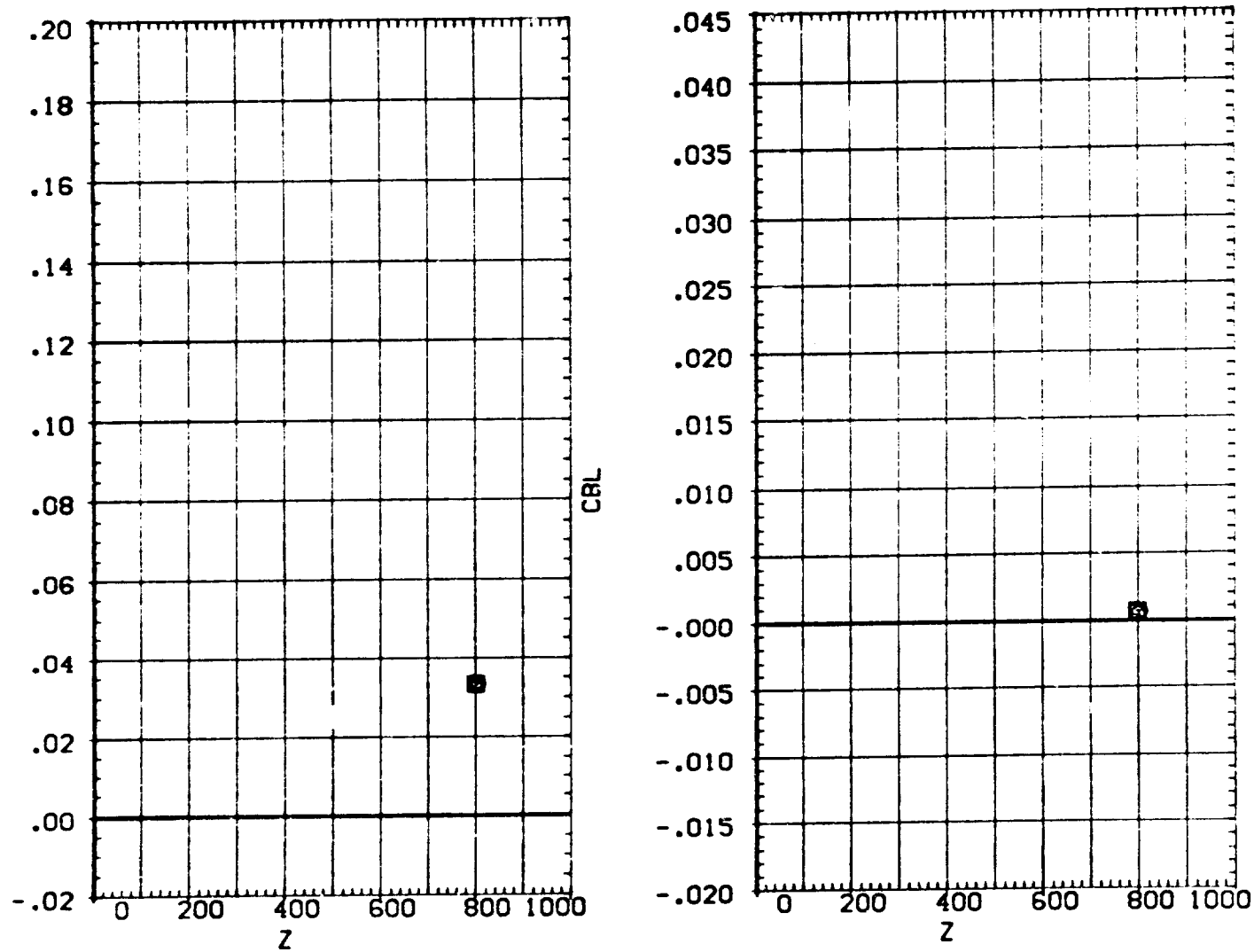


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(SB) W/O PLUMES SEPARATING FROM 09T10 (RTJ140)

SYMBOL	X		PARAMETRIC VALUES		
○	-.057	MACH	4.530	PTOTAL	110.000
□	300.110	ALPHA	.000	BETA	.000
◇	600.540	DALPHA	-20.000	DBETA	.000
△	900.280	Y	400.000	PCHMBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

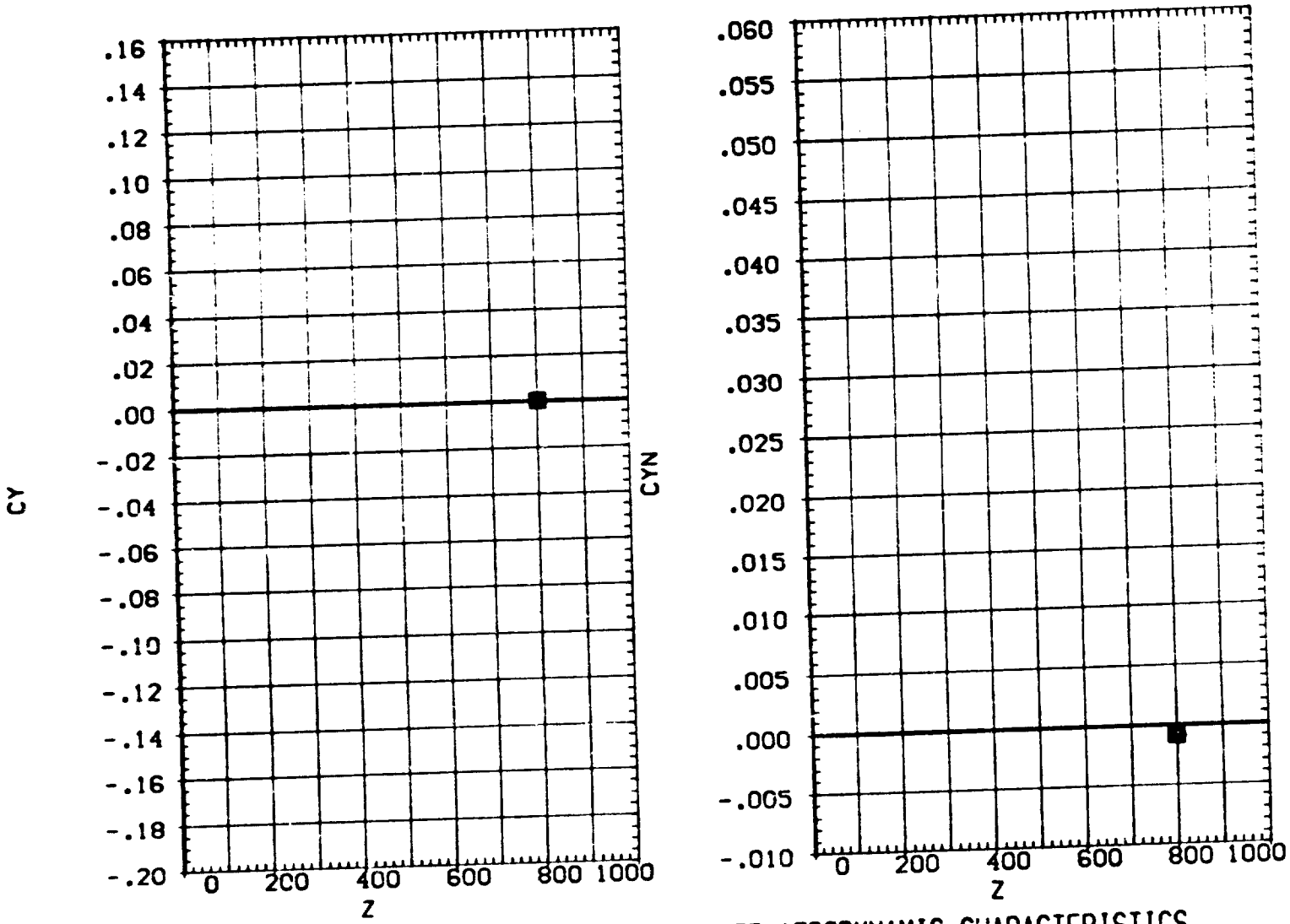


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ140)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

SYMBOL	X		PARAMETRIC VALUES		
○	-.057	MACH	4.530	PTOTAL	110.000
□	300.110	ALPHA	.000	BETA	.000
◇	600.540	DALPHA	-20.000	DBETA	.000
△	900.280	Y	400.000	PCHMBR	.000

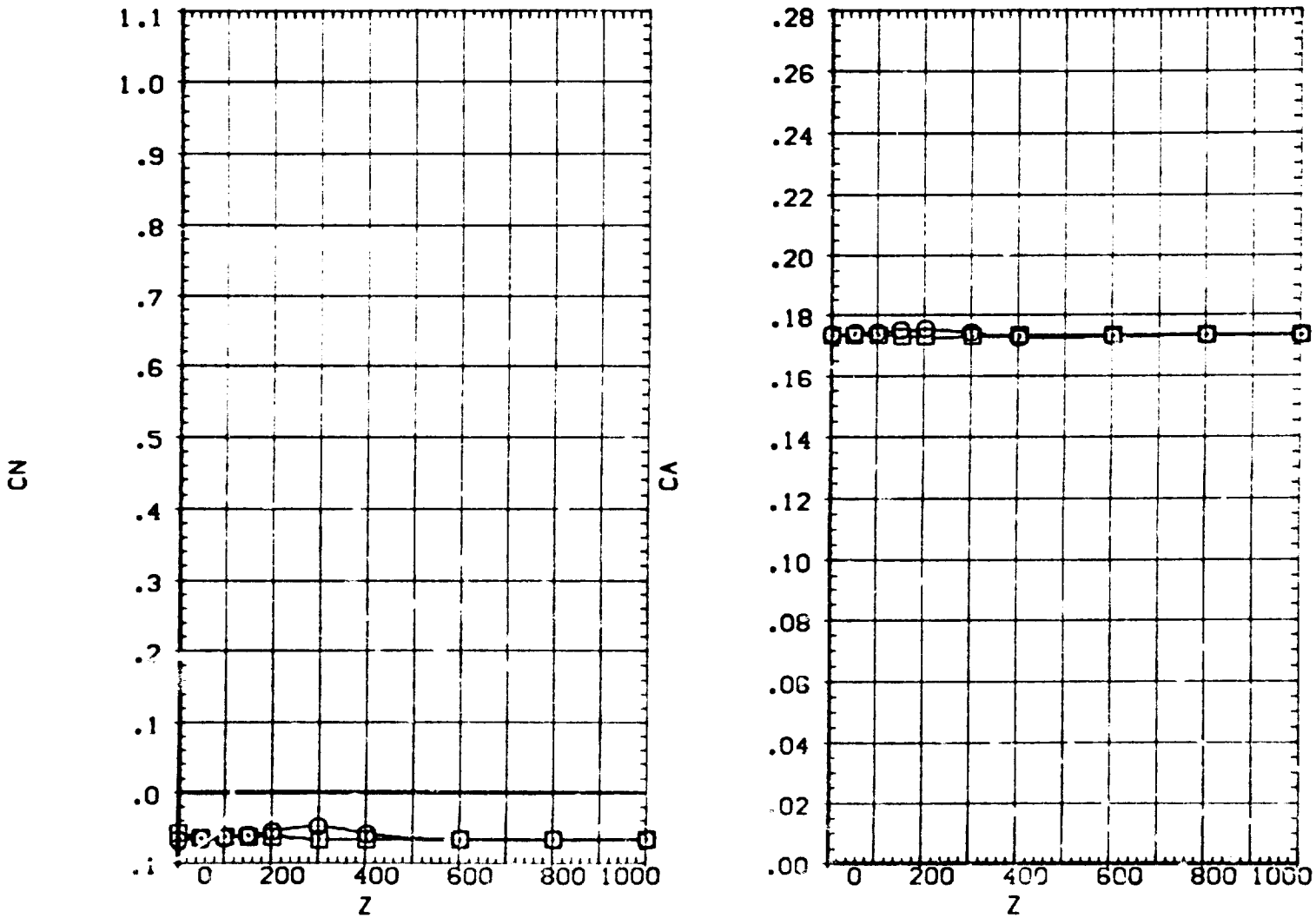


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ141)

SYMBOL	X		PARAMETRIC VALUES		
○	.195	MACH	4.530	PTOTAL	110.000
□	900.530	ALPHA	.000	BETA	.000
		DALPHA	.000	DBETA	5.000
		Y	.000	PCHMBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

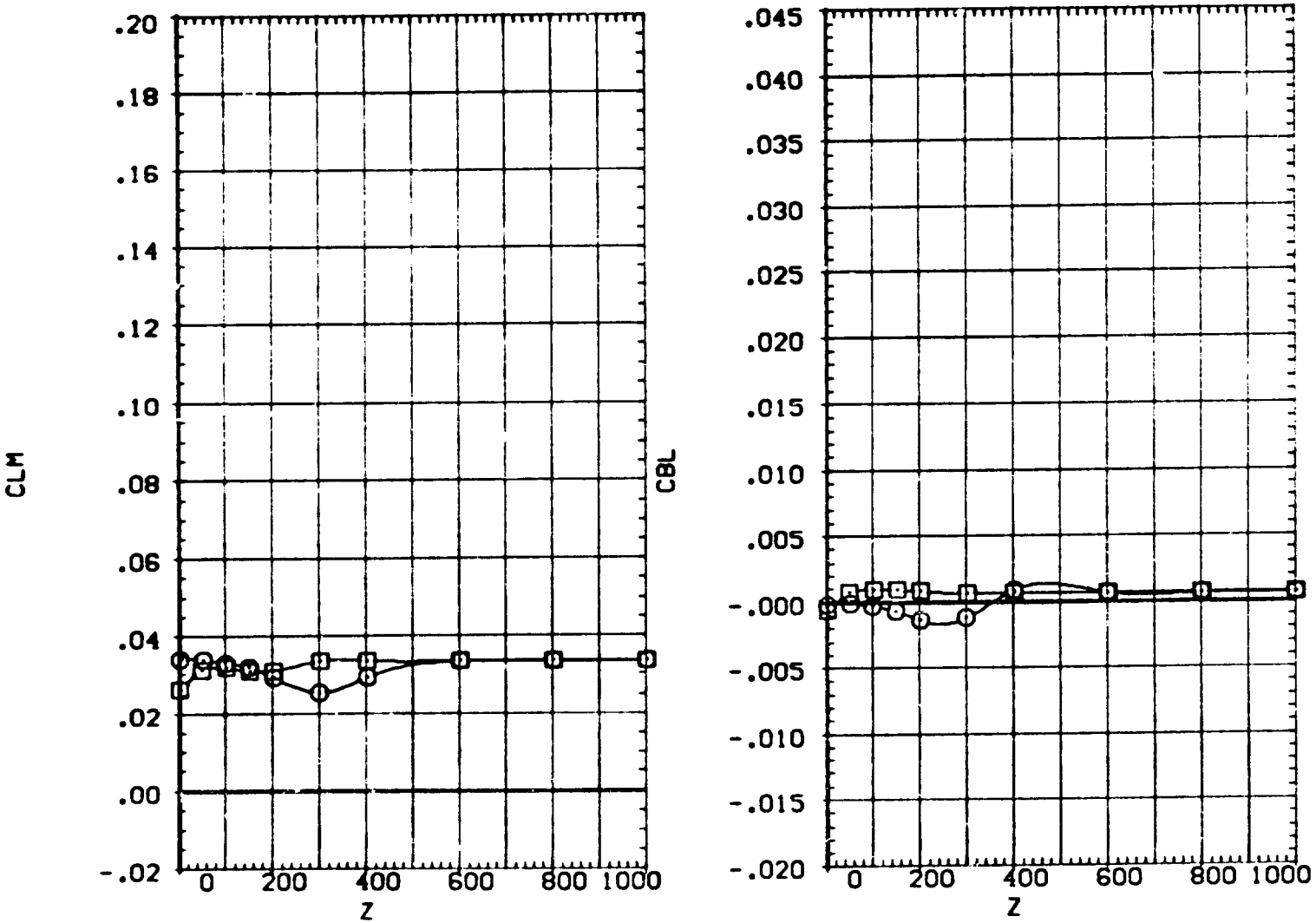


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM OST10 (RTJ141)

SYMBOL	X		PARAMETRIC VALUES		
○	.195	MACH	4.530	PTOTAL	110.000
□	900.530	ALPHA	.000	BETA	.000
		DALPHA	.000	DBETA	5.000
		Y	.000	PCHBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

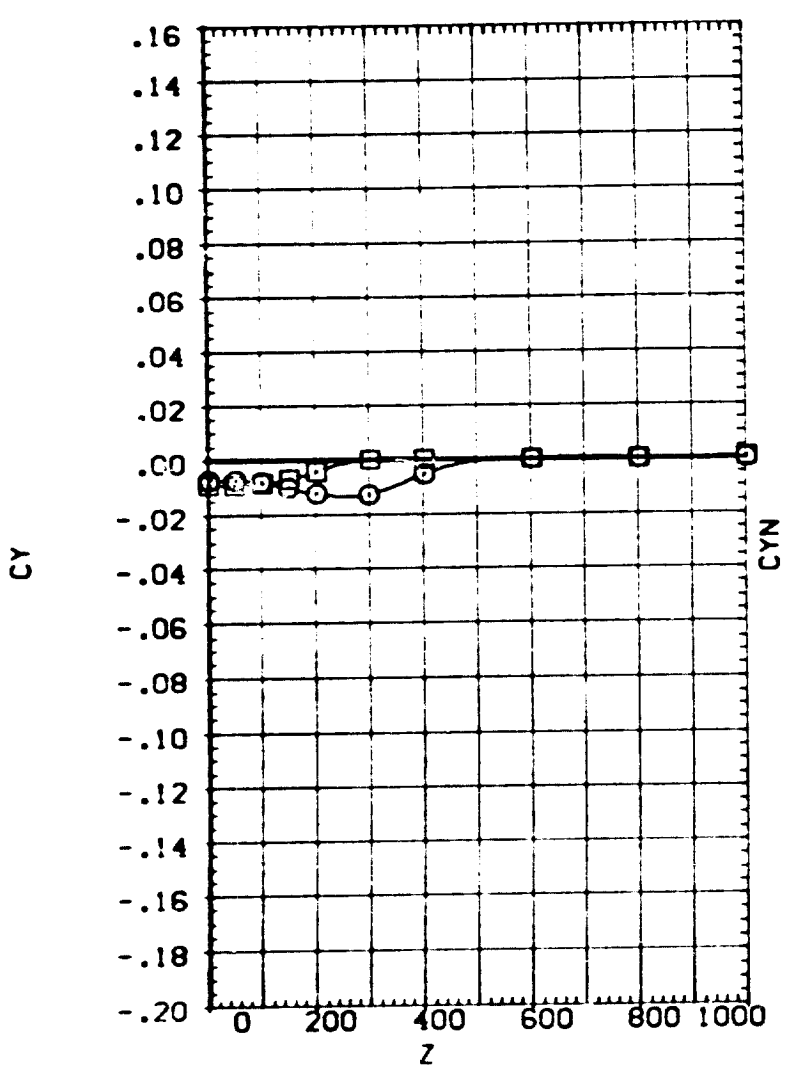


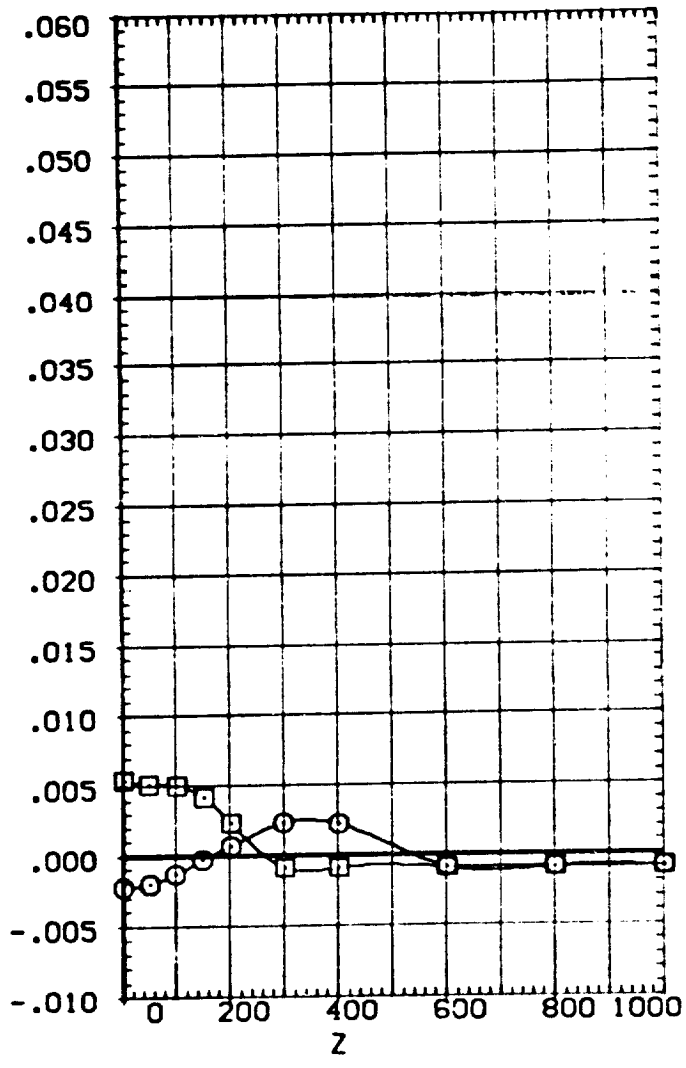
EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ141)

SYMBOL	X		PARAMETRIC VALUES		
○	.195	MACH	4.530	PTOTAL	110.000
□	900.530	ALPHA	.000	BETA	.000
		DALPHA	.000	DBETA	5.000
		Y	.000	PCHMBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



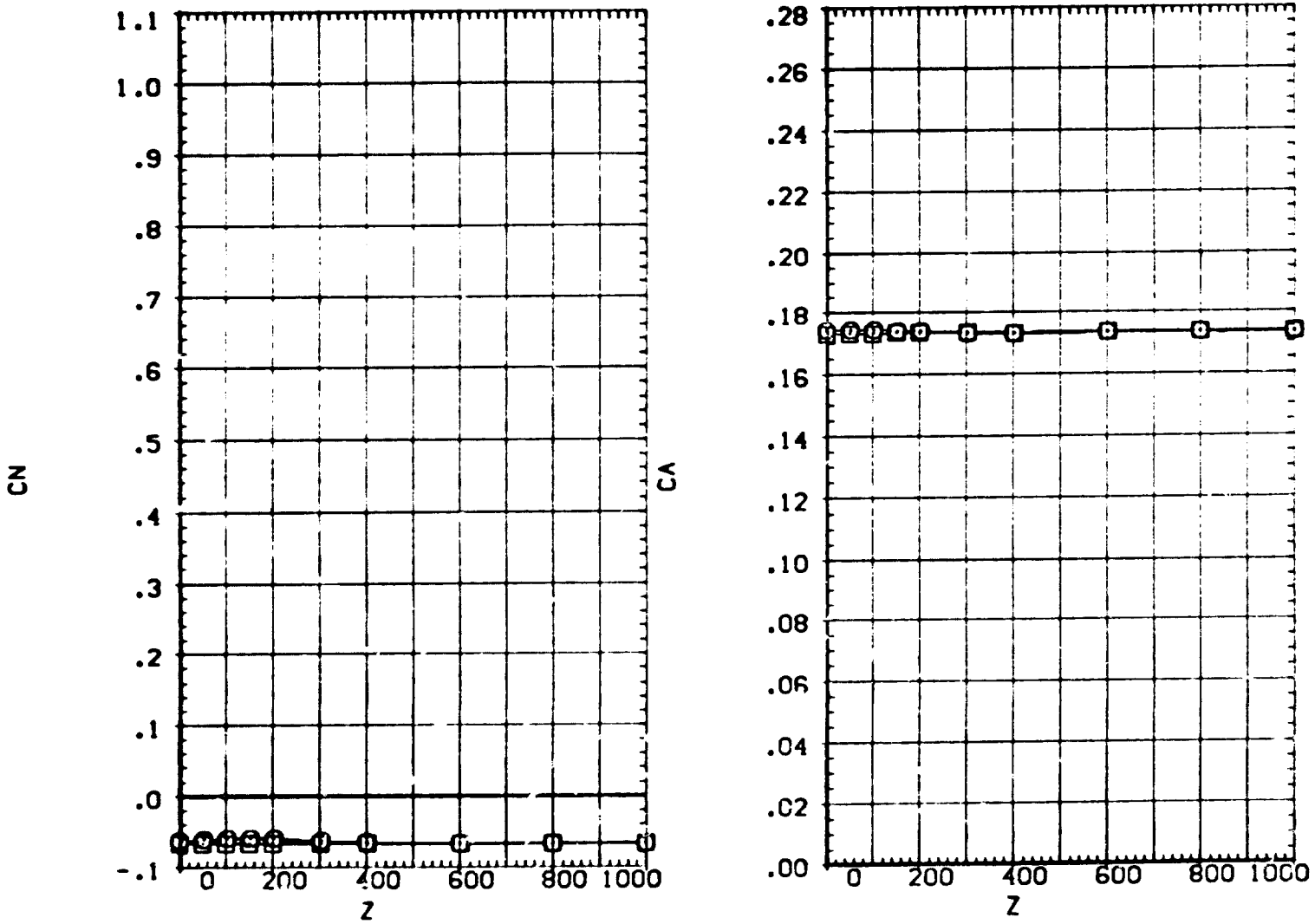


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

[A13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ142)

SYMBOL	X		PARAMETRIC VALUES		
○	-.132	MACH	4.530	PTOTAL	110.000
□	900.500	ALPHA	.000	BETA	.000
		DALPHA	.000	DBETA	5.000
		Y	200.000	POWER	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

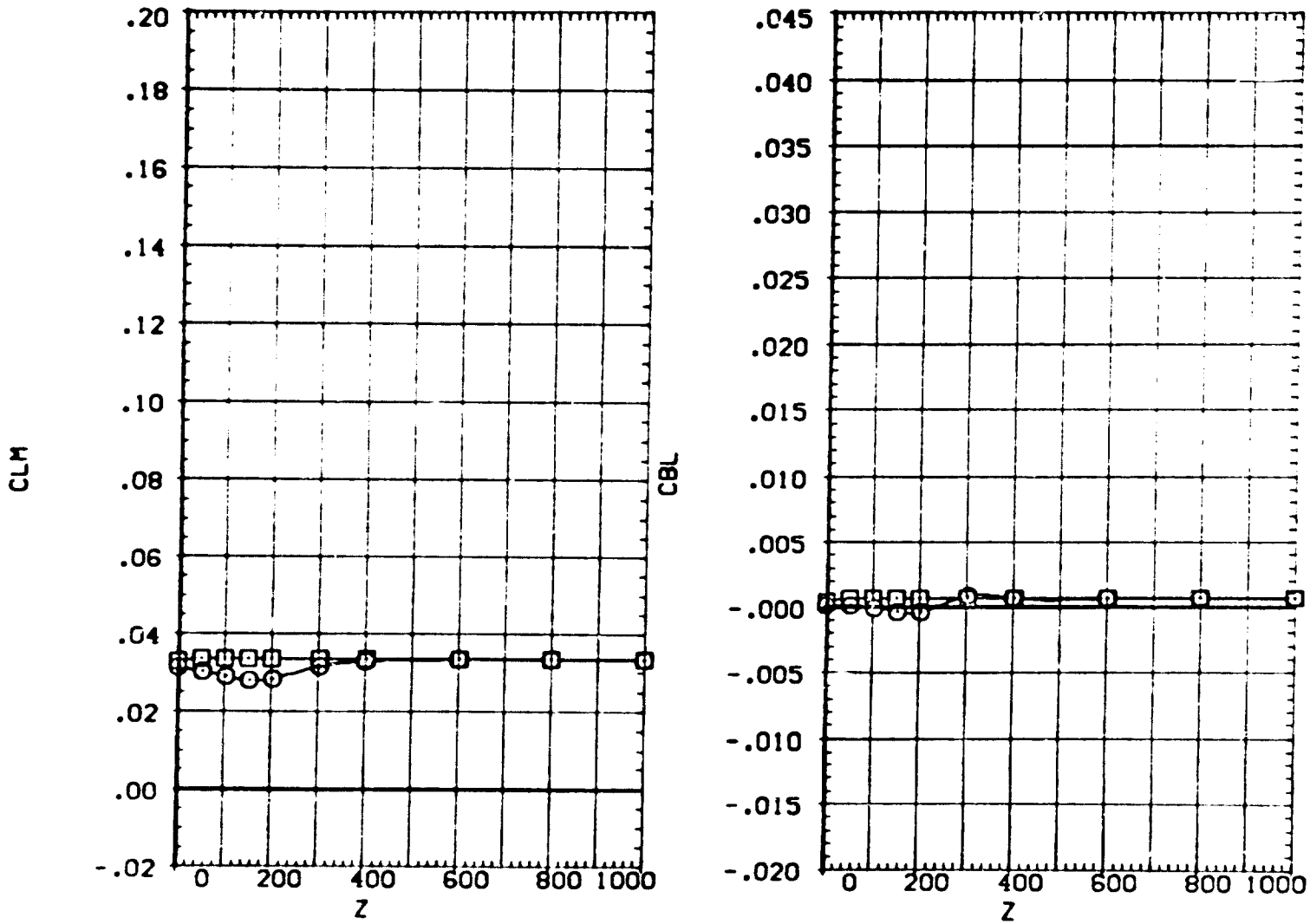


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ142)

SYMBOL	X		PARAMETRIC VALUES		
○	-.132	MACH	4.530	PTOTAL	110.000
□	900.500	ALPHA	.000	BETA	.000
		DALPHA	.000	DBETA	5.000
		Y	200.000	PCHNGR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

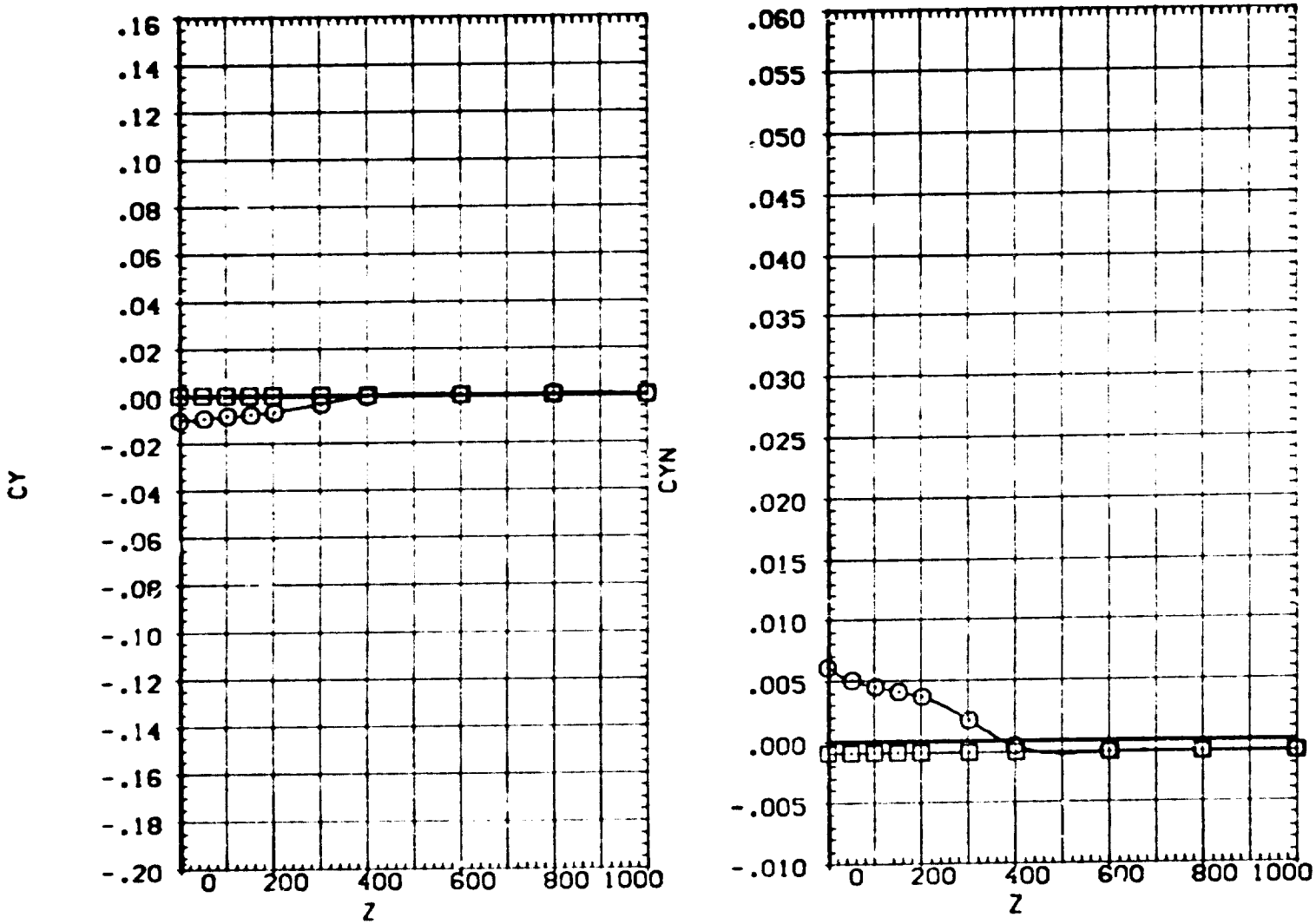


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ142)

SYMBOL	X		PARAMETRIC VALUES		
○	-.132	MACH	4.530	PTOTAL	110.000
□	900.500	ALPHA	.000	BETA	.000
		DALPHA	.000	DBETA	5.000
		Y	200.000	POWER	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

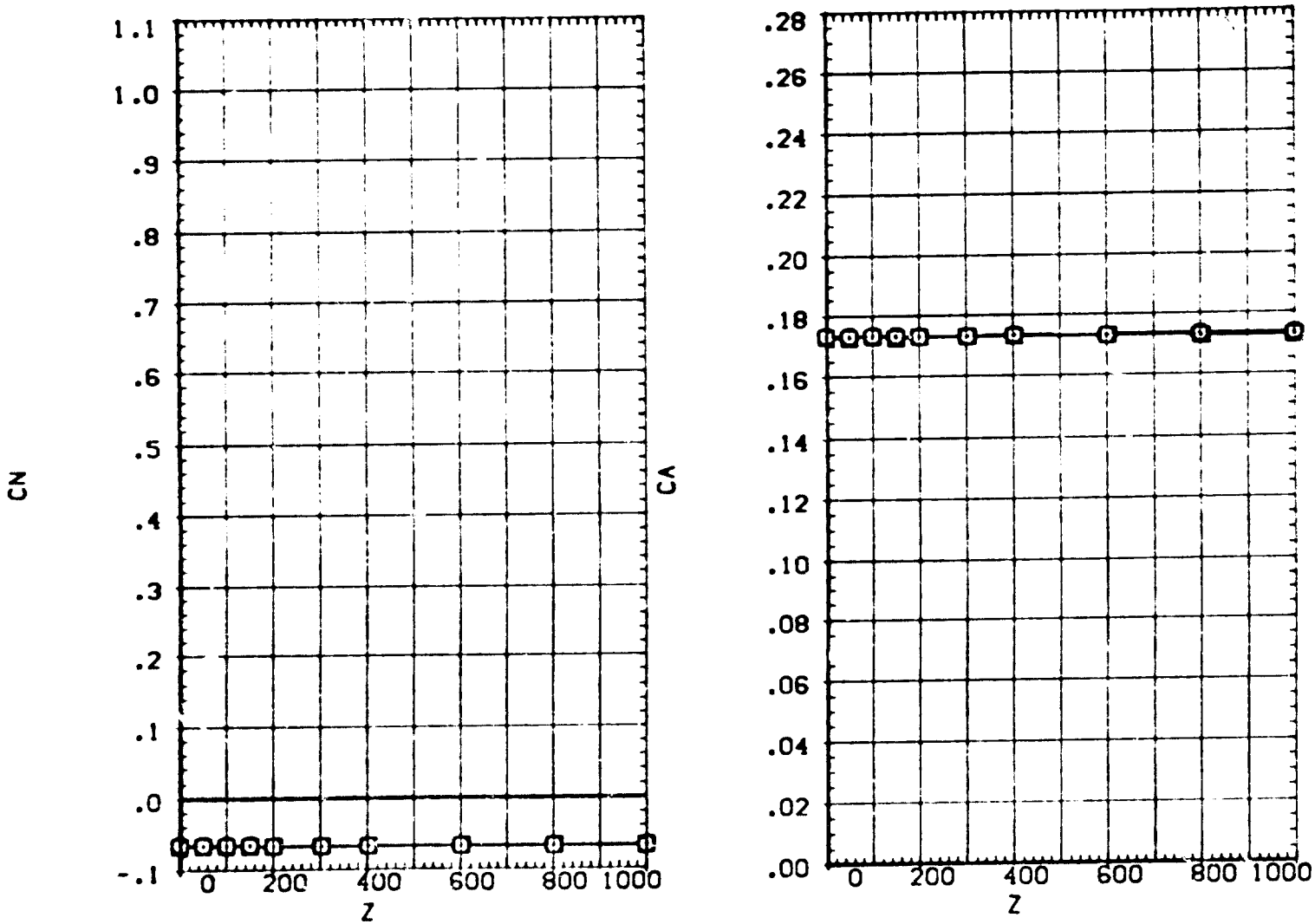


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

[A13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ143)

SYMBOL	X		PARAMETRIC VALUES		
○	.117	MACH	4.530	PTOTAL	110.000
	900.660	ALPHA	.000	BETA	.000
		DALPHA	.000	DBETA	5.000
		Y	400.000	PCHNGR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

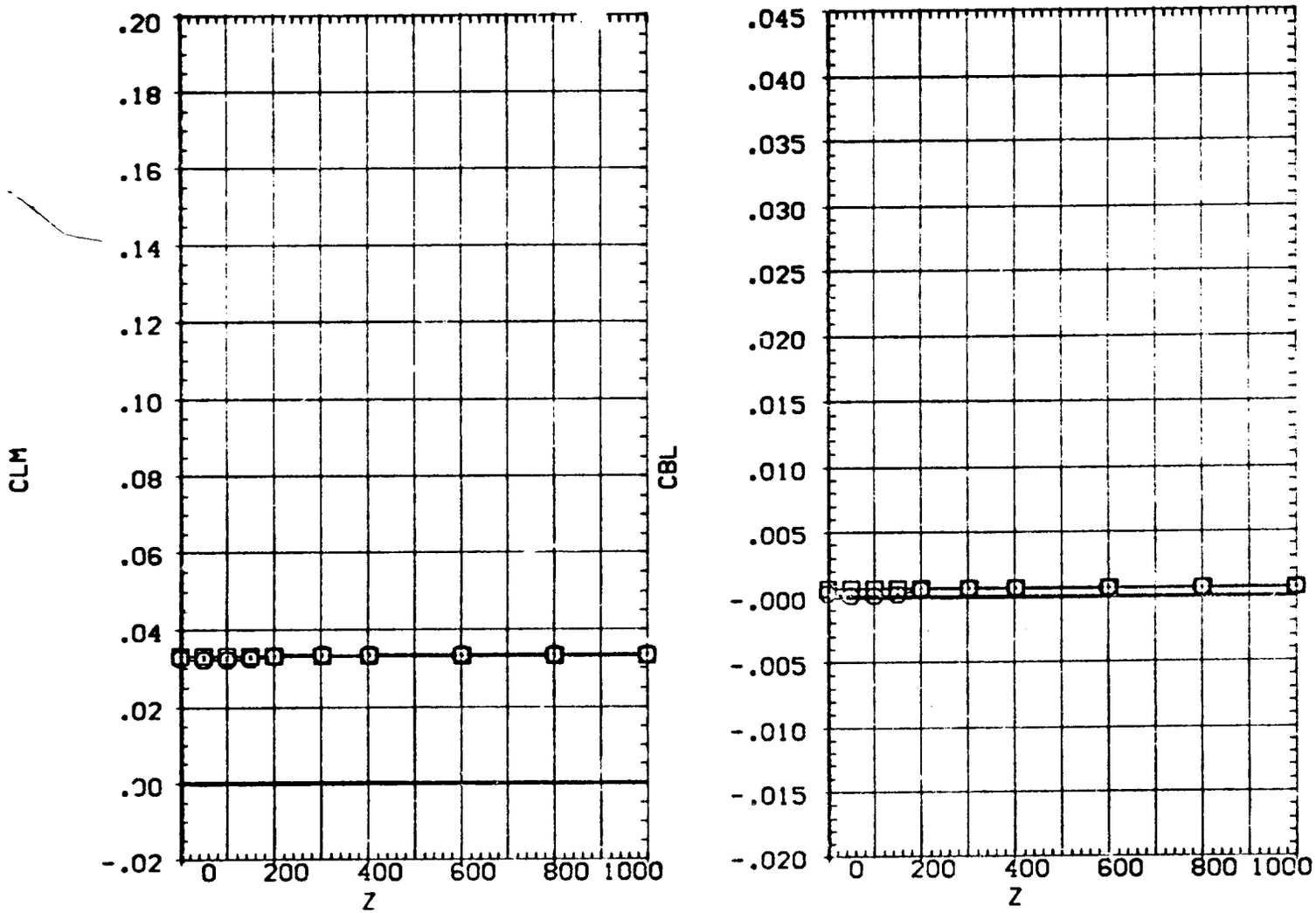


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S9) W/O PLUMES SEPARATING FROM 09T10 (RTJ143)

SYMBOL	X		PARAMETRIC VALUES		
○	.117	MACH	4.530	PTOTAL	110.000
□	900.660	ALPHA	.000	BETA	.000
		DALPHA	.000	DBETA	5.000
		Y	400.000	PCHNBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

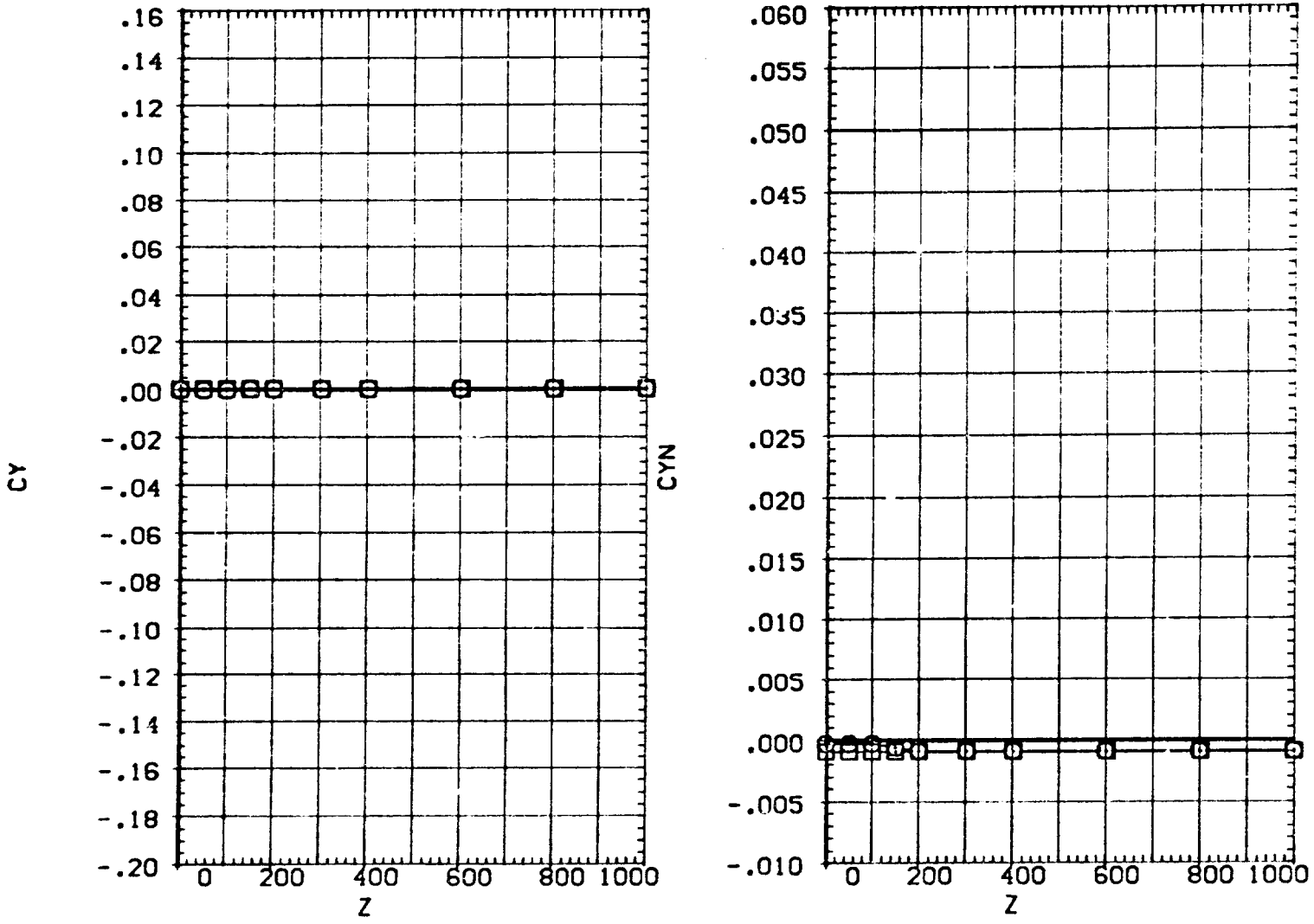


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ143)

SYMBOL	X		PARAMETRIC VALUES		
○	.117	MACH	4.530	PTOTAL	110.000
□	900.660	ALPHA	.000	BETA	.000
		DALPHA	.000	DBETA	5.000
		Y	400.000	PCHNGR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

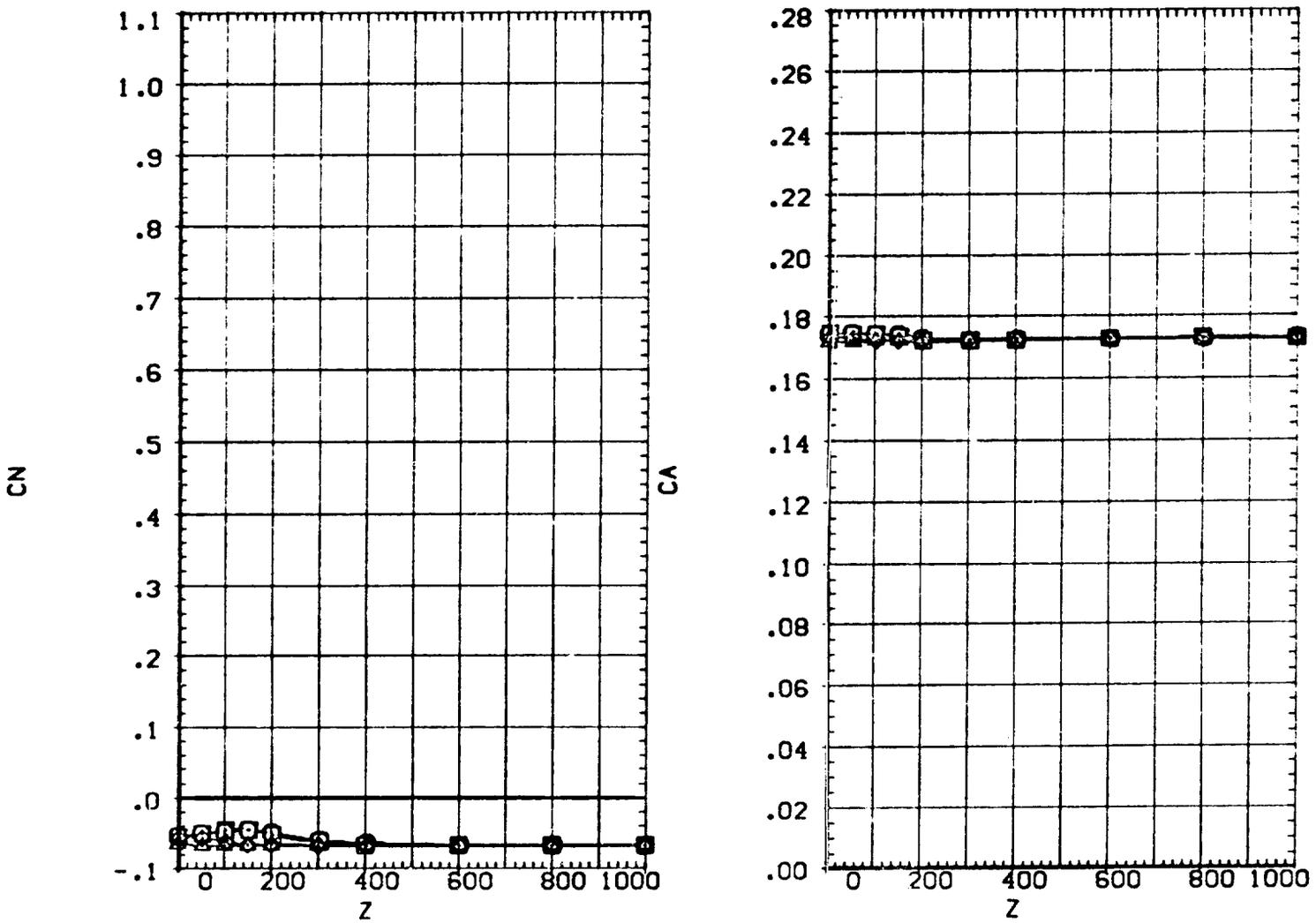


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ144)

SYMBOL	X		PARAMETRIC VALUES		
○	.214	MACH	4.530	PTOTAL	110.000
□	300.140	ALPHA	.000	BETA	.000
◇	600.570	DALPHA	.000	DBETA	-5.000
△	900.560	Y	200.000	PCHMBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

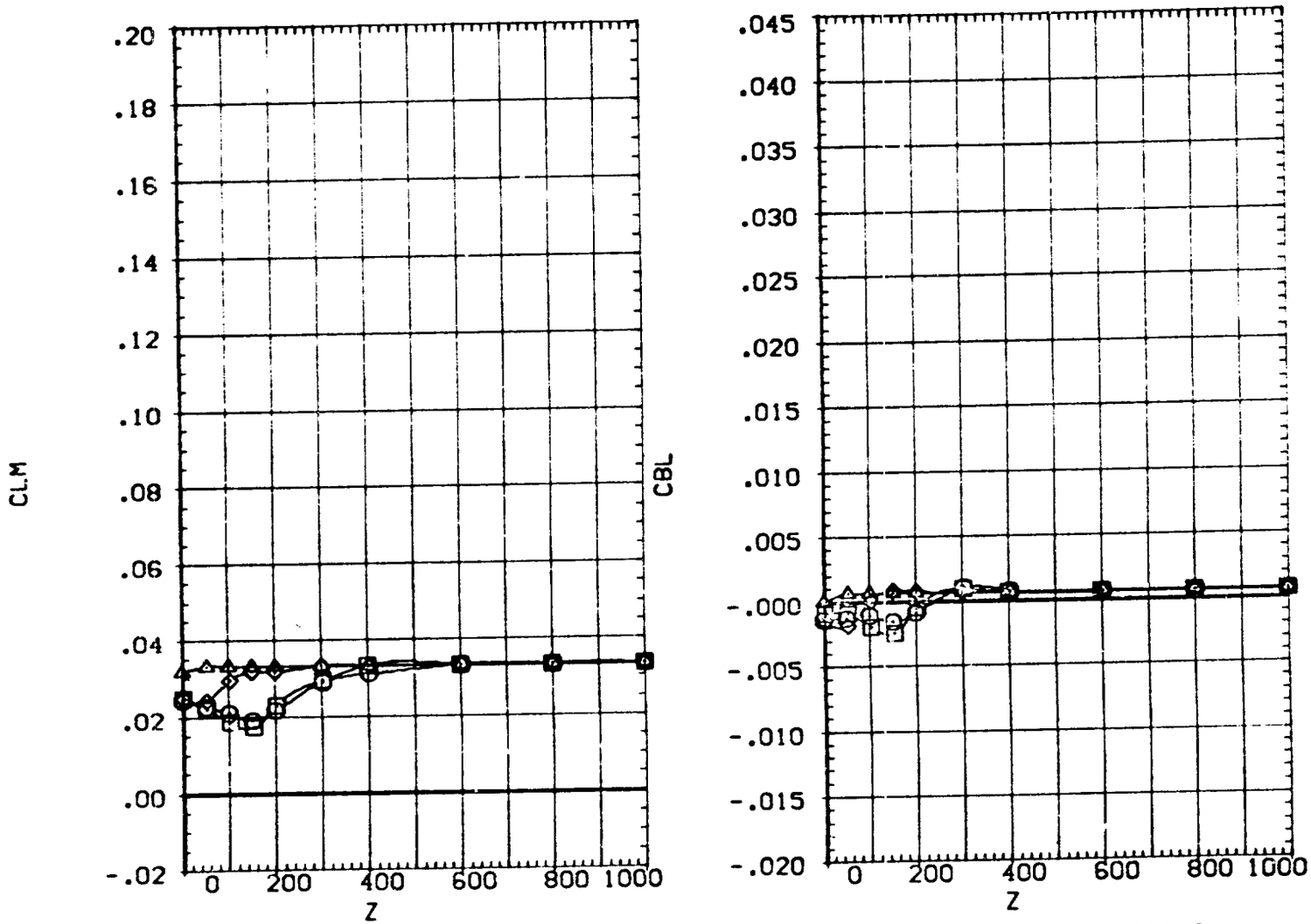


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ144)

SYMBOL	X		PARAMETRIC VALUES		
○	.214	MACH	4.530	PTOTAL	110.000
□	300.140	ALPHA	.000	BETA	.000
◇	600.570	DALPHA	.000	DBETA	-5.000
△	900.560	Y	200.000	PCHMBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

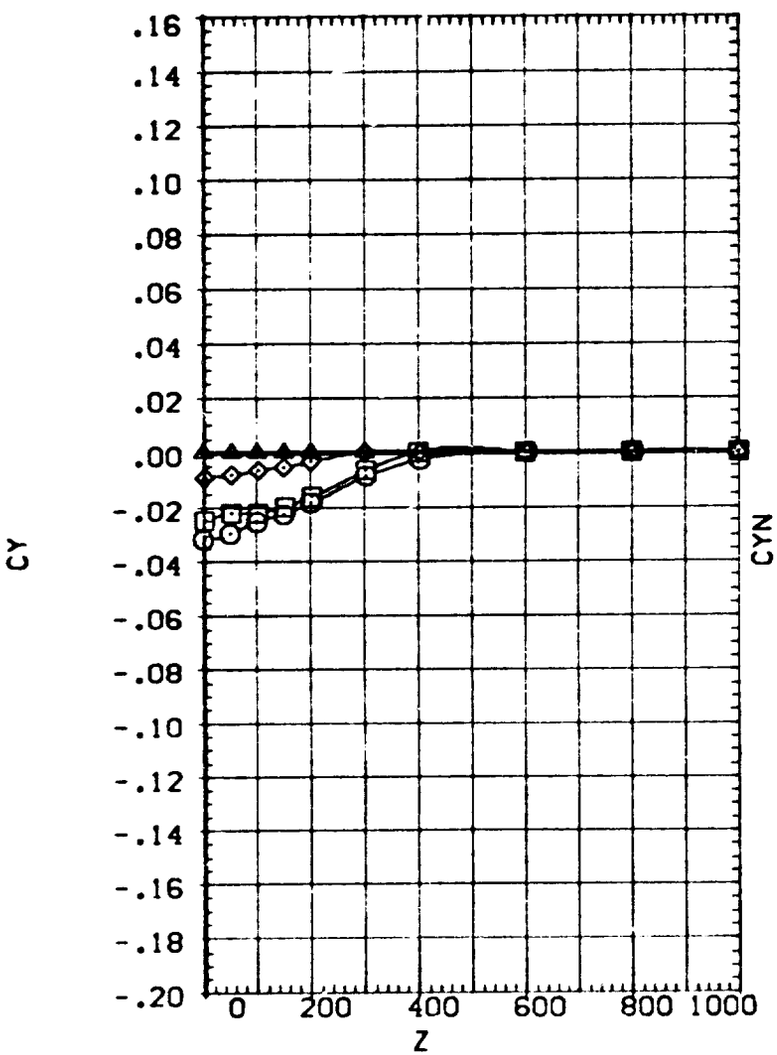


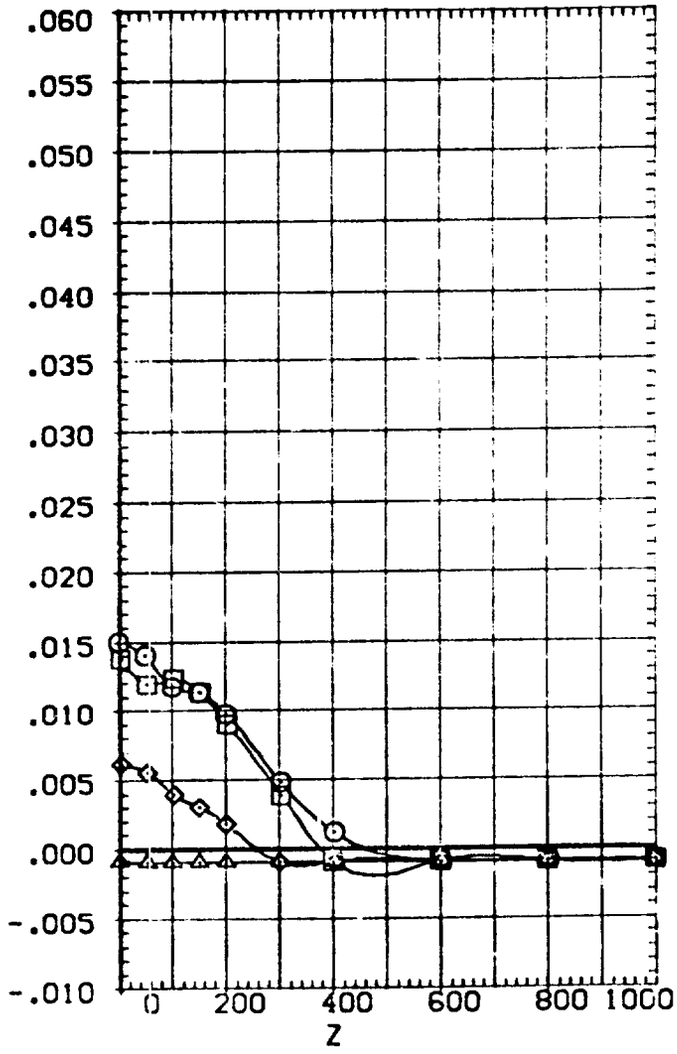
EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ144)

SYMBOL	X		PARAMETRIC VALUES		
○	.214	MACH	4.530	PTOTAL	110.000
□	300.140	ALPHA	.000	BETA	.000
◇	600.570	DALPHA	.000	DBETA	-5.000
△	900.560	Y	200.000	PCHMBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



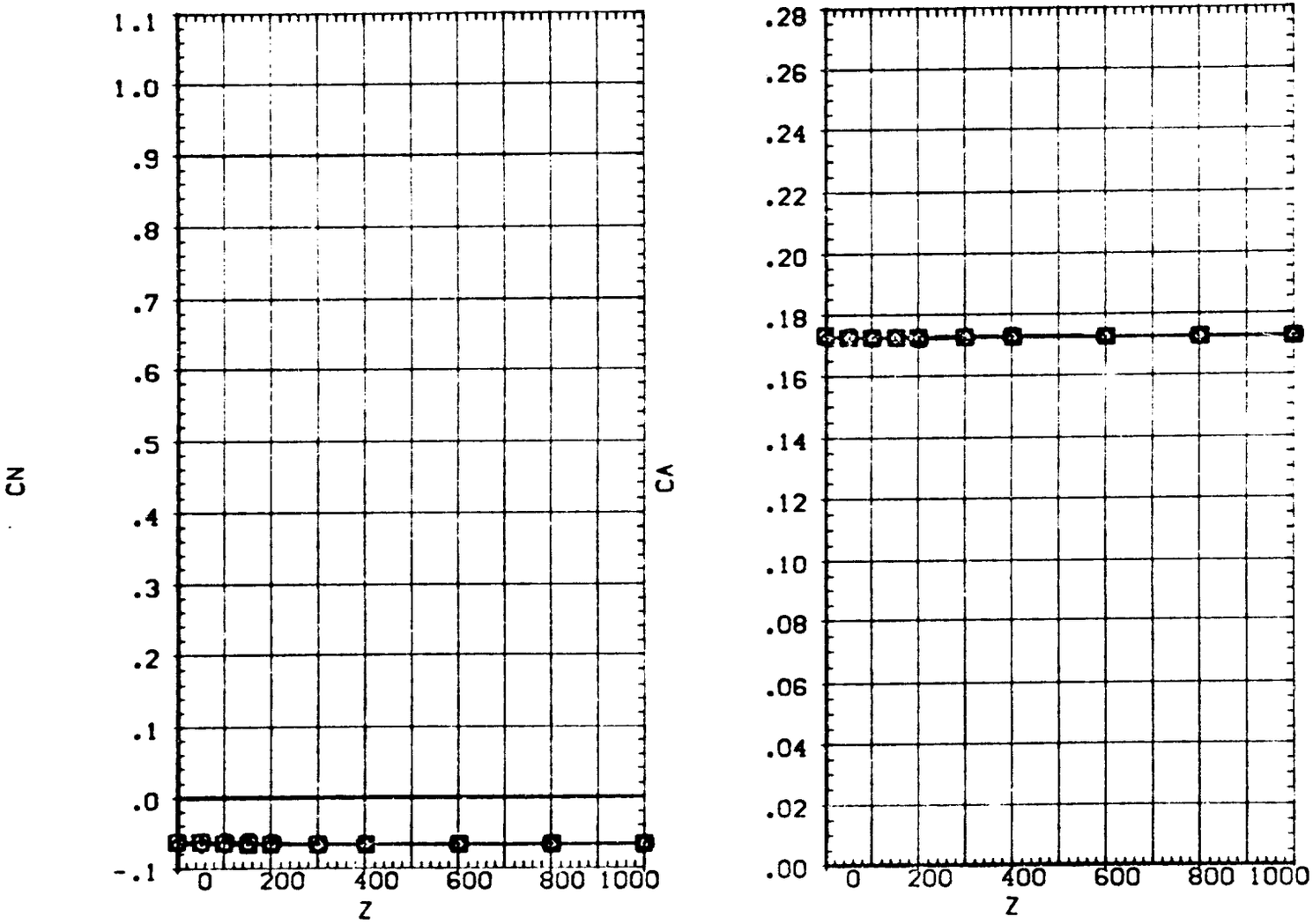


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ145)

SYMBOL	X		PARAMETRIC VALUES		
○	.118	MACH	4.530	PTOTAL	110.000
□	300.460	ALPHA	.000	BETA	.000
◇	600.620	DALPHA	.000	DBETA	-5.000
△	900.620	Y	400.000	PCHMBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

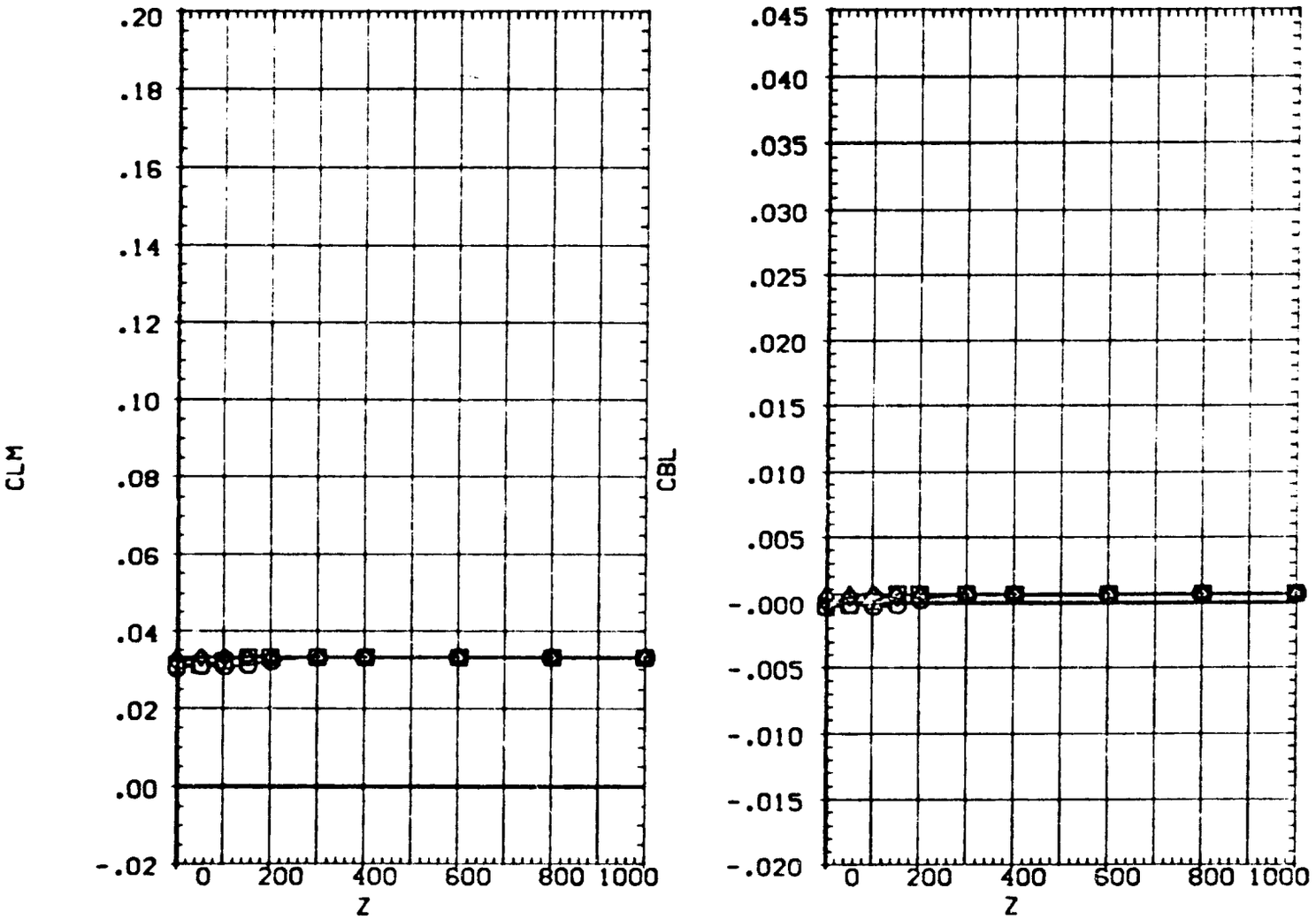


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ145)

SYMBOL	X		PARAMETRIC VALUES		
○	.118	MACH	4.530	PTOTAL	110.000
□	300.460	ALPHA	.000	BETA	.000
◇	600.620	DALPHA	.000	DBETA	-5.000
△	900.620	Y	400.000	PCHMBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

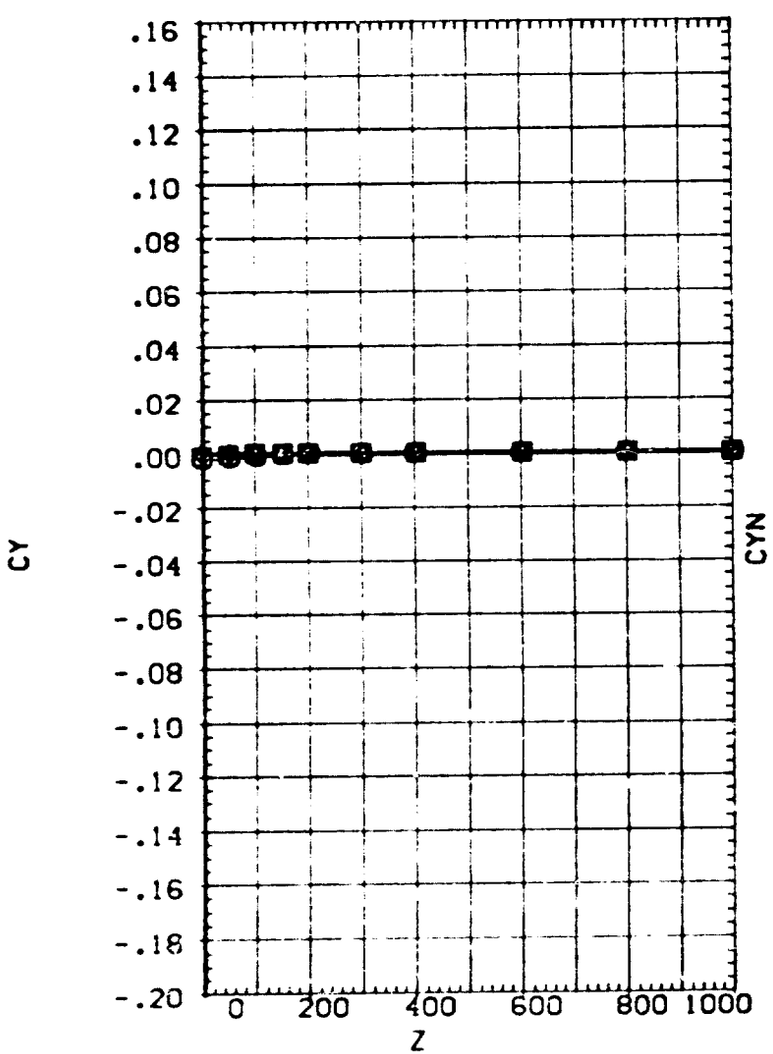


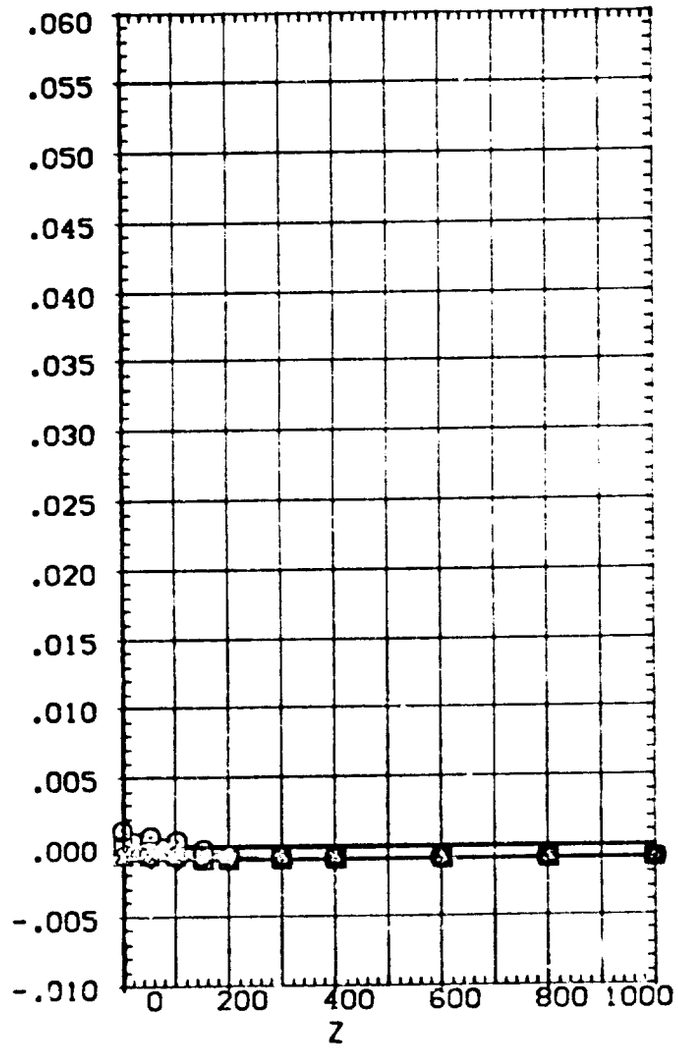
EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ145)

SYMBOL	X		PARAMETRIC VALUES		
○	.118	MACH	4.530	PTOTAL	110.000
□	300.460	ALPHA	.000	BETA	.000
◇	600.620	DALPHA	.000	DBETA	-5.000
△	900.620	Y	400.000	PCHMBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



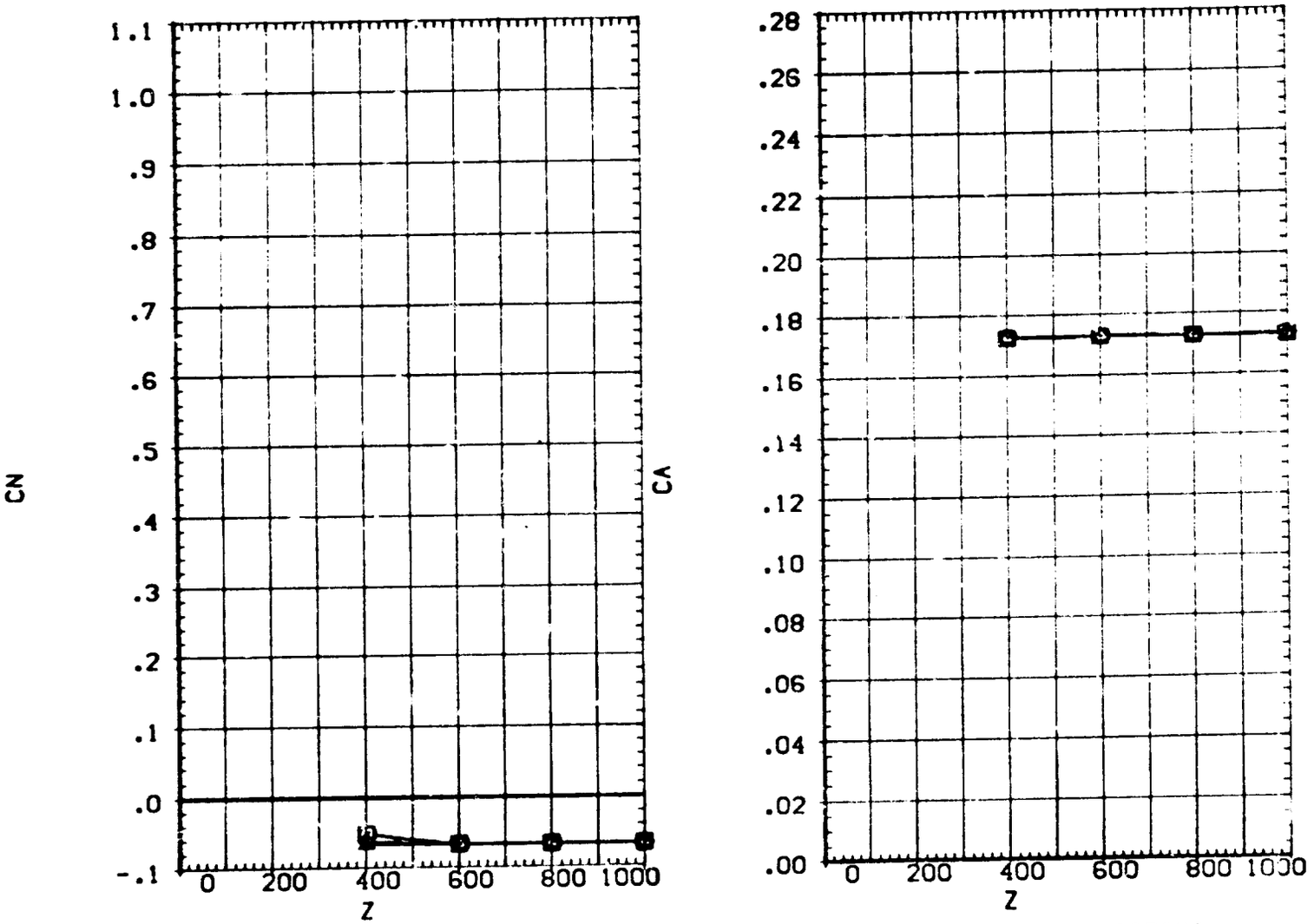


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ146)

SYMBOL	X		PARAMETRIC VALUES		
○	.323	MACH	4.530	PTOTAL	110.000
□	300.480	ALPHA	.000	BETA	.000
◇	600.310	DALPHA	.000	DBETA	-5.000
△	900.550	Y	.000	PCHMBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

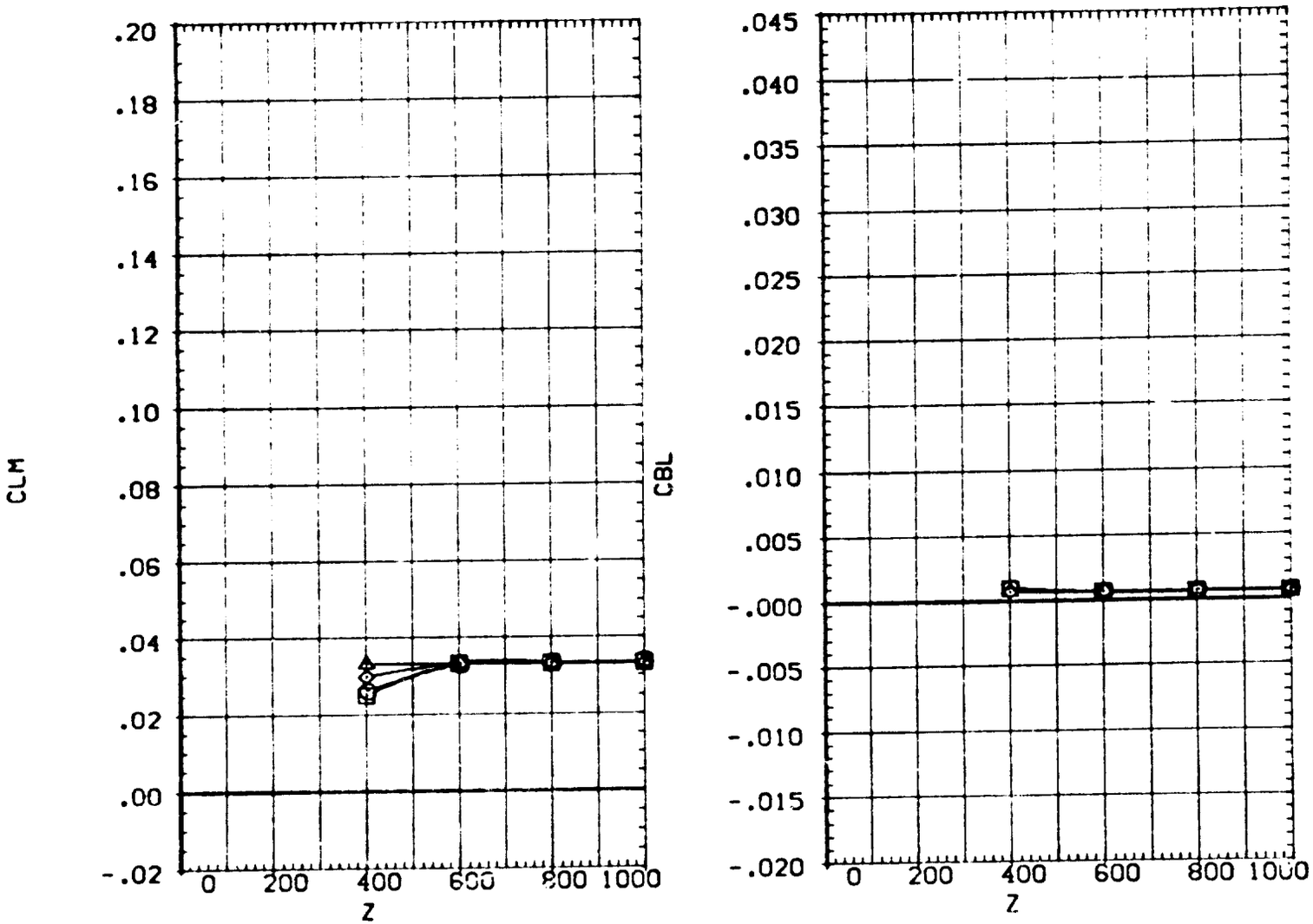


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ146)

SYMBOL	X		PARAMETRIC VALUES		
○	.323	MACH	4.530	PTOTAL	110.000
□	300.480	ALPHA	.000	BETA	.000
◇	600.310	DALPHA	.000	DBETA	-5.000
△	900.550	Y	.000	PCHMBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

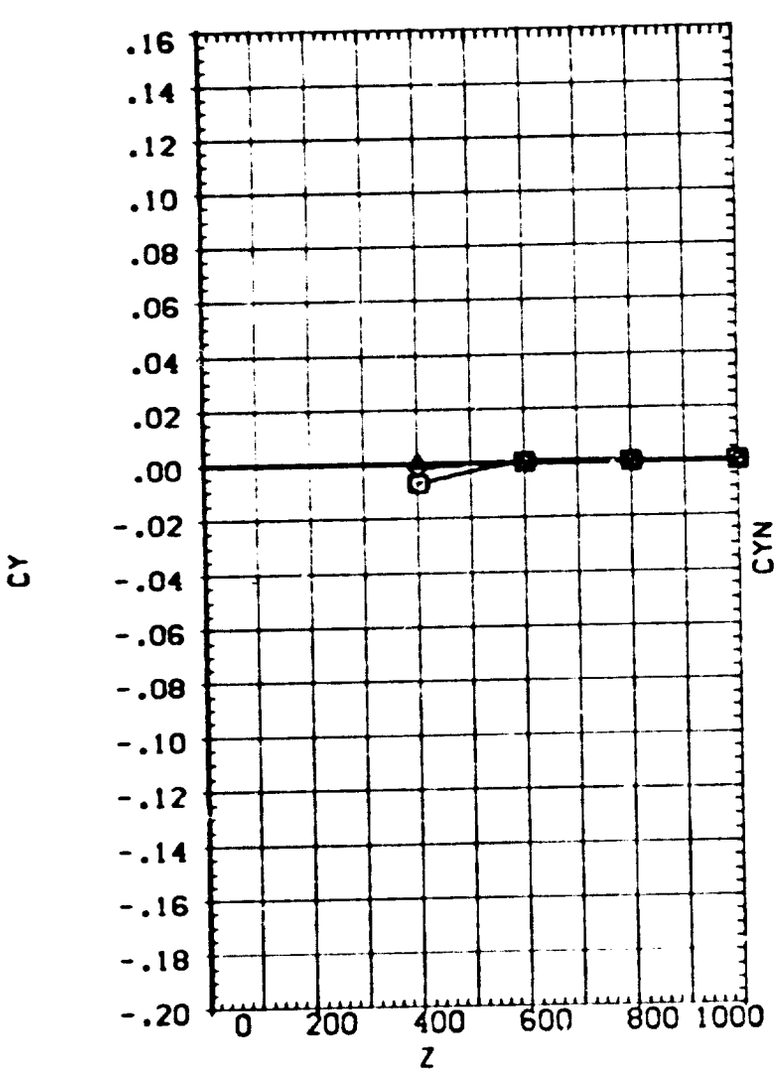


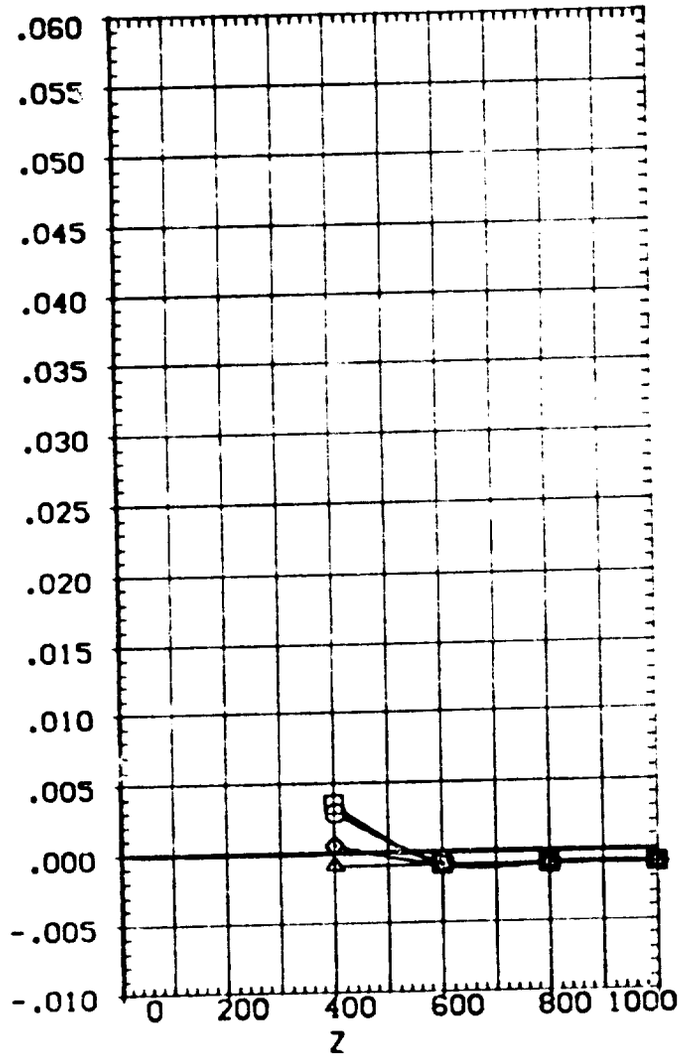
EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ146)

SYMBOL	X		PARAMETRIC VALUES		
○	.323	MACH	4.530	PTOTAL	110.000
□	300.480	ALPHA	.000	BETA	.000
◇	600.310	DALPHA	.000	DBETA	-5.000
△	900.550	Y	.000	PCHBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



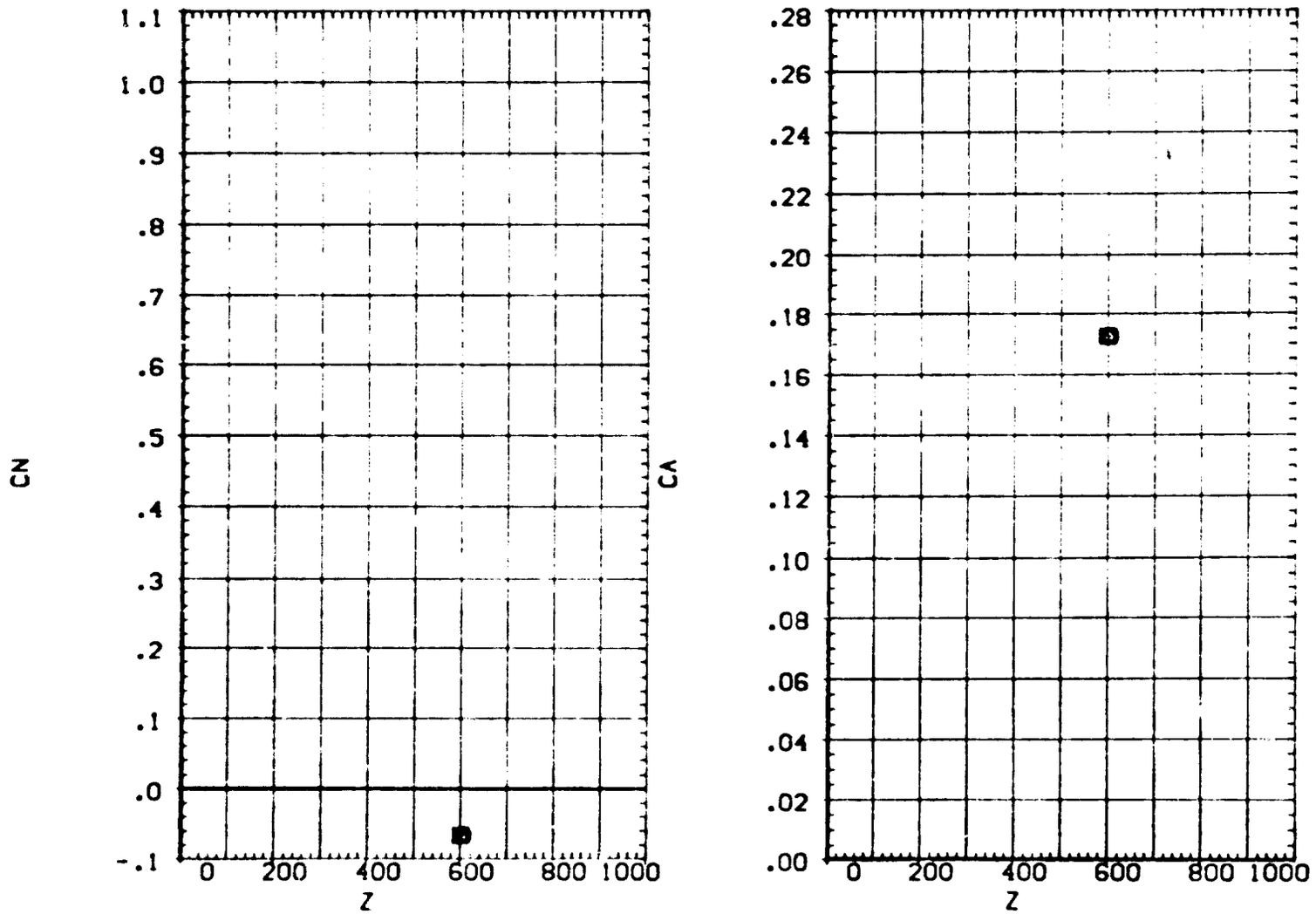


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ147)

SYMBOL	X		PARAMETRIC VALUES		
○	.392	MACH	4.530	PTOTAL	110.000
□	300.420	ALPHA	.000	BETA	.000
◇	600.600	DALPHA	.000	DBETA	-5.000
△	900.850	Y	870.000	PCHNBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

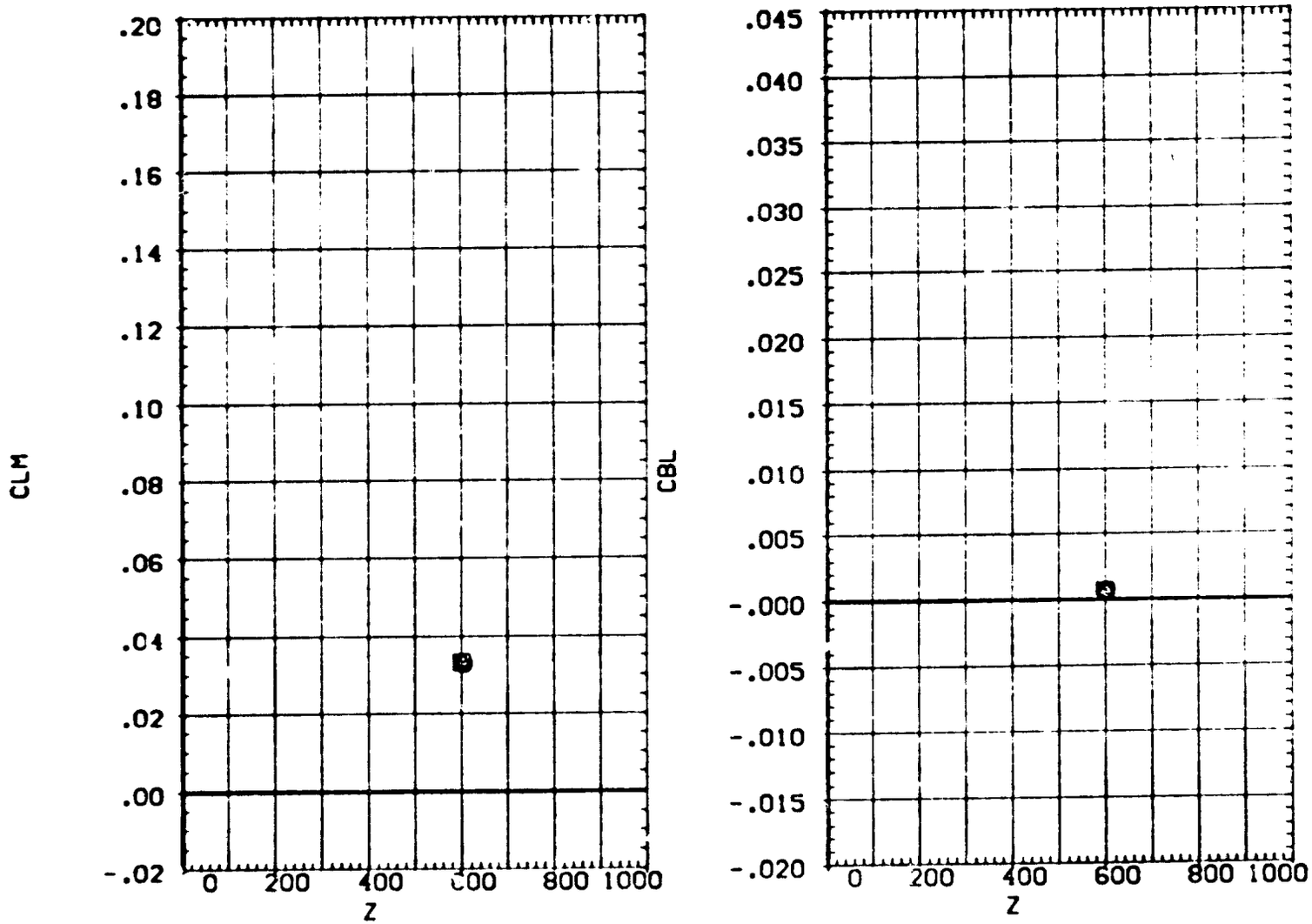


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RIJ147)

SYMBOL	X		PARAMETRIC VALUES		
○	.392	MACH	4.530	PTOTAL	110.000
□	300.420	ALPHA	.000	BETA	.000
◇	600.500	DALPHA	.000	DBETA	-5.000
△	900.850	Y	800.000	PCHMBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

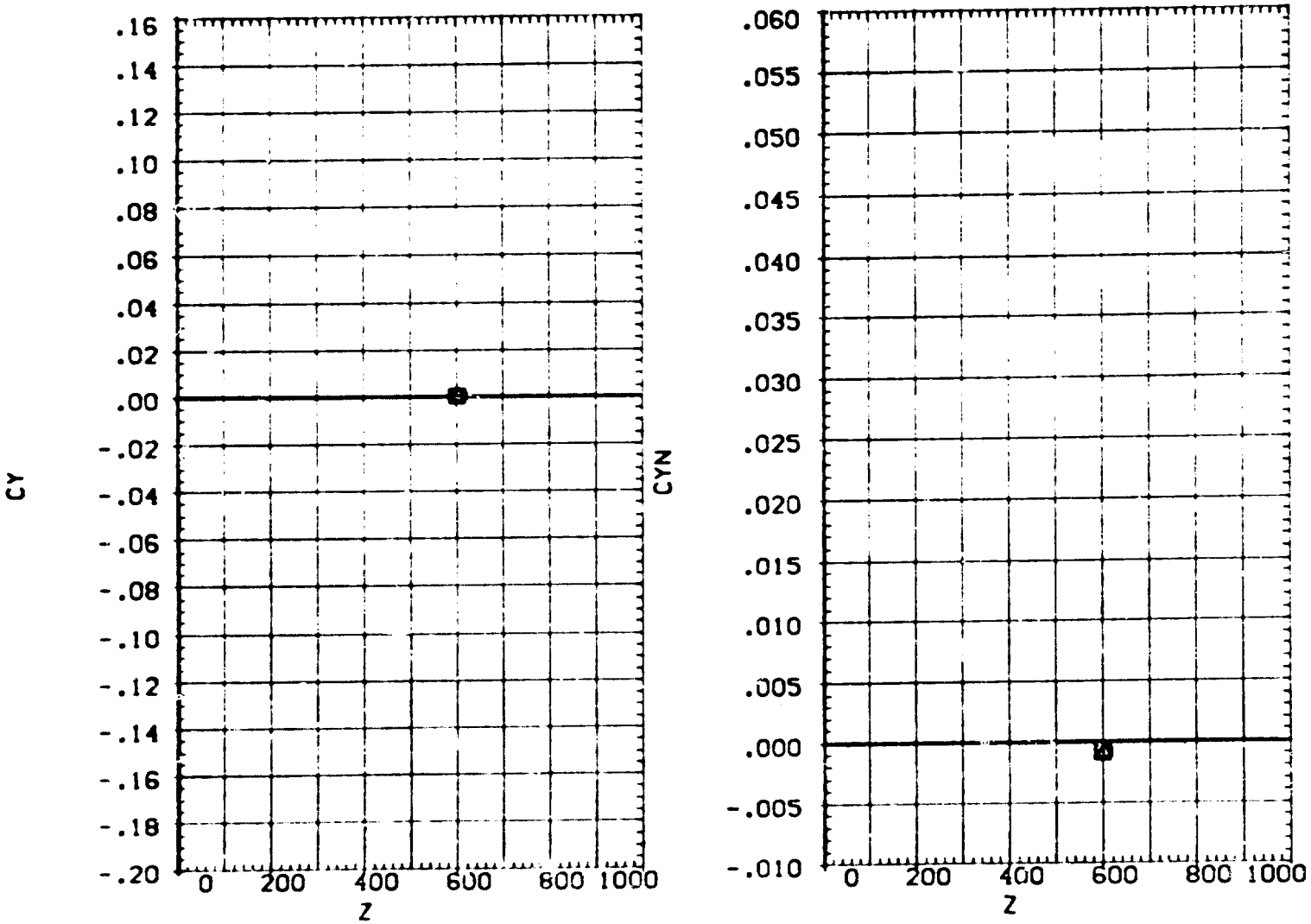


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

!A13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ147)

SYMBOL	X		PARAMETRIC VALUES		
○	.392	MACH	4.530	PTOTAL	110.000
□	300.420	ALPHA	.000	BETA	.000
◇	600.600	DALPHA	.000	DBETA	-5.000
△	900.850	Y	800.000	PCHMBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

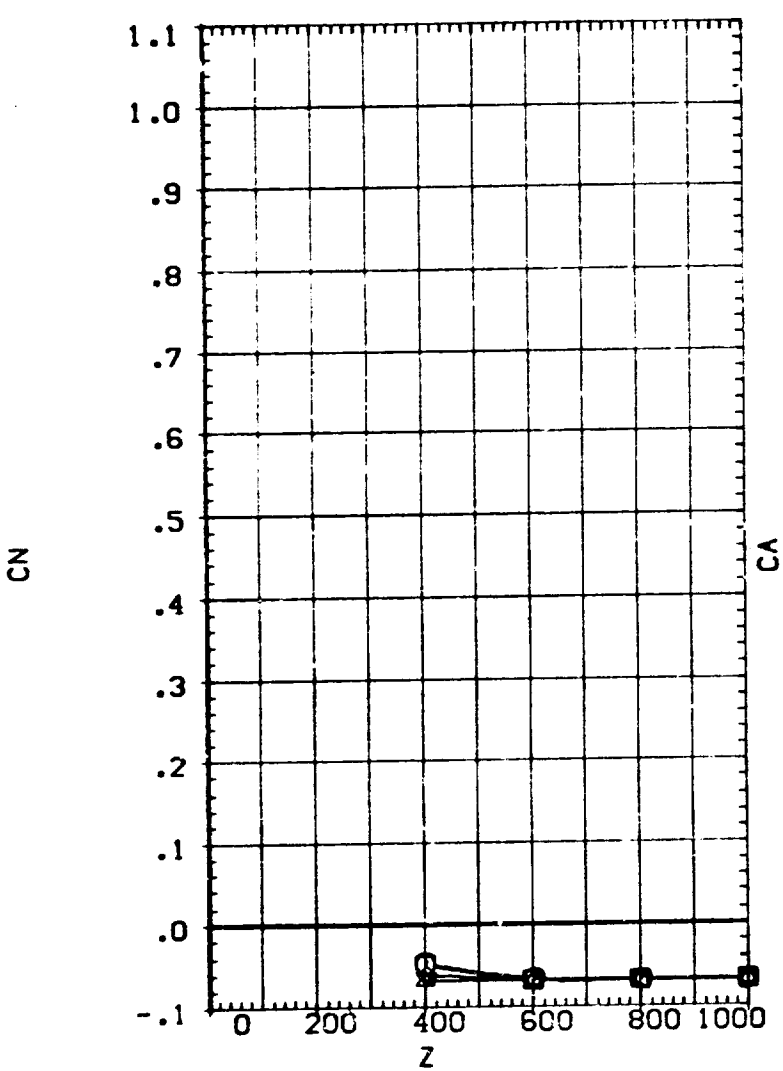


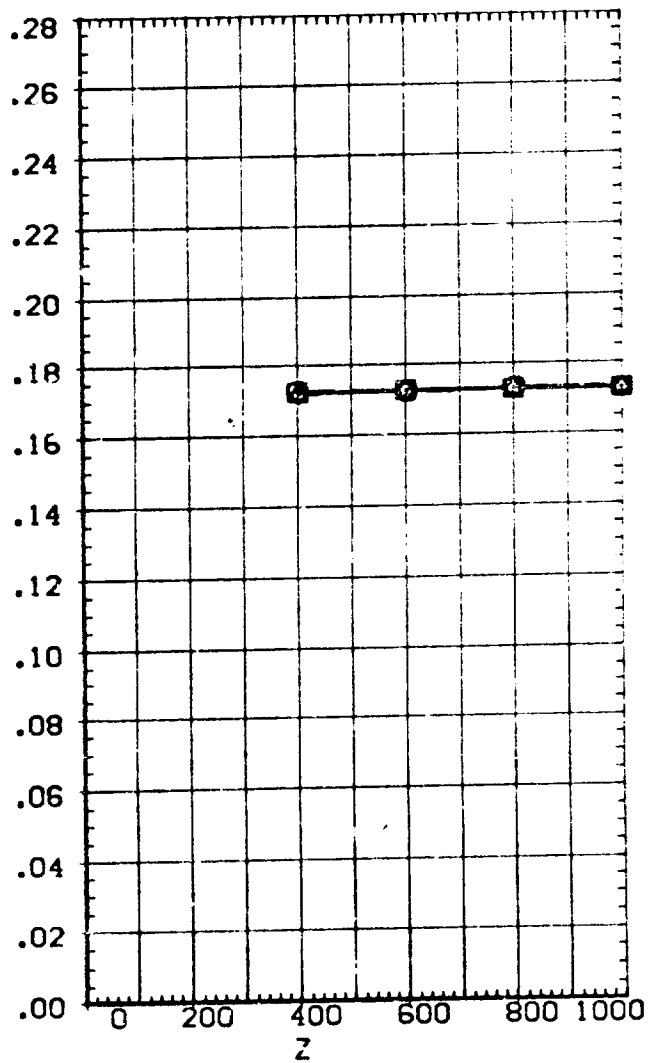
EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ148)

SYMBOL	X		PARAMETRIC VALUES		
○	.236	MACH	4.530	PTOTAL	110.000
□	300.210	ALPHA	.000	BETA	.000
◇	600.560	DALPHA	.000	DBETA	-10.000
△	900.440	Y	.000	PCHNGR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



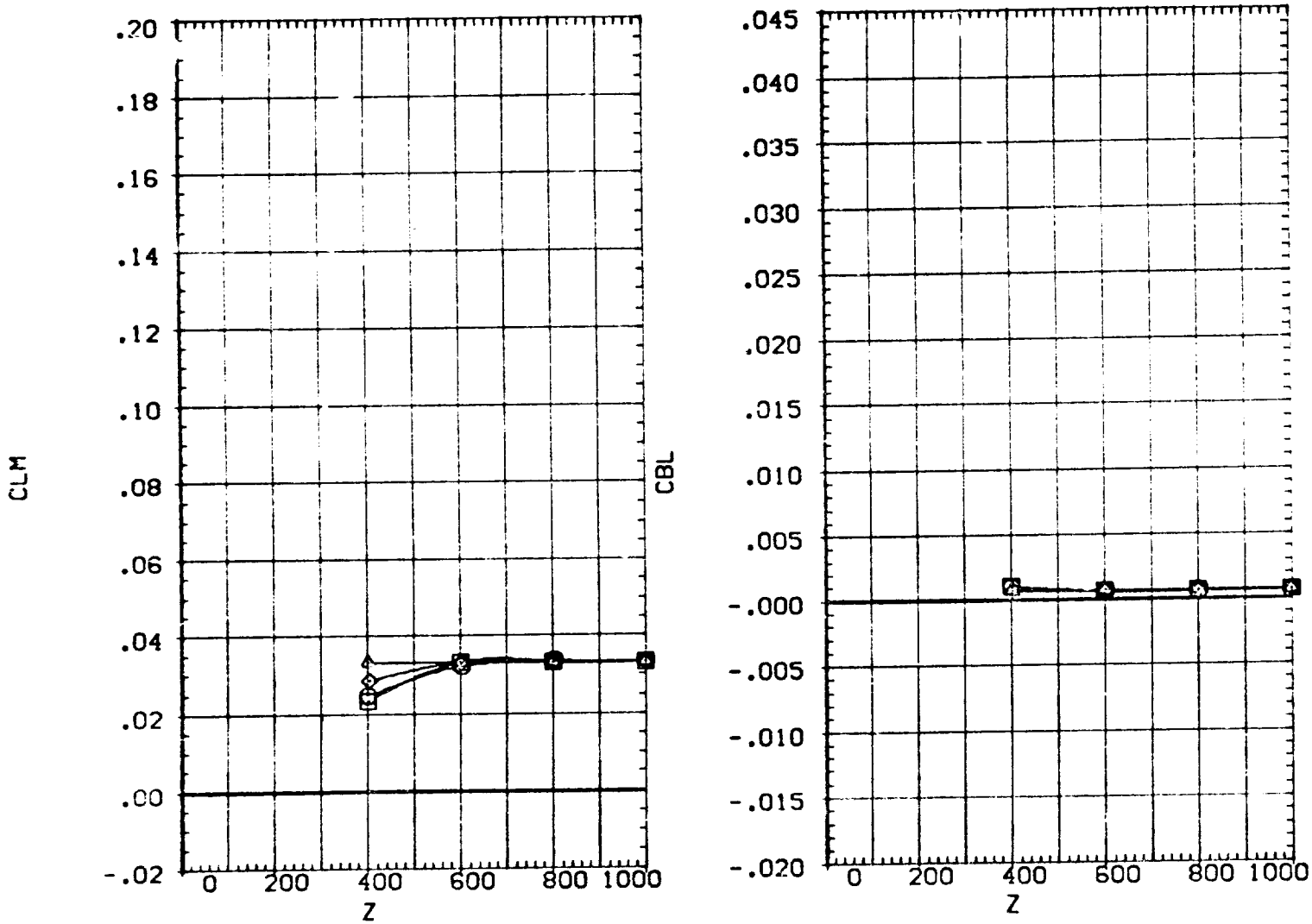


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 Sr ,(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ148)

SYMBOL	X		PARAMETRIC VALUES		
○	.236	MACH	4.530	PTOTAL	110.000
□	300.210	ALPHA	.000	BETA	.000
◇	600.560	DALPHA	.000	DBETA	-10.000
△	900.440	Y	.000	PCHNGR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

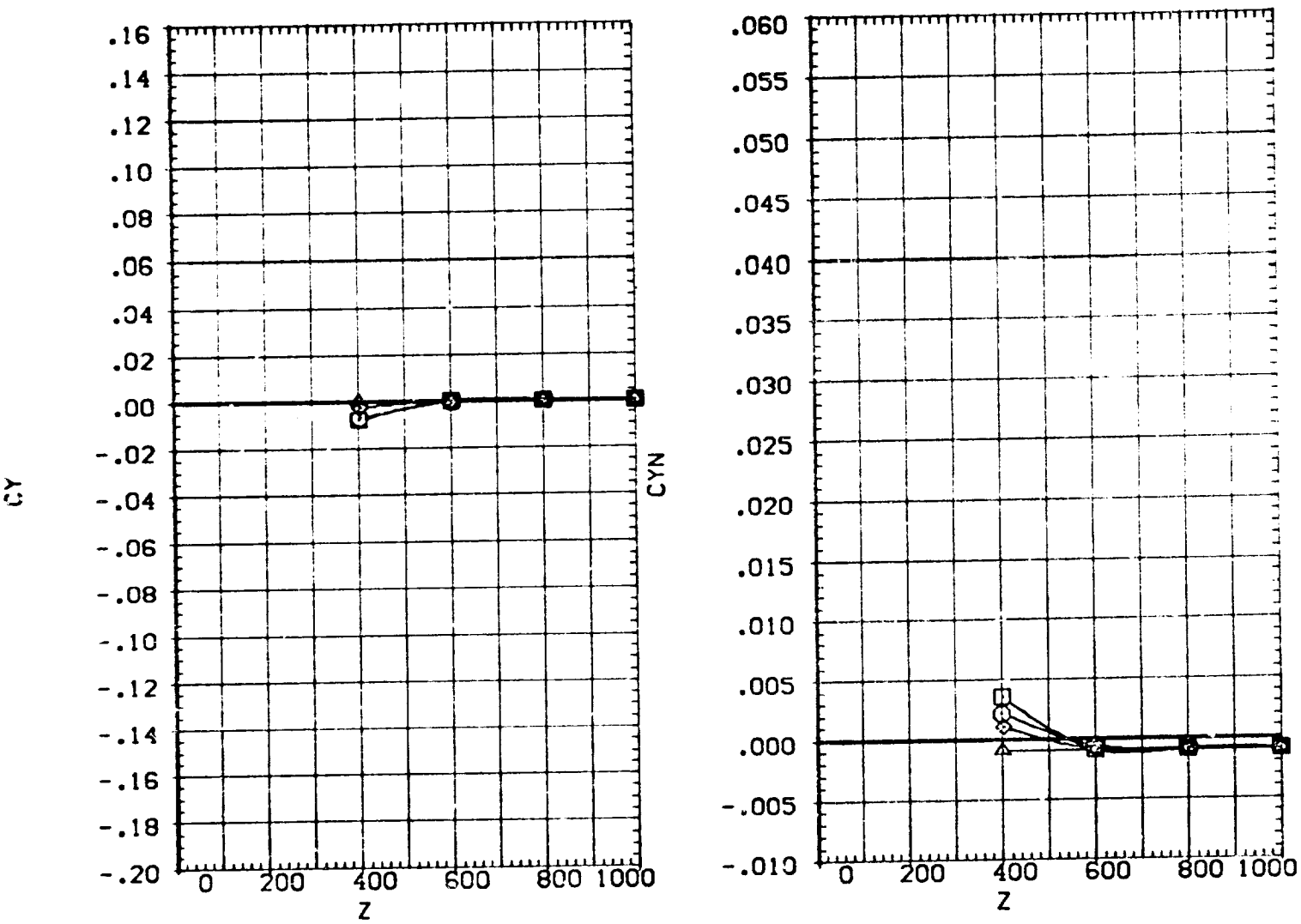


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ148)

SYMBOL	X		PARAMETRIC VALUES		
○	.236	MACH	4.530	PTOTAL	110.000
□	300.210	ALPHA	.000	BETA	.000
◇	600.560	DALPHA	.000	DBETA	-10.000
△	900.440	Y	.000	PCHMBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

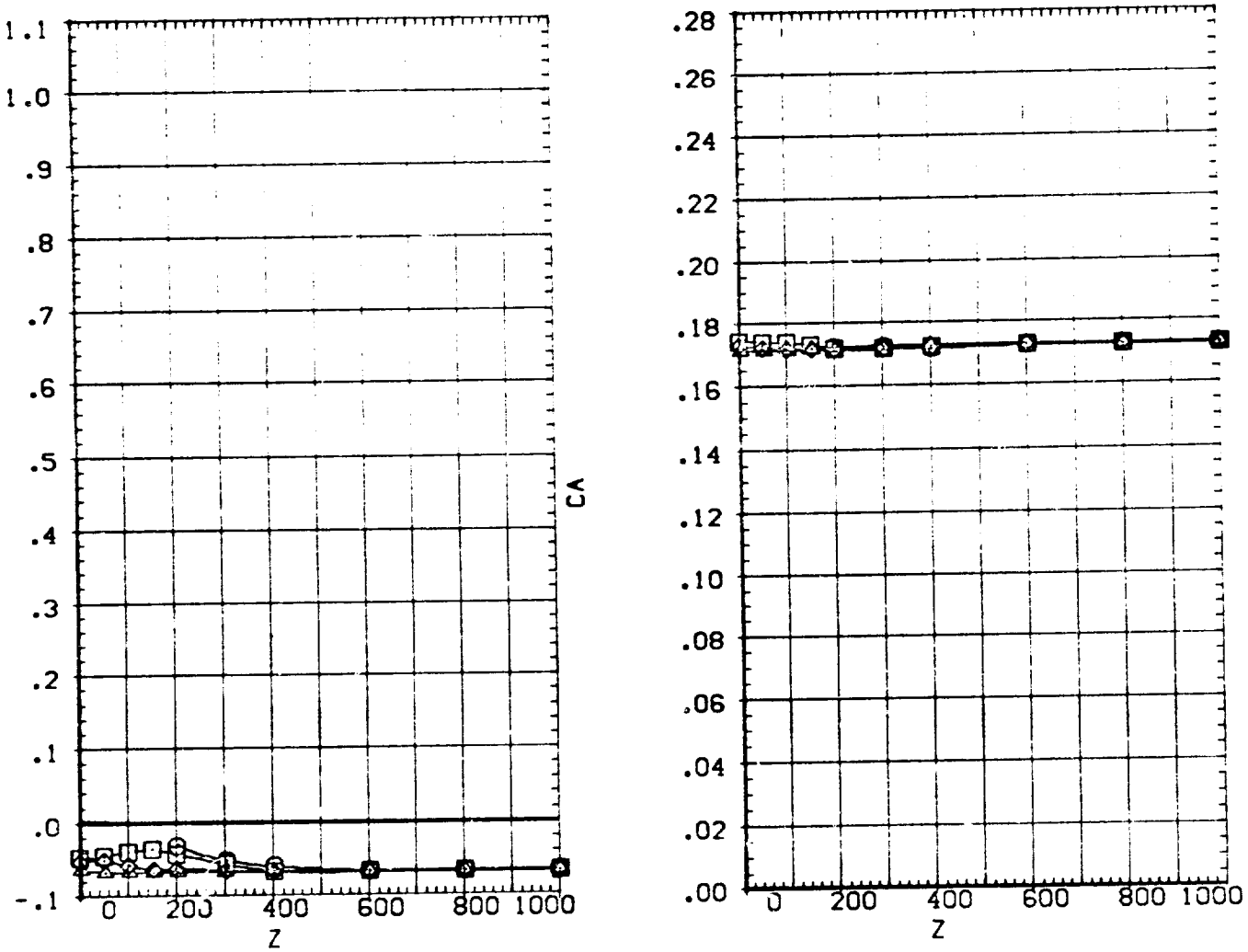


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

:A13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ149)

SYMBOL	X		PARAMETRIC VALUES		
○	.283	MACH	4.530	PTOTAL	110.000
□	300.370	ALPHA	.000	BETA	.000
◇	600.600	DALPHA	.000	DBETA	-10.000
△	900.820	Y	200.000	PCHMBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

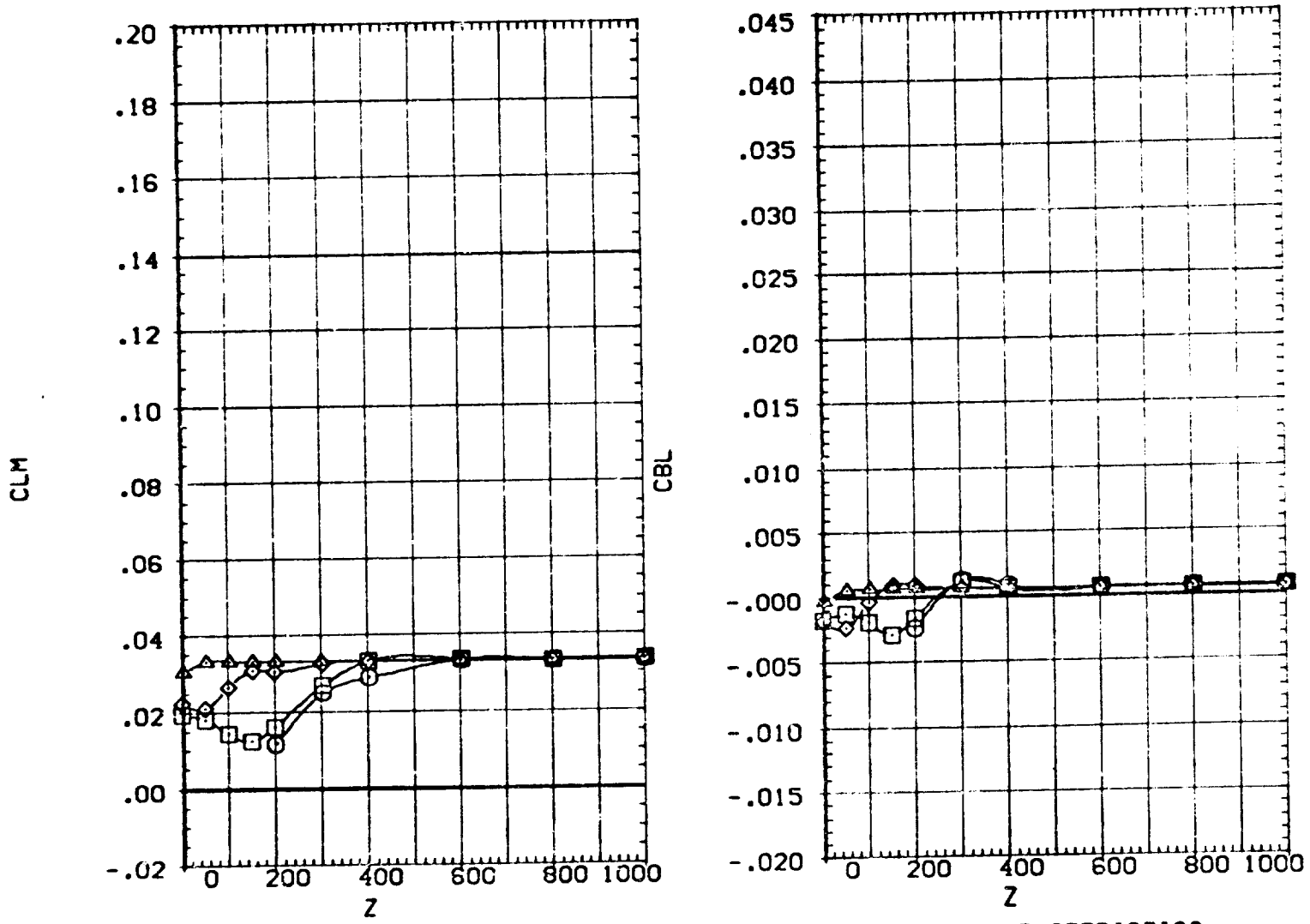


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ149)

SYMBOL	X		PARAMETRIC VALUES		
○	.283	MACH	4.530	PTOTAL	110.000
□	300.370	ALPHA	.000	BETA	.000
◇	600.600	DALPHA	.000	DBETA	-10.000
△	900.820	Y	200.000	PCHMBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

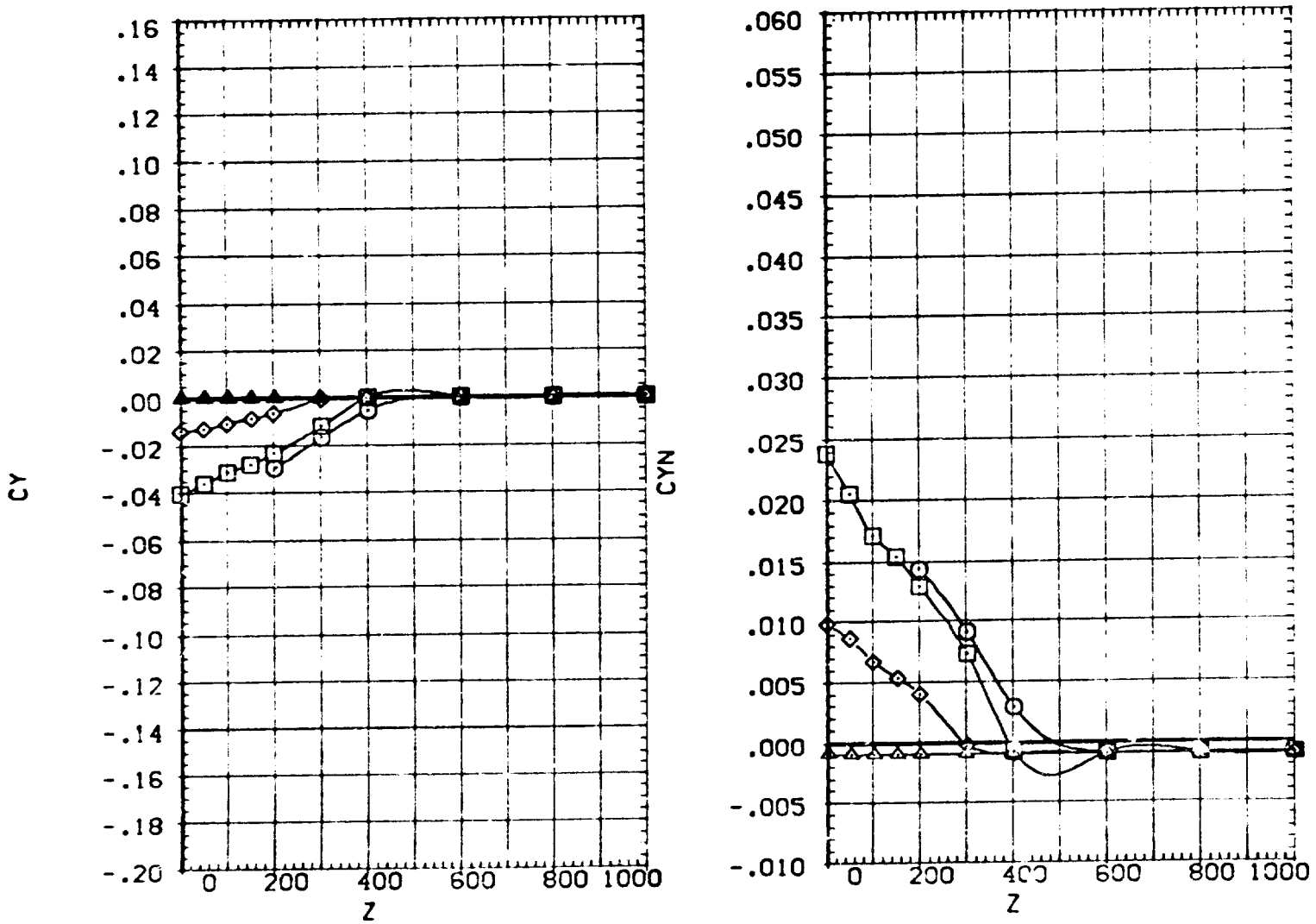


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ149)

SYMBOL	X		PARAMETRIC VALUES		
○	.283	MACH	4.530	PTOTAL	110.000
□	300.370	ALPHA	.000	BETA	.000
◇	600.600	DALPHA	.000	DBETA	-10.000
△	900.820	Y	200.000	PCHMBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

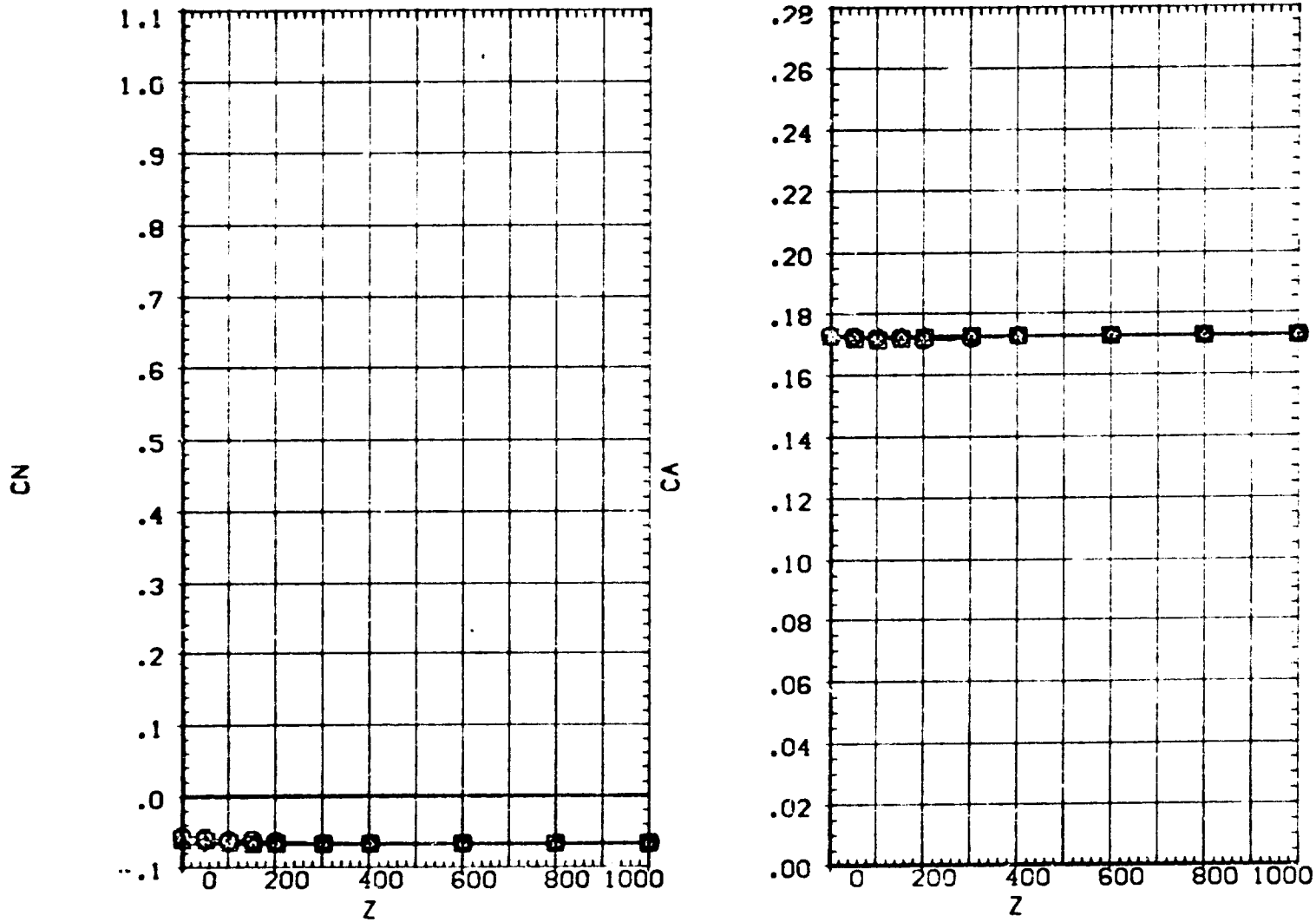


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ150)

SYMBOL	X		PARAMETRIC VALUES		
○	.176	MACH	4.530	PTOTAL	110.000
□	300.270	ALPHA	.000	BETA	.000
◇	600.500	DALPHA	.000	DBETA	-10.000
△	900.460	Y	400.000	PCHMBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

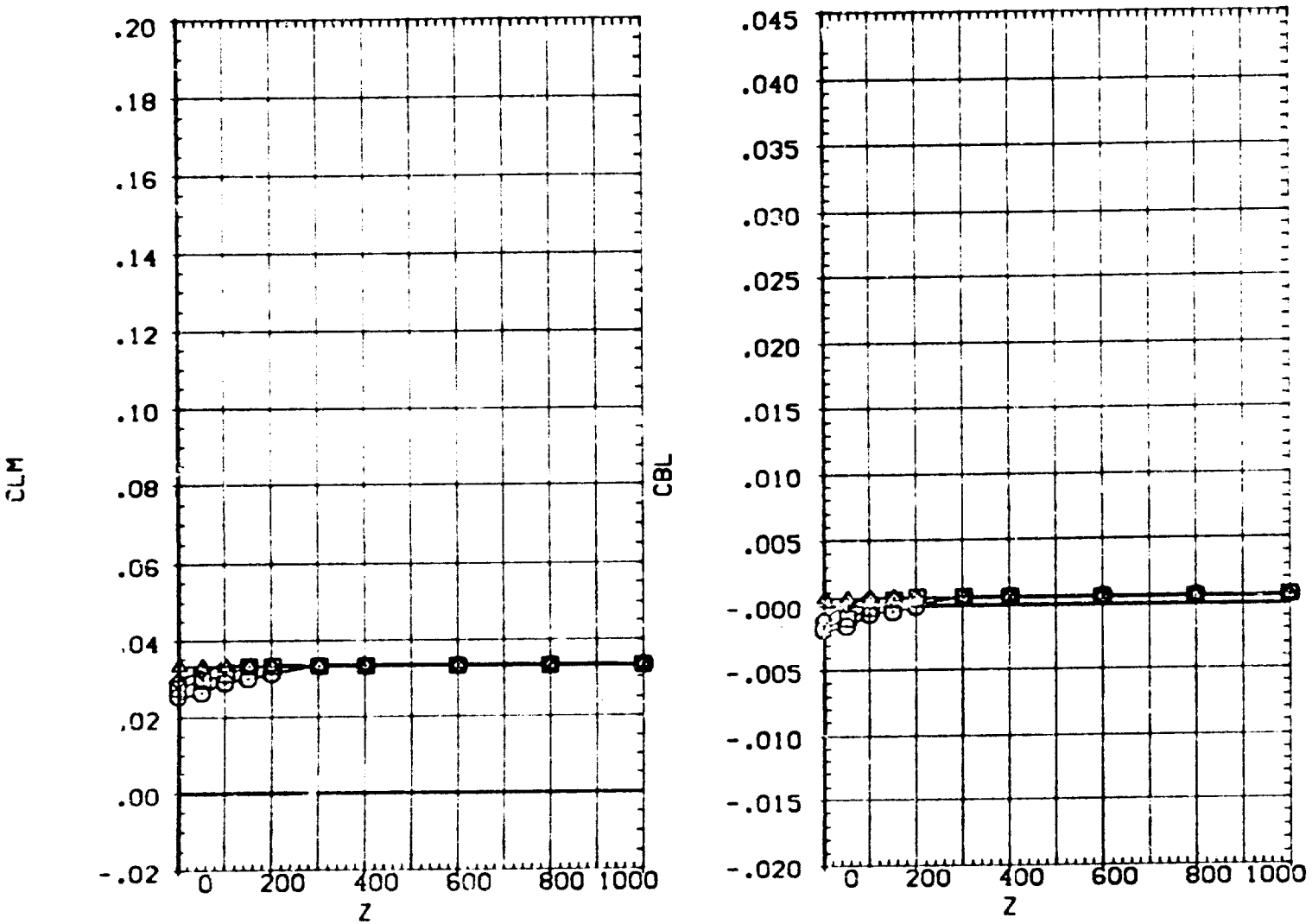


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ150)

SYMBOL	X		PARAMETRIC VALUES		
○	.176	MACH	4.530	PTOTAL	110.000
□	300.270	ALPHA	.000	BETA	.000
◇	600.500	DALPHA	.000	DBETA	-10.000
△	900.460	Y	400.000	PCHMBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

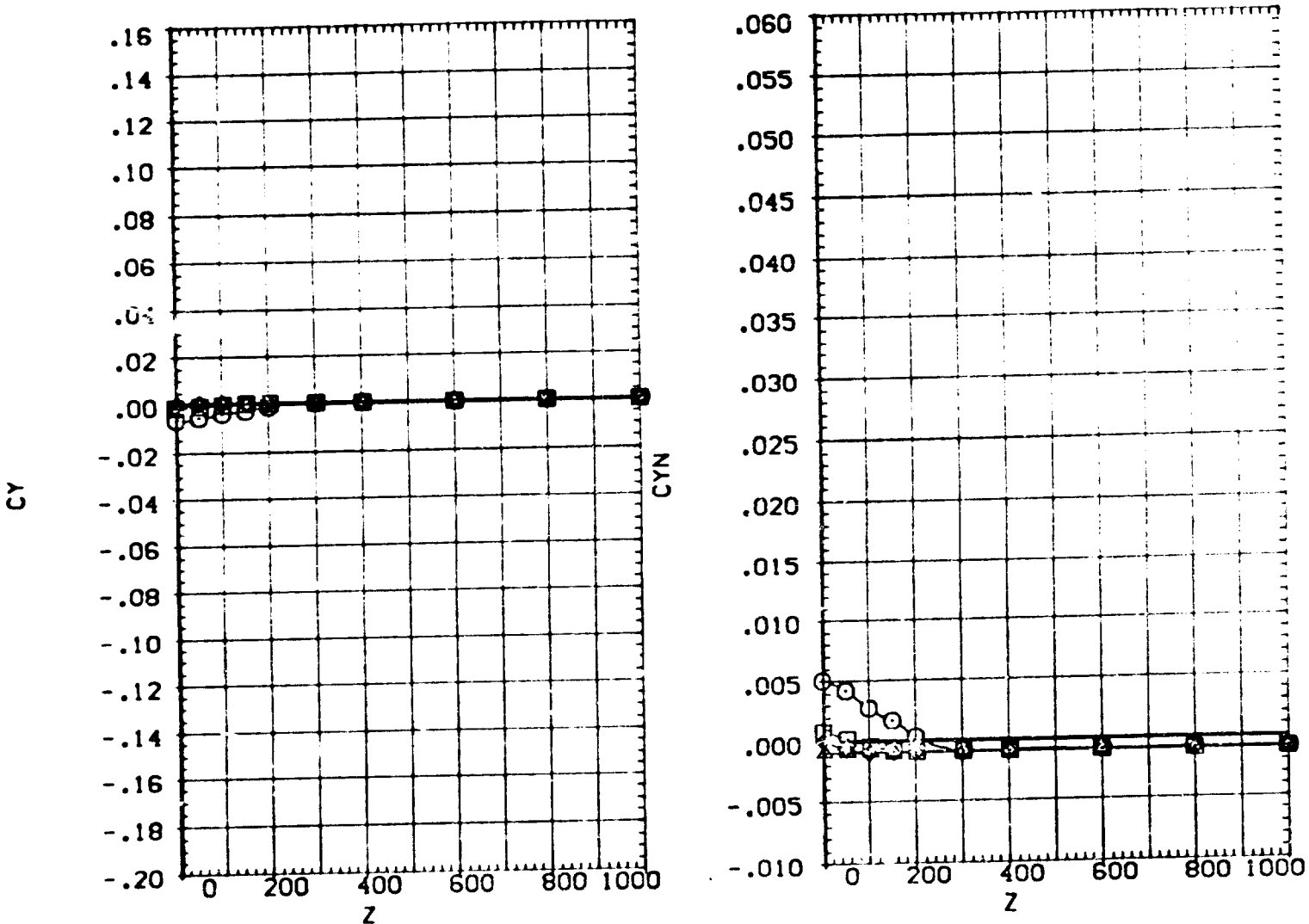


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

!A13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ150)

SYMBOL	X		PARAMETRIC VALUES		
○	.176	MACH	4.530	PTOTAL	110.000
□	300.270	ALPHA	.000	BETA	.000
◇	600.500	DALPHA	.000	DBETA	-10.000
△	900.460	Y	400.000	PCHMBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

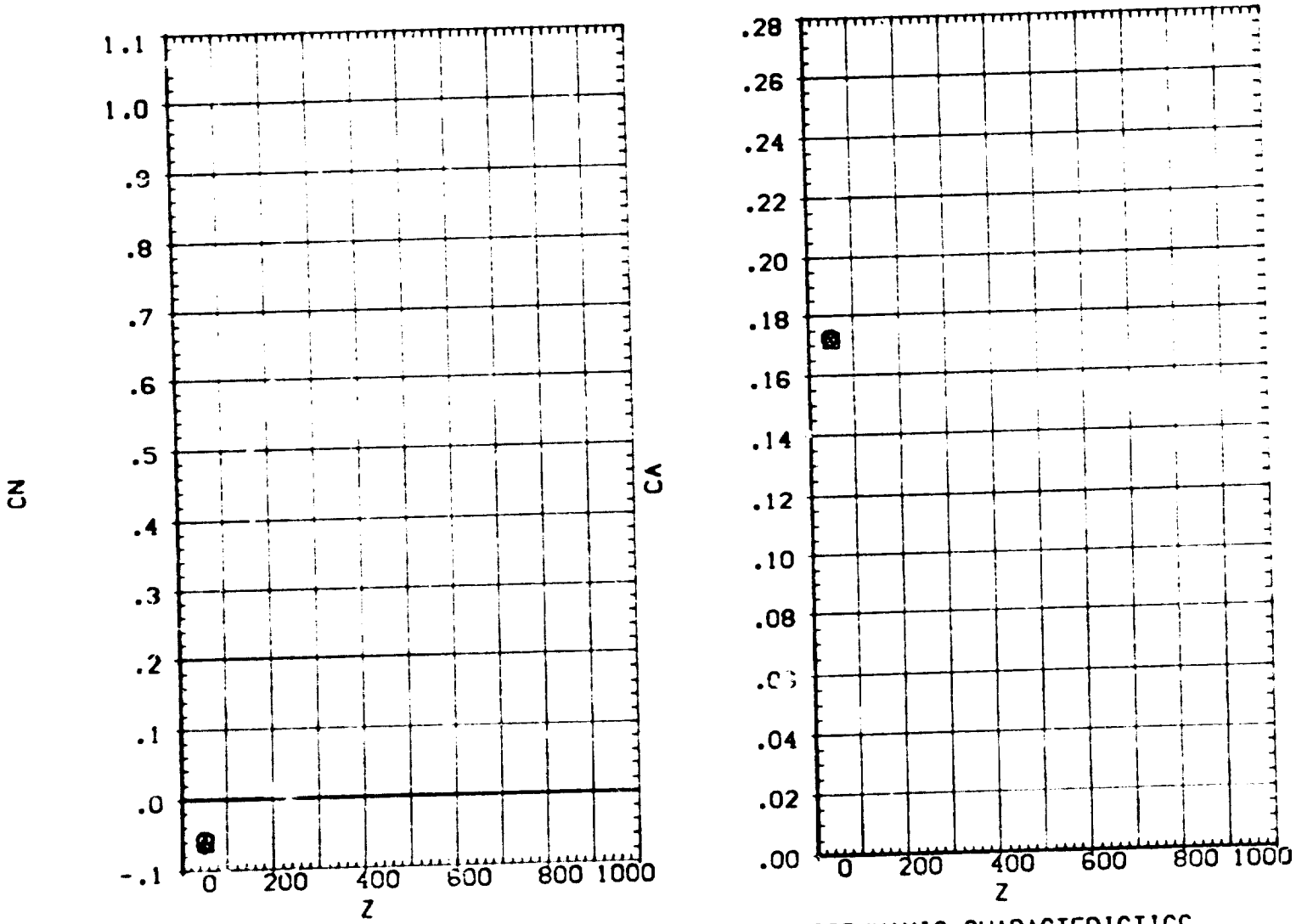


EFFECT OF SR8 W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(SB) W/O PLUMES SEPARATING FROM 09T10 (RTJ151)

SYMBOL	X		PARAMETRIC VALUES		
○	.272	MACH	4.530	PTOTAL	110.000
□	300.310	ALPHA	.000	BETA	.000
◇	600.490	DALPHA	.000	DBETA	-10.000
△	900.580	Y	800.000	PCHMBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

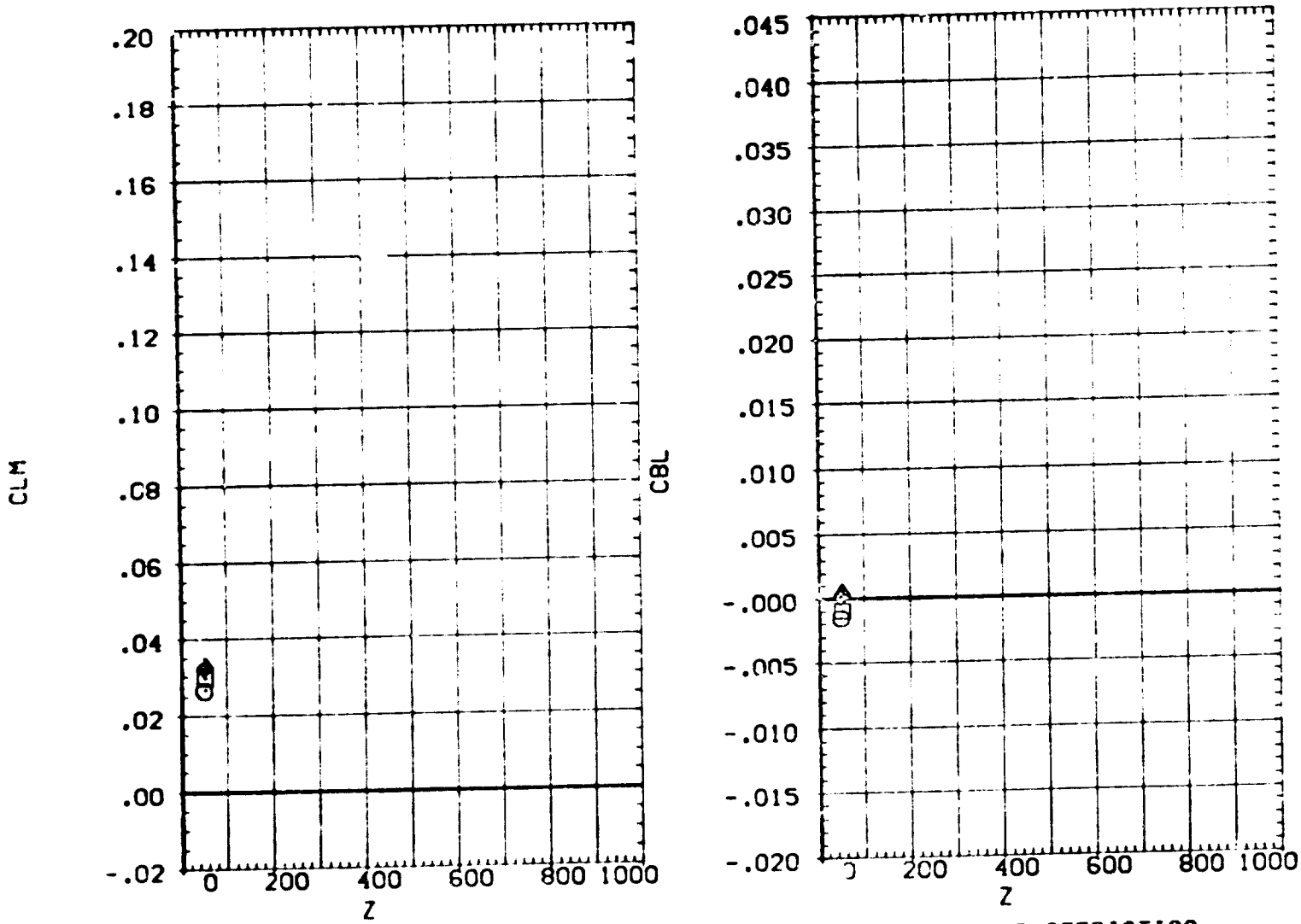


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA'3 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ151)

SYMBOL	X		PARAMETRIC VALUES		
○	.272	MACH	4.530	PTOTAL	110.000
□	300.310	ALPHA	.000	BETA	.000
◇	600.490	D.ALPHA	.000	DBE"A	-10.000
△	900.580	Y	800.000	PCHMBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

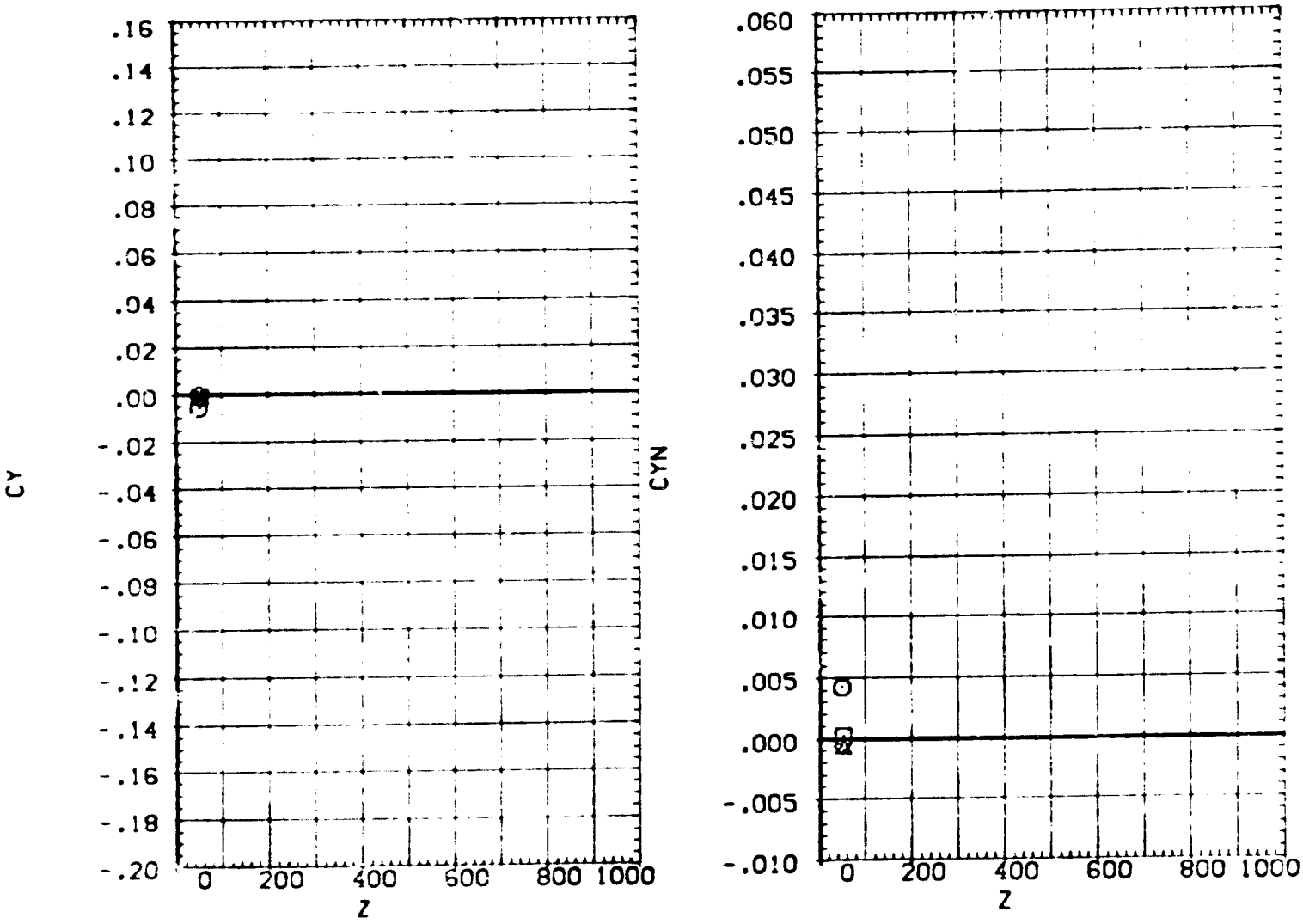


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

!A!3 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ151)

SYMBOL	X		PARAMETRIC VALUES		
○	.272	MACH	4.530	PTOTAL	110.000
□	300.310	ALPHA	.000	BETA	.000
◇	600.490	DALPHA	.000	DBETA	-10.000
△	900.580	Y	800.000	PCHMBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

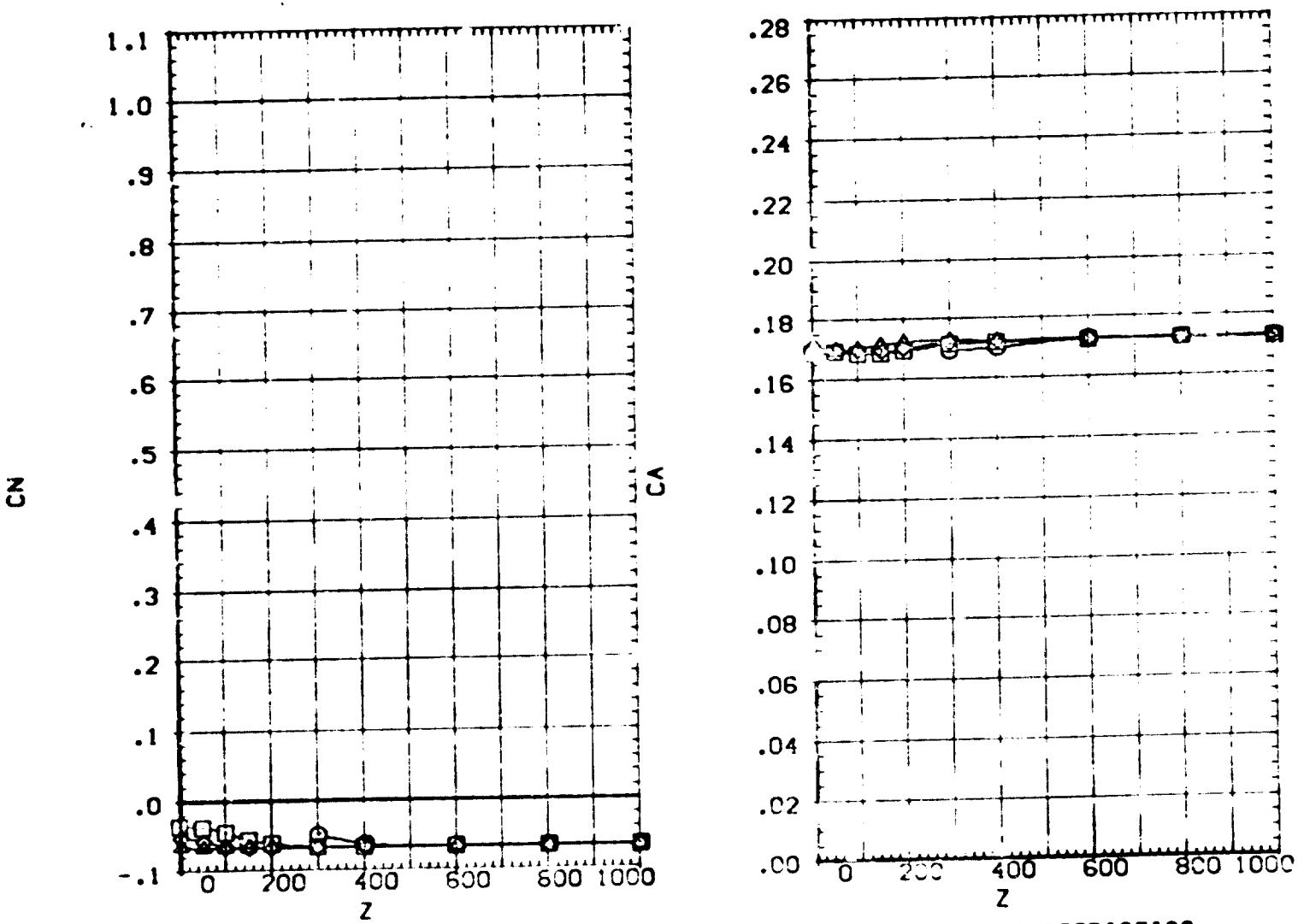


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ153)

SYMBOL	K		PARAMETRIC VALUES		
○	.097	MACH	4.530	PTOTAL	110.000
□	300.550	ALPHA	.000	BETA	.000
◇	600.160	DALPHA	.000	DBETA	-20.000
△	900.600	Y	400.000	PCHBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

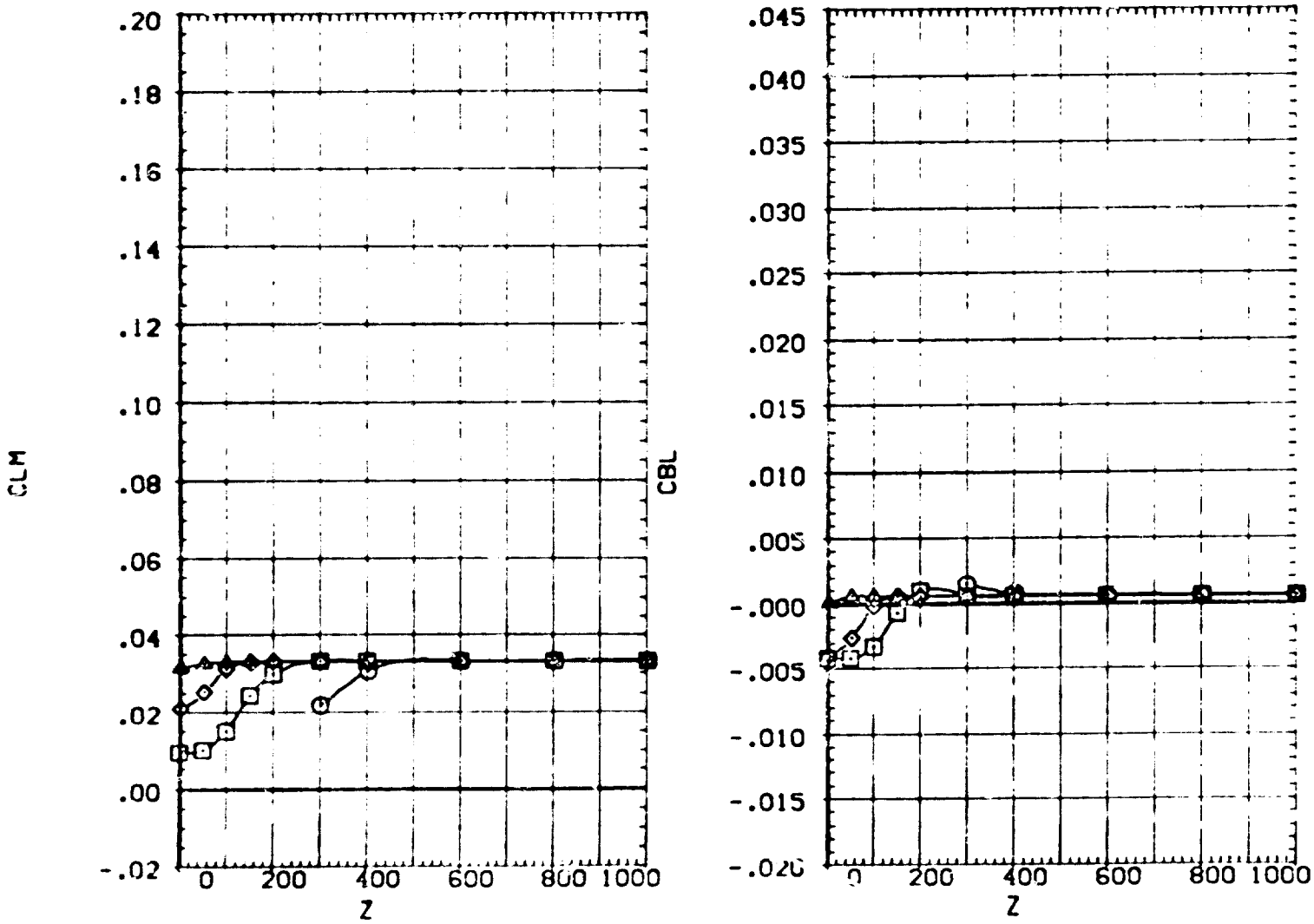


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ153)

SYMBOL	X		PARAMETRIC VALUES		
○	.097	MACH	4.530	PTOTAL	110.000
◇	300.950	ALPHA	.000	BETA	.000
△	600.160	DALPHA	.000	DBETA	-20.000
	900.600	Y	400.000	PCHBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

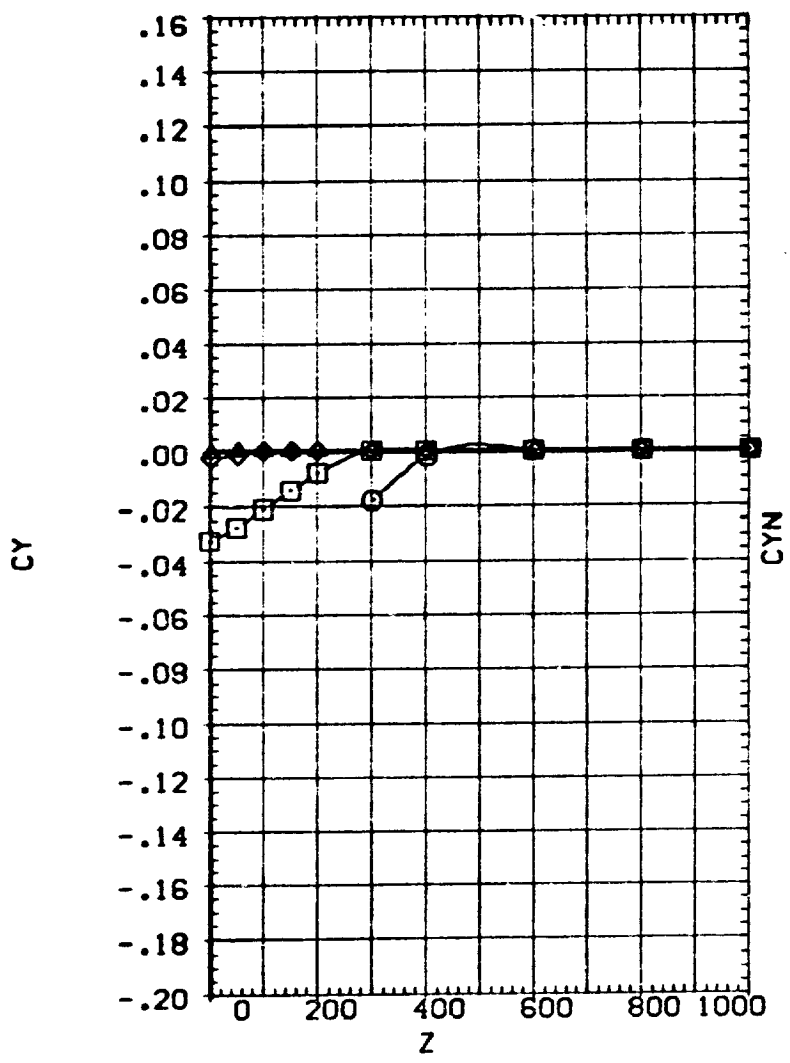


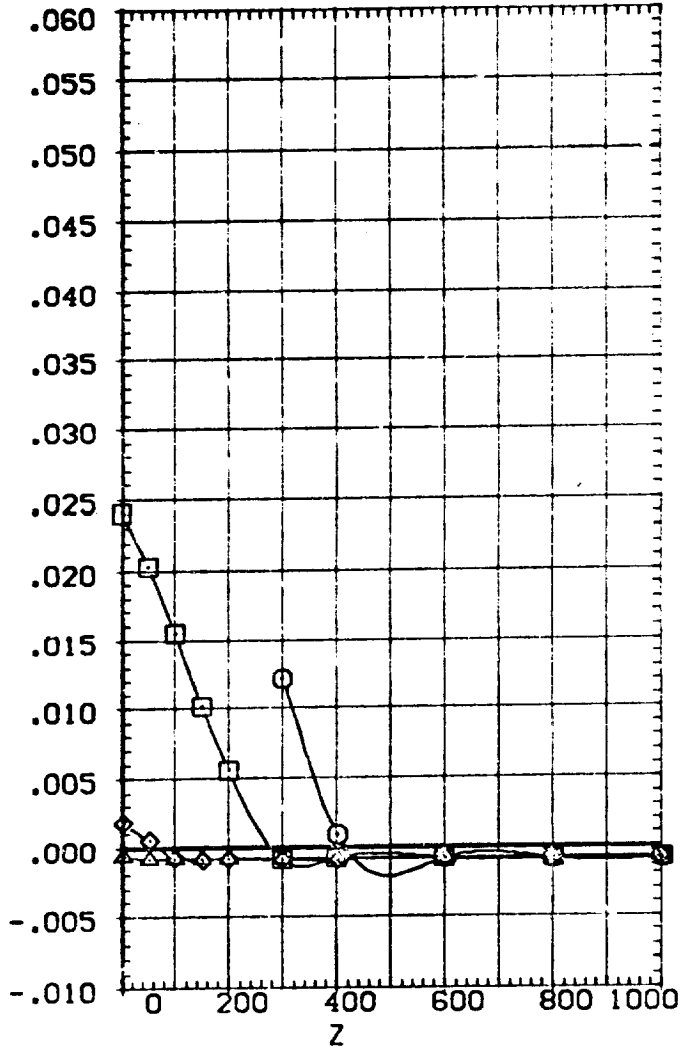
EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ153)

SYMBOL	X		PARAMETRIC VALUES		
○	.097	MACH	4.530	PTOTAL	110.000
□	300.550	ALPHA	.000	BETA	.000
◇	600.160	DALPHA	.000	DBETA	-20.000
△	900.600	Y	400.000	PCHMBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



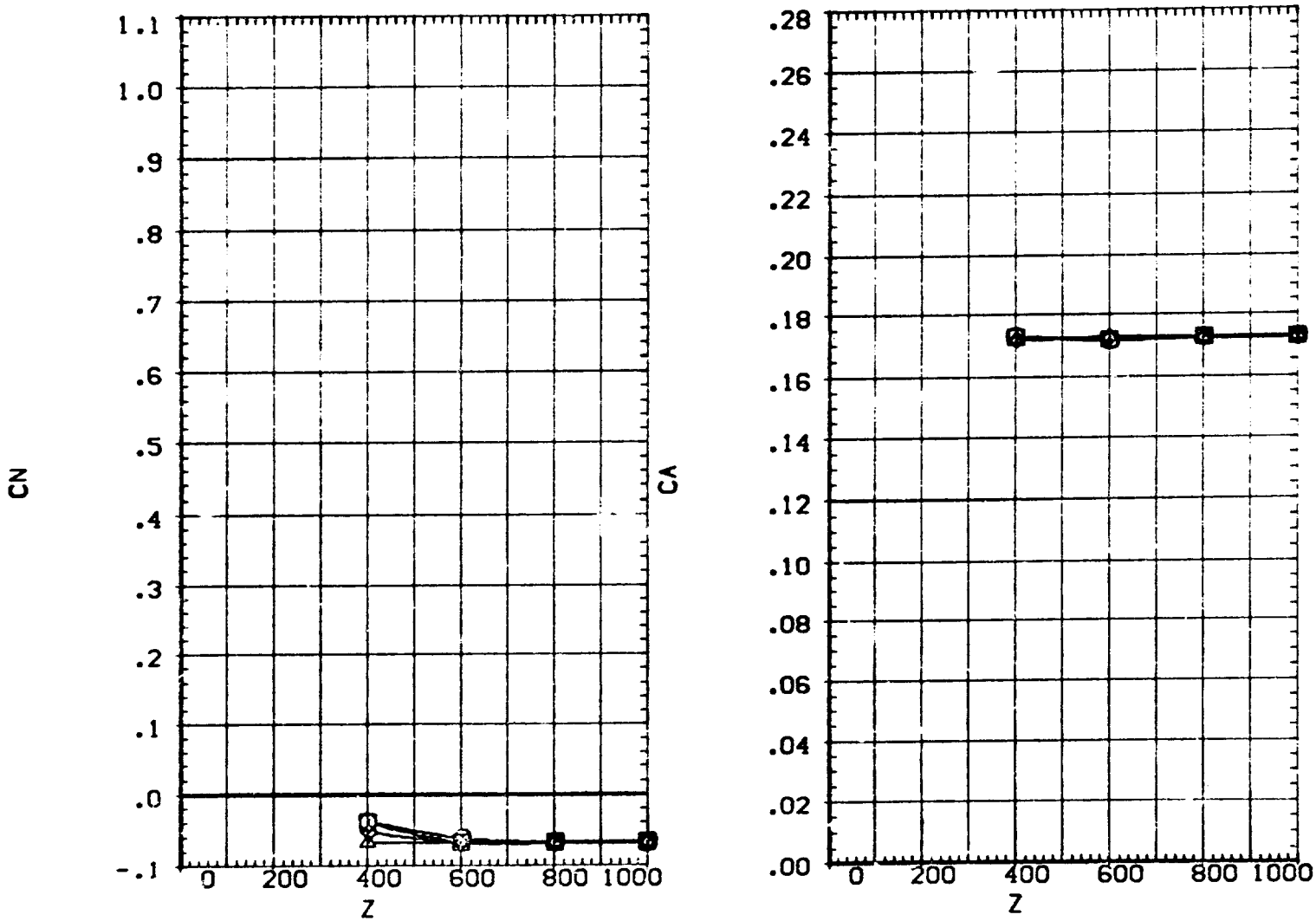


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ154)

SYMBOL	X		PARAMETRIC VALUES		
○	.145	MACH	4.530	PTOTAL	110.000
□	299.780	ALPHA	.000	BETA	.000
◇	602.620	DALPHA	.000	DBETA	-20.000
△	899.990	Y	.000	PCHMBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

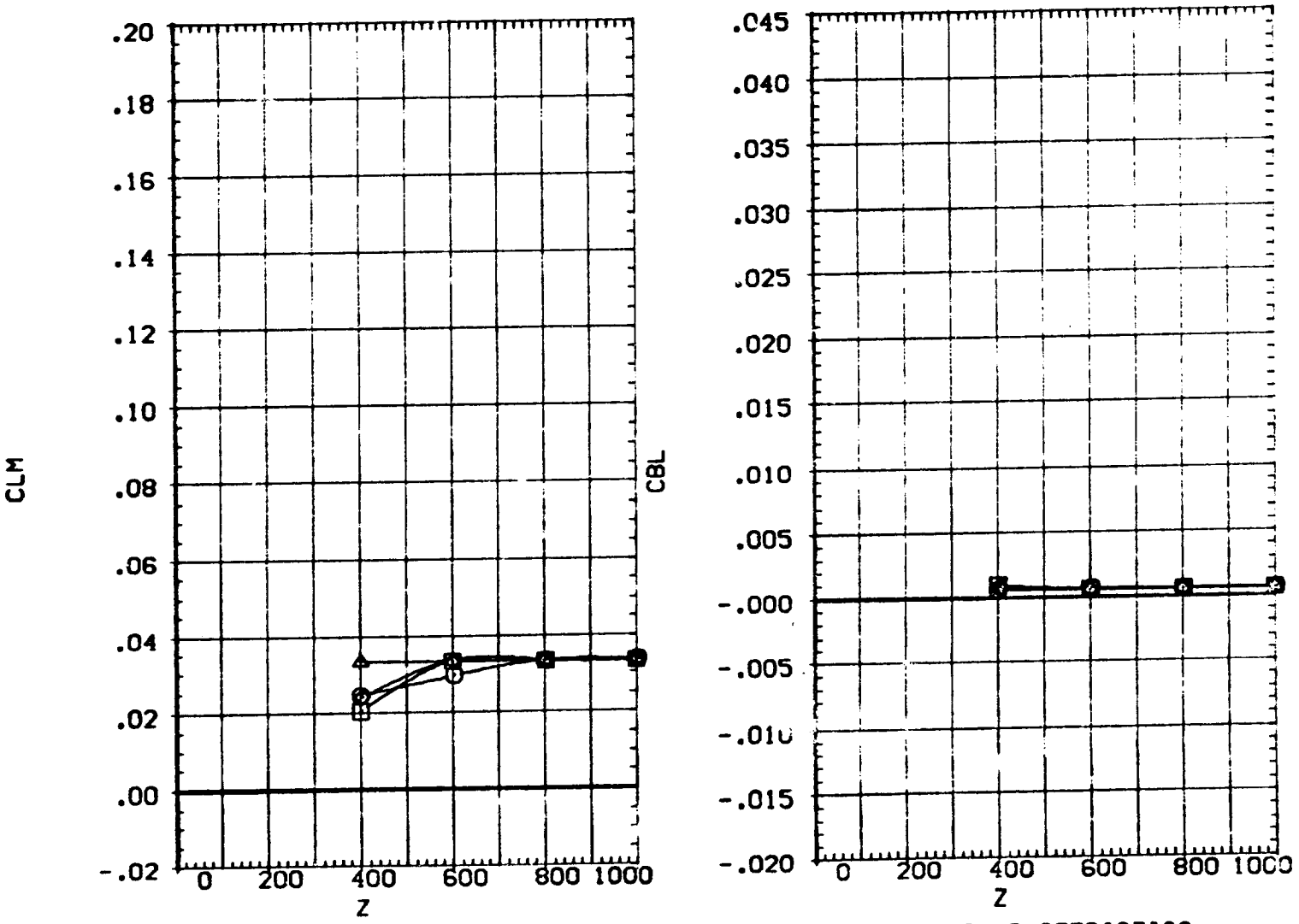


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

!A13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ154)

SYMBOL	X		PARAMETRIC VALUES		
○	.145	MACH	4.530	PTOTAL	110.000
□	299.780	ALPHA	.000	BETA	.000
◇	600.620	DALPHA	.000	DBETA	-20.000
△	899.990	Y	.000	PCHMBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

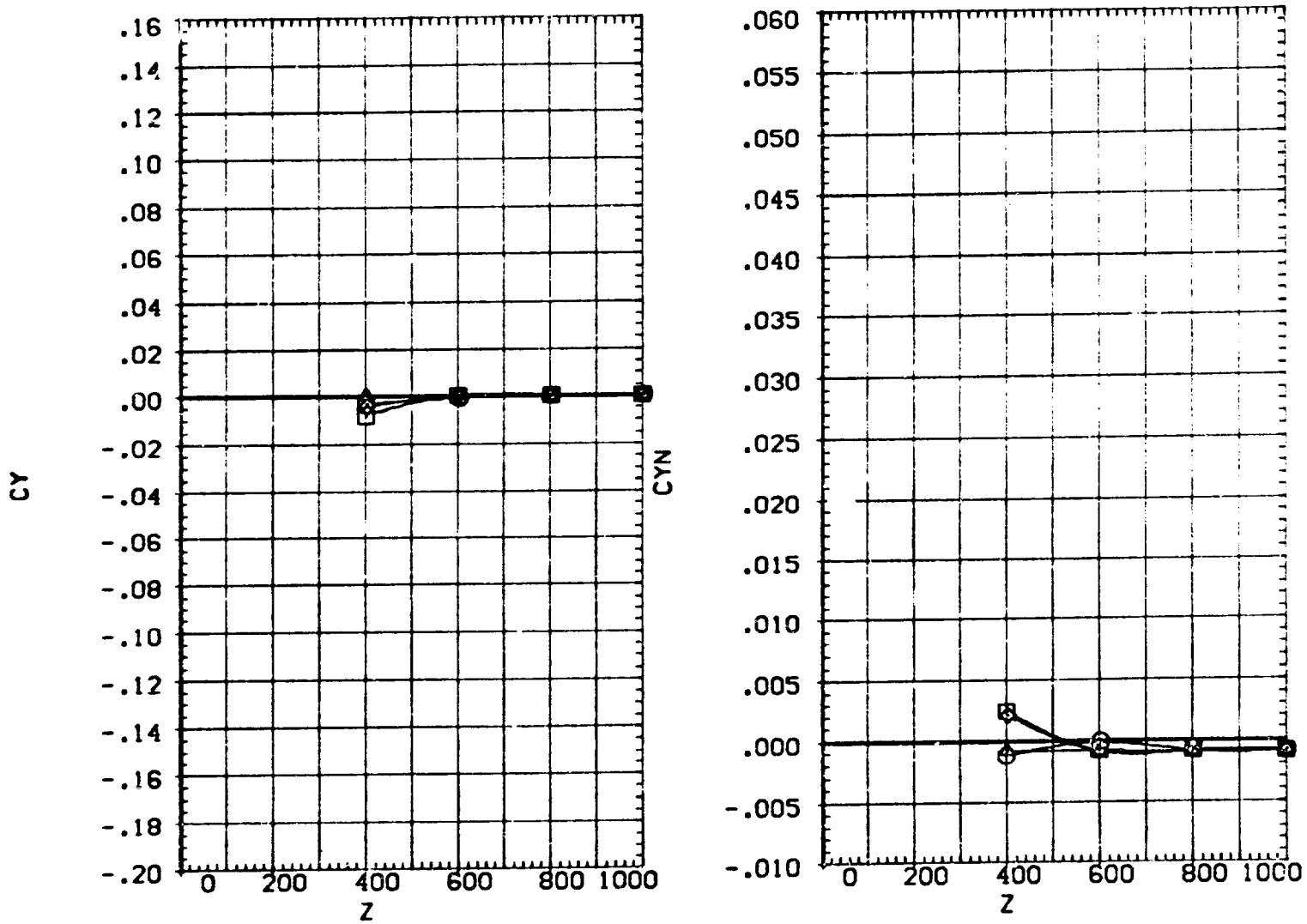


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ154)

SYMBOL	X		PARAMETRIC VALUES		
○	.145	MACH	4.530	PTOTAL	110.000
□	299.780	ALPHA	.000	BETA	.000
◇	600.620	DALPHA	.000	DBETA	-20.000
△	899.990	Y	.000	PCHMBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

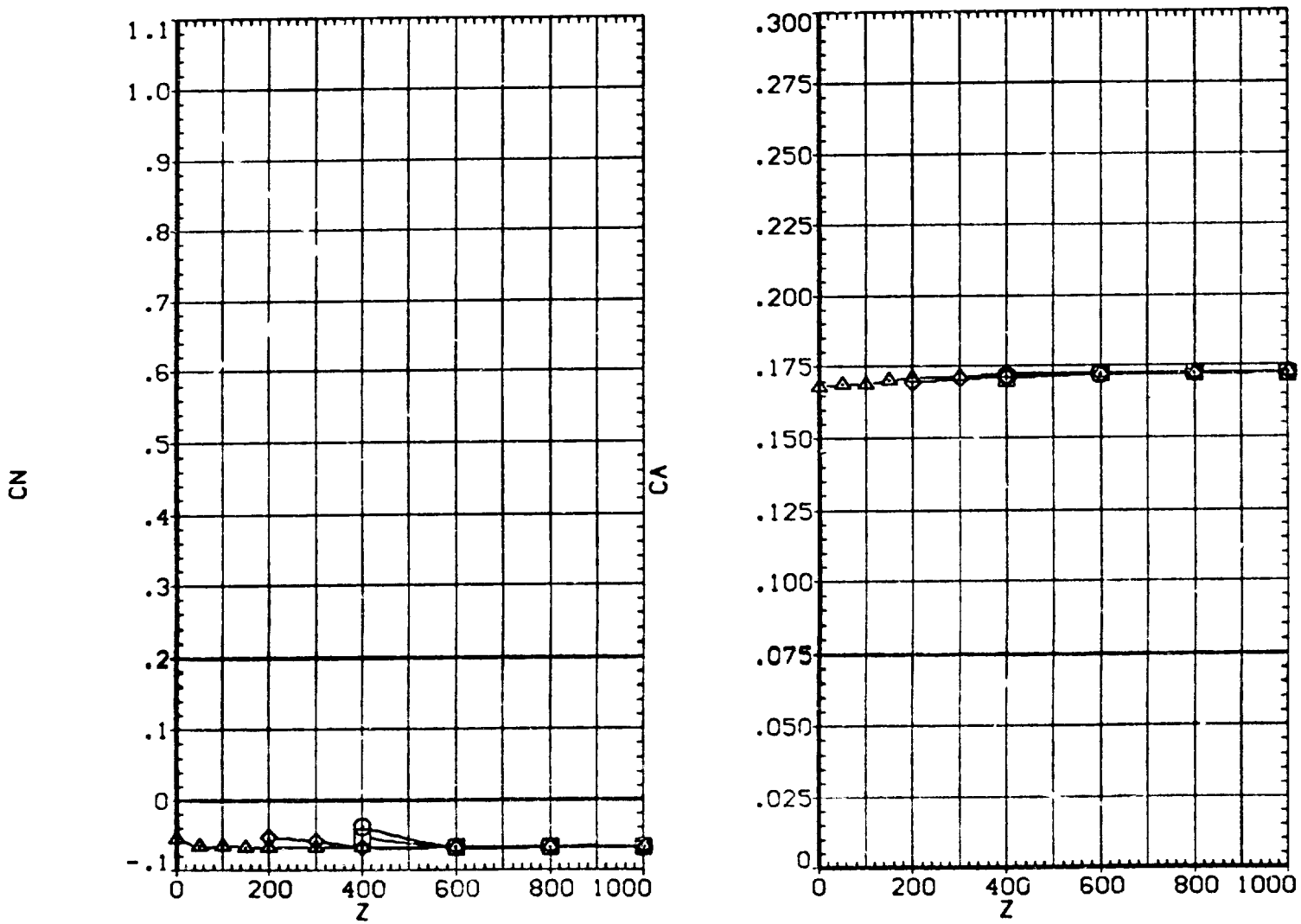


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ155)

SYMBOL	X		PARAMETRIC VALUES		
○	.049	MACH	4.530	PTOTAL	110.000
□	300.910	ALPHA	.000	BETA	.000
◇	600.640	DALPHA	.000	DBETA	-20.000
△	900.760	Y	200.000	PCHMBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

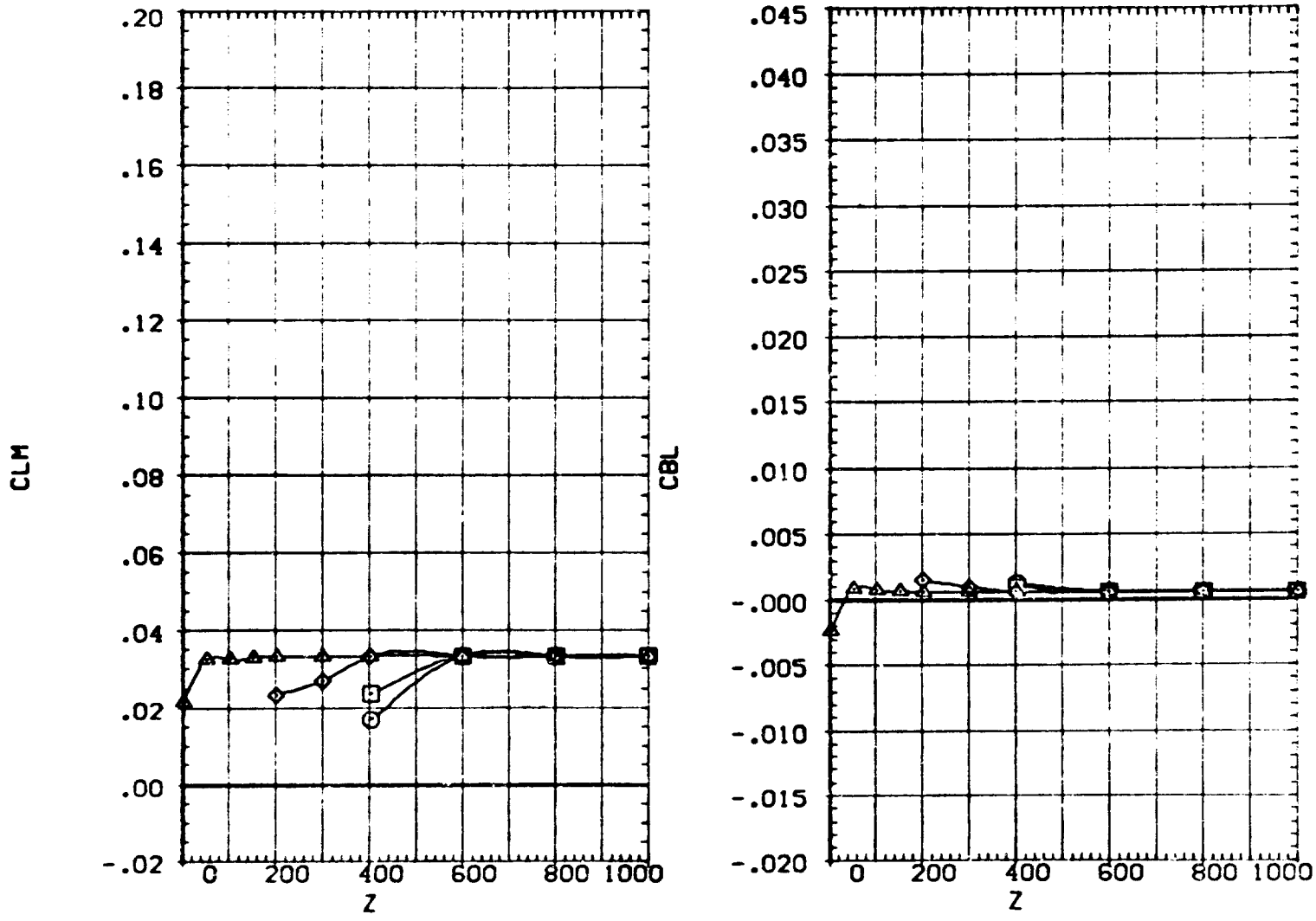


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ155)

SYMBOL	X		PARAMETRIC VALUES		
○	.049	MACH	4.530	PTOTAL	110.000
□	300.910	ALPHA	.000	BETA	.000
◇	600.640	DALPHA	.000	DBETA	-20.000
△	900.760	Y	200.000	PCHMBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

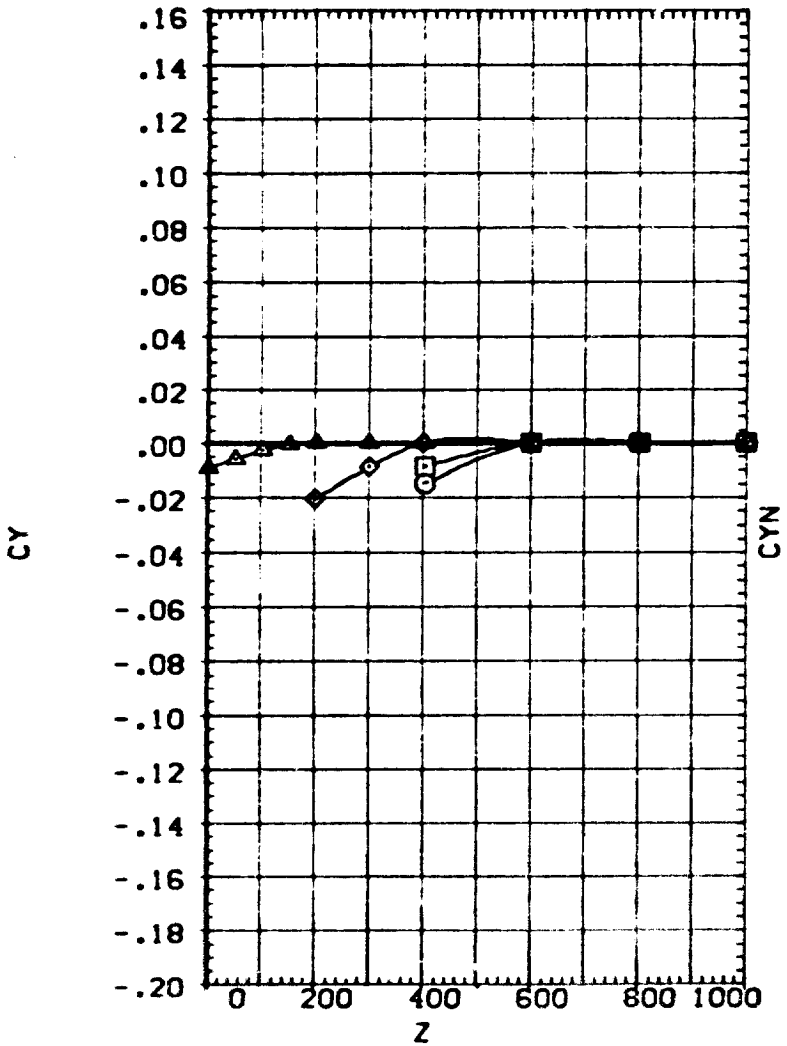


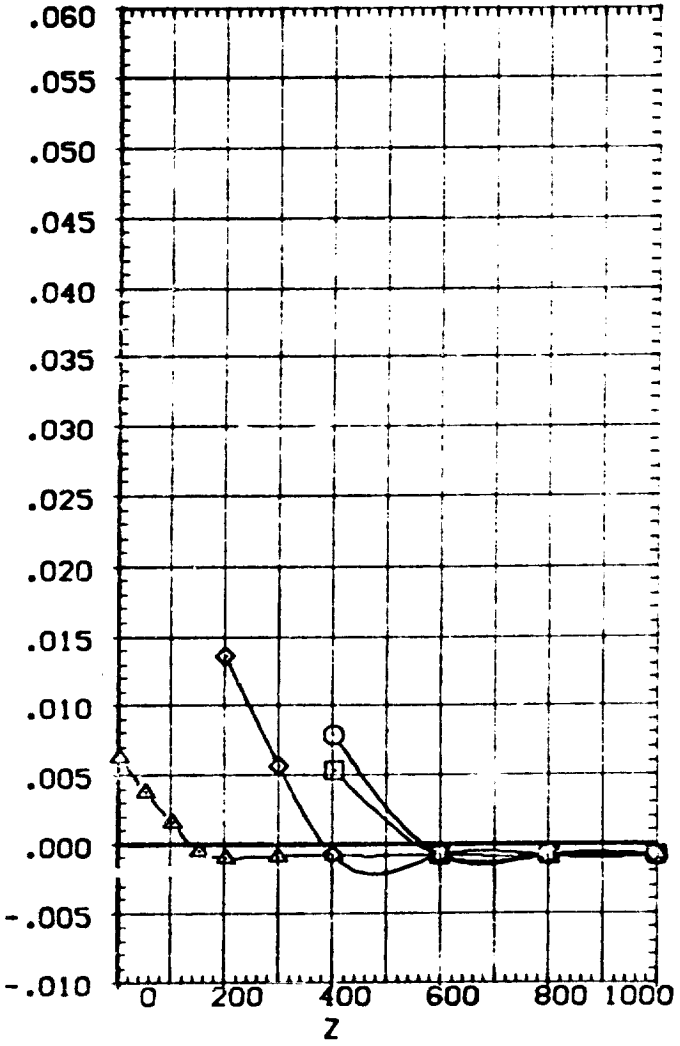
EFFECT OF SRB J PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T*O (RTJ155)

SYMBOL	X		PARAMETRIC VALUES		
○	.049	MACH	4.530	PTOTAL	110.000
□	300.910	ALPHA	.000	BETA	.000
◇	600.640	DALPHA	.000	DBETA	-20.000
△	900.760	Y	200.000	PCHMBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



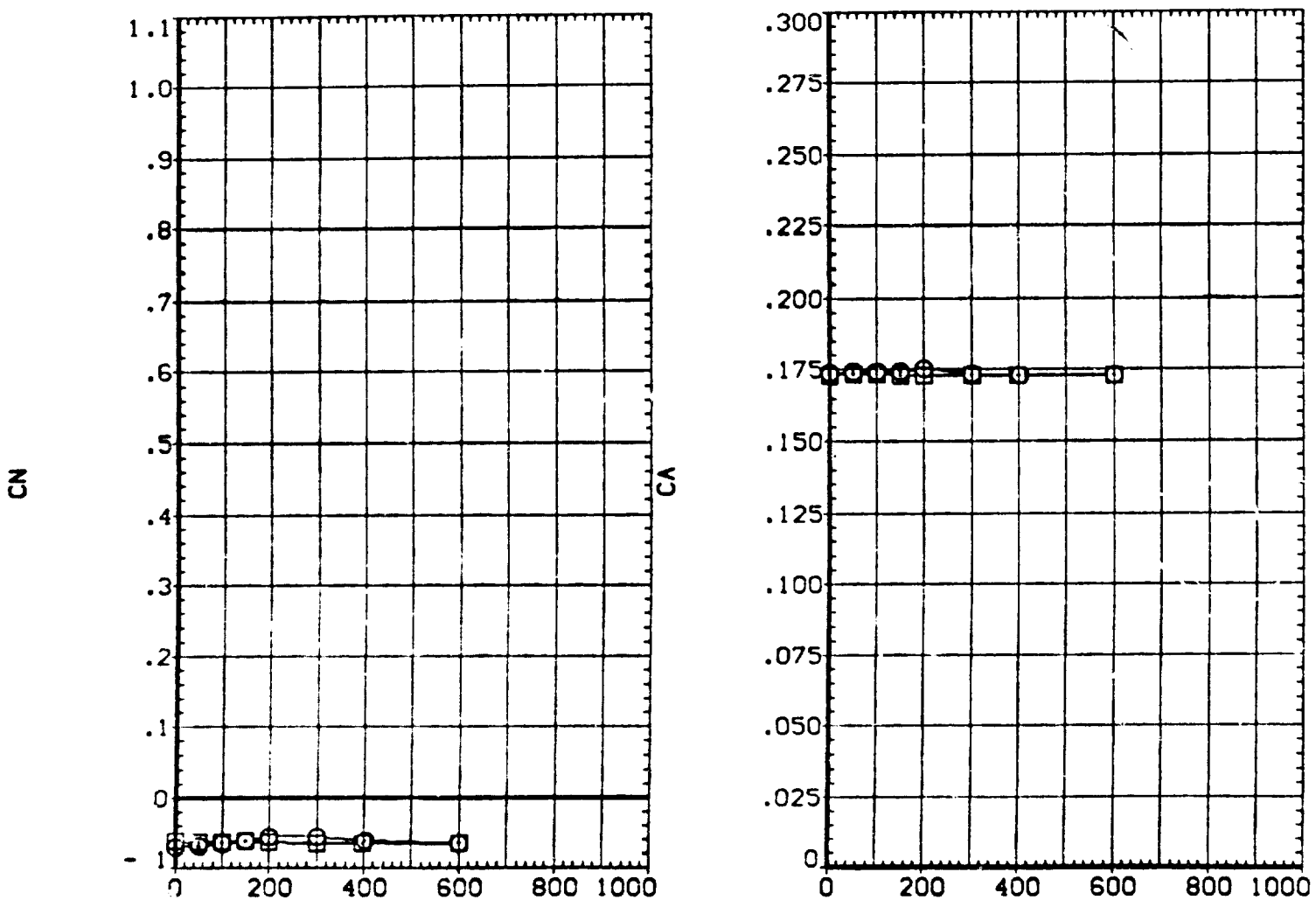


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ173)

SYMBOL	X		PARAMETRIC VALUES		
○	.316	MACH	4.530	PTOTAL	110.000
□	900.810	ALPHA	.000	BETA	.000
		DALPHA	5.000	DBETA	5.000
		Y	.000	PCHMBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

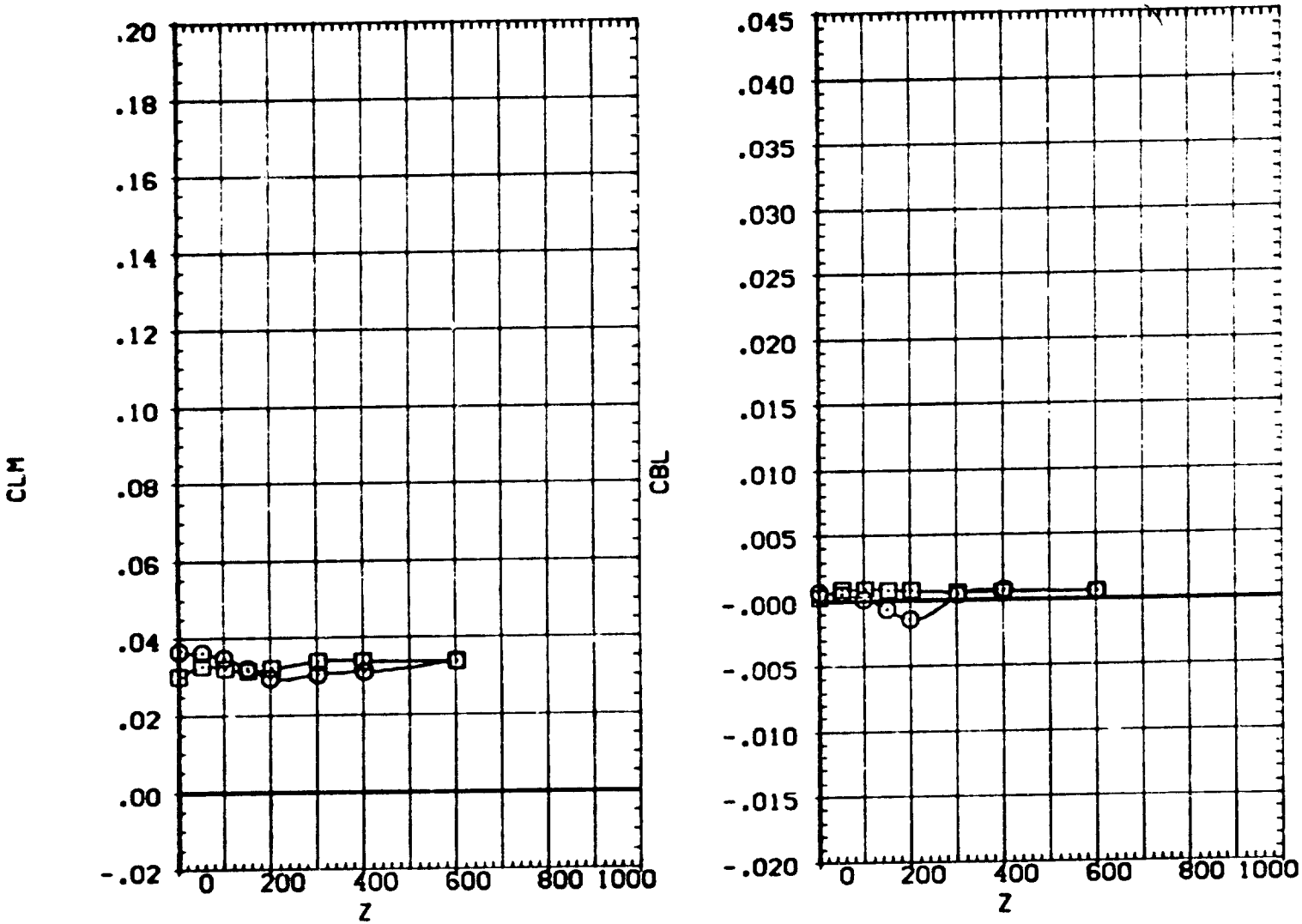


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ173)

SYMBOL	X		PARAMETRIC VALUES		
○	.316	MACH	4.530	PTOTAL	110.000
□	900.810	ALPHA	.000	BETA	.000
		DALPHA	5.000	DBETA	5.000
		Y	.000	PCHMBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

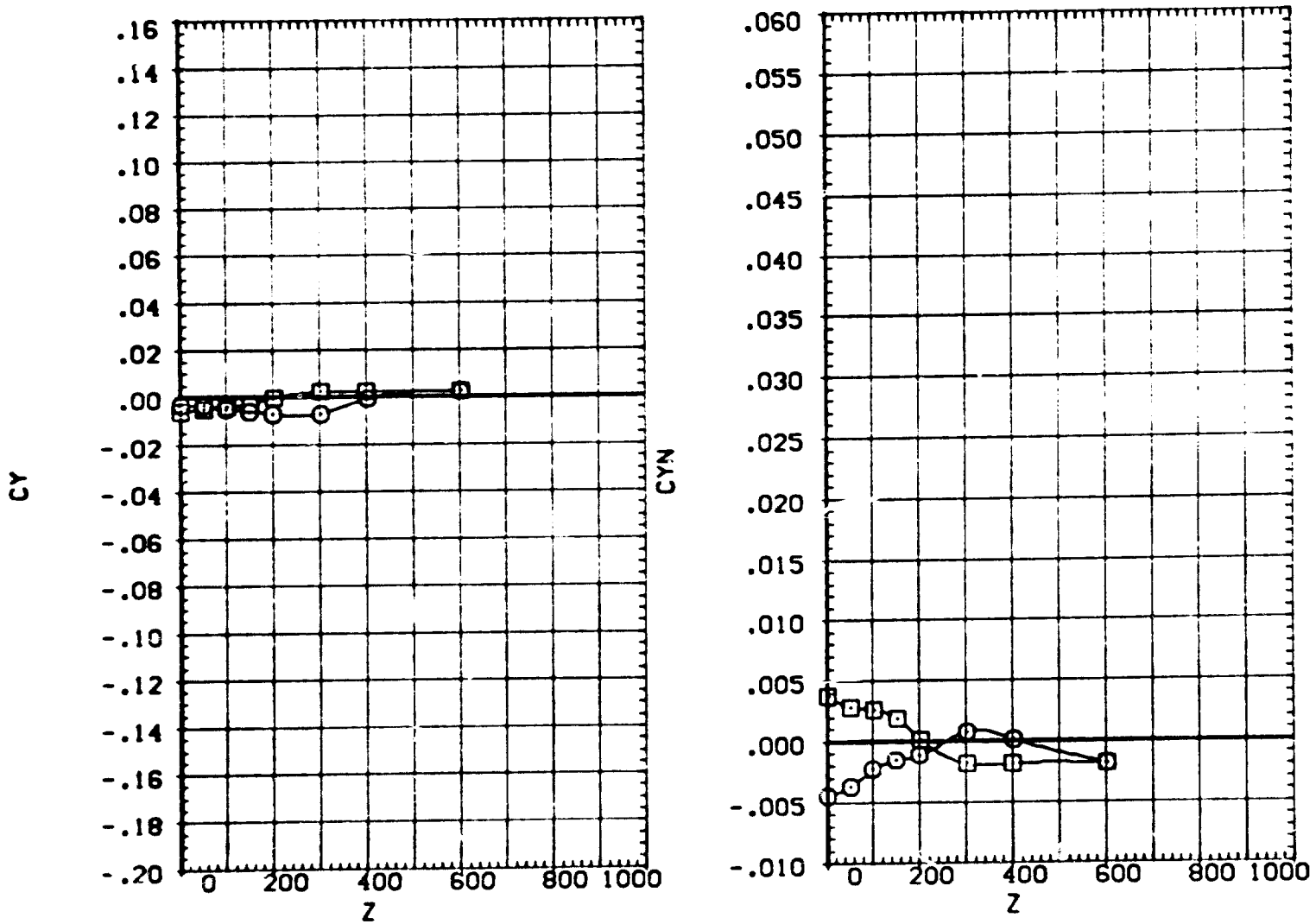


EFFECT OF SRB W/O PLUMES SEPARATION ON ORP/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ173)

SYMBOL	X		PARAMETRIC VALUES		
○	.316	MACH	4.530	PTOTAL	110.000
□	900.810	ALPHA	.000	BETA	.000
		DALPHA	5.000	DBETA	5.000
		Y	.000	PCHMBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

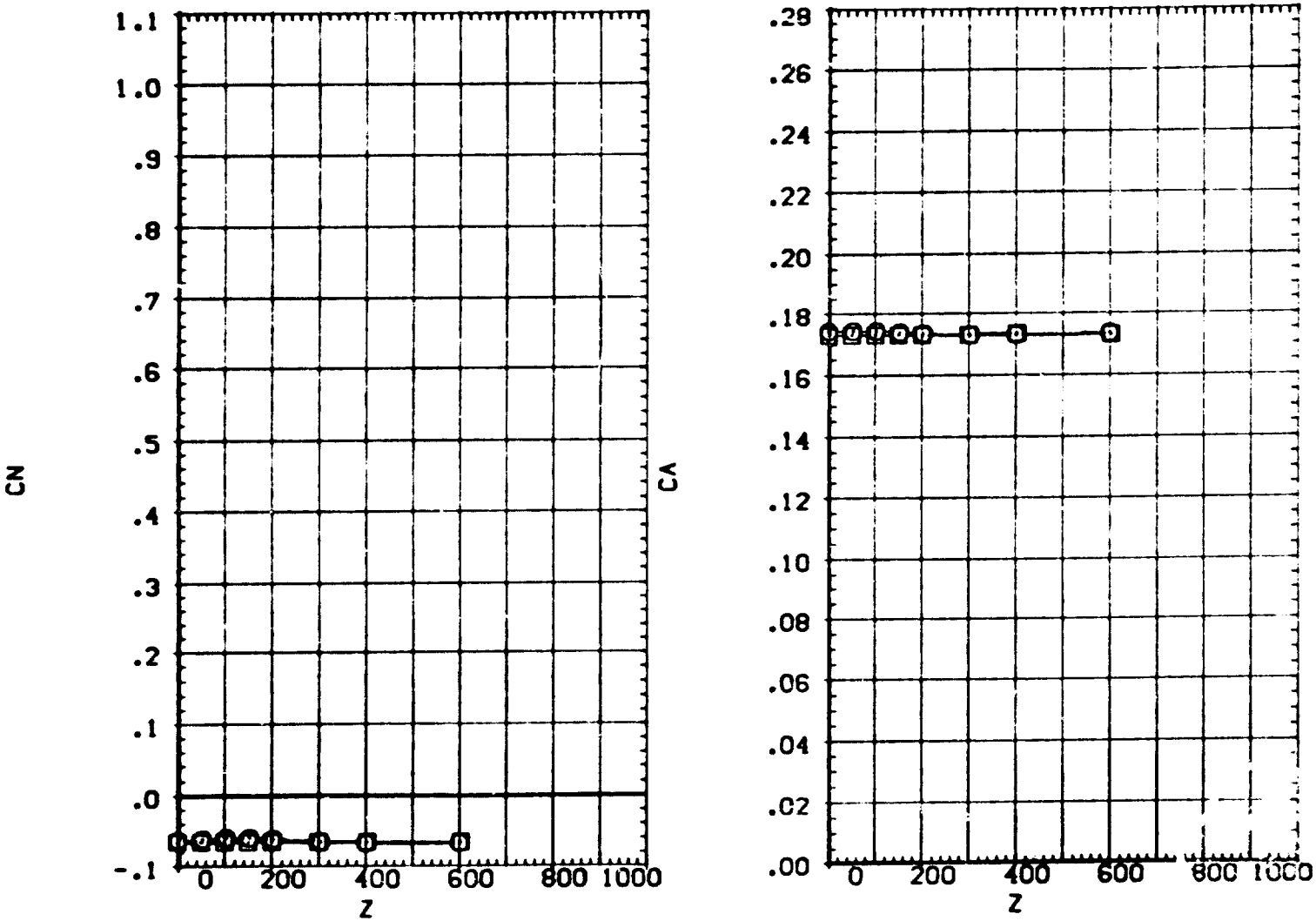


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ174)

SYMBOL	X	PARAMETRIC VALUES			
○	.152	MACH	4.530	PTOTAL	110.200
□	900.690	ALPHA	.000	BETA	.000
		DALPHA	5.000	DBETA	5.000
		Y	200.000	PCHBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

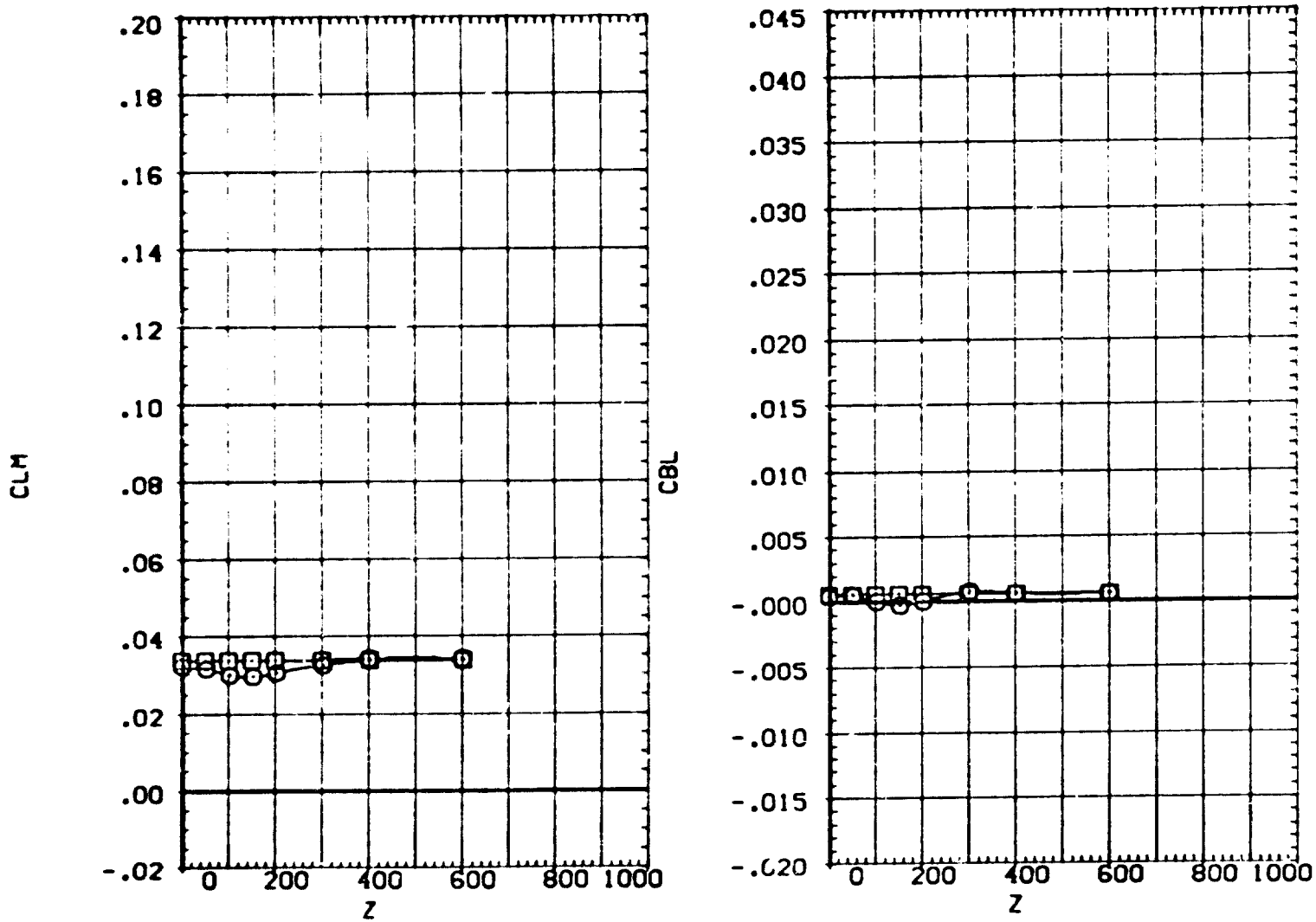


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ174)

SYMBOL	X		PARAMETRIC VALUES		
□	.152	MACH	4.530	PTOTAL	110.000
□	900.690	ALPHA	.000	BETA	.000
		DALPHA	5.000	DBETA	5.000
		Y	200.000	PCHBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

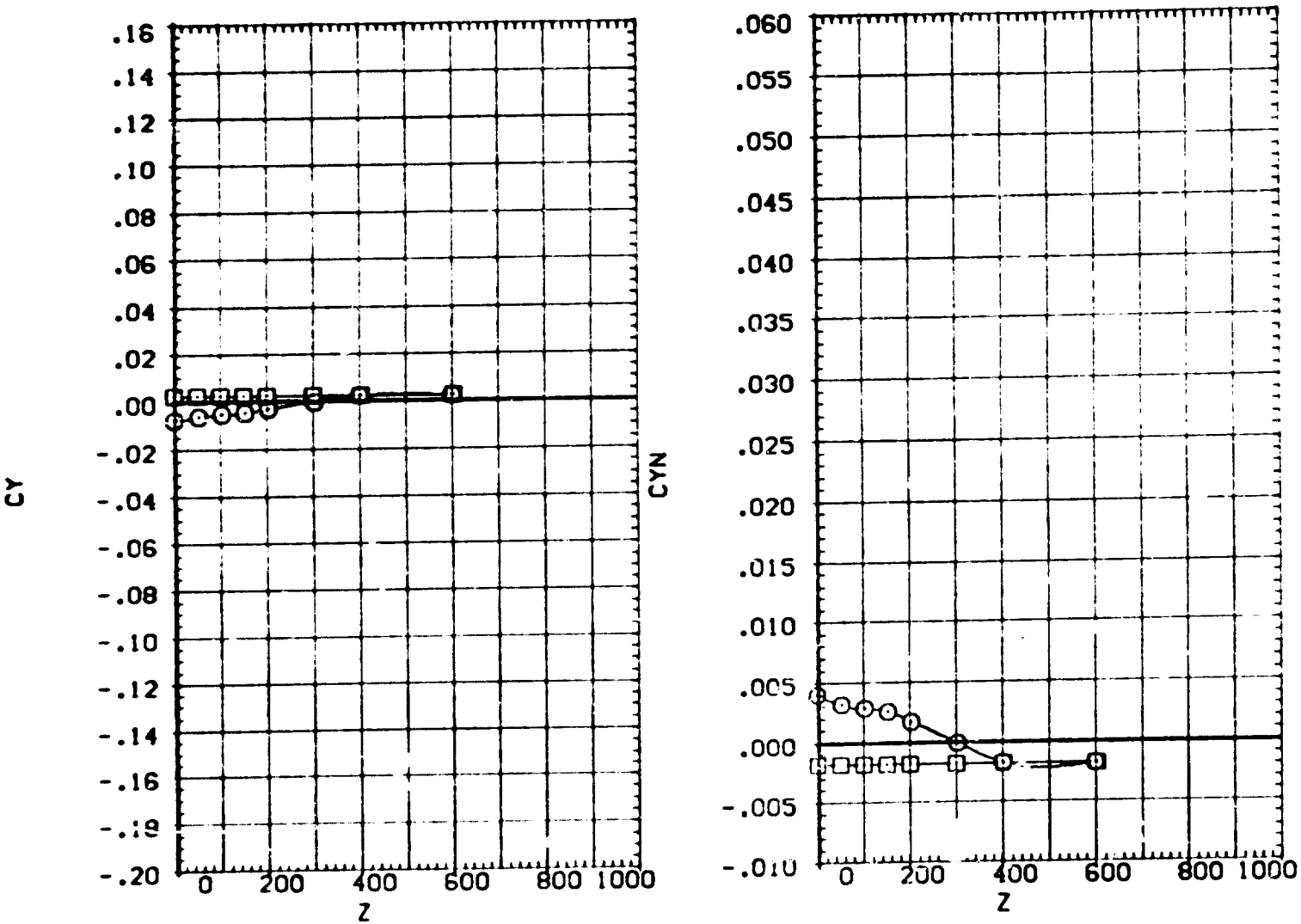


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ174)

SYMBOL	X		PARAMETRIC VALUES		
○	.152	MACH	4.530	PTOTAL	110.000
□	900.690	ALPHA	.000	BETA	.000
		DALPHA	5.000	DBETA	5.000
		Y	200.000	PCHNGR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

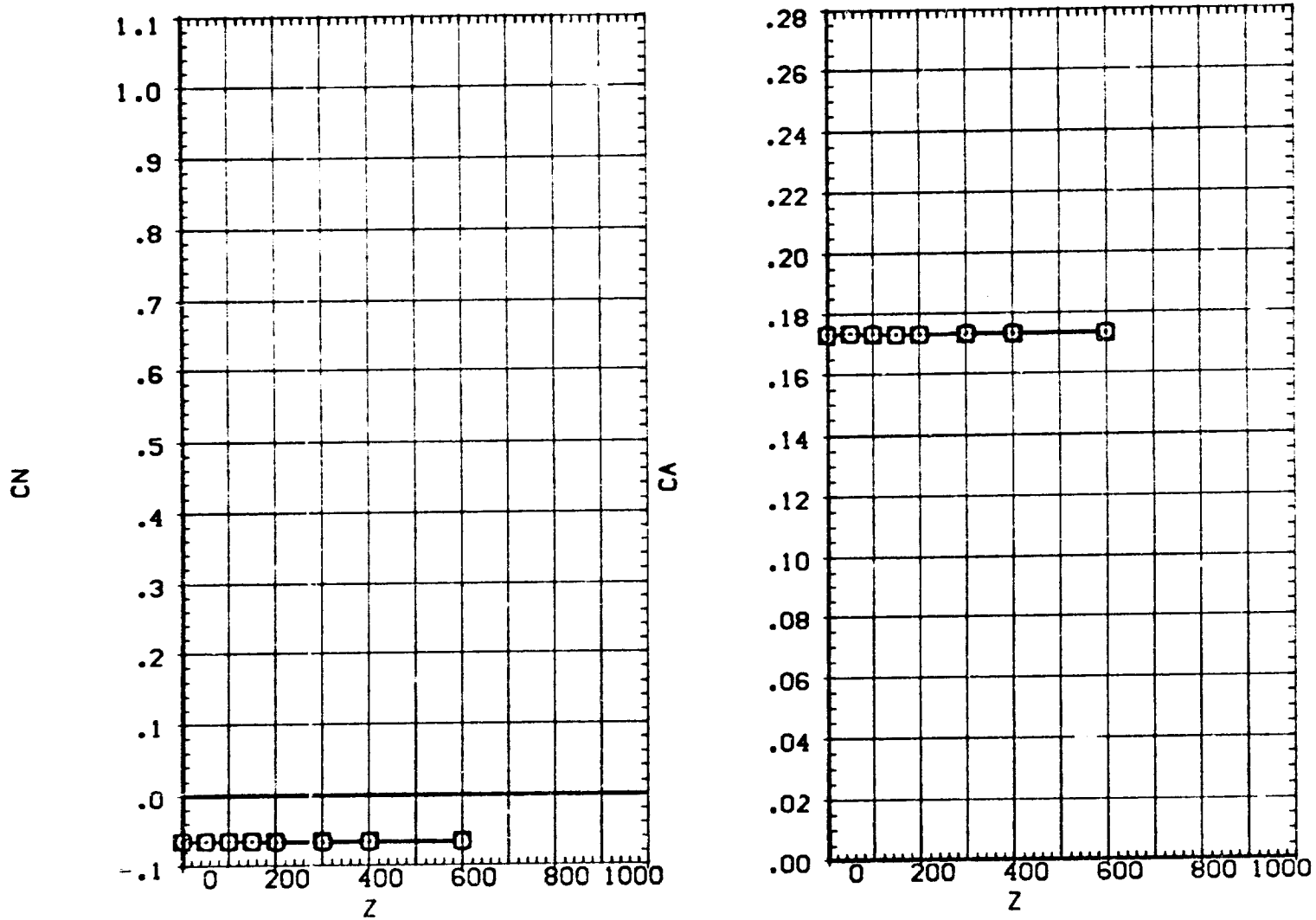


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ175)

SYMBOL	X		PARAMETRIC VALUES		
○	.183	MACH	4.530	PTOTAL	110.000
□	900.730	ALPHA	.000	BETA	.000
		DALPHA	5.000	DBETA	5.000
		Y	400.000	PCHMBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

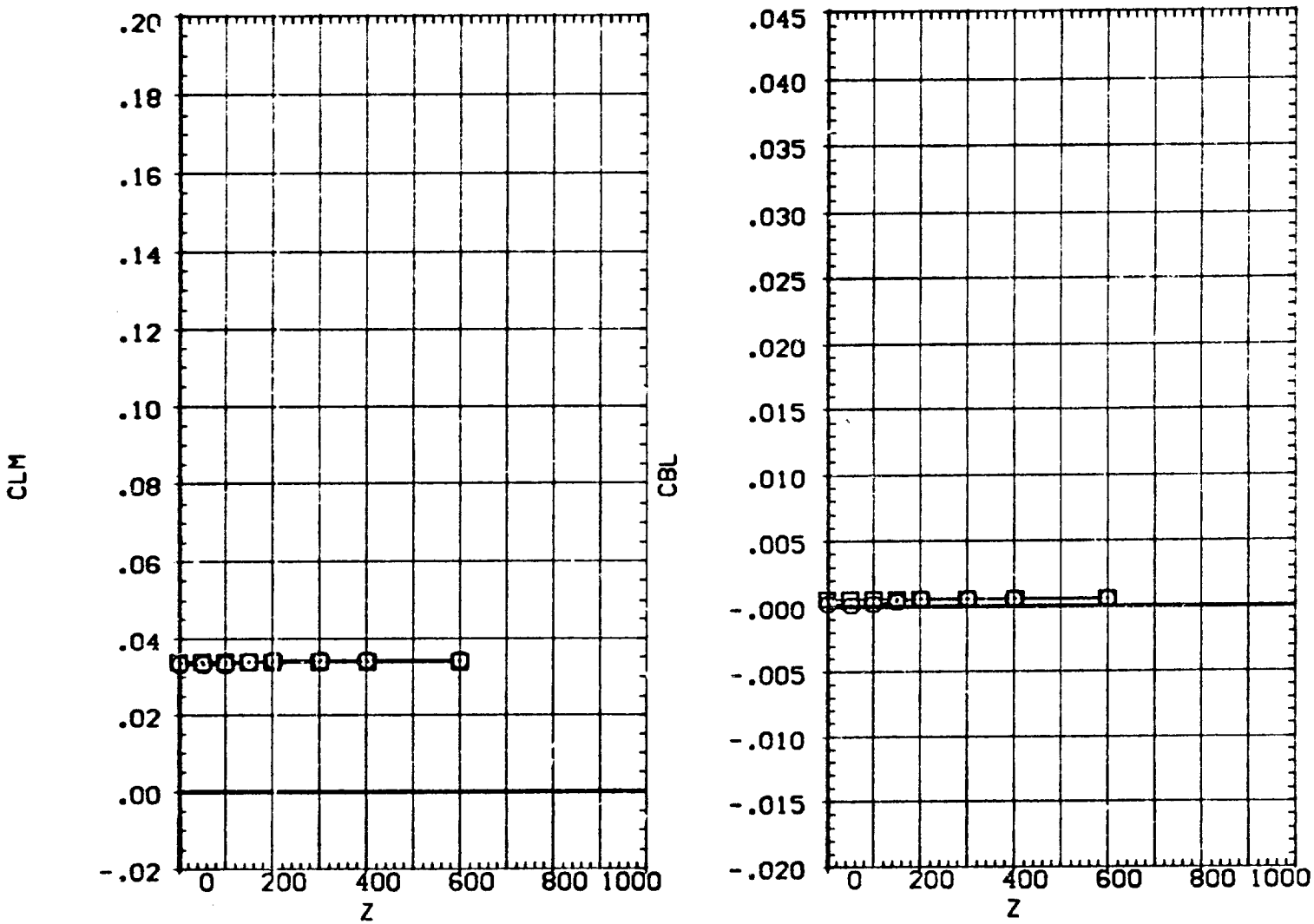


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SR3(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ175)

SYMBOL	X		PARAMETRIC VALUES		
○	.163	MACH	4.530	PTOTAL	110.000
□	900.730	ALPHA	.000	BETA	.000
		DALPHA	5.000	DBETA	5.000
		Y	400.000	PCHNGR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

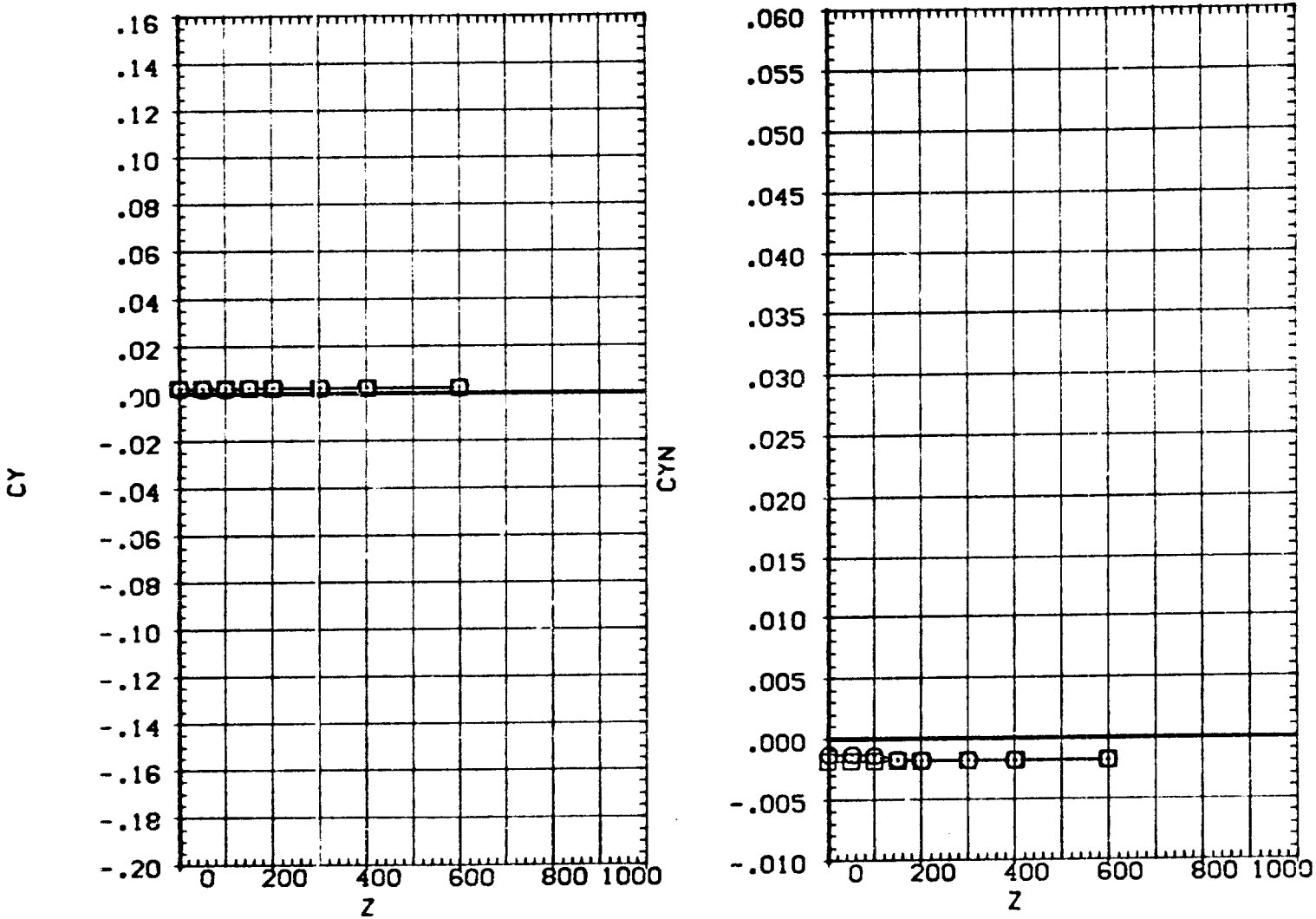


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM O9T10 (RTJ175)

SYMBOL	X		PARAMETRIC VALUES		
○	.183	MACH	4.530	PTOTAL	110.000
□	900.730	ALPHA	.000	BETA	.000
		DALPHA	5.000	DBETA	5.000
		Y	400.000	PCHMBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

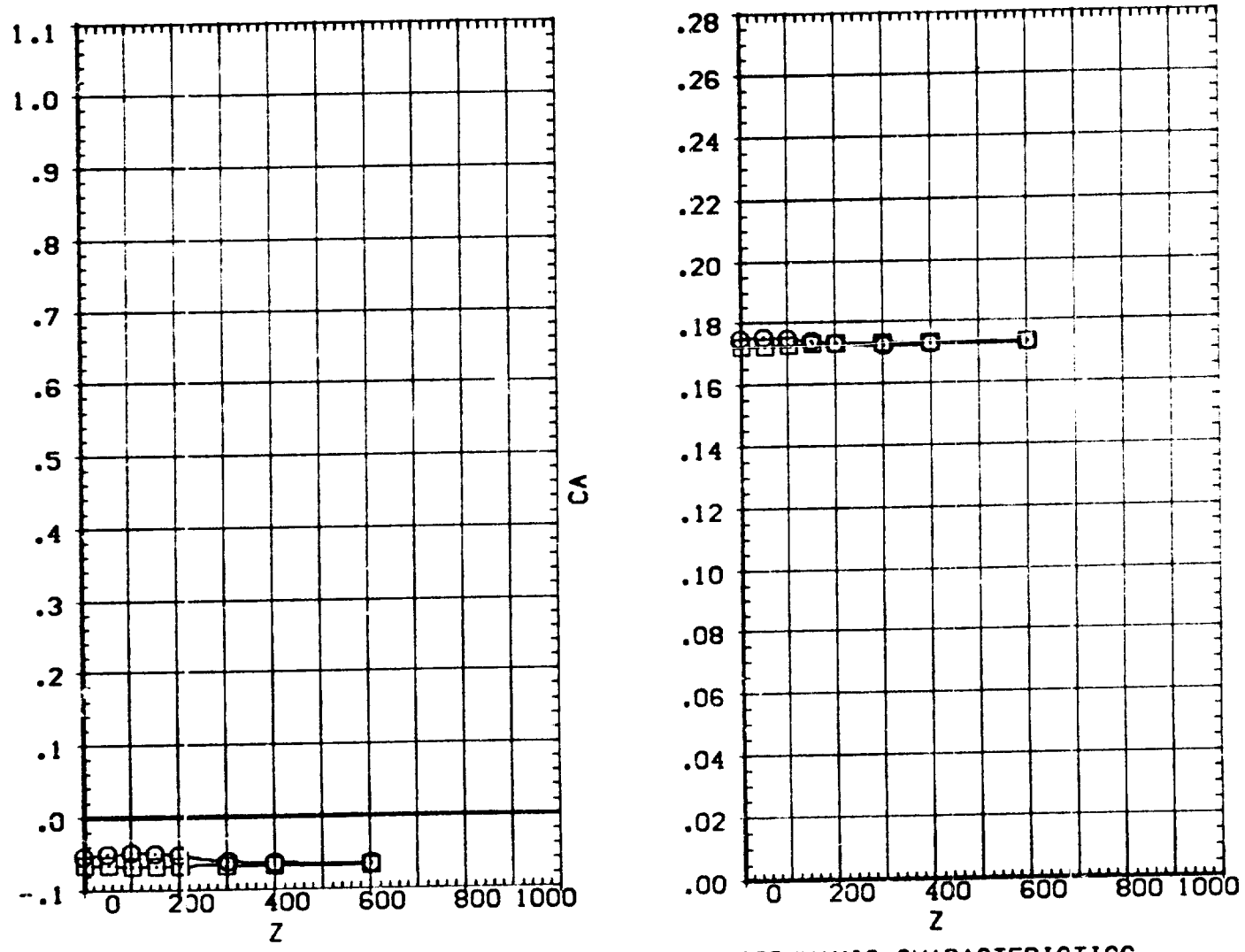


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ176)

SYMBOL	X		PARAMETRIC VALUES		
○	.256	MACH	4.530	PTOTAL	110.000
□	900.690	ALPHA	.000	BETA	.000
		DALPHA	5.000	DBETA	-5.000
			200.000	PCHMBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

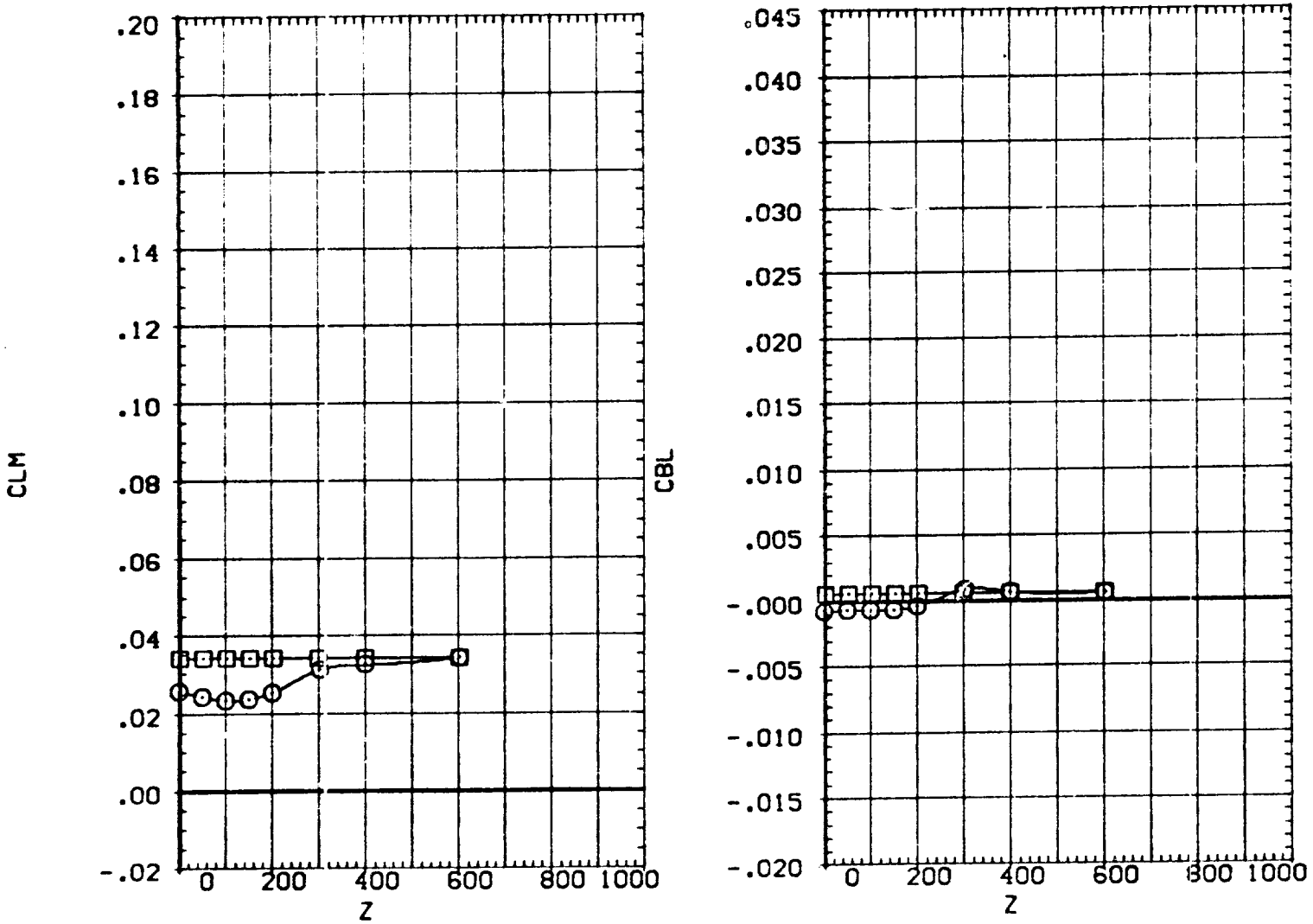


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(SB) W/O PLUMES SEPARATING FROM 09T10 (RTJ176)

SYMBOL	X		PARAMETRIC VALUES		
○	.256	MACH	4.530	PTOTAL	110.000
□	900.690	ALPHA	.000	BETA	.000
		DALPHA	5.000	DBETA	-5.000
		Y	100.000	PCHMBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

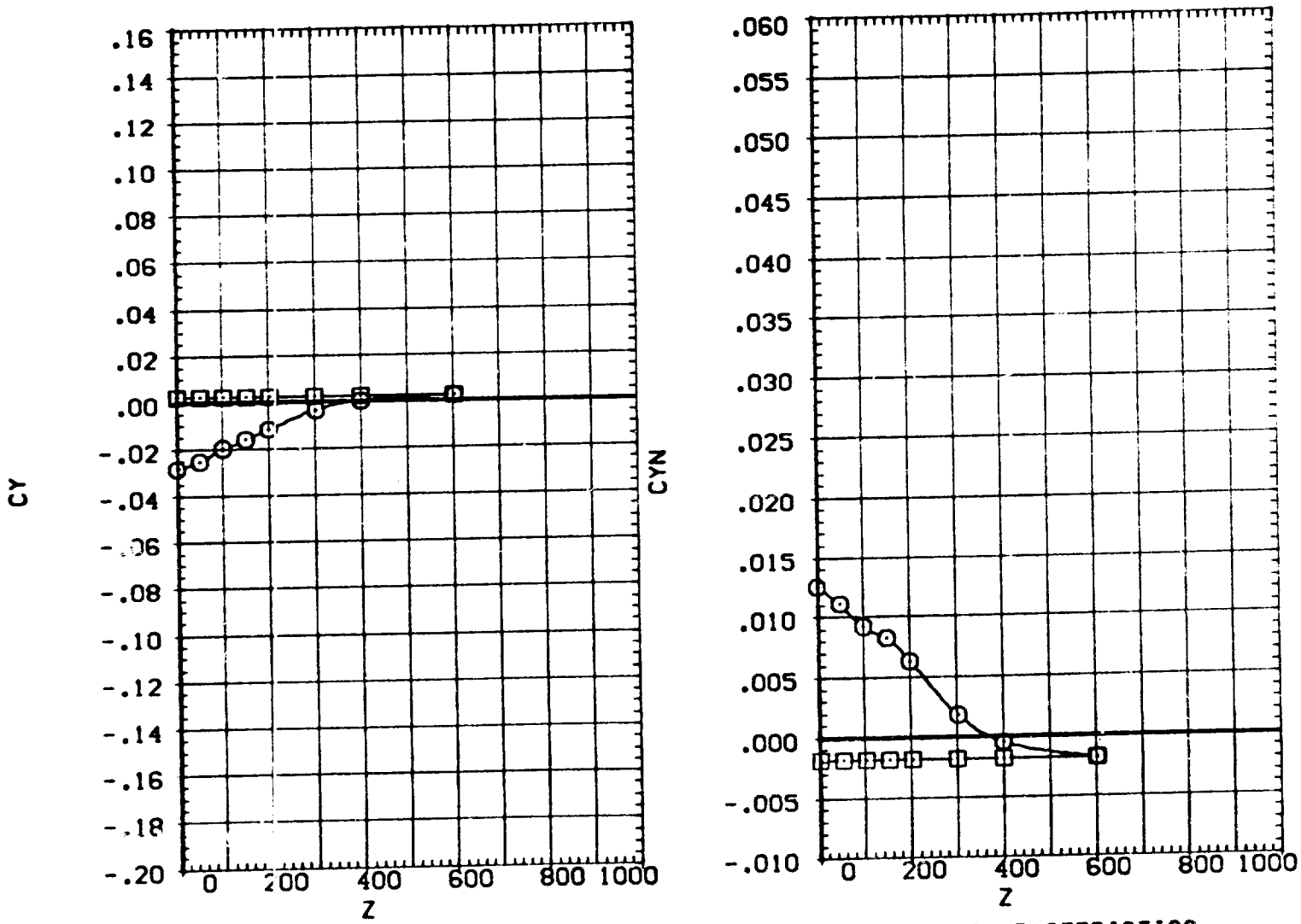


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ176)

SYMBOL	X		PARAMETRIC VALUES		
○	.256	MACH	4.530	PTOTAL	110.000
□	900.690	ALPHA	.000	BETA	.000
		DALPHA	5.000	DBETA	-5.000
		Y	200.000	PCHMBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

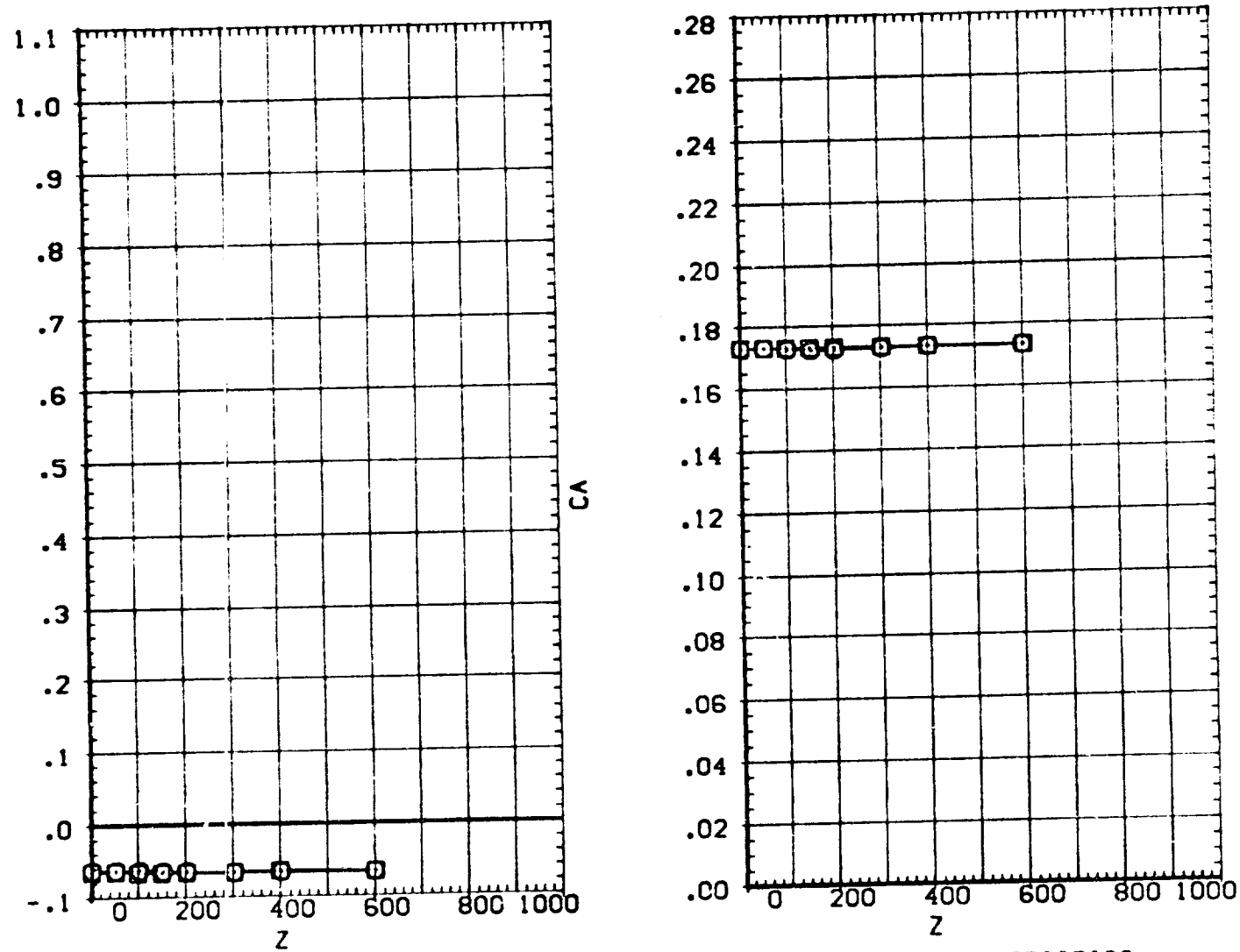


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ177)

SYMBOL	X		PARAMETRIC VALUES		
○	.369	MACH	4.530	PTOTAL	110.000
□	900.510	ALPHA	.000	BETA	.000
		DALPHA	5.000	DBETA	-5.000
		Y	400.000	PCHNGR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

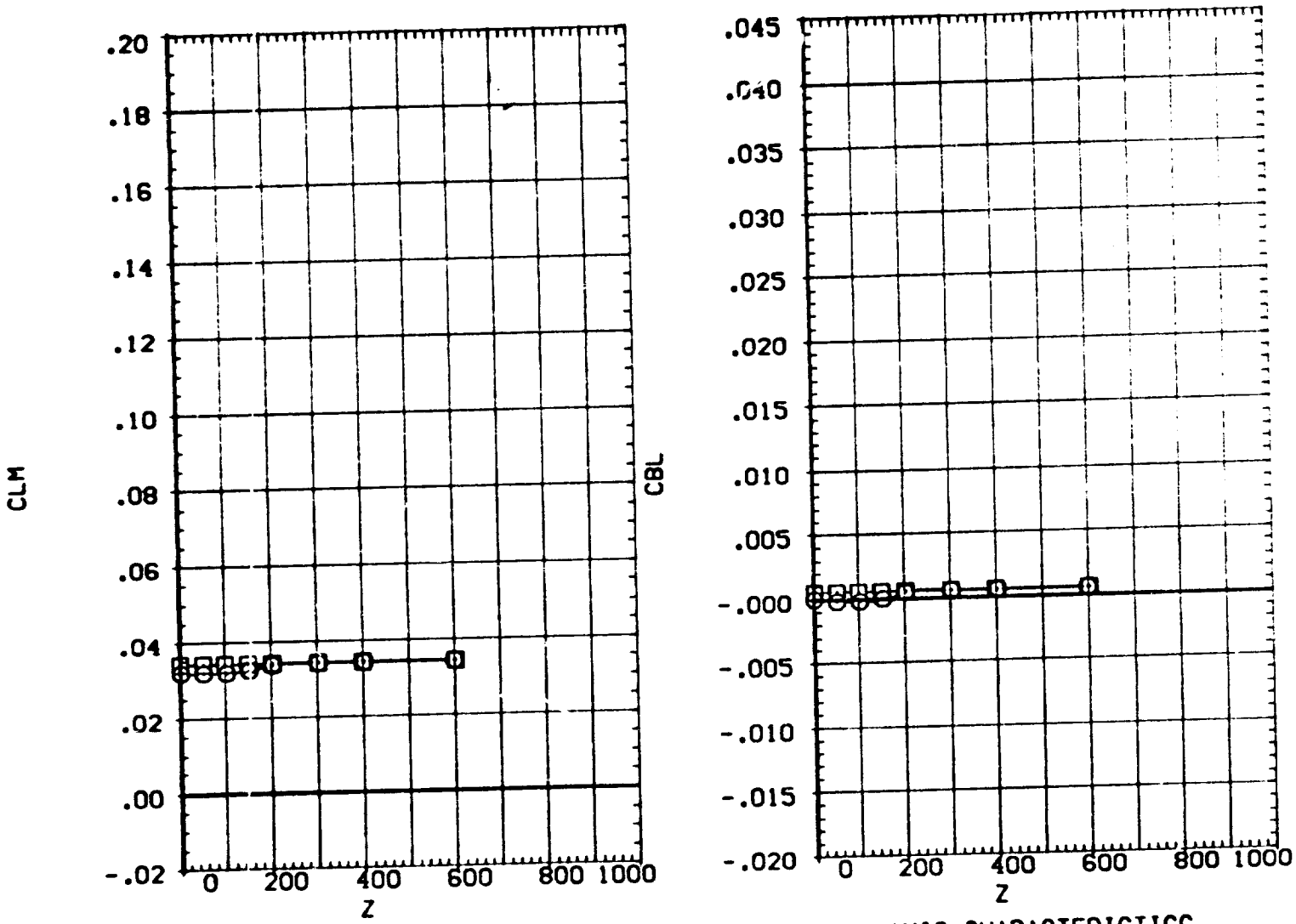


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ177)

SYMBOL	X		PARAMETRIC VALUES		
○	.369	MACH	4.530	PTOTAL	110.000
□	900.510	ALPHA	.000	BETA	.000
		DALPHA	5.000	DBETA	-5.000
		Y	400.000	PCHMBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

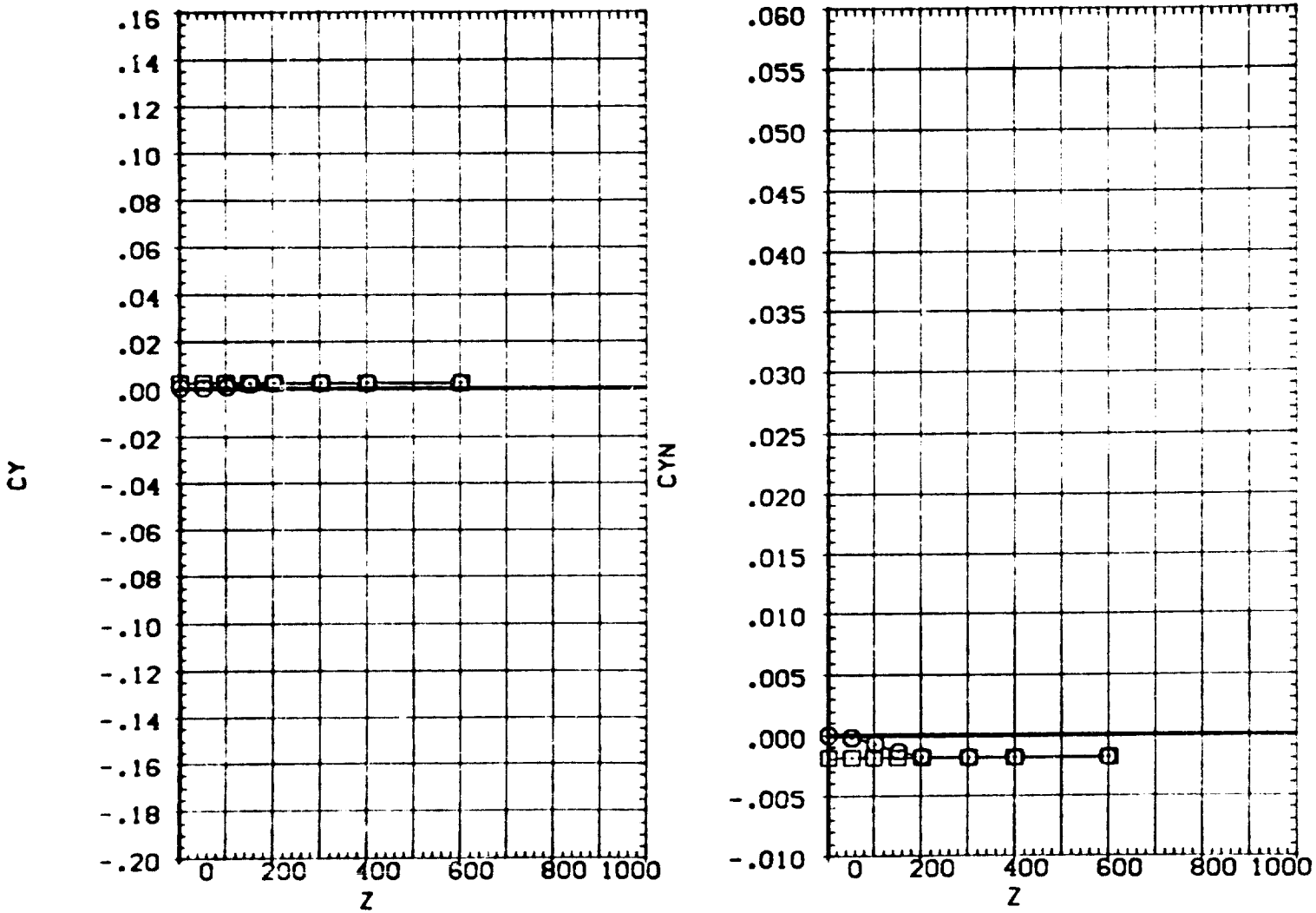


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ177)

SYMBOL	X		PARAMETRIC VALUES		
○	.369	MACH	4.530	PTOTAL	110.000
□	900.510	ALPHA	.000	BETA	.000
		DALPHA	5.000	DBETA	-5.000
		Y	400.000	PCHMBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

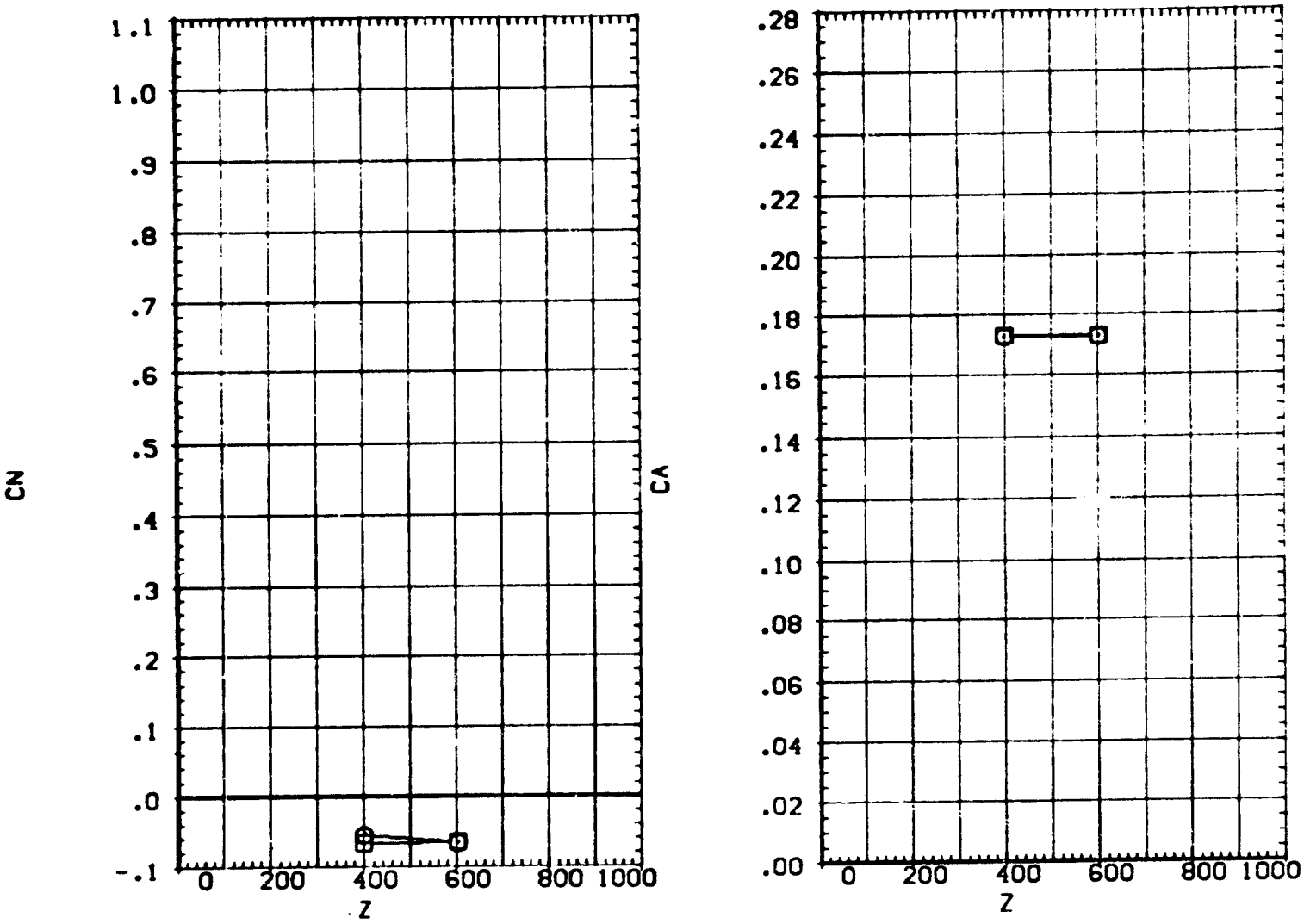


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(SB) W/O PLUMES SEPARATING FROM 09T10 (RTJ178)

SYMBOL	X		PARAMETRIC VALUES		
○	.307	MACH	4.530	PTOTAL	110.000
□	900.600	ALPHA	.000	BETA	.000
		DALPHA	5.000	DBETA	-5.000
		Y	.000	PCHMBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

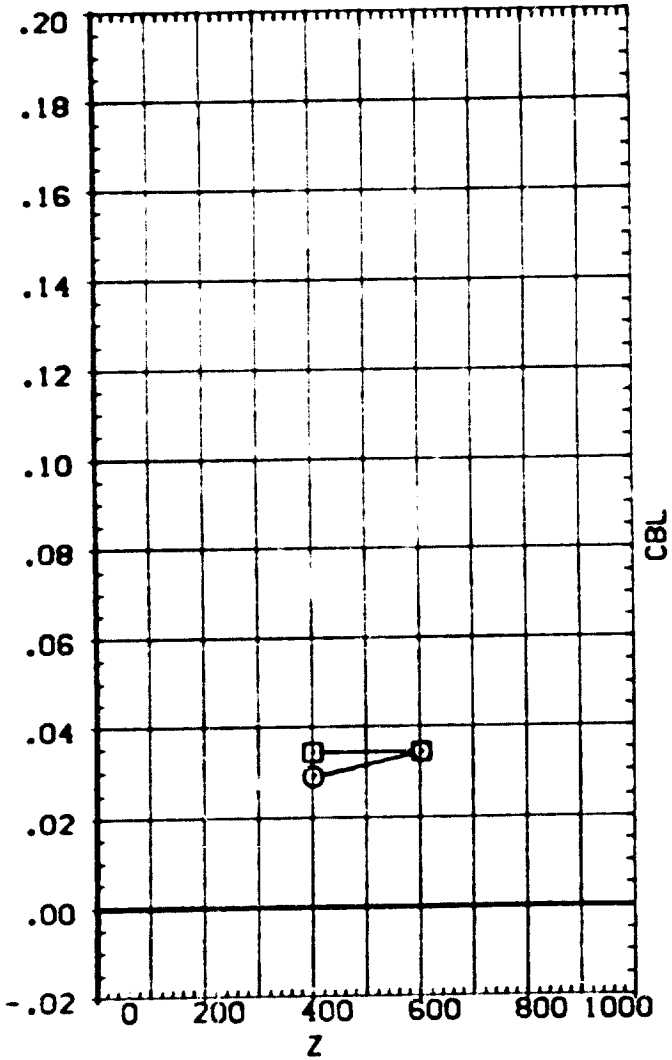


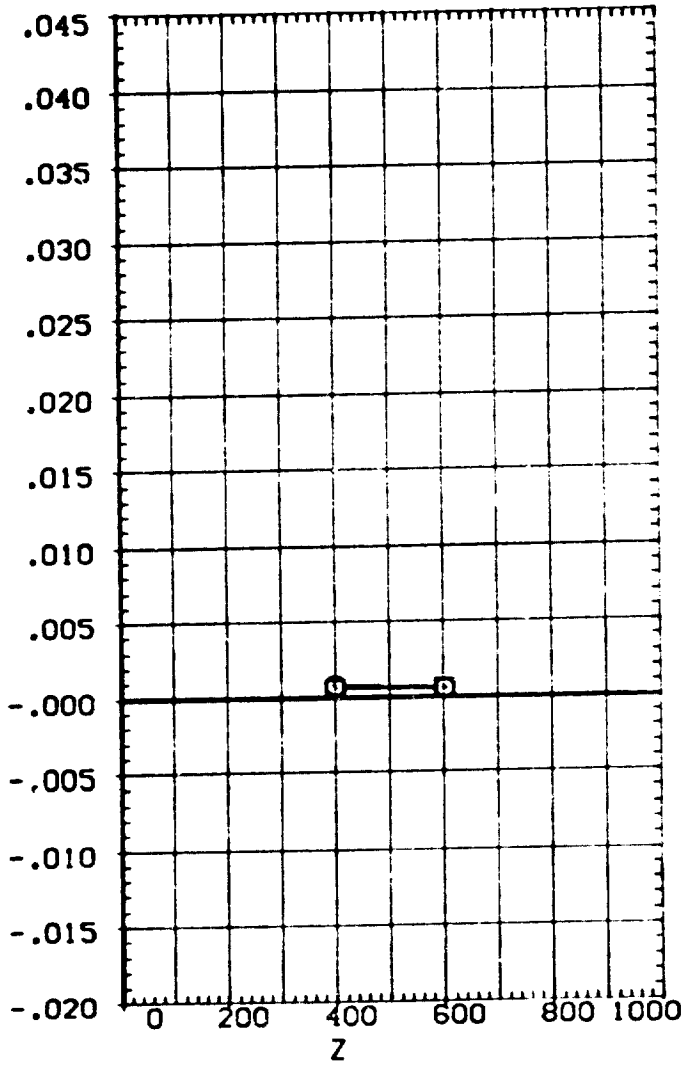
EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ178)

SYMBOL	X		PARAMETRIC VALUES		
○	.307	MACH	4.530	PTOTAL	110.000
□	900.600	ALPHA	.000	BETA	.000
		DALPHA	5.000	DBETA	-5.000
		V	.000	PCHMBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



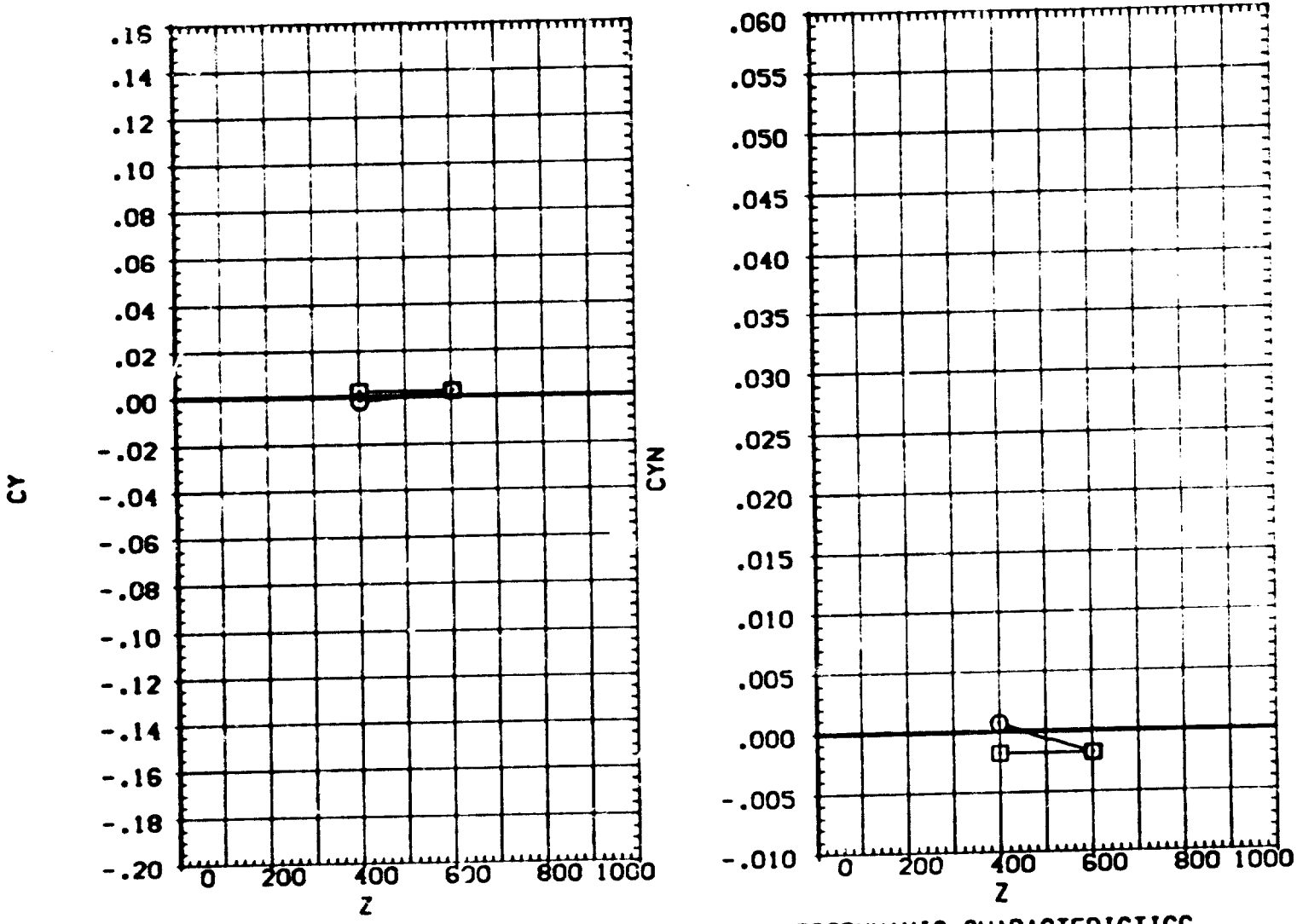


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM O9T10 (RTJ178)

SYMBOL	X	PARAMETRIC VALUES			
○	.307	MACH	4.530	PTOTAL	110.000
□	900.600	ALPHA	.000	BETA	.000
		DALPHA	5.000	DBETA	-5.000
		Y	.000	PCHBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

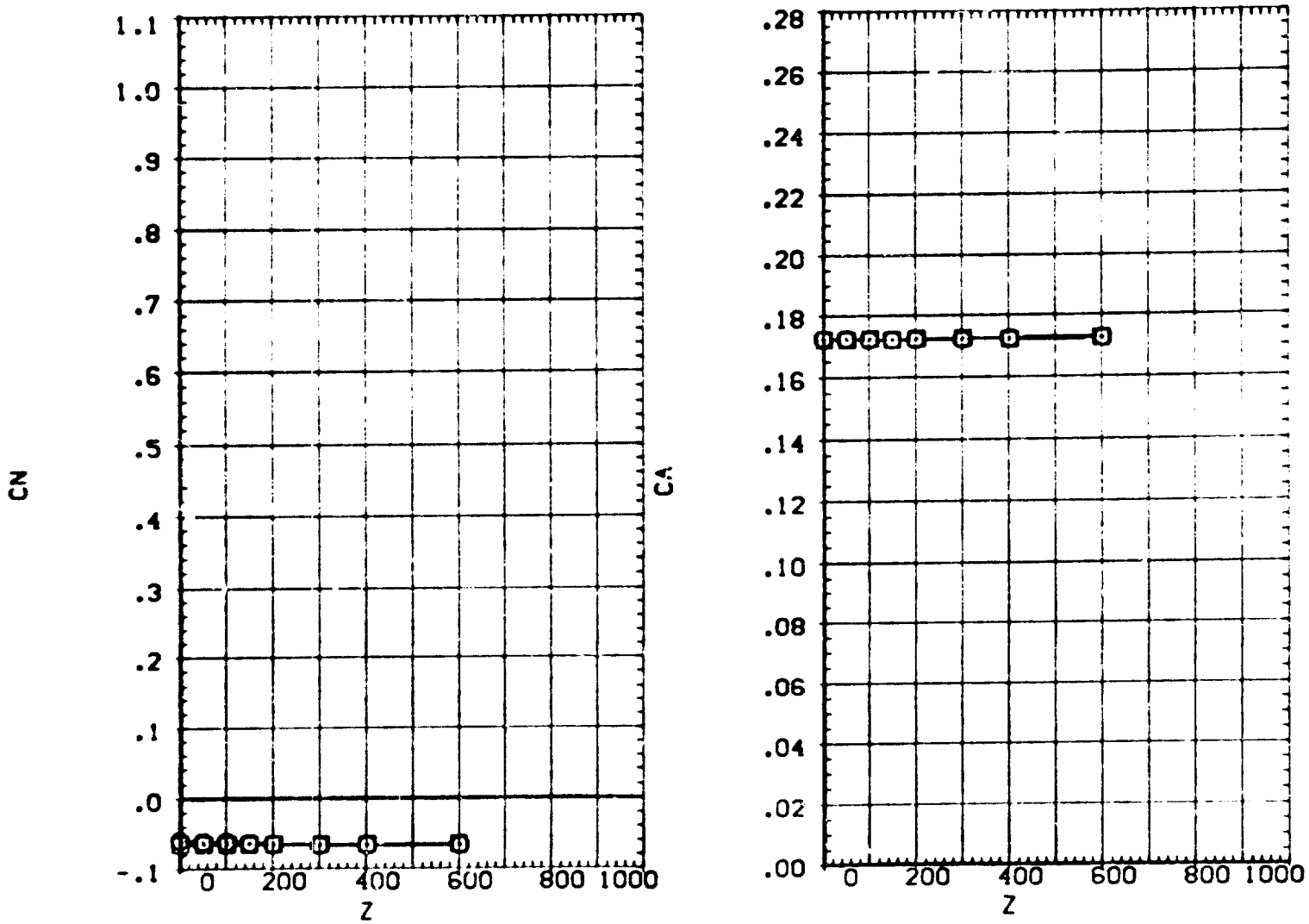


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA1.' SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ179)

SYMBOL	X		PARAMETRIC VALUES		
○	.302	MACH	4.530	PTOTAL	110.000
□	900.520	ALPHA	.000	BETA	.000
		DALPHA	5.000	DBETA	-10.000
		Y	400.000	PCHBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

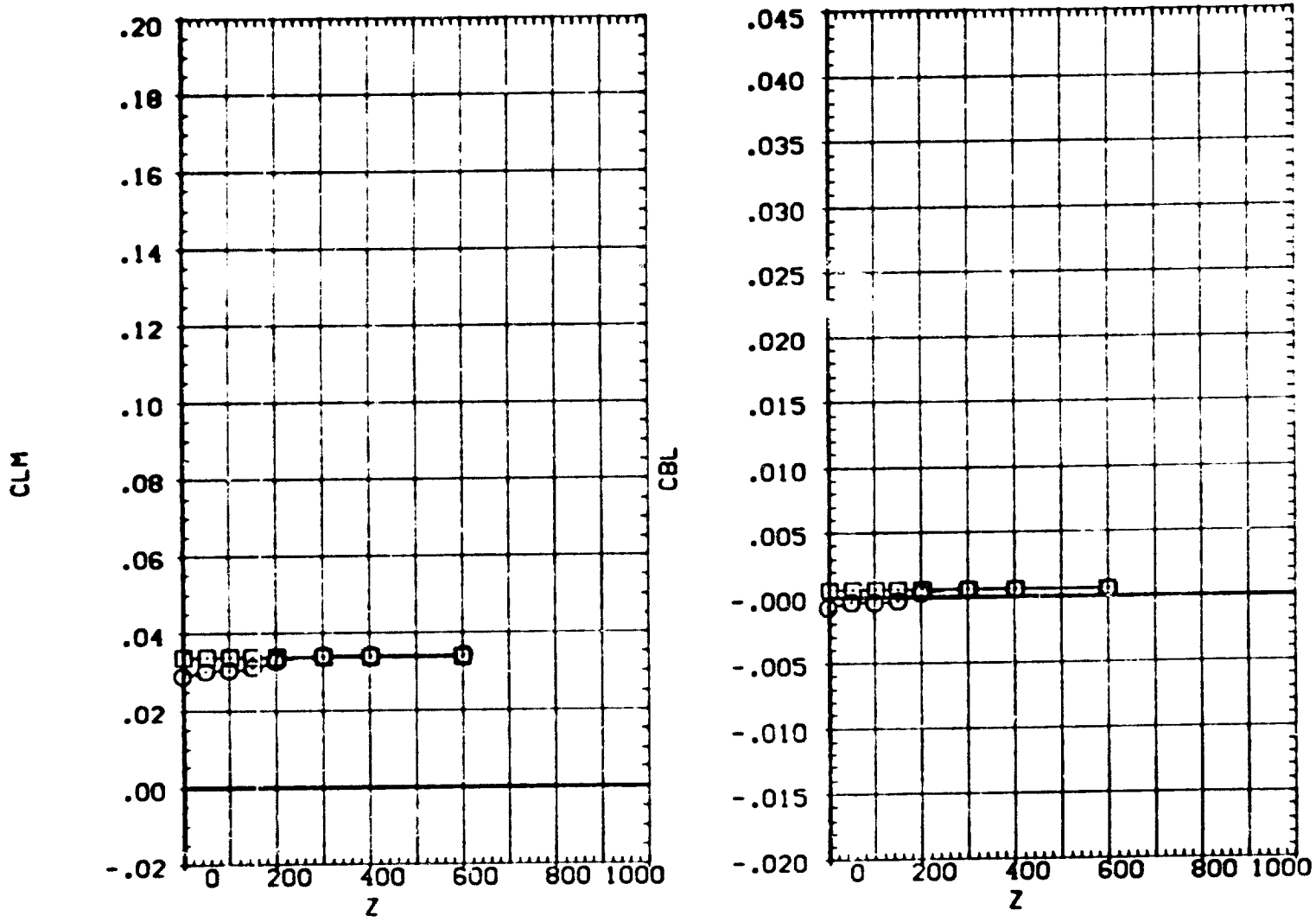


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

[A13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ179)

SYMBOL	X		PARAMETRIC VALUES		
○	.302	MACH	4.530	PTOTAL	110.000
□	900.520	ALPHA	.000	BETA	.000
		DALPHA	5.000	DBETA	-10.000
		Y	400.000	POWER	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

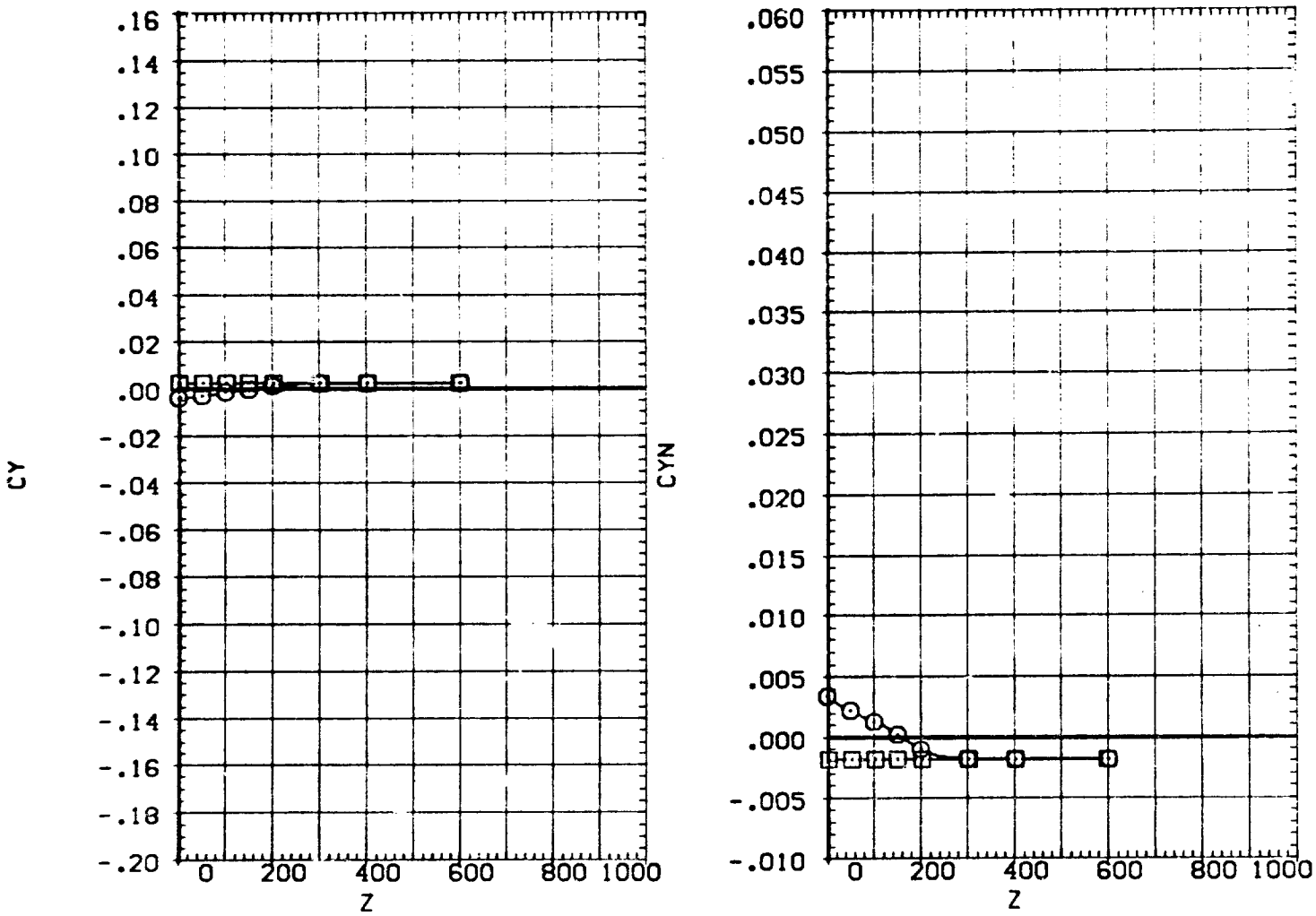


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

!A13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ179)

SYMBOL	X		PARAMETRIC VALUES		
□	.302	MACH	4.530	PTOTAL	110.000
	900.520	ALPHA	.000	BETA	.000
		DALPHA	5.000	DBETA	-10.000
		Y	400.000	PCHMBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

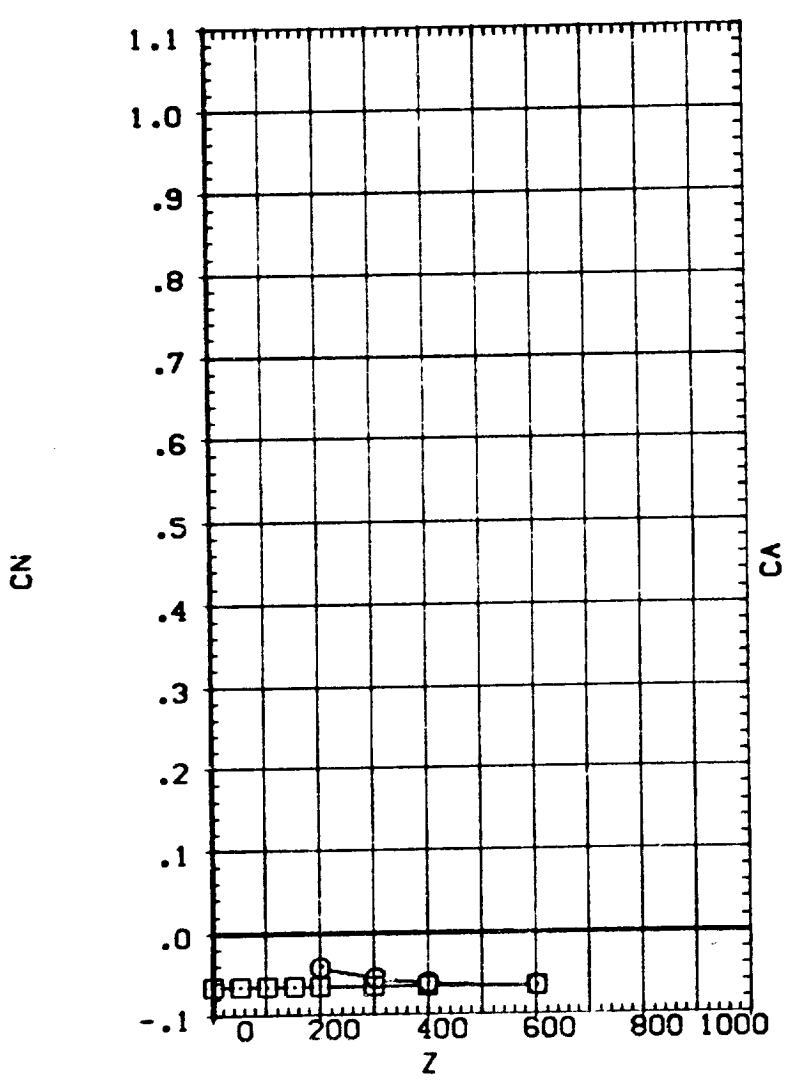


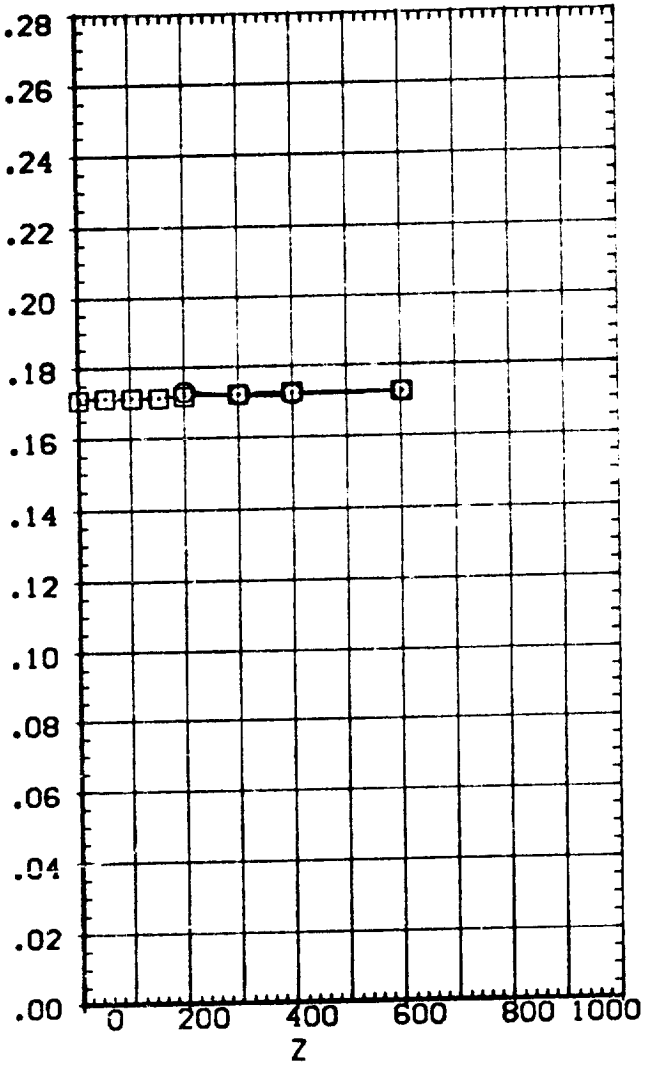
EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ180)

SYMBOL	X		PARAMETRIC VALUES		
○	.485	MACH	4.530	PTOTAL	110.000
□	900.670	ALPHA	.000	BETA	.000
		DALPHA	5.000	DBETA	-10.000
		Y	200.000	PCHMBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



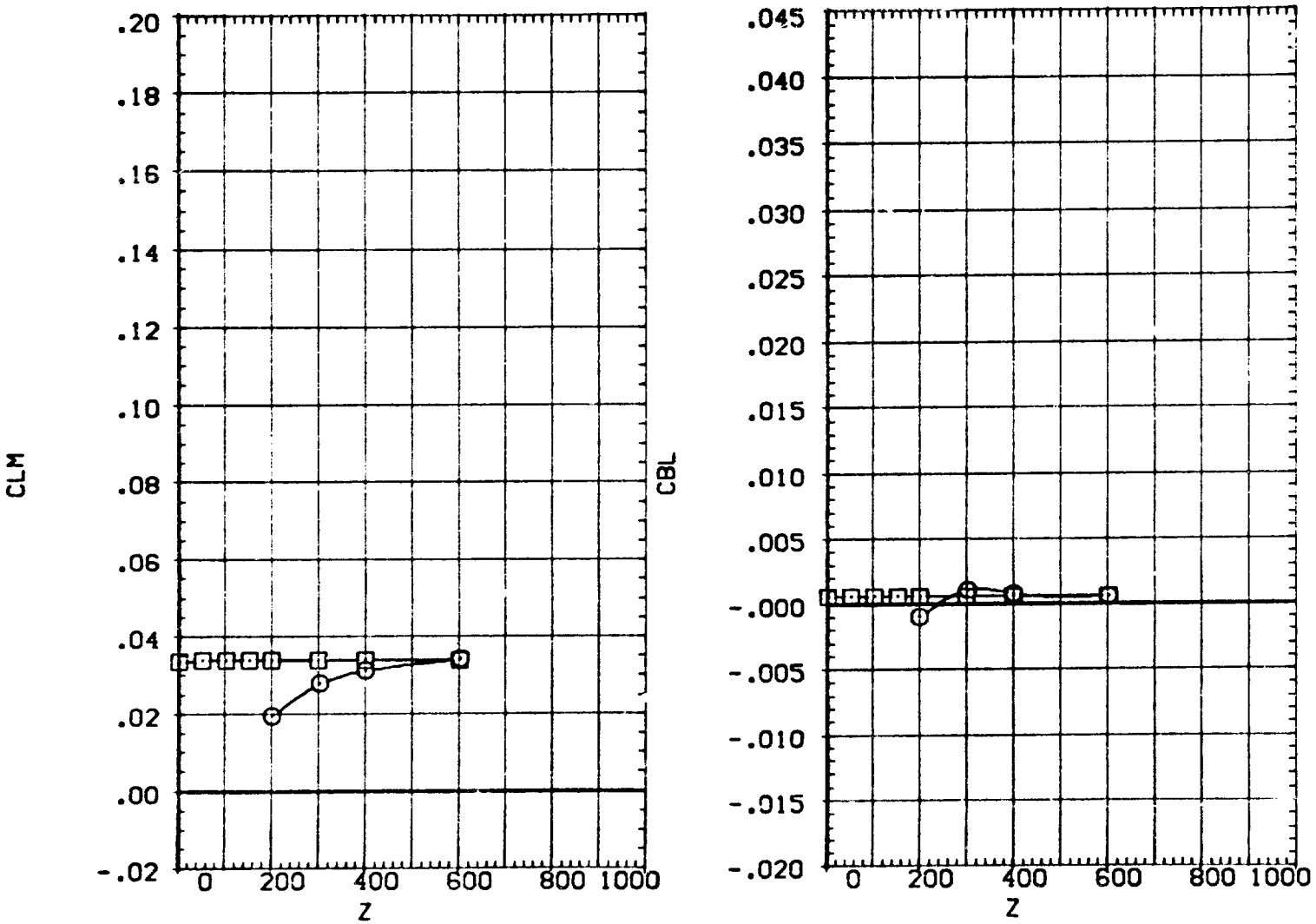


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ180)

SYMBOL	X		PARAMETRIC VALUES		
○	.485	MACH	4.530	PTOTAL	110.000
□	900.670	ALPHA	.000	BETA	.000
		DALPHA	5.000	DBETA	-10.000
		Y	200.000	PCHMBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

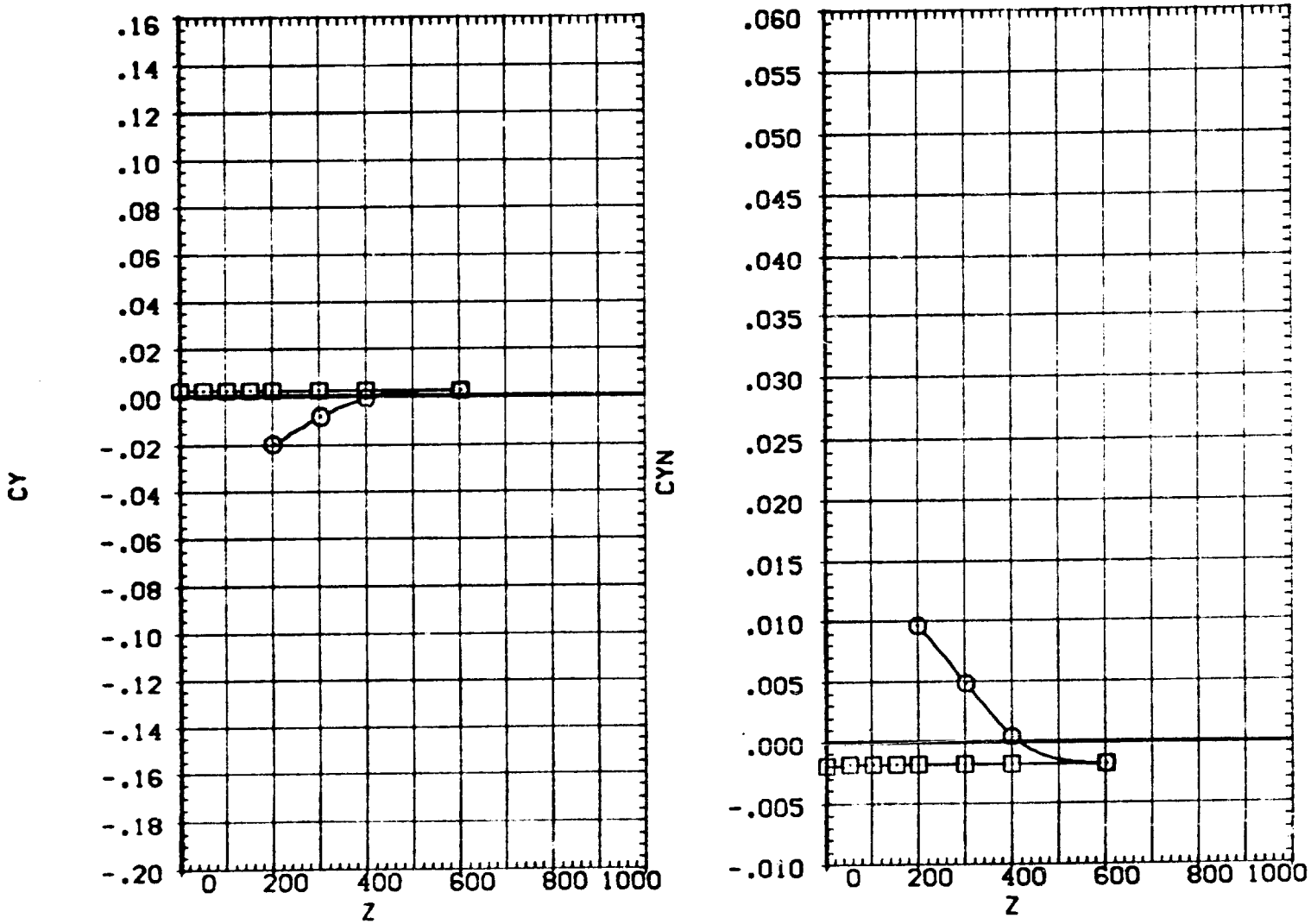


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ180)

SYMBOL	X		PARAMETRIC VALUES		
○	.485	MACH	4.530	PTOTAL	110.000
□	900.670	ALPHA	.000	BETA	.000
		DALPHA	5.000	DBETA	-10.000
		Y	200.000	PCHMBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

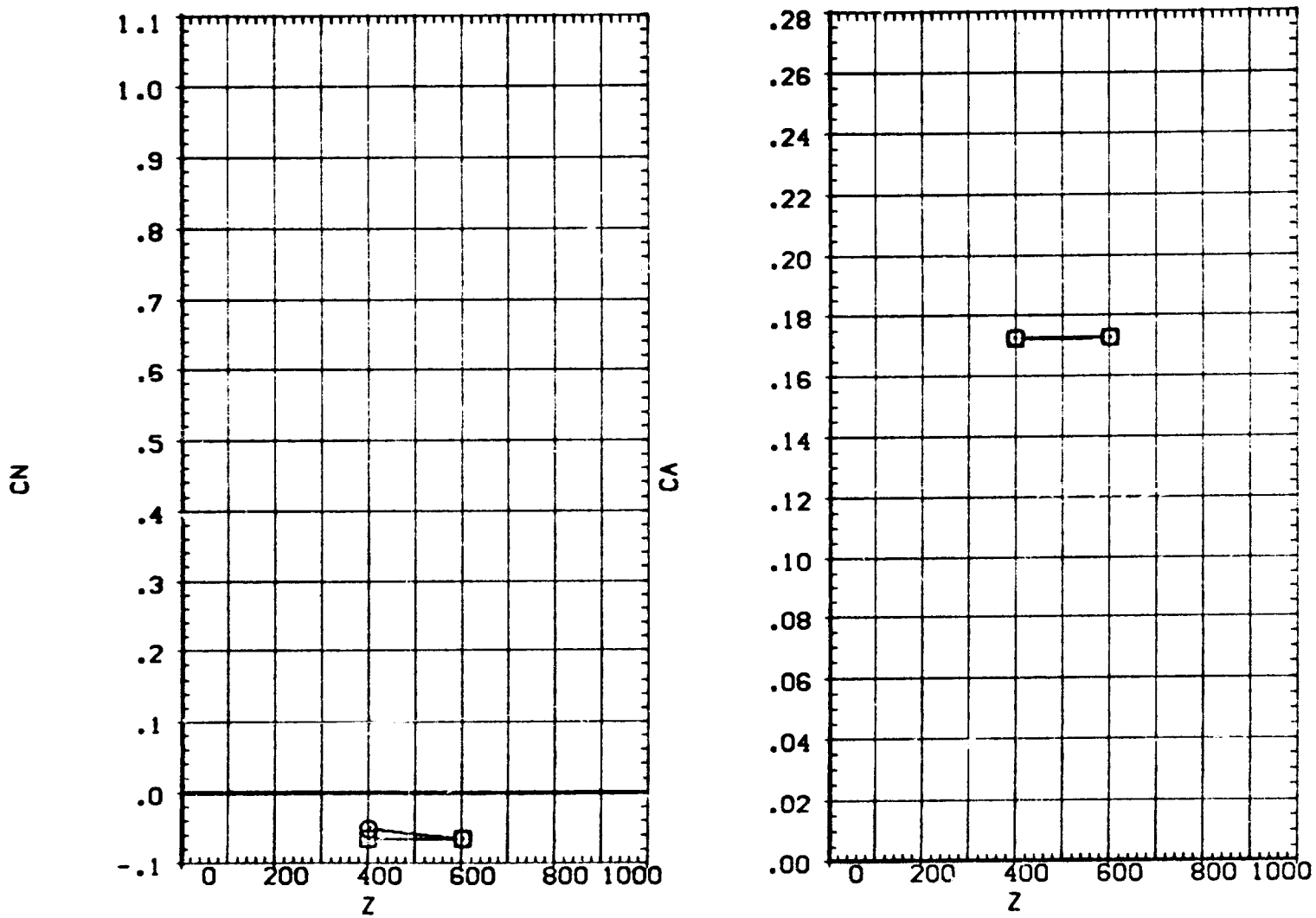


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ181)

SYMBOL	X		PARAMETRIC VALUES		
○	.190	MACH	4.530	PTOTAL	110.000
□	900.700	ALPHA	.000	BETA	.000
		DALPHA	5.000	DBETA	-10.000
		Y	.000	PCHMBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

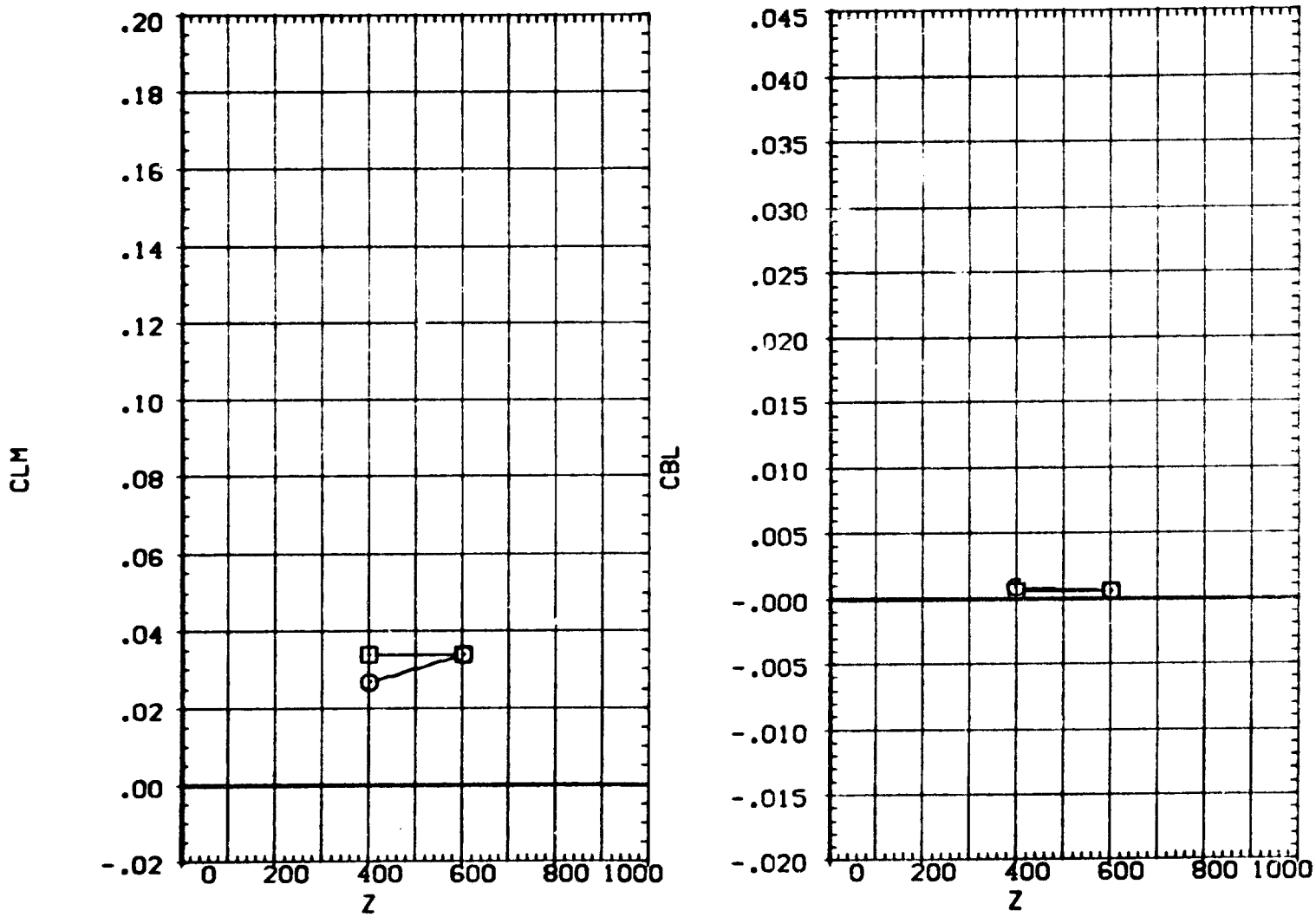


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ181)

SYMBOL	X		PARAMETRIC VALUES		
○	.190	MACH	4.530	PTOTAL	110.000
□	900.700	ALPHA	.000	BETA	.000
		DALPHA	5.000	DBETA	-10.000
		Y	.000	PCHMBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

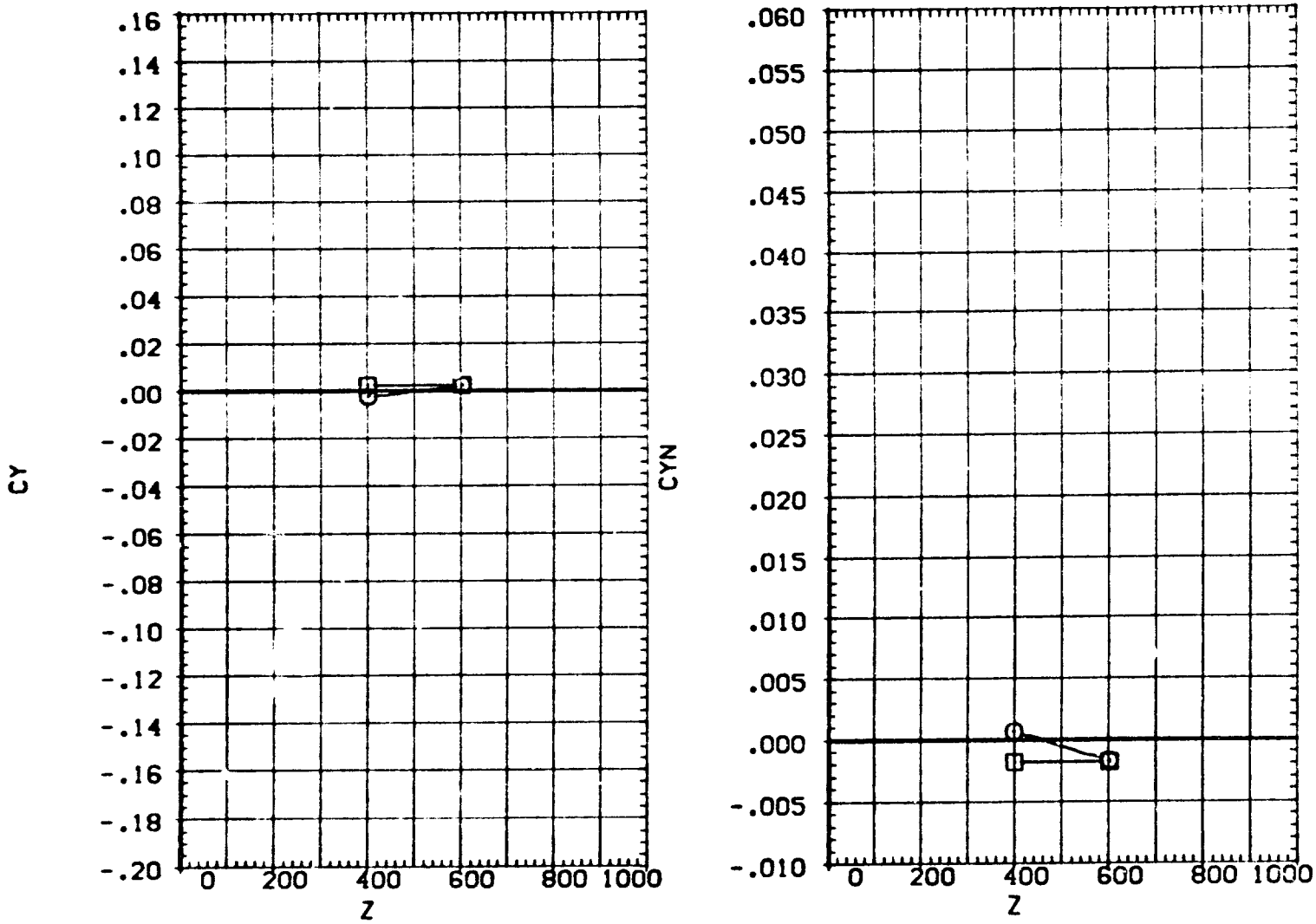


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ181)

SYMBOL	X		PARAMETRIC VALUES		
○	.190	MACH	4.530	PTOTAL	110.000
□	900.700	ALPHA	.000	BETA	.000
		DALPHA	5.000	DBETA	-10.000
		Y	.000	PCHMBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

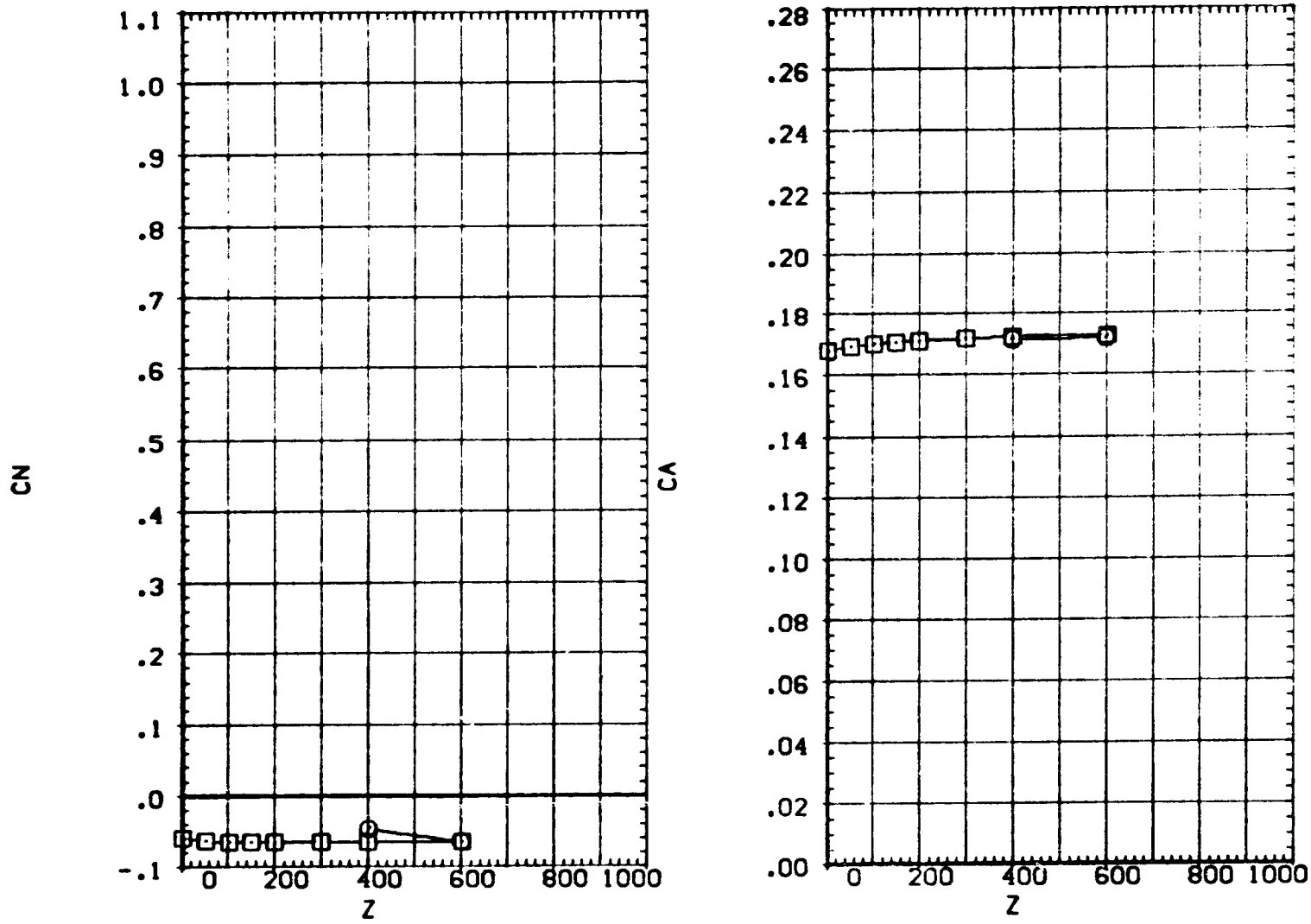


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ182)

SYMBOL	X		PARAMETRIC VALUES		
○	.354	MACH	4.530	PTOTAL	110.000
□	900.370	ALPHA	.000	BETA	.000
		DALPHA	5.000	DBETA	-20.000
		Y	200.000	PCHMBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

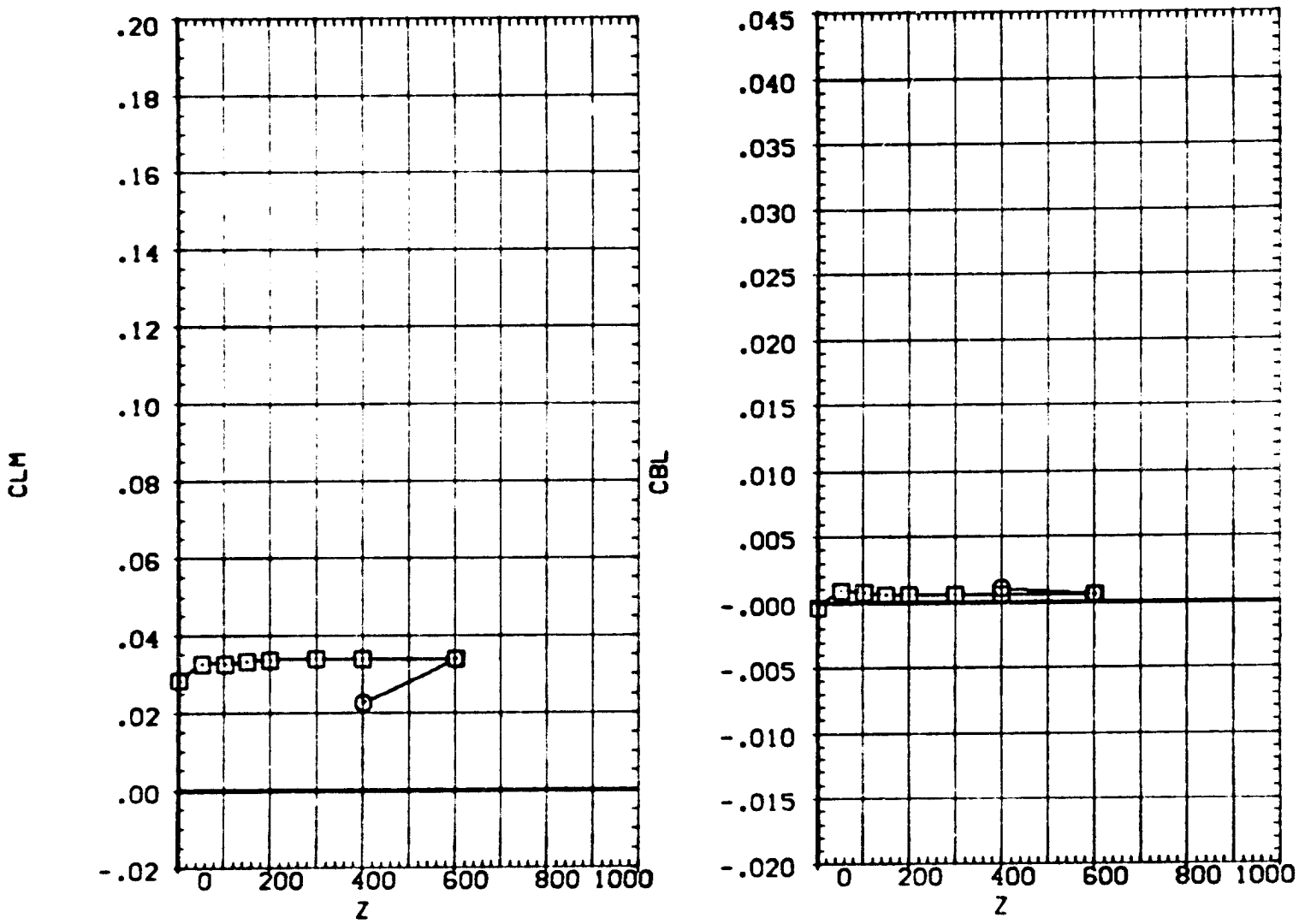


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ182)

SYMBOL	X		PARAMETRIC VALUES		
□	.354	MACH	4.530	PTOTAL	110.000
○	900.370	ALPHA	.000	BETA	.000
		DALPHA	5.000	DBETA	-20.000
		Y	200.000	PCHNGR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

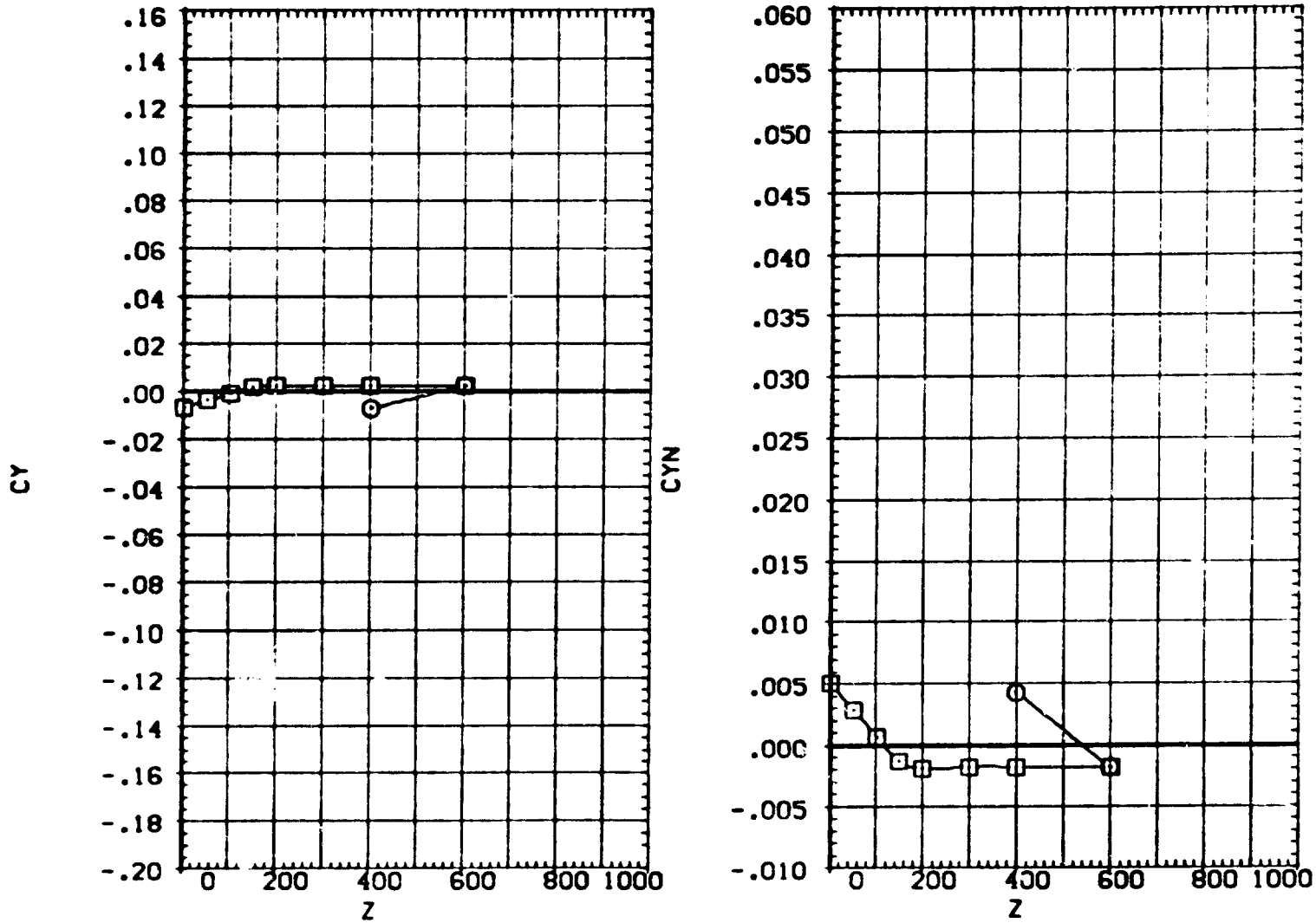


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ182)

SYMBOL	X		PARAMETRIC VALUES		
○	.354	MACH	4.530	PTOTAL	110.000
□	900.370	ALPHA	.000	BETA	.000
		DALPHA	5.000	DBETA	-20.000
		Y	200.000	PCHNGR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

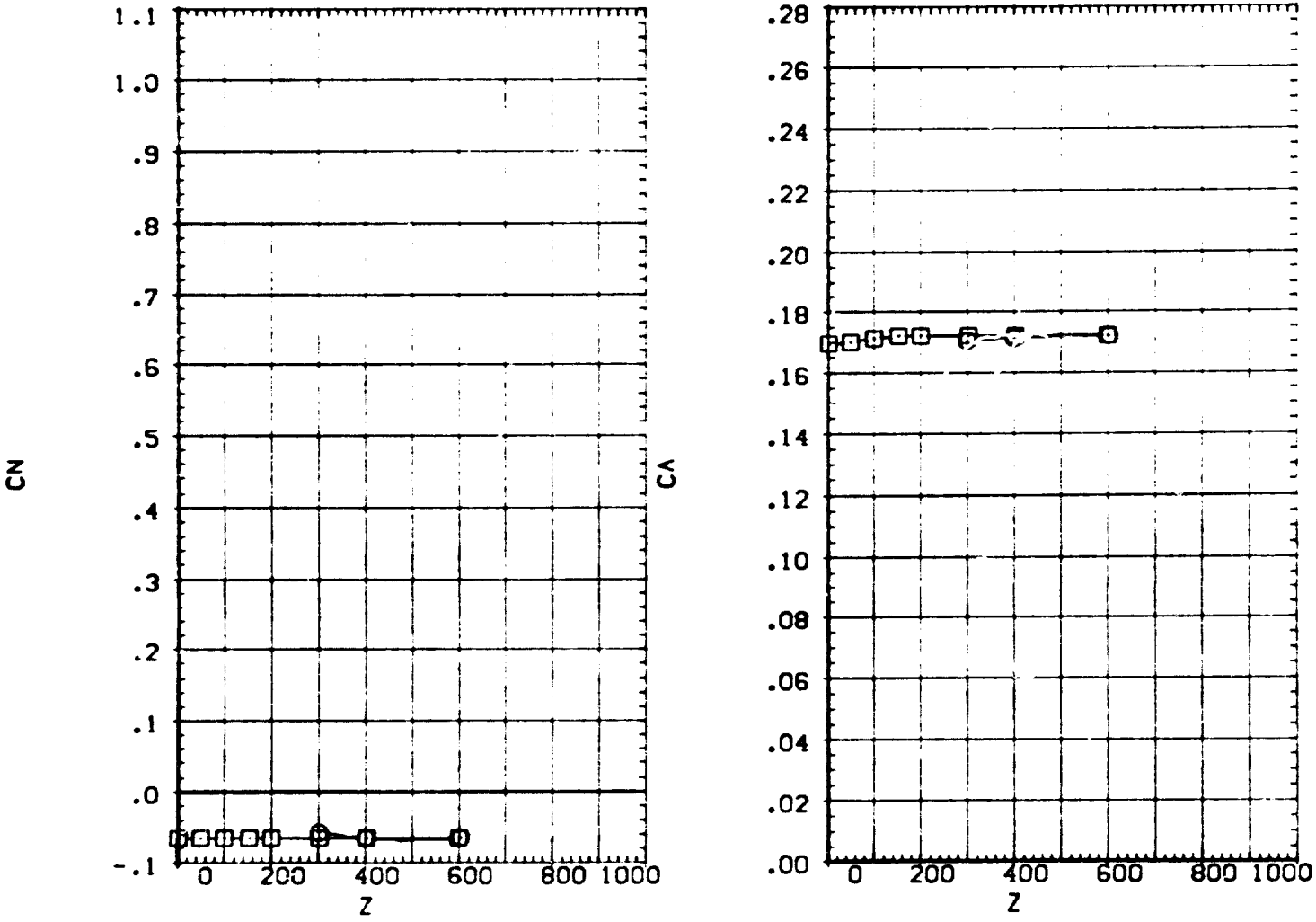


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

[A]3 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ183)

SYMBOL	X		PARAMETRIC VALUES		
	.538	MACH	4.530	PTOTAL	110.000
	900.120	ALPHA	.000	BETA	.000
		DALPHA	5.000	DBETA	-20.000
		Y	400.000	PCHMBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

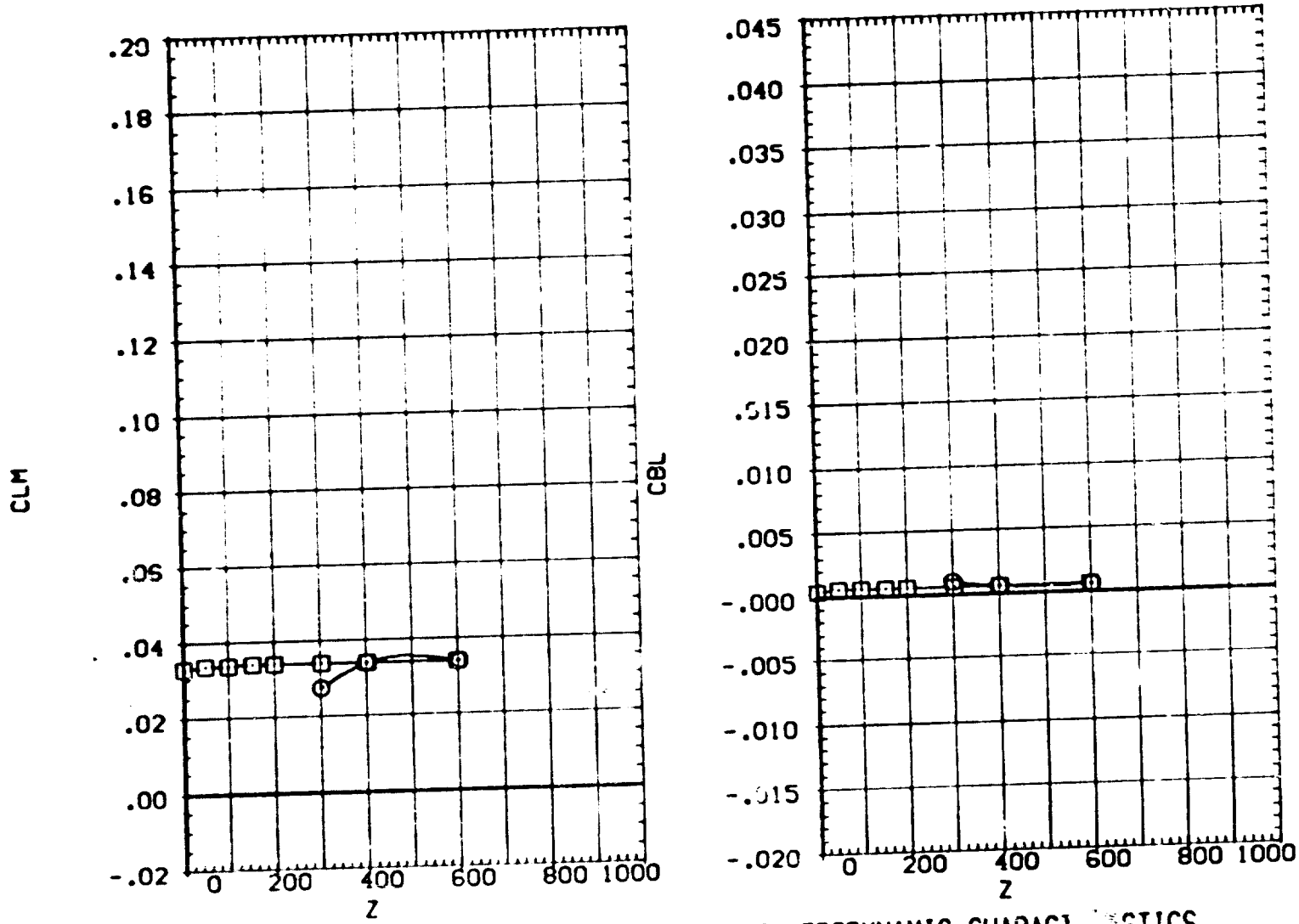


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ183)

SYMBOL	X		PARAMETRIC VALUES		
○	.538	MACH	4.530	PTOTAL	110.000
□	900.120	ALPHA	.000	BETA	.000
		DALPHA	5.000	DBETA	-20.000
		Y	400.000	POWER	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

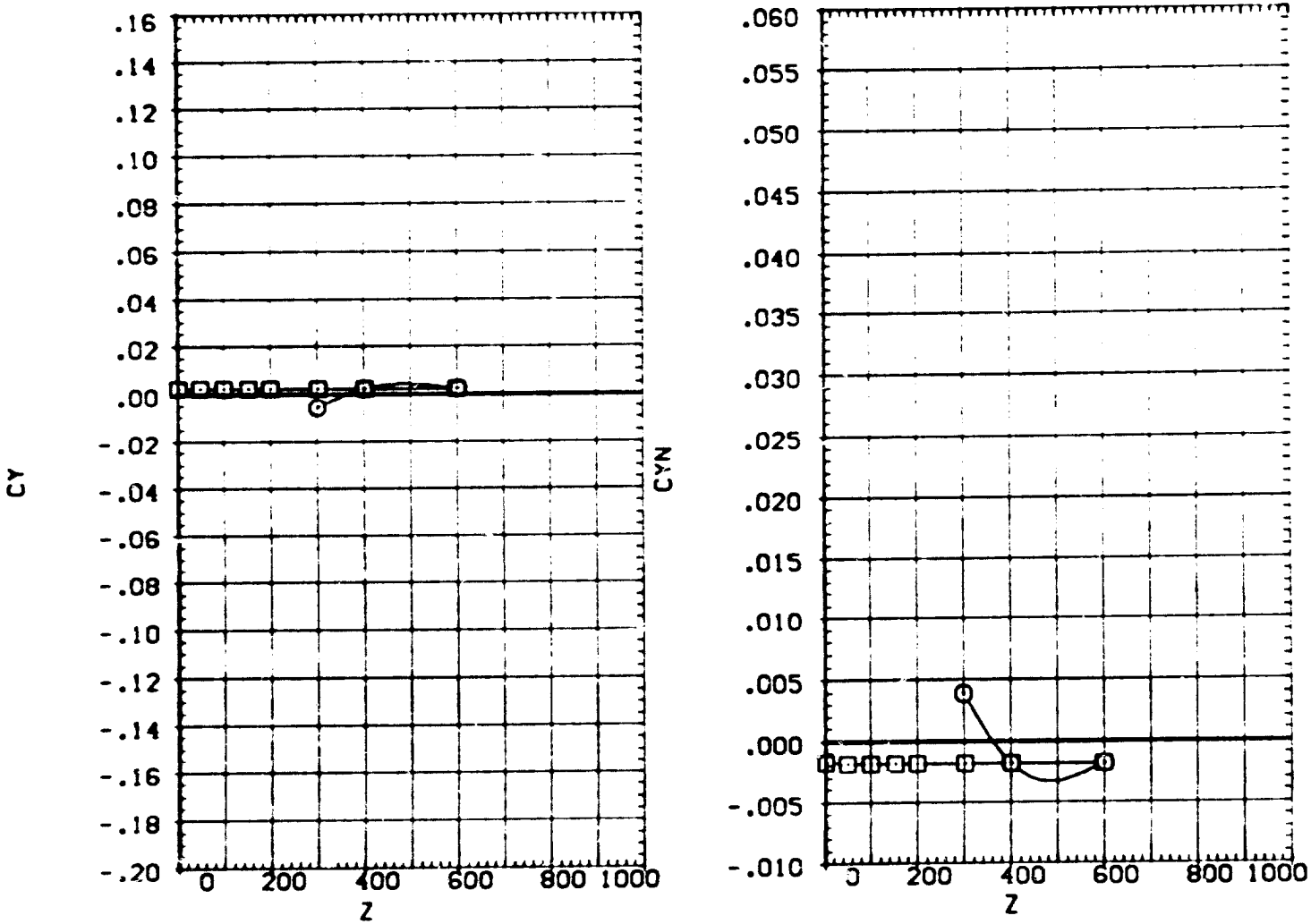


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

[A13 SRB(S8) W/O PLUMES SEPARATING FROM OBTIO (RTJ183)

SYMBOL	X		PARAMETRIC VALUES		
	.538	MACH	4.530	PTOTAL	110.000
	900.120	ALPHA	.000	BETA	.000
		DALPHA	5.000	DBETA	-20.000
		Y	400.000	PCHMBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

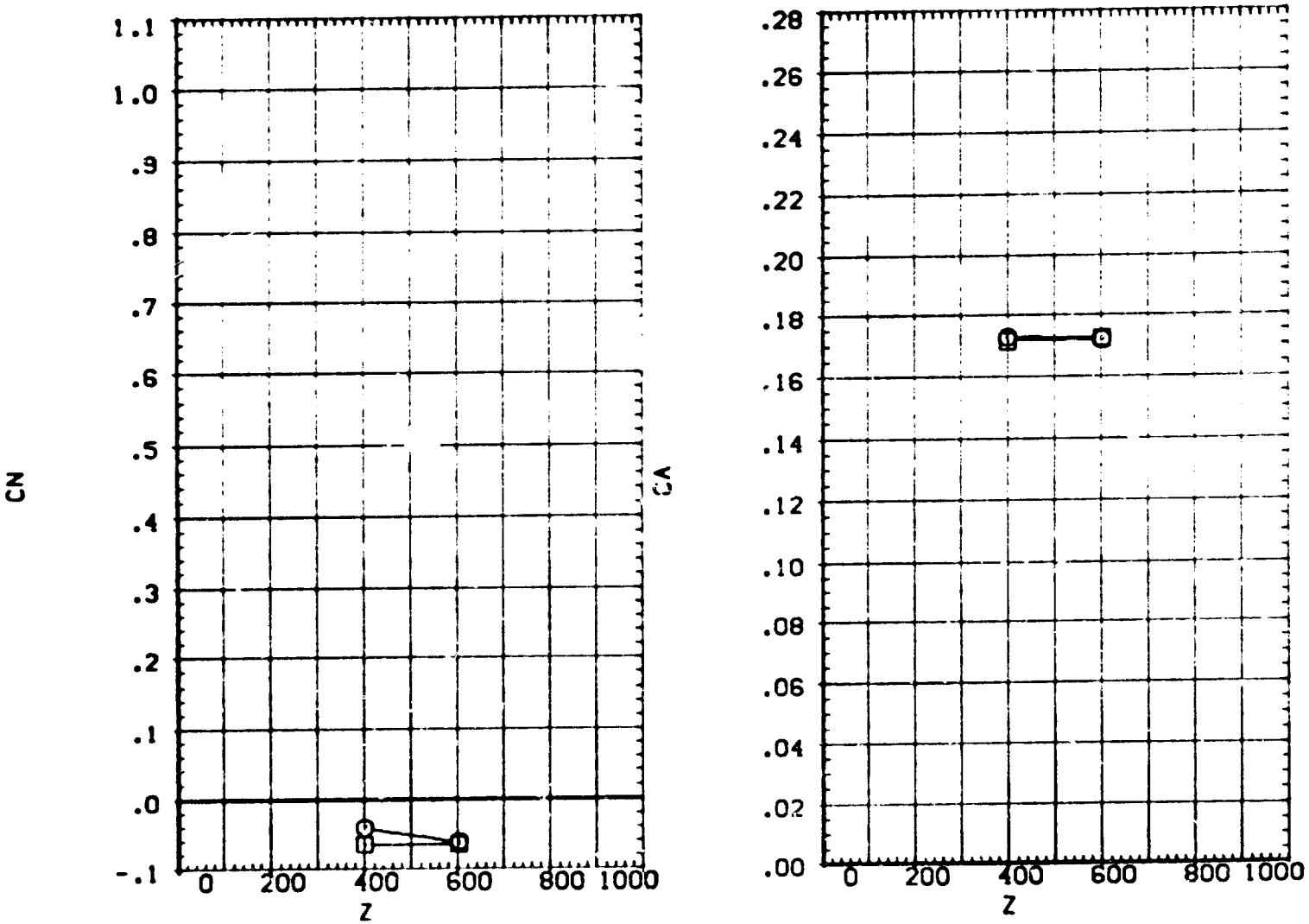


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ184)

SYMBOL	X		PARAMETRIC VALUES		
○	.019	MACH	4.530	PTOTAL	110.000
□	900.810	ALPHA	.000	BETA	.000
		DALPHA	5.000	DBETA	-20.000
		Y	.000	POWER	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

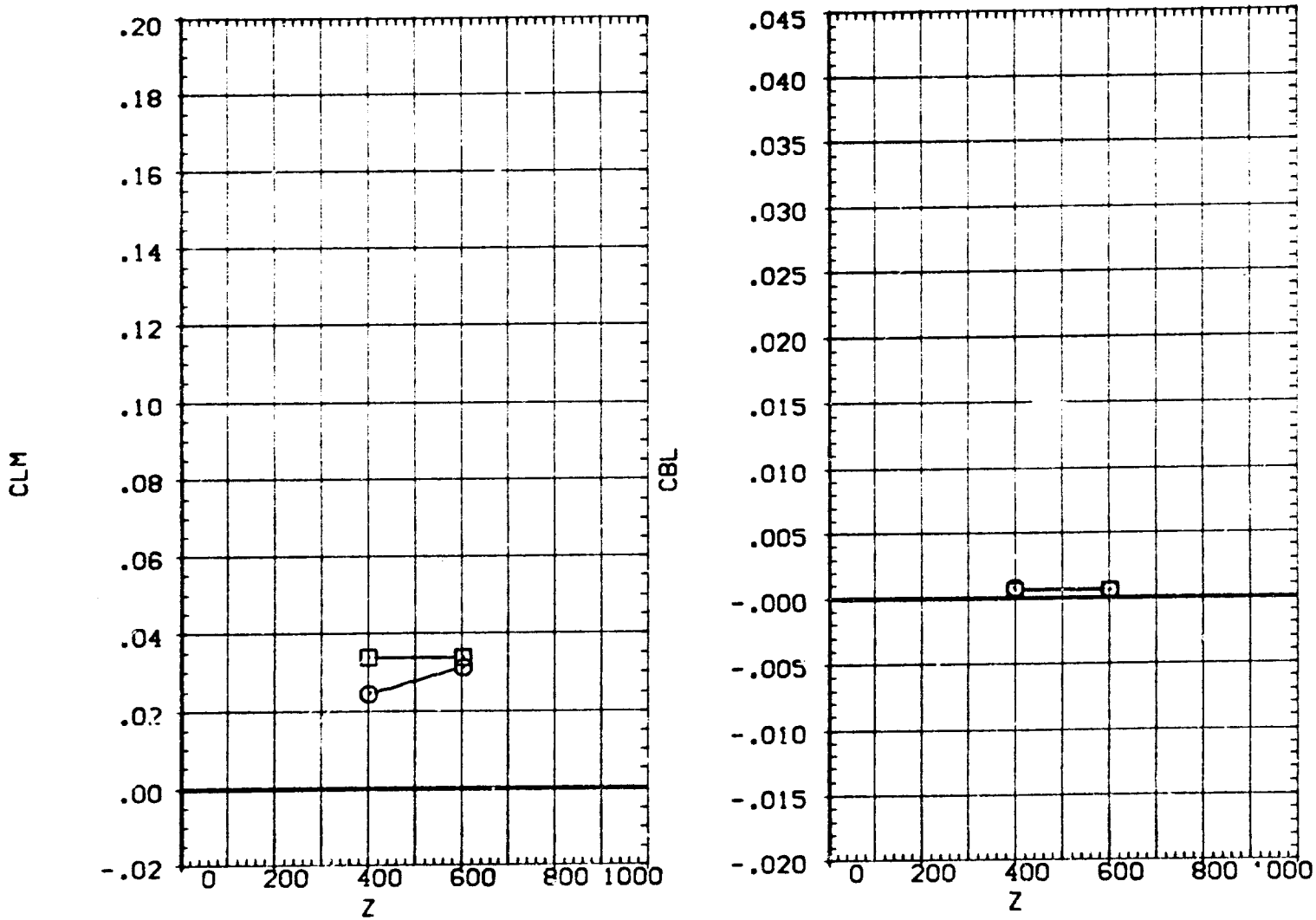


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ184)

SYMBOL	X		PARAMETRIC VALUES		
○	.019	MACH	4.530	PTOTAL	110.000
□	900.810	ALPHA	.00	BETA	.000
		DALPHA	5.000	DBETA	-20.000
		Y	.000	PCHMBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

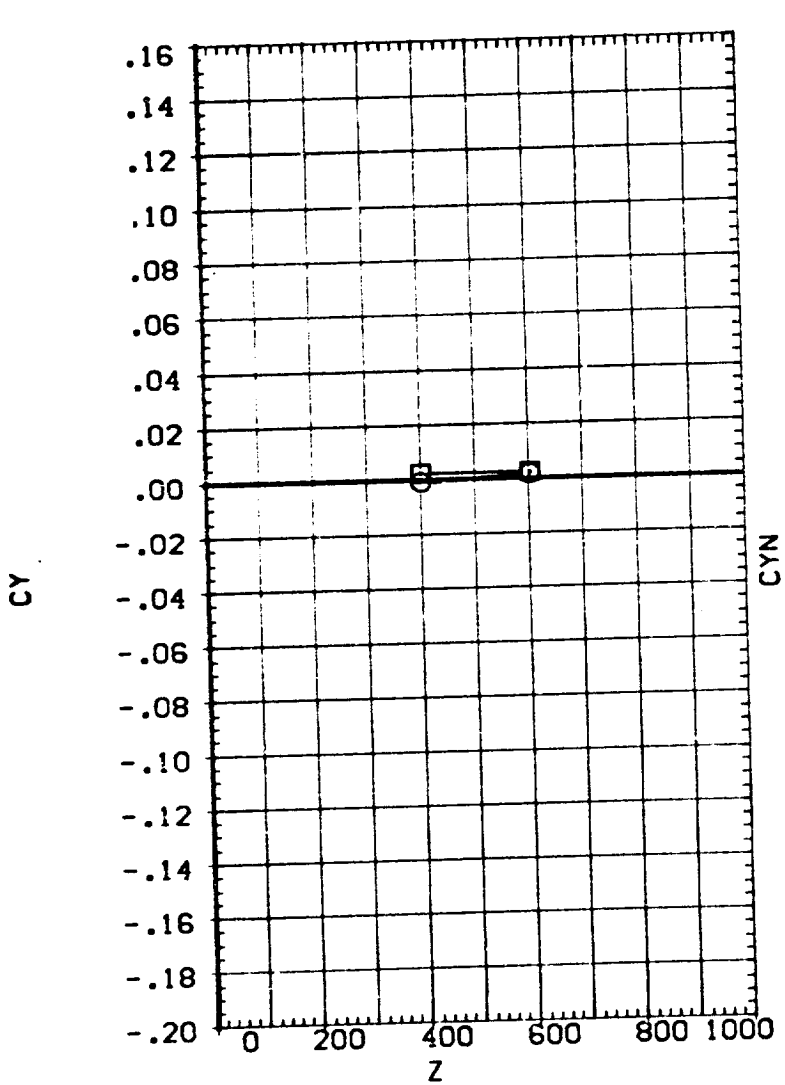


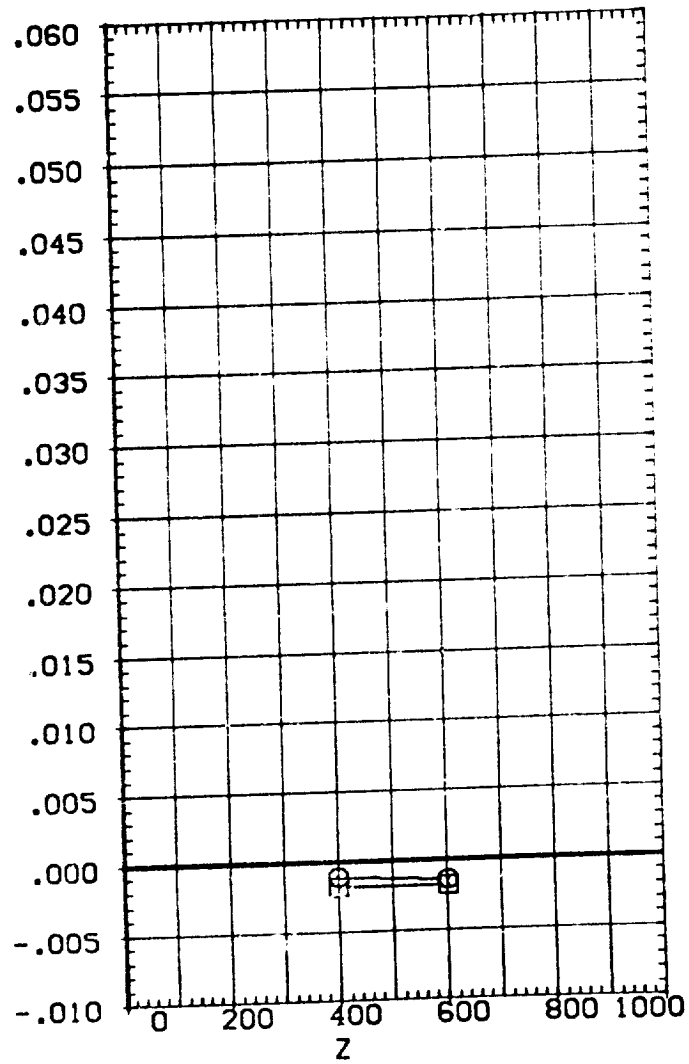
EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ184)

SYMBOL	X		PARAMETRIC VALUES		
○	.019	MACH	4.530	PTOTAL	110.000
□	900.810	ALPHA	.000	BETA	.000
		DALPHA	5.000	DBETA	-20.000
		Y	.000	PCHMBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



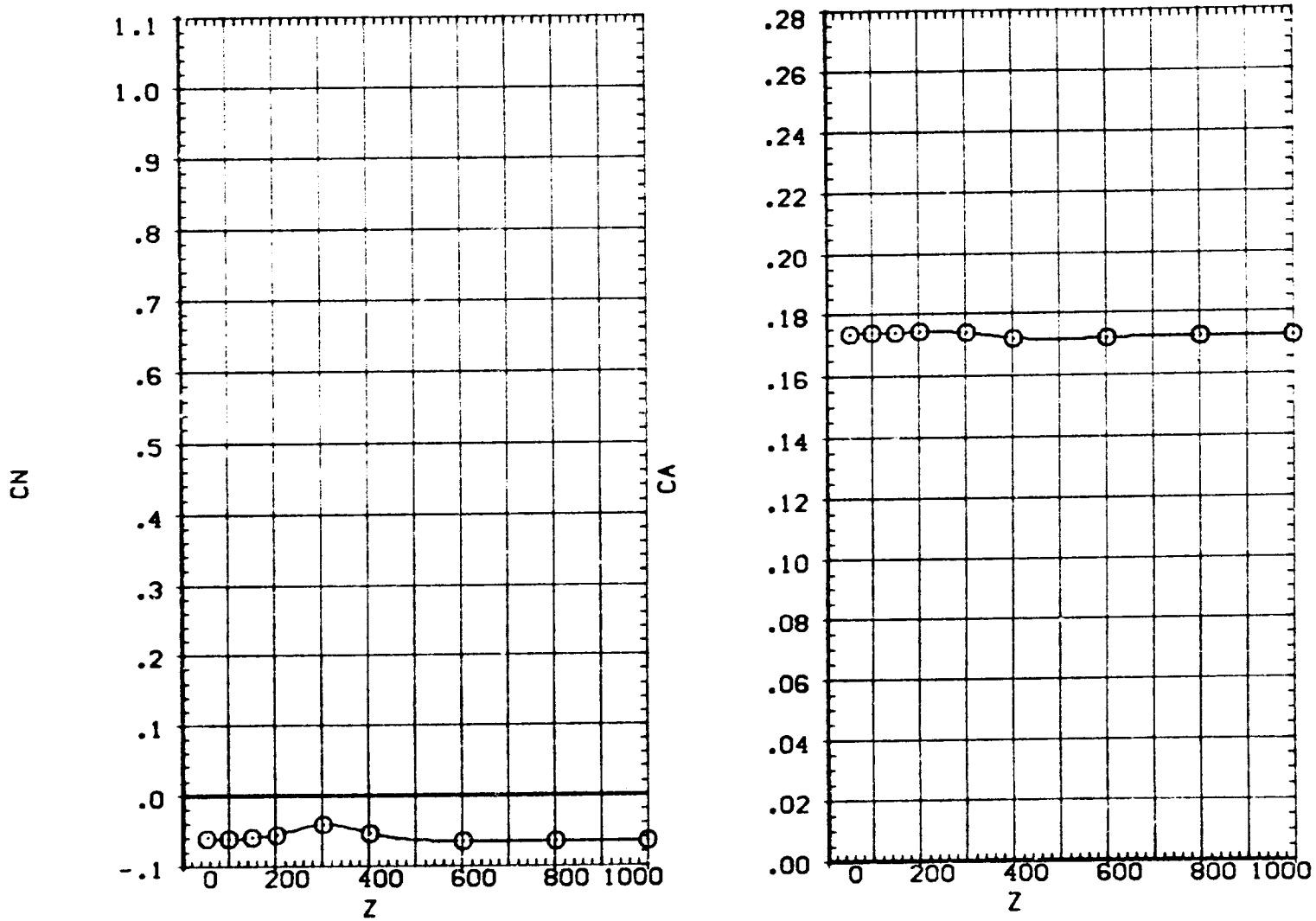


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ185)

SYMBOL	X		PARAMETRIC VALUES		
C	.237	MACH	4.530	PTOTAL	110.000
		ALPHA	.000	BETA	.000
		DALPHA	-5.000	DBETA	5.000
		Y	.000	PCHMBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

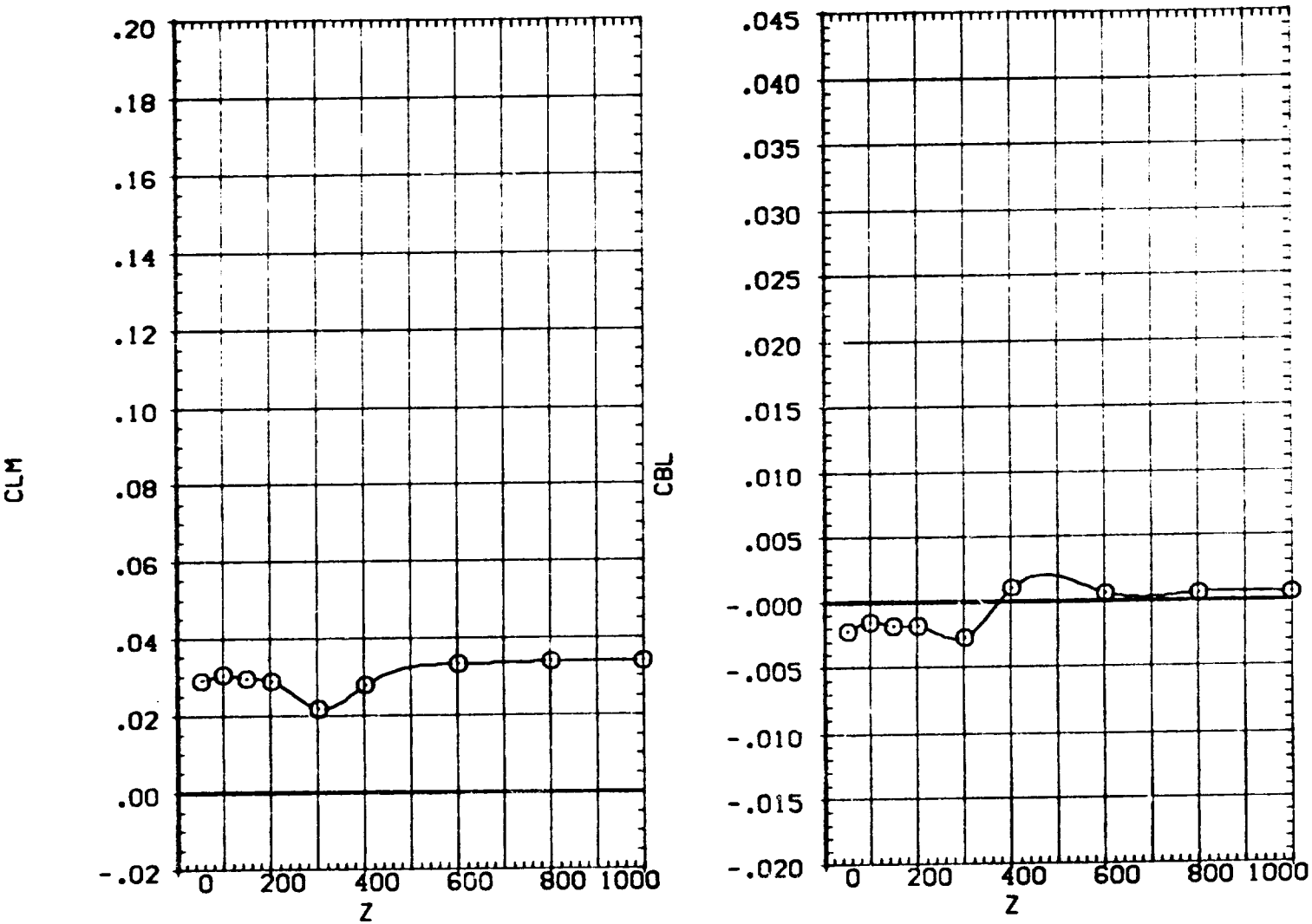


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AEROCYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ185)

SYMBOL	X		PARAMETRIC VALUES		
O	.237	MACH	4.530	PTOTAL	110.000
		ALPHA	.000	BETA	.000
		DALPHA	-5.000	DBETA	5.000
		Y	.000	PCHMBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

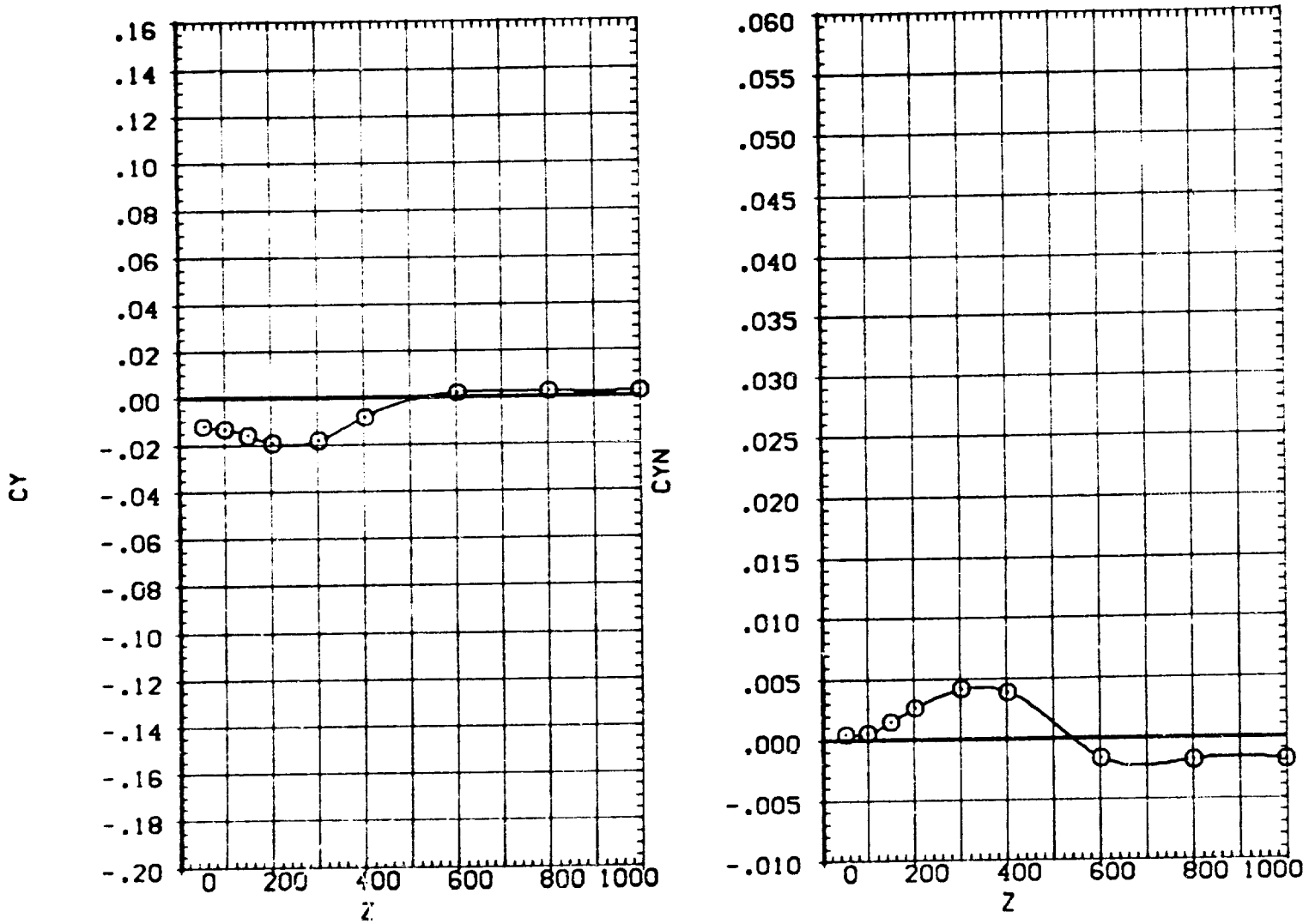


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ185)

SYMBOL	X				
○	.237	PARAMETRIC VALUES			
		MACH	4.530	PTOTAL	110.000
		ALPHA	.000	BETA	.000
		DALPHA	-5.000	DBETA	5.000
		Y	.000	PCHMBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

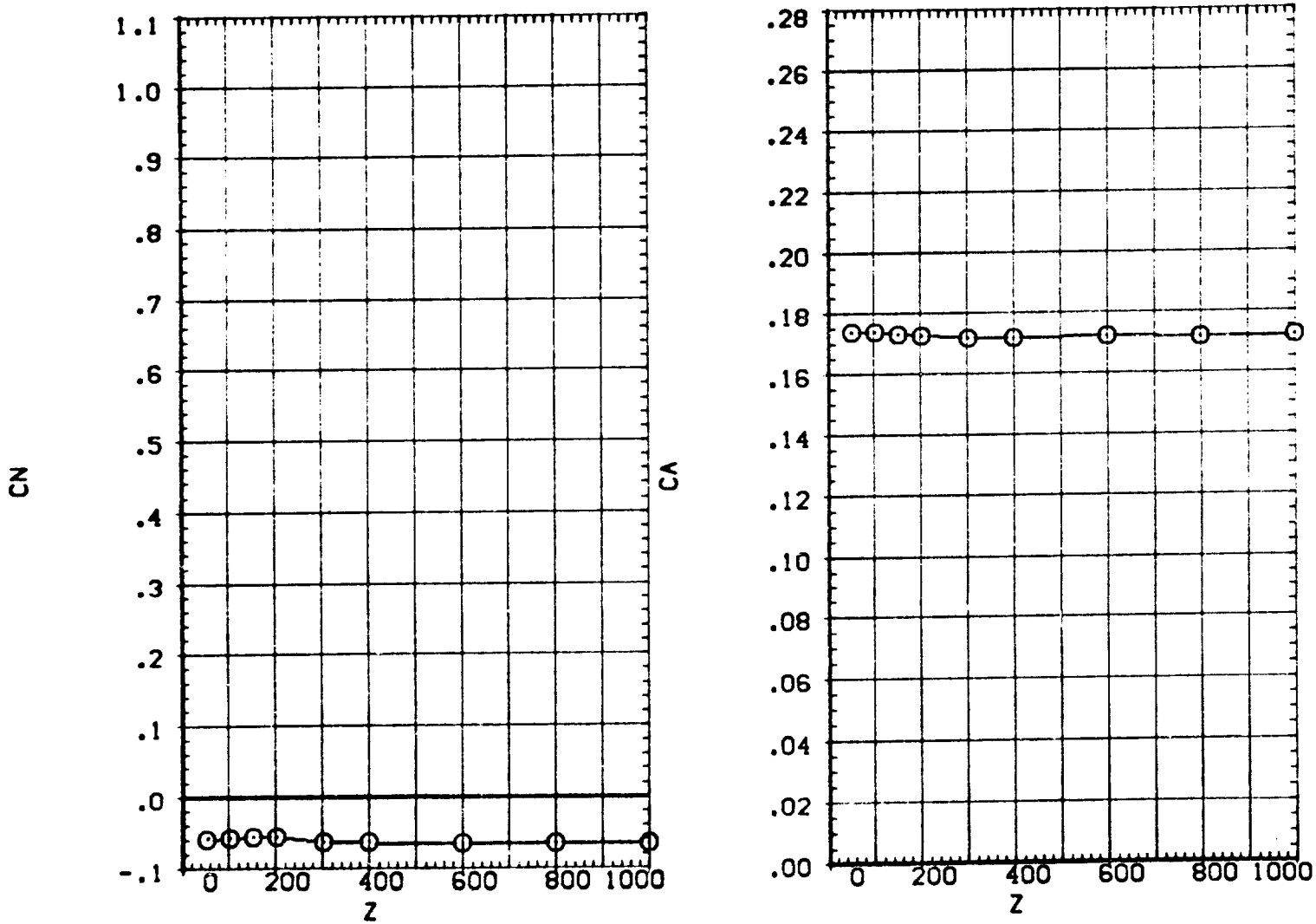


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM OSTIO (RTJ186)

SYMBOL	X		PARAMETRIC VALUES		
○	.216	MACH	4.530	PTOTAL	110.000
		ALPHA	.000	BETA	.000
		DALPHA	-5.000	DBETA	5.000
		Y	200.000	PCHBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

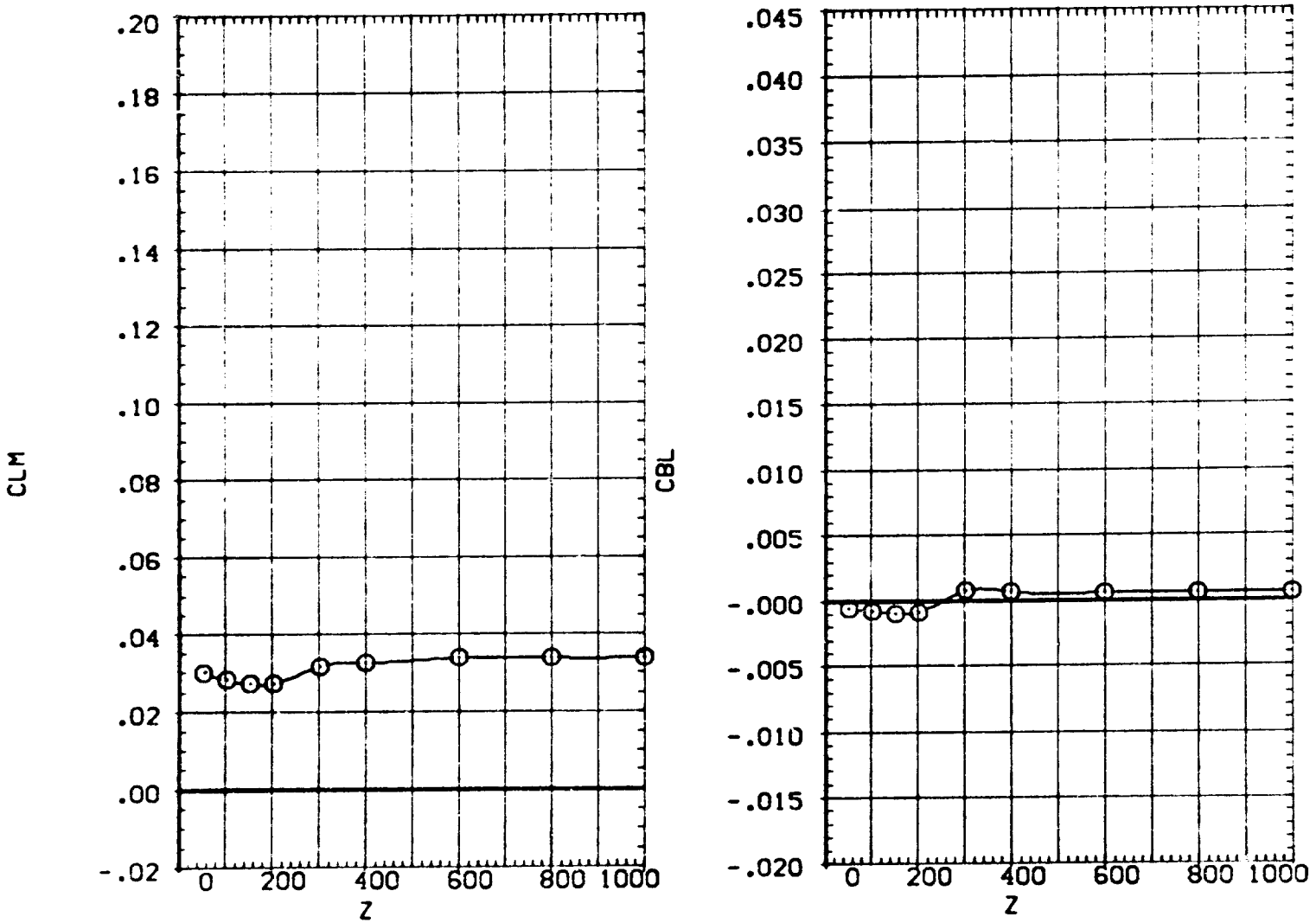


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ186)

SYMBOL	X				
○	.216	MACH	4.530	PTOTAL	110.000
		ALPHA	.000	BETA	.000
		DALPHA	-5.000	DBETA	5.000
		Y	200.000	PCHMBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

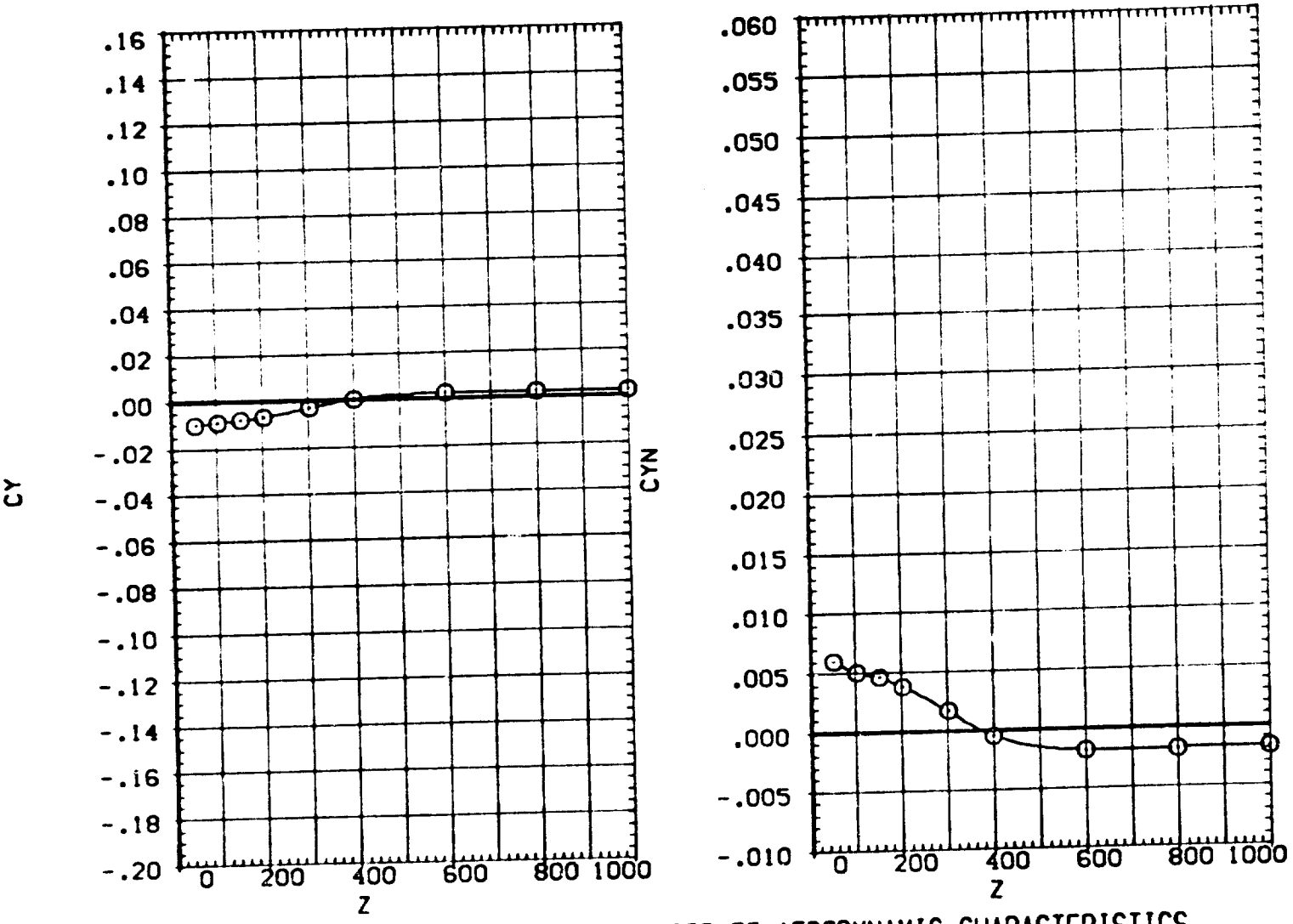


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(SB) W/O PLUMES SEPARATING FROM 09T10 (RTJ186)

SYMBOL	X	PARAMETRIC VALUES			
○	.216	MACH	.530	PTOTAL	110.000
		ALPHA	.000	BETA	.000
		DALPHA	-5.000	DBETA	5.000
		Y	200.000	PCHNGR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

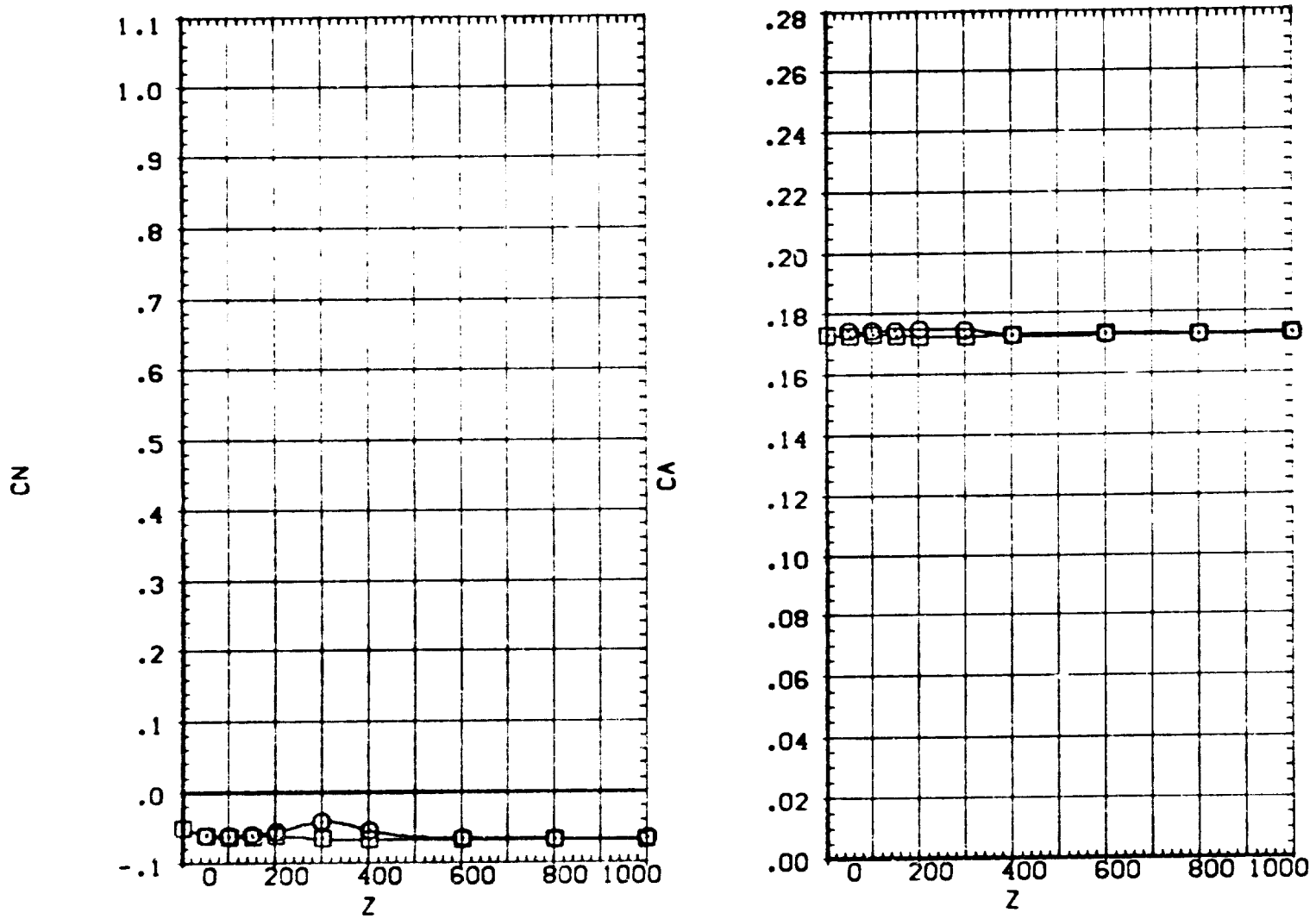


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ187)

SYMBOL	X		PARAMETRIC VALUES		
○	.013	MACH	4.530	PTOTAL	110.000
□	900.650	ALPHA	.000	BETA	.000
		DALPHA	-5.000	DBETA	5.000
		Y	.000	PCHMBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

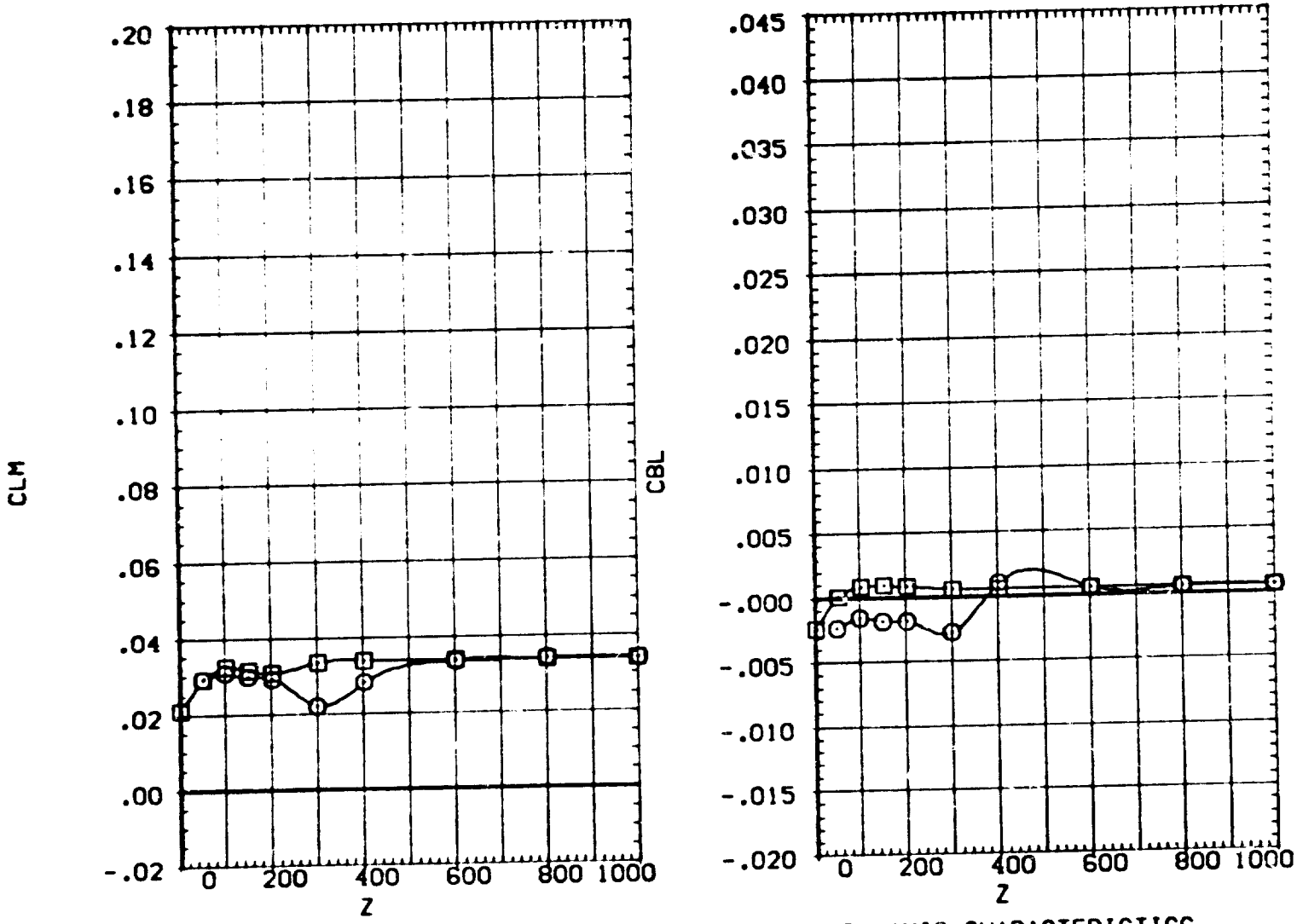


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ187)

SYMBOL	X		PARAMETRIC VALUES		
○	.013	MACH	4.530	PTOTAL	110.000
□	900.650	ALPHA	.000	BETA	.000
		DALPHA	-5.000	DBETA	5.000
		Y	.000	PCHNBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

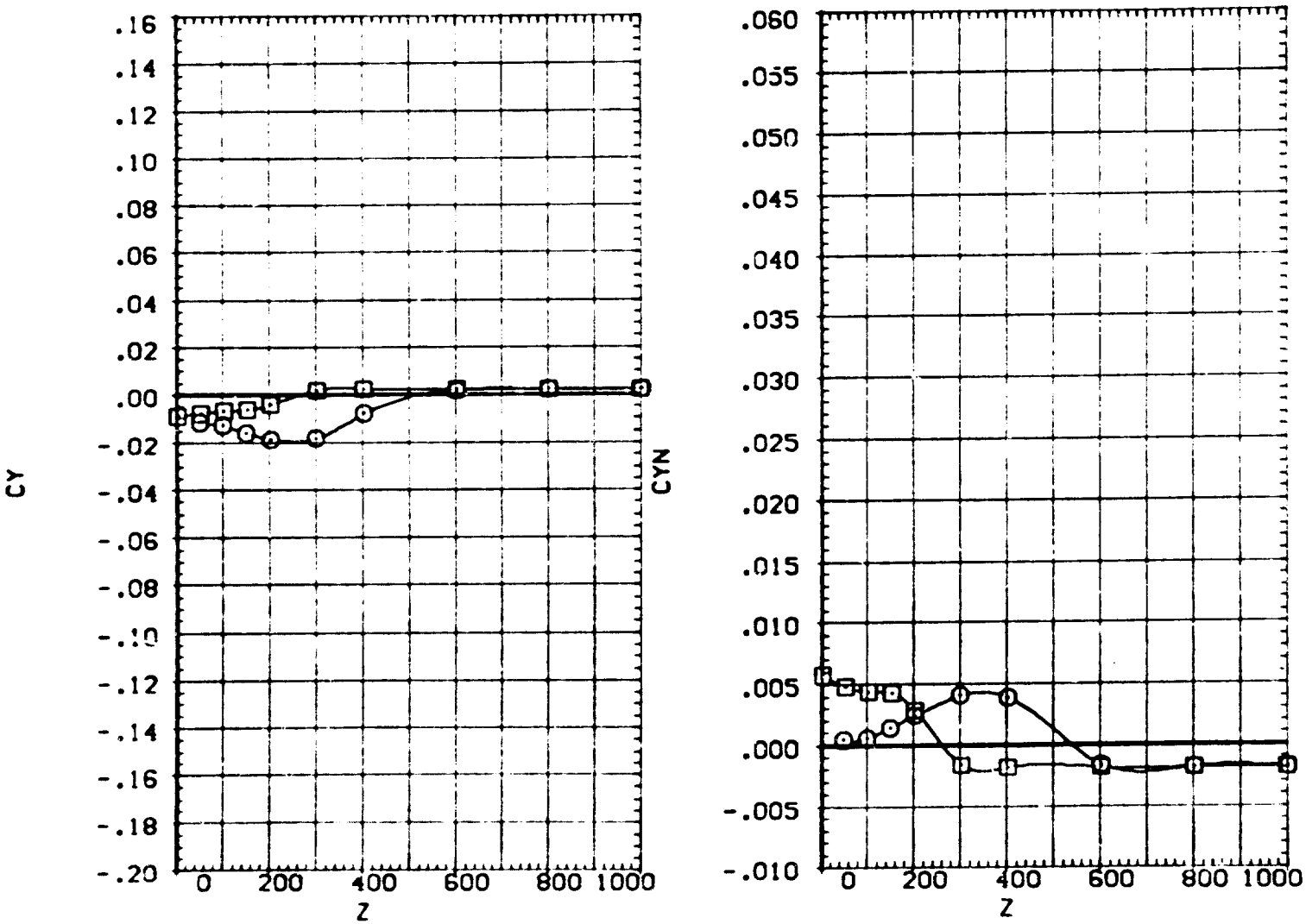


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/C PLUMES SEPARATING FROM 09T10 (RTJ187)

SYMBOL	X		PARAMETRIC VALUES		
□	.013	MACH	4.530	PTOTAL	110.000
□	900.650	ALPHA	.000	BETA	.000
		DALPHA	5.000	DBETA	5.000
		Y	.000	PCHNGR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

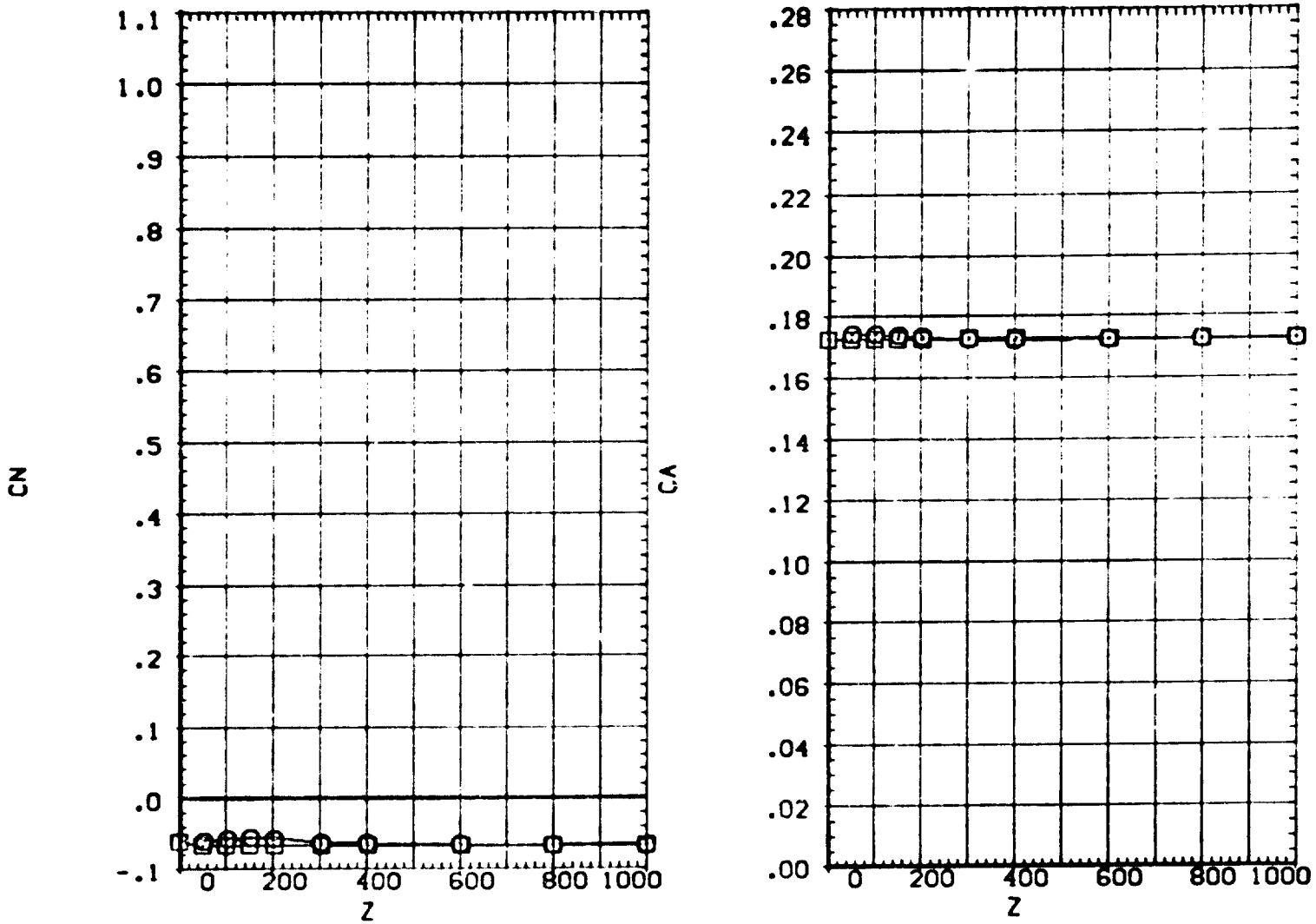


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ188)

SYMBOL	X		PARAMETRIC VALUES		
○	.142	MACH	4.530	PTOTAL	110.000
□	900.580	ALPHA	.000	BETA	.000
		DALPHA	-5.000	DBETA	5.000
		Y	200.000	PCHNGR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

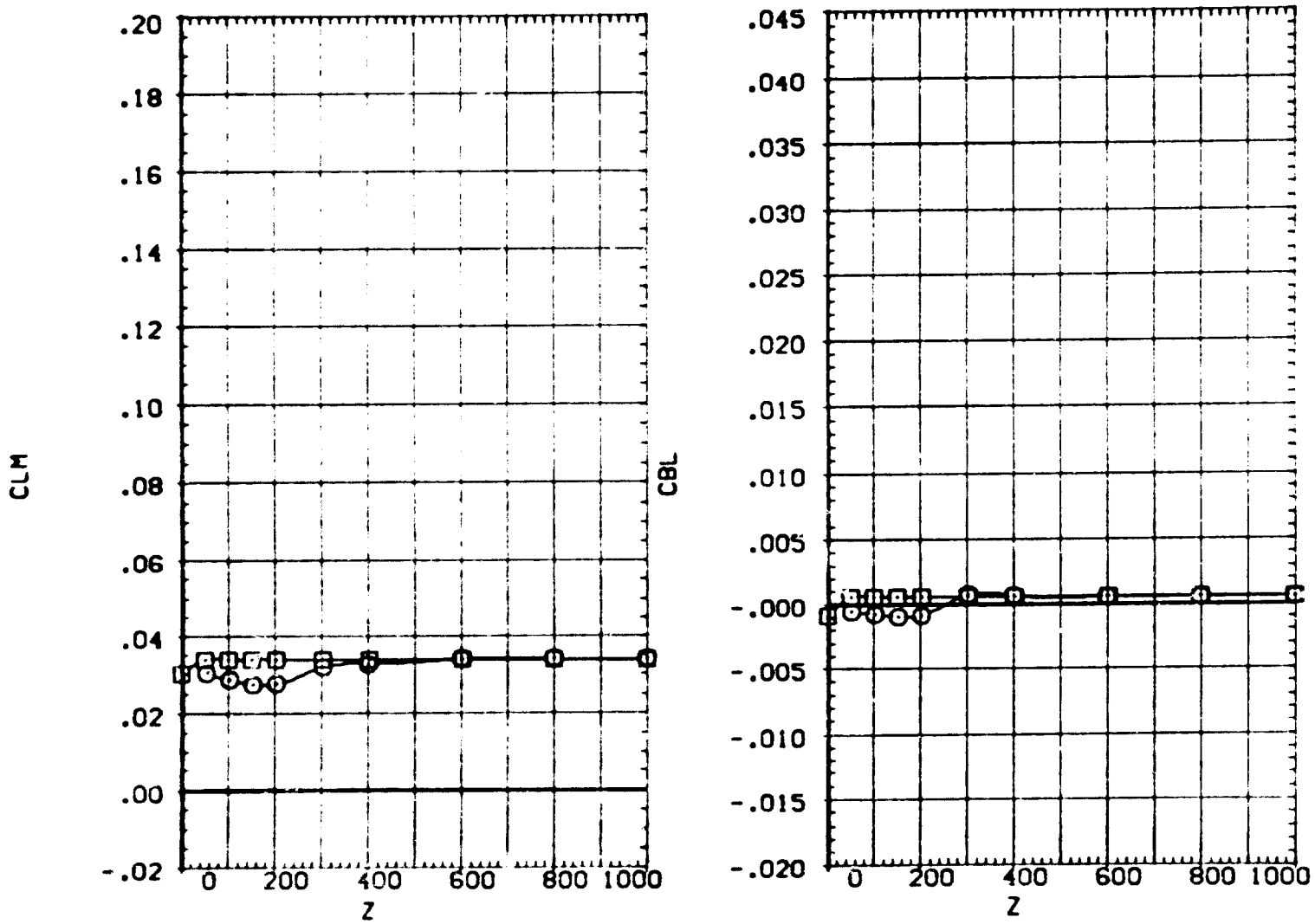


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

[A13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ188)

SYMBOL	X		PARAMETRIC VALUES		
	.142	MACH	4.530	PTOTAL	110.000
	900.580	ALPHA	.000	BETA	.000
		DALPHA	-5.000	DBETA	5.000
		Y	200.000	PCHMBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

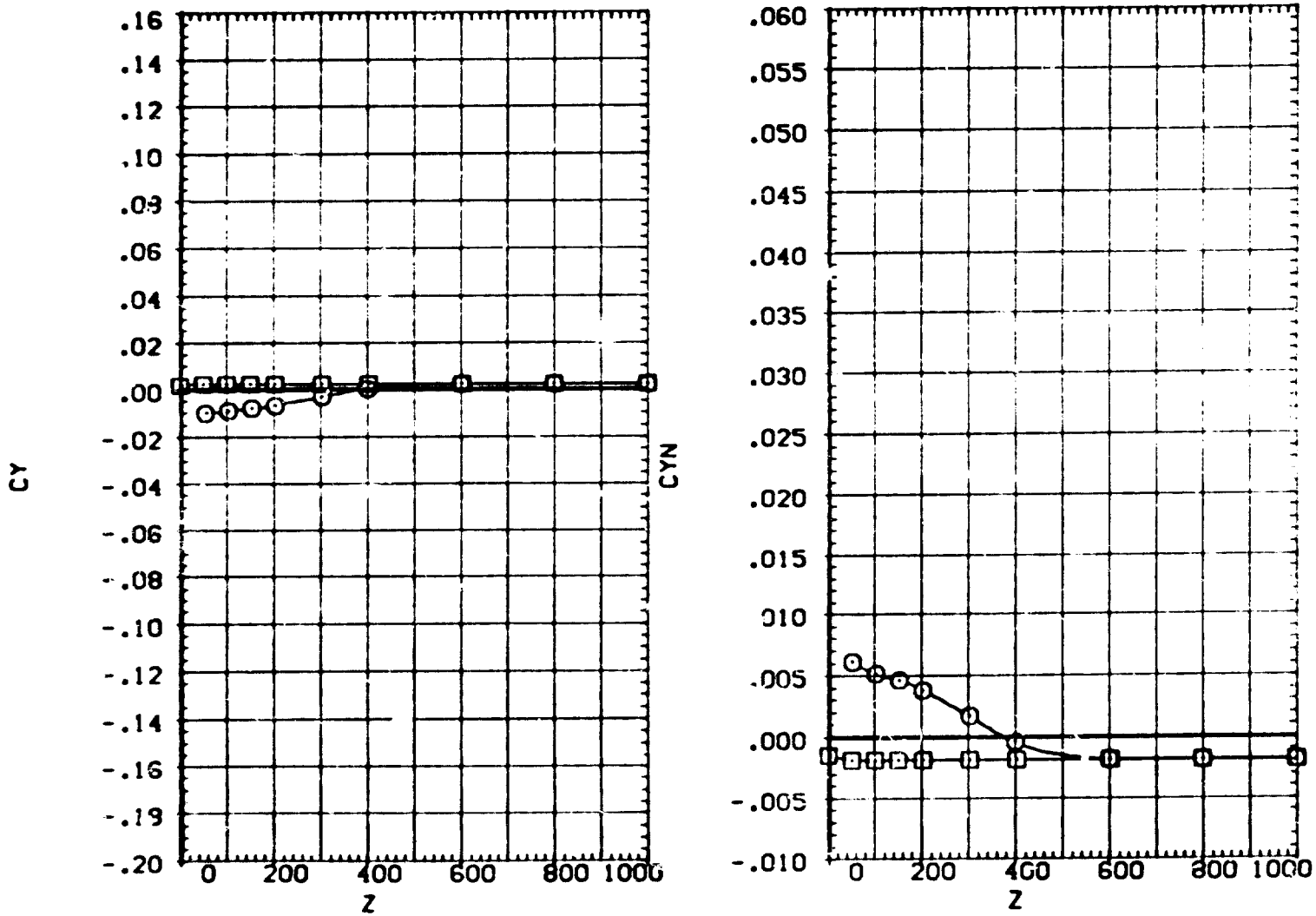


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S9) W/O PLUMES SEPARATING FROM 09T10 (RTJ188)

SYMBOL	X		PARAMETRIC VALUES		
○	.142	MACH	4.530	PTOTAL	110.000
□	900.580	ALPHA	.000	BETA	.000
		DALPHA	-5.000	DBETA	5.000
		Y	200.000	POWER	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

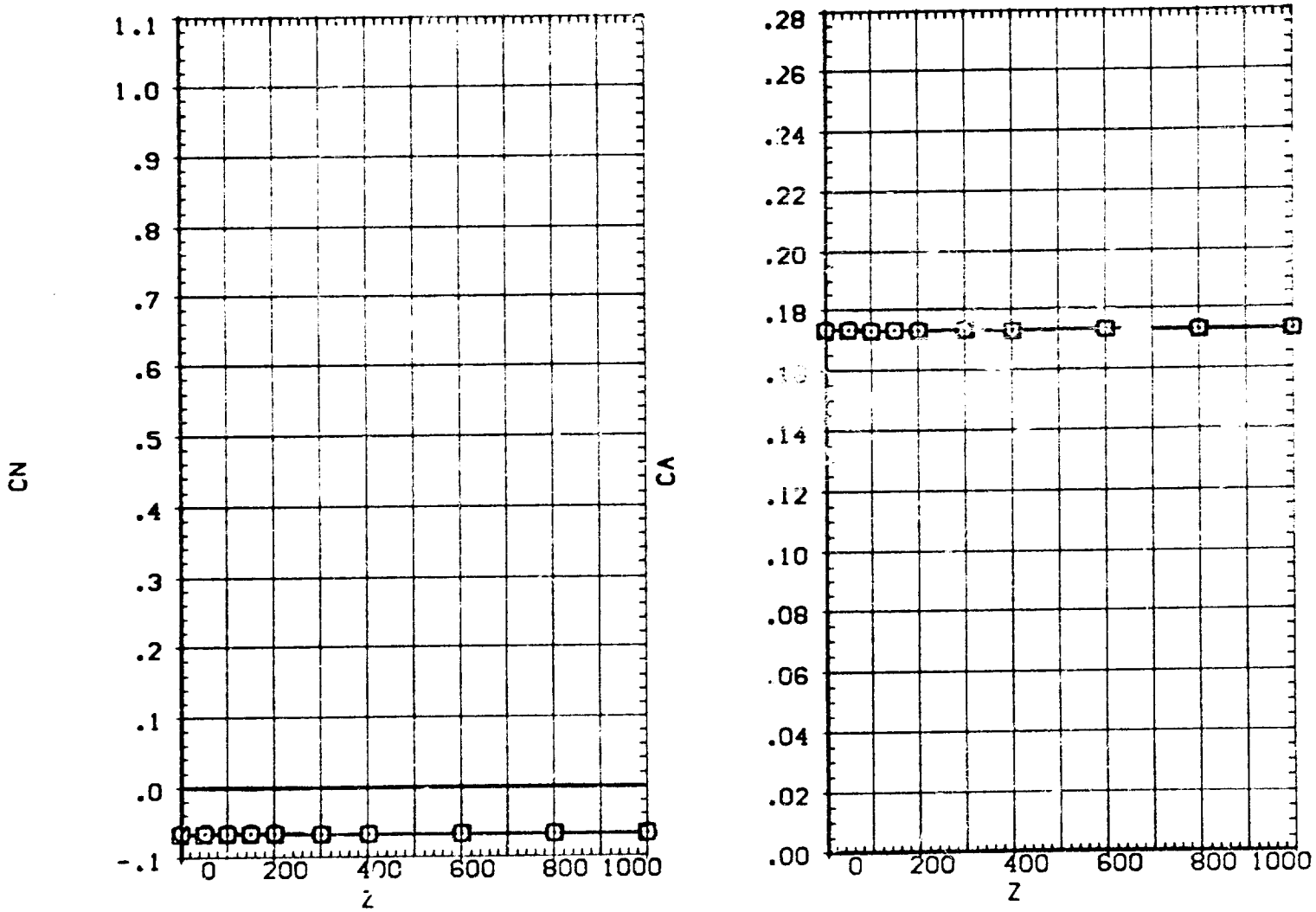


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ189)

SYMBOL	X		PARAMETRIC VALUES		
○	.219	MACH	4.590	PTOTAL	110.000
□	900.570	ALPHA	.000	BETA	.000
		DALPHA	-5.000	DBETA	5.000
		Y	400.000	PCHMBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

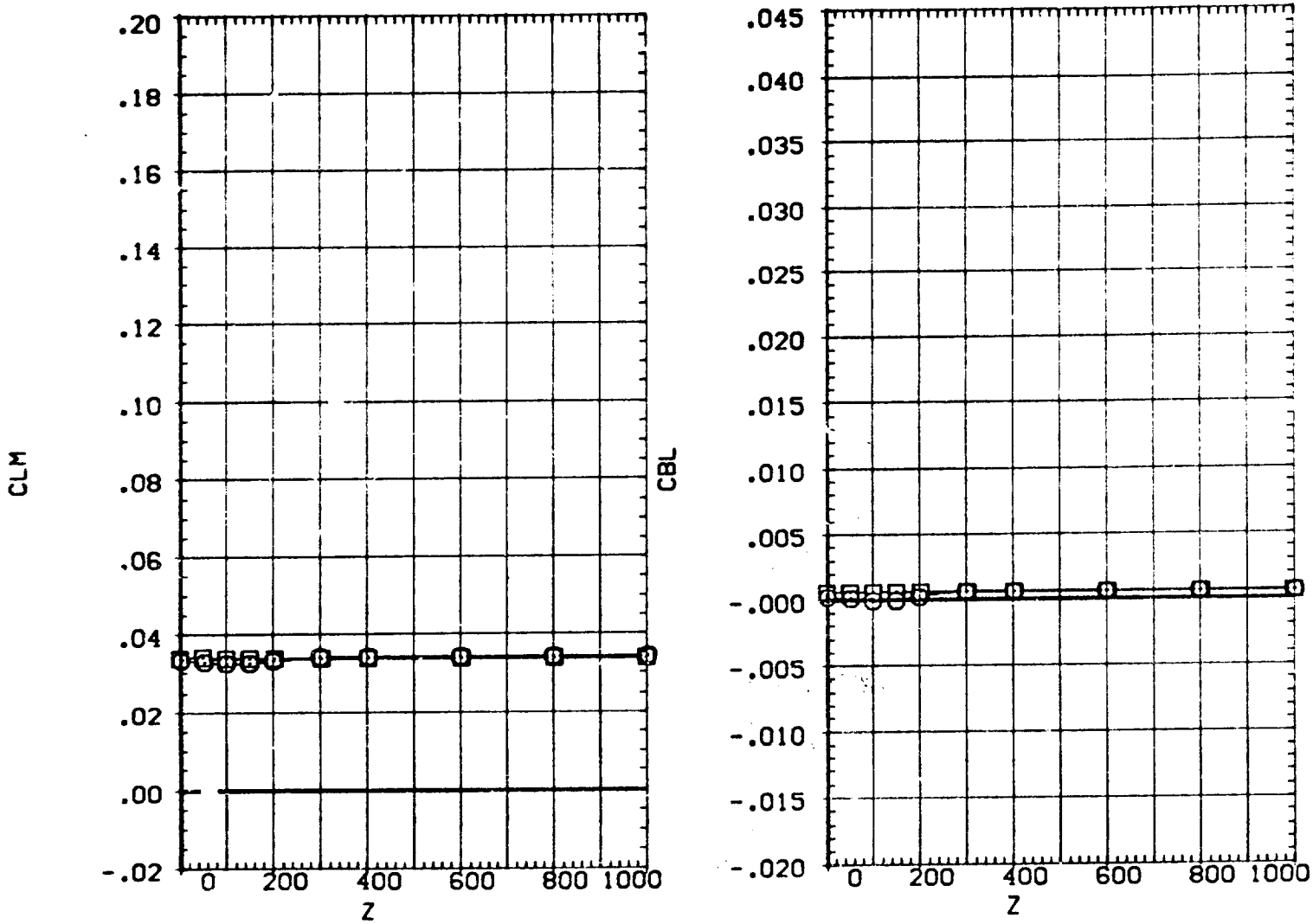


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ189)

SYMBOL	X		PARAMETRIC VALUES		
○	.219	MACH	4.530	PTOTAL	110.000
□	900.570	ALPHA	.000	BETA	.000
		DALPHA	-5.000	DBETA	5.000
		Y	400.000	PCHMBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

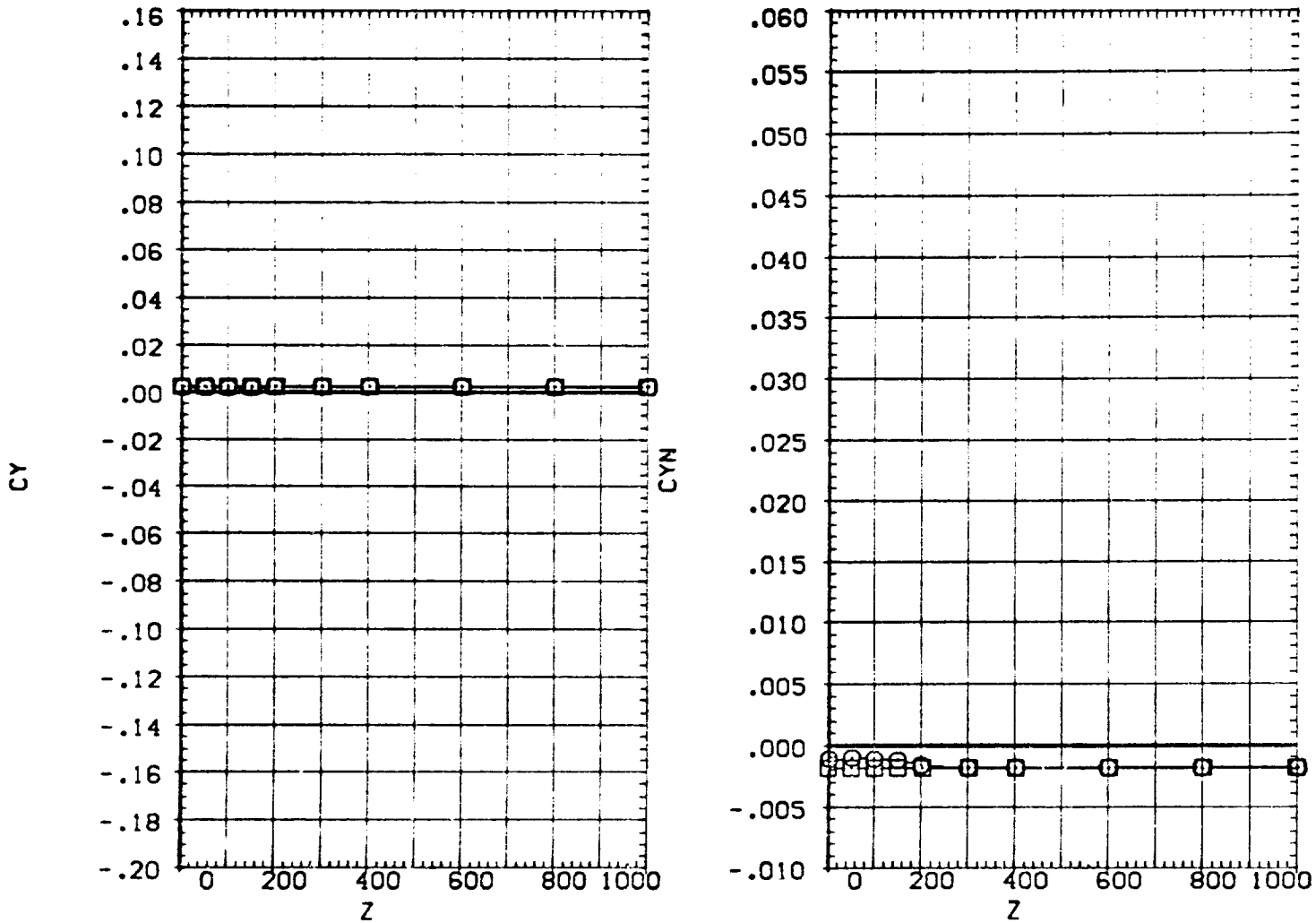


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ189)

SYMBOL	X		PARAMETRIC VALUES		
○	.219	MACH	4.530	PTOTAL	110.000
	900.570	ALPHA	.000	BETA	.000
		DALPHA	-5.000	DBETA	5.000
		Y	400.000	PCHMBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

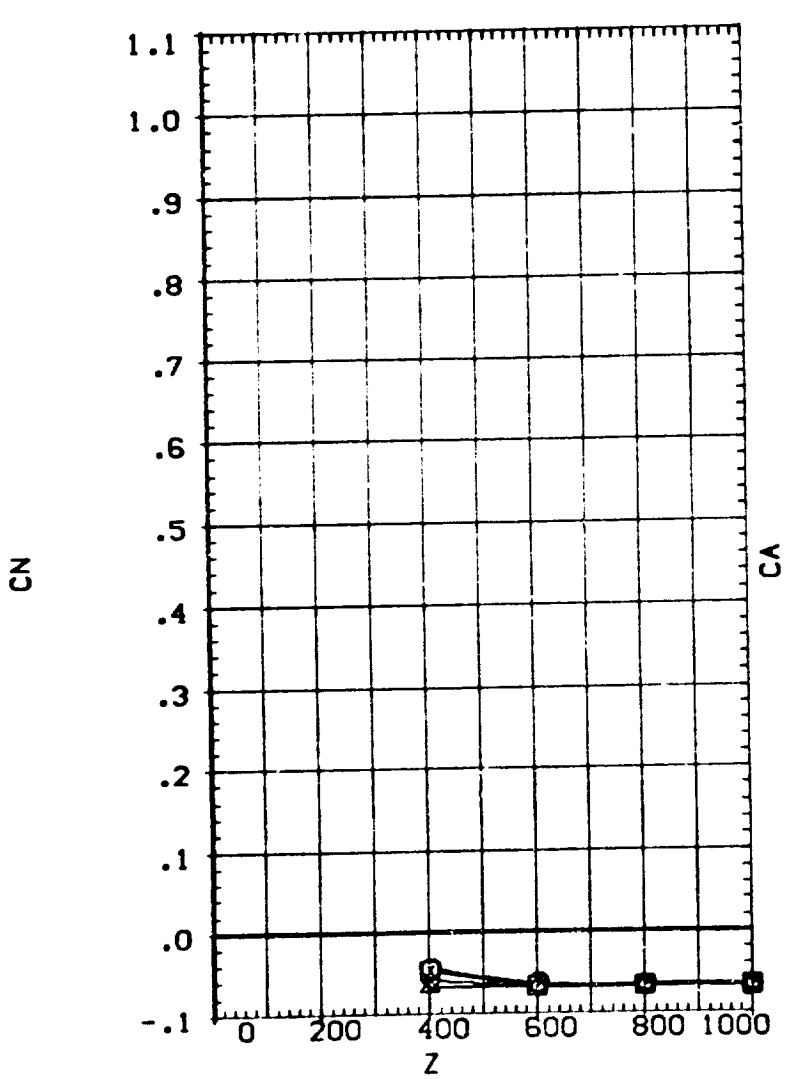


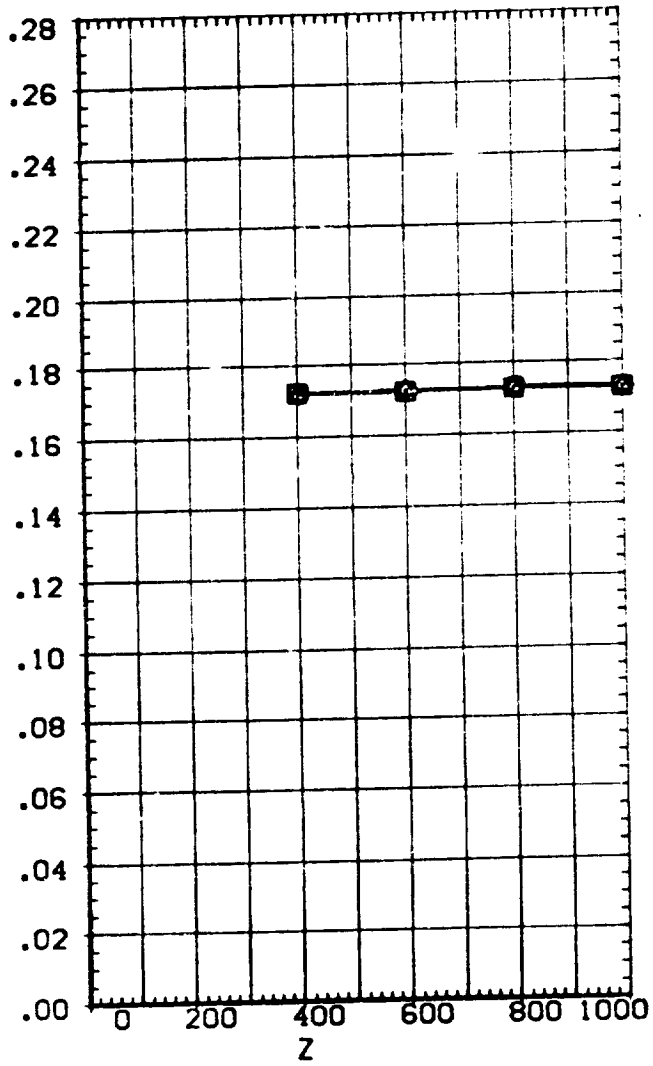
EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ190)

SYMBOL	X		PARAMETRIC VALUES		
○	.491	MACH	4.530	PTOTAL	110.000
□	300.330	ALPHA	.000	BETA	.000
◇	600.560	DALPHA	-5.000	DBETA	-5.000
△	900.500	Y	.000	PCHNGR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



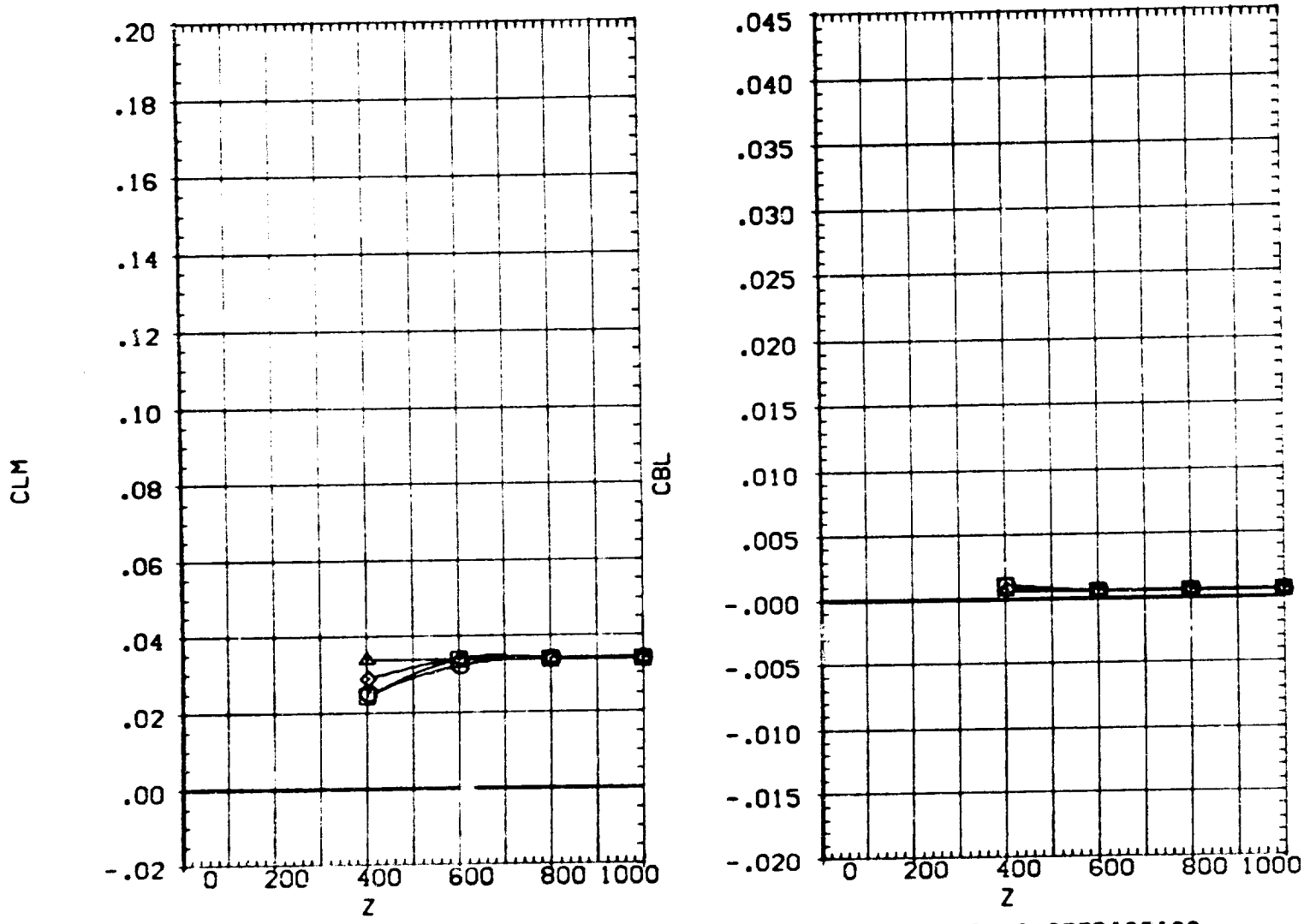


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

!A13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ190)

SYMBOL	X		PARAMETRIC VALUES		
○	.491	MACH	4.530	PTOTAL	110.000
□	300.330	ALPHA	.000	BETA	.000
◇	600.560	DALPHA	-5.000	DBETA	-5.000
△	900.500	Y	.000	PCHMBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

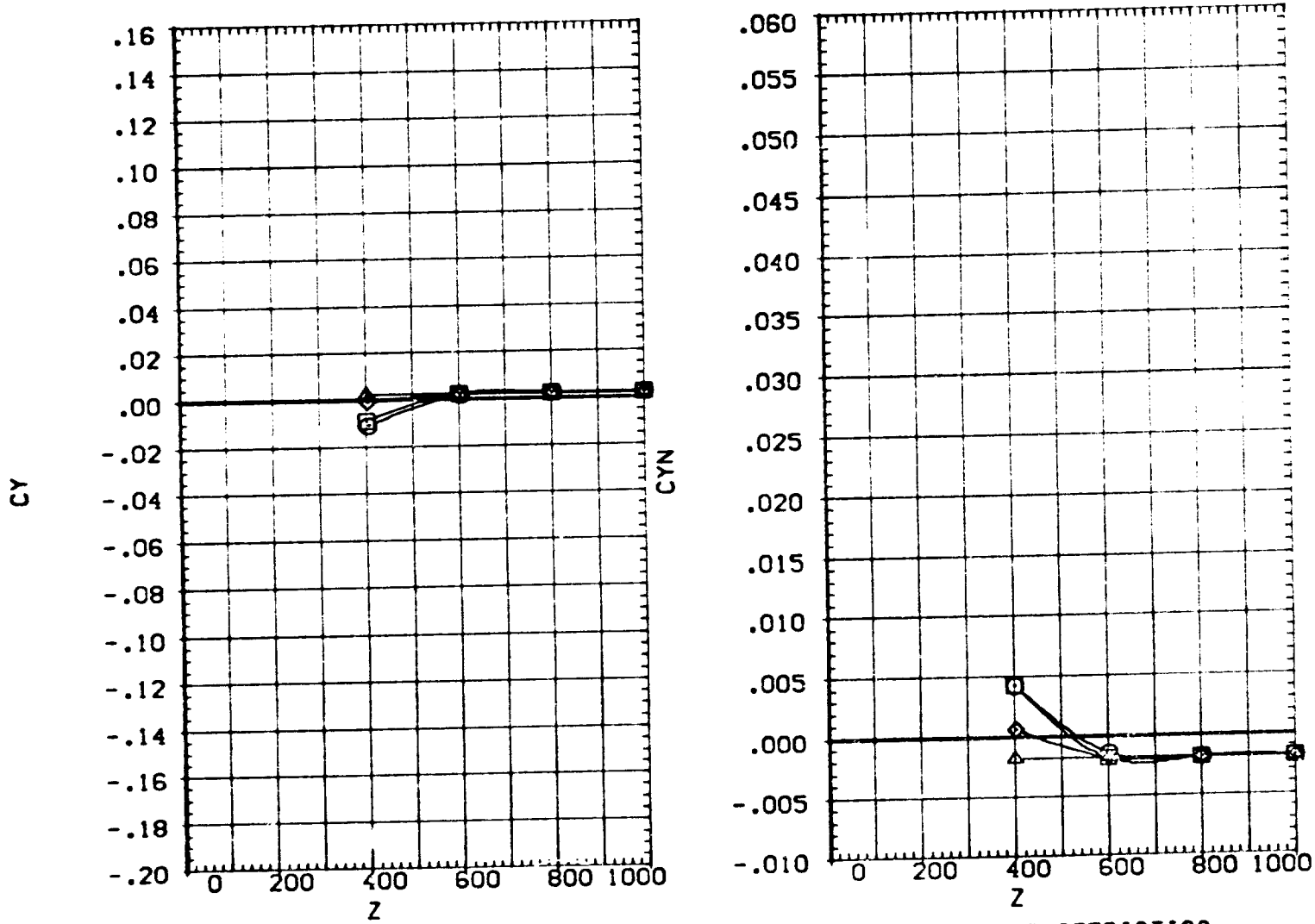


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ190)

SYMBOL	X		PARAMETRIC VALUES		
○	.491	MACH	4.530	PTOTAL	110.000
□	300.330	ALPHA	.000	BETA	.000
◇	600.560	DALPHA	-5.000	DBETA	-5.000
△	900.500	Y	.000	PCHMBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

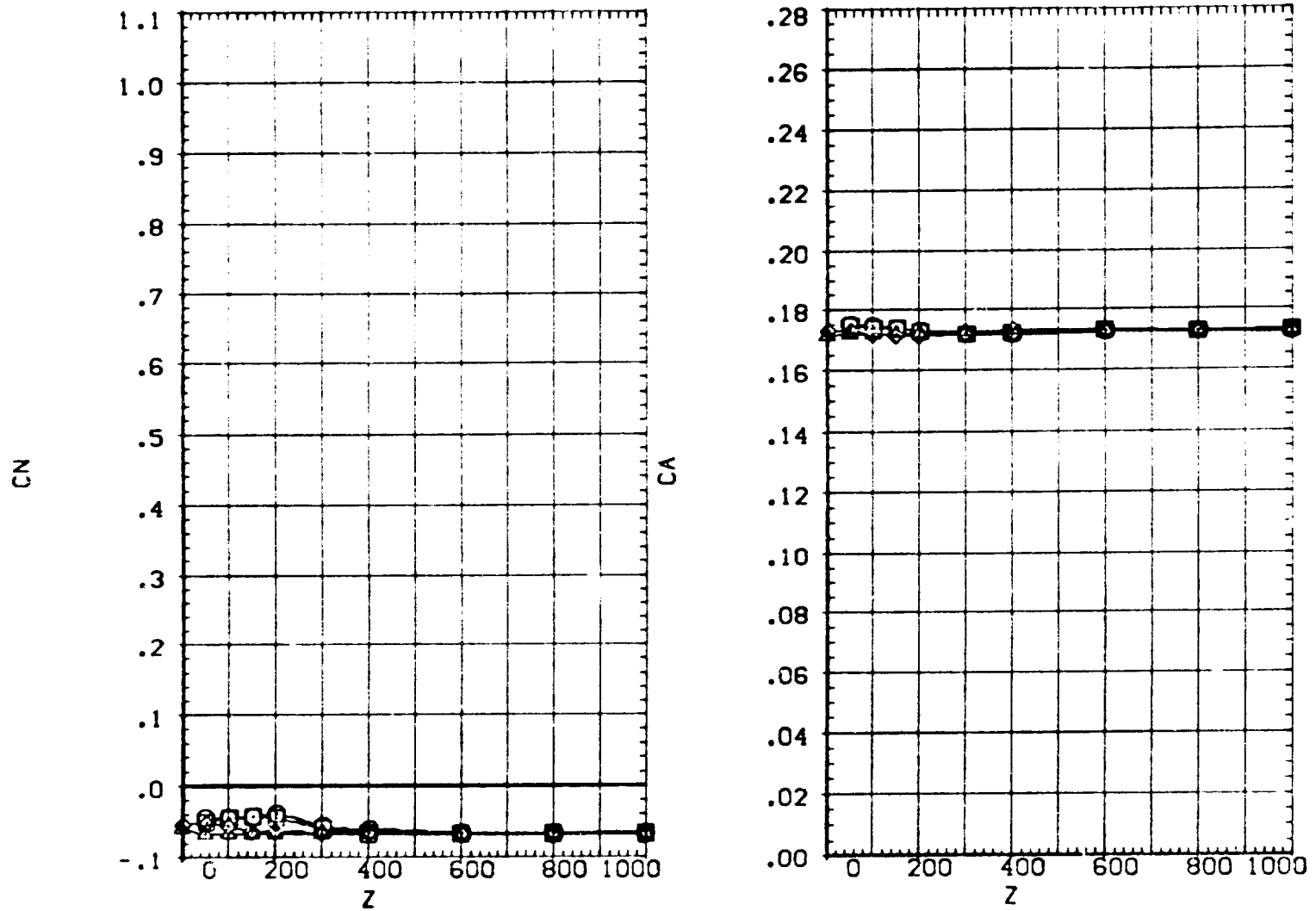


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ191)

SYMBOL	X		PARAMETRIC VALUES		
○	.324	MACH	4.530	PTOTAL	110.000
□	300.230	ALPHA	.000	BETA	.000
◇	600.570	DALPHA	-5.000	DBETA	-5.000
△	900.600	Y	200.000	PCHMBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

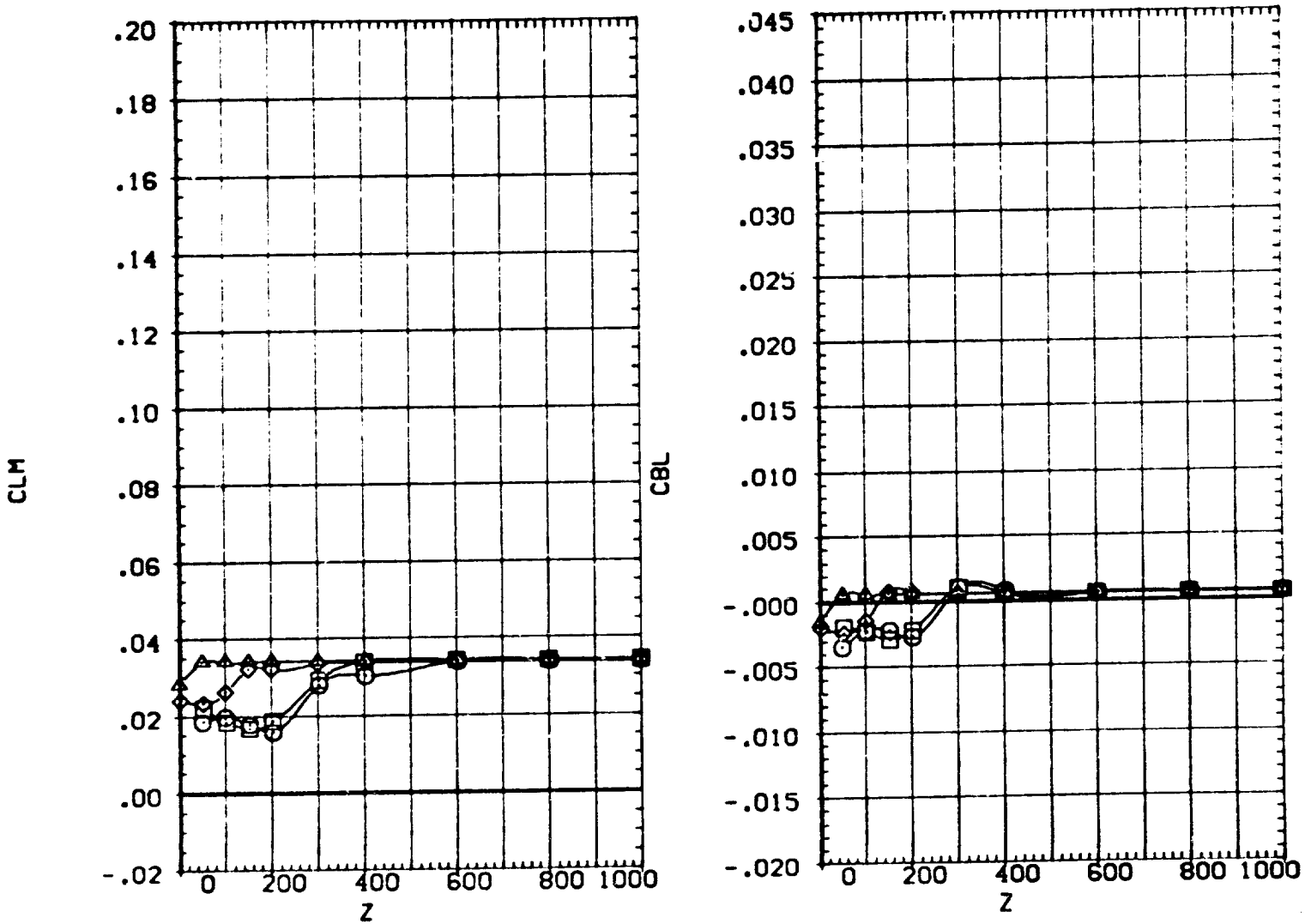


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ191)

SYMBOL	X		PARAMETRIC VALUES		
○	.324	MACH	4.530	PTOTAL	110.000
□	300.230	ALPHA	.000	BETA	.000
◇	600.570	DALPHA	-5.000	DBETA	-5.000
△	900.600	Y	200.000	PCHMBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

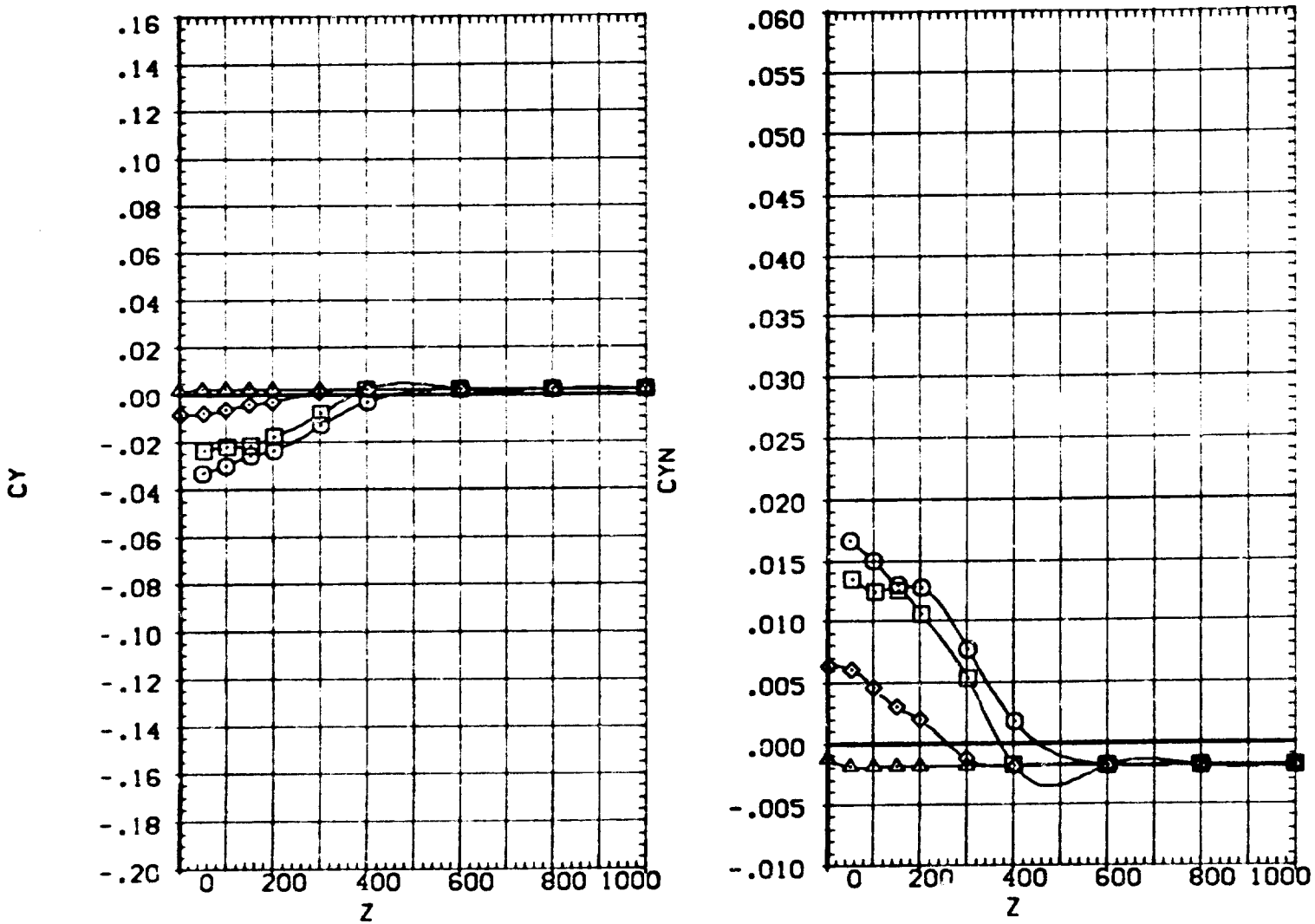


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ191)

SYMBOL	X		PARAMETRIC VALUES		
○	.324	MACH	4.530	PTOTAL	110.000
◇	300.230	ALPHA	.000	BETA	.000
□	600.570	DALPHA	-5.000	DBETA	-5.000
△	900.600	Y	200.000	PCHNGR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

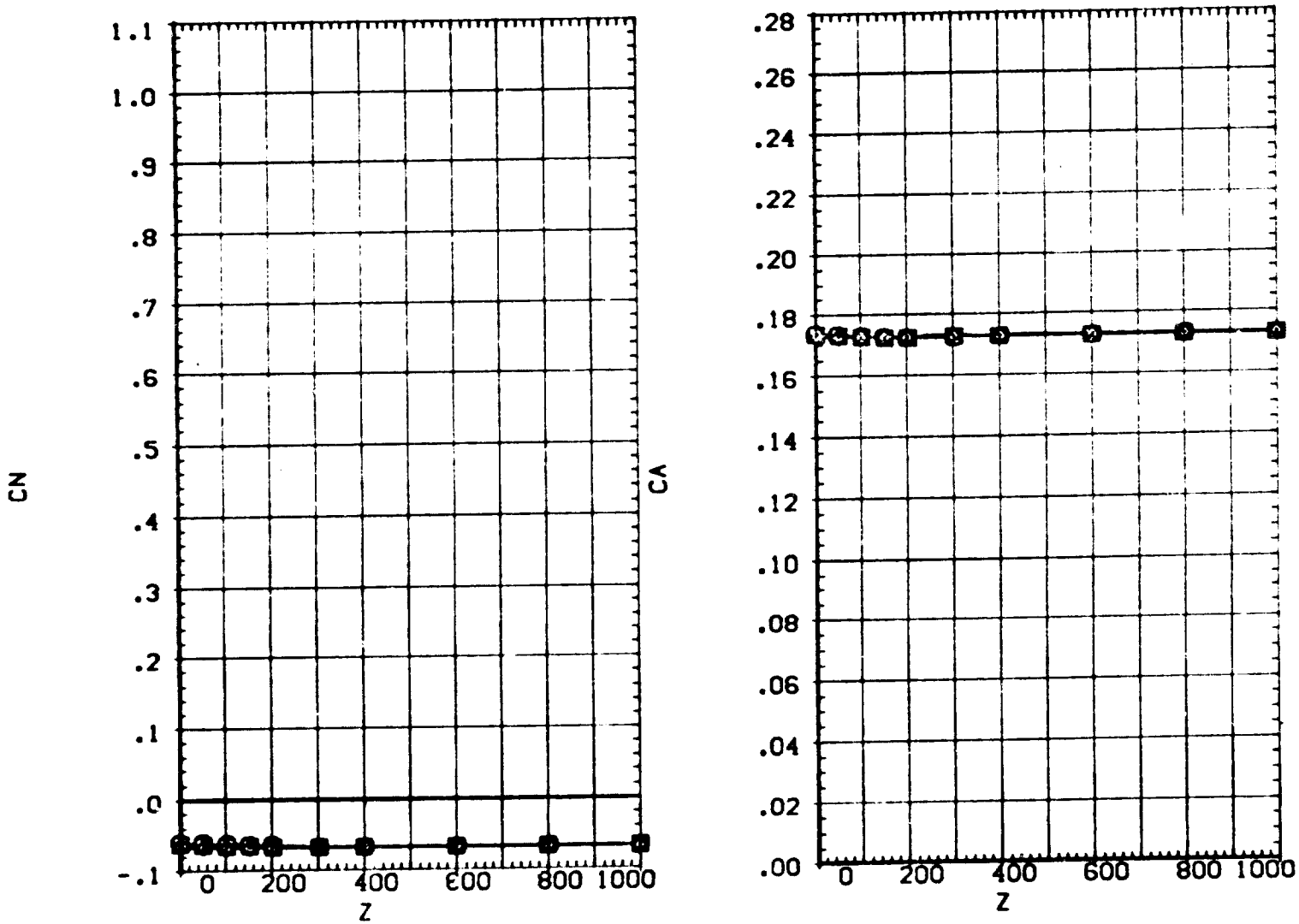


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ192)

SYMBOL	X		PARAMETRIC VALUES		
○	.325	MACH	4.530	PTOTAL	110.000
□	300.490	ALPHA	.000	BETA	.000
◇	600.480	DALPHA	-5.000	DBETA	-5.000
△	900.610	Y	400.000	PCHMBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

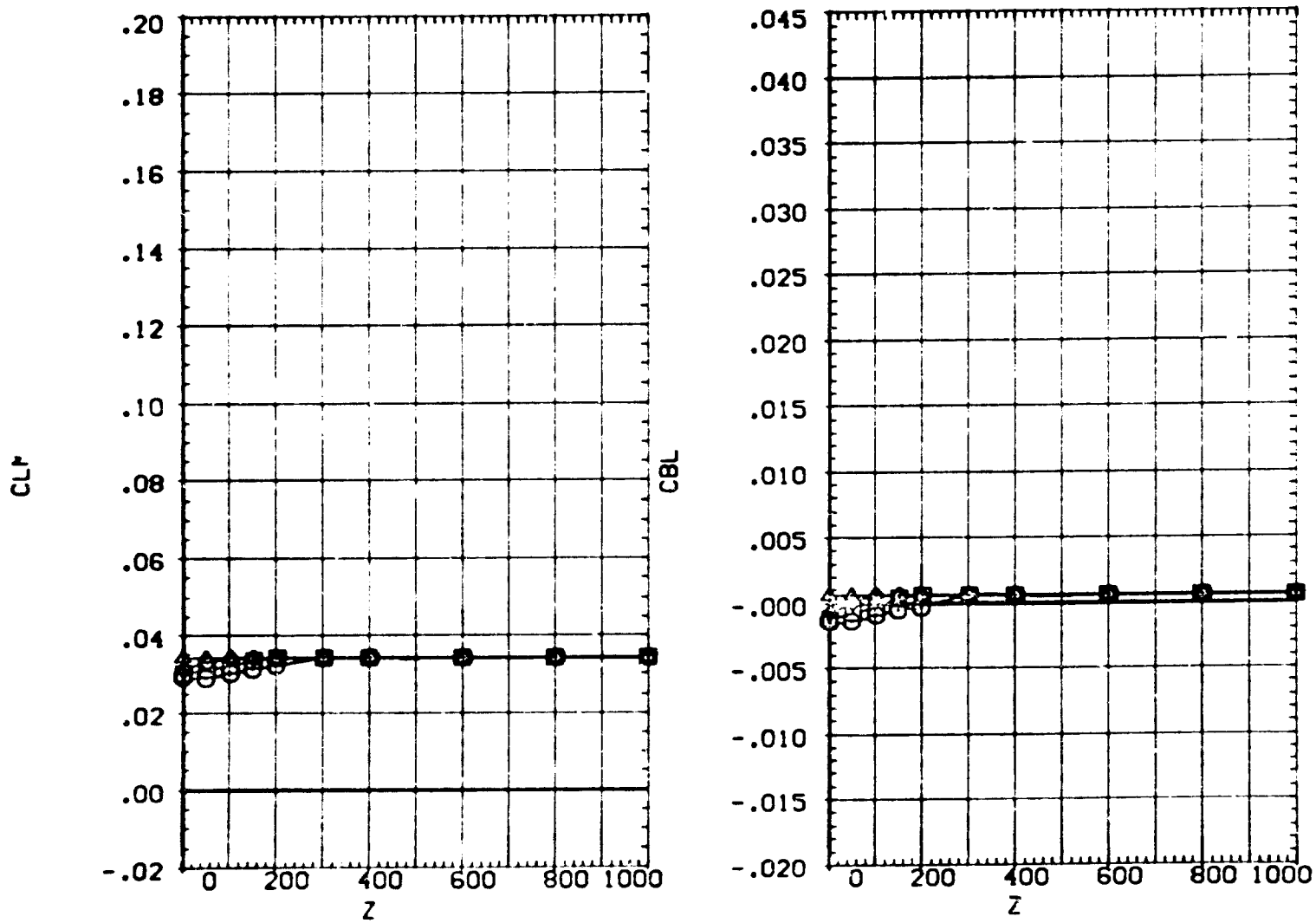


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ192)

SYMBOL	X		PARAMETRIC VALUES		
○	.325	MACH	.530	PTOTAL	110.000
□	300.490	ALPHA	.000	BETA	.000
◇	600.480	DALPHA	-5.000	DBETA	-5.000
△	900.610	Y	400.000	PCHMBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

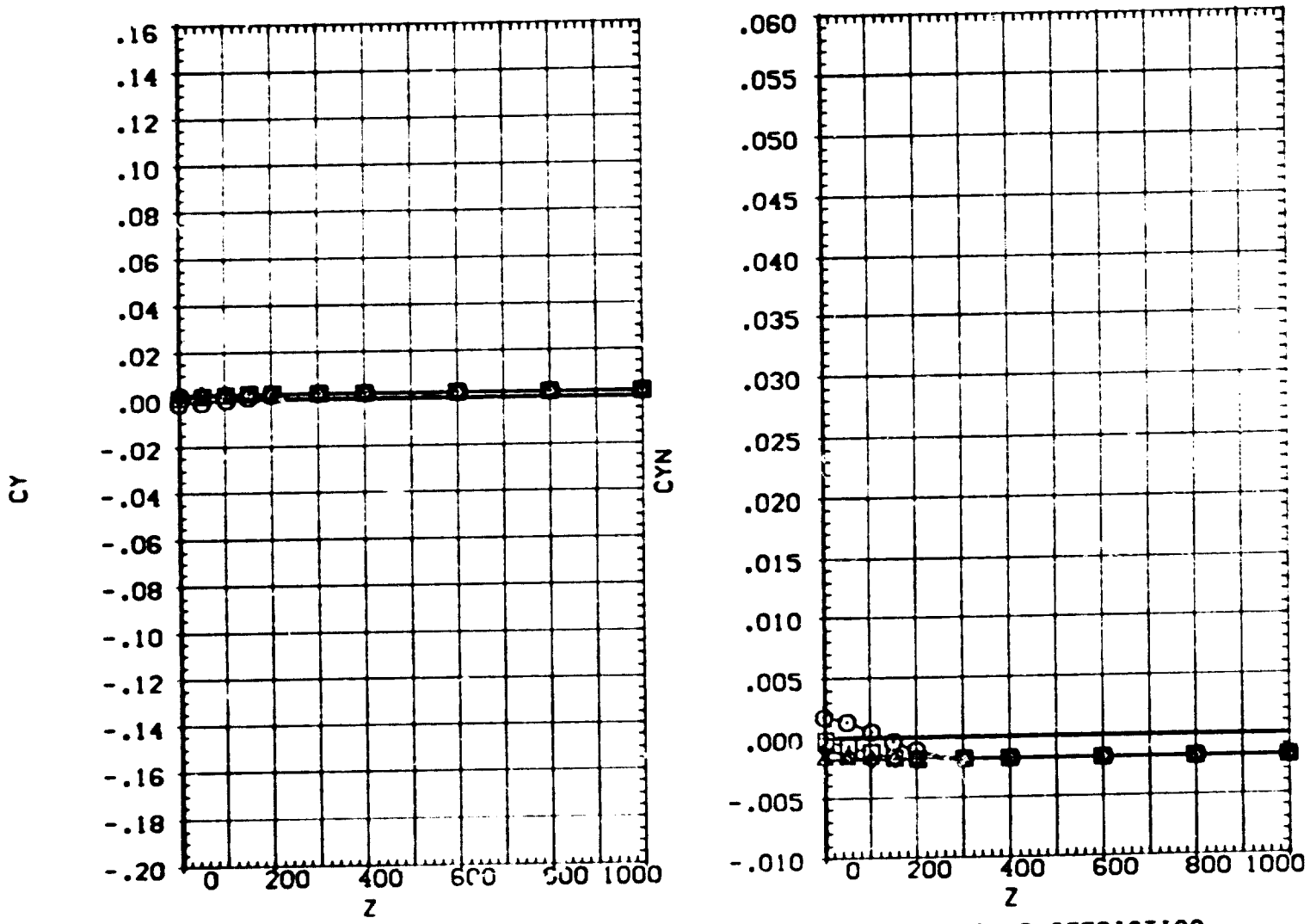


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ192)

SYMBOL	X		PARAMETRIC VALUES		
○	.325	MACH	4.530	PTOTAL	110.000
□	300.490	ALPHA	.000	BETA	.000
◇	600.480	DALPHA	-5.000	DBETA	-5.000
△	900.610	Y	400.000	PCHSR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

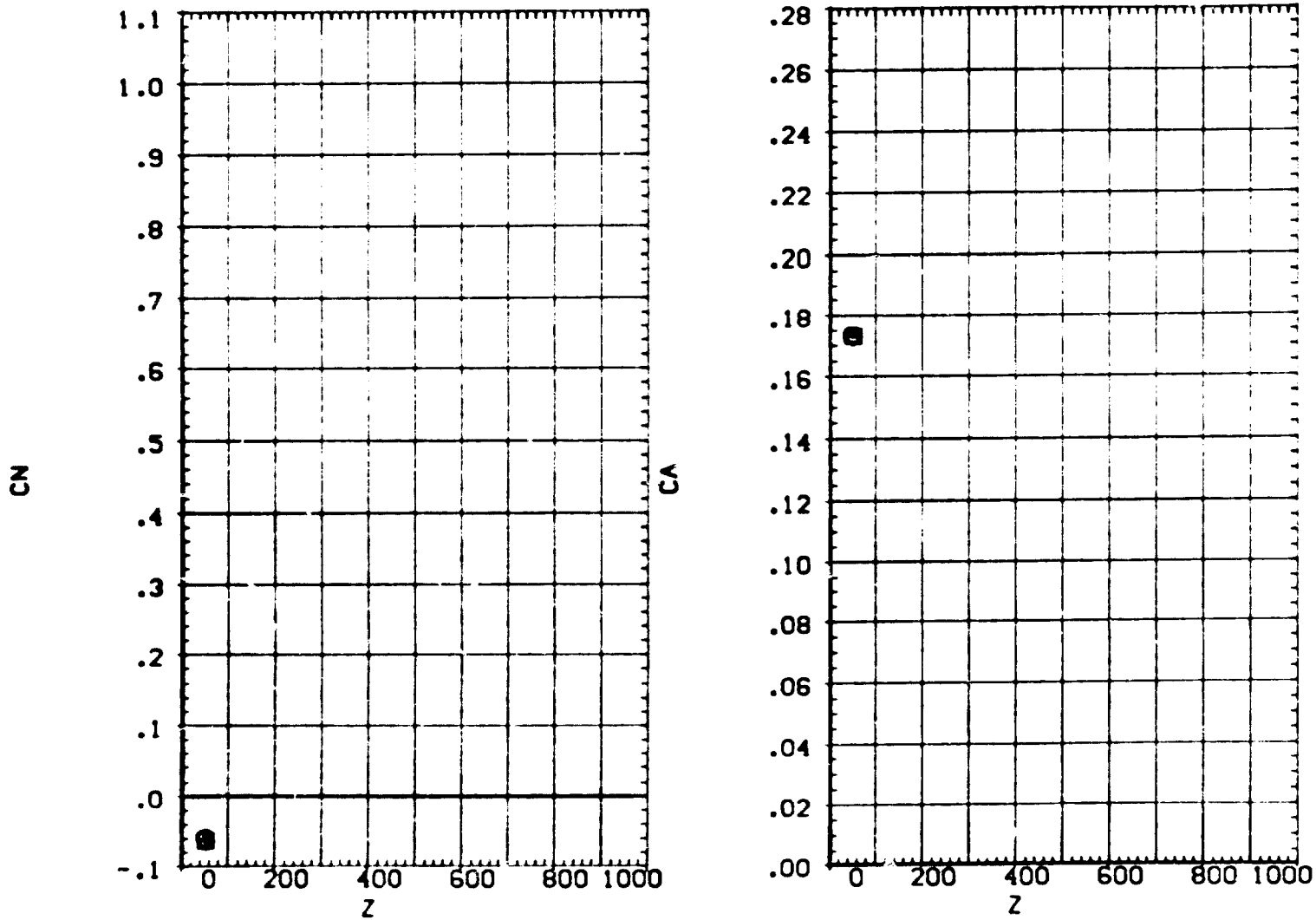


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ193)

SYMBOL	X		PARAMETRIC VALUES		
○	.375	MACH	4.530	PTOTAL	110.000
□	300.300	ALPHA	.000	BETA	.000
◇	600.560	DALPHA	-5.000	DBETA	-5.000
△	900.570	Y	800.000	POWER	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

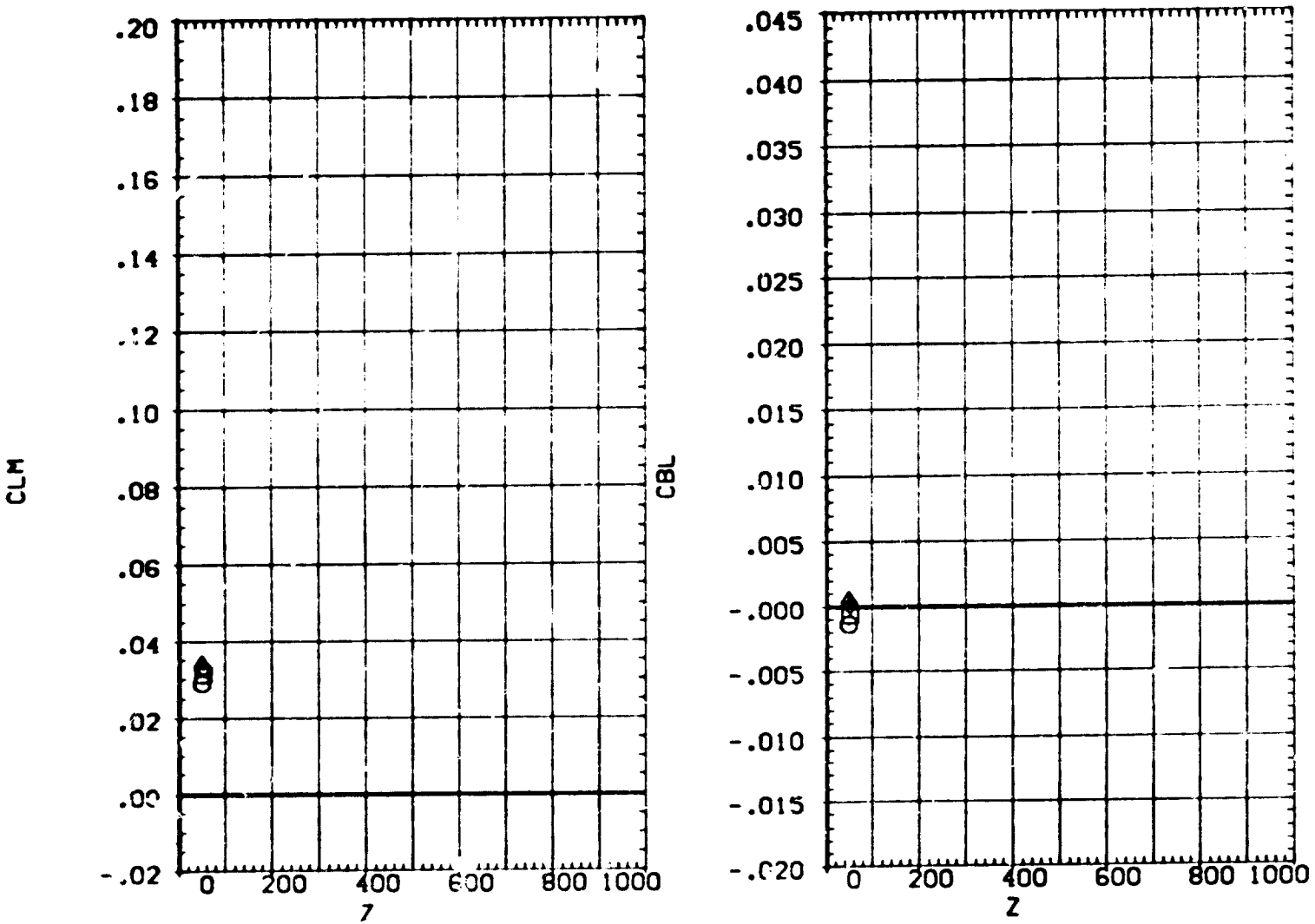


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ193)

SYMBOL	X		PARAMETRIC VALUES		
○	.375	MACH	4.530	PTOTAL	110.000
□	300.300	ALPHA	.000	BETA	.000
◇	600.560	DALPHA	-5.000	DBETA	-5.010
△	900.570	Y	800.000	PCHNBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

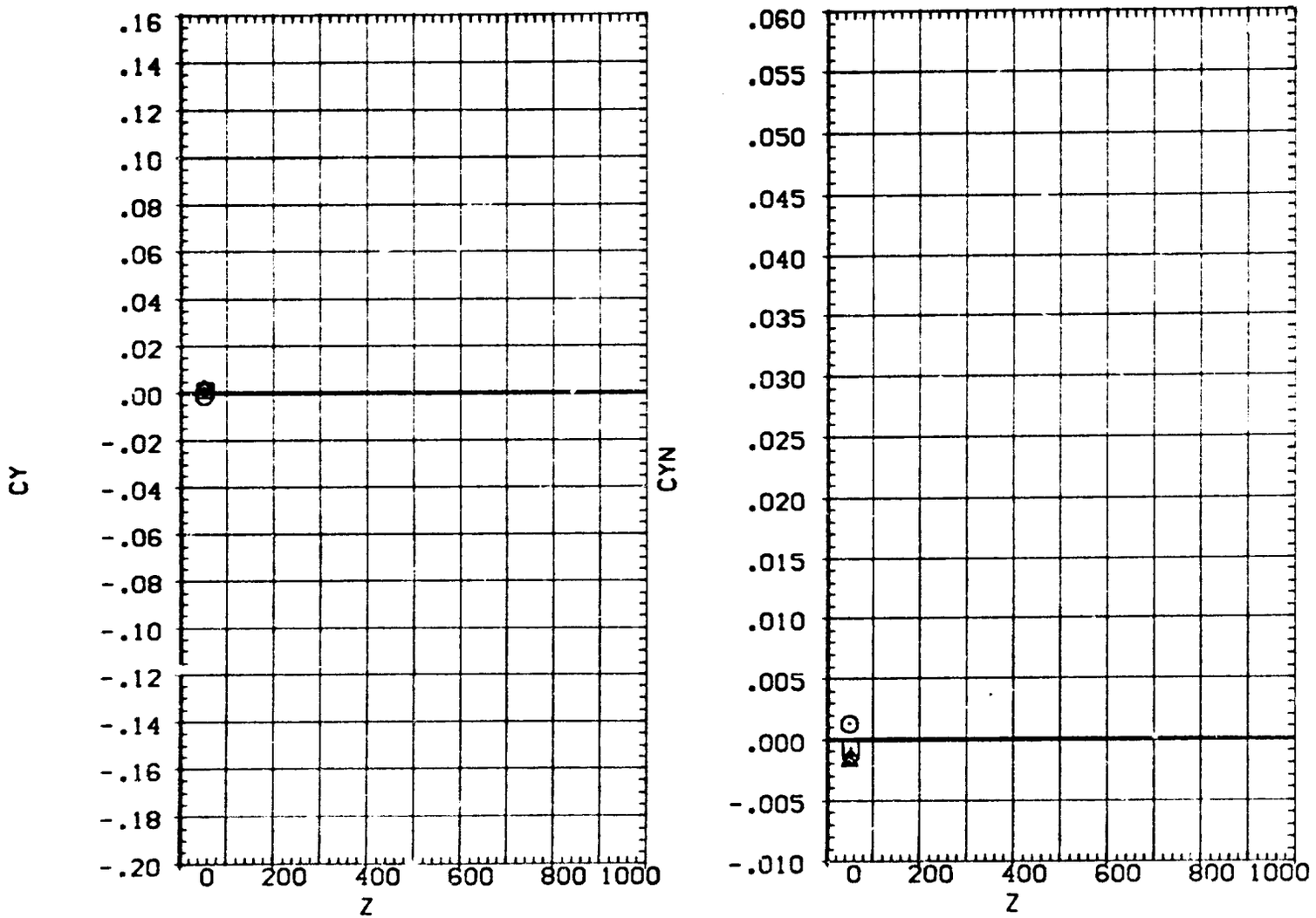


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ193)

SYMBOL	X		PARAMETRIC VALUES		
○	.375	MACH	4.530	PTOTAL	110.000
□	300.300	ALPHA	.000	BETA	.000
◇	600.560	DALPHA	-5.000	DBETA	-5.000
△	900.570	Y	800.000	PCHMBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

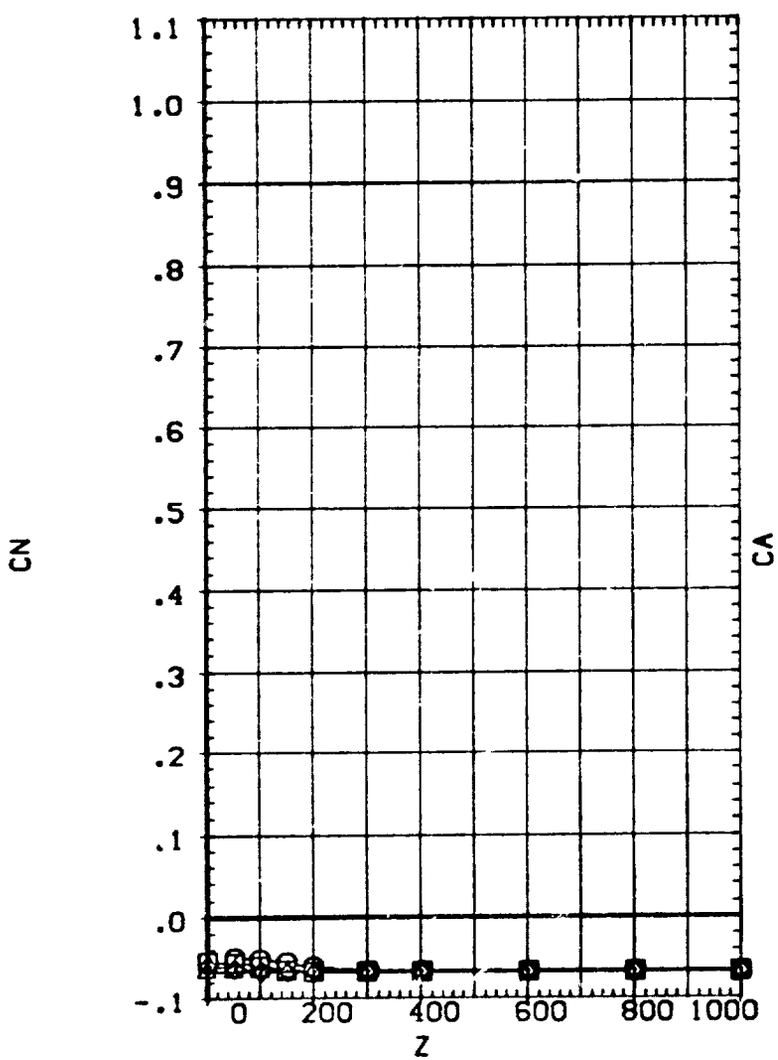


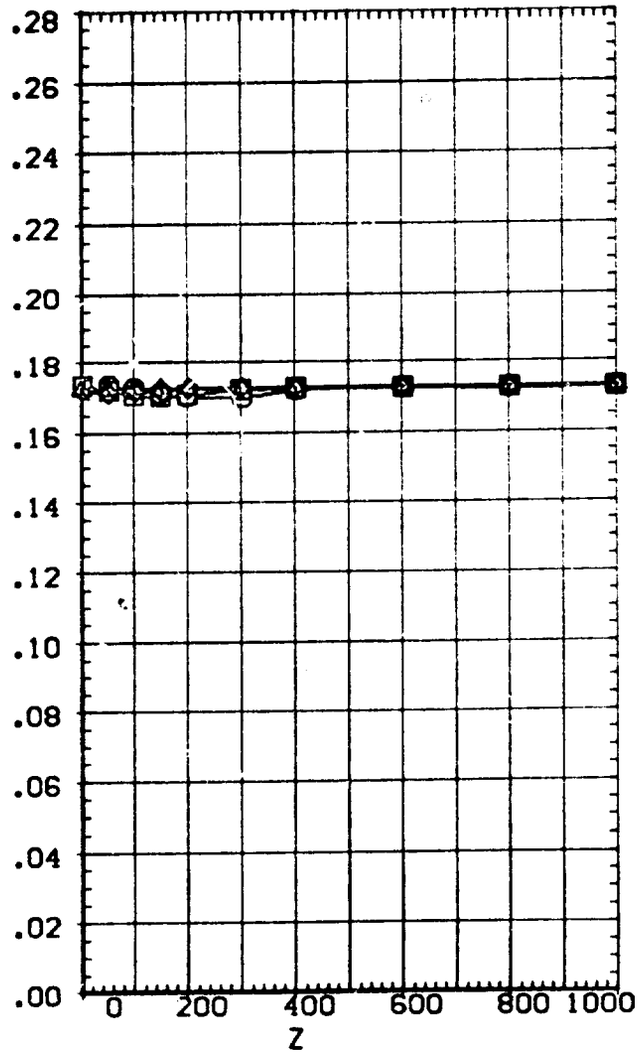
EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ195)

SYMBOL	X		PARAMETRIC VALUES		
○	.202	MACH	4.530	PTOTAL	110.000
□	300.410	ALPHA	.000	BETA	.000
◇	600.650	DALPHA	-5.000	DBETA	-10.000
△	900.650	Y	400.000	PCHMBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



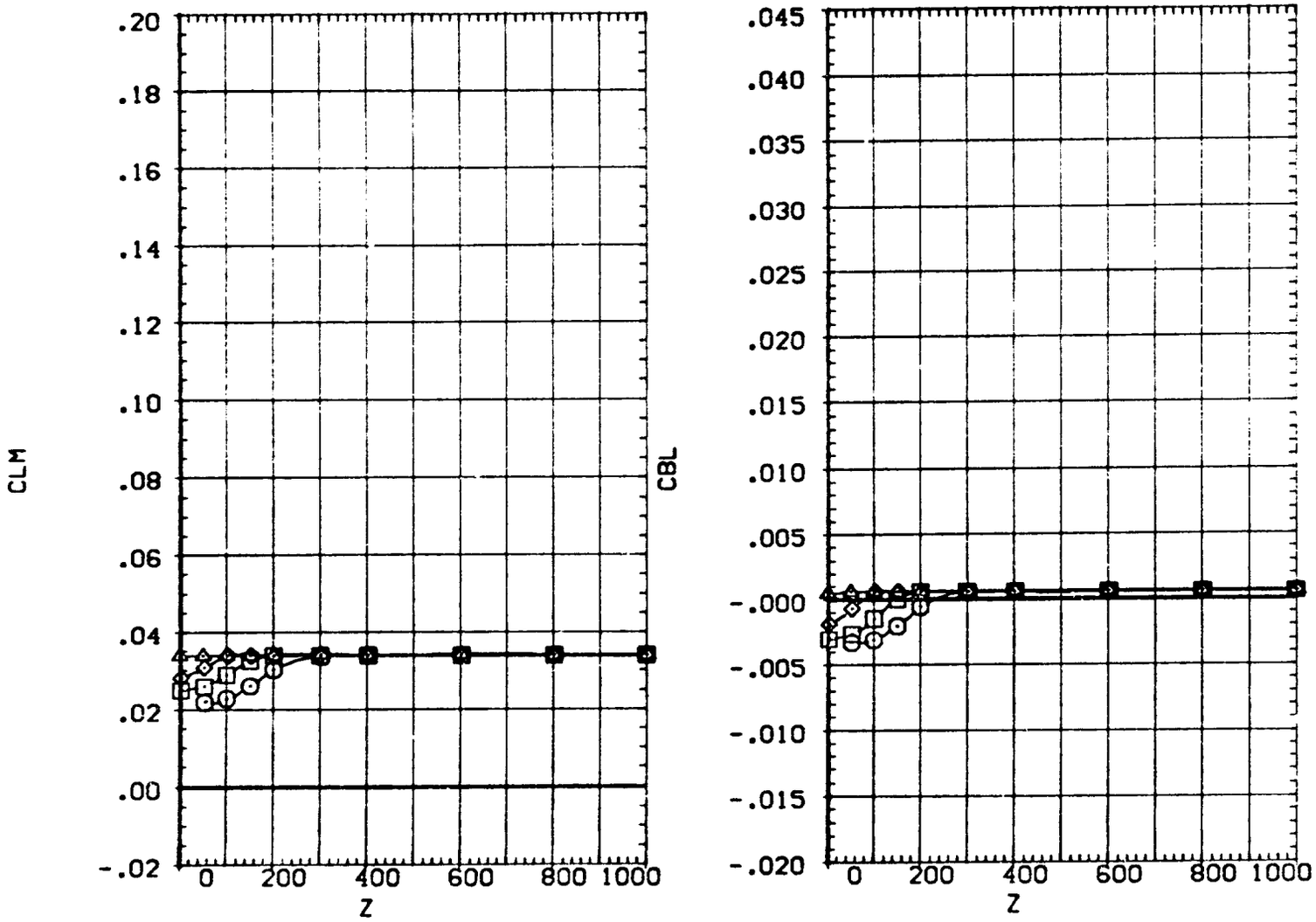


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ195)

SYMBOL	X		PARAMETRIC VALUES		
○	.202	MACH	4.530	PTOTAL	110.000
□	300.410	ALPHA	.000	BETA	.000
◇	600.650	DALPHA	-5.000	DBETA	-10.000
△	900.650	Y	400.000	PCHMBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

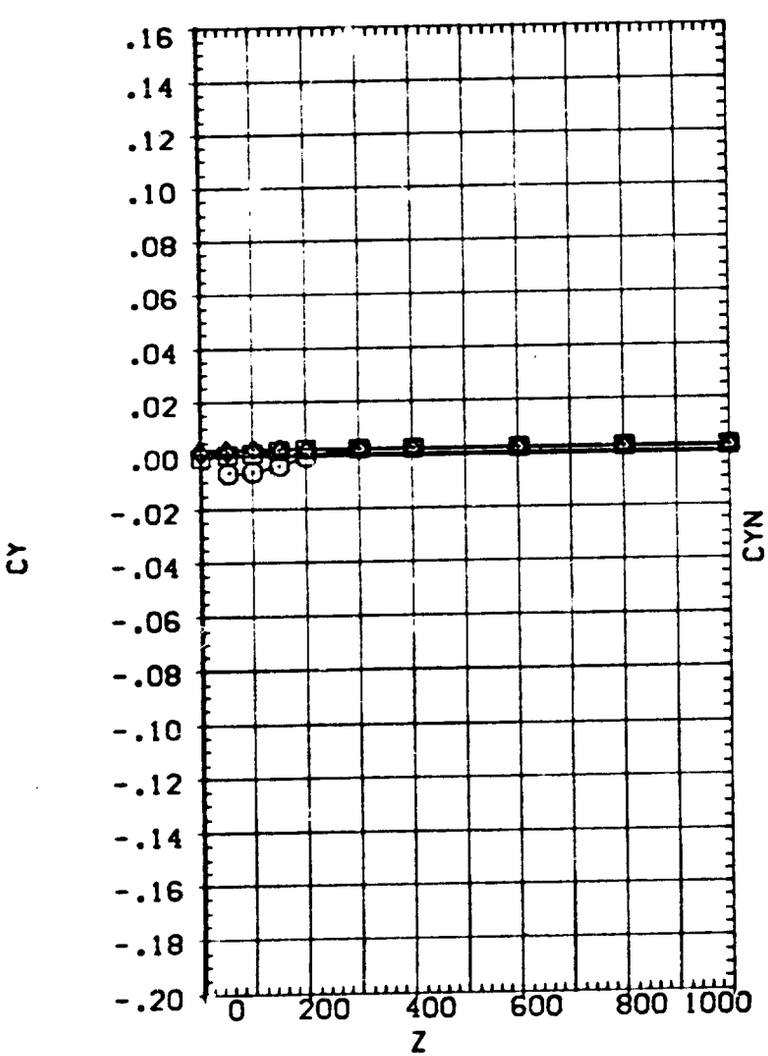


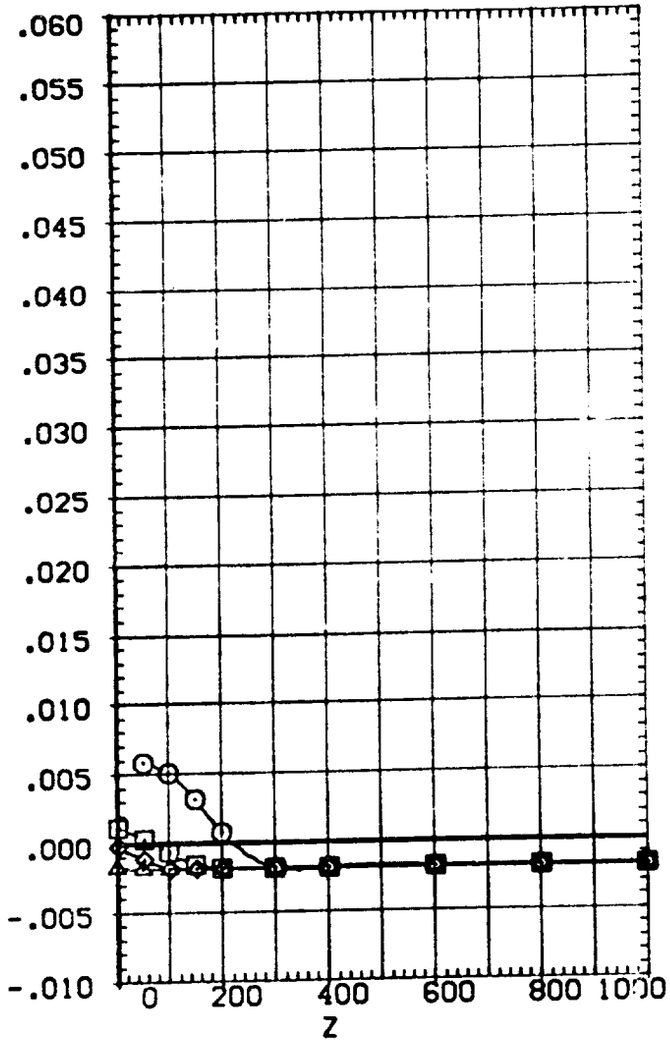
EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ195)

SYMBOL	X		PARAMETRIC VALUES		
○	.202	MACH	4.530	PTOTAL	110.000
□	300.410	ALPHA	.000	BETA	.000
◇	600.650	DALPHA	-5.000	DBETA	-10.000
△	900.650	Y	400.000	PCHMBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



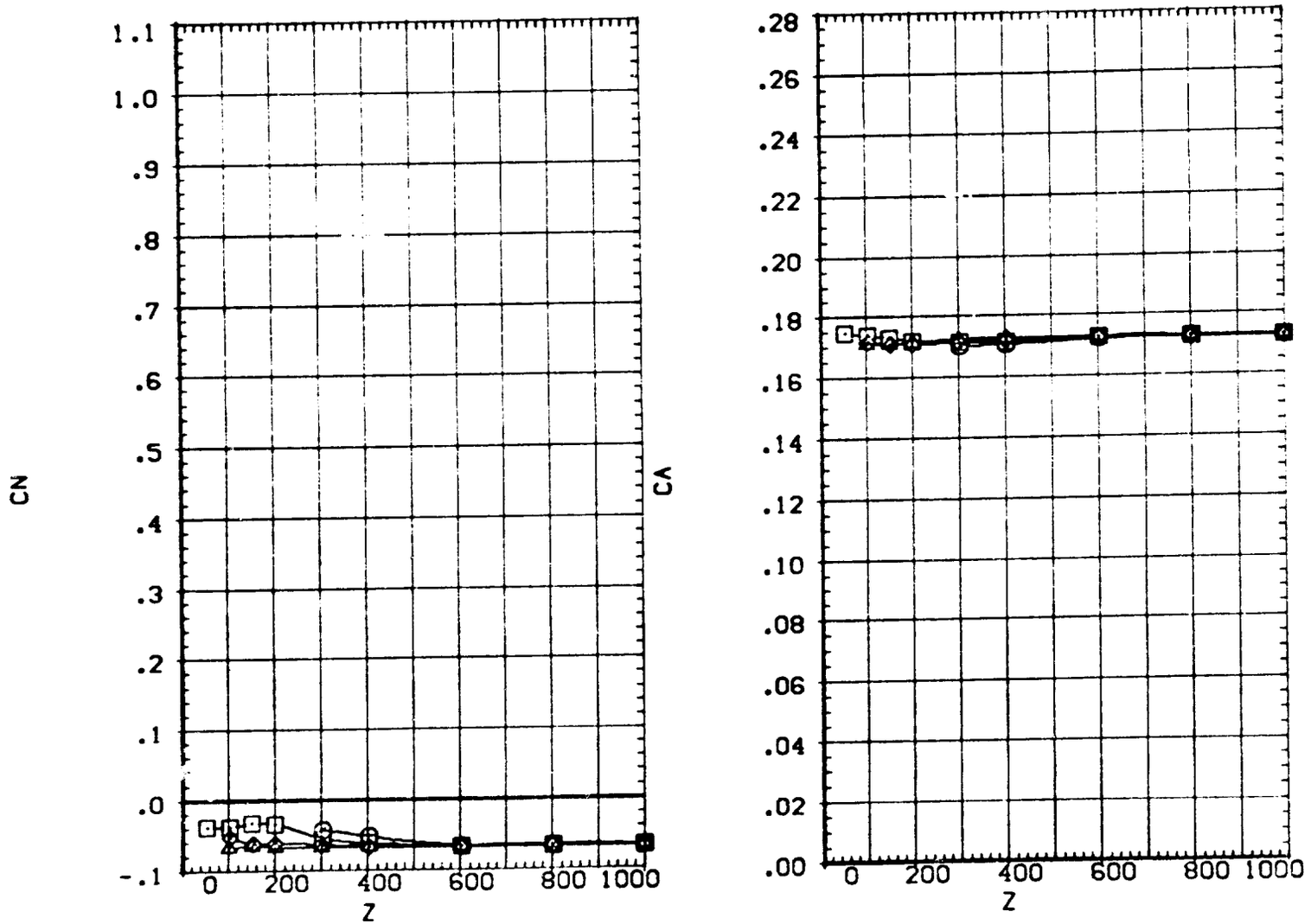


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ196)

SYMBOL	X		PARAMETRIC VALUES		
○	.321	MACH	4.530	PTOTAL	110.000
□	300.410	ALPHA	.000	BETA	.000
◇	600.470	DALPHA	-5.000	DBETA	-10.000
△	900.250	Y	200.000	PCHMBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

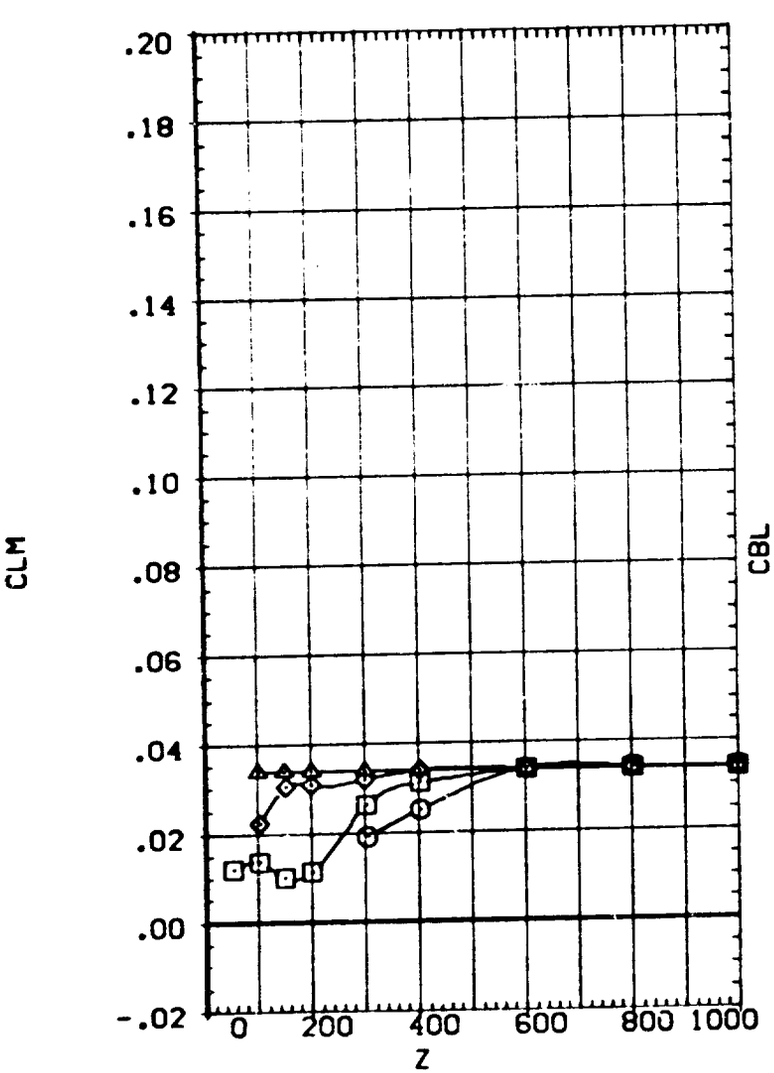


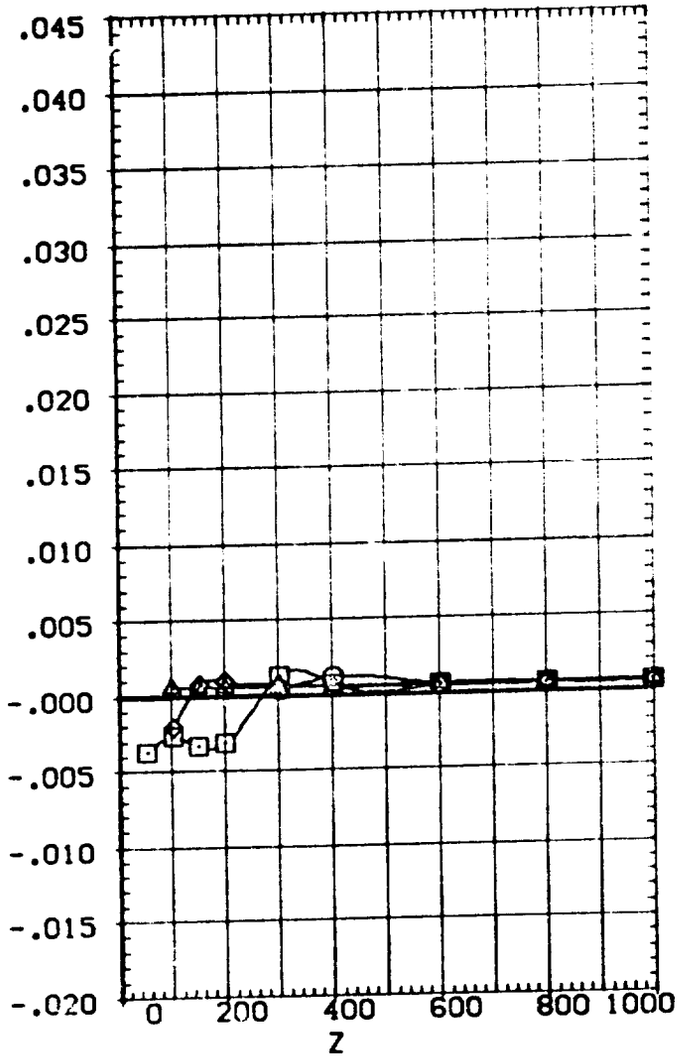
EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ196)

SYMBOL	X		PARAMETRIC VALUES		
○	.321	MACH	4.530	PTOTAL	110.000
□	300.410	ALPHA	.000	BETA	.000
◇	600.470	DALPHA	-5.000	DBETA	-10.000
△	900.250	Y	200.000	PCHMBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



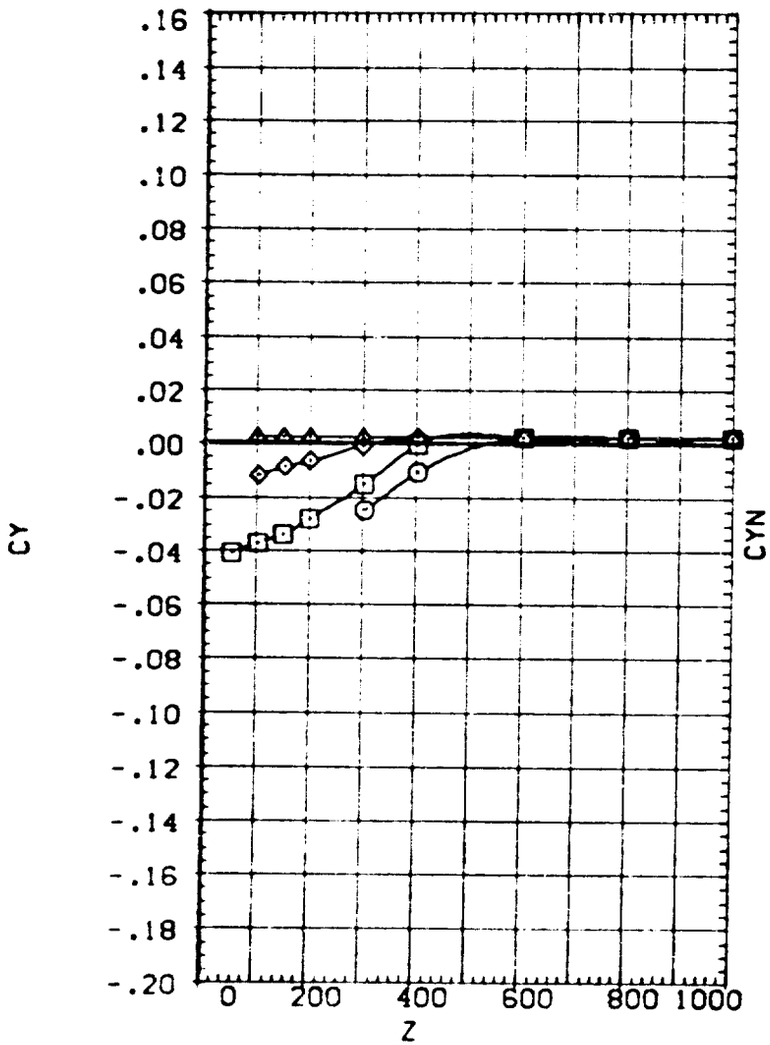


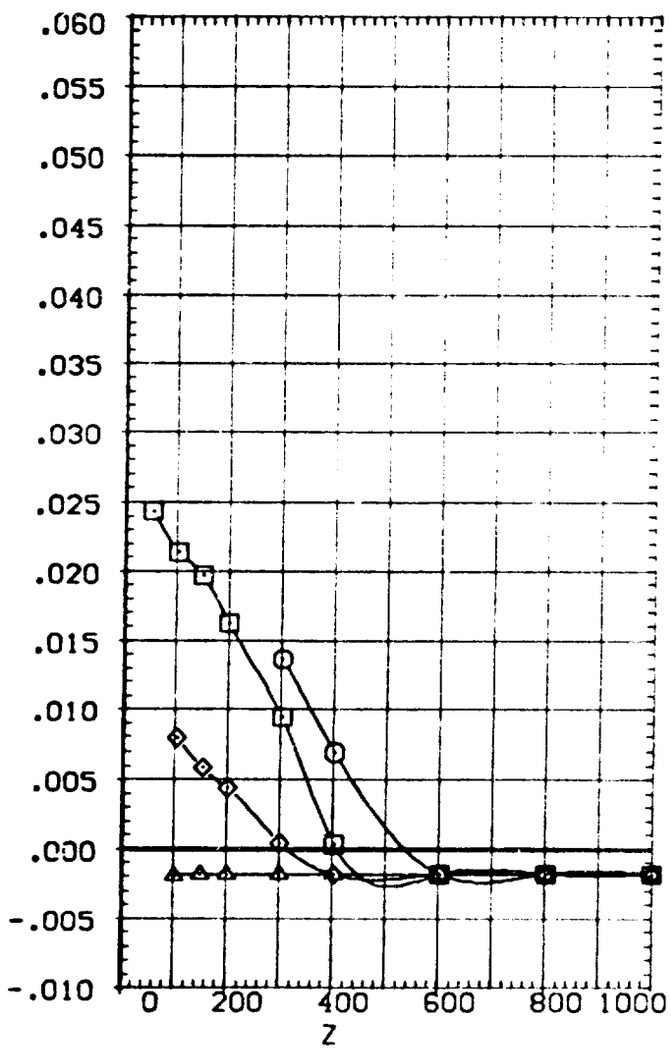
EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

[A13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ196)

SYMBOL	X		PARAMETRIC VALUES		
□	.321	MACH	4.530	PTOTAL	110.000
○	300.410	ALPHA	.000	BETA	.000
◇	600.470	DALPHA	-5.000	DBETA	-10.000
△	900.250	Y	200.000	PCHMBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



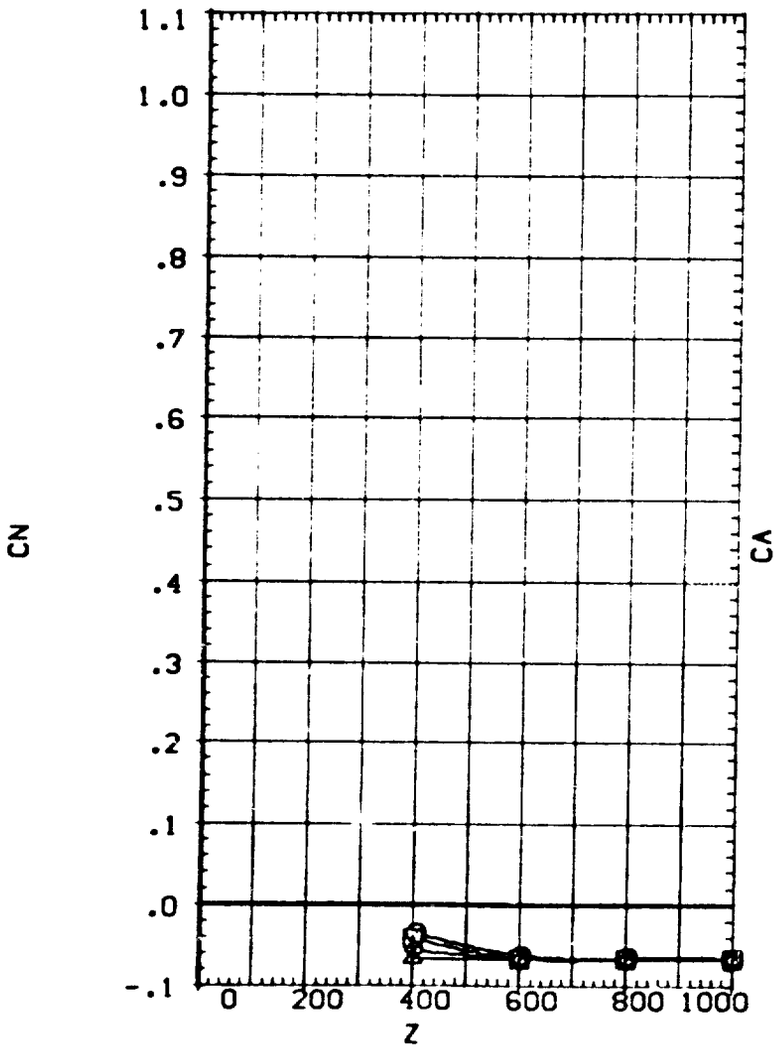


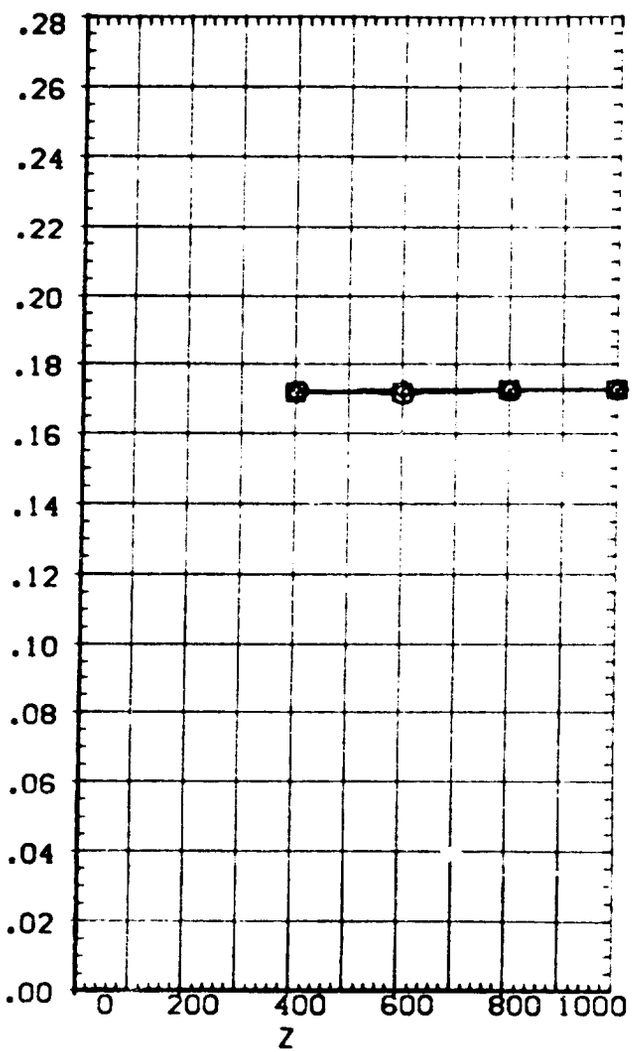
EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ197)

SYMBOL	X		PARAMETRIC VALUES		
○	.559	MACH	4.530	PTOTAL	110.000
□	300.090	ALPHA	.000	BETA	.000
◇	600.550	DALPHA	-5.000	DBETA	-10.000
△	900.440	Y	.000	PCHMBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



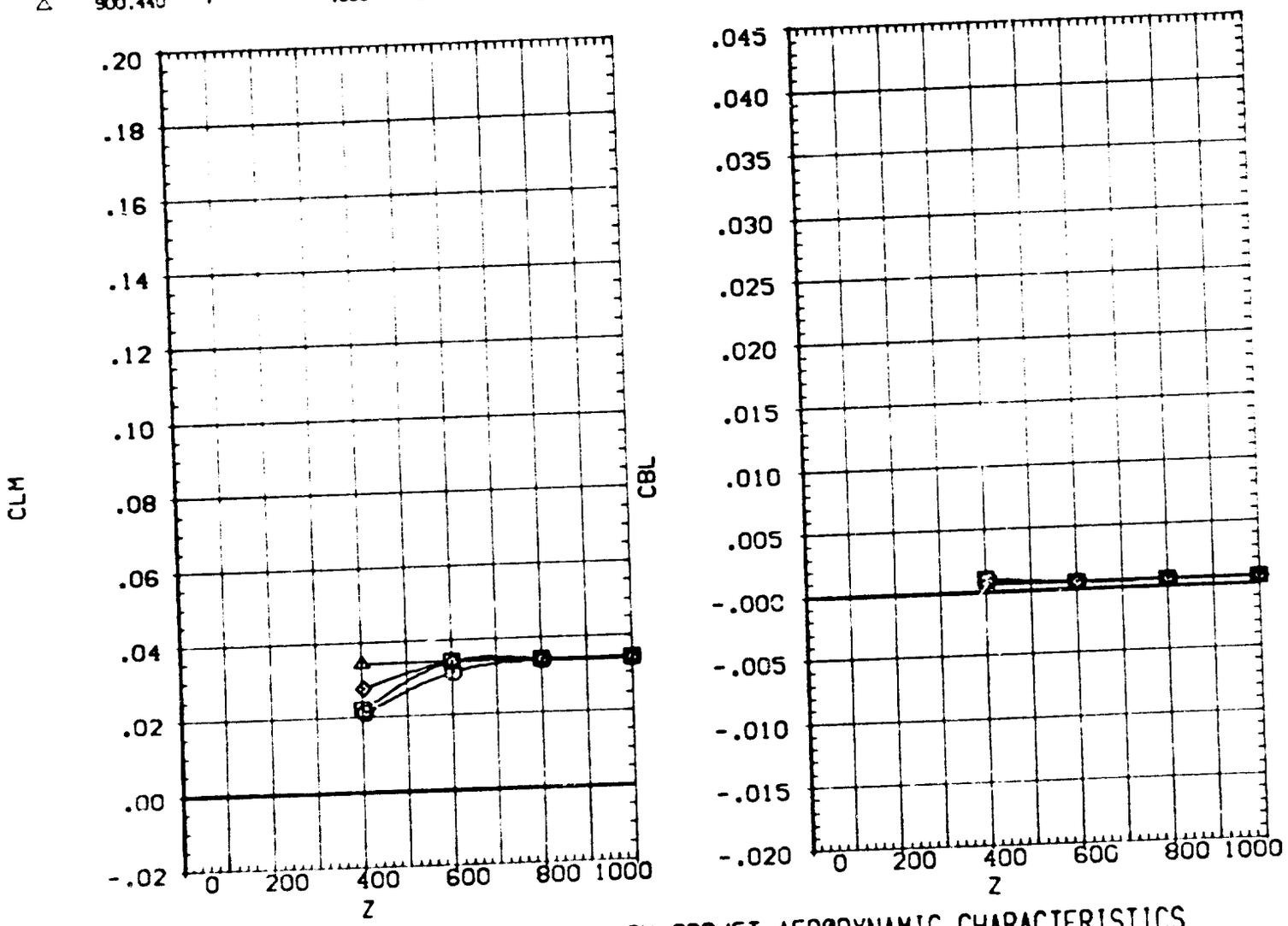


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ197)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

SYMBOL	X		PARAMETRIC VALUES		
○	.559	MACH	4.530	PTOTAL	110.000
◇	300.090	ALPHA	.000	BETA	.000
△	600.550	DALPHA	-5.000	DBETA	-10.000
	900.440	Y	.000	PCHMBR	.000

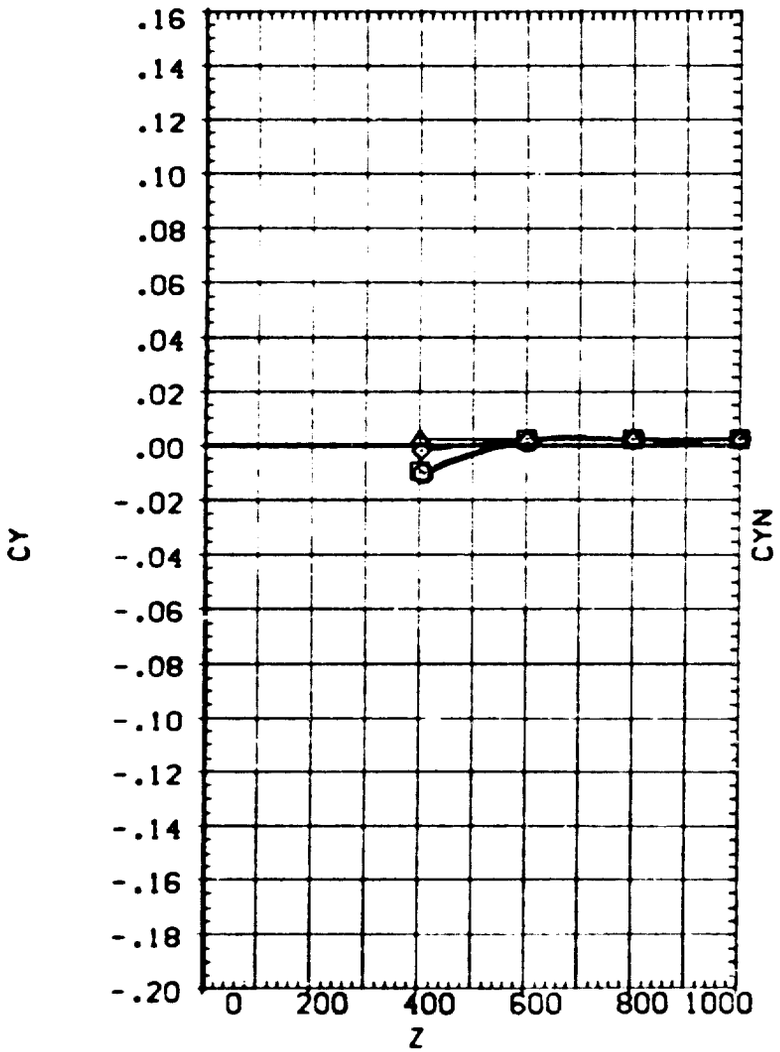


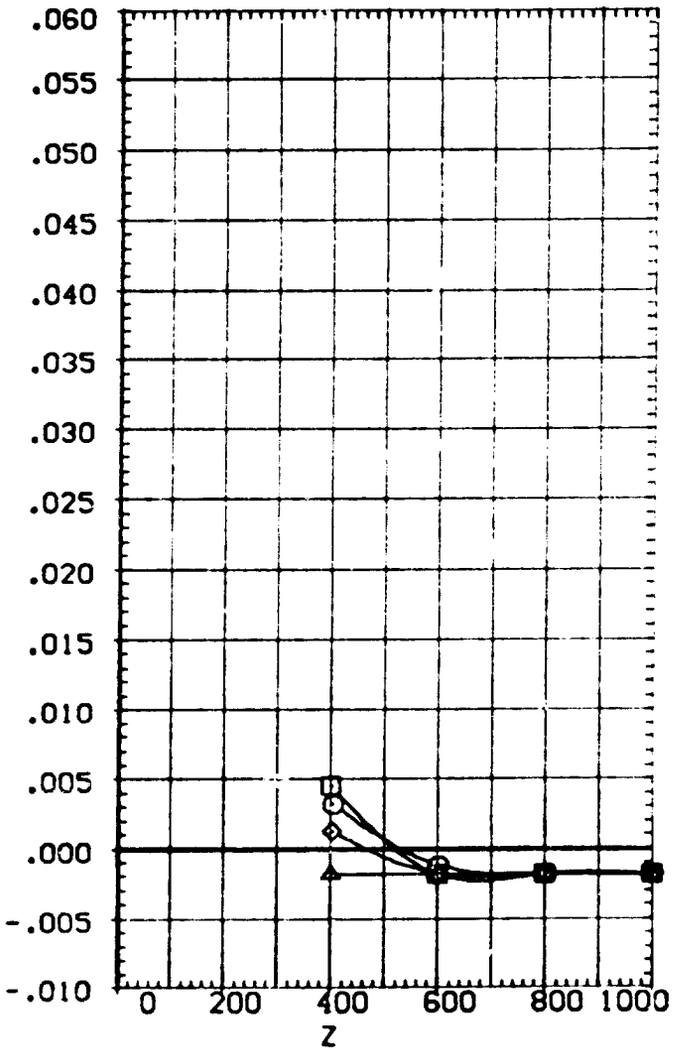
EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

[A13 SRB(S8) W/O PLUMES SEPARATING FROM O9T10 (RTJ197)

SYMBOL	X		PARAMETRIC VALUES		
○	.559	MACH	4.530	PTOTAL	110.000
□	300.090	ALPHA	.000	BETA	.000
◇	600.550	DALPHA	-5.000	DBETA	-10.000
△	900.440	Y	.000	PCHMBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



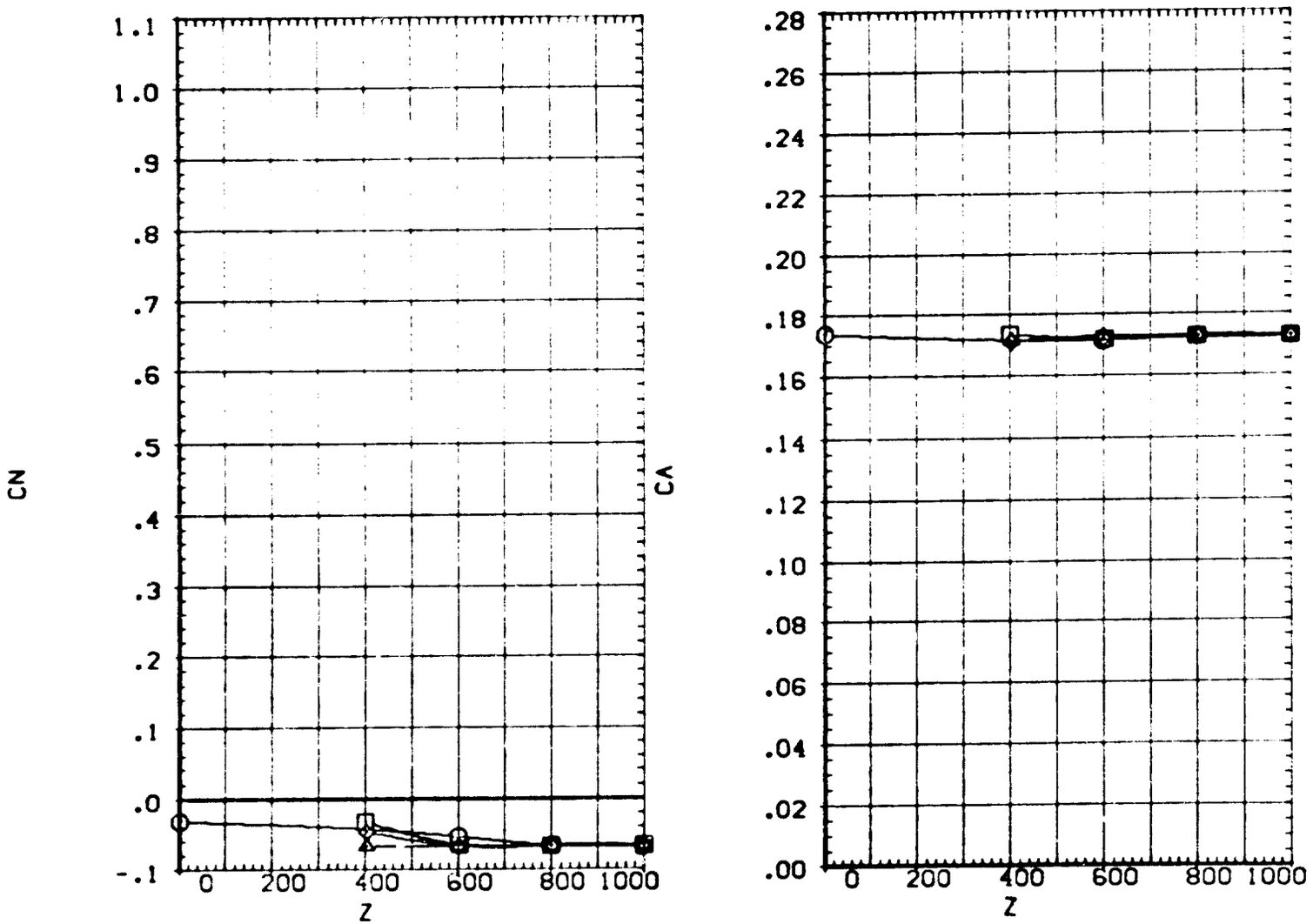


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ138)

SYMBOL	X		PARAMETRIC VALUES		
○	.000	MACH	4.530	PTOTAL	110.000
◇	300.380	ALPHA	.000	BETA	.000
□	600.820	DALPHA	-5.000	DBETA	-20.000
△	900.820	Y	.000	PCHMBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

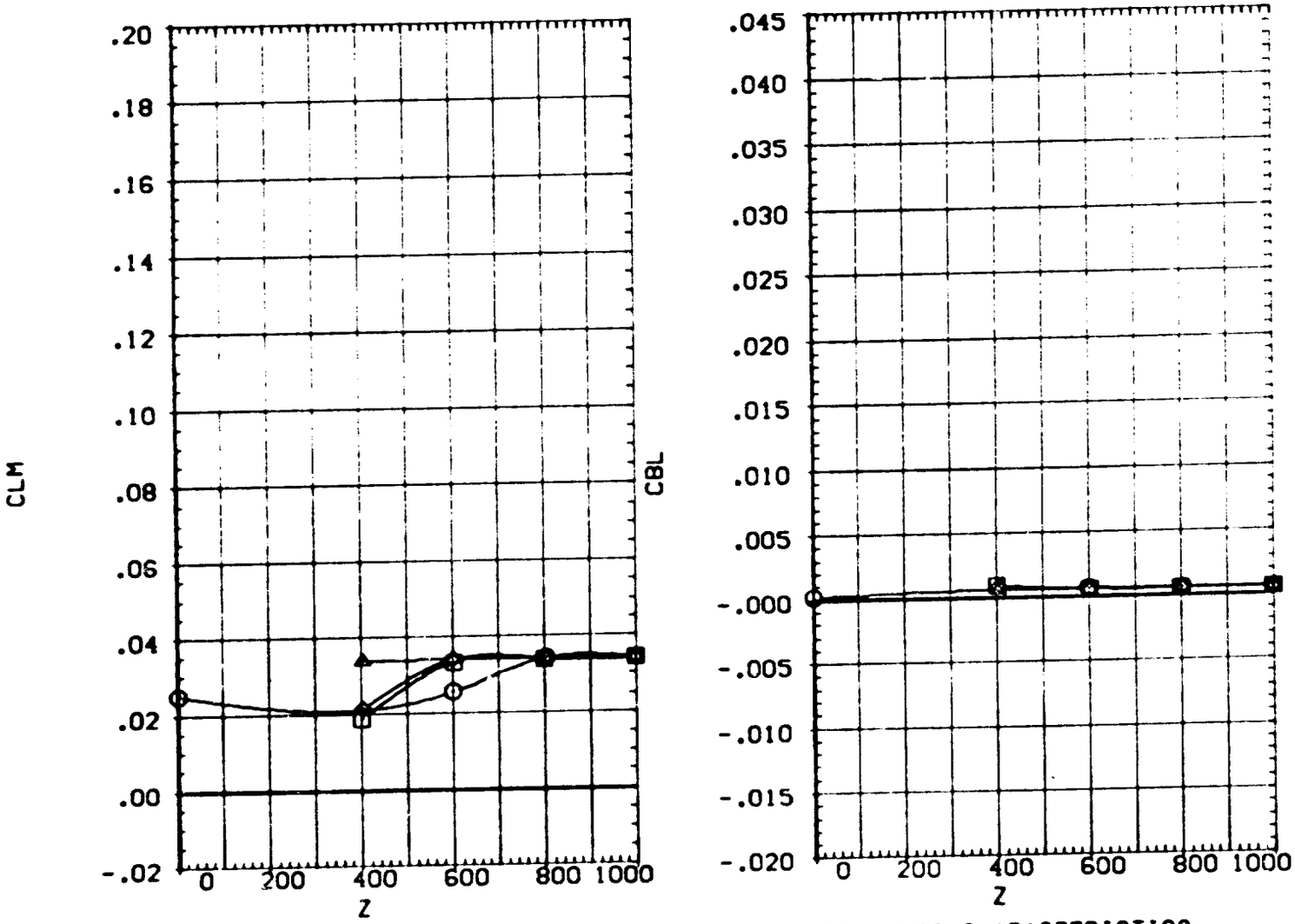


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ198)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE ARACTERISTICS FOR IDUAL DATASETS

SYMBOL	X		PARAMETRIC VALUES		
○	.000	MACH	4.530	PTOTAL	110.000
□	300.380	ALPHA	.000	BETA	.000
◇	600.820	DALPHA	-5.000	DBETA	-20.000
△	900.820	Y	.000	PCHMBR	.000

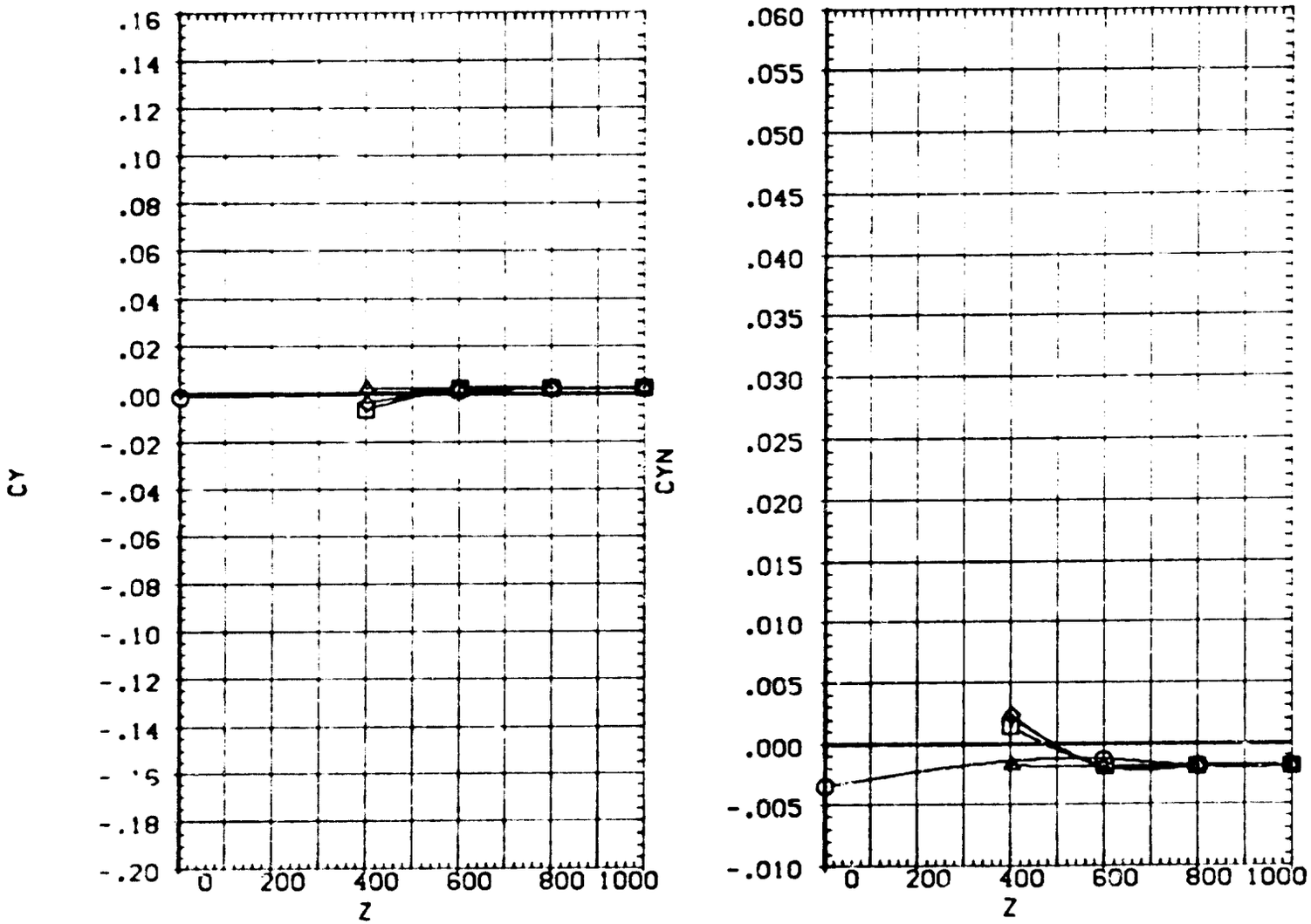


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

[A13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ198)

SYMBOL	X		PARAMETRIC VALUES		
○	.000	MACH	4.530	PTOTAL	110.000
◇	300.380	ALPHA	.000	BETA	.000
△	600.820	DALPHA	-5.000	DBETA	-20.000
	900.820	Y	.000	PCHMBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

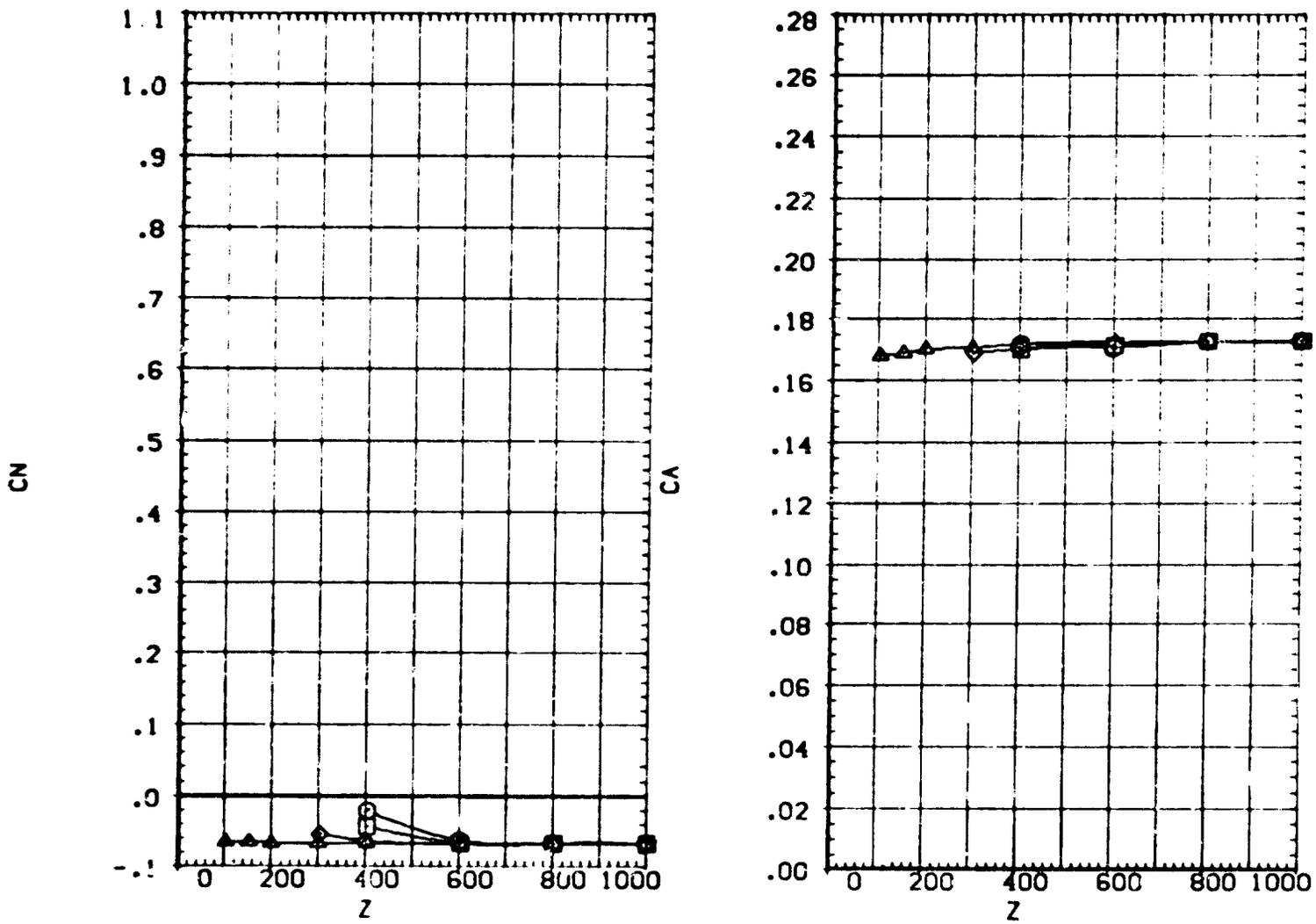


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ199)

SYMBOL	X		PARAMETRIC VALUES		
○	.103	MACH	4.530	PTOTAL	110.000
□	300.290	ALPHA	.000	BETA	.000
◇	600.660	DALPHA	-5.000	DBETA	-20.000
△	900.550	Y	200.000	PCHBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

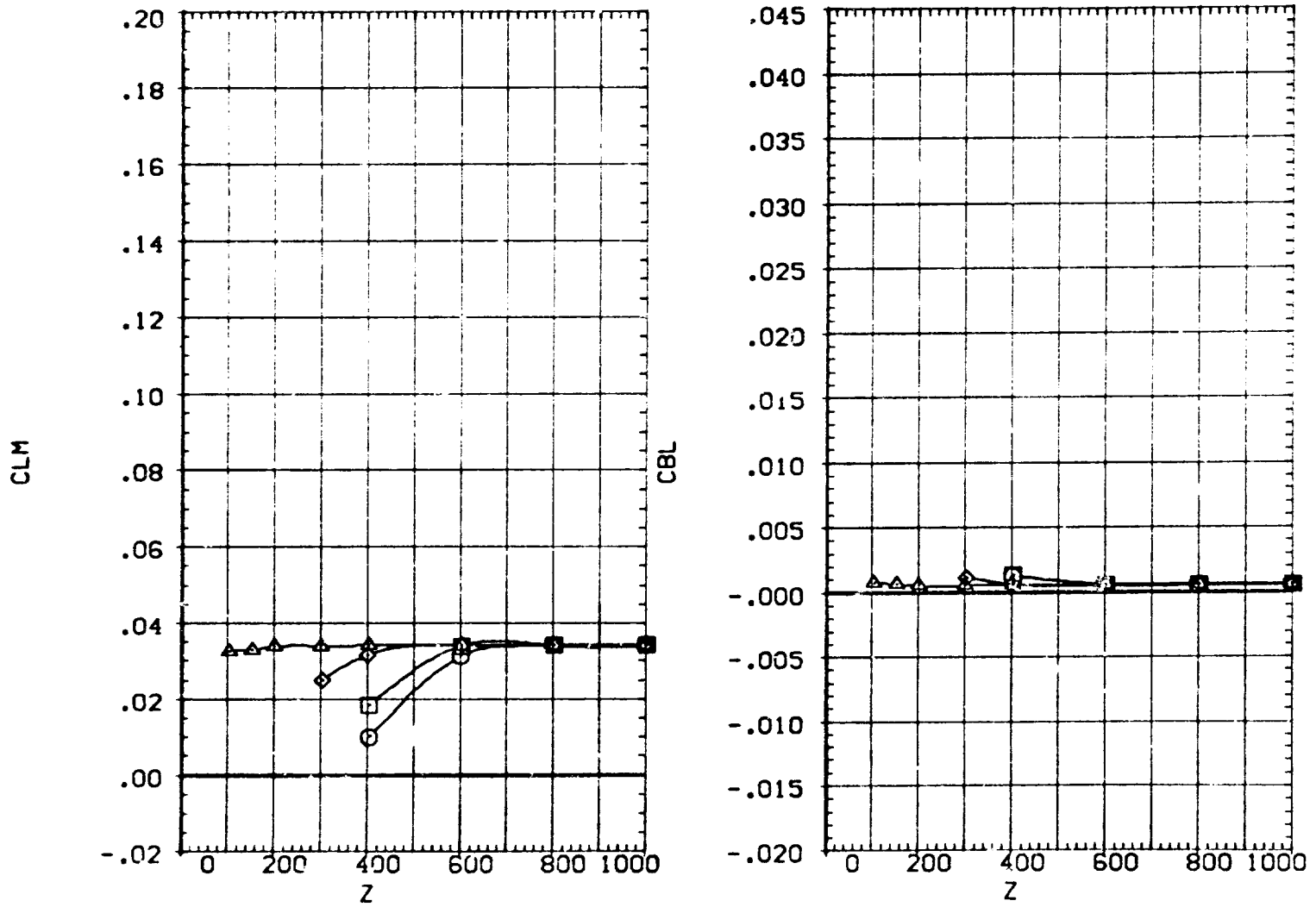


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

[A13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ199)

SYMBOL	X		PARAMETRIC VALUES		
○	.103	MACH	4.530	PTOTAL	110.000
□	300.290	ALPHA	.000	BETA	.000
◇	600.660	DALPHA	-5.000	DBETA	-20.000
△	900.550	Y	200.000	PCHMBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

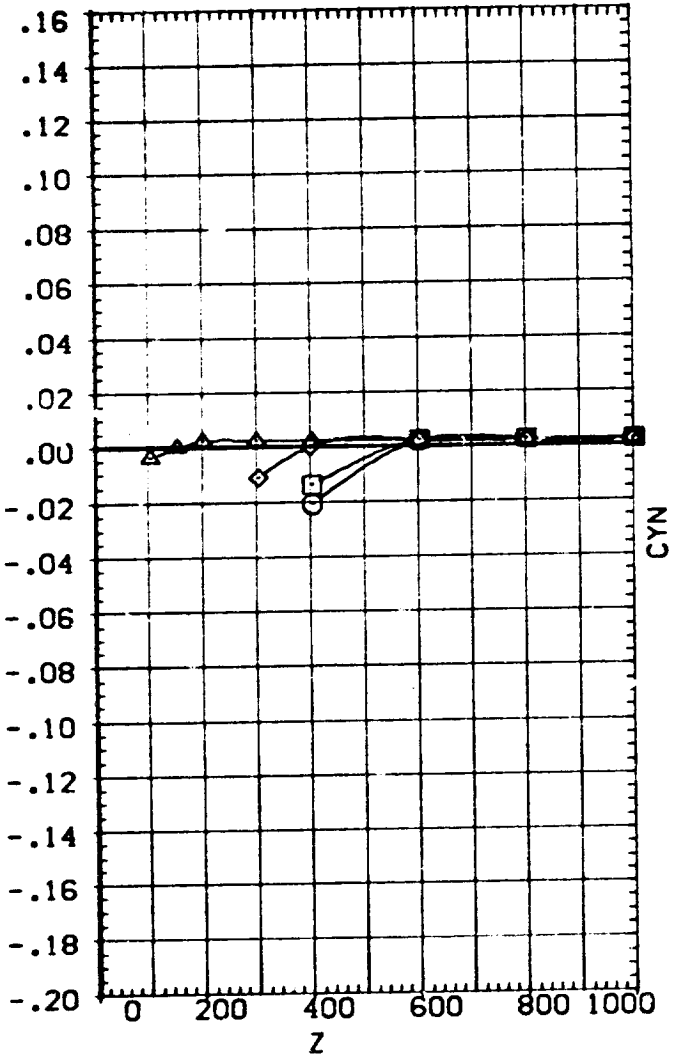


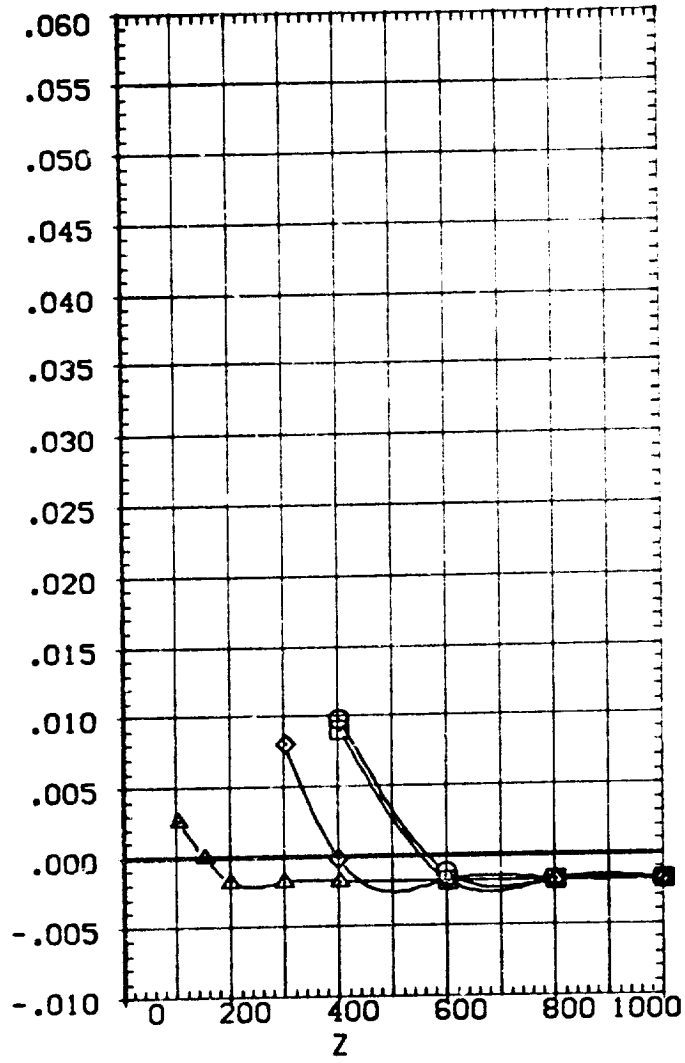
EFFECT OF SRB W/O PLUMES SEPARATION ON ORBIET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ199)

SYMBOL	X		PARAMETRIC VALUES		
○	.103	MACH	4.530	PTOTAL	110.000
□	300.290	ALPHA	.000	BETA	.000
◇	600.660	DALPHA	-5.000	DBETA	-20.000
△	900.550	Y	200.000	PCHMBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHAPACTERISTICS FOR INDIVIDUAL DATASETS



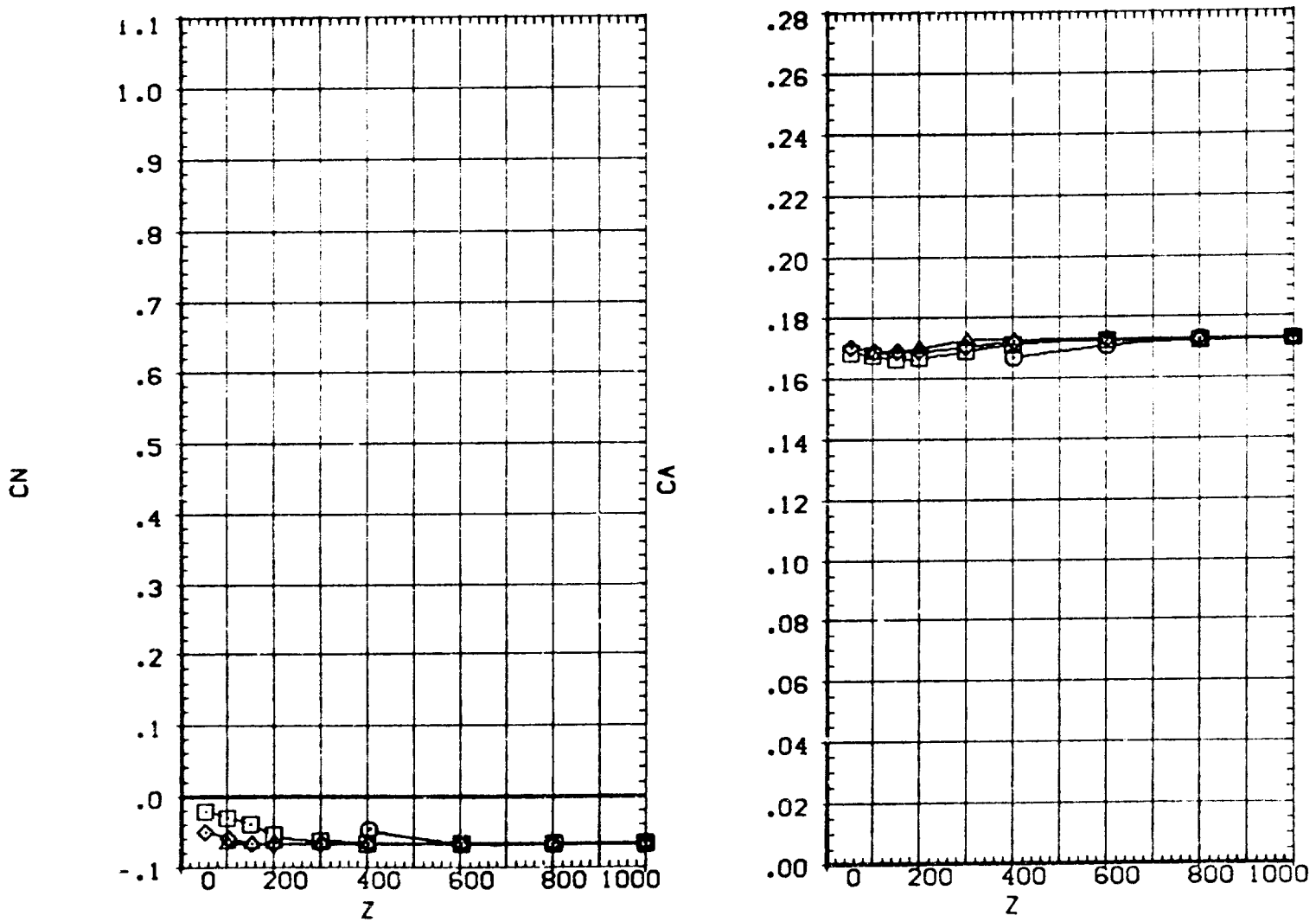


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ200)

SYMBOL	X		PARAMETRIC VALUES		
○	.250	MACH	4.530	PTOTAL	110.000
□	300.700	ALPHA	.000	BETA	.000
◇	599.930	DALPHA	-5.000	DBETA	-20.000
△	899.980	Y	400.000	DMBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

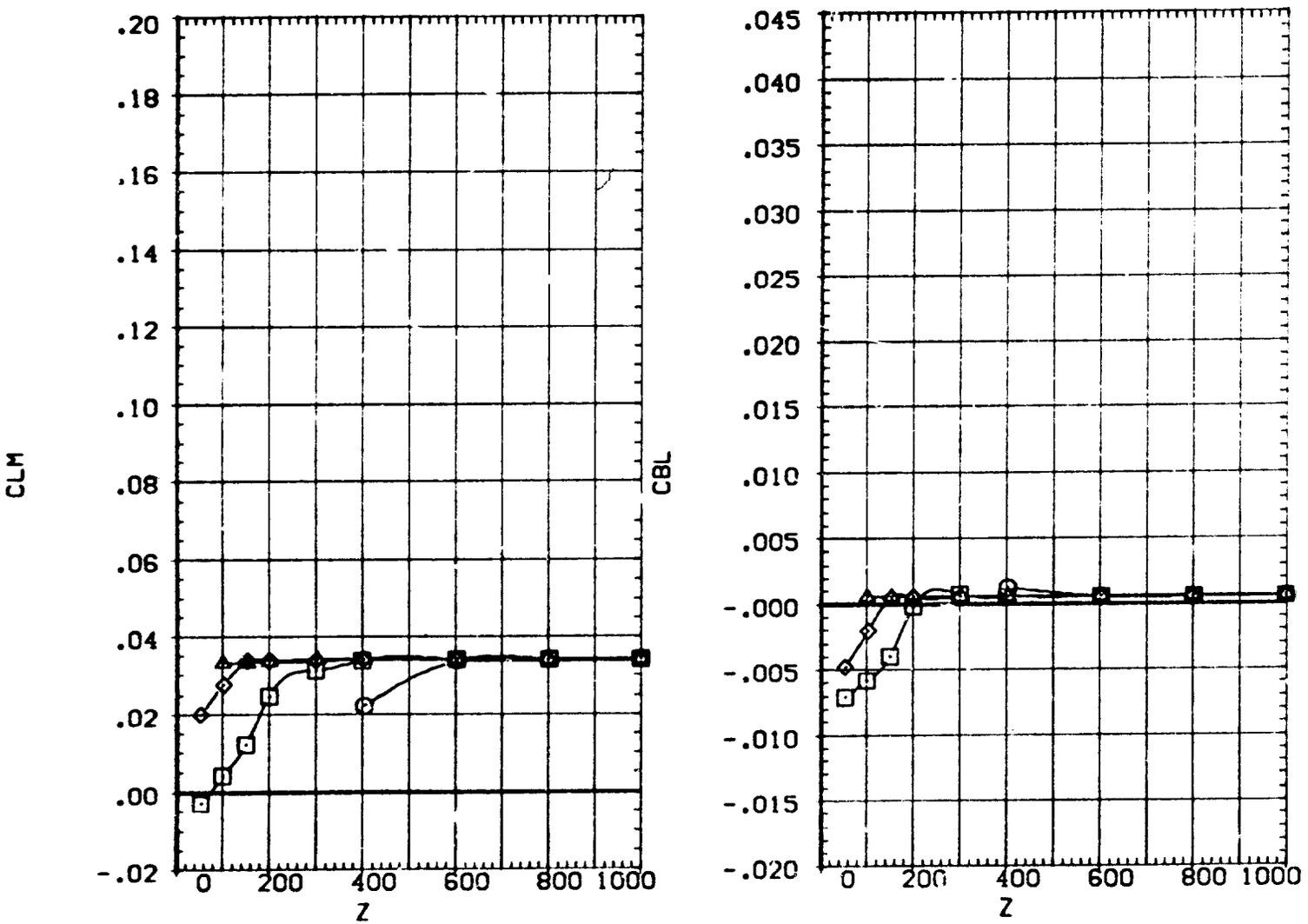


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09110 (RTJ200)

SYMBOL	X		PARAMETRIC VALUES		
○	.250	MACH	4.530	PTOTAL	110.000
□	300.700	ALPHA	.000	BETA	.000
◇	599.930	DALPHA	-5.000	DBETA	-20.000
△	899.980	Y	400.000	PCHMBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

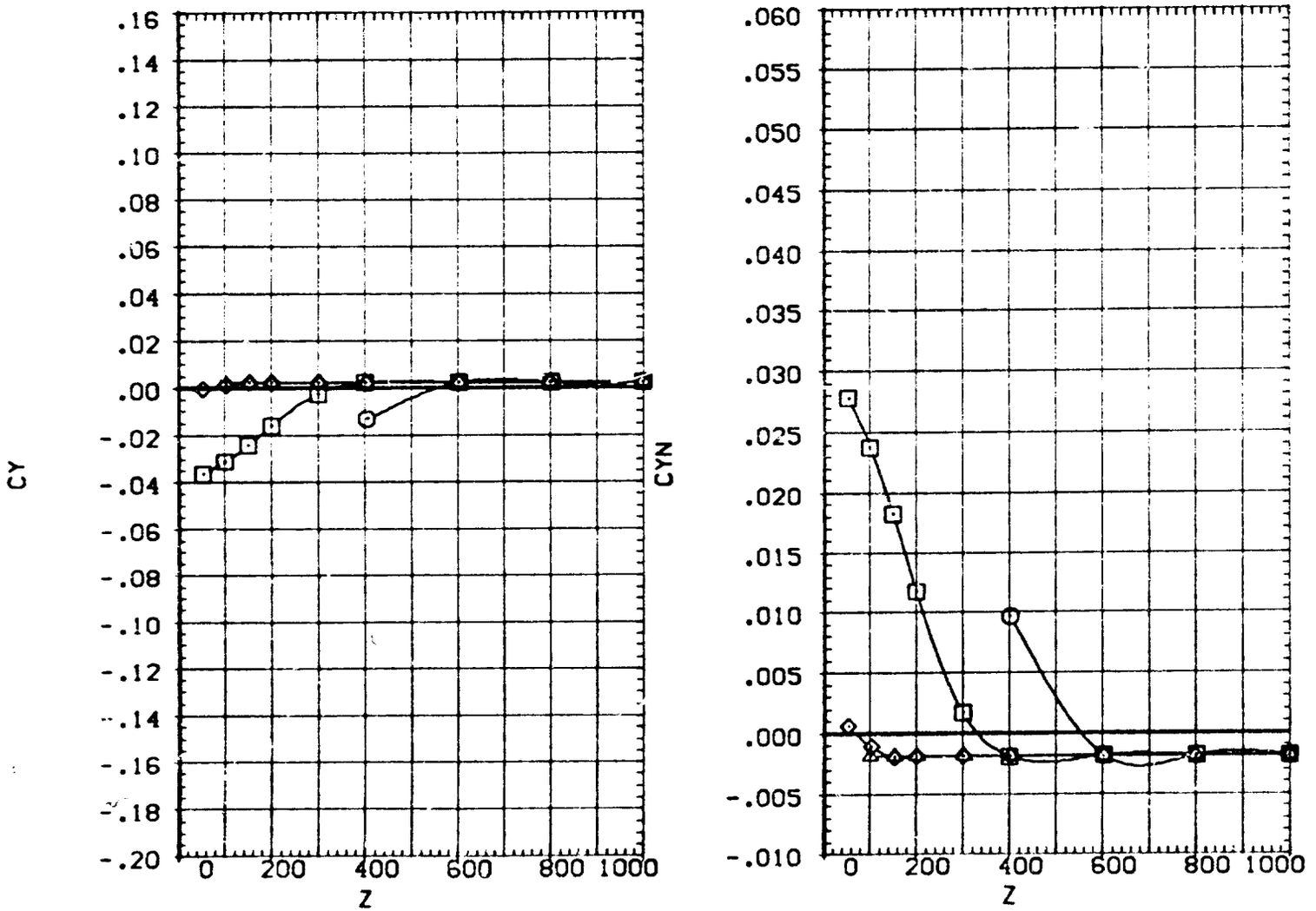


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ200)

SYMBOL	X		PARAMETRIC VALUES		
○□	.250	MACH	4.530	PTOTAL	110.000
◇	300.700	ALPHA	.000	BETA	.000
◇	599.930	DALPHA	-5.000	DBETA	-20.000
△	899.980	Y	400.000	PCHMBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

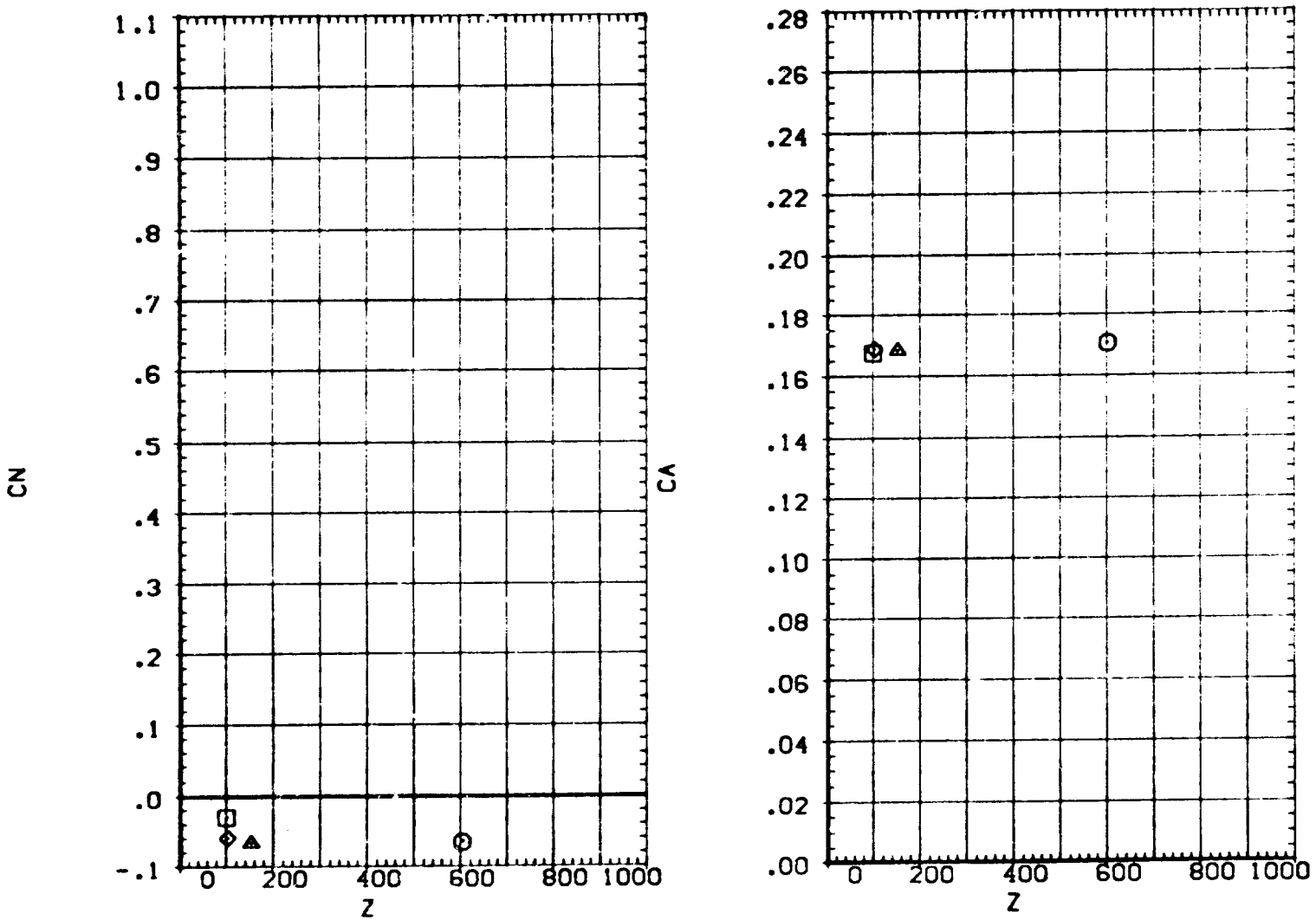


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ201)

SYMBOL	X		PARAMETRIC VALUES		
○	.702	MACH	4.530	PTOTAL	110.000
□	300.510	ALPHA	.000	BETA	.000
◇	600.100	DALPHA	-5.000	DBETA	-20.000
△	900.630	Y	800.000	PCHMBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

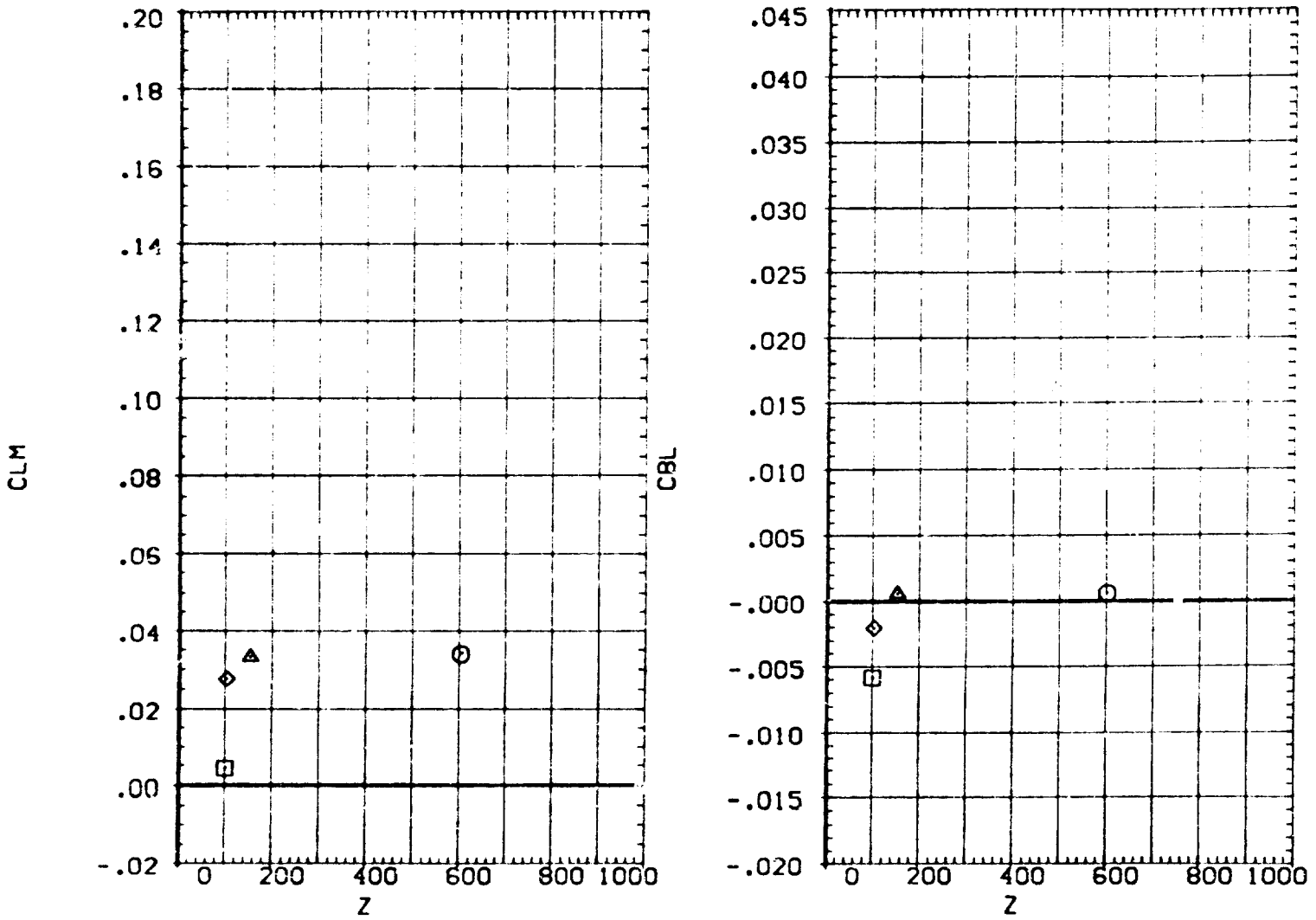


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

[A13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ201)

SYMBOL	X		PARAMETRIC VALUES		
○	.702	MACH	4.530	PTOTAL	110.000
□	300.510	ALPHA	.000	BETA	.000
◇	600.100	DALPHA	-5.000	DBETA	-20.000
△	900.630	Y	800.000	PCHMBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

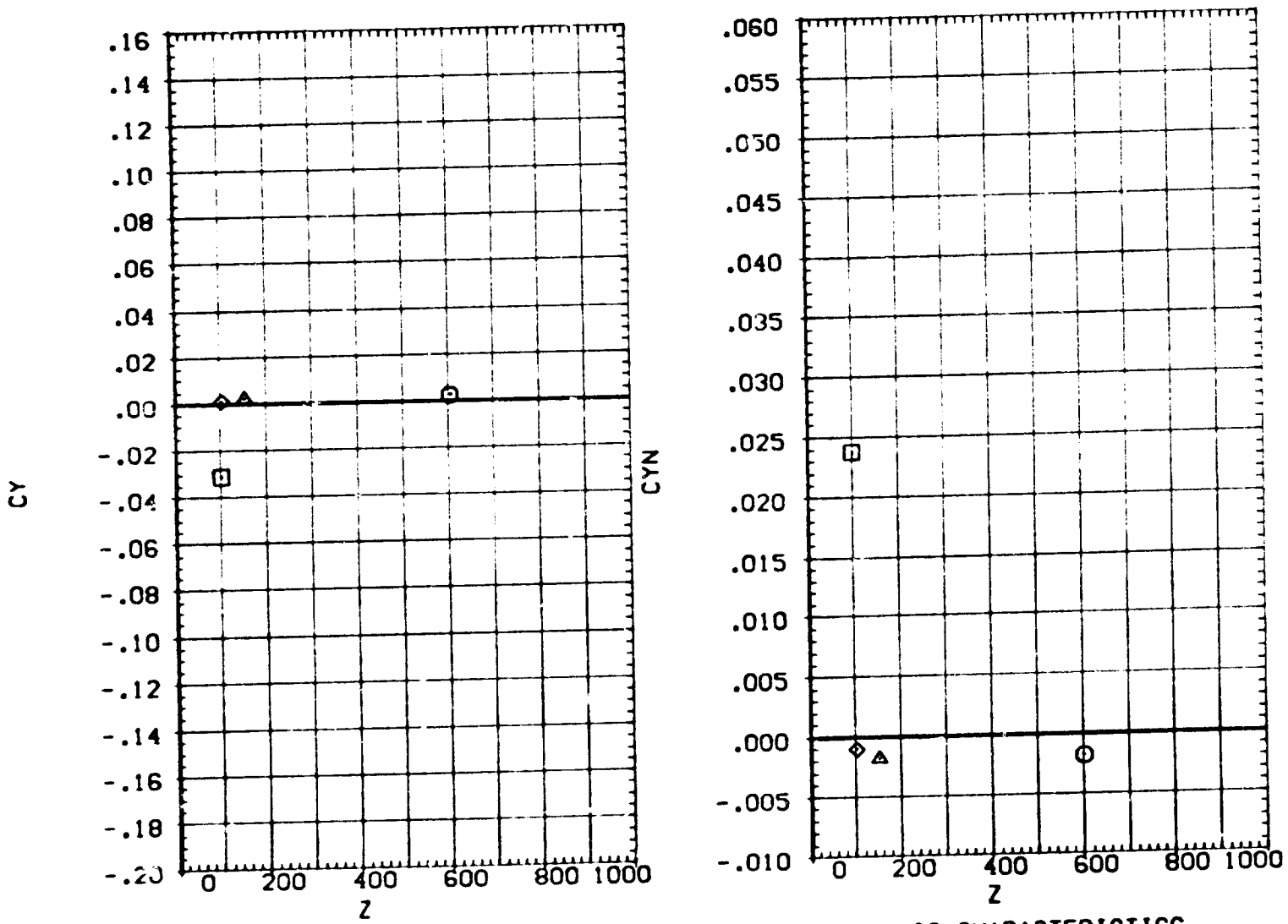


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

[A13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ201)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

SYMBOL	X		PARAMETRIC VALUES		
○	.702	MACH	4.530	PTOTAL	110.000
□	300.510	ALPHA	.000	BETA	.000
◇	600.100	CALPHA	-5.000	DBETA	-20.000
△	900.630	Y	800.000	PCHMBR	.000

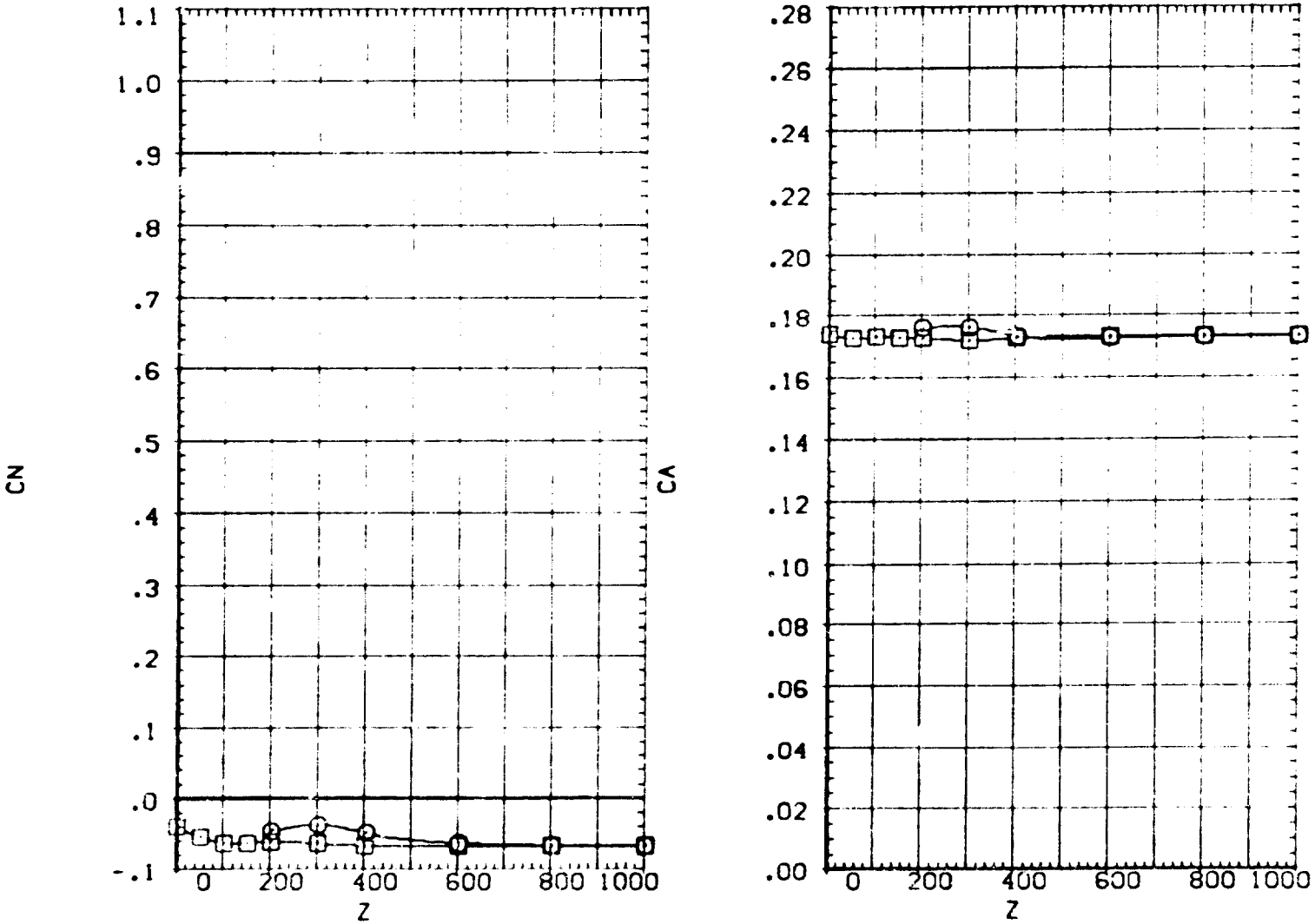


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

[A13 SRB(SB) W/O PLUMES SEPARATING FROM 09T10 (RTJ202)

SYMBOL	X	PARAMETRIC VALUES			
	.173	MACH	4.530	PTOTAL	10.000
	900.690	ALPHA	.000	BETA	.000
		DALPHA	-10.000	DBETA	5.000
		Y	.000	PCHMBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

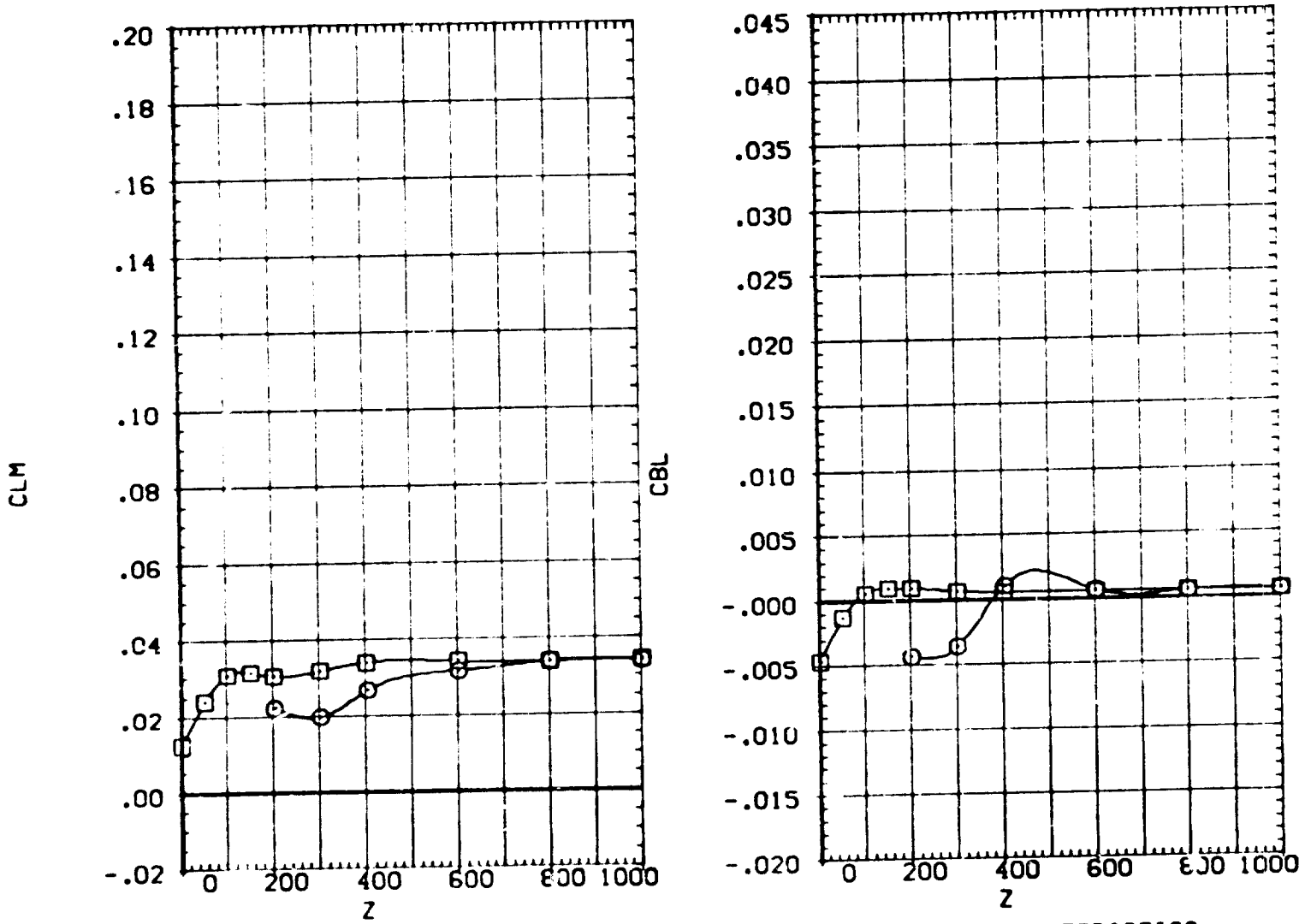


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ202)

SYMBOL	X		PARAMETRIC VALUES		
□	.173	MACH	4.530	PTOTAL	110.000
○	900.690	ALPHA	.000	BETA	.000
		DALPHA	-10.000	DBETA	5.000
		Y	.000	PCHMBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

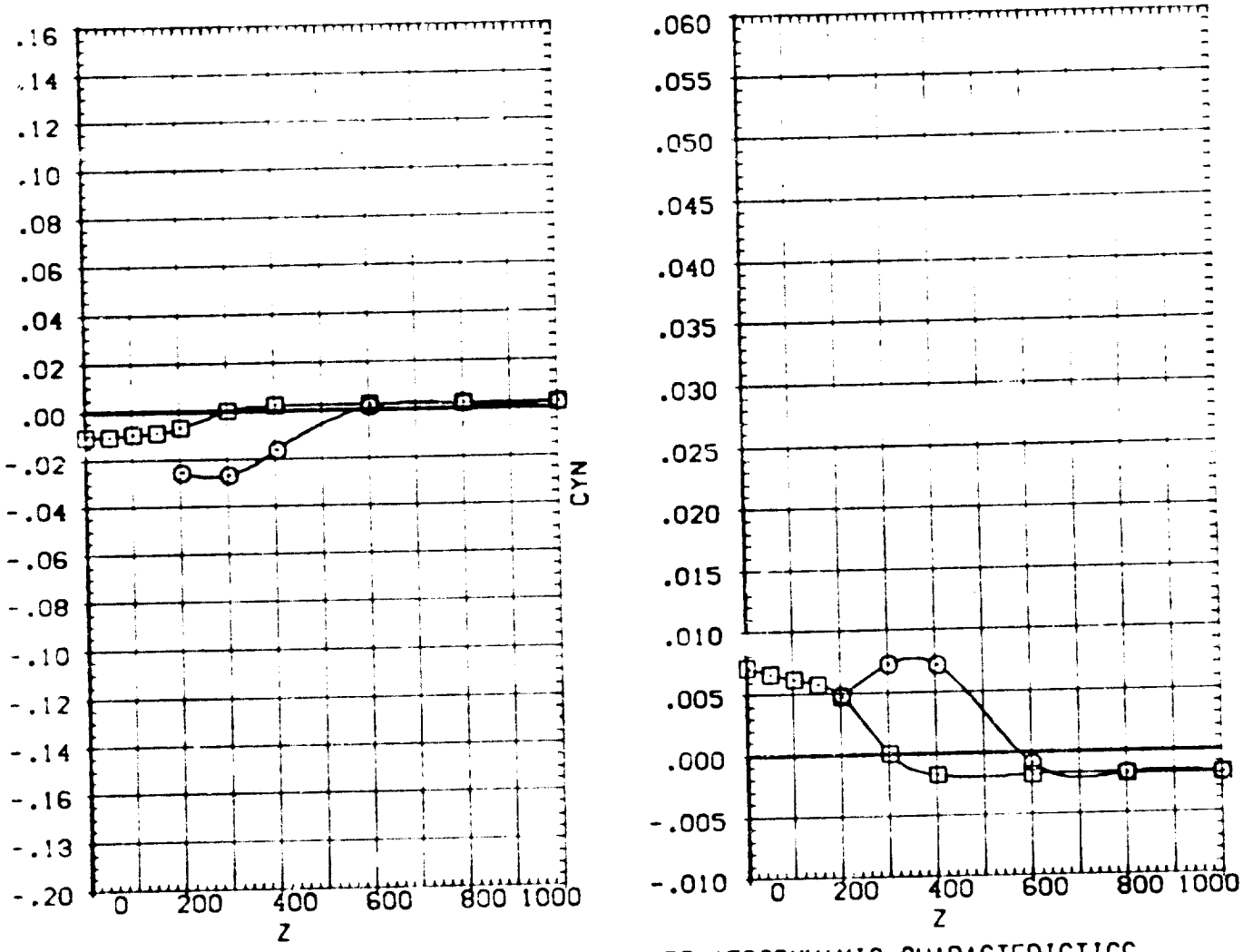


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

[A13 SRB(S8) W/O PLUMES SEPARATING FROM OST10 (RTJ202)

SYMBOL	X		PARAMETRIC VALUES		
	.173	MACH	4.530	PTOTAL	110.000
	900.690	ALPHA	.000	BETA	.000
		DALPHA	-10.000	DBETA	5.000
		Y	.000	PCNBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

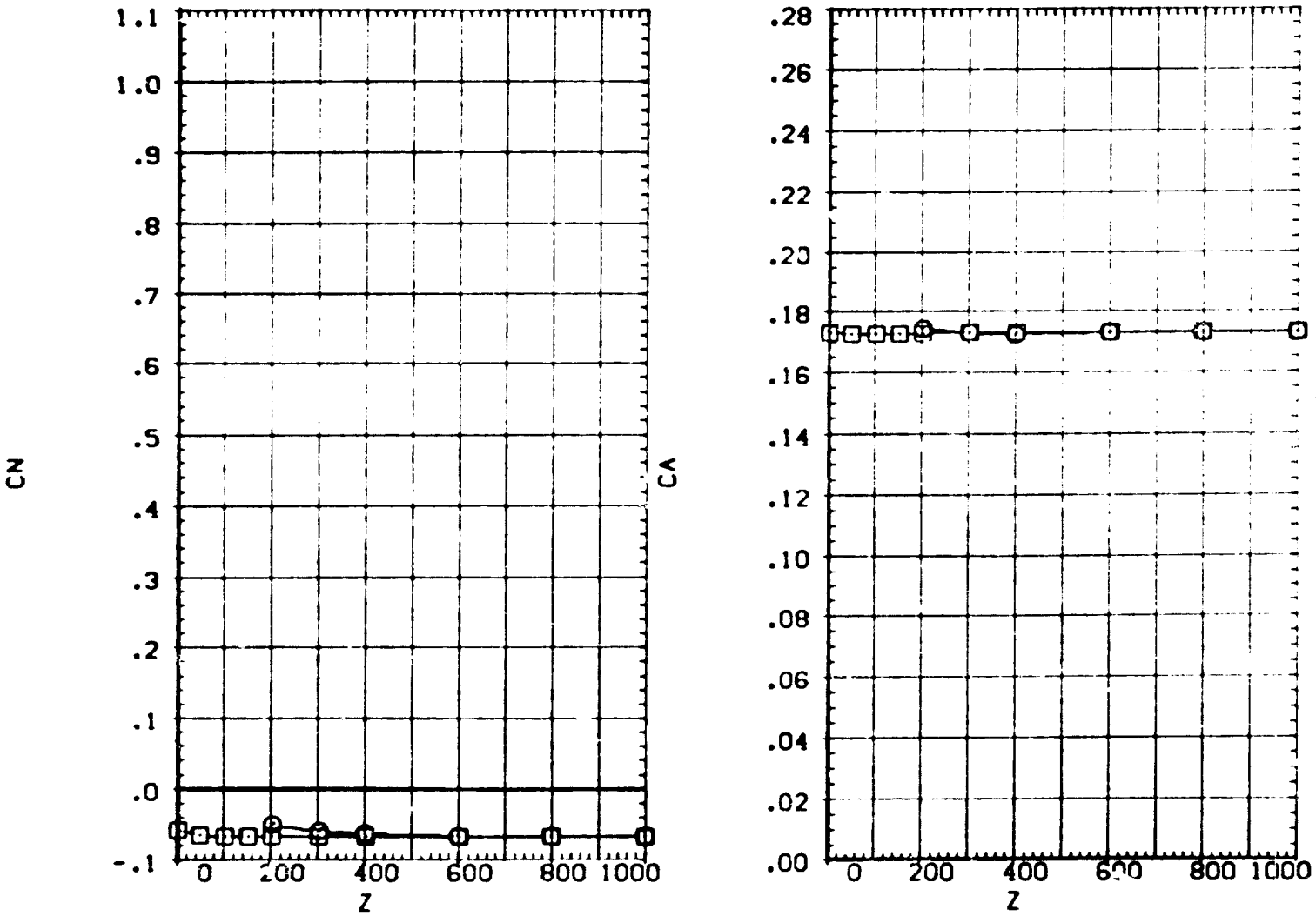


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

[A13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ203)

SYMBOL	X		PARAMETRIC VALUES		
○	.277	MACH	4.530	PTOTAL	110.000
□	900.600	ALPHA	.000	BETA	.000
		DALPHA	-10.000	DBETA	5.000
		Y	200.000	PCHBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

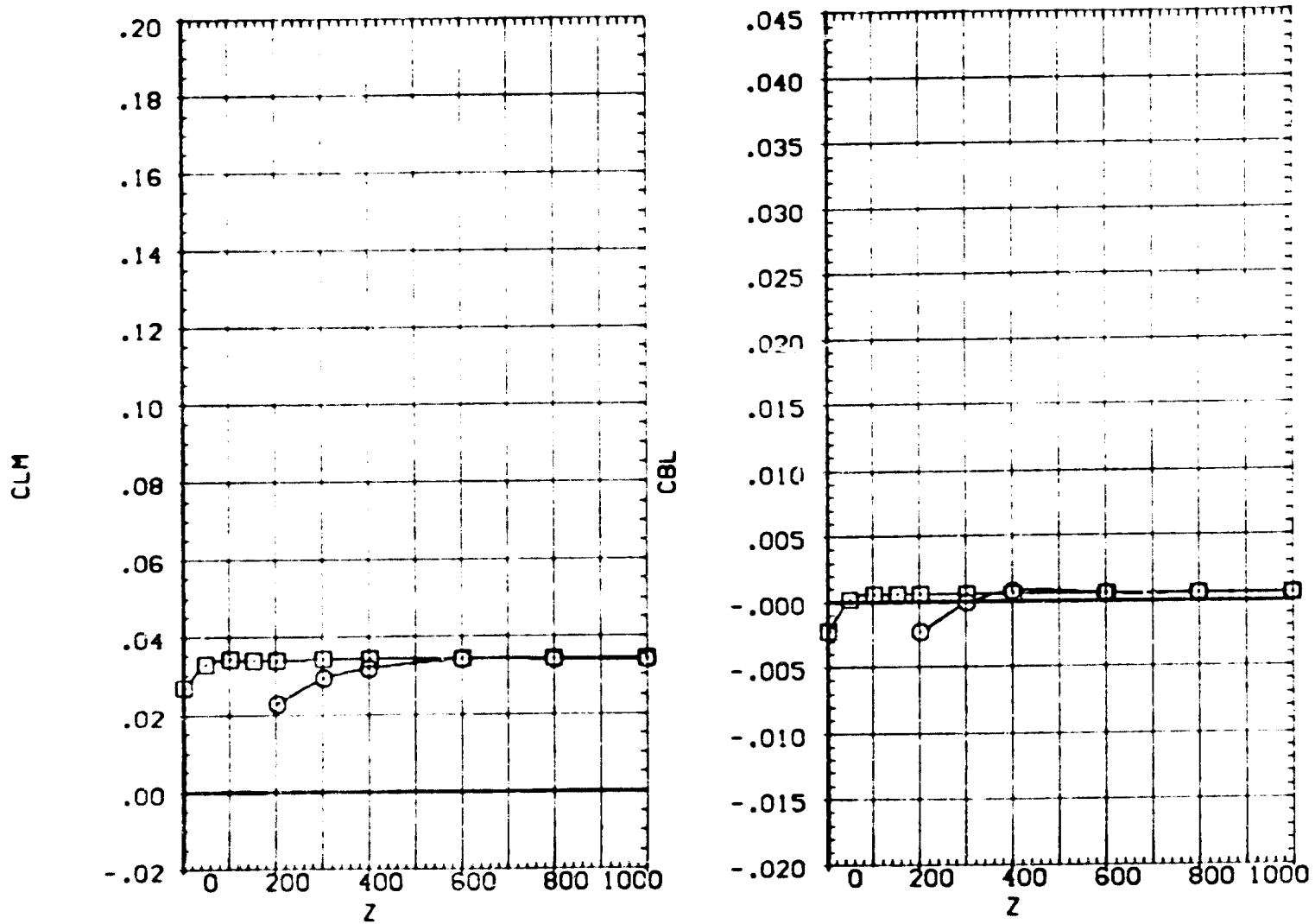


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

[A]3 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ203)

SYMBOL	X		PARAMETRIC VALUES		
	.277	MACH	4.530	PTOTAL	110.000
	900.600	ALPHA	.000	BETA	.000
		DALPHA	-10.000	DBETA	5.000
		Y	200.000	PCHMBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

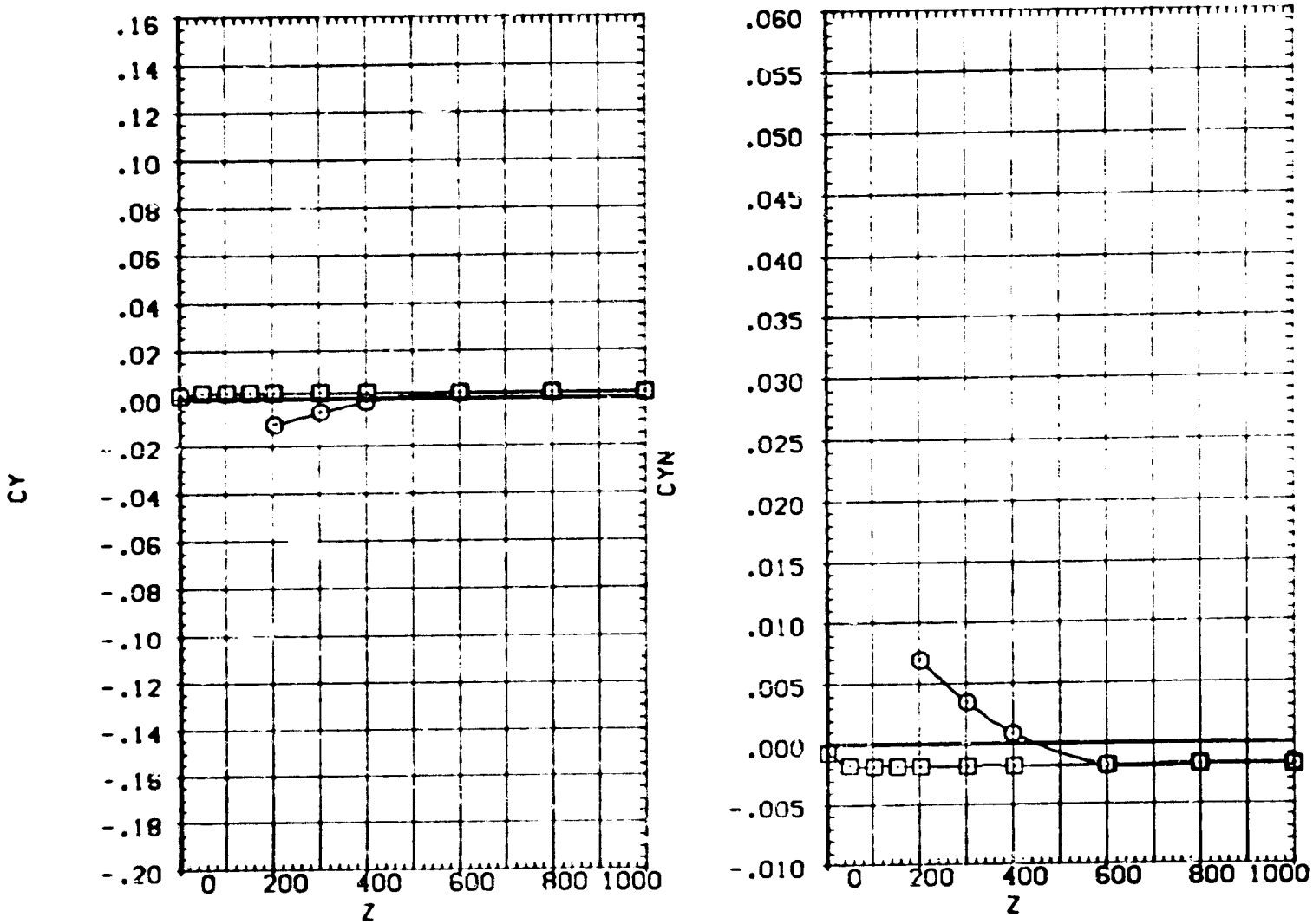


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ203)

SYMBOL	X		PARAMETRIC VALUES		
○	.277	MACH	4.530	PTOTAL	110.000
□	900.600	ALPHA	.000	BETA	.000
		DALPHA	-10.000	DBETA	5.000
		Y	200.000	PCHNBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

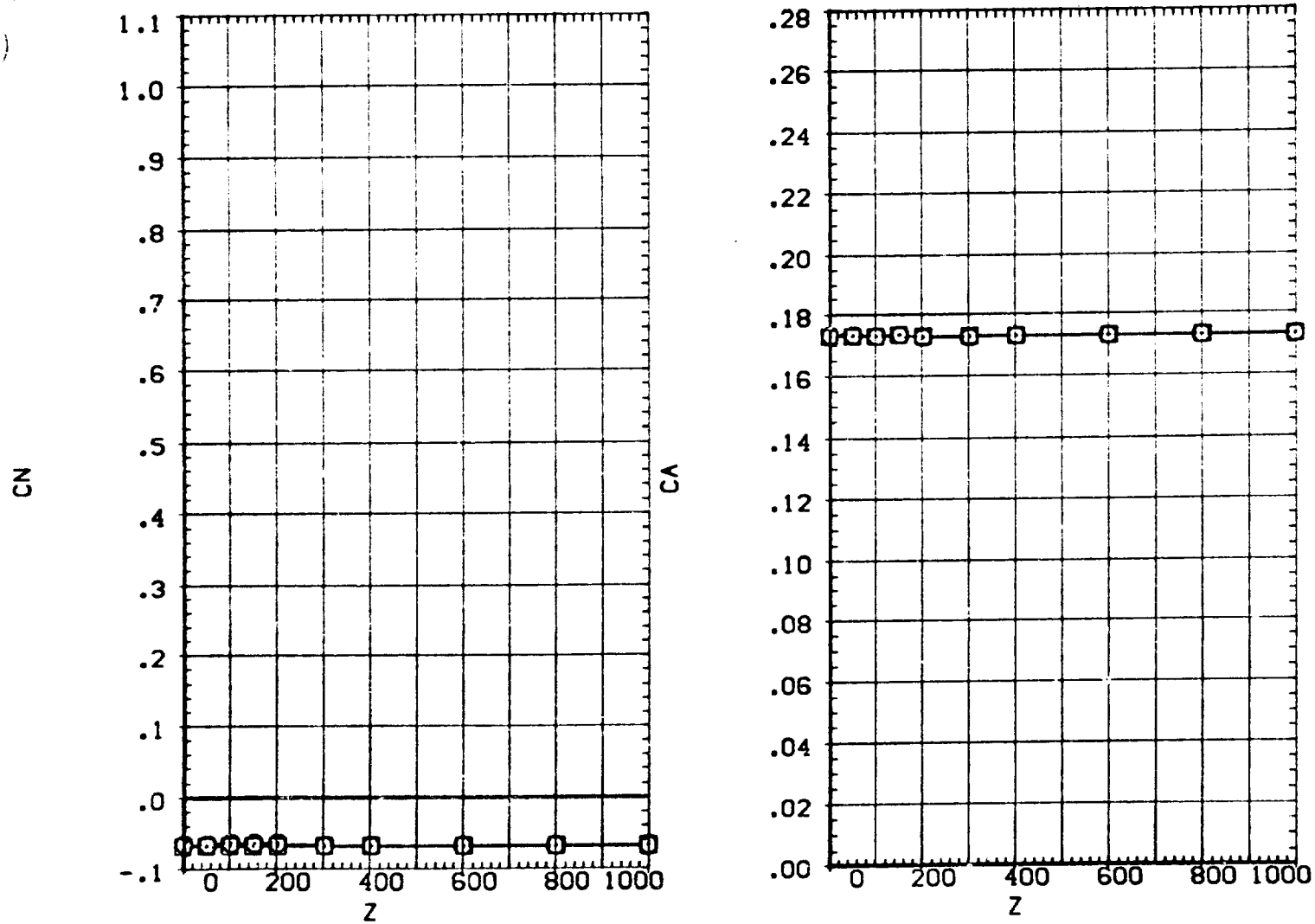


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ204)

SYMBOL	X		PARAMETRIC VALUES		
○	.163	MACH	4.530	PTOTAL	110.000
□	900.370	ALPHA	.000	BETA	.000
		DALPHA	-10.000	DBETA	5.000
		Y	400.000	PCHMBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

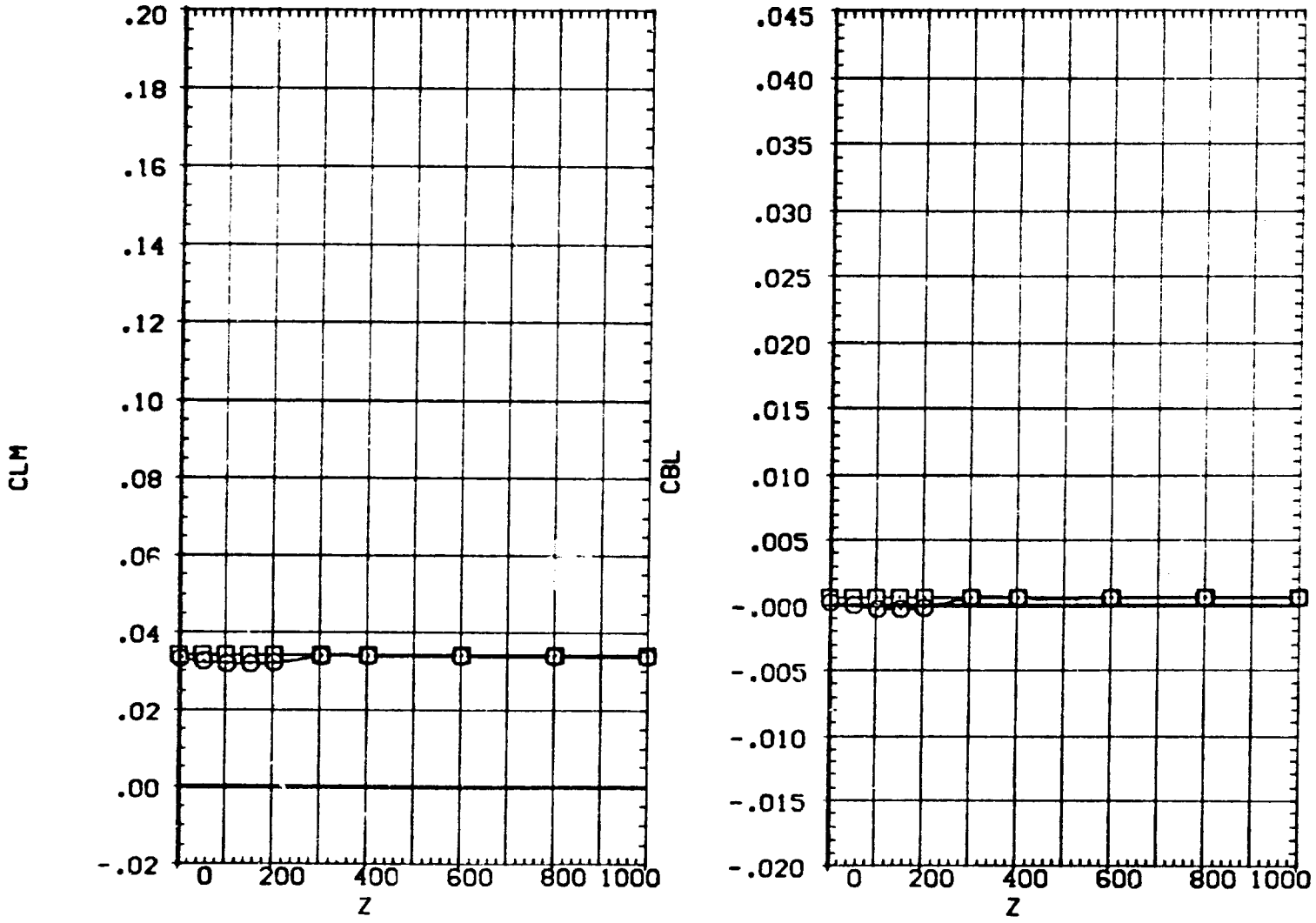


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S&) W/O PLUMES SEPARATING FROM 09T10 (RTJ204)

SYMBOL	X		PARAMETRIC VALUES		
○	.163	MACH	4.530	PTOTAL	110.000
□	900.370	ALPHA	.000	BETA	.000
		DALPHA	-10.000	DBETA	5.000
		Y	400.000	PCHMBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

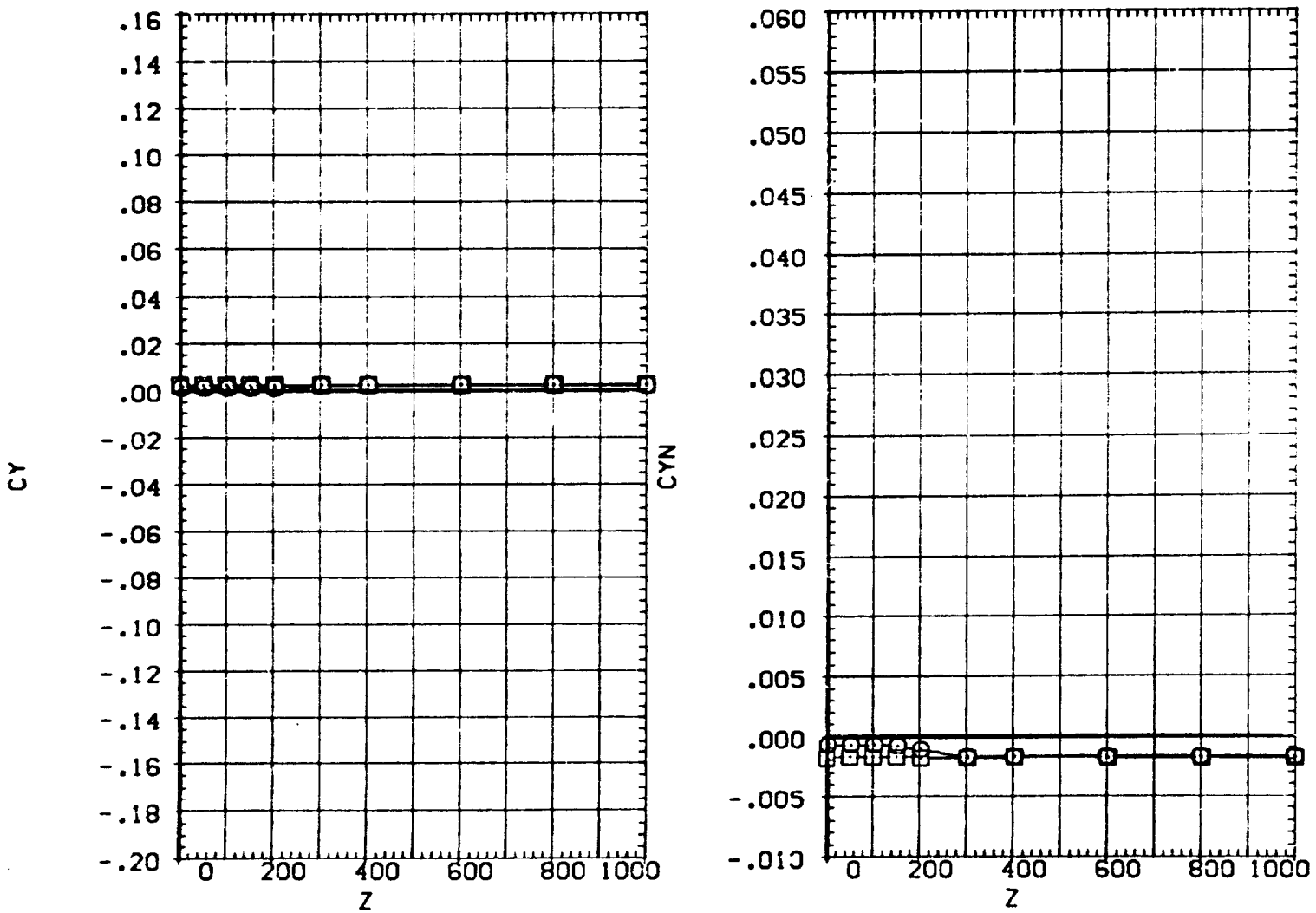


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ204)

SYMBOL	X		PARAMETRIC VALUES		
○	.16)	MACH	4.530	PTOTAL	110.000
□	900.3)	ALPHA	.000	BETA	.000
		DALPHA	-10.000	DBETA	5.000
		Y	400.000	PCHMBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

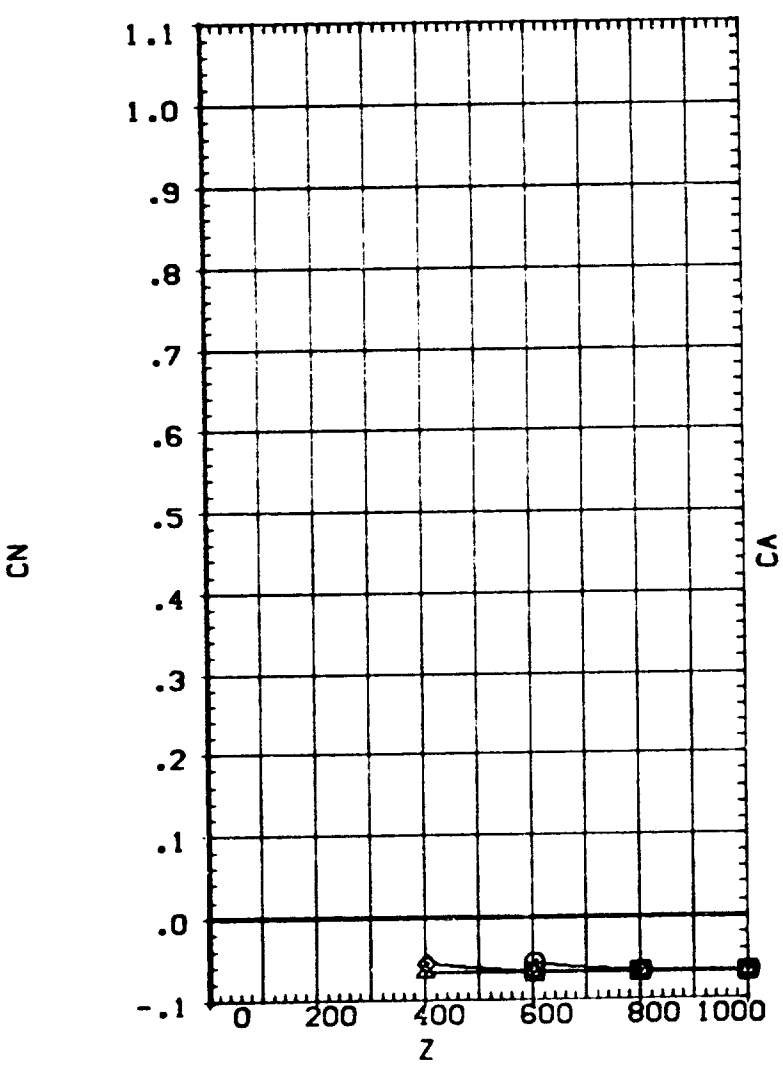


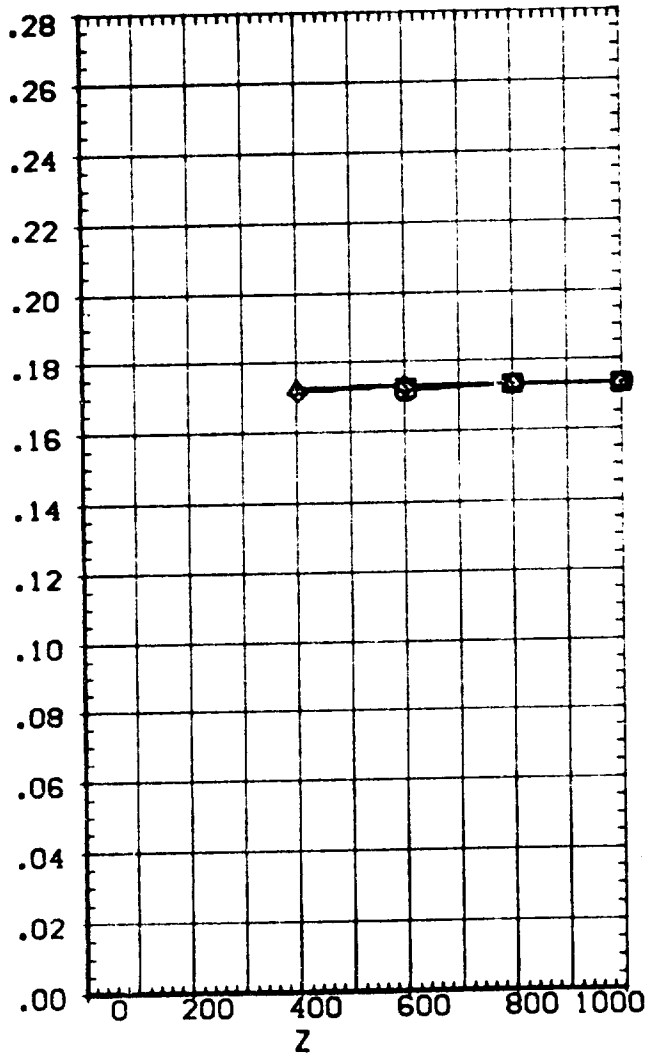
EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ205)

SYMBOL	X		PARAMETRIC VALUES		
○	.469	MACH	4.530	PTOTAL	110.000
□	300.590	ALPHA	.000	BETA	.000
◇	600.600	DALPHA	-10.000	DBETA	-5.000
△	900.340	Y	.000	PCHMBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



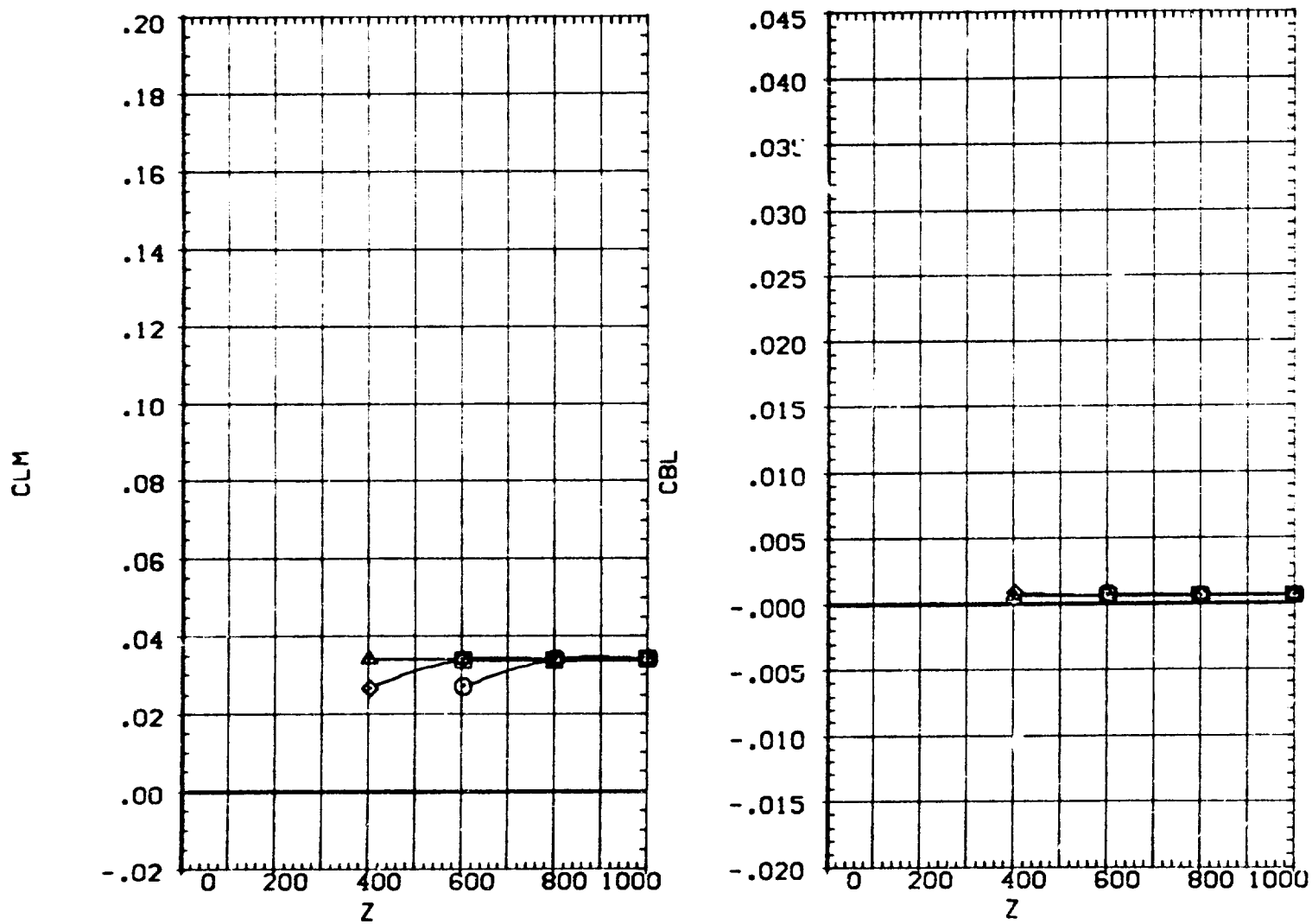


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

!A13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ205)

SYMBOL	X		PARAMETRIC VALUES		
○	.469	MACH	4.530	PTOTAL	110.000
□	300.590	ALPHA	.000	BETA	.000
◇	600.600	DALPHA	-10.000	DBETA	-5.000
△	900.340	Y	.000	PCHMBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

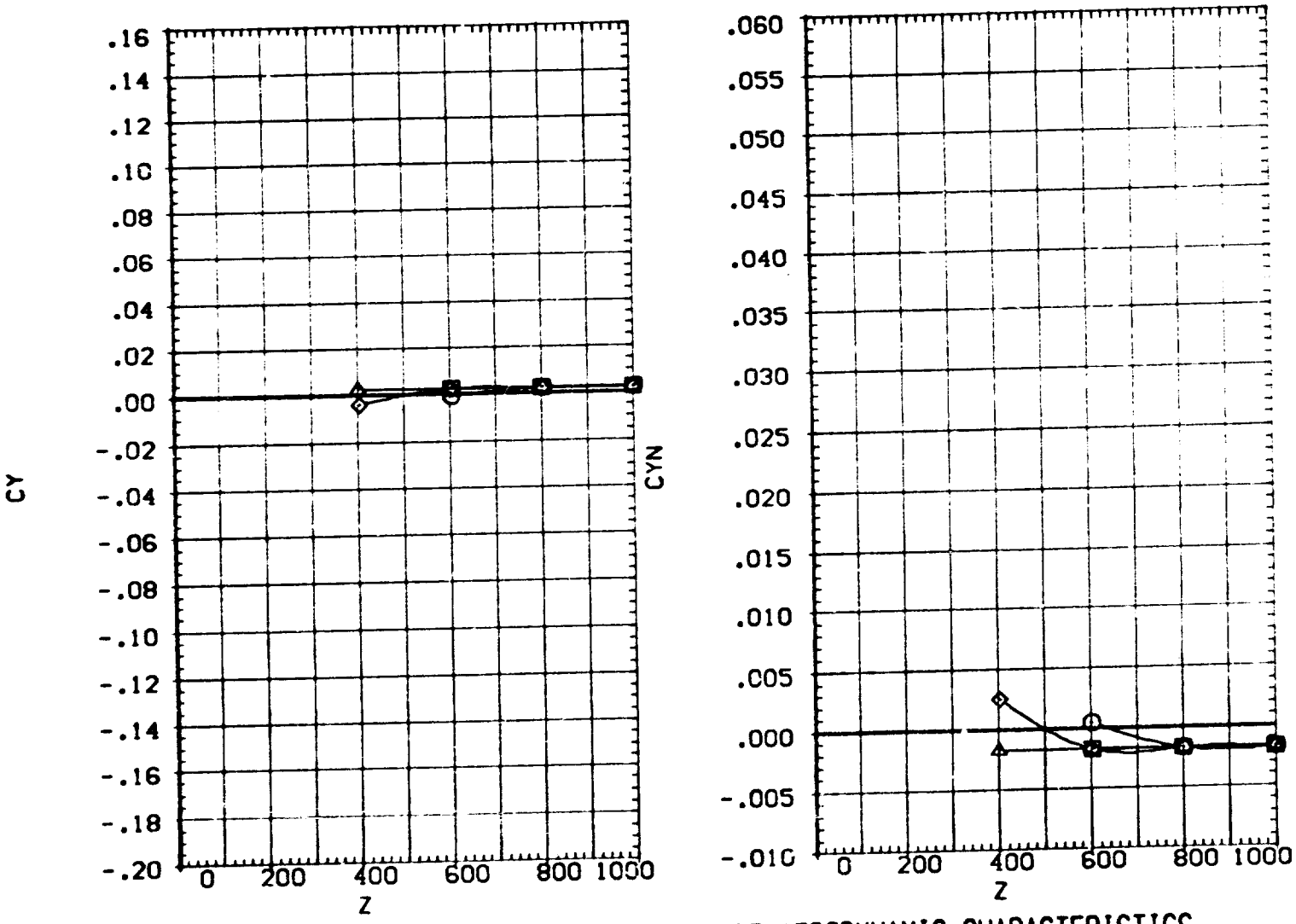


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

!A13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ205)

SEE THE ASSOCIATED DATA DOCUME... FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

SYMBOL	X		PARAMETRIC VALUES		
○	.469	MACH	4.530	PTOTAL	110.000
□	300.590	ALPHA	.000	BETA	.000
◇	600.600	DALPHA	-10.000	DBETA	-5.000
△	900.340	Y	.000	PCHMBR	.000

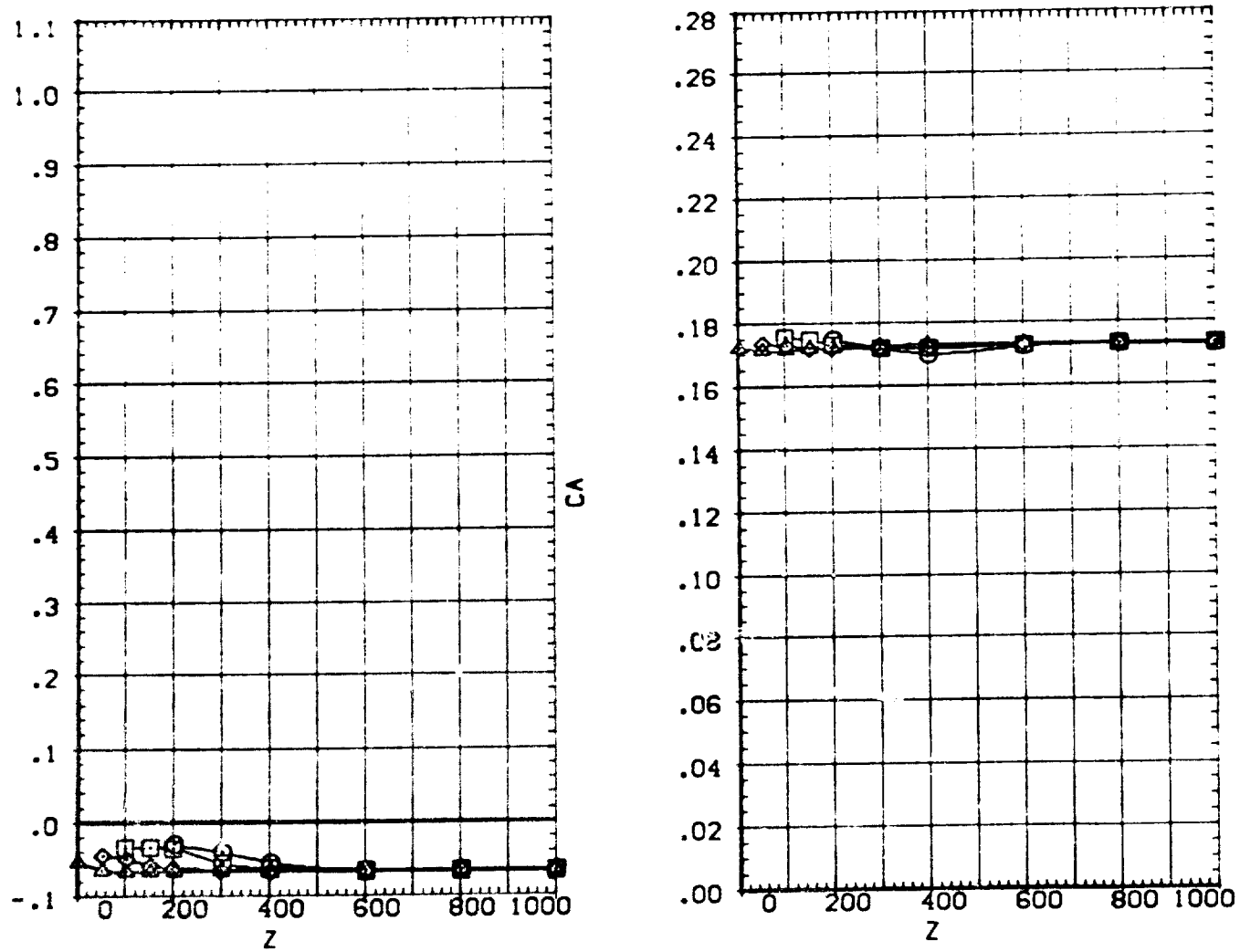


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

[A:3 SRB(S8) W/O PLUMES SEPARATING FROM C9T10 (RTJ206)

SYMBOL			PARAMETRIC VALUES		
	.45:	MACH	4.530	PITCH	110.000
	300.360	ALPHA	.000	BETA	.000
	600.6:0	DALPHA	-10.000	DBETA	-5.000
	900.830	γ	200.000	PCHBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

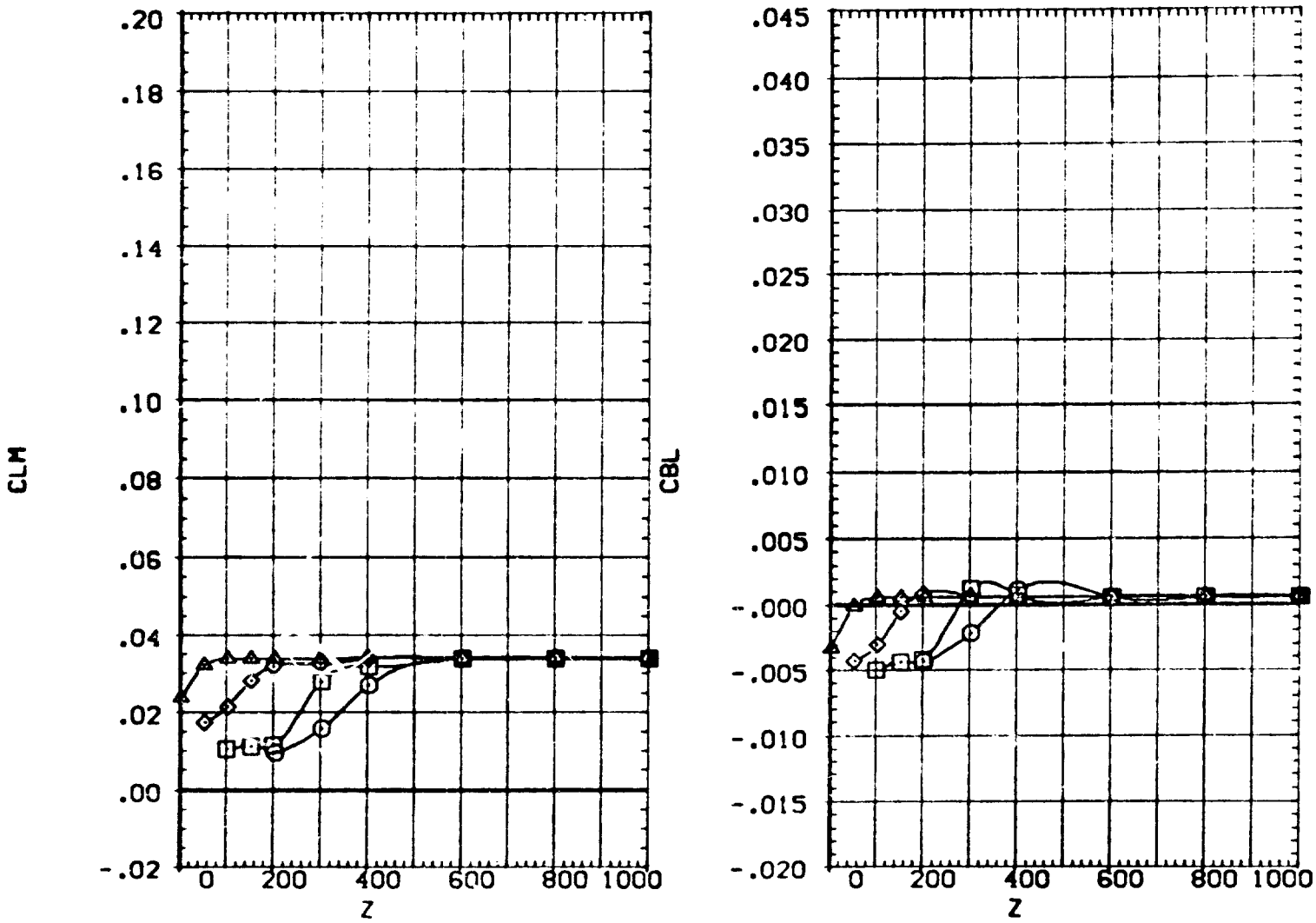


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ206)

SYMBOL	X		PARAMETRIC VALUES		
○	.451	MACH	+.530	PTOTAL	110.000
□	300.360	ALPHA	.000	BETA	.000
◇	600.610	DALPHA	-10.000	DBETA	-5.000
△	900.830	Y	200.000	PCHMBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

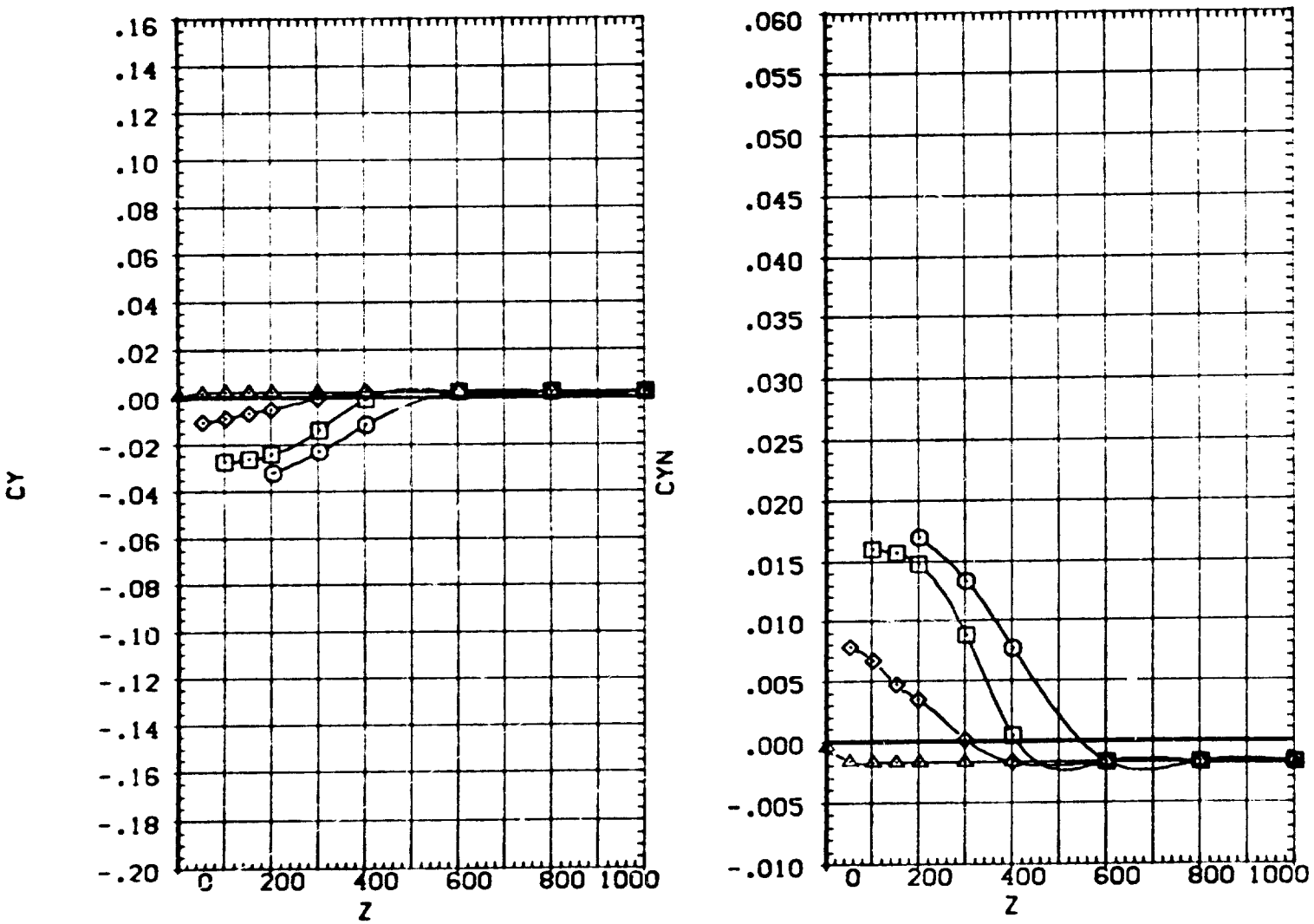


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ206)

SYMBOL	X		PARAMETRIC VALUES		
○	.451	MACH	4.530	PTOTAL	110.000
□	300.360	ALPHA	.000	BETA	.000
◇	600.610	DALPHA	-10.000	DBETA	-5.000
△	900.830	Y	200.000	PCHMBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

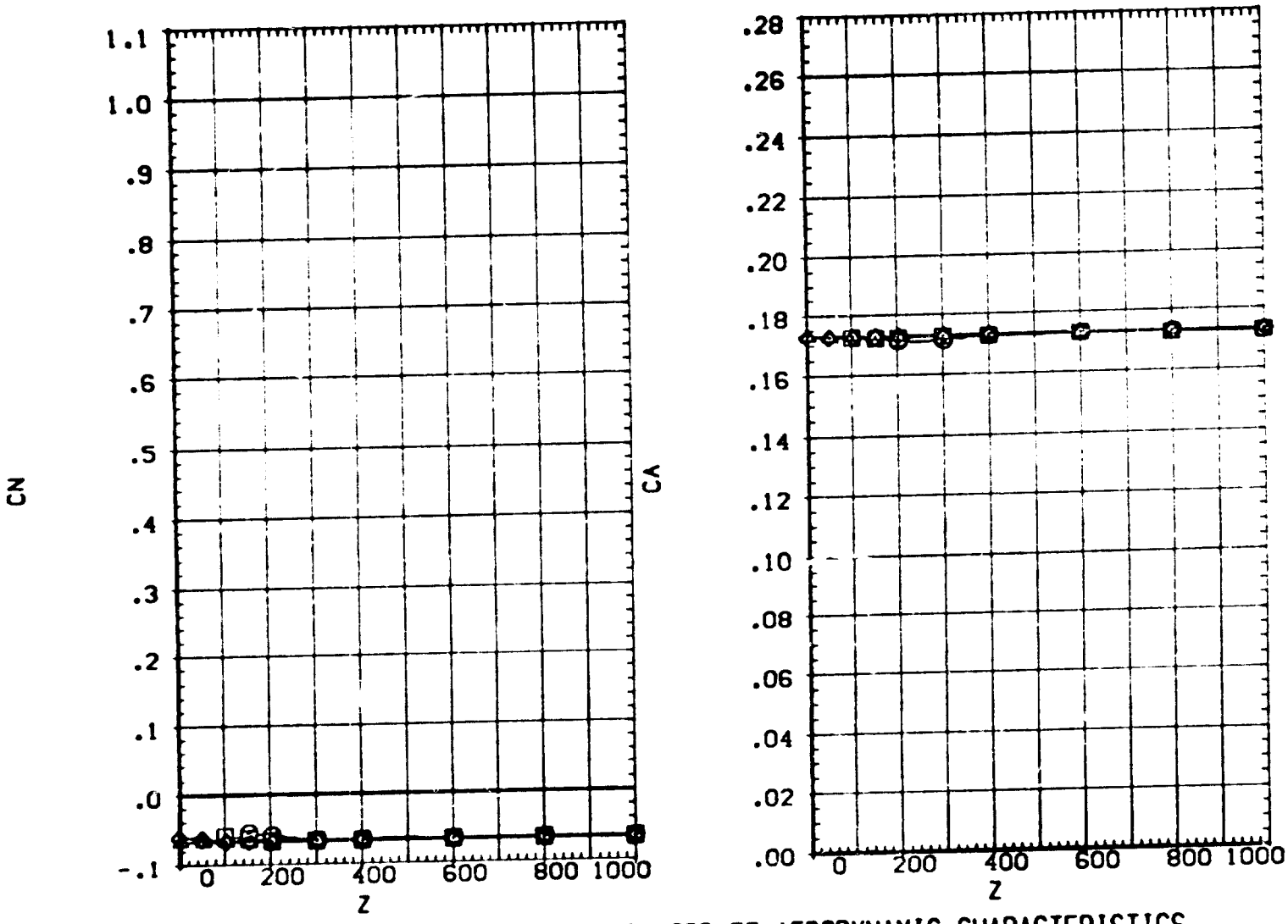


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

[A13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ207)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

SYMBOL	X	PARAMETRIC VALUES			
○	.296	MACH	4.530	PTOTAL	110.000
□	299.890	ALPHA	.000	BETA	.000
◇	600.400	DALPHA	-10.000	DBETA	-5.000
△	900.580	Y	400.000	PCHNGR	.000

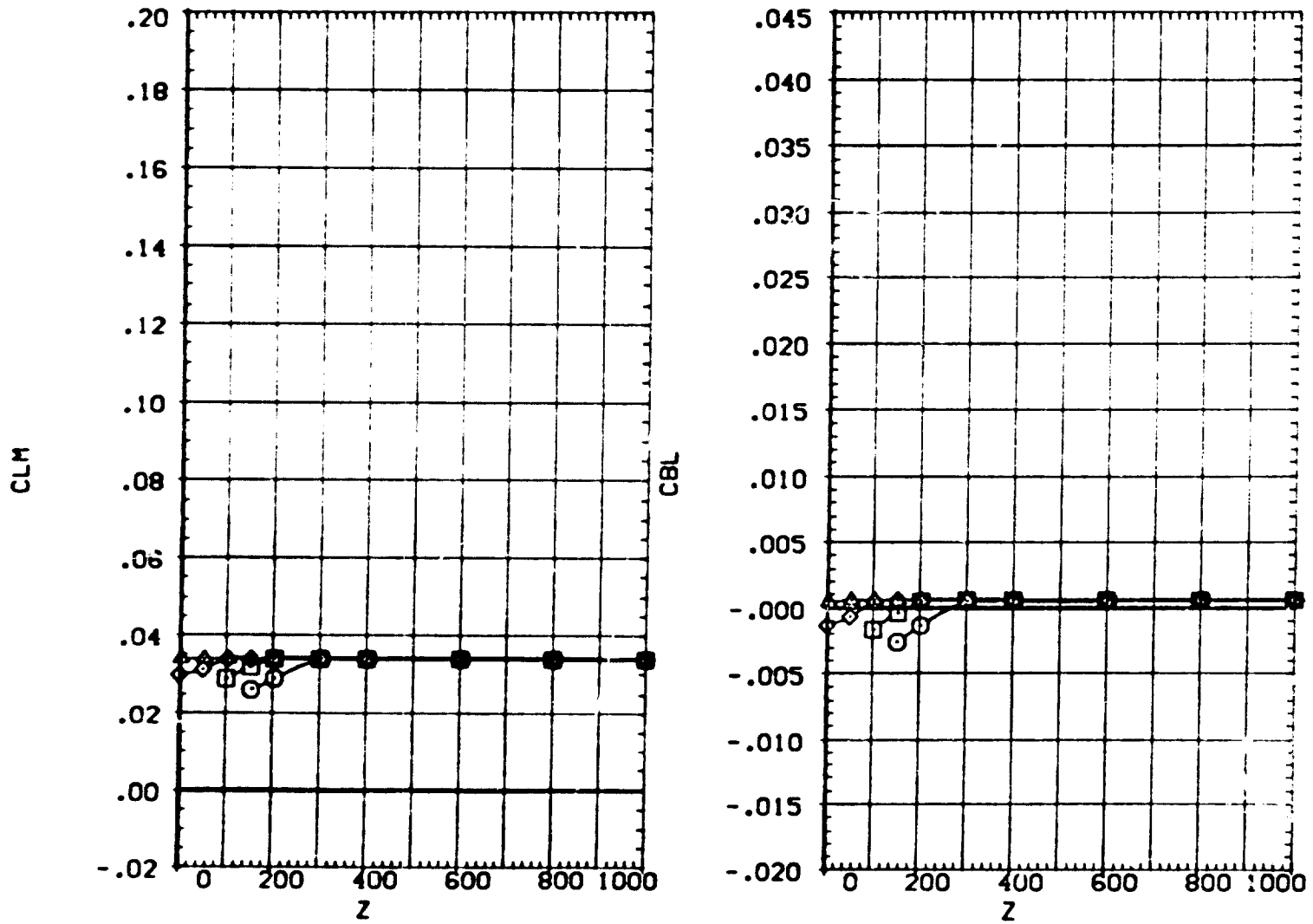


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

:A13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ207)

SYMBOL	X		PARAMETRIC VALUES		
○	.296	MACH	4.530	PTOTAL	110.000
□	299.890	ALPHA	.000	BETA	.000
◇	600.400	DALPHA	-10.000	DBETA	-5.000
△	900.580	Y	400.000	PCHMBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIGUAL DATASETS

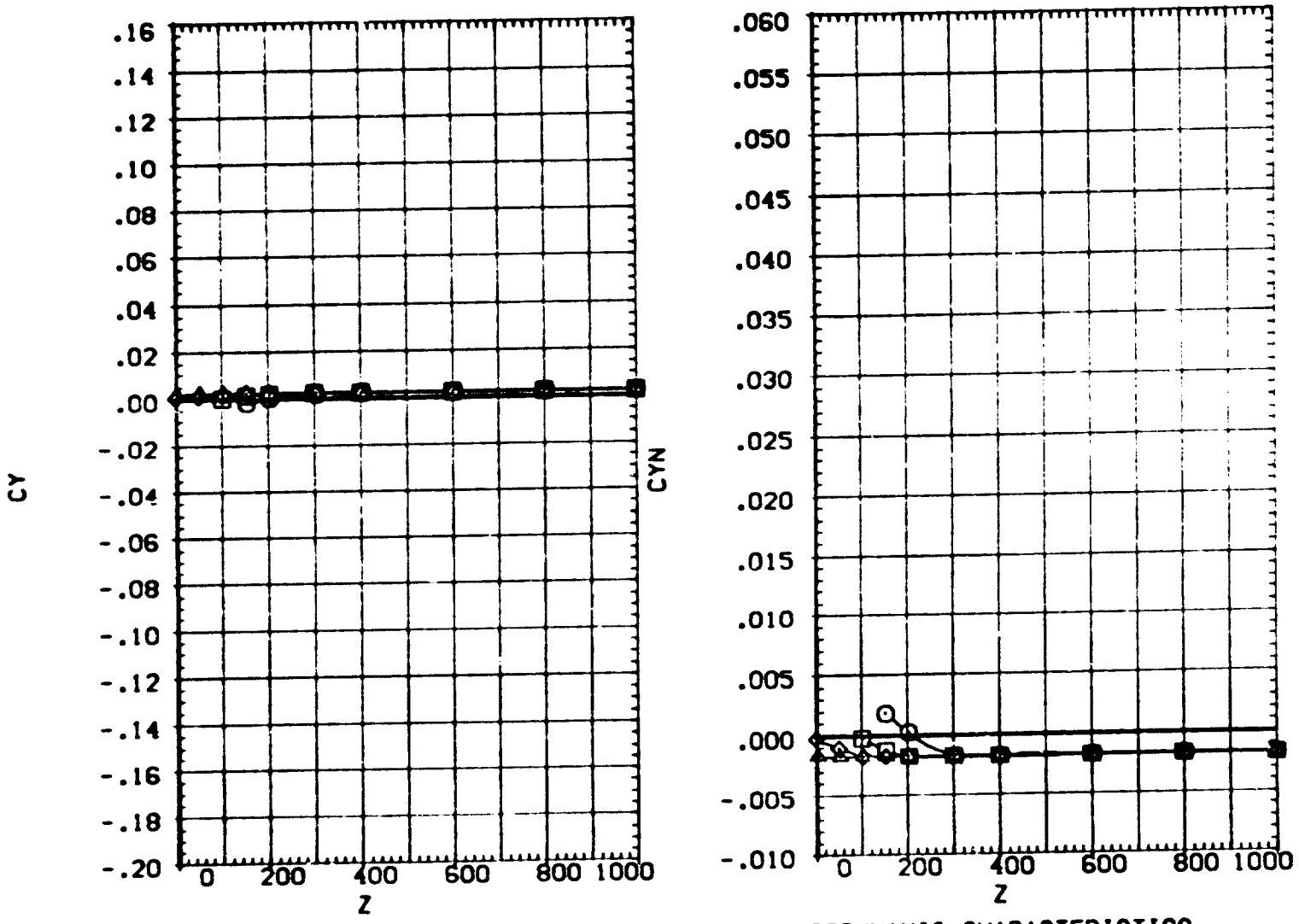


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ207)

SYMBOL	X		PARAMETRIC VALUES		
○	.296	MACH	4.530	PTOTAL	110.000
□	299.890	ALPHA	.000	BETA	.000
◇	600.400	DALPHA	-10.000	DBETA	-5.000
△	900.580	Y	400.000	PCHNGR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

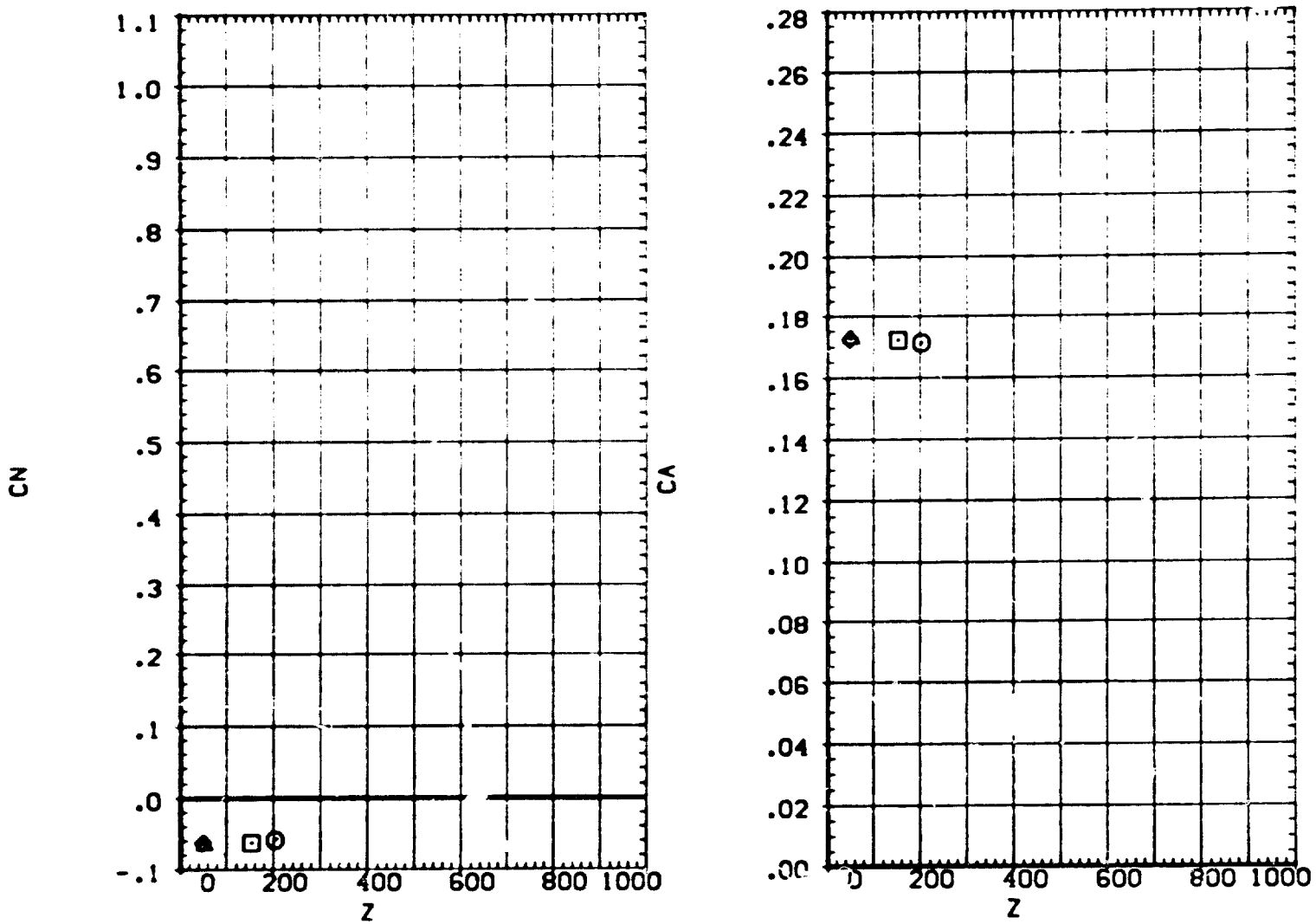


EFFECT OF SRB W/O PLUMES SEPARATION ON ORBITER AERODYNAMIC CHARACTERISTICS

!A!3 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ208)

SYMBOL	X		PARAMETRIC VALUES		
○	.294	MACH	4.530	PTOTAL	110.000
□	300.390	ALPHA	.000	BETA	.000
◇	600.540	DALPHA	-10.000	DBETA	-5.000
△	900.680	Y	800.000	PCHMBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

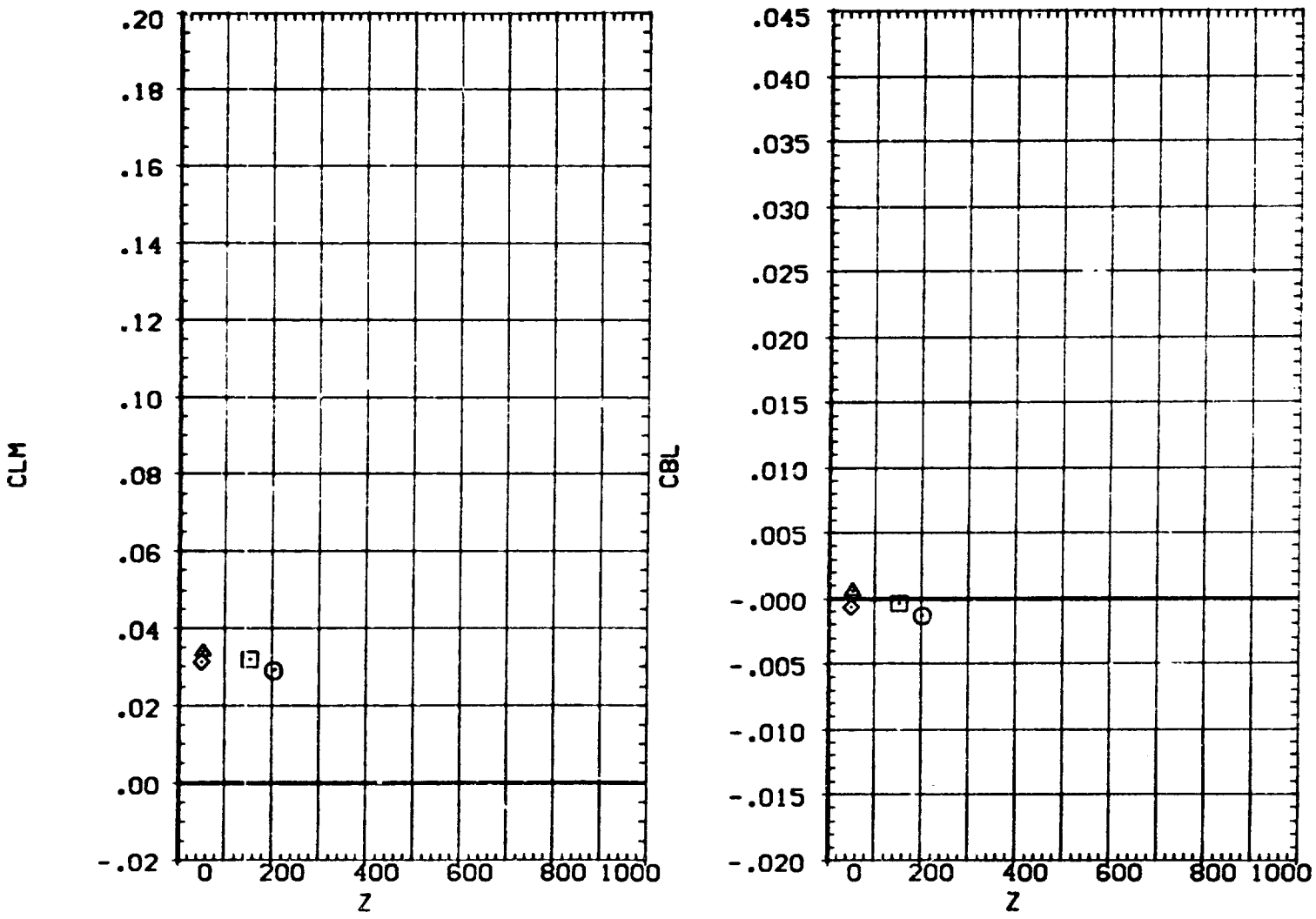


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ208)

SYMBOL	X		PARAMETRIC VALUES		
○	.294	MACH	4.530	PTOTAL	110.000
□	300.390	ALPHA	.000	BETA	.000
◇	600.540	DALPHA	-10.000	DBETA	-5.000
△	900.680	Y	800.000	PCHMBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

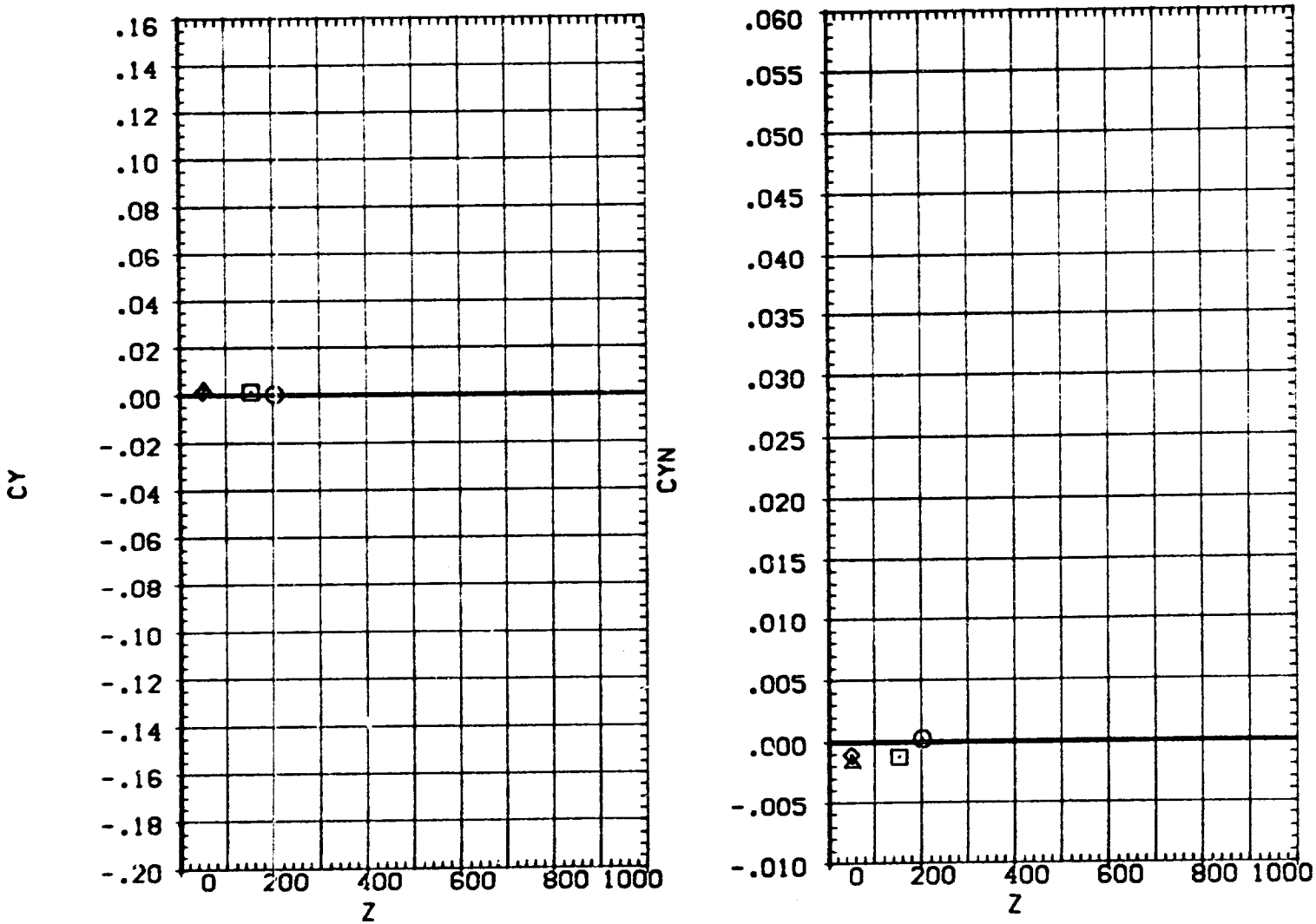


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

TA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ208)

SYMBOL	X		PARAMETRIC VALUES		
○	.294	MACH	4.530	PTOTAL	110.000
□	300.390	ALPHA	.000	BETA	.000
◇	600.540	DALPHA	-10.000	DBETA	-5.000
△	900.680	Y	800.000	PCHMBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

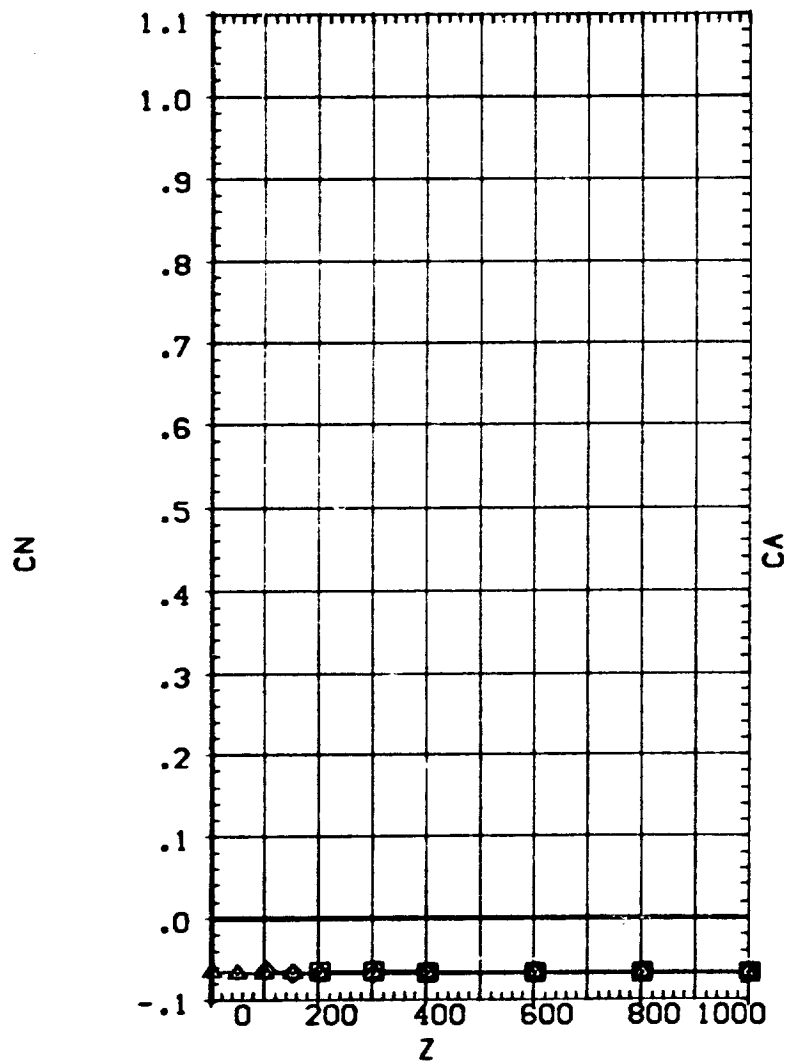


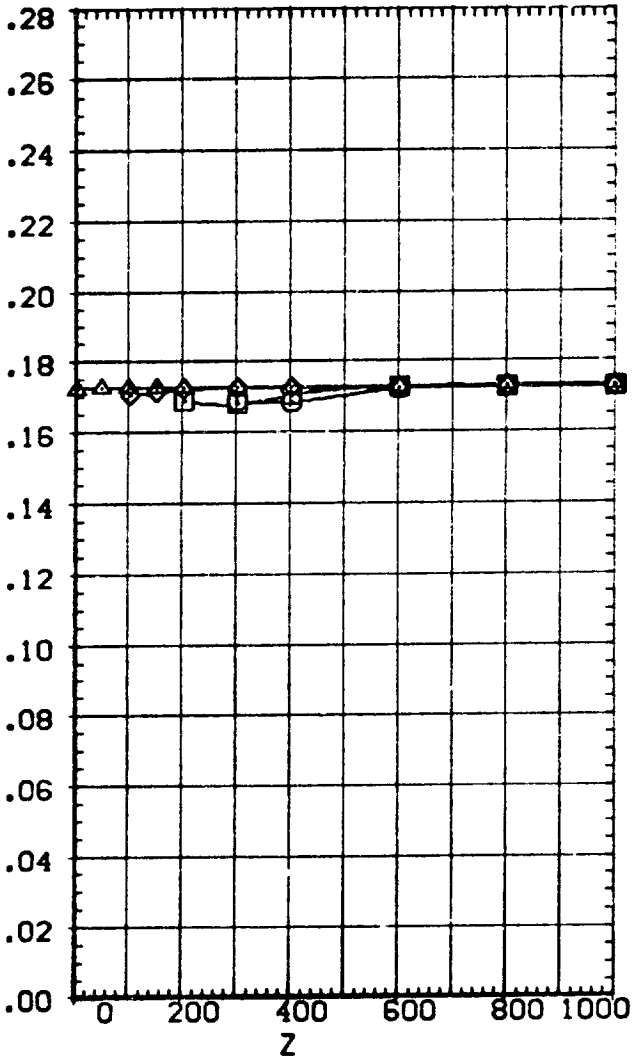
EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ210)

SYMBOL	X		PARAMETRIC VALUES		
○	.355	MACH	4.530	PTOTAL	110.000
□	300.600	ALPHA	.000	BETA	.000
◇	600.430	DALPHA	-10.000	DBETA	-10.000
△	900.530	Y	400.000	PCHMBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



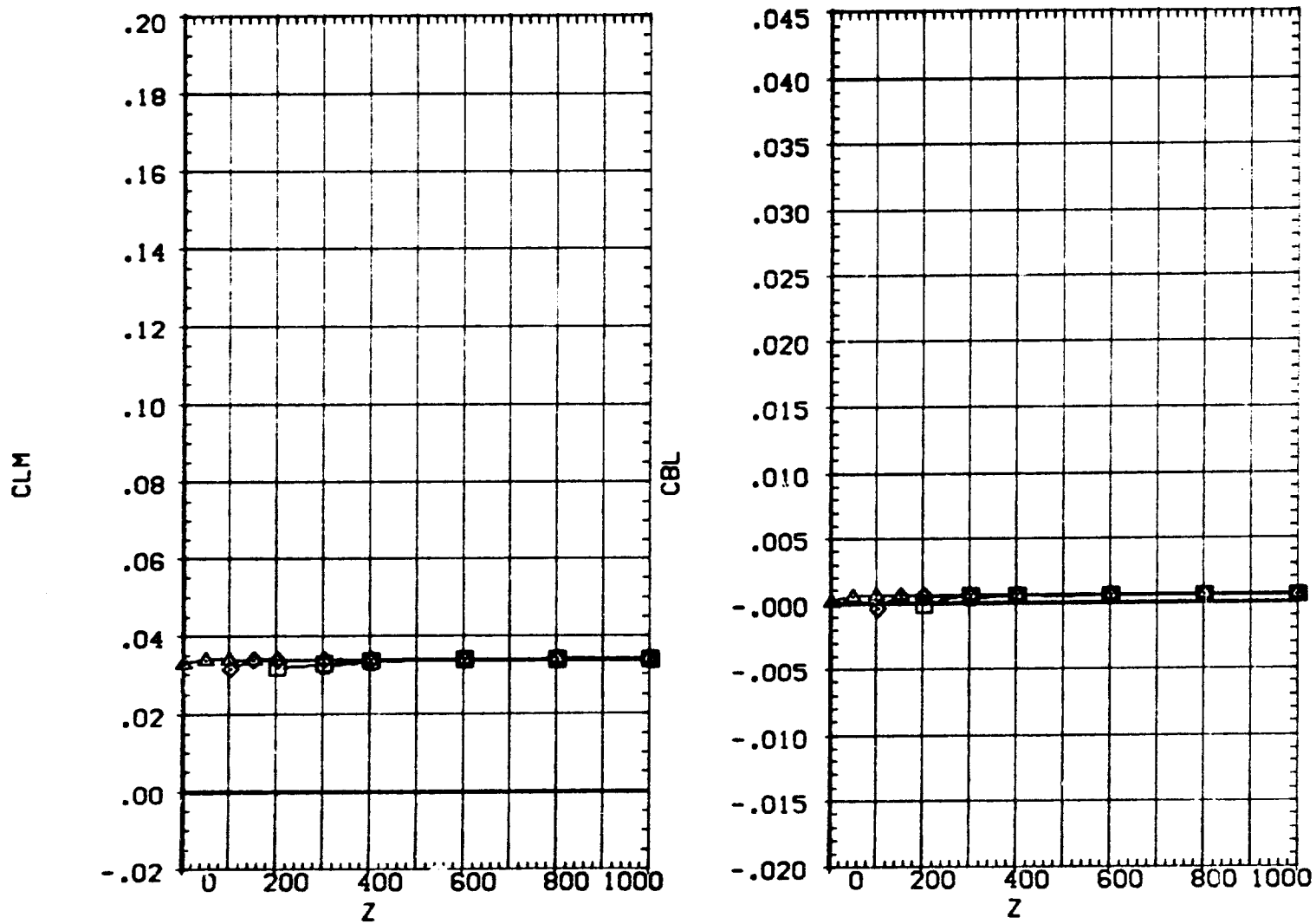


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ210)

SYMBOL	X		PARAMETRIC VALUES		
○	.355	MACH	4.530	PTOTAL	110.000
□	300.600	ALPHA	.000	BETA	.000
◇	600.430	DALPHA	-10.000	DBETA	-10.000
△	900.530	Y	400.000	PCHMBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

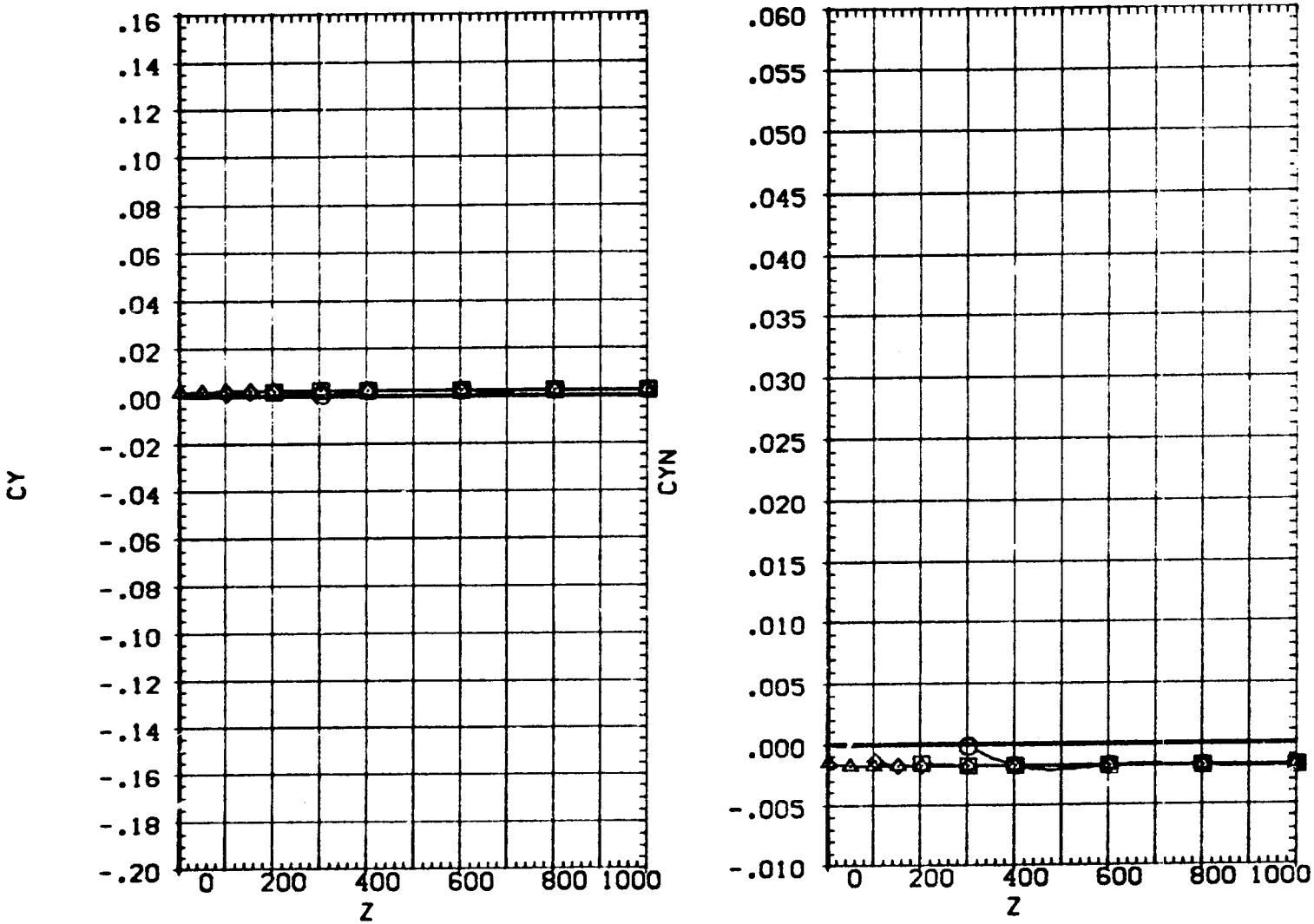


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ210)

SYMBOL	X		PARAMETRIC VALUES		
○	.355	MACH	4.530	PTOTAL	110.000
□	300.600	ALPHA	.000	BETA	.000
◇	600.430	DALPHA	-10.000	DBETA	-10.000
△	900.530	Y	400.000	PCHMBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

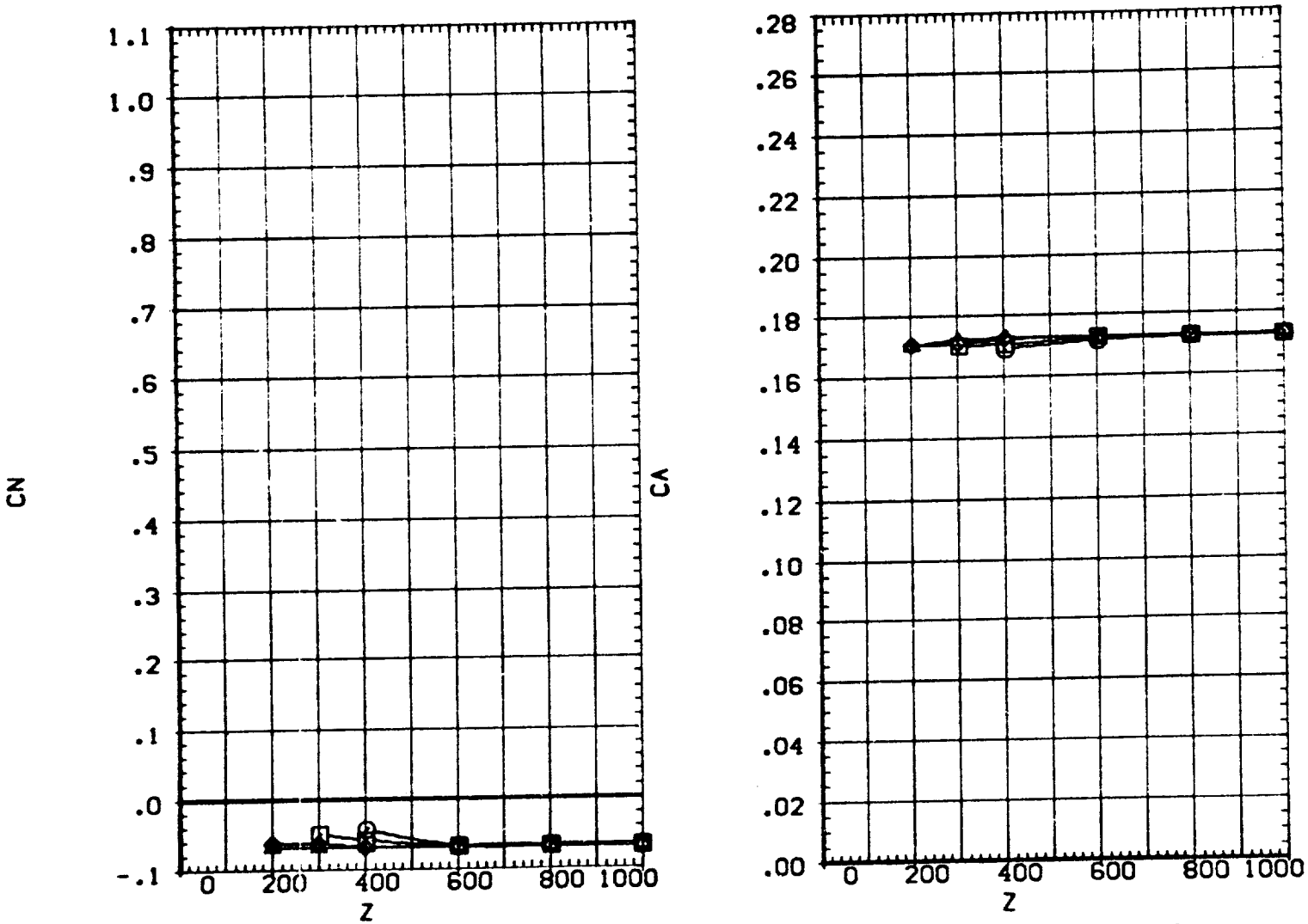


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

[A13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ211)

SYMBOL	X		PARAMETRIC VALUES		
○	.553	MACH	4.530	PTOTAL	110.000
□	300.640	ALPHA	.000	BETA	.000
◇	600.250	DALPHA	-10.000	DBETA	-10.000
△	900.070	Y	200.000	PCHMBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

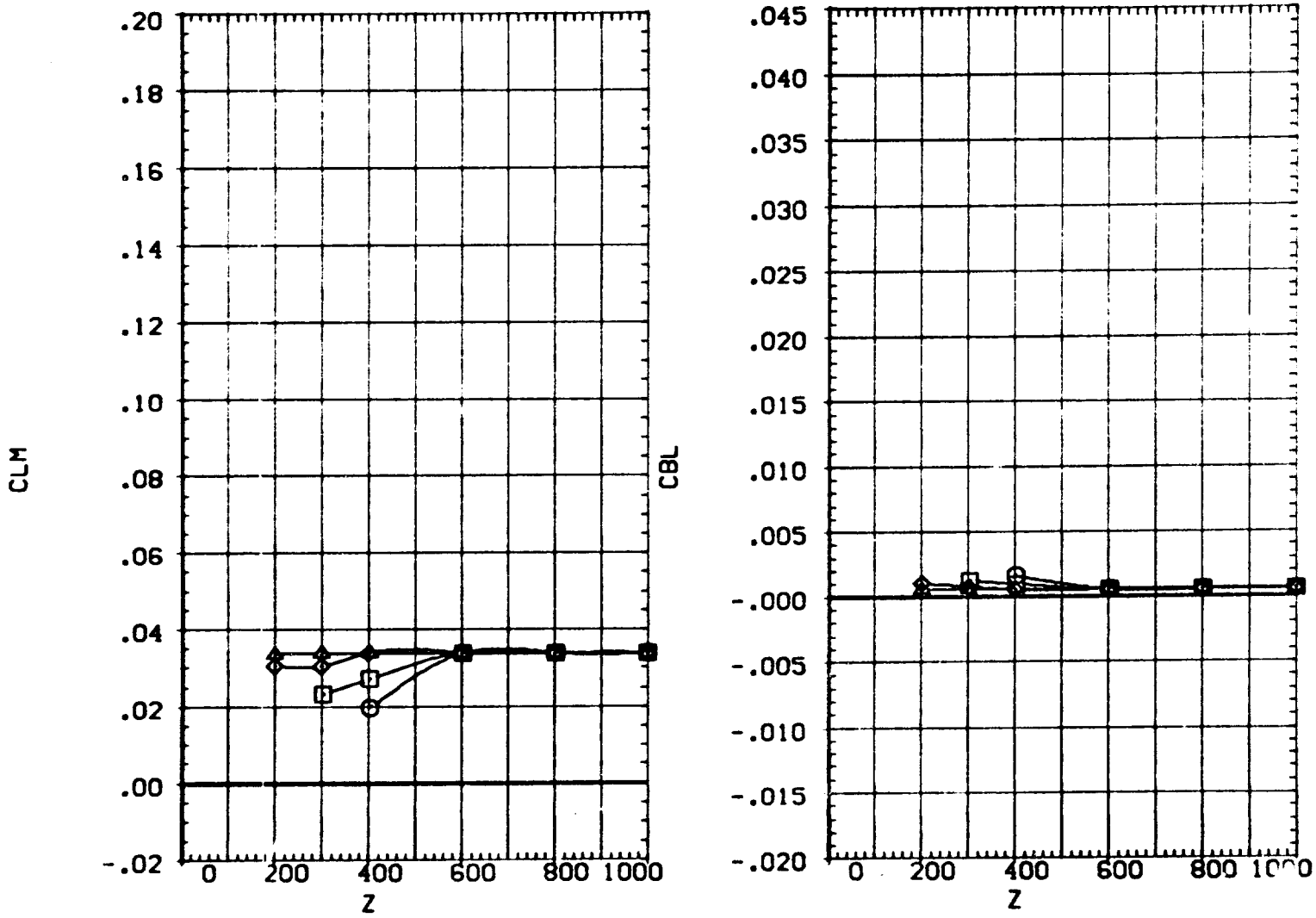


EFFECT OF SRB W/O PLUMES SEPARATION ON SRB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ211)

SYMBOL	X		PARAMETRIC VALUES		
○	.553	MACH	4.530	PTOTAL	110.000
□	300.240	ALPHA	.000	BETA	.000
◇	600.250	DALPHA	-10.000	DBETA	-10.000
△	900.070	Y	200.000	PCHMBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

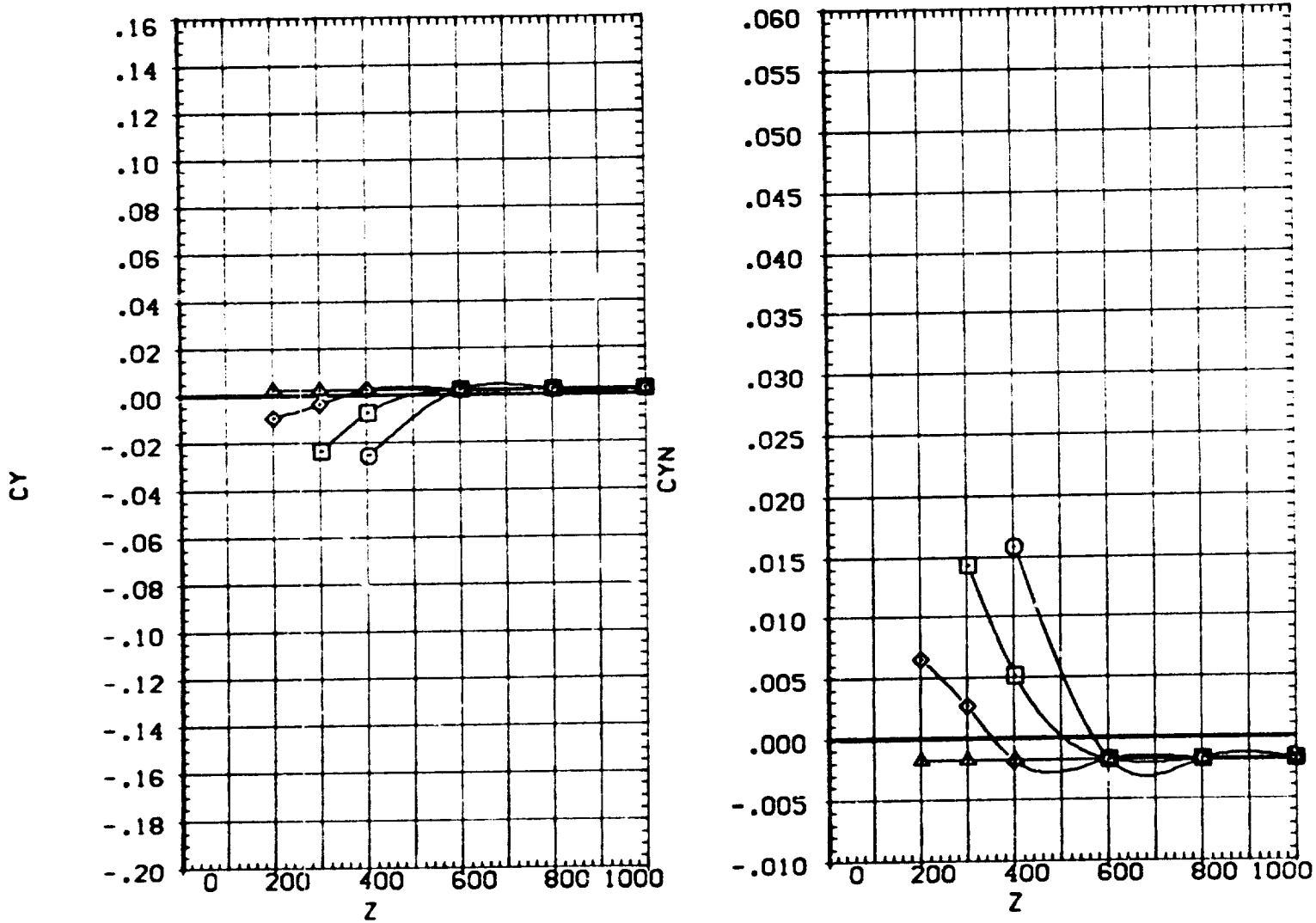


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ211)

SYMBOL	X		PARAMETRIC VALUES		
○	.553	MACH	4.530	PTOTAL	110.000
□	300.640	ALPHA	.000	BETA	.000
◇	600.250	DALPHA	-10.000	DBETA	-10.000
△	900.070	Y	200.000	PCHMBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

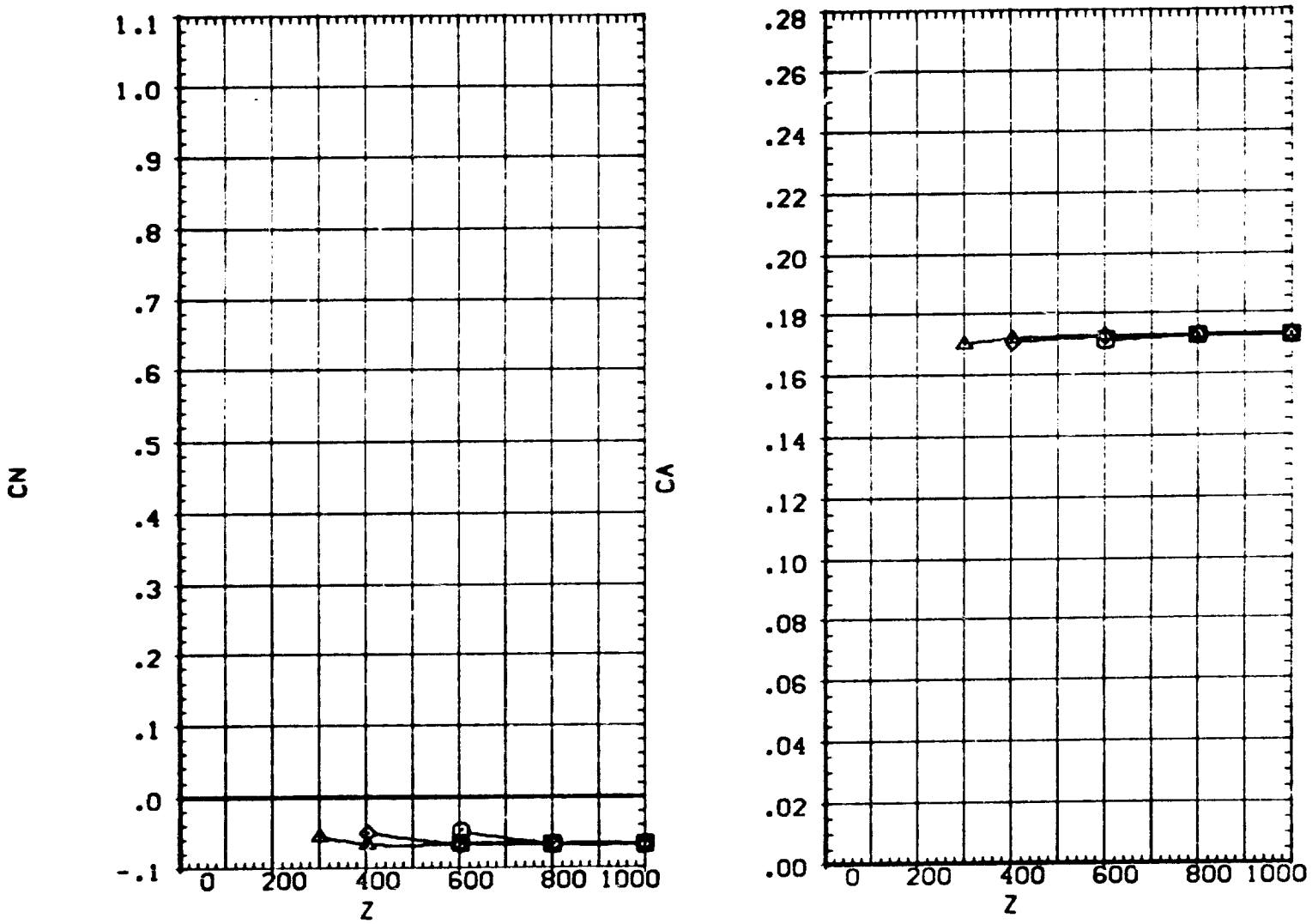


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ212)

SYMBOL	X		PARAMETRIC VALUES		
○	.523	MACH	4.530	PTOTAL	110.000
□	300.470	ALPHA	.000	BETA	.000
◇	600.710	DALPHA	-10.000	DBETA	-10.000
△	900.290	Y	.000	PCHMBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

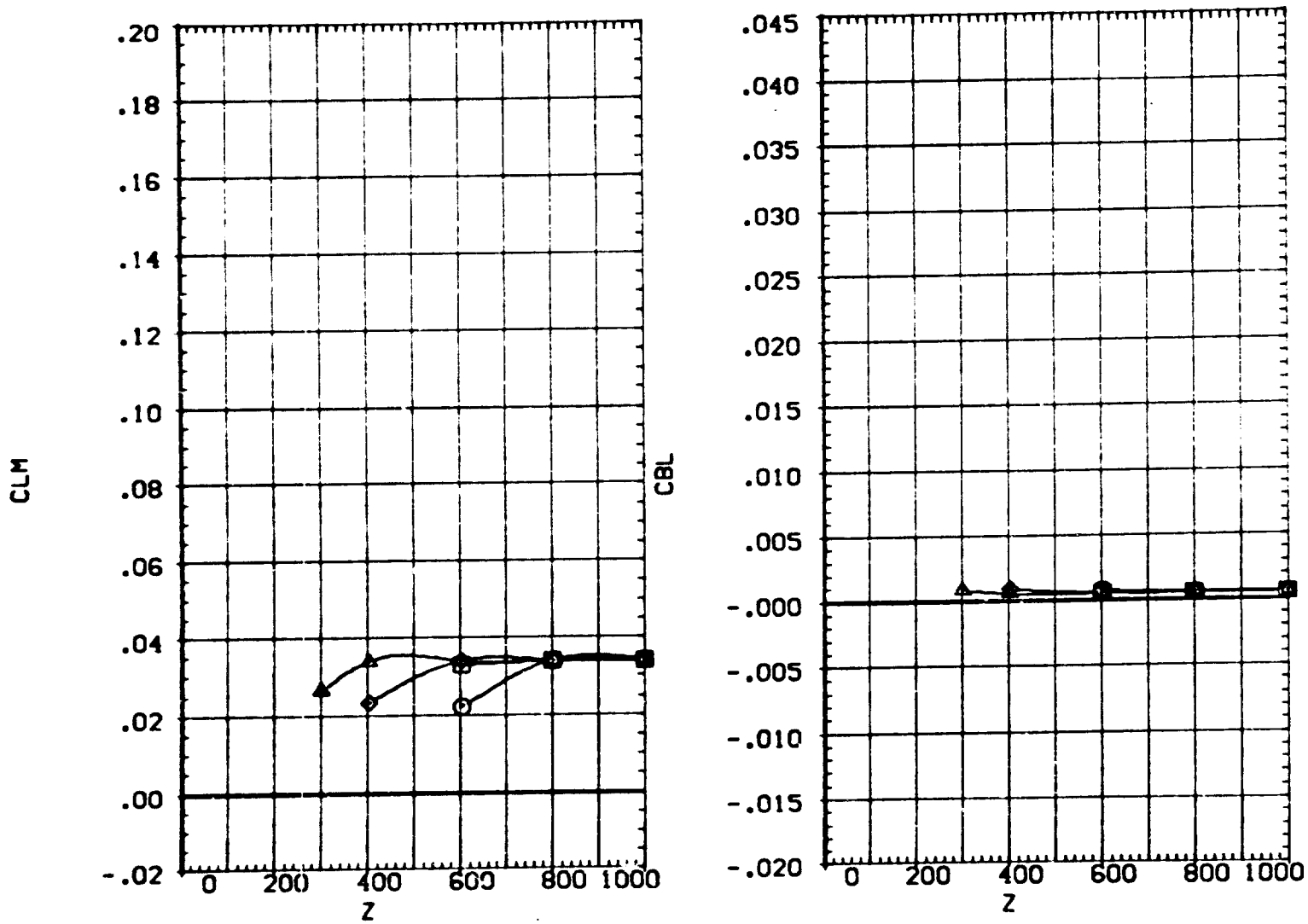


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ212)

SYMBOL	X		PARAMETRIC VALUES		
○	.523	MACH	4.530	PTOTAL	110.000
□	300.470	ALPHA	.000	BETA	.000
◇	600.710	DALPHA	-10.000	DBETA	-10.000
△	900.290	Y	.000	PCHMBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

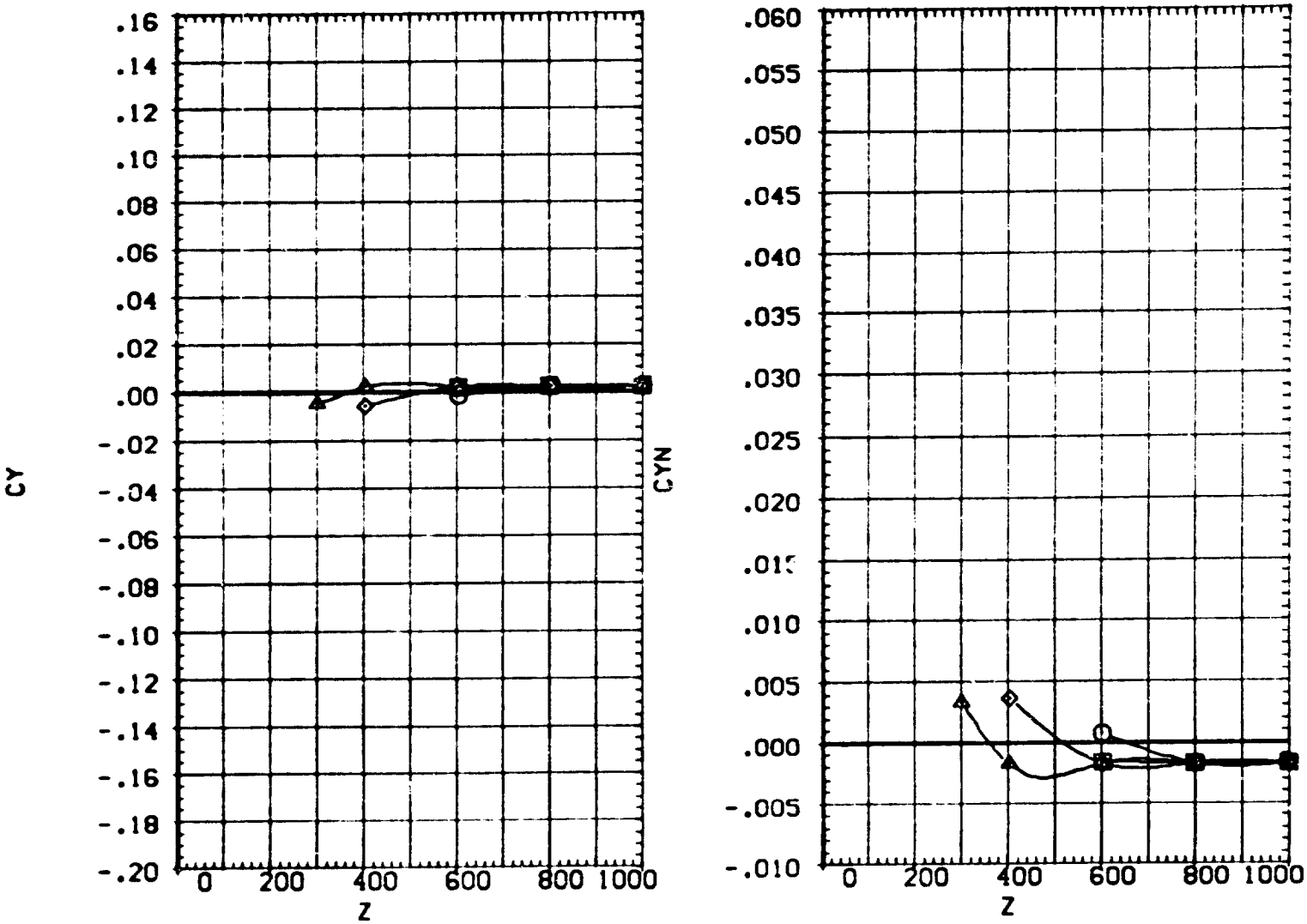


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ212)

SYMBOL	X		PARAMETRIC VALUES		
○	.523	MACH	4.530	PTOTAL	110.000
□	300.470	ALPHA	.000	BETA	.000
◇	600.710	DALPHA	-10.000	DBETA	-10.000
△	900.290	Y	.000	PCHMBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

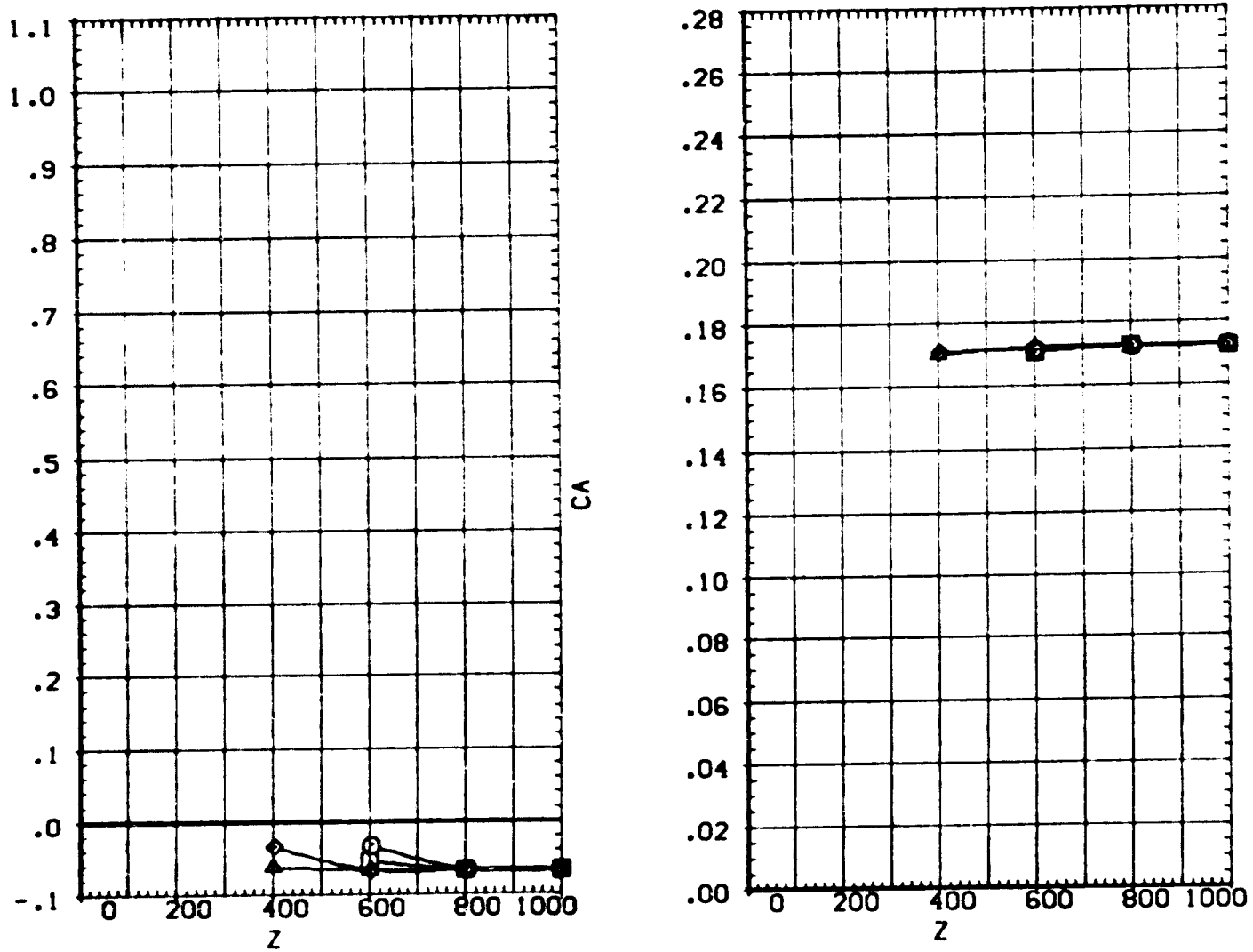


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ213)

SYMBOL	X		PARAMETRIC VALUES		
○	.706	MACH	4.530	PTOTAL	110.000
□	300.430	ALPHA	.000	BETA	.000
◇	600.560	DALPHA	-10.000	DBETA	-20.000
△	899.950	Y	.000	PCHMBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

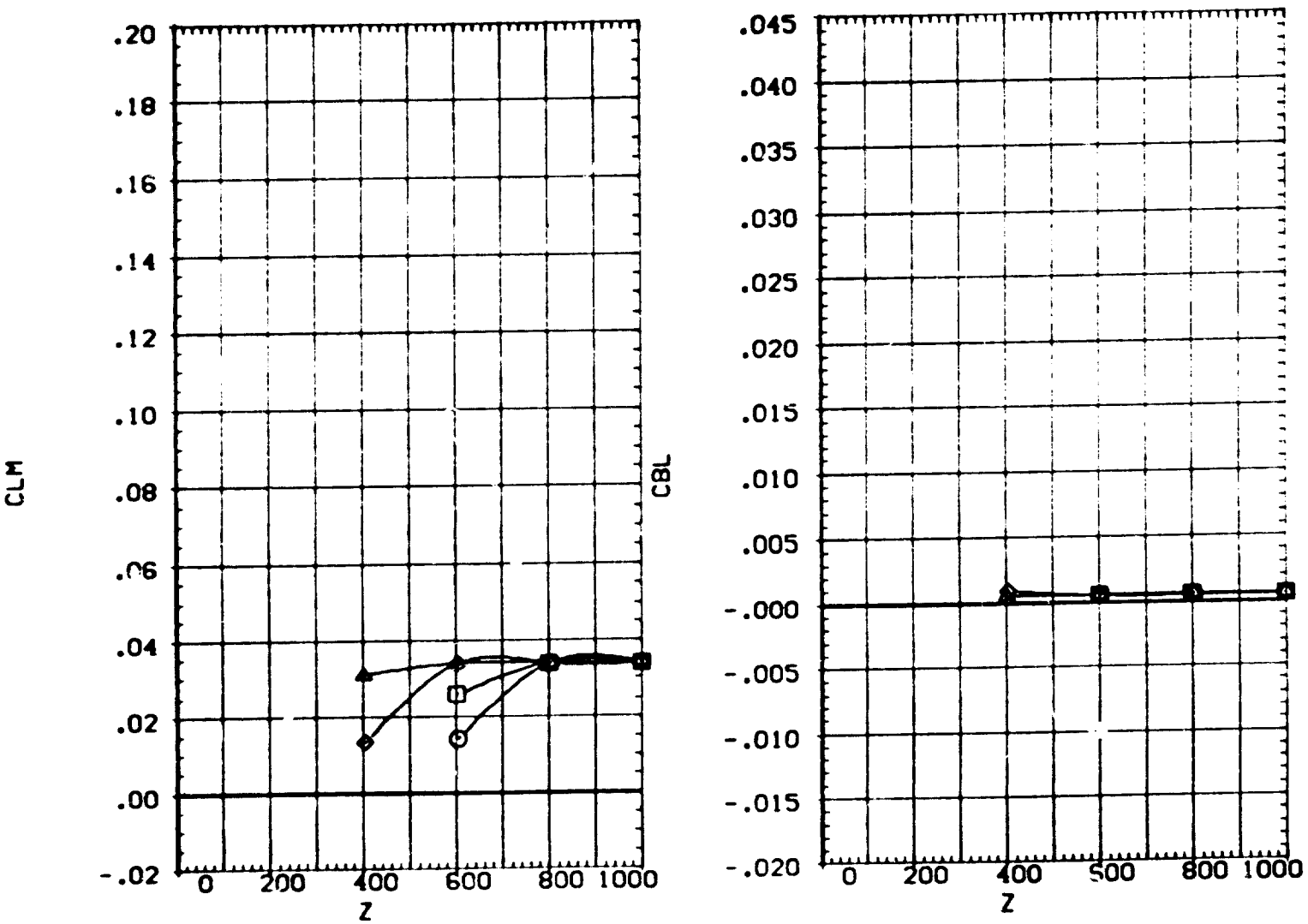


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ213)

SYMBOL	X		PARAMETRIC VALUES		
○	.708	MACH	4.530	PTOTAL	110.000
□	300.430	ALPHA	.000	BETA	.000
◇	600.560	DALPHA	-10.000	DBETA	-20.000
△	899.950	Y	.000	PCHBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

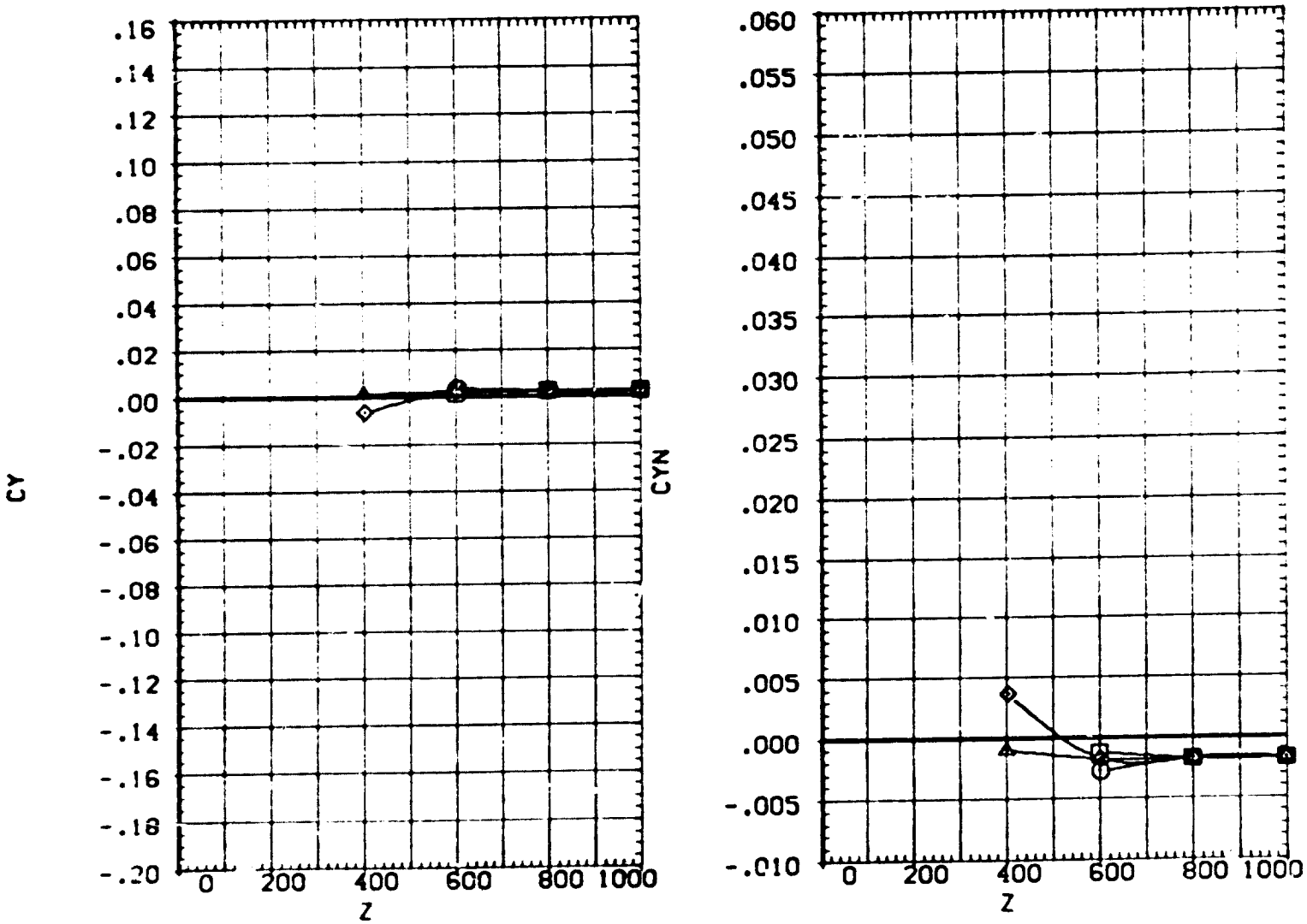


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

[A13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ213)

SYMBOL	X		PARAMETRIC VALUES		
○□	.708	MACH	4.530	PTOTAL	110.000
◇	300.430	ALPHA	.000	BETA	.000
△	600.560	DALPHA	-10.000	DBETA	-20.000
	899.950	Y	.000	PCHMBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

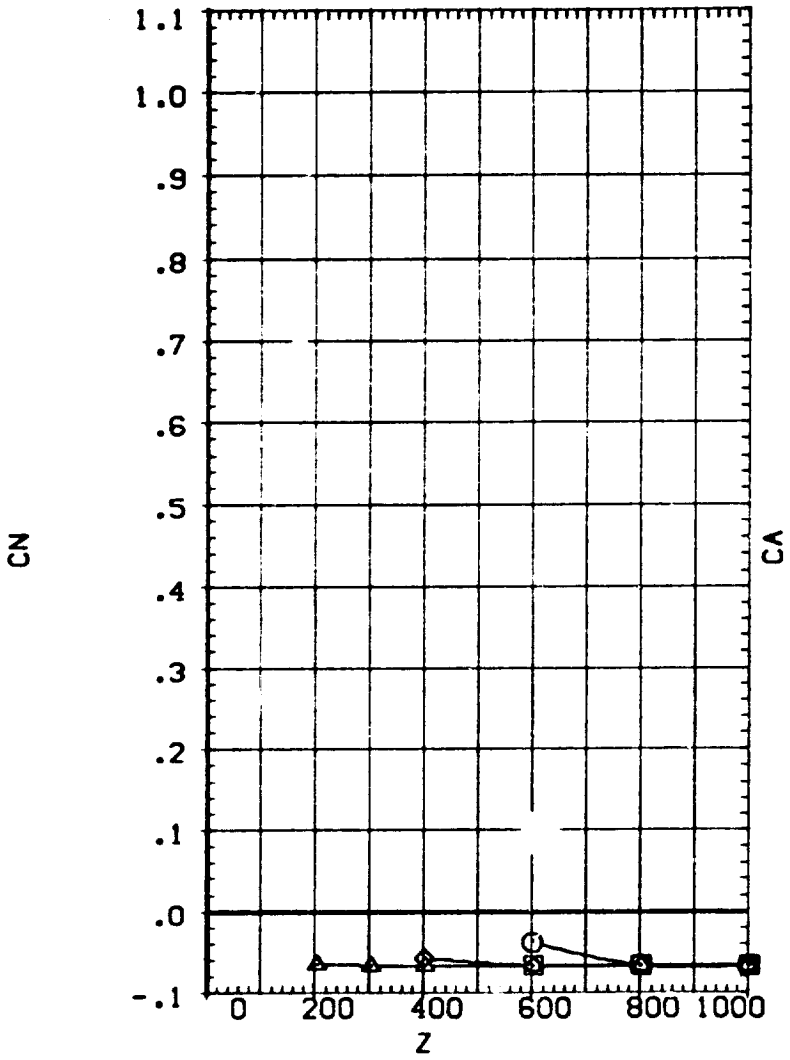


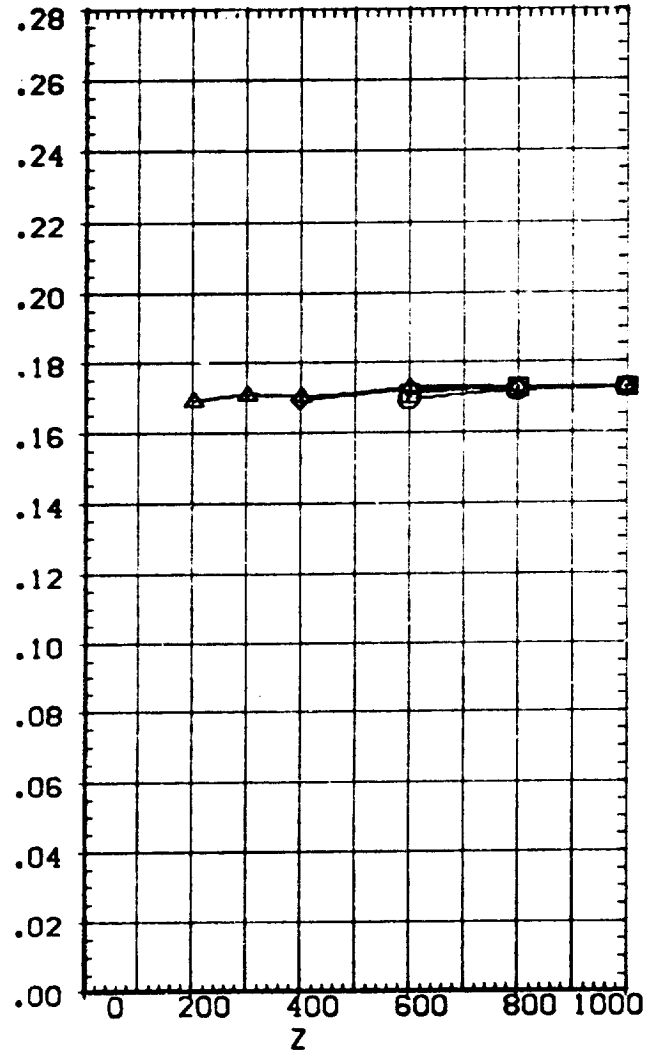
EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ214)

SYMBOL	X		PARAMETRIC VALUES		
○	-.101	MACH	4.530	PTOTAL	110.000
□	300.430	ALPHA	.000	BETA	.000
◇	598.860	DALPHA	-10.000	DBETA	-20.000
△	899.400	Y	200.000	PCHMBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



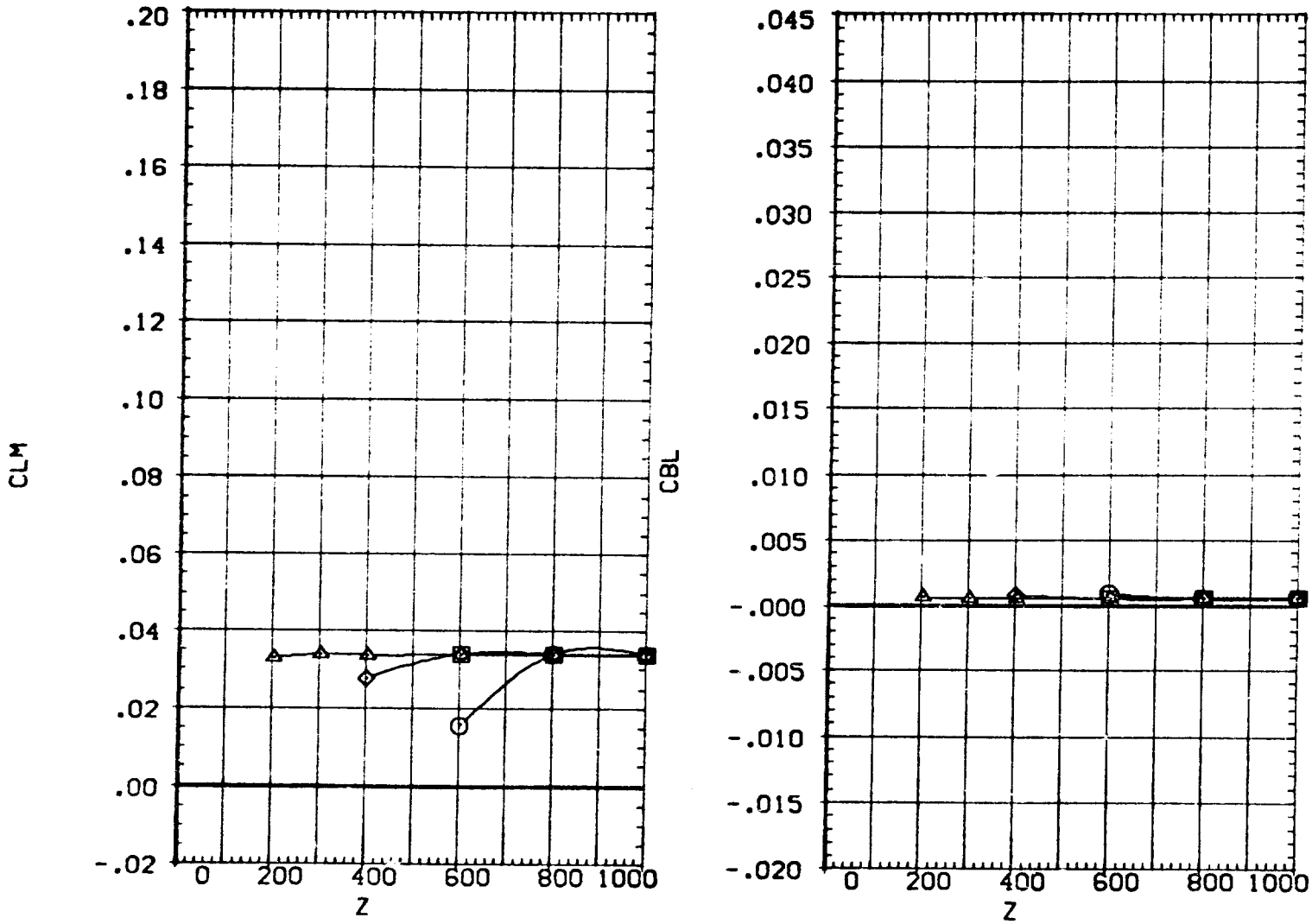


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM OST10 (RTJ214)

SYMBOL	X		PARAMETRIC VALUES		
○	-.101	MACH	4.530	PTOTAL	110.000
□	300.430	ALPHA	.000	BETA	.000
◇	598.860	DALPHA	-10.000	DBETA	-20.000
△	899.400	Y	200.000	PCHMBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

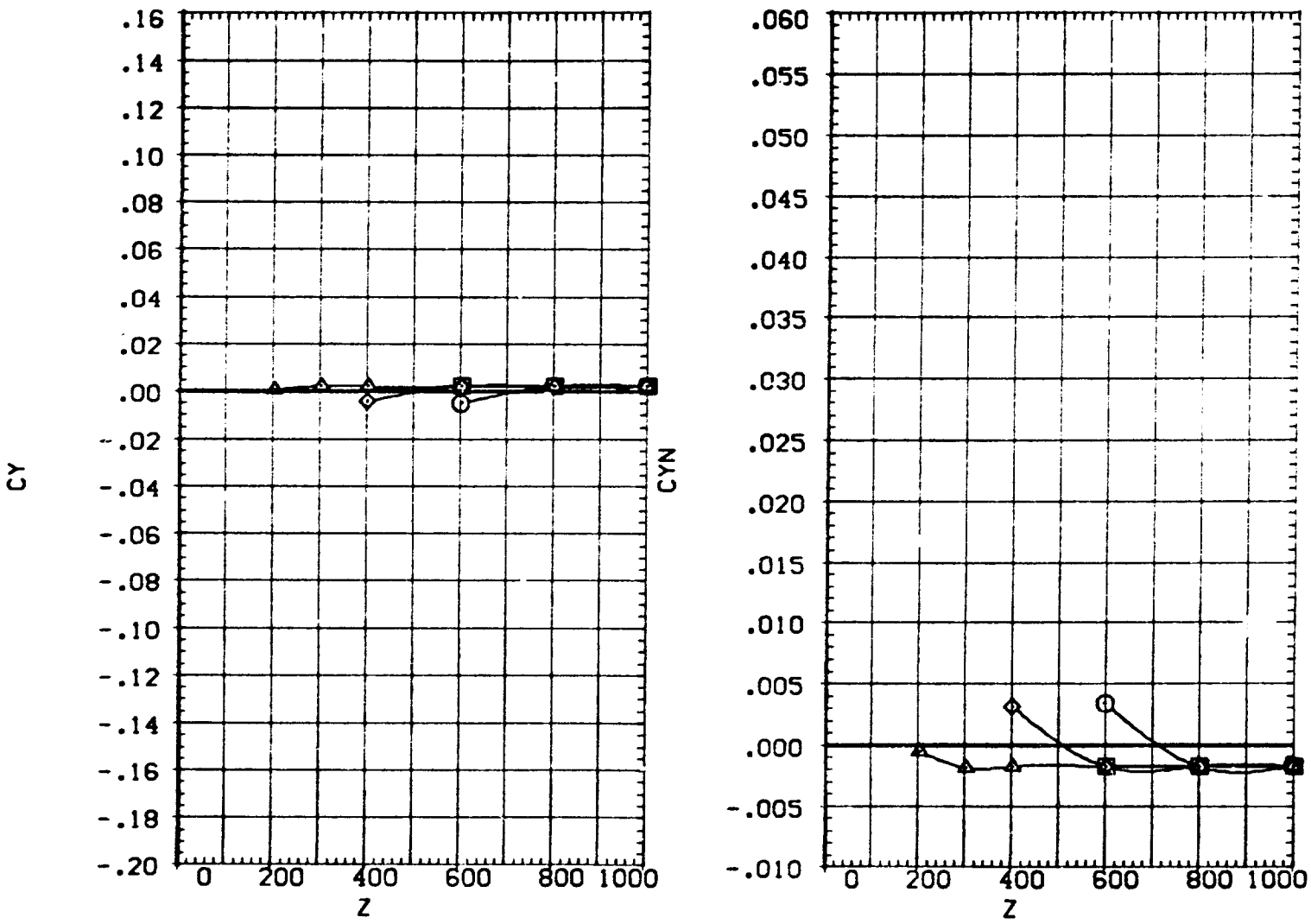


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

!A13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ214)

SYMBOL	X		PARAMETRIC VALUES		
○	-.101	MACH	4.530	PTOTAL	110.000
□	300.430	ALPHA	.000	BETA	.000
◇	598.860	DALPHA	-10.000	DBETA	-20.000
△	899.400	Y	200.000	PCHMBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

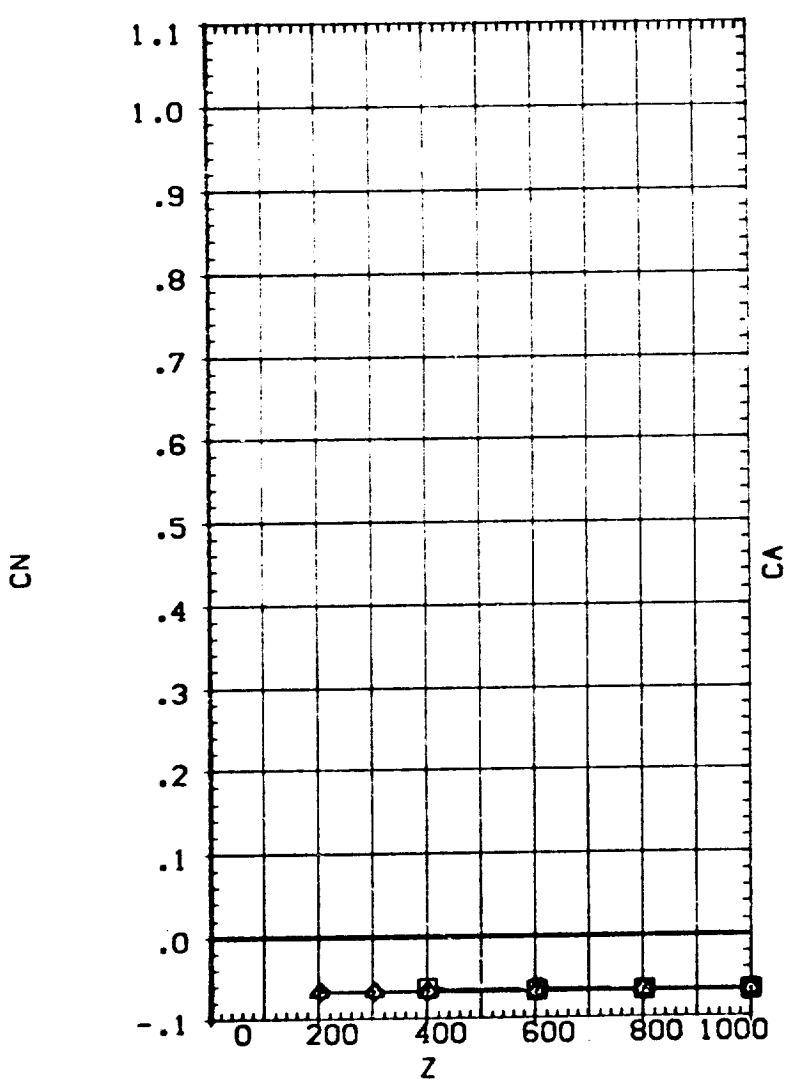


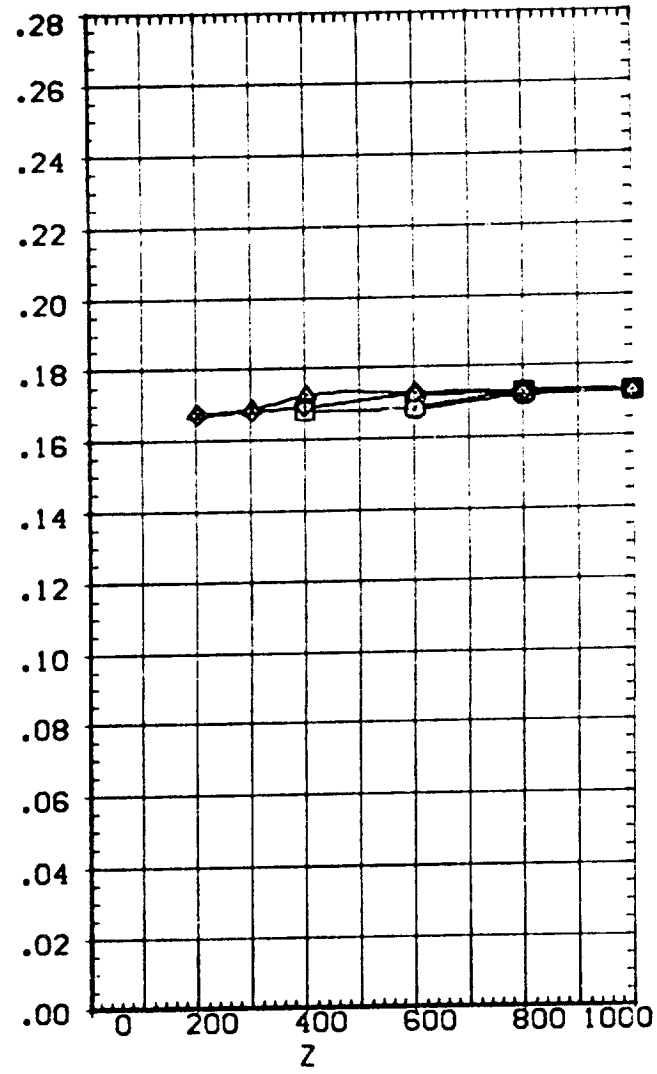
EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ215)

SYMBOL	X		PARAMETRIC VALUES		
○	.398	MACH	4.530	PTOTAL	110.000
□	299.860	ALPHA	.000	BETA	.000
◇	600.710	DALPHA	-10.000	DBETA	-20.000
△	899.920	Y	400.000	PCHMBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



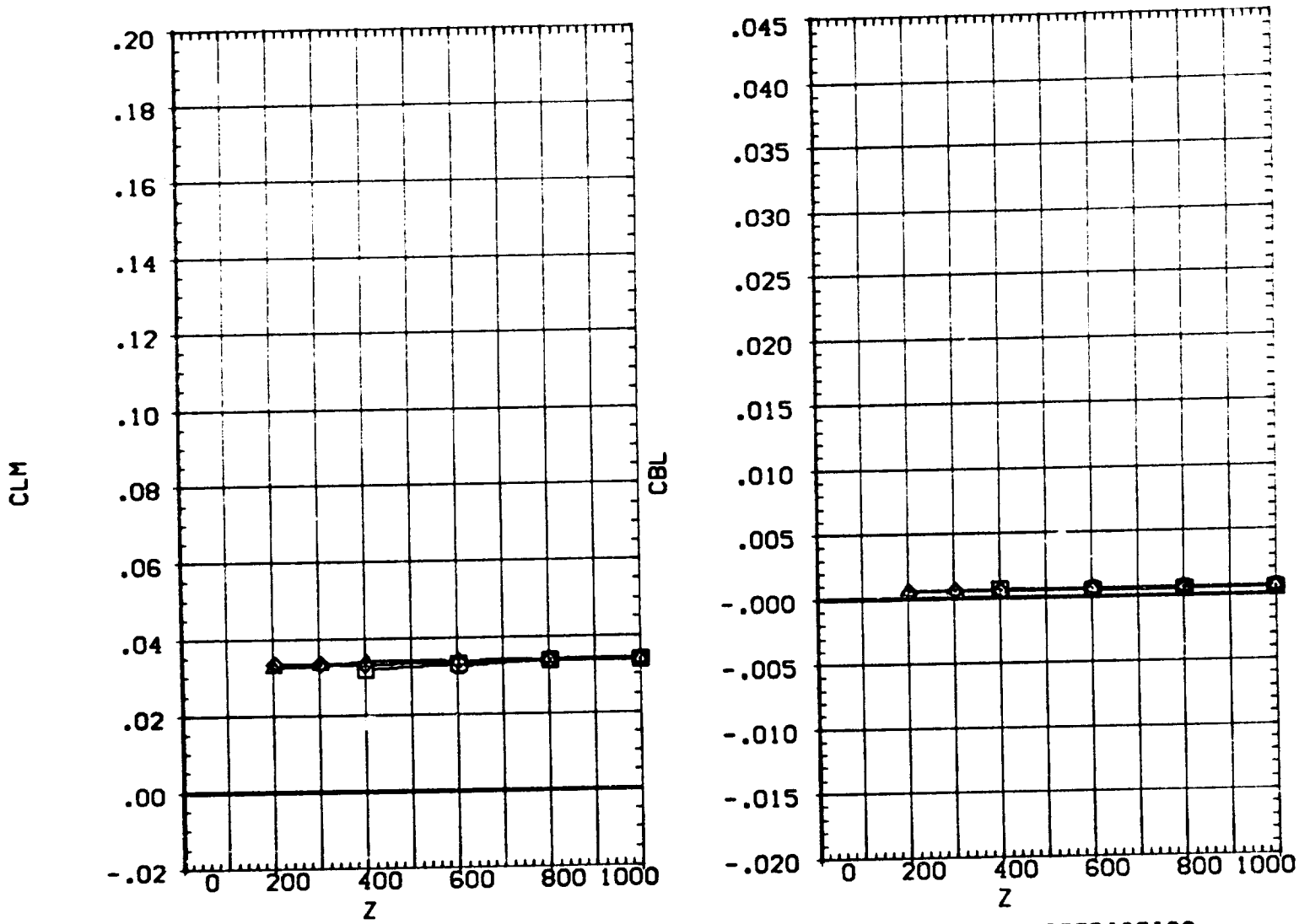


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ215)

SYMBOL	X		PARAMETRIC VALUES		
○	.398	MACH	4.530	PTOTAL	110.000
□	299.860	ALPHA	.000	BETA	.000
◇	600.710	DALPHA	-10.000	DBETA	-20.000
△	899.920	Y	400.000	PCHNGR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

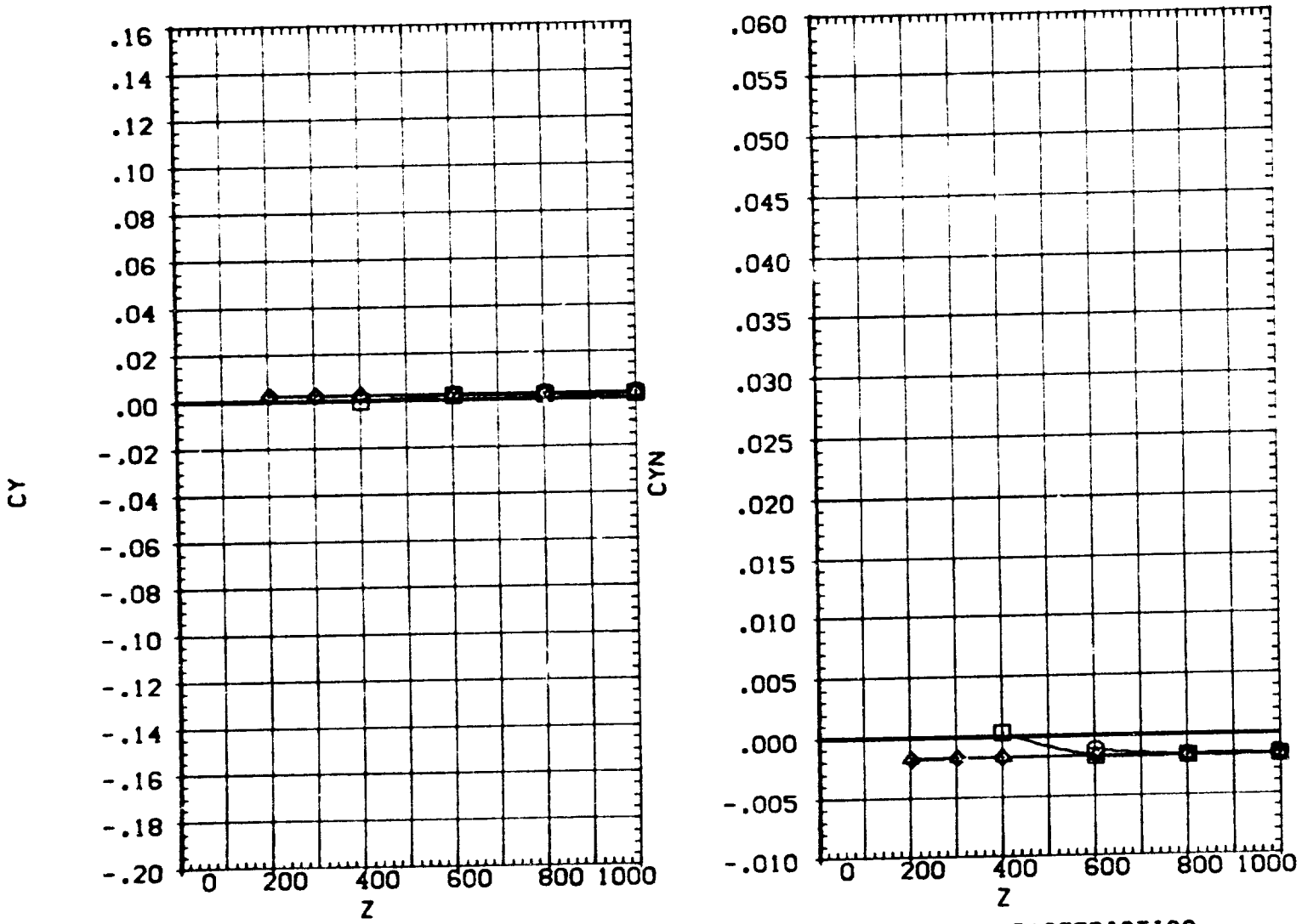


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ215)

SYMBOL	X		PARAMETRIC VALUES		
○	.398	MACH	4.530	PTOTAL	110.000
□	299.860	ALPHA	.000	BETA	.000
◇	600.710	DALPHA	-10.000	DBETA	-20.000
△	899.920	Y	400.000	PCHMBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

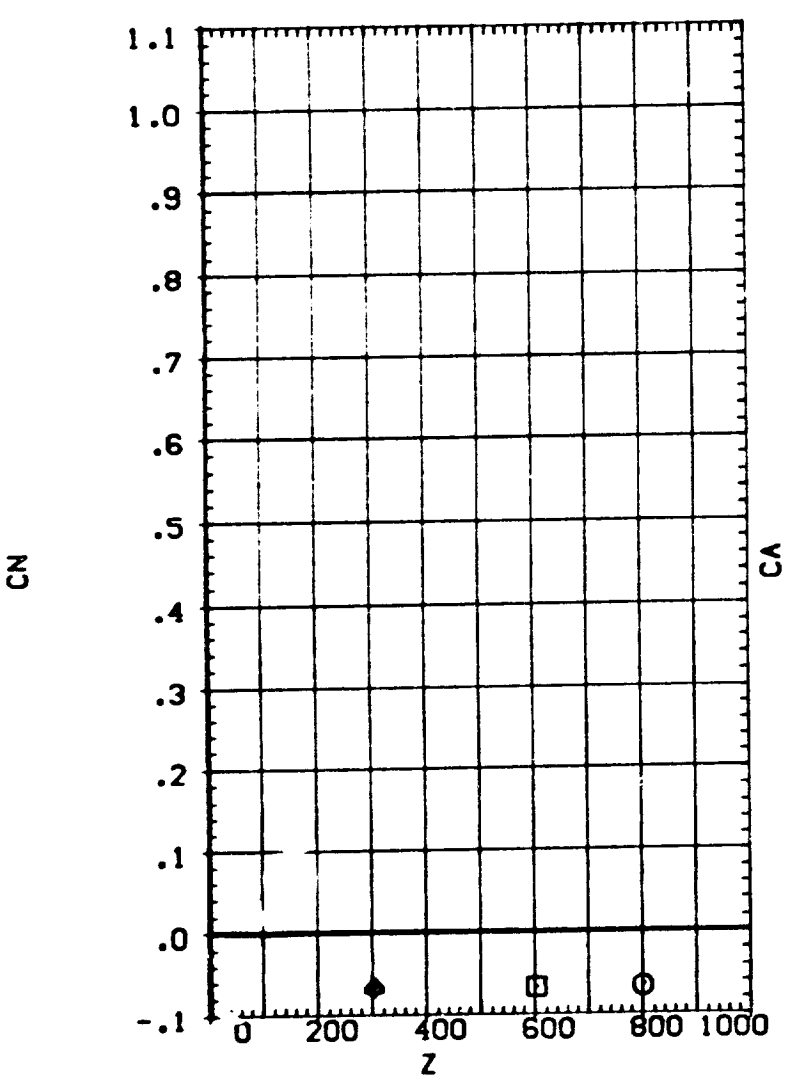


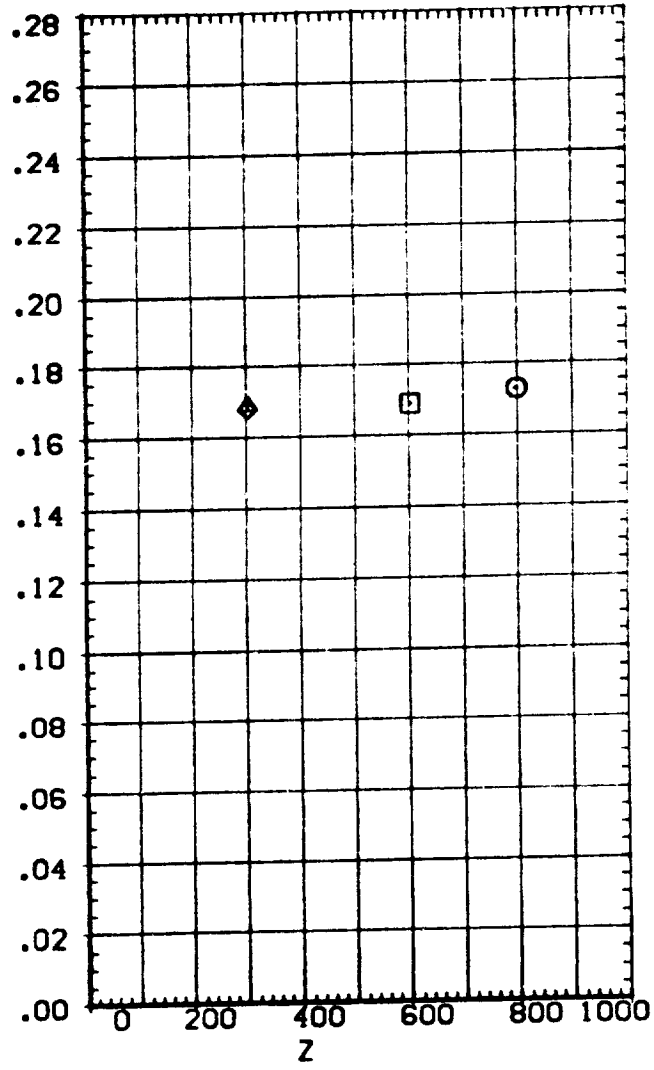
EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ216)

SYMBOL	X		PARAMETRIC VALUES		
○	-.666	MACH	4.530	PTOTAL	110.000
□	300.470	ALPHA	.000	BETA	.000
◇	600.170	DALPHA	-10.000	DBETA	-20.000
△	900.840	Y	800.000	PCHMBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



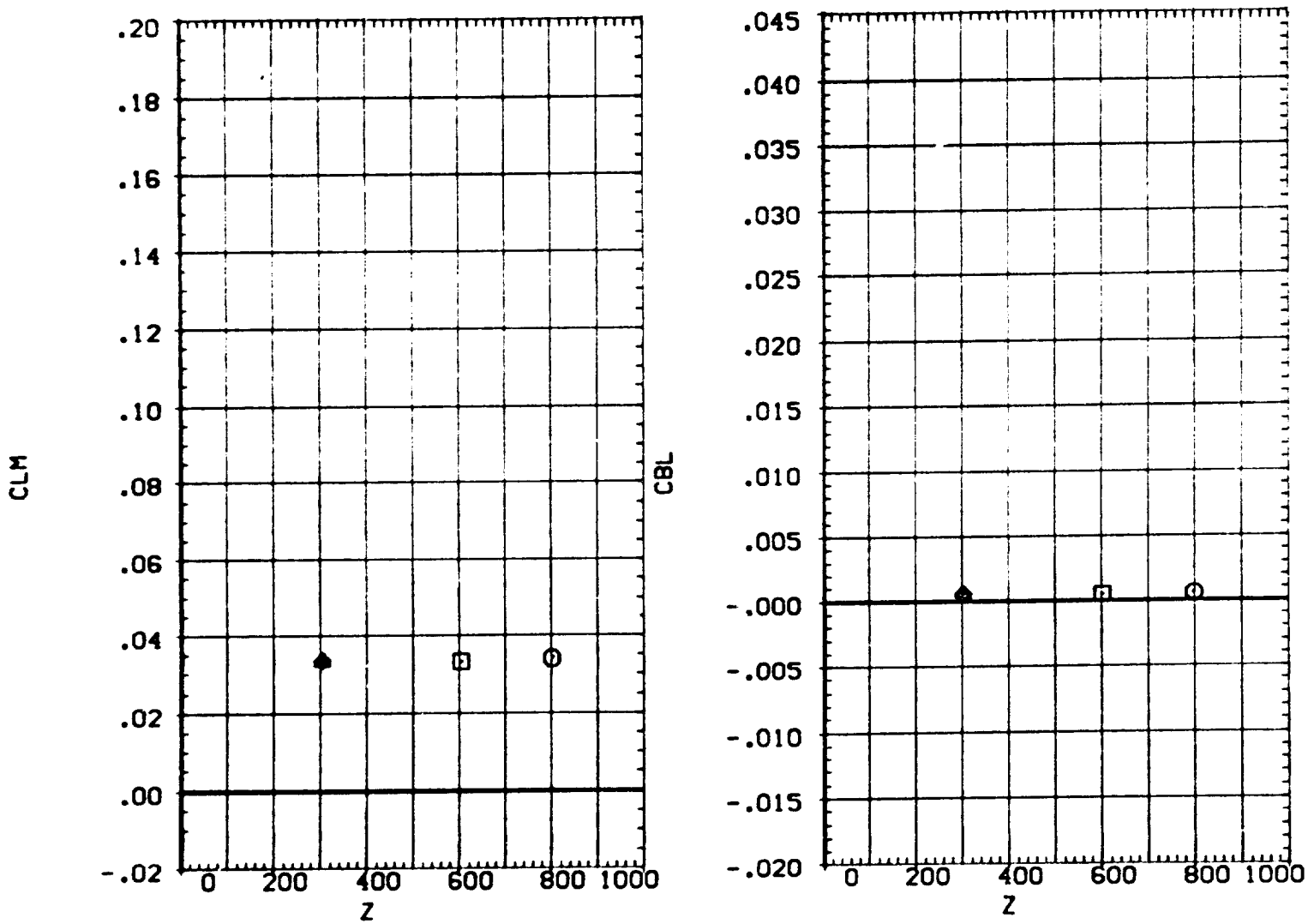


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ216)

SYMBOL	X		PARAMETRIC VALUES		
○	-.666	MACH	4.530	PTOTAL	110.000
□	300.470	ALPHA	.000	BETA	.000
◇	600.170	DALPHA	-10.000	DBETA	-20.000
△	900.840	Y	800.000	PCHMBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

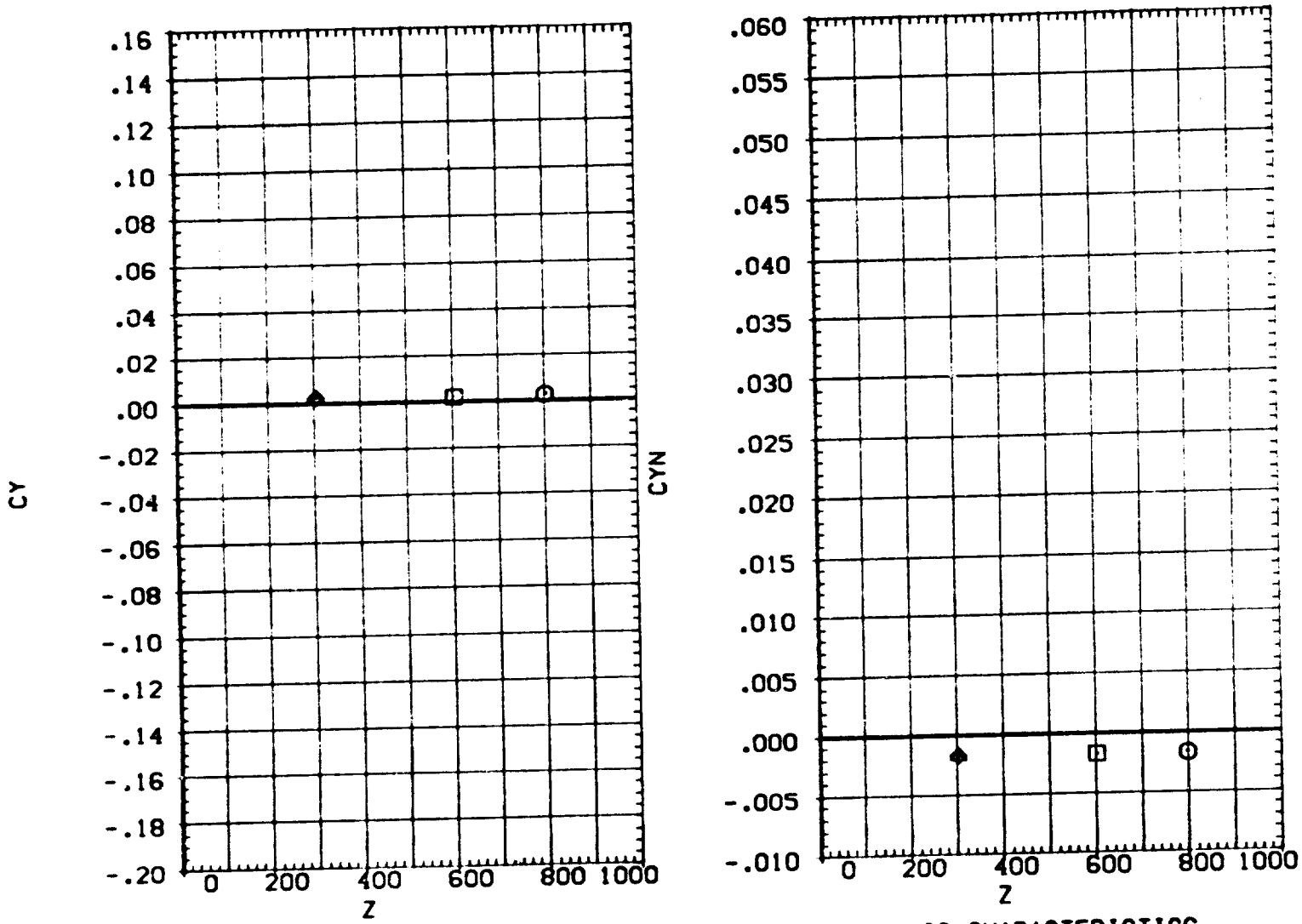


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ216)

SYMBOL	X		PARAMETRIC VALUES		
○	-.666	MACH	4.530	PTOTAL	110.000
□	300.470	ALPHA	.000	BETA	.000
◇	600.170	DALPHA	-10.000	DBETA	-20.000
△	900.840	Y	800.000	PCHMBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

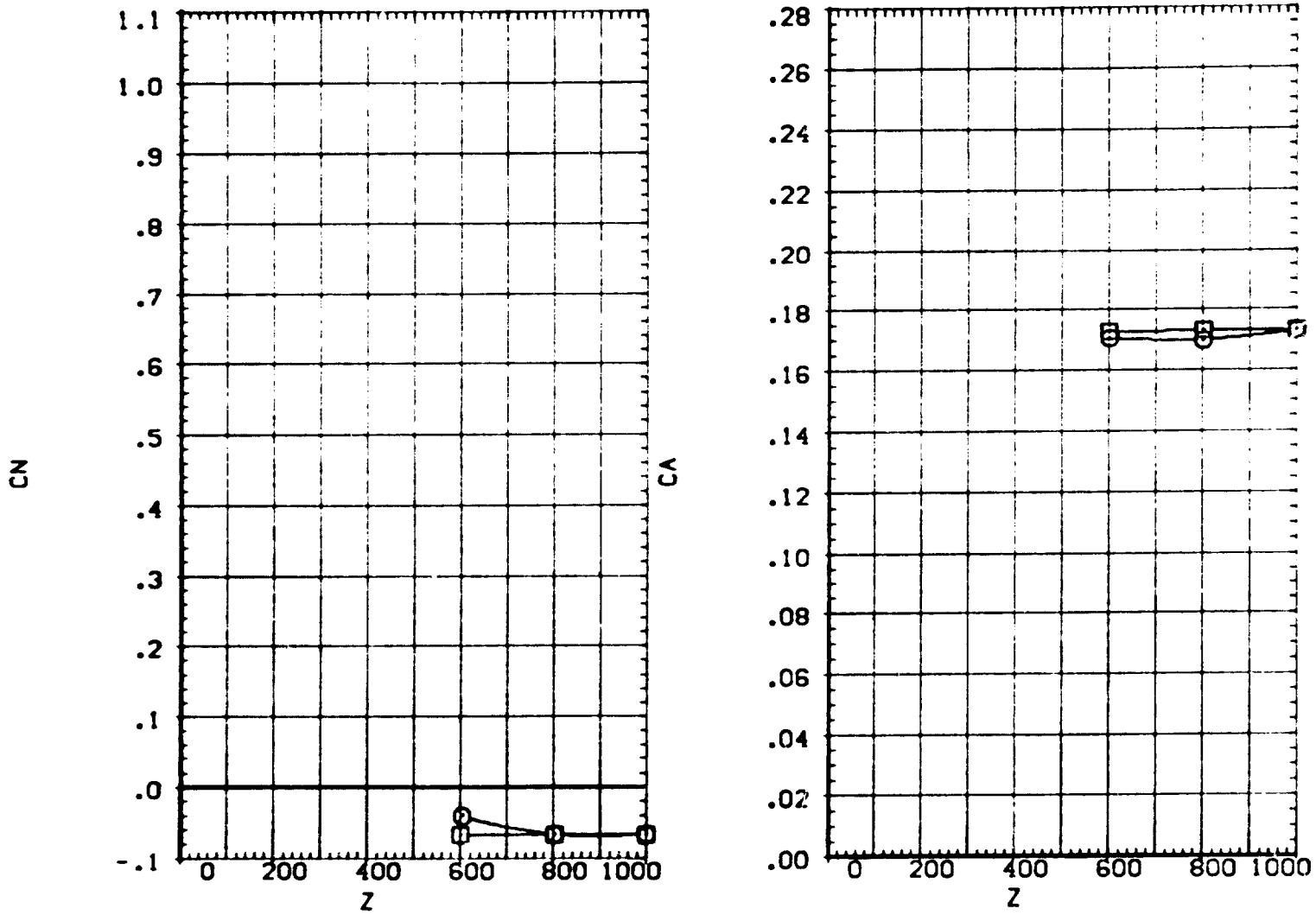


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

!A13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ217)

SYMBOL	X		PARAMETRIC VALUES		
○	.467	MACH	4.530	PTOTAL	110.000
□	900.200	ALPHA	.000	BETA	.000
		DALPHA	-20.000	DBETA	5.000
		Y	.000	PCHMBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

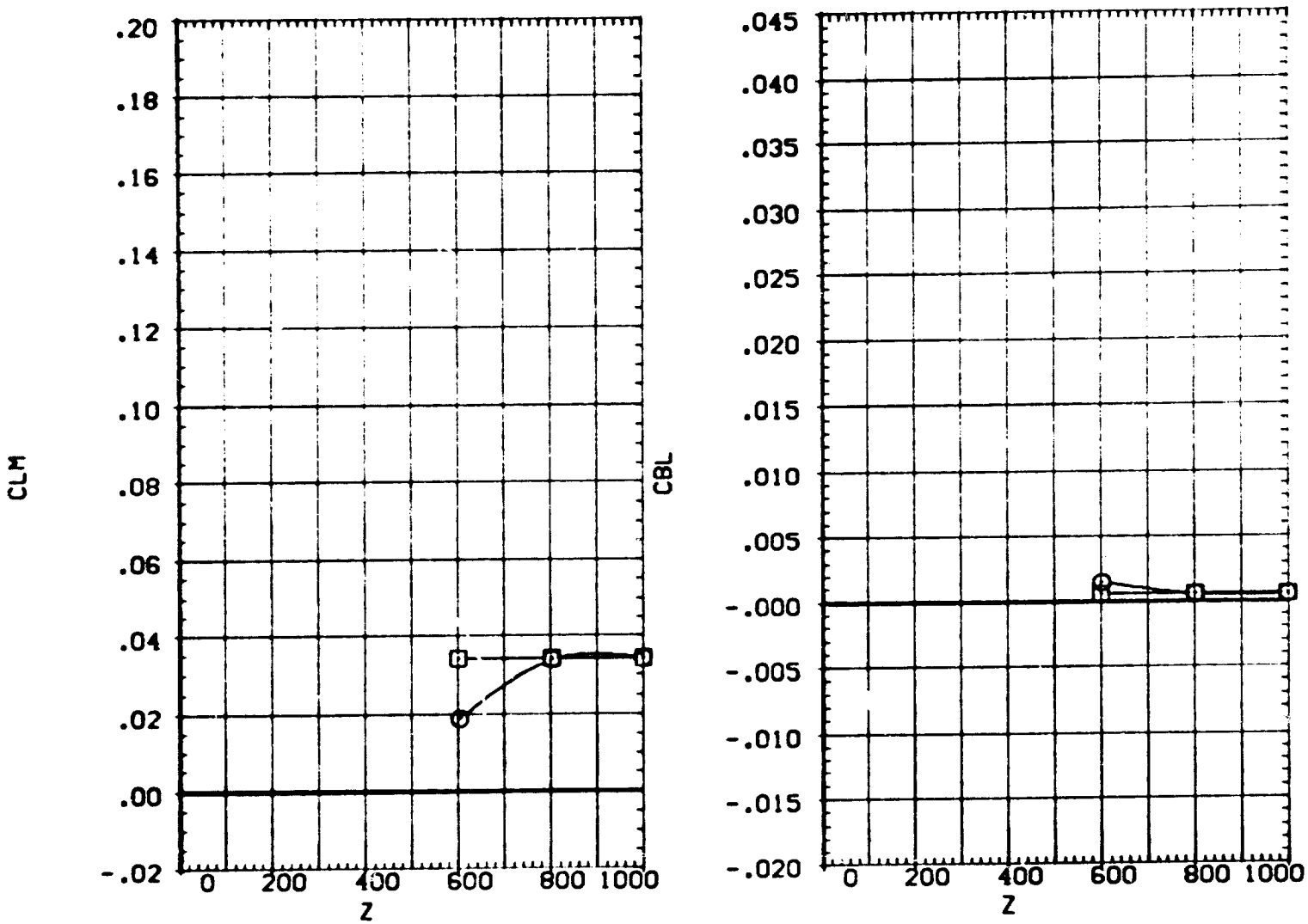


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ217)

SYMBOL	X		PARAMETRIC VALUES		
○	.467	MACH	4.530	PTOTAL	110.000
□	900.200	ALPHA	.000	BETA	.000
		DALPHA	-20.000	DBETA	5.000
		Y	.000	PCHNGR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

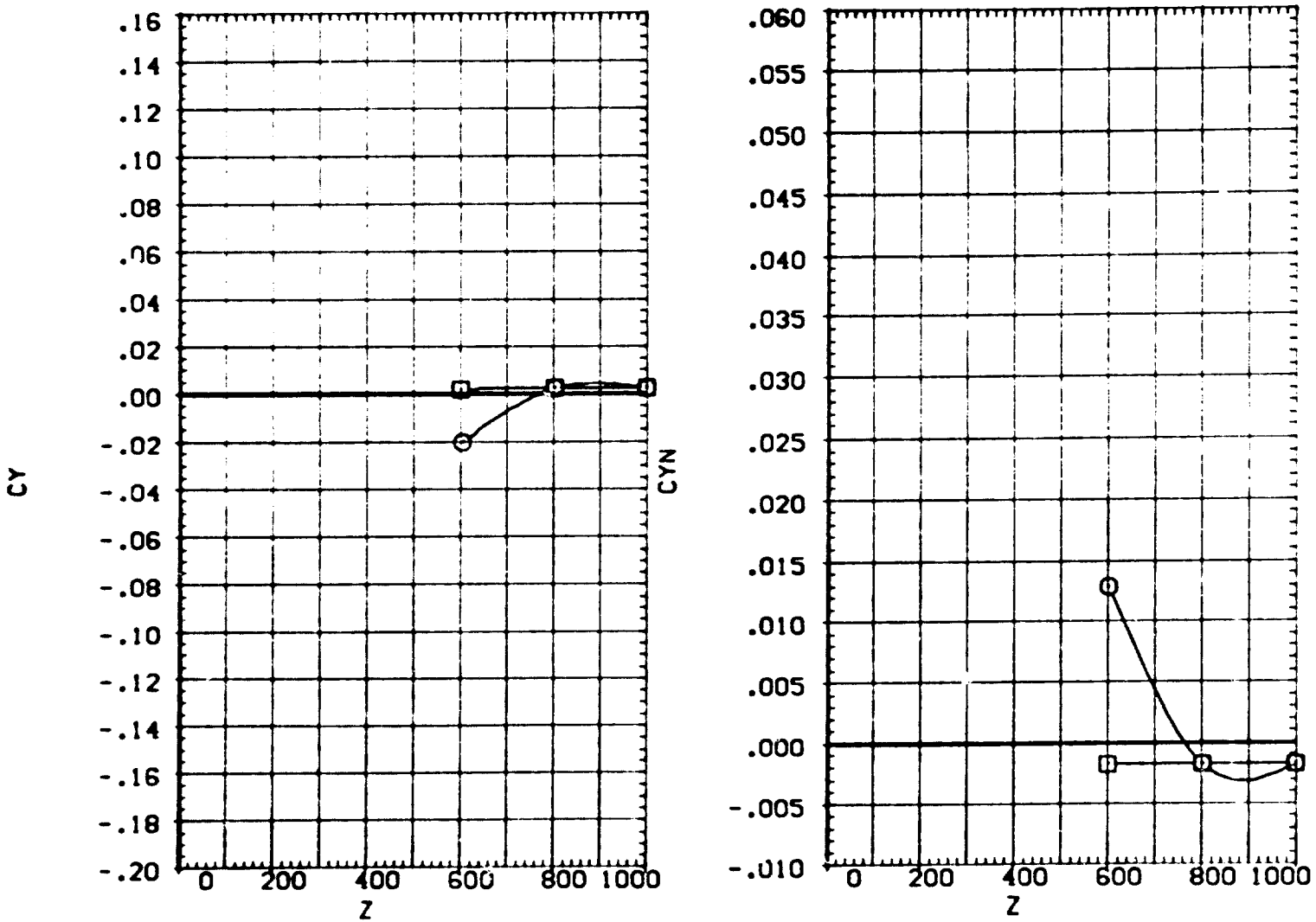


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ217)

SYMBOL	X		PARAMETRIC VALUES		
○	.467	MACH	4.530	PTOTAL	110.000
□	900.200	ALPHA	.000	BETA	.000
		DALPHA	-20.000	DBETA	5.000
		Y	.000	PCHMBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

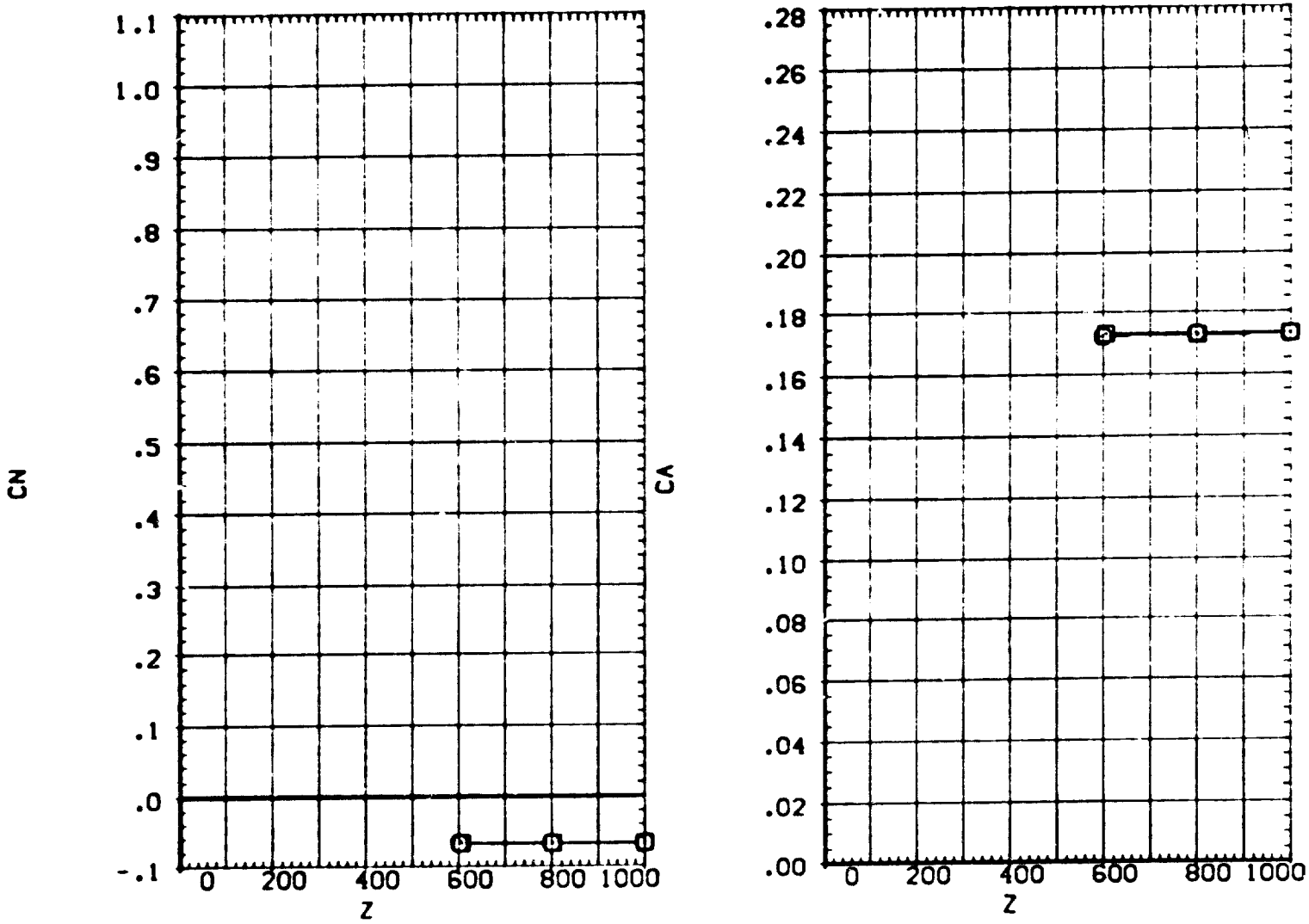


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ218)

SYMBOL	X	PARAMETRIC VALUES			
○	-.262	MACH	4.530	PTOTAL	110.000
□	901.280	ALPHA	.000	BETA	.000
		DALPHA	-20.000	DBETA	5.000
		Y	200.000	PCHNBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

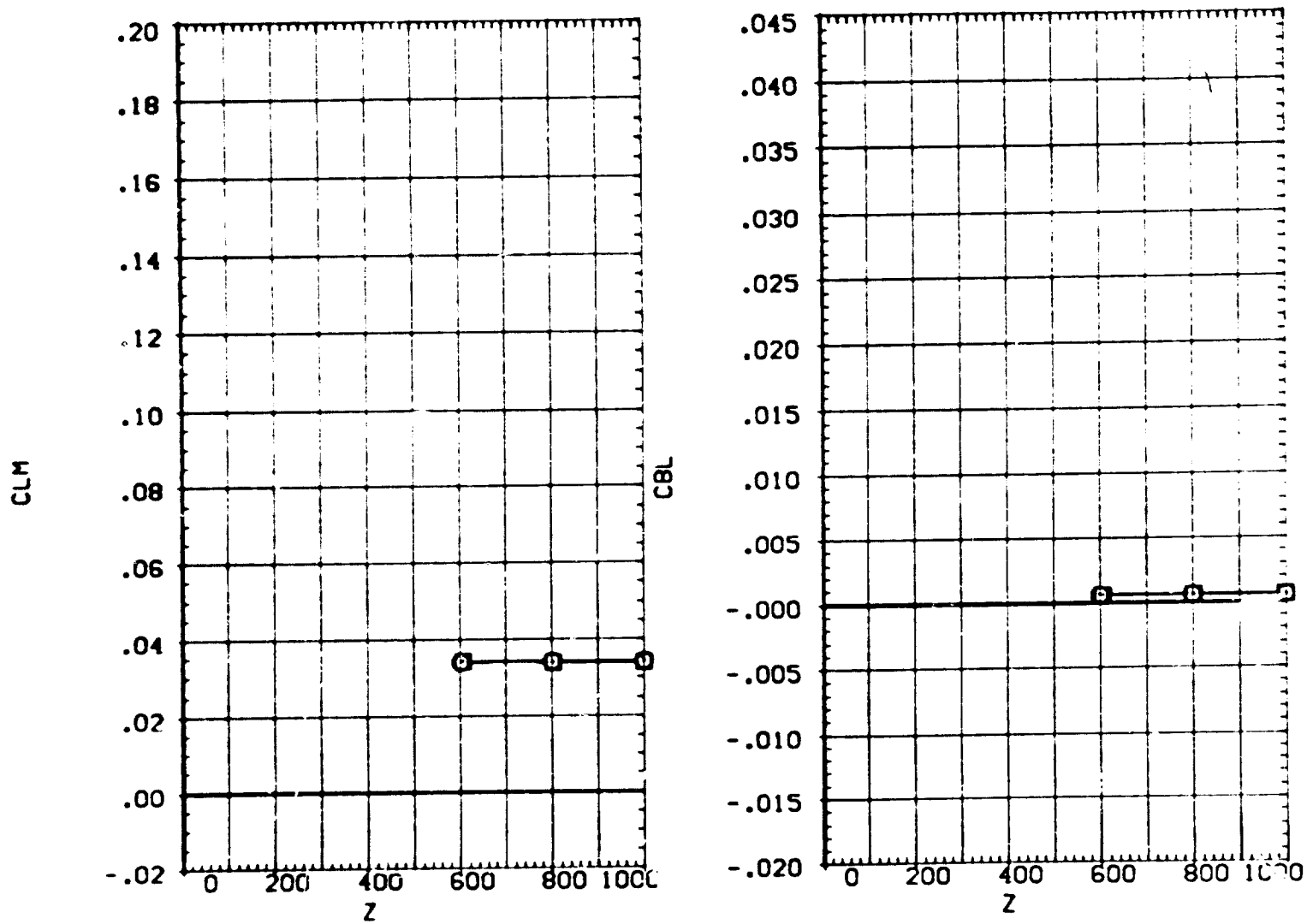


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

!A13 SRB(Sσ) W/O PLUMES SEPARATING FROM 09T10 (RTJ218)

SYMBOL	X		PARAMETRIC VALUES		
○	-.262	MACH	4.530	PTOTAL	110.000
□	901.280	ALPHA	.000	BETA	.000
		DALPHA	-20.000	DBETA	5.000
		Y	200.000	PCHMBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

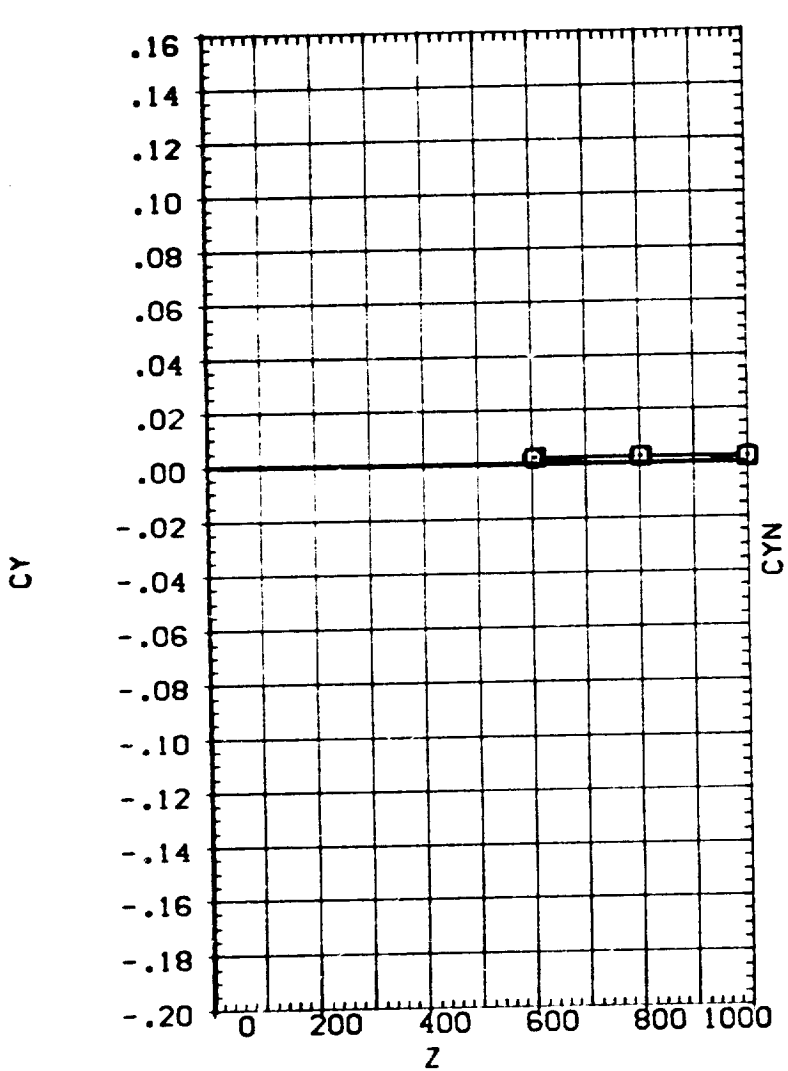


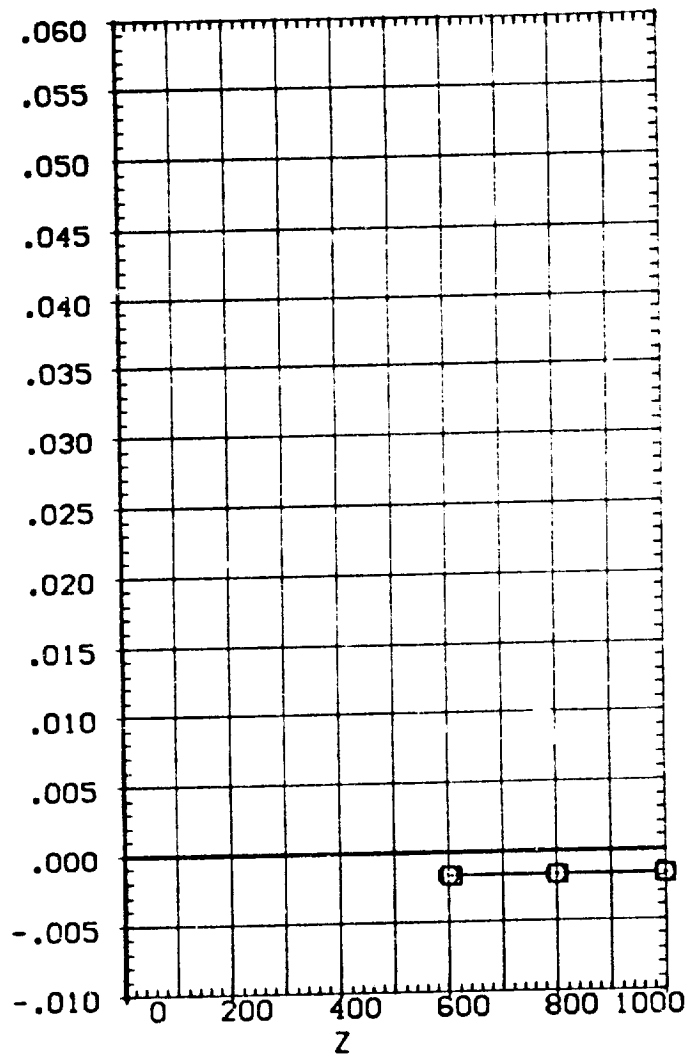
EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ218)

SYMBOL	X		PARAMETRIC VALUES		
○	-.262	MACH	4.530	PTOTAL	110.000
□	901.280	ALPHA	.000	BETA	.000
		DALPHA	-20.000	DBETA	5.000
		Y	200.000	PCHMBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



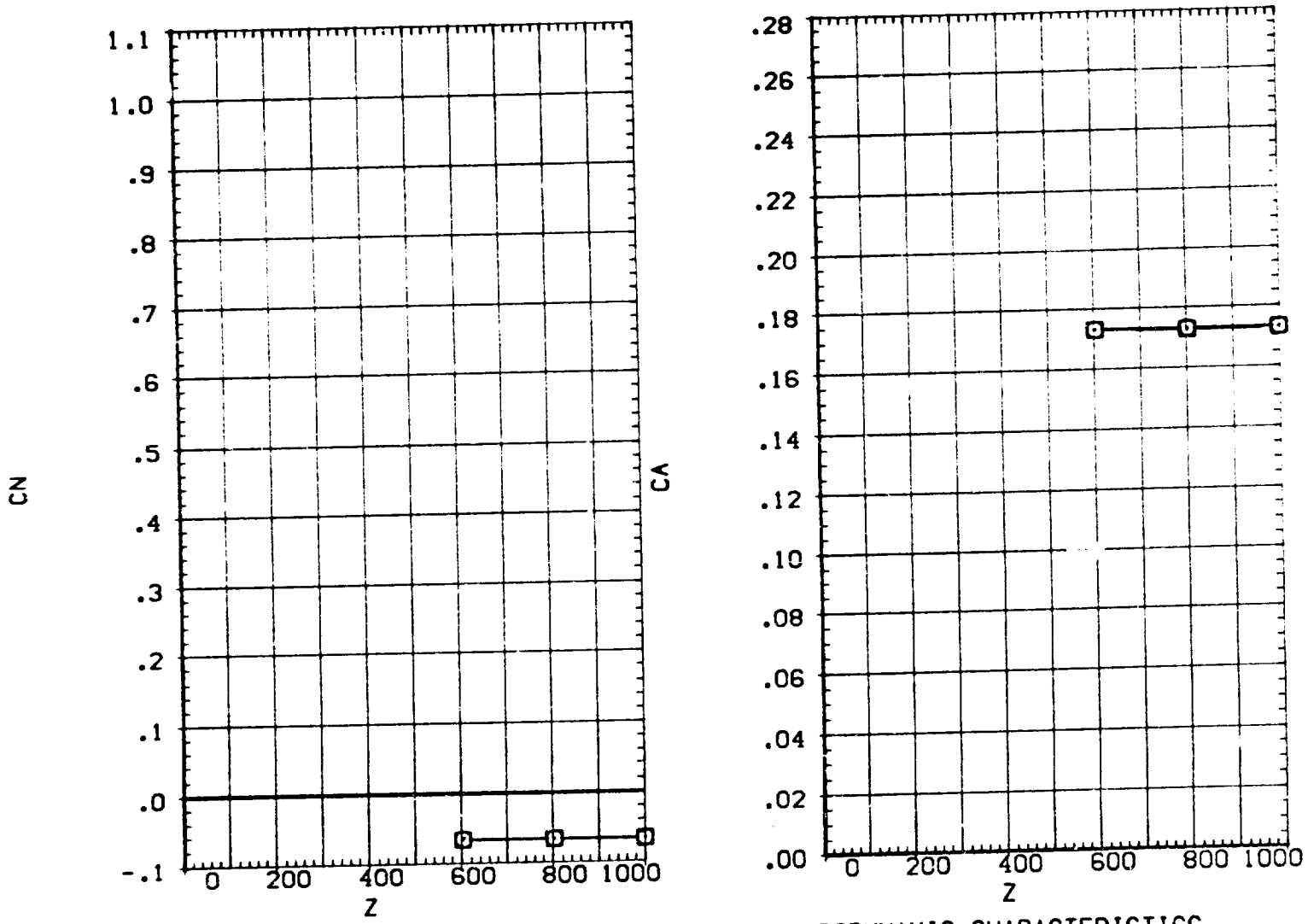


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ219)

SYMBOL	X		PARAMETRIC VALUES		
○	.225	MACH	4.530	PTOTAL	110.000
□	900.800	ALPHA	.000	BETA	.000
		DALPHA	-20.000	DBETA	5.000
		Y	400.000	PCHMBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

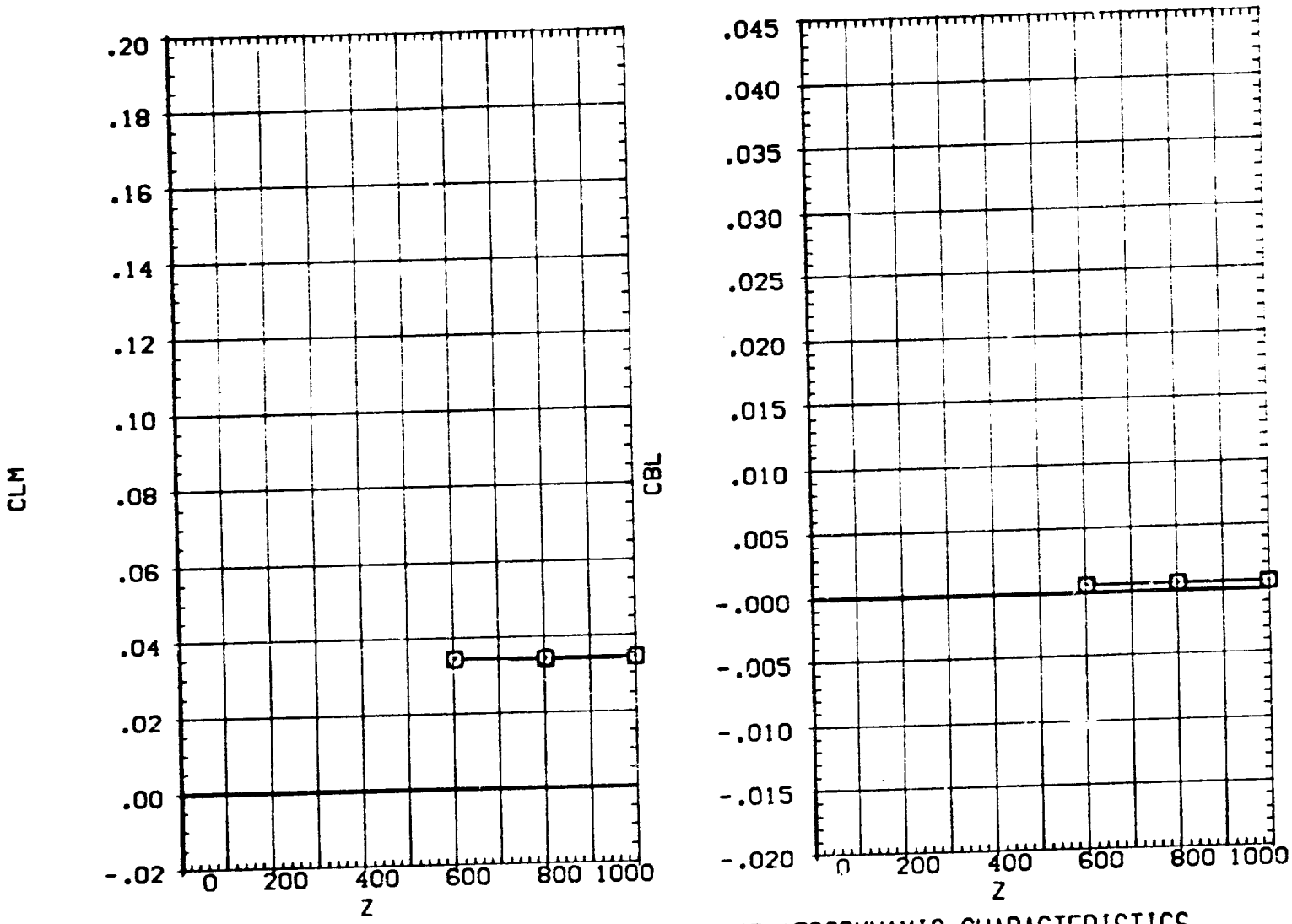


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ219)

SYMBOL	X		PARAMETRIC VALUES		
○	.225	MACH	4.530	PTOTAL	110.000
□	900.800	ALPHA	.000	BETA	.000
		DALPHA	-20.000	DBETA	5.000
		Y	400.000	PCHMBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

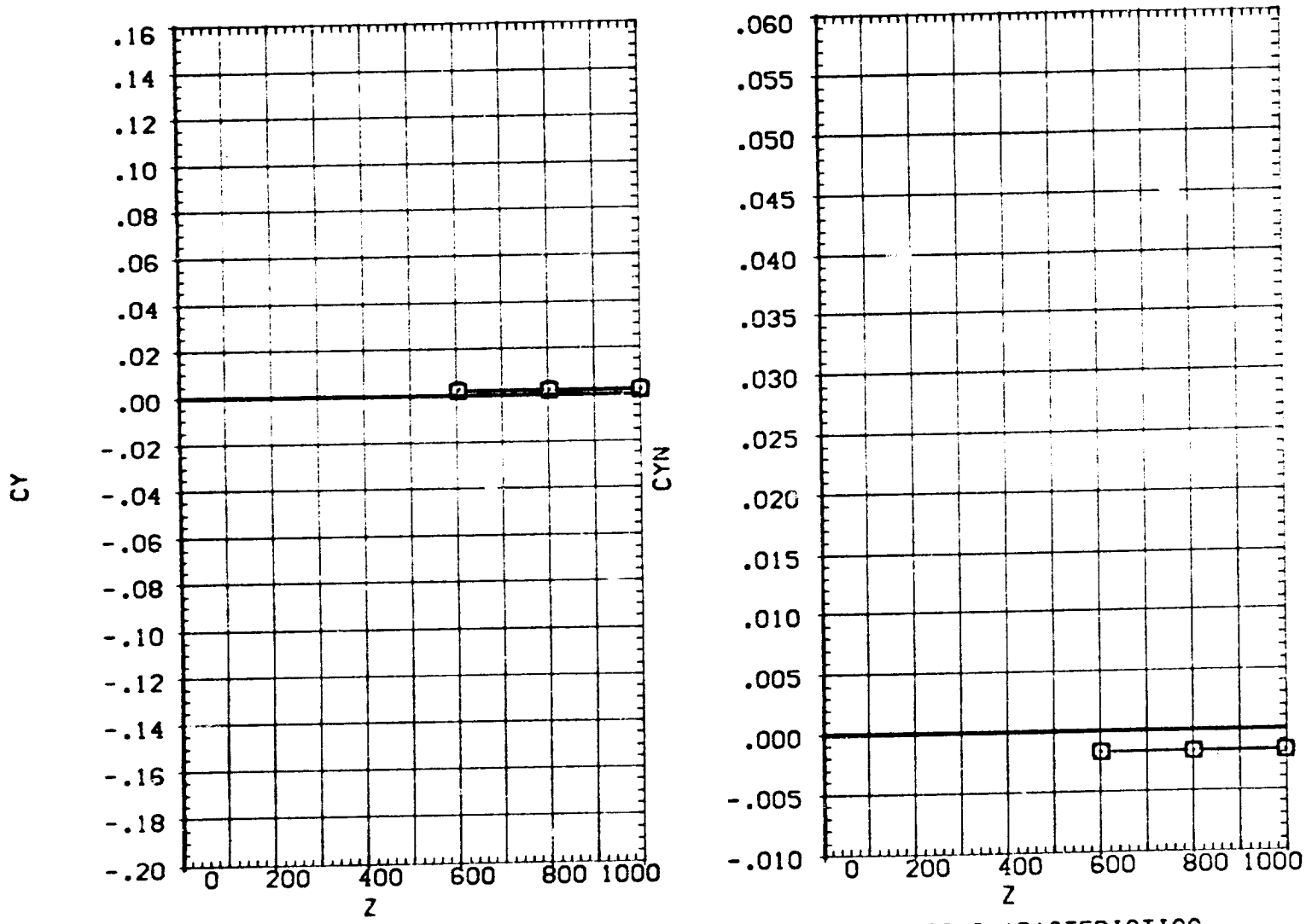


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ219)

SYMBOL	X		PARAMETRIC VALUES		
○	.225	MACH	4.530	PTOTAL	110.000
□	900.800	ALPHA	.000	BETA	.000
		DALPHA	-20.000	DBETA	5.000
		Y	400.000	PCHMBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

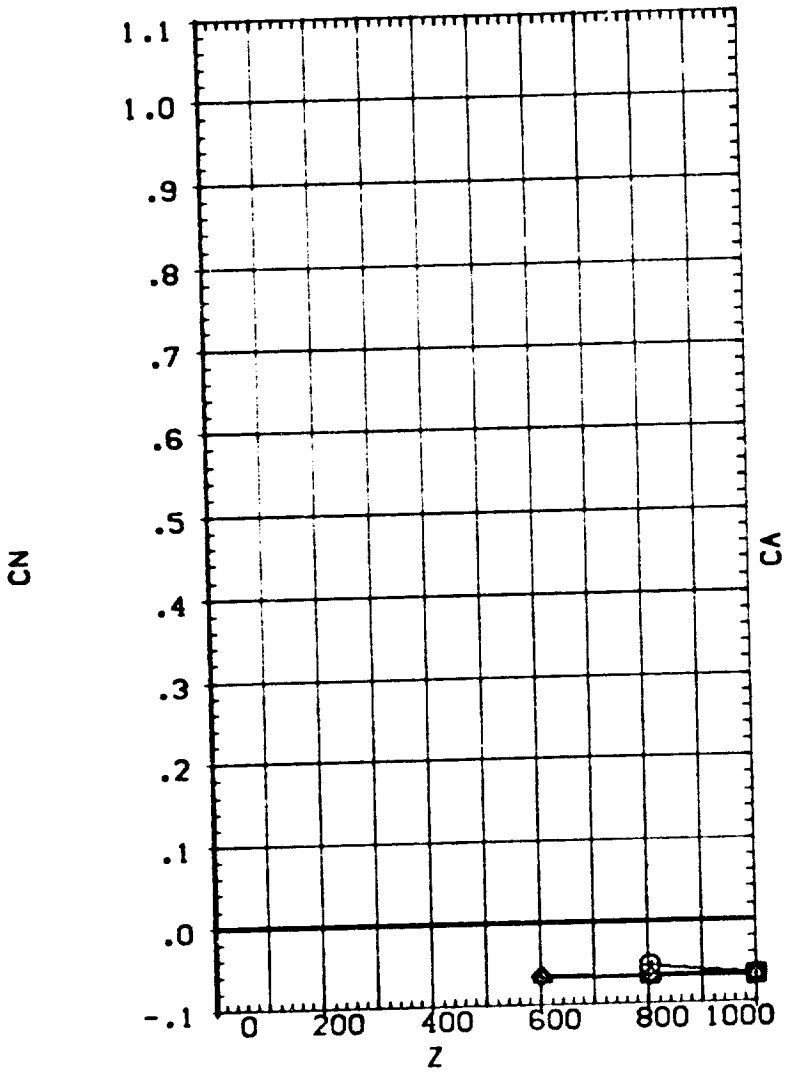


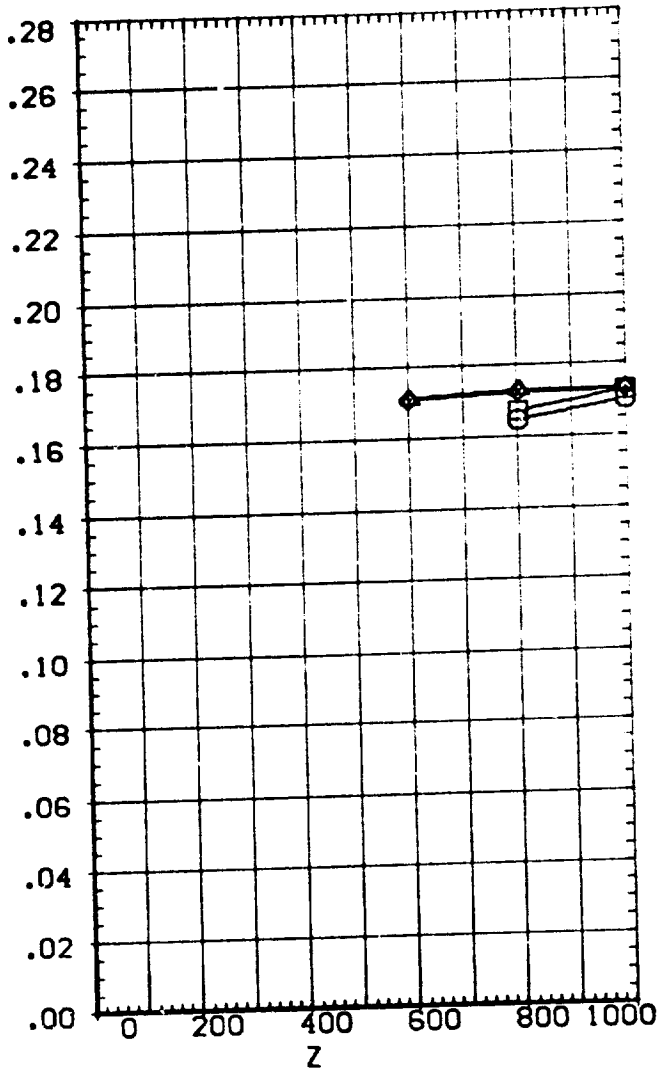
EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ220)

SYMBOL	X		PARAMETRIC VALUES		
○	.590	MACH	4.530	PTOTAL	110.000
□	300.870	ALPHA	.000	BETA	.000
◇	600.220	DALPHA	-20.000	DBETA	-5.000
△	900.630	Y	.000	PCHMBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



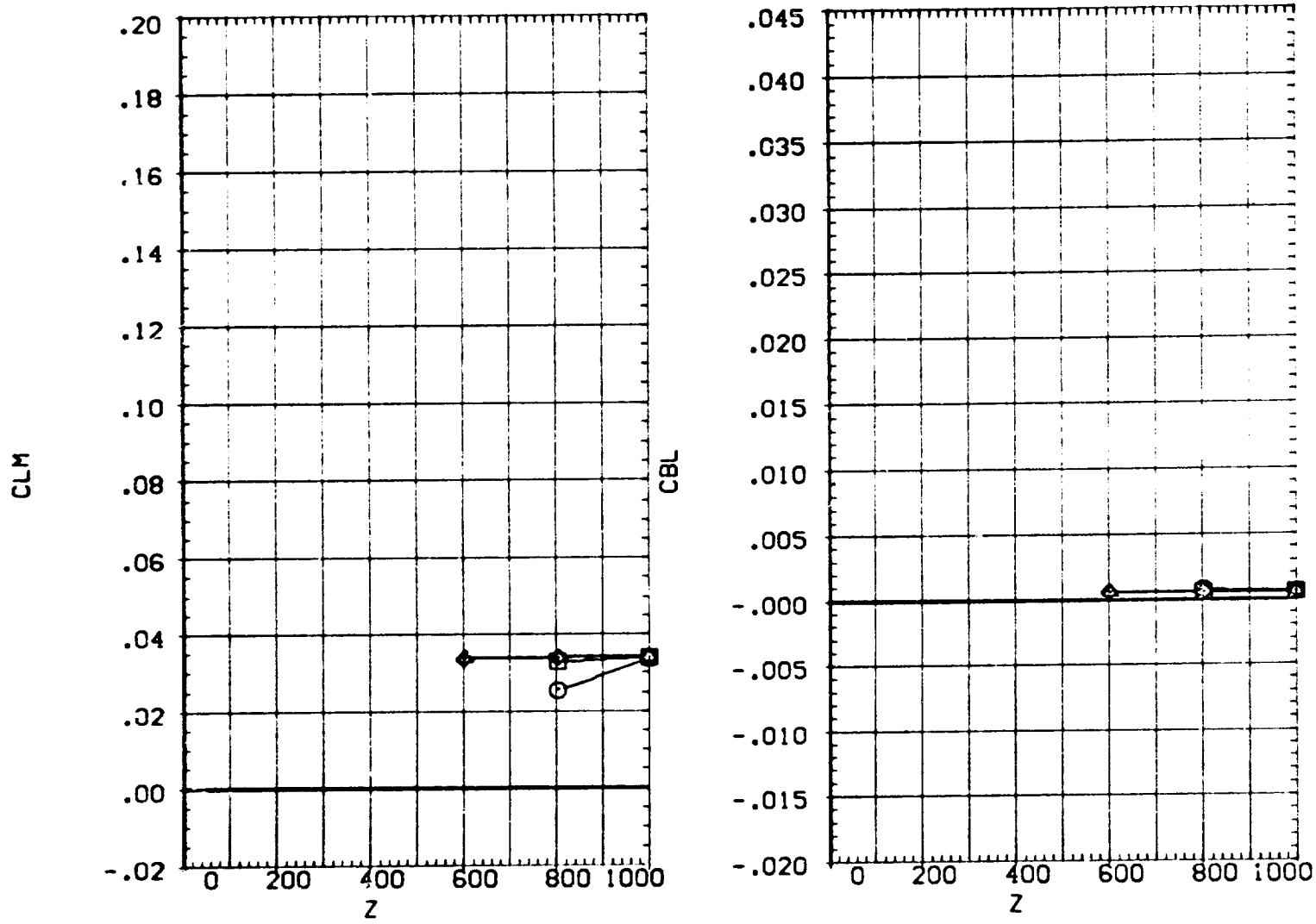


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ220)

SYMBOL	X		PARAMETRIC VALUES		
○	.590	MACH	4.530	PTOTAL	110.000
□	300.870	ALPHA	.000	BETA	.000
◇	600.220	DALPHA	-20.000	DBETA	-5.000
△	900.630	Y	.000	PCHMBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

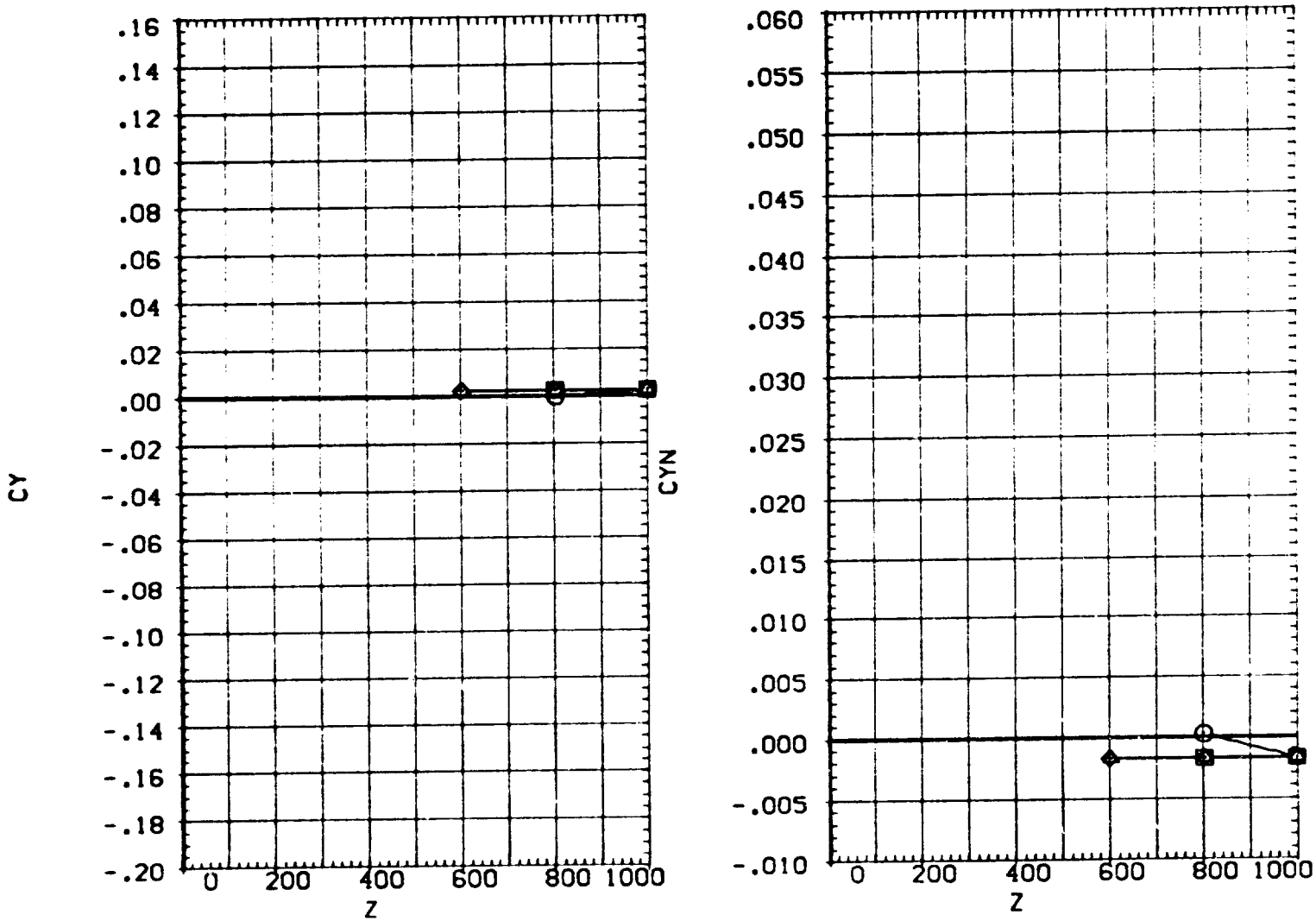


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ220)

SYMBOL	X		PARAMETRIC VALUES		
○	.590	MACH	4.530	PTOTAL	110.000
□	300.870	ALPHA	.000	BETA	.000
◇	600.220	DALPHA	-20.000	DBETA	-5.000
△	900.630	Y	.000	PCHMBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

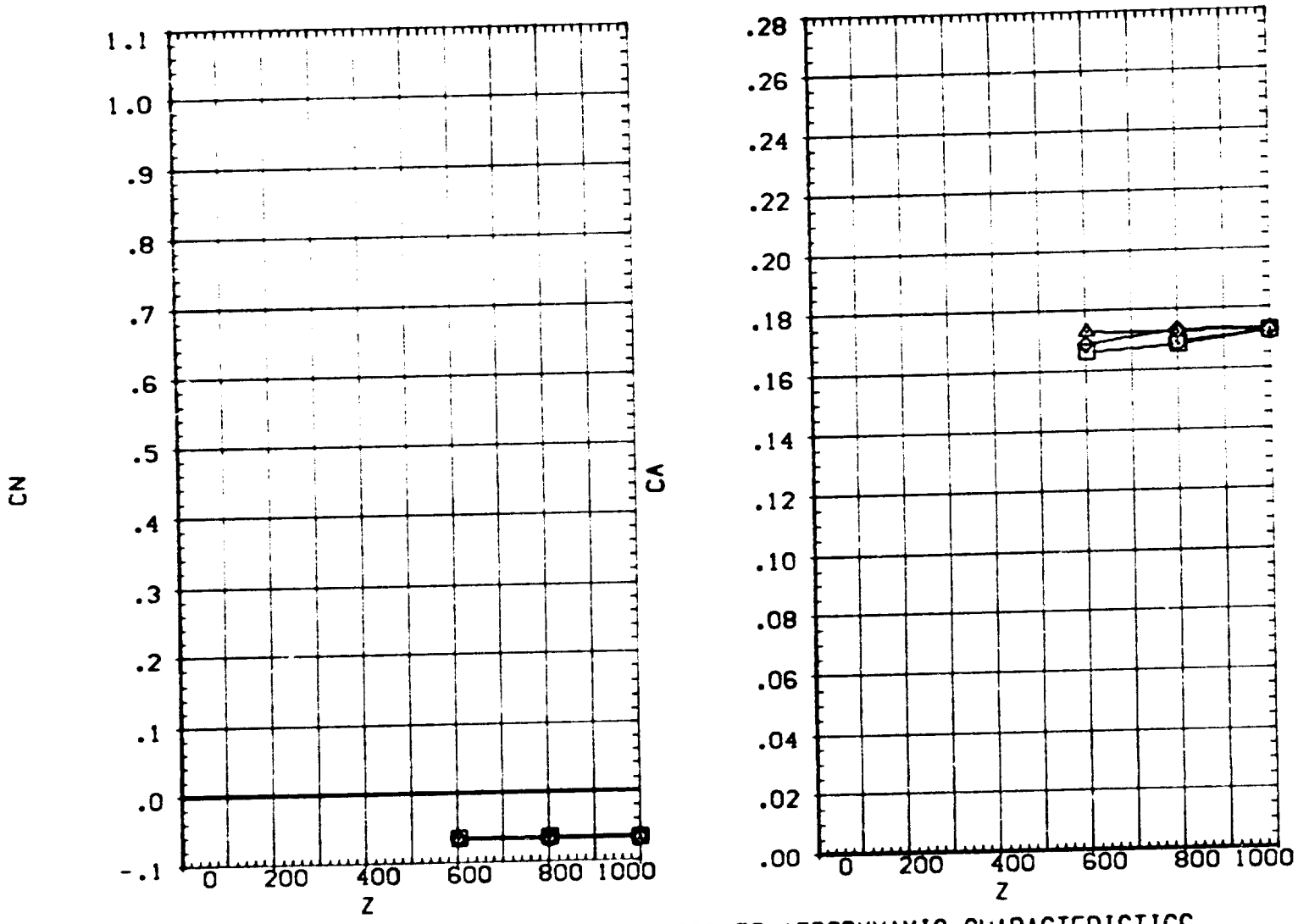


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ221)

SYMBOL	X		PARAMETRIC VALUES		
○	.051	MACH	4.530	PTOTAL	110.000
□	300.670	ALPHA	.000	BETA	.000
◇	600.280	DALPHA	-20.000	DBETA	-5.000
△	900.900	Y	200.000	PCHMBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

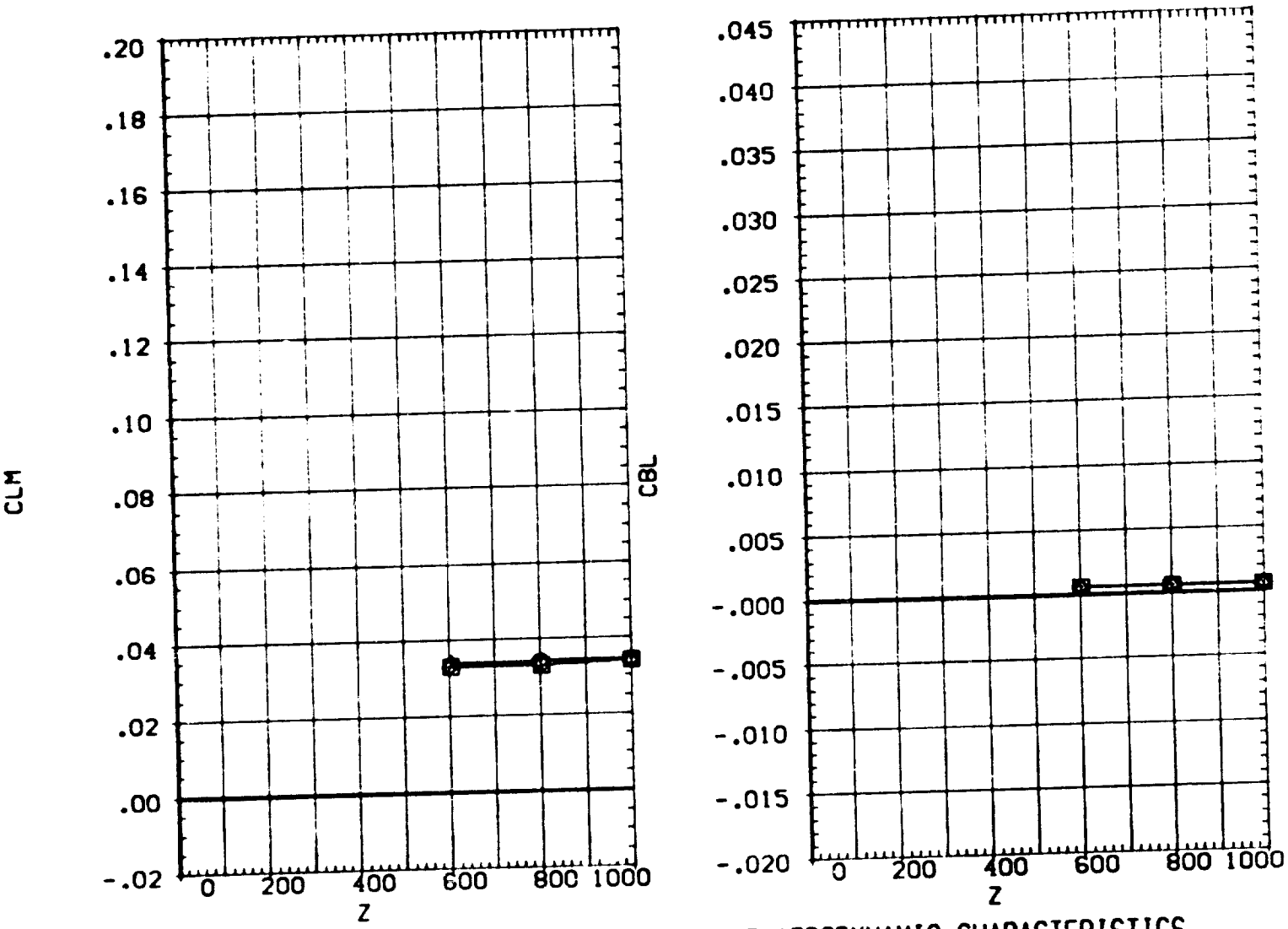


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ221)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

SYMBOL	X		PARAMETRIC VALUES		
○	.051	MACH	4.530	PTOTAL	110.000
□	300.670	ALPHA	.000	BETA	.000
◇	600.280	DALPHA	-20.000	DBETA	-5.000
△	900.950	Y	200.000	PCHMBR	.000

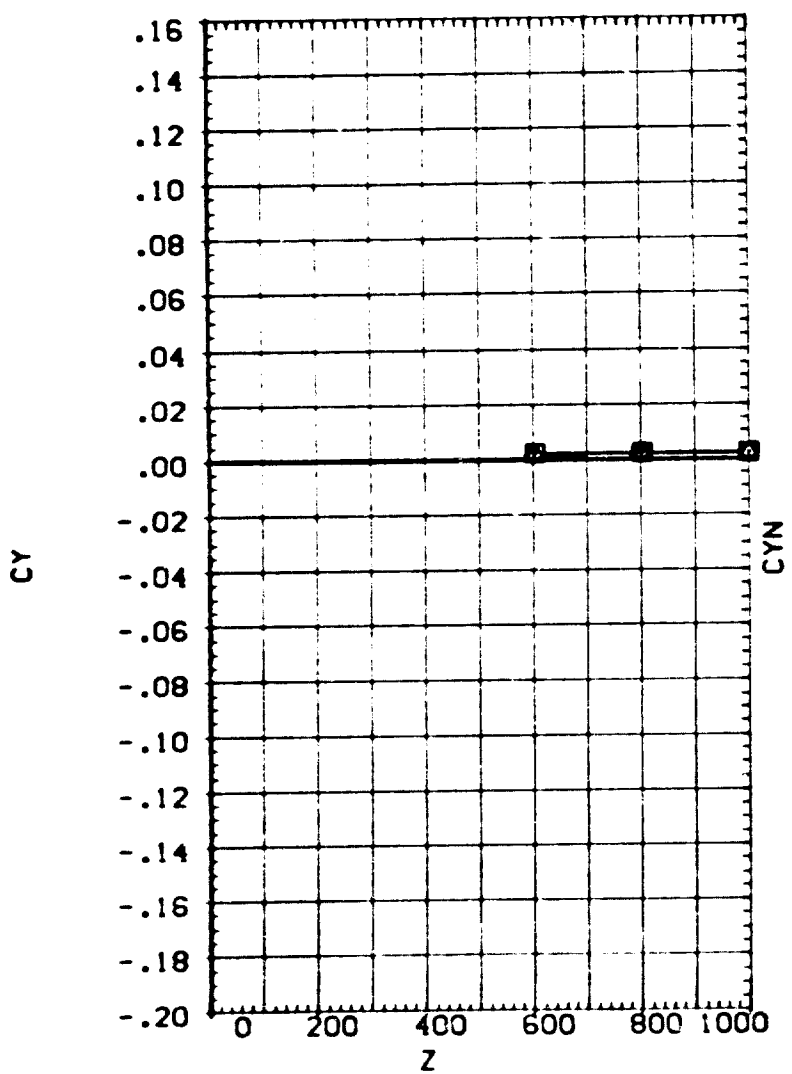


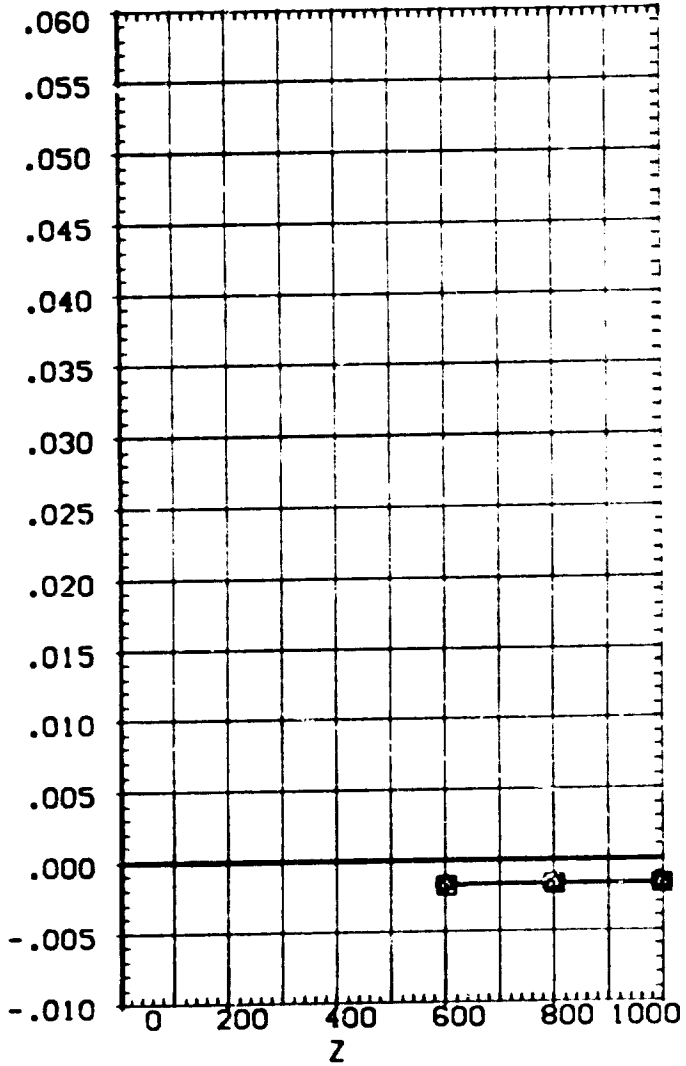
EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

!A13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ221)

SYMBOL	X		PARAMETRIC VALUES		
○	.051	MACH	4.530	PTOTAL	110.000
□	300.570	ALPHA	.000	BETA	.300
◇	600.280	DALPHA	-20.000	DBETA	-5.000
△	900.950	Y	200.000	PCHNGR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



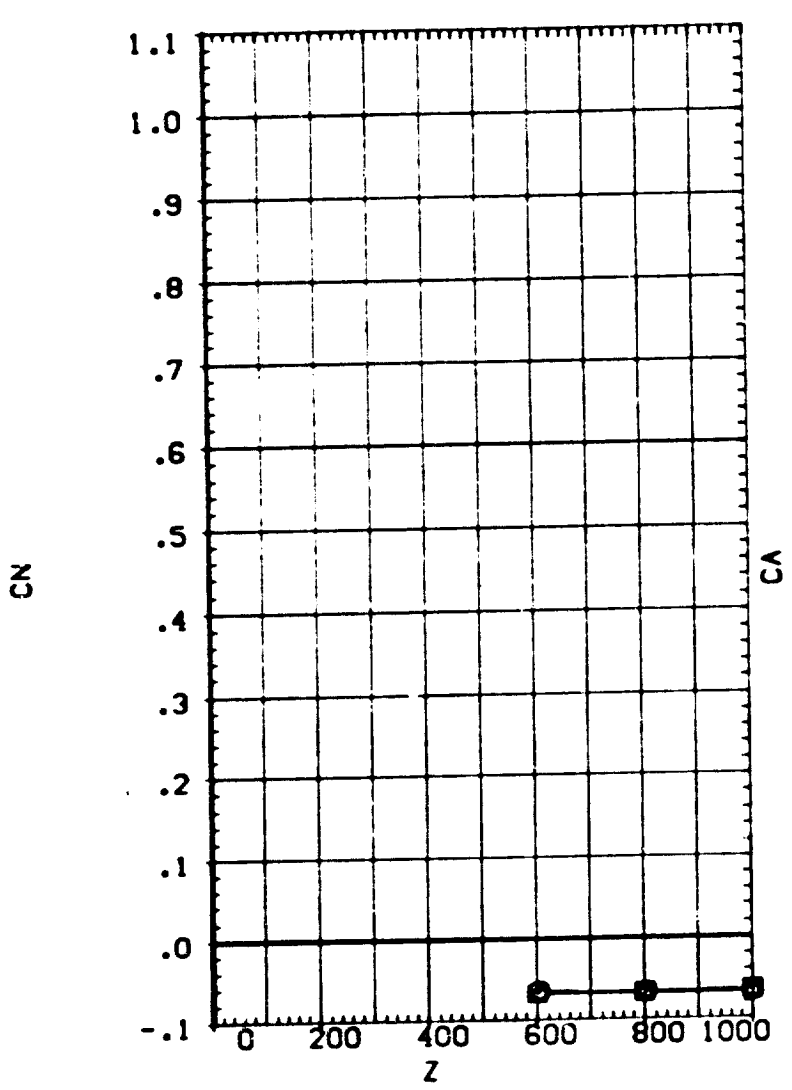


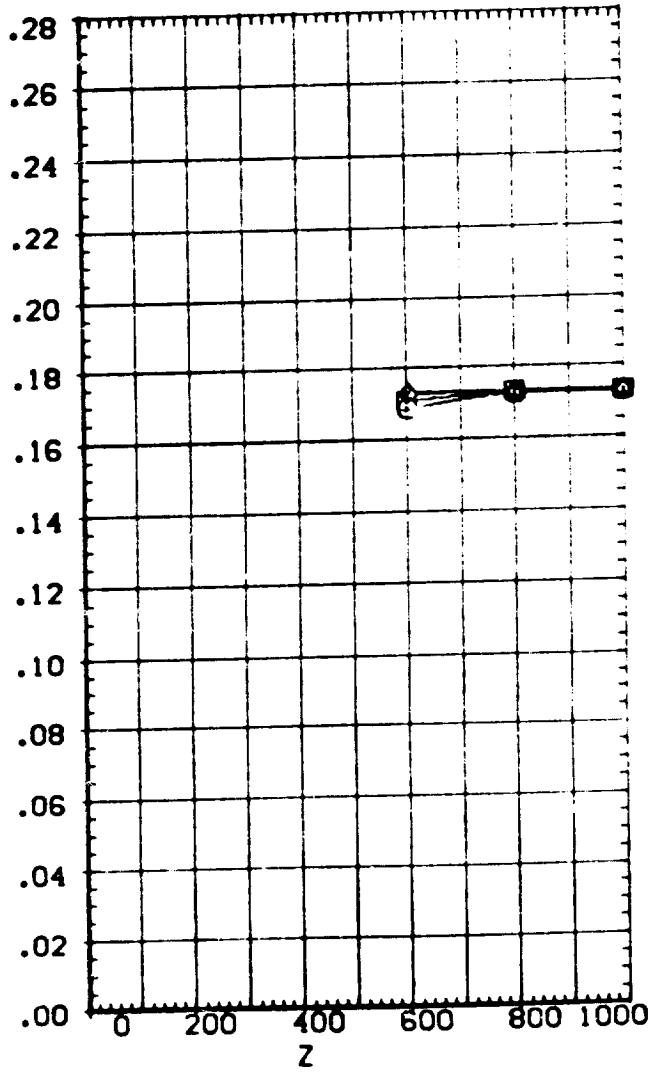
EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

[A13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ222)

SYMBOL	X		PARAMETRIC VALUES		
○	.239	MACH	4.530	PTOTAL	110.000
□	300.020	ALPHA	.000	BETA	.000
◇	600.770	DALPHA	-20.000	DBETA	-5.000
△	900.750	Y	400.000	PCHMBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



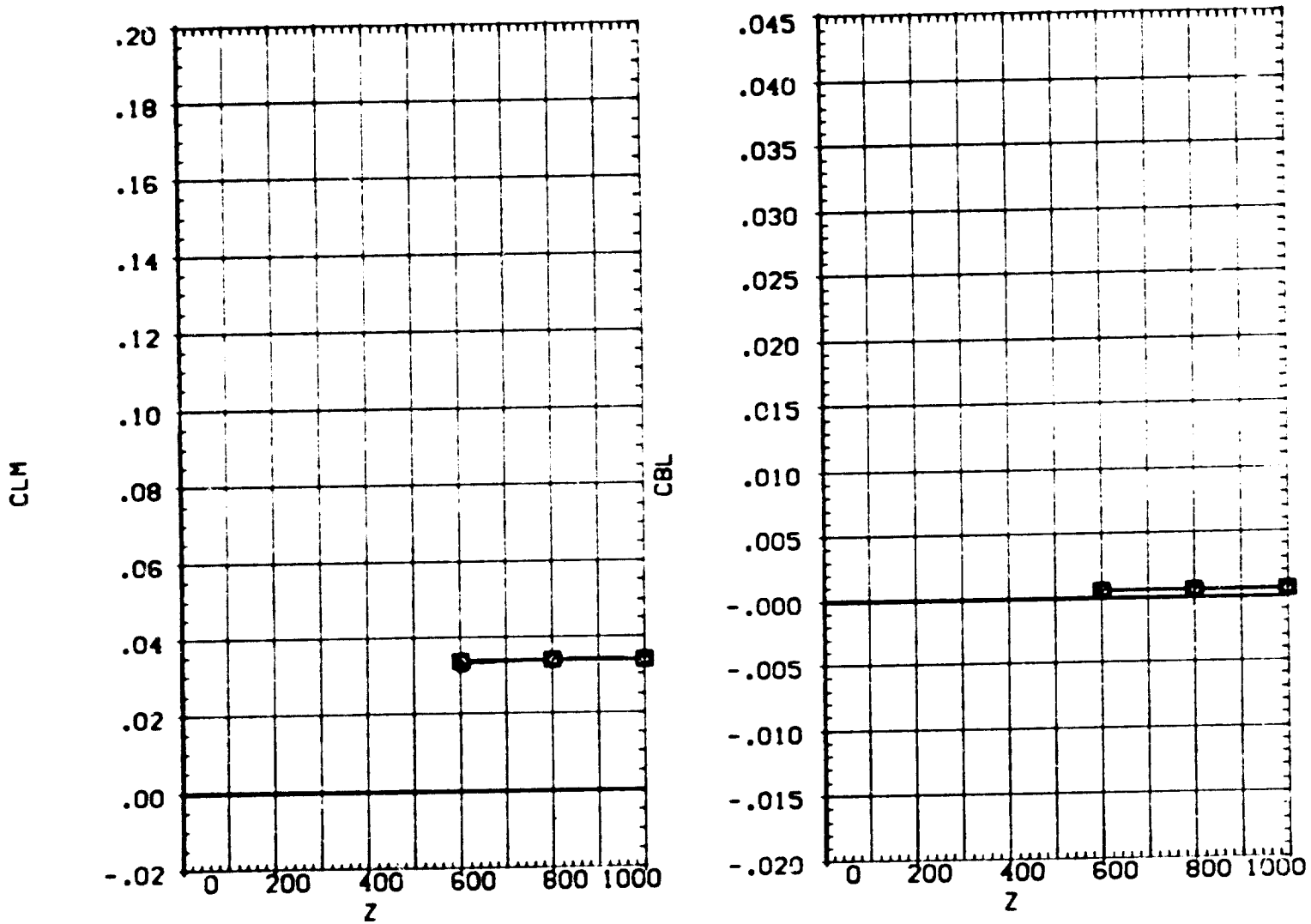


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

!A13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ222)

SYMBOL	X		PARAMETRIC VALUES		
○	.239	MACH	4.530	PTOTAL	110.000
□	300.020	ALPHA	.000	BETA	.000
◇	600.770	DALPHA	-20.000	DBETA	-5.000
△	900.750	Y	400.000	PCHMBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

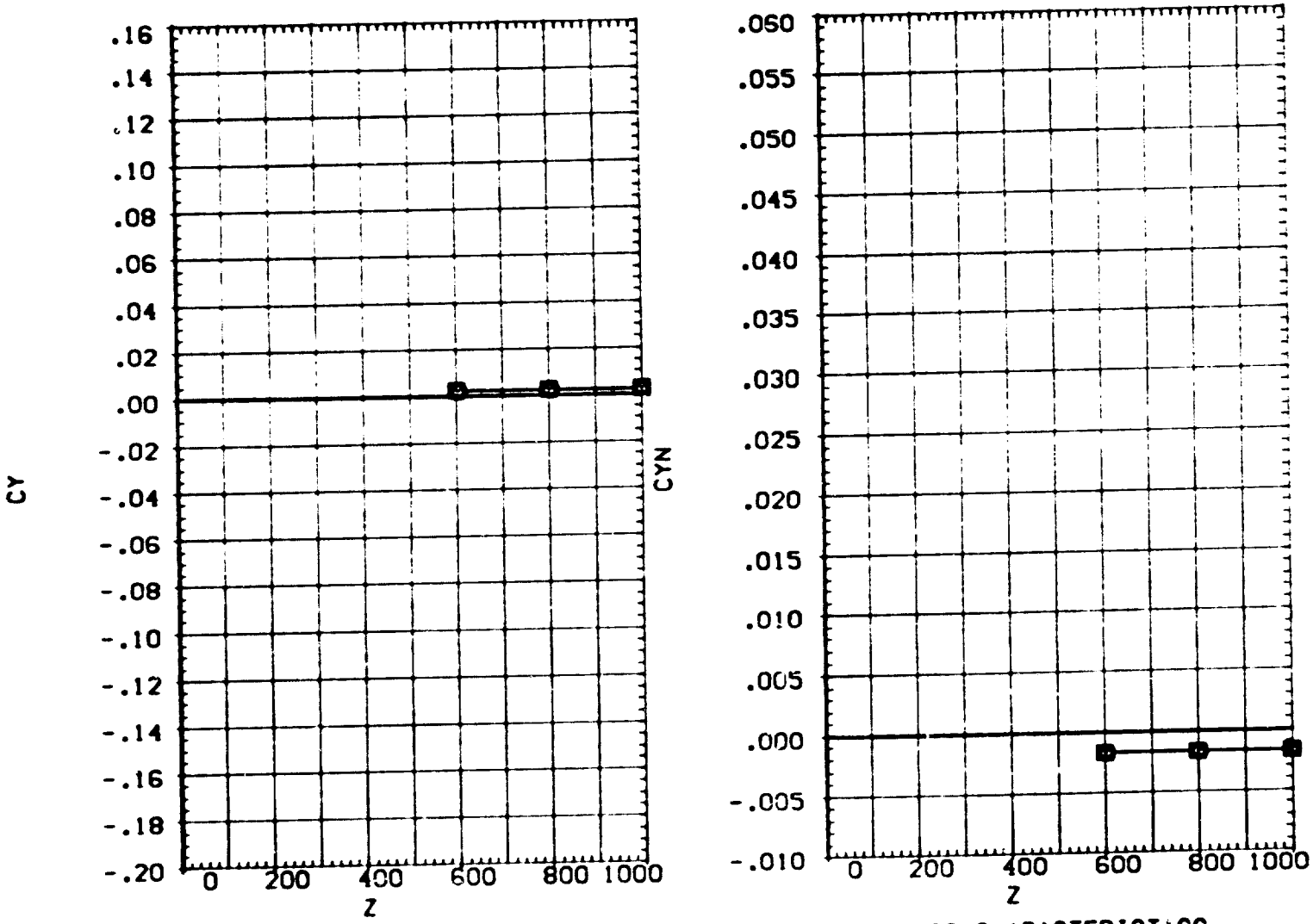


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ222)

SYMBOL	X		PARAMETRIC VALUES		
○	.239	MACH	4.530	PTOTAL	110.000
□	300.020	ALPHA	.000	BETA	.000
◇	600.770	DALPHA	-20.000	DBETA	-5.000
△	900.750	Y	400.000	POWER	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

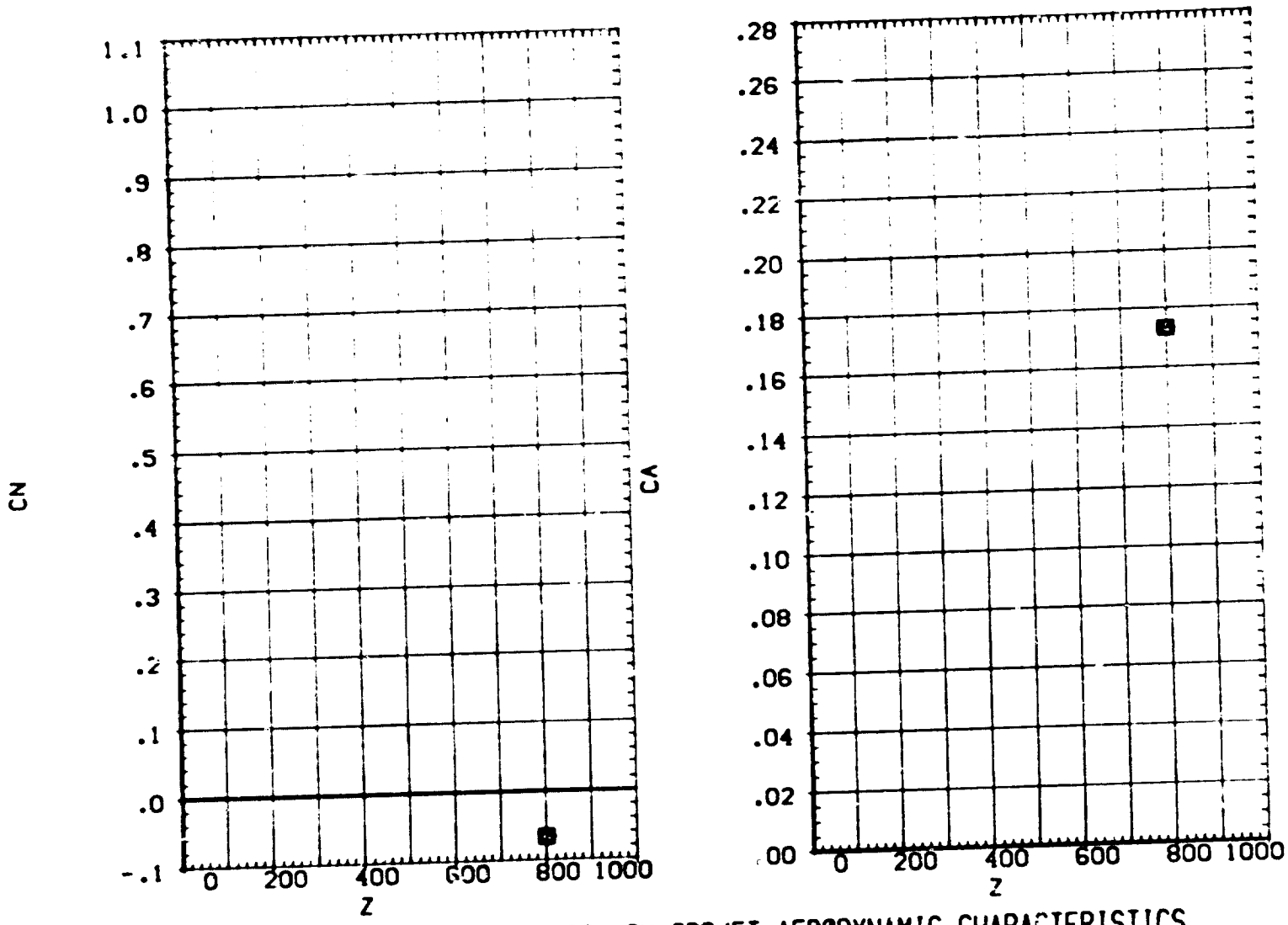


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

:A:3 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ223)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

SYMBOL	X		PARAMETRIC VALUES		
○	-.011	MACH	4.530	PTOTAL	110.000
□	300.150	ALPHA	.000	BETA	.000
◇	500.630	DALPHA	-20.000	DBETA	-5.000
△	900.030	Y	400.000	PCHMBR	.000

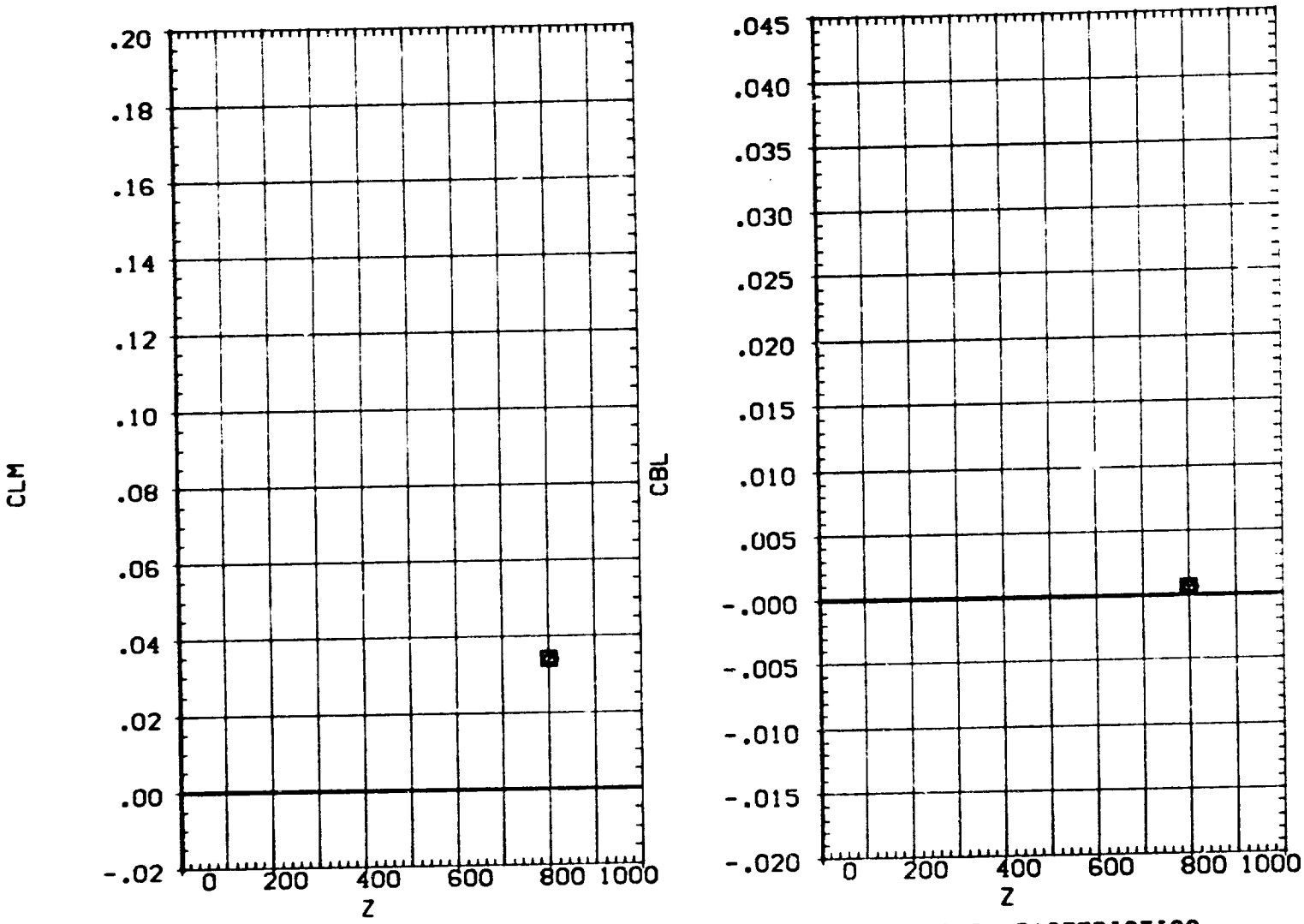


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ223)

SYMBOL	X		PARAMETRIC VALUES		
○	-.011	MACH	4.530	PTOTAL	110.000
□	300.150	ALPHA	.000	BETA	.000
◇	600.630	DALPHA	-20.000	DBETA	-5.000
△	900.030	Y	800.000	DCHMBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

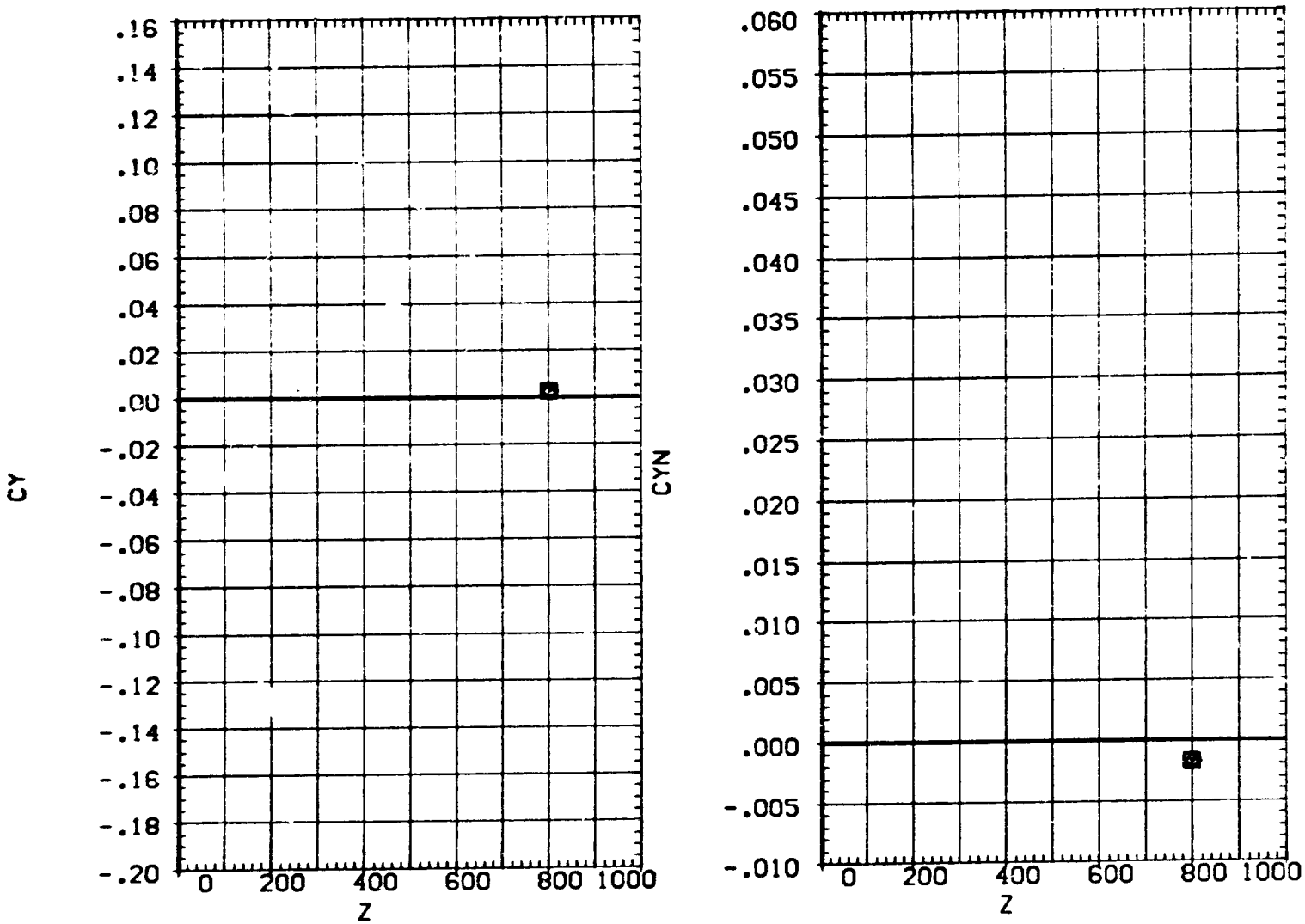


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ223)

SYMBOL	X		PARAMETRIC VALUES		
○	-.011	MACH	4.530	PTOTAL	110.000
□	300.150	ALPHA	.000	BETA	.000
◇	600.630	DALPHA	-20.000	DBETA	-5.000
△	900.030	Y	800.000	PCHMBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

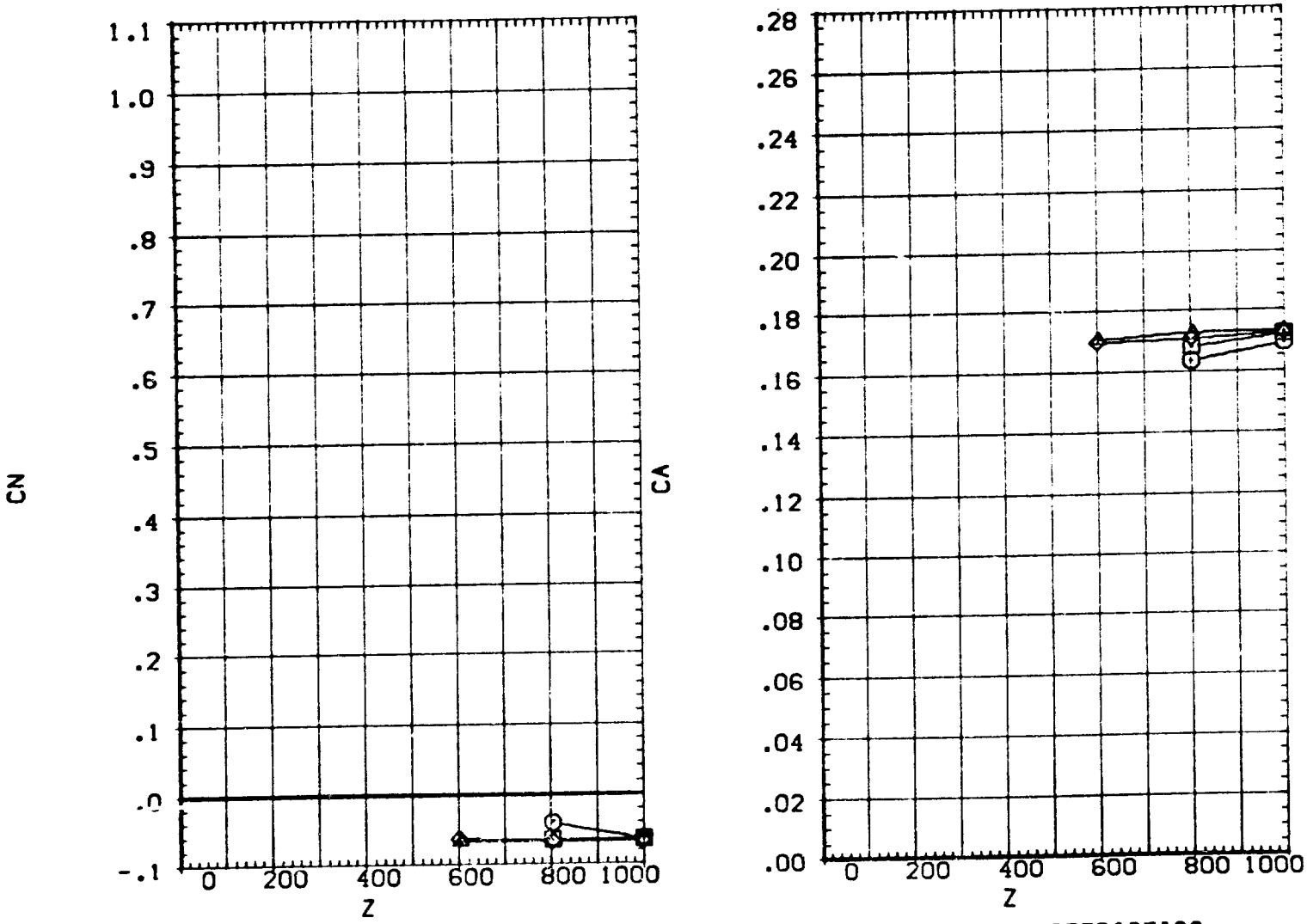


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ225)

SYMBOL	X		PARAMETRIC VALUES		
○	.643	MACH	4.530	PTOTAL	110.000
□	300.660	ALPHA	.000	BETA	.000
◇	599.870	DALPHA	-20.000	DBETA	-10.000
△	900.580	Y	.000	PCHMBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

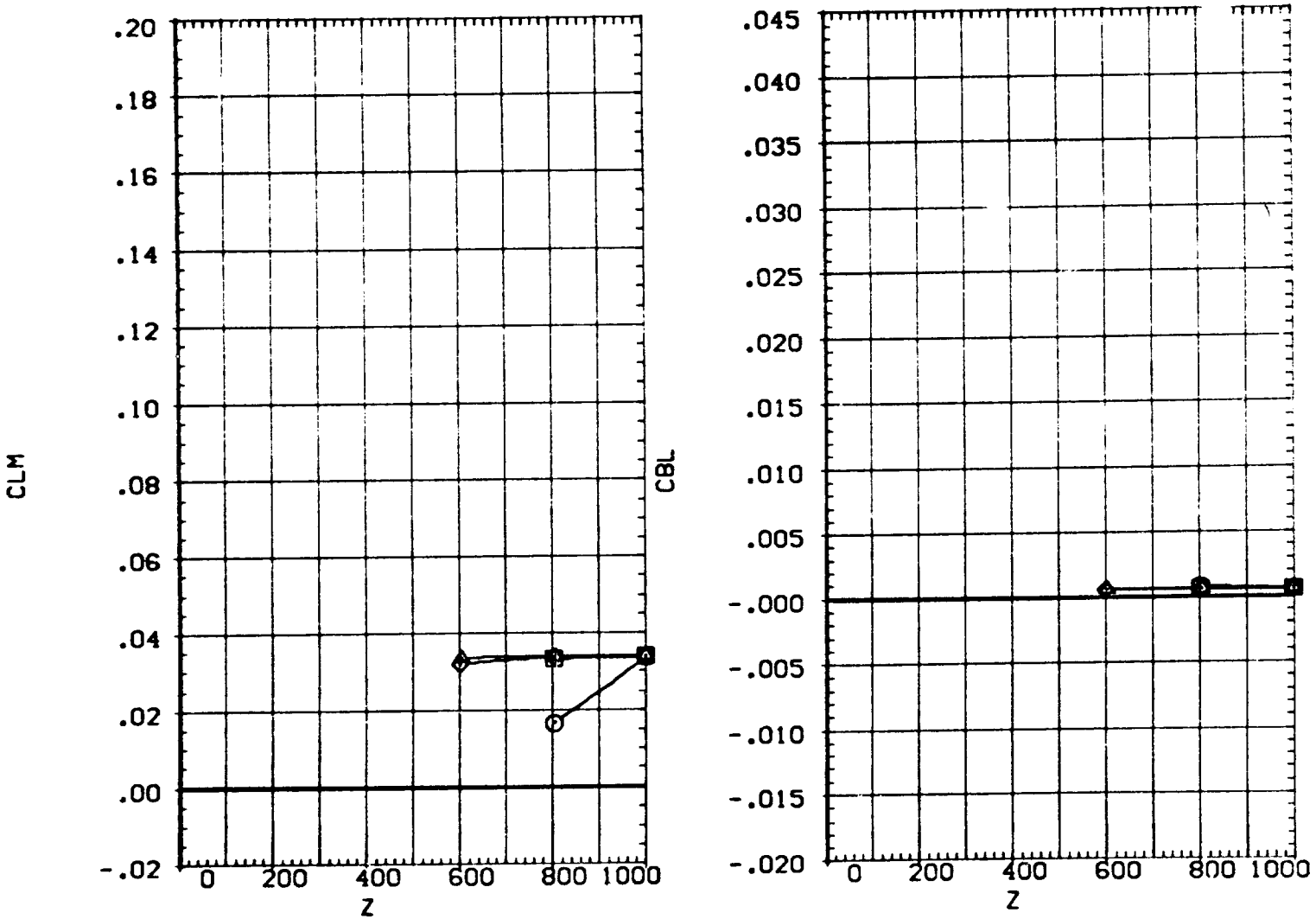


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ225)

SYMBOL	X		PARAMETRIC VALUES		
○	.643	MACH	4.530	PTOTAL	110.000
□	300.660	ALPHA	.000	BETA	.000
◇	599.870	DALPHA	-20.000	DBETA	-10.000
△	900.580	Y	.000	PCHMBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

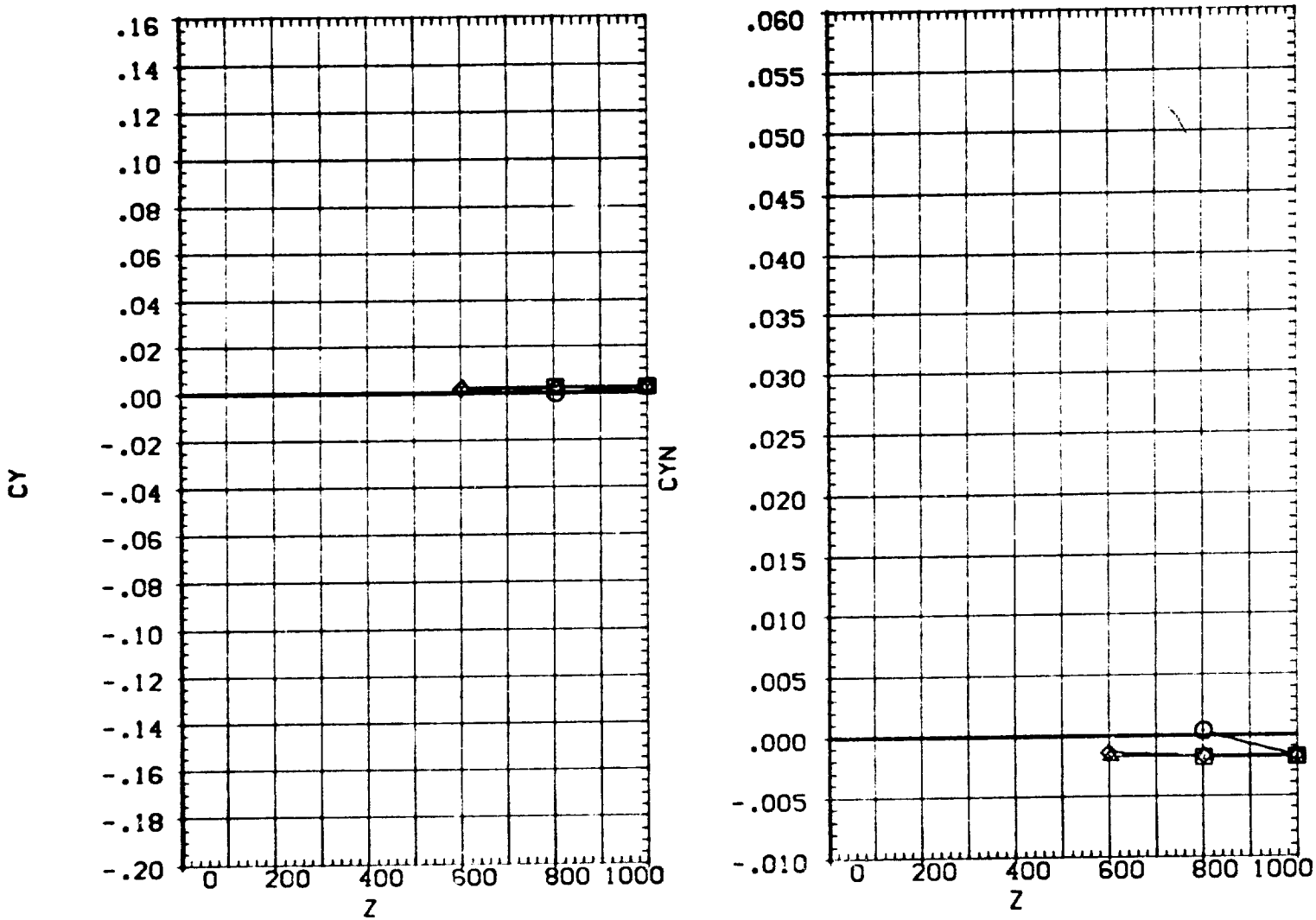


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ225)

SYMBOL	X		PARAMETRIC VALUES		
○	.643	MACH	4.530	PTOTAL	110.000
□	300.660	ALPHA	.000	BETA	.000
◇	599.870	DALPHA	-20.000	DBETA	-10.000
△	900.580	Y	.000	PCHMBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

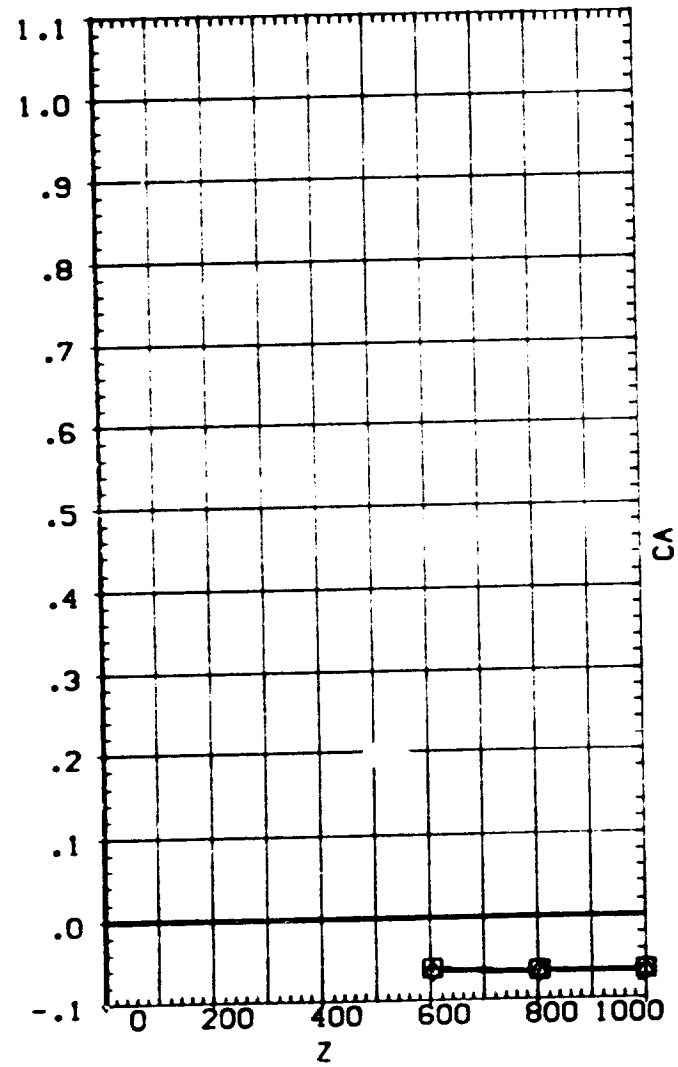


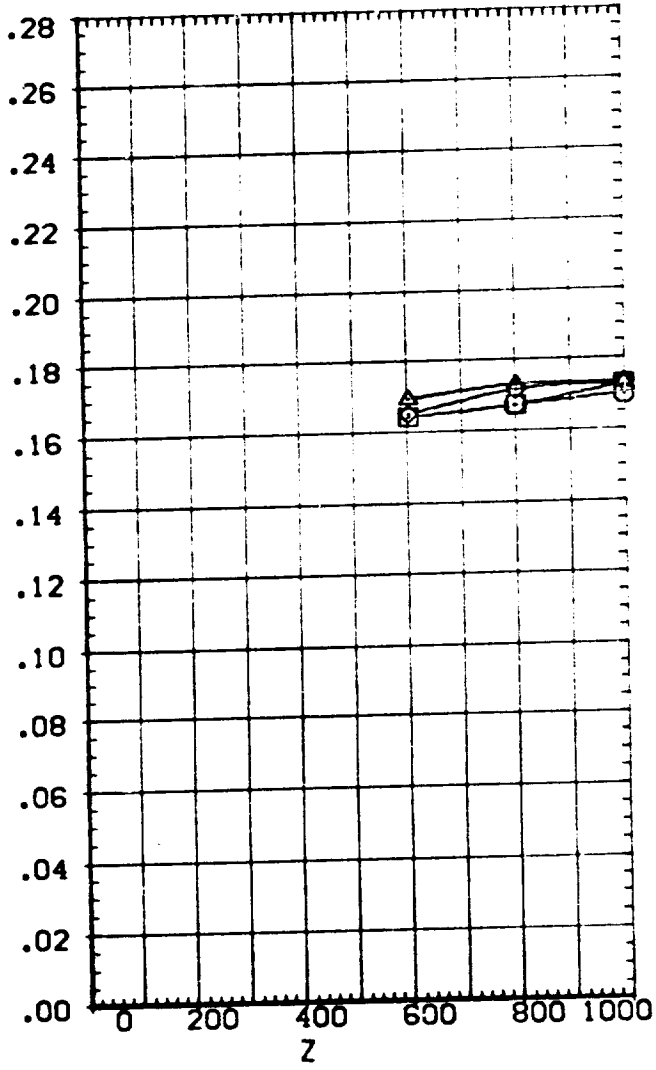
EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ226)

SYMBOL	X		PARAMETRIC VALUES		
○	.131	MACH	4.530	PTOTAL	110.000
□	300.460	ALPHA	.000	BETA	.000
◇	600.430	DALPHA	-20.000	DBETA	-10.000
△	900.520	Y	200.000	PCHMBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



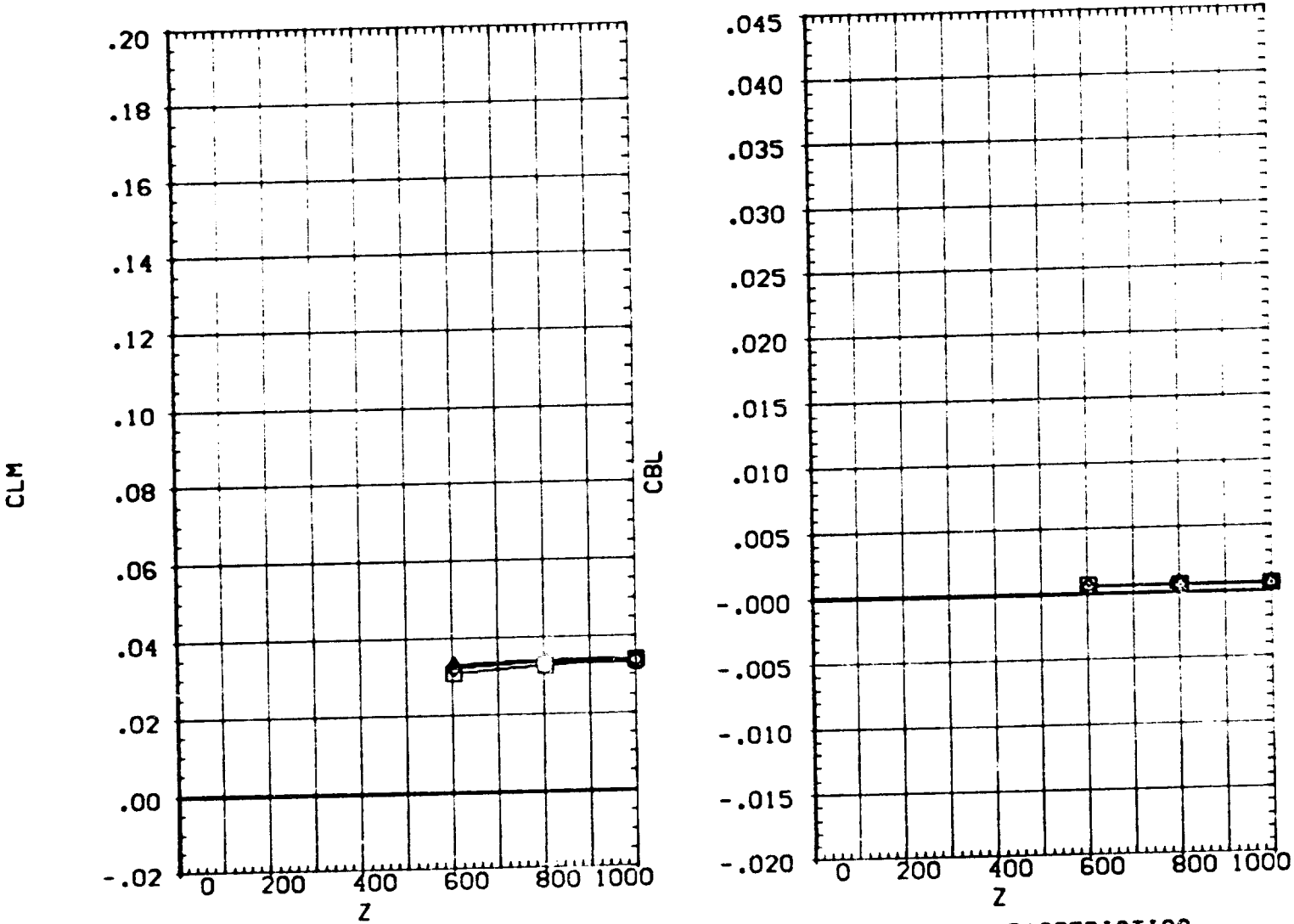


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA:3 SRB(S8) W/O PLUMES SEPARATING FROM OST10 (RTJ226)

SYMBOL	X		PARAMETRIC VALUES		
○	.131	MACH	4.530	PTOTAL	110.000
□	300.460	ALPHA	.000	BETA	.000
◇	600.430	DALPHA	-20.000	DBETA	-10.000
△	900.520	Y	200.000	PCHMBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

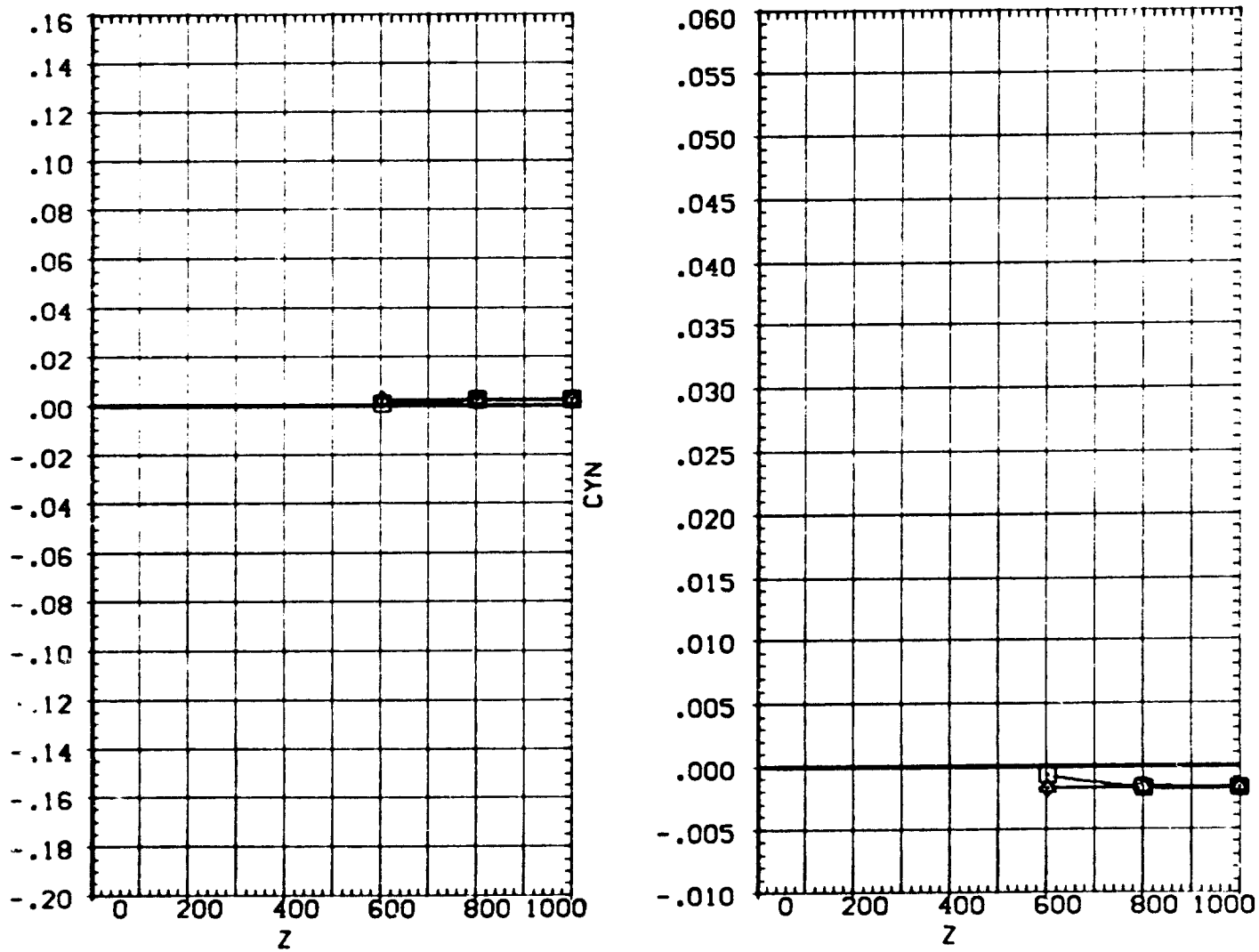


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

!A13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ226)

SYMBOL	X		PARAMETRIC VALUES		
○	.131	MACH	4.530	PTOTAL	110.000
□	300.460	ALPHA	.000	BETA	.000
◇	600.430	DALPHA	-20.000	DBETA	-10.000
△	900.520	Y	200.000	PCHMBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

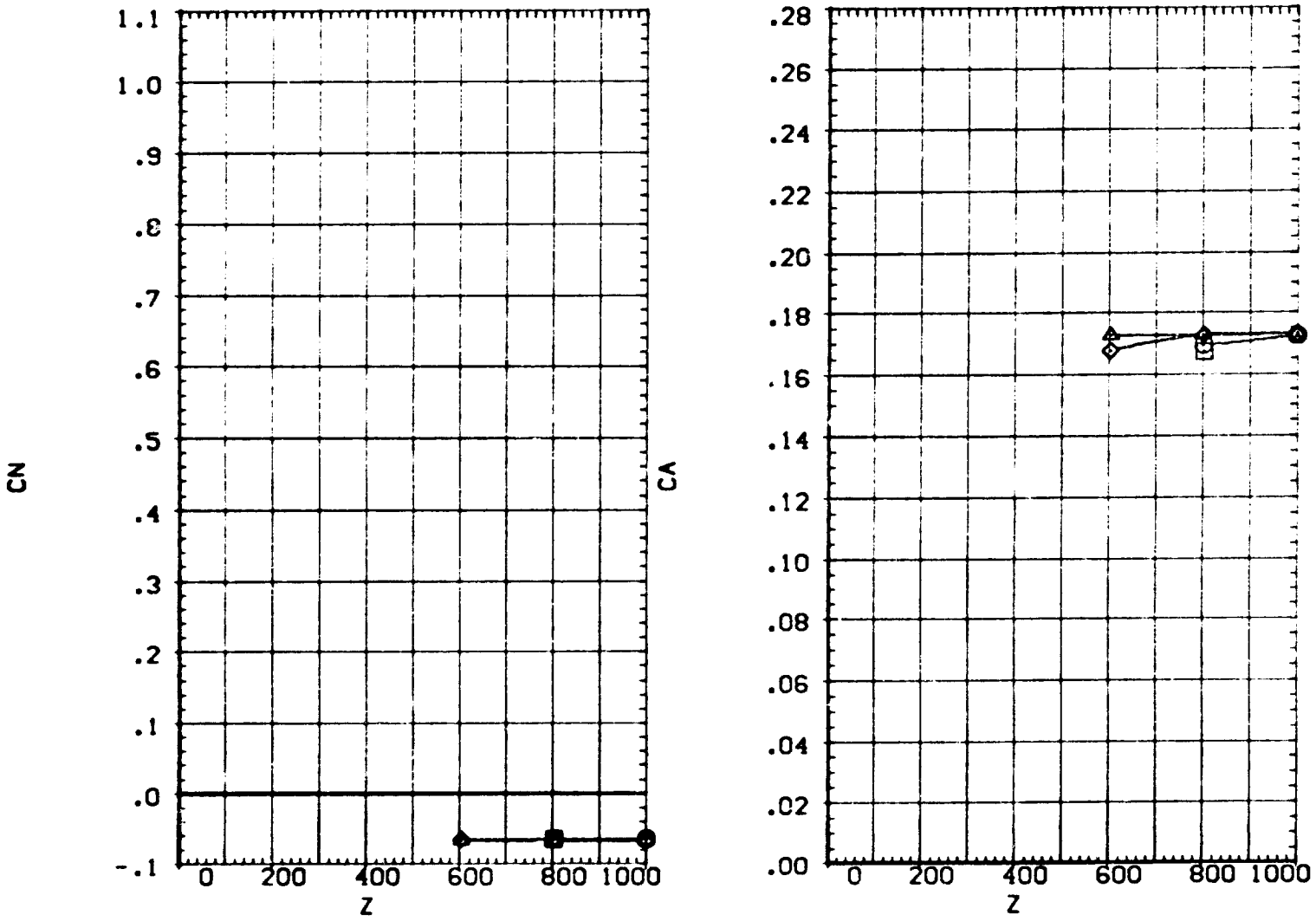


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ227)

SYMBOL	X		PARAMETRIC VALUES		
○	.595	MACH	4.530	PTOTAL	110.000
□	300.640	ALPHA	.000	BETA	.000
◇	600.750	DALPHA	-20.000	DBETA	-10.000
△	900.720	Y	400.000	PCHMBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

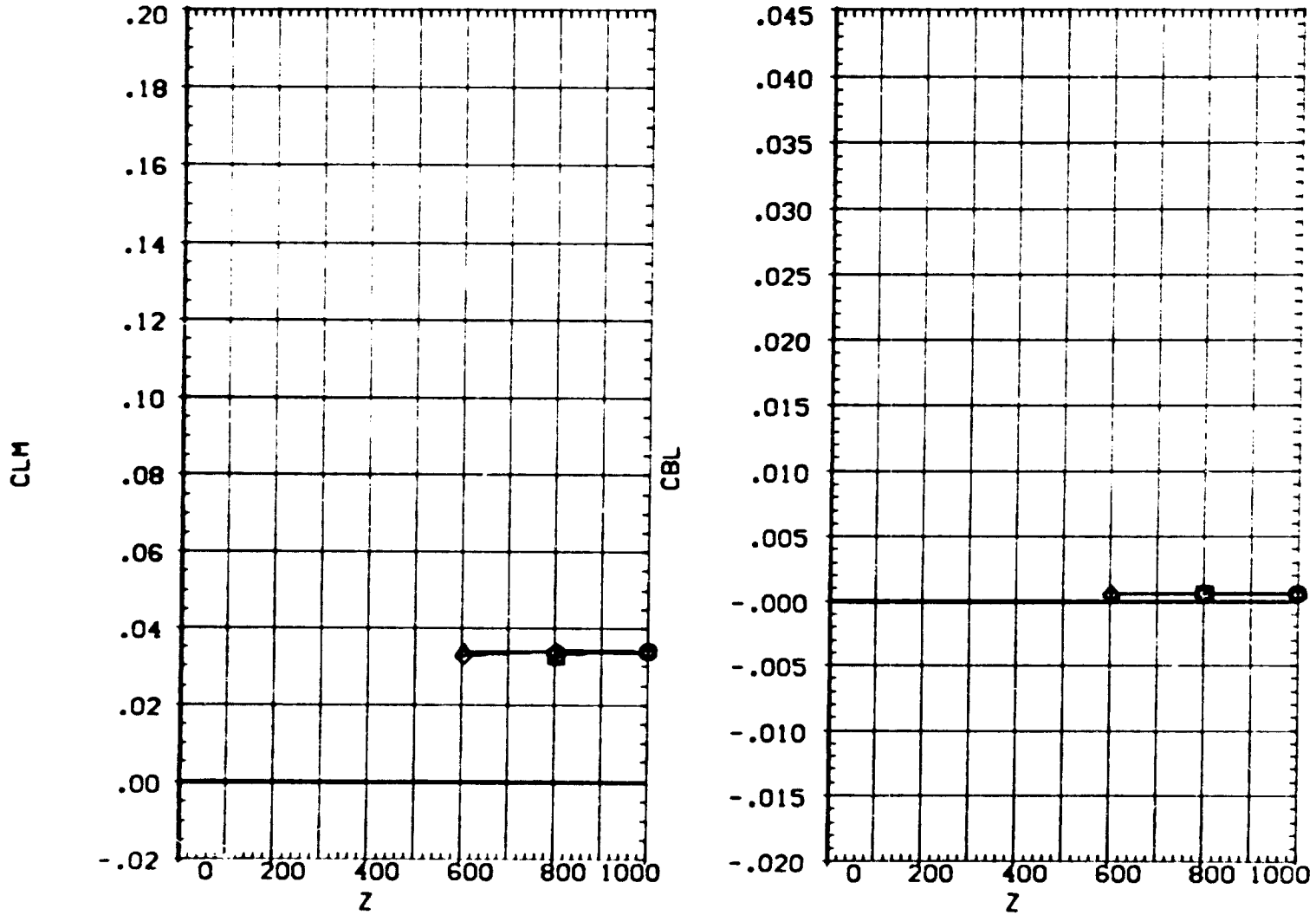


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

!A13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ227)

SYMBOL	X		PARAMETRIC VALUES		
○	.595	MACH	4.530	PTOTAL	110.000
□	300.640	ALPHA	.000	BETA	.000
◇	600.750	DALPHA	-20.000	DBETA	-10.000
△	900.720	Y	400.000	PCHMBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

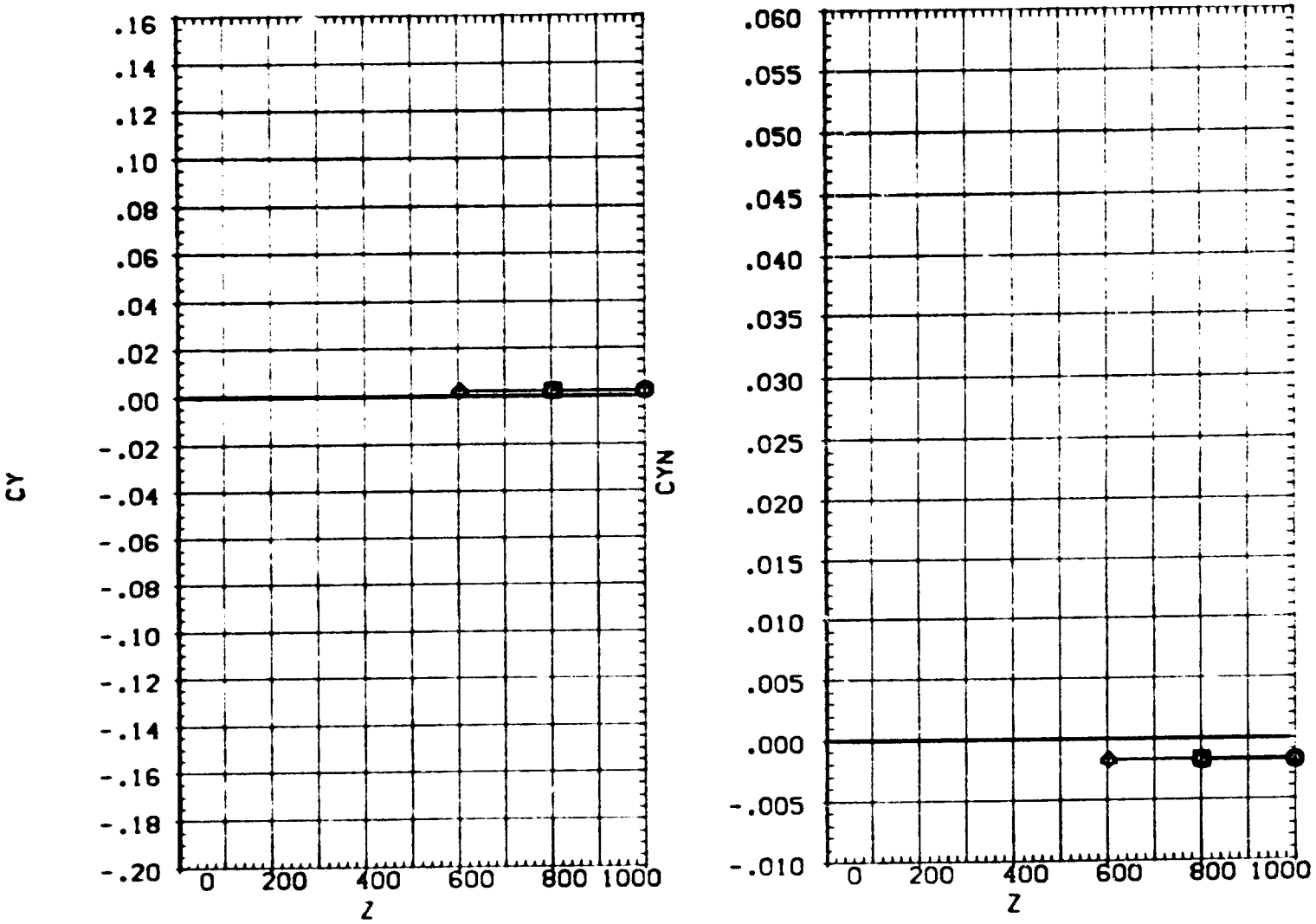


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM OBITO (RTJ227)

SYMBOL	X		PARAMETRIC VALUES		
○	.595	MACH	4.530	PTOTAL	110.000
□	300.640	ALPHA	.000	BETA	.000
◇	600.750	DALPHA	-20.000	DBETA	-10.000
△	900.720	Y	400.000	PCHMBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

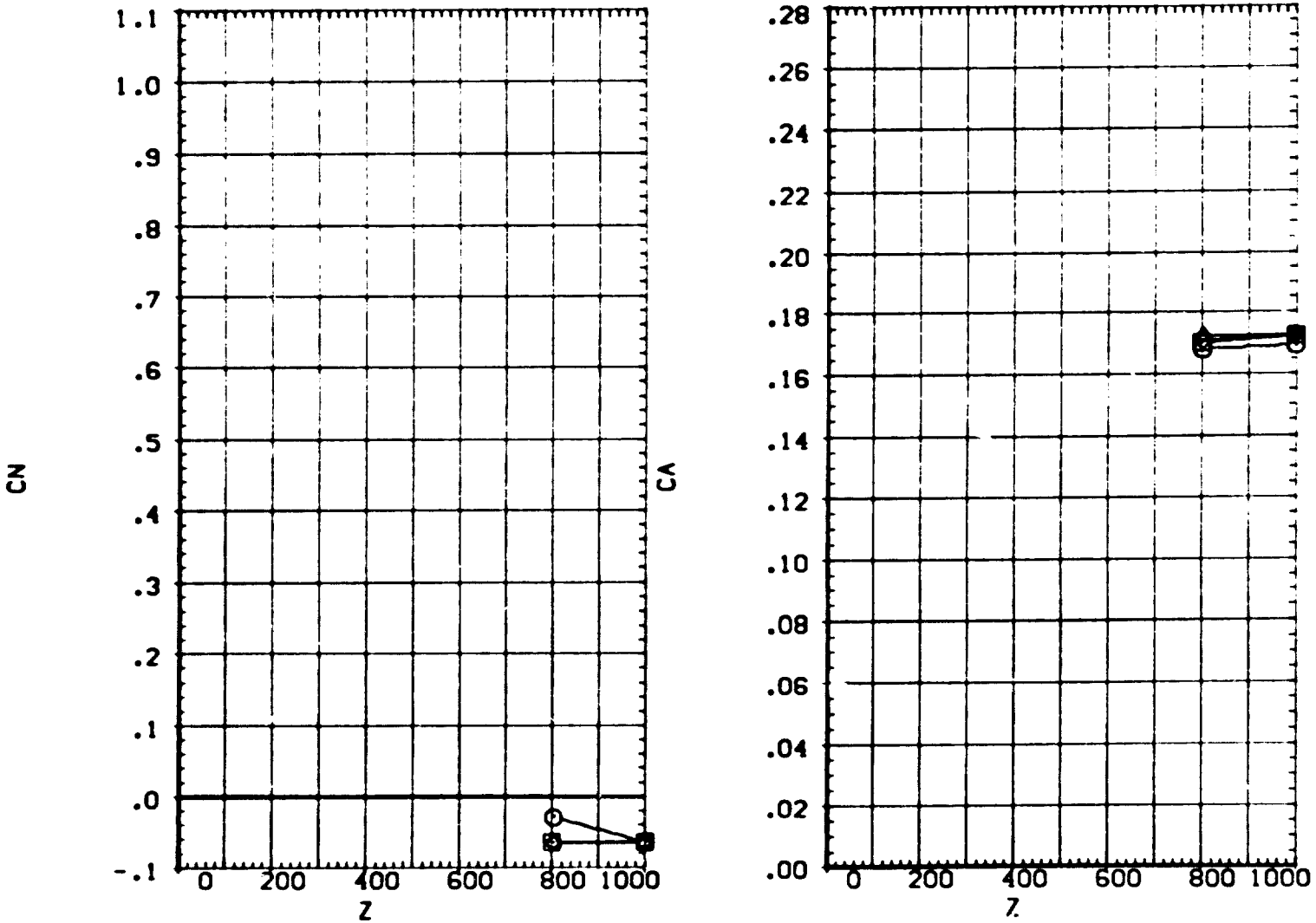


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

!A13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ228)

SYMBOL	X		PARAMETRIC VALUES		
○	.817	MACH	4.530	PTOTAL	110.000
□	300.300	ALPHA	.000	BETA	.000
◇	600.930	DALPHA	-20.000	DBETA	-20.000
△	900.570	Y	.000	PCHNBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

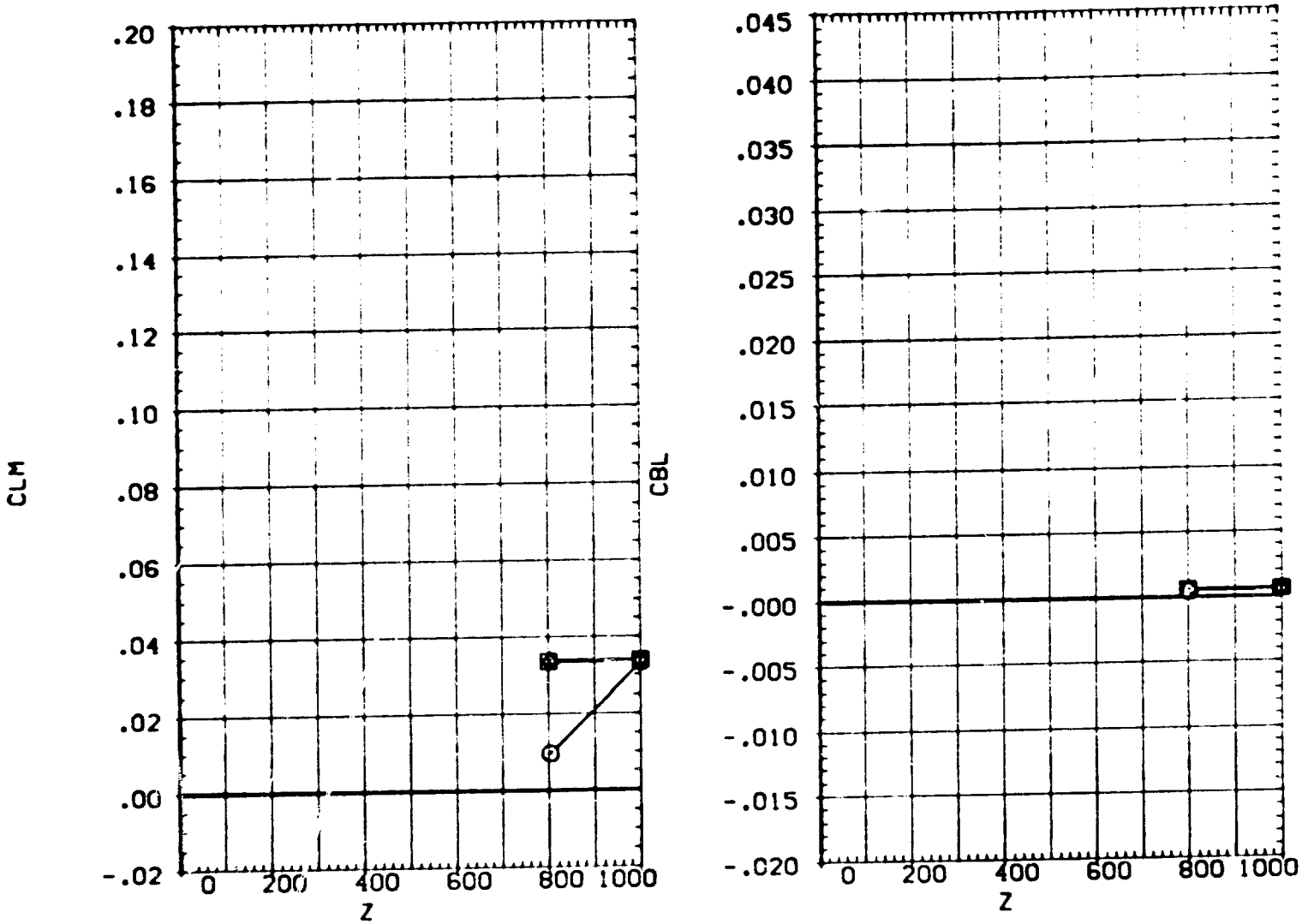


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

!A13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ228)

SYMBOL	X		PARAMETRIC VALUES		
	.817	MACH	4.530	PTOTAL	110.000
	300.300	ALPHA	.000	BETA	.000
	600.930	DALPHA	-20.000	DBETA	-20.000
△	900.570	v	.000	PCNBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

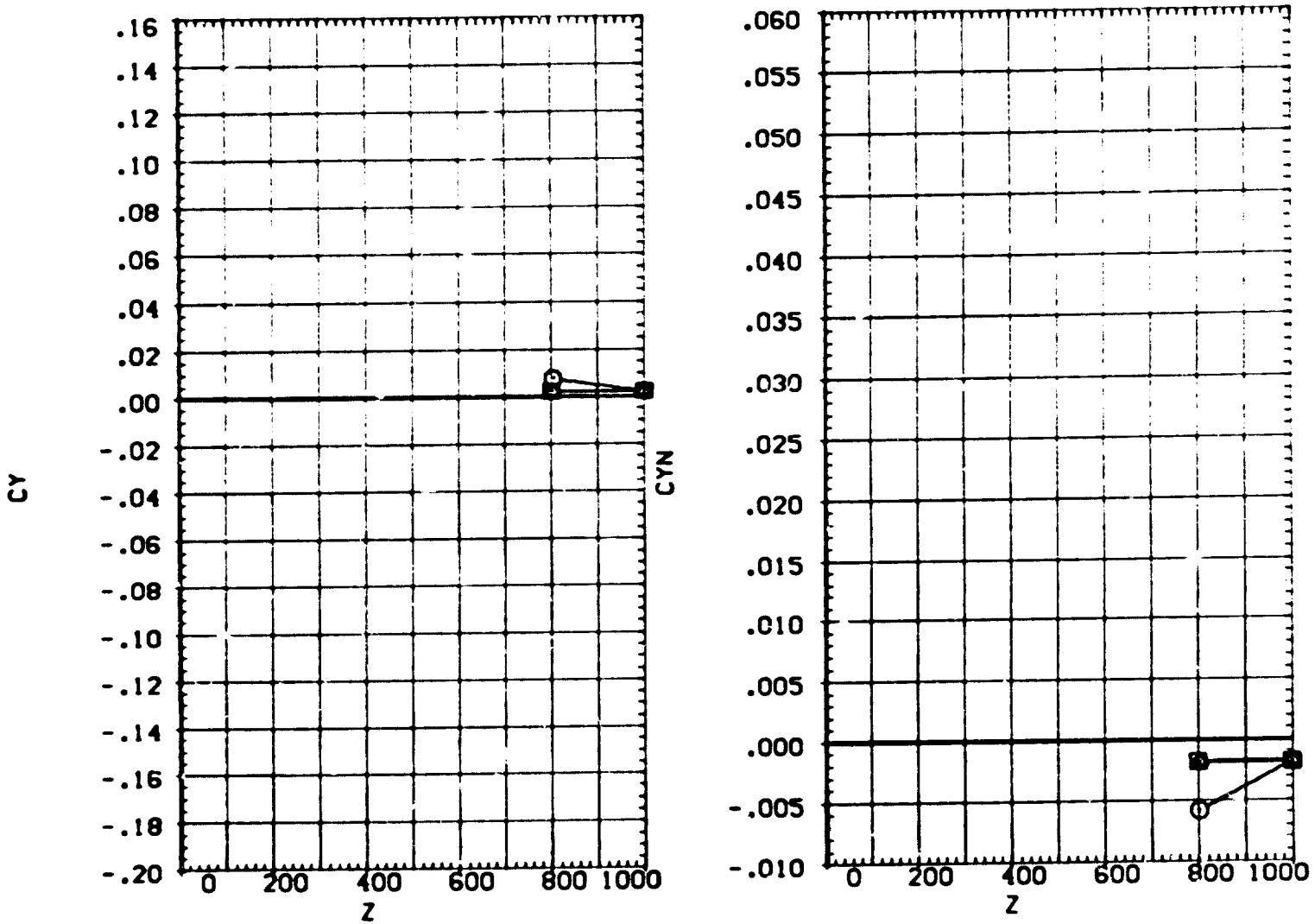


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ228)

SYMBOL	X		PARAMETRIC VALUES		
○	.817	MACH	4.530	PTOTAL	110.000
□	300.300	ALPHA	.000	BETA	.000
◇	600.930	DALPHA	-20.000	DBETA	-20.000
△	900.570	Y	.000	PCHNGR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

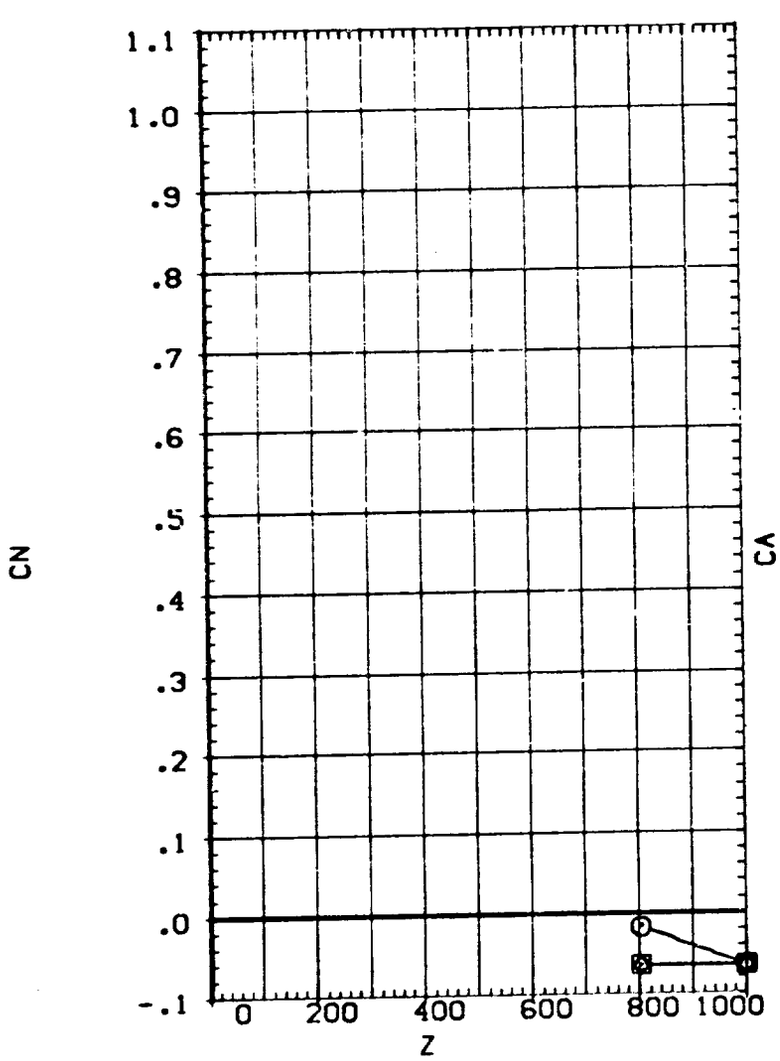


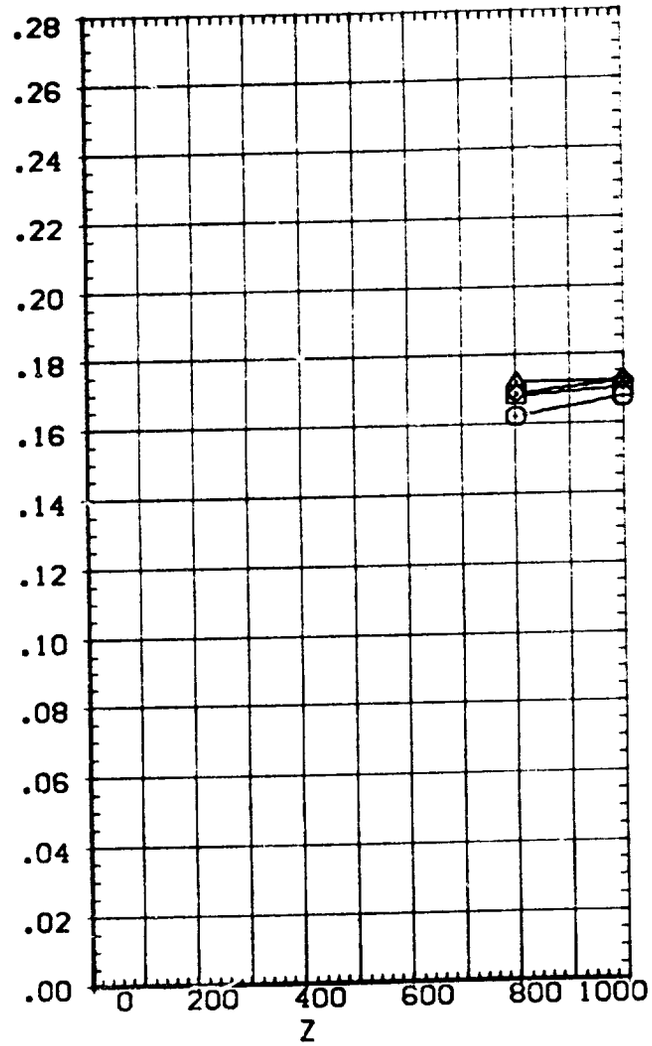
EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ229)

SYMBOL	X		PARAMETRIC VALUES		
○	.291	MACH	4.530	PTOTAL	110.000
□	300.660	ALPHA	.000	BETA	.000
◇	600.330	DALPHA	-20.000	DBETA	-20.000
△	900.330	Y	200.000	PCHMBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



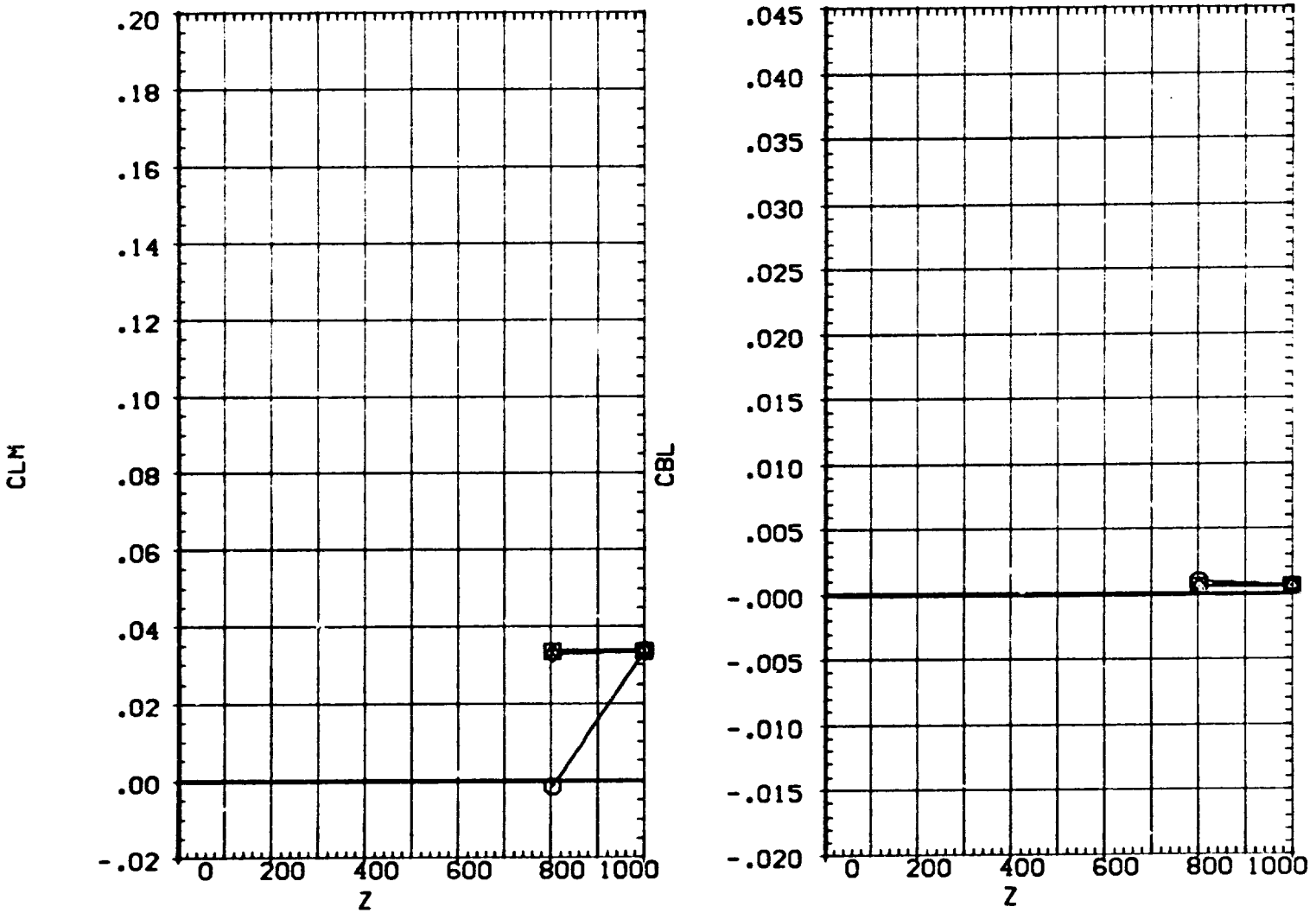


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ229)

SYMBOL	X		PARAMETRIC VALUES		
○	.291	MACH	4.530	PTOTAL	110.000
□	300.660	ALPHA	.000	BETA	.000
◇	600.330	DALPHA	-20.000	DBETA	-20.000
△	900.330	Y	200.000	PCHMBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

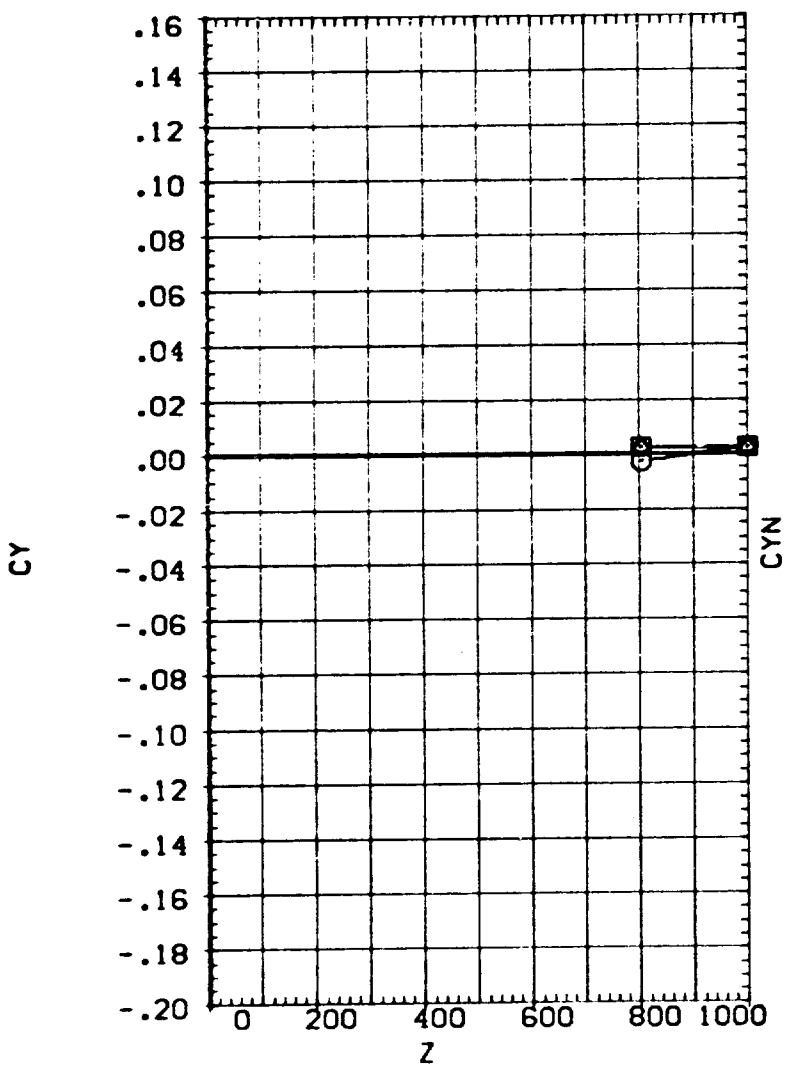


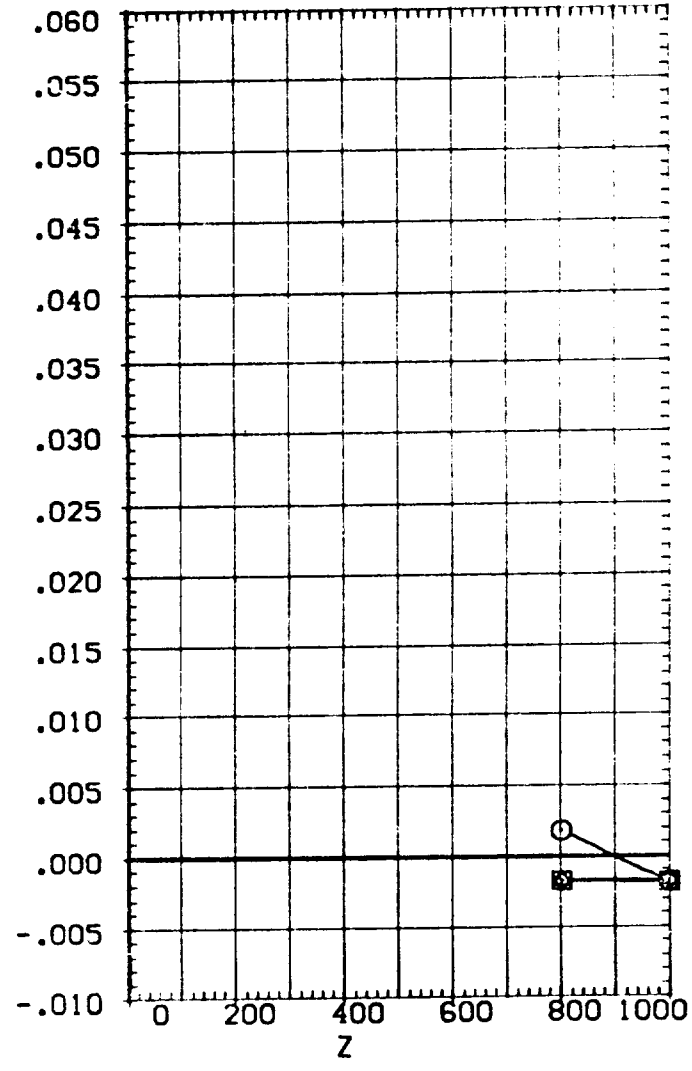
EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ229)

SYMBOL	X		PARAMETRIC VALUES		
○	.291	MACH	4.530	PTOTAL	110.000
□	300.660	ALPHA	.000	BETA	.000
◇	600.330	DALPHA	-20.000	DBETA	-20.000
△	900.330	Y	200.000	PCHMBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



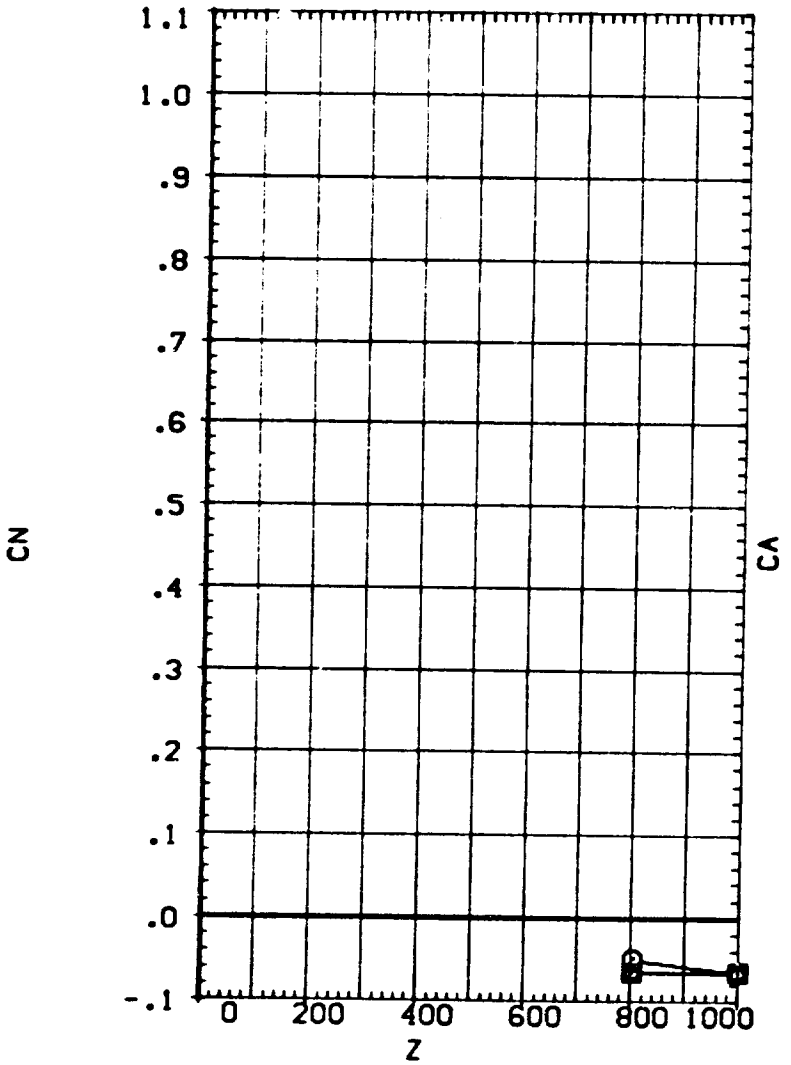


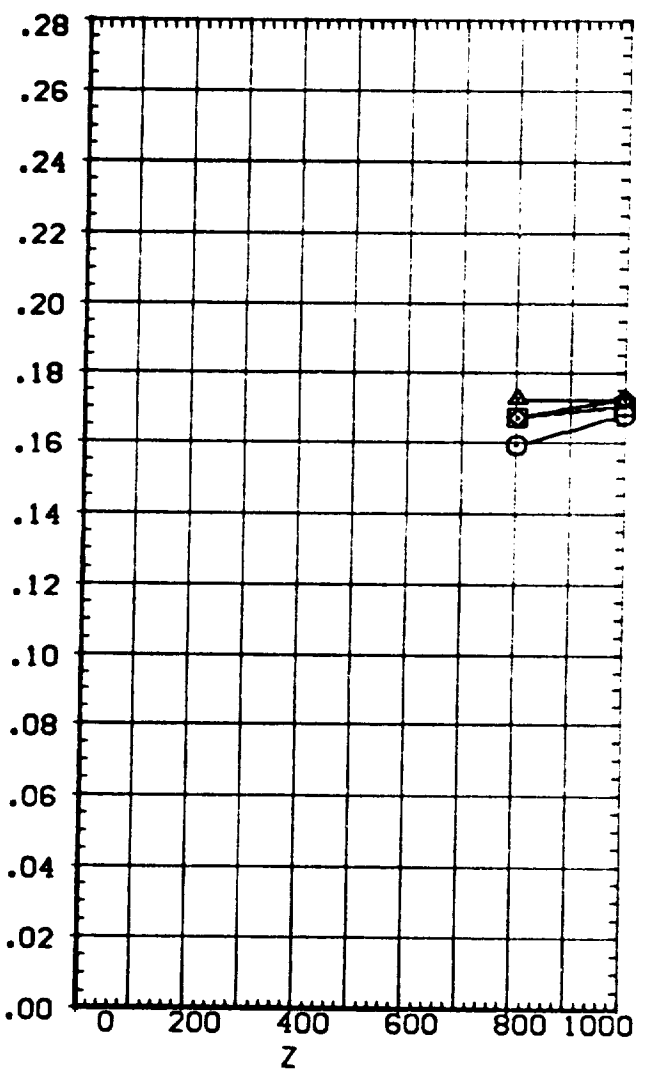
EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ230)

SYMBOL	X		PARAMETRIC VALUES		
○	.586	MACH	4.530	PTOTAL	110.000
□	300.250	ALPHA	.000	BETA	.000
◇	600.580	DALPHA	-20.000	DBETA	-20.000
△	900.290	Y	400.000	PCHMBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



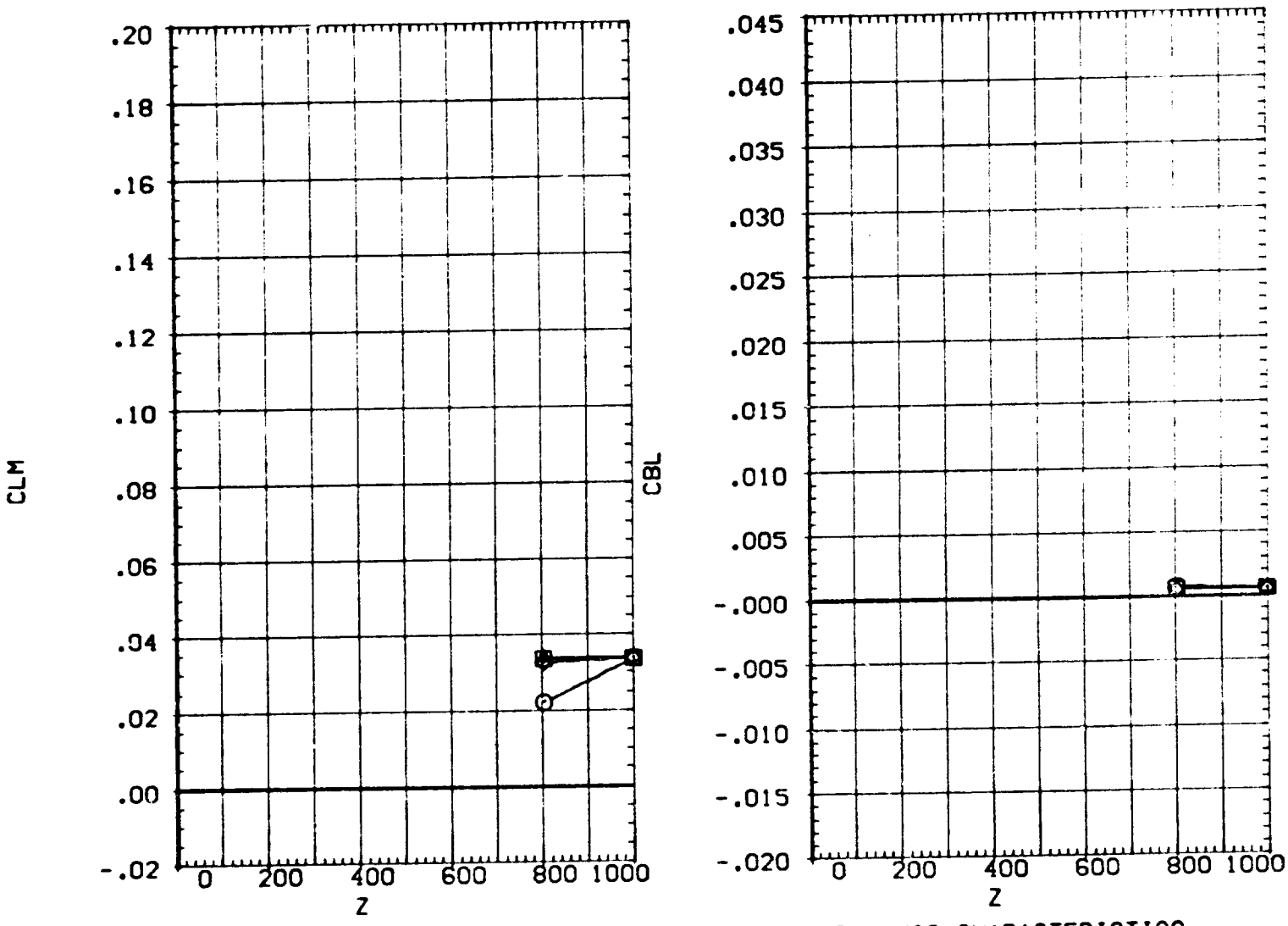


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ230)

SYMBOL	X		PARAMETRIC VALUES		
○	.586	MACH	4.530	PTOTAL	110.000
□	300.250	ALPHA	.000	BETA	.000
◇	600.580	DALPHA	-20.000	DBETA	-20.000
△	900.290	Y	400.000	PCHMBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

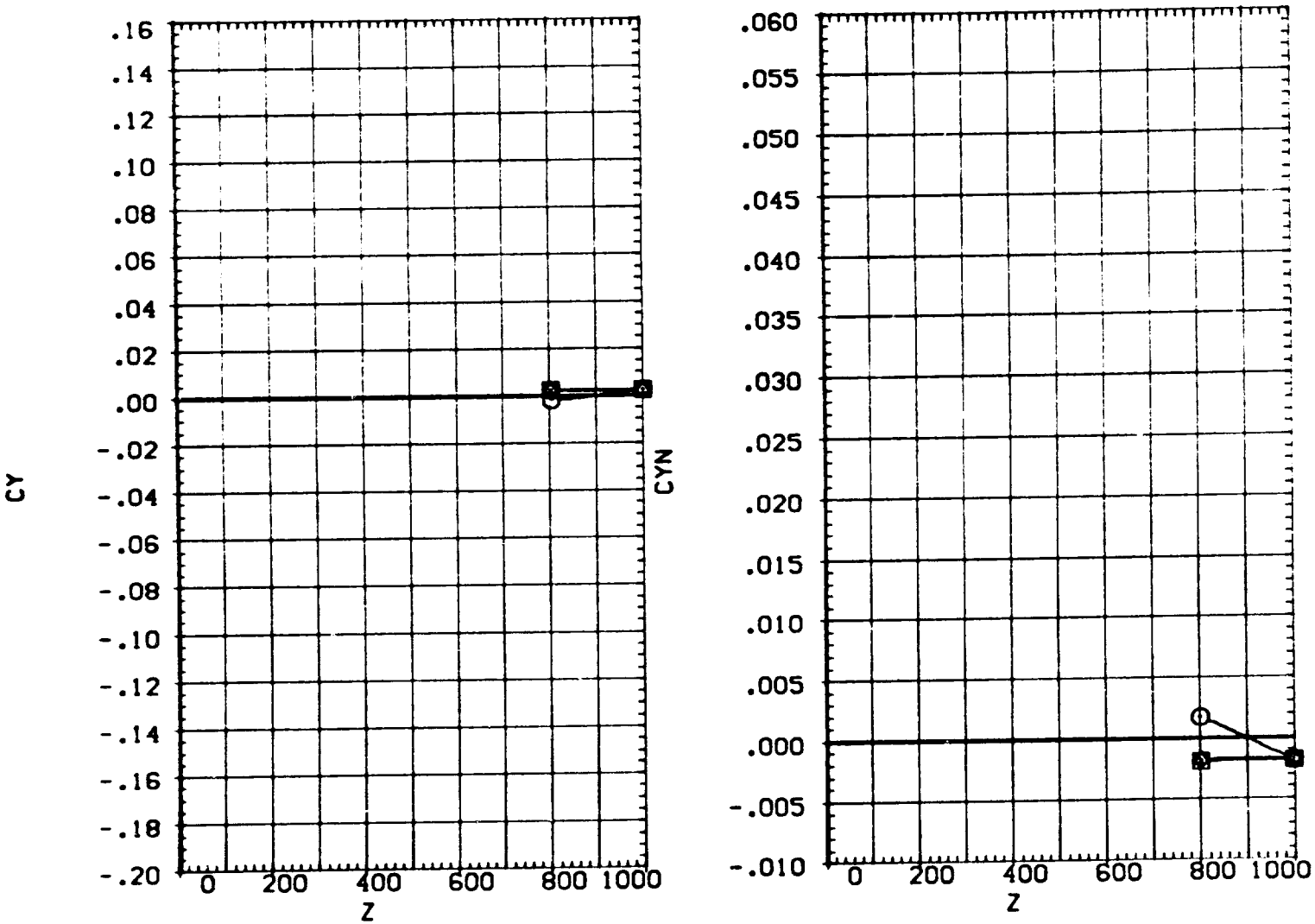


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ230)

SYMBOL	X		PARAMETRIC VALUES		
○	.586	MACH	4.530	PTOTAL	110.000
□	300.250	ALPHA	.000	BETA	.000
◇	600.580	DALPHA	-20.000	DBETA	-20.000
△	900.290	Y	400.000	PCHMBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

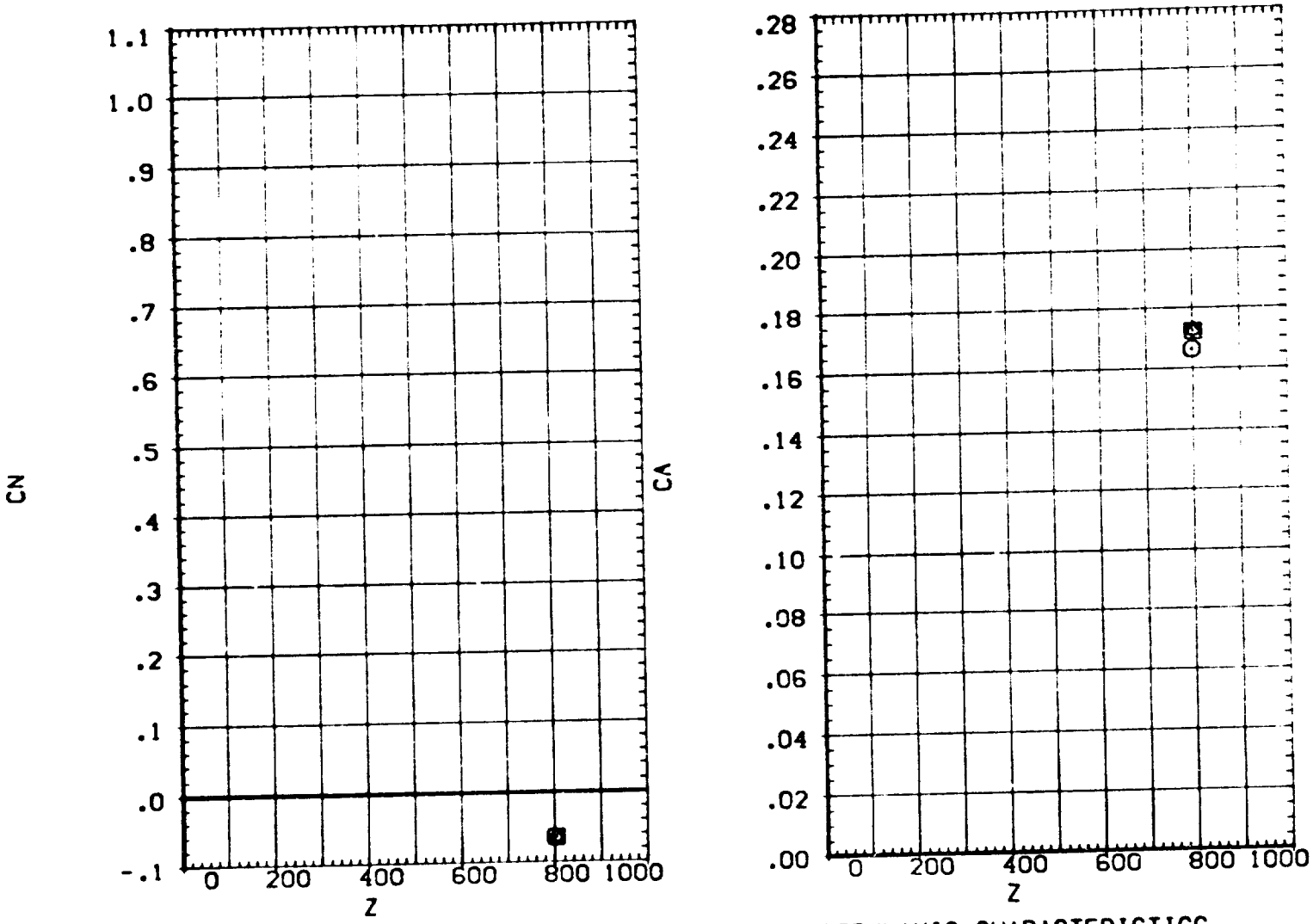


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ231)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

SYMBOL	X		PARAMETRIC VALUES		
○	-1.218	MACH	4.530	PTOTAL	110.000
□	300.610	ALPHA	.000	BETA	.000
◇	600.610	DALPHA	-20.000	DBETA	-20.000
△	900.560	Y	800.000	PCHMBR	.000

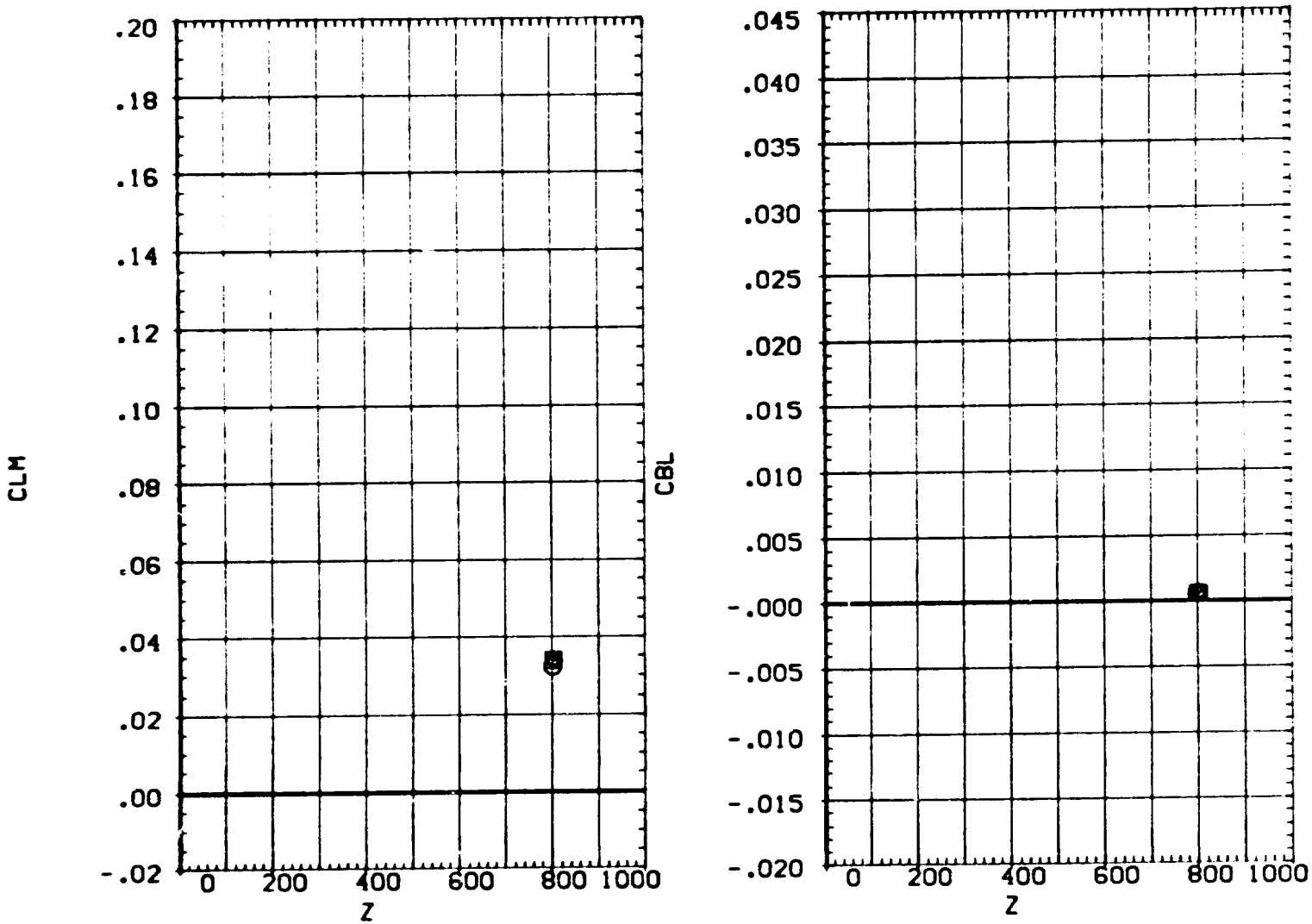


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ231)

SYMBOL	X		PARAMETRIC VALUES		
○	-1.218	MACH	4.530	PTOTAL	110.000
□	300.610	ALPHA	.000	BETA	.000
◇	600.610	DALPHA	-20.000	DBETA	-20.000
△	900.560	Y	800.000	PCHMBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

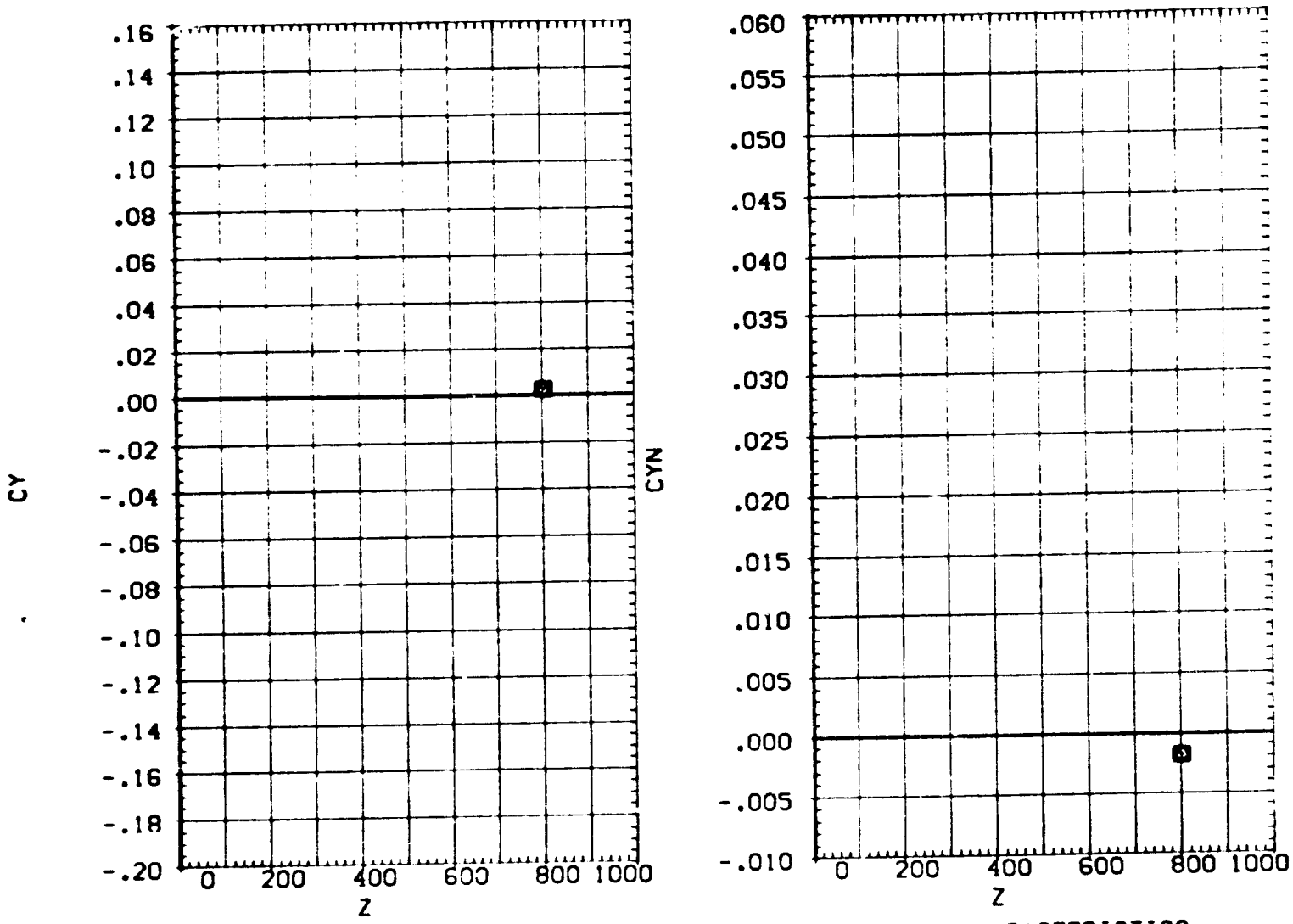


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ231)

SYMBOL	X		PARAMETRIC VALUES		
○	-1.218	MACH	4.530	PTOTAL	110.000
□	300.610	ALPHA	.000	BETA	.000
◇	600.610	DALPHA	-20.000	DBETA	-20.000
△	900.560	Y	800.000	PCHMBR	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

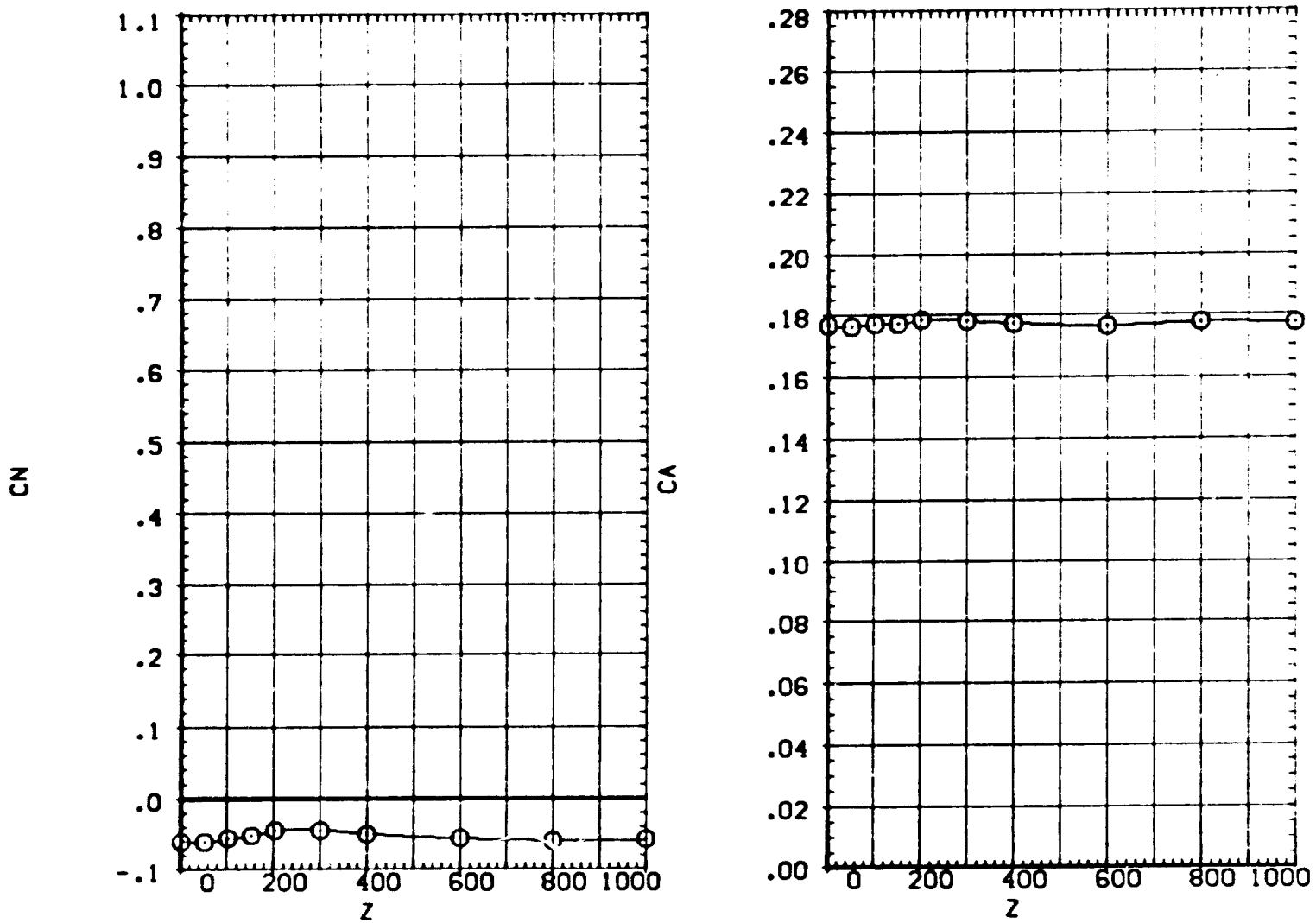


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

!A13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ257)

SYMBOL	Y		PARAMETRIC VALUES		
○	10.254	MACH	4.510	PTOTL	28.900
		ALPHA	.000	BETA	5.000
		DALPHA	.000	DBETA	.000
		X	.000	PCHMB	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

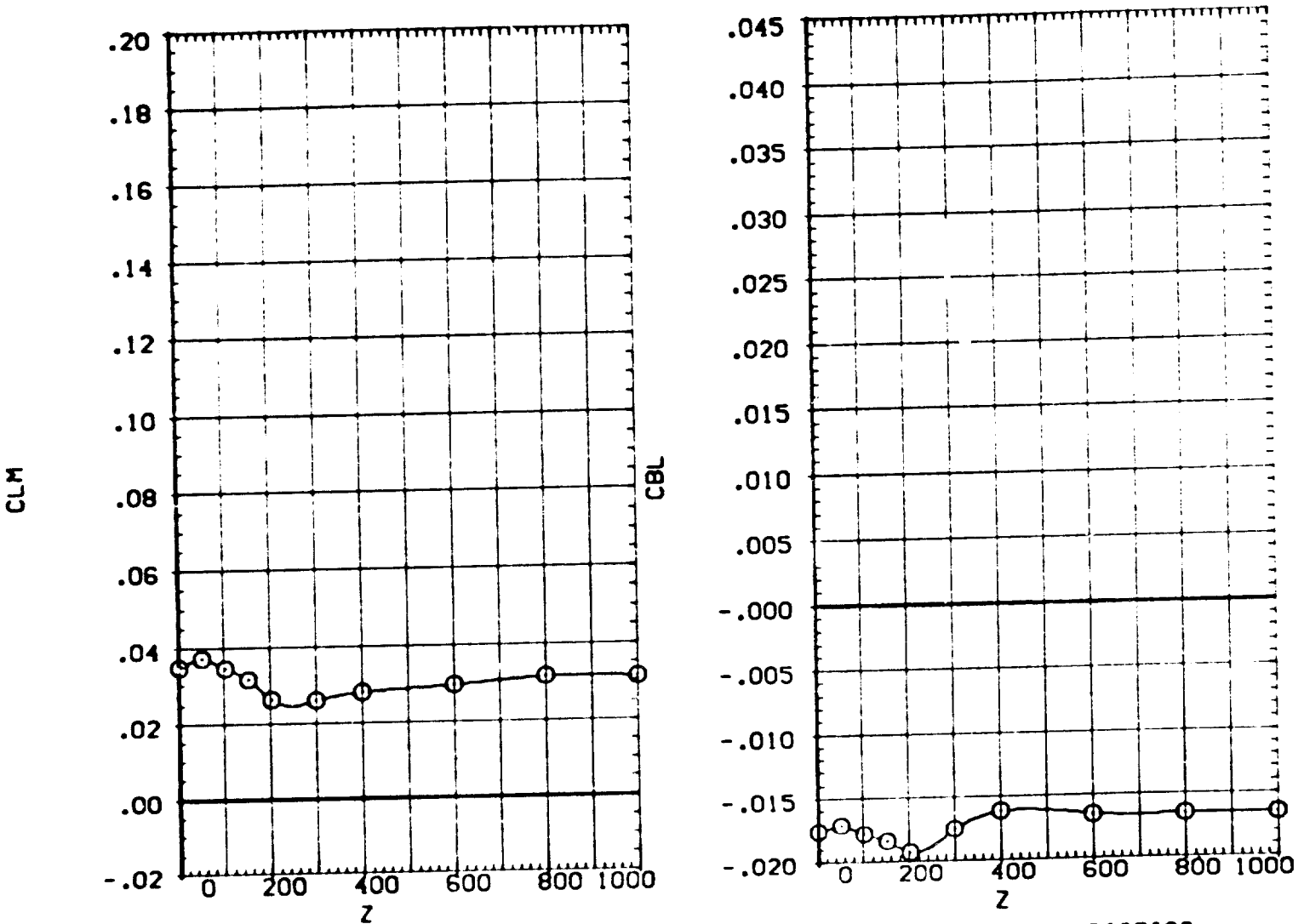


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(SB) W/O PLUMES SEPARATING FROM 09T10 (RTJ257)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

SYMBOL	Y	PARAMETRIC VALUES			
○	10.254	MACH	4.510	PTOTL	28.900
		ALPHA	.000	BETA	5.000
		DALPHA	.000	DBETA	.000
		X	.000	PCHMB	.000

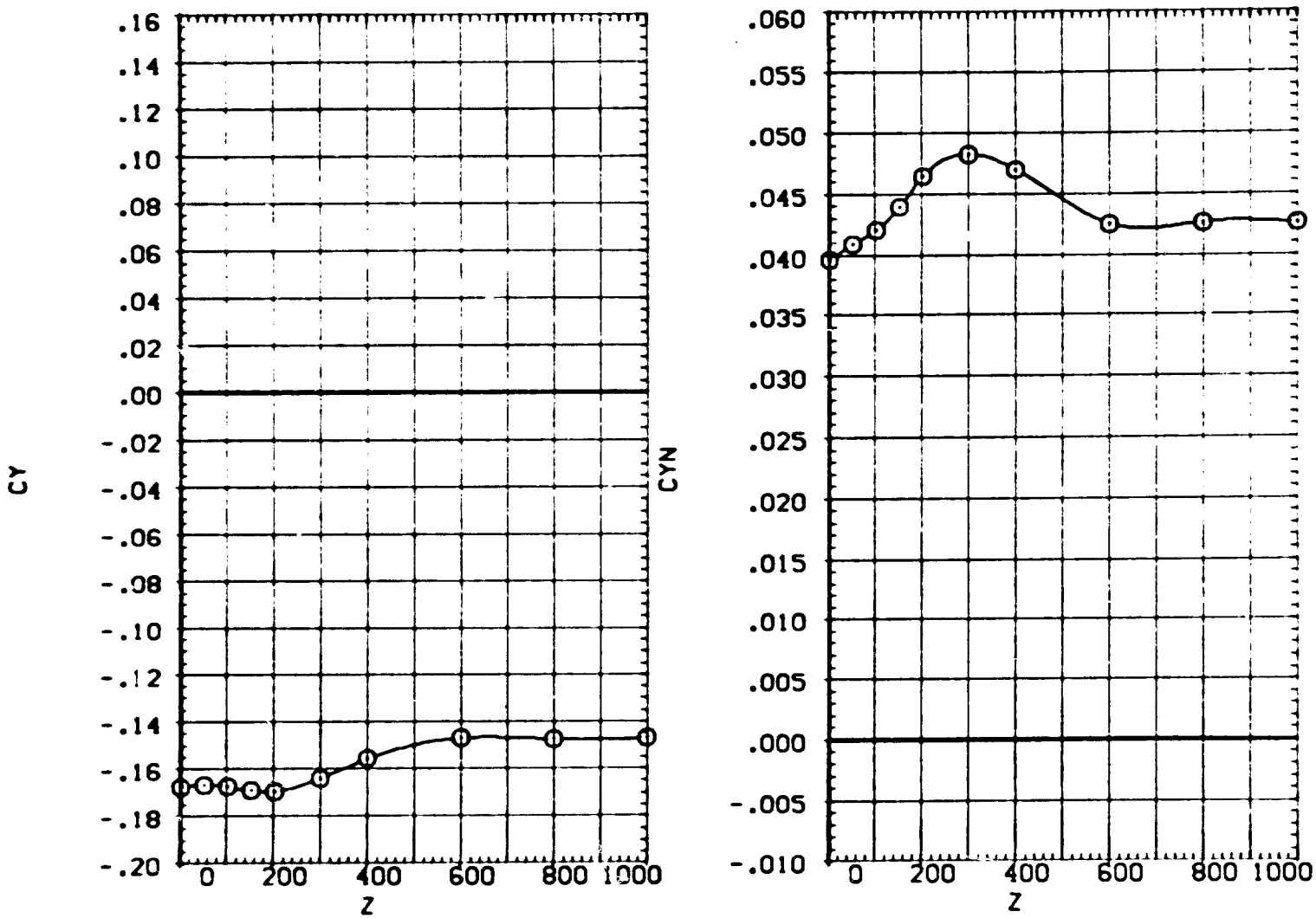


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ257)

SYMBOL	Y	PARAMETRIC VALUES			
○	10.254	MACH	4.510	PTOTL	28.900
		ALPHA	.000	BETA	5.000
		DALPHA	.000	DBETA	.000
		X	.000	PCHMB	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

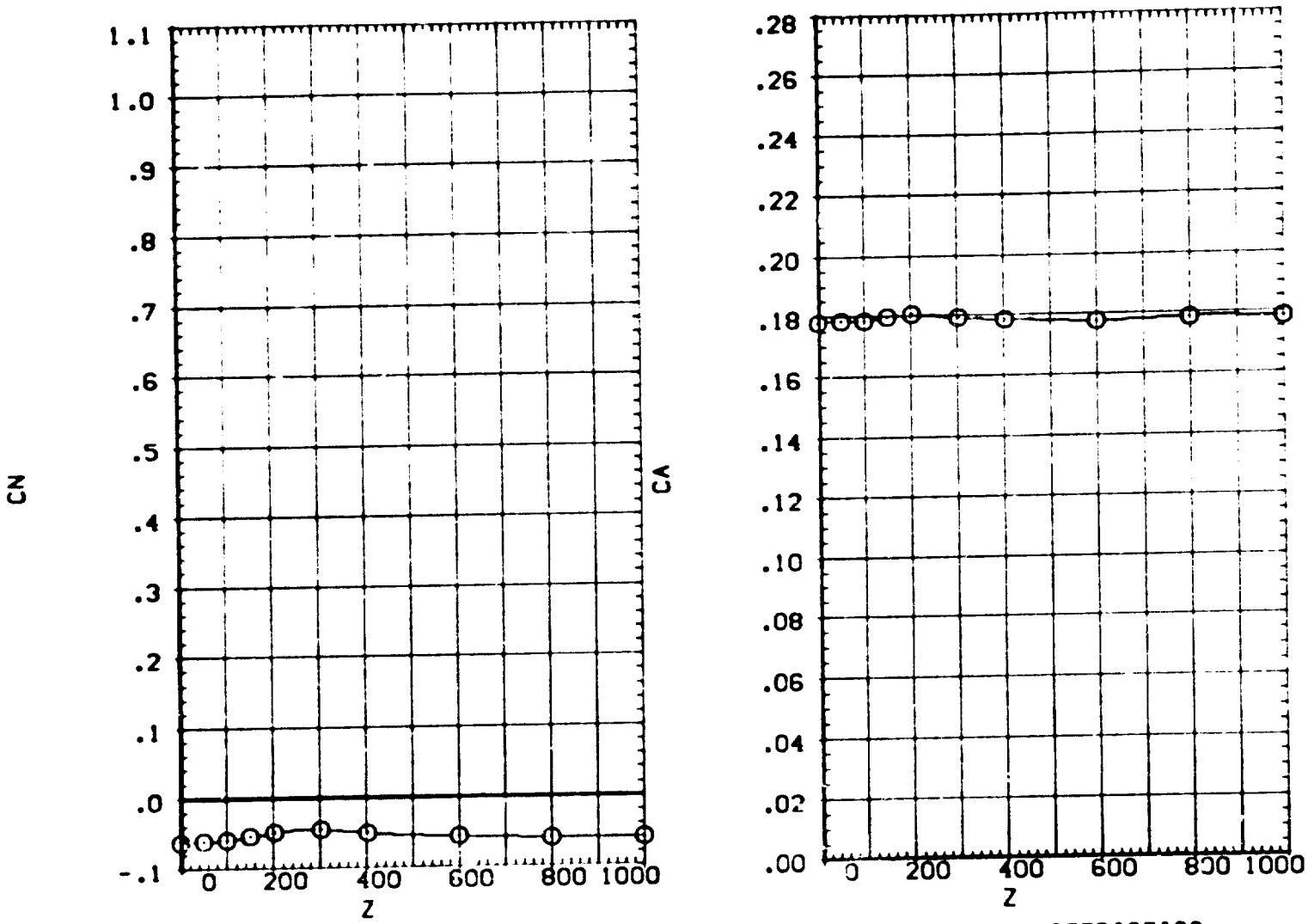


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

!A13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ258)

SYMBOL	Y				
O	.475	MACH	4.510	PTOTL	28.900
		ALPHA	.000	BETA	5.000
		DALPHA	.000	DBETA	5.000
		X	.000	PCHNB	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

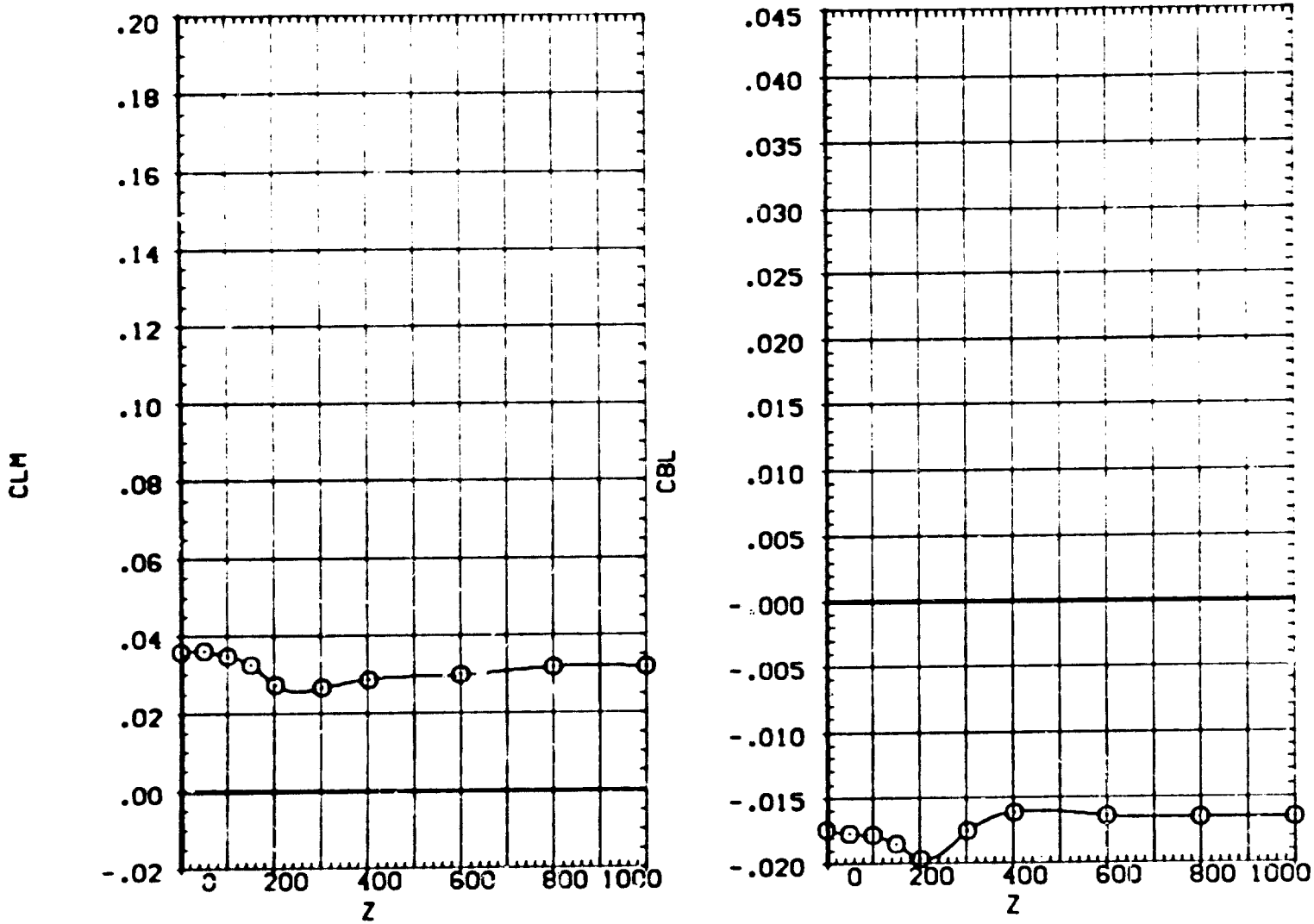


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ258)

SYMBOL	Y		PARAMETRIC VALUES		
○	.475	MACH	4.510	PTOTL	28.900
		ALPHA	.000	BETA	5.000
		DALPHA	.000	DBETA	5.000
		X	.000	PCHHB	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

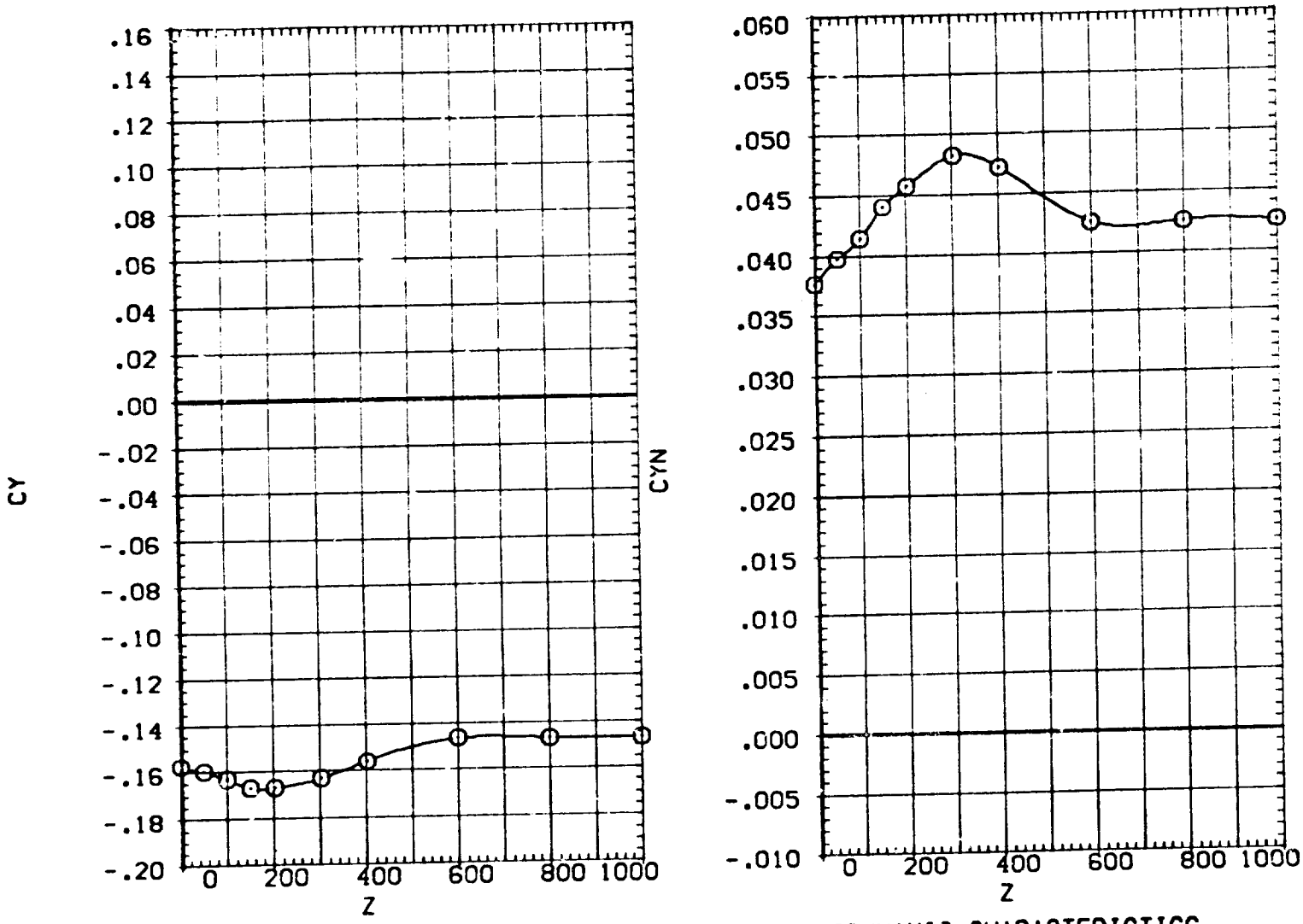


EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ258)

SYMBOL	Y	PARAMETRIC VALUES			
○	.475	MACH	4.510	PTOTL	28.900
		ALPHA	.000	BETA	5.000
		DALPHA	.000	DBETA	5.000
		X	.000	PCHMB	.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



EFFECT OF SRB W/O PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS