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OCTOBER 1971
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—SPACE SHUTTLE—

STABILITY AND CONTROL
EFFECTIVENESS OF THE MDAC
PARAMETRIC DELTA CANARD
BOOSTER AT MACH 0.38

Volume I

CANARD PARAMETRIC VARIATIONS

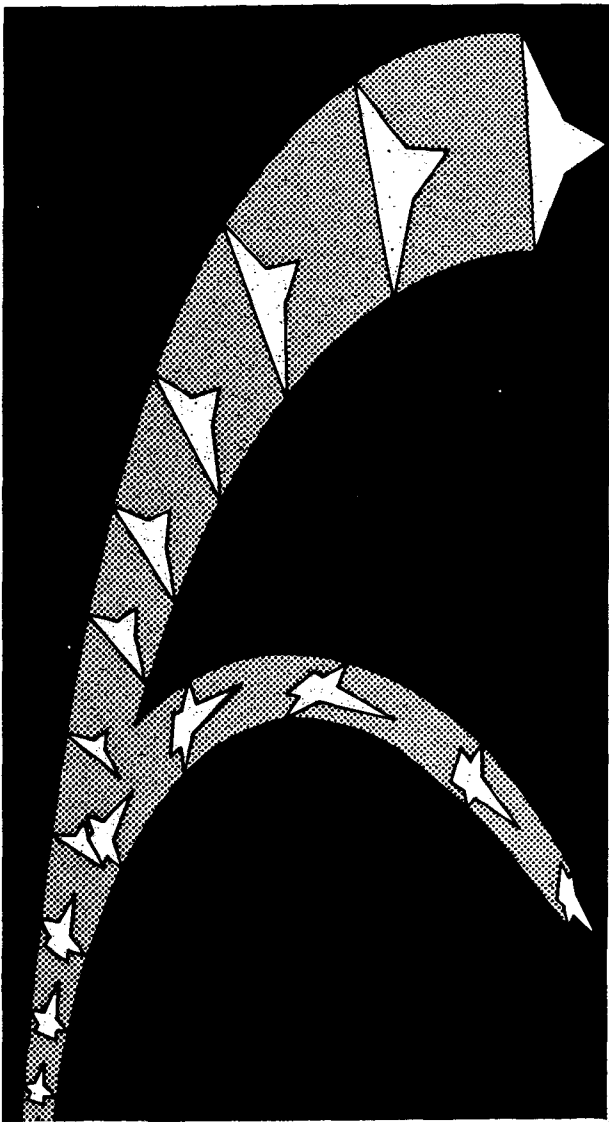
by

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NSRDC 7x10 - FOOT
TRANSONIC WIND TUNNEL

NAVY SHIP RESEARCH
AND
DEVELOPMENT CENTER



FACILITY FORM 602

N72-10933

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CR-119995

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(THRU)

March 73

(CODE)

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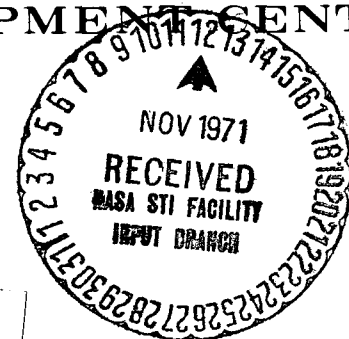
(CATEGORY)

SADSAC SPACE SHUTTLE
AEROTHERMODYNAMIC
DATA MANAGEMENT SYSTEM

CONTRACT NAS8-4016
MARSHALL SPACE FLIGHT CENTER

SPACE DIVISION  CHRYSLER
CORPORATION

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AS MUCH INFORMATION AS POSSIBLE.**

SADSAC/SPACE SHUTTLE
WIND TUNNEL TEST DATA REPORT

CONFIGURATION: Space Shuttle Parametric Delta Canard Booster .15 Scale

TEST PURPOSE: Investigation of Stability and Control Effectiveness at
Mach Number 0.38

TEST FACILITY: NSRDC 7 x 10-Foot Transonic Wind Tunnel

TESTING AGENCY: LMSC-HREC for MSFC

TEST NO. & DATE: NSRDC 3110; March, 1971

FACILITY COORDINATOR: Dale Chadock - NSRDC

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ABSTRACT

A 0.015 scale model of a modified version of the MDAC Space Shuttle Booster was tested in the Naval Ship Research and Development Center 7 x 10 Foot Transonic Wind Tunnel during March 1971 (Test Number NSRDC 3110) to obtain force, static stability, and control effectiveness data. This test was conducted by Lockheed's Huntsville Research and Engineering Center for the Aero-Astrodynamic Laboratory of the George C. Marshall Space Flight Center. Data were obtained for a cruise Mach Number of 0.38, altitude of 10,000 ft ($q = 165$ psf), and Reynolds Number per foot of approximately 2×10^6 . The model was tested through an angle of attack range of -4° to 15° at zero degree angle of sideslip, and at an angle of sideslip range of -6° to 6° at fixed angles of attack of 0° , 6° , and 15° . Other test variables were elevon deflections, canard deflections, aileron deflections, rudder deflections, wing dihedral angle, canard incidence angle, wing incidence angle, canard position, wing position, wing and canard size, canard control flap size and dorsal fin size.

Plotted data for this test will be published under one data report number (DMS-DR-1139) with four volumes as follows:

- | | |
|---|---------------------------|
| I. Canard Parametric Variations | Data plot pages 1-525 |
| II. Wing Parametric Variations - Size and Location | Data plot pages 526-1309 |
| III. Wing Parametric Variations - Incidence and Dihedral | Data plot pages 1310-1804 |
| IV. Surface Effectiveness, Model Buildup and Directional Stability at High Angles of Attack | Data plot pages 1805-2207 |

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SUMMARY

A 0.015 scale model of a modified version of the MDAC Space Shuttle Booster was tested in the Naval Ship Research and Development Center 7 x 10 Foot Transonic Wind Tunnel during March 1971 (Test Number NSRDC 3110) to obtain force, static stability, and control effectiveness data. This test was conducted by Lockheed's Huntsville Research and Engineering Center for the Aero-Astrodynamic Laboratory of the George C. Marshall Space Flight Center. Data were obtained for a cruise Mach Number of 0.38, altitude of 10,000 ft ($q = 165$ psf), and Reynolds Number per foot of approximately 2×10^6 . The model was tested through an angle of attack range of -4° to 15° at zero degree angle of sideslip, and at an angle of sideslip range of -6° to 6° at fixed angles of attack of 0° , 6° , and 15° . Other test variables were elevon deflections, canard deflections, aileron deflections, rudder deflections, wing dihedral angle, canard incidence angle, wing incidence angle, canard position, wing position, wing and canard size, canard control flap size, and dorsal fin size.

Plotted data for this test will be published under one data report number (DMS-DR-1139) with four volumes as follows:

- | | | | |
|------|---|-----------------|-----------|
| I. | Canard Parametric Variations | Data plot pages | 1-525 |
| II. | Wing Parametric Variations - Size and Location | Data plot pages | 526-1309 |
| III. | Wing Parametric Variations - Incidence and Dihedral | Data plot pages | 1310-1804 |
| IV. | Surface Effectiveness, Model Buildup and Directional Stability at High Angles of Attack | Data plot pages | 1805-2207 |

CONFIGURATIONS INVESTIGATED

The baseline model was a 0.015-scale modified version of the McDonnell Douglas model 256-14 booster configuration which was designed by NSRDC to allow the following variations in geometry: canard vertical location, size and incidence angle; wing vertical location, size, incidence angle, dihedral angle and variable wing tip fins; and dorsal fin size. A sketch of the baseline model is shown in Figure 2. In addition to the geometrical variations, the model had deflectable elevons, canard trailing edge flaps, dorsal fin rudders, and wing tip rudders. Deflection angles were obtained by replacing the control surface with a separate surface set to the desired angle. A typical model installation is shown in Figure 3 for configuration BlC2FlWlVl with an aileron control deflection of 20 degrees.

Four pressure ports were used for measuring the base pressures, and were located as shown in Figure 4. Measurements from the pressure ports were used to calculate the base drag coefficient.

To ensure a turbulent boundary layer, artificial transition strips were applied as shown in Figure 5. Wing, body and canard grit size were calculated by the method of Braslow and Know for a tunnel Reynolds number of 2×10^6 per foot.

Model Components Tested

- B1 = Baseline MDAC booster body (length = 3.453 ft)
- B2 = Baseline MDAC booster body (length = 3.06 ft)
- W1 = Baseline booster wing (planform area = 1.355 ft²)
- W2 = Alternate high aspect ratio wing (planform area = 1.148 ft²)
- V1 = Booster wing tip vertical fin (planform area = 0.226 ft²)
- V2 = Booster wing tip extension (planform area = 0.15 ft²)

CONFIGURATIONS INVESTIGATED
(CONTINUED)

Model Component Tested (Con't)

- D1 = Booster large dorsal fin
- D2 = Booster small dorsal fin
- D3 = Booster small dorsal fin
- C1 = Booster large canard
- C2 = Booster small canard
- C3 = C2 with F1 portion removed
- F1 = Canard trailing edge control surface for C1 (20% chord exposed area)
- F2 = Canard trailing edge control surface for C1 (40% chord exposed area)
- F3 = Canard flap, F2 for C2 with F1 portion removed

For detailed information on the above components refer to the model component sheets, pages 52 through 68.

Combinations Tested

B1	B1C2F2W1V1
B1W1V1	B1C3F3W1V1
B1C2F1	B1C2F1W1V2
B1C2F2	B1C2F1W1V2D1
B1C1F1W1V1	V1C2F1W1V1D2
B1C1F1W1V2D1	B1C2F1W1V1D3
B1C2F1W1V1	B2C2F1W1V1
B1C2F1W2D2	

See Data Collation Sheets for a complete list of combinations tested.

TEST NSRDC-3110 DATASET COLLATION SHEET

PRETEST
 POSTTEST

DATA SET IDENTIFIER	CONFIGURATION	SCHD.		RUN NUMBER			NO. of RUNS	PARAMETRIC VALUES										
		a	b	0.4				Se	Sc	Sa	Sr	Tw	lc	lw	CND POS	WNG POS		
RN2001	BIC2 FIWIVI	A	0	38			1	0	0	0	0	7°40	3	0	1	1		
002		0	A	39														
003		6		40														
004		15	Y	41								Y						
005		A	0	23								15						
006		0	A	28														
007		6		23														
008		15	Y	26								Y		Y				
009		A	0	23								3		2				
010		0	A	24														
011		6		25														
012		15	Y	46								Y						
013		A	0	51								15						
014		0	A	54														
015		6		53														
016		15	Y	57								Y		Y		Y		
017		A	0	915								3		1		2		
018		0	A	316														
019		6		317														
020	Y	15	Y	318				Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y

1	7	13	19	25	31	37	43	49	55	61	67	75	76
CN	CA	CLM	CBL	CYN	CY	CL	CD	L/D	CAB				L3
CAP.	B.P.(1)	B.P.(3)											

COEFFICIENTS:

CA = -4, 0, 2, 4, 6, 8, 10, 15, 20

a or b

SCHEDULES

BA = -6, -3, 0, 3, 6

IDPVAR(1) | IDPVAR(2) | NDV

TEST NSRDC-3110 DATASET COLLATION SHEET

PRETEST
 POSTTEST

DATA SET IDENTIFIER	CONFIGURATION	SCHD.		RUN NUMBER			NO. of RUNS	PARAMETRIC VALUES								
		a	B	0.4				Sc	Sc	Sc	Sr	Lw	Lc	Lw	CND POS	WING POS
RN2021	BIC2FIWIVI	A	0	0.4			1	0	0	0	0	7°40'	15	0	1	2
022		0	A	0.4												
023		6		0.4												
024		15		0.4												
025		A	0	0.4								3		2		
026		0	A	0.4												
027		6		0.4												
028		15		0.4												
029		A	0	0.4								15				
030		0	A	0.4												
031		6		0.4												
032		15		0.4												
033		A	0	0.4								3	3	1	1	
034		0	A	0.4												
035		6		0.4												
036		15		0.4												
037		A	0	0.4								15				
038		0	A	0.4												
039		6		0.4												
040		15		0.4												

1	7	13	19	25	31	37	43	49	55	61	67	75	76
CN	CA	CLM	CBL	CYN	CY	CL	CD	L/D	KAB				23
C.A.E.	B.P.(1)	B.P.(3)											

COEFFICIENTS:

$\alpha A = -4, 0, 2, 4, 6, 8, 10, 15, 20$

a or B SCHEDULES

$BA = -6, -3, 0, 3, 6$

TEST NSRDC-3110 DATASET COLLATION SHEET

PRETEST
 POSTTEST

DATA SET IDENTIFIER	CONFIGURATION	SCHD.		RUN NUMBER			NO. of RUNS	PARAMETRIC VALUES										
		α	β	0.4				δ_c	δ_s	δ_a	δ_r	Γ_w	l_c	l_w	CND POS	WING POS		
RN2 041	BIC2FIWIVI	A	0	133			1	0	0	0	0	7°40'	3	3	2	1		
042		0	A	133														
043		6		133														
044		15		136														
045		A	0	141								15						
046		0	A	142														
047		6		143														
048		15		144														
049		A	0	162								3		1	2			
050		0	A	163														
051		6		165														
052		15		165														
053		A	0	167								15						
054		0	A	168														
055		6		169														
056		15		170														
057		A	0	182								3		2				
058		0	A	183														
059		6		186														
060		15		187														

1	7	13	19	25	31	37	43	49	55	61	67	75	76
CA	CA	CLM	CHL	CYN	CV	CL	CD	L/D	CAB				
C.P.F.	B.P.(1)	B.P.(3)								MA.C.H.			

COEFFICIENTS: $\alpha A = -4, 0, 2, 4, 6, 9, 10, 15, 20$ IDPVAR(1) IDPVAR(2) NDV
 α or β
 SCHEDULES $BA = -6, -3, 0, 3, 6$

TEST NSRDC-3110 DATASET COLLATION SHEET

PRETEST
 POSTTEST

DATA SET IDENTIFIER	CONFIGURATION	SCHD.		RUN NUMBER			NO. of RUNS	PARAMETRIC VALUES								
		a	B	0.4				Se	Sc	Sc	Sr	TW	Lc	LW	CNP POS	WING POS
RN2061	BIG2FIWIVI	A	0	182			1	0	0	0	0	740	15	3	2	2
062		0	A	181												
063		6		182												
064		15		183												
065	BIG1FIWIVI	A	0	35								3	0	1	1	
066		0	A	34												
067		6		35												
068		15		36												
069		A	0	37							15					
070		0	A	37												
071		6		38												
072		15		31												
073		A	0	47								3		2		
074		0	A	48												
075		6		49												
076		15		50												
077		A	0	55								15				
078		0	A	56												
079		6		57												
080		15		58												

1	7	13	19	25	31	37	43	49	55	61	67	75	76
CN	CA	CLM	CBL	CYN	CY	CL	CO	L/D	CAB				
C.A.E.	B.P.(1)	B.P.(3)								MACH			1.3

COEFFICIENTS: $\alpha A = -8, 0, 2, 4, 6, 8, 10, 15, 20$ IDPVAR(1) IDPVAR(2) NDV

a, or B SCHEDULES $BA = -6, -3, 0, 3, 6$

TEST NSRDC-3110 DATASET COLLATION SHEET

PRETEST
 POSTTEST

DATA SET IDENTIFIER	CONFIGURATION	SCHD.		RUN NUMBER			NO. of RUNS	PARAMETRIC VALUES										
		α	β	0.4				S_c	S_c	S_a	S_r	Γ_w	L_c	L_w	CND POS	WING POS		
RN2081	BICI FIWIVI	A	0	361			1	0	0	0	0	7°40'	3	0	1	2		
082		0	A	362														
083		6		361														
084		15		362														
085		A	0	361								15						
086		0	A	362														
087		6		361														
088		15		362														
089		A	0	361								3		2				
090		0	A	362														
091		6		361														
092		15		362														
093		A	0	361								15						
094		0	A	362														
095		6		361														
096		15		362														
097		A	0	361								3	3	1	1			
098		0	A	362														
099		6		361														
100		15		362														

1	7	13	19	25	31	37	43	49	55	61	67	75	76
CN	CA	CLM	CBL	CYN	CY	CL	CD	L/D	GAB				
C.A.E.	A.P.(1)	A.P.(3)								MACH.			13

COEFFICIENTS: $\alpha A = -4, 0, 2, 4, 6, 9, 10, 15, 20$ \Rightarrow IDPVAR(1) | IDPVAR(2) | NDV
 α or β
 SCHEDULES $BA = -6, -3, 0, 3, 6$

TEST NSRDC-3110 DATASET COLLATION SHEET

PRETEST
 POSTTEST

DATA SET IDENTIFIER	CONFIGURATION	SCHD.		RUN NUMBER			NO. of RUNS	PARAMETRIC VALUES									
		a	e	0.4					S _e	S _c	S _a	S _r	Γ _w	L _c	L _w	CND POS	WING POS
RN2101	BICIFWIV1	A	0	116			1	0	0	0	0	7°40'	15	3	1	1	
102		0	A	117													
103		6		118													
104		15		119									Y		Y	Y	
105		A	0	131									3		2	1	
106		0	A	135													
107		6		139													
108		15		140									Y				
109		A	0	144									15				
110		0	A	150													
111		6		151											Y	Y	
112		15		152											Y	Y	
113		A	0	155									3		1	2	
114		0	A	159													
115		6		160													
116		15		161													
117		A	0	171									15				
118		0	A	172													
Y 119		6		173				Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
120		15		174				Y	Y	Y	Y	Y	Y	Y	Y	Y	Y

1	7	13	19	25	31	37	43	49	55	61	67	75	76
CN	CA	CLM	CBL	CYN	CV	CL	CD	L/D	GAB				23
C.A.F.	B.P.(1)	B.P.(3)											

COEFFICIENTS: αA = -4, 0, 2, 4, 6, 8, 10, 15, 20

a. or B SCHEDULES

BA = -6, -3, 0, 3, 6

→ IDPVAR(1) | IDPVAR(2) | NDV

TEST NSRDC-3110 DATASET COLLATION SHEET

PRETEST
 POSTTEST

DATA SET IDENTIFIER	CONFIGURATION	SCHD.		RUN NUMBER				NO. of RUNS	PARAMETRIC VALUES								
		a	B	0.4					Sc	Sc	Sc	Sr	Tw	Lc	Lw	CND PAS	WING PLS
RN2 121	BICIFLWIV1	A	0	121				1	0	0	0	0	740	3	3	2	2
122		0	A	122													
123		6		123													
124		15		124													
125		A	0	125									15				
126		0	A	126													
127		6		127													
128		15		128													
129	BICIFLWIV2.D1	A	0	129									3	0	1	1	
130		0	A	130													
131		6		131													
132		15		132													
133		A	0	133									15				
134		0	A	134													
135		6		135													
136		15		136													
137		A	0	137									3		2		
138		0	A	138													
139		6		139													
140		15		140													

1	7	13	19	25	31	37	43	49	55	61	67	75	76
CN	CA	CLM	GBL	CYN	CY	CL	CD	L/D	CAB				
C.A.F.	B.P.L.1	B.P.L.3								MACH			13

COEFFICIENTS: $\alpha A = -4, 0, 2, 4, 6, 8, 10, 15, 20$ IDPVAR(1) | IDPVAR(2) | NDV
 a or B
 SCHEDULES $BA = -6, -3, 0, 3, 6$

TEST NSRDC-3110 DATASET COLLATION SHEET

PRETEST
 POSTTEST

DATA SET IDENTIFIER	CONFIGURATION	SCHED.		RUN NUMBER			NO. of RUNS	PARAMETRIC VALUES										
		a	B	0,4				Sc	Sc	Sc	St	Tw	Lc	LW	CND POS	WING POS		
RN2141	BICIFWIV2D1	A	0	0			1	0	0	0	0	7°40'	15	0	2	1		
142		0	A	0														
143		6		0														
144		15		0									↓		↓	↓		
145		A	0	0								3			1	2		
146		0	A	0														
147		6		0									↓					
148		15		0														
149		A	0	0									15					
150		0	A	0														
151		6		0														
152		15		0									↓			↓		
153		A	0	0								3			2			
154		0	A	0														
155		6		0														
156		15		0														
157		A	0	0									15					
158		0	A	0														
159		6		0				↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓
160		15		0														

1	7	13	19	25	31	37	43	49	55	61	67	75	76
CN	CA	CLM	CBL	CYN	CY	CL	GD	L/D	CAB	MACH			A3
C.A.F.	B.P.(1)	B.P.(3)											

COEFFICIENTS: $\alpha A = -2, 0, 2, 4, 6, 8, 10, 15, 20$

a or B

SCHEDULES $BA = -6, -3, 0, 3, 6$

→ IDPVAR(1) | IDPVAR(2) | NDV

TEST NSRDC-3110 DATASET COLLATION SHEET

PRETEST
 POSTTEST

DATA SET IDENTIFIER	CONFIGURATION	SCHD.		RUN NUMBER				NO. of RUNS	PARAMETRIC VALUES								
		a	B	0.4					Sc	Sc	Sc	Sr	Γ_w	Lc	Lw	END POS	WING POS
RN2.161	BICIFIWIV2.D1	A	0	15				1	0	0	0	0	7°40'	3	3	1	1
162		0	A	15													
163		6		15													
164		15		15									Y				
165		A	0	112									15				
166		0	A	113													
167		6		114													
168		15		115													
169		A	0	77									3		2		
170		0	A	78													
171		6		79													
172		15		80													
173		A	0	85									15				
174		0	A	86													
175		6		87													
176		15		88													
177		A	0	83									3		1	2	
178		0	A	84													
Y 179	Y	6		15				Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
180		15		15				Y	Y	Y	Y	Y	Y	Y	Y	Y	Y

1	7	13	19	25	31	37	43	49	55	61	67	75.76
CA	CA	CLM	CHL	CYN	CY	CL	CD	L/D	CAB			A3
C.A.F.	B.P.(1)	B.P.(3)								MACH		

COEFFICIENTS: SA = -4, 0, 2, 4, 6, 9, 10, 15, 20 IDPVAR(1) | IDPVAR(2) | NDV
 a or B
 SCHEDULES BA = -6, -3, 0, 3, 6

TEST NSRDC-3110 DATASET COLLATION SHEET

PRETEST

POSTTEST

DATA SET IDENTIFIER	CONFIGURATION	SCHED.		RUN NUMBER			NO. of RUNS	PARAMETRIC VALUES										
		a	B	0.4				Sc	Sc	Sa	St	Tw	Lc	LW	CND PDS	WING PDS		
RN2 181	BIC1FIWV2.D1	A	0	503			1	0	0	0	0	7°40'	15	3	1	2		
182		0	A	504														
183		6		507														
184		15		508								Y			Y			
185		A	0	173								3			2			
186		0	A	172														
187		6		175														
188		15		176								Y						
189		A	0	500								15						
190		0	A	501														
191	Y	6		502														
192		15		503								Y	Y	Y	Y			
193	BIC2FIWV2.D1	A	0	917								3	0	1	1			
194		0	A	918														
195		6		919														
196		15		920								Y						
197		A	0	937								15						
198		0	A	938														
Y 199	Y	6		939				Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
200		15		940				Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y

1	7	13	19	25	31	37	43	49	55	61	67	73
CN	CA	CLM	CHL	CYN	CY	CL	CD	L/D	CAB			
C.A.F.	B.P.(1)	B.P.(3)								MACH		

COEFFICIENTS: $\alpha A = -4, 0, 2, 4, 6, 8, 10, 15, 20$

a or B

SCHEDULES $BA = -6, -3, 0, 3, 6$

IDPVAR(1) | IDPVAR(2) | NDV

TEST NSRDC-3110 DATASET COLLATION SHEET

PRETEST
 POSTTEST

DATA SET IDENTIFIER	CONFIGURATION	SCHD.		RUN NUMBER			NO. of RUNS	PARAMETRIC VALUES										
		a	B	0.4				Sc	S _c	S _a	S _r	Γ _w	L _c	L _w	CND POS	WING POS		
RN2.201	BIC2.FIN/V2.D1	A	0	63			1	0	0	0	0	7.40	3	0	2	1		
202		0	A	7														
203		6		70														
204		15	Y	71								Y						
205		A	0	68								15						
206		0	A	65														
207		6		66														
208		15	Y	67								Y		Y		Y		
209		A	0	81								3		1		2		
210		0	A	81.2														
211		6		81.3														
212		15	Y	81.4								Y						
213		A	0	443								15						
214		0	A	444														
215		6		445														
216		15	Y	446								Y		Y				
217		A	0	456								3		2				
218		0	A	457														
219		6		458														
220		15	Y	459								Y		Y		Y		

1	7	13	19	25	31	37	43	49	55	61	67	75	76
CN	CA	CLM	CHL	CYN	CV	CL	CD	L/D	CAB				
C.A.E.	B.P.(1)	B.P.(3)								MACH.			23

COEFFICIENTS: CA = -4, 0, 2, 4, 6, 8, 10, 15, 20 → IDPVAR(1) | IDPVAR(2) | NDV

a or B

SCHEDULES BA = -6, -3, 0, 3, 6

TEST NSRDC-3110 DATASET COLLATION SHEET

PRETEST
 POSTTEST

DATA SET IDENTIFIER	CONFIGURATION	SCHD.		RUN NUMBER			NO. of RUNS	PARAMETRIC VALUES								
		a	B	0.4				Se	Sc	Sa	Sr	Tw	Lc	Lw	CND POS	WNG POS
RN2221	BIC2FIWIV2 01	A	0	76			1	0	0	0	0	7°40'	15	0	2	2
222		0	A	76												
223		6		76									↓	↓	↓	↓
224		15		76												
225		A	0	78								3	3	1	1	
226		0	A	75												
227		6		76									↓			
228		15		77												
229		A	0	78								15				
230		0	A	79												
231		6		76												
232		15		77									↓		↓	
233		A	0	81								3		2		
234		0	A	82												
235		6		83												
236		15		84									↓			
237		A	0	87								15				
238		0	A	90												
239		6		91												
240		15		92												

1	7	13	19	25	31	37	43	49	55	61	67	75 76
CN	CA	CLM	CHL	CYN	CY	CL	CD	L/D	CAB			67
C.A.F.	B.P.(1)	B.P.(3)										67

COEFFICIENTS:

CA = -4, 0, 2, 4, 6, 8, 10, 15, 20

a or B

SCHEDULES

BA = -6, -3, 0, 3, 6

→ IDPVAR(1) | IDPVAR(2) | NDV

TEST NSRDC-3110 DATASET COLLATION SHEET

PRETEST
 POSTTEST

DATA SET IDENTIFIER	CONFIGURATION	SCHD.		RUN NUMBER			NO. of RUNS	PARAMETRIC VALUES								
		a	B	0.4				Se	Sc	Sa	Sr	TW	Lc	LW	CND PDS	WING PDS
RN2291	BIC2FIWV2D1	A	0	337			1	0	0	0	0	7°40'	3	3	1	2
242		0	A	338												
243		6	↓	339												
244		15	↓	338												
245		A	0	307								15				
246		0	A	510												
247		6	↓	511												
248		15	↓	512												
249		A	0	472								3		2		
250		0	A	473												
251		6	↓	474												
252		15	↓	475												
253		A	0	496								15				
254		0	A	497												
255	↓	6	↓	478												
256		15	↓	479												
257	BIC2FIW2D1	A	0	555								3	0	1	1	
258		0	A	556												
259		6	↓	555												
260		15	↓	556												

1	7	13	19	25	31	37	43	49	55	61	67	75	76
CN	CA	CLM	CBL	CYN	CY	GL	GD	L/D	CAB				23
C.A.E.	B.P.(1)	B.P.(3)											MACH

COEFFICIENTS: SA = -4, 0, 2, 4, 6, 9, 10, 15, 20

SCHEDULES: BA = -6, -3, 0, 3, 6

TEST NSRDC-3110 DATASET COLLATION SHEET

PRETEST
 POSTTEST

DATA SET IDENTIFIER	CONFIGURATION	SCHD.		RUN NUMBER			NO. of RUNS	PARAMETRIC VALUES								
		a	b	0.4				Se	Sc	Sa	Sr	Tw	Lc	Lw	CND POS	WNG POS
RN2261	BIC2FIW2DI	A	0	570			1	0	0	0	0	740	15	0	1	1
262		0	A	571												
263		6		572												
264		15		573												
265		A	0	575								3		2		
266		0	A	576												
267		6		577												
268		15		578												
269		A	0	579								15				
270		0	A	580												
271		6		581												
272		15		582												
273		A	0	584										1	2	
274		0	A	585												
275		6		586												
276		15		587												
277		A	0	588								3		2		
278		0	A	589												
279		6		590												
280		15		591												

1	7	13	19	25	31	37	43	49	55	61	67	75	76
CN	CA	CLM	CHL	CYN	CV	CL	CD	L/D	CAB				
C.A.F.	B.P.(1)	B.P.(3)											

COEFFICIENTS: SA = -4, 0, 2, 4, 6, 8, 10, 15, 20
 a or b
 SCHEDULES BA = -6, -3, 0, 3, 6

→ IDPVAR(1) | IDPVAR(2) | NDV

TEST NSRDC-3110 DATASET COLLATION SHEET

PRETEST
 POSTTEST

DATA SET IDENTIFIER	CONFIGURATION	SCHD.		RUN NUMBER			NO. of RUNS	PARAMETRIC VALUES								
		a	B	0.4				Se	Sc	Sa	Sr	Γw	Lc	Lw	CND POS	WNO POS
RN2281	BIC2FIW2DI	A	0	511			1	0	0	0	0	790	15	0	2	2
282		0	A	512												
283		6		511												
284		15		512												
285		A	0	533								3	3	1	1	
286		0	A	536												
287		6		537												
288		15		538												
289		A	0	538								15				
290		0	A	539												
291		6		539												
292		15		541												
293		A	0	537								3		2		
294		0	A	537												
295		6		537												
296		15		520												
297		A	0	533								15				
298		0	A	534												
299		6		535												
300		15		550												

1	7	13	19	25	31	37	43	49	55	61	67	75	76
CN	CA	CLM	CBL	CYN	CV	CL	CD	L/D	CAB				13
C.A.F.	B.P.(1)	B.P.(3)											MACH.

COEFFICIENTS: αA = -4, 0, 2, 4, 6, 8, 10, 15, 20

a or β

SCHEDULES BA = -6, -3, 0, 3, 6

TEST NSRDC-3110 DATASET COLLATION SHEET

PRETEST
 POSTTEST

DATA SET IDENTIFIER	CONFIGURATION	SCHD.		RUN NUMBER			NO. of RUNS	PARAMETRIC VALUES								
		a	B	0.4				Se	Sc	So	Sr	TW	Lc	LW	CNO POS	WING POS
RN2301	BLC2FIW2D1	A	0	851			1	0	0	0	0	740	3	3	1	2
302		0	A	852												
303		6		853												
304		15	Y	854												
305		A	0	855							15					
306		0	A	856												
307		6		857												
308		15	Y	858												
309		A	0	859							3				2	
310		0	A	860												
311		6		861												
312		15	Y	862							15					
313		A	0	863												
314		0	A	864												
315		6		865												
316		15	Y	866												
317	B1	A	0	867												
318		0	A	868												
319		6		869												
320		15	Y	870												

1	7	13	19	25	31	37	43	49	55	61	67	75	76
CN	CA	CLM	CBL	CYN	CY	CL	CD	LID	CAB				
C.A.F.	B.P.(1)	B.P.(3)								WACH			

COEFFICIENTS: αA = -4, 0, 2, 4, 6, 8, 10, 15, 20

SCHEDULES: BA = -6, -3, 0, 3, 6

IDPVAR(1) | IDPVAR(2) | NDV

TEST NSRDC-3110 DATASET COLLATION SHEET

PRETEST
 POSTTEST

DATA SET IDENTIFIER	CONFIGURATION	SCHD.		RUN NUMBER		NO. of RUNS	PARAMETRIC VALUES										
		a	β	0.4			Se	Sc	Sa	Sr	Tw	Lc	Lw	CND POS	WNG POS		
RN2321	BIC2F2WIVI	A	0	621		1	0	10	0	0	790	3	0	1	1		
322	↓	0	A	622													
323	↓	6	↓	623													
324	↓	15	↓	624													
325	↓	A	0	625				20									
326	↓	0	A	626													
327	↓	6	↓	627													
328	↓	15	↓	628													
329	BIC2F1WIVI	A	0	629				20	0								
330	↓	0	A	630													
331	↓	6	↓	631													
332	↓	15	↓	632													
333	BIC2F2WIVI	A	0	633					10								
334	↓	0	A	634													
335	↓	6	↓	635													
336	↓	15	↓	636													
337	↓	A	0	637					20								
338	↓	0	A	638													
339	↓	6	↓	639													
340	↓	15	↓	640													

1	7	13	19	25	31	37	43	49	55	61	67	75	76
C.N	CA	CLM	CBL	CYN	CY	CL	CD	CLD	CAB				
C.A.E.	B.P.C.I.	B.P.C.S.								MACH			

COEFFICIENTS: $\alpha A = -4, 0, 2, 4, 6, 8, 10, 15, 20$ IDPVAR(1) | IDPVAR(2) | NDV
 a or β
 SCHEDULES $\beta A = -6, -3, 0, 3, 6$

TEST NSRDC-3110 DATASET COLLATION SHEET

PRETEST
 POSTTEST

DATA SET IDENTIFIER	CONFIGURATION	SCHD.		RUN NUMBER			NO. of RUNS	PARAMETRIC VALUES										
		a	B	0.4				Se	Sc	Sa	Sr	Tw	Lc	LW	CND POS	WNG POS		
RN2341	BIC2F1W1V1	A	0	611			1	-10	0	0	0	790	3	0	1	1		
342		0	A	612														
343		6		613														
344	↓	15	↓	614														
345	BIC2F2W1V1	A	0	616				10										
346		0	A	617														
347		6		618														
348		15	↓	619														
349		A	0	620				20										
350		0	A	621														
351		6		622														
352	↓	15	↓	623														
353	BIC2F1W1V1	A	0	625				10	0									
354		0	A	626														
355		6		627														
356	↓	15	↓	628														
357	BIC2F2W1V1	A	0	630				10										
358		0	A	631														
359		6		632														
360	↓	15	↓	633														

1	7	13	19	25	31	37	43	49	55	61	67	75	76
CN	CA	CLM	CAL	CYN	CY	ICL	ICD	LTD	CAB				
C.A.E.	B.P.(1)	B.P.(3)											WACH
										IDPVAR(1)	IDPVAR(2)	NDV	

COEFFICIENTS: αA = -4, 0, 2, 4, 6, 8, 10, 15, 20

α or β
 SCHEDULES RA = -6, -3, 0, 3, 6

TEST NSRDC-3110 DATASET COLLATION SHEET

PRETEST
 POSTTEST

DATA SET IDENTIFIER	CONFIGURATION	SCHD.		RUN NUMBER			NO. of RUNS	PARAMETRIC VALUES								
		a	B	0.4				Se	Sc	Sa	Sr	Γw	lc	LW	CND POS	WNB POS
RN2361	BIC2F2W1VI	A	0	0.4			1	10	20	0	0	7 ⁹⁰	3	0	1	1
362	↓	0	A	0.5												
363	↓	6		0.6												
364	↓	15	↓	0.8				↓	↓							
365	BIC2FIW1VI	A	0	0.9				20	0							
366	↓	0	A	0.2												
367	↓	6		0.2												
368	↓	15	↓	0.3												
369	BIC2F2W1VI	A	0	0.4					10							
370	↓	0	A	0.5												
371	↓	6		0.7												
372	↓	15	↓	0.7												
373	↓	A	0	0.6					20							
374	↓	0	A	0.9												
375	↓	6		0.9												
376	↓	15	↓	0.9				↓	↓							
377	BIC2FIW1VI	A	0	0.6				30	0							
378	↓	0	A	0.1												
379	↓	6		0.4												
380	↓	15	↓	0.6				↓	↓	↓	↓	↓	↓	↓	↓	↓

1	7	13	19	25	31	37	43	49	55	61	67	7576
CN	CA	CLM	CLL	CYN	CY	CL	CD	L/D	CAB			73
C.A.F.	B.P.(1)	B.P.(3)										MACH

COEFFICIENTS: αA = -4, 0, 2, 4, 6, 8, 10, 15, 20 → IDPVAR(1) | IDPVAR(2) | NDV

a or B

SCHEDULES

βA = -6, -3, 0, 3, 6

TEST NSRDC-3110 DATASET COLLATION SHEET

PRETEST
 POSTTEST

DATA SET IDENTIFIER	CONFIGURATION	SCHD.		RUN NUMBER			NO. of RUNS	PARAMETRIC VALUES										
		a	B	0.4				Sc	S _c	S _a	S _r	T _w	L _c	L _w	CNO POS	WNG POS		
RN2381	BIG2F2W1V1	A	0	15			1	30	10	0	0	7'40"	3	0	1	1		
382		0	A	15														
383		6		15														
384		15	Y	15														
385		A	0	20				20										
386		0	A	20														
387		6		20														
388		15	Y	20				Y	Y	Y								
389		A	0	21				0	0	10								
390		0	A	21														
391		6		21														
392		15	Y	22														
393		A	0	22						20								
394		0	A	22														
395		6		23														
396		15	Y	23				Y	Y	Y								
397		A	0	23				-10	0	10								
398		0	A	24														
399		6		24														
400		15	Y	24			Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y

1	7	13	19	25	31	37	43	49	55	61	67	75	76
CN	CA	CLM	CBL	CYN	CY	CL	CD	L/D	CAB	MACH			
C.A.F.	B.P.W.	B.P.C.											

COEFFICIENTS: $\alpha A = -4, 0, 2, 4, 6, 8, 10, 15, 20$

a or B SCHEDULES $\beta A = -6, -3, 0, 3, 6$

TEST NSRDC-3110 DATASET COLLATION SHEET

PRETEST
 POSTTEST

DATA SET IDENTIFIER	CONFIGURATION	SCHD.		RUN NUMBER			NO. of RUNS	PARAMETRIC VALUES								
		a	B	0.4				Se	Sc	Sa	Sr	TW	ic	IN	CNO POS	WING POS
RN2401	BIC2F2WIVI	A	0	231			1	-10	0	20	0	T40'	3	0	1	1
402		0	A	234												
403		6		235												
404		15	Y	236				↓		↓						
405		A	0	221				10		10						
406		0	A	222												
407		6		223												
408		15	Y	224												
409		A	0	225						20						
410		0	A	226												
411		6		227												
412		15	Y	228				Y	Y	Y						
413		A	0	229				0	20	10						
414		0	A	230												
415		6		233												
416		15	Y	234				Y	Y	Y						
417		A	0	253				0	20	20						
418		0	A	254												
419		6		255												
420		15	Y	256				Y	Y	Y	Y	Y	Y	Y	Y	Y

1	7	13	19	25	31	37	43	49	55	61	67	75	76
CN	CA	CLM	CBL	CYN	CY	CL	CD	L/D	CAB				VS
C.A.F.	B.P.(1)	B.P.(2)								MACH			

COEFFICIENTS: $\alpha A = -4, 0, 2, 4, 6, 8, 10, 15, 20$ → IDPVAR(1) | IDPVAR(2) | NDV

a or B

SCHEDULES

$\beta A = -6, -3, 0, 3, 6$

TEST NSRDC-3110 DATASET COLLATION SHEET

PRETEST
 POSTTEST

DATA SET IDENTIFIER	CONFIGURATION	SCHD.		RUN NUMBER			NO. of RUNS	PARAMETRIC VALUES									
		a	B	0.4				Se	Sc	Sa	Sr	TW	Lc	LW	CNO POS	WNG POS	
RN2421	BIG2F2WIVI	A	0	231			1	-10	20	-10	0	7°40'	3	0	1	1	
422		0	A	231													
423		6		231													
424		15	Y	240													
425		A	0	252						20							
426		0	A	252													
427		6		251													
428		15	Y	260													
429		A	0	245				10		10							
430		0	A	246													
431		6		247													
432		15	Y	248													
433		A	0	249						20							
434		0	A	250													
435		6		251													
436		15	Y	252													
437	BIG2FI	A	0	413				-	0	-	-	-	-	-	-	-	
438		0	A	414				-		-	-	-	-	-	-	-	
439		6		415				-		-	-	-	-	-	-	-	
440		15	Y	416				-		-	-	-	-	-	-	-	

1	7	13	19	25	31	37	43	49	55	61	67	75	76
CA	CA	CLM	CBL	CYN	CY	CL	CD	L/D	CAB	WACH			VS
C.A.F.	B.P.C.W.	R.P.C.L.											

COEFFICIENTS:

αA = -4, 0, 2, 4, 6, 8, 10, 15, 20

a or B

SCHEDULES

βA = -6, -3, 0, 3, 6

→ IDPVAR(1) | IDPVAR(2) | NDV

TEST NSRDC-3110 DATASET COLLATION SHEET

PRETEST
 POSTTEST

DATA SET IDENTIFIER	CONFIGURATION	SCHD.		RUN NUMBER			NO. of RUNS	PARAMETRIC VALUES								
		α	β	0.4				Se	Sc	Sc	Sr	TW	Lc	LW	CNO POS	WNG POS
RN2441	BIC2 F1	A	0	771			1	-	10	-	-	-	3	-	1	-
442		0	A	772				-		-	-	-				
443		6		773				-		-	-	-				
444		15		774				-		-	-	-				
445		A	0	775				-	20	-	-	-				
446		0	A	776				-		-	-	-				
447		6		777				-		-	-	-				
448		15		778				-		-	-	-				
449	BIG2 F2	A	0	779				-		-	-	-				
450		0	A	780				-		-	-	-				
451		6		781				-		-	-	-				
452		15		782				-		-	-	-				
453		A	0	783				-	10	-	-	-				
454		0	A	784				-		-	-	-				
455		6		785				-		-	-	-				
456		15		786				-		-	-	-				
457	BIWIVI	A	0	652				-20	-	0	0	740	-	0	-	1
458		0	A	653												
459		6		654												
460		15		655												

1	7	13	19	25	31	37	43	49	55	61	67	75	76
GN	CA	CLM	CBL	CYN	CY	CL	CD	LTD	CAB				
C.A.F.	B.P.C.W.	B.P.C.U.								MACH.			

COEFFICIENTS: $\alpha A = -4, 0, 2, 4, 6, 8, 10, 15, 20$ IDPVAR(1) IDPVAR(2) NDV
 α or β
 SCHEDULES $BA = -6, -3, 0, 3, 6$

TEST NSRDC-3110 DATASET COLLATION SHEET

PRETEST
 POSTTEST

DATA SET IDENTIFIER	CONFIGURATION	SCHD.		RUN NUMBER			NO. of RUNS	PARAMETRIC VALUES								
		a	B	0.4				Se	Sc	Sa	Sr	TW	Lc	Ln	CNO POS	WNG POS
RN2461	BIWIVI	A	0	0.4			1	-10	-	0	0	1'40"	-	0	-	1
462		0	A	0.4												
463		6		0.4												
464		15		0.4				Y								
465		A	0	0.36				0								
466		0	A	0.37												
467		6		0.38												
468		15		0.37				Y								
469		A	0	0.40				10								
470		0	A	0.41												
471		6		0.42												
472		15		0.43				Y								
473		A	0	0.48				20								
474		0	A	0.49												
475		6		0.50												
476		15		0.51				Y								
477		A	0	0.56				30								
478		0	A	0.57												
479		6		0.58												
480		15		0.59				Y								

1	7	13	19	25	31	37	43	49	55	61	67	75	76
CN	CA	CLM	CBL	CYN	CY	CL	CD	L/D	CAB	MACH			13
C.A.F.	B.P.C.W.	B.P.C.S.											

COEFFICIENTS: $\alpha A = -4, 0, 2, 4, 6, 8, 10, 15, 20$

a or B SCHEDULES $\beta A = -6, -3, 0, 3, 6$

IDPVAR(1) IDPVAR(2) NDV

TEST NSRDC-3110 DATASET COLLATION SHEET

PRETEST
 POSTTEST

DATA SET IDENTIFIER	CONFIGURATION	SCHD.		RUN NUMBER			NO. of RUNS	PARAMETRIC VALUES										
		a	B	0,4				Se	Sc	Sa	Sr	TW	ic	IN	CNO POS	WNO POS		
RN2481	BIWIVI	A	0	265			1	0	-	10	0	740	-	0	-	1		
482		0	A	266														
483		6		267														
484		15	Y	268														
485		A	0	269						20								
486		0	A	270														
487		6		271														
488		15	Y	272														
489		A	0	273				-10		10								
490		0	A	274														
491		6		275														
492		15	Y	276														
493		A	0	277				-10		20								
494		0	A	278														
495		6		279														
496		15	Y	280														
497		A	0	281				10		10								
498		0	A	282														
499		6		283														
500		15	Y	284														

1	7	13	19	25	31	37	43	49	55	61	67	7576
CN	CA	CLM	CBL	CVN	CY	CL	CD	L/D	CAB			13
C.A.F.	B.P.L.W.	B.P.C.								MACH		

COEFFICIENTS: $\alpha A = -4, 0, 2, 4, 6, 8, 10, 15, 20$ IDPVAR(1) IDPVAR(2) NDV
 a or B
 SCHEDULES $BA = -6, -3, 0, 3, 6$

TEST NSRDC-3110 DATASET COLLATION SHEET

PRETEST
 POSTTEST

DATA SET IDENTIFIER	CONFIGURATION	SCHD.		RUN NUMBER		NO. of RUNS	PARAMETRIC VALUES										
		α	β	0,4			S_e	S_c	S_a	S_r	T_w	i_c	i_w	CND POS	WAB POS		
RN2501	BIWIVI	A	0	715		1	10	-	20	0	7°40'	-	0	-	1		
502		0	A	718			↓	-	↓			-	↓				
503		6		715			↓	-	↓			-	↓				
504		15		716			↓	-	↓			-	↓				
505		0		785			0	-	0	-5		-	↓				
506		6		716			↓	-	↓			-	↓				
507		15		717			↓	-	↓			-	↓				
508		0		718			↓	-	↓	-10		-	↓				
509		6		717			↓	-	↓			-	↓				
510		15		718			↓	-	↓			-	↓				
511	BIC2FIWIVI	0		707				0		-5		3		1			
512		6		703			↓	-	↓			-	↓				
513		15		707			↓	-	↓			-	↓				
514		0		710			↓	-	↓	-10		-	↓				
515		6		711			↓	-	↓			-	↓				
516		15	Y	712			↓	-	↓			-	↓				
517		A	0	581					0	15°		-	↓				
518		0	A	582			↓	-	↓			-	↓				
519		6		583			↓	-	↓			-	↓				
520		15	Y	584			↓	-	↓			-	↓				

1	7	13	19	25	31	37	43	49	55	61	67	75	76
CN	CA	CLM	CBL	CYN	CY	CL	CO	L/D	CAE	WACH			
C.A.F.	B.P.(1)	B.P.(3)											

COEFFICIENTS: $\alpha A = -9, 0, 2, 4, 6, 8, 10, 15, 20$
 α or β
 SCHEDULES $\beta A = -6, -3, 0, 3, 6$

TEST NSRDC-3110 DATASET COLLATION SHEET

PRETEST
 POSTTEST

DATA SET IDENTIFIER	CONFIGURATION	SCHD.		RUN NUMBER			NO. of RUNS	PARAMETRIC VALUES								
		a	B	0.4				Se	Sc	Sa	Sr	Tw	Lc	LW	CNO. POS	WING POS
RN251	BIC2FIWVI	A	0	505			1	0	0	0	0	15	3	0	2	1
522	↓	0	A	506												
523	↓	6	↓	507												
524	↓	15	↓	508												
525	BIC2FIWV2DI	A	0	514										1		
526	↓	0	A	525												
527	↓	6	↓	526												
528	↓	15	↓	527												
529	↓	A	0	529											2	
530	↓	0	A	528												
531	↓	6	↓	521												
532	↓	15	↓	522												
533	BIC2FIW2DI	A	0	521									3	1		
534	↓	0	A	522												
535	↓	6	↓	523												
536	↓	15	↓	524												
537	↓	A	0	525											2	
538	↓	0	A	526												
539	↓	6	↓	527												
540	↓	15	↓	528				↓	↓	↓	↓	↓	↓	↓	↓	↓

1	7	13	19	25	31	37	43	49	55	61	67	75	76
CN	CA	CLM	CBL	CVN	CY	CL	CD	L/D	CAB	MACH			
C.A.F.	B.P.L.W.	R.P.(3)											

COEFFICIENTS: $\alpha A = -4, 0, 2, 4, 6, 8, 10, 15, 20$

a or B SCHEDULES $\beta A = -6, -3, 0, 3, 6$

TEST NSRDC-3110 DATASET COLLATION SHEET

PRETEST
 POSTTEST

DATA SET IDENTIFIER	CONFIGURATION	SCHD.		0.4	RUN NUMBER			NO. of RUNS	PARAMETRIC VALUES								
		a	B						Se	Sc	Sa	Sr	TW	Lc	LW	CNO POS	WNG POS
RN2541	BIC2FIWIV1	A	0	584				1	0	10	0	0	7'40'	3	0	1	1
542		0	A	584													
543		6		584													
544		15	Y	584													
545		A	0	603					20								
546		0	A	603													
547		6		603													
548		15	Y	603													
549	BIC2F2WIV1	A	0	631												2	
550		0	A	631													
551		6		631													
552		15	Y	631													
553	BIC2FIWIV2	A	0	826					0		-					1	
554		0	A	826													
555		6		826													
556		15	Y	826													
557	BIC2FIWIV1	A	0	551													
558		0	A	551													
559		6		551													
560		15	Y	551													

7	13	19	25	31	37	43	49	55	61	67	7576
CN	CA	CLM	CBL	CYN	CY	CL	CD	L/D	CAB	MACH	15
G.A.F.	B.P.L.W.	B.P.(2)									

COEFFICIENTS: $\alpha A = -4, 0, 2, 4, 6, 8, 10, 15, 20$

a or B SCHEDULES $\beta A = -6, -3, 0, 3, 6$

TEST NSRDC-3110 DATASET COLLATION SHEET

PRETEST
 POSTTEST

DATA SET IDENTIFIER	CONFIGURATION	SCHED.		RUN NUMBER			NO. of RUNS	PARAMETRIC VALUES									
		α	β	0.4				Se	Sc	Se	Sr	Γw	ic	LN	CND POS	WAG PLS	
RN2561	BIC2.FI.WI.VI.02	A	0	847			1	0	0	0	0	740'	3	0	1	1	
562	↓	0	A	848													
563	↓	6		849													
564	↓	15	↓	850													
565	BIC3.F3.WI.VI	A	0	834													
566	↓	0	A	840													
567	↓	6		841													
568	↓	15	↓	842													
569	BIC2.FI.WI.VI.03	A	0	852													
570	↓	0	A	853													
571	↓	6		854													
572	↓	15	↓	855													
573	B2C2.FI.WI.VI	A	0	857													
574	↓	0	A	858													
575	↓	6		859													
576	↓	15	↓	860				↓	↓	↓	↓	↓	↓	↓	↓	↓	

1	7	13	19	25	31	37	43	49	55	61	67	75	76
CN	CA	CLM	CAL	CYN	CY	CL	CD	L/D	CAB	MACH			1.3
C.A.F.	B.P.(1)	B.P.(3)											

COEFFICIENTS: αA = -4, 0, 2, 4, 6, 8, 10, 15, 20

α or β _____

SCHEDULES βA = -6, -3, 0, 3, 6

IDPVAR(1) | IDPVAR(2) | NDV

TEST FACILITY DESCRIPTION

The test program was conducted in the NSRDC 7 x 10-foot transonic wind tunnel, which is a closed-loop, continuous flow tunnel with a Mach number range from $M = 0.30$ to $M = 1.20$ at simulated altitudes from sea level to 40,000 feet. Reynolds number can be varied between 1×10^6 and 3×10^6 per foot by adjusting the settling chamber total pressure.

TABLE I. SADSAC NOMENCLATURE OF AERODYNAMIC COEFFICIENTS

COEFFICIENT	COEFFICIENT NAME	SADSAC NOMENCLATURE		
		BODY AXIS	STABILITY AXIS	WIND AXIS
C_A	Total Axial Force	CA	-	-
C_{AB}	Base Axial Force	CAB	--	-
C_{AF}	Forebody Axial Force	CAF	-	-
C_D	Total Drag Force	-	CD	CDTOTL
C_{DB}	Base Drag Force	-	CDB	CDBASE
C_{DF}	Forebody Drag Force	-	CDF	CDFORE
C_L	Lift Force	-	CL	CL
C_N	Normal Force	CN	-	-
C_Y	Side Force	CY	CY	CC
C_l	Rolling Moment	CBL	CSL	CWL
C_m	Pitching Moment	CLM	CLM	CPM
C_n	Yawing Moment	CYN	CLN	CLN
L/D	Lift-To-Drag Force Ratio	-	L/D	CL/CD
L/D	Lift-To-Forebody Drag Force Ratio	-	L/DF	CL/CDF
N/A	Normal-To-Axial Force Ratio	N/A	-	-
N/A	Normal-To-Forebody Axial Force Ratio	CN/CAF	-	-

TABLE II.
TEST CONDITIONS
TEST NSRDC 3110

MACH NUMBER	REYNOLDS NUMBER per unit length	DYNAMIC PRESSURE (pounds/sq. inch)	STAGNATION TEMPERATURE (degrees Fahrenheit)
0.38	2.69×10^6	1.35	

BALANCE UTILIZED: TSB-24

CAPACITY:

NF	<u>1500 #</u>
SF	<u>500 #</u>
AF	<u>100 #</u>
PM	<u>1850 in #</u>
YM	<u>625 in #</u>
RM	<u>750 in #</u>

ACCURACY:

<u>7.5 #</u>
<u>2.5 #</u>
<u>0.5 #</u>
<u>0.25 in #</u>
<u>3.13 in #</u>
<u>3.75 in #</u>

COEFFICIENT TOLERANCE:

<u>0.0290</u>
<u>0.0097</u>
<u>0.0020</u>
<u>0.0009</u>
<u>0.0003</u>
<u>0.0004</u>

COMMENTS:

DATA REDUCTION

This section includes a description of the data reduction accomplished by NSRDC and by SADSAC

For SADSAC

A six-component strain gauge balance was used to measure the force and moment data for this test (see Figure 1 for axis system orientation); four base pressures were also measured but only two were used to calculate the base axial force coefficient (CAB). Reference data utilized to reduce the measured data to coefficient form are listed below:

$$S_{\text{ref}} = \text{Wing W1 planform area} = 1.355 \text{ ft}^2$$

$$l_{\text{ref}} = b_{\text{ref}} = \text{Body B1 length} = 41.436 \text{ in}$$

The moment reference point (MRP) for all data in which B1 was tested is 31.14 inches aft of the fuselage nose, on the lateral centerline and 0.225 inch above the vertical centerline of the model. The MRP for all data in which B2 was tested is 26.64 inches aft of the nose, on the lateral centerline, and 0.225 inch above the model vertical centerline.

Data submitted to SADSAC were CN, CA, CLM, CBL, CYN, CY, CL, CD, L/D, CAB, CAF, BP(1), and BP(3); BP(1) and BP(3) are base pressure coefficients applicable to base pressure tubes 1 and 3 (see Figure 4). The base axial force coefficient (CAB) was calculated as listed below:

$$\text{CAB} = \text{BP}(1) \left[\frac{A1}{S_{\text{ref}}} \right] + \left[\text{BP}(1) - \text{BP}(3) \right] \left[\frac{A2}{S_{\text{ref}}} \right] + \text{BP}(3) \left[\frac{A3}{S_{\text{ref}}} \right]$$

DATA REDUCTION
(CONTINUED)

- A1 = total area of 10 nozzles at the throats = 0.0121 ft²
A2 = total area of 10 nozzles at the nozzle exits minus the total throat area (A1)
A3 = total base area minus A1 and A2
A3 = 0.1312 ft² for high wing
A3 = 0.1372 ft² for low wing

By SADSAC

A request for incremental effects of control deflection required additional processing of the basic data by SADSAC. Coefficient data was obtained at even values of angle of attack ($\alpha = -2, 0, 4, 6, 8$ and 10°) and then used to determine the difference between the datasets, i.e. $(C_N)_{\delta_e=10} - (C_N)_{\delta_e=0}$. Incremental data were obtained for the following coefficients: CL, CIM, CD, L/D, CYN, CBL, and CY.

SUMMARY DATA PLOT INDEX

CONFIGURATION VARIABLE	CONFIGURATION CONDITIONS FIXED							PLOTTED COEFFICIENT SCHEDULE	PAGES
	WNDSIZ	INCIDW	DINDRL	WNGPOS	CNDSIZ	INCIDC	CNDPOS		
Canard Size	W1V1	0°	7.66°	1	-	3°	1	A	1-8
Canard Size	W1V1	0°	7.66°	1	-	3°	1	B	9-11
Canard Position	W1V1	0°	7.66°	1	C2	3°	-	A	12-19
Canard Position	W1V1	0°	7.66°	1	C2	3°	-	B	20-22
Canard Incidence	W1V1	0°	7.66°	1	C2	-	1	A	23-30
Canard Incidence	W1V1	0°	7.66°	1	C2	-	1	B	31-33
Canard Size	W1V1	0°	7.66°	1	-	3°	2	A	34-41
Canard Size	W1V1	0°	7.66°	1	-	3°	2	B	42-44
Canard Position	W1V1	0°	7.66°	2	C2	3°	-	A	45-52
Canard Position	W1V1	0°	7.66°	2	C2	3°	-	B	53-55
Canard Incidence	W1V1	0°	7.66°	1	C2	-	2	A	56-63
Canard Incidence	W1V1	0°	7.66°	1	C2	-	2	B	64-66
Canard Size	W1V1	3°	7.66°	1	-	3°	1	A	67-74
Canard Size	W1V1	3°	7.66°	1	-	3°	1	B	75-77
Canard Position	W1V1	3°	7.66°	1	C2	3°	-	A	78-85
Canard Position	W1V1	3°	7.66°	1	C2	3°	-	B	86-88
Canard Incidence	W1V1	3°	7.66°	1	C2	-	1	A	89-96
Canard Incidence	W1V1	3°	7.66°	1	C2	-	1	B	97-99

SUMMARY DATA PLOT INDEX
(CONTINUED)

CONFIGURATION VARIABLE	CONFIGURATION CONDITIONS FIXED							PLOTTED COEFFICIENT SCHEDULE	PAGES
	WNDSIZ	INCIDW	DINDRL	WNGPOS	CNDSIZ	INCIDC	CNDPOS		
Canard Size	W1V1	3°	7.66°	1	-	3°	2	A	100-107
Canard Size	W1V1	3°	7.66°	1	-	3°	2	B	108-110
Canard Position	W1V1	3°	7.66°	2	C2	3°	-	A	111-118
Canard Position	W1V1	3°	7.66°	2	C2	3°	-	B	119-121
Canard Incidence	W1V1	3°	7.66°	2	C2	-	2	A	122-129
Canard Incidence	W1V1	3°	7.66°	2	C2	-	2	B	130-132
Canard Size	W1V1	0°	7.66°	2	-	3°	1	A	133-140
Canard Size	W1V1	0°	7.66°	2	-	3°	1	B	141-143
Canard Incidence	W1V1	0°	7.66°	2	C2	-	1	A	144-151
Canard Incidence	W1V1	0°	7.66°	2	C2	-	1	B	152-154
Canard Size	W1V1	0°	7.66°	2	C2	3°	1	A	155-162
Canard Size	W1V1	0°	7.66°	2	C2	3°	1	B	163-165
Canard Incidence	W1V1	0°	7.66°	2	C2	-	1	A	166-173
Canard Incidence	W1V1	0°	7.66°	2	C2	-	1	B	174-176
Canard Size	W1V1	3°	7.66°	2	-	3°	1	A	177-184
Canard Size	W1V1	3°	7.66°	2	-	3°	1	B	185-187

SUMMARY DATA PLOT INDEX
(CONTINUED)

CONFIGURATION VARIABLE	CONFIGURATION CONDITIONS FIXED							PLOTTED COEFFICIENT SCHEDULE	PAGES
	WNDSIZ	INCIDW	DINDRL	WNGPOS	CNDSIZ	INCIDC	CNDPOS		
Canard Incidence	W1V1	3°	7.66°	2	C2	3°	1	A	188-195
Canard Incidence	W1V1	3°	7.66°	2	C2	3°	1	B	196-198
Canard Size	W1	3°	7.66°	2	-	3°	2	A	199-206
Canard Size	W1	3°	7.66°	2	-	3°	2	B	207-209
Canard Incidence	W1	3°	7.66°	2	C2	-	2	A	210-217
Canard Incidence	W1	3°	7.66°	2	C2	-	2	B	218-220
Canard Size	W1	0°	7.66°	1	-	15°	1	A	221-228
Canard Size	W1	0°	7.66°	1	-	15°	1	B	229-231
Canard Position	W1	0°	7.66°	1	C2	15°	-	A	232-239
Canard Position	W1	0°	7.66°	1	C2	15°	-	B	240-242
Canard Size	W1	0°	7.66°	1	-	15°	2	A	243-250
Canard Size	W1	0°	7.66°	1	-	15°	2	B	251-253
Canard Position	W1	0°	7.66°	2	C2	15°	-	A	254-261
Canard Position	W1	0°	7.66°	2	C2	15°	-	B	262-264
Canard Size	W1	3°	7.66°	1	-	15°	1	A	265-272
Canard Size	W1	3°	7.66°	1	-	15°	1	B	273-275
Canard Position	W1	3°	7.66°	1	C2	15°	-	A	276-283
Canard Position	W1	3°	7.66°	1	C2	15°	-	B	284-286

SUMMARY DATA PLOT INDEX
(CONTINUED)

CONFIGURATION VARIABLE	CONFIGURATION CONDITIONS FIXED							PLOTTED COEFFICIENT SCHEDULE	PAGES
	WNSIZ	INCIDW	DINDRL	WNGPOS	CNDSIZ	INCIDC	CNDPOS		
Canard Size	W1	3°	7.66°	1	-	15°	-	A	287-294
Canard Size	W1	3°	7.66°	1	-	15°	-	B	295-297
Canard Position	W1	3°	7.66°	1	C2	15°	-	A	298-305
Canard Position	W1	3°	7.66°	1	C2	15°	-	B	306-308
Canard Size	W1	3°	7.66°	2	-	15°	1 & 2	A & B	309-352
Canard Position	W1	0° & 3°	7.66°	1 & 2	C1	3° & 15°	1 & 2	A & B	353-440
Canard Incidence	W1	0° & 3°	7.66°	1 & 2	C1	-	1 & 2	A & B	441-528
Wing Size	-	0° & 3°	7.66°	1	C2	3° & 15°	1 & 2	A & B	529-616
Wing Size	-	0° & 3°	7.66°	2	C2	3° & 15°	1 & 2	A & B	617-704
Wing Size	-	0° & 3°	7.66°	1	C1	3° & 15°	1 & 2	A & B	705-792
Wing Size	-	0° & 3°	7.66°	2	C1	3° & 15°	1 & 2	A & B	793-880
Wing Location	W1V1 W1V2 W2 W1	0°	7.66°	-	C2	3° & 15°	1 & 2	A & B	881-1001
Wing Location	W1V1 W1V2 W2 W1	3°	7.66°	-	C2	3° & 15°	1 & 2	A & B	1002-1133

SUMMARY DATA PLOT INDEX
(CONTINUED)

CONFIGURATION VARIABLE	CONFIGURATION CONDITIONS FIXED							PLOTTED COEFFICIENT SCHEDULE	PAGES
	WNDSIZ	INCIDW	DINDRL	WNGPOS	CNDSIZ	INCIDC	CNDPOS		
Wing Location	{ W1V1 W1V2	0°	7.66°	-	C1	3° & 15°	1 & 2	A & B	1134-1221
Wing Location	{ W1V1 W1V2	3°	7.66°	-	C1	3° & 15°	1 & 2	A & B	1222-1309
Wing Incidence	W1V1	-	7.66°	1 & 2	C1 & C2	3° & 15°	1 & 2	A & B	1310-1485
Wing Incidence	W1V2	-	7.66°	1 & 2	C1 & C2	3° & 15°	1 & 2	A & B	1486-1661
Wing Incidence	W2	-	7.66°	1 & 2	C2	3° & 15°	1 & 2	A & B	1662-1738
Wing Dihedral	{ W1V1 W1V2 W2	0° & 3°	-	1	C2	3°	1 & 2	A & B	1739-1804
Elevon Deflection	W1V1	0°	7.66°	1	C2 & Off	3°	1	A & B	1805-1848
Wing Tip Rudder Deflection	W1V1	0°	7.66°	1	C2 & Off	3°	1	A & B	1849-1854
Dorsal Fin	{ W1V1 W1V2	0°	7.66°	1	C2	3°	1	A & B	1855-1876
Canard Flap Deflection and Size	W1V1 & Off	0°	7.66°	1	C2	3°	1	A & B	1877-1898
Canard Effectiveness	W1V1 & Off	0°	7.66°	1	C2	3°	1	A & B	1899-1964
Aileron Effectiveness	W1V1	0°	7.66°	1	C2 & Off	3°	1	A & B	1976-2074

SUMMARY DATA PLOT INDEX
(CONTINUED)

CONFIGURATION VARIABLE	CONFIGURATION CONDITIONS FIXED							PLOTTED COEFFICIENT SCHEDULE	PAGES
	WNDSIZ	INCIDW	DINDRL	WNGPOS	CNDSIZ	INCIDC	CNDPOS		
Elevon Effectiveness	W1V1	0°	7.66°	1	C2 & Off	3°	1	C	2075-2090
Rudder Effectiveness	W1V1	0°	7.66°	1	C2 & Off	3°	1	D	2091-2102
Canard Effectiveness	W1V1	0°	7.66°	1	C2	3°	1	E	2103-2126
Aileron Effectiveness	W1V1	0°	7.66°	1	C2 & Off	3°	1	F	2127-2180
Directional Stability At High Alpha	{ W1V1 W1V2 W2	0° & 3°	7.66°	1 & 2	C1 & C2	3° & 15°	1 & 2	G	2281-2207

PLOTTED COEFFICIENT SCHEDULE:

- (A) CN, CA, CIM, CL, CD, L/D & CAB vs. ALPHA.
CIM vs. CL
- (B) CBL, CYN & CY vs. BETA
- (C) DCL, DCIM, DCD & DL/D vs. ELEVTR
- (D) DCYN, DCBL, DCY, DCD, DCIM, & DL/D vs. RUDDER
- (E) DCL, DCIM, DCD & DL/D vs. CANARD
- (F) DCYN, DCBL, DCY, DCD, DCIM & DL/D vs. AILRON
- (G) CBL, CYN & CY vs. ALPHA

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.

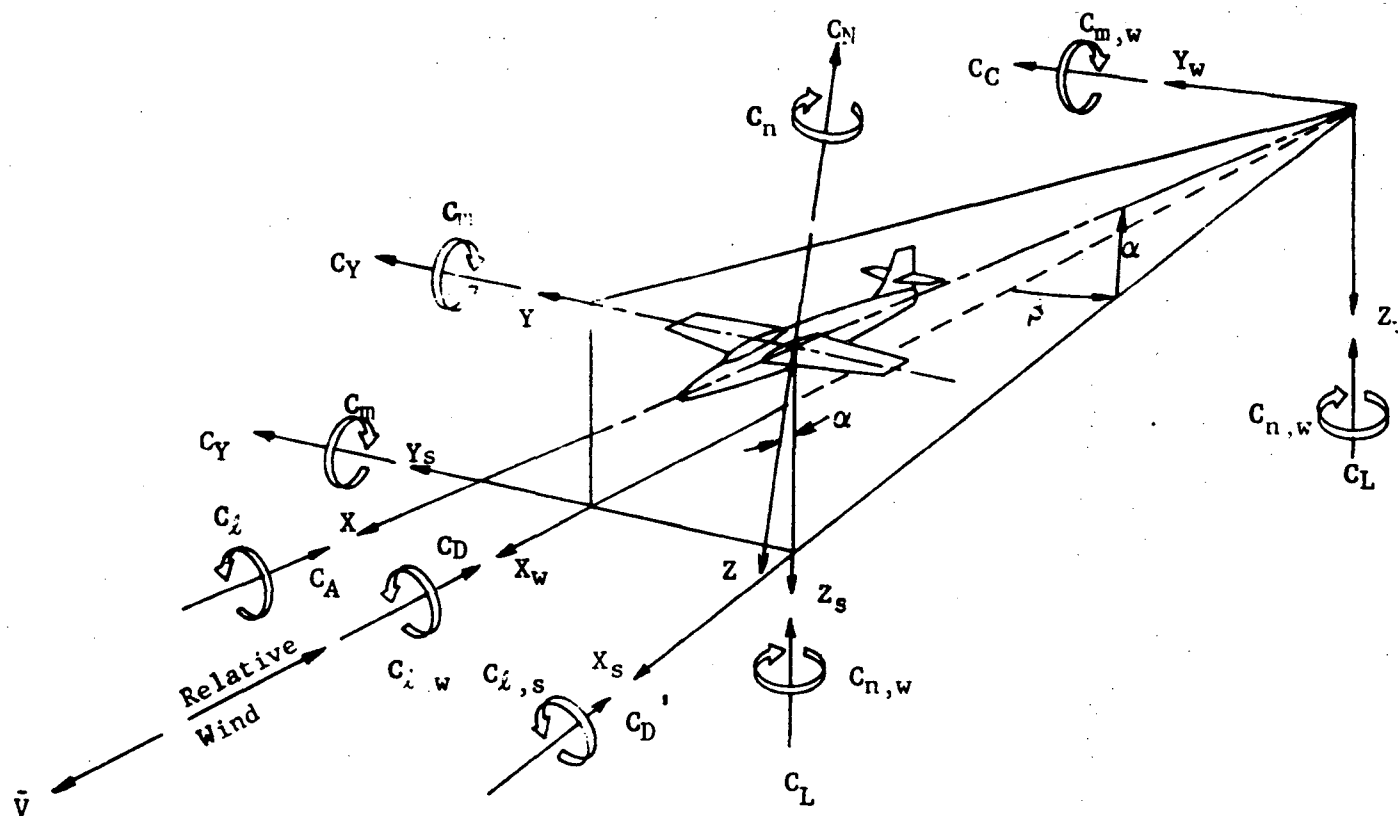


Figure 1. Axis systems, showing direction and sense of force and moment coefficients, angle of attack, and sideslip angle

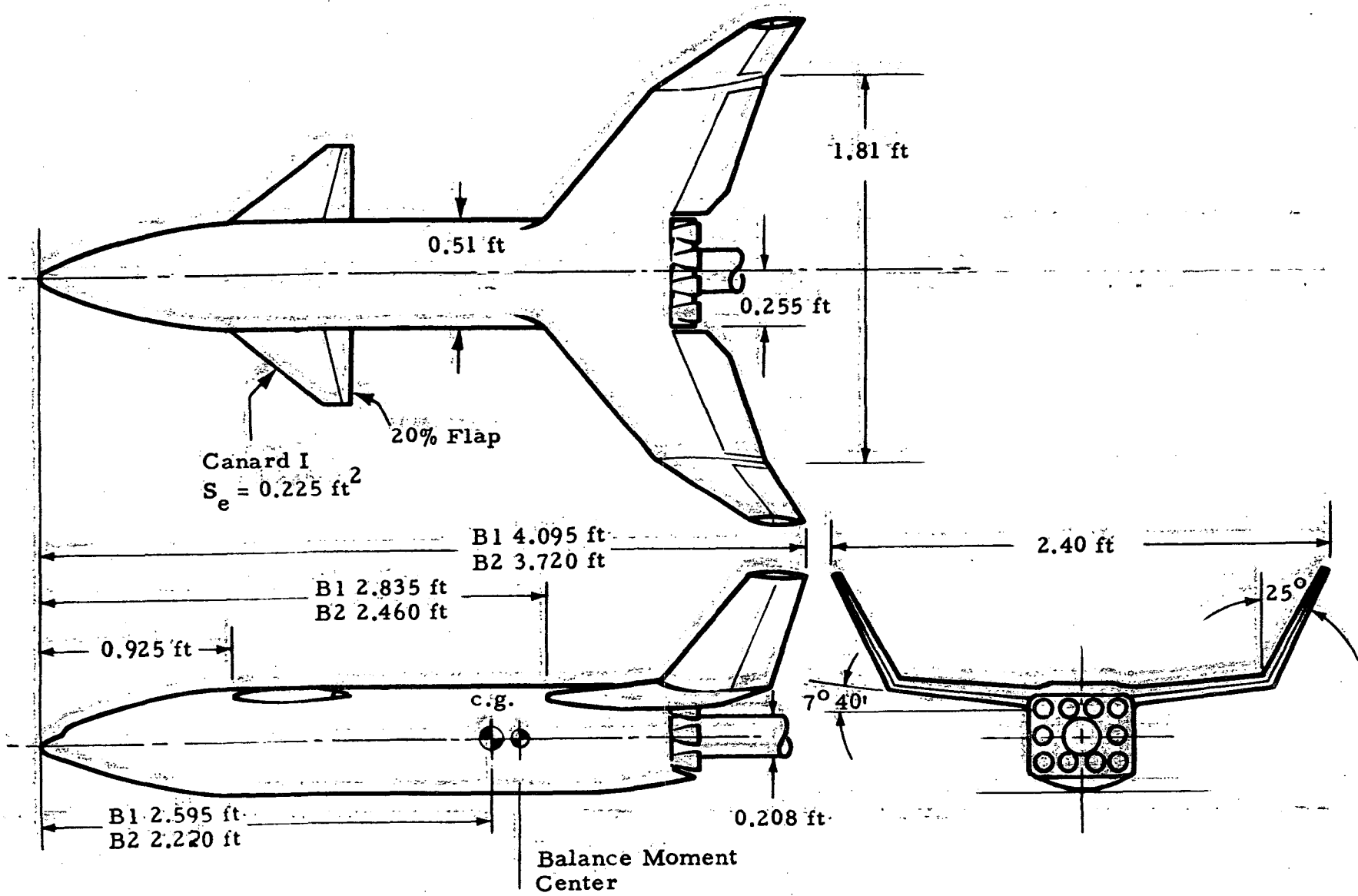
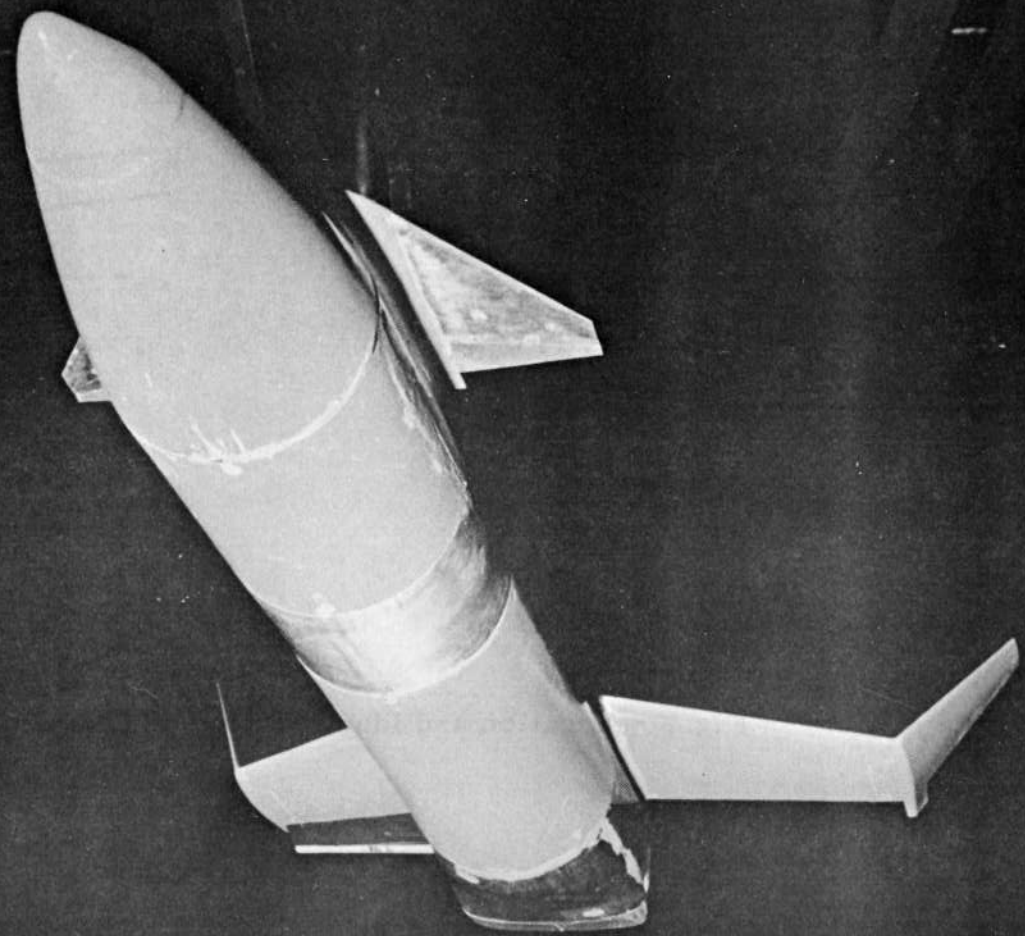


Fig. 2. General Arrangement of a Typical High Wing - High Canard Configuration

NOT REPRODUCIBLE



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FIGURE 3. TYPICAL MODEL INSTALLATION, CONFIGURATION B1C2F1W1V1 WITH AILERON CONTROL DEFLECTION OF 20 DEGREES

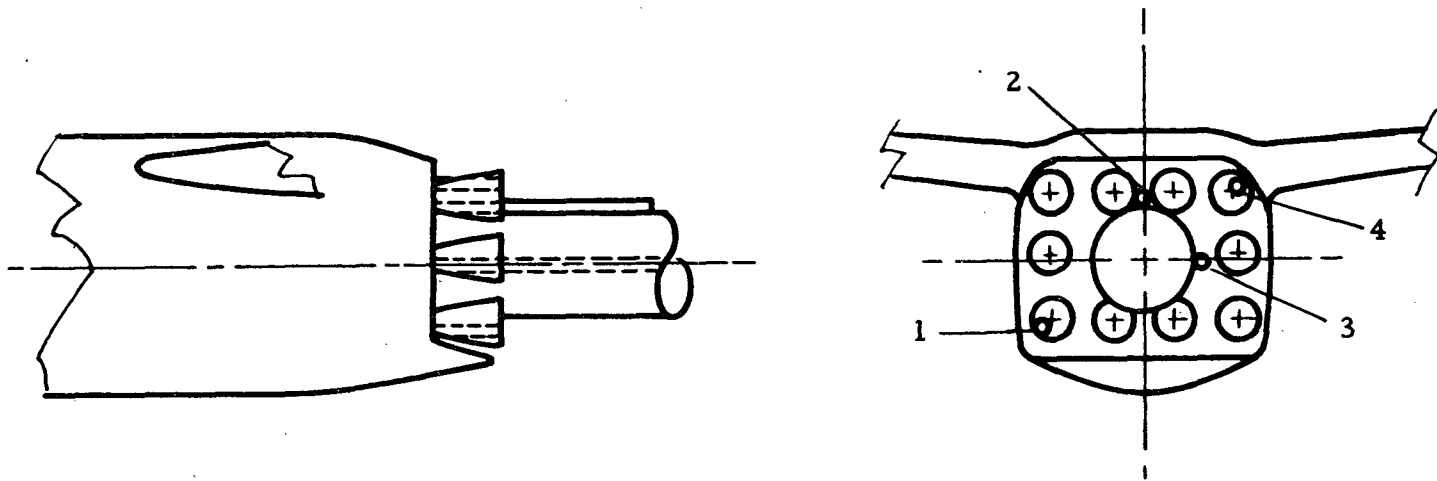


Fig. 4, - Location and Identification of Base Pressure Tubes

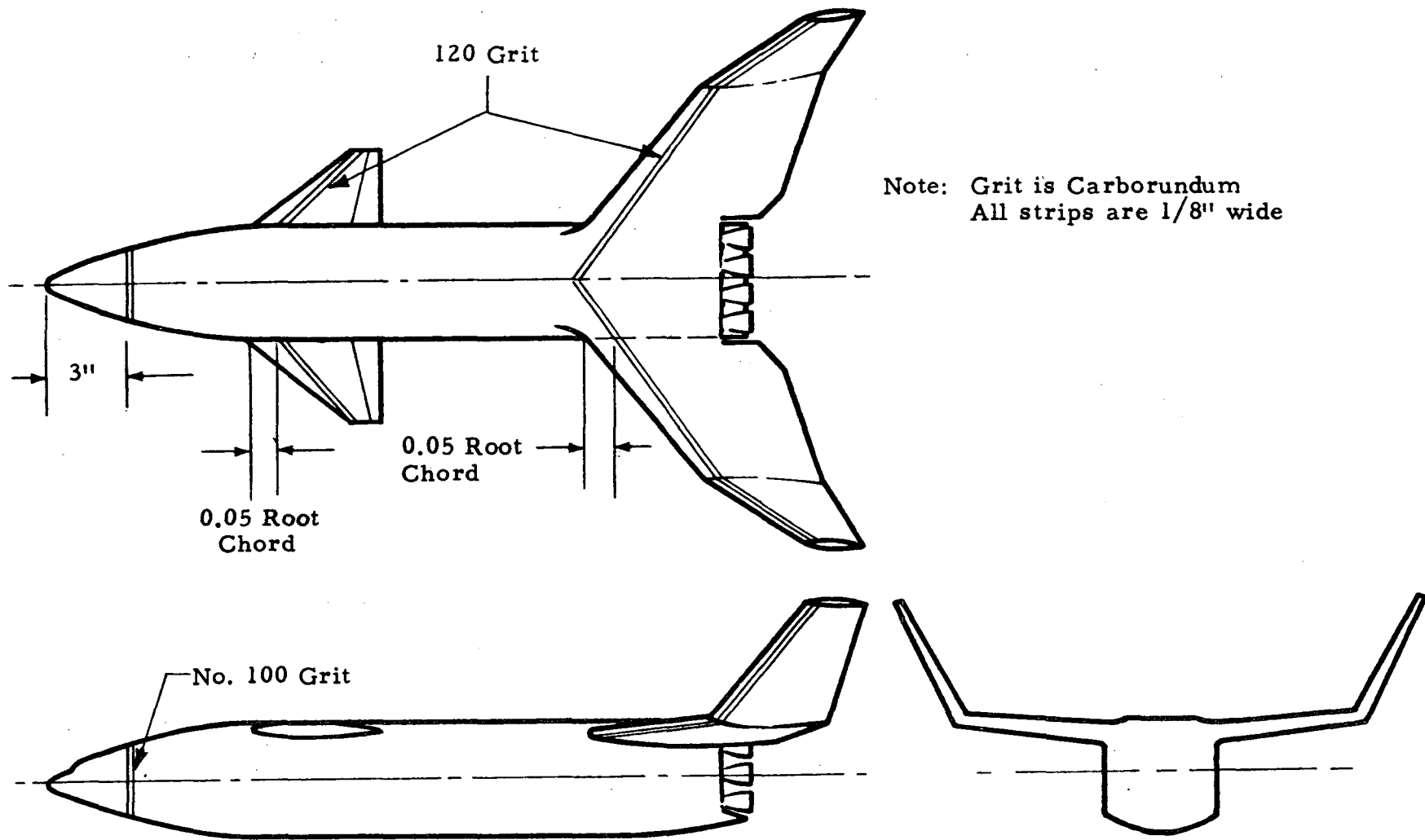


Fig. 5.- Typical Transition Grit Installation on Body, Wing and Canard

TABLE III.

MODEL COMPONENT: BODY - B1

GENERAL DESCRIPTION: Baseline MDAC booster body 256-19A-X
X = total length is 229 vs 291.7 for 19A

DRAWING NUMBER: NSRDC A152011-A

<u>DIMENSIONS:</u>	<u>FULL-SCALE</u>	<u>MODEL SCALE</u>
Length	<u>229 ft</u>	<u>3.453 ft</u>
Max. Width	<u>34 ft</u>	<u>0.51 ft</u>
Max. Depth	<u>34 ft</u>	<u>0.51 ft</u>
Fineness Ratio	—	—
Area		
Max. Cross-Sectional	<u>907.92 ft²</u>	<u>0.204 ft²</u>
Planform	—	—
Wetted	—	—
Base	high wing <u>866.67 ft²</u>	<u>0.195 ft²</u>
	Low wing <u>893.21 ft²</u>	<u>0.201 ft²</u>

TABLE IV.

MODEL COMPONENT: BODY - B2

GENERAL DESCRIPTION: Baseline MDAC boundary body 256-14

DRAWING NUMBER: NSRDC A152011

<u>DIMENSIONS:</u>	<u>FULL-SCALE</u>	<u>MODEL SCALE</u>
Length	<u>204.08 ft</u>	<u>3.06 ft</u>
Max. Width	<u>34 ft</u>	<u>0.51 ft</u>
Max. Depth	<u>34 ft</u>	<u>0.51 ft</u>
Fineness Ratio	<u>6</u>	<u>6</u>
Area		
Max. Cross-Sectional	<u>907.92 ft²</u>	<u>0.204 ft²</u>
Planform	<u>—</u>	<u>—</u>
Wetted	<u>—</u>	<u>—</u>
Base :		
high wing	<u>866.67 ft²</u>	<u>0.195 ft²</u>
Low wing	<u>893.21 ft²</u>	<u>0.201 ft²</u>

TABLE V.

MODEL COMPONENT: W1
 GENERAL DESCRIPTION: Baseline booster wing 250-14

DRAWING NUMBER: NSRDC A152024-1

<u>DIMENSIONS:</u>	<u>FULL-SCALE</u>	<u>MODEL SCALE</u>
<u>TOTAL DATA</u>		
Area		
Planform	<u>6020 ft²</u>	<u>1.355 ft²</u>
Wetted	<u>---</u>	<u>---</u>
Span (equivalent)	<u>120.67 ft.</u>	<u>1.01 ft</u>
Aspect Ratio	<u>2.42</u>	<u>2.12</u>
Rate of Taper	<u>---</u>	<u>---</u>
Taper Ratio	<u>.547</u>	<u>.547</u>
Diehedral Angle, degrees	<u>7°10' 15"</u>	<u>7°40' 15"</u>
Incidence Angle, degrees	<u>0° 3'</u>	<u>0° 3'</u>
Aerodynamic Twist, degrees	<u>---</u>	<u>---</u>
Toe-In Angle	<u>0°</u>	<u>0°</u>
Cant Angle	<u>---</u>	<u>---</u>
Sweep Back Angles, degrees		
Leading Edge	<u>10°</u>	<u>40°</u>
Trailing Edge	<u>19°31'</u>	<u>19°31'</u>
0.25 Element Line	<u>---</u>	<u>---</u>
Chords:		
Root (Wing Sta. 0.0)	<u>64.55 ft</u>	<u>.969 ft</u>
Tip, (equivalent)	<u>35.4 ft</u>	<u>.53 ft</u>
MAC	<u>---</u>	<u>---</u>
Fus. Sta. of .25 MAC	<u>---</u>	<u>---</u>
W.P. of .25 MAC	<u>---</u>	<u>---</u>
B.L. of .25 MAC	<u>---</u>	<u>---</u>
Airfoil Section		
Root	<u>64A010</u>	<u>64A010</u>
Tip	<u>64A010</u>	<u>64A010</u>
<u>EXPOSED DATA</u>		
Area	<u>3960 ft²</u>	<u>.891 ft²</u>
Span, (equivalent)	<u>86.8 ft</u>	<u>1.30 ft.</u>
Aspect Ratio	<u>1.89</u>	<u>1.89</u>
Taper Ratio	<u>.627</u>	<u>.627</u>
Chords		
Root	<u>56.4 ft</u>	<u>.845 ft</u>
Tip	<u>35.4</u>	<u>.53 ft</u>
MAC	<u>---</u>	<u>---</u>
Fus. Sta. of .25 MAC	<u>---</u>	<u>---</u>
W.P. of .25 MAC	<u>---</u>	<u>---</u>
B.L. of .25 MAC	<u>---</u>	<u>---</u>

TABLE VI.

MODEL COMPONENT: W2

GENERAL DESCRIPTION: A alternate high speed cabin wing

DRAWING NUMBER: NSRDC A-15 2024-5

DIMENSIONS: FULL-SCALE MODEL SCALE

TOTAL DATA

Area		
Planform	5100 ft ²	1.148 ft ²
Wetted	—	—
Span (equivalent)	152.5 ft	229 ft
Aspect Ratio	.455	.455
Rate of Taper	—	—
Taper Ratio	—	—
Diehedral Angle, degrees	7°40', 15"	7°40', 15"
Incidence Angle, degrees	0° 3'	0° 3'
Aerodynamic Twist, degrees	0	0
Toe-In Angle	—	—
Cant Angle	—	—
Sweep Back Angles, degrees	—	—
Leading Edge	40°	40°
Trailing Edge	28.5°	28.5°
0.25 Element Line	—	—
Chords:		
Root (Wing Sta. 0.0)	45.9 ft	0.639 ft
Tip, (equivalent)	20.9 ft	0.314 ft
MAC	—	—
Fus. Sta. of .25 MAC	—	—
W.P. of .25 MAC	—	—
B.L. of .25 MAC	—	—
Airfoil Section		
Root	64A010	64A010
Tip	64A010	64A010

EXPOSED DATA

Area	3500 ft ²	0.728 ft ²
Span, (equivalent)	118.2 ft	1.775 ft
Aspect Ratio	4	4
Taper Ratio	.547	.547
Chords		
Root	38.2 ft	0.574 ft
Tip	20.9 ft	0.314 ft
MAC	—	—
Fus. Sta. of .25 MAC	—	—
W.P. of .25 MAC	—	—
B.L. of .25 MAC	—	—

TABLE VII. VII

MODEL COMPONENT: VI

GENERAL DESCRIPTION: Booster wing tip vertical fin

(Dimensions given are for each tip)

DRAWING NUMBER: NSRDC A152027-1,4

DIMENSIONS: FULL-SCALE MODEL SCALE

TOTAL DATA

Area		
Planform	1010 ft ²	.226 ft ²
Wetted		
Semi-Span (equivalent)	38.90 ft	.582 ft
Aspect Ratio	1.5	1.5
Rate of Taper		
Taper Ratio	.467	.467
Dihedral Angle, degrees	29°	29°
Incidence Angle, degrees	3°	3°
Aerodynamic Twist, degrees	0	0
Toe-In Angle	0	0
Cant Angle	0	0
Sweep Back Angles, degrees		
Leading Edge	40°	40°
Trailing Edge	19°31'	19°31'
0.25 Element Line		
Chords:		
Root (Wing Sta. 0.0)	35.35 ft	.530 ft
Tip, (equivalent)	16.50 ft	.297 ft
MAC		
Fus. Sta. of .25 MAC		
W.P. of .25 MAC		
B.L. of .25 MAC		
Airfoil Section		
Root	64A010	64A010
Tip	64A009	64A009

EXPOSED DATA

Area		
Span, (equivalent)		
Aspect Ratio		
Taper Ratio		
Chords		
Root		
Tip		
MAC		
Fus. Sta. of .25 MAC		
W.P. of .25 MAC		
B.L. of .25 MAC		

TABLE VIII. 111

MODEL COMPONENT: V2

GENERAL DESCRIPTION: Parasol wing tip extension

(Dimensions are for each tip)

DRAWING NUMBER: NSRDC A 152030-1

DIMENSIONS: FULL-SCALE MODEL SCALE

TOTAL DATA

Area		
Planform	671 ft ²	0.15 ft ²
Wetted		
Span (equivalent)	21.9 ft	.329 ft
Aspect Ratio	0.72	0.72
Rate of Taper		
Taper Ratio	0.70	0.70
Dihedral Angle, degrees	7°40' 15"	7°40' 15"
Incidence Angle, degrees	0° 3'	0° 3'
Aerodynamic Twist, degrees		
Toe-In Angle		
Cant Angle		
Sweep Back Angles, degrees		
Leading Edge	40°	40°
Trailing Edge	19° 31'	19° 31'
0.25 Element Line		
Chords:		
Root (Wing Sta. 0.0)	35.9 ft	.538 ft
Tip, (equivalent)	25.2 ft	.378 ft
MAC		
Fus. Sta. of .25 MAC		
W.P. of .25 MAC		
B.L. of .25 MAC		
Airfoil Section		
Root	64A010	64A010
Tip	64A010	64A010

EXPOSED DATA

Area		
Span, (equivalent)		
Aspect Ratio		
Taper Ratio		
Chords		
Root		
Tip		
MAC		
Fus. Sta. of .25 MAC		
W.P. of .25 MAC		
B.L. of .25 MAC		

TABLE IX.

MODEL COMPONENT: DI

GENERAL DESCRIPTION: Booster Large Dorsal fin

DRAWING NUMBER: NSRDC A152016-1

<u>DIMENSIONS:</u>	<u>FULL-SCALE</u>	<u>MODEL SCALE</u>
Area	<u>1996 ft²</u>	<u>0.149 ft²</u>
Span (equivalent)	<u>55.4 ft</u>	<u>.931 ft</u>
Inb'd equivalent chord	<u>48.8 ft</u>	<u>.731 ft</u>
Outb'd equivalent chord	<u>22.2 ft</u>	<u>.333 ft</u>
Ratio movable surface chord/ total surface chord		
At Inb'd equiv. chord	<u>.30</u>	<u>.30</u>
At Outb'd equiv. chord	<u>.30</u>	<u>.30</u>
Sweep Back Angles, degrees		
Leading Edge	<u>55°</u>	<u>55°</u>
Tailing Edge	<u>43.5°</u>	<u>43.5°</u>
Hingeline	<u>—</u>	<u>—</u>
Area Moment (Normal to hinge line)	<u>—</u>	<u>—</u>

TABLE X.

MODEL COMPONENT: D2

GENERAL DESCRIPTION: Booster small Dorsal Fin

DRAWING NUMBER: _____

<u>DIMENSIONS:</u>	<u>FULL-SCALE</u>	<u>MODEL SCALE</u>
Area	<u>1450 ft.²</u>	<u>.326 ft.²</u>
Span (equivalent)	<u>36.1 ft.</u>	<u>.541 ft.</u>
Inb'd equivalent chord	<u>48.8 ft.</u>	<u>.731 ft.</u>
Outb'd equivalent chord	<u>31.5 ft.</u>	<u>.473 ft.</u>
Ratio movable surface chord/ total surface chord		
At Inb'd equiv. chord	<u>.30</u>	<u>.30</u>
At Outb'd equiv. chord	<u>.30</u>	<u>.30</u>
Sweep Back Angles, degrees		
Leading Edge	<u>55°</u>	<u>65°</u>
Tailing Edge	<u>43.5°</u>	<u>43.5°</u>
Hingeline	<u>—</u>	<u>—</u>
Area Moment (Normal to hinge line)	<u>—</u>	<u>—</u>

TABLE XI.

MODEL COMPONENT: D 3

GENERAL DESCRIPTION: Booster small Dorsal Fin

DRAWING NUMBER: _____

<u>DIMENSIONS:</u>	<u>FULL-SCALE</u>	<u>MODEL SCALE</u>
Area	<u>1360 ft.²</u>	<u>.306 ft.²</u>
Span (equivalent)	<u>33.3 ft.</u>	<u>.500 ft.</u>
Inb'd equivalent chord	<u>48.8 ft.</u>	<u>.731 ft.</u>
Outb'd equivalent chord	<u>32.8 ft.</u>	<u>.442 ft.</u>
Ratio movable surface chord/ total surface chord		
At Inb'd equiv. chord	<u>.30</u>	<u>.30</u>
At Outb'd equiv. chord	<u>.30</u>	<u>.30</u>
Sweep Back Angles, degrees		
Leading Edge	<u>55°</u>	<u>55°</u>
Tailing Edge	<u>43.5°</u>	<u>43.5°</u>
Hingeline	<u>—</u>	<u>—</u>
Area Moment (Normal to hinge line)	<u>—</u>	<u>—</u>

TABLE XII.

MODEL COMPONENT: C1

GENERAL DESCRIPTION: Powder large canard

DRAWING NUMBER: NSRDC A152018-5

DIMENSIONS: FULL-SCALE MODEL SCALE

TOTAL DATA

Area		
Planform	2050 ft ²	0.596 ft ²
Wetted		
Span (equivalent)	78.7 ft	1.18 ft
Aspect Ratio	2.34	2.34
Rate of Taper		
Taper Ratio	.124	.124
Diehedral Angle, degrees	0	0
Incidence Angle, degrees	3° 15'	3° 15'
Aerodynamic Twist, degrees	0	0
Toe-In Angle		
Cant Angle		
Sweep Back Angles, degrees		
Leading Edge	53° 08'	53° 08'
Trailing Edge	0	0
0.25 Element Line		
Chords:		
Root (Wing Sta. 0.0)	59.8 ft	.897 ft
Tip, (equivalent)	7.47 ft	.112 ft
MAC, inches		
Fus. Sta. of .25 MAC		
W.P. of .25 MAC		
Airfoil Section		
Root	64A010	64A010
Tip	64A010	64A010

EXPOSED DATA

Area	1000 ft ²	0.225 ft ²
Span, (equivalent)	44.7 ft	0.67 ft
Aspect Ratio	2	2
Taper Ratio	.2	.2
Chords		
Root	37.3 ft	0.559 ft
Tip	7.47 ft	0.112 ft
MAC		
Fus. Sta. of .25 MAC		
W.P. of .25 MAC		

TABLE XIII.

MODEL COMPONENT: C2

GENERAL DESCRIPTION: Parallel small canard

DRAWING NUMBER: NSRDC A152018-5

DIMENSIONS: FULL-SCALE MODEL SCALE

TOTAL DATA

Area		
Planform	2235 ft ²	0.503 ft ²
Wetted	---	---
Span (equivalent)	72.6 ft	1.09 ft
Aspect Ratio	2.36	2.36
Rate of Taper	---	---
Taper Ratio	.118	.118
Dihedral Angle, degrees	0	0
Incidence Angle, degrees	3° 15'	3° 15'
Aerodynamic Twist, degrees	0	0
Toe-In Angle	---	---
Cant Angle	---	---
Sweep Back Angles, degrees		
Leading Edge	53°	53°
Trailing Edge	0	0
0.25 Element Line	---	---
Chords:		
Root (Wing Sta. 0.0)	55. ft	.825 ft
Tip, (equivalent)	6.47 ft	.097 ft
MAC, inches	---	---
Fus. Sta. of .25 MAC	---	---
W.P. of .25 MAC	---	---
Airfoil Section		
Root	64A010	64A010
Tip	64A010	64A010

EXPOSED DATA

Area	750 ft ²	0.169 ft ²
Span, (equivalent)	38.8 ft	0.531 ft
Aspect Ratio	2	2
Taper Ratio	0.2	0.2
Chords		
Root	32.2 ft	0.434 ft
Tip	6.46 ft	0.097 ft
MAC	---	---
Fus. Sta. of .25 MAC	---	---
W.P. of .25 MAC	---	---

TABLE XIV.

MODEL COMPONENT: C 3

GENERAL DESCRIPTION: C 2 with F1 portion removed.

DRAWING NUMBER: _____

DIMENSIONS:

TOTAL DATA

	<u>FULL-SCALE</u>	<u>MODEL SCALE</u>
Area		
Planform	1787 ft ²	.4023 ft ²
Wetted	—	—
Span (equivalent)	76.2 ft	1.09 ft.
Aspect Ratio	3.25	3.25
Rate of Taper	—	—
Taper Ratio	.118	.118
Dihedral Angle, degrees	0°	0°
Incidence Angle, degrees	3°	3°
Aerodynamic Twist, degrees	0°	0°
Toe-In Angle	—	—
Cant Angle	—	—
Sweep Back Angles, degrees		
Leading Edge	53°	53°
Trailing Edge	14°55'	14°55'
0.25 Element Line	—	—
Chords:		
Root (Wing Sta. 0.0)	44.0 ft.	.66 ft.
Tip, (equivalent)	5.17 ft.	.0776 ft.
MAC, inches	—	—
Fus. Sta. of .25 MAC	—	—
W.P. of .25 MAC	—	—
Airfoil Section		
Root	64A010 with last 20% removed.	
Tip	64A010 with last 20% removed.	

EXPOSED DATA

Area	600 ft ²	.135 ft ²
Span, (equivalent)	38.8 ft	.581 ft.
Aspect Ratio	2.5	2.5
Taper Ratio	.20	.20
Chords		
Root	25.76 ft.	.3814 ft.
Tip	5.17 ft.	.0776 ft.
MAC	—	—
Fus. Sta. of .25 MAC	—	—
W.P. of .25 MAC	—	—

TABLE XV. ✓

MODEL COMPONENT: F1 FOR CANARD C1

GENERAL DESCRIPTION: Rounder canard trailing edge control
(20% chord - exposed area)

DRAWING NUMBER: NSRDC A1520171B

<u>DIMENSIONS:</u>	<u>FULL-SCALE</u>	<u>MODEL SCALE</u>
Area	<u>200 ft²</u>	<u>0.045 ft²</u>
Span (equivalent)	<u>44.7 ft</u>	<u>0.67 ft</u>
Inb'd equivalent chord	<u>7.46 ft</u>	<u>0.112 ft</u>
Outb'd equivalent chord	<u>1.495 ft</u>	<u>0.0224 ft</u>
Ratio movable surface chord/ total surface chord		
At Inb'd equiv. chord	<u>0.2</u>	<u>0.2</u>
At Outb'd equiv. chord	<u>0.2</u>	<u>0.2</u>
Sweep Back Angles, degrees		
Leading Edge	<u>14°56'</u>	<u>14°56'</u>
Trailing Edge	<u>0</u>	<u>0</u>
Hingeline	<u>—</u>	<u>—</u>
Area Moment (Normal to hinge line)	<u>—</u>	<u>—</u>

TABLE XVI. XVI

MODEL COMPONENT: F1 FOIL CANARD C2

GENERAL DESCRIPTION: Booster canard trailing edge flap
(20% chord - exposed area)

DRAWING NUMBER: _____

DIMENSIONS:

	<u>FULL-SCALE</u>	<u>MODEL SCALE</u>
Area	<u>150 ft²</u>	<u>0.0338 ft²</u>
Span (equivalent)	<u>38.8 ft</u>	<u>0.581 ft</u>
Inb'd equivalent chord	<u>6.45 ft</u>	<u>0.0968 ft</u>
Outb'd equivalent chord	<u>1.295 ft</u>	<u>0.0194 ft</u>
Ratio movable surface chord/ total surface chord		
At Inb'd equiv. chord	<u>0.2</u>	<u>0.2</u>
At Outb'd equiv. chord	<u>0.2</u>	<u>0.2</u>
Sweep Back Angles, degrees		
Leading Edge	<u>14°55'</u>	<u>14°55'</u>
Trailing Edge	<u>0</u>	<u>0</u>
Hingeline	<u>—</u>	<u>—</u>
Area Moment (Normal to hinge line)	<u>—</u>	<u>—</u>

MODEL COMPONENT: F2 WITH CANARD C1

GENERAL DESCRIPTION: Booster canard trailing edge control
(40% chord)

DRAWING NUMBER: NSRDC A152017, 18

<u>DIMENSIONS:</u>	<u>FULL-SCALE</u>	<u>MODEL SCALE</u>
Area	<u>400 ft²</u>	<u>.09 ft²</u>
Span (equivalent)	<u>44.7 ft</u>	<u>0.67 ft</u>
Inb'd equivalent chord	<u>14.92 ft</u>	<u>0.229 ft</u>
Outb'd equivalent chord	<u>2.99 ft</u>	<u>0.0449 ft</u>
Ratio movable surface chord/ total surface chord		
At Inb'd equiv. chord	<u>0.4</u>	<u>0.4</u>
At Outb'd equiv. chord	<u>0.4</u>	<u>0.4</u>
Sweep Back Angles, degrees		
Leading Edge	<u>28°09'</u>	<u>28°09'</u>
Tailing Edge	<u>0</u>	<u>0</u>
Hingeline	<u>—</u>	<u>—</u>
Area Moment (Normal to hinge line)	<u>—</u>	<u>—</u>

TABLE XVIII.

XVIII

MODEL COMPONENT: F2 WITH CANARD C2

GENERAL DESCRIPTION: _____

DRAWING NUMBER: _____

<u>DIMENSIONS:</u>	<u>FULL-SCALE</u>	<u>MODEL SCALE</u>
Area	<u>300 ft²</u>	<u>0.0676 ft²</u>
Span (equivalent)	<u>38.0 ft</u>	<u>0.581 ft</u>
Inb'd equivalent chord	<u>12.9 ft</u>	<u>0.1936 ft</u>
Outb'd equivalent chord	<u>2.59 ft</u>	<u>0.0388 ft</u>
Ratio movable surface chord/ total surface chord		
At Inb'd equiv. chord	<u>0.4</u>	<u>0.4</u>
At Outb'd equiv. chord	<u>0.4</u>	<u>0.4</u>
Sweep Back Angles, degrees		
Leading Edge	<u>28°</u>	<u>28°</u>
Trailing Edge	<u>0</u>	<u>0</u>
Hingeline	<u>—</u>	<u>—</u>
Area Moment (Normal to hinge line)	<u>—</u>	<u>—</u>

MODEL COMPONENT: F 3

GENERAL DESCRIPTION: Canard Flap. Consists of F2 for C2 with F1 portion removed.

DRAWING NUMBER: _____

DIMENSIONS:

	<u>FULL-SCALE</u>	<u>MODEL SCALE</u>
Area	<u>150 ft.²</u>	<u>0.0338 ft.²</u>
Span (equivalent)	<u>38.8 ft.</u>	<u>0.581 ft.</u>
Inb'd equivalent chord	<u>6.45 ft.</u>	<u>0.0968 ft.</u>
Outb'd equivalent chord	<u>2.54 ft.</u>	<u>0.0194 ft.</u>
Ratio movable surface chord/ total surface chord		
At Inb'd equiv. chord	<u>0.333</u>	<u>0.333</u>
At Outb'd equiv. chord	<u>0.333</u>	<u>0.333</u>
Sweep Back Angles, degrees		
Leading Edge	<u>28°</u>	<u>28°</u>
Trailing Edge	<u>14° 55'</u>	<u>14° 55'</u>
Hingeline	<u>—</u>	<u>—</u>
Area Moment (Normal to hinge line)	<u>—</u>	<u>—</u>

NOMENCLATURE

(General)

<u>SYMBOL</u>	<u>SADSAC SYMBOL</u>	<u>DEFINITION</u>
α	ALPHA	angle of attack, angle between the projection of the wind X_w -axis on the body X, Z-plane and the body X-axis; degrees
β	BETA	sideslip angle, angle between the wind X_w -axis and the projection of this axis on the body X-Z-plane; degrees
ψ	PSI	yaw angle, angle of rotation about the body Z-axis, positive when the positive X-axis is rotated toward the positive Y-axis; degrees
ϕ	PHI	roll angle, angle of rotation about the body X-axis, positive when the positive Y-axis is rotated toward the positive Z-axis; degrees
ρ		air density; K_g/m^3 , slugs/ft ³
a		speed of sound; m/sec, ft/sec
V		speed of vehicle relative to surrounding atmosphere; m/sec, ft/sec
q	Q(P _{SI}) Q(P _{SF})	dynamic pressure; $1/2\rho V^2$, psi, psf
M	MACH	Mach number; V/a
RN/L	RN/L	Reynolds number per unit length; million/ft
p		static pressure; psi
P		total pressure; psi
C_p	CP	pressure coefficient; $(p-p_\infty)/q$

NOMENCLATURE (Continued)

Reference & C. G. Definitions

<u>SYMBOL</u>	<u>SADSAC SYMBOL</u>	<u>DEFINITION</u>
S		wing area; m^2 , ft^2
S_{ref}	SREF	reference area; m^2 , ft^2
\bar{c}		wing mean aerodynamic chord or reference chord; m, ft, in (see l_{ref} or LREF)
l_{ref}	LREF	reference length; m, ft, in.; (see \bar{c})
b_{ref}	BREF	wing span or reference span; m, ft, in
A_b		base area; m^2 , ft^2 , in^2
c. g.		center of gravity
MRP	MRP	abbreviation for moment reference point
	XMRP	abbreviation for moment reference point on X-axis
	YMRP	abbreviation for moment reference point on Y-axis
	ZMRP	abbreviation for moment reference point on Z-axis

NOMENCLATURE (Continued)

Axis System General

SYMBOL

DEFINITION

F

force; F, lbs

M

moment; M, in-lb

Subscript

Definition

N

normal force

A

axial force

L

lift force

D

drag force

Y

force or moment about the Y axis

Z

moment about the Z axis

X

moment about the X axis

s

stability axis system

w

wind axis system

ref

reference conditions

∞

free stream conditions

t

total conditions

b

base

NOMENCLATURE (Continued)

Body Axis System

<u>SYMBOL</u>	<u>SADSAC SYMBOL</u>	<u>DEFINITION</u>
C_N	CN	normal force coefficient; F_N/qS
C_A	CA	axial force coefficient; F_A/qS
C_{Af}	CAF	forebody axial force coefficient; $C_A - C_{Ab}$
C_m	CLM	pitching moment coefficient; $M_y/qS l_{ref}$
C_y	CY	side force coefficient; F_y/qS
C_n	CYN	yawing moment coefficient; $M_z/qS b_{ref}$
C_l	CEL	rolling moment coefficient, $M_x/qS b_{ref}$

NOMENCLATURE (Continued)

Stability Axis System

<u>SYMBOL</u>	<u>SADSAC SYMBOL</u>	<u>DEFINITION</u>
C_L	CL	lift force coefficient; F_L/qS
C_D	CD	drag force coefficient; F_D/qS
C_{D_b}	CDB	base drag coefficient
C_{D_f}	CDF	forebody drag coefficient; $C_D - C_{D_b}$
C_m	CLM	pitching moment coefficient; $M_{Y,s}/qS l_{ref}$
C_y	CY	side force coefficient; F_Y/qS
C_n	CLN	yawing moment coefficient; $M_{Z,s}/qS b_{ref}$
C_l	CSL	rolling moment coefficient; $M_{X,s}/qS b_{ref}$
L/D	L/D	lift-to-drag ratio; C_L/C_D
L/D_f	L/DF	lift to forebody drag ratio; C_L/C_{D_f}

NOMENCLATURE (Continued)

Surface Definitions

<u>SYMBOL</u>	<u>SADSAC SYMBOL</u>	<u>DEFINITION</u>
i_t	HORIZT	horizontal tail incidence; positive when trailing edge down; degrees
δ		symmetrical surface deflection angle; degrees; positive deflections are:
	AILRON	aileron - total aileron deflection; (left aileron - right aileron)/2
	CANARD	canard - trailing edge down
	ELEVON	elevon - trailing edge down
	ELEVTR	elevator - trailing edge down
	FLAP	flap - trailing edge down
	RUDDER	rudder - trailing edge to the left
	SPOILR	spoiler - trailing edge down
	TAB	tab - trailing edge down with respect to control surface
δ		antisymmetrical surface deflection angle, degrees; positive trailing edge down:
	AIL-L	left aileron - trailing edge down
	AIL-R	right aileron - trailing edge down
	ELVN-L	left elevon - trailing edge down
	ELVN-R	right elevon - trailing edge down
	SPLR-L	left spoiler - trailing edge down
	SPLR-R	right spoiler - trailing edge down

<u>SURFACE SUBSCRIPTS</u>	<u>DEFINITION</u>
a	aileron
b	base
c	canard
e	elevator or elevon
f	flap
r	rudder or ruddervator
s	spoiler
t	tail

ADDITIONS TO NOMENCLATURE

<u>SYMBOL</u>	<u>SADSAC SYMBOL</u>	<u>DEFINITION</u>
CNDPOS	CNDPOS	canard vertical position (1=high, 2=low)
WNGPOS	WNGPOS	wing vertical position (1=high, 2=low)
i_w	INCIDW	wing incidence angle, positive when trailing edge down; deg.
Γ_w	DIHDRL	wing dihedral angle; deg.
i_c	INCIDC	canard incidence angle, positive when trailing edge down; deg.
ΔC_L	DCL	incremental lift coefficient, algebraic difference of two runs.
ΔC_D	DCD	incremental drag coefficient, algebraic difference of two runs.
ΔC_M	DCIM	incremental pitching moment coefficient, algebraic difference of two runs.
$\Delta L/D$	DL/D	incremental lift drag ratio, algebraic difference of two runs.
ΔC_y	DCY	incremental side force coefficient, algebraic difference of two runs.
ΔC_n	DCYN	incremental yawing moment coefficient, algebraic difference of two runs. Body axis system.
ΔC_l	DCBL	incremental rolling moment coefficient, algebraic difference of two runs. Body axis system.

TABULATED DATA LISTING

A tabulated data listing, consisting of all aero data sets, both original and those created in arriving at the plotted material to be presented subsequently, is available as an addendum to this report. The tabular listing is made up in two sections:

- (a) a brief summary list of all data sets containing the identifier, the descriptor, and the resident dependent variables.
- (b) a full list of all data sets containing all resident or selected aerodynamic coefficients of the data sets as well as the above mentioned information.

The listing is currently sent on limited distribution to the following organizations:

NASA AMES	Mr. V. Stevens
NSRDC	Mr. D. Chadock

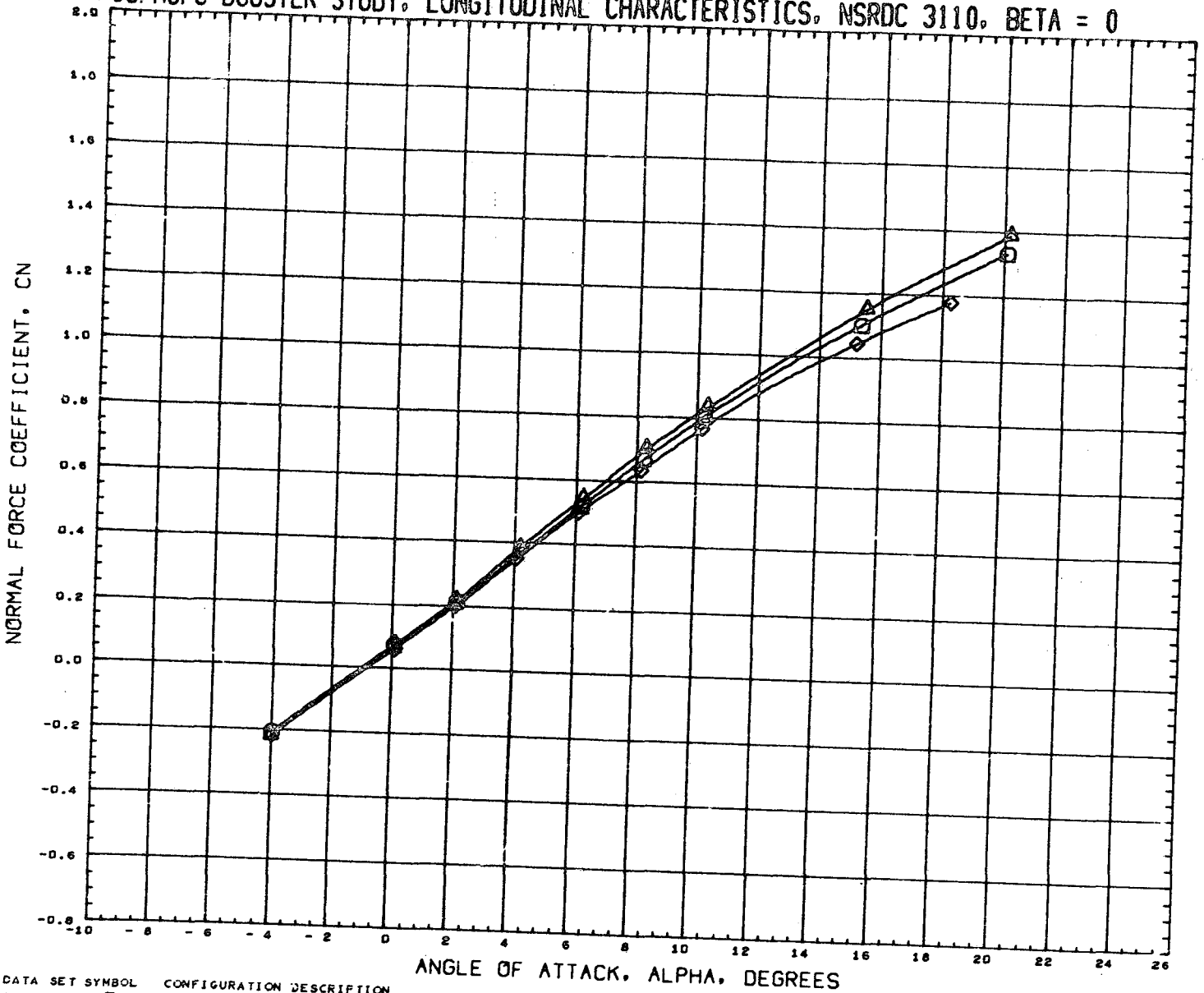
If copies of this listing are desired, please contact the above or the cognizant SADSAC personnel who, for this data, is:

W. R. Morgan
Department 2780
Chrysler Corporation Space Division
New Orleans, La. 70129

(504) 255-2304

PLOTTED DATA

LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



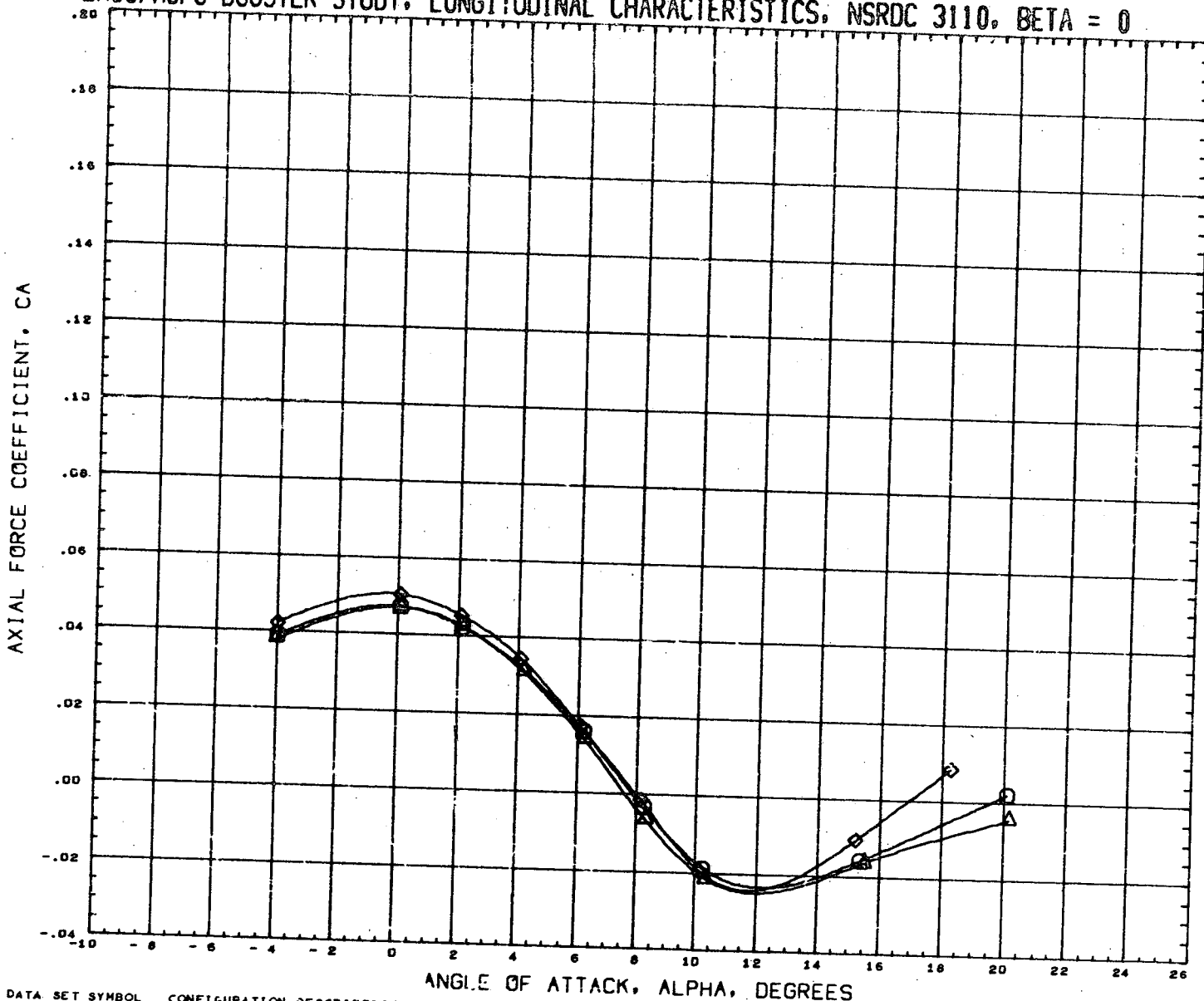
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MACH 0.381

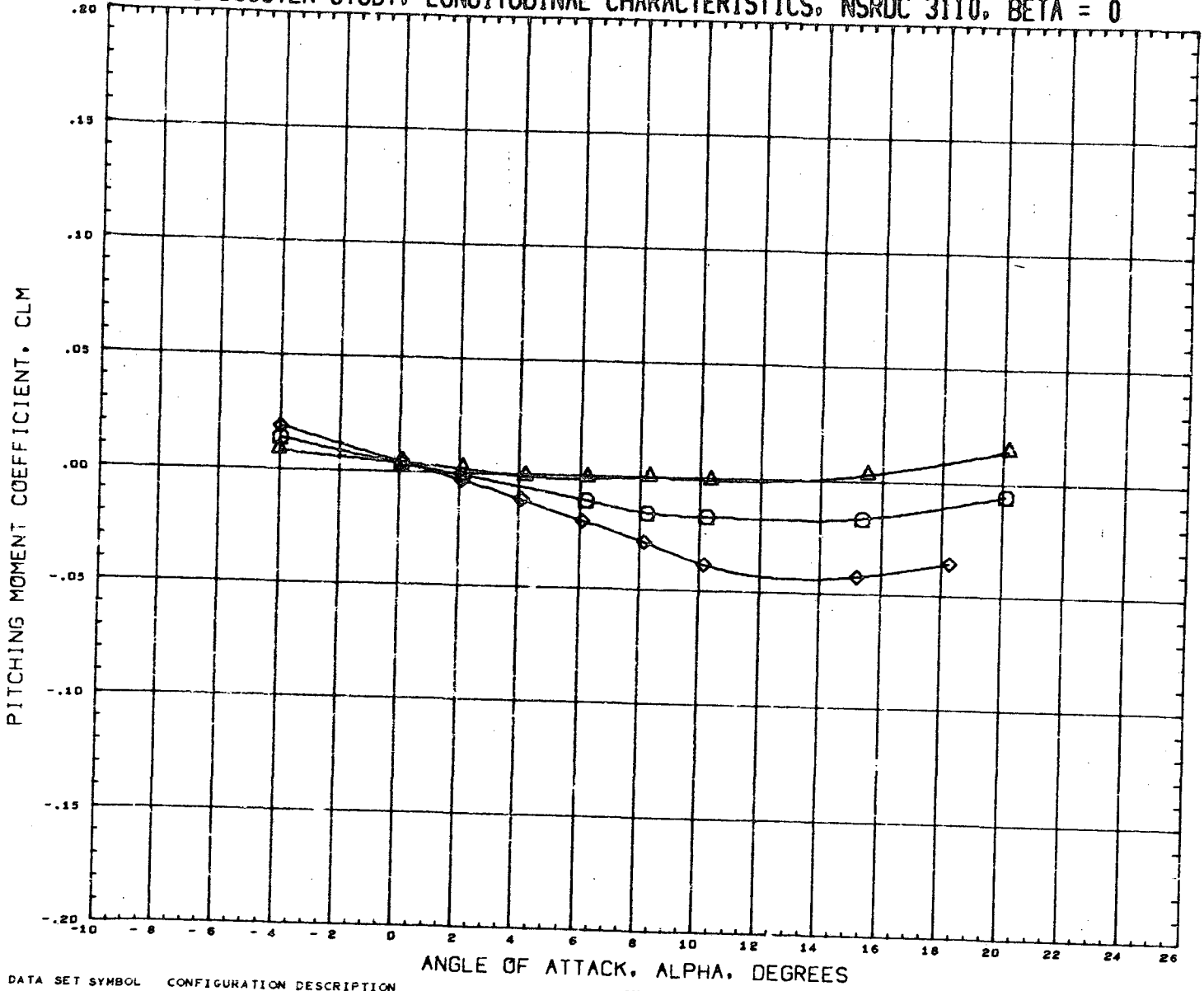
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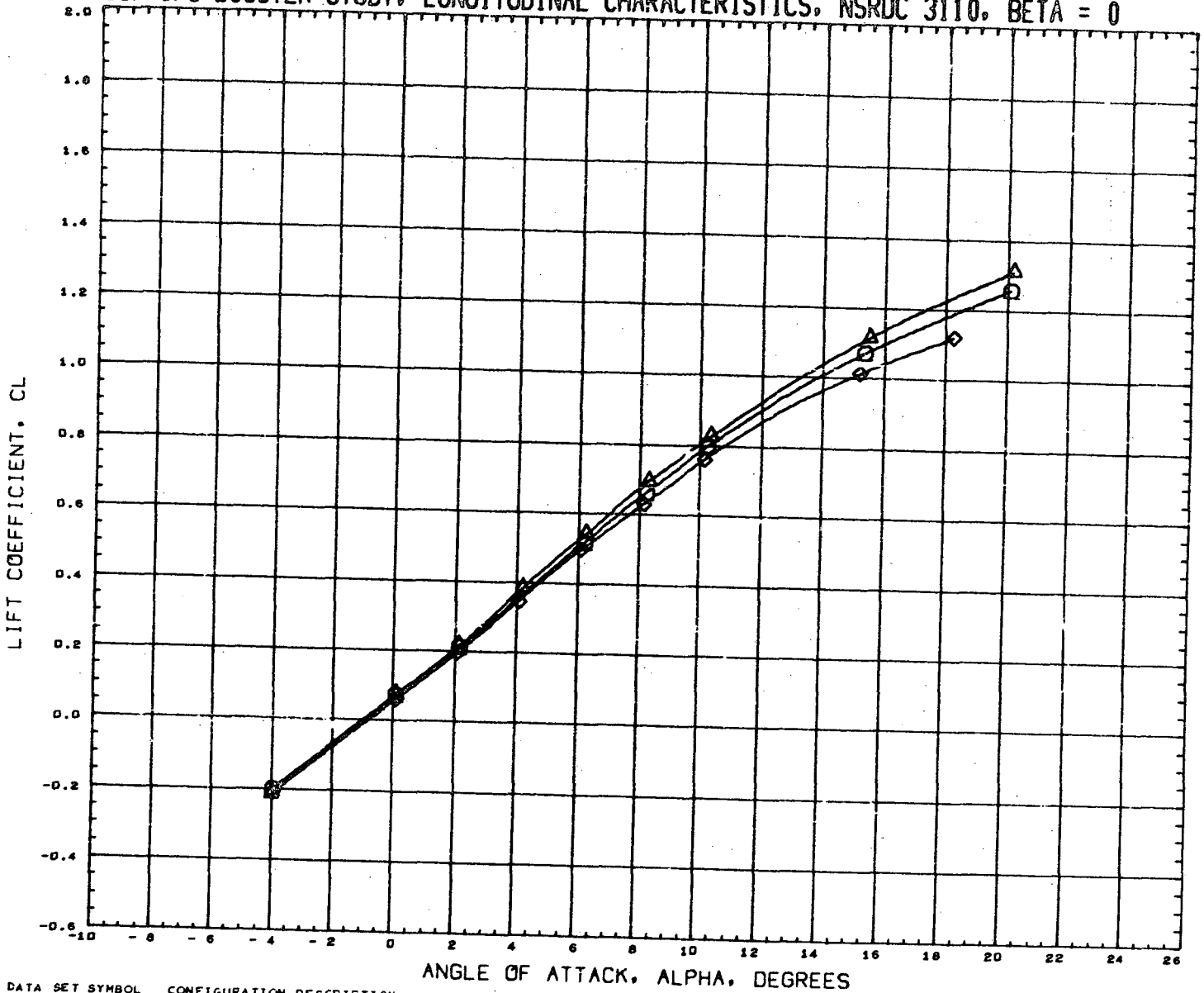
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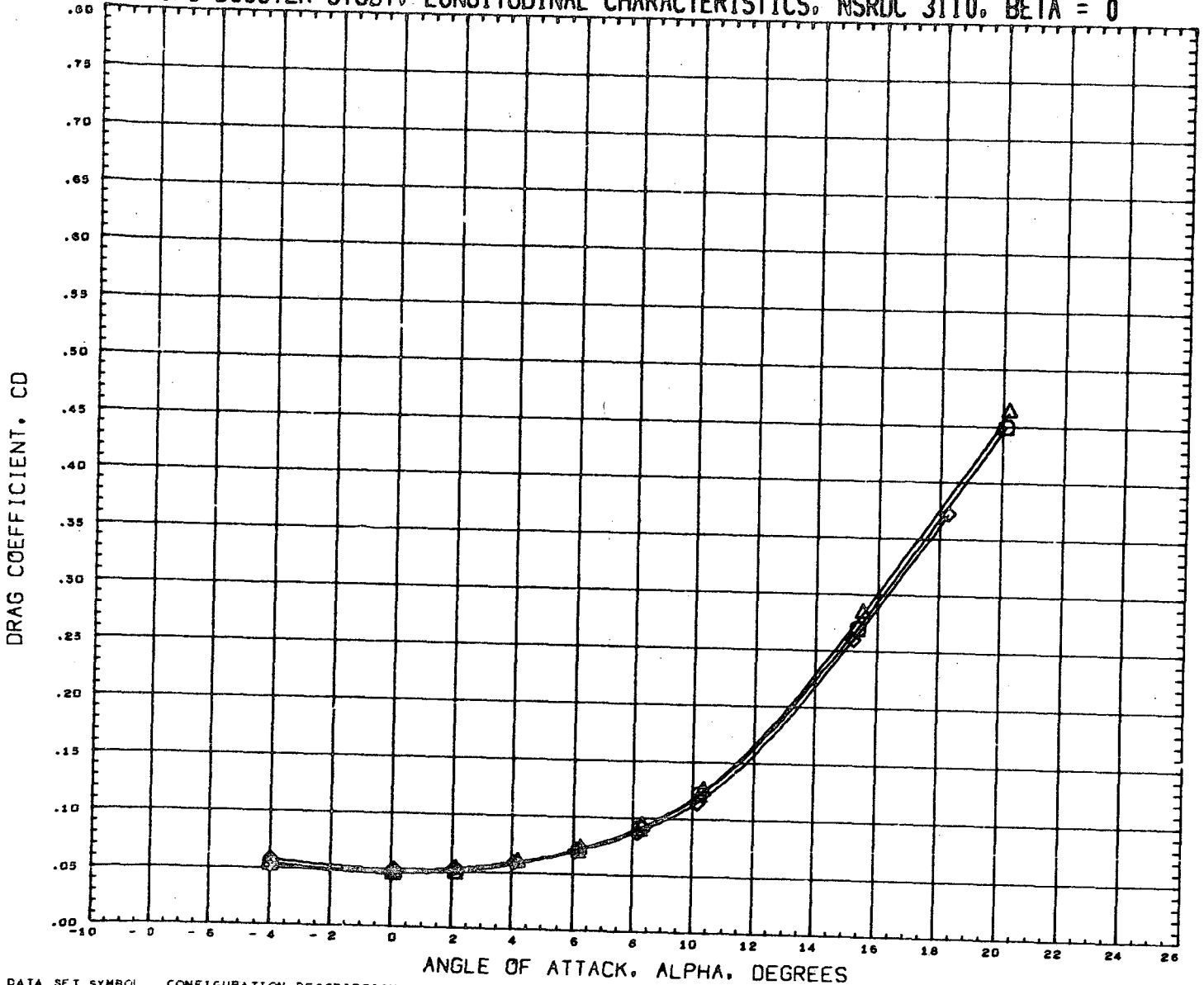
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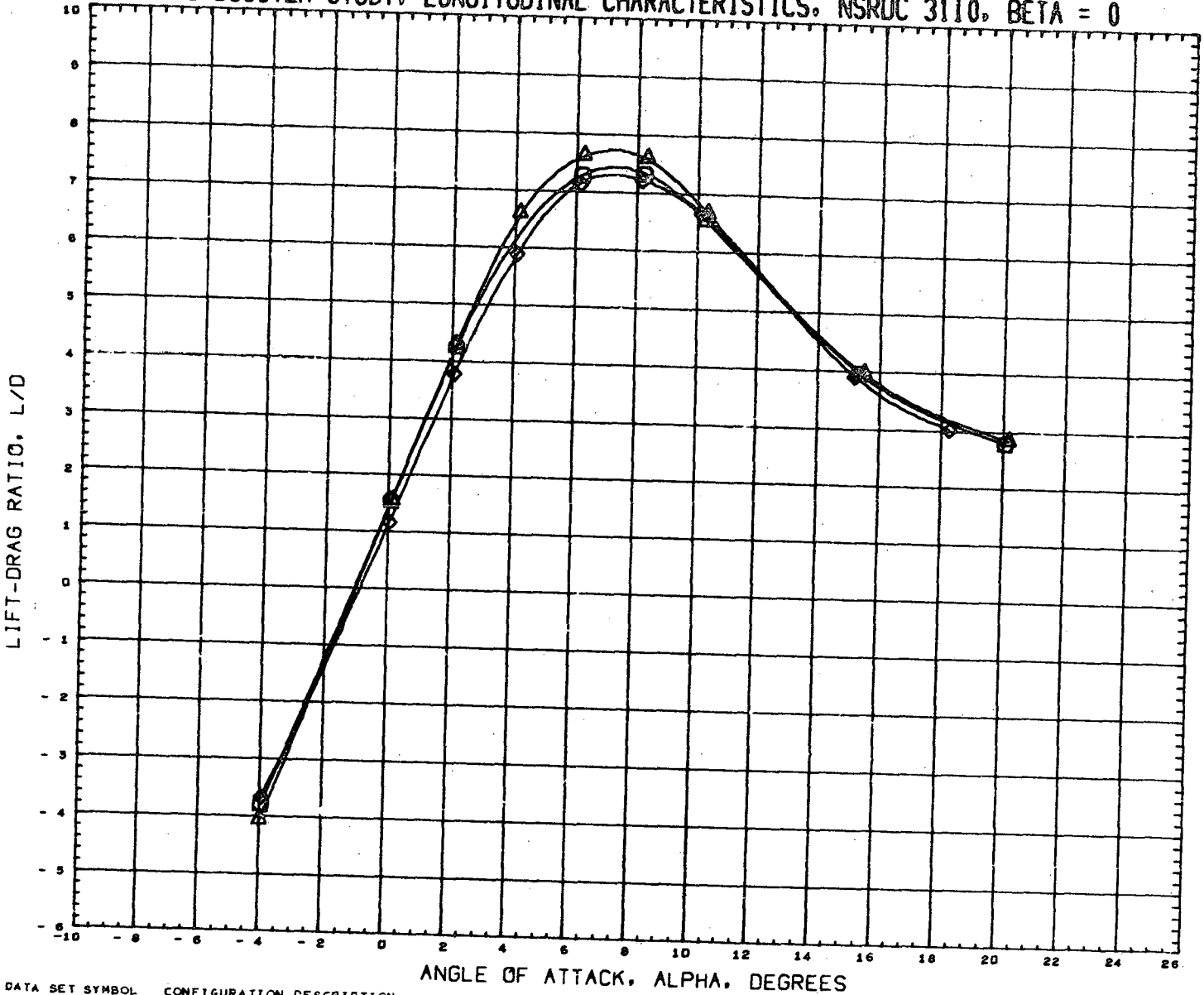
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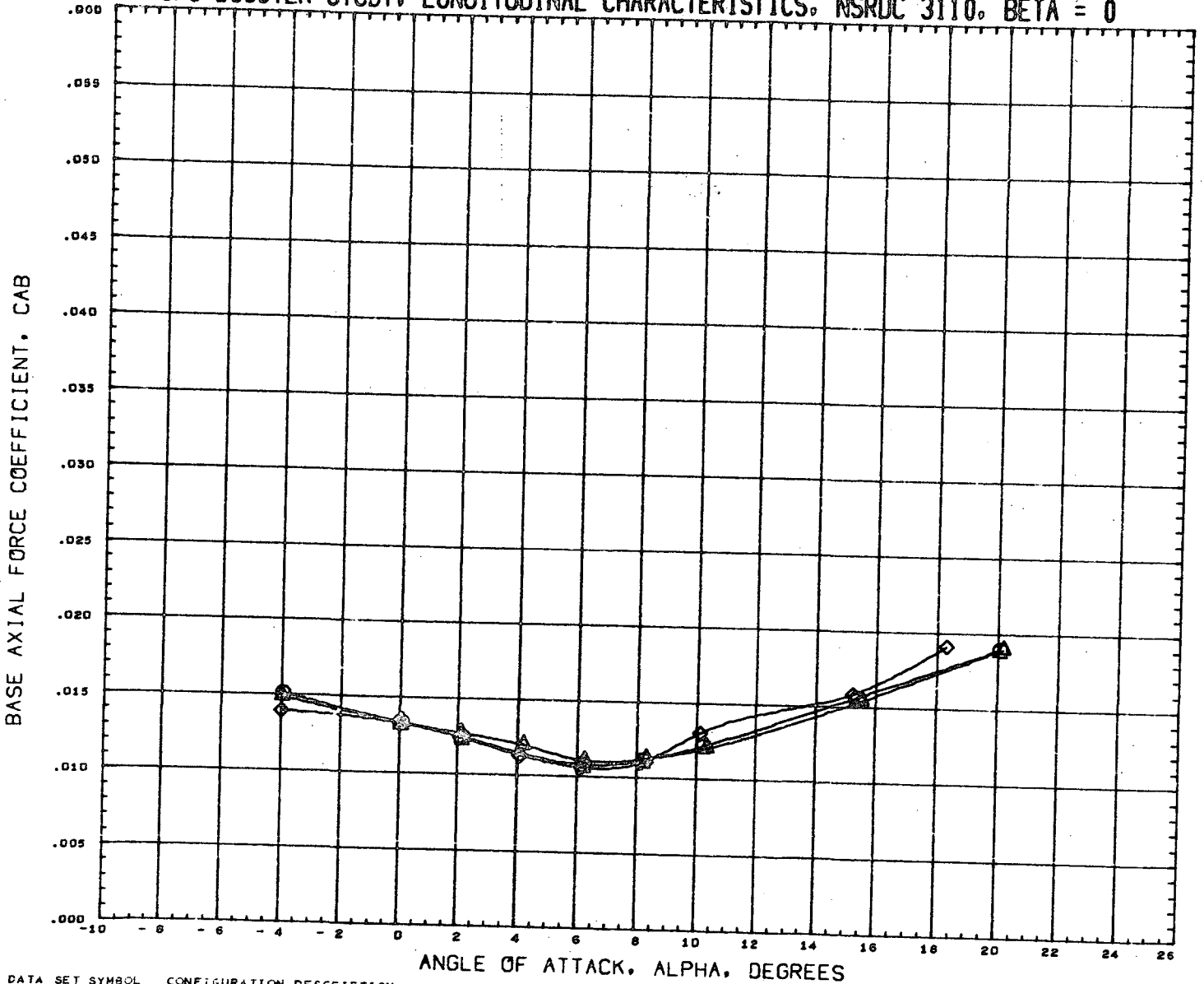
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MACH 0.381

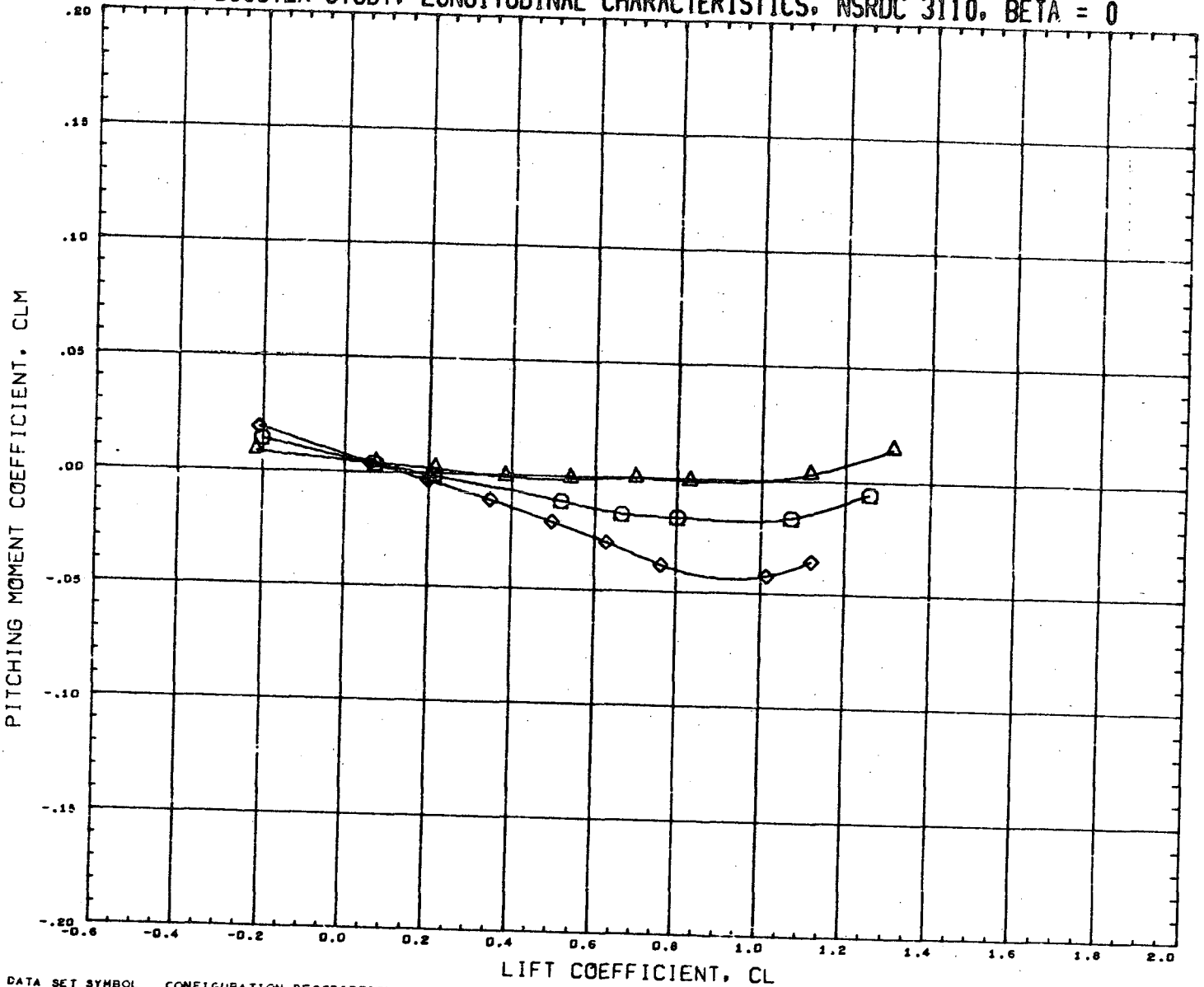
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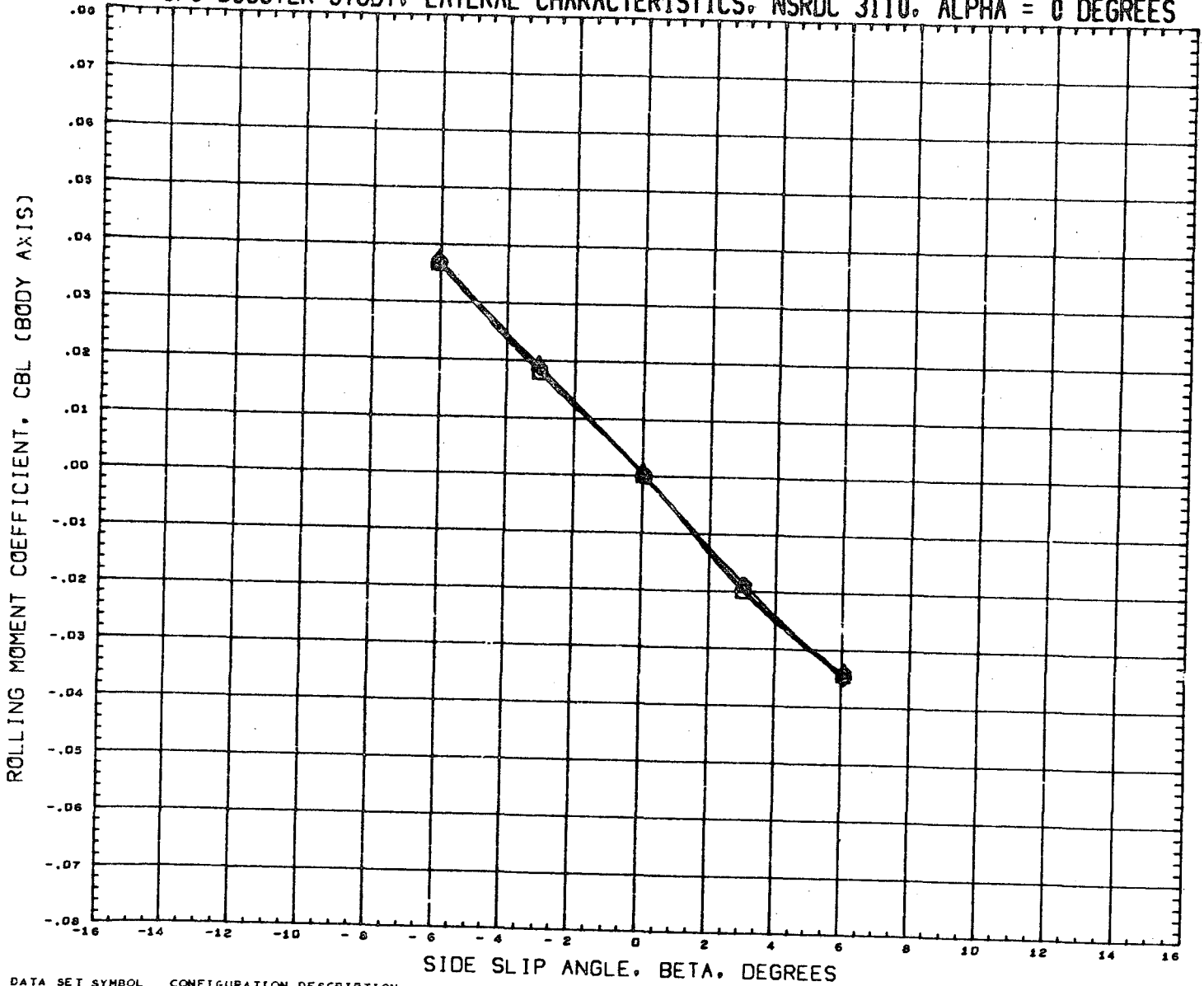
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MACH 0.381

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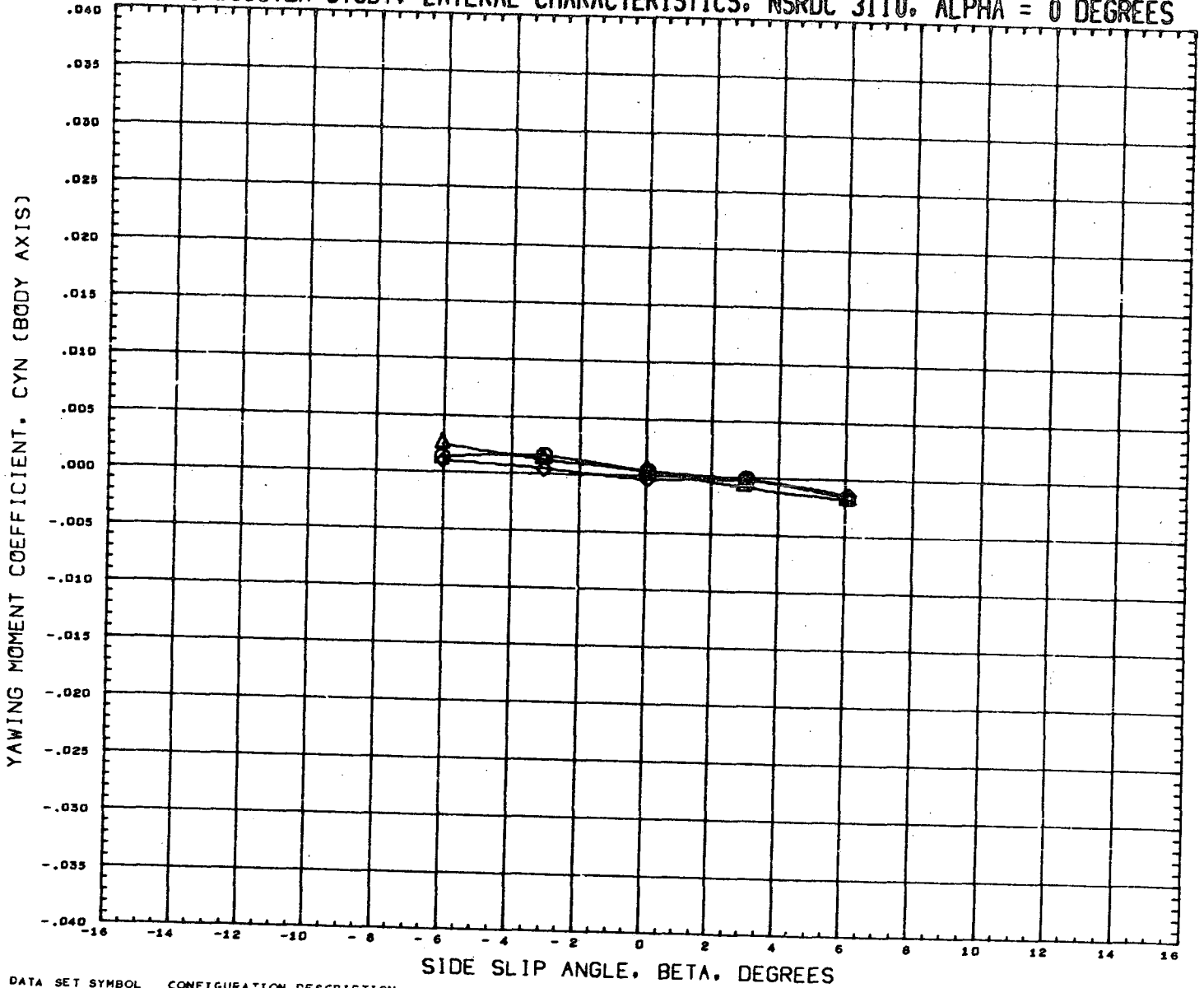
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MACH 0.381

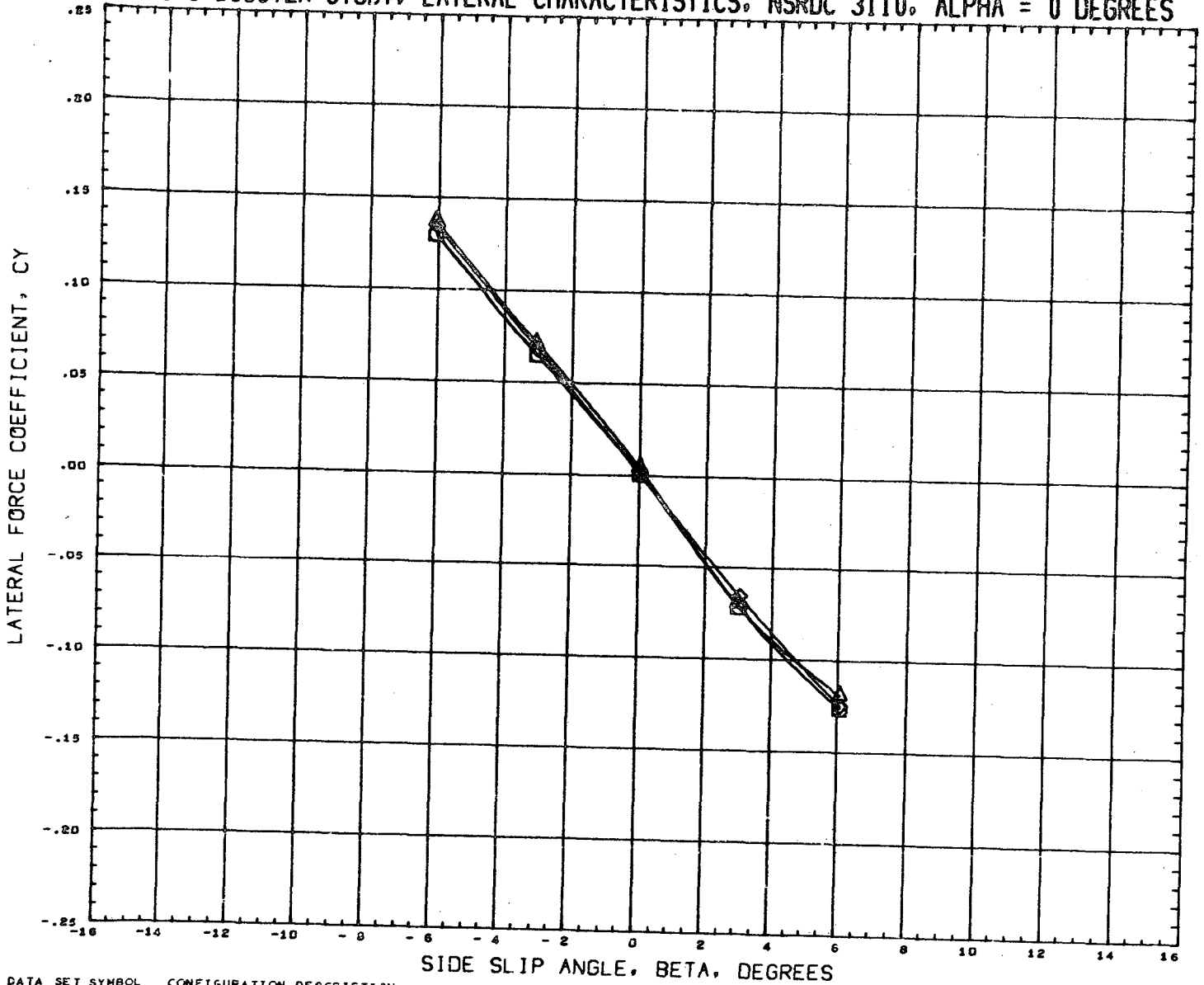
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MACH 0.381

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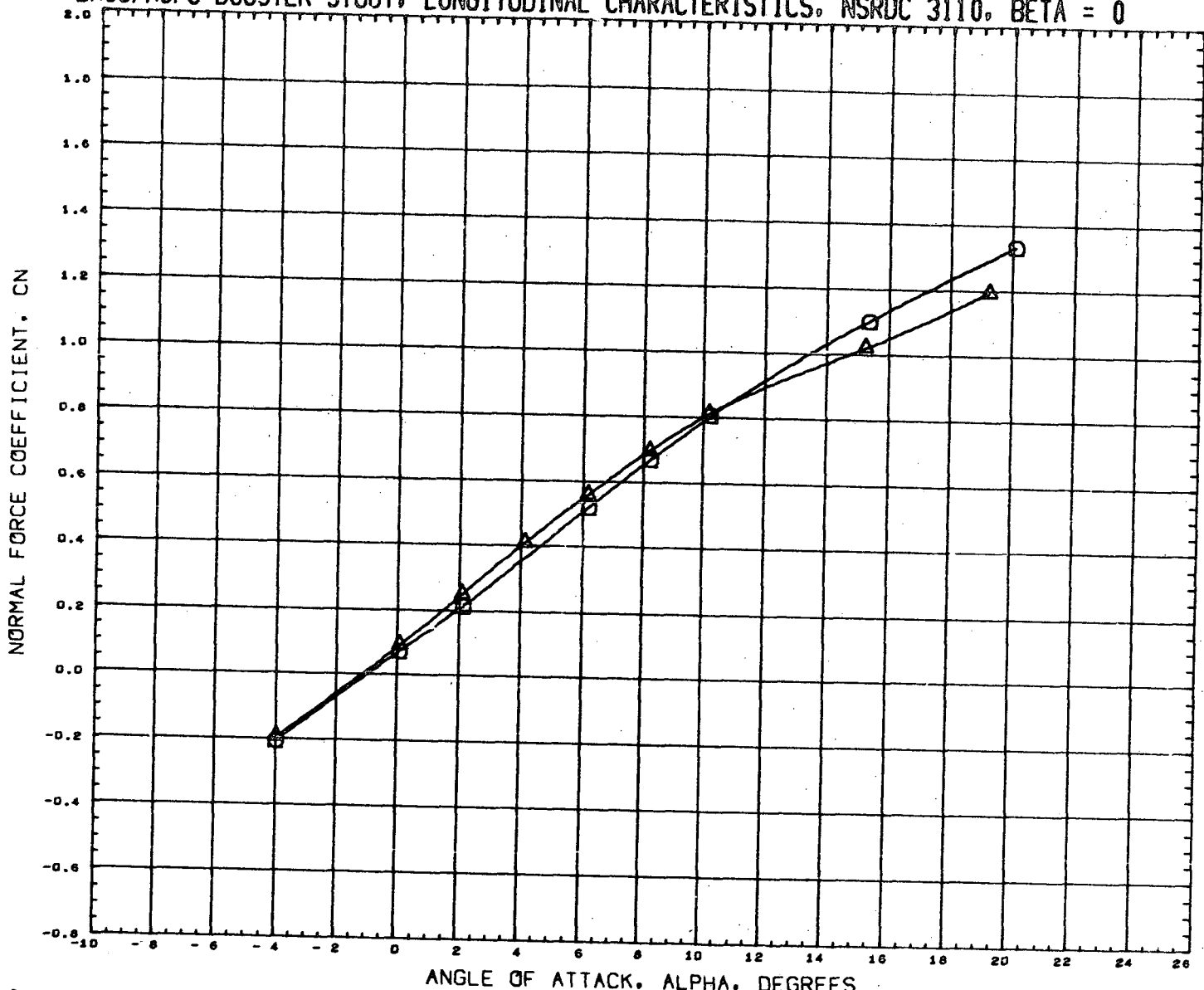
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ZMRP	0.2250	INCHES
SCALE	1.5000	PERCNT

MACH 0.381

LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL
(RN2001)
(RN2009)



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NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1

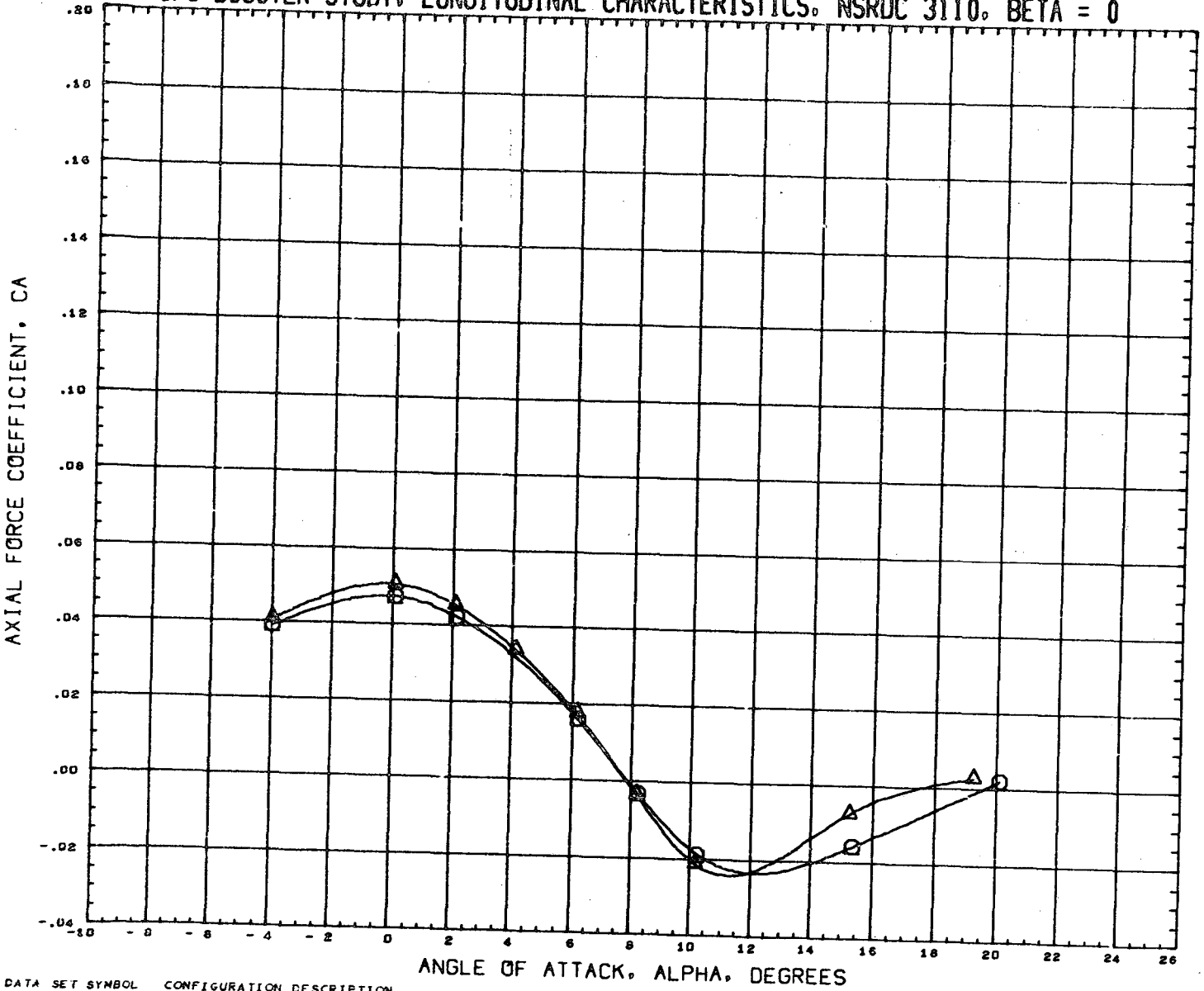
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YMRP	0.0000	INCHES
ZMRP	0.2250	INCHES
SCALE	1.5000	PERCENT

MACH 0.381

LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL
(RN2001) \circ
(RN2009) \triangle

CONFIGURATION DESCRIPTION
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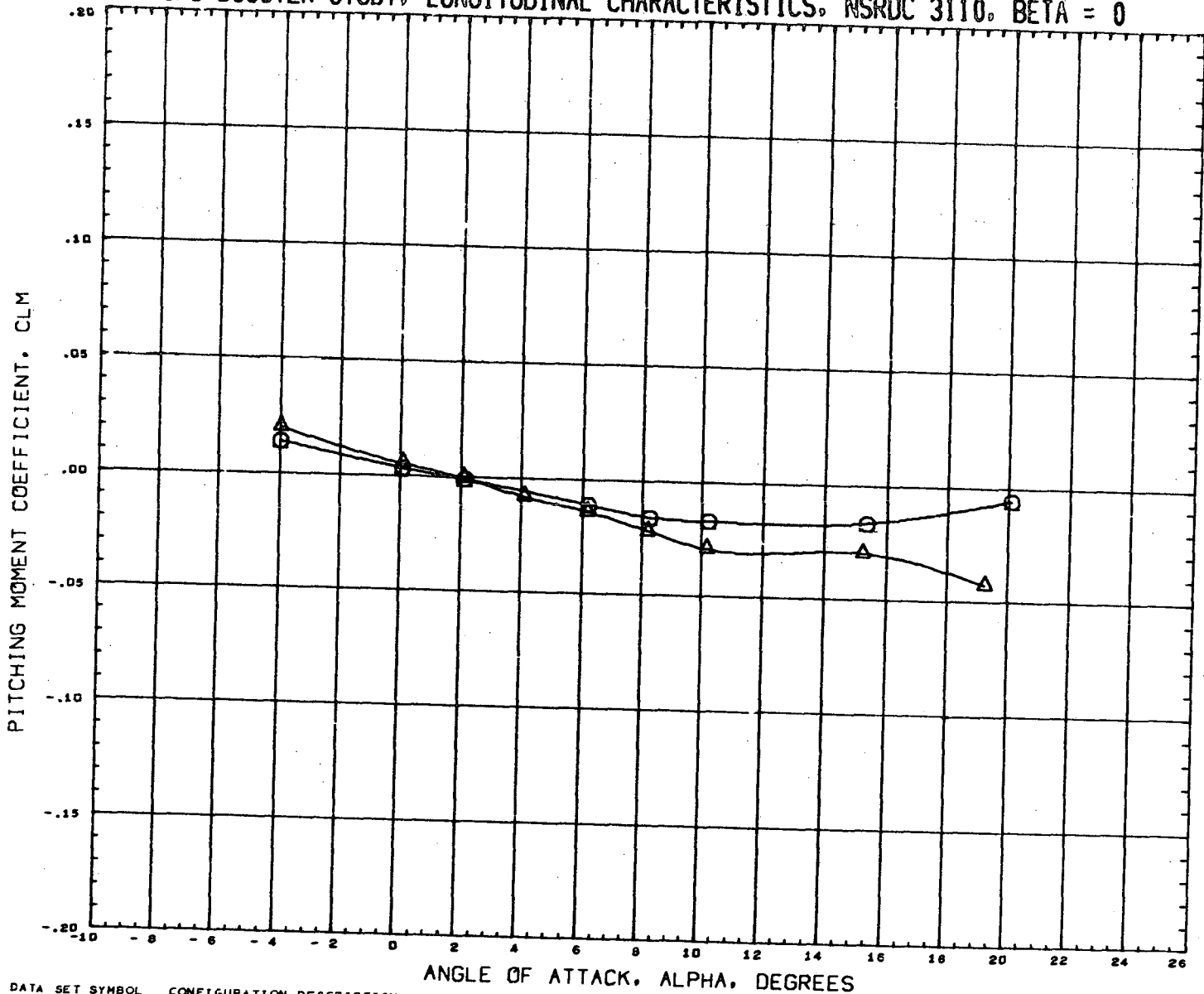
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REFERENCE INFORMATION

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BREF	41.4360	INCHES
XMRP	31.1400	INCHES
YMRP	0.0000	INCHES
ZMRP	0.2250	INCHES
SCALE	1.5000	PERCENT

MACH 0.381

LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL
(RN20J1) \circ
(RN20G9) \triangle

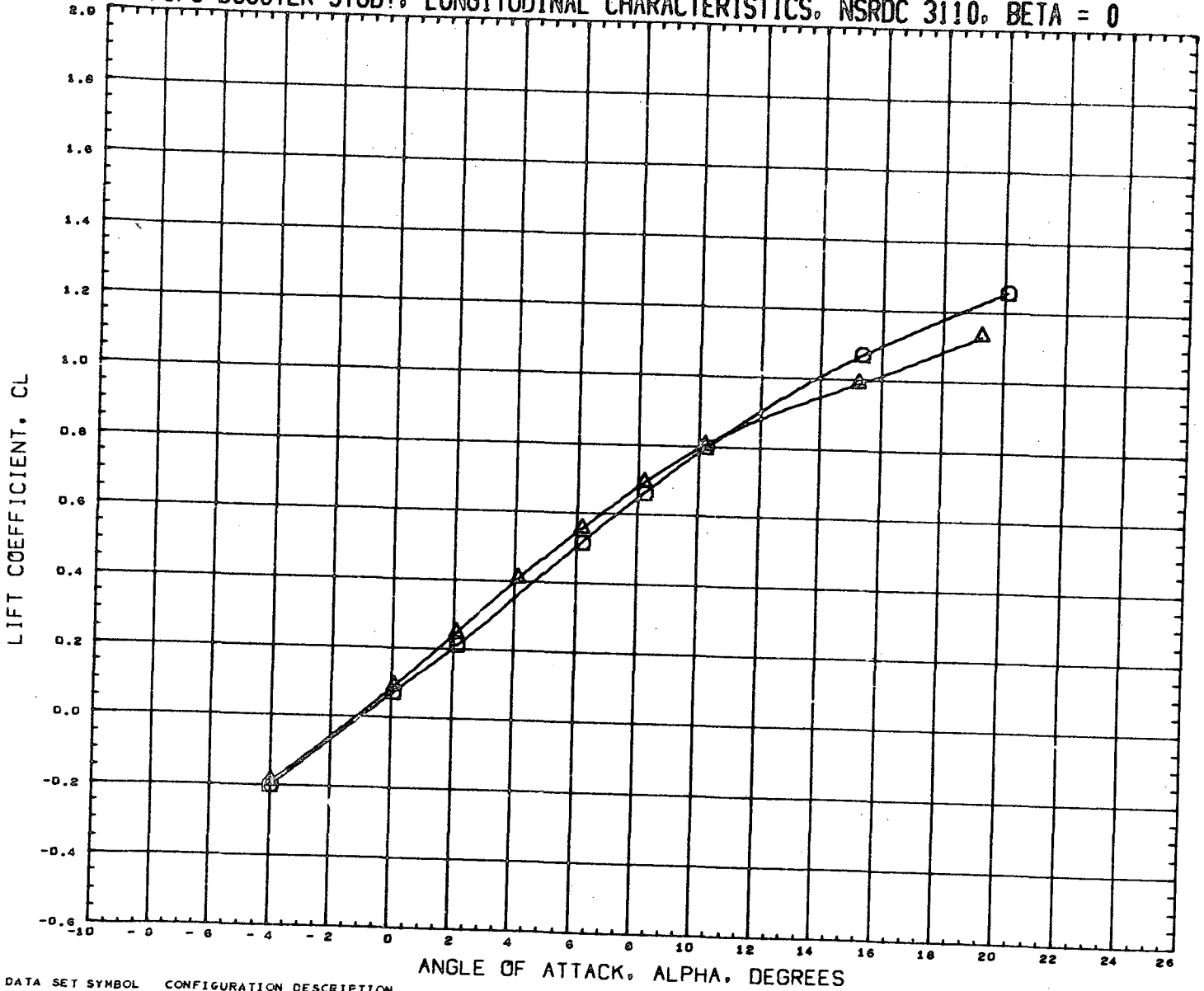
CONFIGURATION DESCRIPTION
NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1
NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1

INCIDC	CNDPOS	INCIDW	WNGPOS
3.000	1.000	0.000	1.000
3.000	2.000	0.000	1.000

REFERENCE INFORMATION
SREF 1.3550 SQ. FT.
LREF 41.4360 INCHES
BREF 41.4360 INCHES
XMRP 31.1400 INCHES
YMRP 0.0000 INCHES
ZMRP 0.2250 INCHES
SCALE 1.5000 PERCENT

MACH 0.381

LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



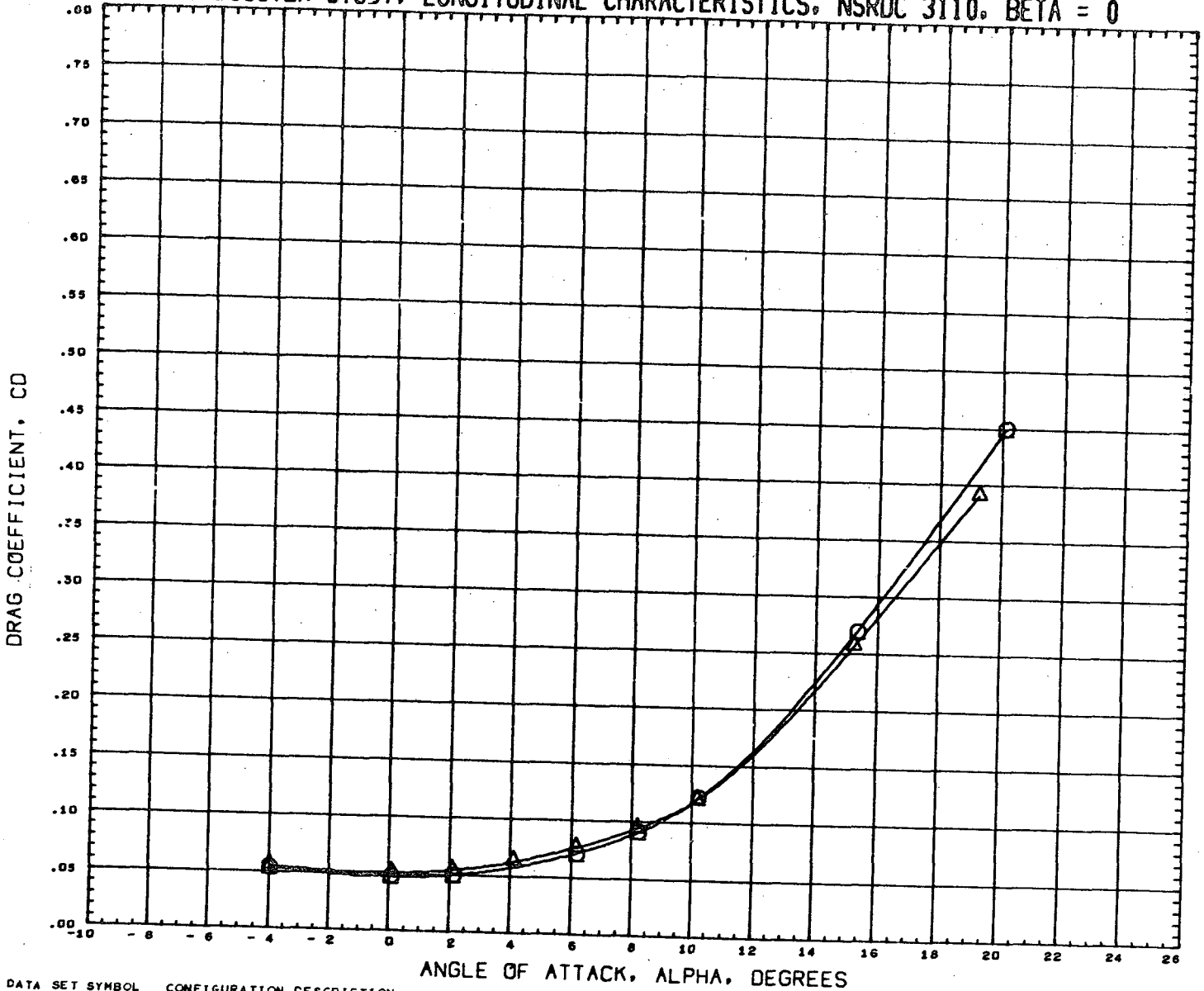
DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(RN2001)	NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1
(RN2009)	NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1



INCIDC	CNDPOS	INCIDW	WNGPOS
3.000	1.000	0.000	1.000
3.000	2.000	0.000	1.000

REFERENCE INFORMATION	
SREF	1.3550 SQ. FT.
LREF	41.4360 INCHES
BREF	41.4360 INCHES
XMRP	31.1400 INCHES
YMRP	0.0000 INCHES
ZMRP	0.2250 INCHES
SCALE	1.5000 PERCENT

MACH 0.381

LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



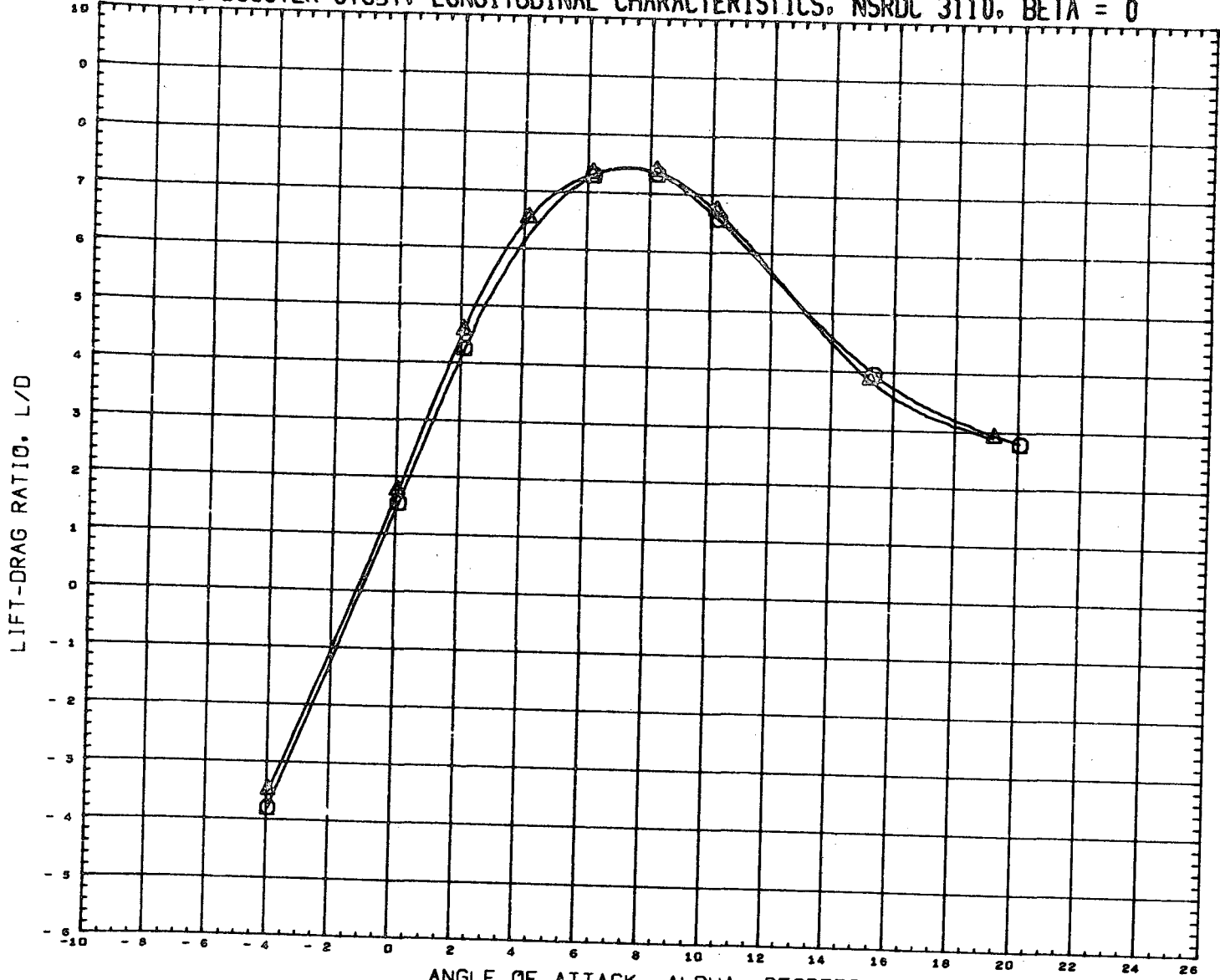
DATA SET SYMBOL (RN2001) (RN2009)   CONFIGURATION DESCRIPTION NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1 NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1

INCIDC	CNDPOS	INCIDW	WNGFOS
3.000	1.000	0.000	1.000
3.000	2.000	0.000	1.000

REFERENCE INFORMATION		
SREF	1.3550	SQ.FT.
LREF	41.4360	INCHES
BREF	41.4360	INCHES
XMRF	31.1400	INCHES
YMRF	0.0000	INCHES
ZMRF	0.2250	INCHES
SCALE	1.5000	PERCNT

MACH 0.381

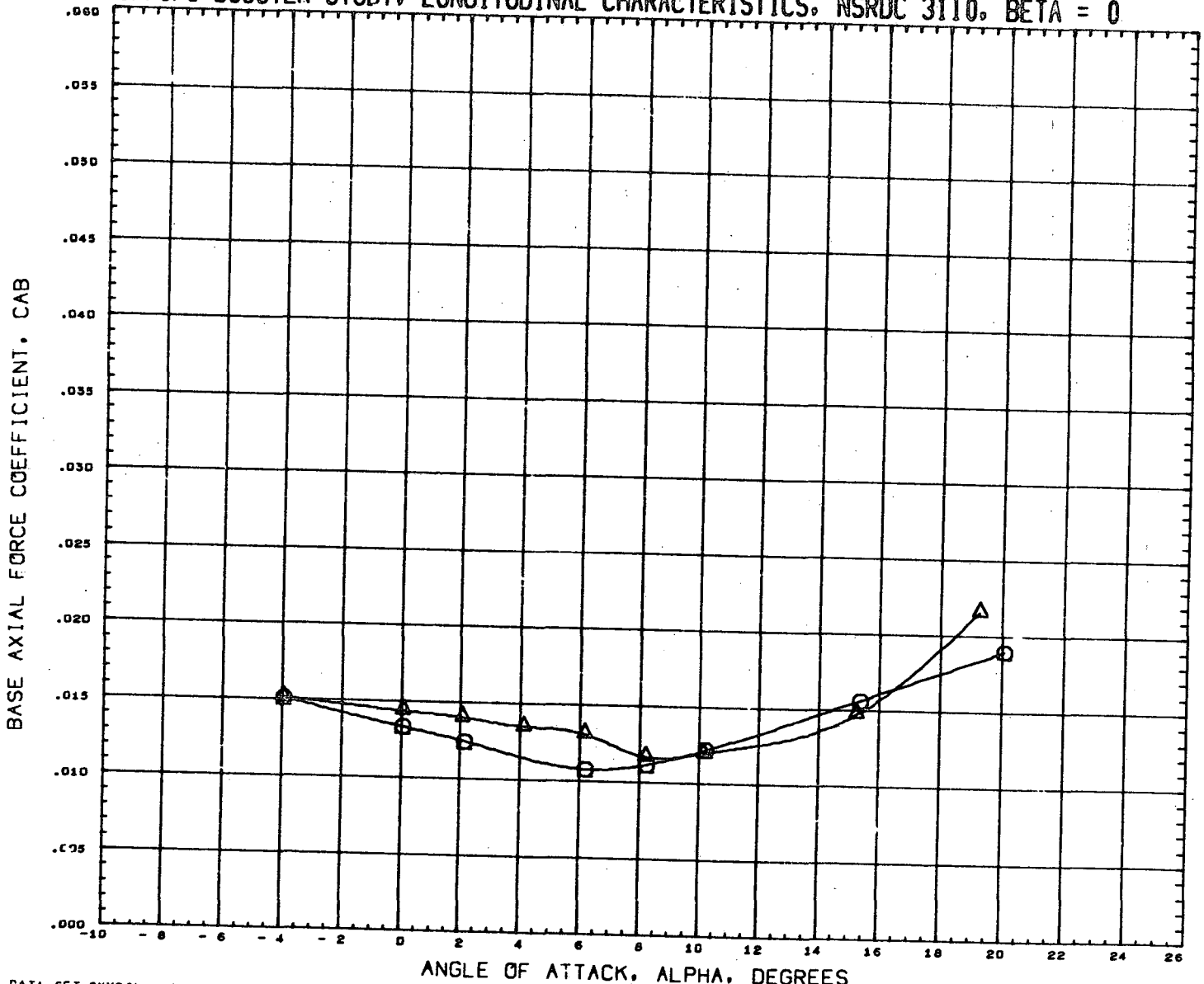
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2001)	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1	3.000	1.000	0.000	1.000	SREF 1.3550 SQ.FT.
(RN2009)	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1	3.000	2.000	0.000	1.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCENT

MACH 0.381

LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL
(RN2001) \circ
(RN2009) \triangle

CONFIGURATION DESCRIPTION
NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1
NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1

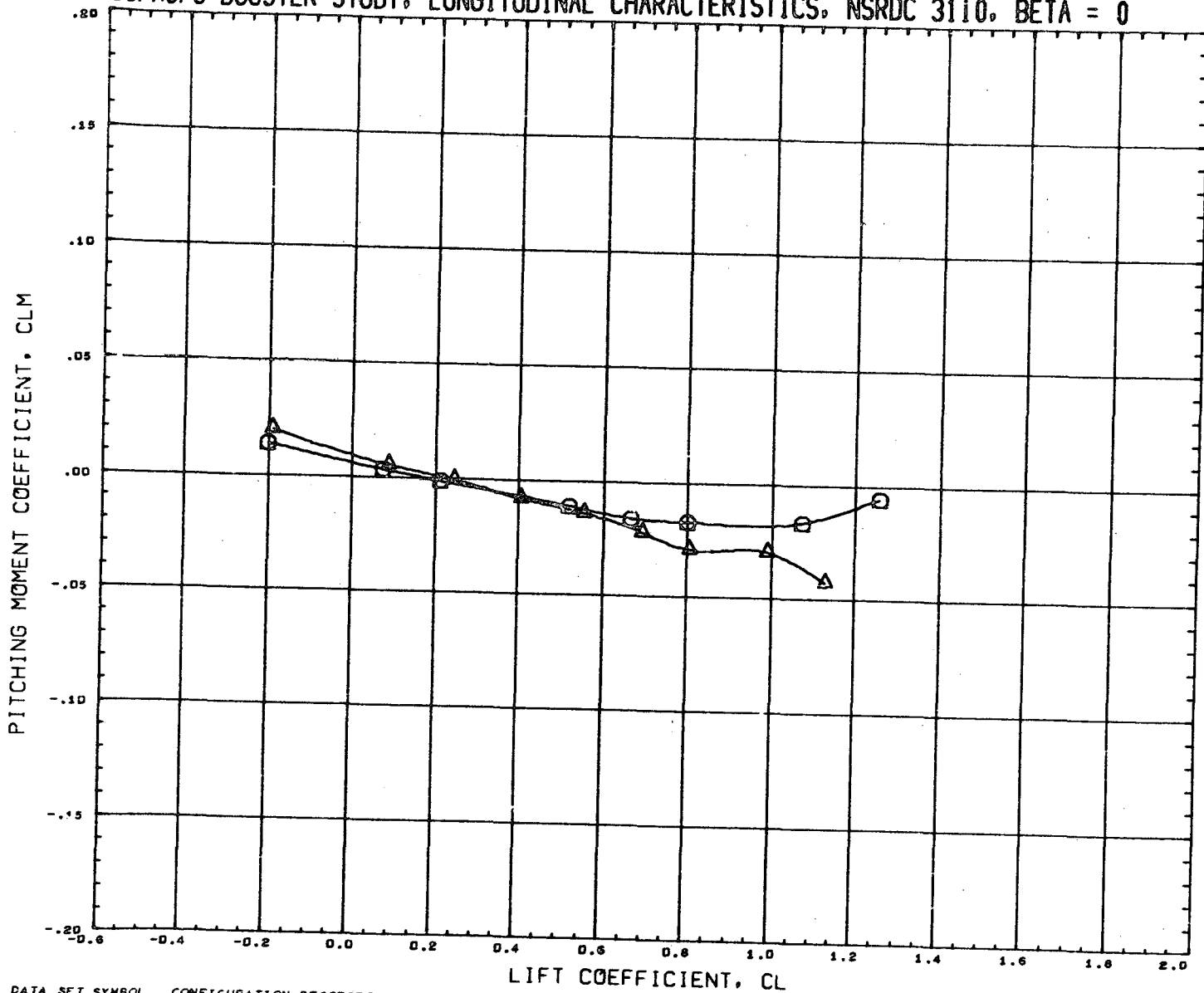
INCIDC	CNDPOS	INCIDW	WNGPOS
3.000	1.000	0.000	1.000
3.000	2.000	0.000	1.000

REFERENCE INFORMATION

SREF	1.3550	SQ. FT.
LREF	41.4360	INCHES
BREF	41.4360	INCHES
XMRP	31.1400	INCHES
YMRP	0.0000	INCHES
ZMRP	0.2250	INCHES
SCALE	1.5000	PERCENT

MACH 0.381

LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



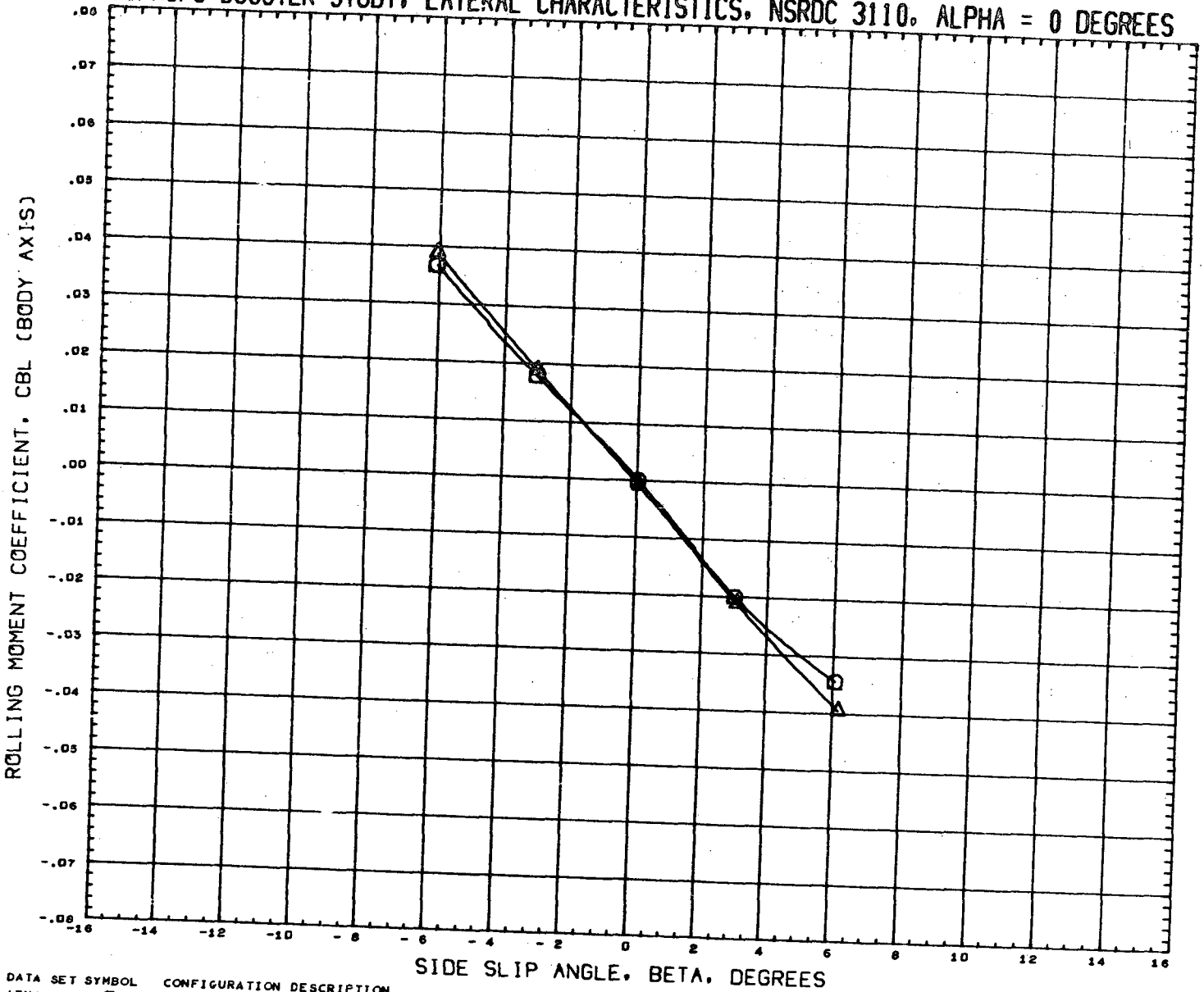
DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(RN2001)	NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1
(RN2009)	NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1

INCIDC	CNDPOS	INCIDW	WNGPOS
3.000	1.000	0.000	1.000
3.000	2.000	0.000	1.000

REFERENCE INFORMATION	
SREF	1.3550 SQ. FT.
LREF	41.4360 INCHES
BREF	41.4360 INCHES
XMRP	31.1400 INCHES
YMRP	0.0000 INCHES
ZMRP	0.2250 INCHES
SCALE	1.5000 PERCENT

MACH 0.381

LMSC/MSFC BOOSTER STUDY, LATERAL CHARACTERISTICS, NSRDC 3110, ALPHA = 0 DEGREES



DATA SET SYMBOL
(RN2002)
(RN2010)



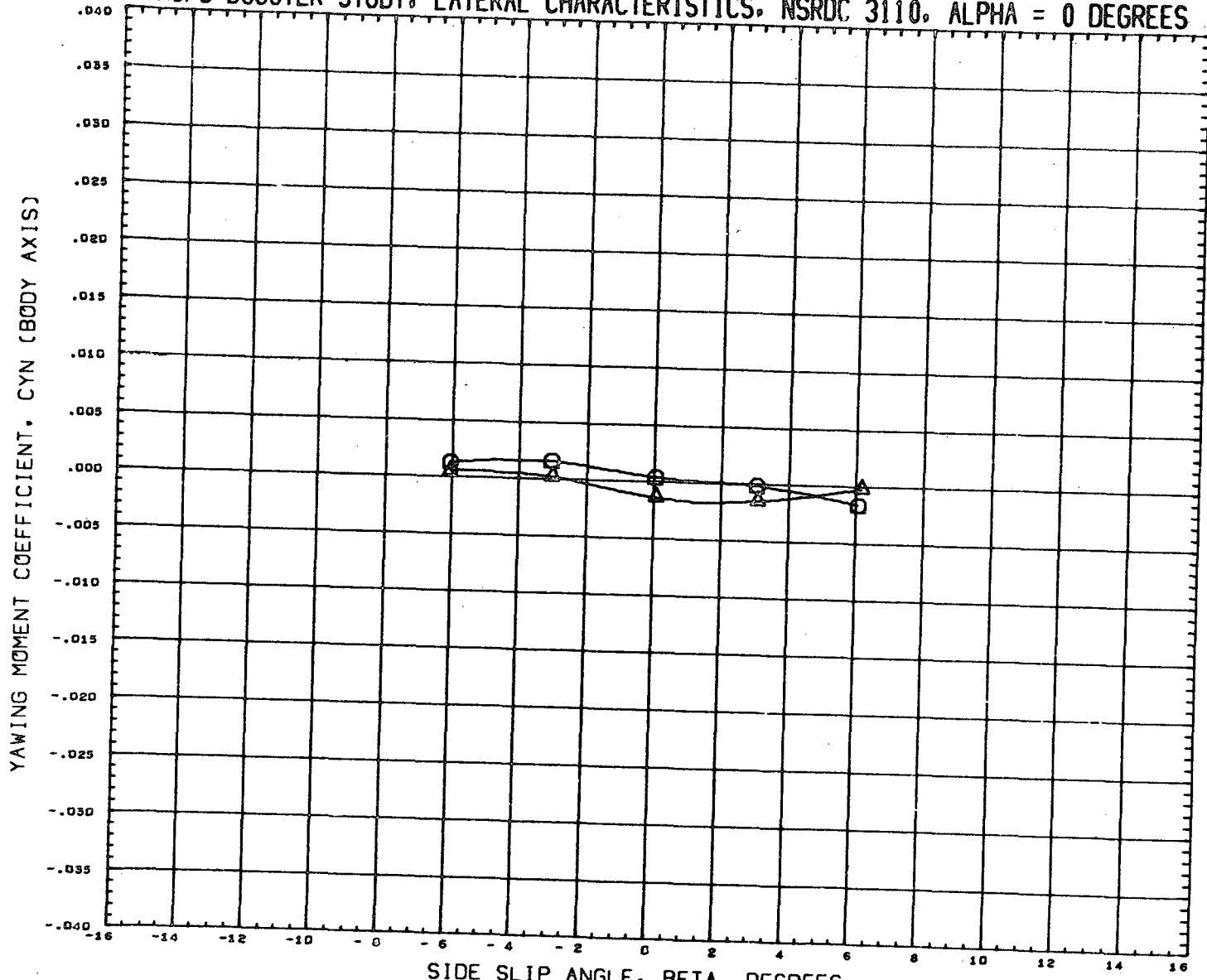
CONFIGURATION DESCRIPTION
NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1
NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1

INCIDC 3.000
CNDPOS 1.000
INCIDW 0.000
WNGPOS 1.000

REFERENCE INFORMATION
SREF 1.3550 SQ. FT.
LREF 41.4360 INCHES
BREF 41.4360 INCHES
XMRP 31.1400 INCHES
YMRP 0.0000 INCHES
ZMRP 0.2250 INCHES
SCALE 1.5000 PERCENT

MACH 0.381

LMSC/MSFC BOOSTER STUDY, LATERAL CHARACTERISTICS, NSRDC 3110, ALPHA = 0 DEGREES



DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (RN2002) ○ NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1
 (RN2010) △ NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1

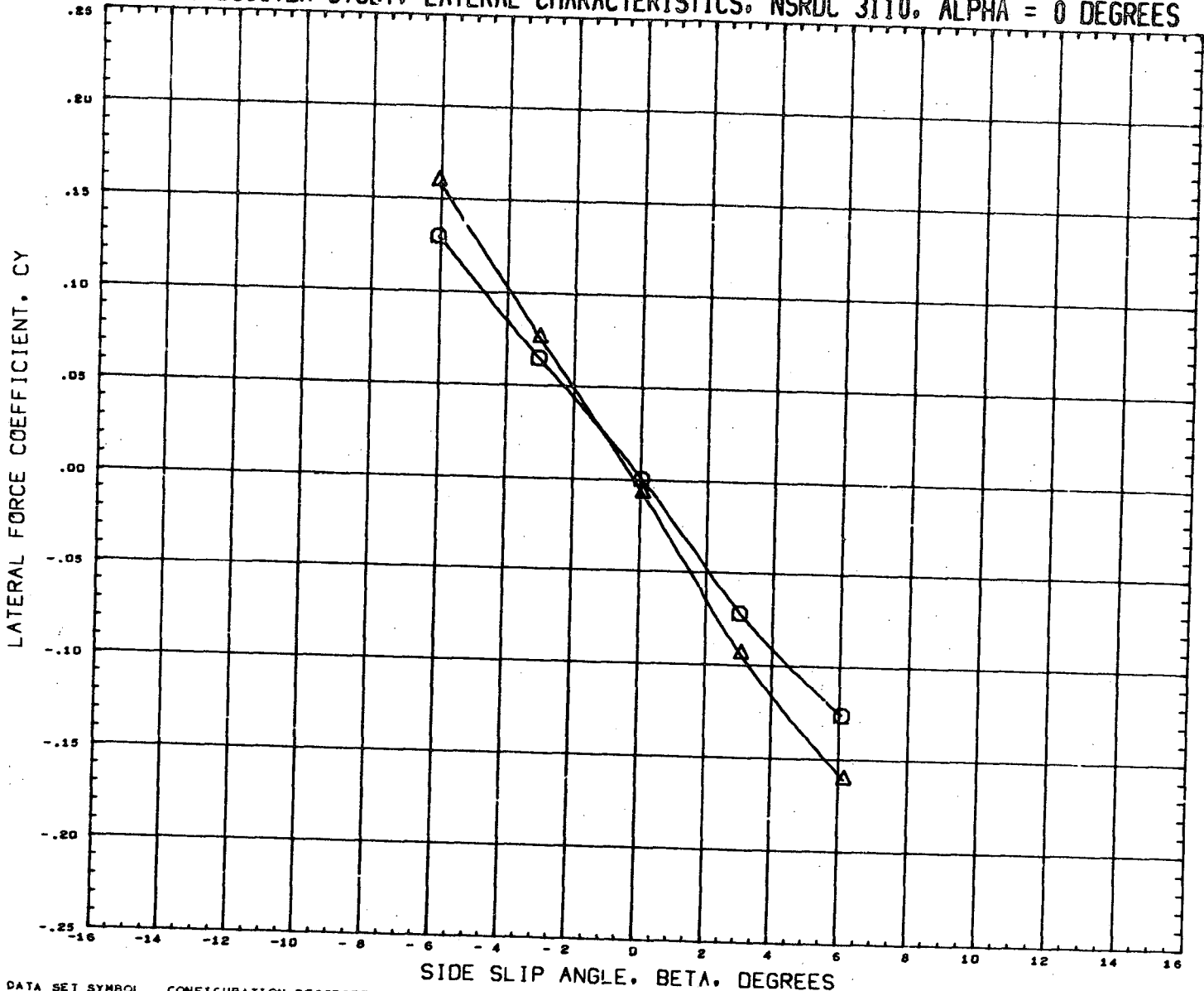
INCIDC	CNDPOS	INCIDW	WNGPOS
3.000	1.000	0.000	1.000
3.000	2.000	0.000	1.000

REFERENCE INFORMATION

SREF	1.3550	SQ.FT.
LREF	41.4360	INCHES
BREF	41.4360	INCHES
XMRP	31.1400	INCHES
YMRP	0.0000	INCHES
ZMRP	0.2250	INCHES
SCALE	1.5000	PERCNT

MACH 0.381

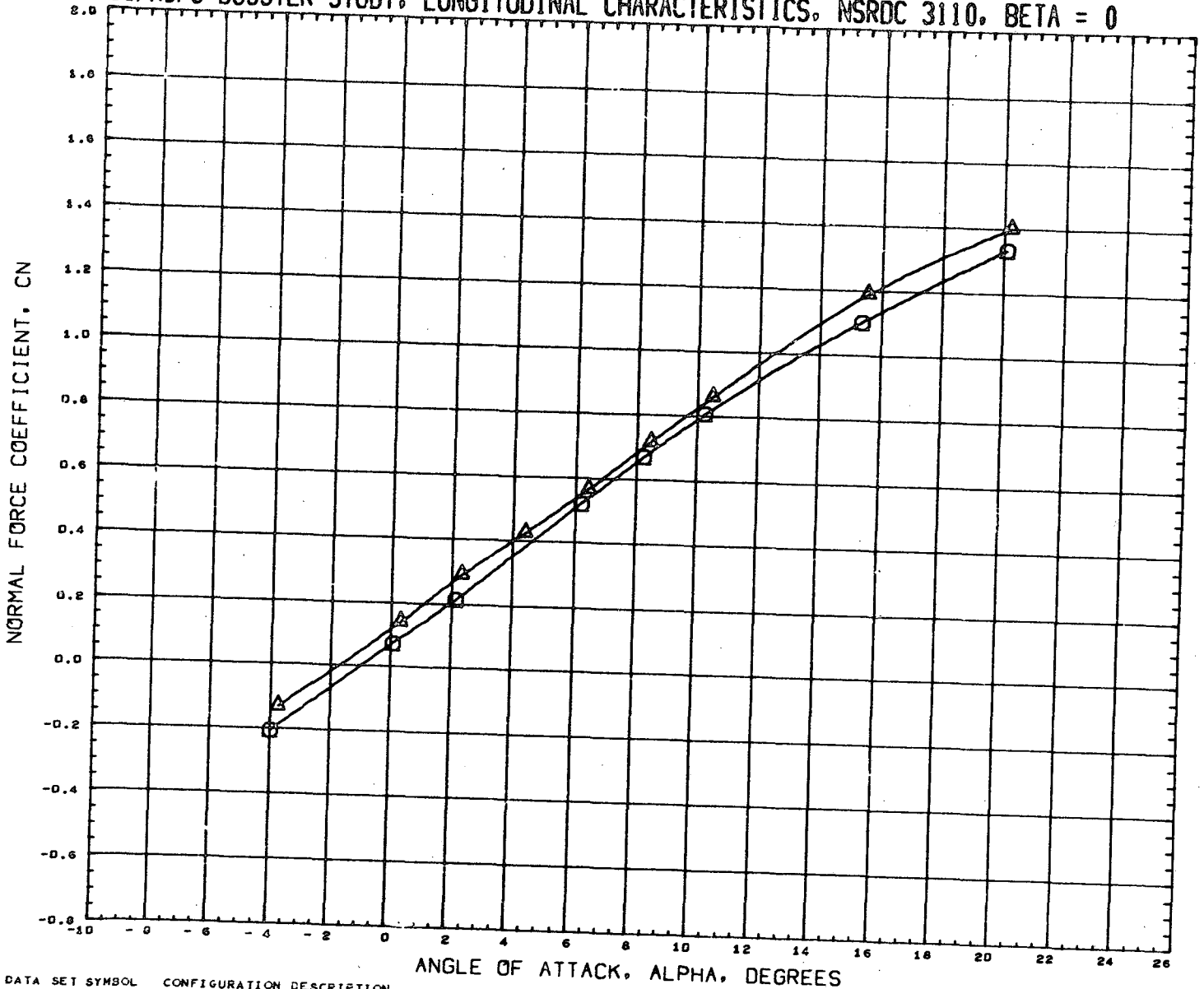
LMSC/MSFC BOOSTER STUDY, LATERAL CHARACTERISTICS, NSRDC 3110, ALPHA = 0 DEGREES



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2002)	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1	3.000	1.000	0.000	1.000	SREF 1.3550 SQ.FT.
(RN2010)	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1	3.000	2.000	0.000	1.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCENT

MACH 0.381

LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



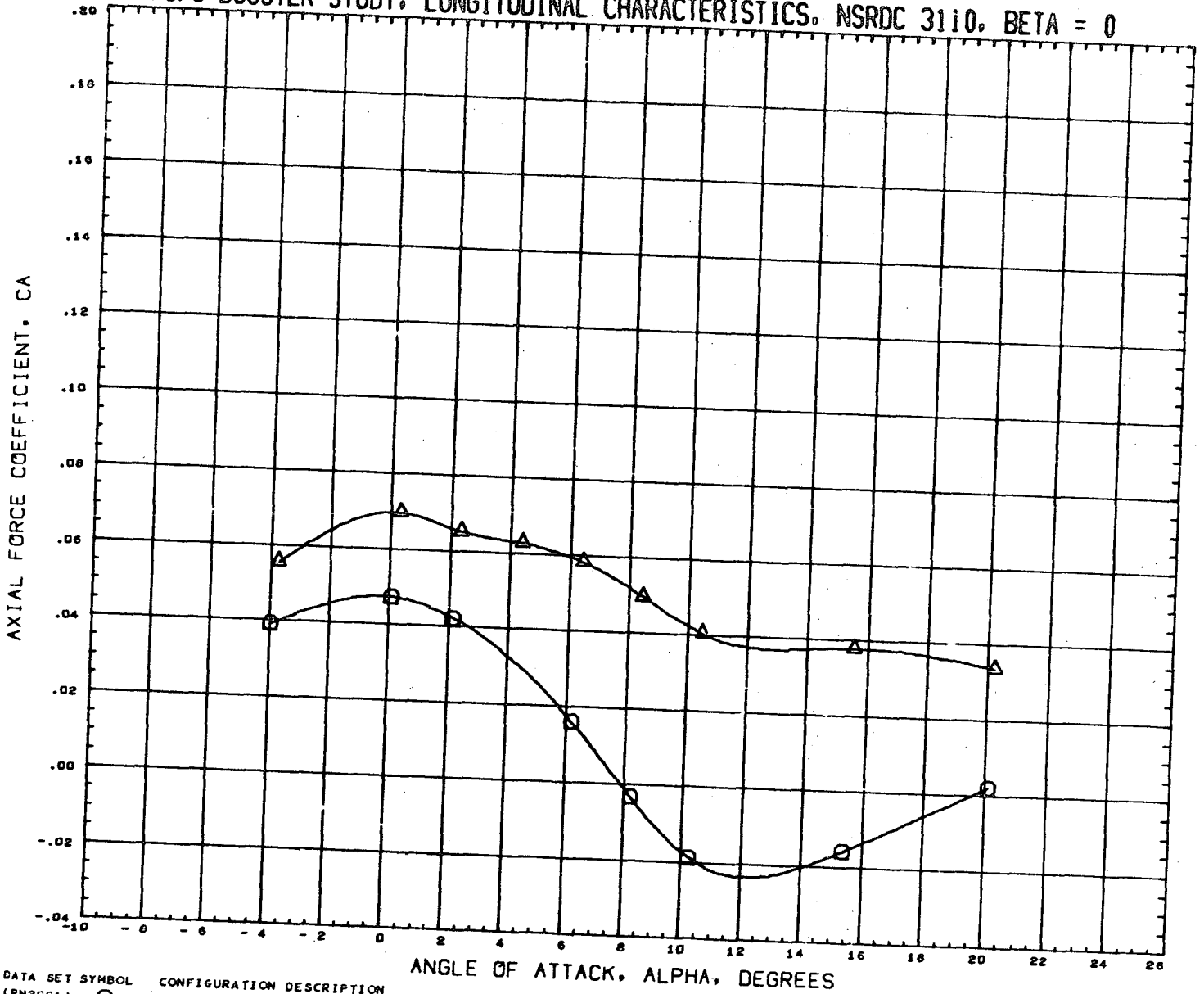
DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (RN2001) ○ NSRDC-3110, HSFC/LMSC BOOSTER B1C2F1W1V1
 (RN2005) △ NSRDC-3110, HSFC/LMSC BOOSTER B1C2F1W1V1

INCIDC CNDPOS INCIDW WNGPOS
 3.000 1.000 0.000 1.000
 15.000 1.000 0.000 1.000

REFERENCE INFORMATION
 SREF 1.3550 SQ.FT.
 LREF 41.4360 INCHES
 BREF 41.4360 INCHES
 XMRF 31.1400 INCHES
 YMRF 0.0000 INCHES
 ZMRF 0.2250 INCHES
 SCALE 1.5000 PERCNT

MACH 0.381

LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL
(RN2001)
(RN2005)



CONFIGURATION DESCRIPTION
NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1
NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1

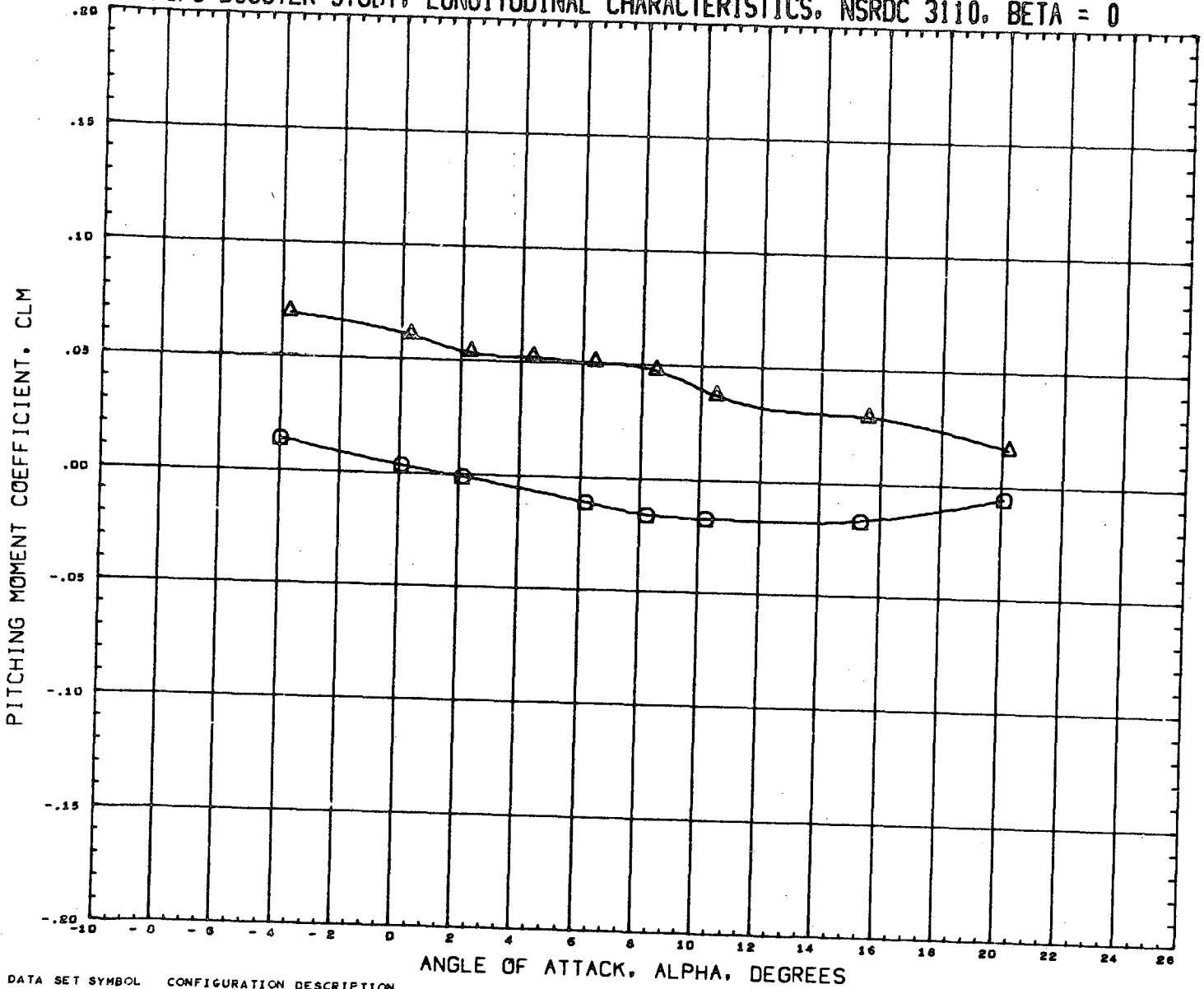
INCIDC	CNDPOS	INCIDW	WNGPOS
3.000	1.000	0.000	1.000
15.000	1.000	0.000	1.000

REFERENCE INFORMATION

SREF	1.3550	SQ. FT.
LREF	41.4360	INCHES
BREF	41.4360	INCHES
XMRP	31.1400	INCHES
YMRP	0.0000	INCHES
ZMRP	0.2250	INCHES
SCALE	1.5000	PERCENT

MACH 0.381

LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL
(RN2001) \circ
(RN2005) \triangle

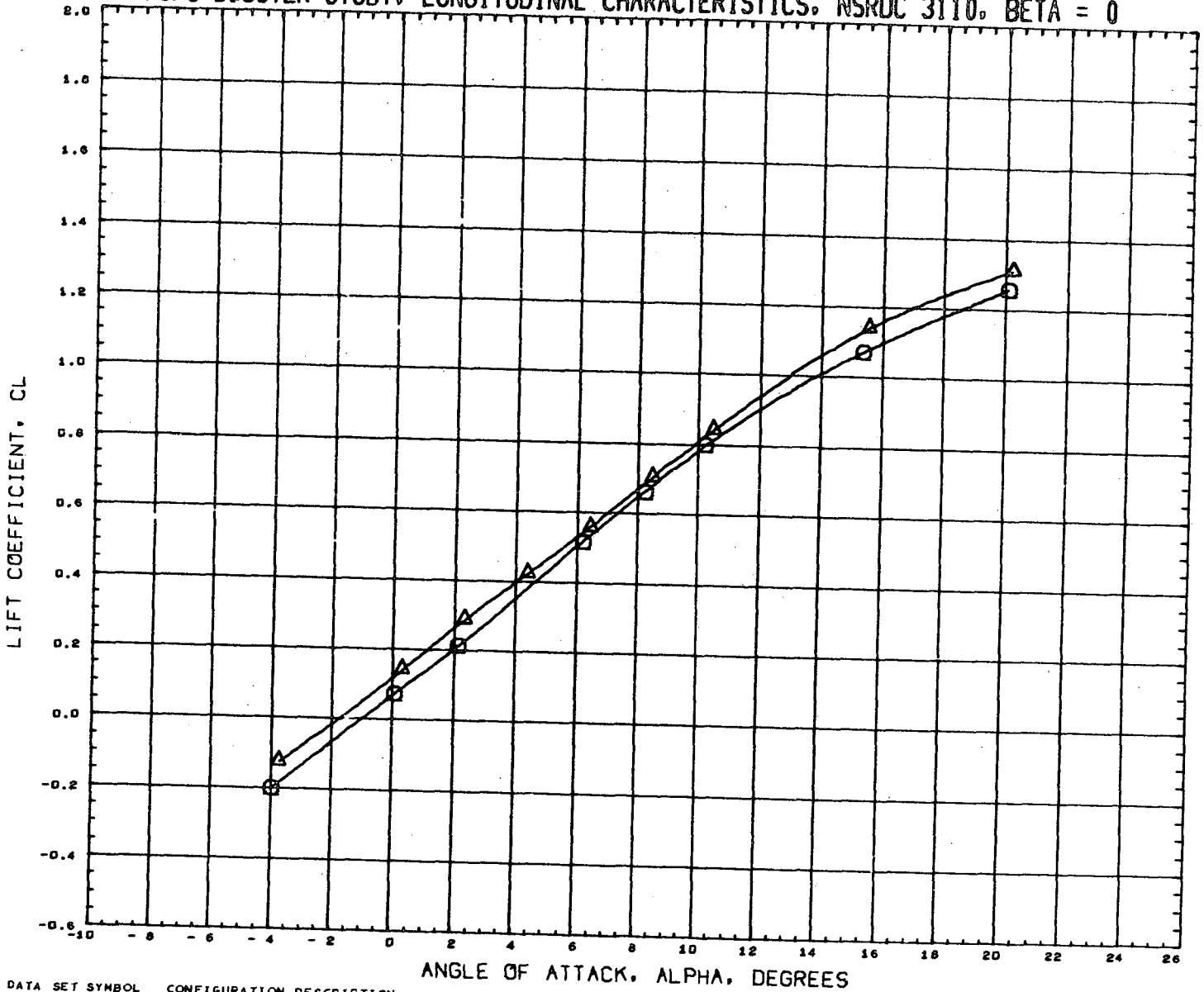
CONFIGURATION DESCRIPTION
NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1
NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1

INCIDC	CNDPOS	INCIDW	WNGPOS
3.000	1.000	0.000	1.000
15.000	1.000	0.000	1.000

REFERENCE INFORMATION	
SREF	1.3550 SQ.FT.
LREF	41.4360 INCHES
BREF	41.4360 INCHES
XMRF	31.1400 INCHES
YMRF	0.0000 INCHES
ZMRF	0.2250 INCHES
SCALE	1.5000 PERCENT

MACH 0.381

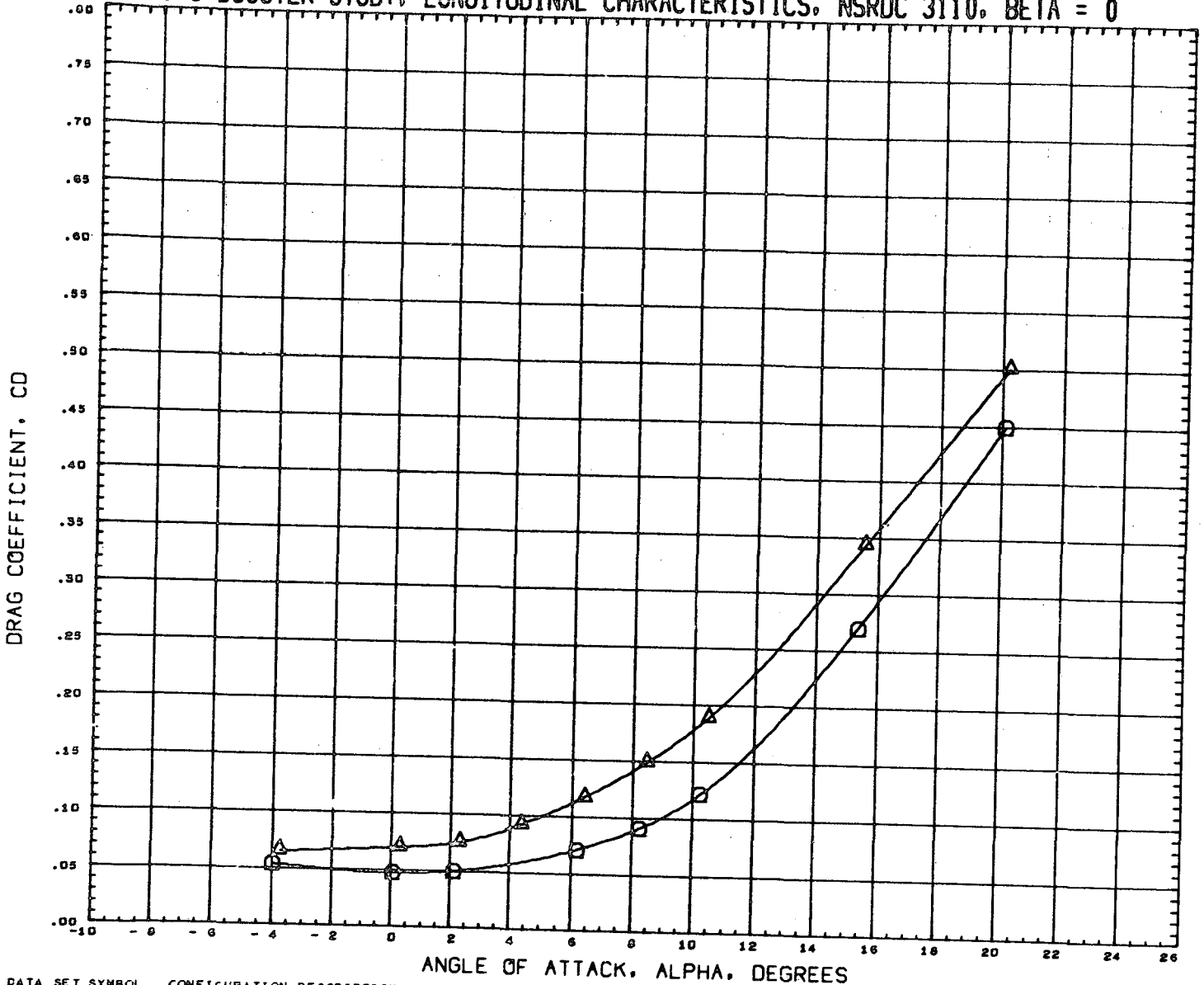
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION:	
(RN2003)	NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1	3.000	1.000	0.000	1.000	SREF	1.3550 SQ.FT.
(RN2005)	NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1	15.000	1.000	0.000	1.000	LREF	41.4360 INCHES
						BREF	41.4360 INCHES
						XMRP	31.1400 INCHES
						YMRP	0.0000 INCHES
						ZMRP	0.2250 INCHES
						SCALE	1.5000 PERCENT

MACH 0.381

LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



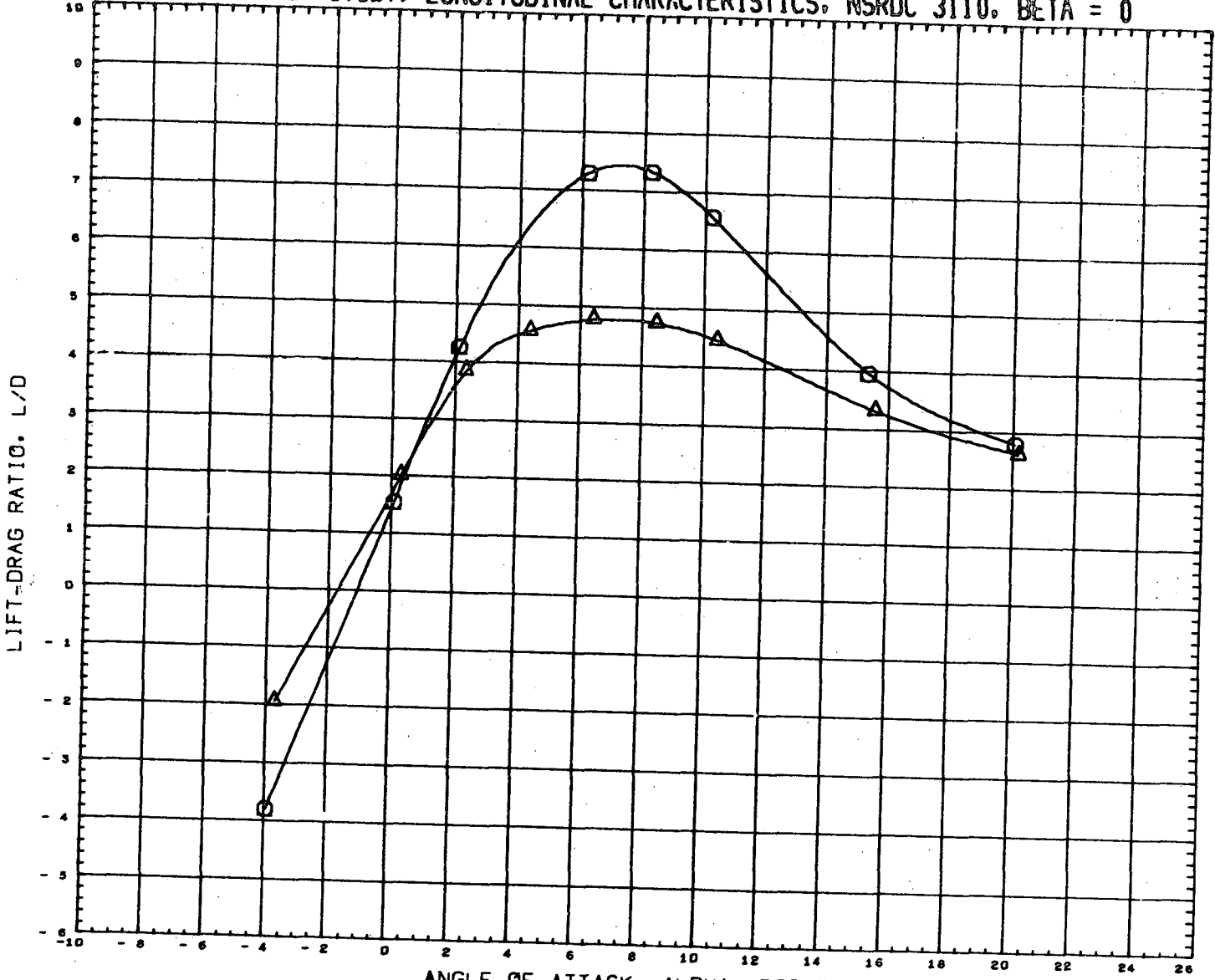
DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(RN2001) ○	NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1
(RN2005) △	NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1

INCIDC	CNDPOS	INCIDW	WNGPOS
3.000	1.000	0.000	1.000
15.000	1.000	0.000	1.000

REFERENCE INFORMATION		
SREF	1.3550	SQ. FT.
LREF	41.4360	INCHES
BREF	41.4360	INCHES
XMRP	31.1400	INCHES
YMRP	0.0000	INCHES
ZMPP	0.2250	INCHES
SCALE	1.5000	PERCENT

MACH 0.381

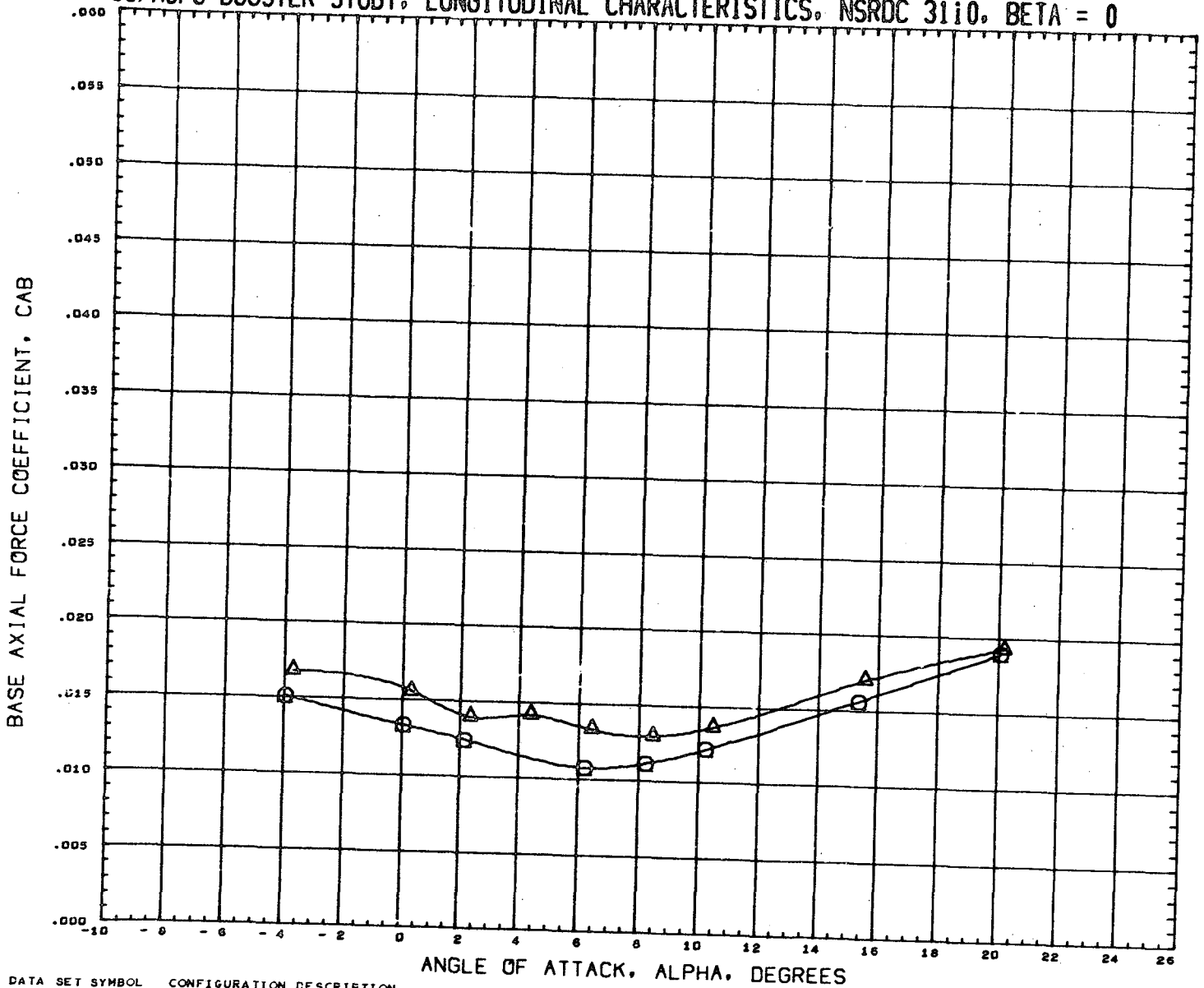
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2001)	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1	3.000	1.000	0.000	1.000	SREF 1.3550 SQ.FT.
(RN2005)	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1	15.000	1.000	0.000	1.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCENT

MACH 0.301

LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



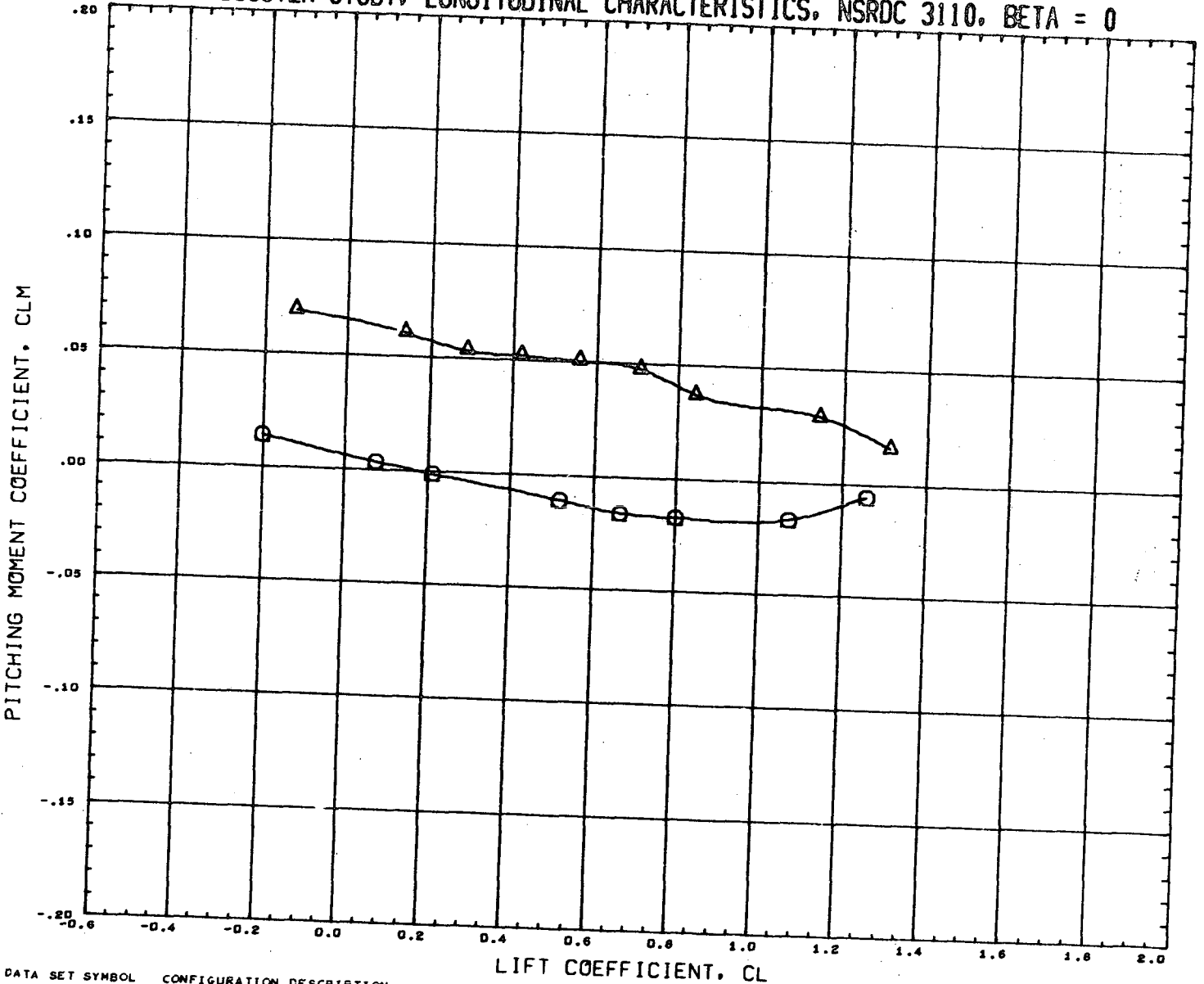
DATA SET SYMBOL (RN2001) (RN2005) CONFIGURATION DESCRIPTION NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1 NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1

INCIDC 3.000 15.000 CNDPOS 1.000 1.000 INCIDW 0.000 0.000 WNGPOS 1.000 1.000

REFERENCE INFORMATION
 SREF 1.3550 SQ.FT.
 LREF 41.4360 INCHES
 BREF 41.4360 INCHES
 XMRP 31.1400 INCHES
 YMRP 0.0000 INCHES
 ZMRP 0.2250 INCHES
 SCALE 1.5000 PERCENT

MACH 0.381

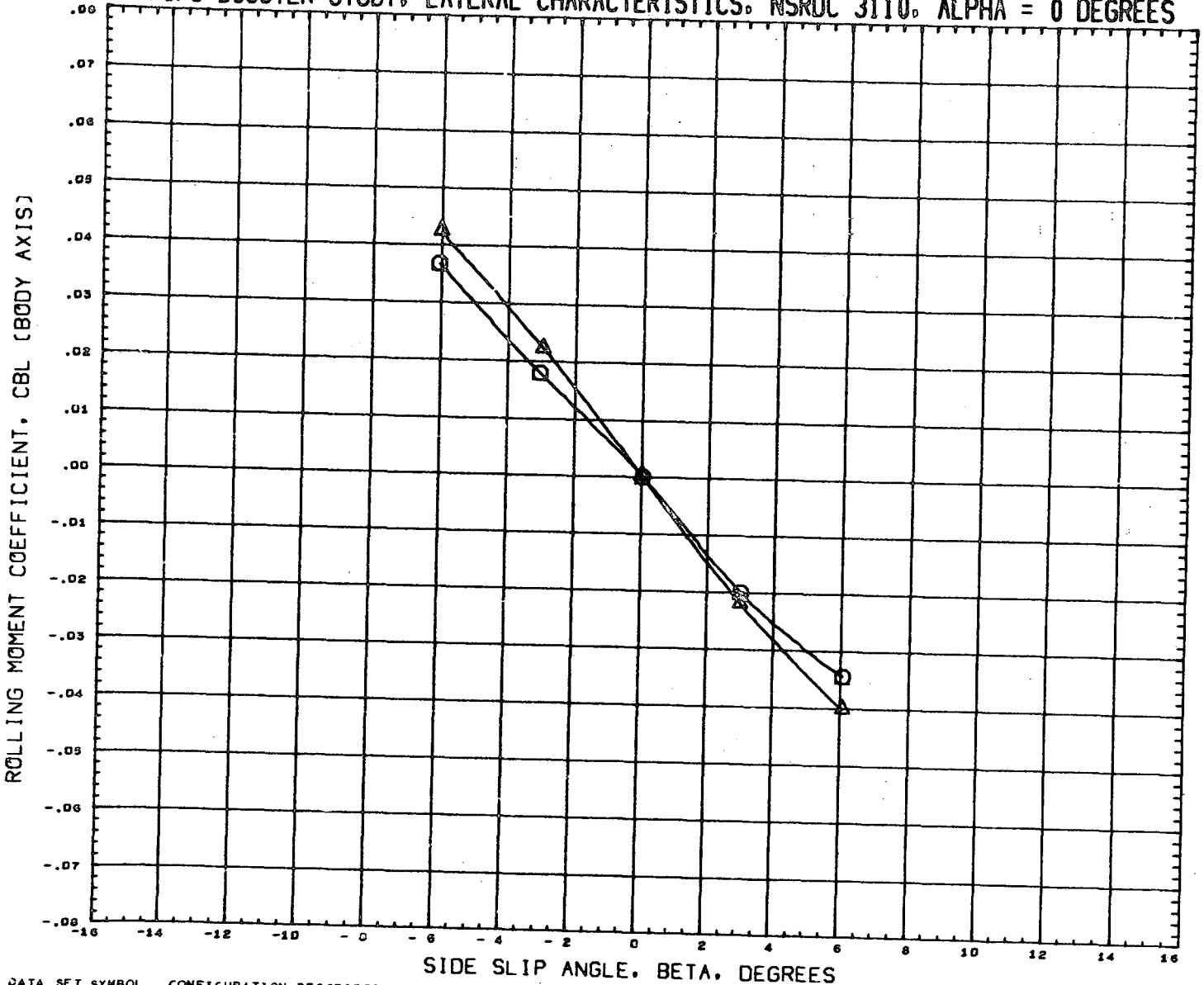
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2001)	NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1	3.000	1.000	0.000	1.000	SREF 1.3550 SQ. FT.
(RN2005)	NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1	15.000	1.000	0.000	1.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCENT

MACH 0.381

LMSC/MSFC BOOSTER STUDY, LATERAL CHARACTERISTICS, NSROC 3110, ALPHA = 0 DEGREES



DATA SET SYMBOL
(RN2002)
(RN2006)

CONFIGURATION DESCRIPTION
NSRDC-3110,HSFC/LMSC BOOSTER B1C2F1W1
NSRDC-3110,HSFC/LMSC BOOSTER B1C2F1W1

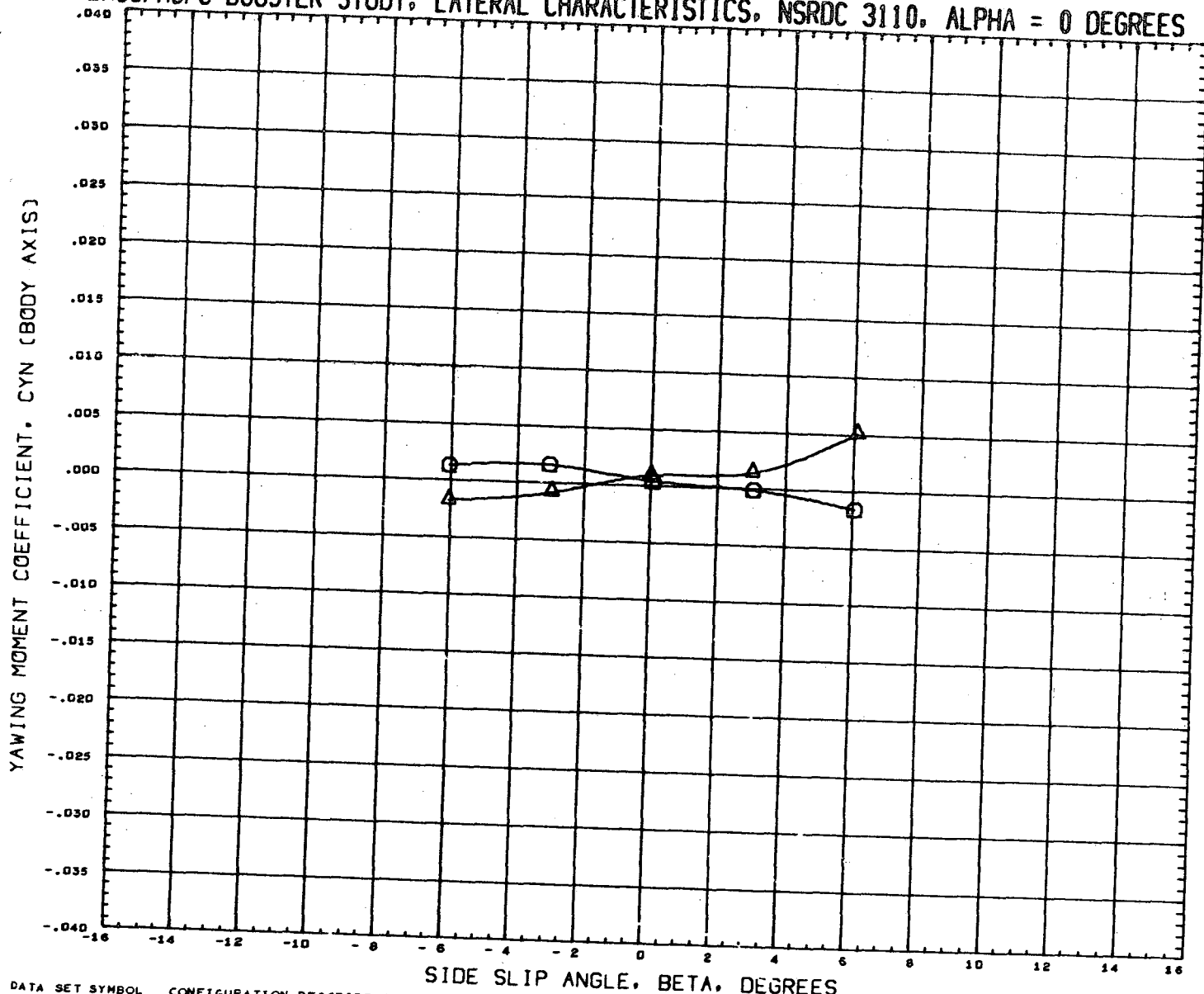
INCIDC	CNDPOS	INCIDW	WNGPOS
3.000	1.000	0.000	1.000
15.000	1.000	0.000	1.000

REFERENCE INFORMATION

SREF	1.3550	SQ.FT.
LREF	41.4360	INCHES
BREF	41.4360	INCHES
XMRP	31.1400	INCHES
YMRP	0.0000	INCHES
ZMRP	0.2250	INCHES
SCALE	1.5000	PERCNT

MACH 0.381

LMSC/MSFC BOOSTER STUDY, LATERAL CHARACTERISTICS, NSRDC 3110, ALPHA = 0 DEGREES



DATA SET SYMBOL
(RN2002)
(RN2006)



CONFIGURATION DESCRIPTION
NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1
NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1

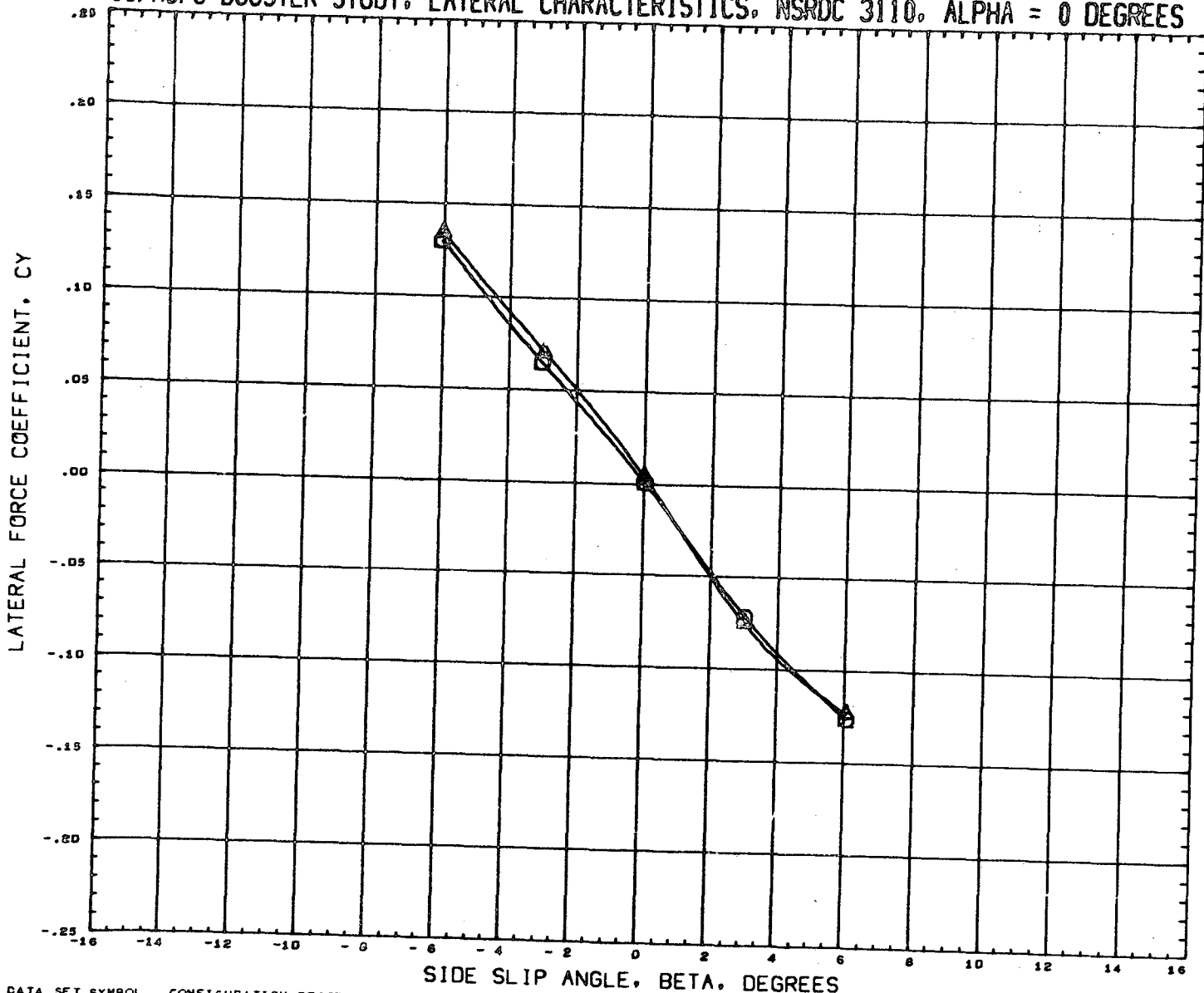
INCIDC	CNDPOS	INCIDW	WNGPOS
3.000	1.000	0.000	1.000
15.000	1.000	0.000	1.000

REFERENCE INFORMATION

SREF	1.3550	SQ.FT.
LREF	41.4360	INCHES
BREF	41.4360	INCHES
XMRP	31.1400	INCHES
YMRP	0.0000	INCHES
ZMRP	0.2250	INCHES
SCALE	1.5000	PERCENT

MACH 0.381

LMSC/MSFC BOOSTER STUDY, LATERAL CHARACTERISTICS, NSRDC 3110, ALPHA = 0 DEGREES



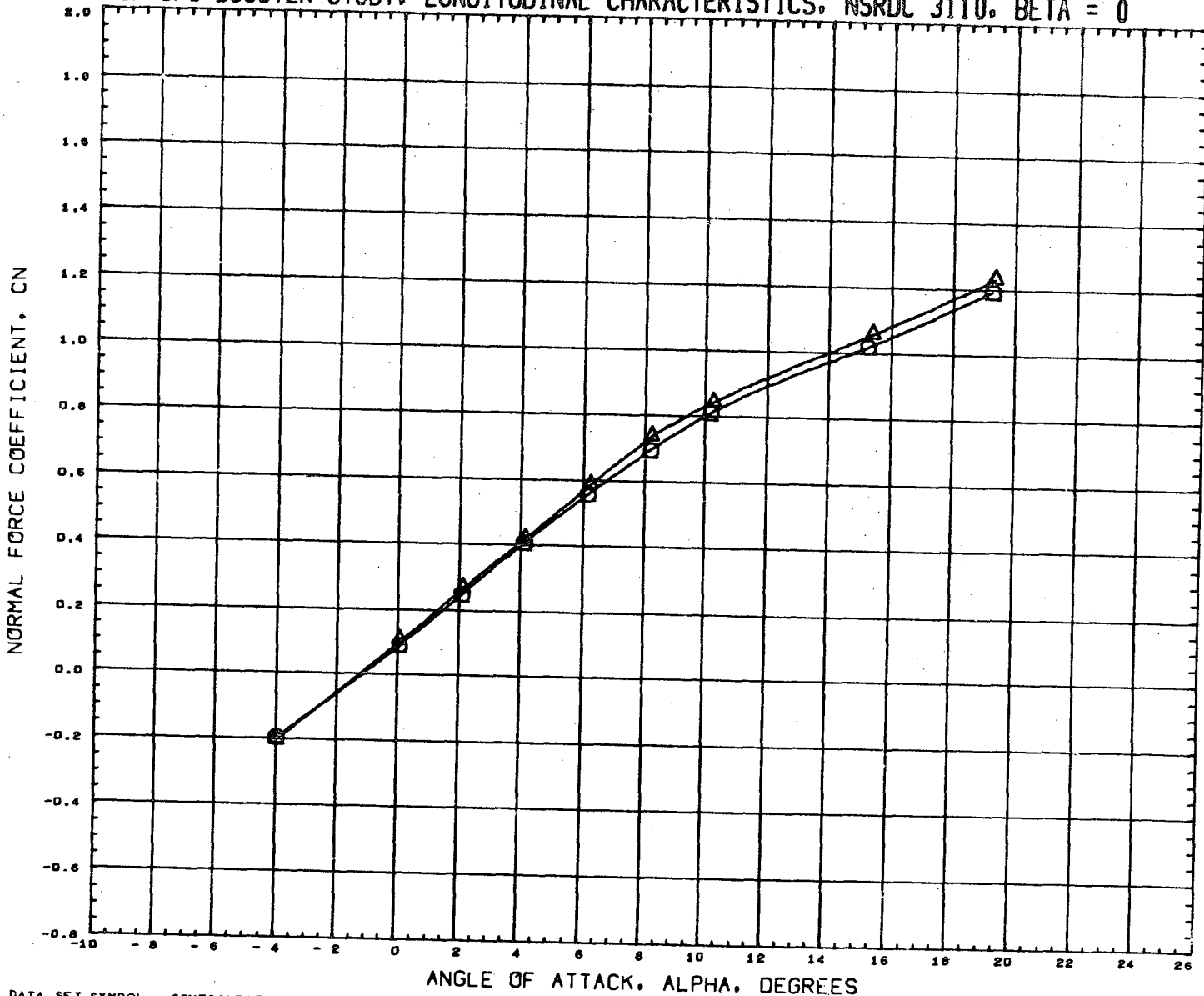
DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(RN2002)	NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1
(RN2006)	NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1

INCIDC	CNDPOS	INCIDW	WNGPOS
3.000	1.000	0.000	1.000
15.000	1.000	0.000	1.000

REFERENCE INFORMATION	
SREF	1.3550 SQ. FT.
LREF	41.4360 INCHES
BREF	41.4360 INCHES
XMRP	31.1400 INCHES
YMRP	0.0000 INCHES
ZMRP	0.2250 INCHES
SCALE	1.5000 PERCENT

MACH 0.381

LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL
(RN2009)
(RN2073)



CONFIGURATION DESCRIPTION
NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1
NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1

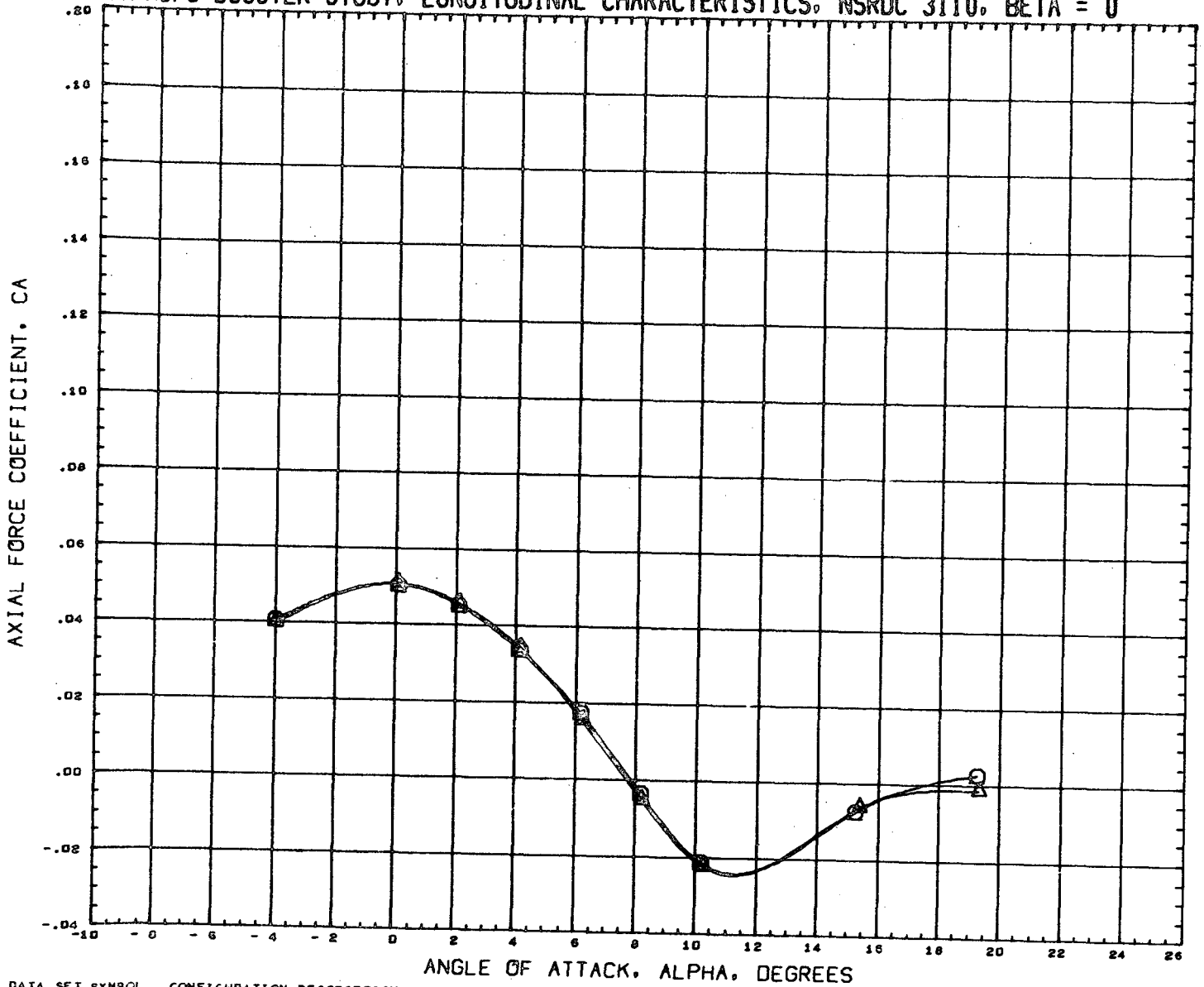
INCIDC	CNDPOS	INCIDW	WNGPOS
3.000	2.000	0.000	1.000
3.000	2.000	0.000	1.000

REFERENCE INFORMATION

SREF	1.3550	SQ. FT.
LREF	41.4360	INCHES
BREF	41.4360	INCHES
XMRF	31.1400	INCHES
YMRP	0.0000	INCHES
ZMRP	0.2250	INCHES
SCALE	1.5000	PERCENT

MACH 0.381

LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL
 (RN2009) \odot
 (RN2073) \triangle

CONFIGURATION DESCRIPTION
 NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1
 NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1

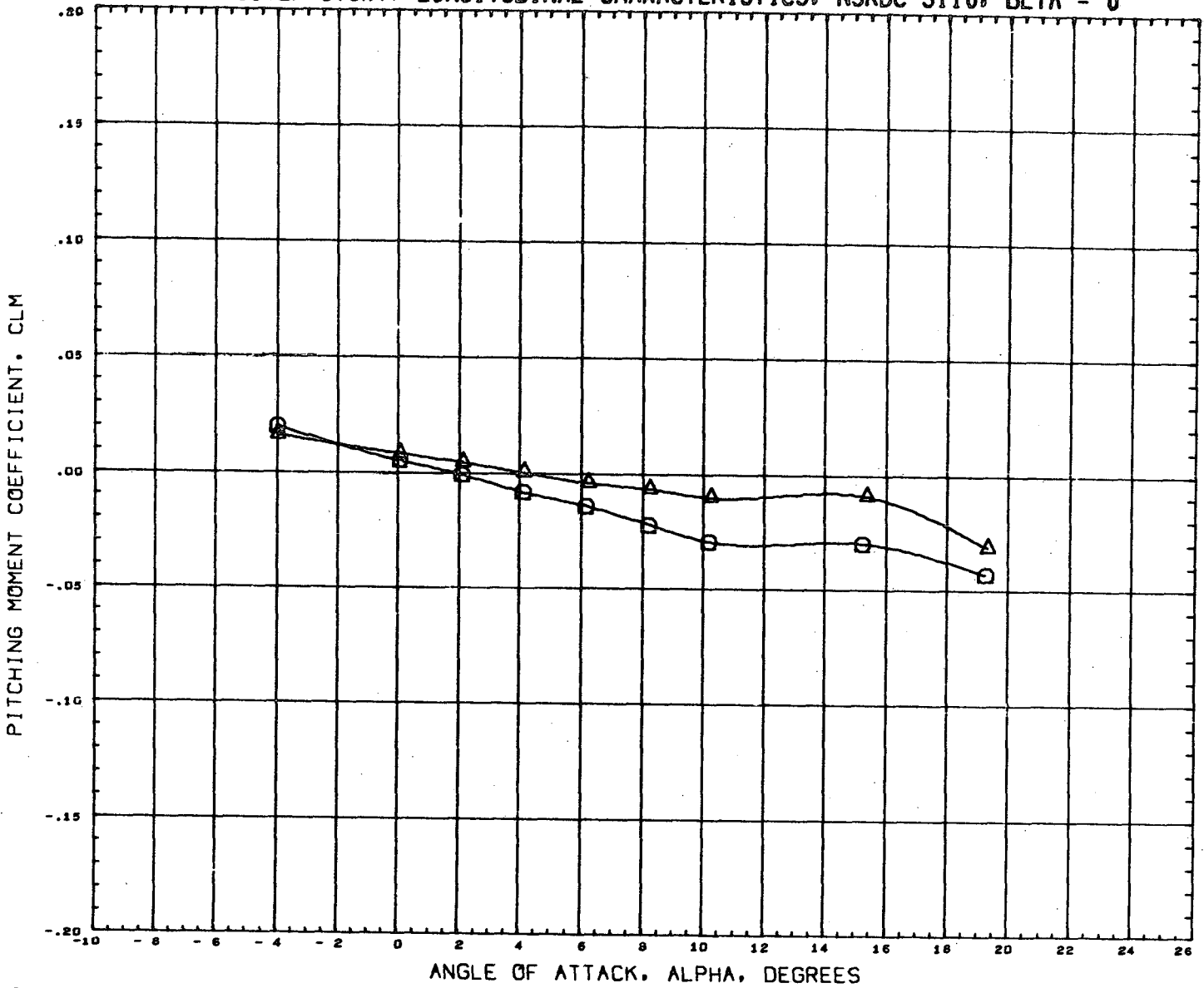
INCIDC	CNDPOS	INCIDW	WNGPOS
3.000	2.000	0.000	1.000
3.000	2.000	0.000	1.000

REFERENCE INFORMATION

SREF	1.3550	SQ. FT.
LREF	41.4360	INCHES
BREF	41.4360	INCHES
XMRP	31.1400	INCHES
YMRP	0.0000	INCHES
ZMRP	0.2250	INCHES
SCALE	1.5000	PERCENT

MACH 0.381

LMSC/MSFC BOOSTER STUDY. LONGITUDINAL CHARACTERISTICS. NSRDC 3110. BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION	
(RN2009)	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1	3.000	2.000	0.000	1.000	SREF	1.3550 SQ.FT.
(RN2073)	NSRDC-3110,MSFC/LMSC BOOSTER B1C1F1W1V1	3.000	2.000	0.000	1.000	LREF	41.4360 INCHES
						BREF	41.4360 INCHES
						XMRP	31.1400 INCHES
						YMRP	0.0000 INCHES
						ZMRP	0.2250 INCHES
						SCALE	1.5000 PERCENT

MACH 0.381

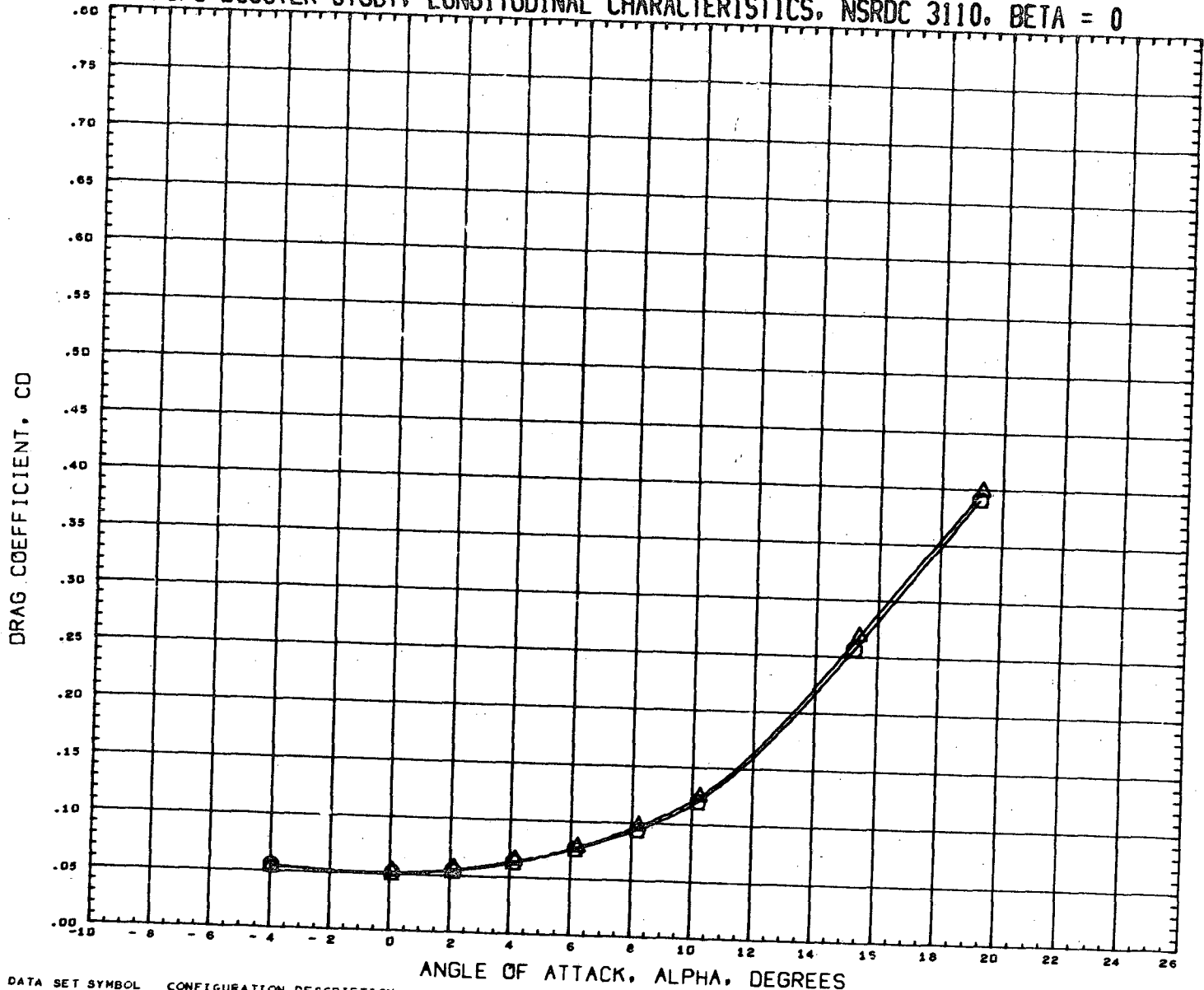
LMSC/MSFC BOOSTER STUDY. LONGITUDINAL CHARACTERISTICS. NSRDC 3110. BETA = 0





DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2009)	NSRDC-3110,HSFC/LMSC BOOSTER B1C2F1W1V1	3.000	2.000	0.000	1.000	SREF 1.3550 SQ.FT.
(RN2073)	NSRDC-3110,HSFC/LMSC BOOSTER B1C1F1W1V1	3.000	2.000	0.000	1.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCENT

MACH 0.391

LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL
 (RN2009) 
 (RN2073) 

CONFIGURATION DESCRIPTION
 NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1
 NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1

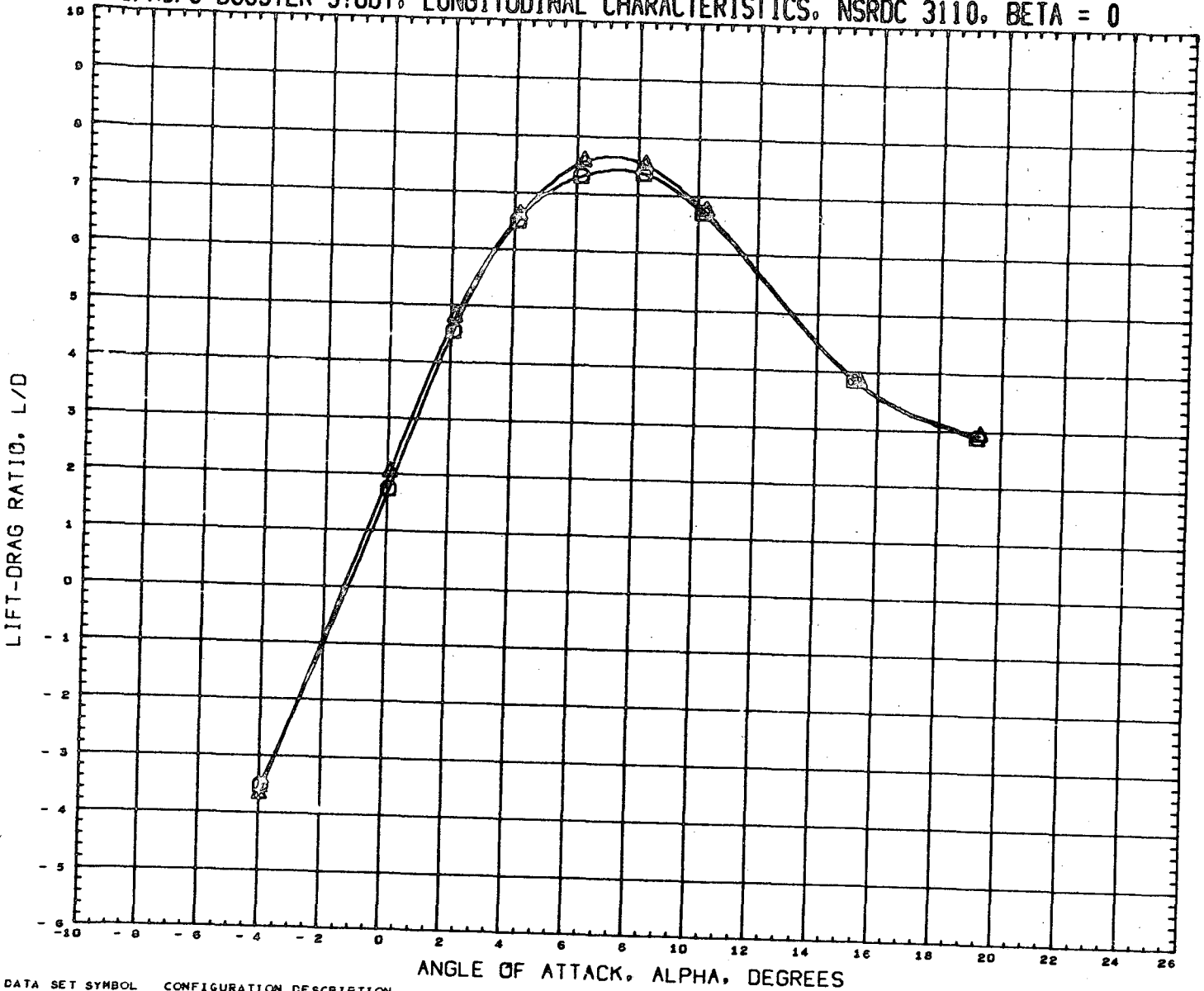
INCIDC	CNDFOS	INCIDW	WNGPOS
3.000	2.000	0.000	1.000
3.000	2.000	0.000	1.000

REFERENCE INFORMATION

SREF	1.3550	SQ. FT.
LREF	41.4360	INCHES
BREF	41.4360	INCHES
XMRP	31.1400	INCHES
YMRP	0.0000	INCHES
ZMRP	0.2250	INCHES
SCALE	1.5000	PERCENT

MACH 0.381

LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



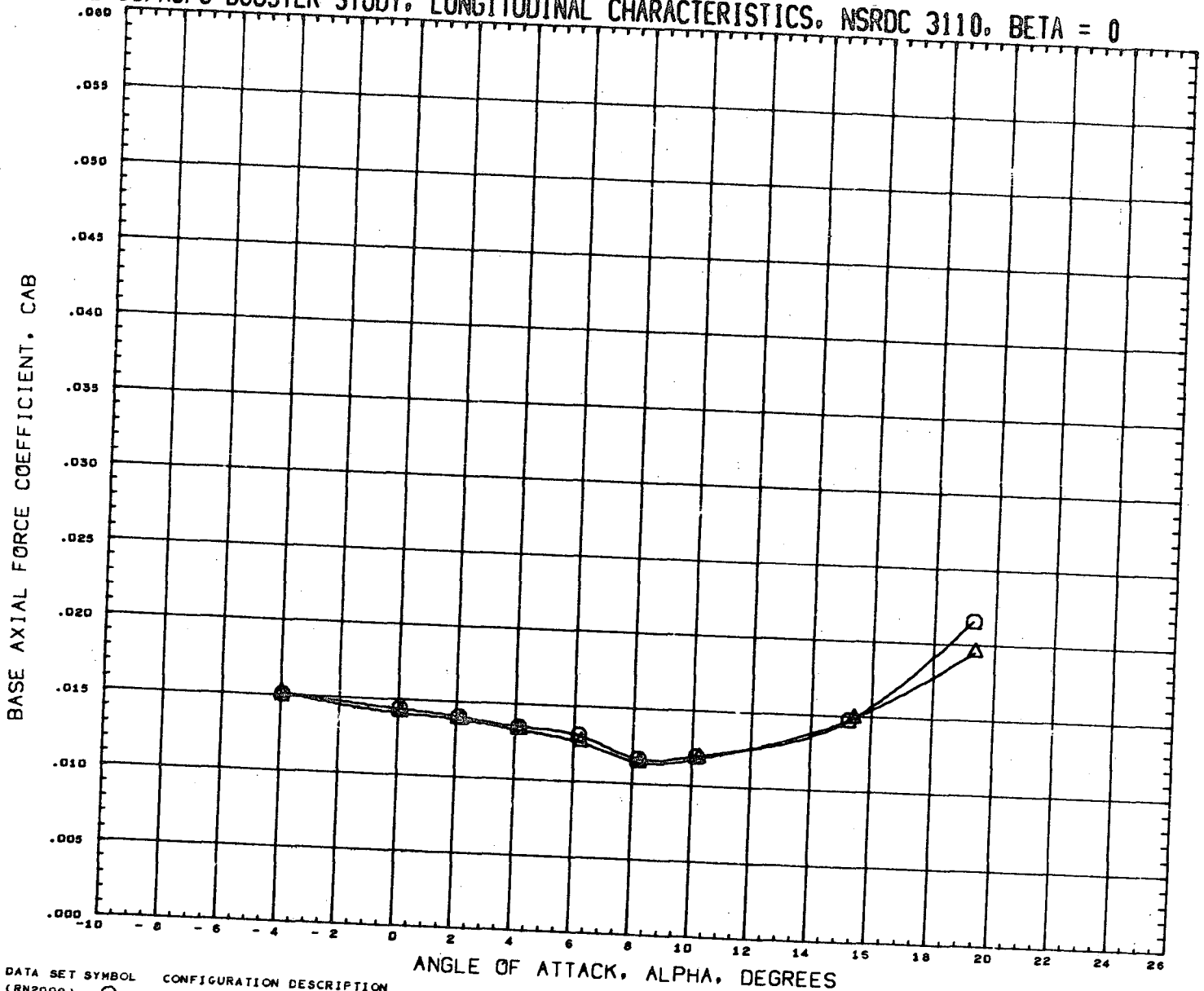
DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(RN2009)	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1
(RN2073)	NSRDC-3110,MSFC/LMSC BOOSTER B1C1F1W1V1

INCIDC	CNDPOS	INCIDW	WNGPOS
3.000	2.000	0.000	1.000
3.000	2.000	0.000	1.000

REFERENCE INFORMATION	
SREF	1.3550 SQ.FT.
LREF	41.4360 INCHES
BREF	41.4360 INCHES
XMRP	31.1400 INCHES
YMRP	0.0000 INCHES
ZMRP	0.2250 INCHES
SCALE	1.5000 PERCENT

HACH 0.381

LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL
(RN2009)
(RN2073)



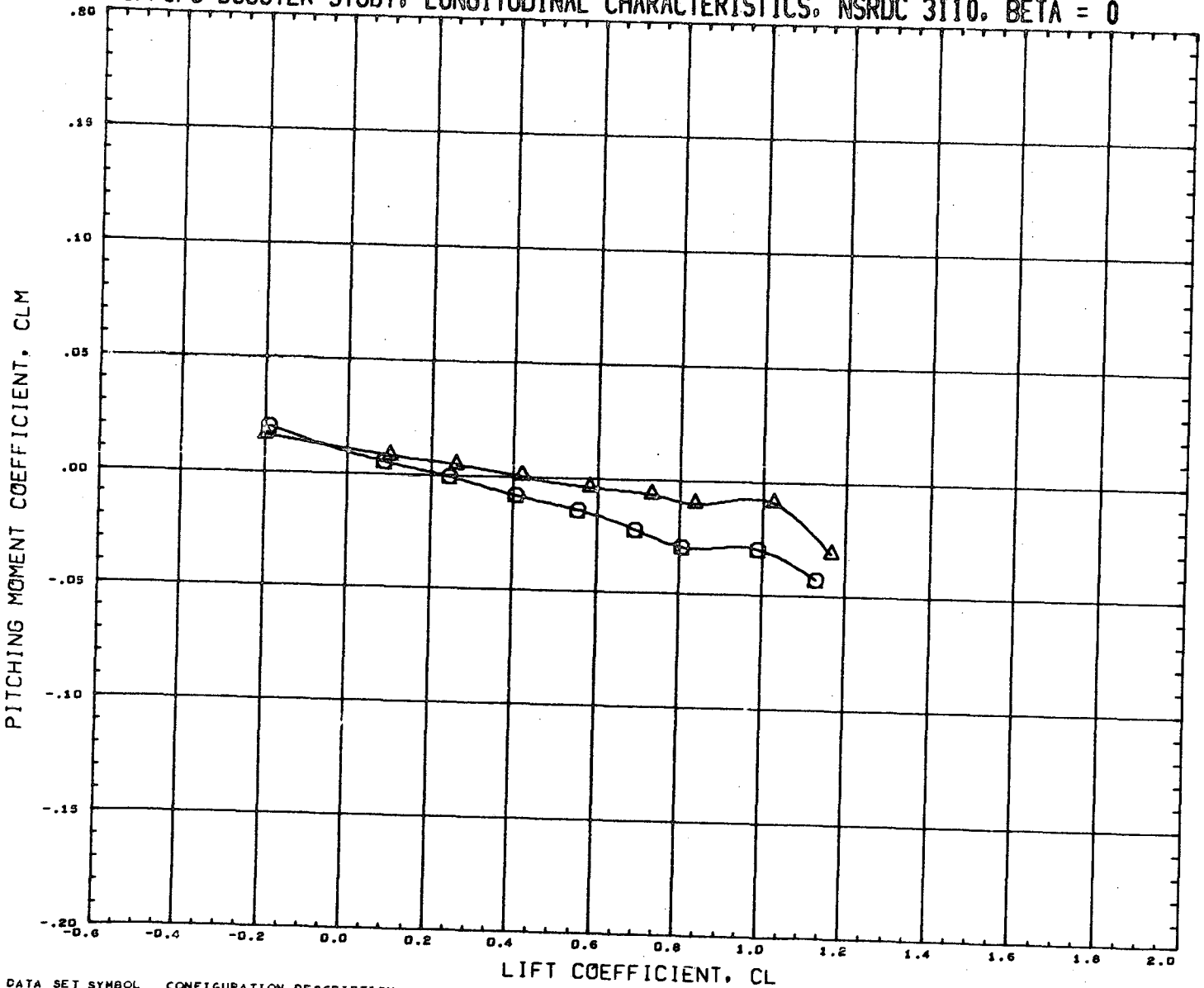
CONFIGURATION DESCRIPTION
NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1
NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1

INCIDC	CNDPOS	INCIDW	WNGPOS
3.000	2.000	0.000	1.000
3.000	2.000	0.000	1.000

REFERENCE INFORMATION		
SREF	1.3550	SQ. FT.
LREF	41.4360	INCHES
BREF	41.4360	INCHES
XMRP	31.1400	INCHES
YMRP	0.0000	INCHES
ZMRP	0.2250	INCHES
SCALE	1.5000	PERCENT

MACH 0.361

LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0

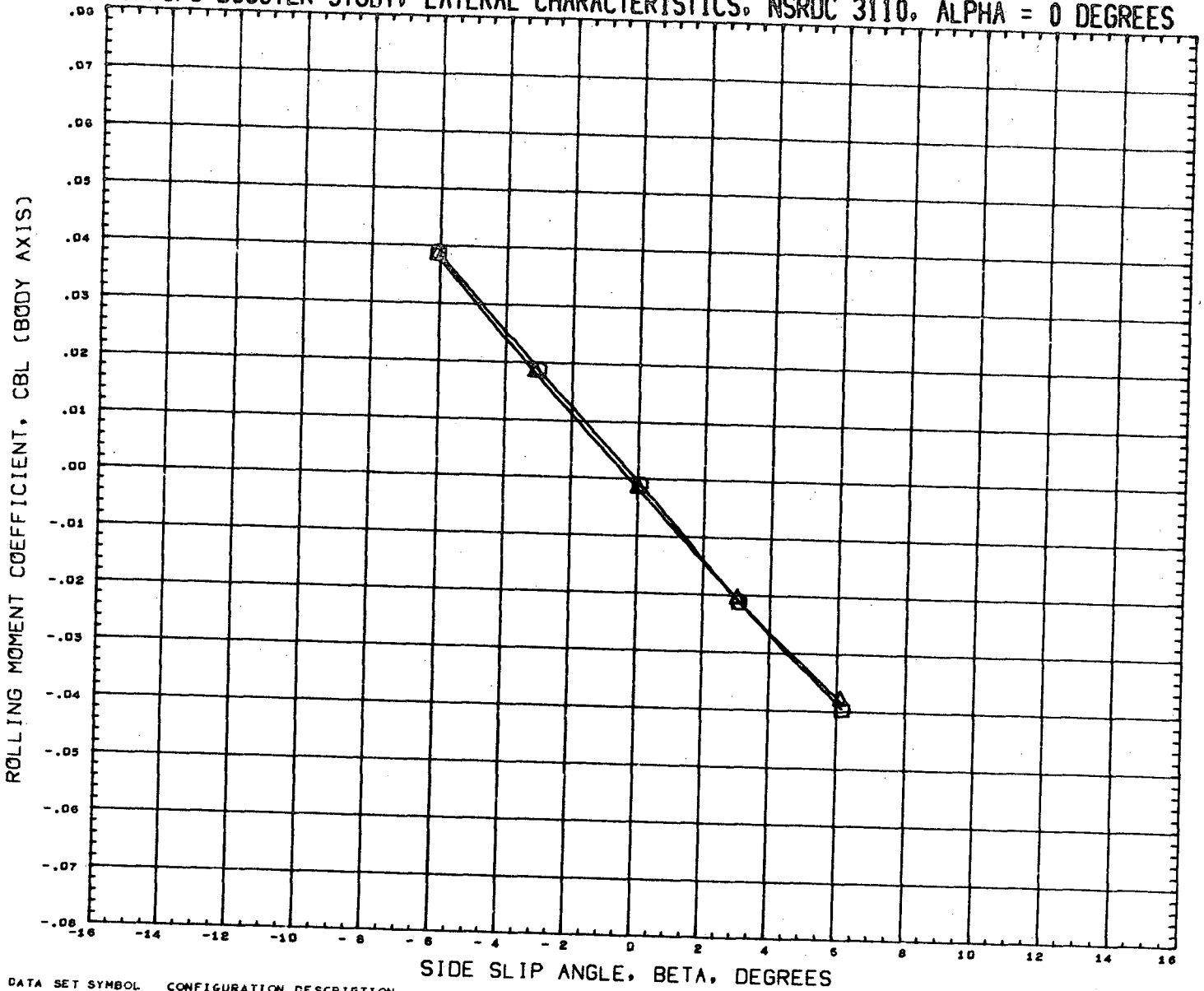




DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (RN2069) ○ NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1
 (RN2073) △ NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1

INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION	
3.000	2.000	0.000	1.000	SREF	1.3550 SQ. FT.
3.000	2.000	0.000	1.000	LREF	41.4360 INCHES
				BREF	41.4360 INCHES
				XMRP	31.1400 INCHES
				YMRP	0.0000 INCHES
				ZMRP	0.2250 INCHES
				SCALE	1.5000 PERCENT

MACH D.301

LMSC/MSFC BOOSTER STUDY, LATERAL CHARACTERISTICS, NSRDC 3110, ALPHA = 0 DEGREES



DATA SET SYMBOL
(RN2010) 
(RN2074) 

CONFIGURATION DESCRIPTION
NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1
NSRDC-3110,MSFC/LMSC BOOSTER B1C1F1W1V1

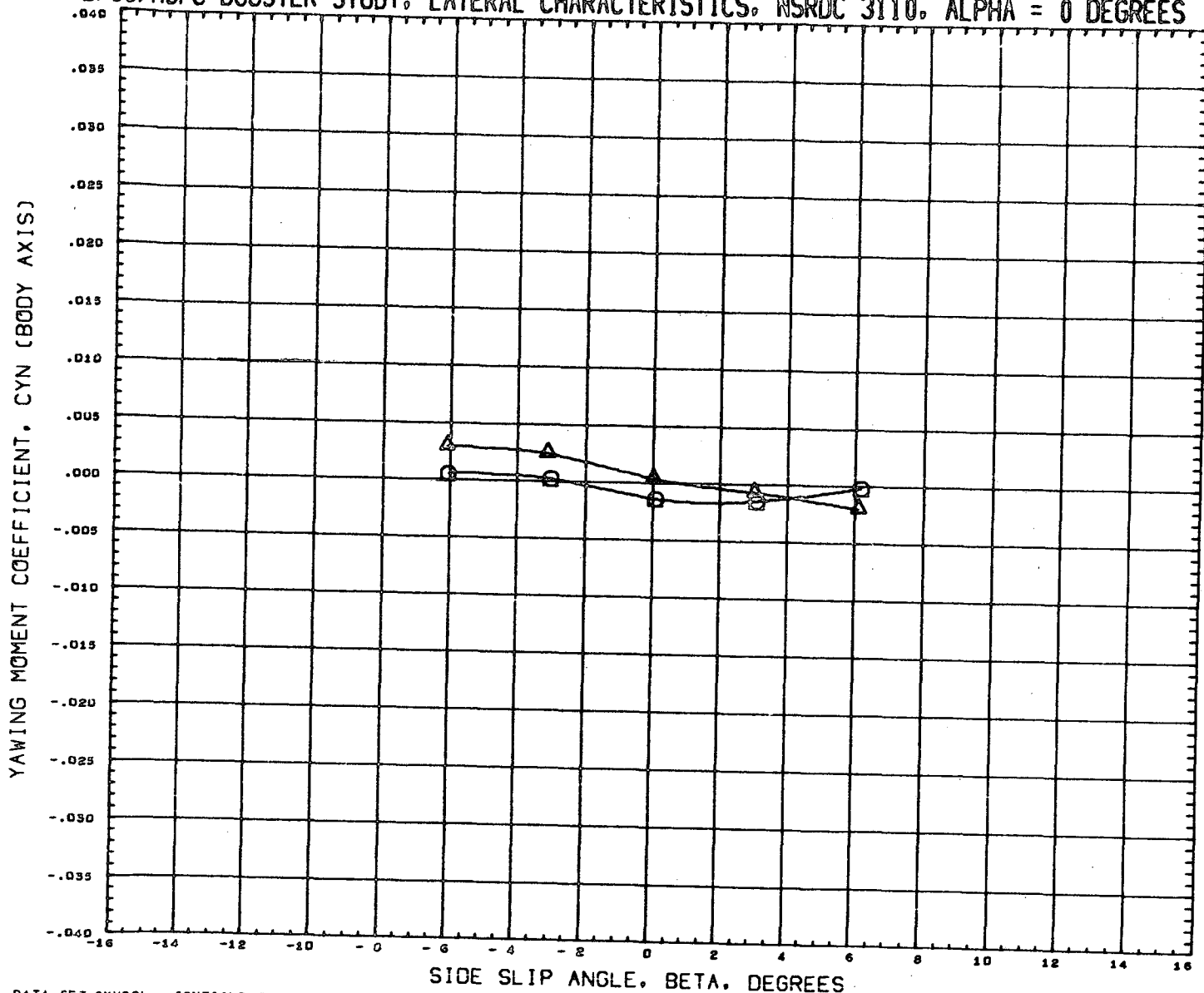
INCIDC	CNDPOS	INCIDW	WNGPOS
3.000	2.000	0.000	1.000
3.000	2.000	0.000	1.000

REFERENCE INFORMATION

SREF	1.3550	SQ.FT.
LREF	41.4360	INCHES
BREF	41.4360	INCHES
XMRP	31.1400	INCHES
YMRP	0.0000	INCHES
ZMRP	0.2250	INCHES
SCALE	1.5000	PERCNT

MACH 0.382

LMSC/MSFC BOOSTER STUDY, LATERAL CHARACTERISTICS, NSRDC 3110, ALPHA = 0 DEGREES



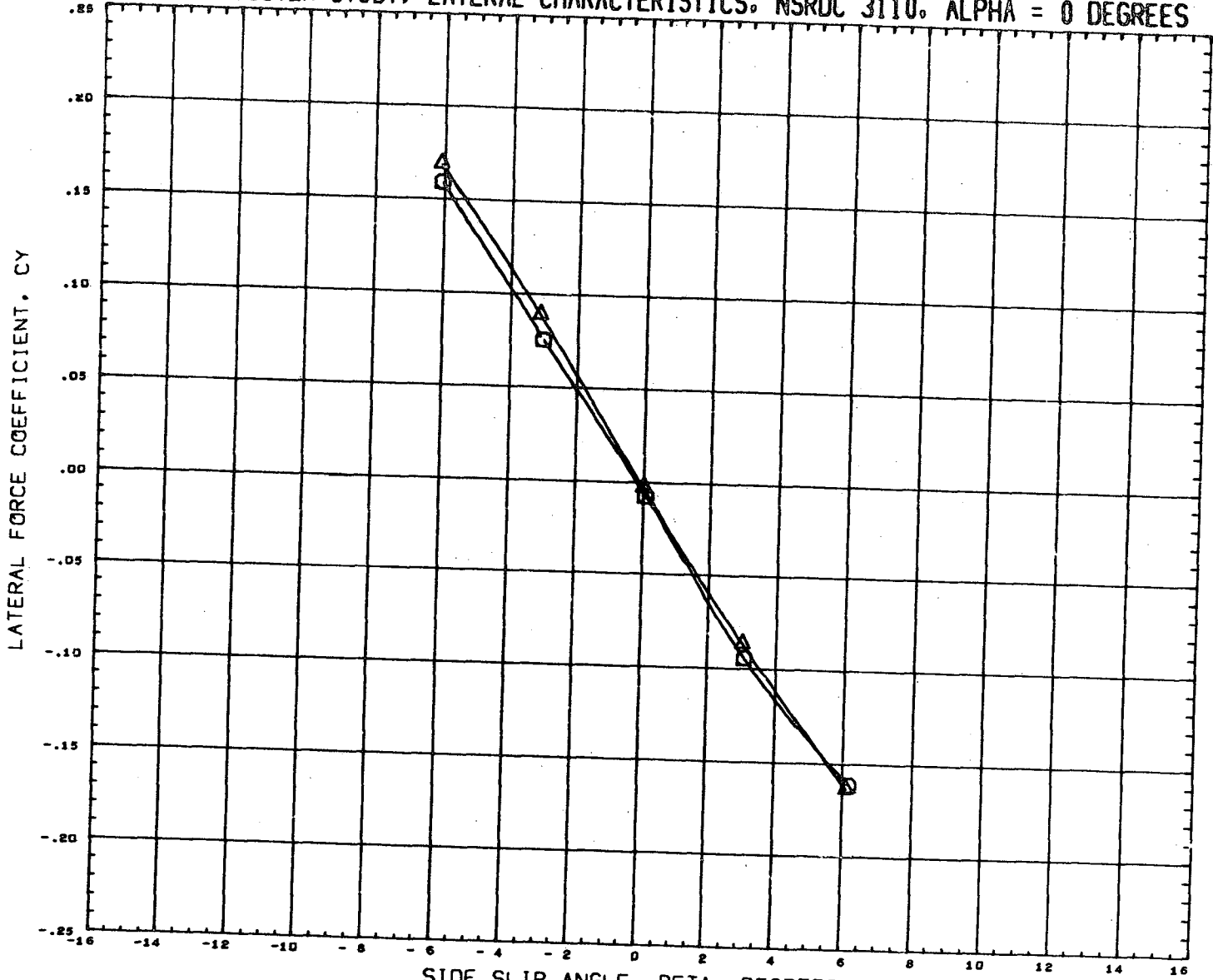
DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(RN2010)	NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1
(RN2074)	NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1

INCIDC	CNDPOS	INCIDW	WNGPOS
3.000	2.000	0.000	1.000
3.000	2.000	0.000	1.000

REFERENCE INFORMATION	
SREF	1.3550 SQ. FT.
LREF	41.4360 INCHES
BREF	41.4360 INCHES
XMRP	31.1400 INCHES
YMRP	0.0000 INCHES
ZMRP	0.2250 INCHES
SCALE	1.5000 PERCENT

MACH 0.382

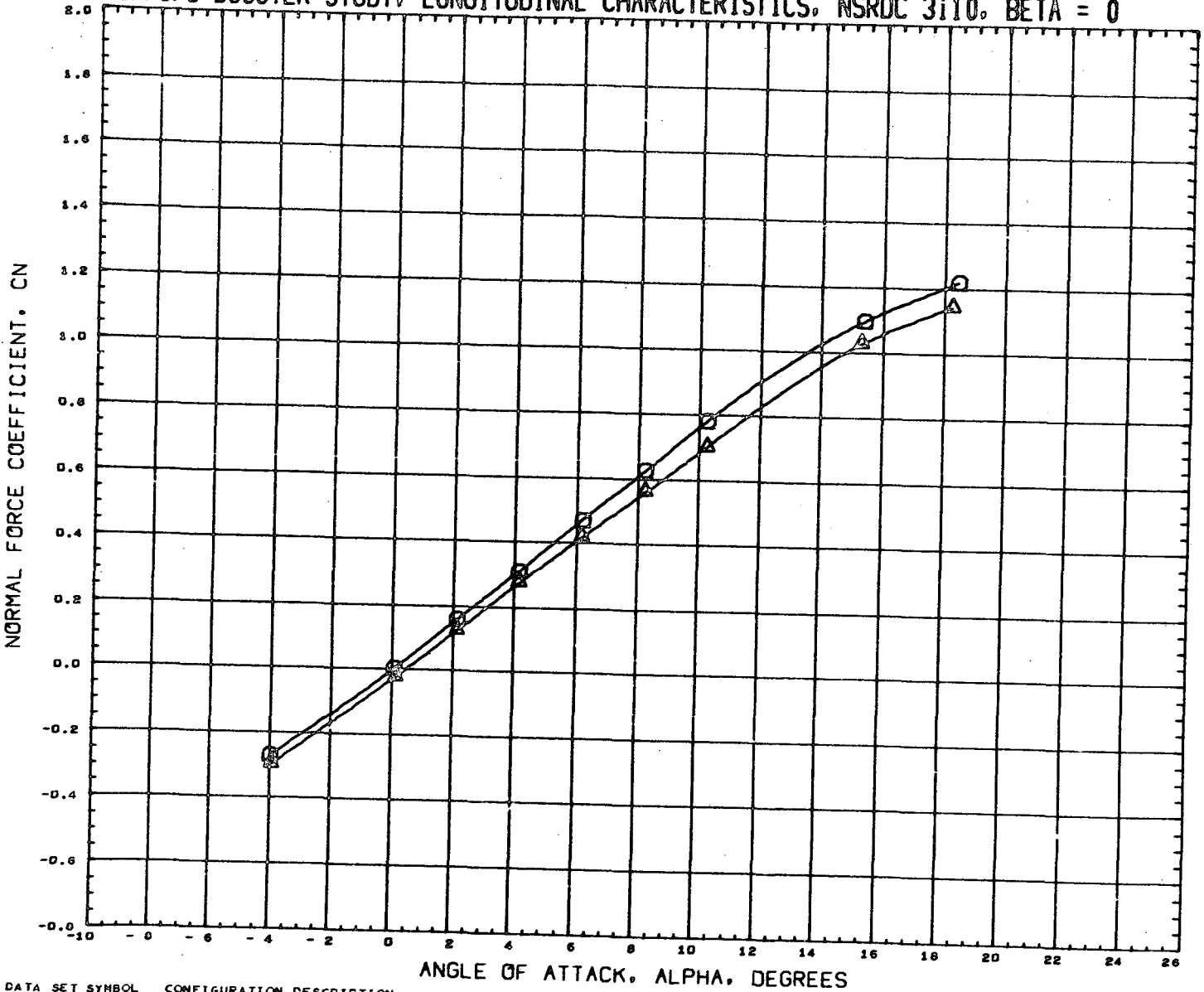
LMSC/MSFC BOOSTER STUDY, LATERAL CHARACTERISTICS, NSRDC 3110, ALPHA = 0 DEGREES



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2D10)	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1	3.000	2.000	0.000	1.000	SREF 1.3550 SQ.FT.
(RN2D74)	NSRDC-3110,MSFC/LMSC BOOSTER B1C1F1W1V1	3.000	2.000	0.000	1.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCNT

MACH 0.382

LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0

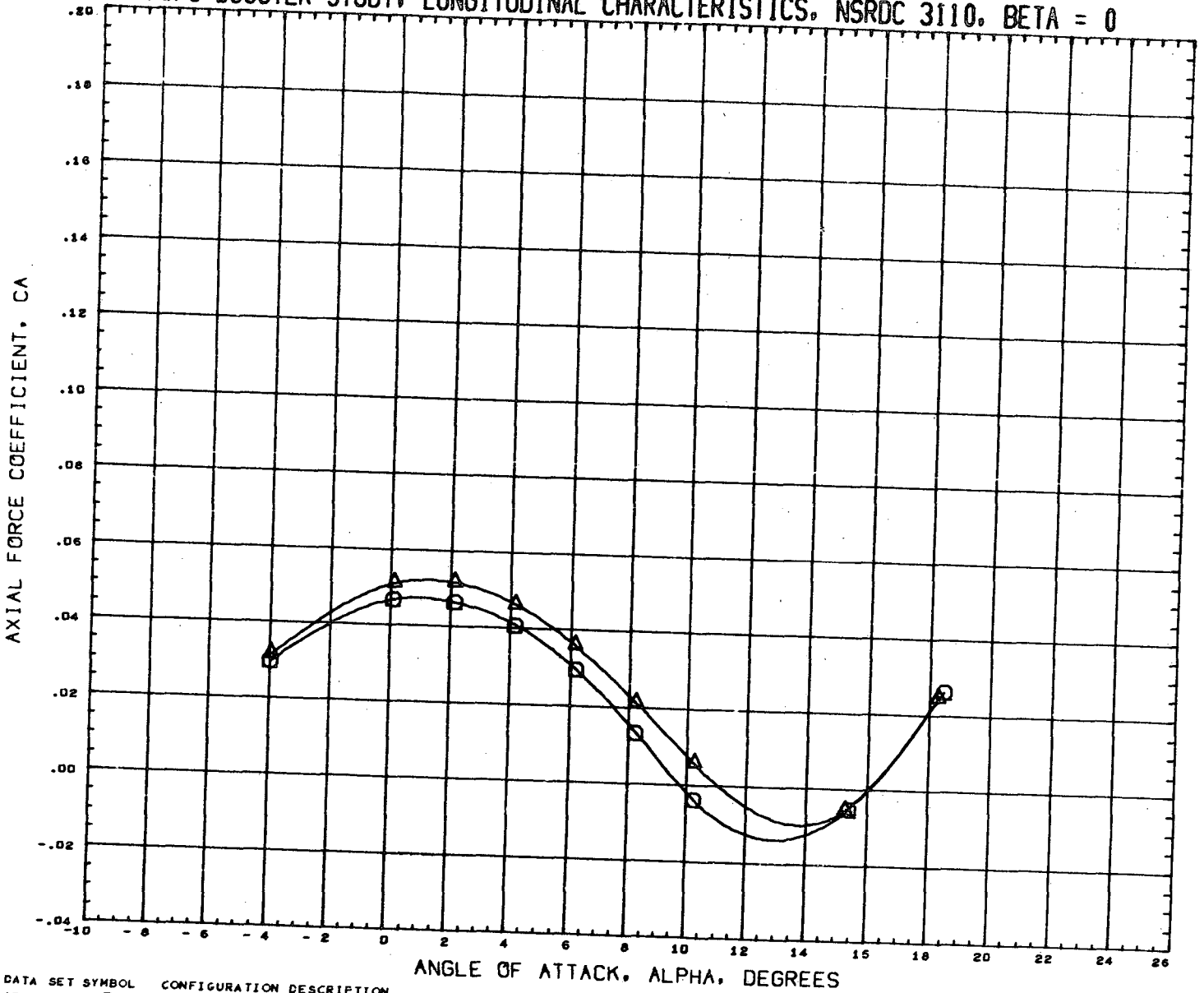



DATA SET SYMBOL (RN2017) \square CONFIGURATION DESCRIPTION NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1
 (RN2025) \triangle NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1

INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION	
3.000	1.000	0.000	2.000	SREF	1.3550 SQ.FT.
3.000	2.000	0.000	2.000	LREF	41.4360 INCHES
				BREF	41.4360 INCHES
				XMRP	31.1400 INCHES
				YMRP	0.0000 INCHES
				ZMRP	0.2250 INCHES
				SCALE	1.5000 PERCENT

MACH 0.362

LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



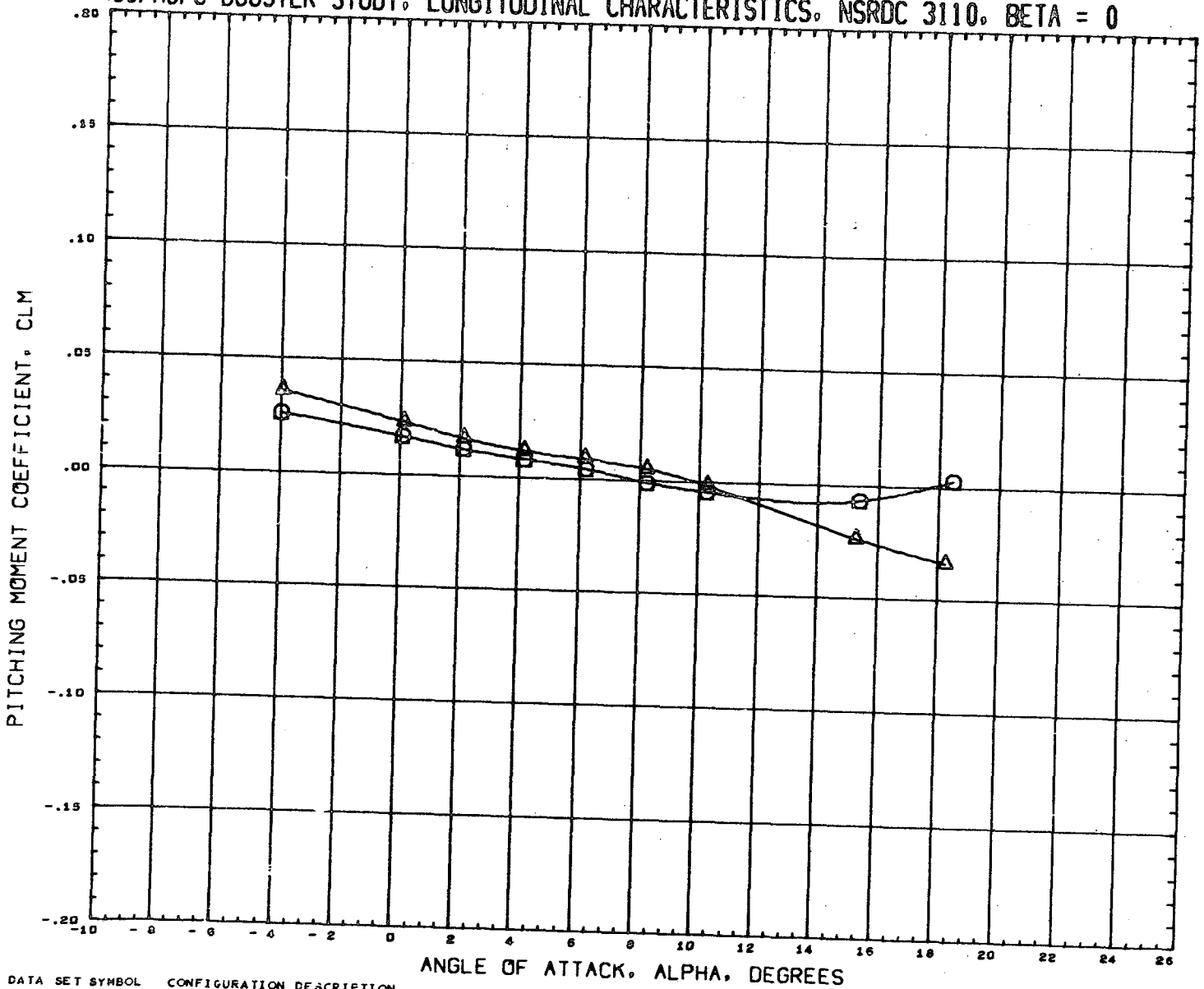
DATA SET SYMBOL (RN2017) (RN2025)  CONFIGURATION DESCRIPTION
 NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1
 NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1

INCIDC	CNDPOS	INCIDW	WNGPOS
3.000	1.000	0.000	2.000
3.000	2.000	0.000	2.000

REFERENCE INFORMATION	
SREF	1.3550 SQ.FT.
LREF	41.4360 INCHES
BREF	41.4360 INCHES
XMRP	31.1400 INCHES
YMRP	0.0000 INCHES
ZMRP	0.2250 INCHES
SCALE	1.5000 PERCENT

MACH 0.302

LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



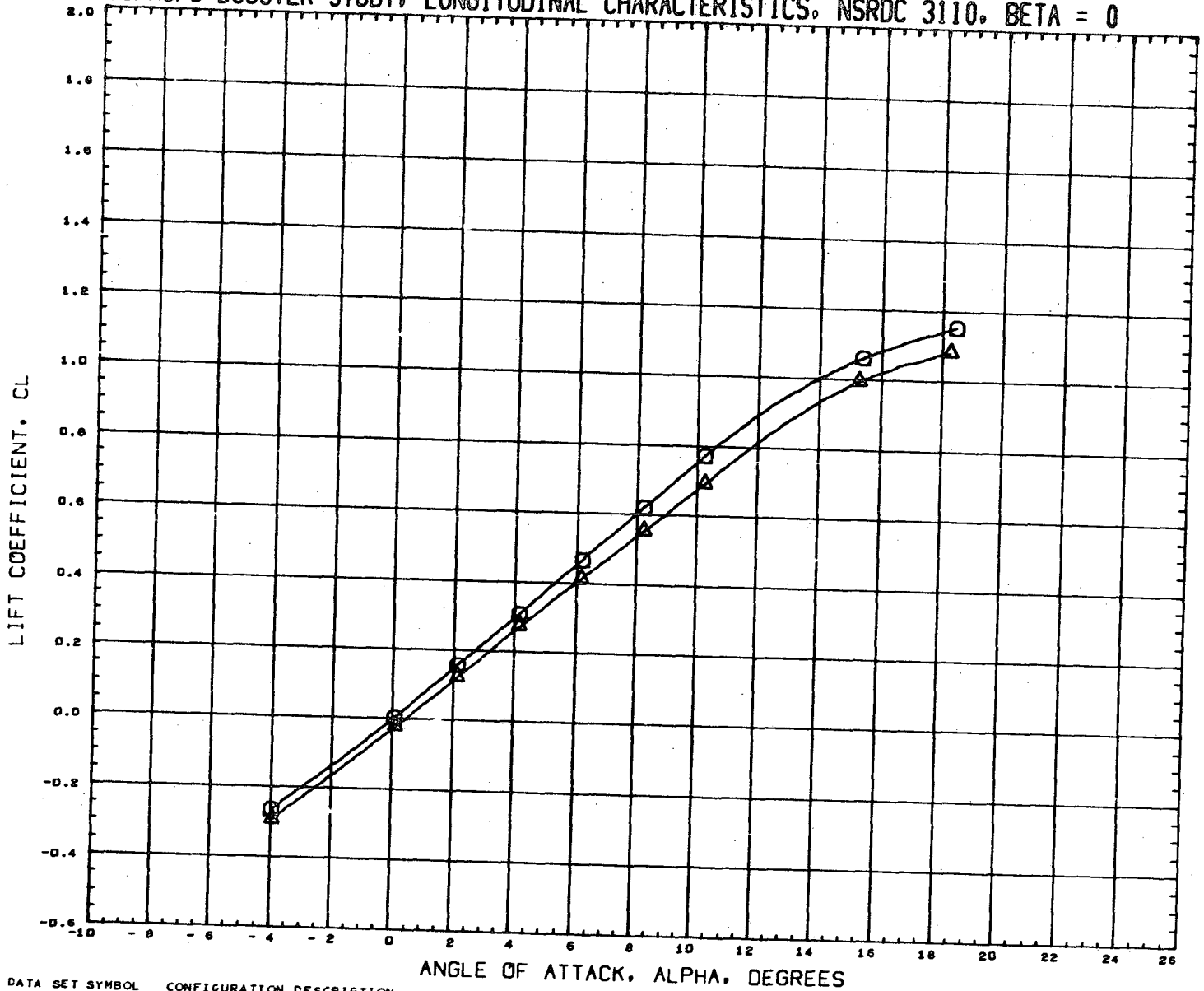
DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(RN2017)	NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1
(RN2025)	NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1

INCIDC	CNDPOS	INCIDW	WNGPOS
3.000	1.000	0.000	2.000
3.000	2.000	0.000	2.000

REFERENCE INFORMATION	
SREF	1.3550 SQ. FT.
LREF	41.4360 INCHES
BREF	41.4360 INCHES
XMRP	31.1400 INCHES
YMRP	0.0000 INCHES
ZMRP	0.2250 INCHES
SCALE	1.5000 PERCENT

MACH 0.382

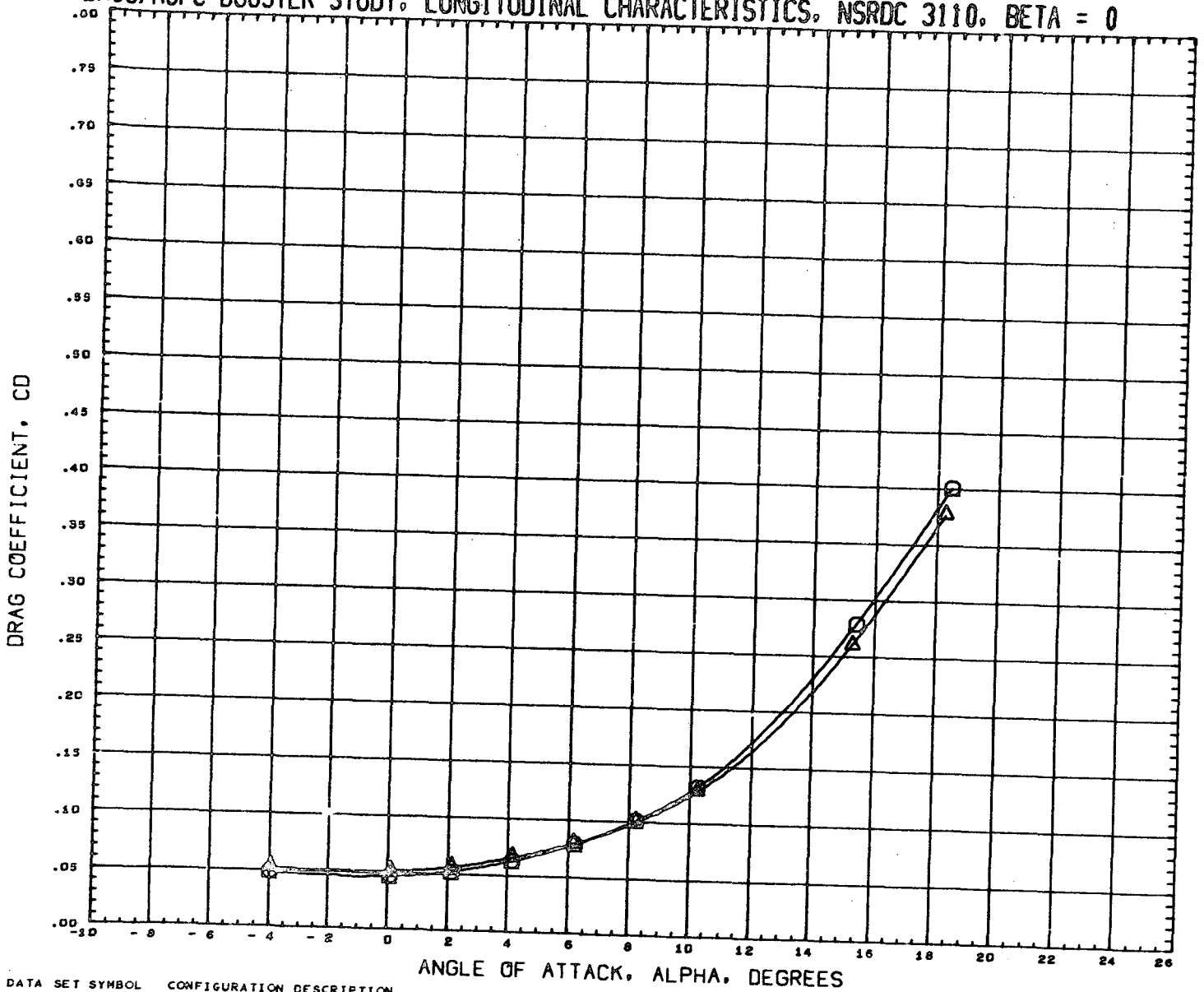
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2017)	NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1	3.000	1.000	0.000	2.000	SREF 1.3550 SQ. FT.
(RN2025)	NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1	3.000	2.000	0.000	2.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCENT

MACH 0.382

LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



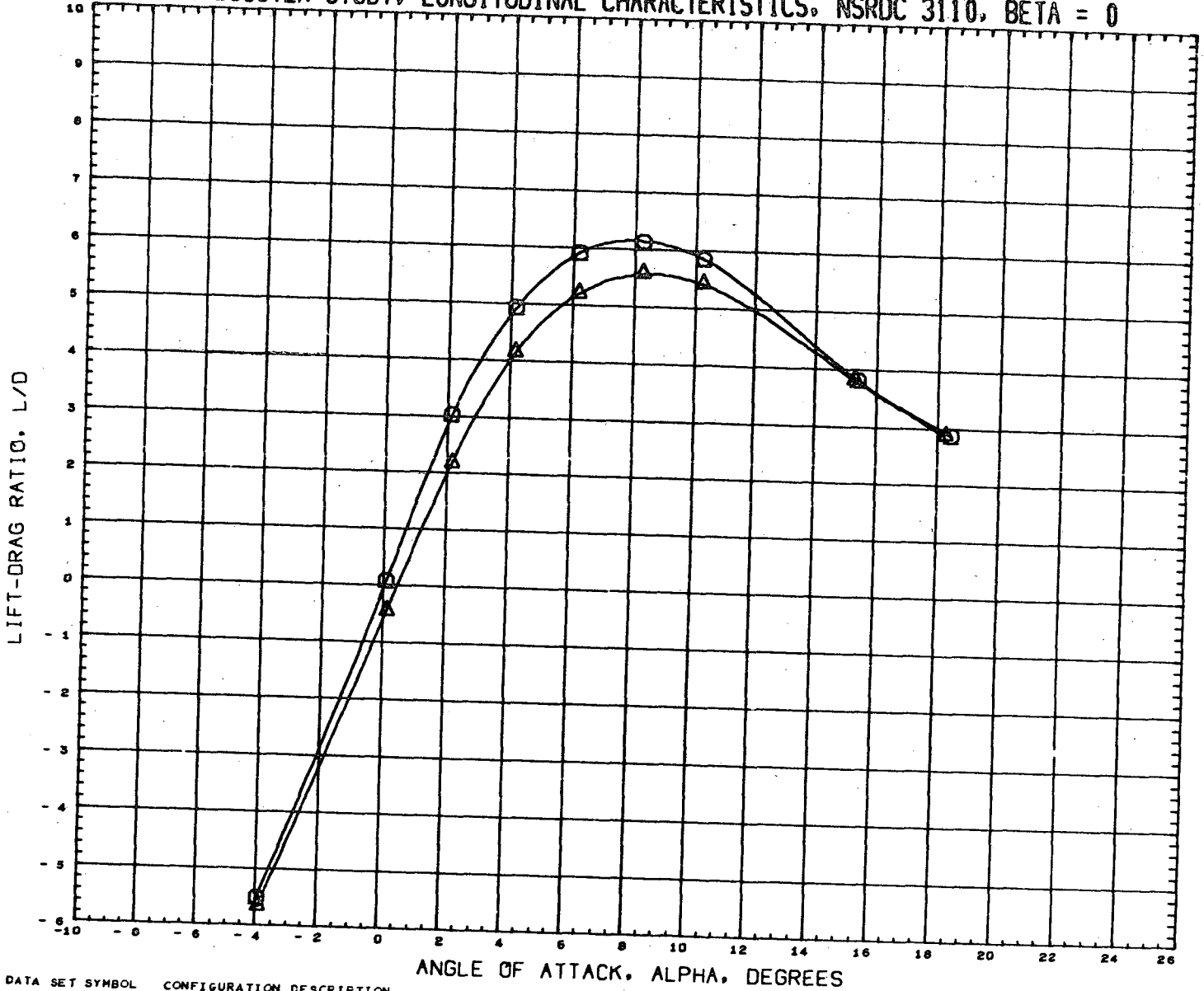
DATA SET SYMBOL (RN2017) (RN2025)   CONFIGURATION DESCRIPTION
 NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1
 NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1

INCIDC	CNDPOS	INCIDW	WNGPOS
3.000	1.000	0.000	2.000
3.000	2.000	0.000	2.000

REFERENCE INFORMATION	
SREF	1.3550 SQ.FT.
LREF	41.4360 INCHES
BREF	41.4360 INCHES
XMRP	31.1400 INCHES
YMRP	0.0000 INCHES
ZMRP	0.2250 INCHES
SCALE	1.5000 PERCENT

MACH 0.382

LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL
(RN2017) □
(RN2025) △

CONFIGURATION DESCRIPTION
NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1
NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1

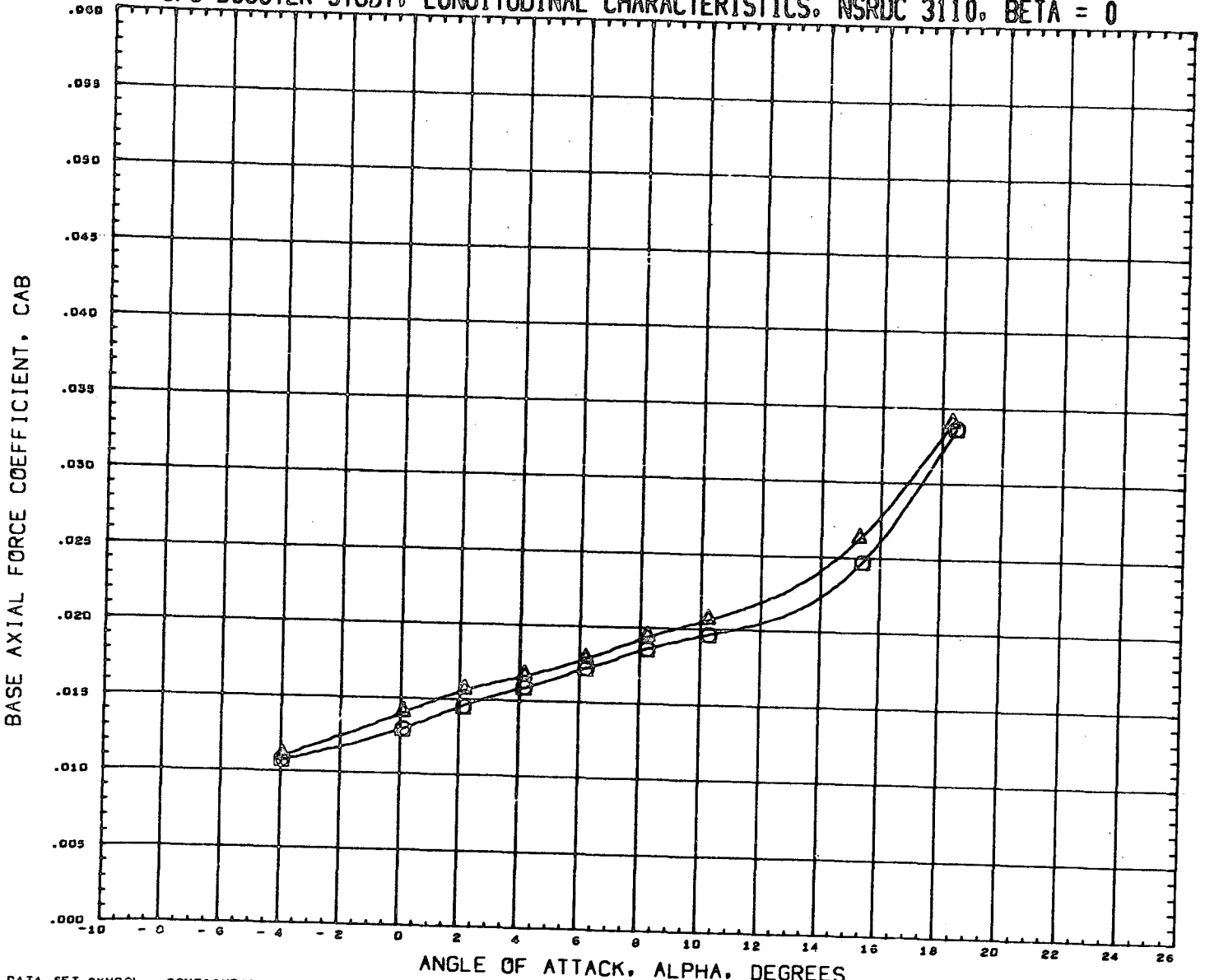
INCIDC	CNDPOS	INCIDW	WNGPOS
3.000	1.000	0.000	2.000
3.000	2.000	0.000	2.000

REFERENCE INFORMATION

SREF	1.3550	SQ.FT.
LREF	41.4360	INCHES
BREF	41.4360	INCHES
XMRP	31.1400	INCHES
YMRP	0.0000	INCHES
ZMRP	0.2250	INCHES
SCALE	1.5000	PERCENT

MACH 0.382

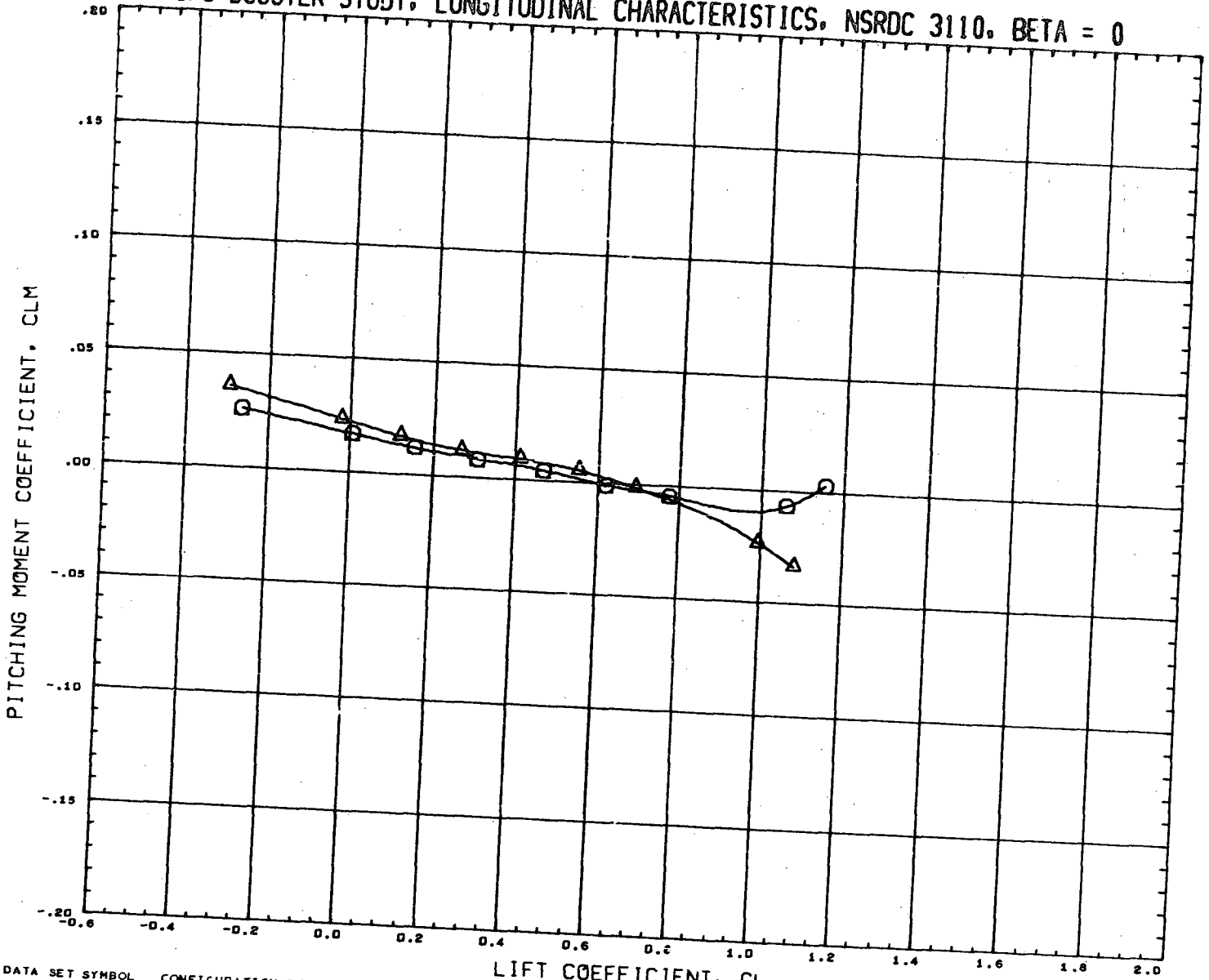
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2017)	NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1	3.000	1.000	0.000	2.000	SREF 1.3550 SQ. FT.
(RN2025)	NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1	3.000	2.000	0.000	2.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCNT

MACH 0.382

LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL
(RN2017)
(RN2025)



CONFIGURATION DESCRIPTION
NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1
NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1

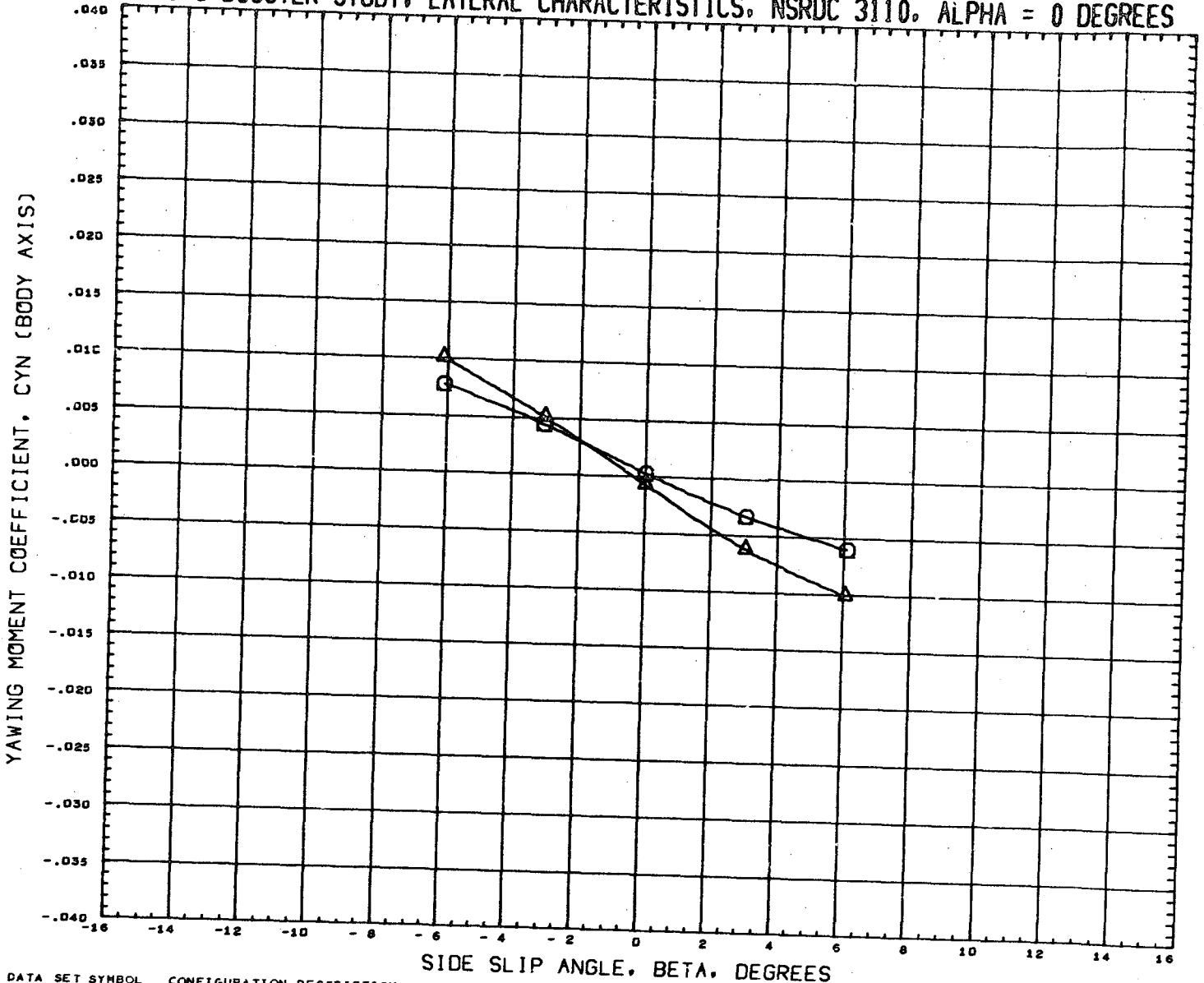
INCIDC	CNDPOS	INCIDW	WNGPOS
3.000	1.000	0.000	2.000
3.000	2.000	0.000	2.000

REFERENCE INFORMATION

SREF	1.3550	SG.FT.
LREF	41.4360	INCHES
BREF	41.4360	INCHES
XMRP	31.1400	INCHES
YMRP	0.0000	INCHES
ZMRP	0.2250	INCHES
SCALE	1.5000	PERCNT

MACH 0.382

LMSC/MSFC BOOSTER STUDY, LATERAL CHARACTERISTICS, NSRDC 3110, ALPHA = 0 DEGREES



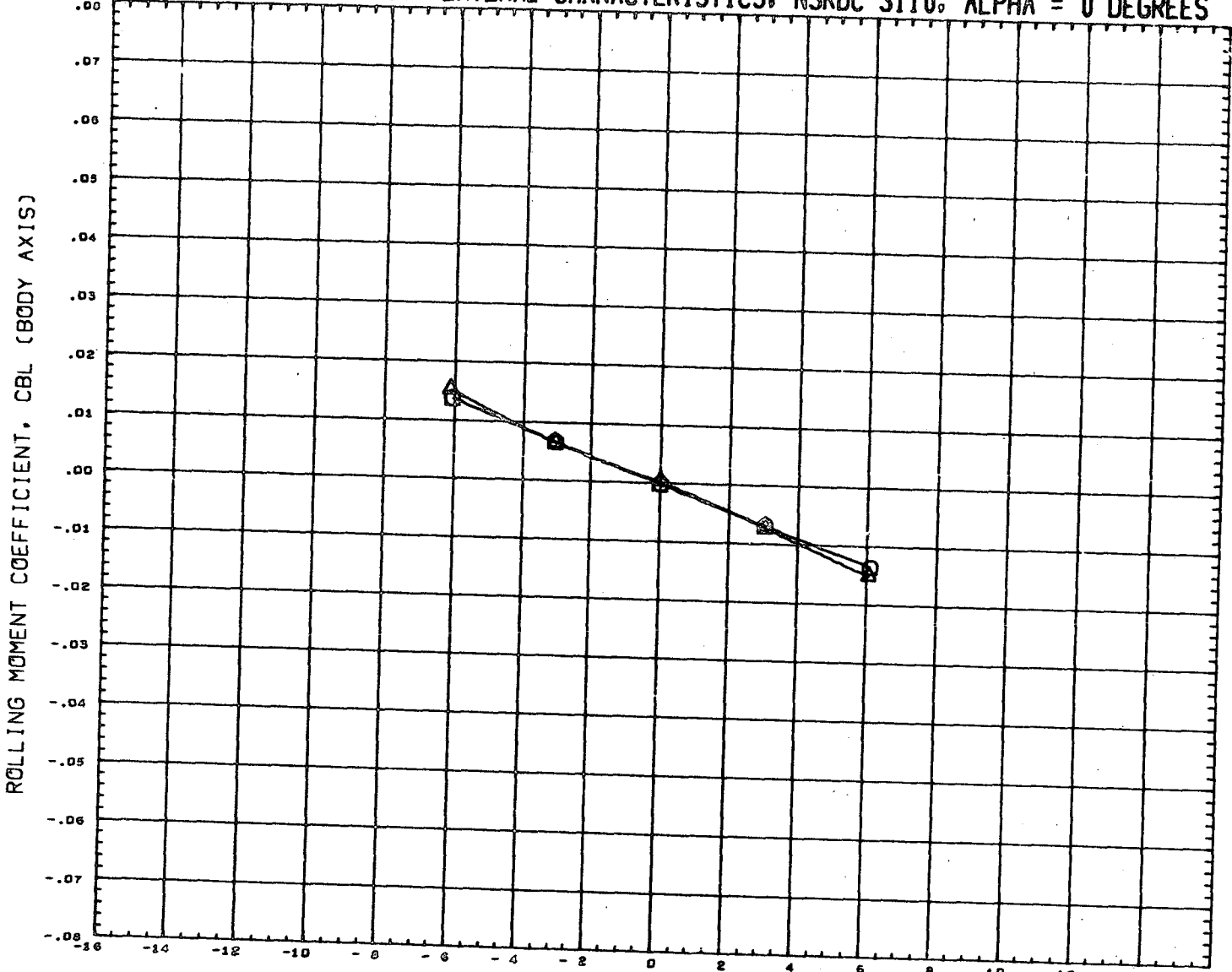
DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (RN2018) ○ NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1
 (RN2026) △ NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1

INCIDC CNDPOS INCIDW WNGPOS
 3.000 1.000 0.000 2.000
 3.000 2.000 0.000 2.000

REFERENCE INFORMATION
 SREF 1.3550 SQ. FT.
 LREF 41.4360 INCHES
 BREF 41.4360 INCHES
 XMRP 31.1400 INCHES
 YMRP 0.0000 INCHES
 ZMRP 0.2250 INCHES
 SCALE 1.5000 PERCNT

MACH 0.381

LMSC/MSFC BOOSTER STUDY, LATERAL CHARACTERISTICS, NSRDC 3110, ALPHA = 0 DEGREES



DATA SET SYMBOL
(RN2018)
(RN2026)



CONFIGURATION DESCRIPTION
NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1
NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1

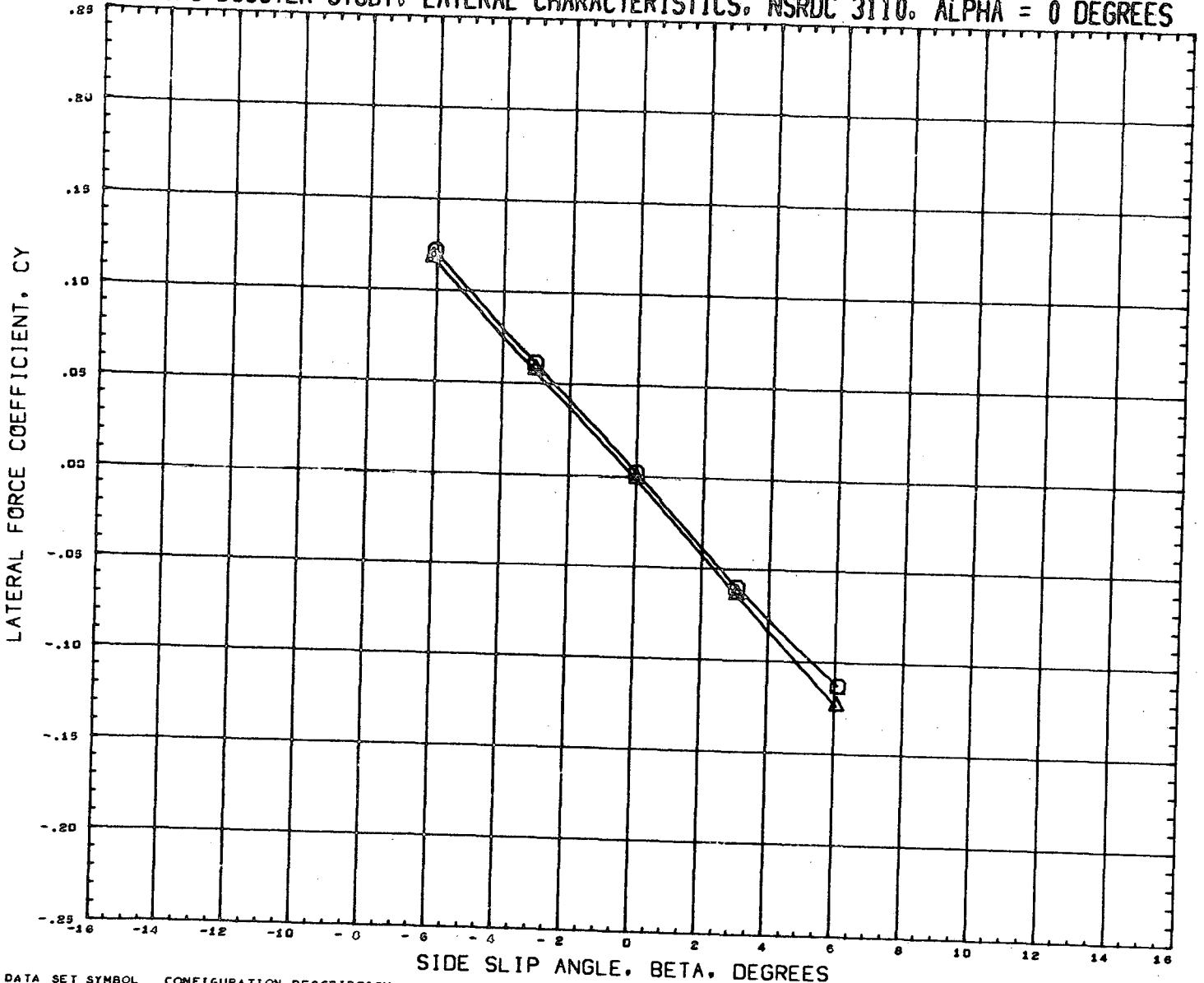
INCIDC	CNDPOS	INCIDW	WNGPOS
3.000	1.000	0.000	2.000
3.000	2.000	0.000	2.000

REFERENCE INFORMATION

SREF	1.3550	SQ.FT.
LREF	41.4360	INCHES
BREF	41.4360	INCHES
XMRP	31.1400	INCHES
YMRP	0.0000	INCHES
ZMRP	0.2250	INCHES
SCALE	1.5000	PERCNT

MACH 0.361

LMSC/MSFC BOOSTER STUDY, LATERAL CHARACTERISTICS, NSRDC 3110, ALPHA = 0 DEGREES



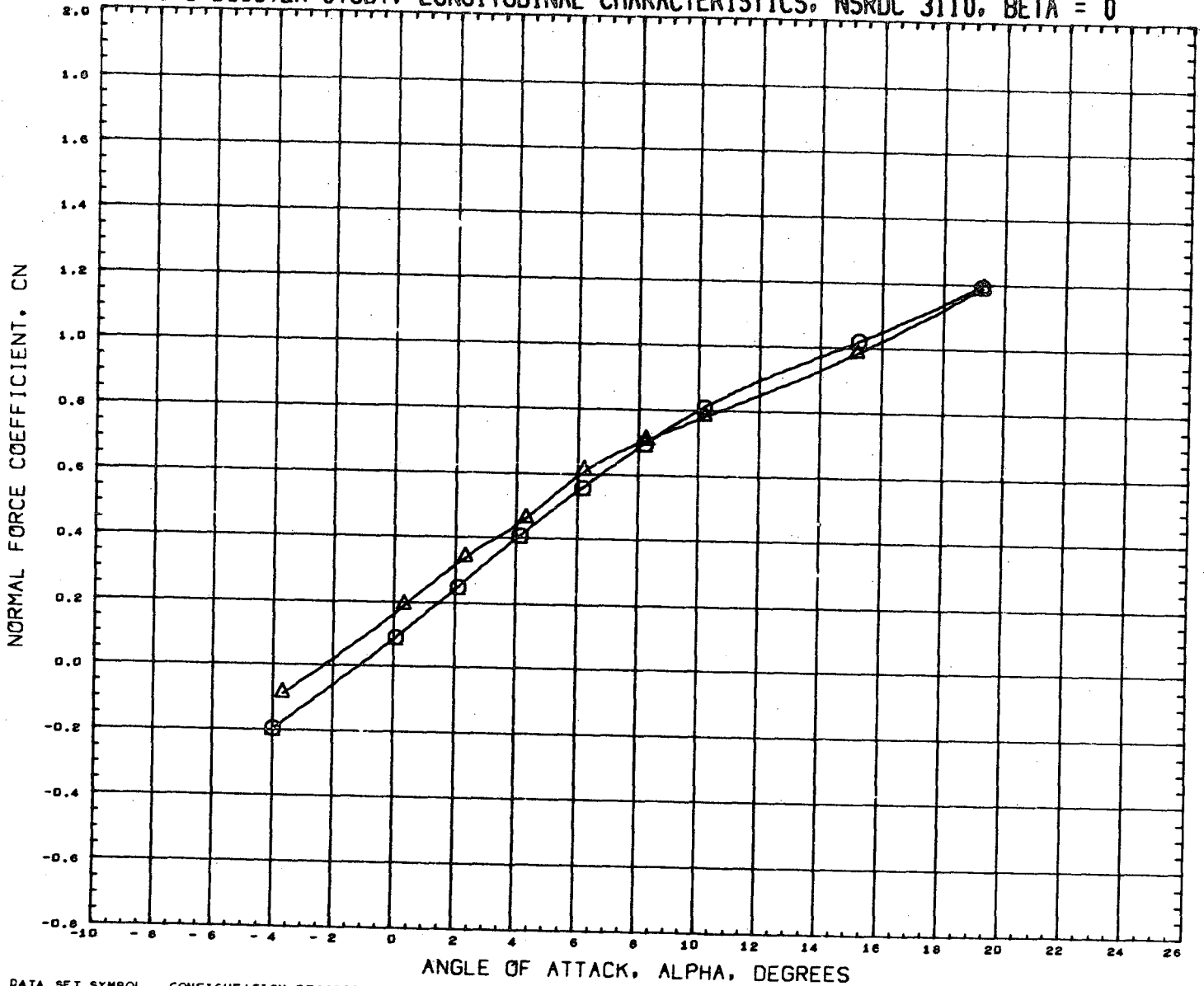
DATA SET SYMBOL (RN2018) (RN2026) CONFIGURATION DESCRIPTION NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1 NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1

INCIDC	CNDPOS	INCIDW	WNGPOS
3.000	1.000	0.000	2.000
3.000	2.000	0.000	2.000

REFERENCE INFORMATION	
SREF	1.3550 SQ. FT.
LREF	41.4360 INCHES
BREF	41.4360 INCHES
XMRP	31.1400 INCHES
YMRP	0.0000 INCHES
ZMRP	0.2250 INCHES
SCALE	1.5000 PERCENT

MACH 0.381

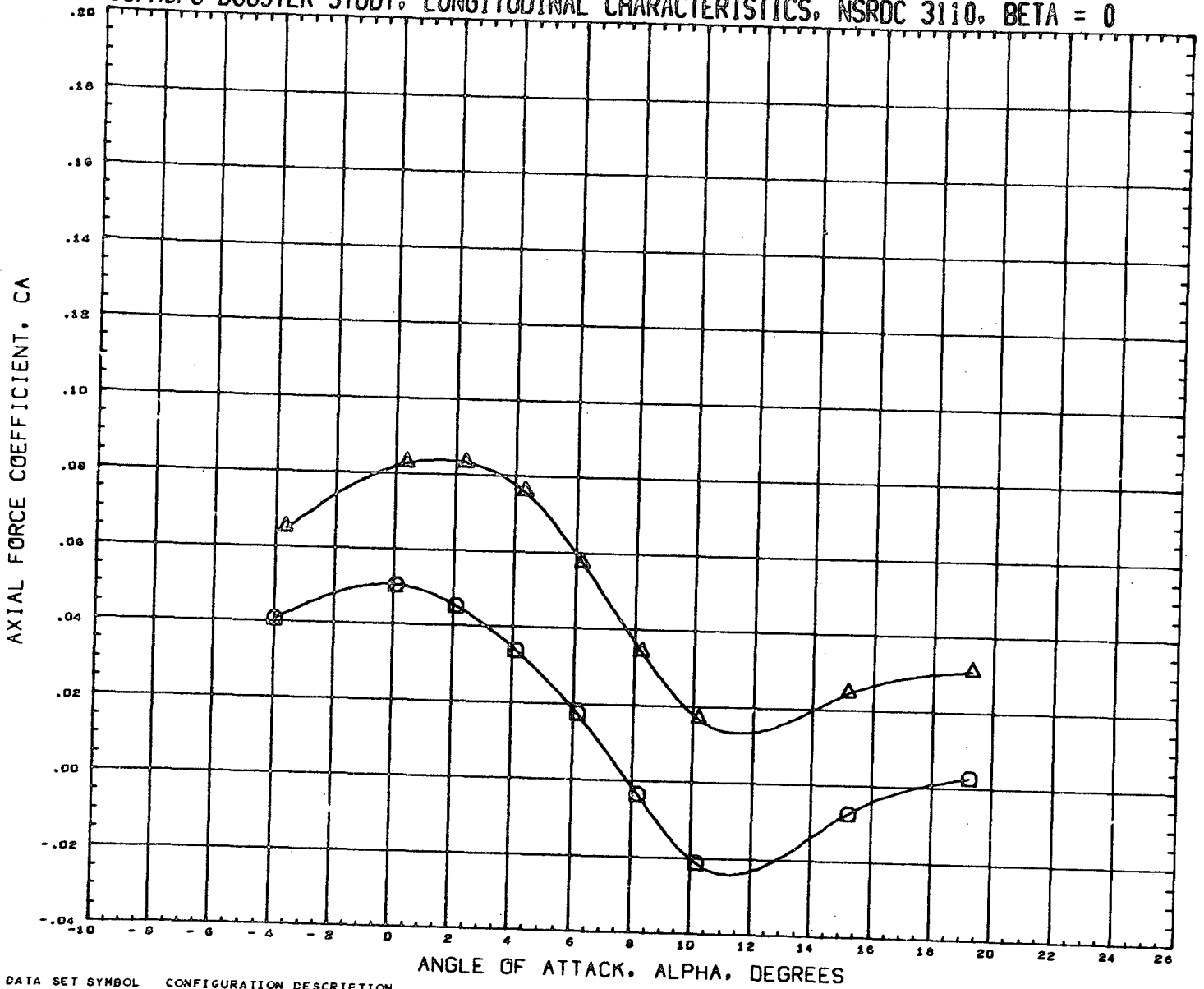
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN20G9)	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1	3.000	2.000	0.000	1.000	SREF 1.3550 SQ.FT.
(RN20I3)	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1	15.000	2.000	0.000	1.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCENT

MACH 0.381

LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (R2009) □ NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1
 (R2013) △ NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1

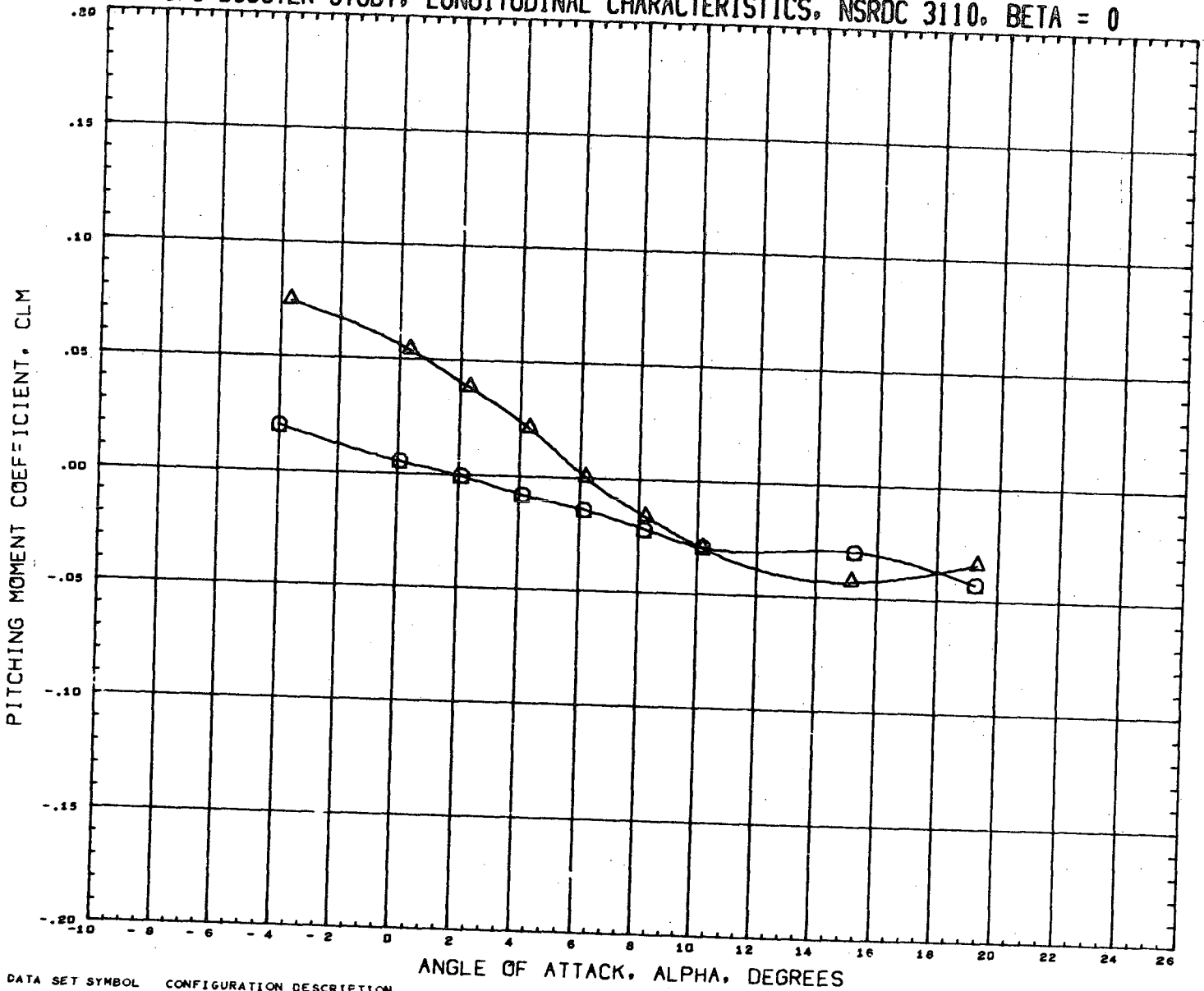
INCIDC	CNDPOS	INCIDW	WNGPOS
3.000	2.000	0.000	1.000
15.000	2.000	0.000	1.000

REFERENCE INFORMATION

SREF	1.3550	SQ.FT.
LREF	41.4360	INCHES
BREF	41.4360	INCHES
XMRP	31.1400	INCHES
YMRP	0.0000	INCHES
ZMRP	0.2250	INCHES
SCALE	1.5000	PERCENT

MACH 0.381

LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL
(RN2009) \square
(RN2013) \triangle

CONFIGURATION DESCRIPTION
NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1
NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1

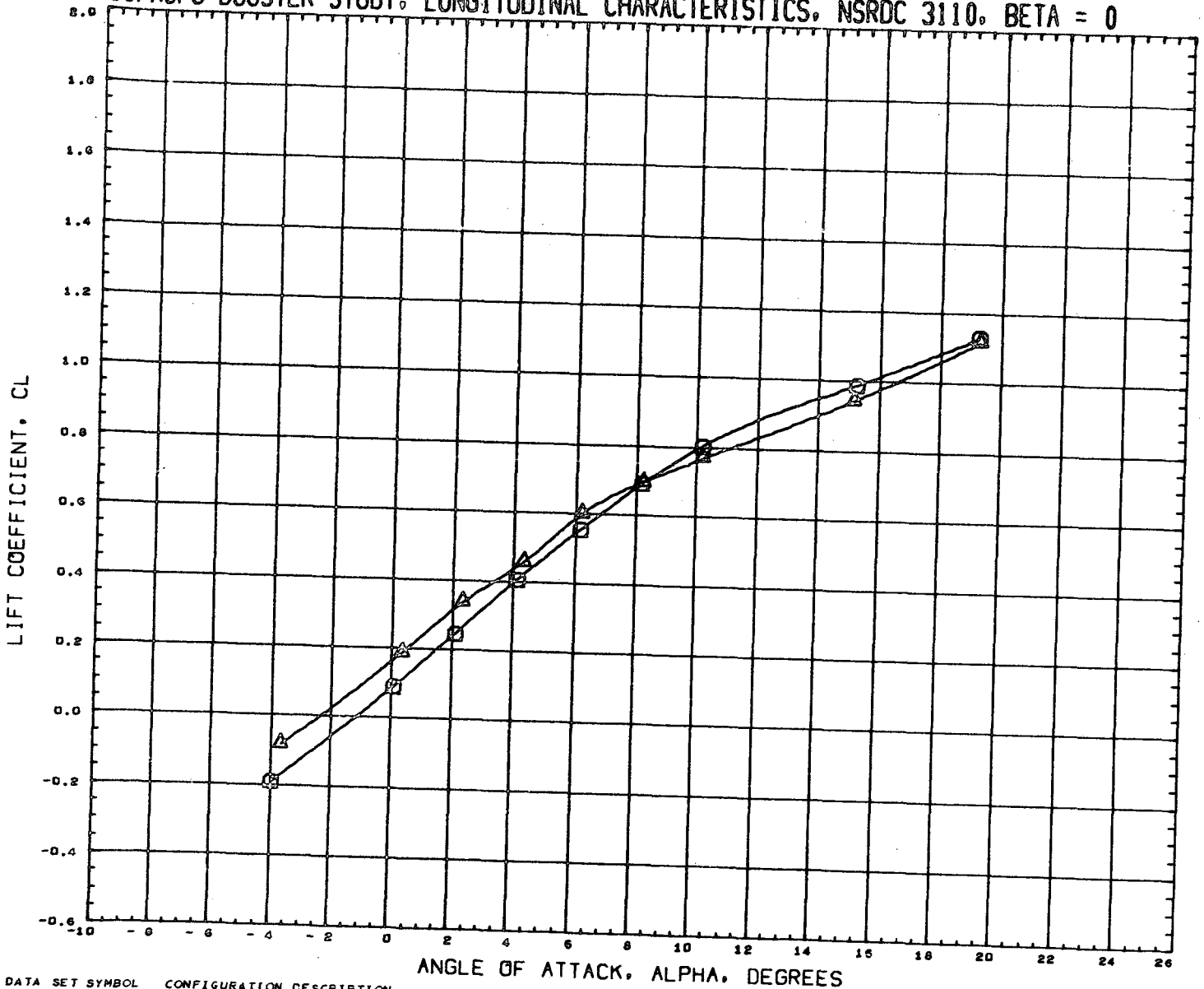
INCIDC	CNDPOS	INCIDW	WNGPOS
3.000	2.000	0.000	1.000
15.000	2.000	0.000	1.000

REFERENCE INFORMATION

SREF	1.3550	SQ. FT.
LREF	41.4360	INCHES
BREF	41.4360	INCHES
XMRP	31.1400	INCHES
YMRP	0.0000	INCHES
ZMRP	0.2250	INCHES
SCALE	1.5000	PERCNT

MACH 0.381

LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



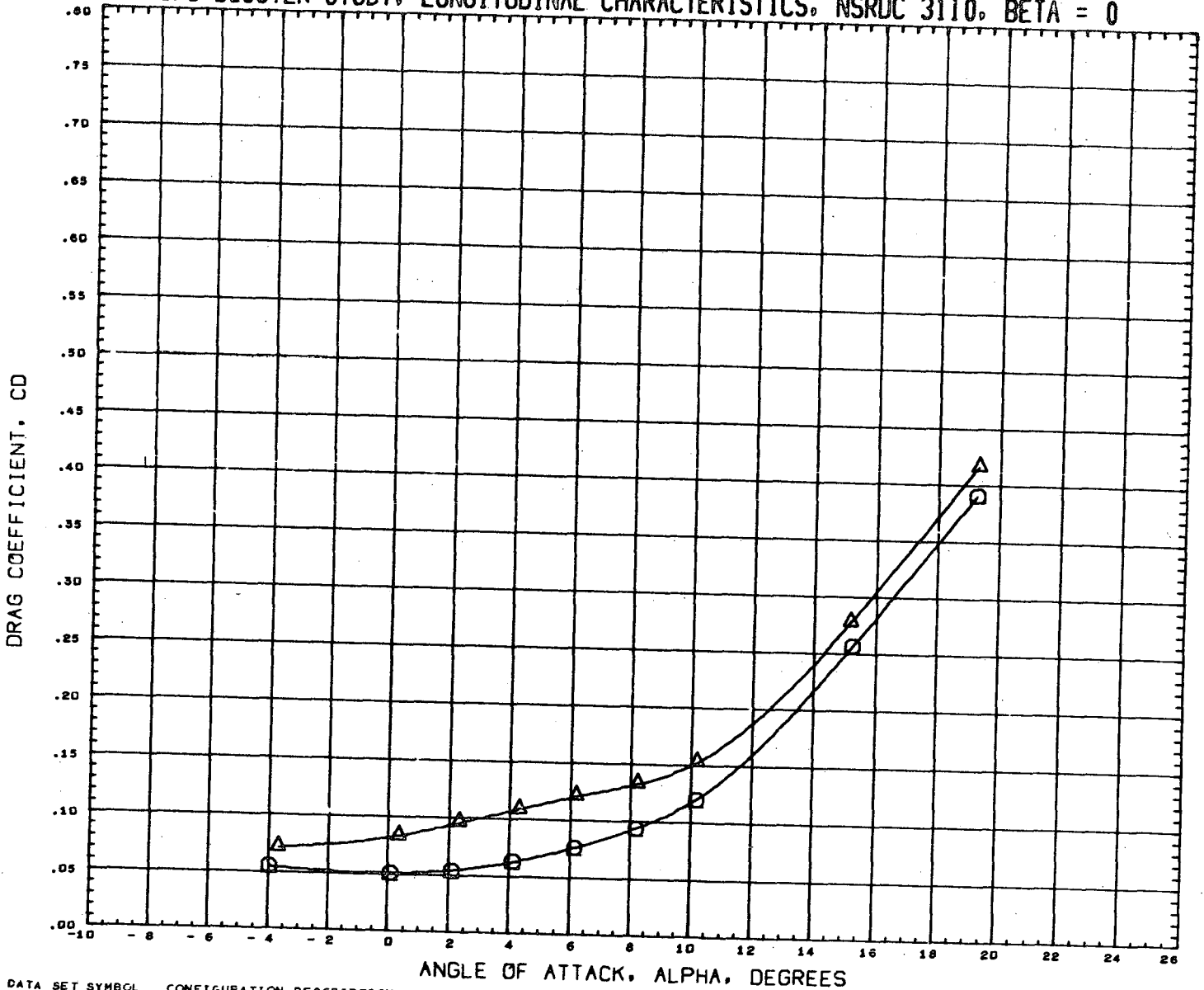
DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(RN2009)	NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1
(RN2013)	NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1

INCIDC	CNDPOS	INCIDW	WNGPOS
3.000	2.000	0.000	1.000
15.000	2.000	0.000	1.000

REFERENCE INFORMATION	
SREF	1.3550 SQ.FT.
LREF	41.4360 INCHES
BREF	41.4360 INCHES
XMRP	31.1400 INCHES
YMRP	0.0000 INCHES
ZMRP	0.2250 INCHES
SCALE	1.5000 PERCENT

MACH 0.381

LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL
(RN2009)
(RN2013)



CONFIGURATION DESCRIPTION

NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1
NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1

INCIDC	CNDPOS	INCIDW	WNGPOS
3.000	2.000	0.000	1.000
15.000	2.000	0.000	1.000

REFERENCE INFORMATION

SREF	1.3550	SQ.FT.
LREF	41.4360	INCHES
BREF	41.4360	INCHES
XMRP	31.1400	INCHES
YMRP	0.0000	INCHES
ZMRP	0.2250	INCHES
SCALE	1.5000	PERCENT

MACH 0.381

LMSC/MSFC BOOSTER STUDY. LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL
(RN2009) \square
(RN2013) \triangle

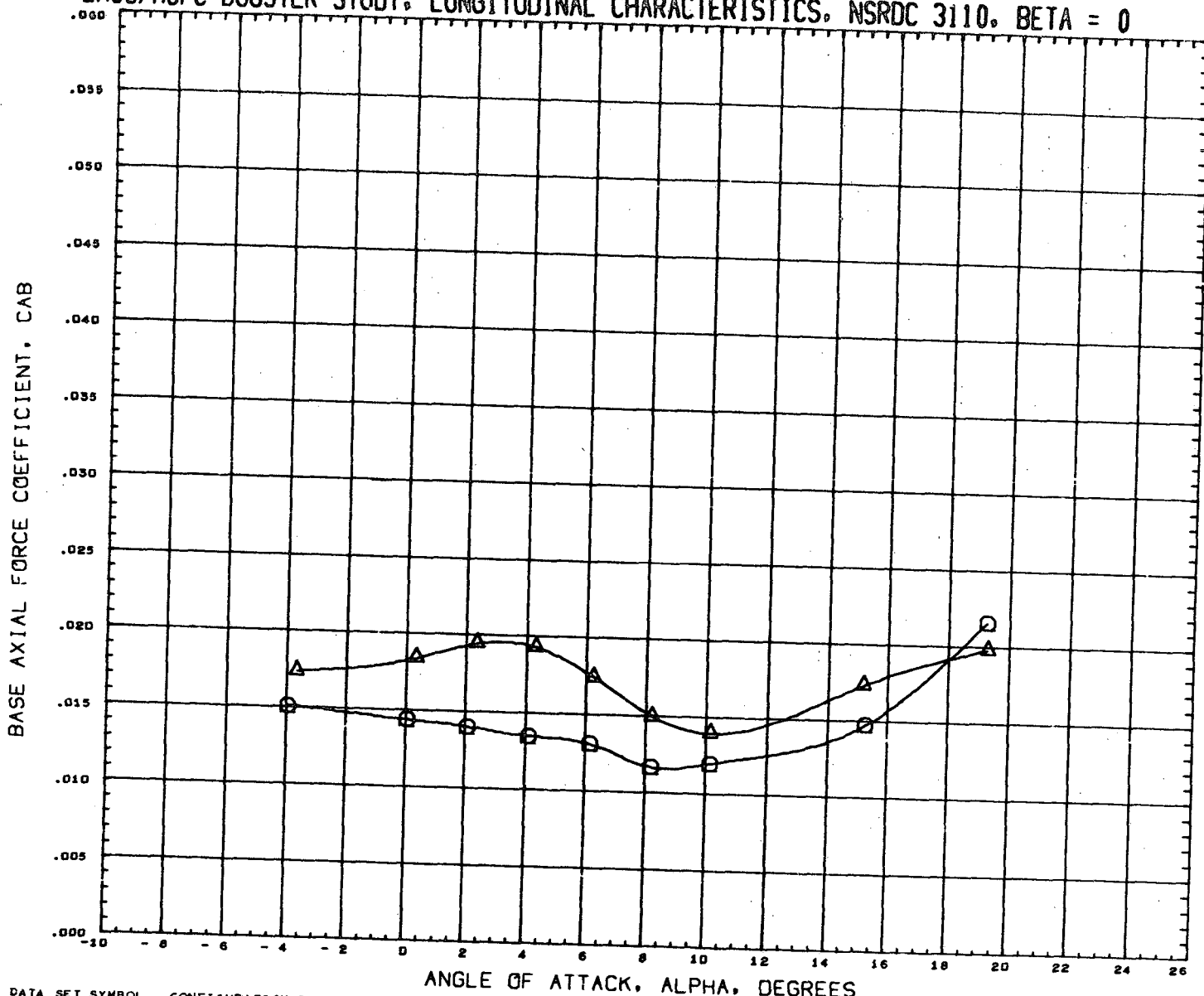
CONFIGURATION DESCRIPTION
NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1
NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1



INCIDC	CNDPOS	INCIDW	WNGPOS
3.000	2.000	0.000	1.000
15.000	2.000	0.000	1.000

REFERENCE INFORMATION	
SREF	1.3550 SQ. FT.
LREF	41.4360 INCHES
BREF	41.4360 INCHES
XMRP	31.1400 INCHES
YMRP	0.0000 INCHES
ZMRP	0.2250 INCHES
SCALE	1.5000 PERCENT

MACH 0.381

LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL
(RN2009) 
(RN2013) 

CONFIGURATION DESCRIPTION
NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1
NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1

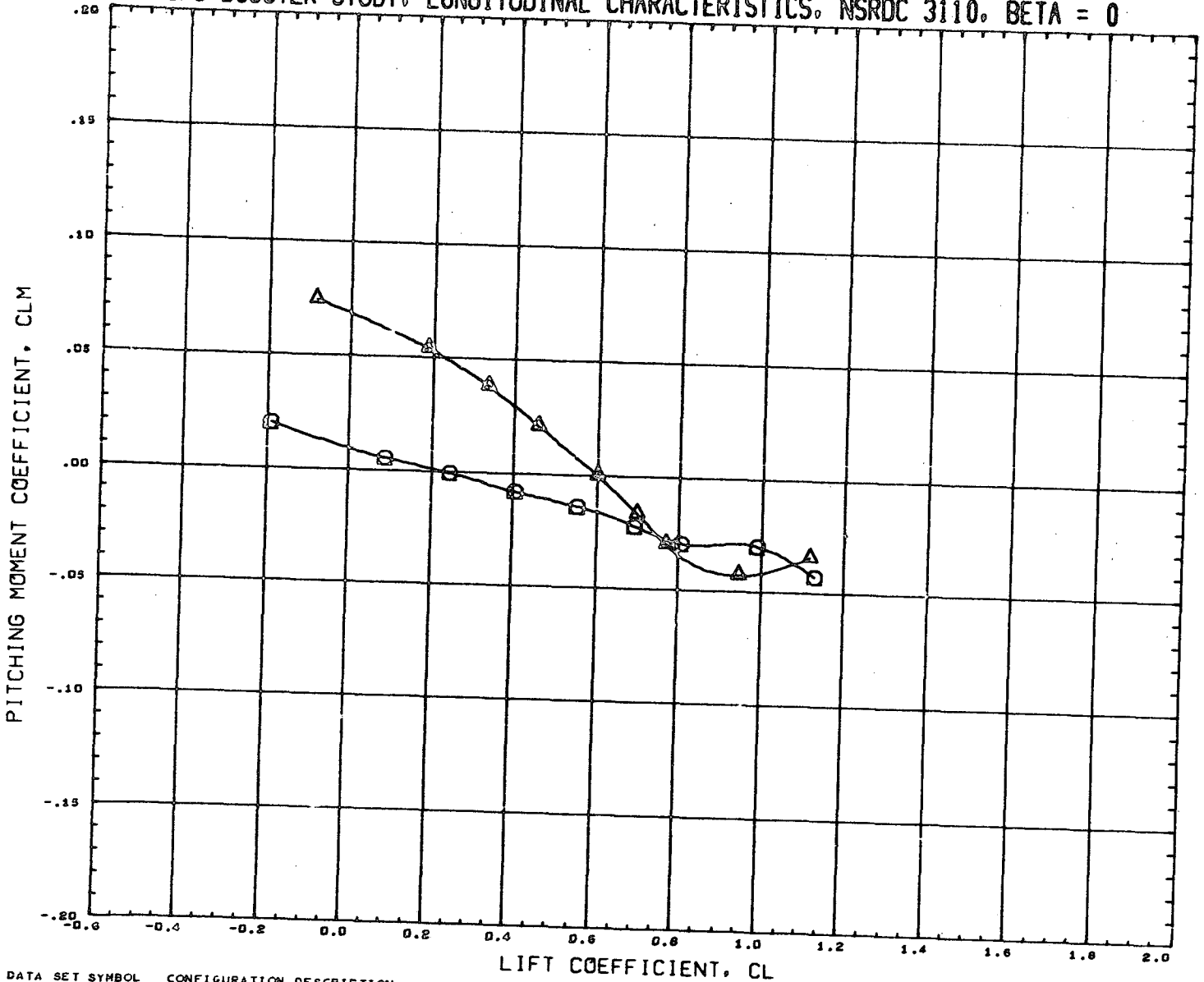
INCIDC	CNDPOS	INCIDW	WNGPOS
3.000	2.000	0.000	1.000
15.000	2.000	0.000	1.000

REFERENCE INFORMATION

SREF	1.3550	SQ. FT.
LREF	41.4360	INCHES
BREF	41.4360	INCHES
XMRP	31.1400	INCHES
YMRP	0.0000	INCHES
ZMRP	0.2250	INCHES
SCALE	1.5000	PERCENT

MACH 0.381

LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



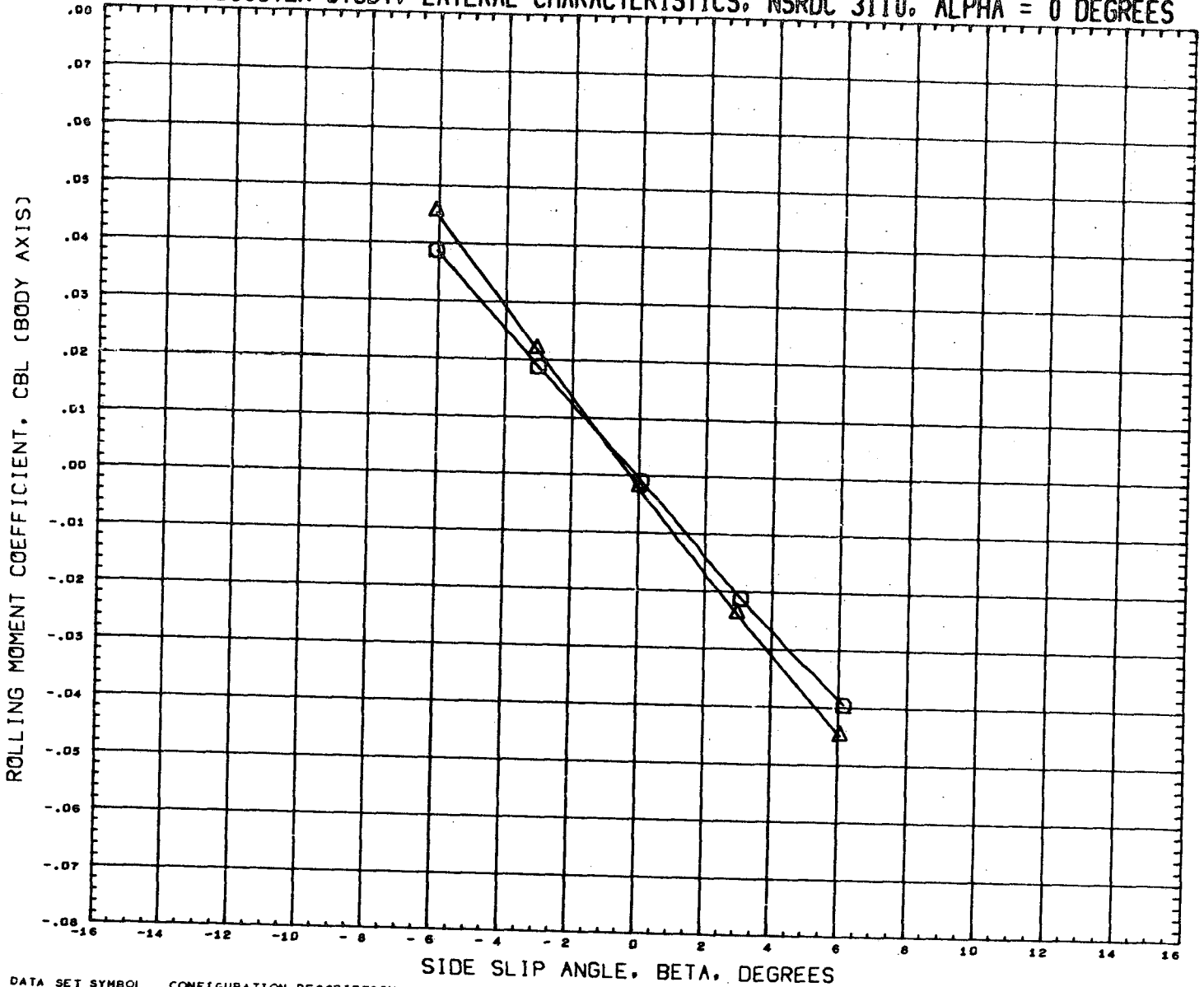
DATA SET SYMBOL (R2009) (R2013) CONFIGURATION DESCRIPTION NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1 NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1

INCIDC 3.000 15.000
 CNDPOS 2.000 2.000
 INCIDW 0.000 0.000
 WNGPOS 1.000 1.000

REFERENCE INFORMATION
 SREF 1.3550 SQ.FT.
 LREF 41.4360 INCHES
 BREF 41.4350 INCHES
 XMRP 31.1400 INCHES
 YMRP 0.0000 INCHES
 ZMRP 0.2250 INCHES
 SCALE 1.5000 PERCENT

MACH 0.381

LMSC/MSFC BOOSTER STUDY, LATERAL CHARACTERISTICS, NSRDC 3110, ALPHA = 0 DEGREES



DATA SET SYMBOL
(RN2D10) □
(RN2D14) △

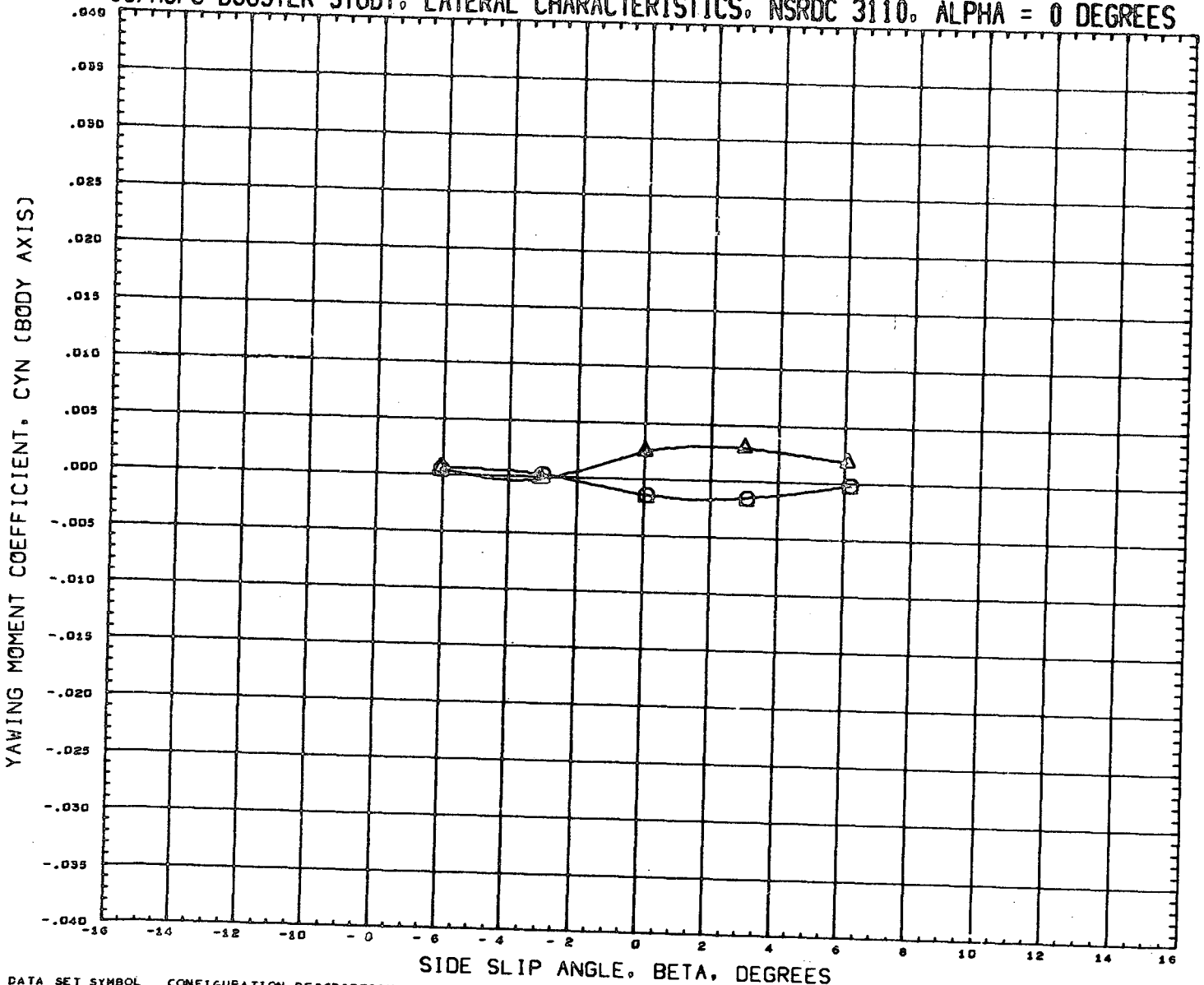
CONFIGURATION DESCRIPTION
NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1
NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1

INCIDC	CNDPOS	INCIDW	WNGPOS
3.000	2.000	0.000	1.000
15.000	2.000	0.000	1.000

REFERENCE INFORMATION		
SREF	1.3550	SQ. FT.
LREF	41.4360	INCHES
BREF	41.4360	INCHES
XMRP	31.1400	INCHES
YMRP	0.0000	INCHES
ZMRP	0.2250	INCHES
SCALE	1.5000	PERCENT

MACH 0.382

LMSC/MSFC BOOSTER STUDY, LATERAL CHARACTERISTICS, NSRDC 3110, ALPHA = 0 DEGREES



DATA SET SYMBOL
(RN2010)
(RN2014)



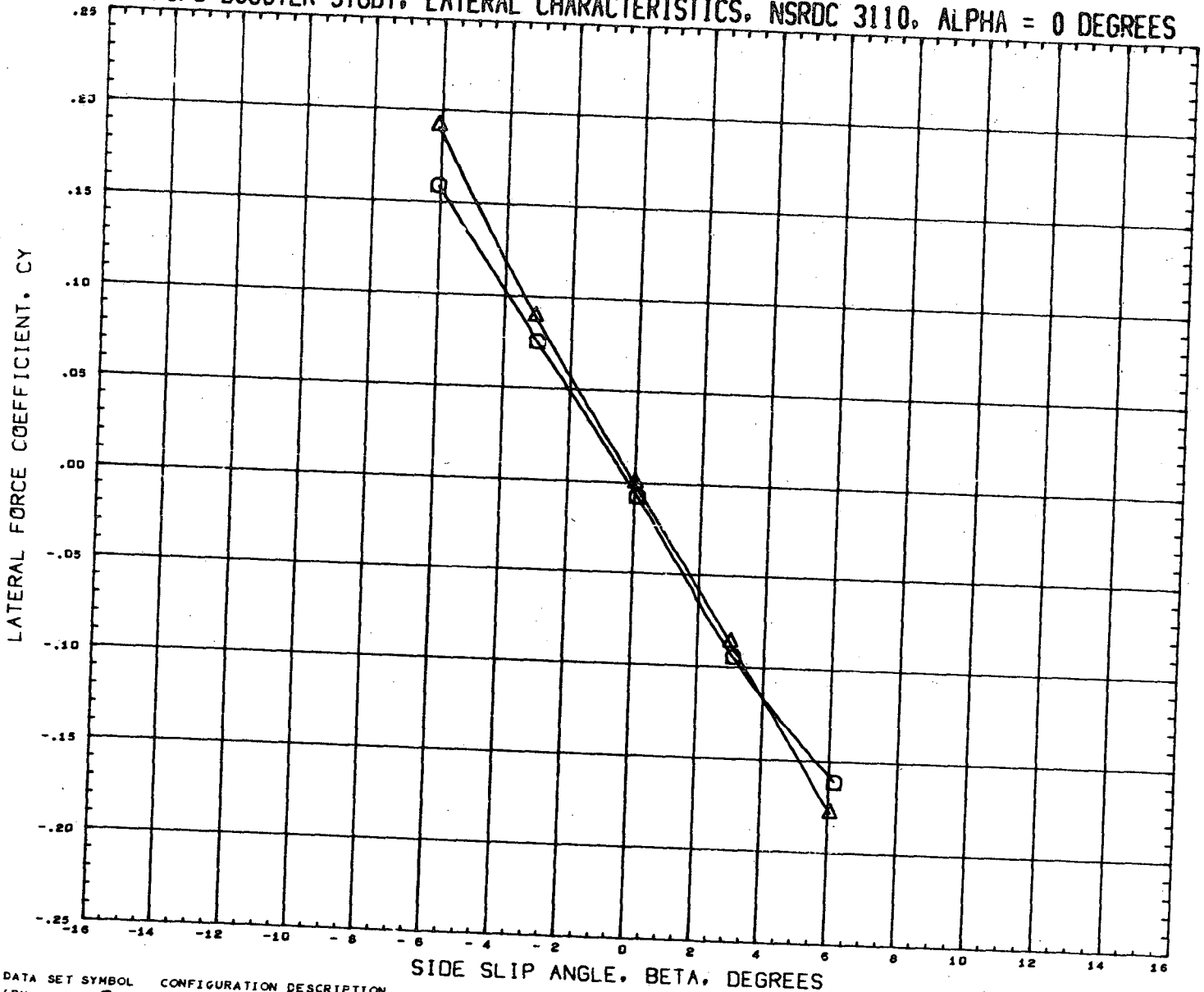
CONFIGURATION DESCRIPTION
NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1
NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1


INCIDC	CNDPOS	INCIDW	WNGPOS
3.000	2.000	0.000	1.000
15.000	2.000	0.000	1.000

REFERENCE INFORMATION	
SREF	1.3550 SQ.FT.
LREF	41.4360 INCHES
BREF	41.4360 INCHES
XMRP	31.1400 INCHES
YMRP	0.0000 INCHES
ZMRP	0.2250 INCHES
SCALE	1.5000 PERCNT

MACH 0.382

LMSC/MSFC BOOSTER STUDY. LATERAL CHARACTERISTICS, NSRDC 3110, ALPHA = 0 DEGREES



DATA SET SYMBOL (RN2010) (RN2014)  CONFIGURATION DESCRIPTION
 NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1
 NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1

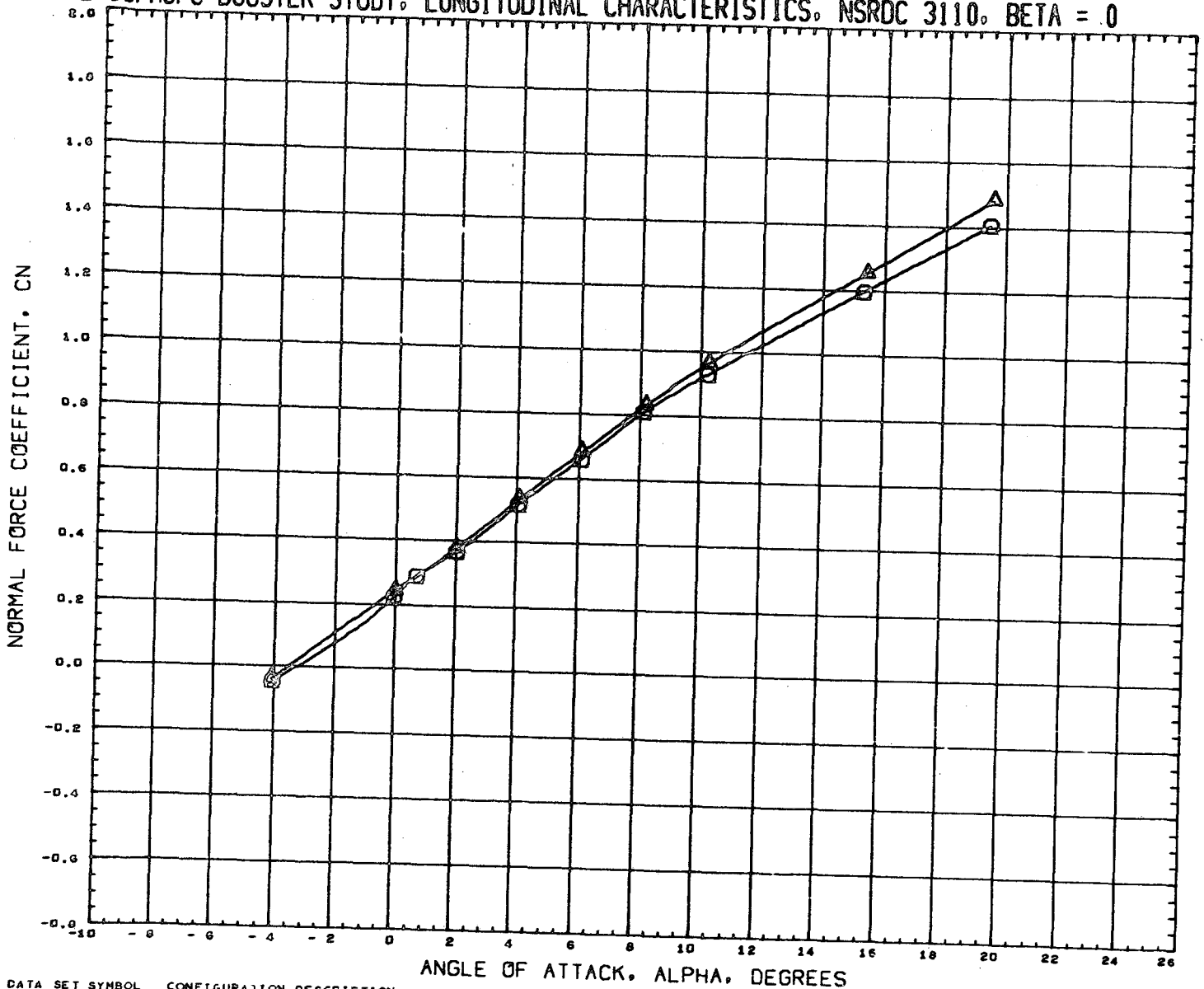
INCIDC	CNDPOS	INCIDW	WNGPOS
3.000	2.000	0.000	1.000
15.000	2.000	0.000	1.000

REFERENCE INFORMATION

SREF	1.3550	SQ.FT.
LREF	41.4360	INCHES
BREF	41.4360	INCHES
XMRP	31.1400	INCHES
YMRP	0.0000	INCHES
ZMRP	0.2250	INCHES
SCALE	1.5000	PERCENT

MACH 0.382

LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



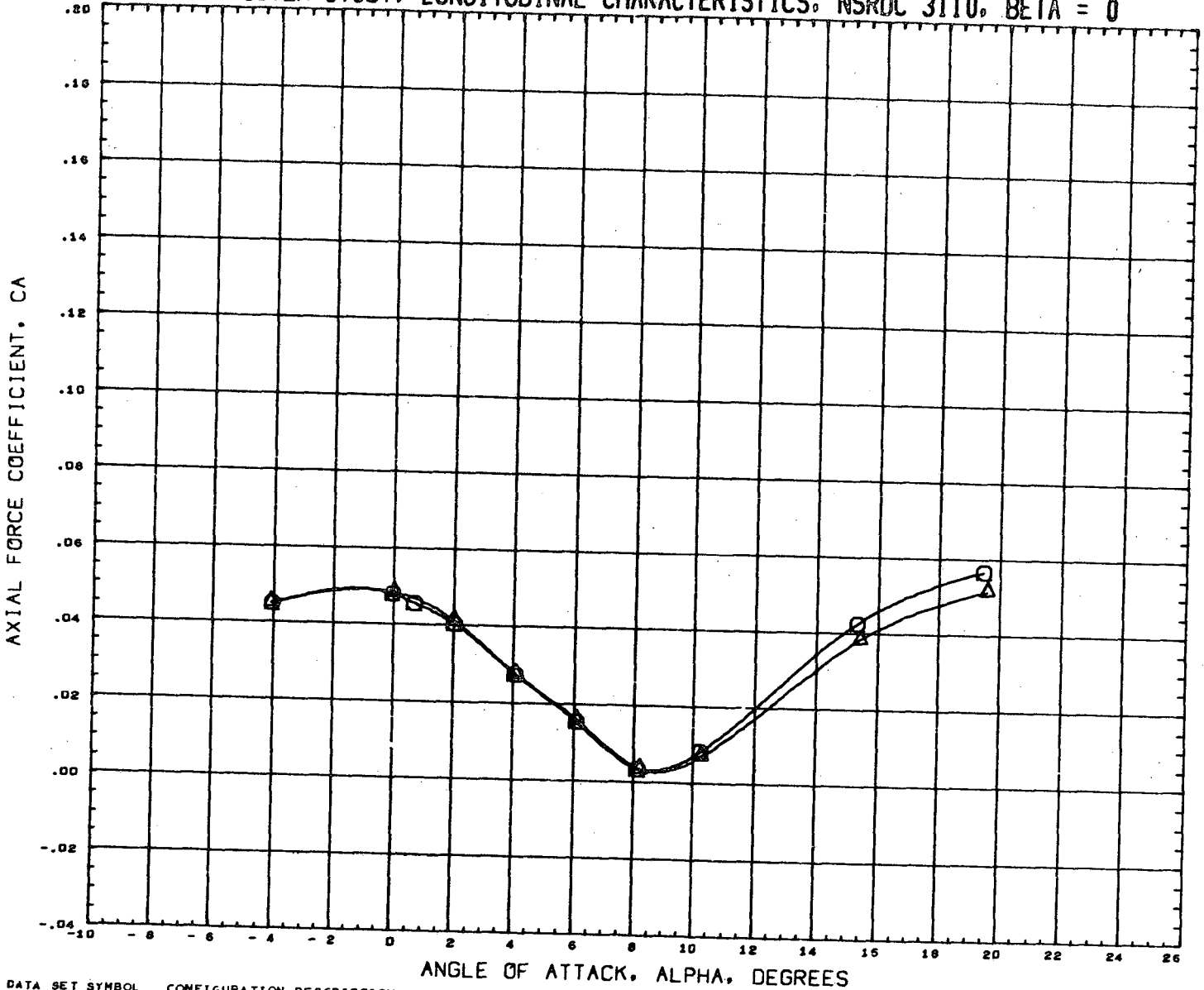
DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(RN2033)	NSRDC-3110, MSFC/LHSC BOOSTER B1C2F1W1V1
(RN2097)	NSRDC-3110, MSFC/LHSC BOOSTER B1C1F1W1V1

INCIDC	CNDPOS	INCIDW	WNGPOS
3.000	1.000	3.000	1.000
3.000	1.000	3.000	1.000

REFERENCE INFORMATION	
SREF	1.3550 SQ.FT.
LREF	41.4360 INCHES
BREF	41.4360 INCHES
XMRP	31.1400 INCHES
YMRP	0.0000 INCHES
ZMRP	0.2250 INCHES
SCALE	1.5000 PERCENT

MACH 0.383

LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL
(RN2033)
(RN2097)



CONFIGURATION DESCRIPTION
NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1
NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1

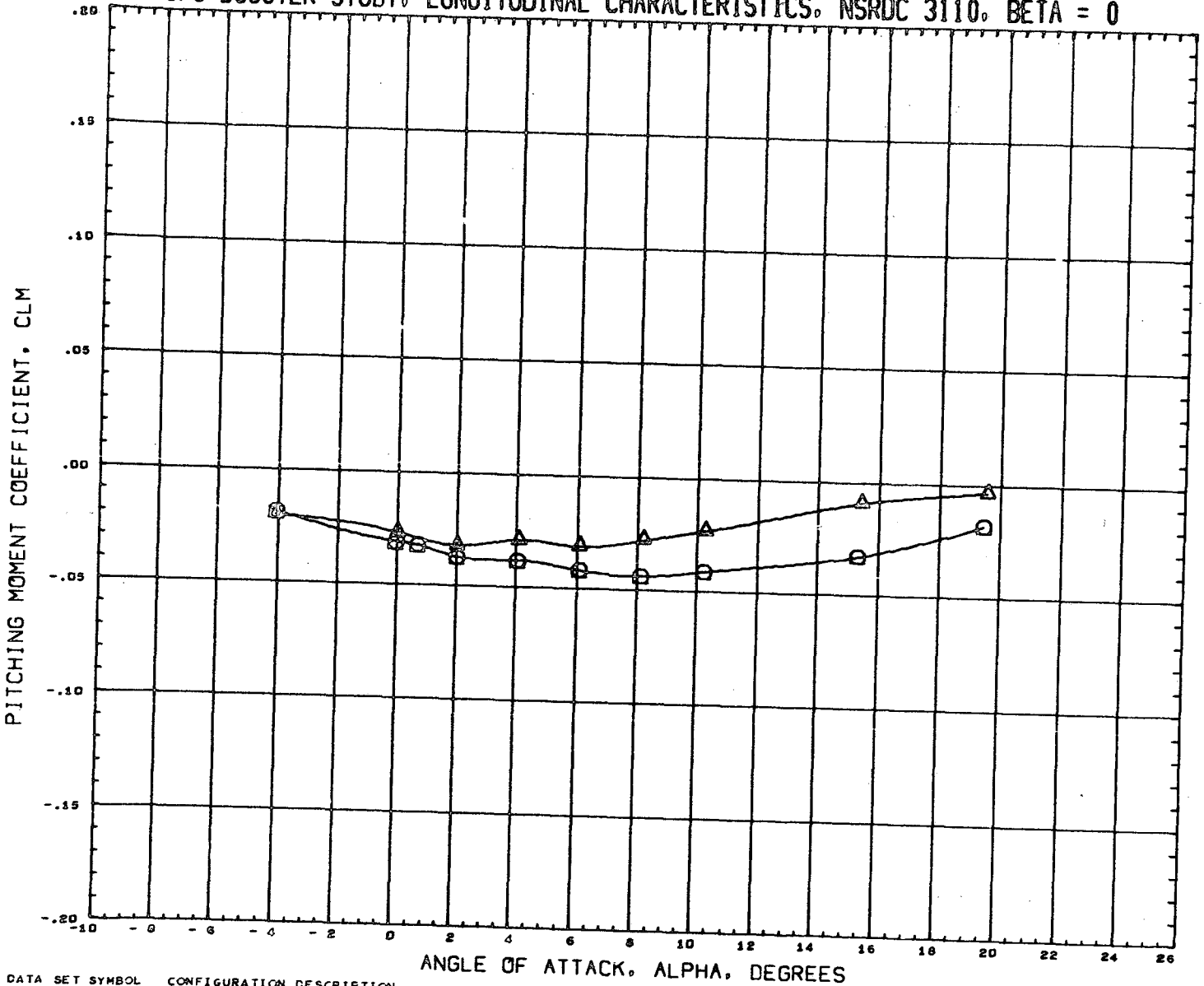
INCIDC	CNDPOS	INCIDW	WNGPOS
3.000	1.000	3.000	1.000
3.000	1.000	3.000	1.000

REFERENCE INFORMATION

SREF	1.3550	SQ. FT.
LREF	41.4360	INCHES
BREF	41.4360	INCHES
XMRP	31.1400	INCHES
YMRP	0.0000	INCHES
ZMRP	0.2250	INCHES
SCALE	1.5000	PERCENT

MACH 0.383

LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL (R2033) (R2097)
 CONFIGURATION DESCRIPTION
 NSRDC-3110, MSFC/LHSC BOOSTER B1C2F1W1V1
 NSRDC-3110, MSFC/LHSC BOOSTER B1C1F1W1V1

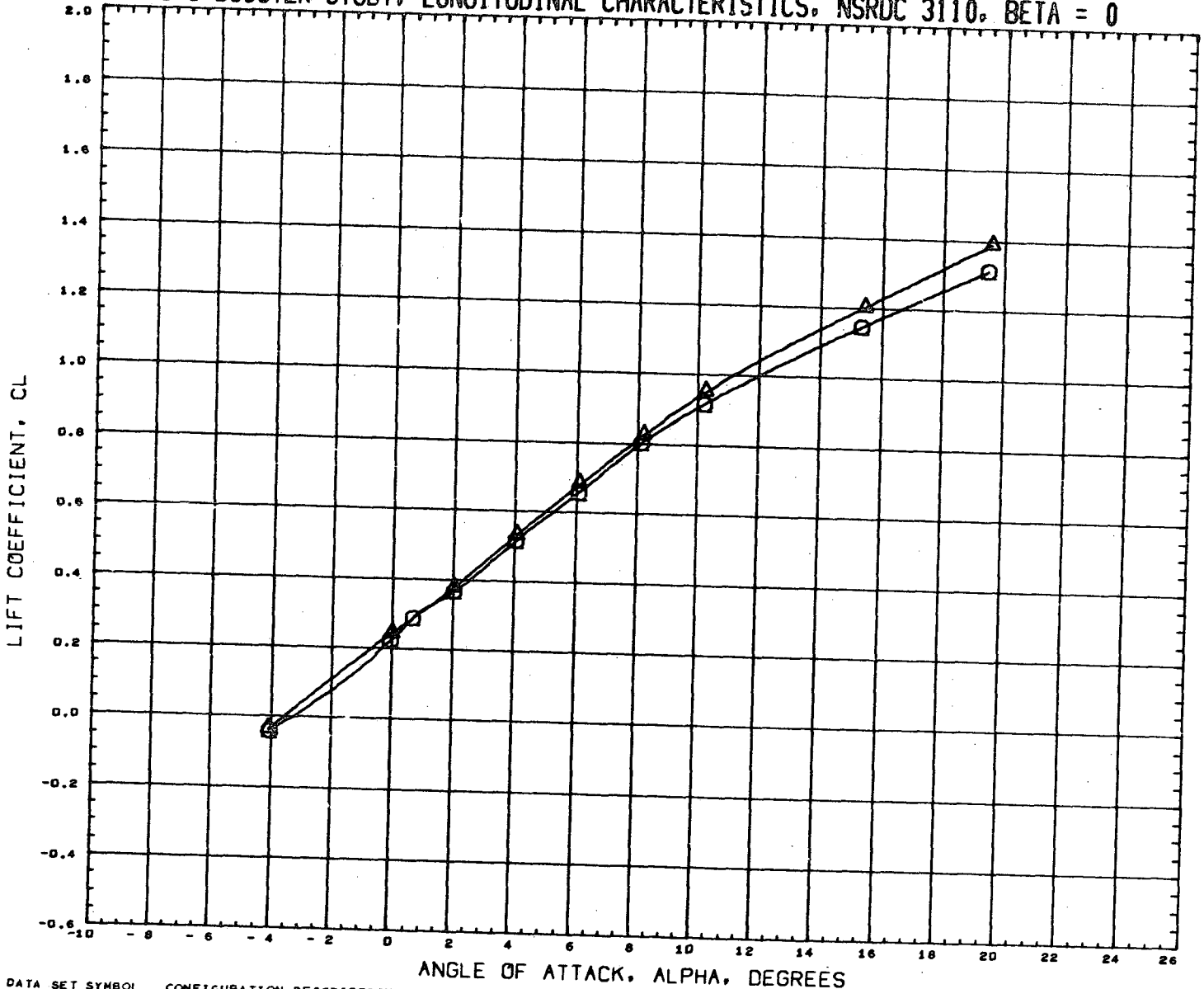
INCIDC	CNGPOS	INCIDW	WNGPOS
3.000	1.000	3.000	1.000
3.000	1.000	3.000	1.000

REFERENCE INFORMATION

SREF	1.3550	SQ.FT.
LREF	41.4360	INCHES
BREF	41.4360	INCHES
XMRP	31.1400	INCHES
YMRP	0.0000	INCHES
ZMRP	0.2250	INCHES
SCALE	1.5000	PERCENT

MACH 0.383

LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL
(RN2033)
(RN2097)



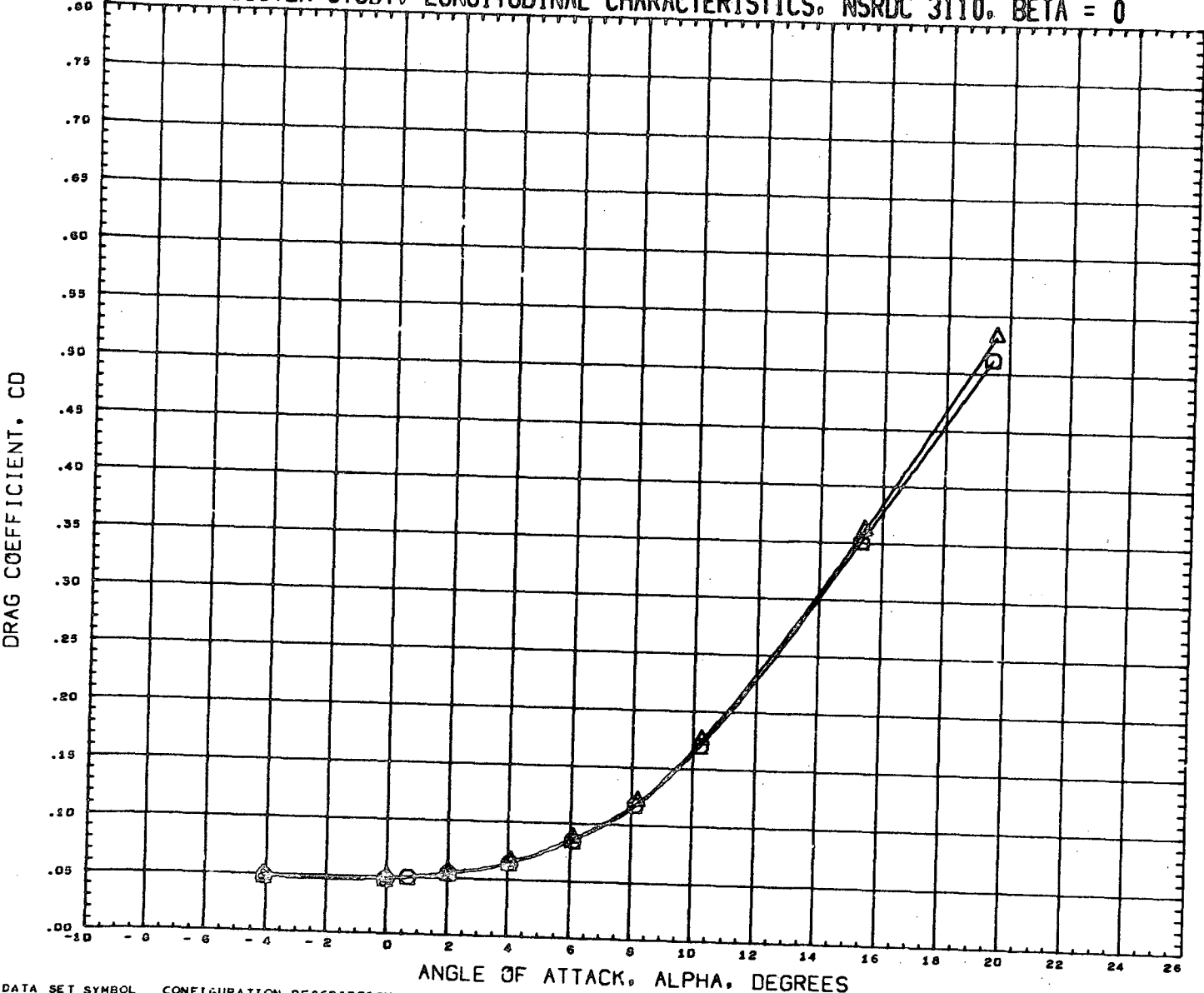
CONFIGURATION DESCRIPTION
NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1
NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1


INCIDC	CNDPOS	INCIDW	WNGPOS
3.000	1.000	3.000	1.000
3.000	1.000	3.000	1.000

REFERENCE INFORMATION		
SREF	1.3550	SQ. FT.
LREF	41.4360	INCHES
BREF	41.4360	INCHES
XMRP	31.1400	INCHES
YMRP	0.0000	INCHES
ZMRP	0.2250	INCHES
SCALE	1.5000	PERCENT

MACH 0.383

LMSC/MSFC BOOSTER STUDY. LONGITUDINAL CHARACTERISTICS. NSRDC 3110. BETA = 0



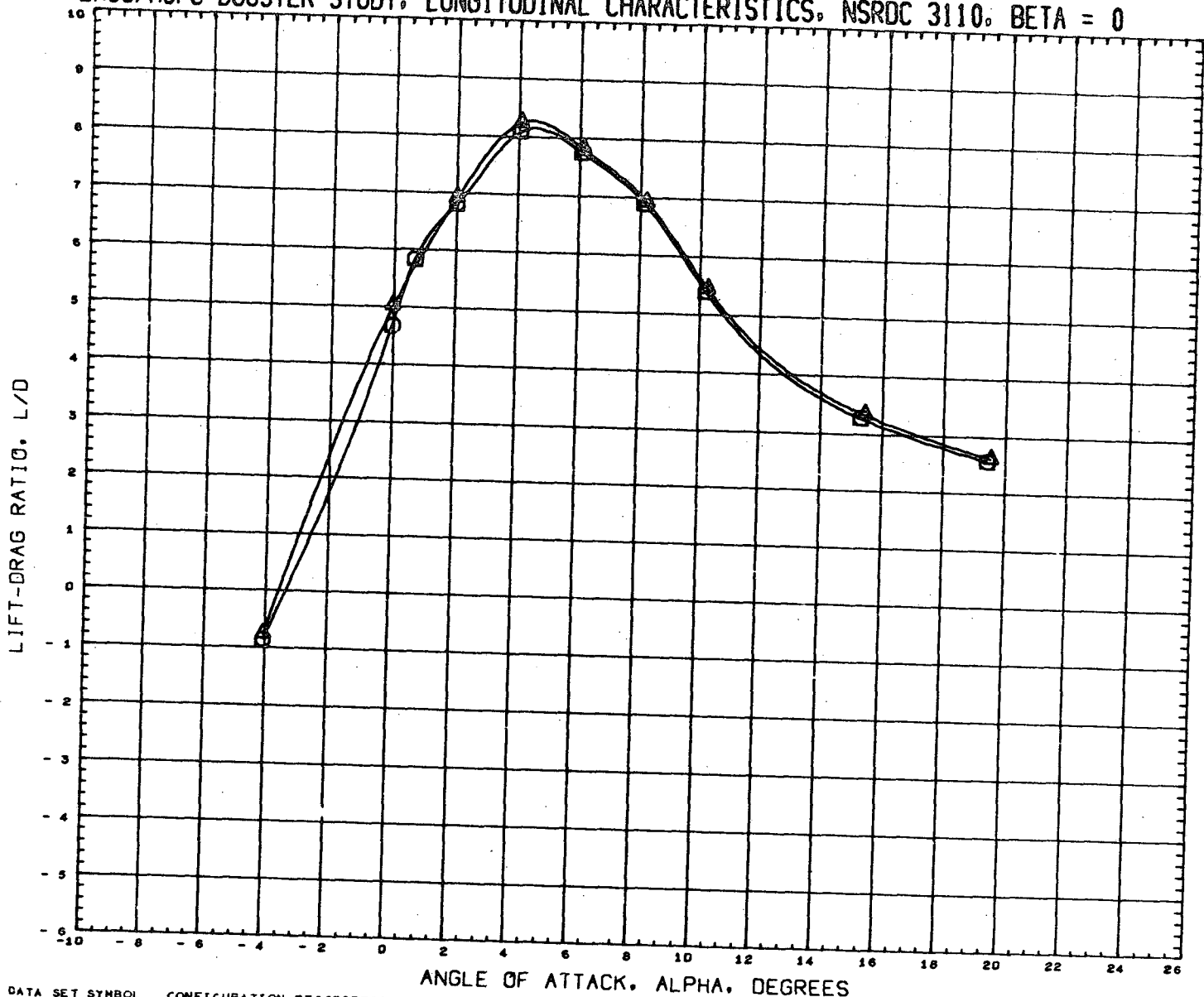
DATA SET SYMBOL (RN2033) (RN2097)  CONFIGURATION DESCRIPTION NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1 NSRDC-3110,MSFC/LMSC BOOSTER B1C1F1W1V1

INCIDC 3.000 3.000 CNDFOS 1.000 1.000 INCIDW 3.000 3.000 WNGPOS 1.000 1.000

REFERENCE INFORMATION
 SREF 1.3550 SQ.FT.
 LREF 41.4360 INCHES
 BREF 41.4360 INCHES
 XMRP 31.1400 INCHES
 YMRP 0.0000 INCHES
 ZMRP 0.2250 INCHES
 SCALE 1.5000 PERCENT

MACH 0.383

LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL
(RN2033) □
(RN2097) △

CONFIGURATION DESCRIPTION
NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1
NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1

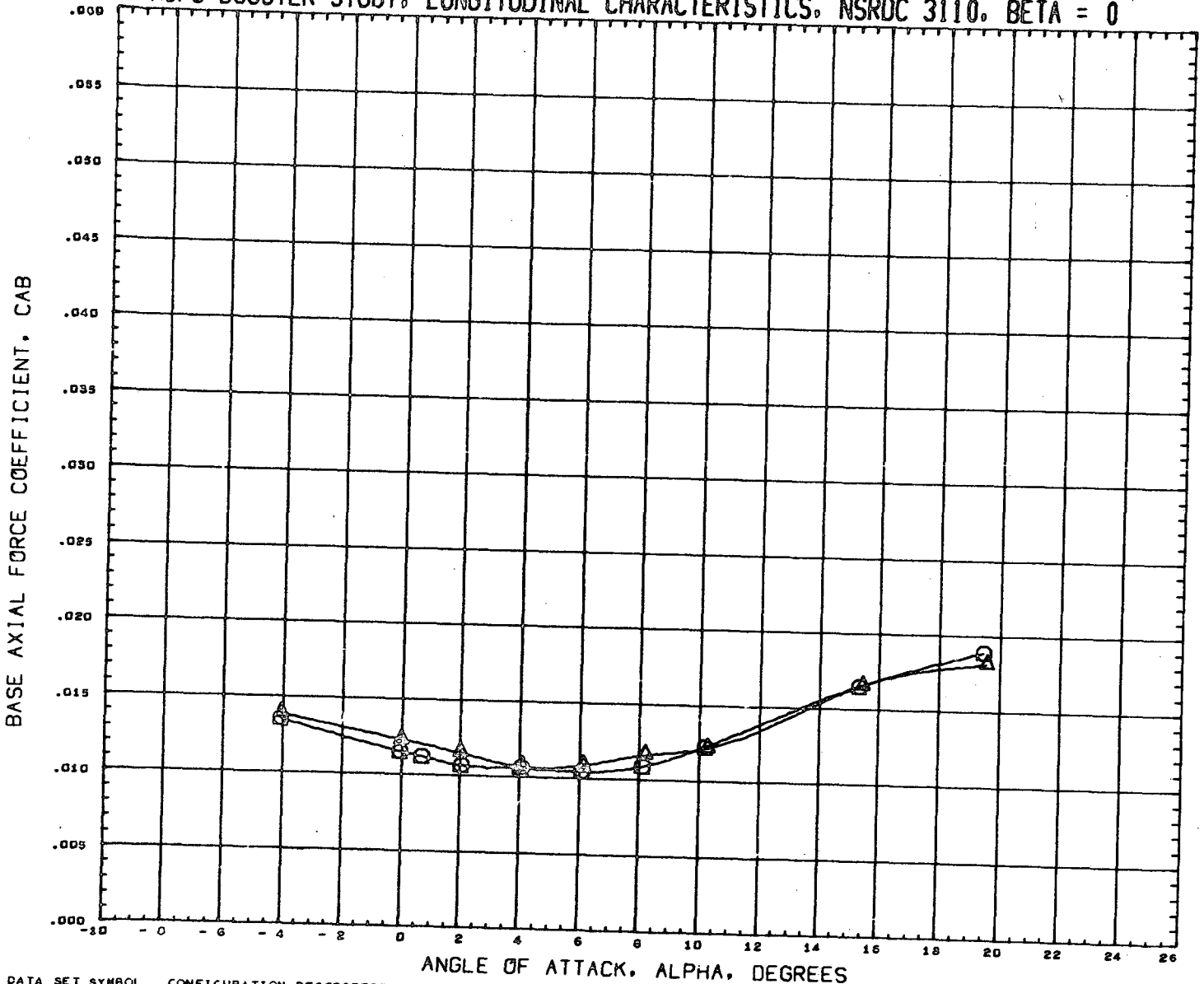
INCIDC	CNDPOS	INCIDW	WNGPOS
3.000	1.000	3.000	1.000
3.000	1.000	3.000	1.000

REFERENCE INFORMATION

SREF	1.3550	SQ. FT.
LREF	41.4360	INCHES
BREF	41.4360	INCHES
XMRP	31.1400	INCHES
YMRP	0.0000	INCHES
ZMRP	0.2250	INCHES
SCALE	1.5000	PERCNT

MACH 0.383

LMSC/MSFC BOOSTER STUDY. LONGITUDINAL CHARACTERISTICS. NSRDC 3110. BETA = 0



DATA SET SYMBOL
(RN2033)
(RN2097)

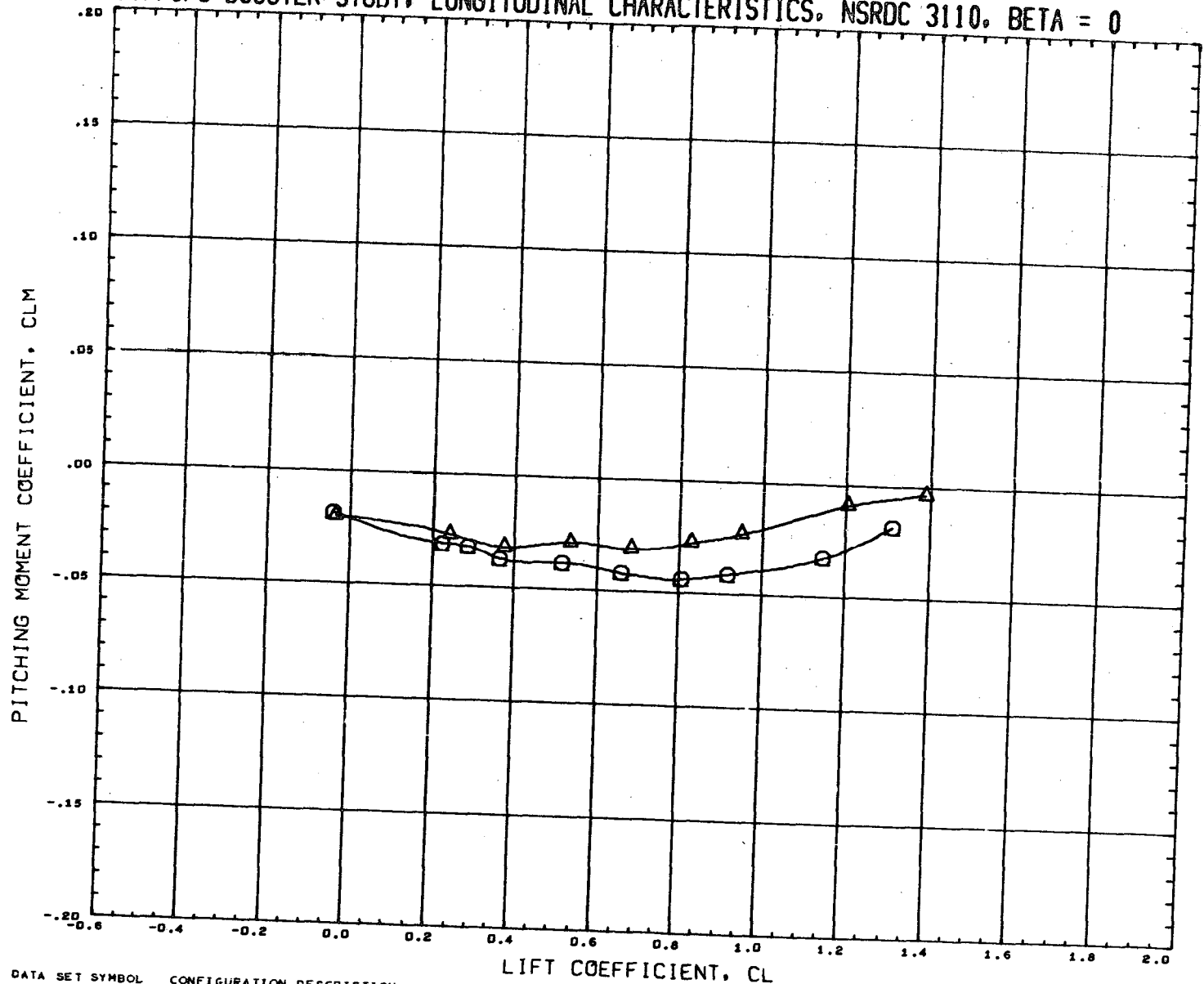
CONFIGURATION DESCRIPTION
NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1
NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1

INCIDC	CNDPOS	INCIDW	WNGPOS
3.000	1.000	3.000	1.000
3.000	1.000	3.000	1.000

REFERENCE INFORMATION	
SREF	1.3550 SQ.FT.
LREF	41.4360 INCHES
BREF	41.4360 INCHES
XMRP	31.1400 INCHES
YMRP	0.0000 INCHES
ZMRP	0.2250 INCHES
SCALE	1.5000 PERCENT

MACH 0.363

LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL
(RN2033)
(RN2097)



CONFIGURATION DESCRIPTION
NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1
NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1

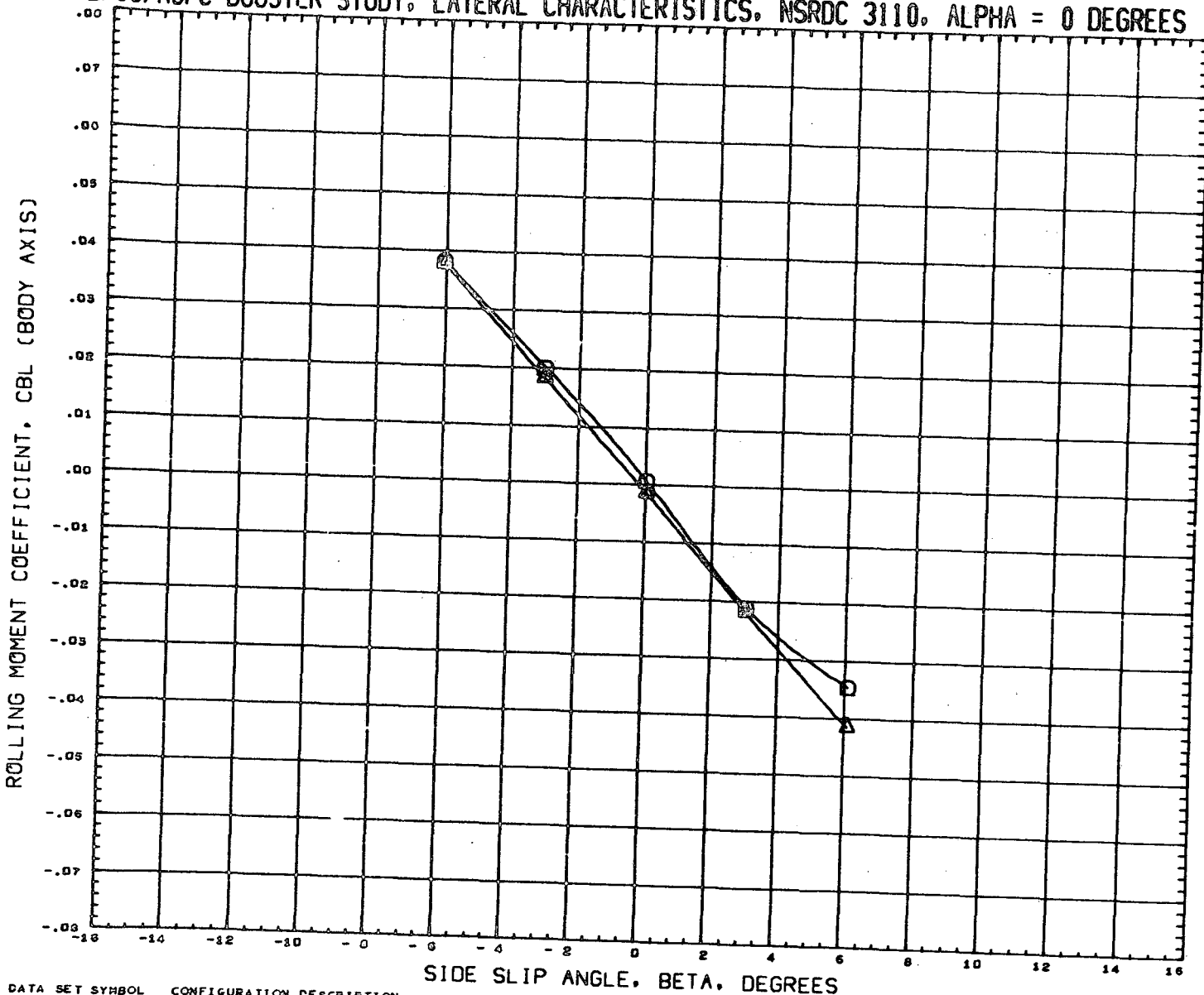
INCIDC	CNDPOS	INCIDW	WNGPOS
3.000	1.000	3.000	1.000
3.000	1.000	3.000	1.000

REFERENCE INFORMATION

SREF	1.3550	SQ.FT.
LREF	41.4360	INCHES
BREF	41.4360	INCHES
XMRP	31.1400	INCHES
YMRP	0.0000	INCHES
ZMRP	0.2250	INCHES
SCALE	1.5000	PERCENT

MACH 0.383

LMSC/MSFC BOOSTER STUDY, LATERAL CHARACTERISTICS, NSRDC 3110, ALPHA = 0 DEGREES



DATA SET SYMBOL
(RN2034)
(RN2098)



CONFIGURATION DESCRIPTION
NSRDC-3110, MSFC/LHSC BOOSTER B1C2F1W1V1
NSRDC-3110, MSFC/LHSC BOOSTER B1C1F1W1V1

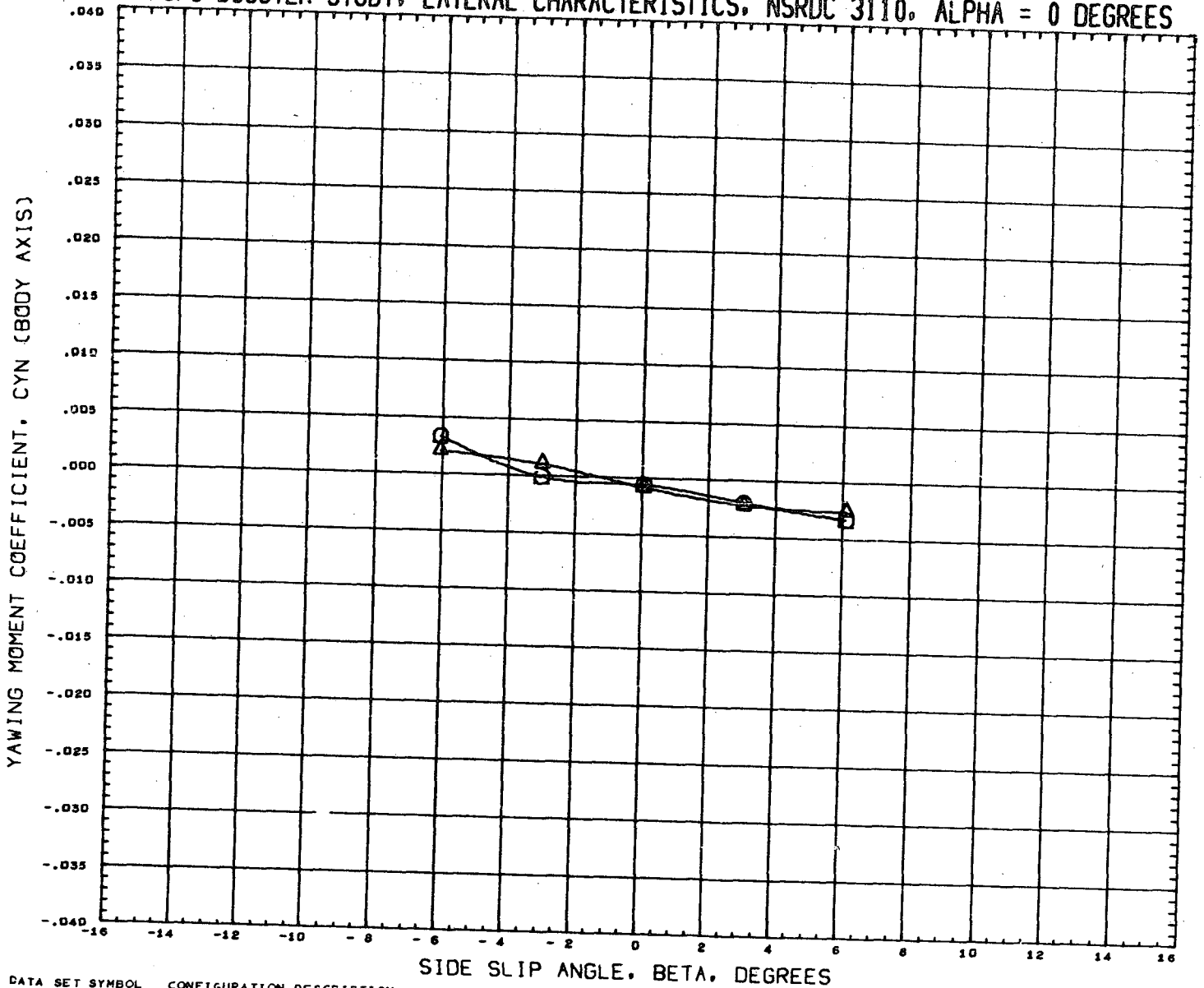
INCIDC	CNDPOS	INCIDW	WNGPOS
3.000	1.000	3.000	1.000
3.000	1.000	3.000	1.000

REFERENCE INFORMATION

SREF	1.3550	SQ. FT.
LREF	41.4360	INCHES
BREF	41.4360	INCHES
XMRP	31.1400	INCHES
YMRP	0.0000	INCHES
ZMRP	0.2250	INCHES
SCALE	1.5000	PERCENT

MACH D.301

LMSC/MSFC BOOSTER STUDY, LATERAL CHARACTERISTICS, NSRDC 3110, ALPHA = 0 DEGREES



DATA SET SYMBOL
(RN2034)
(RN2098)



CONFIGURATION DESCRIPTION
NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1
NSRDC-3110,MSFC/LMSC BOOSTER B1C1F1W1V1

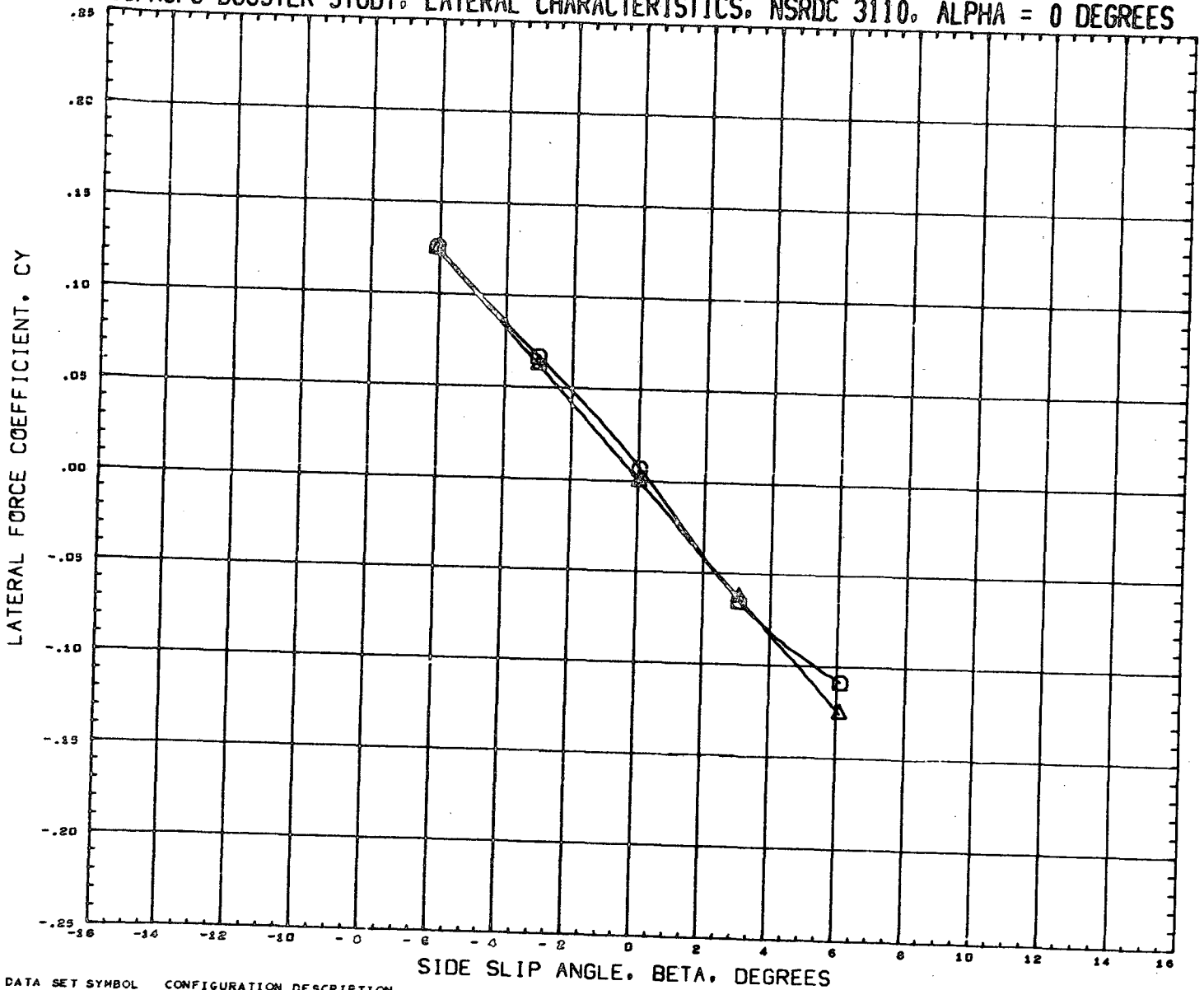
INCIDC	CNDPOS	INCIDW	WNGPOS
3.000	1.000	3.000	1.000
3.000	1.000	3.000	1.000



REFERENCE INFORMATION

SREF	1.3550	sq. FT.
LREF	41.4360	INCHES
BREF	41.4360	INCHES
XMRP	31.1400	INCHES
YMRP	0.0000	INCHES
ZMRP	0.2250	INCHES
SCALE	1.5000	PERCENT

MACH 0.381

LMSC/MSFC BOOSTER STUDY, LATERAL CHARACTERISTICS, NSRDC 3110, ALPHA = 0 DEGREES



DATA SET SYMBOL
(RN2034) 
(RN2098) 

CONFIGURATION DESCRIPTION
NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1
NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1

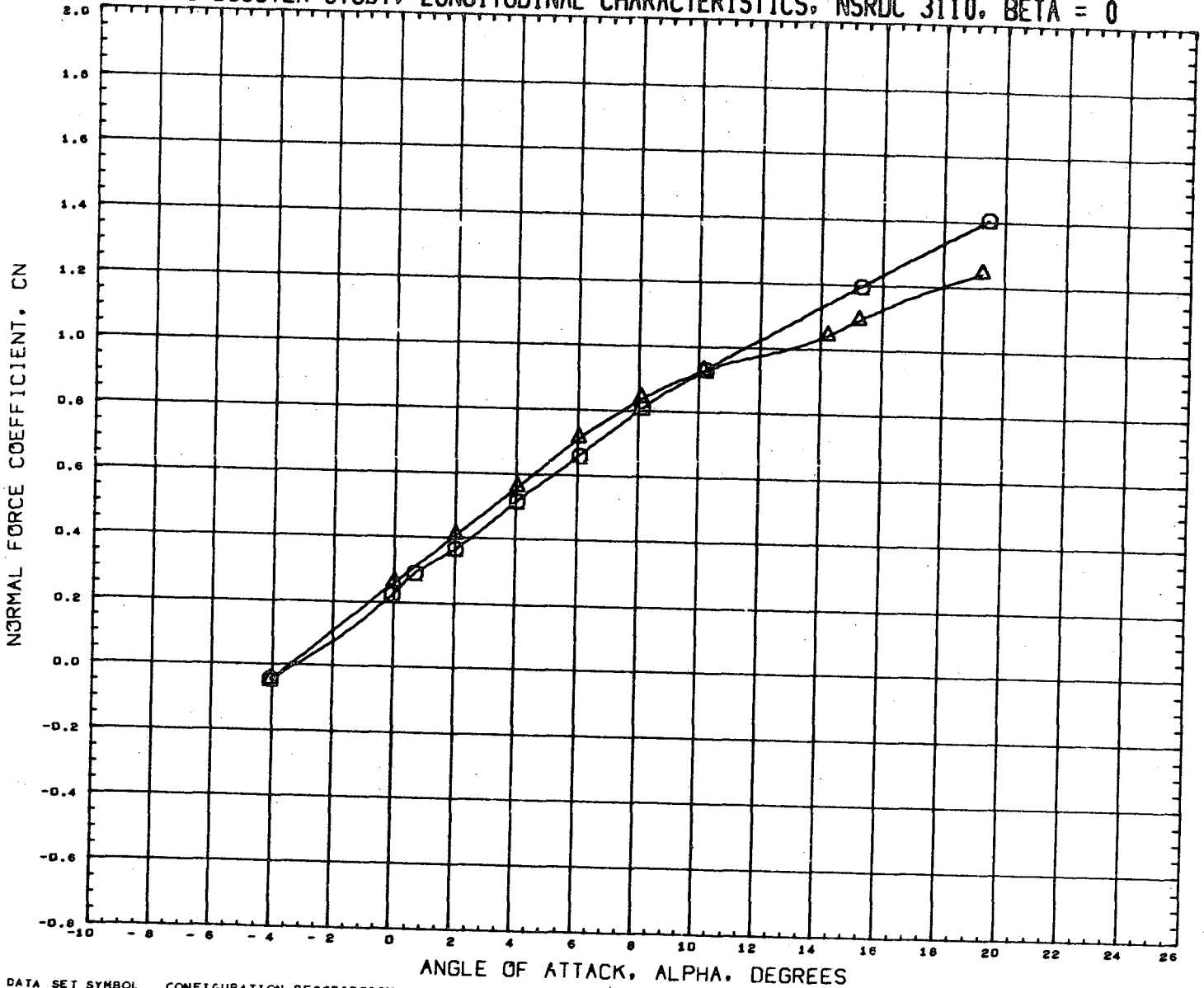
INCIDC	CNDPOS	INCIDW	WNGPOS
3.000	1.000	3.000	1.000
3.000	1.000	3.000	1.000

REFERENCE INFORMATION

SREF	1.3550	SQ. FT.
LREF	41.4360	INCHES
BREF	41.4360	INCHES
XMRP	31.1400	INCHES
YMRP	0.0000	INCHES
ZMRP	0.2250	INCHES
SCALE	1.5000	PERCENT

HACH 0.301

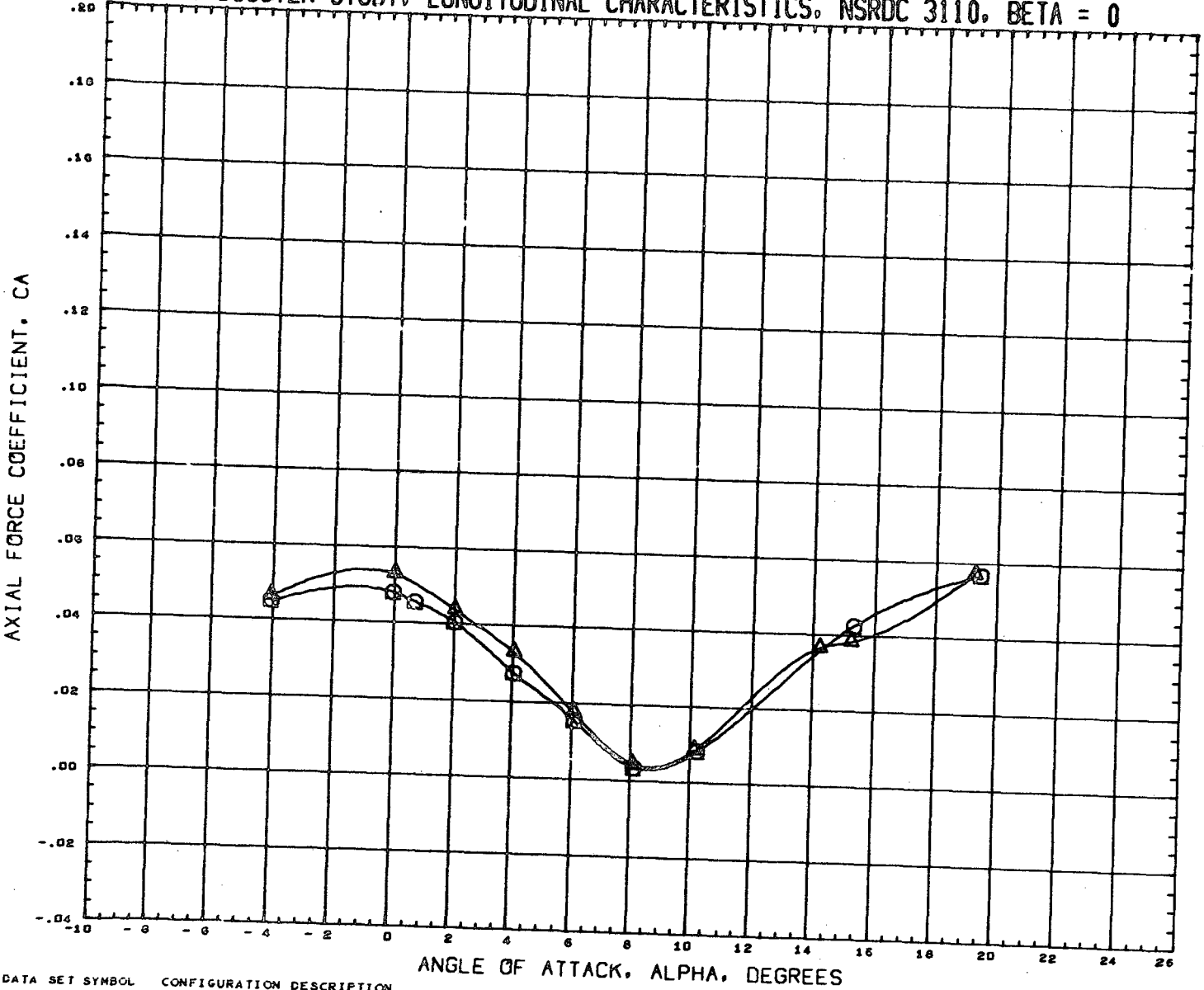
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION	
(RN2033)	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1	3.000	1.000	3.000	1.000	SREF	1.3550 SQ.FT.
(RN2041)	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1	3.000	2.000	3.000	1.000	LREF	41.4360 INCHES
						BREF	41.4360 INCHES
						XMRP	31.1400 INCHES
						YMRP	0.0000 INCHES
						ZMRP	0.2250 INCHES
						SCALE	1.5000 PERCNT

MACH 0.363

LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL
(R2033)
(R2041)

CONFIGURATION DESCRIPTION
NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1
NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1

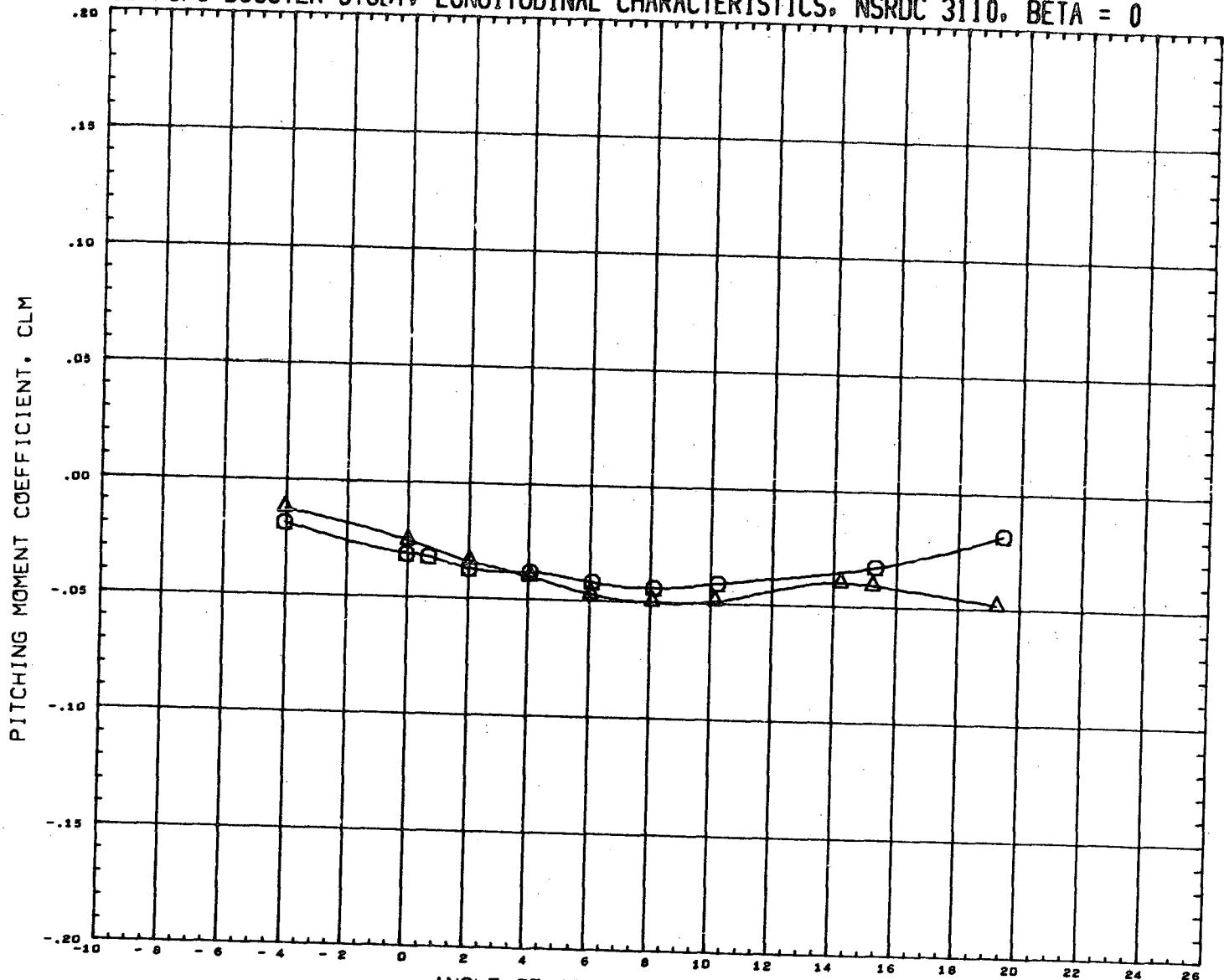
INCIDC	CNDPOS	INCIDW	WNGPOS
3.000	1.000	3.000	1.000
3.000	2.000	3.000	1.000

REFERENCE INFORMATION

SREF	1.3550	SQ. FT.
LREF	41.4360	INCHES
BREF	41.4360	INCHES
XMRP	31.1400	INCHES
YMRP	0.0000	INCHES
ZMRP	0.2250	INCHES
SCALE	1.5000	PERCENT

MACH 0.383

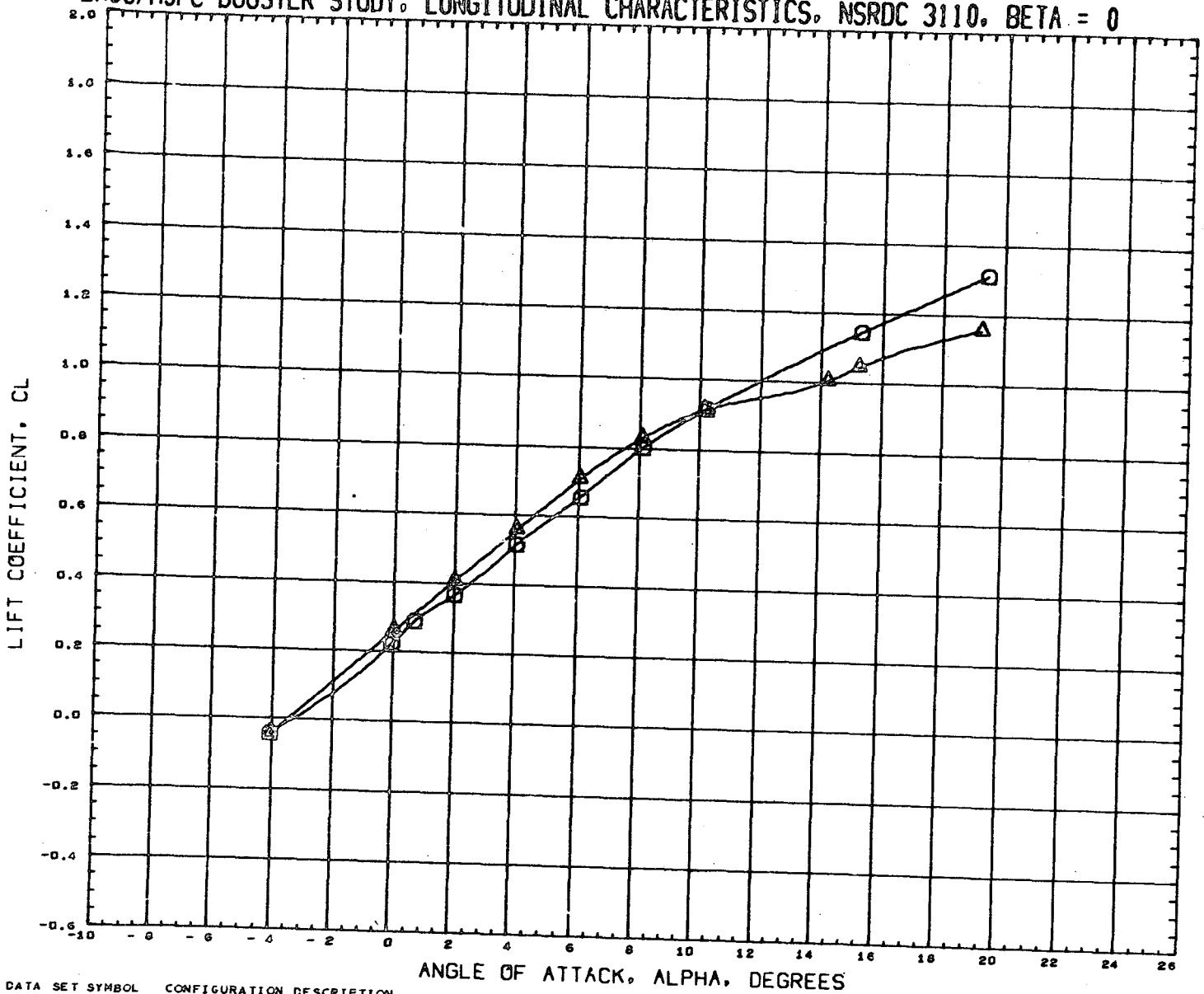
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2033)	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1	3.000	1.000	3.000	1.000	SREF 1.3550 SQ.FT.
(RN2041)	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1	3.000	2.000	3.000	1.000	LREF 41.4360 INCHES
						BREF 41.4350 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCENT

MACH 0.383

LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



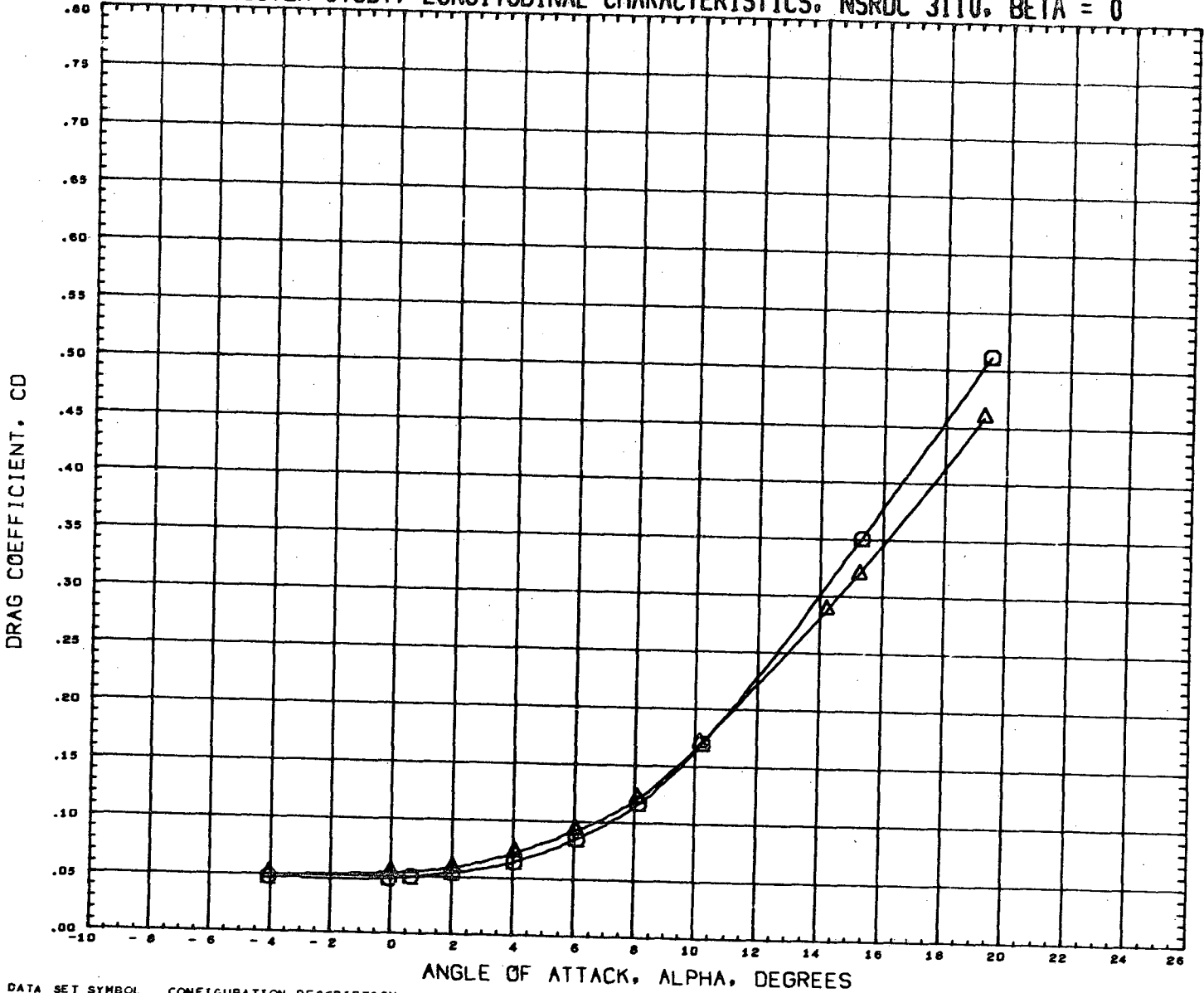
DATA SET SYMBOL (RN2D33) (RN2D41) CONFIGURATION DESCRIPTION NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1 NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1

INCIDC 3.000 3.000 CNDPOS 1.000 2.000 INCIDW 3.000 3.000 WNGPOS 1.000 1.000

REFERENCE INFORMATION
 SREF 1.3550 SQ.FT.
 LREF 41.4360 INCHES
 BREF 41.4360 INCHES
 XMRF 31.1400 INCHES
 YMRP 0.0000 INCHES
 ZMRP 0.2250 INCHES
 SCALE 1.5000 PERCENT

MACH 0.383

LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL
(RN2033)
(RN2041)



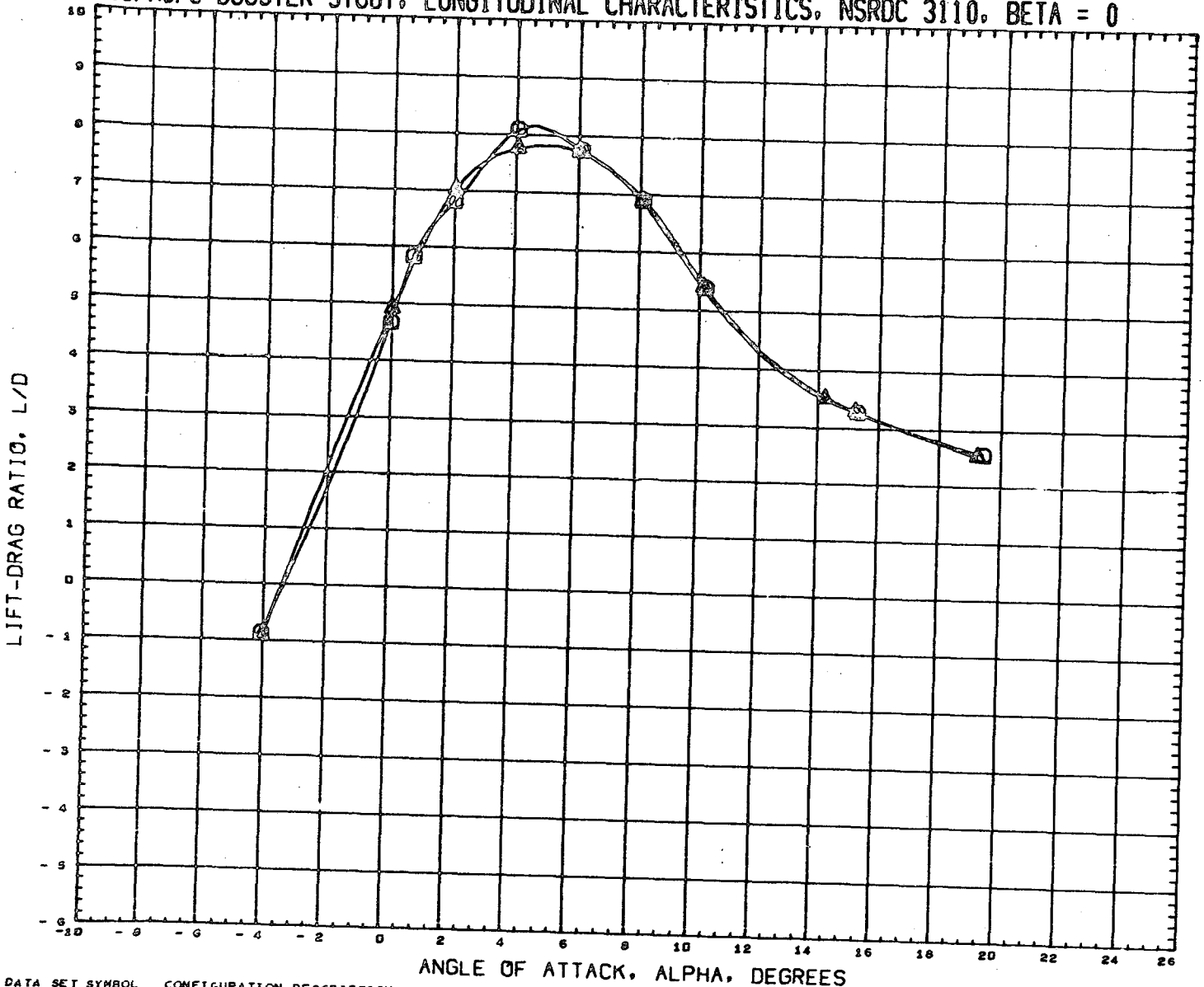
CONFIGURATION DESCRIPTION
NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1
NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1

INCIDC	CNDFOS	INCIDW	WNGPOS
3.000	1.000	3.000	1.000
3.000	2.000	3.000	1.000

REFERENCE INFORMATION	
SREF	1.3550 SQ.FT.
LREF	41.4360 INCHES
BREF	41.4360 INCHES
XMRP	31.1400 INCHES
YMRP	0.0000 INCHES
ZMRP	0.2250 INCHES
SCALE	1.5000 PERCENT

MACH 0.303

LMSC/MSFC BOOSTER STUDY. LONGITUDINAL CHARACTERISTICS, NSRDC 3110. BETA = 0



DATA SET SYMBOL
(RN2033)
(RN2041)



CONFIGURATION DESCRIPTION
NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1
NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1

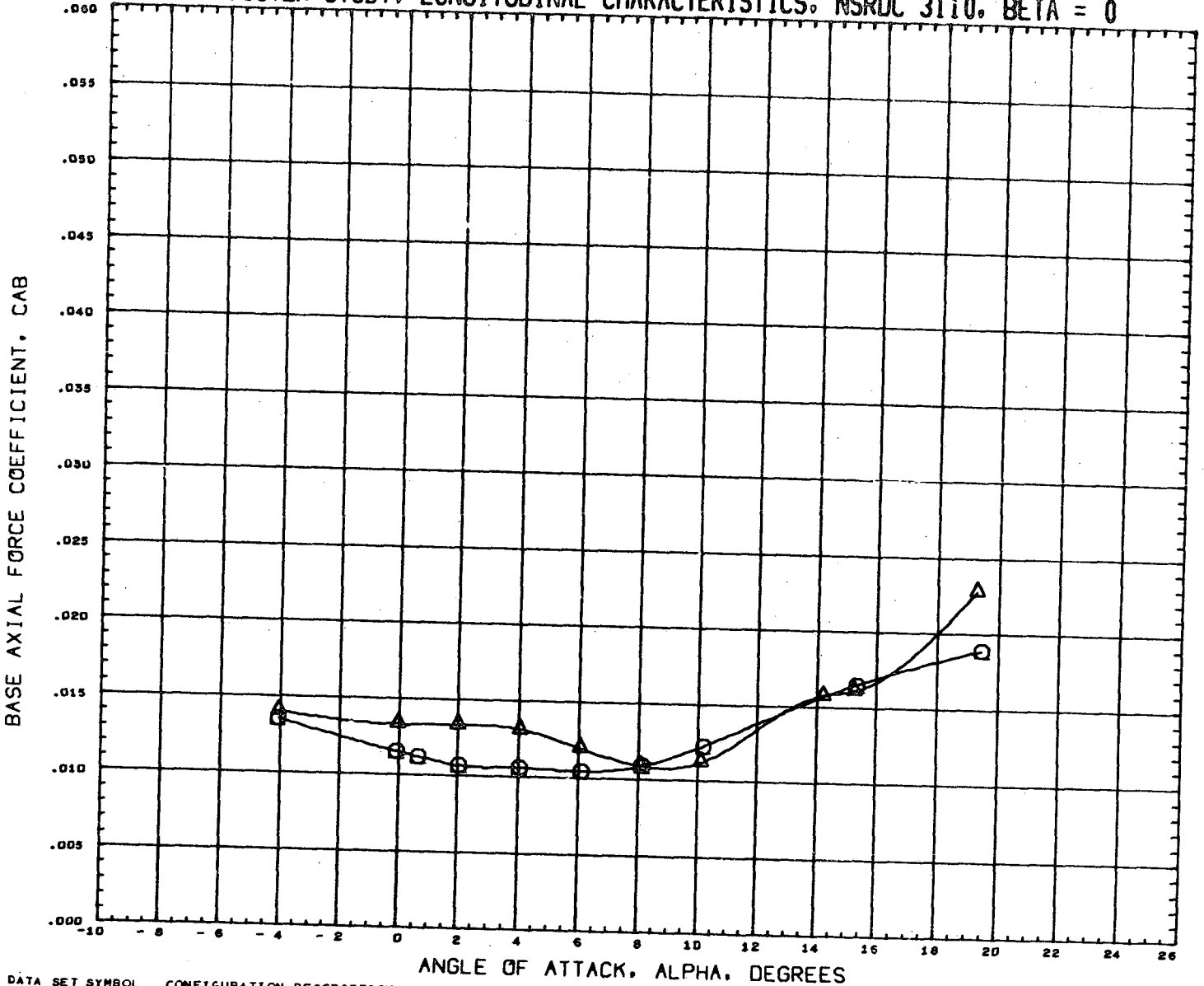
INCIDC	CNDPOS	INCIDW	WNGPOS
3.000	1.000	3.000	1.000
3.000	2.000	3.000	1.000

REFERENCE INFORMATION

SREF	1.3550	59. FT.
LREF	41.4360	INCHES
BREF	41.4360	INCHES
XMRF	31.1400	INCHES
YMRF	0.0000	INCHES
ZMRF	0.2250	INCHES
SCALE	1.5000	PERCENT

MACH 0.303

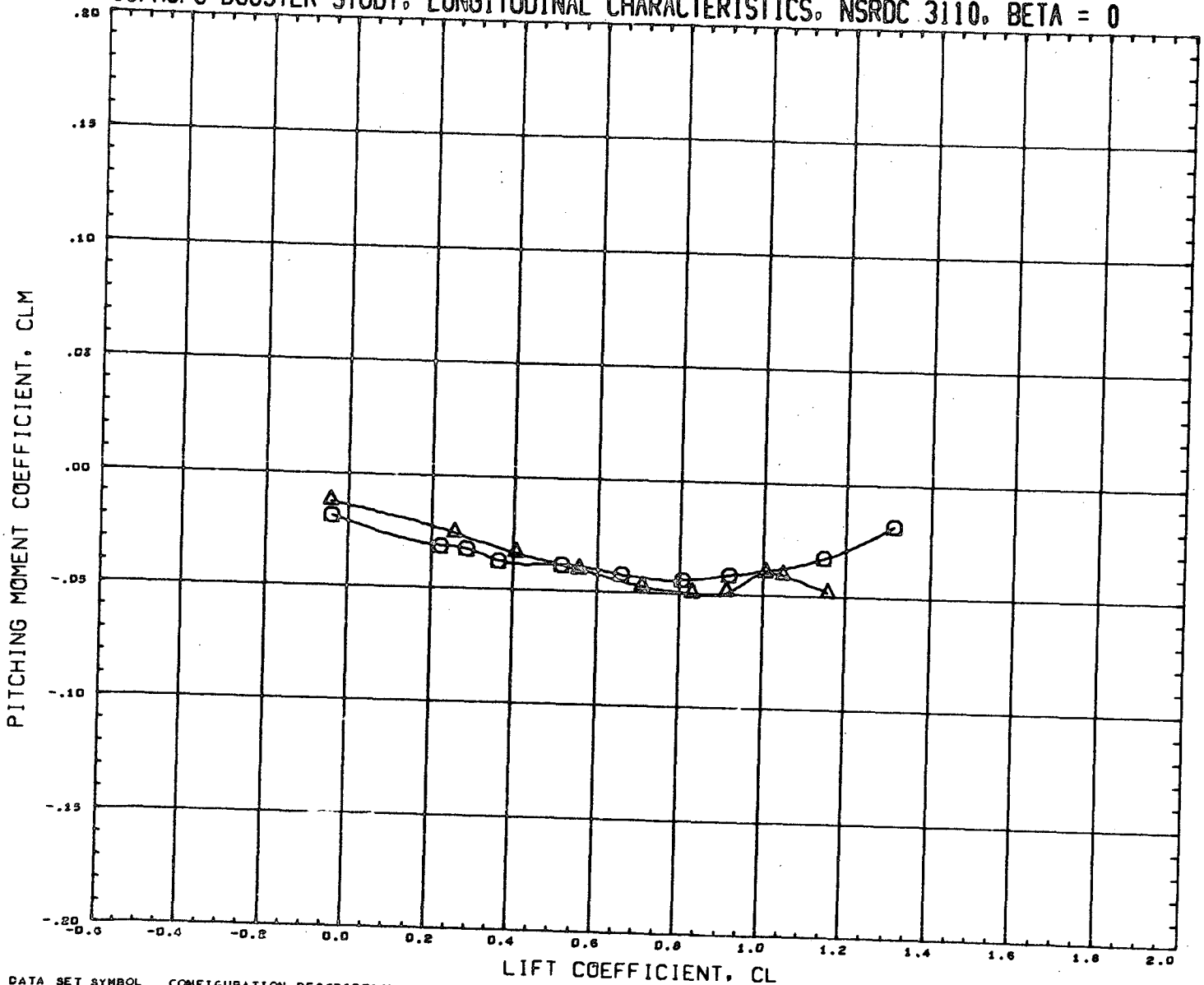
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2033)	NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1	3.000	1.000	3.000	1.000	SREF 1.3550 SQ. FT.
(RN2041)	NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1	3.000	2.000	3.000	1.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCENT

MACH 0.383

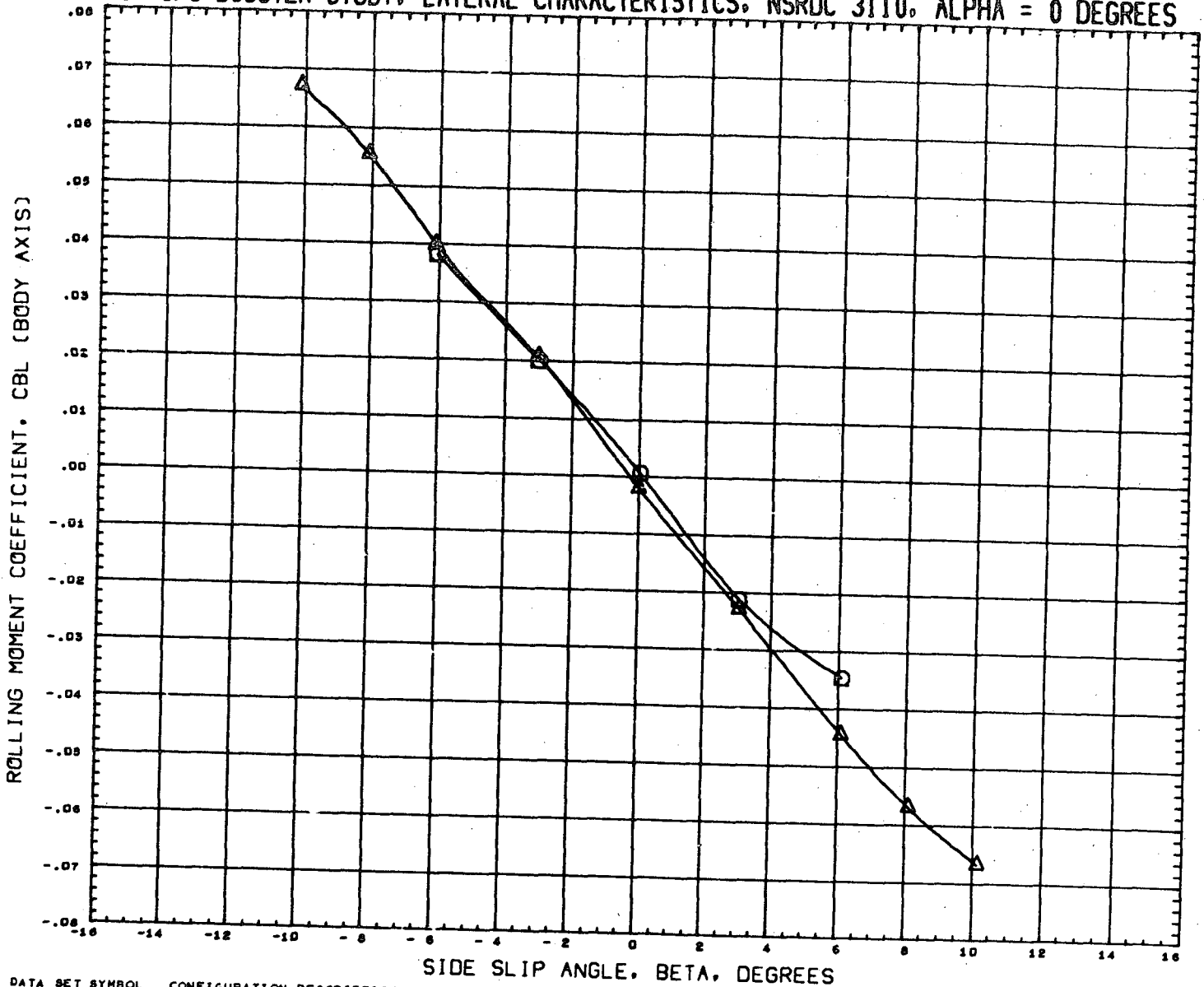
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2033)	NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1	3.000	1.000	3.000	1.000	SREF 1.3550 SQ.FT.
(RN2041)	NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1	3.000	2.000	3.000	1.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCENT

MACH 0.303

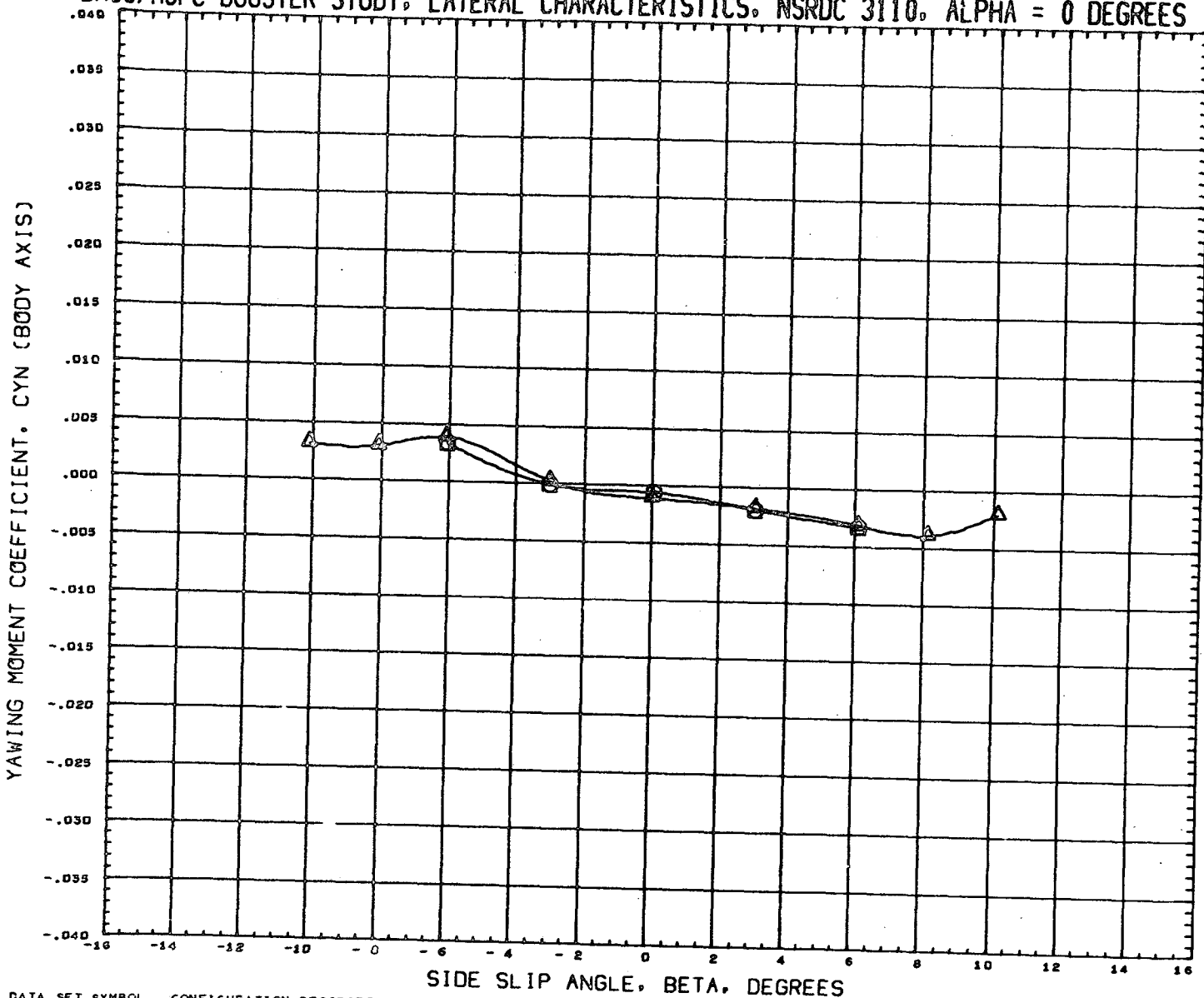
LMSC/MSFC BOOSTER STUDY, LATERAL CHARACTERISTICS, NSRDC 3110, ALPHA = 0 DEGREES



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2034)	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1	3.000	1.000	3.000	1.000	SREF 1.3550 SQ. FT.
(RN2042)	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1	3.000	2.000	3.000	1.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCNT

MACH 0.381

LMSC/MSFC BOOSTER STUDY, LATERAL CHARACTERISTICS, NSRDC 3110, ALPHA = 0 DEGREES



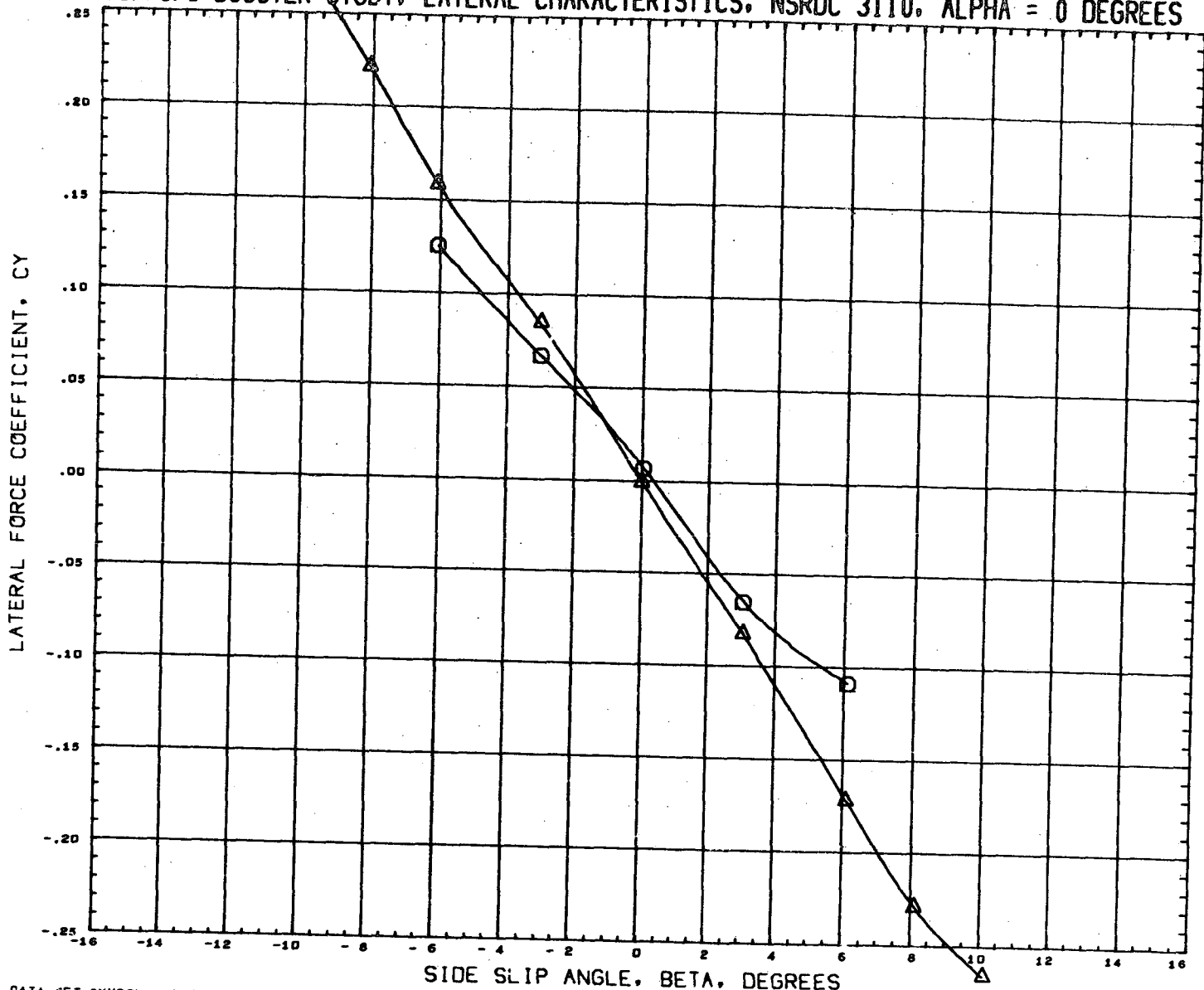
DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(RN2034) \bigcirc	NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1
(RN2042) \triangle	NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1

INCIDC	CNDPOS	INCIDW	WNGPOS
3.000	1.000	3.000	1.000
3.000	2.000	3.000	1.000

REFERENCE INFORMATION	
SREF	1.3550 SQ. FT.
LREF	41.4360 INCHES
BREF	41.4360 INCHES
XMRP	31.1400 INCHES
YMRP	0.0000 INCHES
ZMRP	0.2250 INCHES
SCALE	1.5000 PERCENT

MACH 0.381

LMSC/MSFC BOOSTER STUDY, LATERAL CHARACTERISTICS, NSRDC 3110, ALPHA = 0 DEGREES



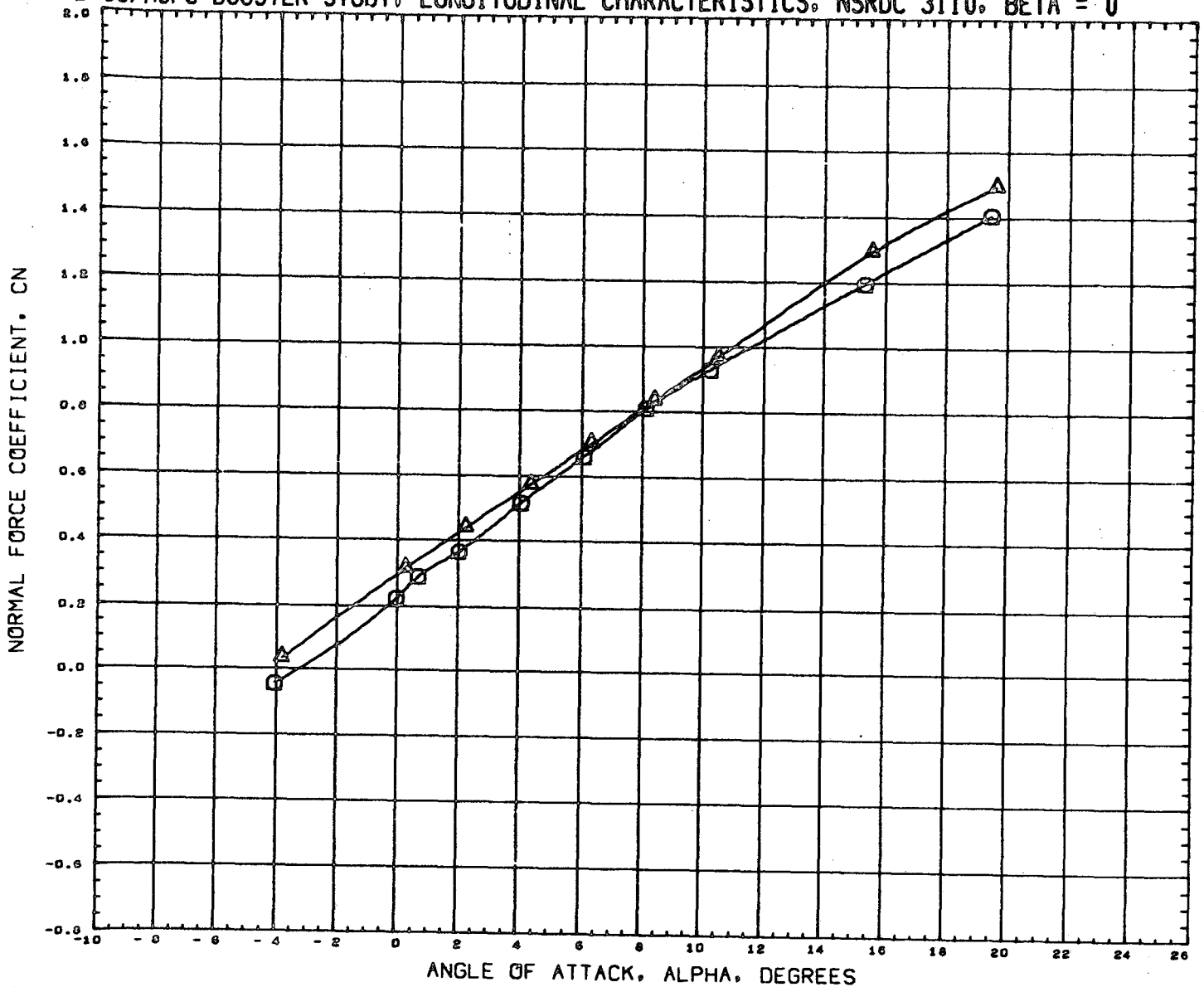
DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(RN2034)	NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1
(RN2042)	NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1

INC1DC	CNDPOS	INC1DW	WNGPOS
3.000	1.000	3.000	1.000
3.000	2.000	3.000	1.000

REFERENCE INFORMATION		
SREF	1.3550	SQ. FT.
LREF	41.4360	INCHES
BREF	41.4360	INCHES
XMRF	31.1400	INCHES
YMRF	0.0000	INCHES
ZMRF	0.2250	INCHES
SCALE	1.5000	PERCENT

MACH 0.381

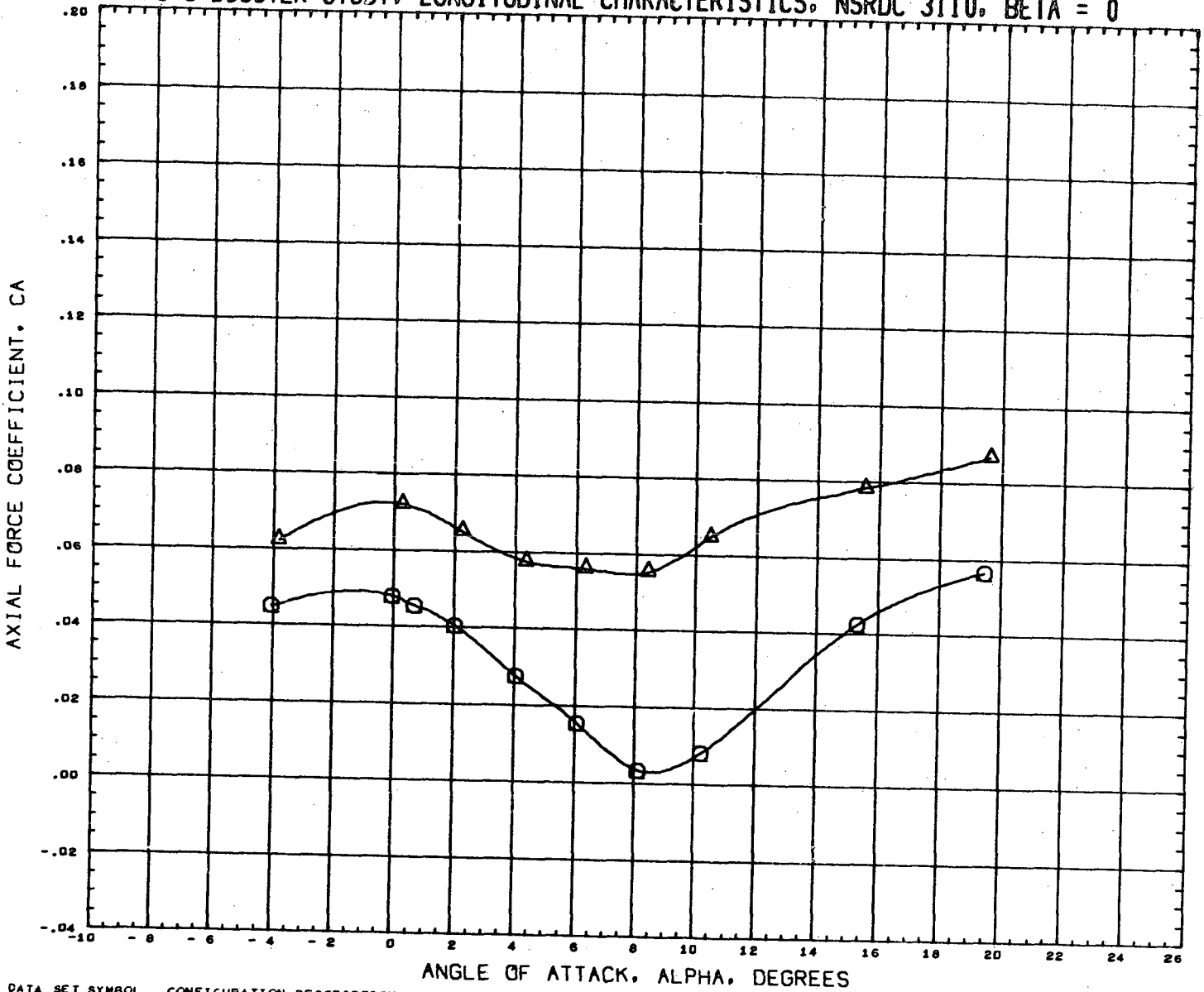
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0





DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION	
(RN2033)	NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1	3.000	1.000	3.000	1.000	SREF	1.3550 SQ. FT.
(RN2037)	NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1	15.000	1.000	3.000	1.000	LREF	41.4360 INCHES
						BREF	41.4360 INCHES
						XMRP	31.1400 INCHES
						YMRP	0.0000 INCHES
						ZMRP	0.2250 INCHES
						SCALE	1.5000 PERCNT

MACH 0.383

LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL
(RN2033) 
(RN2037) 

CONFIGURATION DESCRIPTION
NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1
NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1

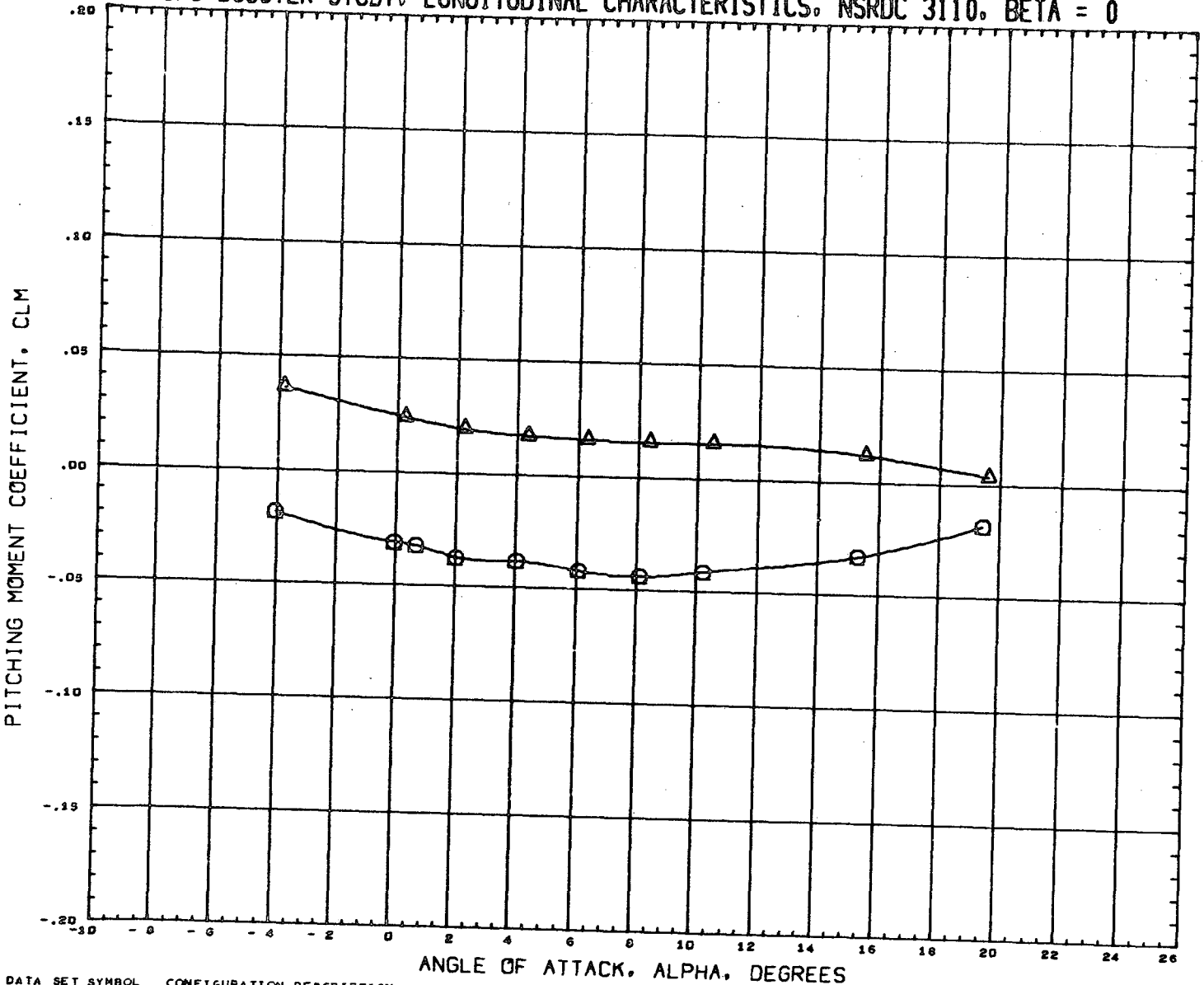
INCIDC	CNDPOS	INCIDW	WNGPOS
3.000	1.000	3.000	1.000
15.000	1.000	3.000	1.000

REFERENCE INFORMATION

SREF	1.3550	SQ. FT.
LREF	41.4360	INCHES
BREF	41.4360	INCHES
XMRP	31.1400	INCHES
YMRP	0.0000	INCHES
ZMRP	0.2230	INCHES
SCALE	1.5000	PERCENT

MACH 0.383

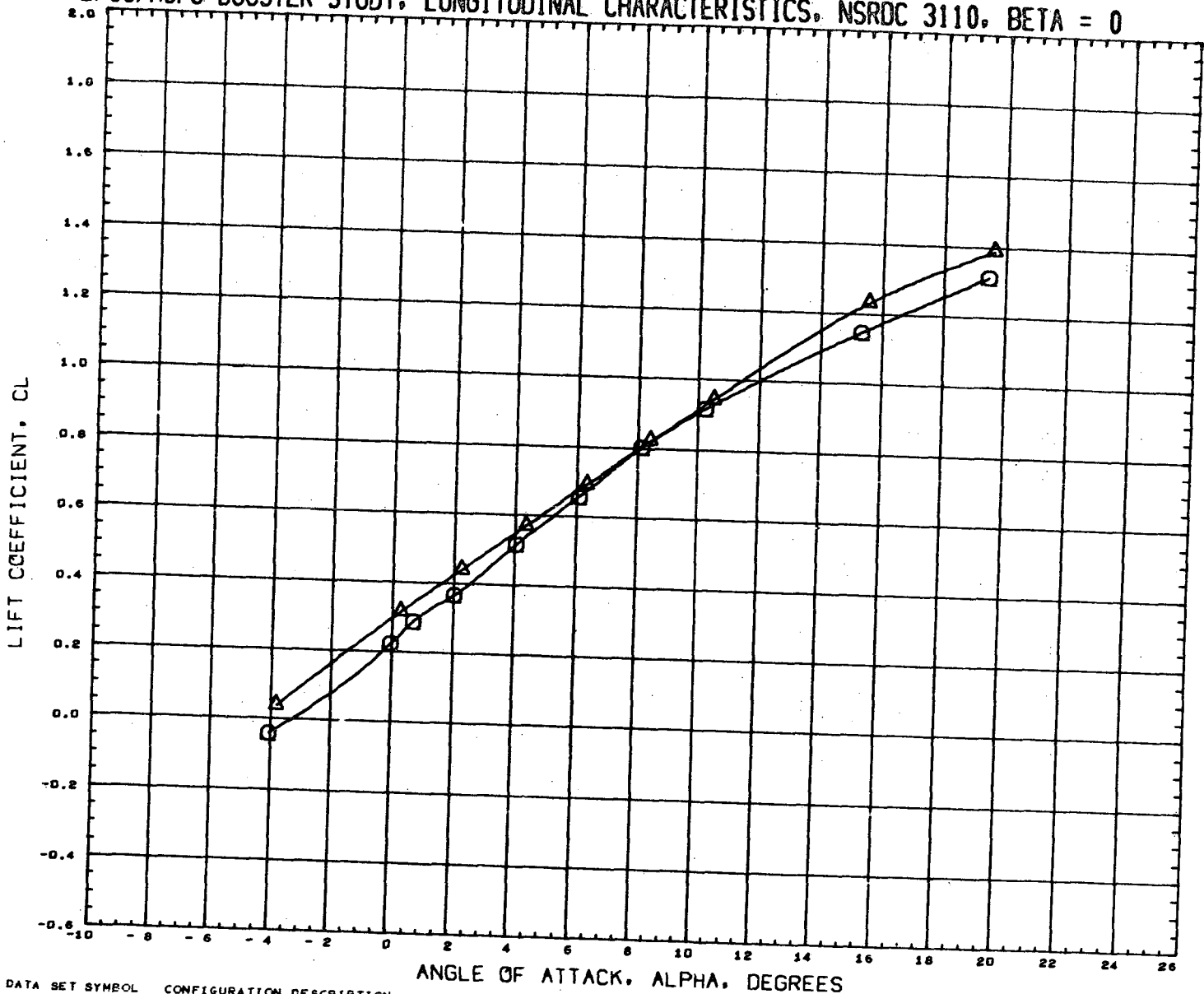
LMSC/MSFC BOOSTER STUDY. LONGITUDINAL CHARACTERISTICS. NSRDC 3110. BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2033)	NSRDC-3110,HSFC/LMSC BOOSTER B1C2F1W1V1	3.000	1.000	3.000	1.000	SREF 1.3550 SQ.FT.
(RN2037)	NSRDC-3110,HSFC/LMSC BOOSTER B1C2F1W1V1	15.000	1.000	3.000	1.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRF 31.1400 INCHES
						YMRF 0.0000 INCHES
						ZMRF 0.2250 INCHES
						SCALE 1.5000 PERCENT

MACH 0.383

LMSC/MSFC BOOSTER STUDY. LONGITUDINAL CHARACTERISTICS. NSRDC 3110. BETA = 0



DATA SET SYMBOL
(RN2033)
(RN2037)

CONFIGURATION DESCRIPTION
NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1
NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1

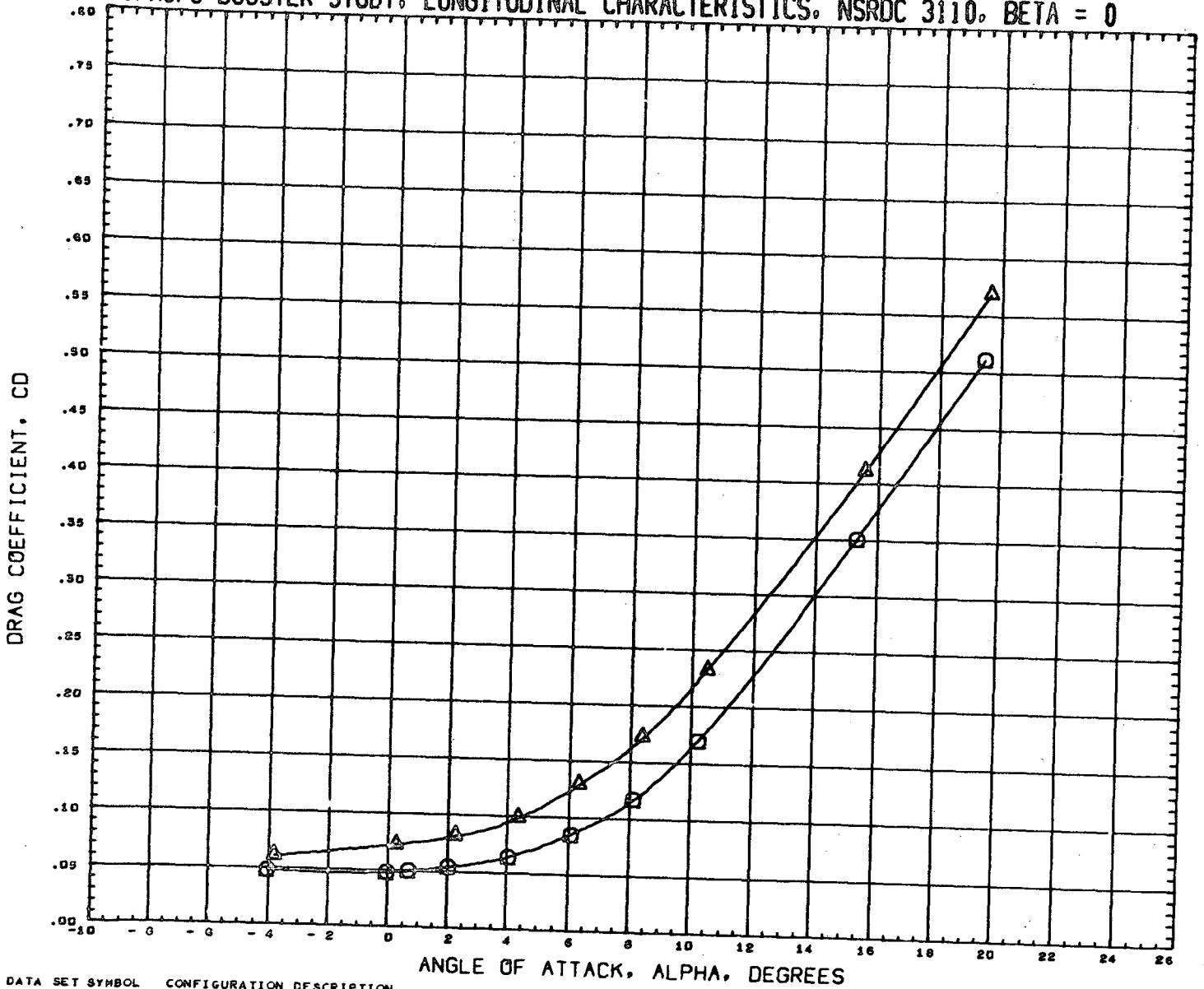
INCIDC	CNDPOS	INCIDW	WNGPOS
3.000	1.000	3.000	1.000
15.000	1.000	3.000	1.000

REFERENCE INFORMATION

SREF	1.3550	SQ. FT.
LREF	41.4360	INCHES
BREF	41.4360	INCHES
XMRP	31.1400	INCHES
YMRP	0.0000	INCHES
ZMRP	0.2250	INCHES
SCALE	1.5000	PERCENT

MACH 0.385

LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



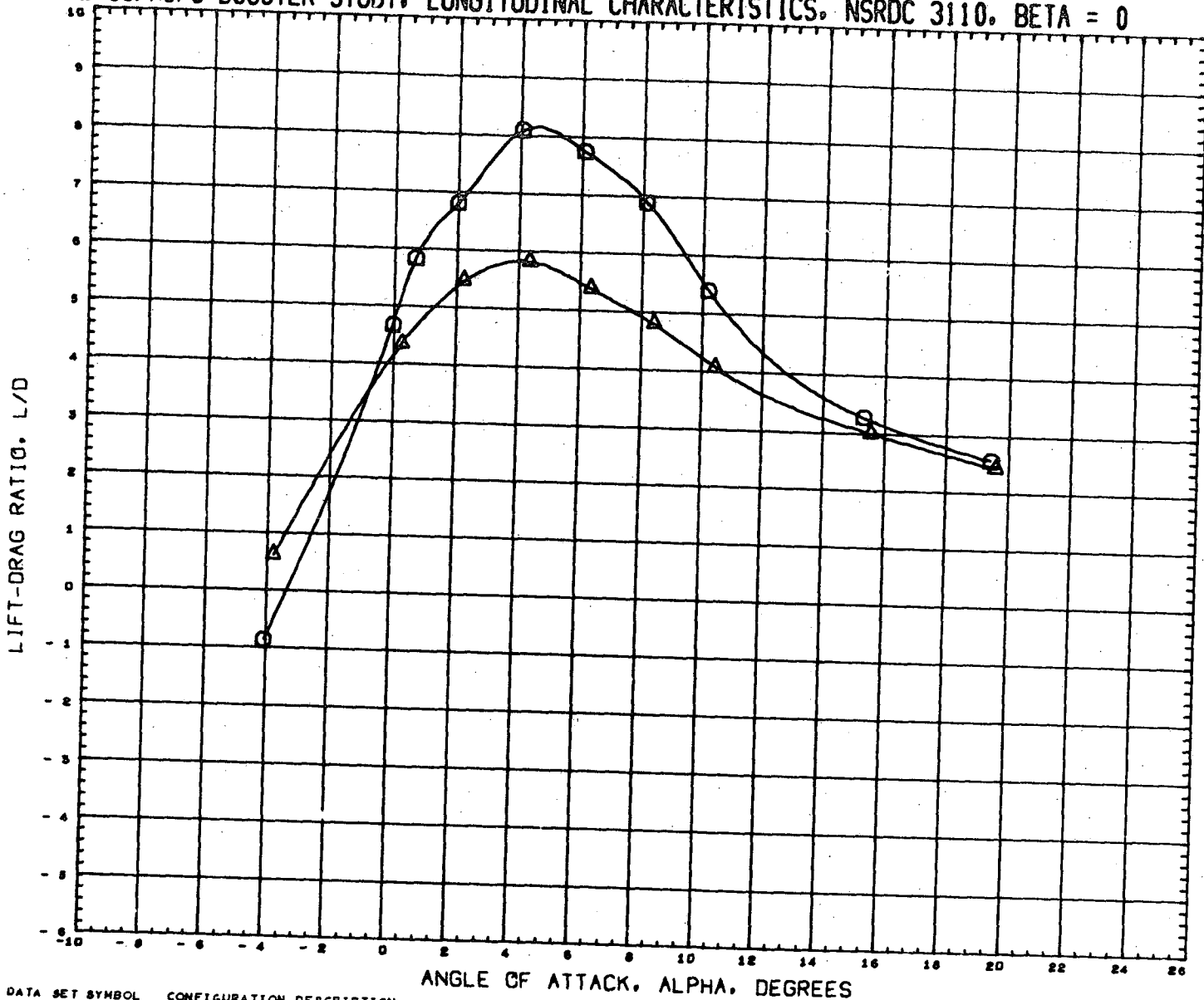
DATA SET SYMBOL (RN2033) (RN2037) CONFIGURATION DESCRIPTION NSRDC-3110,MSFC/LHSC BOOSTER B1C2F1W1V1 NSRDC-3110,MSFC/LHSC BOOSTER B1C2F1W1V1

INCIDC 3.000 15.000 CNDPOS 1.000 1.000 INCIDW 3.000 3.000 WNGPOS 1.000 1.000

REFERENCE INFORMATION
 SREF 1.3550 SQ.FT.
 LREF 41.4360 INCHES
 BREF 41.4360 INCHES
 XMRP 31.1400 INCHES
 YMRP 0.0000 INCHES
 ZMRP 0.2250 INCHES
 SCALE 1.5000 PERCENT

MACH 0.383

LMSC/MSFC BOOSTER STUDY. LONGITUDINAL CHARACTERISTICS. NSRDC 3110. BETA = 0



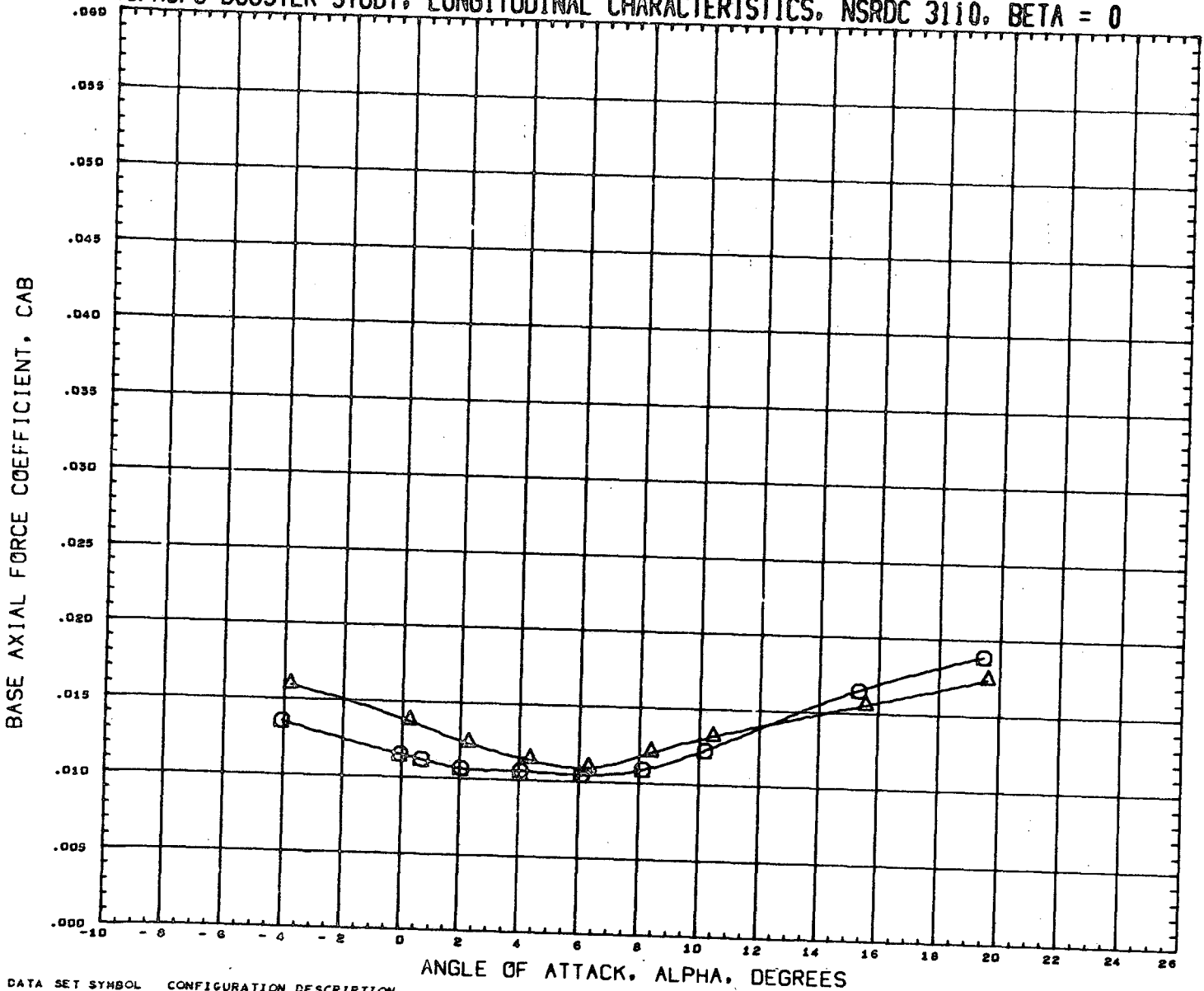
DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(RN2033) ○	NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1
(RN2037) △	NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1

INCIDC	CNDPOS	INCIDW	WNGPOS
3.000	1.000	3.000	1.000
15.000	1.000	3.000	1.000

REFERENCE INFORMATION		
SREF	1.3550	90. F.I.
LREF	41.4360	INCHES
BREF	41.4360	INCHES
XMRP	31.1400	INCHES
YMRP	0.0000	INCHES
ZMRP	0.2250	INCHES
SCALE	1.5000	PERCENT

MACH 0.383

LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



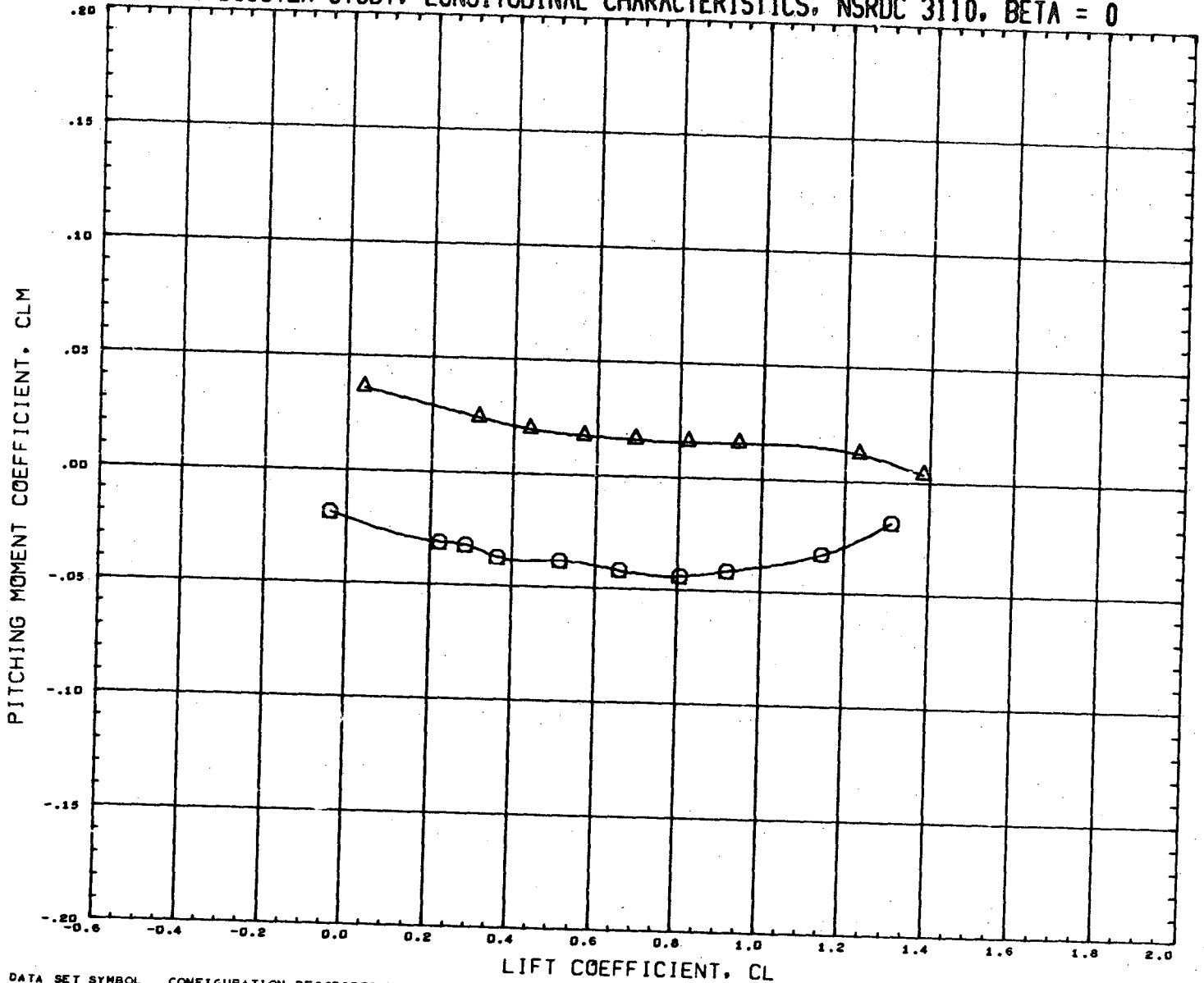
DATA SET SYMBOL (RN2033) (RN2037) CONFIGURATION DESCRIPTION NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1 NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1

INCIDC 3.000 15.000 CNDPOS 1.000 1.000 INCIDW 3.000 3.000 WNGPOS 1.000 1.000

REFERENCE INFORMATION SREF 1.355C SQ. FT. LREF 41.4360 INCHES BREF 41.4360 INCHES XHRP 31.1400 INCHES YHRP 0.0000 INCHES ZHRP 0.2250 INCHES SCALE 1.5000 PERCENT

MACH 0.383

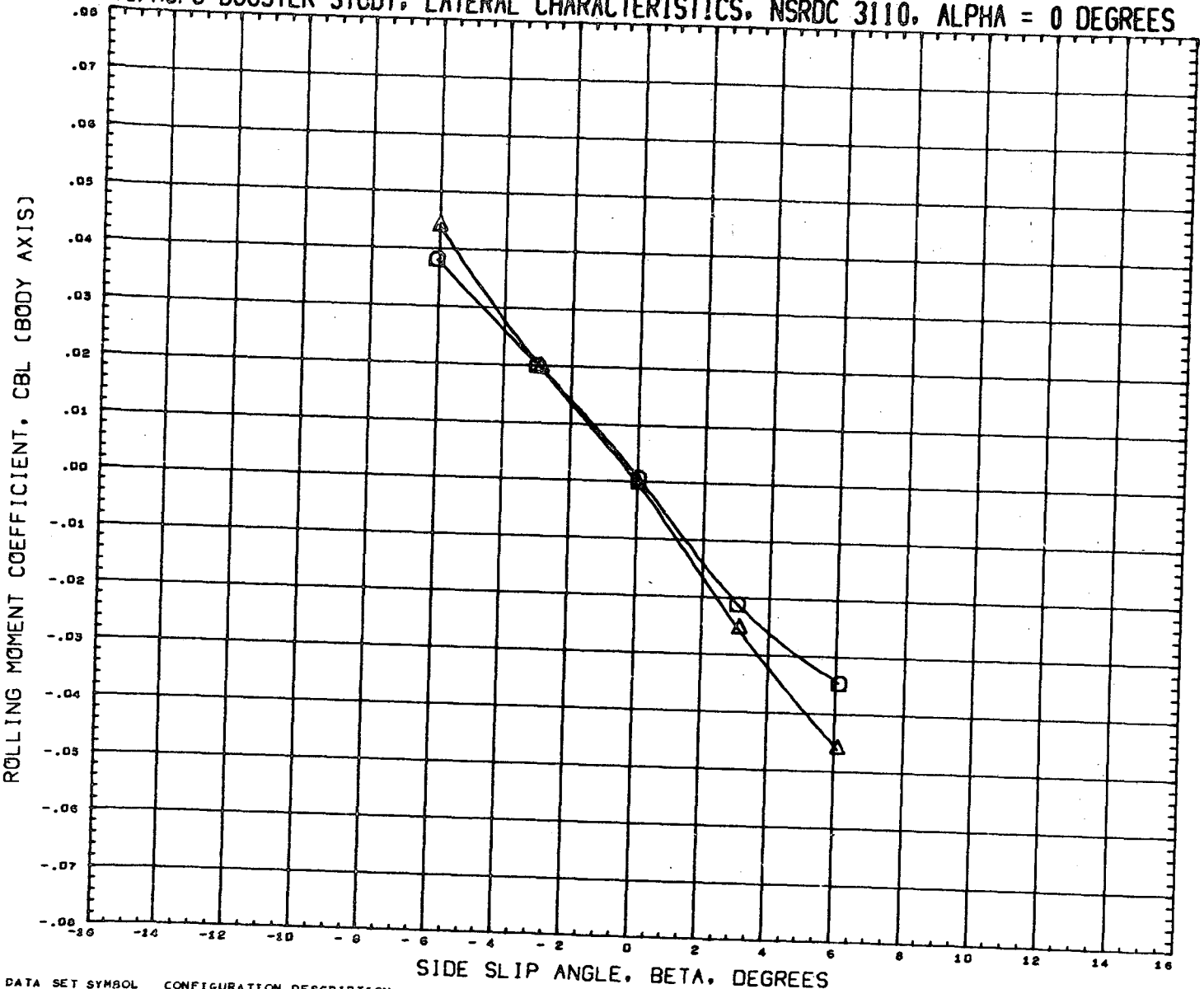
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2033)	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1	5.000	1.000	3.000	1.000	SREF 1.3550 SQ.FT.
(RN2037)	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1	15.000	1.000	3.000	1.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCENT

MACH 0.383

LMSC/MSFC BOOSTER STUDY, LATERAL CHARACTERISTICS, NSRDC 3110, ALPHA = 0 DEGREES



DATA SET SYMBOL (RN2034) (RN2038) Δ CONFIGURATION DESCRIPTION NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1 NSRDC-3110, MSFC/LHSC BOOSTER B1C2F1W1V1

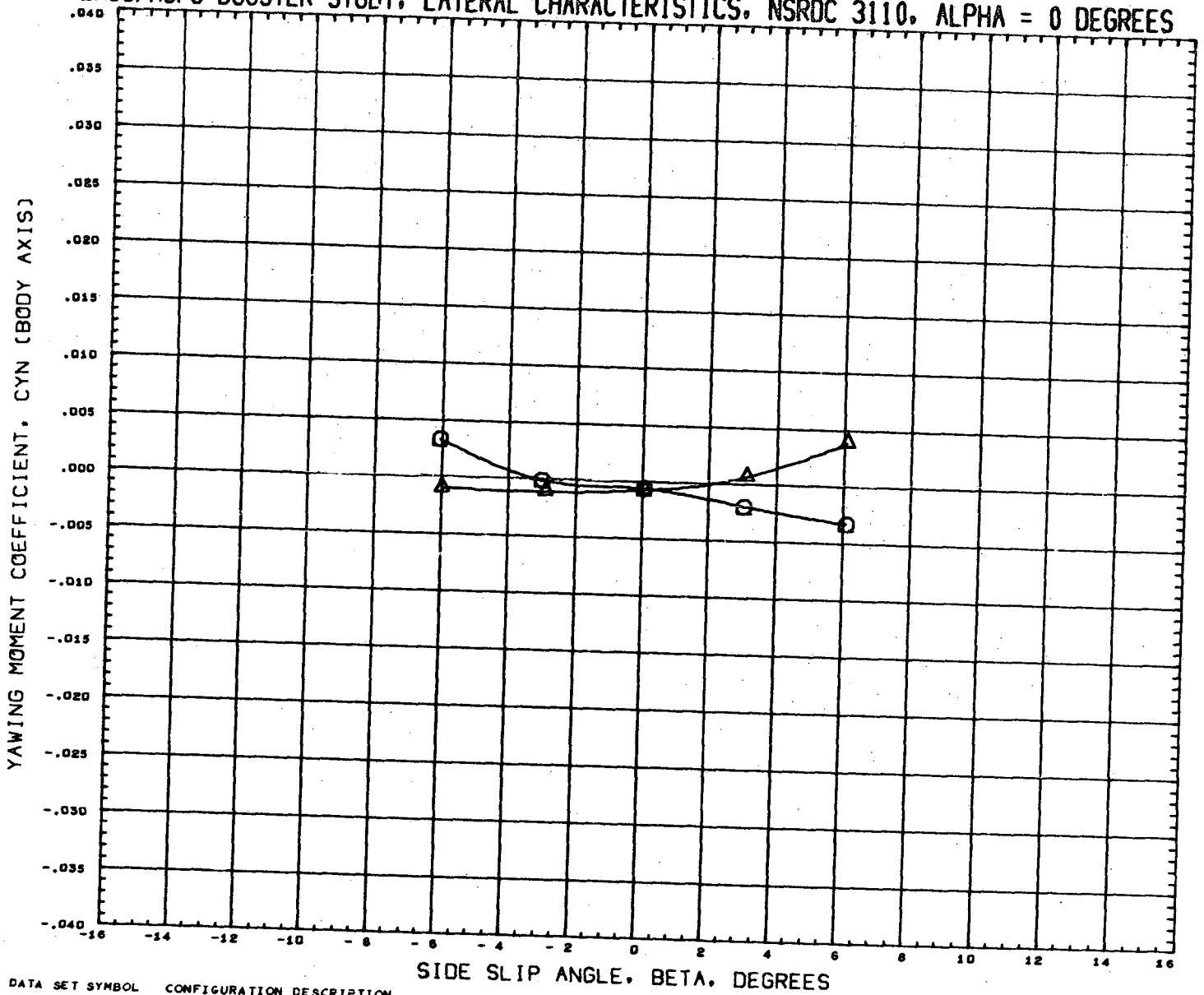
INCIDC 3.000 15.000 CNDPOS 1.000 1.000 INCIDW 3.000 3.000 WNGPOS 1.000 1.000



REFERENCE INFORMATION
 SREF 1.3550 SQ.FT.
 LREF 41.4360 INCHES
 BREF 41.4360 INCHES
 XMRP 31.1400 INCHES
 YMRP 0.0000 INCHES
 ZMRP 0.2250 INCHES
 SCALE 1.5000 PERCENT

MACH 0.381

4A

LMSC/MSFC BOOSTER STUDY, LATERAL CHARACTERISTICS, NSRDC 3110, ALPHA = 0 DEGREES



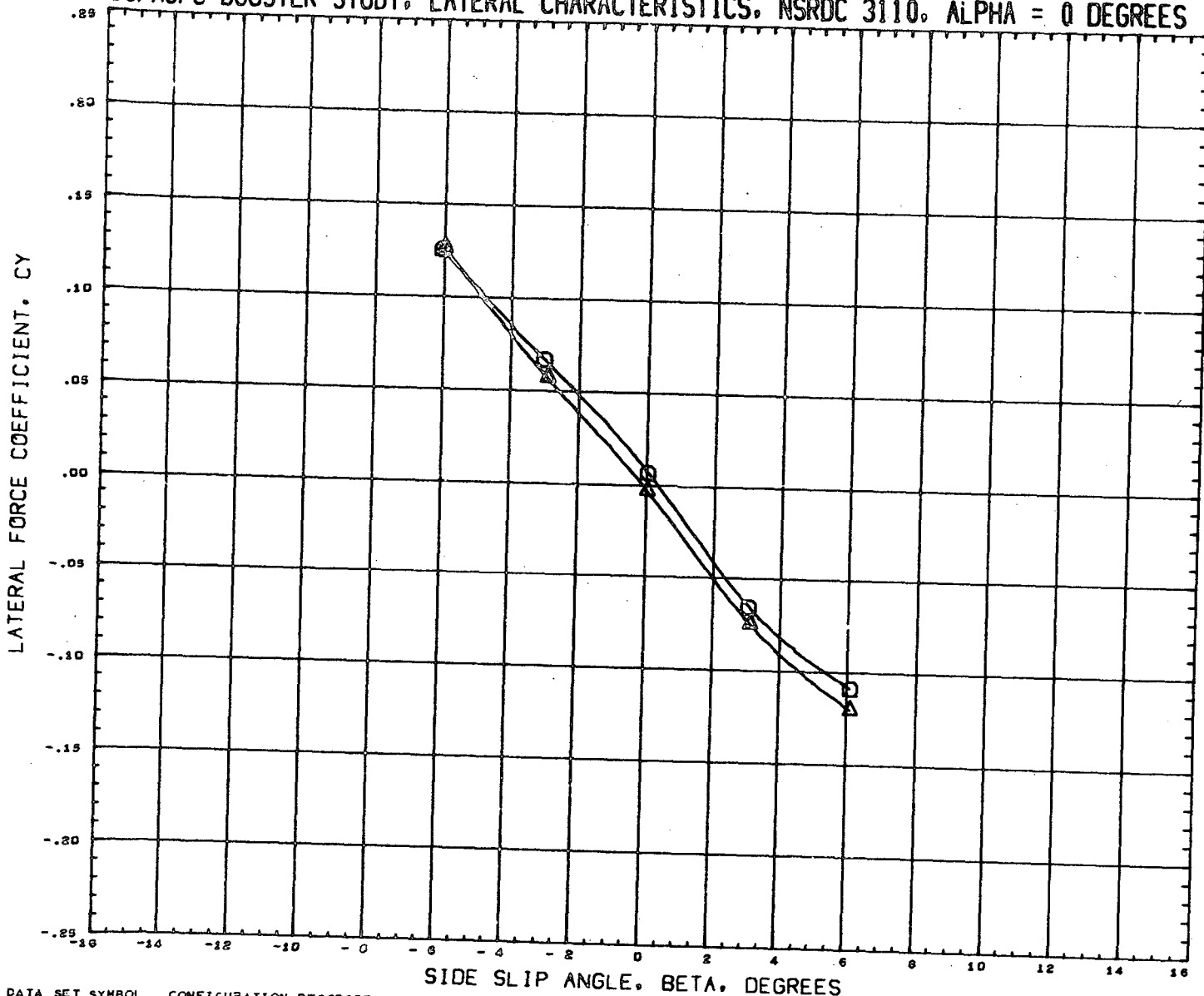
DATA SET SYMBOL (RN2034) (RN2036)   CONFIGURATION DESCRIPTION NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1 NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1

INCIDC 3.000 15.000
 CNDPOS 1.000 1.000
 INCIDW 3.000 3.000
 WNGPOS 1.000 1.000

REFERENCE INFORMATION
 SREF 1.3550 SQ. FT.
 LREF 41.4360 INCHES
 BREF 41.4360 INCHES
 XMRP 31.1400 INCHES
 YMRP 0.0000 INCHES
 ZMRP 0.2250 INCHES
 SCALE 1.5000 PERCENT

MACH 0.361

LMSC/MSFC BOOSTER STUDY, LATERAL CHARACTERISTICS, NSRDC 3110, ALPHA = 0 DEGREES



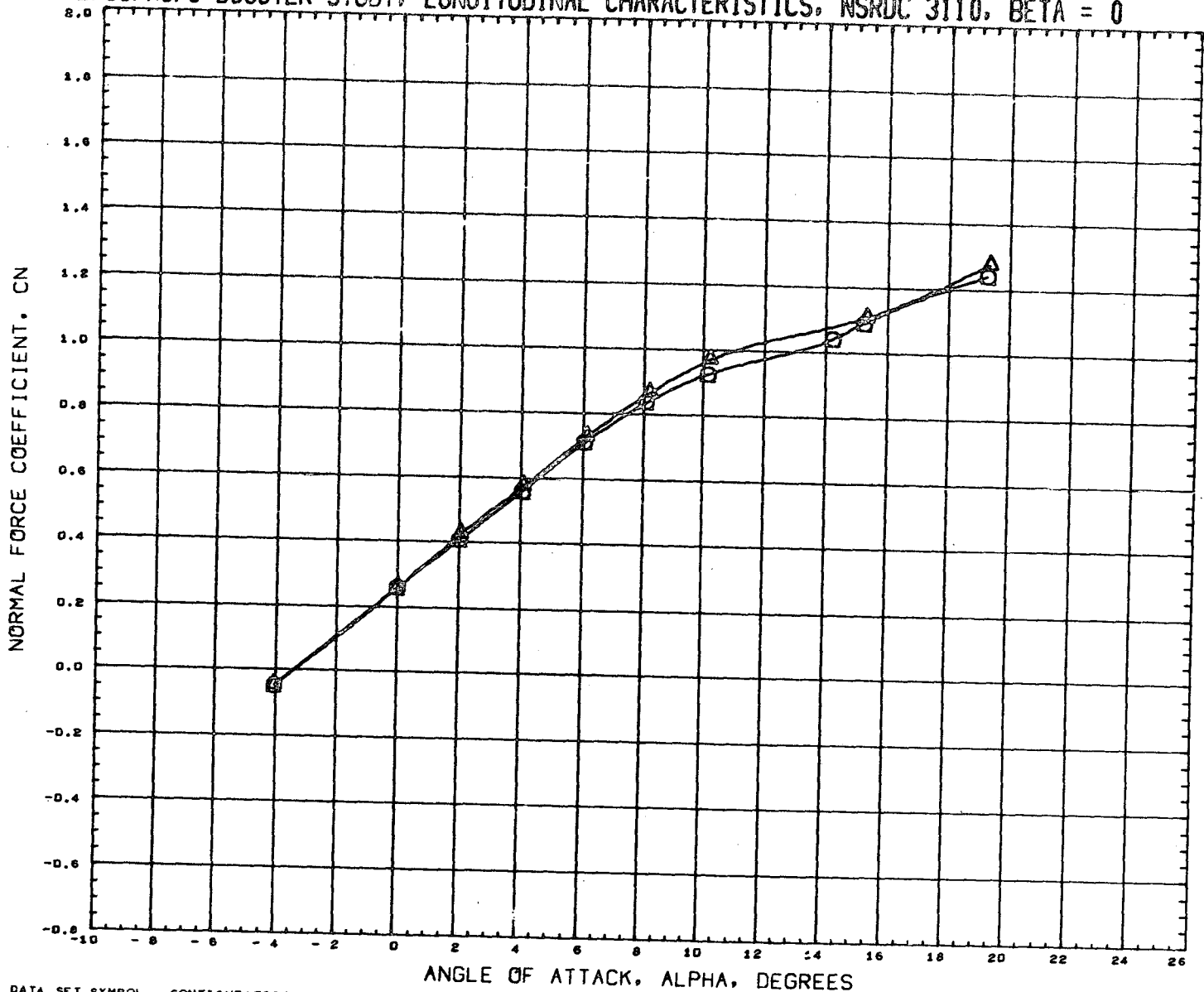
DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(RN2034)	NSRDC-3110, MSFC/LHSC BOOSTER B1C2F1W1V1
(RN2039)	NSRDC-3110, MSFC/LHSC BOOSTER B1C2F1W1V1



INCIDC	CNDFOS	INCIDW	WNGFOS
3.000	1.000	3.000	1.000
15.000	1.000	3.000	1.000



REFERENCE INFORMATION	
SREF	1.3550 SQ.FT.
LREF	41.4360 INCHES
BREF	41.4360 INCHES
XMRP	31.1400 INCHES
YMRP	0.0000 INCHES
ZMRP	0.2250 INCHES
SCALE	1.5000 PERCENT

HACH 0.381

LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL
(RN2041) 
(RN2105) 

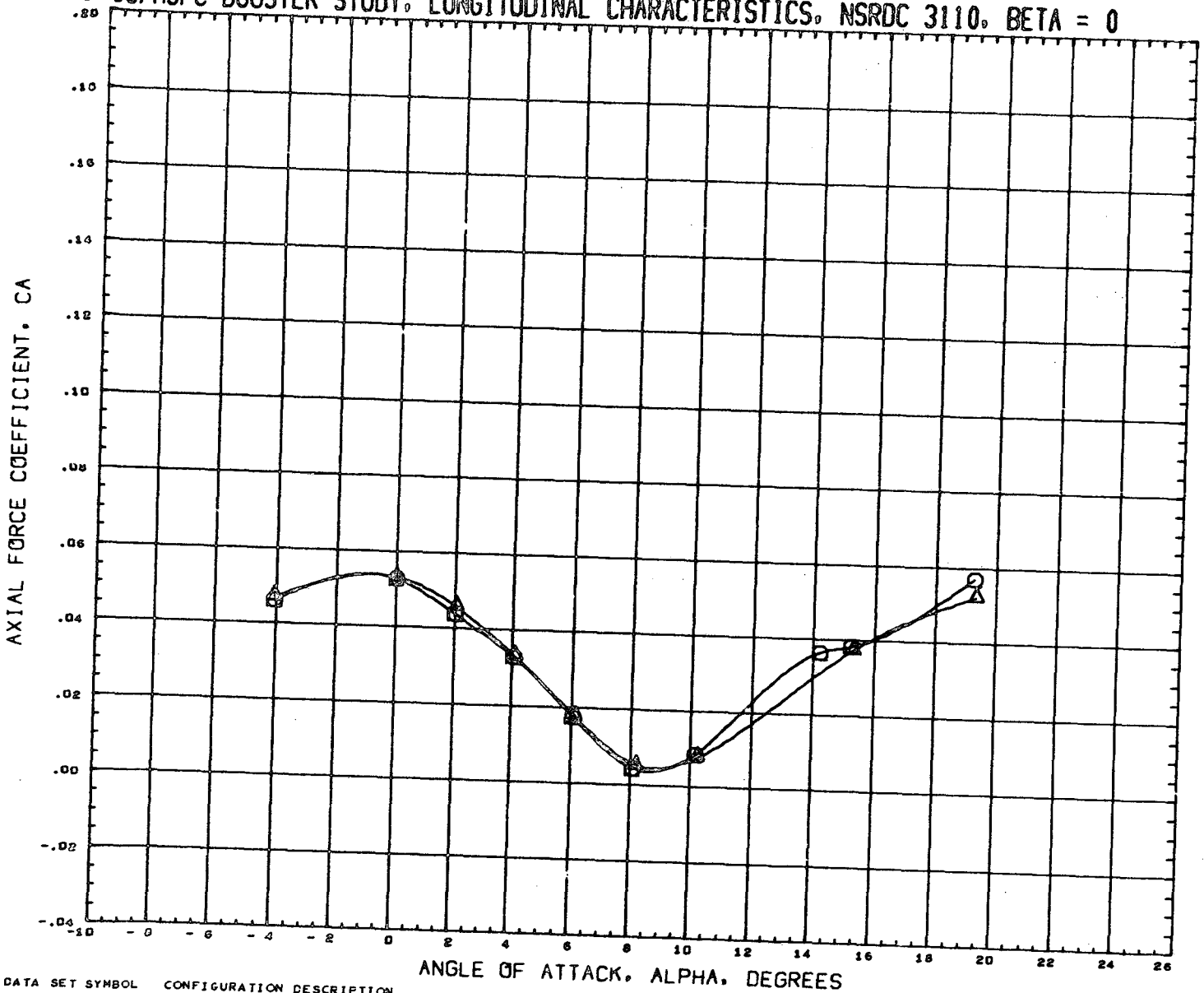
CONFIGURATION DESCRIPTION
NSRDC-3110,MSFC/LMSC BOOSTER  B1C2F1W1V1
NSRDC-3110,MSFC/LMSC BOOSTER  B1C1F1W1V1

INCIDC	CNDPOS	INCIDW	WNGPOS
3.000	2.000	3.000	1.000
3.000	2.000	3.000	1.000

REFERENCE INFORMATION	
SREF	1.3550 SQ.FT.
LREF	41.4360 INCHES
BREF	41.4360 INCHES
XMRP	31.1400 INCHES
YMRP	0.0000 INCHES
ZMRP	0.2250 INCHES
SCALE	1.5000 PERCENT

MACH 0.380

LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL
(RN2041)
(RN2105)



CONFIGURATION DESCRIPTION

NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1
NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1

ANGLE OF ATTACK, ALPHA, DEGREES

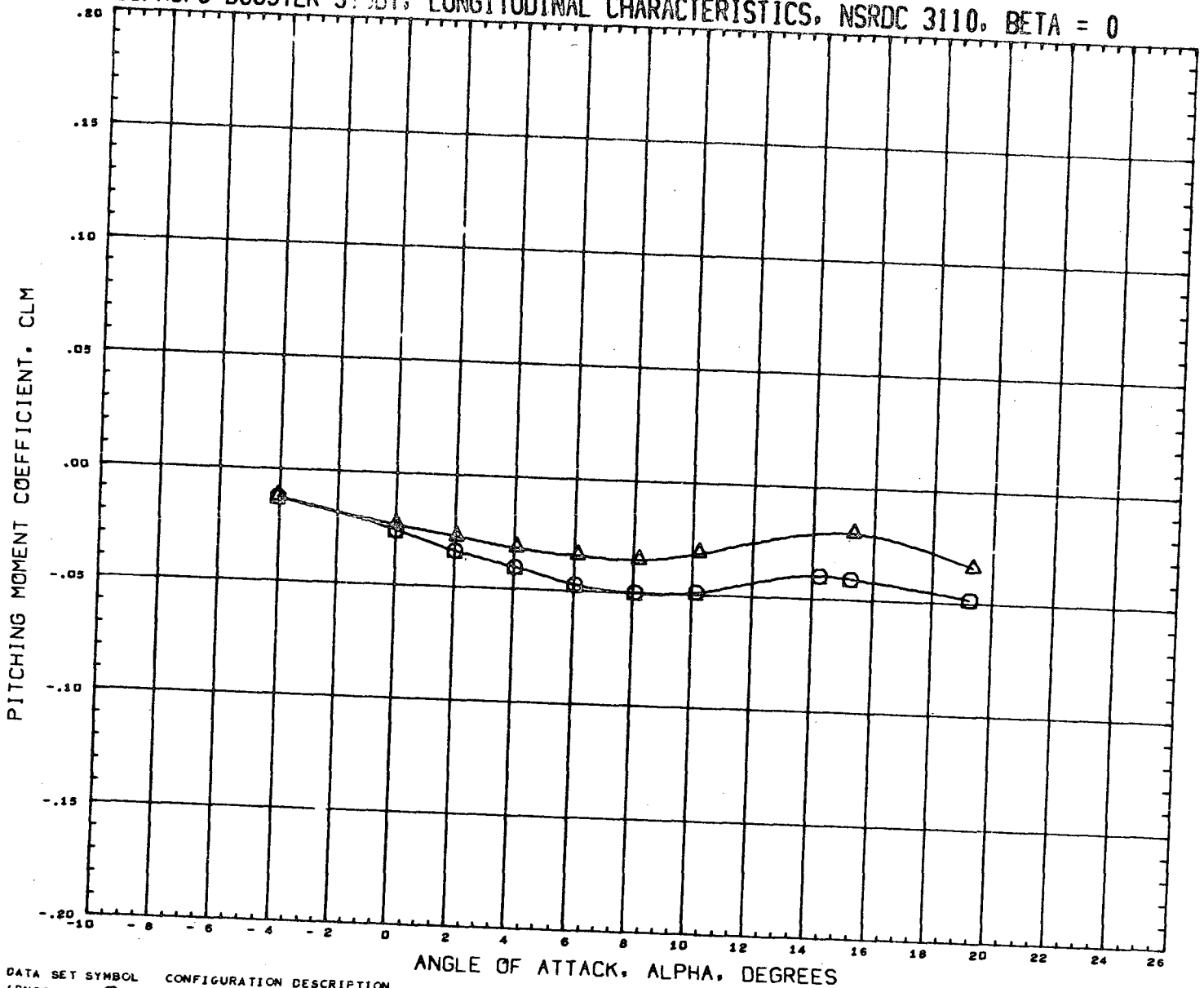
INCIDC	CNDPOS	INCIDW	WNGPOS
3.000	2.000	3.000	1.000
3.000	2.000	3.000	1.000

REFERENCE INFORMATION

SREF	1.3550	SQ. FT.
LREF	41.4360	INCHES
BREF	41.4360	INCHES
XMRP	31.1400	INCHES
YMRP	0.0000	INCHES
ZMRP	0.2250	INCHES
SCALE	1.5000	PERCENT

MACH 0.380

LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL
(RN2041)
(RN2105)



CONFIGURATION DESCRIPTION

NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1
NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1

ANGLE OF ATTACK, ALPHA, DEGREES

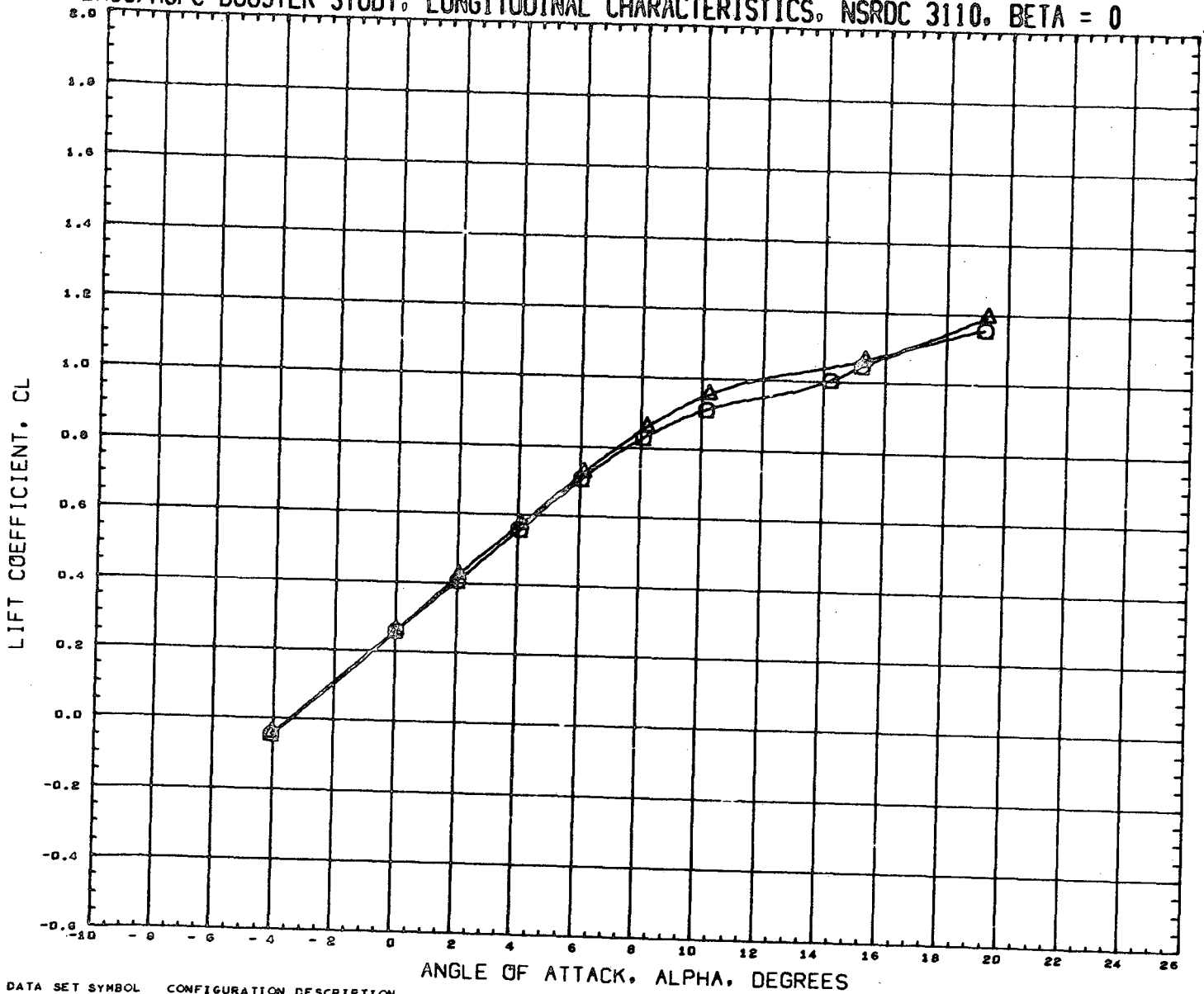
INCIDC	CNDPOS	INCIDW	WNGPOS
3.000	2.000	3.000	1.000
3.000	2.000	3.000	1.000

REFERENCE INFORMATION

SREF	1.3550	SQ.FT.
LREF	41.4360	INCHES
BREF	41.4360	INCHES
XMRP	31.1400	INCHES
YMRP	0.0000	INCHES
ZMRP	0.2250	INCHES
SCALE	1.5000	PERCENT

MACH 0.380

LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL
(RN2041)
(RN2105)



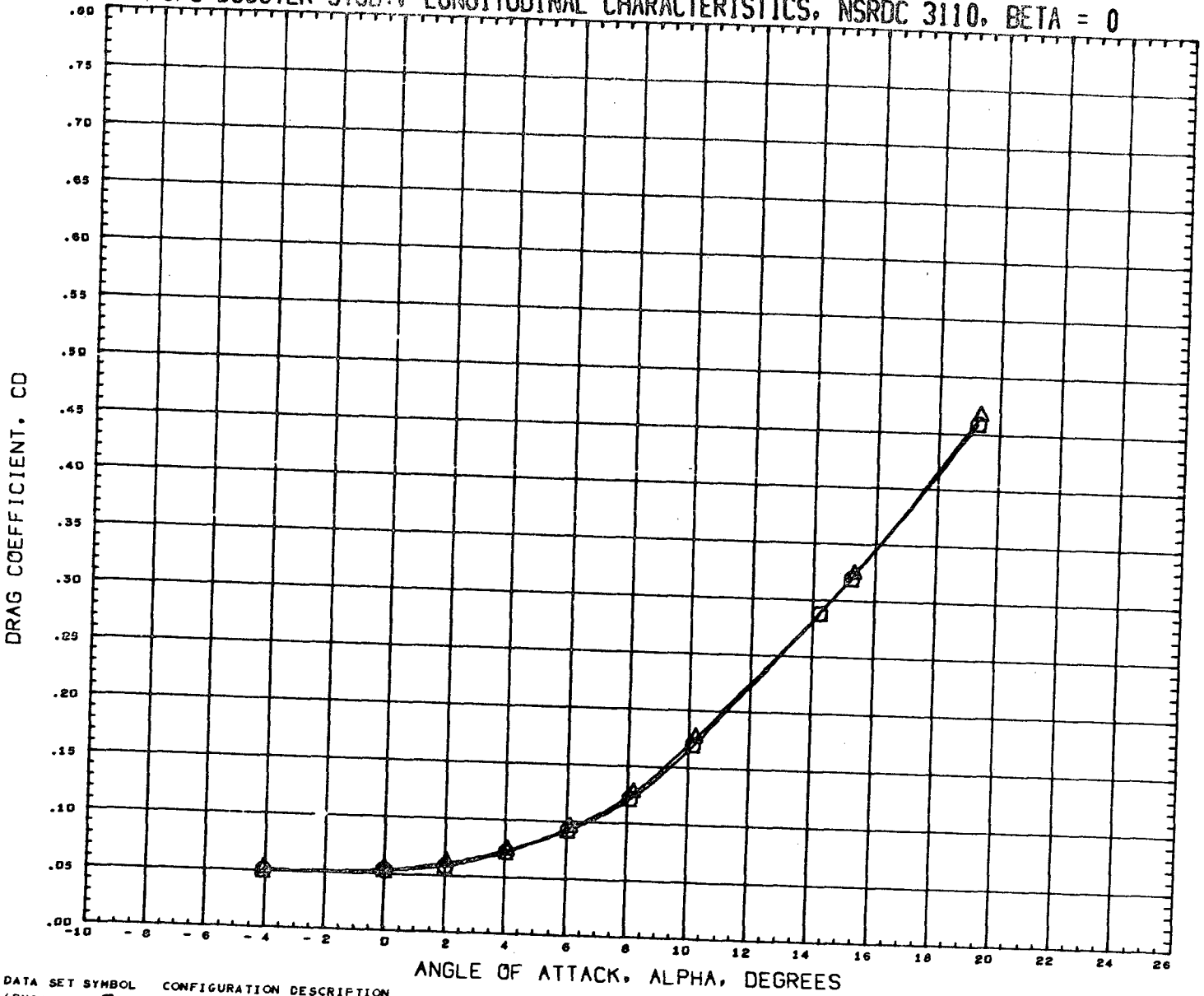
CONFIGURATION DESCRIPTION
NSRDC-3110,MSFC/LHSC BOOSTER B1C2F1W1V1
NSRDC-3110,MSFC/LHSC BOOSTER B1C1F1W1V1


INCIDC	CNDPOS	INCIDW	WNGPOS
3.000	2.000	3.000	1.000
3.000	2.000	3.000	1.000

REFERENCE INFORMATION	
SREF	1.3550 SQ.FT.
LREF	41.4360 INCHES
BREF	41.4360 INCHES
XMRP	31.1400 INCHES
YMRP	0.0000 INCHES
ZMRP	0.2250 INCHES
SCALE	1.5000 PERCENT

MACH 0.360

LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



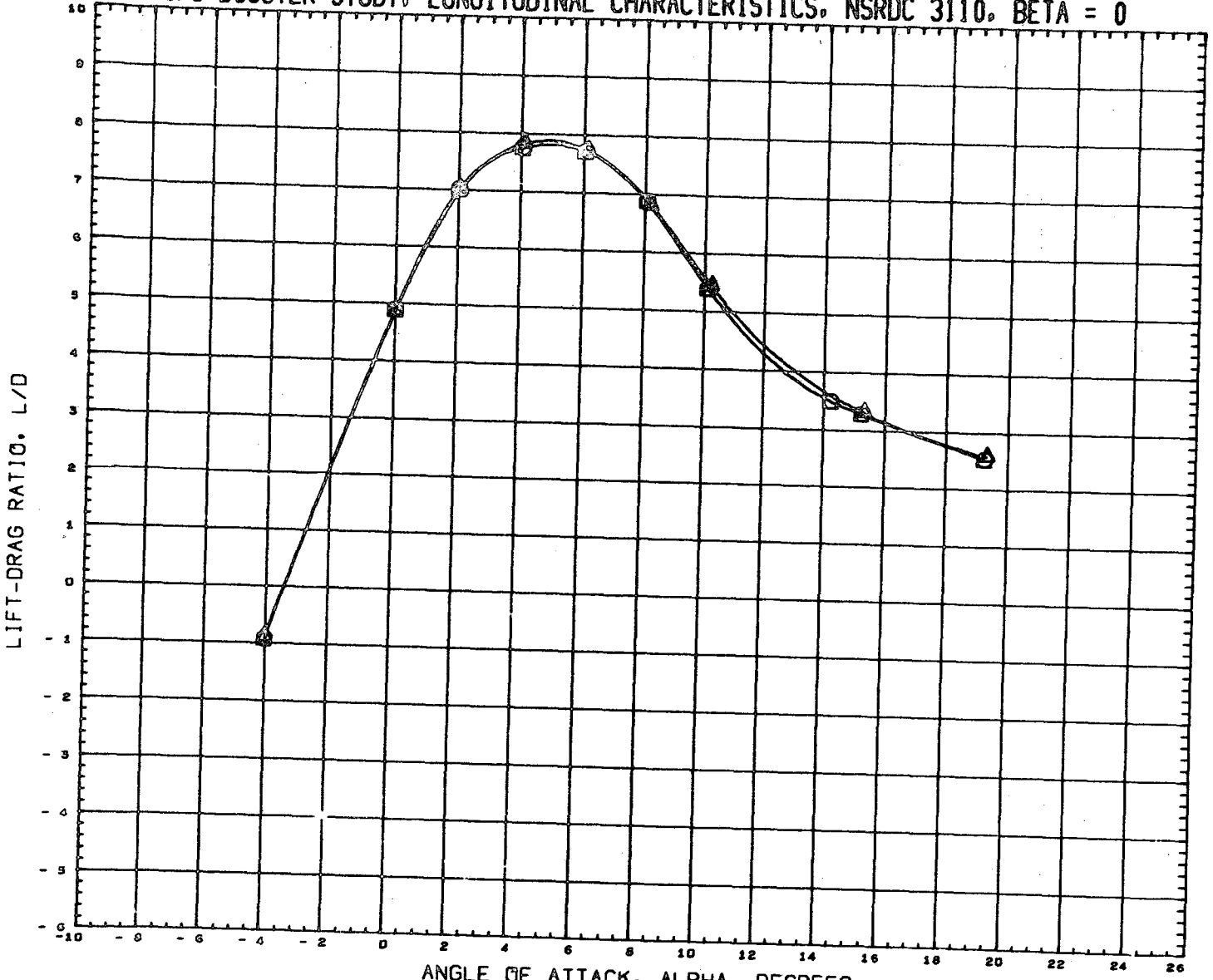
DATA SET SYMBOL (RN2041) (RN2105)  CONFIGURATION DESCRIPTION NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1 NSRDC-3110,MSFC/LMSC BOOSTER B1C1F1W1V1

INC:DC 3.000 3.000
 CNDPOS 2.000 2.000
 INCIDW 3.000 3.000
 WNGPOS 1.000 1.000

REFERENCE INFORMATION
 SREF 1.3550 SQ.FT.
 LREF 41.4360 INCHES
 BREF 41.4360 INCHES
 XNRF 31.1400 INCHES
 YNRF 0.0000 INCHES
 ZNRF 0.2250 INCHES
 SCALE 1.5000 PERCENT

MACH 0.380

LMSC/MSFC BOOSTER STUDY. LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL
(RN2041)
(RN2105)



CONFIGURATION DESCRIPTION
NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1
NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1

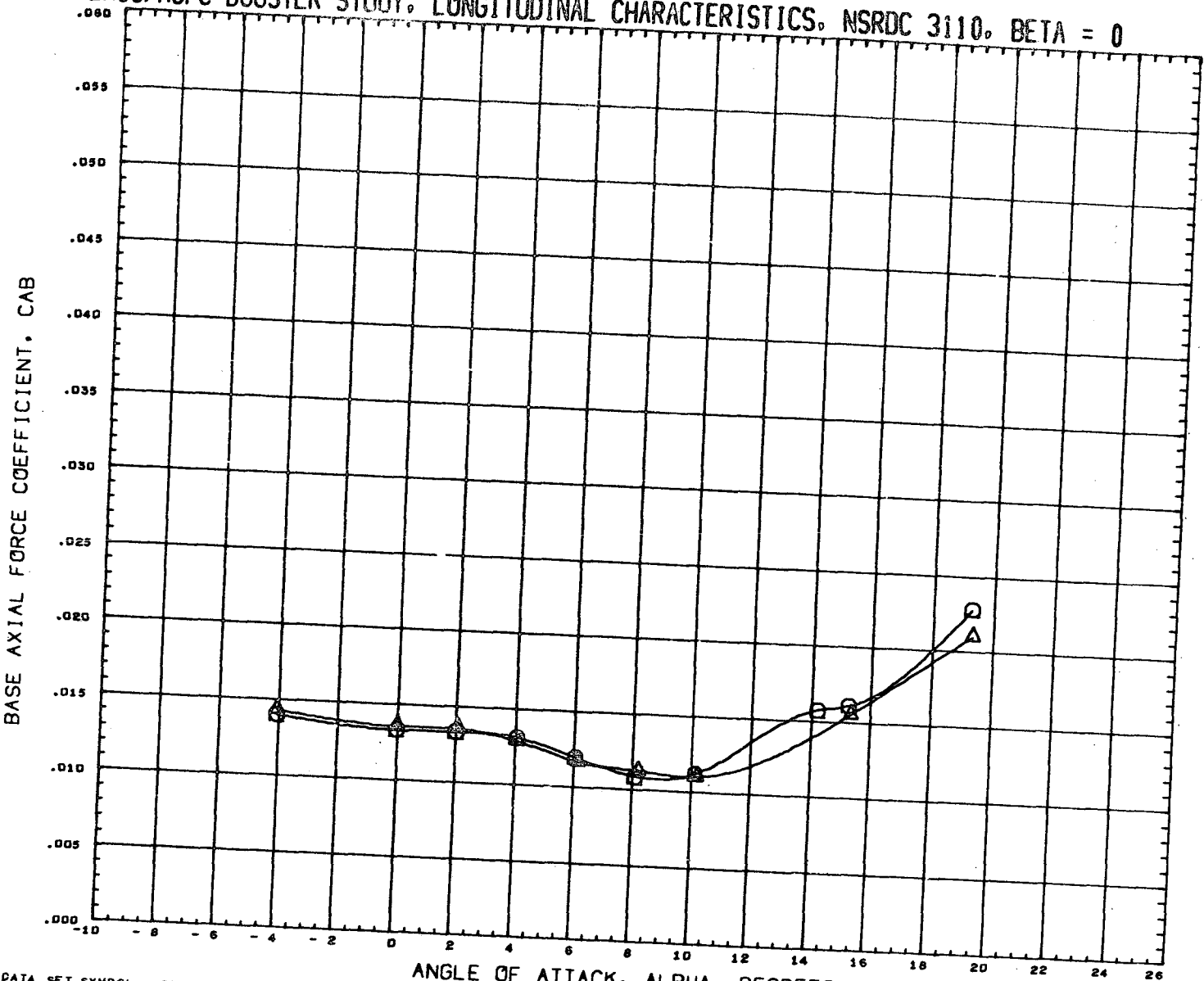
INCIDC	CNDPOS	INCIDW	WNGPOS
3.000	2.000	3.000	1.000
3.000	2.000	3.000	1.000

REFERENCE INFORMATION

SREF	1.3550	SQ. FT.
LREF	41.4360	INCHES
BREF	41.4360	INCHES
XMRP	31.1400	INCHES
YMRP	0.0000	INCHES
ZMRP	0.2250	INCHES
SCALE	1.5000	PERCENT

MACH 0.380

LMSC/MSFC BOOSTER STUDY. LONGITUDINAL CHARACTERISTICS. NSRDC 3110. BETA = 0



DATA SET SYMBOL
(RN2041)
(RN2105)



CONFIGURATION DESCRIPTION
NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1
NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1

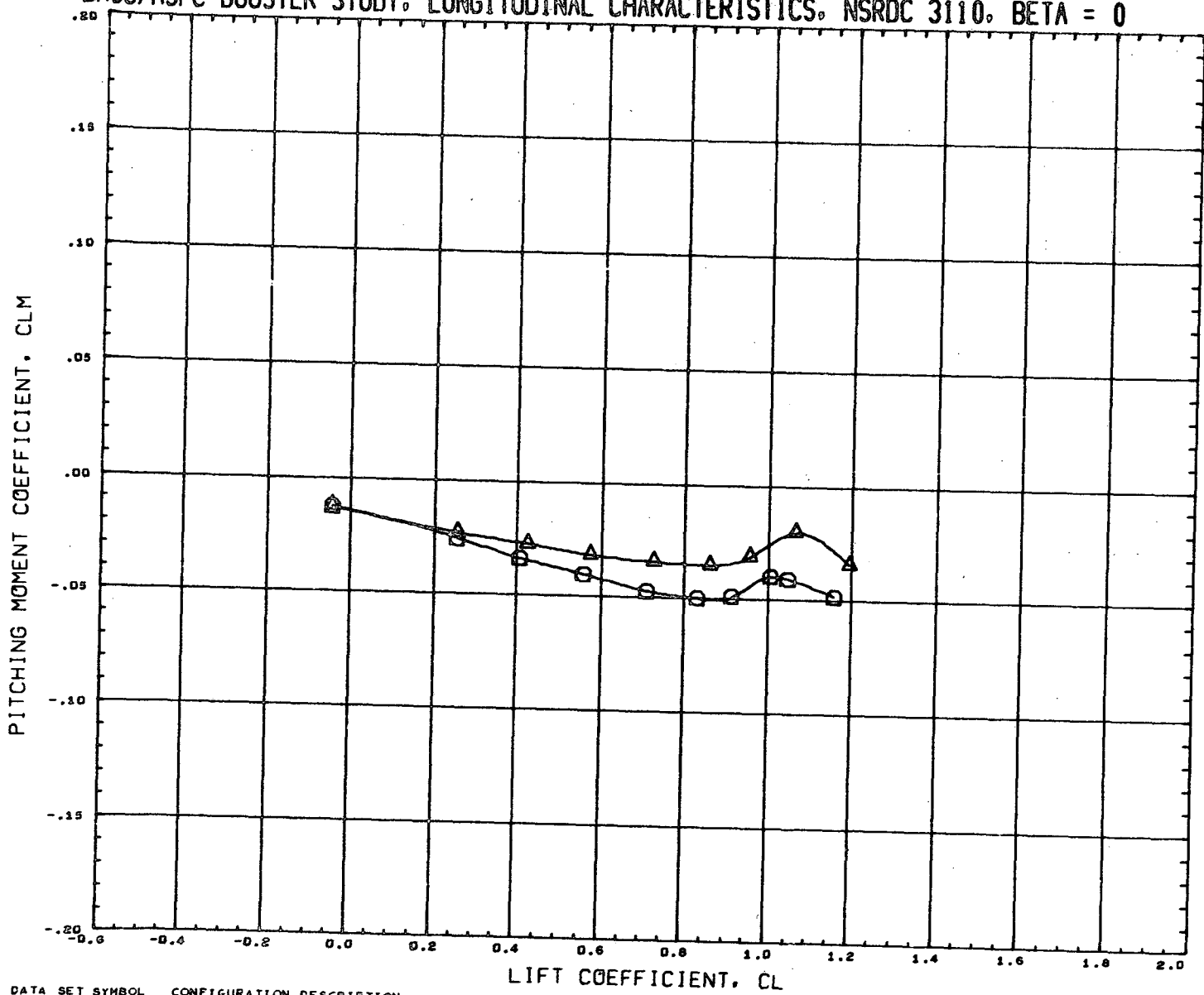
INCIDC	CNDPOS	INCIDW	WNGPOS
3.000	2.000	3.000	1.000
3.000	2.000	3.000	1.000

REFERENCE INFORMATION

SREF	1.3550	SQ. FT.
LREF	41.4360	INCHES
BREF	41.4360	INCHES
XMRP	31.1400	INCHES
YMRP	0.0000	INCHES
ZMRP	0.2250	INCHES
SCALE	1.5000	PERCENT

MACH 0.380

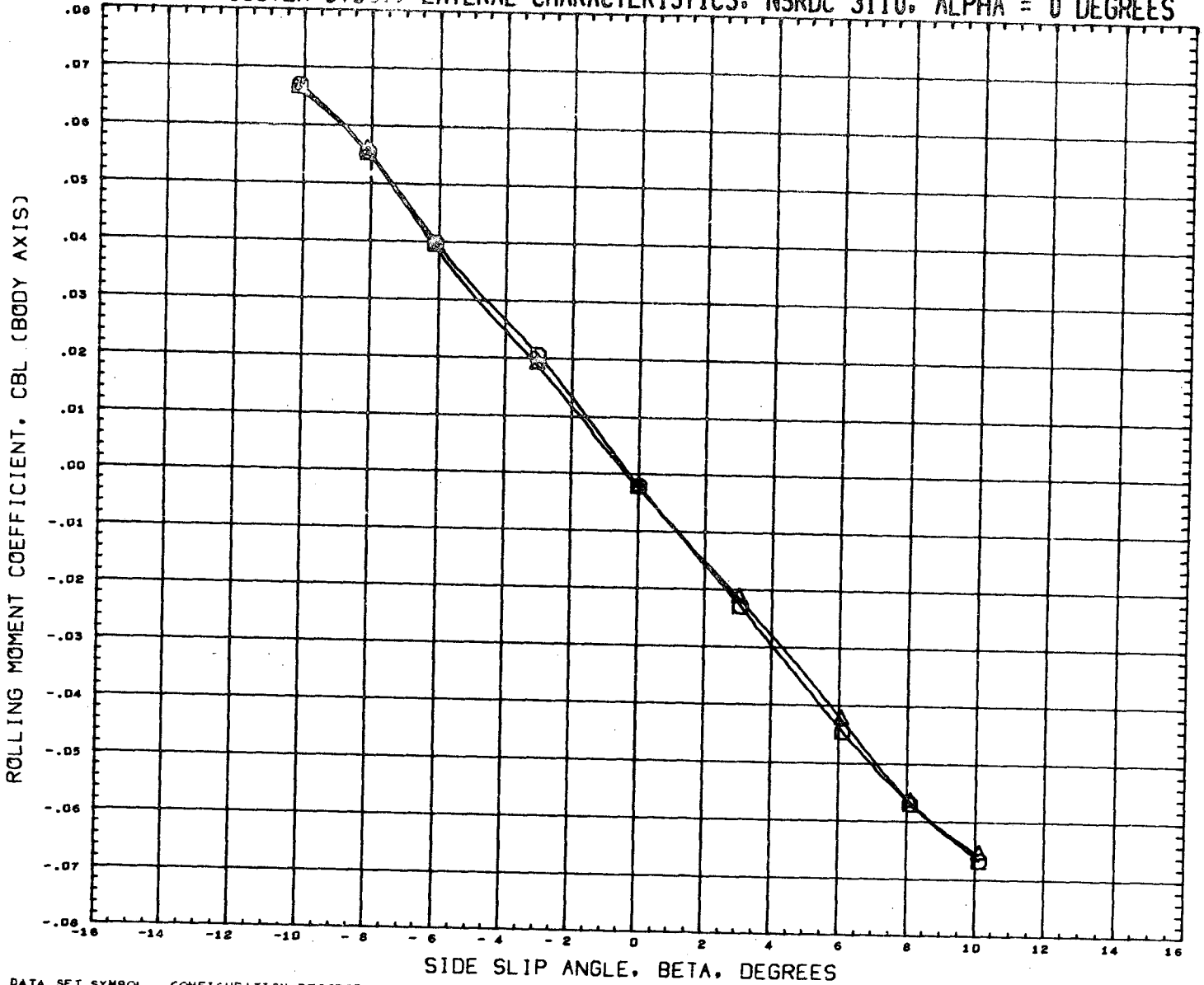
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2041)	NSRDC-3110, MSFC/LHSC BOOSTER B1C2F1W1V1	3.000	2.000	3.000	1.000	SREF 1.3550 SQ.FT.
(RN2105)	NSRDC-3110, MSFC/LHSC BOOSTER B1C1F1W1V1	3.000	2.000	3.000	1.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRF 31.1400 INCHES
						YMRF 0.0000 INCHES
						ZMRF 0.2250 INCHES
						SCALE 1.5000 PERCENT

HACH 0.500

LMSC/MSFC BOOSTER STUDY, LATERAL CHARACTERISTICS, NSRDC 3110, ALPHA = 0 DEGREES



DATA SET SYMBOL
(RN2042)
(RN2106)



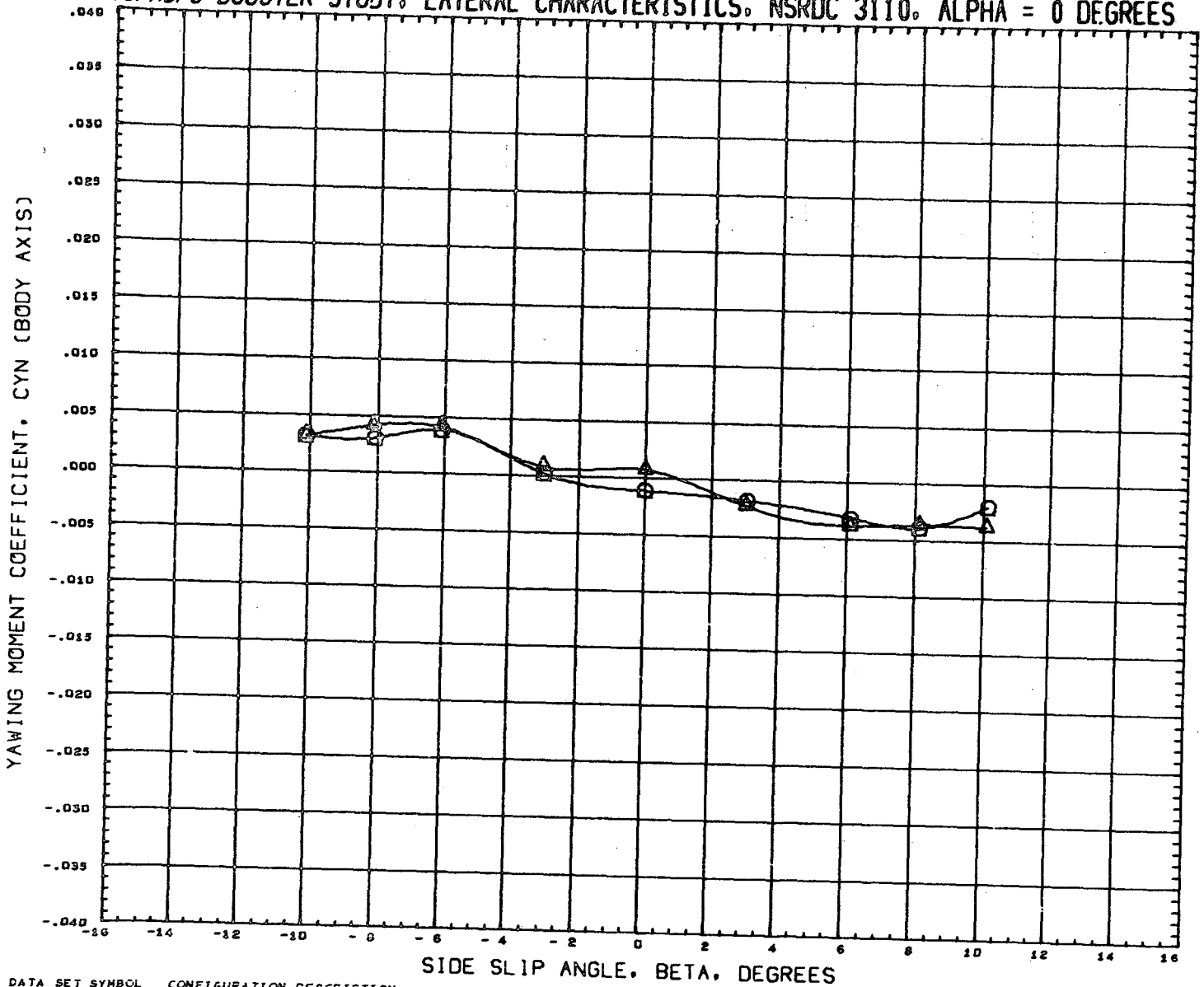
CONFIGURATION DESCRIPTION
NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1
NSRDC-3110,MSFC/LMSC BOOSTER B1C1F1W1

INCIDC	CNDPOS	INCIDW	WNGPOS
3.000	2.000	3.000	1.000
3.000	2.000	3.000	1.000

REFERENCE INFORMATION	
SREF	1.355G 50.FT.
LREF	41.4360 INCHES
BREF	41.4360 INCHES
XMRP	31.1400 INCHES
YMRP	0.0000 INCHES
ZMRP	0.2250 INCHES
SCALE	1.5000 PERCNT

MACH 0.379

LMSC/MSFC BOOSTER STUDY, LATERAL CHARACTERISTICS, NSRDC 3110, ALPHA = 0 DEGREES



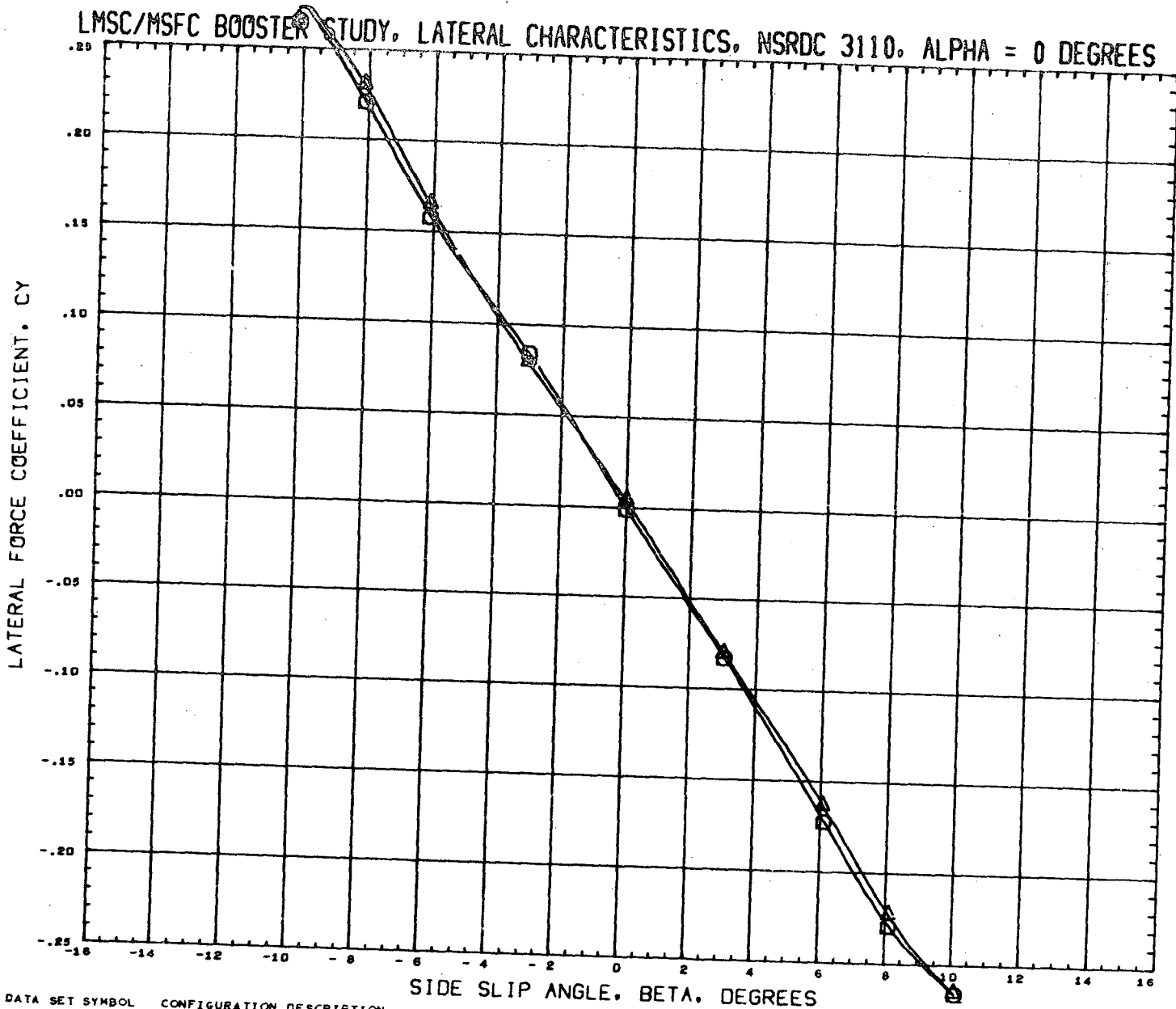
DATA SET SYMBOL (RN2042) (RN2106) CONFIGURATION DESCRIPTION NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1 NSRDC-3110,MSFC/LMSC BOOSTER B1C1F1W1V1



INCIDC 3.000 3.000 CNDPOS 2.000 2.000 INCIDW 3.000 3.000 WNGPOS 1.000 1.000

REFERENCE INFORMATION
 SREF 1.3550 SQ. FT.
 LREF 41.4360 INCHES
 BREF 41.4350 INCHES
 XMRP 31.1400 INCHES
 YMRP 0.0000 INCHES
 ZMRP 0.2250 INCHES
 SCALE 1.5000 PERCENT

MACH 0.379

LMSC/MSFC BOOSTER STUDY, LATERAL CHARACTERISTICS, NSRDC 3110, ALPHA = 0 DEGREES



DATA SET SYMBOL
(RN2D42) 
(RN21D6) 

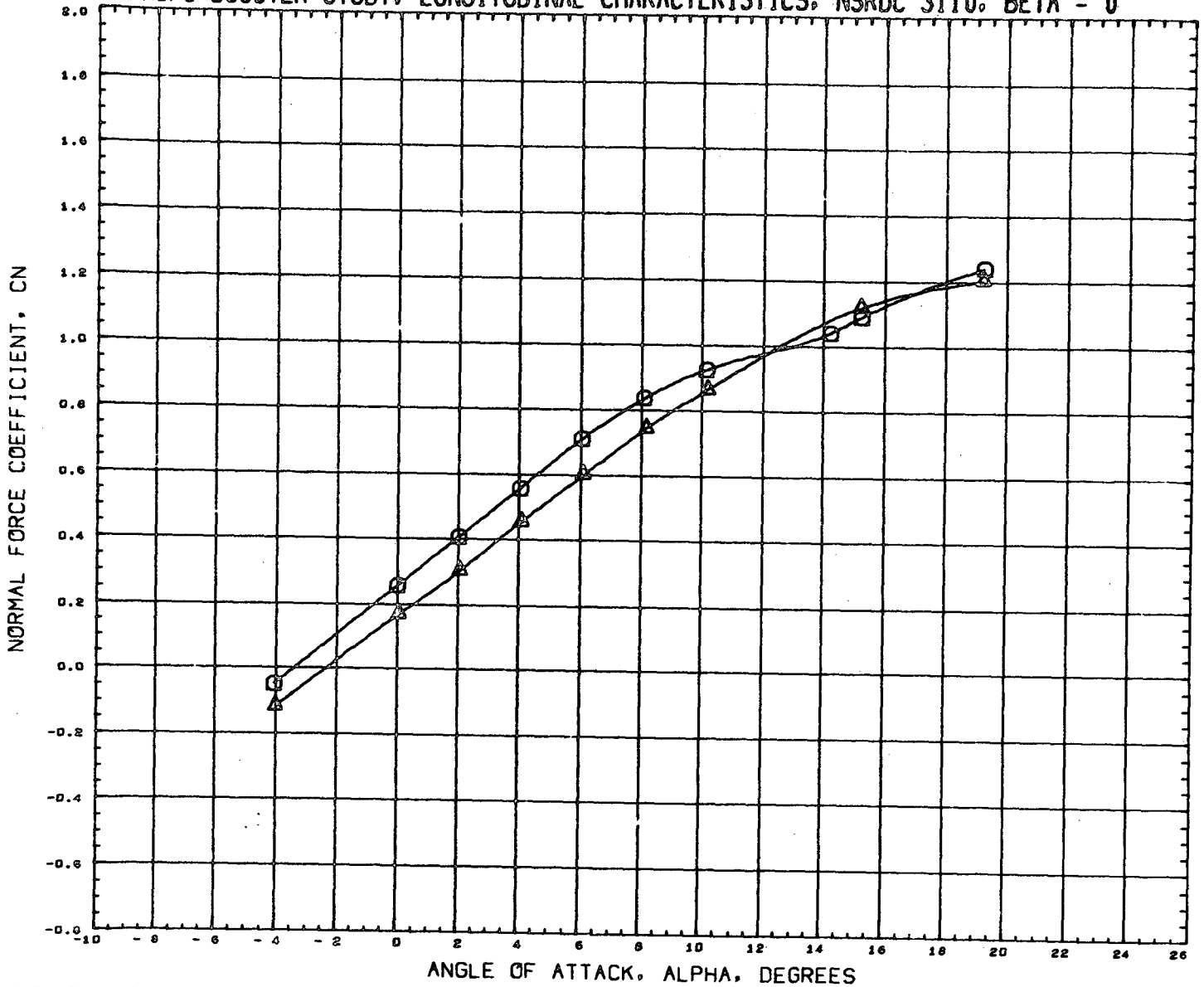
CONFIGURATION DESCRIPTION
NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1
NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1

INCIDC	CNDFOS	INCIDW	WNGPOS
3.000	2.000	3.000	1.000
3.000	2.000	3.000	1.000

REFERENCE INFORMATION
SREF 1.3550 SQ. FT.
LREF 41.4360 INCHES
BREF 41.4360 INCHES
XMRP 31.1400 INCHES
YMRP 0.0000 INCHES
ZMRP 0.2250 INCHES
SCALE 1.5000 PERCENT

MACH 0.379

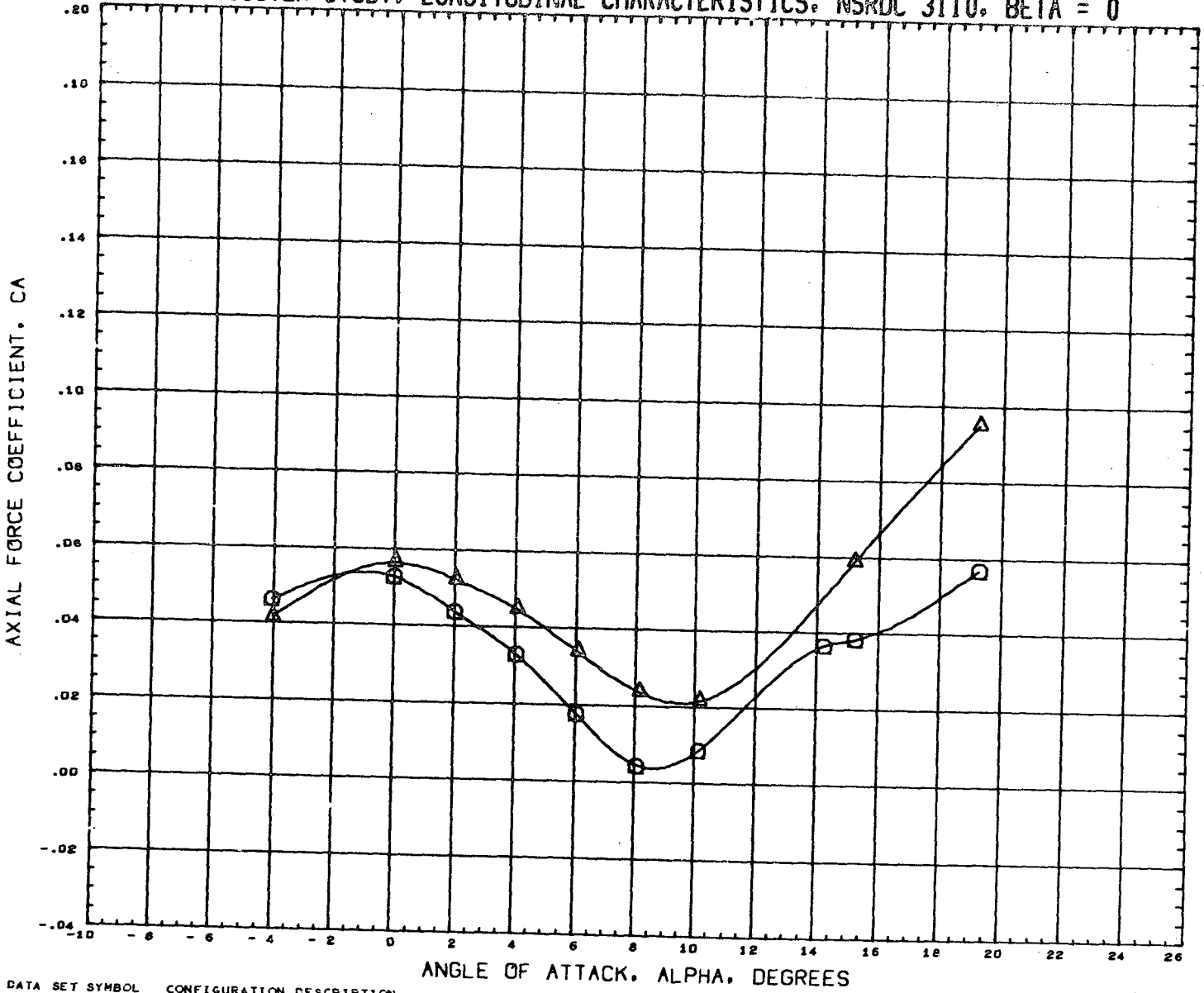
LMSC/MSFC BOOSTER STUDY. LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2041)	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1	3.000	2.000	3.000	1.000	SREF 1.3550 SQ.FT.
(RN2057)	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1	3.000	2.000	3.000	2.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCENT

MACH 0.380

LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0

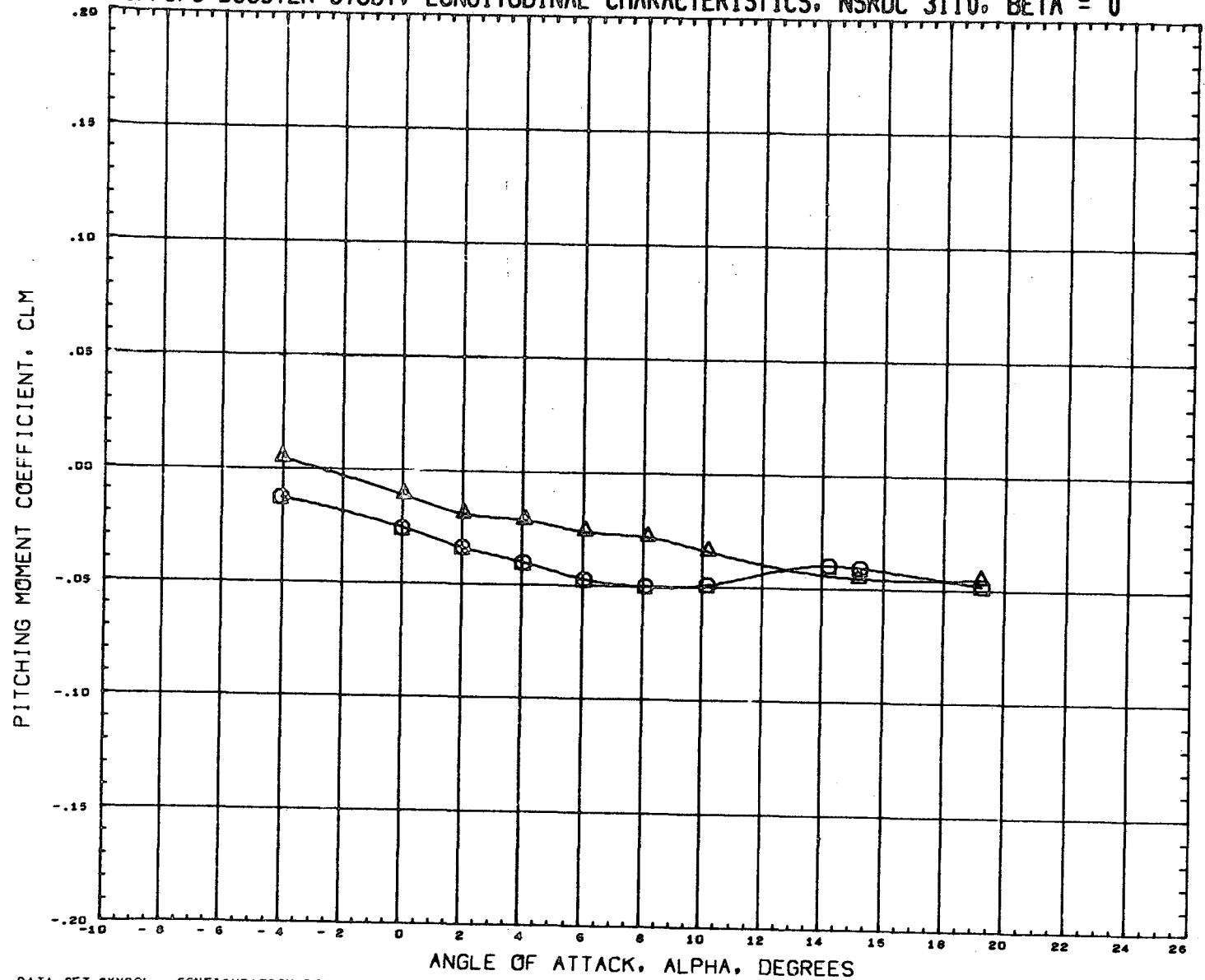


DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (RN2041) □ NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1
 (RN2057) △ NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1

INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION	
3.000	2.000	3.000	1.000	SREF	1.3550 SQ.FT.
3.000	2.000	3.000	2.000	LREF	41.4360 INCHES
				BREF	41.4360 INCHES
				XMRP	31.1400 INCHES
				YMRP	0.0000 INCHES
				ZMRP	0.2250 INCHES
				SCALE	1.5000 PERCNT

MACH 0.380

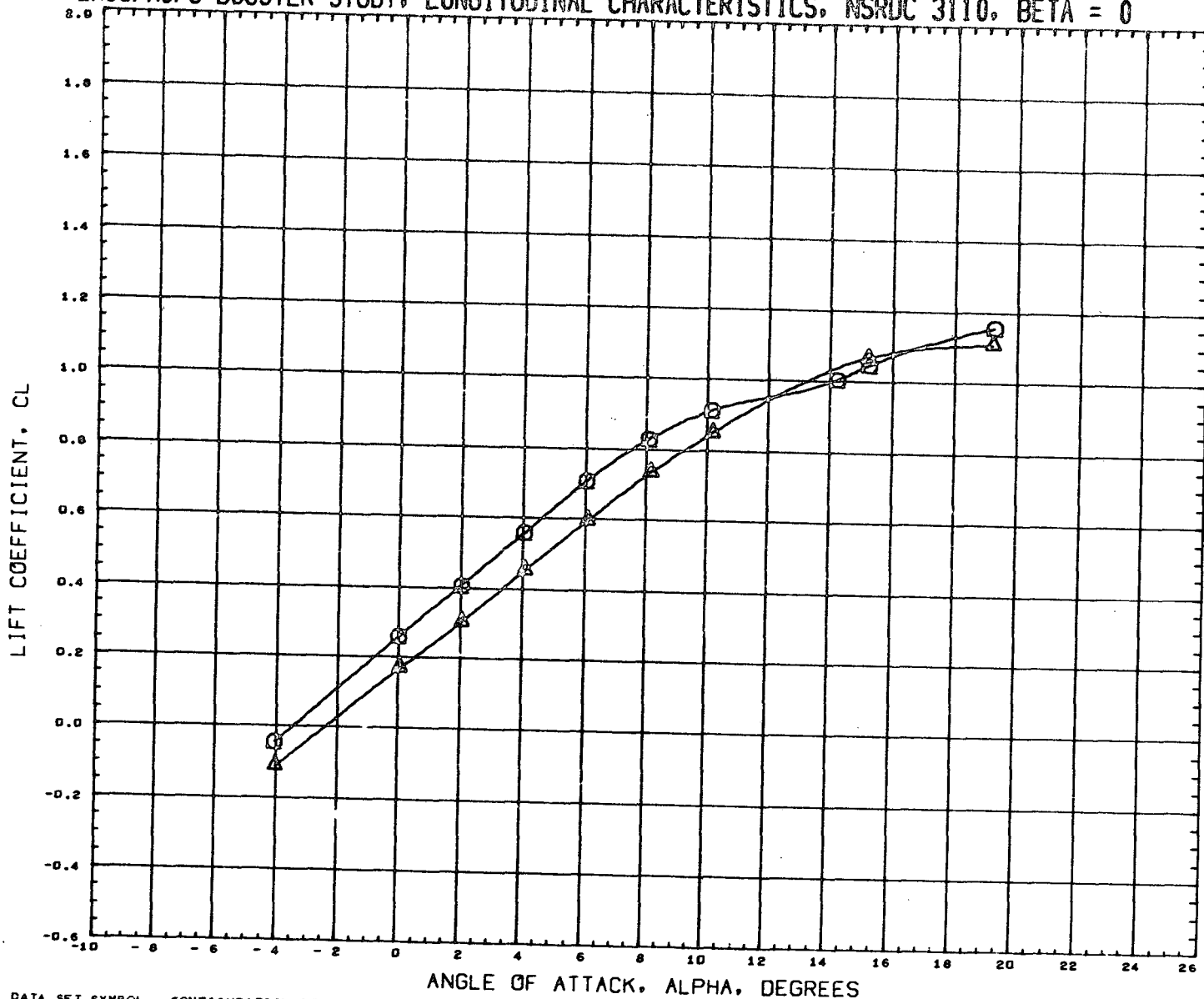
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2041)	NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1	3.000	2.000	3.000	1.000	SREF 1.3550 SQ. FT.
(RN2057)	NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1	3.000	2.000	3.000	2.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XHRP 31.1400 INCHES
						YHRP 0.0000 INCHES
						ZHRP 0.2250 INCHES
						SCALE 1.5000 PERCNT

MACH 0.380

LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0

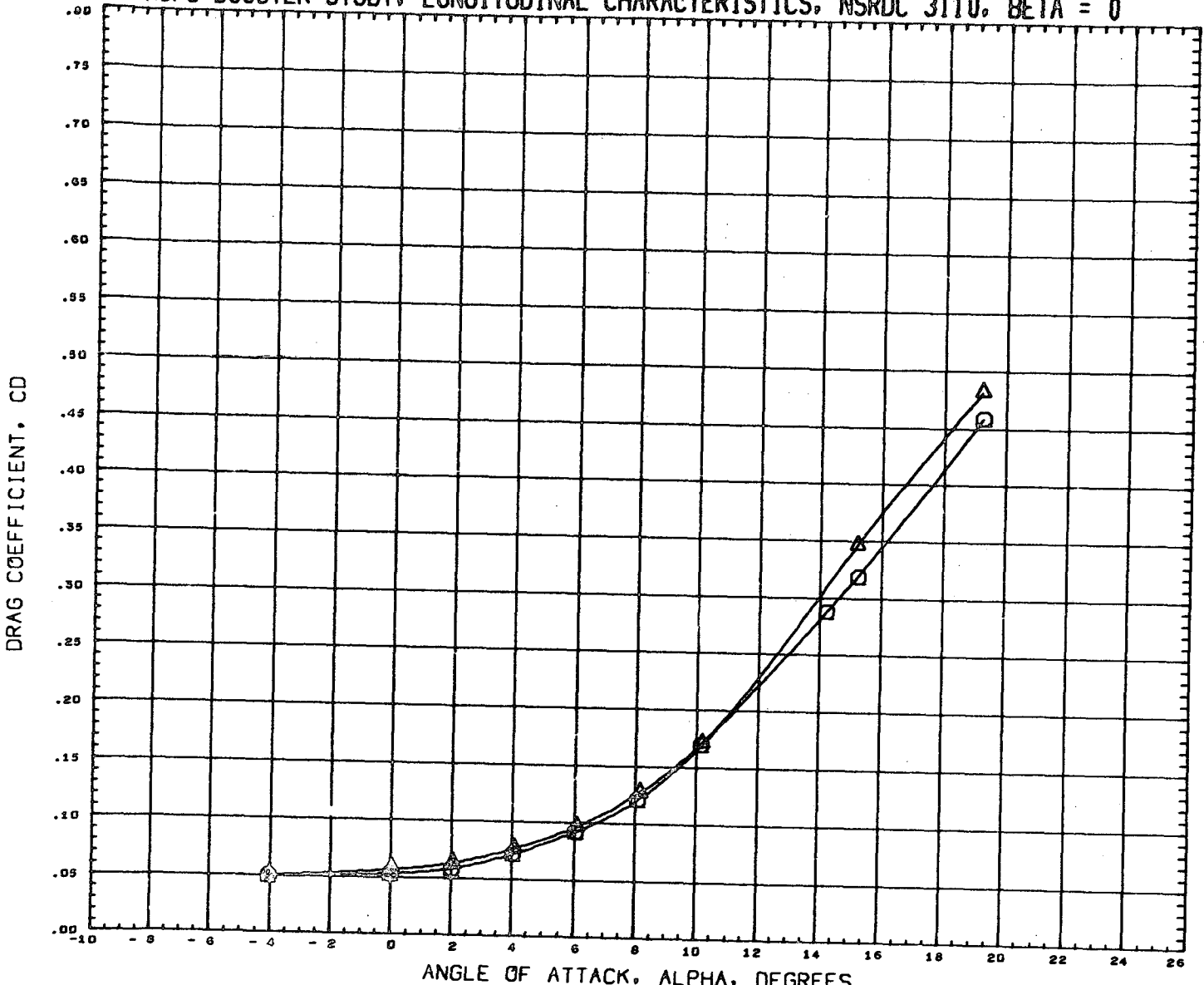


ANGLE OF ATTACK, ALPHA, DEGREES

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2041)	NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1	3.000	2.000	3.000	1.000	SREF 1.3550 SQ.FT.
(RN2057)	NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1	3.000	2.000	3.000	2.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRF 31.1400 INCHES
						YMRF 0.0000 INCHES
						ZMRF 0.2250 INCHES
						SCALE 1.5000 PERCENT

MACH 0.380

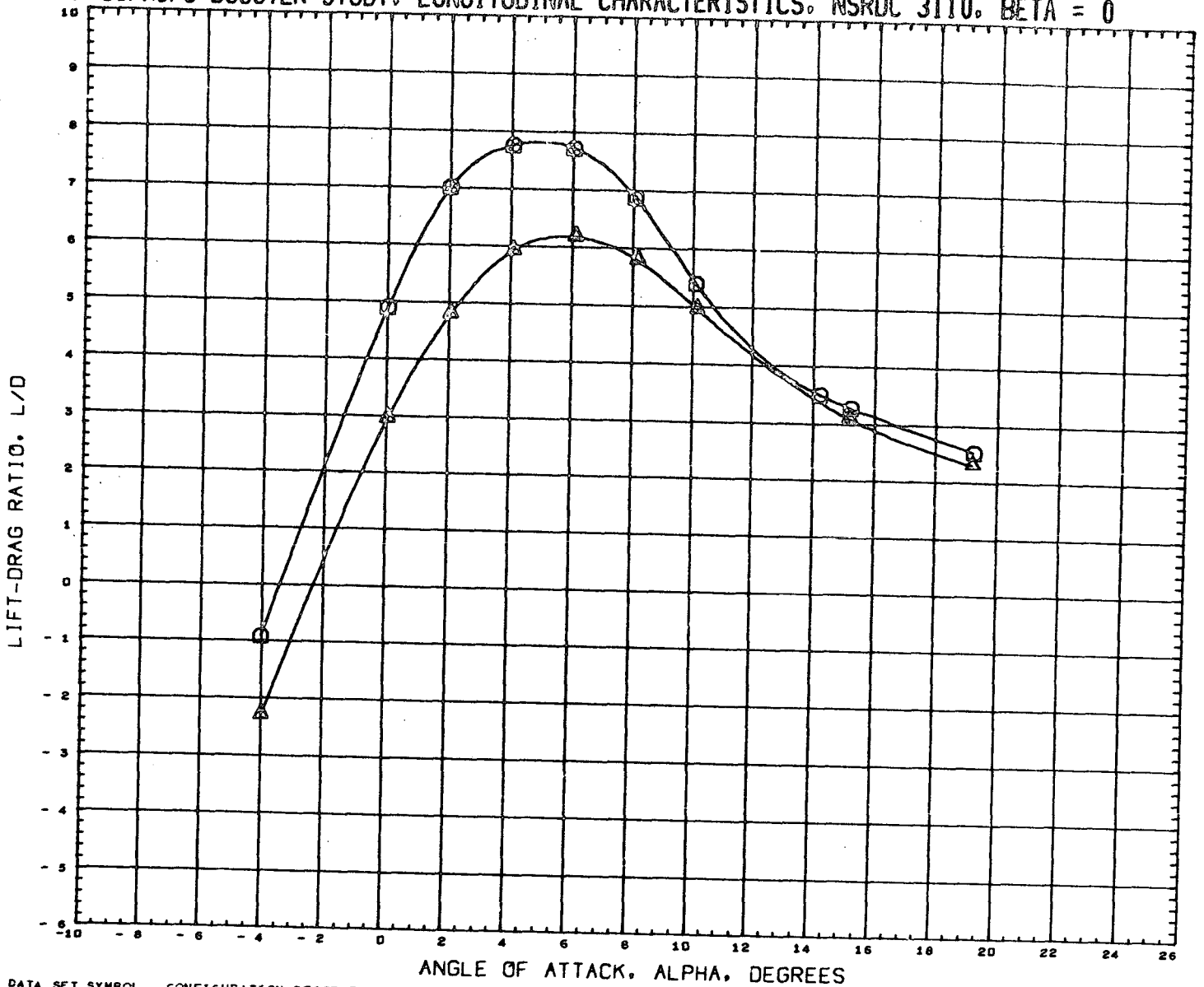
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2041)	NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1	3.000	2.000	3.000	1.000	SREF 1.3550 SQ. FT.
(RN2057)	NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1	3.000	2.000	3.000	2.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCENT

MACH 0.380

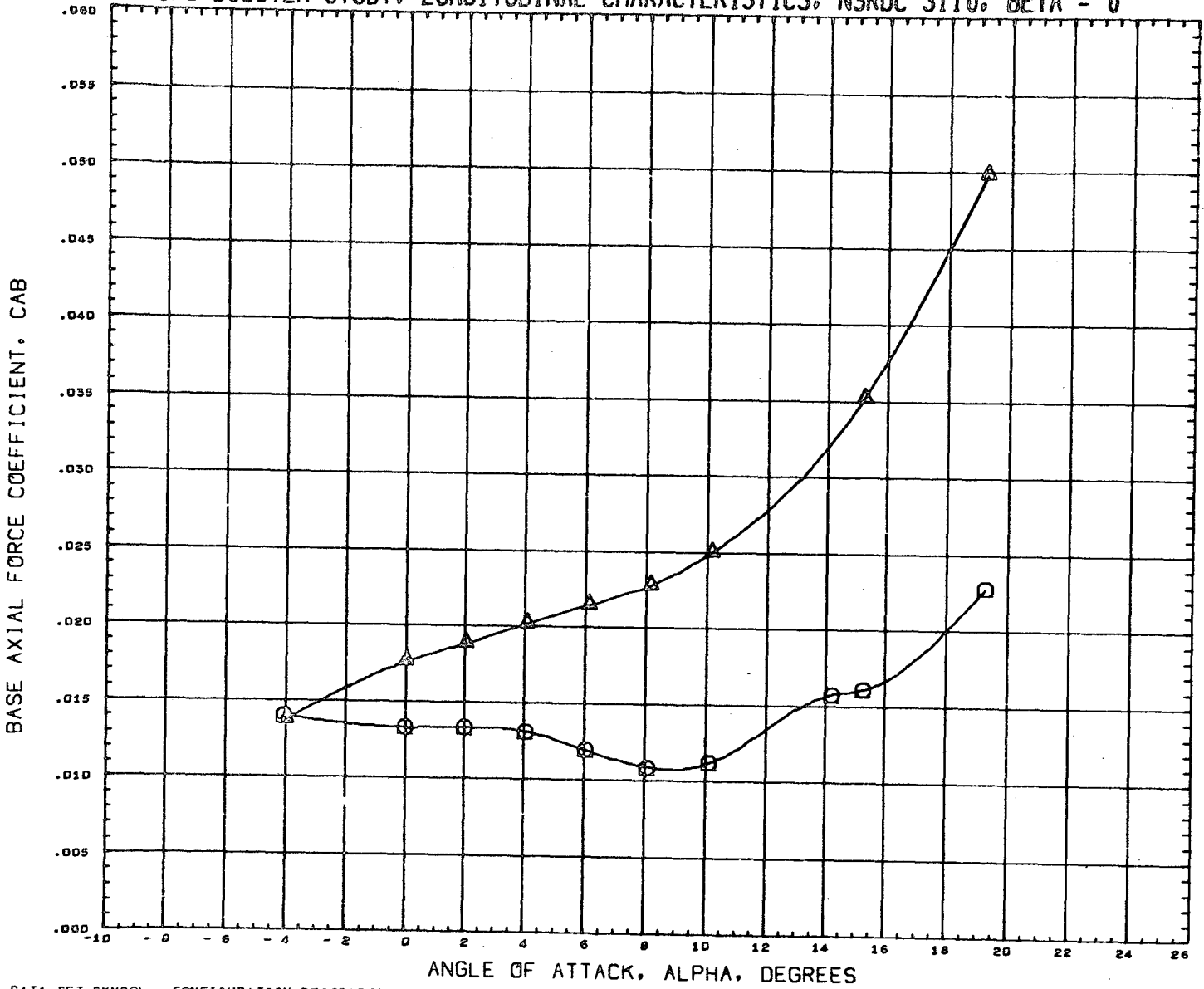
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2041)	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1	3.000	2.000	3.000	1.000	SREF 1.3550 SQ.FT.
(RN2057)	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1	3.000	2.000	3.000	2.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCENT

MACH 0.380

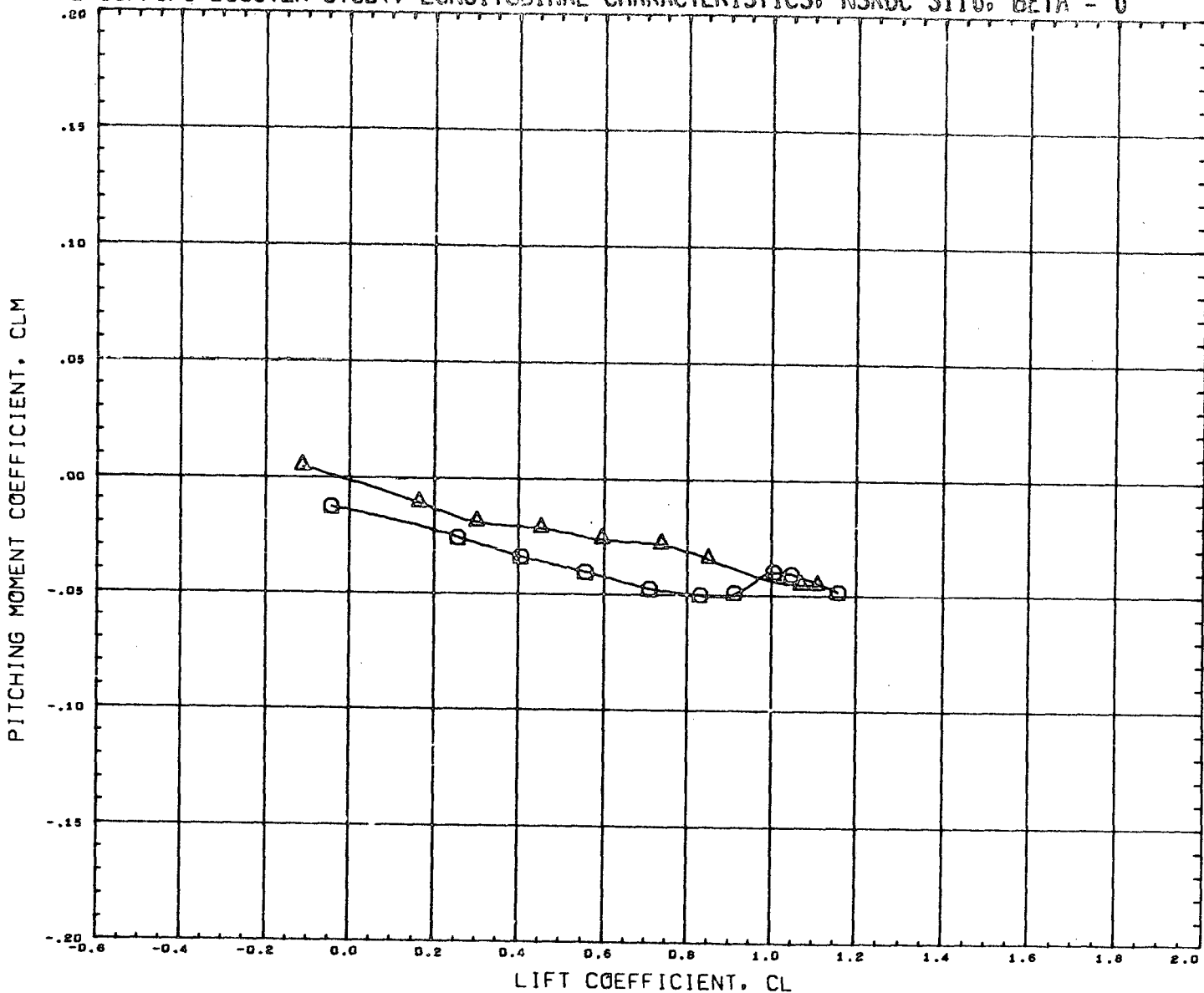
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION	
(RN2041)	NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1	3.000	2.000	3.000	1.000	SREF	1.3550 SQ.FT.
(RN2057)	NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1	3.000	2.000	3.000	2.000	LREF	41.4360 INCHES
						BREF	41.4360 INCHES
						XMRP	31.1400 INCHES
						YMRP	0.0000 INCHES
						ZMRP	0.2250 INCHES
						SCALE	1.5000 PERCNT

HACH 0.380

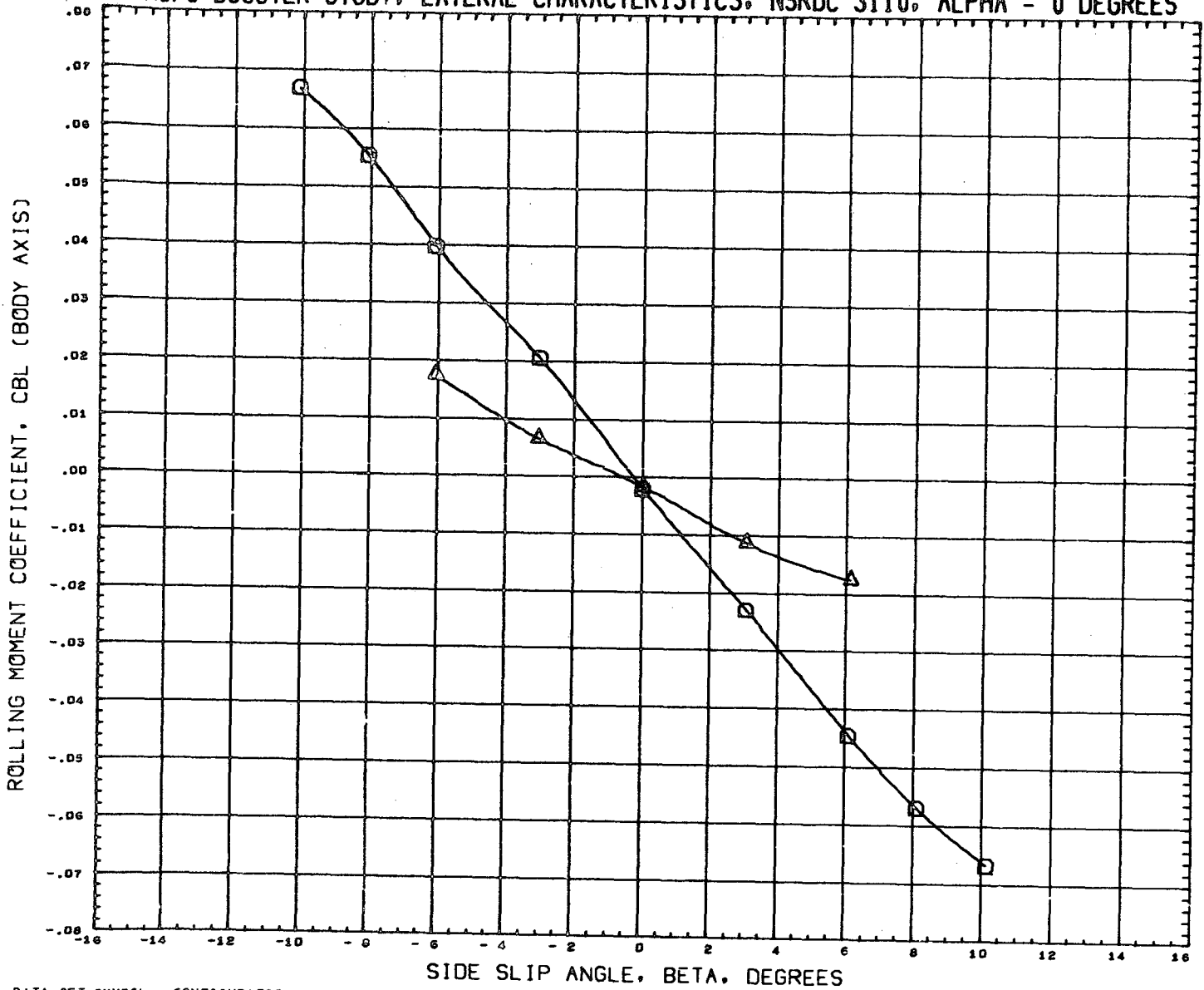
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDFOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2D41)	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1	3.000	2.000	3.000	1.000	SREF 1.3550 SQ.FT.
(RN2D57)	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1	3.000	2.000	3.000	2.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCENT

MACH 0.380

LMSC/MSFC BOOSTER STUDY, LATERAL CHARACTERISTICS, NSRDC 3110, ALPHA = 0 DEGREES



DATA SET SYMBOL
(RN2042)
(RN2058)



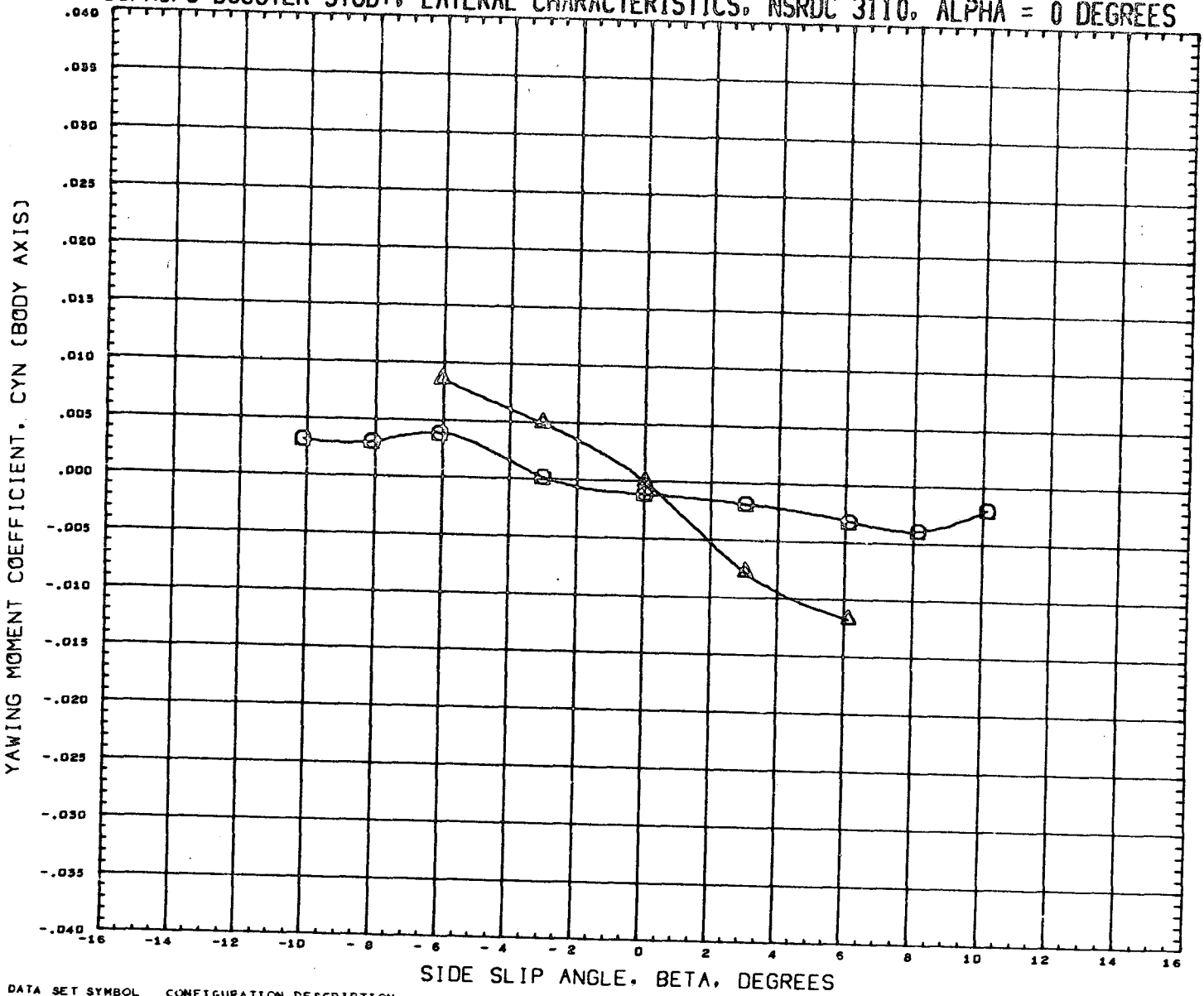
CONFIGURATION DESCRIPTION
NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1
NSRDC-3110, MSFC/LHSC BOOSTER B1C2F1W1V1

INCIDC	CNDPOS	INCIDW	WNGPOS
3.000	2.000	3.000	1.000
3.000	2.000	3.000	2.000

REFERENCE INFORMATION		
SREF	1.3550	SQ.FT.
LREF	41.4360	INCHES
BREF	41.4360	INCHES
XMRP	31.1400	INCHES
YMRP	0.0000	INCHES
ZMRP	0.2250	INCHES
SCALE	1.5000	PERCNT

MACH 0.379

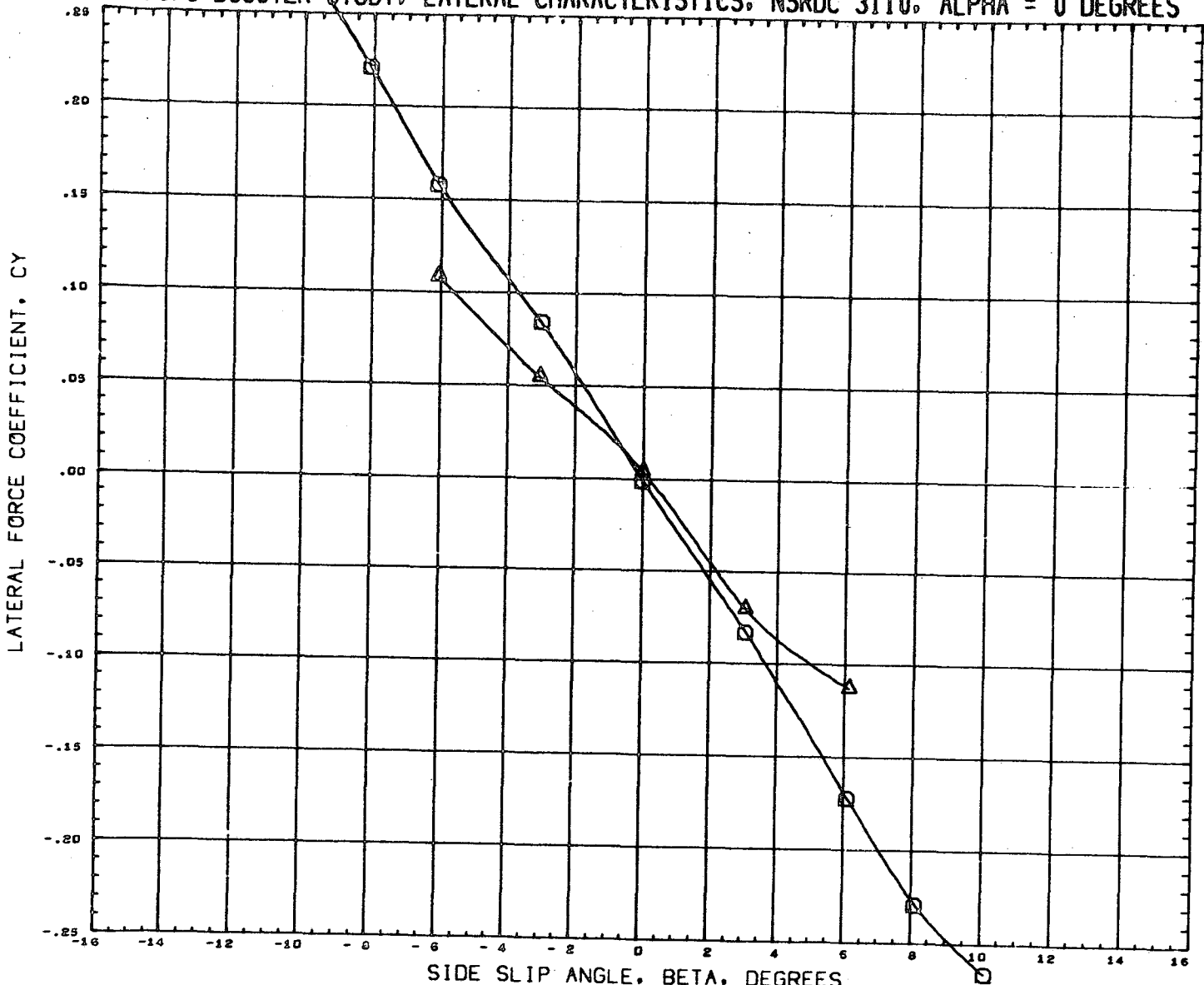
LMSC/MSFC BOOSTER STUDY, LATERAL CHARACTERISTICS, NSRDC 3110, ALPHA = 0 DEGREES



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION	
(R2042)	NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1	3.000	2.000	3.000	1.000	SREF	1.3550 SQ.FT.
(R2058)	NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1	3.000	2.500	3.000	2.000	LREF	41.4360 INCHES
						BREF	41.4360 INCHES
						XMRP	31.1400 INCHES
						YMRP	0.0000 INCHES
						ZMRP	0.2250 INCHES
						SCALE	1.5000 PERCENT

MACH 0.379

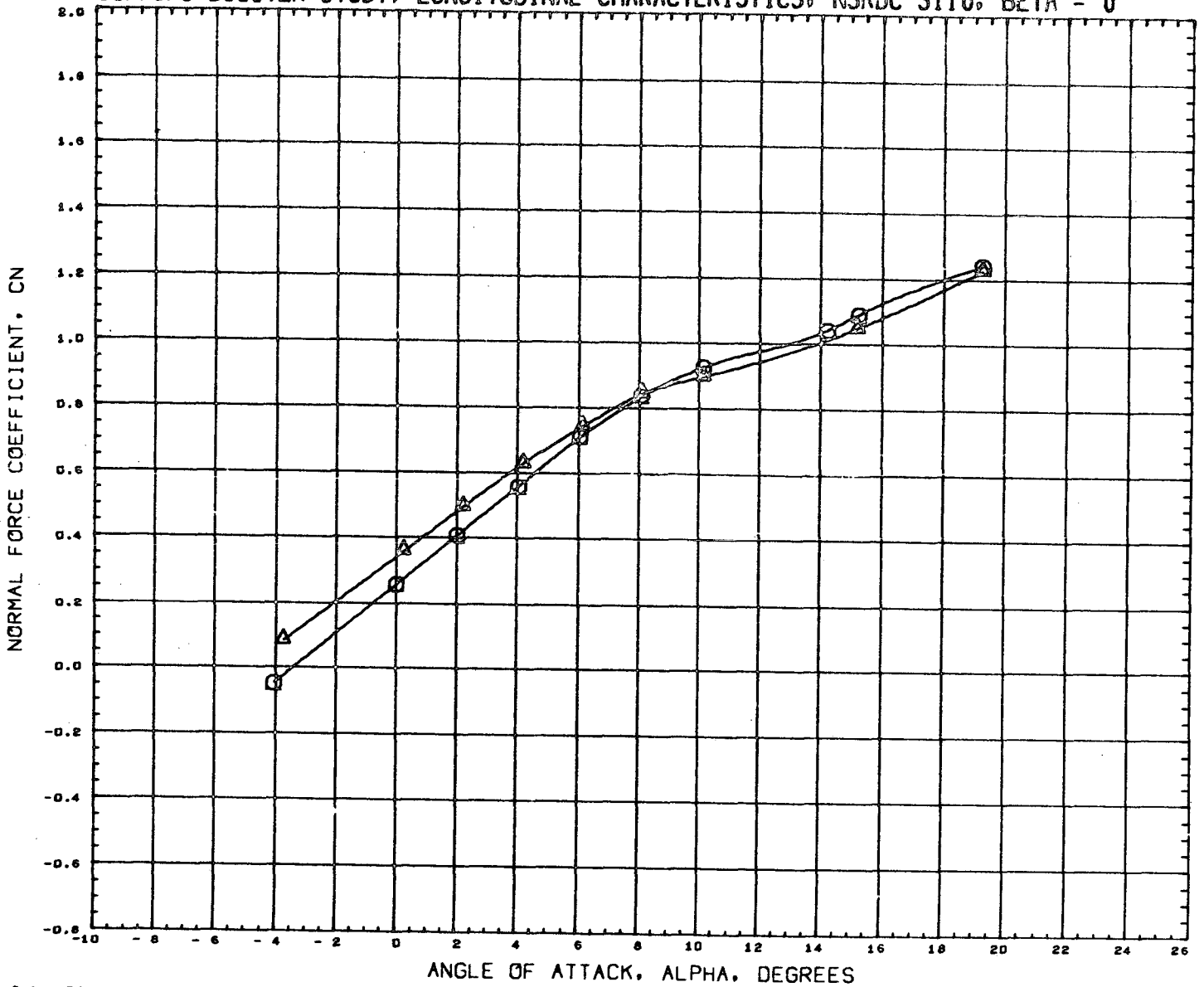
LMSC/MSFC BOOSTER STUDY, LATERAL CHARACTERISTICS, NSRDC 3110, ALPHA = 0 DEGREES



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2042)	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1	3.000	2.000	3.000	1.000	SREF 1.3550 SQ.FT.
(RN2058)	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1	3.000	2.000	3.000	2.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCENT

MACH 0.379

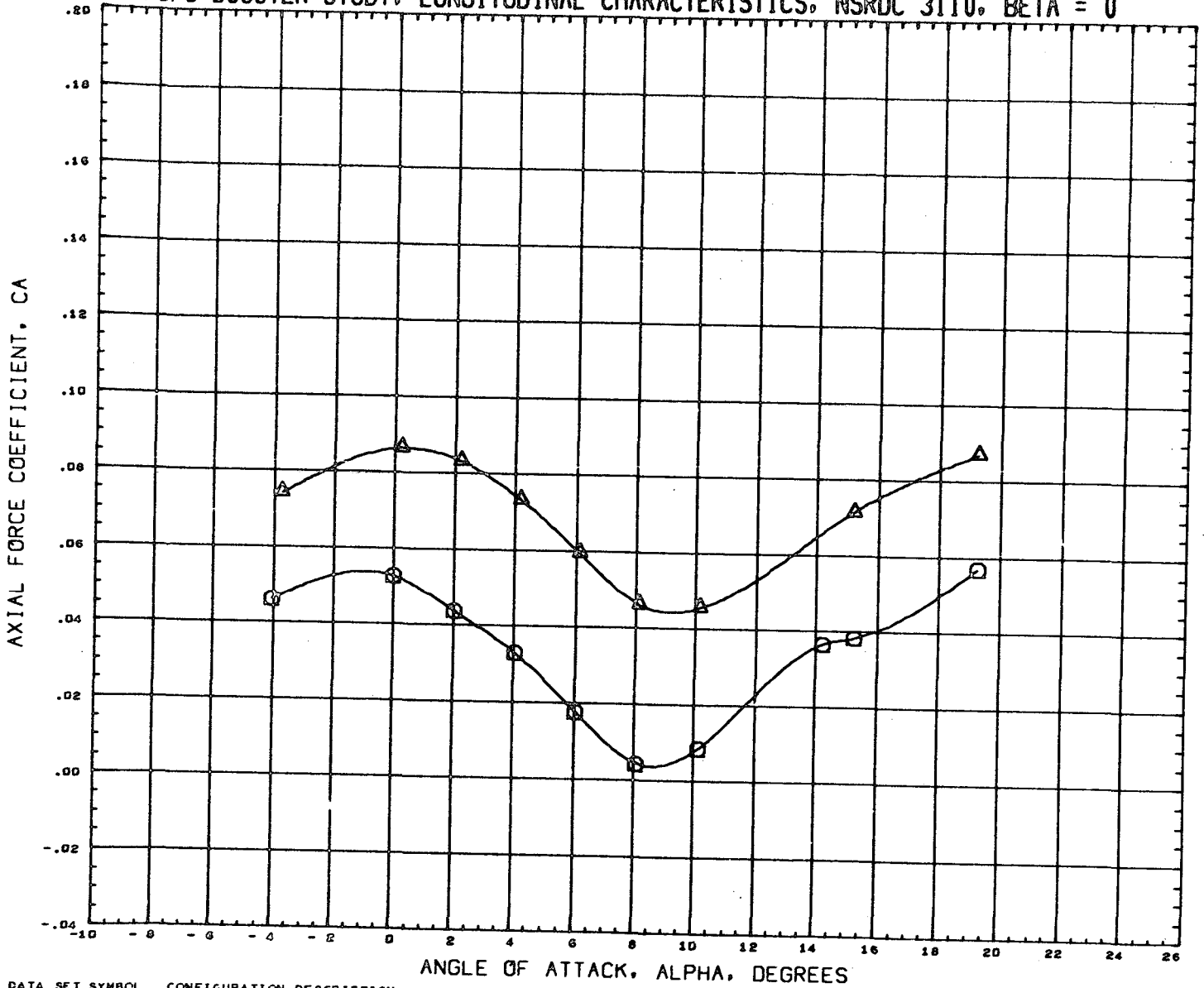
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2D41)	NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1	3.000	2.000	3.000	1.000	SREF 1.3550 SQ.FT.
(RN2D45)	NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1	15.000	2.000	3.000	1.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCENT

MACH 0.380

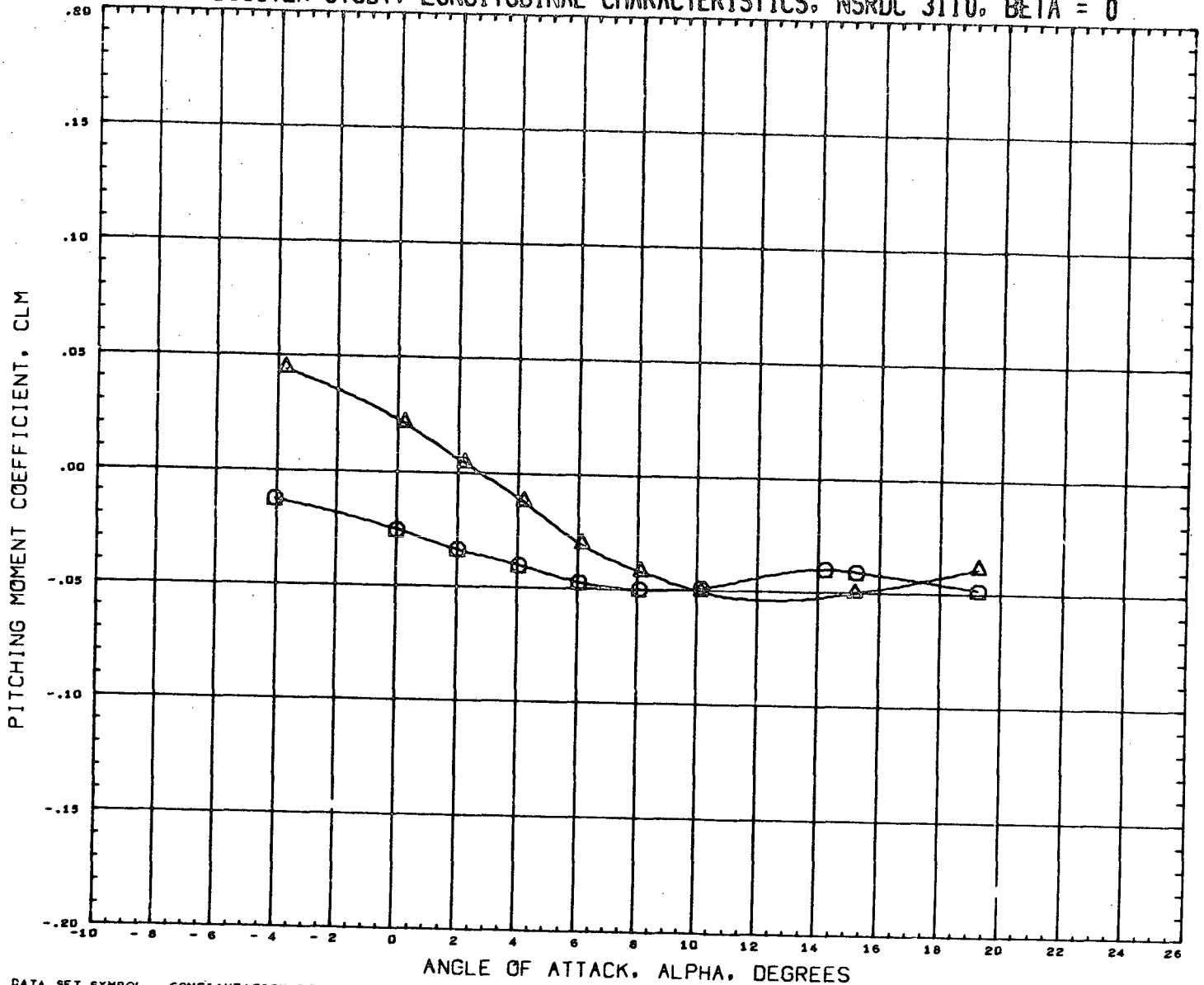
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2041)	NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1	3.000	2.000	3.000	1.000	SREF 1.3550 SQ. FT.
(RN2045)	NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1	15.000	2.000	3.000	1.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCENT

MACH 0.380

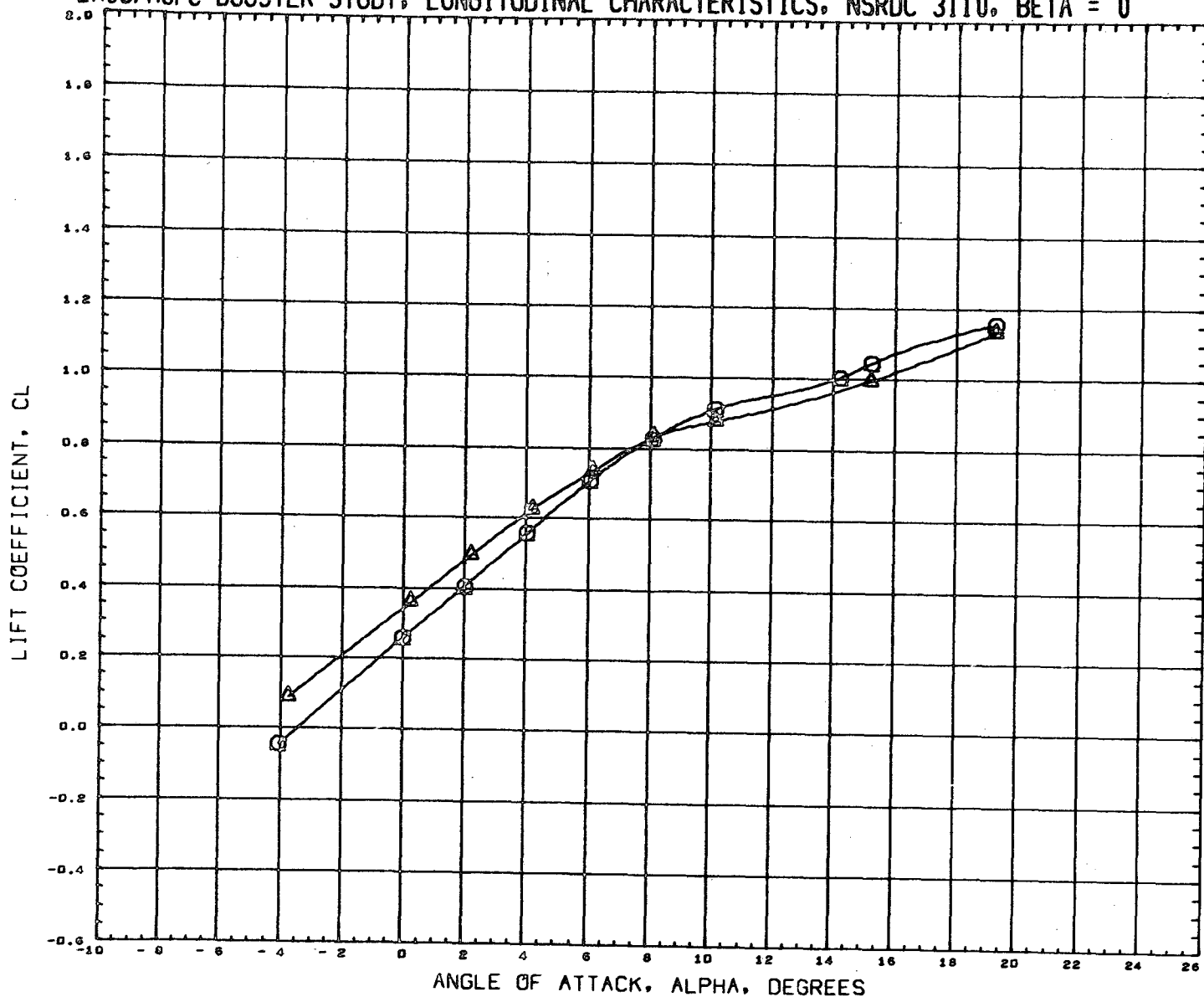
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2041)	NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1	3.000	2.000	3.000	1.000	SREF 1.3550 SQ.FT.
(RN2045)	NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1	15.000	2.000	3.000	1.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCENT

MACH 0.380

LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



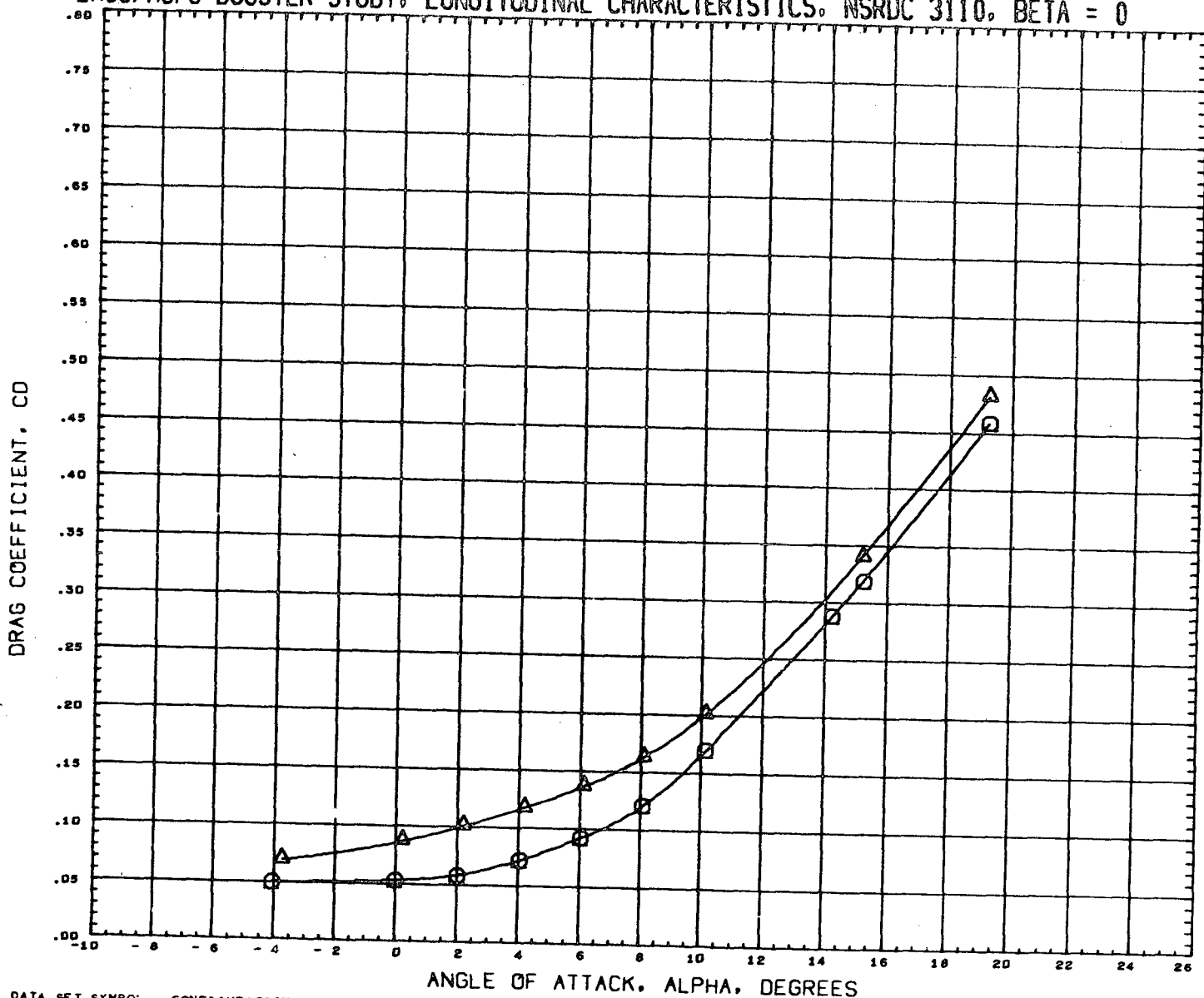
DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(RN2041)	NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1
(RN2045)	NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1

INCIDC	CNDPOS	INCIDW	WNGPOS
3.000	2.000	3.000	1.000
15.000	2.000	3.000	1.000

REFERENCE INFORMATION		
SREF	1.3550	SG.FT.
LREF	41.4360	INCHES
BREF	41.4360	INCHES
XMRP	31.1400	INCHES
YMRP	0.0000	INCHES
ZMRP	0.2250	INCHES
SCALE	1.5000	PERCNT

MACH 0.380

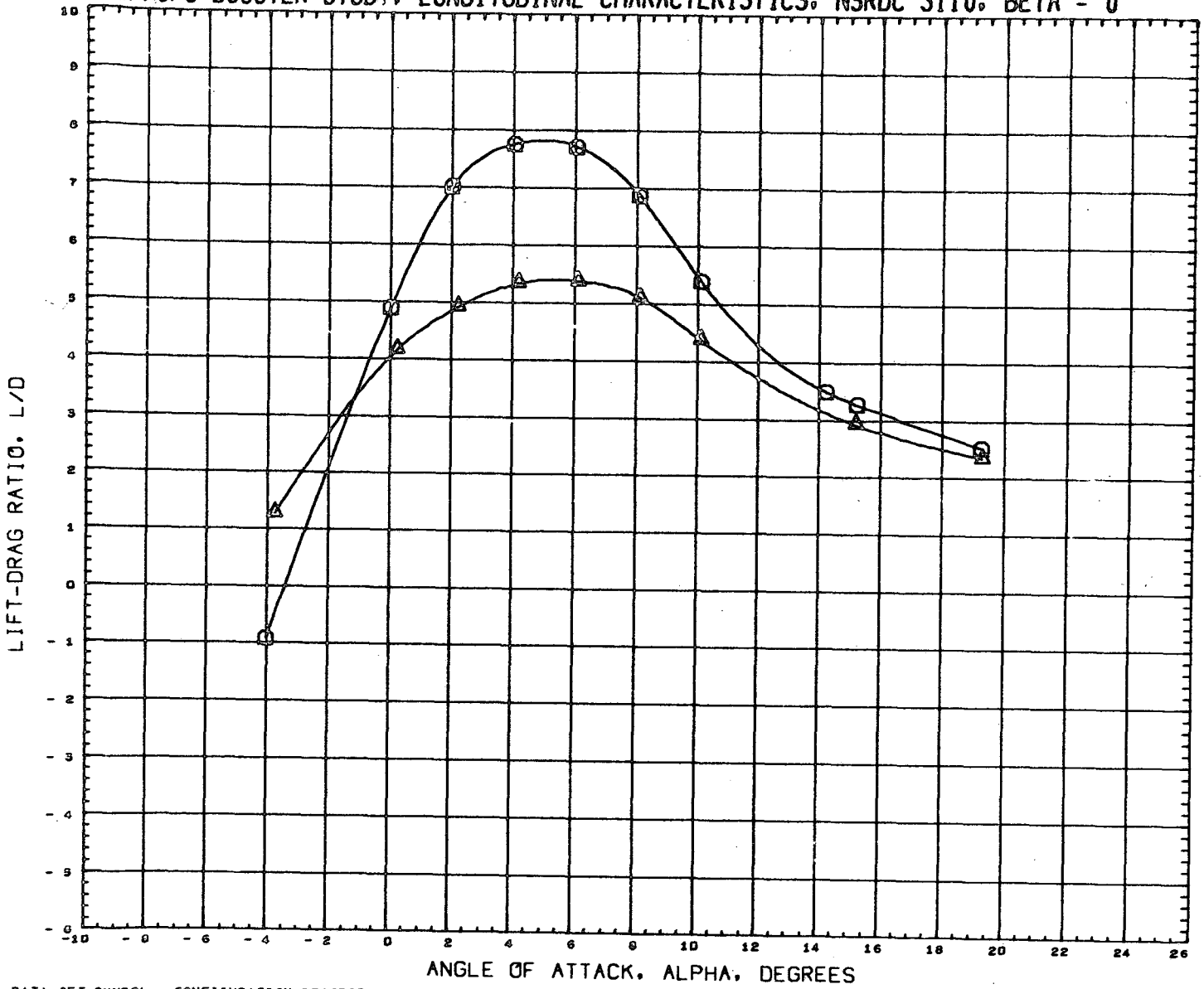
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDFOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2041)	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1	3.000	2.000	3.000	1.000	SREF 1.3550 SQ.FT.
(RN2045)	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1	15.000	2.000	3.000	1.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCNT

MACH 0.380

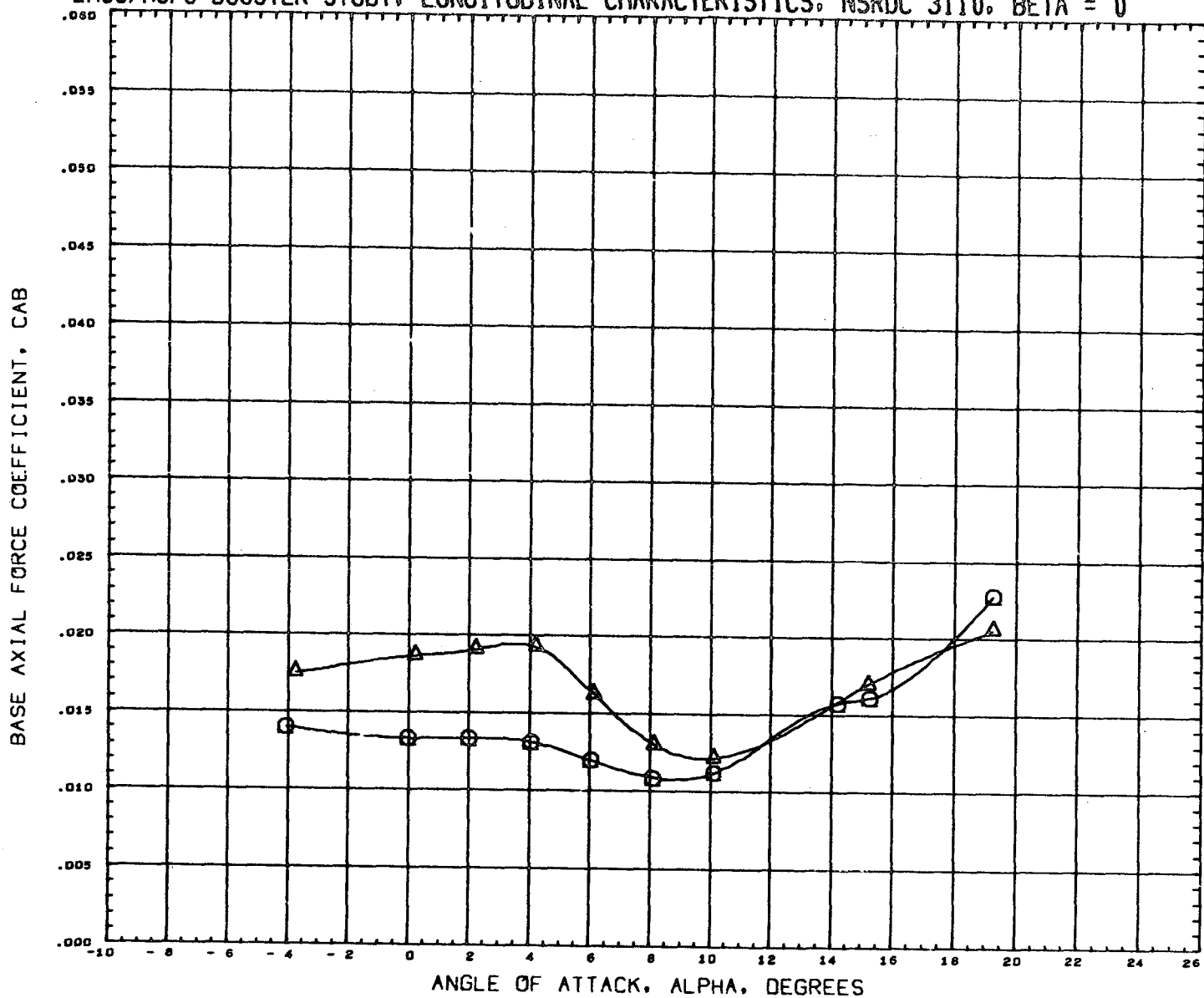
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2041)	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1	3.000	2.000	3.000	1.000	SREF 1.3550 SQ.FT.
(RN2045)	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1	15.000	2.000	3.000	1.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCENT

MACH 0.380

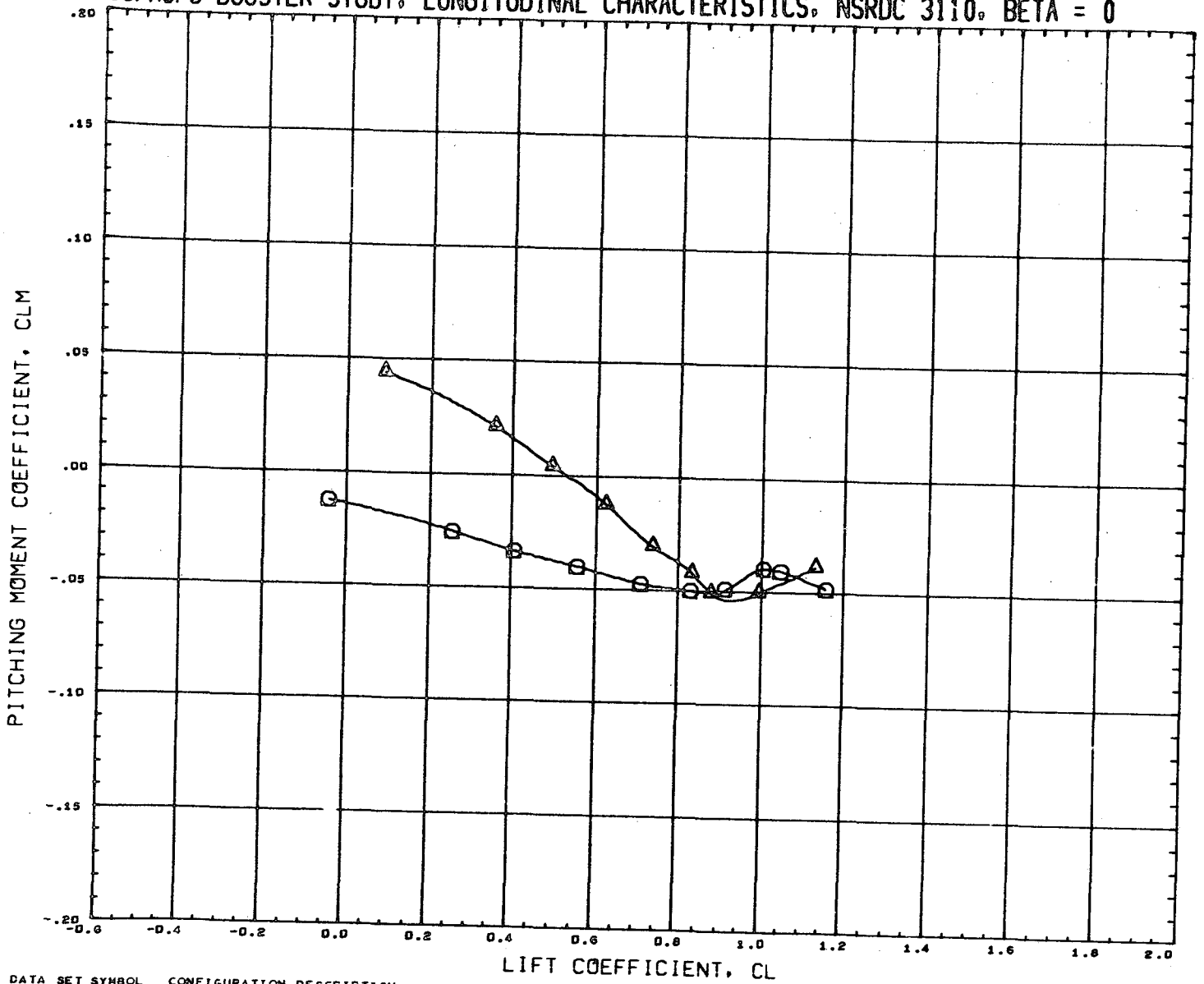
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2041)	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1	3.000	2.000	3.000	1.000	SREF 1.3550 SQ.FT.
(RN2045)	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1	15.000	2.000	3.000	1.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCNT

MACH 0.380

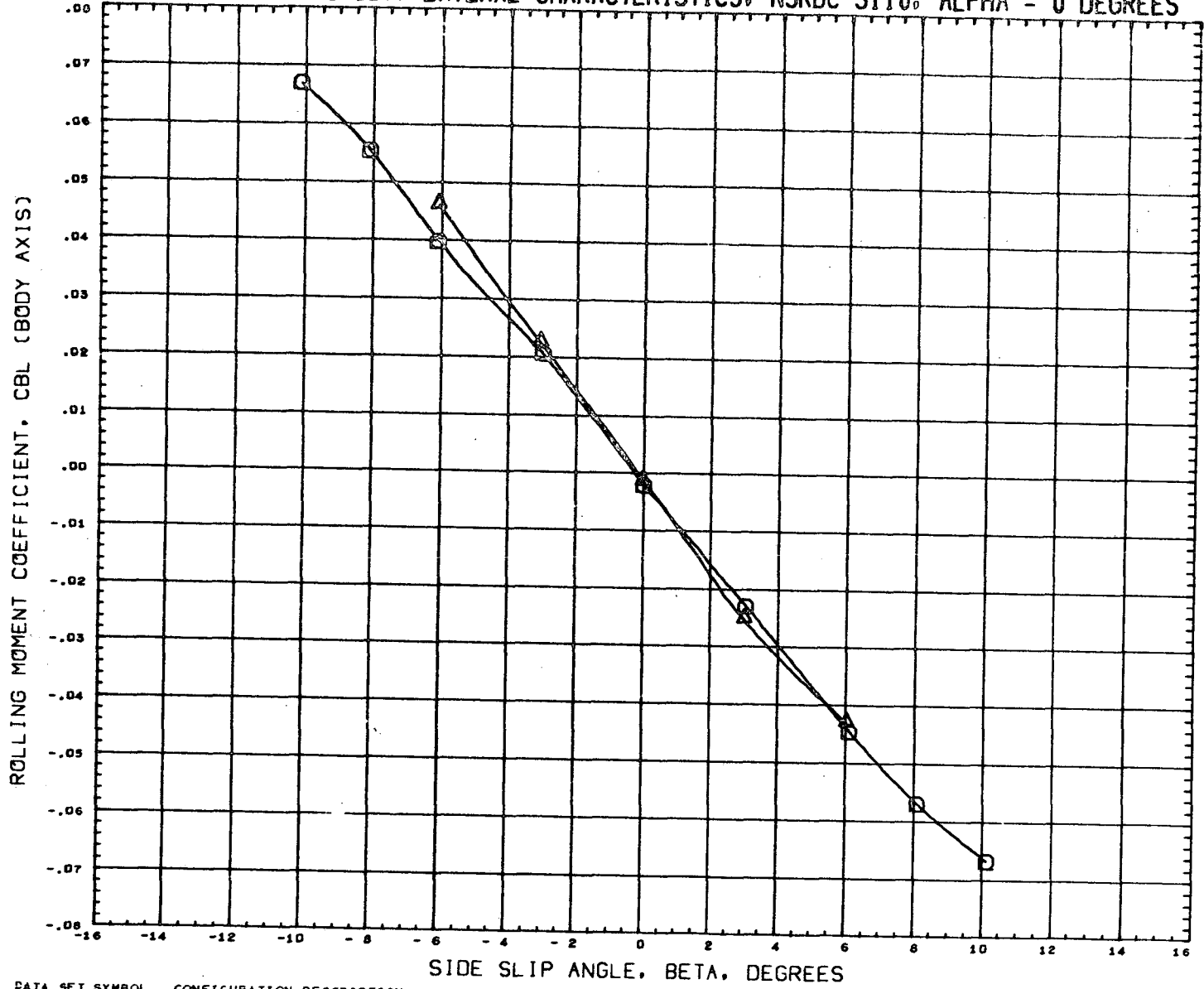
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2041)	NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1	3.000	2.000	3.000	1.000	SREF 1.3550 SQ.FT.
(RN2045)	NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1	15.000	2.000	3.000	1.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCENT

MACH 0.380

LMSC/MSFC BOOSTER STUDY, LATERAL CHARACTERISTICS, NSRDC 3110, ALPHA = 0 DEGREES

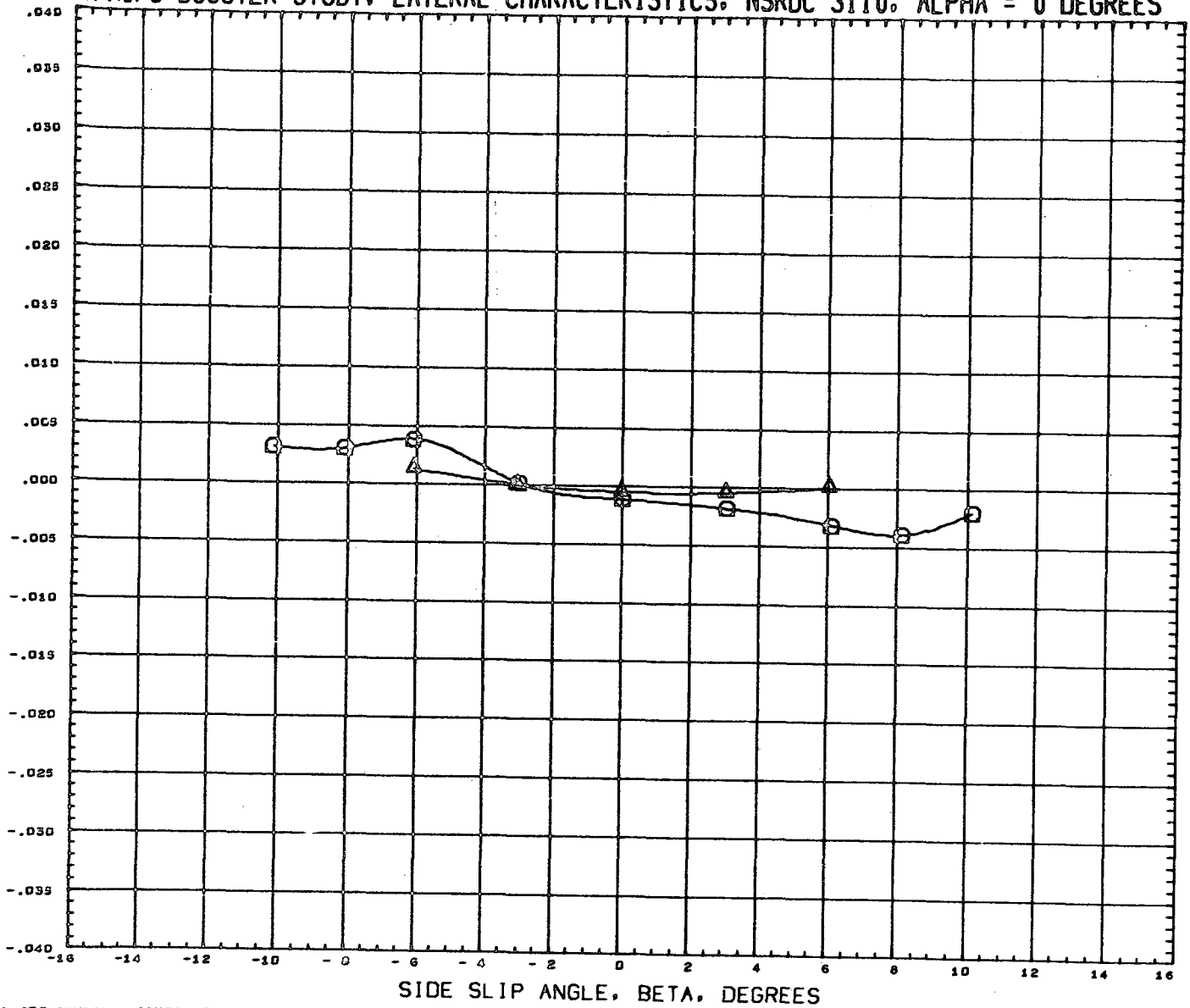


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2042)	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1	3.000	2.000	3.000	1.000	SREF 1.3550 SQ.FT.
(RN2046)	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1	15.000	2.000	3.000	1.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCNT

MACH 0.379

LMSC/MSFC BOOSTER STUDY. LATERAL CHARACTERISTICS. NSRDC 3110. ALPHA = 0 DEGREES

YAWING MOMENT COEFFICIENT, CYN (BODY AXIS)

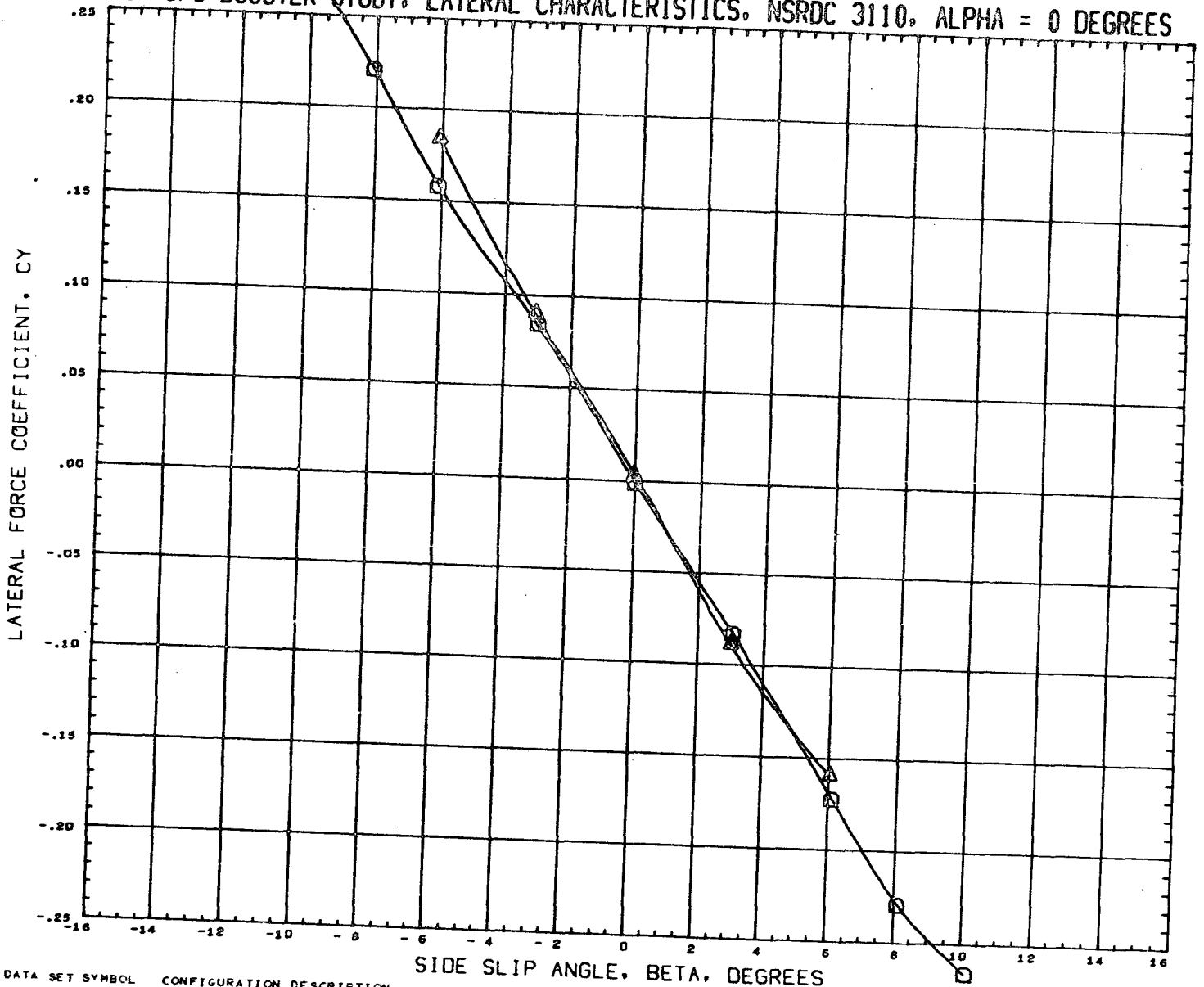


SIDE SLIP ANGLE, BETA, DEGREES

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCICC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2042)	NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1	3.000	2.000	3.000	1.000	SREF 1.3550 SQ.FT.
(RN2046)	NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1	15.000	2.000	3.000	1.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRF 31.1400 INCHES
						YMRF 0.0000 INCHES
						ZMRF 0.2250 INCHES
						SCALE 1.5000 PERCENT

MACH 0.379

LMSC/MSFC BOOSTER STUDY, LATERAL CHARACTERISTICS, NSRDC 3110, ALPHA = 0 DEGREES



DATA SET SYMBOL
(RN2042)
(RN2046)



CONFIGURATION DESCRIPTION

NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1
NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1

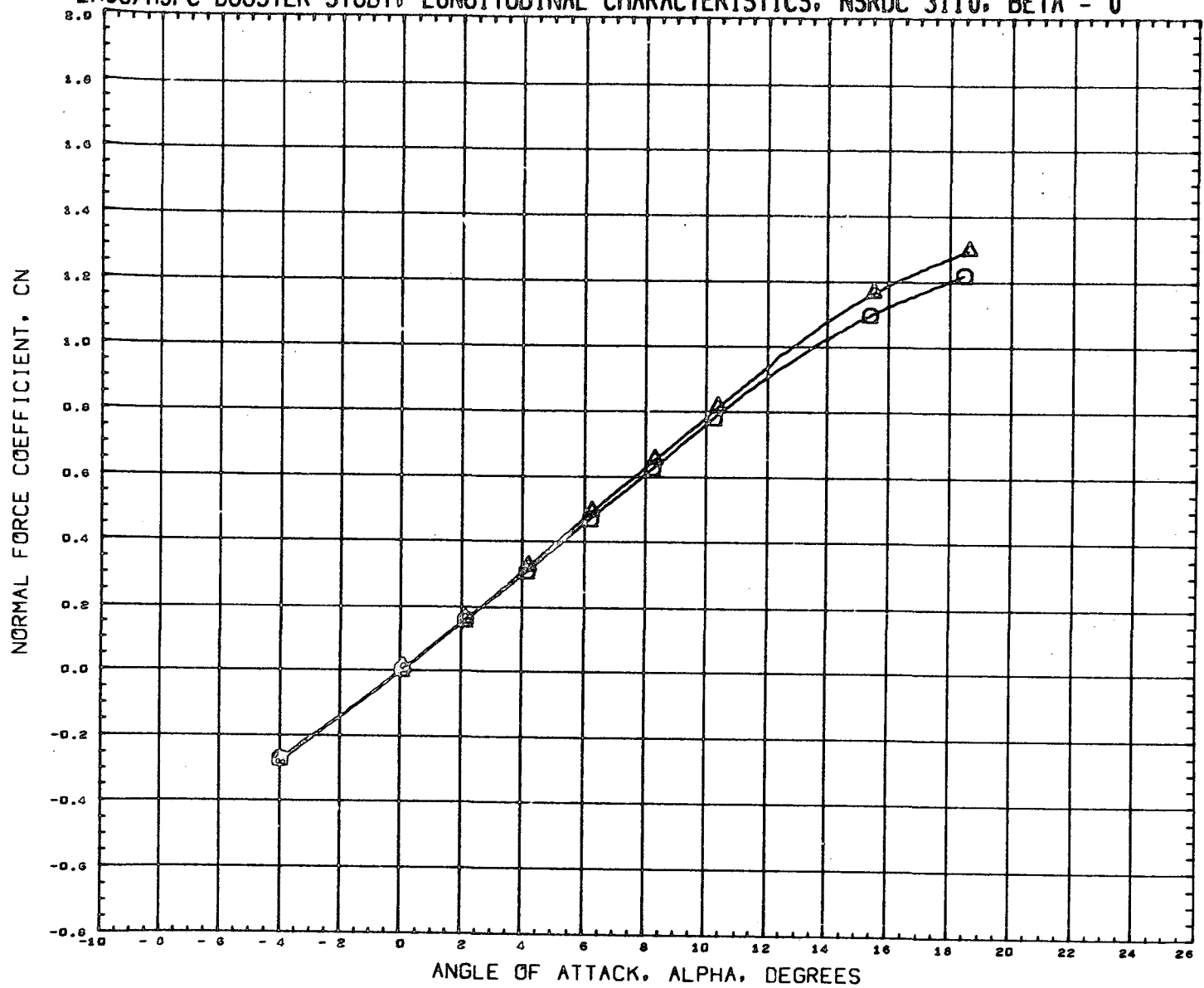
INCIDC	CNDPOS	INCIDW	WNGPOS
3.000	2.000	3.000	1.000
15.000	2.000	3.000	1.000

REFERENCE INFORMATION

SREF	1.3550	SQ. FT.
LREF	41.4360	INCHES
BREF	41.4360	INCHES
XMRP	31.1400	INCHES
YMRP	0.0000	INCHES
ZMRP	0.2250	INCHES
SCALE	1.5000	PERCENT

MACH 0.379

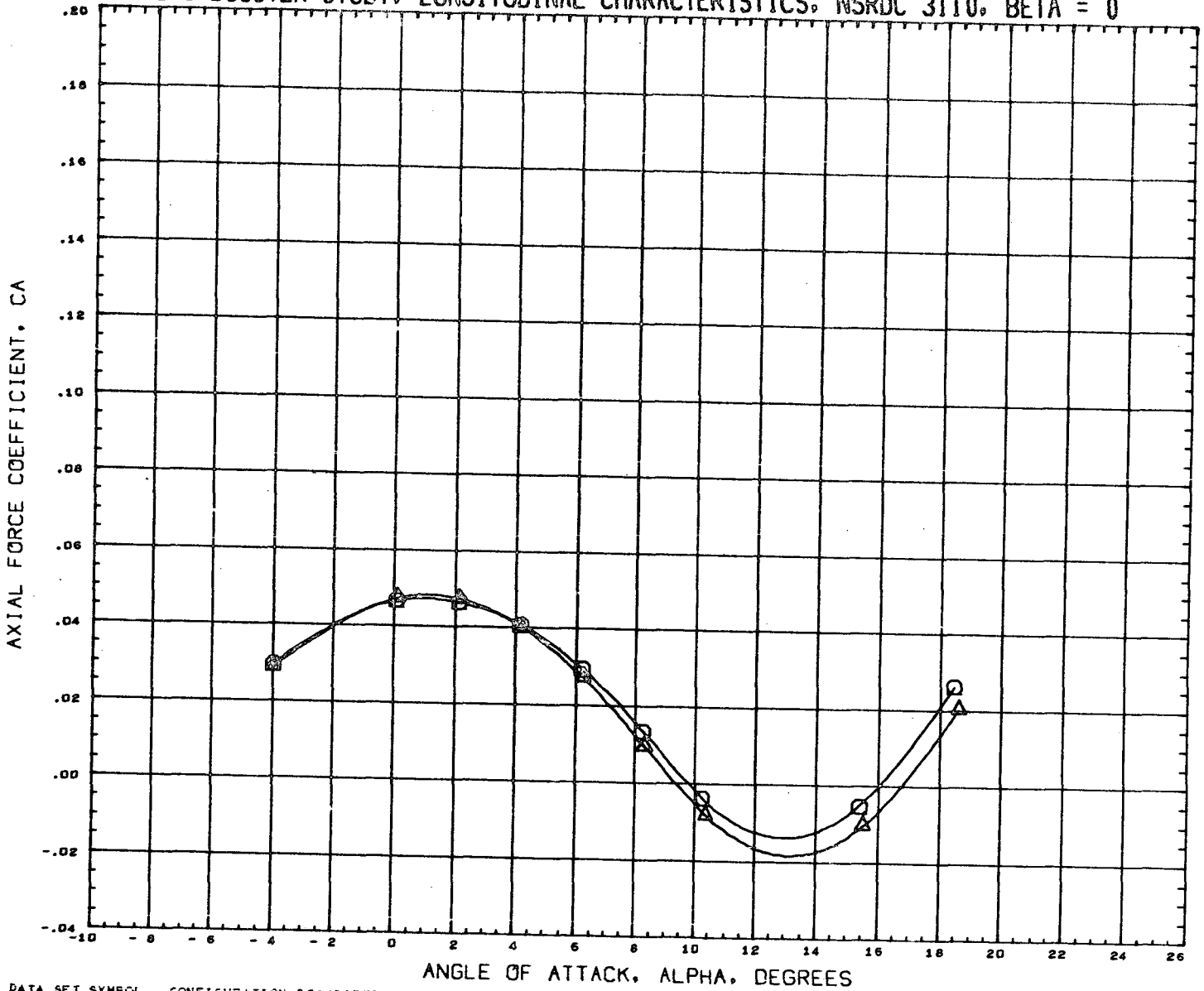
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2017)	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1	3.000	1.000	0.000	2.000	SREF 1.3550 SQ.FT.
(RN2081)	NSRDC-3110,MSFC/LMSC BOOSTER B1C1F1W1V1	3.000	1.000	0.000	2.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCENT

MACH 0.382

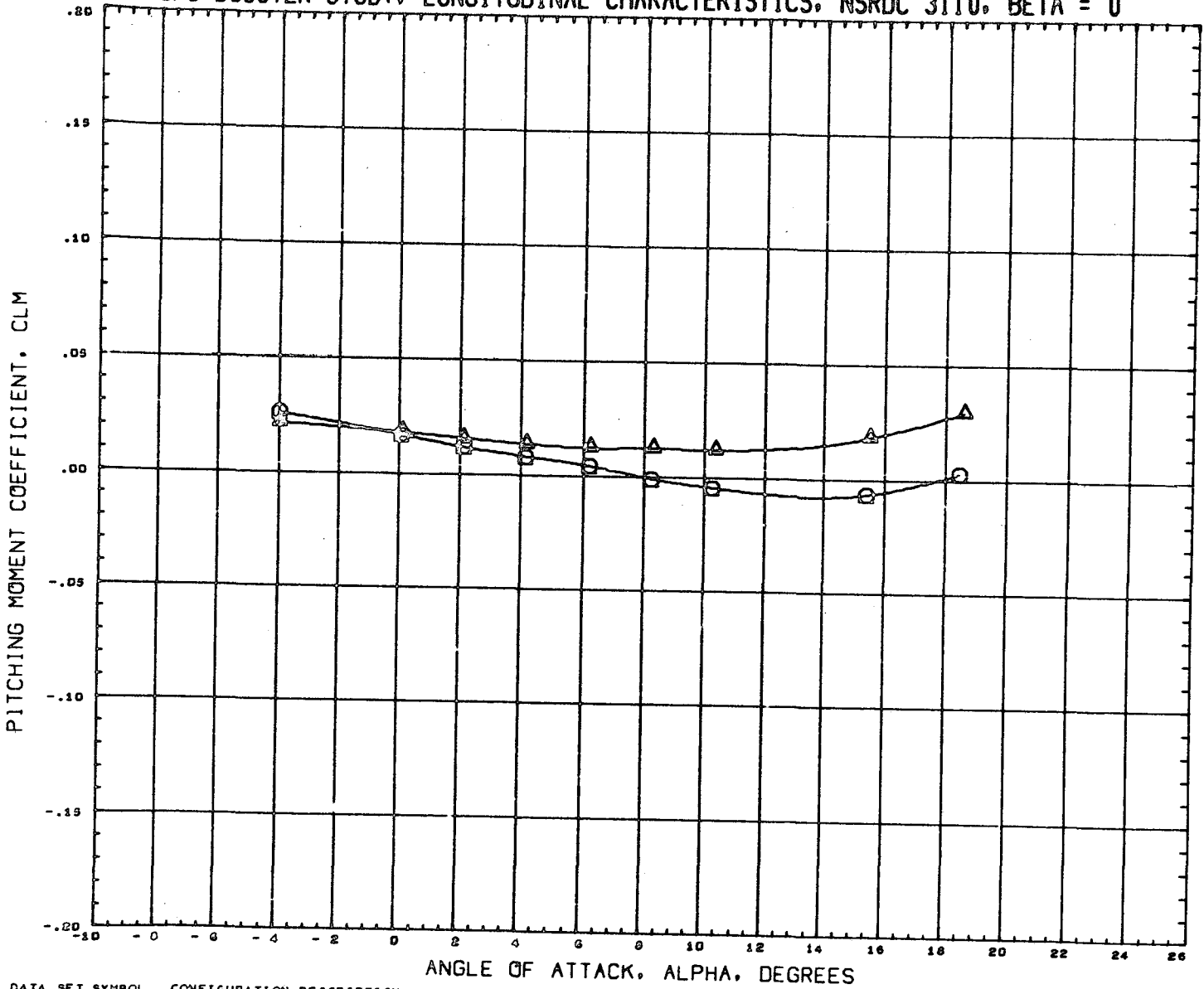
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2017)	NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1	3.000	1.000	0.000	2.000	SREF 1.3550 SQ. FT.
(RN2081)	NSRDC-3110, MSFC/LHSC BOOSTER B1C1F1W1V1	3.000	1.000	0.000	2.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCENT

MACH 0.382

LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL
(RN2017)
(RN2081)



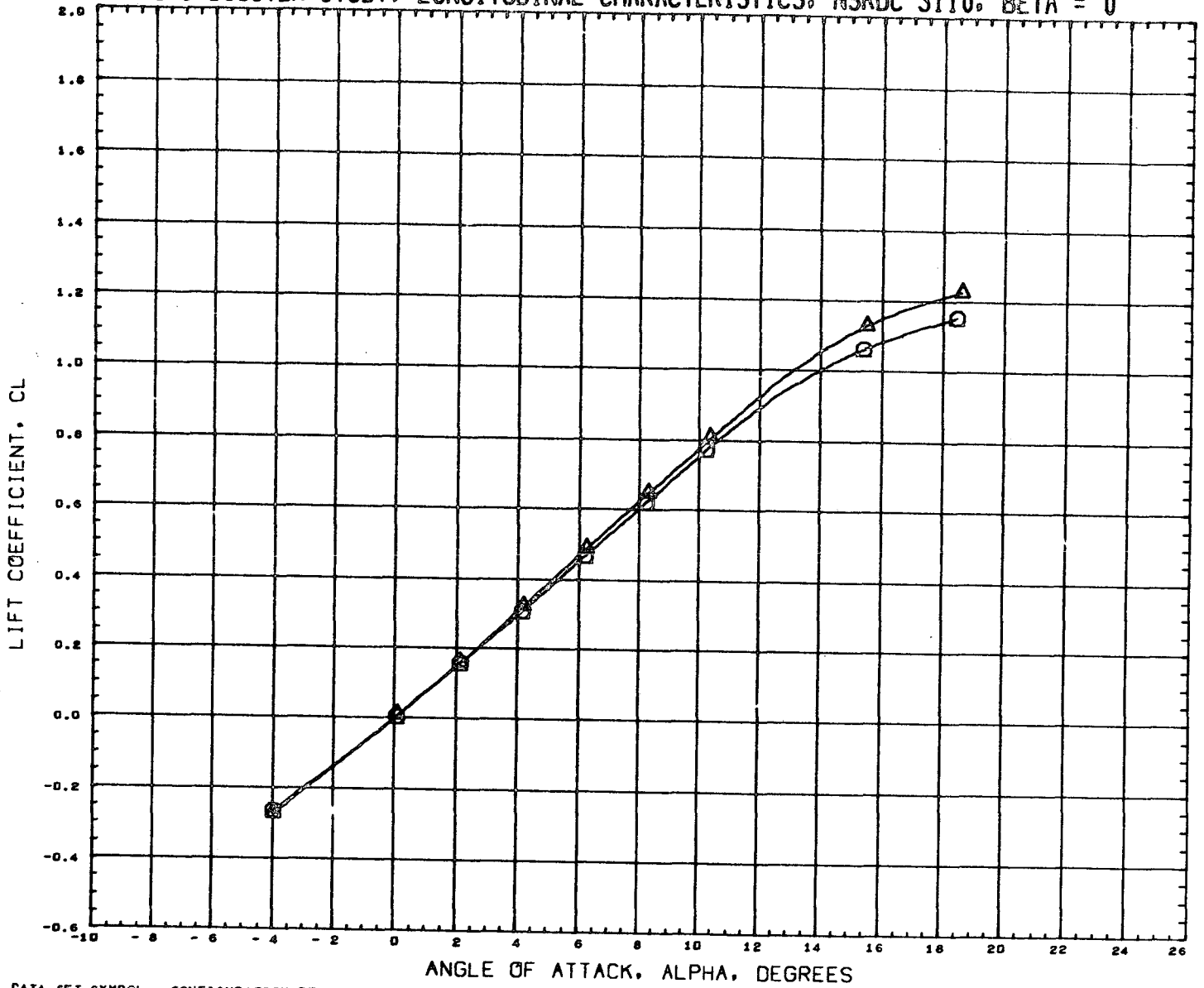
CONFIGURATION DESCRIPTION
NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1
NSRDC-3110,MSFC/LMSC BOOSTER B1C1F1W1V1

INCIDC	CNDPOS	INCIDW	WNGPOS
3.000	1.000	0.000	2.000
3.000	1.000	0.000	2.000

REFERENCE INFORMATION		
SREF	1.3550	SQ.FT.
LREF	41.4360	INCHES
BREF	41.4360	INCHES
XMRP	31.1400	INCHES
YMRP	0.0000	INCHES
ZMRP	0.2250	INCHES
SCALE	1.5000	PERCNT

MACH 0.382

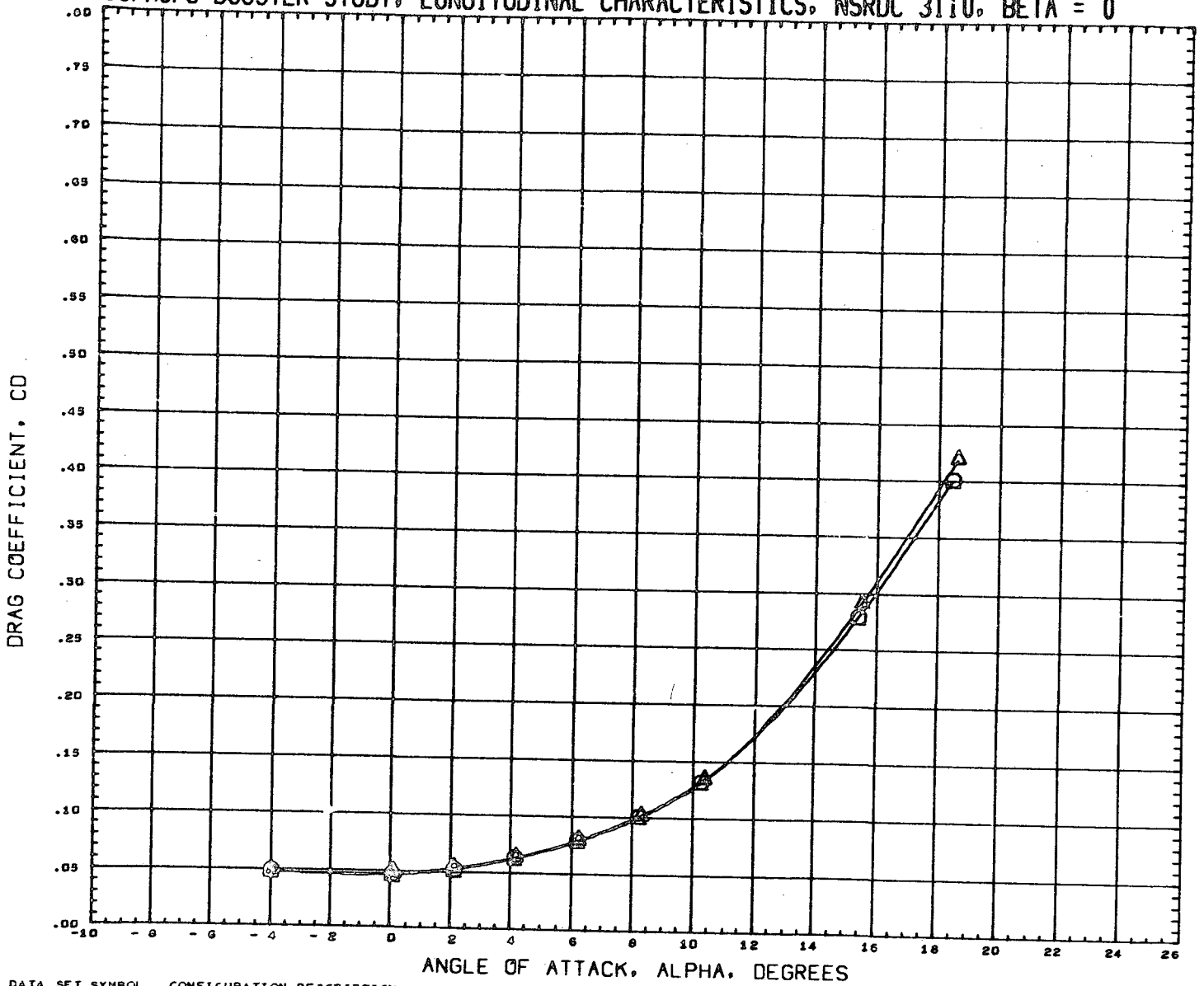
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2017)	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1	3.000	1.000	0.000	2.000	SREF 1.3550 SQ.FT.
(RN2081)	NSRDC-3110,MSFC/LMSC BOOSTER B1C1F1W1V1	3.000	1.000	0.000	2.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCNT

MACH 0.382

LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



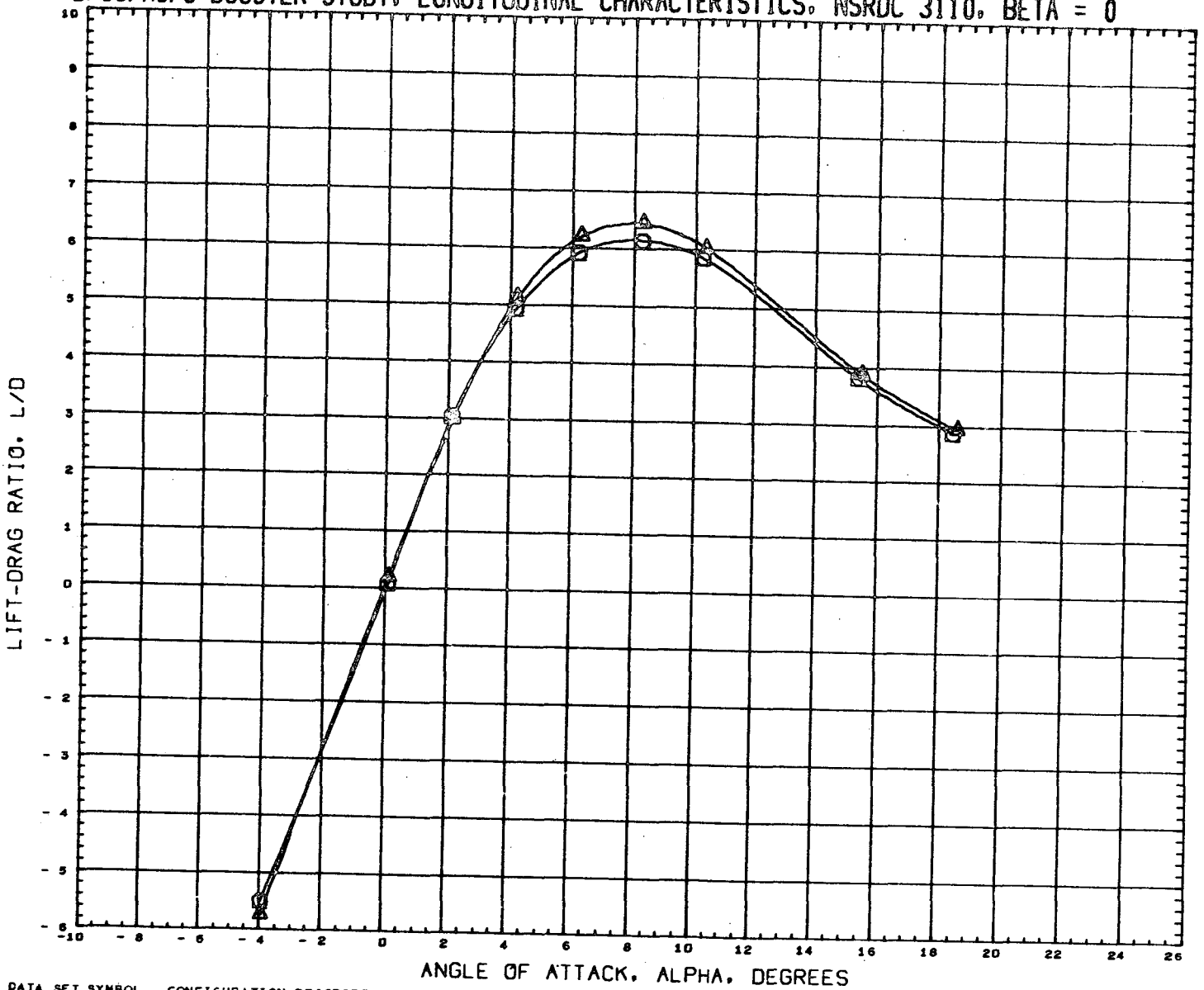
DATA SET SYMBOL (RN2017) (RN2081) CONFIGURATION DESCRIPTION NSRDC-3110, HSFC/LMSC BOOSTER B1C2F1W1V1 NSRDC-3110, HSFC/LMSC BOOSTER B1C1F1W1V1

INCIDC 3.000 3.000 CNDPOS 1.000 1.000 INCIDW 0.000 0.000 WNGPOS 2.000 2.000

REFERENCE INFORMATION SREF 1.3550 SQ. FT. LREF 41.4360 INCHES BREF 41.4360 INCHES XMRP 31.1400 INCHES YMRP 0.0000 INCHES ZMRP 0.2250 INCHES SCALE 1.5000 PERCENT

MACH 0.382

LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL
(RN2017)
(RN2081)



CONFIGURATION DESCRIPTION
NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1
NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1

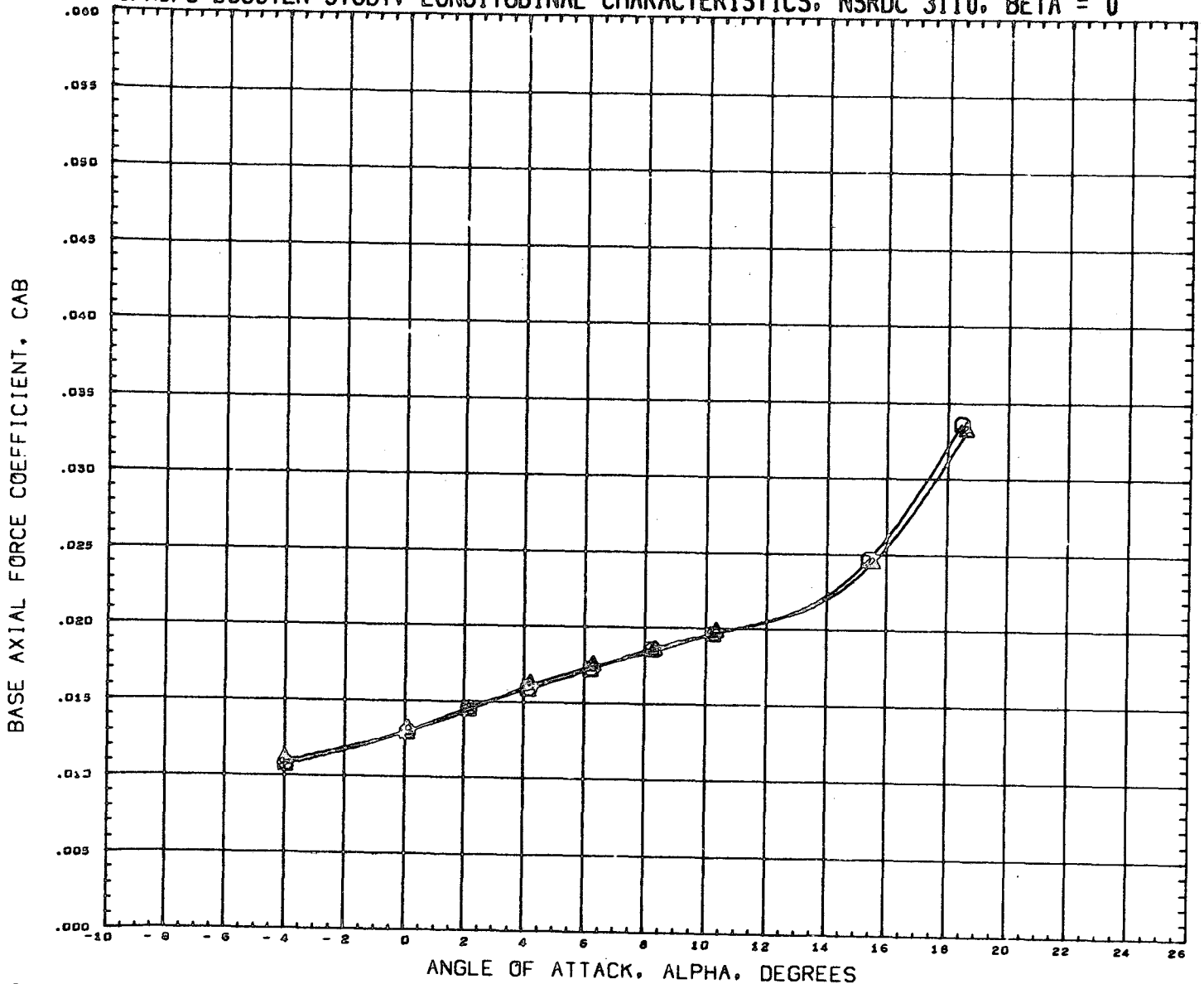
INCIDC	CNDPOS	INCIDW	WNGPOS
3.000	1.000	0.000	2.000
3.000	1.000	0.000	2.000

REFERENCE INFORMATION

SREF	1.3550	SQ. FT.
LREF	41.4360	INCHES
BREF	41.4360	INCHES
XNRP	31.1400	INCHES
YNRP	0.0000	INCHES
ZNRP	0.2250	INCHES
SCALE	1.5000	PERCENT

MACH 0.382

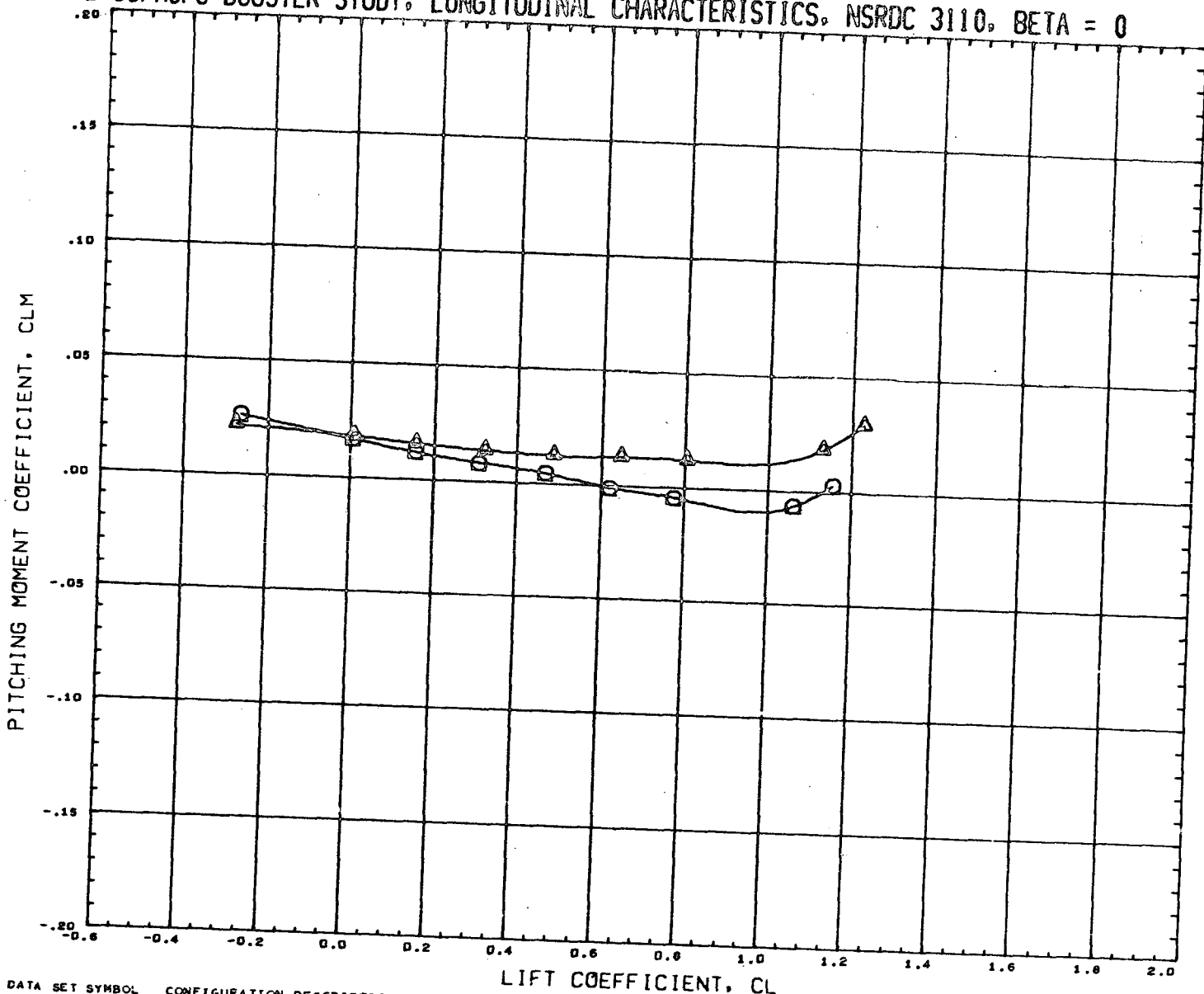
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2017)	NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1	3.000	1.000	0.000	2.000	SREF 1.3550 SQ.FT.
(RN2081)	NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1	3.000	1.000	0.000	2.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCENT

MACH 0.382

LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL
 (RN2017)
 (RN2081)



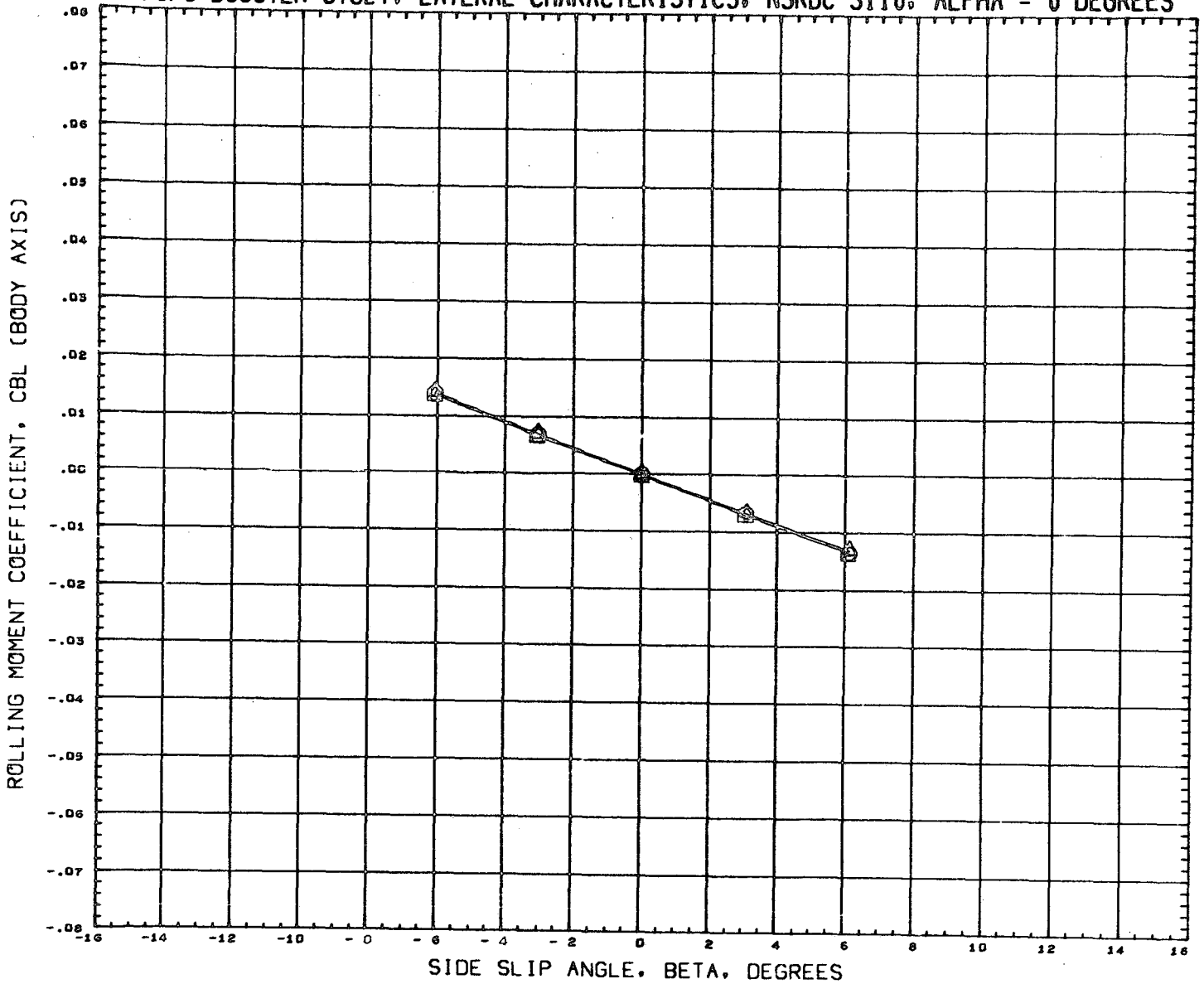
CONFIGURATION DESCRIPTION
 NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1
 NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1

INCIDC	CNDPOS	INCIDW	WNGFOS
3.000	1.000	0.000	2.000
3.000	1.000	0.000	2.000

REFERENCE INFORMATION		
SREF	1.3550	SQ. FT.
LREF	41.4360	INCHES
BREF	41.4360	INCHES
XMRP	31.1400	INCHES
YMRP	0.0000	INCHES
ZMRP	0.2250	INCHES
SCALE	1.5000	PERCENT

MACH 0.382

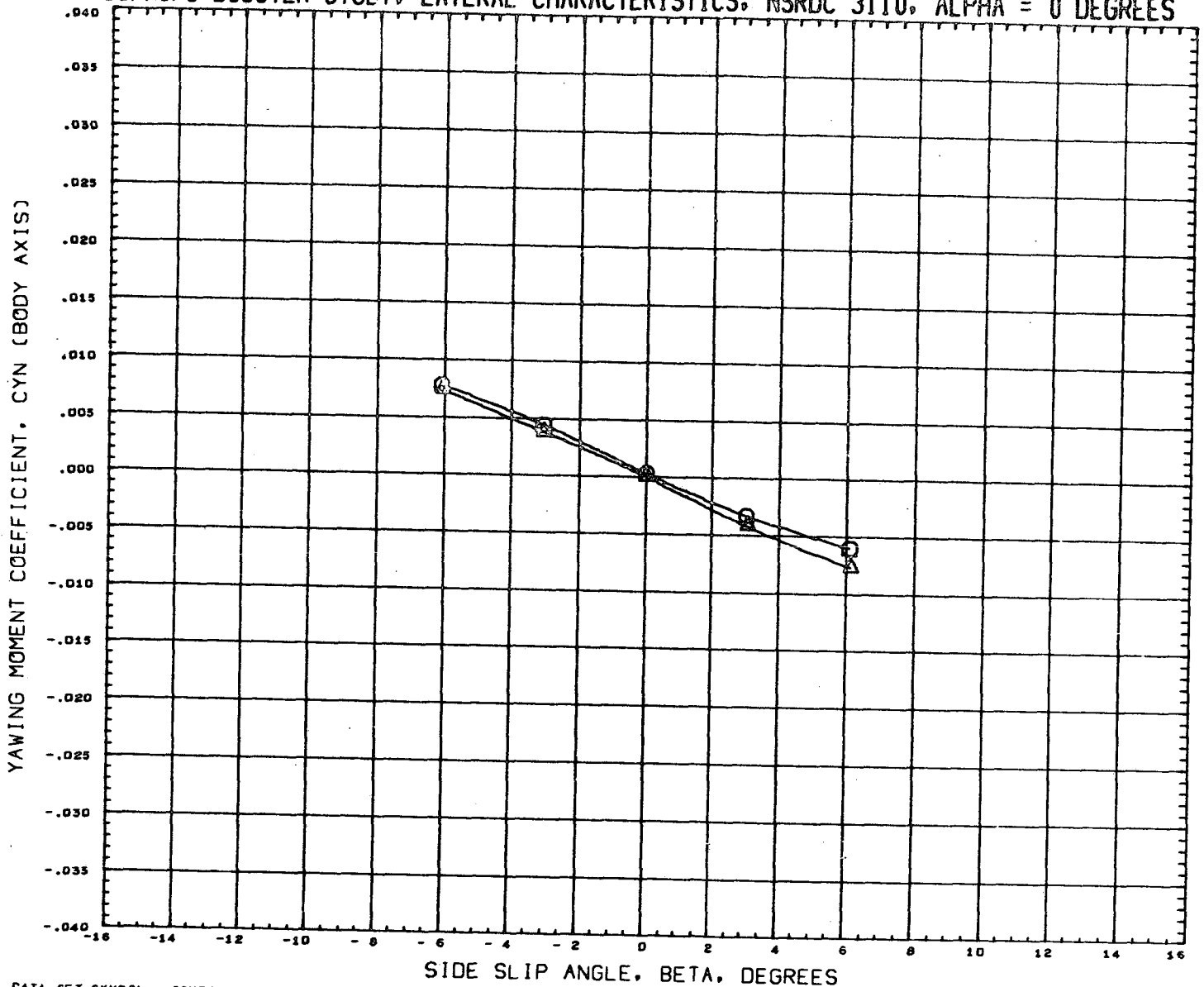
LMSC/MSFC BOOSTER STUDY, LATERAL CHARACTERISTICS, NSRDC 3110, ALPHA = 0 DEGREES



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2018)	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1	3.000	1.000	0.000	2.000	SREF 1.3550 SQ.FT.
(RN2002)	NSRDC-3110,MSFC/LMSC BOOSTER B1C1F1W1V1	3.000	1.000	0.000	2.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCENT

MACH 0.301

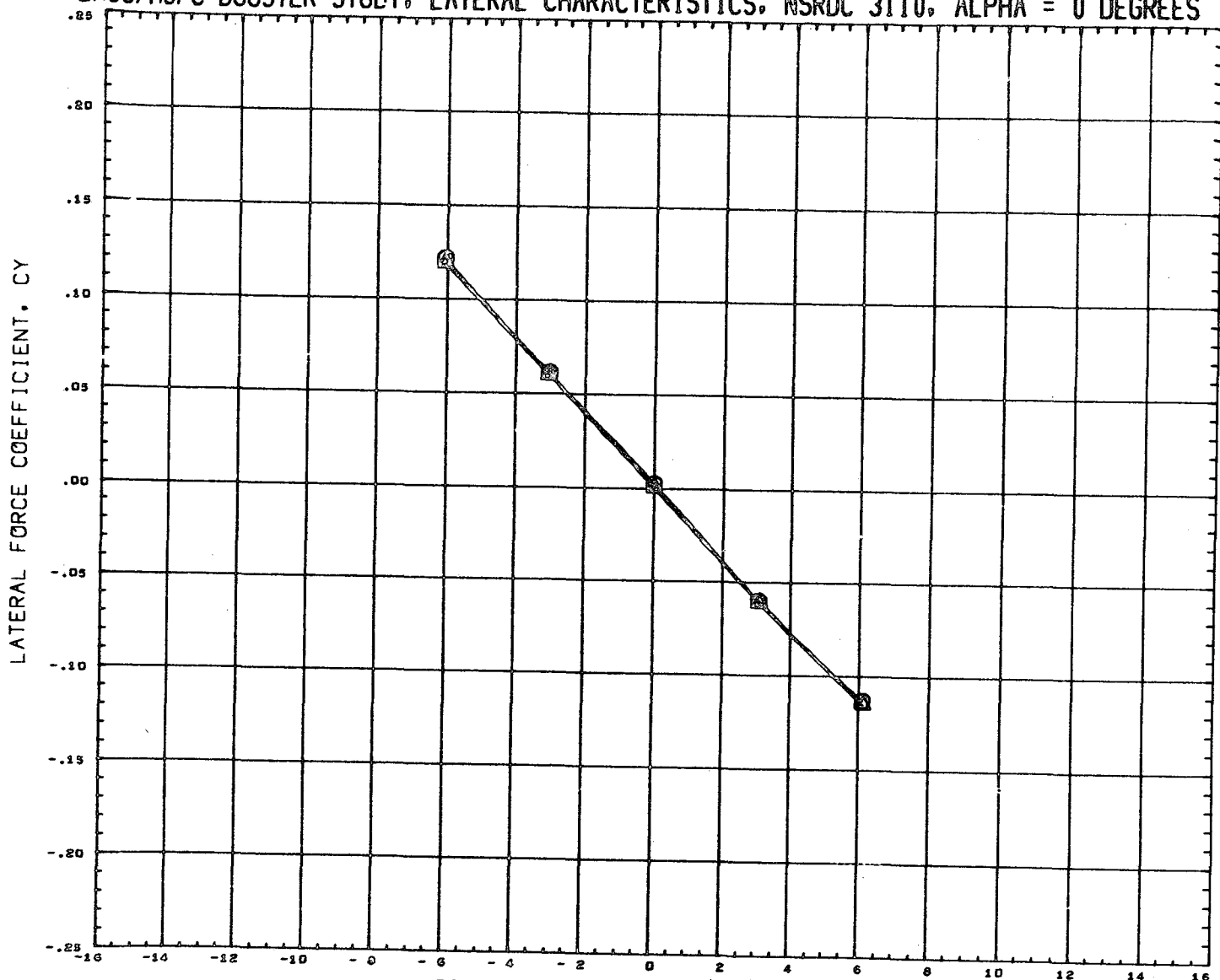
LMSC/MSFC BOOSTER STUDY, LATERAL CHARACTERISTICS, NSRDC 3110, ALPHA = 0 DEGREES



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2018)	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1	3.000	1.000	0.000	2.000	SREF 1.3550 SQ.FT.
(RN2082)	NSRDC-3110,MSFC/LMSC BOOSTER B1C1F1W1V1	3.000	1.000	0.000	2.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRF 31.1400 INCHES
						YMRF 0.0000 INCHES
						ZMRF 0.2250 INCHES
						SCALE 1.5000 PERCENT

MACH 0.381

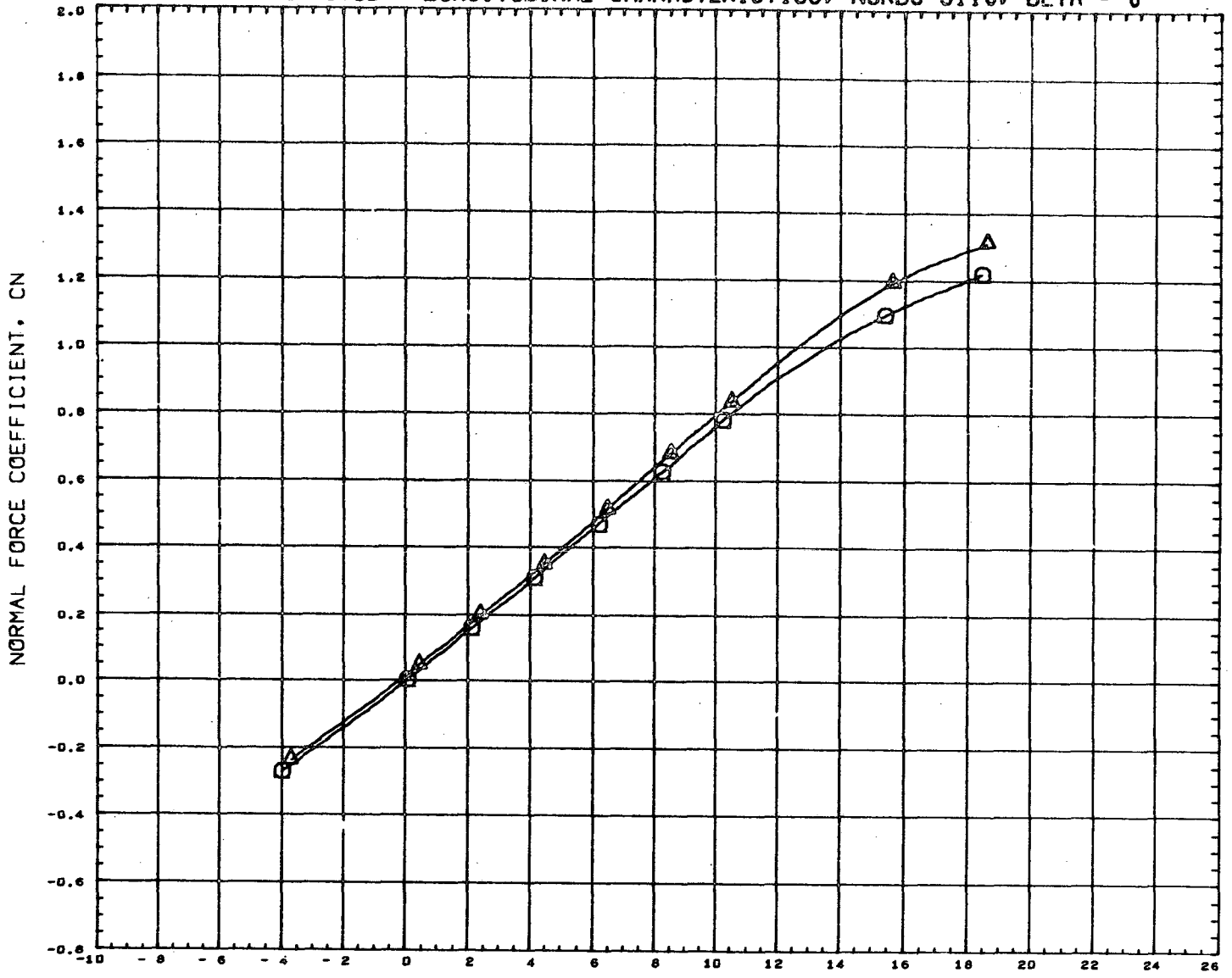
LMSC/MSFC BOOSTER STUDY, LATERAL CHARACTERISTICS, NSRDC 3110, ALPHA = 0 DEGREES



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2018)	NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1	3.000	1.000	0.000	2.000	SREF 1.3550 SQ.FT.
(RN2082)	NSRDC-3110, MSFC/LHSC BOOSTER B1C1F1W1V1	3.000	1.000	0.000	2.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCENT

MACH 0.301

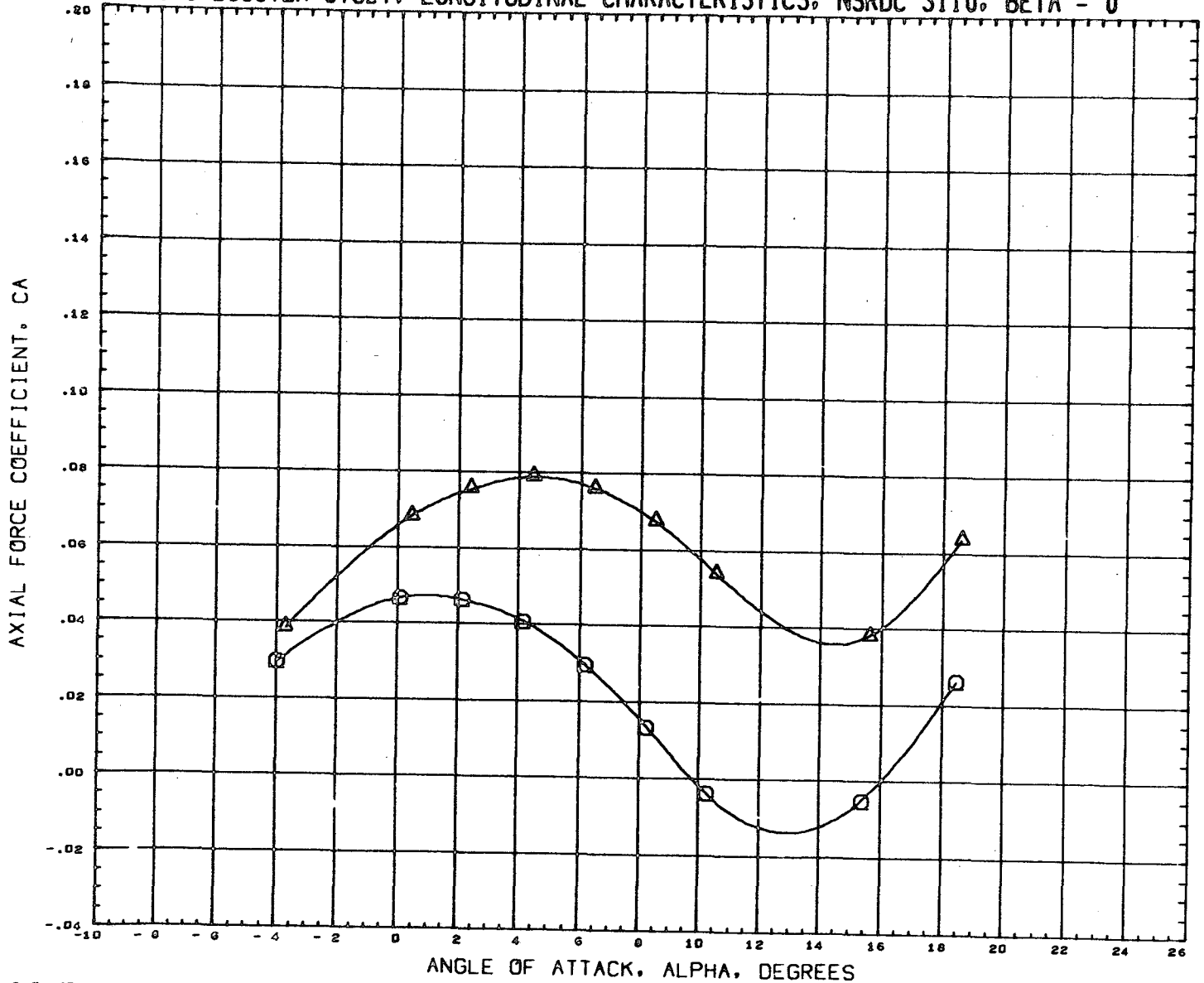
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2017)	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1	3.000	1.000	0.000	2.000	SREF 1.3550 SQ.FT.
(RN2021)	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1	15.000	1.000	0.000	2.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCENT

MACH 0.382

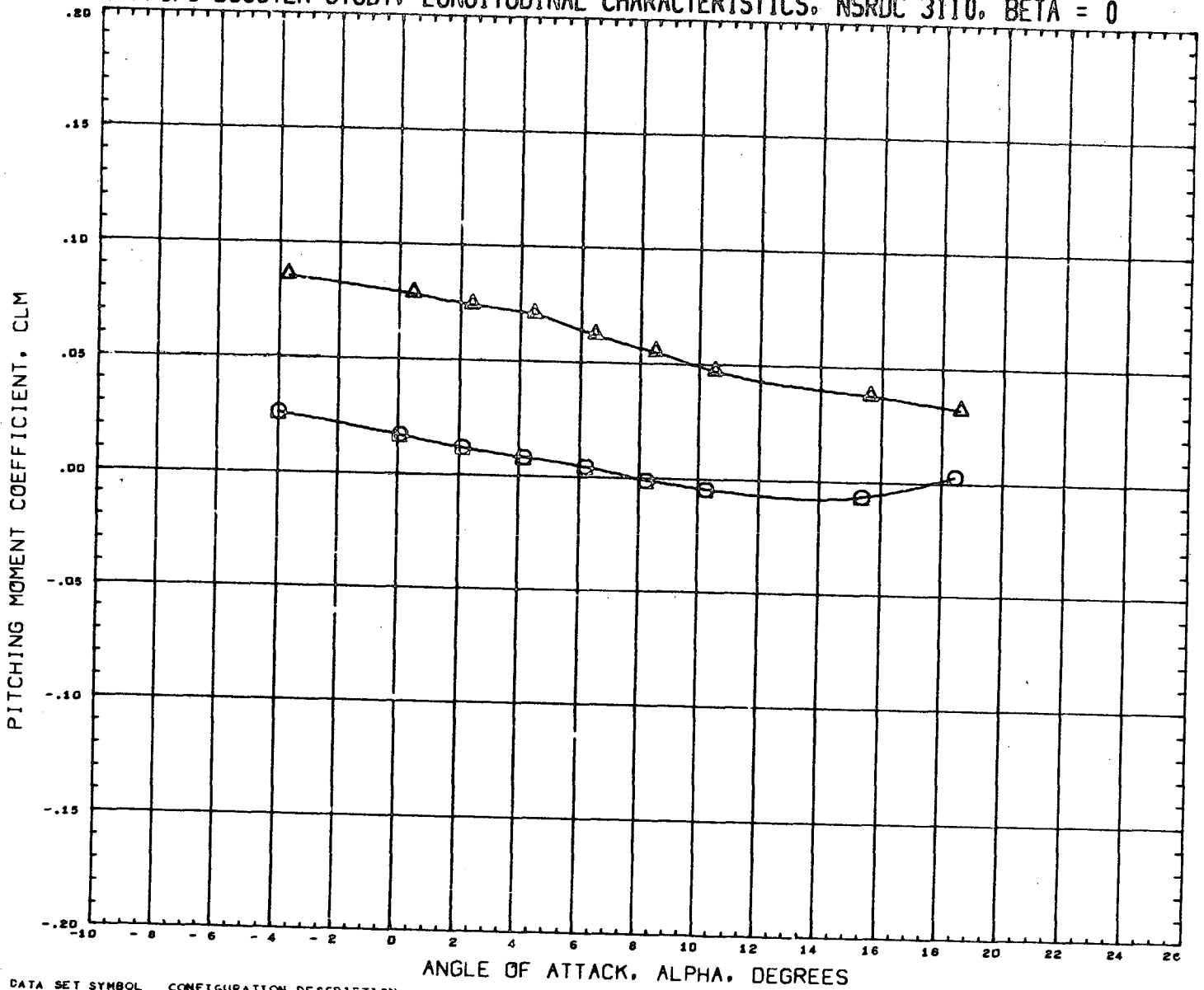
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RM2017)	NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1	3.000	1.000	0.000	2.000	SREF 1.3550 SQ. FT.
(RM2021)	NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1	15.000	1.000	0.000	2.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCENT

MACH 0.382

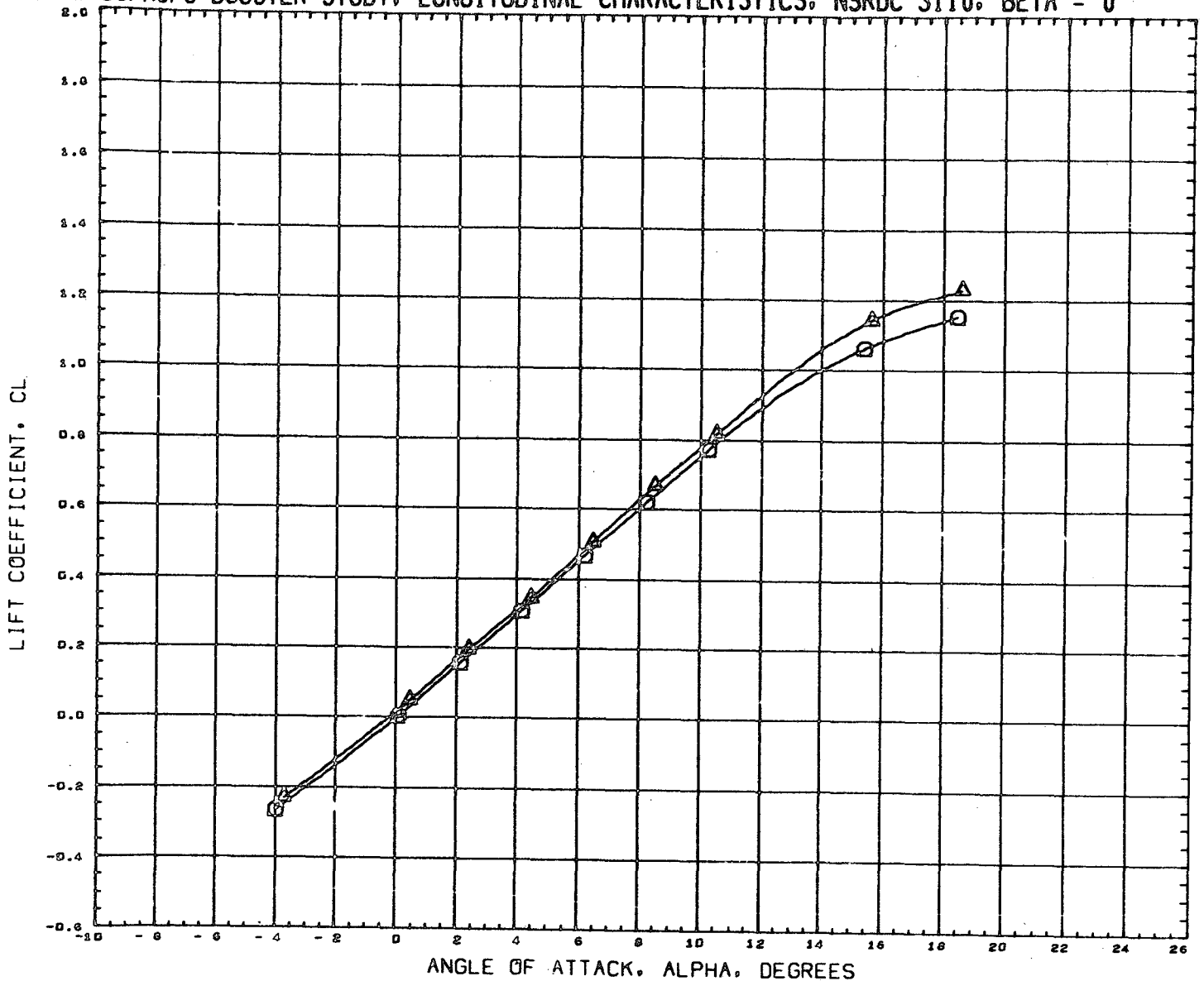
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2017)	NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1	3.000	1.000	0.000	2.000	SREF 1.3550 SQ. FT.
(RN2021)	NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1	15.000	1.000	0.000	2.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCENT

HACH 0.382

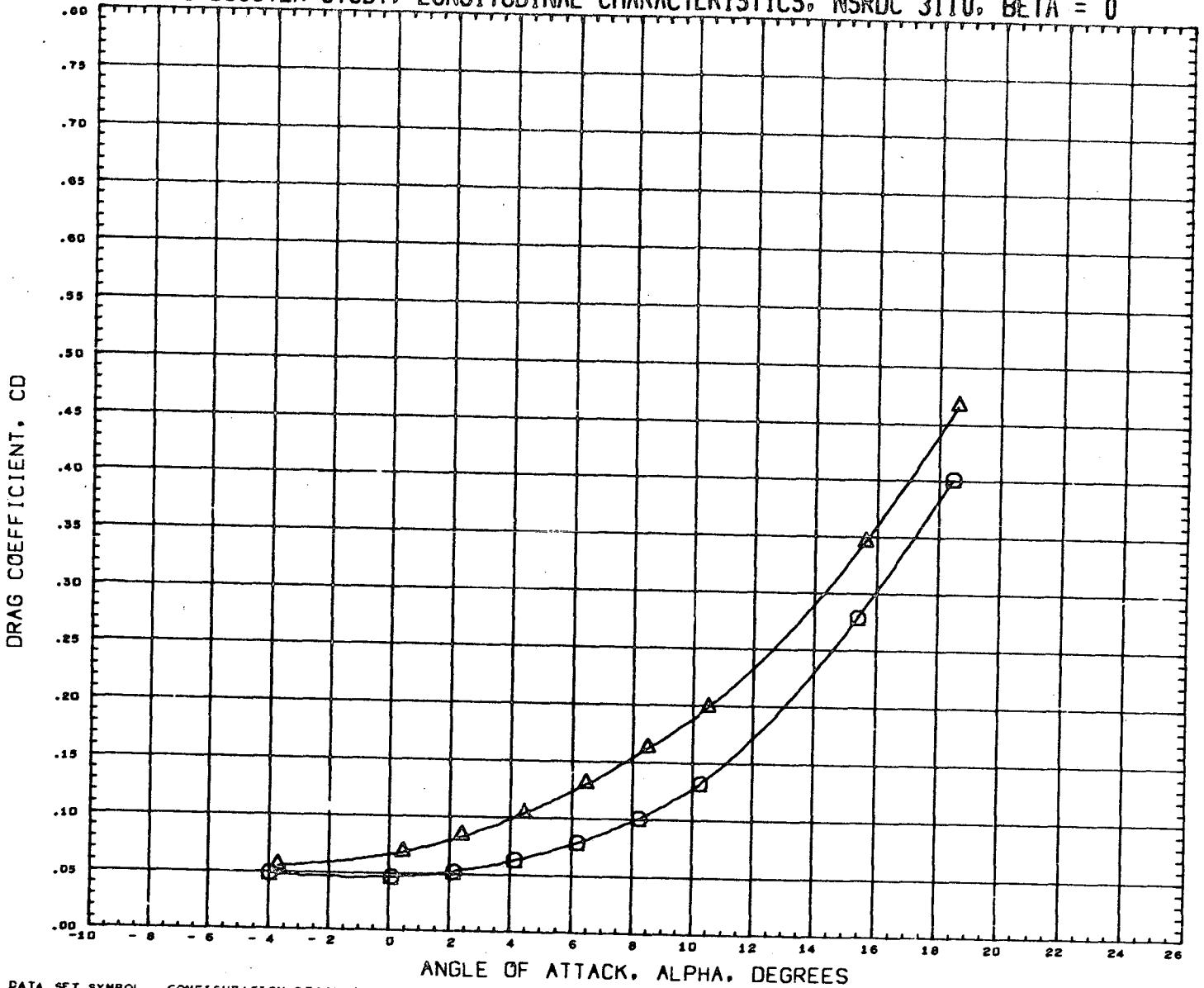
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2017)	NSRDC-3110, MSFC/LHSC BOOSTER B1C2F1W1V1	3.000	1.000	0.000	2.000	SREF 1.3550 SQ.FT.
(RN2021)	NSRDC-3110, MSFC/LHSC BOOSTER B1C2F1W1V1	15.000	1.000	0.000	2.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCENT

MACH 0.382

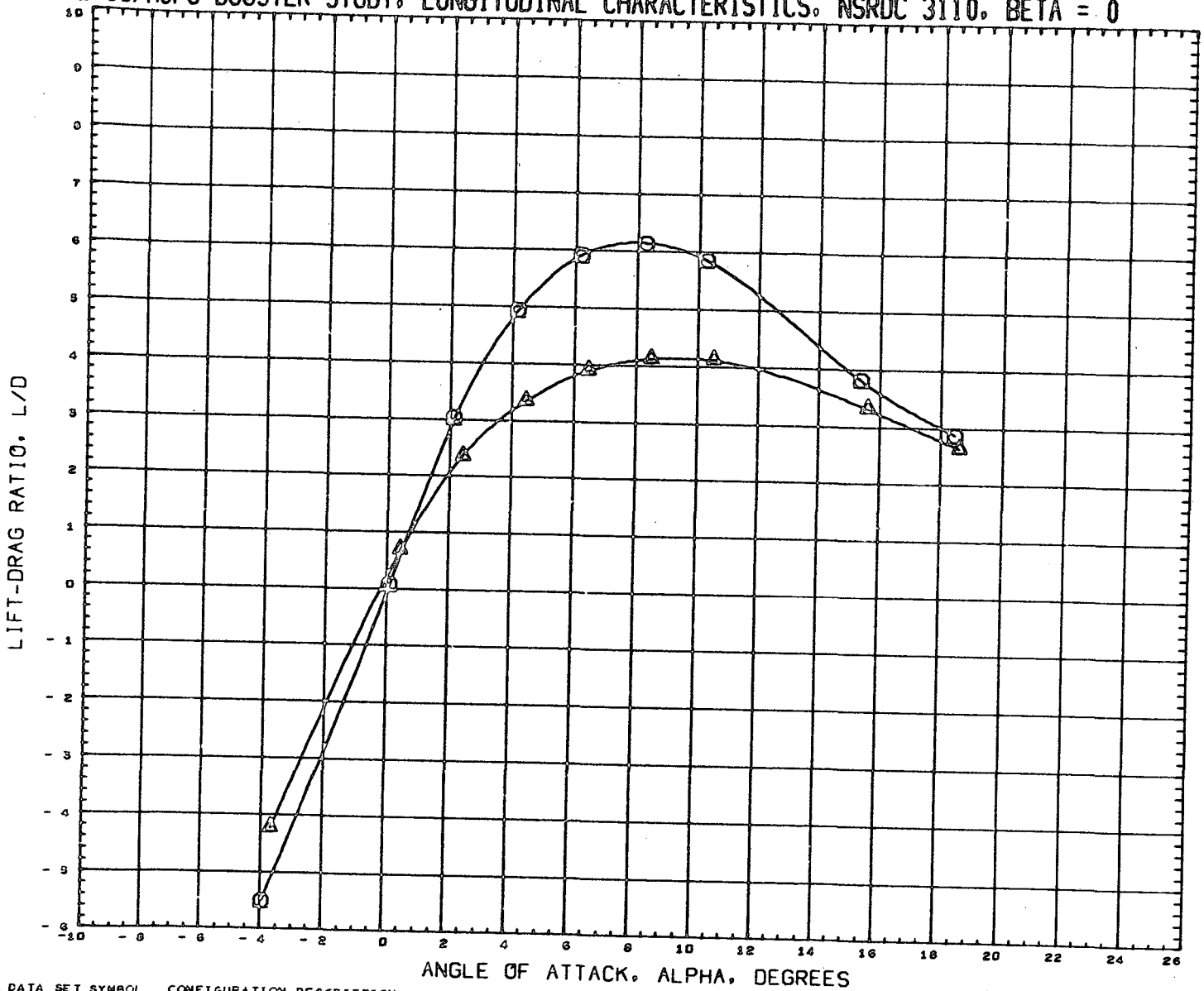
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2017)	NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1	3.000	1.000	0.000	2.000	SREF 1.3550 SQ. FT.
(RN2021)	NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1	15.000	1.000	0.000	2.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCENT

MACH 0.382

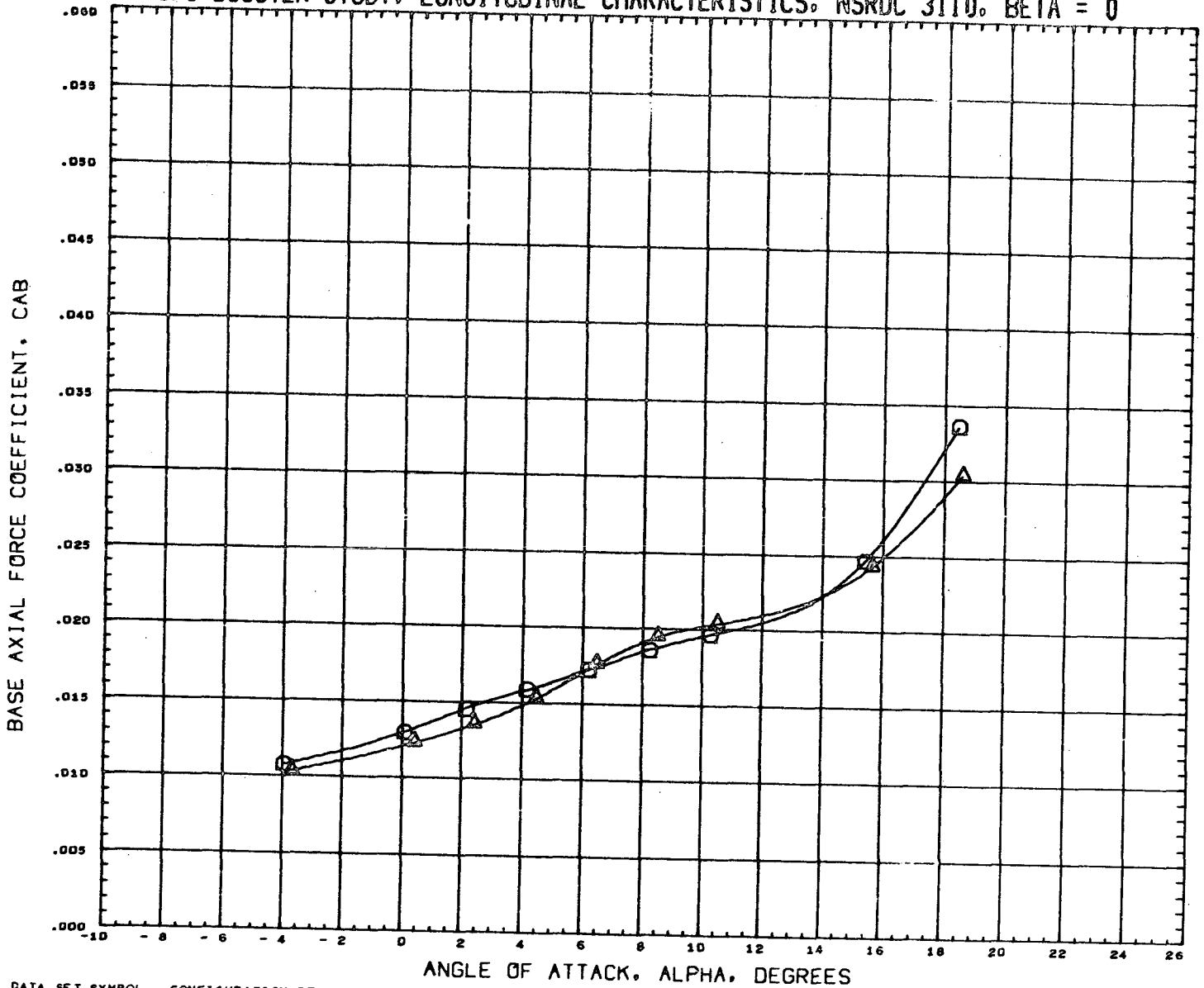
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2D17)	NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1H1V1	3.000	1.000	0.000	2.000	SREF 1.3550 SQ. FT.
(RN2D21)	NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1H1V1	15.000	1.000	0.000	2.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCENT

MACH 0.382

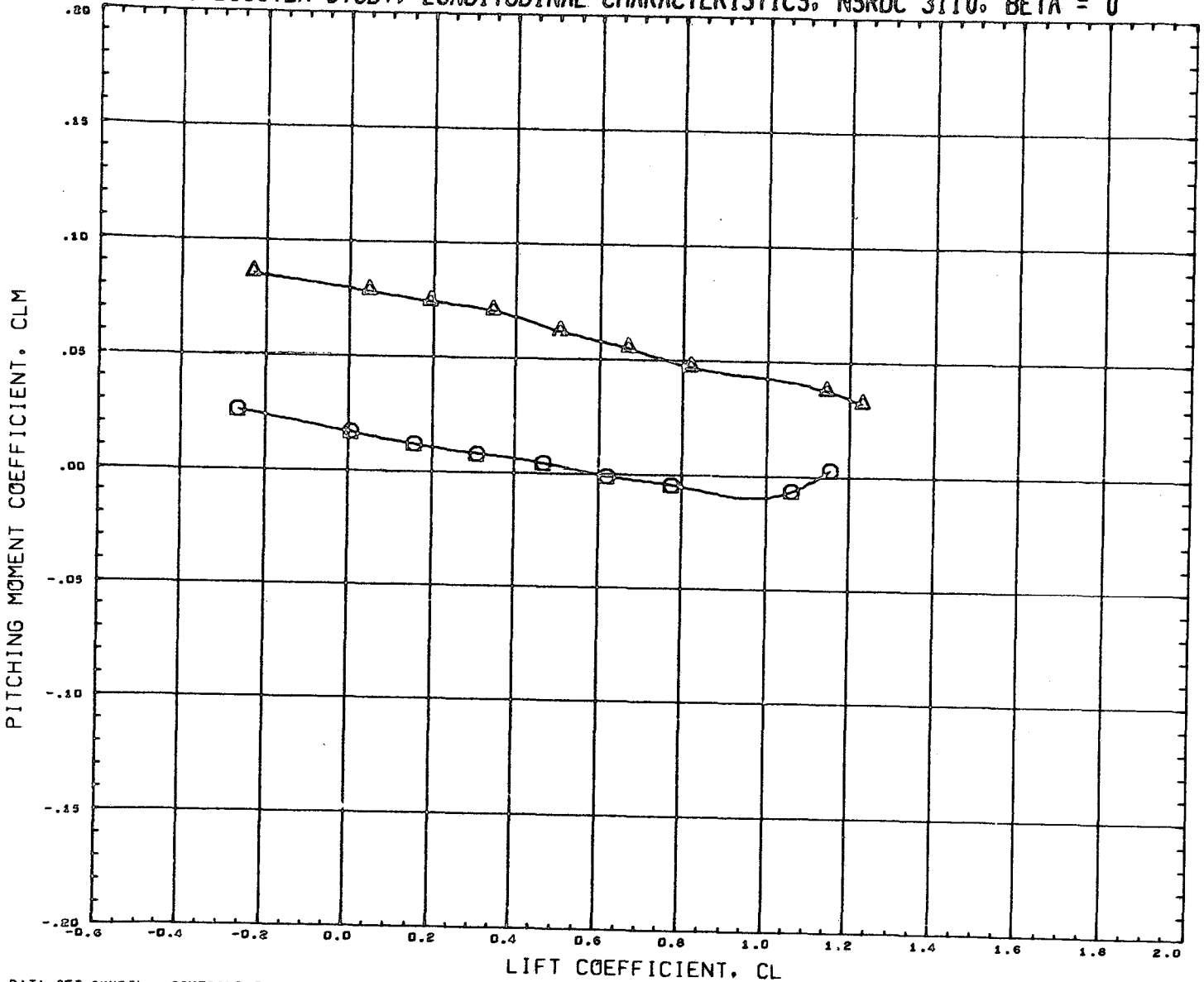
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2017)	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1	3.000	1.000	0.000	2.000	SREF 1.3550 SQ.FT.
(RN2021)	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1	15.000	1.000	0.000	2.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCENT

MACH 0.382

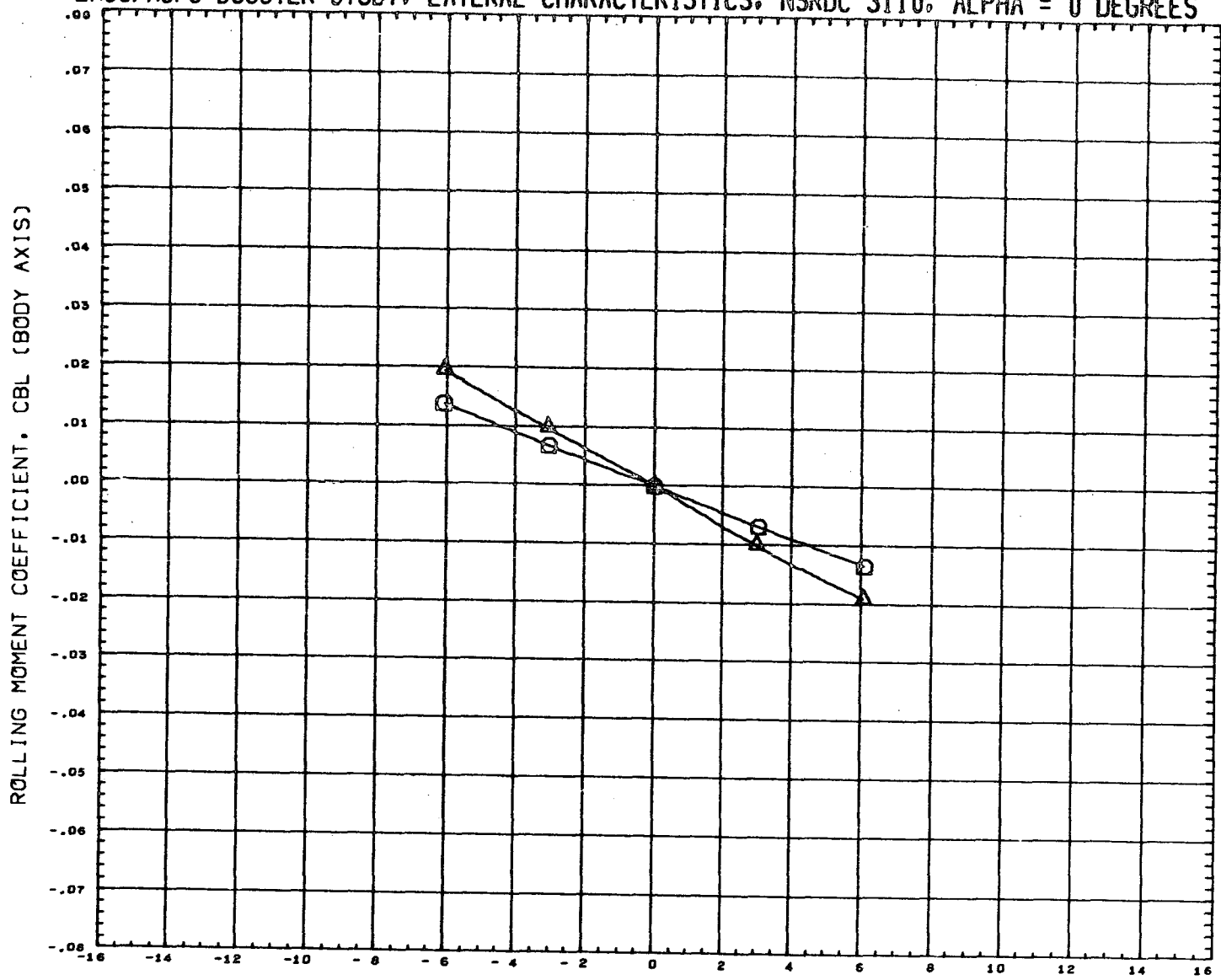
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2D17)	NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1	3.000	1.000	0.000	2.000	SREF 1.3550 SW.FT.
(RN2D21)	NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1	15.000	1.000	0.000	2.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCENT

MACH 0.382

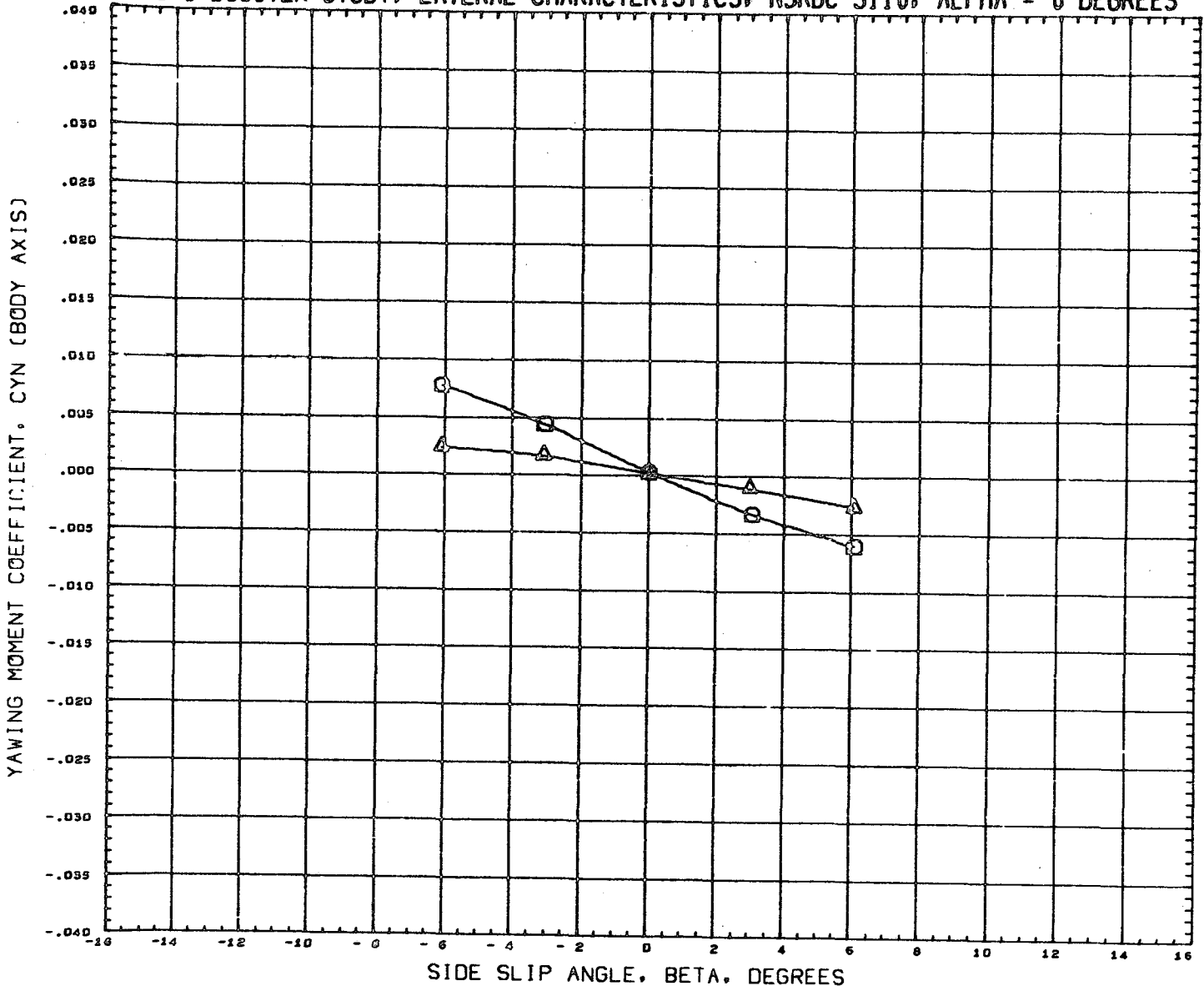
LMSC/MSFC BOOSTER STUDY, LATERAL CHARACTERISTICS, NSRDC 3110, ALPHA = 0 DEGREES



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2018)	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1	3.000	1.000	0.000	2.000	SREF 1.3550 SQ.FT.
(RN2022)	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1	15.000	1.000	0.000	2.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRF 31.1400 INCHES
						YMRF 0.0000 INCHES
						ZMRF 0.2250 INCHES
						SCALE 1.5000 PERCENT

MACH 0.381

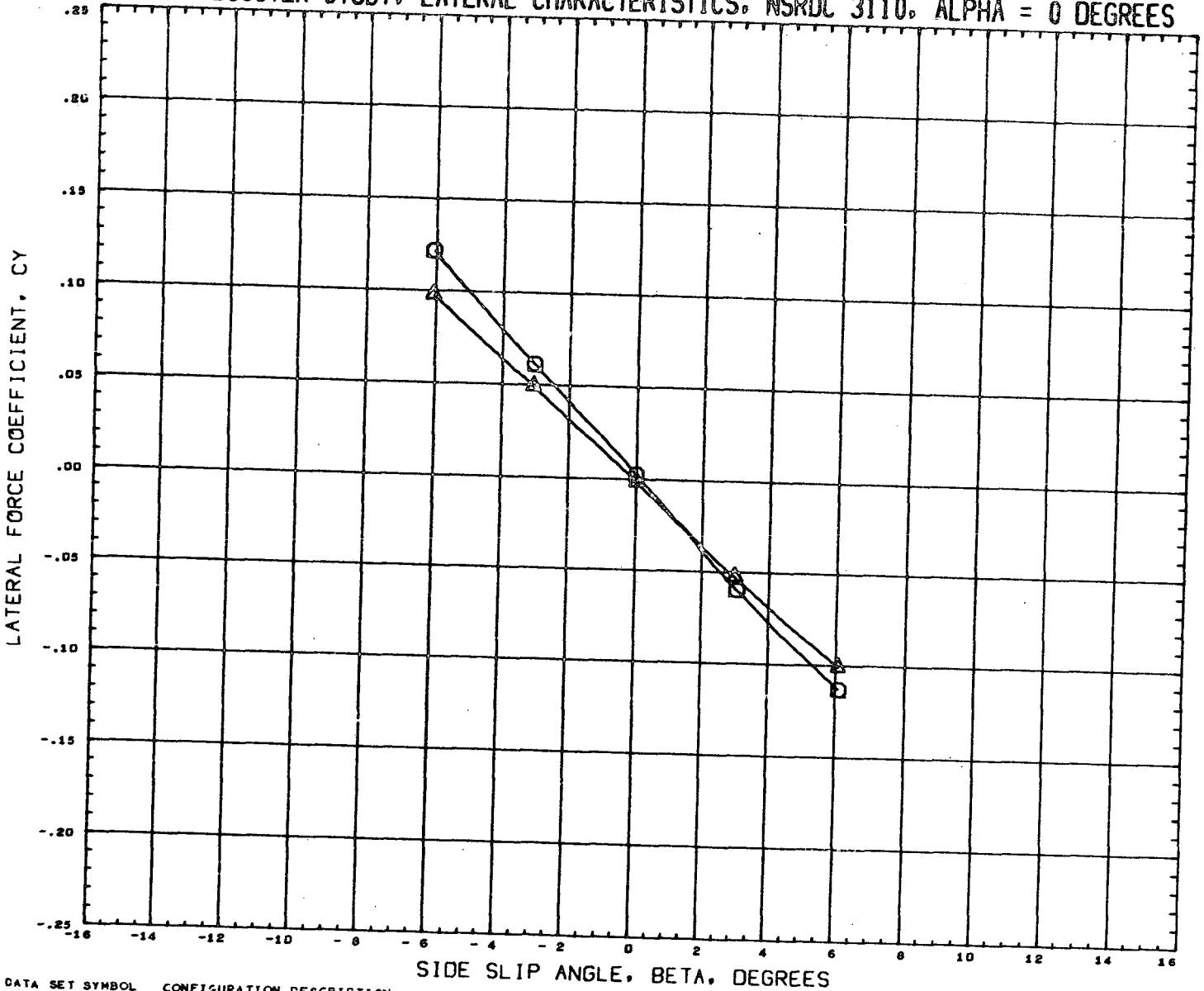
LMSC/MSFC BOOSTER STUDY, LATERAL CHARACTERISTICS, NSRDC 3110, ALPHA = 0 DEGREES



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION	
(RN2010)	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1	3.000	1.000	0.000	2.000	SREF	1.3550 SQ.FT.
(RN2022)	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1	15.000	1.000	0.000	2.000	LREF	41.4360 INCHES
						BREF	41.4360 INCHES
						XMRP	31.1400 INCHES
						YMRP	0.0000 INCHES
						ZMRP	0.2250 INCHES
						SCALE	1.5000 PERCNT

HACH 0.381

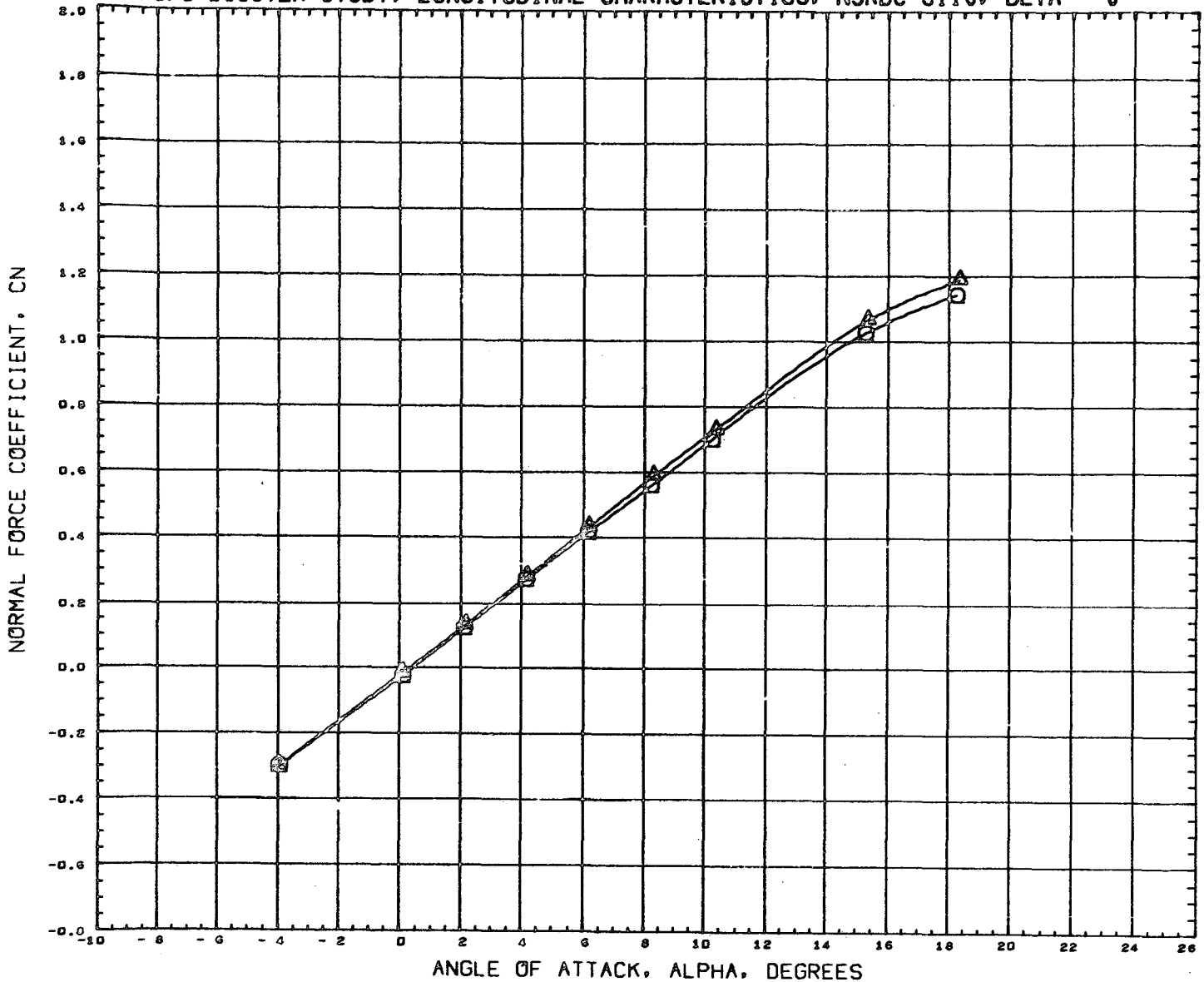
LMSC/MSFC BOOSTER STUDY, LATERAL CHARACTERISTICS, NSRDC 3110, ALPHA = 0 DEGREES



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2018)	NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1	3.000	1.000	0.000	2.000	SREF 1.3550 SQ.FT.
(RN2022)	NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1	15.000	1.000	0.000	2.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCENT

MACH 0.381

LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0

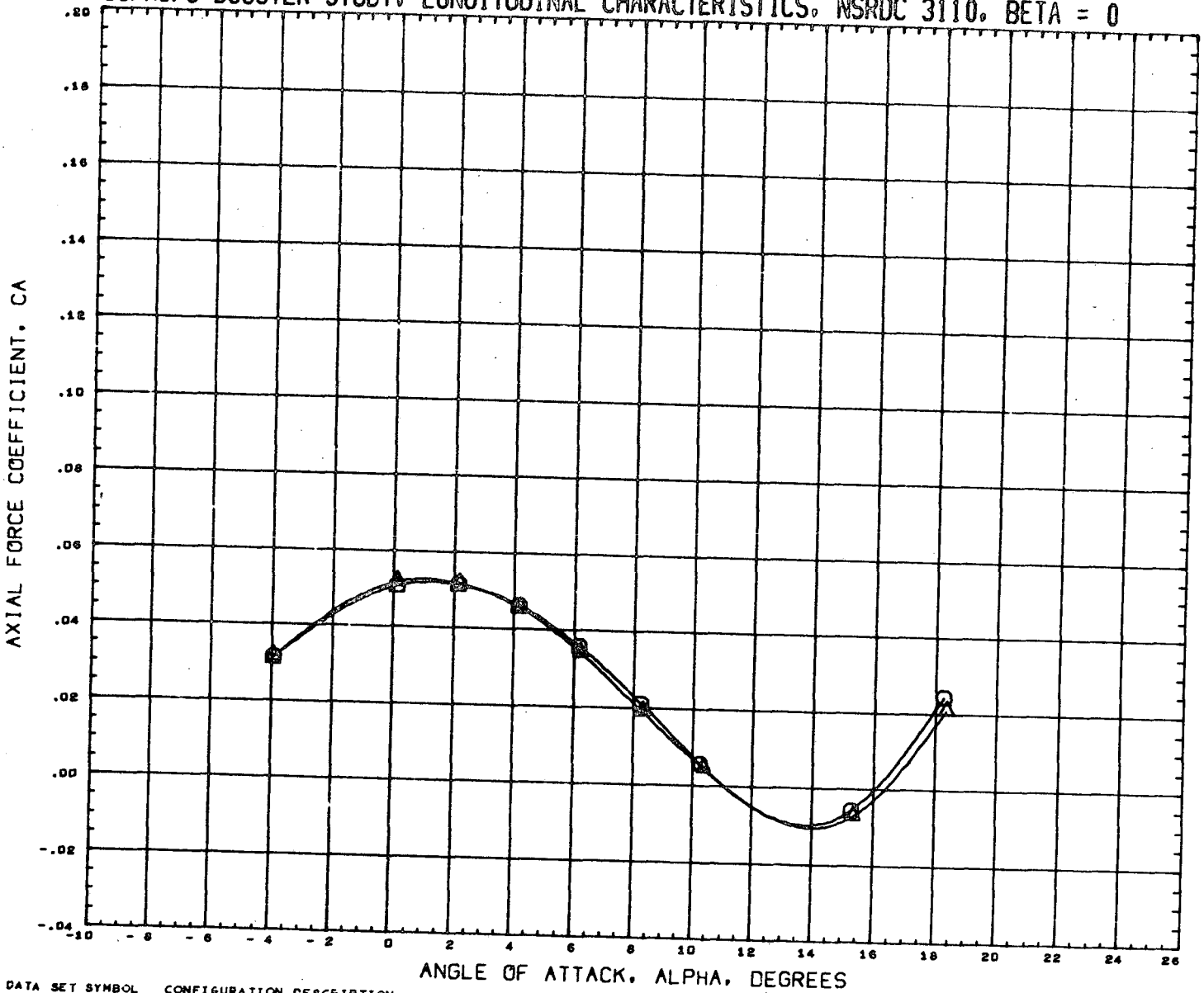


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2025)	NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1	3.000	2.000	0.000	2.000	SREF 1.3550 SQ.FT.
(RN2089)	NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1	3.000	2.000	0.000	2.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCENT

MACH 0.382

④ 4

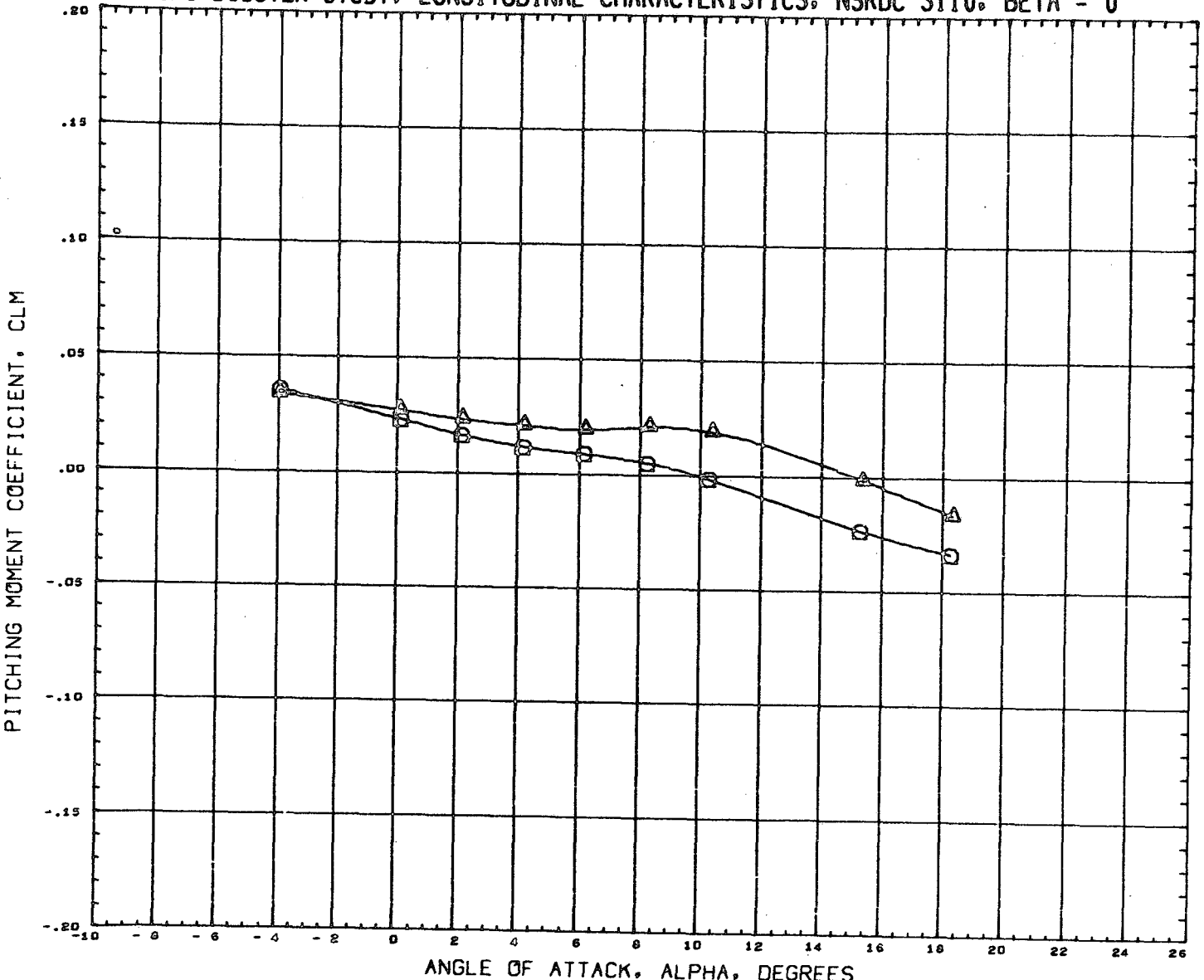
LMSC/MSFC BOOSTER STUDY. LONGITUDINAL CHARACTERISTICS. NSRDC 3110. BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2025)	NSRDC-3110,HSFC/LMSC BOOSTER B1C2F1W1V1	3.000	2.000	0.000	2.000	SREF 1.3550 SQ.FT.
(RN2089)	NSRDC-3110,HSFC/LMSC BOOSTER B1C1F1W1V1	3.000	2.000	0.000	2.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCENT

MACH 0.302

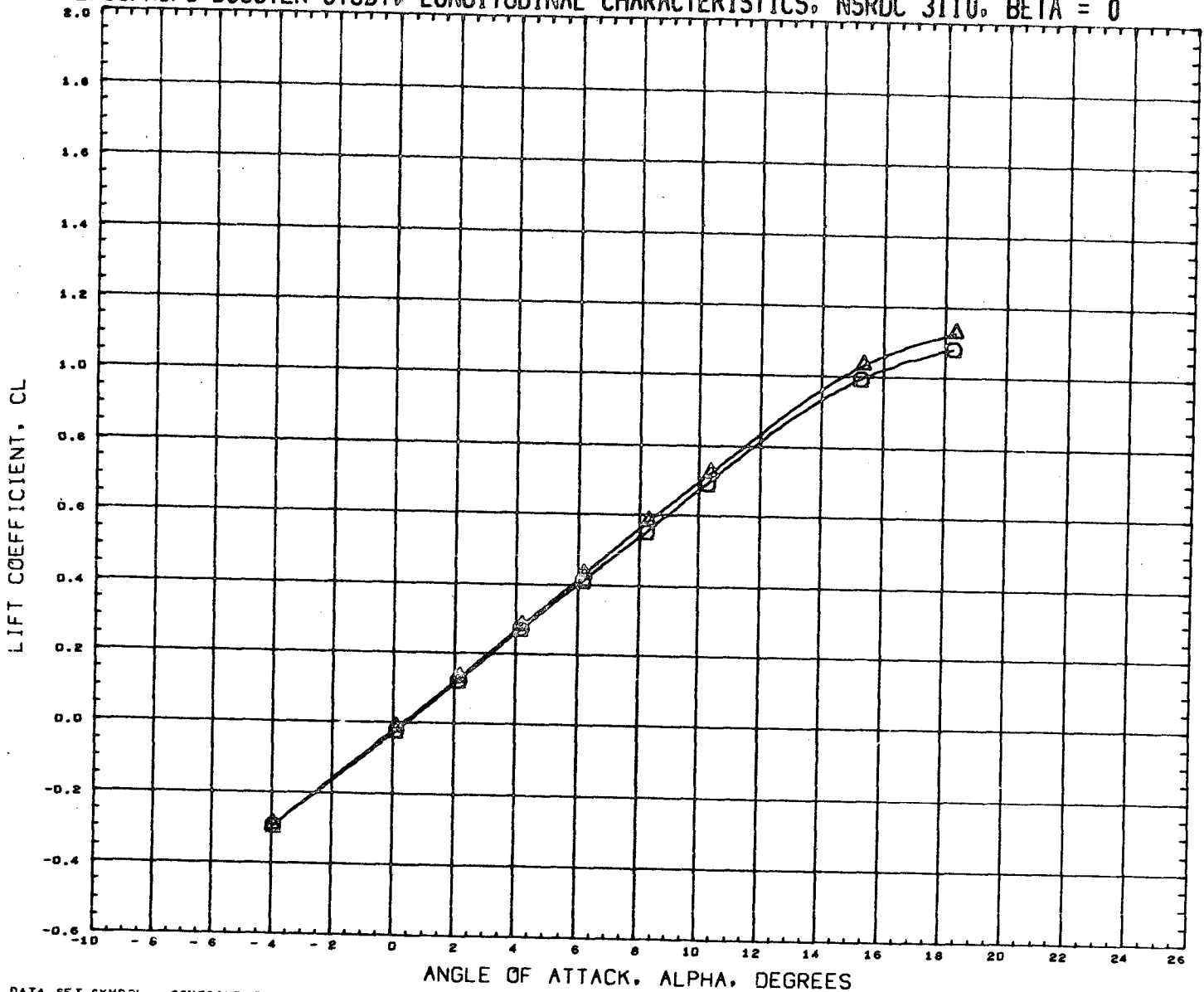
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGFOS	REFERENCE INFORMATION
(RN2025) \square	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1	3.000	2.000	0.000	2.000	SREF 1.3550 90.FT.
(RN2009) \triangle	NSRDC-3110,MSFC/LMSC BOOSTER B1C1F1W1V1	3.000	2.000	0.000	2.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCNT

MACH 0.382

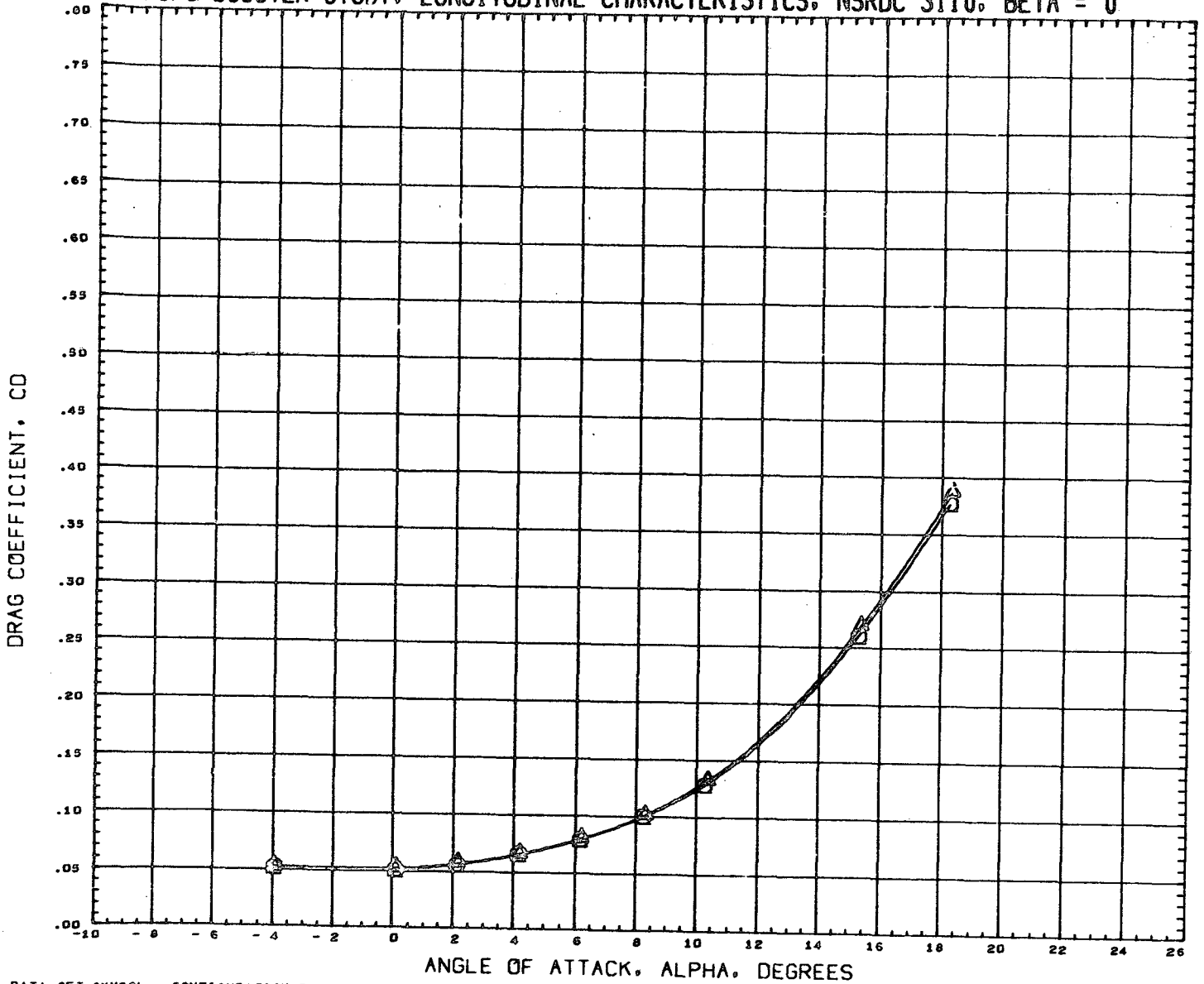
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION	
(RN2025)	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1	3.000	2.000	0.000	2.000	SREF	1.3550 SQ.FT.
(RN2029)	NSRDC-3110,MSFC/LMSC BOOSTER B1C1F1W1V1	3.000	2.000	0.000	2.000	LREF	41.4360 INCHES
						BREF	41.4360 INCHES
						XMRP	31.1400 INCHES
						YMRP	0.0000 INCHES
						ZMRP	0.2250 INCHES
						SCALE	1.3000 PERCENT

MACH 0.302

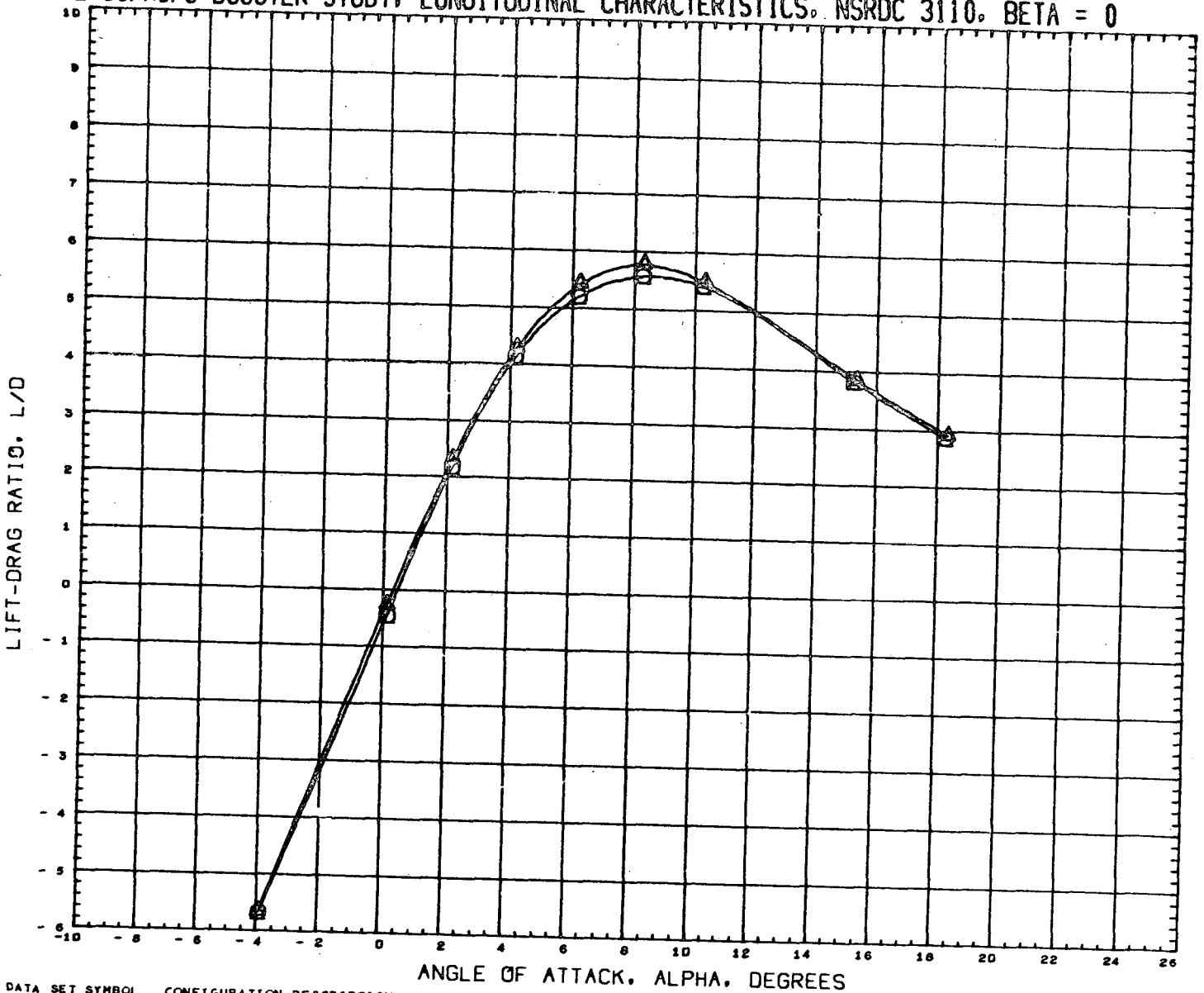
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2D25)	NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1	3.000	2.000	0.000	2.000	SREF 1.3550 SQ.FT.
(RN2D89)	NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1	3.000	2.000	0.000	2.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCENT

MACH 0.382

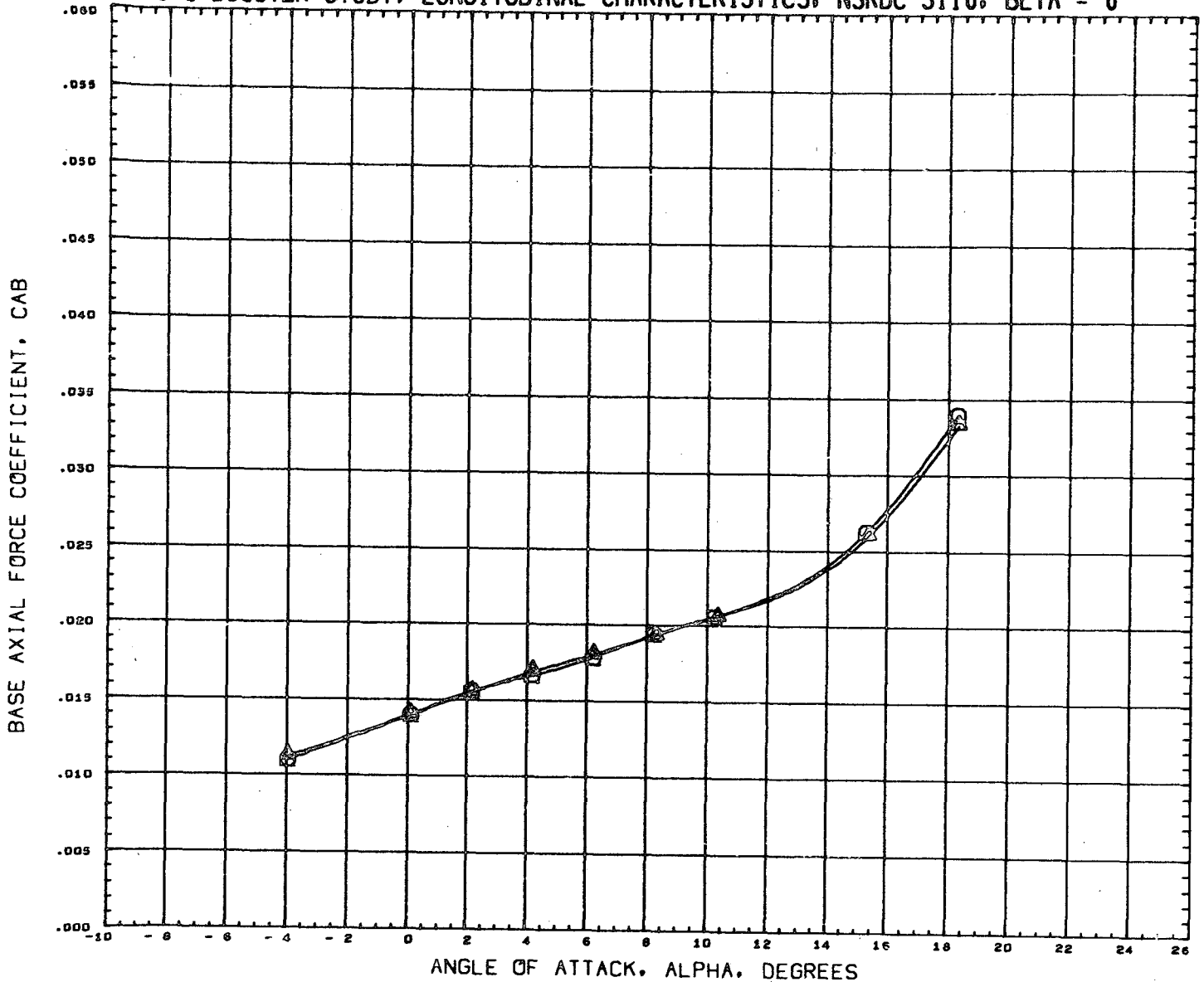
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2025)	NSRDC-311G,MSFC/LMSC BOOSTER B1C2F1W1V1	3.000	2.000	0.000	2.000	SREF 1.3550 SQ.FT.
(RN2089)	NSRDC-311D,MSFC/LMSC BOOSTER B1C1F1W1V1	3.000	2.000	0.000	2.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCNT

MACH 0.382

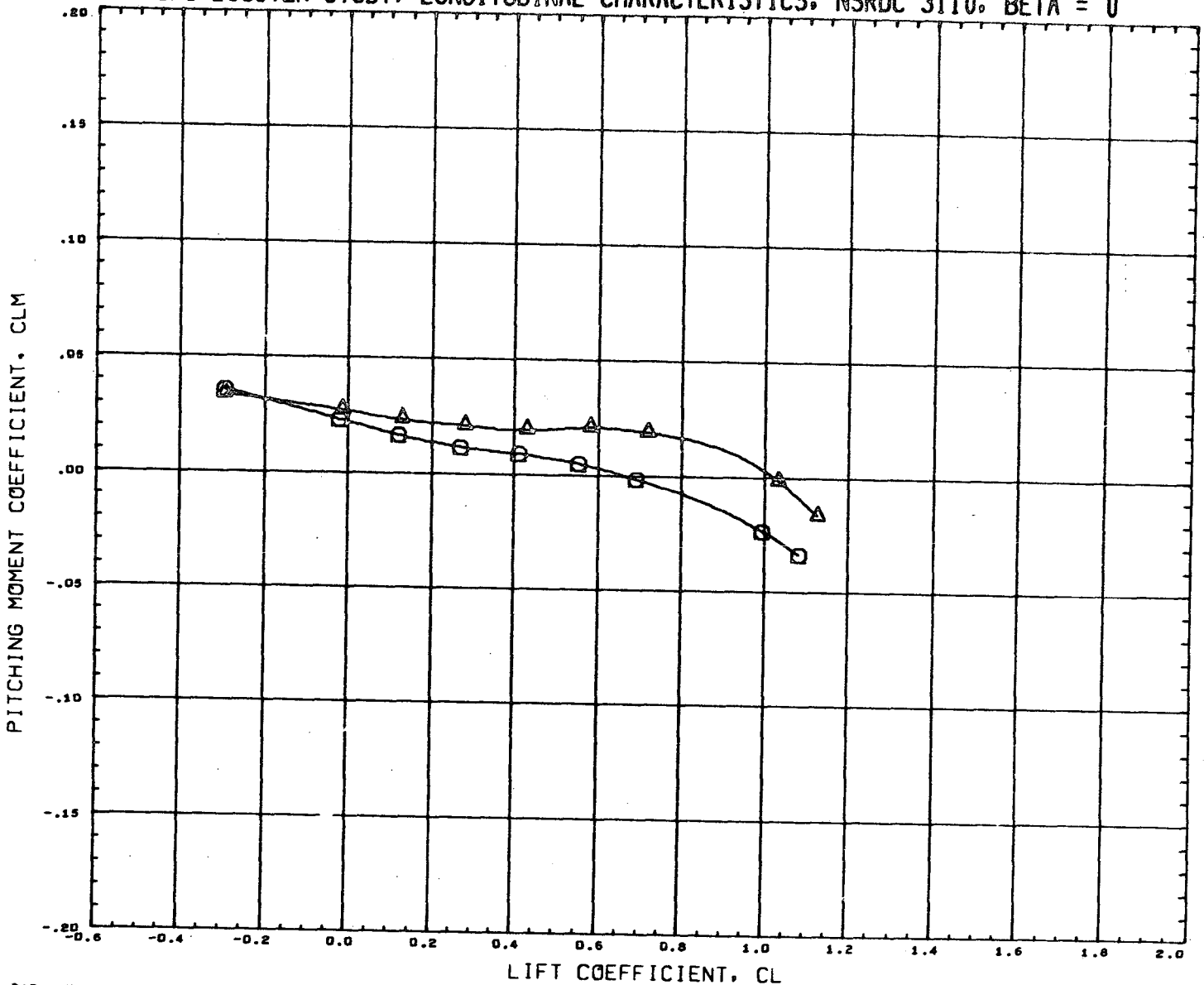
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2025)	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1	3.000	2.000	0.000	2.000	SREF 1.3550 SQ.FT.
(RN2089)	NSRDC-3110,MSFC/LMSC BOOSTER B1C1F1W1V1	3.000	2.000	0.000	2.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCENT

MACH 0.382

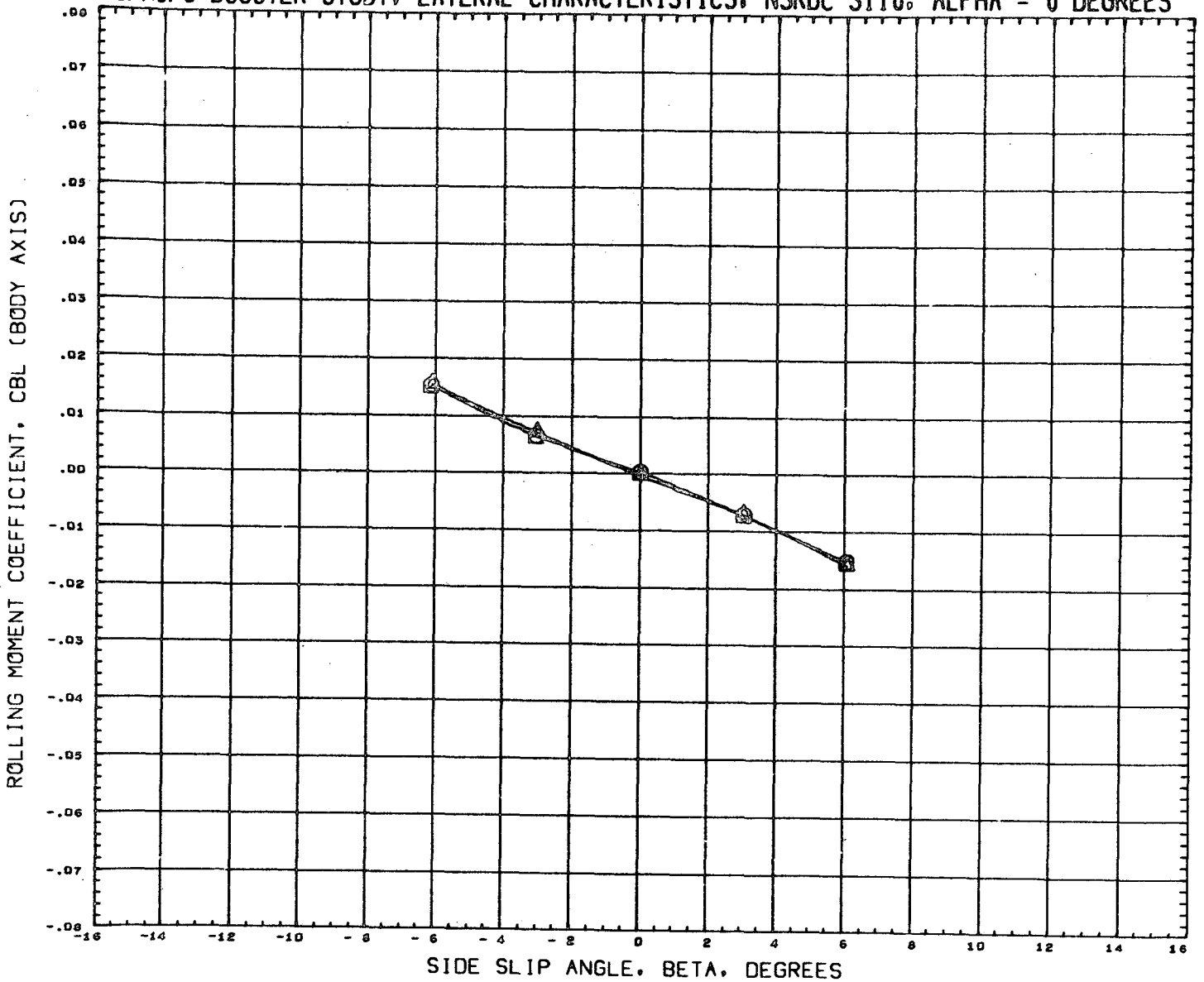
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION	
(RN2025)	NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1	3.000	2.000	0.000	2.000	SREF	1.3550 SQ. FT.
(RN2089)	NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1	3.000	2.000	0.000	2.000	LREF	41.4360 INCHES
						BREF	41.4360 INCHES
						XMRP	31.1400 INCHES
						YMRP	0.0000 INCHES
						ZMRP	0.2250 INCHES
						SCALE	1.5000 PERCENT

MACH 0.382

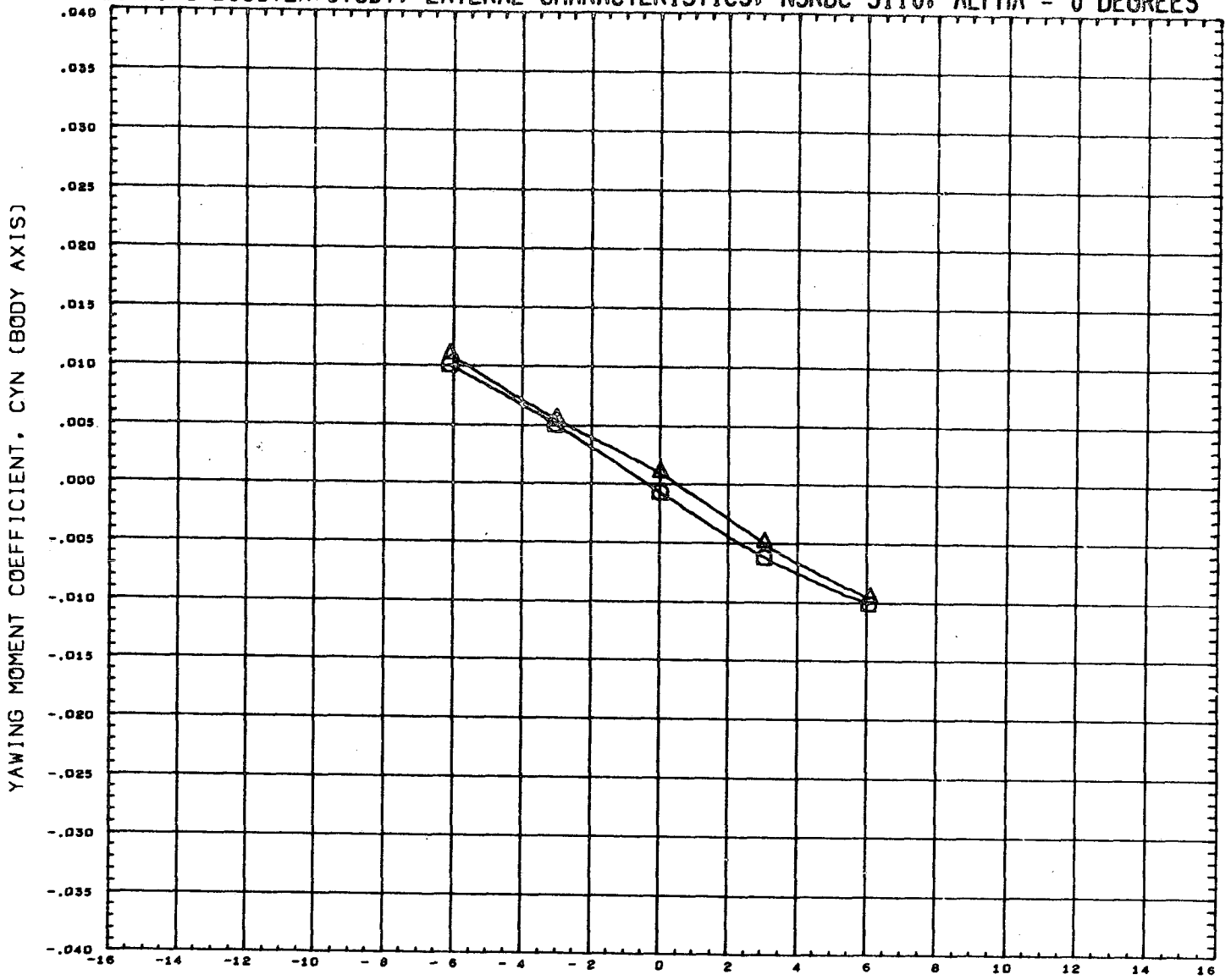
LMSC/MSFC BOOSTER STUDY, LATERAL CHARACTERISTICS, NSRDC 3110, ALPHA = 0 DEGREES



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2026)	NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1 V1	3.000	2.000	0.000	2.000	SREF 1.3550 SQ. FT.
(RN2090)	NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1 V1	3.000	2.000	0.000	2.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCENT

MACH 0.381

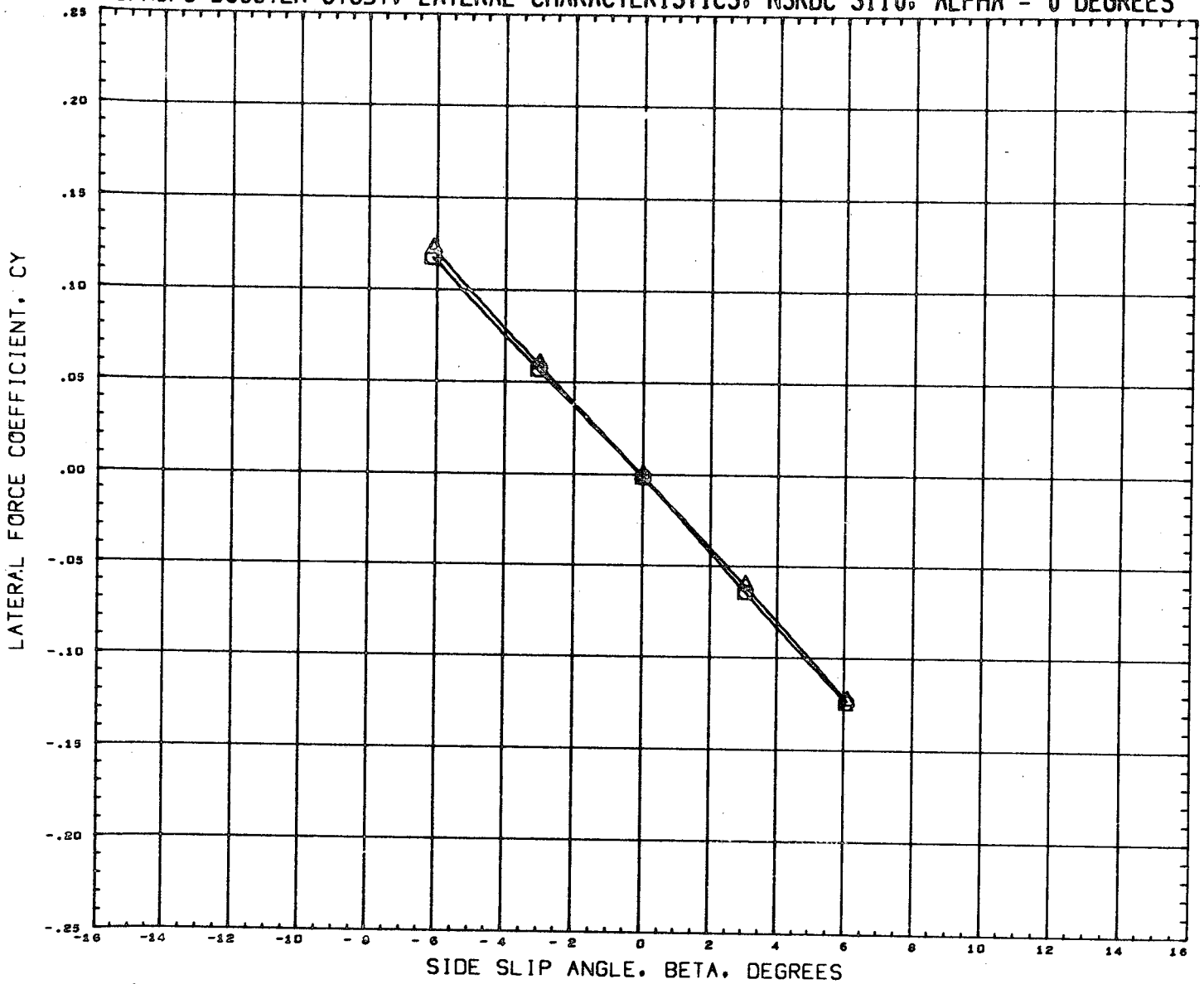
LMSC/MSFC BOOSTER STUDY, LATERAL CHARACTERISTICS, NSRDC 3110, ALPHA = 0 DEGREES



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2026)	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1	3.000	2.000	0.000	2.000	SREF 1.3550 SQ.FT.
(RN2090)	NSRDC-3110,MSFC/LMSC BOOSTER B1C1F1W1V1	3.000	2.000	0.000	2.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCENT

MACH 0.381

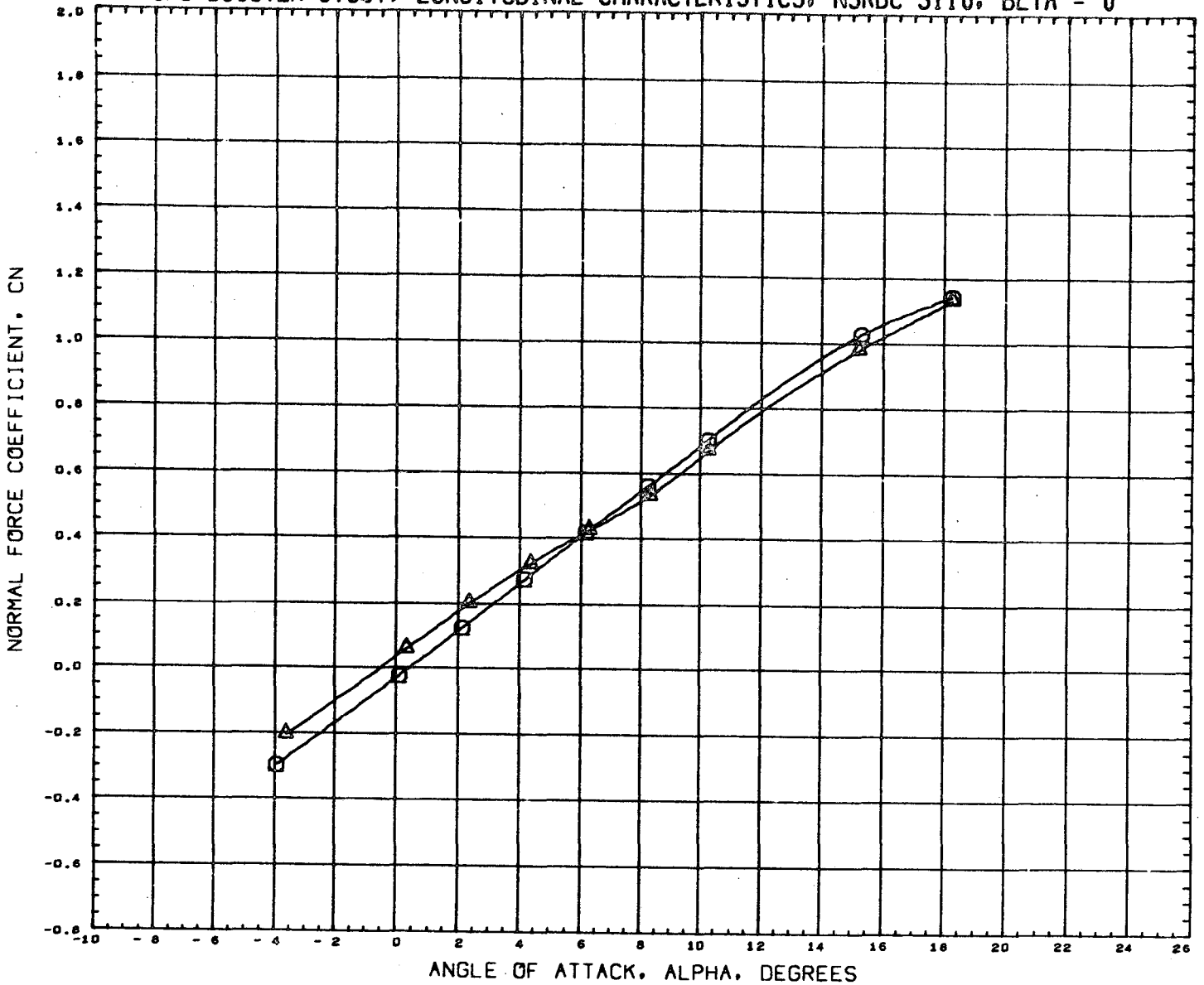
LMSC/MSFC BOOSTER STUDY, LATERAL CHARACTERISTICS, NSRDC 3110, ALPHA = 0 DEGREES



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2026)	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1	3.000	2.000	0.000	2.000	SREF 1.3550 SQ.FT.
(RN2090)	NSRDC-3110,MSFC/LMSC BOOSTER B1C1F1W1V1	3.000	2.000	0.000	2.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCENT

MACH 0.301

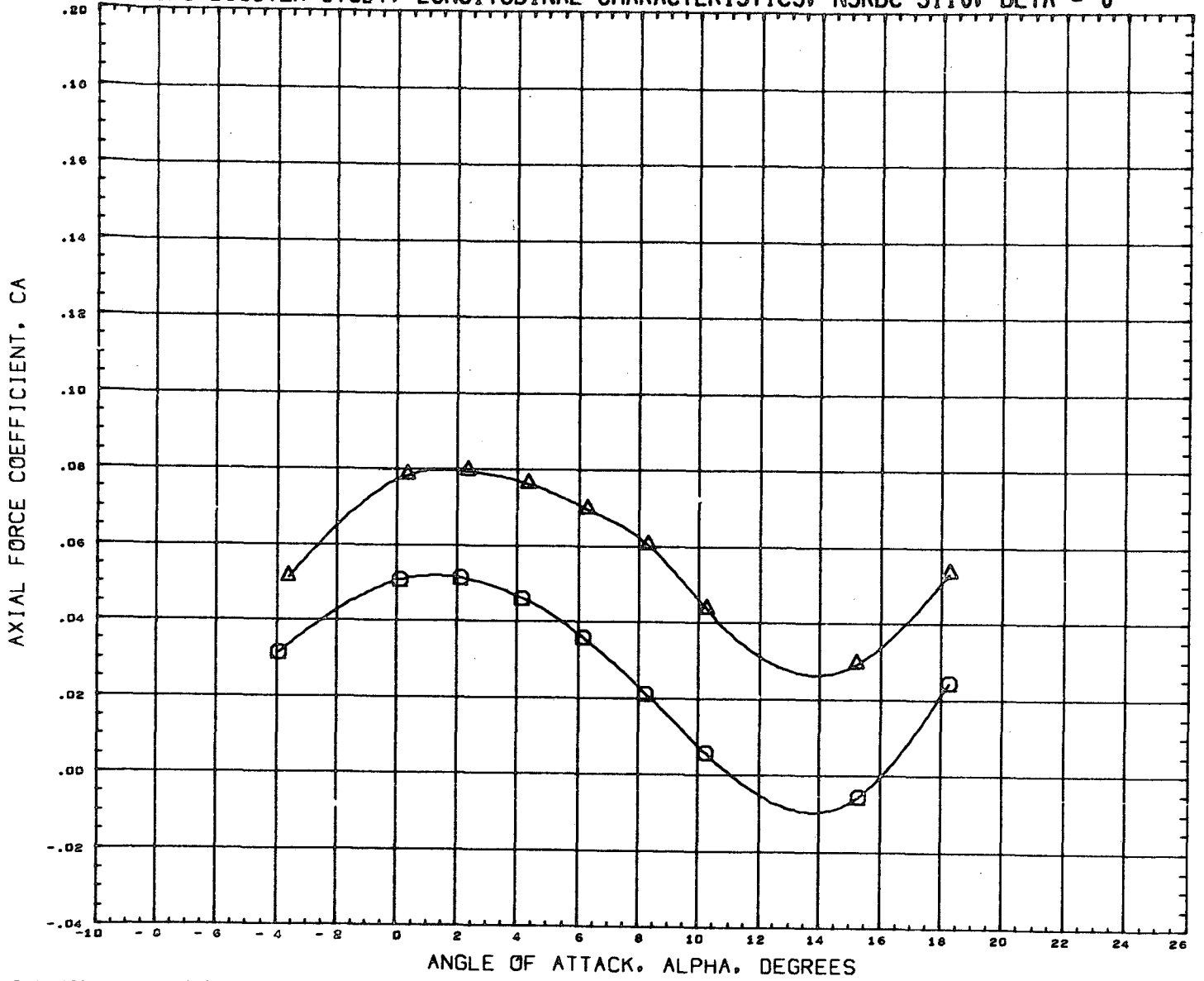
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2025)	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1	3.000	2.000	0.000	2.000	SREF 1.3550 SQ.FT.
(RN2029)	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1	15.000	2.000	0.000	2.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCNT

MACH 0.382

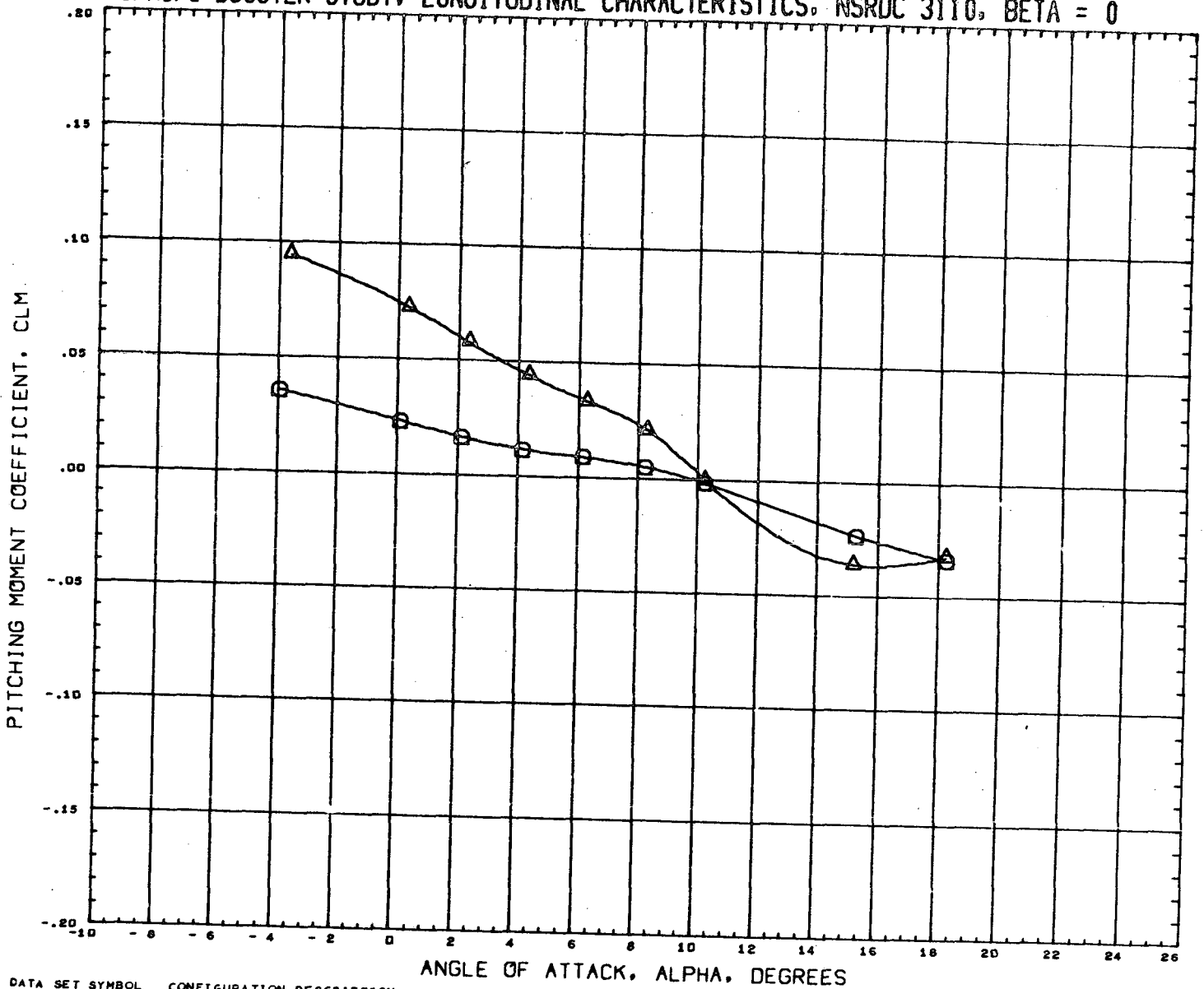
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INC1DC	CNDPOS	INC1DW	WNGPOS	REFERENCE INFORMATION
(RN2025)	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1	3.000	2.000	0.000	2.000	SREF 1.3550 SQ.FT.
(RN2029)	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1	15.000	2.000	0.000	2.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCNT

HACH 0.382

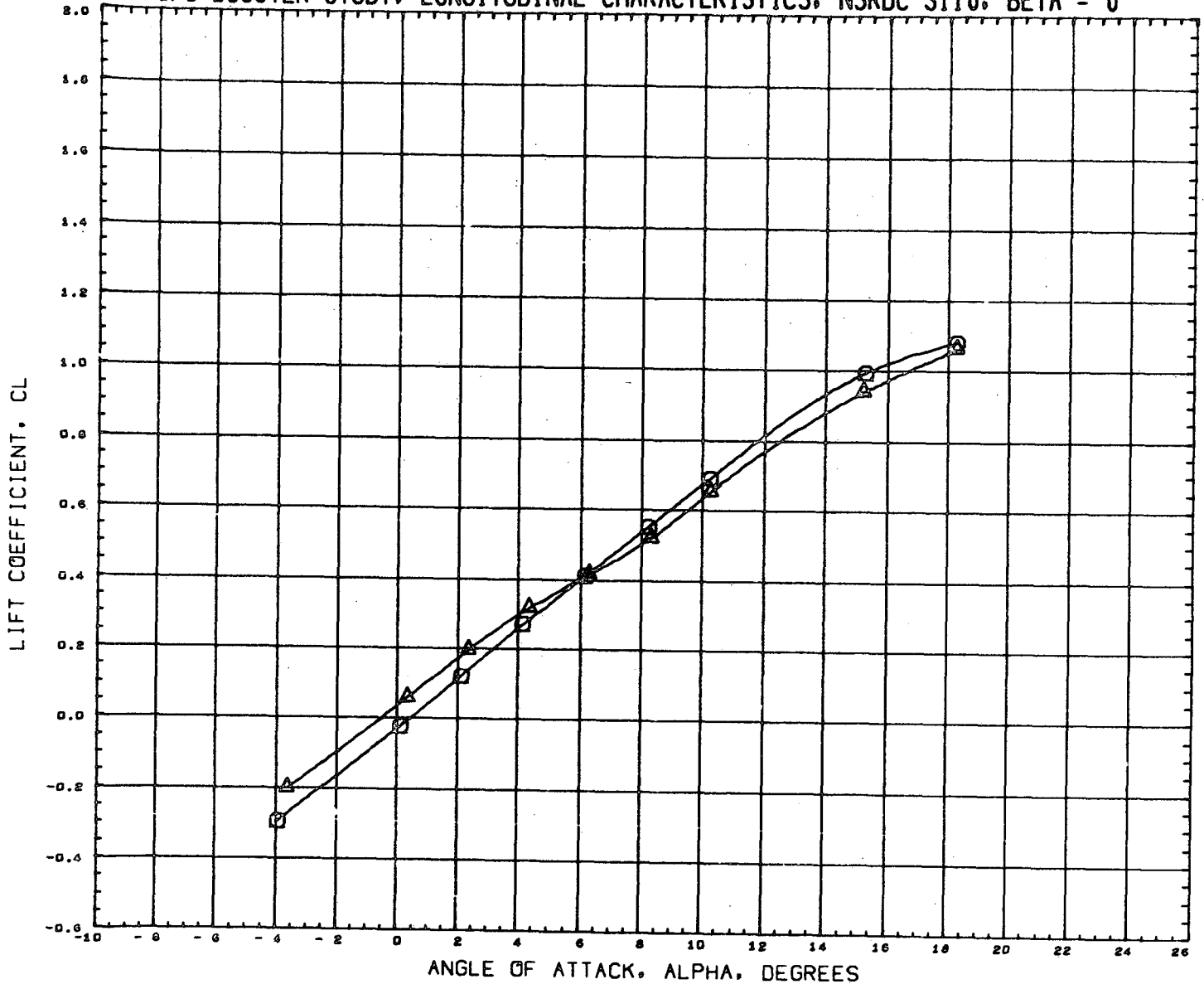
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS. NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2025)	NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1	3.000	2.000	0.000	2.000	SREF 1.3550 SQ. FT.
(RN2029)	NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1	15.000	2.000	0.000	2.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCENT

MACH 0.382

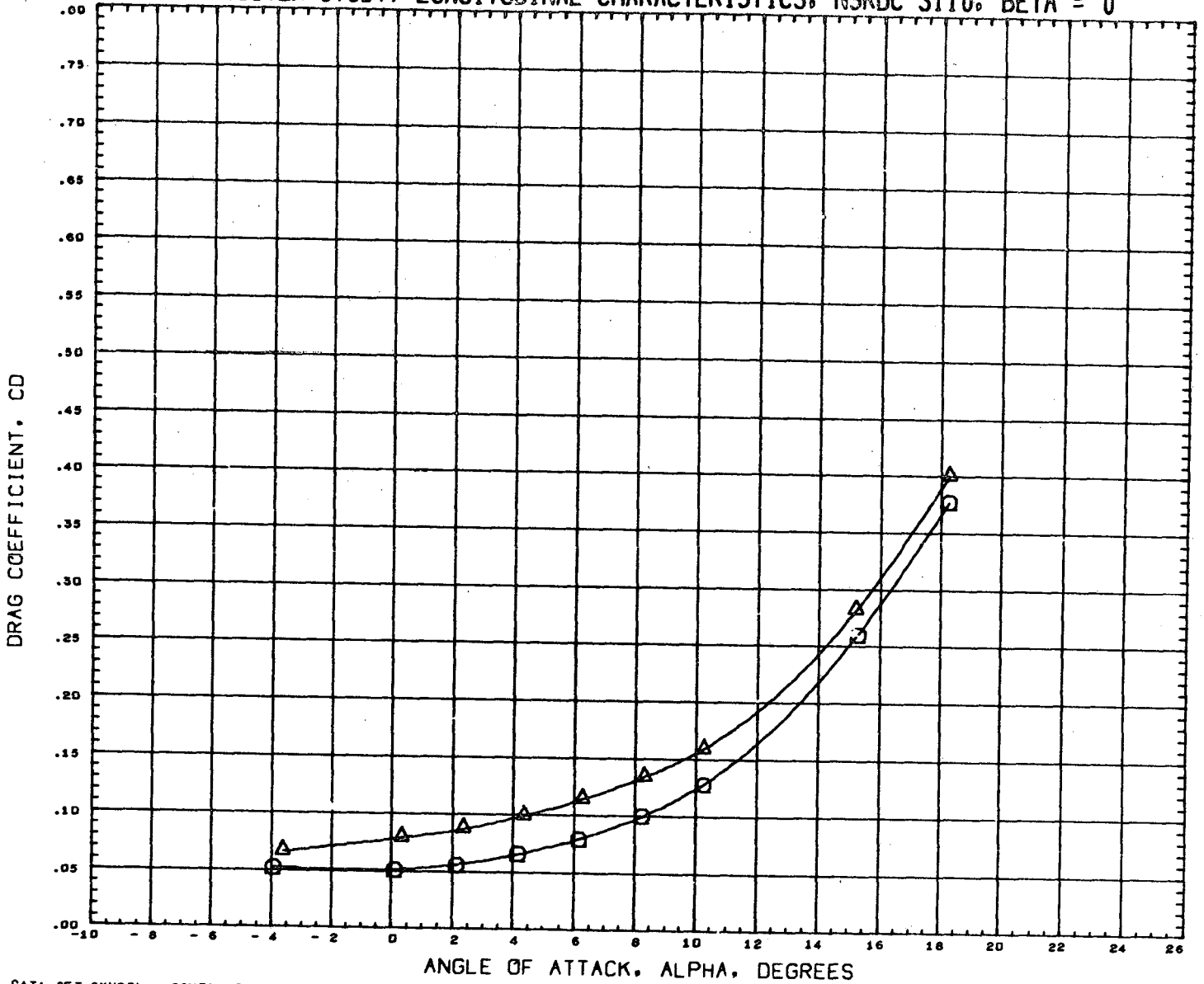
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2025)	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1	3.000	2.000	0.000	2.000	SREF 1.3550 SQ.FT.
(RN2029)	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1	15.000	2.000	0.000	2.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCENT

MACH 0.582

LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL
(RN2025) □
(RN2029) △

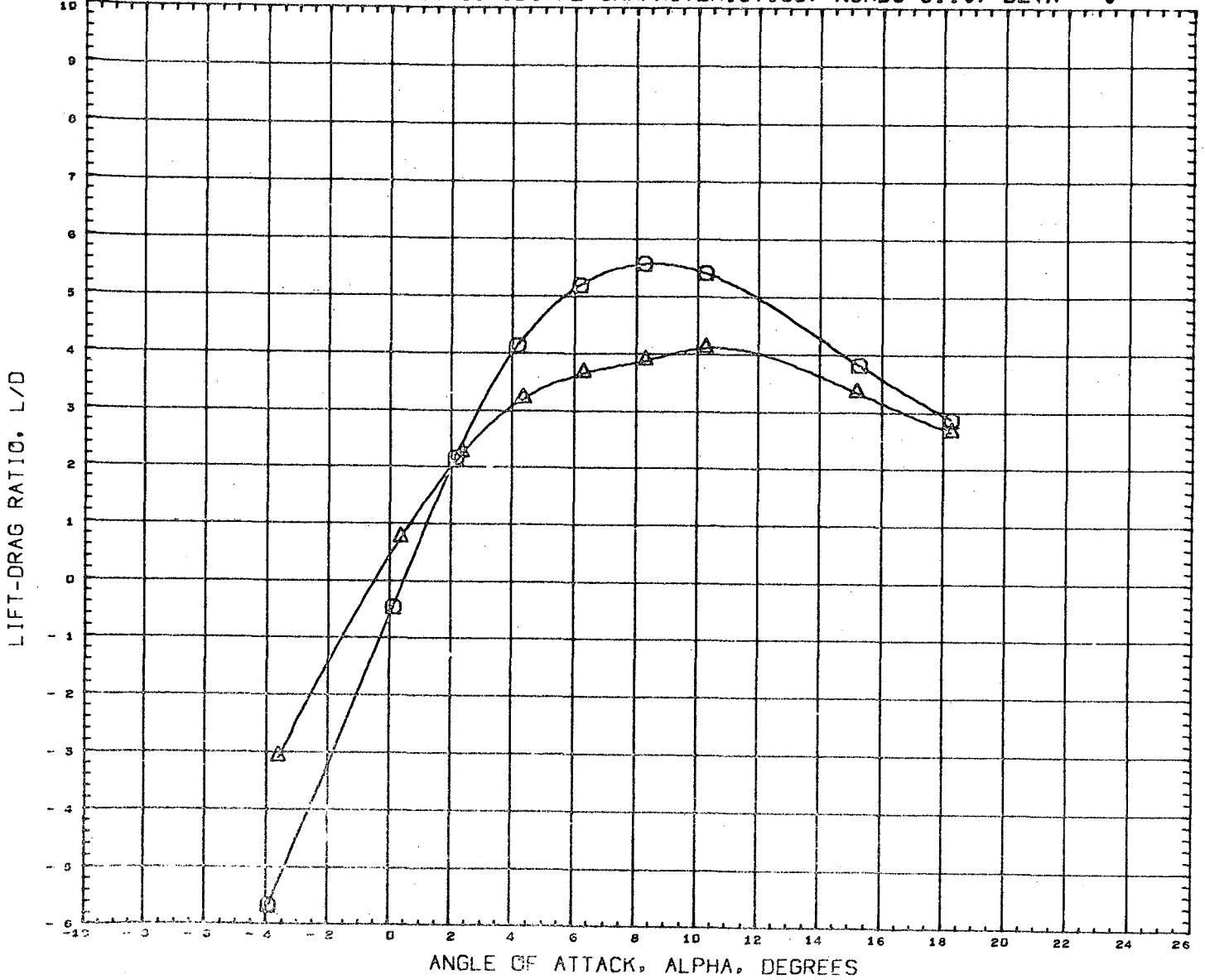
CONFIGURATION DESCRIPTION
NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1
NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1

INCIDC	CNDPOS	INCIDW	WNGPOS
3.000	2.000	0.000	2.000
15.000	2.000	0.000	2.000

REFERENCE INFORMATION	
SREF	1.3550 SQ. FT.
LREF	41.4360 INCHES
BREF	41.4360 INCHES
XMRP	31.1400 INCHES
YMRP	0.0000 INCHES
ZMRP	0.2250 INCHES
SCALE	1.5000 PERCENT

MACH 0.382

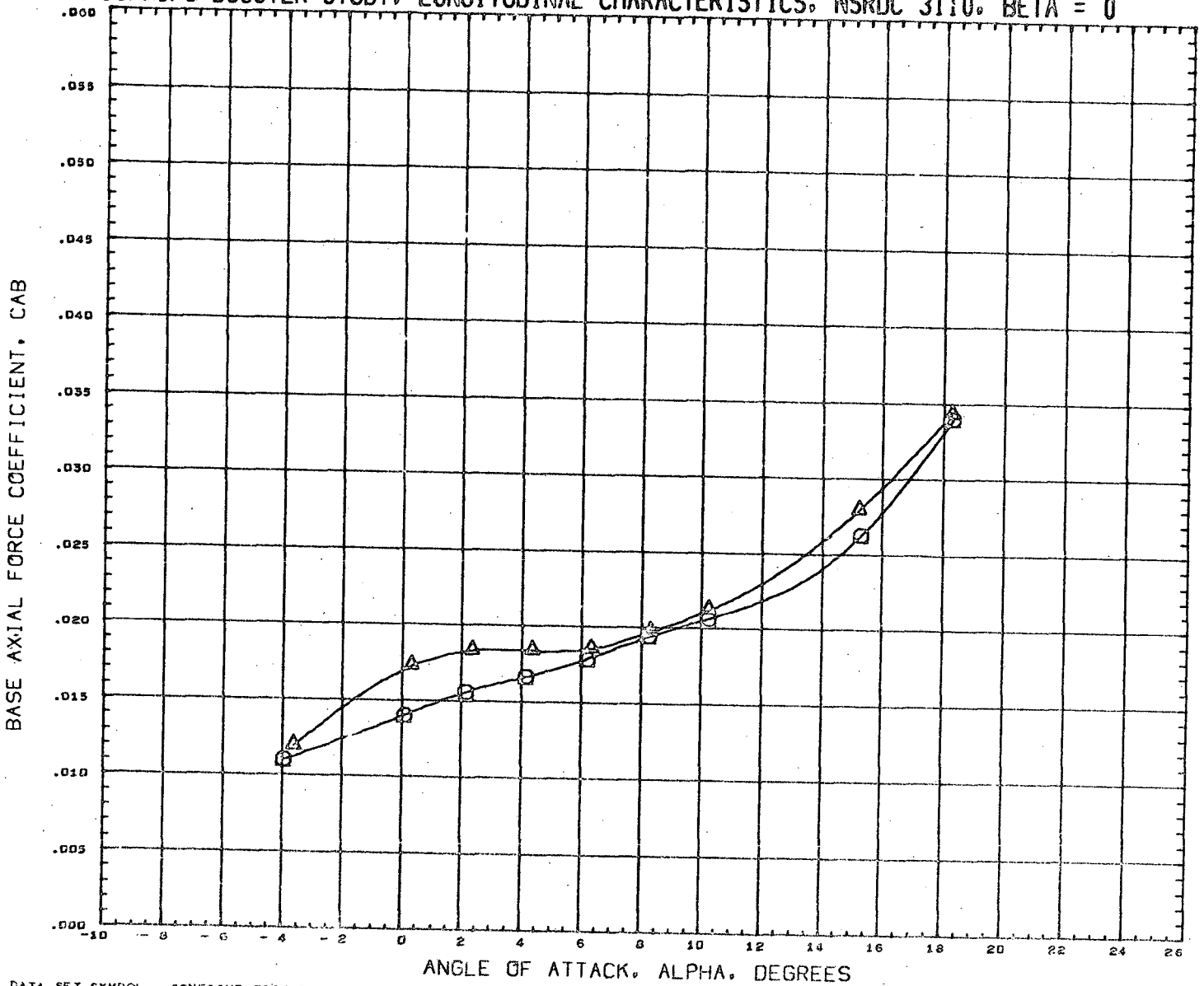
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2025) □	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1	3.000	2.000	0.000	2.000	SREF 1.3550 SQ.FT. LREF 41.4360 INCHES
(RN2029) △	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1	15.000	2.000	0.000	2.000	BREF 41.4360 INCHES XHRP 31.1400 INCHES YHRP 0.0000 INCHES ZHRP 0.2250 INCHES SCALE 1.5000 PERCENT

MACH 0.382

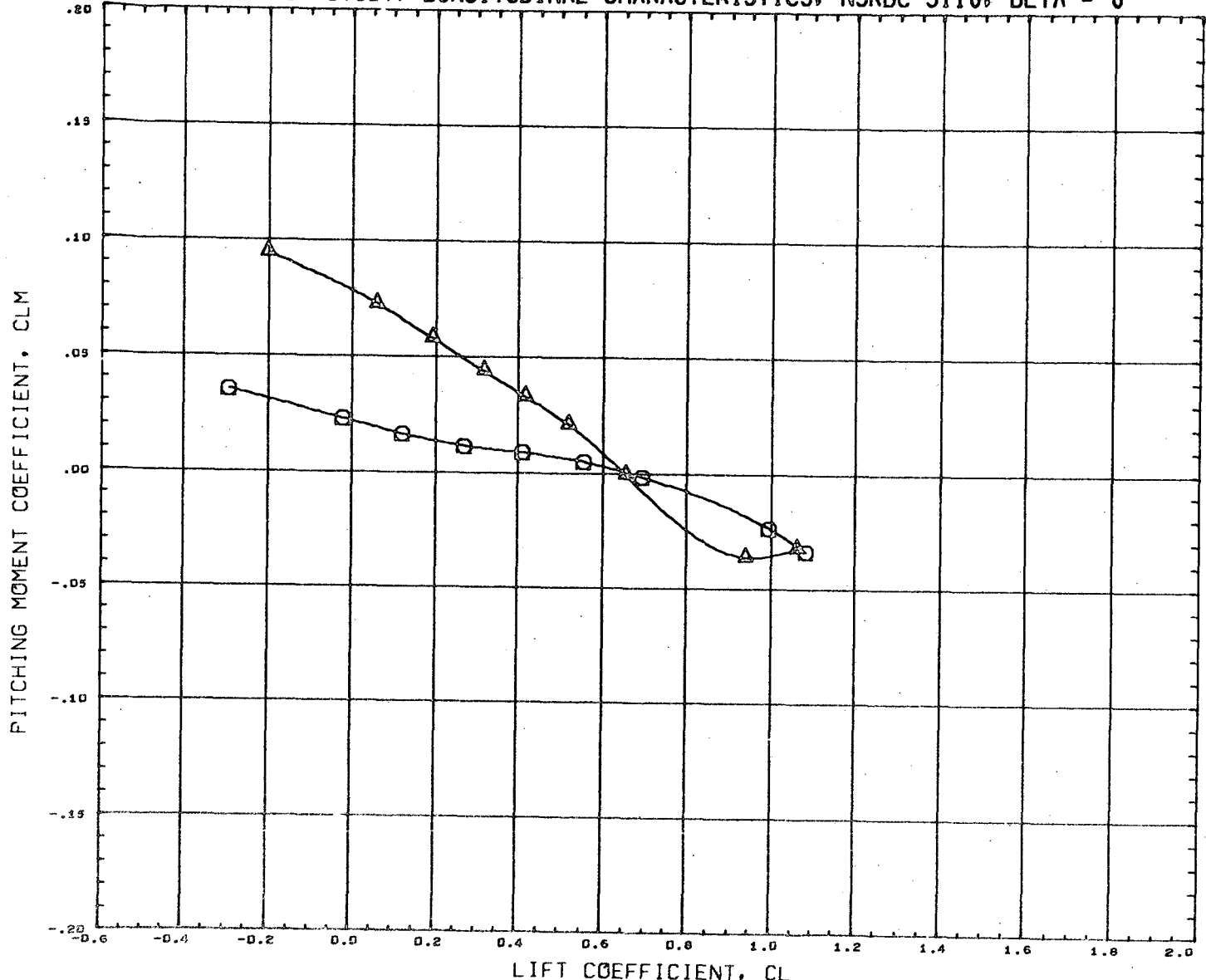
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2025)	NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1	3.000	2.000	0.000	2.000	SREF 1.3550 SQ.Ft.
(RN2029)	NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1	15.000	2.000	0.000	2.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCENT

MACH 0.382

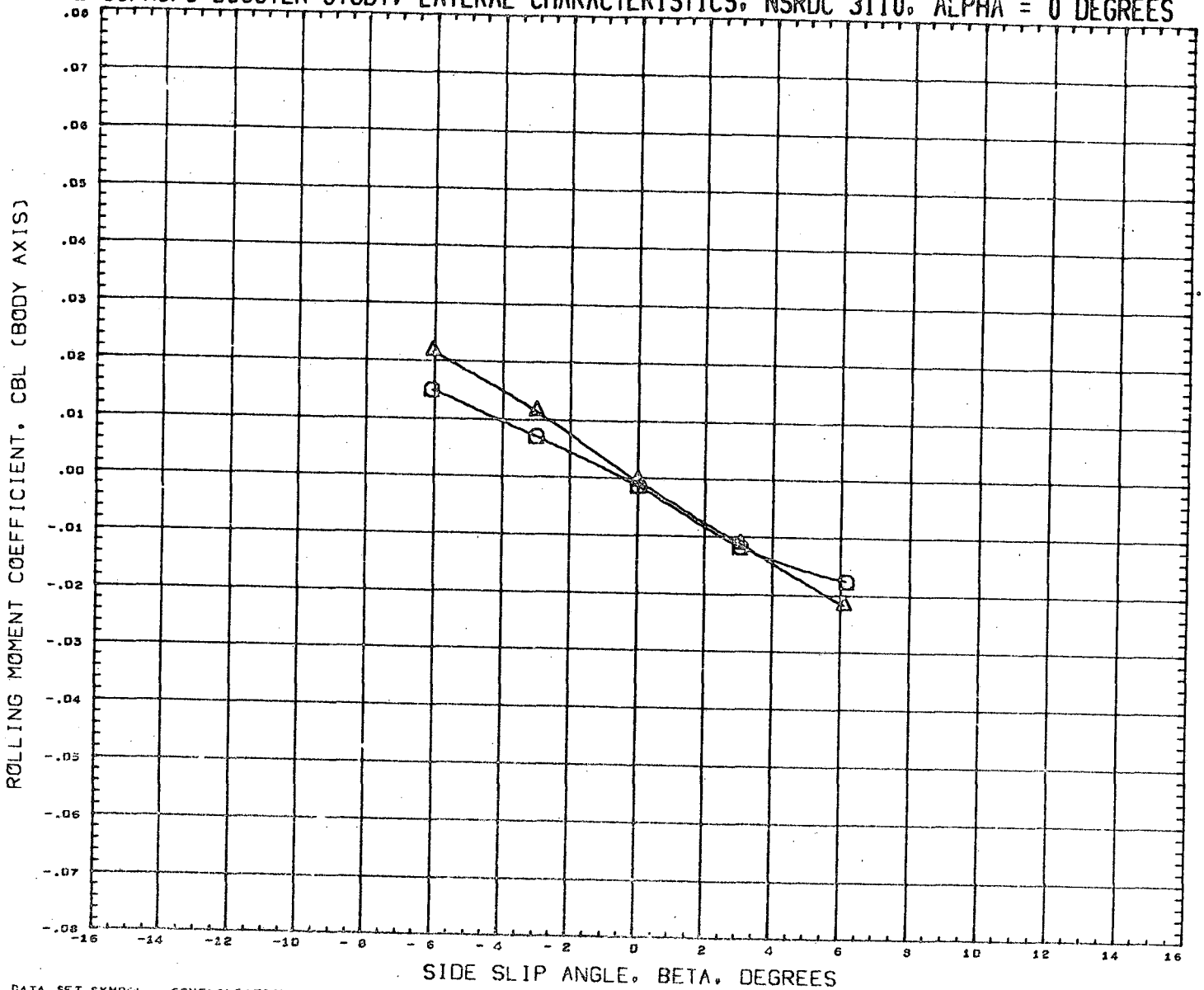
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RH2025)	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1	3.000	2.000	0.000	2.000	SREF 1.3550 SQ.FT.
(RN2029)	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1	15.000	2.000	0.000	2.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCNT

MACH 0.382

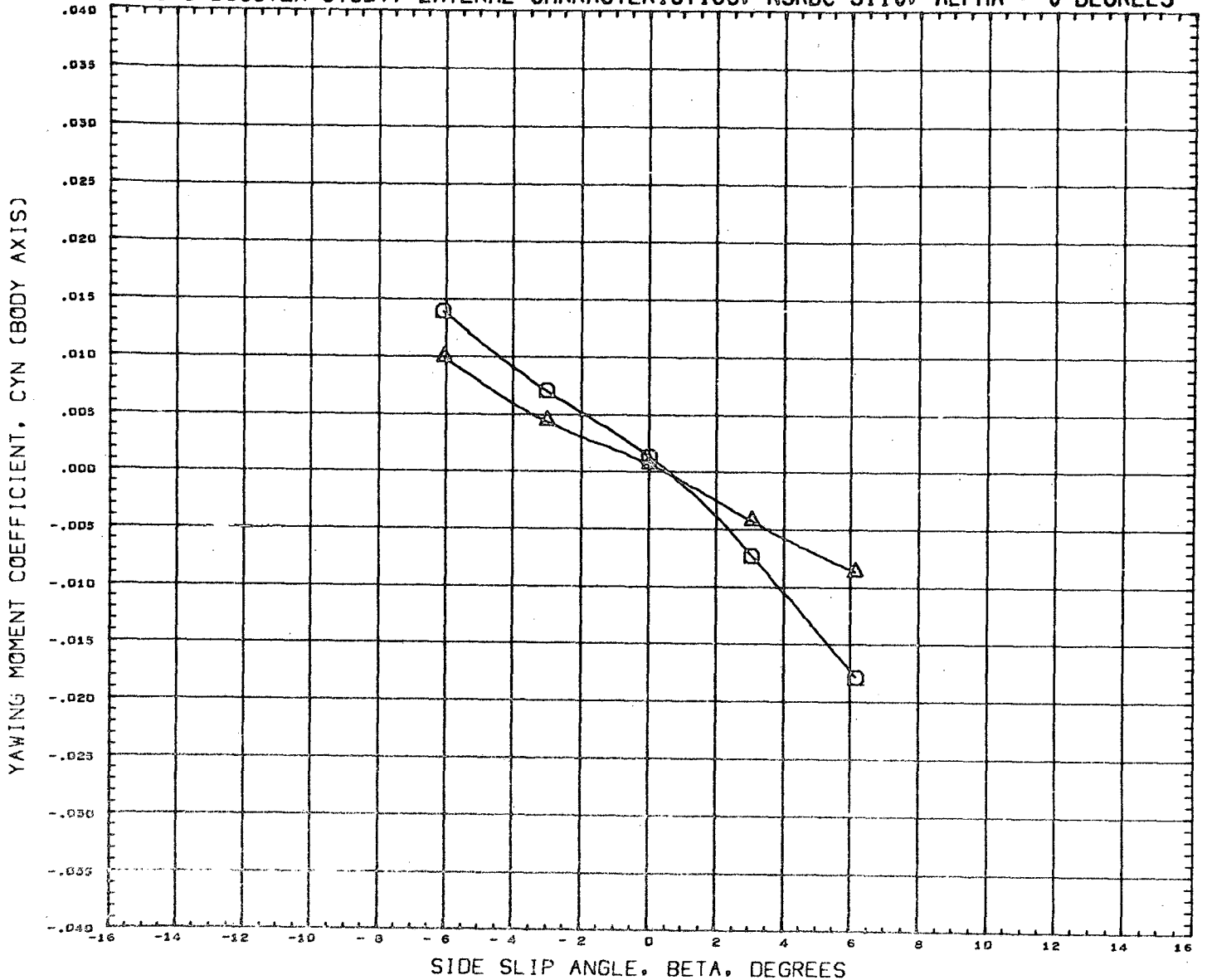
LMSC/MSFC BOOSTER STUDY, LATERAL CHARACTERISTICS, NSRDC 3110, ALPHA = 0 DEGREES



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2020)	NSRDC-3110, MSFC/LHSC BOOSTER B1C2F1W1V1	3.000	1.000	0.000	2.000	SREF 1.3550 SQ. FT.
(RN2030)	NSRDC-3110, MSFC/LHSC BOOSTER B1C2F1W1V1	15.000	2.000	0.000	2.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCENT

MACH 0.381

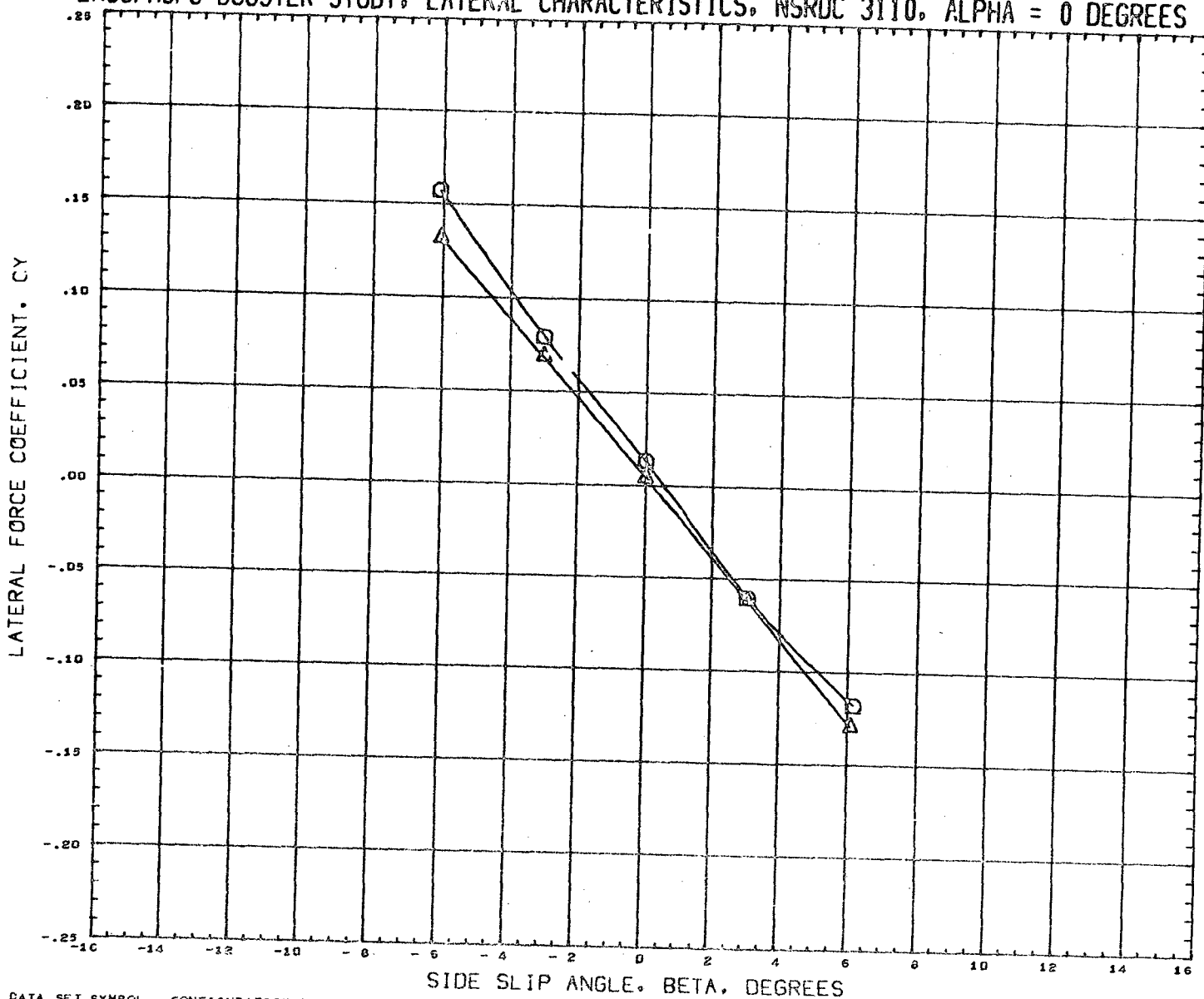
LMSC/MSFC BOOSTER STUDY, LATERAL CHARACTERISTICS, NSRDC 3110, ALPHA = 0 DEGREES



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2020)	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1	3.000	1.000	0.000	2.000	SREF 1.3550 SQ.FT.
(RN2030)	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1	15.000	2.000	0.000	2.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRF 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCENT

MACH 0.381

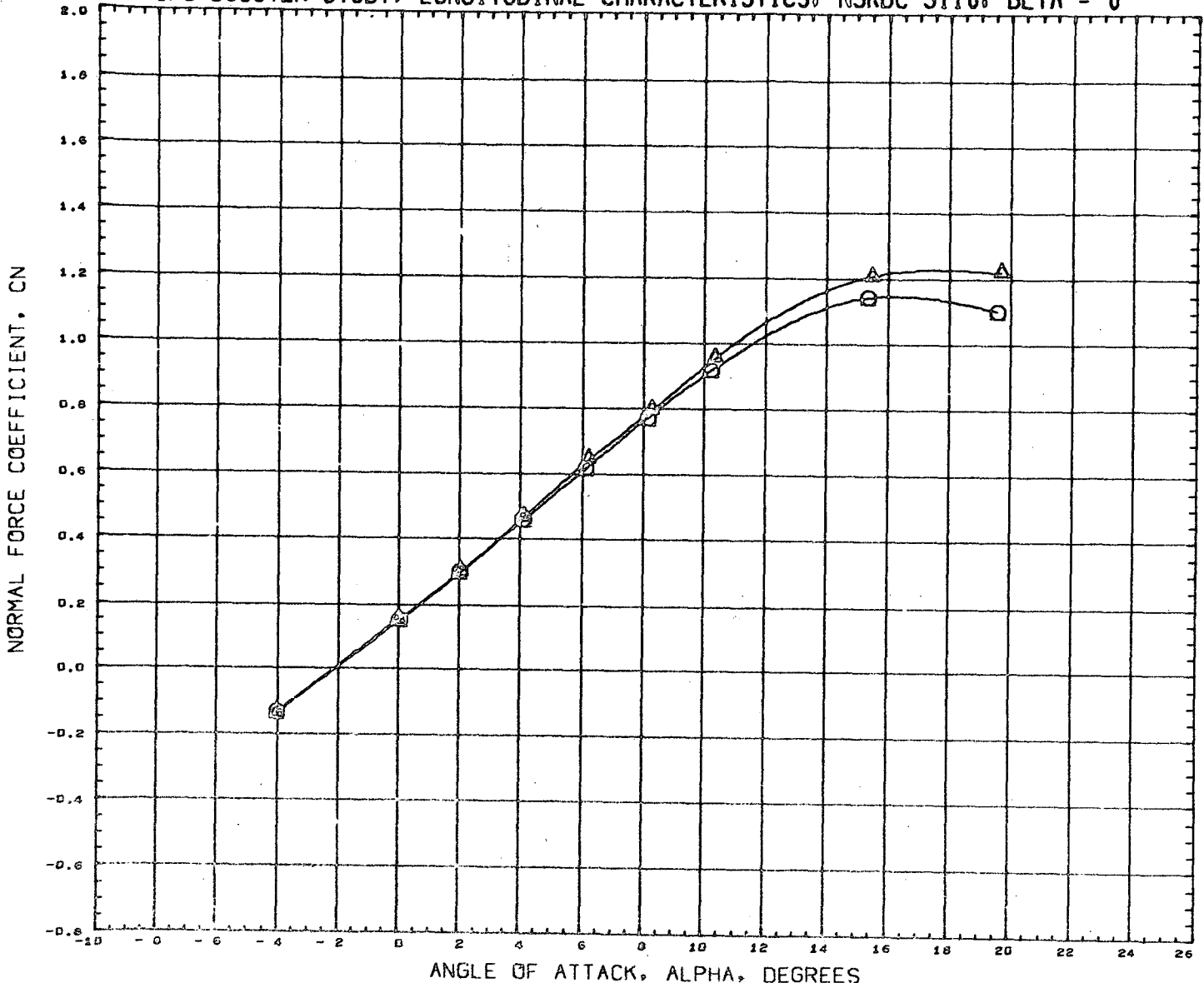
LMSC/MSFC BOOSTER STUDY, LATERAL CHARACTERISTICS, NSRDC 3110, ALPHA = 0 DEGREES



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2020)	NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1	3.000	1.000	0.000	2.000	SREF 1.3550 SQ. FT.
(RN2030)	NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1	15.000	2.000	0.000	2.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YHRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCENT

MACH 0.391

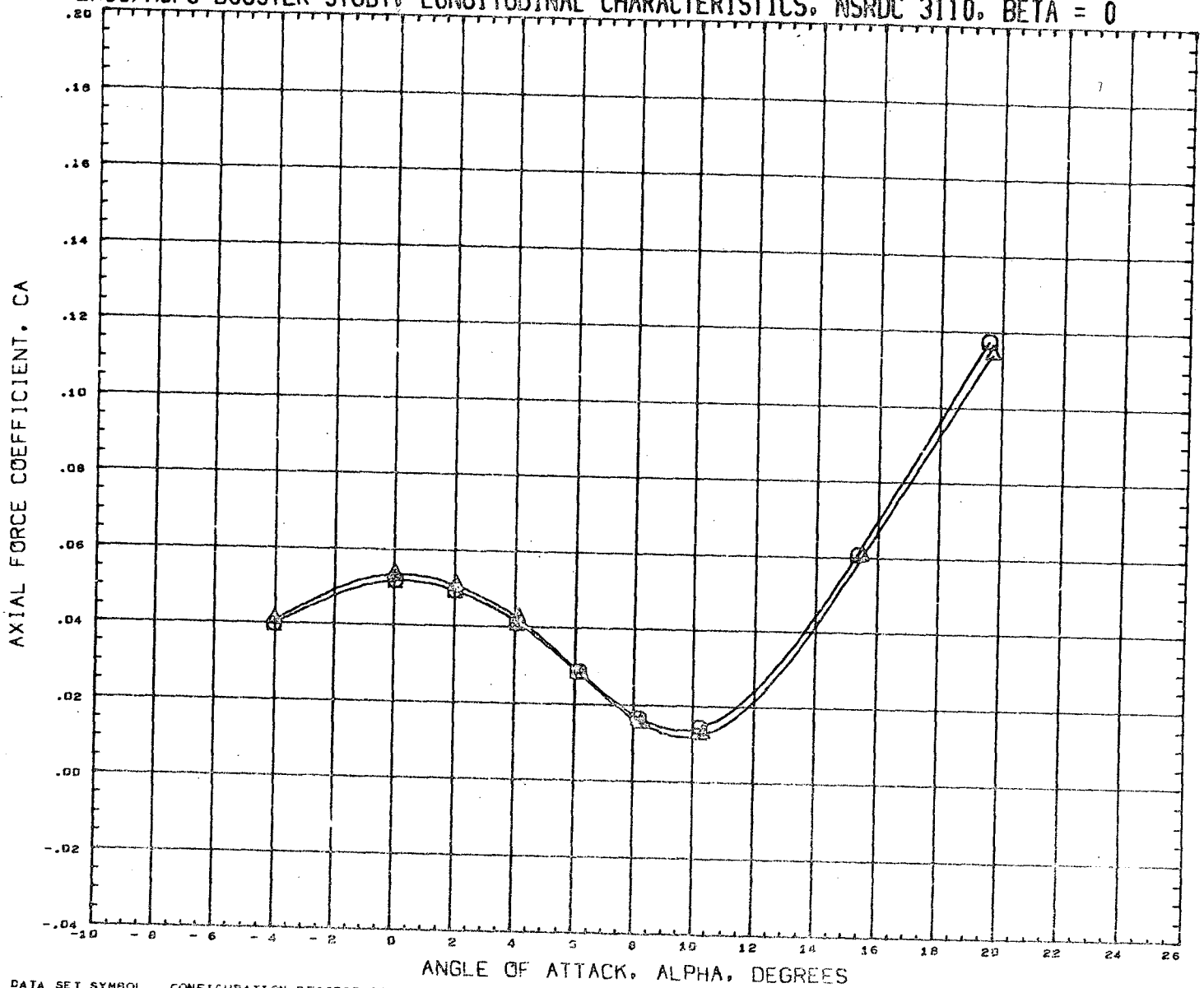
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDFOS	INCIDW	WNGFOS	REFERENCE INFORMATION	
(RN2049)	NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1	3.000	1.000	3.000	2.000	SREF	1.3550 SQ. FT.
(RN2113)	NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1	3.000	1.000	3.000	2.000	LREF	41.4360 INCHES
						BREF	41.4360 INCHES
						XMRP	31.1400 INCHES
						YMRP	0.0000 INCHES
						ZMRP	0.2250 INCHES
						SCALE	1.5000 PERCENT

MACH 0.382

LMSC/MSFC BOOSTER STUDY. LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL
(RN2049)
(RN2113)



CONFIGURATION DESCRIPTION
NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1
NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1

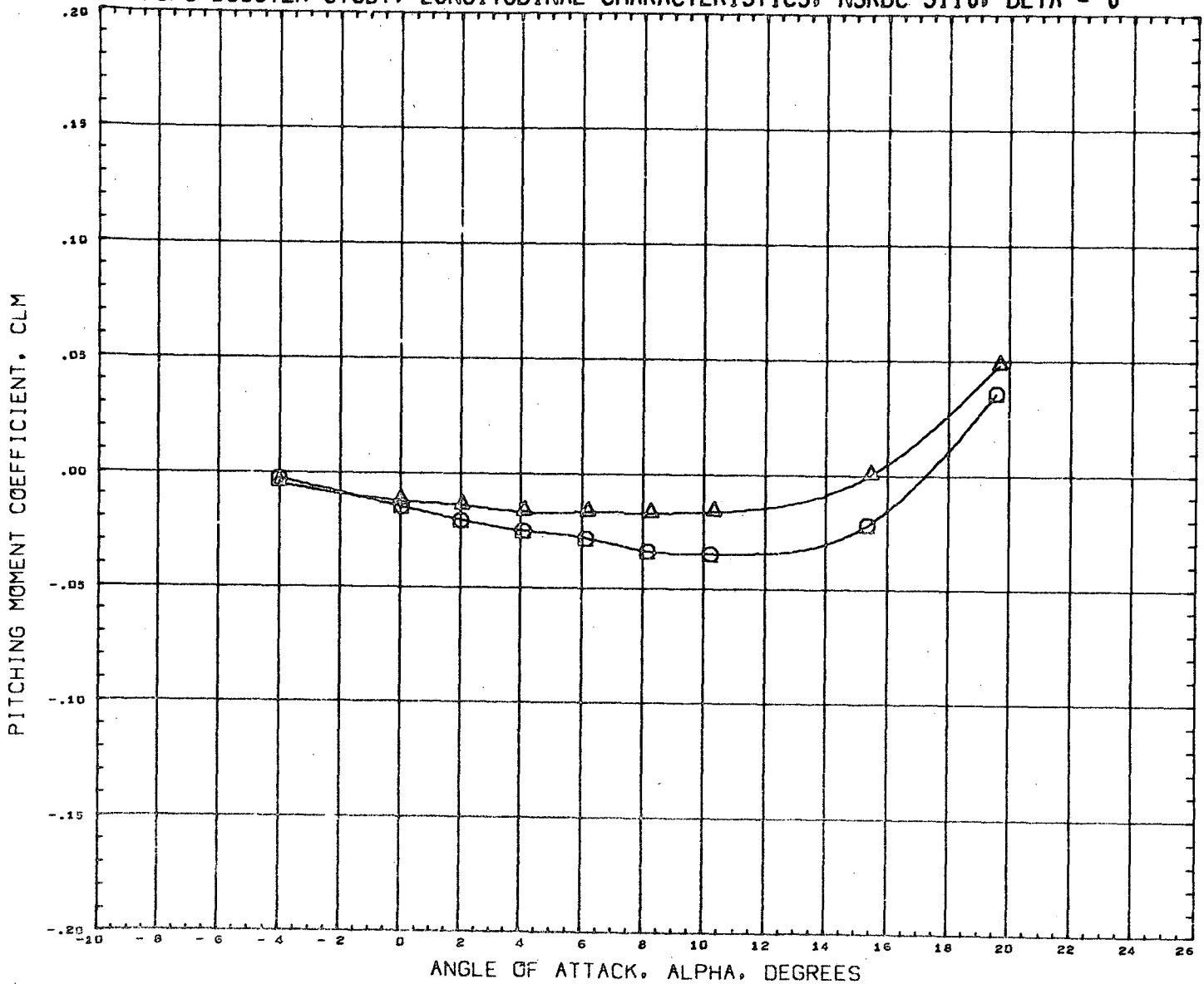
INCIDC	CNDPOS	INCIDW	WNGPOS
3.000	1.000	3.000	2.000
3.000	1.000	3.000	2.000

REFERENCE INFORMATION

SREF	1.3550	50. FT.
LREF	41.4360	INCHES
BREF	41.4360	INCHES
XMRP	31.1400	INCHES
YMRP	0.0000	INCHES
ZMRP	0.2250	INCHES
SCALE	1.5000	PERCENT

MACH 0.382

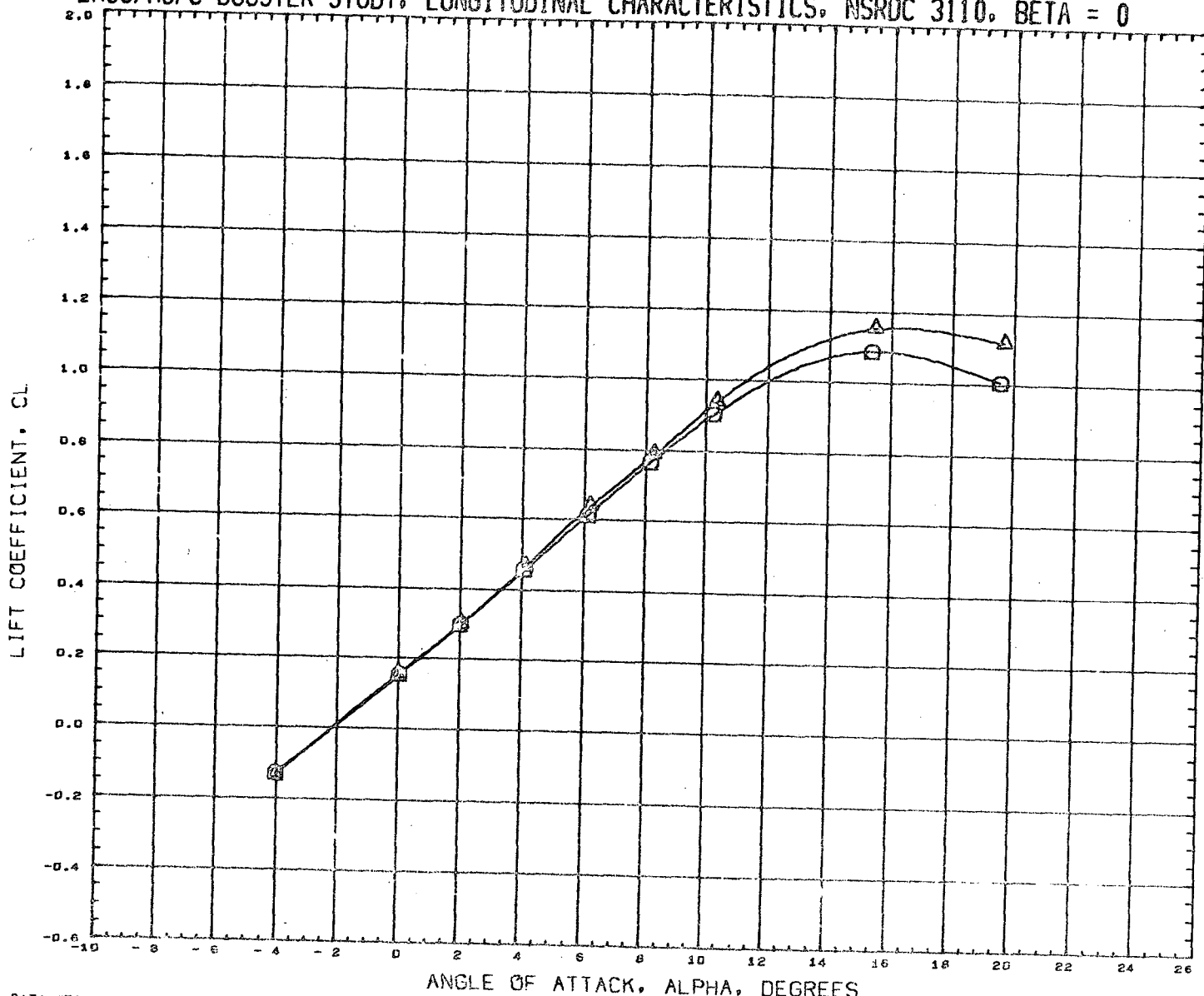
LMSC/MSFC BOOSTER STUDY. LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION	
(RN2049)	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1	3.000	1.000	3.000	2.000	SREF	1.3550 SQ.FT.
(RN2113)	NSRDC-3110,MSFC/LMSC BOOSTER B1C1F1W1V1	3.000	1.000	3.000	2.000	LREF	41.4360 INCHES
						BREF	41.4360 INCHES
						XMRP	31.1400 INCHES
						YMRP	0.0000 INCHES
						ZMRP	0.2250 INCHES
						SCALE	1.5000 PERCENT

MACH 0.582

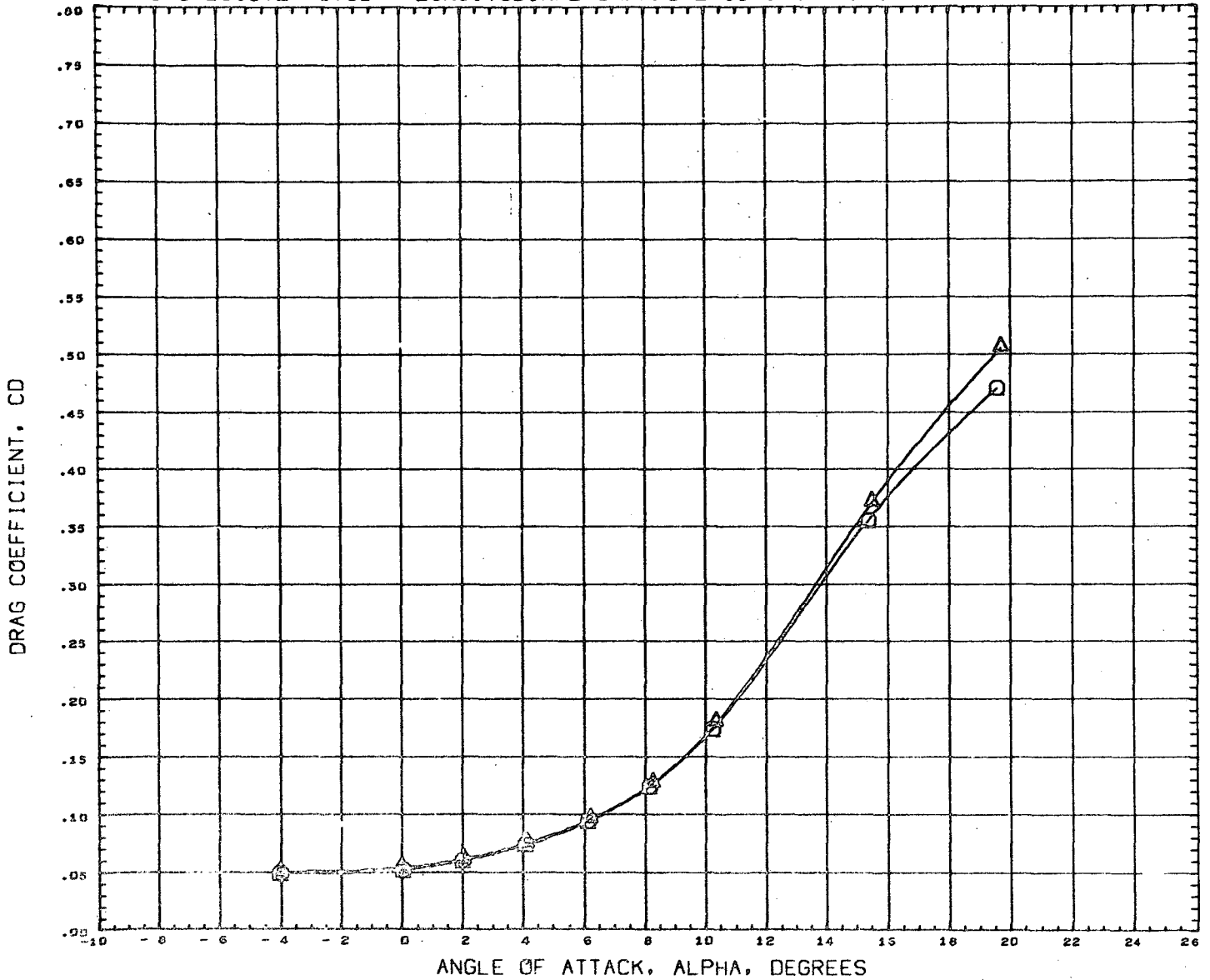
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2D49)	NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1	3.000	1.000	3.000	2.000	SREF 1.3550 SQ. FT.
(RN2113)	NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1	3.000	1.000	3.000	2.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCENT

MACH 0.382

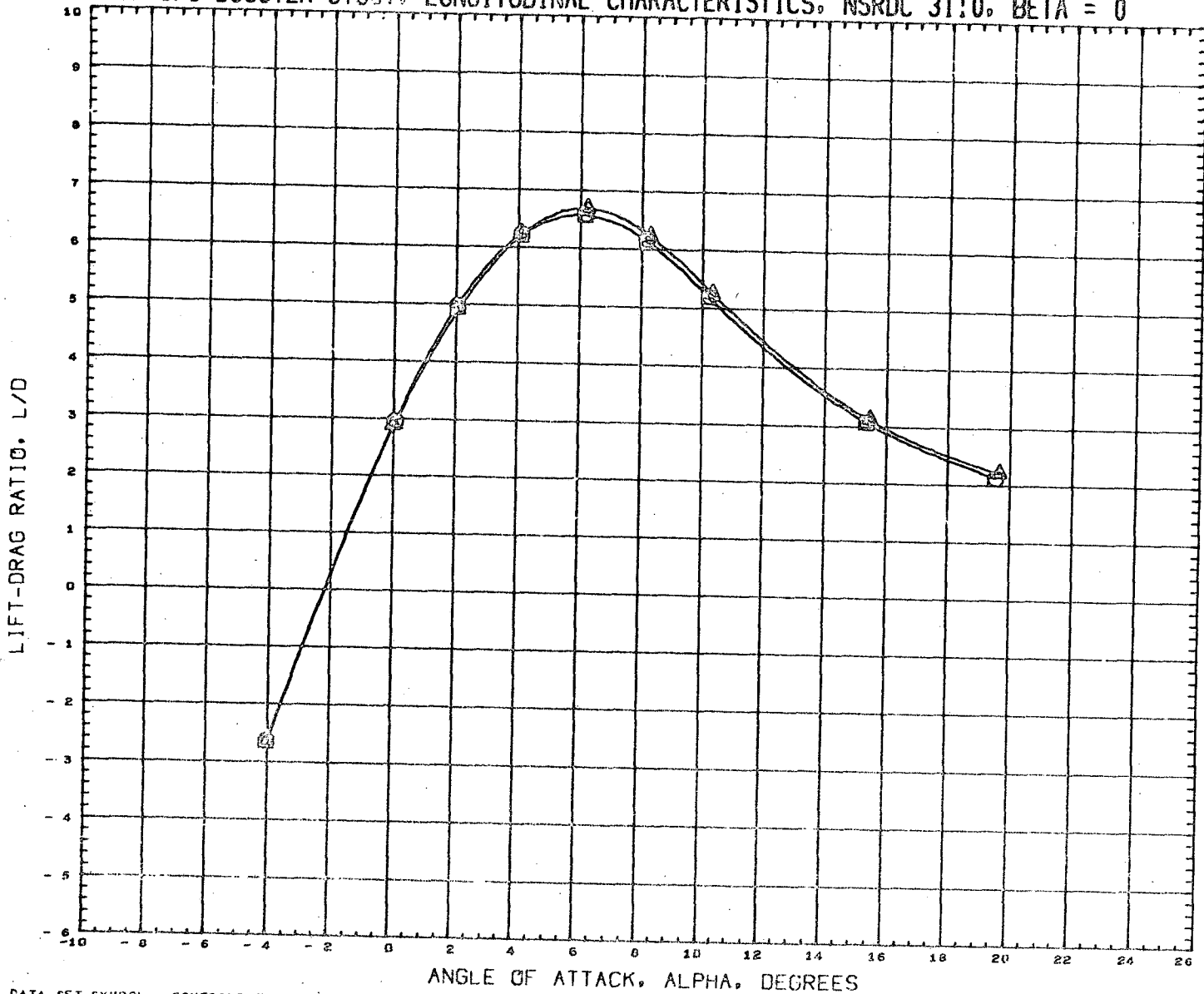
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION	
(RN2049)	NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1	3.000	1.000	3.000	2.000	SREF	1.3550 SQ.FT.
(RN2113)	NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1	3.000	1.000	3.000	2.000	LREF	41.4360 INCHES
						BREF	41.4360 INCHES
						XMRP	31.1400 INCHES
						YMRP	0.0000 INCHES
						ZMRP	0.2250 INCHES
						SCALE	1.5000 PERCNT

MACH 0.382

LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



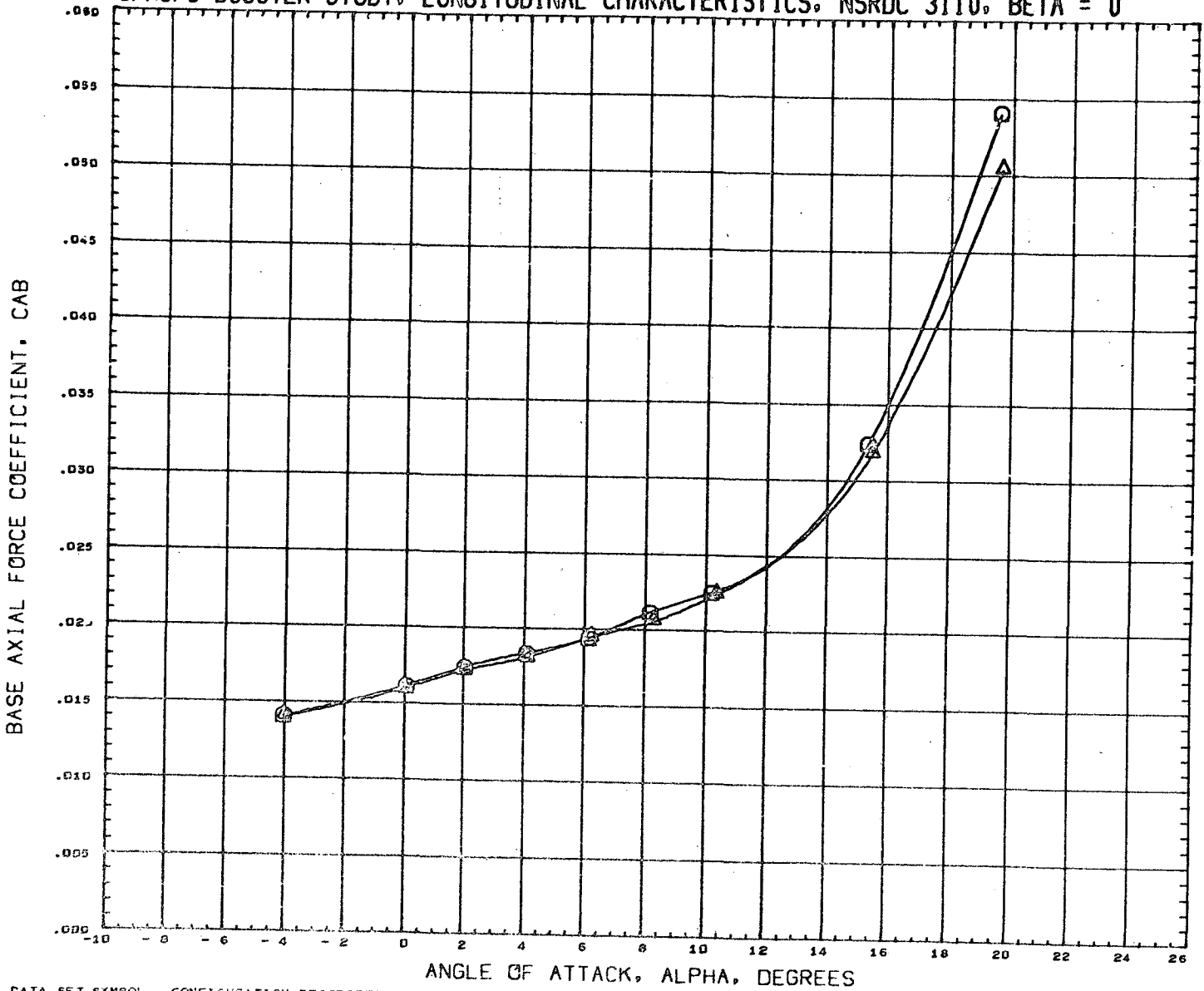
DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(RN2049)	NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1
(RN2113)	NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1

INCIDC	CNDPOS	INCIDW	WNGPOS
3.000	1.000	3.000	2.000
3.000	1.000	3.000	2.000

REFERENCE INFORMATION	
SREF	1.3550 SQ. FT.
LREF	41.4360 INCHES
BREF	41.4360 INCHES
XMRP	31.1400 INCHES
YMRP	0.0000 INCHES
ZMRP	0.2250 INCHES
SCALE	1.5000 PERCENT

MACH 0.382

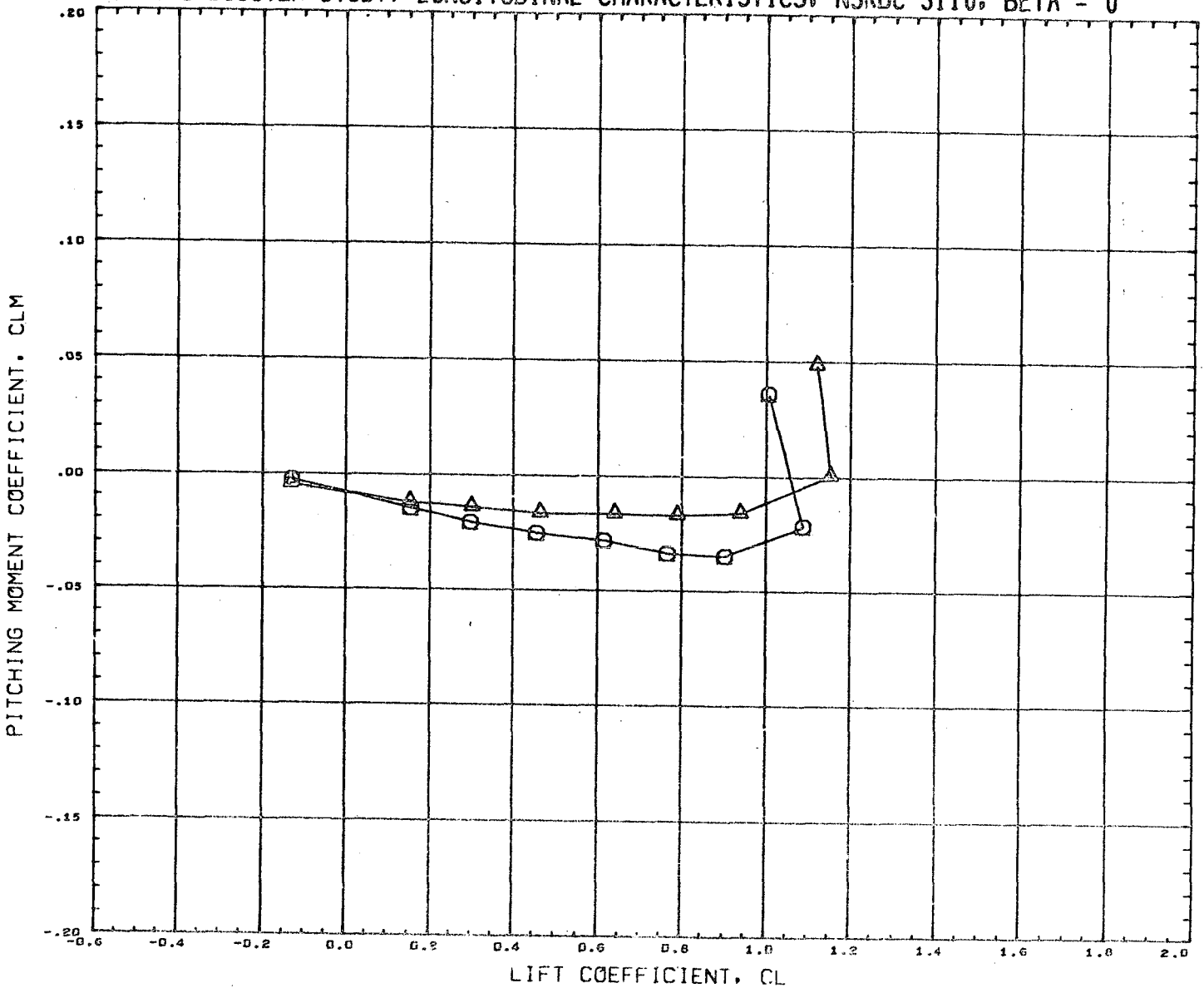
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION	
(RN2049)	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1	3.000	1.000	3.000	2.000	SREF	1.3550 SQ.FT.
(RN2113)	NSRDC-3110,MSFC/LMSC BOOSTER B1C1F1W1V1	3.000	1.000	3.000	2.000	LREF	41.4360 INCHES
						BREF	41.4360 INCHES
						XMRP	31.1400 INCHES
						YMRP	0.0000 INCHES
						ZMRP	0.2250 INCHES
						SCALE	1.5000 PERCENT

MACH 0.382

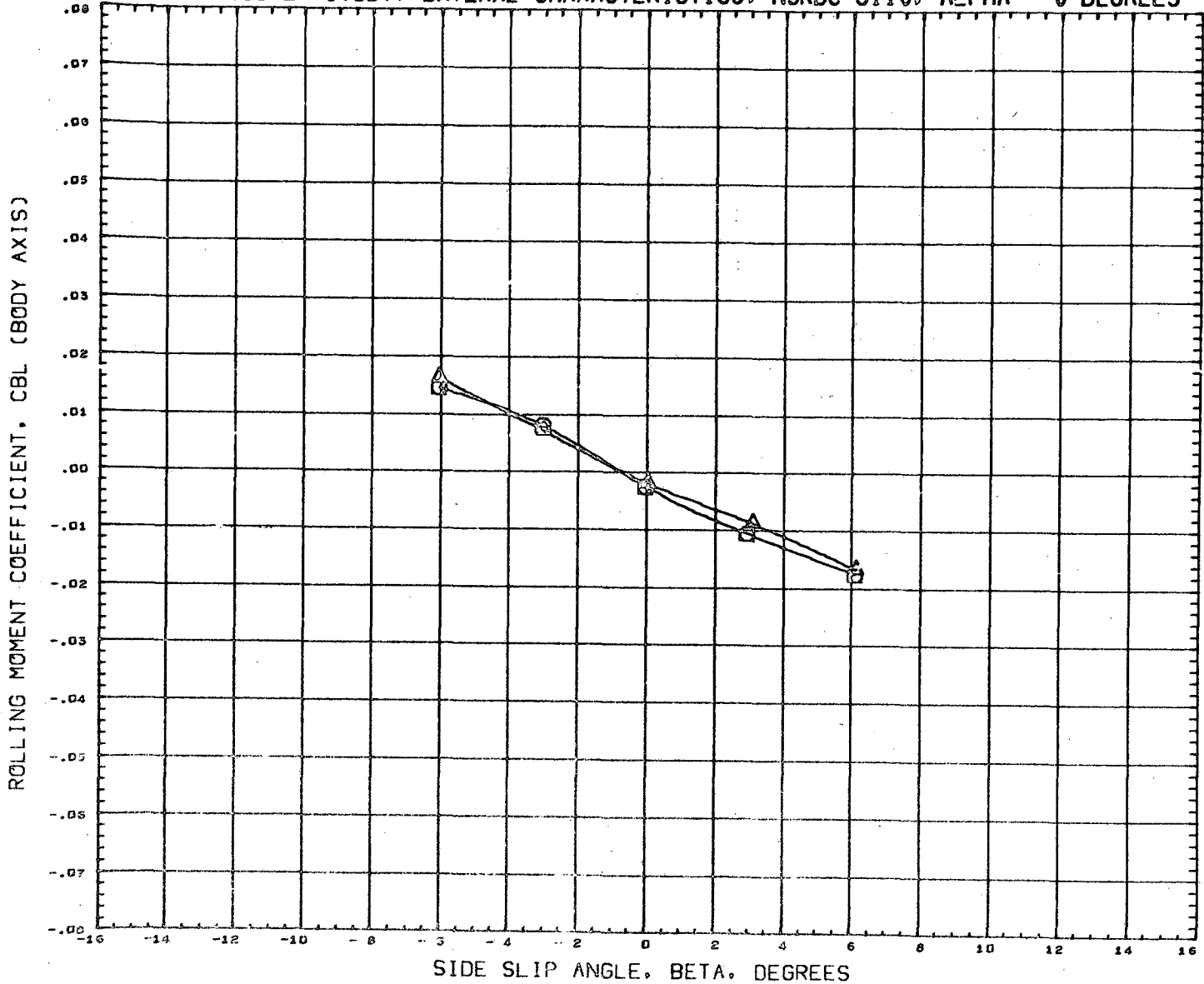
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2049)	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1	3.000	1.000	3.000	2.000	SREF 1.3550 SQ.FT.
(RN2113)	NSRDC-3110,MSFC/LMSC BOOSTER B1C1F1W1V1	3.000	1.000	3.000	2.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCENT

MACH 0.382

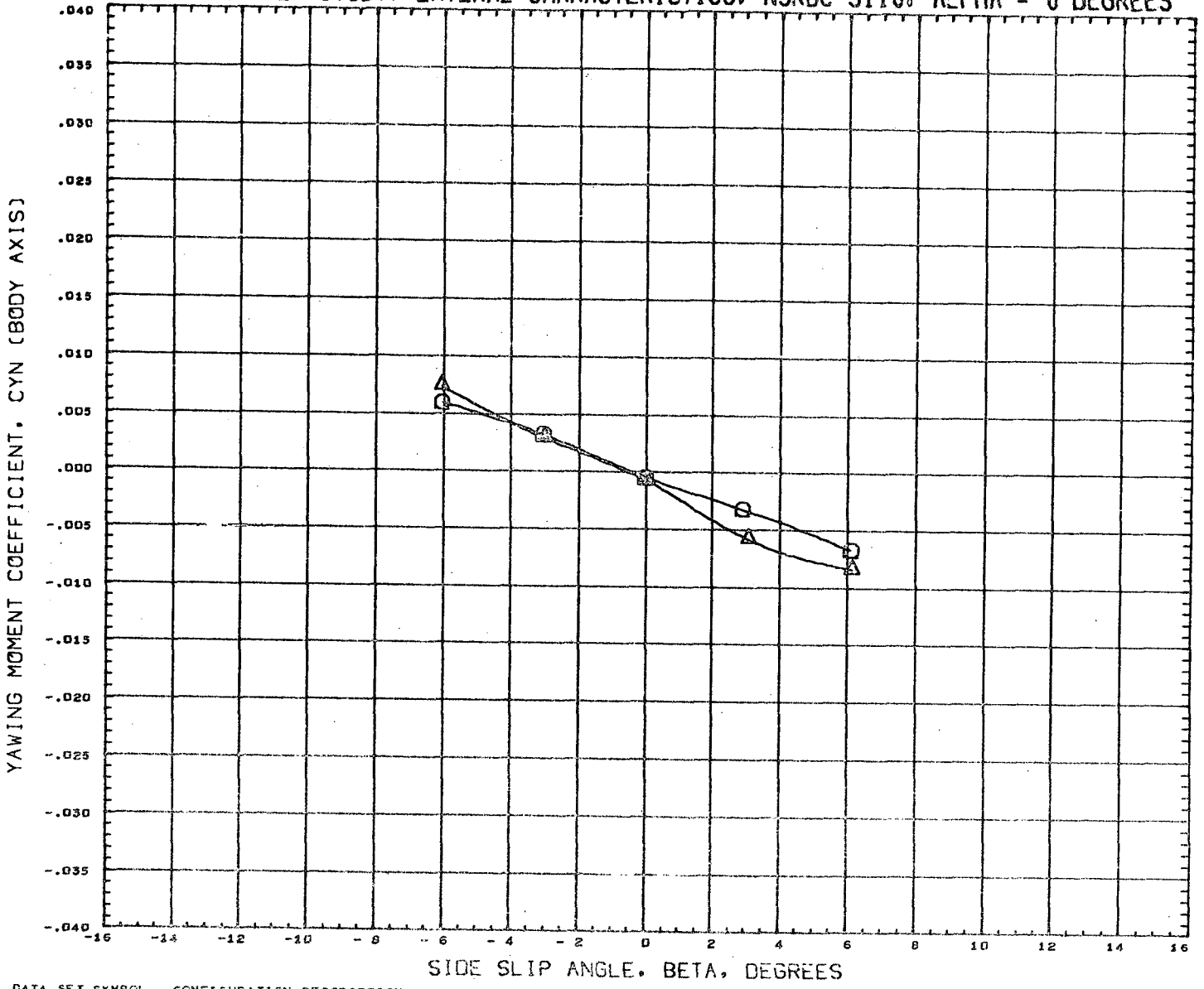
LMSC/MSFC BOOSTER STUDY, LATERAL CHARACTERISTICS, NSRDC 3110, ALPHA = 0 DEGREES



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2050)	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1	3.000	1.000	3.000	2.000	SREF 1.3550 SQ.FT.
(RN2114)	NSRDC-3110,MSFC/LMSC BOOSTER B1C1F1W1V1	3.000	1.000	3.000	2.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCNT

MACH 0.381

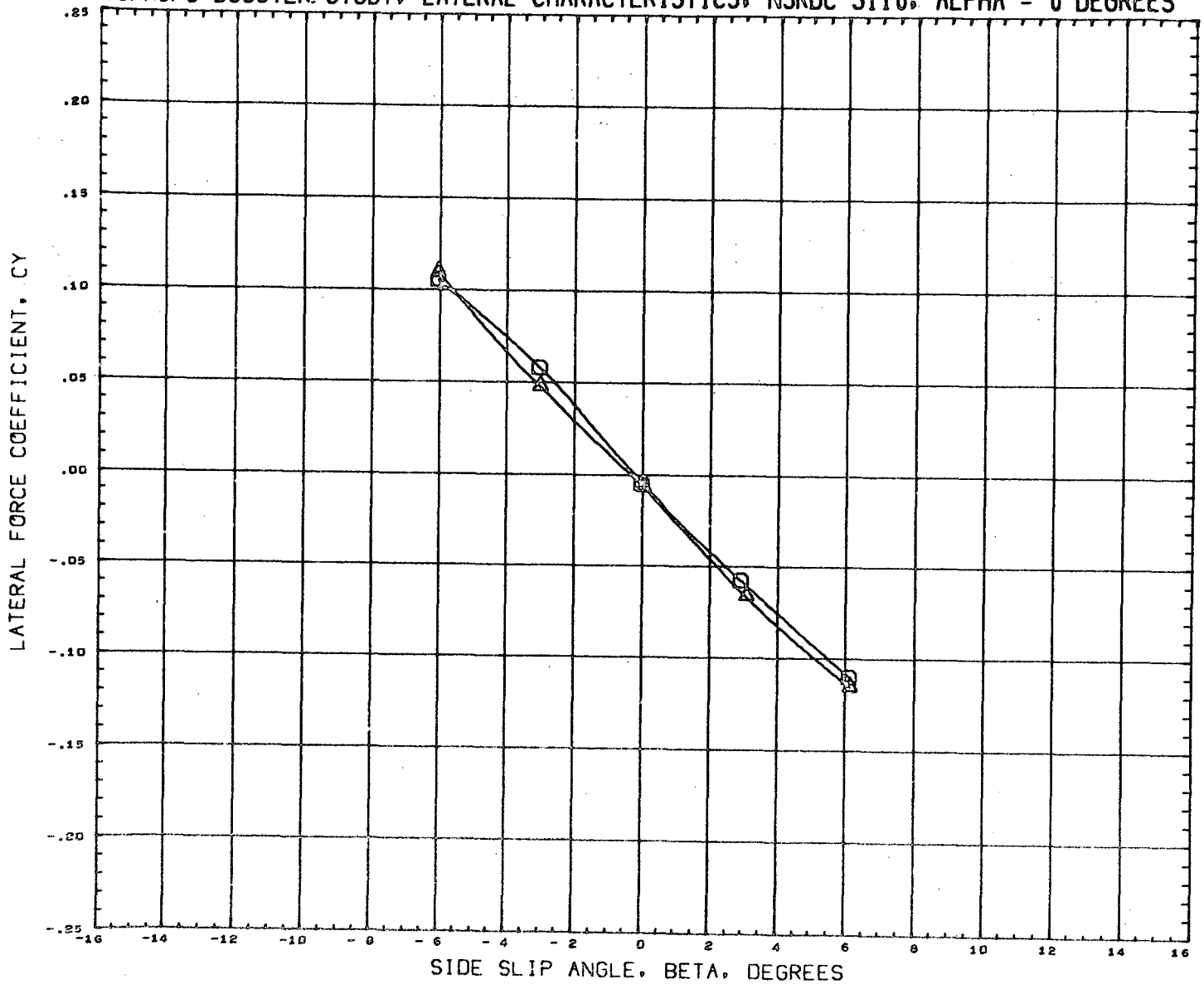
LMSC/MSFC BOOSTER STUDY, LATERAL CHARACTERISTICS, NSRDC 3110, ALPHA = 0 DEGREES



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2050)	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1	3.000	1.000	3.000	2.000	SREF 1.3550 SQ.FT.
(RN2114)	NSRDC-3110,MSFC/LMSC BOOSTER B1C1F1W1V1	3.000	1.000	3.000	2.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCENT

MACH 0.301

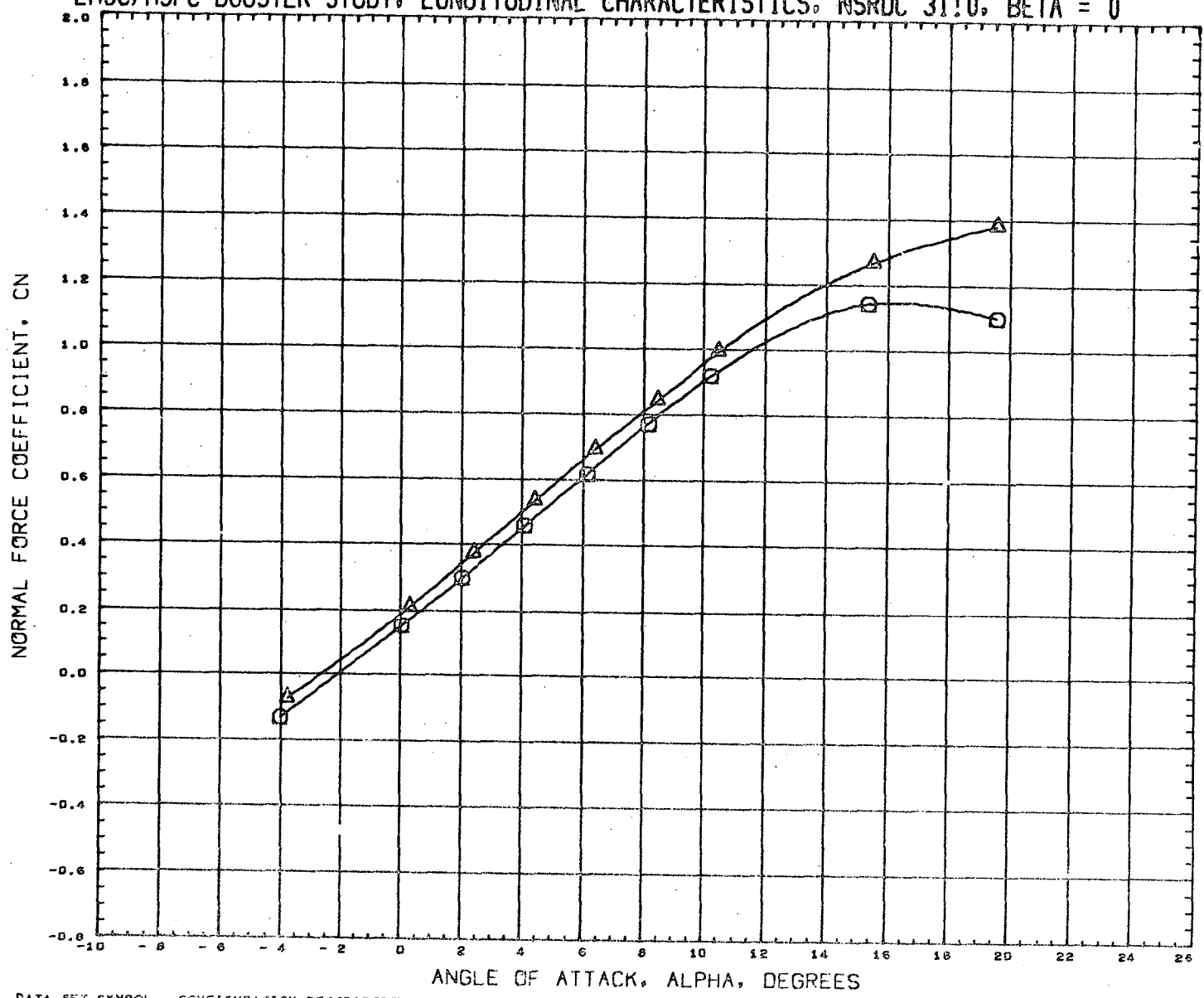
LMSC/MSFC BOOSTER STUDY, LATERAL CHARACTERISTICS, NSRDC 3110, ALPHA = 0 DEGREES



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2050)	NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1	3.000	1.000	3.000	2.000	SREF 1.3550 SQ.FT.
(RN2114)	NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1	3.000	1.000	3.000	2.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCENT

MACH 0.381

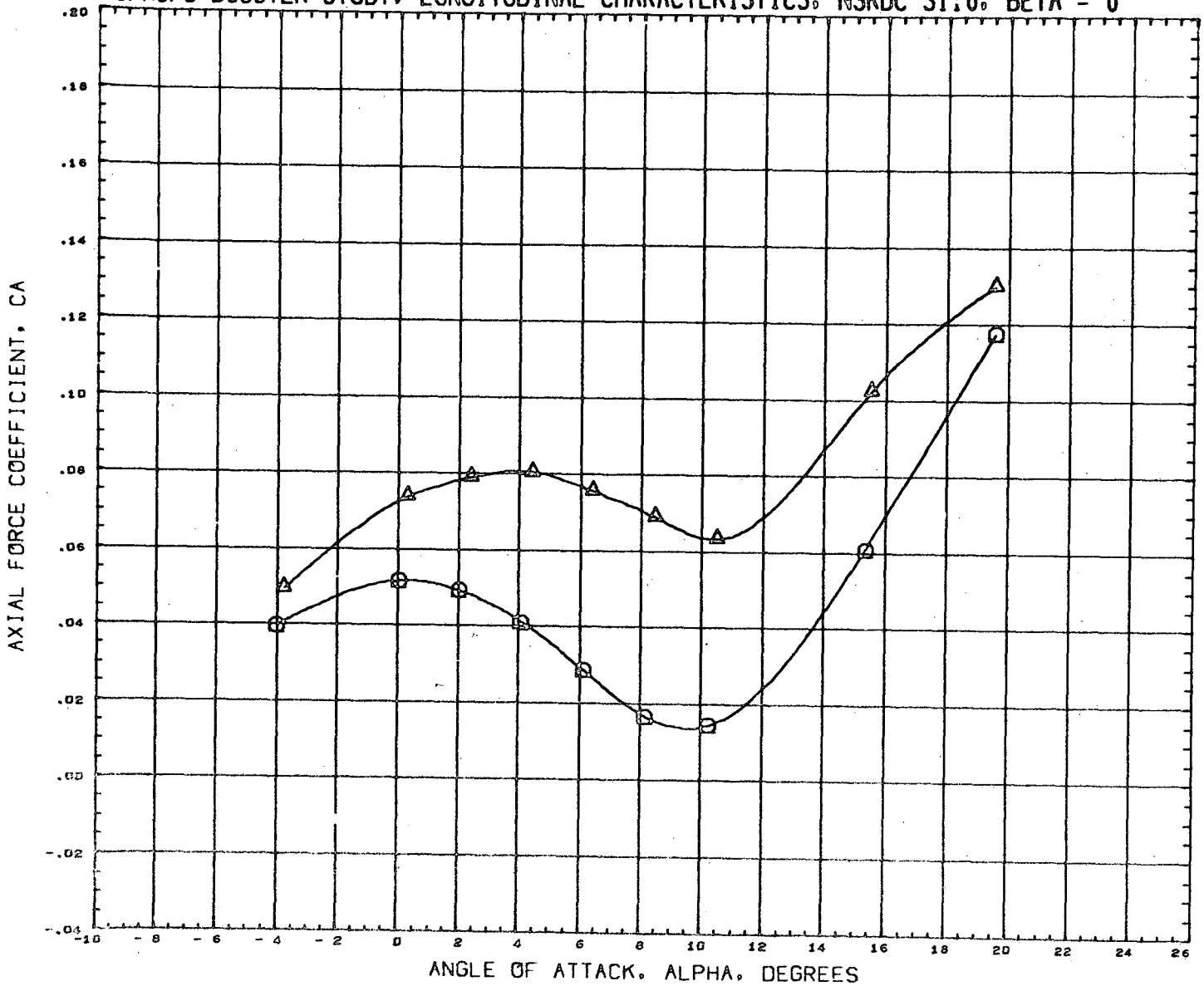
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0





DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION	
(RN2049)	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1	3.000	1.000	3.000	2.000	SREF	1.3550 SQ.FT.
(RN2053)	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1	15.000	1.000	3.000	2.000	LREF	41.4360 INCHES
						BREF	41.4360 INCHES
						XMRP	31.1400 INCHES
						YMRP	0.0000 INCHES
						ZMRP	0.2250 INCHES
						SCALE	1.5000 PERCNT

MACH 0.382

LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL
(RN2049) 
(RN2053) 

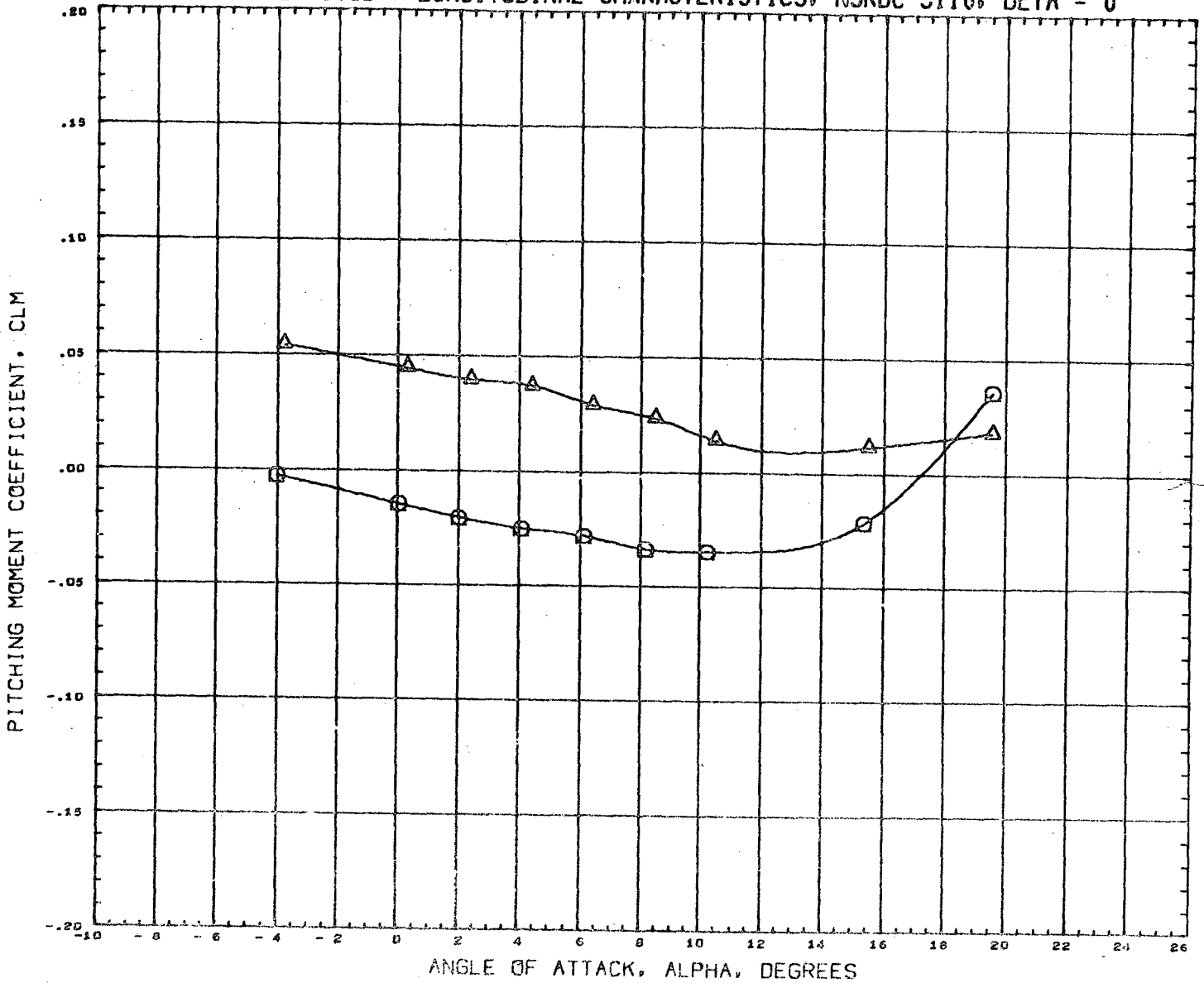
CONFIGURATION DESCRIPTION
NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1
NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1

INCIDC 3.000
15.000
CNDPOS 1.000
1.000
INCIDW 3.000
3.000
WNGFOS 2.000
2.000

REFERENCE INFORMATION
SREF 1.3550 SQ.FT.
LREF 41.4360 INCHES
BREF 41.4360 INCHES
XMRP 31.1400 INCHES
YMRP 0.0000 INCHES
ZMRP 0.2250 INCHES
SCALE 1.5000 PERCENT

MACH 0.382

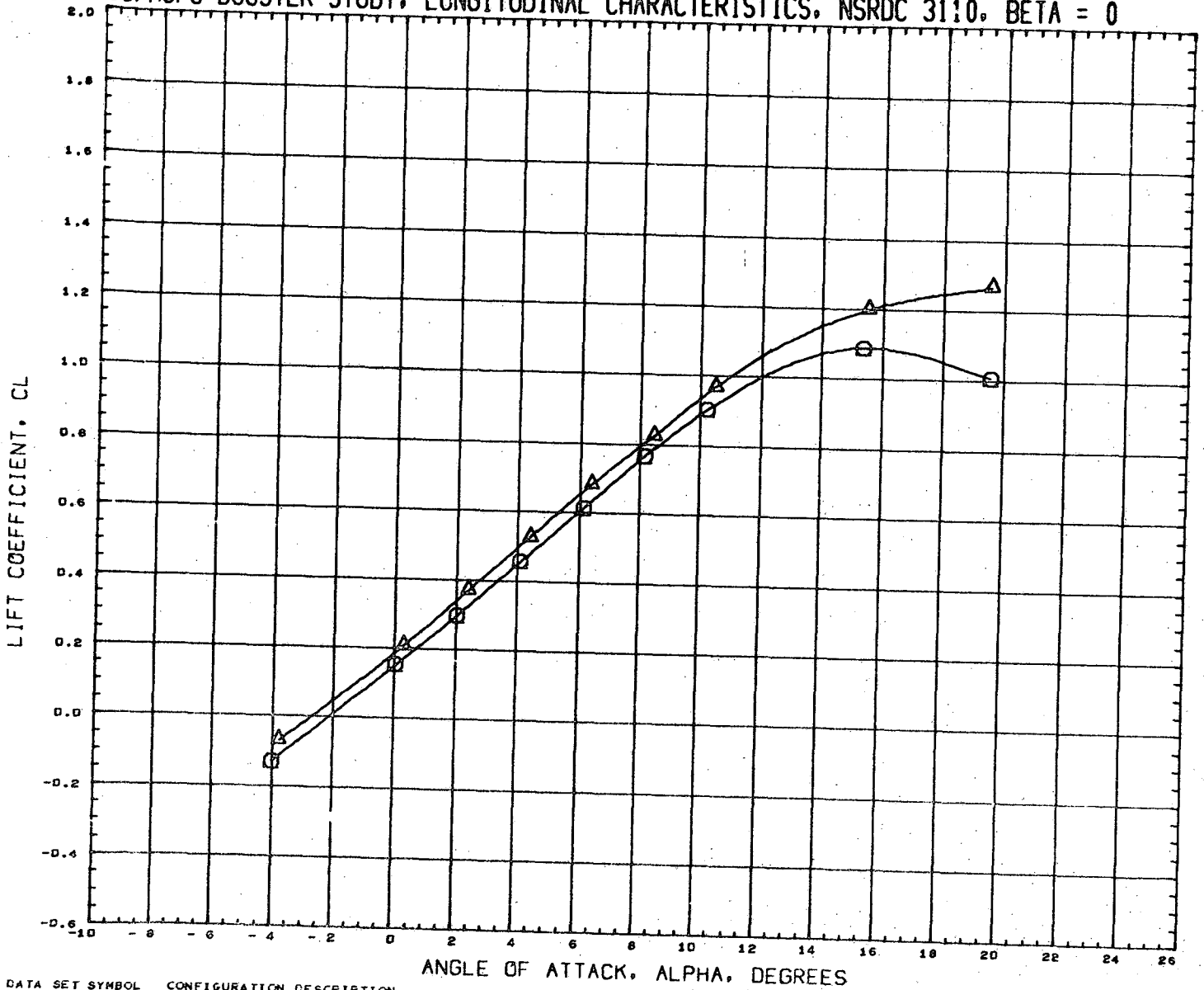
LMSC/MSFC BOOSTER STUDY. LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0




DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIEW	WNGPOS	REFERENCE INFORMATION
(RN2049)	NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1	3.000	1.000	3.000	2.000	SREF 1.3550 SQ.FT.
(RN2053)	NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1	15.000	1.000	3.000	2.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCENT

MACH 0.302

LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



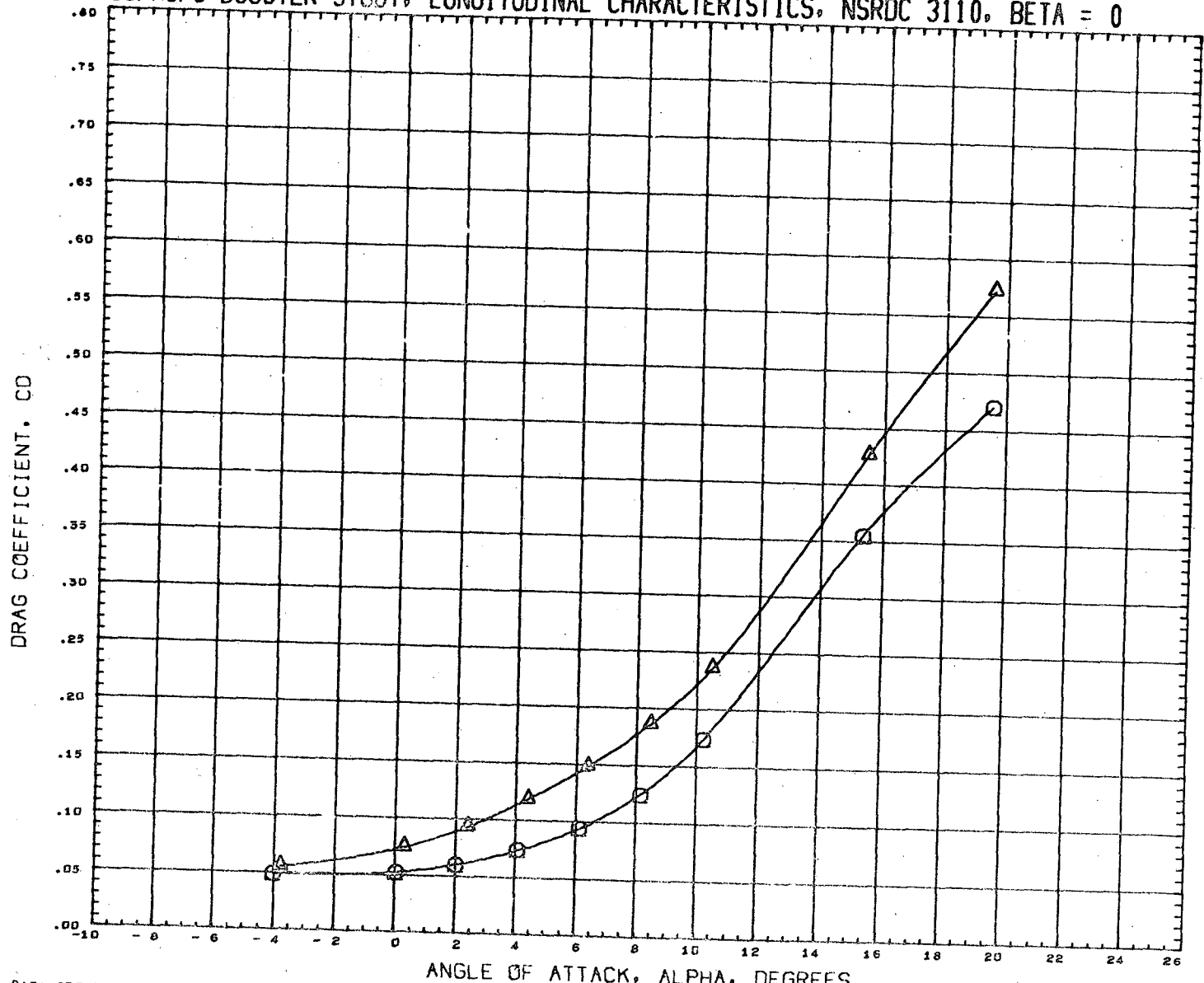
DATA SET SYMBOL (RN2049) (RN2053)  CONFIGURATION DESCRIPTION NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1 NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1

INCIDC	CNDPOS	INCIDW	WNGPOS
3.000	1.000	3.000	2.000
15.000	1.000	3.000	2.000

REFERENCE INFORMATION	
SREF	1.3550 SQ.FT.
LREF	41.4360 INCHES
BREF	41.4360 INCHES
XMRP	31.1400 INCHES
YMRP	0.0000 INCHES
ZMRP	0.2250 INCHES
SCALE	1.5000 PERCENT

MACH 0.382

LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0

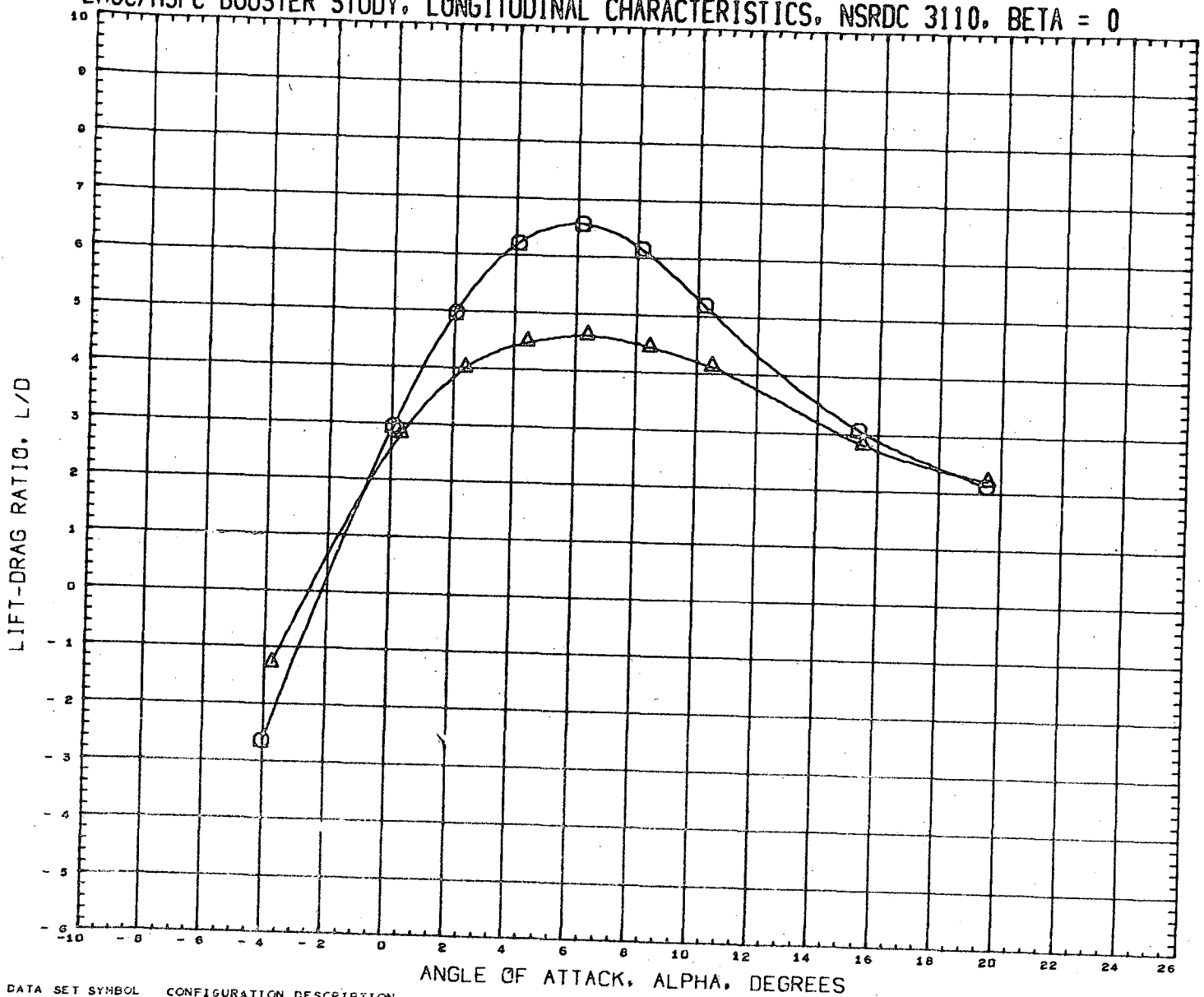


DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(RN2049)	NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1
(RN2053)	NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1

INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
3.000	1.000	3.000	2.000	SREF 1.3550 SQ. FT.
15.000	1.000	3.000	2.000	LREF 41.4360 INCHES
				BREF 41.4360 INCHES
				XMRP 31.1400 INCHES
				YMRP 0.0000 INCHES
				ZMRP 0.2250 INCHES
				SCALE 1.5000 PERCENT

MACH 0.382

LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (RN2049) NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1
 (RN2053) NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1

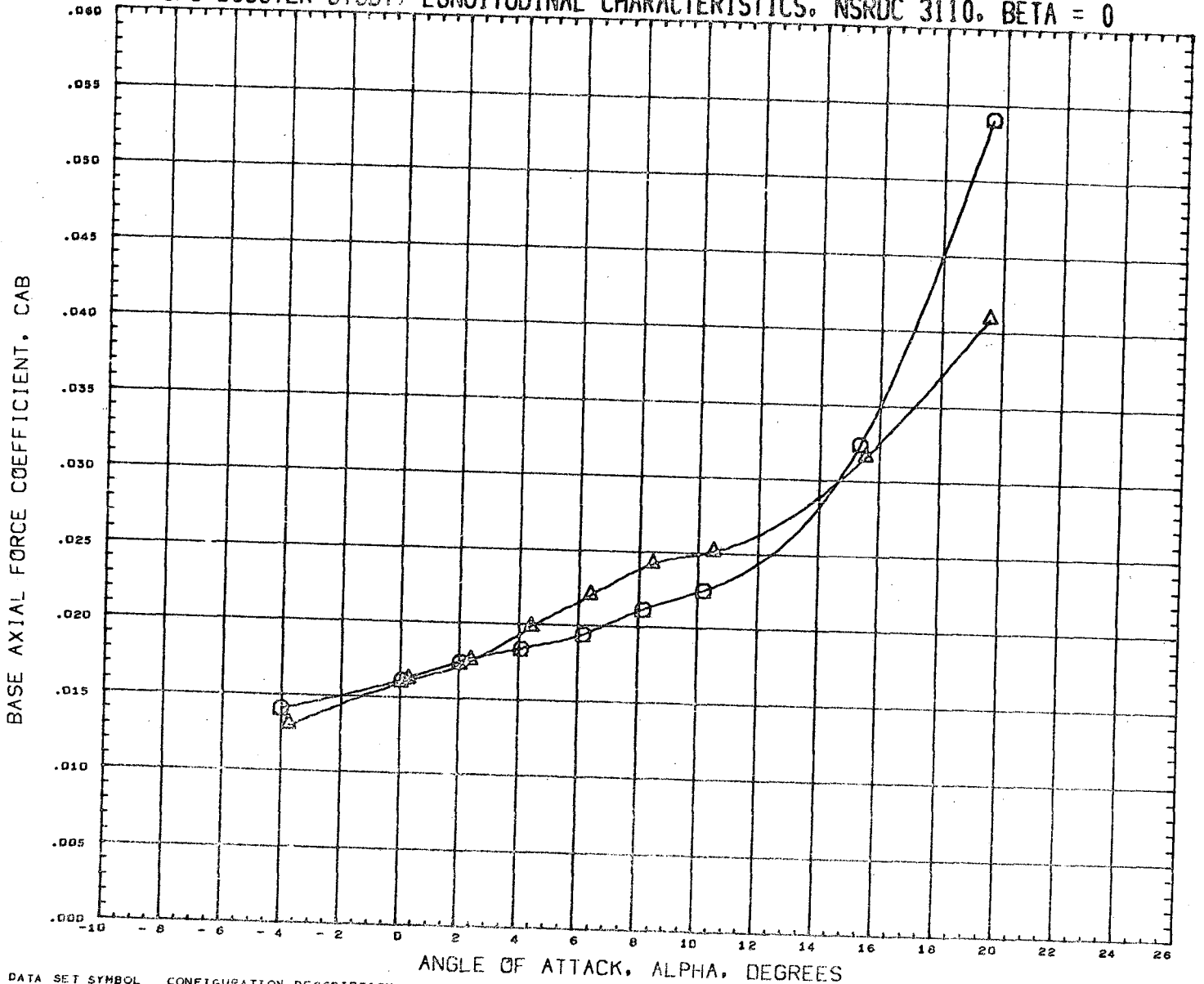
INCIDC	CNDPOS	INCIDW	WNGPOS
3.000	1.000	3.000	2.000
15.000	1.000	3.000	2.000

REFERENCE INFORMATION

SREF	1.3550	SQ. FT.
LREF	41.4360	INCHES
BREF	41.4360	INCHES
XMRP	31.1400	INCHES
YMRP	0.0000	INCHES
ZMRP	0.2250	INCHES
SCALE	1.5000	PERCENT

MACH 0.382

LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0

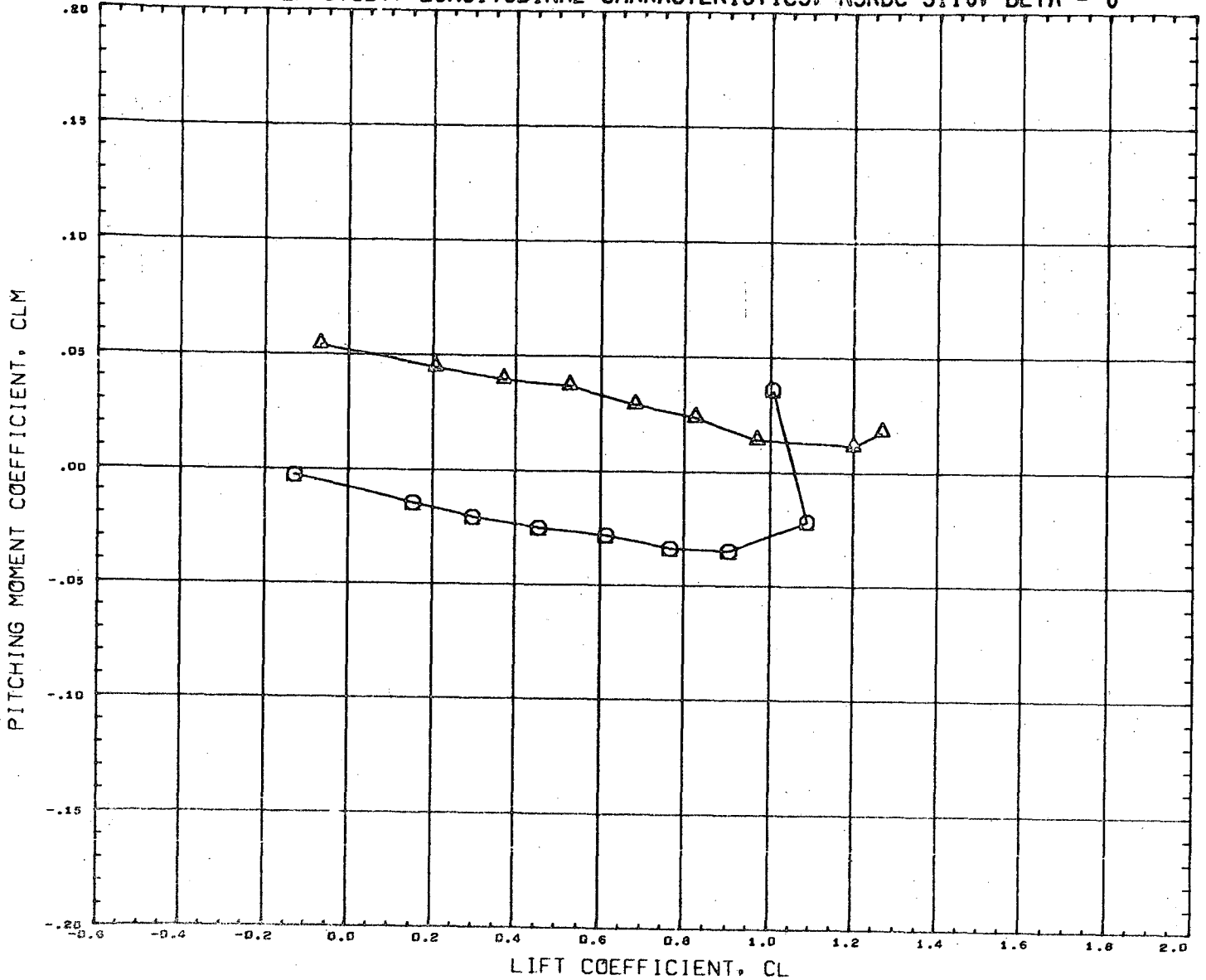


DATA SET SYMBOL (RN2D45) (RN2D53) CONFIGURATION DESCRIPTION NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1 NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1

INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
3.000	1.000	3.000	2.000	SREF 1.3550 SQ.FT.
15.000	1.000	3.000	2.000	LREF 41.4360 INCHES
				BREF 41.4360 INCHES
				XMRP 31.1400 INCHES
				YMRP 0.0000 INCHES
				ZMRP 0.2250 INCHES
				SCALE 1.5000 PERCNT

MACH 0.382

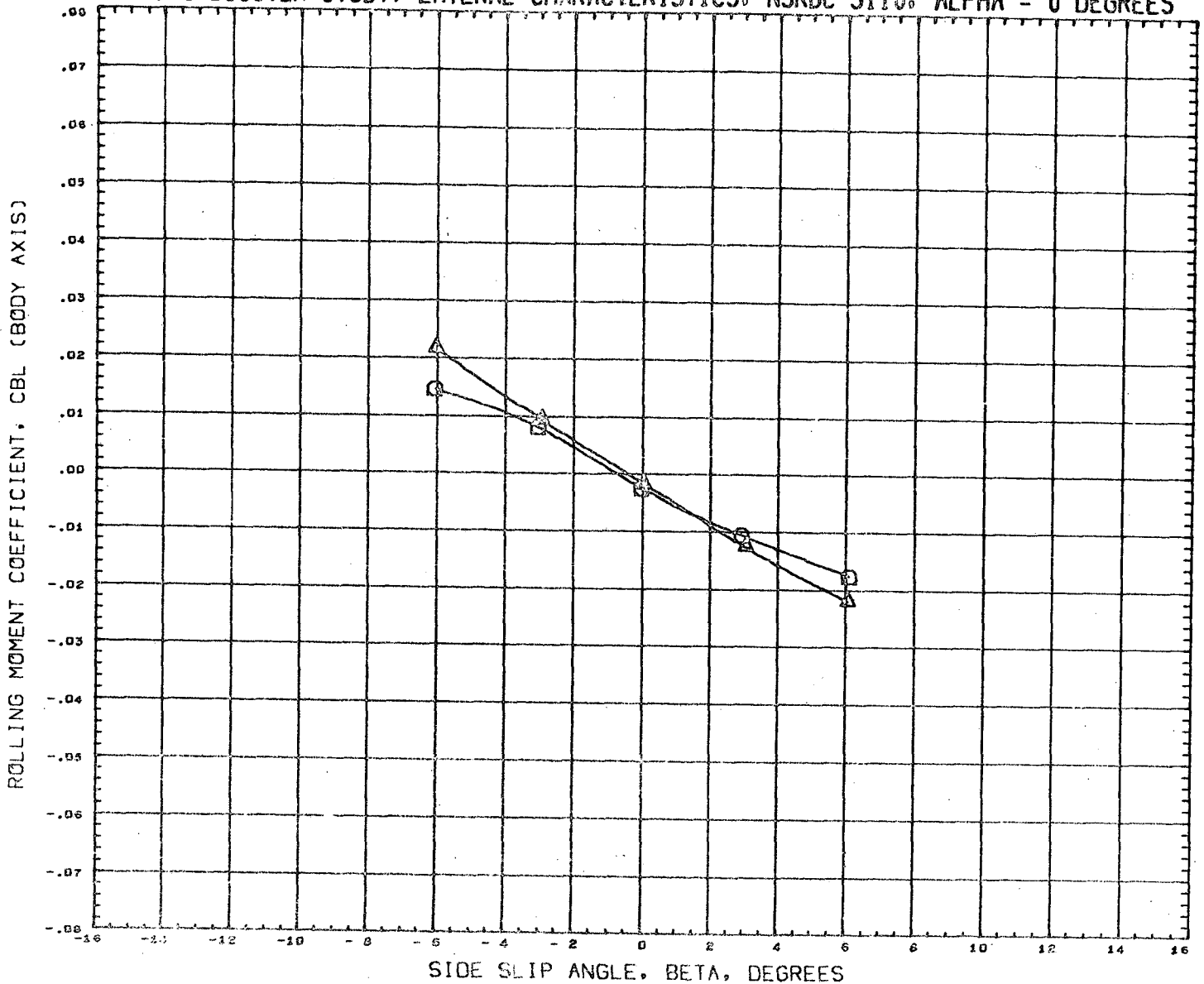
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2049)	NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1	3.000	1.000	3.000	2.000	SREF 1.3550 SQ. FT.
(RN2053)	NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1	15.000	1.000	3.000	2.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCNT

MACH 0.382

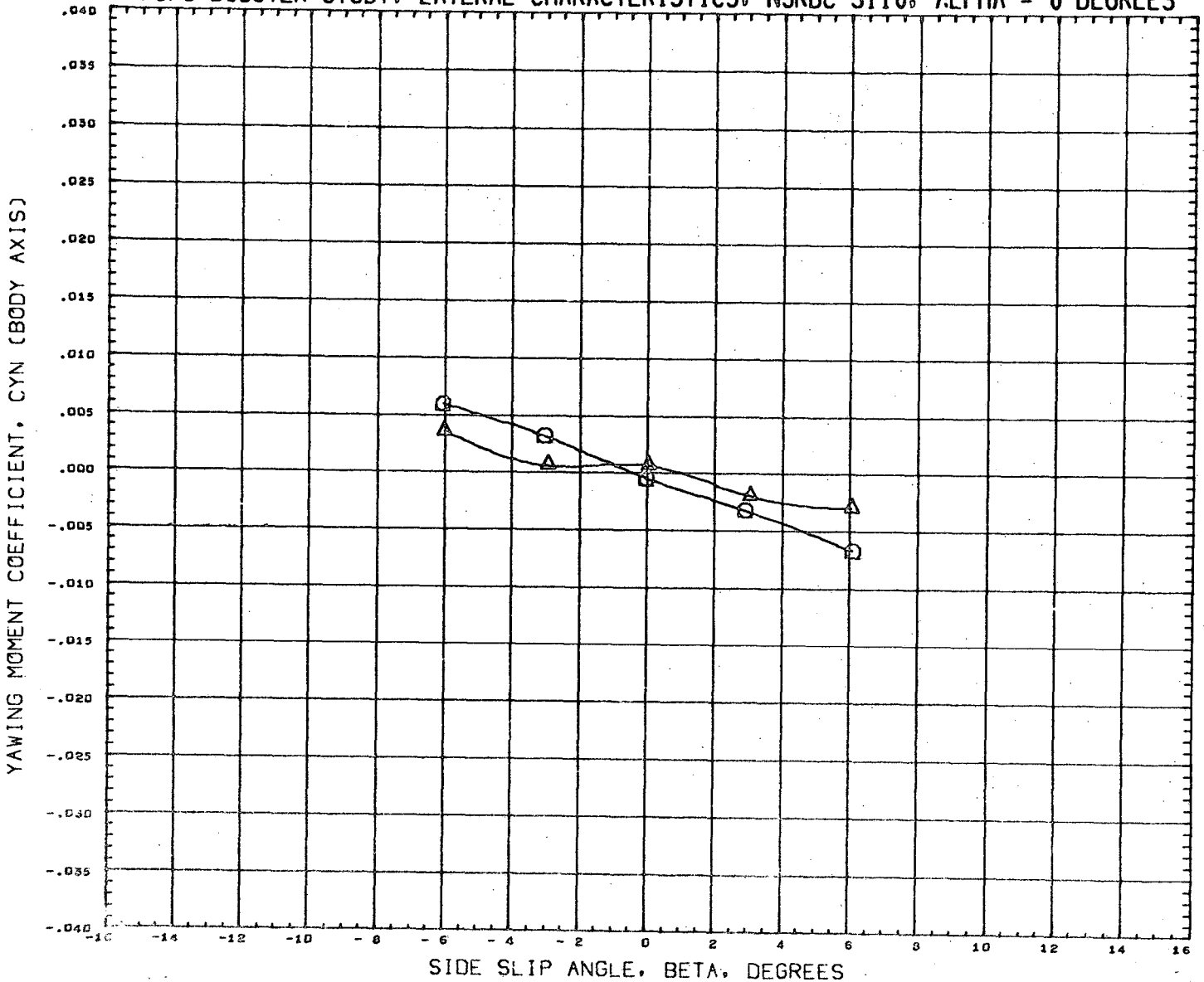
LMSC/MSFC BOOSTER STUDY, LATERAL CHARACTERISTICS, NSRDC 3110, ALPHA = 0 DEGREES



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION	
(RN2050)	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1	3.000	1.000	3.000	2.000	SREF	1.3550 SQ.FT.
(RN2054)	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V2	15.000	1.000	3.000	2.000	LREF	41.4360 INCHES
						BREF	41.4360 INCHES
						XMRP	31.1400 INCHES
						YMRP	0.0000 INCHES
						ZMRP	0.2250 INCHES
						SCALE	1.5000 PERCENT

MACH 0.381

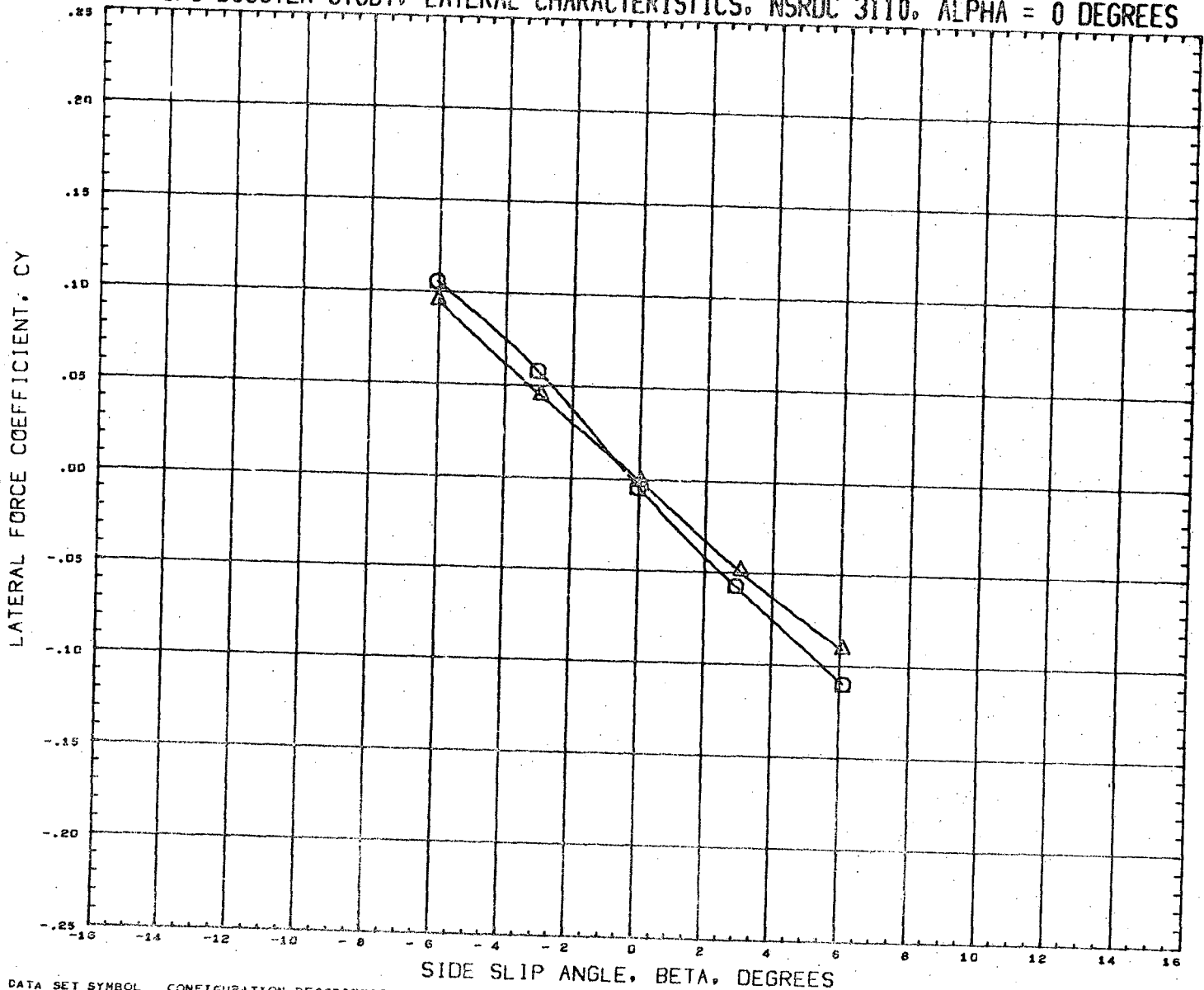
LMSC/MSFC BOOSTER STUDY, LATERAL CHARACTERISTICS, NSRDC 3110, ALPHA = 0 DEGREES



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2050) \circ	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1	3.000	1.000	3.000	2.000	SREF 1.3550 SQ.FT.
(RN2054) \triangle	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1	15.000	1.000	3.000	2.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCENT

MACH 0.381

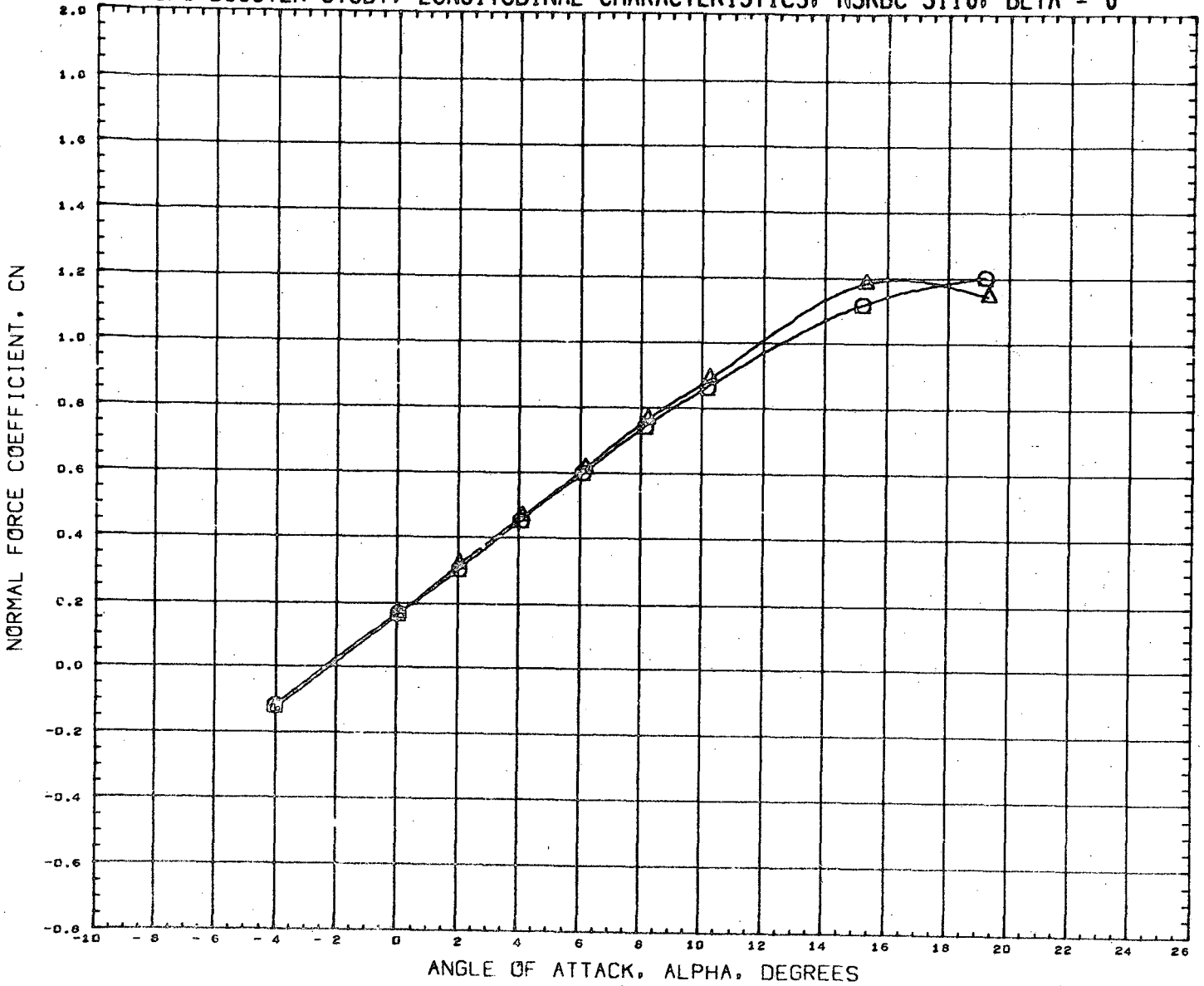
LMSC/MSFC BOOSTER STUDY, LATERAL CHARACTERISTICS, NSRDC 3110, ALPHA = 0 DEGREES



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2050)	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1	3.000	1.000	3.000	2.000	SREF 1.3550 SQ.FT.
(RN2054)	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1	15.000	1.000	3.000	2.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCENT

MACH 0.381

LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL
(RN2057) □
(RN2121) △

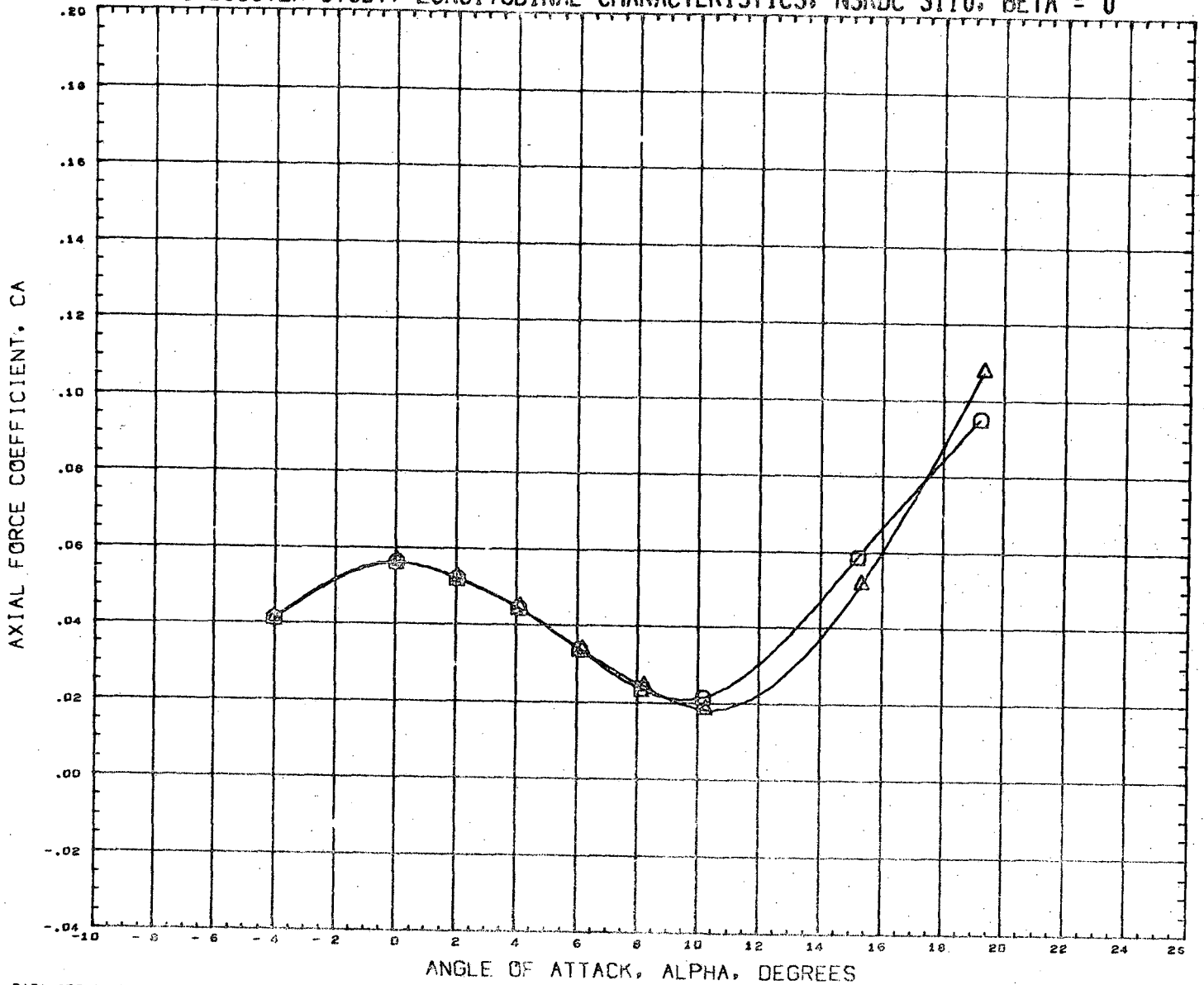
CONFIGURATION DESCRIPTION
NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1
NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1

INCIDC	CNDPOS	INCIDW	WNGPOS
3.000	2.000	3.000	2.000
3.000	2.000	3.000	2.000

REFERENCE INFORMATION		
SREF	1.3550	SQ. FT.
LREF	41.4360	INCHES
BREF	41.4360	INCHES
XMRP	31.1400	INCHES
YMRP	0.0000	INCHES
ZMRP	0.2250	INCHES
SCALE	1.5000	PERCENT

MACH 0.380

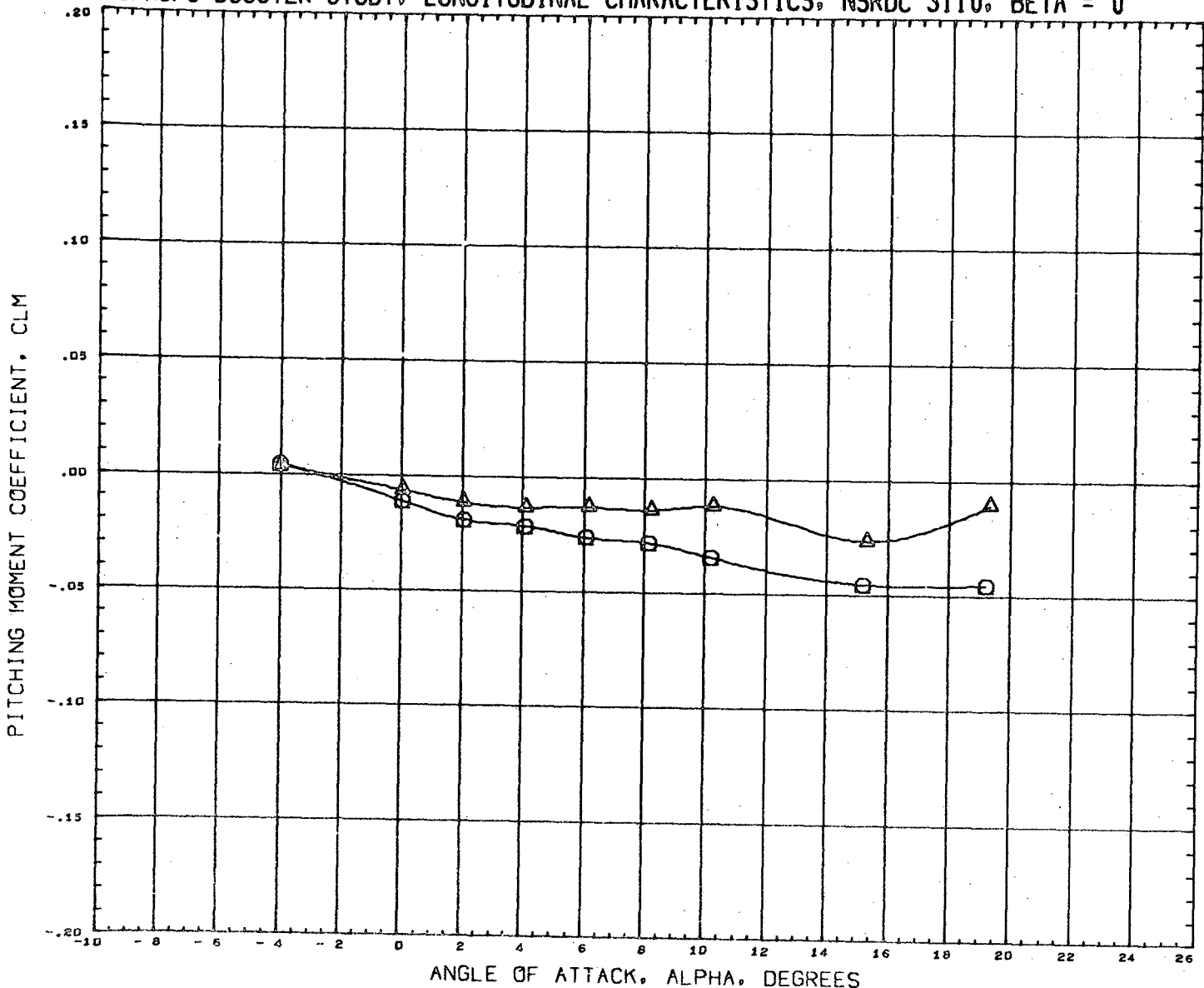
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2057)	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1	3.000	2.000	3.000	2.000	SREF 1.3550 SQ.FT.
(RN2121)	NSRDC-3110,MSFC/LMSC BOOSTER B1C1F1W1V1	3.000	2.000	3.000	2.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCENT

MACH 0.380

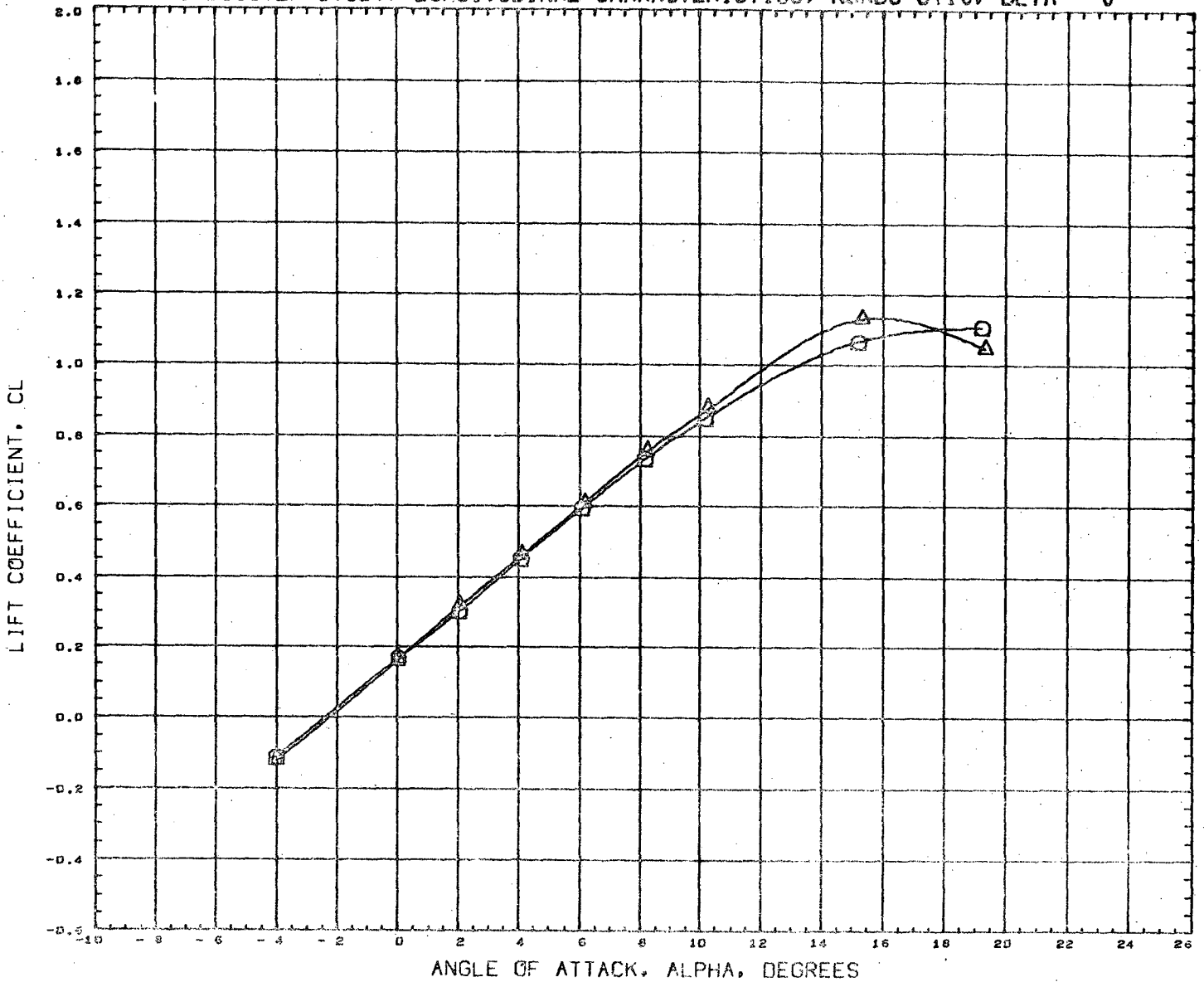
LMSC/MSFC BOOSTER STUDY. LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGFOS	REFERENCE INFORMATION	
(RN2057)	NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1	3.000	2.000	3.000	2.000	SREF	1.3550 SQ. FT.
(RN2121)	NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1	3.000	2.000	3.000	2.000	LREF	41.4360 INCHES
						BREF	41.4360 INCHES
						XMRP	31.1400 INCHES
						YMRP	0.0000 INCHES
						ZMRP	0.2250 INCHES
						SCALE	1.5000 PERCENT

MACH 0.380

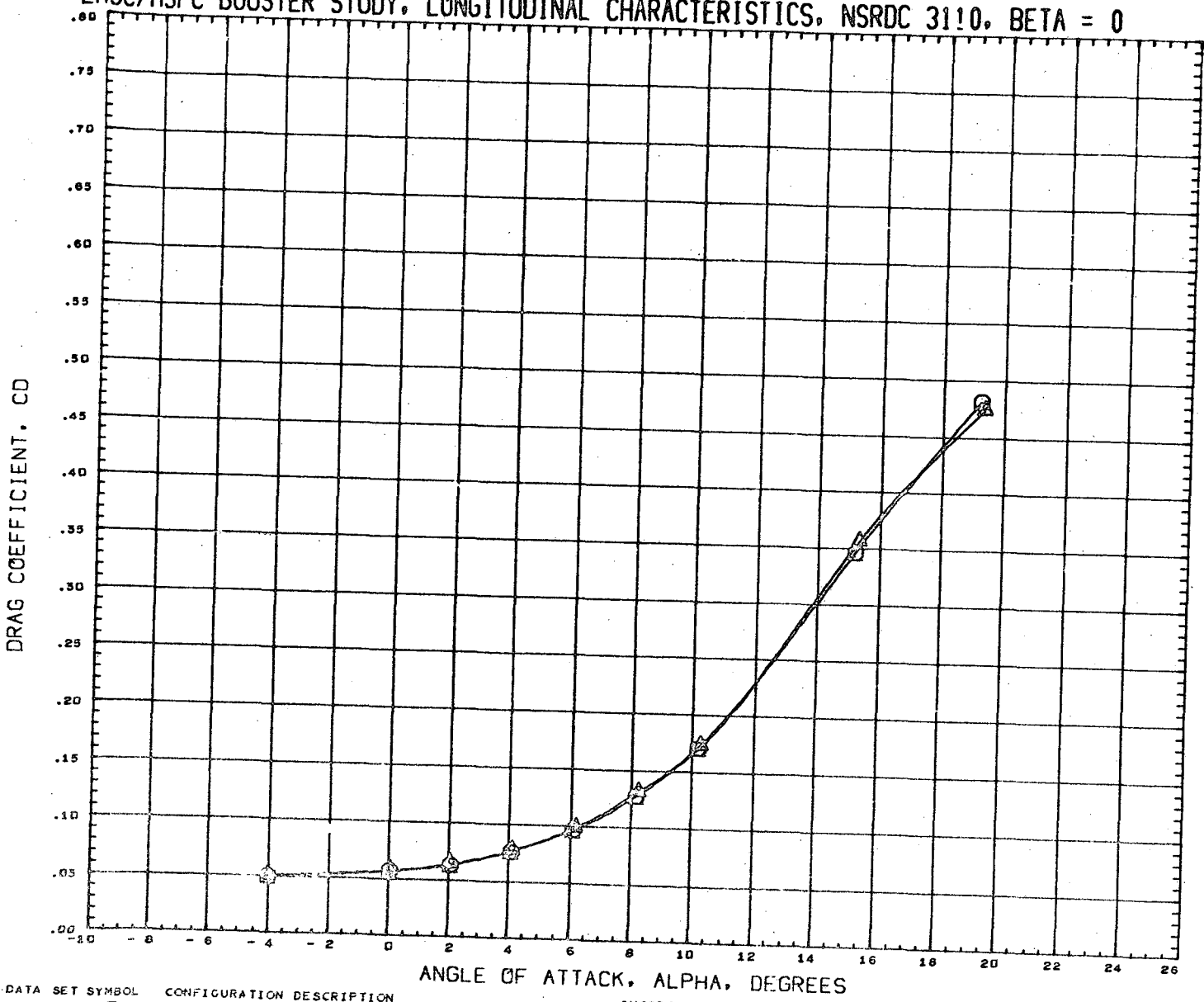
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2057)	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1	3.000	2.000	3.000	2.000	SREF 1.3550 SQ.FT.
(RN2121)	NSRDC-3110,MSFC/LMSC BOOSTER B1C1F1W1V1	3.000	2.000	3.000	2.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRF 31.1400 INCHES
						YMRF 0.0000 INCHES
						ZMRF 0.2250 INCHES
						SCALE 1.5000 PERCNT

MACH 0.380

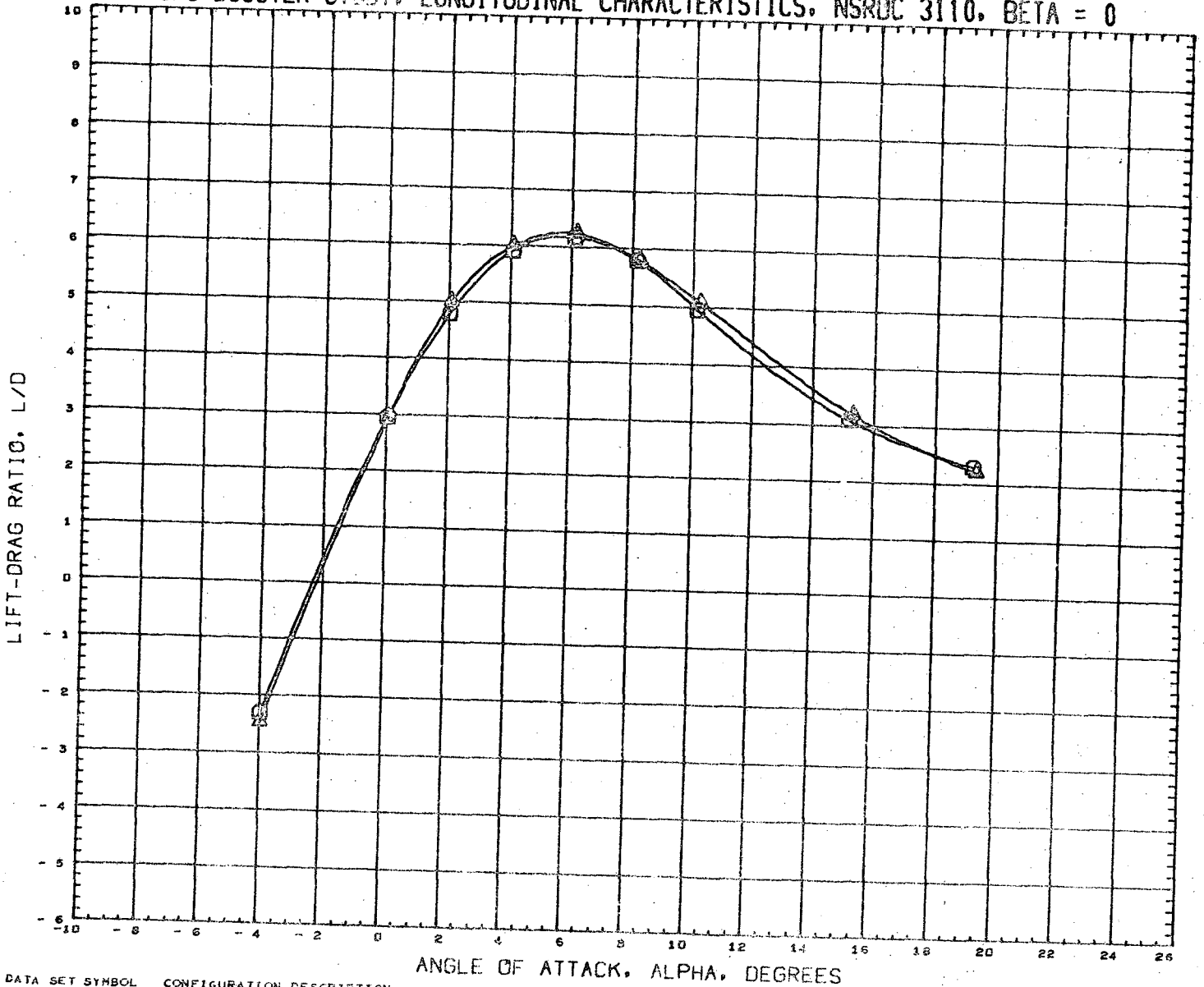
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGFOS	REFERENCE INFORMATION
(FN2057)	NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1	3.000	2.000	3.000	2.000	SREF 1.3550 SQ.FT.
(RN2121)	NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1	3.000	2.000	3.000	2.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCENT

MACH 0.380

LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL
(RN2057)
(RN2121)



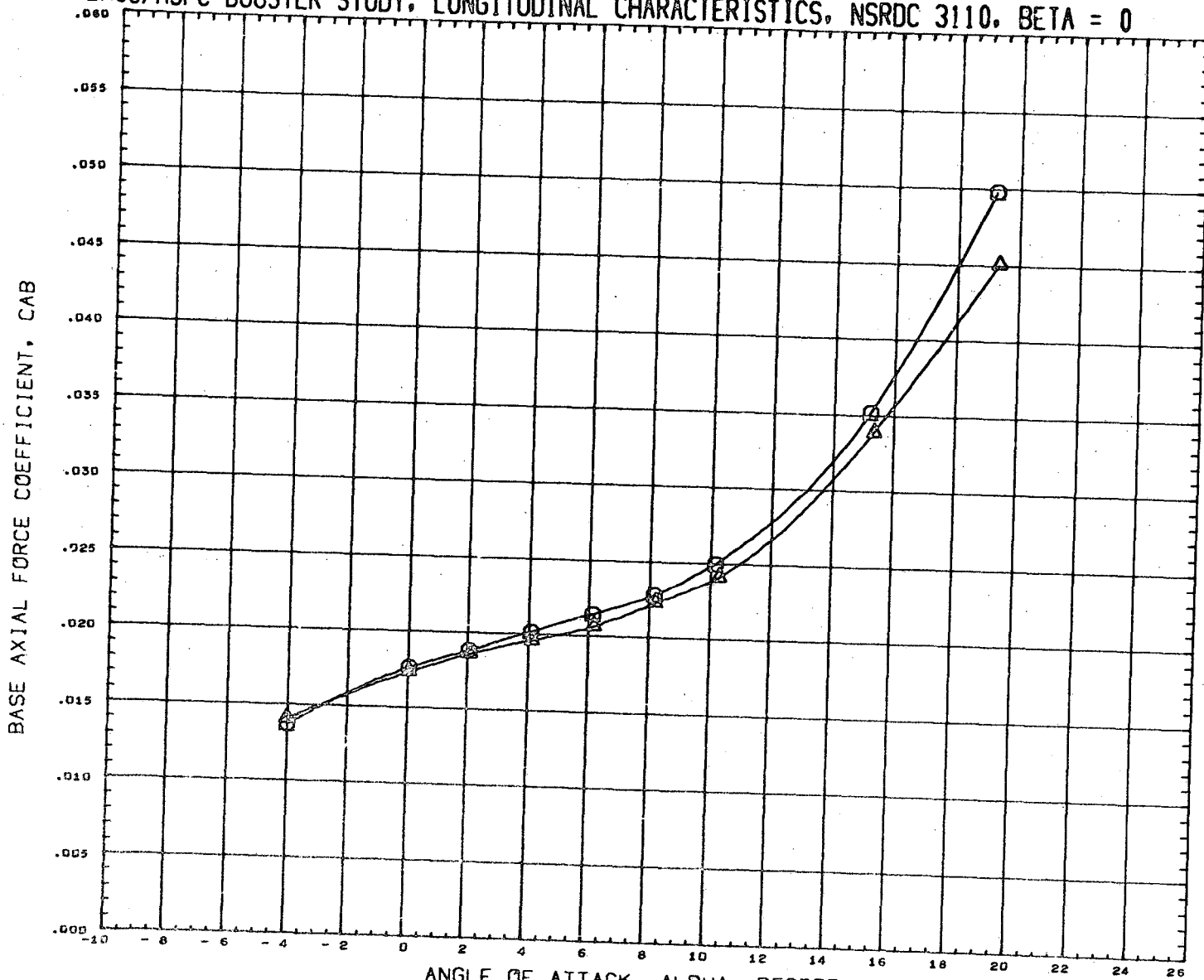
CONFIGURATION DESCRIPTION
NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1
NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1

INCIDC	CNDPOS	INCIDW	WNCPOS
3.000	2.000	3.000	2.000
3.000	2.000	3.000	2.000

REFERENCE INFORMATION	
SREF	1.3550 SQ. FT.
LREF	41.4360 INCHES
BREF	41.4360 INCHES
XMRP	31.1400 INCHES
YMRP	0.0000 INCHES
ZMRP	0.2230 INCHES
SCALE	1.5000 PERCENT

* MACH D.380

LMSC/MSFC BOOSTER STUDY. LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL
(RN2057) \circ
(RN2121) \triangle

CONFIGURATION DESCRIPTION
NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1
NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1

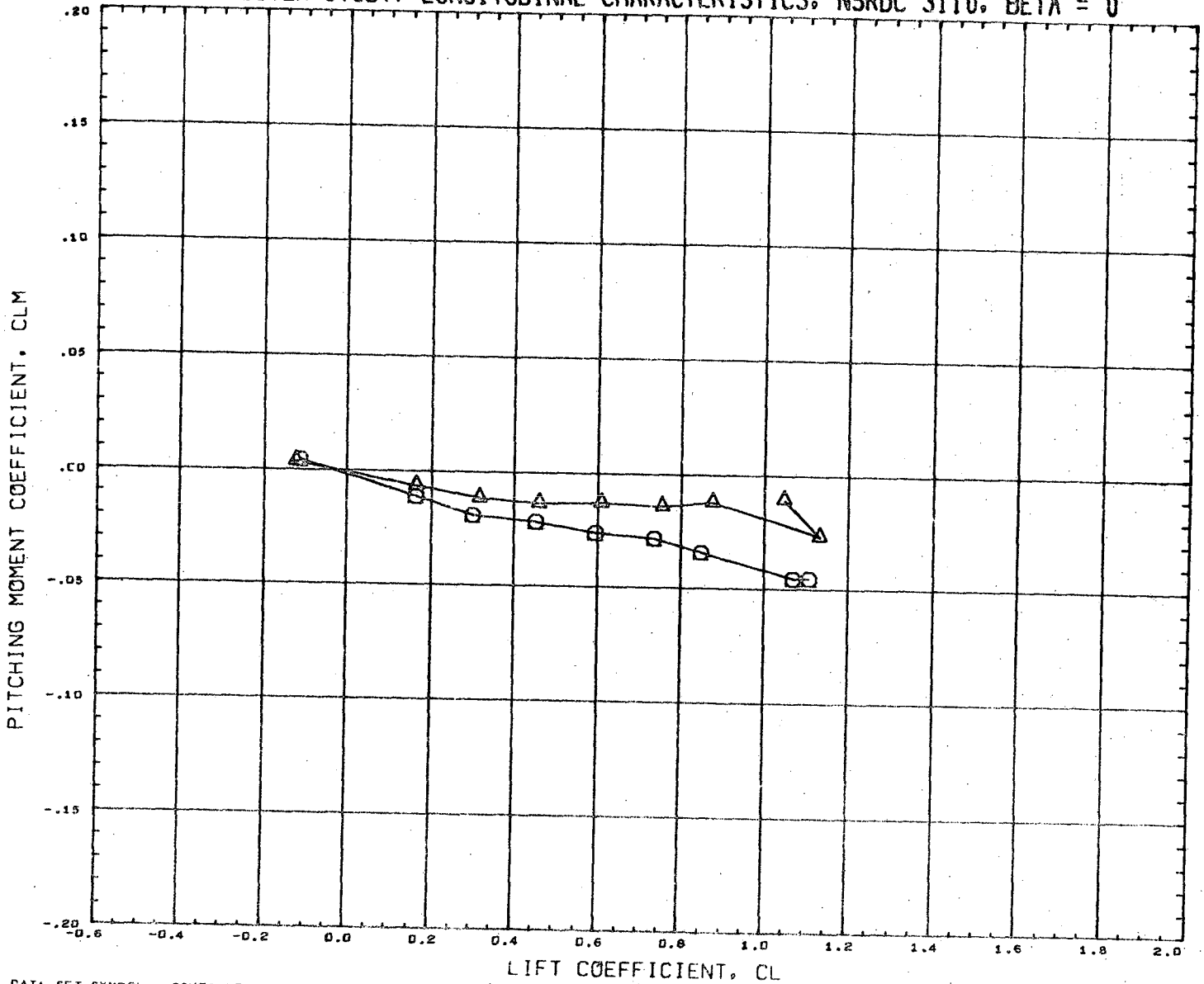
INCIDC	CNDPOS	INCIDW	WNGPOS
3.000	2.000	3.000	2.000
3.000	2.000	3.000	2.000

REFERENCE INFORMATION

SREF	1.3550	SQ. FT.
LREF	41.4360	INCHES
BREF	41.4360	INCHES
XMRP	31.1400	INCHES
YMRP	0.0000	INCHES
ZMRP	0.2250	INCHES
SCALE	1.5000	PERCENT

MACH 0.380

LMSC/MSFC BOOSTER STUDY. LONGITUDINAL CHARACTERISTICS. NSRDC 3110. BETA = 0



DATA SET SYMBOL
(RN2057)
(RN2121)



CONFIGURATION DESCRIPTION

NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1
NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1

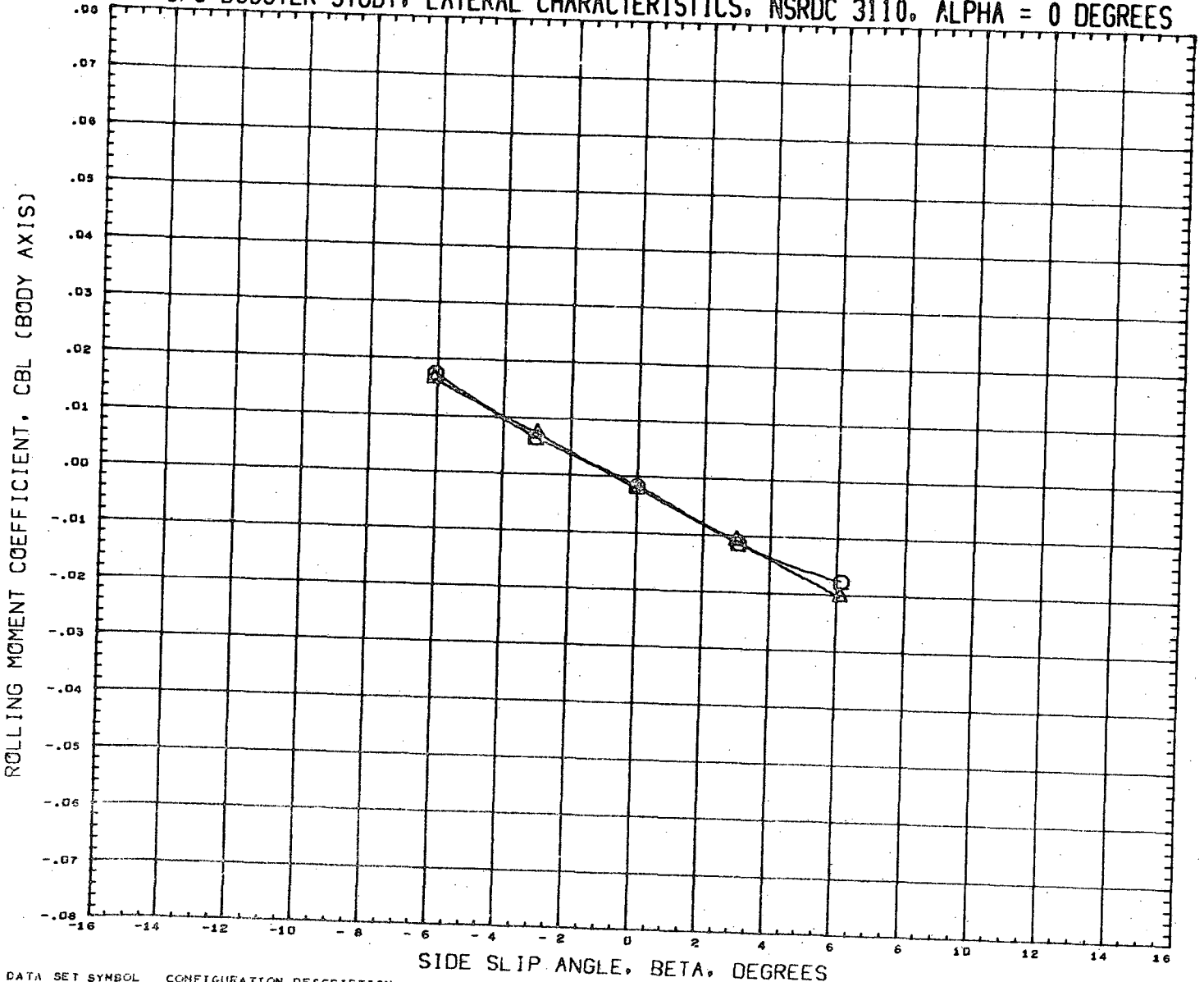
INCIDC	CNDPOS	INCIDW	WNGPOS
3.000	2.000	3.000	2.000
3.000	2.000	3.000	2.000

REFERENCE INFORMATION

SREF	1.3550	SQ. FT.
LREF	41.4360	INCHES
BREF	41.4360	INCHES
XMRP	31.1400	INCHES
YMRP	0.0000	INCHES
ZMRP	0.2250	INCHES
SCALE	1.5000	PERCENT

MACH 0.380

LMSC/MSFC BOOSTER STUDY, LATERAL CHARACTERISTICS, NSRDC 3110, ALPHA = 0 DEGREES



DATA SET SYMBOL
(RN3D58) Q
(RN2122) A

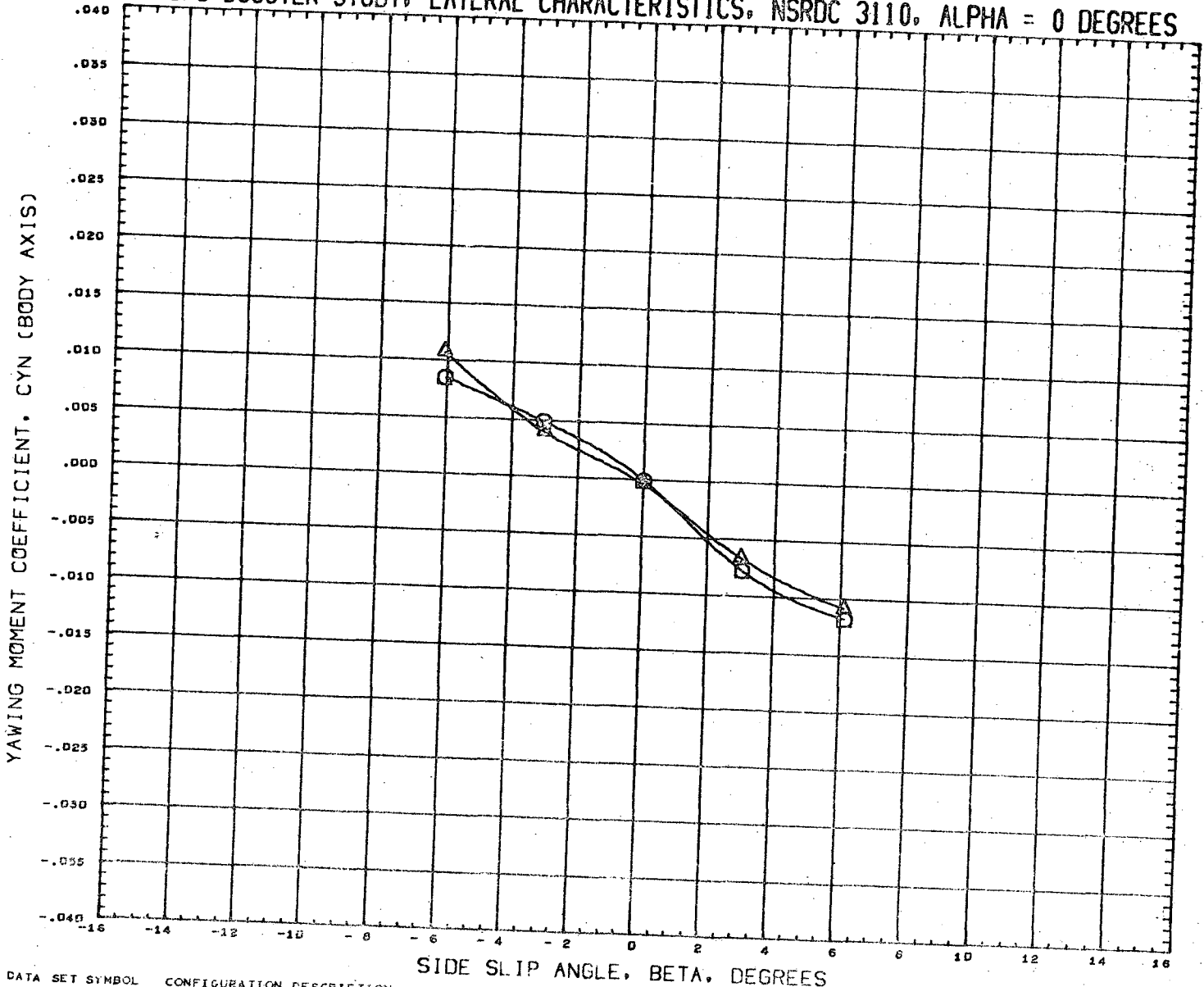
CONFIGURATION DESCRIPTION
NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1
NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1

INCIDC 3.000
CNDPOS 2.000
INCIDW 3.000
WNGPOS 2.000

REFERENCE INFORMATION
SREF 1.3550 SQ. FT.
LREF 41.4360 INCHES
BREF 41.4360 INCHES
XMRP 31.1400 INCHES
YMRP 0.0000 INCHES
ZMRP 0.2250 INCHES
SCALE 1.5000 PERCENT

MACH 0.379

LMSC/MSFC BOOSTER STUDY, LATERAL CHARACTERISTICS, NSRDC 3110, ALPHA = 0 DEGREES



DATA SET SYMBOL
(RN2058)
(RN2122)



CONFIGURATION DESCRIPTION
NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1
NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1

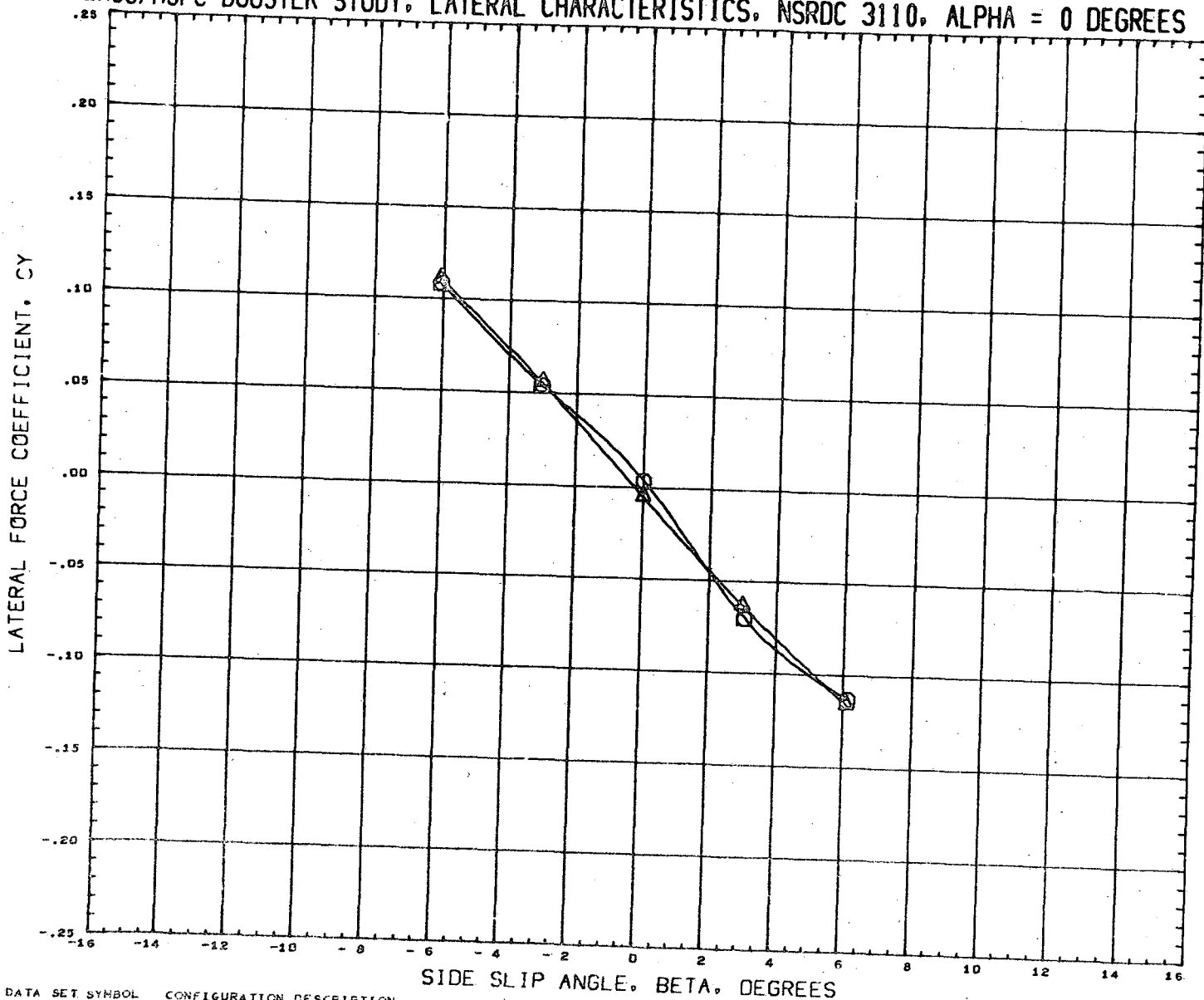
INCIDC	CNDPOS	INCIDW	WNGPOS
3.000	2.000	3.000	2.000
3.000	2.000	3.000	2.000

REFERENCE INFORMATION

SREF	1.3350	SQ. FT.
LREF	41.4360	INCHES
BREF	41.4360	INCHES
XMRP	31.1400	INCHES
YMRP	0.0000	INCHES
ZMRP	0.2250	INCHES
SCALE	1.5000	PERCENT

MACH 0.379

LMSC/MSFC BOOSTER STUDY, LATERAL CHARACTERISTICS, NSRDC 3110, ALPHA = 0 DEGREES



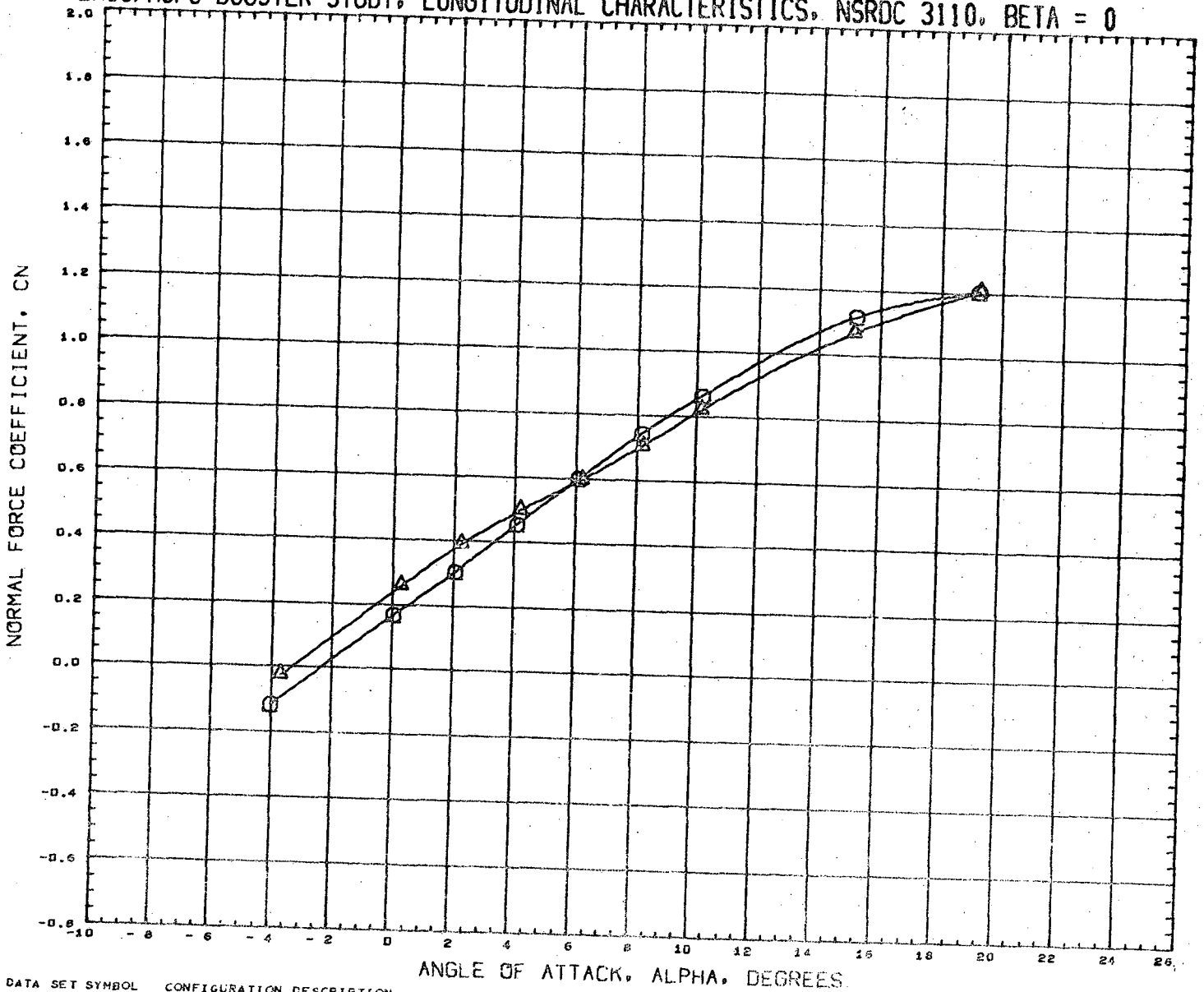
DATA SET SYMBOL (RN2058) (RN2122) CONFIGURATION DESCRIPTION NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1 NSRDC-3110,MSFC/LMSC BOOSTER B1C1F1W1V1

INCIDC 3.000 3.000 CNDPOS 2.000 2.000 INCIDW 3.000 3.000 WNGPOS 2.000 2.000

REFERENCE INFORMATION SREF 1.3550 SQ.FT. LREF 41.4360 INCHES BREF 41.4360 INCHES XMRP 31.1400 INCHES YMRP 0.0000 INCHES ZMRP 0.2250 INCHES SCALE 1.5000 PERCENT

MACH 0.379

LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL
(RN2057)
(RN2061)



CONFIGURATION DESCRIPTION
NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1
NSRDC-3110, NSFC/LHSC BOOSTER B1C2F1W1V1

INCIDC 3.000
15.000

CNDPOS 2.000
2.000

INCIDW 3.000
3.000

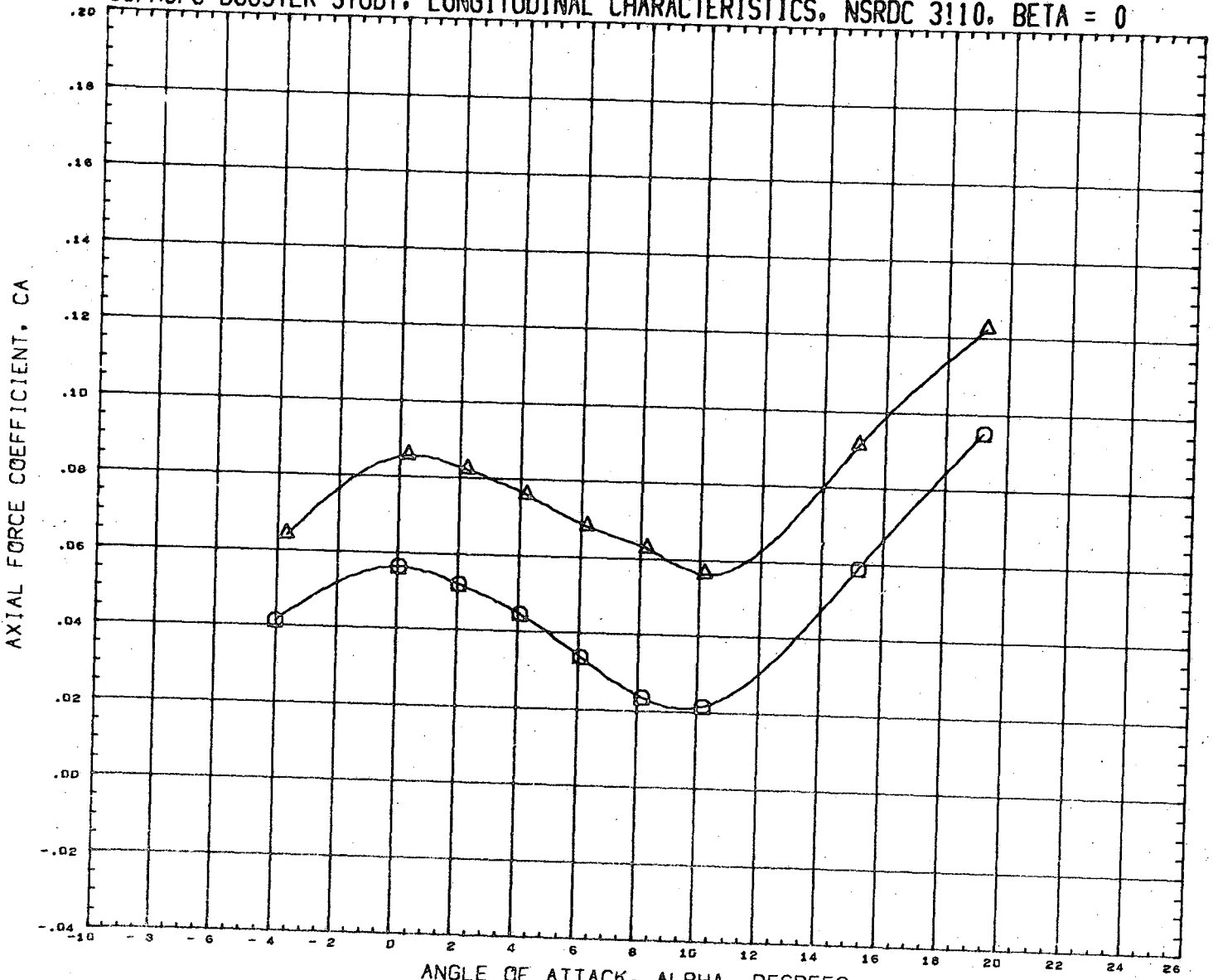
WNGPOS 2.000
2.000

REFERENCE INFORMATION

SREF	1.3550	SQ.FT.
LREF	41.4360	INCHES
BREF	41.4360	INCHES
XMRP	31.1400	INCHES
YMRP	0.0000	INCHES
ZMRP	0.2250	INCHES
SCALE	1.5000	PERCNT

MACH 0.300

LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



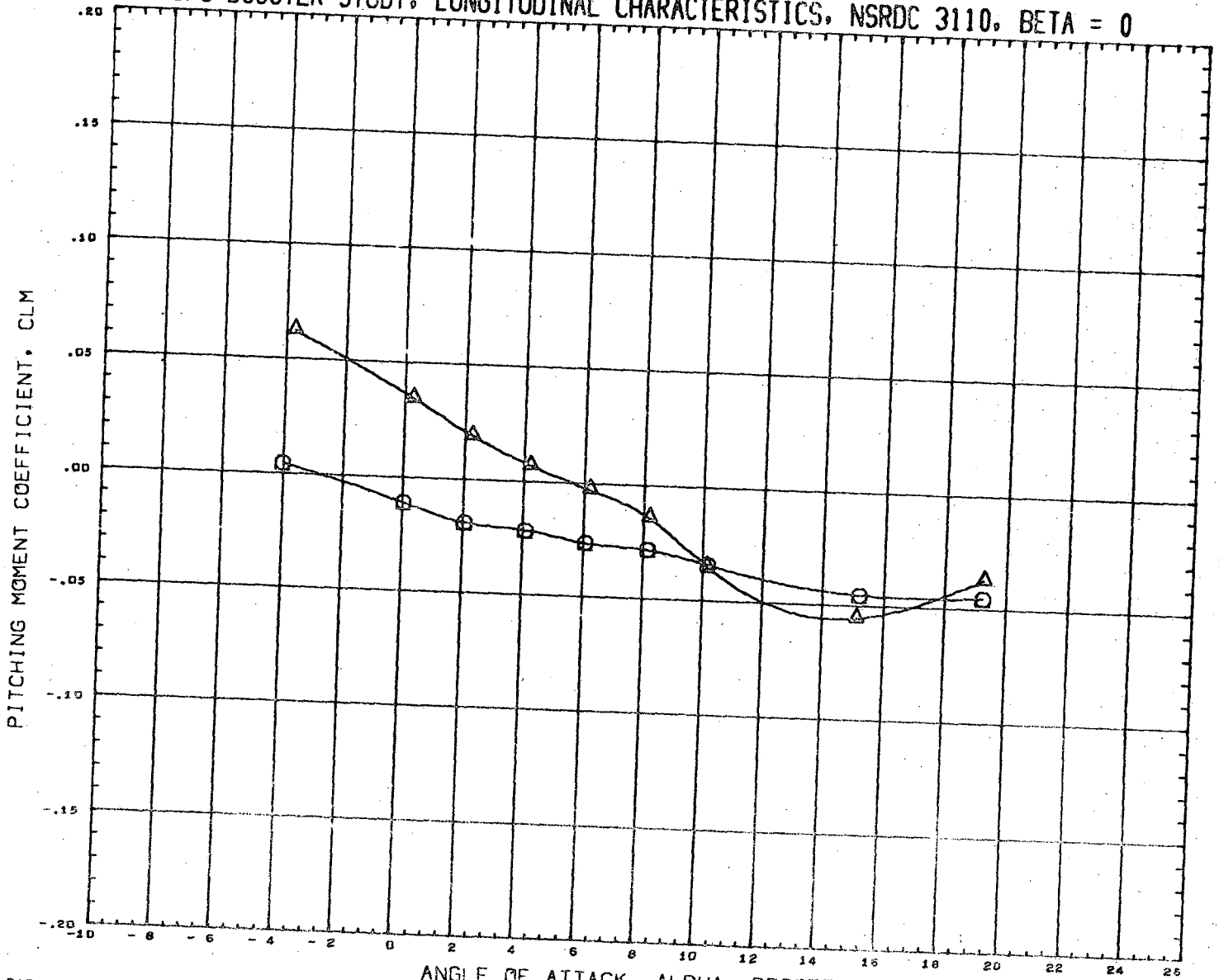
DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (RN2057) NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1
 (RN2061) NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1



INCIDC CNDPOS INCIDW WNGPOS
 3.000 2.000 3.000 2.000
 15.000 2.000 3.000 2.000

REFERENCE INFORMATION
 SREF 1.3550 SQ. FT.
 LREF 41.4360 INCHES
 BREF 41.4360 INCHES
 XMRP 31.1400 INCHES
 YMRP 0.0000 INCHES
 ZMRP 0.2250 INCHES
 SCALE 1.5000 PERCENT

MACH 0.380

LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL
(RN2057) 
(RN2061) 

CONFIGURATION DESCRIPTION
NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1
NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1

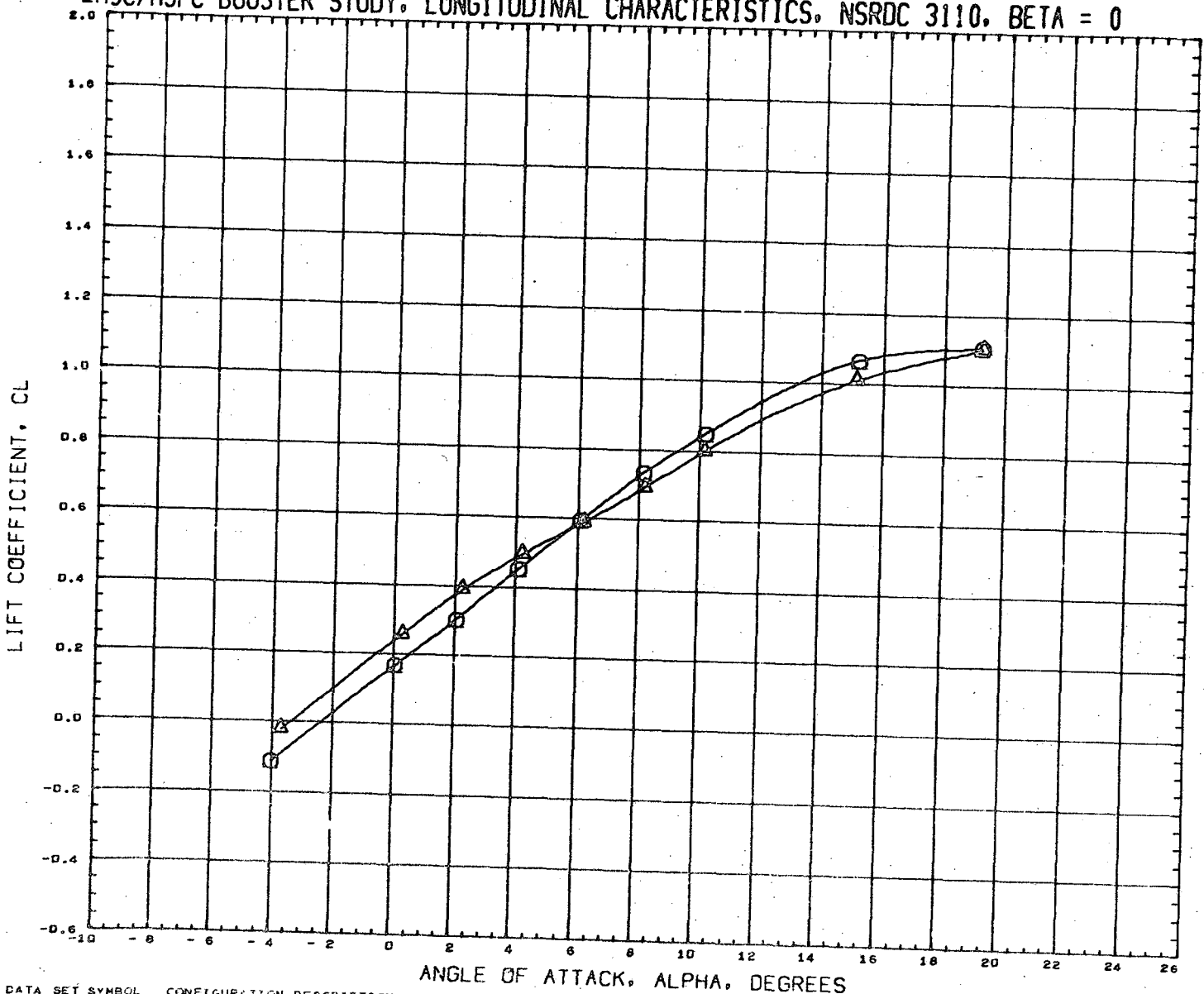
INCIDC	CNDPOS	INCIDW	WNGPOS
3.000	2.000	3.000	2.000
15.000	2.000	3.000	2.000

REFERENCE INFORMATION

SREF	1.3550	SQ. FT.
LREF	41.4360	INCHES
BREF	41.4360	INCHES
XMRP	31.1400	INCHES
YMRP	0.0000	INCHES
ZMRP	0.2250	INCHES
SCALE	1.5000	PERCENT

MACH 0.300

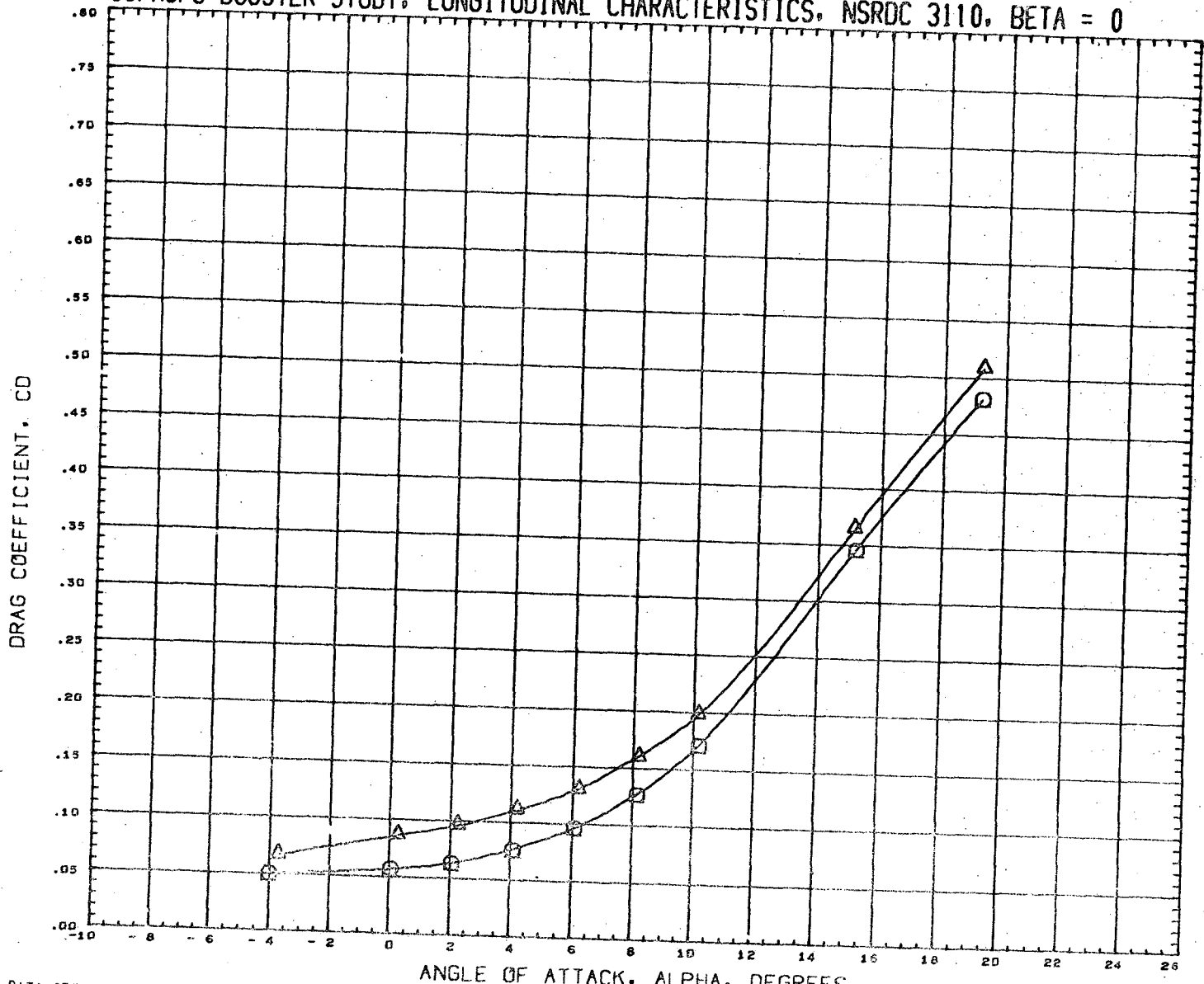
LMSC/MSFC BOOSTER STUDY. LONGITUDINAL CHARACTERISTICS. NSRDC 3110. BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2057)	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1	3.000	2.000	3.000	2.000	SREF 1.3550 SQ.FT.
(RN2061)	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1	15.000	2.000	3.000	2.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRF 31.1400 INCHES
						YMRF 0.0000 INCHES
						ZMRF 0.2250 INCHES
						SCALE 1.5000 PERCENT

MACH 0.380

LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL
(RN2057)
(RN2061)



CONFIGURATION DESCRIPTION

NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1
NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1

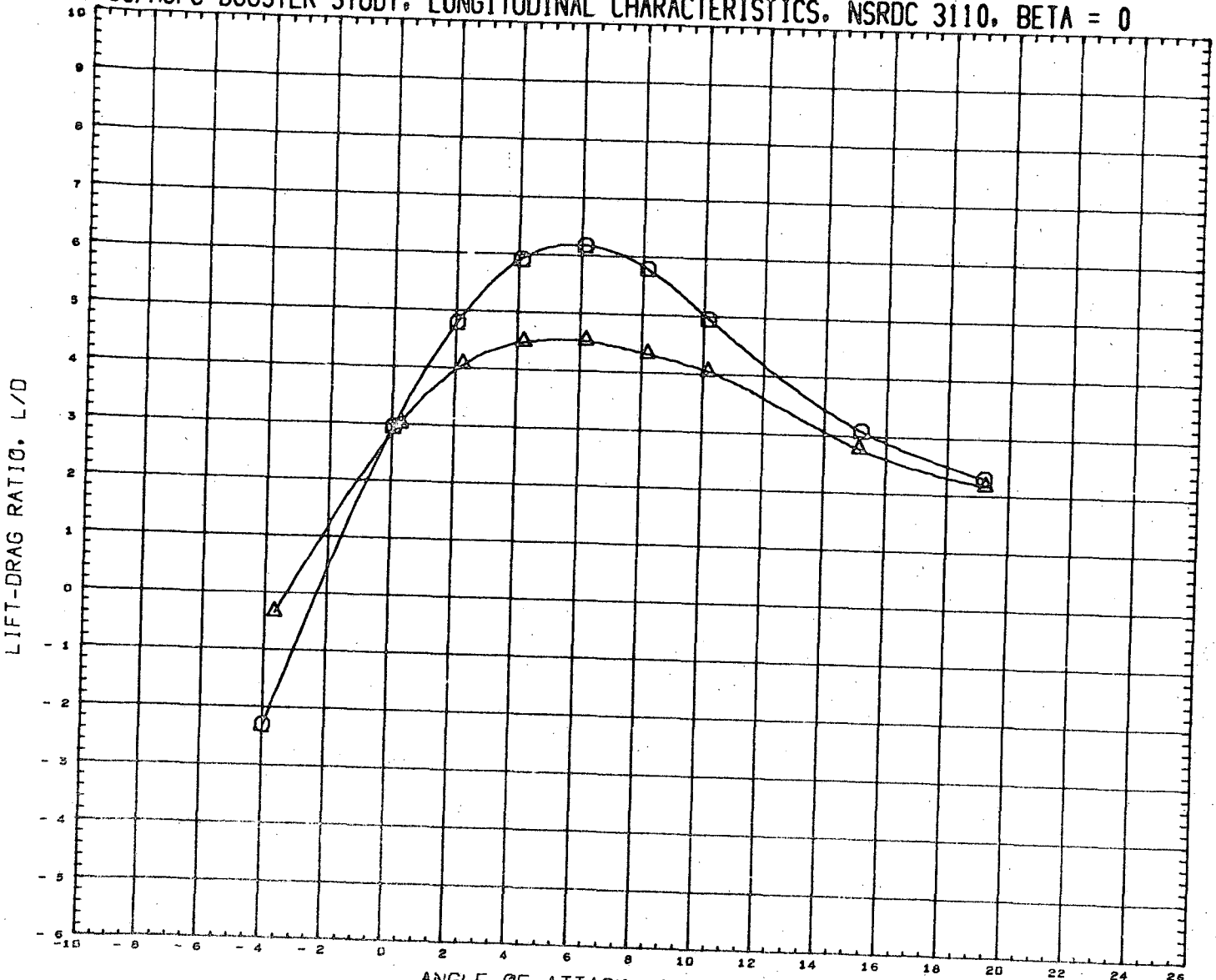
INCIDC	CNDPOS	INCIDW	WNGPOS
3.000	2.000	3.000	2.000
15.000	2.000	3.000	2.000

REFERENCE INFORMATION

PARAMETER	VALUE	UNIT
SREF	1.3550	SQ. FT.
LREF	41.4360	INCHES
BREF	41.4360	INCHES
XMRP	31.1400	INCHES
YMRP	0.0000	INCHES
ZMRP	0.2250	INCHES
SCALE	1.5000	PERCENT

MACH 0.380

LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL
 (R2057)
 (R2061)

CONFIGURATION DESCRIPTION
 NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1
 NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1

INCIDC	CNDPOS	INCIDW	WNGPOS
3.000	2.000	3.000	2.000
15.000	2.000	3.000	2.000

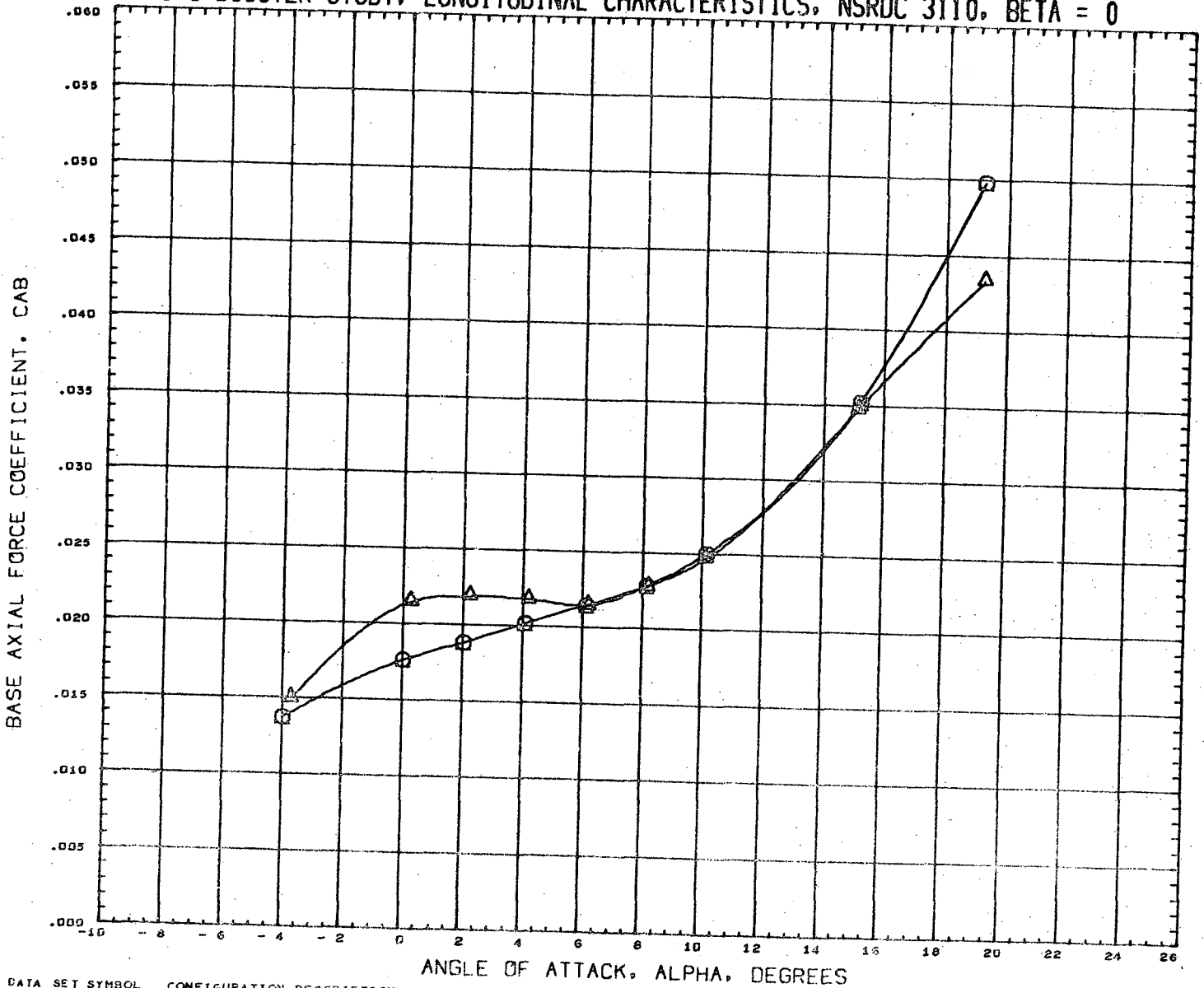
REFERENCE INFORMATION

SREF	1.3550	SQ. FT.
LREF	41.4360	INCHES
BREF	41.4360	INCHES
XMRP	31.1400	INCHES
YMRP	0.0000	INCHES
ZMRP	0.2250	INCHES
SCALE	1.5000	PERCENT

MACH 0.380

60

LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL
 (RN2057)
 (RN2061)

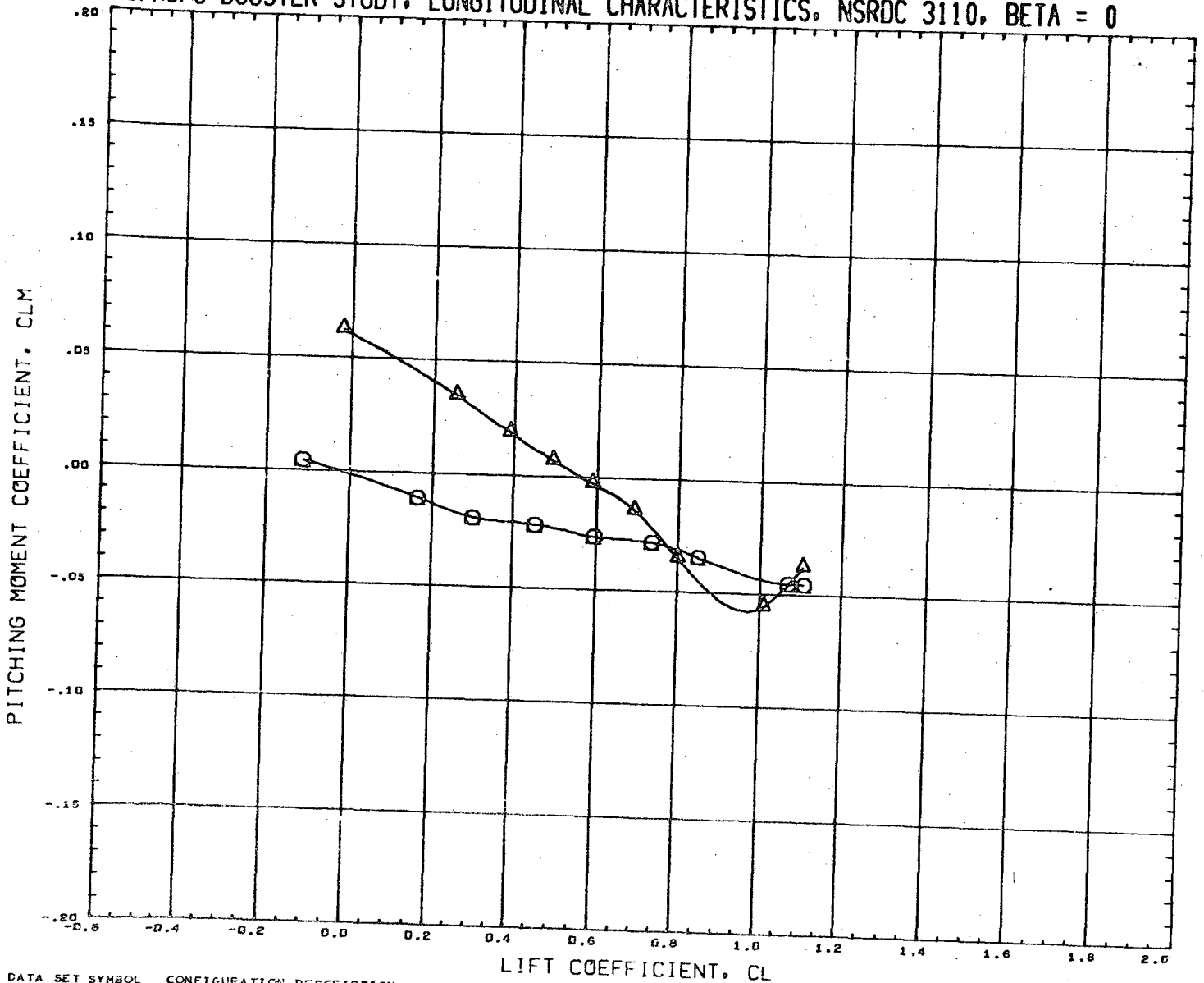
CONFIGURATION DESCRIPTION
 NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1
 NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1

INCIDC CNDPOS INCIDW WNGPOS
 3.000 2.000 3.000 2.000
 15.000 2.000 3.000 2.000

REFERENCE INFORMATION
 SREF 1.3550 SQ. FT.
 LREF 41.4360 INCHES
 BREF 41.4360 INCHES
 XMRP 31.1400 INCHES
 YMRP 0.0000 INCHES
 ZMRP 0.2250 INCHES
 SCALE 1.5000 PERCENT

MACH 0.380

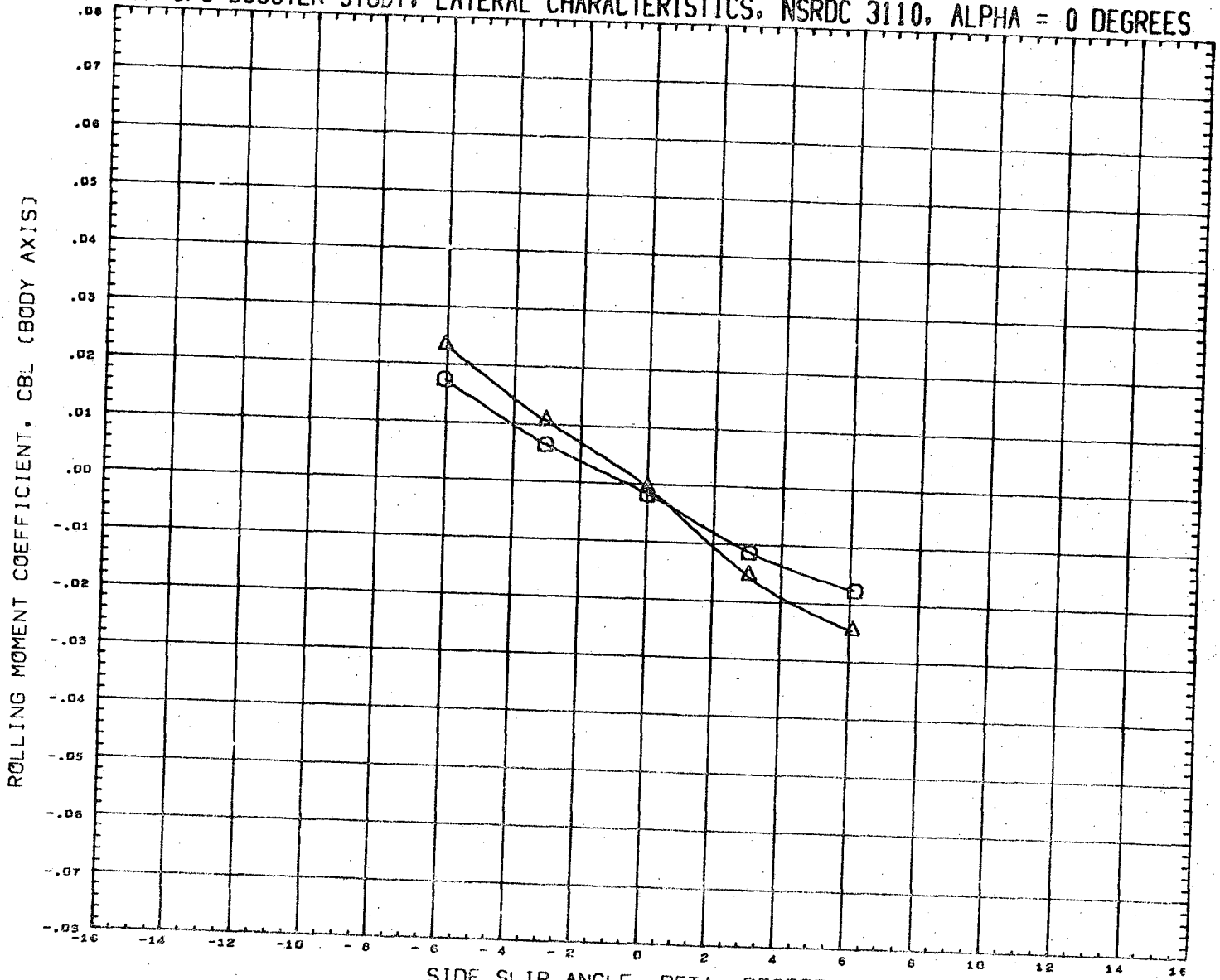
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGFOS	REFERENCE INFORMATION
(RN2057)	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1	3.000	2.000	3.000	2.000	SREF 1.3550 SQ.FT.
(RN2061)	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1	15.000	2.000	3.000	2.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCNT

MACH 0.380

LMSC/MSFC BOOSTER STUDY, LATERAL CHARACTERISTICS, NSRDC 3110, ALPHA = 0 DEGREES



DATA SET SYMBOL
(RN2058)
(RN2062)



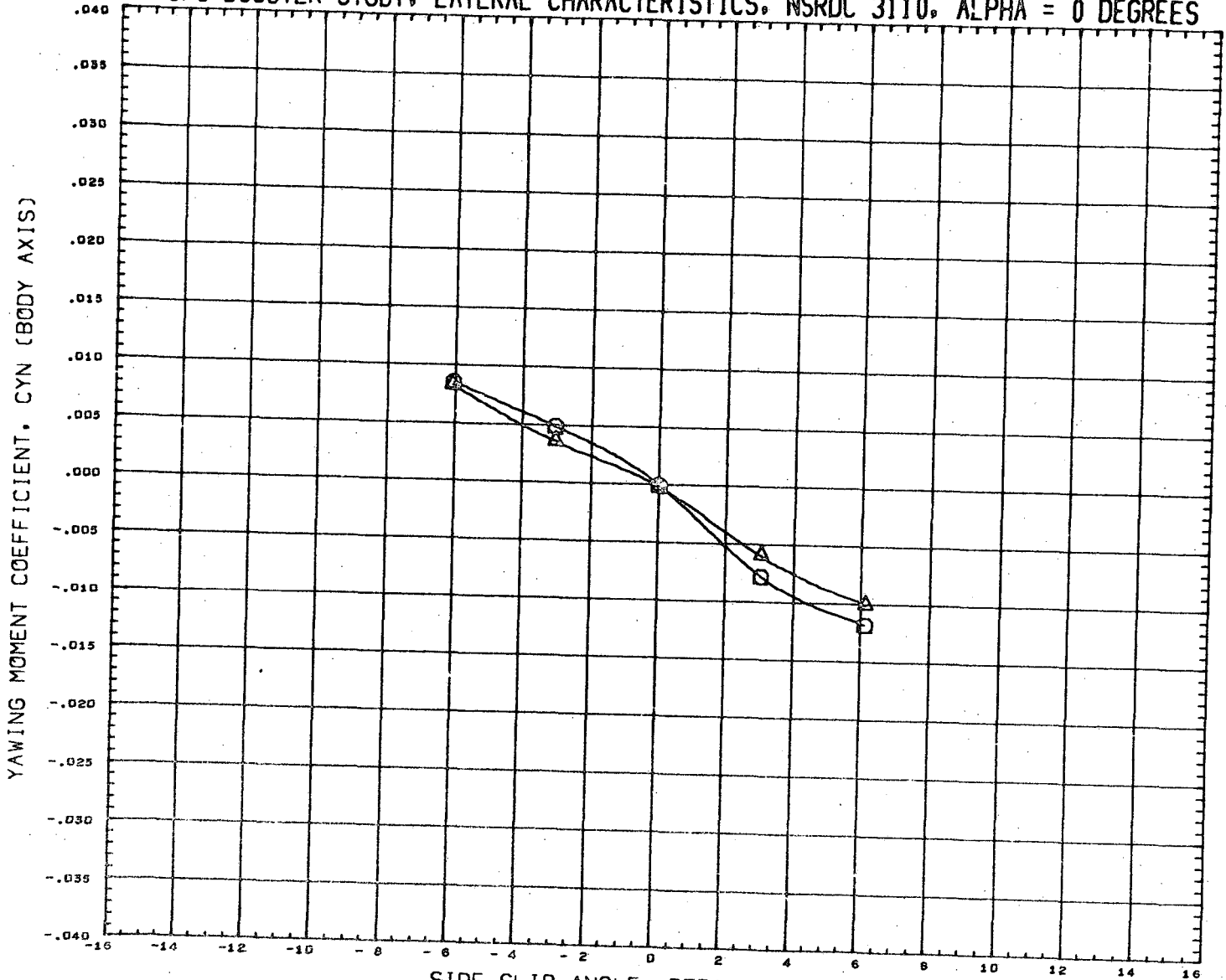
CONFIGURATION DESCRIPTION
NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1
NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1

INCIDC	CNDPOS	INCIDW	WNGPOS
3.000	2.000	3.000	2.000
15.000	2.000	3.000	2.000

REFERENCE INFORMATION	
SREF	1.3550 SQ. FT.
LREF	41.4360 INCHES
BREF	41.4360 INCHES
XMRP	31.1400 INCHES
YMRP	0.0000 INCHES
ZMRP	0.2250 INCHES
SCALE	1.5000 PERCENT

MACH 0.379

LMSC/MSFC BOOSTER STUDY, LATERAL CHARACTERISTICS, NSRDC 3110, ALPHA = 0 DEGREES



DATA SET SYMBOL
 (RN2050) \circ
 (RN2062) \triangle

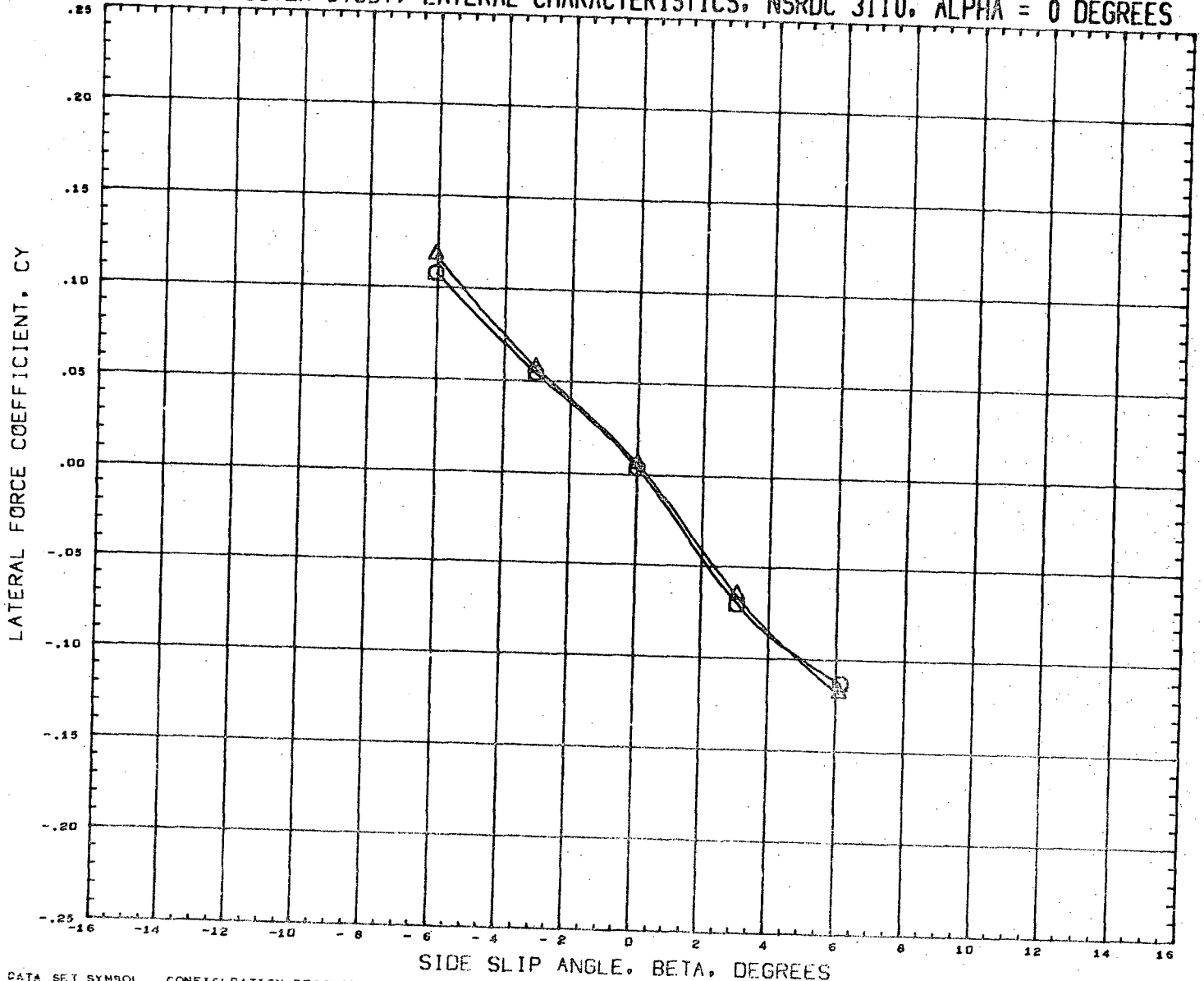
CONFIGURATION DESCRIPTION
 NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1
 NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1

INCIDC 3.000
 15.000
 CNDPOS 2.000
 2.000
 INCIDW 3.000
 3.000
 WNGPOS 2.000
 2.000

REFERENCE INFORMATION
 SREF 1.3550 SQ. FT.
 LREF 41.4360 INCHES
 BREF 41.4360 INCHES
 XMRP 31.1400 INCHES
 YMRP 0.0000 INCHES
 ZMRP 0.2250 INCHES
 SCALE 1.5000 PERCENT

MACH 0.379

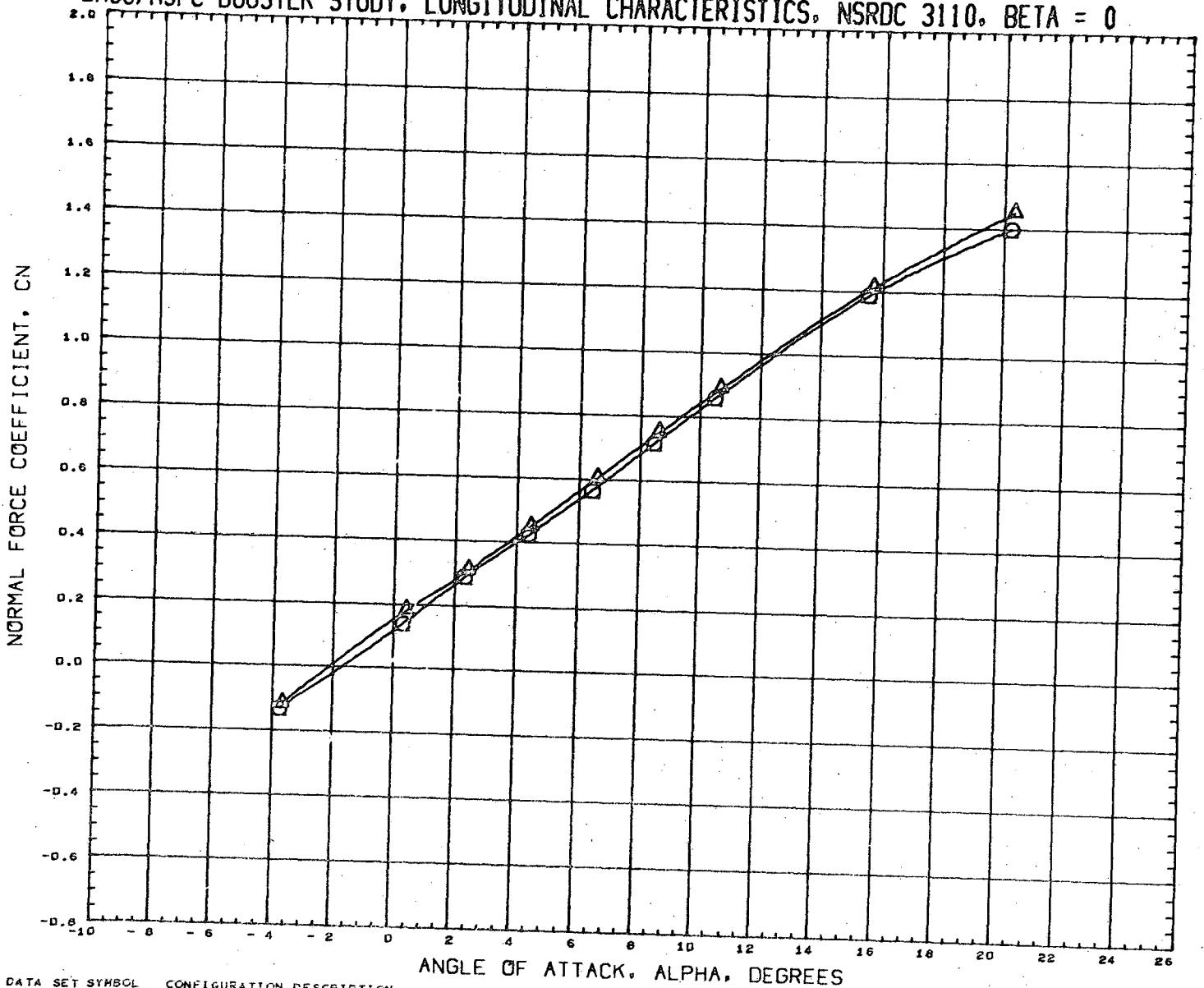
LMSC/MSFC BOOSTER STUDY, LATERAL CHARACTERISTICS, NSRDC 3110, ALPHA = 0 DEGREES



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2058)	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1	3.000	2.000	3.000	2.000	SREF 1.3550 SQ. FT.
(RN2062)	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1	15.000	2.000	3.000	2.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCNT

MACH 0.379

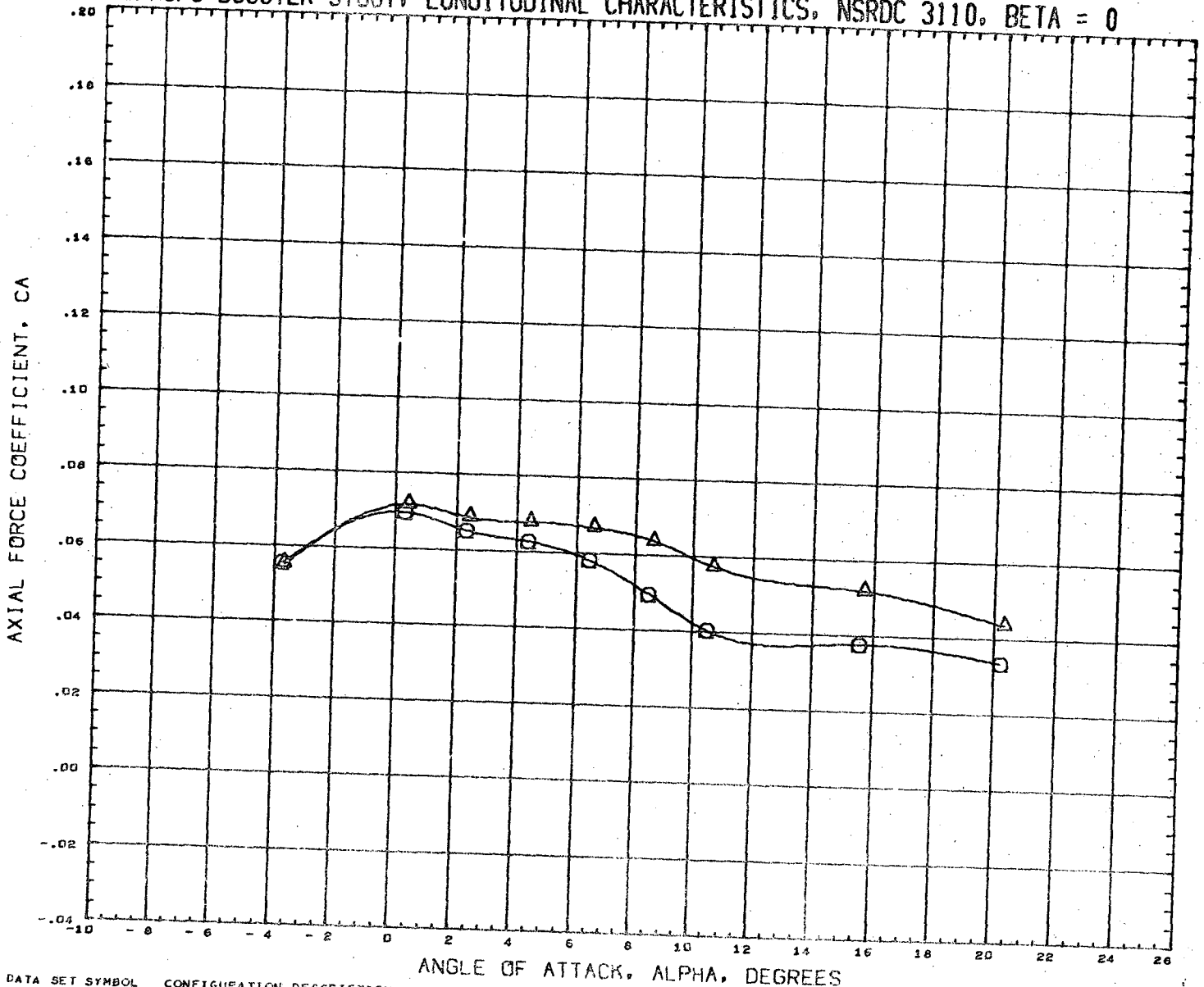
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(R2005)	NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1	15.000	1.000	0.000	1.000	SREF 1.3550 SQ.FT.
(R2069)	NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1	15.000	1.000	0.000	1.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCENT

MACH 0.379

LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0

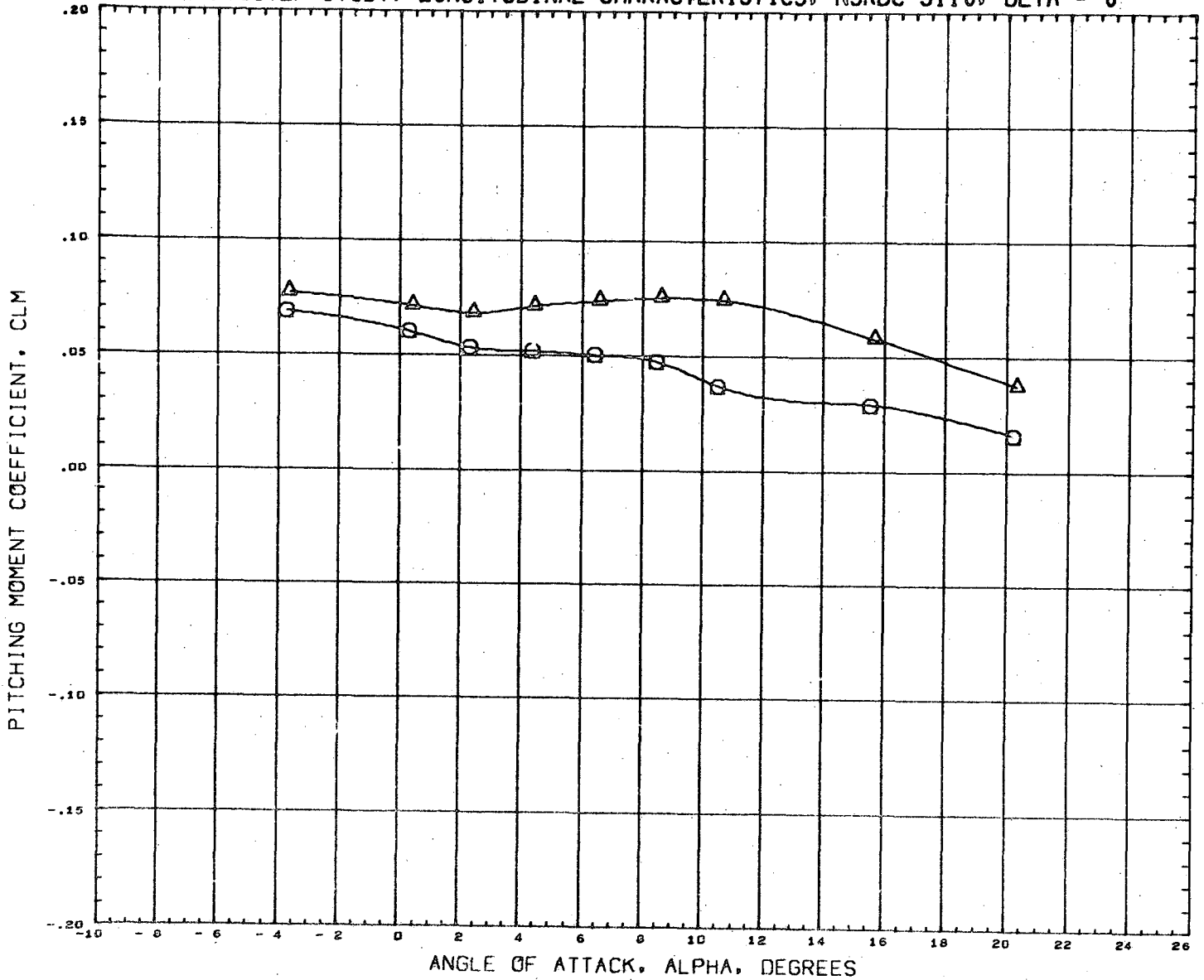


DATA SET SYMBOL (RN2005) (RN2069) CONFIGURATION DESCRIPTION NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1 NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1

INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION	
15.000	1.000	0.000	1.000	SREF	1.3550 SQ.FT.
15.000	1.000	0.000	1.000	LREF	41.4360 INCHES
				BREF	41.4360 INCHES
				XMRP	31.3400 INCHES
				YMRP	0.0000 INCHES
				ZMRP	0.2250 INCHES
				SCALE	1.5000 PERCNT

MACH 0.379

LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL
(RN2005)
(RN2069)



CONFIGURATION DESCRIPTION
NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1
NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1

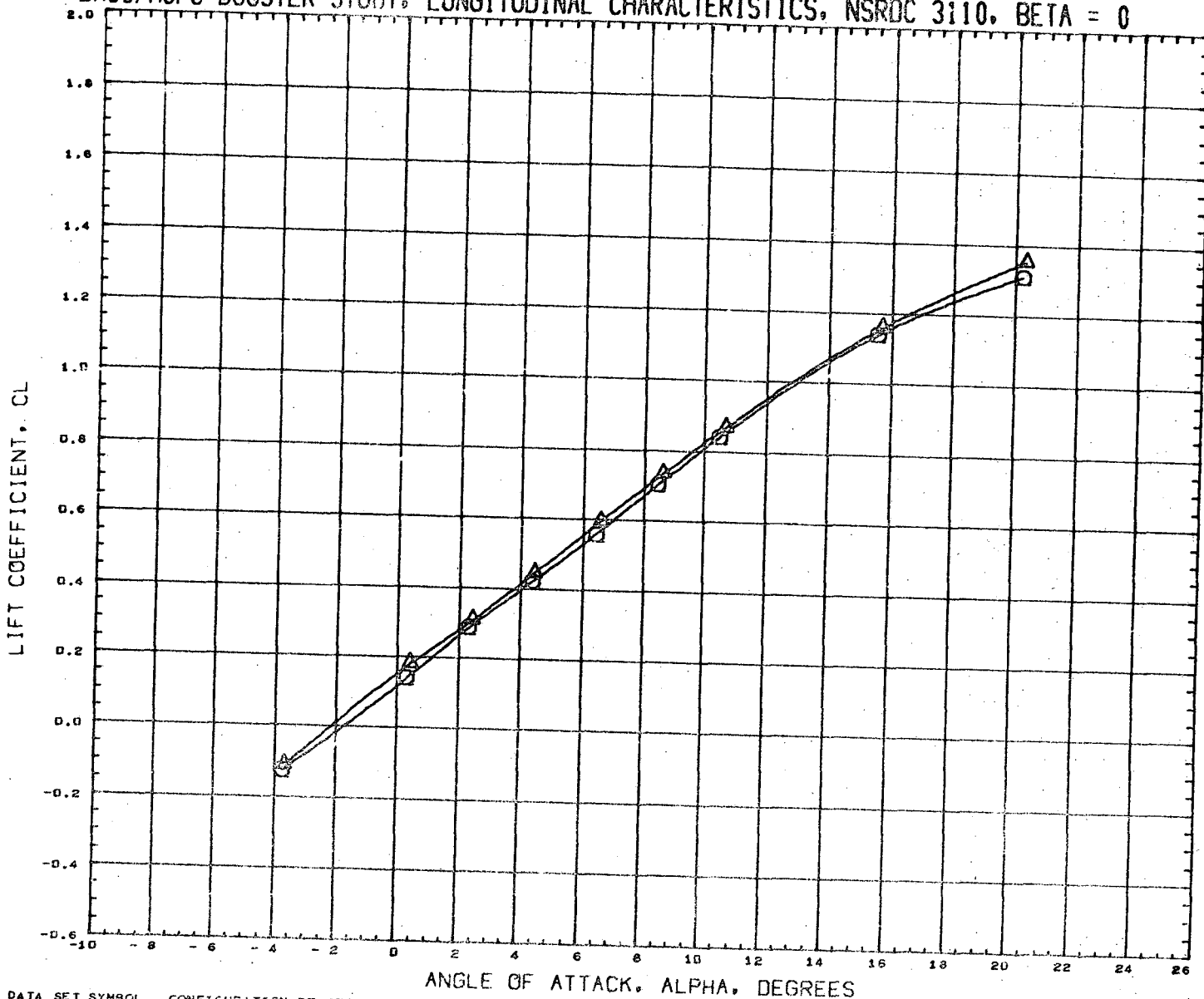
INCIDC	CNDPOS	INCIDW	WNGPOS
15.000	1.000	0.000	1.000
15.000	1.000	0.000	1.000

REFERENCE INFORMATION

SREF	1.3550	SQ. FT.
LREF	41.4360	INCHES
BREF	41.4360	INCHES
XMRF	31.1400	INCHES
YMRF	0.0000	INCHES
ZMRF	0.2250	INCHES
SCALE	1.5000	PERCENT

MACH 0.379

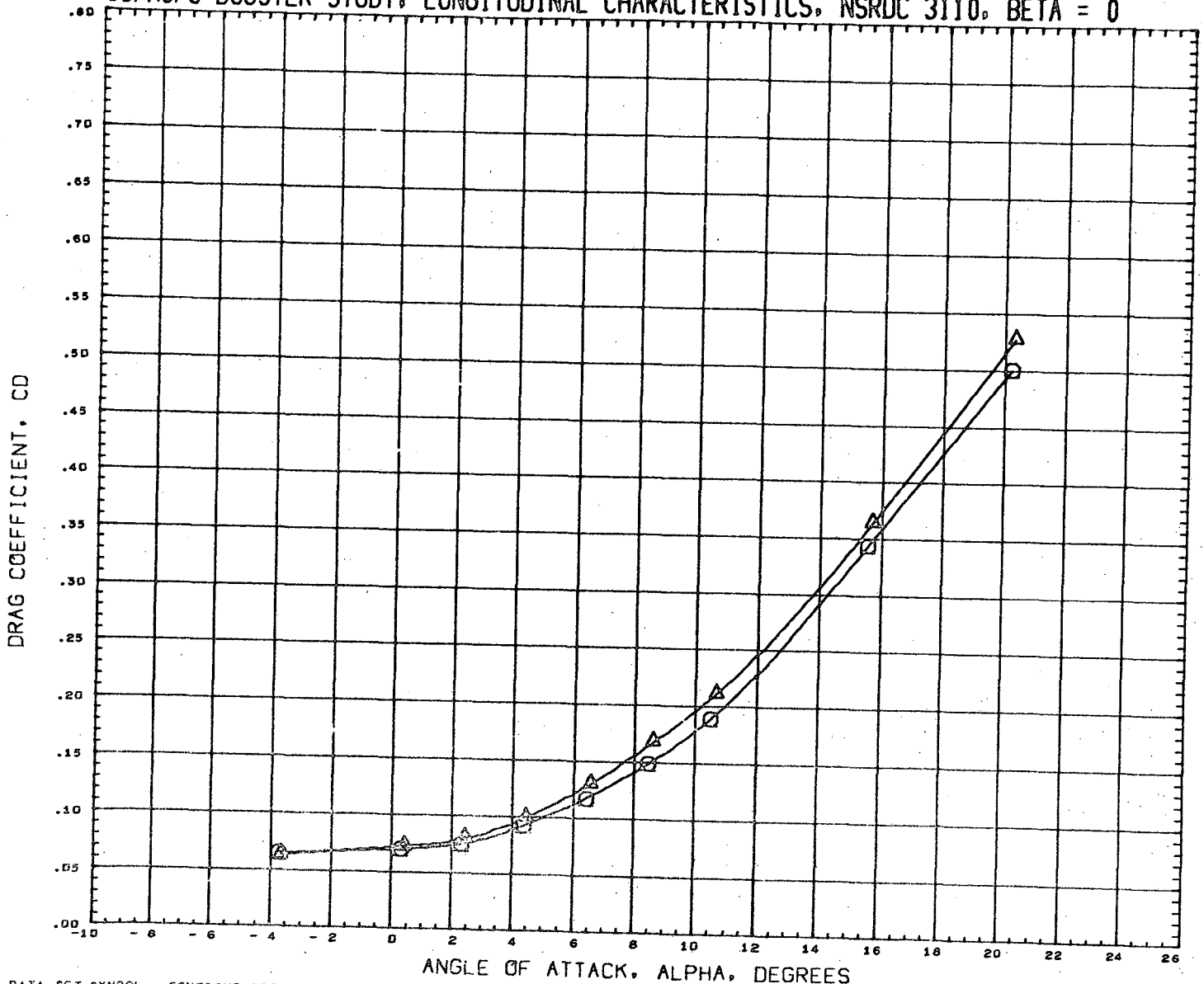
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2005)	NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1	15.000	1.000	0.000	1.000	SREF 1.3550 SQ. FT.
(RN2069)	NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1	15.000	1.000	0.000	1.000	LREF 41.4380 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCENT

MACH 0.379

LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL
(RN2DD5)
(RN2DS9)



CONFIGURATION DESCRIPTION
NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1
NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1

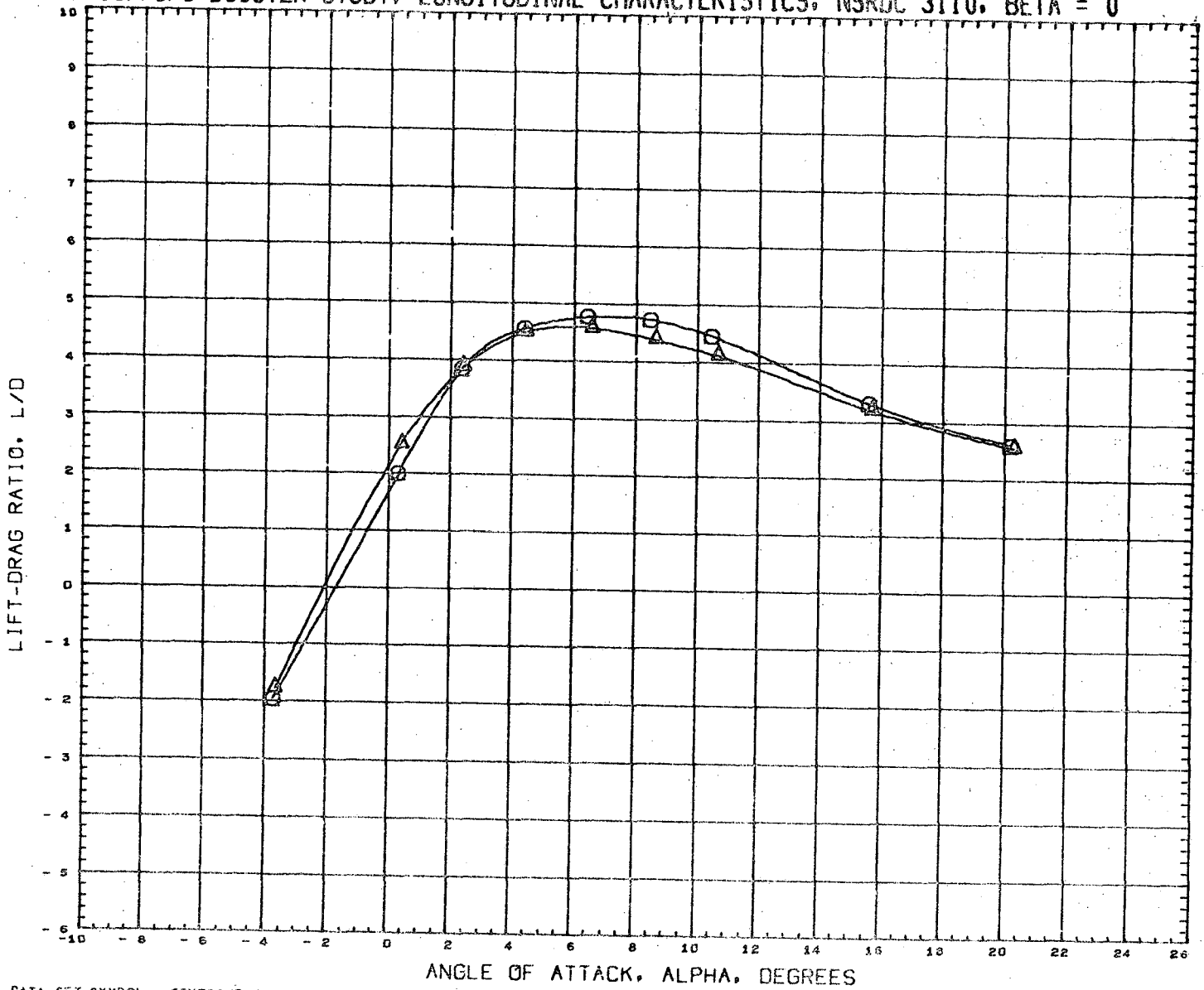
INCIDC	CNDPOS	INCIDW	WNGPOS
15.000	1.000	0.000	1.000
15.000	1.000	0.000	1.000

REFERENCE INFORMATION

SREF	1.3550	SQ.FT.
LREF	41.4360	INCHES
BREF	41.4360	INCHES
XMRP	31.1400	INCHES
YMRP	0.0000	INCHES
ZMRP	0.2250	INCHES
SCALE	1.5000	PERCENT

MACH 0.379

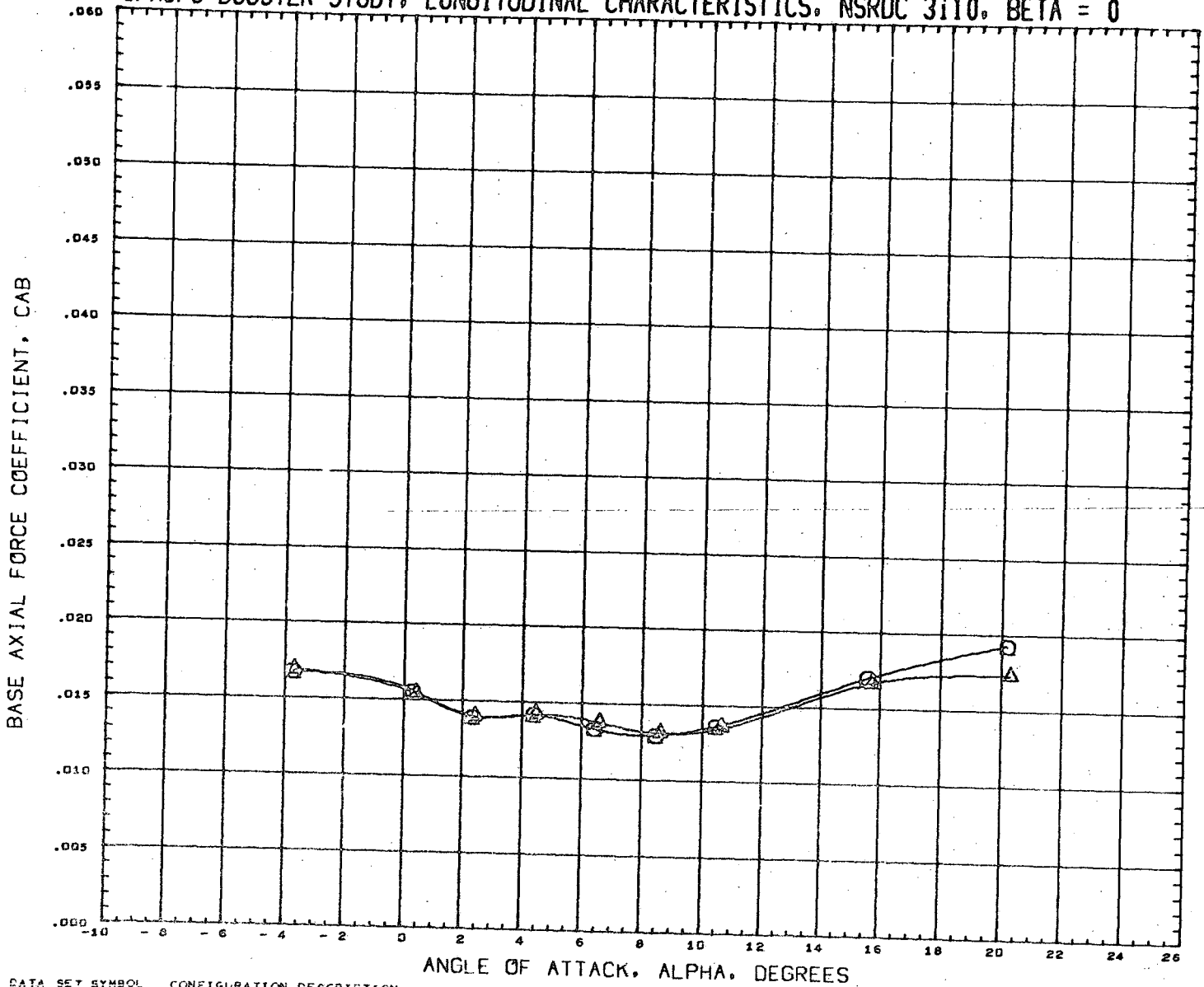
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCICW	WNGPOS	REFERENCE INFORMATION
(RN2005)	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1	15.000	1.000	0.000	1.000	SREF 1.3550 SQ.FT.
(RN2069)	NSRDC-3110,MSFC/LMSC BOOSTER B1C1F1W1V1	15.000	1.000	0.000	1.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCNT

MACH 0.379

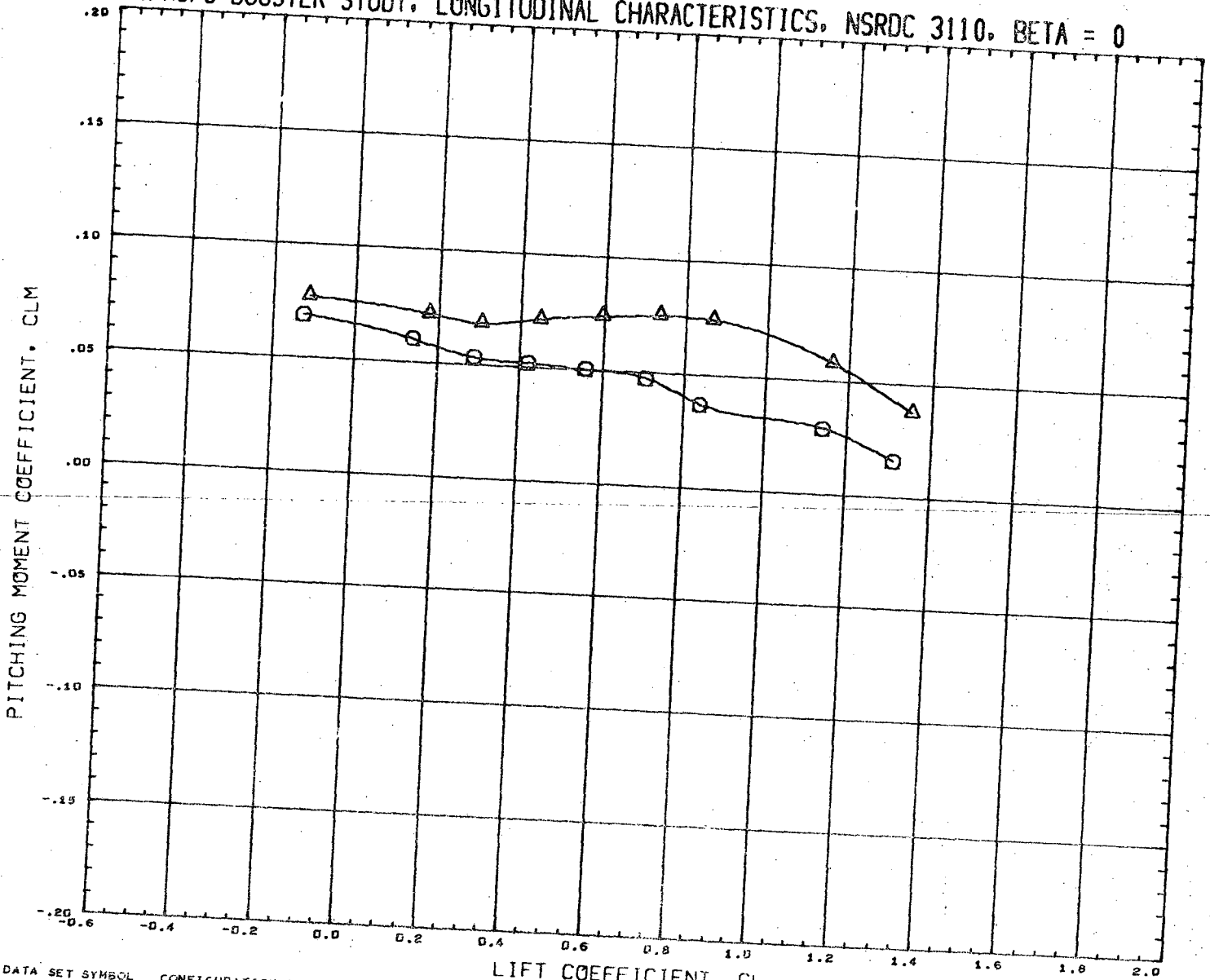
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2005)	NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1	15.000	1.000	0.000	1.000	SREF 1.3550 SQ. FT.
(RN2069)	NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1	15.000	1.000	0.000	1.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCNT

MACH 0.379

LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL
(RN2G05) \square
(RN2D69) \triangle

CONFIGURATION DESCRIPTION
NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1
NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1

LIFT COEFFICIENT, CL

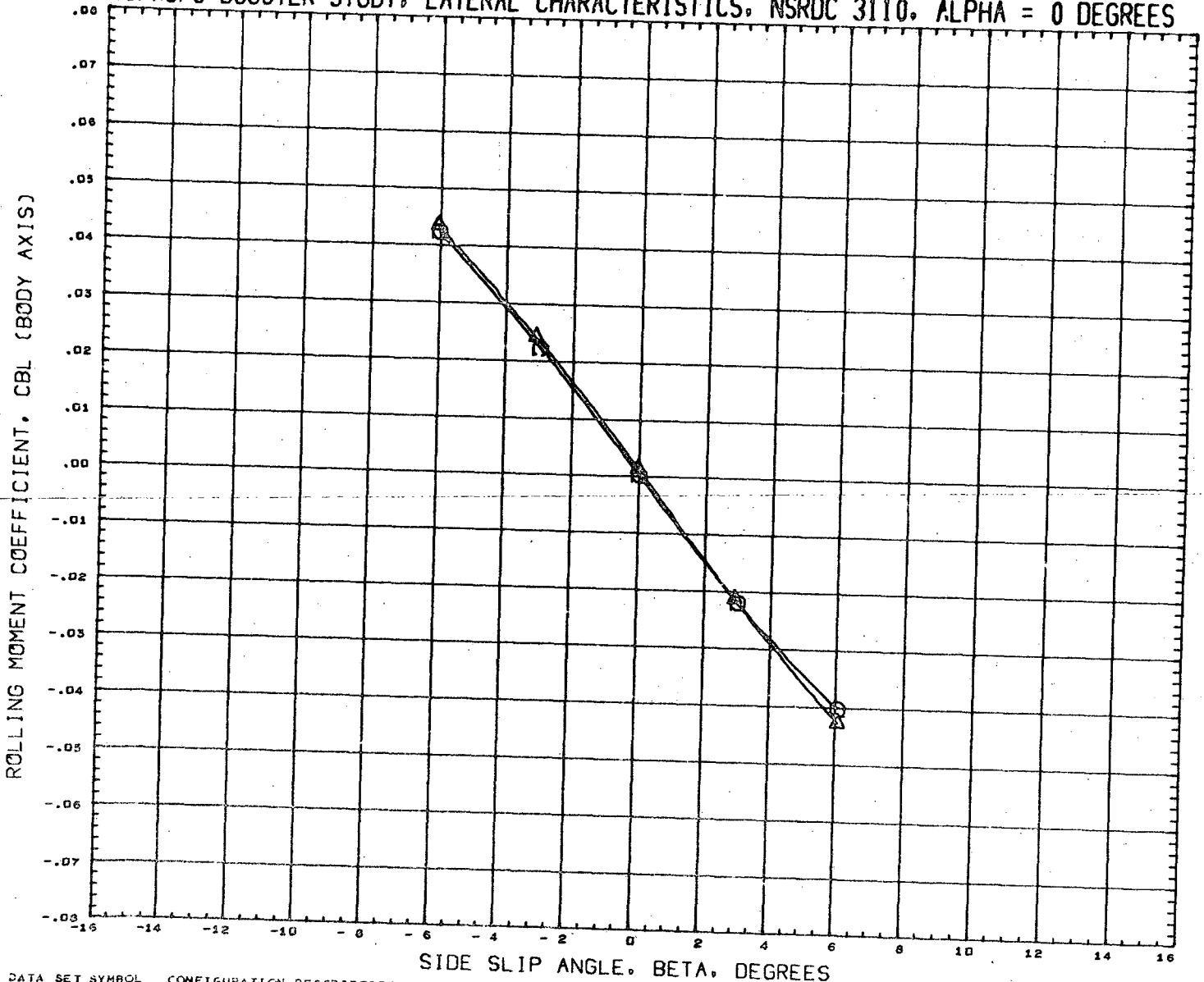
INCIDC	CNDPOS	INCIDW	WNCPOS
15.000	1.000	0.000	1.000
15.000	1.000	0.000	1.000



REFERENCE INFORMATION

SREF	1.3550	SQ. FT.
LREF	41.4360	INCHES
BREF	41.4360	INCHES
XMRP	31.1400	INCHES
YMRP	0.0000	INCHES
ZMRP	0.2250	INCHES
SCALE	1.5000	PERCENT

MACH 0.379

LMSC/MSFC BOOSTER STUDY, LATERAL CHARACTERISTICS, NSRDC 3110, ALPHA = 0 DEGREES



DATA SET SYMBOL
(RN2006) 
(RN2070) 

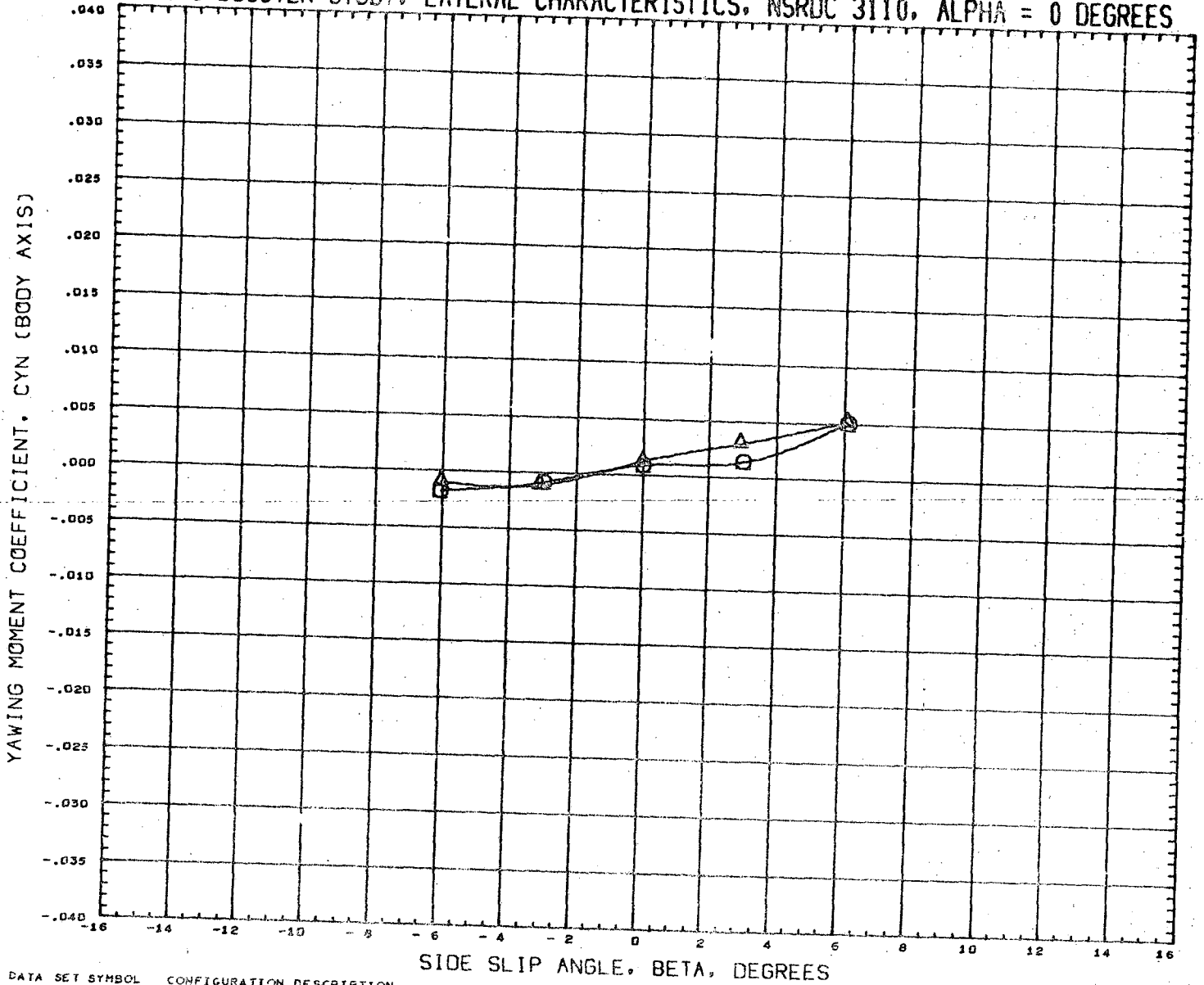
CONFIGURATION DESCRIPTION
NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1
NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1

INCIDC	CNDPOS	INCIDW	WNGPOS
15.000	1.000	0.000	1.000
15.000	1.000	0.000	1.000

REFERENCE INFORMATION		
SREF	1.3550	SQ. FT.
LREF	41.4360	INCHES
BREF	41.4360	INCHES
XMRP	31.1400	INCHES
YMRP	0.0000	INCHES
ZMRP	0.2250	INCHES
SCALE	1.5000	PERCNT

MACH 0.380

LMSC/MSFC BOOSTER STUDY, LATERAL CHARACTERISTICS, NSRDC 3110, ALPHA = 0 DEGREES



DATA SET SYMBOL
(RN2006)
(RN2070)



CONFIGURATION DESCRIPTION
NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1
NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1

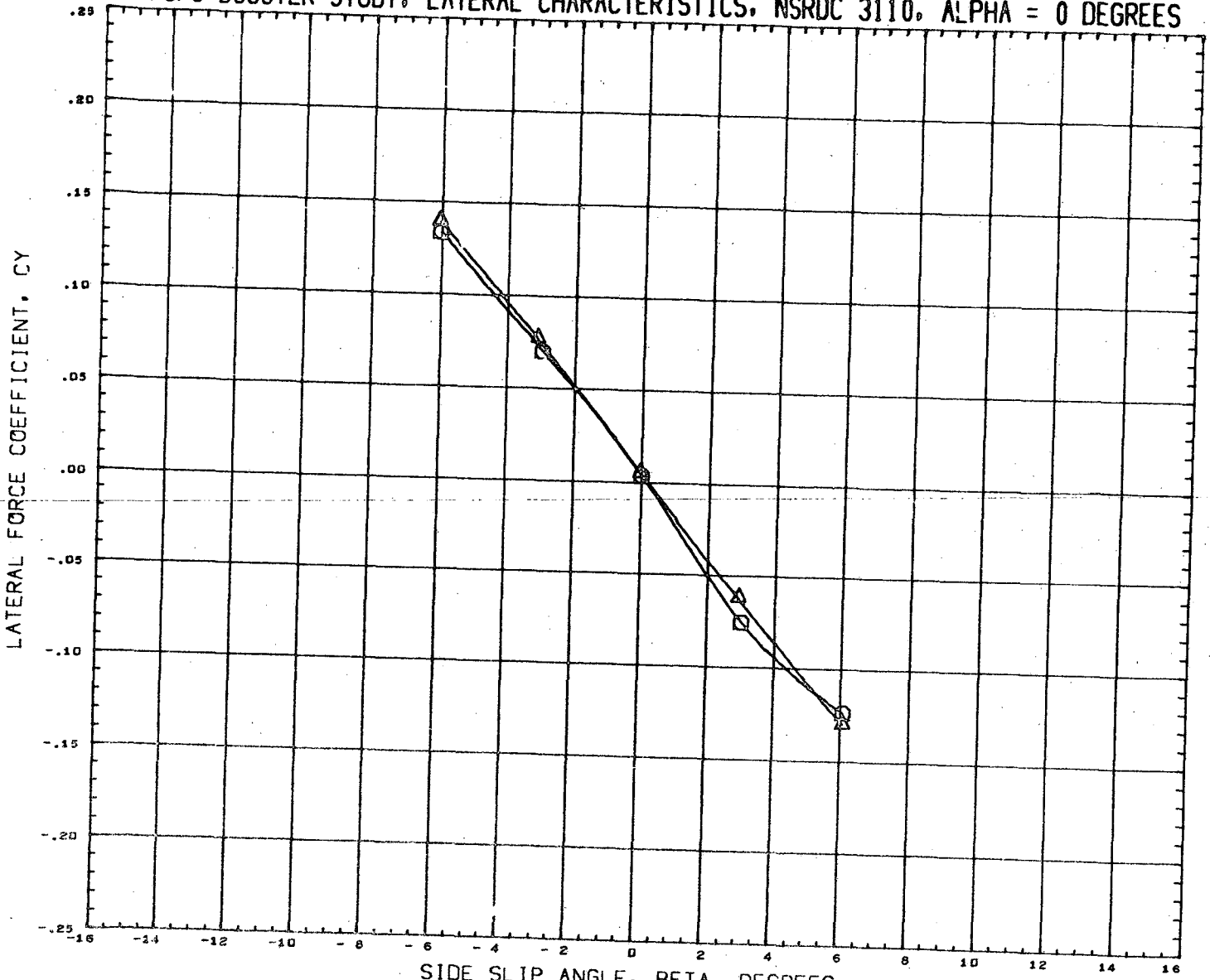
INCIDC	CNDPOS	INCIDW	WNGPOS
15.000	1.000	0.000	1.000
15.000	1.000	0.000	1.000

REFERENCE INFORMATION

SREF	1.3550	SQ.FT.
LREF	41.4360	INCHES
BREF	41.4360	INCHES
XMRP	31.1400	INCHES
YMRP	0.0000	INCHES
ZMRP	0.2250	INCHES
SCALE	1.5000	PERCENT

MACH D.380

LMSC/MSFC BOOSTER STUDY, LATERAL CHARACTERISTICS, NSRDC 3110, ALPHA = 0 DEGREES



DATA SET SYMBOL
(RN2006)
(RN2070)

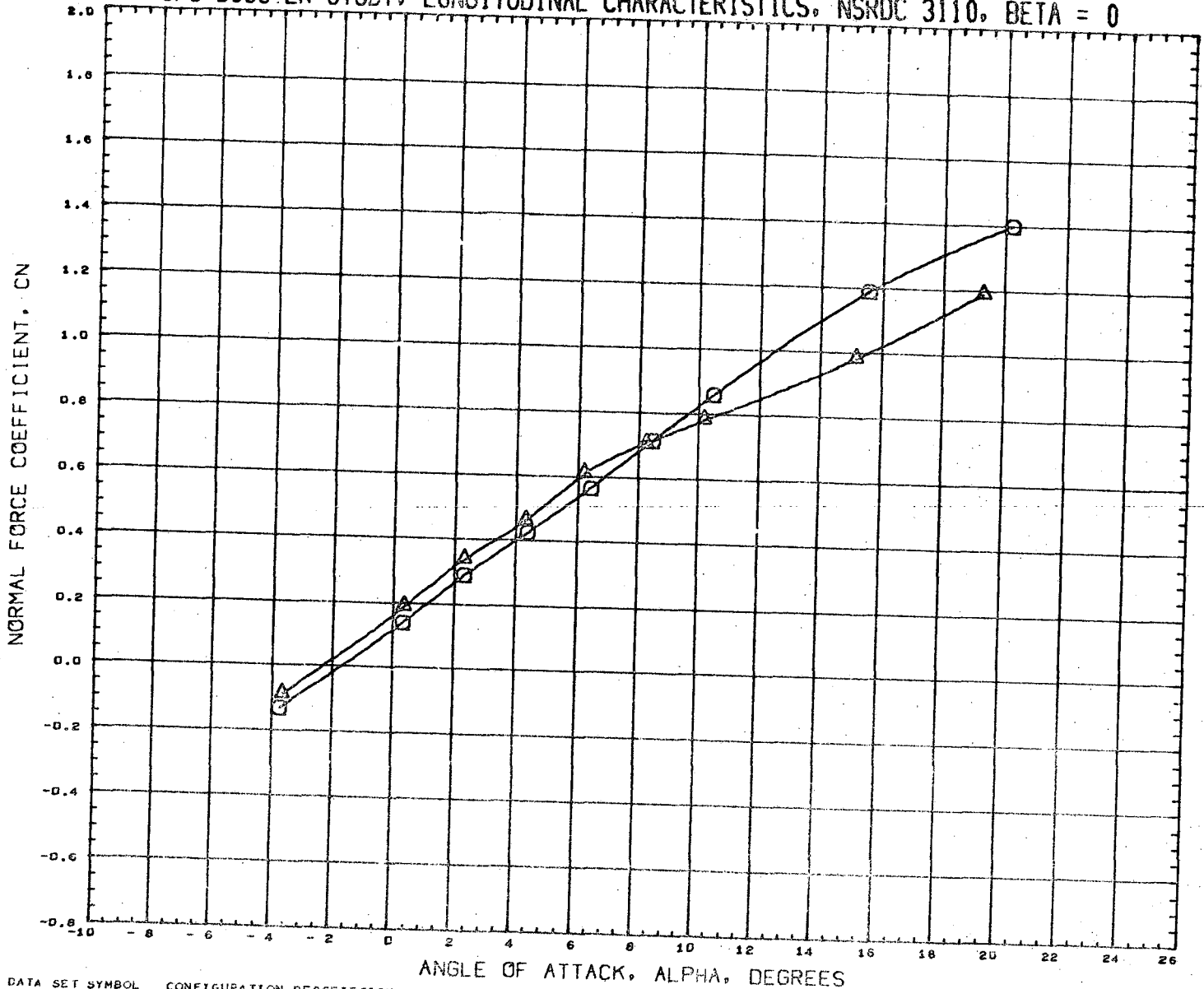
CONFIGURATION DESCRIPTION
NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1
NSRDC-3110,MSFC/LMSC BOOSTER B1C1F1W1V1

INCIDC	CNDPOS	INCIDW	WNGPOS
15.000	1.000	0.000	1.000
15.000	1.000	0.000	1.000

REFERENCE INFORMATION
SREF 1.3550 SQ.FT.
LREF 41.4360 INCHES
BREF 41.4360 INCHES
XMRP 31.1400 INCHES
YMRP 0.0000 INCHES
ZMRP 0.2250 INCHES
SCALE 1.5000 PERCNT

MACH 0.380

LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL
(RN2005) □
(RN2013) △

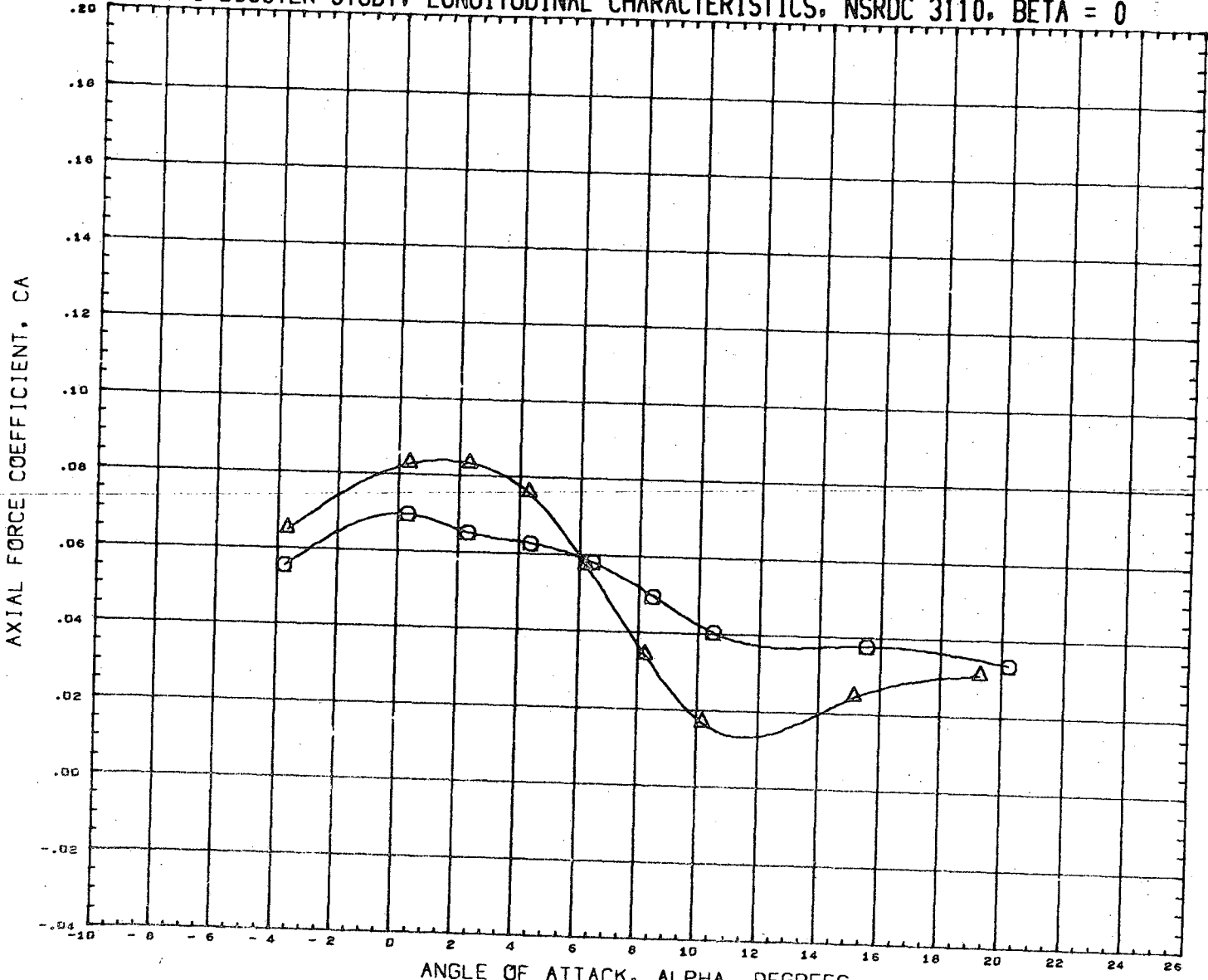
CONFIGURATION DESCRIPTION
NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1
NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1

INCIDC	CNCFOS	INCIDW	WNGPOS
15.000	1.000	0.000	1.000
15.000	2.000	0.000	1.000

REFERENCE INFORMATION
SREF 1.3550 SQ. FT.
LREF 41.4360 INCHES
BREF 41.4360 INCHES
XMRP 31.1400 INCHES
YMRP 0.0000 INCHES
ZMRP 0.2250 INCHES
SCALE 1.5000 PERCENT

MACH 0.379

LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL
 (RN2005)
 (RN2013)

CONFIGURATION DESCRIPTION
 NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1
 NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1

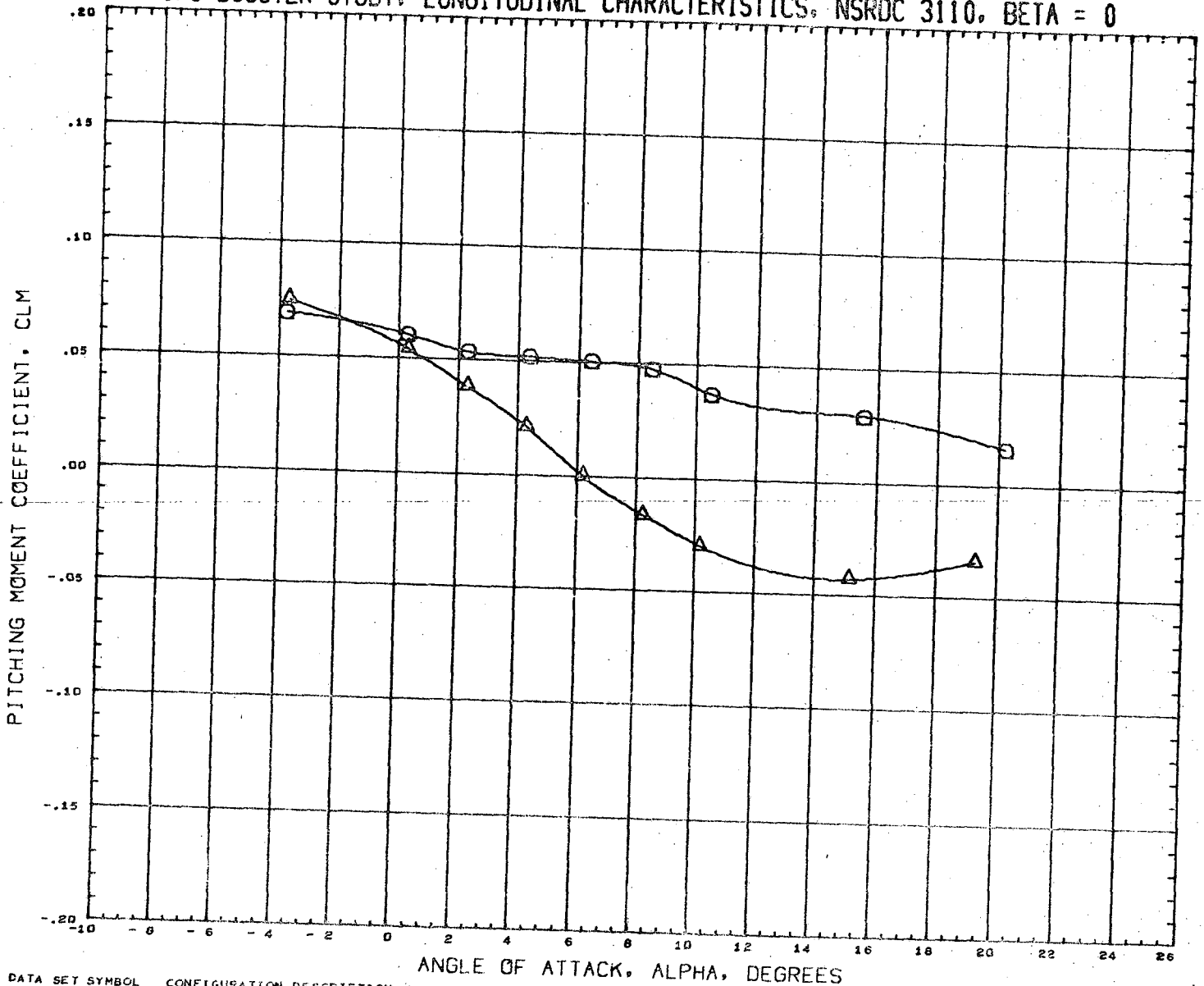
INCIDC	CNDPOS	INCIDW	WNGPOS
15.000	1.000	0.000	1.000
15.000	2.000	0.000	1.000

REFERENCE INFORMATION

SREF	1.3550	SQ. FT.
LREF	41.4360	INCHES
BREF	41.4360	INCHES
XMRP	31.1400	INCHES
YMRP	0.0000	INCHES
ZMRP	0.2250	INCHES
SCALE	1.5000	PERCNT

MACH 0.379

LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL
(RN2005)
(RN2013)



CONFIGURATION DESCRIPTION

NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1
NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1

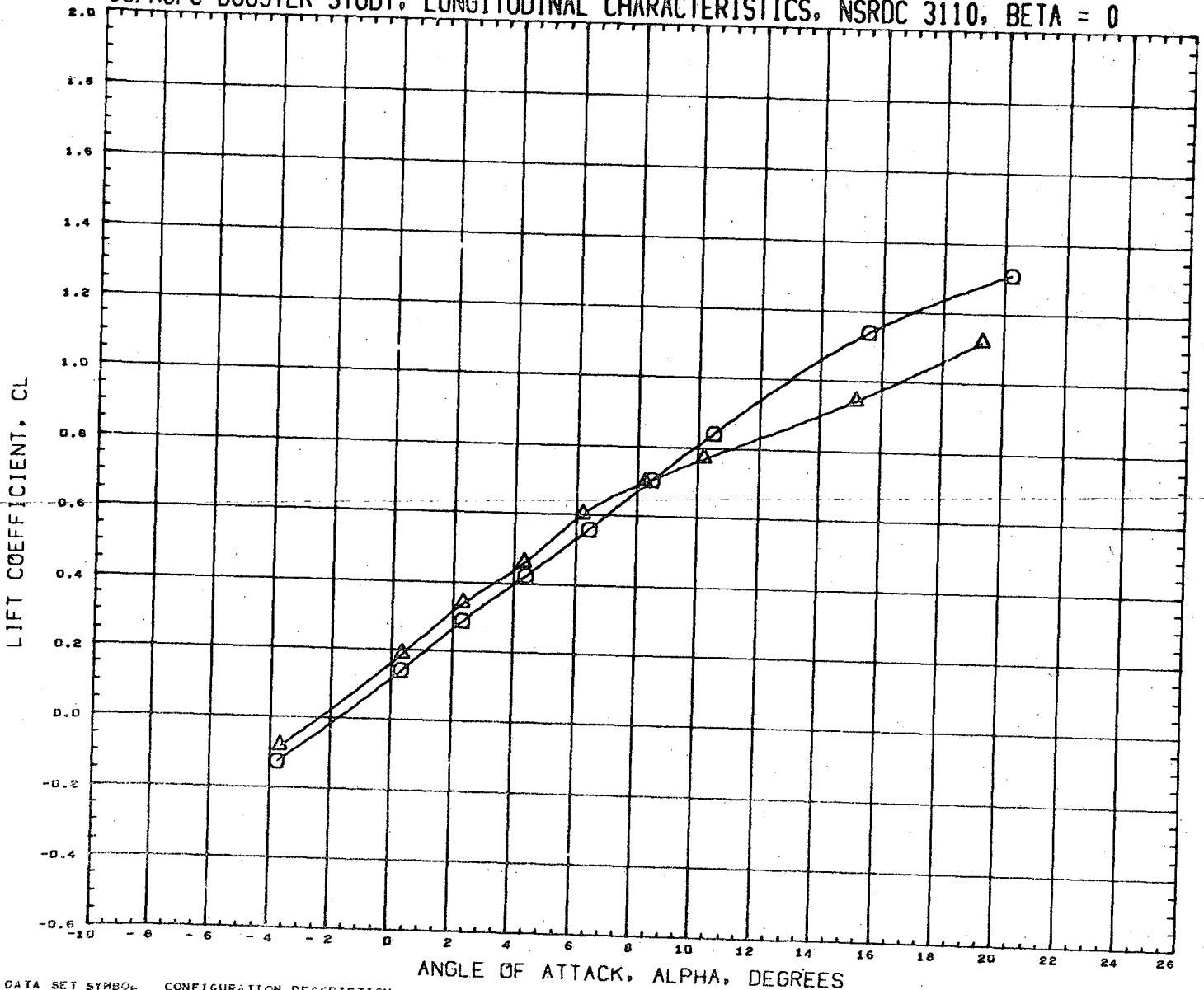
INCIDC	CNDPOS	INCIDW	WNGPOS
15.000	1.000	0.000	1.000
15.000	2.000	0.000	1.000

REFERENCE INFORMATION

SREF	1.3550	SQ. FT.
LREF	41.4360	INCHES
BREF	41.4360	INCHES
XMRP	31.1400	INCHES
YMRP	0.0000	INCHES
ZMRP	0.2250	INCHES
SCALE	1.5000	PERCNT

MACH 0.379

LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL:
 (RN2005) ○
 (RN2013) △

CONFIGURATION DESCRIPTION
 NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1
 NSRDC-3110, NSFC/LMSC BOOSTER B1C2F1W1V1

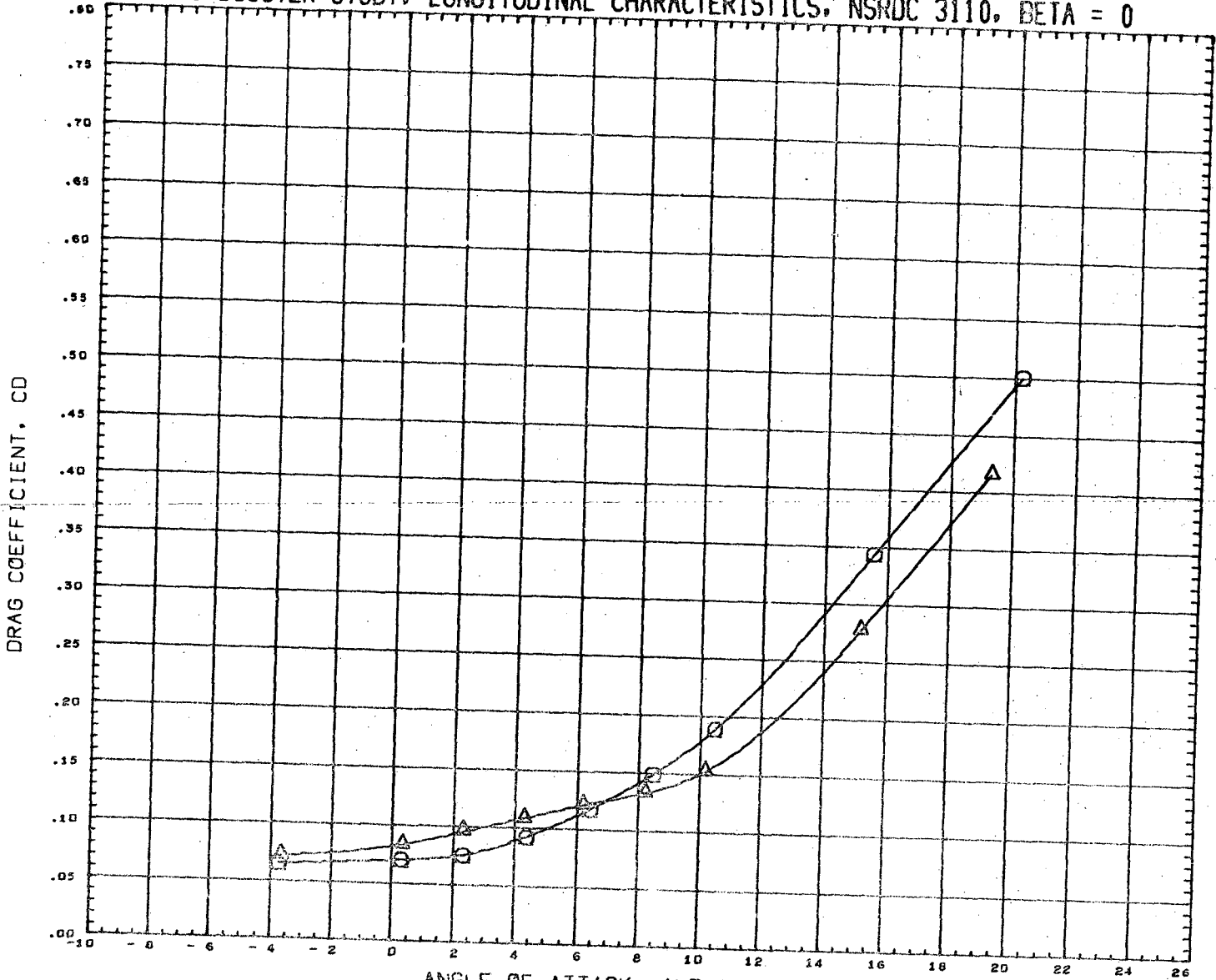
INCIDC	CNDPOS	INCIDW	WNGPOS
15.000	1.000	0.000	1.000
15.000	2.000	0.000	1.000

REFERENCE INFORMATION

SREF	1.3550	SQ.FT.
LREF	41.4360	INCHES
BREF	41.4360	INCHES
XMRP	31.1400	INCHES
YMRP	0.0000	INCHES
ZMRP	0.2250	INCHES
SCALE	1.5000	PERCENT

MACH 0.379

LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL
(RN2005) \circ
(RN2013) \triangle

CONFIGURATION DESCRIPTION
NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1
NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1

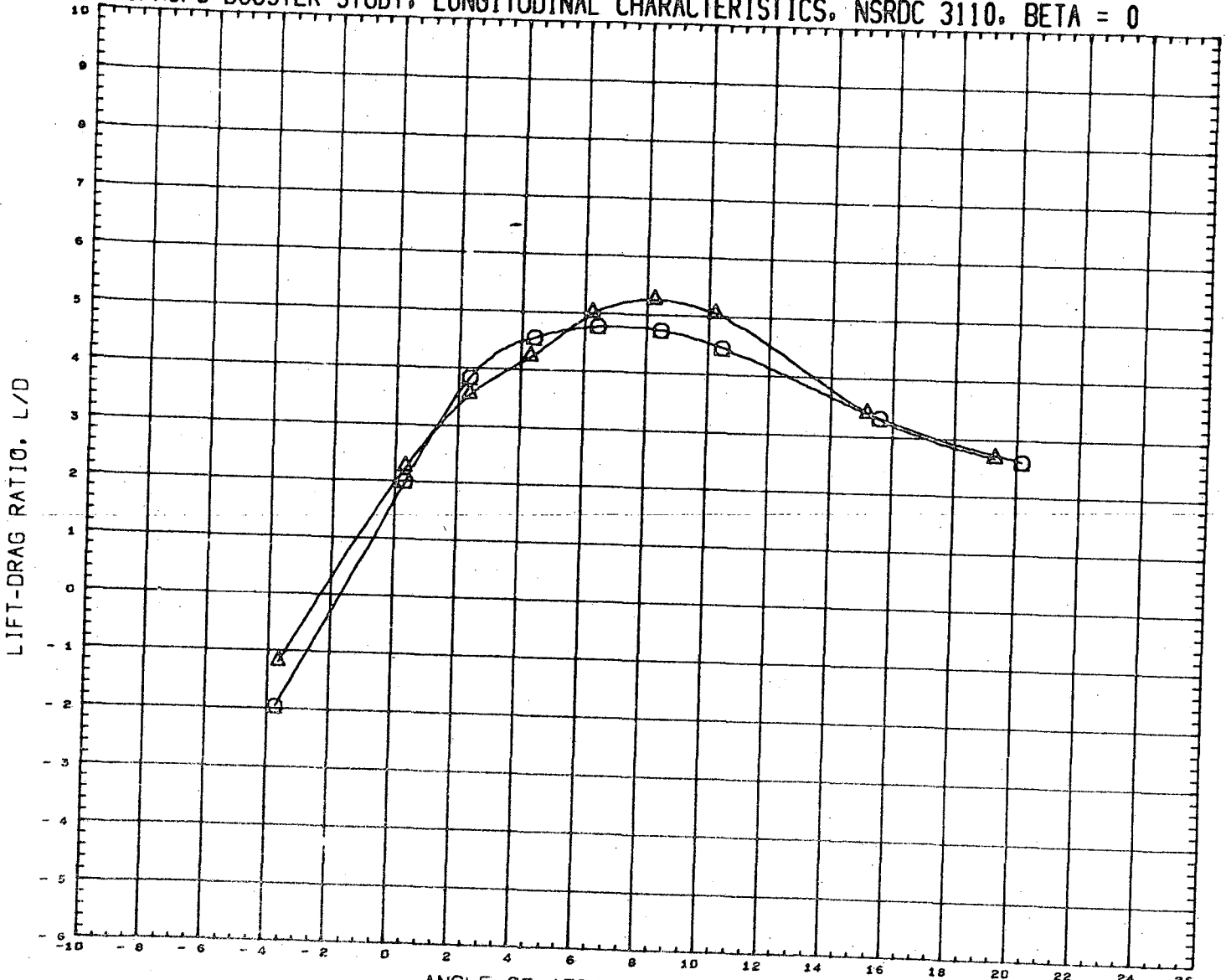
INCIDC	CNDPOS	INCIDW	WNGPOS
15.000	1.000	0.000	1.000
15.000	2.000	0.000	1.000

REFERENCE INFORMATION

SREF	1.3550	SQ. FT.
LREF	41.4360	INCHES
BREF	41.4360	INCHES
XMRP	31.1400	INCHES
YMRP	0.0000	INCHES
ZMRP	0.2250	INCHES
SCALE	1.5000	PERCENT

MACH 0.379

LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(RN2005)	NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1
(RN2013)	NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1

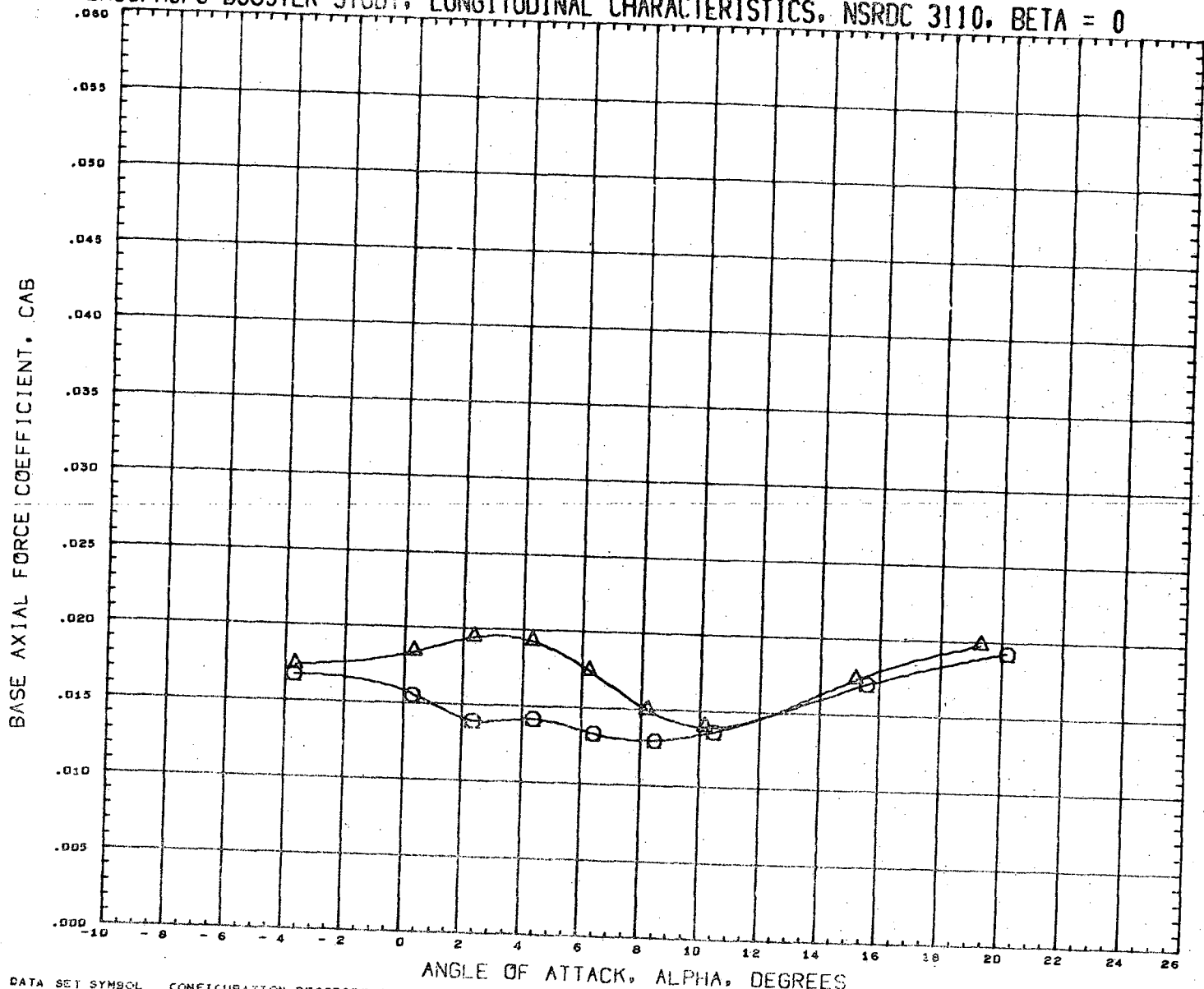
INCIDC	CNDPOS	INCIDW	WNGPOS
15.000	1.000	0.000	1.000
15.000	2.000	0.000	1.000

REFERENCE INFORMATION

SREF	1.3550	SQ. FT.
LREF	41.4360	INCHES
BREF	41.4360	INCHES
XMRP	31.1400	INCHES
YMRP	0.0000	INCHES
ZMRP	0.2250	INCHES
SCALE	1.5000	PERCNT

MACH 0.379

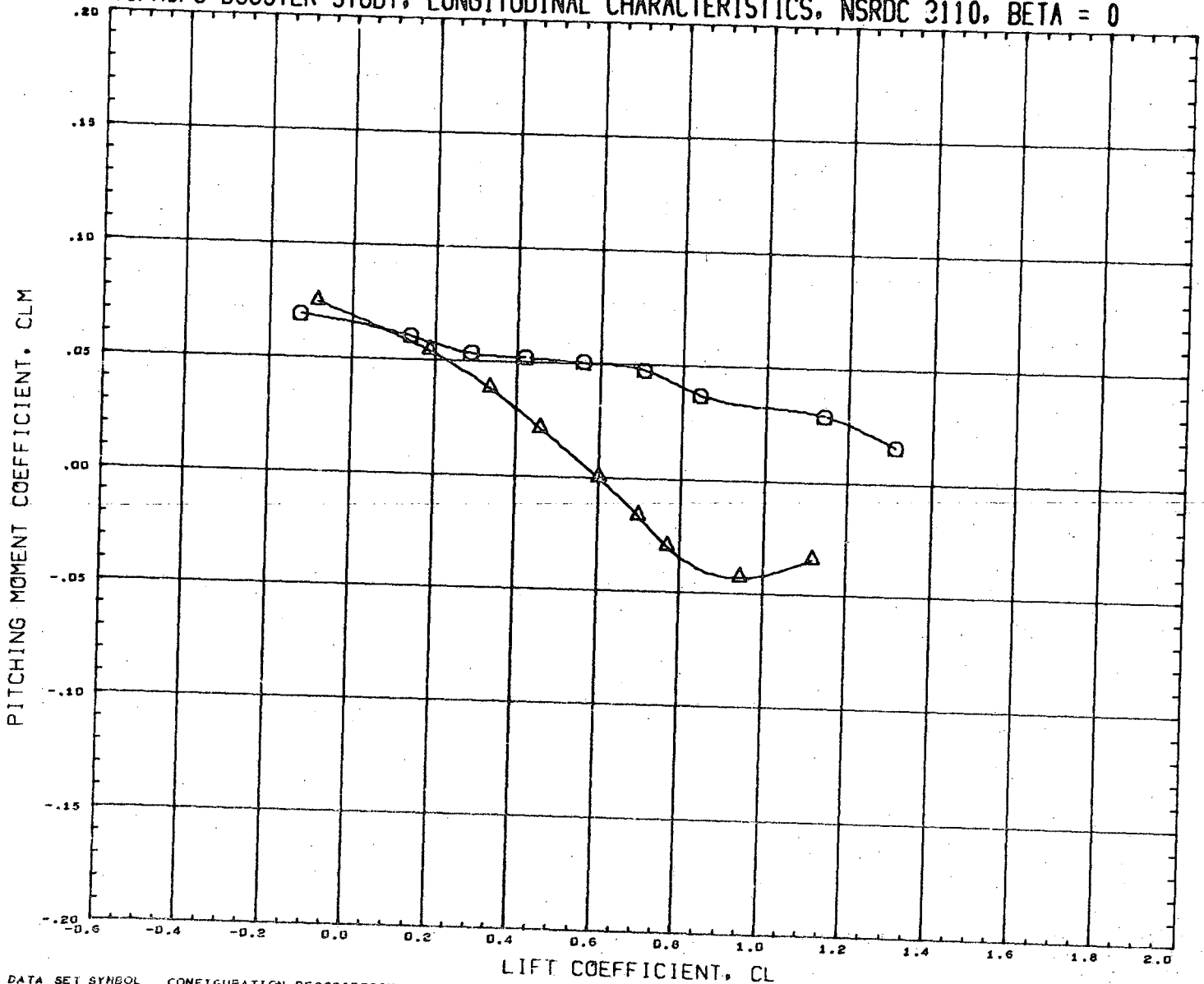
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2005)	NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1	15.000	1.000	0.000	1.000	SREF 1.3550 SQ. FT.
(RN2013)	NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1	15.000	2.000	0.000	1.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCNT

MACH 0.379

LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



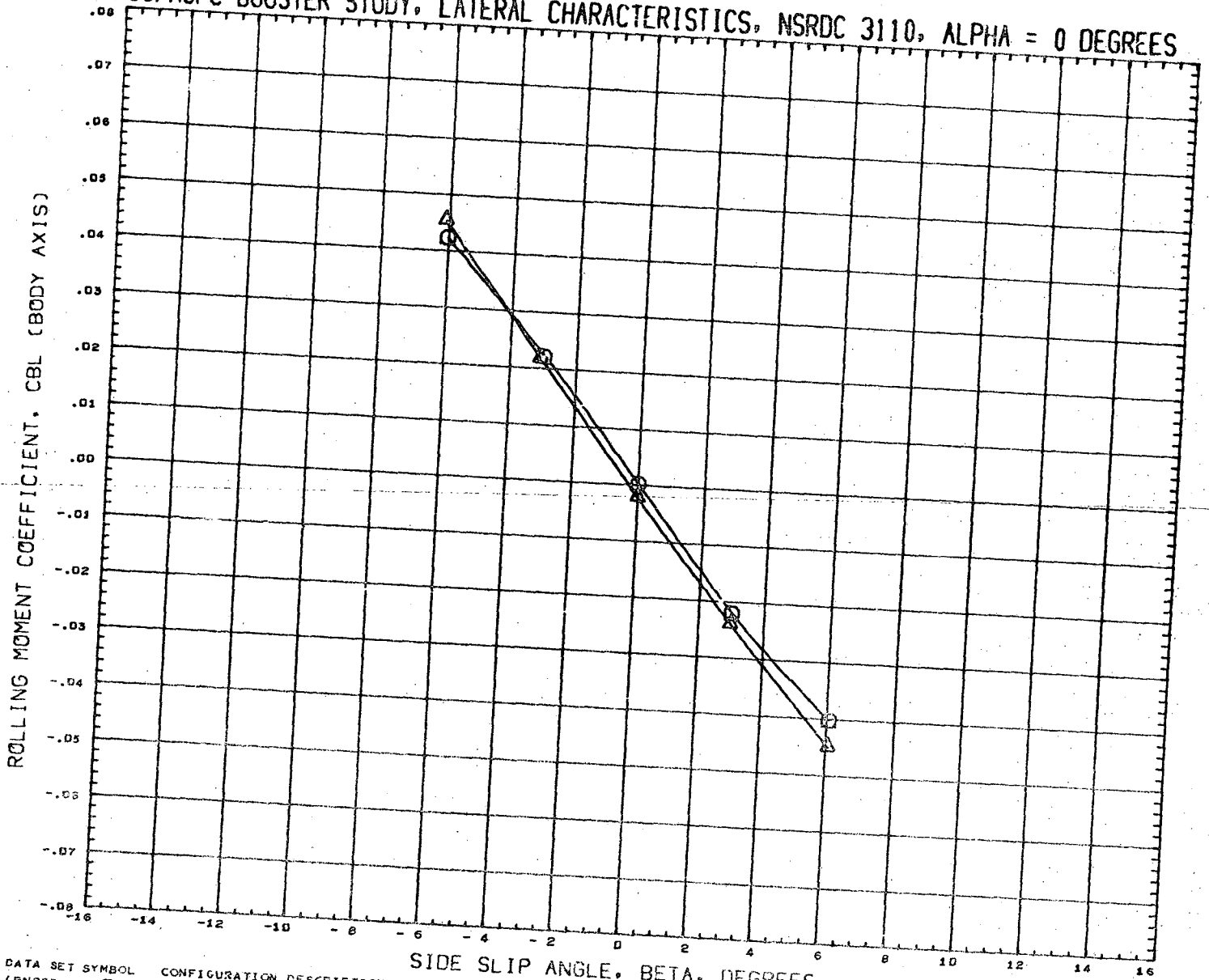
DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(RN2005)	NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1
(RN2013)	NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1

INCIDC	CNDPOS	INCIDW	WNGPOS
15.000	1.000	0.000	1.000
15.000	2.000	0.000	1.000

REFERENCE INFORMATION	
SREF	1.3550 SQ.FT.
LREF	41.4360 INCHES
BREF	41.4360 INCHES
XMRP	31.1400 INCHES
YMRP	0.0000 INCHES
ZMRP	0.2250 INCHES
SCALE	1.5000 PERCNT

MACH 0.379

LMSC/MSFC BOOSTER STUDY, LATERAL CHARACTERISTICS, NSRDC 3110, ALPHA = 0 DEGREES



DATA SET SYMBOL
(RN2006)
(RN2014)



CONFIGURATION DESCRIPTION
NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1
NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1

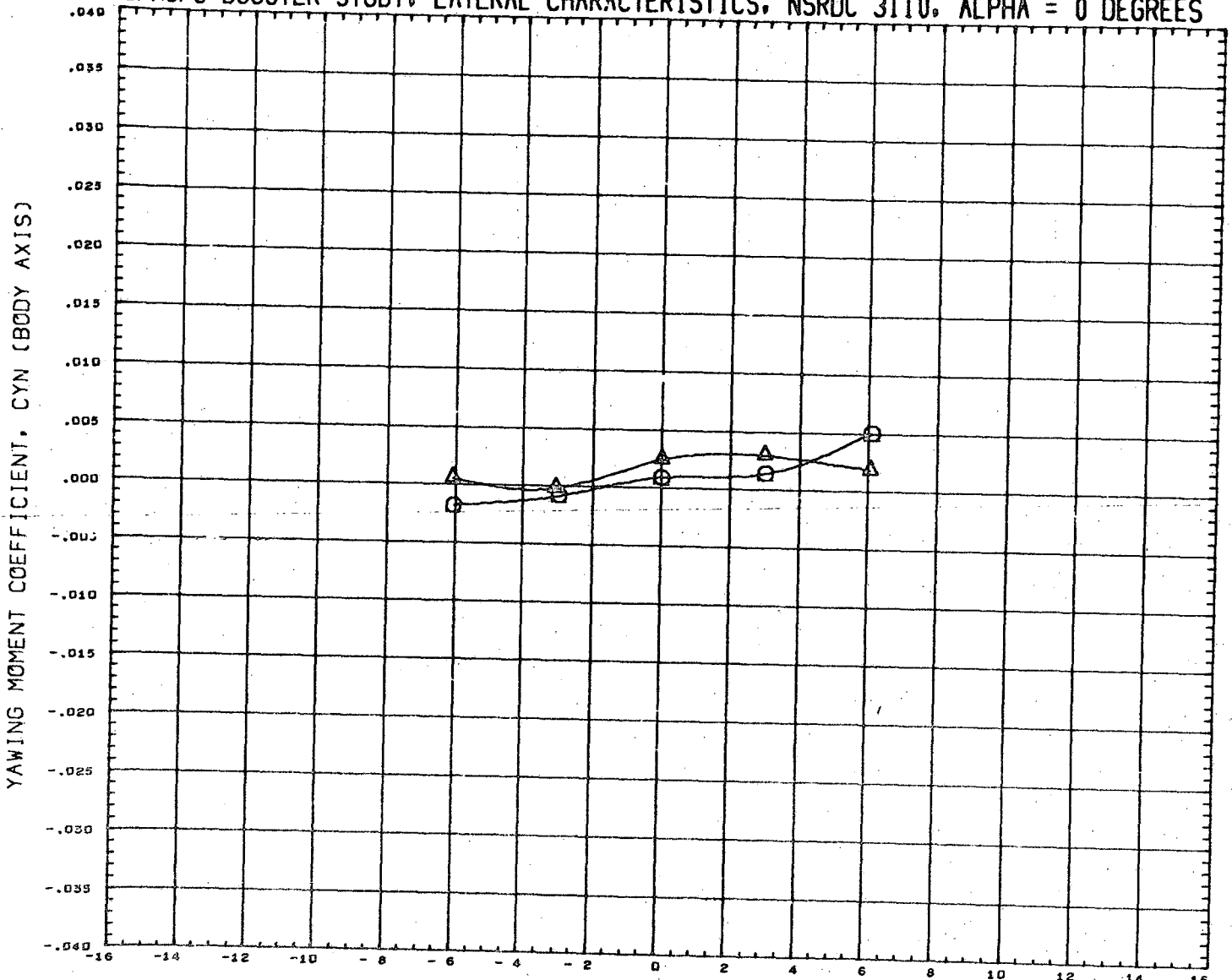
INCIDC	CNDPOS	INCIDW	WNGPOS
15.000	1.000	0.000	1.000
15.000	2.000	0.000	1.000

REFERENCE INFORMATION

SREF	1.3550	SQ. FT.
LREF	41.4360	INCHES
BREF	41.4360	INCHES
XMRP	31.1400	INCHES
YMRP	0.0000	INCHES
ZMRP	0.2250	INCHES
SCALE	1.5000	PERCENT

MACH 0.380

LMSC/MSFC BOOSTER STUDY, LATERAL CHARACTERISTICS, NSRDC 3110, ALPHA = 0 DEGREES

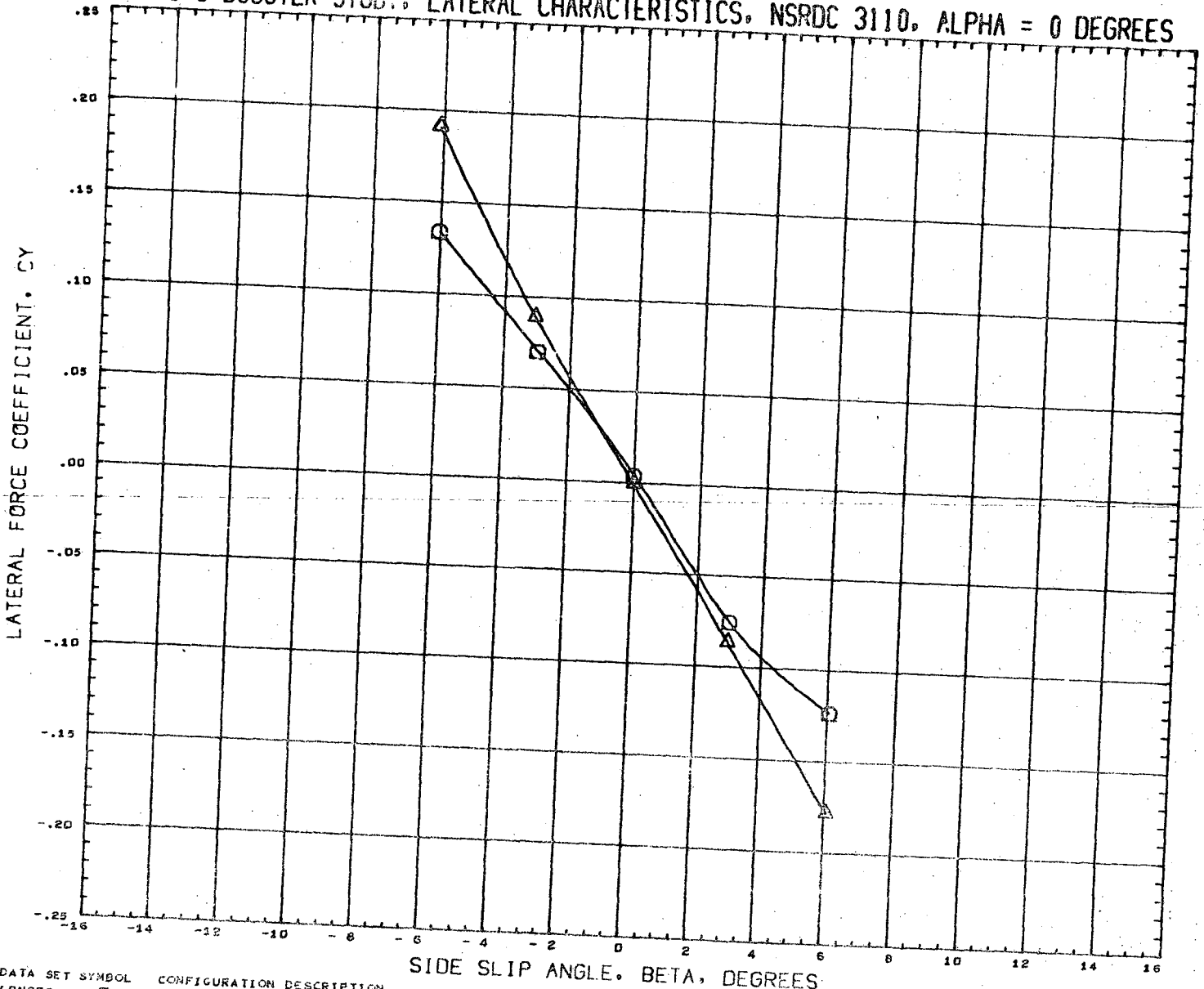


SIDE SLIP ANGLE, BETA, DEGREES

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2006)	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1	15.000	1.000	0.000	1.000	SREF 1.3550 SQ.FT.
(RN2014)	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1	15.000	2.000	0.000	1.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRF 31.1400 INCHES
						YMRF 0.0000 INCHES
						ZMRF 0.2250 INCHES
						SCALE 1.5000 PERCENT

MACH 0.380

LMSC/MSFC BOOSTER STUDY, LATERAL CHARACTERISTICS, NSRDC 3110, ALPHA = 0 DEGREES



DATA SET SYMBOL
(RN2006)
(RN2014)



CONFIGURATION DESCRIPTION

NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1
NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1

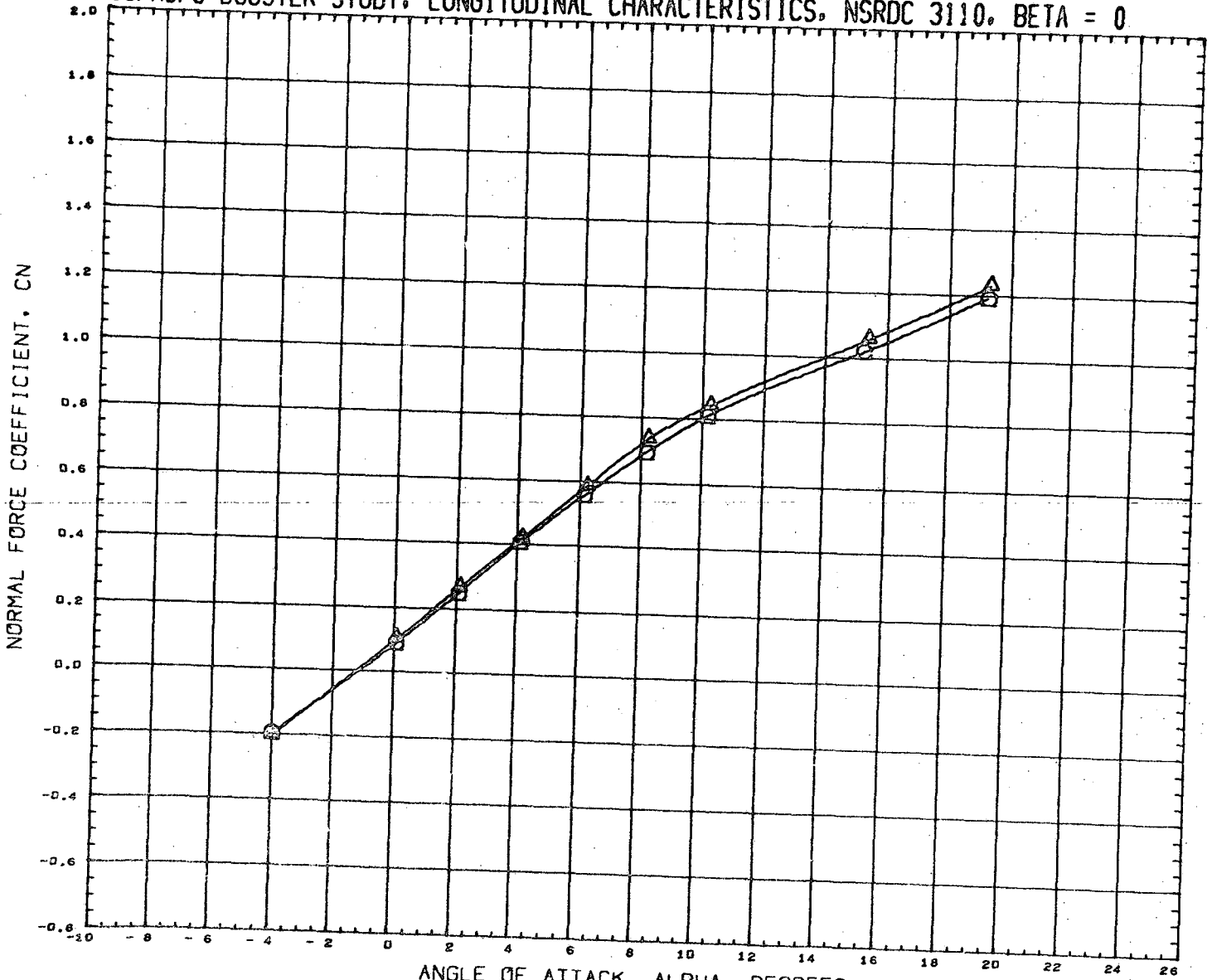
INCIDC	CNDPOS	INCICW	WNCPOS
15.000	1.000	0.000	1.000
15.000	2.000	0.000	1.000

REFERENCE INFORMATION

SREF	1.3550	SQ.FT.
LREF	41.4360	INCHES
BREF	41.4360	INCHES
XMRP	31.1400	INCHES
YMRP	0.0000	INCHES
ZMRP	0.2250	INCHES
SCALE	1.5000	PERCNT

MACH 0.390

LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL
(R2009) □
(R2073) △

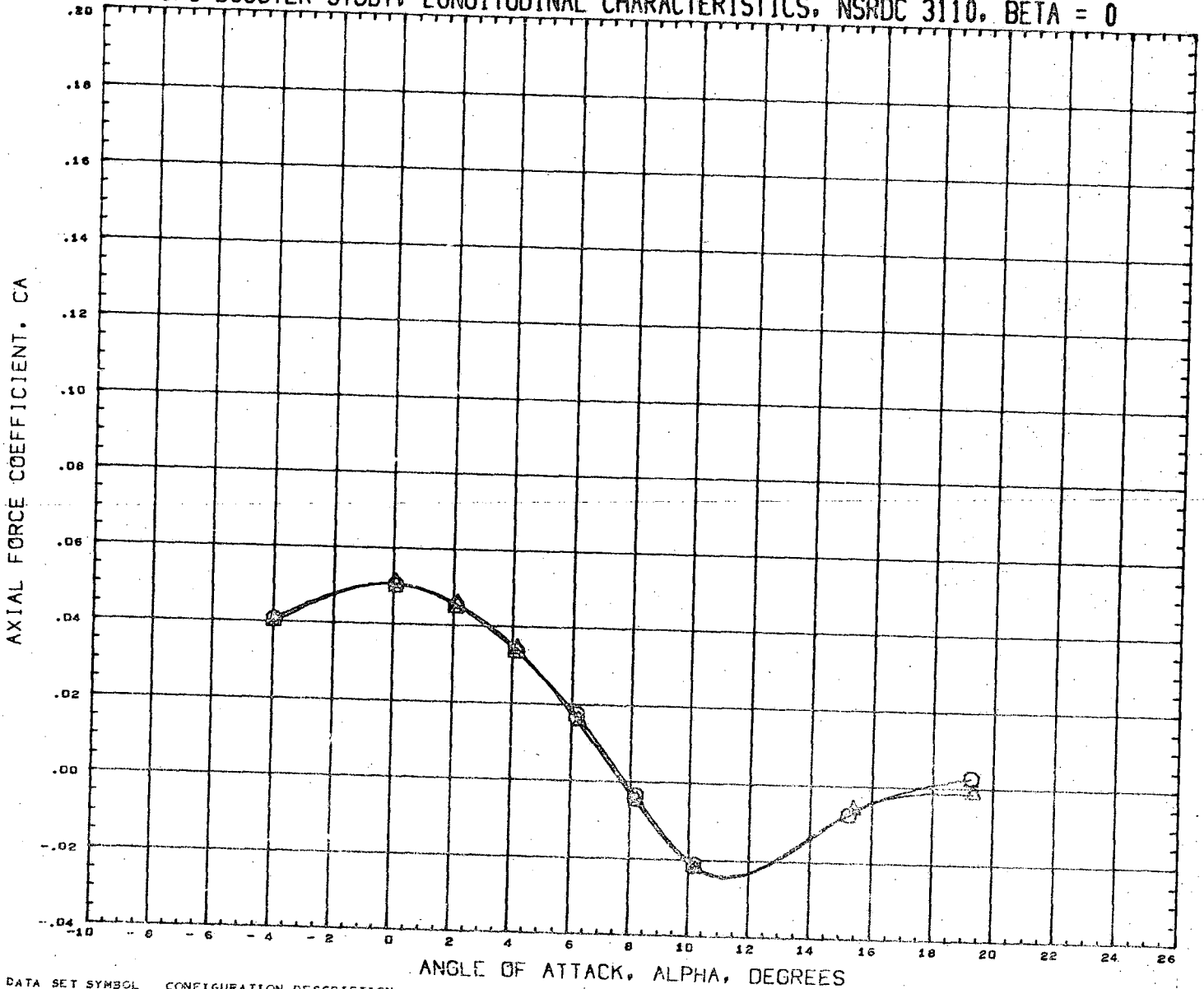
CONFIGURATION DESCRIPTION
NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1
NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1

INCIDC	CNDPOS	INCIDW	WNGPOS
3.000	2.000	0.000	1.000
3.000	2.000	0.000	1.000

REFERENCE INFORMATION	
SREF	1.3550 SQ. FT.
LREF	41.4360 INCHES
BREF	41.4360 INCHES
XMRP	31.1400 INCHES
YMRP	0.0000 INCHES
ZMRP	0.2250 INCHES
SCALE	1.5000 PERCNT

MACH 0.301

LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL
(RN2009) \square
(RN2073) \triangle

CONFIGURATION DESCRIPTION
NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1
NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1

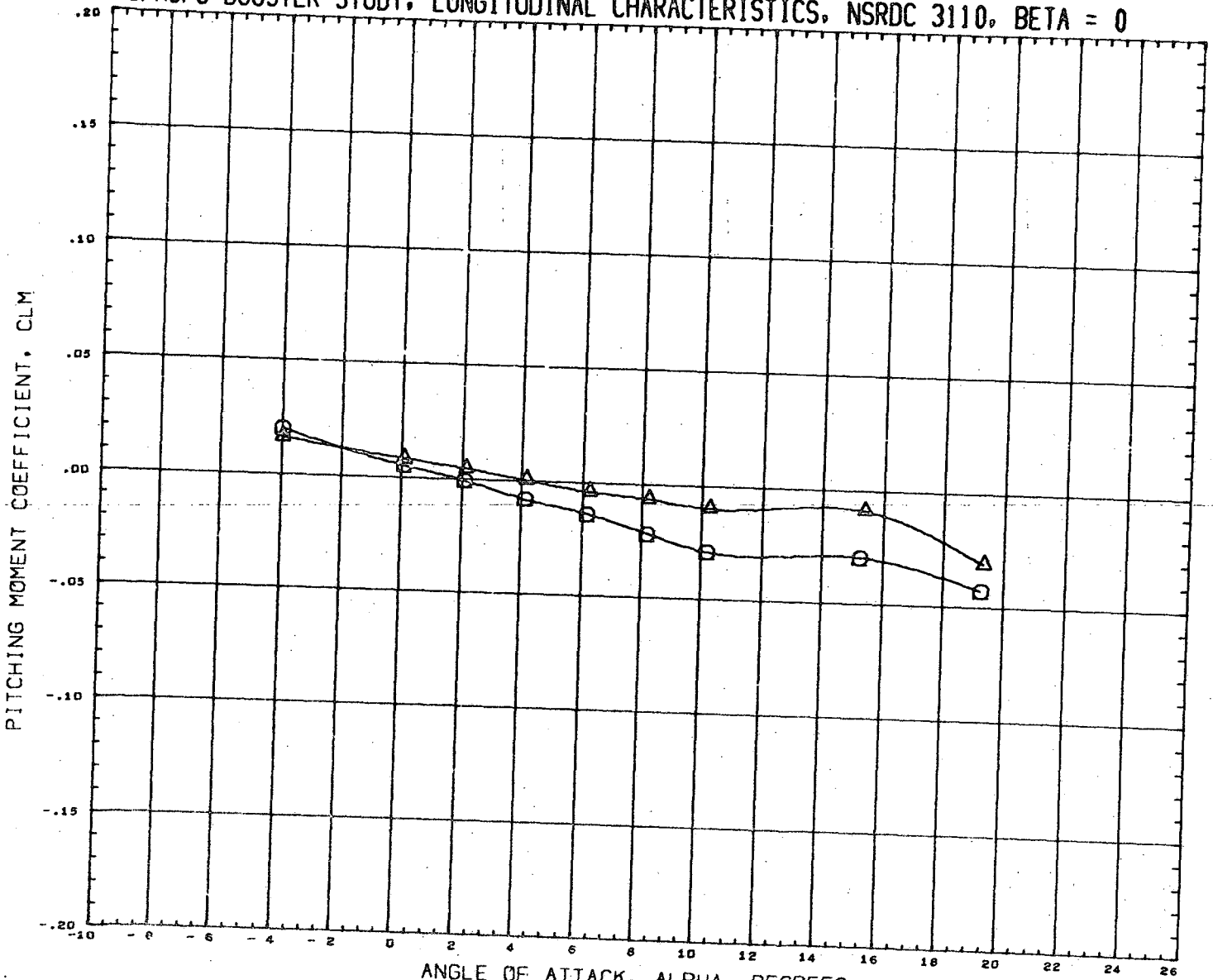
INCIDC	CNDPOS	INCIDW	WNGFOS
3.000	2.000	0.000	1.000
3.000	2.000	0.000	1.000

REFERENCE INFORMATION

SREF	1.3550	SQ. FT.
LREF	41.4360	INCHES
BREF	41.4360	INCHES
XMRP	31.1400	INCHES
YMRP	0.0000	INCHES
ZMRP	0.2250	INCHES
SCALE	1.5000	PERCENT

MACH 0.381

LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL
(RN2009)
(RN2073)

CONFIGURATION DESCRIPTION
NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1
NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1

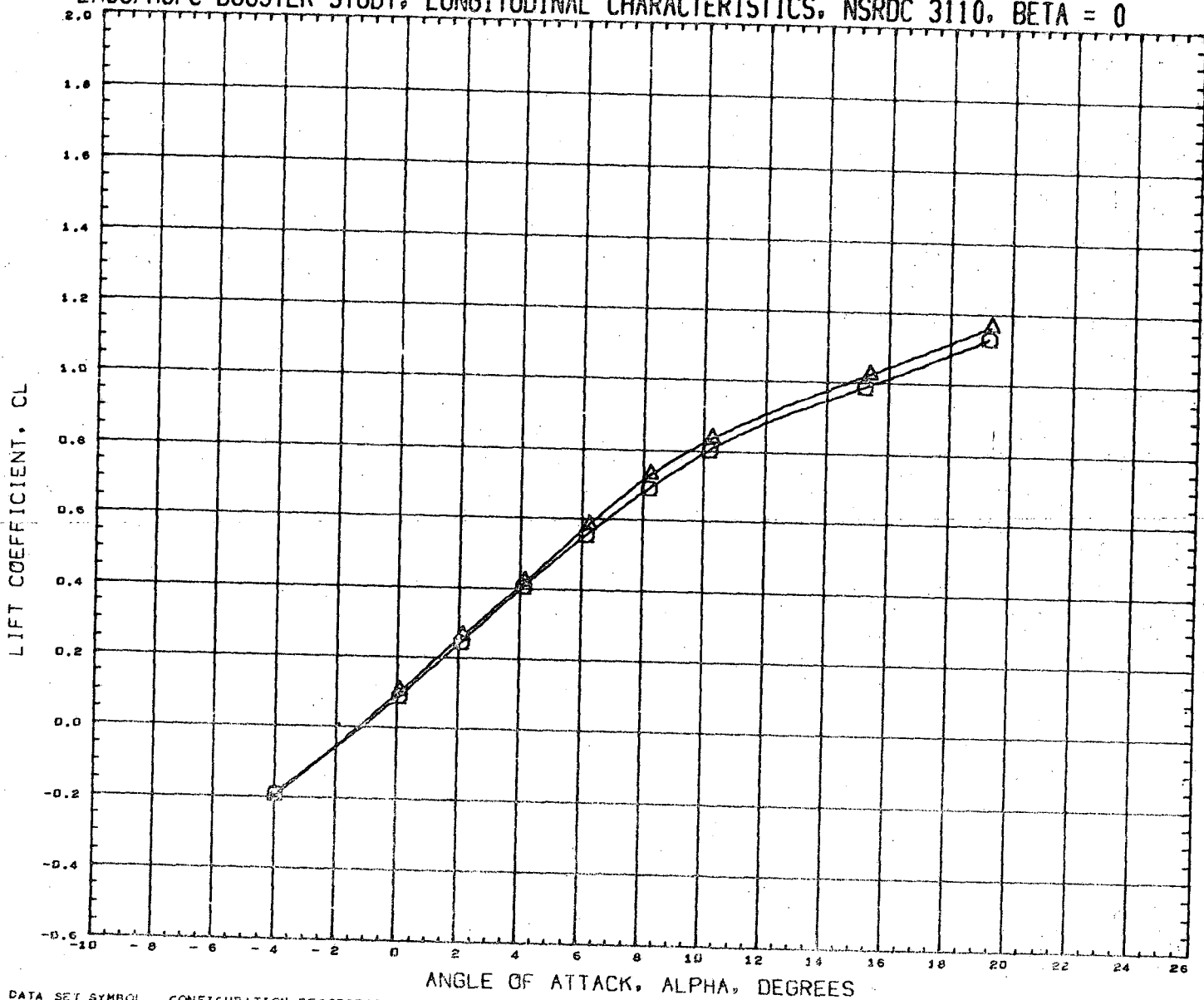
INCIDC	CNDPOS	INCIDW	WNGPOS
3.000	2.000	0.000	1.000
3.000	2.000	0.000	1.000

REFERENCE INFORMATION

SREF	1.3550	sq. FT.
LREF	41.4360	INCHES
BREF	41.4360	INCHES
XMRP	31.1400	INCHES
YMRP	0.0000	INCHES
ZMRP	0.2250	INCHES
SCALE	1.5000	PERCENT

MACH 0.381

LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0

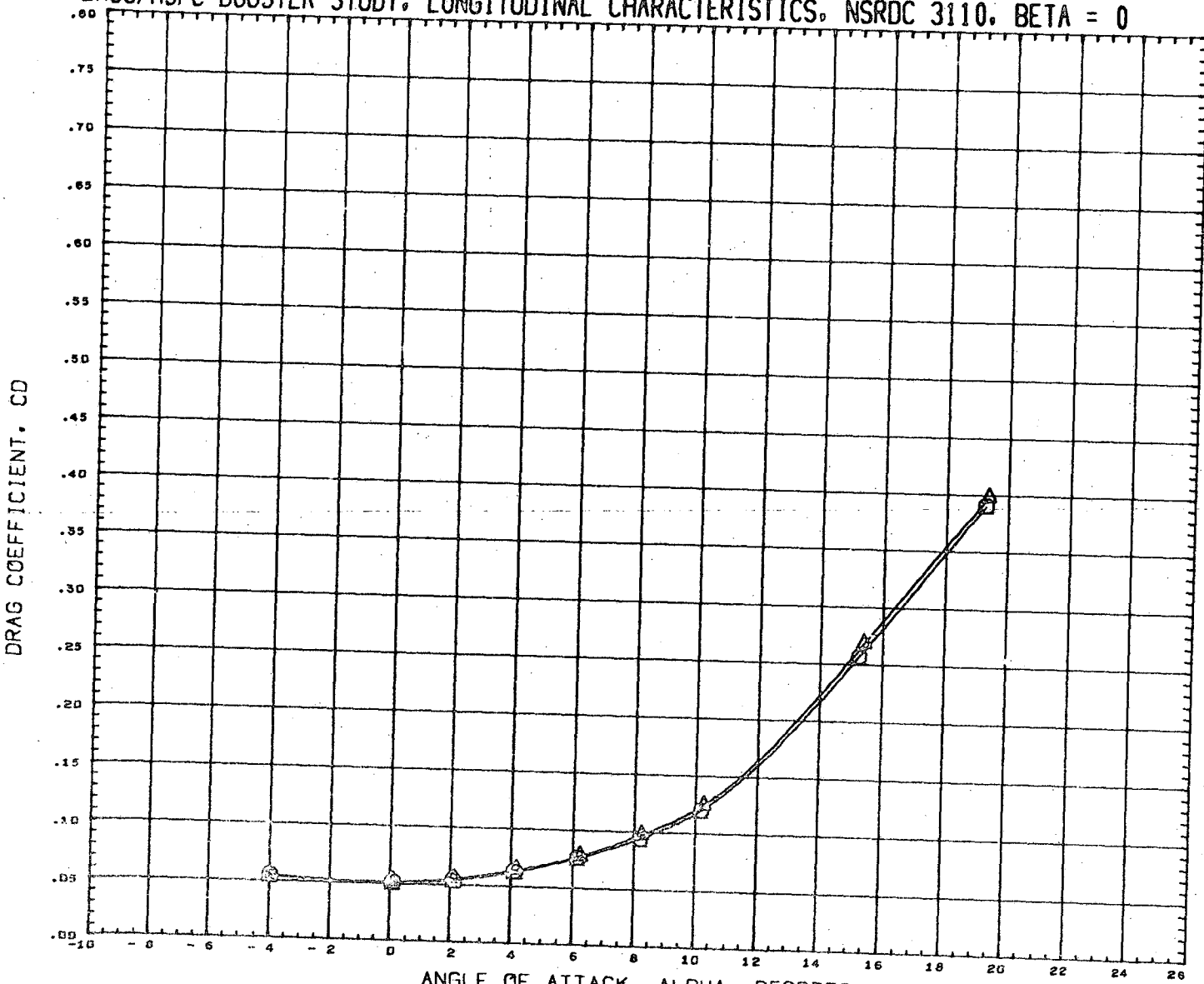


DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (RN2009) NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1
 (RN2073) NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1

INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION	
3.000	2.000	0.000	1.000	SREF	1.3550 SQ. FT.
3.000	2.000	0.000	1.000	LREF	41.4360 INCHES
				BREF	41.4360 INCHES
				XMRP	31.1400 INCHES
				YMRP	0.0000 INCHES
				ZMRP	0.2250 INCHES
				SCALE	1.5000 PERCENT

MACH 0.381

LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2009)	NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1	3.000	2.000	0.000	1.000	SREF 1.3550 SQ. FT.
(RN2073)	NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1	3.000	2.000	0.000	1.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCENT

MACH 0.361

LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL
(RN2099)
(RN2073)



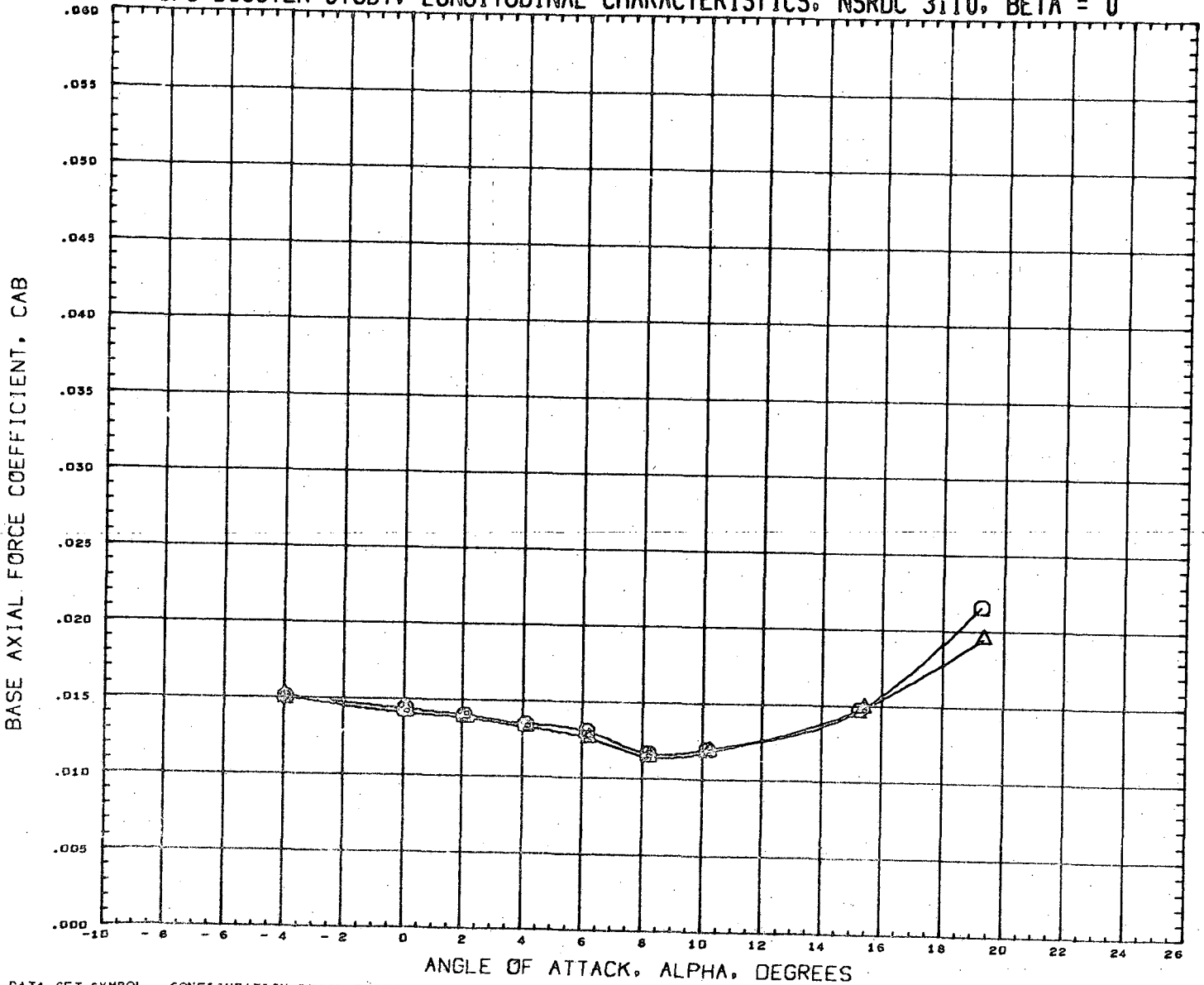
CONFIGURATION DESCRIPTION
NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1
NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1

INCIDC	CNDPOS	INCIDW	WNGPOS
3.000	2.000	0.000	1.000
3.000	2.000	0.000	1.000

REFERENCE INFORMATION	
SREF	1.3550 SQ. FT.
LREF	41.4360 INCHES
BREF	41.4360 INCHES
XMRP	31.1400 INCHES
YMRP	0.0000 INCHES
ZMRP	0.2250 INCHES
SCALE	1.5000 PERCENT

MACH 0.381

LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL
 (RN2009) ○
 (RN2073) △

CONFIGURATION DESCRIPTION
 NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1
 NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1

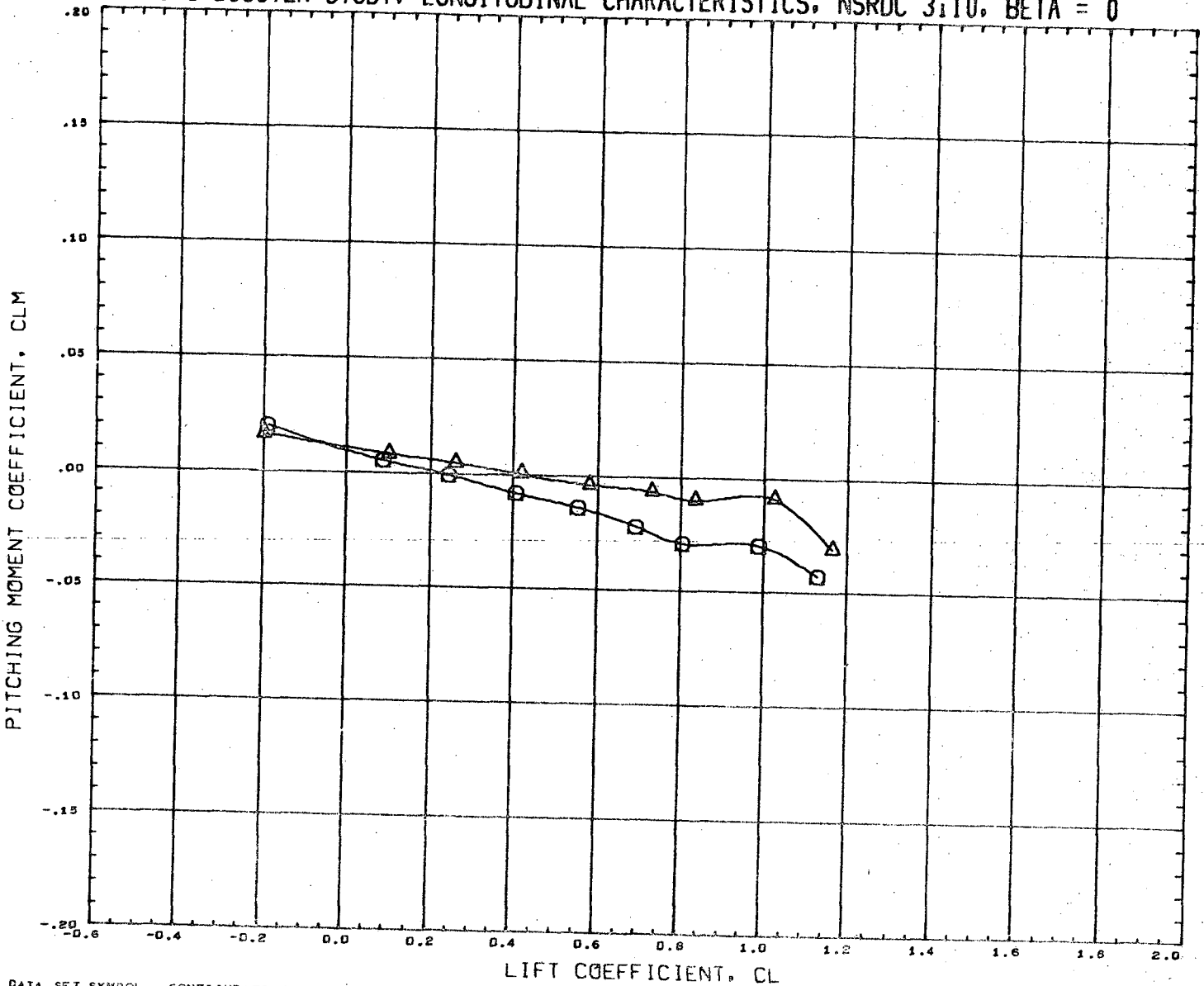
INCIDC	CNDPOS	INCIDW	WNGPOS
3.000	2.000	0.500	1.000
3.000	2.000	0.600	1.000

REFERENCE INFORMATION

SREF	1.3550	SQ. FT.
LREF	41.4360	INCHES
BREF	41.4360	INCHES
XMRP	31.1400	INCHES
YMRP	0.0000	INCHES
ZMRP	0.2250	INCHES
SCALE	1.5000	PERCENT

MACH 0.581

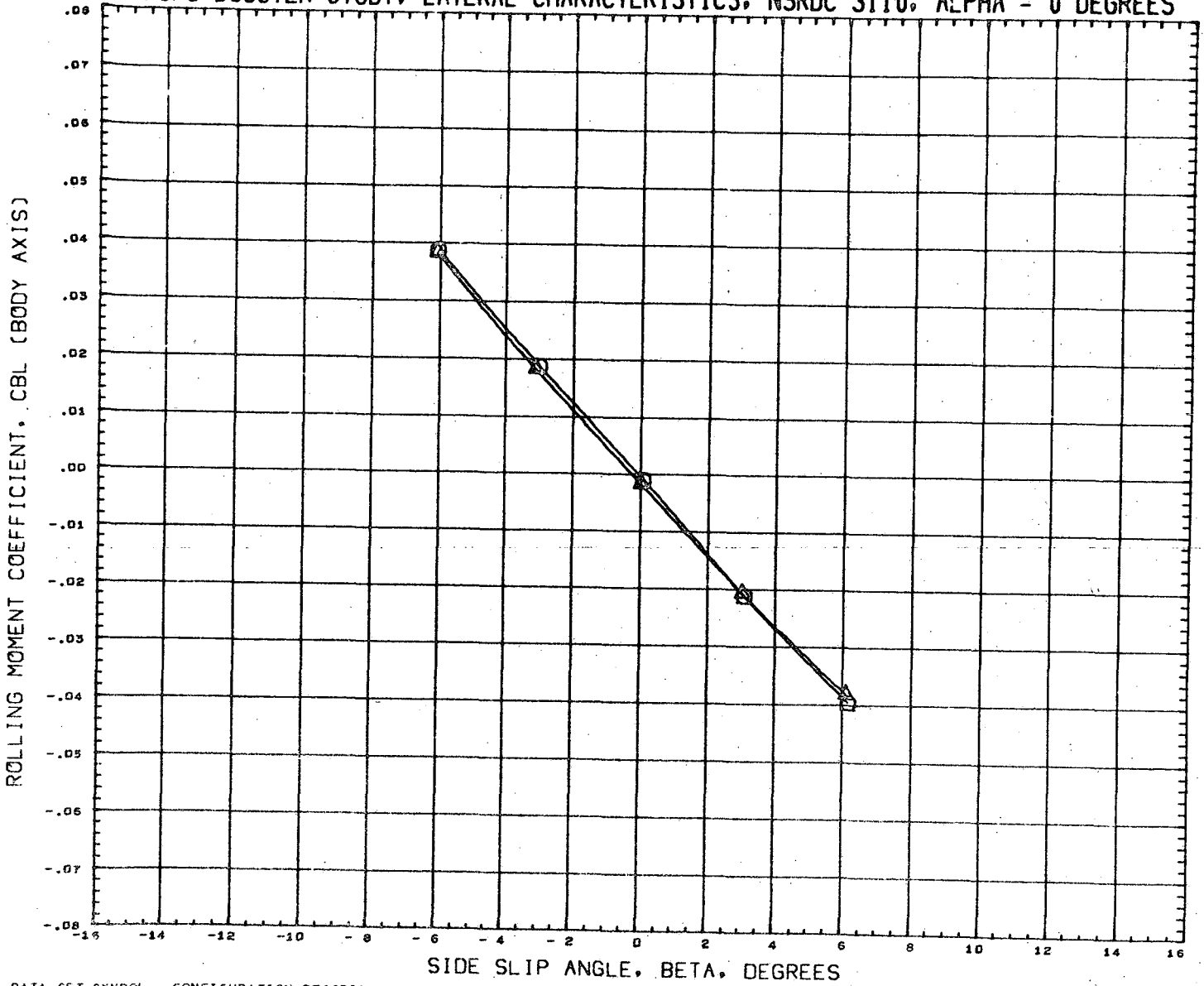
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2009)	NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1	3.000	2.000	0.000	1.000	SREF 1.3550 SQ. FT.
(RR2073)	NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1	3.000	2.000	0.000	1.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCENT

MACH 0.361

LMSC/MSFC BOOSTER STUDY, LATERAL CHARACTERISTICS, NSRDC 3110, ALPHA = 0 DEGREES



DATA SET SYMBOL
(RN2010)
(RN2074)



CONFIGURATION DESCRIPTION
NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1
NSRDC-3110,MSFC/LMSC BOOSTER B1C1F1W1V1

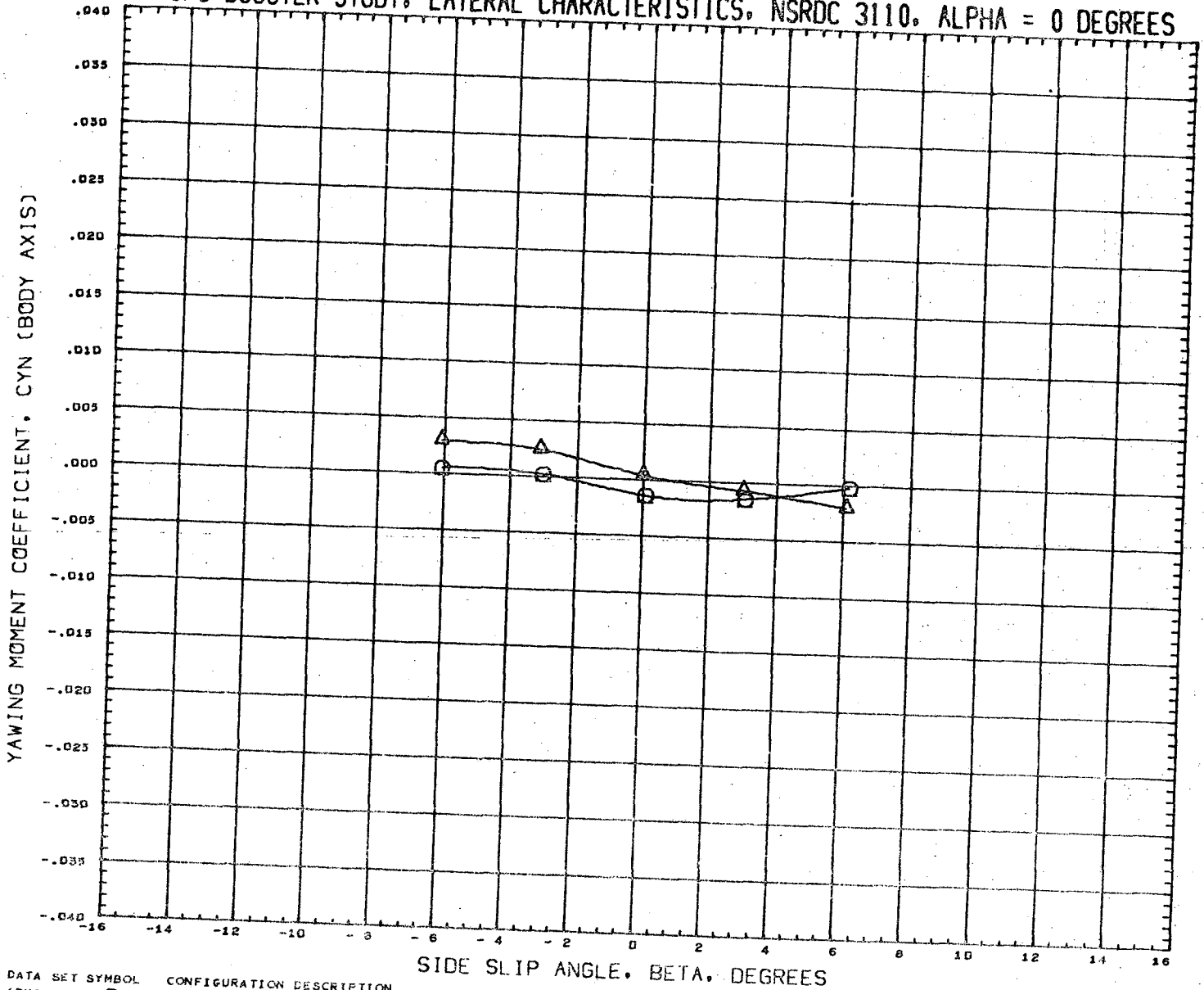
INCIDC	CNDPOS	INCIDW	WNGPOS
3.000	2.000	0.000	1.000
3.000	2.000	0.000	1.000

REFERENCE INFORMATION

SREF	1.3550	SQ.FT.
LREF	41.4360	INCHES
BREF	41.4360	INCHES
XMRP	31.1400	INCHES
YMRP	0.0000	INCHES
ZMRP	0.2250	INCHES
SCALE	1.5000	PERCENT

MACH 0.382

LMSC/MSFC BOOSTER STUDY, LATERAL CHARACTERISTICS, NSRDC 3110, ALPHA = 0 DEGREES



DATA SET SYMBOL
(RN2010)
(RN2074)



CONFIGURATION DESCRIPTION
NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1
NSRDC-3110,MSFC/LMSC BOOSTER B1C1F1W1V1

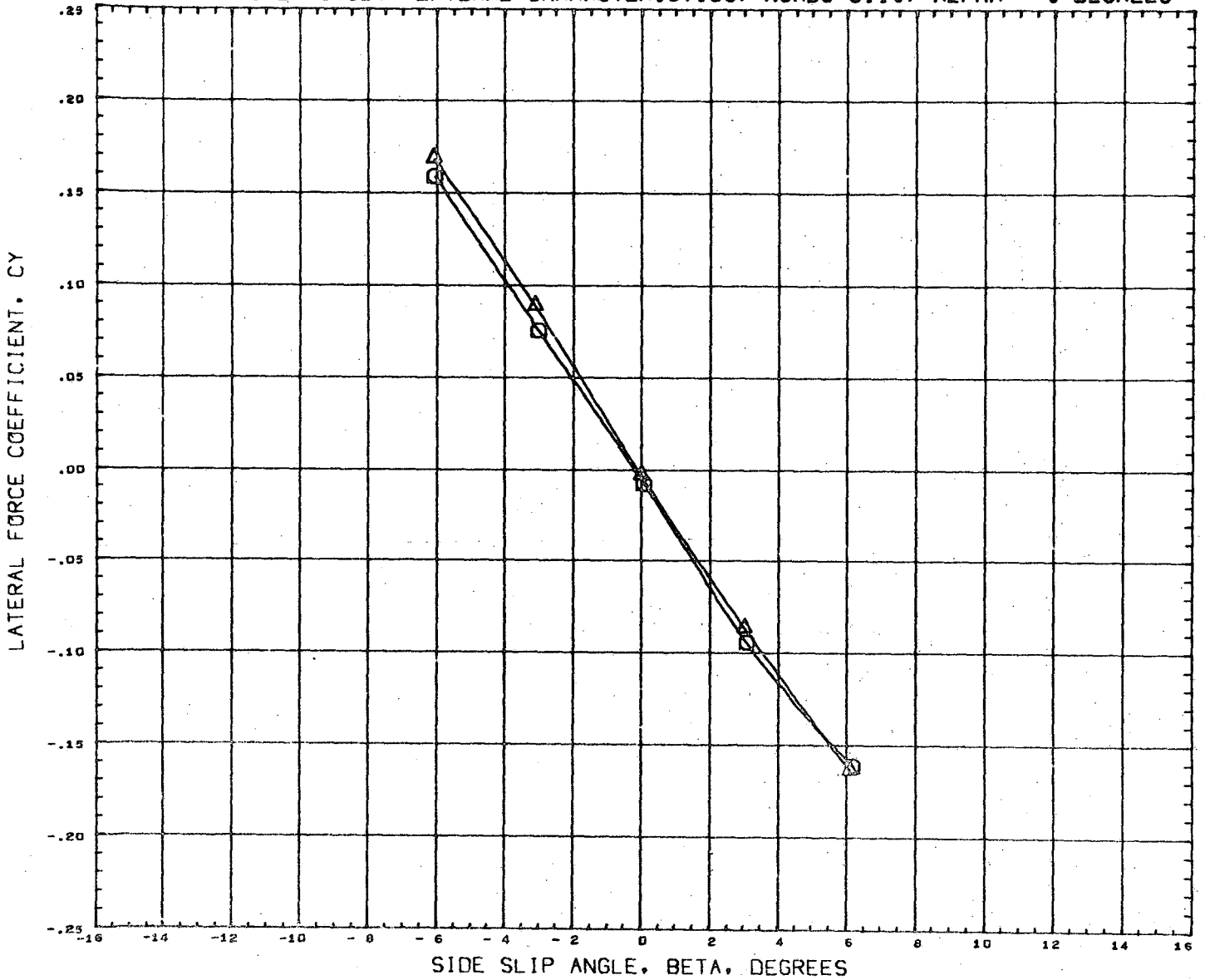
INCIDC	CNDPOS	INCIDW	WNGPOS
3.000	2.000	0.000	1.000
3.000	2.000	0.000	1.000

REFERENCE INFORMATION

SREF	1.3550	SQ.FT.
LREF	41.4360	INCHES
BREF	41.4360	INCHES
XMRP	31.1400	INCHES
YMRP	0.0000	INCHES
ZMRP	0.2250	INCHES
SCALE	1.5000	PERCENT

MACH 0.382

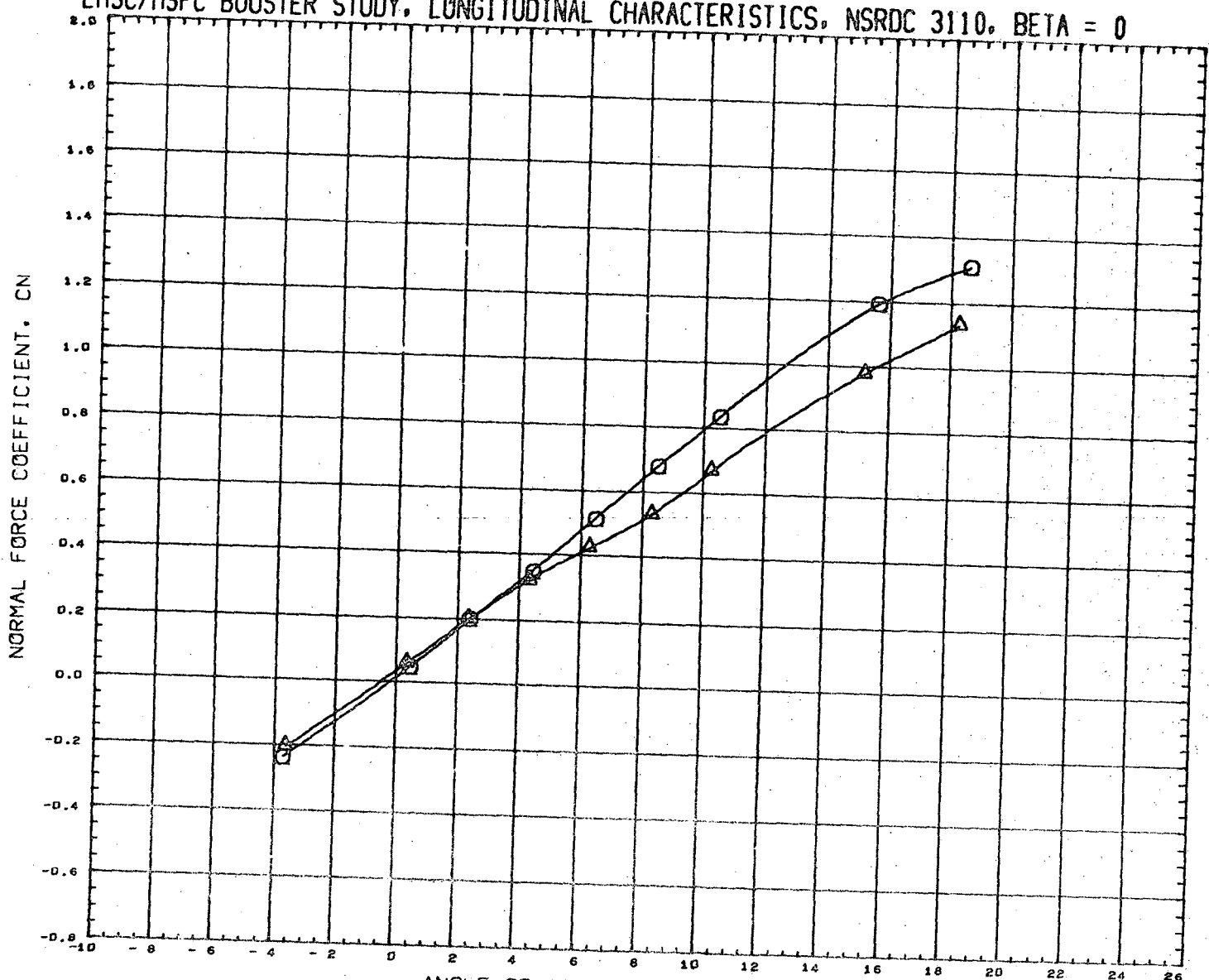
LMSC/MSFC BOOSTER STUDY, LATERAL CHARACTERISTICS, NSRDC 3110, ALPHA = 0 DEGREES



DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2010)	○	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1	3.000	2.000	0.000	1.000	SREF 1.3550 SQ.FT. LREF 41.4360 INCHES
(RN2074)	△	NSRDC-3110,MSFC/LMSC BOOSTER B1C1F1W1V1	3.000	2.000	0.000	1.000	BREF 41.4360 INCHES XMRP 31.1400 INCHES YMRP 0.0000 INCHES ZMRP 0.2250 INCHES SCALE 1.5000 PERCNT

MACH 0.382

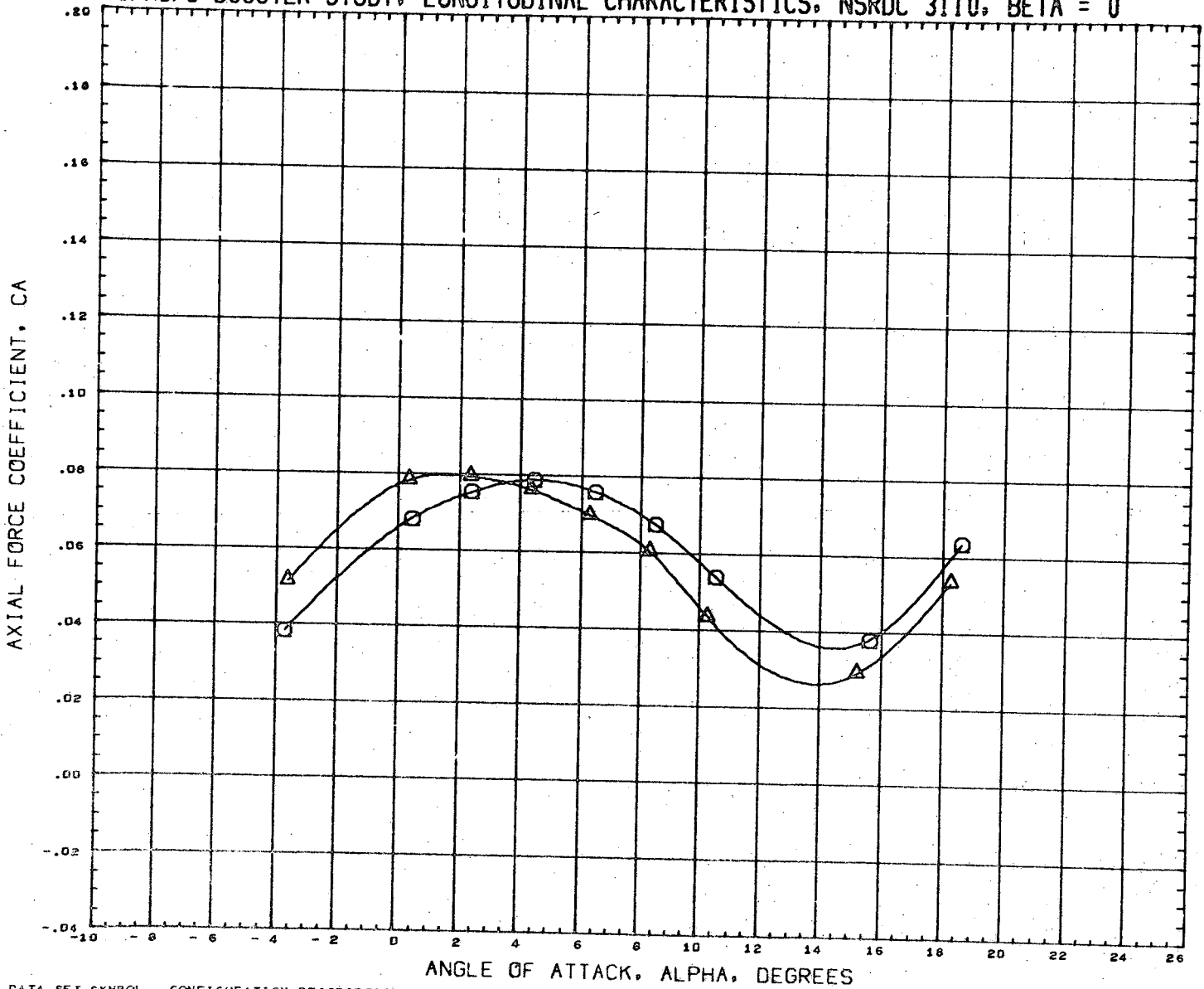
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGFOS	REFERENCE INFORMATION
(RN2021)	NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1	15.000	1.000	0.000	2.000	SREF 1.3550 SQ. FT.
(RN2022)	NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1	15.000	2.000	0.000	2.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCNT

MACH 0.392

LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



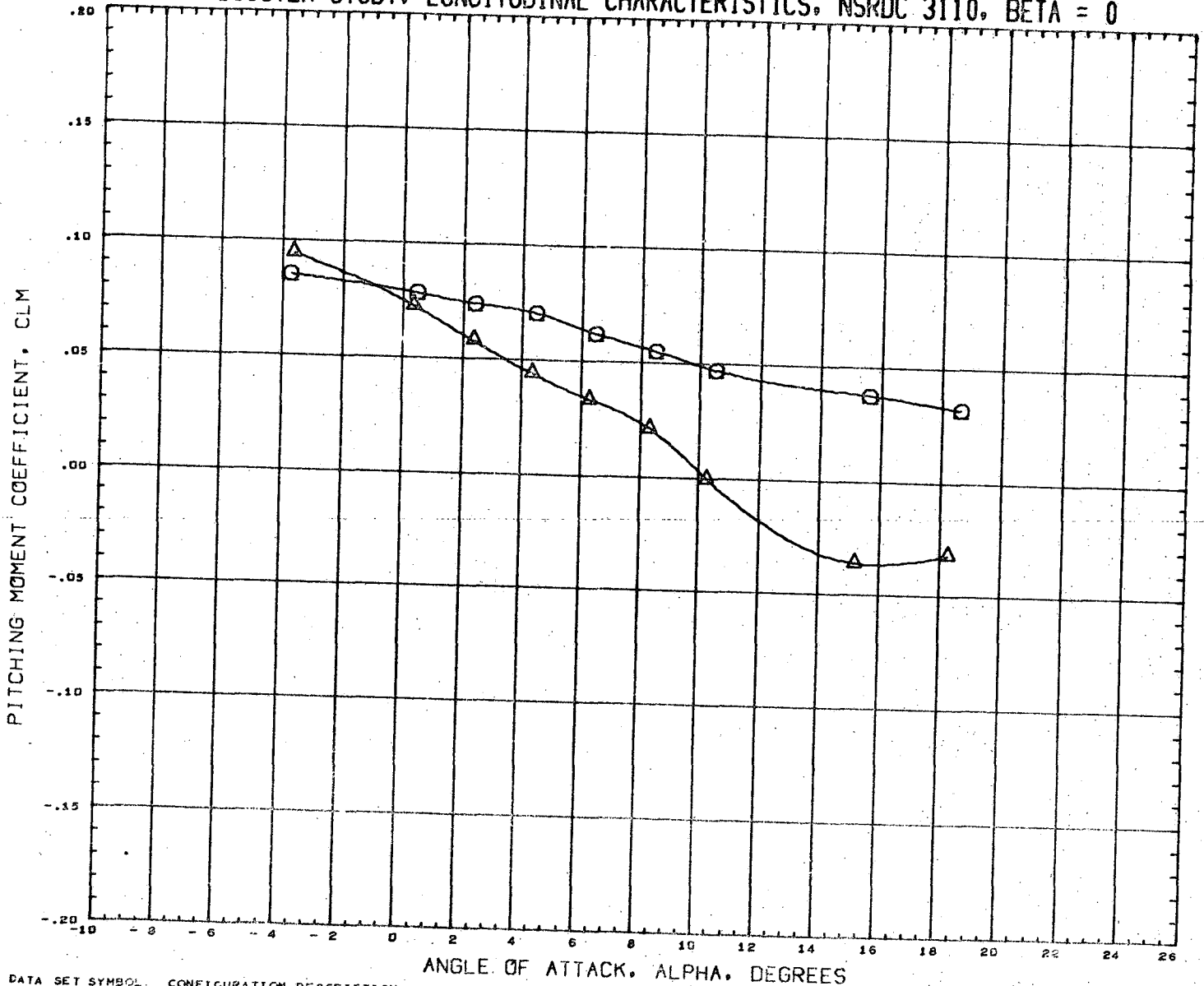
DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(RN2021) ○	NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1
(RN2029) △	NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1

INCIDC	CNDPOS	INCIDW	WRGPOS
15.000	1.000	0.000	2.000
15.000	2.000	0.000	2.000

REFERENCE INFORMATION	
SREF	1.3550 SQ. FT.
LREF	41.4360 INCHES
BREF	41.4360 INCHES
XMRP	31.1400 INCHES
YMRP	0.0000 INCHES
ZMRP	0.2250 INCHES
SCALE	1.5000 PERCENT

MACH 0.382

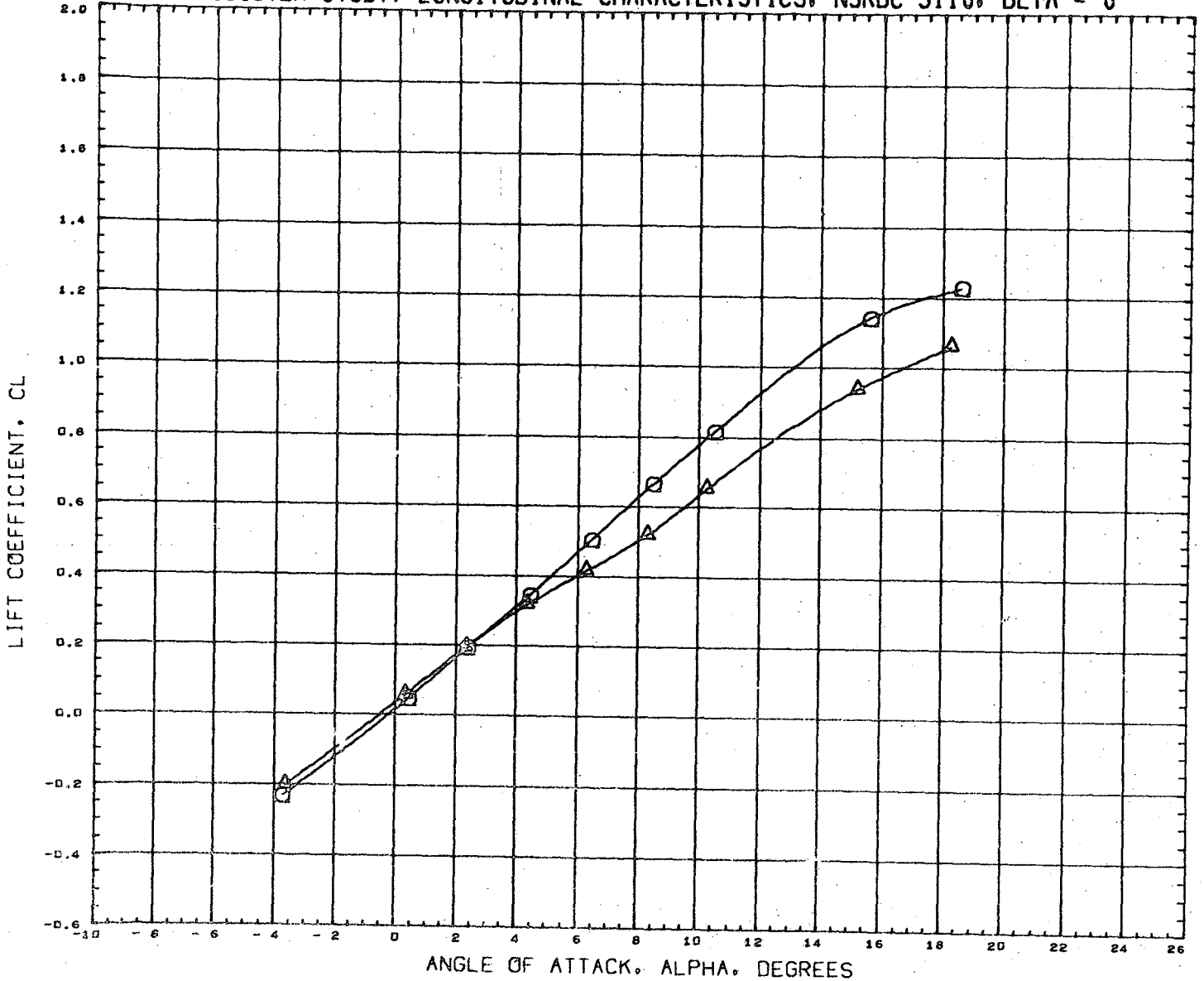
LMSC/MSFC BOOSTER STUDY. LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION	
(RN2021)	NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1	15.000	1.000	0.000	2.000	SREF	1.3550 SQ.FT.
(RN2029)	NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1	15.000	2.000	0.000	2.000	LREF	41.4360 INCHES
						BREF	41.4360 INCHES
						XMRP	31.1400 INCHES
						YMRP	0.0000 INCHES
						ZMRP	0.2250 INCHES
						SCALE	1.5000 PERCENT

MACH 0.382

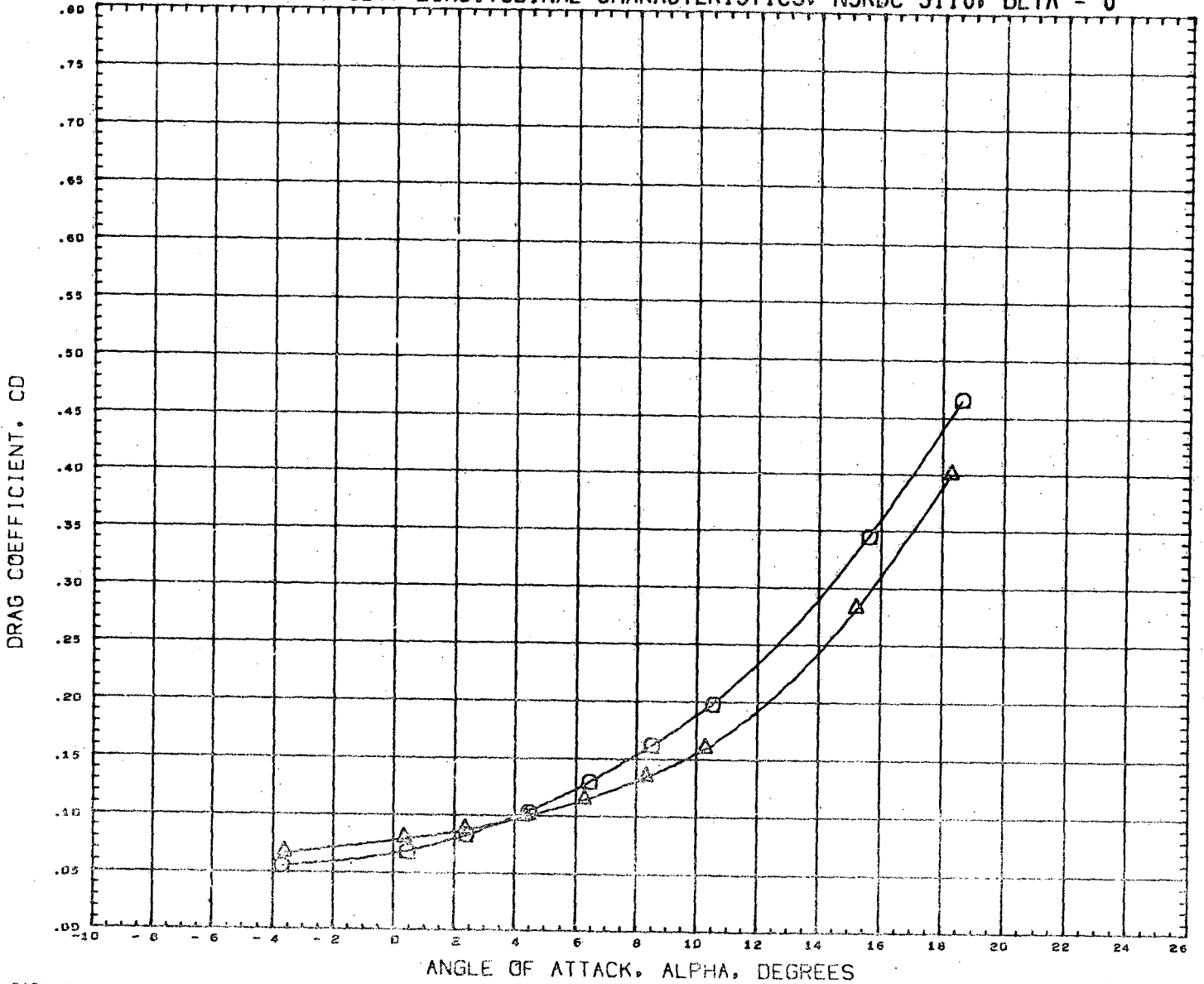
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2021)	NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1	15.000	1.000	0.000	2.000	SREF 1.3550 SQ. FT.
(RN2029)	NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1	15.000	2.000	0.000	2.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRF 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCENT

MACH 0.382

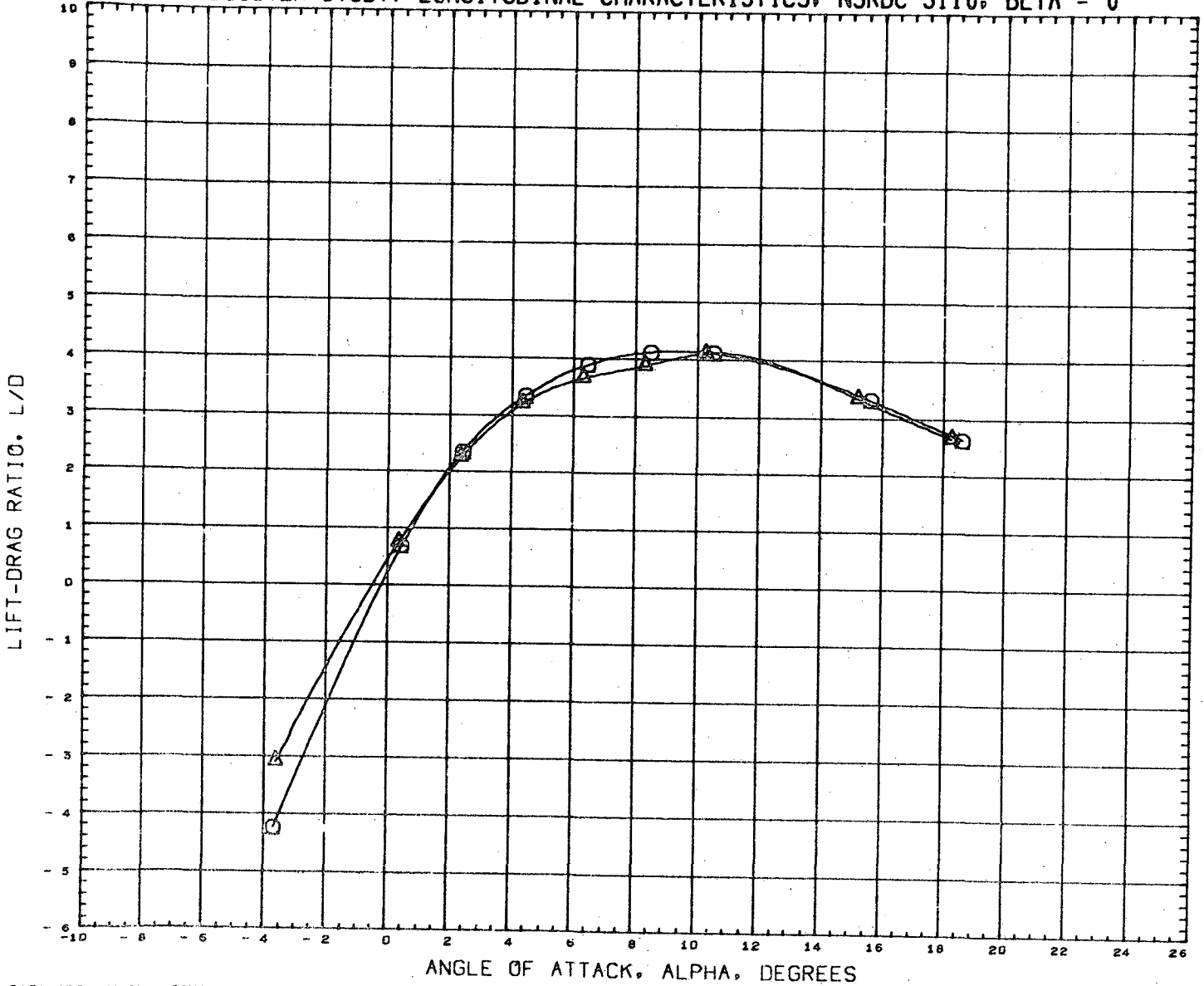
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CHDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION	
(RN2021) ○	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1	15.000	1.000	0.000	2.000	SREF	1.3550 SQ.FT.
(RN2029) △	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1	15.000	2.000	0.000	2.000	LREF	41.4360 INCHES
						BREF	41.4360 INCHES
						XMRP	31.1400 INCHES
						YMRP	0.0000 INCHES
						ZMRP	0.2250 INCHES
						SCALE	1.5000 PERCENT

MACH 0.382

LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0

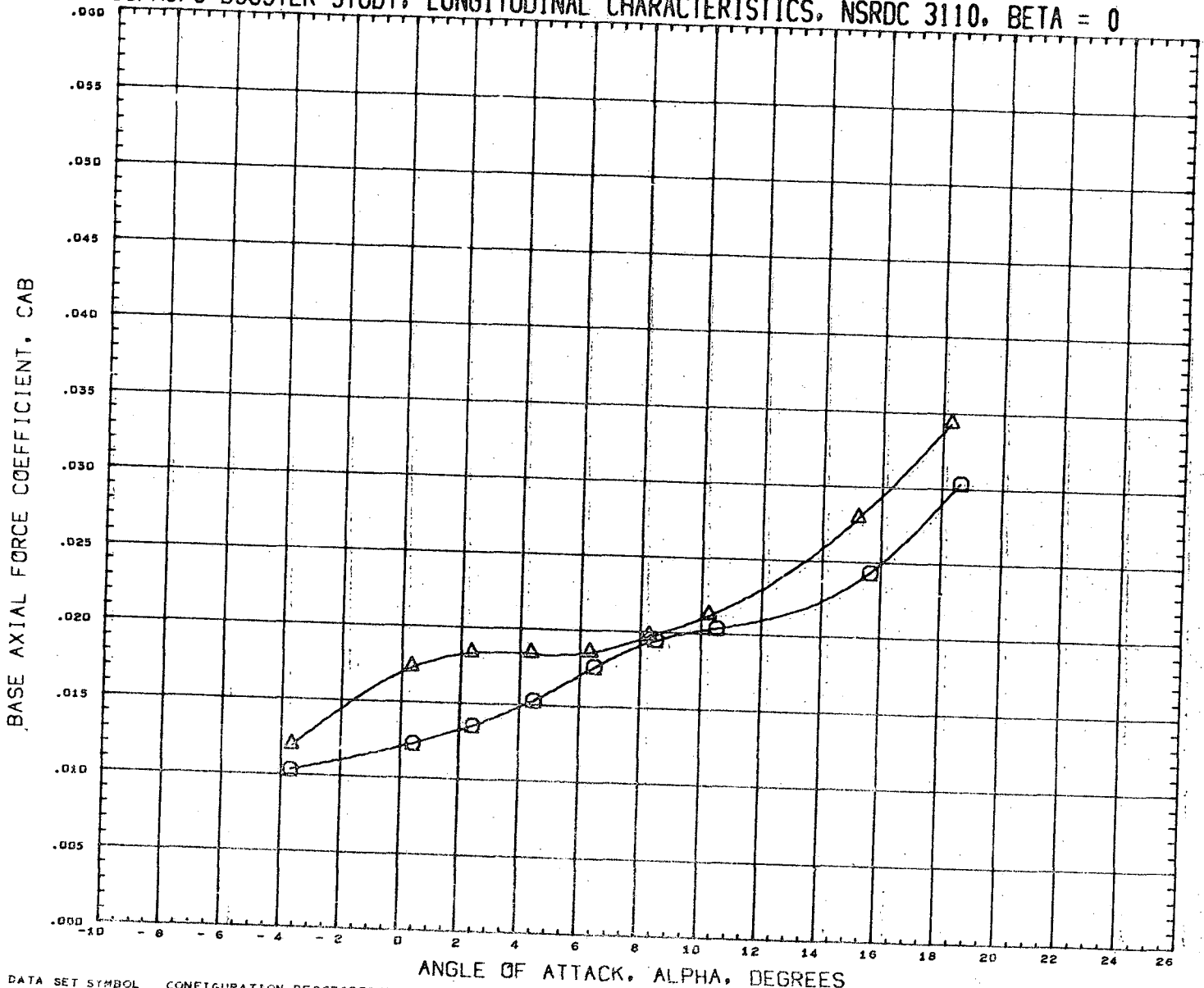


ANGLE OF ATTACK, ALPHA, DEGREES

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION	
(RN2021)	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1	15.000	1.000	0.000	2.000	SREF	1.3550 SQ.FT.
(RN2029)	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1	15.000	2.000	0.000	2.000	LREF	41.4360 INCHES
						BREF	41.4360 INCHES
						XMRP	31.1400 INCHES
						YMRP	0.0000 INCHES
						ZMRP	0.2250 INCHES
						SCALE	1.5000 PERCENT

MACH 0.382

LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



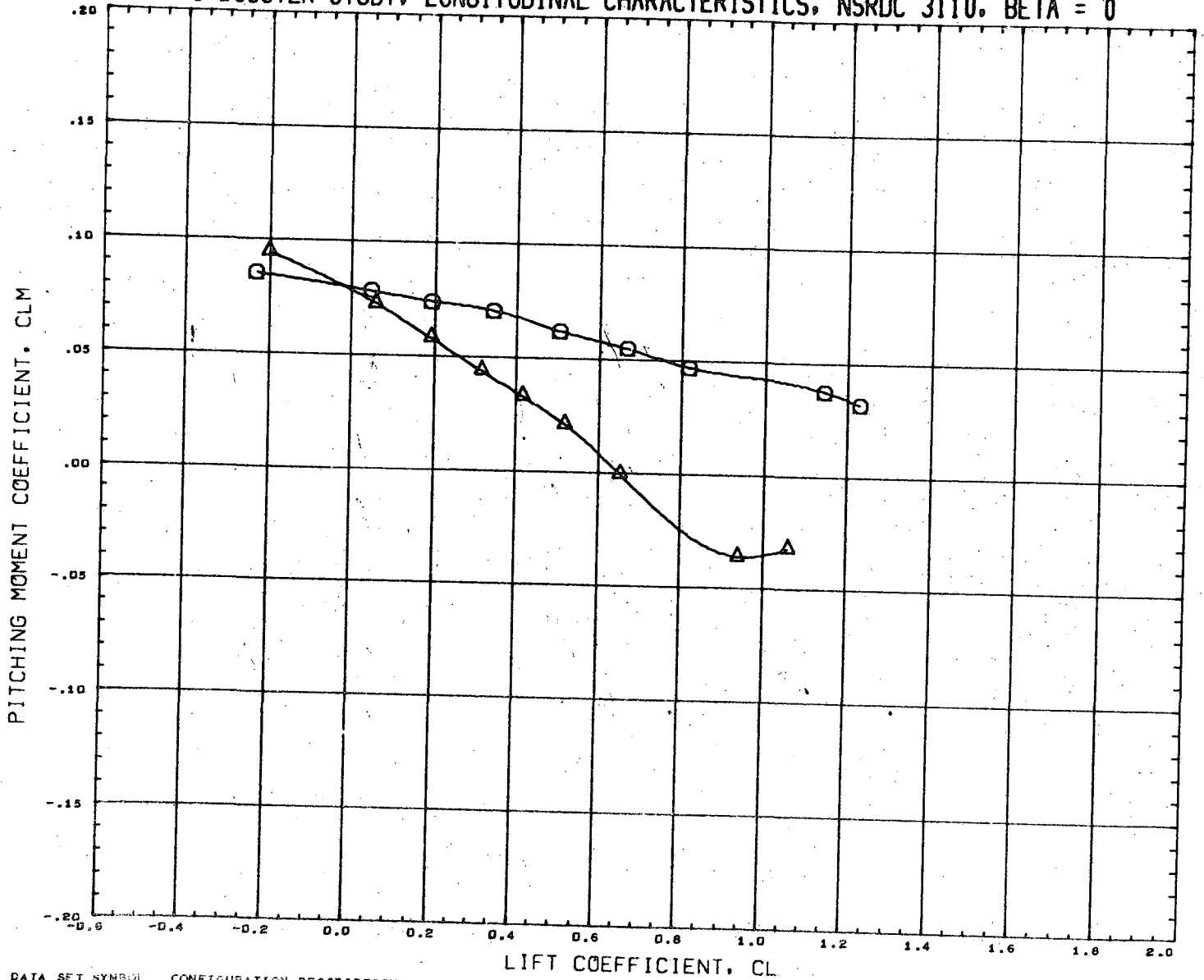
DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(RN2021)	NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1
(RN2029)	NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1

INCIDC	CNDPOS	INCIDW	WNGPOS
15.000	1.000	0.000	2.000
15.000	2.000	0.000	2.000

REFERENCE INFORMATION	
SREF	1.3550 SQ. FT.
LREF	41.4360 INCHES
BREF	41.4360 INCHES
XMRP	31.1400 INCHES
YMRP	0.0000 INCHES
ZMRP	0.2250 INCHES
SCALE	1.5000 PERCENT

MACH 0.382

LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL
(RN2021) ○
(RN2029) △

CONFIGURATION DESCRIPTION
NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1
NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1

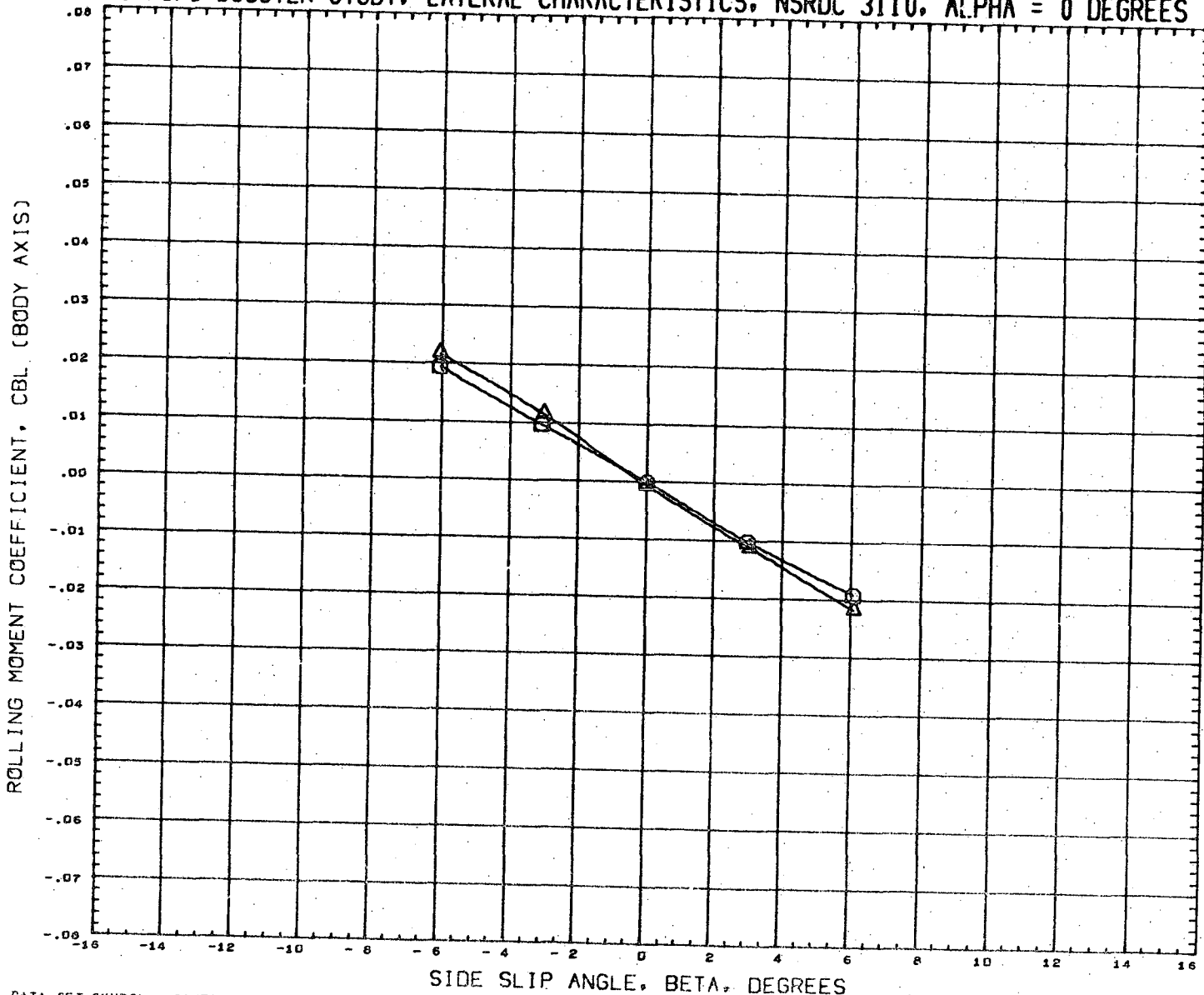
INCIDC	CNDPOS	INCIDW	WNGPOS
15.000	1.000	0.000	2.000
15.000	2.000	0.000	2.000

REFERENCE INFORMATION

SREF	1.3550	SQ. FT.
LREF	41.4360	INCHES
BREF	41.4360	INCHES
XMRP	31.1400	INCHES
YMRP	0.0000	INCHES
ZMRP	0.2250	INCHES
SCALE	1.5000	PERCENT

MACH 0.382

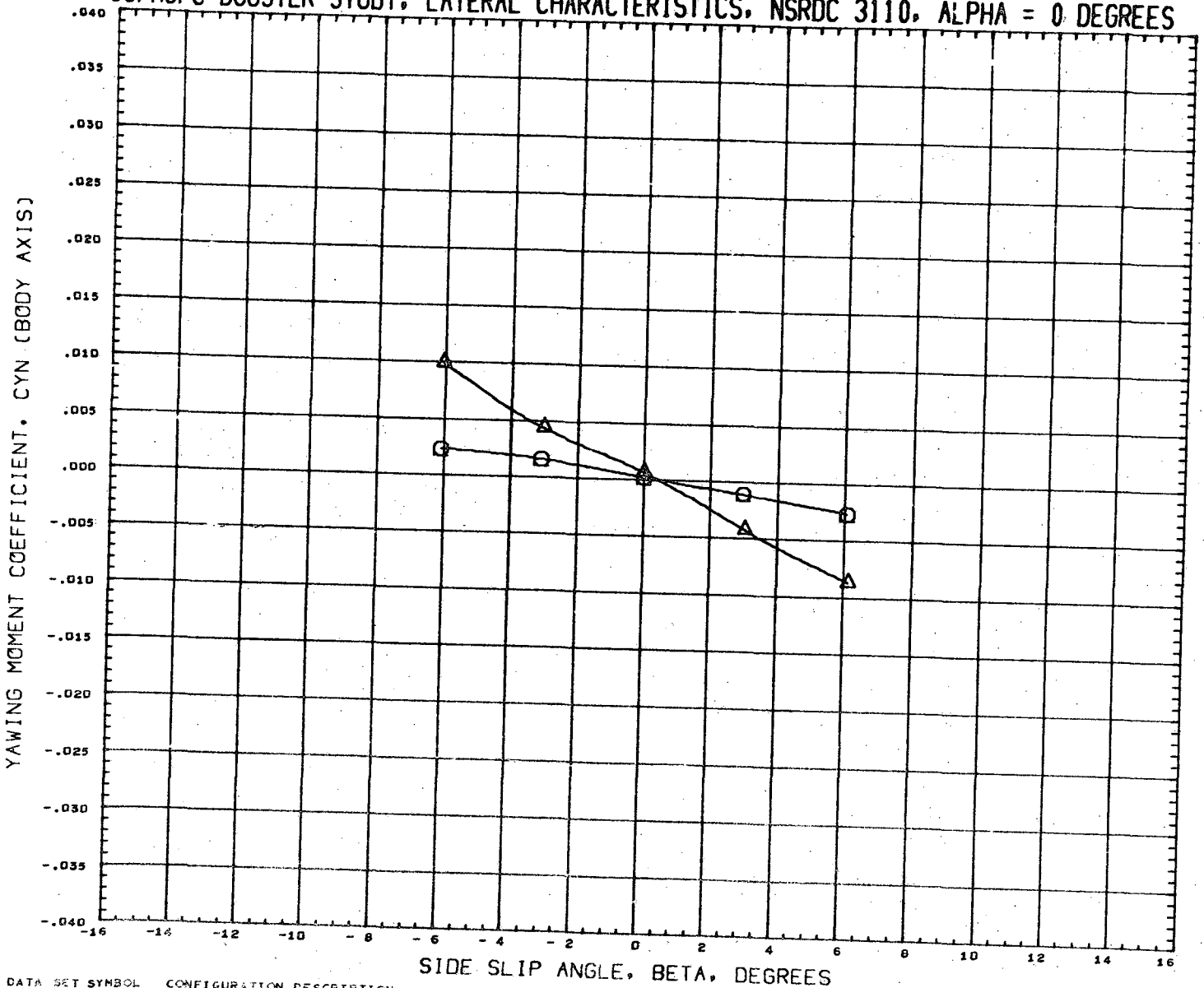
LMSC/MSFC BOOSTER STUDY, LATERAL CHARACTERISTICS, NSRDC 3110, ALPHA = 0 DEGREES



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2022)	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1	15.000	1.000	0.000	2.000	SREF 1.3550 SQ.FT.
(RN2030)	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1	15.000	2.000	0.000	2.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCENT

MACH 0.381

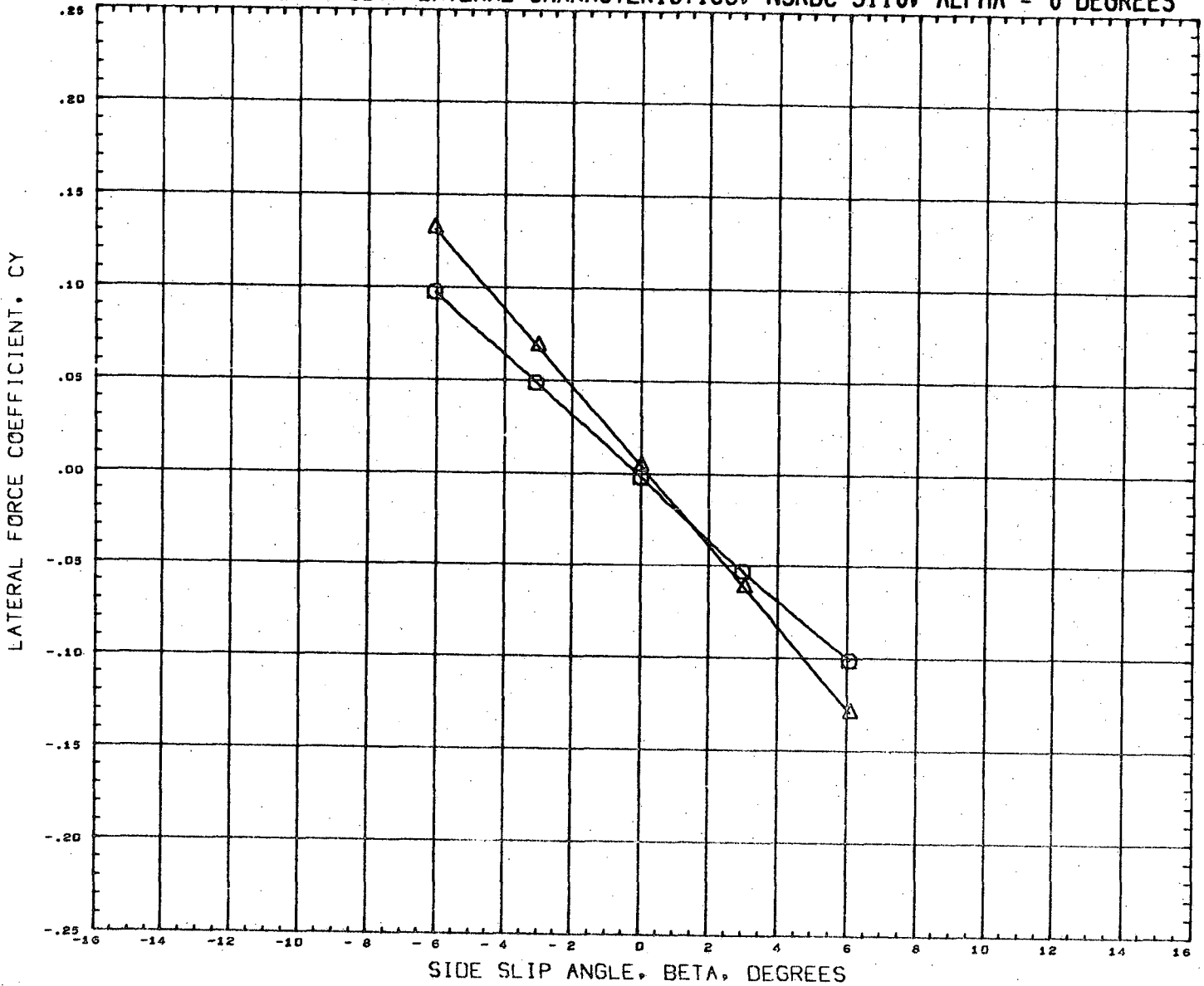
LMSC/MSFC BOOSTER STUDY, LATERAL CHARACTERISTICS, NSRDC 3110, ALPHA = 0 DEGREES



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2022)	NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1	15.000	1.000	0.000	2.000	SREF 1.3550 SQ. FT.
(RN2030)	NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1	15.000	2.000	0.000	2.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCENT

MACH 0.381

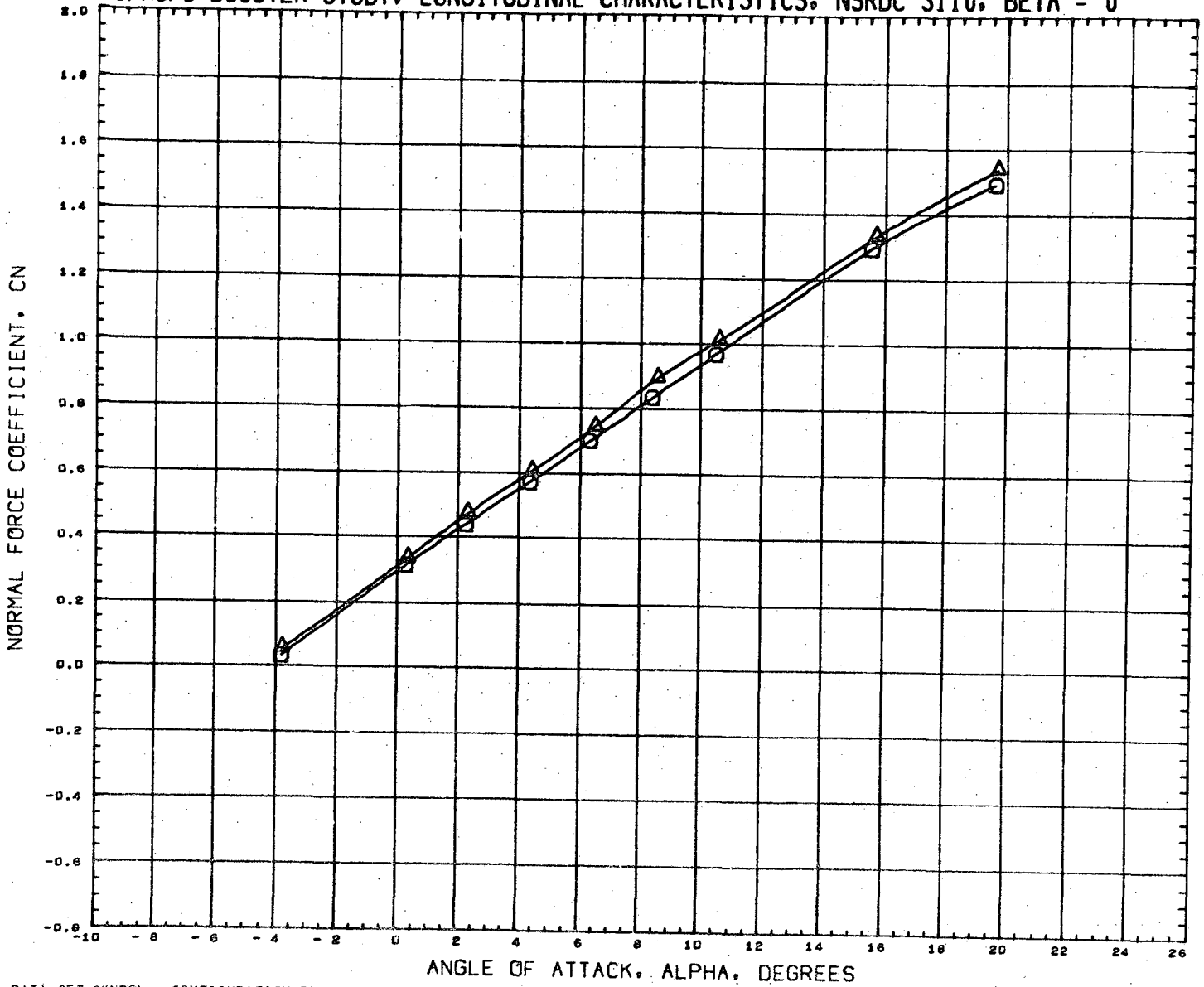
LMSC/MSFC BOOSTER STUDY, LATERAL CHARACTERISTICS, NSRDC 3110, ALPHA = 0 DEGREES



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDFOS	INCIDW	WNGFOS	REFERENCE INFORMATION
(RN2022)	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1	15.000	1.000	0.000	2.000	SREF 1.3550 SQ.FT.
(RN2030)	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1	15.000	2.000	0.000	2.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCNT

MACH 0.381

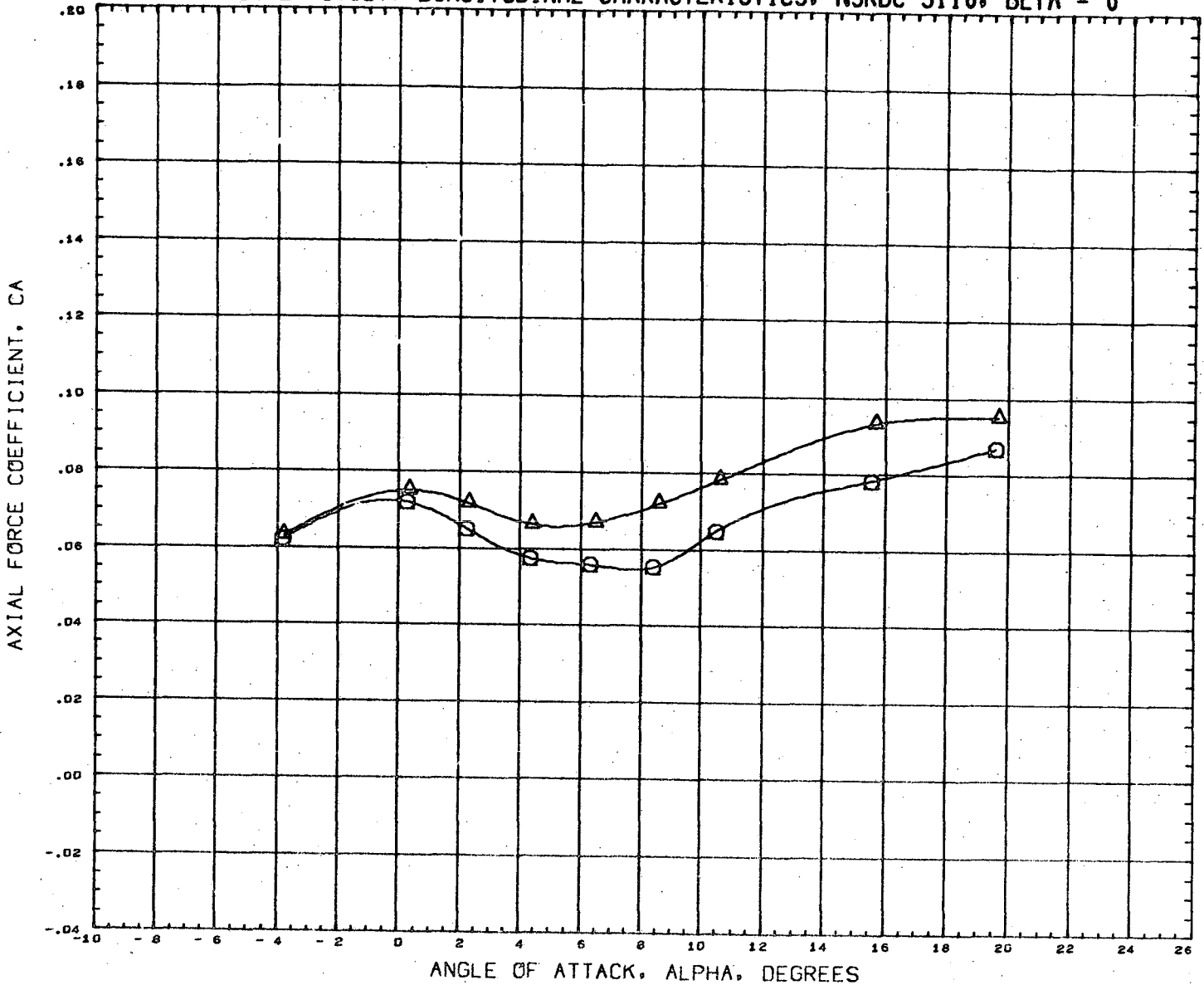
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION	
(RN2037)	NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1	15.000	1.000	3.000	1.000	SREF	1.3550 SQ. FT.
(RN2101)	NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1	15.000	1.000	3.000	1.000	LREF	41.4360 INCHES
						BREF	41.4360 INCHES
						XMRP	31.1400 INCHES
						YMRP	0.0000 INCHES
						ZMRP	0.2250 INCHES
						SCALE	1.5000 PERCENT

MACH D.381

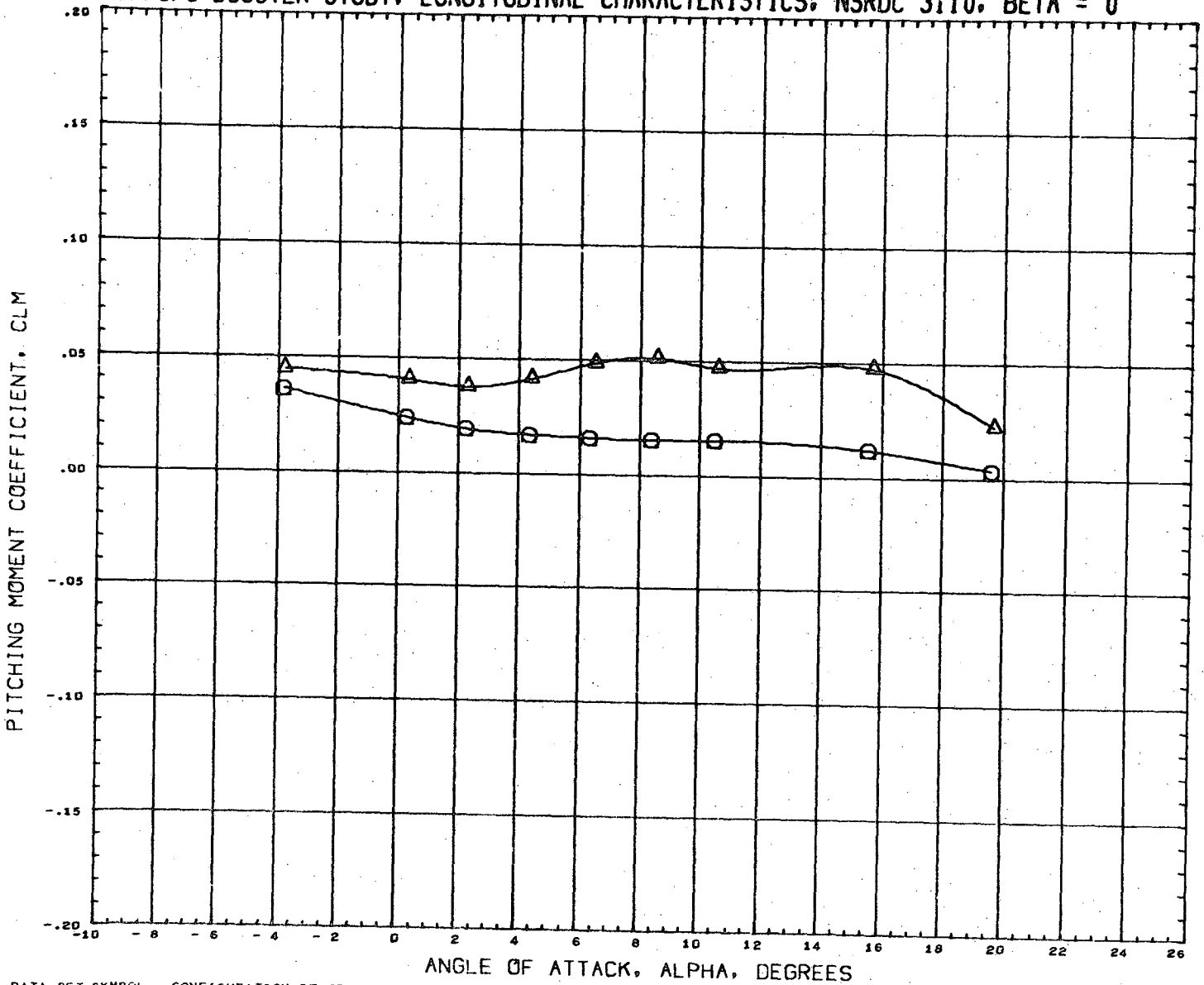
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2037)	NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1	15.000	1.000	3.000	1.000	SREF 1.3550 SQ. FT.
(RN2101)	NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1	15.000	1.000	3.000	1.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCENT

MACH 0.381

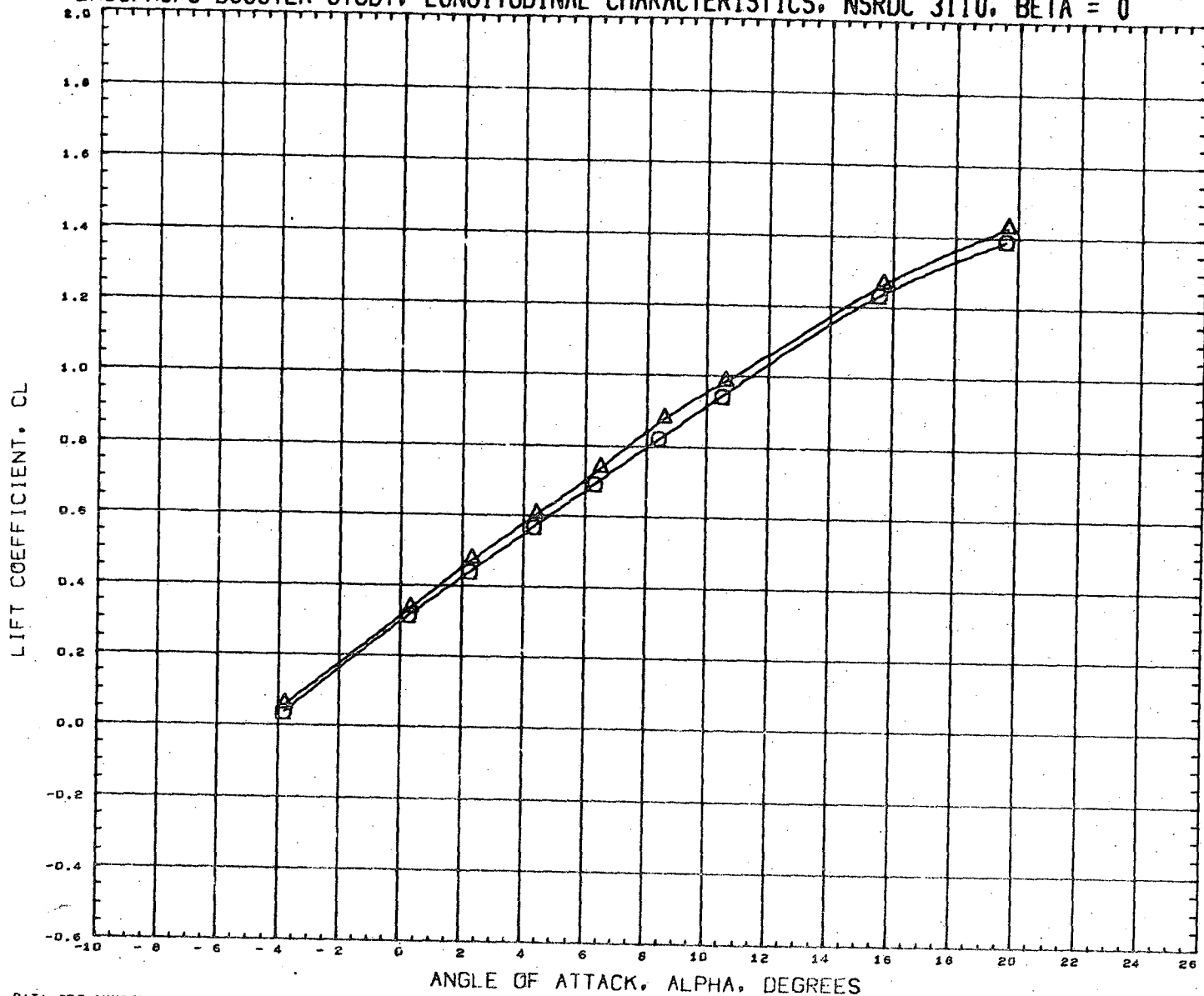
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2037)	NSRDC-3110,MSFC/LMSC BOOSTER BIC2F1W1V1	15.000	1.000	3.000	1.000	SREF 1.3550 SQ.FT.
(RN2101)	NSRDC-3110,MSFC/LMSC BOOSTER BIC1F1W1V1	15.000	1.000	3.000	1.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCNT

MACH 0.381

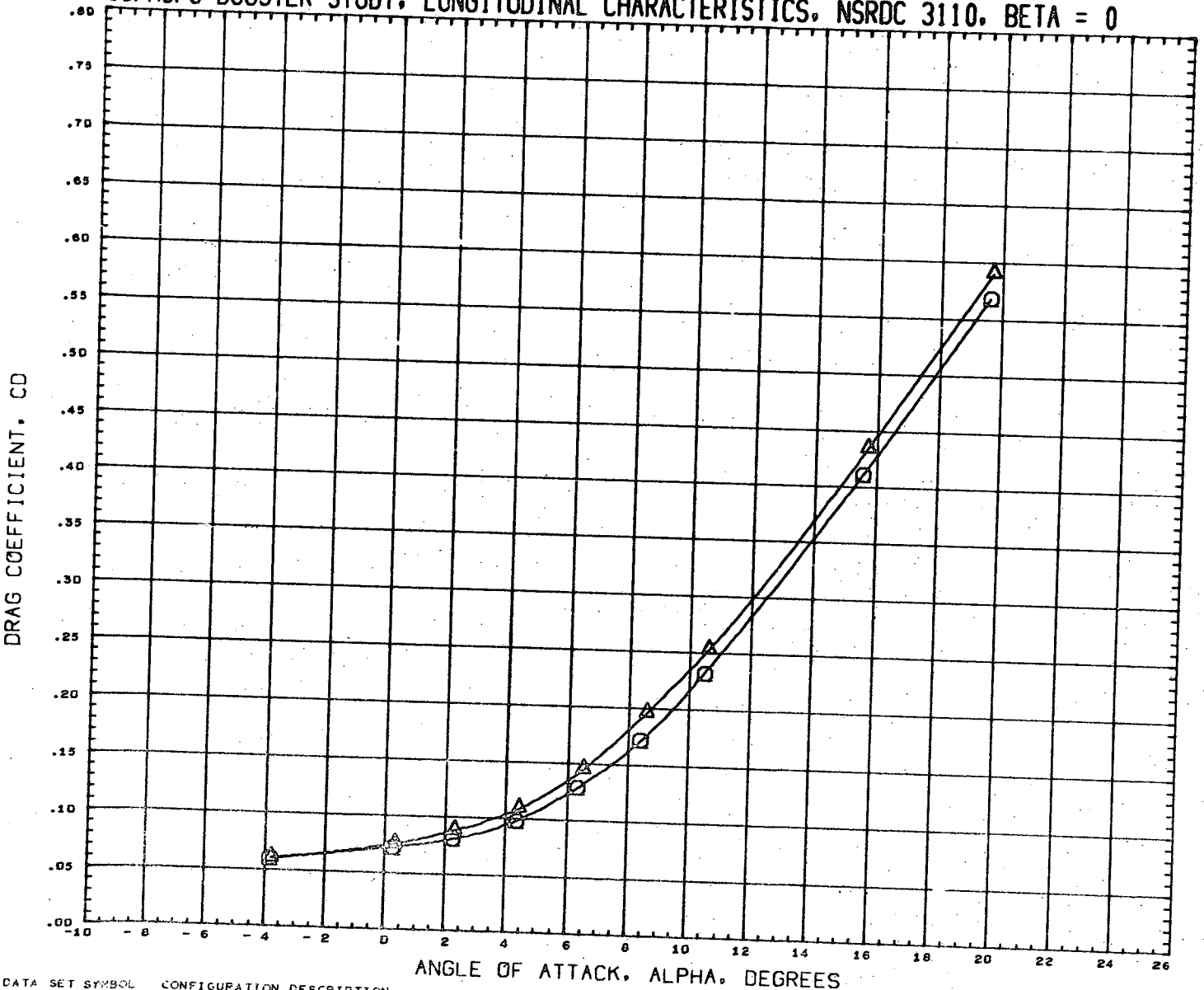
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2037)	NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1	15.000	1.000	3.000	1.000	SREF 1.3550 SQ.FT.
(RN2101)	NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1	15.000	1.000	3.000	1.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCENT

MACH 0.381

LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL
 (RN2037)
 (RN2101)

CONFIGURATION DESCRIPTION
 NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1
 NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1

INCIDC	CNDPOS	INCIDW	WNGPOS
15.000	1.000	3.000	1.000
15.000	1.000	3.000	1.000

REFERENCE INFORMATION

SREF	1.3550	SQ.FT.
LREF	41.4360	INCHES
BREF	41.4360	INCHES
XMRF	31.1400	INCHES
YMRF	0.0000	INCHES
ZMRF	0.2250	INCHES
SCALE	1.5000	PERCNT

MACH D.381

LMSC/MSFC BOOSTER STUDY. LONGITUDINAL CHARACTERISTICS, NSRDC 3:10, BETA = 0



DATA SET SYMBOL
(RN2037)
(RN2101)

CONFIGURATION DESCRIPTION
NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1
NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1

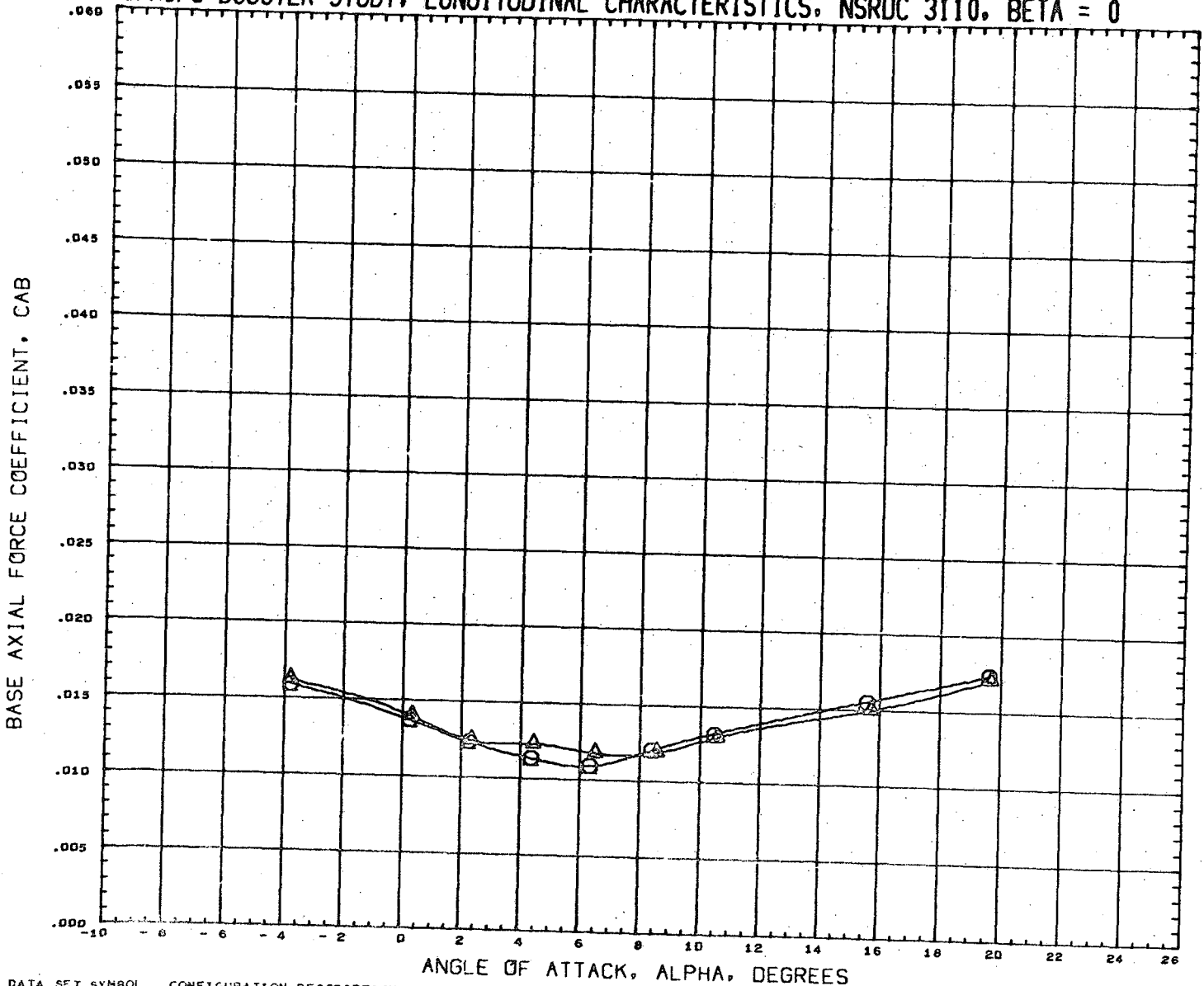
INCIDC	CNDPOS	INCIDW	WNGPOS
15.000	1.000	3.000	1.000
15.000	1.000	3.000	1.000

REFERENCE INFORMATION

SREF	1.3550	SQ. FT.
LREF	41.4360	INCHES
BREF	41.4360	INCHES
XMRP	31.1400	INCHES
YMRP	0.0000	INCHES
ZMRP	0.2250	INCHES
SCALE	1.5000	PERCENT

MACH 0.381

LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL
(RN2037)
(RN2101)



CONFIGURATION DESCRIPTION
NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1
NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1

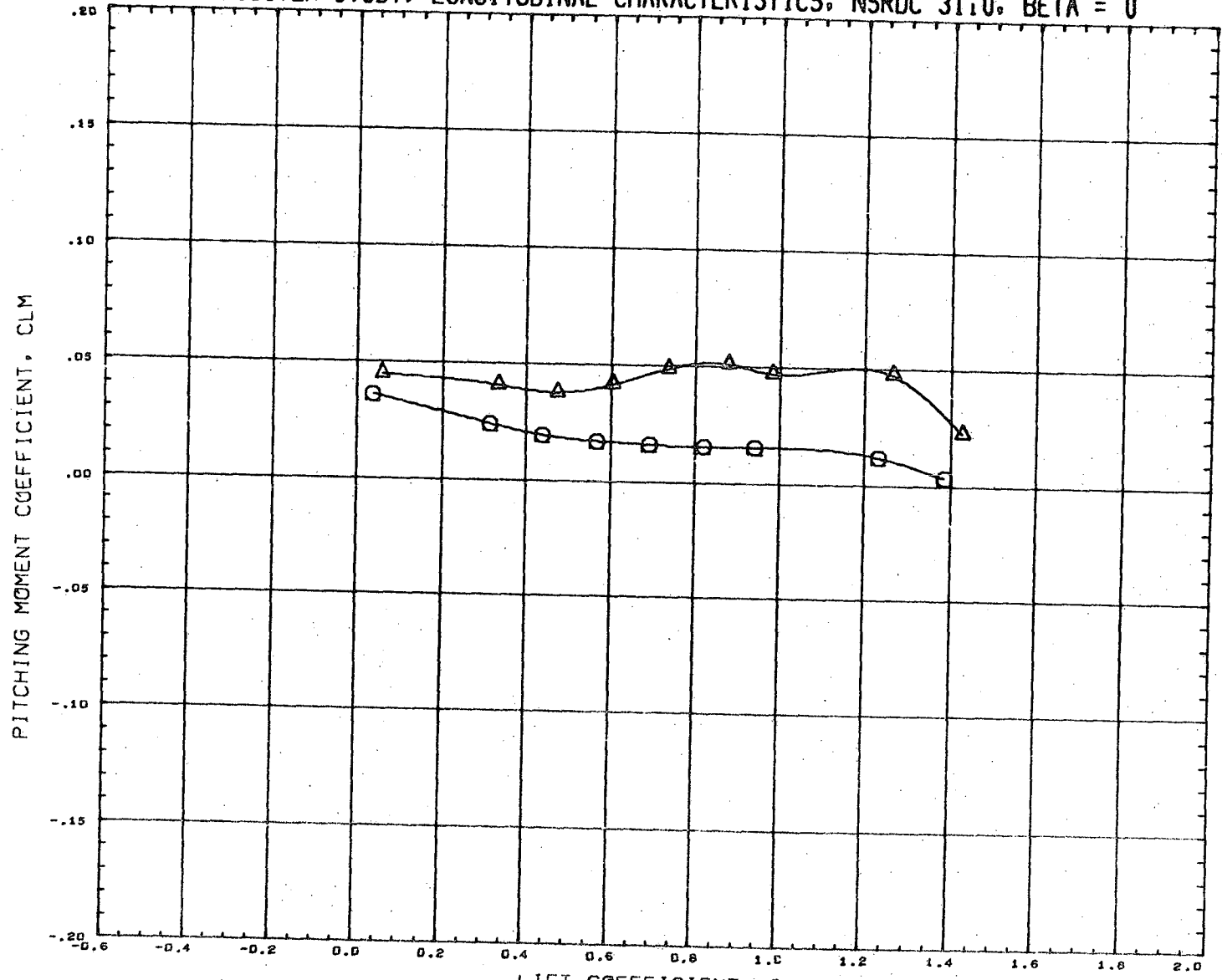
INCIDC	CNDPOS	INCIDW	WNGPOS
15.000	1.000	3.000	1.000
15.000	1.000	3.000	1.000

REFERENCE INFORMATION

SREF	1.3550	SQ. FT.
LREF	41.4360	INCHES
BREF	41.4360	INCHES
XMRP	31.1400	INCHES
YMRP	0.0000	INCHES
ZMRP	0.2250	INCHES
SCALE	1.5000	PERCNT

MACH 0.381

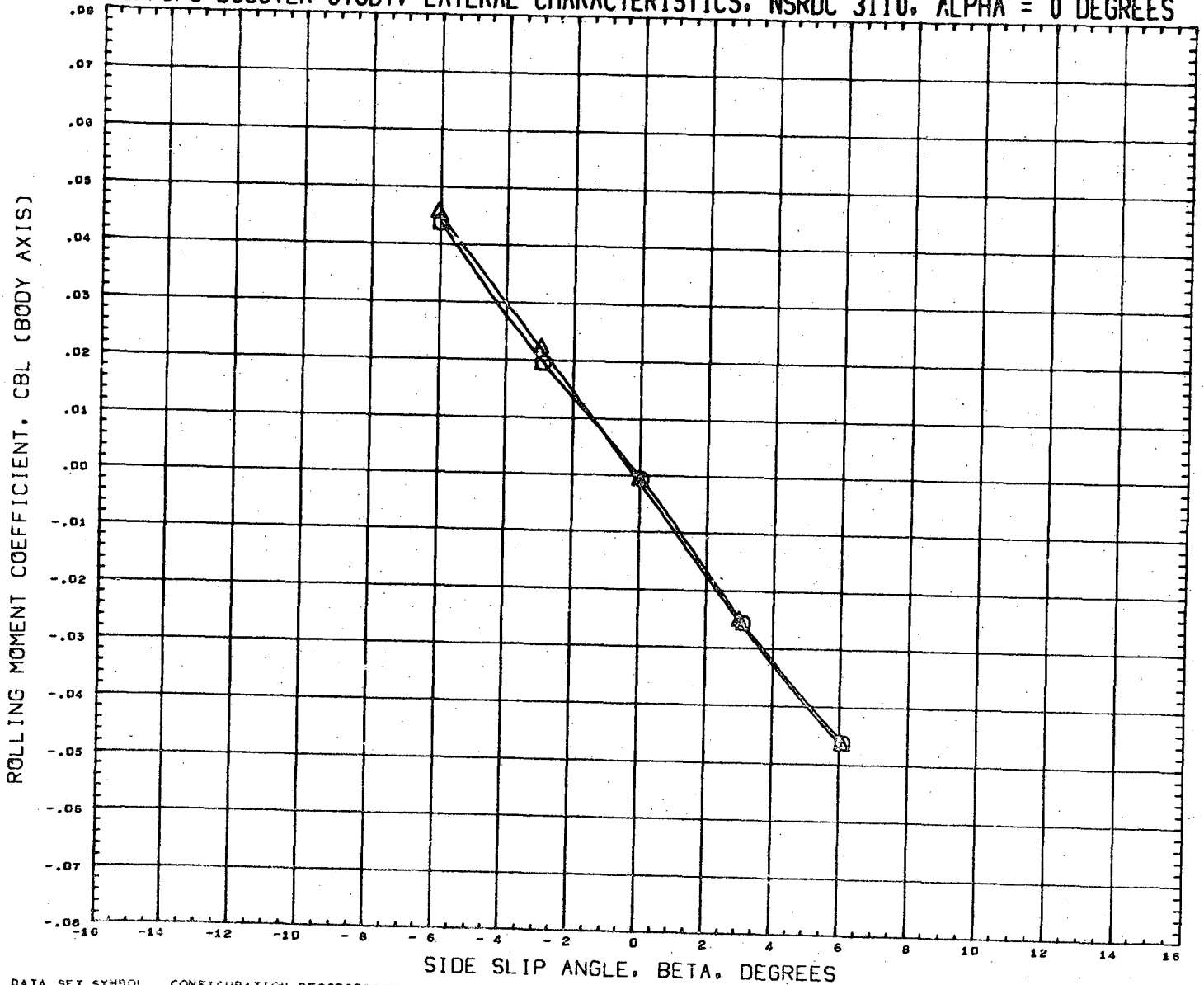
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2037)	NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1	15.000	1.000	3.000	1.000	SREF 1.3550 SQ. FT.
(RN2101)	NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1	15.000	1.000	3.000	1.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCENT

MACH 0.381

LMSC/MSFC BOOSTER STUDY, LATERAL CHARACTERISTICS, NSRDC 3110, ALPHA = 0 DEGREES



DATA SET SYMBOL
(RN2038)
(RN2102)

CONFIGURATION DESCRIPTION
NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1
NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1

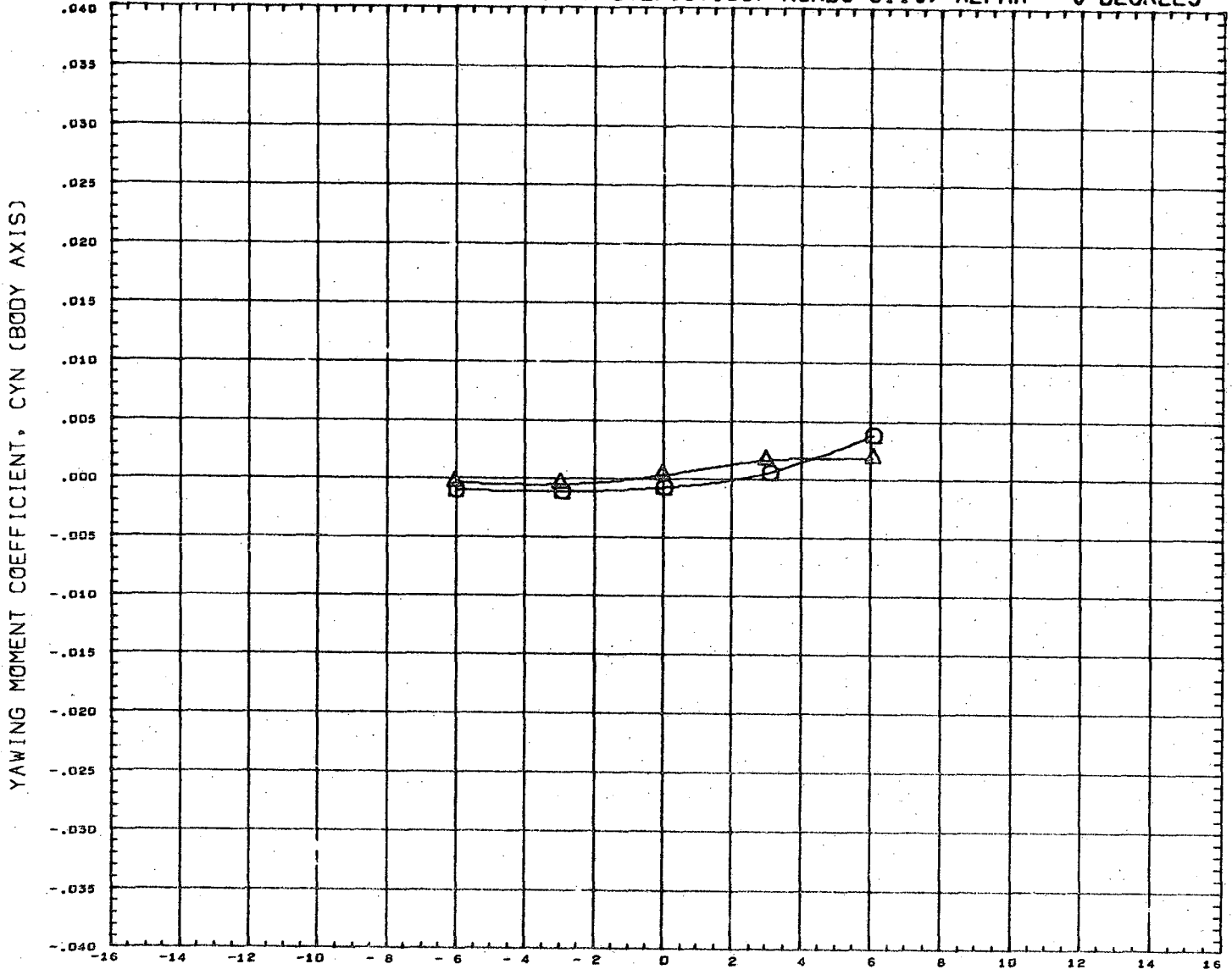
INCIDC	CNDPOS	INCIDW	WNGPOS
15.000	1.000	3.000	1.000
15.000	1.000	3.000	1.000

REFERENCE INFORMATION	
SREF	1.3550 SQ. FT.
LREF	41.4360 INCHES
BREF	41.4360 INCHES
XMRP	31.1400 INCHES
YMRP	0.0000 INCHES
ZMRP	0.2250 INCHES
SCALE	1.5000 PERCENT

MACH 0.381

204

LMSC/MSFC BOOSTER STUDY. LATERAL CHARACTERISTICS, NSRDC 3110, ALPHA = 0 DEGREES

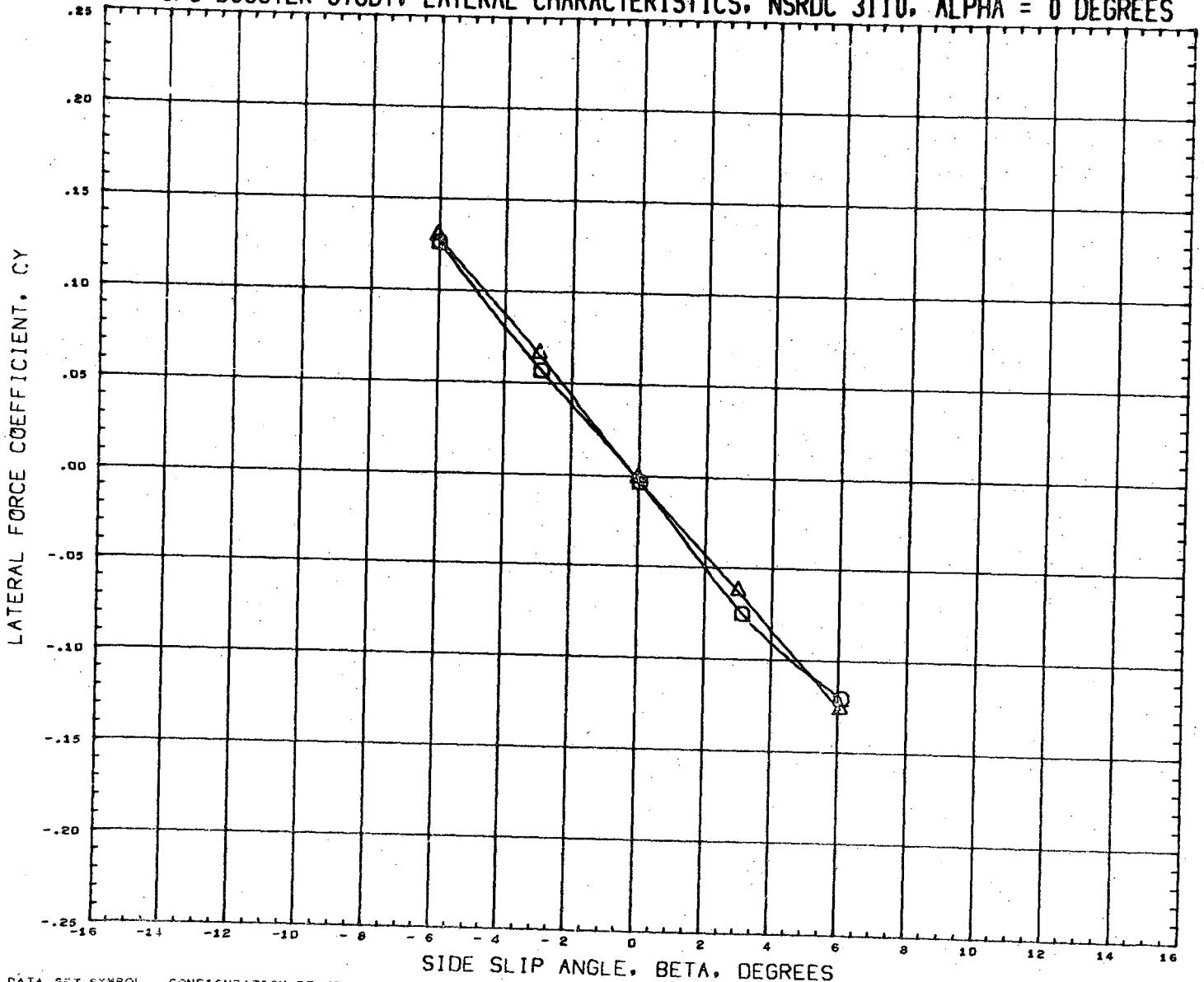


SIDE SLIP ANGLE, BETA, DEGREES

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2038)	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1	15.000	1.000	3.000	1.000	SREF 1.3550 SQ.FT.
(RN2102)	NSRDC-3110,MSFC/LMSC BOOSTER B1C1F1W1V1	15.000	1.000	3.000	1.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCNT

MACH 0.381

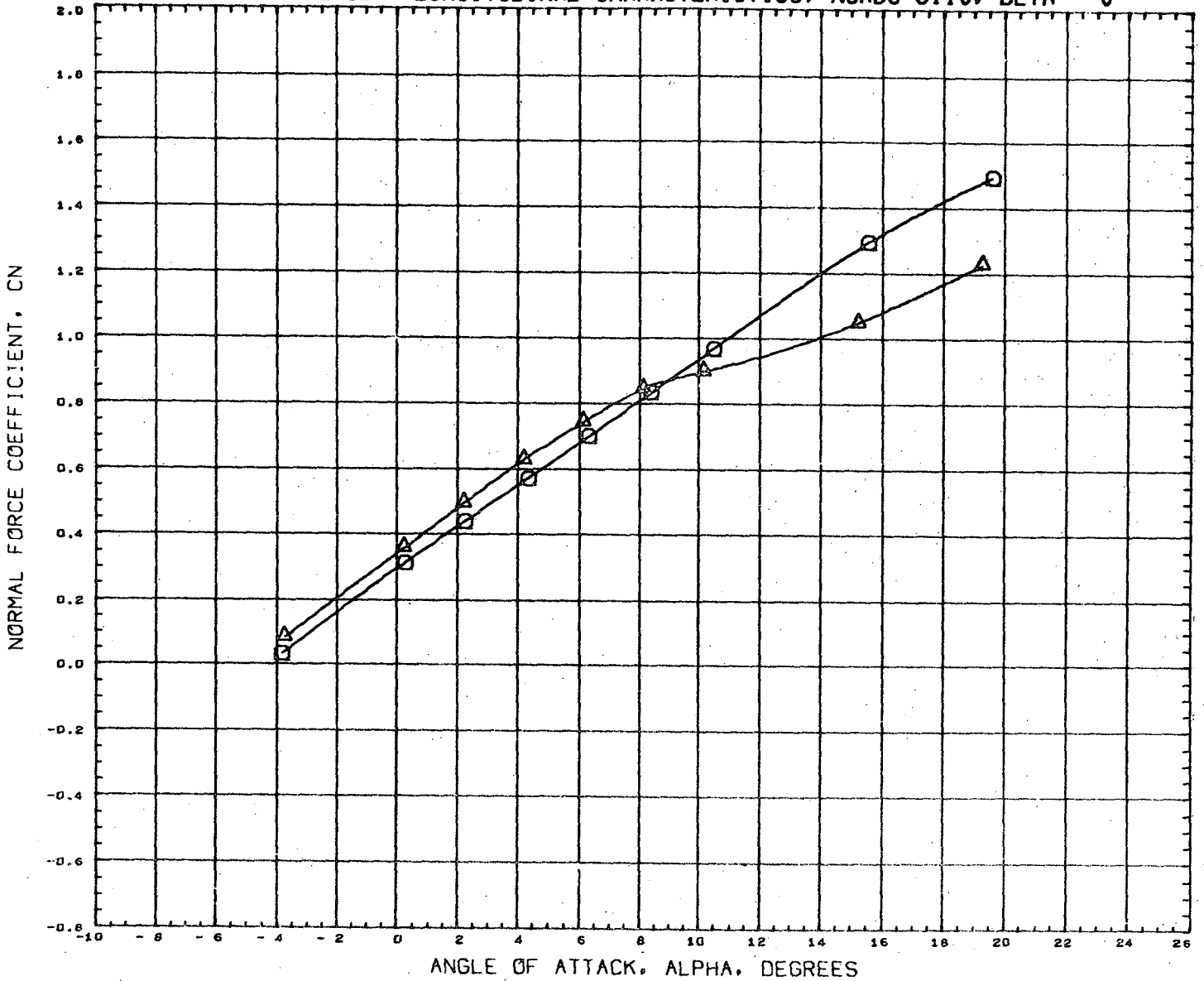
LMSC/MSFC BOOSTER STUDY, LATERAL CHARACTERISTICS, NSRDC 3110, ALPHA = 0 DEGREES



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2000)	NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1	15.000	1.000	3.000	1.000	SREF 1.3550 SQ.FT.
(RN2100)	NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1	15.000	1.000	3.000	1.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCENT

MACH 0.381

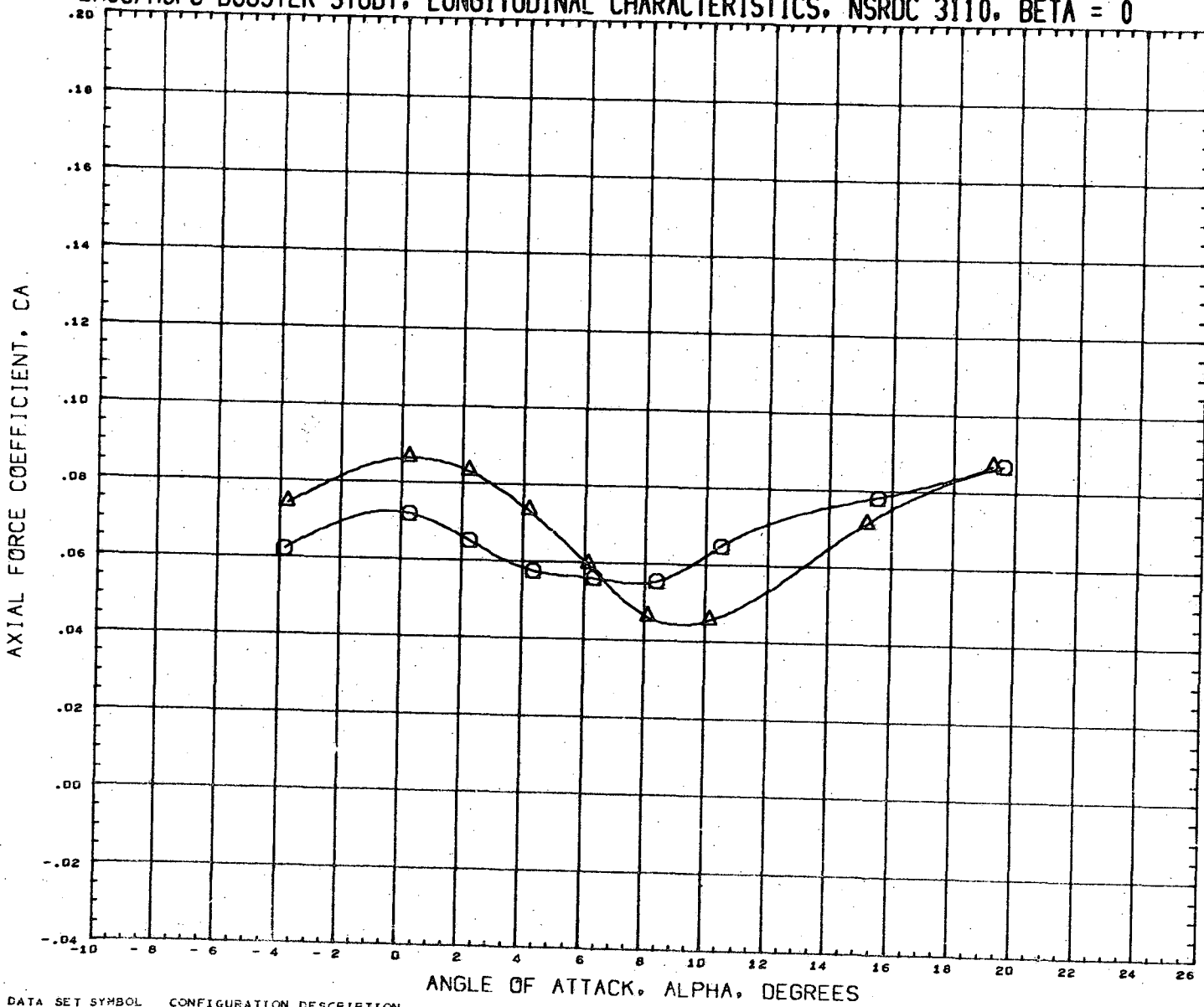
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2037)	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1	15.000	1.000	3.000	1.000	SREF 1.3550 SQ.FT.
(RN2045)	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1	15.000	2.000	3.000	1.000	LREF 41.4360 INCHES BREF 41.4360 INCHES XMRP 31.1400 INCHES YMRP 0.0000 INCHES ZMRP 0.2250 INCHES SCALE 1.5000 PERCENT

MACH 0.361

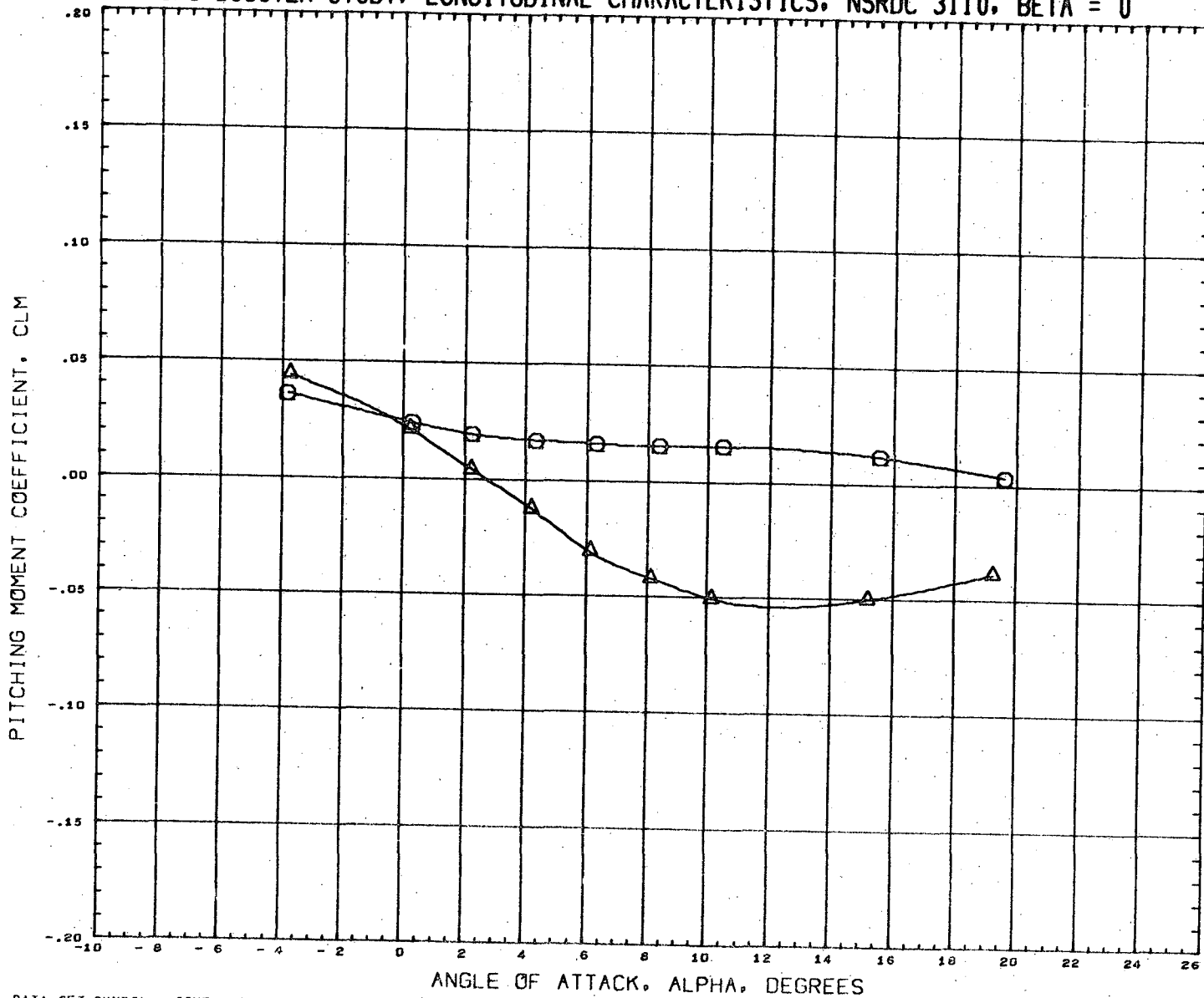
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0





DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2037)	NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1	15.000	1.000	3.000	1.000	SREF 1.3550 SQ. FT.
(RN2045)	NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1	15.000	2.000	3.000	1.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCENT

MACH 0.381

LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL
(RN2037) 
(RN2045) 

CONFIGURATION DESCRIPTION
NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1
NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1

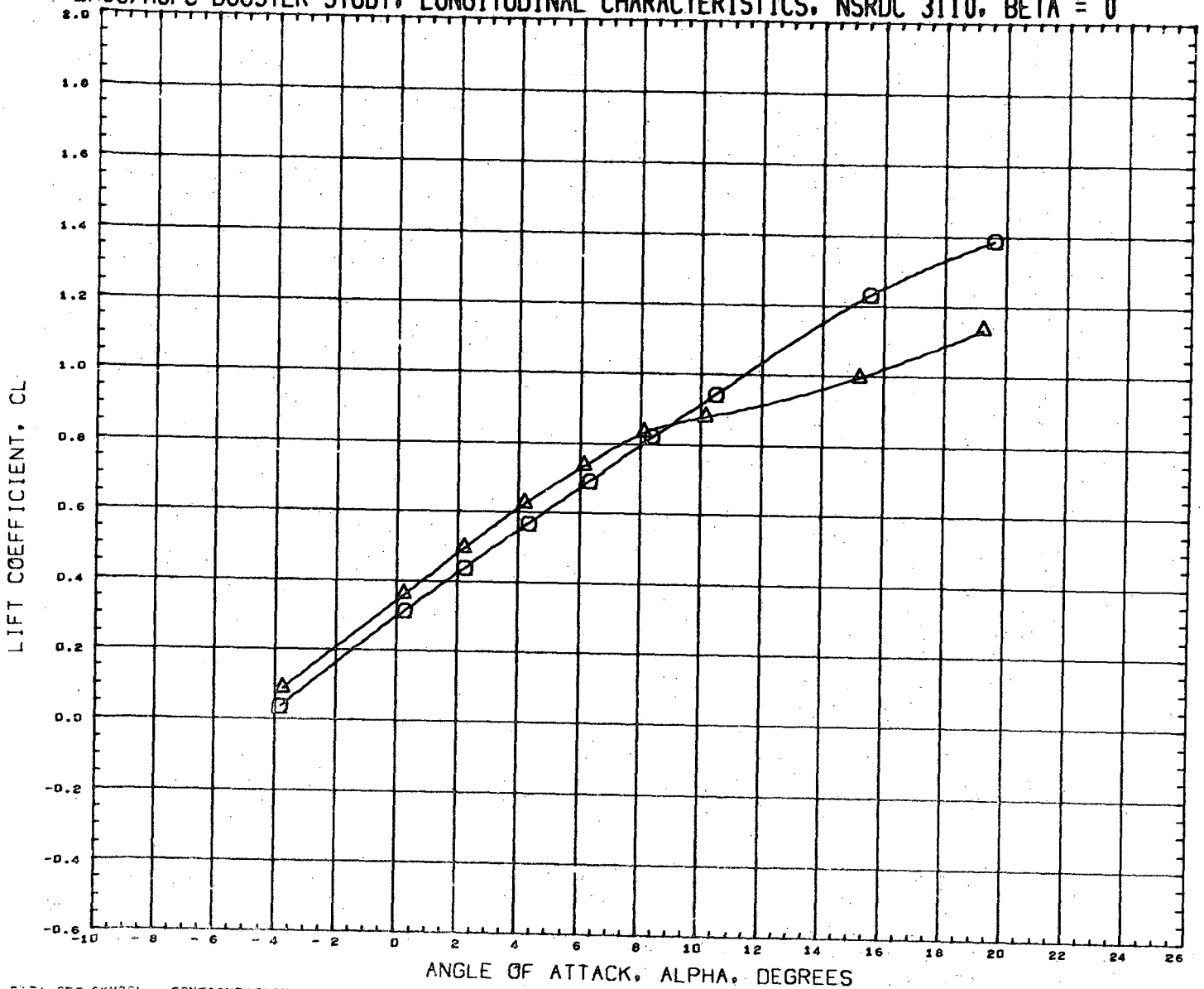
INCIDC	CNDPOS	INCIDW	WNGPOS
15.000	1.000	3.000	1.000
15.000	2.000	3.000	1.000

REFERENCE INFORMATION

SREF	1.3550	SQ. FT.
LREF	41.4360	INCHES
BREF	41.4360	INCHES
XMRP	31.1400	INCHES
YMRP	0.0000	INCHES
ZMRP	0.2250	INCHES
SCALE	1.5000	PERCENT

MACH 0.381

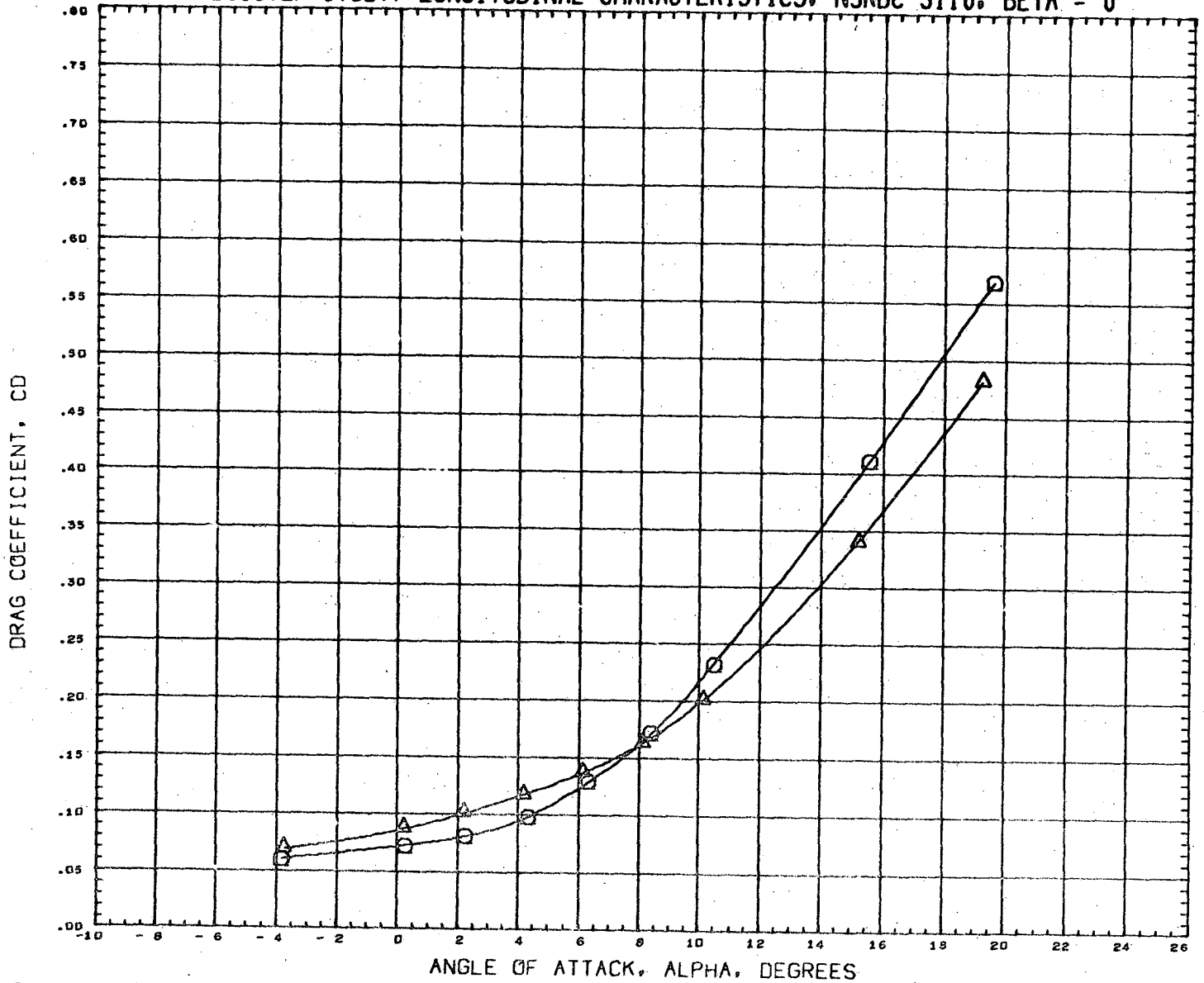
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2037)	NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1	15.000	1.000	3.000	1.000	SREF 1.3550 SQ.FT.
(RN2045)	NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1	15.000	2.000	3.000	1.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRF 31.1400 INCHES
						YMRF 0.0000 INCHES
						ZMRF 0.2250 INCHES
						SCALE 1.5000 PERCNT

MACH 0.361

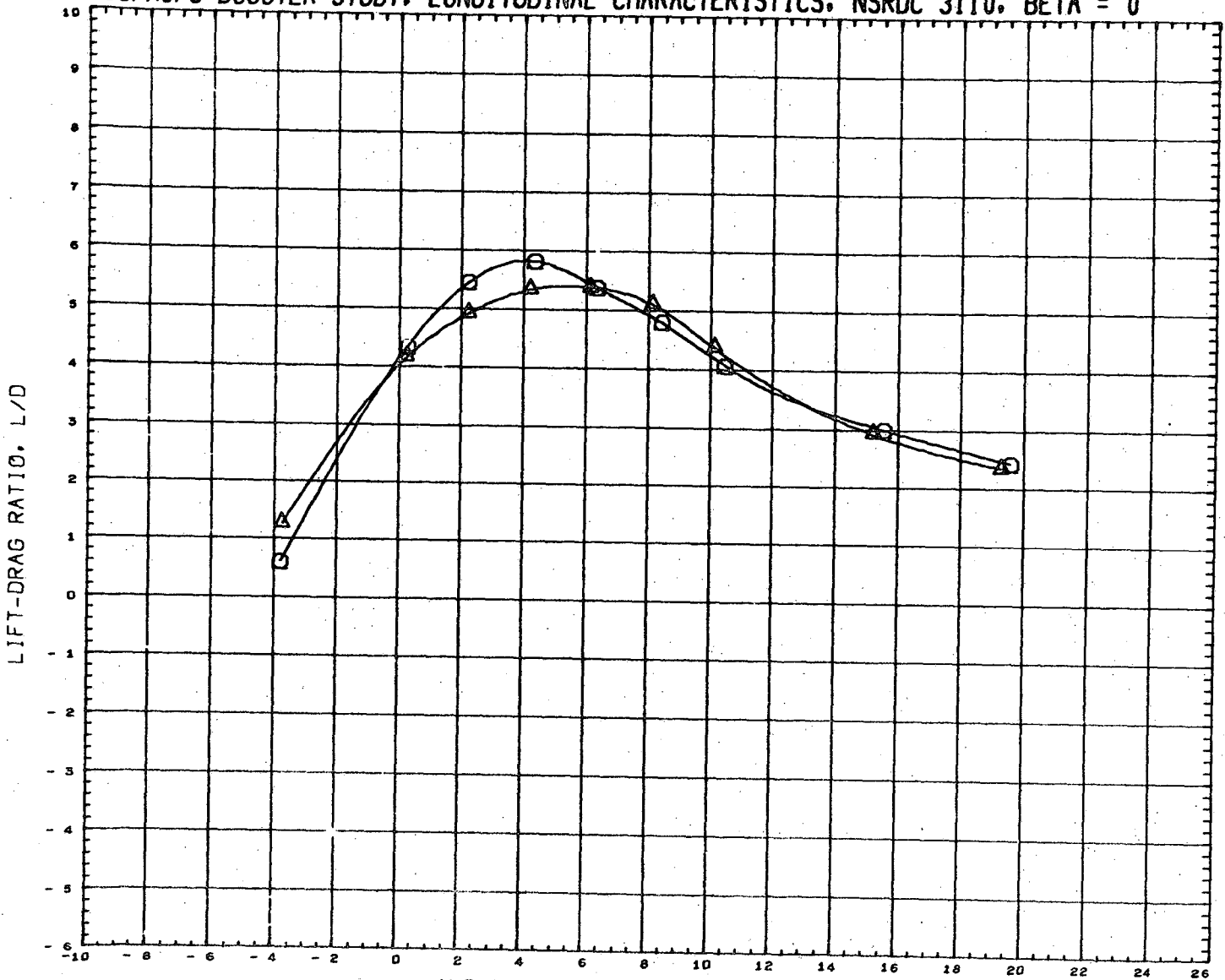
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2037)	NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1	15.000	1.000	3.000	1.000	SREF 1.3550 SQ. FT.
(RN2045)	NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1	15.000	2.000	3.000	1.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCENT

MACH 0.381

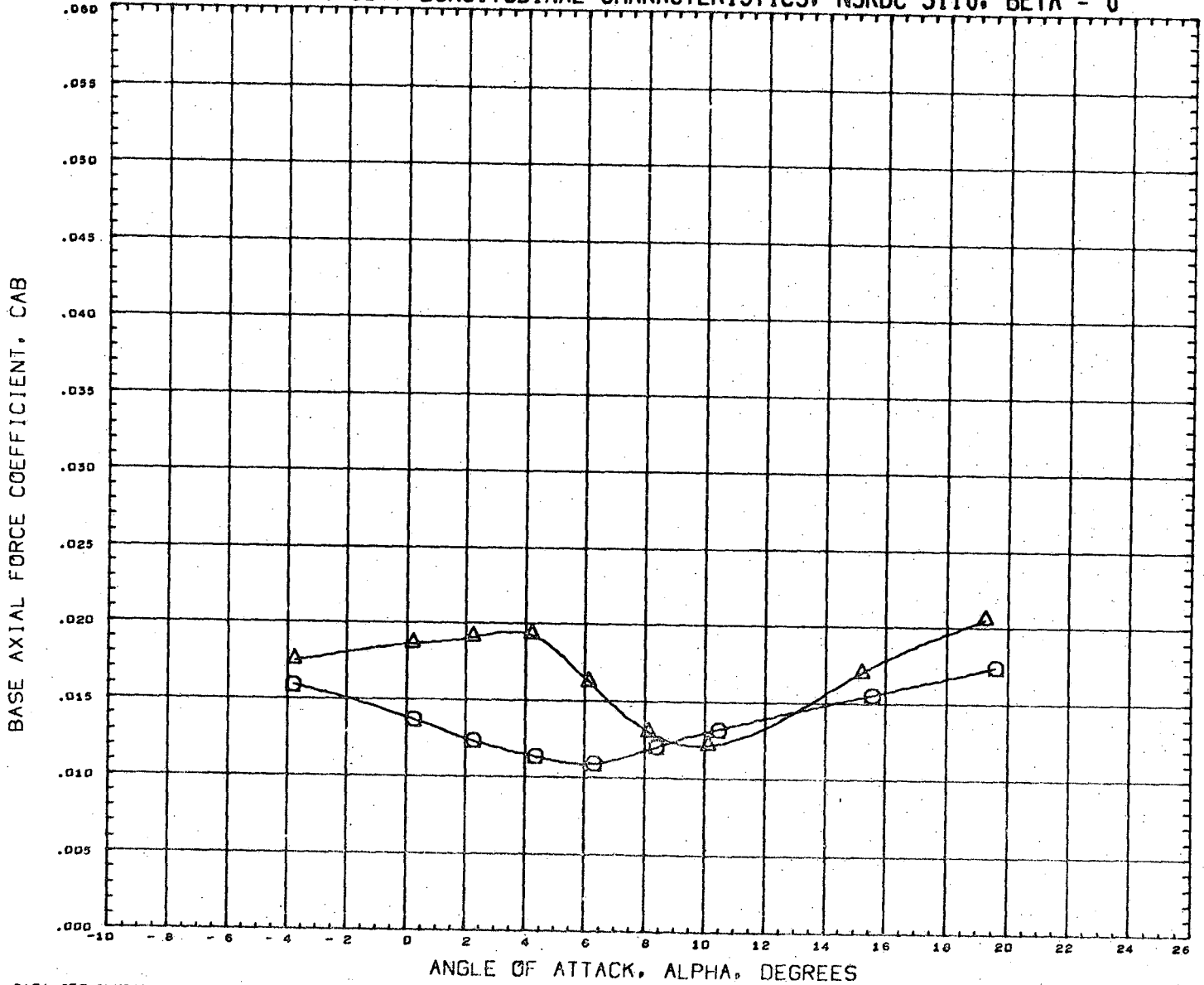
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2037)	NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1	15.000	1.000	3.000	1.000	SREF 1.3550 SQ.FT.
(RN2045)	NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1	15.000	2.000	3.000	1.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 32.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCENT

MACH 0.381

LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3:10, BETA = 0



DATA SET SYMBOL
 (RN2037) \square
 (RN2045) \triangle

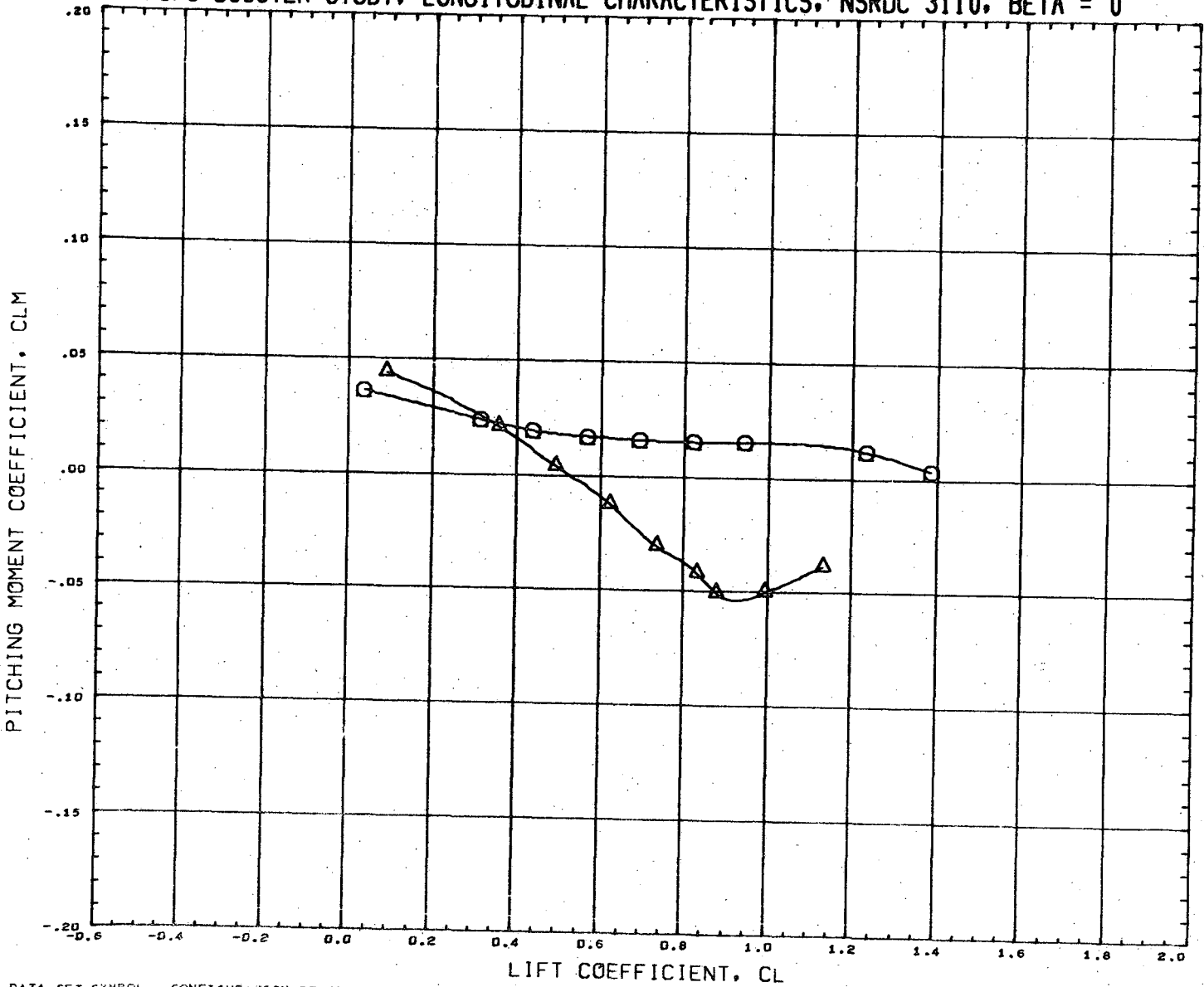
CONFIGURATION DESCRIPTION
 NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1
 NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1

INCIDC	CNDPOS	INCIDW	WNGPOS.
15.000	1.000	3.000	1.000
15.000	2.000	3.000	1.000

REFERENCE INFORMATION		
SREF	1.3550	SQ. FT.
LREF	41.4360	INCHES
BREF	41.4360	INCHES
XMRP	31.1400	INCHES
YMRP	0.0000	INCHES
ZMRP	0.2250	INCHES
SCALE	1.5000	PERCENT

MACH 0.381

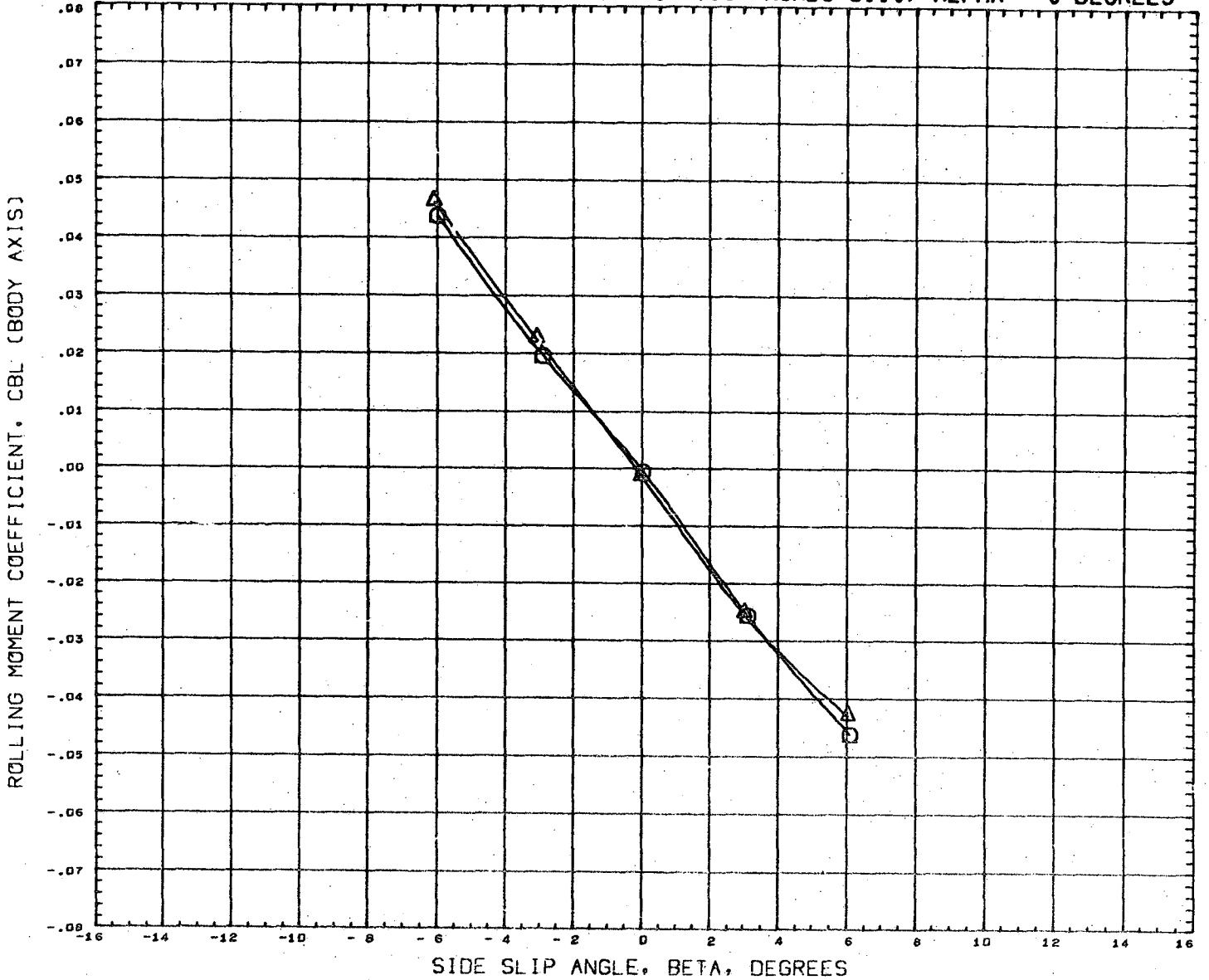
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION	
(RN2037)	NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1	15.000	1.000	3.000	1.000	SREF	1.3550 SQ.FT.
(RN2045)	NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1	15.000	2.000	3.000	1.000	LREF	41.4360 INCHES
						BREF	41.4360 INCHES
						XMRP	31.1400 INCHES
						YMRP	0.0000 INCHES
						ZMRP	0.2250 INCHES
						SCALE	1.5000 PERCENT

HACH 0.381

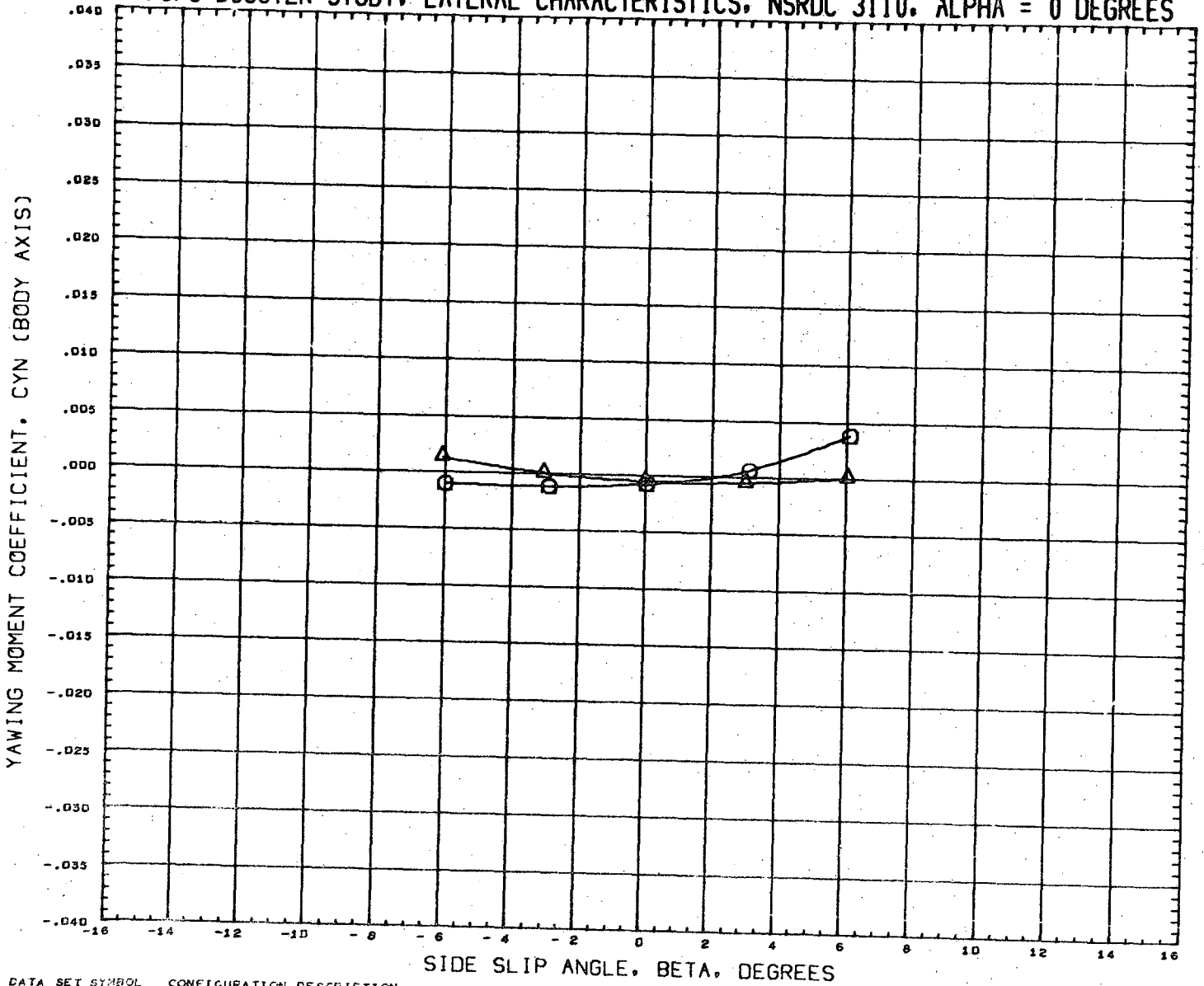
LMSC/MSFC BOOSTER STUDY, LATERAL CHARACTERISTICS, NSRDC 3110, ALPHA = 0 DEGREES





DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2036)	NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1	15.000	1.000	3.000	1.000	SREF 1.3550 SQ.FT.
(RN2046)	NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1	15.000	2.000	3.000	1.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCNT

MACH 0.381

LMSC/MSFC BOOSTER STUDY, LATERAL CHARACTERISTICS, NSRDC 3110, ALPHA = 0 DEGREES



DATA SET SYMBOL
(RN2038) 
(RN2046) 

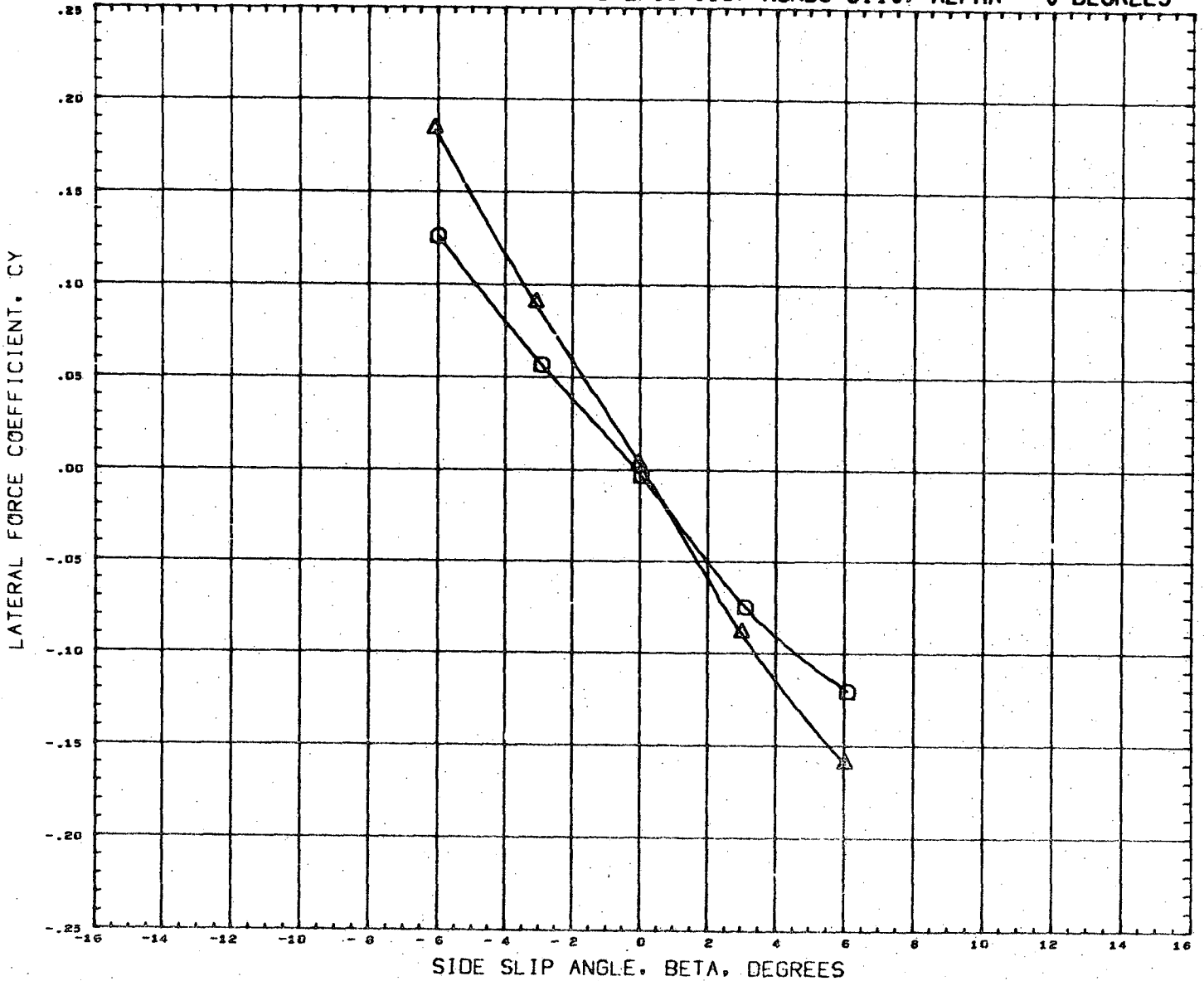
CONFIGURATION DESCRIPTION
NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1
NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1

INCIDC	CNDFOS	INCIDW	WNGPOS
15.000	1.000	3.000	1.000
15.000	2.000	3.000	1.000

REFERENCE INFORMATION		
SREF	1.3550	SQ. FT.
LREF	41.4360	INCHES
BREF	41.4360	INCHES
XMRP	31.1400	INCHES
YMRP	0.0000	INCHES
ZMRP	0.2250	INCHES
SCALE	1.5000	PERCENT

MACH 0.381

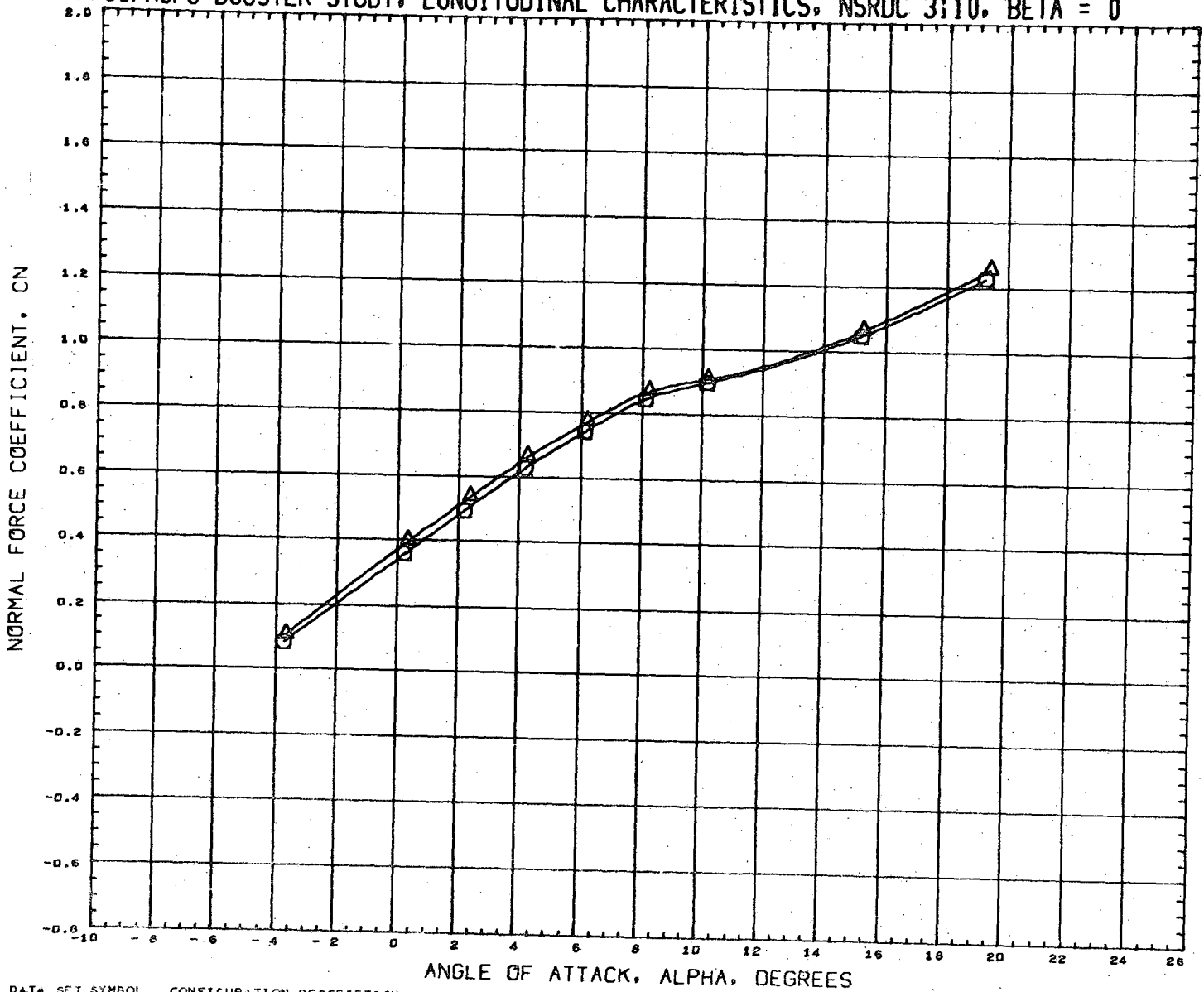
LMSC/MSFC BOOSTER STUDY, LATERAL CHARACTERISTICS, NSRDC 3110, ALPHA = 0 DEGREES



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2038)	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1	15.000	1.000	3.000	1.000	SREF 1.3550 SQ.FT. LREF 41.4360 INCHES
(RN2046)	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1	15.000	2.000	3.000	1.000	BREF 41.4360 INCHES XMRP 31.1400 INCHES YMRP 0.0000 INCHES ZMRP 0.2250 INCHES SCALE 1.5000 PERCNT

MACH 0.381

LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL
(RN2045)
(RN2109)



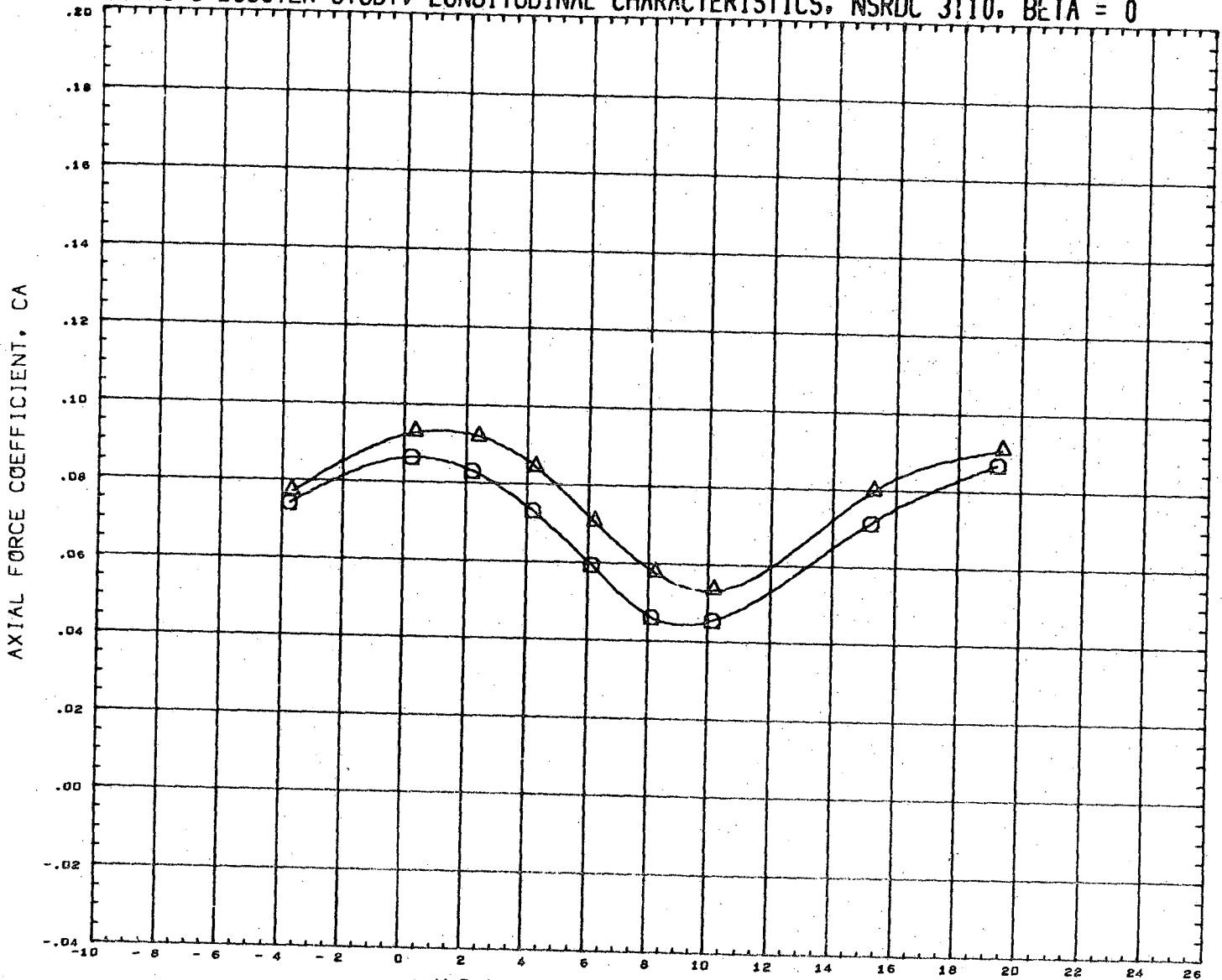
CONFIGURATION DESCRIPTION
NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1
NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1



INCIDC	CNDPOS	INCIDW	WNGPOS
15.000	2.000	3.000	1.000
15.000	2.000	3.000	1.000

REFERENCE INFORMATION
SREF 1.3550 SQ. FT.
LREF 41.4360 INCHES
BREF 41.4360 INCHES
XMRP 31.1400 INCHES
YMRP 0.0000 INCHES
ZMRP 0.2250 INCHES
SCALE 1.5000 PERCENT

MACH C.302

LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL
(RN2045) 
(RN2109) 

CONFIGURATION DESCRIPTION
NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1
NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1

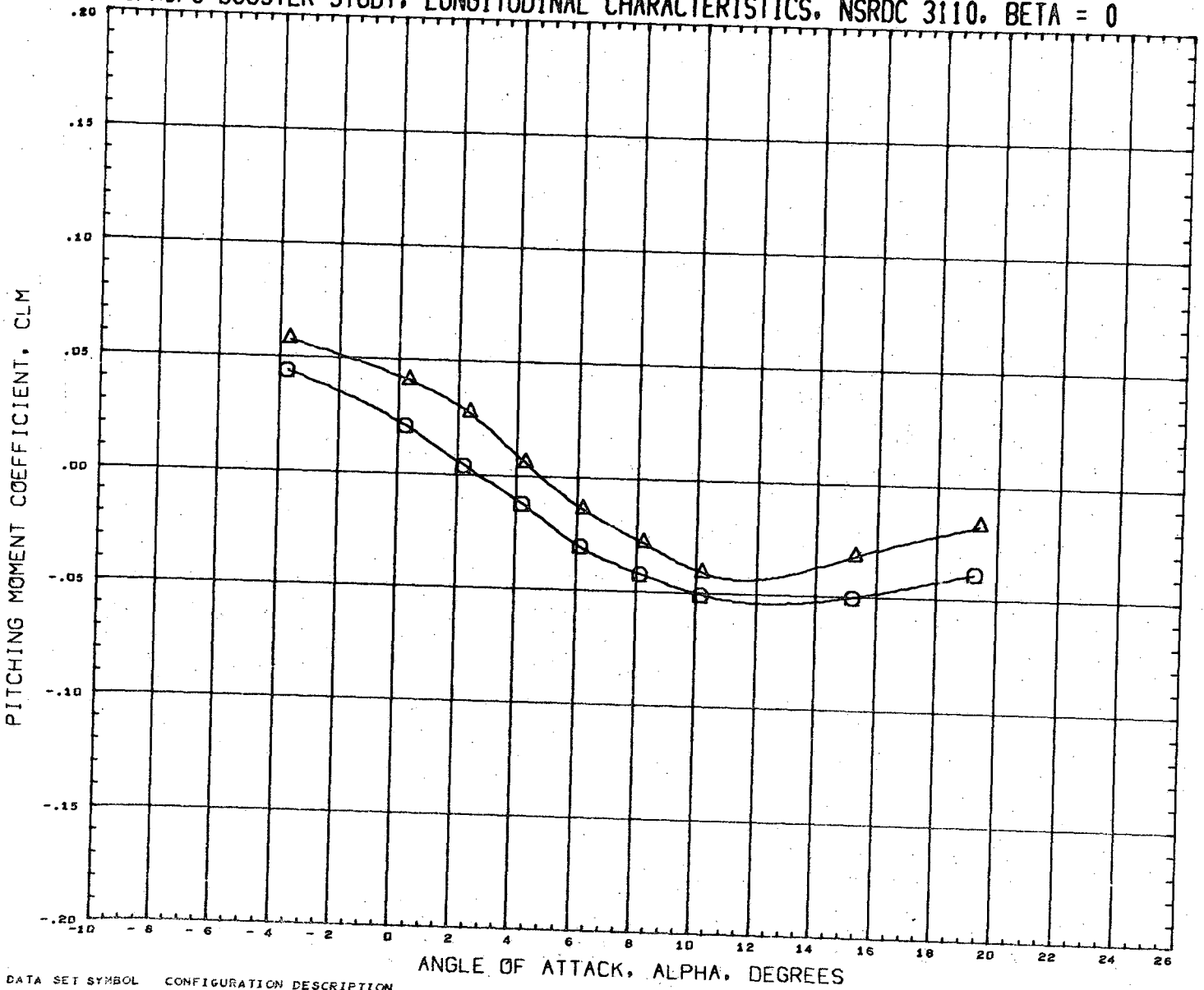
INCIDC	CNDPOS	INCIDW	WNGPOS
15.000	2.000	3.000	1.000
15.000	2.000	3.000	1.000

REFERENCE INFORMATION

SREF	1.3550	SQ. FT.
LREF	41.4360	INCHES
BREF	41.4360	INCHES
XMRP	31.1400	INCHES
YMRP	0.0000	INCHES
ZMRP	0.2250	INCHES
SCALE	1.5000	PERCENT

MACH 0.382

LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



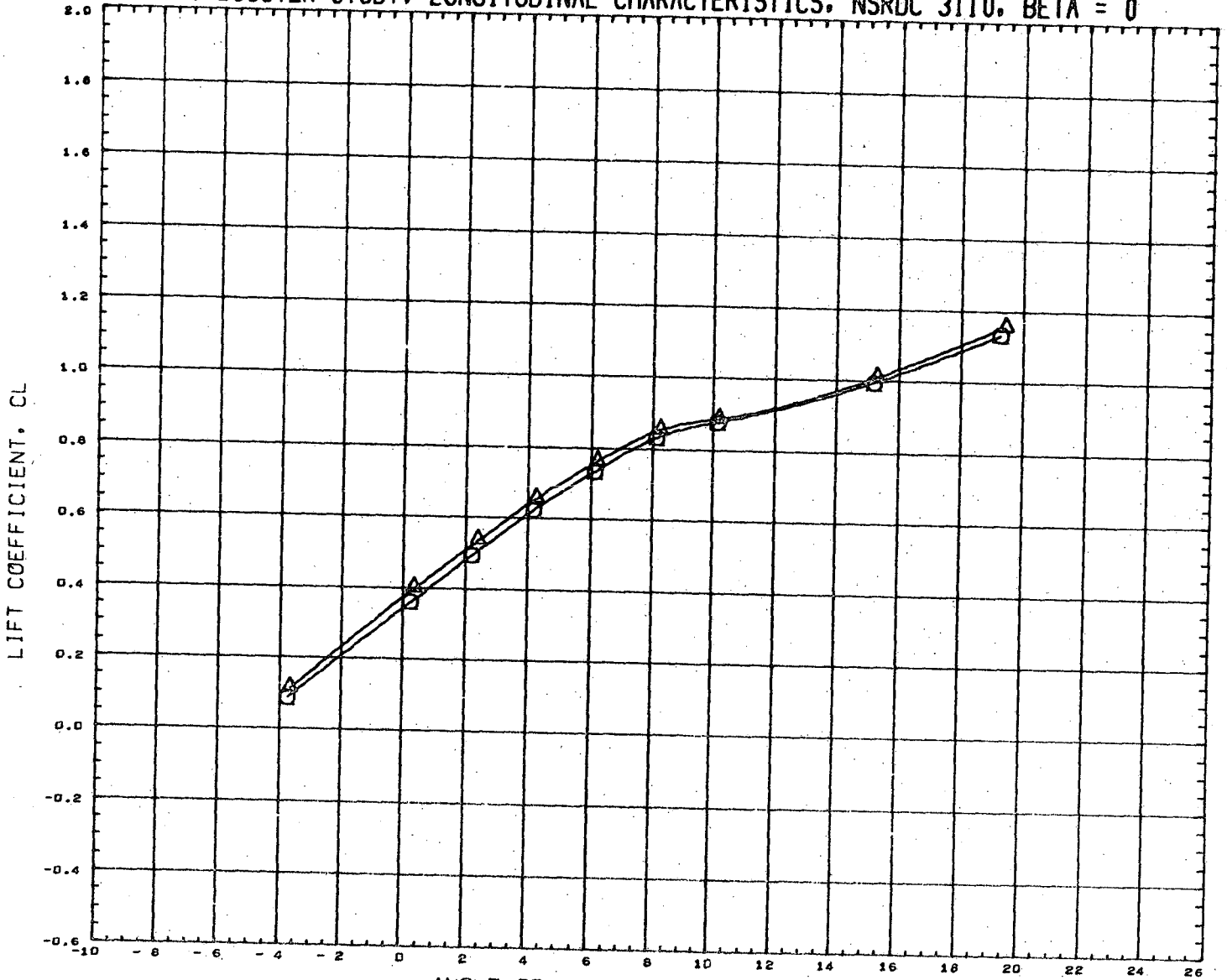
DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (RN2045) ○ NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1
 (RN2109) △ NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1

INCIDC CNDPOS INCIDW WNGPOS
 15.000 2.000 3.000 1.000
 15.000 2.000 3.000 1.000

REFERENCE INFORMATION
 SREF 1.3550 SQ. FT.
 LREF 41.4360 INCHES
 BREF 41.4360 INCHES
 XMRP 31.1400 INCHES
 YMRP 0.0000 INCHES
 ZMRP 0.2250 INCHES
 SCALE 1.5000 PERCENT

MACH 0.382

LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL
 (RN2045)
 (RN2109)

CONFIGURATION DESCRIPTION
 NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1
 NSRDC-3110,MSFC/LMSC BOOSTER B1C1F1W1V1

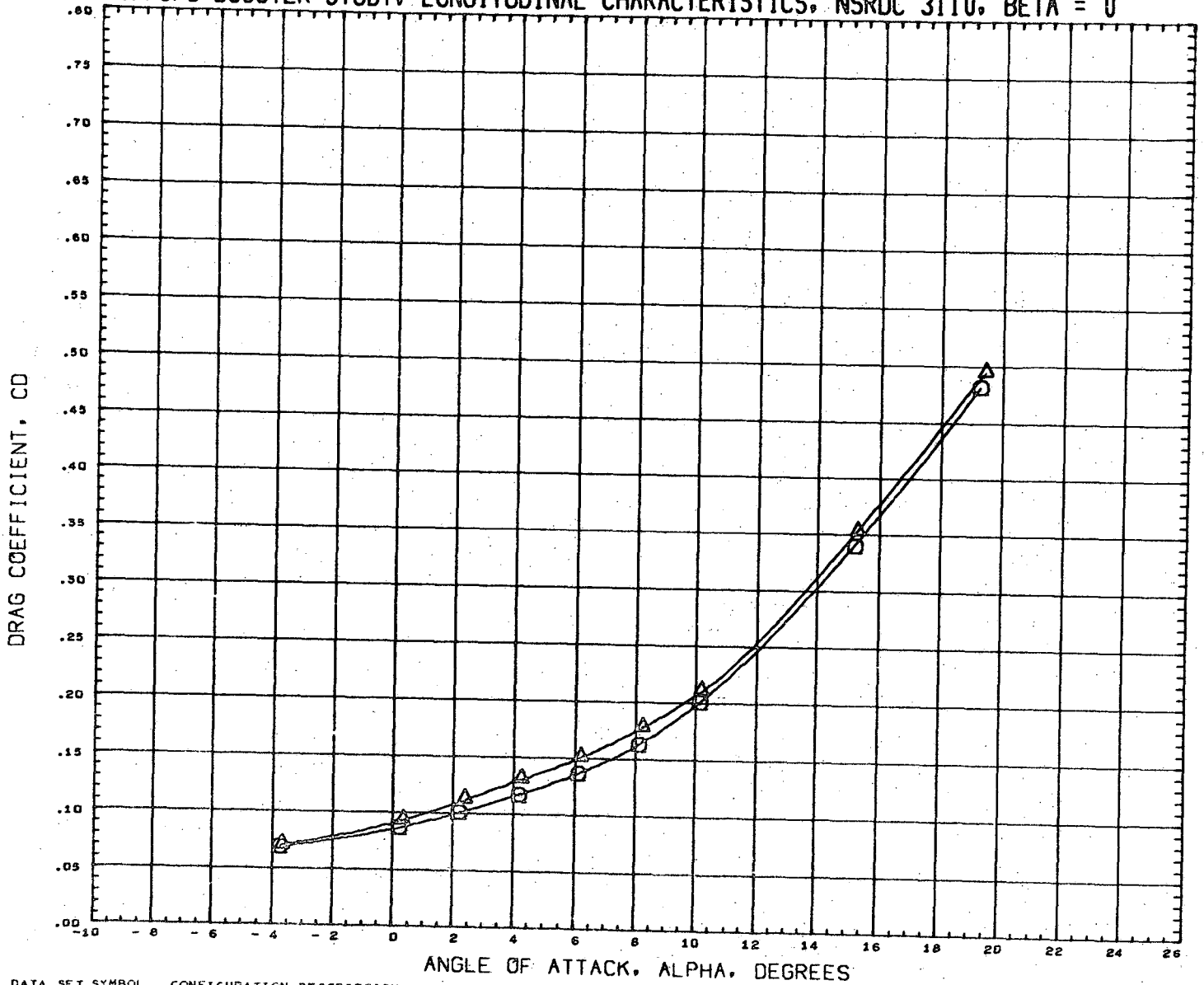
INCIDC	CNDPOS	INCIDW	WNGPOS
15.000	2.000	3.000	1.000
15.000	2.000	3.000	1.000

REFERENCE INFORMATION

SREF	1.3550	SQ.FT.
LREF	41.4360	INCHES
BREF	41.4360	INCHES
XMRP	31.1400	INCHES
YMRP	0.0000	INCHES
ZMRP	0.2250	INCHES
SCALE	1.5000	PERCENT

MACH 0.382

LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL
(RN2045)
(RN2109)

CONFIGURATION DESCRIPTION
NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1
NSRDC-3110,MSFC/LMSC BOOSTER B1C1F1W1V1

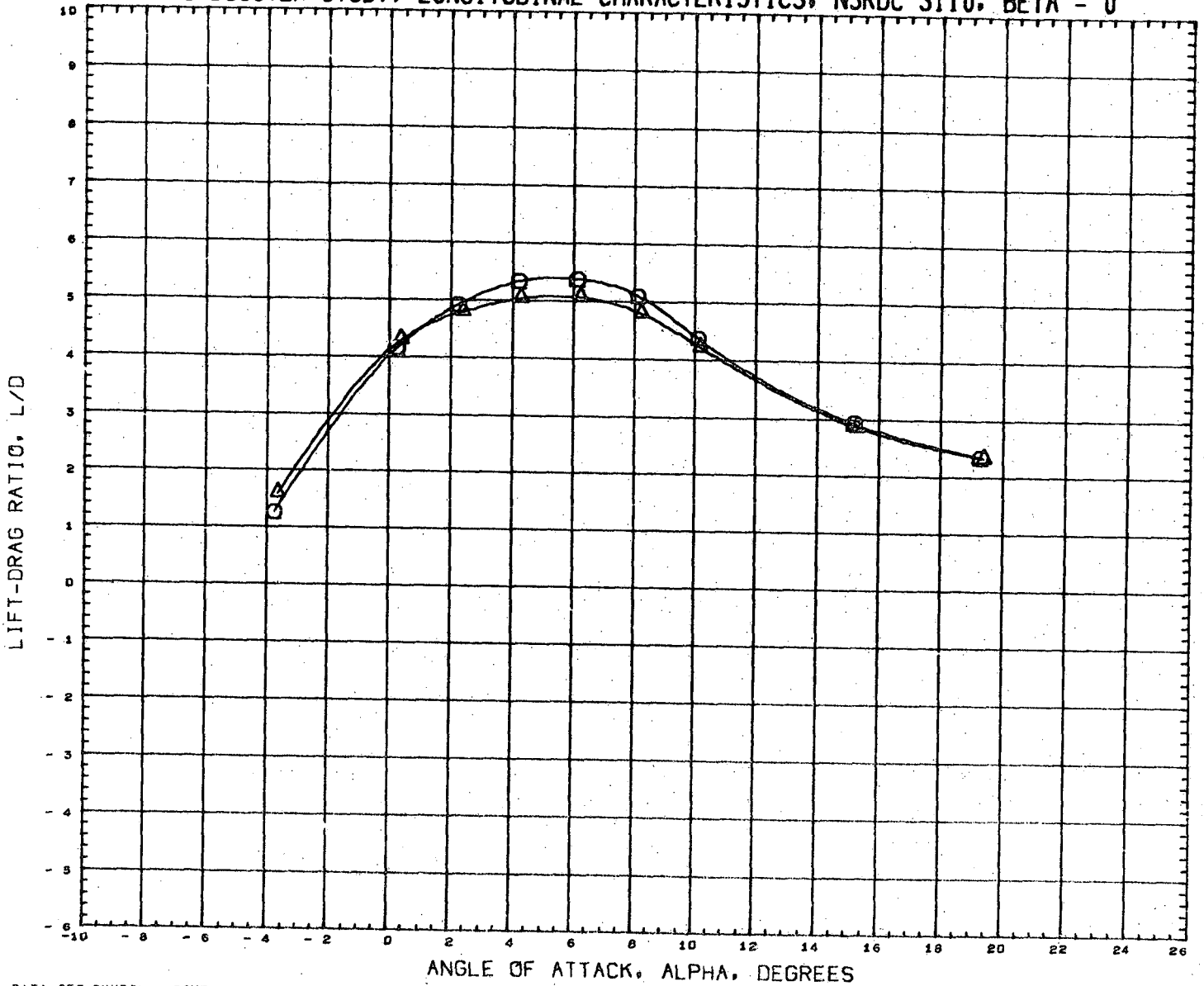
INCIDC	CNDPOS	INCIDW	WNGPOS
15.000	2.000	3.000	1.000
15.000	2.000	3.000	1.000

REFERENCE INFORMATION

SREF	1.3550	SQ. FT.
LREF	41.4360	INCHES
BREF	41.4360	INCHES
XMRP	31.1400	INCHES
YMRP	0.0000	INCHES
ZMRP	0.2250	INCHES
SCALE	1.5000	PERCNT

MACH 0.382

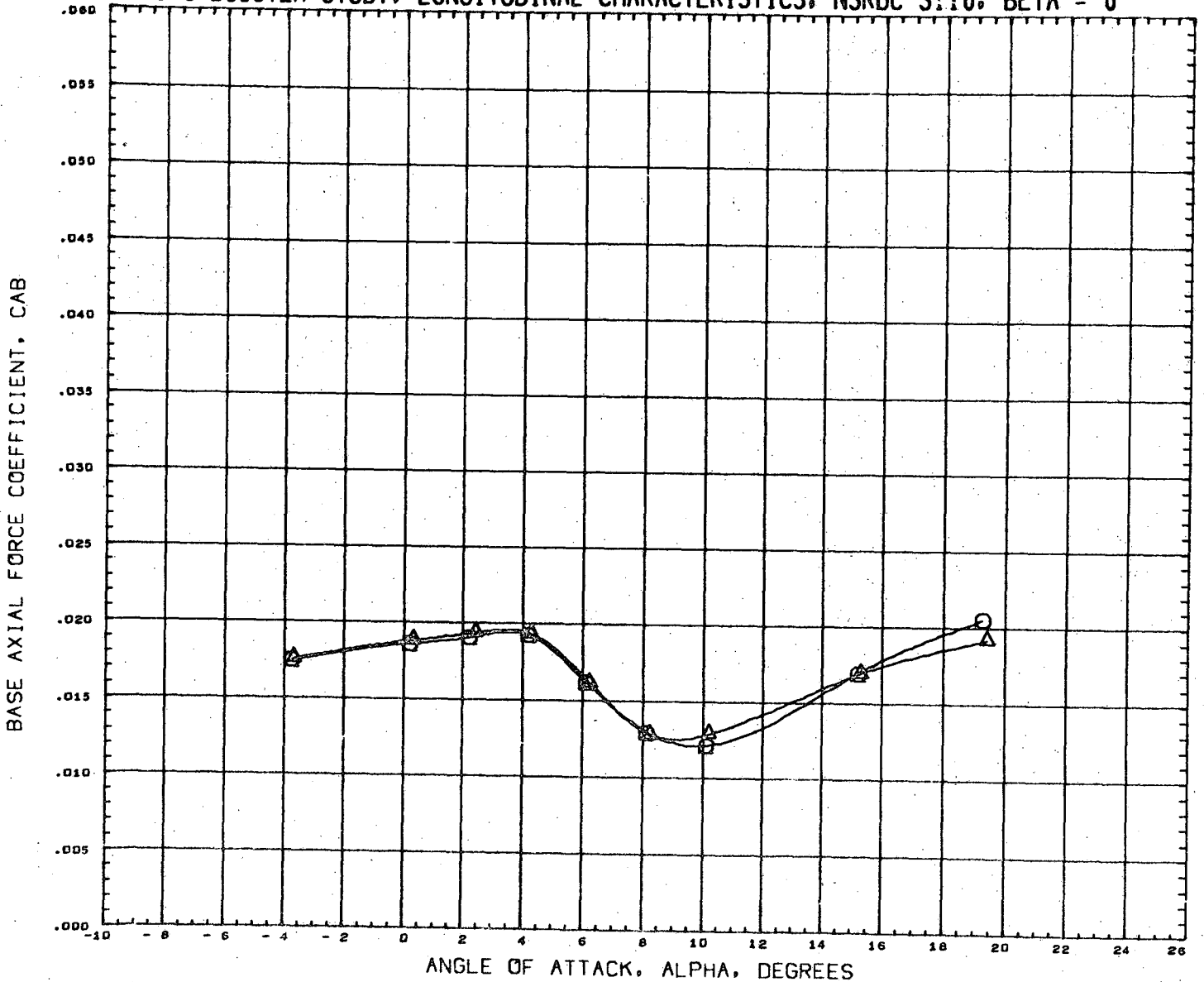
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION	
(RN2045)	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1	15.000	2.000	3.000	1.000	SREF	1.3550 SQ.FT.
(RN2109)	NSRDC-3110,MSFC/LMSC BOOSTER B1C1F1W1V1	15.000	2.000	3.000	1.000	LREF	41.4360 INCHES
						BREF	41.4360 INCHES
						XMRP	31.1400 INCHES
						YMRP	0.0000 INCHES
						ZMRP	0.2250 INCHES
						SCALE	1.5000 PERCENT

MACH 0.382

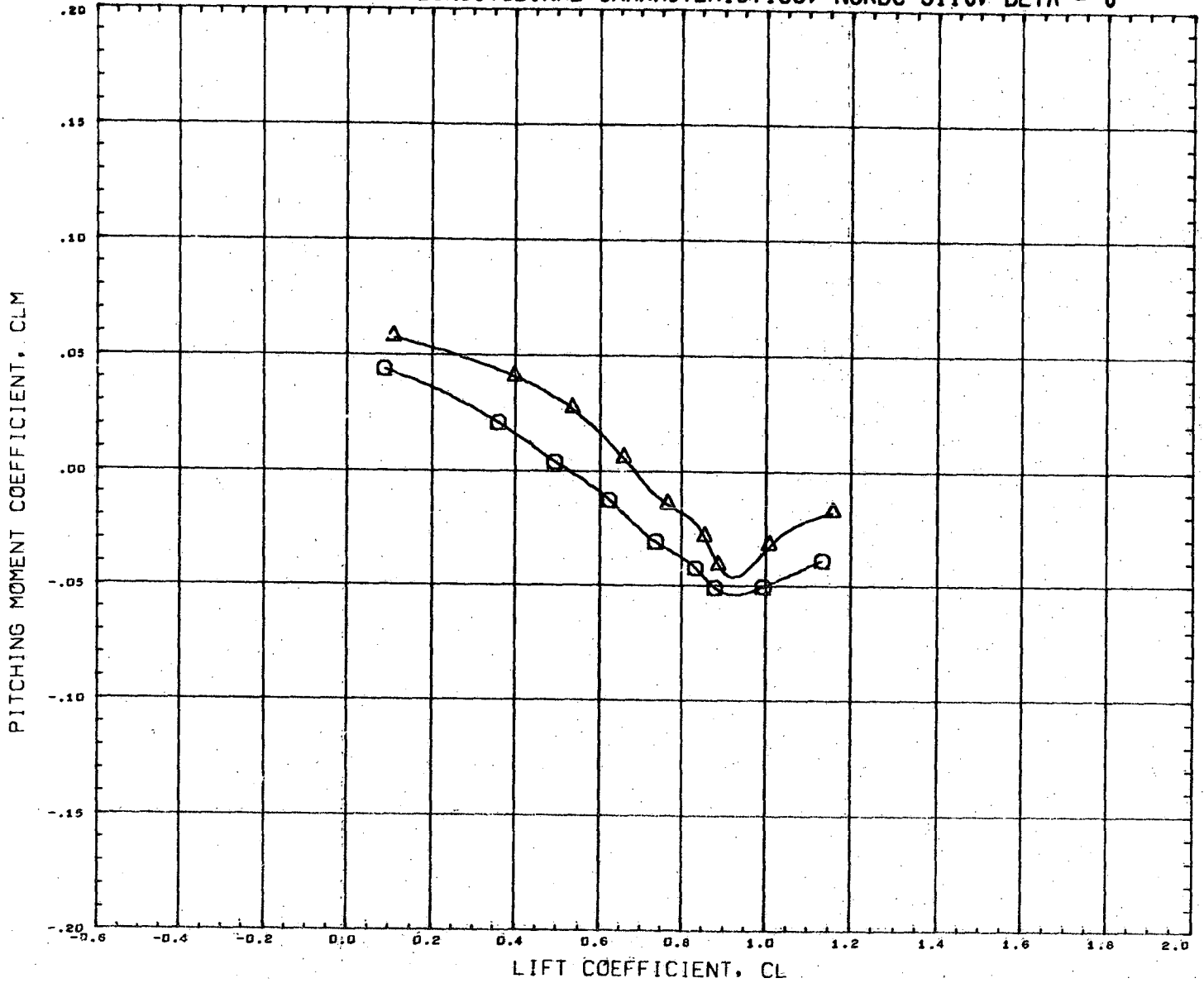
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION	
(RN2045)	NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1	15.000	2.000	3.000	1.000	SREF	1.3550 SQ.FT.
(RN2109)	NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1	15.000	2.000	3.000	1.000	LREF	41.4360 INCHES
						BREF	41.4360 INCHES
						XMRP	31.1400 INCHES
						YMRP	0.0000 INCHES
						ZMRP	0.2250 INCHES
						SCALE	1.5000 PERCNT

MACH 0.382

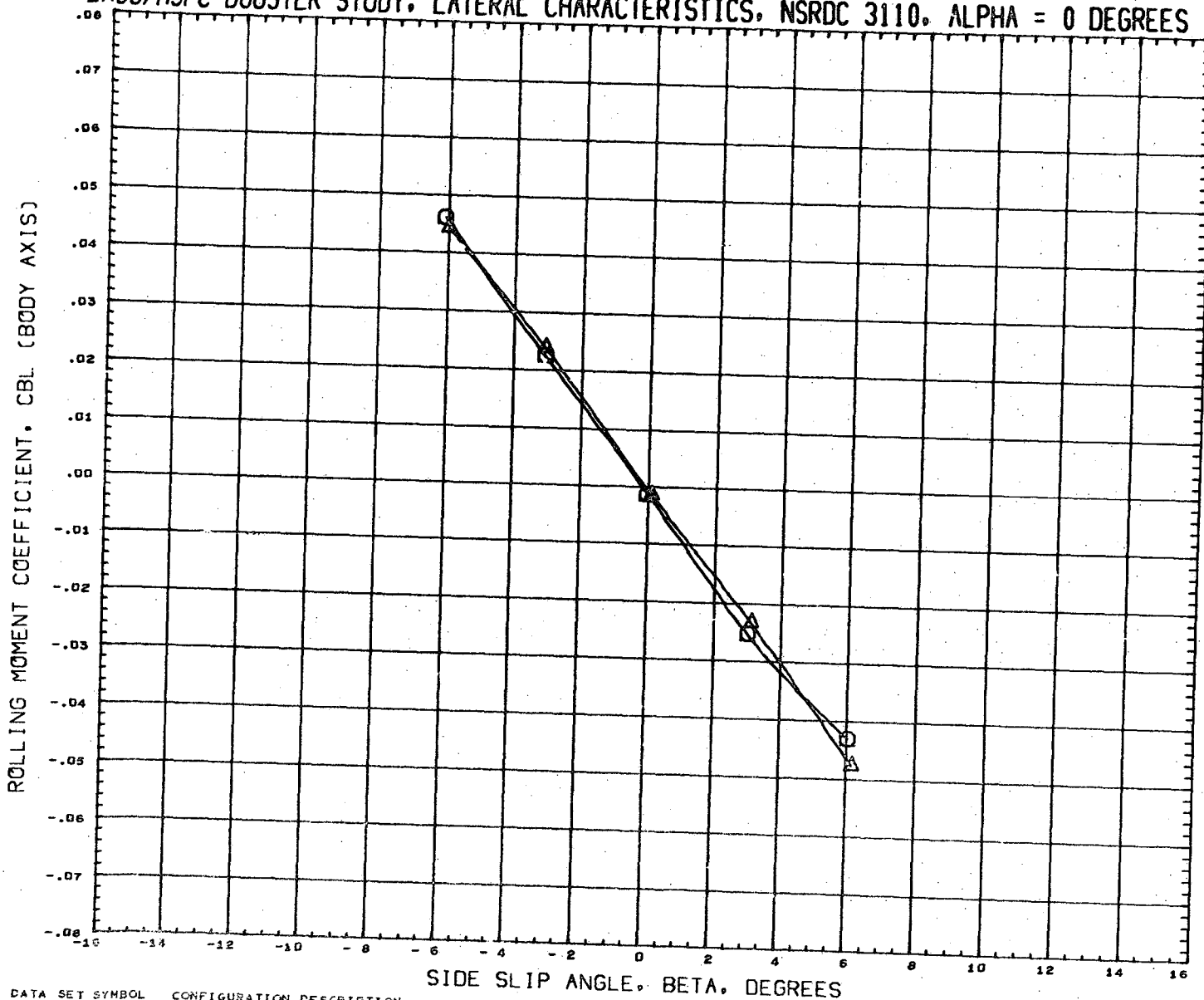
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3:10, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCICW	WNGPOS	REFERENCE INFORMATION
(RN2045)	NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1	15.000	2.000	3.000	1.000	SRÉF 1.3550 SQ. FT.
(RN2109)	NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1	15.000	2.000	3.000	1.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCNT

MACH 0.382

LMSC/MSFC BOOSTER STUDY. LATERAL CHARACTERISTICS, NSRDC 3110. ALPHA = 0 DEGREES



DATA SET SYMBOL
(RN2046)
(RN2110)



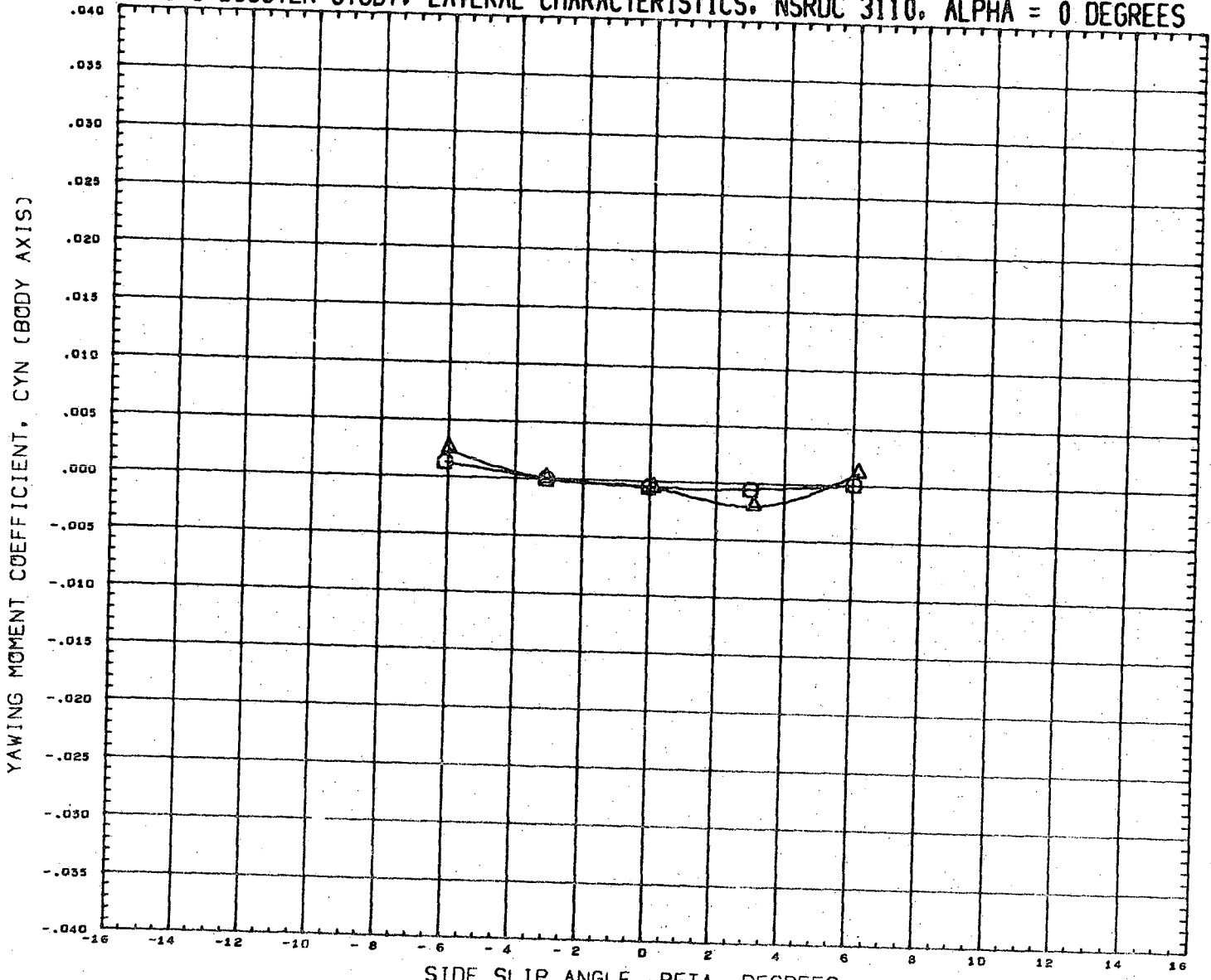
CONFIGURATION DESCRIPTION
NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1
NSRDC-3110,MSFC/LMSC BOOSTER B1C1F1W1V1

INCIDC	CNDPOS	INCIDW	WNGPOS
15.000	2.000	3.000	1.000
15.000	2.000	3.000	1.000

REFERENCE INFORMATION
SREF 1.3550 SQ.FT.
LREF 41.4360 INCHES
BREF 41.4360 INCHES
XMRP 31.1400 INCHES
YMRP 0.0000 INCHES
ZMRP 0.2250 INCHES
SCALE 1.5000 PERCENT

MACH 0.380

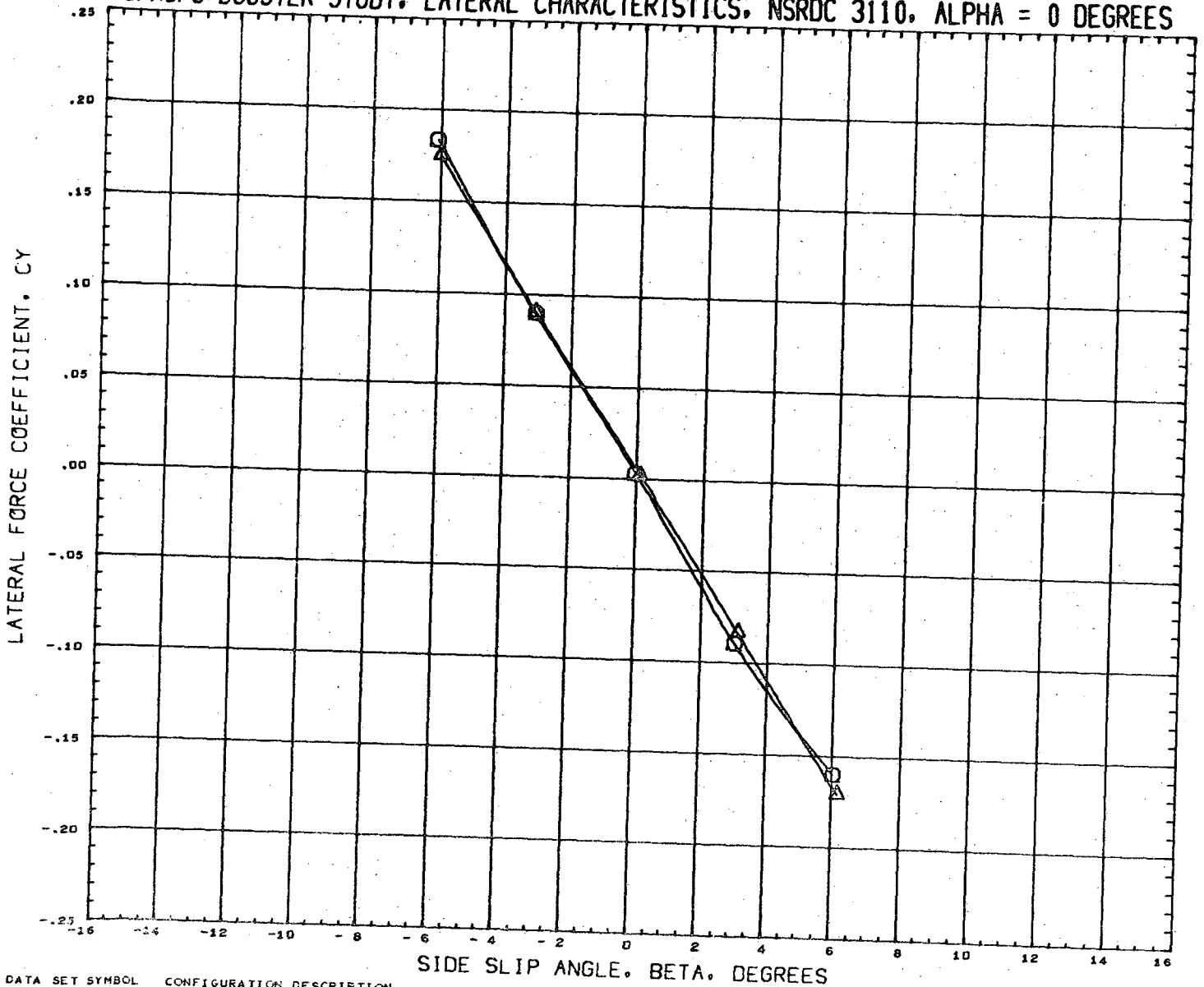
LMSC/MSFC BOOSTER STUDY, LATERAL CHARACTERISTICS, NSRDC 3110, ALPHA = 0 DEGREES





DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2046)	NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1	15.000	2.000	3.000	1.000	SREF 1.3550 SQ.FT.
(RN2110)	NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1	15.000	2.000	3.000	1.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCENT

MACH 0.380

LMSC/MSFC BOOSTER STUDY, LATERAL CHARACTERISTICS, NSRDC 3110, ALPHA = 0 DEGREES



DATA SET SYMBOL
(RN2046) 
(RN2110) 

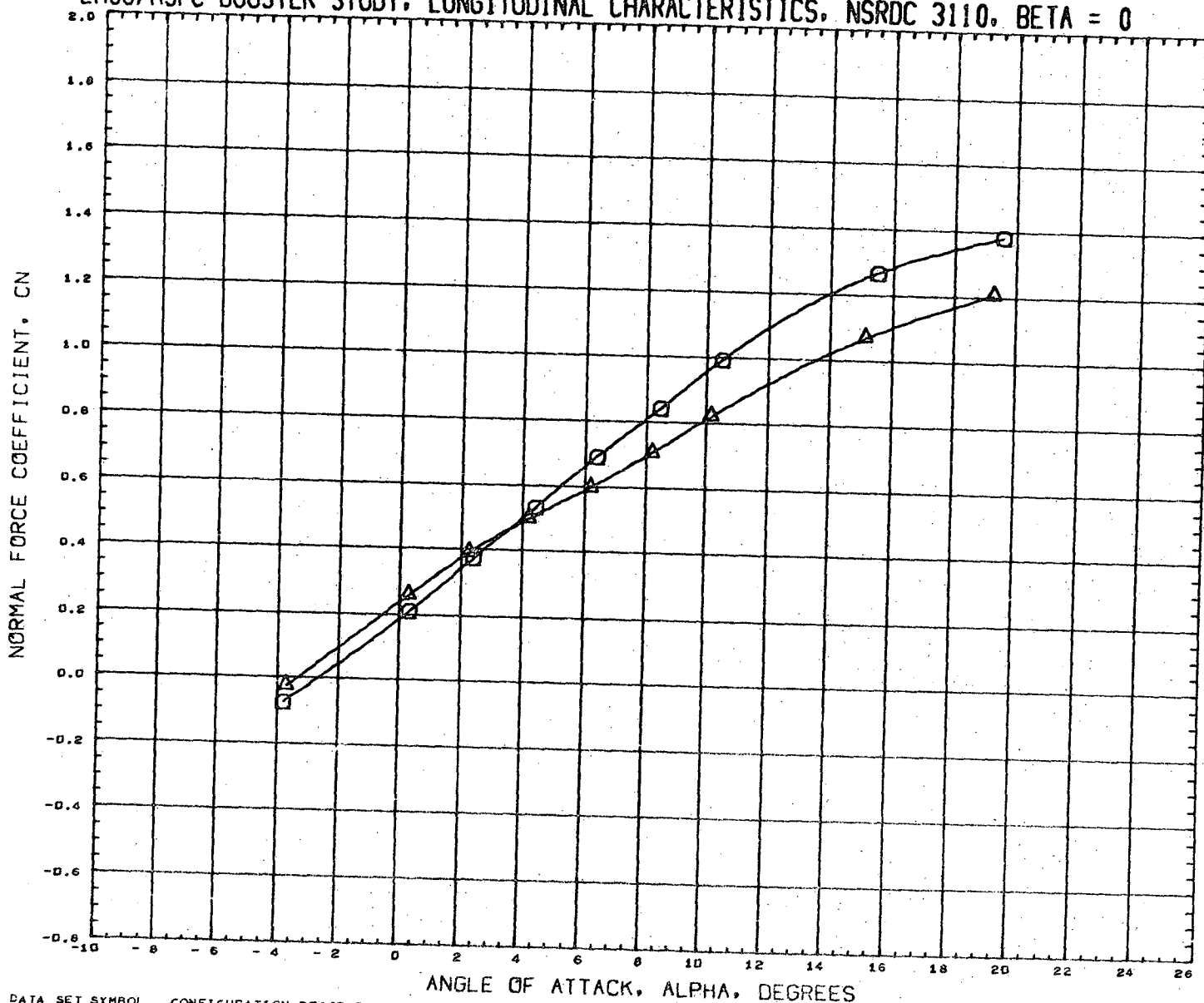
CONFIGURATION DESCRIPTION
NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1
NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1

INCIDC 15.000
CNDPOS 2.000
INCIDW 3.000
WNGPOS 1.000

REFERENCE INFORMATION
SREF 1.3550 SQ. FT.
LREF 41.4360 INCHES
BREF 41.4360 INCHES
XMRP 31.1400 INCHES
YMRP 0.0000 INCHES
ZMRP 0.2250 INCHES
SCALE 1.5000 PERCENT

MACH 0.360

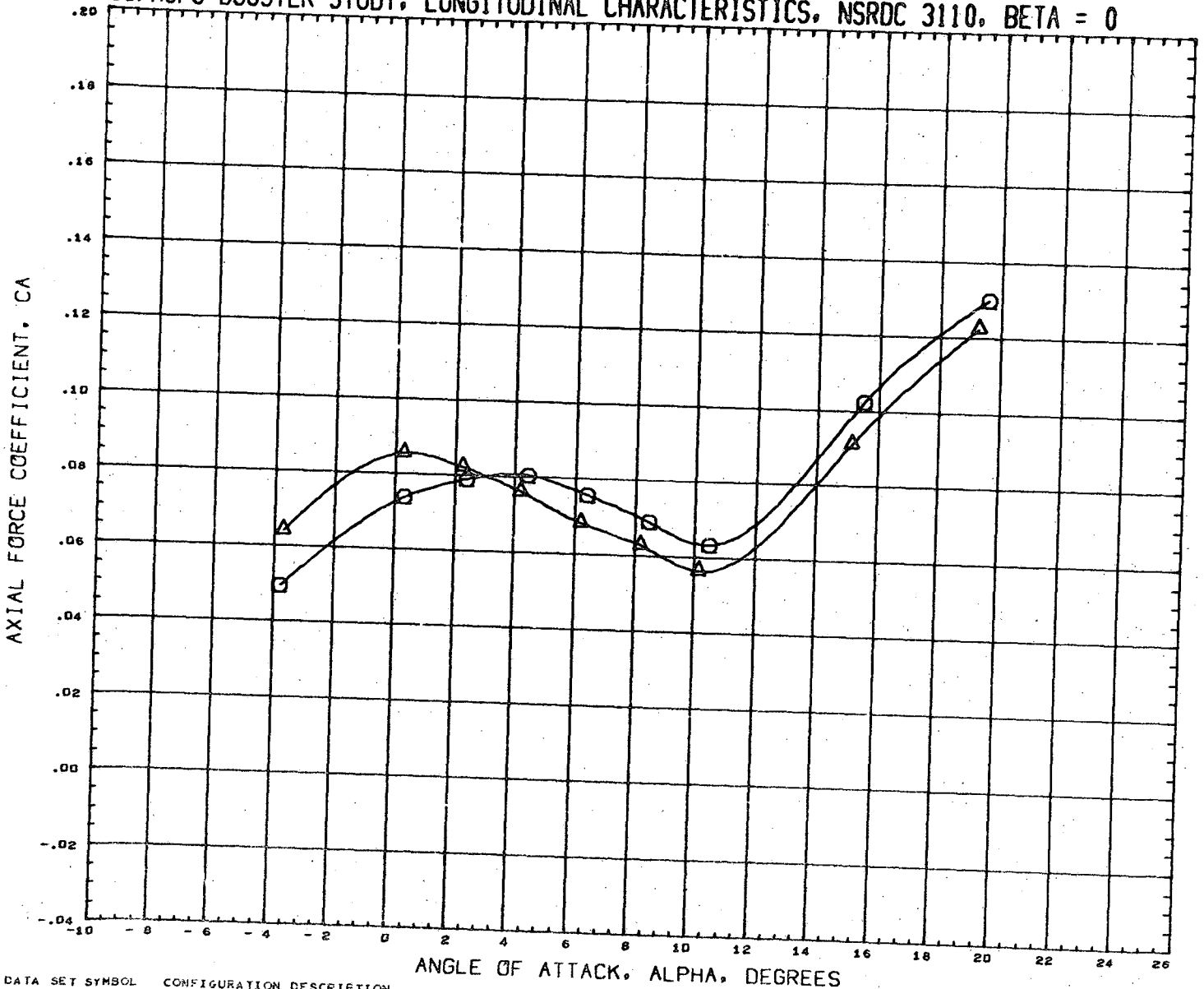
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2053)	NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1	15.000	1.000	3.000	2.000	SREF 1.3550 SQ.FT.
(RN2061)	NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1	15.000	2.000	3.000	2.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCENT

MACH 0.381

LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(RN2053)	NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1
(RN2061)	NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1

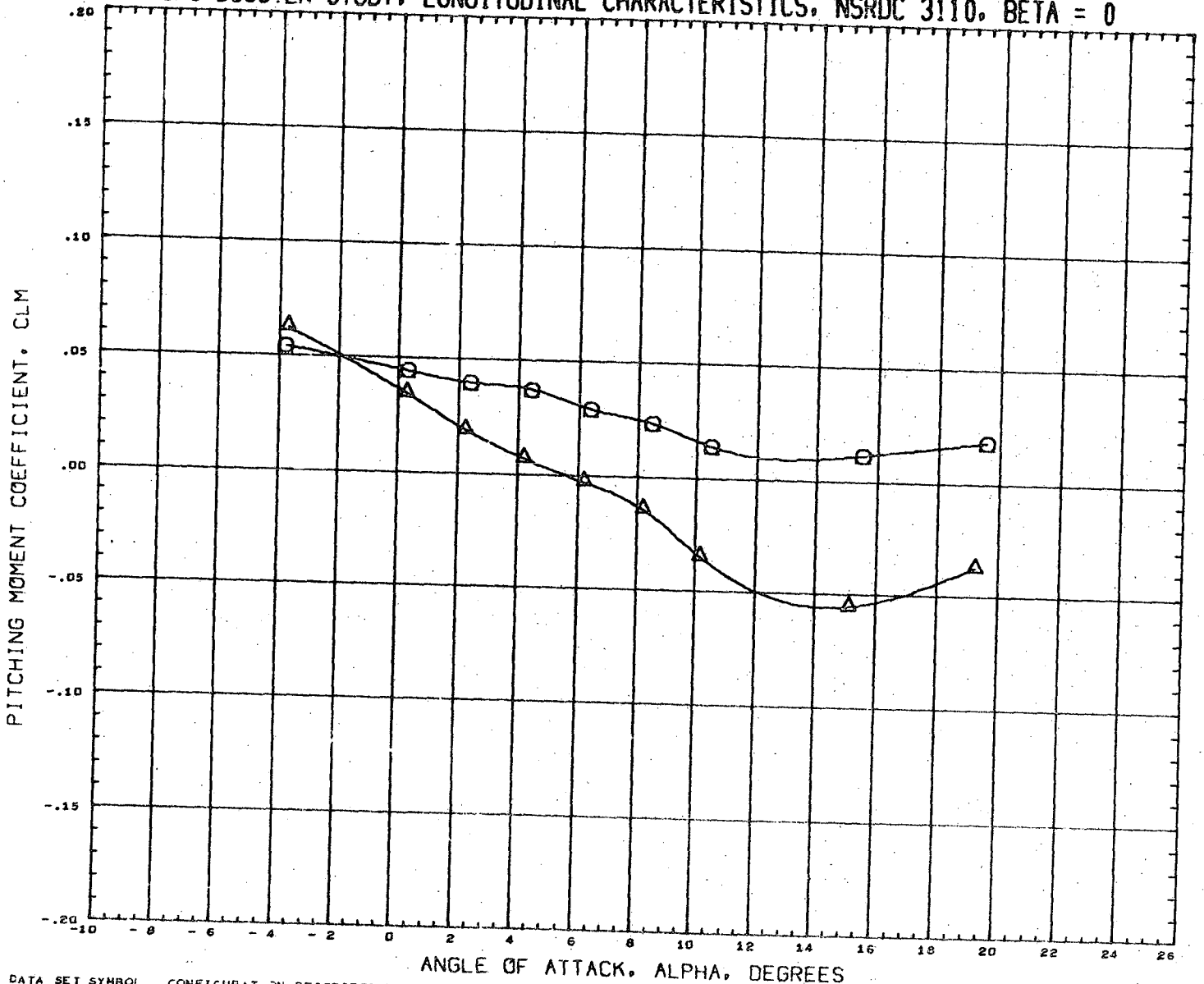
INCIDC	CNDPOS	INCIDW	WNGPOS
15.000	1.000	3.000	2.000
15.000	2.000	3.000	2.000

REFERENCE INFORMATION

SREF	1.3550	SQ. FT.
LREF	41.4360	INCHES
BREF	41.4360	INCHES
XMRF	31.1400	INCHES
YMRF	0.0000	INCHES
ZMRF	0.2250	INCHES
SCALE	1.5000	PERCENT

MACH 0.381

LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL
(RN2053)
(RN2061)



CONFIGURATION DESCRIPTION
NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1
NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1

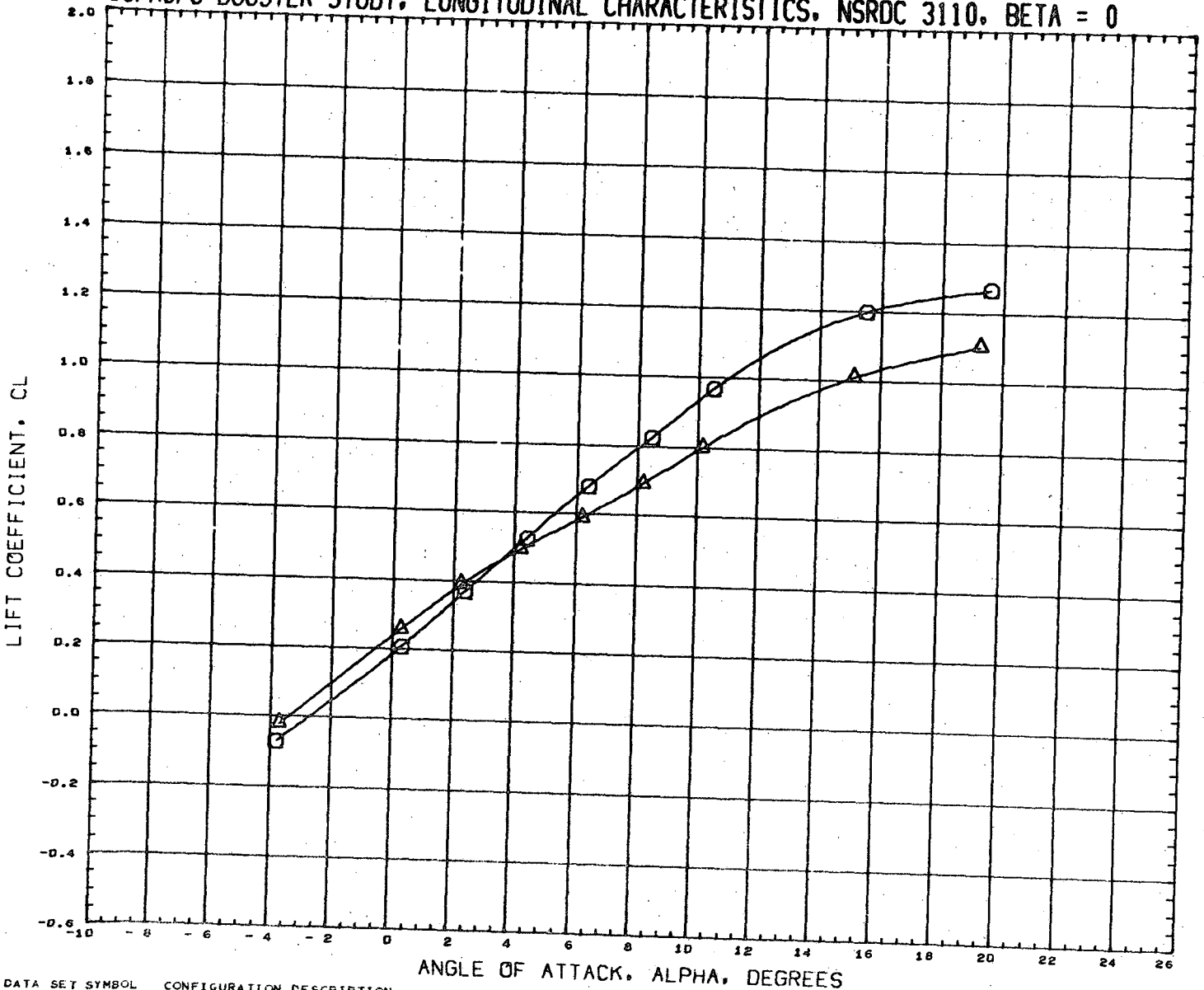
INCIDC	CNDPOS	INCIDW	WNGPOS
15.000	1.000	3.000	2.000
15.000	2.000	3.000	2.000

REFERENCE INFORMATION

SREF	1.3550	SQ.FT.
LREF	41.4360	INCHES
BREF	41.4360	INCHES
XMRP	31.1400	INCHES
YMRP	0.0000	INCHES
ZMRP	0.2250	INCHES
SCALE	1.5000	PERCNT

MACH 0.381

LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL
(RN2053)
(RN2061)



CONFIGURATION DESCRIPTION
NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1
NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1

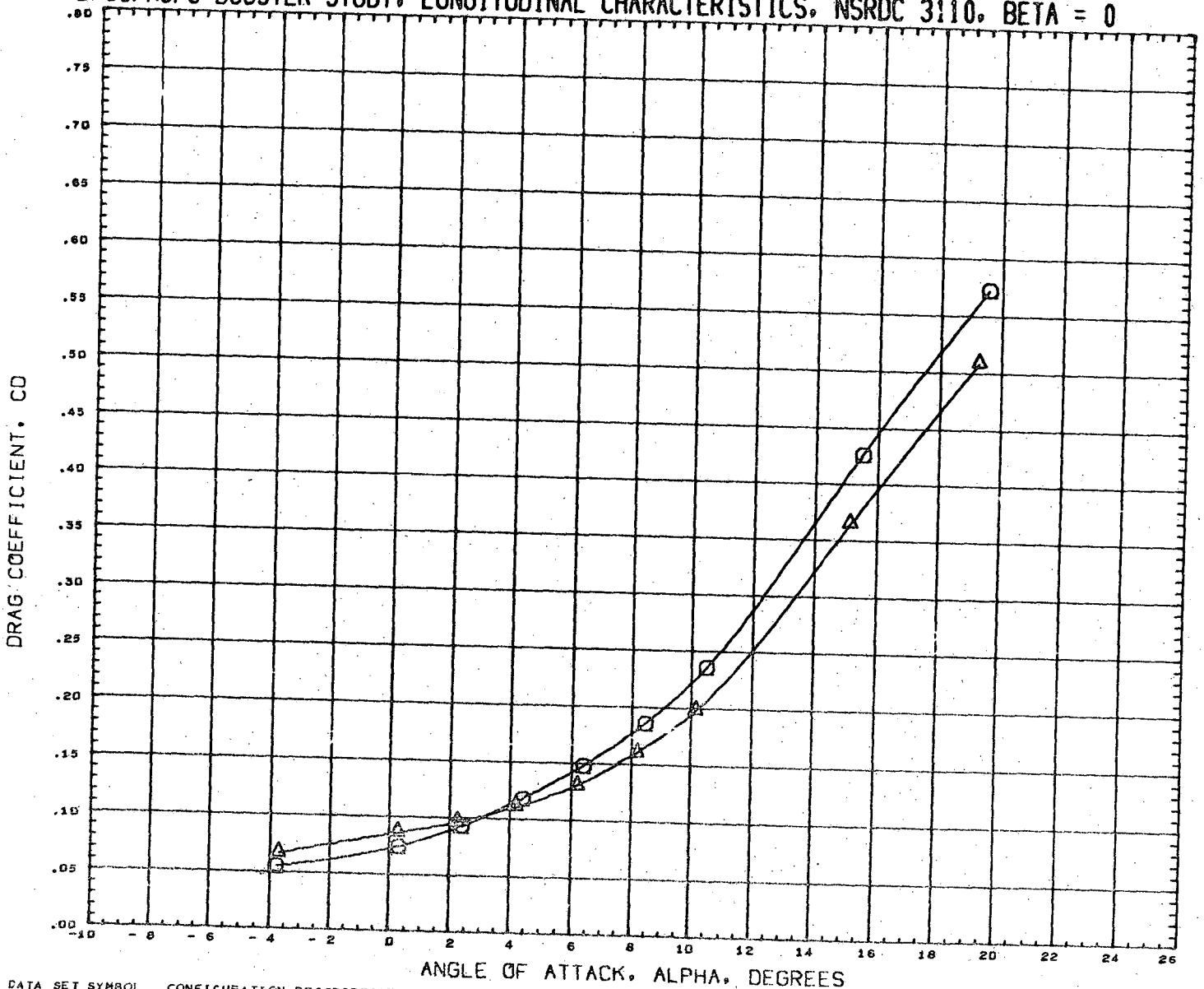
INCIDC	CNDPOS	INCIDW	WNGPOS
15.000	1.000	3.000	2.000
15.000	2.000	3.000	2.000

REFERENCE INFORMATION

SREF	1.3550	SQ. FT.
LREF	41.4360	INCHES
BREF	41.4360	INCHES
XMRP	31.1400	INCHES
YMRP	0.0000	INCHES
ZMRP	0.2250	INCHES
SCALE	1.5000	PERCENT

MACH 0.381

LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL
(RN2053) \circ
(RN2061) \triangle

CONFIGURATION DESCRIPTION
NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1
NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1

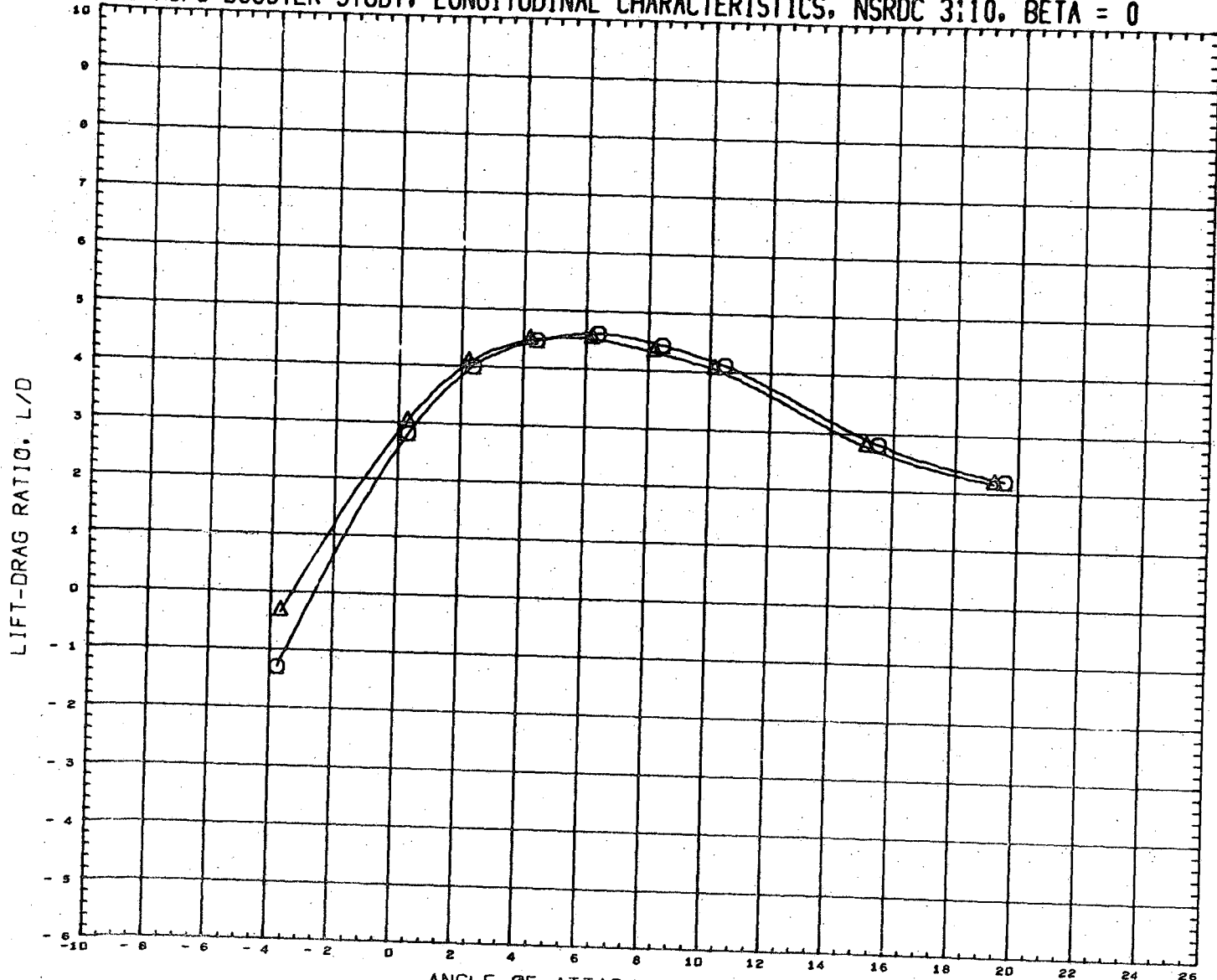
INCIDC	CNDPOS	INCIDW	WNGPOS
15.000	1.000	3.000	2.000
15.000	2.000	3.000	2.000

REFERENCE INFORMATION

SREF	1.3550	SQ. FT.
LREF	41.4360	INCHES
BREF	41.4360	INCHES
XMRP	31.1400	INCHES
YMRP	0.0000	INCHES
ZMRP	0.2250	INCHES
SCALE	1.5000	PERCENT

MACH 0.381

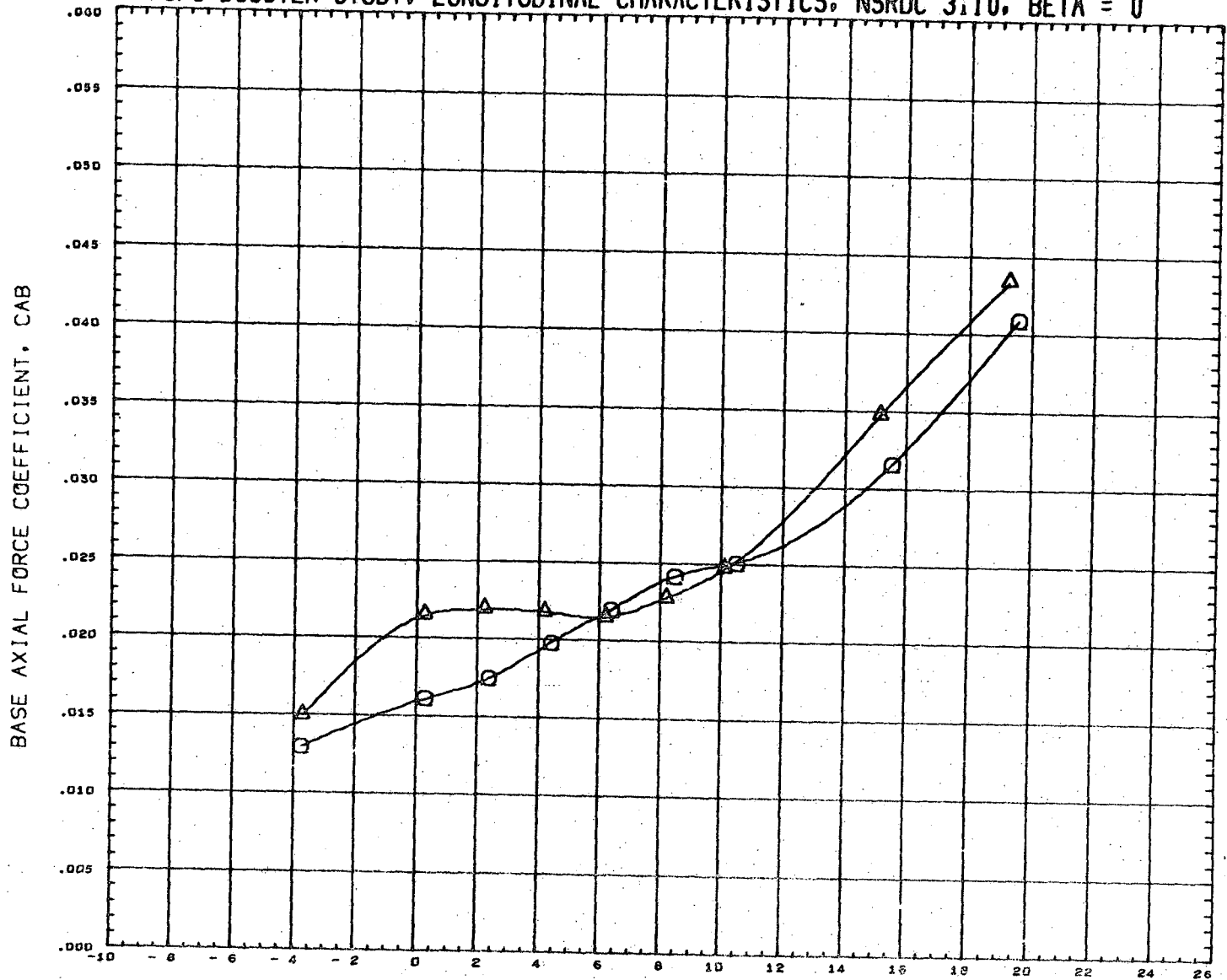
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3:10, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2053)	NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1	15.000	1.000	3.000	2.000	SREF 1.3550 SQ. FT.
(RN2061)	NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1	15.000	2.000	3.000	2.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCENT

MACH 0.381

LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL
(RN2053)
(RN2061)



CONFIGURATION DESCRIPTION
NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1
NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1

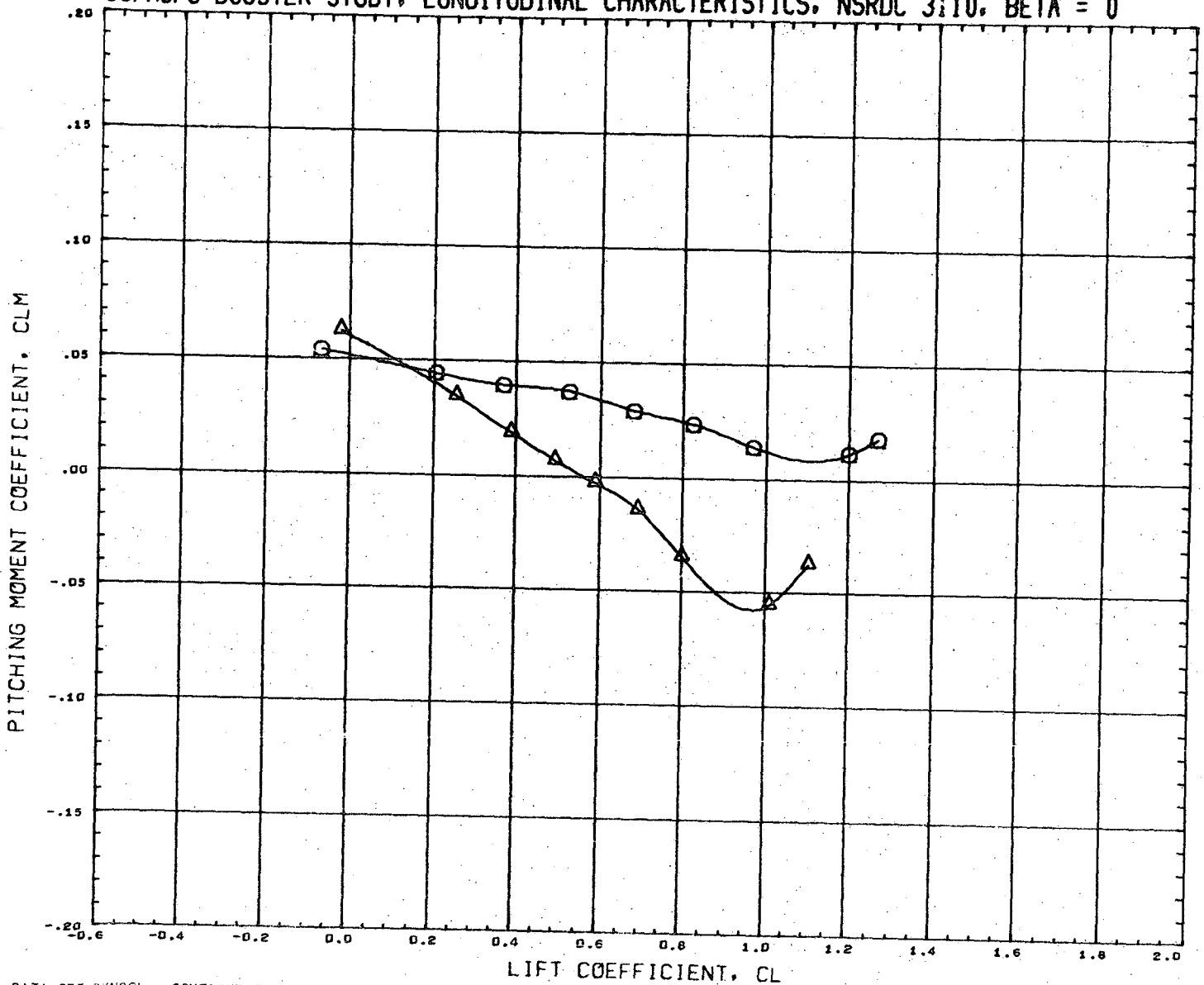
INCIDC	CNDPOS	INCIDW	WNGPOS
15.000	1.000	3.000	2.000
15.000	2.000	3.000	2.000

REFERENCE INFORMATION

SREF	1.3550	SQ. FT.
LREF	41.4360	INCHES
BREF	41.4360	INCHES
XMRP	31.1400	INCHES
YMRP	0.0000	INCHES
ZMRP	0.2250	INCHES
SCALE	1.5000	PERCNT

MACH 0.381

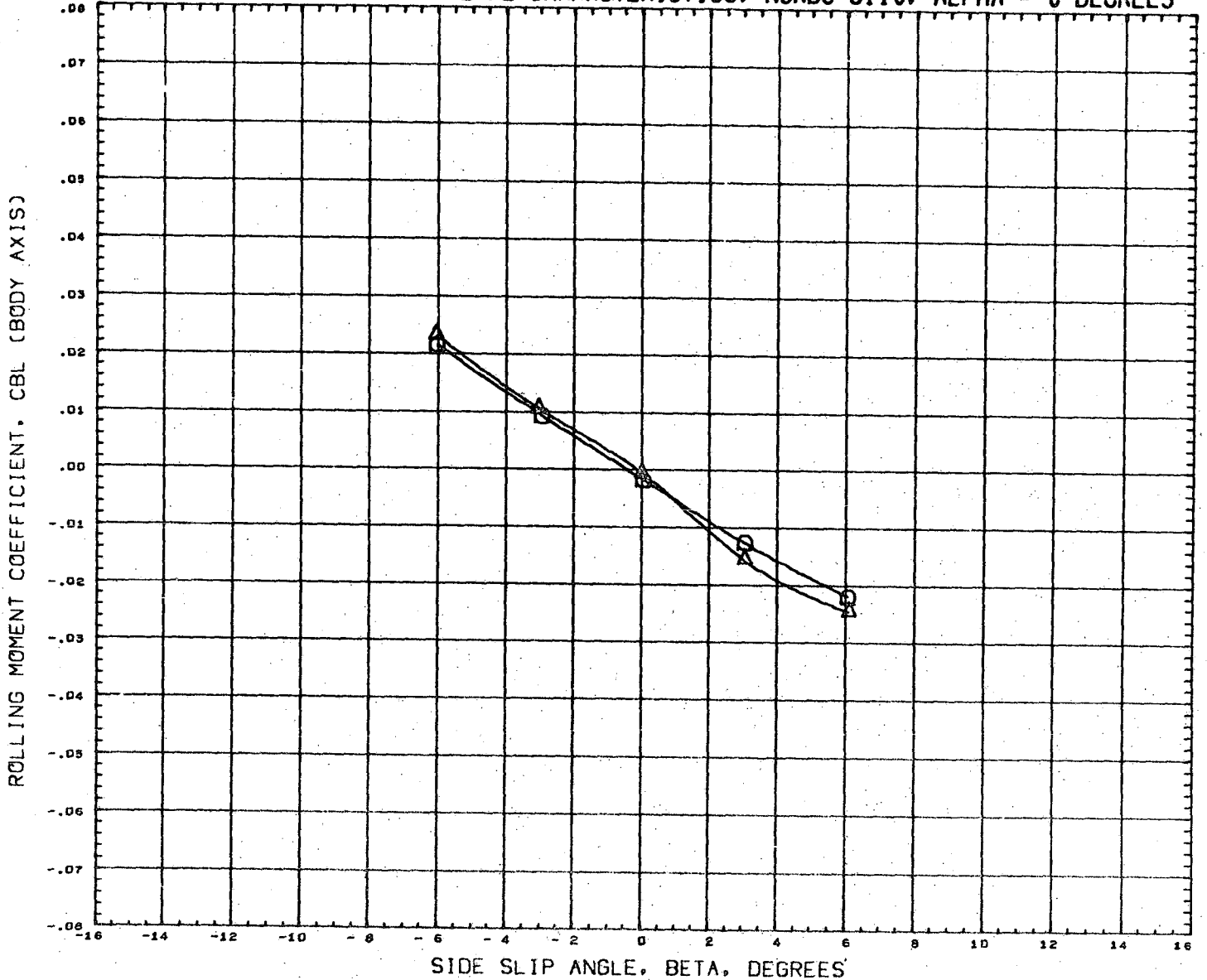
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION	
(RN2053)	NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1	15.000	1.000	3.000	2.000	SREF	1.3550 SQ. FT.
(RN2061)	NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1	15.000	2.000	3.000	2.000	LREF	41.4360 INCHES
						BREF	41.4360 INCHES
						XMRP	31.1400 INCHES
						YMRP	0.0000 INCHES
						ZMRP	0.2250 INCHES
						SCALE	1.5000 PERCENT

MACH 0.381

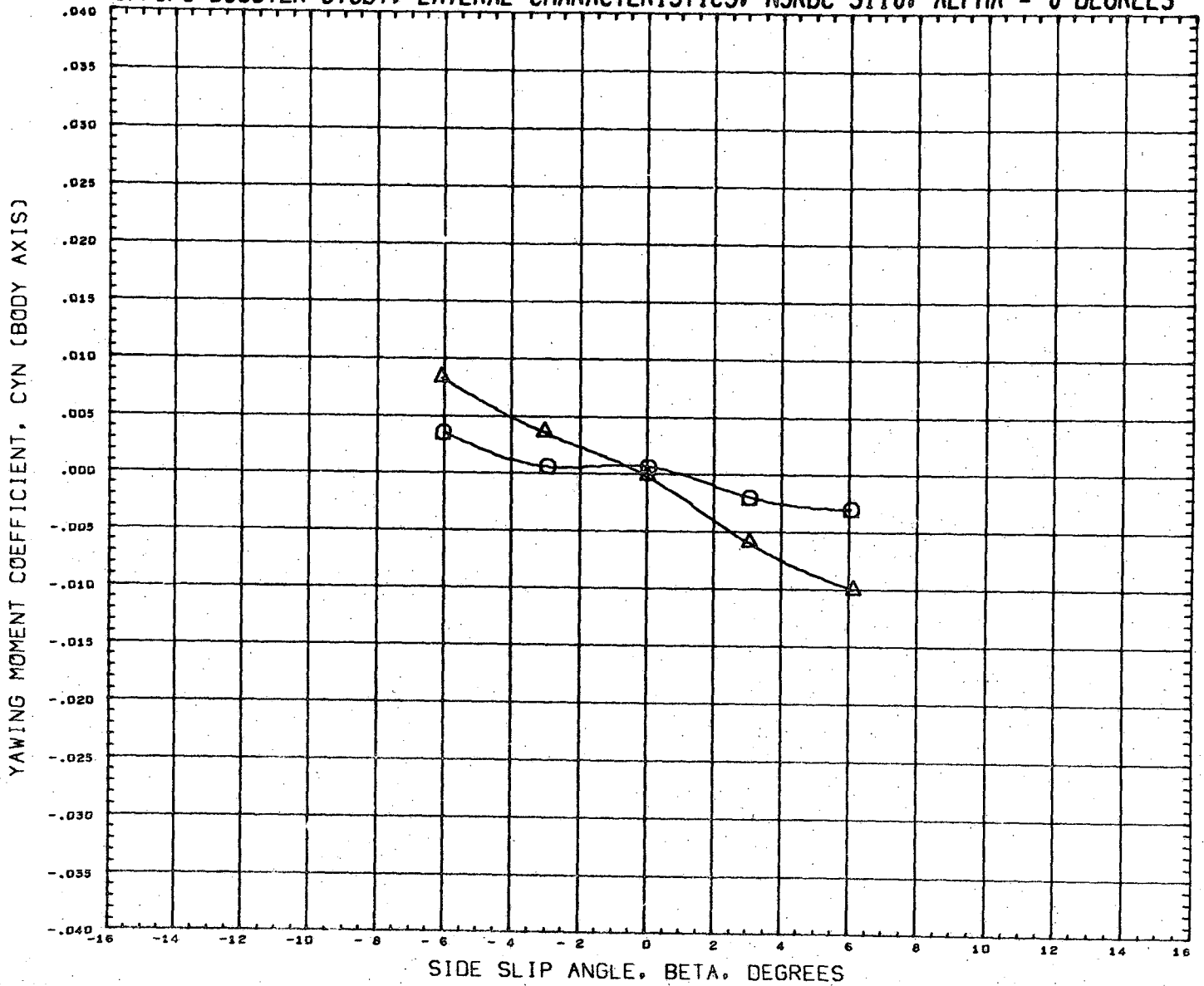
LMSC/MSFC BOOSTER STUDY, LATERAL CHARACTERISTICS, NSRDC 3110, ALPHA = 0 DEGREES



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2054)	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1	15.000	1.000	3.000	2.000	SREF 1.3550 SQ.FT.
(RN2062)	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1	15.000	2.000	3.000	2.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCNT

MACH 0.381

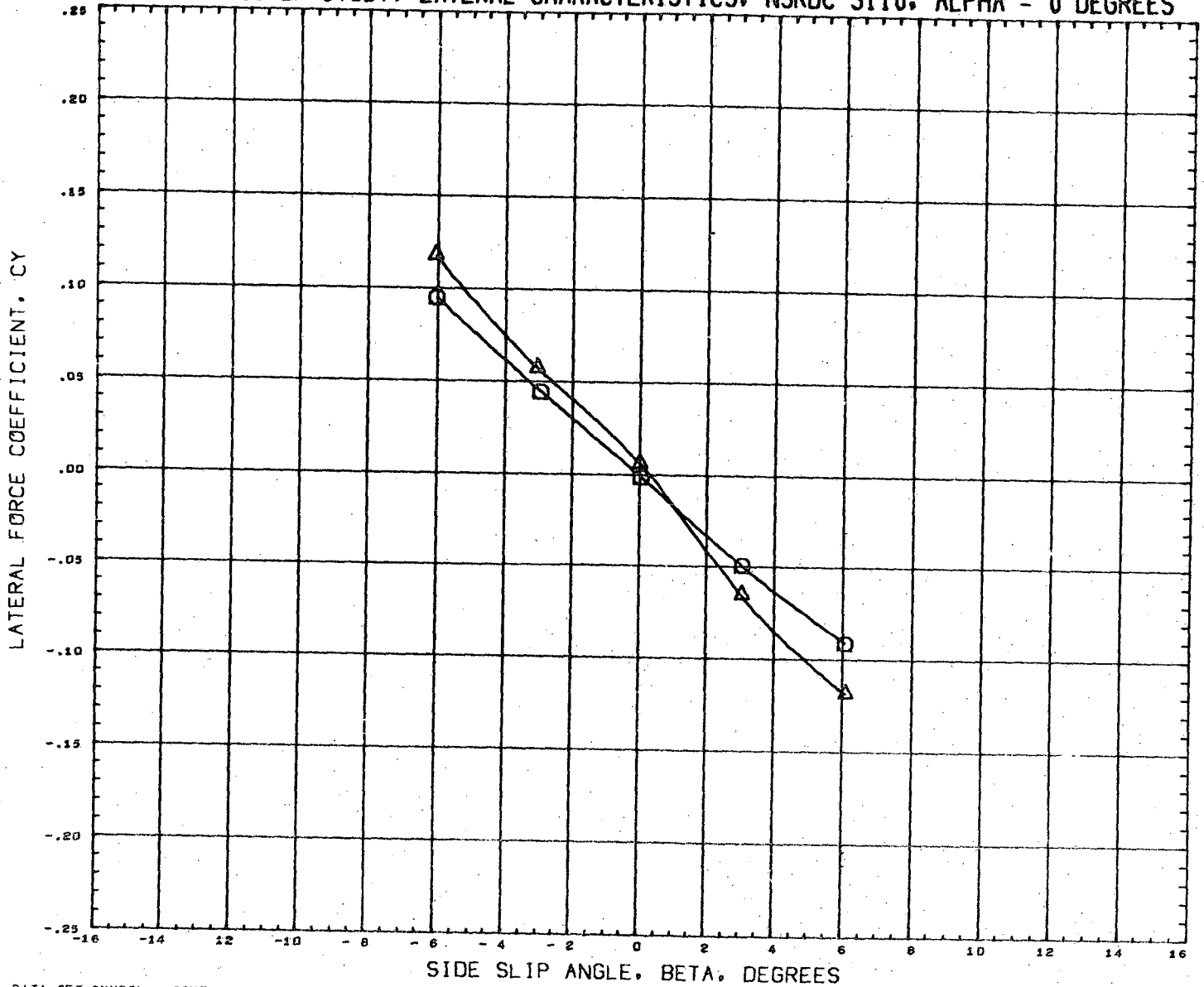
LMSC/MSFC BOOSTER STUDY, LATERAL CHARACTERISTICS, NSRDC 3110, ALPHA = 0 DEGREES



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2034) ○	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1	15.000	1.000	3.000	2.000	SREF 1.3550 SQ.FT.
(RN2062) △	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1	15.000	2.000	3.000	2.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCNT

MACH 0.381

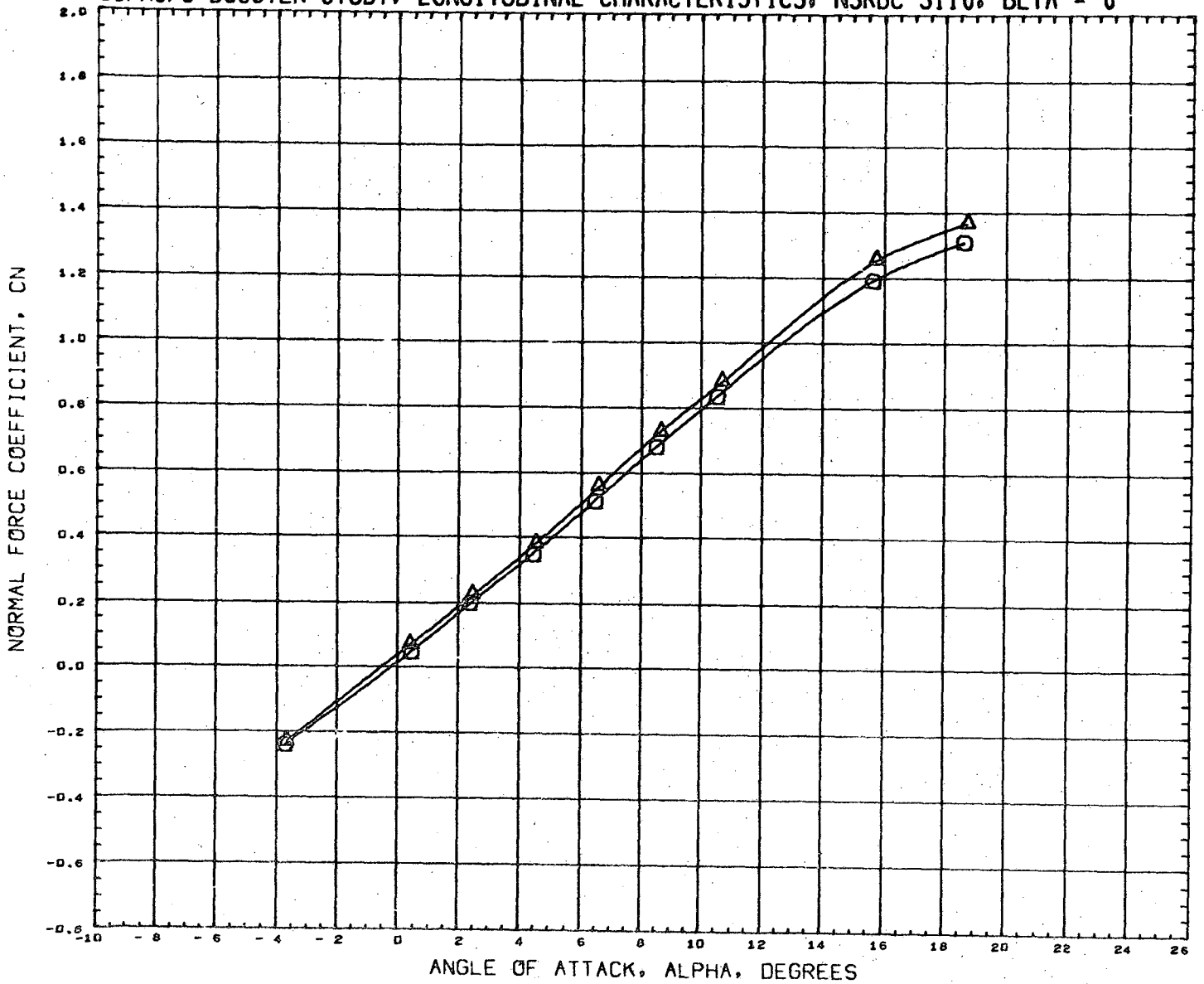
LMSC/MSFC BOOSTER STUDY, LATERAL CHARACTERISTICS, NSRDC 3110, ALPHA = 0 DEGREES



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2054)	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1	15.000	1.000	3.000	2.000	SREF 1.3550 SQ.FT.
(RN2062)	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1	15.000	2.000	3.000	2.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCNT

MACH 0.381

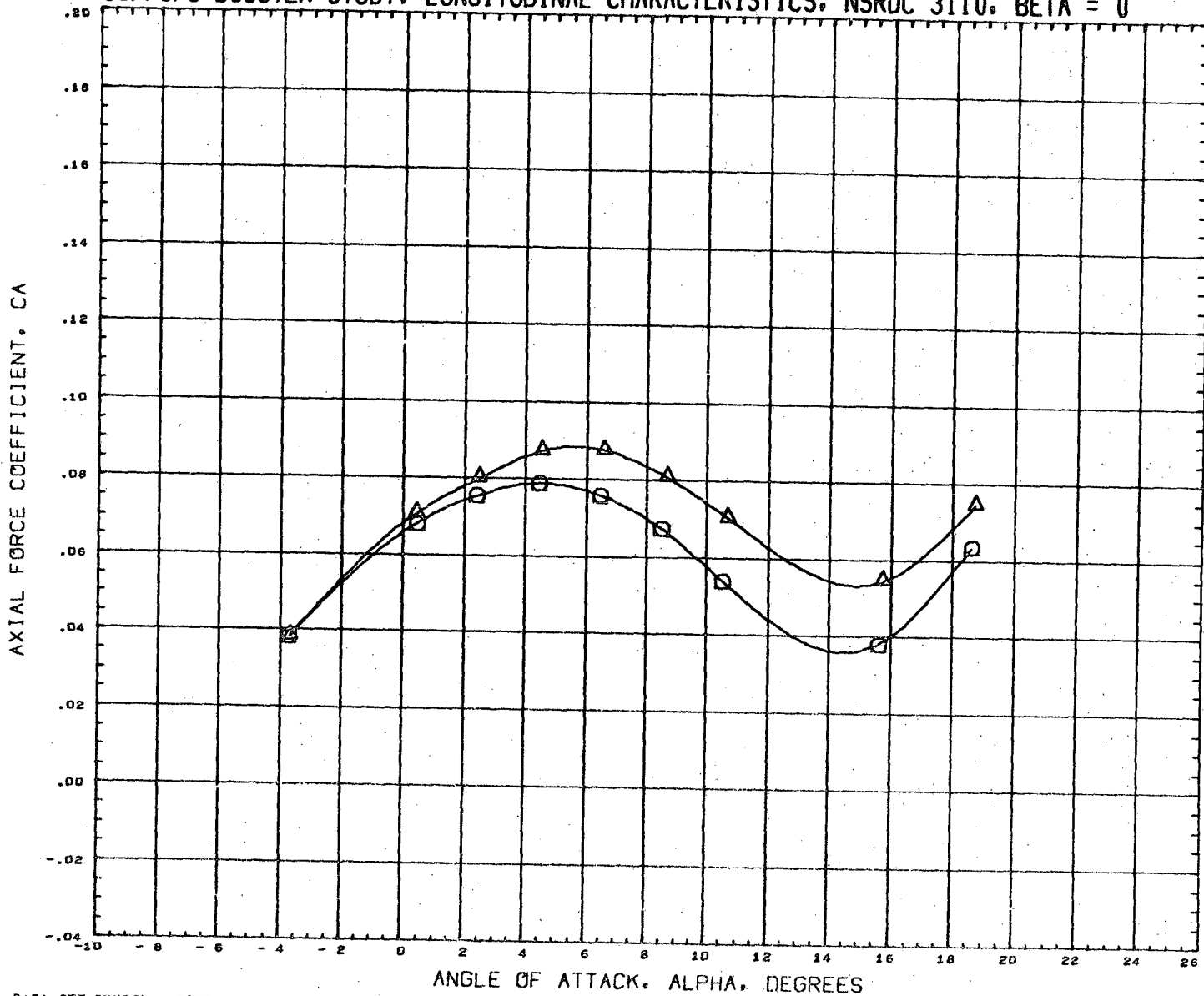
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2021)	NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1	15.000	1.000	0.000	2.000	SREF 1.3550 SQ. FT.
(RN2085)	NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1	15.000	1.000	0.000	2.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCENT

MACH 0.382

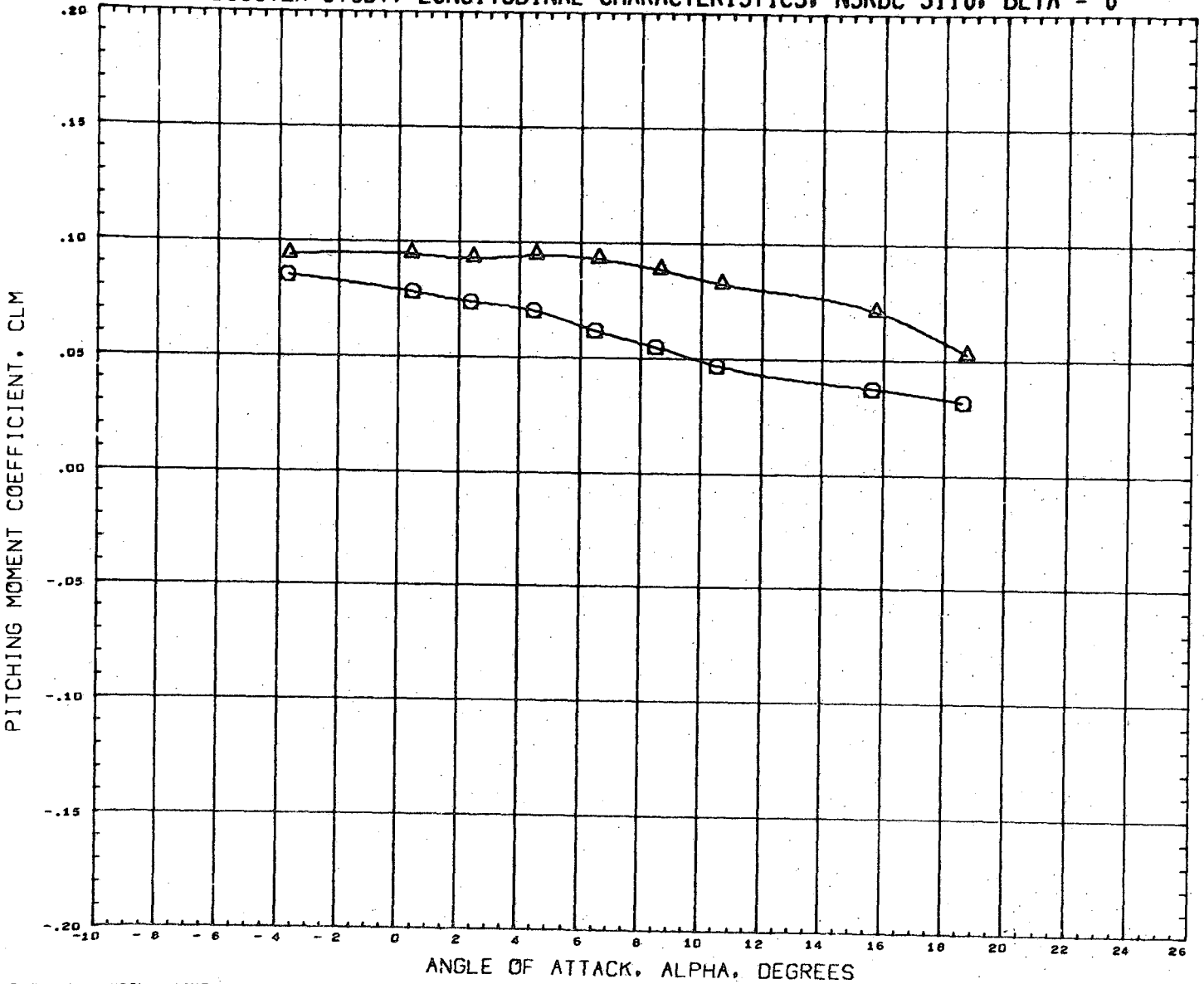
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2021)	NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1	15.000	1.000	0.000	2.000	SREF 1.3550 SQ. FT.
(RN2085)	NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1	15.000	1.000	0.000	2.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2230 INCHES
						SCALE 1.5000 PERCENT

MACH 0.382

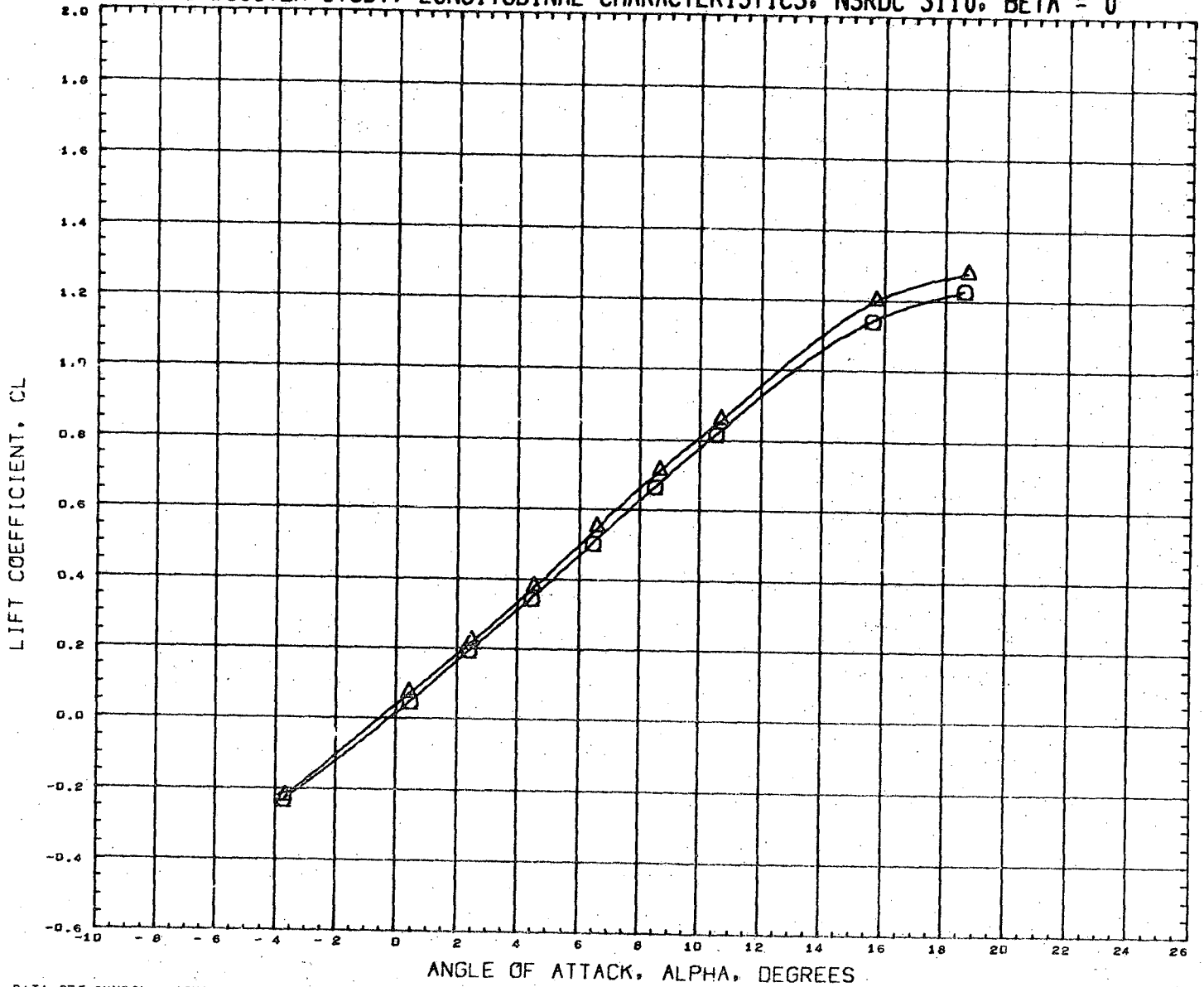
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2021)	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1	15.000	1.000	0.000	2.000	SREF 1.3550 SQ.FT.
(RN2085)	NSRDC-3110,MSFC/LMSC BOOSTER B1C1F1W1V1	15.000	1.000	0.000	2.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCENT

MACH 0.362

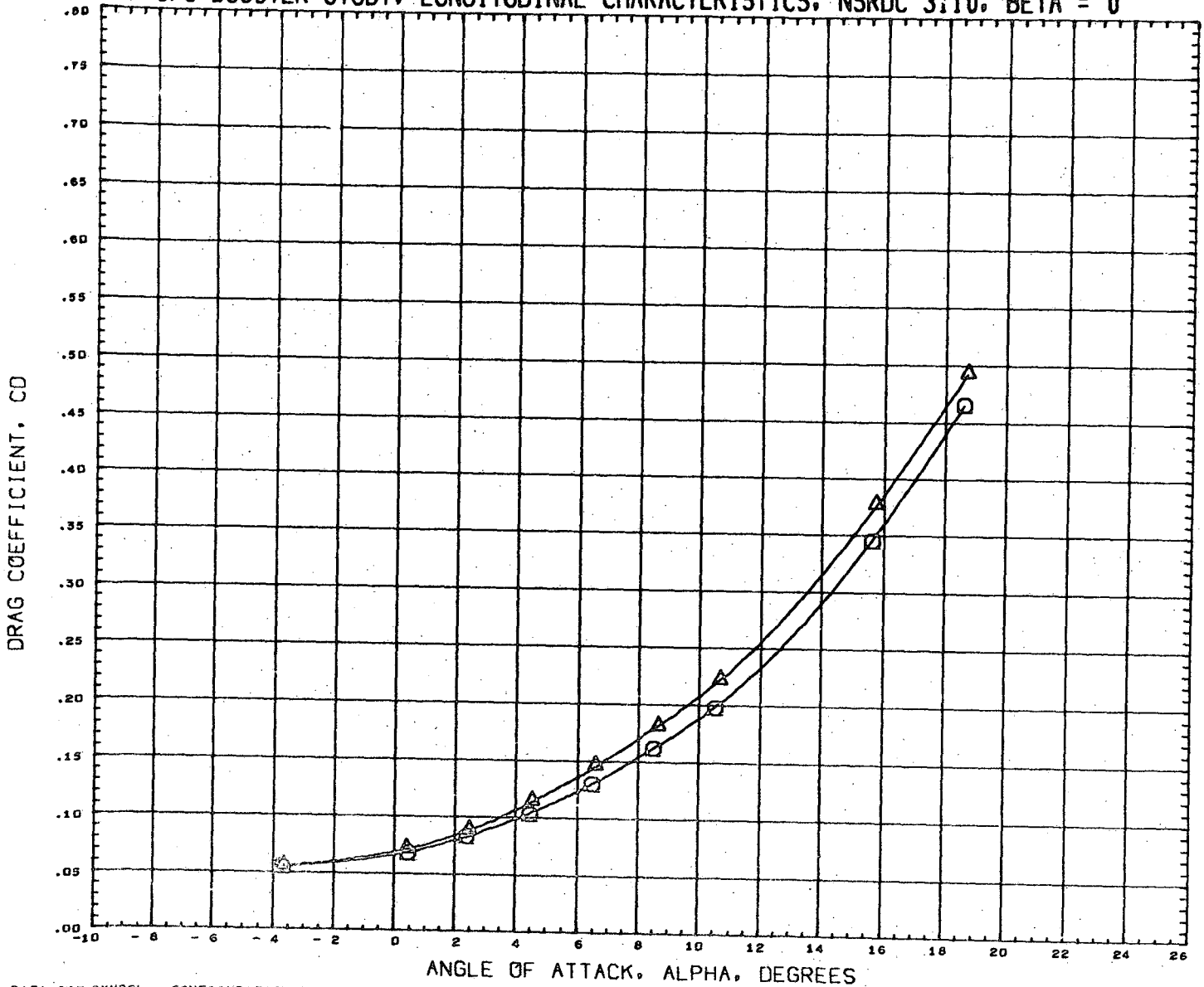
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION	
(RN2021)	NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1	15.000	1.000	0.000	2.000	SREF	1.3550 SQ. FT.
(RN2085)	NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1	15.000	1.000	0.000	2.000	LREF	41.4360 INCHES
						BREF	41.4360 INCHES
						XMRP	31.1400 INCHES
						YMRP	0.0000 INCHES
						ZMRP	0.2250 INCHES
						SCALE	1.5000 PERCNT

MACH 0.382

LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL
(RN2021)
(RN2083)



CONFIGURATION DESCRIPTION
NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1
NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1

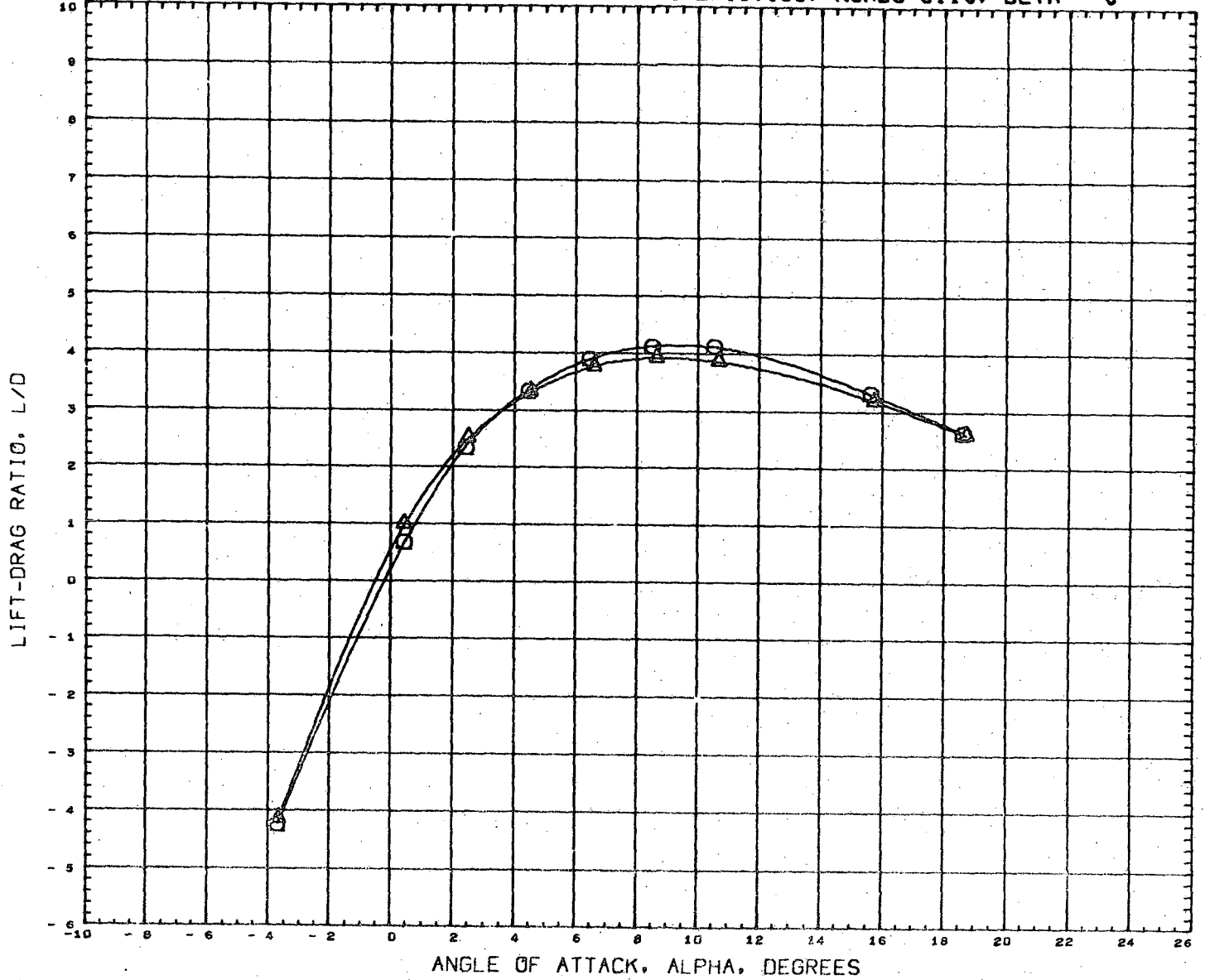
INCIDC	CNDPOS	INCIDW	WNGPOS
15.000	1.000	0.000	2.000
15.000	1.000	0.000	2.000

REFERENCE INFORMATION

SREF	1.3550	SQ. FT.
LREF	41.4360	INCHES
BREF	41.4360	INCHES
XMRP	31.1400	INCHES
YMRP	0.0000	INCHES
ZMRP	0.2250	INCHES
SCALE	1.5000	PERCENT

MACH 0.362

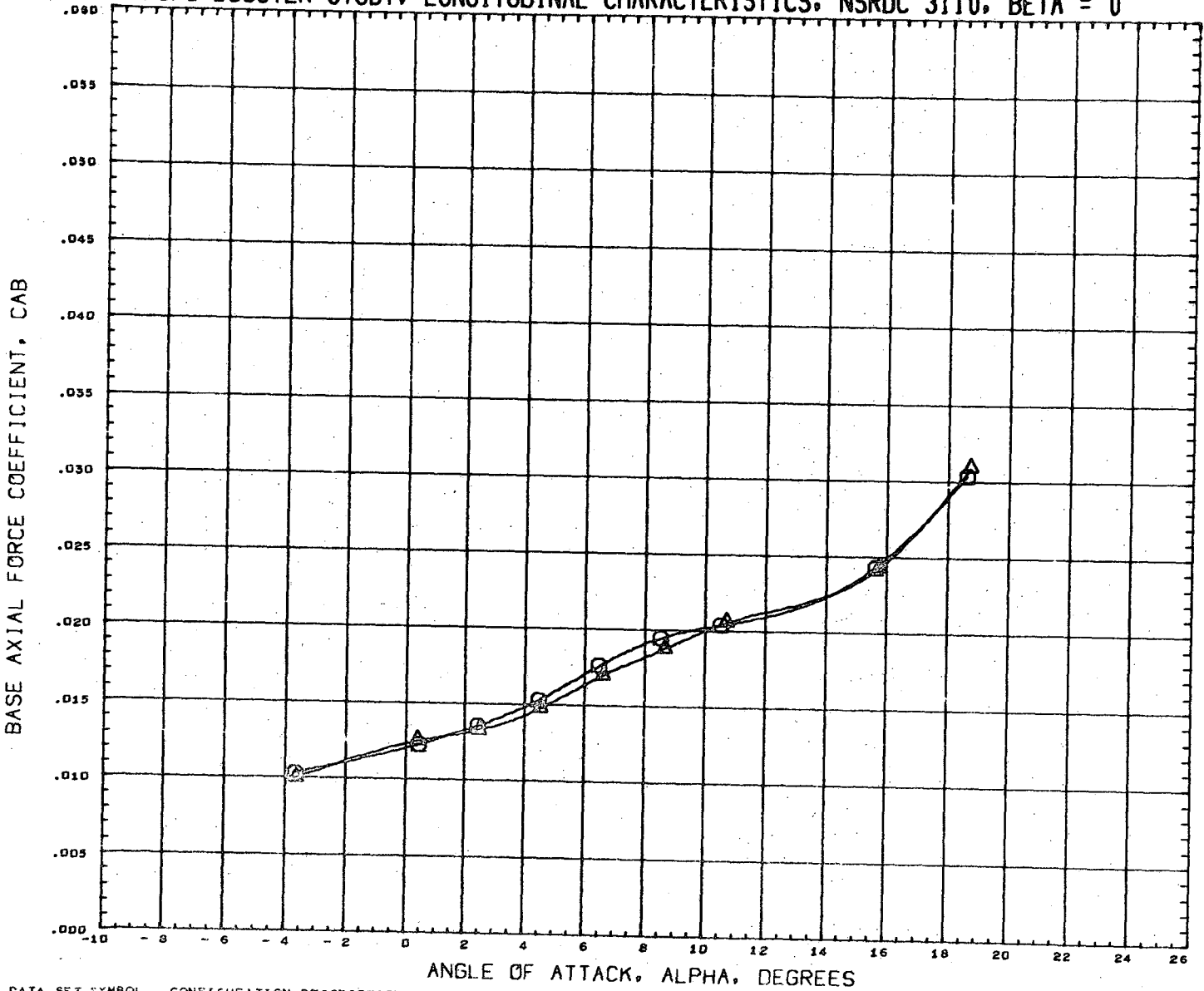
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3:10, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2021)	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1	15.000	1.000	0.000	2.000	SREF 1.3550 SQ.FT. LREF 41.4360 INCHES
(RN2065)	NSRDC-3110,MSFC/LMSC BOOSTER B1C1F1W1V1	15.000	1.000	0.000	2.000	BREF 41.4360 INCHES XMRP 31.1400 INCHES YMRP 0.0000 INCHES ZMRP 0.2250 INCHES SCALE 1.5000 PERCNT

MACH 0.382

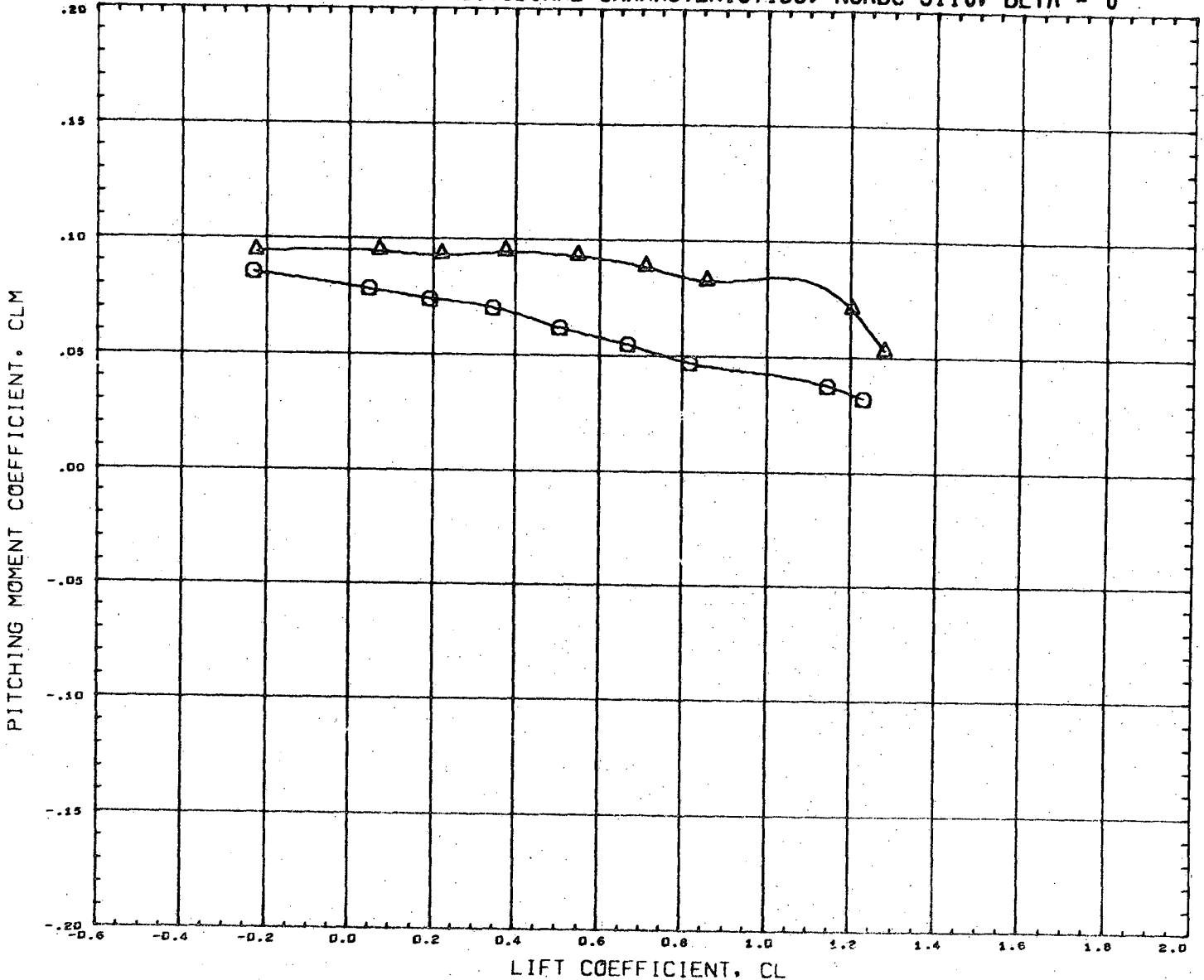
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2021)	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1	15.000	1.000	0.000	2.000	SREF 1.3550 SQ.FT.
(RN2095)	NSRDC-3110,MSFC/LMSC BOOSTER B1C1F1W1V1	15.000	1.000	0.000	2.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCNT

NACH 0.382

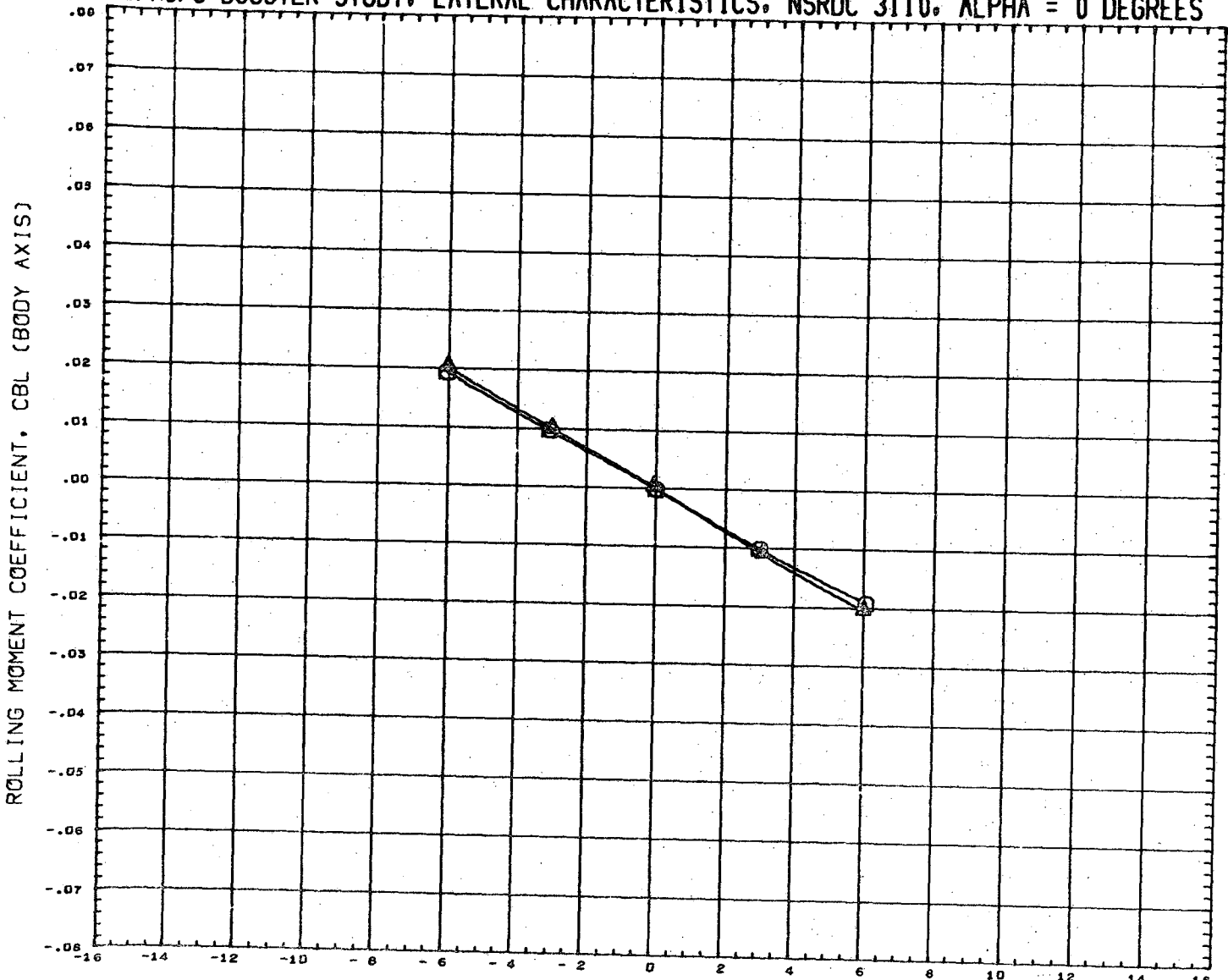
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2D21)	NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1	15.000	1.000	0.000	2.000	SREF 1.3550 SQ. FT.
(RN2D85)	NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1	15.000	1.000	0.000	2.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCENT

MACH 0.382

LMSC/MSFC BOOSTER STUDY, LATERAL CHARACTERISTICS, NSRDC 3110, ALPHA = 0 DEGREES



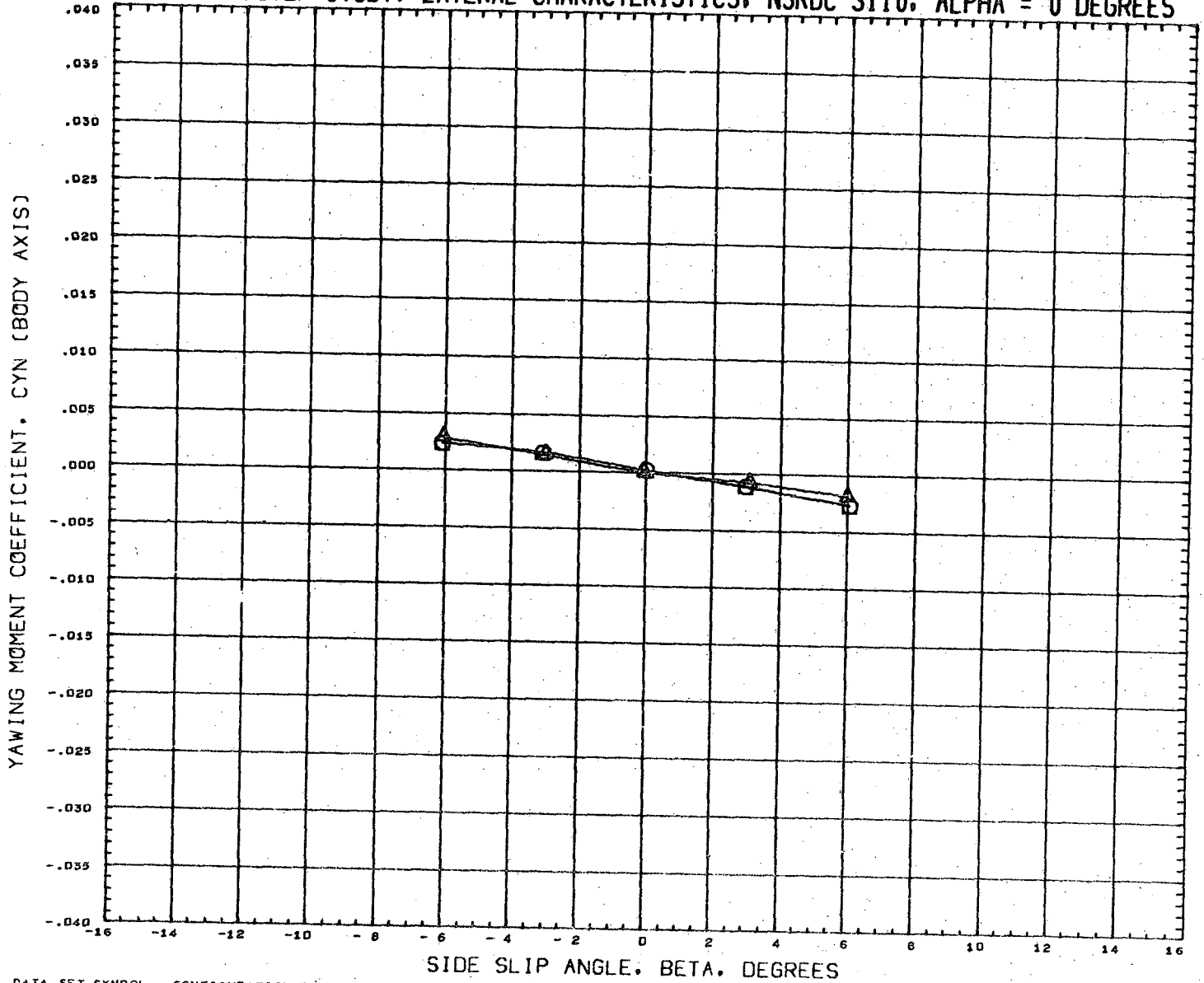
DATA SET SYMBOL (RN2022) (RN2086) CONFIGURATION DESCRIPTION NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1 NSRDC-3110,MSFC/LMSC BOOSTER B1C1F1W1V1

INCIDC 15.000 CNDFOS 1.000 INCIGW 0.000 WNGPOS 2.000

REFERENCE INFORMATION SREF 1.3550 SQ.FT. LREF 41.4360 INCHES BREF 41.4360 INCHES XMRF 31.1400 INCHES YMRF 0.0000 INCHES ZMRF 0.2250 INCHES SCALE 1.5000 PERCENT

MACH 0.381

LMSC/MSFC BOOSTER STUDY, LATERAL CHARACTERISTICS, NSRDC 3110, ALPHA = 0 DEGREES



DATA SET SYMBOL
(RN2022)
(RN2086)



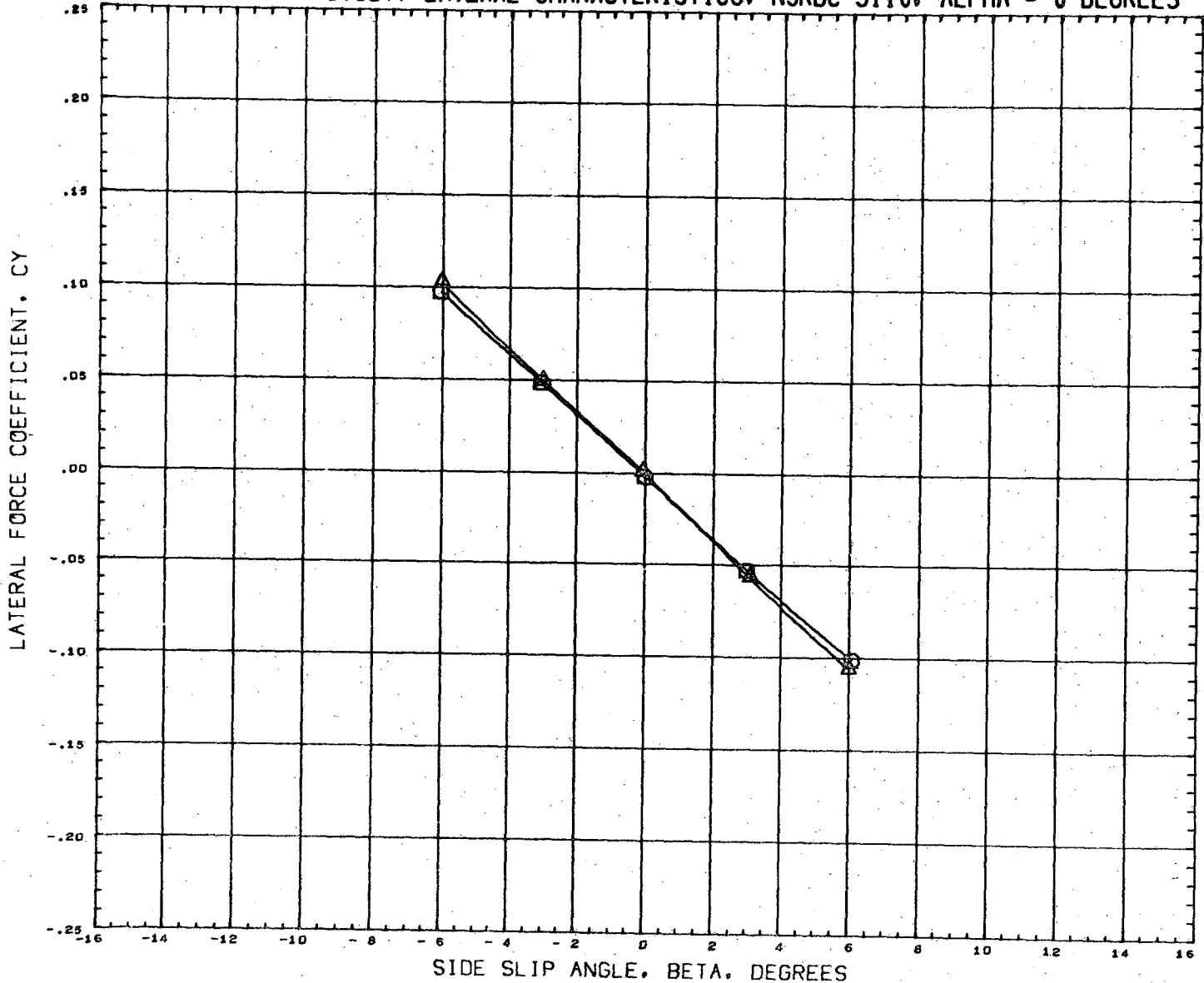
CONFIGURATION DESCRIPTION
NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1
NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1

INCIDC	CNDPOS	INCIDW	WNGFOS
15.000	1.000	0.000	2.000
15.000	1.000	0.000	2.000

REFERENCE INFORMATION		
SREF	1.3550	SQ. FT.
LREF	41.4360	INCHES
BREF	41.4360	INCHES
XMRP	31.1400	INCHES
YMRP	0.0000	INCHES
ZMRP	0.2250	INCHES
SCALE	1.5000	PERCNT

MACH 0.381

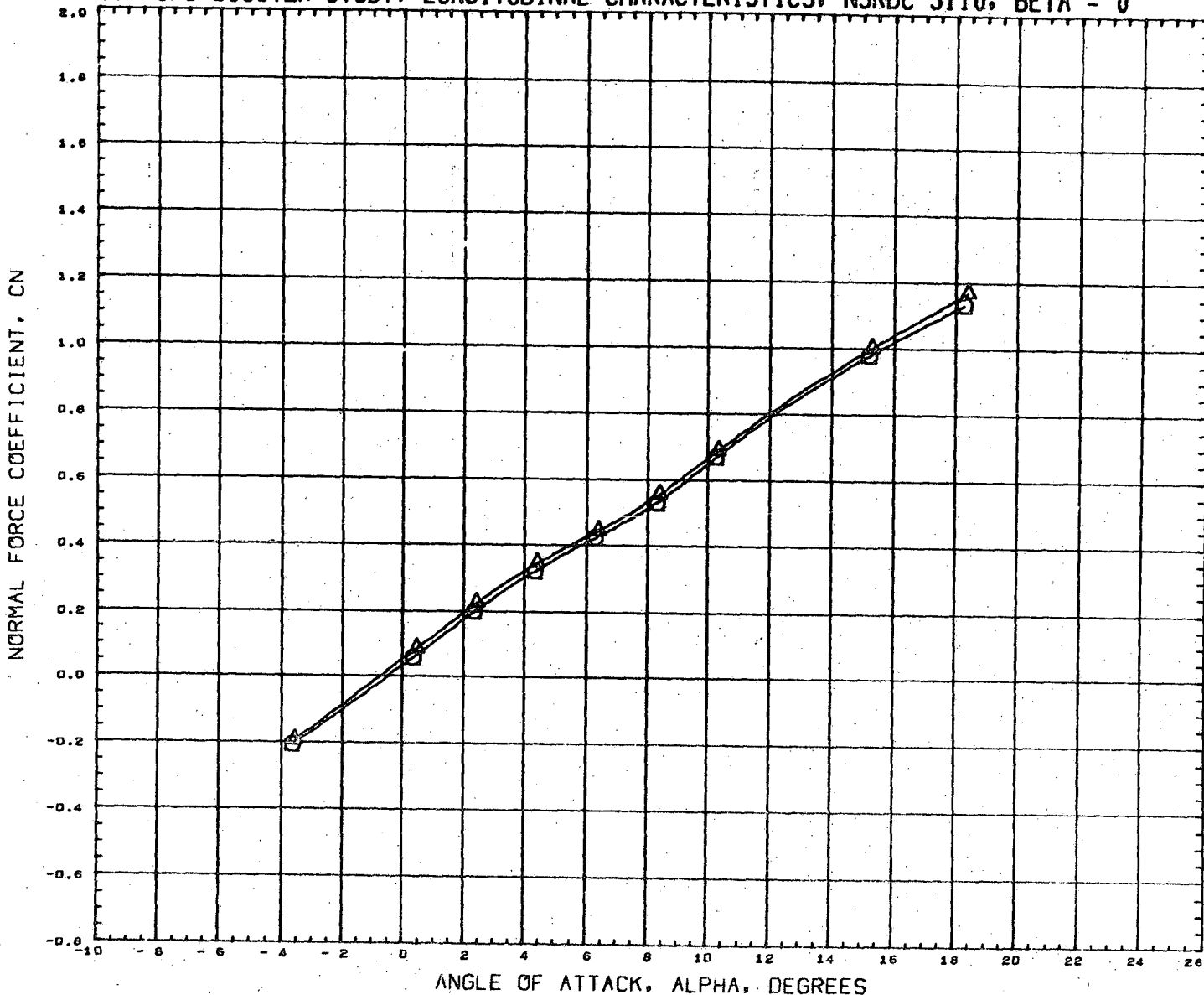
LMSC/MSFC BOOSTER STUDY, LATERAL CHARACTERISTICS, NSRDC 3110, ALPHA = 0 DEGREES



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2022)	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1	15.000	1.000	0.000	2.000	SREF 1.3550 SQ.FT.
(RN2085)	NSRDC-3110,MSFC/LMSC BOOSTER B1C1F1W1V1	15.000	1.000	0.000	2.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCENT

MACH 0.381

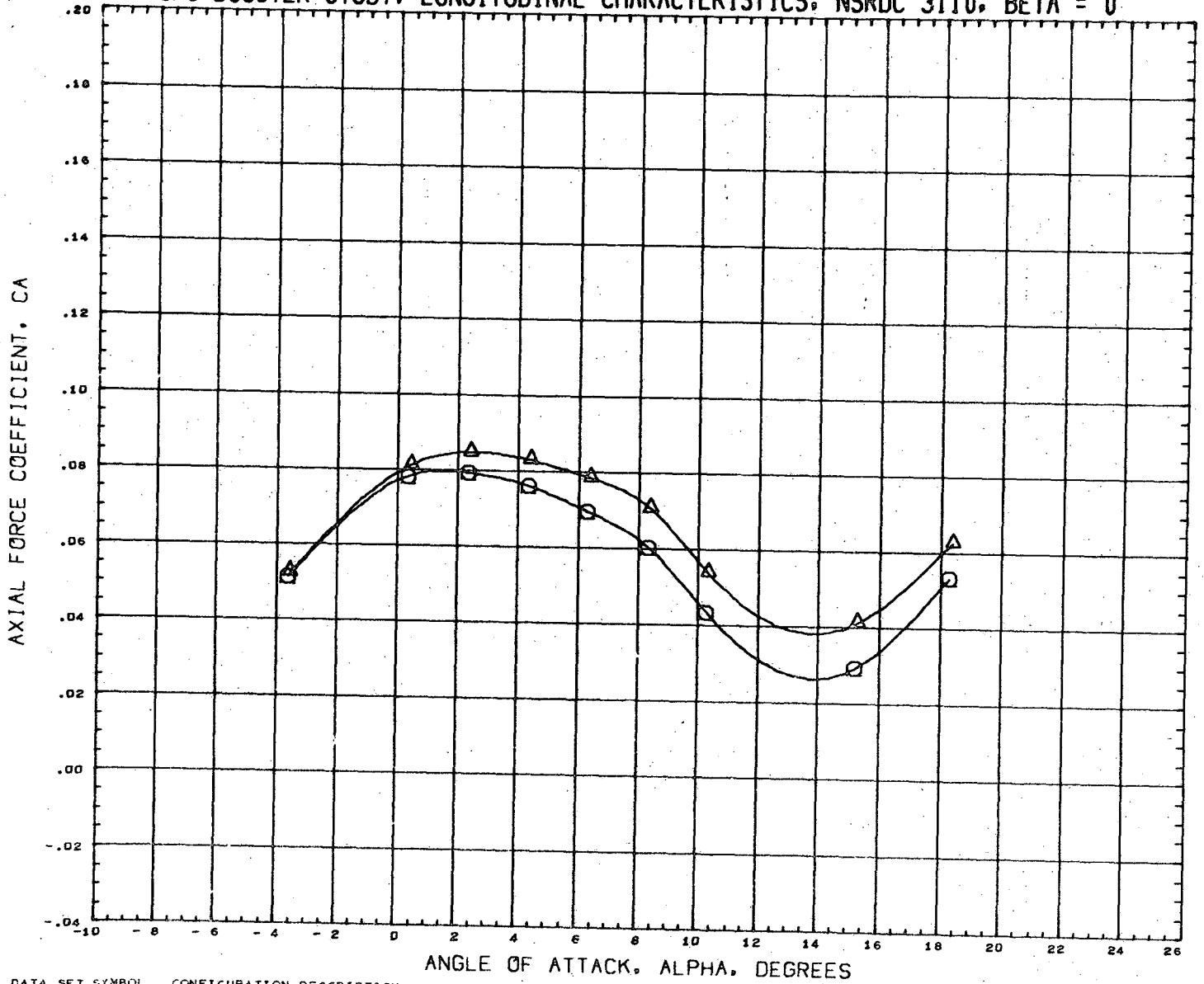
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2029)	NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1	15.000	2.000	0.000	2.000	SREF 1.3550 SQ. FT.
(RN2093)	NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1	15.000	2.000	0.000	2.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCNT

MACH 0.381

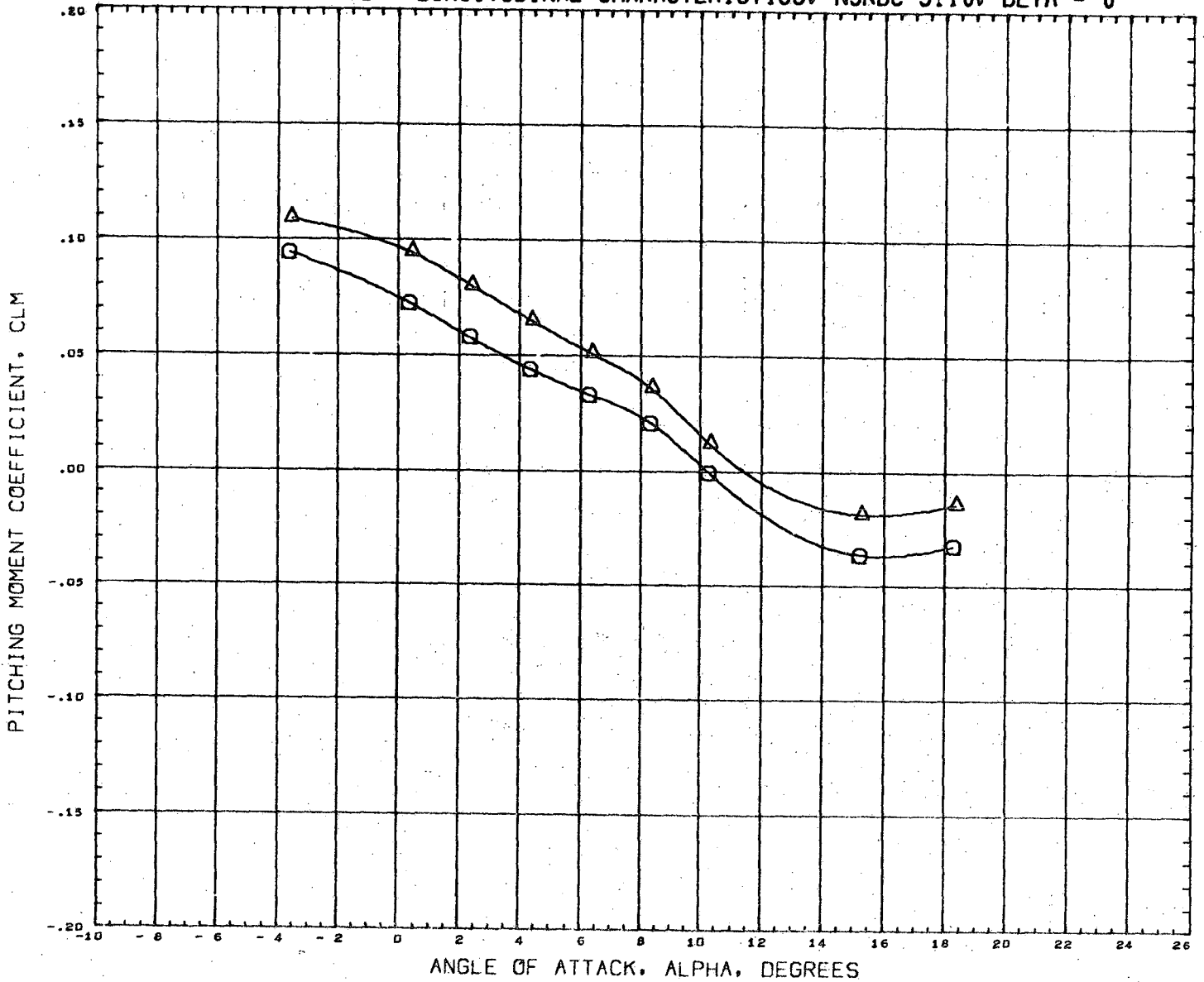
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2029)	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1	15.000	2.000	0.000	2.000	SREF 1.3550 SQ.FT.
(RN2093)	NSRDC-3110,MSFC/LMSC BOOSTER B1C1F1W1V1	15.000	2.000	0.000	2.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCENT

MACH 0.381

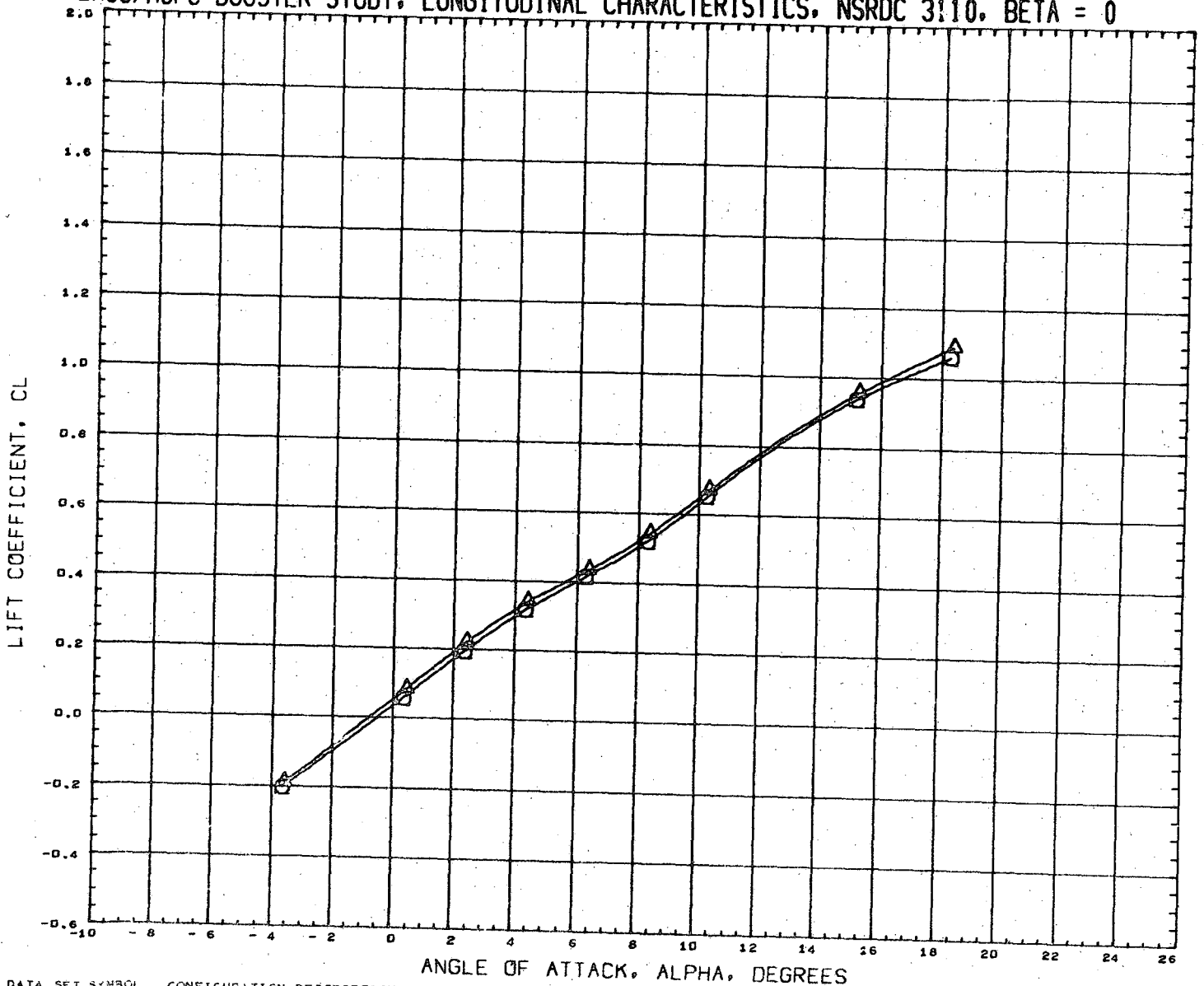
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2029)	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1	15.000	2.000	0.000	2.000	SREF 1.3550 SQ.FT.
(RN2093)	NSRDC-3110,MSFC/LMSC BOOSTER B1C1F1W1V1	15.000	2.000	0.000	2.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCNT

MACH 0.381

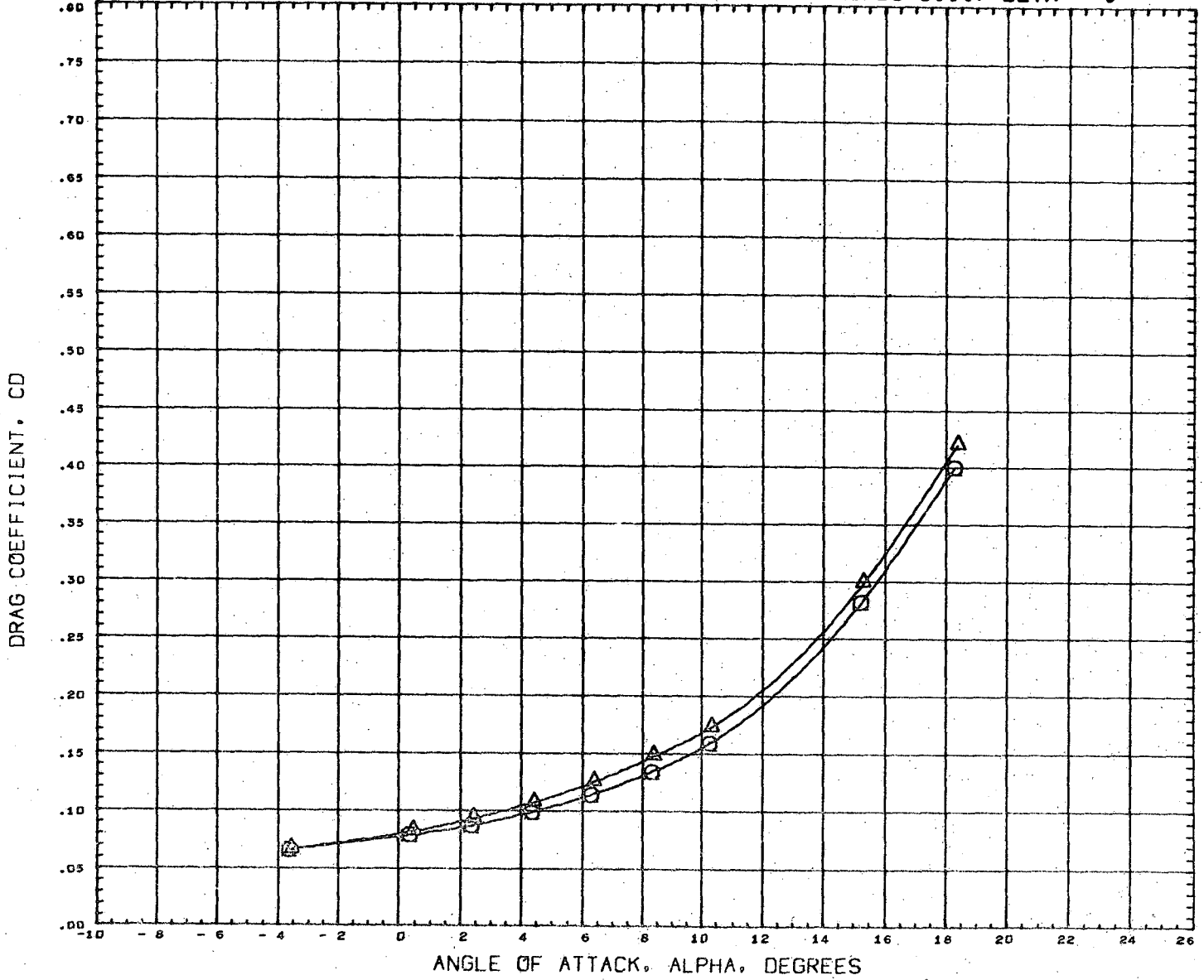
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2029)	NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1	15.000	2.000	0.000	2.000	SREF 1.3550 SQ. FT.
(RN2093)	NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1	15.000	2.000	0.000	2.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCENT

MACH 0.381

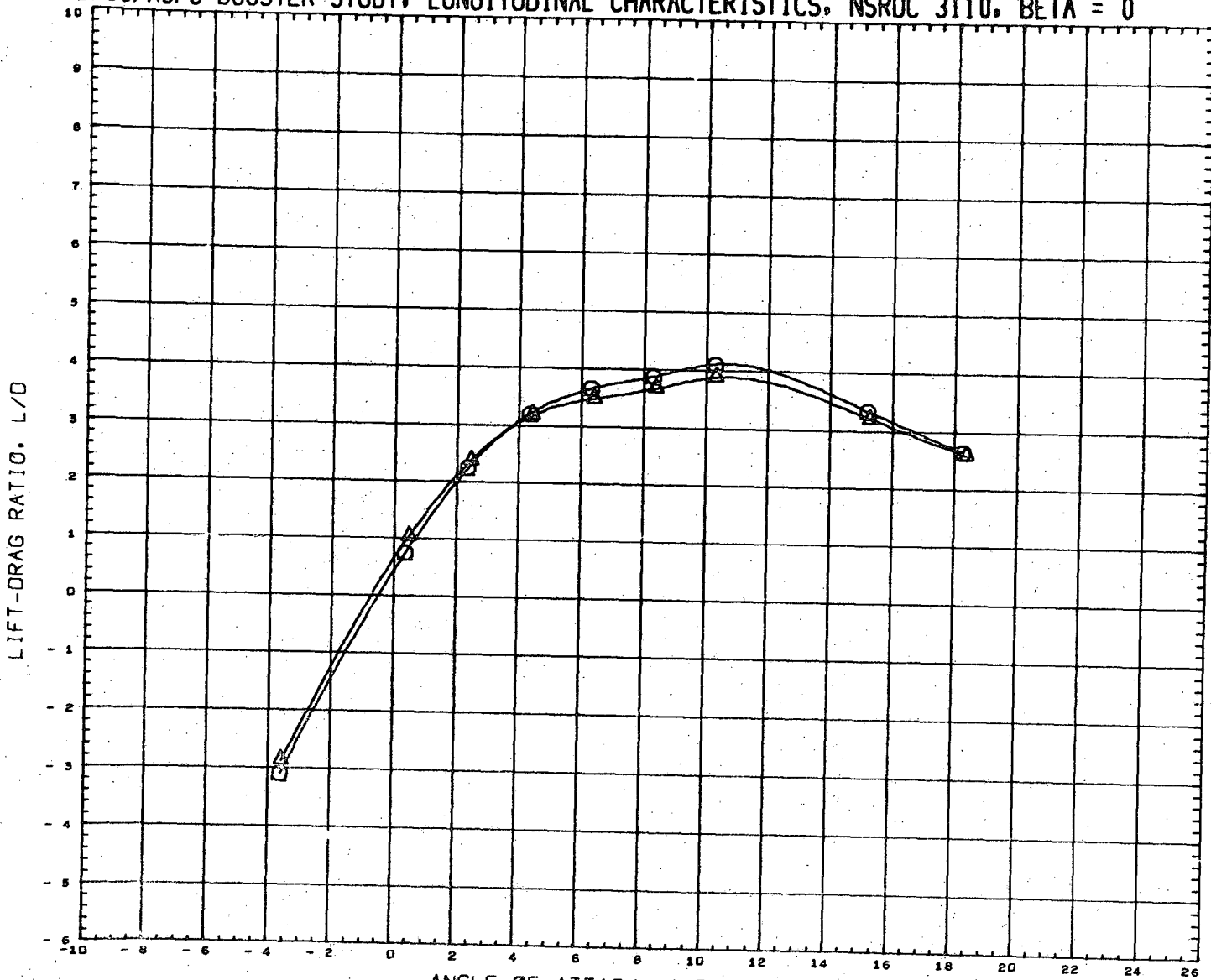
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2029)	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1	15.000	2.000	0.000	2.000	SREF 1.3550 SQ.FT.
(RN2093)	NSRDC-3110,MSFC/LMSC BOOSTER B1C1F1W1V1	15.000	2.000	0.000	2.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCNT

MACH 0.381

LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL
 (RN2029) \circ
 (RN2093) \triangle

CONFIGURATION DESCRIPTION
 NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1
 NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1

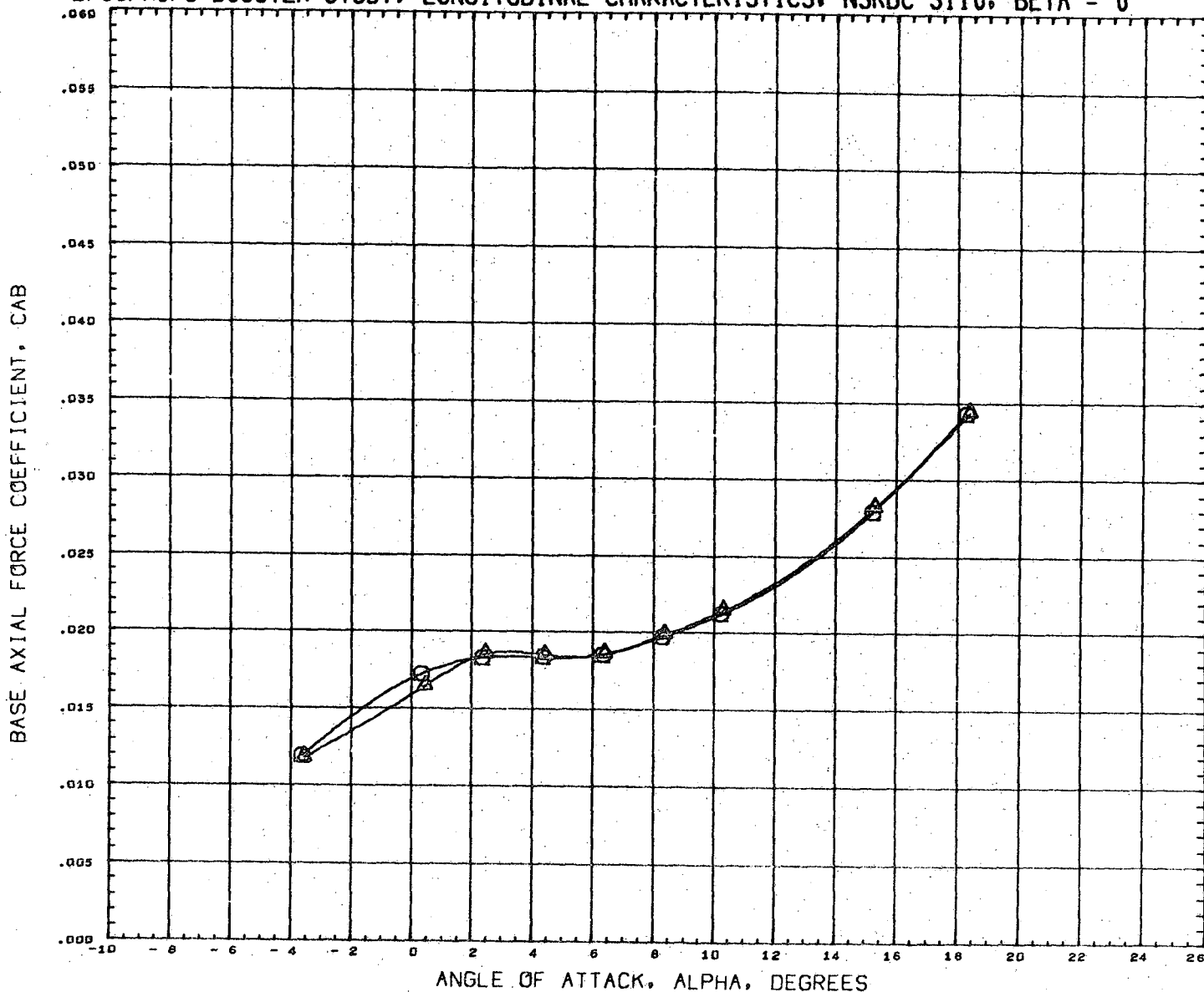
INCIDC	CNDPOS	INCIDW	WNGPOS
15.000	2.000	0.000	2.000
15.000	2.000	0.000	2.000

REFERENCE INFORMATION

SREF	1.3550	SQ. FT.
LREF	41.4360	INCHES
BREF	41.4360	INCHES
XMRP	31.1400	INCHES
YMRP	0.0000	INCHES
ZMRP	0.2250	INCHES
SCALE	1.5000	PERCENT

MACH 0.381

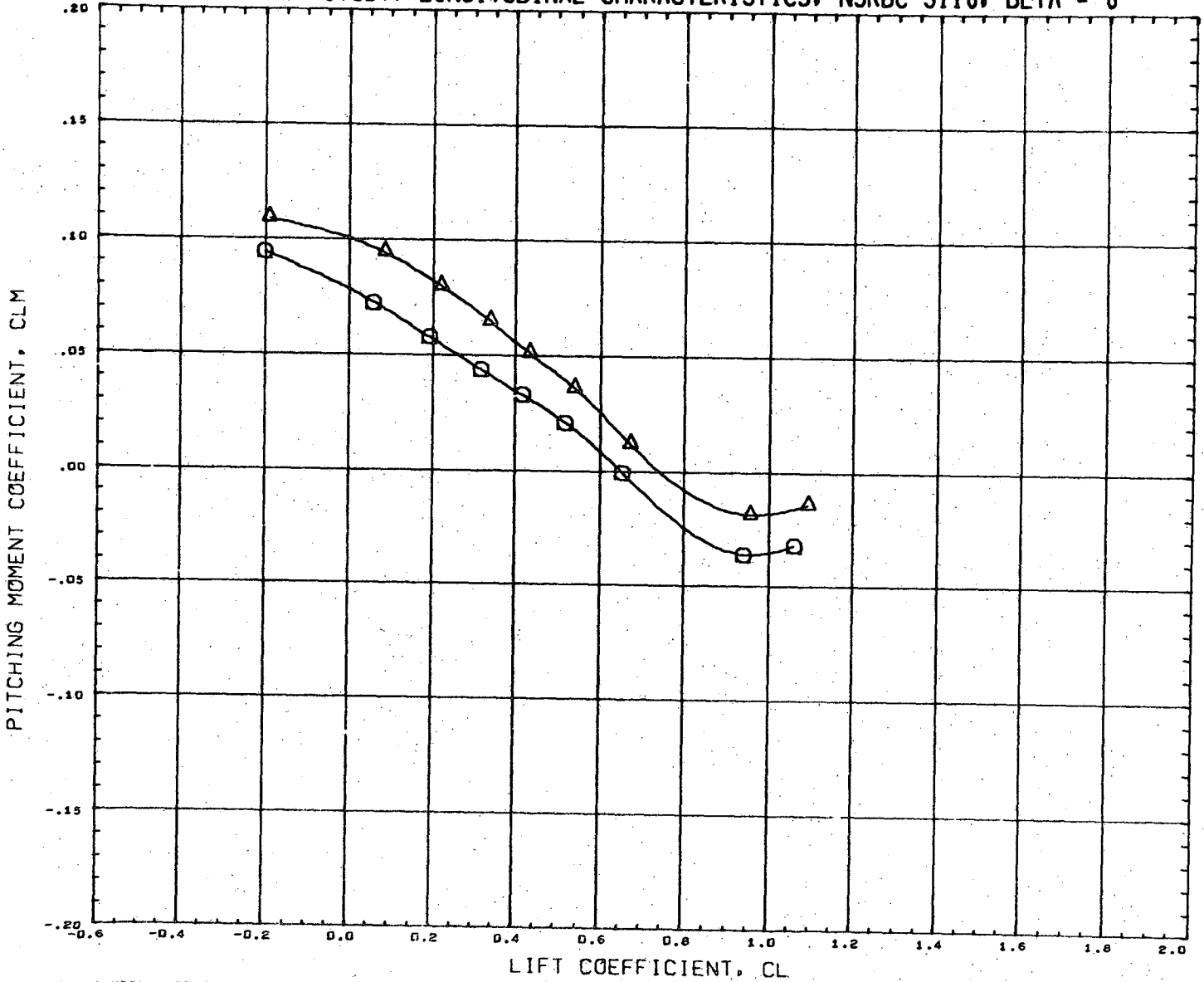
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2029)	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1	15.000	2.000	0.000	2.000	SREF 1.3550 SQ.FT.
(RN2093)	NSRDC-3110,MSFC/LMSC BOOSTER B1C1F1W1V1	15.000	2.000	0.000	2.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCENT

MACH 0.381

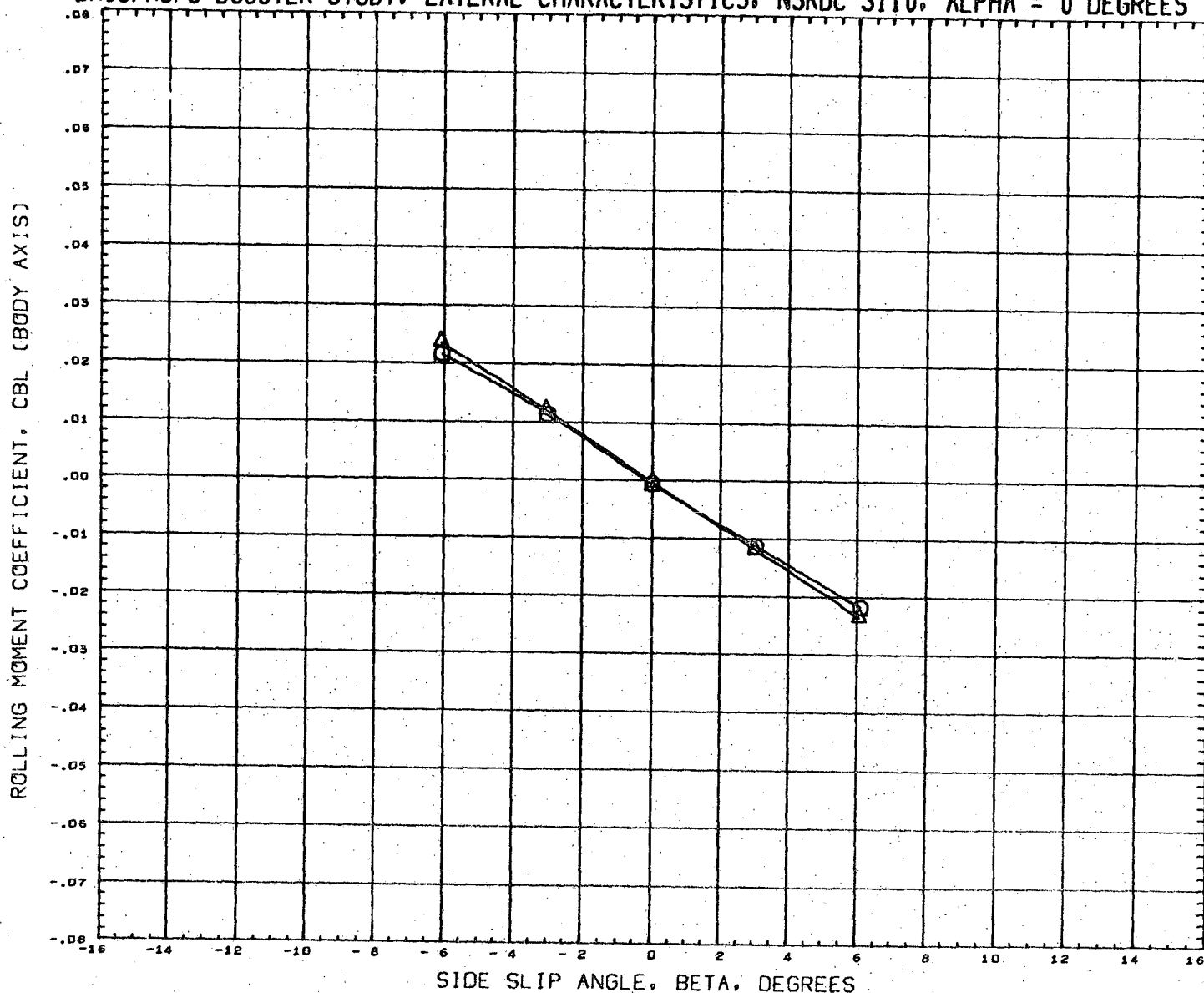
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2029)	NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1	15.000	2.000	0.000	2.000	SREF 1.3550 SQ. FT.
(RN2093)	NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1	15.000	2.000	0.000	2.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCENT

MACH 0.381

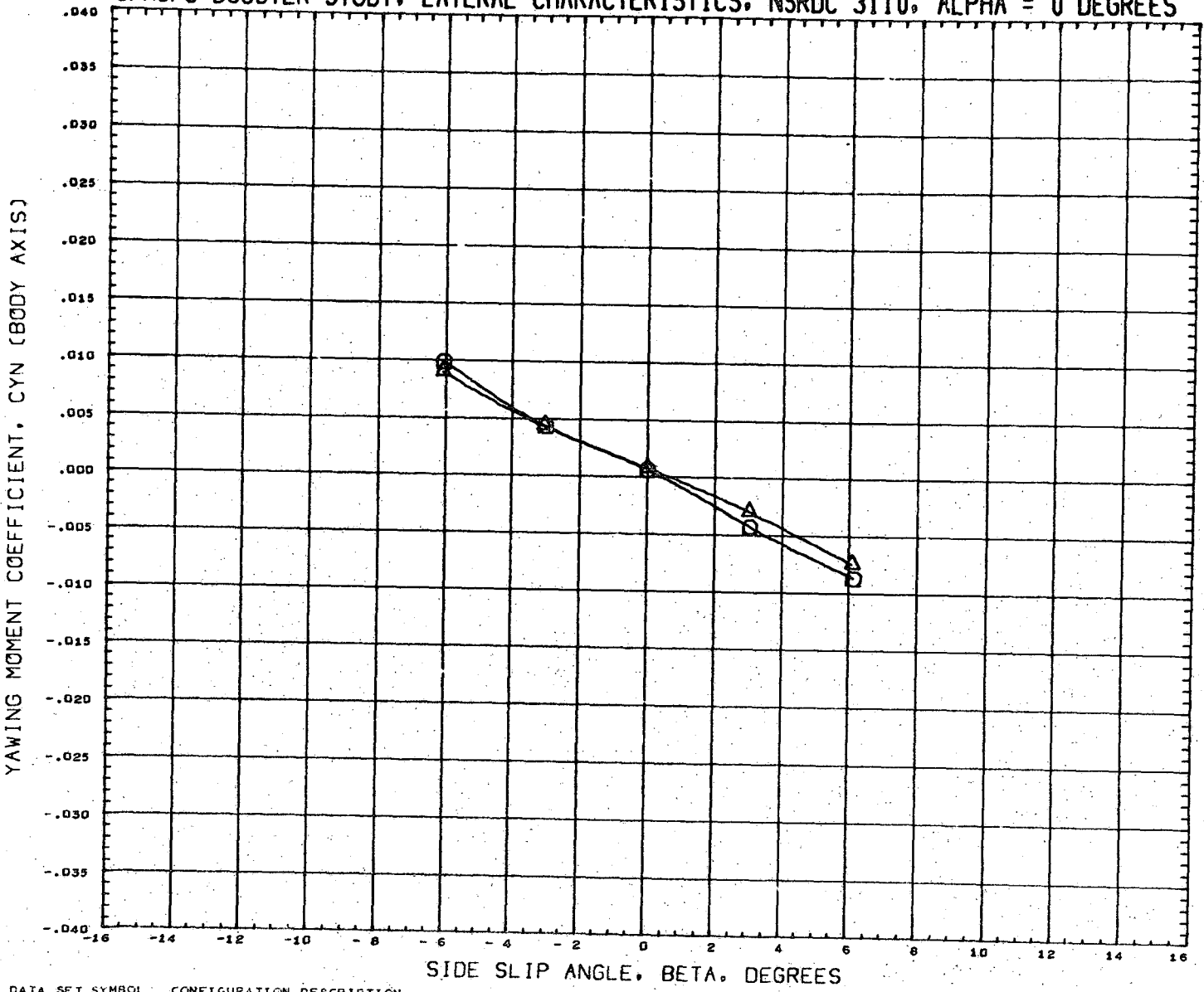
LMSC/MSFC BOOSTER STUDY, LATERAL CHARACTERISTICS, NSRDC 3110, ALPHA = 0 DEGREES



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION	
(R2030)	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1	15.000	2.000	0.000	2.000	SREF	1.3550 SQ.FT.
(R2094)	NSRDC-3110,MSFC/LMSC BOOSTER B1C1F1W1V1	15.000	2.000	0.000	2.000	LREF	41.4360 INCHES
						BREF	41.4360 INCHES
						XMRP	31.1400 INCHES
						YMRP	0.0000 INCHES
						ZMRP	0.2250 INCHES
						SCALE	1.5000 PERCENT

MACH 0.381

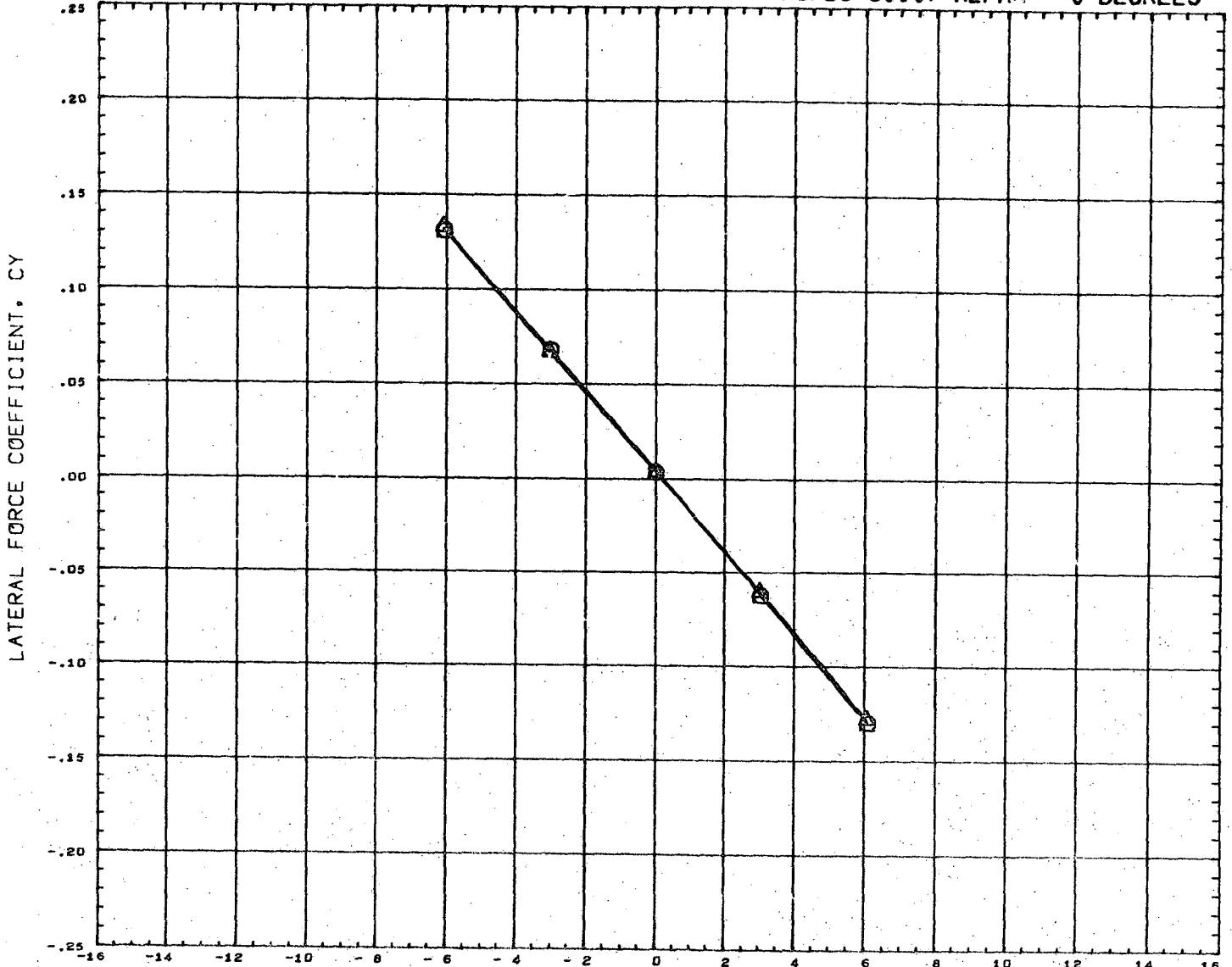
LMSC/MSFC BOOSTER STUDY, LATERAL CHARACTERISTICS, NSRDC 3110, ALPHA = 0 DEGREES



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2030)	NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1	15.000	2.000	0.000	2.000	SREF 1.3550 SQ. FT.
(RN2094)	NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1	15.000	2.000	0.000	2.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCENT

MACH 0.381

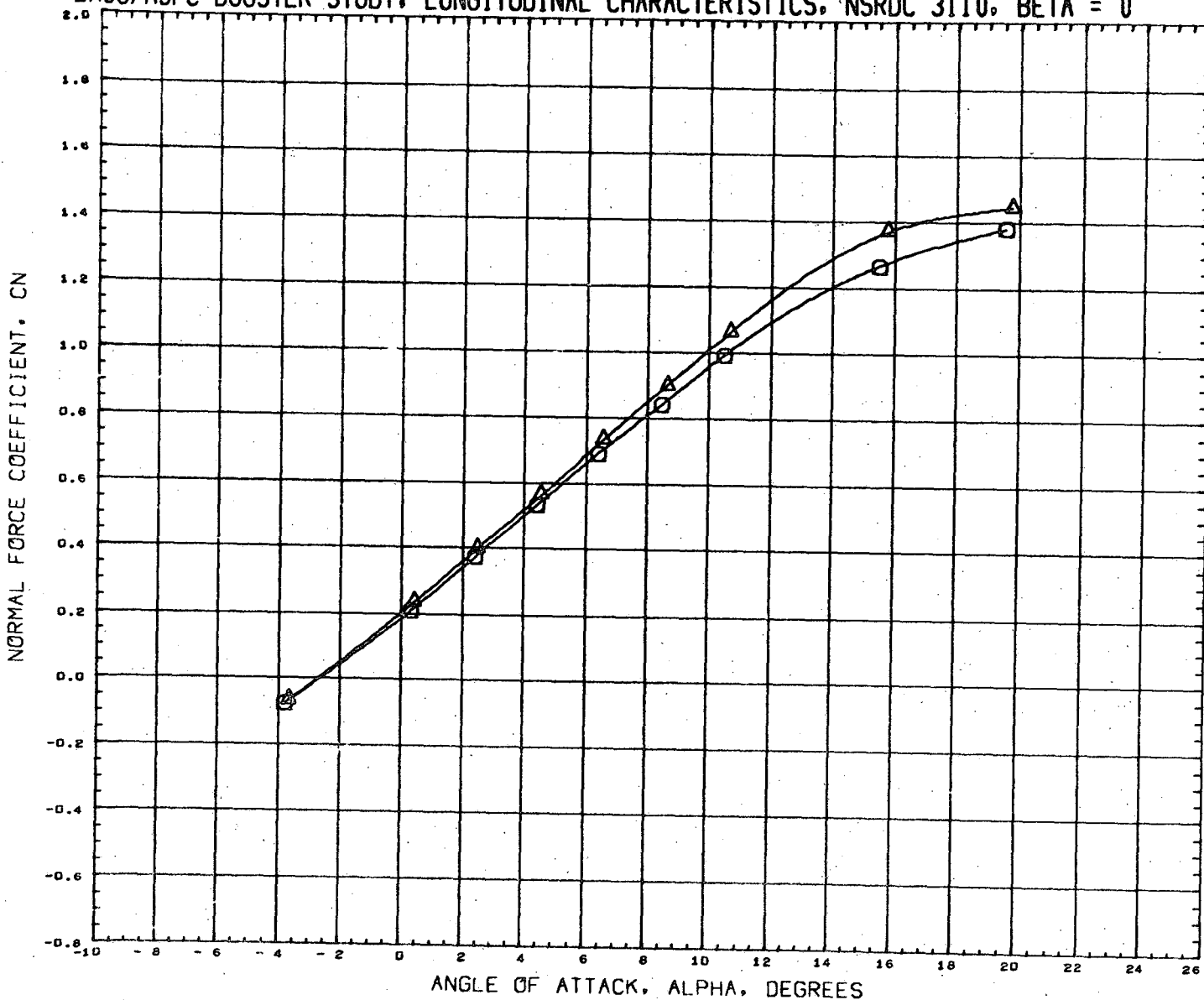
LMSC/MSFC BOOSTER STUDY, LATERAL CHARACTERISTICS, NSRDC 3110, ALPHA = 0 DEGREES



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2030)	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1	15.000	2.000	0.000	2.000	SREF 1.3550 SQ.FT.
(RN2094)	NSRDC-3110,MSFC/LMSC BOOSTER B1C1F1W1V1	15.000	2.000	0.000	2.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCNT

MACH 0.381

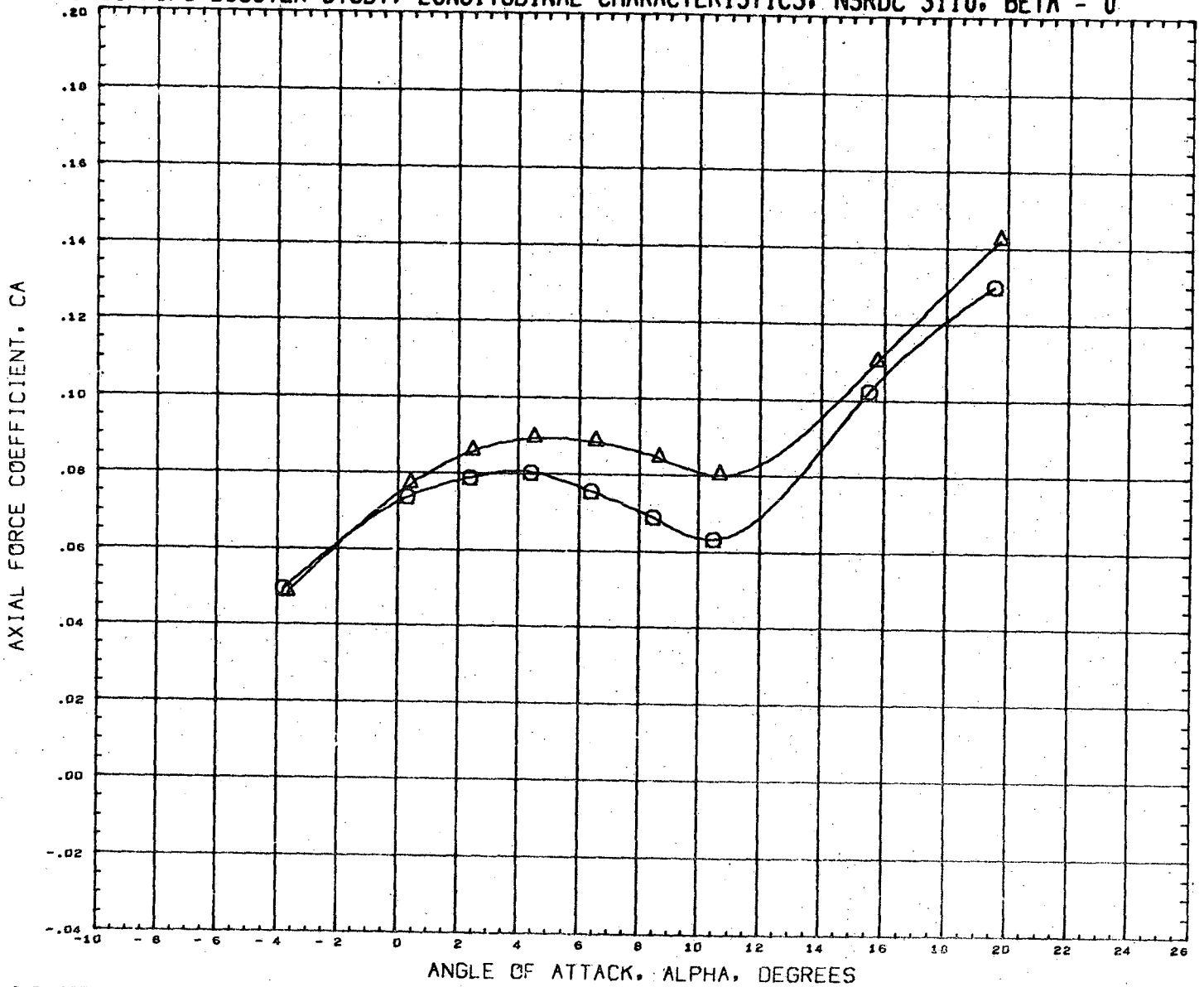
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2053)	NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1	15.000	1.000	3.000	2.000	SREF 1.3550 SQ. FT.
(RN2117)	NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1	15.000	1.000	3.000	2.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCENT

MACH 0.381

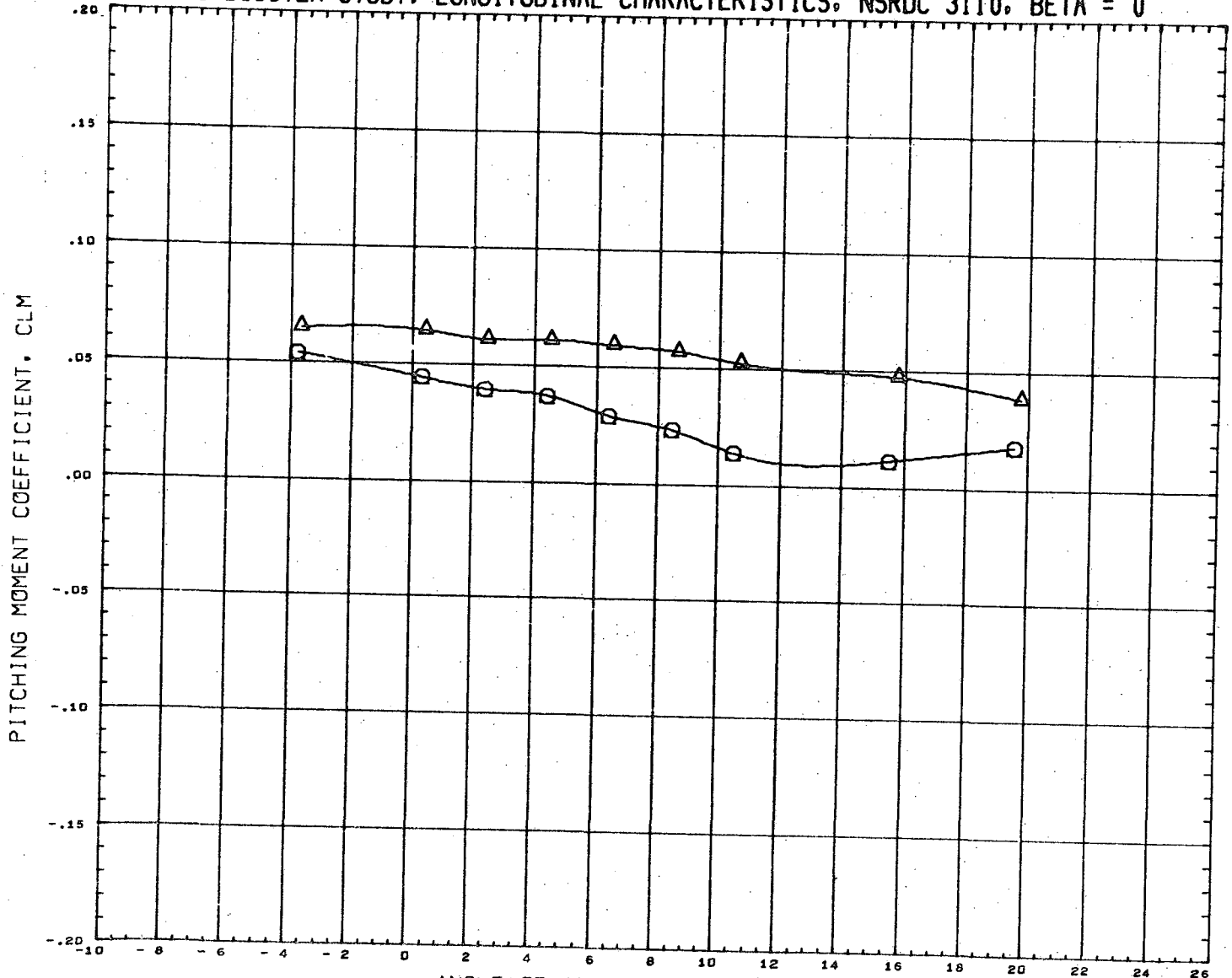
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2D53)	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1	15.000	1.000	3.000	2.000	SREF 1.3550 SQ.FT.
(RN2117)	NSRDC-3110,MSFC/LMSC BOOSTER B1C1F1W1V1	15.000	1.000	3.000	2.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCENT

MACH 0.381

LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL
(RN2053) \square
(RN2117) \triangle

CONFIGURATION DESCRIPTION
NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1
NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1

INCIDC	CNDPOS	INCIDW	WNGPOS
15.000	1.000	3.000	2.000
15.000	1.000	3.000	2.000

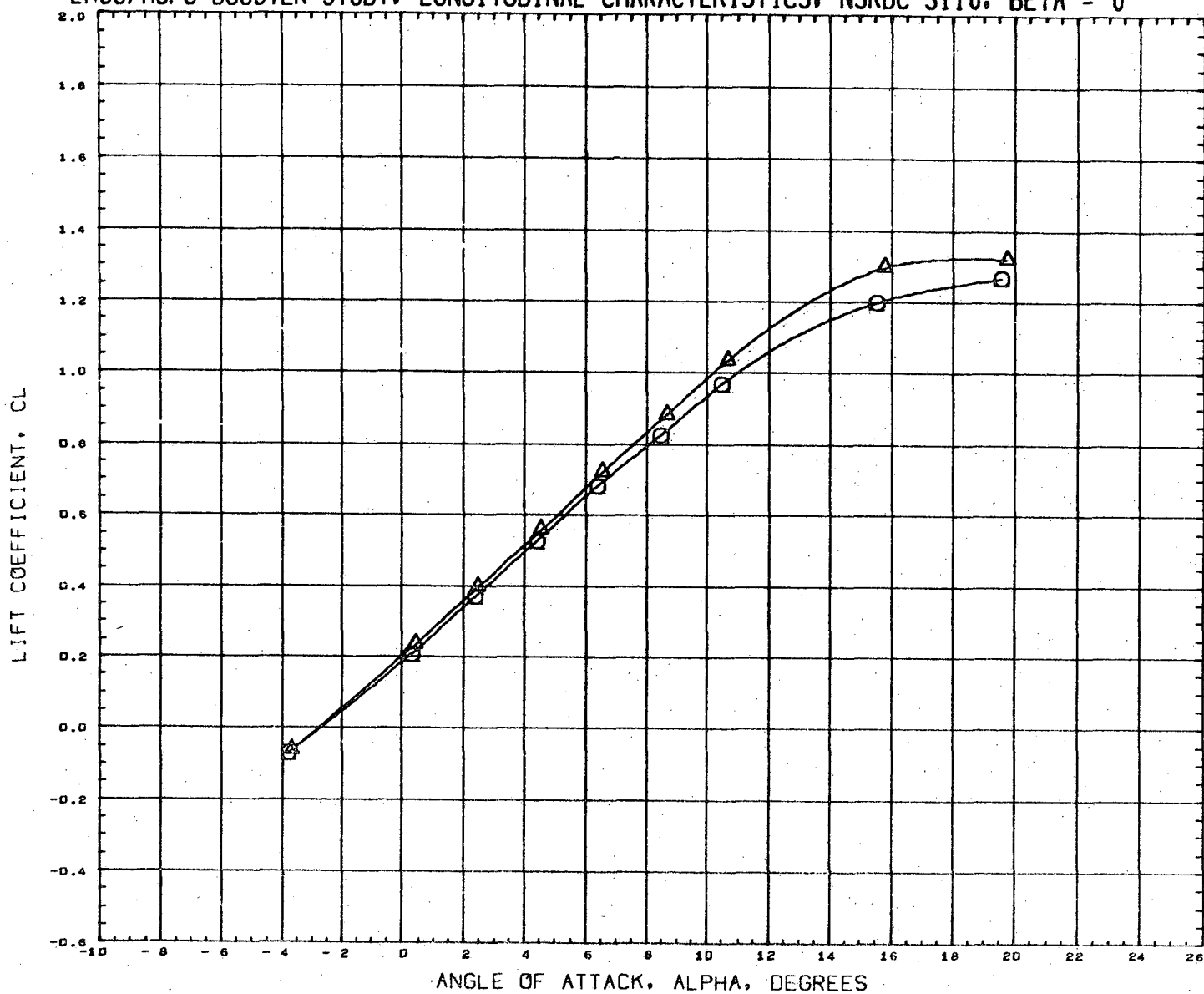
REFERENCE INFORMATION

SREF	1.3550	SQ. FT.
LREF	41.4360	INCHES
BREF	41.4360	INCHES
XMRP	31.1400	INCHES
YMRP	0.0000	INCHES
ZMRP	0.2250	INCHES
SCALE	1.5000	PERCENT

MACH 0.381



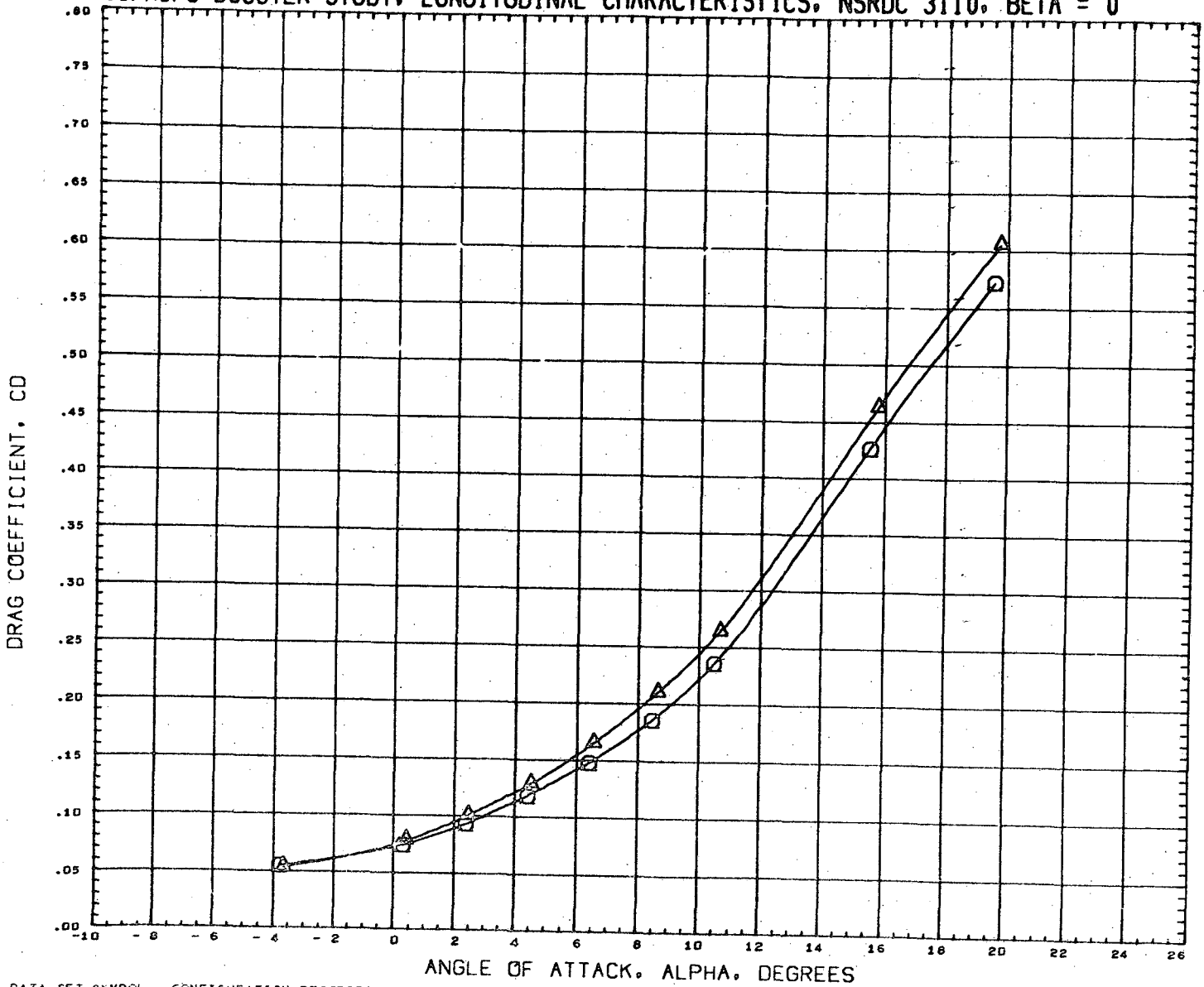
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2053)	NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1	15.000	1.000	3.000	2.000	SREF 1.3550 SQ. FT.
(RN2117)	NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1	15.000	1.000	3.000	2.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCENT

MACH 0.381

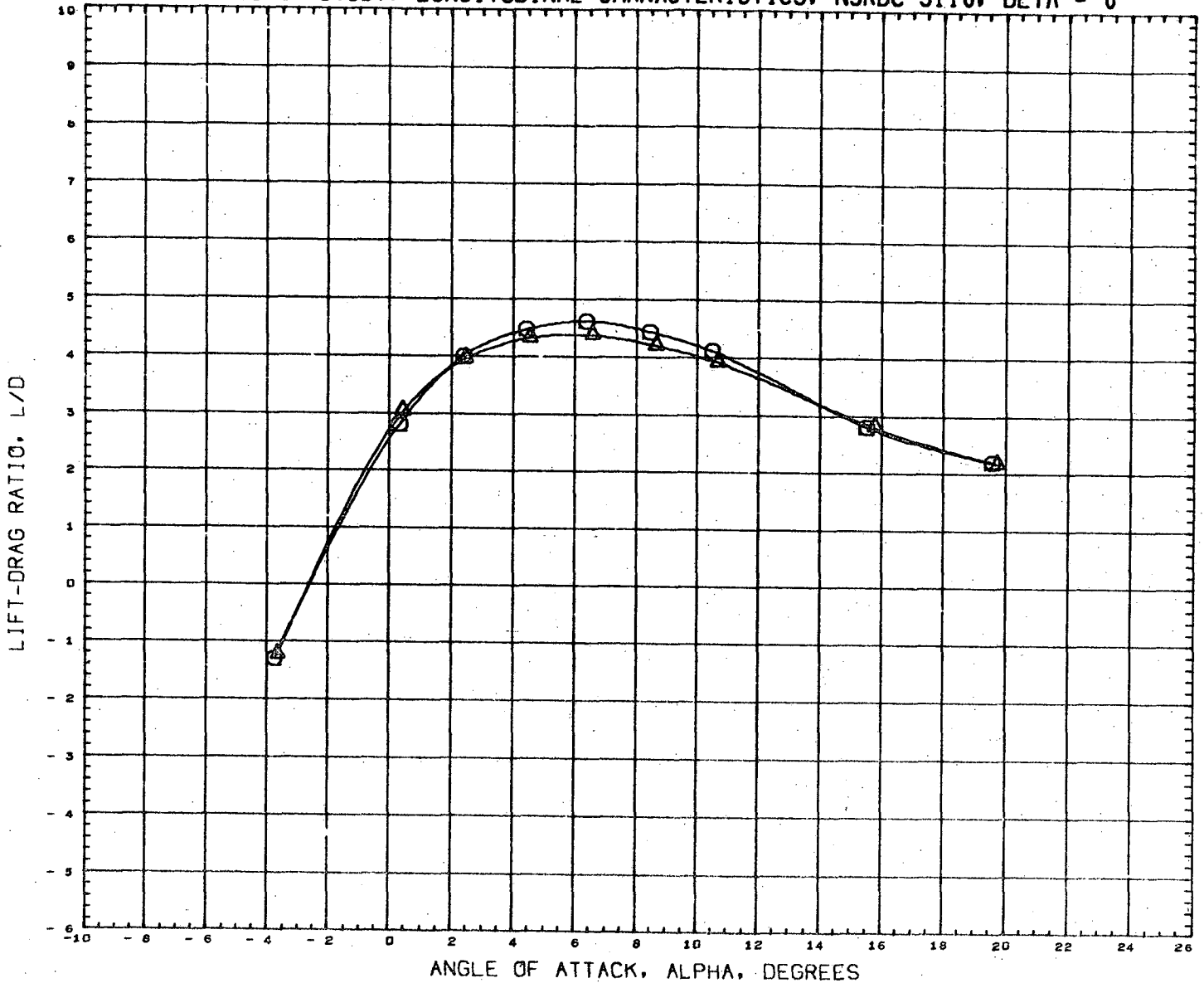
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION	
(RN2053)	NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1	15.000	1.000	3.000	2.000	SREF	1.3550 SQ. FT.
(RN2117)	NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1	15.000	1.000	3.000	2.000	LREF	41.4360 INCHES
						BREF	41.4360 INCHES
						XMRP	31.1400 INCHES
						YMRP	0.0000 INCHES
						ZMRP	0.2250 INCHES
						SCALE	1.5000 PERCENT

MACH 0.381

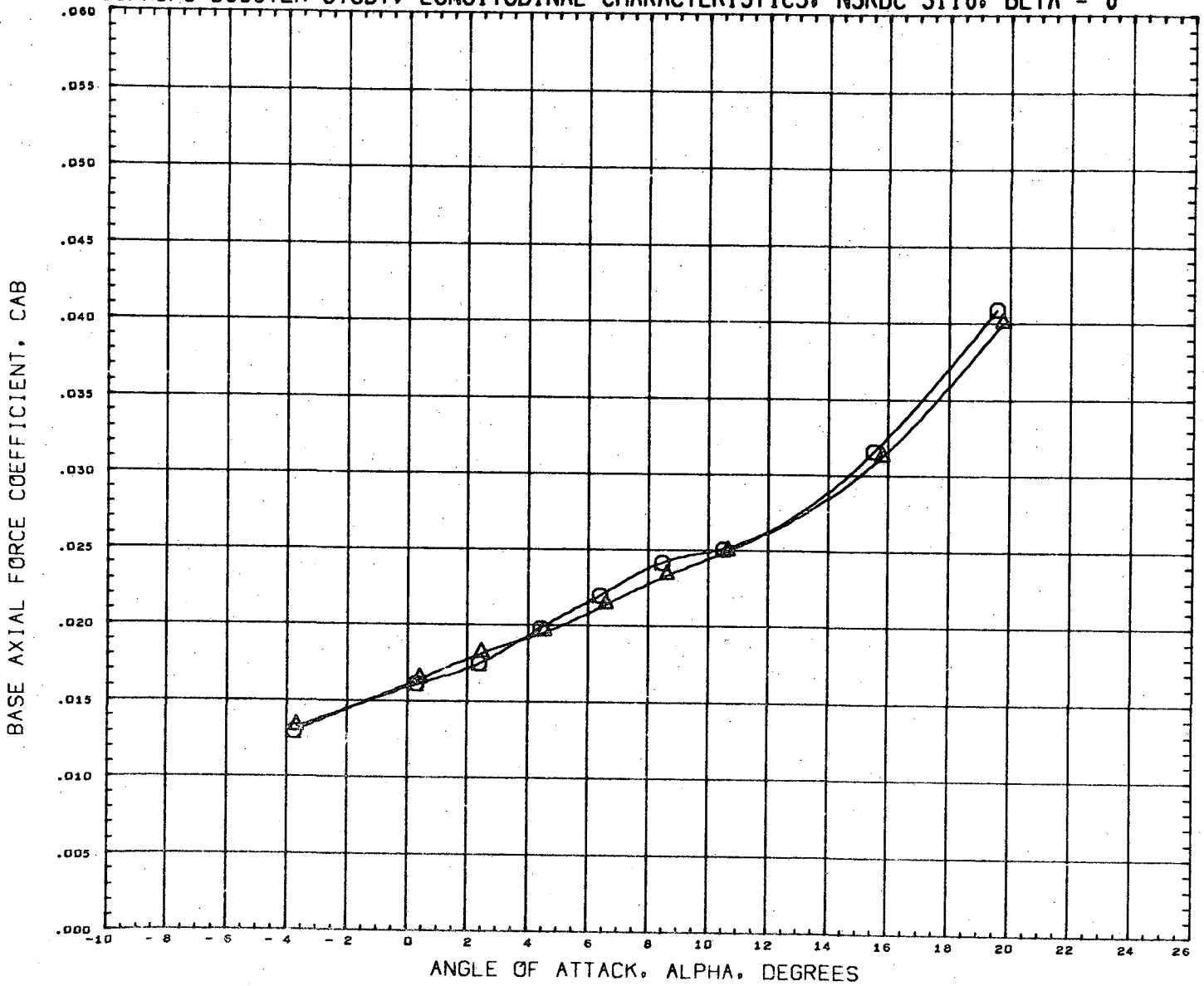
LMSC/MSFC BOOSTER STUDY. LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2053)	NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1	15.000	1.000	3.000	2.000	SREF 1.3550 SQ. FT.
(RN2117)	NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1	15.000	1.000	3.000	2.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCNT

MACH 0.381

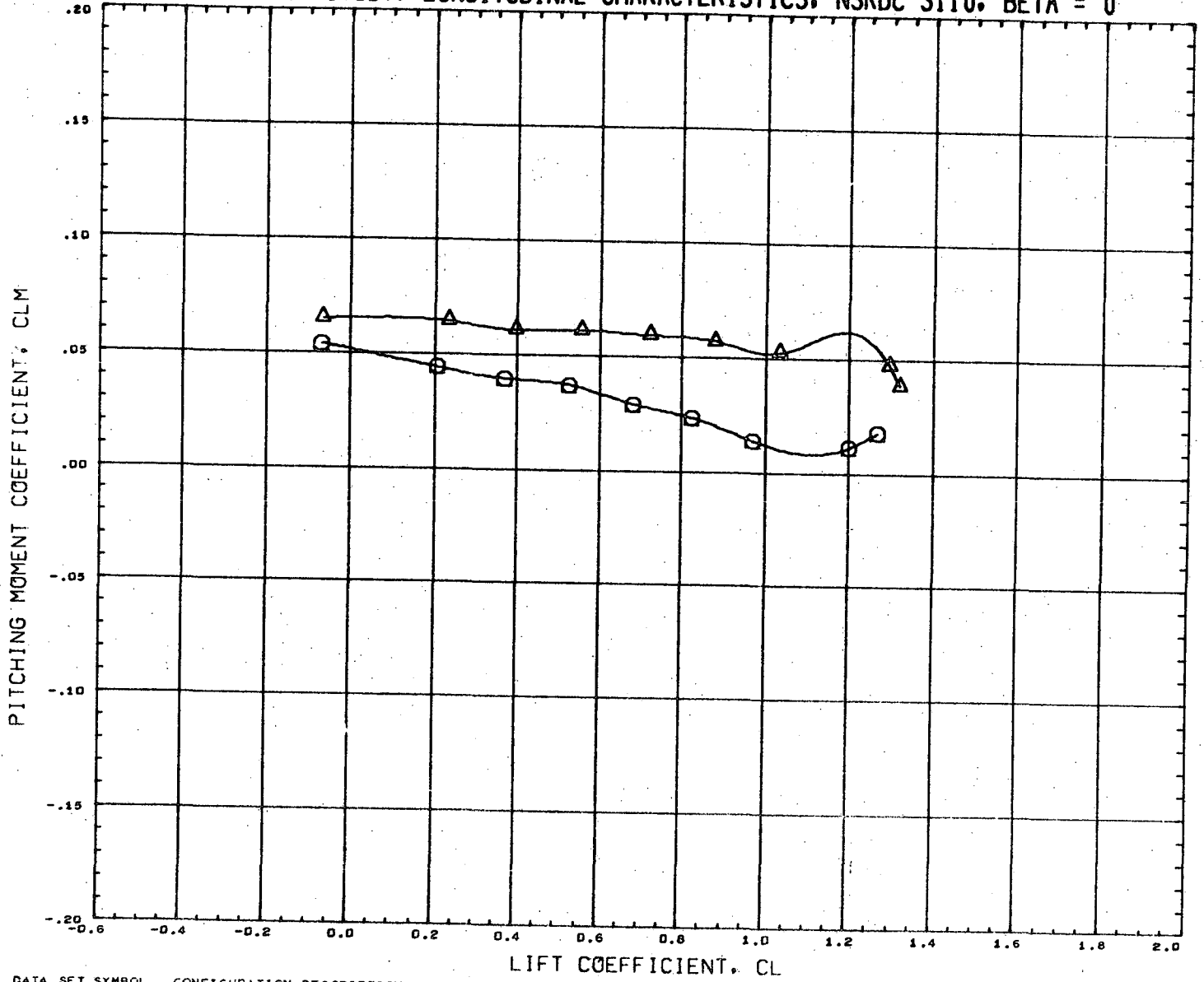
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2053)	NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1	15.000	1.000	3.000	2.000	SREF 1.3550 SQ. FT.
(RN2117)	NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1	15.000	1.000	3.000	2.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCENT

MACH 0.381

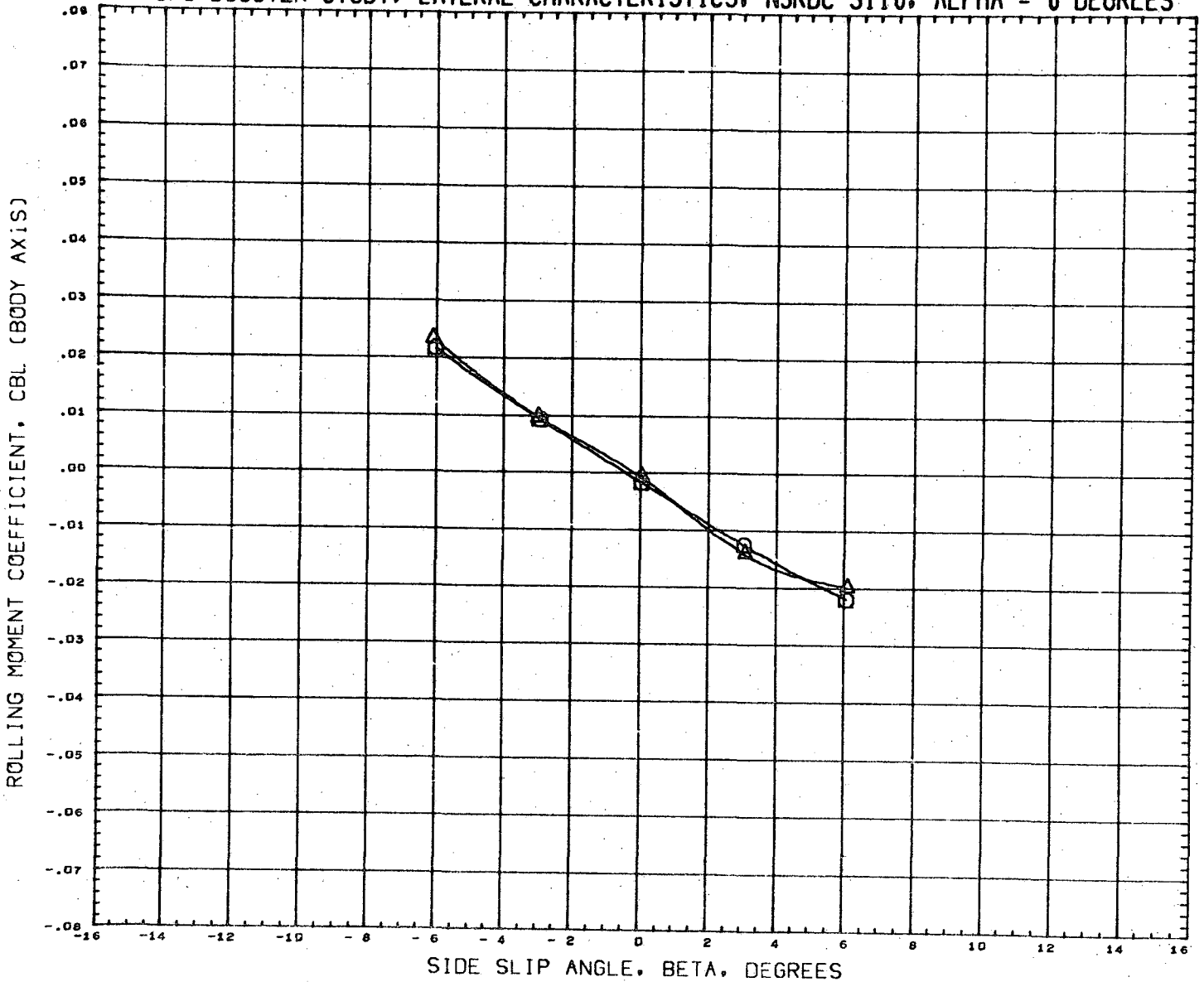
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0





DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2053)	NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1	15.000	1.000	3.000	2.000	SREF 1.3550 SQ. FT.
(RN2117)	NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1	15.000	1.000	3.000	2.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCNT

MACH 0.381

LMSC/MSFC BOOSTER STUDY, LATERAL CHARACTERISTICS, NSRDC 3110, ALPHA = 0 DEGREES



DATA SET SYMBOL
(RN2054) 
(RN2118) 

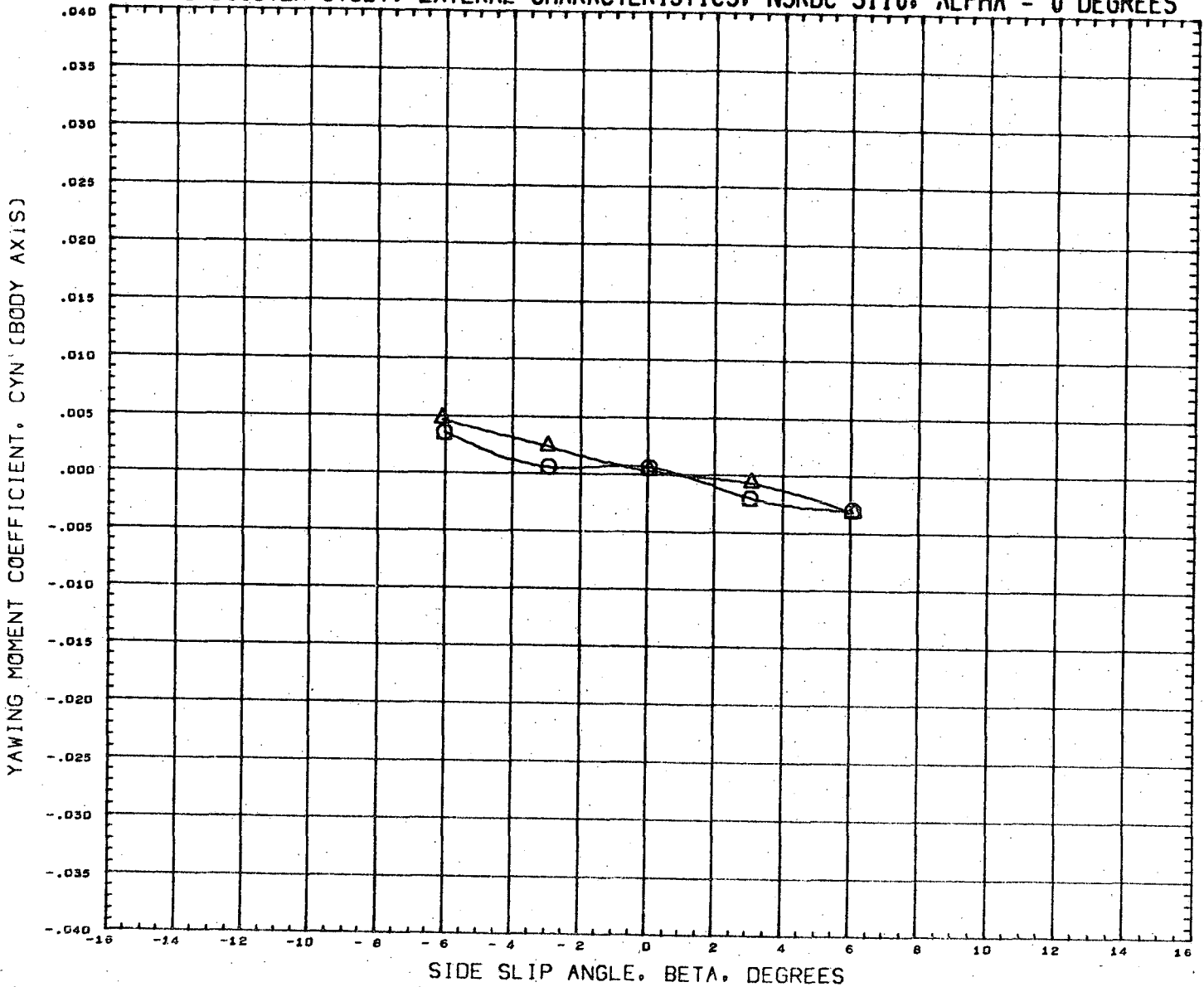
CONFIGURATION DESCRIPTION
NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1
NSRDC-3110,MSFC/LMSC BOOSTER B1C1F1W1V1

INCIDC	CNDPOS	INCIDW	WNGPOS
15.000	1.000	3.000	2.000
15.000	1.000	3.000	2.000

REFERENCE INFORMATION	
SREF	1.3550 SQ.FT.
LREF	41.4360 INCHES
BREF	41.4360 INCHES
XMRP	31.1400 INCHES
YMRP	0.0000 INCHES
ZMRP	0.2250 INCHES
SCALE	1.5000 PERCENT

MACH 0.981

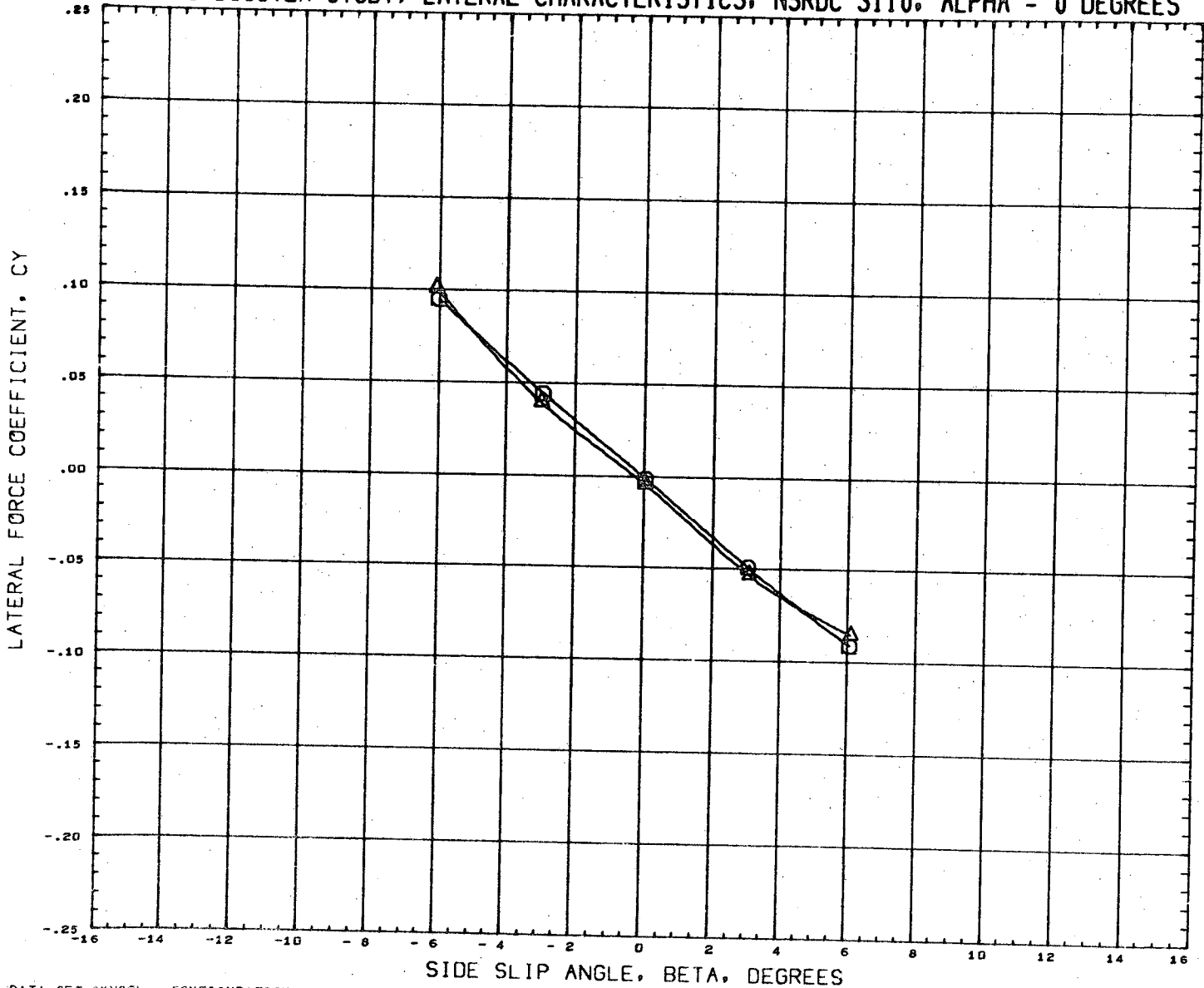
LMSC/MSFC BOOSTER STUDY, LATERAL CHARACTERISTICS, NSRDC 3110, ALPHA = 0 DEGREES



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2054)	NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1	15.000	1.000	3.000	2.000	SREF 1.3550 SQ. FT.
(RN2118)	NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1	15.000	1.000	3.000	2.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCENT

MACH 0.381

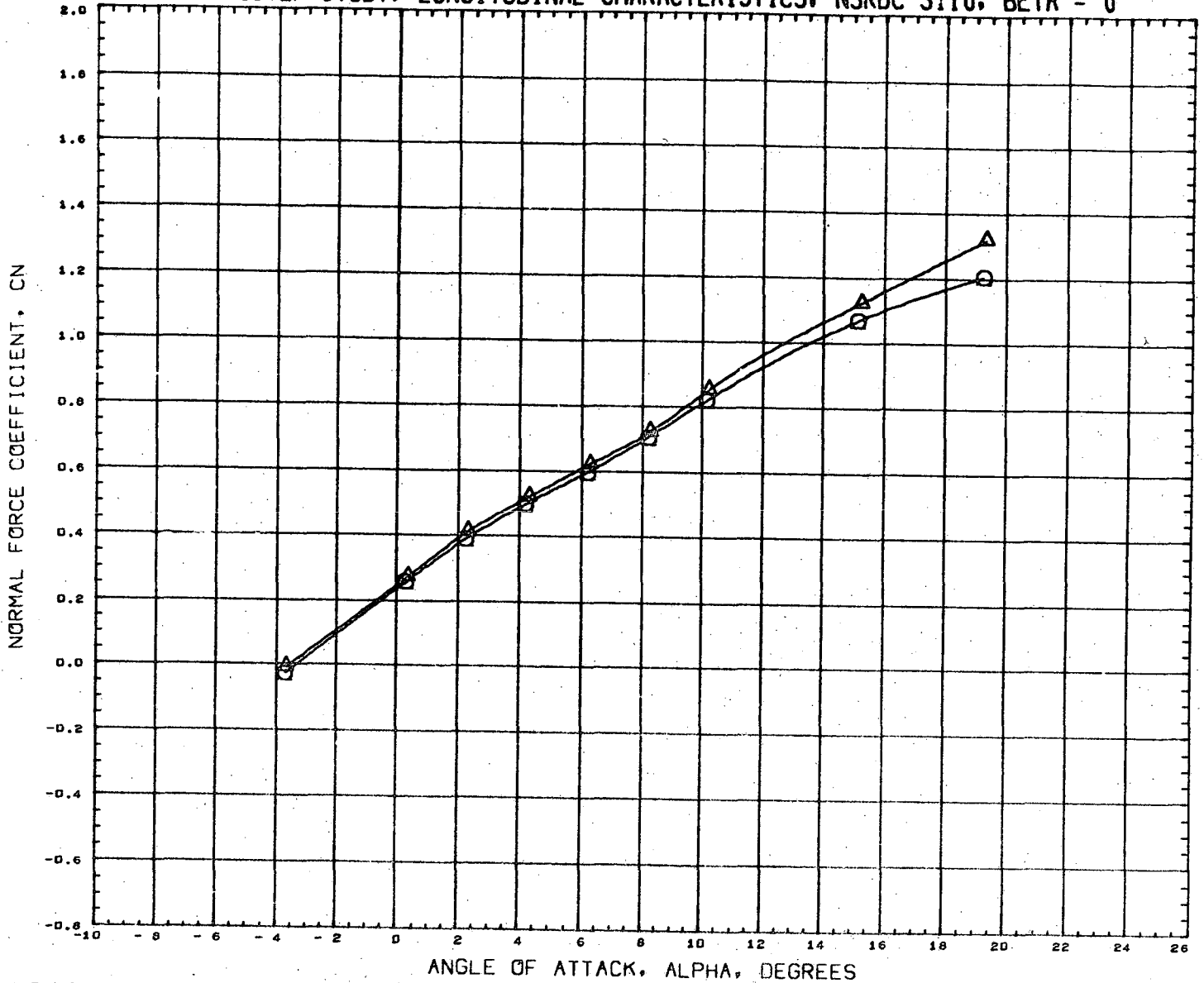
LMSC/MSFC BOOSTER STUDY, LATERAL CHARACTERISTICS, NSRDC 3110, ALPHA = 0 DEGREES



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2054)	NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1	15.000	1.000	3.000	2.000	SREF 1.3550 SQ.FT.
(RN2110)	NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1	15.000	1.000	3.000	2.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCNT

MACH 0.381

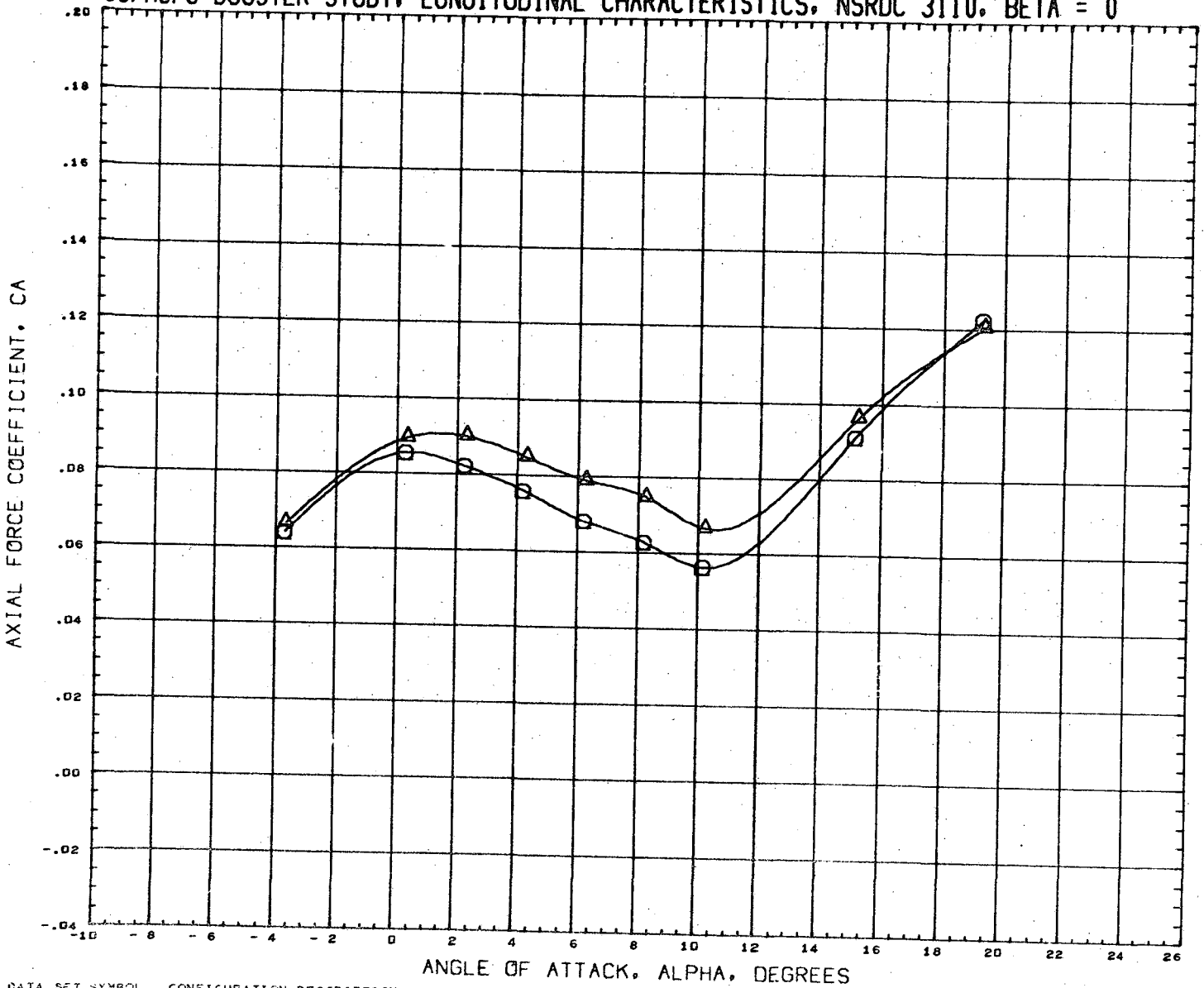
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2061)	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1	15.000	2.000	3.000	2.000	SREF 1.3550 SQ.FT.
(RN2125)	NSRDC-3110,MSFC/LMSC BOOSTER B1C1F1W1V1	15.000	2.000	3.000	2.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRF 31.1400 INCHES
						YMRF 0.0000 INCHES
						ZMRF 0.2250 INCHES
						SCALE 1.5000 PERCENT

MACH 0.385

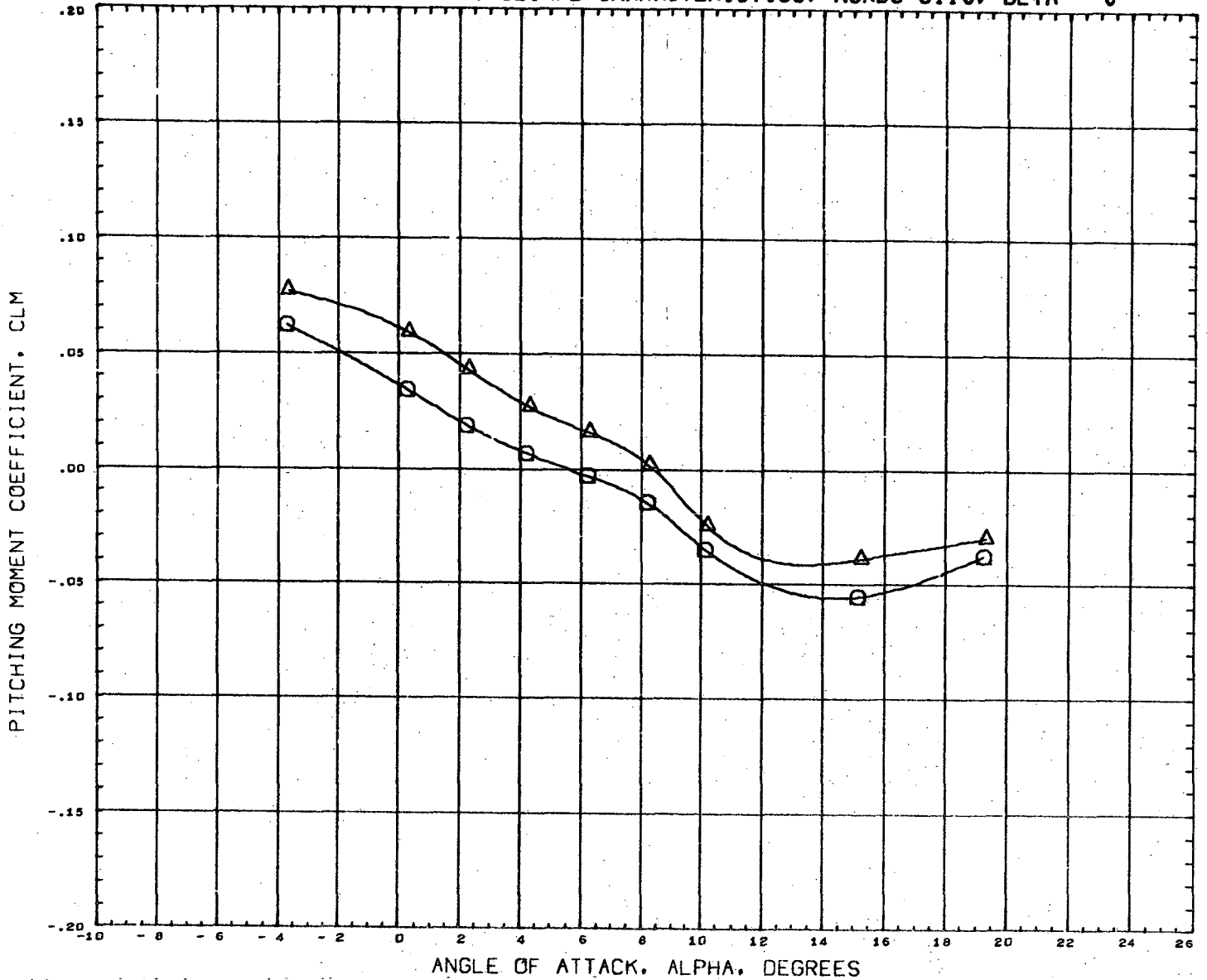
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN261)	NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1	15.000	2.000	3.000	2.000	SREF 1.3550 SQ. FT.
(RN2125)	NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1	15.000	2.000	3.000	2.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCENT

MACH 0.385

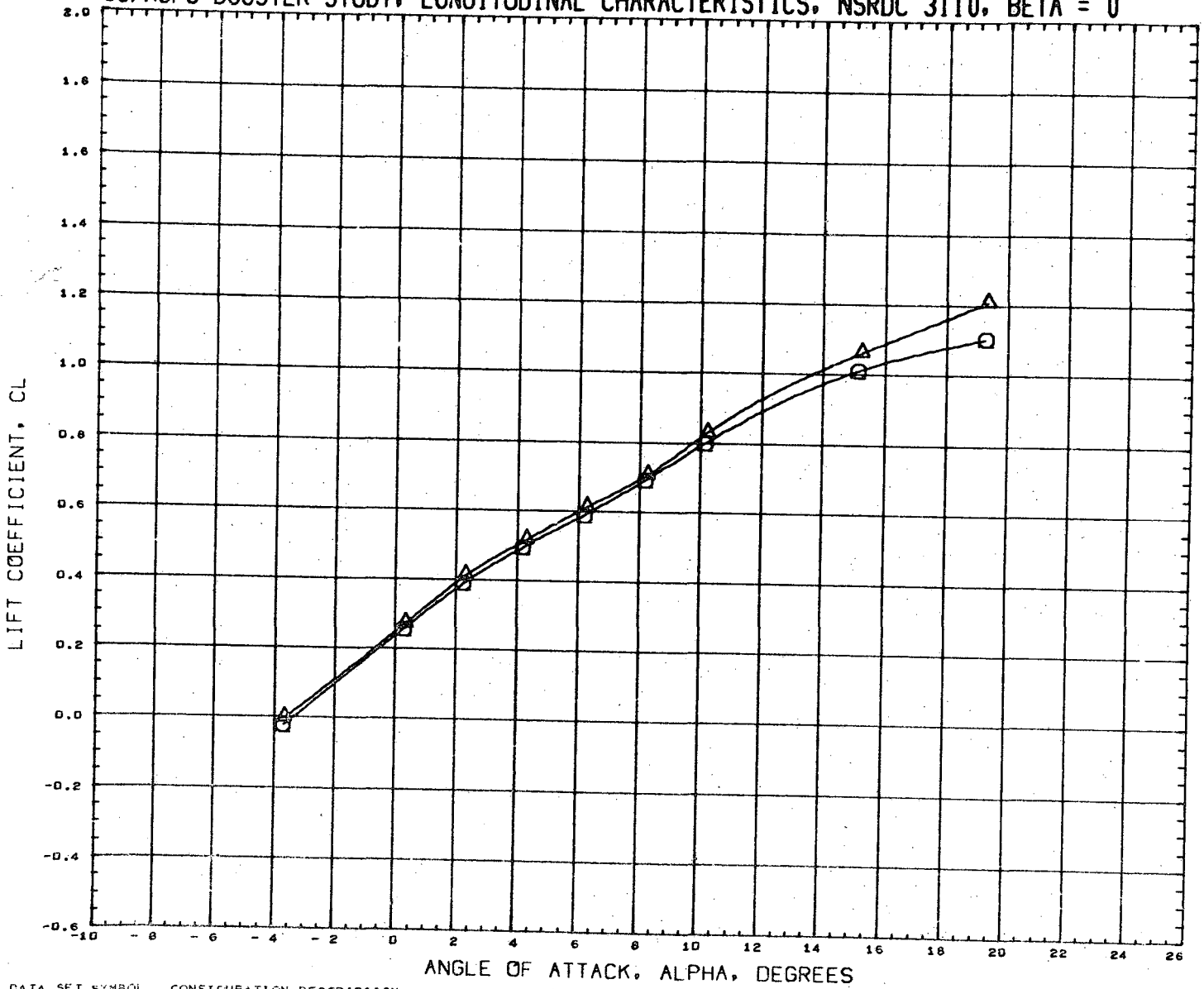
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3:10, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2061)	NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1	15.000	2.000	3.000	2.000	SREF 1.3550 SQ.FT.
(RN2125)	NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1	15.000	2.000	3.000	2.000	LREF 41.4360 INCHES BREF 41.4360 INCHES XMRP 31.1400 INCHES YMRP 0.0000 INCHES ZMRP 0.2250 INCHES SCALE 1.5000 PERCNT

MACH 0.385

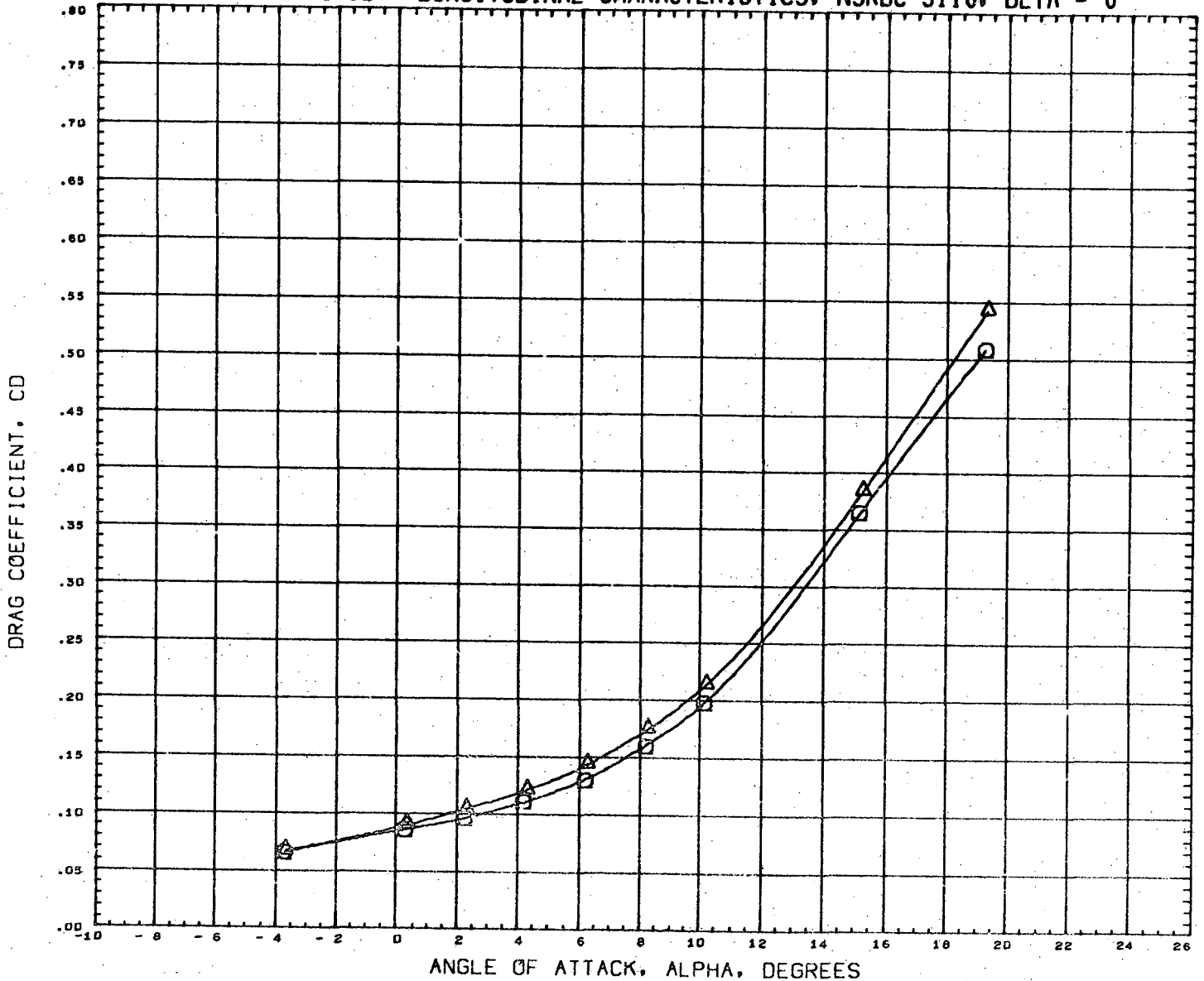
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION	
(RN2051)	NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1	15.000	2.000	3.000	2.000	SREF	1.3550 SQ. FT.
(RN2125)	NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1	15.000	2.000	3.000	2.000	LREF	41.4360 INCHES
						BREF	41.4360 INCHES
						XMRP	31.1400 INCHES
						YMRP	0.0000 INCHES
						ZMRP	0.2250 INCHES
						SCALE	1.5000 PERCENT

MACH 0.385

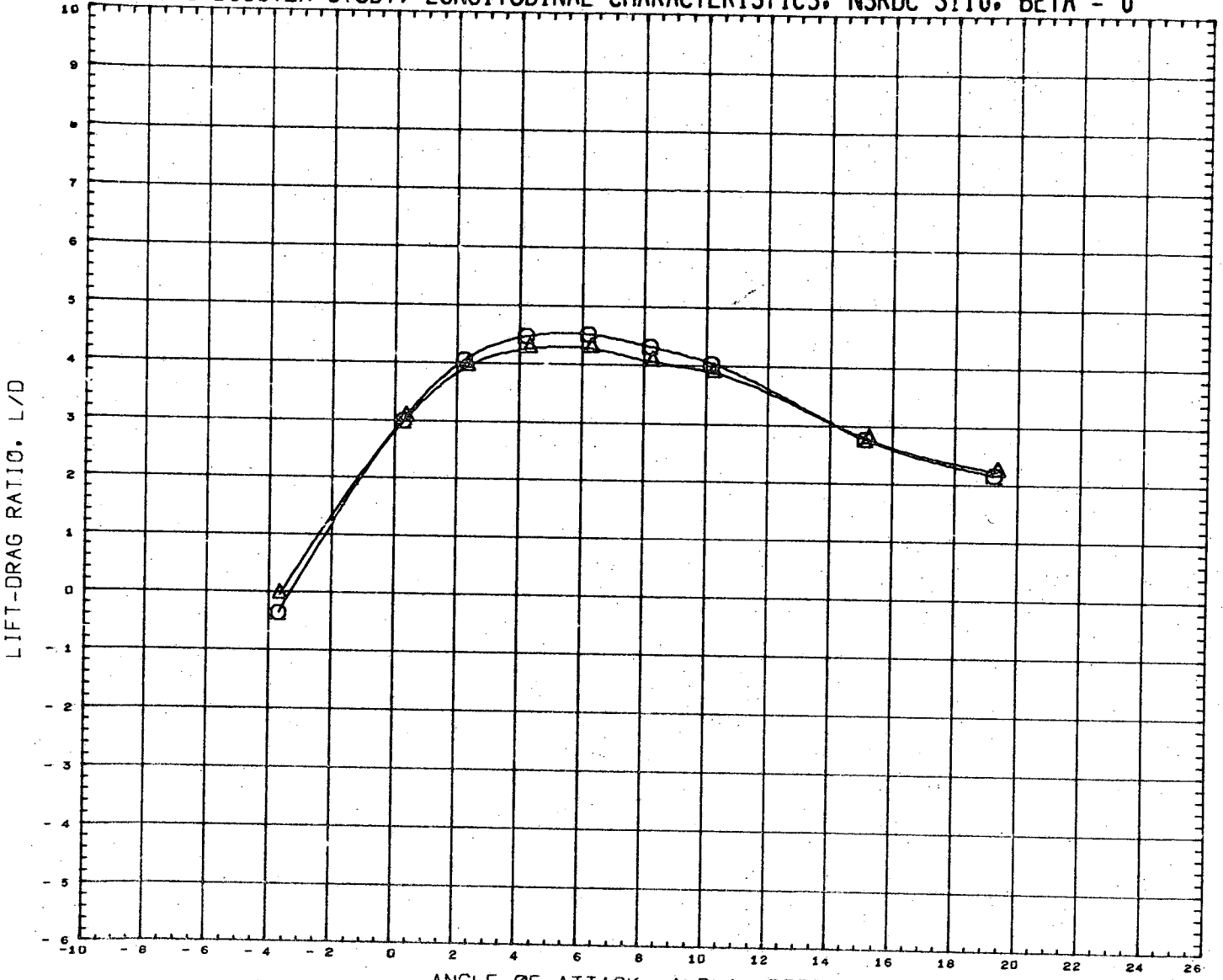
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2061)	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1	15.000	2.000	3.000	2.000	SREF 1.3550 SQ.FT. LREF 41.4360 INCHES
(RN2125)	NSRDC-3110,MSFC/LMSC BOOSTER B1C1F1W1V1	15.000	2.000	3.000	2.000	BREF 41.4360 INCHES XMRP 31.1400 INCHES YMRP 0.0000 INCHES ZMRP 0.2250 INCHES SCALE 1.5000 PERCENT

MACH 0.385

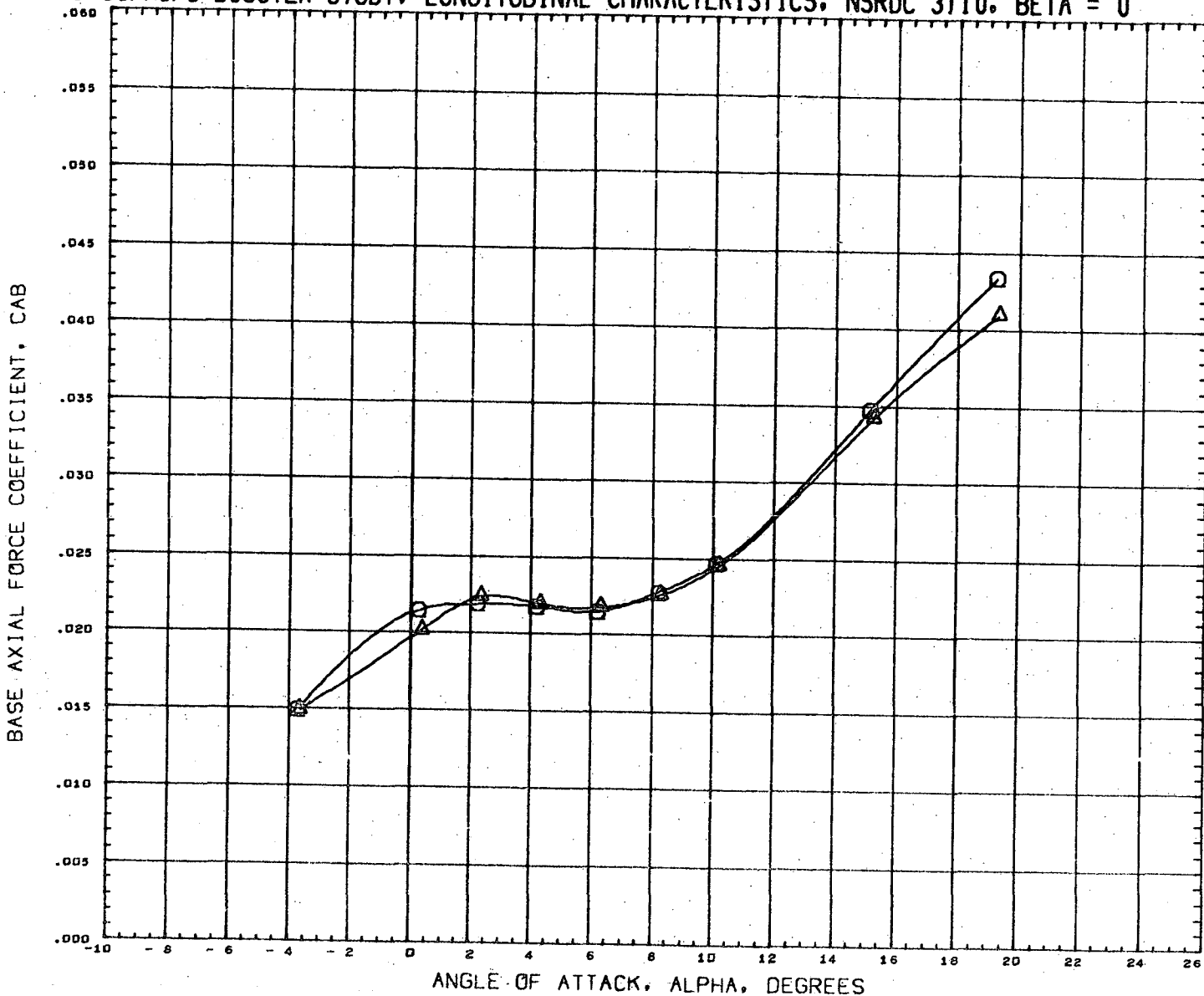
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CHDPOS	INCIDW	WNGFOS	REFERENCE INFORMATION	
(RN2051)	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1	15.000	2.000	3.000	2.000	SREF	1.3550 SQ. FT.
(RN2125)	NSRDC-3110,MSFC/LMSC BOOSTER B1C1F1W1V1	15.000	2.000	3.000	2.000	LREF	41.4360 INCHES
						BREF	41.4360 INCHES
						XMRP	31.1400 INCHES
						YMRP	0.0000 INCHES
						ZMRP	0.2250 INCHES
						SCALE	1.5000 PERCNT

MACH 0.385

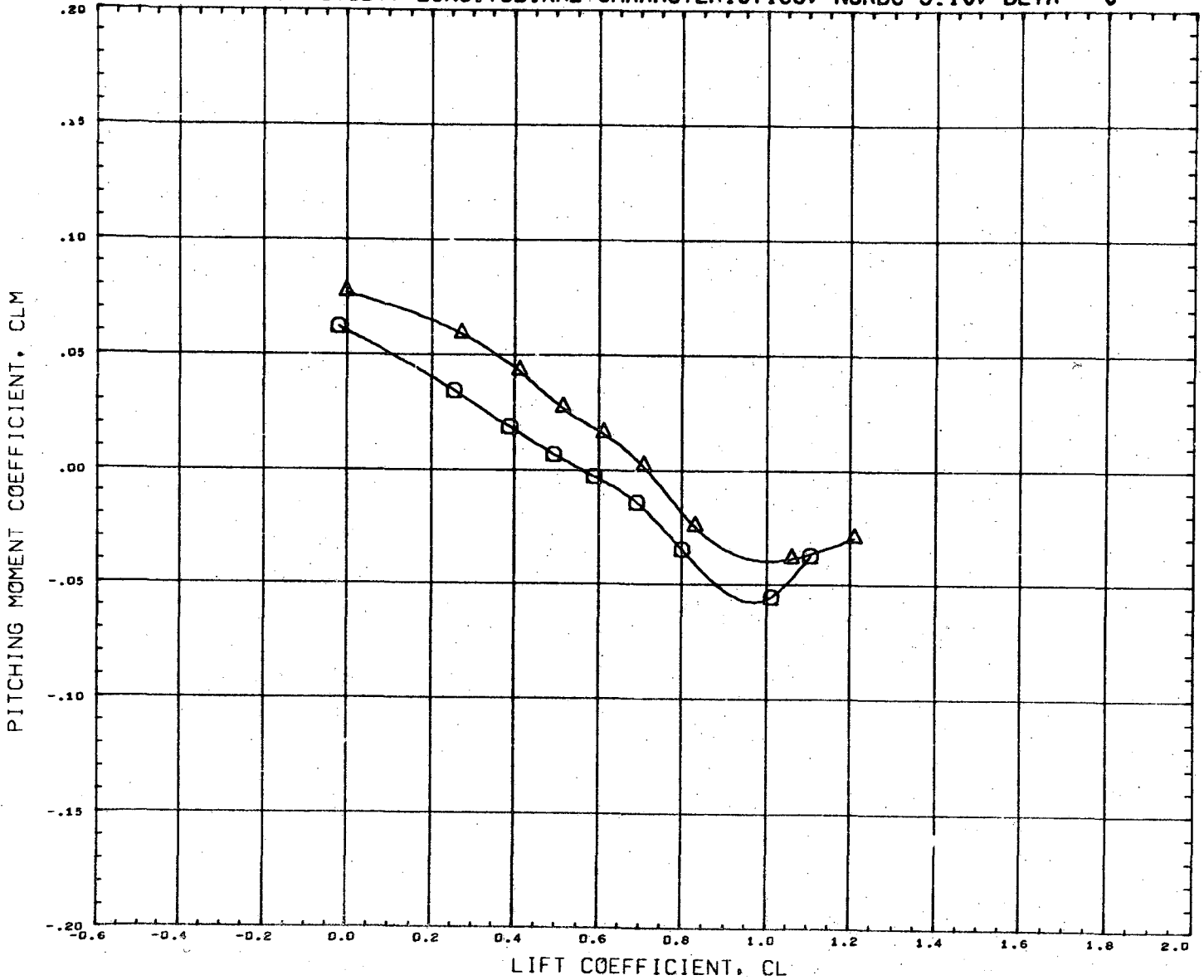
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2061)	NSRDC-3110, MSFC/LMSC BOOSTER B1C2F1W1V1	15.000	2.000	3.000	2.000	SREF 1.3550 SQ. FT.
(RN2125)	NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1	15.000	2.000	3.000	2.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCENT

MACH 0.385

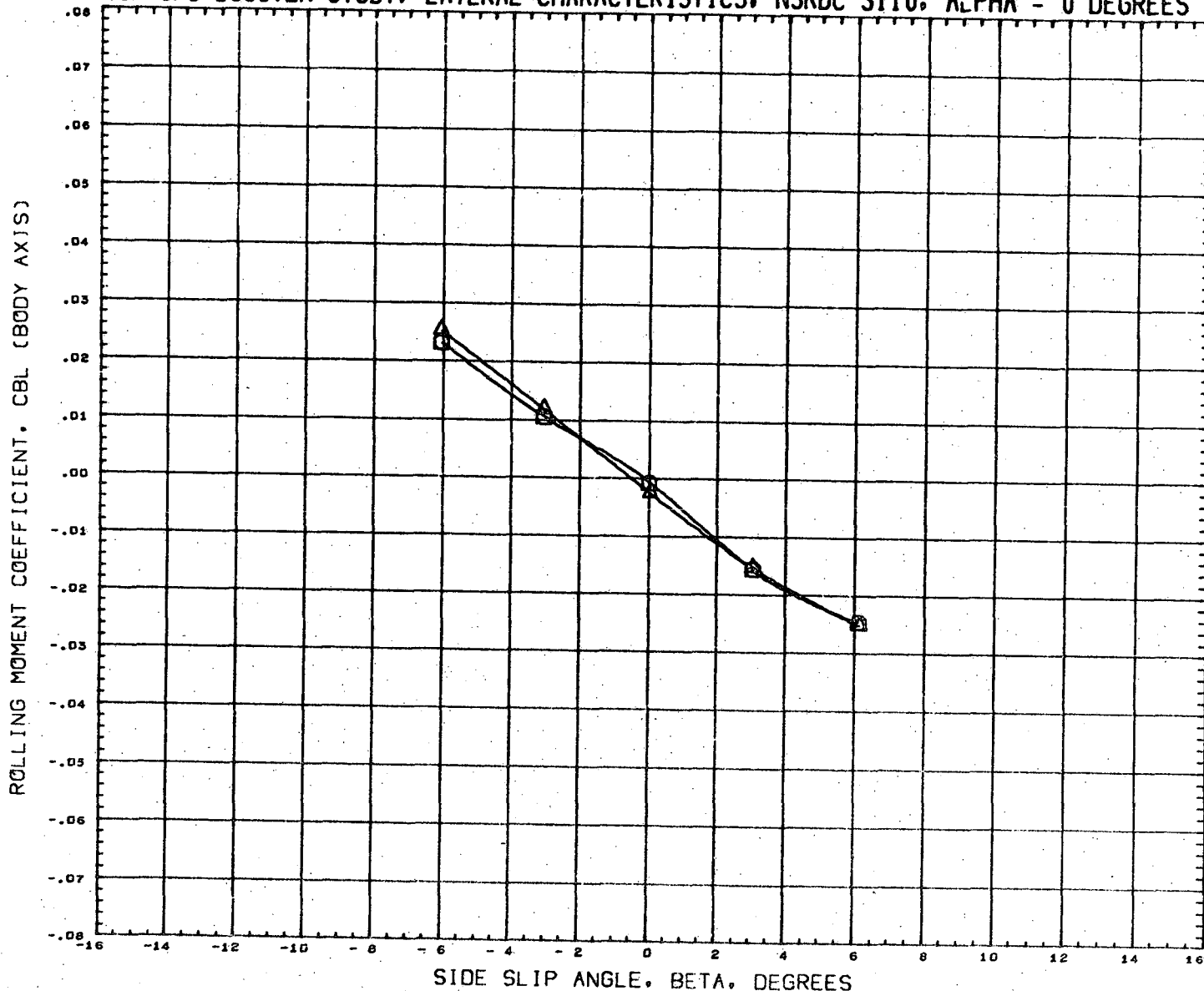
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2061)	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1	15.000	2.000	3.000	2.000	SREF 1.3550 SQ.FT.
(RN2125)	NSRDC-3110,MSFC/LMSC BOOSTER B1C1F1W1V1	15.000	2.000	3.000	2.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCENT

MACH 0.385

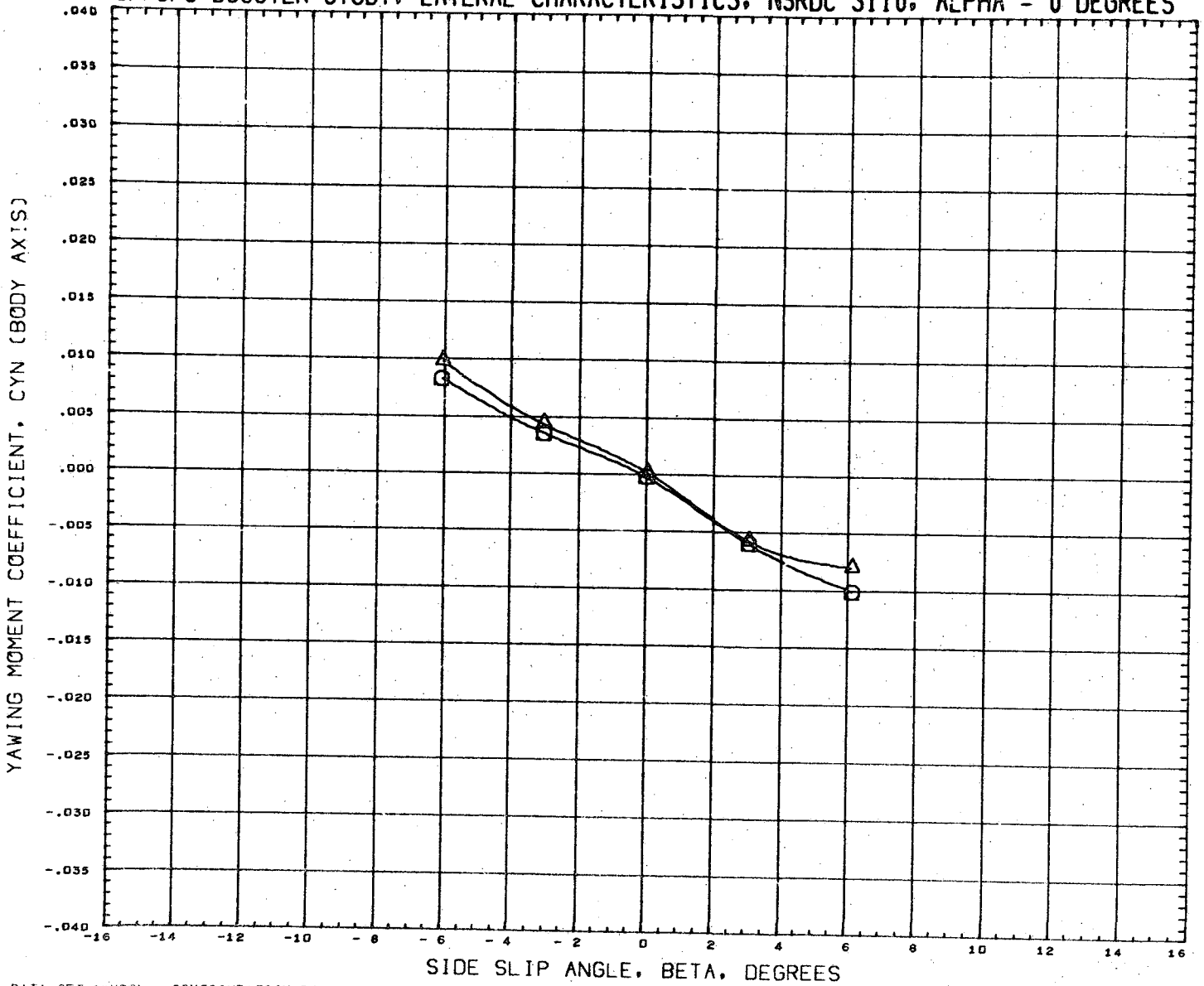
LMSC/MSFC BOOSTER STUDY, LATERAL CHARACTERISTICS, NSRDC 3110, ALPHA = 0 DEGREES



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2062)	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1	15.000	2.000	3.000	2.000	SREF 1.3550 SQ.FT.
(RN2126)	NSRDC-3110,MSFC/LMSC BOOSTER B1C1F1W1V1	15.000	2.000	3.000	2.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCNT

MACH 0.381

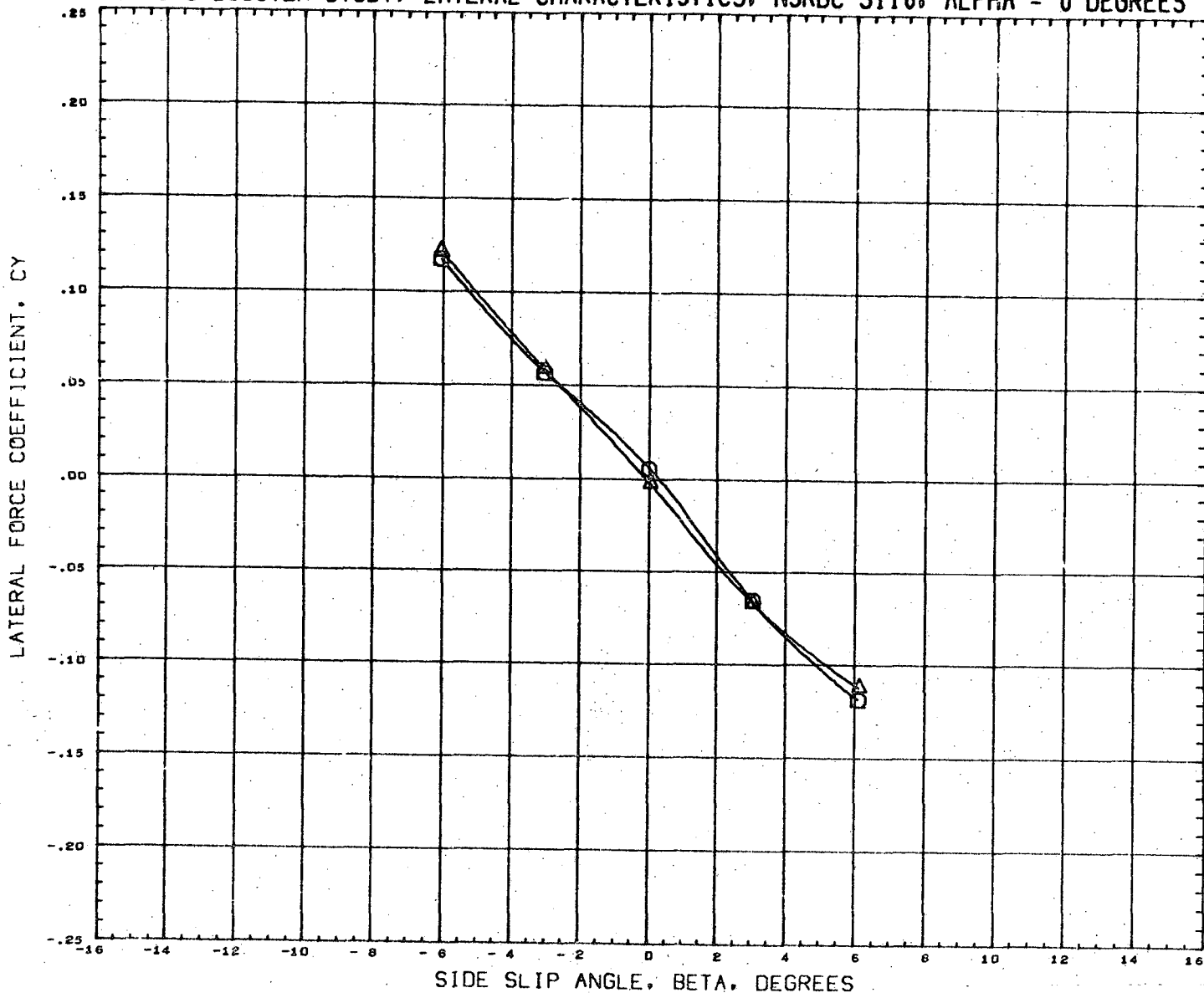
LMSC/MSFC BOOSTER STUDY, LATERAL CHARACTERISTICS, NSRDC 3110, ALPHA = 0 DEGREES



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION	
(RN1062)	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1	15.000	2.000	3.000	2.000	SREF	1.3550 SQ.FT.
(RN2126)	NSRDC-3110,MSFC/LMSC BOOSTER B1C1F1W1V1	15.000	2.000	3.000	2.000	LREF	41.4360 INCHES
						BREF	41.4360 INCHES
						XMRP	31.1400 INCHES
						YMRP	0.0000 INCHES
						ZMRP	0.2250 INCHES
						SCALE	1.5000 PERCNT

HACH 0.381

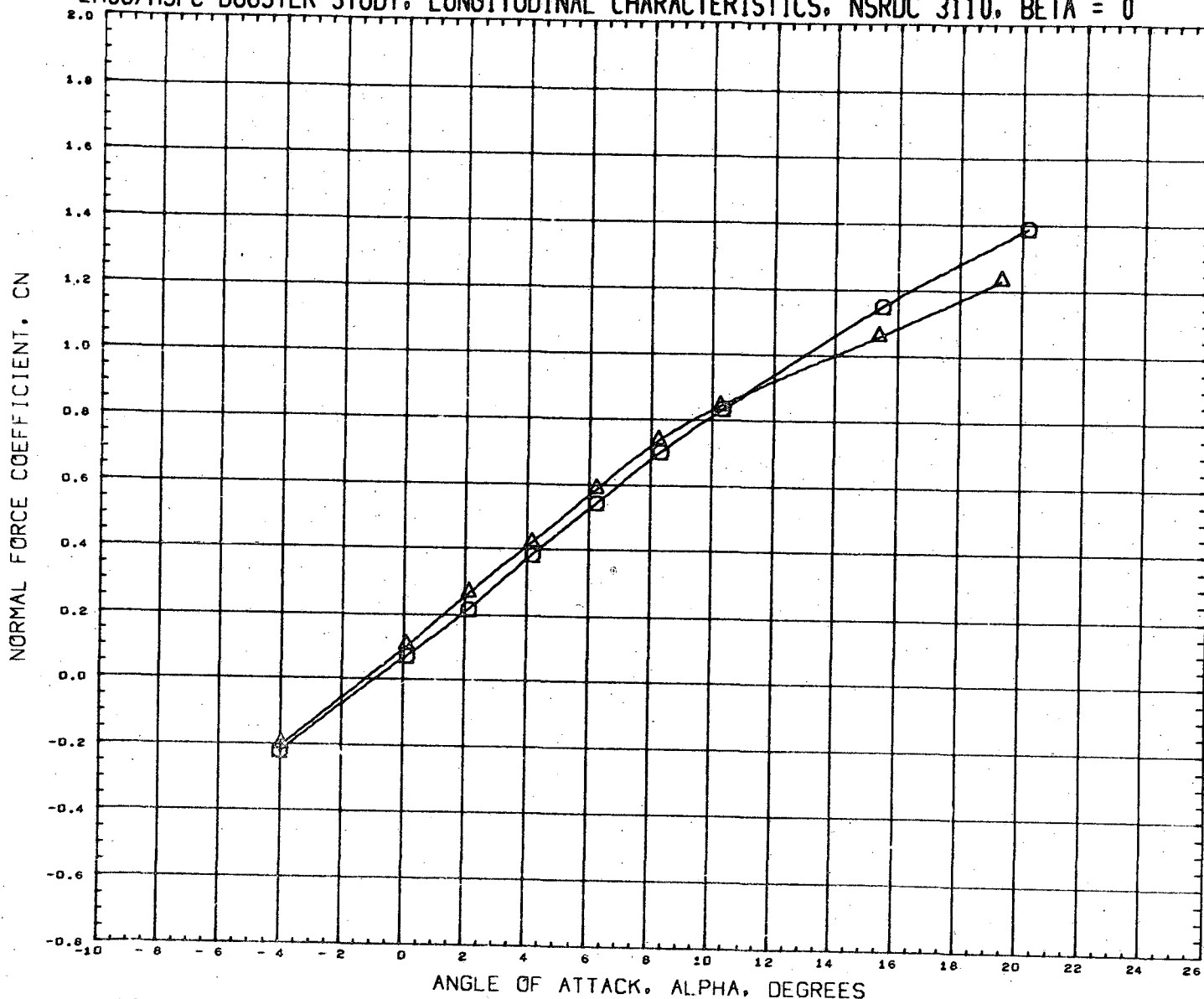
LMSC/MSFC BOOSTER STUDY, LATERAL CHARACTERISTICS, NSRDC 3110, ALPHA = 0 DEGREES



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2062)	NSRDC-3110,MSFC/LMSC BOOSTER B1C2F1W1V1	15.000	2.000	3.000	2.000	SREF 1.3550 SQ.FT.
(RN2126)	NSRDC-3110,MSFC/LMSC BOOSTER B1C1F1W1V1	15.000	2.000	3.000	2.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCNT

MACH 0.381

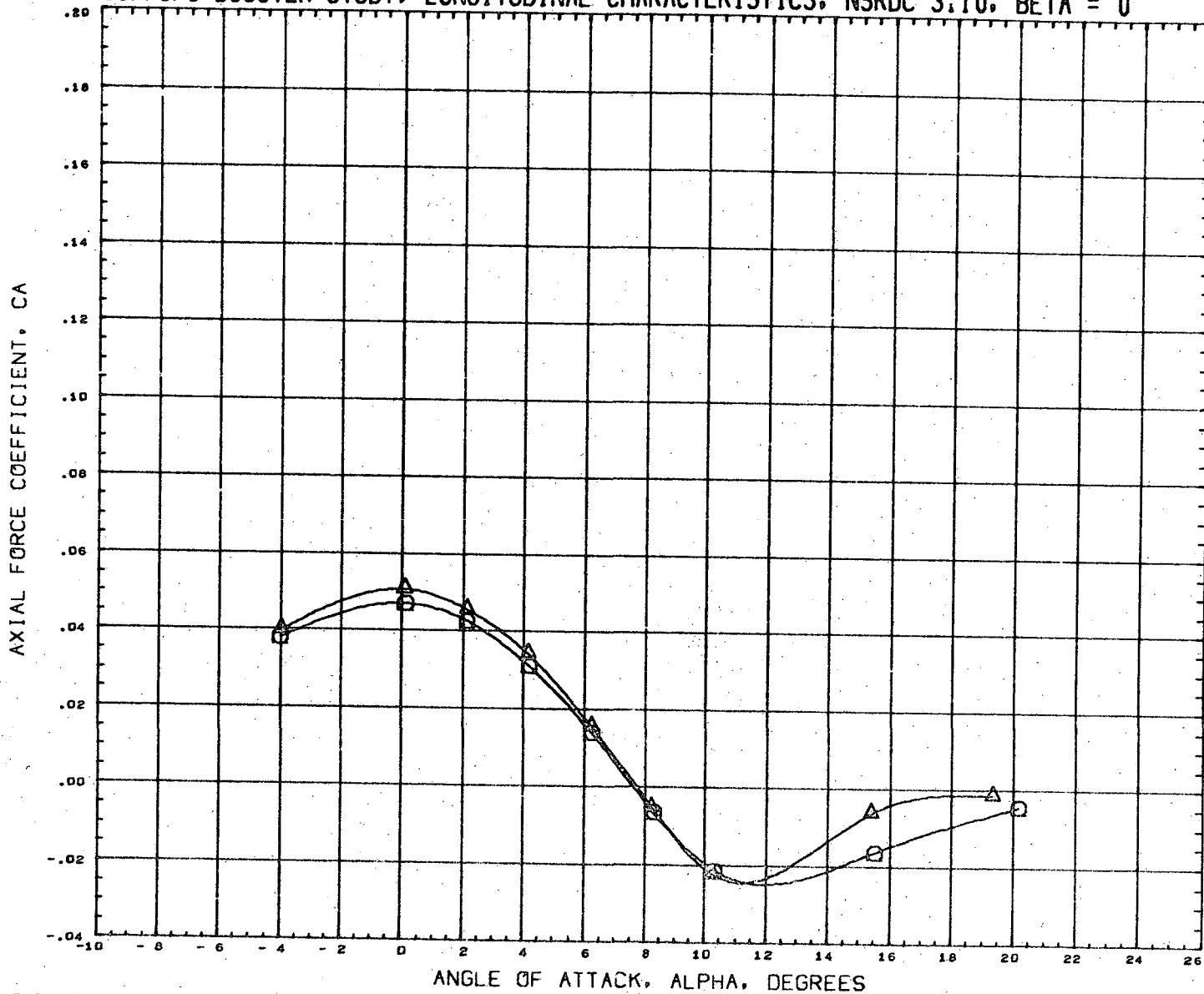
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2065)	NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1	5.000	1.000	0.000	1.000	SREF 1.3550 SQ. FT.
(RN2073)	NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1	3.000	2.000	0.000	1.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCENT

MACH 0.381

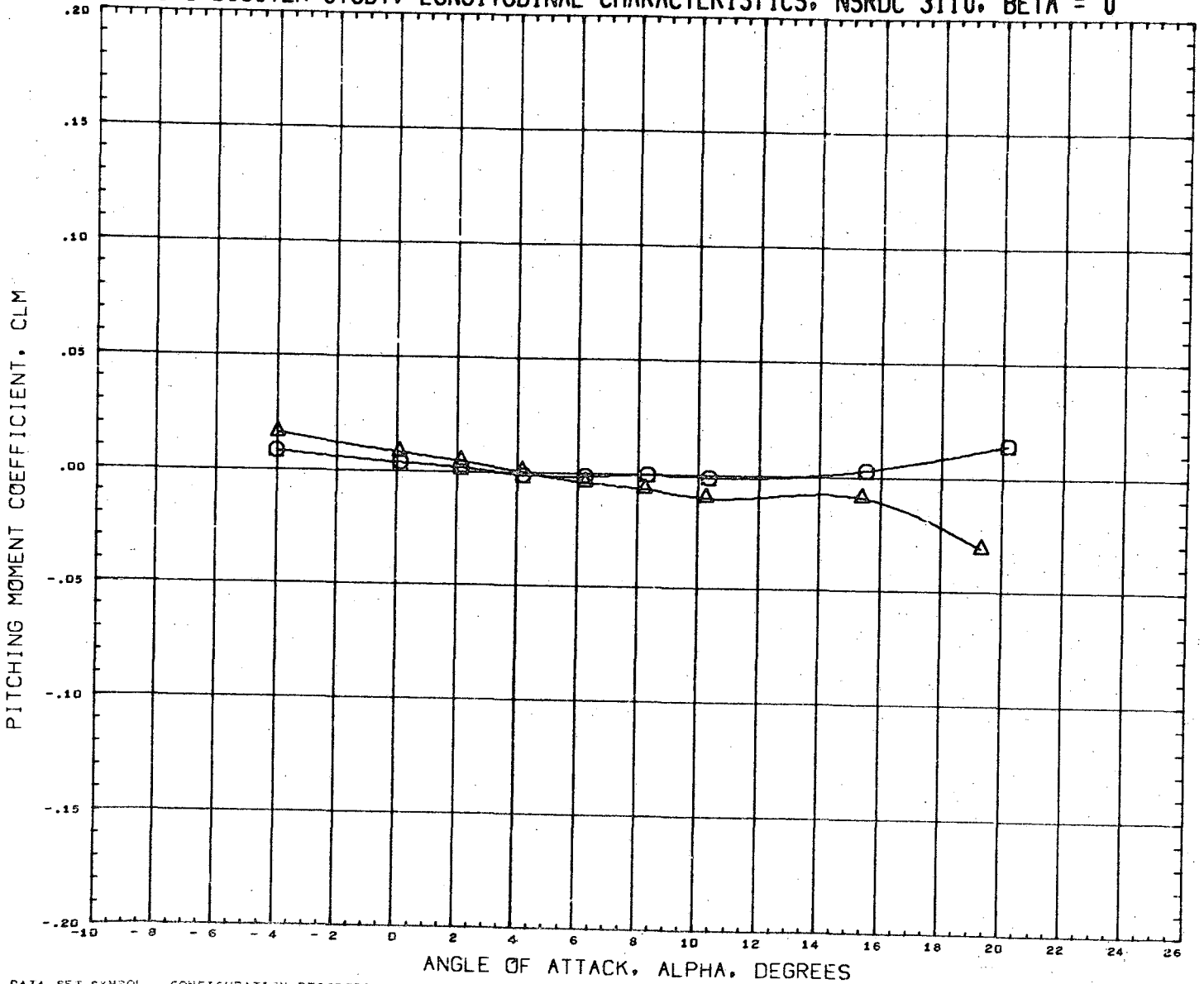
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3:10, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2065)	NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1	3.000	1.000	0.000	1.000	SREF 1.3550 SQ. FT.
(RN2073)	NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1	3.000	2.000	0.000	1.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCENT

MACH 0.381

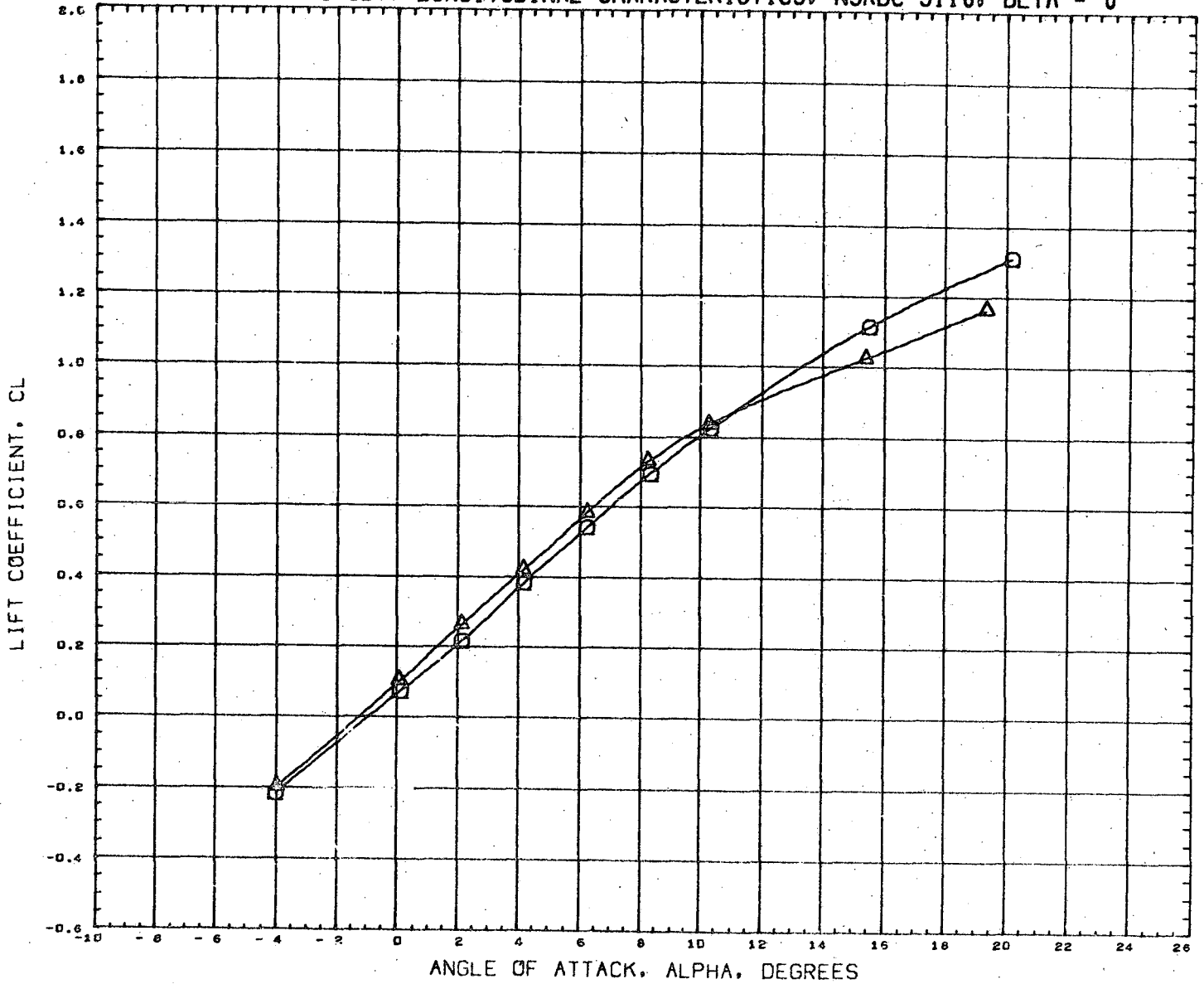
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2065)	NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1	3.000	1.000	0.000	1.000	SREF 1.3550 SQ. FT.
(RN2073)	NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1	3.000	2.000	0.000	1.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCENT

MACH 0.381

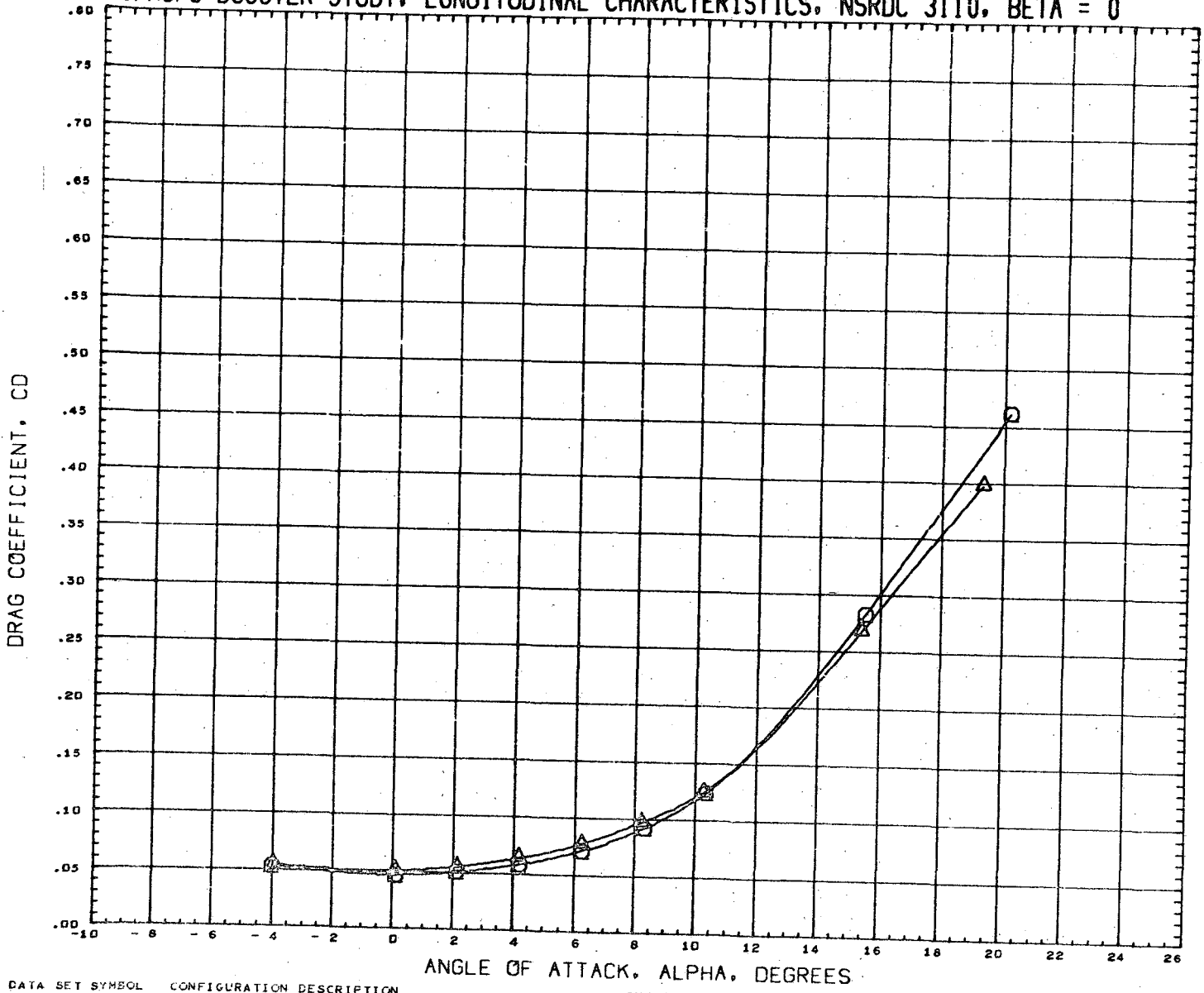
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2065)	NSRDC-3110,MSFC/LMSC BOOSTER B1C1F1W1V1	3.000	1.000	0.000	1.000	SREF 1.3550 SQ.FT.
(RN2073)	NSRDC-3110,MSFC/LMSC BOOSTER B1C1F1W1V1	3.000	2.000	0.000	1.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRF 31.1400 INCHES
						YMRF 0.0000 INCHES
						ZMRF 0.2250 INCHES
						SCALE 1.5000 PERCENT

MACH 0.381

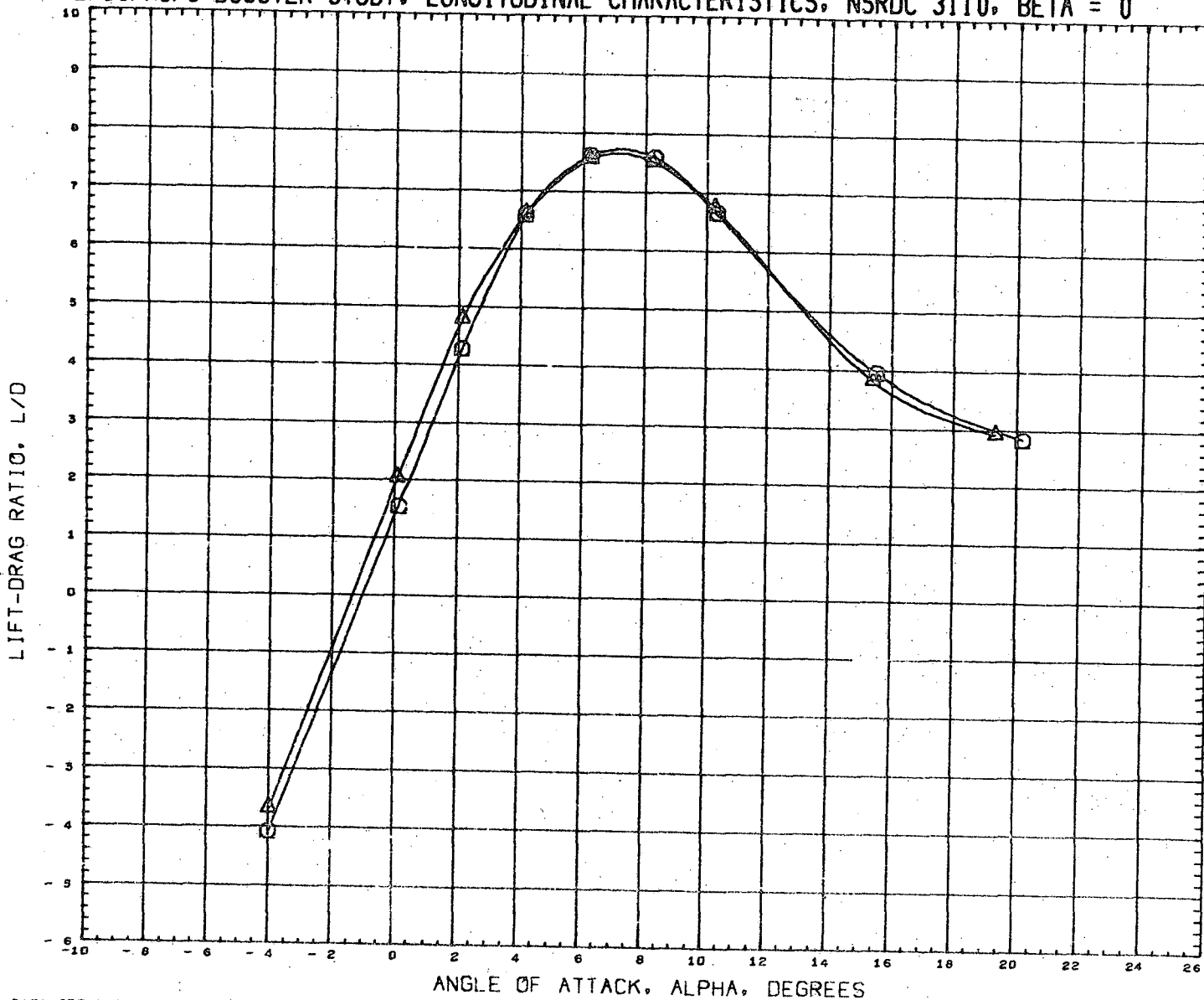
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGFOS	REFERENCE INFORMATION
(RN2065)	NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1	3.000	1.000	0.000	1.000	SREF 1.3550 SQ. FT.
(RN2073)	NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1	3.000	2.000	0.000	1.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCENT

MACH 0.381

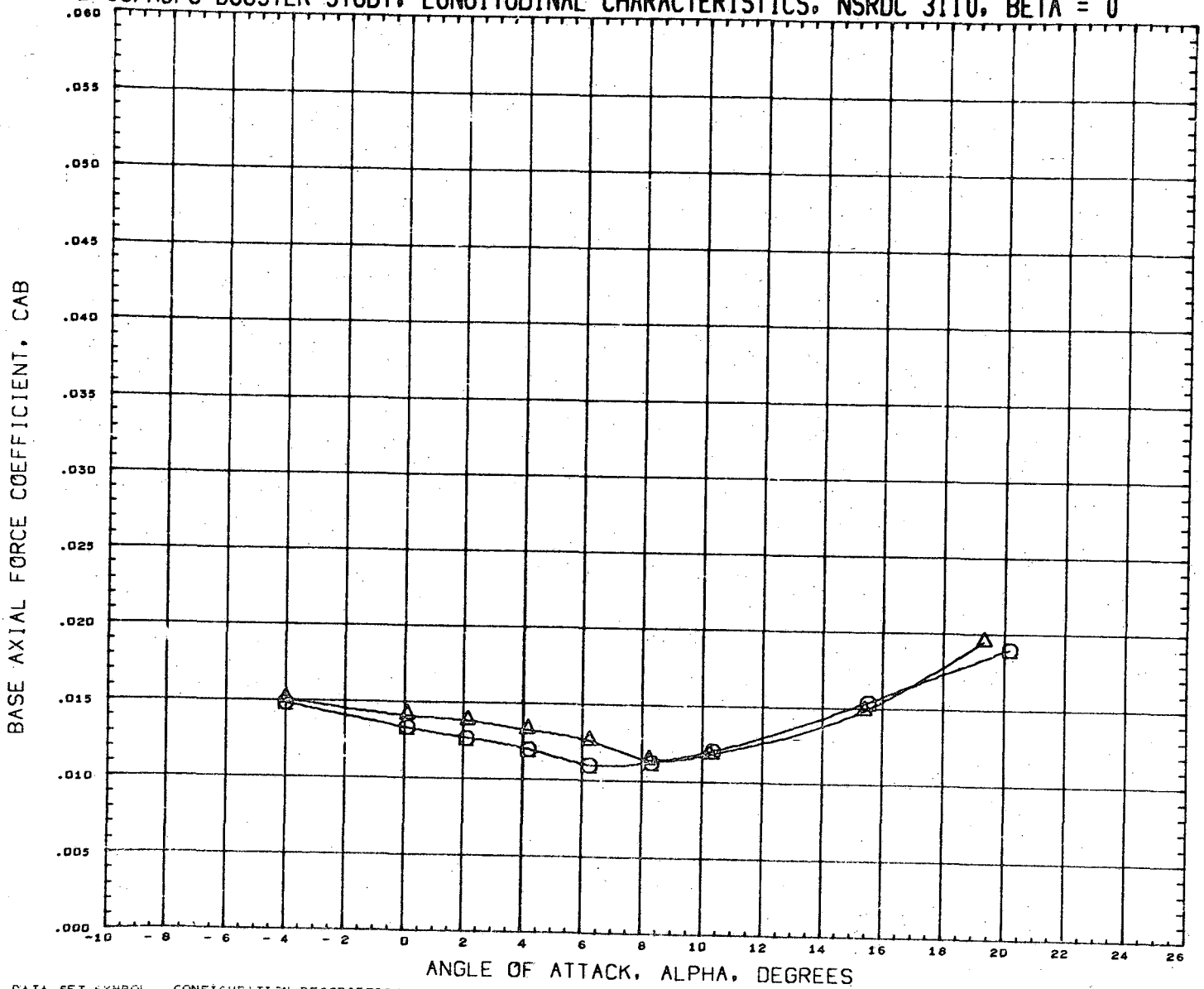
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2065)	NSRDC-3110,MSFC/LMSC BOOSTER B1C1F1W1V1	3.000	1.000	0.000	1.000	SREF 1.3550 SQ.FT.
(RN2073)	NSRDC-3110,MSFC/LMSC BOOSTER B1C1F1W1V1	3.000	2.000	0.000	1.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCENT

MACH 0.381

LMSC/MSFC BOOSTER STUDY. LONGITUDINAL CHARACTERISTICS. NSRDC 3110. BETA = 0

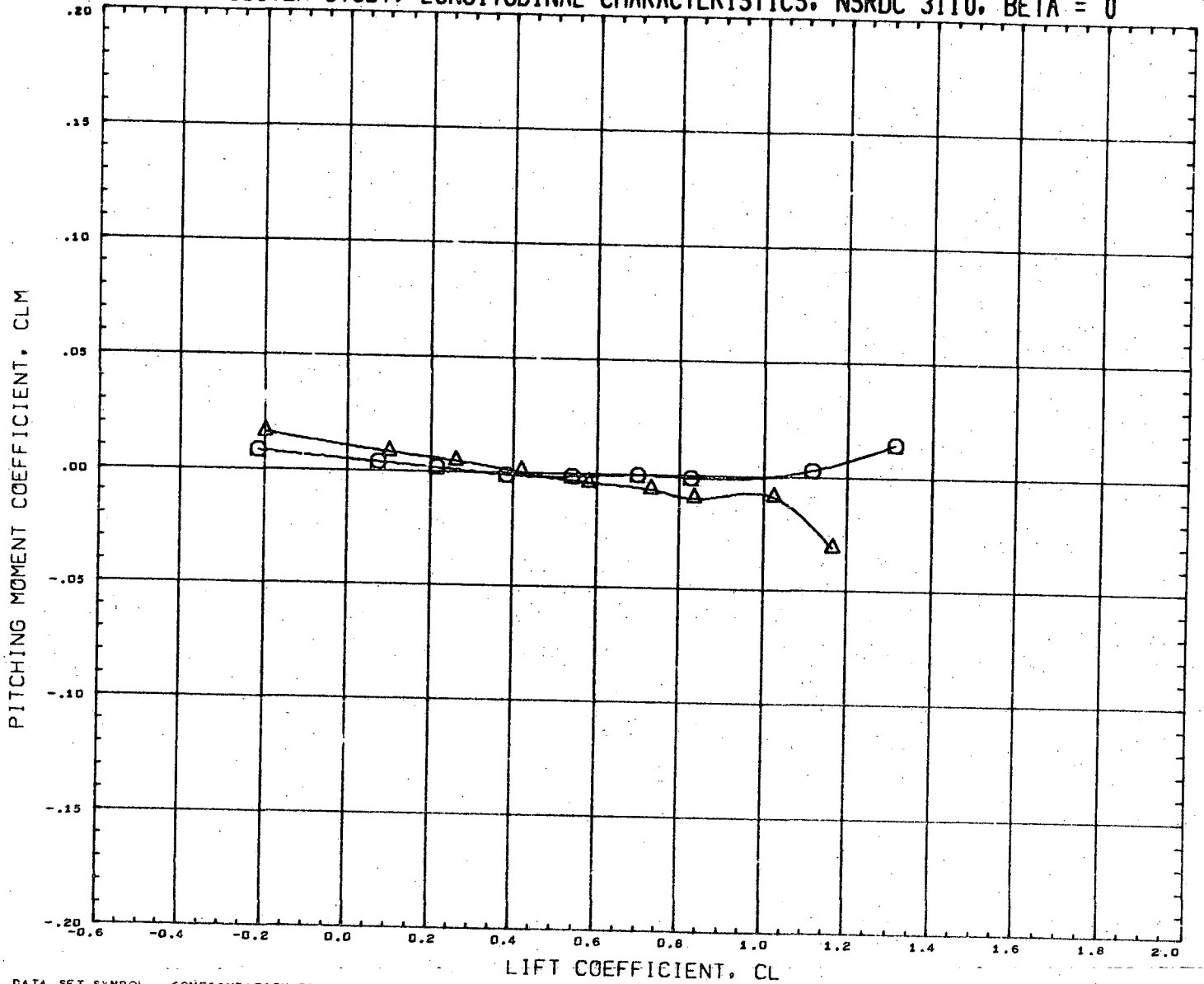


DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(RN2965) ○	NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1
(RN2973) △	NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1

INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
3.000	1.000	0.000	1.000	SREF 1.3550 SQ.FT.
3.000	2.000	0.000	1.000	LREF 41.4360 INCHES
				BREF 41.4360 INCHES
				XMRP 31.1400 INCHES
				YMRP 0.0000 INCHES
				ZMRP 0.2250 INCHES
				SCALE 1.5000 PERCENT

MACH 0.381

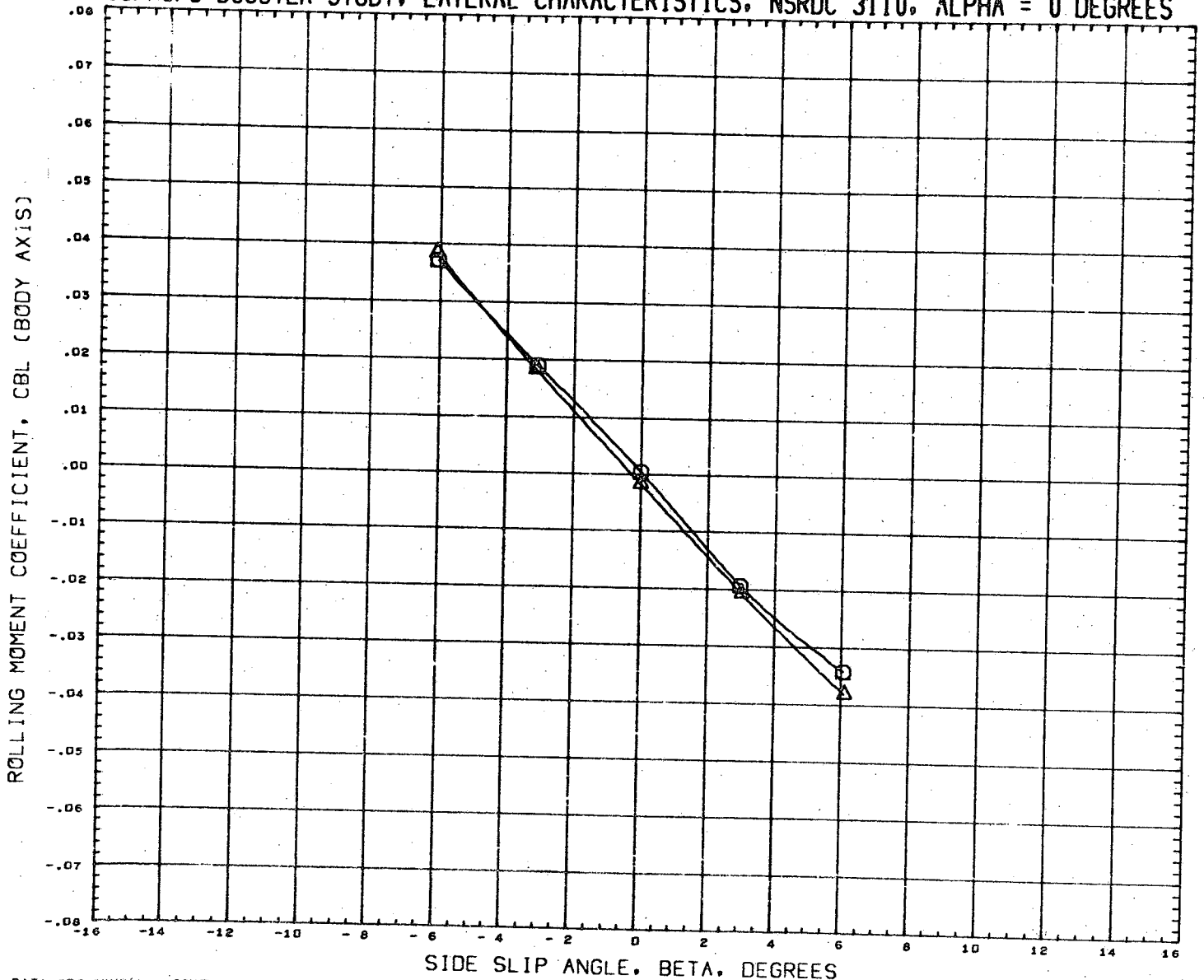
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2065)	NSRDC-3110,MSFC/LMSC BOOSTER B1C1F1W1V1	3.000	1.000	0.000	1.000	SREF 1.3550 SQ.FT.
(RN2073)	NSRDC-3110,MSFC/LMSC BOOSTER B1C1F1W1V1	3.000	2.000	0.000	1.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCENT

MACH 0.381

LMSC/MSFC BOOSTER STUDY, LATERAL CHARACTERISTICS, NSRDC 3110, ALPHA = 0 DEGREES



DATA SET SYMBOL
(RN2066) □
(RN2074) △

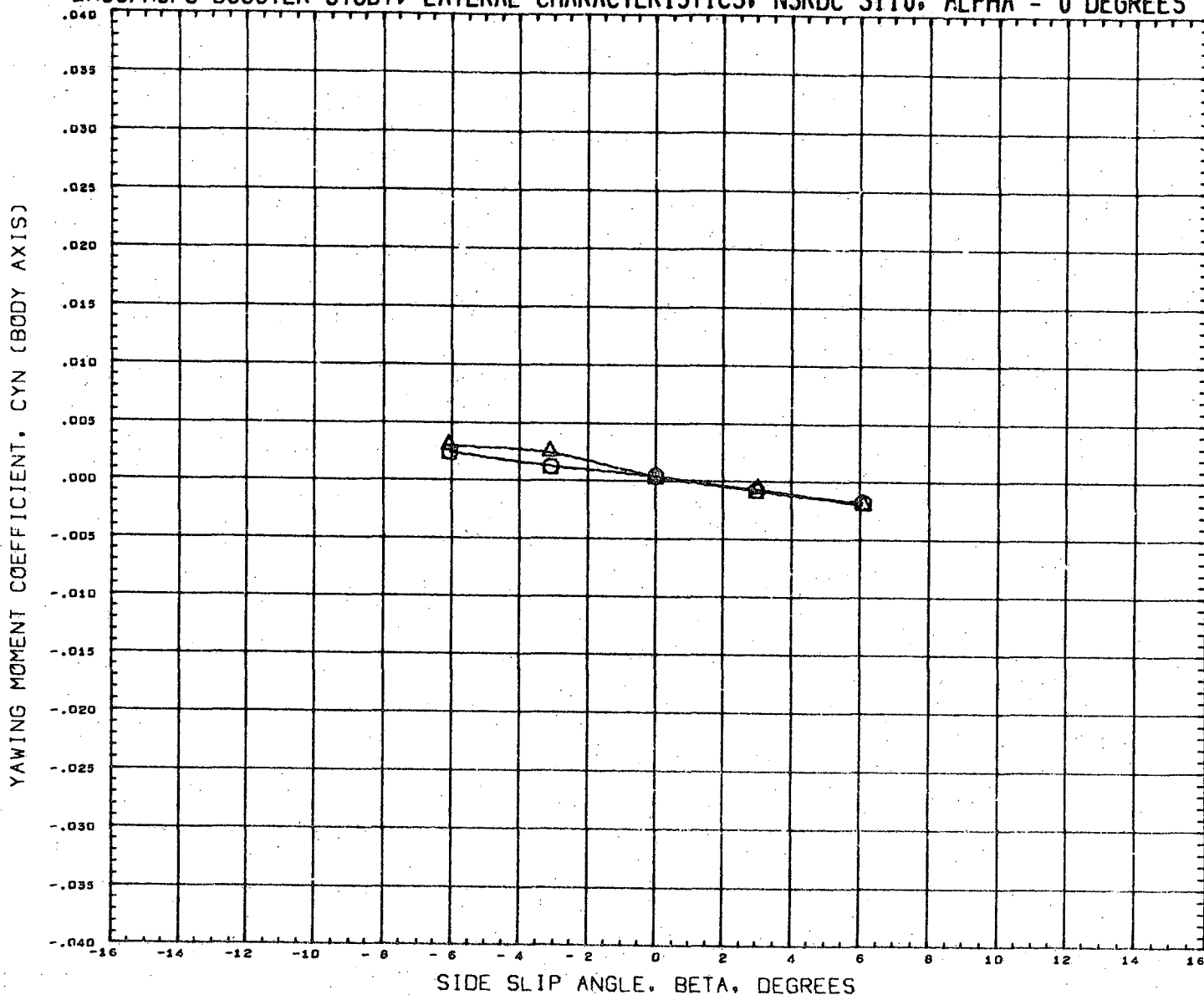
CONFIGURATION DESCRIPTION
NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1
NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1

INCIDC	CNDPOS	INCIDW	WNGPOS
3.000	1.000	0.000	1.000
3.000	2.000	0.000	1.000

REFERENCE INFORMATION
SREF 1.3550 SQ. FT.
LREF 41.4360 INCHES
BREF 41.4360 INCHES
XMRP 31.1400 INCHES
YMRP 0.0000 INCHES
ZMRP 0.2250 INCHES
SCALE 1.5000 PERCENT

MACH 0.381

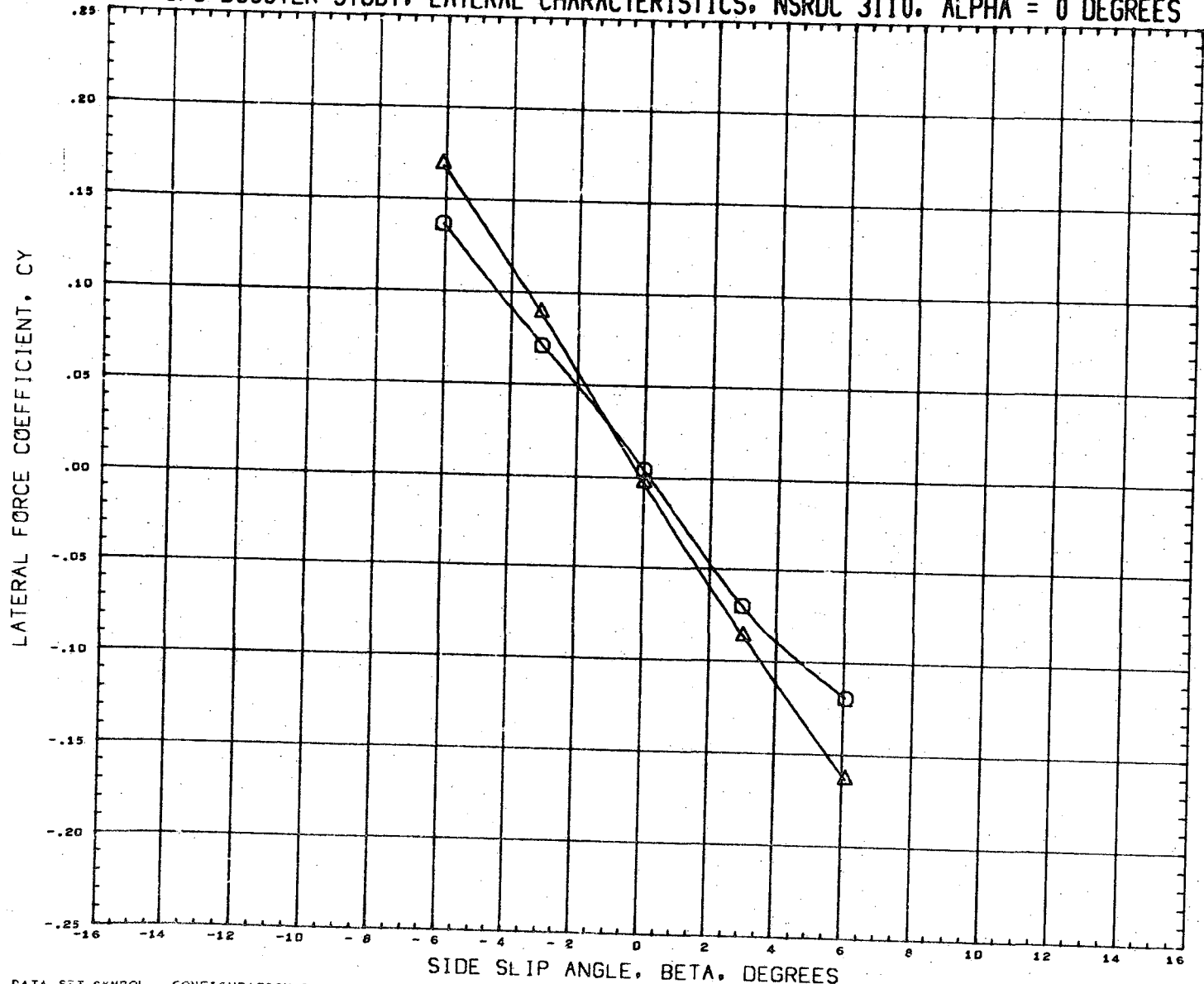
LMSC/MSFC BOOSTER STUDY, LATERAL CHARACTERISTICS, NSRDC 3110, ALPHA = 0 DEGREES



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2066)	NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1	3.000	1.000	0.000	1.000	SREF 1.3550 SQ. FT.
(RN2074)	NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1	3.000	2.000	0.000	1.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCENT

MACH 0.381

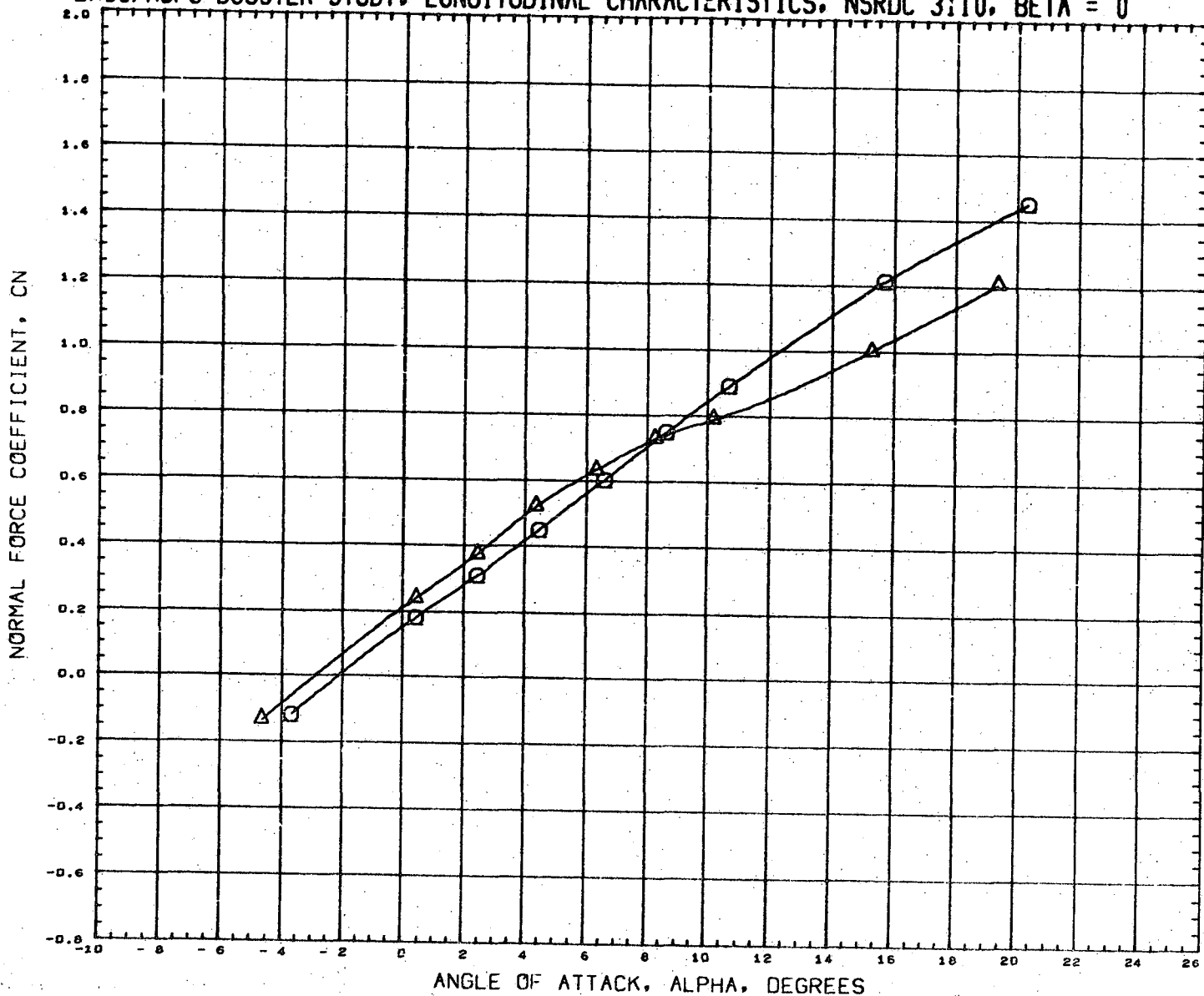
LMSC/MSFC BOOSTER STUDY, LATERAL CHARACTERISTICS, NSRDC 3110, ALPHA = 0 DEGREES



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2066)	NSRDC-3110,MSFC/LMSC BOOSTER B1C1F1W1V1	3.000	1.000	0.000	1.000	SREF 1.3550 SQ.FT.
(RN2074)	NSRDC-3110,MSFC/LMSC BOOSTER B1C1F1W1V1	3.000	2.000	0.000	1.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCENT

MACH 0.381

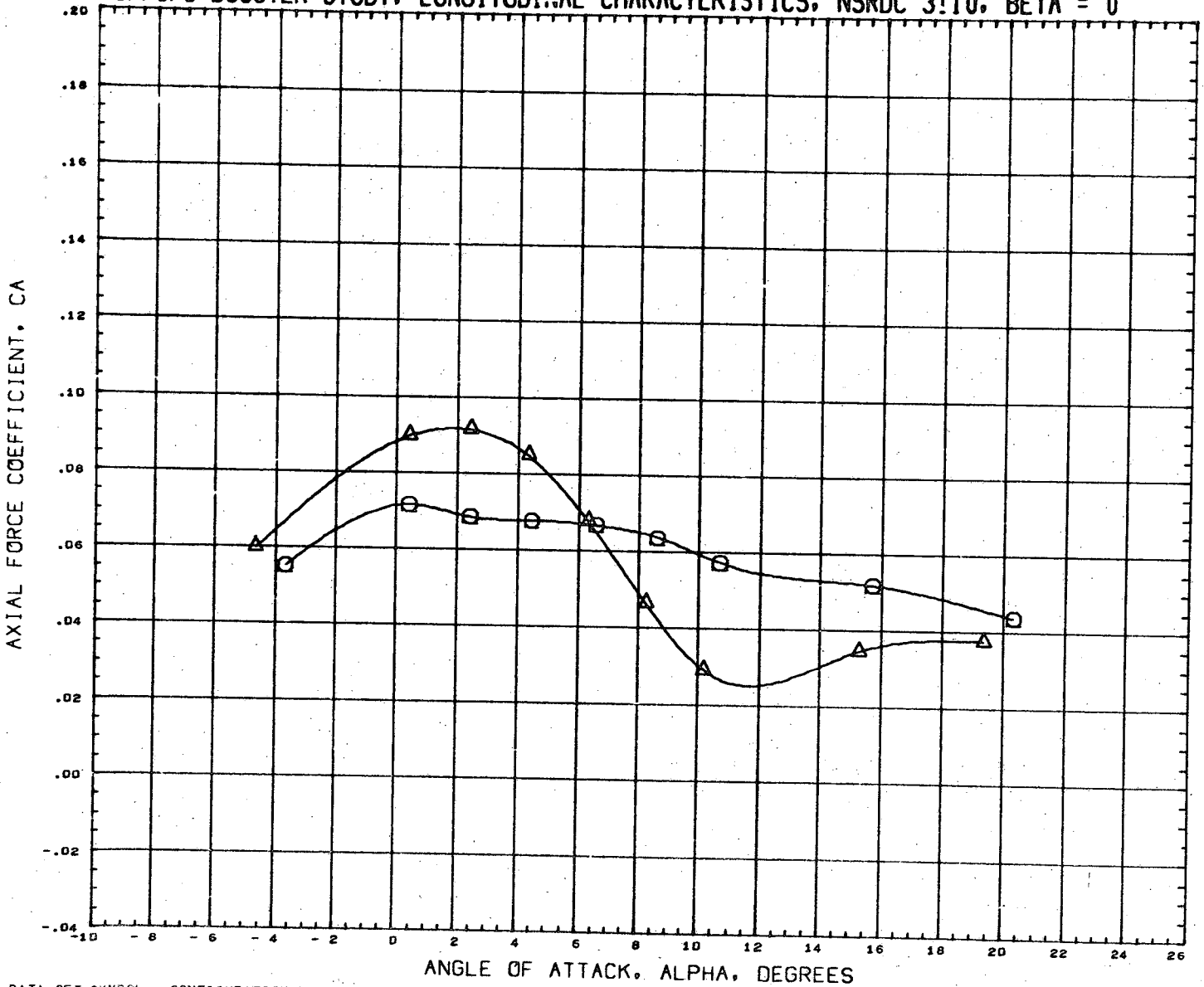
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2069)	NSRDC-3110,MSFC/LMSC BOOSTER B1C1F1W1V1	15.000	1.000	0.000	1.000	SREF 1.3550 SQ.FT.
(RN2077)	NSRDC-3110,MSFC/LMSC BOOSTER B1C1F1W1V1	15.000	2.000	0.000	1.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCENT

MACH 0.361

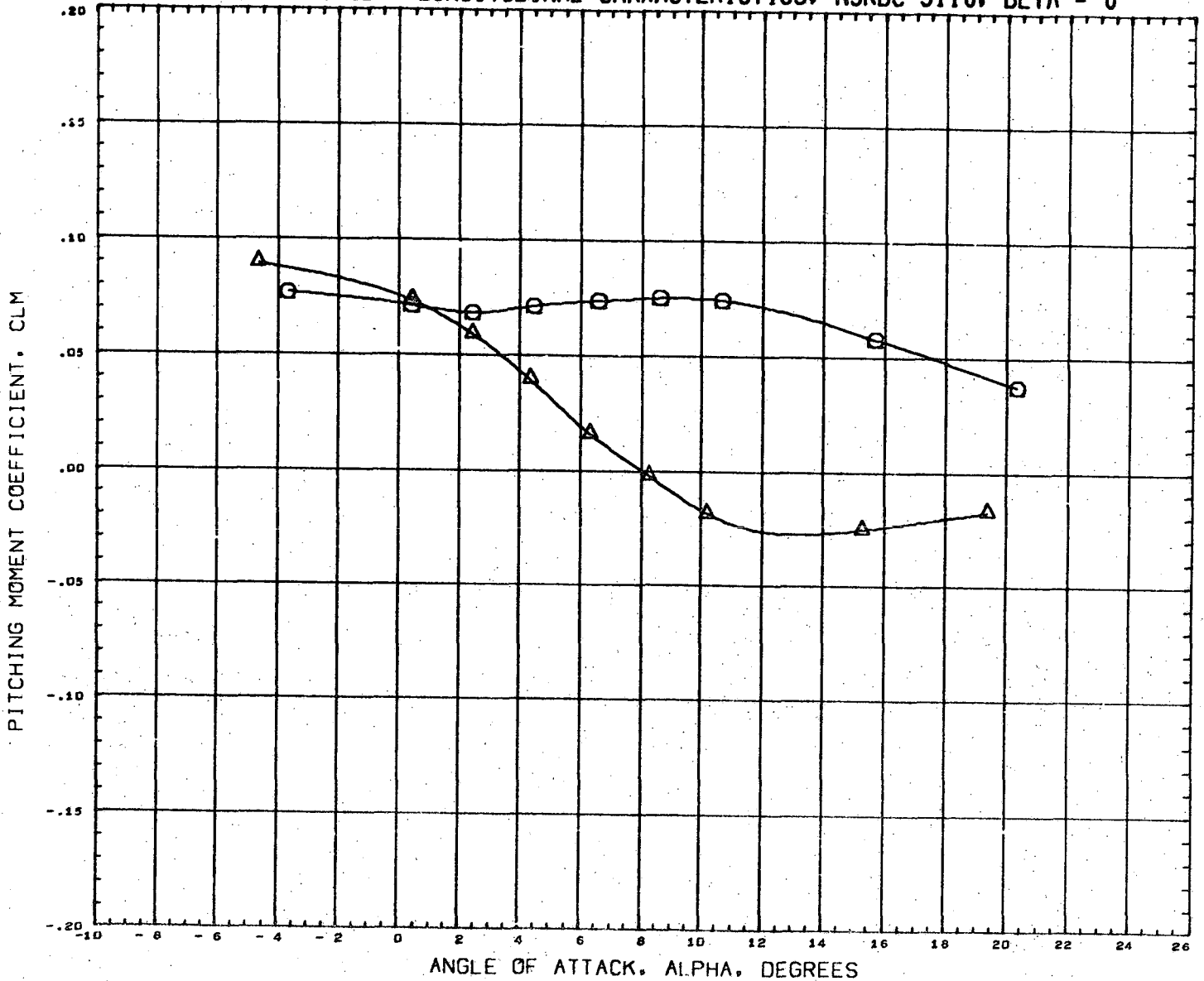
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2069)	NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1	15.000	1.000	0.000	1.000	SREF 1.3550 SQ. FT.
(RN2077)	NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1	15.000	2.000	0.000	1.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCENT

MACH 0.381

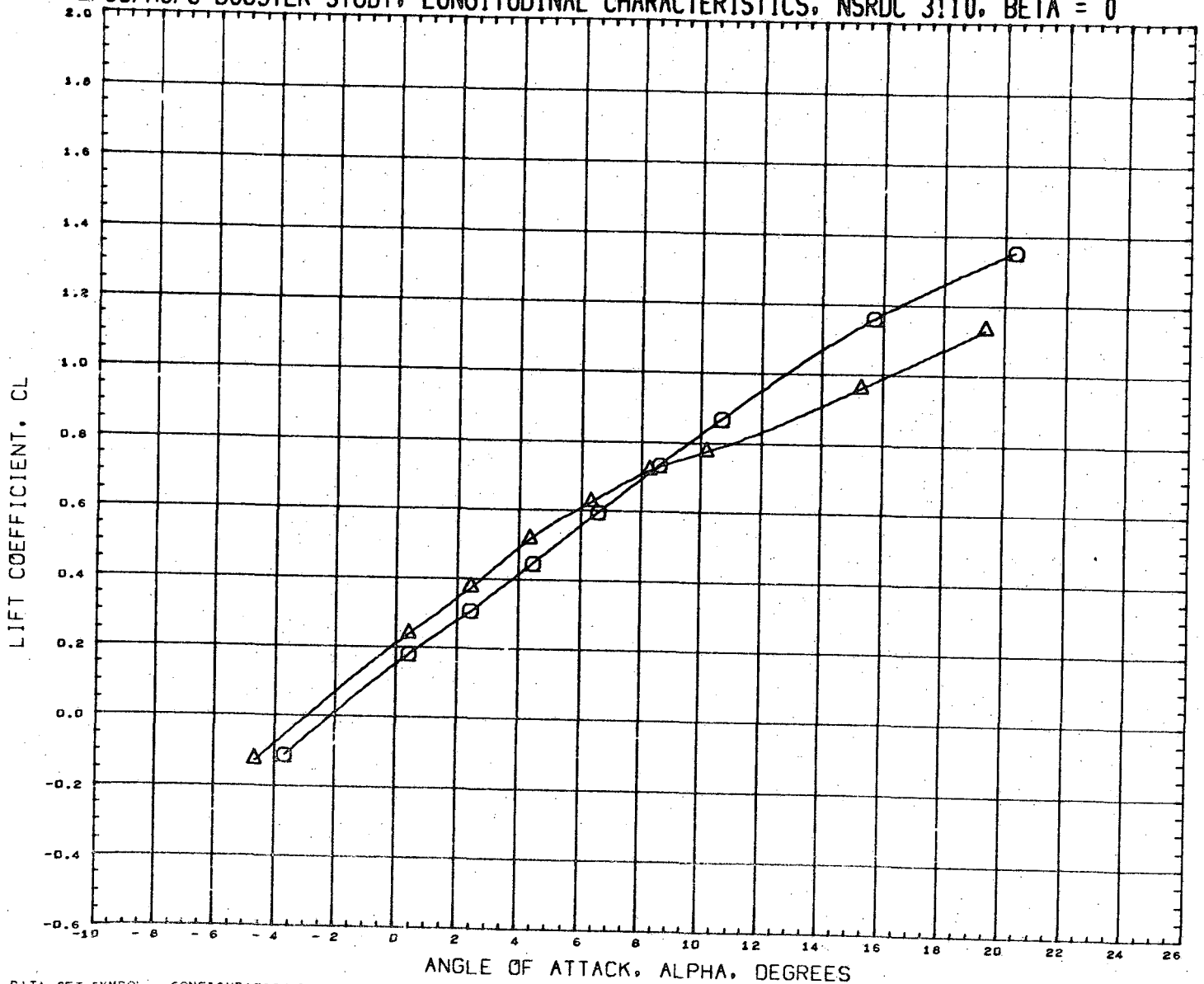
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCICW	WNGPOS	REFERENCE INFORMATION
(RN2069)	NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1	15.000	1.000	0.000	1.000	SREF 1.3550 SQ. FT.
(RN2077)	NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1	15.000	2.000	0.000	1.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCNT

MACH 0.381

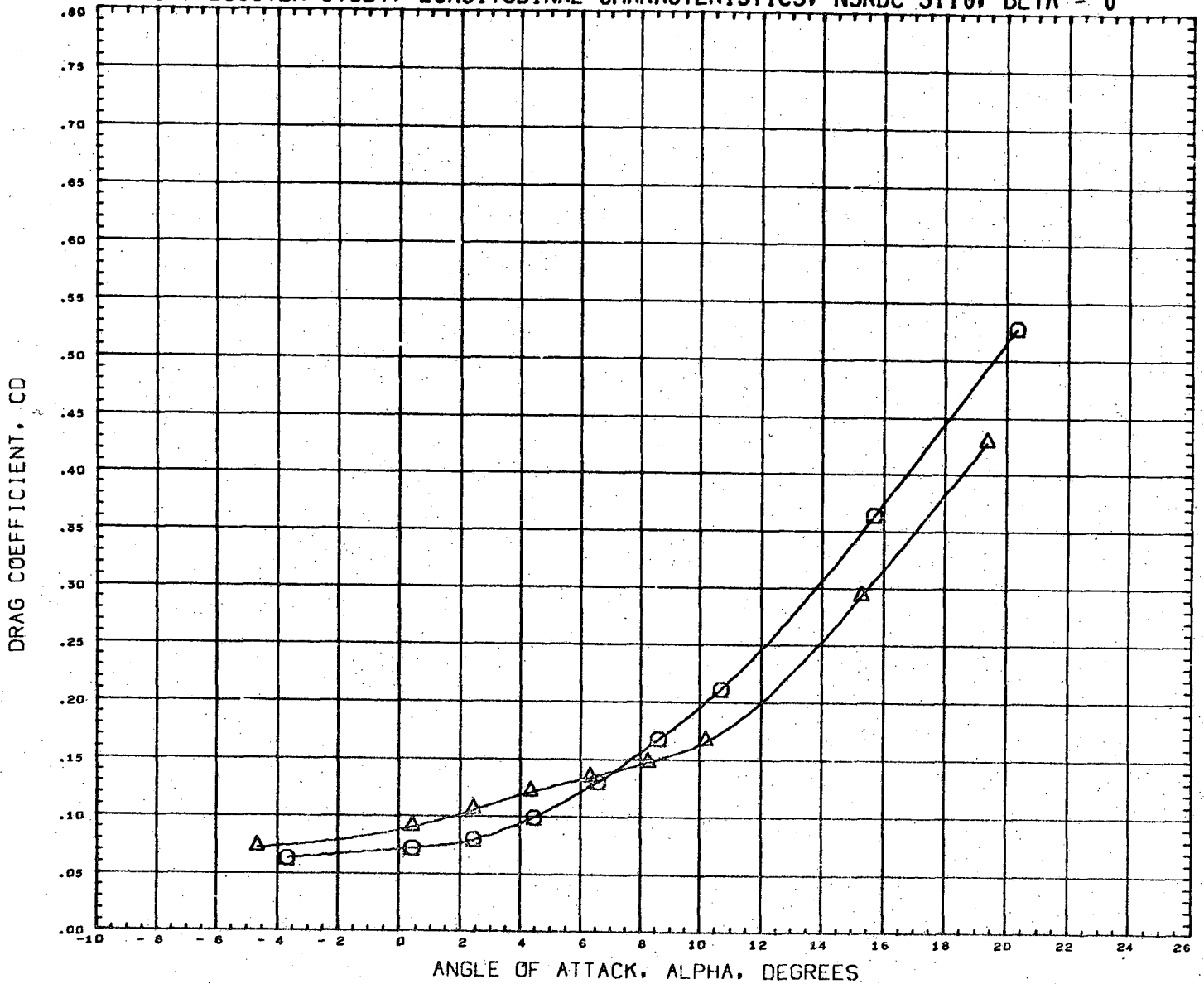
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2069)	NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1	15.000	1.000	0.000	1.000	SREF 1.3550 SQ. FT.
(RN2077)	NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1	15.000	2.000	0.000	1.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCNT

MACH 7.381

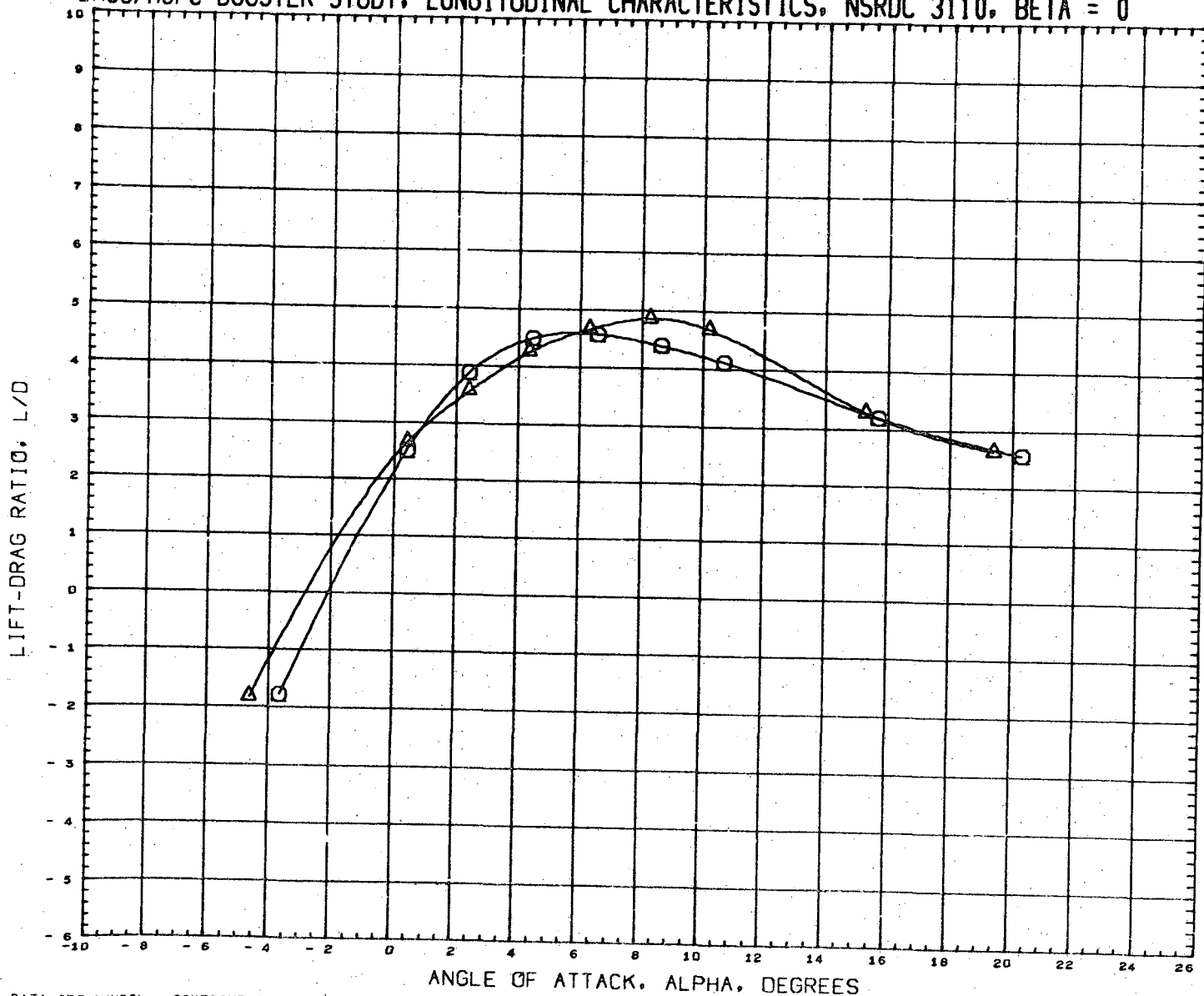
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2069)	NSRDC-3110,MSFC/LMSC BOOSTER B1C1F1W1V1	15.000	1.000	0.000	1.000	SREF 1.3550 SQ.FT.
(RN2077)	NSRDC-3110,MSFC/LMSC BOOSTER B1C1F1W1V1	15.000	2.000	0.000	1.000	LREF 41.4360 INCHES BREF 41.4360 INCHES XMRP 31.1400 INCHES YMRP 0.0000 INCHES ZMRP 0.2250 INCHES SCALE 1.5000 PERCENT

MACH 0.381

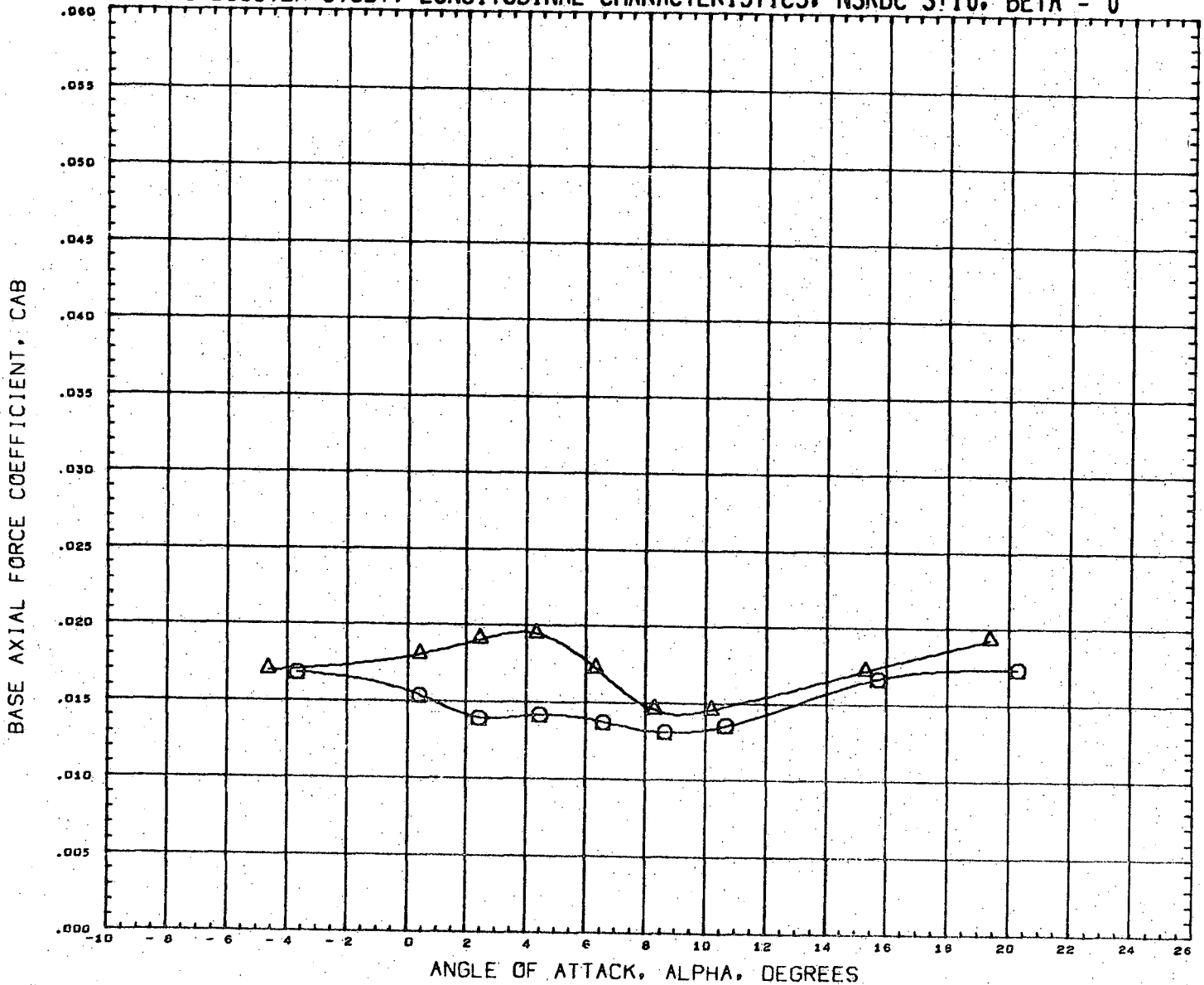
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION	
(RN2069)	NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1	15.000	1.000	0.000	1.000	SREF	1.3550 SQ. FT.
(RN2077)	NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1	15.000	2.000	0.000	1.000	LREF	41.4360 INCHES
						BREF	41.4360 INCHES
						XMRP	31.1400 INCHES
						YMRP	0.0000 INCHES
						ZMRP	0.2250 INCHES
						SCALE	1.5000 PERCENT

MACH 0.381

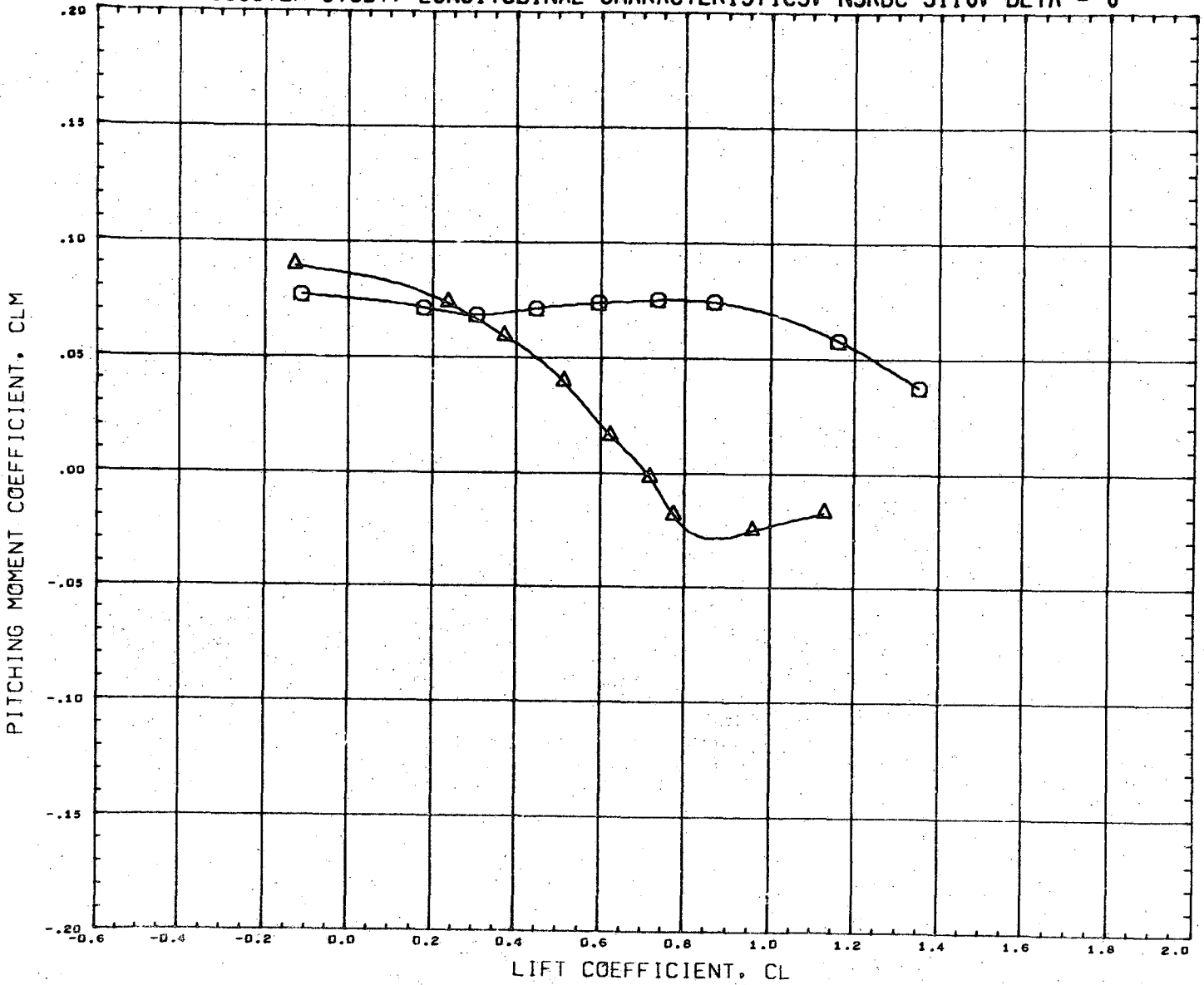
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2069)	NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1	15.000	1.000	0.000	1.000	SREF 1.3550 SQ.FT.
(RN2077)	NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1	15.000	2.000	0.000	1.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCENT

MACH 0.361

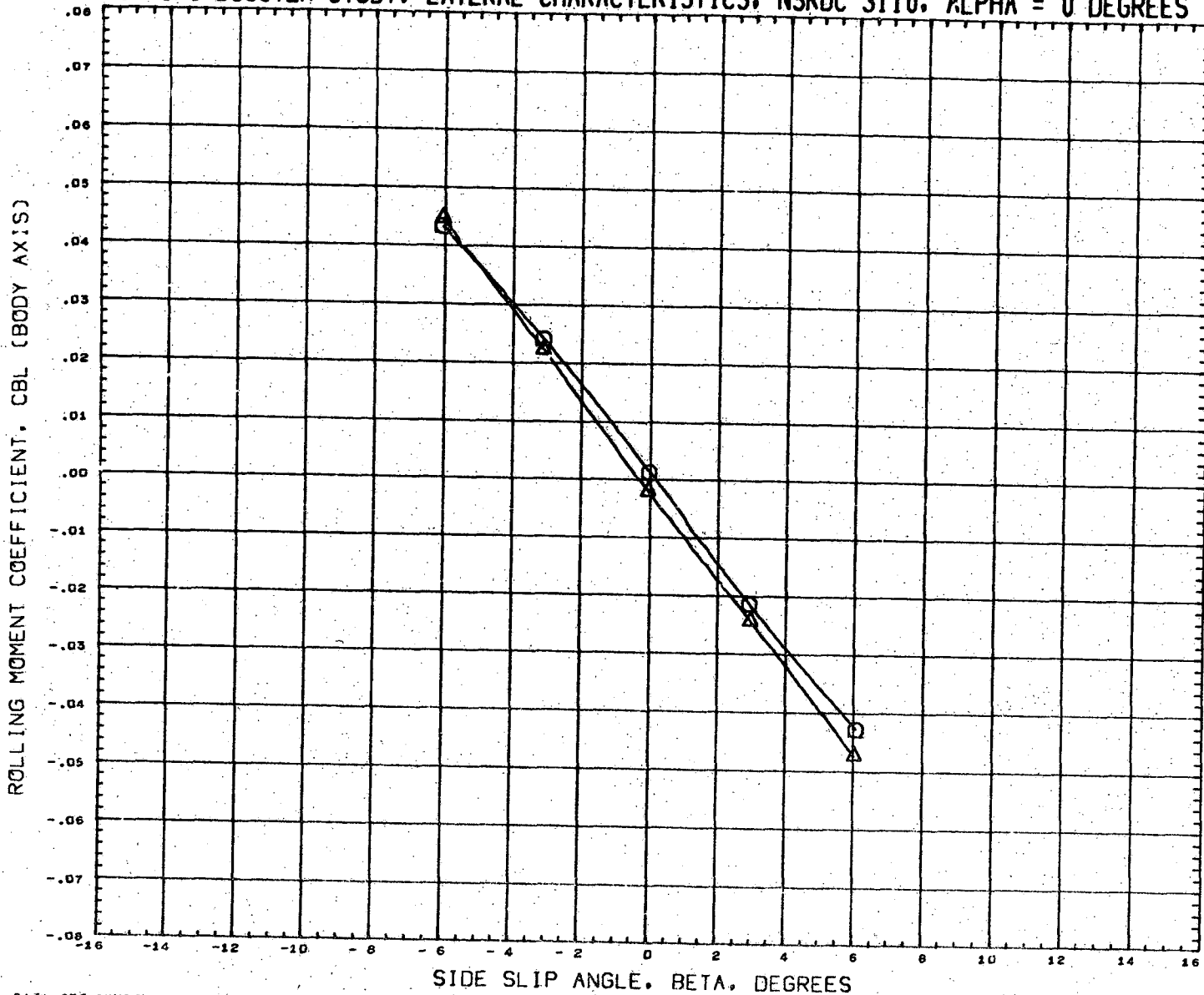
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0





DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	JNCIDW	WNGPOS	REFERENCE INFORMATION	
(RN2069)	NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1	15.000	1.000	0.000	1.000	SREF	1.3550 SQ. FT.
(RN2077)	NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1	15.000	2.000	0.000	1.000	LREF	41.4360 INCHES
						BREF	41.4360 INCHES
						XMRP	31.1400 INCHES
						YMRP	0.0000 INCHES
						ZMRP	0.2250 INCHES
						SCALE	1.5000 PERCENT

MACH 0.381

LMSC/MSFC BOOSTER STUDY. LATERAL CHARACTERISTICS, NSRDC 3110, ALPHA = 0 DEGREES



DATA SET SYMBOL
(RN2070) 
(RN2078) 

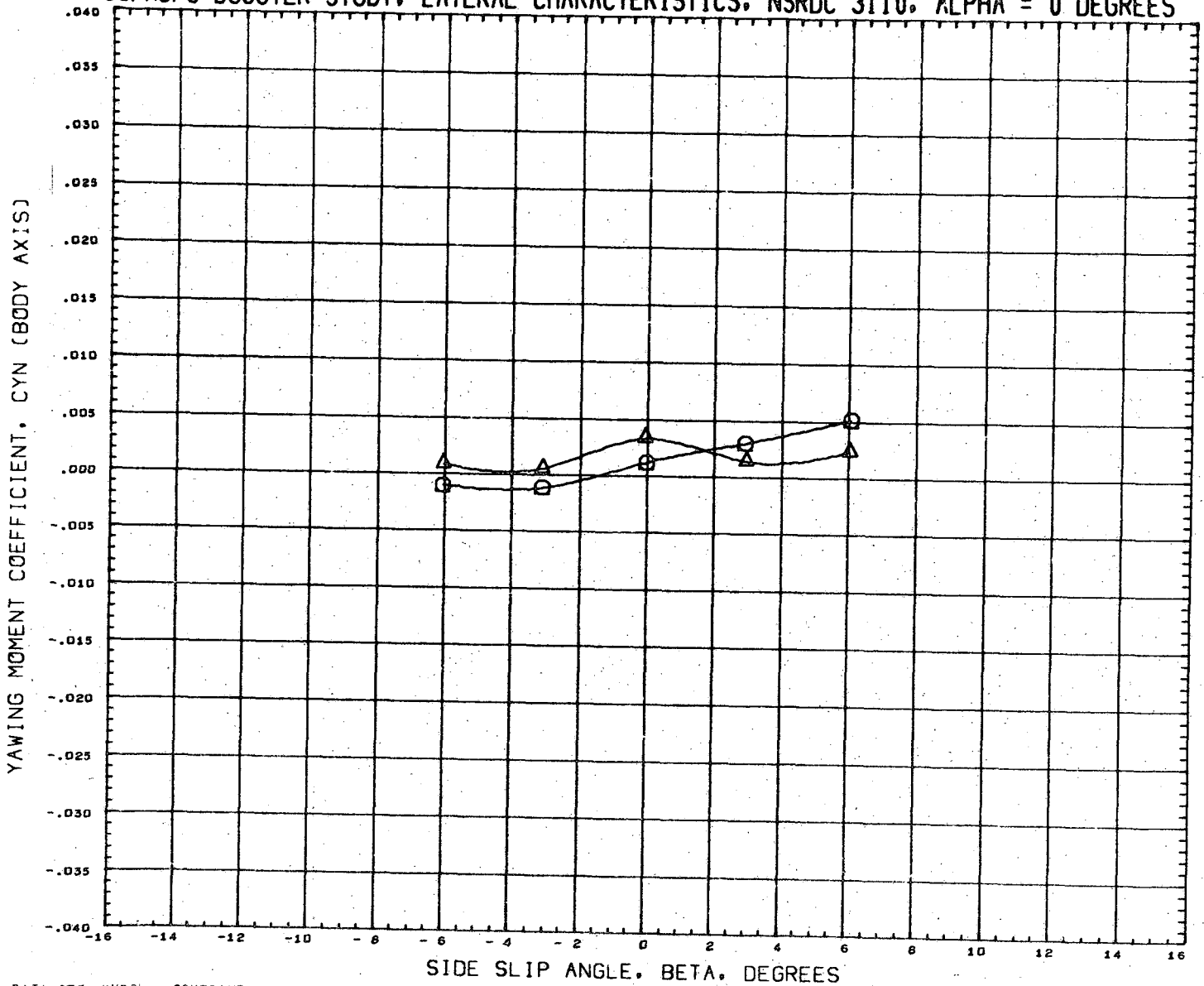
CONFIGURATION DESCRIPTION
NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1
NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1

INCIDC CNDPOS INCIDW WNGPOS
15.000 1.000 0.000 1.000
15.000 2.000 0.000 1.000

REFERENCE INFORMATION
SREF 1.3550 SQ. FT.
LREF 41.4360 INCHES
BREF 41.4360 INCHES
XMRP 31.1400 INCHES
YMRP 0.0000 INCHES
ZMRP 0.2250 INCHES
SCALE 1.5000 PERCENT

MACH 0.379

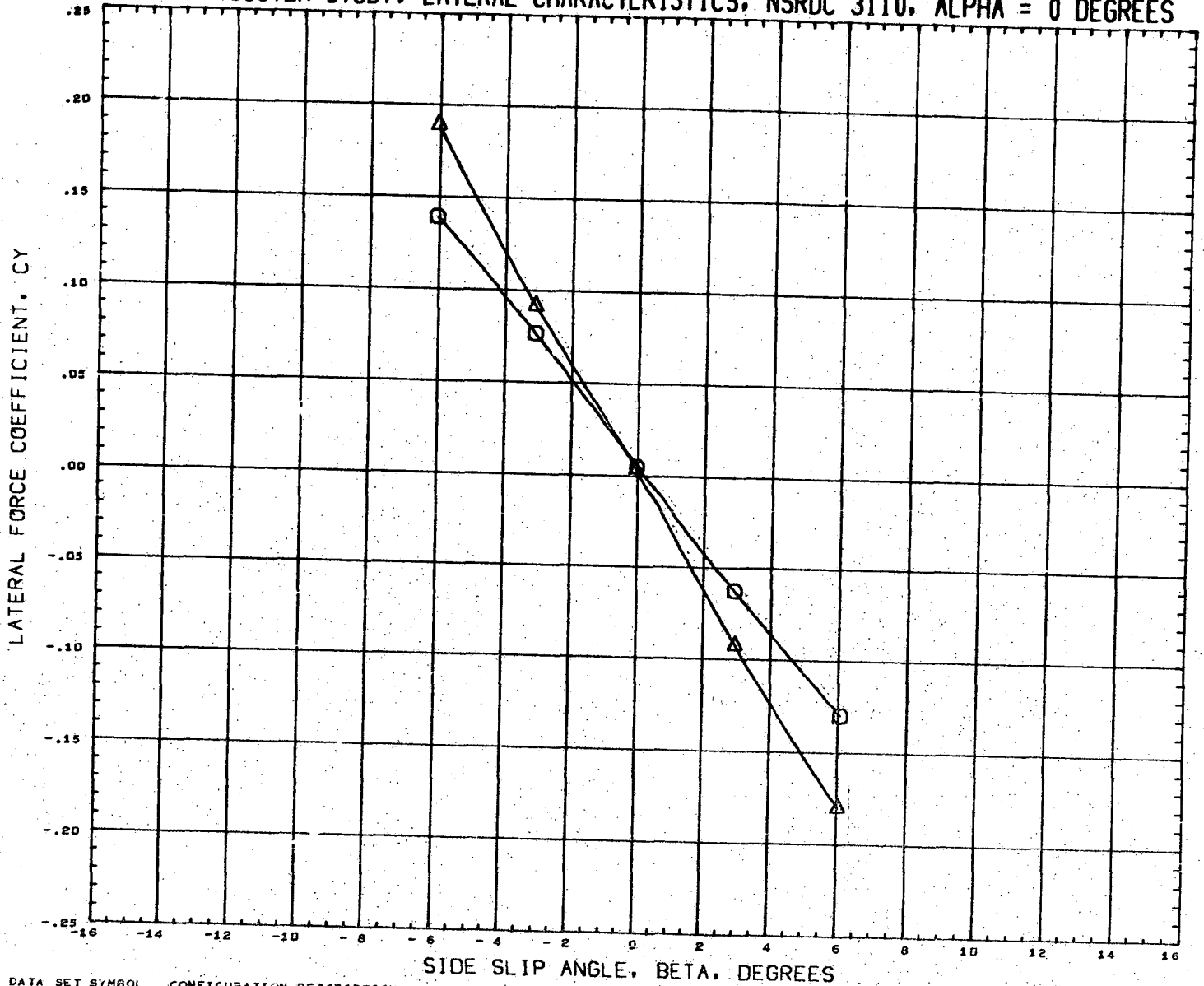
LMSC/MSFC BOOSTER STUDY, LATERAL CHARACTERISTICS, NSRDC 3110, ALPHA = 0 DEGREES



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDFOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2070)	NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1	15.000	1.000	0.000	1.000	SREF 1.5350 SQ.FT.
(RN2078)	NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1	15.000	2.000	0.000	1.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCENT

MACH 0.379

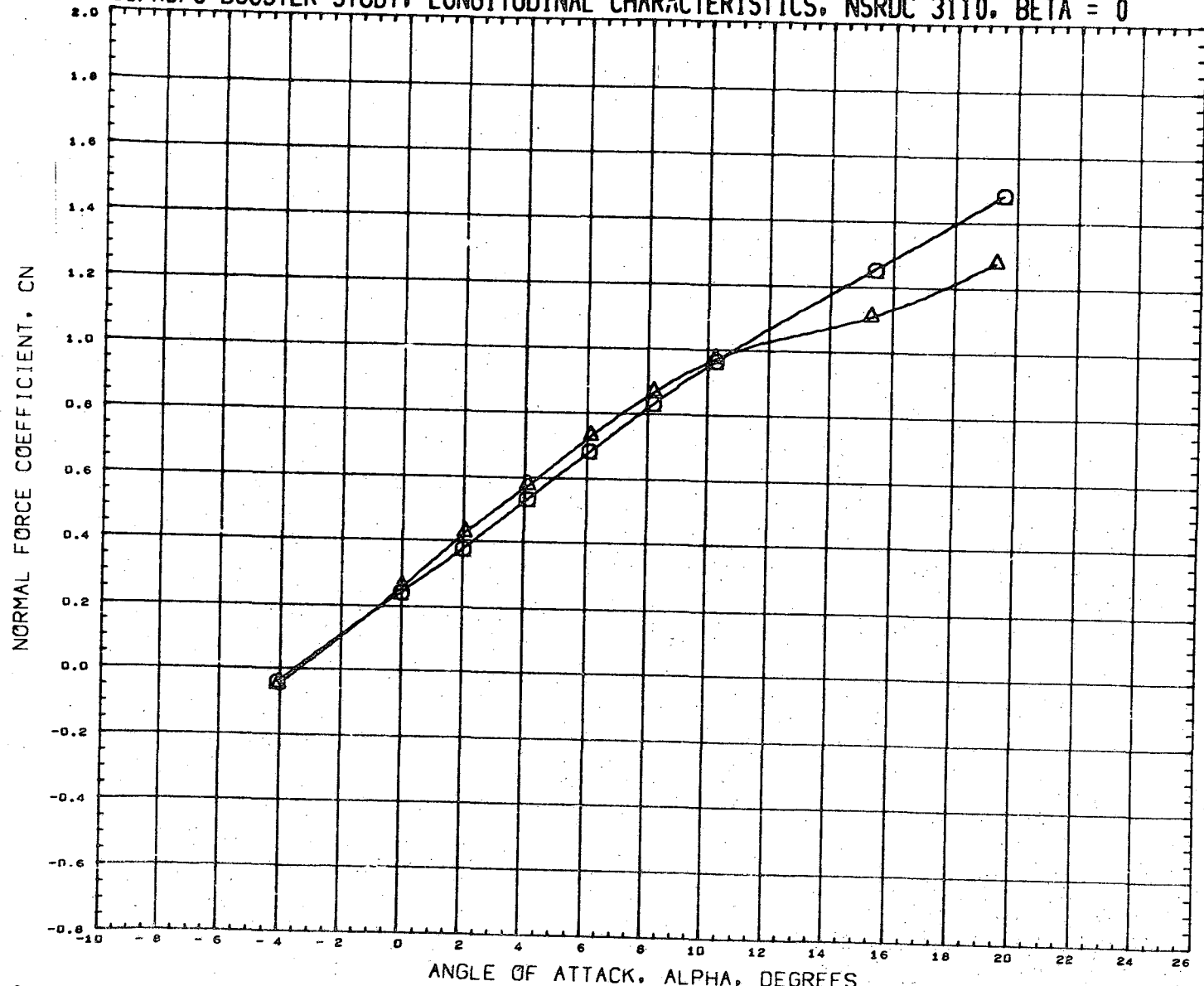
LMSC/MSFC BOOSTER STUDY, LATERAL CHARACTERISTICS, NSRDC 3110, ALPHA = 0 DEGREES



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2070)	NSRDC-3110,MSFC/LMSC BOOSTER B1C1F1W1V1	15.000	1.000	0.000	1.000	SREF 1.3550 SQ.FT.
(RN2078)	NSRDC-3110,MSFC/LMSC BOOSTER B1C1F1W1V1	15.000	2.000	0.000	1.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCNT

MACH 0.379

LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0

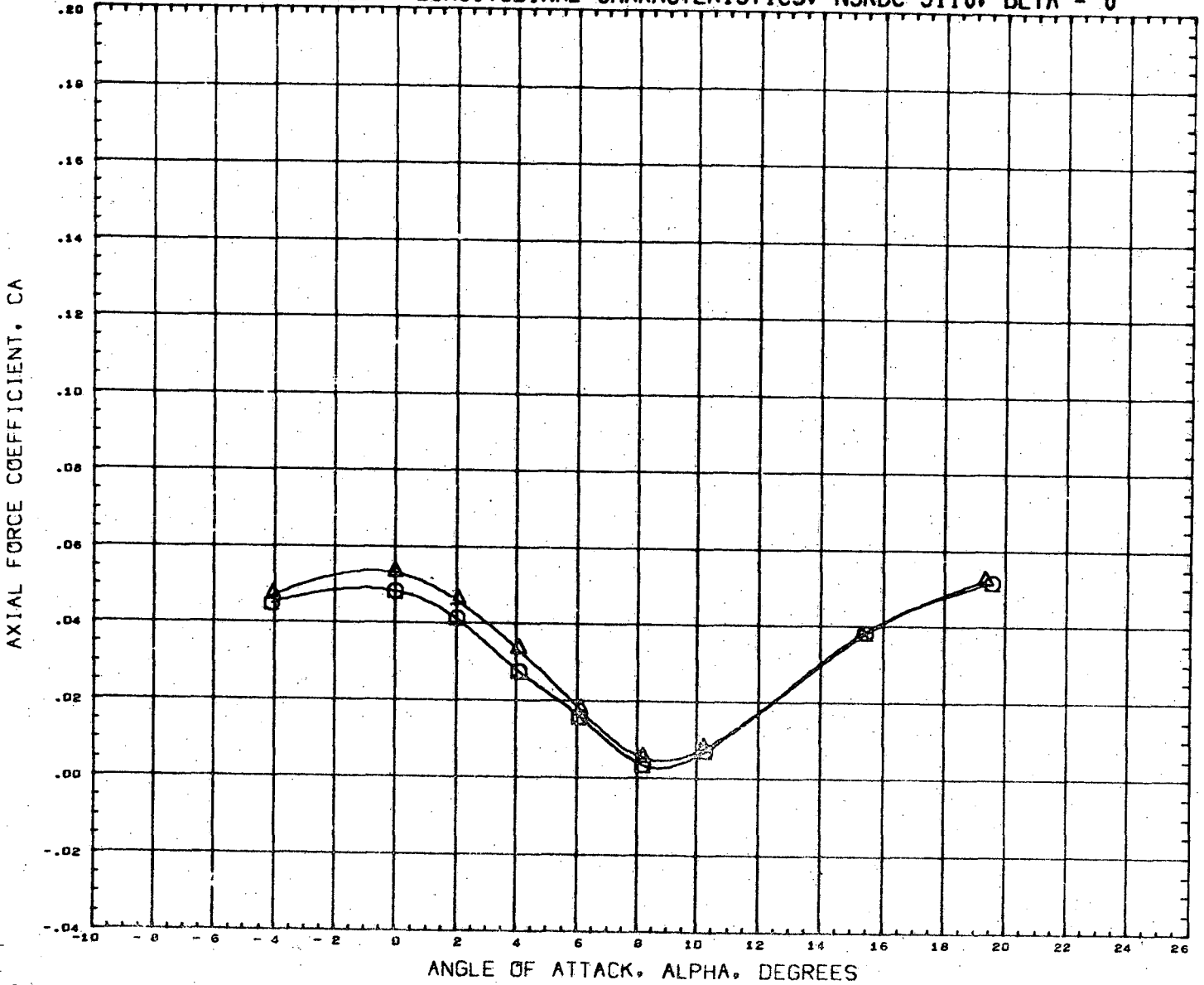


DATA SET SYMBOL (RN2097) (RN2105) CONFIGURATION DESCRIPTION NSRDC-3110,MSFC/LMSC BOOSTER B1C1F1W1V1 NSRDC-3110,MSFC/LMSC BOOSTER B1C1F1W1V1

INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
3.000	1.000	3.000	1.000	SREF 1.3550 SQ.FT.
3.000	2.000	3.000	1.000	LREF 41.4360 INCHES
				BREF 41.4360 INCHES
				XMRP 31.1400 INCHES
				YMRP 0.0000 INCHES
				ZMRP 0.2250 INCHES
				SCALE 1.5000 PERCENT

MACH 0.383

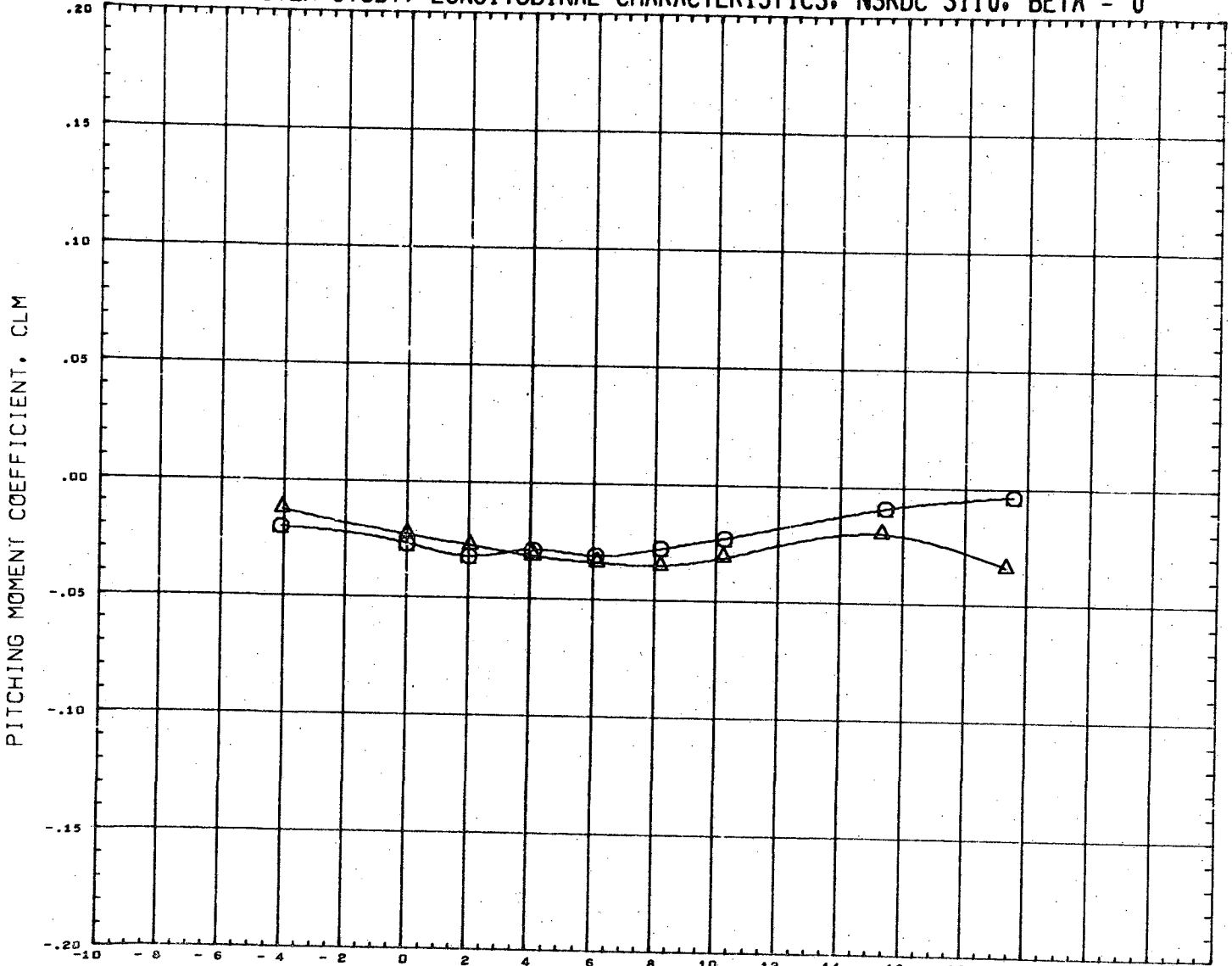
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2097)	NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1	3.000	1.000	3.000	1.000	SREF 1.3550 SQ.FT.
(RN2105)	NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1	3.000	2.000	3.000	1.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCNT

MACH 0.383

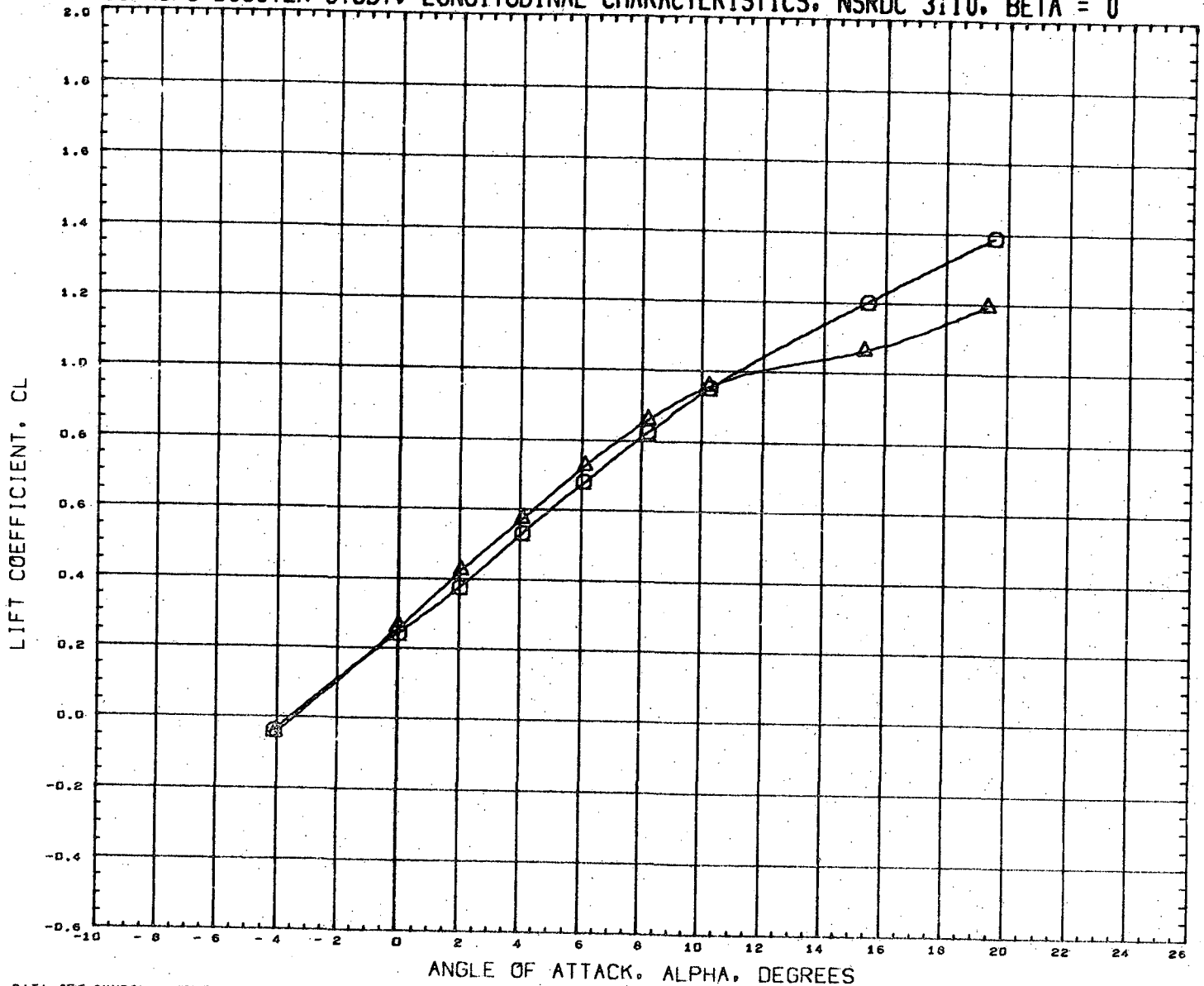
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2097)	NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1	3.000	1.000	3.000	1.000	SREF 1.3550 SQ. FT.
(RN2105)	NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1	3.000	2.000	3.000	1.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCENT

MACH 0.383

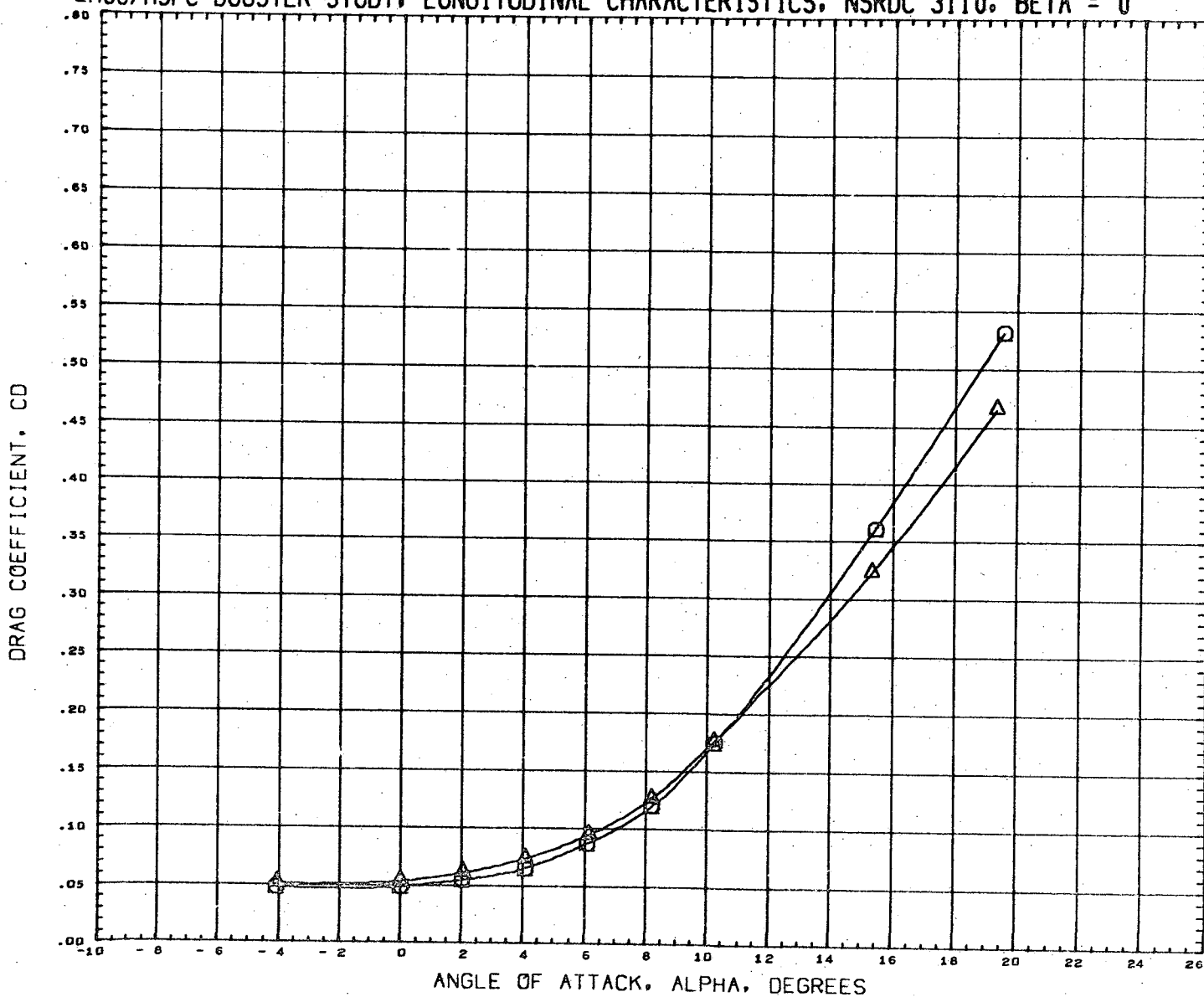
LMSC/MSFC BOOSTER STUDY. LONGITUDINAL CHARACTERISTICS. NSRDC 3110. BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2097)	NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1	3.000	1.000	3.000	1.000	SREF 1.3550 SQ. FT.
(RN2105)	NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1	3.000	2.000	3.000	1.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCENT

MACH 0.383

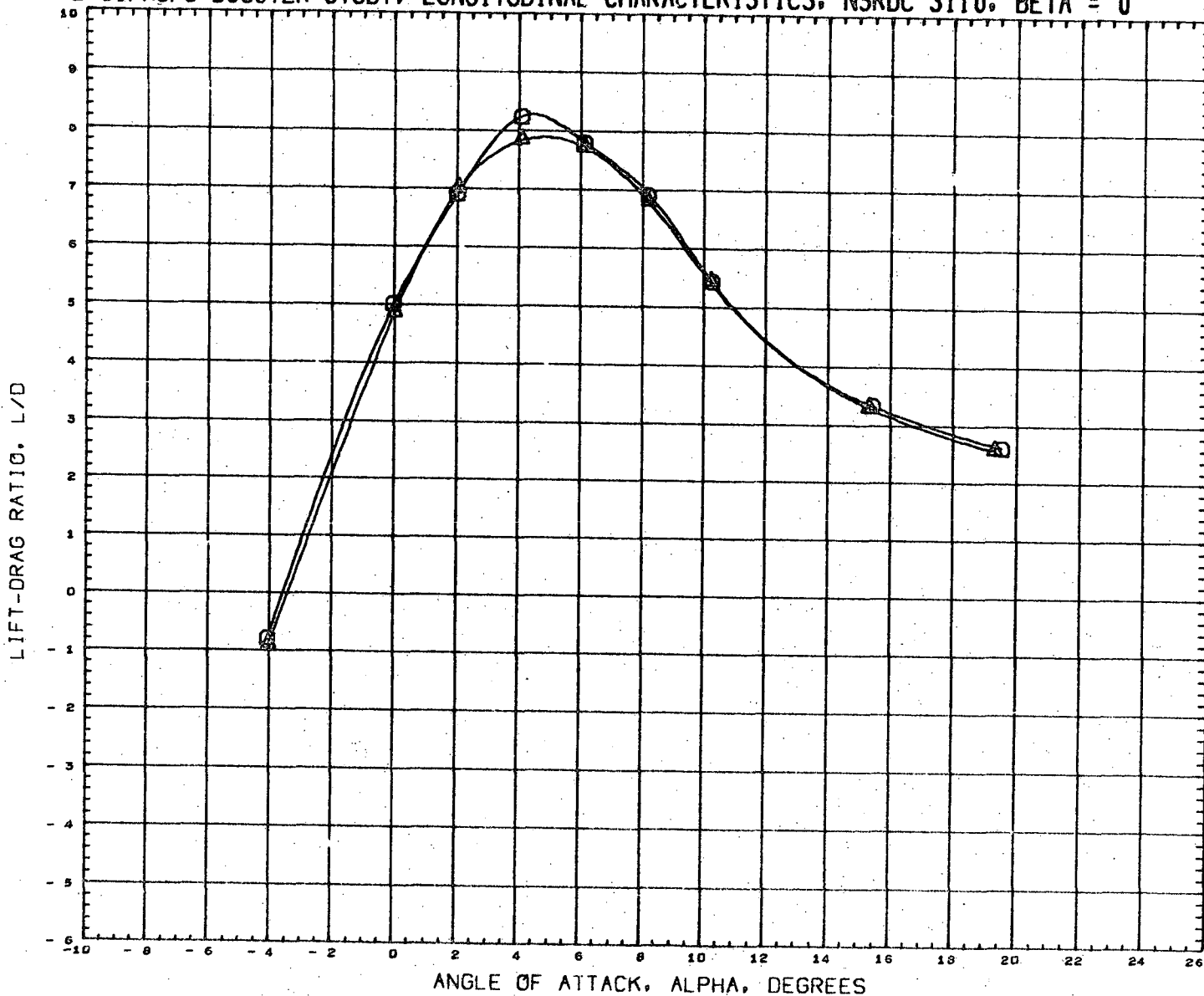
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION	
(RN2097)	NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1	3.000	1.000	3.000	1.000	SREF	1.3550 SQ. FT.
(RN2105)	NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1	3.000	2.000	3.000	1.000	LREF	41.4360 INCHES
						BREF	41.4360 INCHES
						XMRP	31.1400 INCHES
						YMRP	0.0000 INCHES
						ZMRP	0.2250 INCHES
						SCALE	1.5000 PERCENT

MACH 0.383

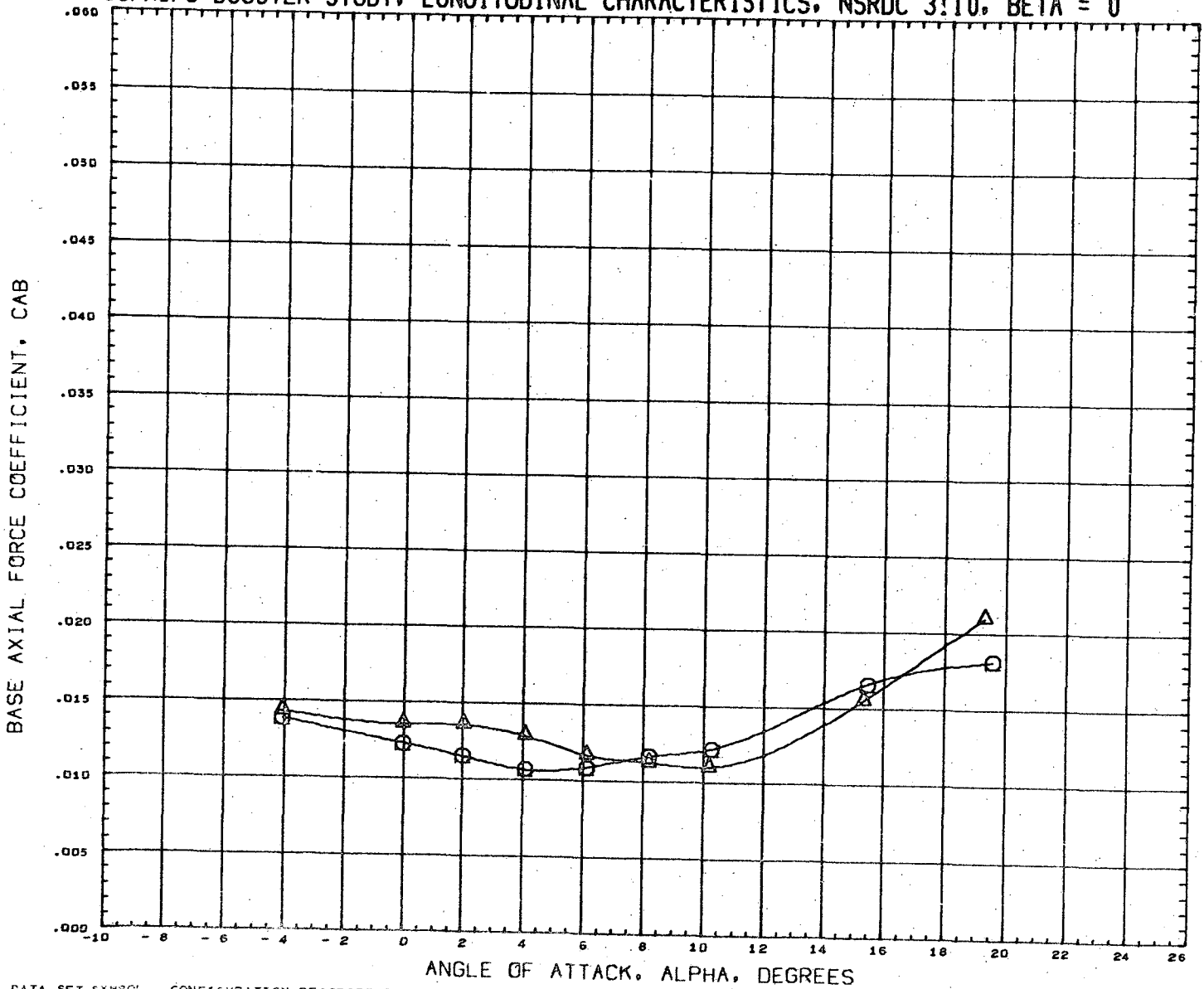
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2097)	NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1	3.000	1.000	3.000	1.000	SREF 1.3550 SQ. FT.
(RN2105)	NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1	3.000	2.000	3.000	1.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCENT

MACH 0.383

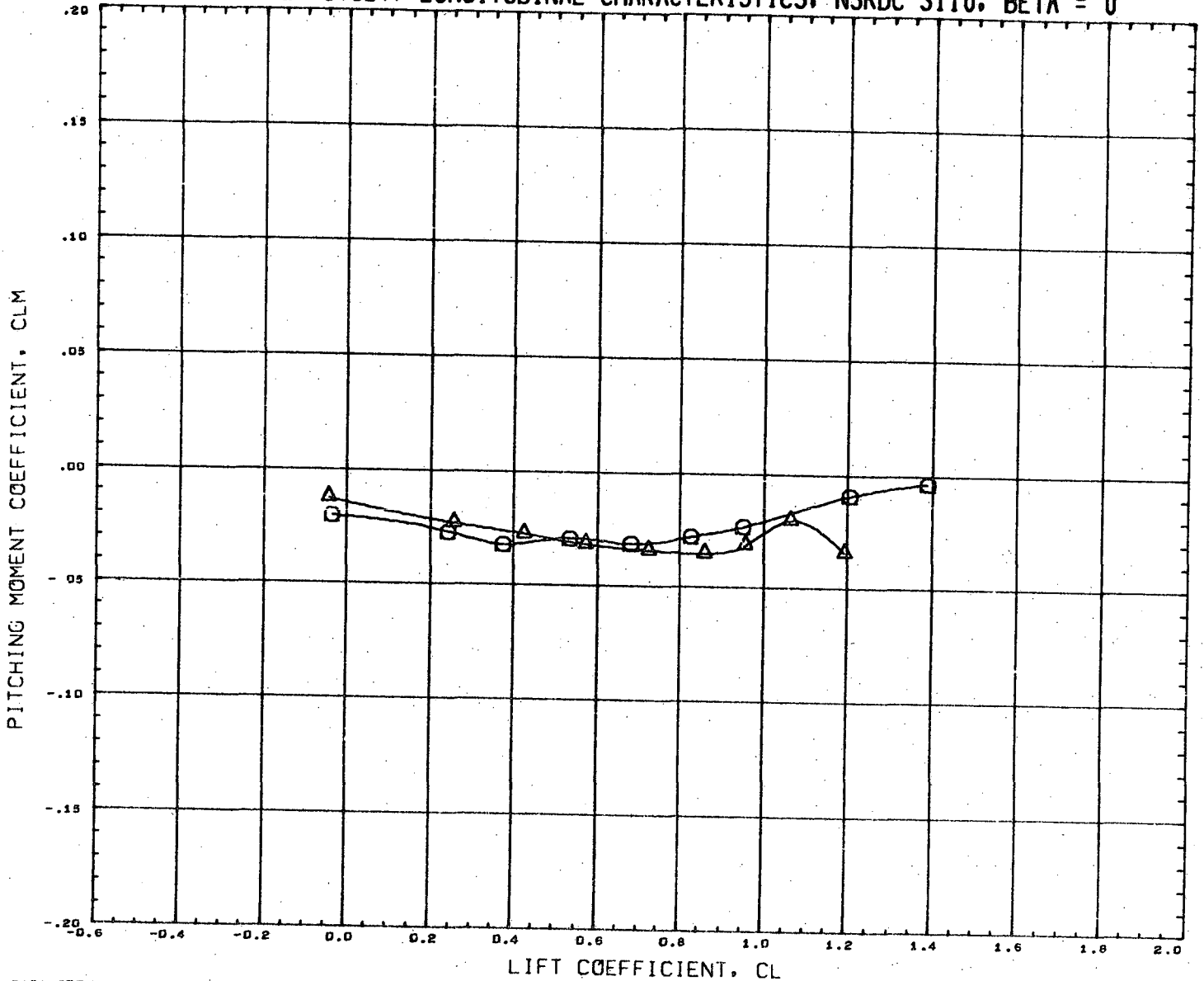
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION	
(RN2097)	NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1	3.000	1.000	3.000	1.000	SREF	1.3550 SQ. FT.
(RN2105)	NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1	3.000	2.000	3.000	1.000	LREF	41.4360 INCHES
						BREF	41.4360 INCHES
						XMRP	31.1400 INCHES
						YMRP	0.0000 INCHES
						ZMRP	0.2250 INCHES
						SCALE	1.5000 PERCENT

MACH 0.383

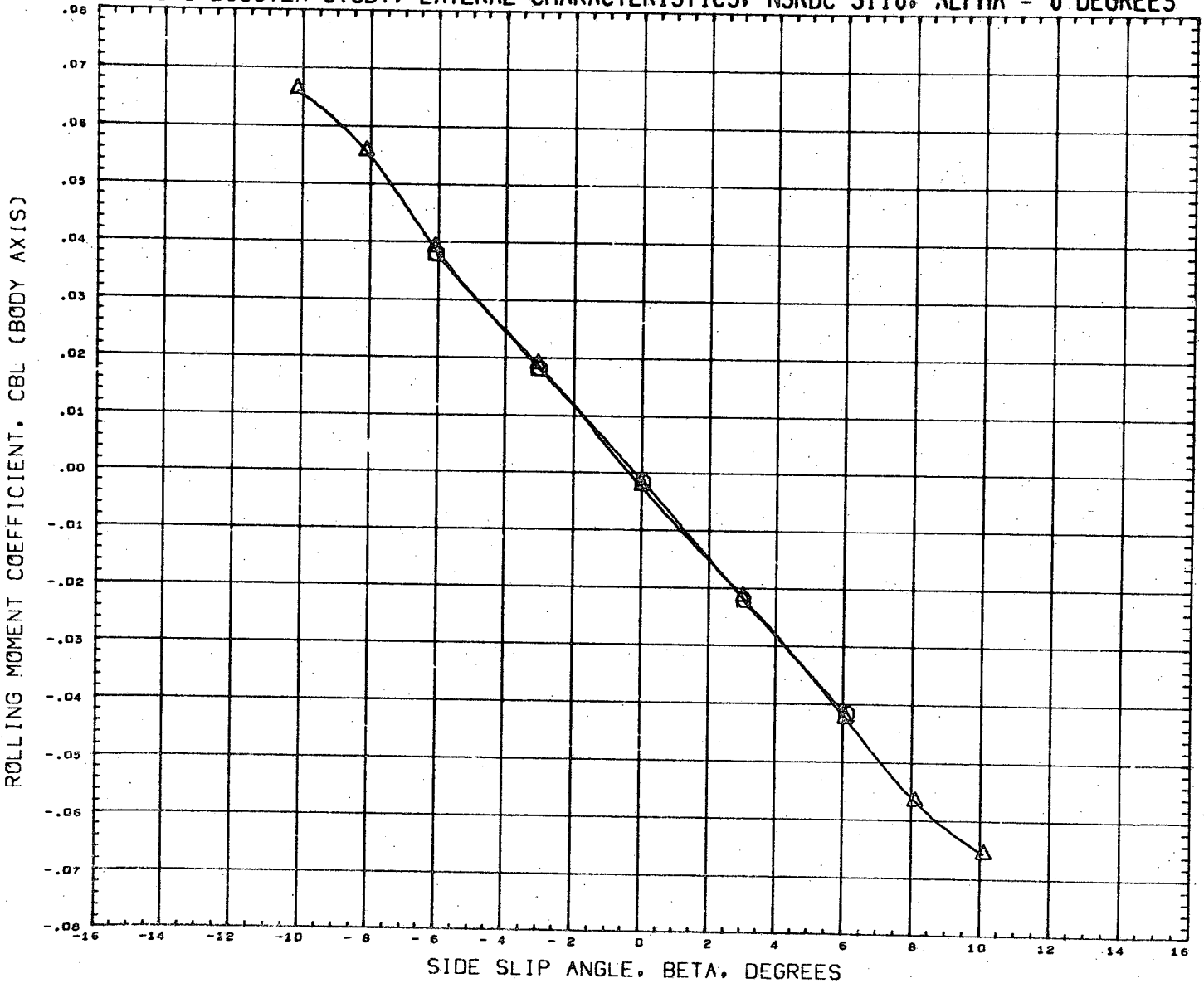
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION	
(RN2097)	NSRDC-3110,MSFC/LMSC BOOSTER B1C1F1W1V1	3.000	1.000	3.000	1.000	SREF	1.3550 SQ.FT.
(RN2105)	NSRDC-3110,MSFC/LMSC BOOSTER B1C1F1W1V1	3.000	2.000	3.000	1.000	LREF	41.4360 INCHES
						BREF	41.4360 INCHES
						XMRP	31.1400 INCHES
						YMRP	0.0000 INCHES
						ZMRP	0.2250 INCHES
						SCALE	1.5000 PERCENT

MACH 0.383

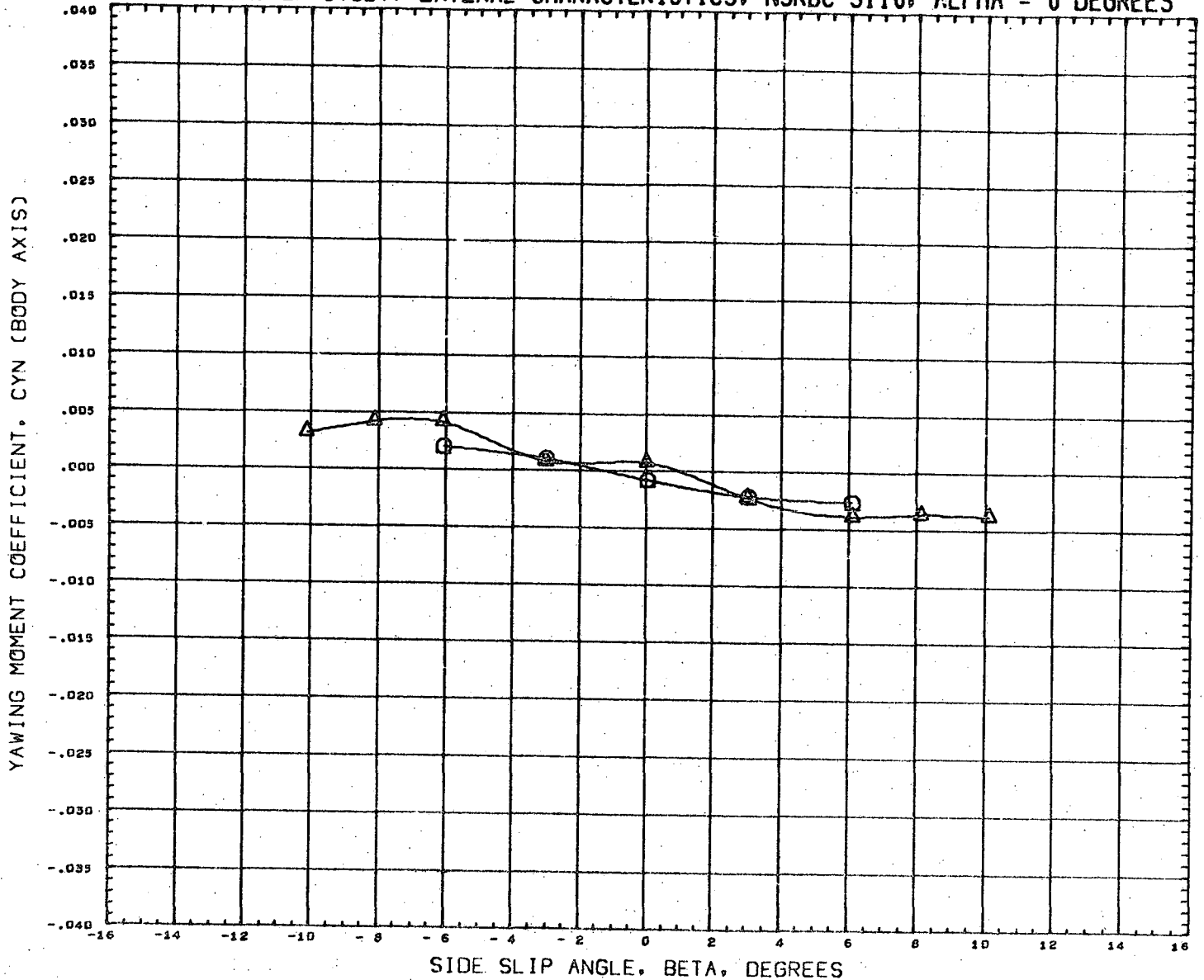
LMSC/MSFC BOOSTER STUDY, LATERAL CHARACTERISTICS, NSRDC 3110, ALPHA = 0 DEGREES



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2098)	NSRDC-3110,MSFC/LMSC BOOSTER B1C1F1W1V1	3.000	1.000	3.000	1.000	SREF 1.3550 SQ.FT.
(RN2106)	NSRDC-3110,MSFC/LMSC BOOSTER B1C1F1W1V1	3.000	2.000	3.000	1.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCENT

MACH 0.381

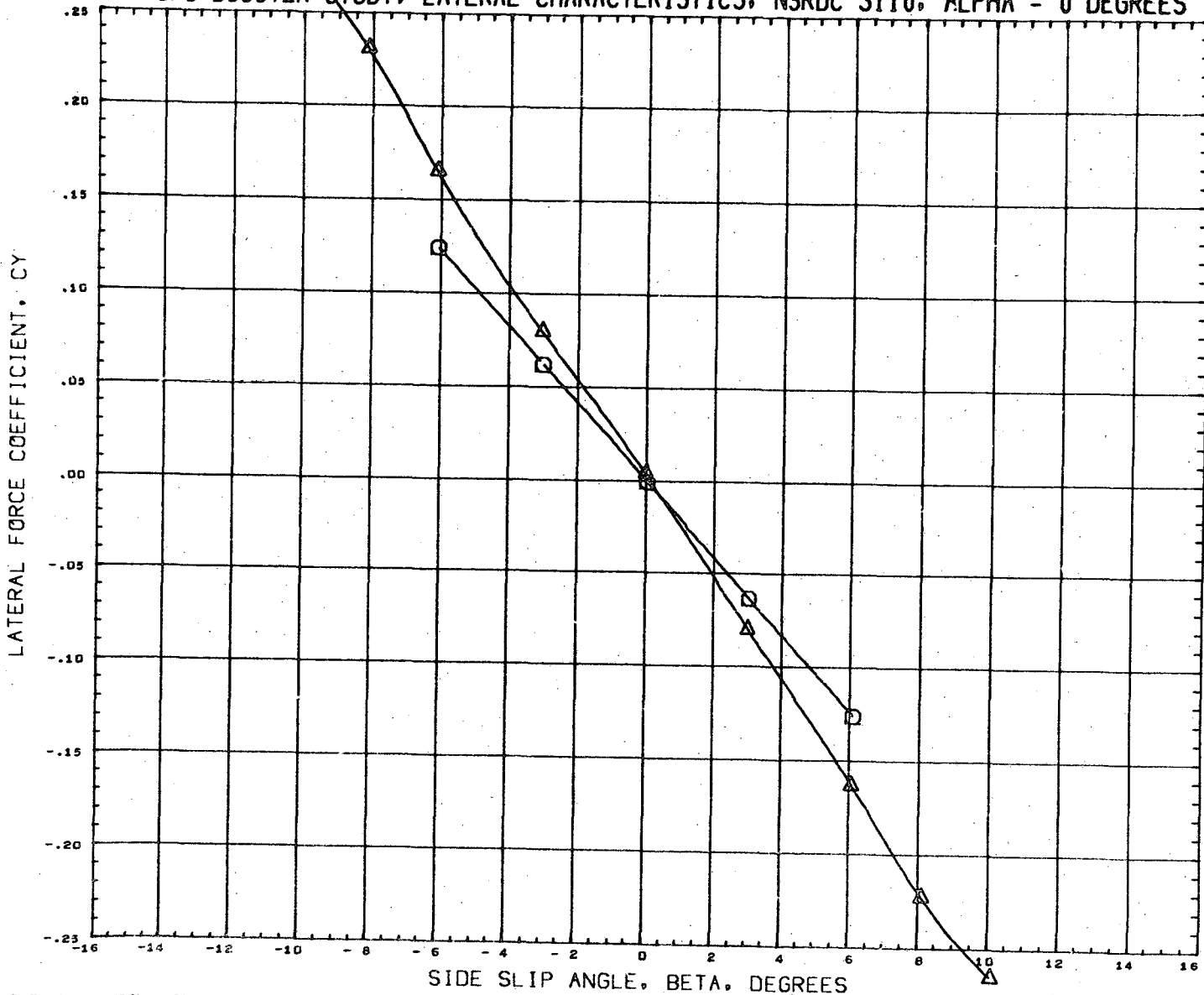
LMSC/MSFC BOOSTER STUDY, LATERAL CHARACTERISTICS, NSRDC 3110, ALPHA = 0 DEGREES





DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2096)	NSRDC-3110,MSFC/LMSC BOOSTER B1C1F1W1V1	3.000	1.000	3.000	1.000	SREF 1.3550 SQ.FT.
(RN2106)	NSRDC-3110,MSFC/LMSC BOOSTER B1C1F1W1V1	3.000	2.000	3.000	1.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCNT

MACH 0.381

LMSC/MSFC BOOSTER STUDY, LATERAL CHARACTERISTICS, NSRDC 3110, ALPHA = 0 DEGREES



DATA SET SYMBOL
(RN2099) 
(RN2106) 

CONFIGURATION DESCRIPTION
NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1
NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1

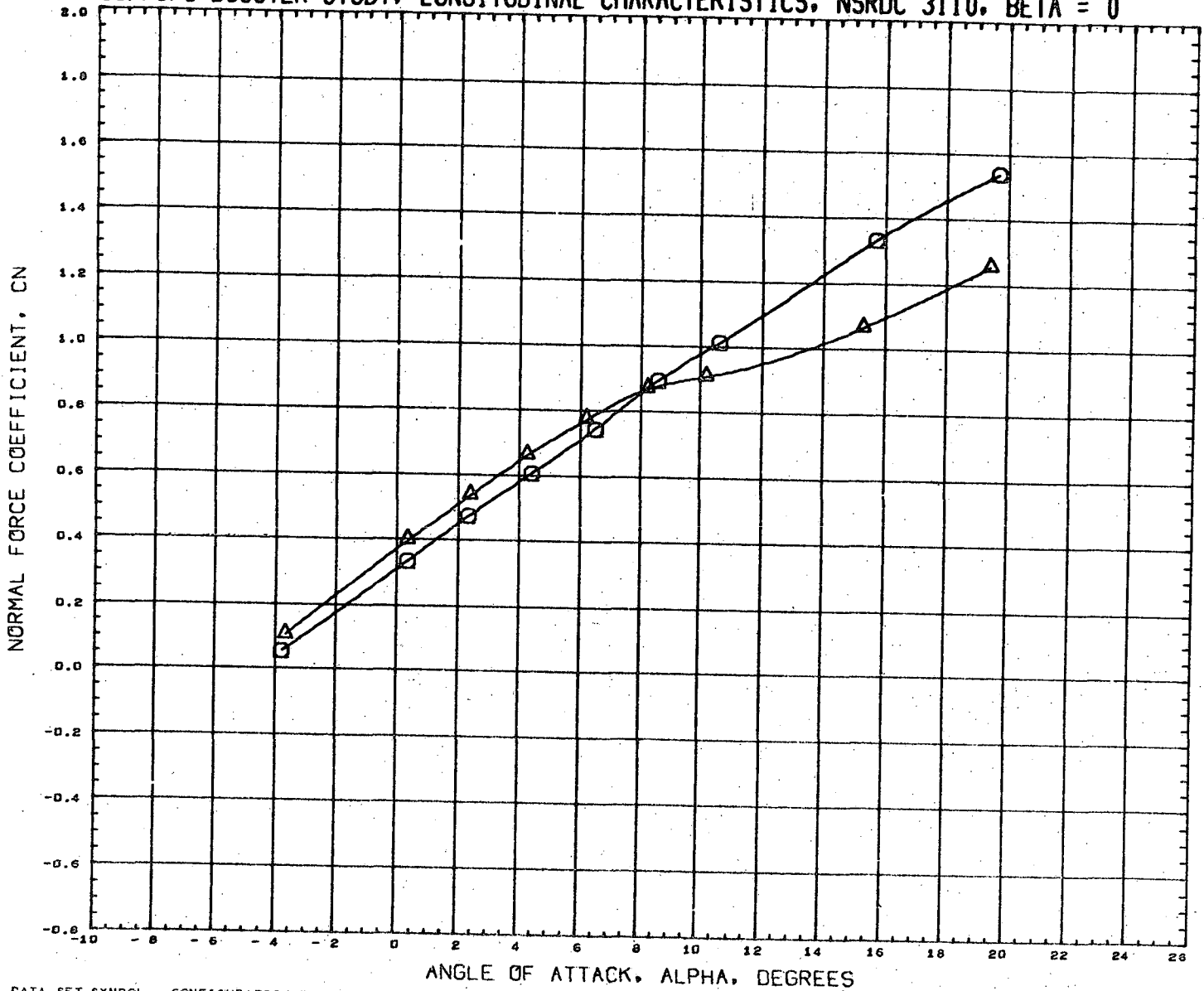
INCIDC	CNDPOS	INCIDW	WNGPOS
3.000	1.000	3.000	1.000
3.000	2.000	3.000	1.000



REFERENCE INFORMATION

SREF	1.3550	SQ.FT.
LREF	41.4360	INCHES
BREF	41.4360	INCHES
XMRP	31.1400	INCHES
YMRP	0.0000	INCHES
ZMRP	0.2250	INCHES
SCALE	1.5000	PERCENT

MACH 0.381

LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL
(RN2101) 
(RN2109) 

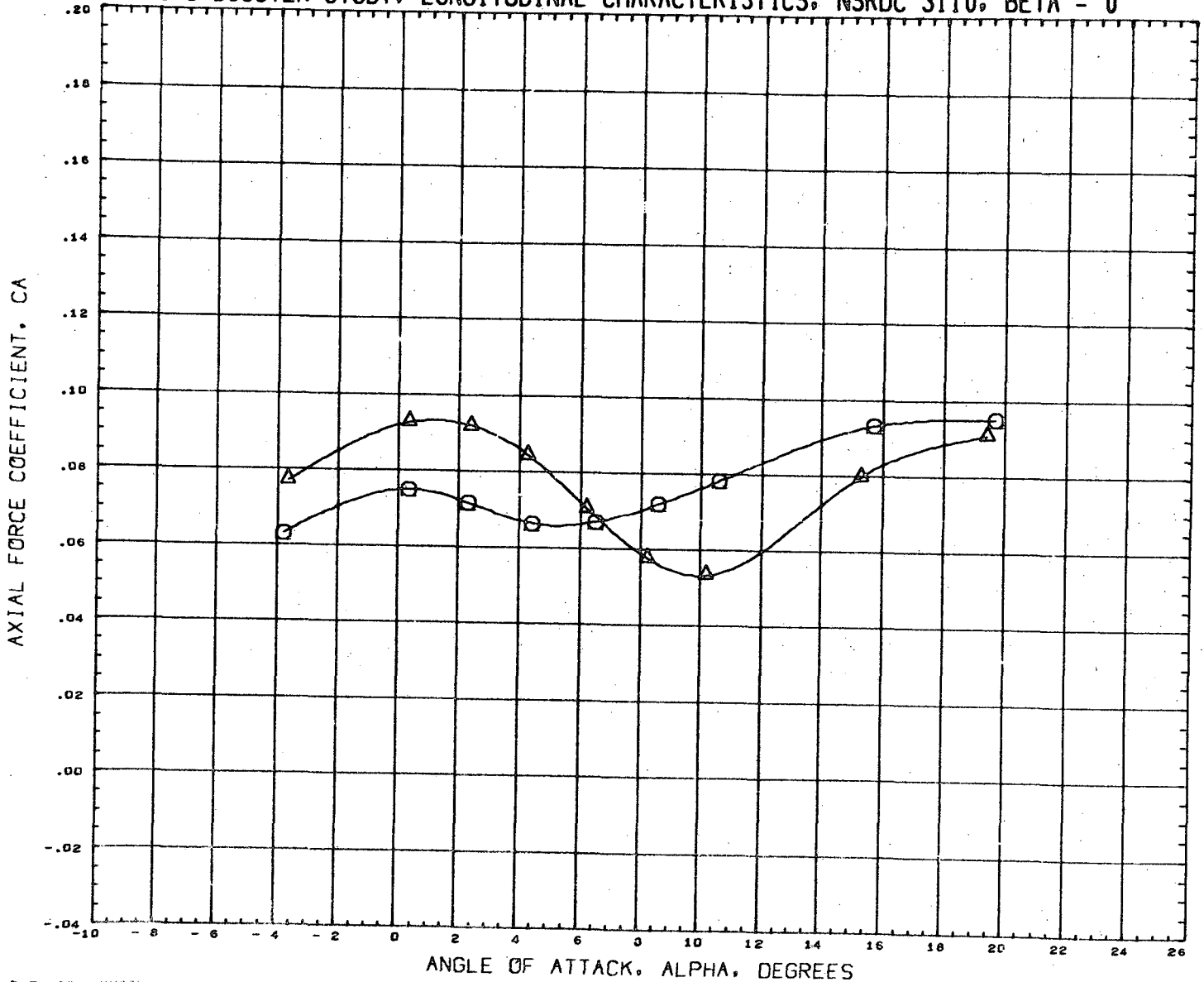
CONFIGURATION DESCRIPTION
NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1
NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1

INCIDC	CNDPOS	INCIDW	WNGPOS
15.000	1.000	3.000	1.000
15.000	2.000	3.000	1.000

REFERENCE INFORMATION	
SREF	1.3550 SQ.FT.
LREF	41.4360 INCHES
BREF	41.4360 INCHES
XMRP	31.1400 INCHES
YMRP	0.0000 INCHES
ZMRP	0.2250 INCHES
SCALE	1.5000 PERCENT

MACH 0.381

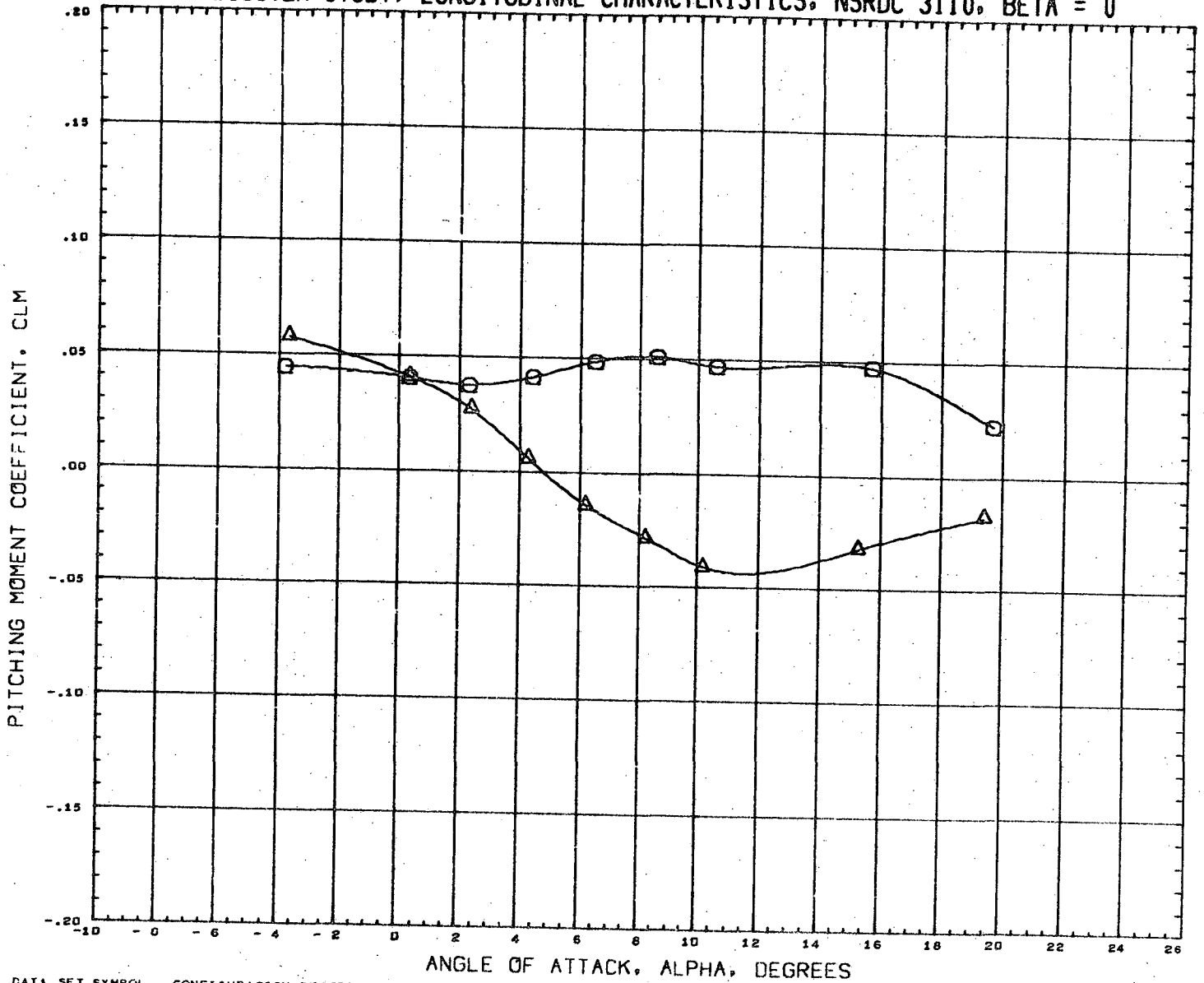
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2101)	NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1	15.000	1.000	3.000	1.000	SREF 1.5550 SQ.FT.
(RN2109)	NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1	15.000	2.000	3.000	1.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCENT

MACH 0.381

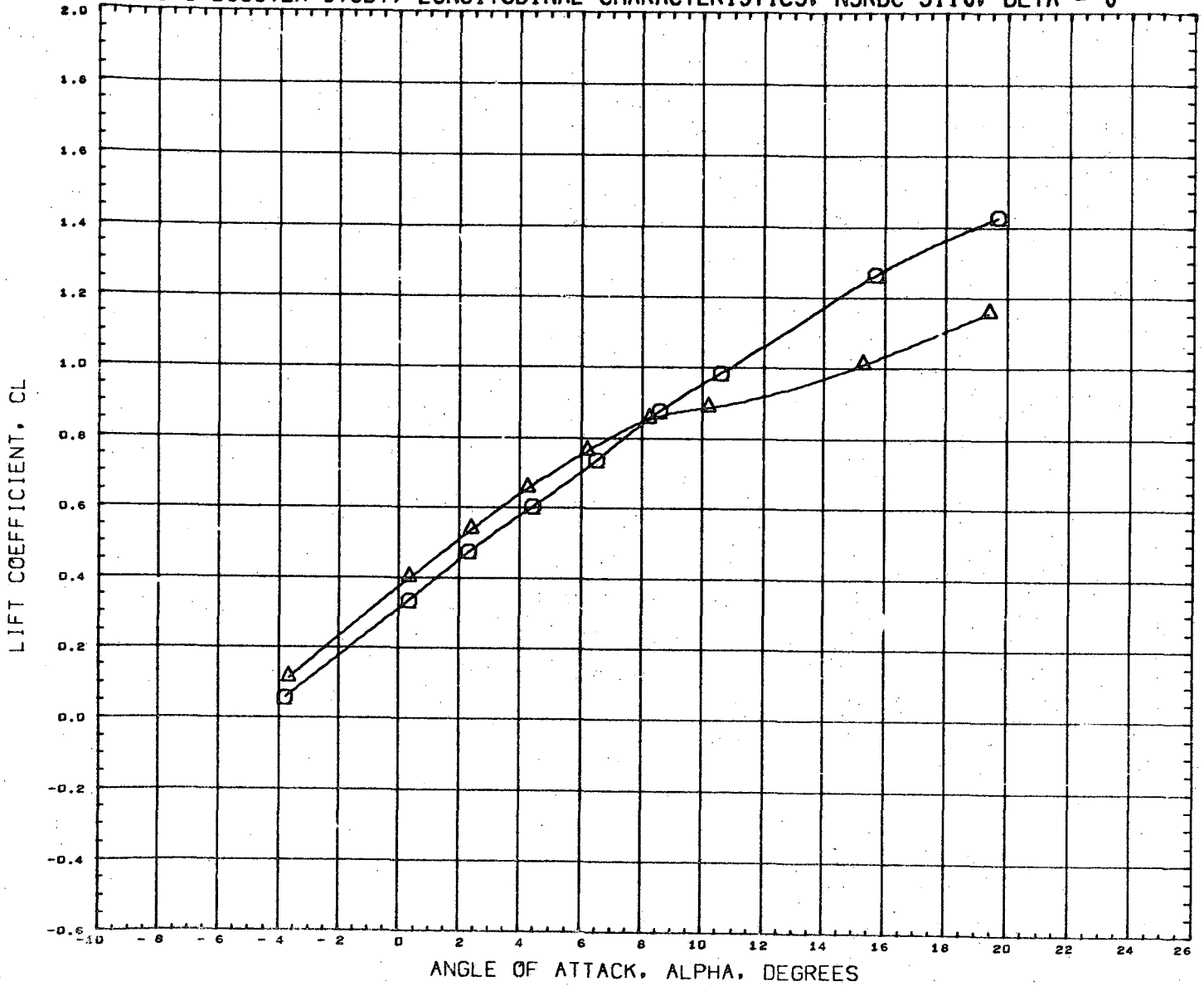
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2101)	NSRDC-3110,MSFC/LMSC BOOSTER B1C1F1W1V1	15.000	1.000	3.000	1.000	SREF 1.3550 SQ.FT.
(RN2109)	NSRDC-3110,MSFC/LMSC BOOSTER B1C1F1W1V1	15.000	2.000	3.000	1.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						YMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCENT

MACH 0.581

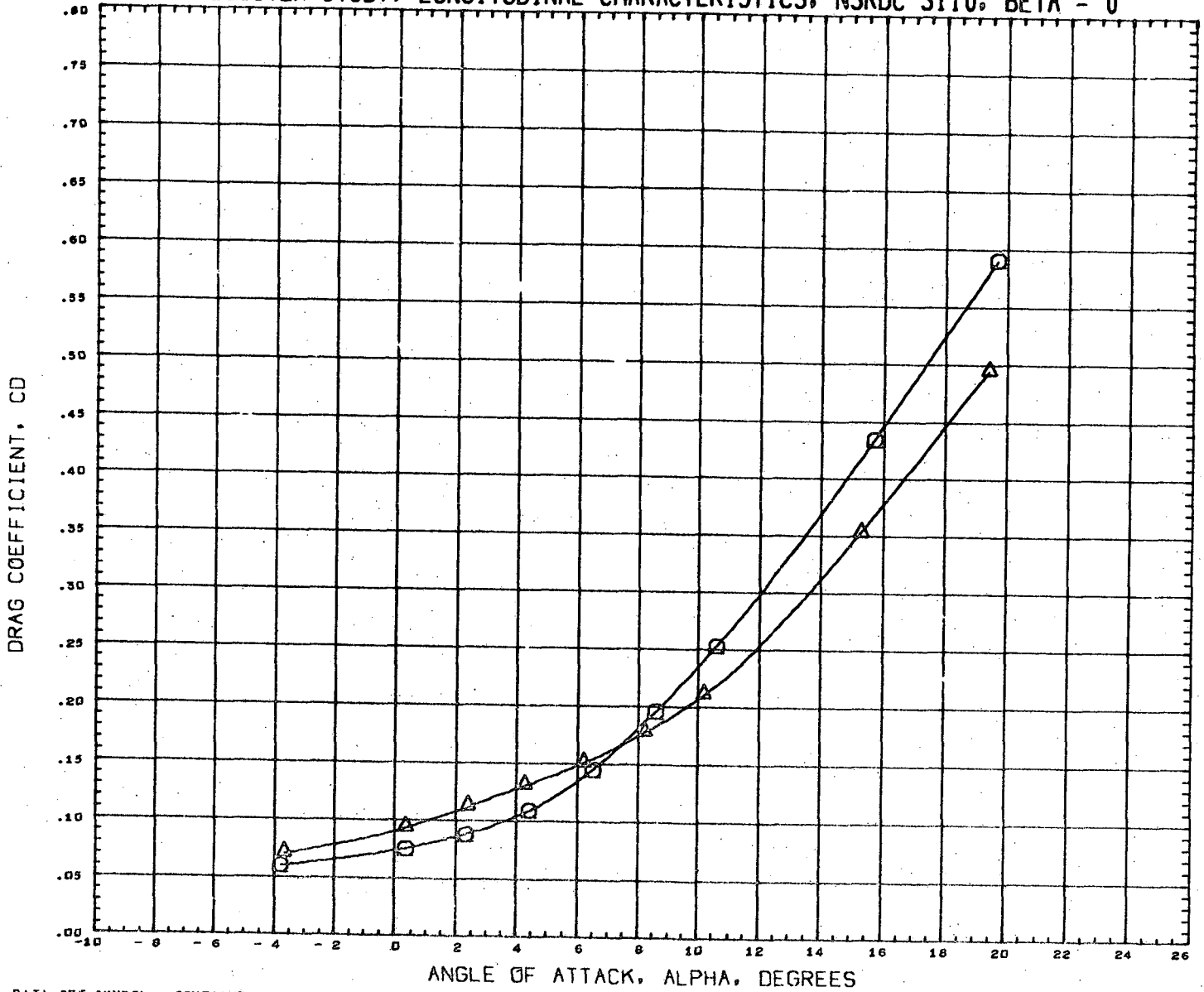
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2101)	NSRDC-3110,MSFC/LMSC BOOSTER B1C1F1W1V1	15.000	1.000	3.000	1.000	SREF 1.3550 SQ.FT. LREF 41.4360 INCHES
(RN2109)	NSRDC-3110,MSFC/LMSC BOOSTER B1C1F1W1V1	15.000	2.000	3.000	1.000	BREF 41.4360 INCHES XMRF 31.1400 INCHES YMRF 0.0000 INCHES ZMRF 0.2250 INCHES SCALE 1.5000 PERCENT

MAC: 0.381

LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL
(RN2101)
(RN2109)



CONFIGURATION DESCRIPTIO.
NSRDC-3110,MSFC/LMSC BOOSTER B1C1F1W1V1
NSRDC-3110,MSFC/LMSC BOOSTER B1C1F1W1V1

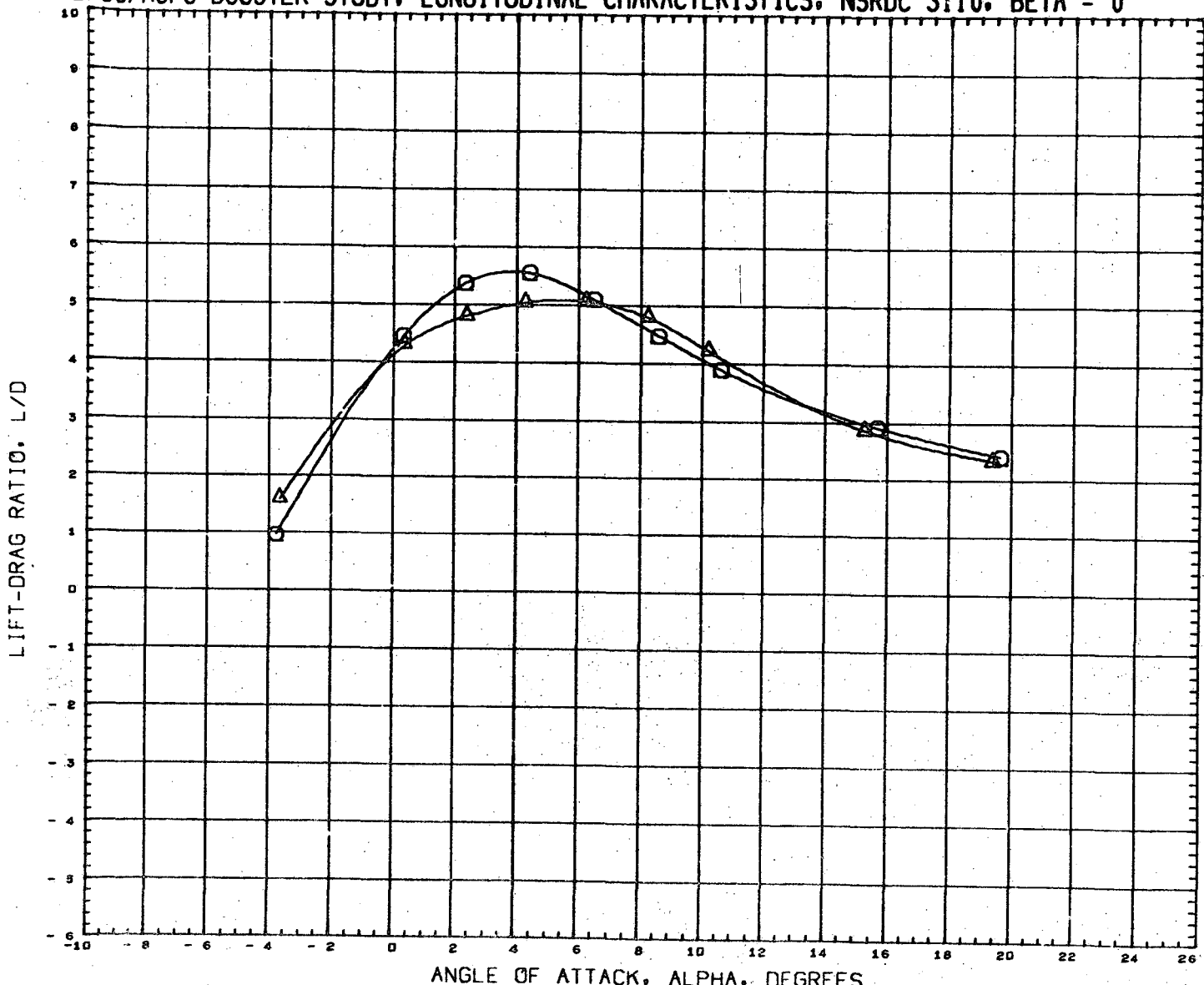
INCIDC	CNDPOS	INCIDW	WNGPOS
15.000	1.000	3.000	1.000
15.000	2.000	3.000	1.000

REFERENCE INFORMATION

SREF	1.3550	SQ. FT.
LREF	41.4360	INCHES
BREF	41.4360	INCHES
XMRP	31.1400	INCHES
YMRP	0.0000	INCHES
ZMRP	0.2250	INCHES
SCALE	1.5000	PERCENT

MACH 0.381

LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0

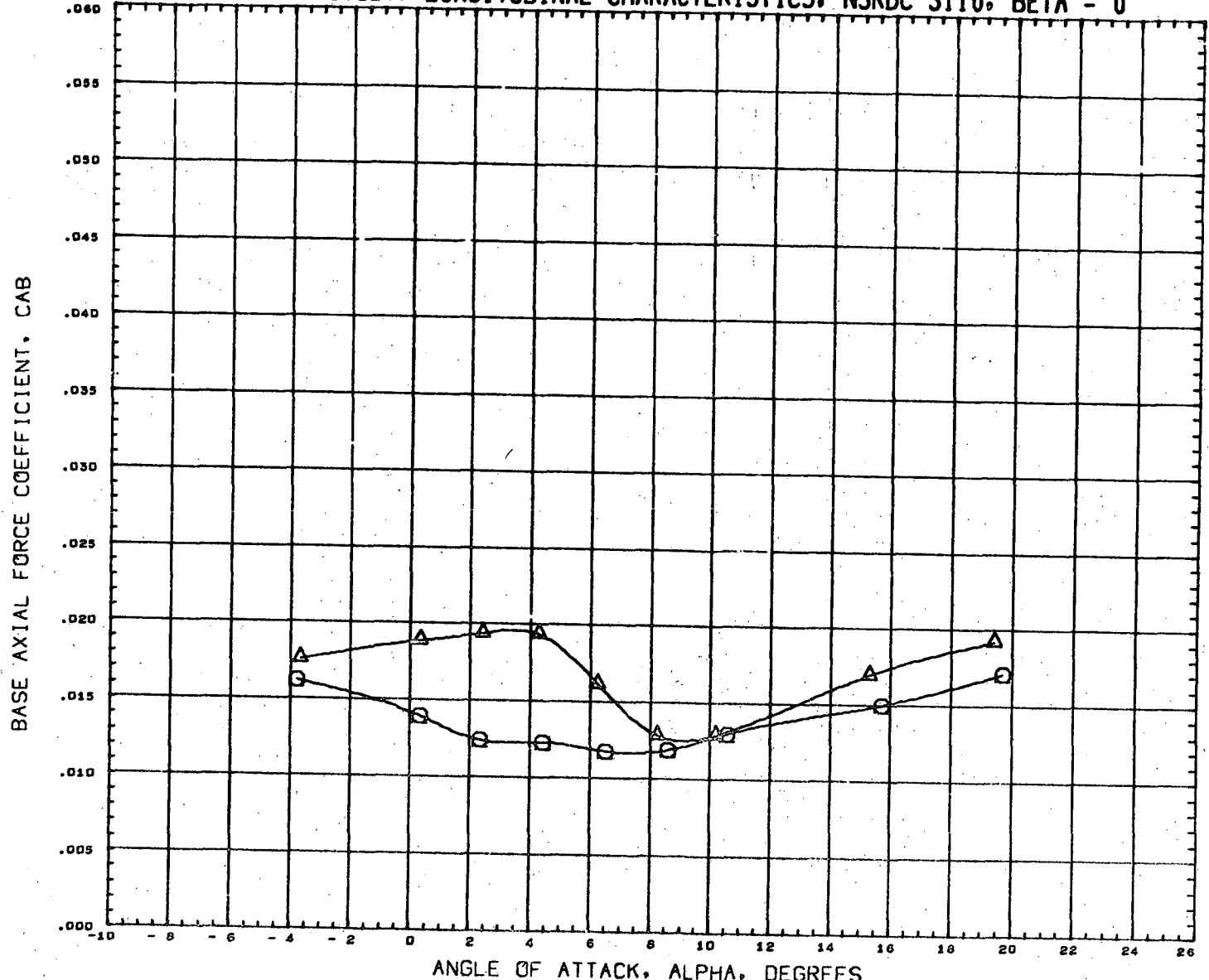


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2101)	NSRDC-3110,MSFC/LMSC BOOSTER B1C1F1W1V1	15.000	1.000	3.000	1.000	SREF 1.3550 SQ.FT.
(RN2109)	NSRDC-3110,MSFC/LMSC BOOSTER B1C1F1W1V1	15.000	2.000	3.000	1.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCENT

MACH 0.381

6

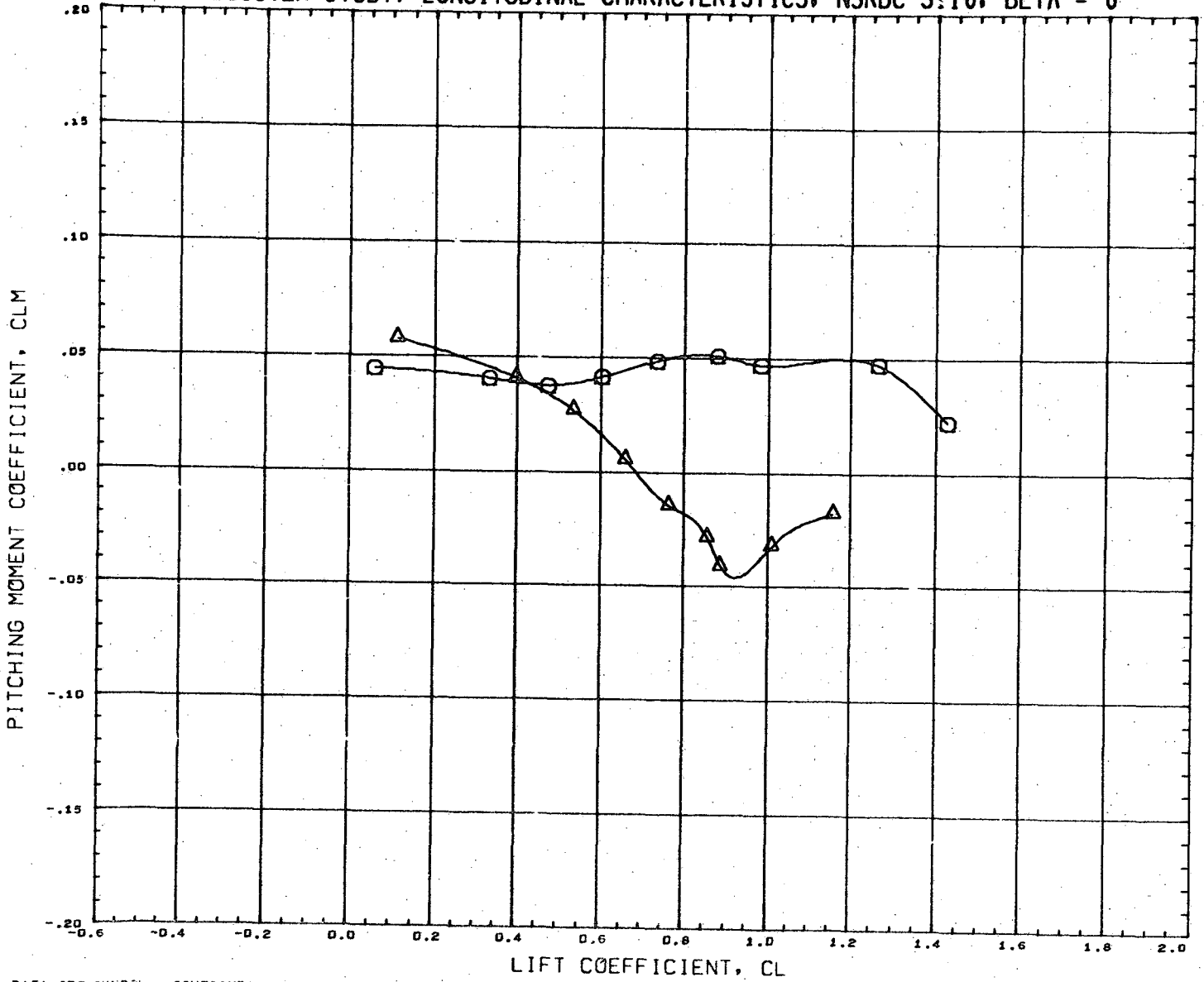
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2101)	NSRDC-3110,MSFC/LMSC BOOSTER B1C1F1W1V1	15.000	1.000	3.000	1.000	SREF 1.3550 SQ.FT.
(RN2109)	NSRDC-3110,MSFC/LMSC BOOSTER B1C1F1W1V1	15.000	2.000	3.000	1.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCNT

MACH 0.381

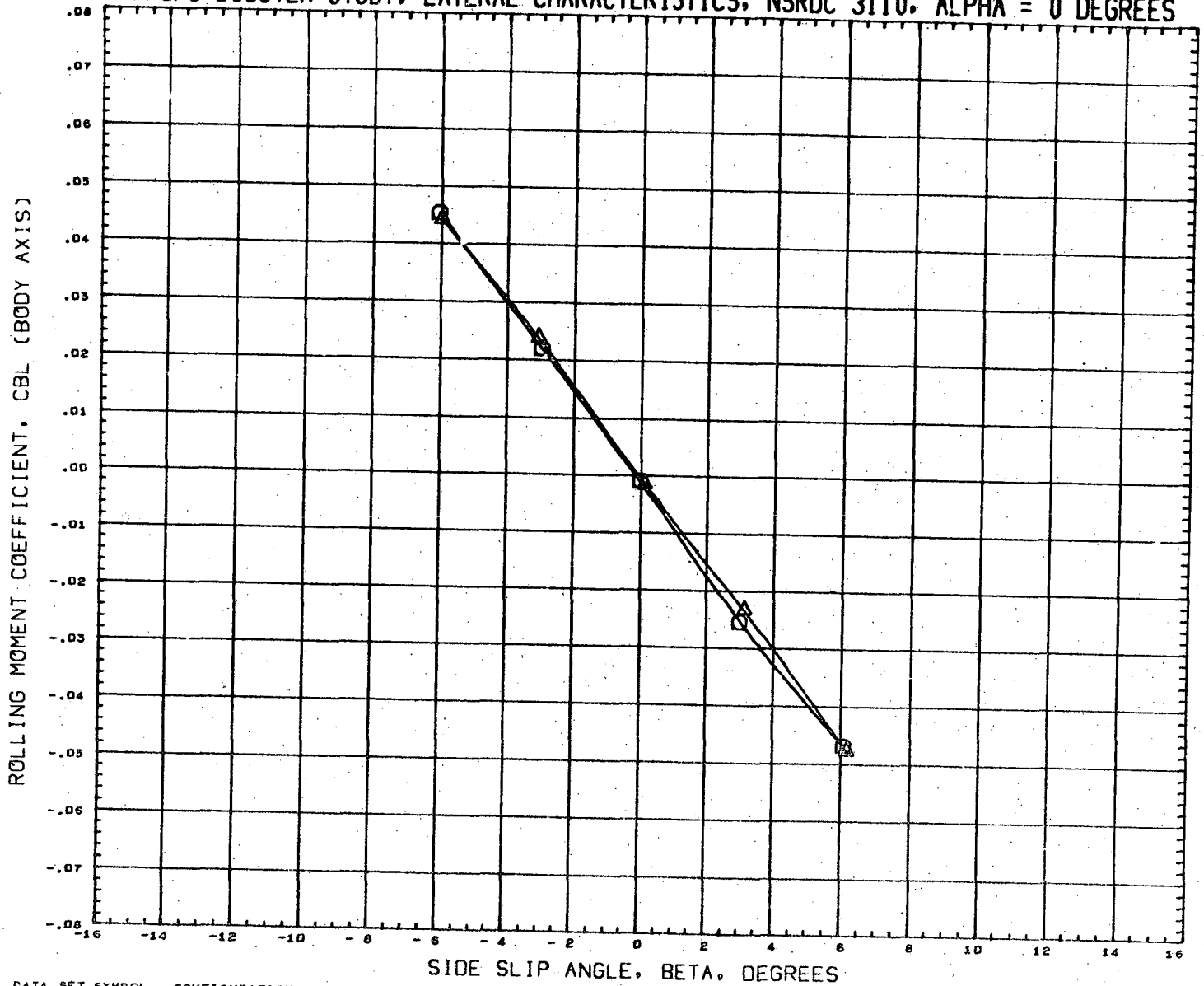
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2101)	NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1	15.000	1.000	3.000	1.000	SREF 1.3550 SQ.FT.
(RN2109)	NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1	15.000	2.000	3.000	1.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCENT

MACH 0.381

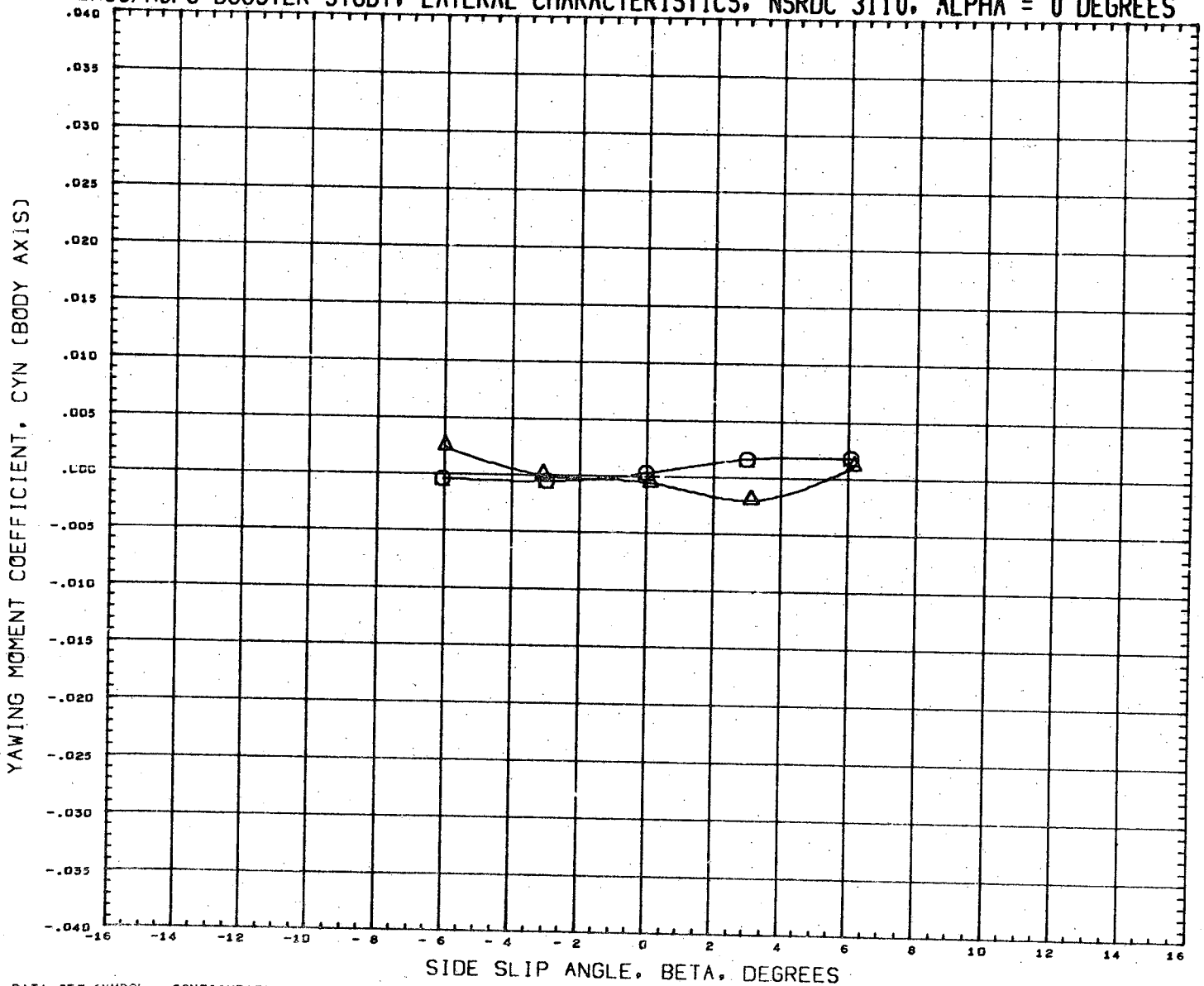
LMSC/MSFC BOOSTER STUDY, LATERAL CHARACTERISTICS, NSRDC 3110, ALPHA = 0 DEGREES





DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION	
(RN2102)	NSRDC-3110,MSFC/LMSC BOOSTER B1C1F1W1V1	15.000	1.000	3.000	1.000	SREF	1.3550 SQ.FT.
(RN2110)	NSRDC-3110,MSFC/LMSC BOOSTER B1C1F1W1V1	15.000	2.000	3.000	1.000	LREF	41.4360 INCHES
						BREF	41.4360 INCHES
						XMRP	31.1400 INCHES
						YMRP	0.0000 INCHES
						ZMRP	0.2250 INCHES
						SCALE	1.5000 PERCENT

MACH 0.380

LMSC/MSFC BOOSTER STUDY, LATERAL CHARACTERISTICS, NSRDC 3110, ALPHA = 0 DEGREES



DATA SET SYMBOL
(RN2102) 
(RN2110) 

CONFIGURATION DESCRIPTION
NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1
NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1

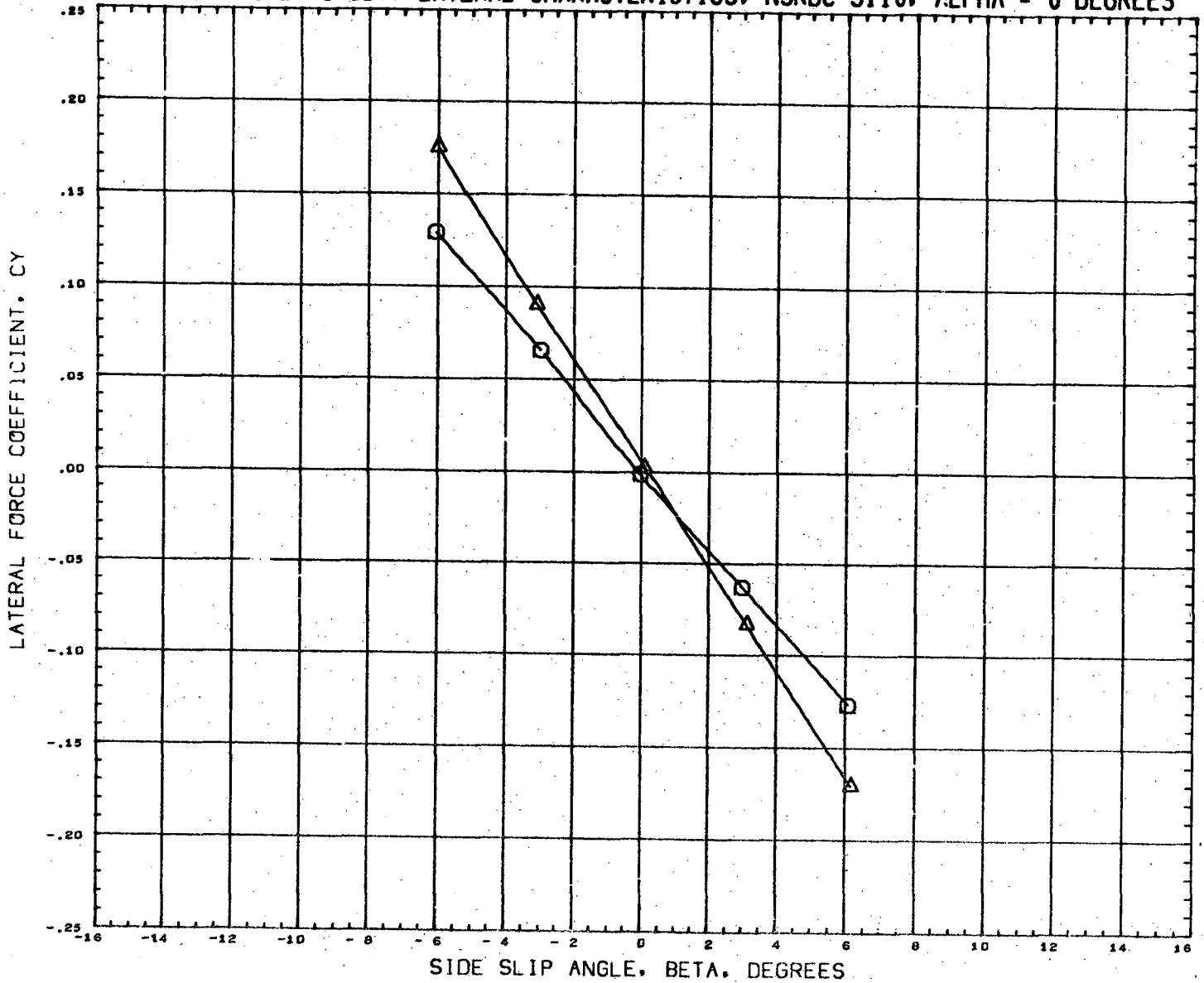
INCIDC	CNDPOS	INCIDW	WNGPOS
15.000	1.000	3.000	1.000
15.000	2.000	3.000	1.000

REFERENCE INFORMATION

SREF	1.3550	SQ. FT.
LREF	41.4360	INCHES
BREF	41.4360	INCHES
XMRF	31.1400	INCHES
YMRF	0.0000	INCHES
ZMRF	0.2250	INCHES
SCALE	1.5000	PERCENT

MACH 0.380

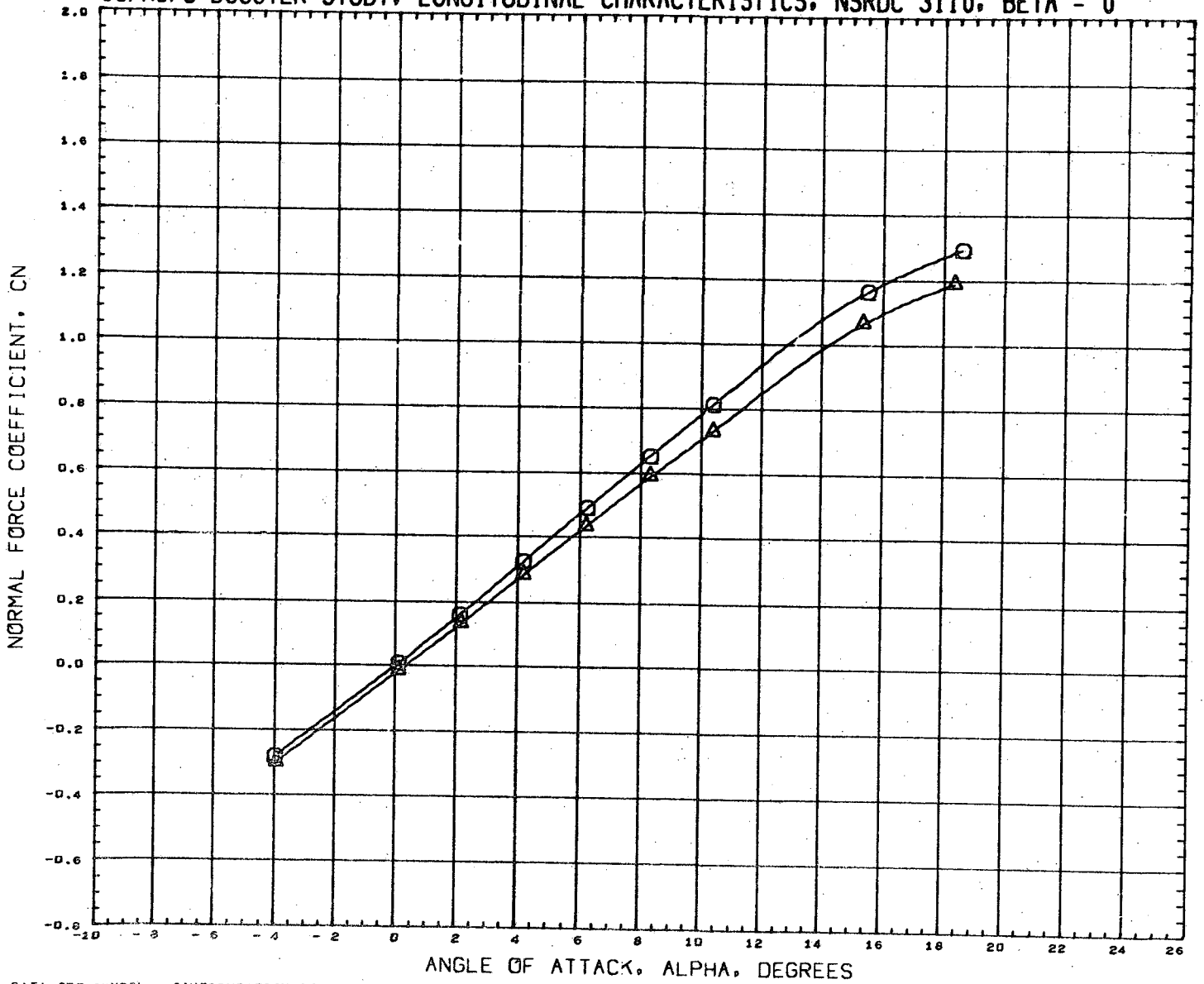
LMSC/MSFC BOOSTER STUDY, LATERAL CHARACTERISTICS, NSRDC 3110, ALPHA = 0 DEGREES



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPCS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2102)	NSRDC-3110,MSFC/LMSC BOOSTER B1C1F1W1V1	15.000	1.000	3.000	1.000	SREF 1.3550 SQ.FT.
(RN2110)	NSRDC-3110,MSFC/LMSC BOOSTER B1C1F1W1V1	15.000	2.000	3.000	1.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCNT

MACH 0.380

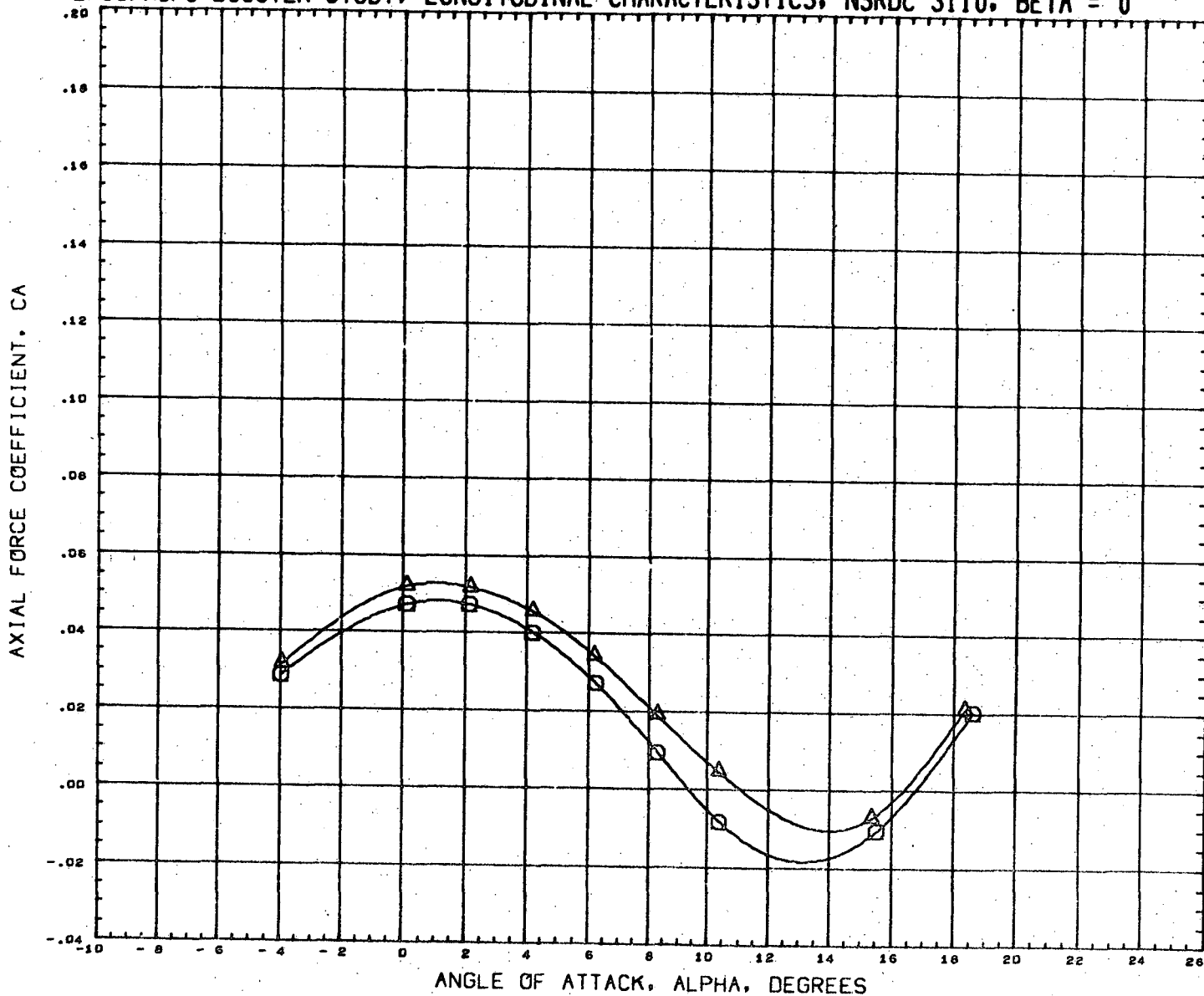
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION	
(R2081)	NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1	3.000	1.000	0.000	2.000	SREF	1.3550 SQ. FT.
(R2089)	NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1	3.000	2.000	0.000	2.000	LREF	41.4360 INCHES
						BREF	41.4360 INCHES
						XMRP	31.1400 INCHES
						YMRP	0.0000 INCHES
						ZMRP	0.2250 INCHES
						SCALE	1.5000 PERCENT

MACH 0.380

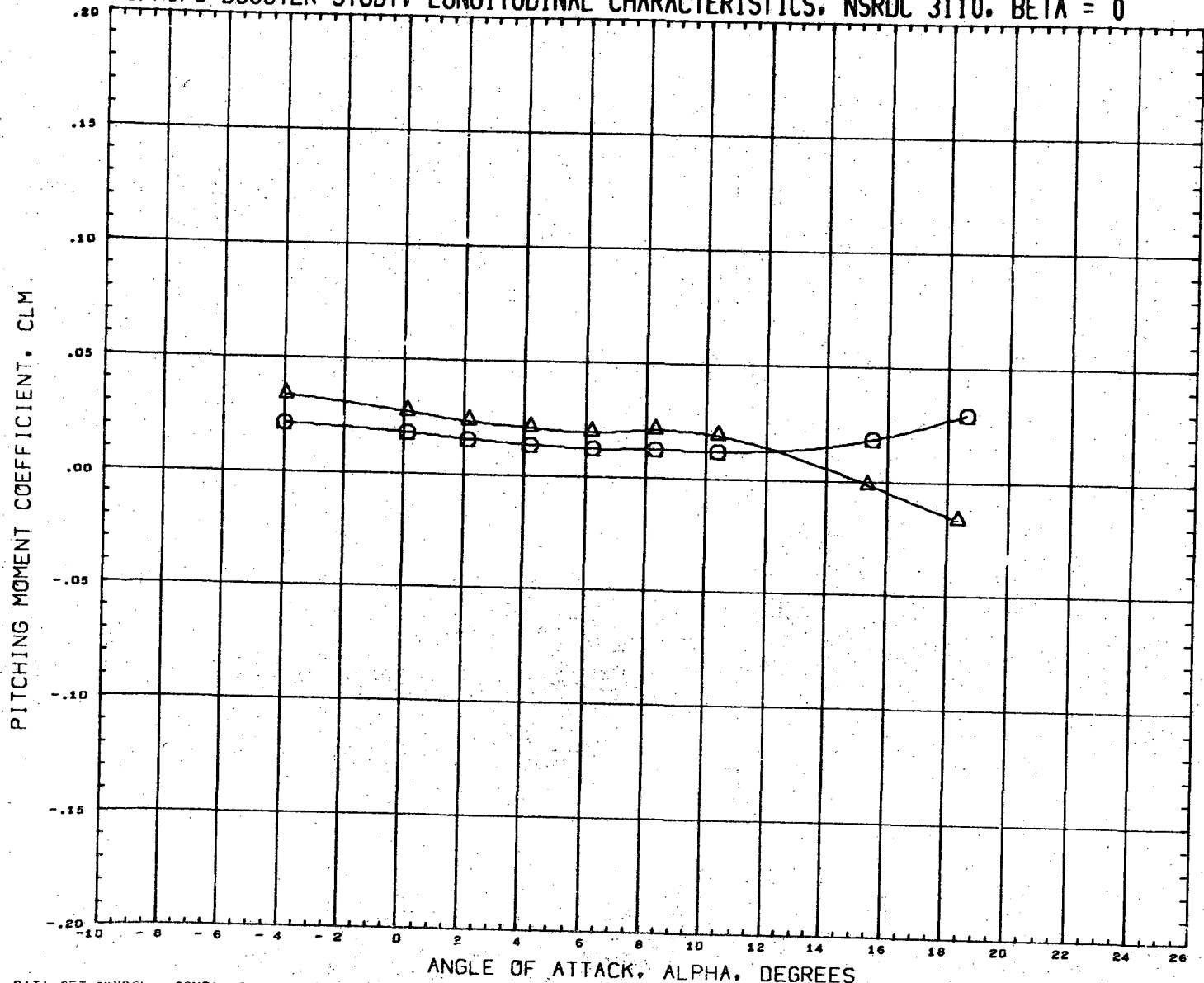
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2081)	NSRDC-3110,MSFC/LMSC BOOSTER B1C1F1W1V1	3.000	1.000	0.000	2.000	SREF 1.3550 SQ.FT.
(RN2089)	NSRDC-3110,MSFC/LMSC BOOSTER B1C1F1W1V1	3.000	2.000	0.000	2.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2230 INCHES
						SCALE 1.5000 PERCENT

MACH 0.380

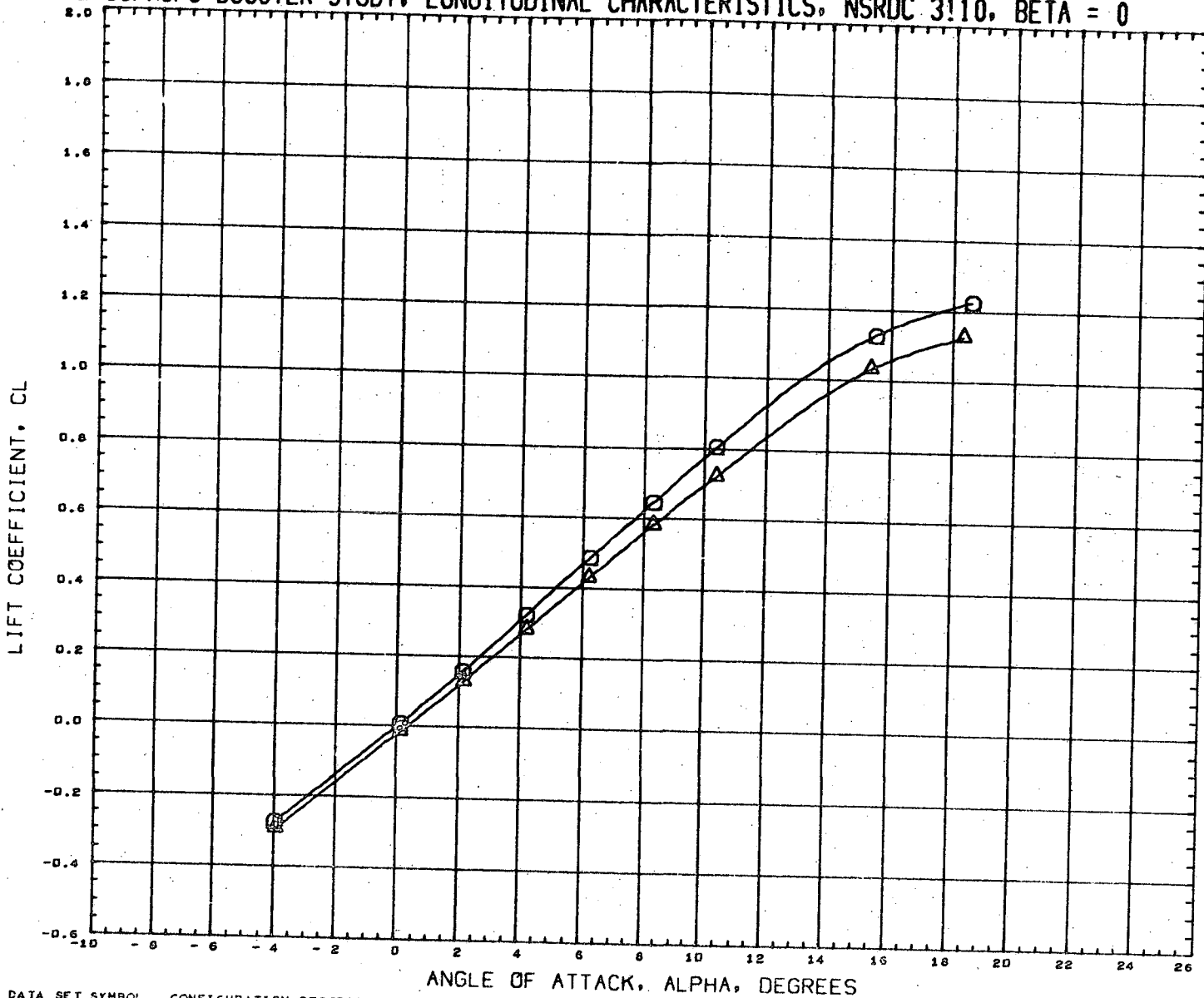
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2081)	NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1	3.000	1.000	0.000	2.000	SREF 1.3550 SQ. FT.
(RN2039)	NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1	3.000	2.000	0.000	2.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1460 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCENT

MACH 0.380

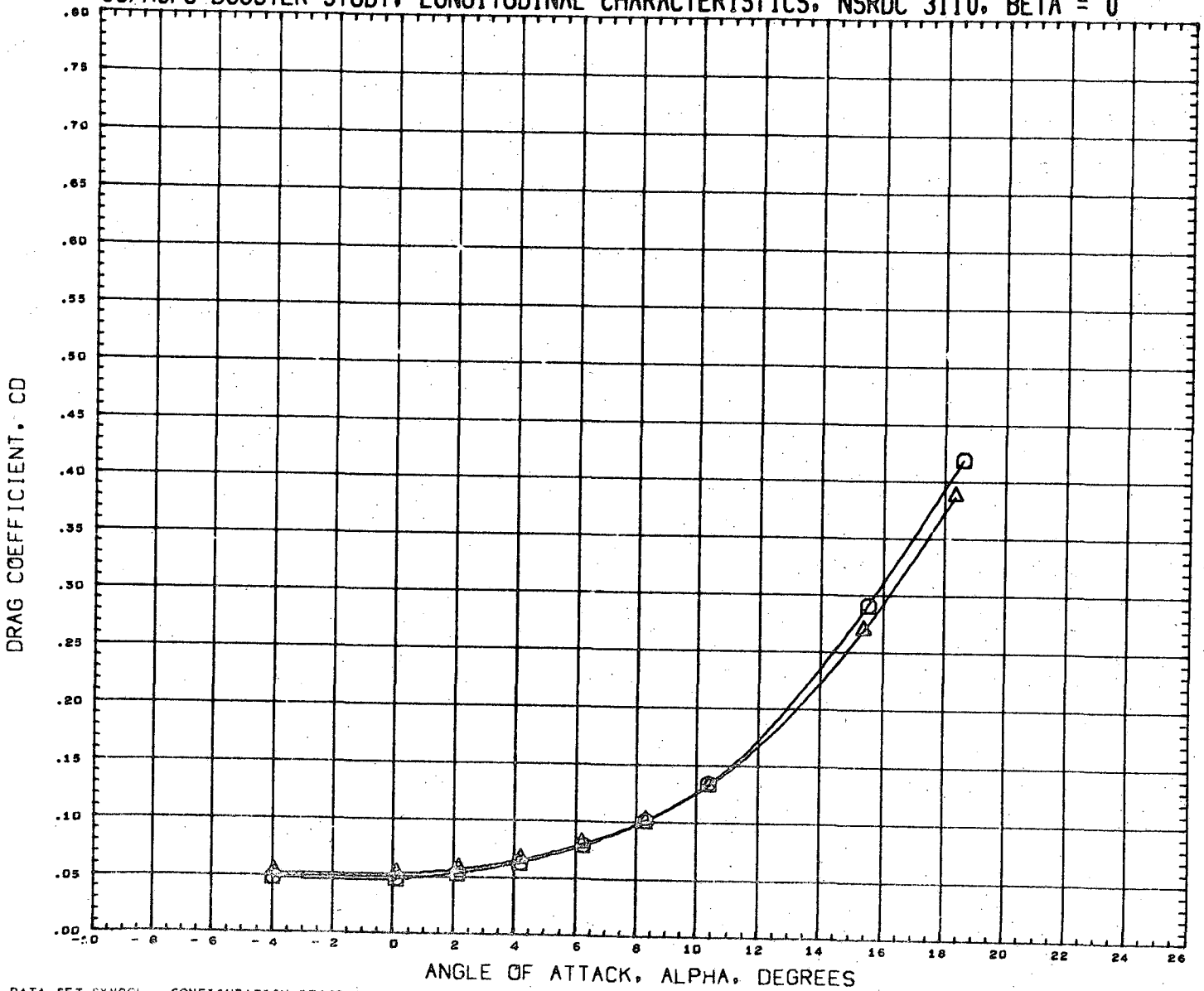
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2081)	NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1	3.000	1.000	0.000	2.000	SREF 1.3550 SQ. FT.
(RN2089)	NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1	3.000	2.000	0.000	2.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCENT

MACH 0.380

LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(R2081)	NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1	3.000	1.000	0.000	2.000	SREF 1.3550 SQ. FT.
(R2089)	NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1	3.000	2.000	0.000	2.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCENT

MACH 0.380

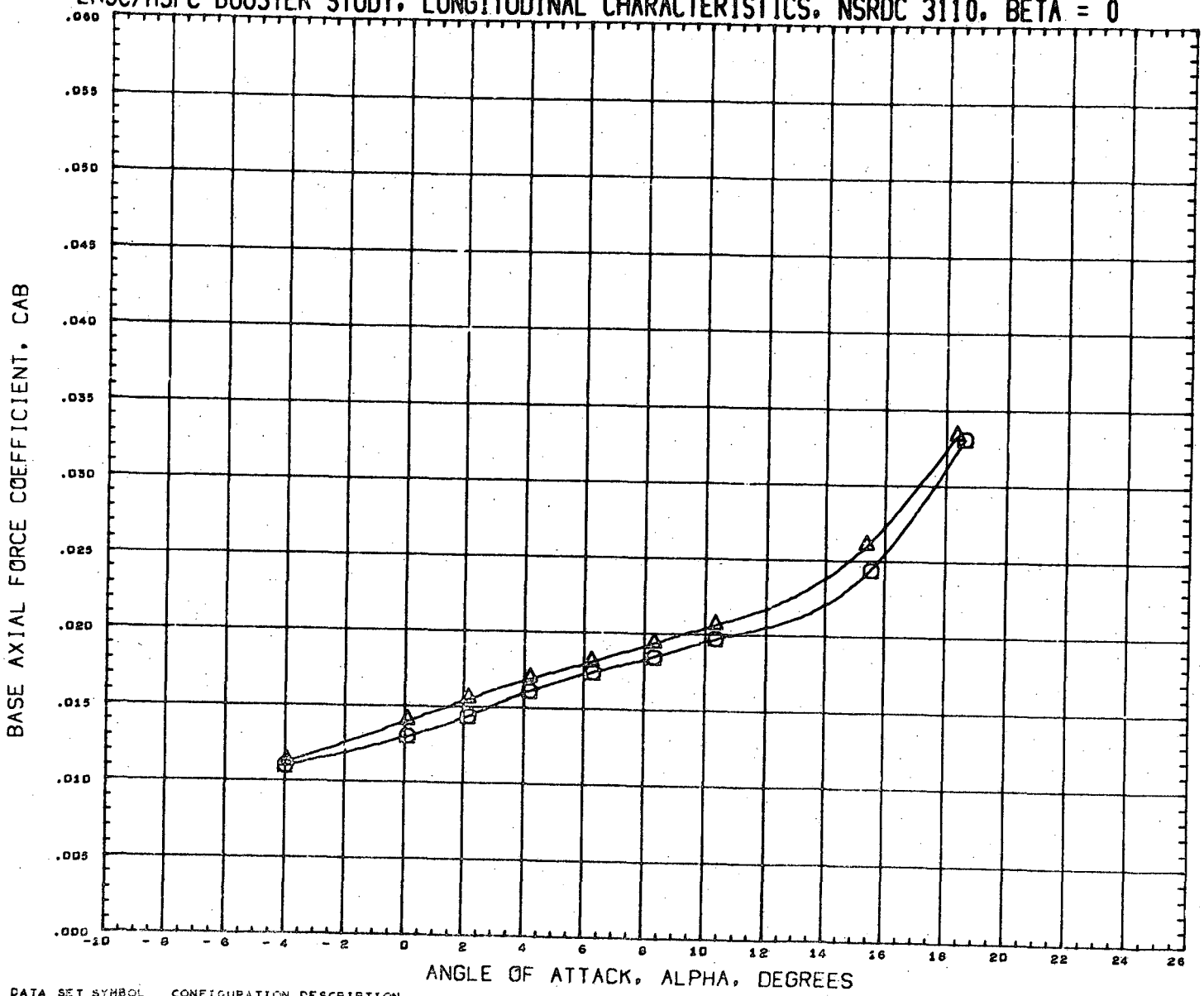
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2081)	NSRDC-3110,MSFC/LMSC BOOSTER B1C1F1W1V1	3.000	1.000	0.000	2.000	SREF 1.3550 SQ.FT.
(RN2089)	NSRDC-3110,MSFC/LMSC BOOSTER B1C1F1W1V1	3.000	2.000	0.000	2.000	LREF 41.4350 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCNT

MACH 0.380

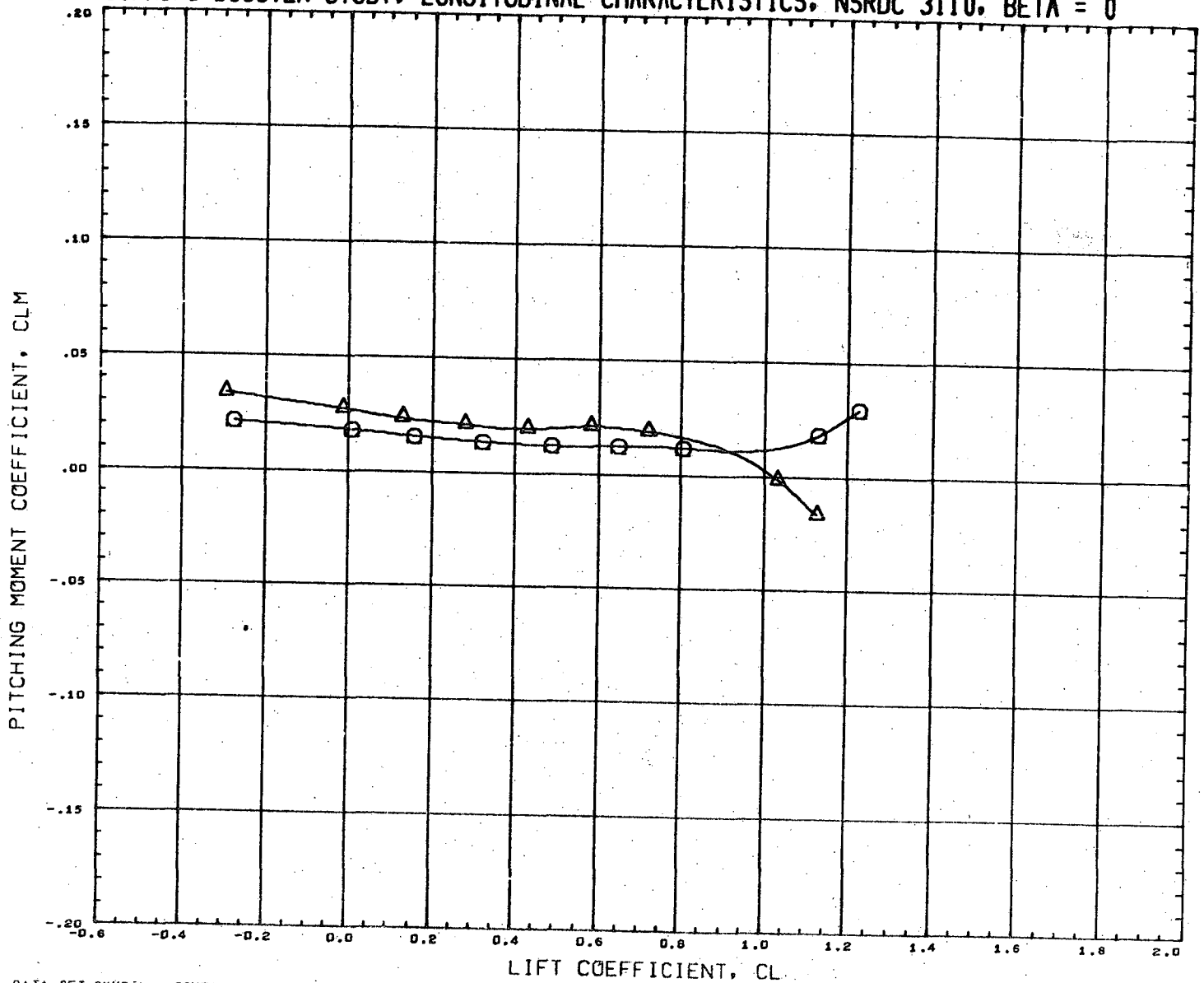
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2081)	NSRDC-3110,MSFC/LMSC BOOSTER B1C1F1W1V1	3.000	1.000	0.000	2.000	SREF 1.3550 SQ.FT.
(RN2009)	NSRDC-3110,MSFC/LMSC BOOSTER B1C1F1W1V1	3.000	2.000	0.000	2.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCENT

MACH 0.380

LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



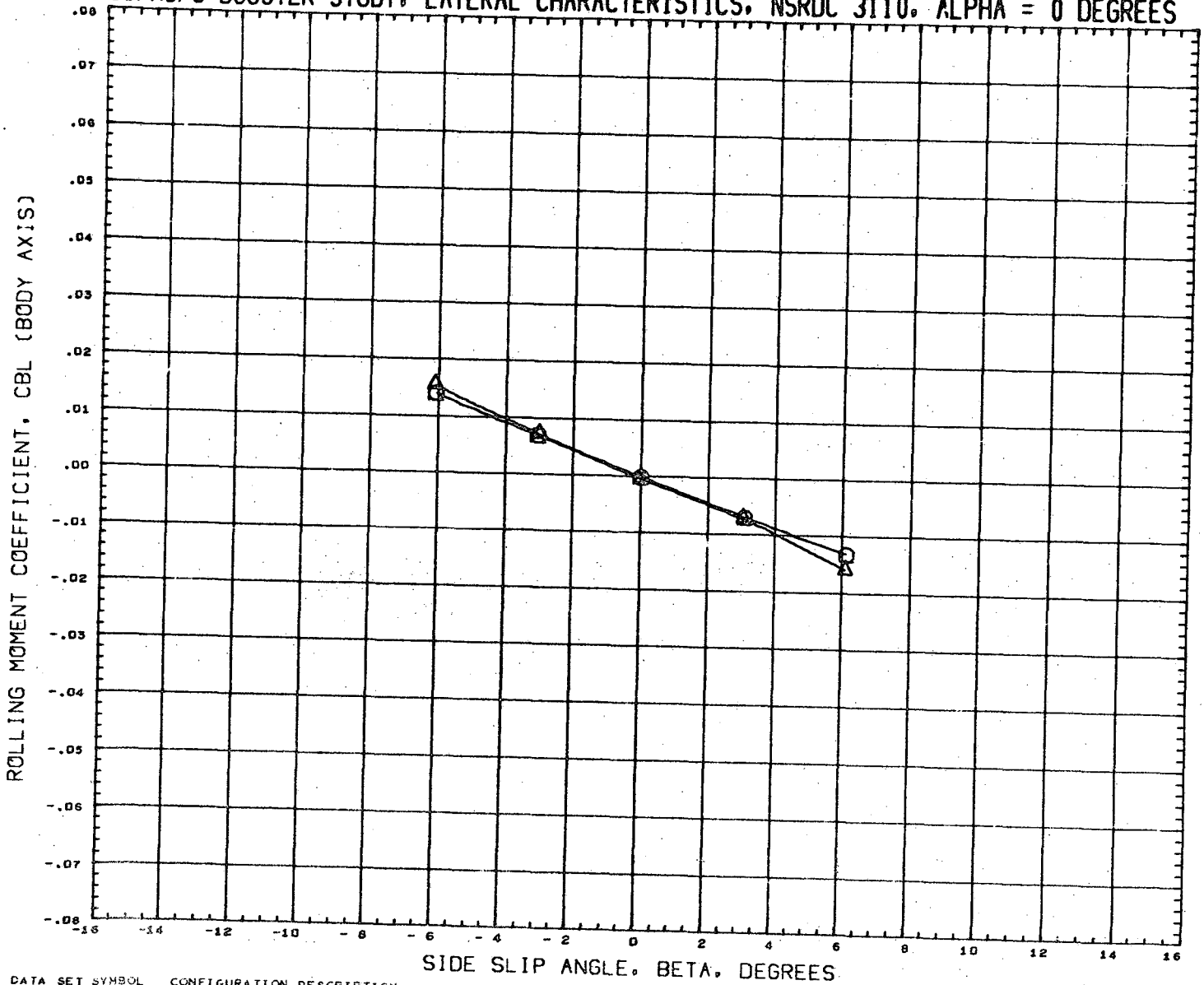
DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(RN2081) \bigcirc	NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1
(RN2089) \triangle	NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1

INCIDC	CNDPOS	INCIDW	WNGPOS
3.000	1.000	0.000	2.000
3.000	2.000	0.000	2.000

REFERENCE INFORMATION		
SREF	1.3550	SQ. FT.
LREF	41.4360	INCHES
BREF	41.4360	INCHES
XMRP	31.1400	INCHES
YMRP	0.0000	INCHES
ZMRP	0.2250	INCHES
SCALE	1.5000	PERCENT

MACH 0.380

LMSC/MSFC BOOSTER STUDY, LATERAL CHARACTERISTICS, NSRDC 3110, ALPHA = 0 DEGREES



DATA SET SYMBOL
(RN2092)
(RN2090)



CONFIGURATION DESCRIPTION
NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1
NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1

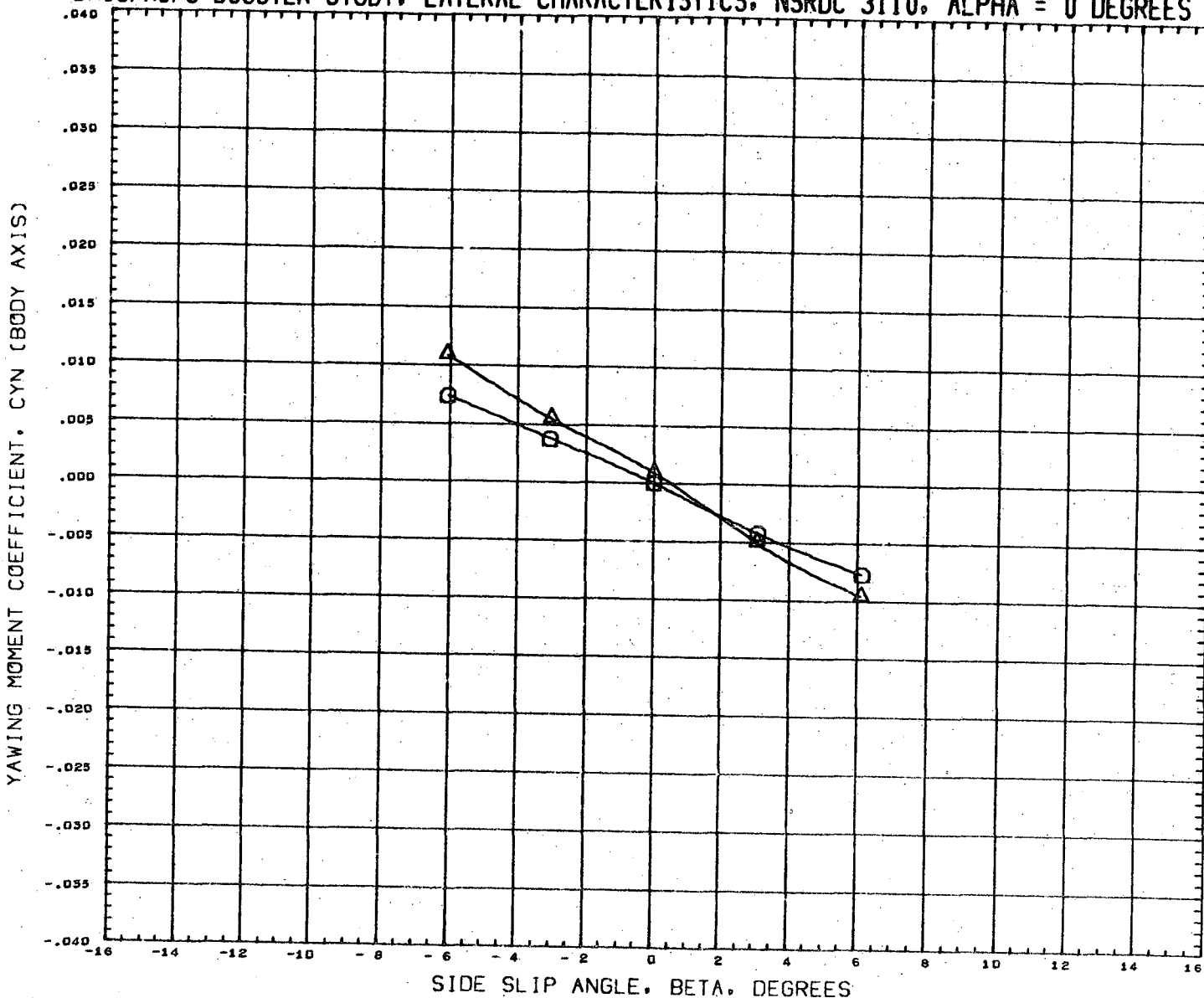
INCIDC	CNDPOS	INCIDW	WNGPOS
3.000	1.000	0.000	2.000
3.000	2.000	0.000	2.000

REFERENCE INFORMATION

SREF	1.3550	SQ. FT.
LREF	41.4360	INCHES
BREF	41.4360	INCHES
XMRP	31.1400	INCHES
YMRP	0.0000	INCHES
ZMRP	0.2250	INCHES
SCALE	1.5000	PERCENT

MACH 0.380

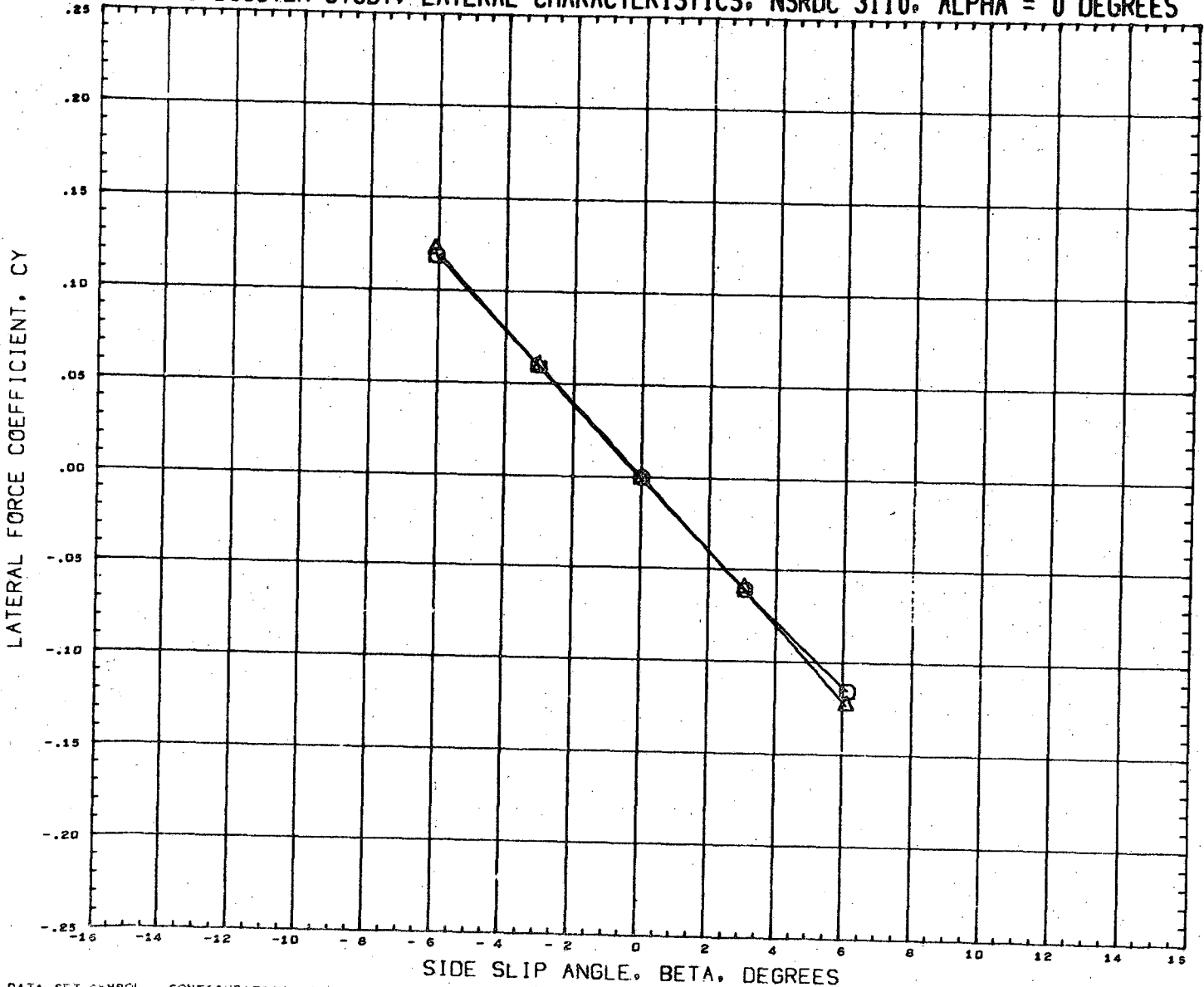
LMSC/MSFC BOOSTER STUDY, LATERAL CHARACTERISTICS, NSRDC 3110, ALPHA = 0 DEGREES



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2082)	NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1	3.000	1.000	0.000	2.000	SREF 1.3550 SQ. FT.
(RN2090)	NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1	3.000	2.000	0.000	2.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCENT

MACH 0.360

LMSC/MSFC BOOSTER STUDY, LATERAL CHARACTERISTICS, NSRDC 3110, ALPHA = 0 DEGREES



DATA SET SYMBOL
 (RN2082) \square
 (RN2090) \triangle

CONFIGURATION DESCRIPTION
 NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1
 NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1

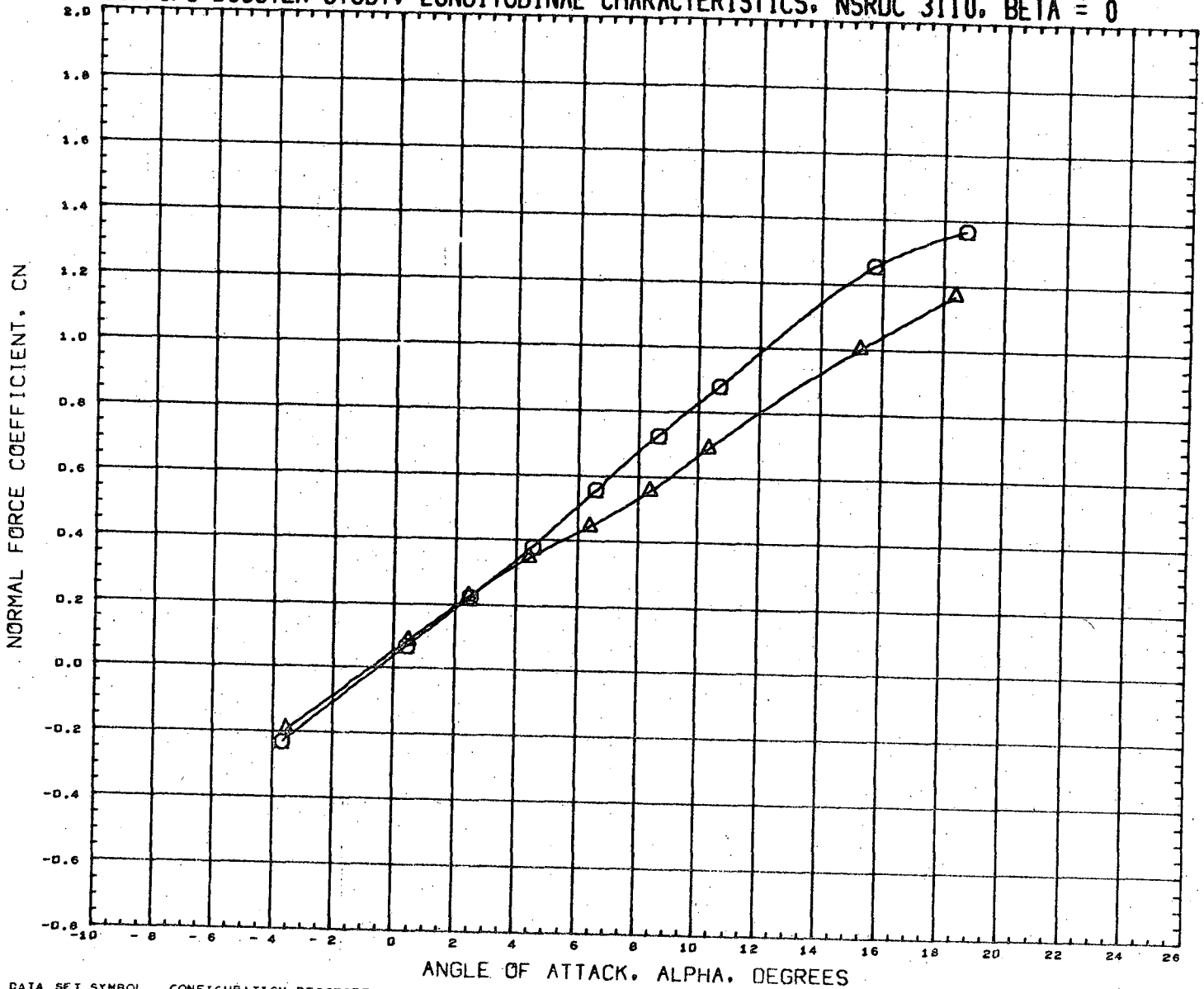
INCIDC	CNDPOS	INCIDW	WNGPOS
3.000	1.000	0.000	2.000
3.000	2.000	0.000	2.000

REFERENCE INFORMATION

SREF	1.3550	SQ. FT.
LREF	41.4360	INCHES
BREF	41.4360	INCHES
XMRP	31.1400	INCHES
YMRP	0.0000	INCHES
ZMRP	0.2250	INCHES
SCALE	1.5000	PERCENT

MACH 0.380

LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL
(RN2085) ○
(RN2093) △

CONFIGURATION DESCRIPTION
NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1
NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1

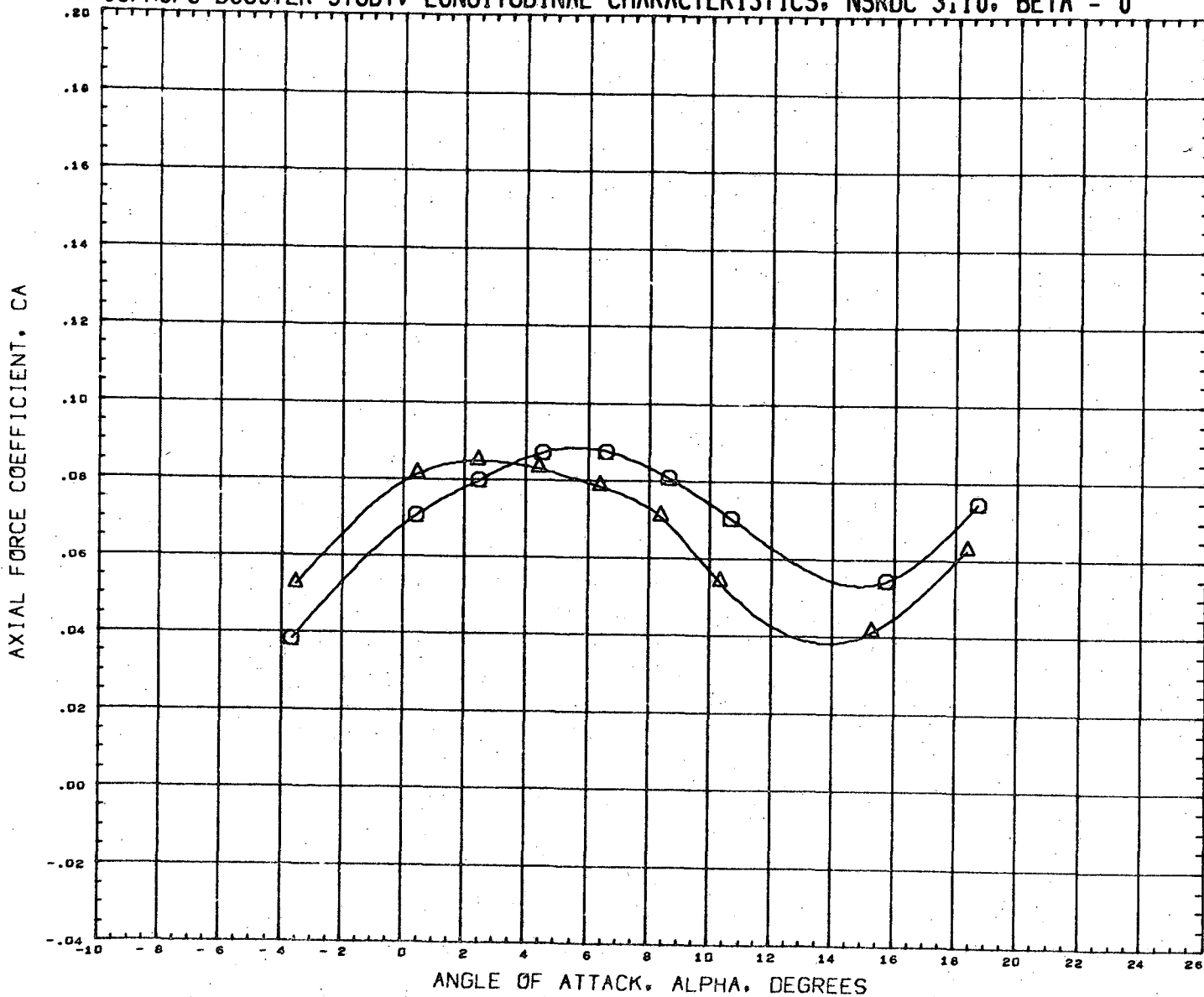
INCIDC	CNDPOS	INCIDW	WNGPOS
15.000	1.000	0.000	2.000
15.000	2.000	0.000	2.000

REFERENCE INFORMATION

SREF	1.3550	SQ. FT.
LREF	41.4360	INCHES
BREF	41.4360	INCHES
XMRF	31.1400	INCHES
YMRF	0.0000	INCHES
ZMRF	0.2250	INCHES
SCALE	1.5000	PERCENT

MACH 0.381

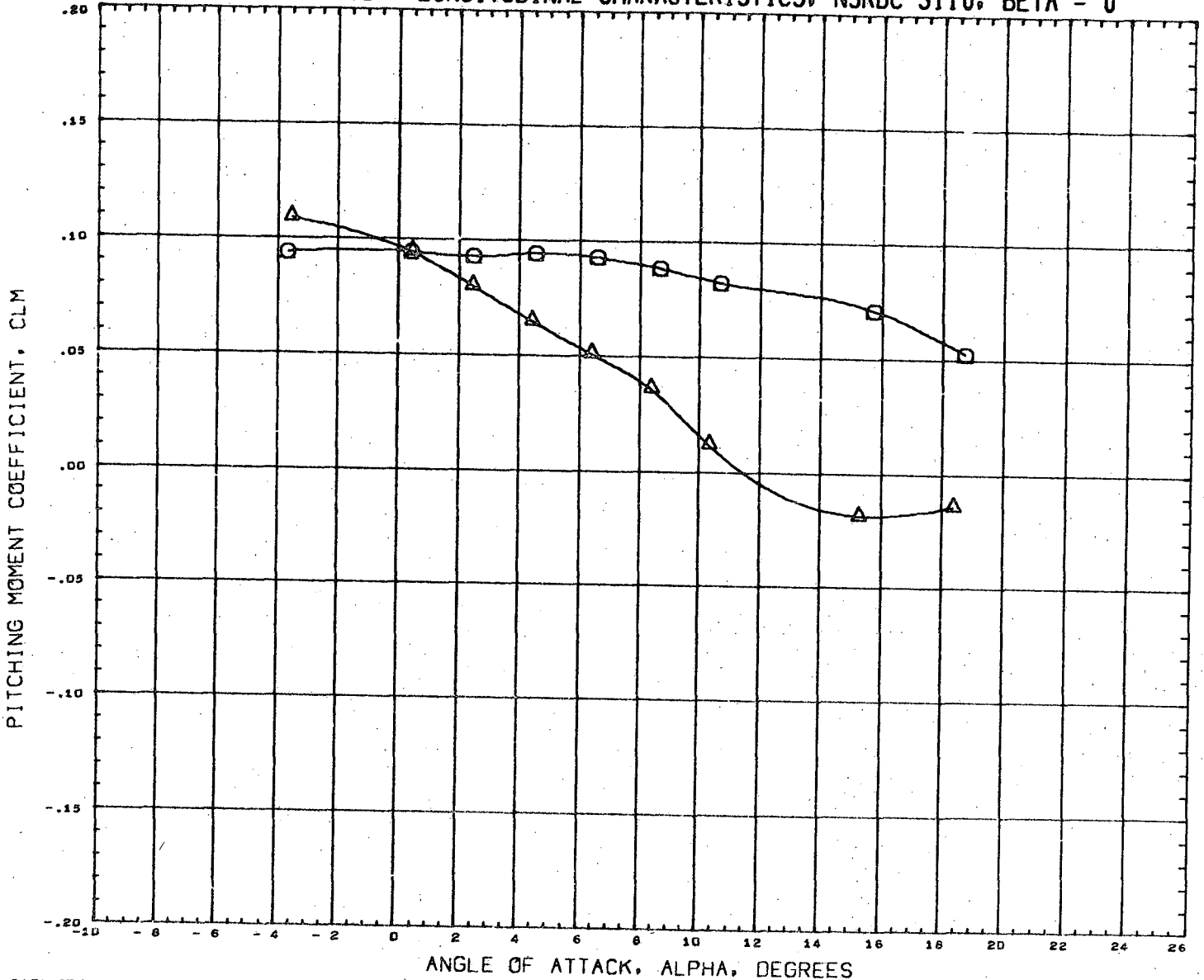
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3:10, BETA = 0



DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CMDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2085)	○	NSRDC-3110,MSFC/LMSC BOOSTER B1C1F1W1V1	15.000	1.000	0.000	2.000	SREF 1.3550 SQ.FT.
(RN2093)	△	NSRDC-3110,MSFC/LMSC BOOSTER B1C1F1W1V1	15.000	2.000	0.000	2.000	LREF 41.4360 INCHES
							BREF 41.4360 INCHES
							XMRP 31.1400 INCHES
							YMRP 0.0000 INCHES
							ZMRP 0.2250 INCHES
							SCALE 1.5000 PERCNT

MACH 0.361

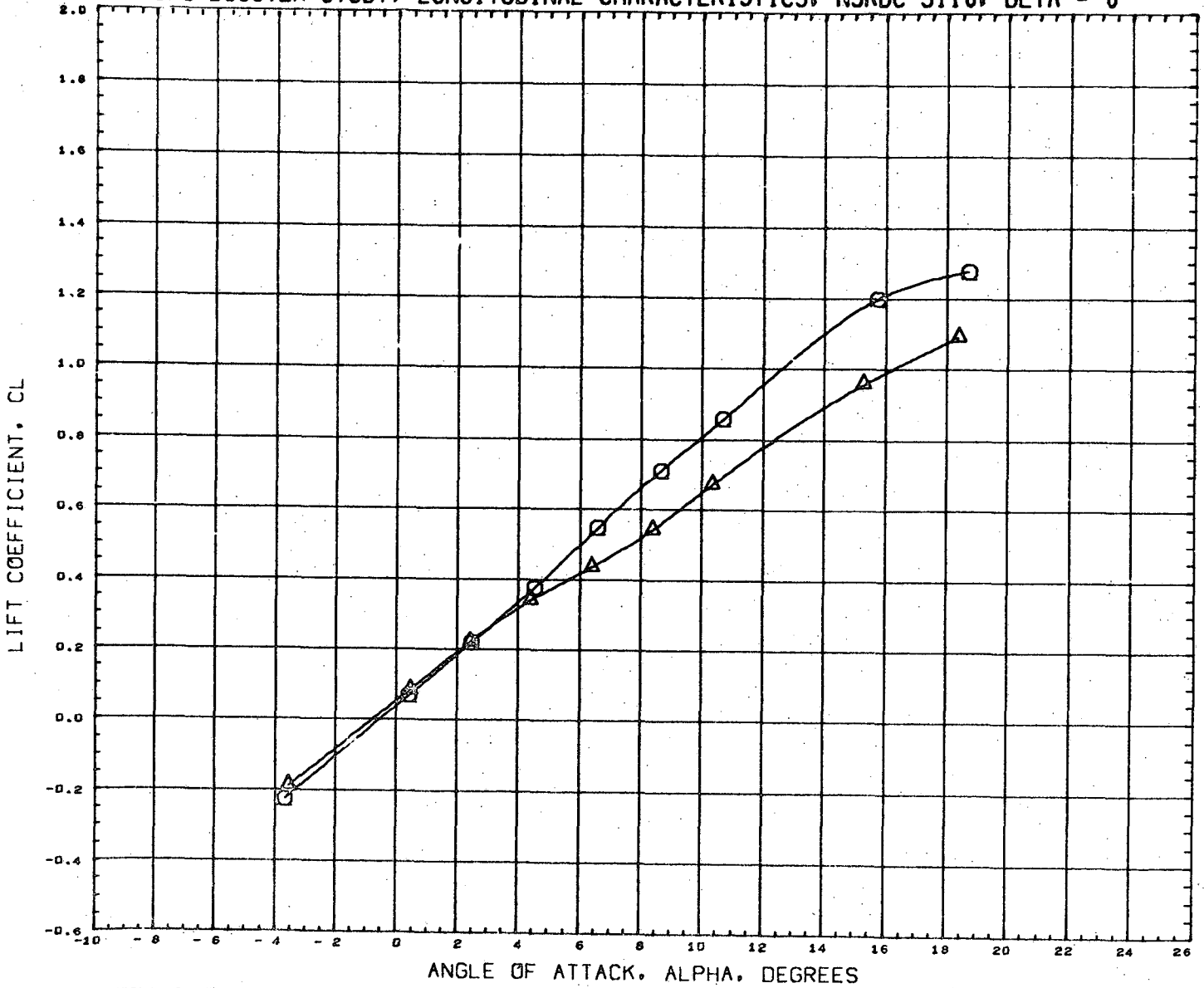
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION	
(RN2085)	NSRDC-3110,MSFC/LMSC BOOSTER B1C1F1W1V1	15.000	1.000	0.000	2.000	SREF	1.3550 SQ.FT.
(RN2093)	NSRDC-3110,MSFC/LMSC BOOSTER B1C1F1W1V1	15.000	2.000	0.000	2.000	LREF	41.4360 INCHES
						BREF	41.4360 INCHES
						XMRP	31.1400 INCHES
						YMRP	0.0000 INCHES
						ZMRP	0.2250 INCHES
						SCALE	1.5000 PERCENT

MACH 0.381

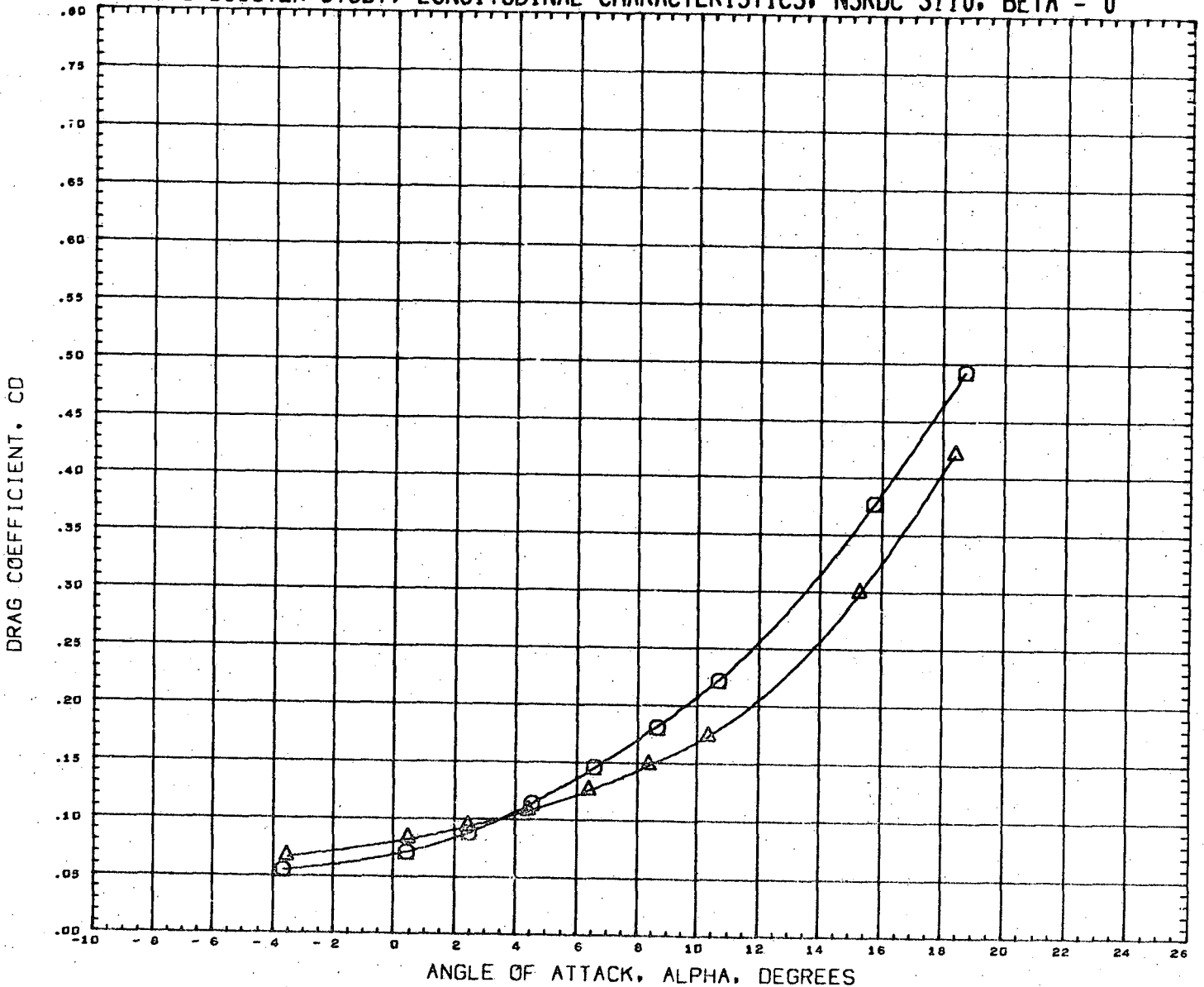
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2085)	NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1	15.000	1.000	0.000	2.000	SREF 1.3550 SQ.FT.
(RN2093)	NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1	15.000	2.000	0.000	2.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCNT

MACH 0.381

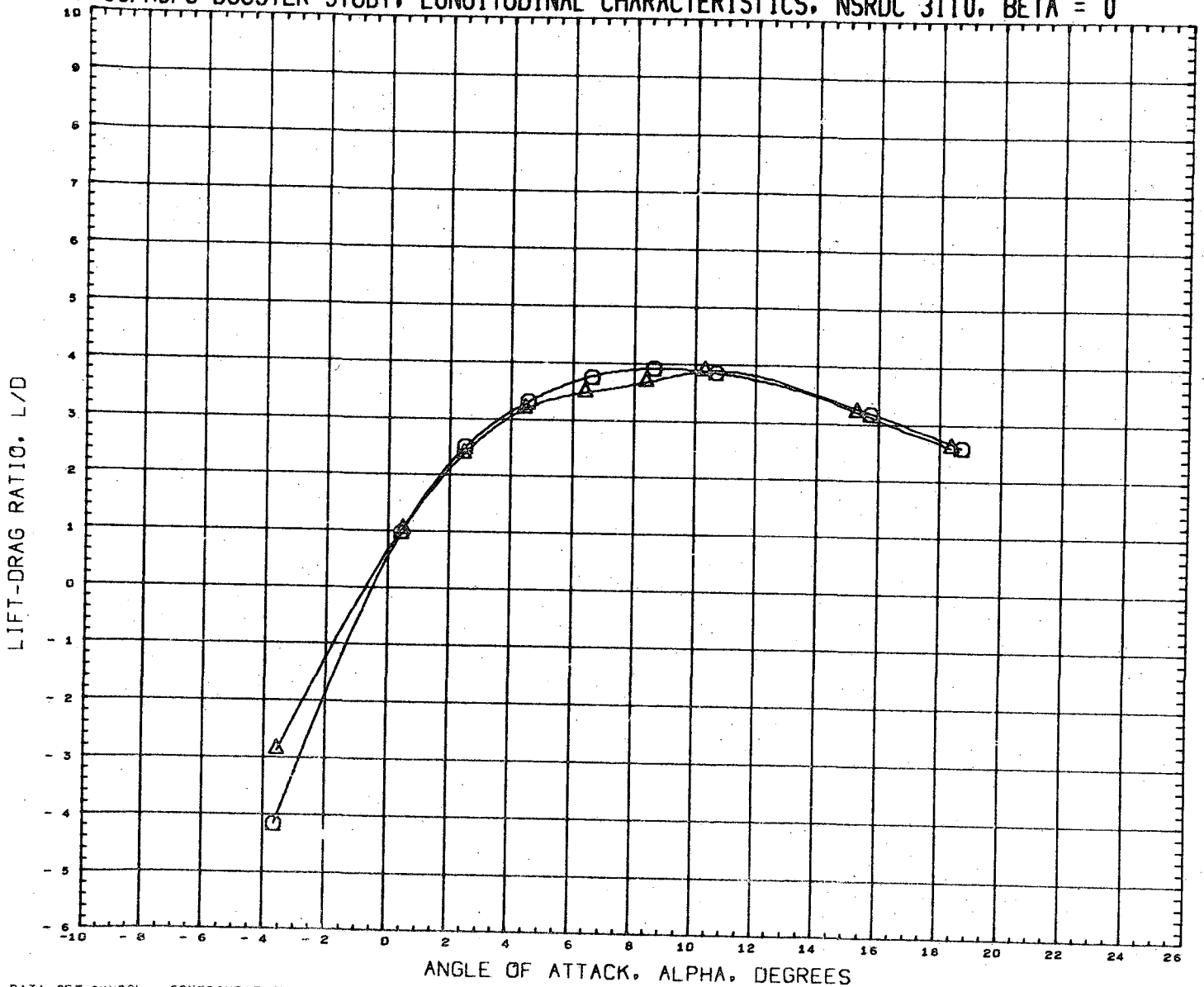
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2085)	NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1	15.000	1.000	0.000	2.000	SREF 1.3550 SQ. FT.
(RN2093)	NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1	15.000	2.000	0.000	2.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCENT

MACH 0.301

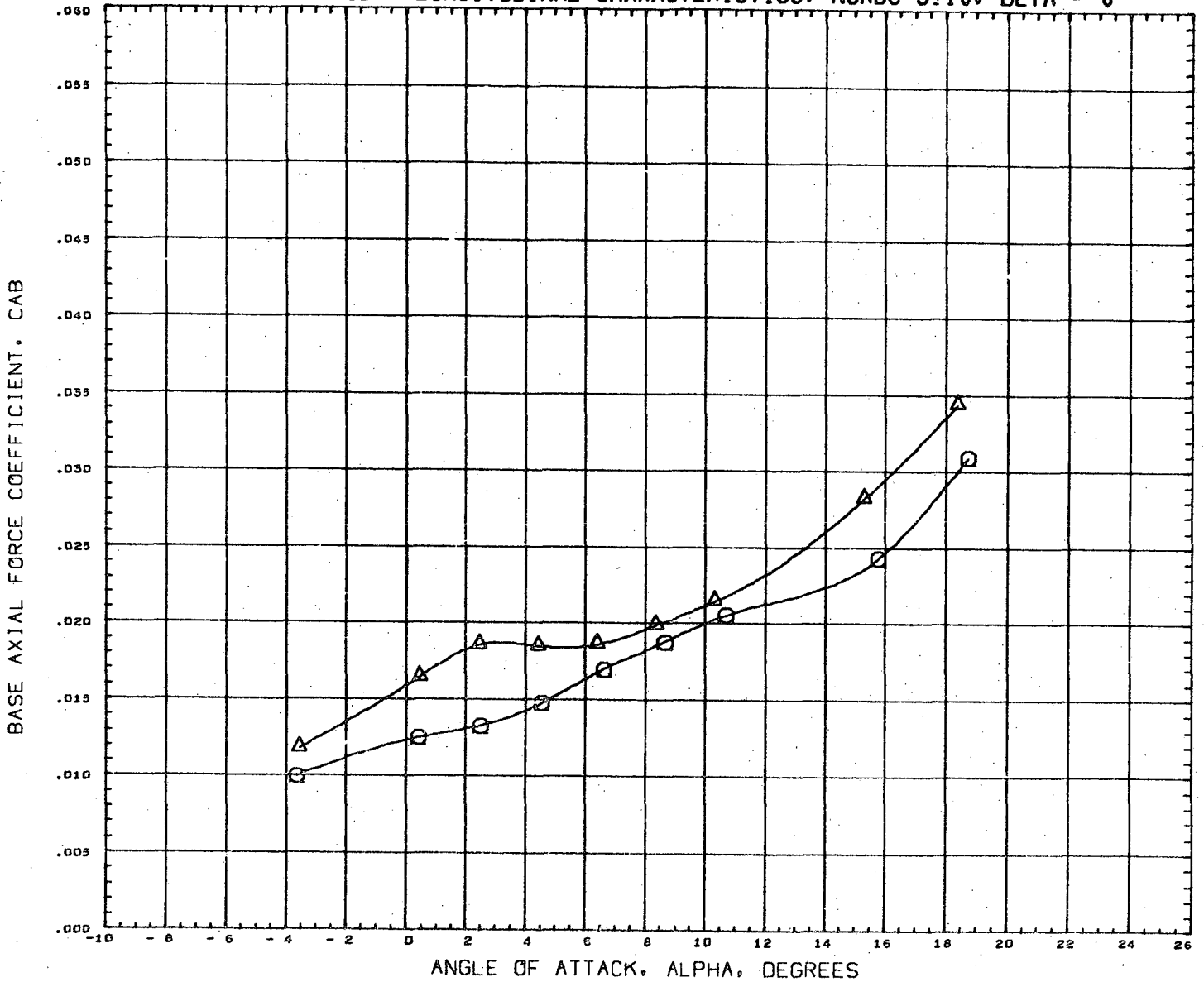
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2085)	NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1	15.000	1.000	0.000	2.000	SREF 1.3550 SQ. FT.
(RN2093)	NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1	15.000	2.000	0.000	2.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCENT

MACH 0.381

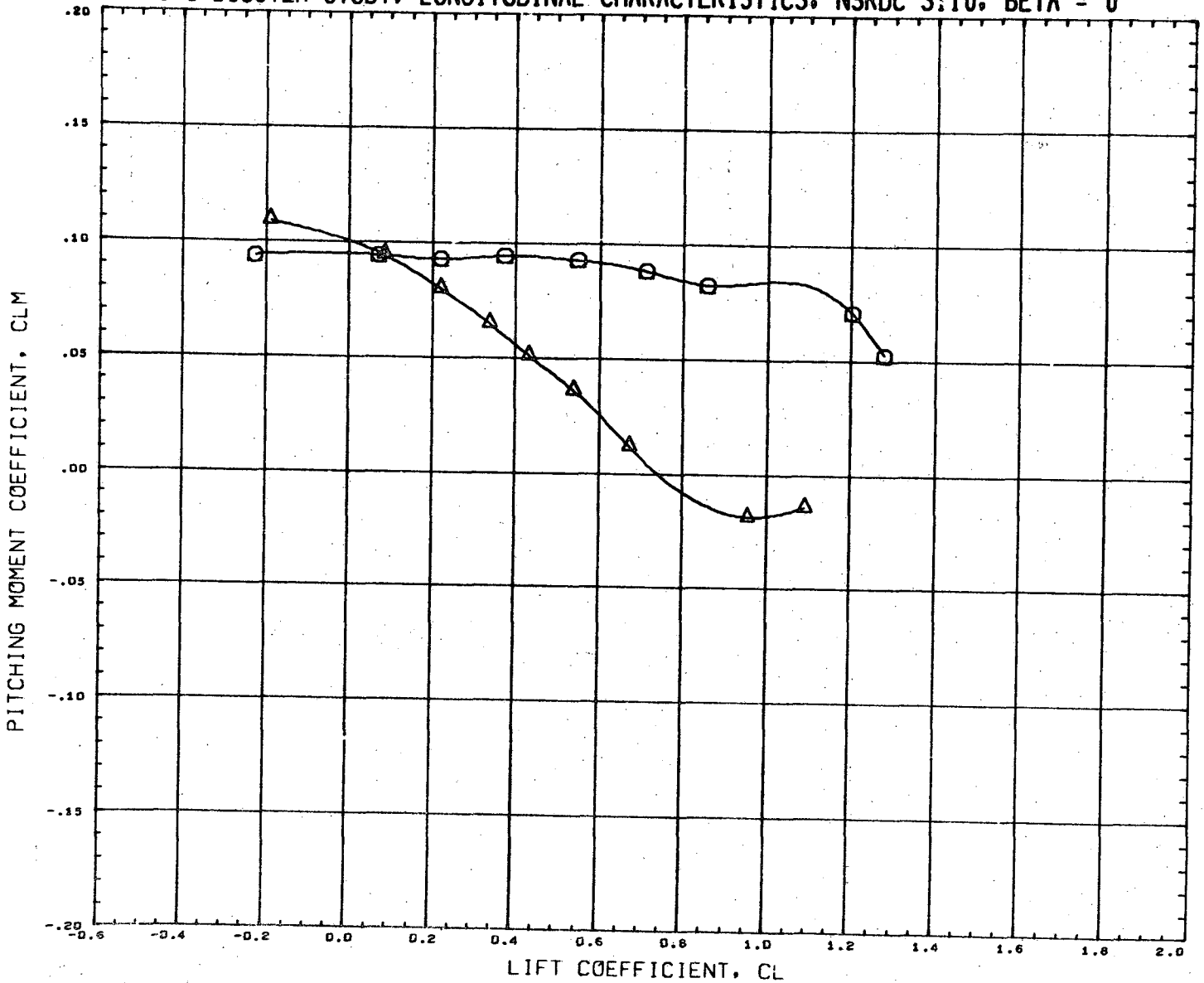
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2085)	NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1	15.000	1.000	0.000	2.000	SREF 1.3550 SQ. FT.
(RN2093)	NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1	15.000	2.000	0.000	2.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCENT

MACH 0.381

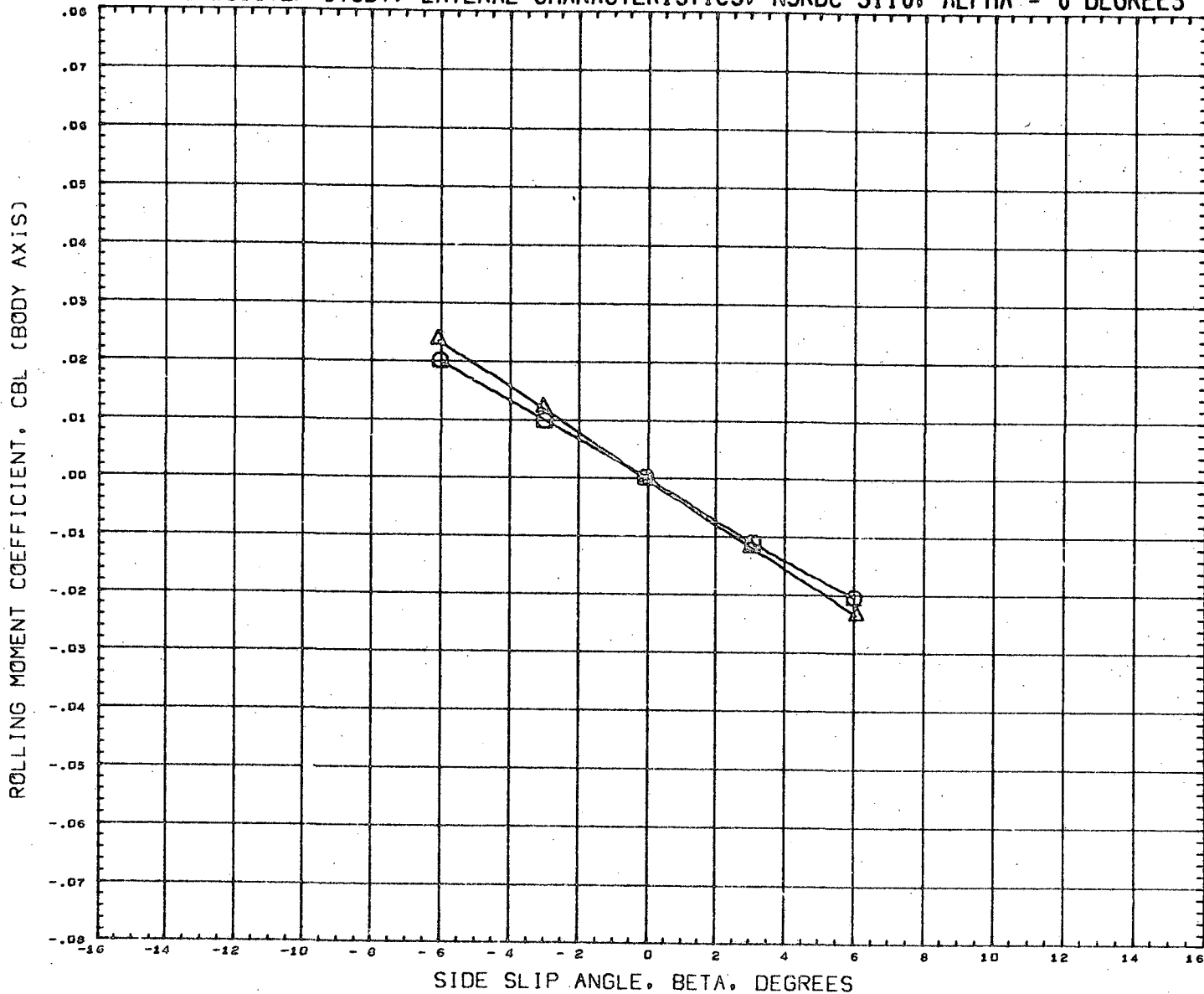
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3:10, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION	
(RN2085)	NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1	15.000	1.000	0.000	2.000	SREF	1.3550 SQ. FT.
(RN2093)	NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1	15.000	2.000	0.000	2.000	LREF	41.4360 INCHES
						BREF	41.4360 INCHES
						XMRF	31.1400 INCHES
						YMRF	0.0000 INCHES
						ZMRF	0.2250 INCHES
						SCALE	1.5000 PERCENT

MACH 0.381

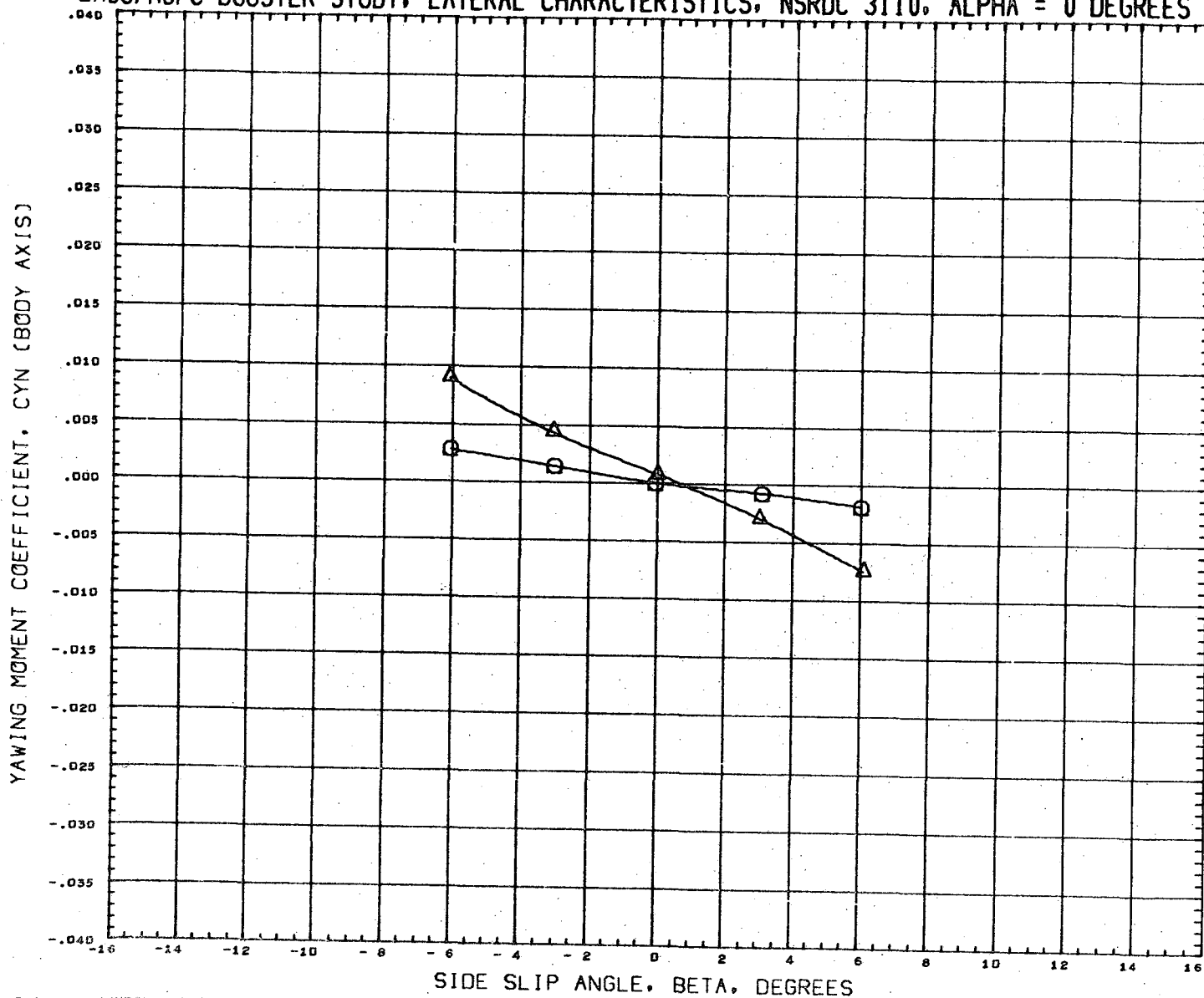
LMSC/MSFC BOOSTER STUDY, LATERAL CHARACTERISTICS, NSRDC 3110, ALPHA = 0 DEGREES



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGFOS	REFERENCE INFORMATION
(RN2086)	NSRDC-3110,MSFC/LMSC BOOSTER B1C1F1W1V1	15.000	1.000	0.000	2.000	SREF 1.3550 SQ. FT.
(RN2094)	NSRDC-3110,MSFC/LMSC BOOSTER B1C1F1W1V1	15.000	2.000	0.000	2.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCENT

MACH 0.380

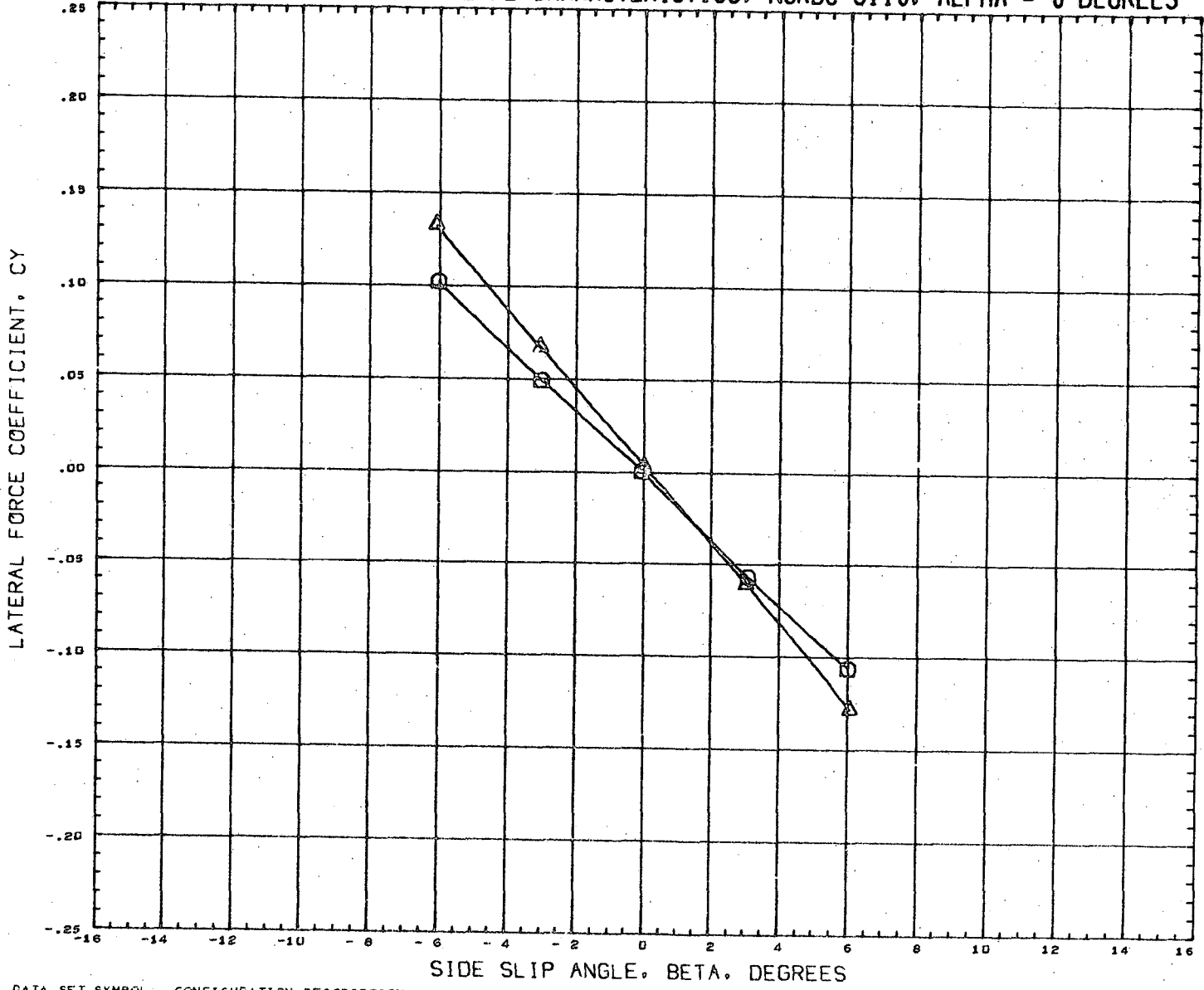
LMSC/MSFC BOOSTER STUDY, LATERAL CHARACTERISTICS, NSRDC 3110, ALPHA = 0 DEGREES



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2086)	NSRDC-3110,MSFC/LMSC BOOSTER B1C1F1W1V1	15.000	1.000	0.000	2.000	SREF 1.3550 SQ.FT.
(RN2094)	NSRDC-3110,MSFC/LMSC BOOSTER B1C1F1W1V1	15.000	2.000	0.000	2.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRF 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCNT

MACH 0.380

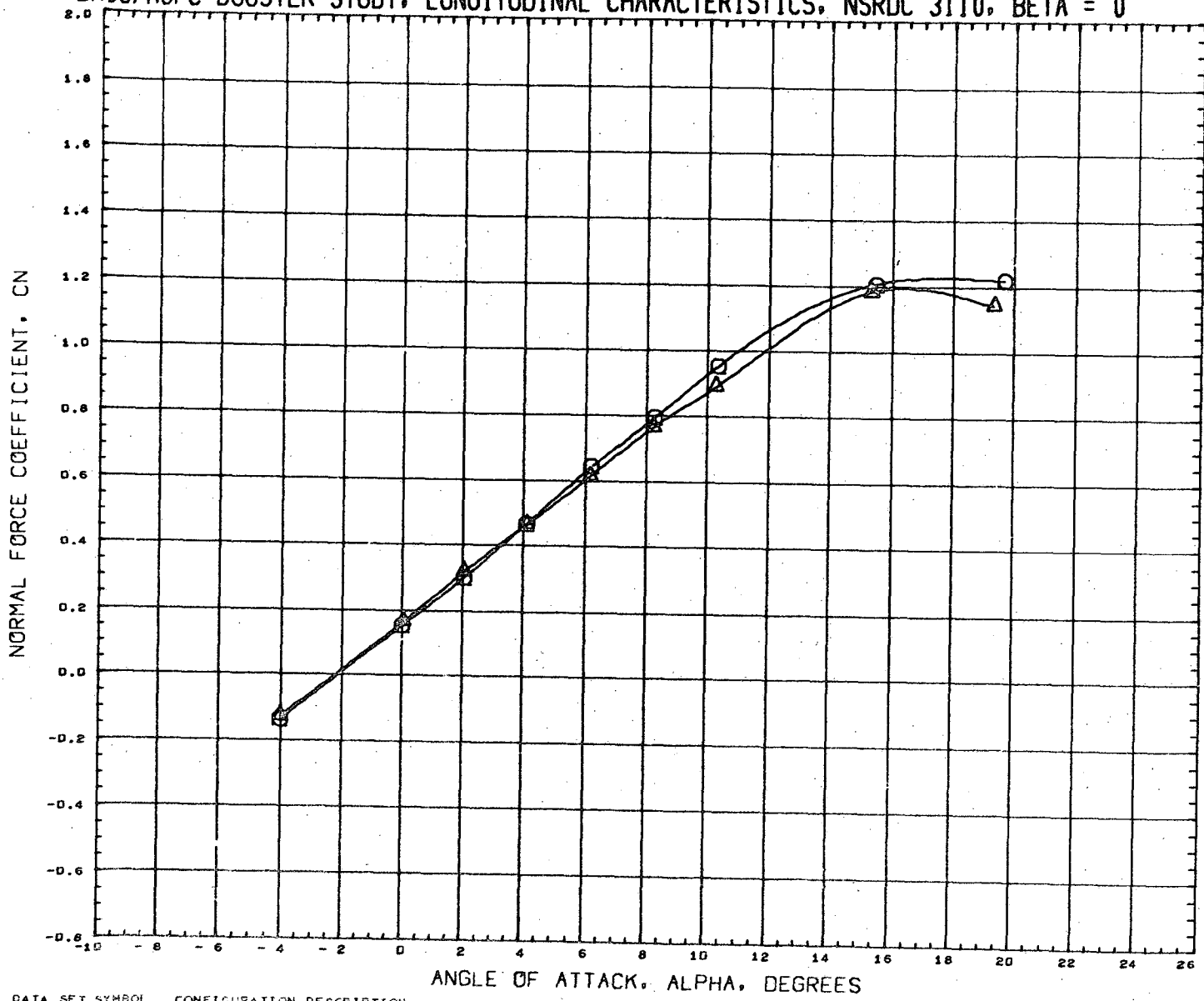
LMSC/MSFC BOOSTER STUDY, LATERAL CHARACTERISTICS, NSRDC 3110, ALPHA = 0 DEGREES



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2086)	NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1	15.000	1.000	0.000	2.000	SREF 1.3550 SQ. FT.
(RN2094)	NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1	15.000	2.000	0.000	2.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCENT

MACH 0.380

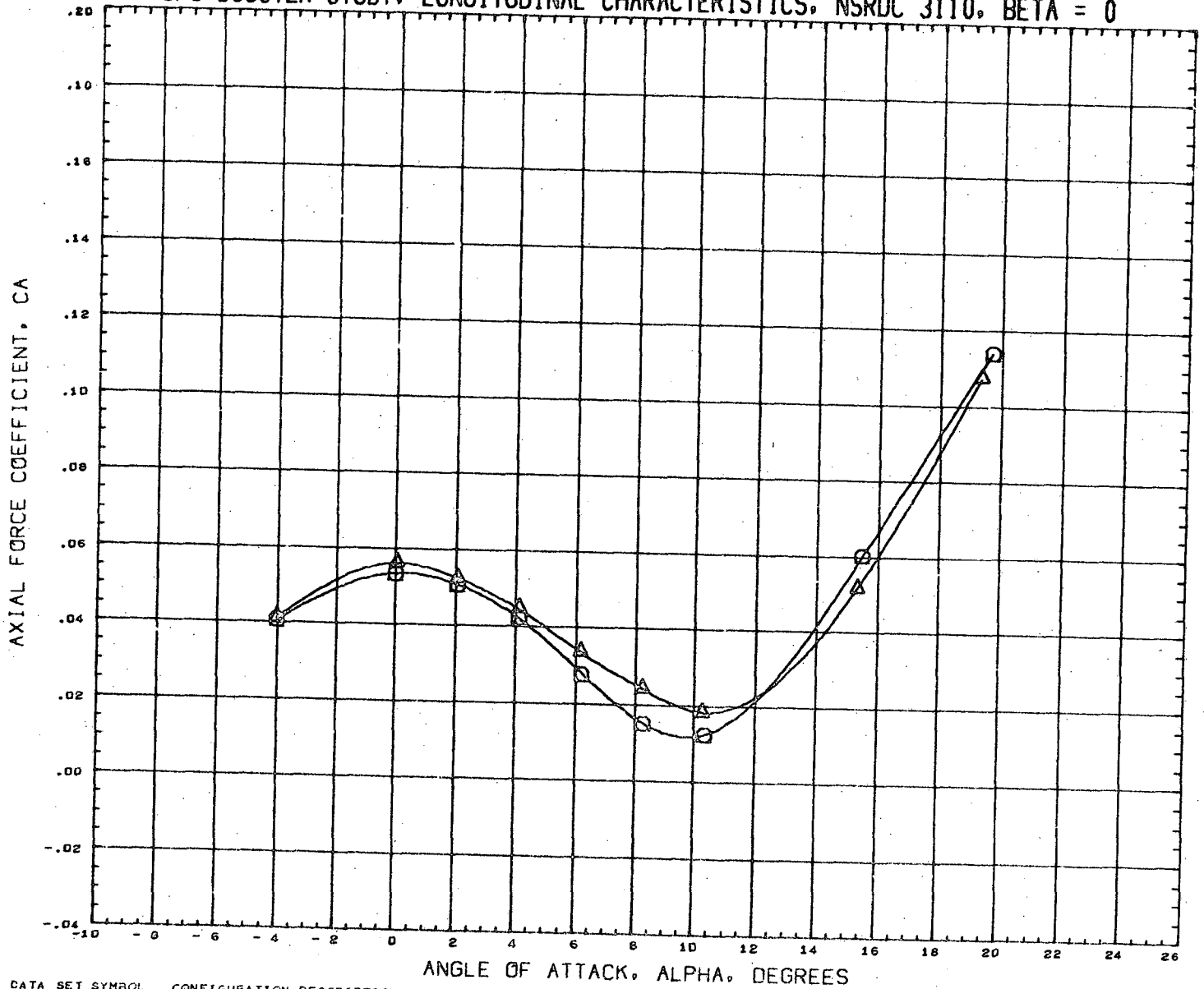
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2113)	NSRDC-3110,MSFC/LMSC BOOSTER B1C1F1W1V1	3.000	1.000	3.000	2.000	SREF 1.3550 SQ. FT.
(RN2121)	NSRDC-3110,MSFC/LMSC BOOSTER B1C1F1W1V1	3.000	2.000	3.000	2.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCENT

MACH 0.380

LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



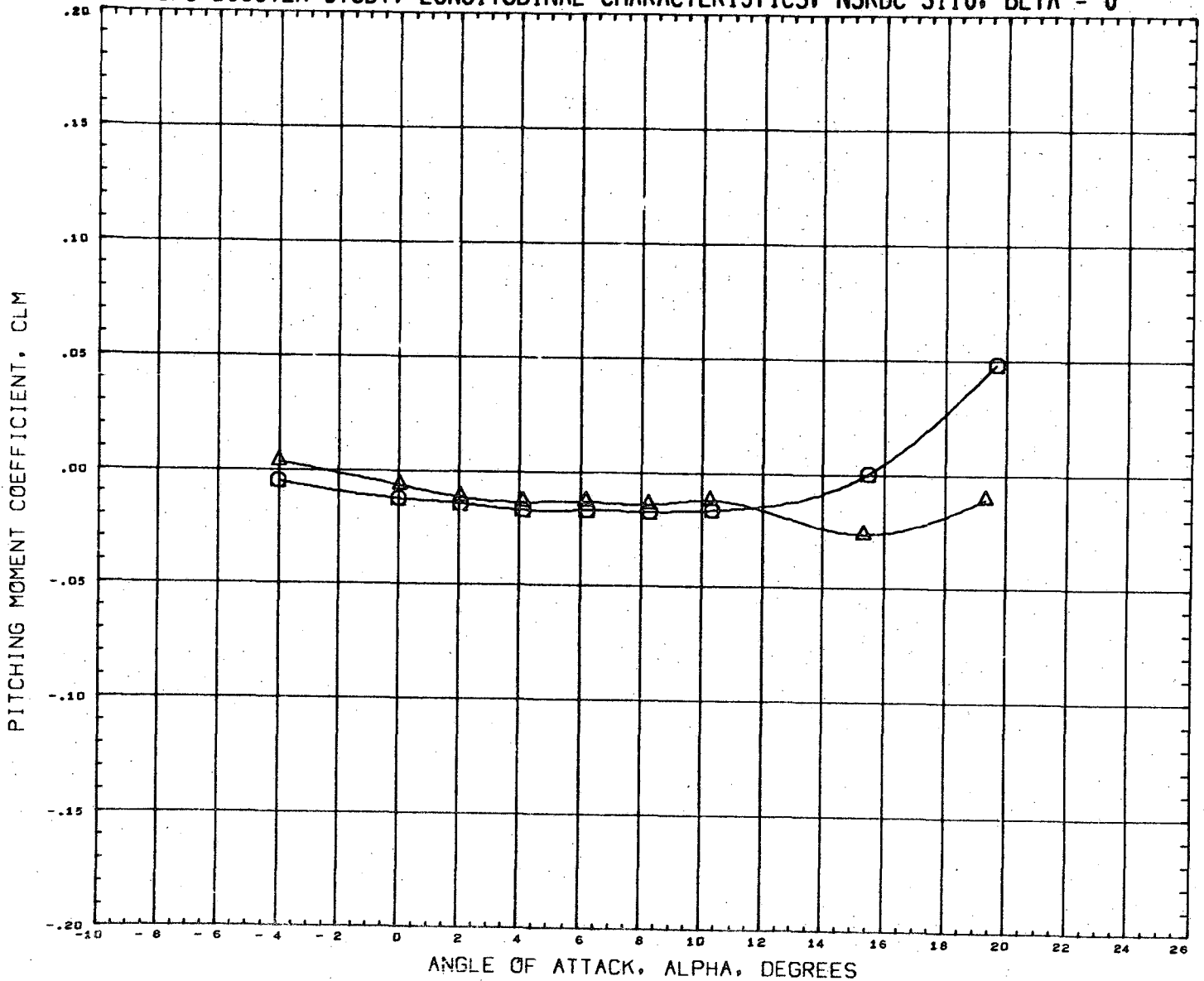
DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(RN2113)	NSRDC-3110,MSFC/LMSC BOOSTER B1C1F1W1V1
(RN2121)	NSRDC-3110,MSFC/LMSC BOOSTER B1C1F1W1V1

INCIDC	CNDPOS	INCIDW	WNGFOS
3.000	1.000	3.000	2.000
3.000	2.000	3.000	2.000

REFERENCE INFORMATION	
SREF	1.3550 SQ. FT.
LREF	41.4360 INCHES
BREF	41.4360 INCHES
XMRP	31.1400 INCHES
YMRP	0.0000 INCHES
ZMRP	0.2250 INCHES
SCALE	1.5000 PERCENT

MACH 0.380

LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL
(RN2113)
(RN2121)



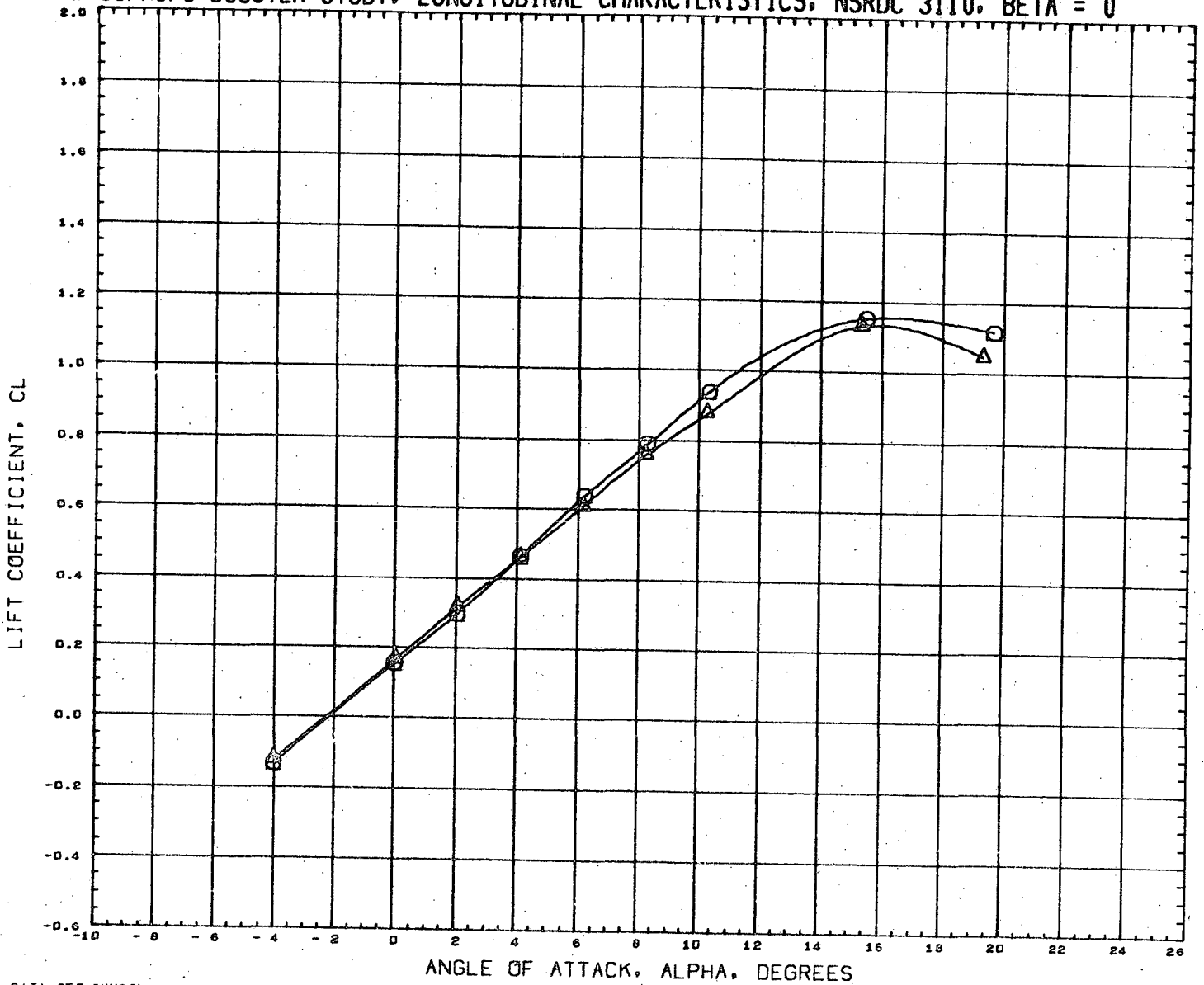
CONFIGURATION DESCRIPTION
NSRDC-3110,MSFC/LMSC BOOSTER B1C1F1W1V1
NSRDC-3110,MSFC/LMSC BOOSTER B1C1F1W1V1

INCIDC	CNDPOS	INCIDW	WNGPOS
3.000	1.000	3.000	2.000
3.000	2.000	3.000	2.000

REFERENCE INFORMATION
SREF 1.3550 SQ.FT.
LREF 41.4360 INCHES
BREF 41.4360 INCHES
XMRP 31.1400 INCHES
YMRP 0.0000 INCHES
ZMRP 0.2250 INCHES
SCALE 1.5000 PERCNT

MACH 0.380

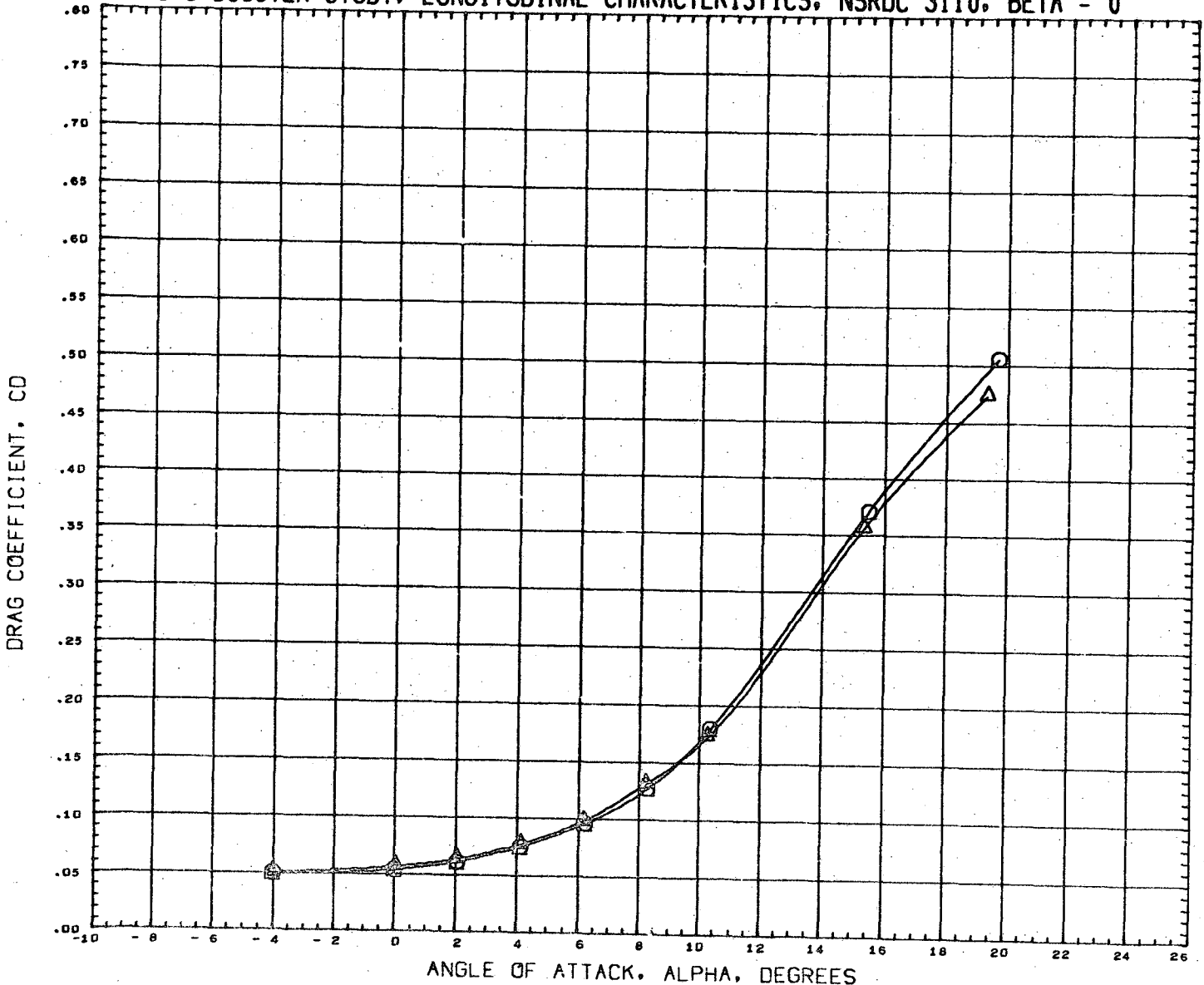
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0





DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION	
(RN2113)	NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1	3.000	1.000	3.000	2.000	SREF	1.3550 SQ. FT.
(RN2121)	NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1	3.000	2.000	3.000	2.000	LREF	41.4360 INCHES
						BREF	41.4360 INCHES
						XMRP	31.1400 INCHES
						YMRP	0.0000 INCHES
						ZMRP	0.2250 INCHES
						SCALE	1.5000 PERCENT

MACH 0.380

LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL
(RN2113) 
(RN2121) 

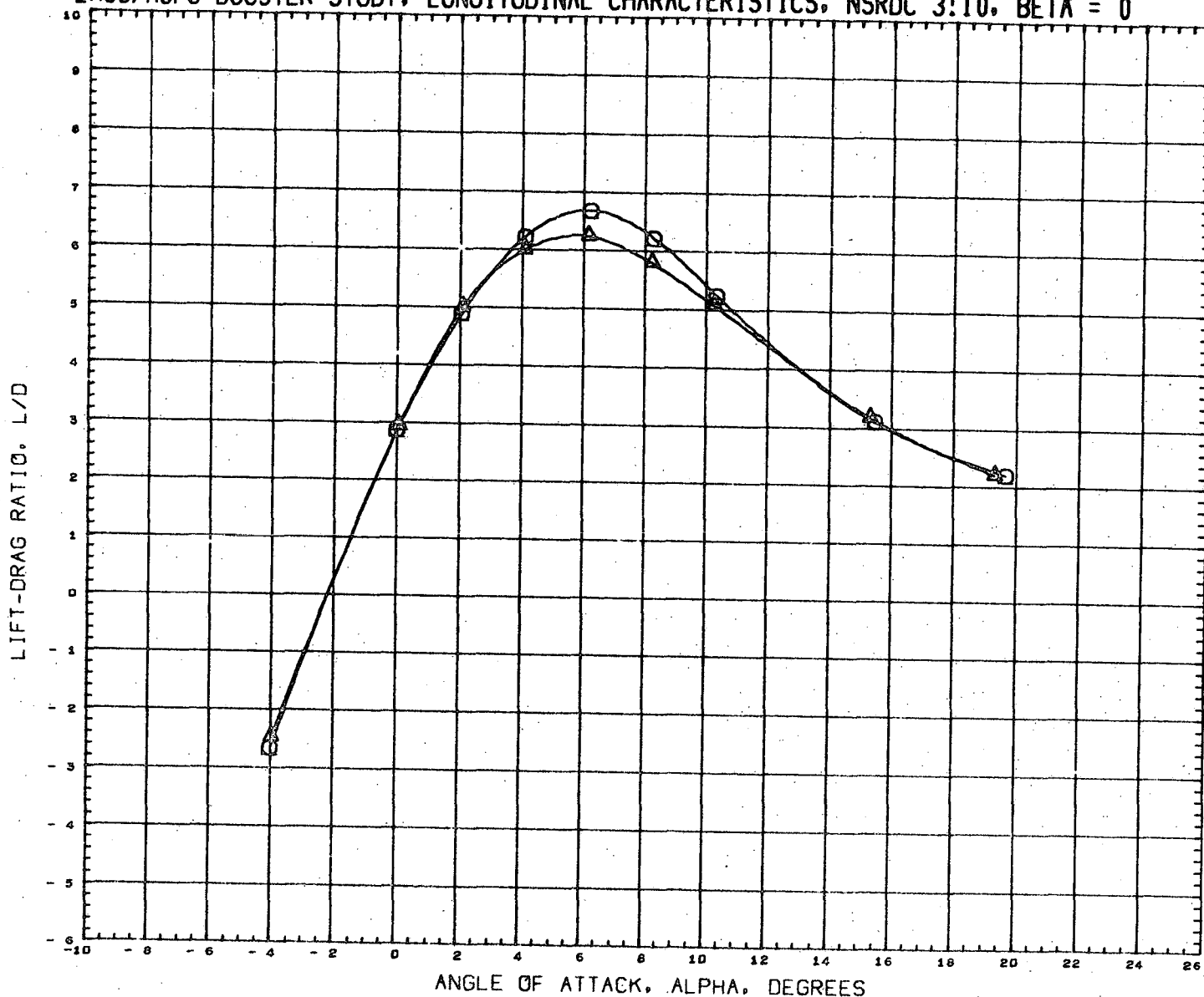
CONFIGURATION DESCRIPTION
NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1
NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1

INCIDC	CNDPOS	INCIDW	WNGPOS
3.000	1.000	3.000	2.000
3.000	2.000	3.000	2.000

REFERENCE INFORMATION	
SREF	1.3550 SQ.FT.
LREF	41.4360 INCHES
BREF	41.4360 INCHES
XMRP	31.1400 INCHES
YMRP	0.0000 INCHES
ZMRP	0.2250 INCHES
SCALE	1.5000 PERCENT

MACH 0.380

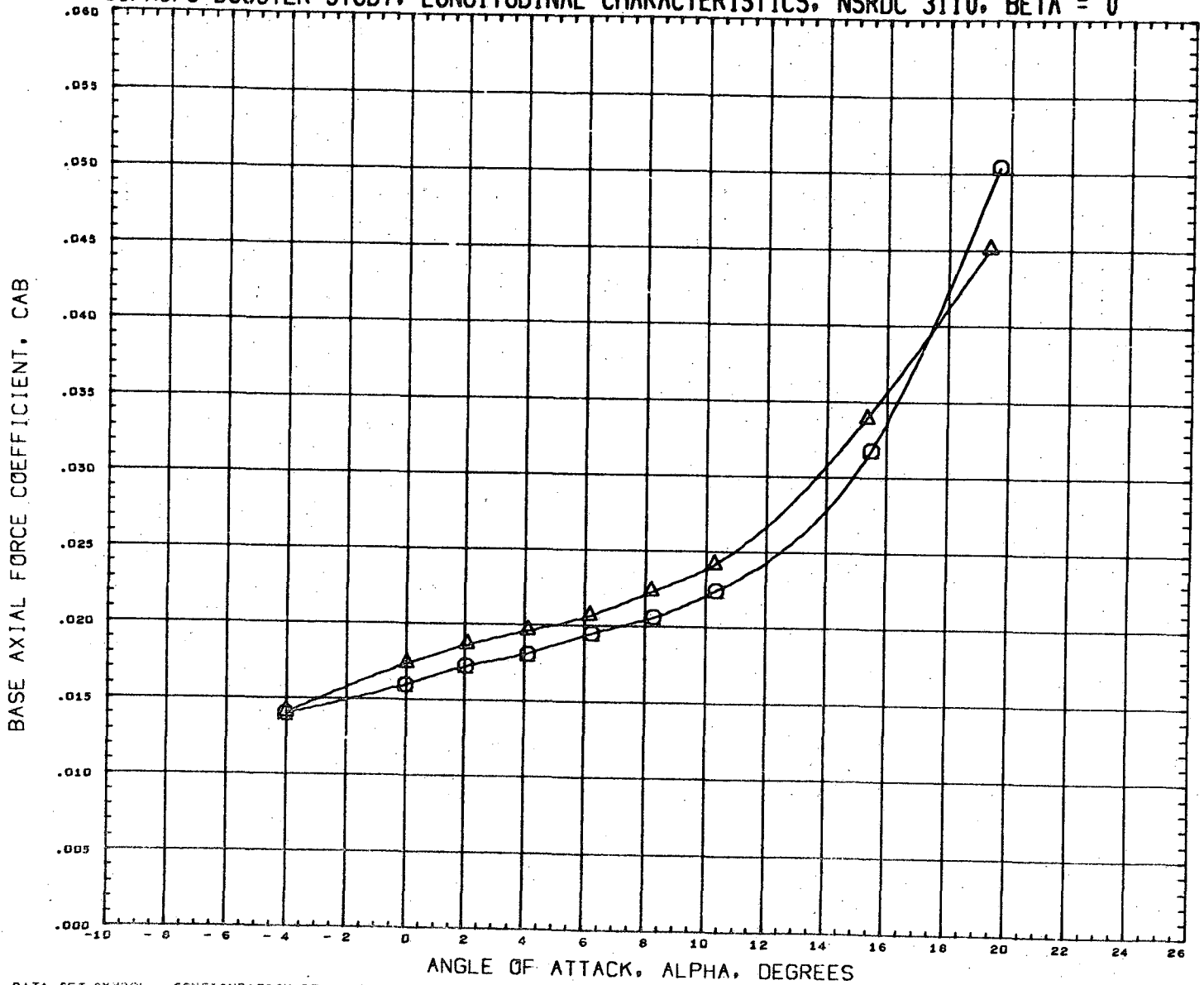
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3:10, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2113)	NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1	3.000	1.000	3.000	2.000	SREF 1.3550 SQ. FT.
(RN2121)	NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1	3.000	2.000	3.000	2.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCENT

MACH 0.380

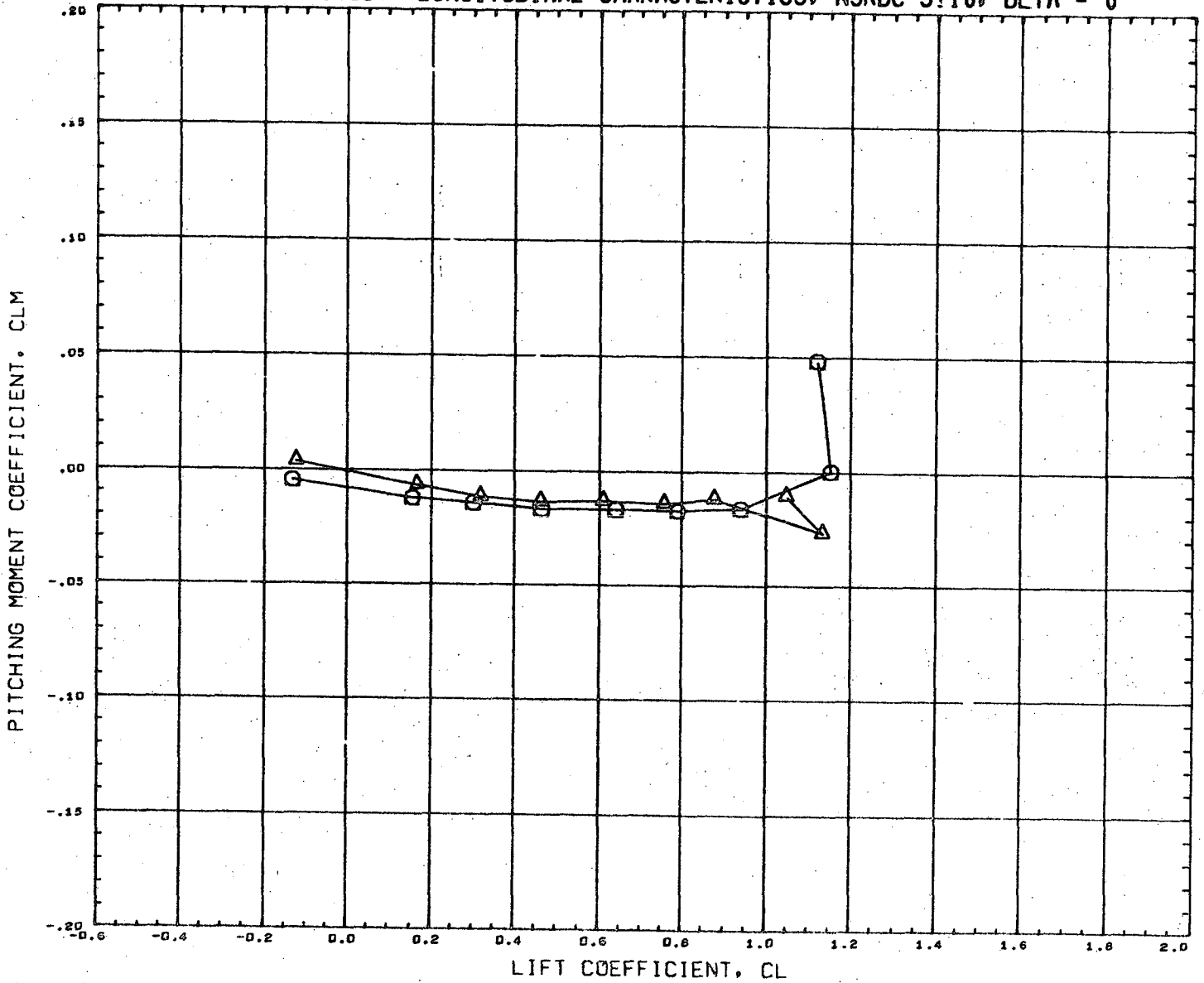
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2113)	NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1	3.000	1.000	3.000	2.000	SREF 1.3550 SQ. FT.
(RN2121)	NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1	3.000	2.000	3.000	2.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRF 31.1400 INCHES
						YMRF 0.0000 INCHES
						ZMRF 0.2250 INCHES
						SCALE 1.5000 PERCENT

MACH 0.380

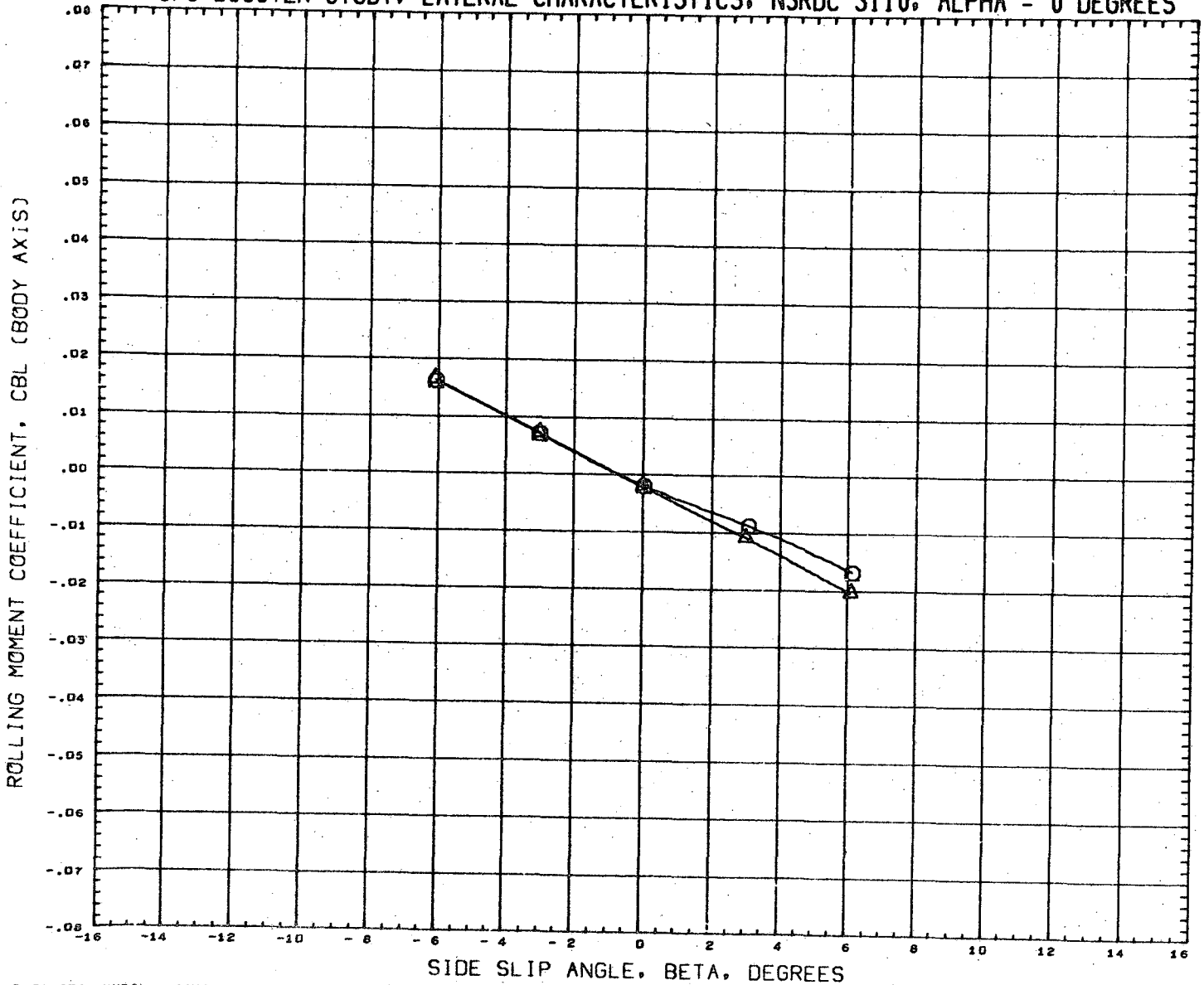
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0





DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2113)	NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1	3.000	1.000	3.000	2.000	SREF 1.3550 SQ. FT.
(RN2121)	NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1	3.000	2.000	3.000	2.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCENT

MACH 0.360

LMSC/MSFC BOOSTER STUDY, LATERAL CHARACTERISTICS, NSRDC 3110, ALPHA = 0 DEGREES



DATA SET SYMBOL
(RN2113) 
(RN2122) 

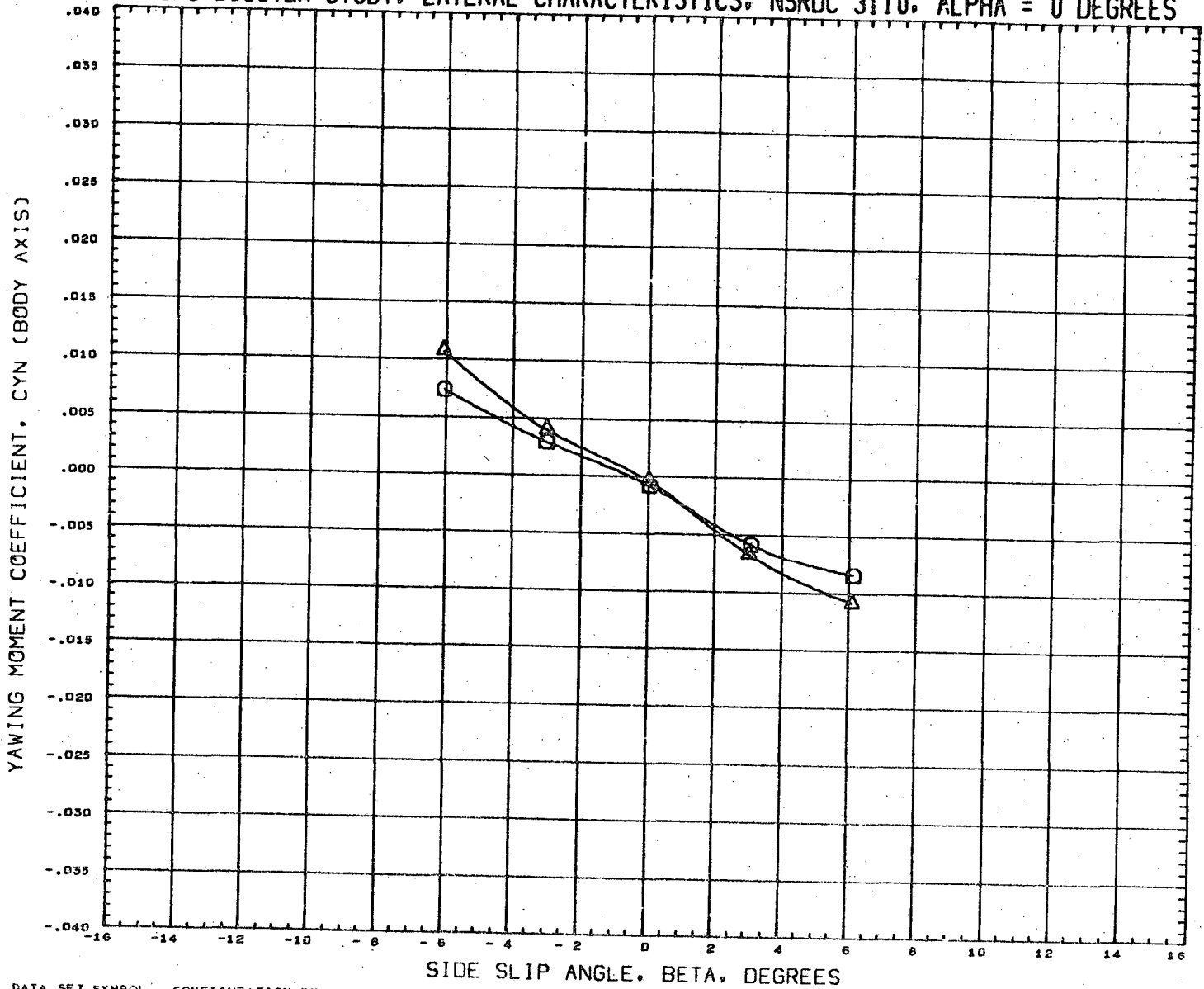
CONFIGURATION DESCRIPTION
NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1
NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1



INCIDC CNDPOS INCICW WNGPOS
3.000 1.000 3.000 2.000
3.000 2.000 3.000 2.000

REFERENCE INFORMATION
SREF 1.3550 SQ. FT.
LREF 41.4360 INCHES
BREF 41.4360 INCHES
XMRP 31.1400 INCHES
YMRP 0.0000 INCHES
ZMRP 0.2250 INCHES
SCALE 1.5000 PERCENT

MACH 0.381

LMSC/MSFC BOOSTER STUDY, LATERAL CHARACTERISTICS, NSRDC 3110, ALPHA = 0 DEGREES



DATA SET SYMBOL
(RN2114) 
(RN2122) 

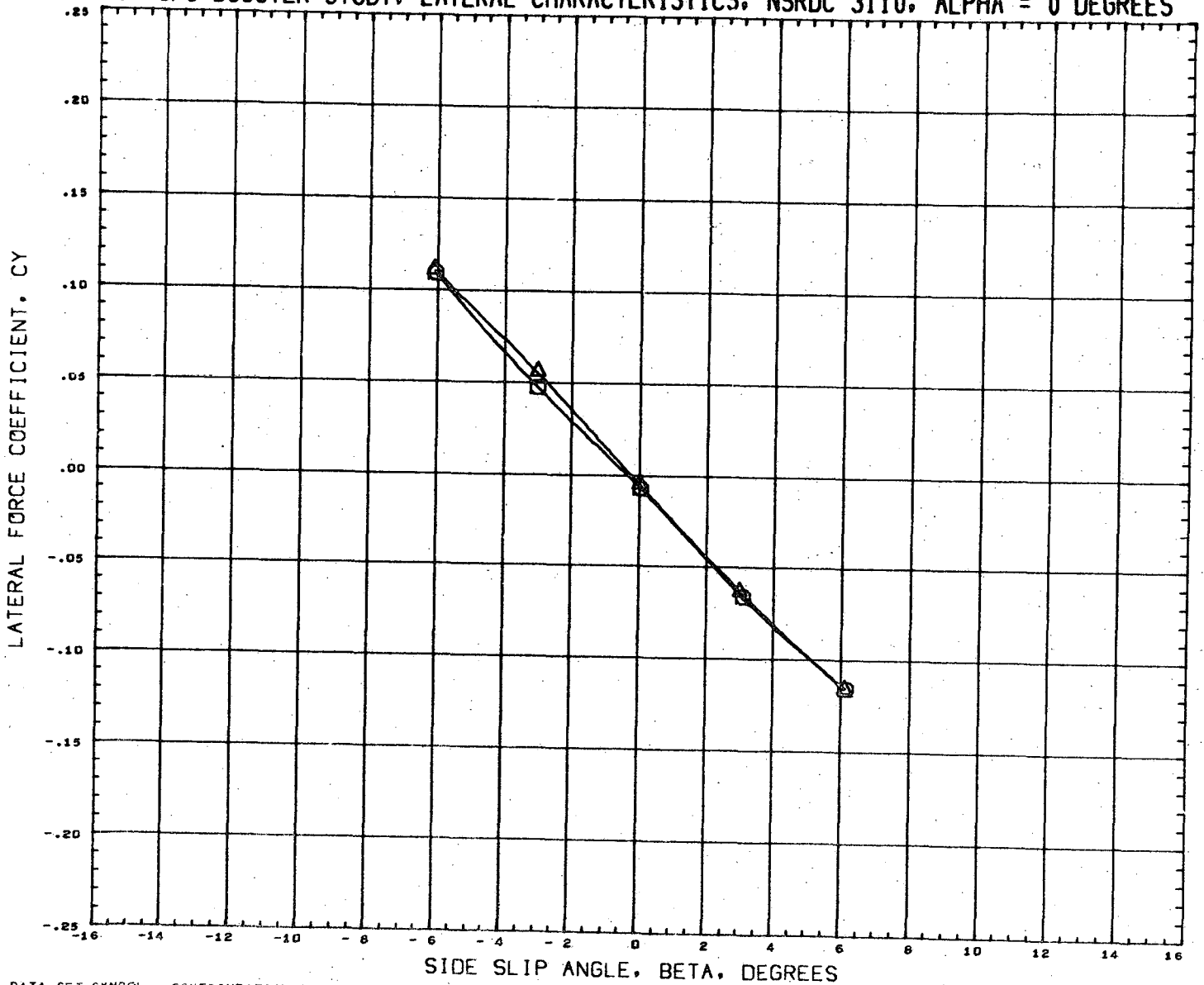
CONFIGURATION DESCRIPTION
NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1
NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1

INCIDC	CNDPOS	INCIDW	WNCPOS
3.000	1.000	3.000	2.000
3.000	2.000	3.000	2.000

REFERENCE INFORMATION
SREF 1.3550 SQ.FT.
LREF 41.4360 INCHES
BREF 41.4360 INCHES
XMRP 31.1400 INCHES
YMRP 0.0000 INCHES
ZMRP 0.2250 INCHES
SCALE 1.5000 PERCENT

MACH 0.381

LMSC/MSFC BOOSTER STUDY, LATERAL CHARACTERISTICS, NSRDC 3110, ALPHA = 0 DEGREES



DATA SET SYMBOL
 (RN2114) \square
 (RN2122) \triangle

CONFIGURATION DESCRIPTION
 NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1
 NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1

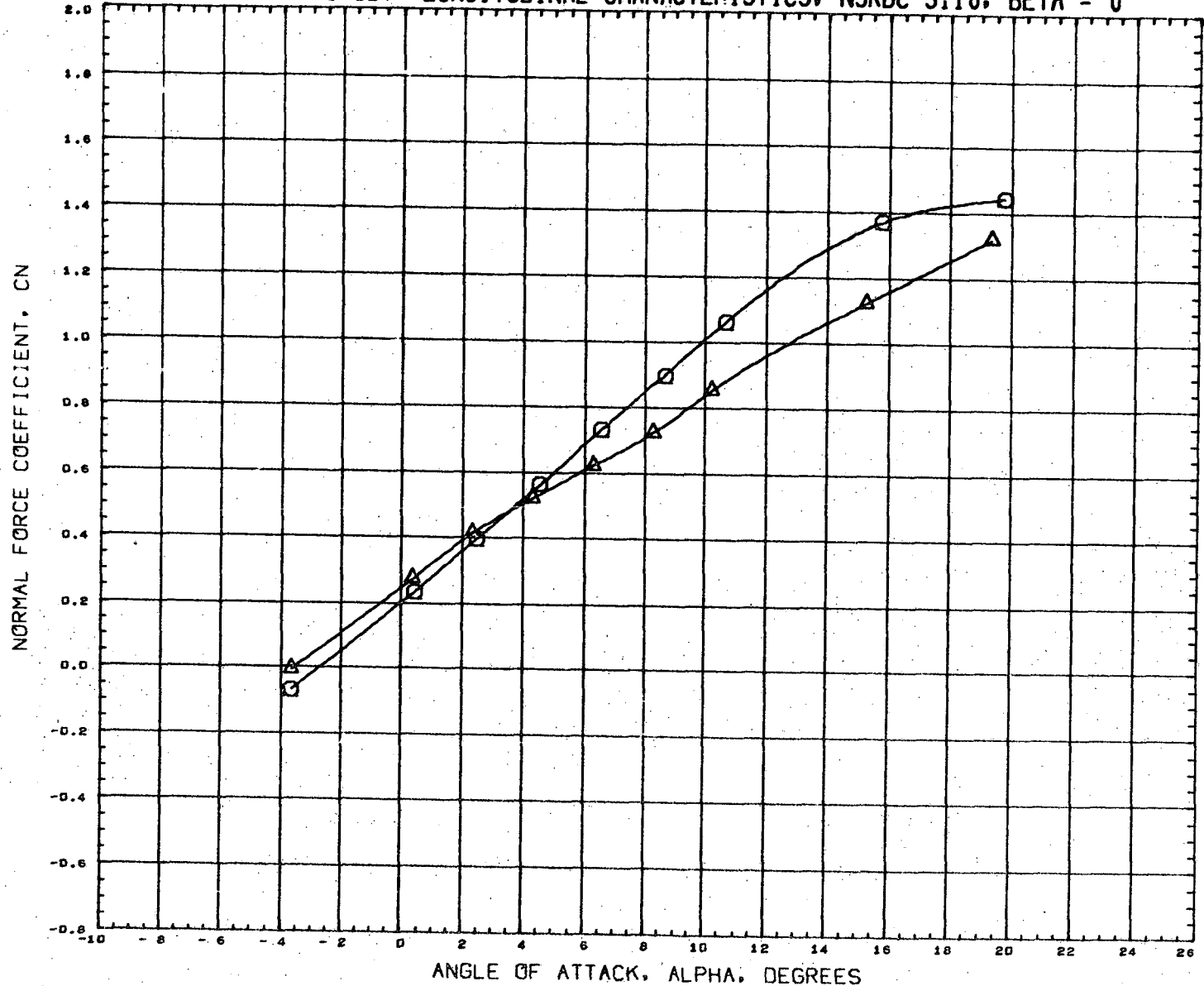
INCIDC	CNDPOS	INCIDW	WNGPOS
3.000	1.000	3.000	2.000
3.000	2.000	3.000	2.000

REFERENCE INFORMATION

SREF	1.3550	SQ. FT.
LREF	41.4360	INCHES
BREF	41.4360	INCHES
XMRP	31.1400	INCHES
YMRP	0.0000	INCHES
ZMRP	0.2250	INCHES
SCALE	1.5000	PERCENT

MACH 0.381

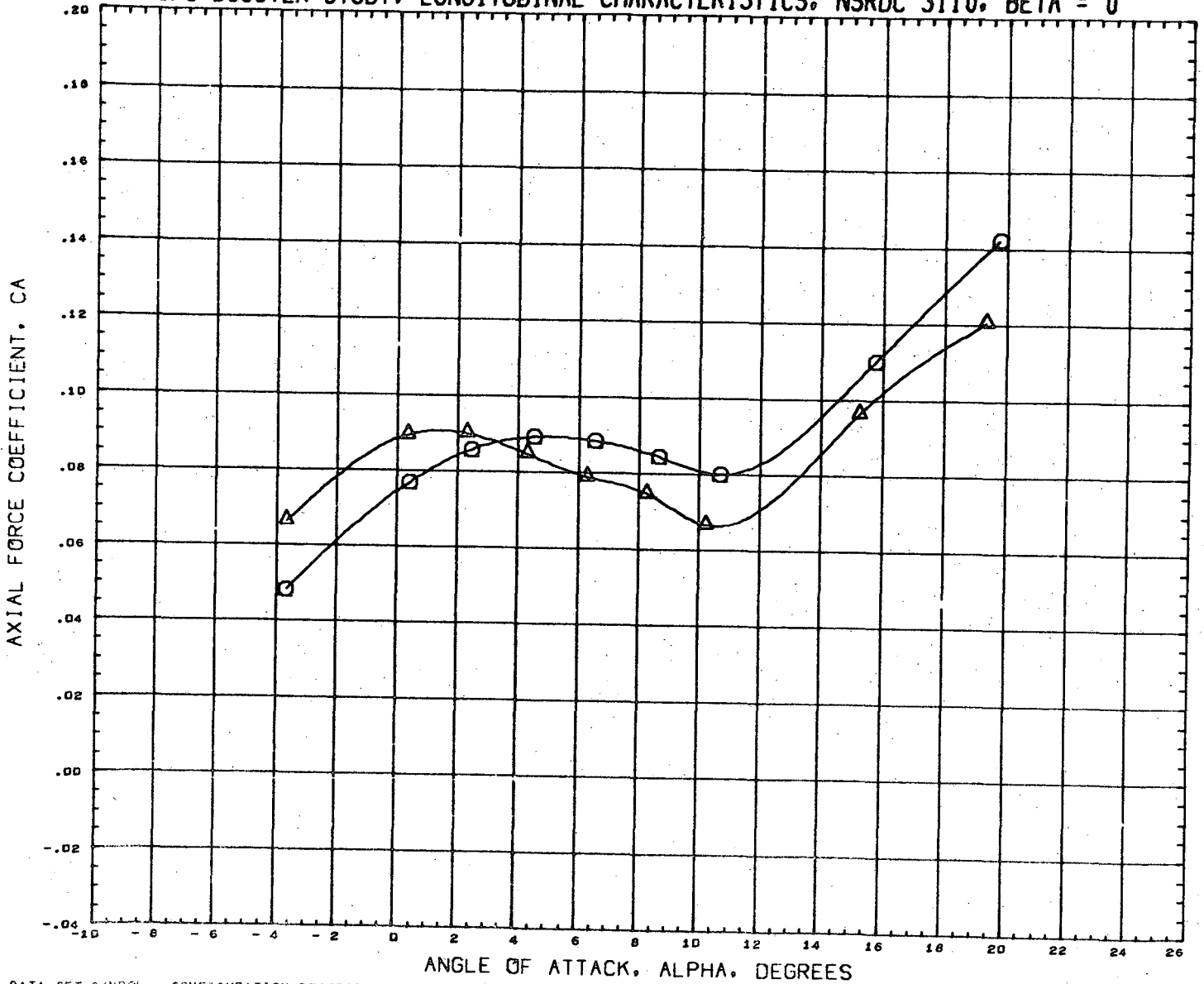
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION	
(RN2117)	NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1	15.000	1.000	3.000	2.000	SREF	1.3550 SQ. FT.
(RN2125)	NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1	15.000	2.000	3.000	2.000	LREF	41.4360 INCHES
						BREF	41.4360 INCHES
						XMRP	31.1400 INCHES
						YMRP	0.0000 INCHES
						ZMRP	0.2250 INCHES
						SCALE	1.5000 PERCENT

MACH 0.381

LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL
(RN2117)
(RN2125)



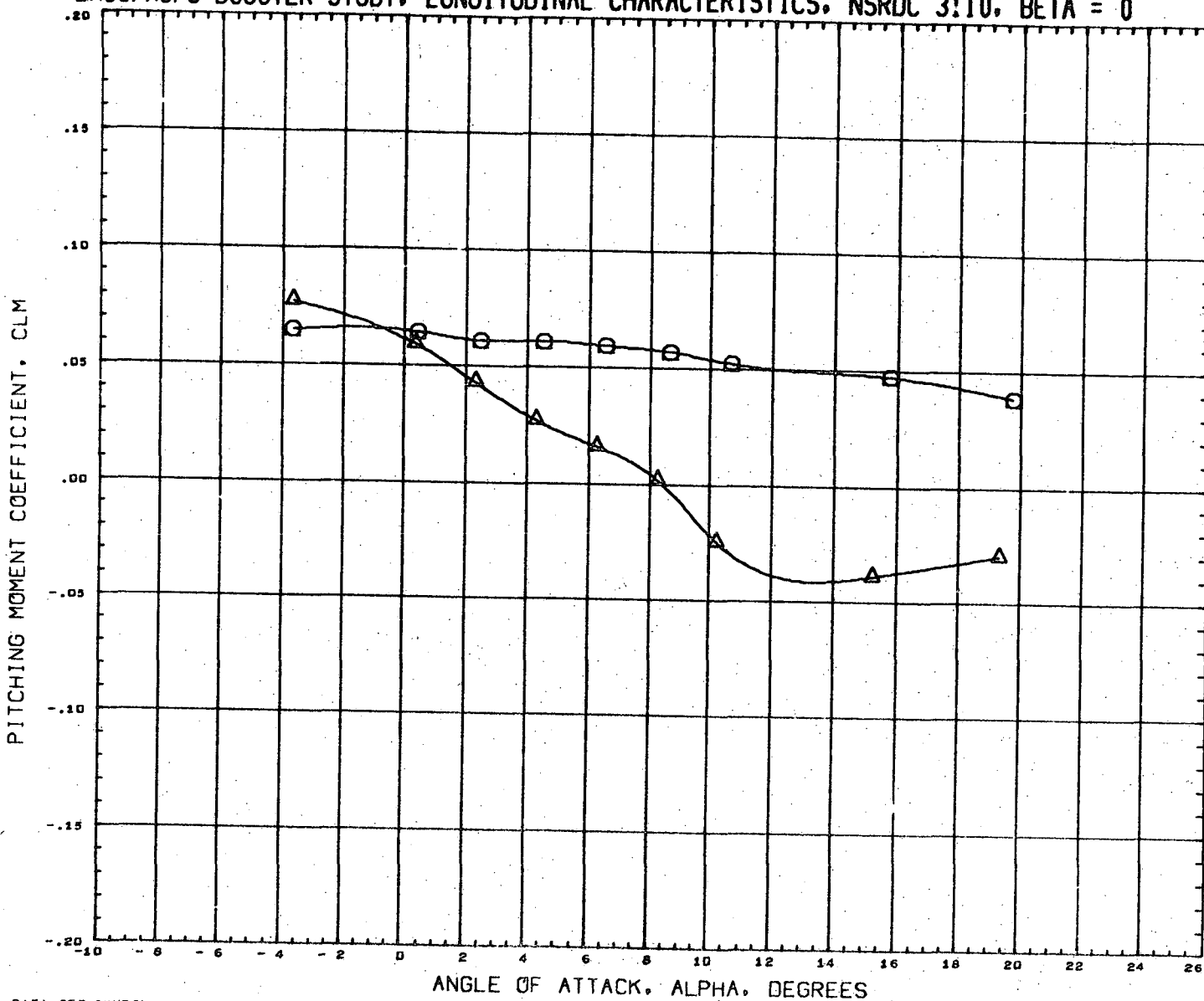
CONFIGURATION DESCRIPTION
NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1
NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1



INCIDC	CNDPOS	INCIDW	WNGPOS
15.000	1.000	3.000	2.000
15.000	2.000	3.000	2.000

REFERENCE INFORMATION		
SREF	1.3550	SQ. FT.
LREF	41.4360	INCHES
BREF	41.4360	INCHES
XMRP	31.1400	INCHES
YMRP	0.0000	INCHES
ZMRP	0.2250	INCHES
SCALE	1.5000	PERCENT

MACH 0.381

LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3:10, BETA = 0



DATA SET SYMBOL
(RN2117) 
(RN2125) 

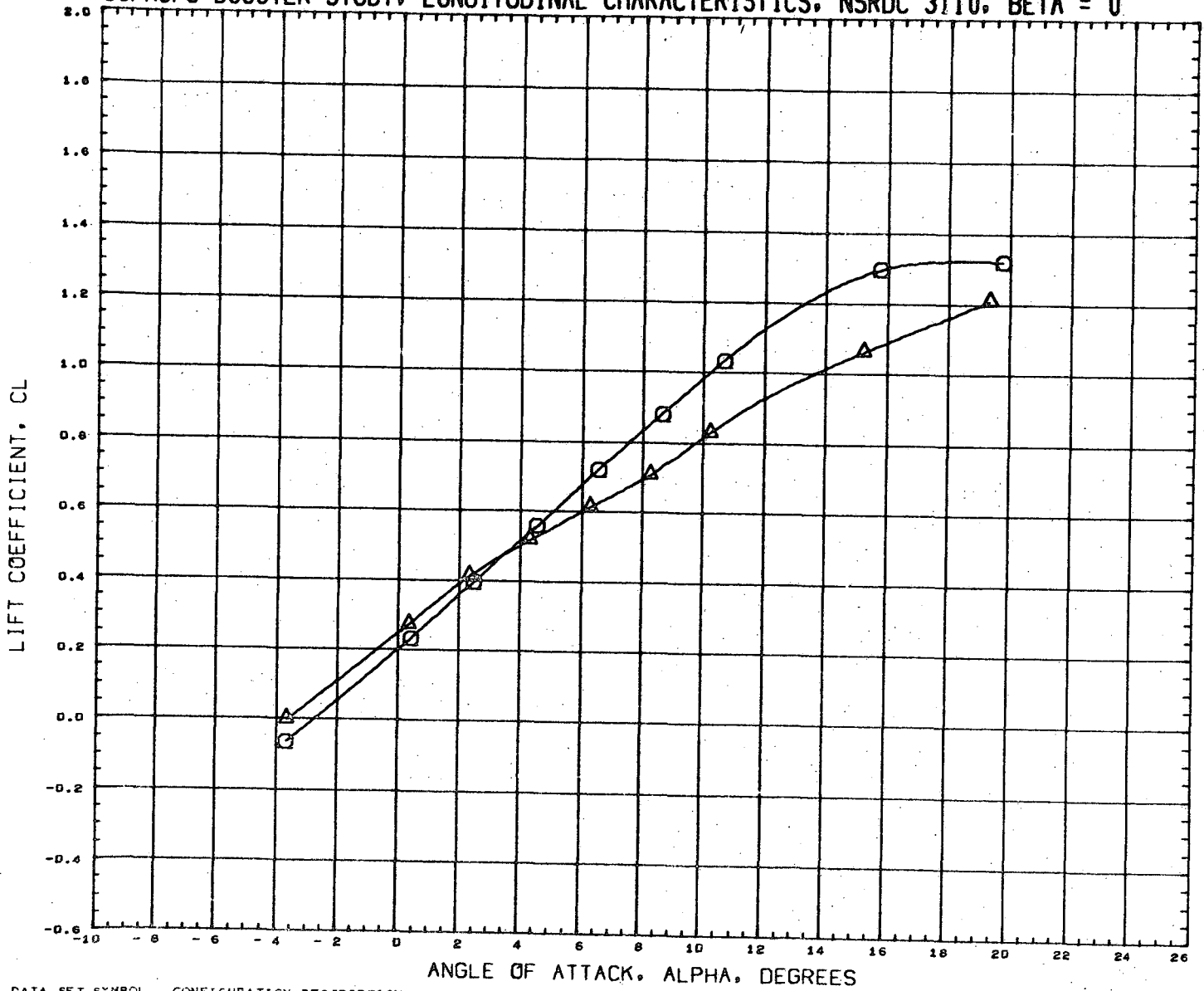
CONFIGURATION DESCRIPTION
NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1
NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1

INCIDC	CNDPOS	INCIDW	WNGFOS
15.000	1.000	3.000	2.000
15.000	2.000	3.000	2.000

REFERENCE INFORMATION	
SREF	1.3550 SQ. FT.
LREF	41.4360 INCHES
BREF	41.4360 INCHES
XMRP	31.1400 INCHES
YMRP	0.0000 INCHES
ZMRP	0.2250 INCHES
SCALE	1.5000 PERCENT

MACH 0.381

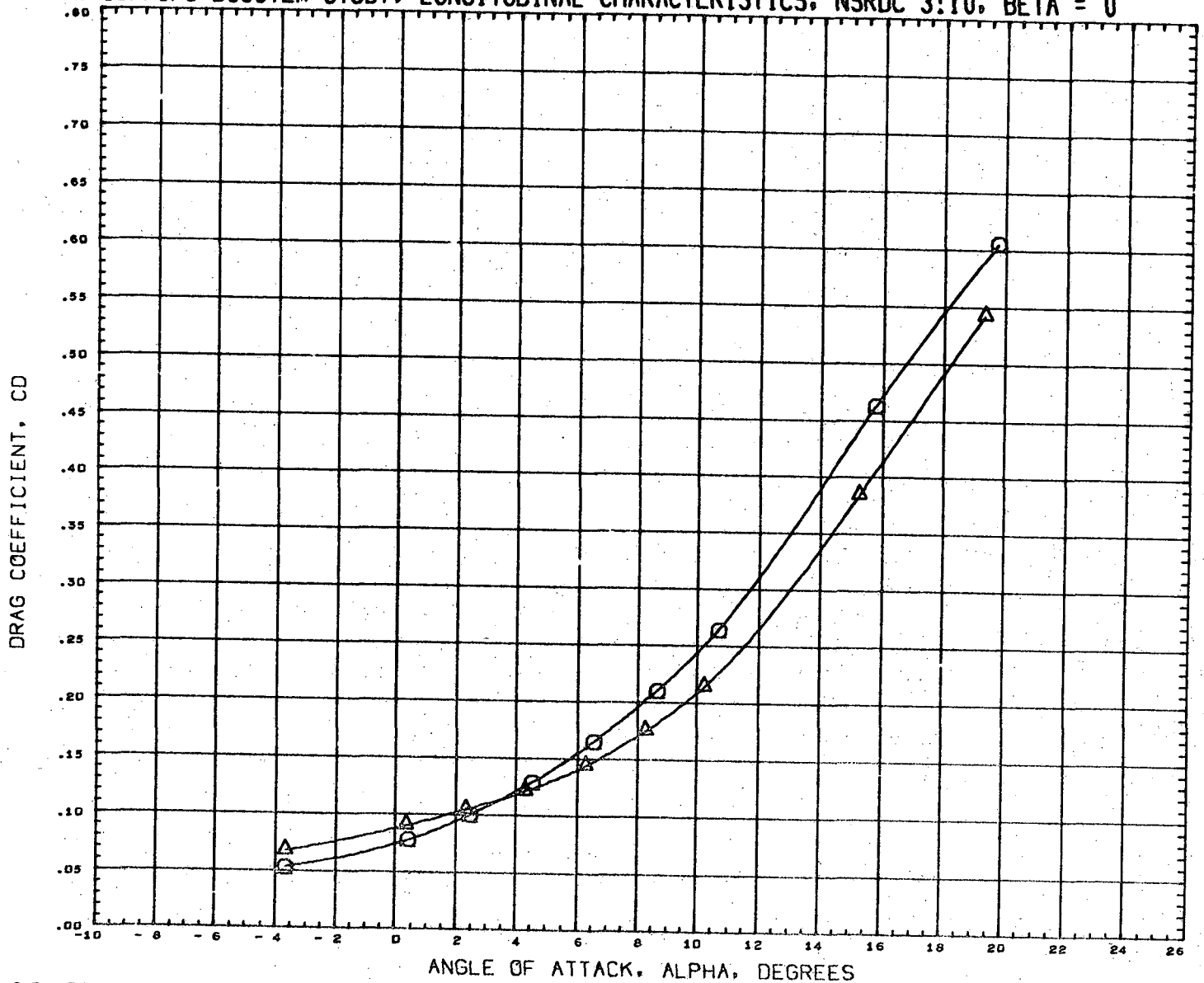
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2117)	NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1	15.000	1.000	3.000	2.000	SREF 1.3550 SQ. FT.
(RN2125)	NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1	15.000	2.000	3.000	2.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCENT

MACH 0.381

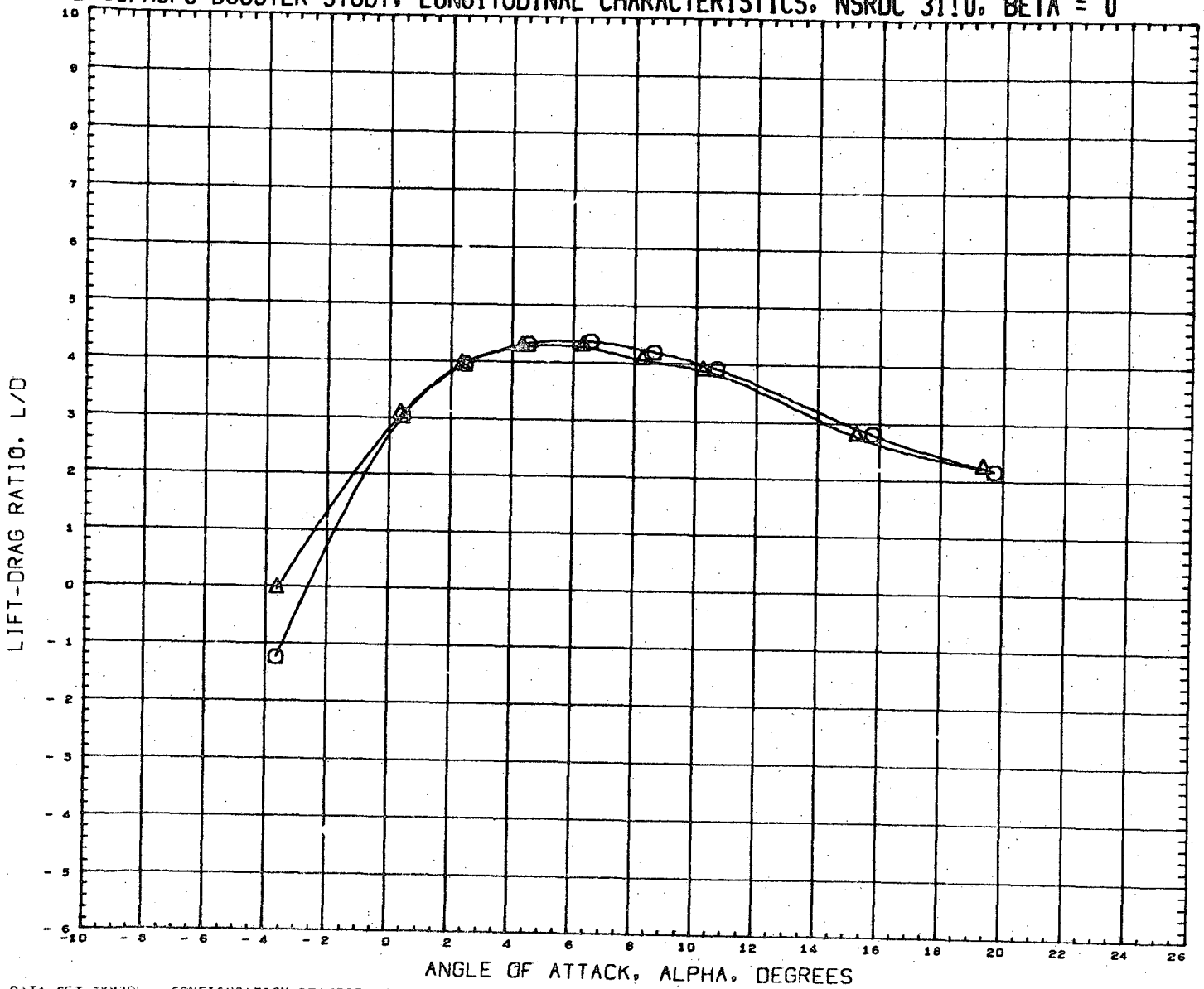
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3:10, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2117)	NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1	15.000	1.000	3.000	2.000	SREF 1.3550 SQ. FT.
(RN2125)	NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1	15.000	2.000	3.000	2.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCENT

MACH 0.381

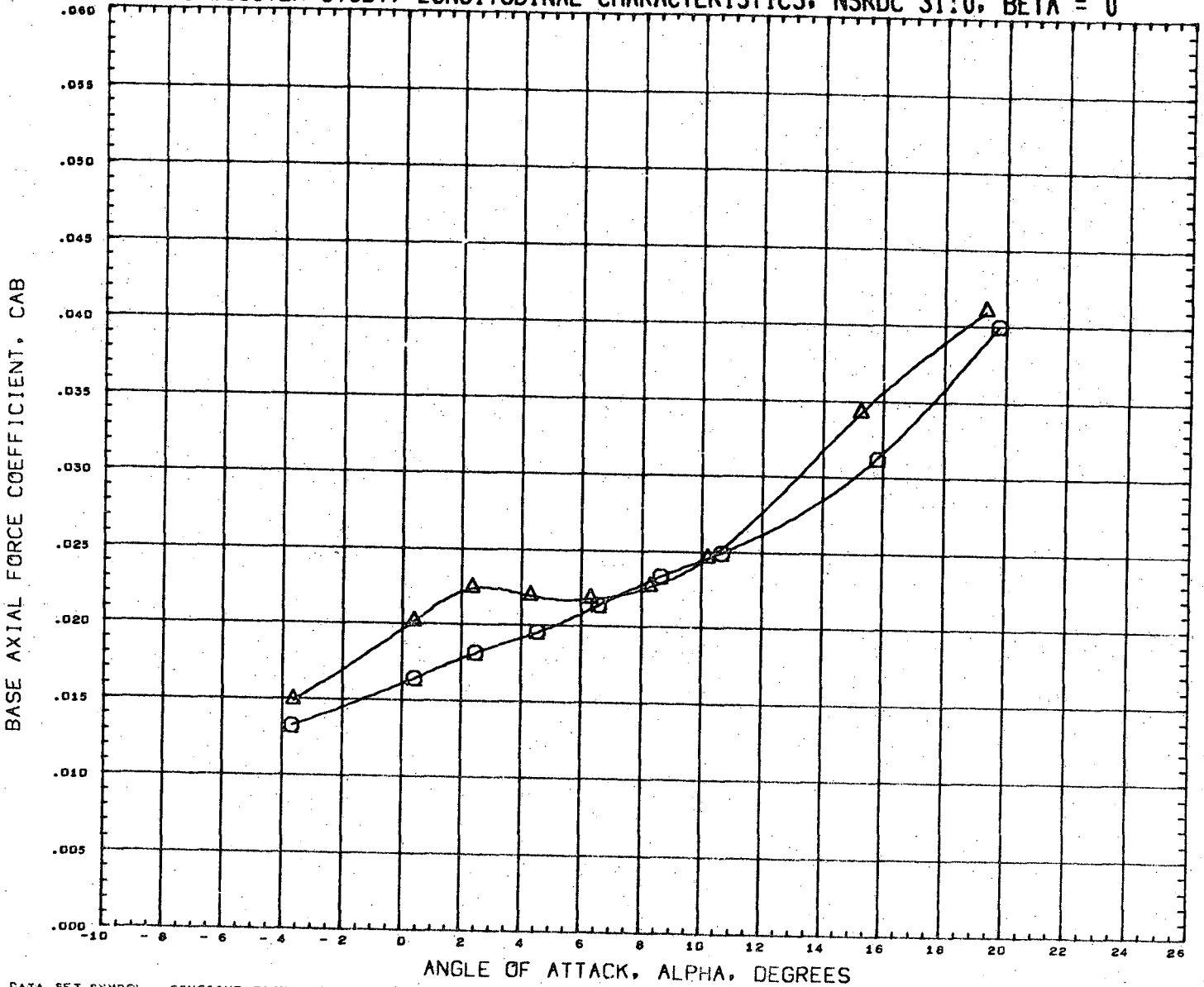
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2117)	NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1	15.000	1.000	3.000	2.000	SREF 1.3550 SQ. FT.
(RN2125)	NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1	15.000	2.000	3.000	2.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCENT

MACH 0.381

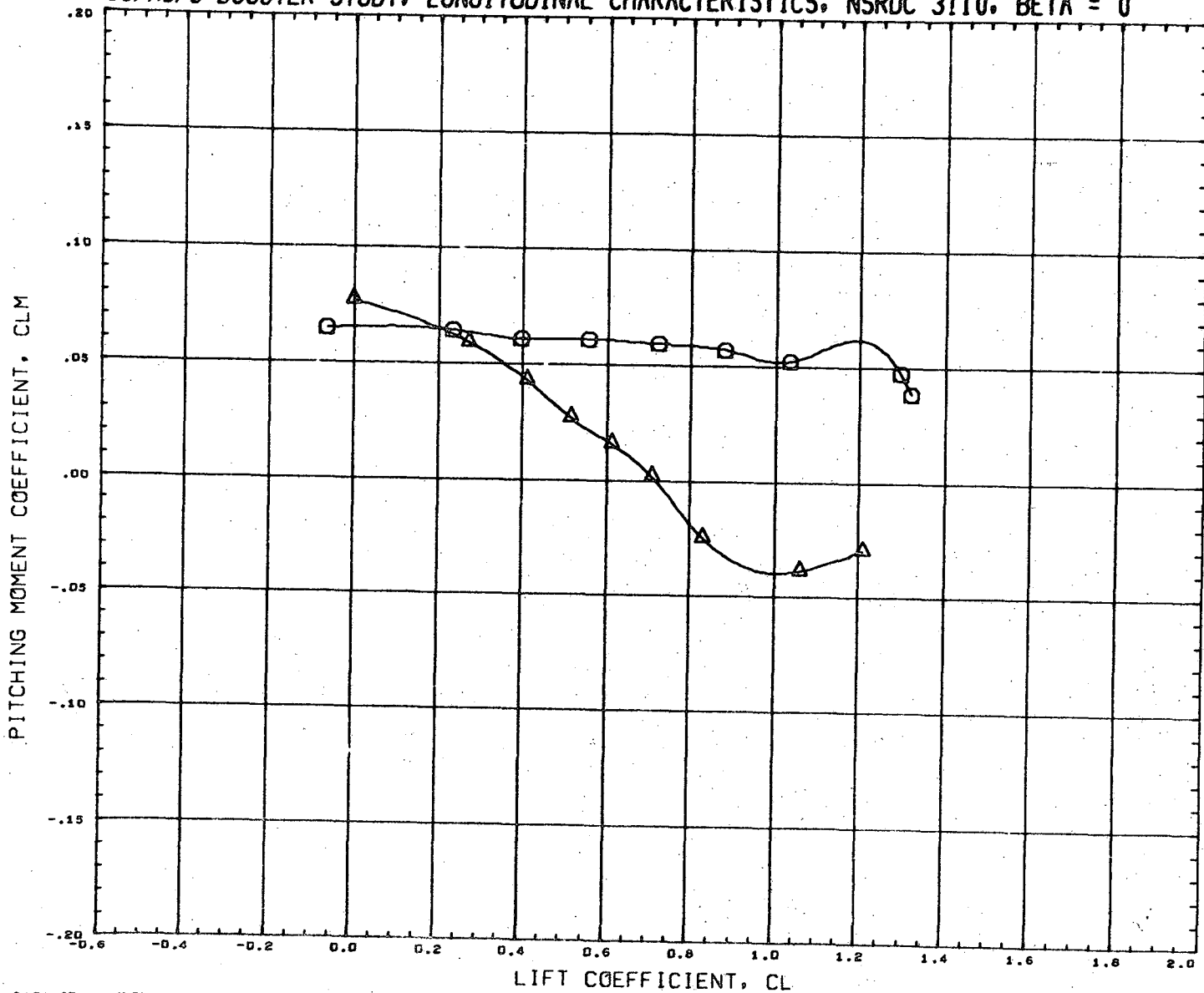
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION	
(RN2117)	NSRDC-3110,MSFC/LMSC BOOSTER B1C1F1W1V1	15.000	1.000	3.000	2.000	SREF	1.3550 SQ.FT.
(RN2125)	NSRDC-3110,MSFC/LMSC BOOSTER B1C1F1W1V1	15.000	2.000	3.000	2.000	LREF	41.4360 INCHES
						BREF	41.4360 INCHES
						XMRP	31.1400 INCHES
						YMRP	0.0000 INCHES
						ZMRP	0.2250 INCHES
						SCALE	1.5000 PERCENT

MACH 0.381

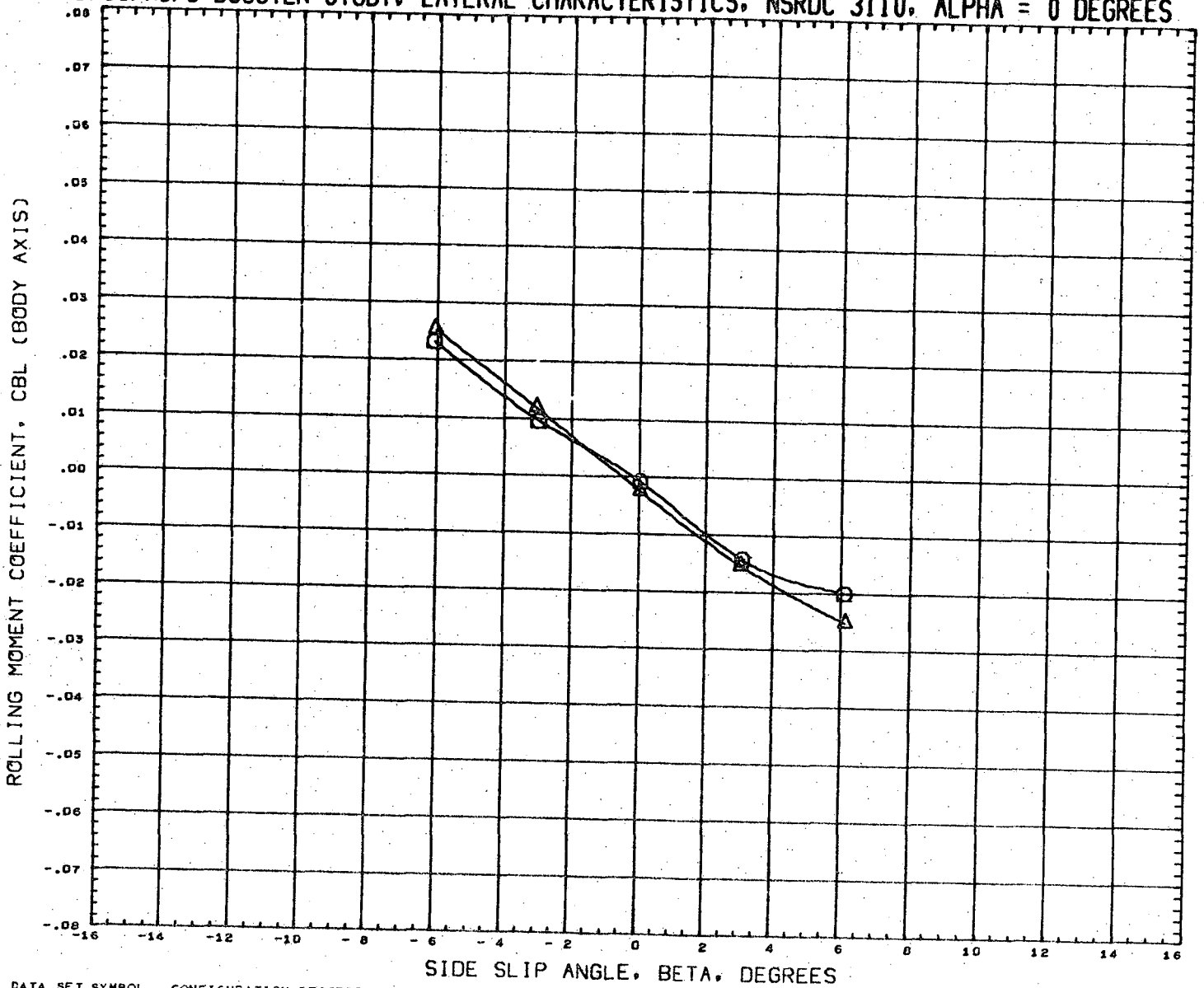
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2117)	NSRDC-3110,MSFC/LMSC BOOSTER B1C1F1W1V1	15.000	1.000	3.000	2.000	SREF 1.3550 SQ.FT.
(RN2125)	NSRDC-3110,MSFC/LMSC BOOSTER B1C1F1W1V1	15.000	2.000	3.000	2.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCNT

MACH 0.381

LMSC/MSFC BOOSTER STUDY, LATERAL CHARACTERISTICS, NSRDC 3110, ALPHA = 0 DEGREES

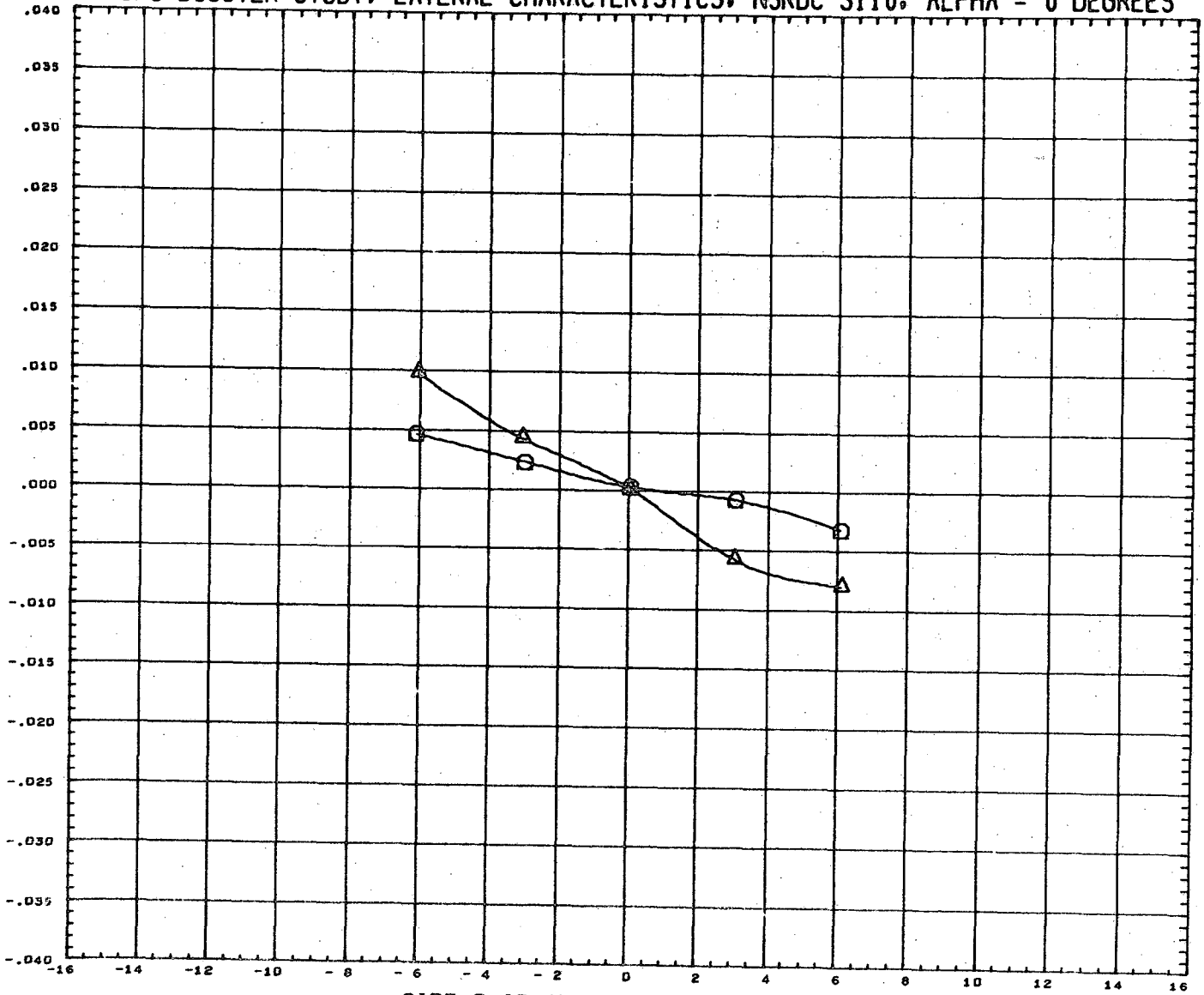


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2118)	NSRDC-3110,MSFC/LMSC BOOSTER B1C1F1W1V1	15.000	1.000	3.000	2.000	SREF 1.3550 SQ.FT.
(RN2126)	NSRDC-3110,MSFC/LMSC BOOSTER B1C1F1W1V1	15.000	2.000	3.000	2.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCNT

MACH 0.380

LMSC/MSFC BOOSTER STUDY, LATERAL CHARACTERISTICS, NSRDC 3110, ALPHA = 0 DEGREES

YAWING MOMENT COEFFICIENT, CYN (BODY AXIS)



SIDE SLIP ANGLE, BETA, DEGREES

DATA SET SYMBOL
(RN2118) □
(RN2126) △

CONFIGURATION DESCRIPTION
NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1
NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1

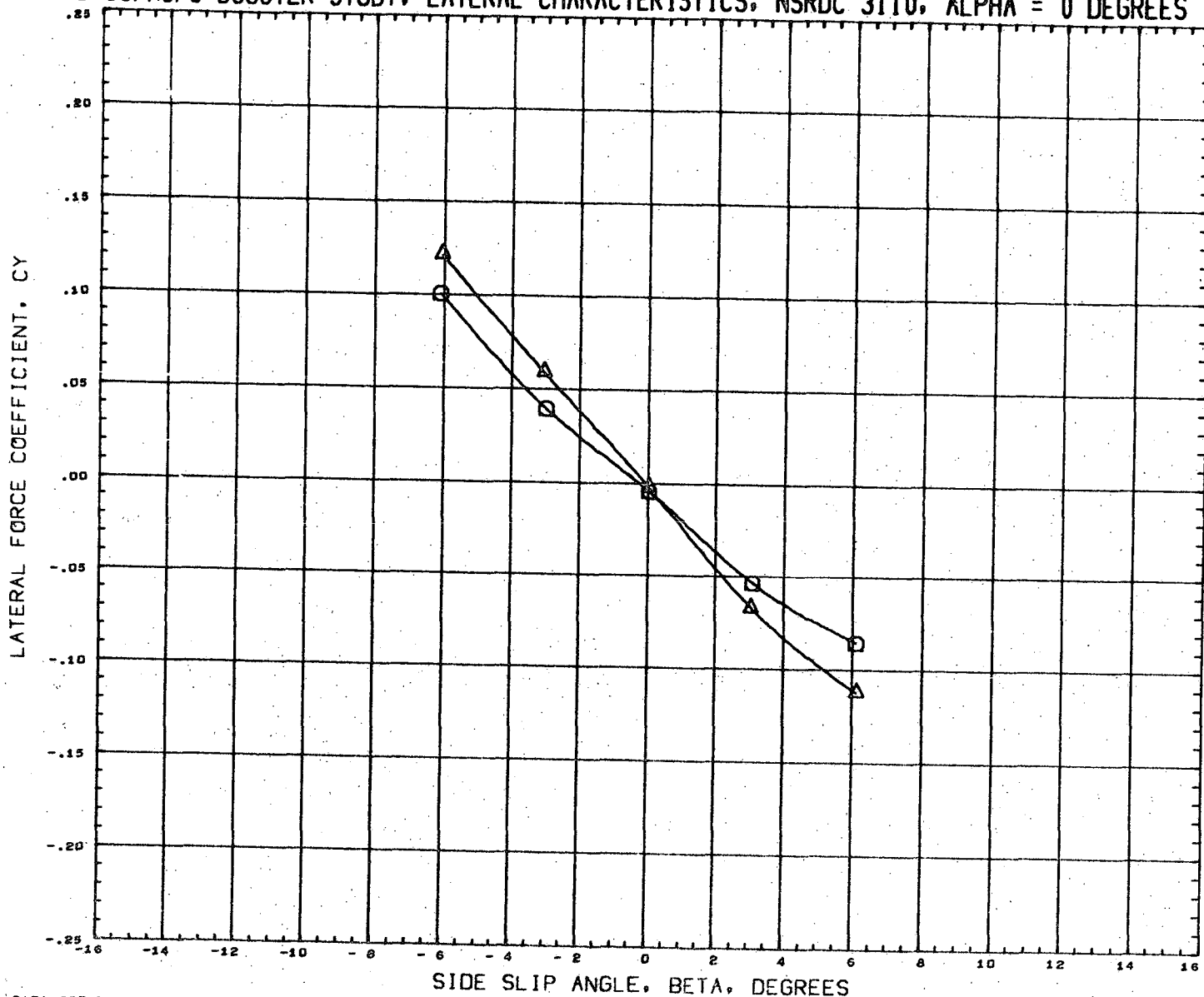
INCIDC	CNDPOS	INCIDW	WNGPOS
15.000	1.000	3.000	2.000
15.000	2.000	3.000	2.000

REFERENCE INFORMATION

SREF	1.3550	SQ. FT.
LREF	41.4360	INCHES
BREF	41.4360	INCHES
XMRP	31.1400	INCHES
YMRP	0.0000	INCHES
ZMRP	0.2250	INCHES
SCALE	1.5000	PERCENT

MACH 0.380

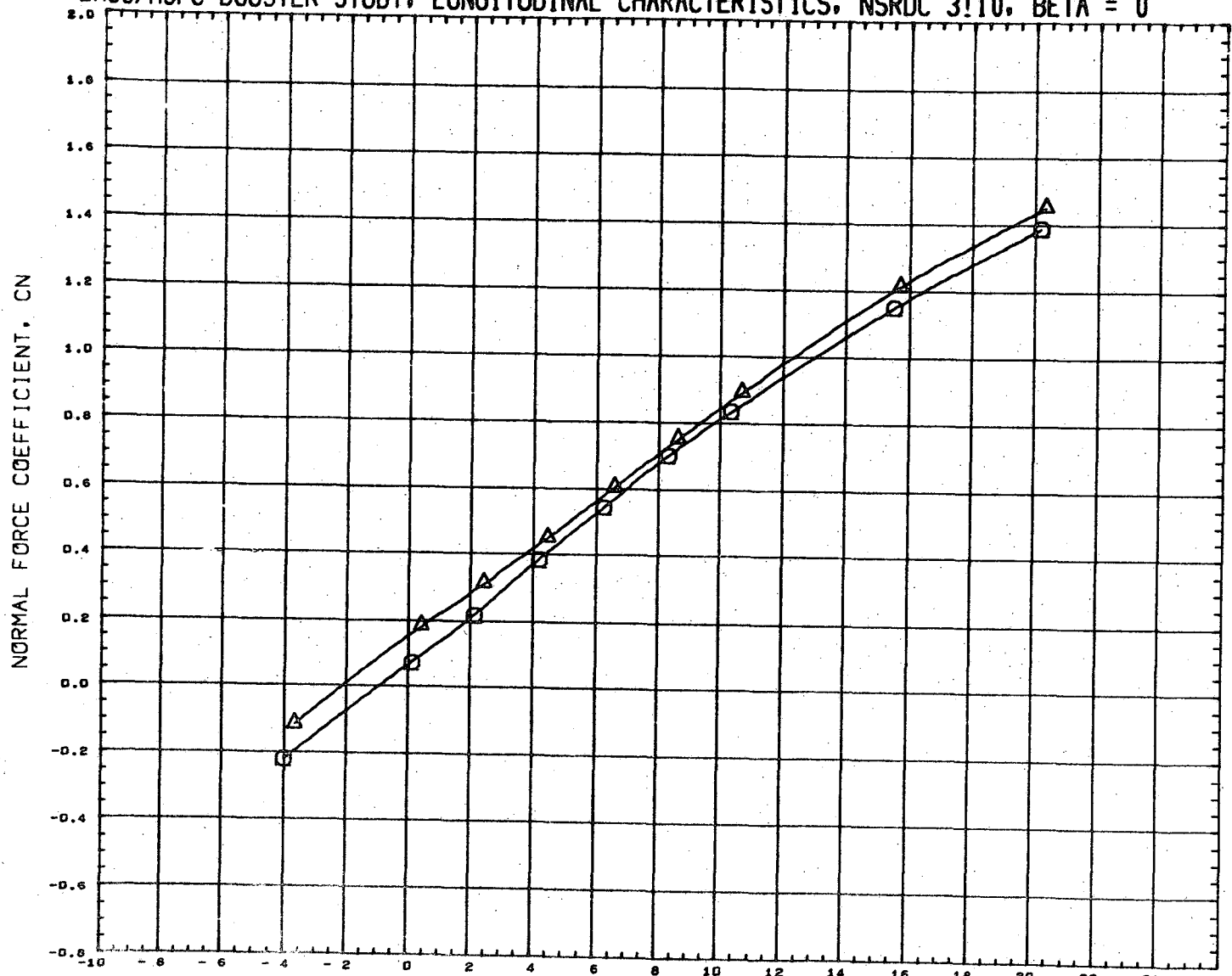
LMSC/MSFC BOOSTER STUDY, LATERAL CHARACTERISTICS, NSRDC 3110, ALPHA = 0 DEGREES



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2118)	NSRDC-3110,MSFC/LMSC BOOSTER B1C1F1W1V1	15.000	1.000	3.000	2.000	SREF 1.3550 SQ. FT.
(RN2126)	NSRDC-3110,MSFC/LMSC BOOSTER B1C1F1W1V1	15.000	2.000	3.000	2.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCENT

MACH 0.380

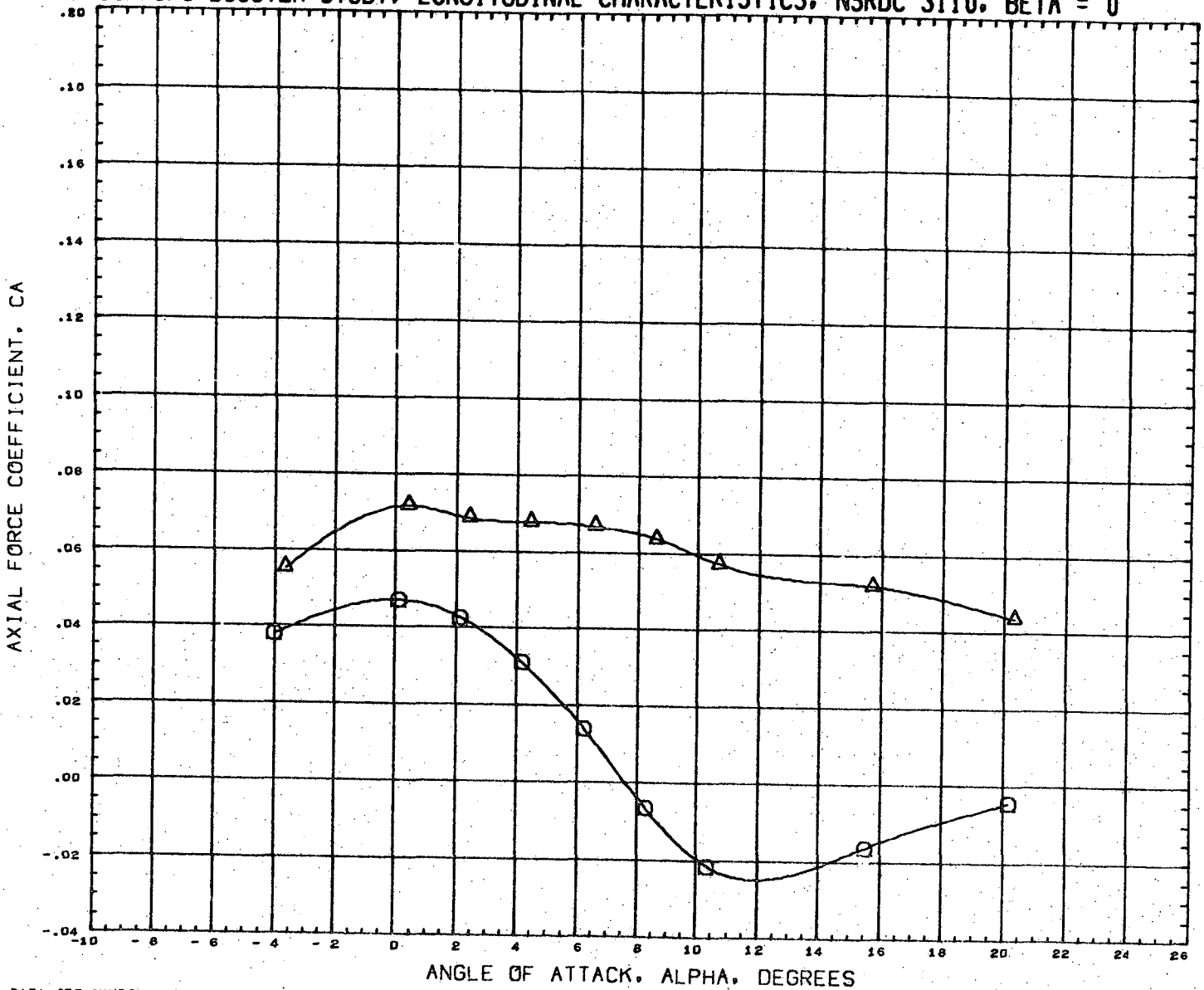
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2055)	NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1	3.000	1.000	0.000	1.000	SREF 1.3550 SQ. FT.
(RN2069)	NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1	15.000	1.000	0.000	1.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCENT

MACH 0.381

LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL
(RN2065) ○
(RN2069) △

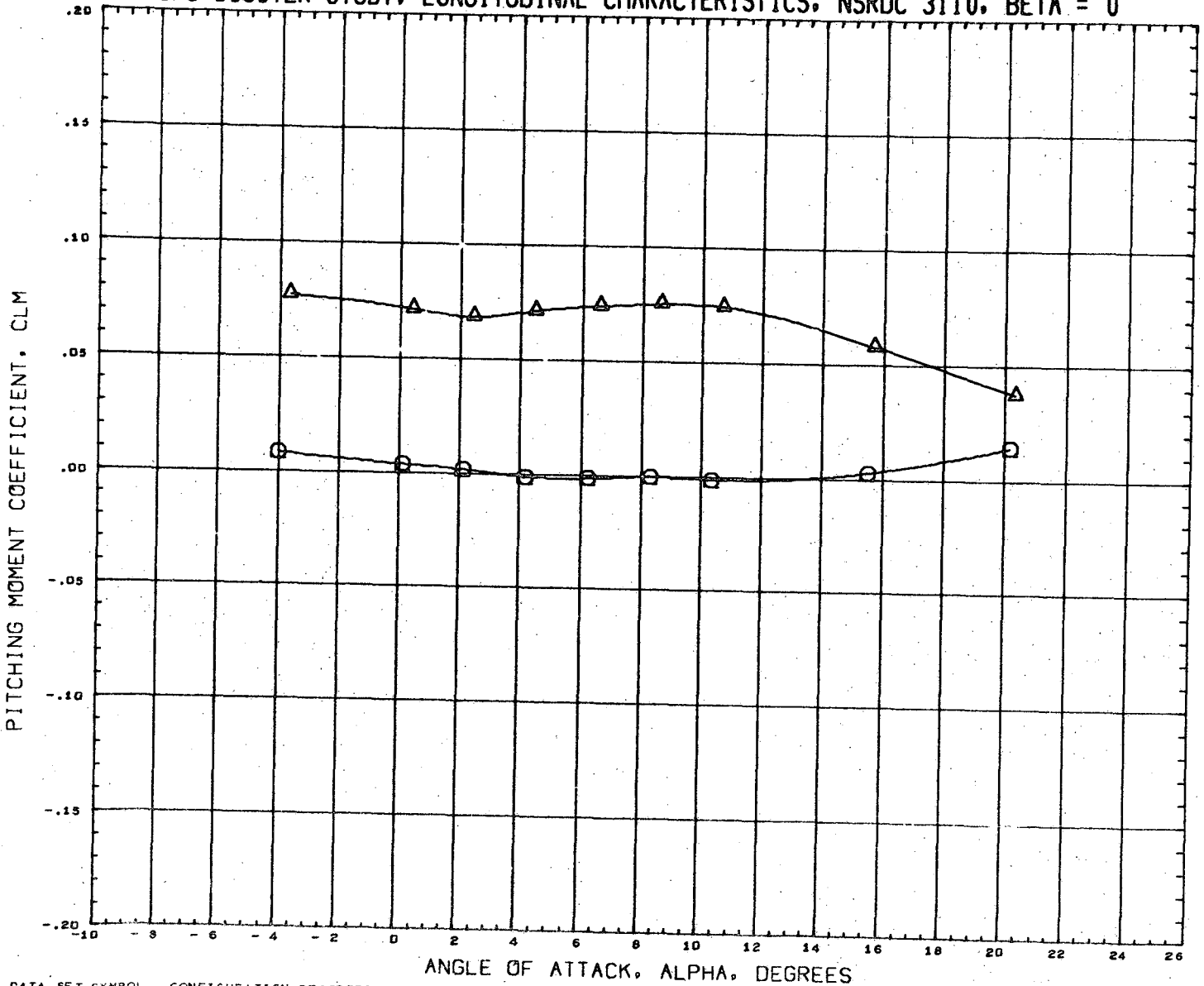
CONFIGURATION DESCRIPTION
NSRDC-3110,MSFC/LMSC BOOSTER B1C1F1W1V1
NSRDC-3110,MSFC/LMSC BOOSTER B1C1F1W1V1

INCIDC	CNDPOS	INCIDW	WNGPOS
3.000	1.000	0.000	1.000
15.000	1.000	0.000	1.000

REFERENCE INFORMATION	
SREF	1.3550 SQ.FT.
LREF	41.4360 INCHES
BREF	41.4360 INCHES
XMRP	31.1400 INCHES
YMRP	0.0000 INCHES
ZMRP	0.2250 INCHES
SCALE	1.5000 PERCNT

MACH 0.381

LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL
(RN2065) \square
(RN2069) \triangle

CONFIGURATION DESCRIPTION
NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1
NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1

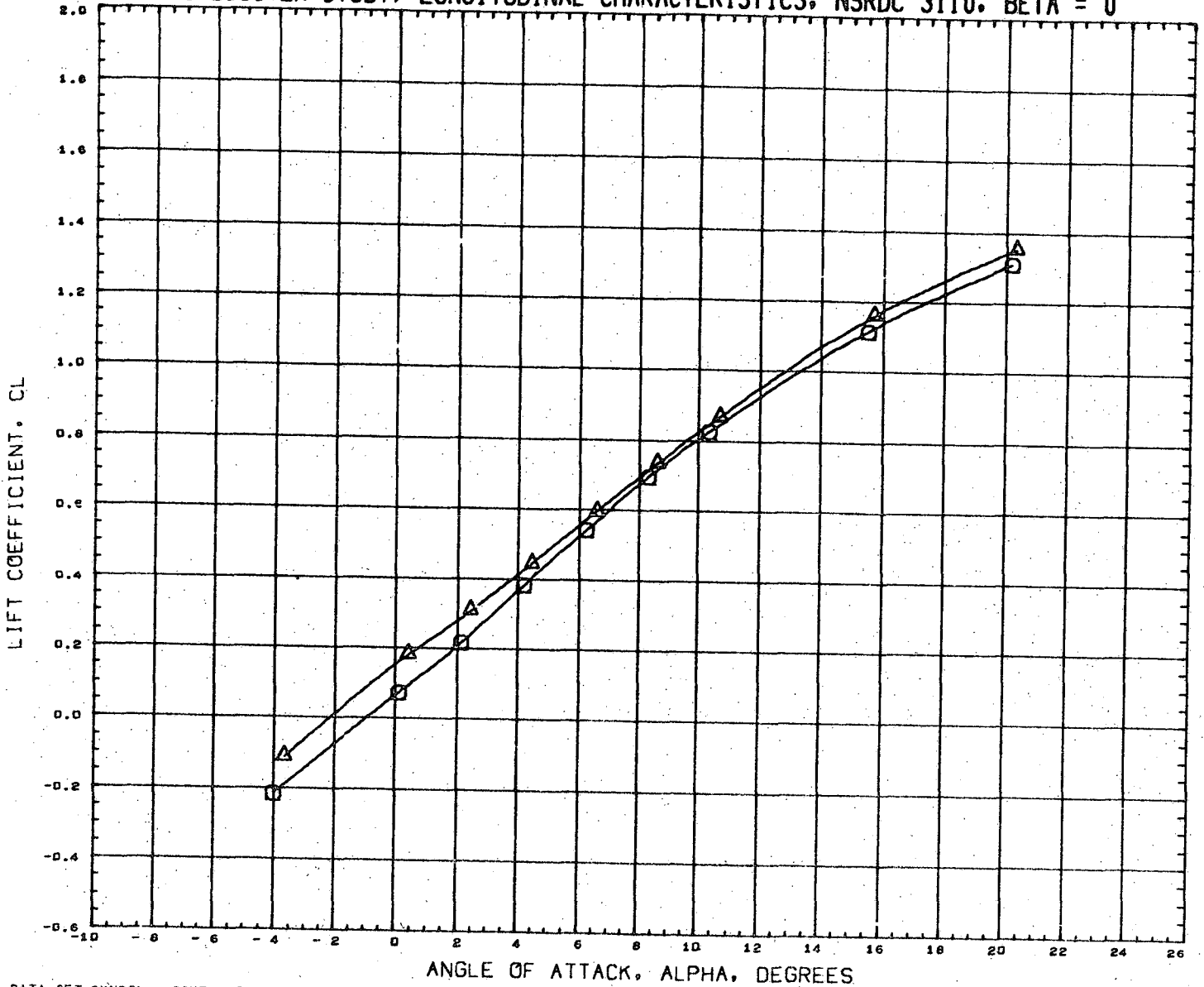
INCIDC	CNDPOS	INCIDW	WNGPOS
3.000	1.000	0.000	1.000
15.000	1.000	0.000	1.000

REFERENCE INFORMATION

SREF	1.3550	SQ. FT.
LREF	41.4360	INCHES
BREF	41.4360	INCHES
XMRP	31.1400	INCHES
YMRP	0.0000	INCHES
ZMRP	0.2250	INCHES
SCALE	1.5000	PERCENT

MACH 0.581

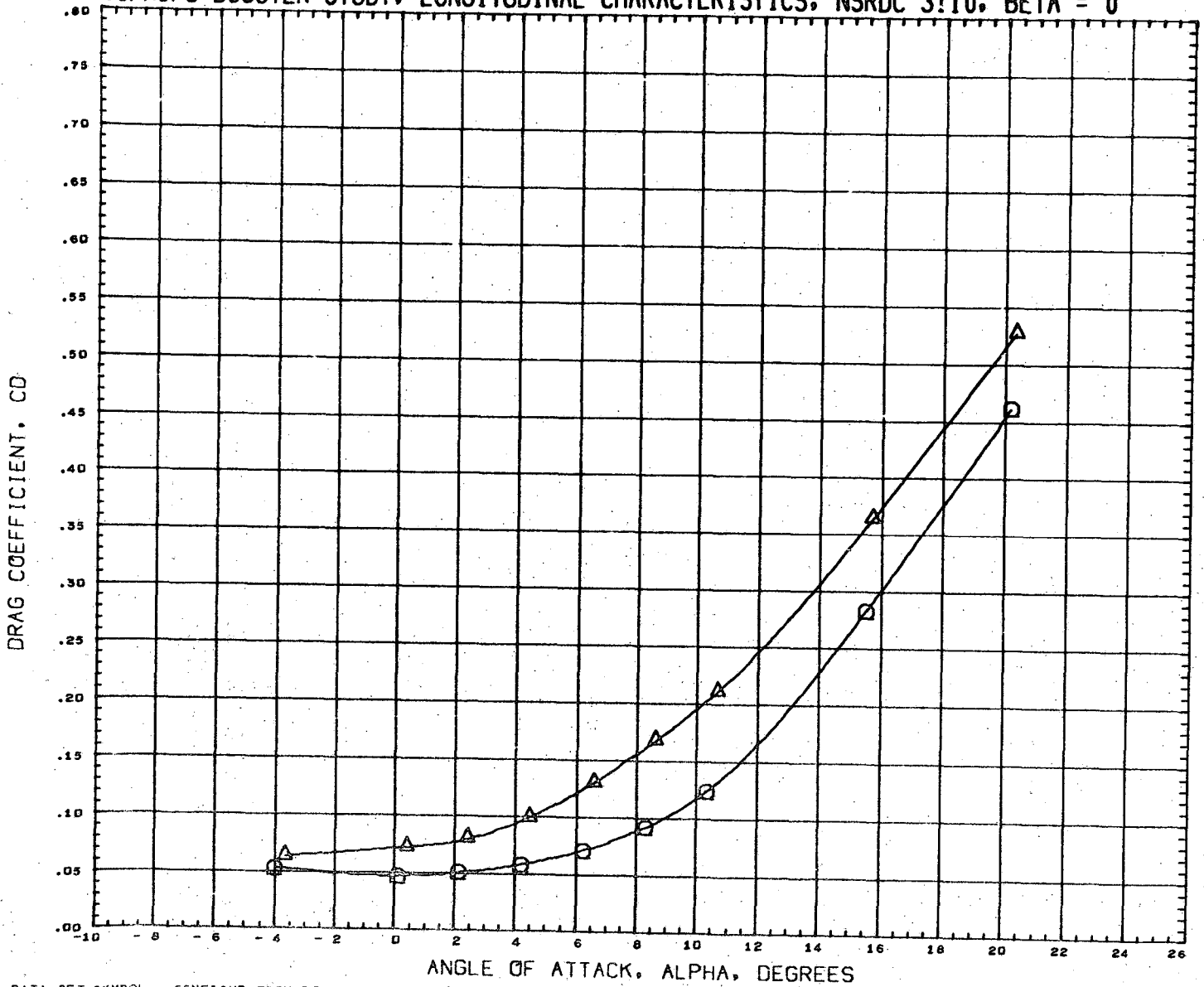
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2065)	NSRDC-3110,MSFC/LMSC BOOSTER B1C1F1W1V1	3.000	1.000	0.000	1.000	SREF 1.3550 SQ.FT.
(RN2069)	NSRDC-3110,MSFC/LMSC BOOSTER B1C1F1W1V1	15.000	1.000	0.000	1.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCENT

MACH 0.381

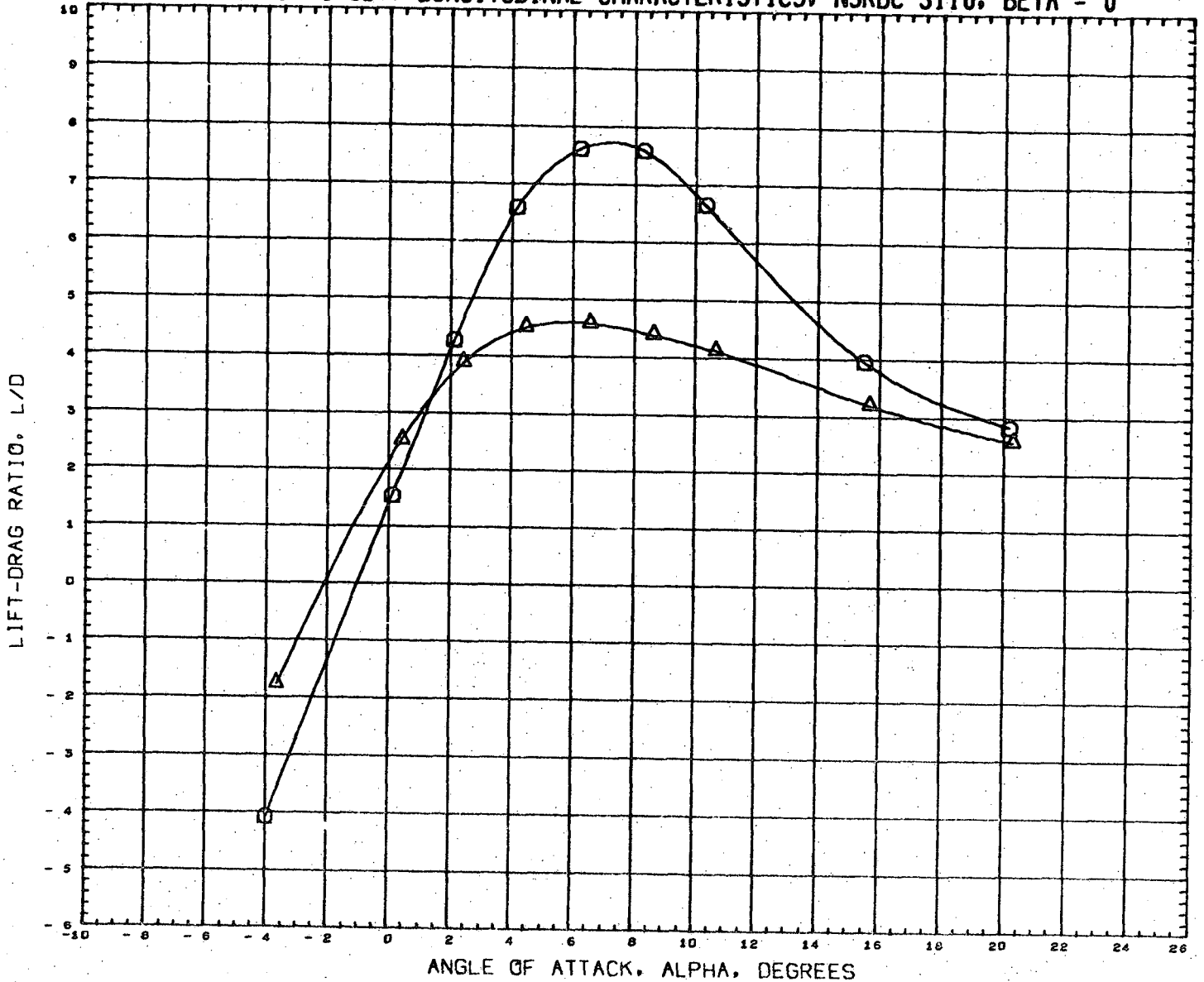
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION	
(RN2065) □	NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1	3.000	1.000	0.000	1.000	SREF	1.3550 SQ. FT.
(RN2069) △	NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1	15.000	1.000	0.000	1.000	LREF	41.4360 INCHES
						BREF	41.4360 INCHES
						XMRP	31.1400 INCHES
						YMRP	0.0000 INCHES
						ZMRP	0.2250 INCHES
						SCALE	1.5000 PERCENT

MACH 0.381

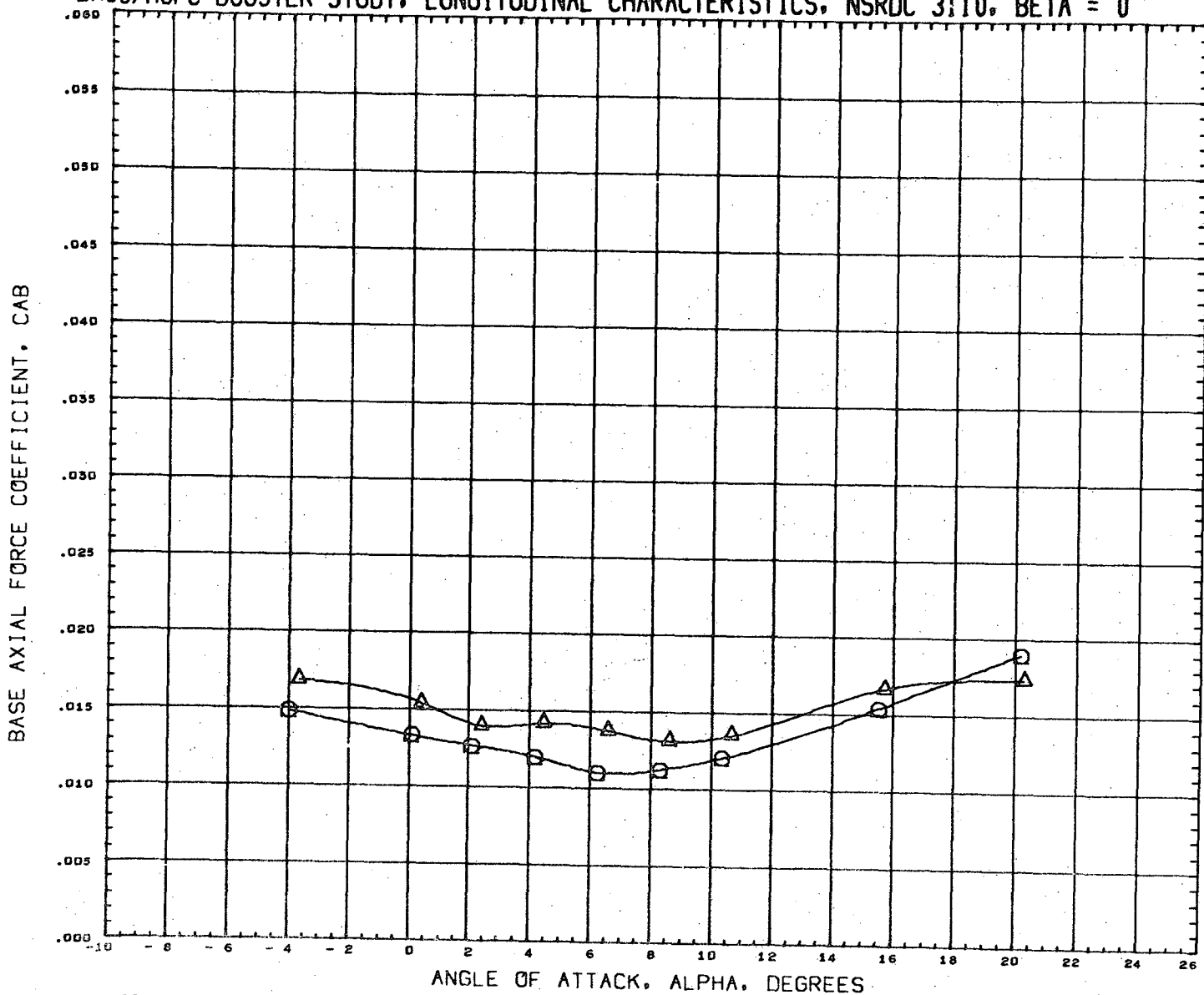
LMSC/MSFC BOOSTER STUDY. LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION	
(RN2065)	NSRDC-3110,MSFC/LMSC BOOSTER B1C1F1W1V1	3.000	1.000	0.000	1.000	SREF	1.3550 SQ.FT.
(RN2069)	NSRDC-3110,MSFC/LM9C BOOSTER B1C1F1W1V1	15.000	1.000	0.000	1.000	LREF	41.4360 INCHES
						BREF	41.4360 INCHES
						XMRP	31.1400 INCHES
						YMRP	0.0000 INCHES
						ZMRP	0.2250 INCHES
						SCALE	1.5000 PERCENT

MACH 0.381

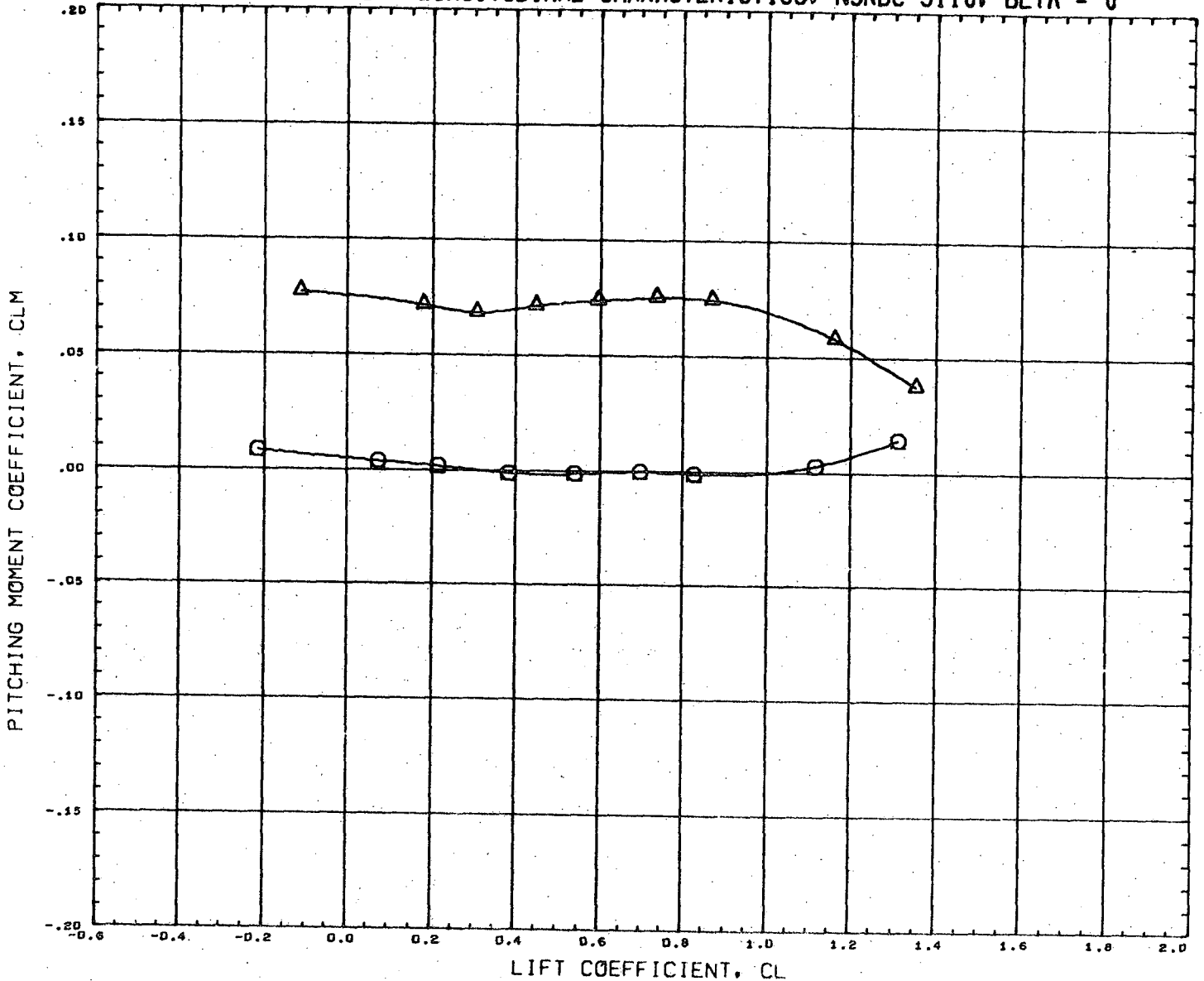
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2085)	NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1	3.000	1.000	0.000	1.000	SREF 1.3550 SQ. FT.
(RN2089)	NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1	15.000	1.000	0.000	1.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCENT

MACH 0.381

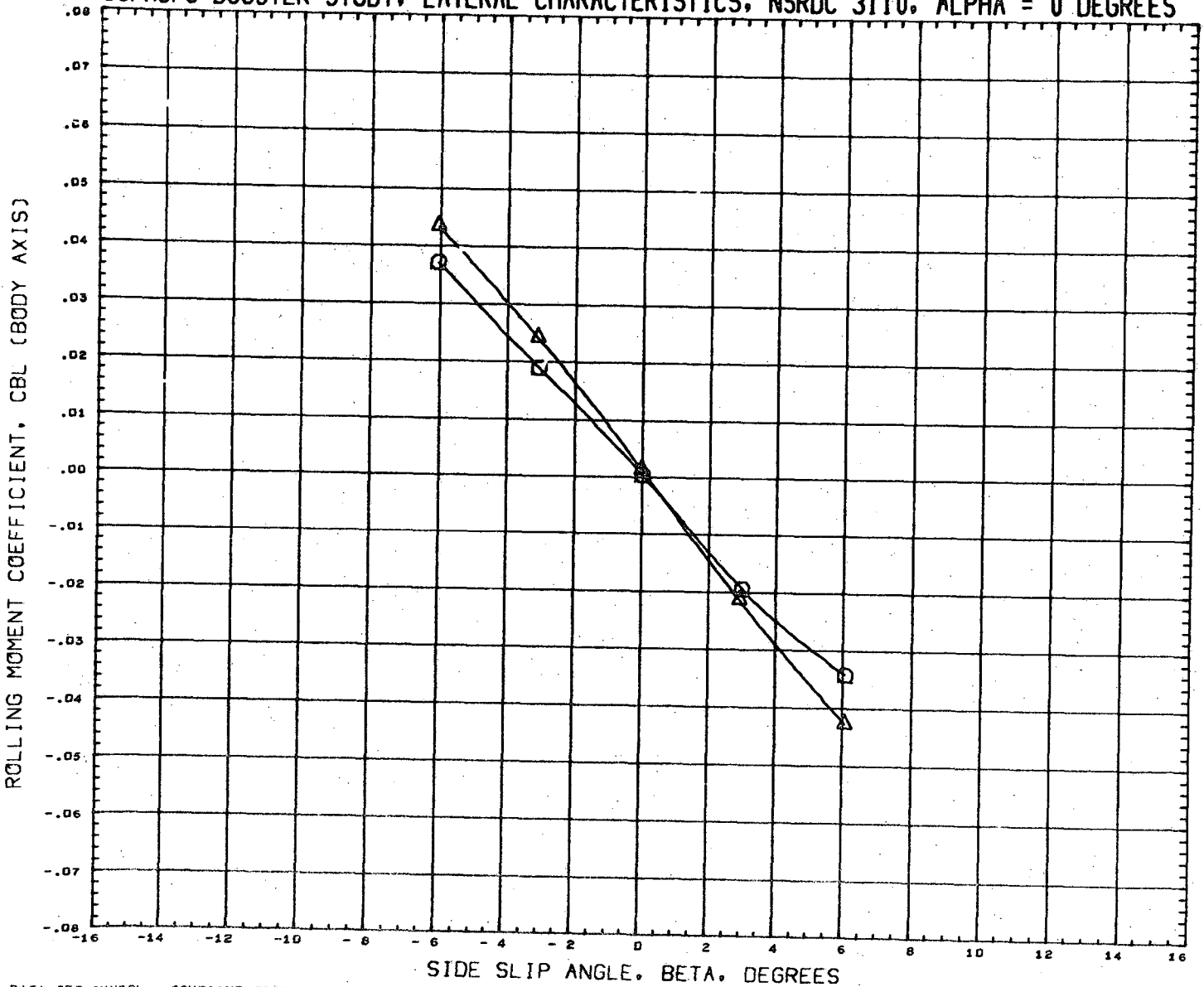
LMSC/MSFC BOOSTER STUDY. LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0





DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2065)	NSRDC-3110,MSFC/LMSC BOOSTER B1C1F1W1V1	3.000	1.000	0.000	1.000	SREF 1.3550 SQ.FT.
(RN2069)	NSRDC-3110,MSFC/LMSC BOOSTER B1C1F1W1V1	15.000	1.000	0.000	1.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCENT

MACH 0.381

LMSC/MSFC BOOSTER STUDY, LATERAL CHARACTERISTICS, NSRDC 3110, ALPHA = 0 DEGREES



DATA SET SYMBOL
(RN2066) 
(RN2070) 

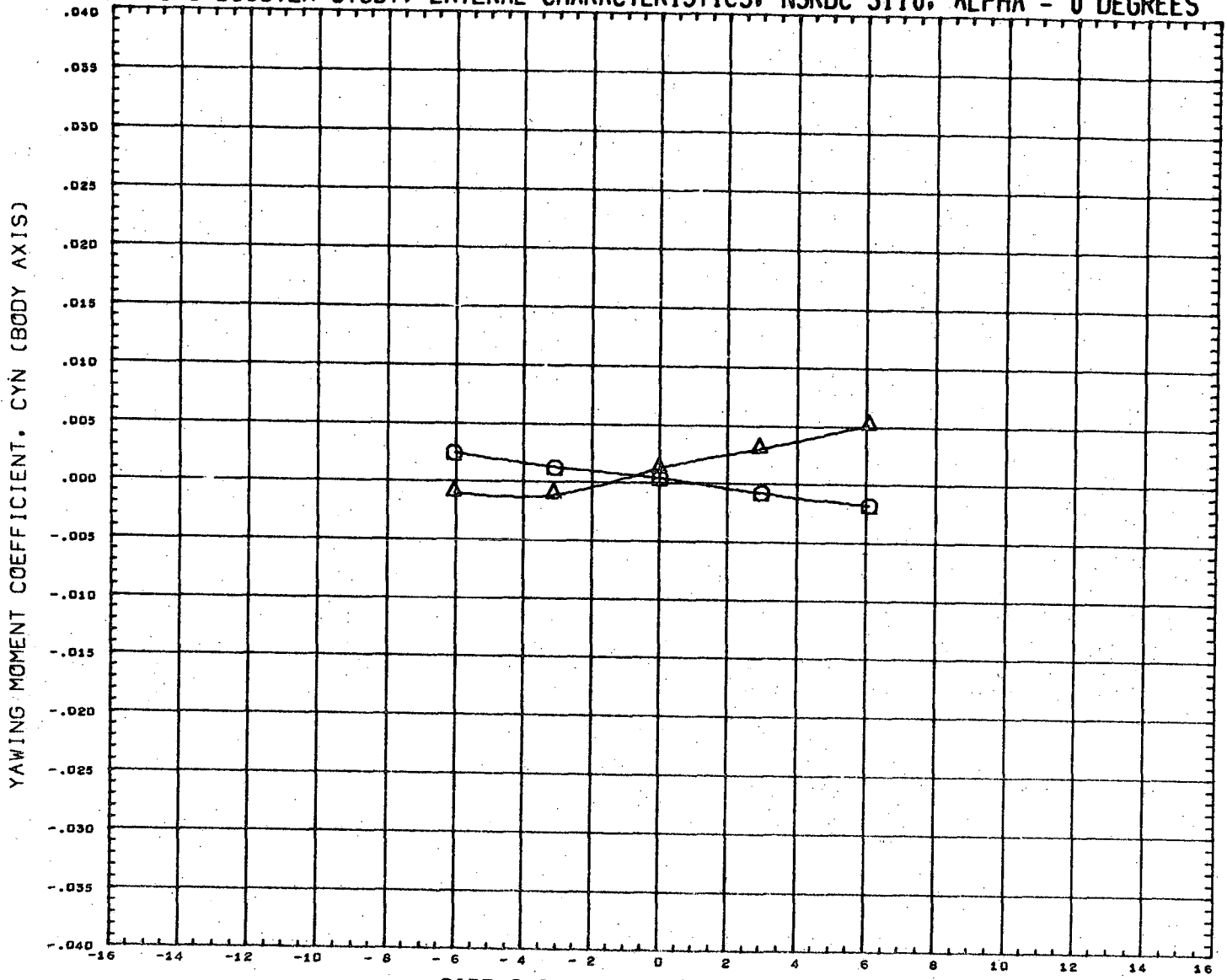
CONFIGURATION DESCRIPTION
NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1
NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1



INCIDC	CNDPOS	INCIDW	WNGPOS
3.000	1.000	0.000	1.000
15.000	1.000	0.000	1.000

REFERENCE INFORMATION		
SREF	1.3550	SQ. FT.
LREF	41.4360	INCHES
BREF	41.4360	INCHES
XMRP	31.1400	INCHES
YMRP	0.0000	INCHES
ZMRP	0.2250	INCHES
SCALE	1.5000	PERCNT

MACH 0.381

LMSC/MSFC BOOSTER STUDY, LATERAL CHARACTERISTICS, NSRDC 3110, ALPHA = 0 DEGREES



DATA SET SYMBOL
(RN2066) 
(RN2070) 

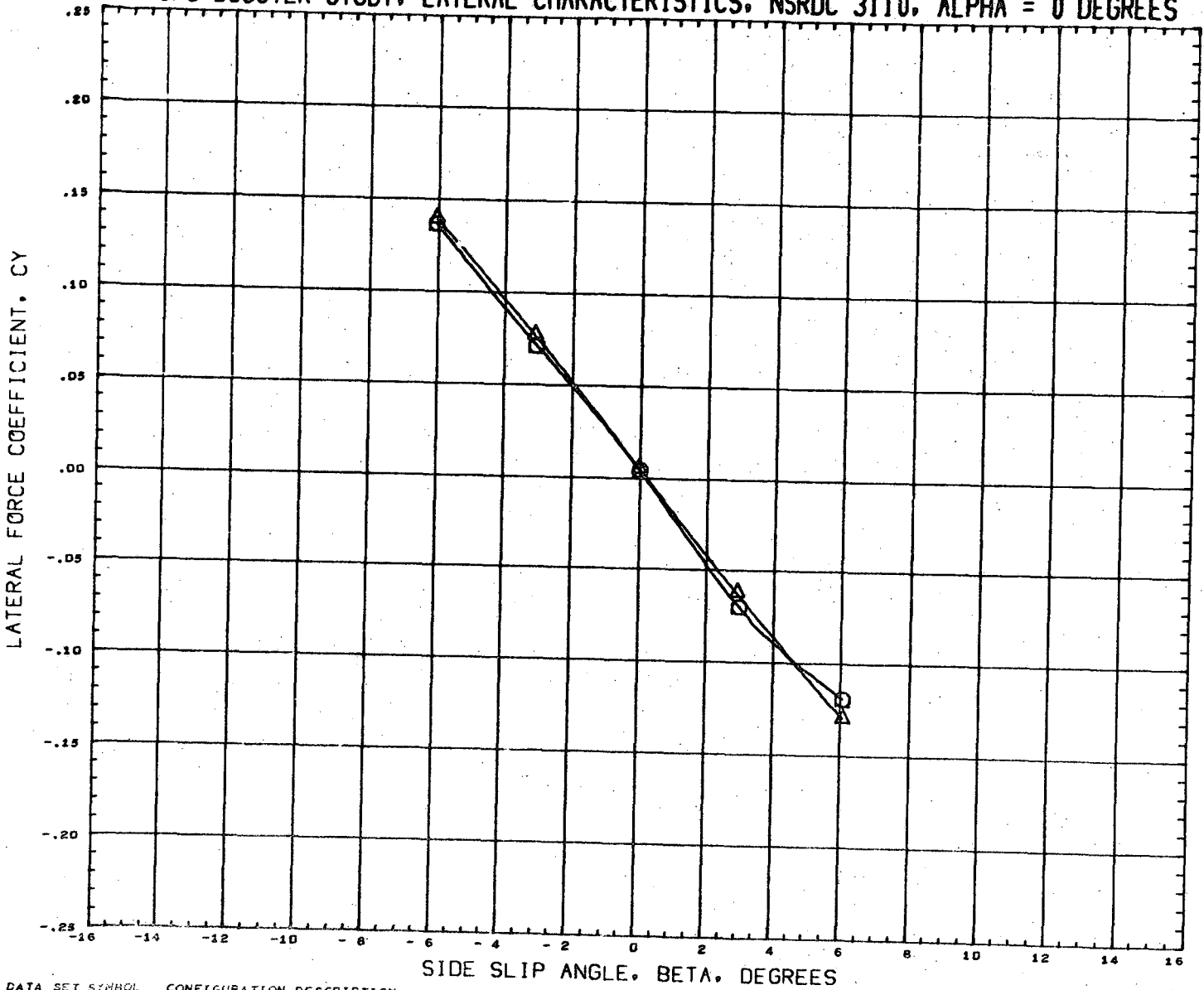
CONFIGURATION DESCRIPTION
NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1
NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1

INCIDC	CNDPOS	INCIDW	WNGPOS
3.000	1.000	0.000	1.000
15.000	1.000	0.000	1.000

REFERENCE INFORMATION
SREF 1.3550 SQ. FT.
LREF 41.4360 INCHES
BREF 41.4360 INCHES
XMRP 31.1400 INCHES
YMRP 0.0000 INCHES
ZMRP 0.2250 INCHES
SCALE 1.5000 PERCENT

MACH 0.381

LMSC/MSFC BOOSTER STUDY, LATERAL CHARACTERISTICS, NSRDC 3110, ALPHA = 0 DEGREES



DATA SET SYMBOL
(RN2066)
(RN2070)



CONFIGURATION DESCRIPTION:
NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1
NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1

INCIDC	CNDPOS	INCIDW	WNGPOS
3.000	1.000	0.000	1.000
15.000	1.000	0.000	1.000

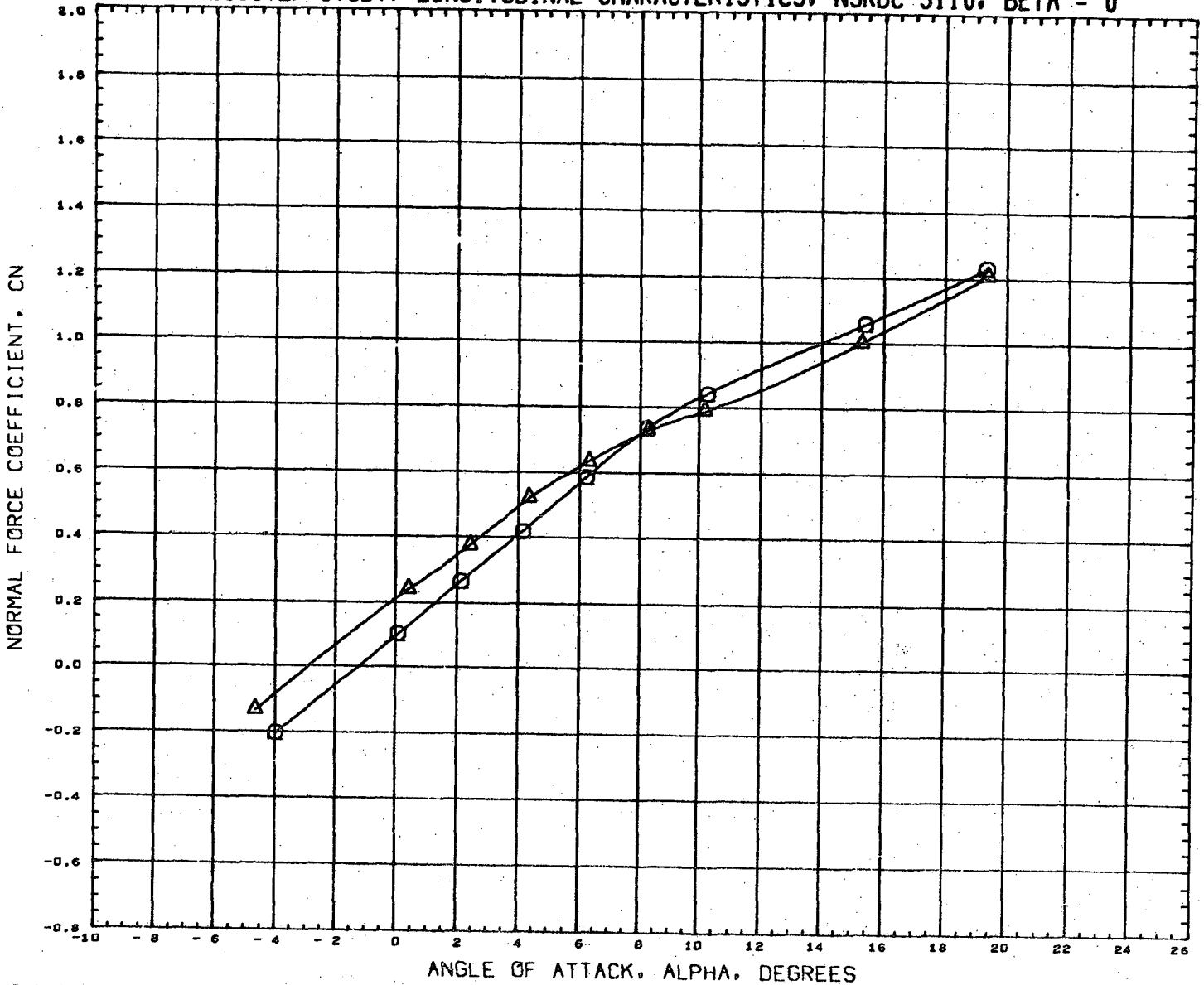
REFERENCE INFORMATION

SREF	1.3550	SQ. FT.
LREF	41.4360	INCHES
BREF	41.4360	INCHES
XMRP	31.1400	INCHES
YMRP	0.0000	INCHES
ZMRP	0.2250	INCHES
SCALE	1.5000	PERCENT

MACH 0.381

100

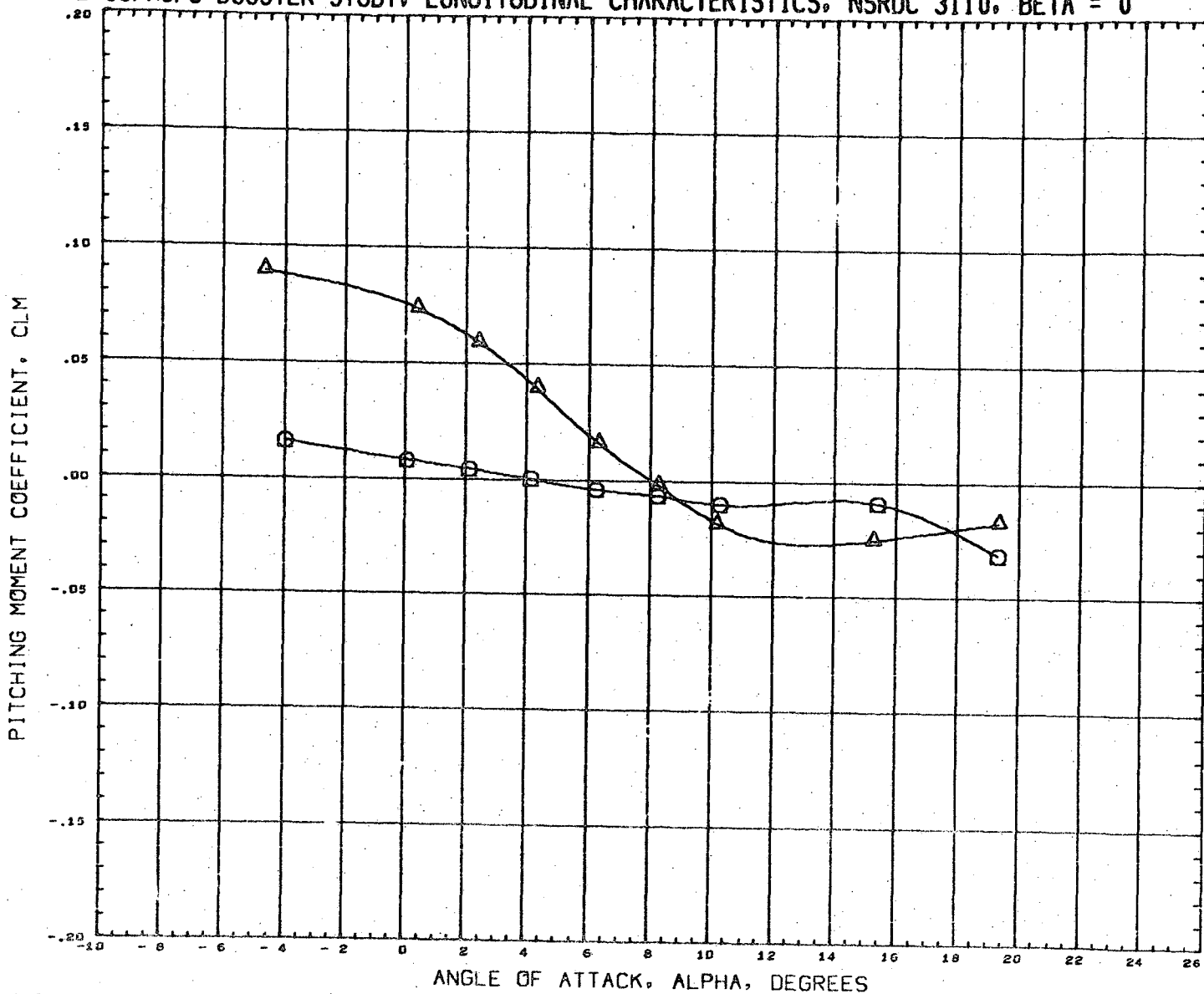
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2073)	NSRDC-3110,MSFC/LMSC BOOSTER B1C1F1W1V1	3.000	2.000	0.000	1.000	SREF 1.3550 SQ.FT.
(RN2077)	NSRDC-3110,MSFC/LMSC BOOSTER B1C1F1W1V1	15.000	2.000	0.000	1.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRF 31.1400 INCHES
						YMRF 0.0000 INCHES
						ZMRF 0.2250 INCHES
						SCALE 1.5000 PERCENT

MACH 0.381

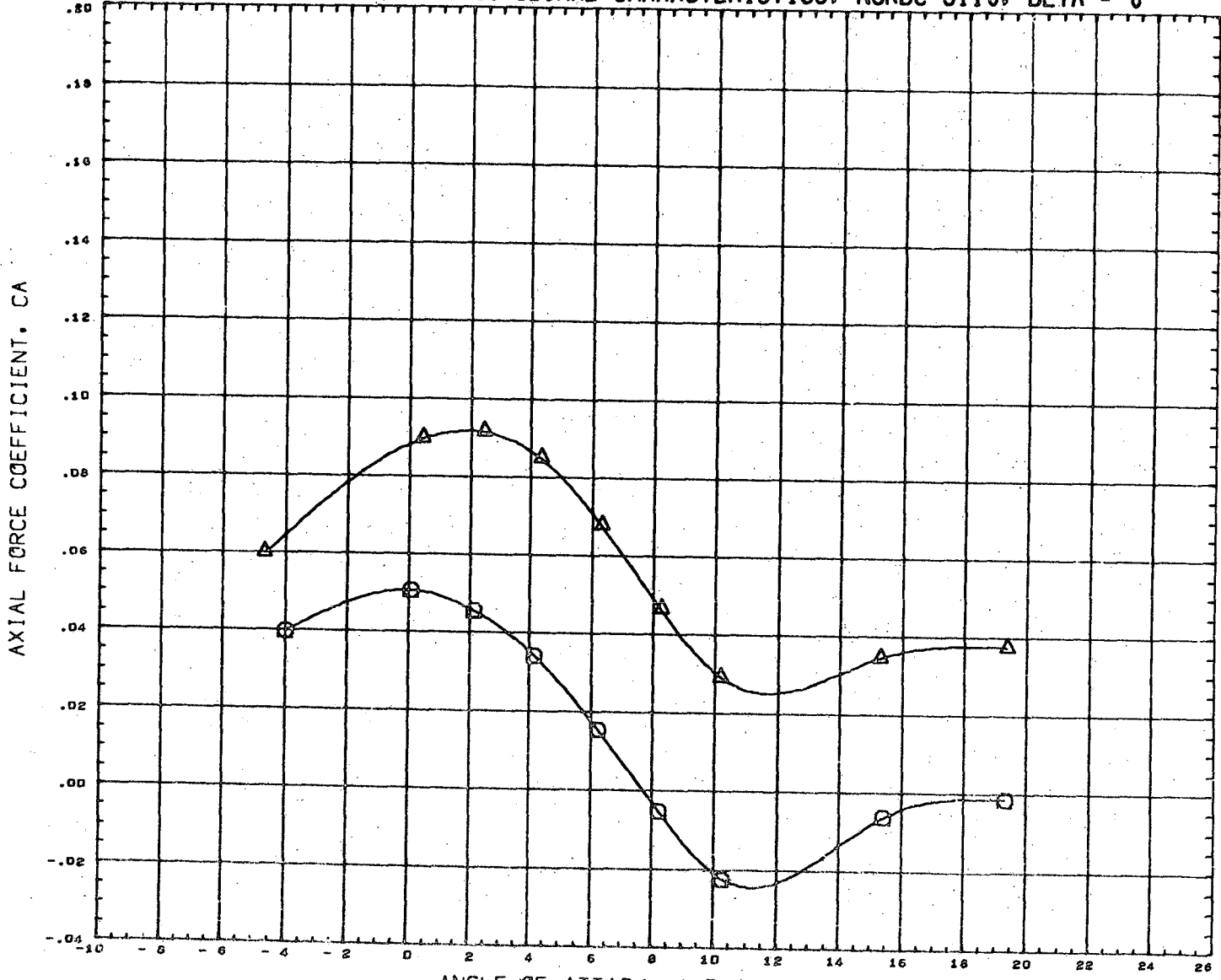
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2073)	NSRDC-3110,MSFC/LMSC BOOSTER B1C1F1W1V1	3.000	2.000	0.000	1.000	GREF 1.3550 SQ.FT.
(RN2077)	NSRDC-3110,MSFC/LMSC BOOSTER B1C1F1W1V1	15.000	2.000	0.000	1.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRF 31.1400 INCHES
						YMRF 0.0000 INCHES
						ZMRF 0.2250 INCHES
						SCALE 1.5000 PERCENT

MACH 0.381

LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL
(RN2073) \square
(RN2077) \triangle

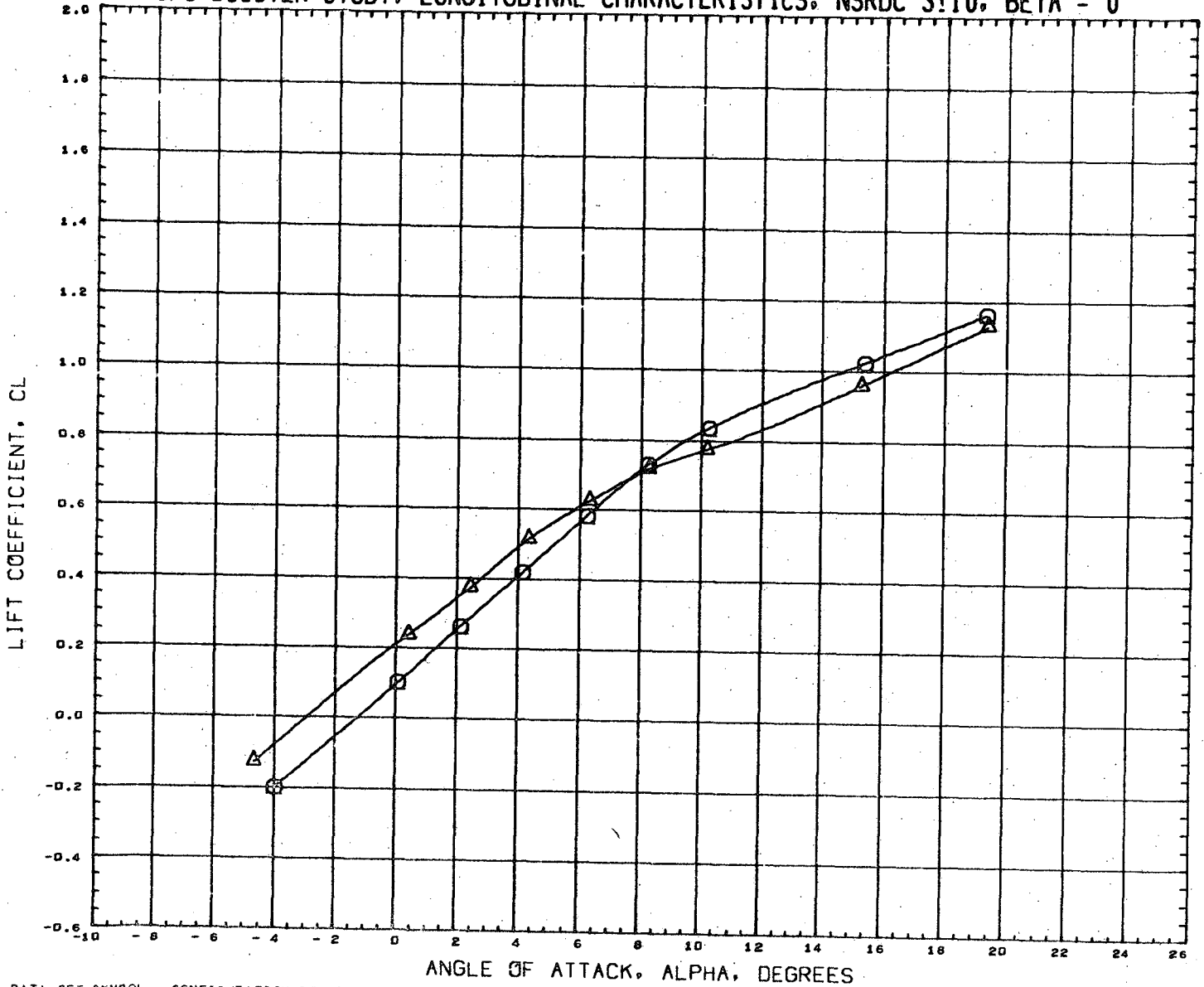
CONFIGURATION DESCRIPTION
NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1
NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1

INCIDC 3.000
15.000
CNDPOS 2.000
2.000
INCIDW 0.000
0.000
WNGPOS 1.000
1.000

REFERENCE INFORMATION
SREF 1.3550 SQ. FT.
LREF 41.4360 INCHES
BREF 41.4360 INCHES
XMRP 31.1400 INCHES
YMRP 0.0000 INCHES
ZMRP 0.2250 INCHES
SCALE 1.5000 PERCENT

MACH 0.381

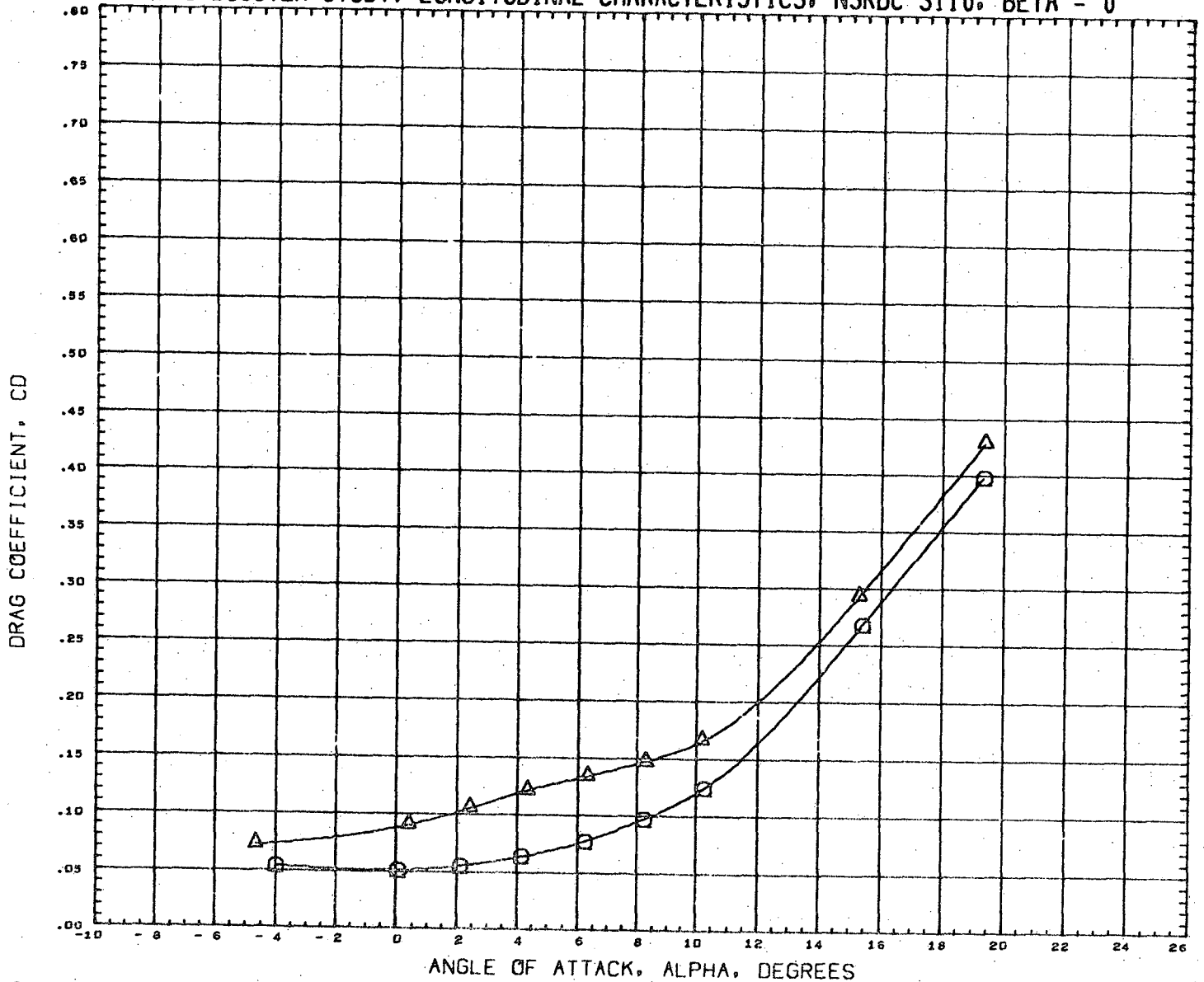
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2073)	NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1	3.000	2.000	0.000	1.000	SREF 1.3550 SQ. FT.
(RN2077)	NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1	15.000	2.000	0.000	1.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCENT

MACH 0.381

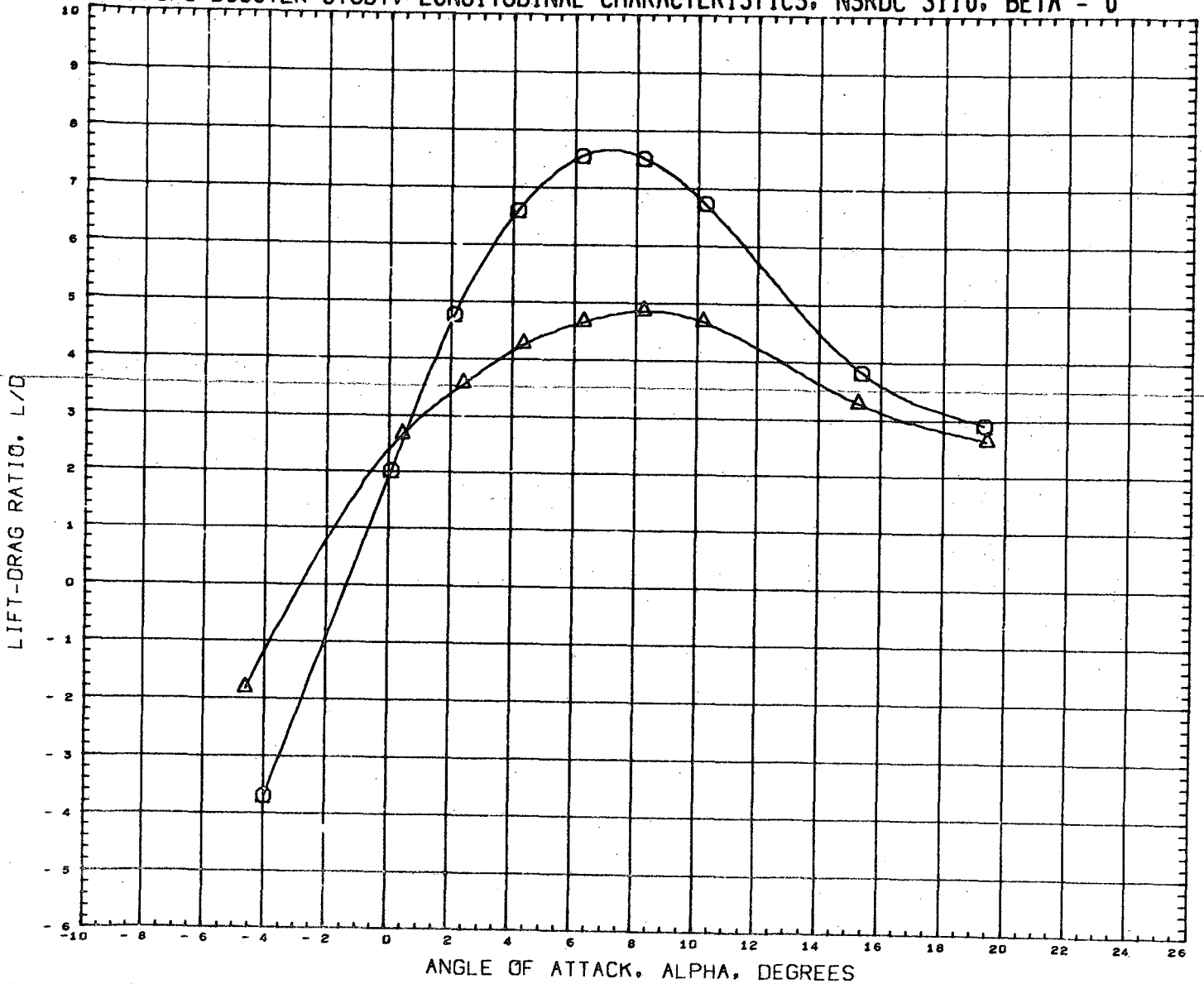
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0





DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2073)	NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1	3.000	2.000	0.000	1.000	SREF 1.3550 SQ. FT.
(RN2077)	NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1	15.000	2.000	0.000	1.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCENT

MACH 0.301

LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL
(RH2073) 
(RH2077) 

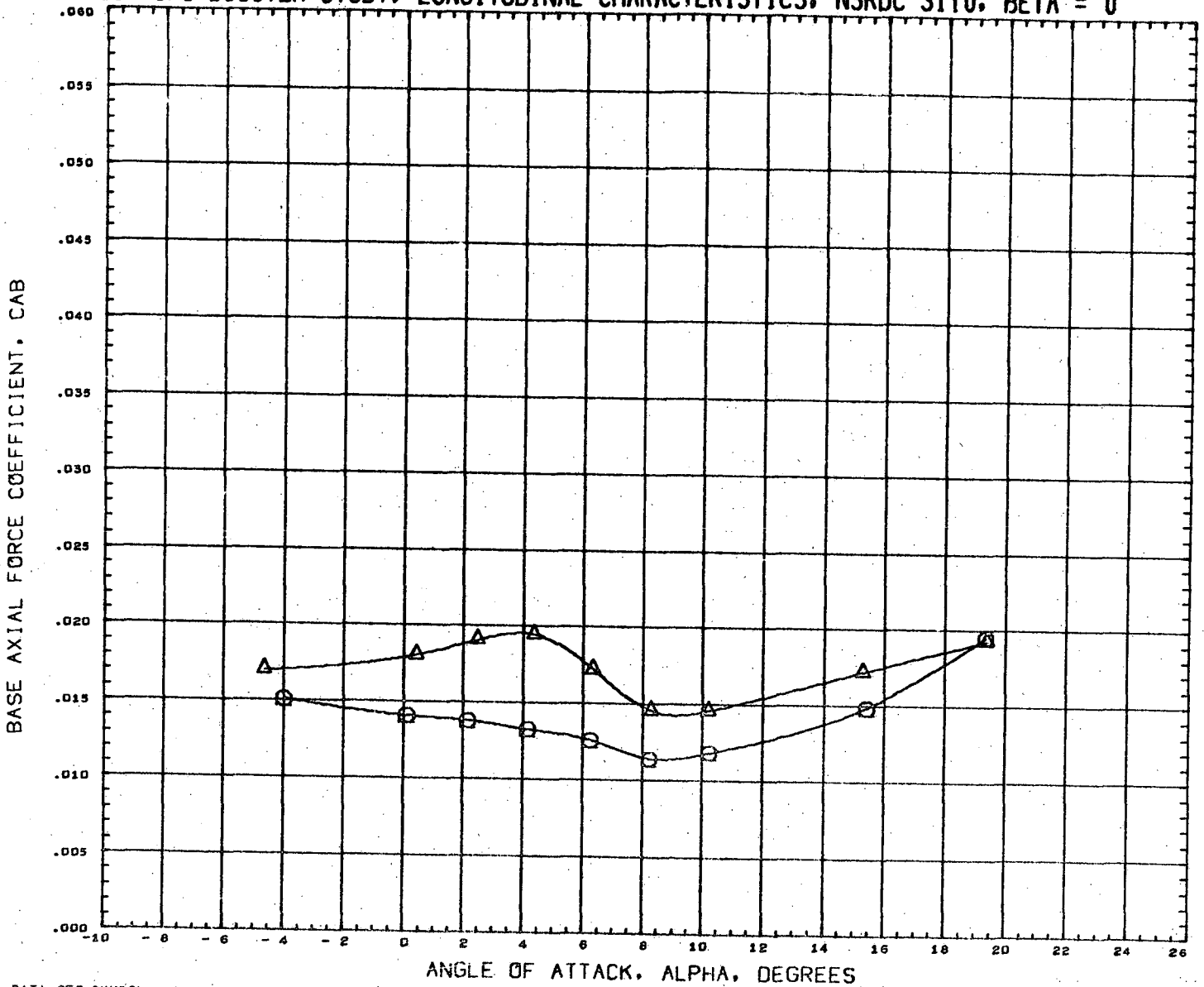
CONFIGURATION DESCRIPTION
NSRDC-3110,MSFC/LMSC BOOSTER B1C1F1W1V1
NSRDC-3110,MSFC/LMSC BOOSTER B1C1F1W1V1

INCIDC	CNDPOS	INCIDW	WNGPOS
3.000	2.000	0.000	1.000
15.000	2.000	0.000	1.000

REFERENCE INFORMATION	
SREF	1.3550 SQ.FT.
LREF	41.4360 INCHES
BREF	41.4360 INCHES
XMRP	31.1400 INCHES
YMRP	0.0000 INCHES
ZMRP	0.2250 INCHES
SCALE	1.5000 PERCENT

MACH 0.381

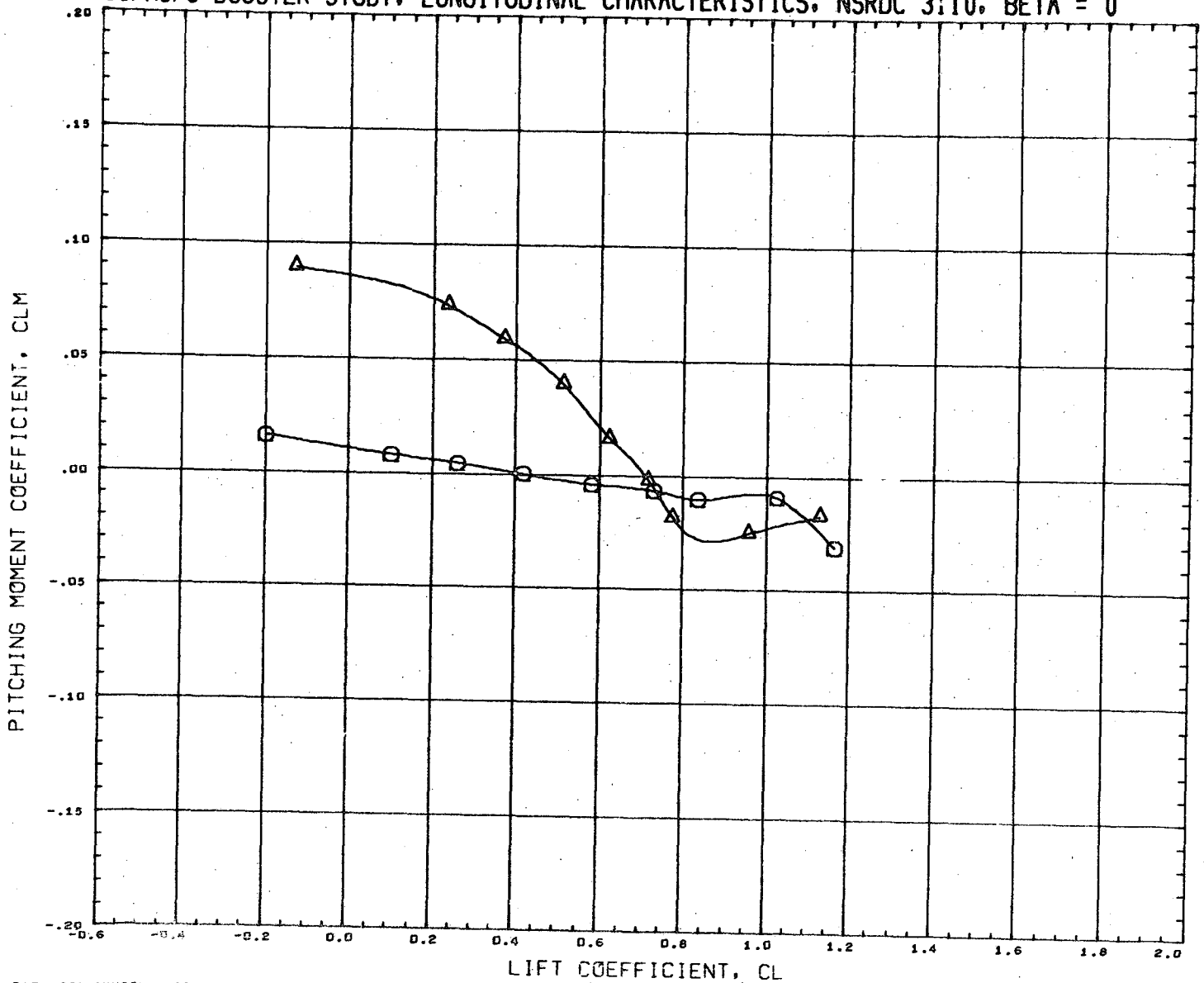
LMSC/MSFC BOOSTER STUDY. LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2073)	NSRDC-3110,MSFC/LMSC BOOSTER B1C1F1W1V1	3.000	2.000	0.000	1.000	SREF 1.3550 SQ.FT.
(RN2077)	NSRDC-3110,MSFC/LMSC BOOSTER B1C1F1W1V1	15.000	2.000	0.000	1.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XHRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCENT

MACH 0.381

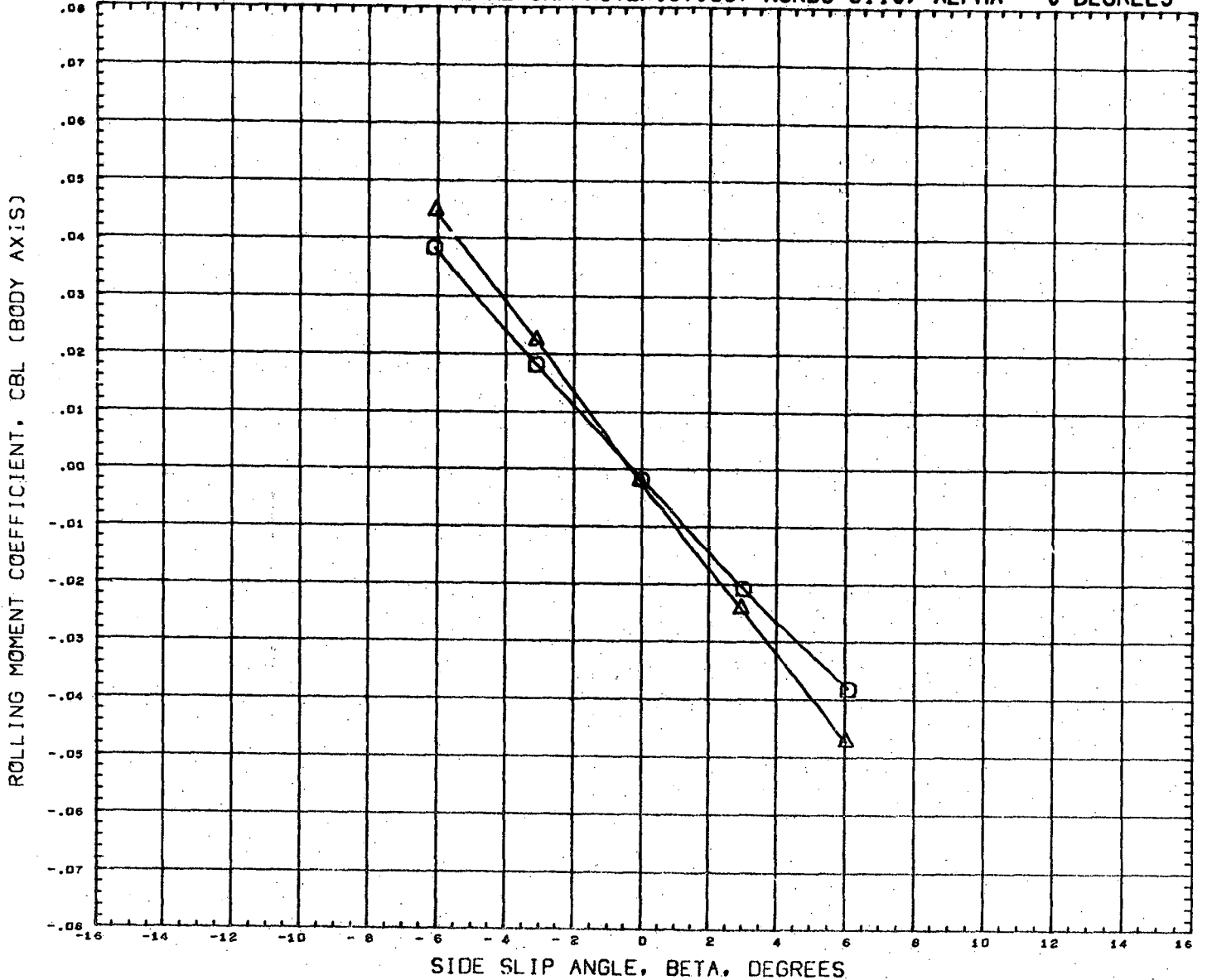
LMSC/MSFC BOOSTER STUDY. LONGITUDINAL CHARACTERISTICS. NSRDC 3110. BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2073)	NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1	3.000	2.000	0.000	1.000	SREF 1.3550 SQ. FT.
(RN2077)	NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1	15.000	2.000	0.000	1.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCENT

MACH 0.381

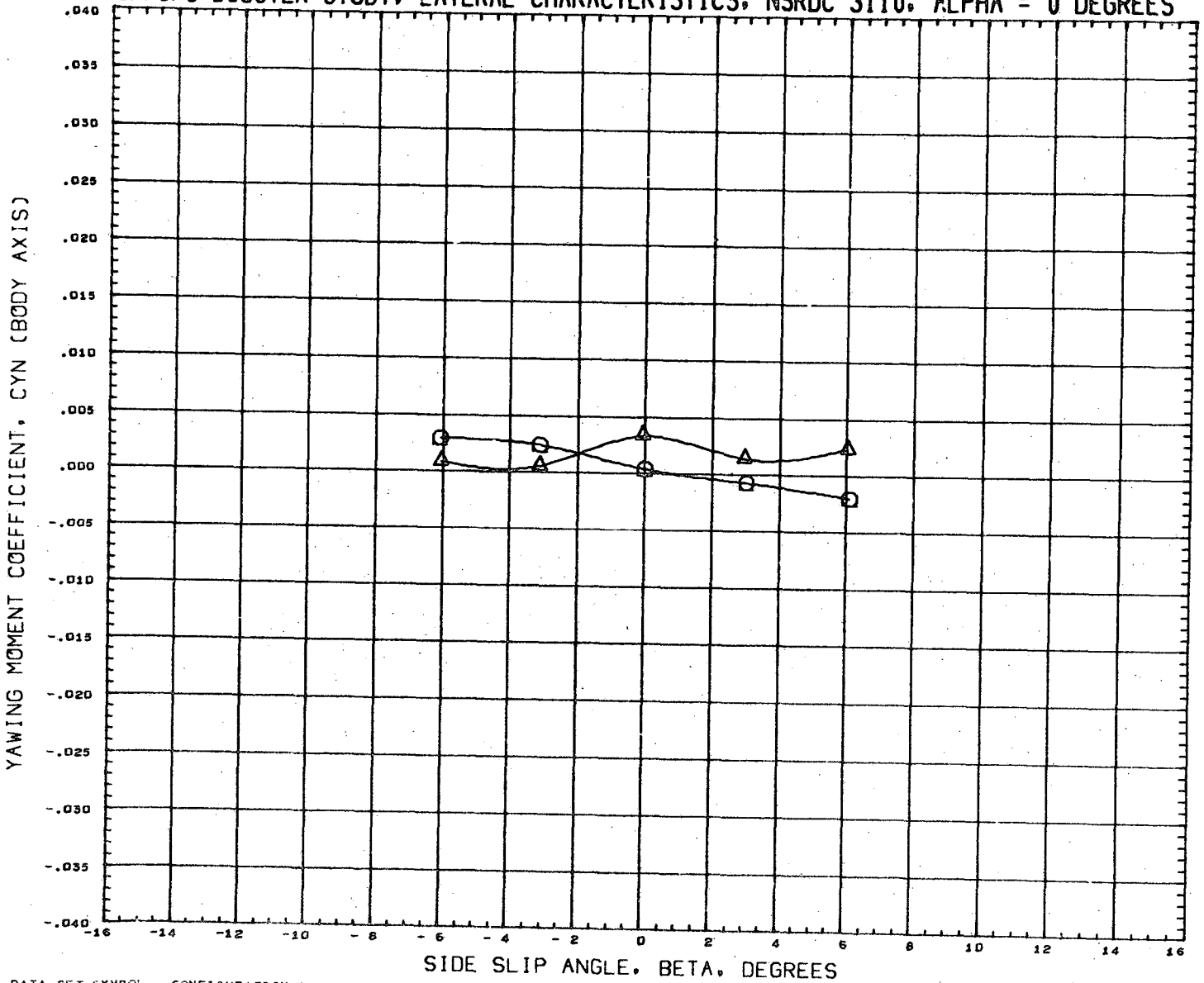
LMSC/MSFC BOOSTER STUDY. LATERAL CHARACTERISTICS. NSRDC 3110. ALPHA = 0 DEGREES



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2074)	NSRDC-3110,MSFC/LMSC BOOSTER B1C1F1W1V1	3.000	2.000	0.000	1.000	SREF 1.3550 SQ.FT.
(RN2078)	NSRDC-3110,MSFC/LMSC BOOSTER B1C1F1W1V1	15.000	2.000	0.000	1.000	LREF 41.4360 INCHES BREF 41.4360 INCHES XMRP 31.1400 INCHES YMRP 0.0000 INCHES ZMRP 0.2250 INCHES SCALE 1.5000 PERCENT

MACH 0.361

LMSC/MSFC BOOSTER STUDY, LATERAL CHARACTERISTICS, NSRDC 3110, ALPHA = 0 DEGREES



DATA SET SYMBOL
(RN2074) \circ
(RN2076) \triangle

CONFIGURATION DESCRIPTION
NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1
NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1

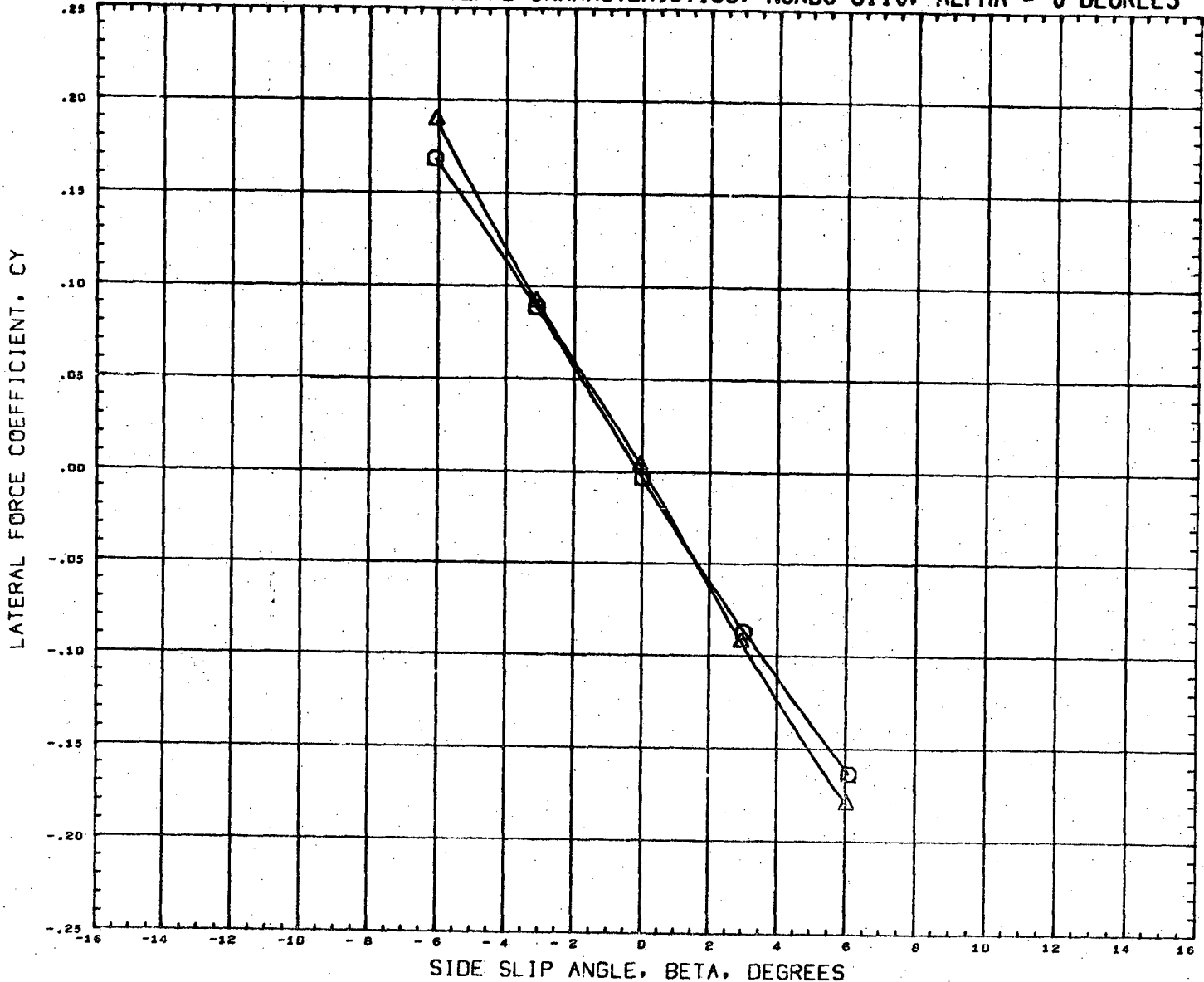
INCIDC	CNDPOS	INCIDW	WNGPOS
3.000	2.000	0.000	1.000
15.000	2.000	0.000	1.000

REFERENCE INFORMATION

SREF	1.3550	SQ. FT.
LREF	41.4360	INCHES
BREF	41.4360	INCHES
XMRP	31.1400	INCHES
YMRP	0.0000	INCHES
ZMRP	0.2250	INCHES
SCALE	1.5000	PERCENT

MACH 0.381

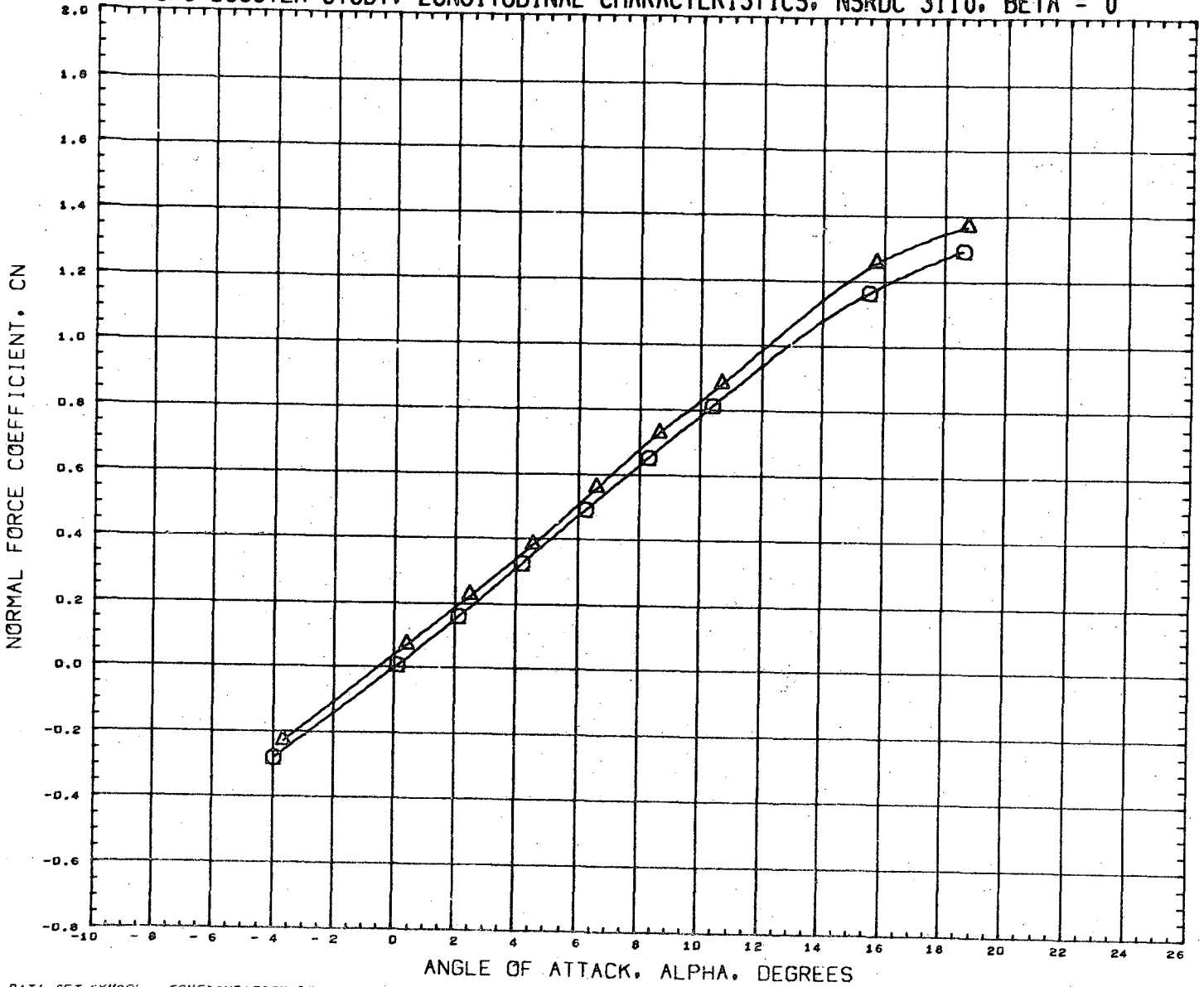
LMSC/MSFC BOOSTER STUDY, LATERAL CHARACTERISTICS, NSRDC 3110, ALPHA = 0 DEGREES



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2074)	NSRDC-3110,MSFC/LMSC BOOSTER B1C1F1W1V1	3.000	2.000	0.000	1.000	SREF 1.3550 SQ.FT.
(RN2078)	NSRDC-3110,MSFC/LMSC BOOSTER B1C1F1W1V1	15.000	2.000	0.000	1.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCENT

MACH 0.381

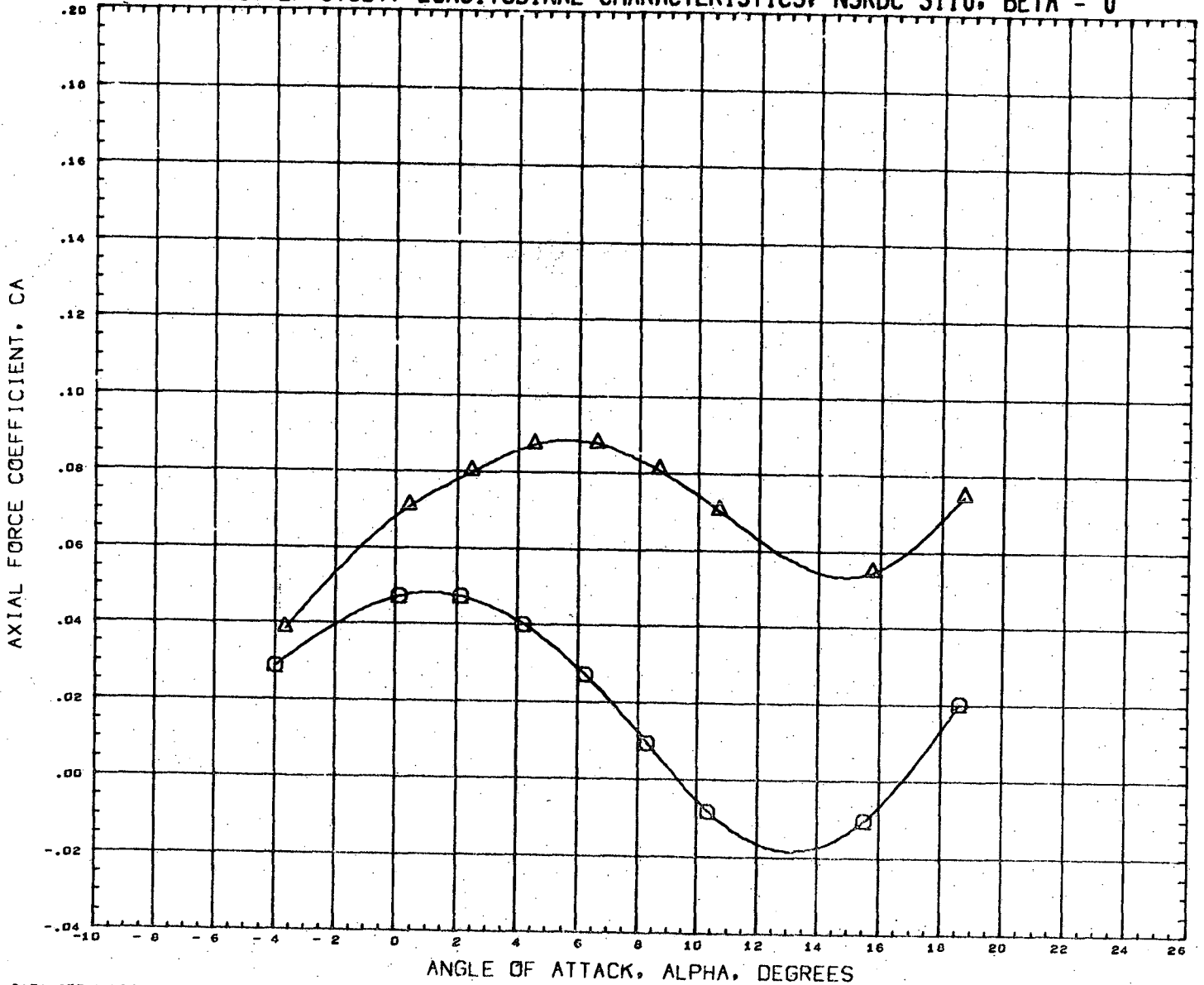
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2091)	NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1	3.000	1.000	0.000	2.000	SREF 1.3550 SQ. FT.
(RN2095)	NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1	15.000	1.000	0.000	2.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCENT

MACH 0.380

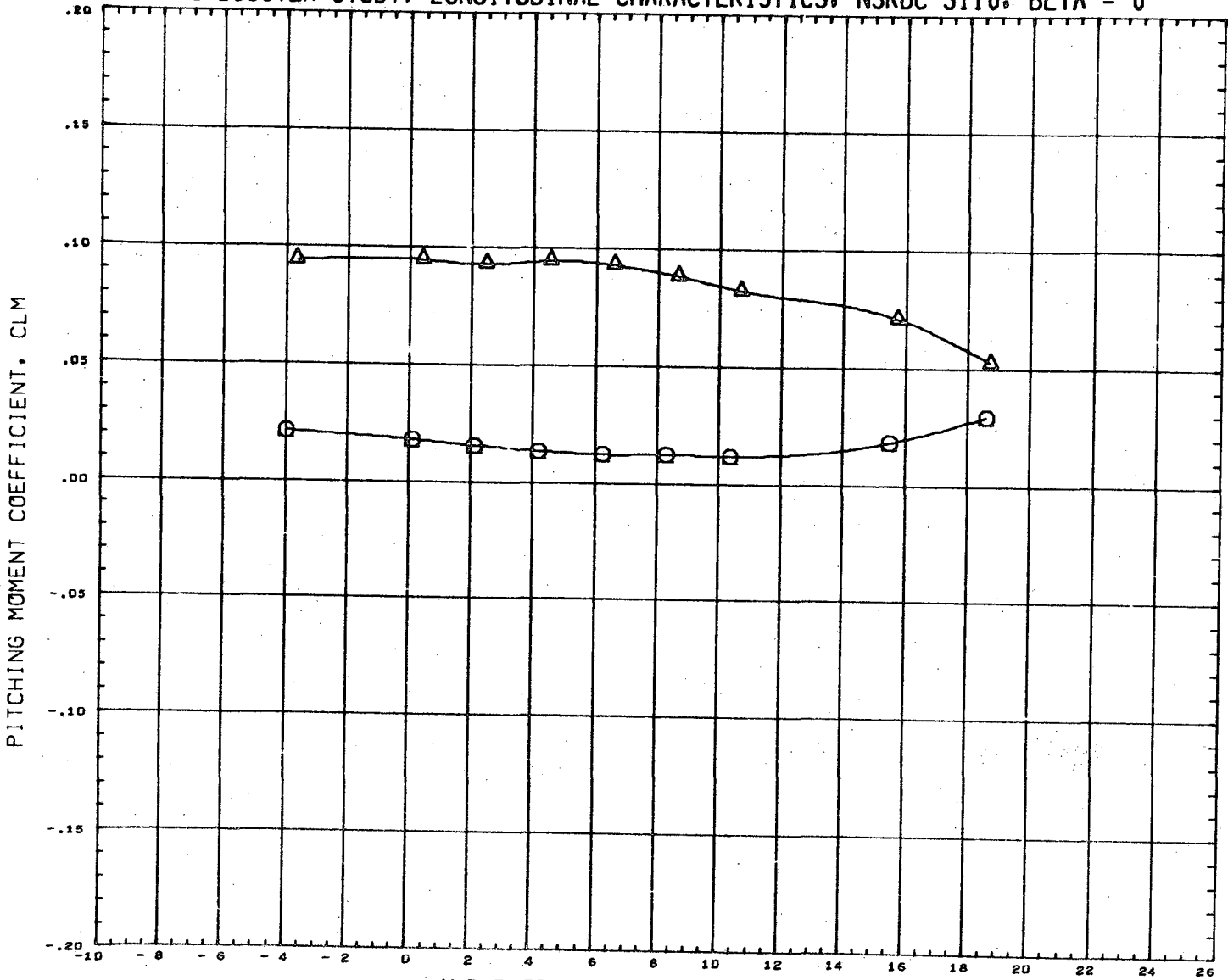
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2081)	NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1	3.000	1.000	0.000	2.000	SREF 1.3550 SQ. FT.
(RN2085)	NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1	15.000	1.000	0.000	2.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCENT

MACH 0.380

LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0

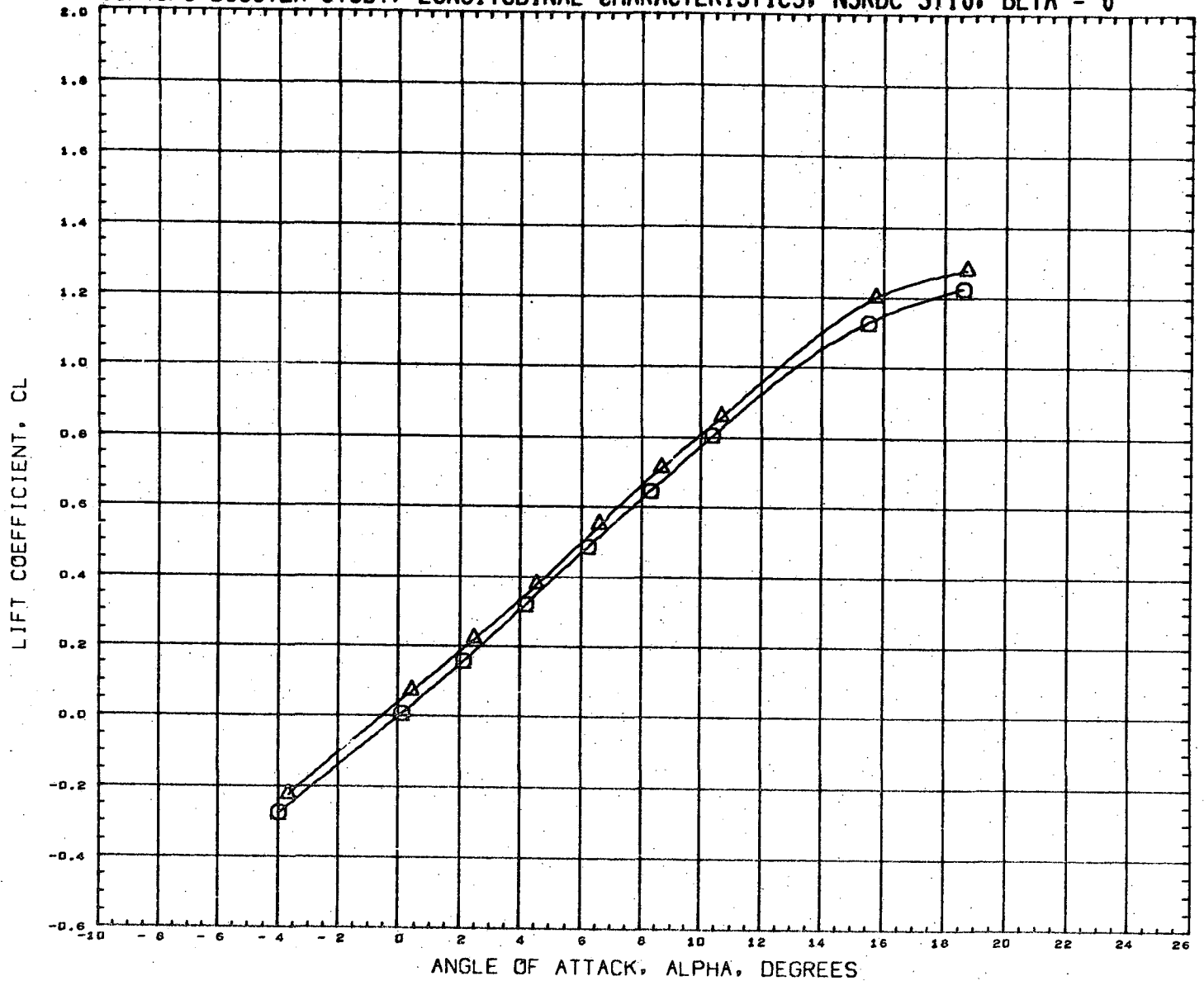


ANGLE OF ATTACK, ALPHA, DEGREES

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2081)	NSRDC-3110,MSFC/LMSC BOOSTER B1C1F1W1V1	3.000	1.000	0.000	2.000	SREF 1.3550 SQ.FT.
(RN2085)	NSRDC-3110,MSFC/LMSC BOOSTER B1C1F1W1V1	15.000	1.000	0.000	2.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCENT

MACH 0.380

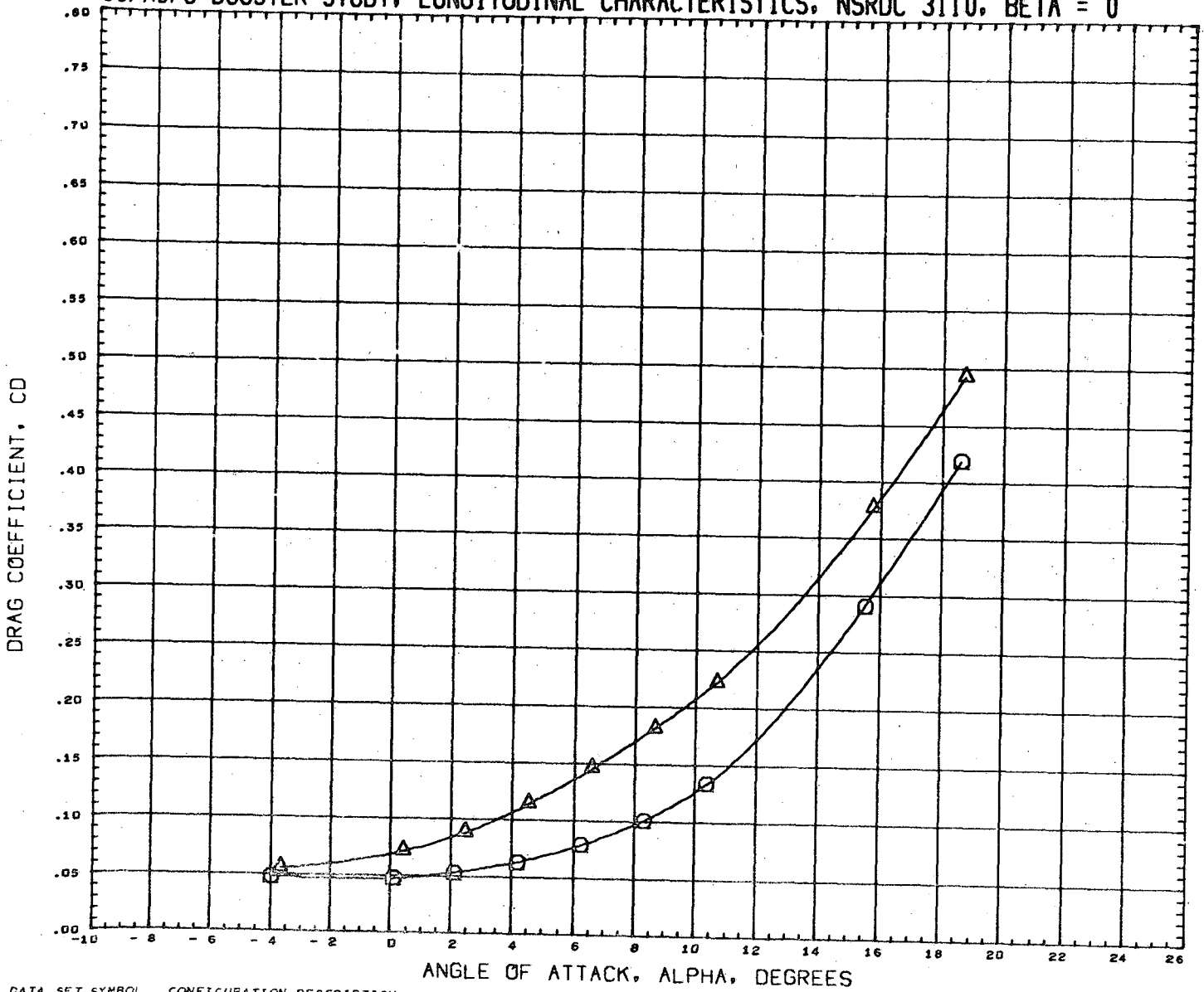
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2081)	NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1	3.000	1.000	0.000	2.000	SREF 1.3550 SQ. FT.
(RN2085)	NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1	15.000	1.000	0.000	2.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCENT

MACH 0.380

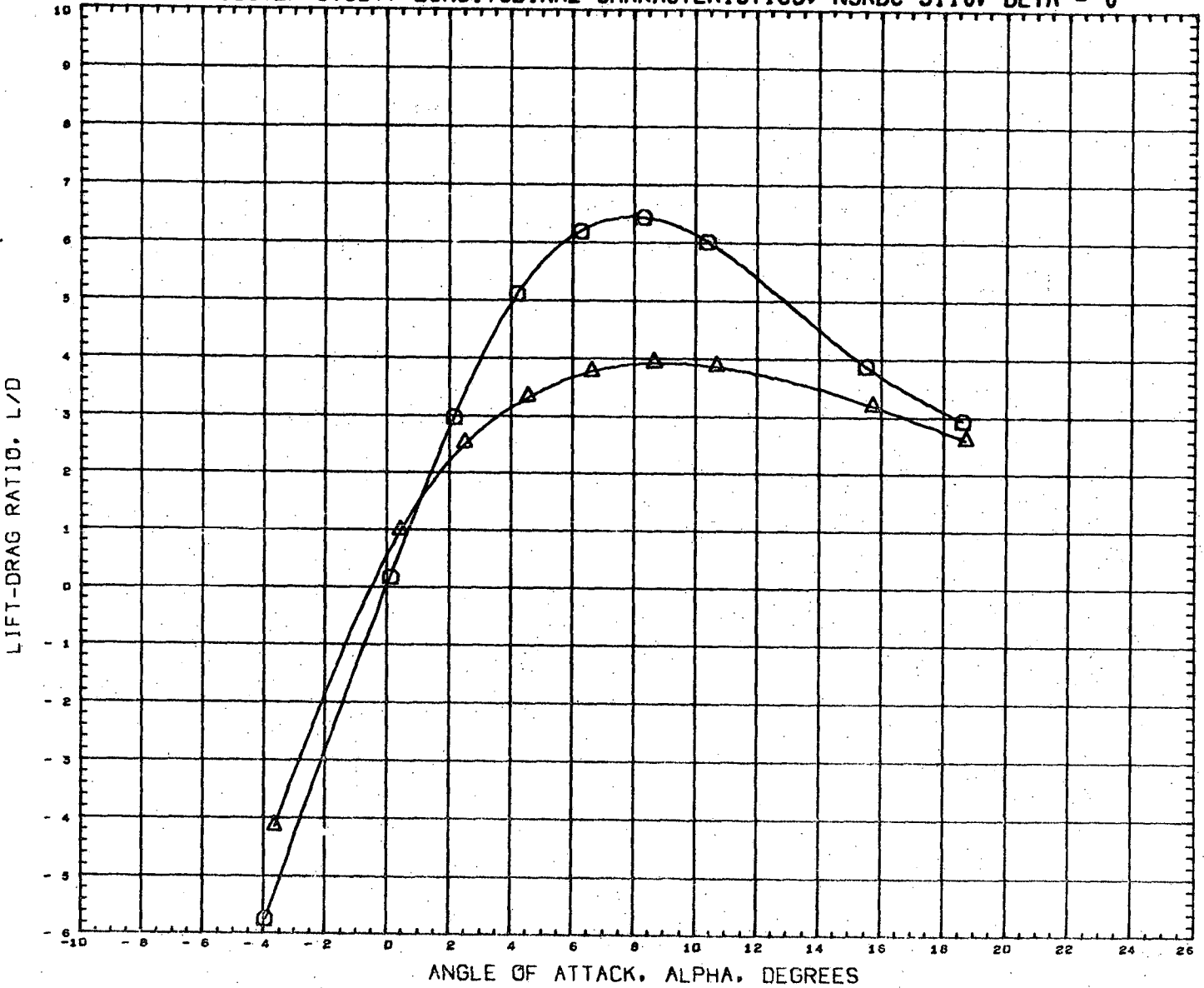
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2081)	NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1	3.000	1.000	0.000	2.000	SREF 1.3550 SQ. FT.
(RN2095)	NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1	15.000	1.000	0.000	2.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCENT

MACH 0.380

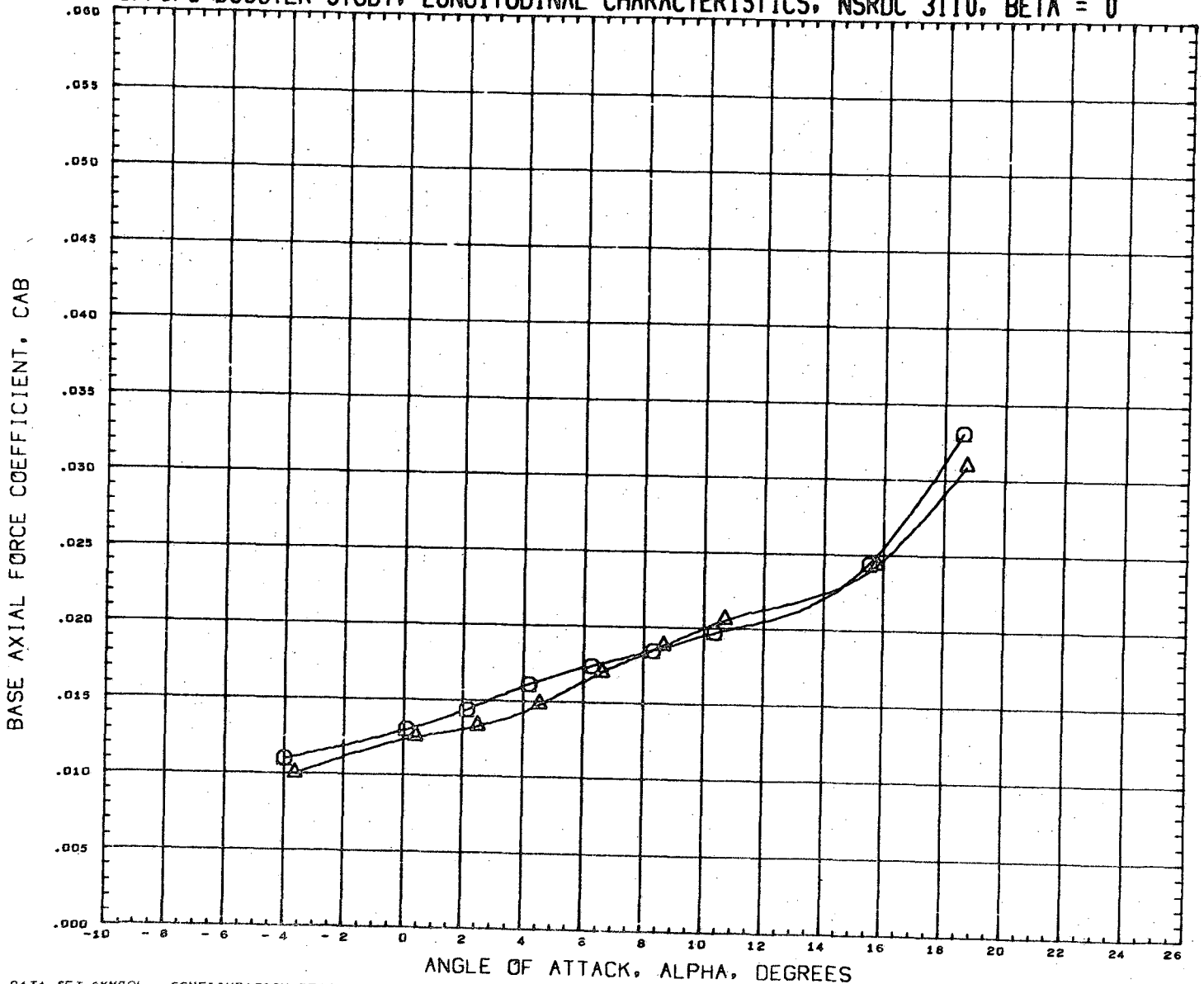
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2081)	NSRDC-3110,MSFC/LMSC BOOSTER B1C1F1W1V1	3.000	1.000	0.000	2.000	SREF 1.3550 SQ.FT.
(RN2085)	NSRDC-3110,MSFC/LMSC BOOSTER B1C1F1W1V1	15.000	1.000	0.000	2.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCENT

MACH 0.380

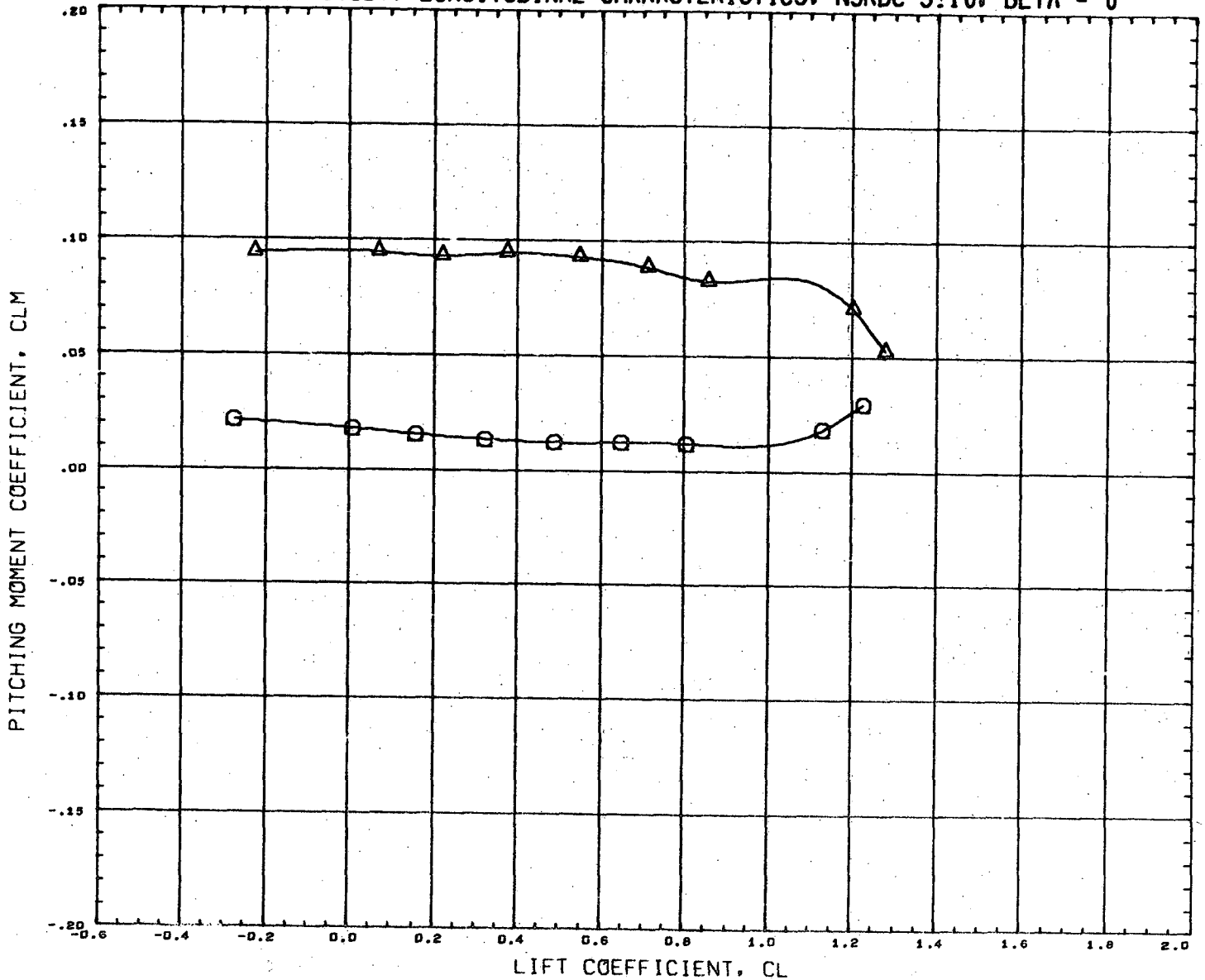
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2081)	NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1	3.000	1.000	0.000	2.000	SREF 1.3550 SQ. FT.
(RN2085)	NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1	15.000	1.000	0.000	2.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCENT

MACH 0.380

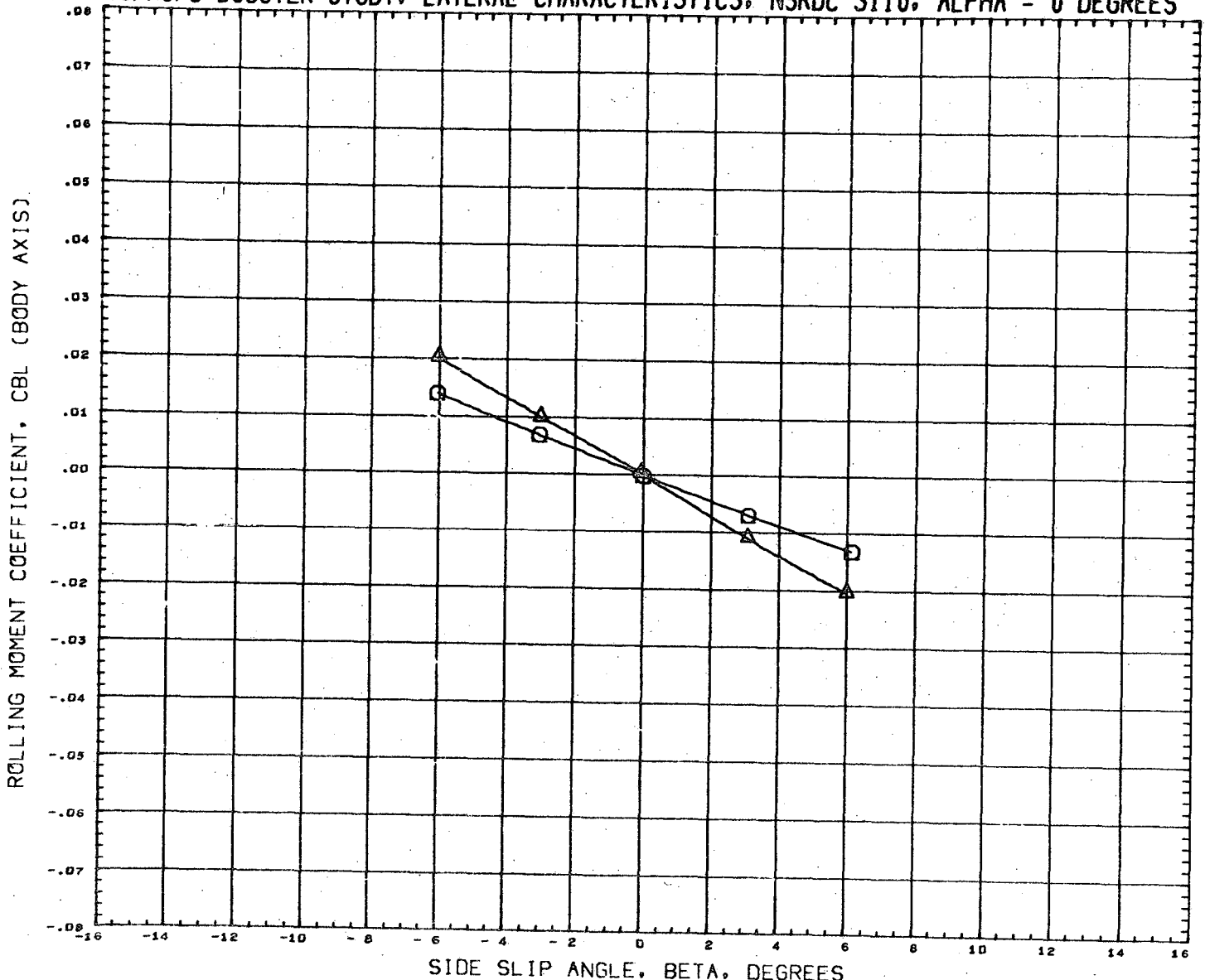
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0





DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2081)	NSRDC-3110,MSFC/LMSC BOOSTER B1C1F1W1V1	3.000	1.000	0.000	2.000	SREF 1.3550 SQ.FT.
(RN2085)	NSRDC-3110,MSFC/LMSC BOOSTER B1C1F1W1V1	15.000	1.000	0.000	2.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCNT

MACH 0.380

LMSC/MSFC BOOSTER STUDY, LATERAL CHARACTERISTICS, NSRDC 3110, ALPHA = 0 DEGREES



DATA SET SYMBOL
(RN2082) 
(RN2086) 

CONFIGURATION DESCRIPTION
NSRDC-3110, NSFC/LHSC BOOSTER B1C1F1W1V1
NSRDC-3110, NSFC/LMSC BOOSTER B1C1F1W1V1

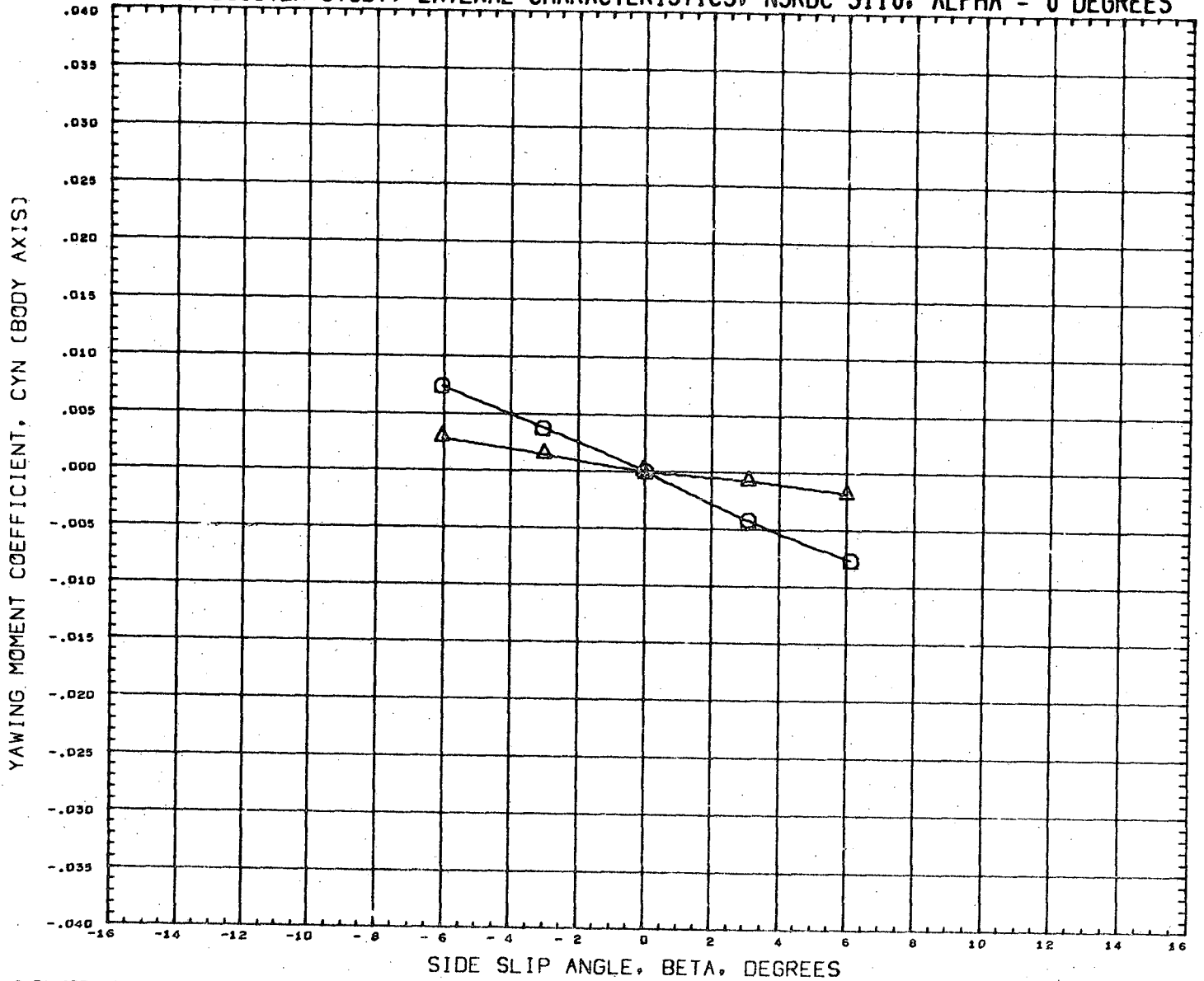
INCIDC	CNDPOS	INCIDW	WNGPOS
3.000	1.000	0.000	2.000
15.000	1.000	0.000	2.000

REFERENCE INFORMATION

SREF	1.3550	SQ. FT.
LREF	41.4360	INCHES
BREF	41.4360	INCHES
XMRP	31.1400	INCHES
YMRP	0.0000	INCHES
ZMRP	0.2250	INCHES
SCALE	1.5000	PERCNT

MACH 0.380

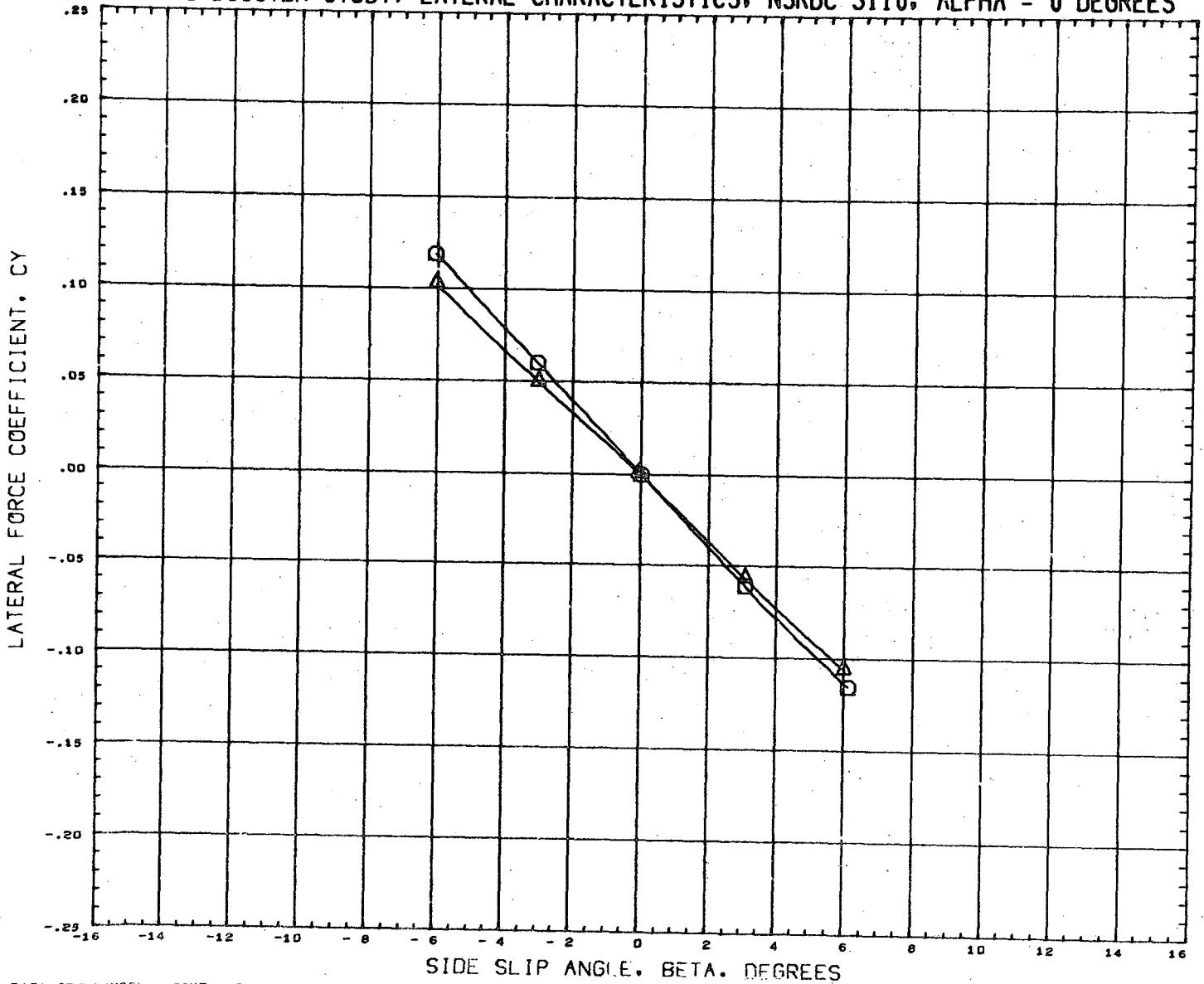
LMSC/MSFC BOOSTER STUDY, LATERAL CHARACTERISTICS, NSRDC 3110, ALPHA = 0 DEGREES



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2082)	NSRDC-3110,MSFC/LMSC BOOSTER B1C1F1W1V1	3.000	1.000	0.000	2.000	SREF 1.3550 SQ.FT.
(RN2086)	NSRDC-3110,MSFC/LMSC BOOSTER B1C1F1W1V1	15.000	1.000	0.000	2.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRF 31.1400 INCHES
						YMRF 0.0000 INCHES
						ZMRF 0.2250 INCHES
						SCALE 1.5000 PERCENT

MACH 0.380

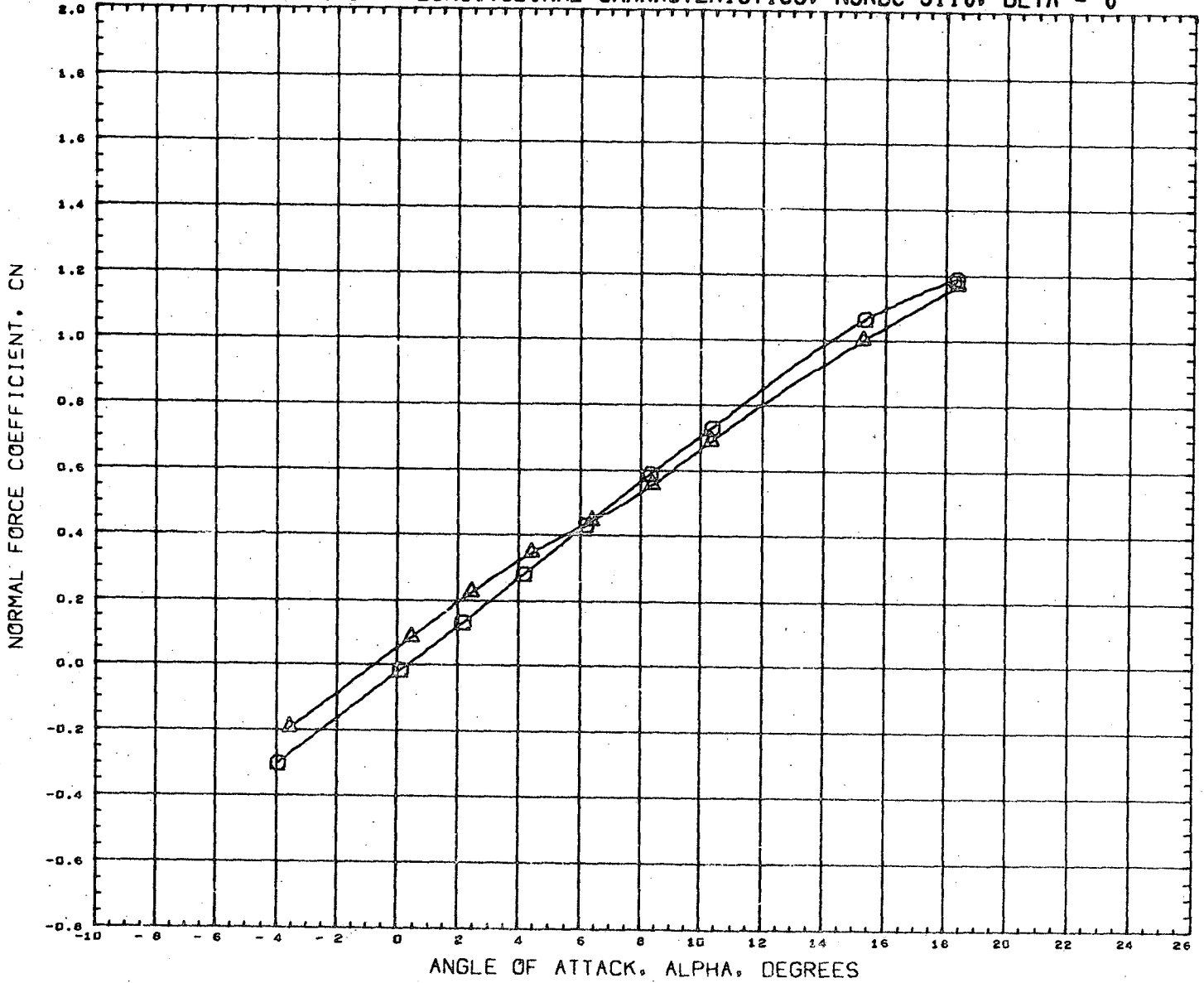
LMSC/MSFC BOOSTER STUDY, LATERAL CHARACTERISTICS, NSRDC 3110, ALPHA = 0 DEGREES



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION	
(RN2082)	NSRDC-3110,MSFC/LMSC BOOSTER B1C1F1W1V1	3.000	1.000	0.000	2.000	SREF	1.3550 SQ.FT.
(RN2086)	NSRDC-3110,MSFC/LMSC BOOSTER B1C1F1W1V1	15.000	1.000	0.000	2.000	LREF	41.4360 INCHES
						BREF	41.4360 INCHES
						XMRP	31.1400 INCHES
						YMRP	0.0000 INCHES
						ZMRP	0.2250 INCHES
						SCALE	1.5000 PERCNT

MACH 0.380

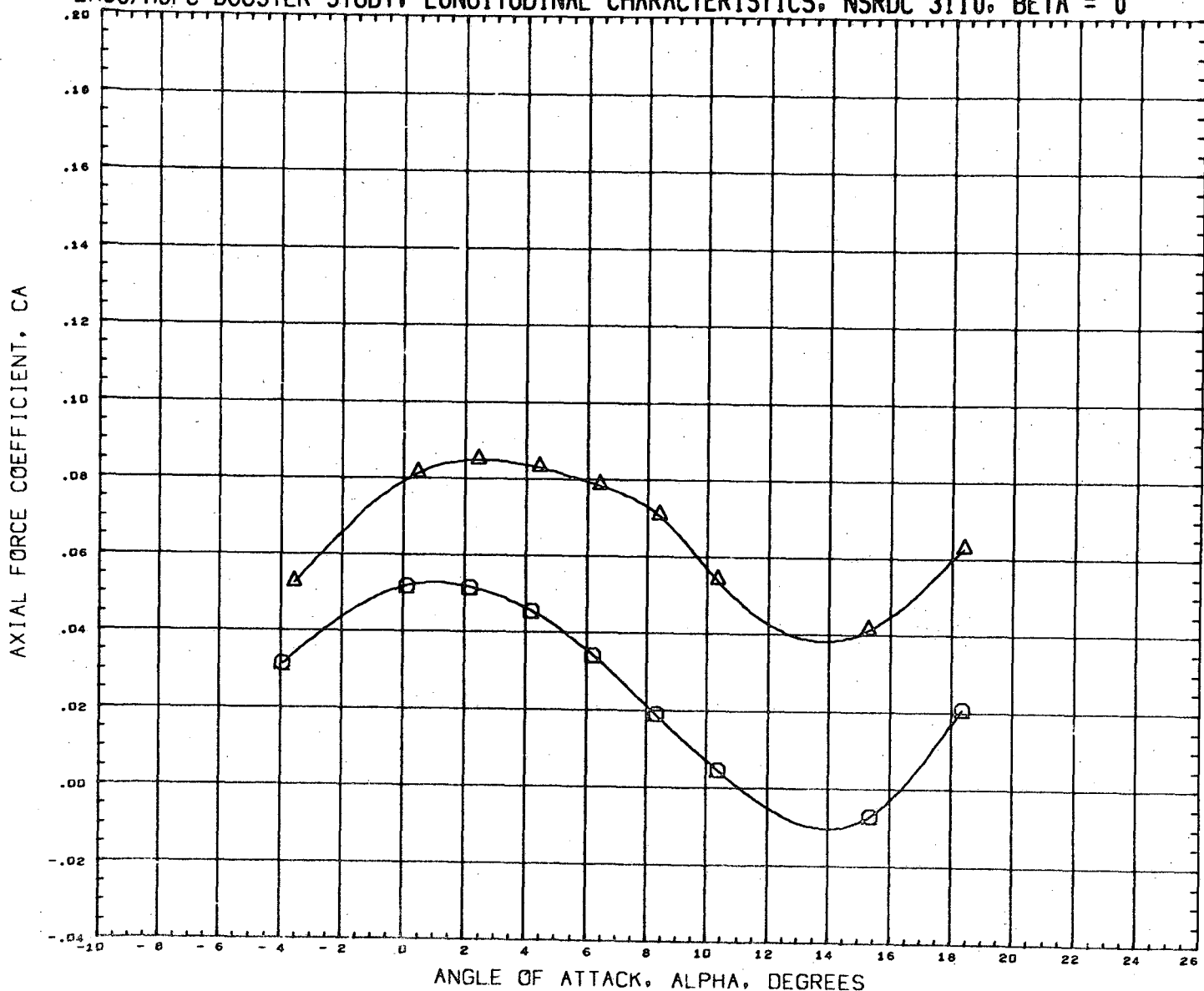
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2089)	NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1	3.000	2.000	0.000	2.000	SREF 1.3550 SQ. FT.
(RN2093)	NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1	15.000	2.000	0.000	2.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCNT

MACH 0.380

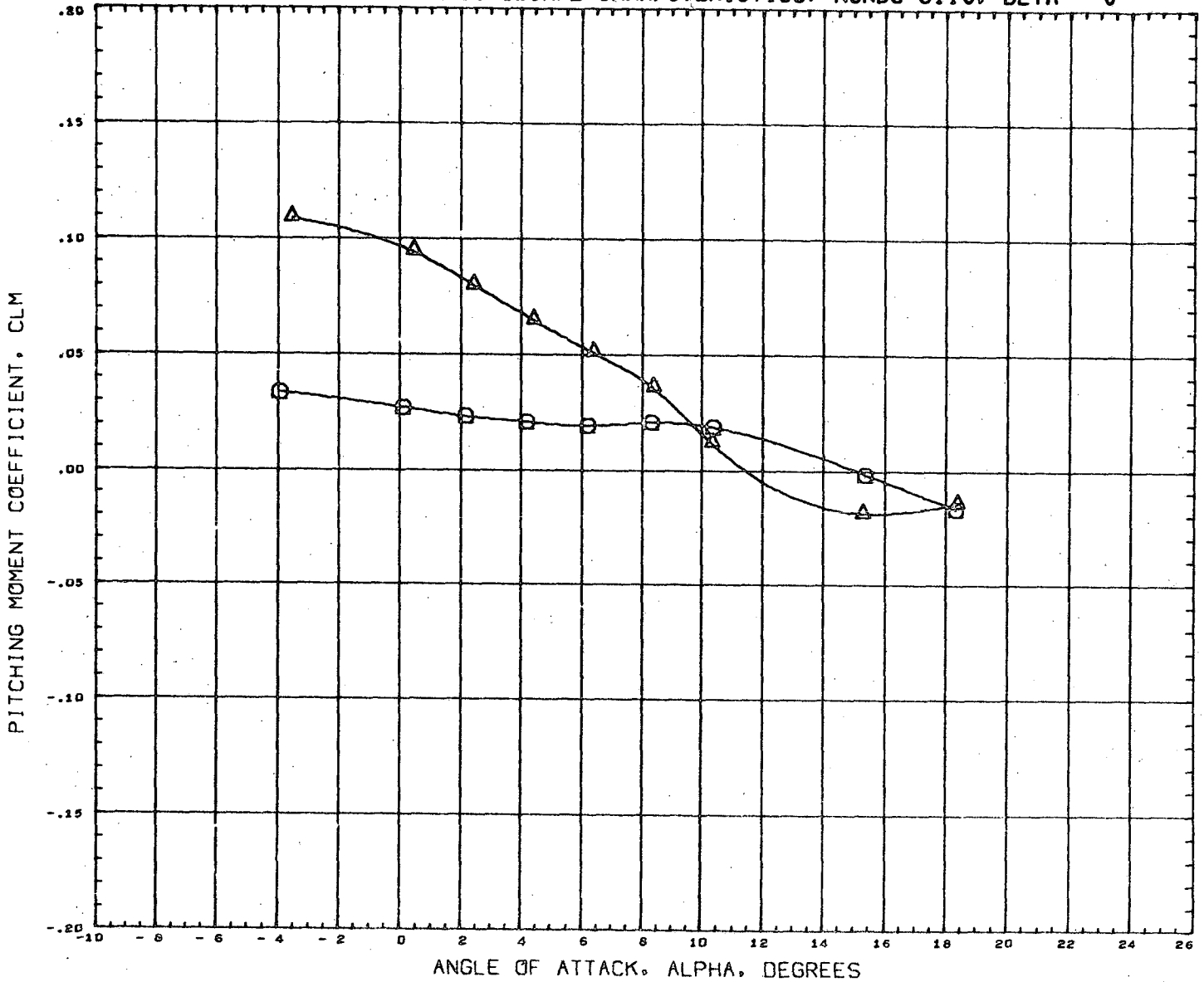
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2099)	NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1	3.000	2.000	0.000	2.000	SREF 1.3550 SQ.FT.
(RN2093)	NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1	15.000	2.000	0.000	2.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCENT

MACH 0.380

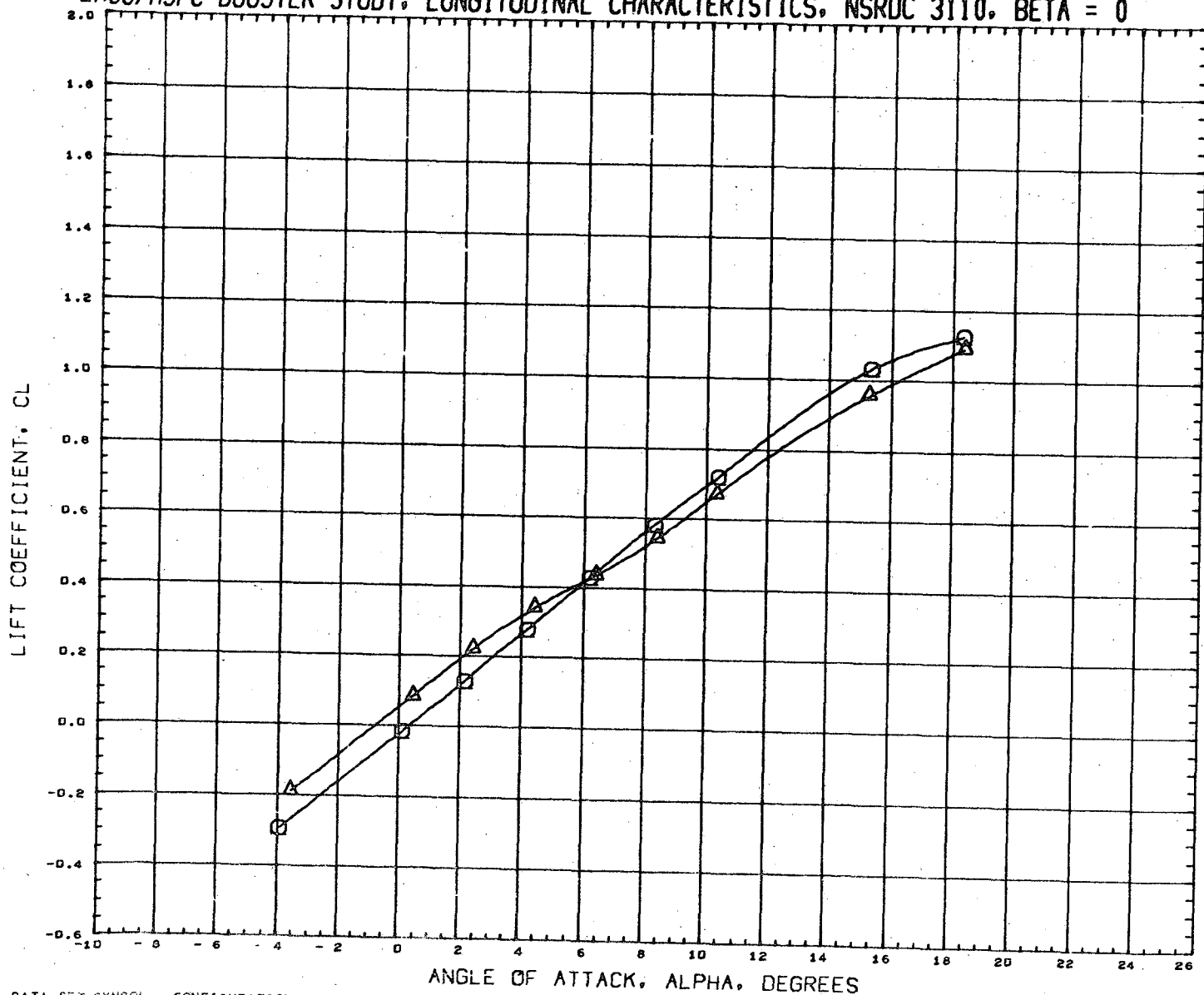
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2089)	NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1	3.000	2.000	0.000	2.000	SREF 1.3550 SQ. FT.
(RN2093)	NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1	15.000	2.000	0.000	2.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCNT

MACH 0.380

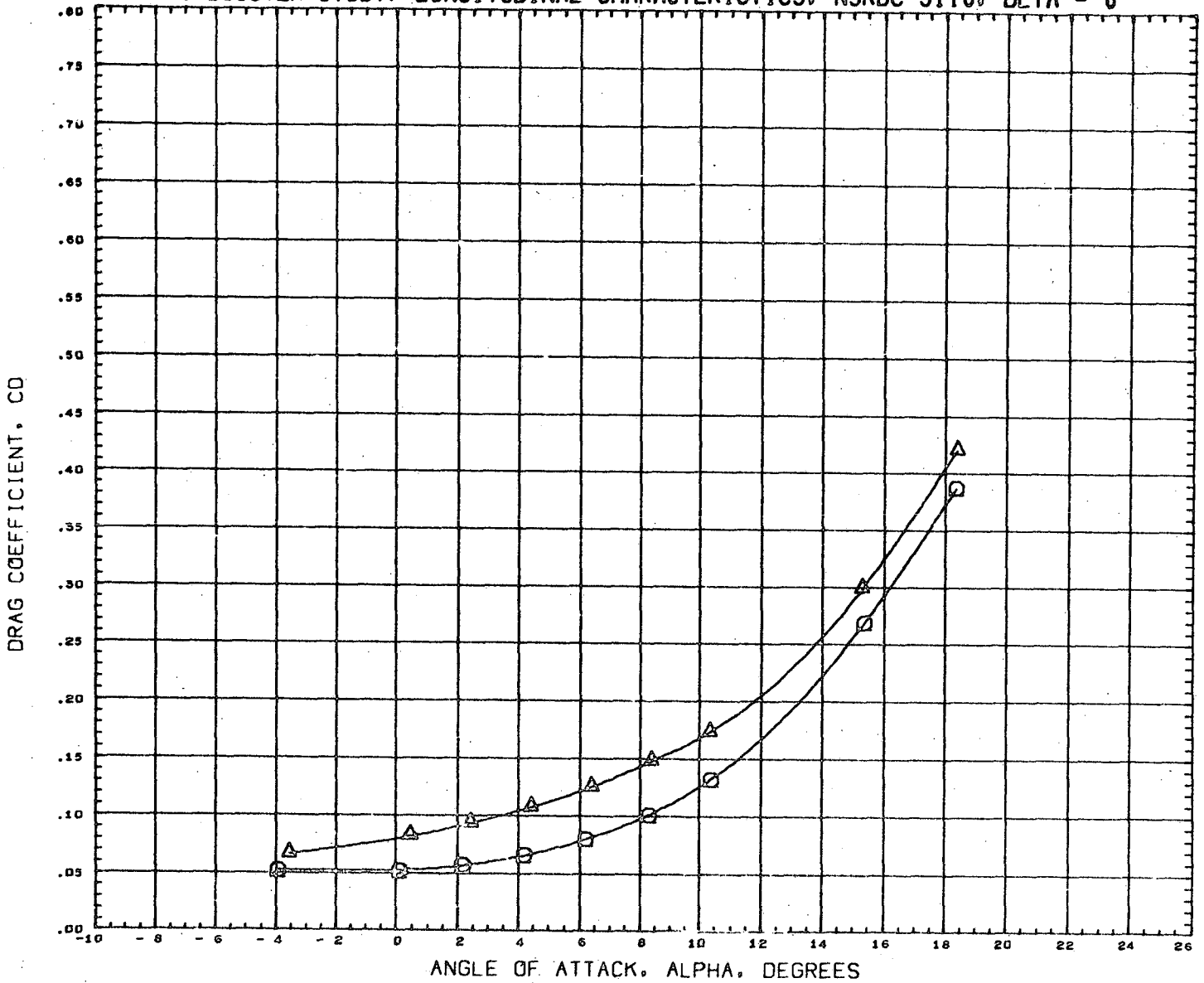
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2089)	NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1	3.000	2.000	0.000	2.000	SREF 1.3550 SQ. FT.
(RN2093)	NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1	15.000	2.000	0.000	2.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCENT

MACH 0.380

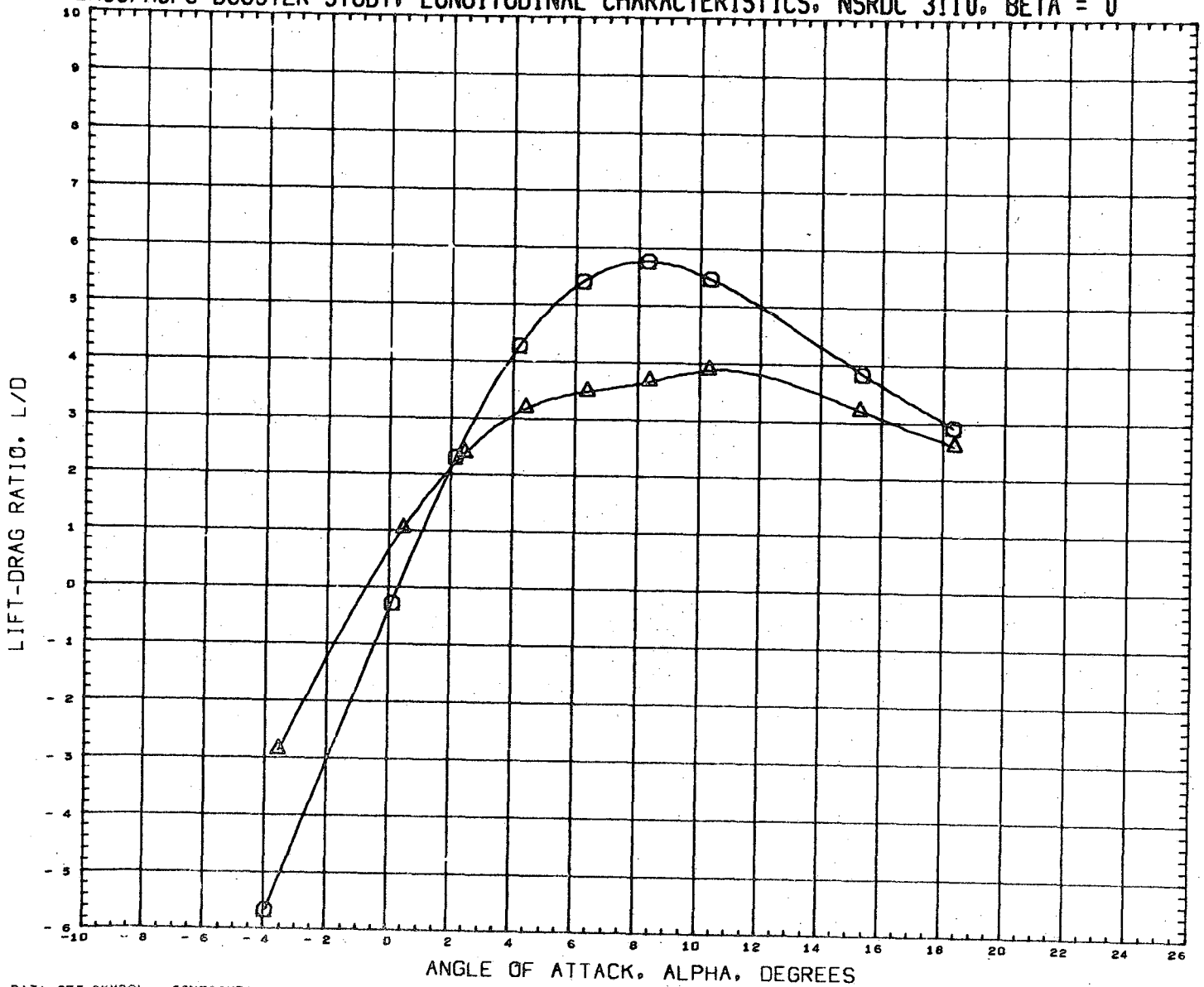
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2089)	NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1	3.000	2.000	0.000	2.000	SREF 1.3550 SQ. FT.
(RN2093)	NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1	15.000	2.000	0.000	2.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCENT

MACH 0.380

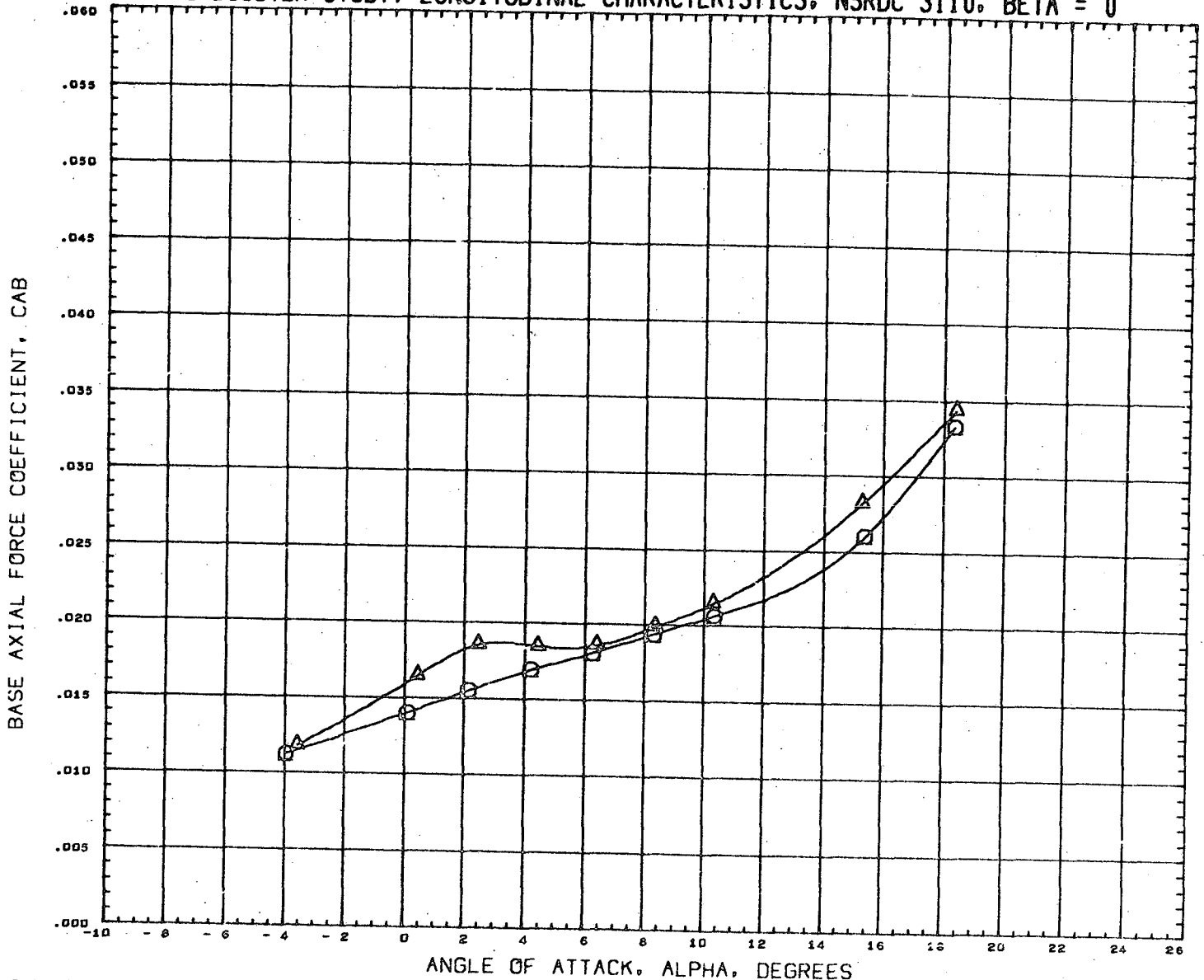
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2089) ○	NSRDC-3110,MSFC/LMSC BOOSTER B1C1F1W1V1	3.000	2.000	0.000	2.000	SREF 1.3550 SQ.FT.
(RN2093) △	NSRDC-3110,MSFC/LMSC BOOSTER B1C1F1W1V1	15.000	2.000	0.000	2.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCENT

MACH 0.380

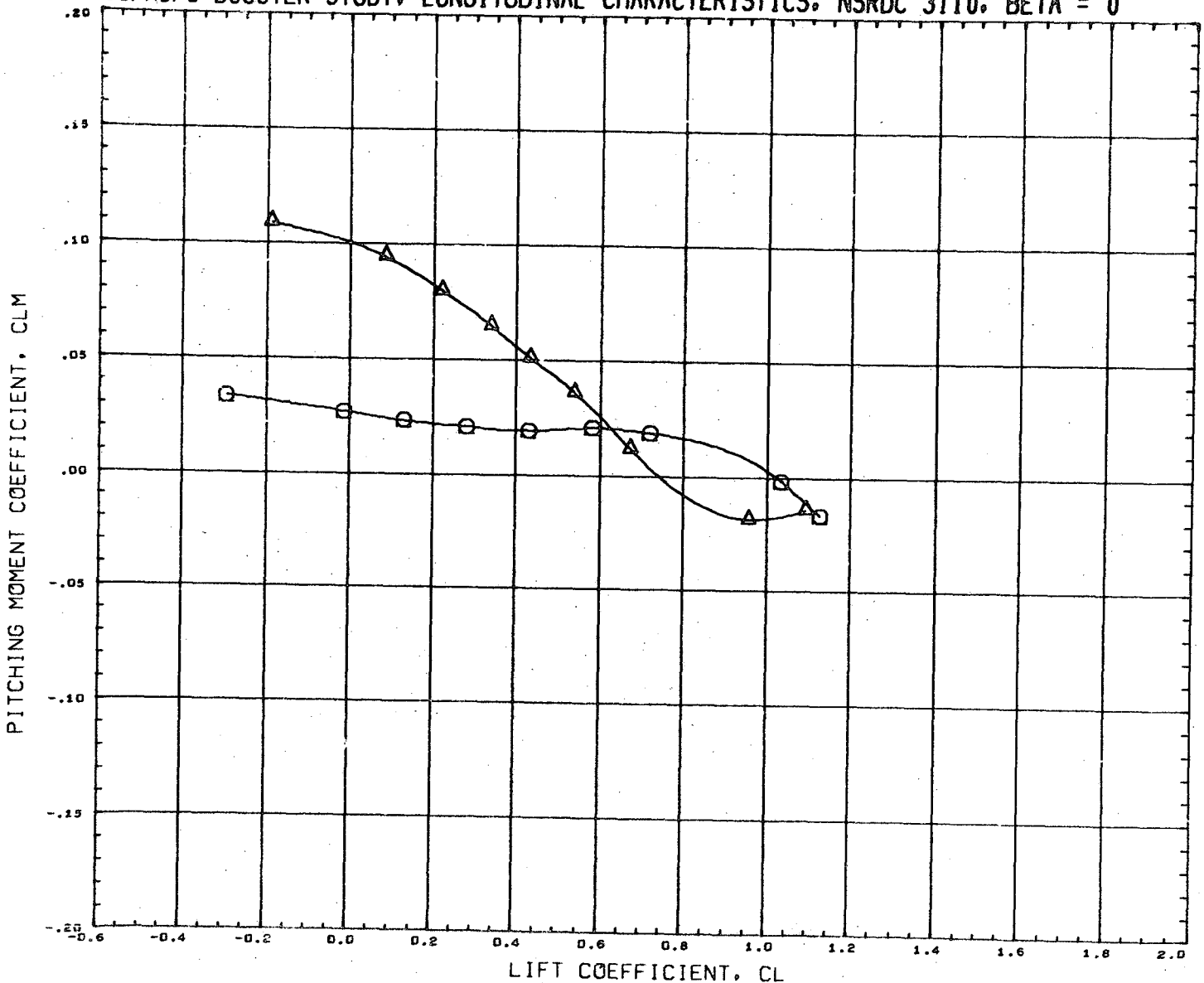
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2089)	NSRDC-3110,MSFC/LMSC BOOSTER B1C1F1W1V1	3.000	2.000	0.000	2.000	SREF 1.3550 SQ.FT.
(RN2093)	NSRDC-3110,MSFC/LMSC BOOSTER B1C1F1W1V1	15.000	2.000	0.000	2.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XHRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCNT

MACH 0.380

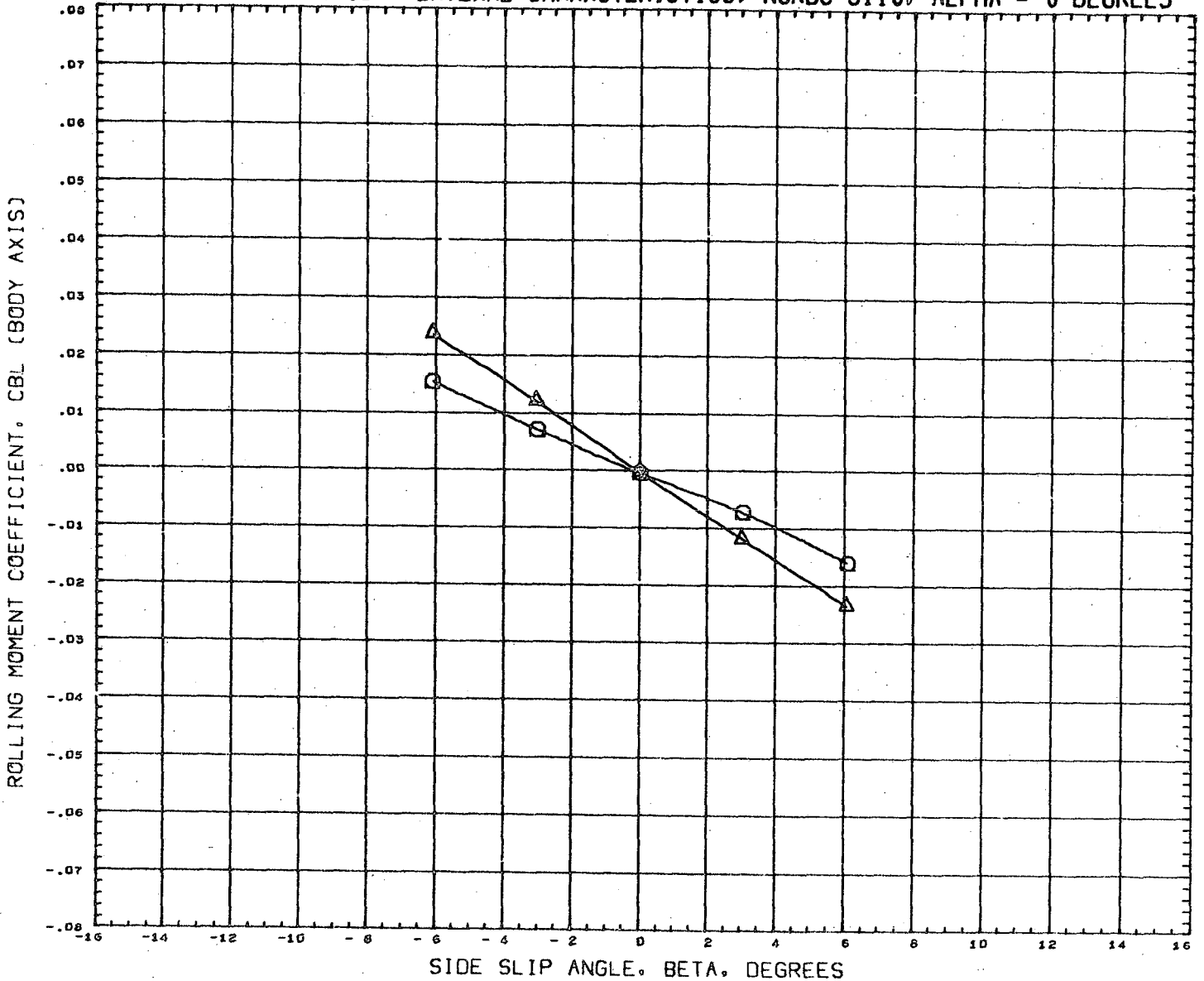
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION	
(RN2089)	NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1	3.000	2.000	0.000	2.000	SREF	1.3550 SQ. FT.
(RN2093)	NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1	15.000	2.000	0.000	2.000	LREF	41.4360 INCHES
						BREF	41.4360 INCHES
						XMRP	31.1400 INCHES
						YMRP	0.0000 INCHES
						ZMRP	0.2250 INCHES
						SCALE	1.5000 PERCENT

MACH 0.380

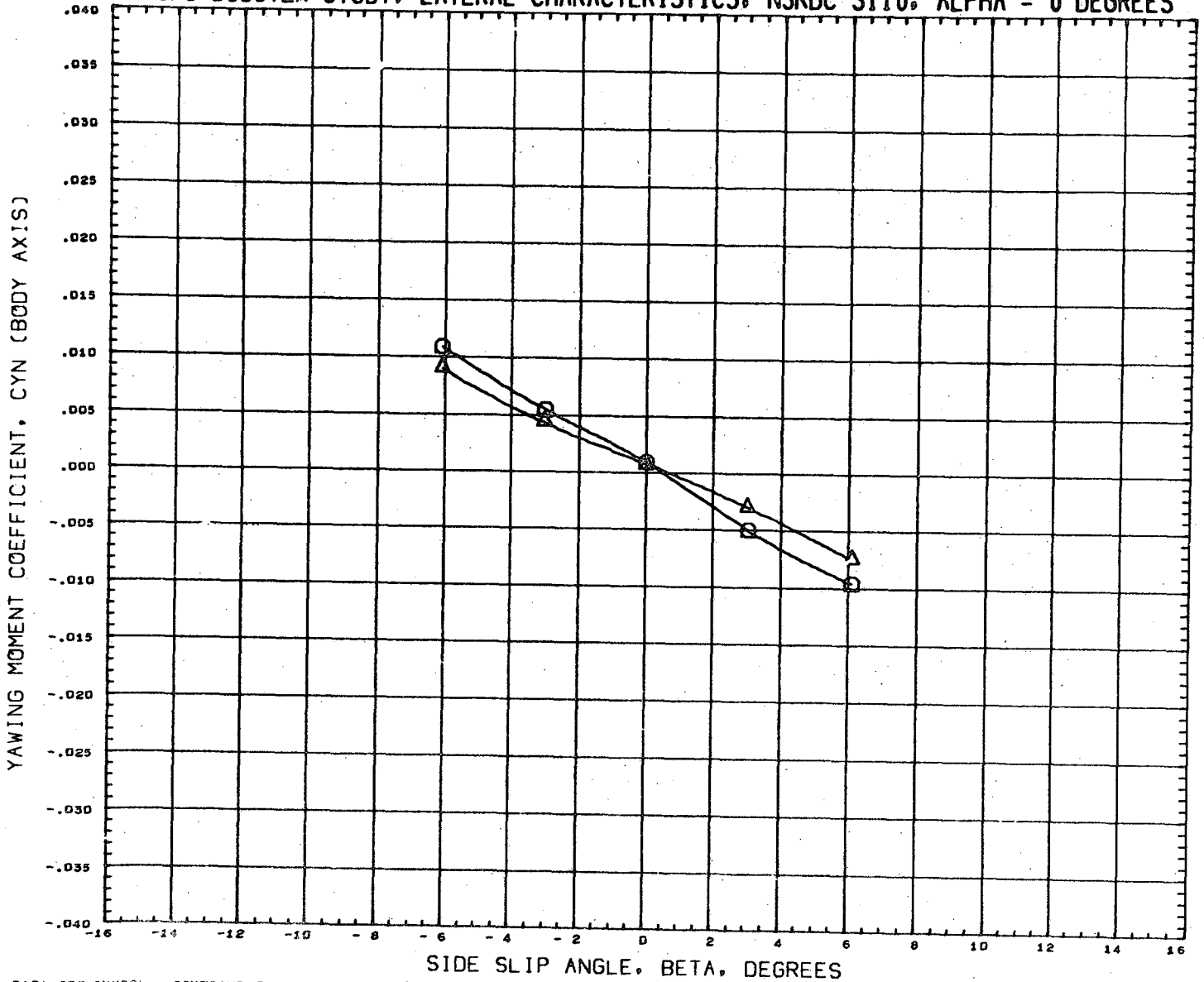
LMSC/MSFC BOOSTER STUDY, LATERAL CHARACTERISTICS, NSRDC 3110, ALPHA = 0 DEGREES



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2090)	NSRDC-3110,MSFC/LMSC BOOSTER B1C1F1W1V1	3.000	2.000	0.000	2.000	SREF 1.3550 SQ.FT. LREF 41.4360 INCHES
(RN2094)	NSRDC-3110,MSFC/LMSC BOOSTER B1C1F1W1V1	15.000	2.000	0.000	2.000	BREF 41.4360 INCHES XMRP 31.1400 INCHES YMRP 0.0000 INCHES ZMRP 0.2250 INCHES SCALE 1.5000 PERCNT

MACH 0.379

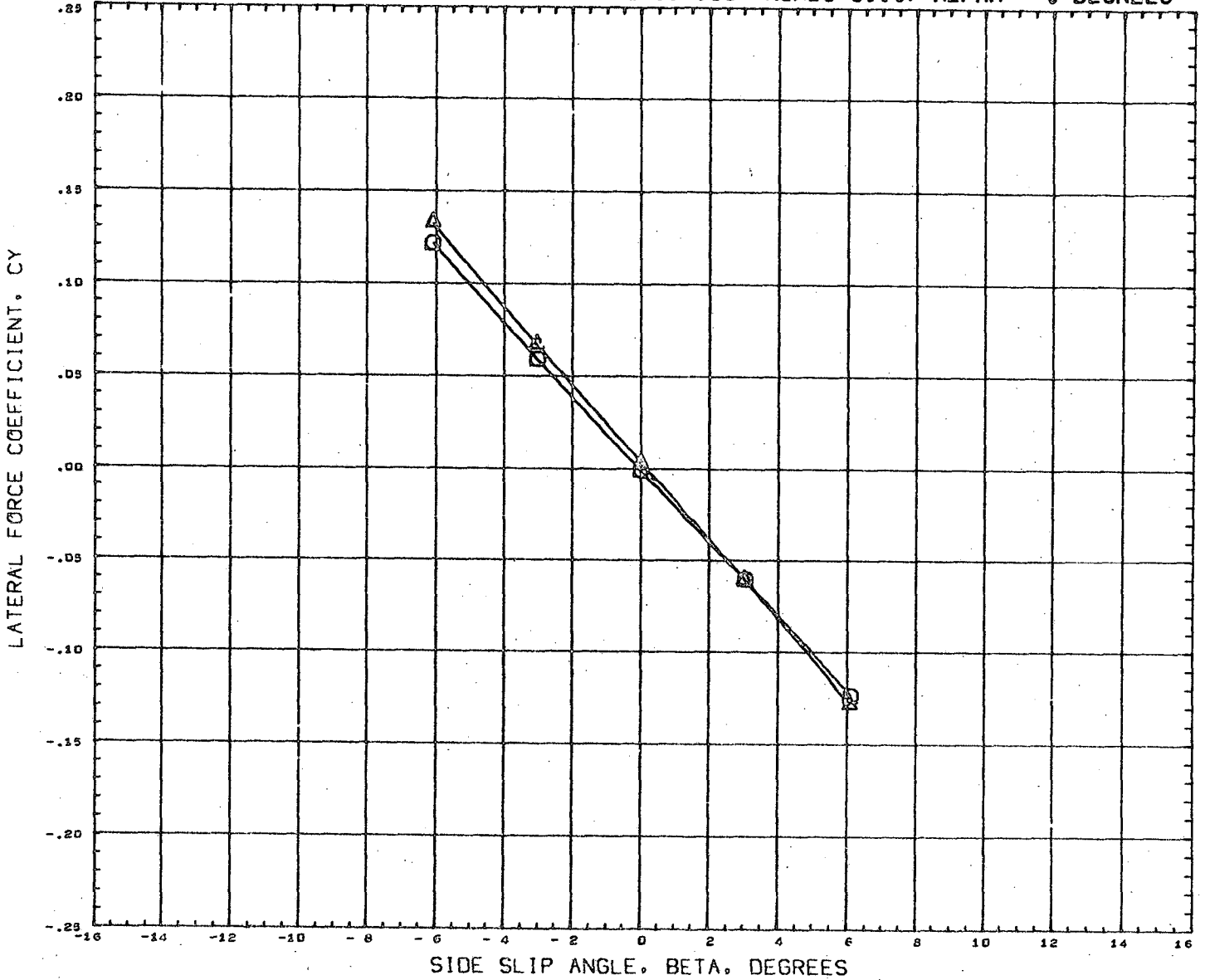
LMSC/MSFC BOOSTER STUDY, LATERAL CHARACTERISTICS, NSRDC 3110, ALPHA = 0 DEGREES



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION	
(RN2090)	NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1	3.000	2.000	0.000	2.000	SREF	1.3550 SQ. FT.
(RN2094)	NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1	15.000	2.000	0.000	2.000	LREF	41.4360 INCHES
						BREF	41.4360 INCHES
						XMRP	31.1400 INCHES
						YMRP	0.0000 INCHES
						ZMRP	0.2250 INCHES
						SCALE	1.5000 PERCENT

MACH 0.379

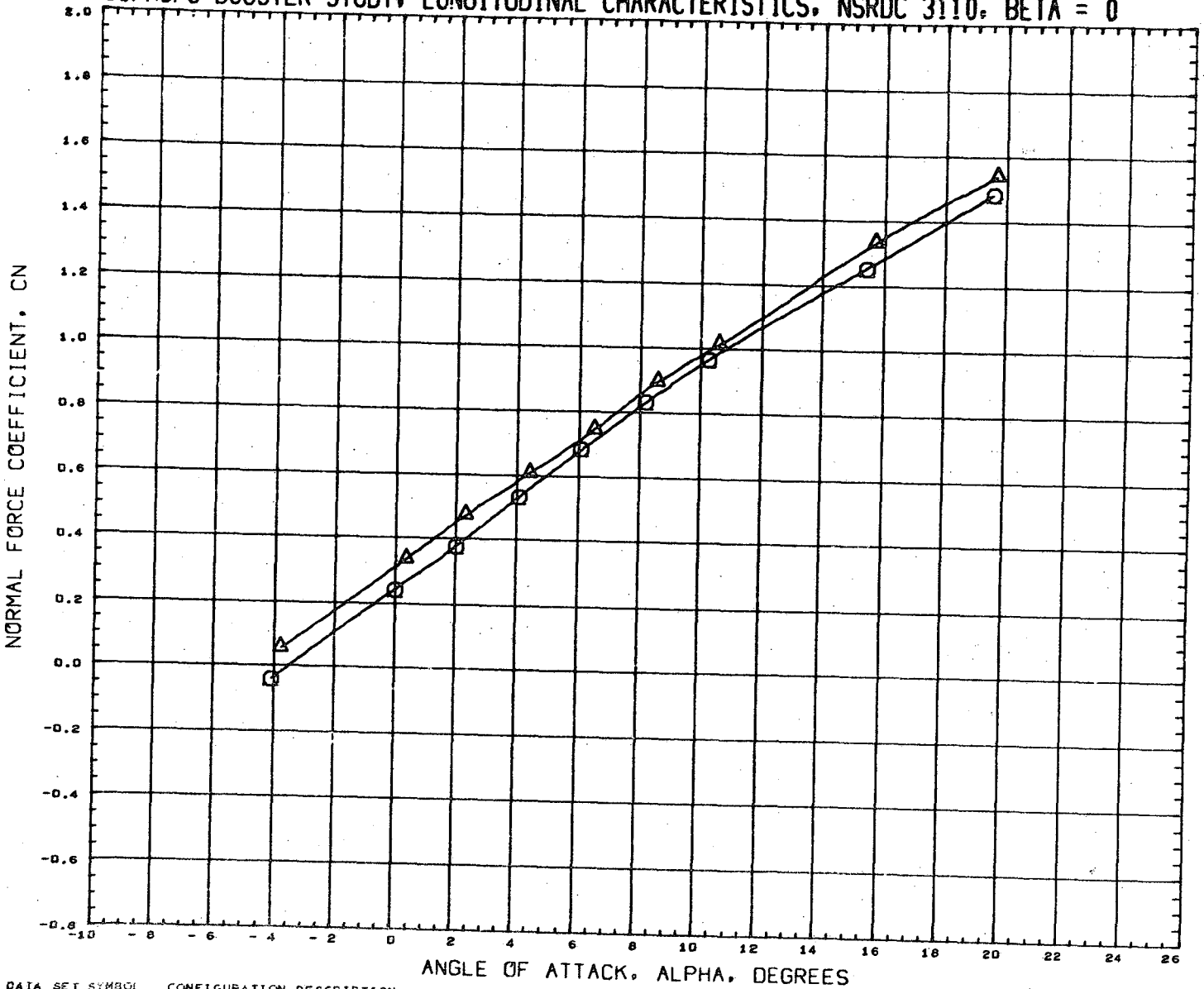
LMSC/MSFC BOOSTER STUDY, LATERAL CHARACTERISTICS, NSRDC 3110, ALPHA = 0 DEGREES



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2095)	NSRDC-3110,MSFC/LMSC BOOSTER B1C1F1W1V1	3.000	2.000	0.000	2.000	SREF 1.3550 SQ.FT.
(RN2094)	NSRDC-3110,MSFC/LMSC BOOSTER B1C1F1W1V1	15.000	2.000	0.000	2.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCENT

MACH 0.379

LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL
(RN2097)
(RN2101)



CONFIGURATION DESCRIPTION
NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1
NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1

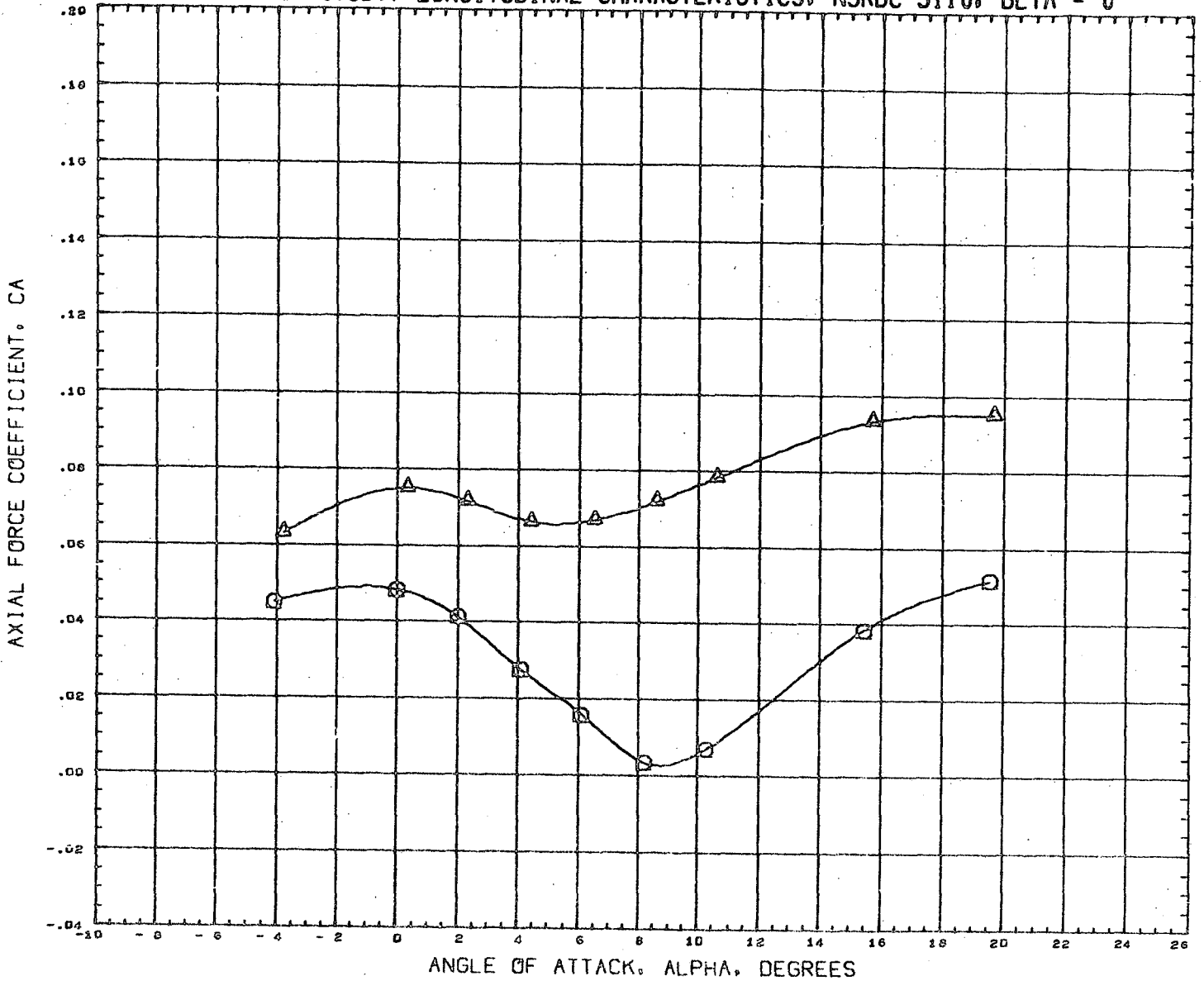
INCIDC	CNDPOS	INCICW	WNGPOS
3.000	1.000	3.000	1.000
15.000	1.000	3.000	1.000

REFERENCE INFORMATION

SREF	1.3550	SQ. FT.
LREF	41.4360	INCHES
BREF	41.4360	INCHES
XMRP	31.1400	INCHES
YMRP	0.0000	INCHES
ZMRP	0.2250	INCHES
SCALE	1.5000	PERCENT

MACH 0.383

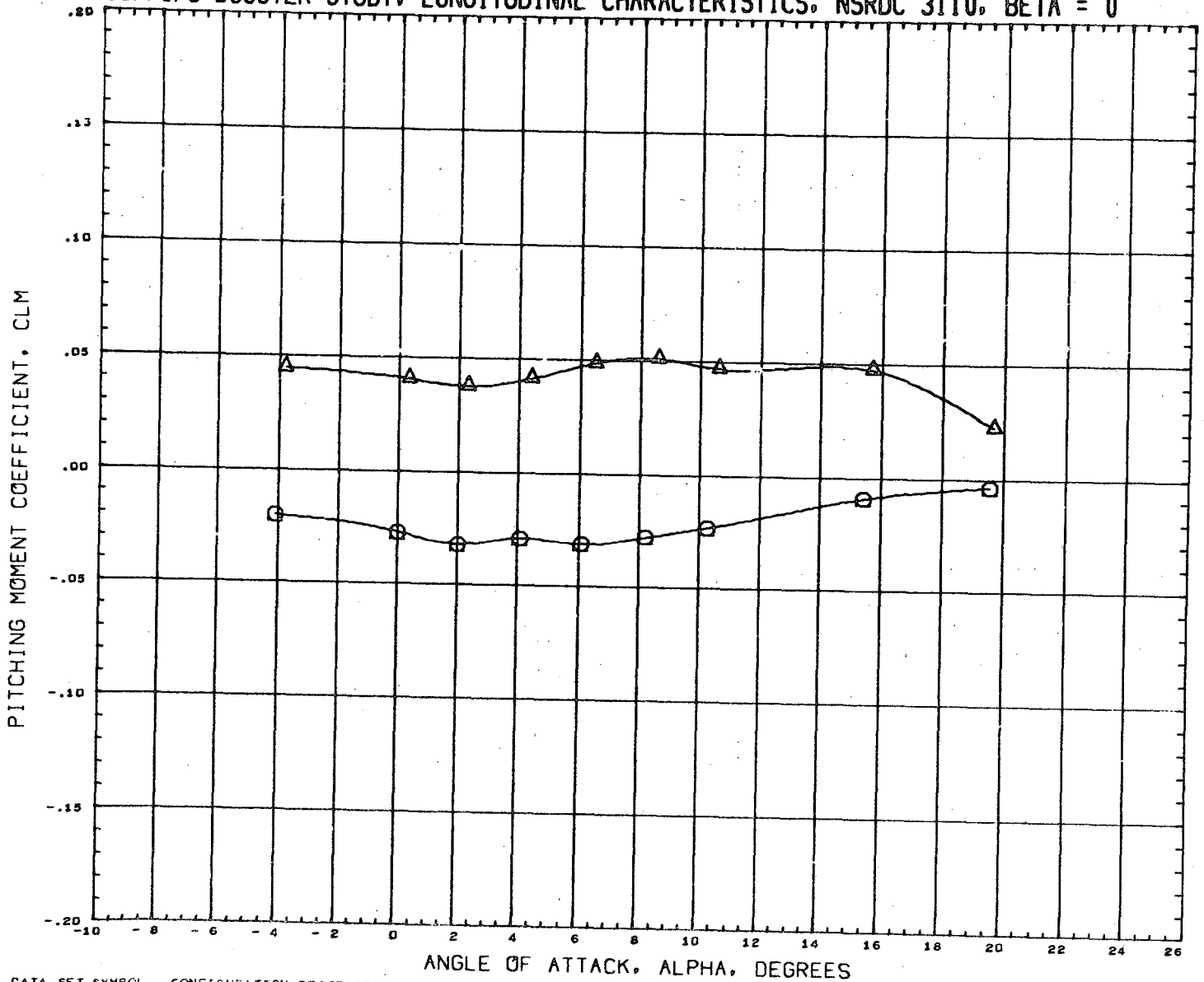
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2097)	NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1	3.000	1.000	3.000	1.000	SREF 1.3550 SQ.FT.
(RN2101)	NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1	15.000	1.000	3.000	1.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCENT

MACH 0.383

LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL
(RN2097)
(RN2101)



CONFIGURATION DESCRIPTION
NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1
NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1

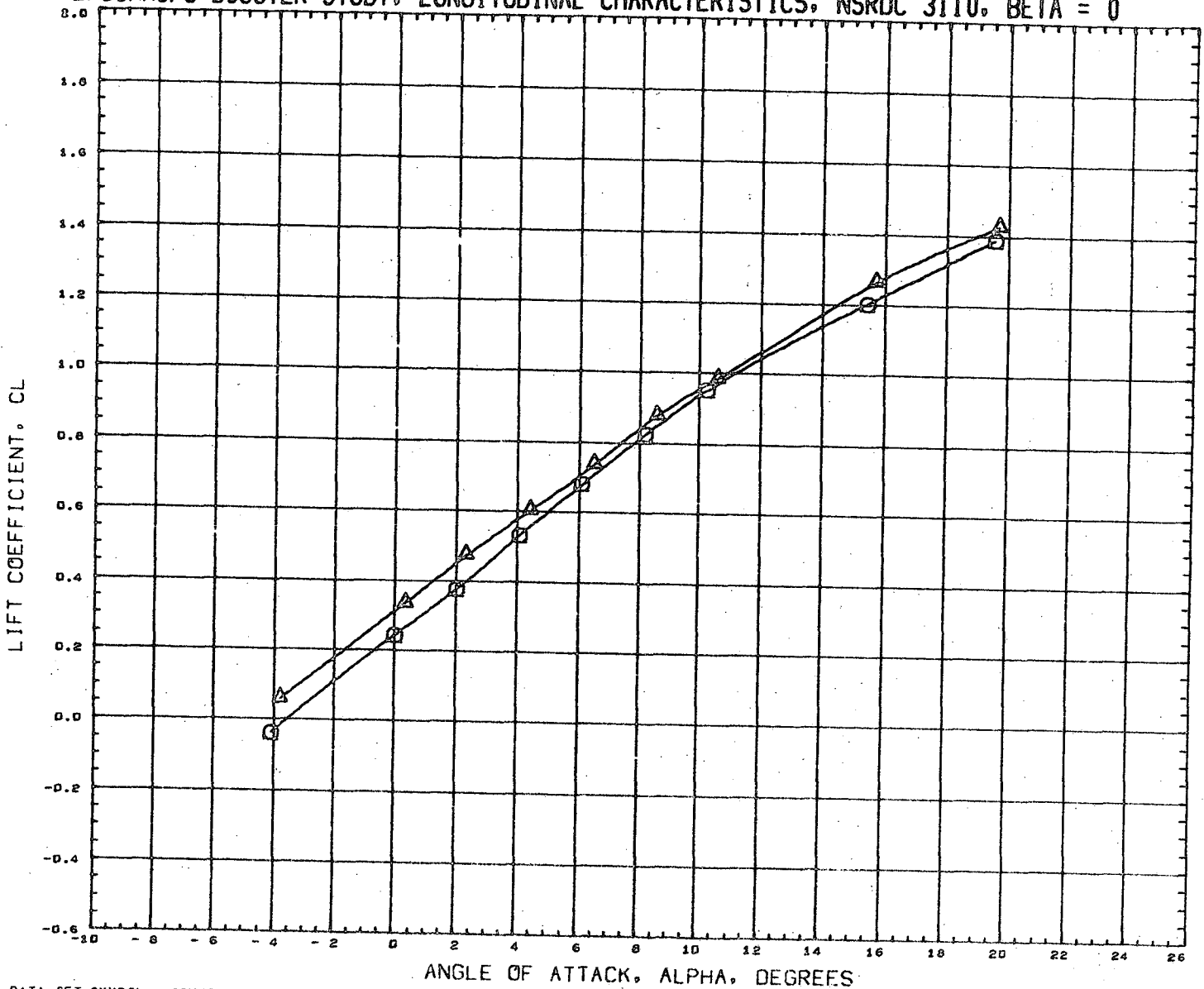
INCIDC	CNDPOS	INCIDW	WNGPOS
3.000	1.000	3.000	1.000
15.000	1.000	3.000	1.000

REFERENCE INFORMATION

SREF	1.3550	SQ.FT.
LREF	41.4360	INCHES
BREF	41.4360	INCHES
YMRP	31.1400	INCHES
ZMRP	0.0000	INCHES
ZMRP	0.2250	INCHES
SCALE	1.5000	PERCENT

MACH 0.383

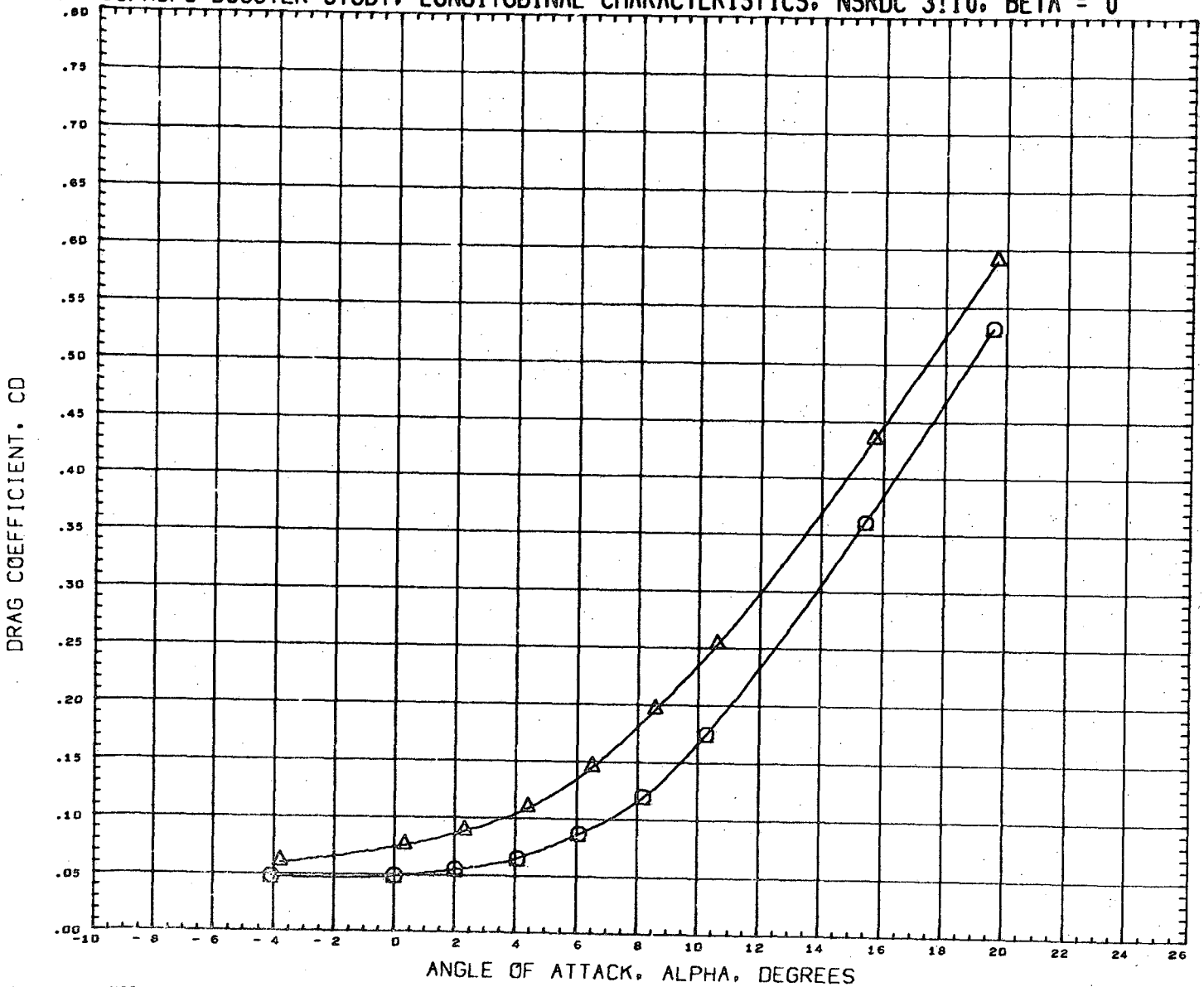
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGFOS	REFERENCE INFORMATION
(RN2097)	NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1	3.000	1.000	3.000	1.000	SREF 1.3550 SQ.FT.
(RN2101)	NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1	15.000	1.000	3.000	1.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCNT

MACH 0.303

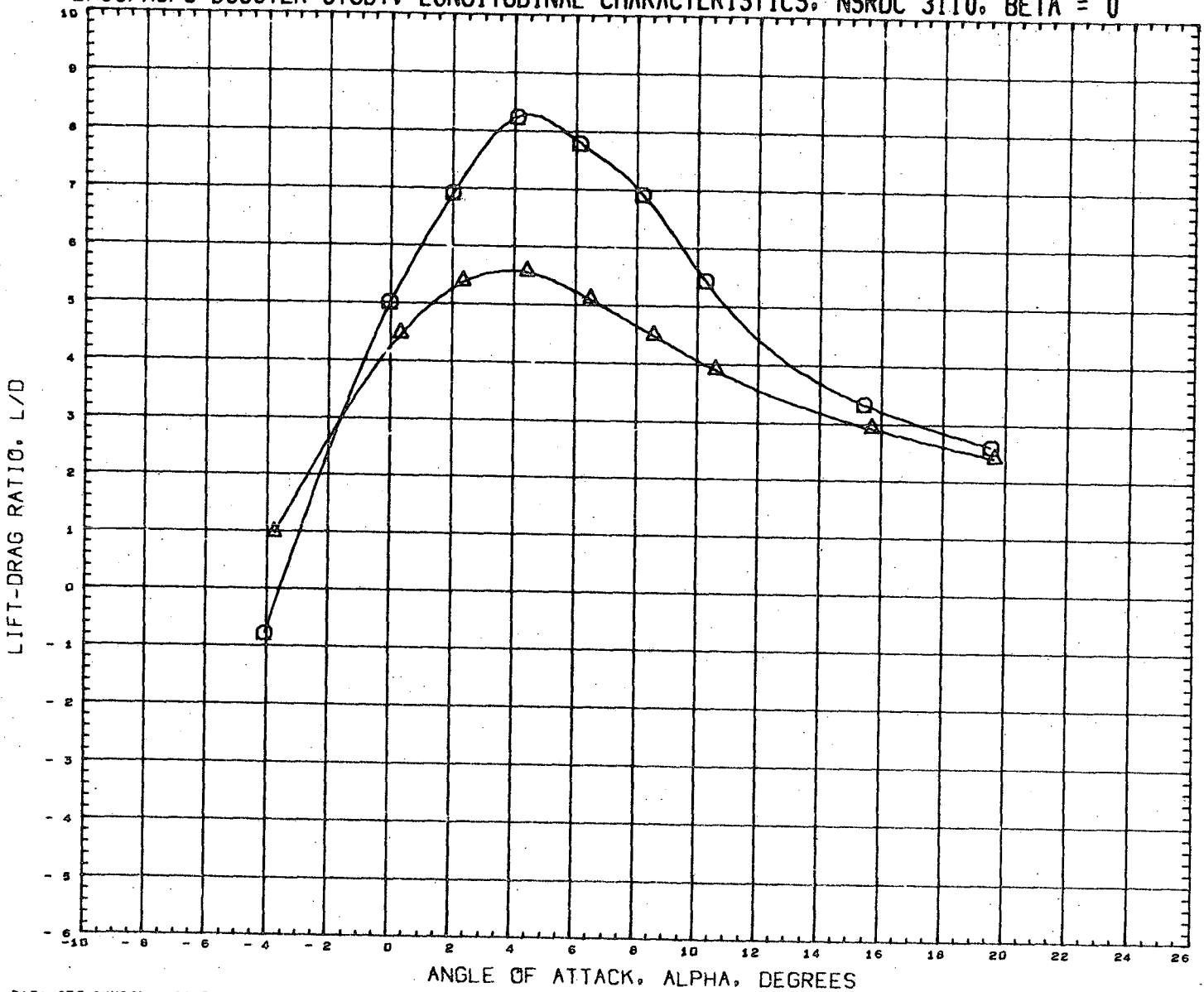
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2097)	NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1	3.000	1.000	3.000	1.000	SREF 1.3550 SQ. FT.
(RN2101)	NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1	15.000	1.000	3.000	1.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCENT

MACH 0.383

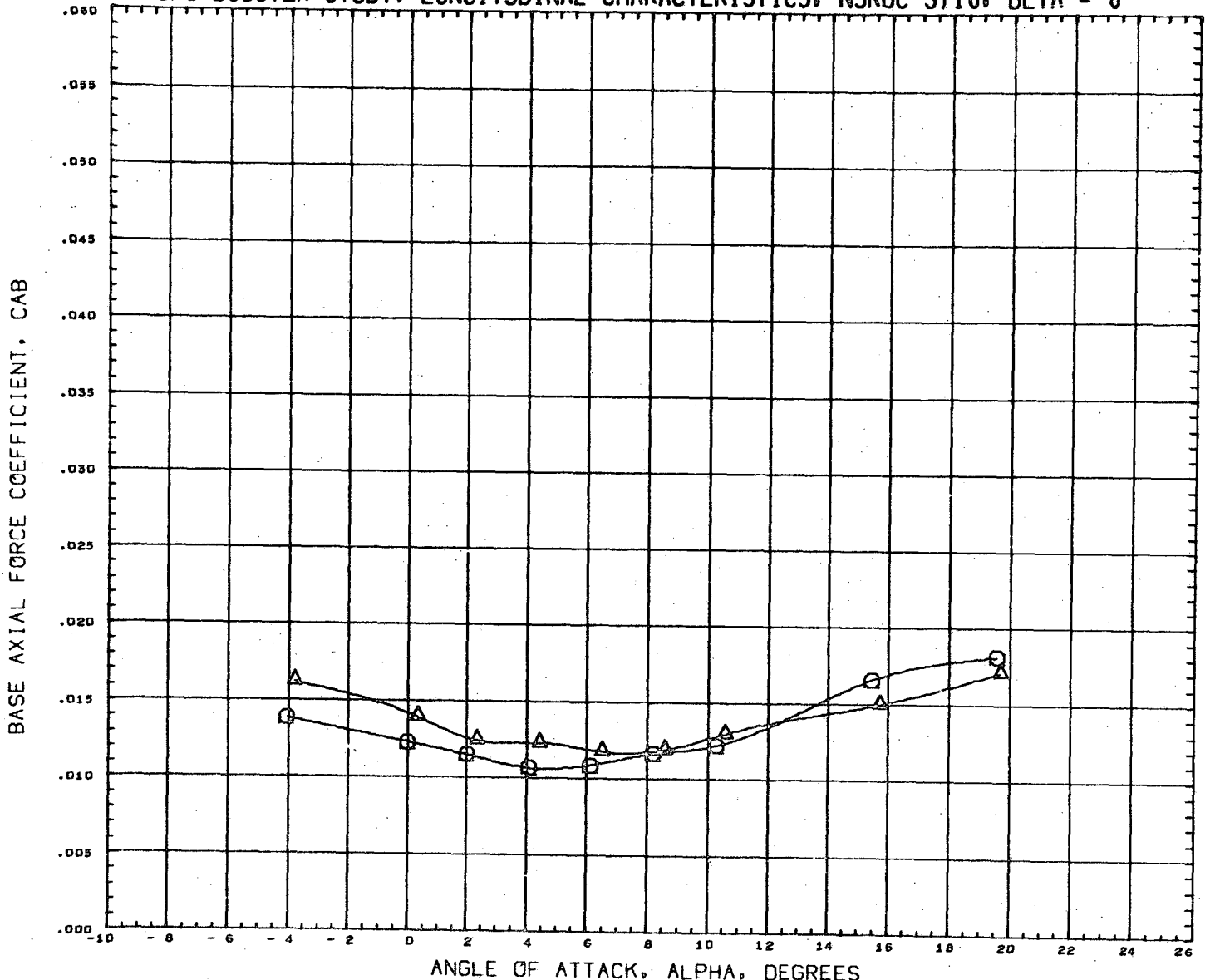
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION	
(RN2D97)	NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1	3.000	1.000	3.000	1.000	SREF	1.3550 SQ. FT.
(RN21D1)	NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1	15.000	1.000	3.000	1.000	LREF	41.4360 INCHES
						BREF	41.4360 INCHES
						XMRP	31.1400 INCHES
						YMRP	0.0000 INCHES
						ZMRP	0.2250 INCHES
						SCALE	1.5000 PERCENT

MACH 0.383

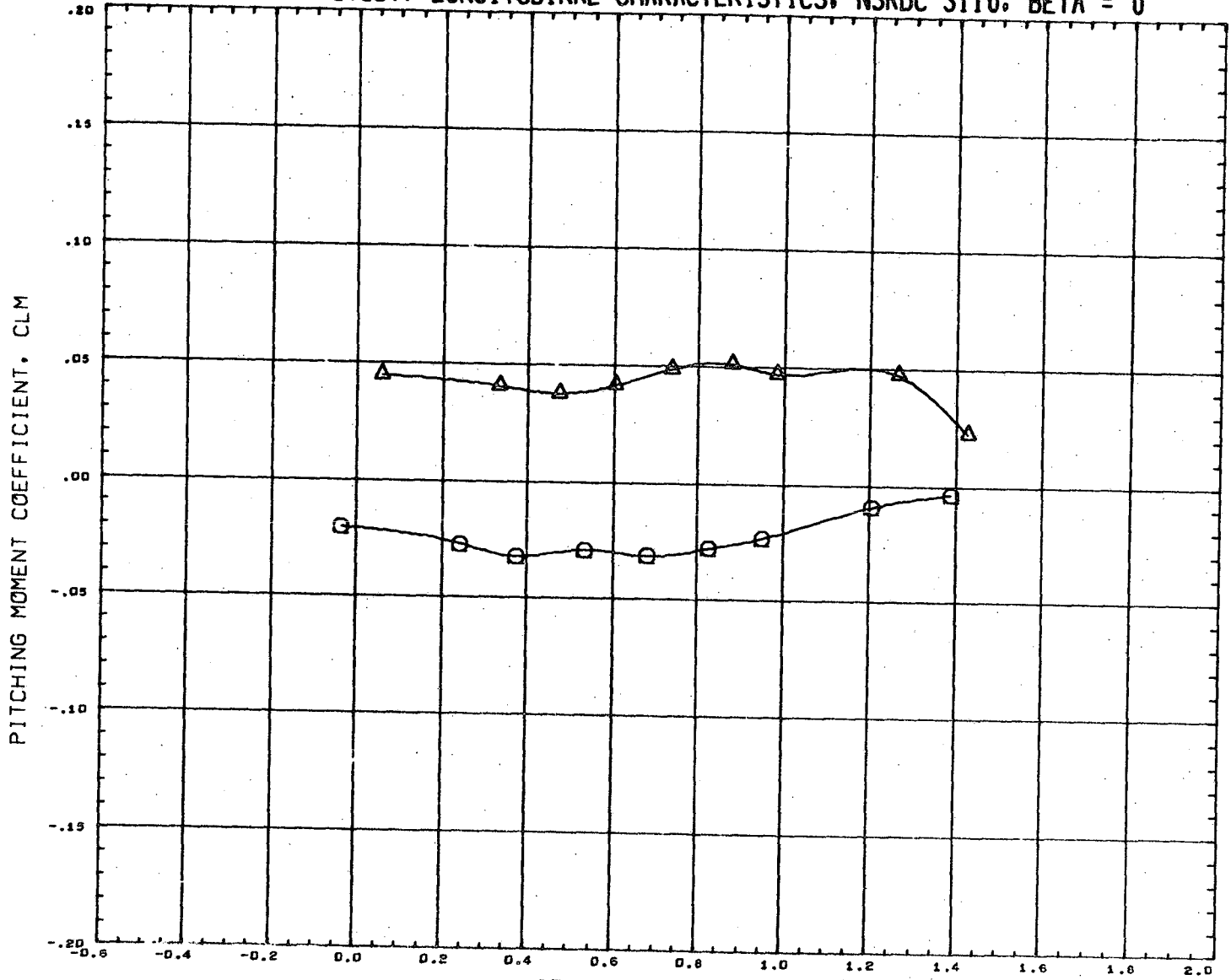
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIPW	WNGPOS	REFERENCE INFORMATION	
(RN2097)	NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1	3.000	1.000	3.000	1.000	SREF	1.3550 SQ.FT.
(RN2101)	NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1	15.000	1.000	3.000	1.000	LREF	41.4360 INCHES
						BREF	41.4360 INCHES
						XMRP	31.1400 INCHES
						YMRP	0.0000 INCHES
						ZMRP	0.2250 INCHES
						SCALE	1.5000 PERCNT

MACH 0.383

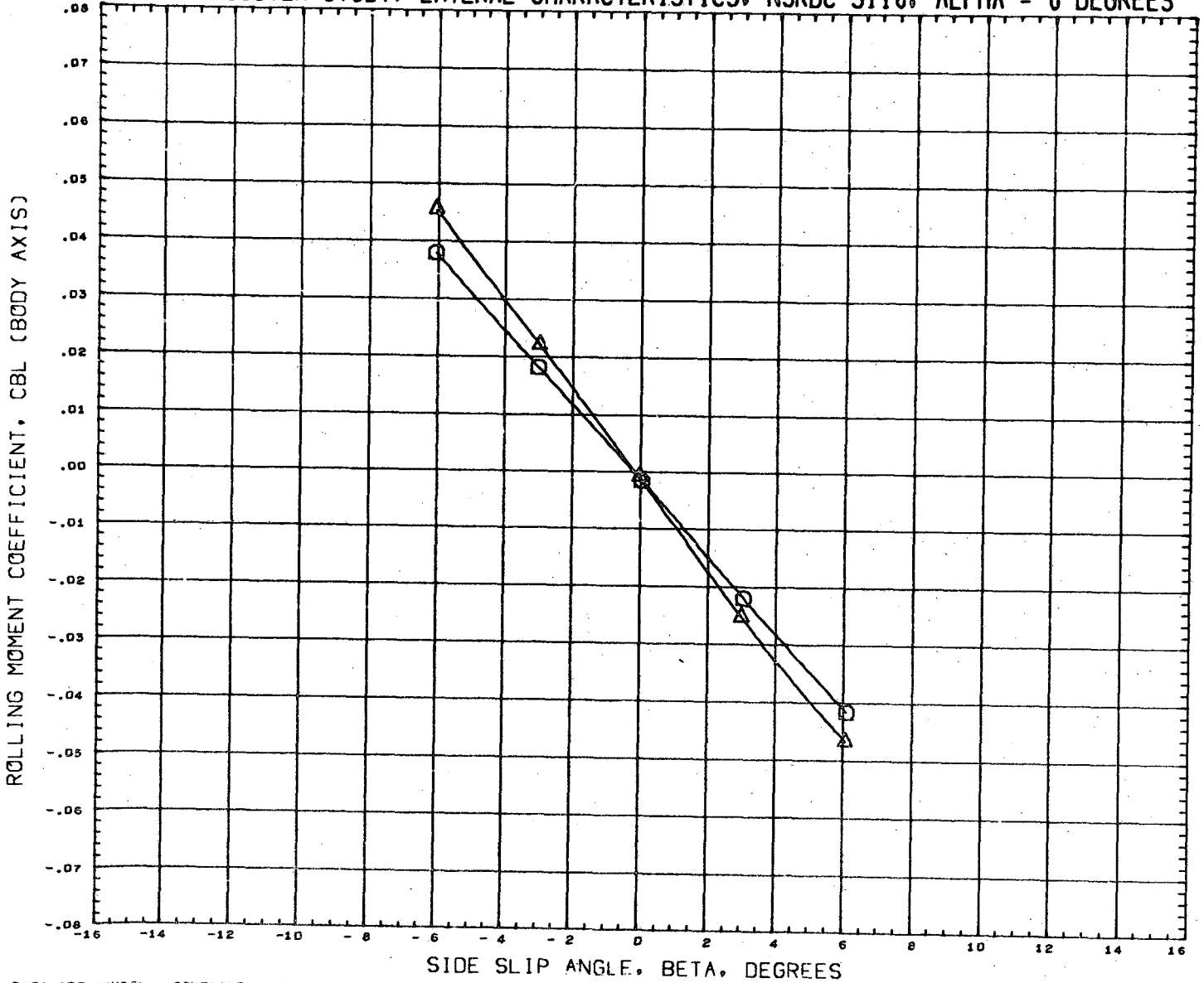
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2097)	NSRDC-3110,MSFC/LMSC BOOSTER B1C1F1W1V1	3.000	1.000	3.000	1.000	SREF 1.3550 SQ. FT.
(RN2101)	NSRDC-3110,MSFC/LMSC BOOSTER B1C1F1W1V1	15.000	1.000	3.000	1.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCENT

MACH 0.383

LMSC/MSFC BOOSTER STUDY, LATERAL CHARACTERISTICS, NSRDC 3110, ALPHA = 0 DEGREES



DATA SET SYMBOL
(RN2098) ○
(RN2102) △

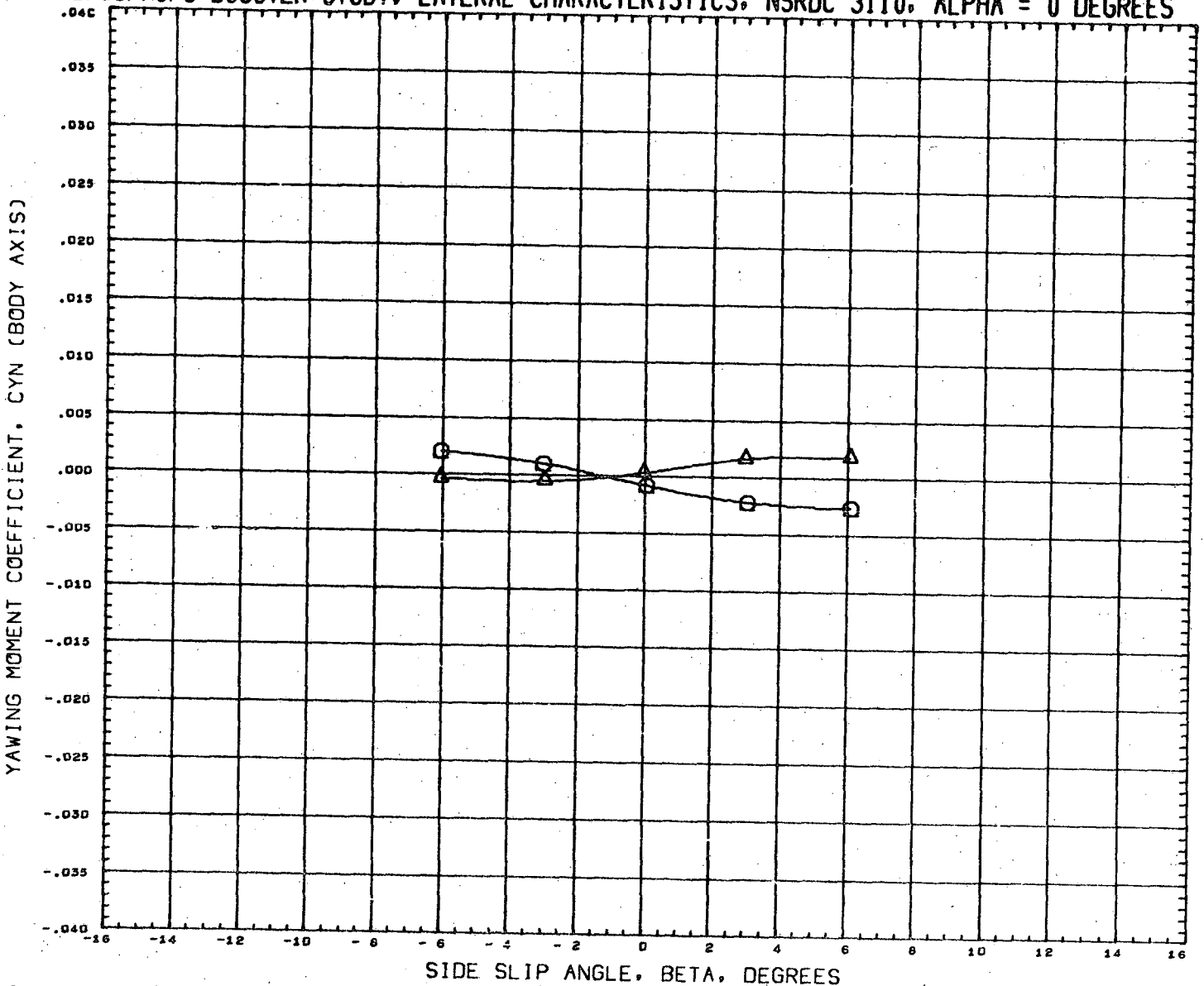
CONFIGURATION DESCRIPTION
NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1
NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1

INCIDC	CNDFOS	INCIDW	WNGPOS
3.000	1.000	3.000	1.000
15.000	1.000	3.000	1.000

REFERENCE INFORMATION		
SREF	1.3550	SQ. FT.
LREF	41.4360	INCHES
BREF	41.4360	INCHES
XMRP	31.1400	INCHES
YMRP	0.0000	INCHES
ZMRP	0.2250	INCHES
SCALE	1.5000	PERCENT

MACH 0.381

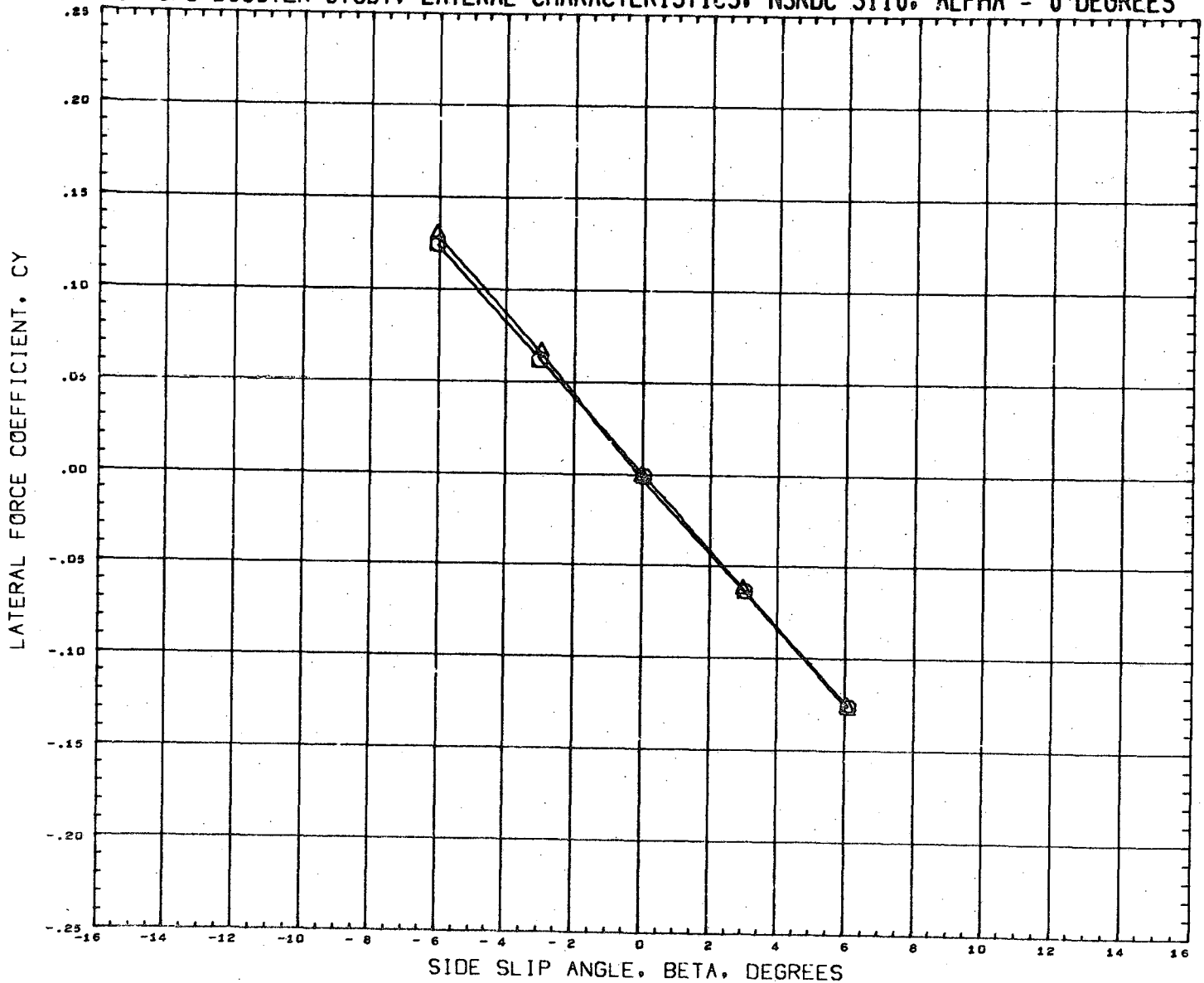
LMSC/MSFC BOOSTER STUDY, LATERAL CHARACTERISTICS, NSRDC 3110, ALPHA = 0 DEGREES



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2098)	NSRDC-3110,MSFC/LMSC BOOSTER B1C1F1W1V1	3.000	1.000	3.000	1.000	SREF 1.3550 SQ.FT.
(RN2102)	NSRDC-3110,MSFC/LMSC BOOSTER B1C1F1W1V1	15.000	1.000	3.000	1.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRF 31.1400 INCHES
						YMRF 0.0000 INCHES
						ZMRF 0.2250 INCHES
						SCALE 1.5000 PERCENT

MACH 0.381

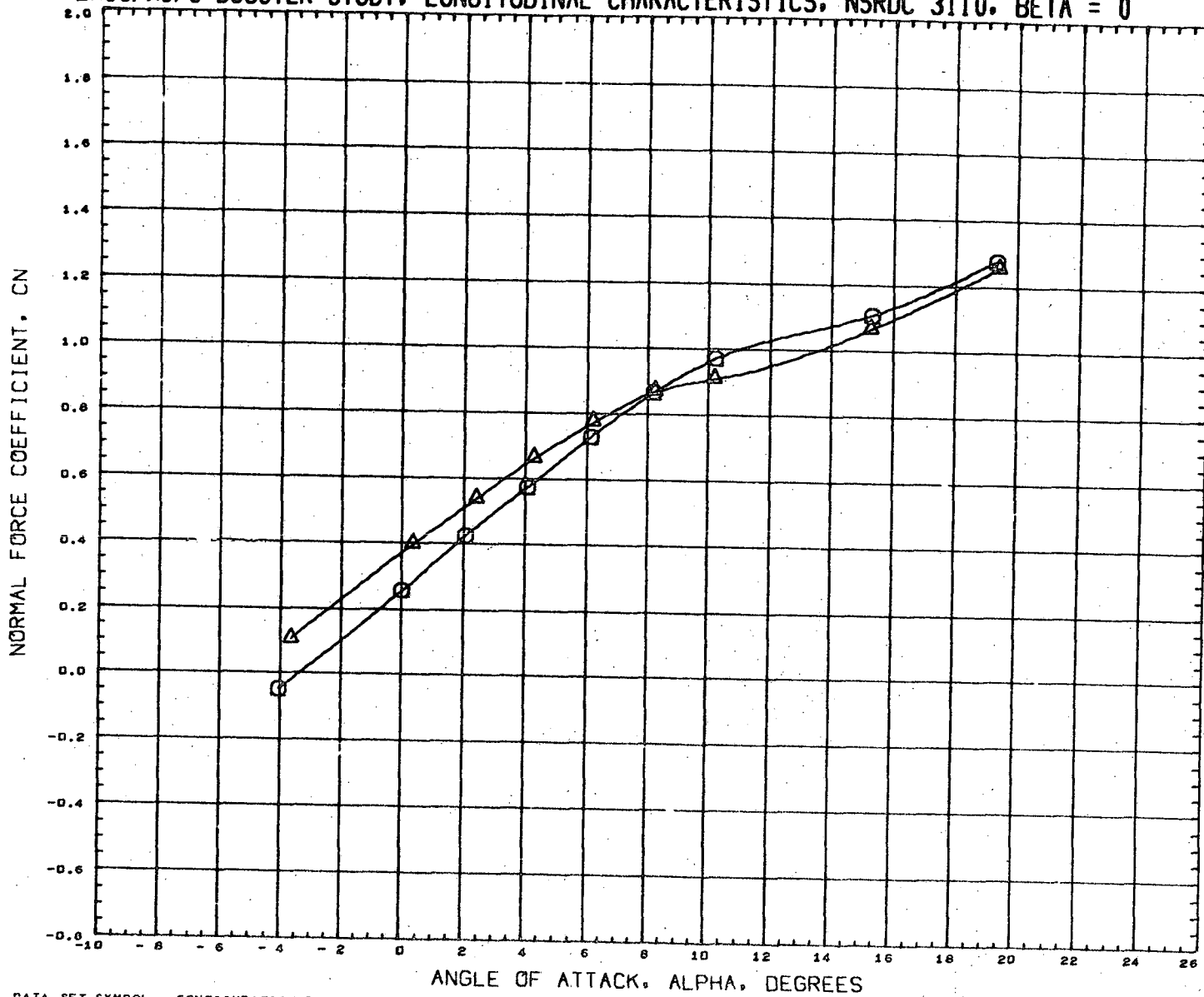
LMSC/MSFC BOOSTER STUDY, LATERAL CHARACTERISTICS, NSRDC 3110, ALPHA = 0 DEGREES



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2098)	NSRDC-3110,MSFC/LMSC BOOSTER B1C1F1W1V1	3.000	1.000	3.000	1.000	SREF 1.3550 SQ.FT.
(RN2102)	NSRDC-3110,MSFC/LMSC BOOSTER B1C1F1W1V1	15.000	1.000	3.000	1.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRF 31.1400 INCHES
						YMRF 0.0000 INCHES
						ZMRF 0.2250 INCHES
						SCALE 1.5000 PERCENT

MACH 0.381

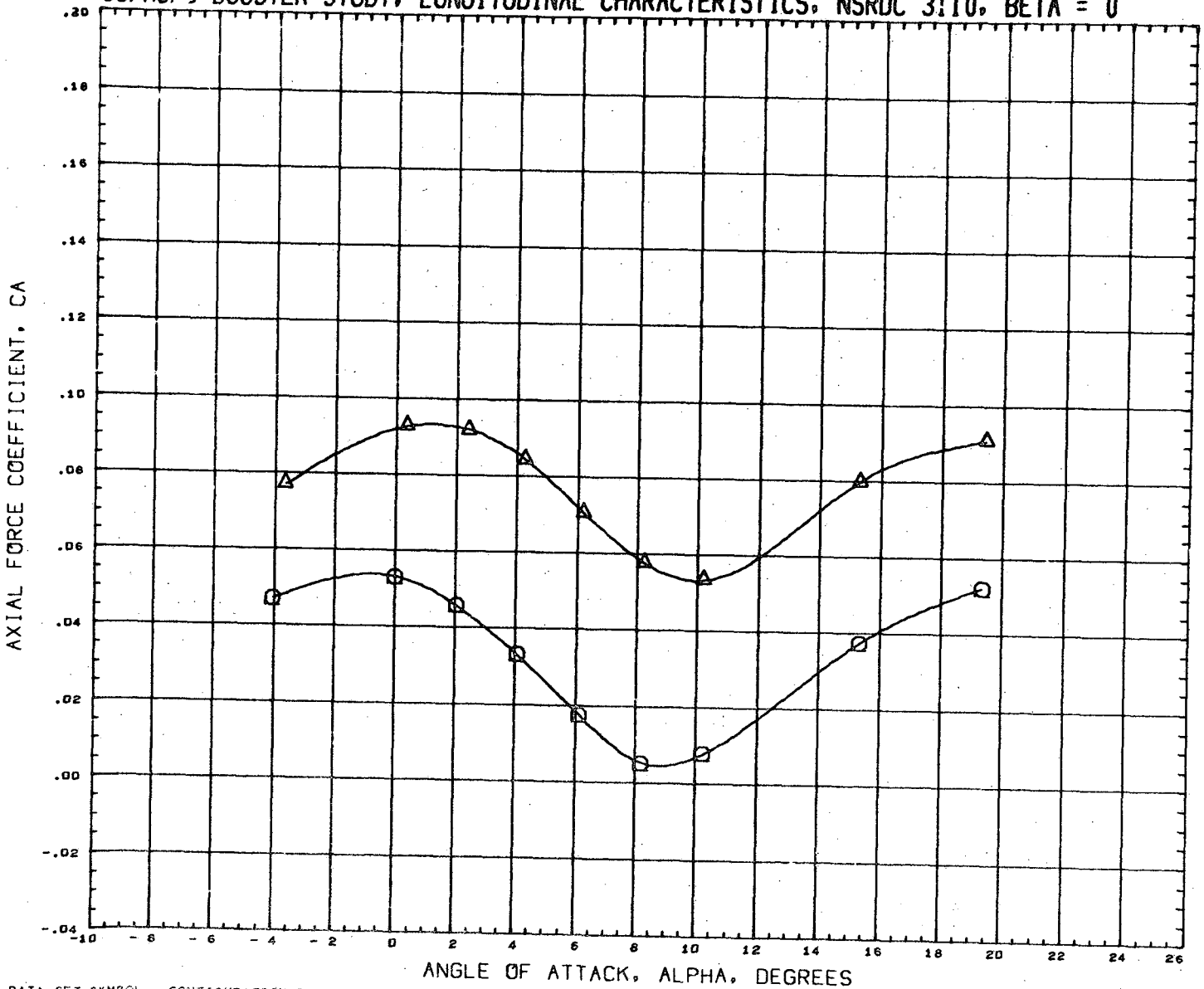
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2105)	NSRDC-3110,MSFC/LMSC BOOSTER B1C1F1W1V1	3.000	2.000	3.000	1.000	SREF 1.3550 SQ.FT.
(RN2109)	NSRDC-3110,MSFC/LMSC BOOSTER B1C1F1W1V1	15.000	2.000	3.000	1.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCNT

MACH 0.381

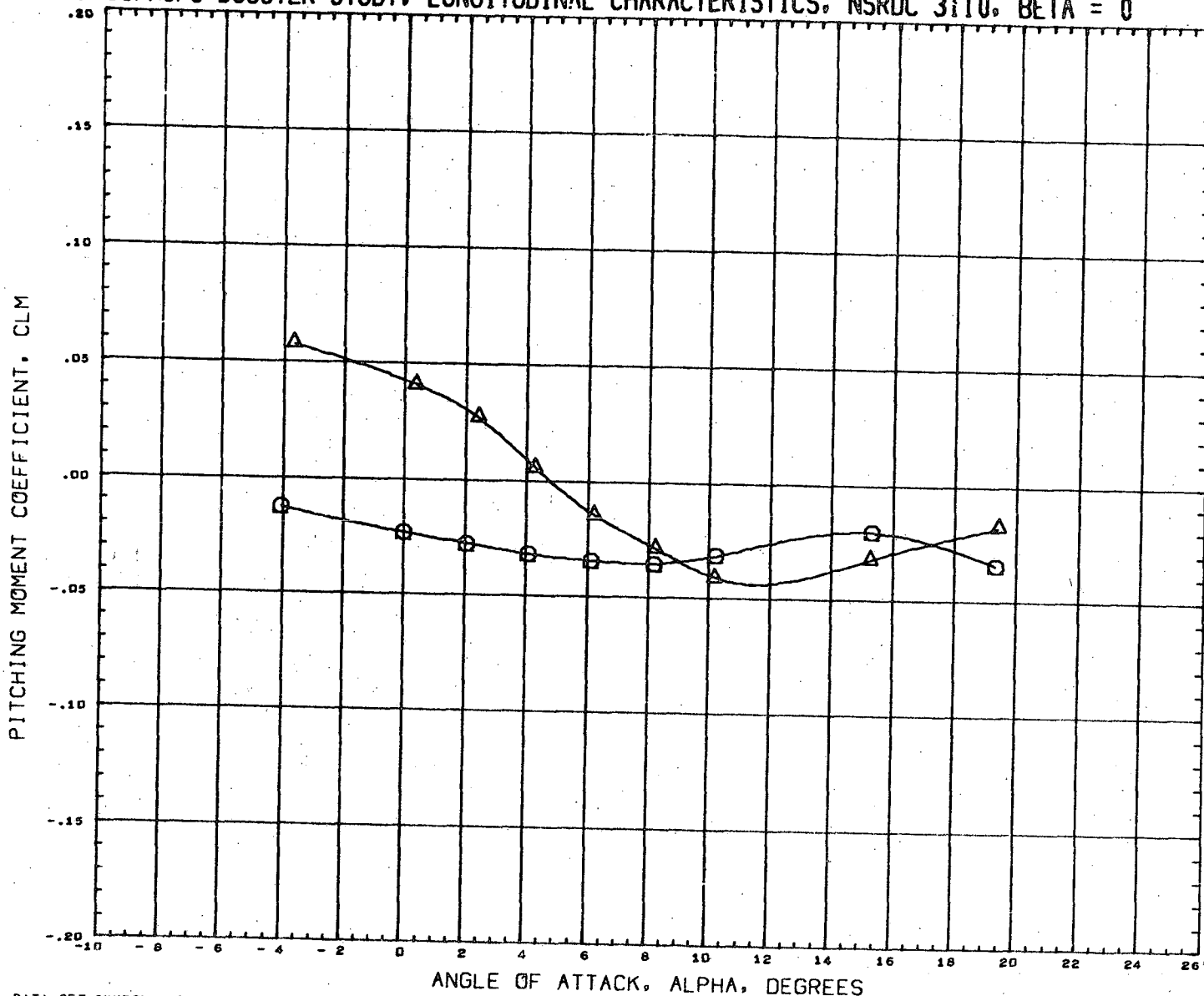
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2105)	NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1	3.000	2.000	3.000	1.000	SREF 1.3550 SQ. FT.
(RN2105)	NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1	15.000	2.000	3.000	1.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRF 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCENT

MACH 0.381

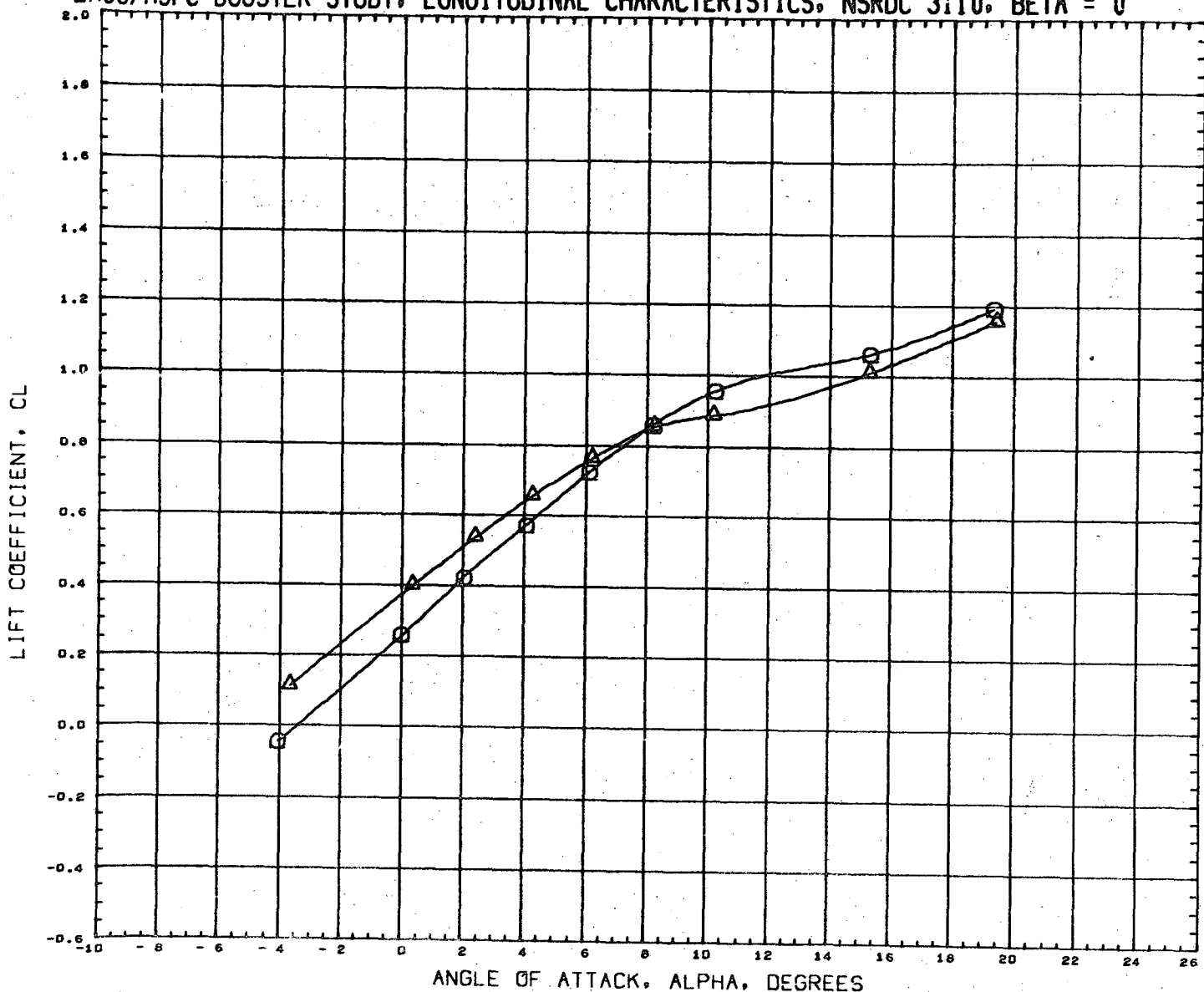
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2105)	NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1	3.000	2.000	3.000	1.000	SREF 1.3550 SQ. FT.
(RN2109)	NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1	15.000	2.000	3.000	1.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCENT

MACH 0.381

LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL
(RN2105)
(RN2109)



CONFIGURATION DESCRIPTION
NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1
NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1

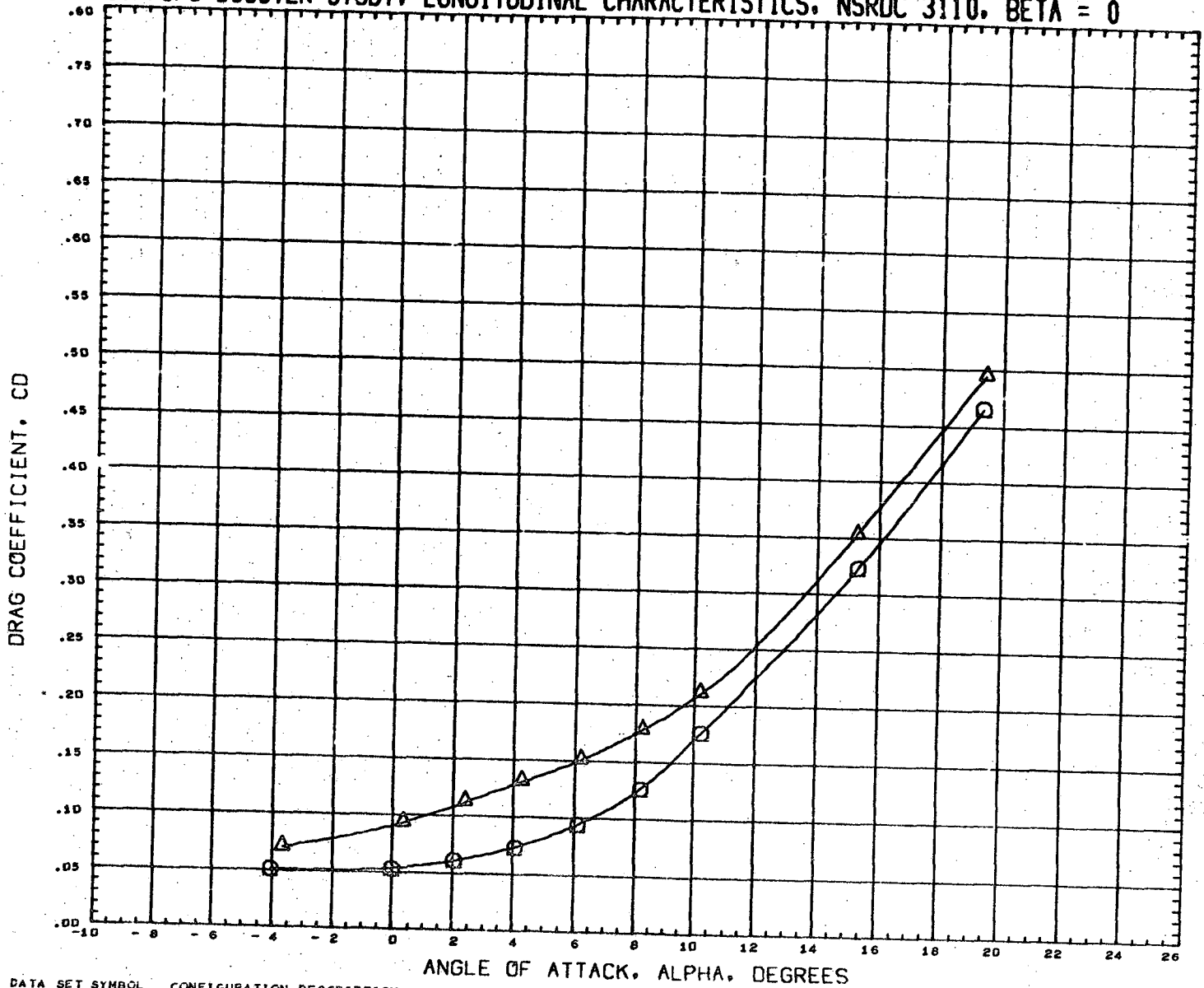
INCIDC	CNDPOS	INCIDW	WNGPOS
3.000	2.000	3.000	1.000
15.000	2.000	3.000	1.000

REFERENCE INFORMATION

SREF	1.3550	SQ.FT.
LREF	41.4360	INCHES
BREF	41.4360	INCHES
XMRP	31.1400	INCHES
YMRP	0.0000	INCHES
ZMRP	0.2250	INCHES
SCALE	1.5000	PERCNT

MACH 0.381

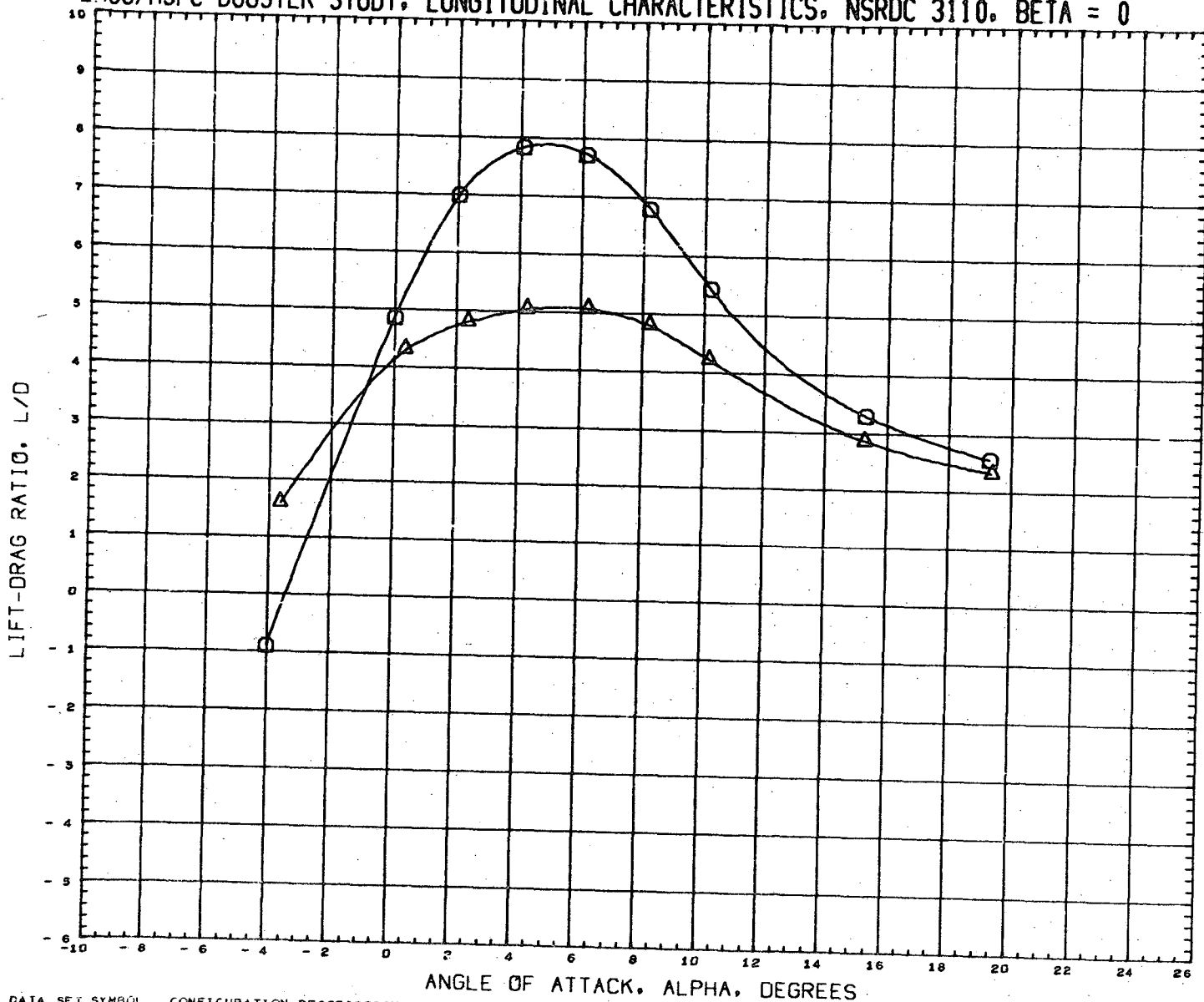
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2105)	NSRDC-3110,MSFC/LMSC BOOSTER B1C1F1W1V1	3.000	2.000	3.000	1.000	SREF 1.3550 SQ.FT.
(RN2109)	NSRDC-3110,MSFC/LMSC BOOSTER B1C1F1W1V1	15.000	2.000	3.000	1.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCENT

MACH 0.381

LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL
 (RN2105) ○
 (RN2109) △

CONFIGURATION DESCRIPTION
 NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1
 NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1

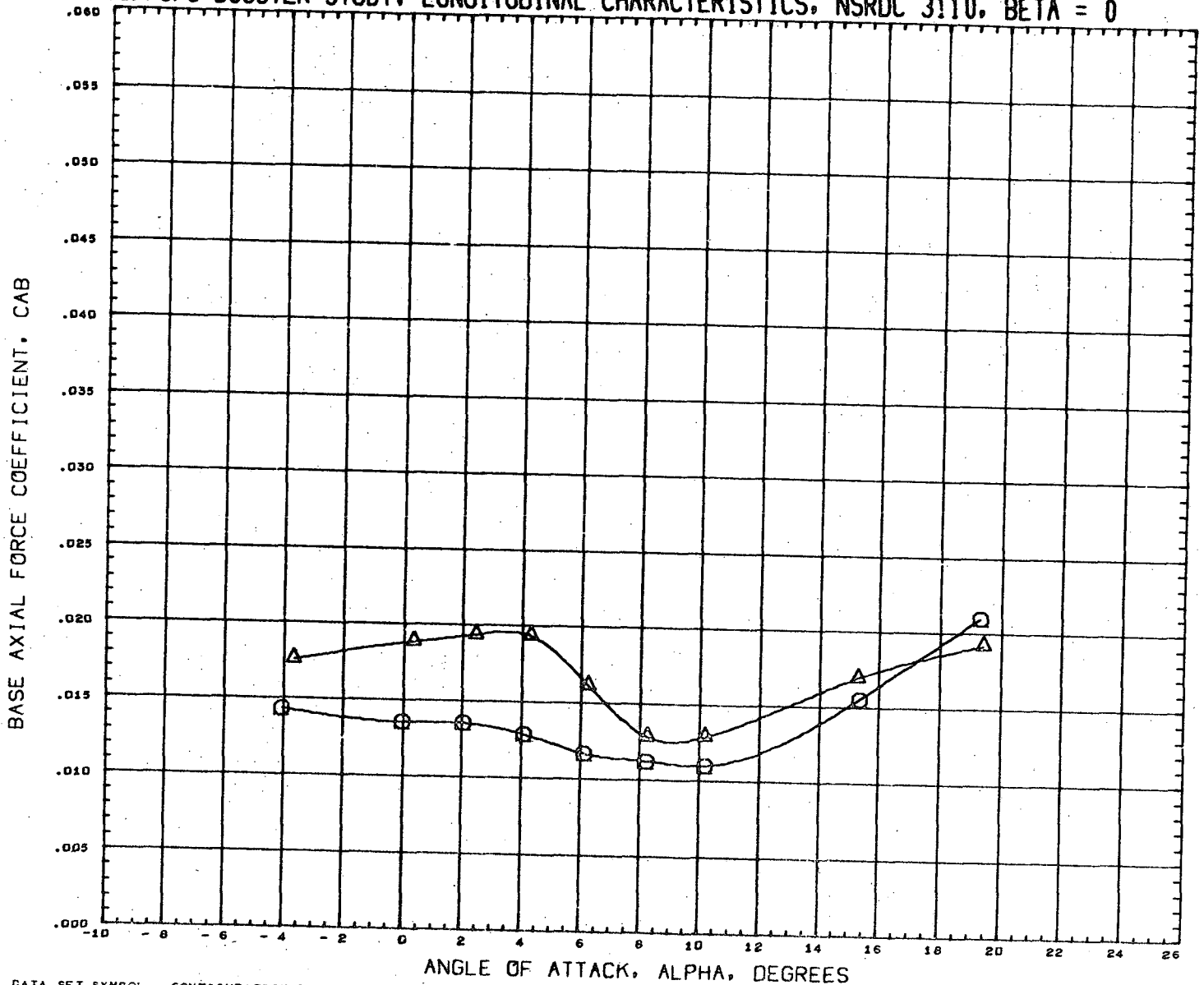
INCIDC	CNDPOS	INCIDW	WNGPOS
3.000	2.000	3.000	1.000
15.000	2.000	3.000	1.000

REFERENCE INFORMATION

SREF	1.3550	SQ. FT.
LREF	41.4360	INCHES
BREF	41.4360	INCHES
XMRP	31.1400	INCHES
YMRP	0.0000	INCHES
ZMRP	0.2250	INCHES
SCALE	1.5000	PERCENT

MACH 0.381

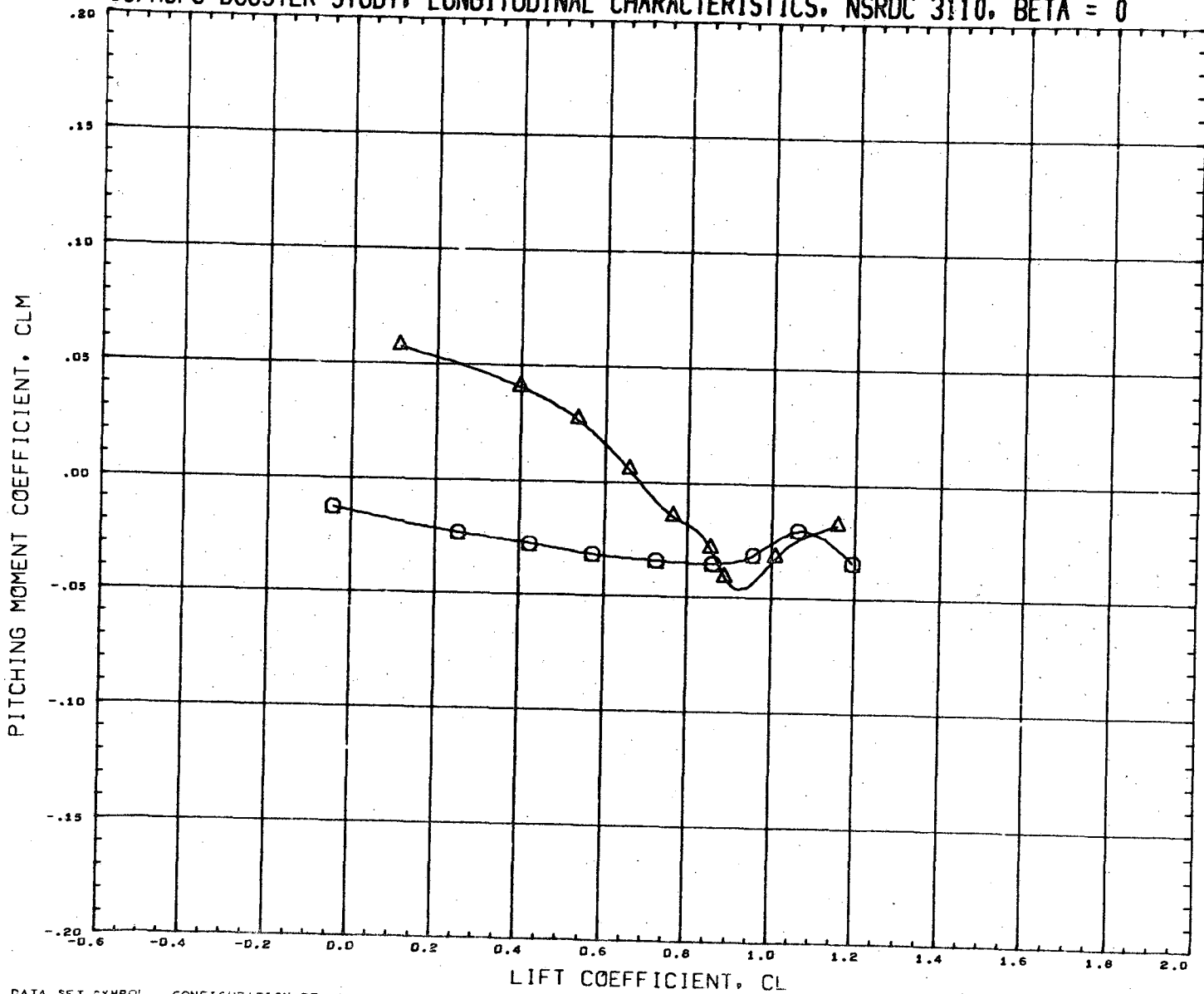
LMSC/MSFC BOOSTER STUDY. LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2105)	NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1	3.000	2.000	3.000	1.000	SREF 1.3550 SQ. FT.
(RN2109)	NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1	15.000	2.000	3.000	1.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCENT

MACH 0.381

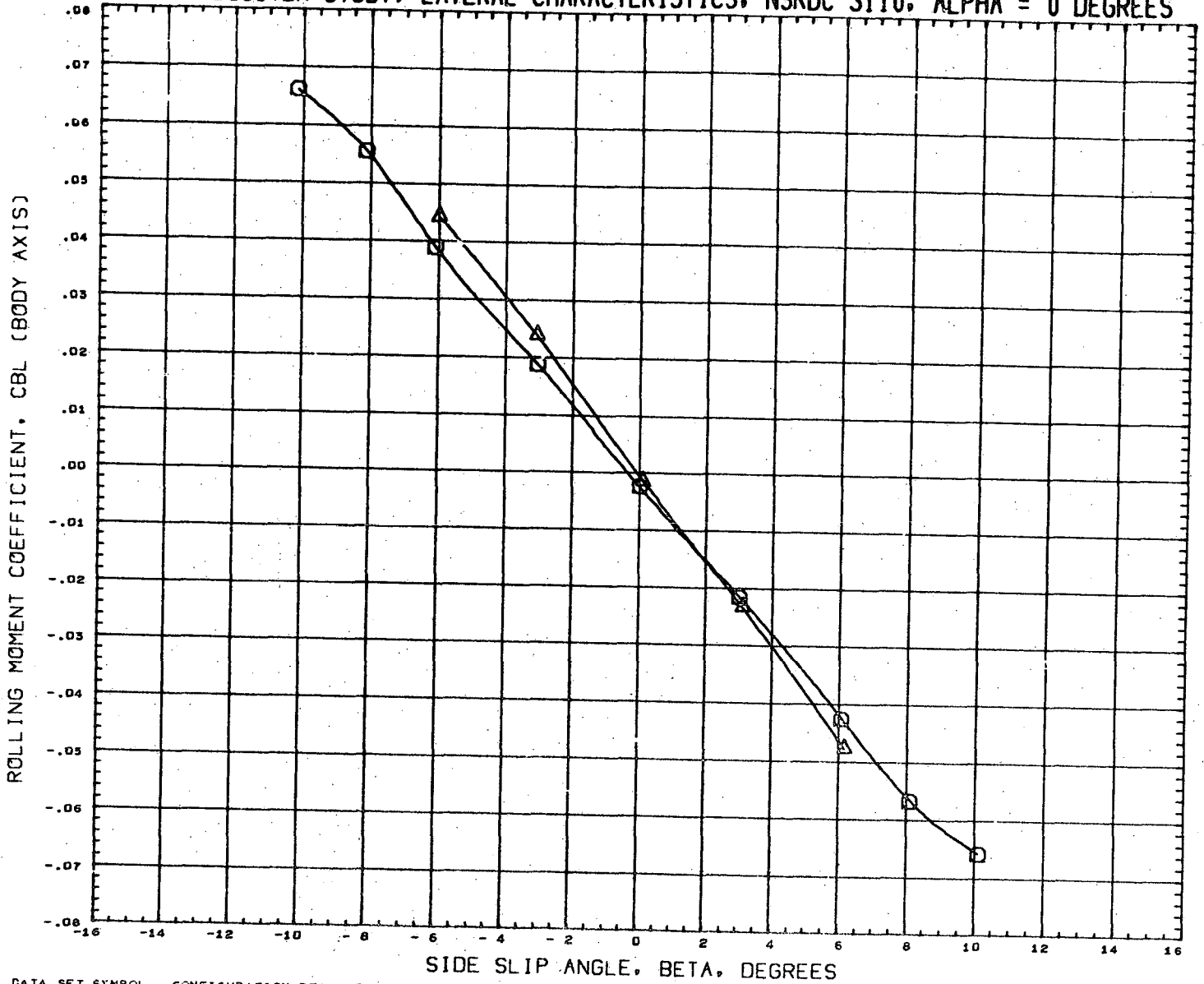
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2105)	NSRDC-3110,MSFC/LMSC BOOSTER B1C1F1W1V1	3.000	2.000	3.000	1.000	SREF 1.3550 SQ.FT.
(RN2109)	NSRDC-3110,MSFC/LMSC BOOSTER B1C1F1W1V1	15.000	2.000	3.000	1.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCNT

MACH 0.381

LMSC/MSFC BOOSTER STUDY, LATERAL CHARACTERISTICS, NSRDC 3110, ALPHA = 0 DEGREES



DATA SET SYMBOL
(RN2106)
(RN2110)



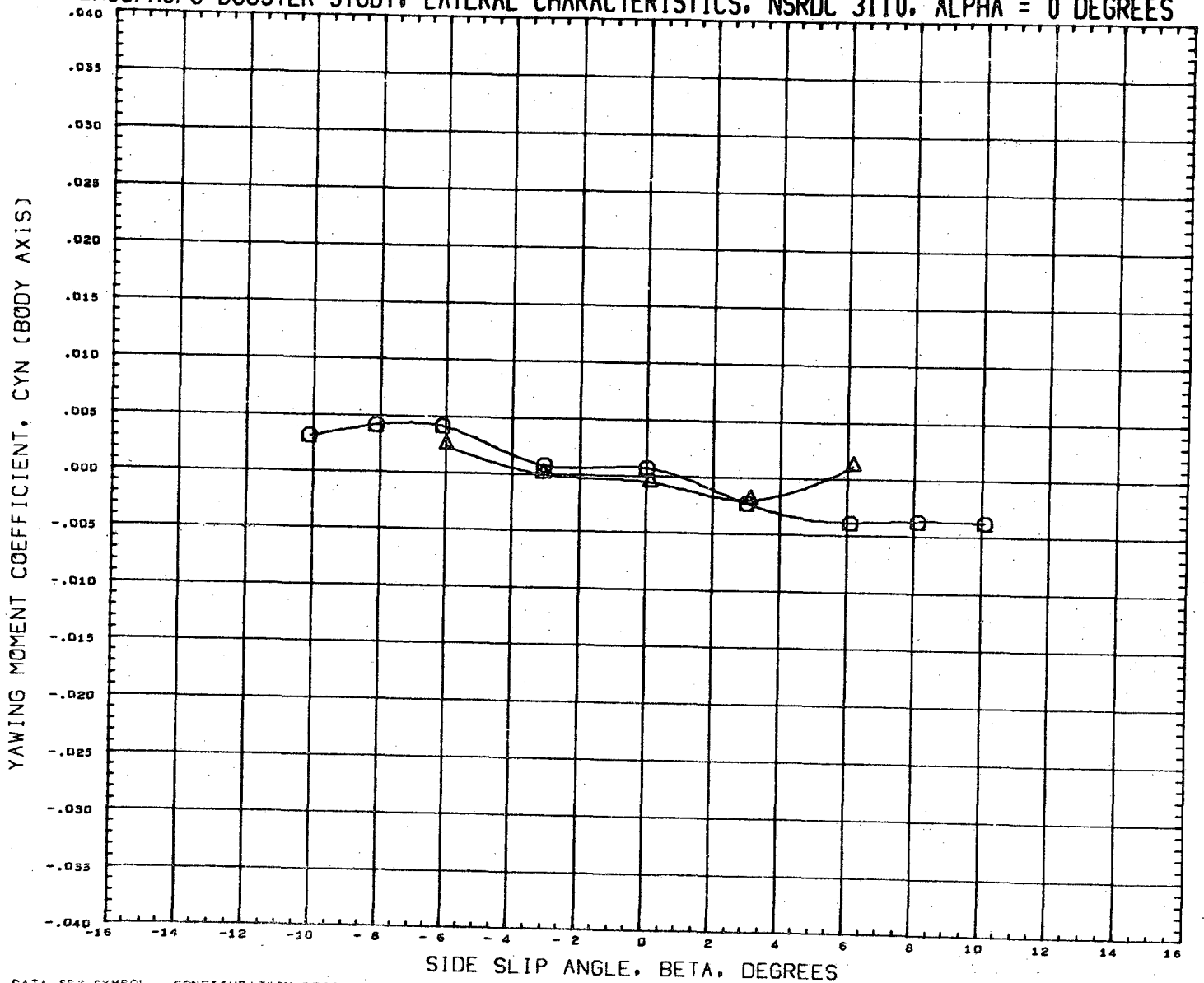
CONFIGURATION DESCRIPTION
NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1
NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1

INCIDC	CNDPOS	INCIDW	WNGPOS
3.000	2.000	3.000	1.000
15.000	2.000	3.000	1.000

REFERENCE INFORMATION		
SREF	1.3550	SQ. FT.
LREF	41.4360	INCHES
BREF	41.4360	INCHES
XMRP	31.1400	INCHES
YMRP	0.0000	INCHES
ZMRP	0.2250	INCHES
SCALE	1.5000	PERCNT

MACH 0.378

LMSC/MSFC BOOSTER STUDY, LATERAL CHARACTERISTICS, NSRDC 3110, ALPHA = 0 DEGREES



DATA SET SYMBOL
(RN210S) ○
(RN2110) △

CONFIGURATION DESCRIPTION
NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1
NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1

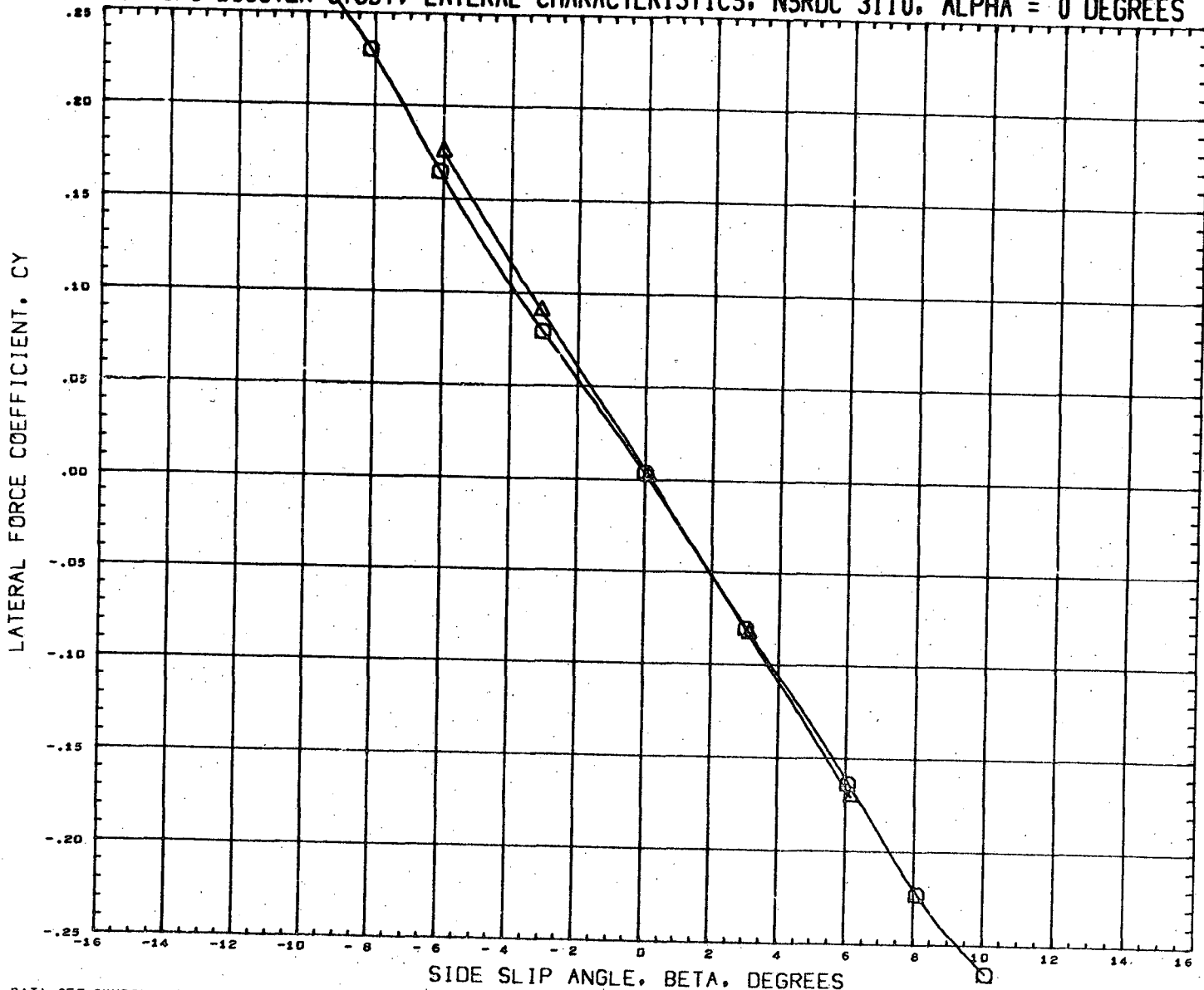
INCIDC	CNDPOS	INCIDW	WNGFOS
3.000	2.000	3.000	1.000
15.000	2.000	3.000	1.000

REFERENCE INFORMATION

SREF	1.3550	SQ. FT.
LREF	41.4360	INCHES
BREF	41.4360	INCHES
XMRF	31.1400	INCHES
YMRF	0.0000	INCHES
ZMRF	0.2250	INCHES
SCALE	1.5000	PERCENT

MACH 0.378

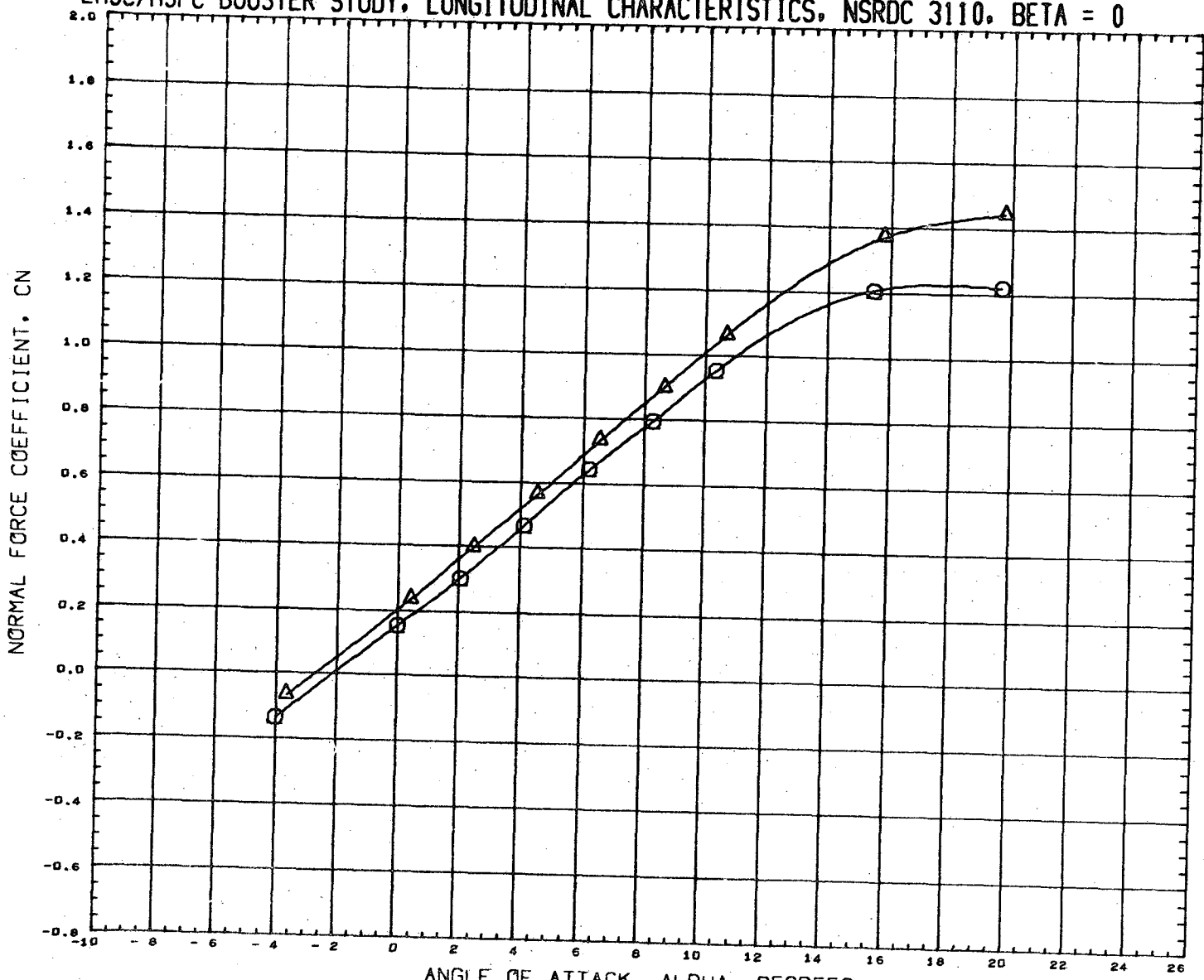
LMSC/MSFC BOOSTER STUDY, LATERAL CHARACTERISTICS, NSRDC 3110, ALPHA = 0 DEGREES



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2106)	NSRDC-3110,MSFC/LMSC BOOSTER B1C1F1W1V1	3.000	2.000	3.000	1.000	SREF 1.3550 SQ.FT.
(RN2110)	NSRDC-3110,MSFC/LMSC BOOSTER B1C1F1W1V1	15.000	2.000	3.000	1.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCNT

MACH 0.378

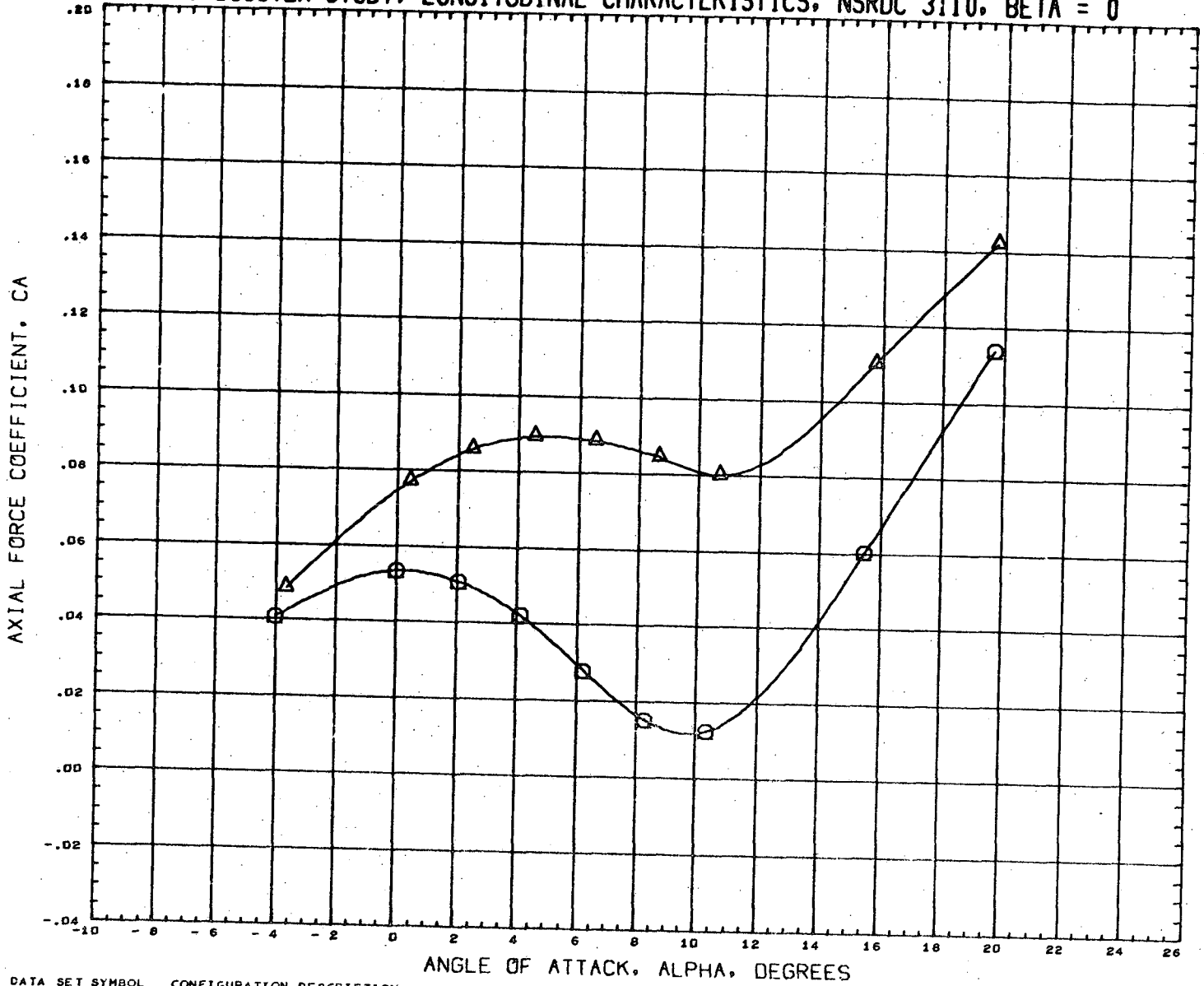
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2113)	NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1	3.000	1.000	3.000	2.000	SREF 1.3550 SQ.FT.
(RN2117)	NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1	15.000	1.000	3.000	2.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRF 31.1400 INCHES
						YMRF 0.0000 INCHES
						ZMRF 0.2250 INCHES
						SCALE 1.5000 PERCENT

MACH 0.380

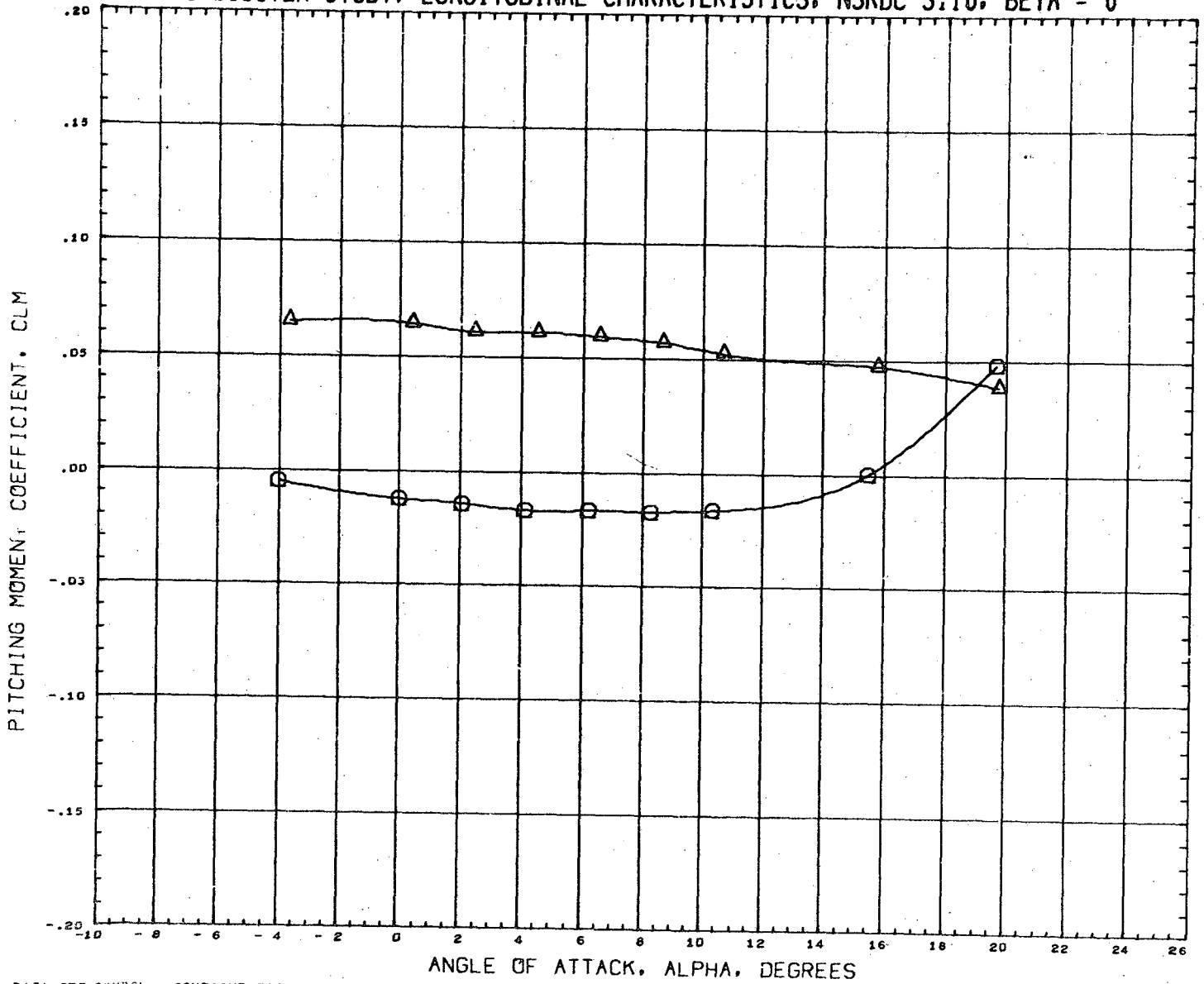
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2113)	NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1	3.000	1.000	3.000	2.000	SREF 1.3550 SQ. FT.
(RN2117)	NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1	15.000	1.000	3.000	2.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCNT

MACH 0.360

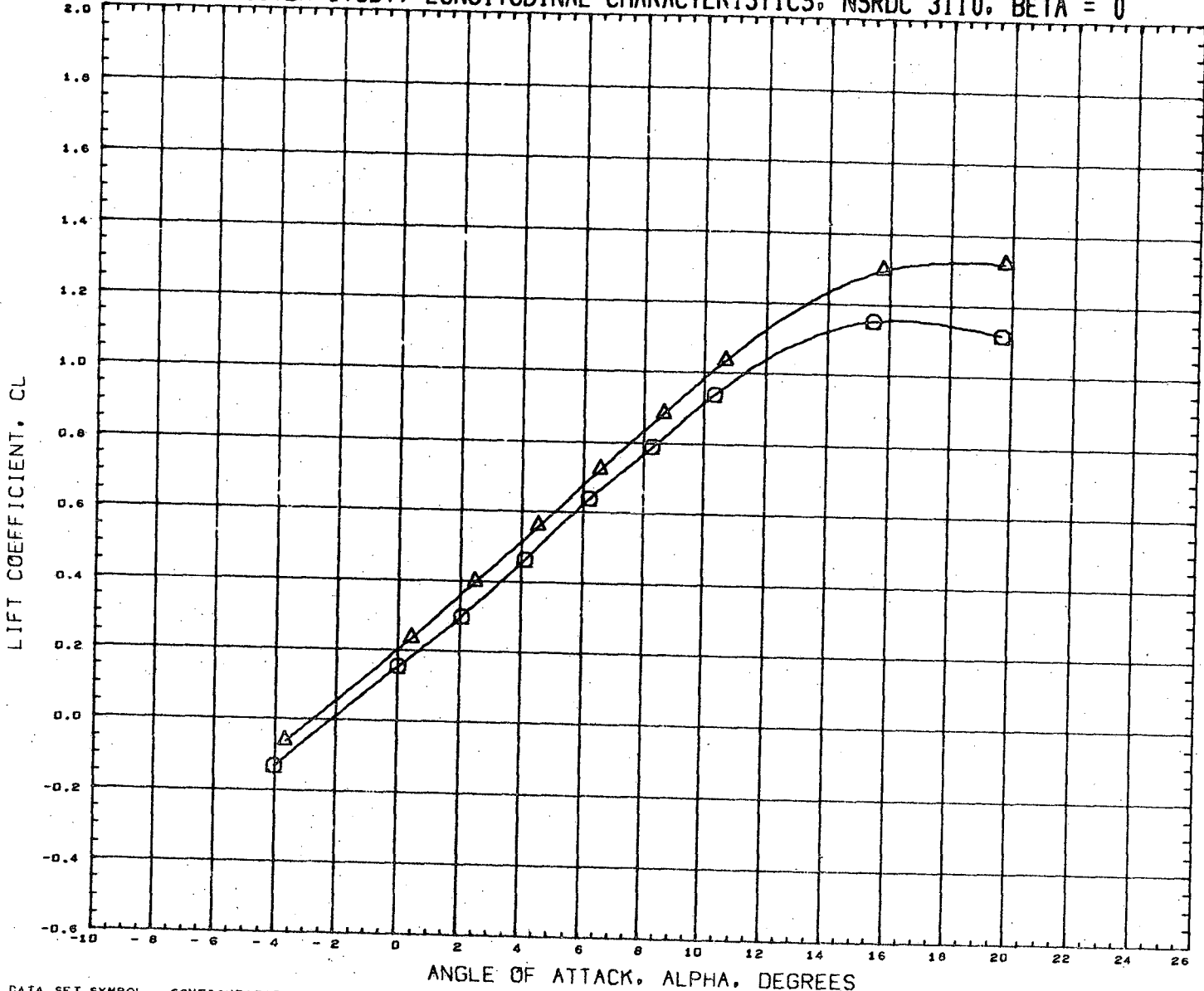
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2113)	NSRDC-3110,MSFC/LMSC BOOSTER B1C1F1W1V1	3.000	1.000	3.000	2.000	SREF 1.3550 SQ.FT.
(RN2117)	NSRDC-3110,MSFC/LMSC BOOSTER B1C1F1W1V1	15.000	1.000	3.000	2.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCNT

MACH 0.380

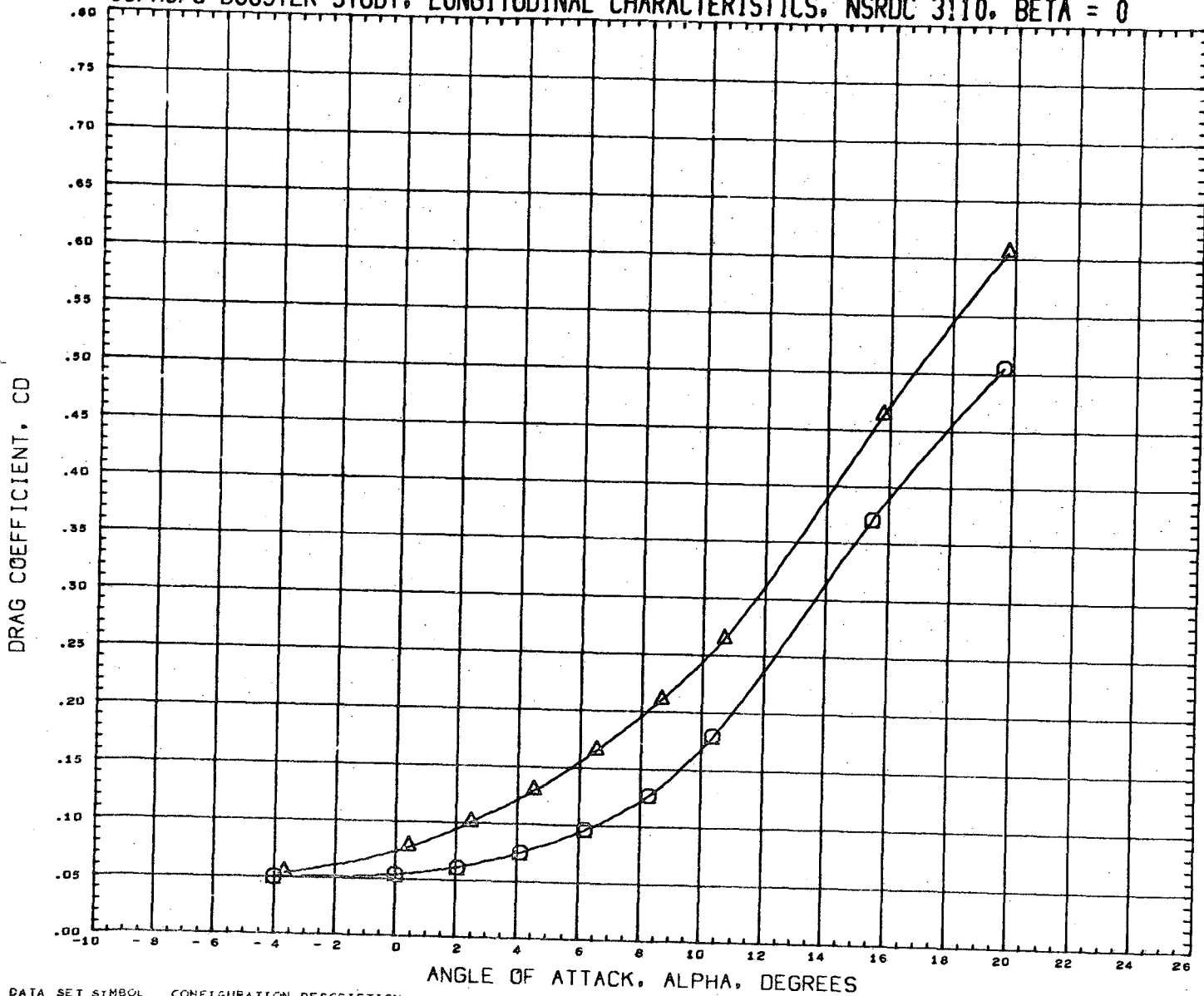
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2113)	NSRDC-3110,MSFC/LMSC BOOSTER B1C1F1W1V1	3.000	1.000	3.000	2.000	SREF 1.3550 SQ.FT.
(RN2117)	NSRDC-3110,MSFC/LMSC BOOSTER B1C1F1W1V1	15.000	1.000	3.000	2.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCENT

MACH 0.380

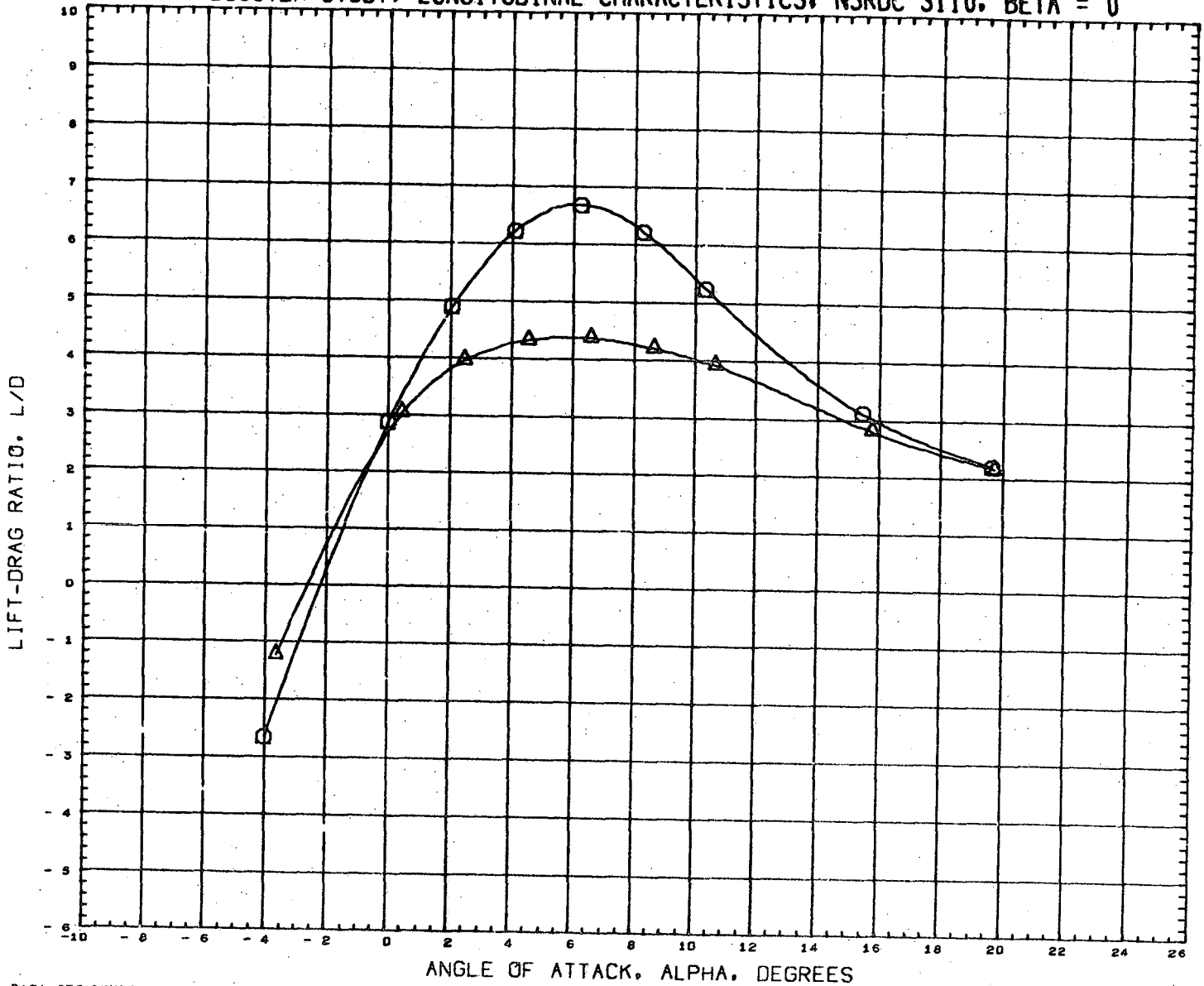
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGFOS	REFERENCE INFORMATION
(RN2113)	NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1	3.000	1.000	3.000	2.000	SREF 1.3550 SQ. FT.
(RN2117)	NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1	15.000	1.000	3.000	2.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCENT

MACH 0.380

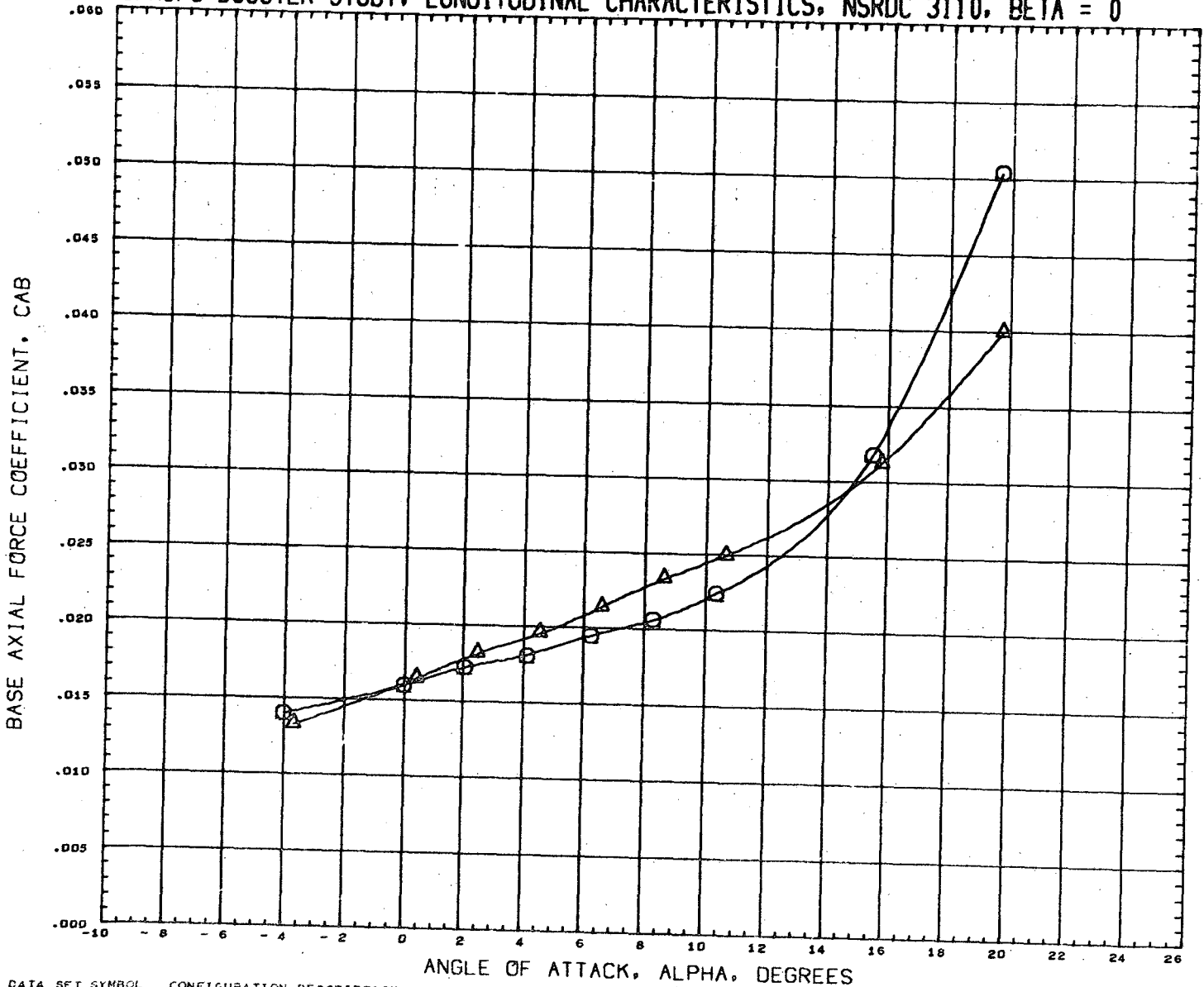
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2113)	NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1	3.000	1.000	3.000	2.000	SREF 1.3550 SQ. FT.
(RN2117)	NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1	15.000	1.000	3.000	2.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCENT

MACH 0.380

LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



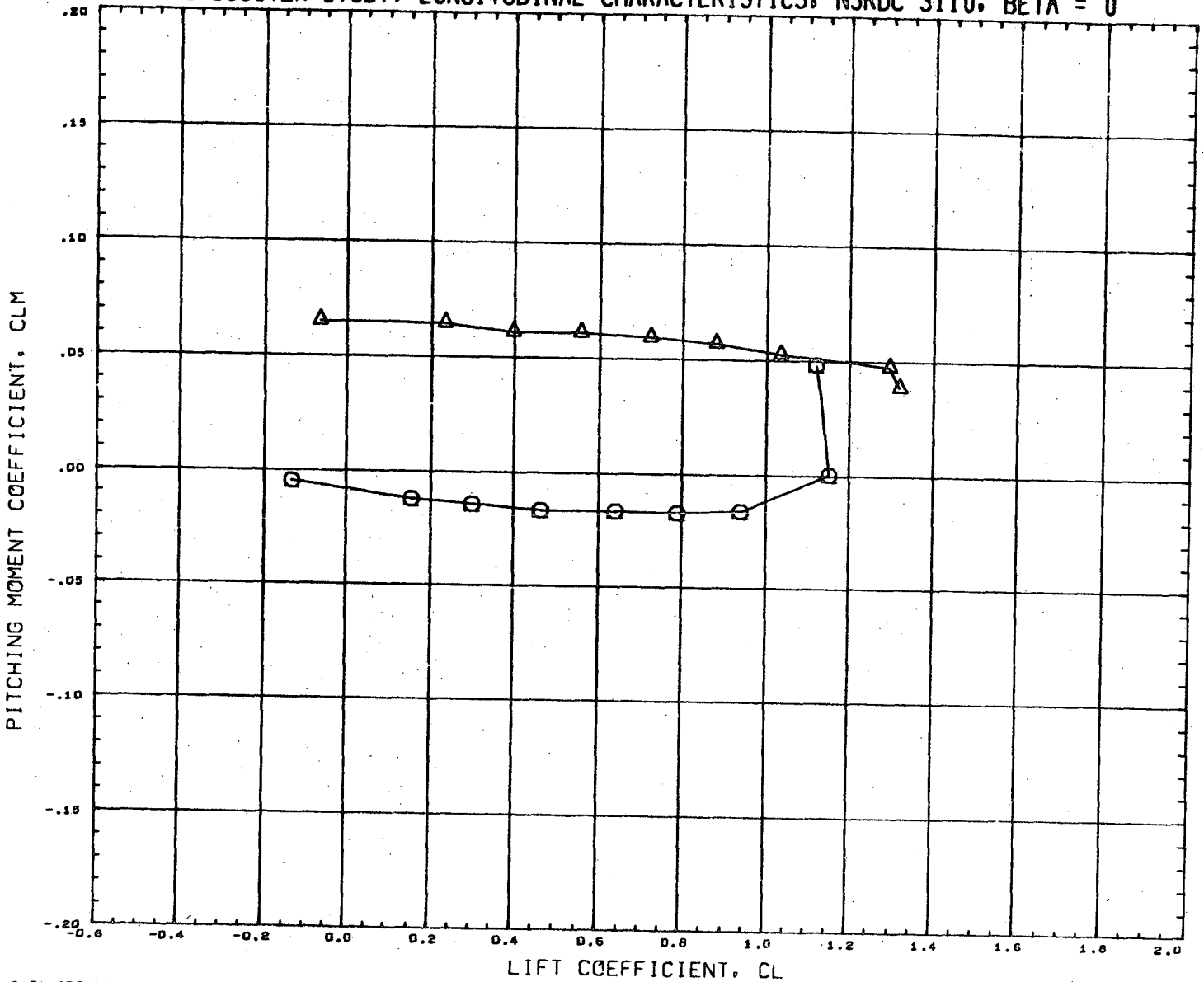
DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(RN2113) ○	NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1
(RN2117) △	NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1

INCIDC	CNDPOS	INCIDW	WNGPOS
3.000	1.000	3.000	2.000
15.000	1.000	3.000	2.000

REFERENCE INFORMATION		
SREF	1.3550	SQ. FT.
LREF	41.4360	INCHES
BREF	41.4360	INCHES
XMRP	31.1400	INCHES
YMRP	0.0000	INCHES
ZMRP	0.2250	INCHES
SCALE	1.5000	PERCENT

MACH 0.380

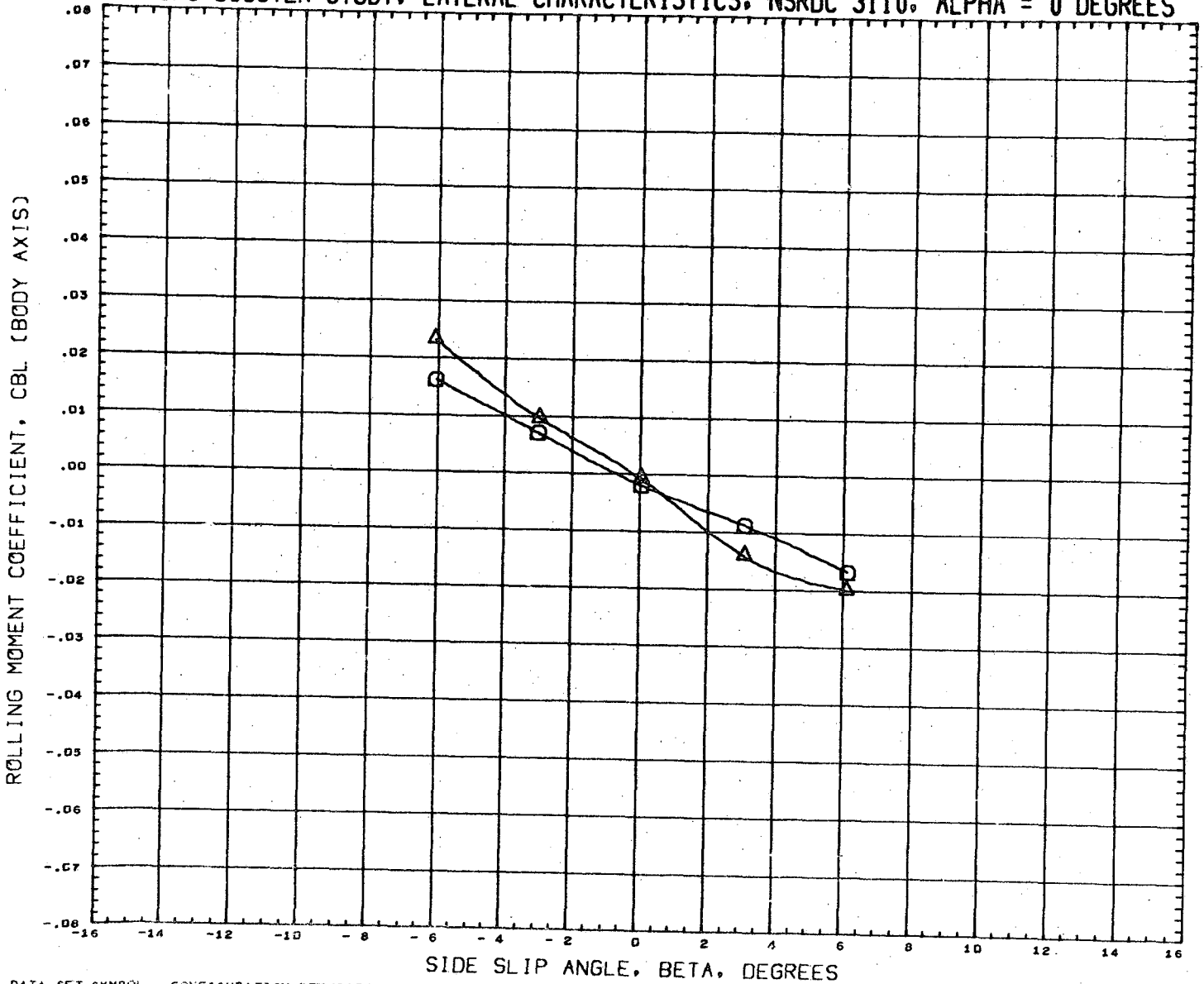
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2113)	NSRDC-3110,MSFC/LMSC BOOSTER B1C1F1W1V1	3.000	1.000	3.000	2.000	SREF 1.3550 SQ.FT.
(RN2117)	NSRDC-3110,MSFC/LMSC BOOSTER B1C1F1W1V1	15.000	1.000	3.000	2.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCENT

MACH 0.380

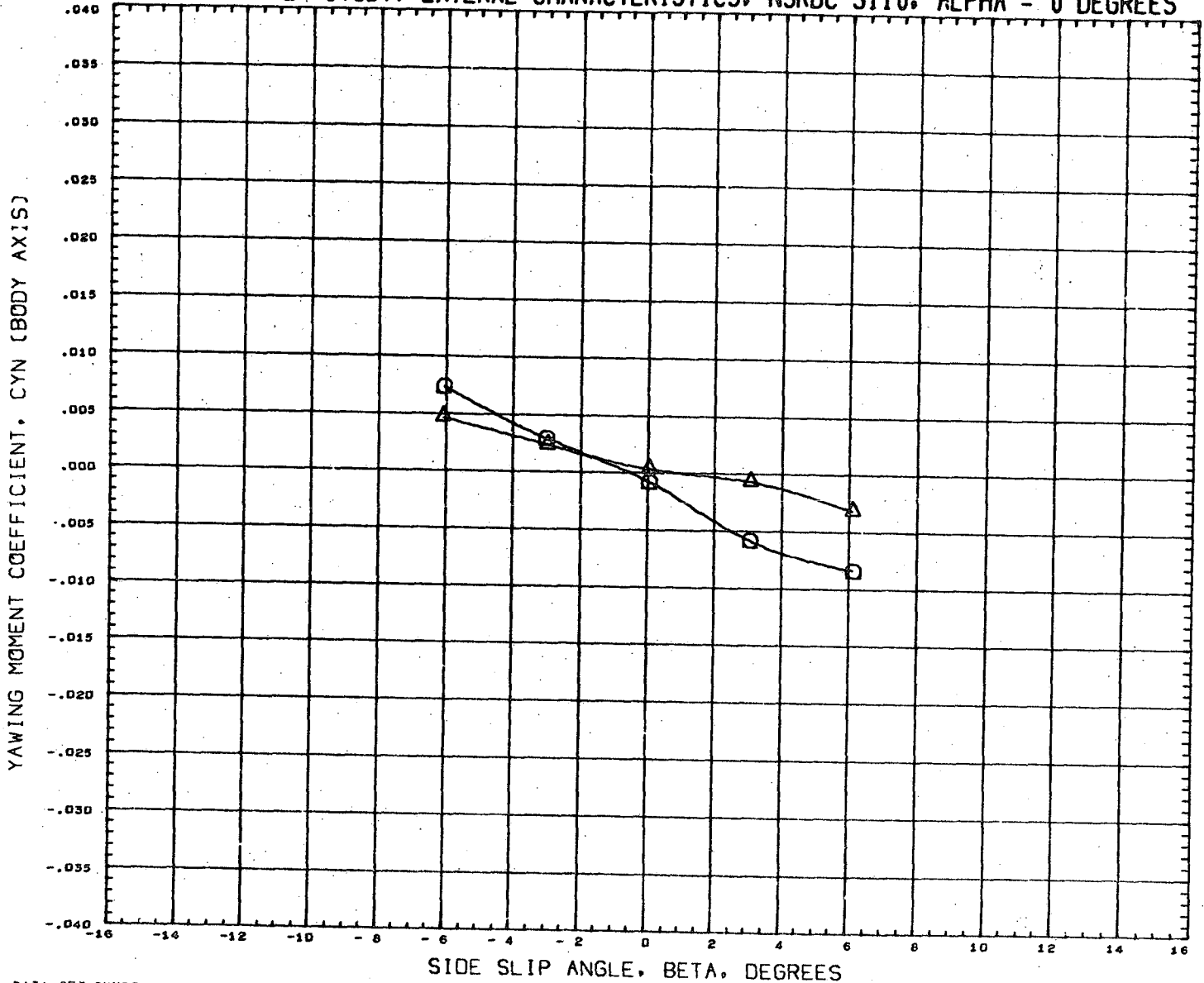
LMSC/MSFC BOOSTER STUDY, LATERAL CHARACTERISTICS, NSRDC 3110, ALPHA = 0 DEGREES



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2114) ○	NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1	3.000	1.000	3.000	2.000	SREF 1.3550 SQ.FT.
(RN2118) △	NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1	15.000	1.000	3.000	2.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCENT

MACH 0.381

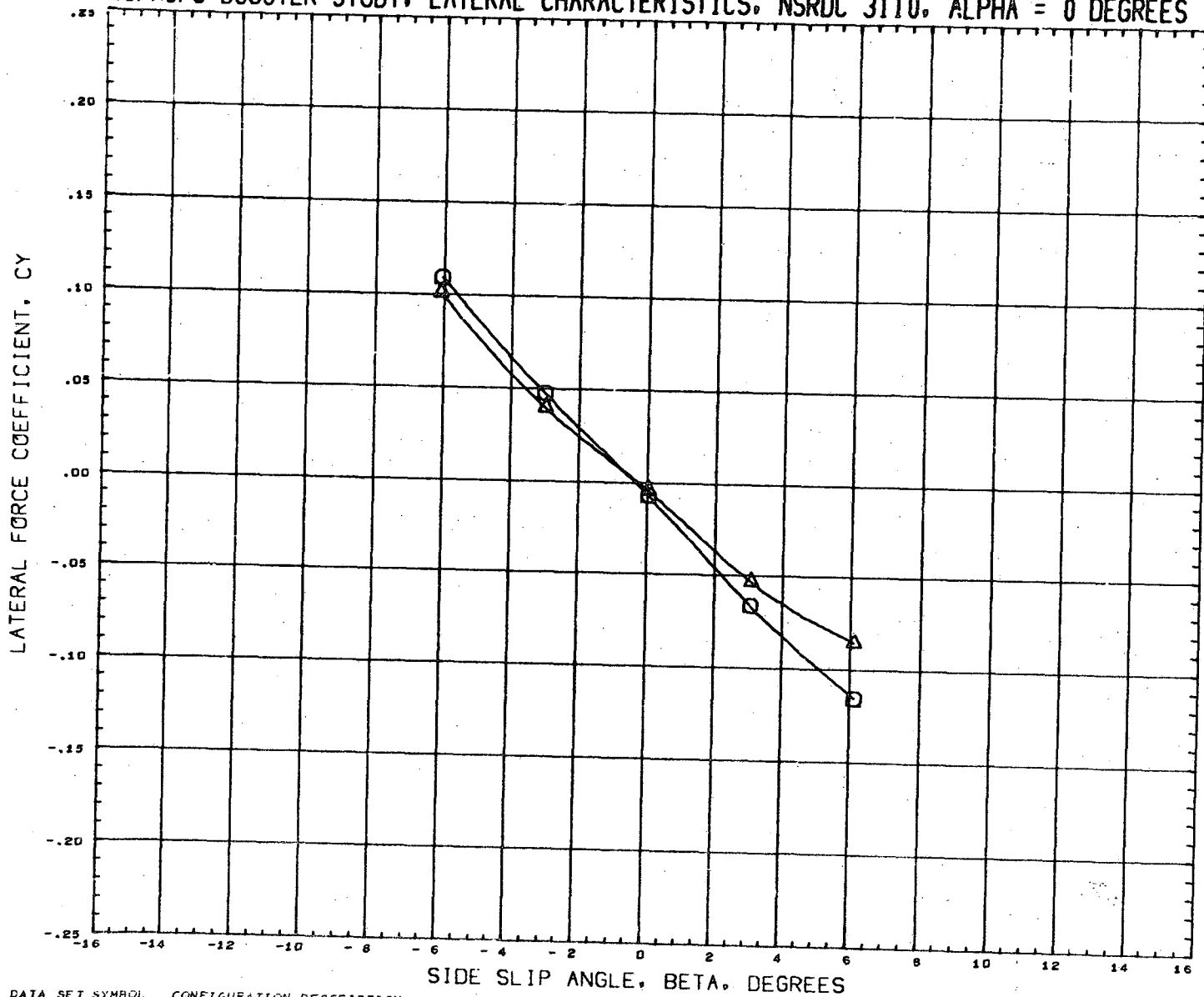
LMSC/MSFC BOOSTER STUDY. LATERAL CHARACTERISTICS, NSRDC 3110, ALPHA = 0 DEGREES



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2114)	NSRDC-3110,MSFC/LMSC BOOSTER B1C1F1W1V1	3.000	1.000	3.000	2.000	SREF 1.3550 SQ.FT.
(RN2118)	NSRDC-3110,MSFC/LMSC BOOSTER B1C1F1W1V1	15.000	1.000	3.000	2.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCNT

MACH 0.381

LMSC/MSFC BOOSTER STUDY, LATERAL CHARACTERISTICS, NSRDC 3110, ALPHA = 0 DEGREES



DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(RN2114) ○	NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1
(RN2115) △	NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1

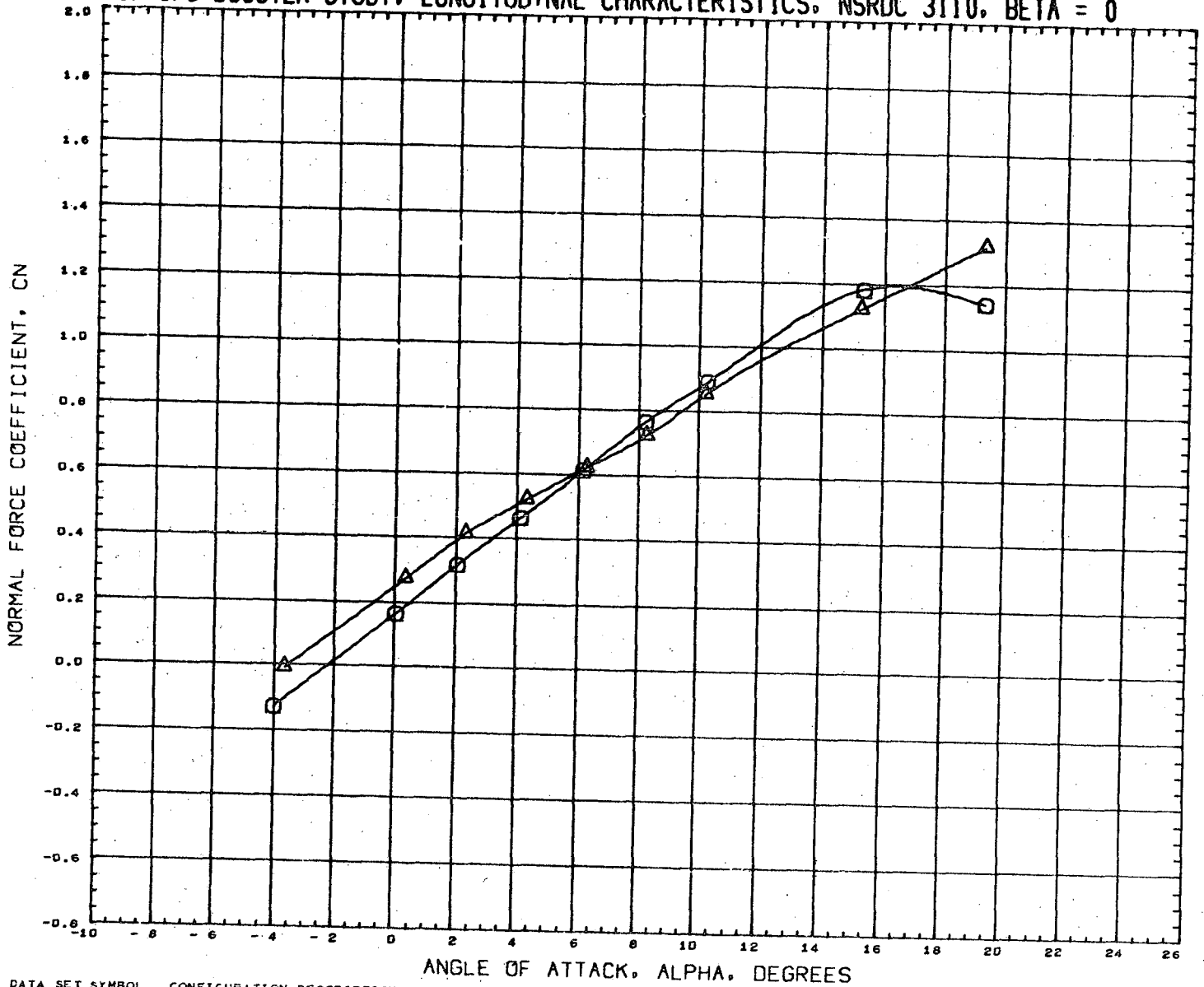
INCIDC	CNDPOS	INCIDW	WNGPOS
3.000	1.000	3.000	2.000
15.000	1.000	3.000	2.000

REFERENCE INFORMATION

SREF	1.3550	SQ. FT.
LREF	41.4360	INCHES
BREF	41.4360	INCHES
XMRP	31.1400	INCHES
YMRP	0.0000	INCHES
ZMRP	0.2250	INCHES
SCALE	1.5000	PERCENT

MACH 0.381

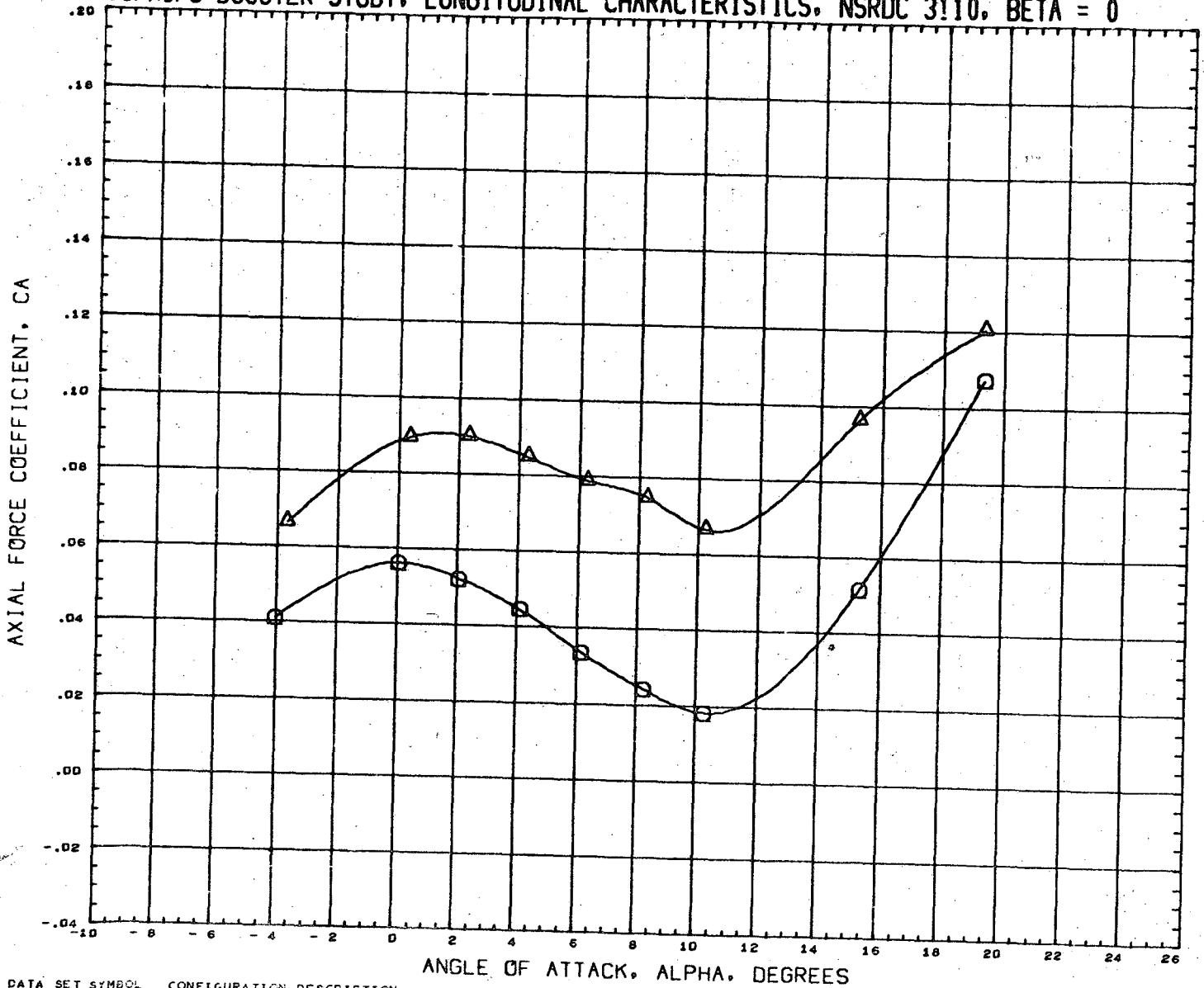
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION	
(RN2121)	NSRDC-3110,MSFC/LMSC BOOSTER B1C1F1W1V1	3.000	2.000	3.000	2.000	SREF	1.3550 SQ.FT.
(RN2125)	NSRDC-3110,MSFC/LMSC BOOSTER B1C1F1W1V1	15.000	2.000	3.000	2.000	LREF	41.4360 INCHES
						BREF	41.4360 INCHES
						XMRP	31.1400 INCHES
						YMRP	0.0000 INCHES
						ZMRP	0.2250 INCHES
						SCALE	1.5000 PERCNT

MACH 0.302

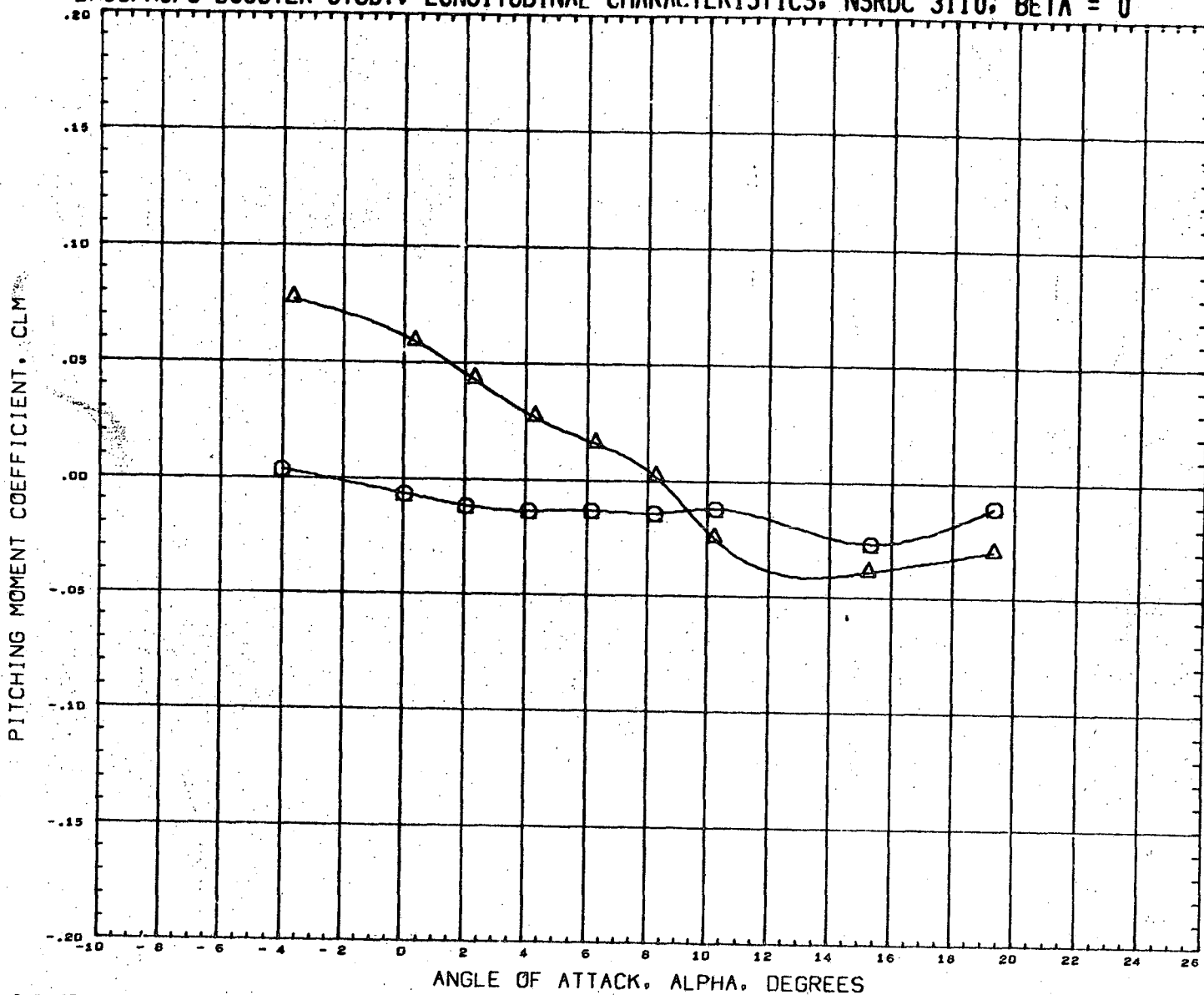
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION	
(RN2121) ○	NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1	3.000	2.000	3.000	2.000	SREF	1.3500 SQ. FT.
(RN2125) △	NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1	15.000	2.000	3.000	2.000	LREF	41.4360 INCHES
						BREF	41.4360 INCHES
						XMRP	31.1400 INCHES
						YMRP	0.0000 INCHES
						ZMRP	0.2250 INCHES
						SCALE	1.5000 PERCENT

MACH 0.382

LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL
(RN2121) Δ
(RN2125)

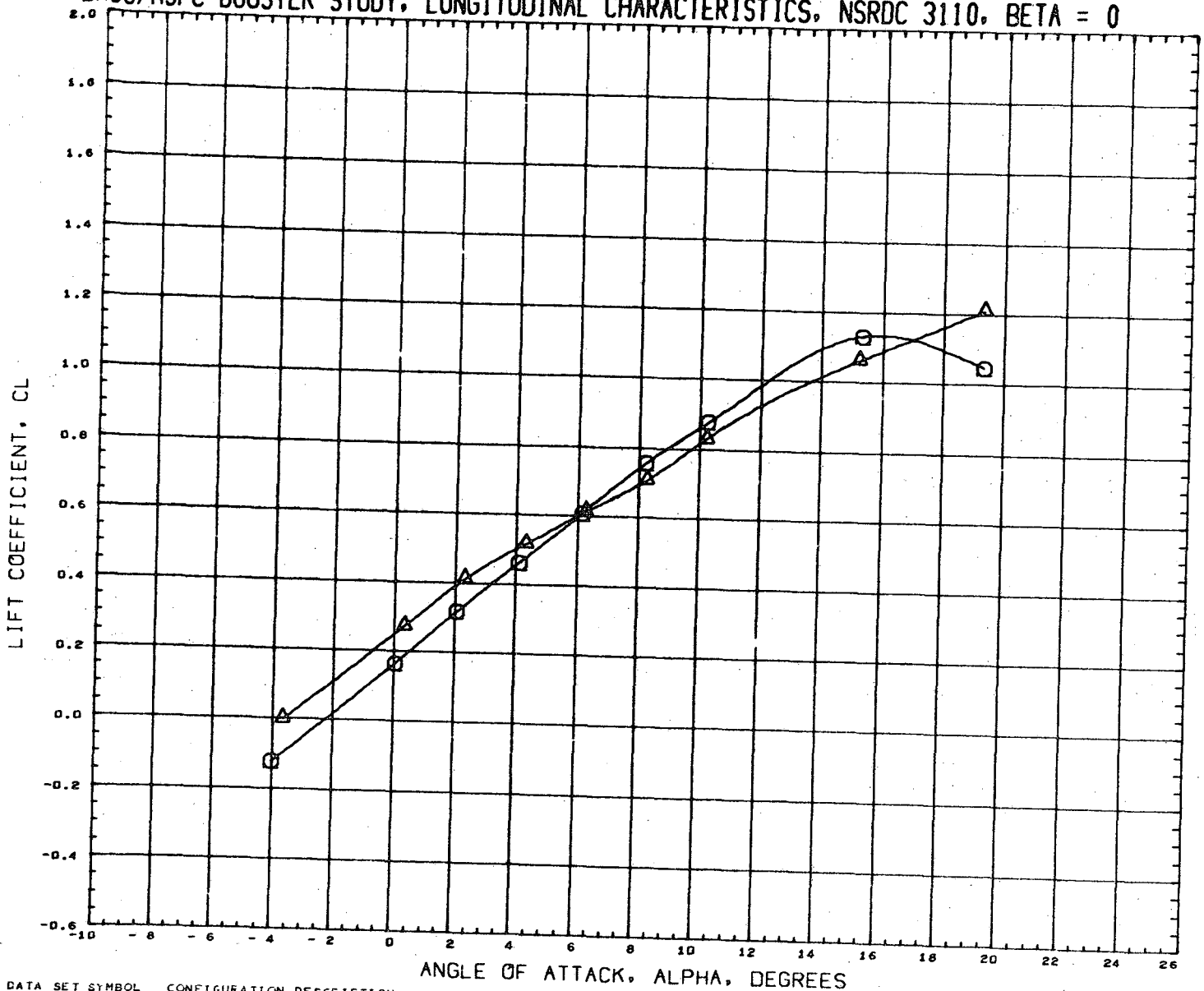
CONFIGURATION DESCRIPTION
NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1
NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1

INCIDC	CNDPOS	INCIDW	WNGPOS
3.000	2.000	3.000	2.000
15.000	2.000	3.000	2.000

REFERENCE INFORMATION		
SREF	1.3550	SQ. FT.
LREF	41.4360	INCHES
BREF	41.4360	INCHES
XMRP	31.1400	INCHES
YMRP	0.0000	INCHES
ZMRP	0.2250	INCHES
SCALE	1.5000	PERCENT

MACH 0.382

LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL
 (RN2121) ○
 (RN2125) △

CONFIGURATION DESCRIPTION
 NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1
 NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1

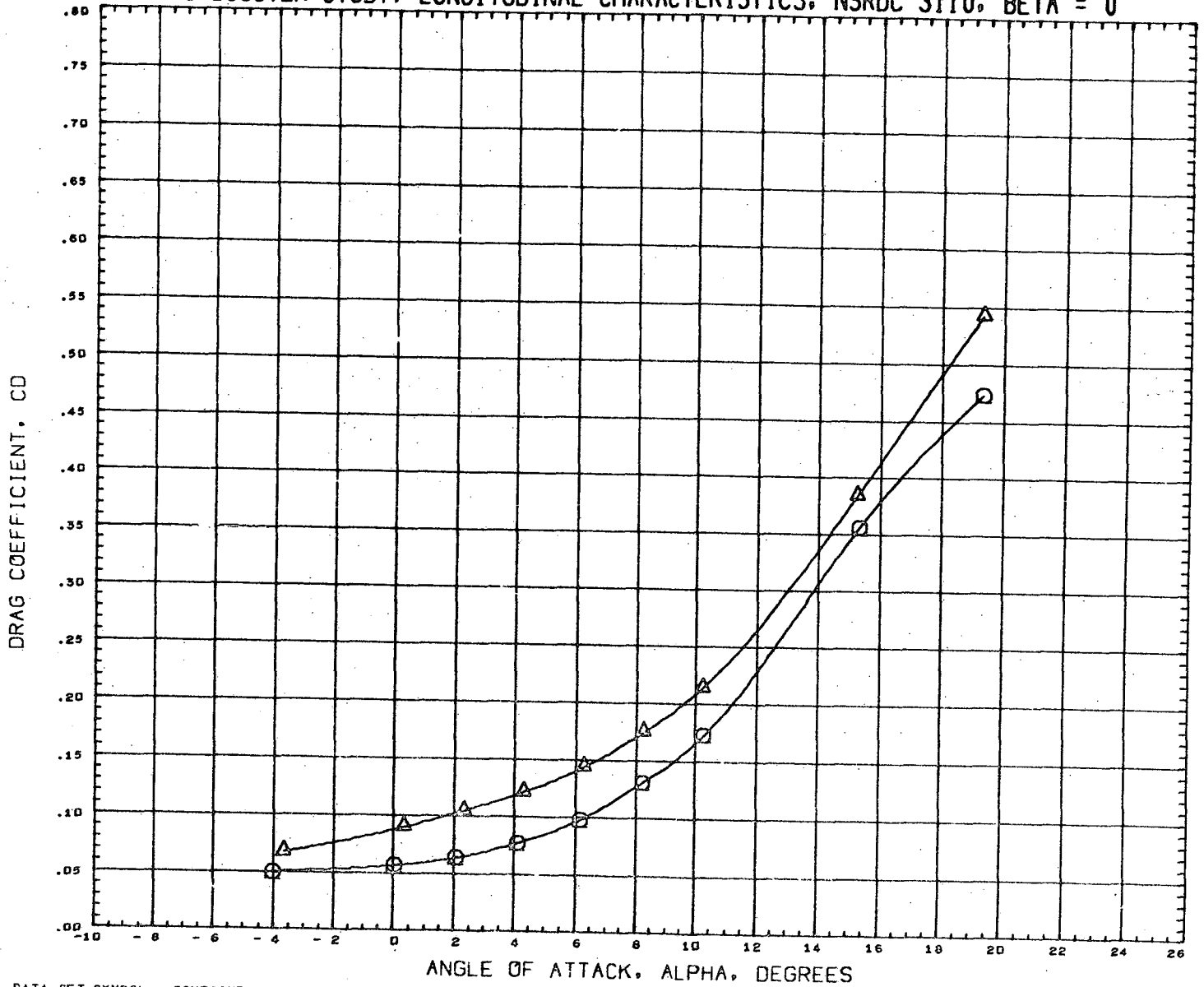
INCIDC	CNDPOS	INCIDW	WNGPOS
3.000	2.000	3.000	2.000
15.000	2.000	3.000	2.000

REFERENCE INFORMATION

SREF	1.3550	SQ. FT.
LREF	41.4360	INCHES
BREF	41.4360	INCHES
XMRP	31.1400	INCHES
YMRP	0.0000	INCHES
ZMRP	0.2250	INCHES
SCALE	1.5000	PERCENT

MACH 0.382

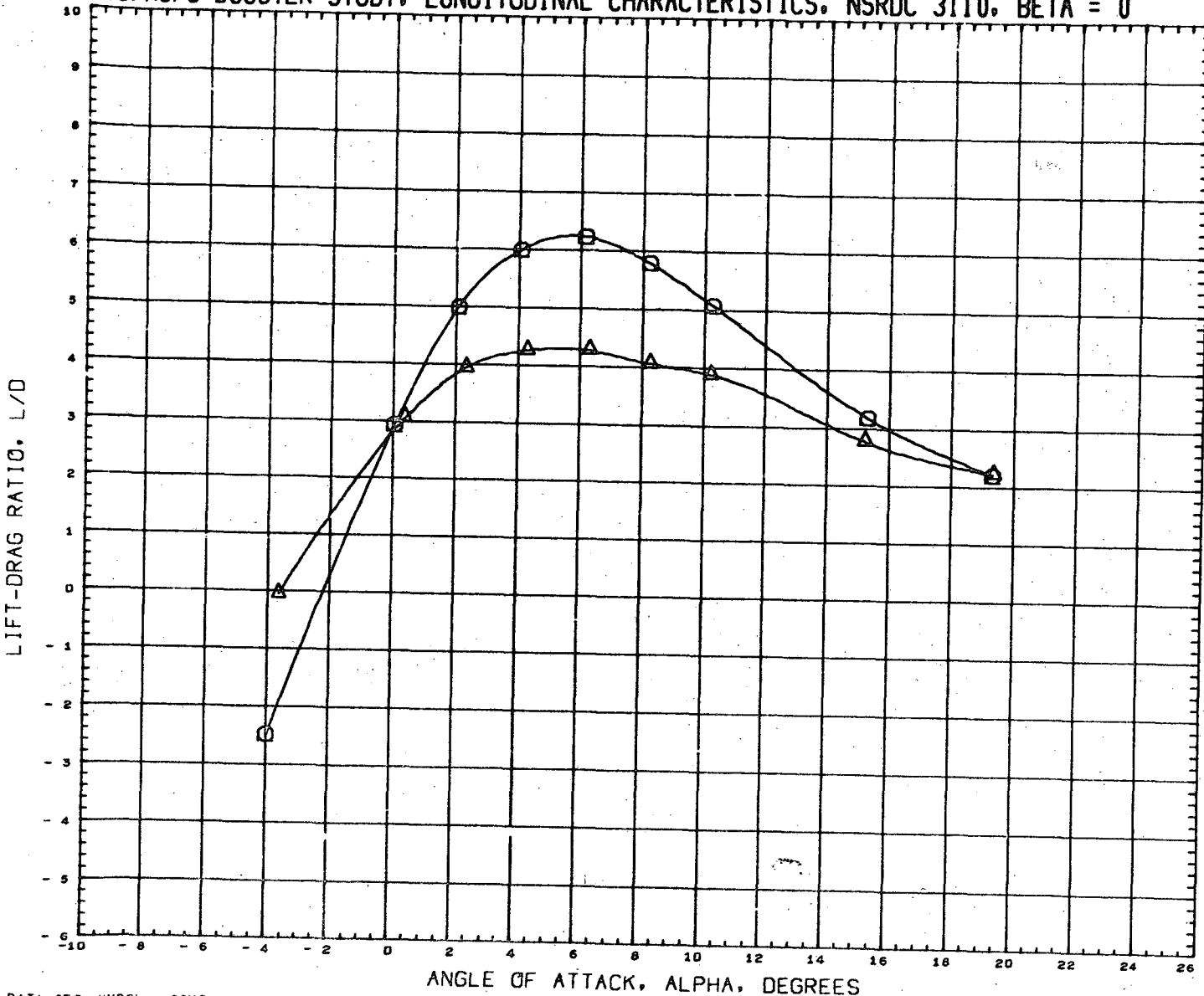
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2121)	NSRDC-3110,MSFC/LMSC BOOSTER B1C1F1W1V1	3.000	2.000	3.000	2.000	SREF 1.3550 SQ.FT.
(RN2125)	NSRDC-3110,MSFC/LMSC BOOSTER B1C1F1W1V1	15.000	2.000	3.000	2.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCENT

MACH 0.382

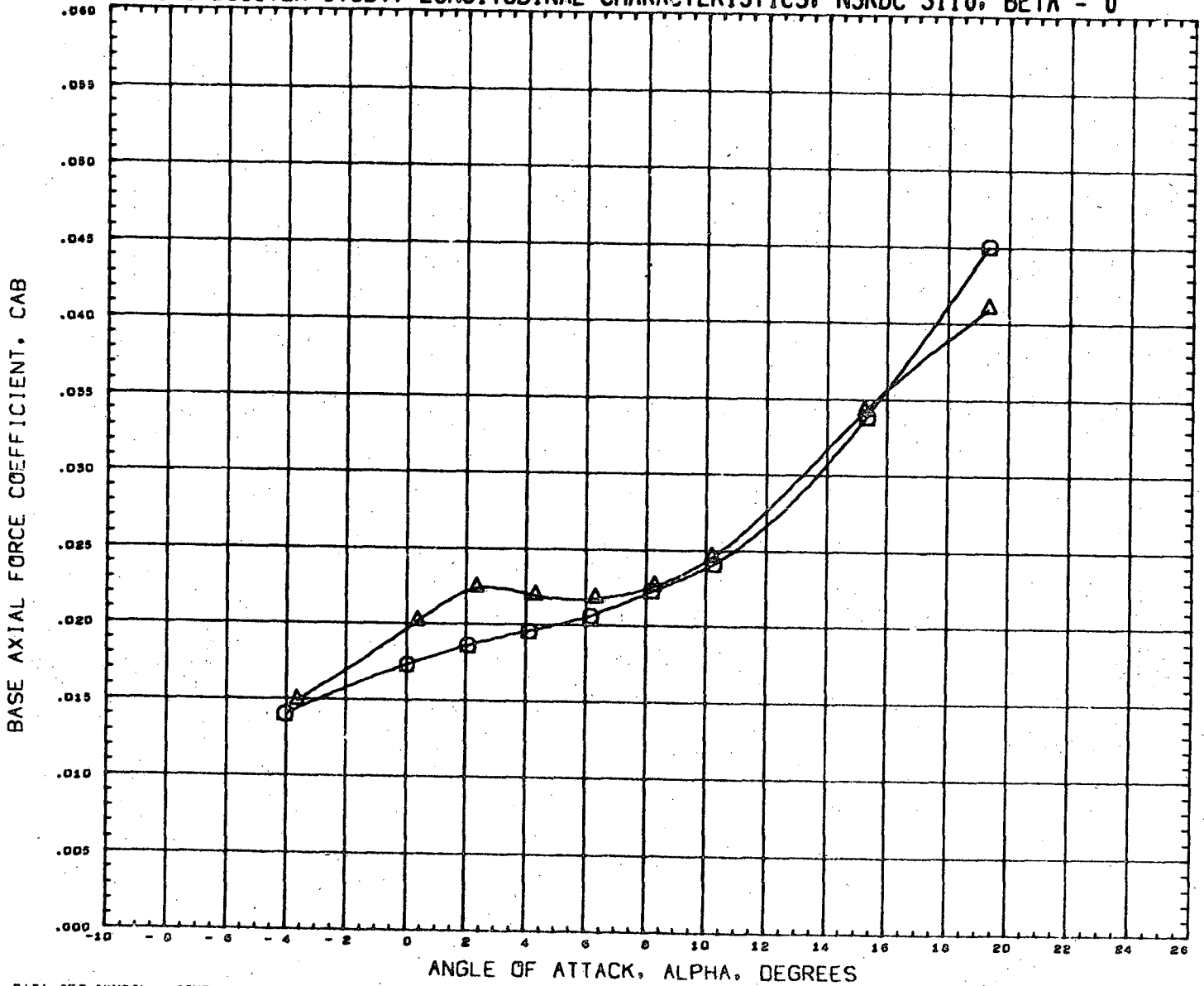
LMSC/MSFC BOOSTER STUDY. LONGITUDINAL CHARACTERISTICS. NSRDC 3110. BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2121)	NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1	3.000	2.000	3.000	2.000	SREF 1.3550 SQ.FT.
(RN2125)	NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1	15.000	2.000	3.000	2.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRP 31.1400 INCHES
						YMRP 0.0000 INCHES
						ZMRP 0.2250 INCHES
						SCALE 1.5000 PERCNT

MACH 0.382

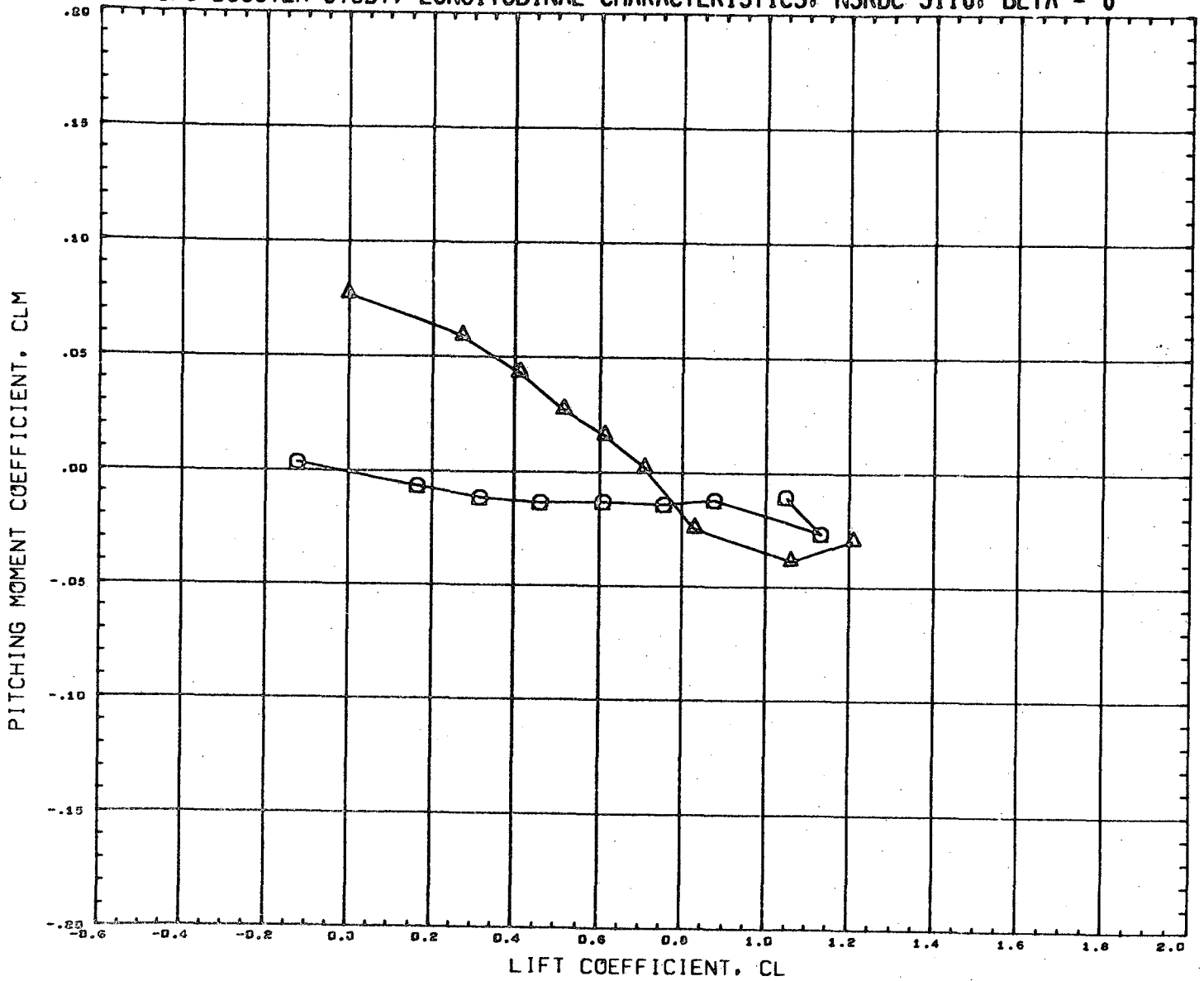
LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGPOS	REFERENCE INFORMATION
(RN2121)	NSRDC-3110,MSFC/LMSC BOOSTER B1C1F1W1V1	3.000	2.000	3.000	2.000	SREF 1.3550 SQ.FT.
(RN2125)	NSRDC-3110,MSFC/LMSC BOOSTER B1C1F1W1V1	15.000	2.000	3.000	2.000	LREF 41.4360 INCHES
						BREF 41.4360 INCHES
						XMRF 31.1400 INCHES
						YMRF 0.0000 INCHES
						ZMRF 0.2250 INCHES
						SCALE 1.5000 PERCENT

MACH 0.362

LMSC/MSFC BOOSTER STUDY, LONGITUDINAL CHARACTERISTICS, NSRDC 3110, BETA = 0



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	INCIDC	CNDPOS	INCIDW	WNGFOS	REFERENCE INFORMATION
(RN2121)	NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1	3.000	2.000	3.000	2.000	SREF 1.3550 SQ. FT. LREF 41.4360 INCHES
(RN2125)	NSRDC-3110, MSFC/LMSC BOOSTER B1C1F1W1V1	15.000	2.000	3.000	2.000	BREF 41.4360 INCHES XMRP 31.1400 INCHES YMRP 0.00L INCHES ZMRP 0.2250 INCHES SCALE 1.5000 PERCENT

MACH 0.382