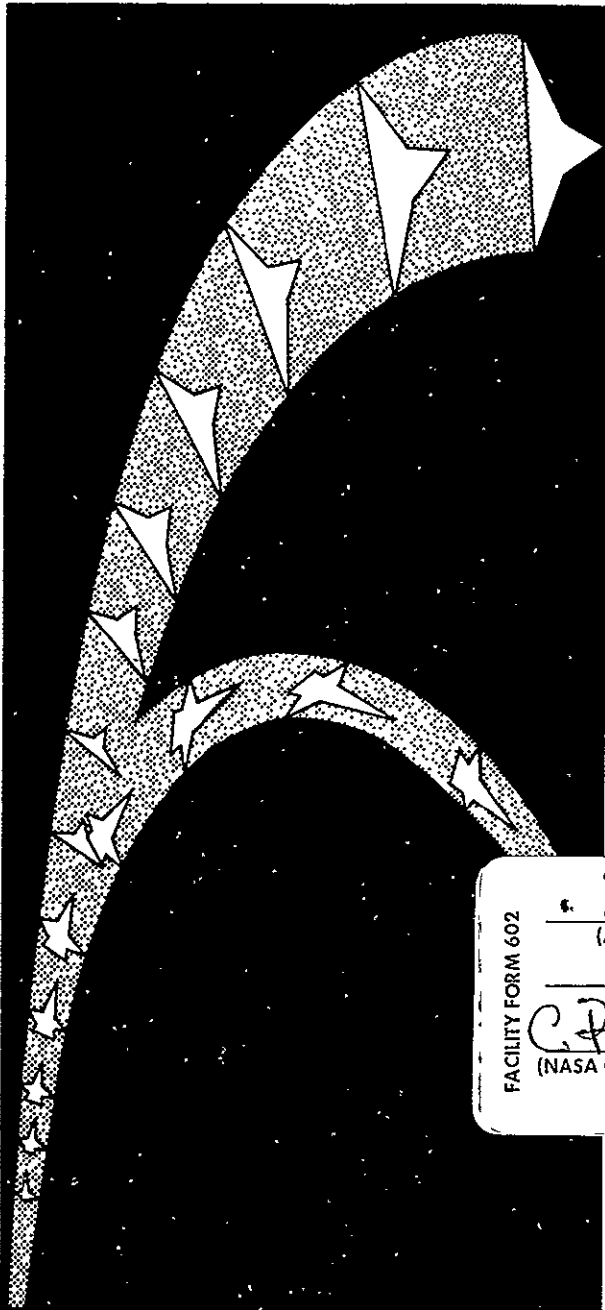


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SPACE SHUTTLE

STATIC STABILITY AND CONTROL INVESTIGATION OF THE NAR DELTA WING (134D) AND STRAIGHT WING (130G) SPACE SHUTTLE ORBITERS

By

E.C. Allen, NAR

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NASA-MSFC WIND TUNNEL TEST RESULTS DATA REPORT

SADSAC SPACE SHUTTLE
AEROTHERMODYNAMIC
DATA MANAGEMENT SYSTEM

CONTRACT NAS8-4016
AMENDMENT 130
DRL 184-58
MARSHALL SPACE FLIGHT CENTER



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SADSAC/SPACE SHUTTLE
WIND TUNNEL TEST DATA REPORT

CONFIGURATION: NAR Delta Wing (134D) and Straight Wing (130G) Space Shuttle Orbiters

TEST PURPOSE: Static Stability and Control Investigation

TEST FACILITY: NASA-MSFC 14 Inch Transonic Wind Tunnel

TESTING AGENCY: MSFC and North American Rockwell

TEST NO. & DATE: MSFC 478; Jan. 14-28; Feb. 3-11, 1971

MODEL SCALE: 0.0035

MACH RANGE: 0.6 to 4.96

FACILITY COORDINATOR: J. Weaver (205-453-2512)

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ABSTRACT

Experimental aerodynamic investigations were made on 0.0035 scale models of the North American Rockwell Delta Wing (134D) and Straight Wing (130G) Space Shuttle Orbiters in the Marshall Space Flight Center 14 inch Transonic Wind Tunnel during the periods January 14-28 and February 3-11, 1971. Tests were conducted over a Mach number range from 0.6 to 4.96 at Reynolds numbers from 4.4 to 8.9×10^6 per unit length. The test primary objectives were control evaluations, therefore the straight wing horizontal tail was deflected symmetrically over a range from -50° to $+30^\circ$ and unsymmetrically (aileron control about some elevator setting) at selected positions. Additionally the straight wing horizontal tail was set at zero incidence and symmetrical elevator deflections were tested over the same -50° to 30° range. The above conditions were evaluated at 0° sideslip angle over an angle of attack range from 40° to 60° . The delta wing orbiter control surfaces were evaluated over an angle of attack range from 0° to 60° at zero degrees sideslip and over an angle of sideslip range from -4° to 10° at angles of attack of 0° , 15° , 30° and 45° . Control surface deflection were; elevator 0 to 45° , aileron 0° , -20° , $+30^\circ$, drag brake 0° & 15° , and rudder 0, -10° , -20° .

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SUMMARY

Experimental aerodynamic investigations were made on 0.0035 scale models of the North American Rockwell Delta Wing (134D) and Straight Wing (130G) Space Shuttle Orbiters in the Marshall Space Flight Center 14 inch Trisonic Wind Tunnel during the periods January 14-28 and February 3-11, 1971. Tests were conducted over a Mach number range from 0.6 to 4.96 at Reynolds numbers from 4.4 to 8.9×10^6 per unit length. The test primary objectives were control evaluations, therefore the straight wing horizontal tail was deflected symmetrically over a range from -50° to $+30^\circ$ and unsymmetrically (aileron control about some elevator setting) at selected positions. Additionally the straight wing horizontal tail was set at zero incidence and symmetrical elevator deflections were tested over the same -50° to 30° range. The above conditions were evaluated at 0° sideslip angle over an angle of attack range from 40° to 60° . The delta wing orbiter control surfaces were evaluated over an angle of attack range from 0° to 60° at zero degrees sideslip and over an angle of sideslip range from -4° to 10° at angles of attack of 0° , 15° , 30° and 45° . Control surface deflection were; elevator 0 to 45° , aileron 0° , -20° , $+30^\circ$, drag brake 0° & 15° , and rudder 0, -10° , -20° .

Detailed descriptions of the model components are contained in the section titled Configurations Investigated.

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.

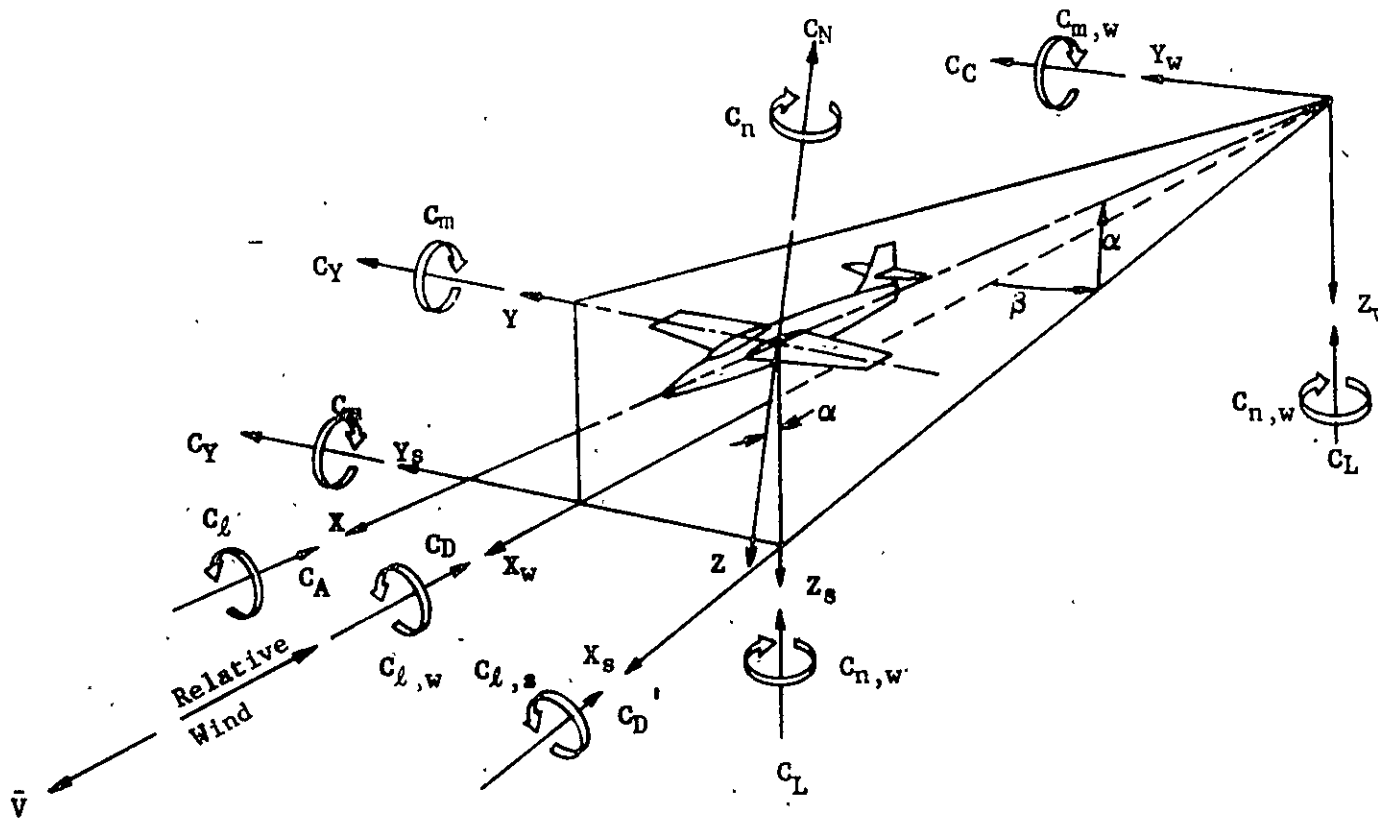


Figure 1. Axis systems, showing direction and sense of force and moment coefficients, angle of attack, and sideslip angle

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	-	-

3

SUMMARY OF SADSAC NOMENCLATURE - AERODYNAMIC FORCE AND MOMENT COEFFICIENTS

CONFIGURATIONS INVESTIGATED

NOMENCLATURE - Straight Wing Orbiter

- B6 Basic 9992-130C body with attach points for a centerline vertical, horizontal, and low-mount wing. Also includes a canopy on the upper surface aft of the nose.
- W10 9992-130C straight wing located in the 9992-130G position on body B6.
- H12 9992-130C straight wing orbiter horizontal stabilizer used with body B6. The surface is located on the vehicle FRP, with the pivot axis at Fus. Sta. 1917.87 in.
- H16 9992-130C straight wing orbiter alternate horizontal stabilizer used with body B6. The surface is located below the vehicle FRP.
- E14 Elevator used with H16.

NOMENCLATURE - Delta Wing Orbiter

- B5 9992-134B body. Delta wing orbiter body including a canopy on the upper surface aft of the nose.
- W17 9992-134D delta wing with -5° twist and rounded wing tips. Used with body B5. Wing blends into body.
- E10 Full span, constant chord elevon located on delta wing W17.
- V17 Centerline vertical stabilizer with the 5° (half angle) wedge trailing edge; used with body B5.
- J2 Drag brake - J2 is the deflectable side panels of vertical tail V17 hinged @ 60% element line and extending to the trailing edge.
- X Straight sting extension

Refer to the immediately following pages for dimensional data and drawings on the above components. See the dataset collation sheet for a complete run summary on the configurations tested.

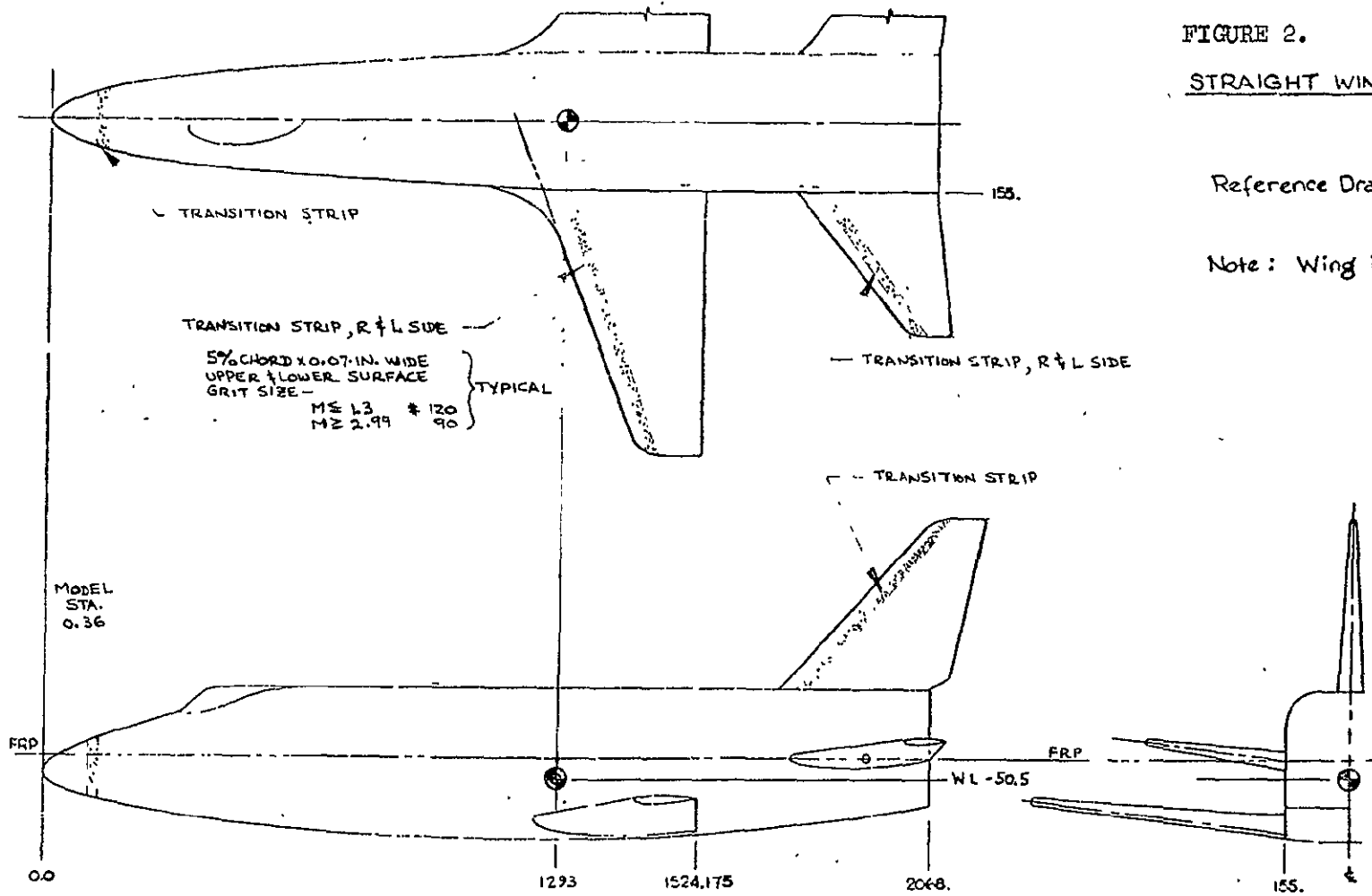


FIGURE 2.
STRAIGHT WING SSV ORBITER

Reference Drawing 9992-130C

Note: Wing is in -130G position

5

MODEL COMPONENT: BODY - B6

GENERAL DESCRIPTION: Basic 9992-130C body. Straight wing orbiter body with attach points for a centerline vertical, horizontal, and low-mount wing. Also included is a canopy on the upper surface aft of the nose. The model scale factor is 0.0035.

DRAWING NUMBER: Lines Dwg. 9992-130C

<u>DIMENSIONS:</u>	<u>FULL-SCALE</u>	<u>MODEL SCALE</u>
Length, in.	<u>2068.00</u>	<u>7.238</u>
Max. Width, in.	<u>310.00</u>	<u>1.086</u>
Max. Depth, in.	<u>340.34</u>	<u>1.191</u>
Fineness Ratio	<u>6.037</u>	<u>6.037</u>
Area		
Max. Cross-Sectional, ft ² (Fus. Sta. 1143.23 in.)	<u>640.03</u>	<u>0.00784</u>
Planform	<u>-</u>	<u>-</u>
Wetted	<u>-</u>	<u>-</u>
Base	<u>-</u>	<u>-</u>

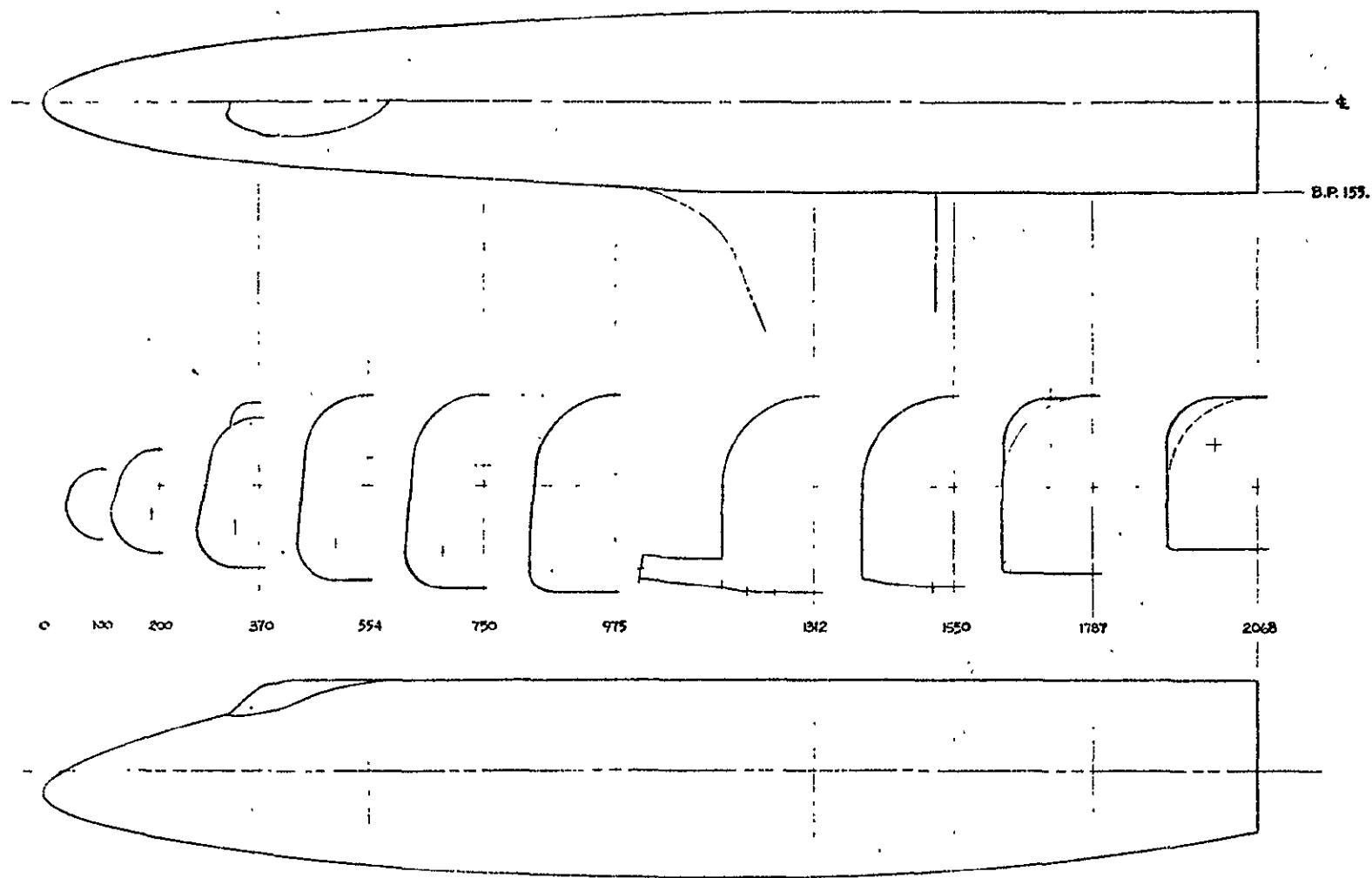


FIGURE 3. BODY B6 9992-130 C CONFIGURATION

MODEL COMPONENT: WING - W10

GENERAL DESCRIPTION: 9992-130C straight wing located in the 9992-130G position on body B6. The total and exposed data do not include the leading edge cuff data which is listed below. The model scale factor is 0.0035.
Wing .25c located at 62% body length aft of nose.

DRAWING NUMBER: Lines Dwg. 9992-130C and 9992-130G

<u>DIMENSIONS:</u>	<u>FULL-SCALE</u>	<u>MODEL SCALE</u>
<u>TOTAL DATA</u>		
Area		
Planform (equiv. true), ft ²	<u>3084.00</u>	<u>0.037779</u>
Wetted		
Span (equivalent), in.	<u>1489.82</u>	<u>5.214</u>
Aspect Ratio	<u>4.961</u>	<u>4.961</u>
Rate of Taper	<u>0.397</u>	<u>0.397</u>
Taper Ratio	<u>0.333</u>	<u>0.333</u>
Diehedral Angle, degrees	<u>7.0</u>	<u>7.0</u>
Incidence Angle, degrees	<u>0.0</u>	<u>0.0</u>
Aerodynamic Twist, degrees (about T.E.)		
Tip In Angle @ B.P. 155.06 in.	<u>4.0</u>	<u>4.0</u>
Garf Angle @ B.P. 745.07 in.	<u>0.0</u>	<u>0.0</u>
Sweep Back Angles, degrees		
Leading Edge	<u>21.672</u>	<u>21.672</u>
Trailing Edge	<u>0.0</u>	<u>0.0</u>
0.25 Element Line	<u>16.596</u>	<u>16.596</u>
Chords:		
Root (Wing Sta. 0.0), in.	<u>447.20</u>	<u>1.565</u>
Tip, (equivalent)(Wing Sta. 750.50 in.), in.	<u>148.97</u>	<u>0.521</u>
MAC, in. (Wing Sta. 312.68 in.), in.	<u>322.95</u>	<u>1.130</u>
Fus. Sta. of .25 MAC, in.	<u>1282.00</u>	<u>4.487</u>
W.P. of .25 MAC, in.	<u>-148.87</u>	<u>-0.521</u>
B.L. of .25 MAC, in.	<u>310.35</u>	<u>1.086</u>
Airfoil Section		
Root	<u>NACA 0012-64</u>	<u>NACA 0012-64</u>
Tip	<u>NACA 0012-64</u>	<u>NACA 0012-64</u>
<u>EXPOSED DATA</u>		
Area (equiv. true), ft ²	<u>2222.00</u>	<u>0.02722</u>
Span, (equivalent), in.	<u>1179.70</u>	<u>4.129</u>
Aspect Ratio	<u>4.385</u>	<u>4.385</u>
Taper Ratio	<u>0.387</u>	<u>0.387</u>
Chords		
Root (Wing Sta. 156.22 in.), in.	<u>385.12</u>	<u>1.348</u>
Tip (equiv.)(Wing Sta. 750.50 in.), in.	<u>148.97</u>	<u>0.521</u>
MAC (Wing Sta. 409.57 in.), in.	<u>284.45</u>	<u>0.996</u>
Fus. Sta. of .25 MAC, in.	<u>1310.84</u>	<u>4.588</u>
W.P. of .25 MAC, in.	<u>-137.06</u>	<u>-0.480</u>
B.L. of .25 MAC, in.	<u>406.52</u>	<u>1.423</u>
<u>LEADING EDGE CUFF</u>		
Area, ft ²	<u>31.79</u>	<u>0.00039</u>
L.E. Intersects Fuselage ML @ Fus. Sta, in.	<u>1027.46</u>	<u>3.596</u>
L.E. Intersects Wing L.E. @ Fus. Sta, in.	<u>1182.20</u>	<u>4.138</u>

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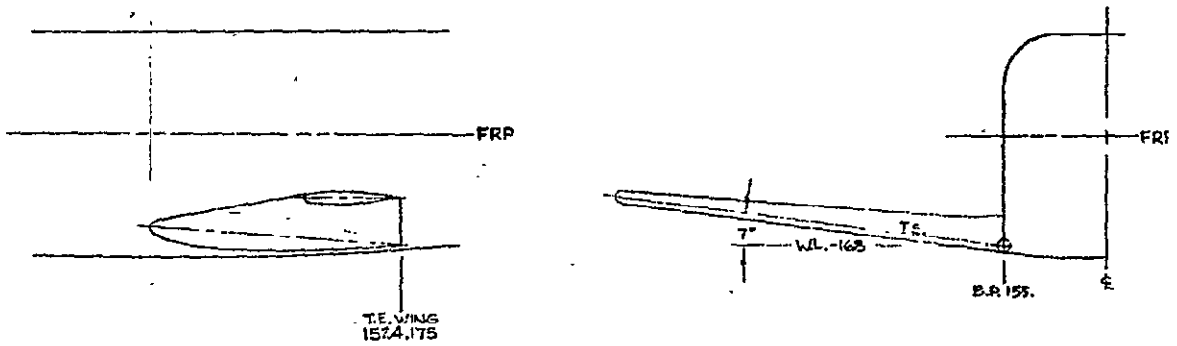
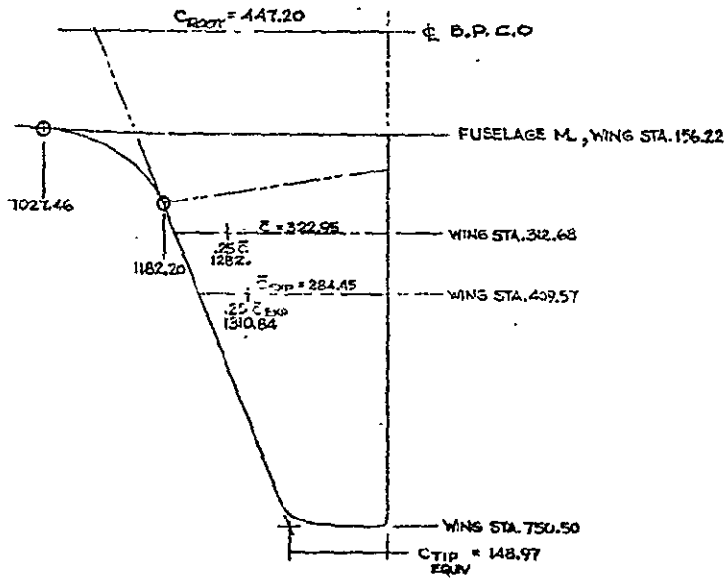


FIGURE 4.

WING W10

9992-130 C CONFIGURATION
 9992-130 G WING POSITION

MODEL COMPONENT: HORIZONTAL STABILIZER - H12

GENERAL DESCRIPTION: 9992-130C straight wing orbiter horizontal stabilizer used with body B6. The surface is located on the vehicle FRP, with the pivot axis at Fus. Sta. 1917.87 in. The model scale factor is 0.0035.

DRAWING NUMBER: Lines Dwg. 9992-130C

<u>DIMENSIONS:</u>	<u>FULL-SCALE</u>	<u>MODEL SCALE</u>
<u>TOTAL DATA</u>		
Area		
Planform (equiv. true), ft ²	<u>1816.00</u>	<u>0.02225</u>
Wetted		
Span (equivalent) in.	<u>953.76</u>	<u>3.338</u>
Aspect Ratio	<u>3.480</u>	<u>3.480</u>
Rate of Taper	<u>0.712</u>	<u>0.712</u>
Taper Ratio	<u>0.228</u>	<u>0.228</u>
Diehedral Angle, degrees	<u>7.0</u>	<u>7.0</u>
Incidence Angle, degrees	<u>0.0</u>	<u>0.0</u>
Aerodynamic Twist, degrees	<u>0.0</u>	<u>0.0</u>
Toe-In Angle	<u>-</u>	<u>-</u>
Cant Angle	<u>-</u>	<u>-</u>
Sweep Back Angles, degrees		
Leading Edge	<u>40.00</u>	<u>40.00</u>
Trailing Edge	<u>6.90</u>	<u>6.90</u>
0.25 Element Line	<u>33.220</u>	<u>33.220</u>
Chords: Horiz.		
Root (Wing Sta. 0.0), in.	<u>443.05</u>	<u>1.551</u>
Tip, (equivalent) (Horiz. Sta. 480.45 in.), in.	<u>101.02</u>	<u>0.354</u>
MAC, in. (Horiz. Sta. 189.89 in.), in.	<u>307.87</u>	<u>1.078</u>
Fus. Sta. of .25 MAC, in.	<u>1840.46</u>	<u>6.442</u>
W.P. of .25 MAC, in.	<u>4.12</u>	<u>0.014</u>
B.L. of .25 MAC, in.	<u>188.47</u>	<u>0.660</u>
Airfoil Section		
Root	<u>NACA 0012-64</u>	<u>NACA 0012-64</u>
Tip	<u>NACA 0012-64</u>	<u>NACA 0012-64</u>
<u>EXPOSED DATA</u>		
Area (equiv. true), ft ²	<u>967.35</u>	<u>0.01185</u>
Span, (equivalent), in.	<u>638.88</u>	<u>2.236</u>
Aspect Ratio	<u>2.93</u>	<u>2.93</u>
Taper Ratio	<u>0.304</u>	<u>0.304</u>
Chords		
Root (Horiz. Sta. 156.22 in), in.	<u>331.84</u>	<u>1.161</u>
Tip (equiv) (Horiz. Sta. 480.45 in.), in.	<u>101.02</u>	<u>0.354</u>
MAC (Horiz. Sta. 289.52 in.), in.	<u>236.94</u>	<u>0.829</u>
Fus. Sta. of .25 MAC, in.	<u>1906.37</u>	<u>6.672</u>
W.P. of .25 MAC, in.	<u>16.26</u>	<u>0.057</u>
B.L. of .25 MAC, in.	<u>287.37</u>	<u>1.006</u>

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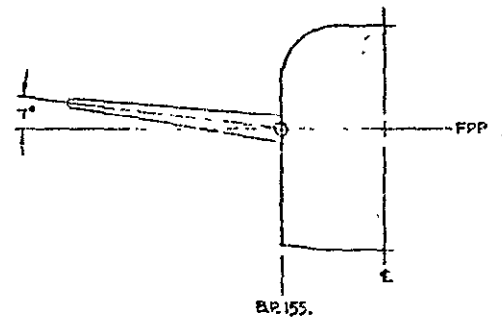
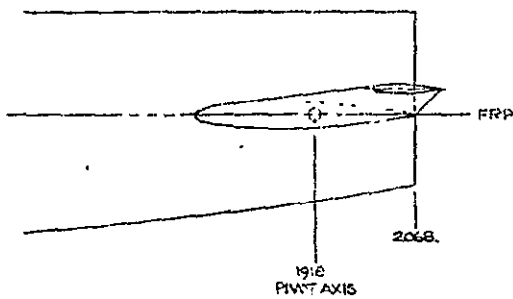
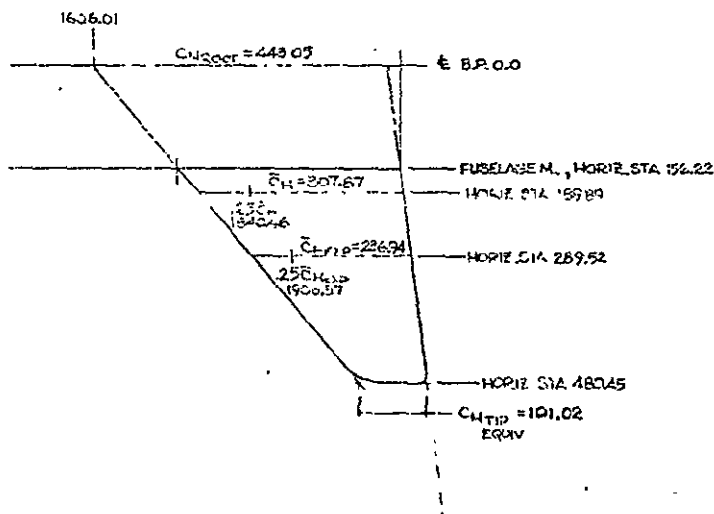


FIGURE 5.
 HORIZONTAL STABILIZER HI2 9992-130C CONFIGURATION:

MODEL COMPONENT: Horizontal Tail - H16

GENERAL DESCRIPTION: 9992-130C Straight Wing Orbiter Alternate Horizontal

Tail Used with Body-B6. The surface is located below the vehicle FRP.

Model Scale = 0.0035

DRAWING NUMBER: S-866-25, -26

DIMENSIONS:

FULL-SCALE

MODEL SCALE

TOTAL DATA

Area, ft ²		
Planform	1802.80	0.02208
Blanketed	0.00	0.000
Span (equivalent), in.	950.04	3.325
Aspect Ratio	3.477	3.477
Rate of Taper	0.712	0.712
Taper Ratio	0.229	0.229
Dihedral Angle, degrees	7.000	7.000
Incidence Angle, degrees	0.000	0.000
Aerodynamic Twist, degrees	-	-
Toe-In Angle	-	-
Cant Angle	-	-
Sweep Back Angles, degrees		
Leading Edge	35.435	35.435
Trailing Edge	0.000	0.000
0.25 Element Line	28.088	28.088
Chords: In.		
Root (Horiz. Sta. 0.00)	441.50	1.545
Tip, (equivalent)(Horiz. Sta. 478.59)	100.94	0.353
MAC (Horiz. Sta. 189.21)	306.85	1.074
Fus. Sta. of .25 MAC	1853.86	6.489
W.P. of .25 MAC	-104.56	-0.366
B.L. of .25 MAC	187.81	0.657
Airfoil Section		
Root	NACA	0012-64
Tip	NACA	0012-64

EXPOSED DATA

Area, ft ²	968.93	0.01187
Span, (equivalent), in.	639.75	2.239
Aspect Ratio	2.933	2.933
Taper Ratio	0.304	0.304
Chords: In.		
Root (Equiv.)(Horiz. Sta. 156.31)	332.00	1.162
Tip (Equiv.)(Horiz. Sta. 478.59)	100.94	0.353
MAC (Horiz. Sta. 287.35)	237.02	0.830
Fus. Sta. of .25 MAC	1905.23	6.672
W.P. of .25 MAC	-92.60	-0.324
B.L. of .25 MAC	285.21	0.998

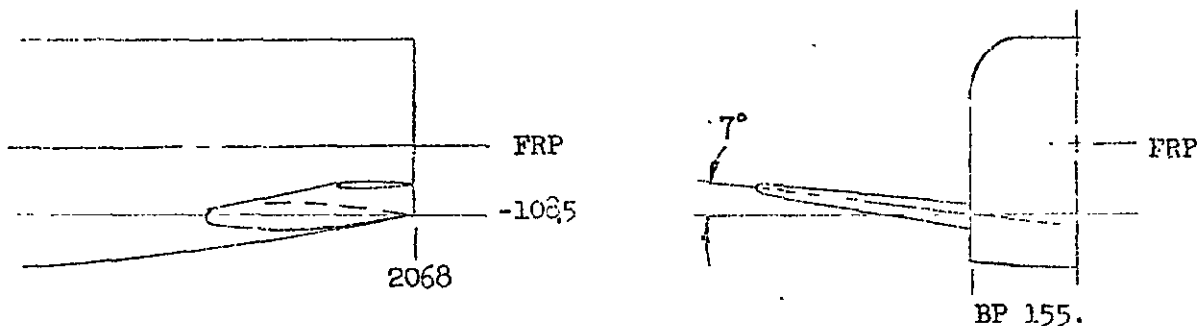
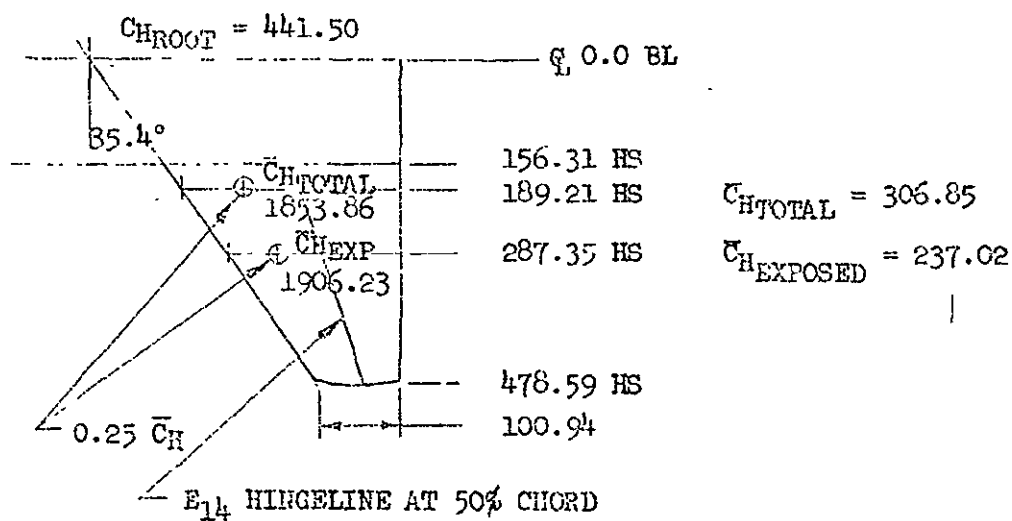


FIGURE 6. HORIZONTAL STABILIZER H_{16} AND
 ELEVATOR E_{14}

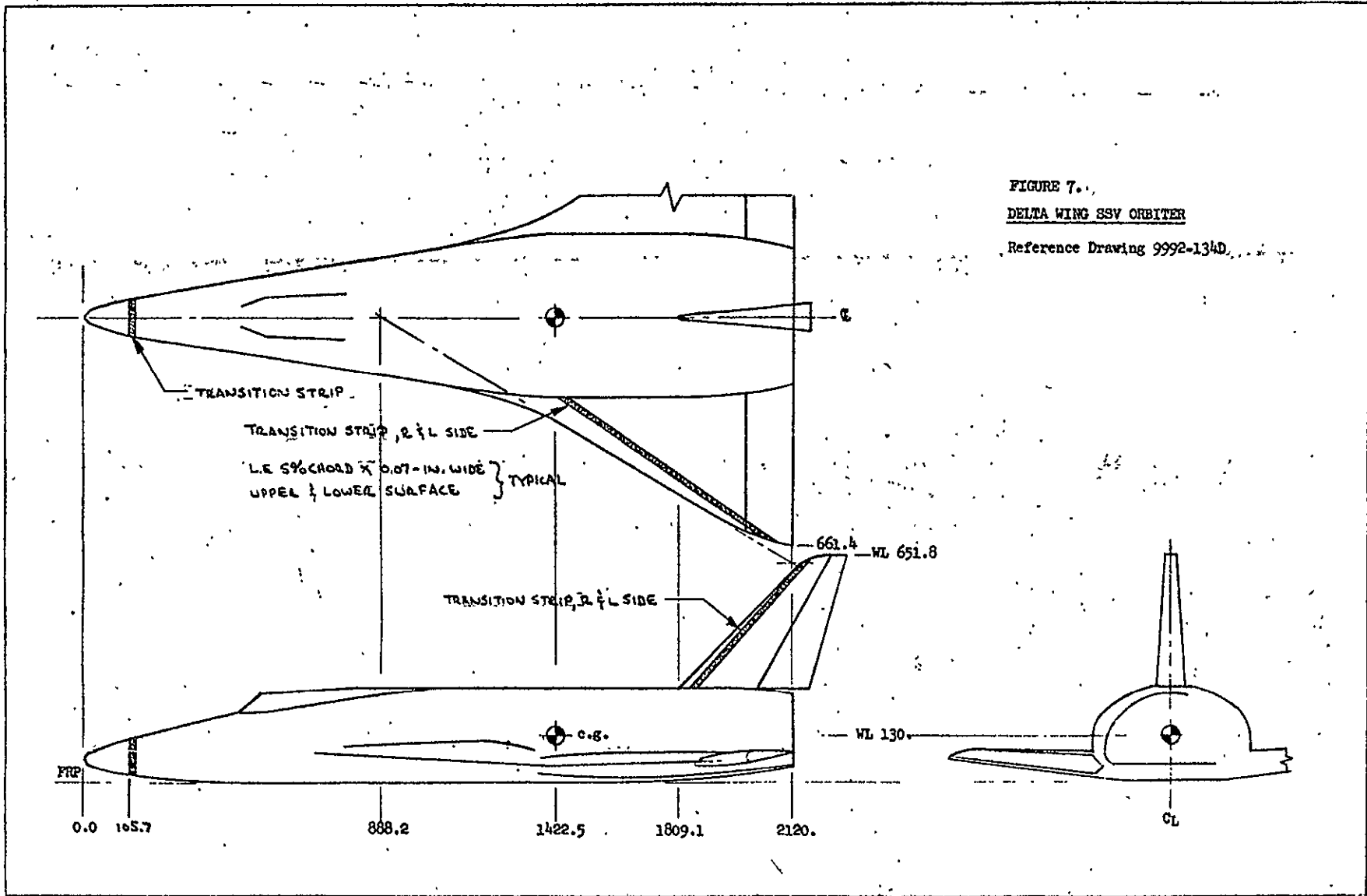


FIGURE 7.
 DELTA WING SSV ORBITER

Reference Drawing 9992-134D

MODEL COMPONENT: BODY - B5

GENERAL DESCRIPTION: 9992-134B body. Delta wing orbiter body including a canopy on the upper surface aft of the nose. The model scale factor is 0.0035.

DRAWING NUMBER: Lines Dwg. 9992-134B

<u>DIMENSIONS:</u>	<u>FULL-SCALE</u>	<u>MODEL SCALE</u>
Length , in.	<u>2120.00</u>	<u>7.420</u>
Max. Width, in.	<u>462.86</u>	<u>1.620</u>
Max. Depth, in.	<u>274.29</u>	<u>0.950</u>
Fineness Ratio	<u>5.906</u>	<u>5.906</u>
Area		
Max. Cross-Sectional , ft ² (Fus. Sta. 1215.0 to 1809.0 in.)	<u>702.75</u>	<u>0.00350</u>
Planform	<u>-</u>	<u>-</u>
Wetted	<u>-</u>	<u>-</u>
Base	<u>-</u>	<u>-</u>

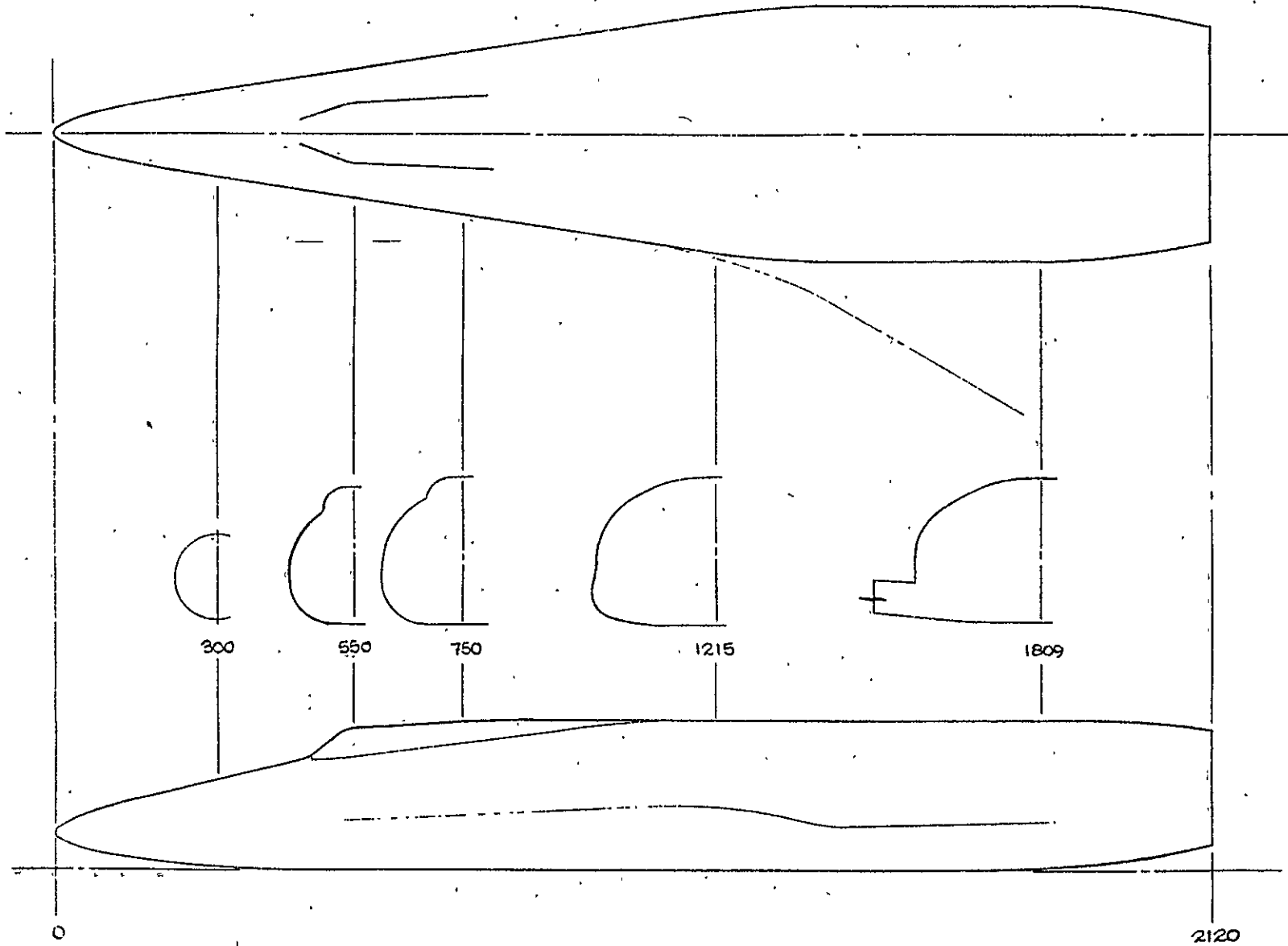


FIGURE 8. BODY B5 9992-134 B CONFIGURATION

MODEL COMPONENT: Wing-W17

GENERAL DESCRIPTION: Delta wing with -5° twist and rounded wing tips. Wing blends into body. Follows NR lines drawing 9902-134D.

Model Scale = 0.0035

DRAWING NUMBER: S-865-13, - 14, - 55 thru - 60

DIMENSIONS: FULL-SCALE MODEL SCALE

TOTAL DATA

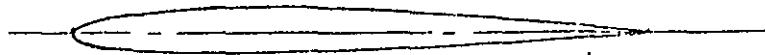
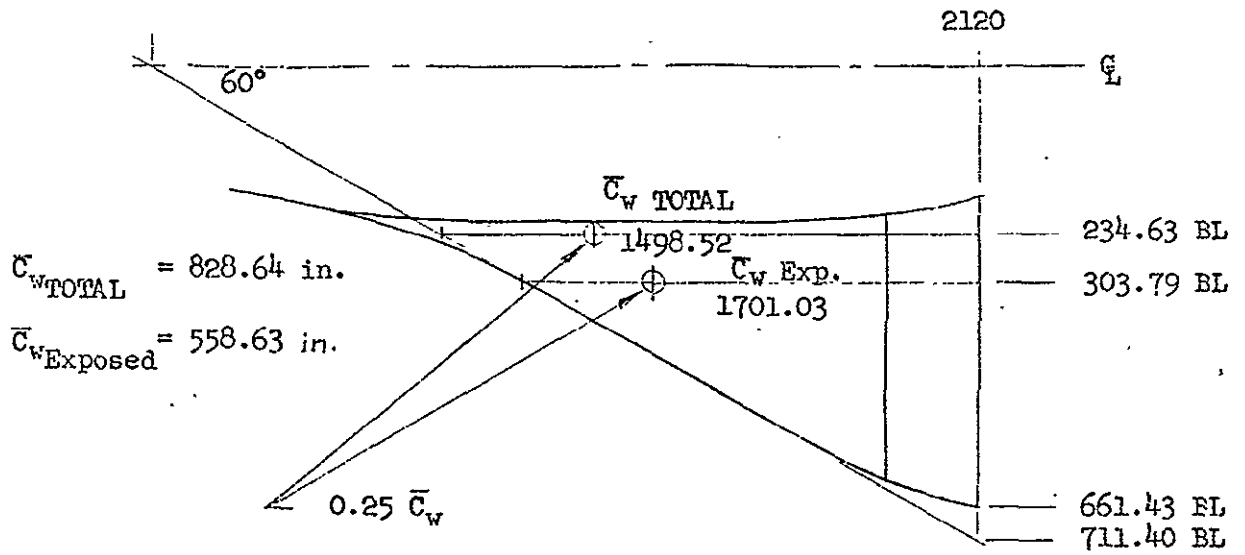
Area, ft ²		
Planform	<u>6026.60</u>	<u>0.07383</u>
Wetted		
Span (equivalent), in.	<u>1286.28</u>	<u>4.502</u>
Aspect Ratio	<u>1.892</u>	<u>1.892</u>
Rate of Taper	<u>1.723</u>	<u>1.723</u>
Taper Ratio	<u>0.094</u>	<u>0.094</u>
Diehedral Angle, degrees	<u>7.0</u>	<u>7.0</u>
Incidence Angle, degrees	<u>0.0</u>	<u>0.0</u>
Aerodynamic Twist, degrees (about T.E.)	<u>-5.0</u>	<u>-5.0</u>
Toe-In Angle	<u>-</u>	<u>-</u>
Cant Angle	<u>-</u>	<u>-</u>
Sweep Back Angles, degrees		
Leading Edge	<u>60.056</u>	<u>60.056</u>
Trailing Edge	<u>0.000</u>	<u>0.000</u>
0.25 Element Line	<u>52.473</u>	<u>52.473</u>
Chords: in.		
Root (Wing Sta. 0.0)	<u>1232.91</u>	<u>4.315</u>
Tip, (equivalent) (w.s. 647.97)	<u>116.45</u>	<u>0.408</u>
MAC (W.S. 234.63)	<u>828.64</u>	<u>2.900</u>
Fus. Sta. of .25 MAC	<u>1498.52</u>	<u>5.245</u>
W.P. of .25 MAC	<u>46.27</u>	<u>0.162</u>
B.L. of .25 MAC	<u>232.88</u>	<u>0.815</u>
Airfoil Section		
Root (W.S. 241.80)	<u>NACA 0009-64</u>	
Tip (W.S. 546.07)	<u>NACA 0012-64</u>	

EXPOSED DATA

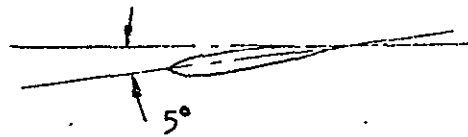
Area, ft ²	<u>2658.68</u>	<u>0.03257</u>
Span, (equivalent) in.	<u>814.61</u>	<u>2.851</u>
Aspect Ratio	<u>1.720</u>	<u>1.720</u>
Taper Ratio	<u>0.141</u>	<u>0.141</u>
Chords: in.		
Root, (Equiv.) (W.S. 237.61)	<u>823.51</u>	<u>2.882</u>
Tip, (Equiv.) (W.S. 647.97)	<u>116.45</u>	<u>0.408</u>
MAC (W.S. 391.34)	<u>558.63</u>	<u>1.955</u>
Fus. Sta. of .25 MAC	<u>1701.03</u>	<u>5.954</u>
W.P. of .25 MAC	<u>65.37</u>	<u>0.229</u>
B.L. of .25 MAC	<u>388.43</u>	<u>1.359</u>

LEADING EDGE CUFF

Planform area, ft ²	<u>46.13</u>	<u>0.00057</u>
Leading edge intersects Fus. M.L. @ Sta., in.	<u>1182.86</u>	<u>4.140</u>
Leading edge intersects wing L.E. @ Sta., in.	<u>1425.73</u>	<u>4.950</u>



CHORD (BL 241.80)
 0009-64 SERIES AIRFOIL



TIP CHORD (BL 546.07)
 0012-64 SERIES AIRFOIL

FIGURE 9. WING W₁₇ 9992-134 D Configuration

MODEL COMPONENT: Elevon-E10 (Data for one of two sides)

GENERAL DESCRIPTION: Full span, constant chord elevon located on delta wing
W17.

Model Scale = 0.0035

DRAWING NUMBER: S-865-57, - 58

<u>DIMENSIONS:</u>	<u>FULL-SCALE</u>	<u>MODEL SCALE</u>
Area, ft ²	<u>393.10</u>	<u>0.00482</u>
Span (equivalent), in.	<u>428.83</u>	<u>1.501</u>
Inb'd equivalent chord, in. (w.s. 223.41)	<u>132.00</u>	<u>0.462</u>
Outb'd equivalent chord, in. (w.s. 652.25)	<u>132.00</u>	<u>0.462</u>
Ratio movable surface chord/ total surface chord		
At Inb'd equiv. chord	<u>0.116</u>	<u>0.116</u>
At Outb'd equiv. chord	<u>1.210</u>	<u>1.210</u>
Sweep Back Angles, degrees		
Leading Edge	<u>0.000</u>	<u>0.000</u>
Tailing Edge	<u>0.000</u>	<u>0.000</u>
Hingeline	<u>0.000</u>	<u>0.000</u>
Area Moment (Normal to hinge line), ft ³ (Product of area and mean chord)	<u>4314.87</u>	<u>0.00019</u>

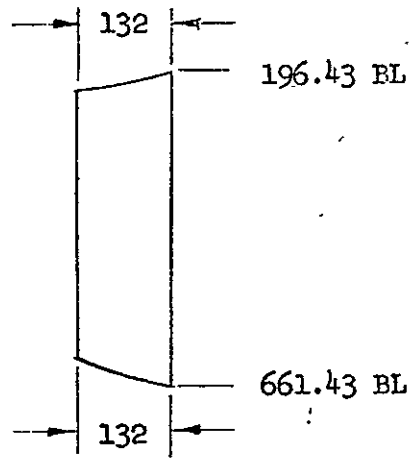


FIGURE 10. ELEVON, E 10-ELEVON USED WITH WING W17

MODEL COMPONENT: Vertical Stabilizer - V 17

GENERAL DESCRIPTION: Centerline vertical stabilizer with the 5° (half angle)
wedge trailing edge. Used with delta wing orbiter body B₅ (configuration
9992-134B).

The model scale factor is 0.0035.

DRAWING NUMBER: S-867-47, -50

DIMENSIONS: FULL-SCALE MODEL SCALE

TOTAL DATA

Area		
Planform, ft ²	663.63	0.00813
Theoretical Span, in.	380.421	
Span (equivalent), in.	372.61	1.304
Aspect Ratio	1.453	1.453
Rate of Taper	0.718	0.718
Taper Ratio	0.314	0.314
Dihedral Angle, degrees	-	-
Incidence Angle, degrees	-	-
Aerodynamic Twist, degrees	-	-
Toe-In Angle, degrees	0.0	0.0
Cant Angle, degrees	0.0	0.0
Sweep Back Angles, degrees		
Leading Edge	45.0	45.0
Trailing Edge	15.734	15.734
0.25 Element Line	39.367	39.367
Chords: Theoretical Tip, in.	117.053	
Root (W.P. 274.29 in) W.P. 274.29 in	390.29	1.366
Tip, (equivalent), (W.P. 646.90 in), in	122.65	0.429
MAC (W.P. 428.19 in), in	279.74	0.979
Fus. Sta. of .25 MAC, in	2032.98	7.115
W.P. of .25 MAC, in	428.19	1.499
B.L. of .25 MAC, in	0.0	0.0
Airfoil Section, Wedge shape with L.E.R. and flat T.E.		
L.E. Radius, in. (1.6% chord)	6.29	0.022

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		

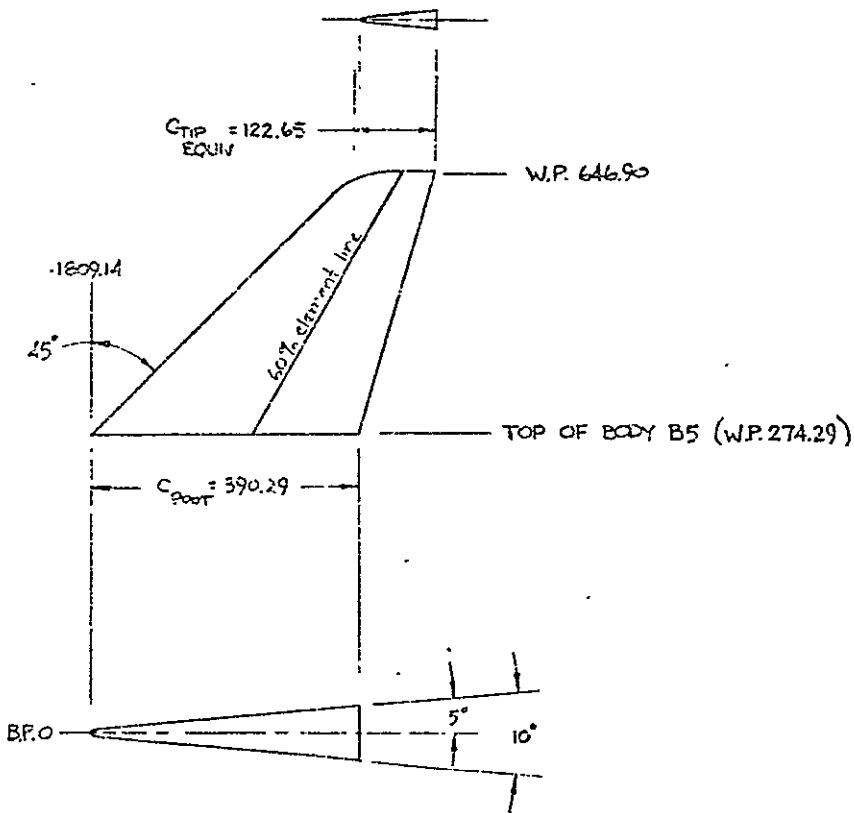


FIGURE 11.

VERTICAL STABILIZER V17

MODEL COMPONENT: Drag brake-J2 (Data for one of two sides)

GENERAL DESCRIPTION: Drag Brake-J2 is the deflectable side panels of vertical tail-V17 hinged at the 60% element line and extending to the trailing edge.

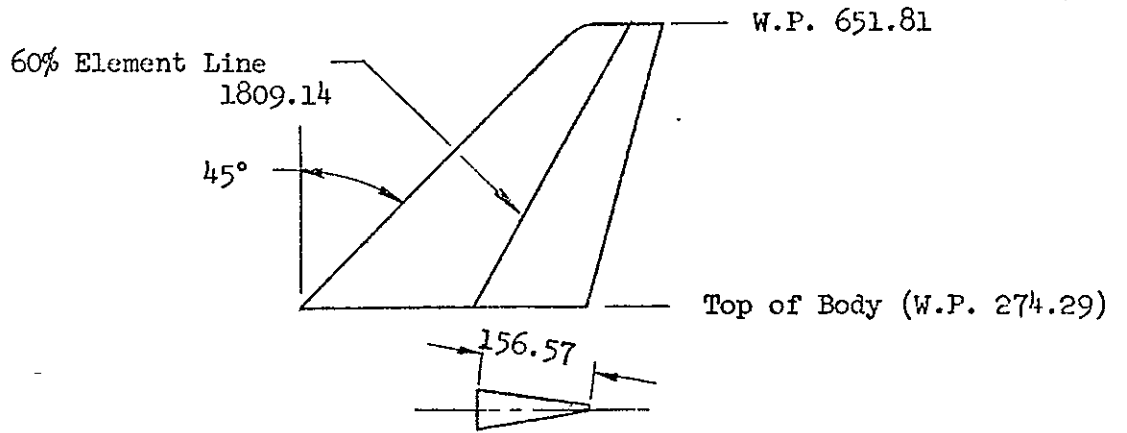
Model Scale = 0.0035

DRAWING NUMBER: S-865-51 (Modified)

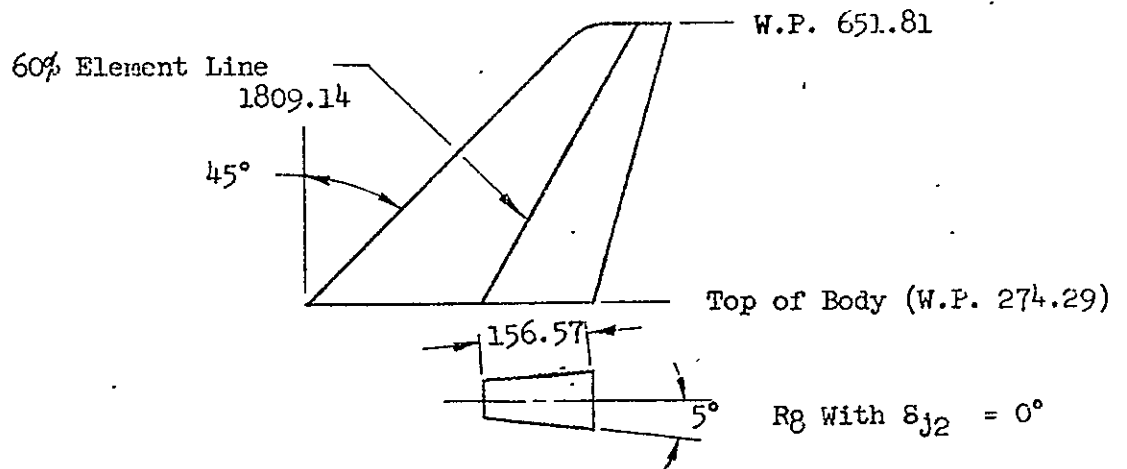
All dimensions are measured in the drag brake reference plane.

DIMENSIONS:

	<u>FULL-SCALE</u>	<u>MODEL SCALE</u>
Area (True), ft. ²	<u>270.27</u>	<u>0.00331</u>
Span (equivalent), in.	<u>382.09</u>	<u>1.337</u>
Inb'd equivalent chord, in. (W.P. 274.29)	<u>156.57</u>	<u>0.548</u>
Outb'd equivalent chord (W.P. 654.57)	<u>47.14</u>	<u>0.165</u>
Ratio movable surface chord/ total surface chord		
At Inb'd equiv. chord	<u>-</u>	<u>-</u>
At Outb'd equiv. chord	<u>-</u>	<u>-</u>
Sweep Back Angles, degrees		
Leading Edge	<u>29.237</u>	<u>29.237</u>
Tailing Edge	<u>15.288</u>	<u>15.288</u>
Hingeline	<u>29.237</u>	<u>29.237</u>
Area Moment (Normal to hinge line), Ft ³ (Product of area and mean chord)	<u>2430.35</u>	<u>0.00010</u>



VERTICAL TAIL V 16



VERTICAL TAIL V 17

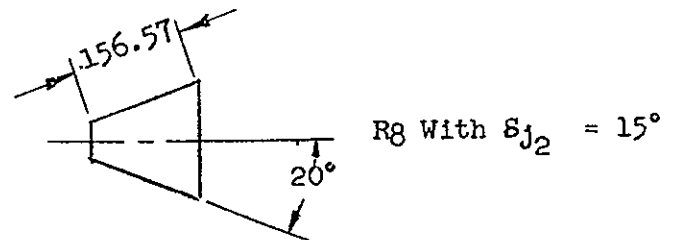


FIGURE 12. DRAG BRAKE J 2

TEST TWT-478 DATA SET COLLATION SHEET

Force-Delta Wing Orbiter, 0.0035-Scale Stability & Control

PRETEST
 POSTTEST

DATA SET IDENTIFIER	CONFIGURATION	SCHD.		PARAMETERS/VALUES				NO. of RUNS	MACH NUMBERS (OR ALTERNATE INDEPENDENT VARIABLE)										
		α	β	SE	SA	SX	SR		0.6	0.9	1.0	1.2	1.46	1.96	2.99	4.96			
R27 S4A	B5W17E10V17J2	A	0	0	0	0	0	1							227/0				
55A				-10				1							228/0				
56A	B5W17E10V17J2X	V		0				8	094/1	106/1	139/0	140/0	061/0	092/0	091/0	090/0			
56B		B						8	203/0	204/0	205/0	206/0	191/0	177/0	152/0	151/0			
56C		C						8	220/0	219/0	218/0	217/0	192/0	182/0	154/0	153/0			
57A		A		-10				4					062/0	055/1	089/0	088/0			
57B		B						4					194/0	174/0	156/0	155/0			
57C		C						4					193/0	175/0	158/0	157/0			
58A		A		-30				4					063/0	056/0	087/0	086/0			
58B		B						4					195/0	173/0	160/0	159/0			
58C		C						4					196/0	172/0	162/0	161/0			
59B		B		-45				5				215/0	198/0	170/0	164/0	163/0			
59C		C						5				216/0	197/0	171/0	166/0	165/0			
60A		A		0	-20			7	068/0	067/0	066/0		065/0	058/0	083/0	082/0			
61A		V		0	-30			7	069/0	070/0	071/0		064/0	057/0	085/0	084/0			
61B		B						7	202/0	201/0	200/0		199/0	169/0	168/0	167/0			
62A		A		-30	30			2	095/0							093/0			
63A		V		0	0		-10	6	072/0	073/0	074/0	075/0		059/0		081/0			
63B		B						6	210/0	209/0	208/0	207/0		179/0		149/0			
64A		A					-20	6	079/0	078/0	077/0	076/0		060/0		080/0			

1	7	13	19	25	31	37	43	49	55	61	67	75	76
CLM	KL	CLN	KY	CSL	CAB	CDF	L/D	KCP					9

COEFFICIENTS: $\alpha A = 0, 2, 4, 6, 8, 10, 12, 14, 16, 18, 20$
 $\alpha B = 20, 22, 24, 26, 28, 30, 32, 34, 36, 38, 40$
 $\alpha C = 40, 42, 44, 46, 48, 50, 52, 54, 56, 58, 60$

SE (+), T.E. DOWN
 SA = (SE)_L - (SE)_R

TEST TWT-478 DATA SET COLLATION SHEET

Force-Delta Wing Orbiter - 0.0035 - Scale Stability & Control

PRETEST
 POSTTEST

DATA SET IDENTIFIER	CONFIGURATION	SCHD.		PARAMETERS/VALUES					MACH NUMBERS (OR ALTERNATE INDEPENDENT VARIABLE)								NO. OF RUNS	
		α	β	SE	SA	SS2	SRE	GRIT	0.6	0.9	1.0	1.2	1.46	1.96	2.99	4.96		
R2764B	BSW17E10V17J2K	B	0	0	0	0	-20		211/0	212/0	213/0	214/0		178/0		150/0		6
65A		A					0	120	100/0									1
66A								90	099/0									1
67A							-30	120	101/0									1
68A								90	098/0									1
69A							-30 30	120	102/0									1
70A								90	097/0									1
71D		0	D	0	0	15		120	130/0									1
72D								90	107/0									1
73D									108/0		109/0	110/0	123/0	124/0	138/0	137/0		7
74D									117/0		116/0	115/0	120/0	129/0	132/0	131/1		7
75D												222/0	189/0	184/0	148/0	147/0		5
76D												223/0	190/0	183/0	142/0	141/0		5
77D							0							182/0				1
78D														181/0				1
79D							-10		112/0		111/0			125/0				3
80D									118/0		119/0			128/0				3
81D	BSW17E10X						0					113/0	122/0	126/0	136/0	135/1		5
82D												114/0	121/0	127/0	134/0	133/0		5
83D												221/0	188/0	185/0	144/0	143/0		5

1 7 13 19 25 31 37 43 49 55 61 67 73 79

CLM CLN CLY CSL CAB CDF L/D KCP

COEFFICIENTS:

α or β

SCHEDULES

$\alpha A = 0, 2, 4, 6, 8, 10, 12, 14, 16, 18, 20$

$\alpha B = 20, 22, 24, 26, 28, 30, 32, 34, 36, 38, 40$

$\beta D = -4, -2, 0, 2, 4, 6, 8, 10$

IDPVAR(1) IDPVAR(2) NDV

TEST FACILITY

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

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

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

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

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

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

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

The tunnel components and performance are discussed in more detail in NASA TM X-53185, dated December 22, 1964, and NASA TM X-53113, dated August 20, 1964.

TEST CONDITIONS
TEST TWT-478

MACH NUMBER	REYNOLDS NUMBER per unit length	DYNAMIC PRESSURE (pounds/sq. inch)	STAGNATION TEMPERATURE (degrees Fahrenheit)
0.6	6.5×10^6	5.58	97
0.9	6.9×10^6	7.96	95
1.0	6.7×10^6	8.33	98
1.2	6.6×10^6	8.98	97
1.46	6.6×10^6	9.56	99
1.96	8.9×10^6	12.80	96
2.99	4.4×10^6	4.95	98
4.96	6.1×10^6	3.40	99

BALANCE UTILIZED: Task 0.7-inch MK I-A&B Six Component

CAPACITY:	ACCURACY:	COEFFICIENT TOLERANCE:
NF <u>400 lbs</u>	<u> </u>	<u>0.3%</u>
SF <u>100 lbs</u>	<u> </u>	<u>0.3%</u>
AF <u>15 lbs</u>	<u> </u>	<u>0.3%</u>
PM <u> </u>	<u> </u>	<u> </u>
YM <u> </u>	<u> </u>	<u> </u>
RM <u>70 in lbs</u>	<u> </u>	<u>0.3%</u>

COMMENTS:
 No satisfactory method is known for determining the absolute accuracy of the final data coefficients.

DATA REDUCTION

Measured data were reduced about the body and stability axis systems. The reference data used to reduce the data were dependent upon the body configuration (B5 or B6) tested; their reference data are listed below:

Straight Wing Orbiter (B6)

$$S_{\text{ref}} = S_W = \text{wing area} = 5.440 \text{ in}^2 = 3084.0 \text{ ft}^2 \text{ full scale}$$

$$l_{\text{ref}} = \bar{c}_W = \text{wing MAC} = 1.130 \text{ in} = 322.9 \text{ in. full scale}$$

$$b = b_W = \text{wing span} = 5.215 \text{ in} = 1490.0 \text{ in full scale}$$

Delta Wing Orbiter (B5)

$$S_{\text{ref}} = S_W = \text{wing area} = 10.732 \text{ in}^2 = 6084.0 \text{ ft}^2 \text{ full scale}$$

$$l_{\text{ref}} = \bar{c} = \text{wing MAC} = 2.874 \text{ in} = 821.2 \text{ in full scale}$$

$$b = b_W = \text{wing span} = 4.980 \text{ in} = 1422.8 \text{ in. full scale}$$

The model moment reference point (MRP) for the Straight Wing Orbiter is 4.526 inches aft of the nose (2193.0 in. full scale), on the lateral centerline, and -0.178 inches below the Fuselage Reference Plane (FRP) (-50.5 in. full scale).

The model moment reference point for the Delta Wing Orbiter is 4.979 inches aft of the nose (1422.5 in. full scale), on the lateral centerline, and 0.4550 inches above the Fuselage Reference Plane (FRP) (130.0 in. full scale).

Angle of attack and angle of sideslip were corrected for sting and balance deflections, and axial force was corrected for weight tares.

Base pressure measurements were made during the tests at several locations on

DATA REDUCTION (Continued)

the vehicle base and have been used to calculate a base axial force which was applied to the data to obtain a forebody axial force. This forebody axial force was then utilized in calculating stability axis data and determining L/D. The equations used were

$$C_{A_F} = C_A - C_{A_B}$$

where C_A = measured axial force coefficients minus tares

$$C_{A_B} = \left\{ \left[p_\infty - (p_1 + p_2)/2 \right] / q_\infty \right\} A_b / S_{ref}$$

where p_∞ = free stream static pressure

p_1 & p_2 = body base static pressure

q_∞ = freestream dynamic pressure

A_b = base area = model base + balance cavity area

= 0.005488 ft² - delta wing orbiter

= 0.006701 ft² - straight wing orbiter

$$C_L = C_N \cos \alpha - C_{A_F} \sin \alpha$$

$$C_{D_F} = C_{A_F} \cos \alpha + C_N \sin \alpha$$

$$L/D = C_L / C_{D_F}$$

The center of pressure data are presented as a percent of body length and were determined by the following equation:

$$X_{c.p.}/l = \left[X_{c.g.} - (C_m/C_N) \bar{c} \right] / l$$

Where incremental coefficients are presented these values were calculated by subtracting the value of the coefficient obtained with the controls neutral from the value obtained with the control at some deflected setting:

$$\Delta C(x) = C(x)_{\delta=y} - C(x)_{\delta=0}$$

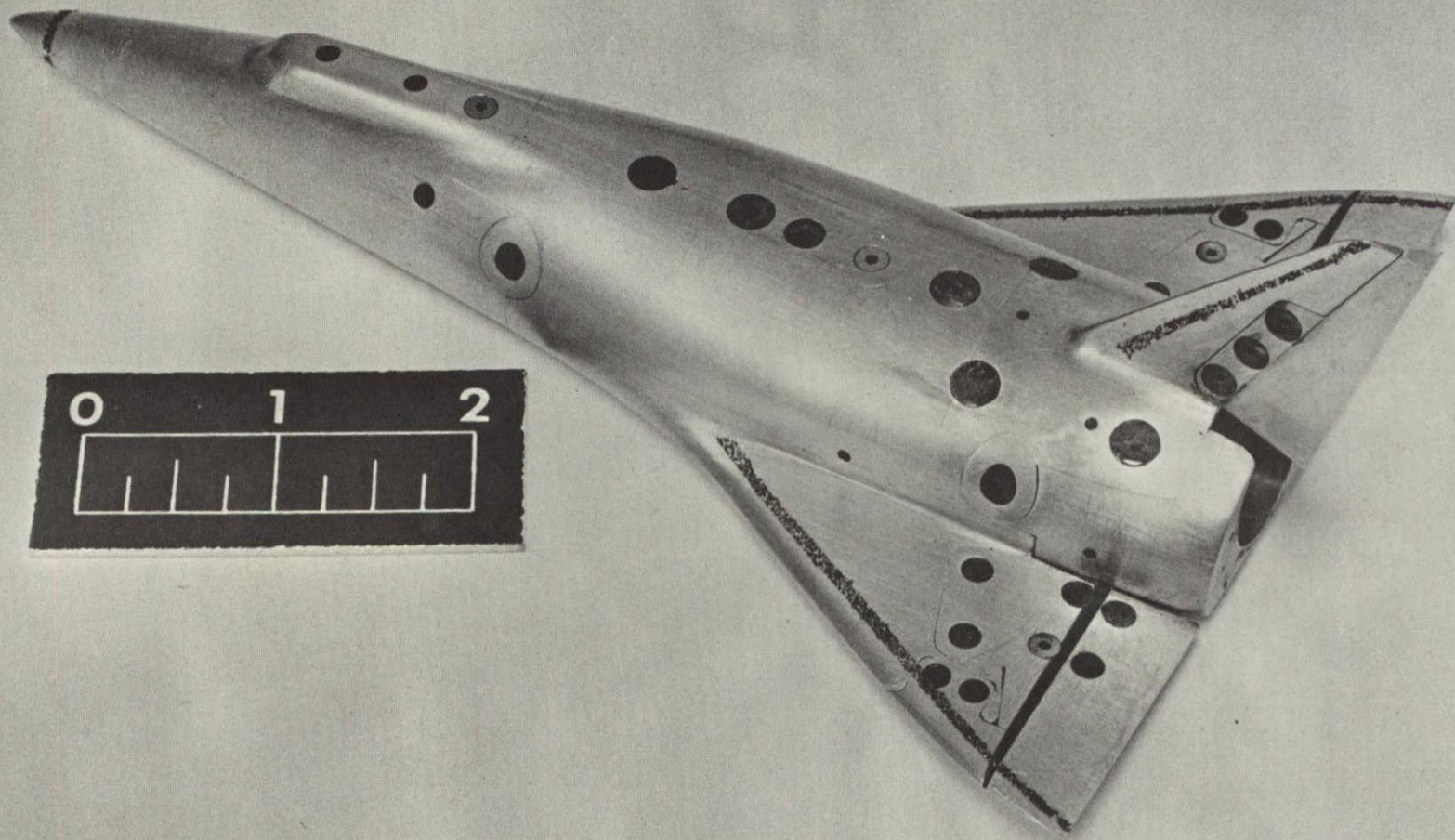
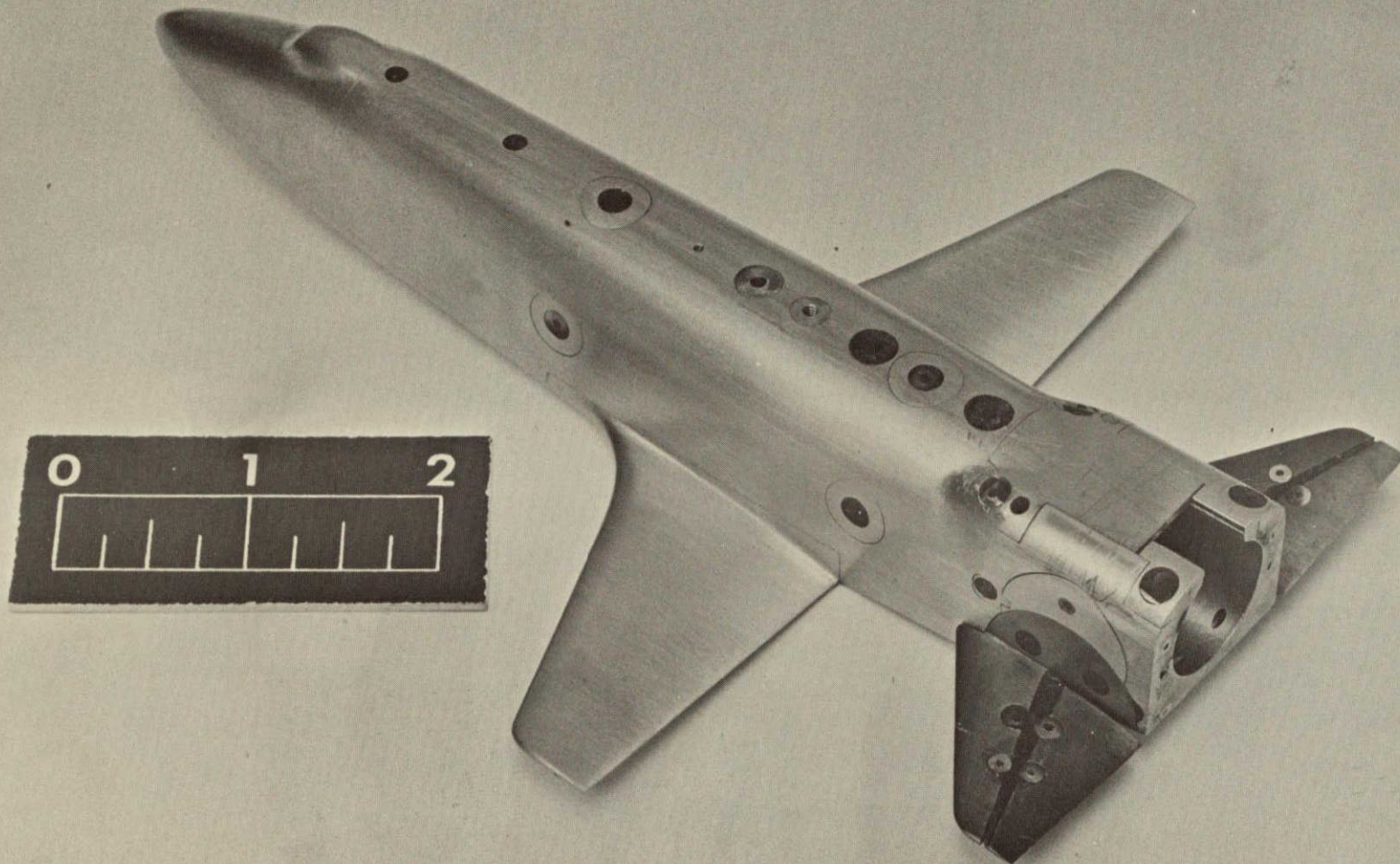


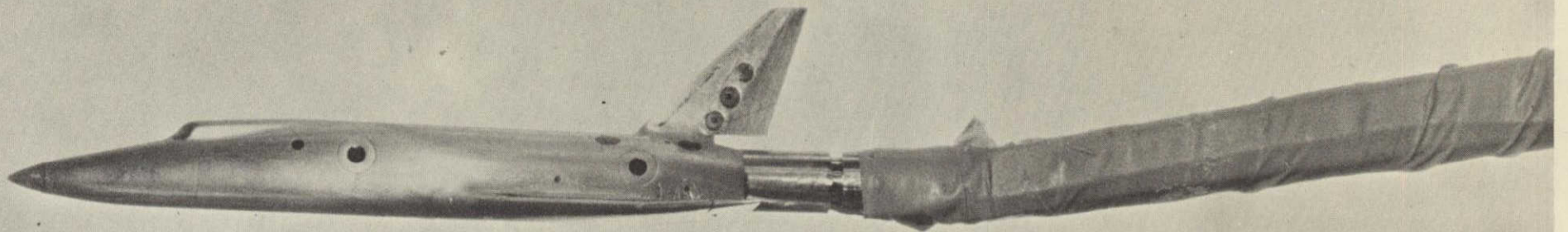
Figure 13. Delta Wing Orbiter Showing Typical Grit Application

NOT REPRODUCIBLE



37

Figure 14. Straight Wing Orbiter



MSFC TWT 478
JAN 22 1971 120 GRIT
CONFIG
B W E V J X
5 17 10 17 2

0	1	2

Figure 15. Typical Tunnel Installation of Delta Wing Orbiter

NOMENCLATURE

<u>SYMBOL</u>	<u>SADSAC SYMBOL</u>	<u>DEFINITION</u>
A_b		base area; m^2 , ft^2 , in^2
a		speed of sound; m/sec, ft/sec
AR	ASPECT	aspect ratio, b^2/S
b	REFB	wing span or reference span; m, ft, in
c		wing chord; m, ft, in
\bar{c}		wing mean aerodynamic chord or reference chord; m, ft, in (see l_{ref} or refl)
c.g.		center of gravity
C.P.		center of pressure
C_A	CA	axial force coefficient, F_A/qS_{ref}
C_{A_b}	CAB	base axial force coefficient, $[(p_\infty - p_b)/q] (A_b/S_{ref})$
C_{A_f}	CAF	forebody axial force coefficient, $C_A - C_{A_b}$
C_D	CDTOTL	drag force coefficient in the wind axis system, $F_D/q S_{ref}$

NOMENCLATURE (continued)

<u>SYMBOL</u>	<u>SADSAC SYMBOL</u>	<u>DEFINITION</u>
C_D	CD	drag force coefficient in the stability axis system, $F_D'/q S_{ref}$
C_L	CL	lift force coefficient (stability or wind axis) $F_L'/q S_{ref}$
C_l	CBL	rolling moment coefficient in body axis system, $M_x/q S_{ref} b$
$C_{l,s}$	CSL	rolling moment coefficient in the stability axis system, $M_{x,s}/q S_{ref} b$
$C_{l,w}$	CWL	rolling moment coefficient in the wind axis system, $M_{x,w}/q S_{ref} b$
C_m	CLM	pitching moment coefficient in the body axis system, $M_y/q S_{ref} l_{ref}$
$C_{m,s}$	CLM	pitching moment coefficient in the stability axis system, $C_{m,s} = C_m$
$C_{m,w}$	CPM	pitching moment coefficient in the wind axis system, $M_{y,w}/q S_{ref} l_{ref}$
C_N	CN	normal force coefficient in the body axis system, $F_N/q S_{ref}$

NOMENCLATURE (continued)

<u>SYMBOL</u>	<u>SADSAC SYMBOL</u>	<u>DEFINITION</u>
C_n	CYN	yawing moment coefficient in the body axis system, $M_z/q S_{ref} b$
$C_{n,s}$	CLN	yawing moment coefficient in the stability axis system, $C_{n,s} = C_n$
$C_{n,w}$	CLN	yawing moment coefficient in the wind axis system, $M_{z,w}/q S_{ref} b$
C_p	CP	pressure coefficient, $(p-p_\infty)/q$
C_y	CY	side force coefficient (body or stability axis system), $F_y/q S_{ref}$
C_c	CC	side force coefficient (wind axis system), $F_y/q S_{ref}$
F_A		axial force; N, lb
F_D		drag force in wind axis system; N, lb
F'_D		drag force in the stability axis system; N, lb
F_L		lift force (stability or wind axis system); N, lb
F_N		normal force; N, lb

NOMENCLATURE (continued)

<u>SYMBOL</u>	<u>SADSAC SYMBOL</u>	<u>DEFINITION</u>
F_Y		side force; N, lb
	N/A	normal to axial force ratio
l_{ref}	REFL	reference length; m, ft, in (see \bar{c})
L/D	L/D	lift-to-drag ratio, C_L/C_D (stability axis system)
L/D	CL/CD	lift-to-drag ratio, C_L/C_D (wind axis system)
M	MACH	Mach number
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
M_x		rolling moment in the body axis system; N-m, ft-lb
$M_{x,s}$		rolling moment in the stability axis system; N-m, ft-lb

NOMENCLATURE (continued)

<u>SYMBOL</u>	<u>SADSAC SYMBOL</u>	<u>DEFINITION</u>
$M_{x,w}$		rolling moment in the wind axis system; N-m, ft-lb
M_y		pitching moment in the body (or stability) axis system; N-m, ft-lb
$M_{y,w}$		pitching moment in the wind axis system; N-m, ft-lb
M_z		yawing moment in the body axis system; N-m, ft-lb
$M_{z,w}$		yawing moment in the wind axis system; N-m, ft-lb
p		static pressure; N/m ² ; psi
P		total pressure; N/m ² ; psi
q	Q(PSI) Q(PSF)	dynamic pressure; N/m ² , psi, psf
RN/L	RN/L	Reynold's number per unit length; million/ft.
S		wing area; m ² , ft ²
S _{ref}	REFS	reference area; m ² , ft ²
T		temperature; °K, °C, °R, °F
V		speed of vehicle relative to surrounding atmosphere; m/sec, ft/sec

NOMENCLATURE (continued)

<u>SYMBOL</u>	<u>SADSAC SYMBOL</u>	<u>DEFINITION</u>
i_T		tail incidence positive when trailing edge down, deg
\bar{V}		velocity of vehicle relative to surrounding atmosphere; m/sec, ft/sec
α	ALPHA	angle of attack, angle between the projection of the wind X_w -axis on the body X, Z-plane and the body X-axis; deg
β	BETA	sideslip angle, angle between the wind X_w -axis and the projection of this axis on the body X-Z-plane; deg
γ		ratio of specific heats
Γ	DIHDRL	wing dihedral angle; deg
δ		control surface deflection angle; deg
	AILRON	aileron - left aileron trailing edge down
	ELEVTR	elevator - trailing edge down
	RUDDER	rudder - trailing edge to the left
	FLAP	flap - trailing edge down
	TAB	tab - trailing edge down with respect to control surface
		air density; K_g/m^3 , slugs/ft ³

NOMENCLATURE (continued)

<u>SYMBOL</u>	<u>SADSAC SYMBOL</u>	<u>DEFINITION</u>
θ		pitch angle, angle of rotation about the body Y-axis, positive when the positive Z-axis is rotated toward the positive X-axis; deg
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; deg
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; deg

NOMENCLATURE (continued)

<u>SUBSCRIPTS</u>	<u>DEFINITION</u>
a	aileron
b	base
c	canard
e	elevator or elevon
f	flap
r	rudder or ruddervator
s	stability axis system
t	tail, or total conditions
w	wind axis system
ref	reference conditions
∞	freestream condition

DATA PLOT INDEX

TITLE NUMBER	TITLE	PLOTTED COEFFICIENTS SCHEDULE	CONDITIONS VARYING	PAGES
1	Delta Wing Orbiter - Elevator Effects	(A)	Elevator Deflection	1-77
2	Delta Wing Orbiter - Aileron Effects	(B)	Aileron Deflection	78-175
3	Delta Wing Orbiter - Rudder Effects	(B)	Rudder Deflection	176-277
4	Delta Wing Orbiter - Component Buildup - Lateral Directional Stability	(C)	Component Buildup and Angle of Attack	278-409
5	Delta Wing Orbiter - Elevator Effectiveness at Various Angles of Attack	(D)	Angle of Attack	410-433
6	Delta Wing Orbiter - Elevator Effectiveness Derivative	(E)	Mach Number	434-436
7	Delta Wing Orbiter - L/D(MAX) Variation with Mach Number	(F)	N/A	437-439
8	Straight Wing Orbiter - Component Buildup	(G)	Component Buildup	440-457
9	Straight Wing Orbiter - Horizontal Stabilizer Effects (Body & Mid-Horizontal)	(G)	Horizontal Stabilizer Deflection	458-475

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DATA PLOT INDEX
(Continued)

TITLE NUMBER	TITLE	PLOTTED COEFFICIENTS SCHEDULE	CONDITIONS VARYING	PAGES
10	Straight Wing Orbiter - Horizontal Stabilizer Effects (Body & Wing & Mid-Horizontal)	(G)	Horizontal Stabilizer Deflection	486-493
11	Straight Wing Orbiter - Elevator Effects (Body & Low - Horizontal)	(G)	Elevator Deflection	494-511
12	Straight Wing Orbiter - Elevator Effects (Body & Wing & Low - Horizontal)	(G)	Elevator Deflection	512-529
13	Straight Wing Orbiter - Aileron Effects Mid-Horizontal Tail	(H)	Primary-Aileron Deflection Secondary-Horiz. Stab. Deflection	530-553
		(G)		554-562
		(H)		563-621
		(H)	Primary-Horiz. Stab. Deflection Secondary-Aileron Deflection	622-645
14	Straight Wing Orbiter - Horizontal Stabilizer Effectiveness at Various Alphas	(I)	Angle of Attack	646-648
15	Straight Wing Orbiter - Elevator Effectiveness at Various Alphas	(D)	Angle of Attack	649-651

DATA PLOT INDEX
(Continued)

TITLE NUMBER	TITLE	PLOTTED COEFFICIENTS SCHEDULE	CONDITIONS VARYING	PAGES
16	Straight Wing Orbiter - Horizontal Stabilizer Effectiveness Derivatives	(J)	N/A	652-657

PLOTTED COEFFICIENT SCHEDULES:

- (A) CL, CDF, CIM, L/D, XCP/L, CAB, CAF, and CN vs. α ; CL vs. CLM; CL vs. CDF
- (B) Schedule (A) plus CY, CLN, and CSL vs. α
- (C) CY, CLN, CSL, CYN, and CBL vs. β ; CY, CLN, and CSL vs. M
- (D) DCIM, DCL, and DCDF vs. HEAVIER
- (E) DCIMDE, DCL/DE, and DCDFDE vs. α
- (F) L/DMAX, ALFLDX, and CLLDMX vs. M
- (G) CN, CAF, CAB, CL, CDF, CIM, and L/D vs α ; CL vs. CLM; CL vs. CDF
- (H) Schedule (G) plus CY, CLN, AND CSL vs. α
- (I) DCIM, DCL, and DCDF vs. HEAIL
- (J) DCIMDH, DCL/DH, DCDFDH, DCIMDE, DCL/DE, and DCDFDE vs. α

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) the 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:

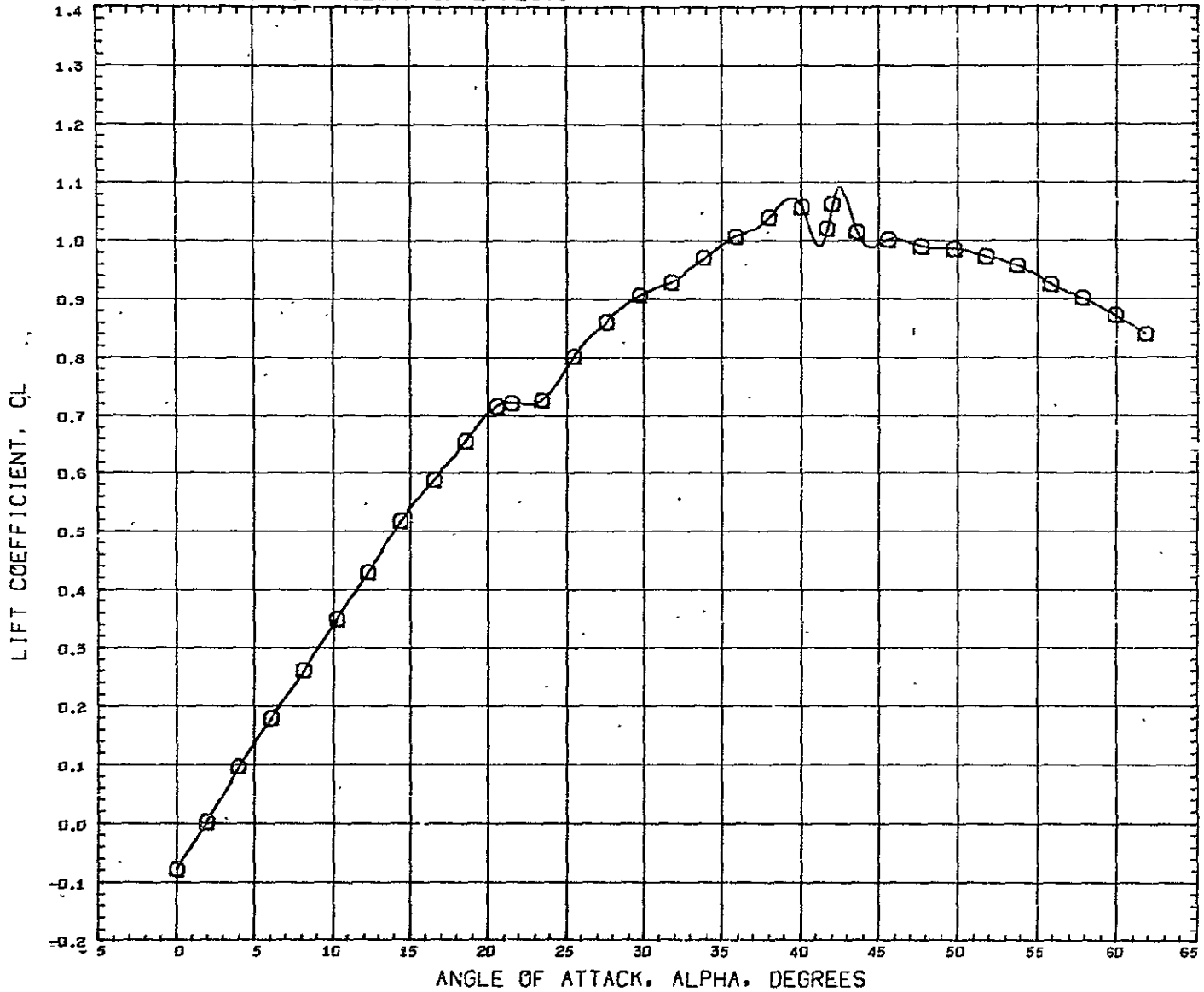
NASA AMES	Mr. V. Stevens
NASA MSC	Mr. R. Nelson
NASA MSFC	Mr. J. Weaver
NAR	Mr. C. R. Leef

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

J. L. Glynn
Department 2780
Chrysler Corporation Space Division
New Orleans, La. 70129

(504) 255-2304

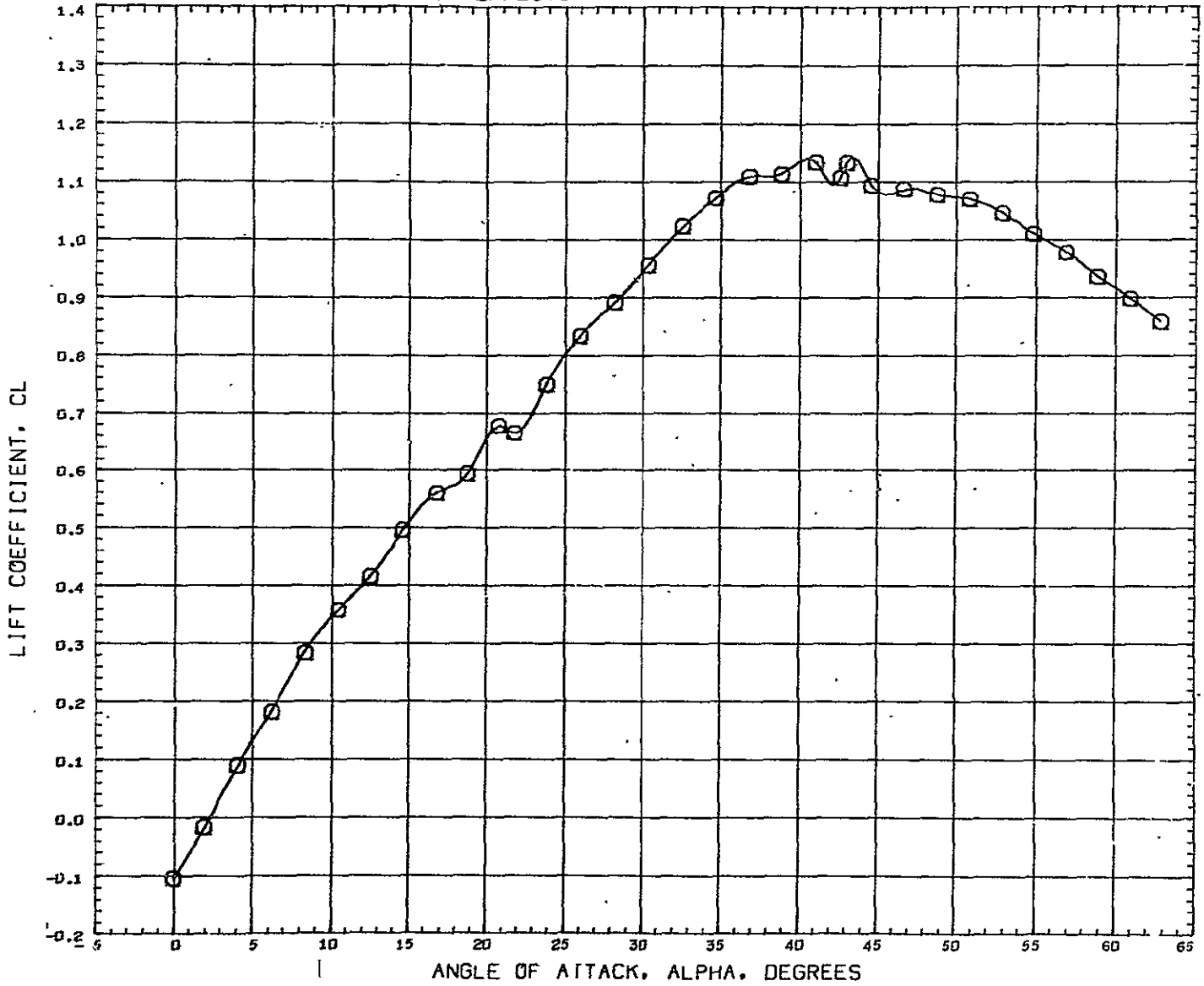
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MACH 5.598

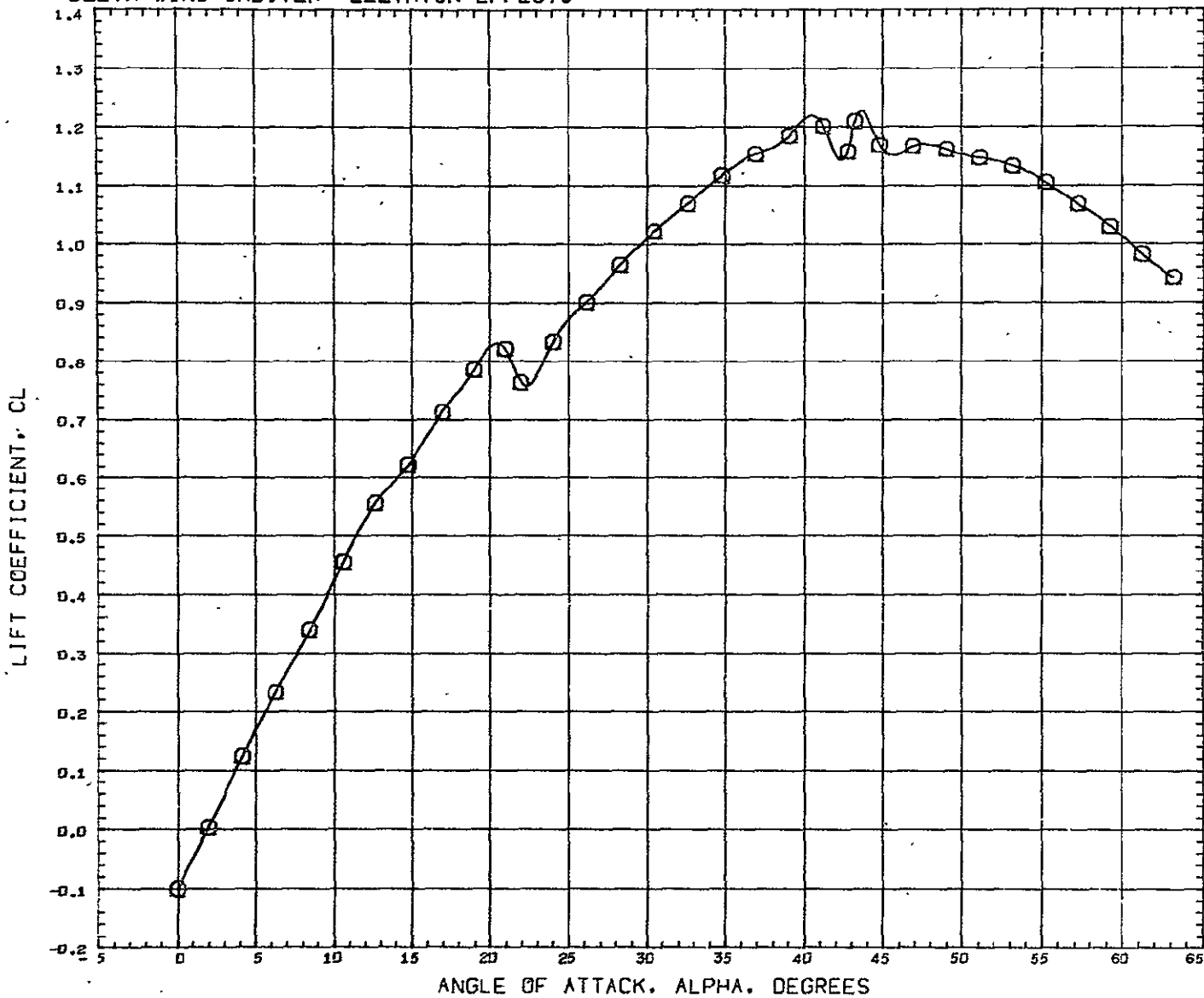
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MACH 0.899

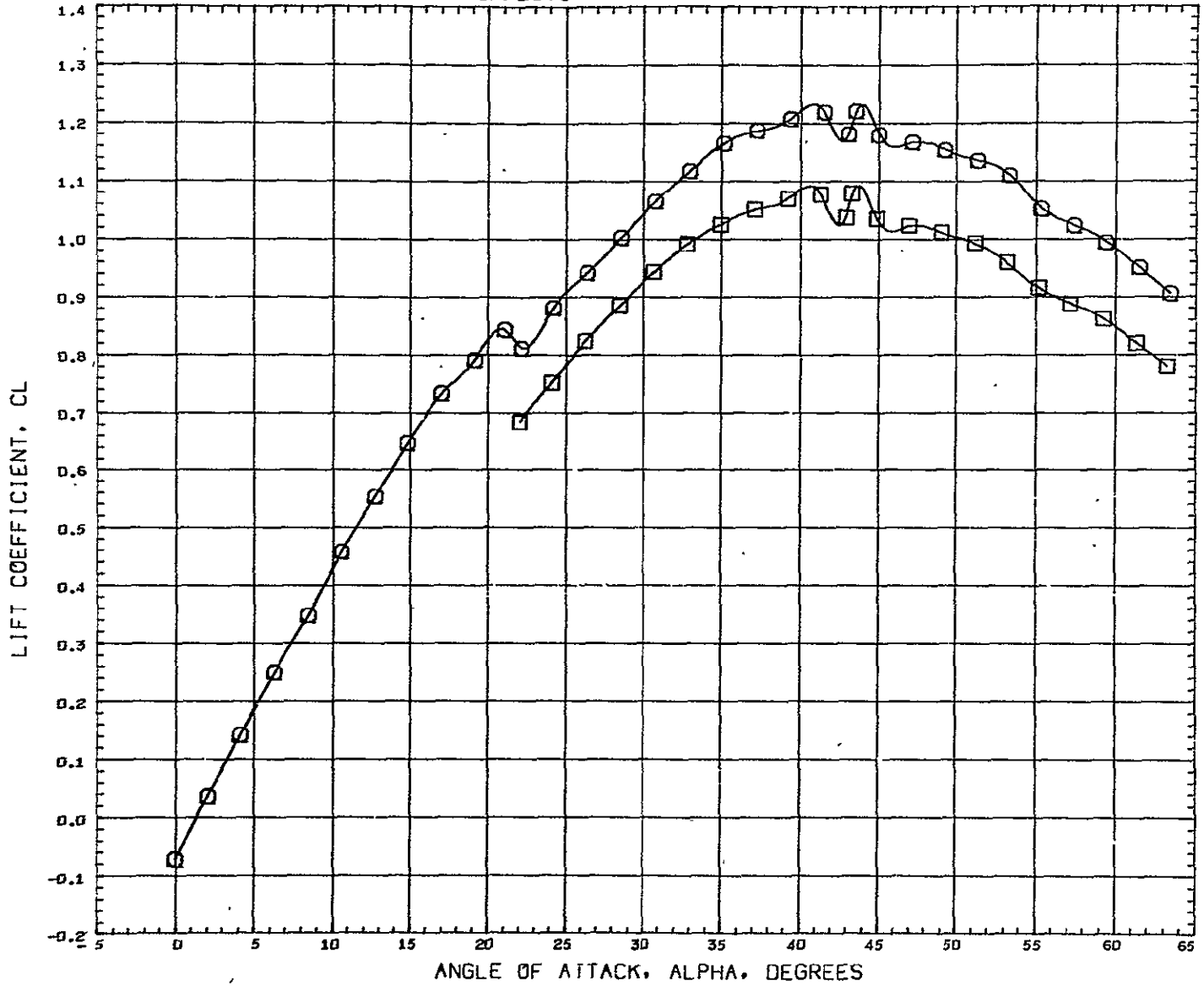
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MACH 1.003

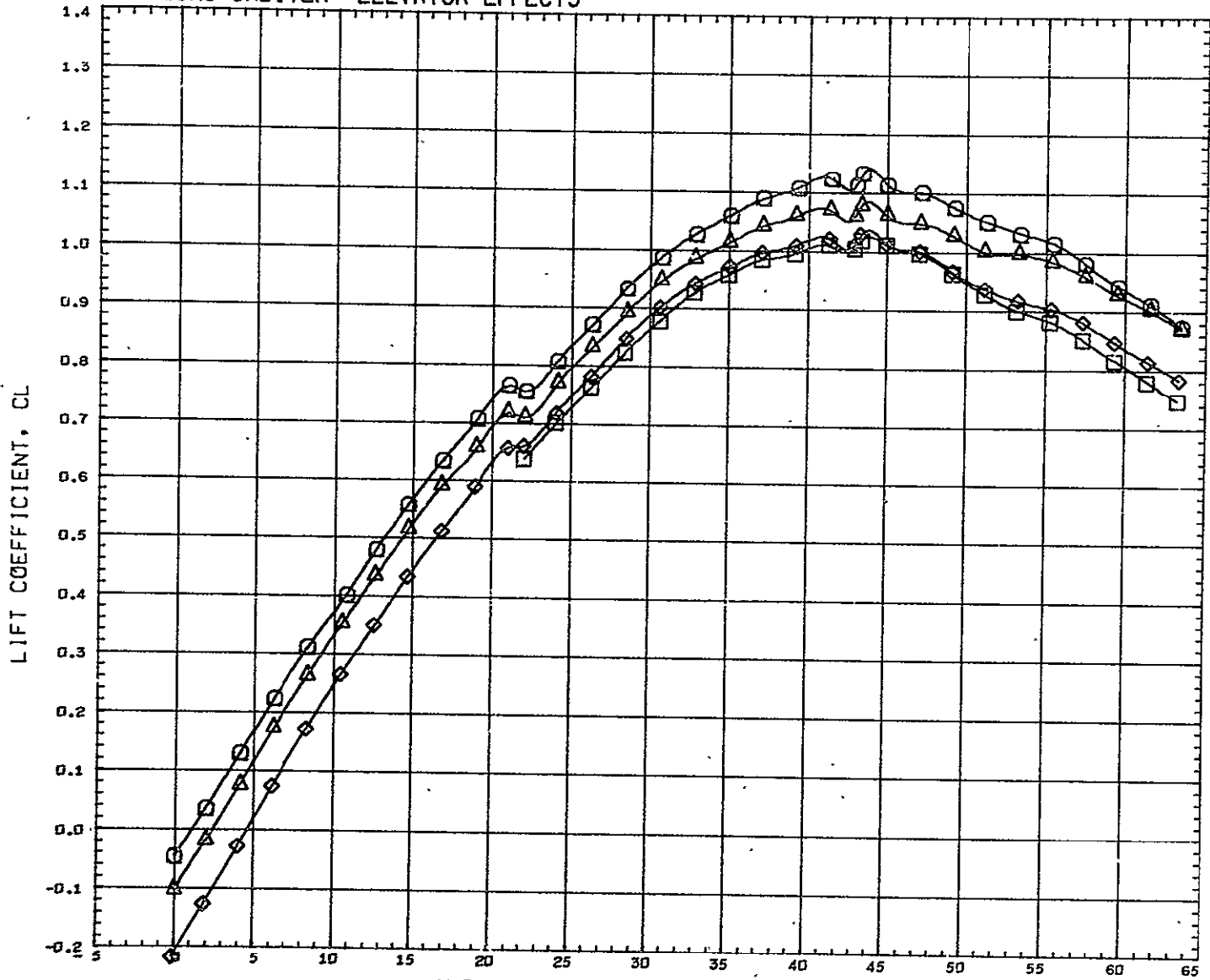
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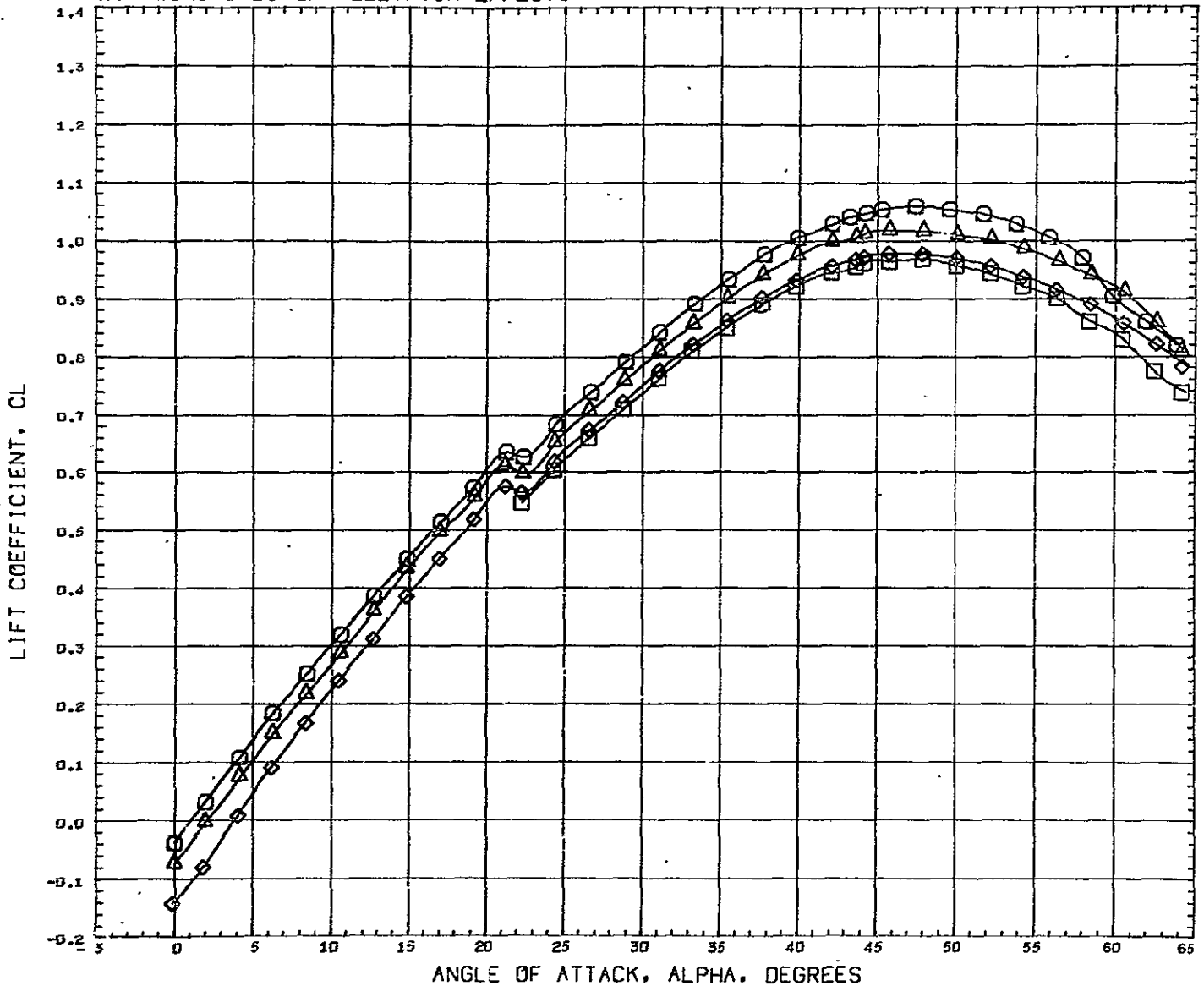
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MACH 1.458

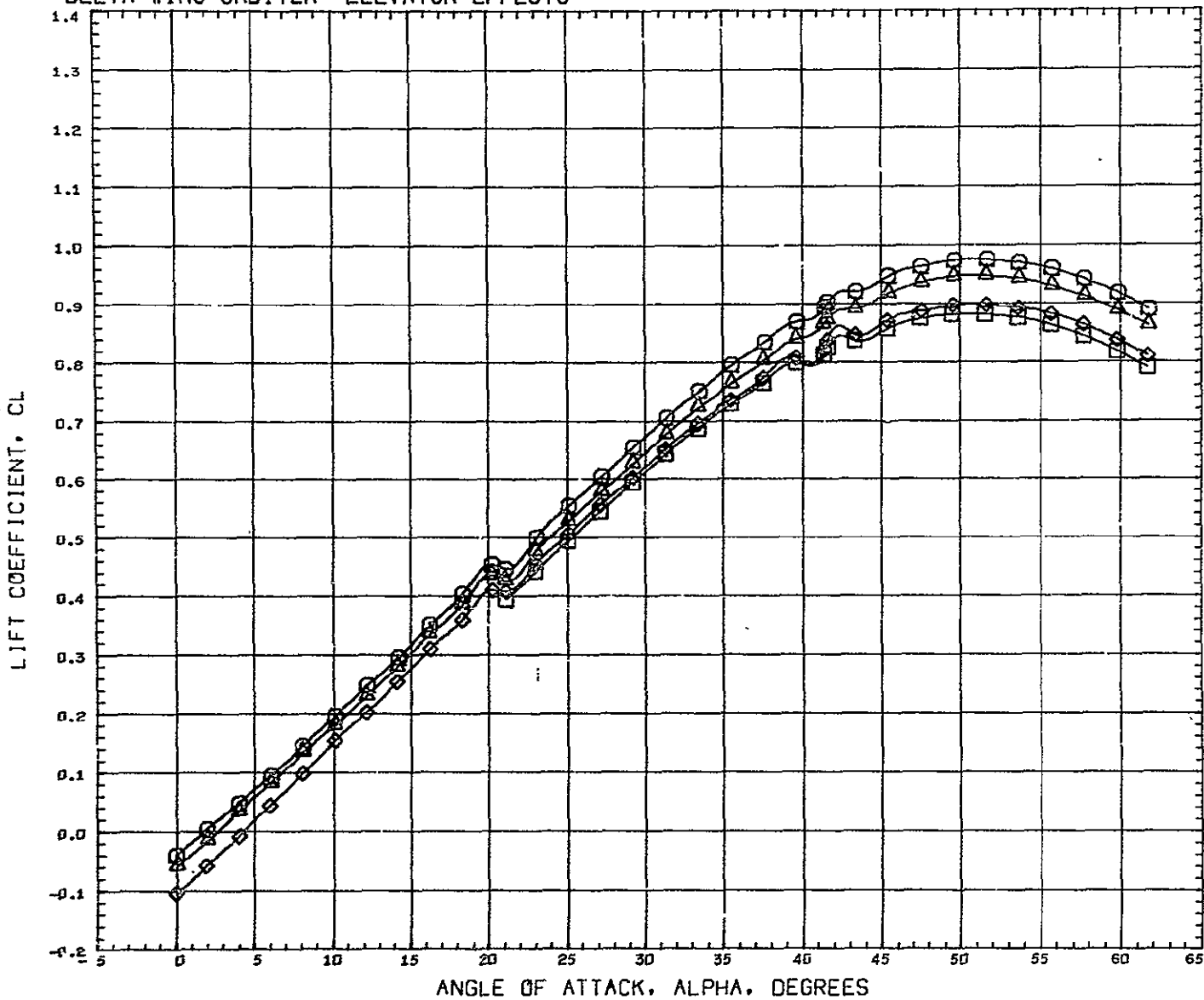
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NACH 1.965

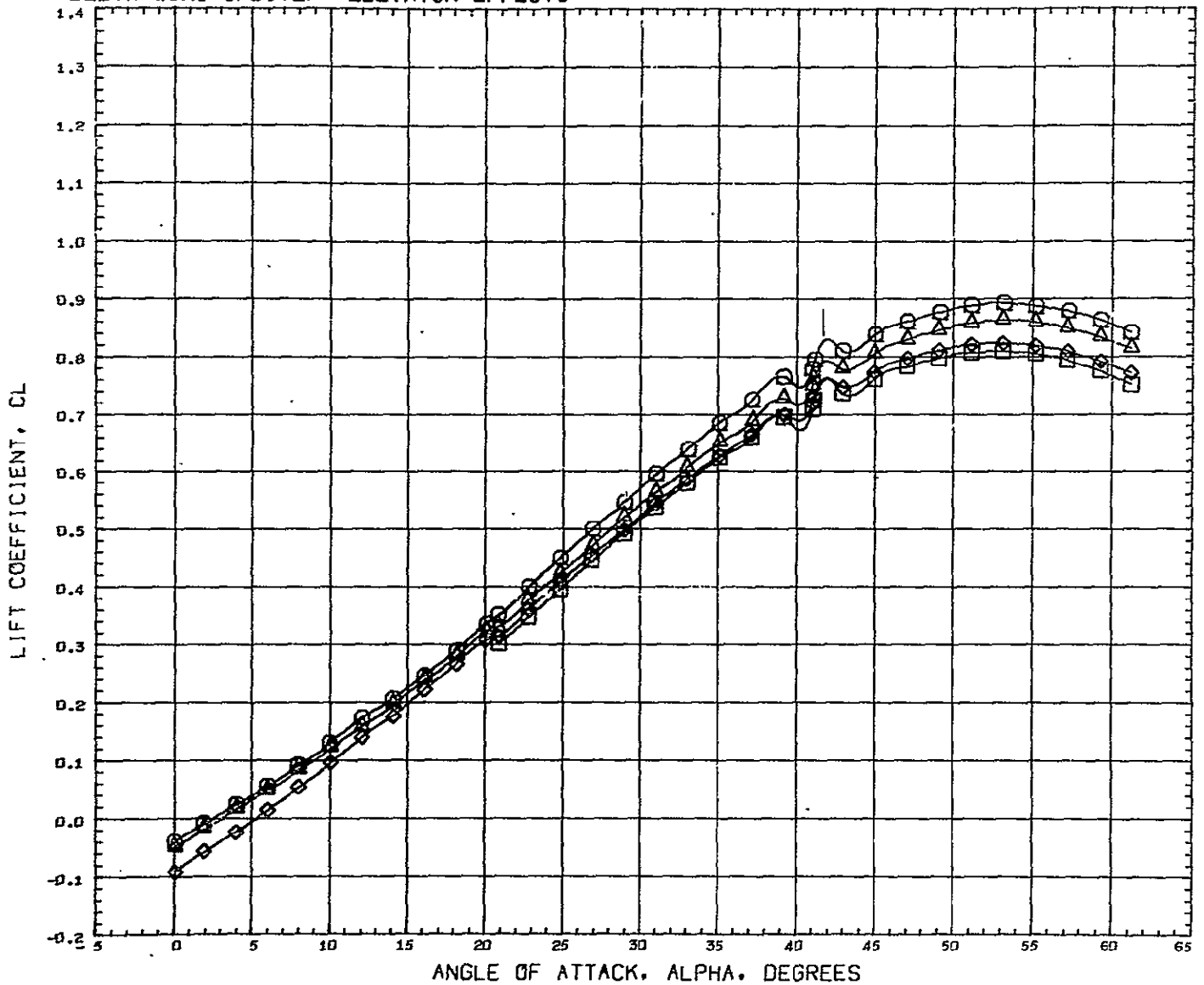
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MACH 2.990

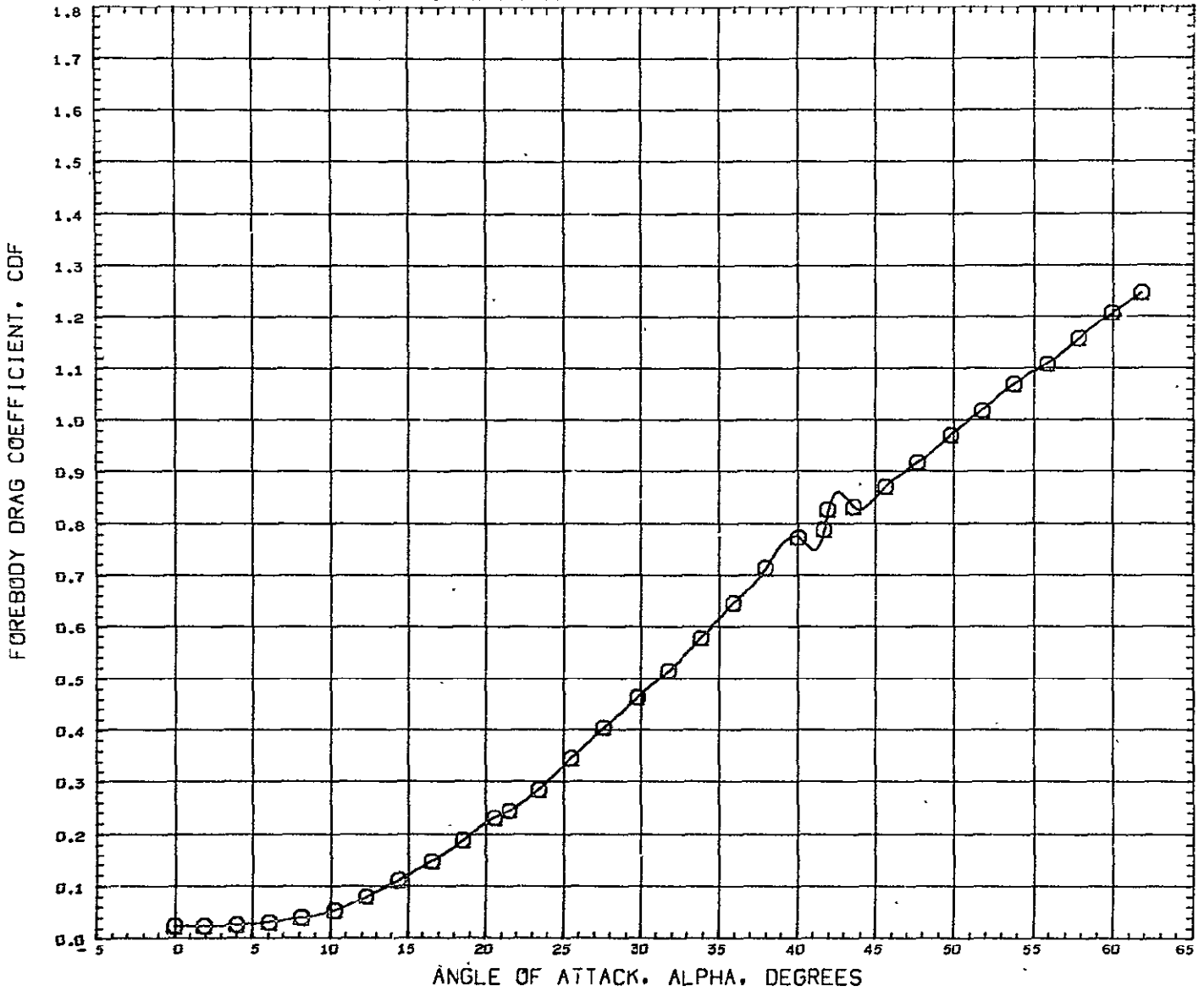
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MACH 4.959

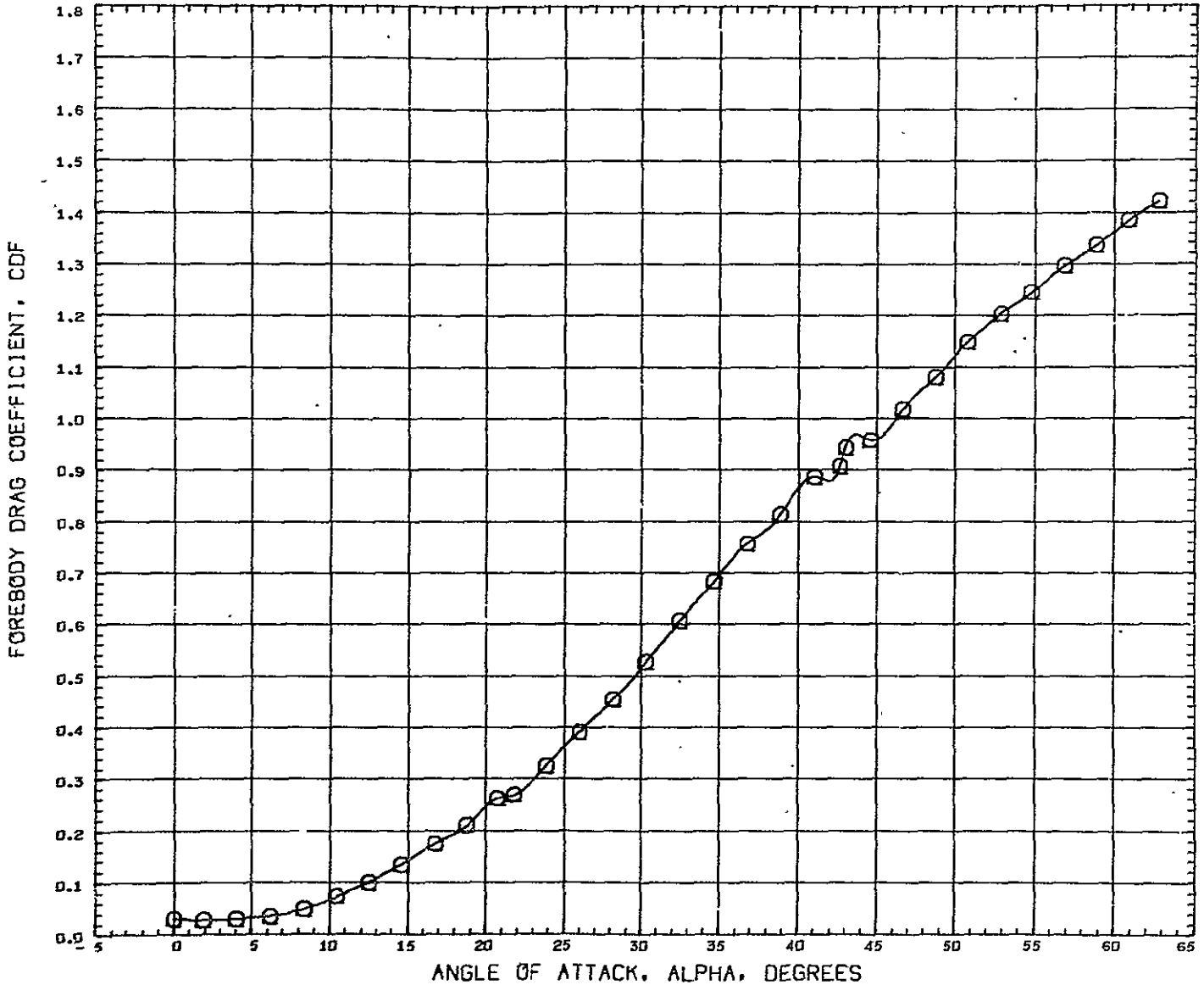
DELTA WING ORBITER- ELEVATOR EFFECTS



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MACH - 0.596

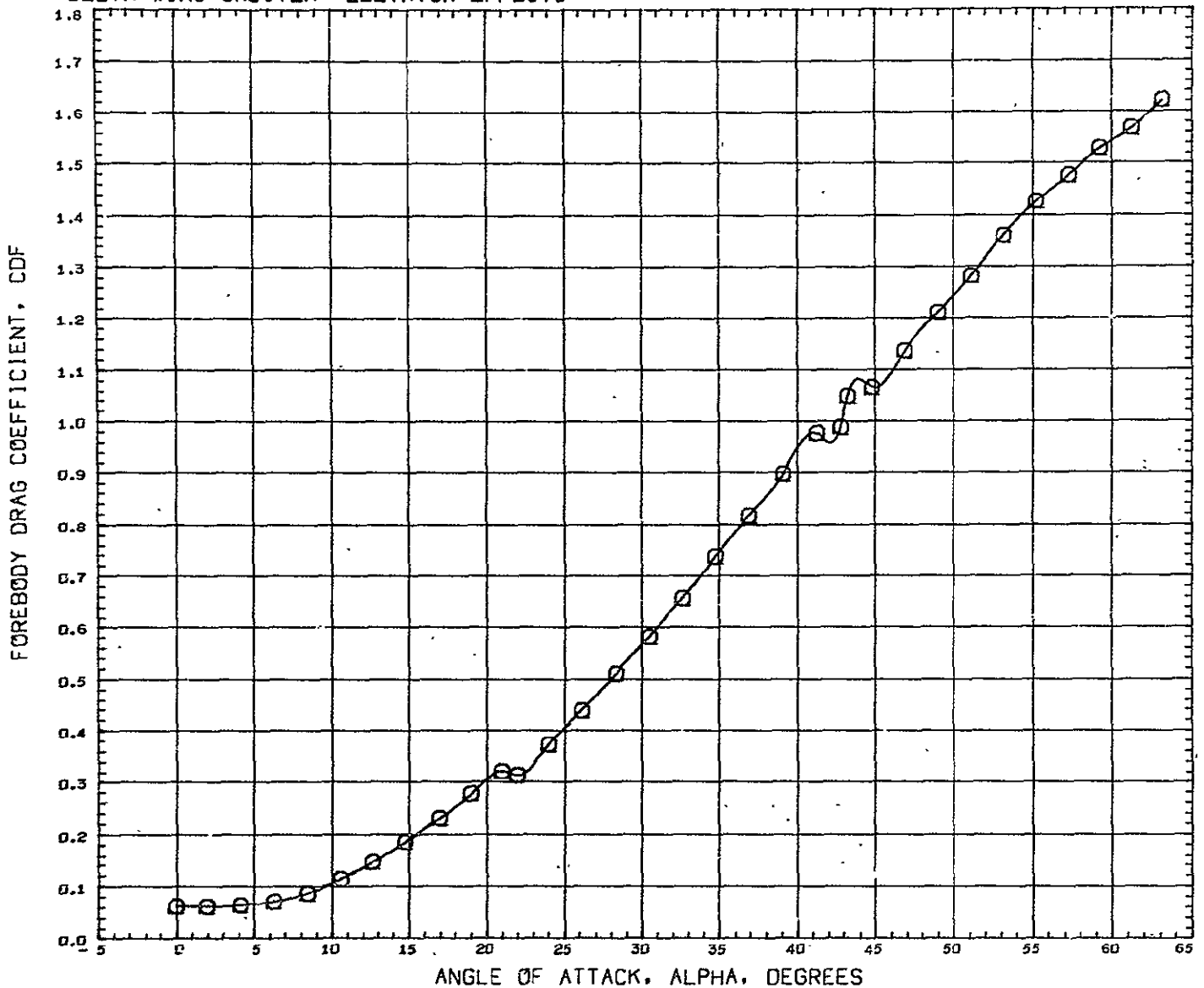
DELTA WING ORBITER- ELEVATOR EFFECTS



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MACH 5.899

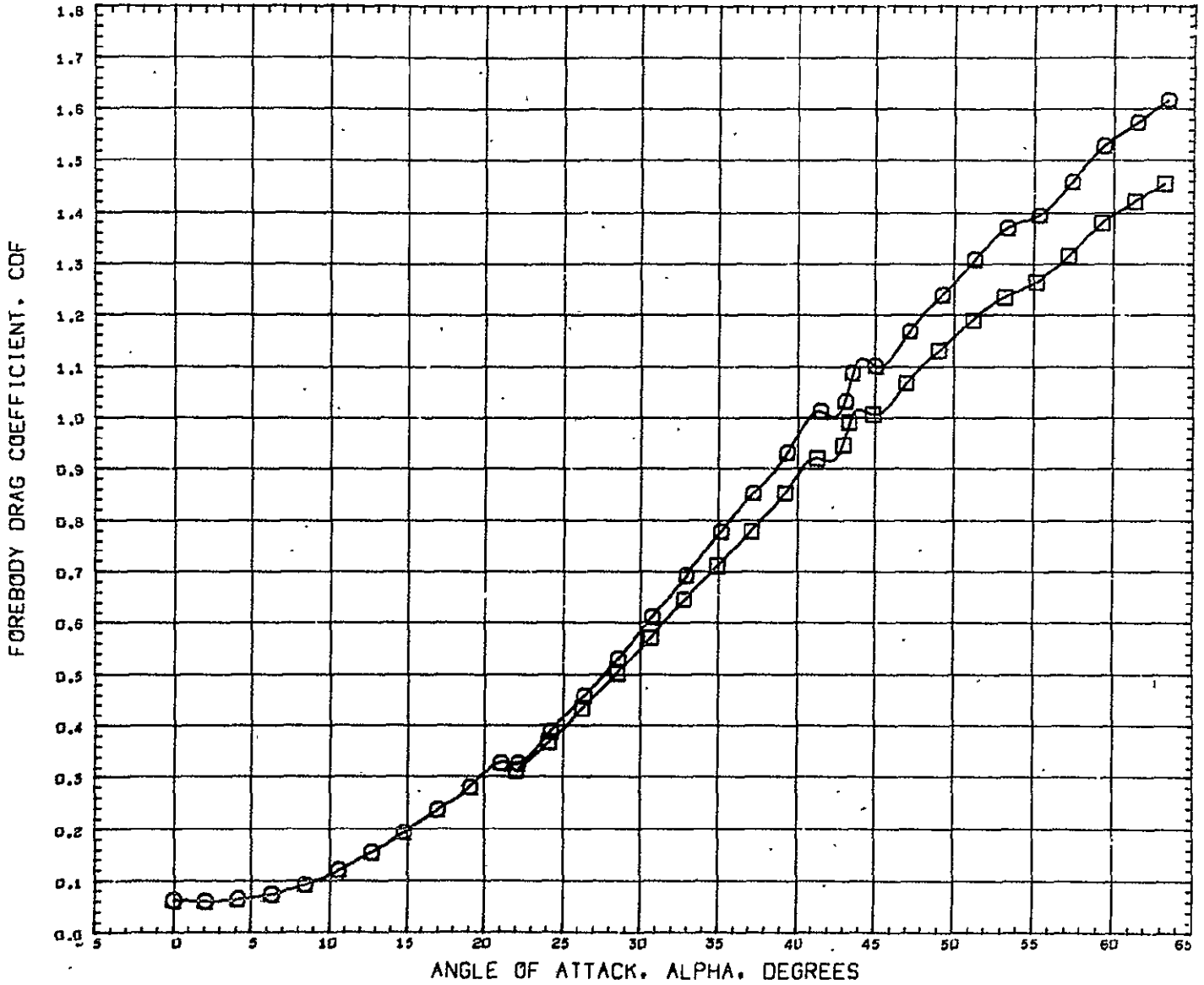
DELTA WING ORBITER- ELEVATOR EFFECTS



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MACH 1.003

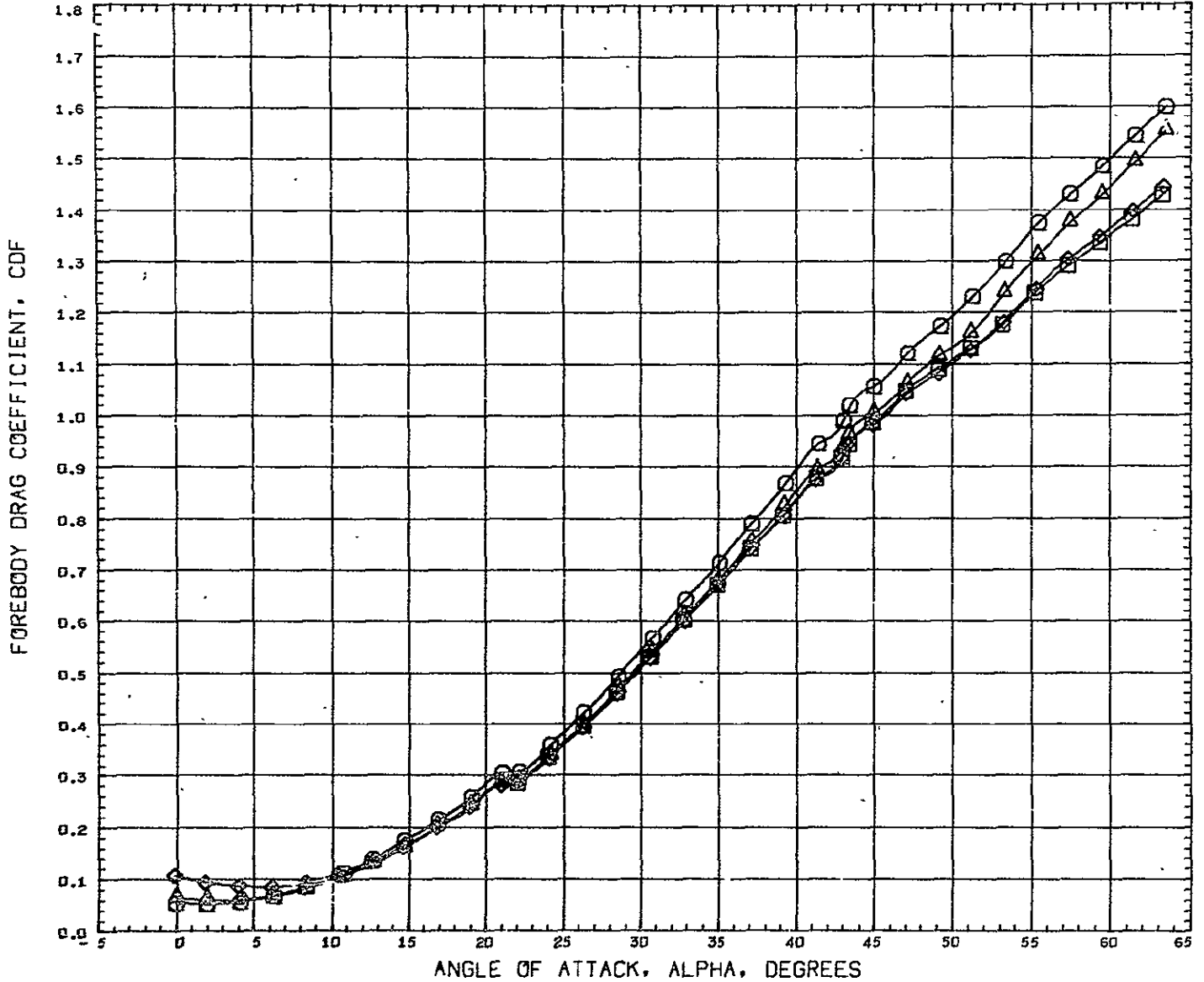
DELTA WING ORBITER- ELEVATOR EFFECTS



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KACH 1.199

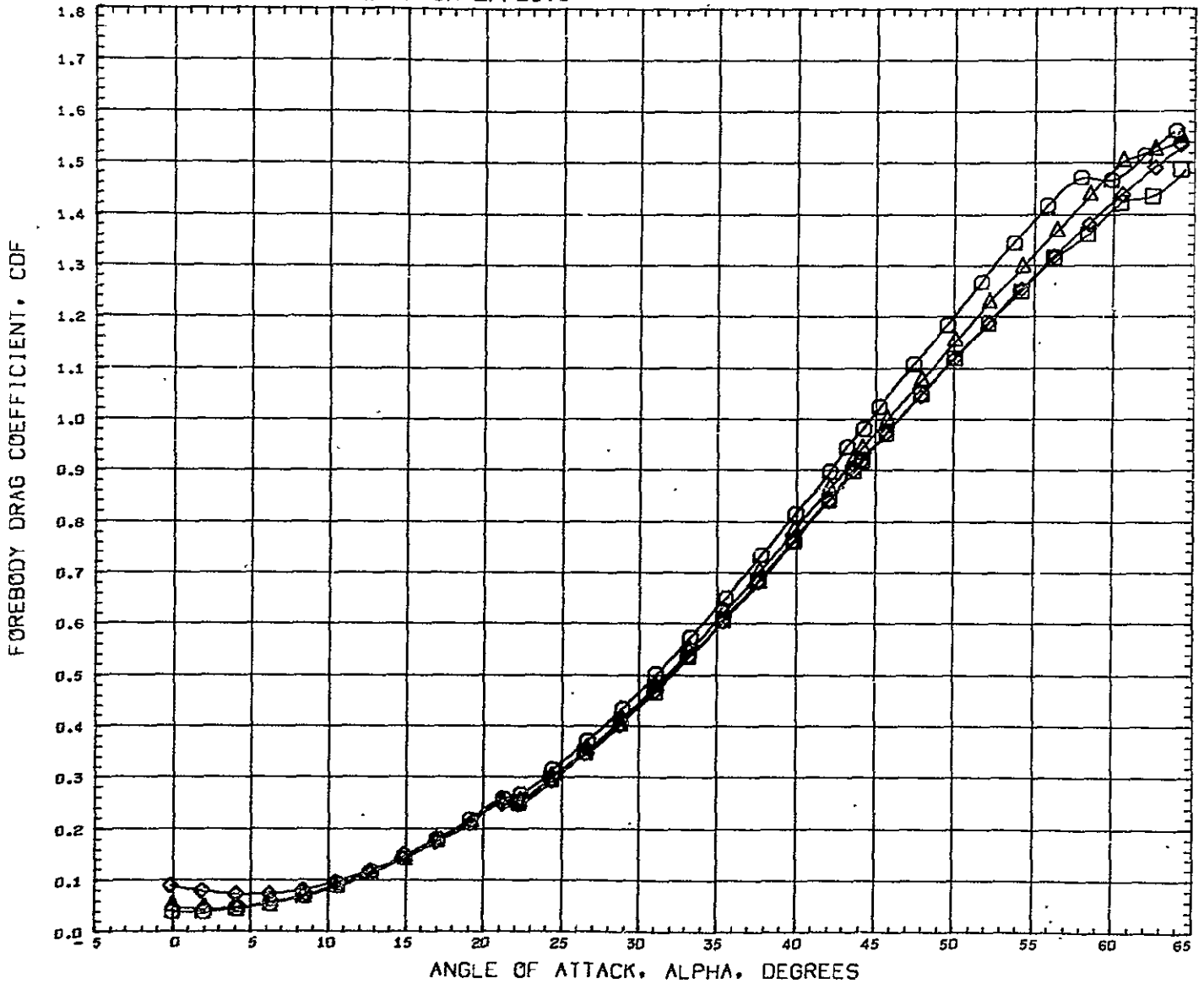
DELTA WING ORBITER- ELEVATOR EFFECTS



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MACH 1.458

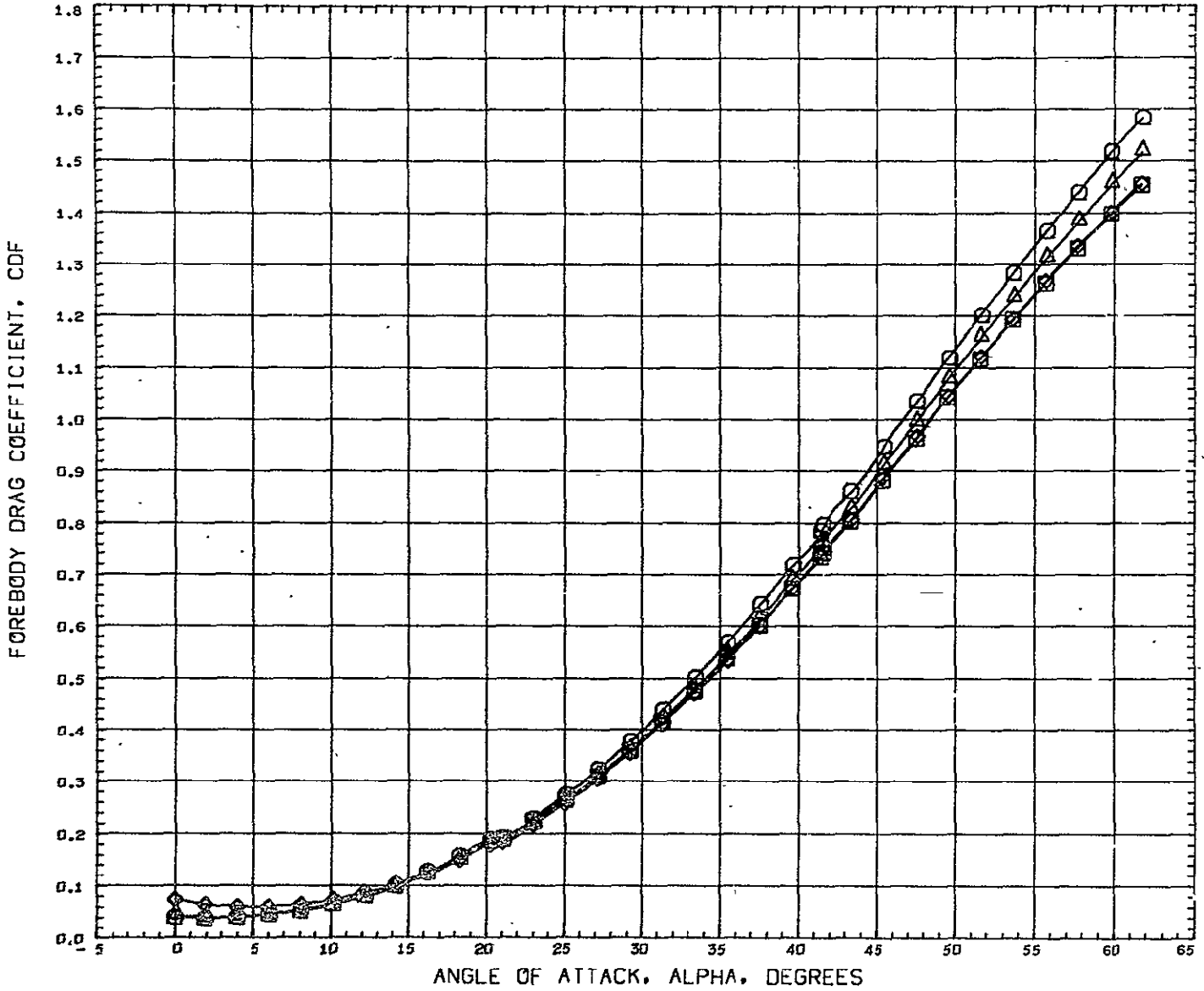
DELTA WING ORBITER- ELEVATOR EFFECTS



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MACH 1.965

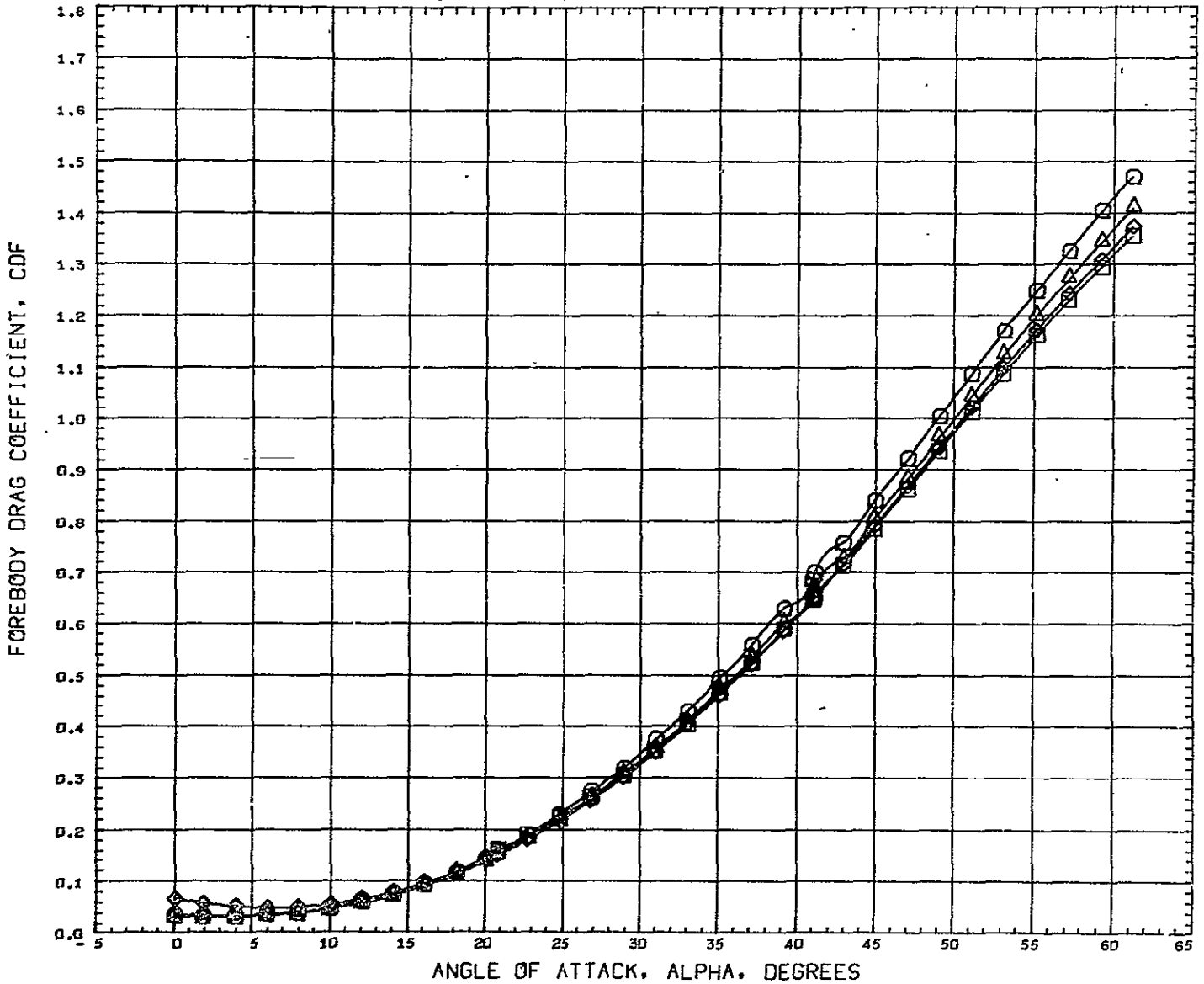
DELTA WING ORBITER- ELEVATOR EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(R2726S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	0.000	0.000	REFS 6084.3340 SQ FT
(R2757S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	-10.000	0.000	0.000	0.000	KEFL 821.2004 INCHES
(R2758S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	-30.000	0.000	0.000	0.000	REFB 1422.8040 INCHES
(R2759S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	-45.000	0.000	0.000	0.000	XMRP 1422.5040 INCHES
						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 2.990

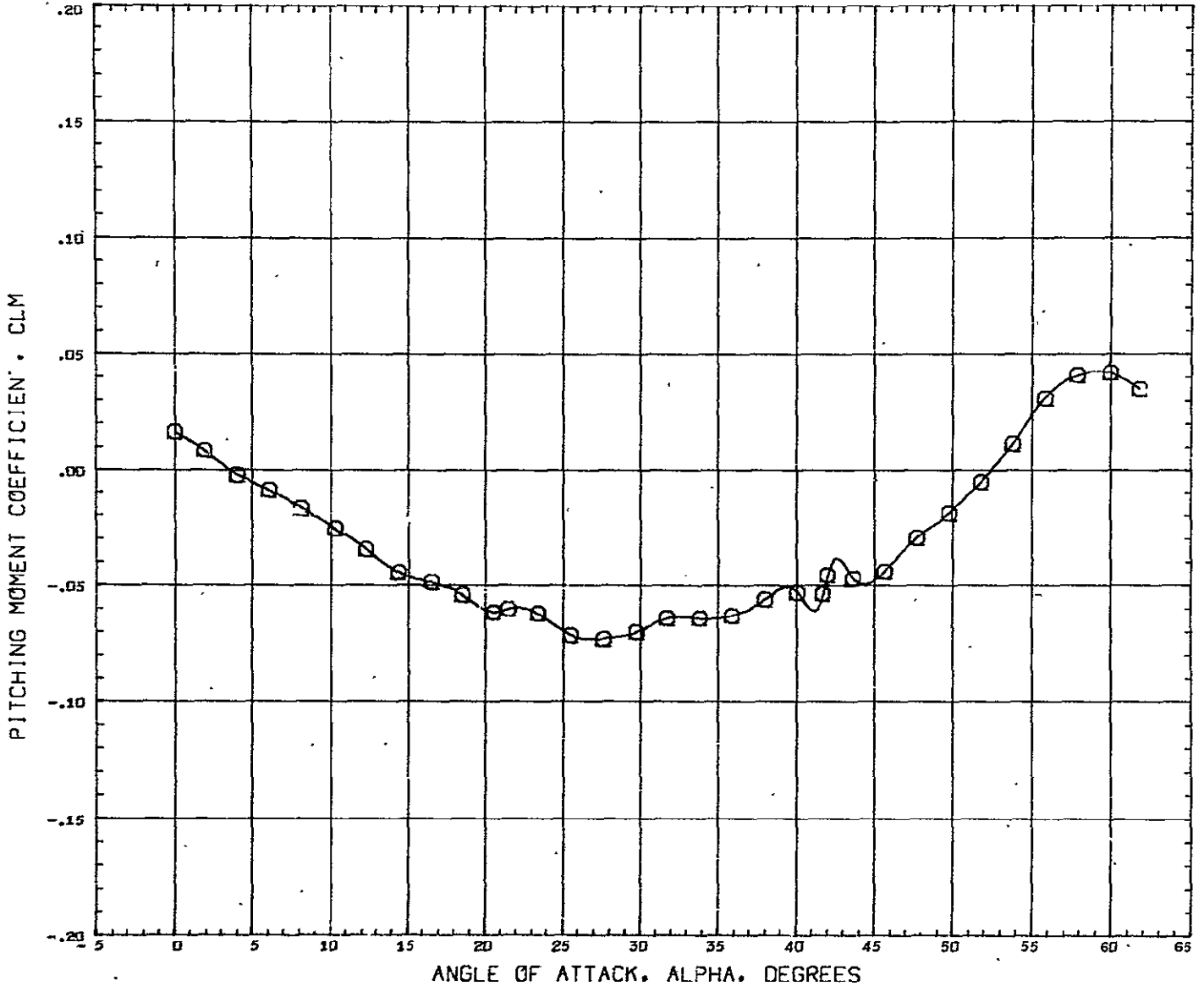
DELTA WING ORBITER- ELEVATOR EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(R2756S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(R2757S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	-10.000	0.000	0.000	0.000	REFL 821.2004 INCHES
(R2758S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	-30.000	0.000	0.000	0.000	REFB 1422.8040 INCHES
(R2759S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	-45.000	0.000	0.000	0.000	XMPF 1422.5040 INCHES
						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 4.959

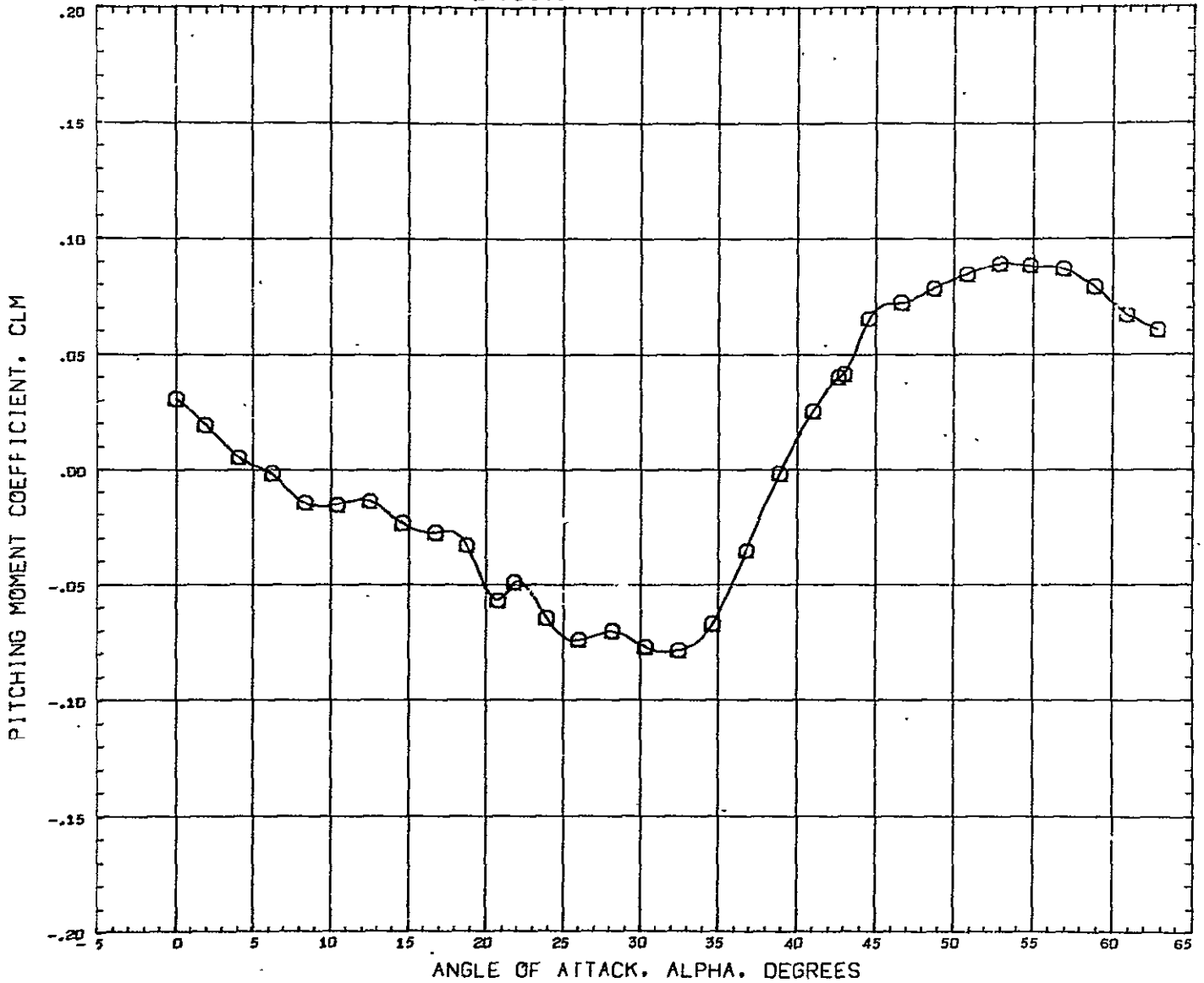
DELTA WING ORBITER- ELEVATOR EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ZLVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(R2756S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(R2757S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	-10.000	0.000	0.000	0.000	REFL 821.2004 INCHES
(R2758S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	-30.000	0.000	0.000	0.000	REFB 1422.8040 INCHES
(R2759S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	-45.000	0.000	0.000	0.000	YMRP 1422.5040 INCHES
						YMRF 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 0.598

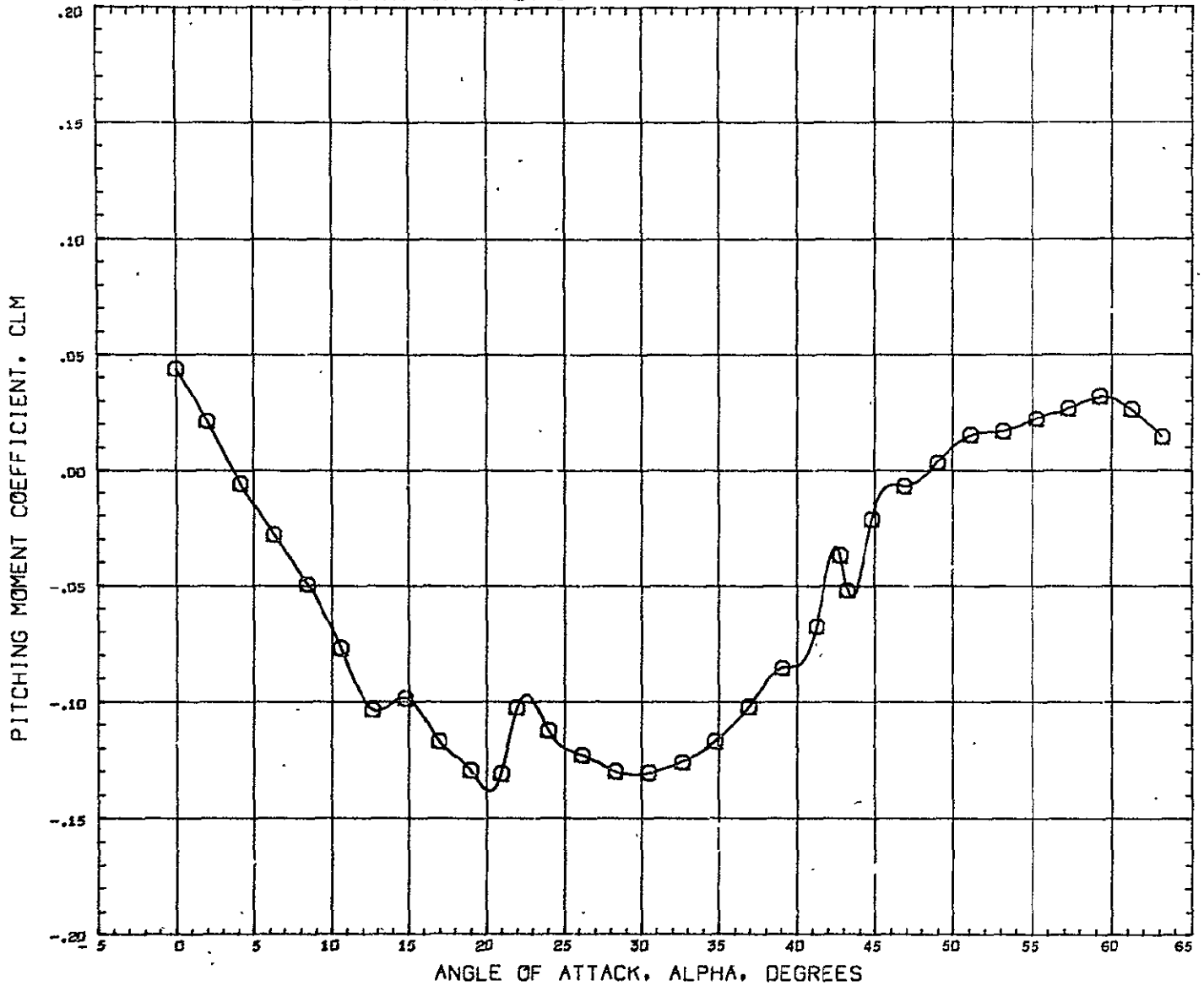
DELTA WING ORBITER- ELEVATOR EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(R2756S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(R2757S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	-10.000	0.000	0.000	0.000	REFL 821.2004 INCHES
(R2758S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	-30.000	0.000	0.000	0.000	REFB 1422.8040 INCHES
(R2759S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	-45.000	0.000	0.000	0.000	XMRP 1422.5040 INCHES
						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 0.899

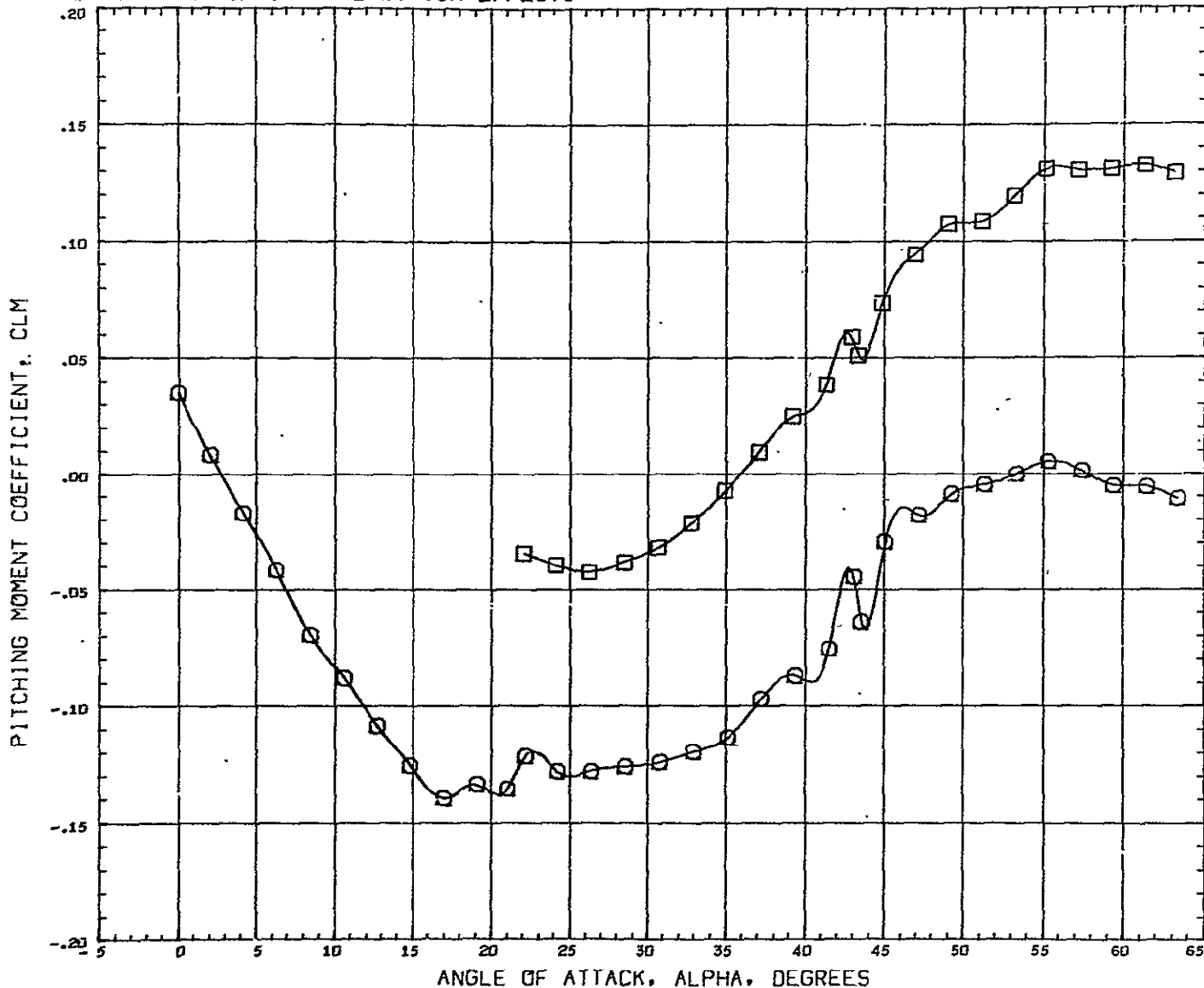
DELTA WING ORBITER- ELEVATOR EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(R2756S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(R2757S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	-10.000	0.000	0.000	0.000	REFL 821.2004 INCHES
(R2758S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	-30.000	0.000	0.000	0.000	REFB 1422.804C INCHES
(R2759S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	-45.000	0.000	0.000	0.000	XMRP 1422.5040 INCHES
						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

HACH 1.003

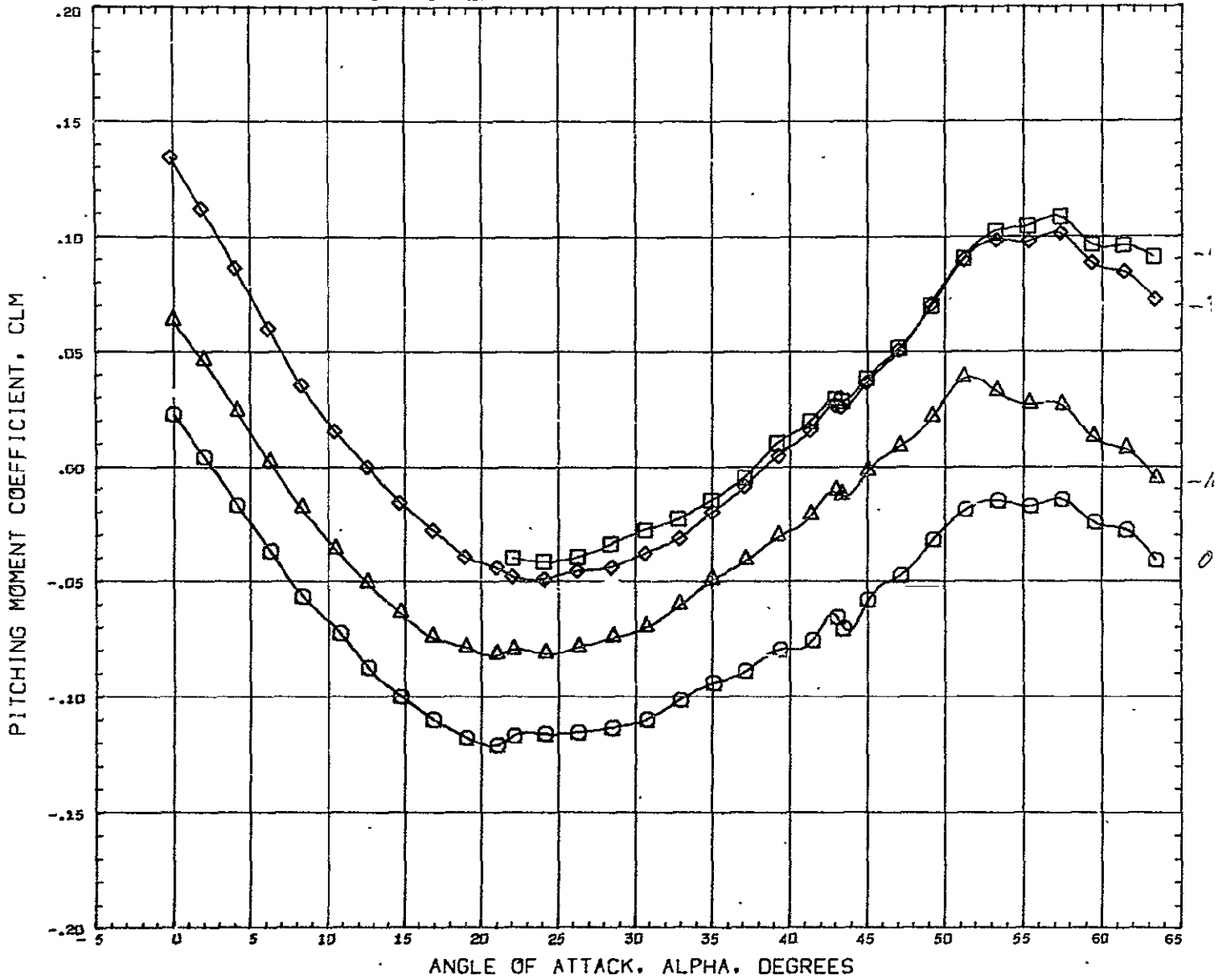
DELTA WING ORBITER- ELEVATOR EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVA IN	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(R2756S)	MSFC478 NR DELTA ORBITER 85W17E10V17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(R2757S)	MSFC478 NR DELTA ORBITER 85W17E10V17J2X	-10.000	0.000	0.000	0.000	REFL 821.2004 INCHES
(R2758S)	MSFC478 NR DELTA ORBITER 85W17E10V17J2X	-30.000	0.000	0.000	0.000	REFB 1422.8040 INCHES
(R2759S)	MSFC478 NR DELTA ORBITER 85W17E10V17J2X	-45.000	0.000	0.000	0.000	XMRP 1422.5040 INCHES
						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 1.199

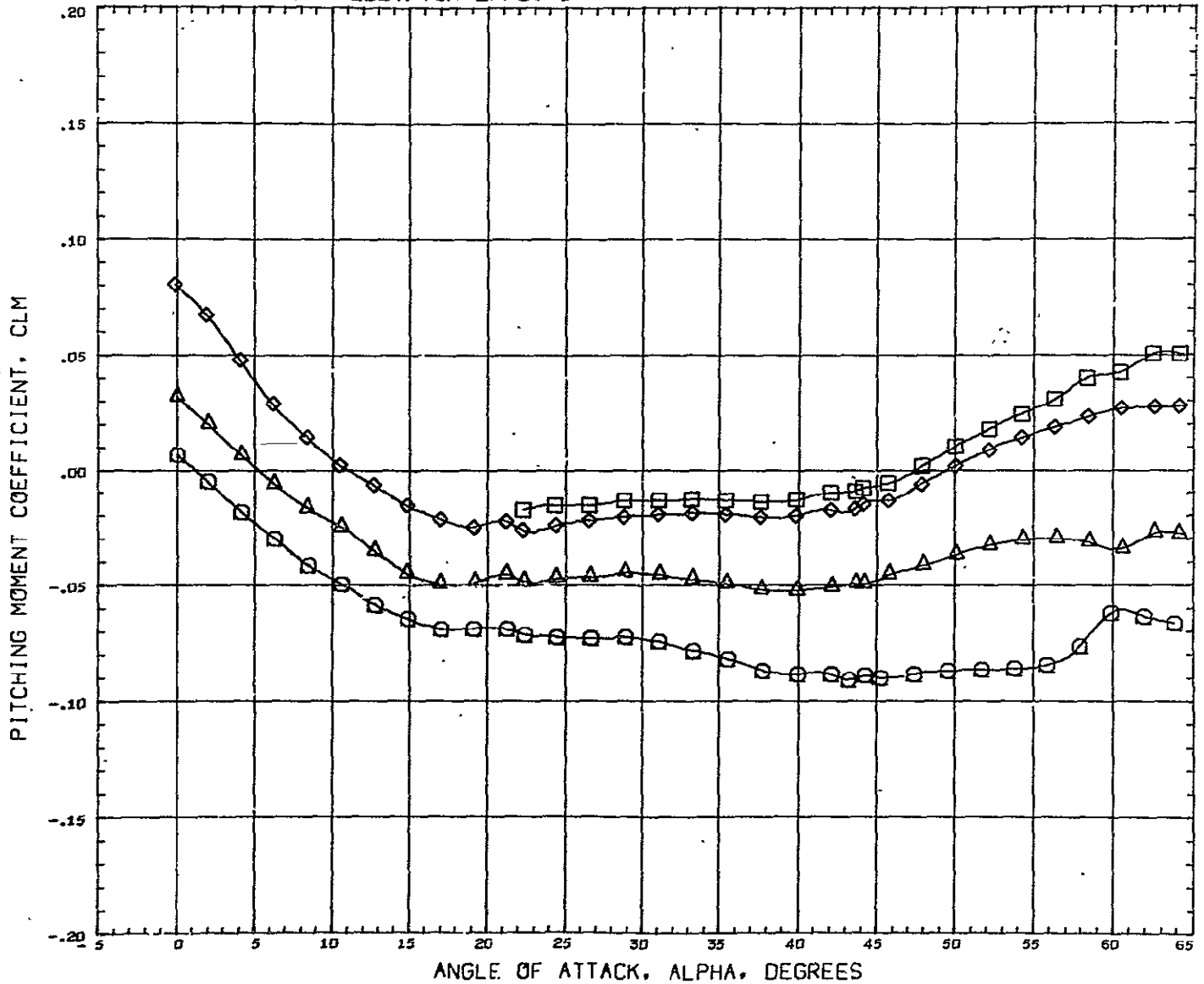
DELTA WING ORBITER- ELEVATOR EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(R2756S)	MSFC478 NR DELTA ORBITER 05W17E10V17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(R2757S)	MSFC478 NR DELTA ORBITER 05W17E10V17J2X	-10.000	0.000	0.000	0.000	REFL 821.2004 INCHES
(R2758S)	MSFC478 NR DELTA ORBITER 05W17E10V17J2X	-30.000	0.000	0.000	0.000	REFB 1422.8040 INCHES
(R2759S)	MSFC478 NR DELTA ORBITER 05W17E10V17J2X	-45.000	0.000	0.000	0.000	XMRP 1422.8040 INCHES YMRP 0.0000 INCHES ZMRP 130.0004 INCHES SCALE 0.0035 SCALE

MACH 1.458

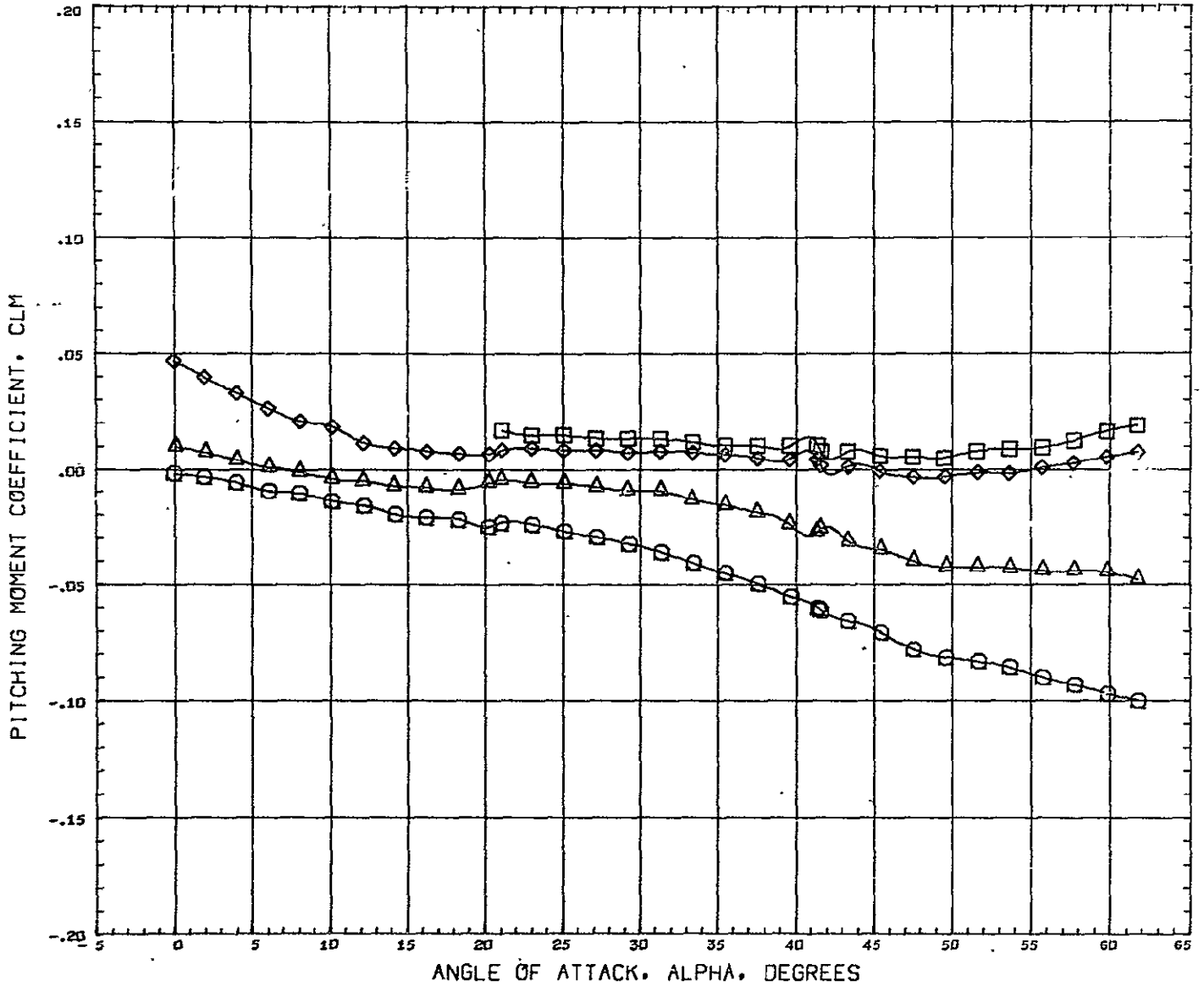
DELTA WING ORBITER- ELEVATOR EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(R2756S)	MSFC478 NR DELTA ORBITER B5W17E1DV17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(R2757S)	MSFC478 NR DELTA ORBITER B5W17E1DV17J2X	-10.000	0.000	0.000	0.000	REFL 821.2004 INCHES
(R2758S)	MSFC478 NR DELTA ORBITER B5W17E1DV17J2X	-30.000	0.000	0.000	0.000	REFB 1422.8340 INCHES
(R2759S)	MSFC478 NR DELTA ORBITER B5W17E1DV17J2X	-45.000	0.000	0.000	0.000	XMRP 1422.5010 INCHES
						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 1.965

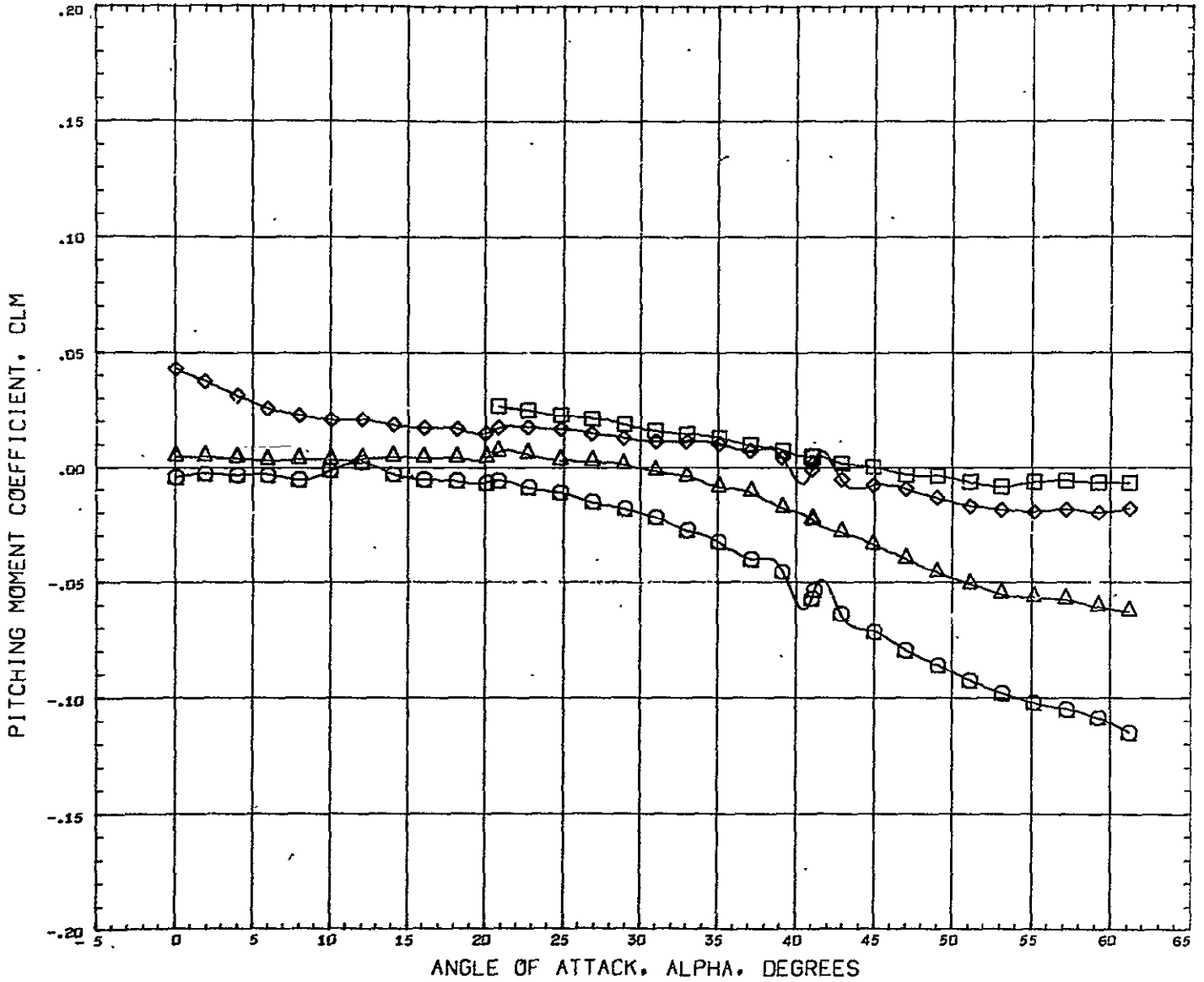
DELTA WING ORBITER- ELEVATOR EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(R2756S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(R2757S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	-10.000	0.000	0.000	0.000	REFL 821.2004 INCHES
(R2758S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	-30.000	0.000	0.000	0.000	REFB 1422.8040 INCHES
(R2759S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	-45.000	0.000	0.000	0.000	XMRP 1422.5040 INCHES
						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 2.990

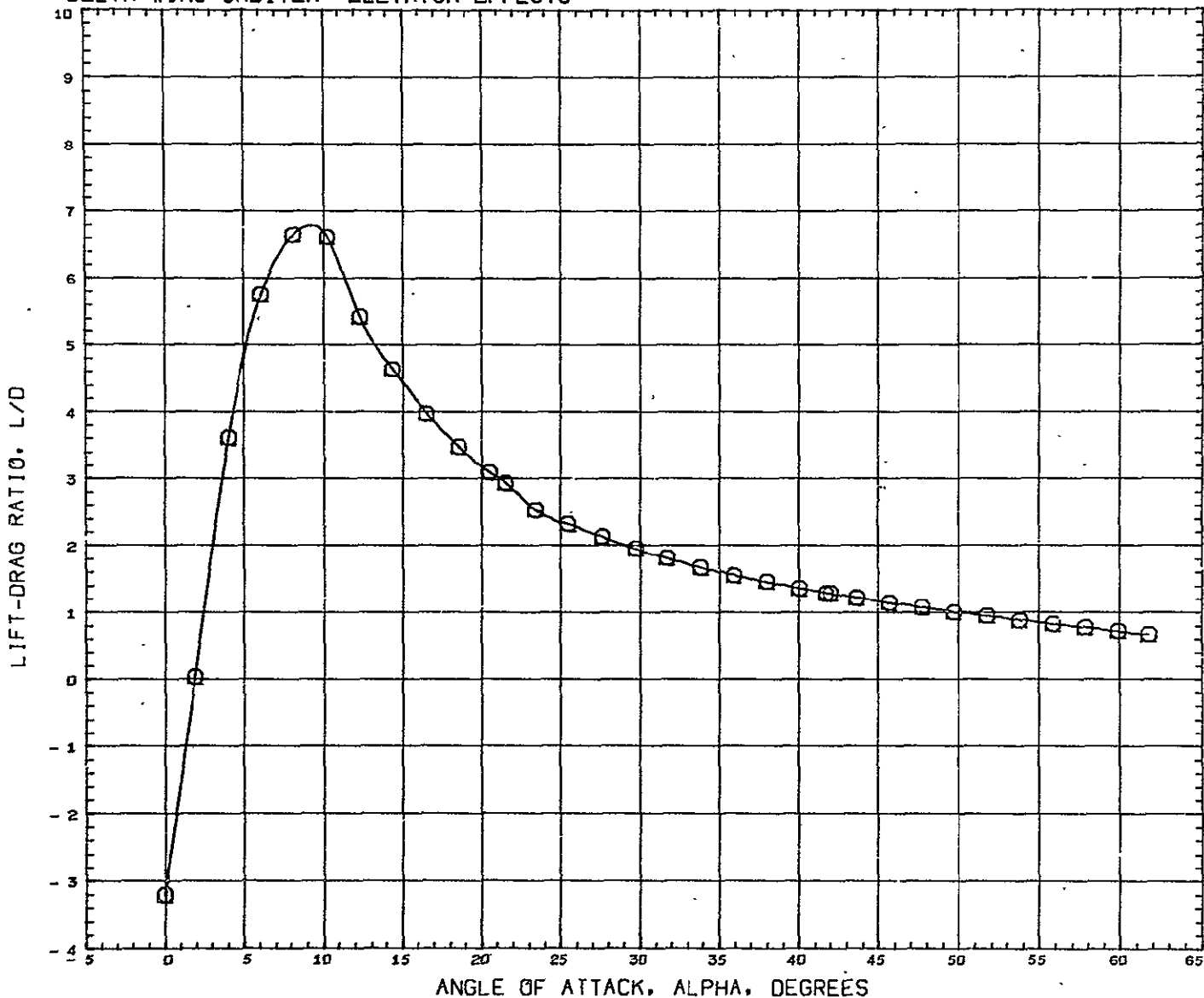
DELTA WING ORBITER- ELEVATOR EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(R2756S)	MSFC478 NR DELTA ORBITER B5W17E1DV17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(R2757S)	MSFC478 NR DELTA ORBITER B5W17E1DV17J2X	-10.000	0.000	0.000	0.000	REFL 921.2004 INCHES
(R2758S)	MSFC478 NR DELTA ORBITER B5W17E1DV17J2X	-30.000	0.000	0.000	0.000	REFB 1422.8040 INCHES
(R2759S)	MSFC478 NR DELTA ORBITER B5W17E1DV17J2X	-45.000	0.000	0.000	0.000	XMRP 1422.5040 INCHES YMRP 0.0000 INCHES ZMRP 130.0004 INCHES SCALE 0.0035 SCALE

MACH 4.959

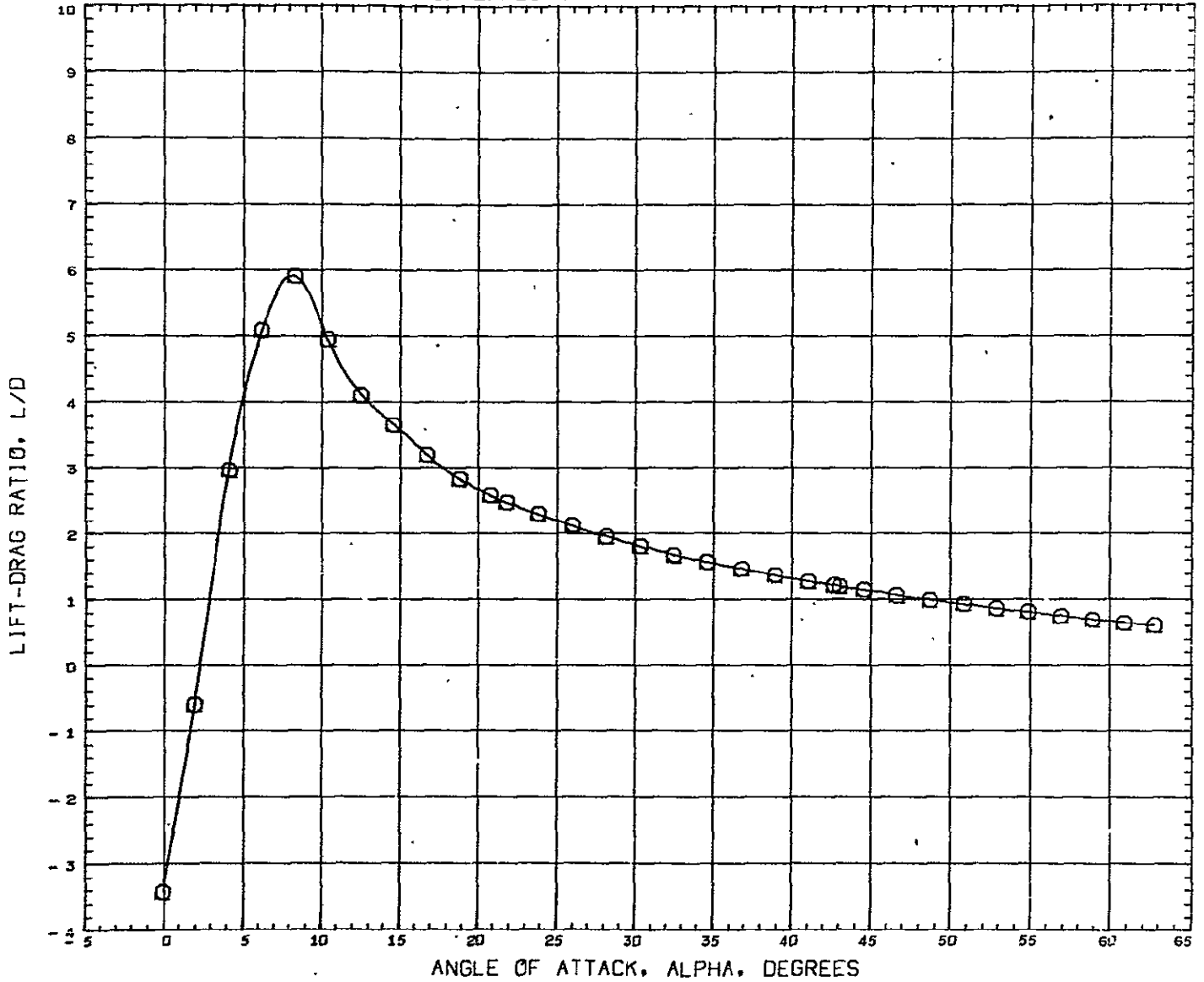
DELTA WING ORBITER- ELEVATOR EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(R2756S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(R2757S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	-10.000	0.000	0.000	0.000	REFL 821.2004 INCHES
(R2758S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	-30.000	0.000	0.000	0.000	REFB 1422.8040 INCHES
(R2759S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	-45.000	0.000	0.000	0.000	XMRP 1422.5040 INCHES
						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 0.598

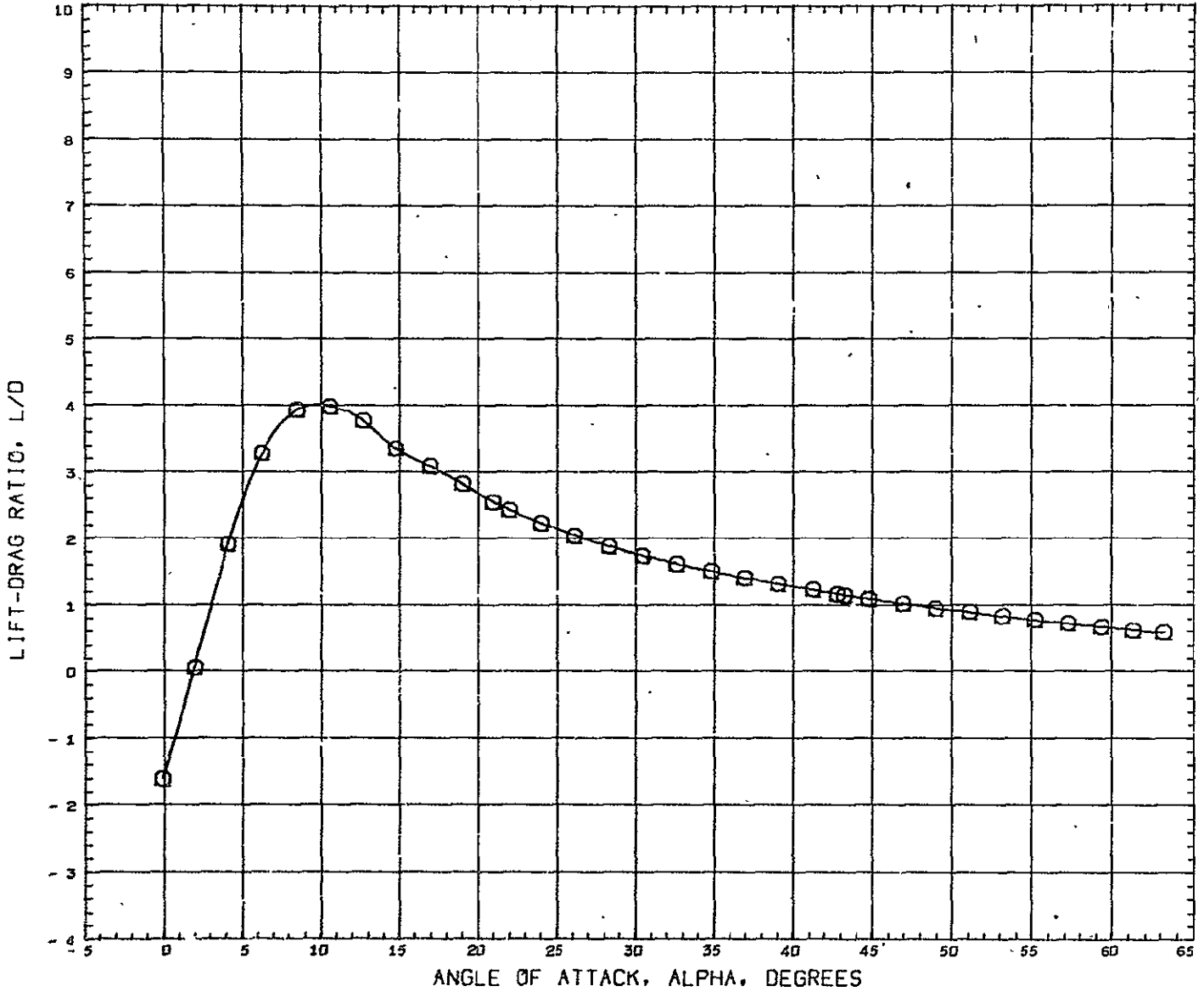
DELTA WING ORBITER- ELEVATOR EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(R2756S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(R2757S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	-10.000	0.000	0.000	0.000	REFL 821.2004 INCHES
(R2758S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	-30.000	0.000	0.000	0.000	REFB 1422.3040 INCHES
(R2759S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	-45.000	0.000	0.000	0.000	XMRP 1422.5040 INCHES
						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 0.899

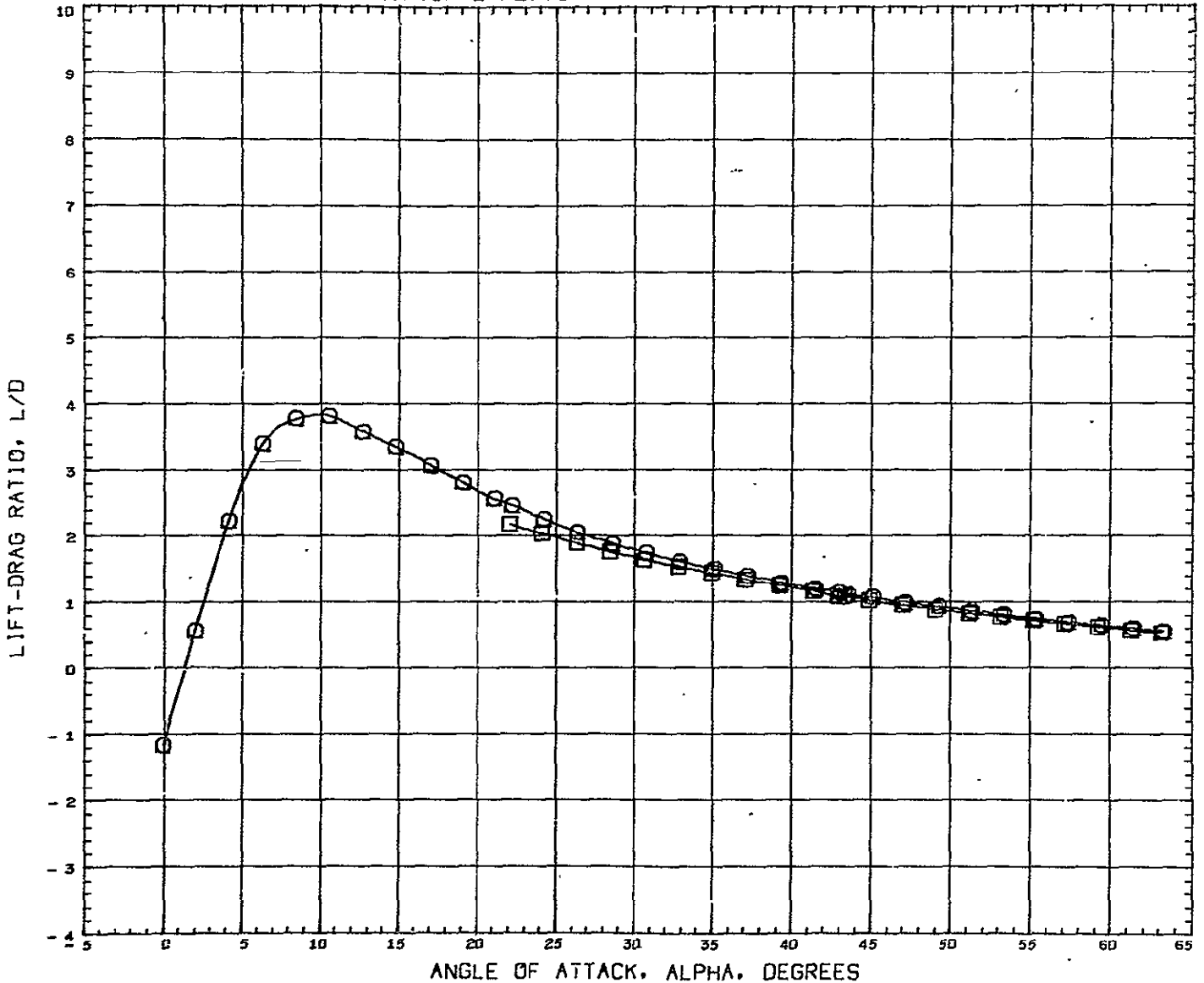
DELTA WING ORBITER- ELEVATOR EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATT	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(#2756S)	MSFC478 NP DELTA ORBITER B5W17E10V17J2X	0,000	0,000	0,000	0,000	REFS 6084,0040 SQ FT
(#2757S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	-10,000	0,000	0,000	0,000	REFL 821,2004 INCHES
(#2758S)	MSFC478 NP DELTA ORBITER B5W17E10V17J2X	-30,000	0,000	0,000	0,000	REFB 1422,8040 INCHES
(#2759S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	-45,000	0,000	0,000	0,000	XMRP 1422,5040 INCHES
						YMRF 0,0000 INCHES
						ZMRF 130,0004 INCHES
						SCALE 0,0035 SCALE

MACH 1.003

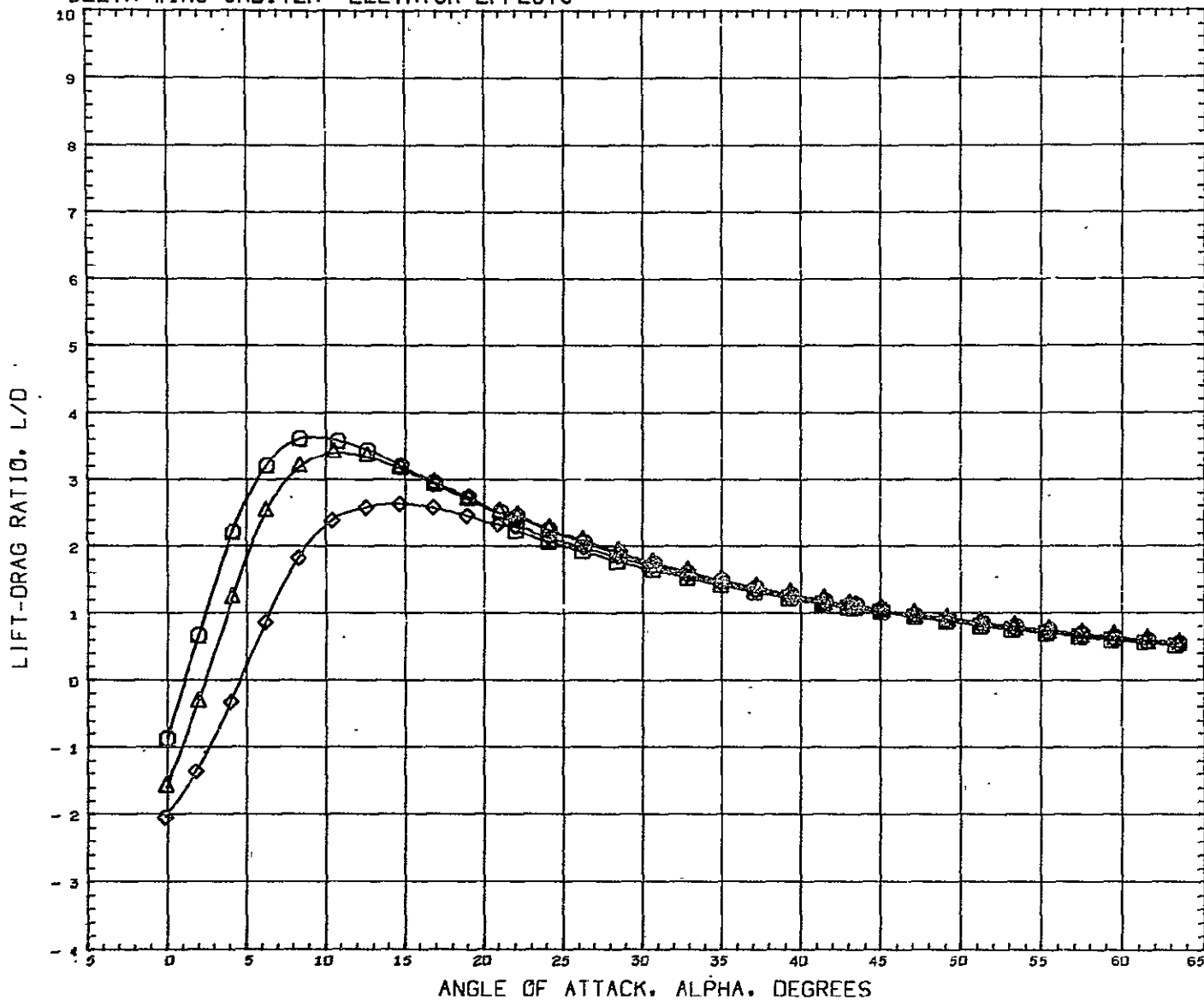
DELTA WING ORBITER- ELEVATOR EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(R2756S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(R2757S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	-10.000	0.000	0.000	0.000	REFL 821.2004 INCHES
(R2758S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	-30.000	0.000	0.000	0.000	REFB 1422.8046 INCHES
(R2759S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	-45.000	0.000	0.000	0.000	XMRP 1422.5040 INCHES
						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 1.199

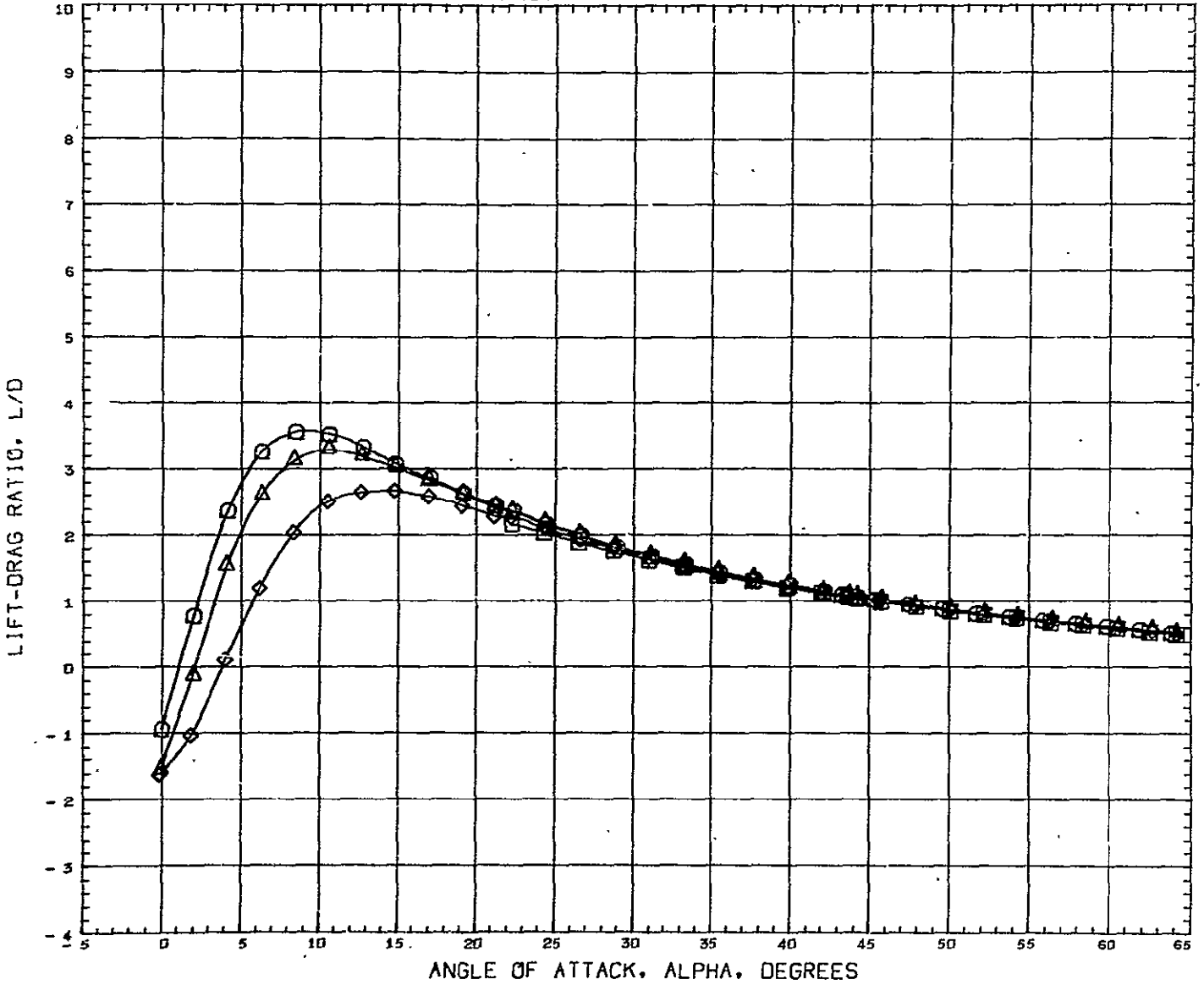
DELTA WING ORBITER- ELEVATOR EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(R2756S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(R2757S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	-10.000	0.000	0.000	0.000	REFL 821.2004 INCHES
(R2758S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	-30.000	0.000	0.000	0.000	REFB 1422.8040 INCHES
(R2759S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	-45.000	0.000	0.000	0.000	XMRP 1422.5040 INCHES
						YMRP 0.0006 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 1.458

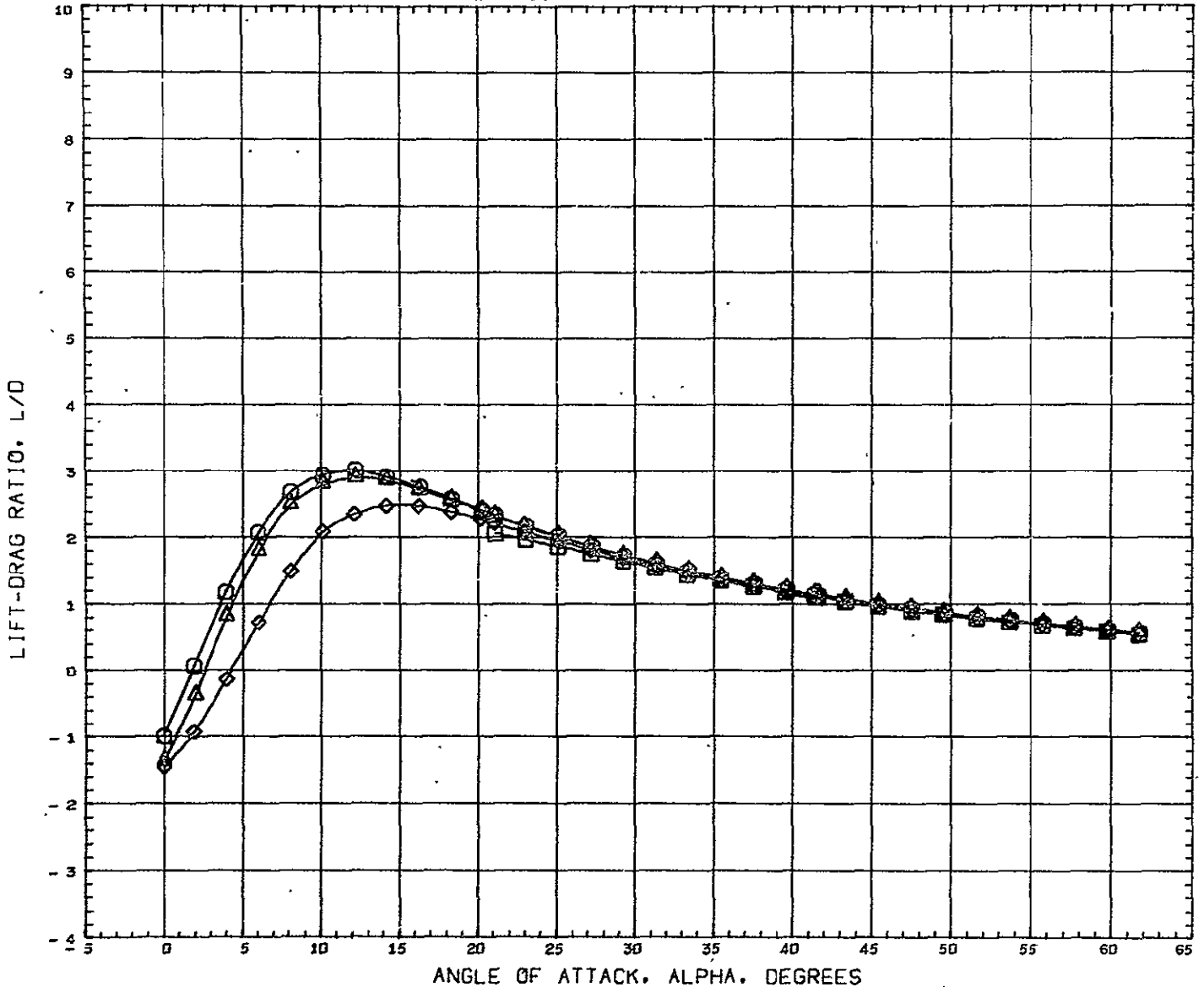
DELTA WING ORBITER- ELEVATOR EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(R2756S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(R2757S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	-10.000	0.000	0.000	0.000	REFL 821.2004 INCHES
(R2758S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	-30.000	0.000	0.000	0.000	REFB 1422.8040 INCHES
(R2759S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	-45.000	0.000	0.000	0.000	XMRP 1422.5040 INCHES
						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 1.965

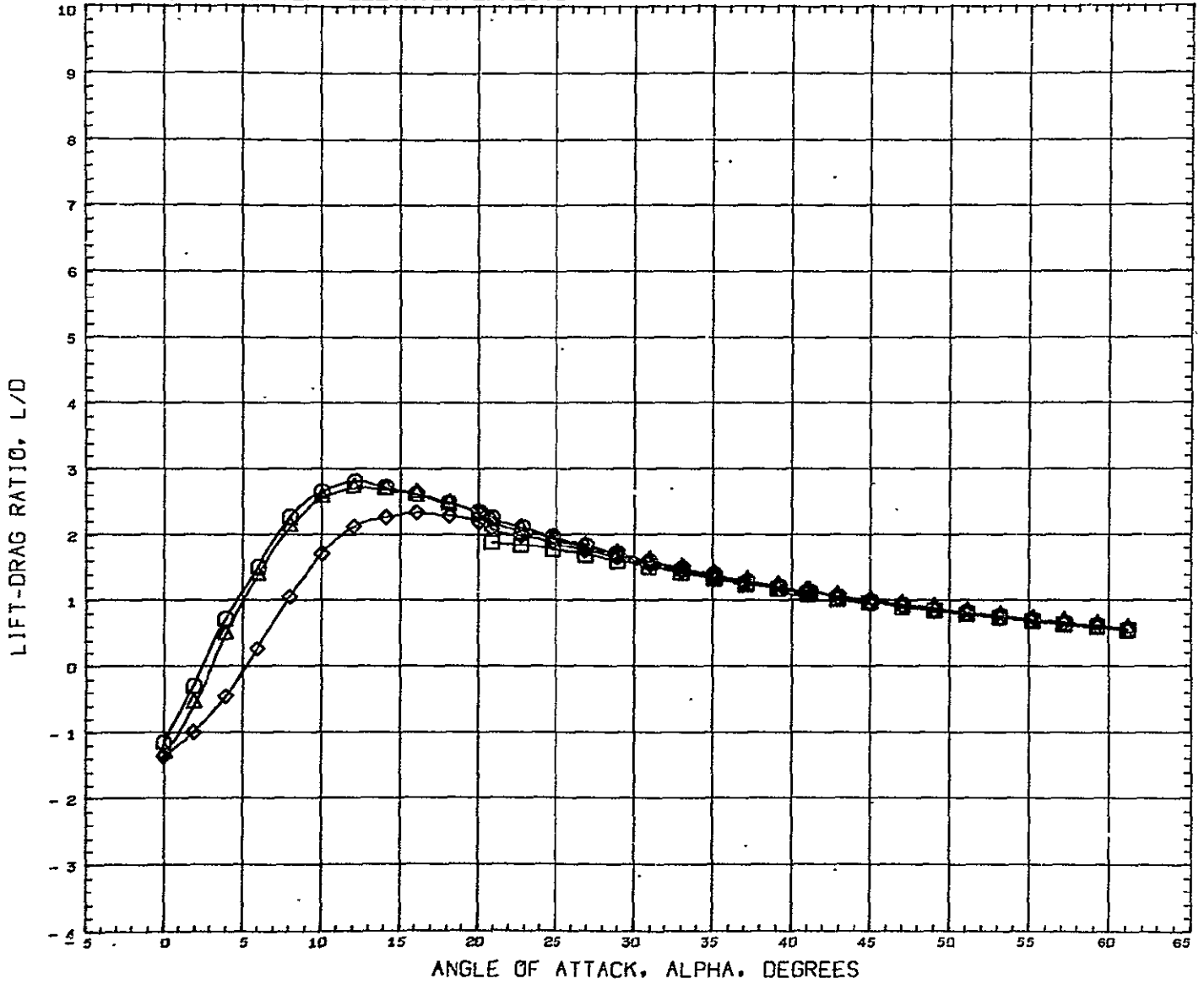
DELTA WING ORBITER- ELEVATOR EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(R2756S)	HSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(R2757S)	HSFC478 NR DELTA ORBITER B5W17E10V17J2X	-10.000	0.000	0.000	0.000	REFL 821.2004 INCHES
(R2758S)	HSFC478 NR DELTA ORBITER B5W17E10V17J2X	-30.000	0.000	0.000	0.000	REFB 1422.8040 INCHES
(R2759S)	HSFC478 NR DELTA ORBITER B5W17E10V17J2X	-45.000	0.000	0.000	0.000	XMRP 1422.5040 INCHES YMRP 0.0000 INCHES ZMRP 130.0004 INCHES SCALE 0.0035 SCALE

MACH 2.990

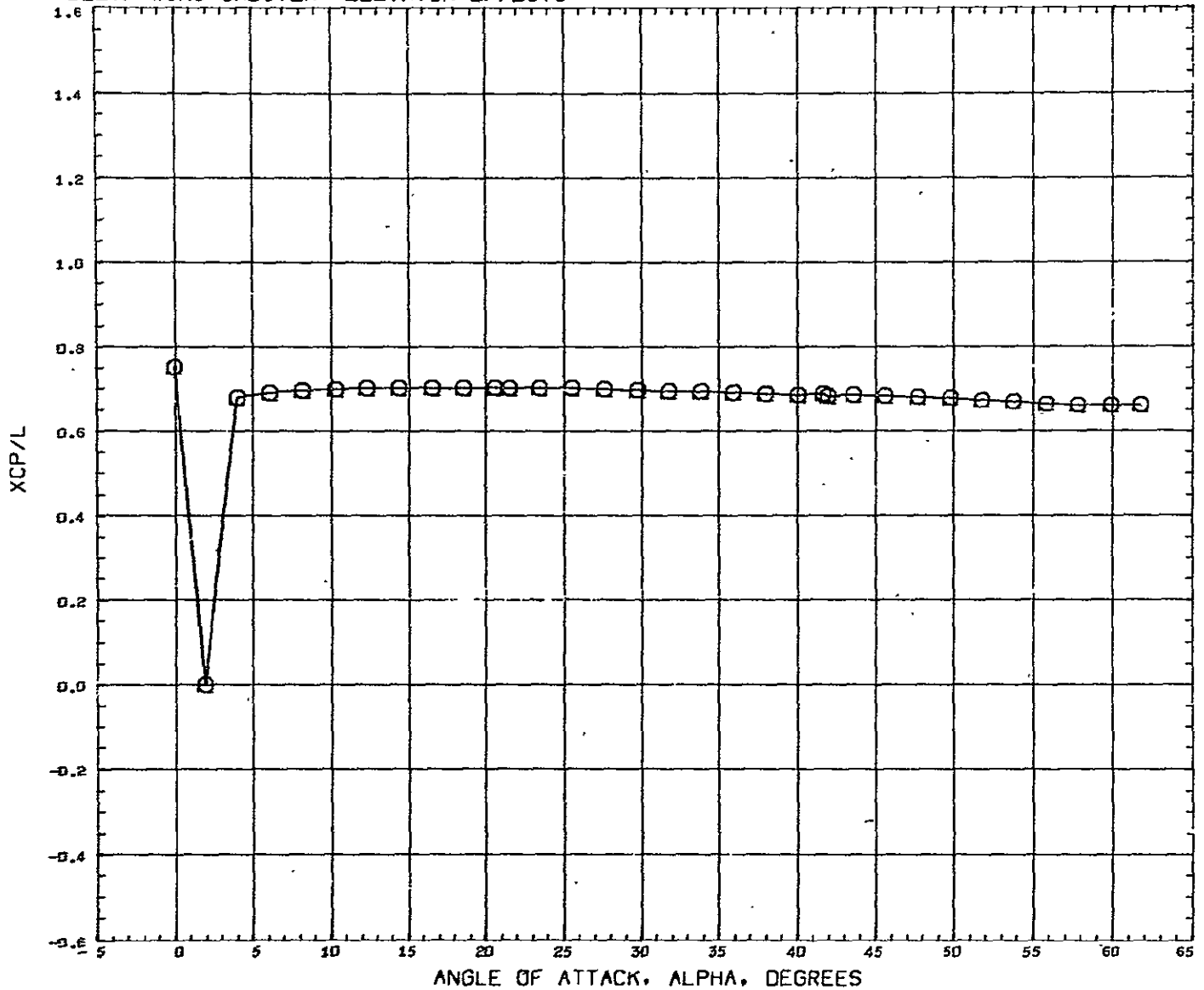
DELTA WING ORBITER- ELEVATOR EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(R2756S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(R2757S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	-10.000	0.000	0.000	0.000	REFL 821.2004 INCHES
(R2758S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	-30.000	0.000	0.000	0.000	REFB 1422.8040 INCHES
(R2759S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	-45.000	0.000	0.000	0.000	XMRP 1422.5040 INCHES
						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 4.959

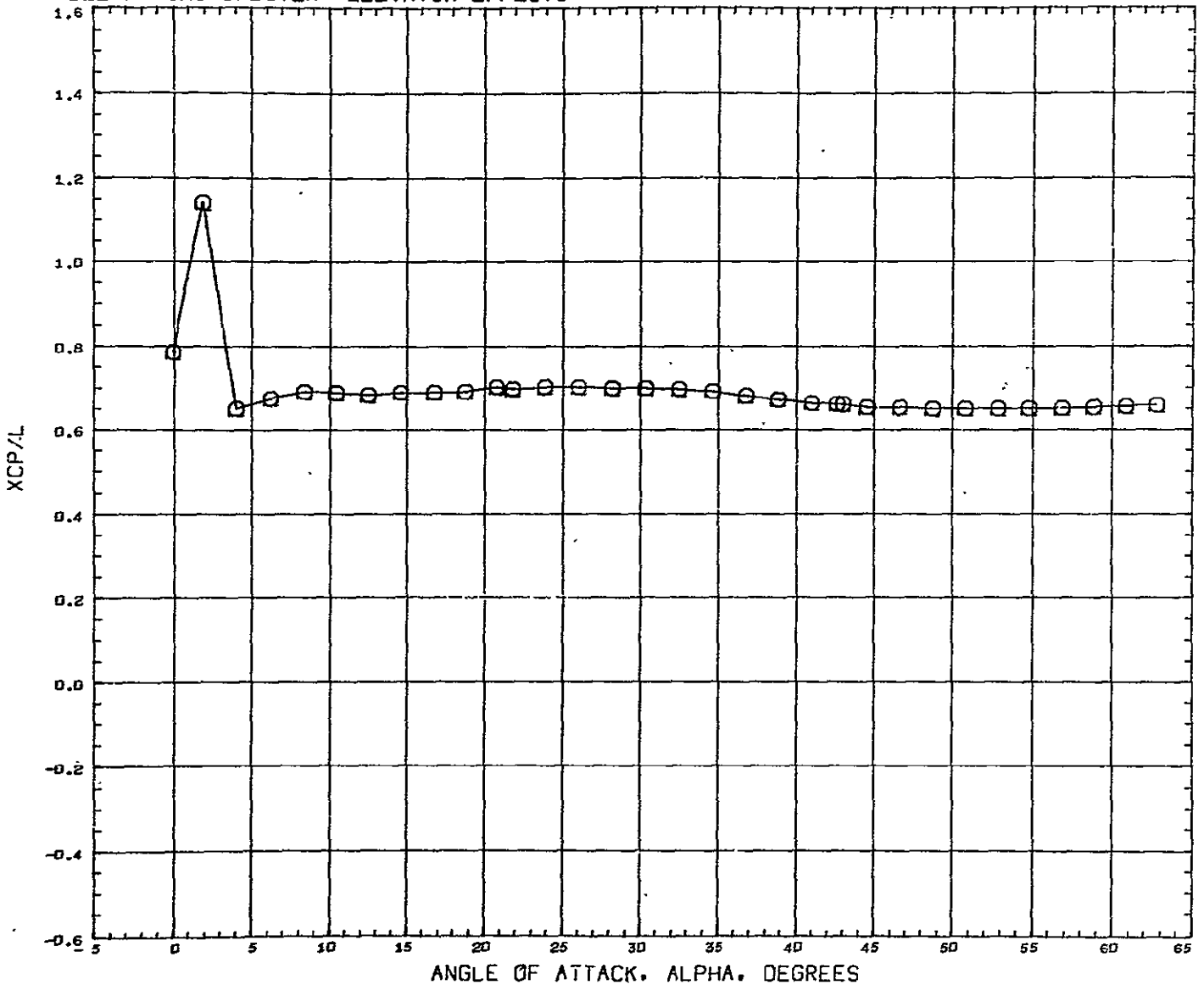
DELTA WING ORBITER- ELEVATOR EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(R2756S)	HSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	0.000	0.000	REFS 6084.9040 SQ FT
(R2757S)	HSFC478 NR DELTA ORBITER B5W17E10V17J2X	-10.000	0.000	0.000	0.000	REFL 821.2004 INCHES
(R2758S)	HSFC478 NR DELTA ORBITER B5W17E10V17J2X	-30.000	0.000	0.000	0.000	REFB 1422.8040 INCHES
(R2759S)	HSFC478 NR DELTA ORBITER B5W17E10V17J2X	-45.000	0.000	0.000	0.000	YMRP 1422.5040 INCHES
						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 0.598

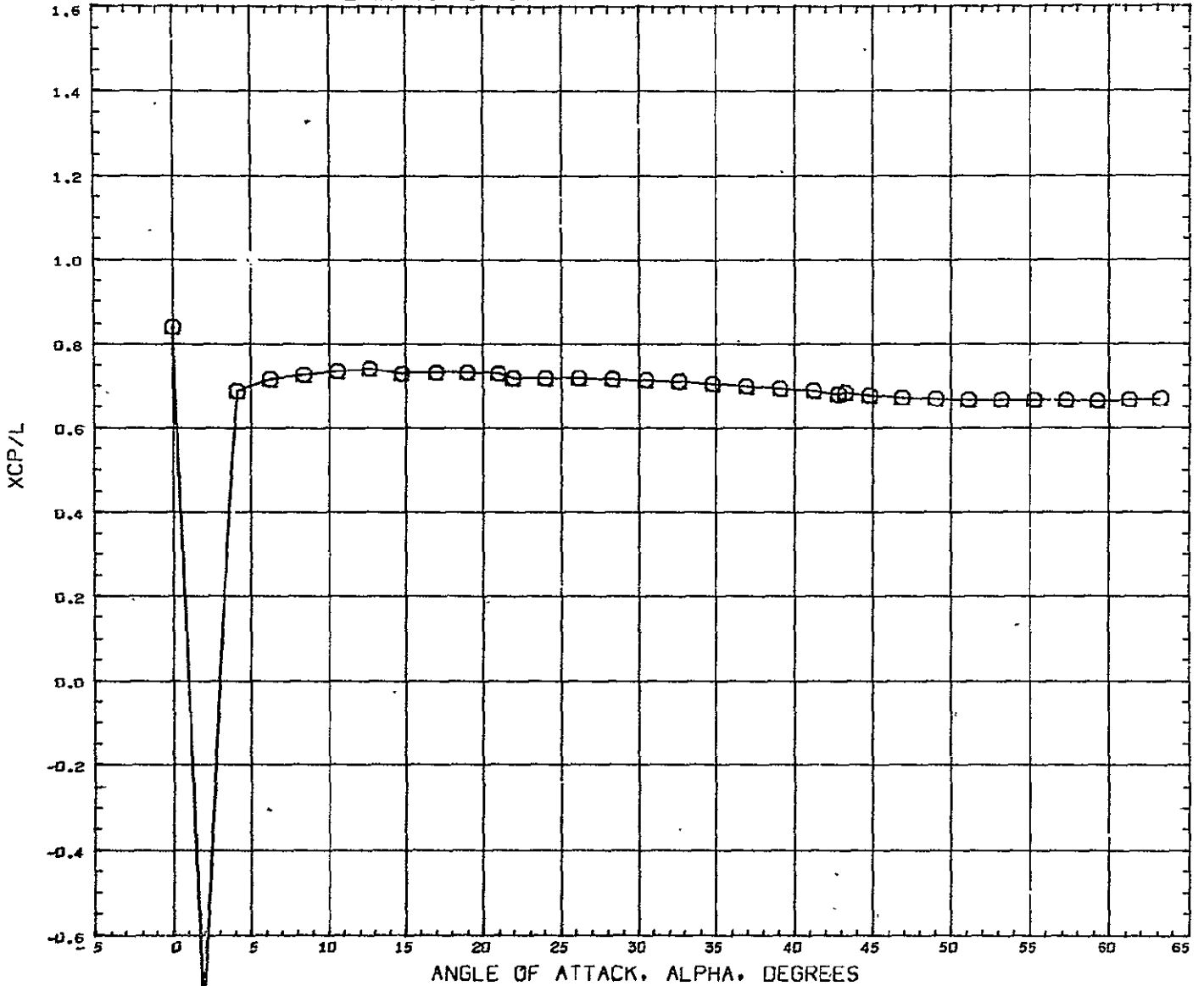
DELTA WING ORBITER- ELEVATOR EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(R2756S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	0.000	0.000	REFS 6084.0640 SQ FT
(R2757S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	-10.000	0.000	0.000	0.000	REFL 821.2004 INCHES
(R2758S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	-30.000	0.000	0.000	0.000	REFB 1422.8040 INCHES
(R2759S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	-45.000	0.000	0.000	0.000	YMRF 1422.5040 INCHES
						YMRP 0.0000 INCHES
						ZMRF 130.0004 INCHES
						SCALE 0.0035 SCALE

HACH 0.899

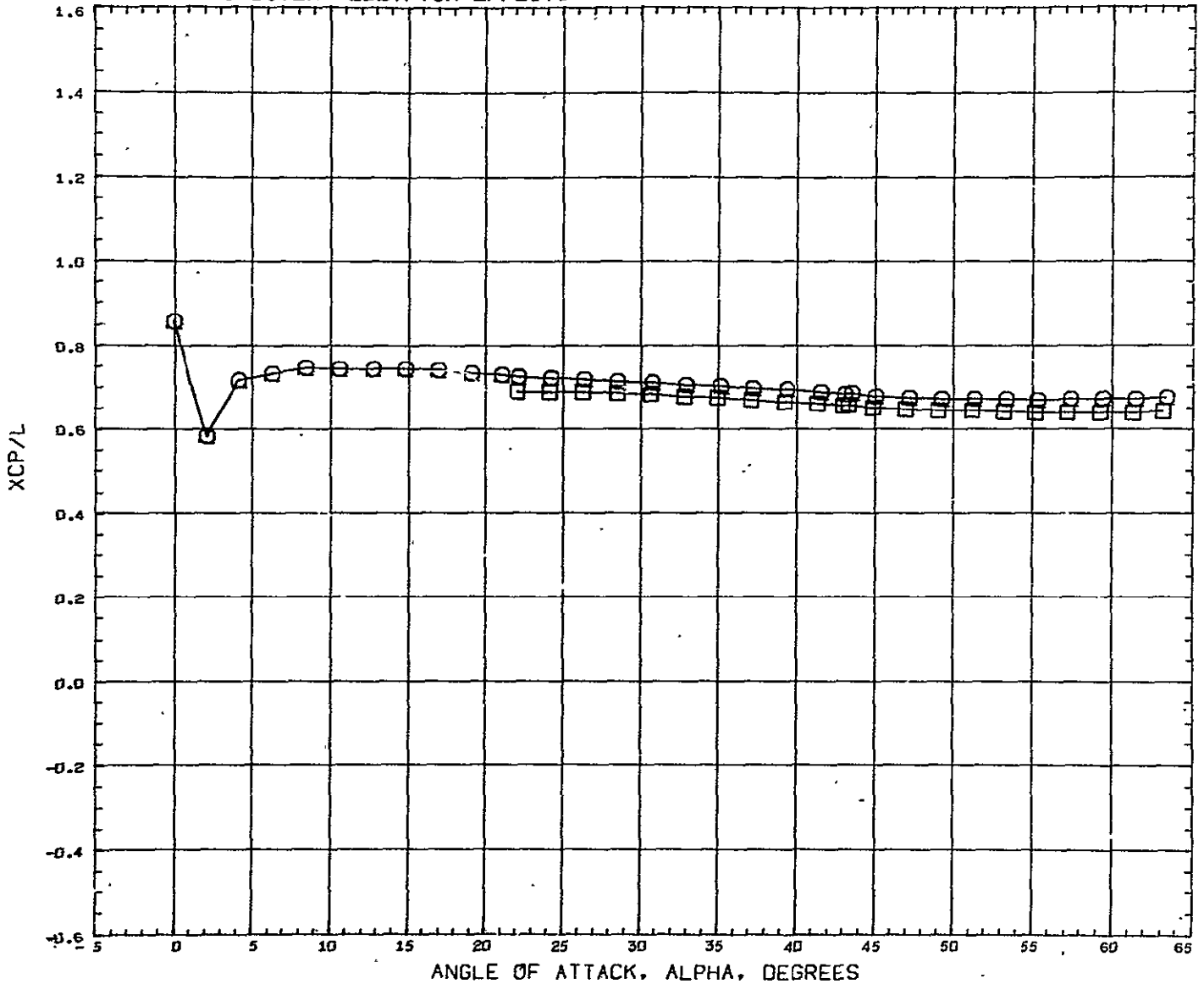
DELTA WING ORBITER- ELEVATOR EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(R2756S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(R2757S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	-10.000	0.000	0.000	0.000	REFL 821.2004 INCHES
(R2758S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	-30.000	0.000	0.000	0.000	REFB 1422.5040 INCHES
(R2759S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	-45.000	0.000	0.000	0.000	XNRP 1422.5040 INCHES YNRP 0.0000 INCHES ZNRP 130.0004 INCHES SCALE 0.0035 SCALE

HACH 1.003

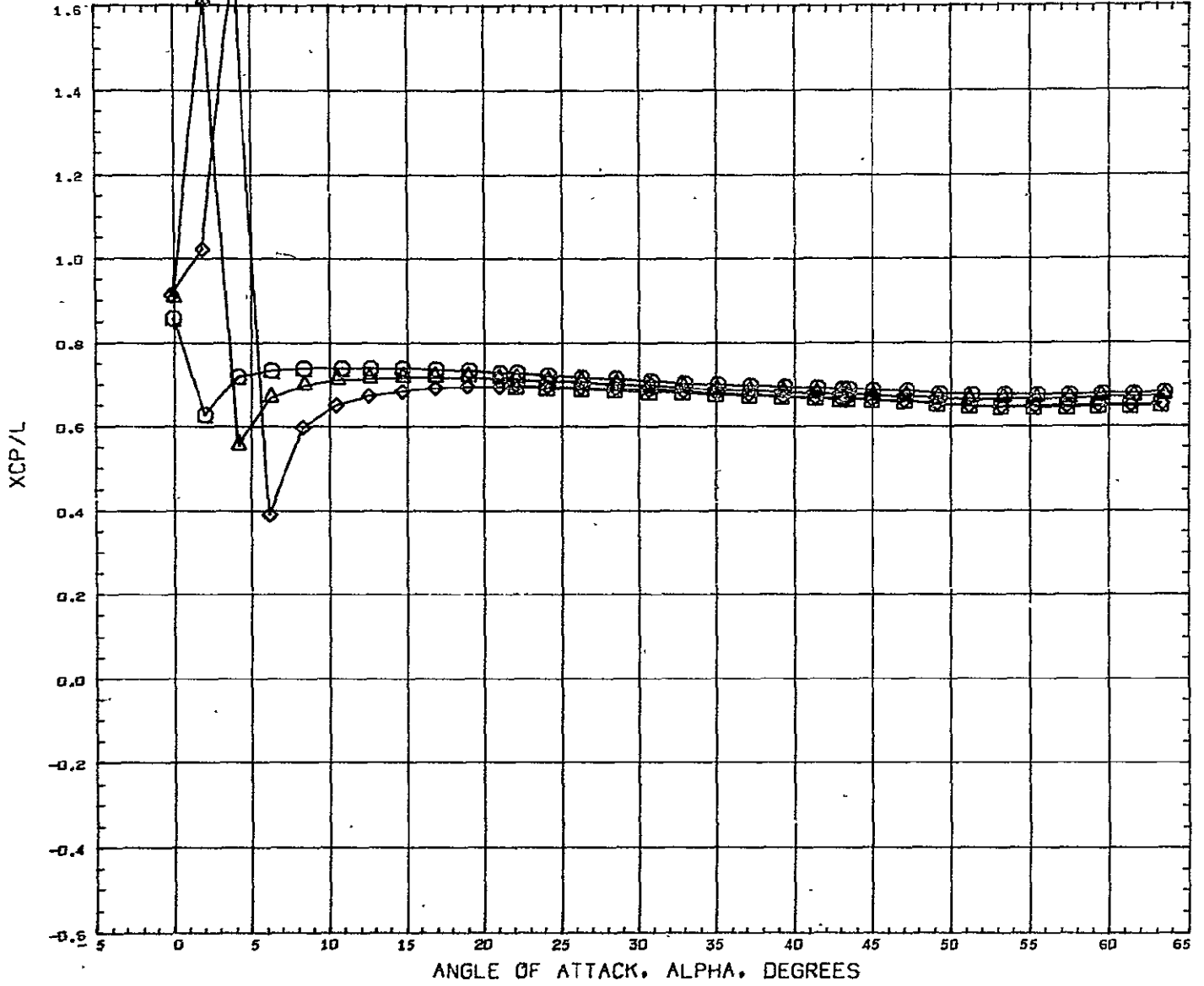
DELTA WING ORBITER- ELEVATOR EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(R2756S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(R2757S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	-10.000	0.000	0.000	0.000	REFL 821.2004 INCHES
(R2758S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	-30.000	0.000	0.000	0.000	REFB 1422.8040 INCHES
(R2759S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	-45.000	0.000	0.000	0.000	XMRP 1422.5040 INCHES
						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 1.199

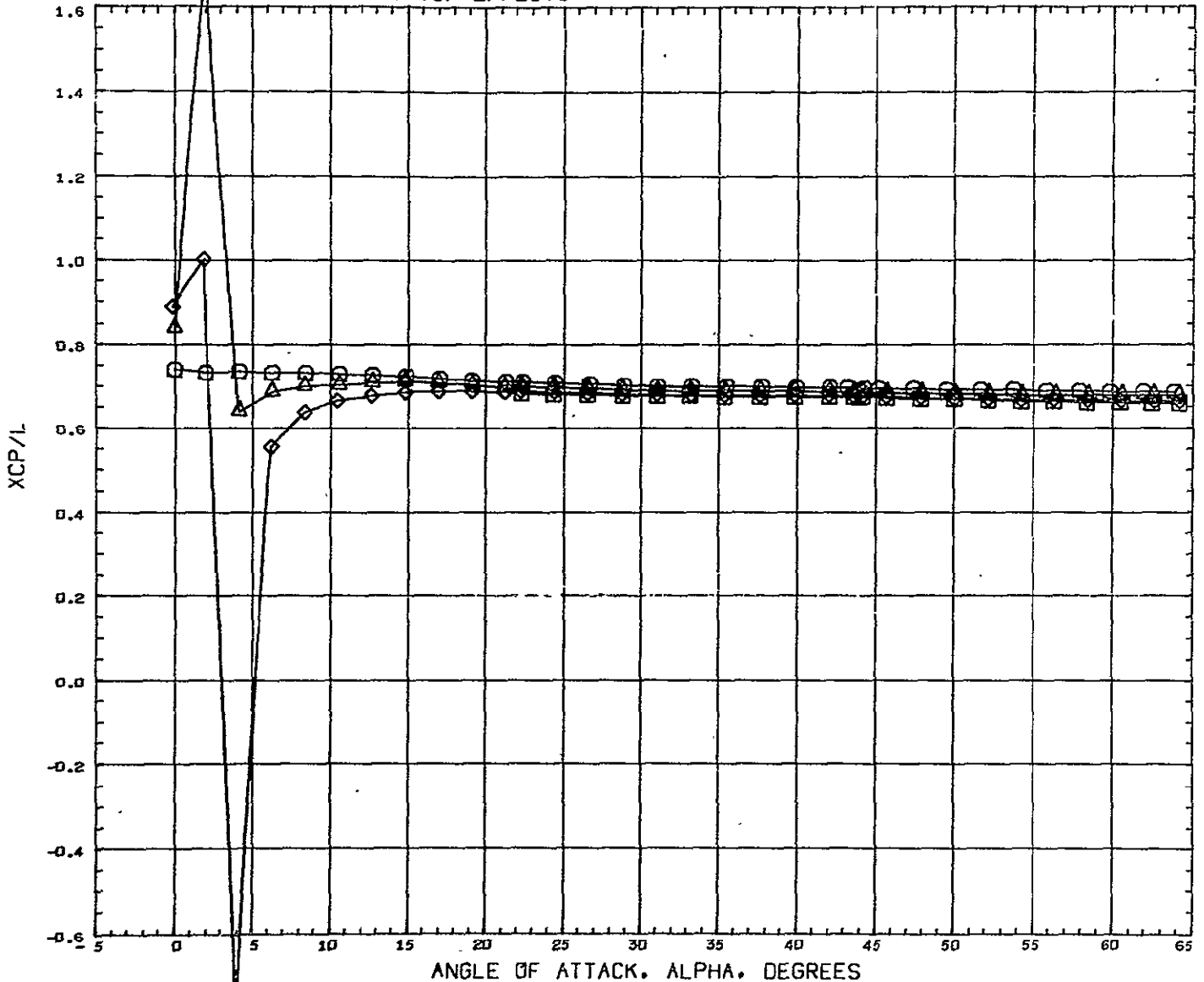
DELTA WING ORBITER- ELEVATOR EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(R27565)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(R27575)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	-10.000	0.000	0.000	0.000	REFL 821.2004 INCHES
(R27585)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	-30.000	0.000	0.000	0.000	REFB 1422.8040 INCHES
(R27595)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	-45.000	0.500	0.000	0.000	XMRP 1422.5040 INCHES YMRP 0.0000 INCHES ZMRP 130.0004 INCHES SCALE 0.0035 SCALE

PACH 1.458

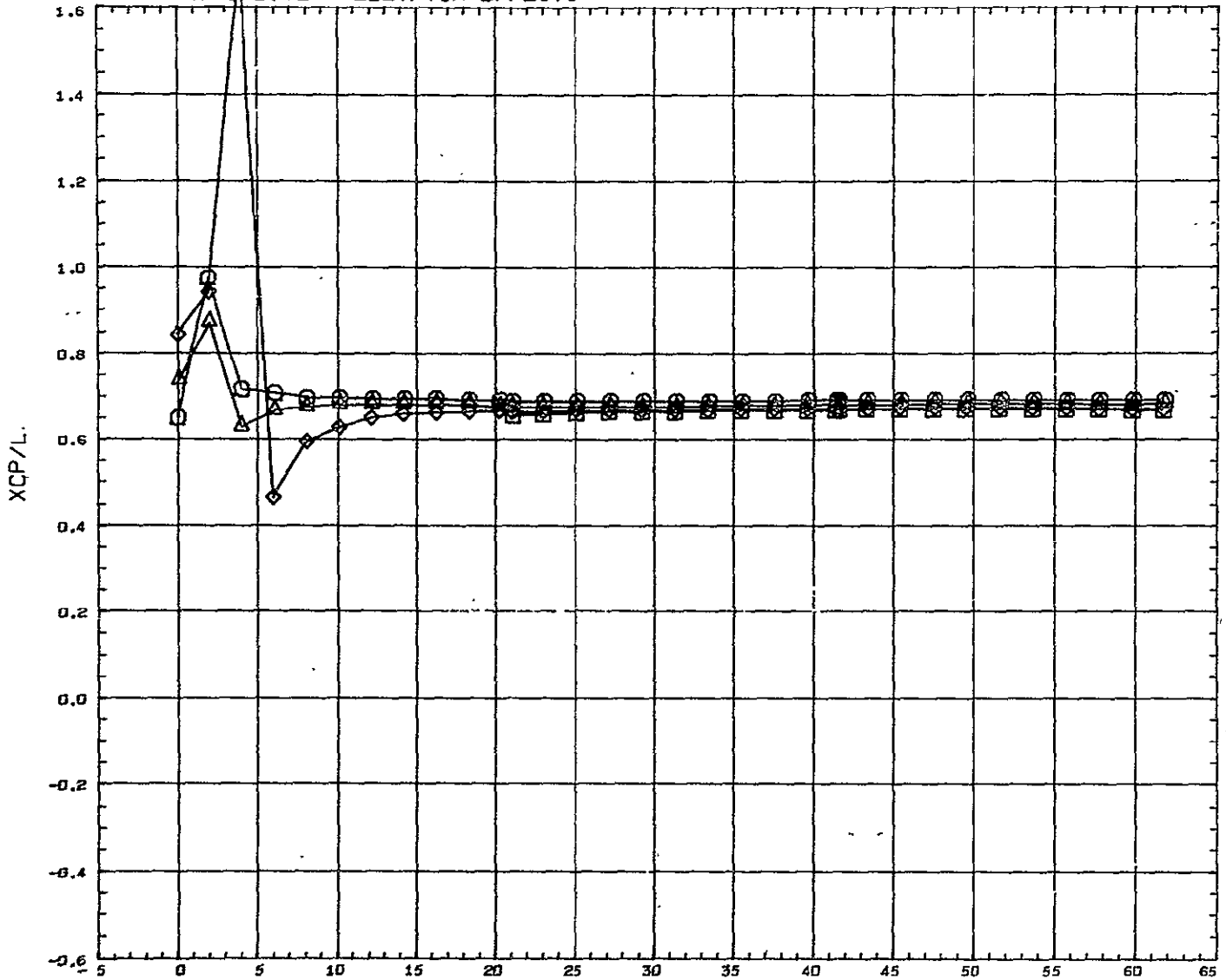
DELTA WING ORBITER- ELEVATOR EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(R2756S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	0.000	0.000	REFS 6084,0040 SQ FT
(R2757S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	-10.000	0.000	0.000	0.000	REFL 821,2004 INCHES
(R2758S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	-30.000	0.000	0.000	0.000	REFB 1422,8040 INCHES
(R2759S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	-45.000	0.000	0.000	0.000	XMRP 1422,5040 INCHES
						YMRP 0,0030 INCHES
						ZMRP 130,0004 INCHES
						SCALE 0,0035 SCALE

MACH 1.965

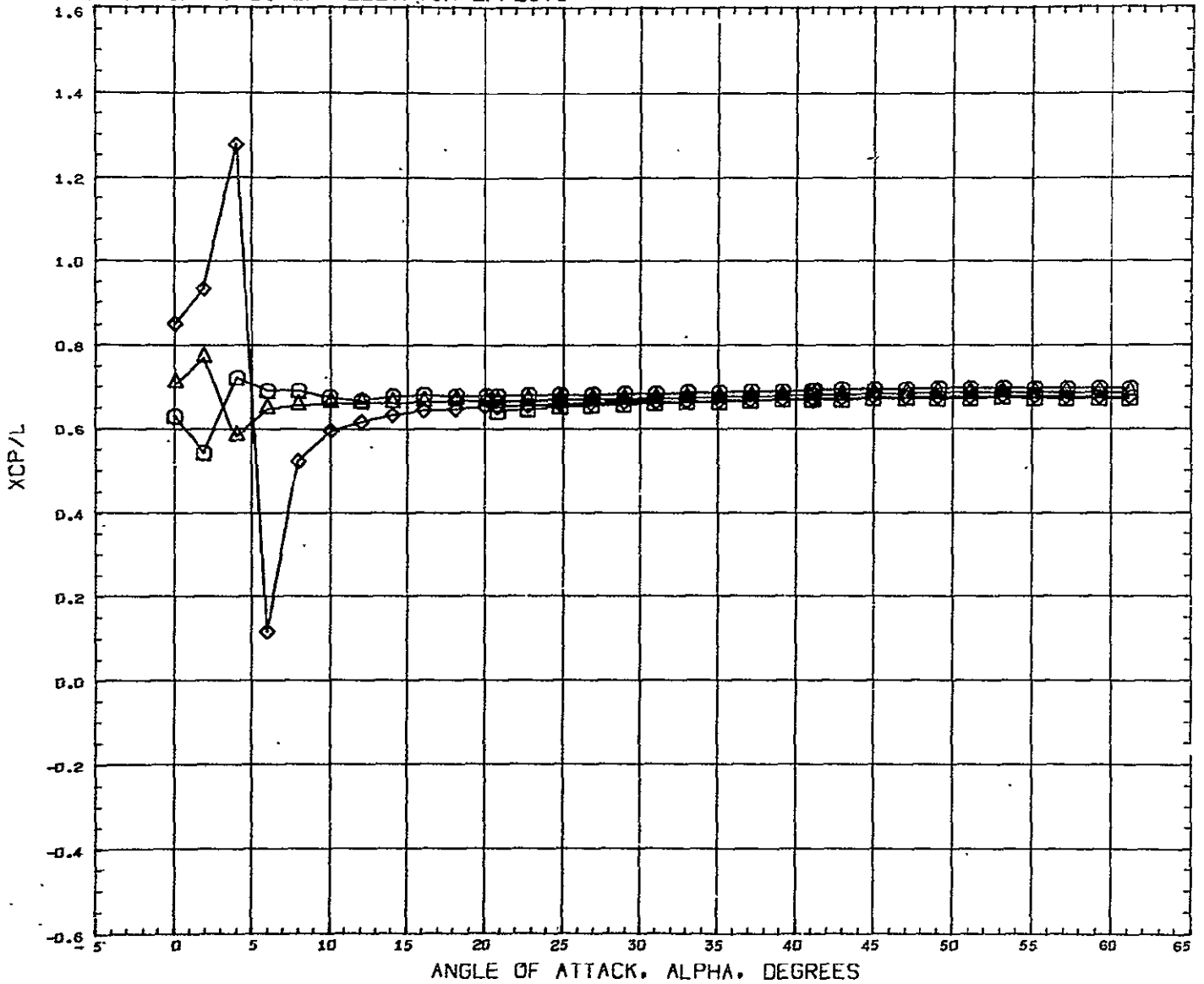
DELTA WING ORBITER- ELEVATOR EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(R27565)	MSFC478 NR DELTA ORBITER B5W17E1DV17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(R27575)	MSFC478 NR DELTA ORBITER B5W17E1DV17J2X	-10.000	0.000	0.000	0.000	REFL 821.2004 INCHES
(R27585)	MSFC478 NR DELTA ORBITER B5W17E1DV17J2X	-30.000	0.000	0.000	0.000	REFB 1422.8040 INCHES
(R27595)	MSFC478 NR DELTA ORBITER B5W17E1DV17J2X	-45.000	0.000	0.000	0.000	XMRP 1422.5040 INCHES
						YMRF 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 2.990

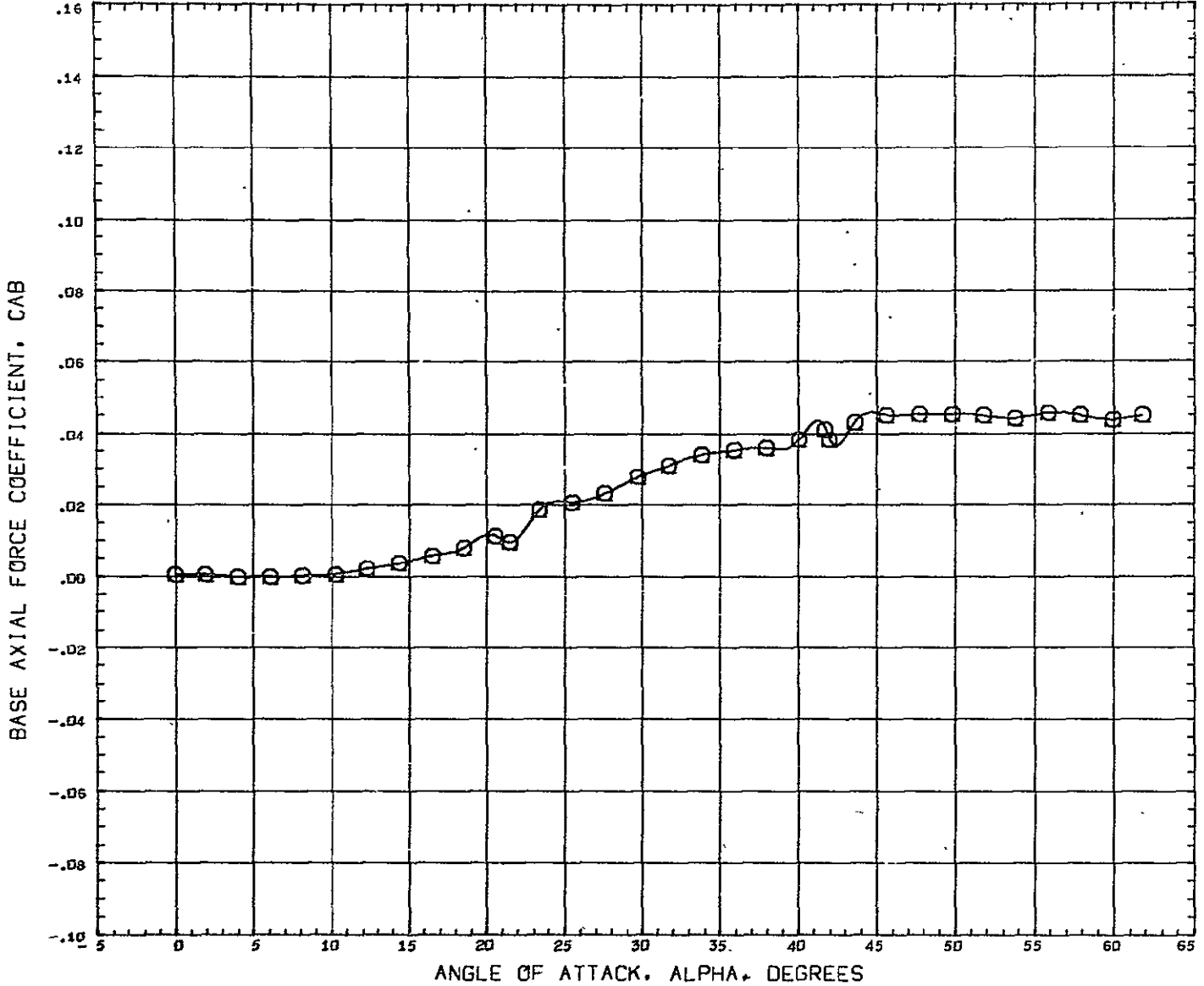
DELTA WING ORBITER- ELEVATOR EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(R2756S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(R2757S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	-10.000	0.000	0.000	0.000	REFL 821.2004 INCHES
(R2758S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	-30.000	0.000	0.000	0.000	REFB 1422.8040 INCHES
(R2759S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	-45.000	0.000	0.000	0.000	XMRP 1422.5040 INCHES
						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 4.959

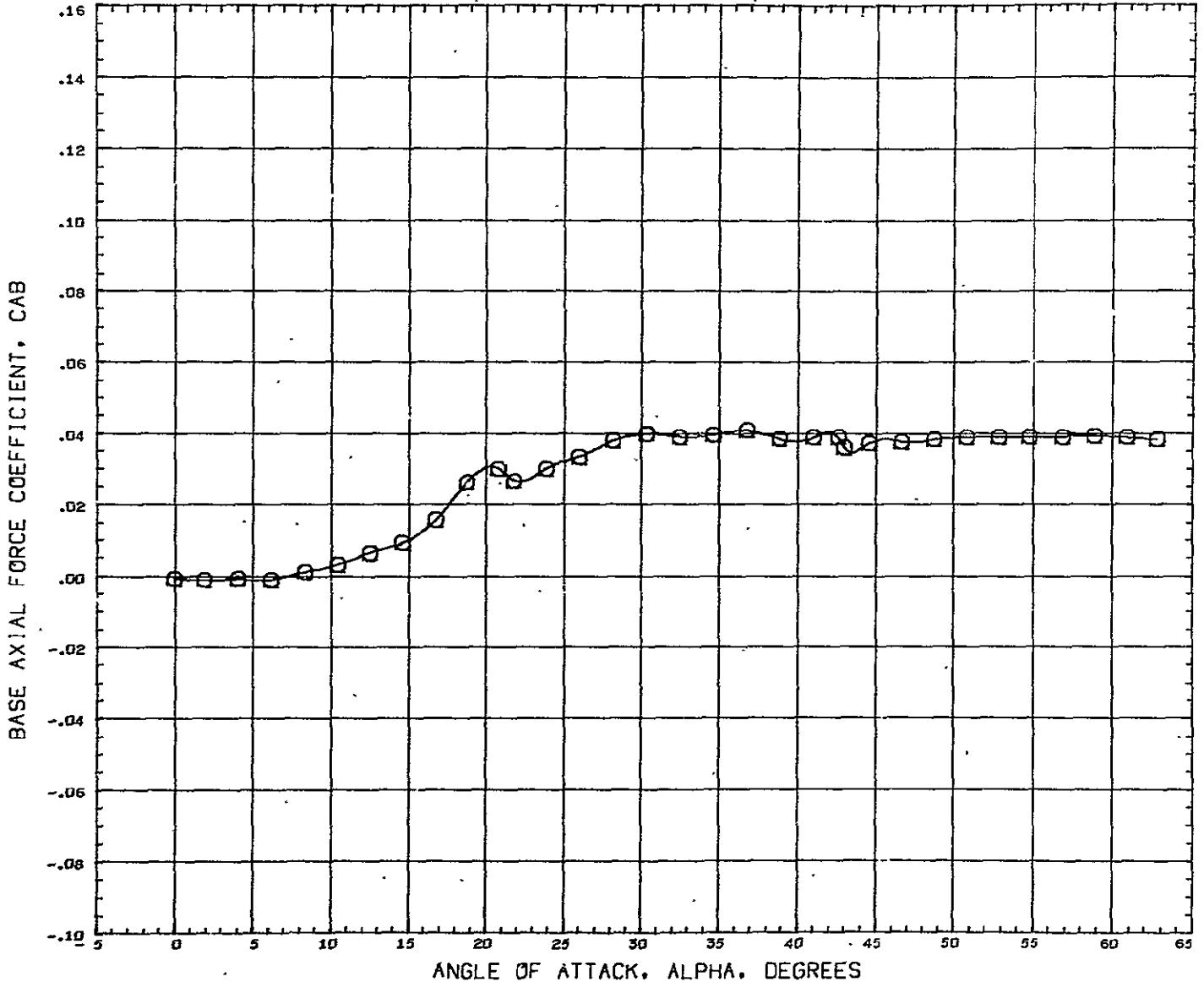
DELTA WING ORBITER- ELEVATOR EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(R2756S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(R2757S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	-10.000	0.000	0.000	0.000	REFL 821.2004 INCHES
(R2758S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	-30.000	0.000	0.000	0.000	REFB 1422.8040 INCHES
(R2759S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	-45.000	0.000	0.000	0.000	XMRP 1422.6040 INCHES
						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 0.598

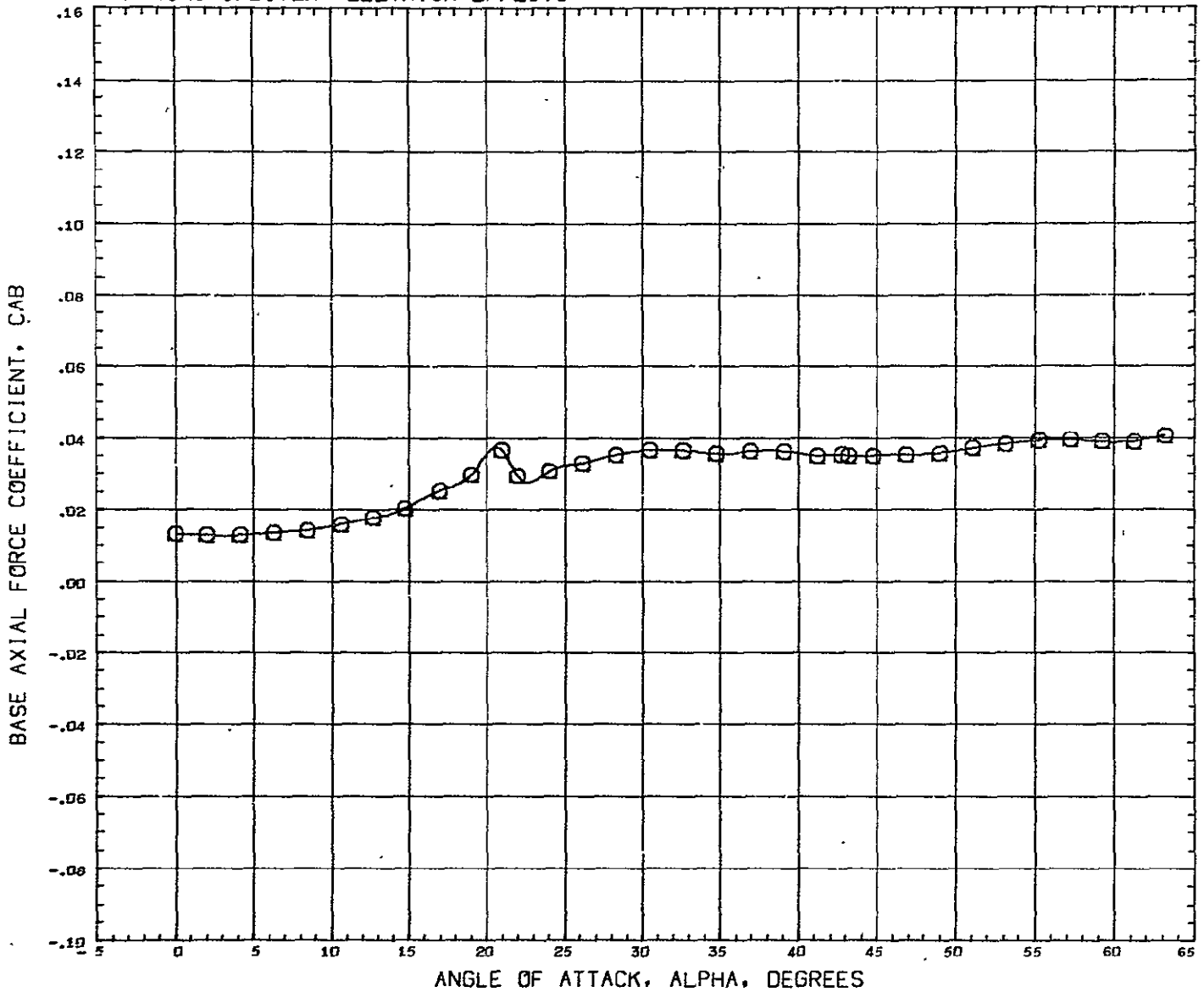
DELTA WING ORBITER- ELEVATOR EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(R2756S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(R2757S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	-10.000	0.000	0.000	0.000	REFL 821.2004 INCHES
(R2758S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	-30.000	0.000	0.000	0.000	REFB 1422.8040 INCHES
(R2759S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	-45.000	0.000	0.000	0.000	XMRP 1422.5040 INCHES
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MACH 0.839

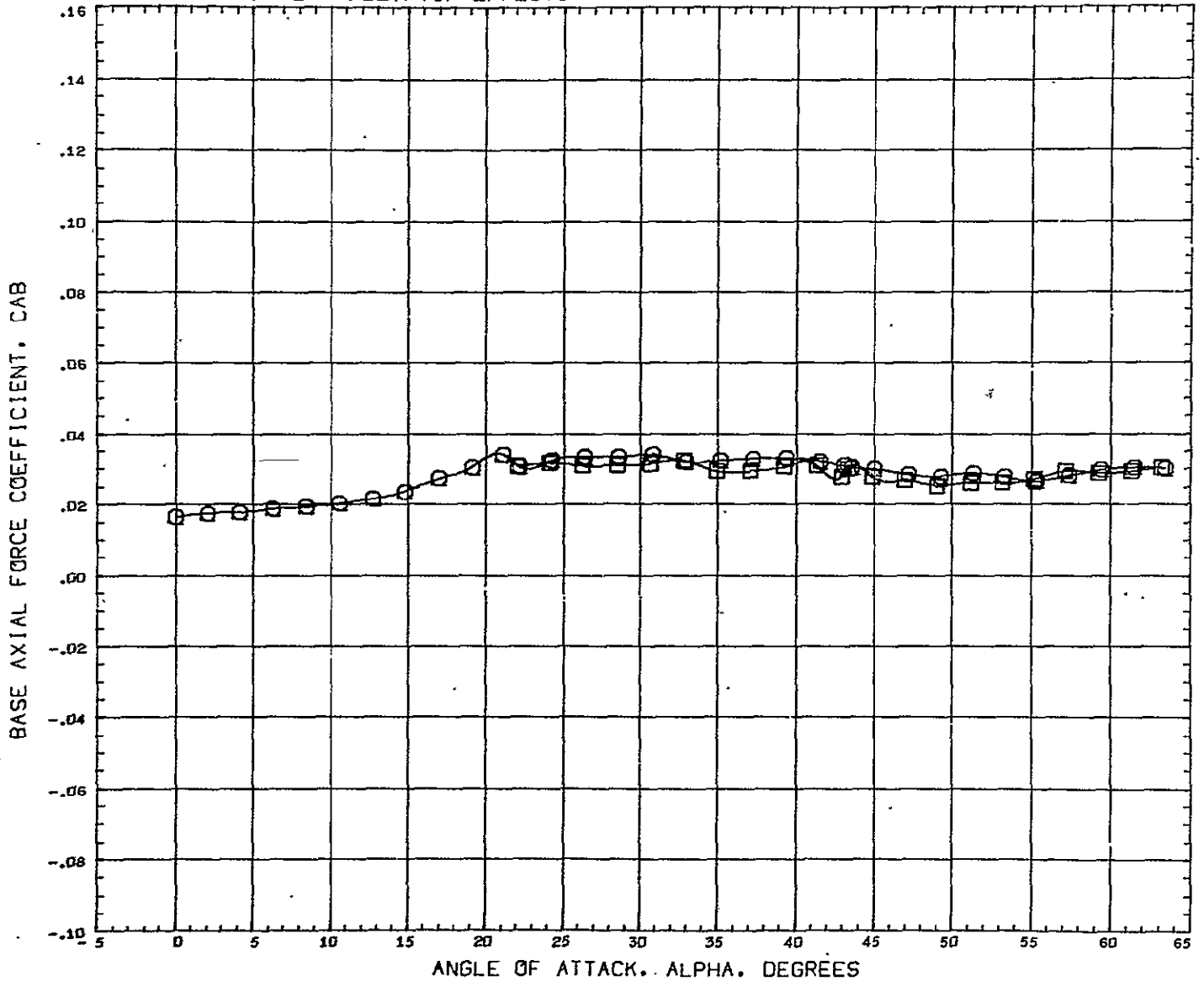
DELTA WING ORBITER- ELEVATOR EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(R2756S)	MSFC478 NR DELTA ORBITER 05W17E10V17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(R2757S)	MSFC478 NR DELTA ORBITER 05W17E10V17J2X	-10.000	0.000	0.000	0.000	REFL 821.2004 INCHES
(R2758S)	MSFC478 NR DELTA ORBITER 05W17E10V17J2X	-30.000	0.000	0.000	0.000	REFB 1422.8040 INCHES
(R2759S)	MSFC478 NR DELTA ORBITER 05W17E10V17J2X	-45.000	0.000	0.000	0.000	XNRF 1422.5040 INCHES
						YHRP 0.0000 INCHES
						ZHRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 1.003

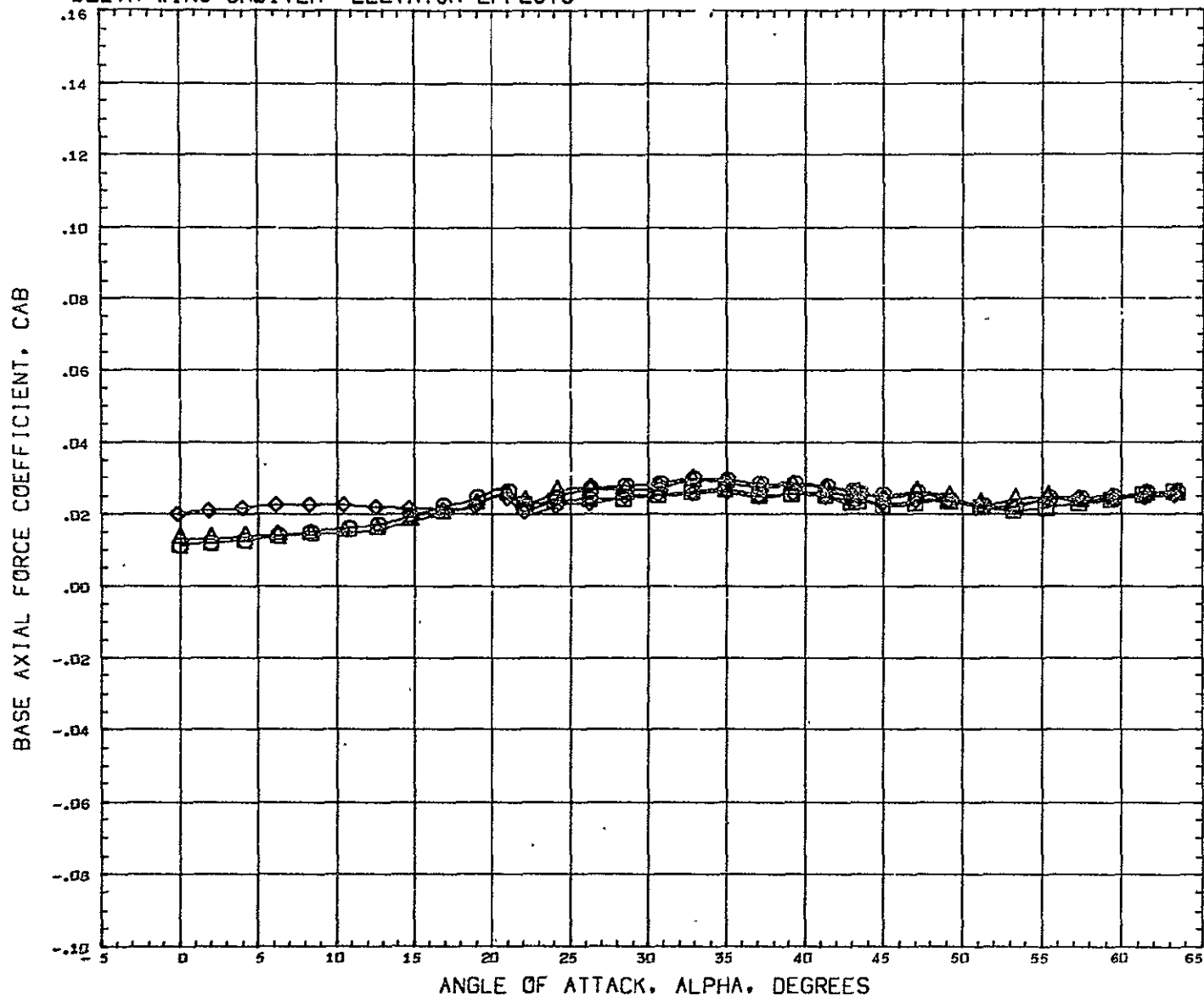
DELTA WING ORBITER- ELEVATOR EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUBBER	RUDFLR	REFERENCE INFORMATION
(R2756S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(R2757S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	-10.000	0.000	0.000	0.000	REFL 821.2004 INCHES
(R2758S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	-30.000	0.000	0.000	0.000	REFB 1422.8040 INCHES
(R2759S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	-45.000	0.000	0.000	0.000	XMRP 1422.5040 INCHES
						YMRP 0.0000 INCHES
						ZMRP 130.0000 INCHES
						SCALE 0.0035 SCALE

MACH 1.199

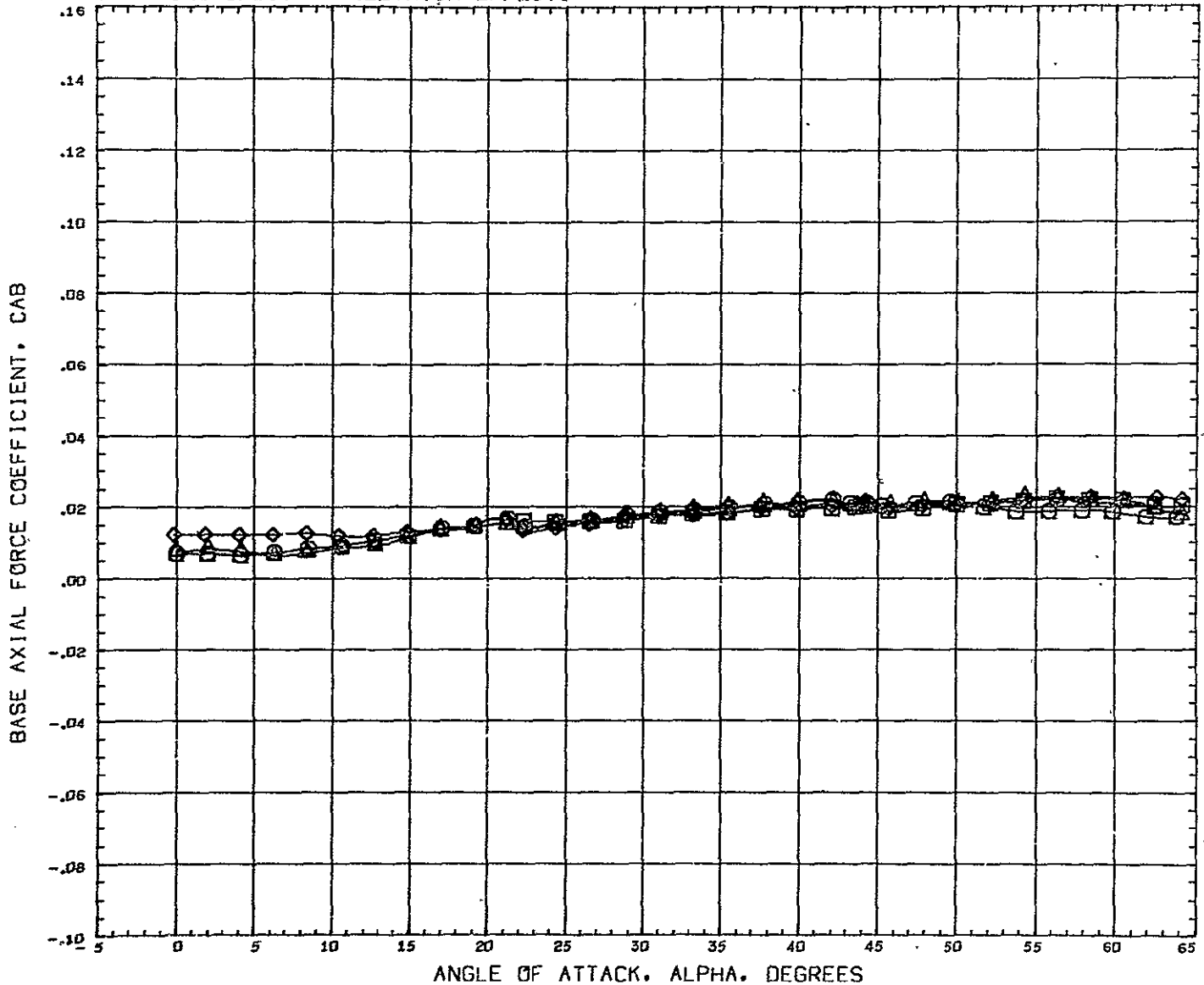
DELTA WING ORBITER- ELEVATOR EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(R2756S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(R2757S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	-10.000	0.000	0.000	0.000	REFL 821.2004 INCHES
(R2758S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	-30.000	0.000	0.000	0.000	REFB 1422.5040 INCHES
(R2759S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	-45.000	0.000	0.000	0.000	XNRF 1422.5040 INCHES YNRF 0.0000 INCHES ZNRF 130.0004 INCHES SCALE 0.0035 SCALE

HACH 1.458

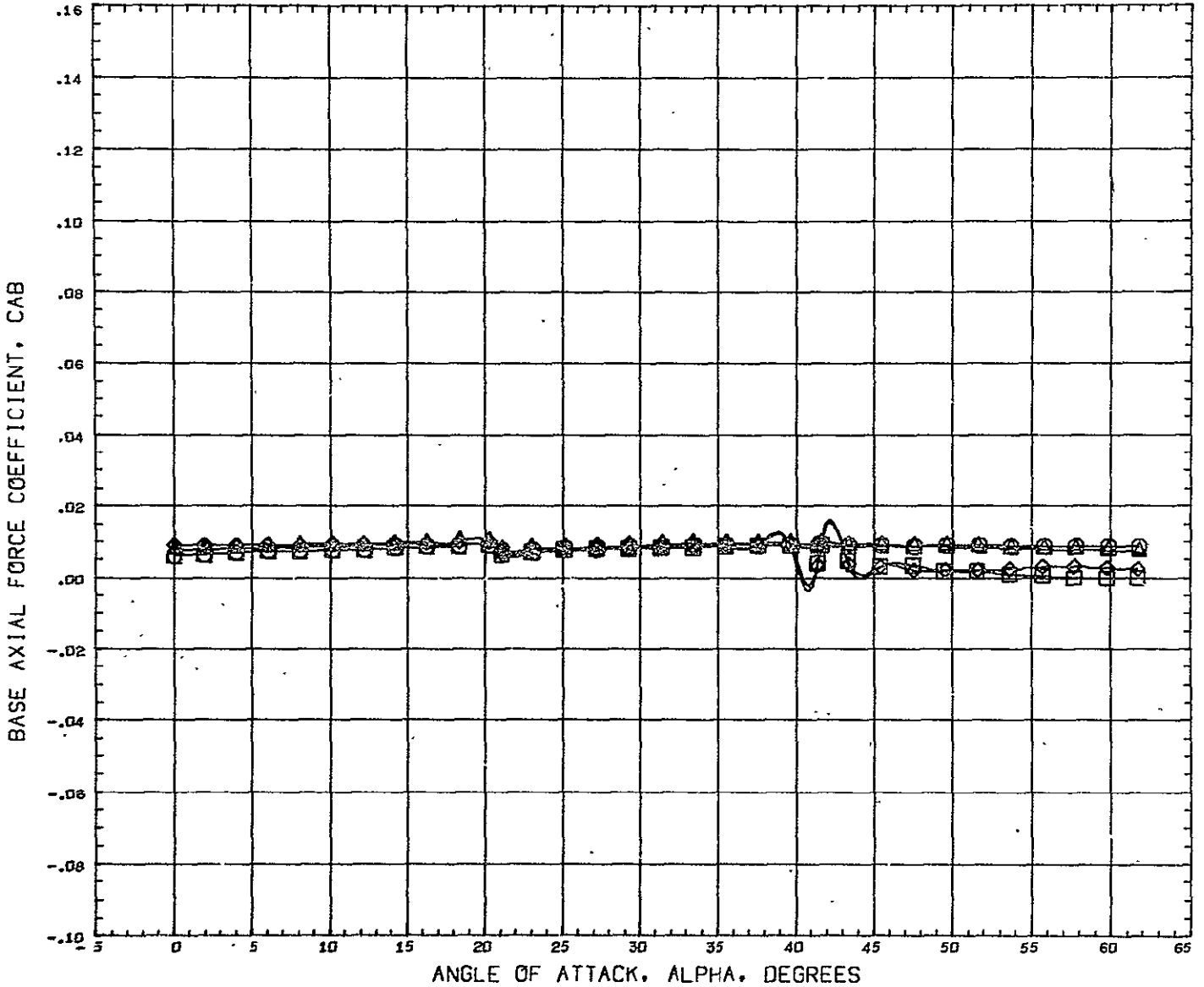
DELTA WING ORBITER- ELEVATOR EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	FUDDER	RUDFLR	REFERENCE INFORMATION	
(R2756S)	MSFC478 NR DELTA ORBITER 85W17E10V17J2X	0.000	0.000	0.000	0.000	REFS	6084.0040 SQ FT
(R2757S)	MSFC478 NR DELTA ORBITER 85W17E10V17J2X	-10.000	0.000	0.000	0.000	REFL	821.2004 INCHES
(R2758S)	MSFC478 NR DELTA ORBITER 85W17E10V17J2X	-30.000	0.000	0.000	0.000	REFD	1422.8040 INCHES
(R2759S)	MSFC478 NR DELTA ORBITER 85W17E10V17J2X	-45.000	0.000	0.000	0.000	XMRF	1422.5040 INCHES
						YMRF	0.0000 INCHES
						ZMRF	130.0004 INCHES
						SCALE	0.0035 SCALE

KACH 1.965

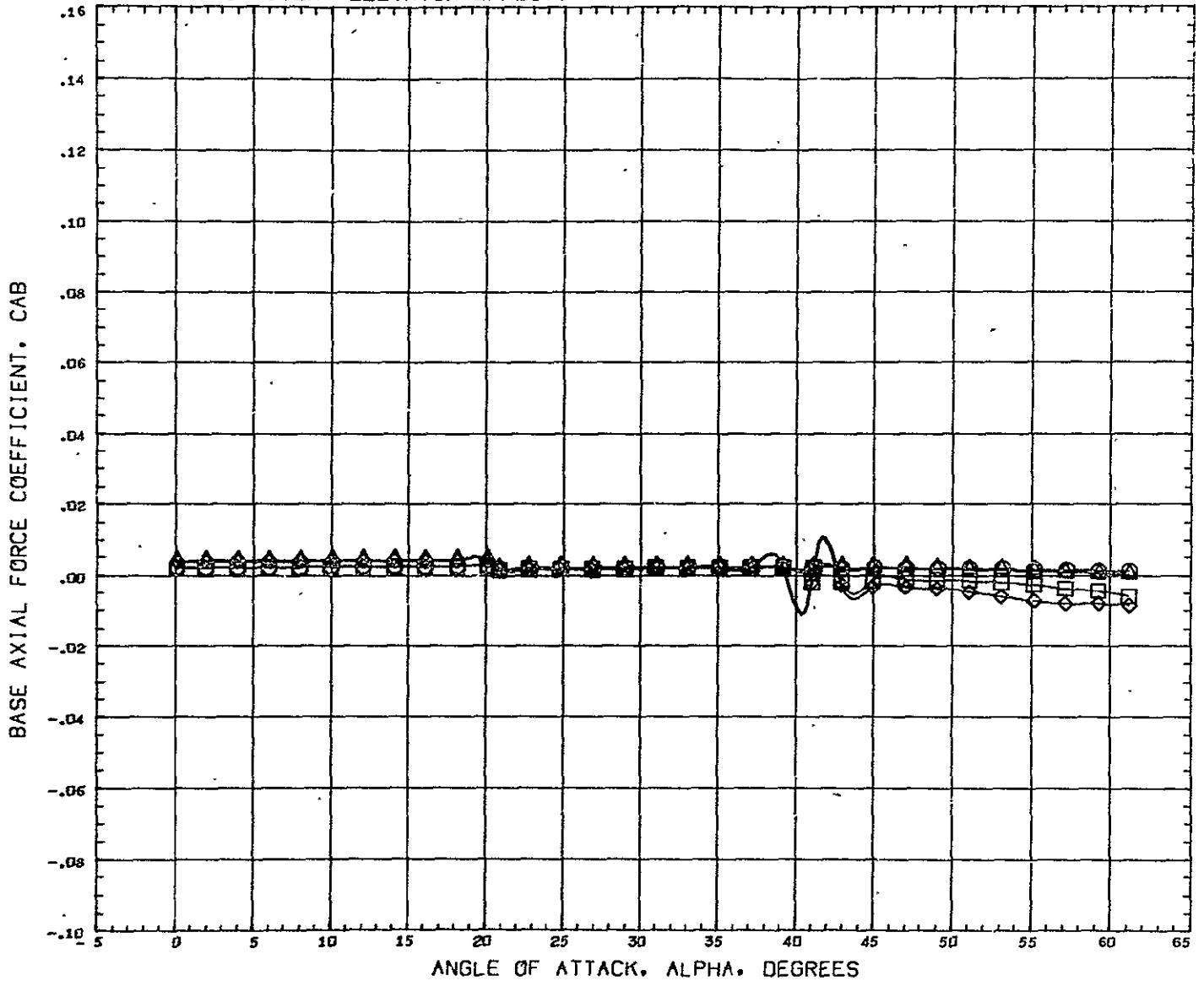
DELTA WING ORBITER- ELEVATOR EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(R2756S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(R2757S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	-10.000	0.000	0.000	0.000	REFL 821.2004 INCHES
(R2758S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	-30.000	0.000	0.000	0.000	REF0 1422.8040 INCHES
(R2759S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	-45.000	0.000	0.000	0.000	YNRP 1422.8040 INCHES YMRP 0.0000 INCHES ZMRP 130.0004 INCHES SCALE 0.0035 SCALE

MACH 2.990

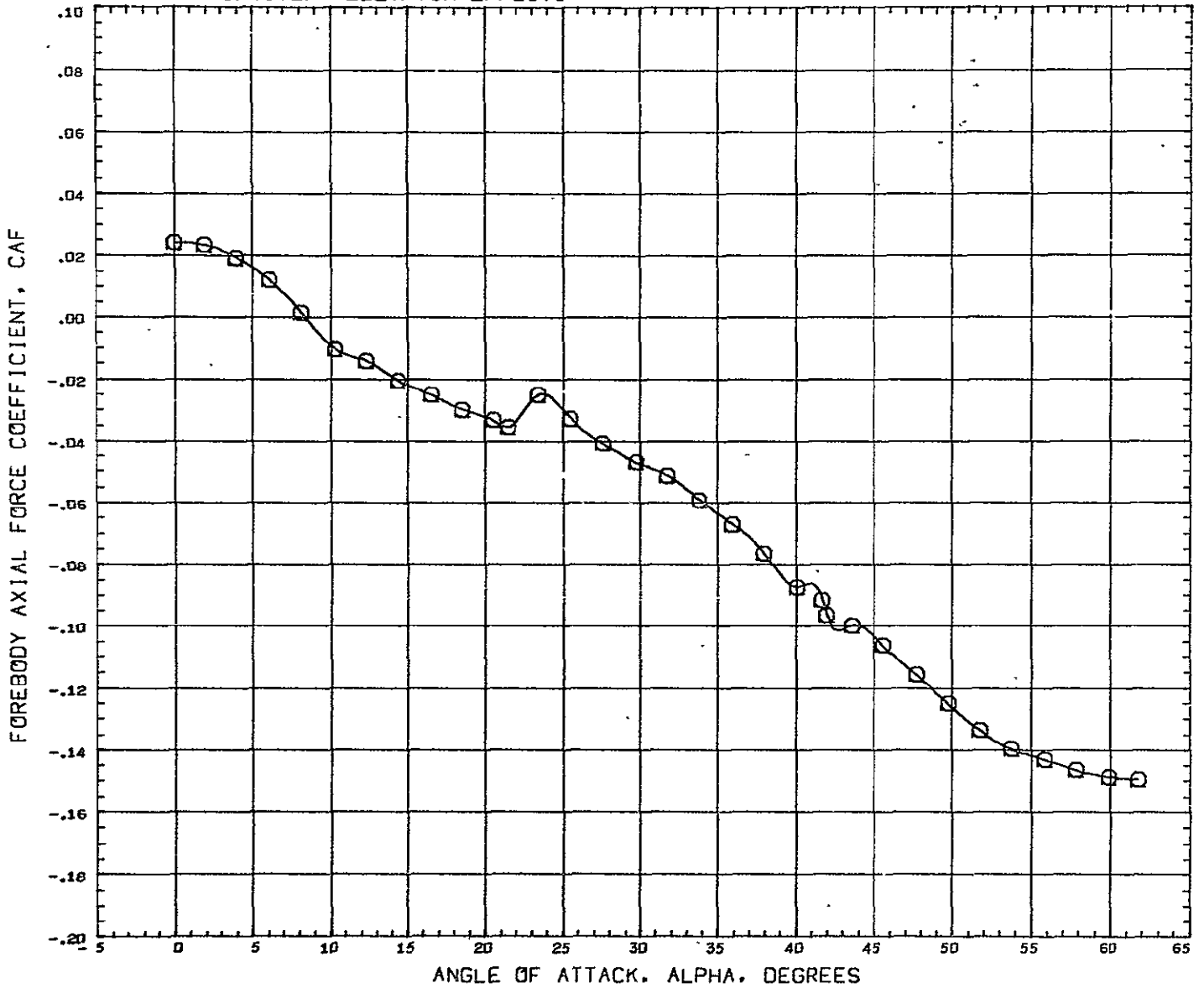
DELTA WING ORBITER- ELEVATOR EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(R2756S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	0.000	0.000	REFS 6004.0000 SQ FT
(R2757S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	-10.000	0.000	0.000	0.000	REFL 821.2004 INCHES
(R2758S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	-30.000	0.000	0.000	0.000	REFB 1422.804C INCHES
(R2759S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	-45.000	0.000	0.000	0.000	XMRP 1422.5040 INCHES
						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

KACH 4.959

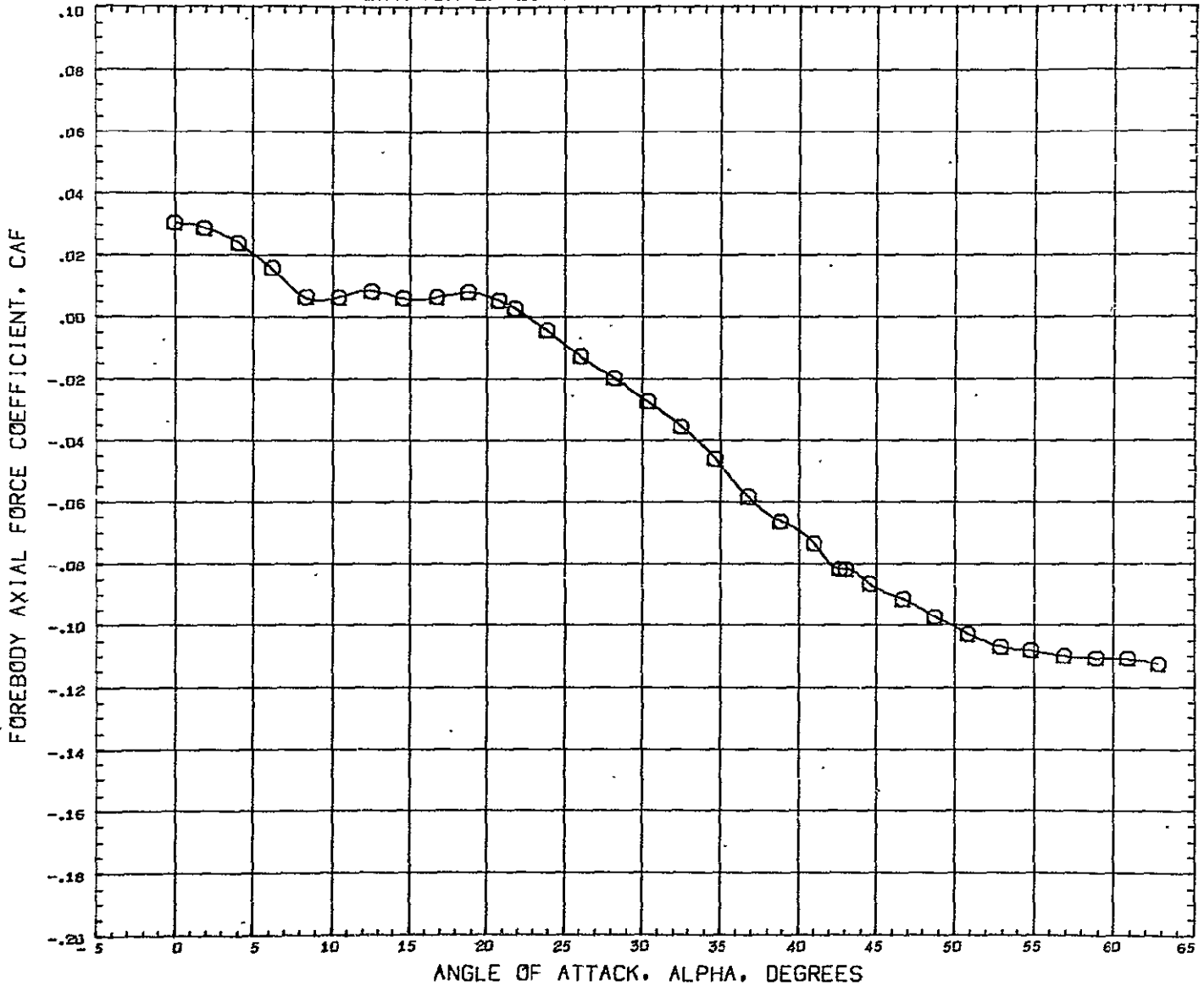
DELTA WING ORBITER- ELEVATOR EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(B2756S)	MSFC478 NR DELTA ORBITER 85W17E10V17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(B2757S)	MSFC478 NR DELTA ORBITER 85W17E10V17J2X	-10.000	0.000	0.000	0.000	REFL 821.2004 INCHES
(B2758S)	MSFC478 NR DELTA ORBITER 85W17E10V17J2X	-30.000	0.000	0.000	0.000	REFB 1422.8040 INCHES
(B2759S)	MSFC478 NR DELTA ORBITER 85W17E10V17J2X	-45.000	0.000	0.000	0.000	XMRP 1422.5340 INCHES
						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 0.598

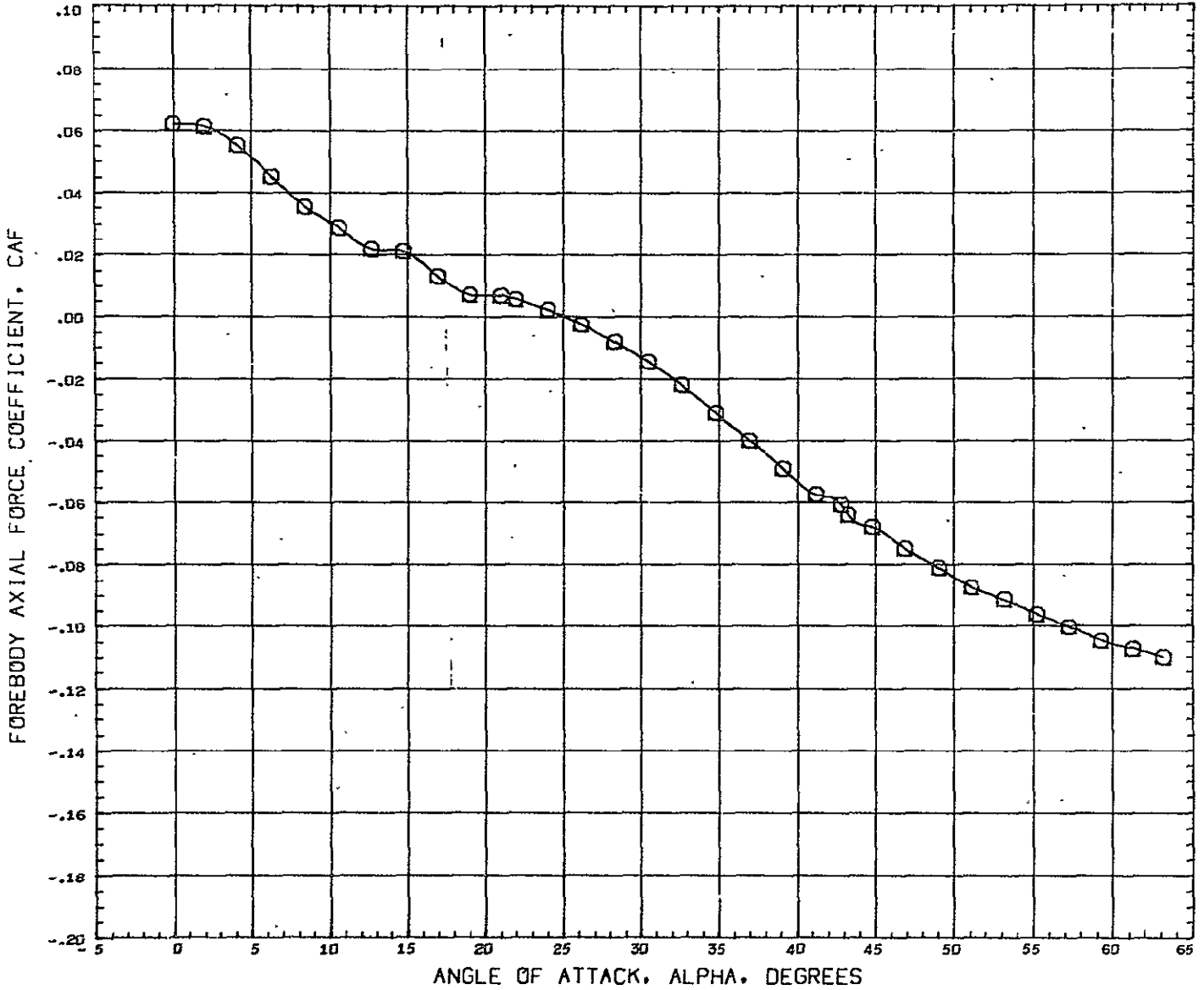
DELTA WING ORBITER- ELEVATOR EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(B2756S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(B2757S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	-10.000	0.000	0.000	0.000	REFL 821.2004 INCHES
(B2758S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	-30.000	0.000	0.000	0.000	REFB 1422.8040 INCHES
(B2759S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	-45.000	0.000	0.000	0.000	XMRP 1422.5040 INCHES
						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 0.899

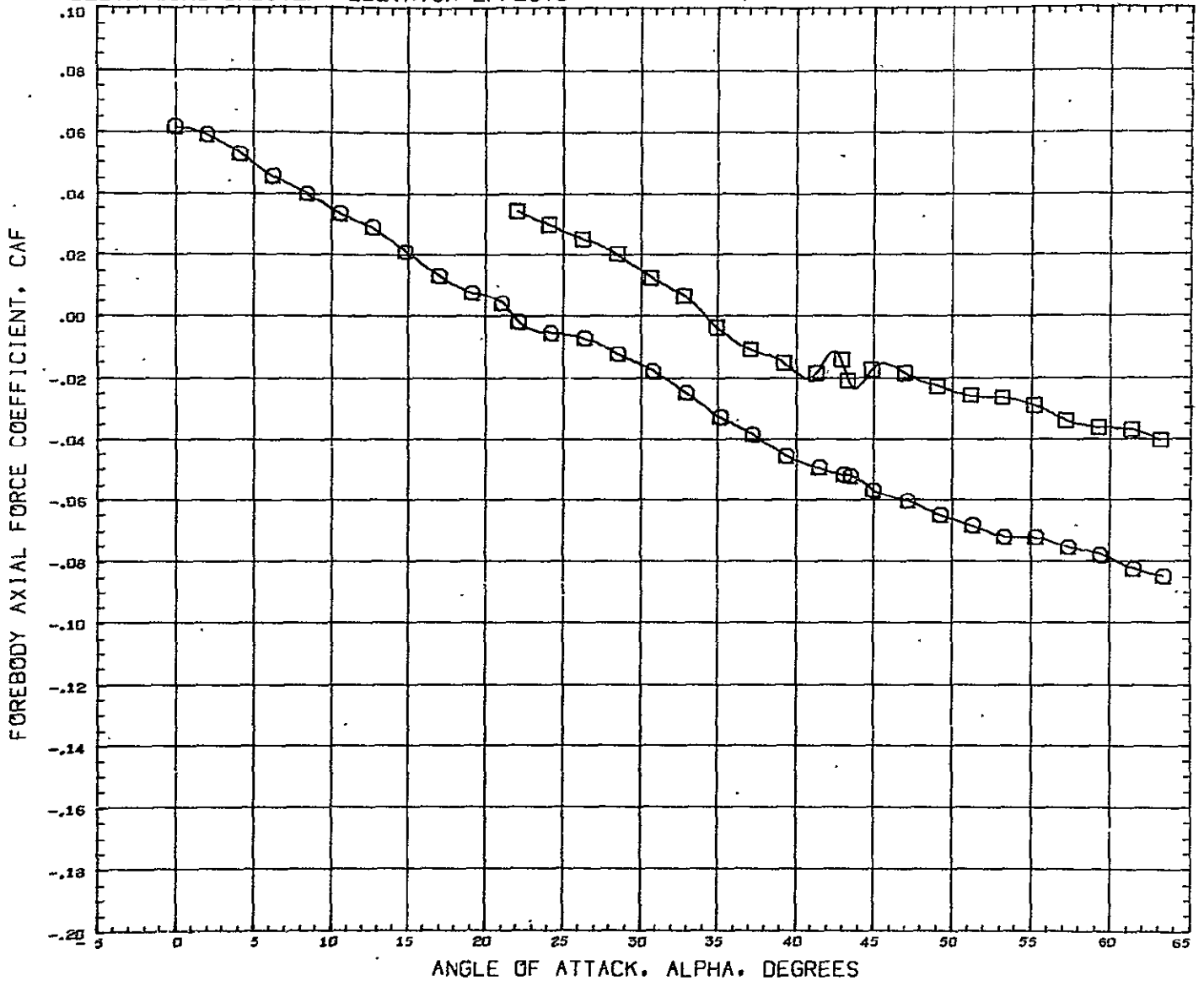
DELTA WING ORBITER- ELEVATOR EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(B2756S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(B2757S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	-10.000	0.000	0.000	0.000	REFL 821.2004 INCHES
(B2758S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	-30.000	0.000	0.000	0.000	REFB 1422.8040 INCHES
(B2759S)	MSFC478 NF DELTA ORBITER B5W17E10V17J2X	-45.000	0.000	0.000	0.000	XMRP 1422.5040 INCHES
						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 1.003

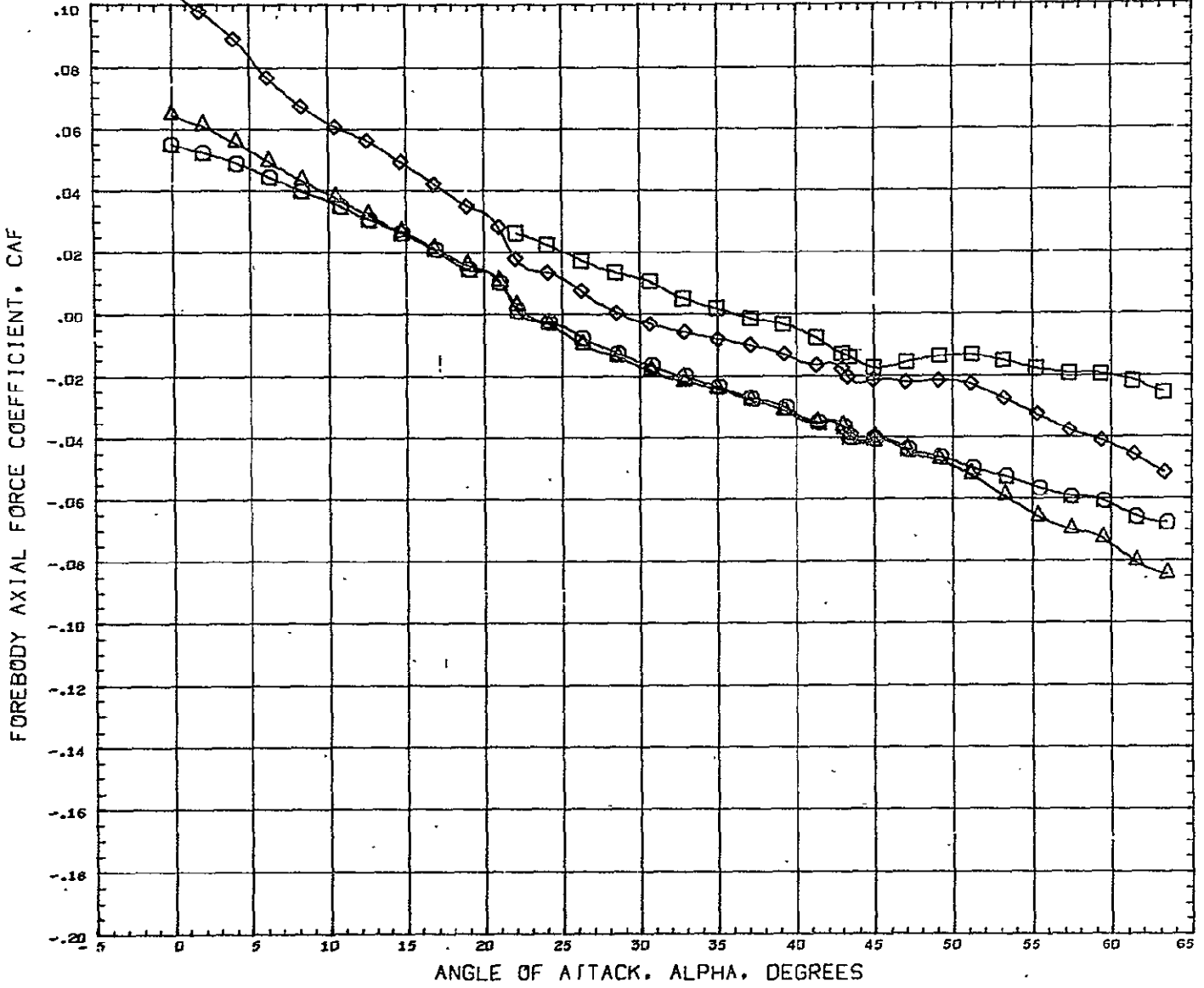
DELTA WING ORBITER- ELEVATOR EFFECTS



DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	PUDDER	RUDFLR	REFERENCE INFORMATION
(B2756S)	○	HSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(B2757S)	△	HSFC478 NR DELTA ORBITER B5W17E19V17J2X	-10.000	0.000	0.000	0.000	REFL 821.2004 INCHES
(B2758S)	◇	HSFC478 NR DELTA ORBITER B5W17E10V17J2X	-30.000	0.000	0.000	0.000	REFD 1422.8040 INCHES
(B2759S)	□	HSFC478 NR DELTA ORBITER B5W17E10V17J2X	-45.000	0.000	0.000	0.000	XMRP 1422.5040 INCHES YMRP 0.0000 INCHES ZMRP 130.0004 INCHES SCALE 0.0035 SCALE

MACH 1.199

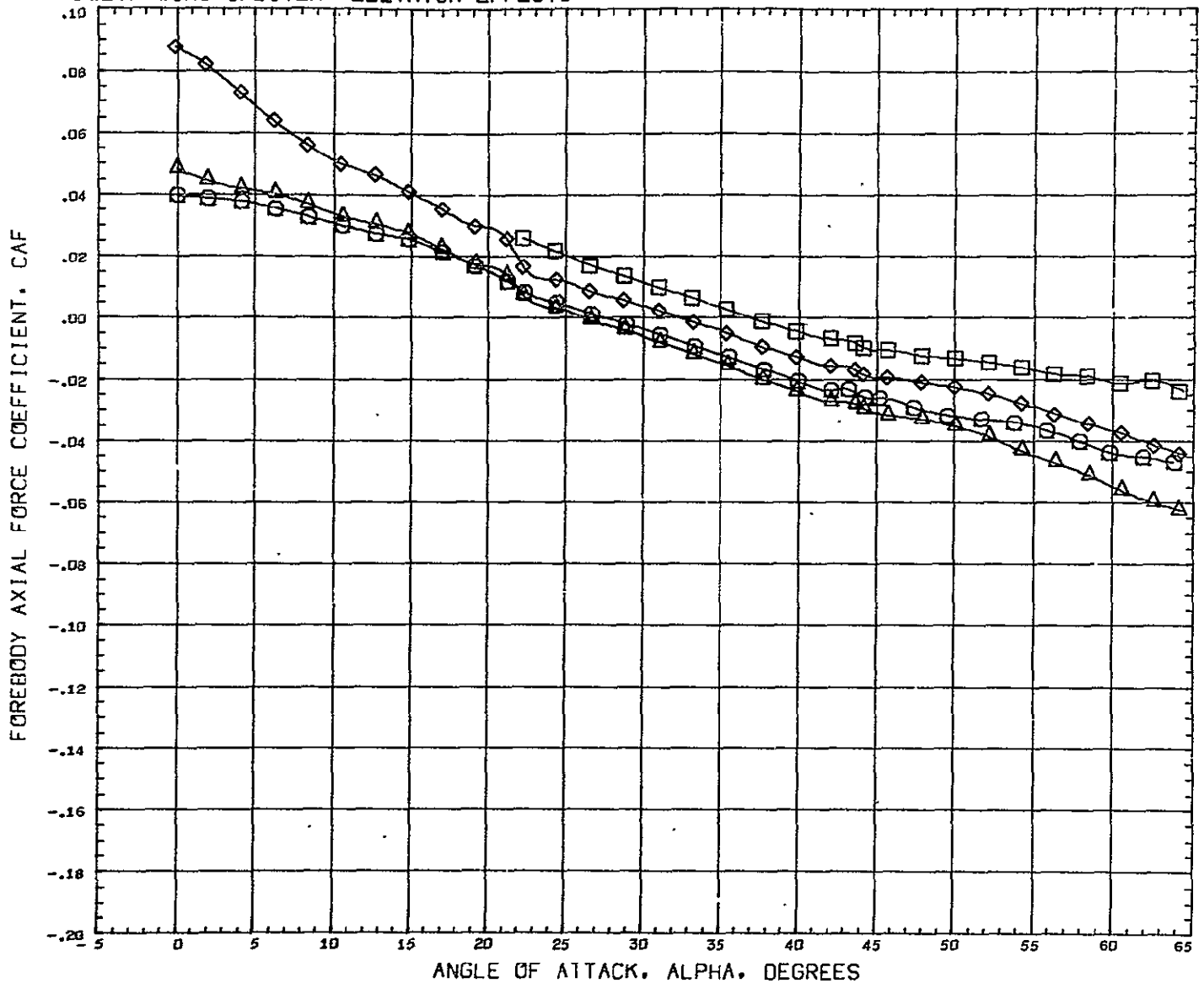
DELTA WING ORBITER- ELEVATOR EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(B2756S)	HSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(B2757S)	HSFC478 NR DELTA ORBITER B5W17E10V17J2X	-10.000	0.000	0.000	0.000	REFL 821.2004 INCHES
(B2758S)	HSFC478 NR DELTA ORBITER B5W17E10V17J2X	-30.000	0.000	0.000	0.000	REFB 1422.8040 INCHES
(B2759S)	HSFC478 NR DELTA ORBITER B5W17E10V17J2X	-45.000	0.000	0.000	0.000	XMRP 1422.5040 INCHES
						YMRF 0.0000 INCHES
						ZMRF 130.0004 INCHES
						SCALE 0.0035 SCALE

PACH 1.458

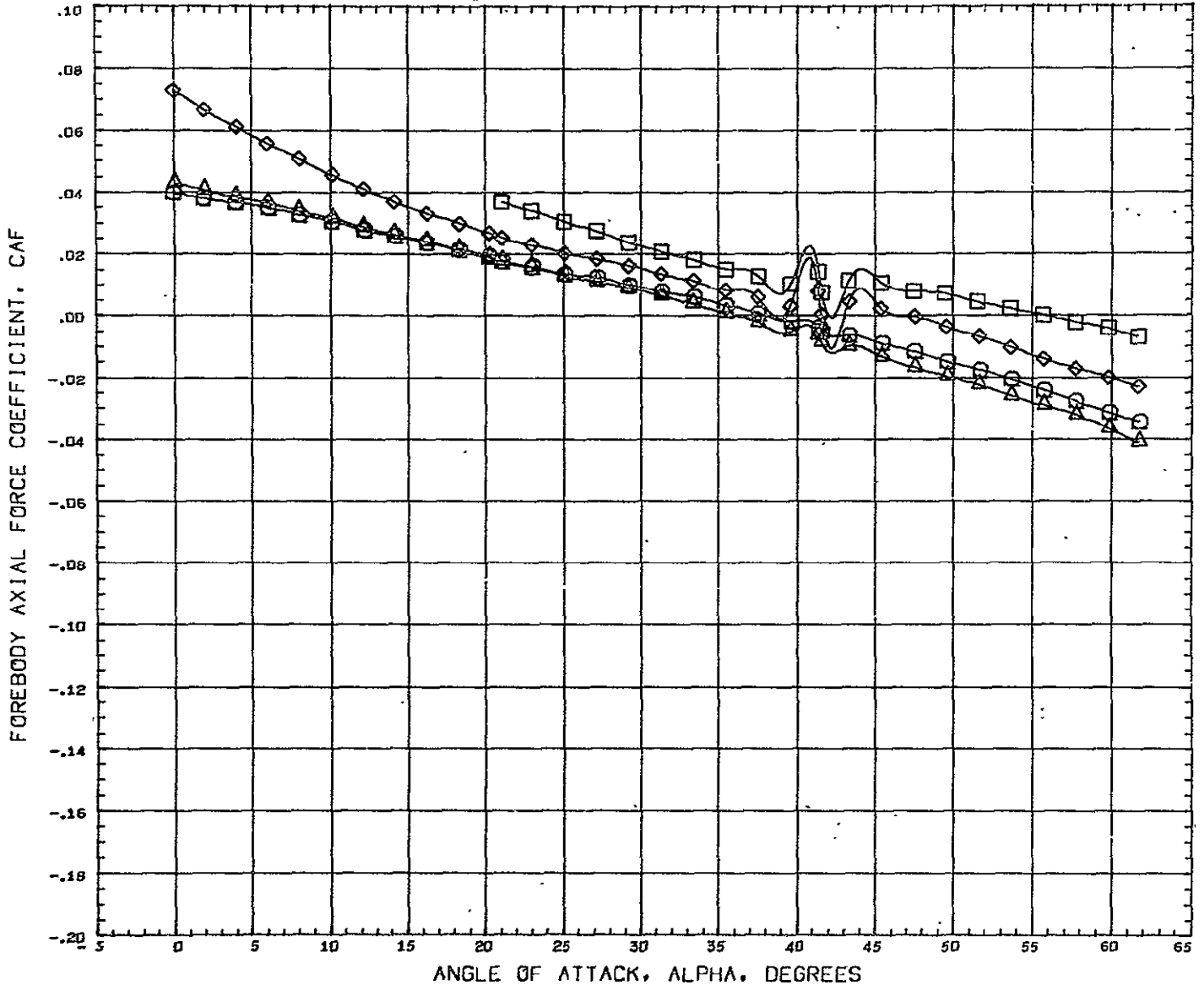
DELTA WING ORBITER- ELEVATOR EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUCFLR	REFERENCE INFORMATION
(B2756S)	MSFC478 NR DELTA ORBITER B5W17E1GV17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(B2757S)	MSFC478 NR DELTA ORBITER B5W17E1GV17J2X	-10.000	0.000	0.000	0.000	REFL 821.2004 INCHES
(B2758S)	MSFC478 NR DELTA ORBITER B5W17E1GV17J2X	-30.000	0.000	0.000	0.000	REFB 1422.8040 INCHES
(B2759S)	MSFC478 NR DELTA ORBITER B5W17E1GV17J2X	-45.000	0.000	0.000	0.000	XMRP 1422.5040 INCHES
						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 1.965

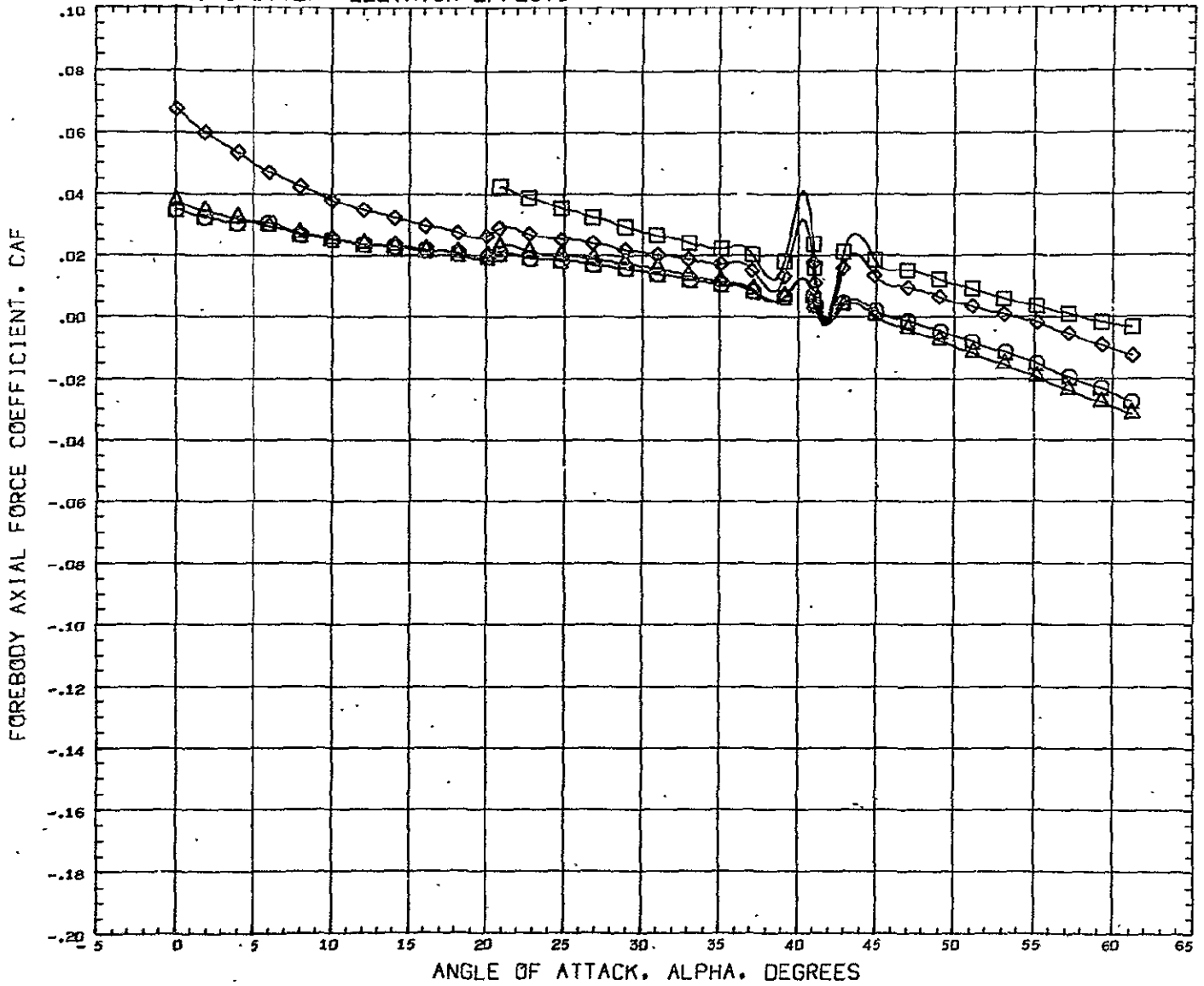
DELTA WING ORBITER- ELEVATOR EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(B2756S)	MSFC478 NR DELTA ORBITER 05W17E10V17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(B2757S)	MSFC478 NR DELTA ORBITER 05W17E10V17J2X	-10.000	0.000	0.000	0.000	REFL 821.2004 INCHES
(B2758S)	MSFC478 NR DELTA ORBITER 05W17E10V17J2X	-30.000	0.000	0.000	0.000	REFS 1422.0040 INCHES
(B2759S)	MSFC478 NR DELTA ORBITER 05W17E10V17J2X	-45.000	0.000	0.000	0.000	REFS 1422.5040 INCHES
						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 2.990

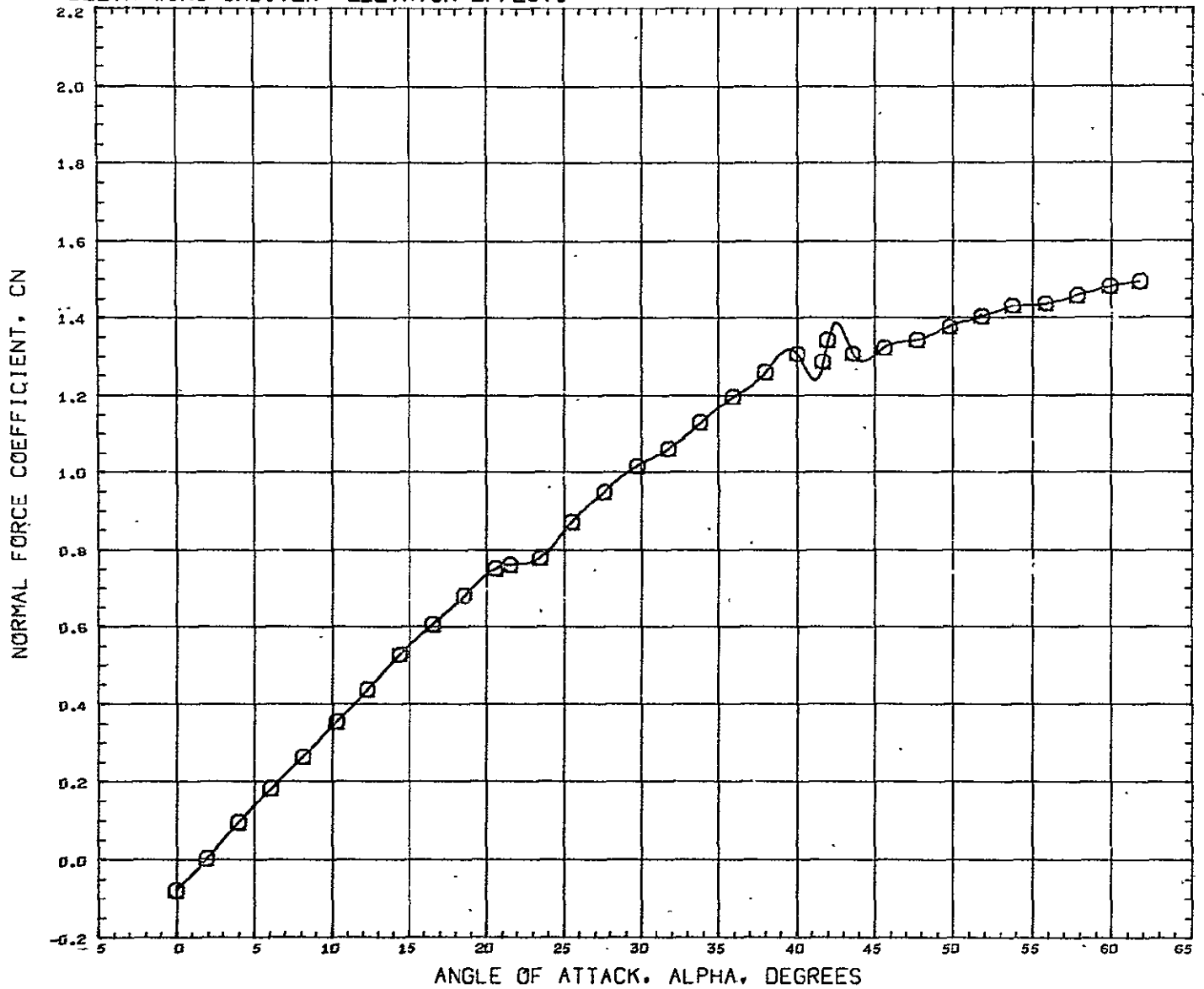
DELTA WING ORBITER- ELEVATOR EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(B2756S)	MSFC478 NR DELTA ORBITER B5W17E1DV17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(B2757S)	MSFC478 NR DELTA ORBITER B5W17E1DV17J2X	-10.000	0.000	0.000	0.000	REFL 821.2904 INCHES
(B2758S)	MSFC478 NR DELTA ORBITER B5W17E1DV17J2X	-30.000	0.000	0.000	0.000	REFB 1422.8040 INCHES
(B2759S)	MSFC478 NR DELTA ORBITER B5W17E1DV17J2X	-45.000	0.000	0.000	0.000	XMRP 1422.5040 INCHES
						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 4.959

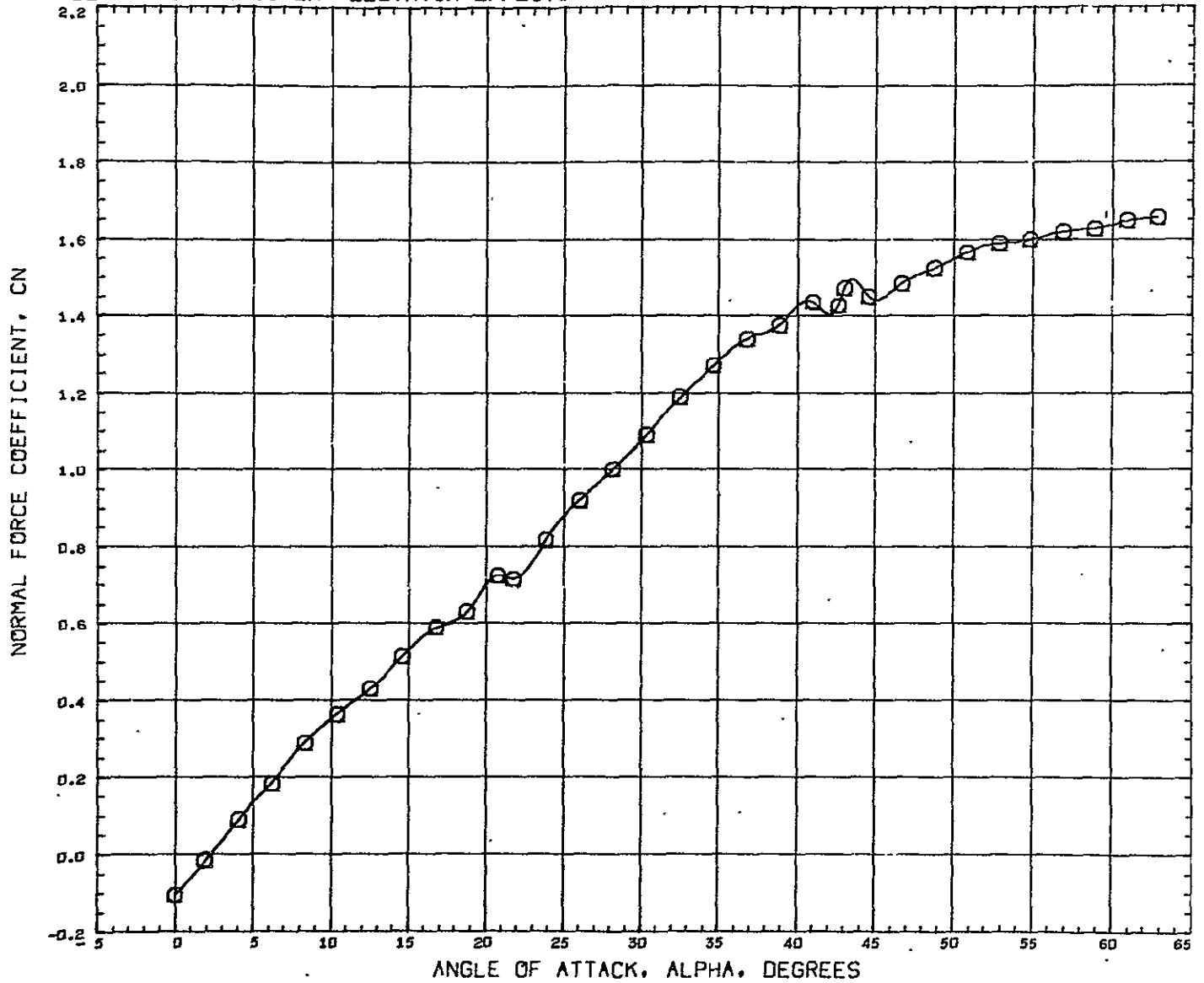
DELTA WING ORBITER- ELEVATOR EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(B2756S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT.
(B2757S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	-10.000	0.000	0.000	0.000	REFL 821.2004 INCHES
(B2758S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	-30.000	0.000	0.000	0.000	REFB 1422.8040 INCHES
(B2759S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	-45.000	0.000	0.000	0.000	XMRP 1422.5040 INCHES
						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 0.593

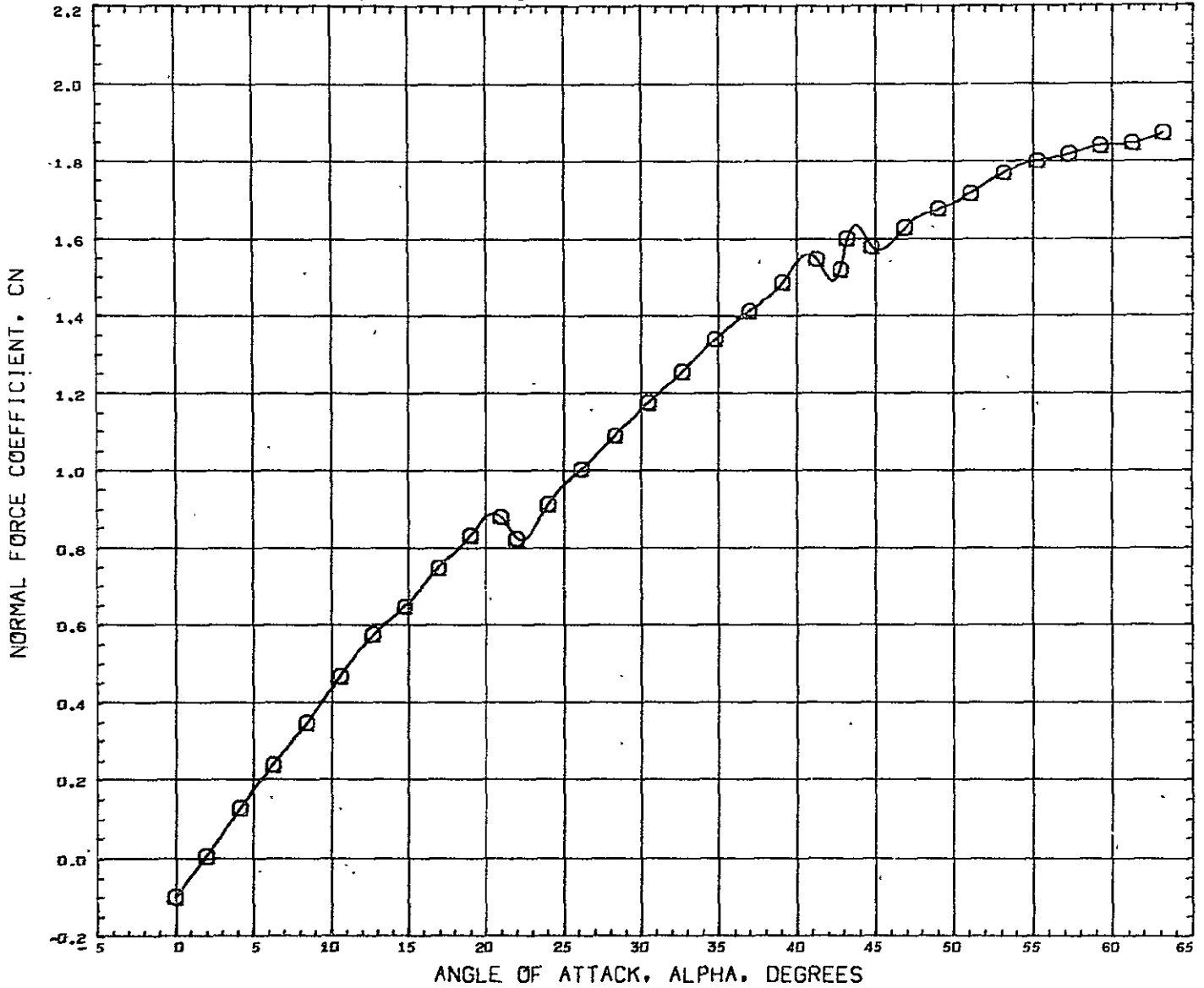
DELTA WING ORBITER- ELEVATOR EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(B2756S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(B2757S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	-10.000	0.000	0.000	0.000	REFL 821.2004 INCHES
(B2758S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	-30.000	0.000	0.000	0.000	REFB 1422.3040 INCHES
(B2759S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	-45.000	0.000	0.000	0.000	XMRP 1422.5040 INCHES
						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
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MACH 0.899

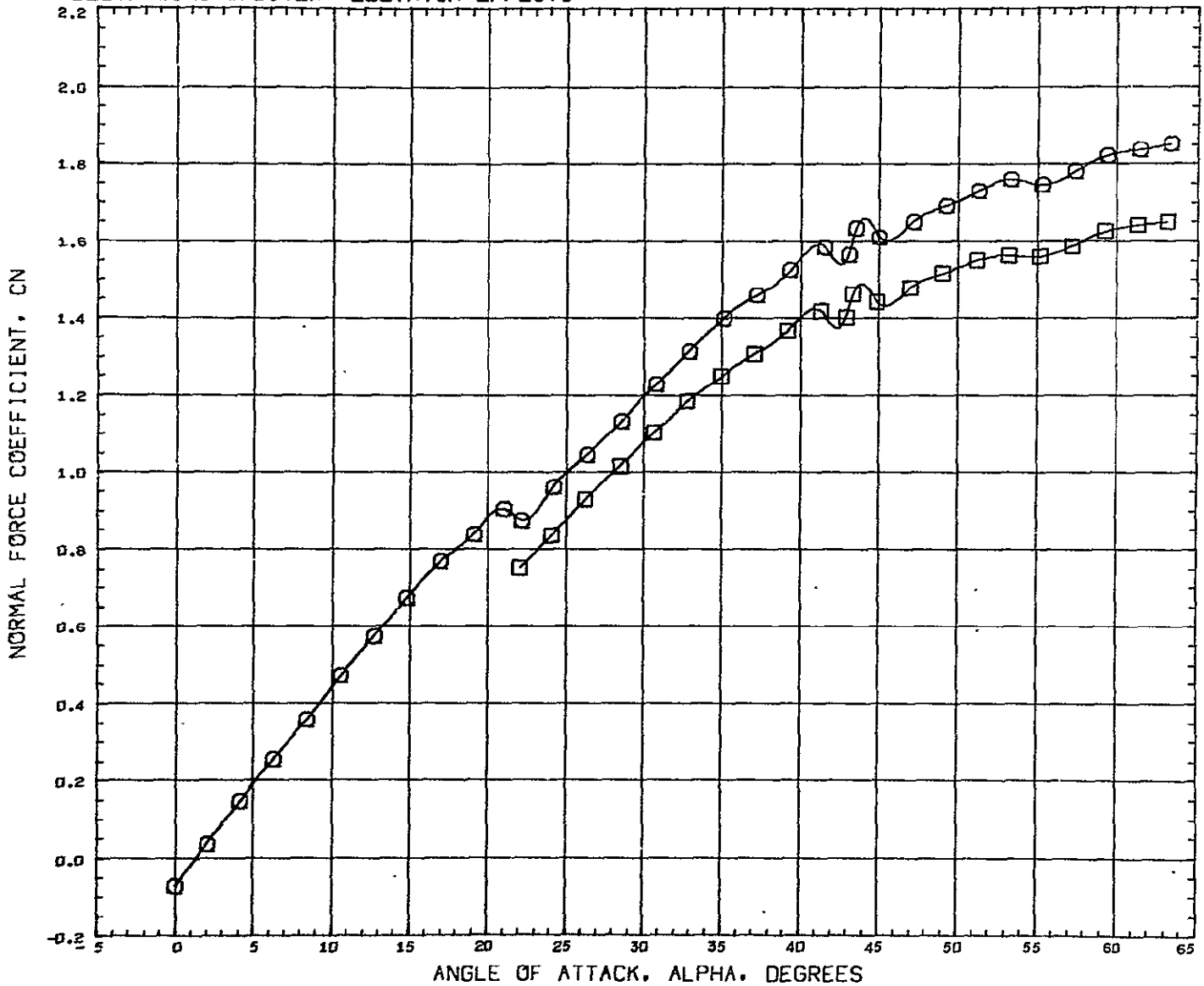
DELTA WING ORBITER- ELEVATOR EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(B2756S)	MSFC478 NR DELTA ORBITER 85W17E10V17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(B2757S)	MSFC478 NR DELTA ORBITER 85W17E10V17J2X	-10.000	0.000	0.000	0.000	REFL 821.2004 INCHES
(B2758S)	MSFC478 NR DELTA ORBITER 85W17E10V17J2X	-30.000	0.000	0.000	0.000	REFE 1422.8040 INCHES
(B2759S)	MSFC478 NR DELTA ORBITER 85W17E10V17J2X	-45.000	0.000	0.000	0.000	XNRF 1422.5040 INCHES
						YNRF 0.0000 INCHES
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						SCALE 0.0035 SCALE

MACH . 1.003

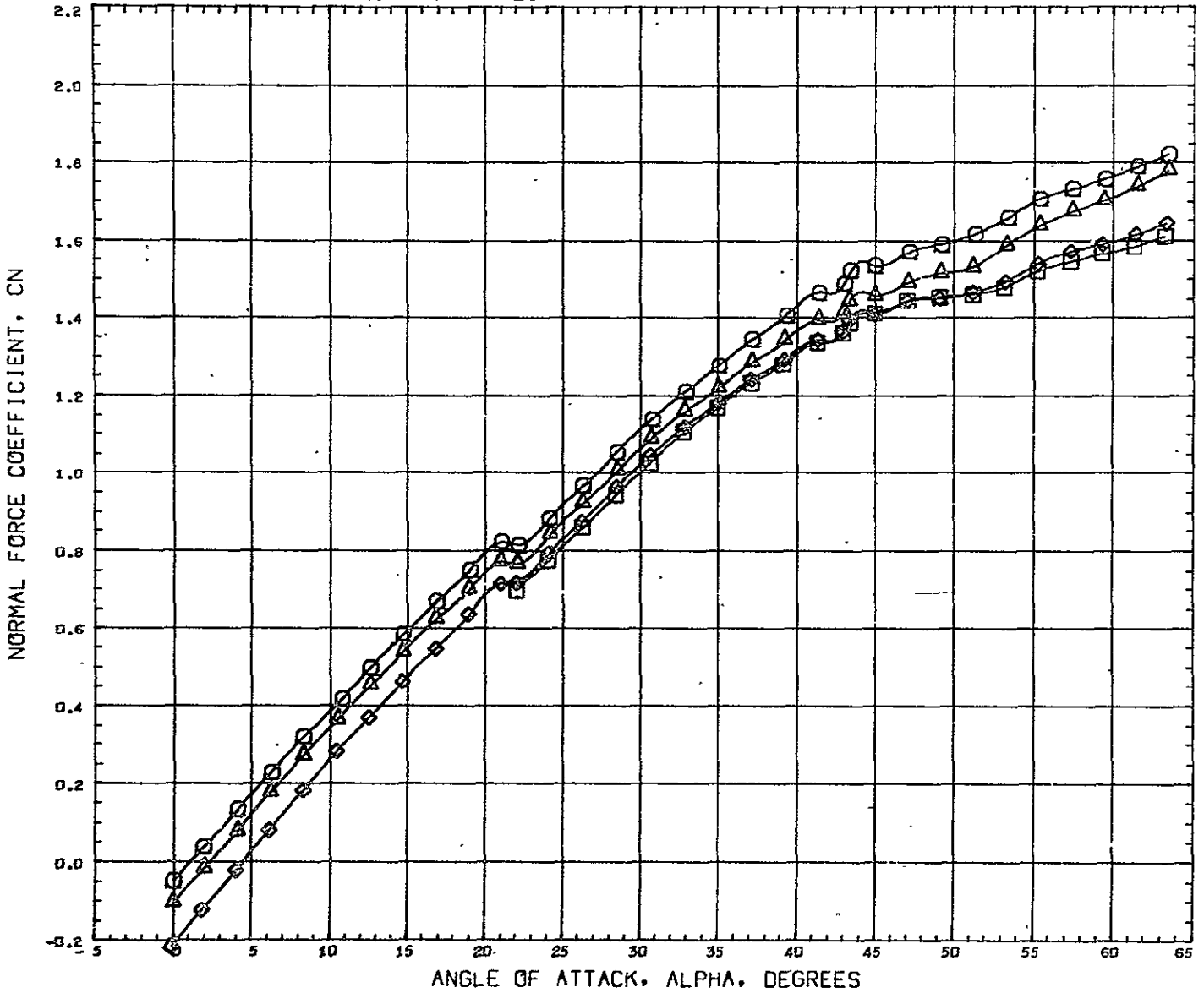
DELTA WING ORBITER- ELEVATOR EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(82756S)	MSFC478 NR DELTA ORBITER B5W17E1DV17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(82757S)	MSFC478 NR DELTA ORBITER B5W17E1DV17J2X	-10.000	0.000	0.000	0.000	REFL 821.2004 INCHES
(82758S)	MSFC478 NR DELTA ORBITER B5W17E1DV17J2X	-30.000	0.000	0.000	0.000	REFB 1422.8040 INCHES
(82759S)	MSFC478 NR DELTA ORBITER B5W17E1DV17J2X	-45.000	0.000	0.000	0.000	XMRP 1422.5040 INCHES
						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 1.199

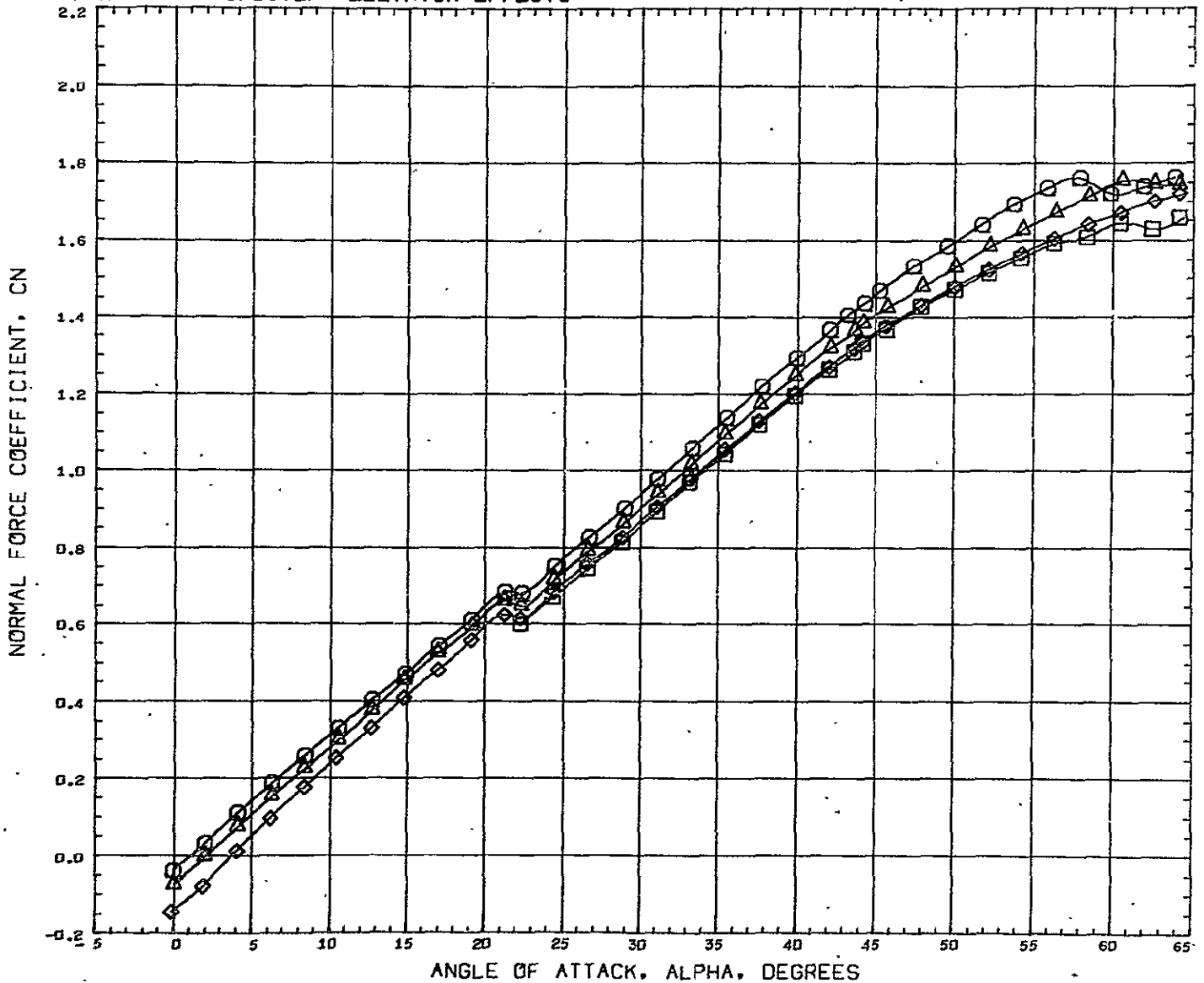
DELTA WING ORBITER- ELEVATOR EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(B2756S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(B2757S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	-10.000	0.000	0.000	0.000	REFL 821.2004 INCHES
(B2758S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	-30.000	0.000	0.000	0.000	REFB 1422.8040 INCHES
(B2759S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	-45.000	0.000	0.000	0.000	XMRP 1422.5040 INCHES
						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
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MACH - 1.458

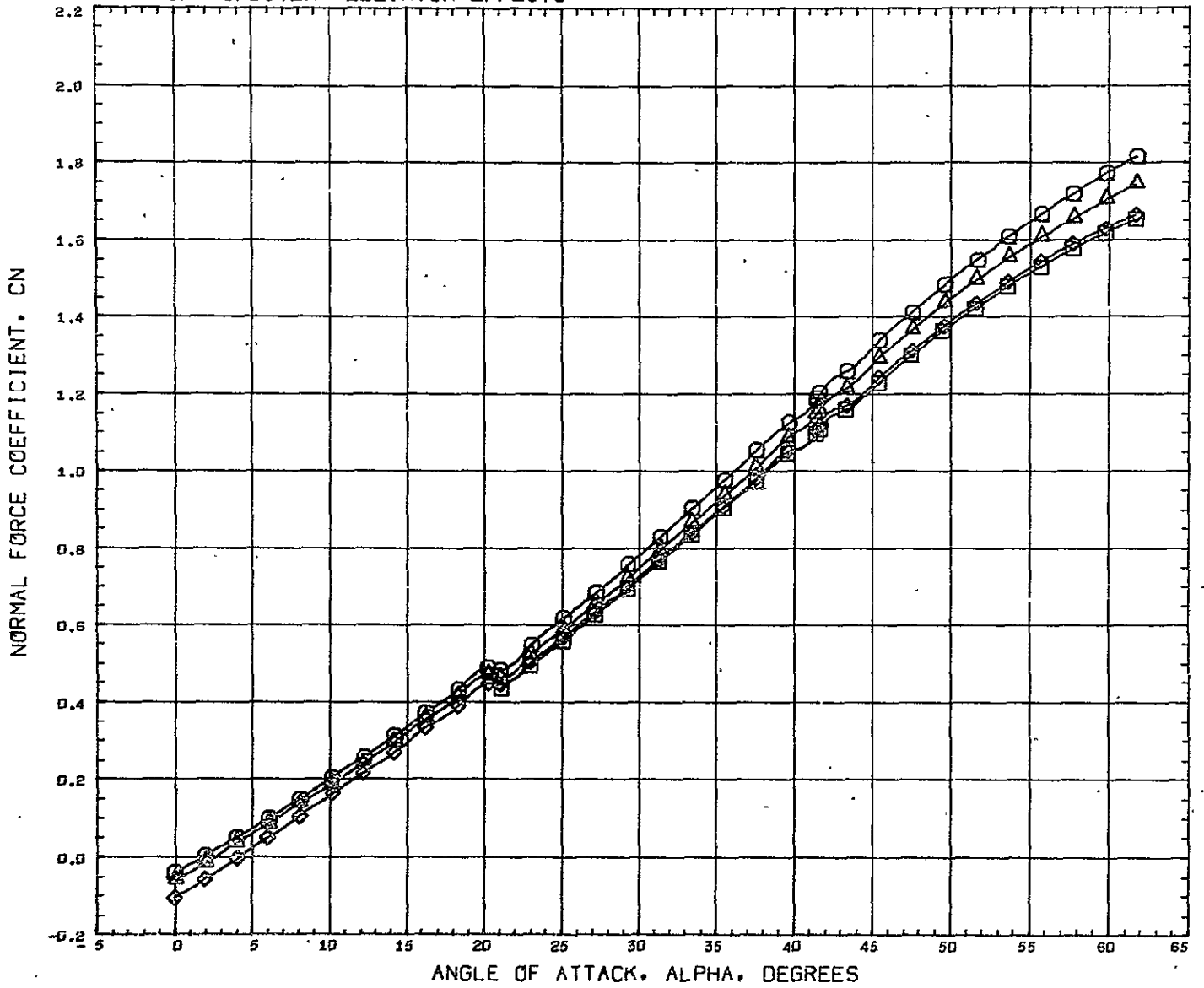
DELTA WING ORBITER- ELEVATOR EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(B2756S)	MSFC478 NR DELTA ORBITER 85W17E10V17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(B2757S)	MSFC478 NR DELTA ORBITER 85W17E10V17J2X	-10.000	0.000	0.000	0.000	REFL 821.2004 INCHES
(B2758S)	MSFC478 NR DELTA ORBITER 85W17E10V17J2X	-30.000	0.000	0.000	0.000	REFB 1422.6040 INCHES
(B2759S)	MSFC478 NR DELTA ORBITER 85W17E10V17J2X	-45.000	0.000	0.000	0.000	XMRP 1422.5040 INCHES
						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 1.965

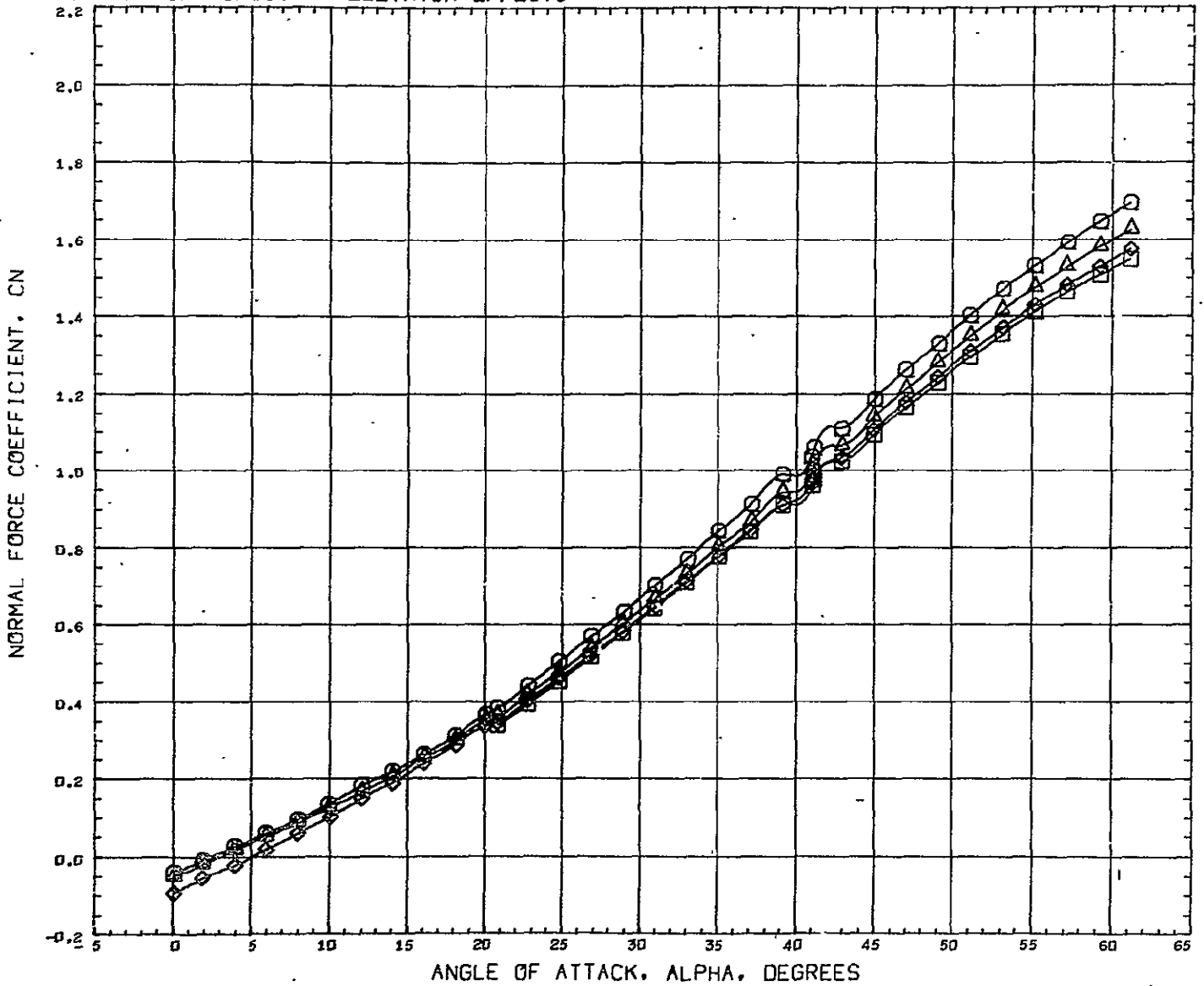
DELTA WING ORBITER- ELEVATOR EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION		
(B2756S)	MSFC478 NR DELTA ORBITER BSW17E10V17J2X	0.000	0.000	0.000	0.000	REFS	6084.0040	SQ FT
(B2757S)	MSFC478 NR DELTA ORBITER BSW17E10V17J2X	-10.000	0.000	0.000	0.000	REFL	821.2004	INCHES
(B2758S)	MSFC478 NR DELTA ORBITER BSW17E10V17J2X	-30.000	0.000	0.000	0.000	REFB	1422.8040	INCHES
(B2759S)	MSFC478 NR DELTA ORBITER BSW17E10V17J2X	-45.000	0.000	0.000	0.000	REFC	1422.5040	INCHES
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MACH 2.990

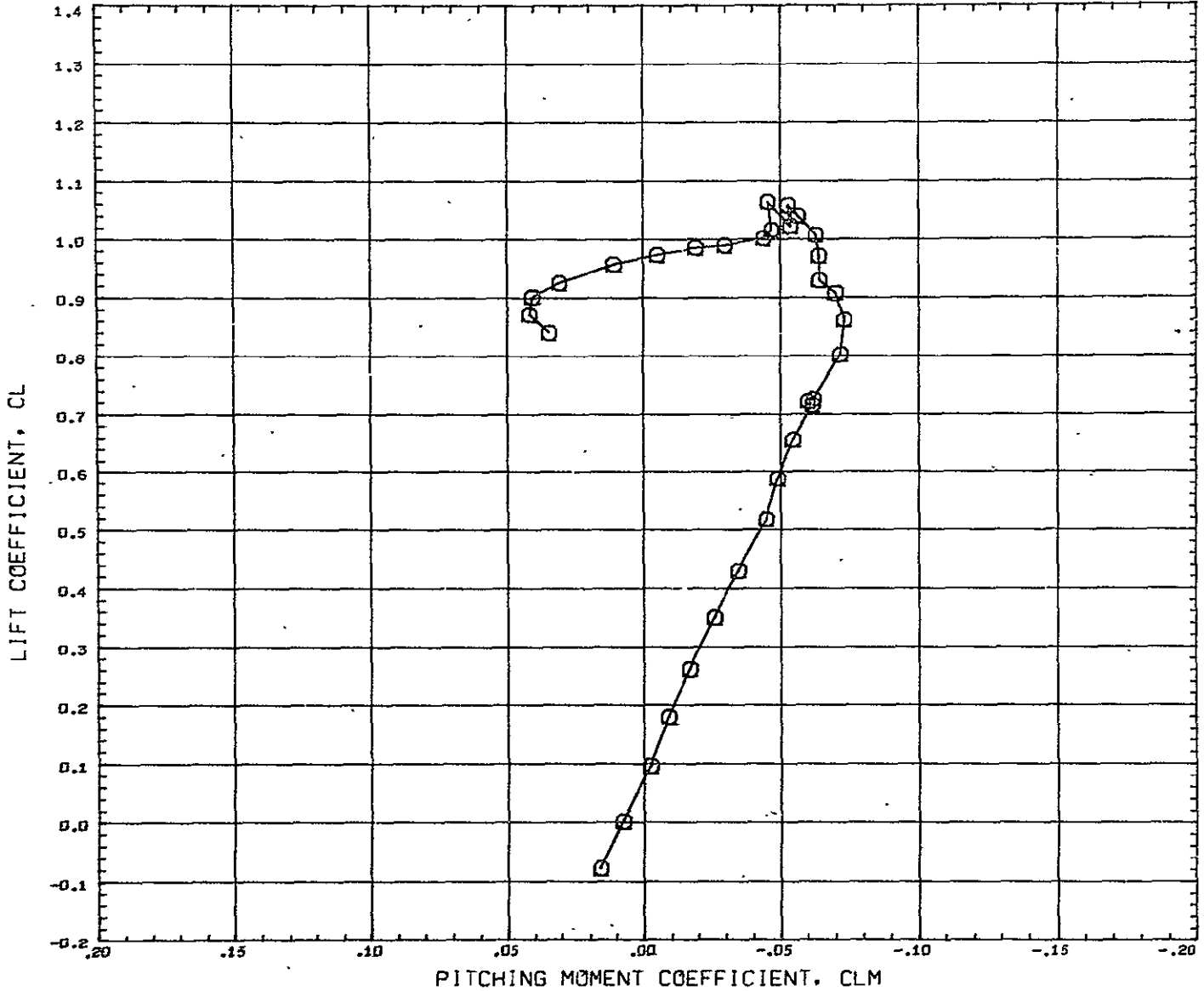
DELTA WING ORBITER- ELEVATOR EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(B2756S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(B2757S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	-10.000	0.000	0.000	0.000	REFL 821.2004 INCHES
(B2758S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	-30.000	0.000	0.000	0.000	REFB 1422.8040 INCHES
(B2759S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	-45.000	0.000	0.000	0.000	XMRP 1422.5040 INCHES
						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
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MACH 4.959

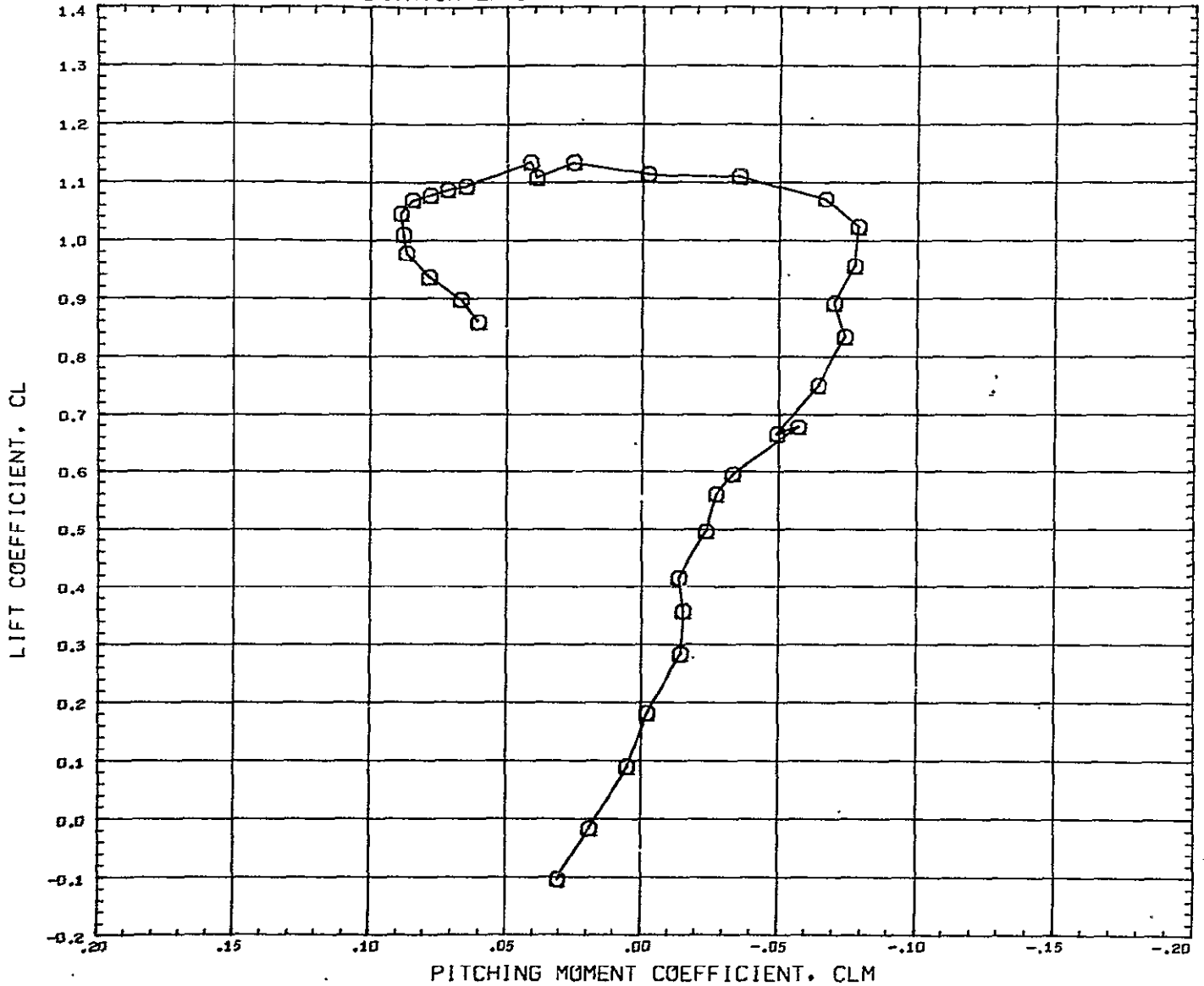
DELTA WING ORBITER- ELEVATOR EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(R2756S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(R2757S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	-10.000	0.000	0.000	0.000	REPL 821.2004 INCHES
(R2758S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	-30.000	0.000	0.000	0.000	REFB 1422.8040 INCHES
(R2759S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	-45.000	0.000	0.000	0.000	XMRP 1422.5040 INCHES
						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 0.598

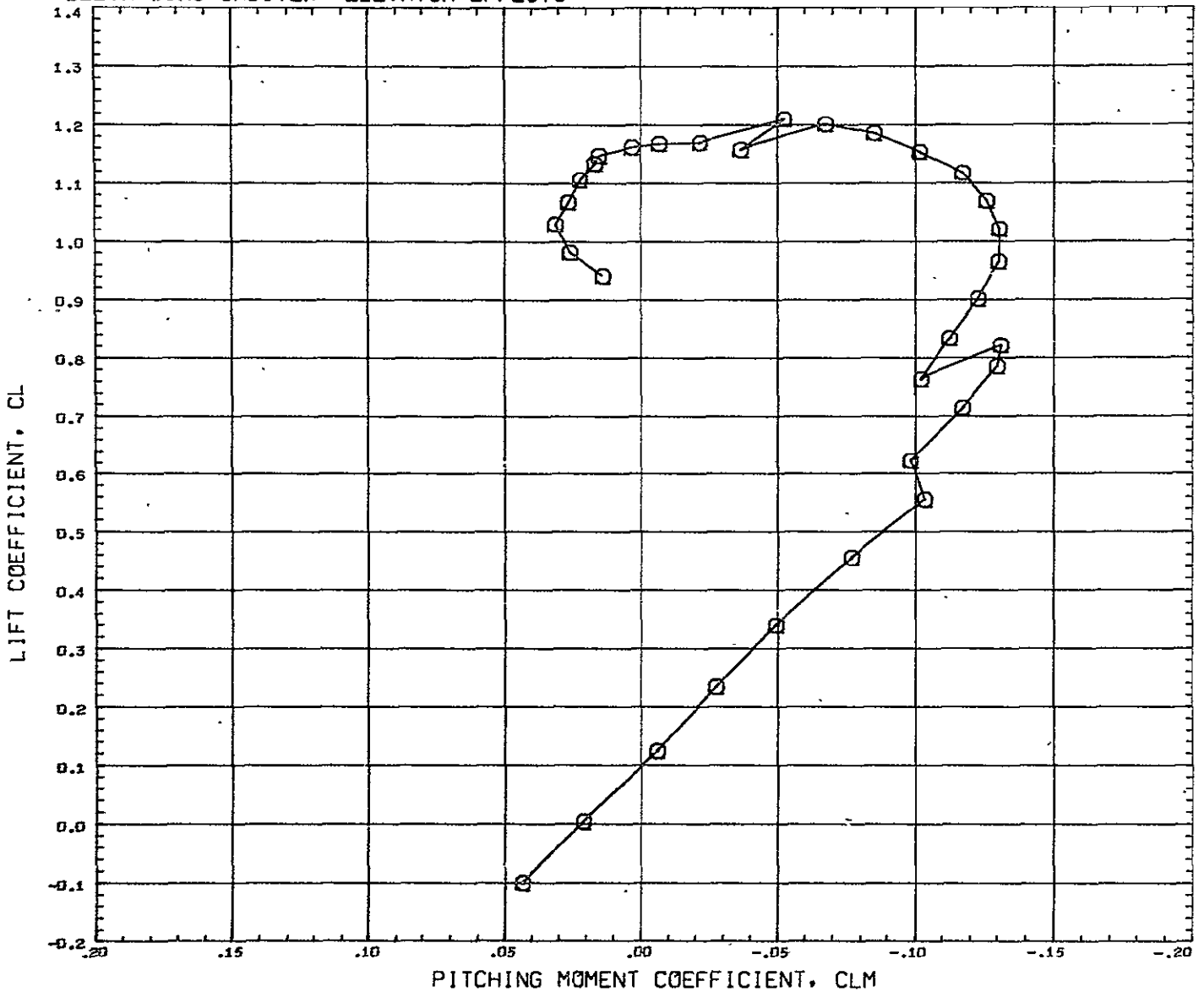
DELTA WING ORBITER- ELEVATOR EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(R2756S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	0.000	0.000	REFS 6084.0840 SQ FT
(R2757S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	-10.000	0.000	0.000	0.000	REFL 821.2004 INCHES
(R2758S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	-30.000	0.000	0.000	0.000	REFB 1422.8040 INCHES
(R2759S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	-45.000	0.000	0.000	0.000	XMRP 1422.8040 INCHES
						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 5.899

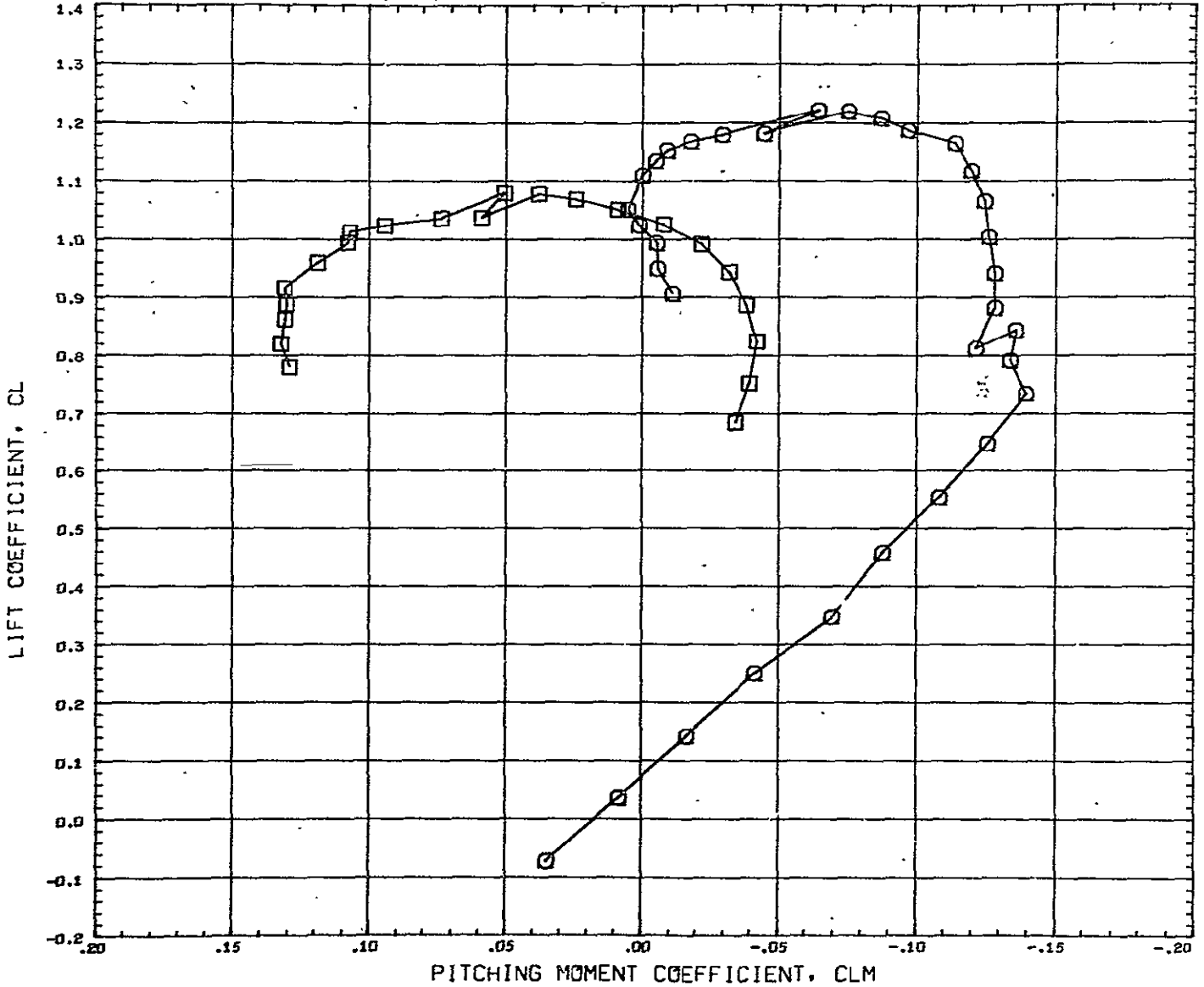
DELTA WING ORBITER- ELEVATOR EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(R2756S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(R2757S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	-10.000	0.000	0.000	0.000	REFL 821.2004 INCHES
(R2758S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	-30.000	0.000	0.000	0.000	REFB 1422.8040 INCHES
(R2759S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	-45.000	0.000	0.000	0.000	XMRP 1422.5040 INCHES
						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 1.003

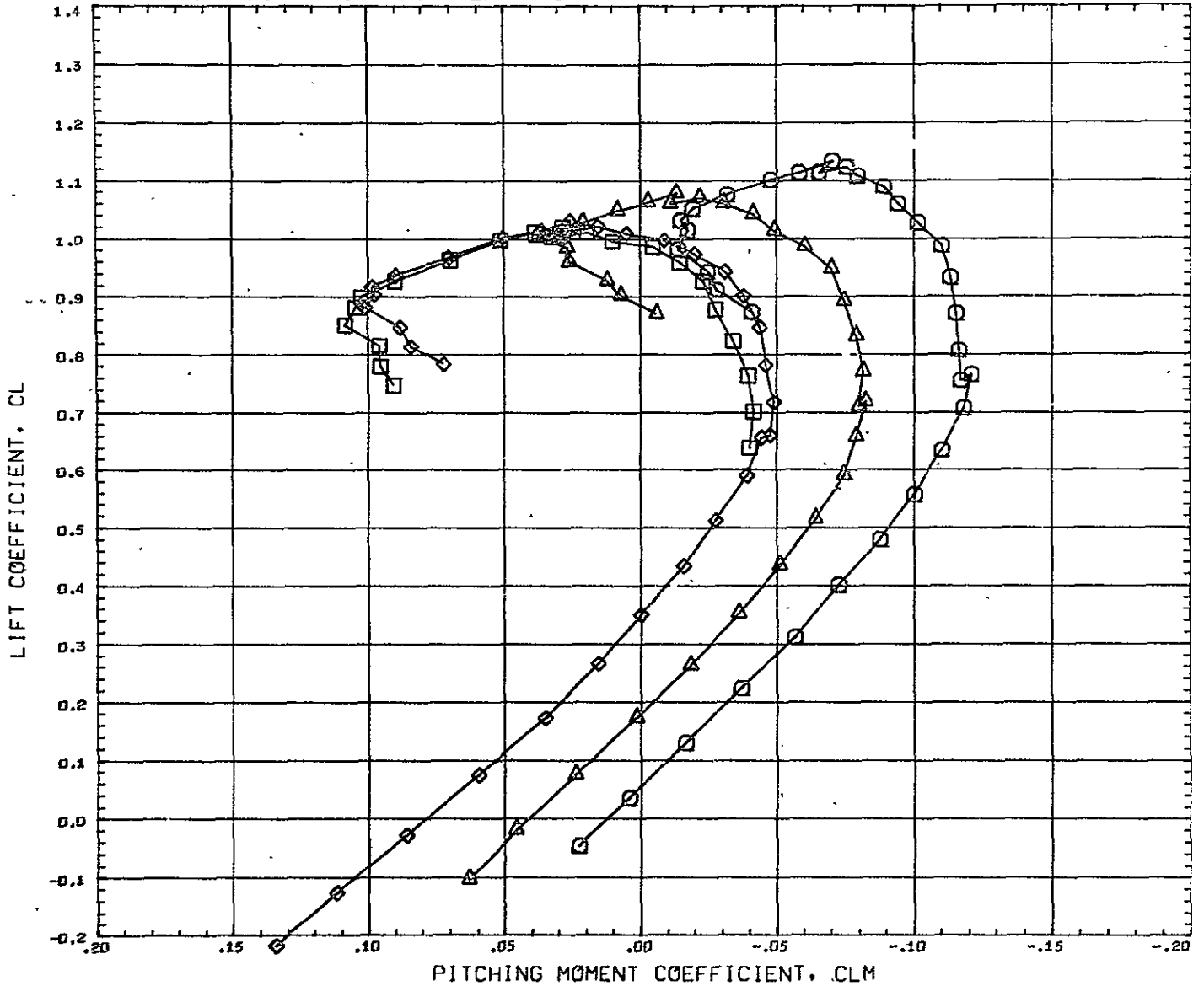
DELTA WING ORBITER- ELEVATOR EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(R2756S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(R2757S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	-10.000	0.000	0.000	0.000	REFL 821.2004 INCHES
(R2758S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	-30.000	0.000	0.000	0.000	REFB 1422.8040 INCHES
(R2759S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	-45.000	0.000	0.000	0.000	XMRP 1422.5040 INCHES
						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
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MACH 1.199

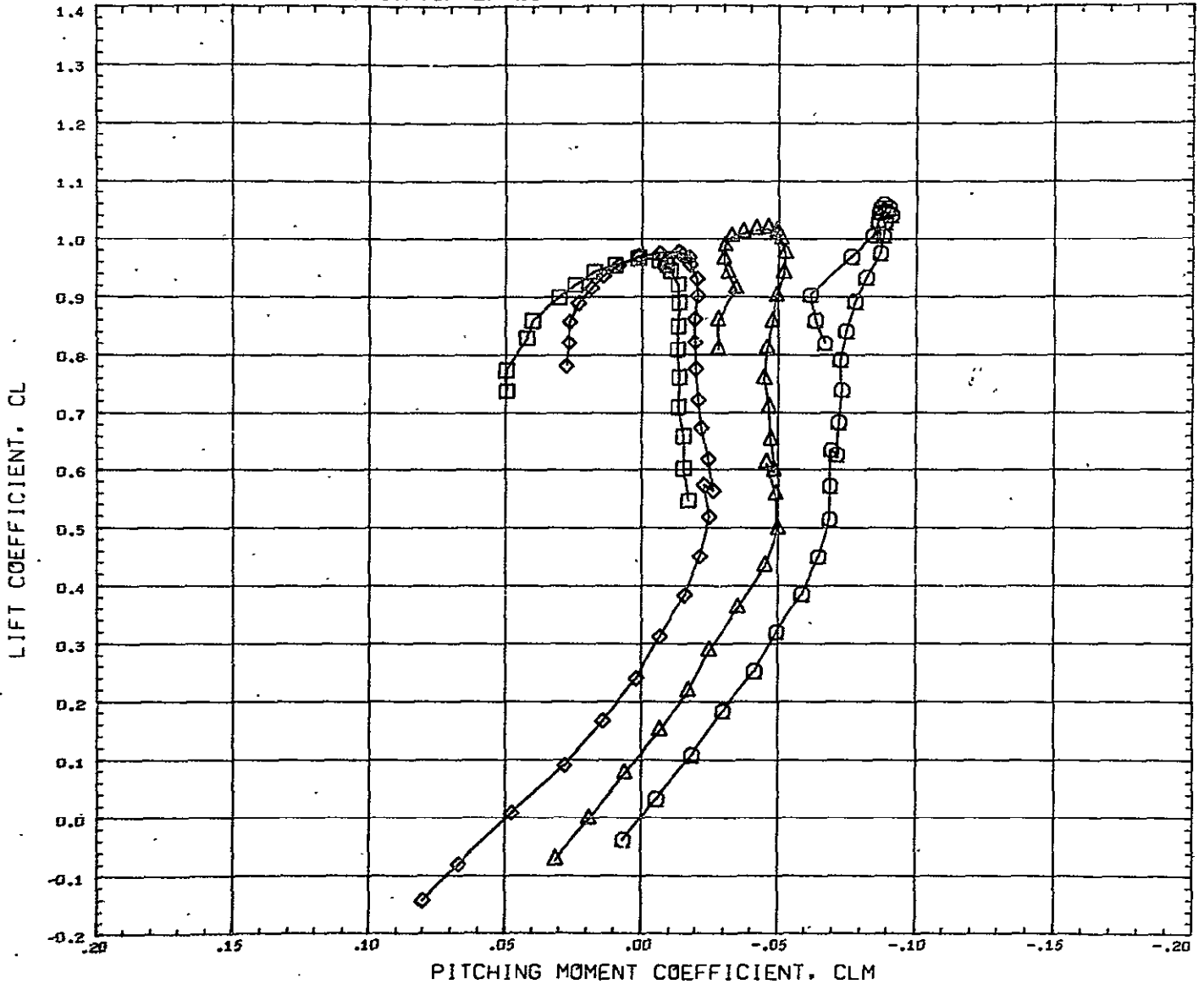
DELTA WING ORBITER- ELEVATOR EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION	
(R27565)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	0.000	0.000	REFS	6084.0040 SQ FT
(R27575)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	-10.000	0.000	0.000	0.000	REFL	821.2004 INCHES
(R27585)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	-30.000	0.000	0.000	0.000	REFB	1422.8040 INCHES
(R27595)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	-45.000	0.000	0.000	0.000	XMRP	1422.5040 INCHES
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						ZMRP	130.0004 INCHES
						SCALE	0.0035 SCALE

MACH 1.458

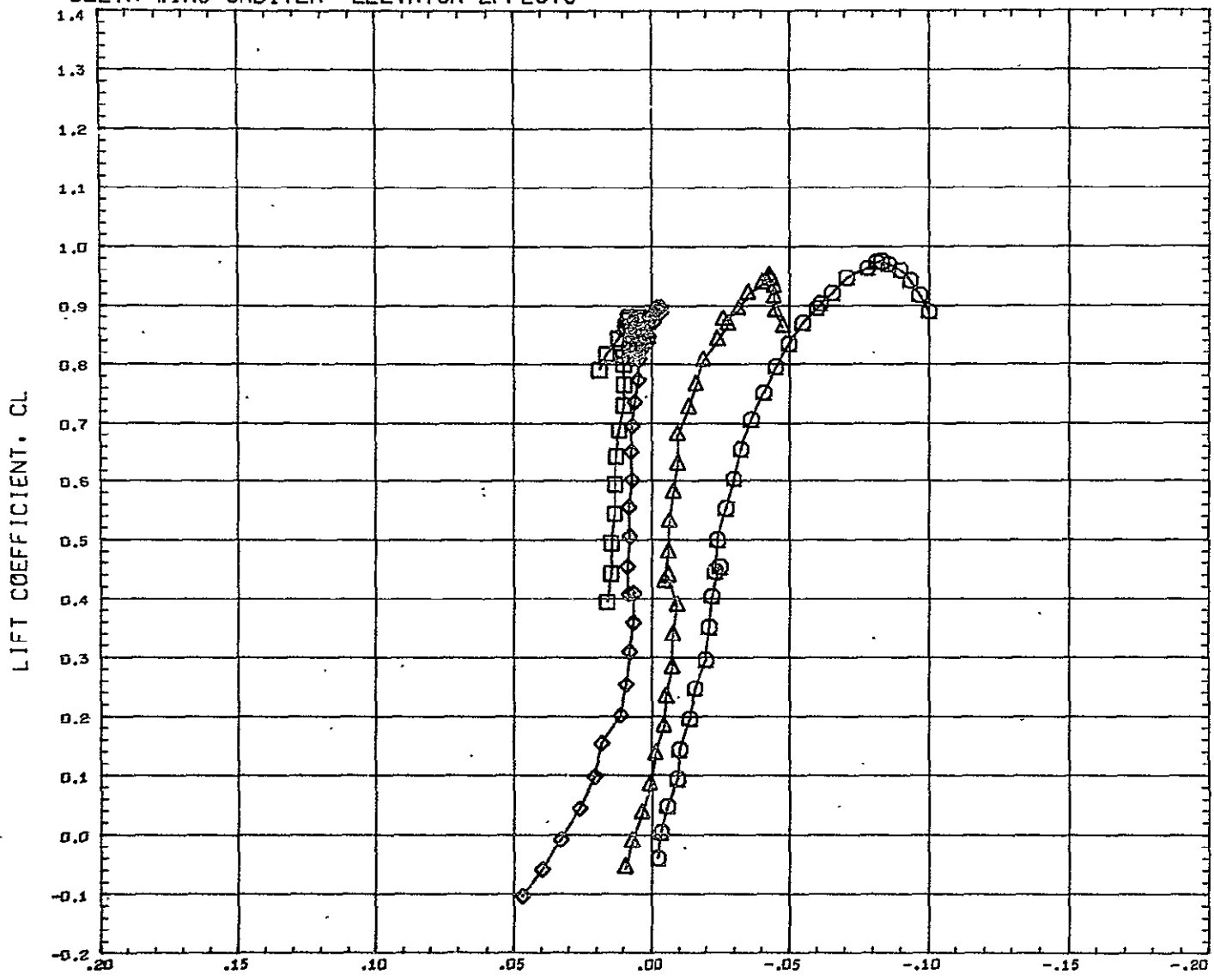
DELTA WING ORBITER- ELEVATOR EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(R2756S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(R2757S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	-10.000	0.000	0.000	0.000	REFL 821.2004 INCHES
(R2758S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	-30.000	0.000	0.000	0.000	REFB 1422.8040 INCHES
(R2759S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	-45.000	0.000	0.000	0.000	XMRP 1422.5040 INCHES
						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 1.965

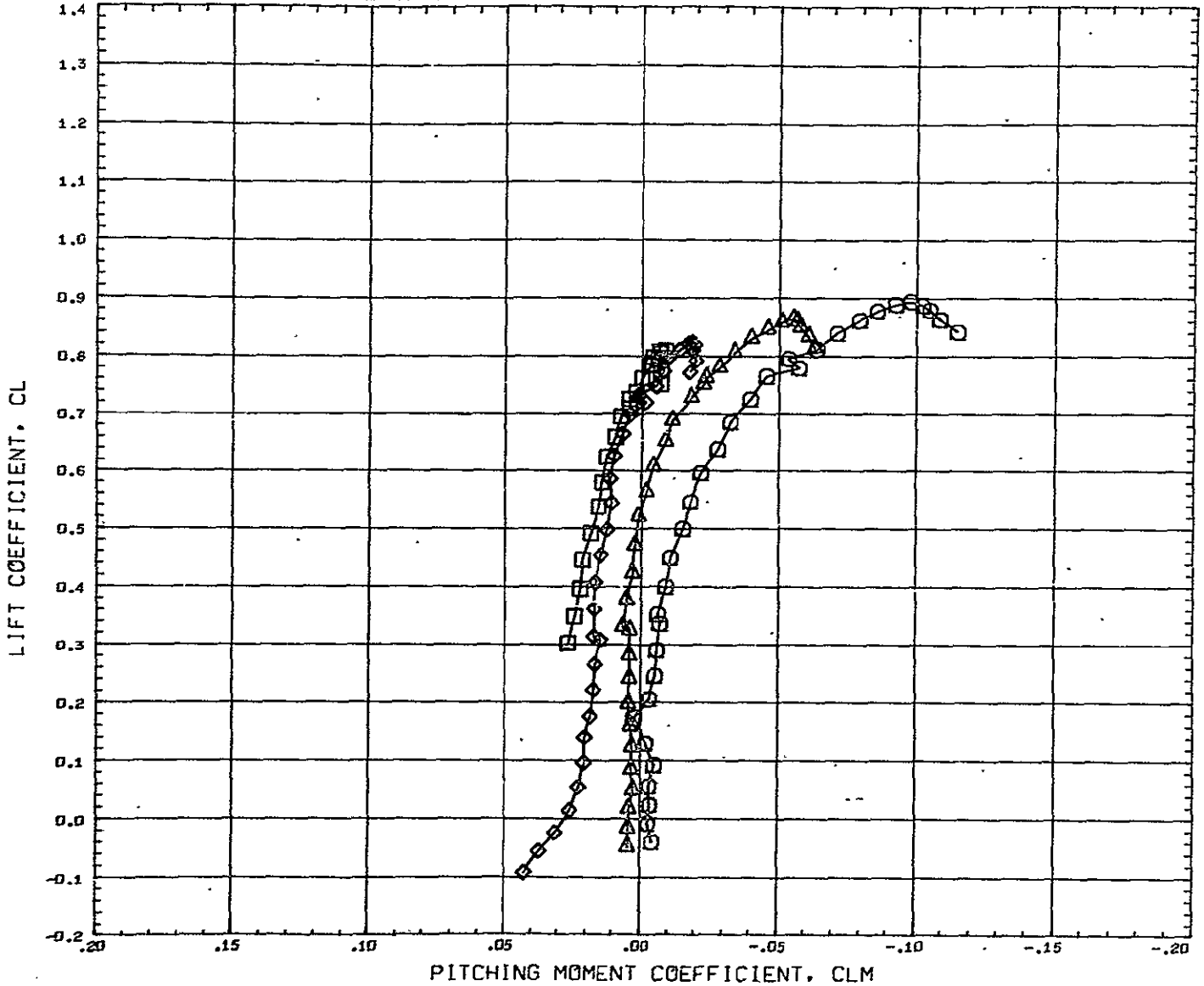
DELTA WING ORBITER- ELEVATOR EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(R2756S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(R2757S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	-10.000	0.000	0.000	0.000	REFL 821.2004 INCHES
(R2758S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	-30.000	0.000	0.000	0.000	REFB 1422.8040 INCHES
(R2759S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	-45.000	0.000	0.000	0.000	XMRP 1422.5040 INCHES
						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 2.990

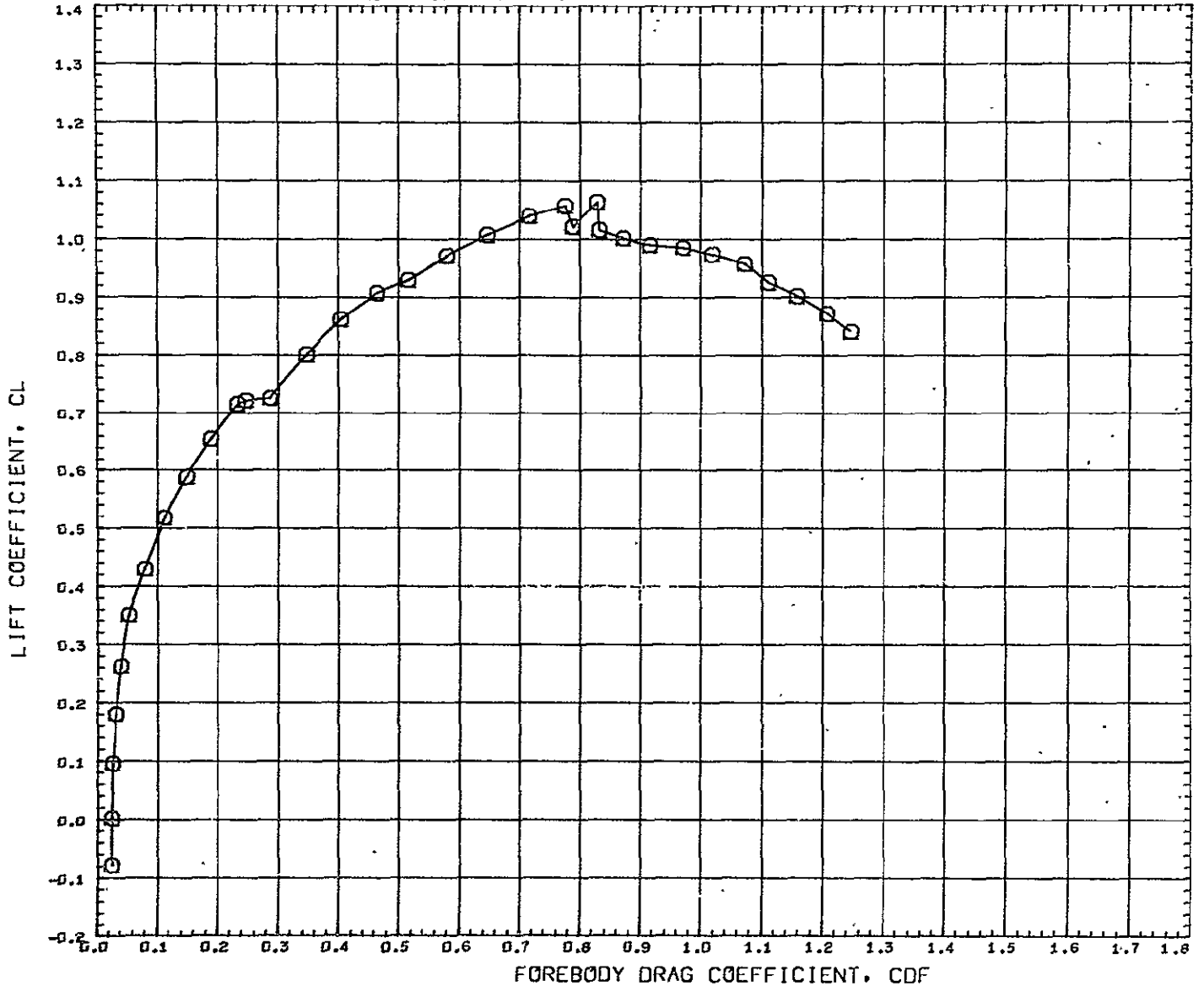
DELTA WING ORBITER- ELEVATOR EFFECTS



DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(R2756S)	○	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(R2757S)	□	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	-10.000	0.000	0.000	0.000	REFL 821.2004 INCHES
(R2758S)	◇	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	-30.000	0.000	0.000	0.000	REFB 1422.8040 INCHES
(R2759S)	△	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	-45.000	0.000	0.000	0.000	XMRP 1422.5040 INCHES
							YMRP 0.0000 INCHES
							ZMRP 130.0004 INCHES
							SCALE 0.0035 SCALE

MACH 4.959

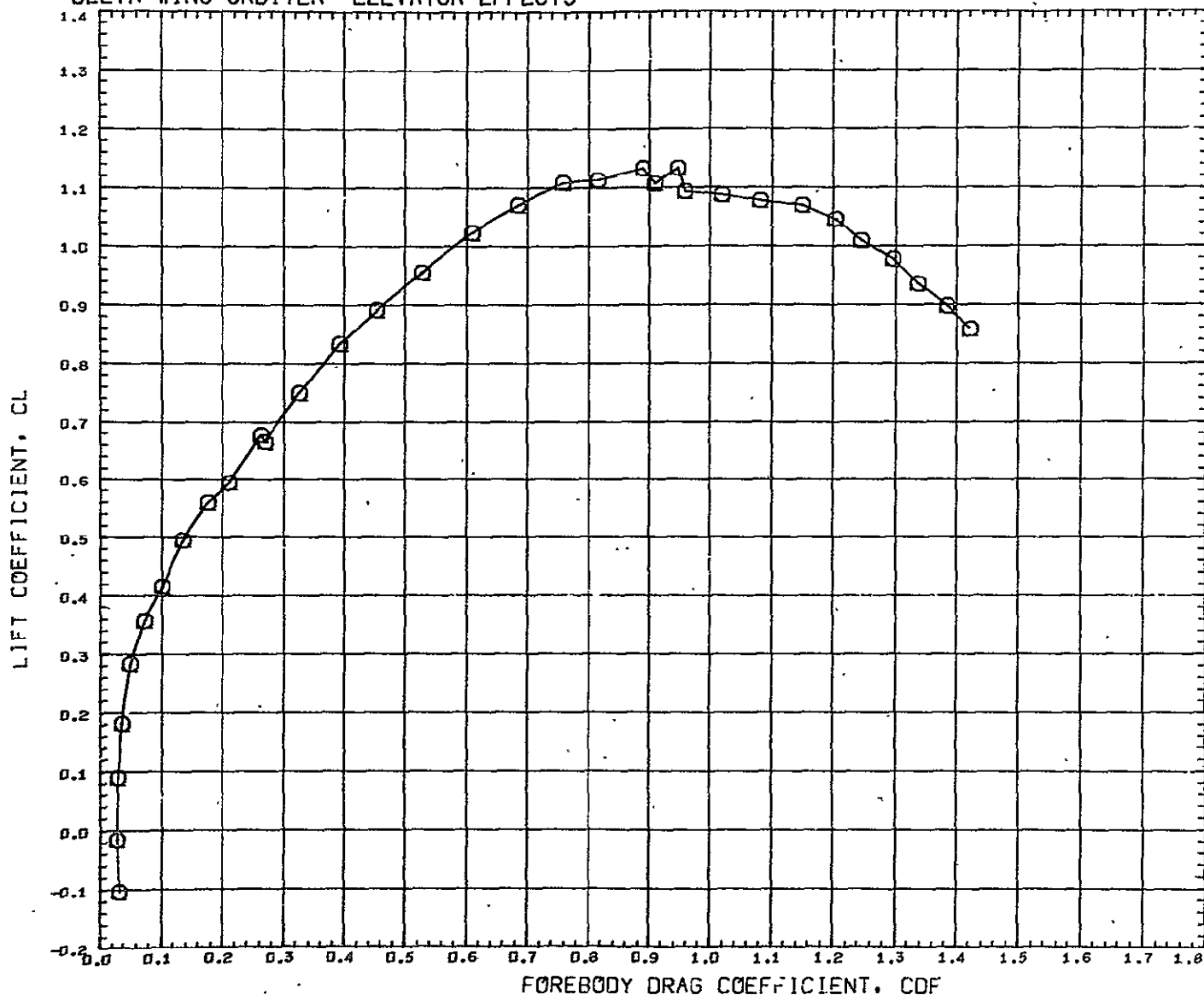
DELTA WING ORBITER- ELEVATOR EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(R2756S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(R2757S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	-10.000	0.000	0.000	0.000	REFL 821.2004 INCHES
(R2758S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	-30.000	0.000	0.000	0.000	REFB 1422.8040 INCHES
(R2759S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	-45.000	0.000	0.000	0.000	XMRP 1422.5040 INCHES
						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 0.598

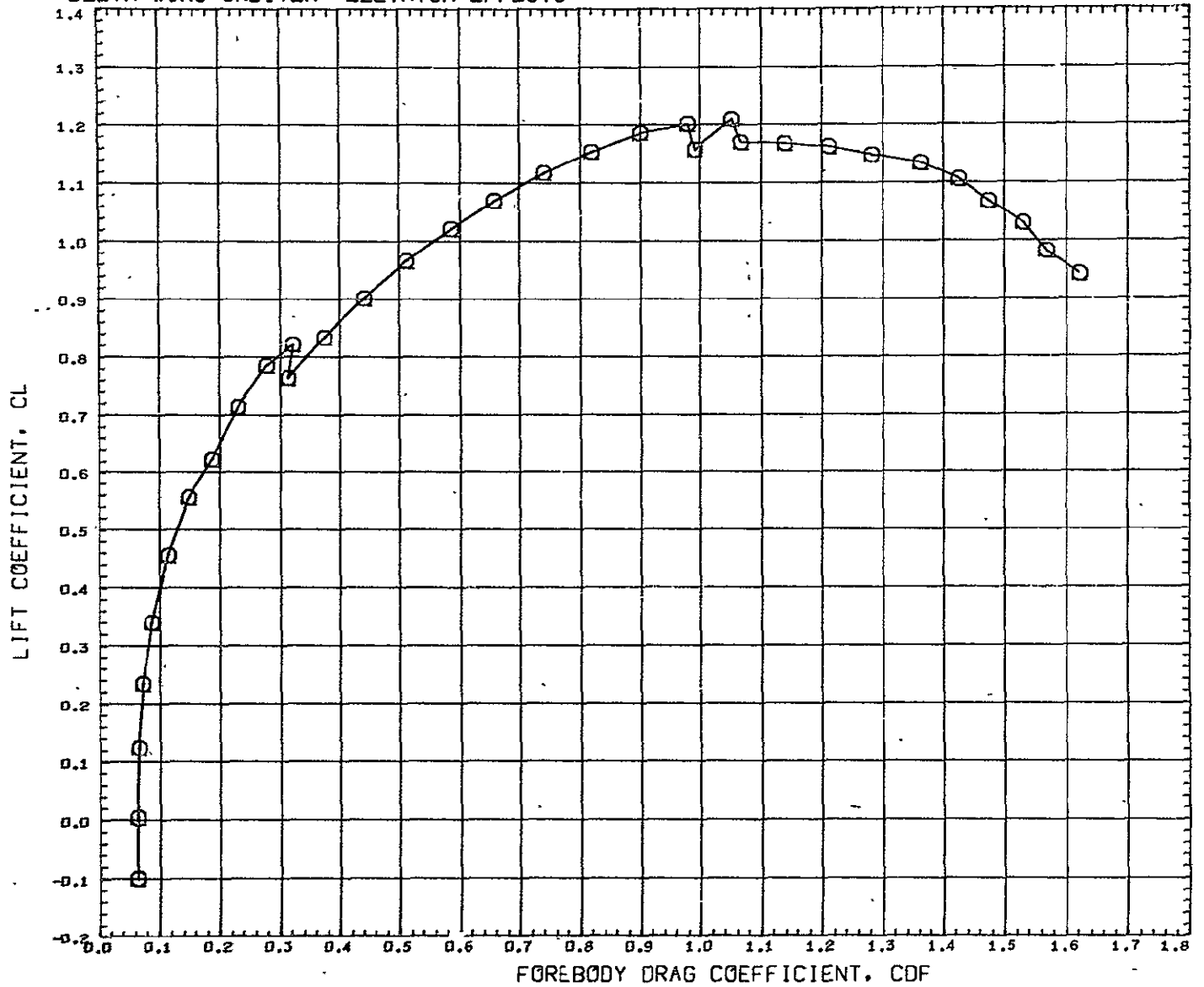
DELTA WING ORBITER- ELEVATOR EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION	
(R2756S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	0.000	0.000	REFS	6984.0040 SQ FT
(R2757S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	-10.000	0.000	0.000	0.000	REFL	821.2004 INCHES
(R2758S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	-30.000	0.000	0.000	0.000	REFB	1422.8040 INCHES
(R2759S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	-45.000	0.000	0.000	0.000	XMRP	1422.5040 INCHES
						YMRP	0.0000 INCHES
						ZMRP	130.0004 INCHES
						SCALE	0.0035 SCALE

MACH 0.899

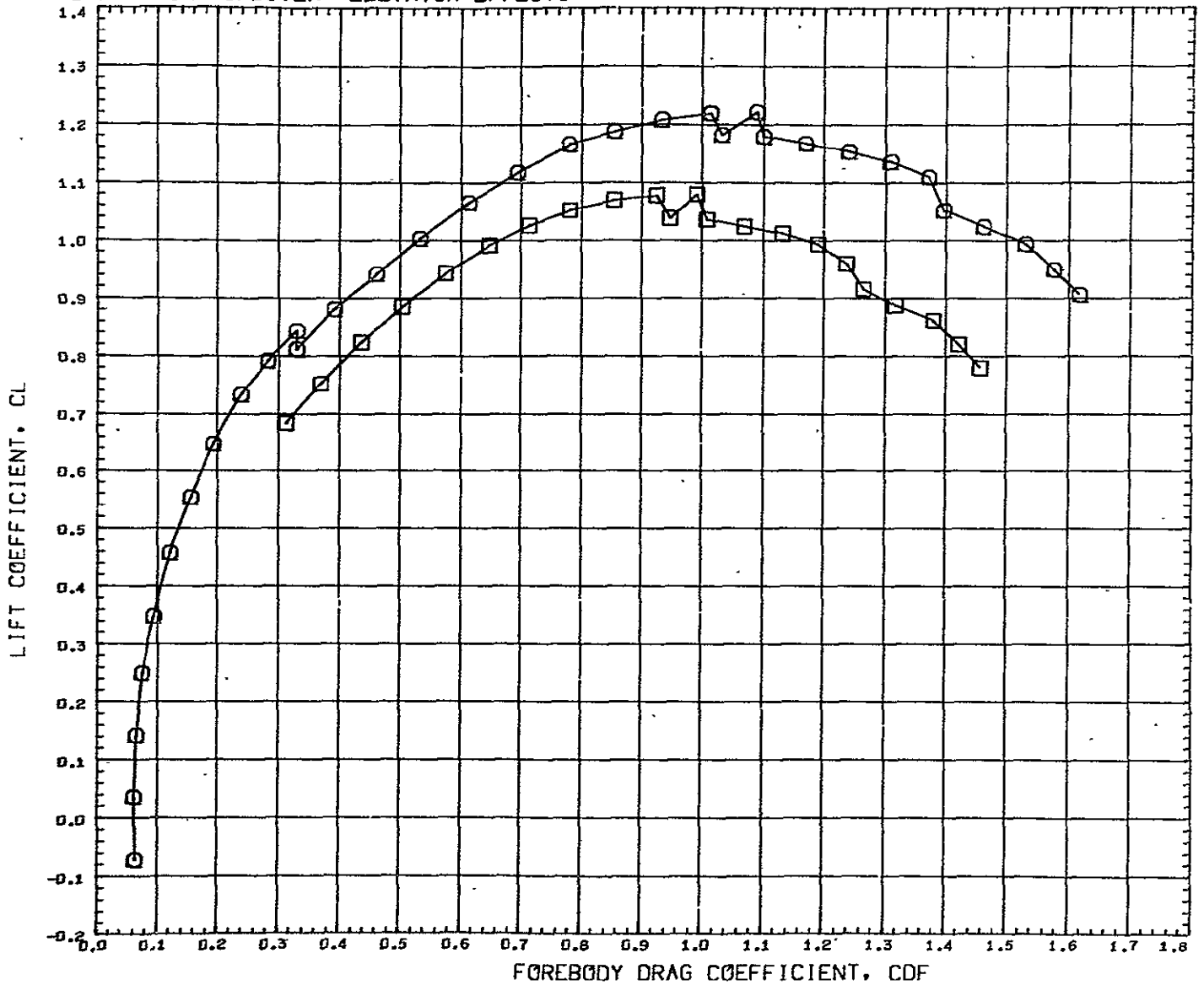
DELTA WING ORBITER- ELEVATOR EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
{R27565}	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
{R27575}	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	-10.000	0.000	0.000	0.000	REFL 821.2004 INCHES
{R27585}	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	-30.000	0.000	0.000	0.000	REFB 1422.8040 INCHES
{R27595}	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	-45.000	0.000	0.000	0.000	XMRP 1422.5040 INCHES
						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 1.003

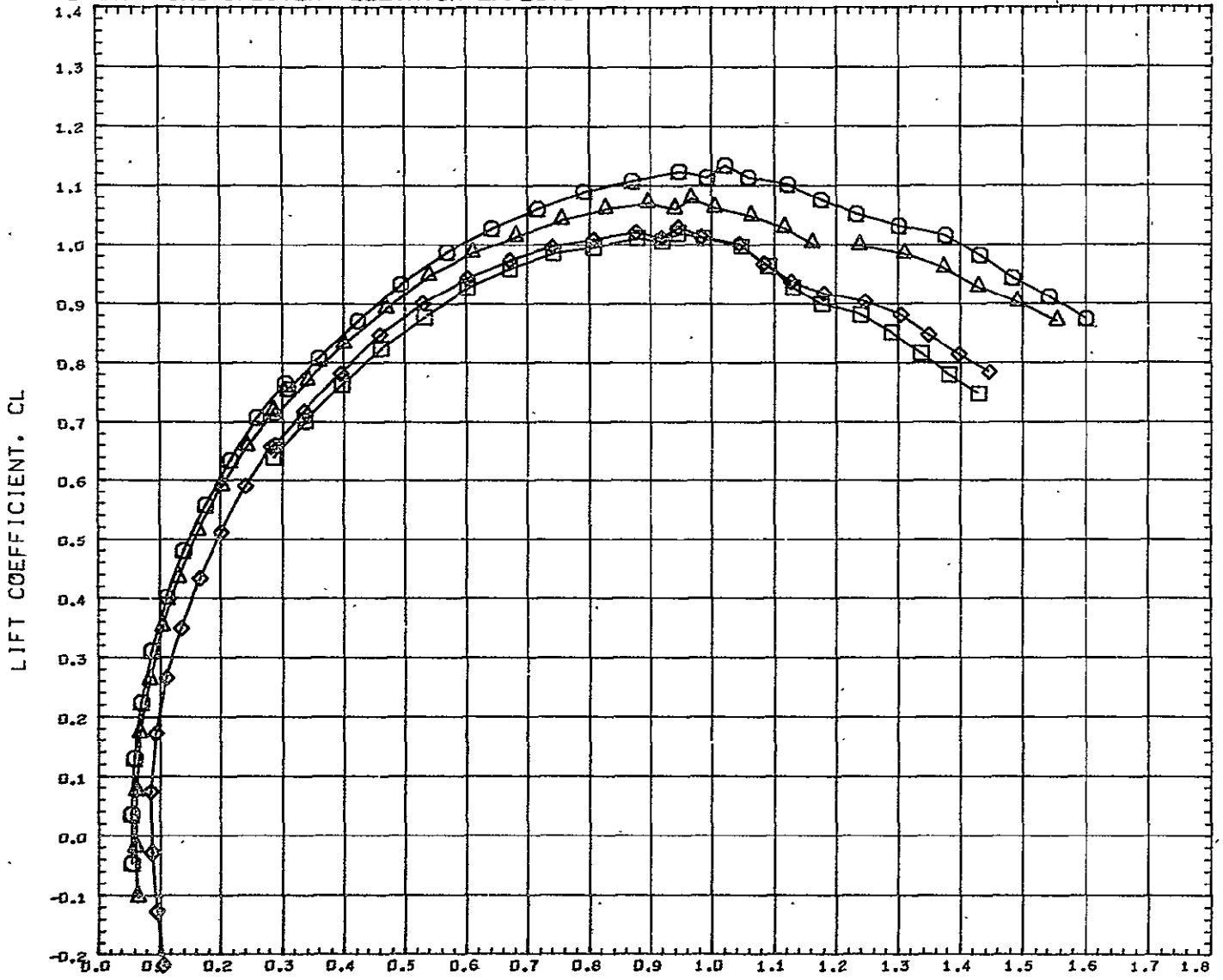
DELTA WING ORBITER- ELEVATOR EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(R2756S)	MSFC478 NR DELTA ORBITER B5W17E1DV17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(R2757S)	MSFC478 NR DELTA ORBITER B5W17E1DV17J2X	-10.000	0.000	0.000	0.000	REFL 821.2004 INCHFS
(R2758S)	MSFC478 NR DELTA ORBITER B5W17E1DV17J2X	-30.000	0.000	0.000	0.000	REFB 1422.8040 INCHES
(R2759S)	MSFC478 NR DELTA ORBITER B5W17E1DV17J2X	-45.000	0.000	0.000	0.000	XMRP 1422.5040 INCHES
						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 1.199

DELTA WING ORBITER- ELEVATOR EFFECTS

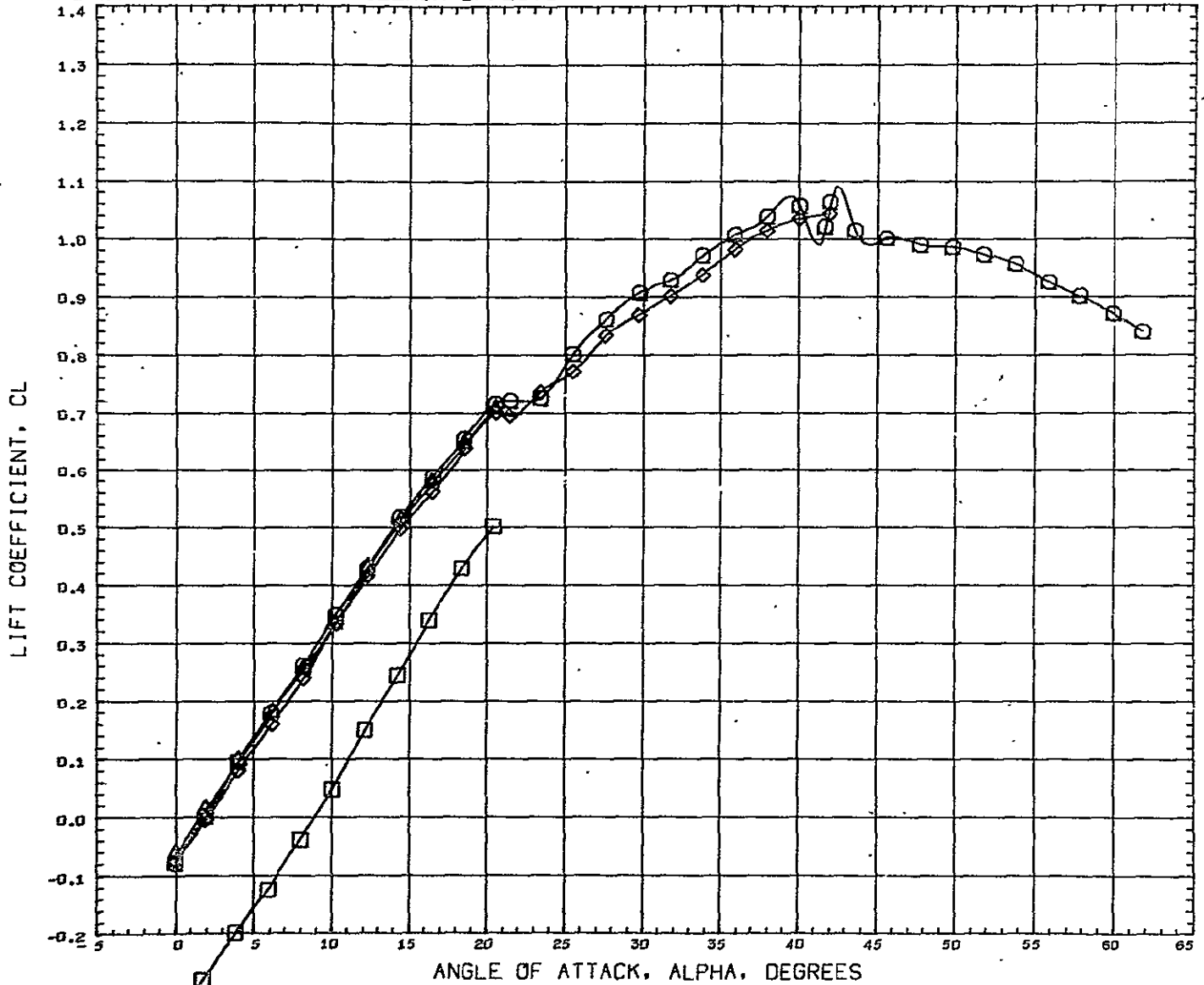


FOREBODY DRAG COEFFICIENT, CDF

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(R2756S)	○	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(R2757S)	△	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	-10.000	0.000	0.000	0.000	REFL 821.2004 INCHES
(R2758S)	◇	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	-30.000	0.000	0.000	0.000	REFB 1422.8040 INCHES
(R2759S)	□	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	-45.000	0.000	0.000	0.000	XMRP 1422.5040 INCHES
							YMRP 0.0000 INCHES
							ZMRP 130.0004 INCHES
							SCALE 0.0035 SCALE

MACH 1.458

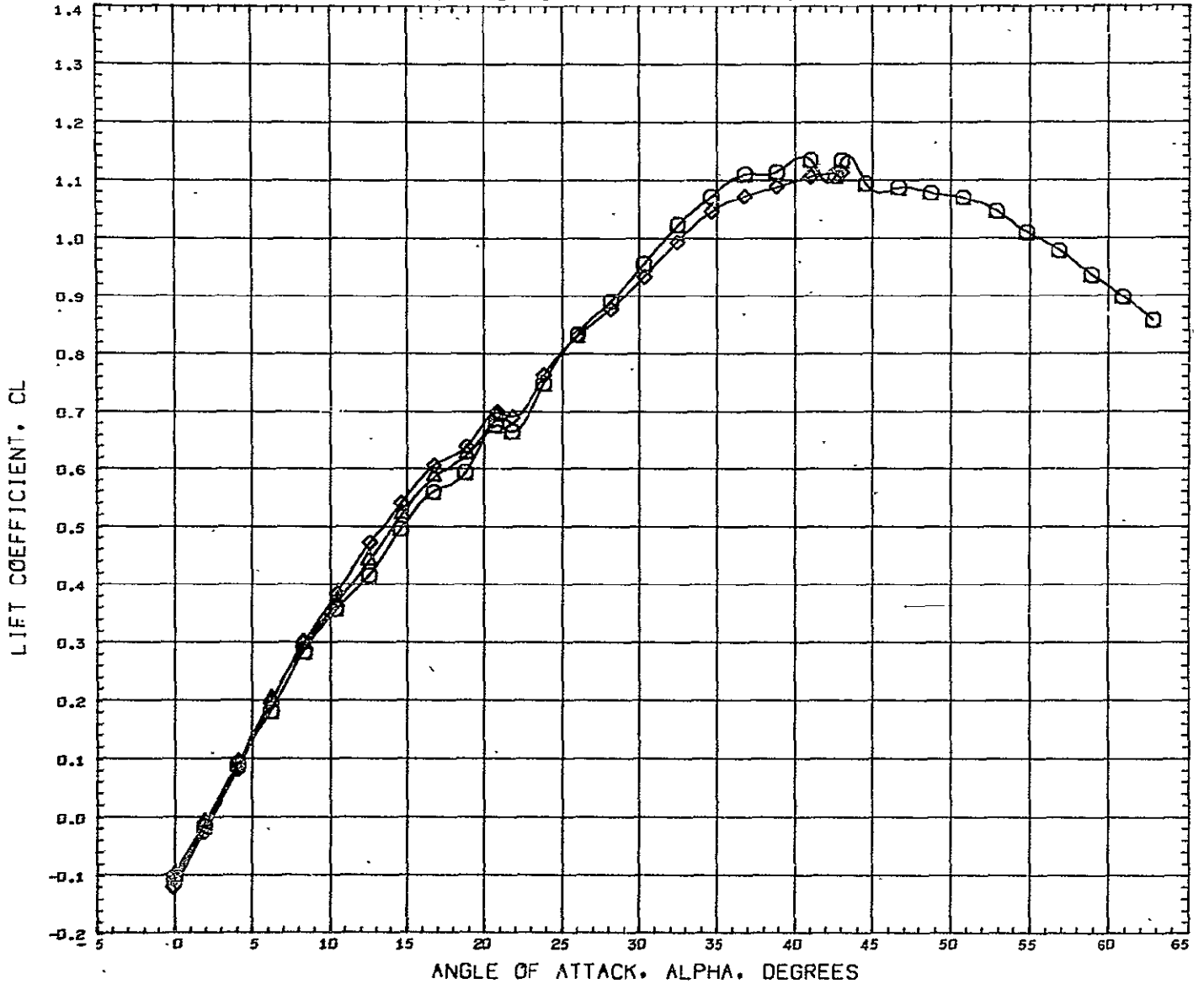
DELTA WING ORBITER-AILERON EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(R2756S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(R2760A)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	-20.000	0.000	0.000	REFL 821.2004 INCHES
(R2761S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	-30.000	0.000	0.000	REFB 1422.8040 INCHES
(R2762A)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	-30.000	30.000	0.000	0.000	XMRP 1422.5040 INCHES YMRP 0.0000 INCHES ZMRP 130.0004 INCHES SCALE 0.0035 SCALE

MACH 0.598

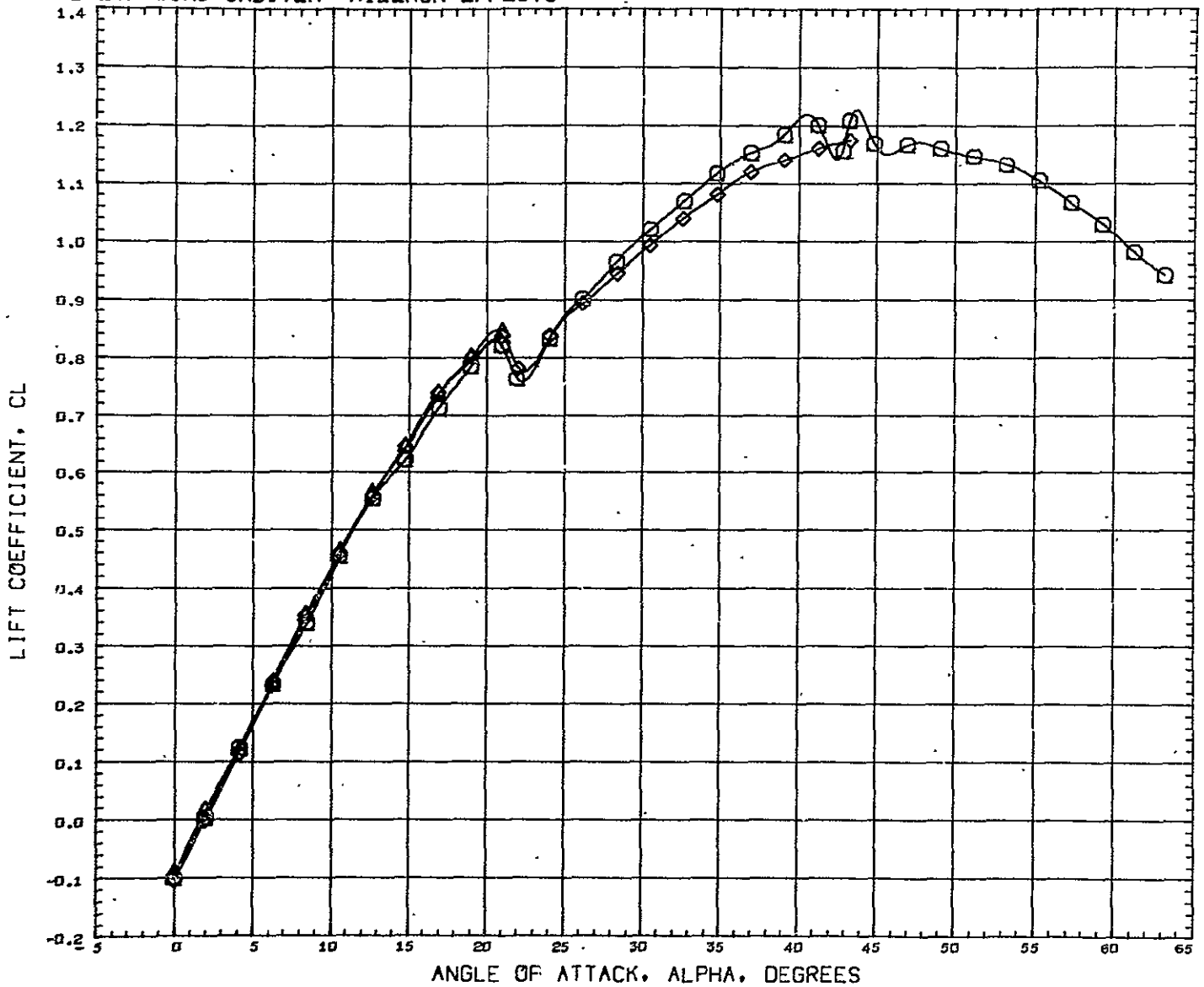
DELTA WING ORBITER-AILERON EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(R2756S)	MSFC478 NR DELTA ORBITER B5W17E1DV17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(R2760A)	MSFC478 NR DELTA ORBITER B5W17E1DV17J2X	0.000	-20.000	0.000	0.000	REFL 821.2004 INCHES
(R2761S)	MSFC478 NR DELTA ORBITER B5W17E1DV17J2X	0.000	-30.000	0.000	0.000	REFB 1422.8040 INCHES
(R2762A)	MSFC478 NR DELTA ORBITER B5W17E1DV17J2X	-30.000	30.000	0.000	0.000	XMRP 1422.5045 INCHES
						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 0.699

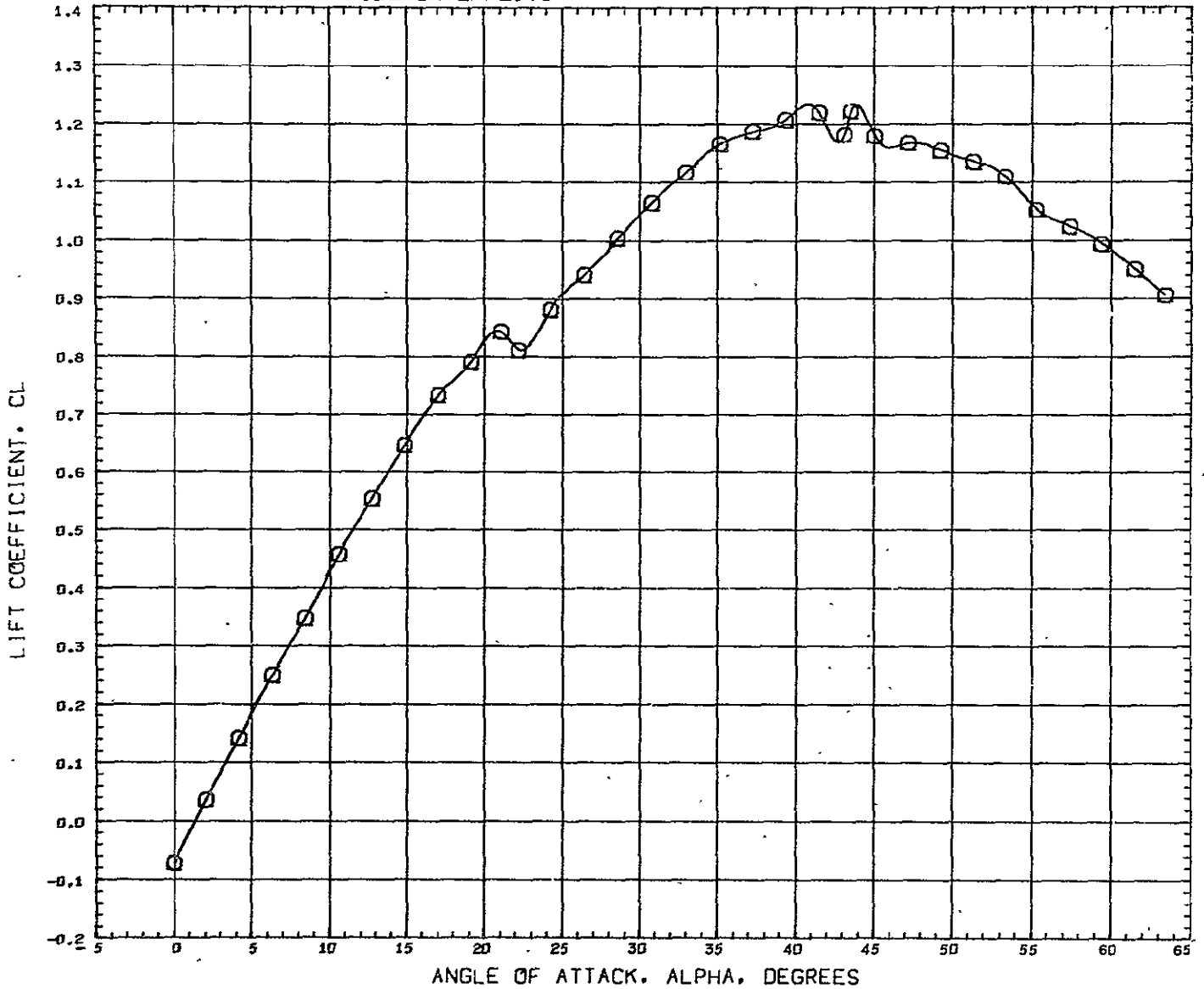
DELTA WING ORBITER-AILERON EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(R2756S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 Sq FT
(R2760A)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	-20.000	0.000	0.000	REFL 821.2094 INCHES
(R2761S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	-30.000	0.000	0.000	REFB 1422.8040 INCHES
(R2762A)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	-30.000	30.000	0.000	0.000	XMRP 1422.8040 INCHES
						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 1.003

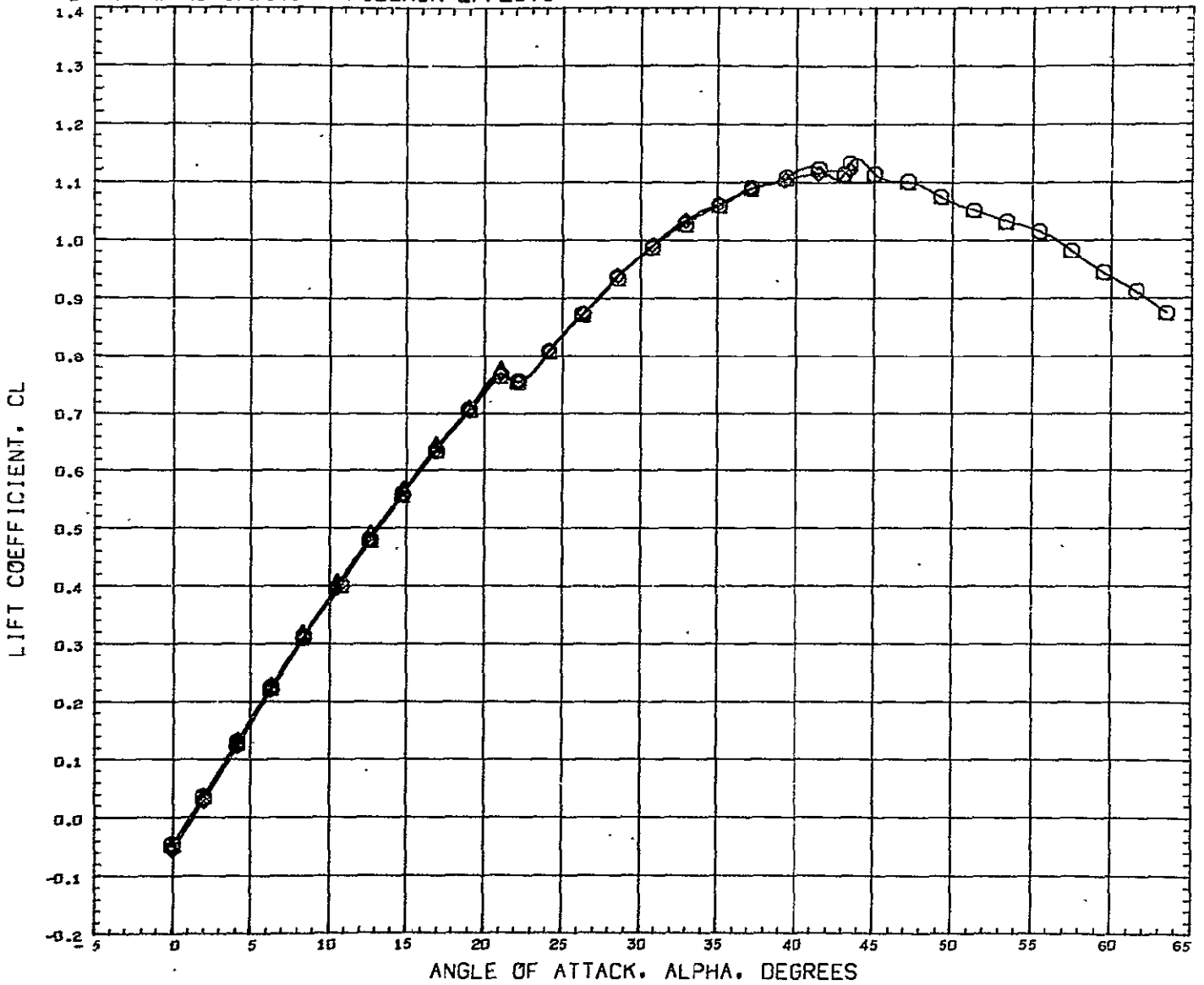
DELTA WING ORBITER-AILERON EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(R2756S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SR FT
(R2760A)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	-20.000	0.000	0.000	REFL 821.2004 INCHES
(R2761S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	-30.000	0.000	0.000	REFB 1422.8040 INCHES
(R2762A)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	-30.000	30.000	0.000	0.000	XMRP 1422.5040 INCHES
						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 1.199

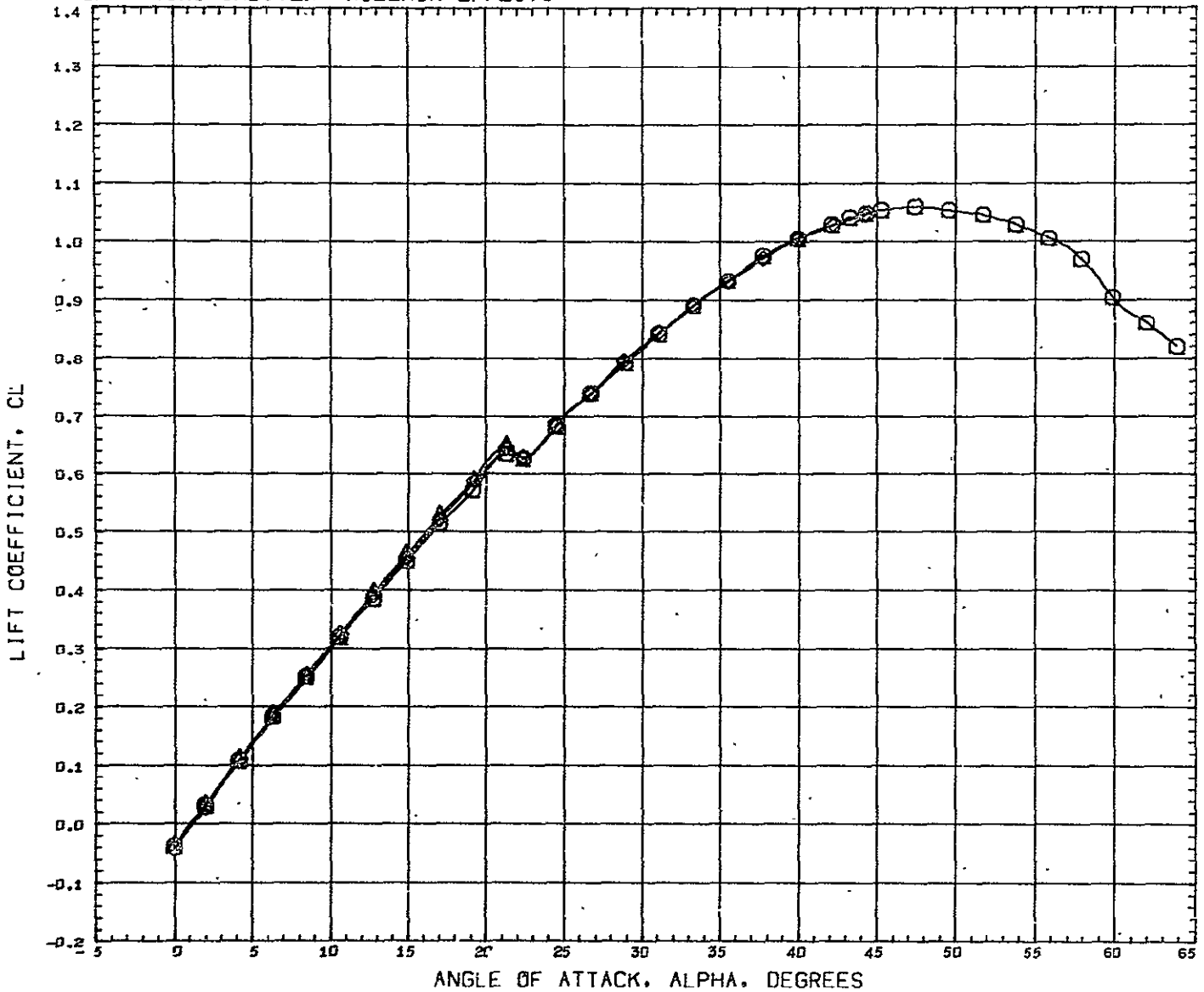
DELTA WING ORBITER-AILERON EFFECTS



DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(R2756S)	○	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(R2760A)	○	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	-20.000	0.000	0.000	REFL 821.2004 INCHES
(R2761S)	○	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	-30.000	0.000	0.000	REFB 1422.9040 INCHES
(R2762A)	○	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	-30.000	30.000	0.000	0.000	XMRP 1422.9040 INCHES
							YMRP 0.0000 INCHES
							ZMRP 130.0004 INCHES
							SCALE 0.0035 SCALE

MACH 1.458

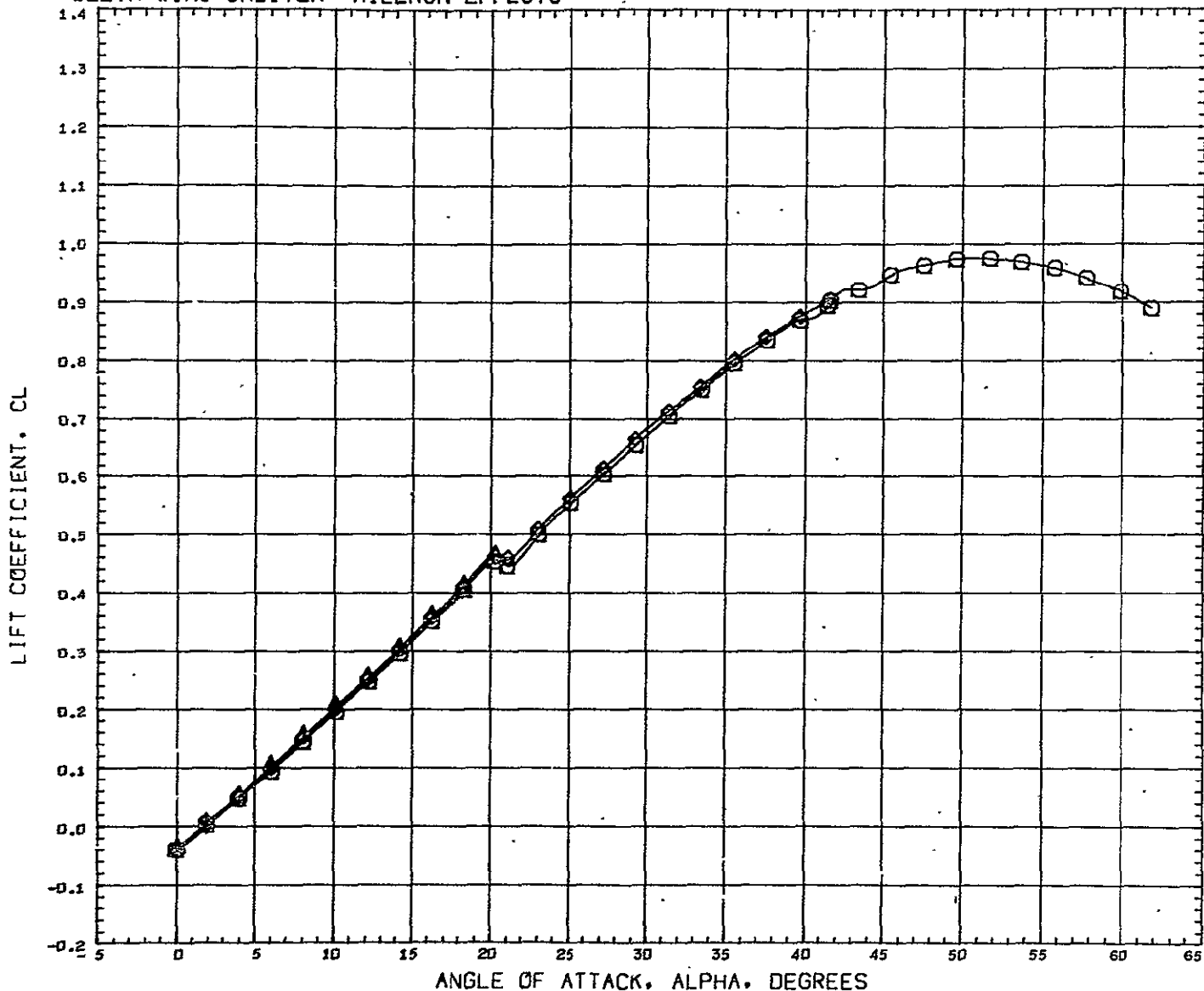
DELTA WING ORBITER-AILERON EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(R2756S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(R2760A)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	-20.000	0.000	0.000	REFL 821.2004 INCHES
(R2761S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	-30.000	0.000	0.000	REFB 1422.8040 INCHES
(R2762A)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	-30.000	30.000	0.000	0.000	XMRP 1422.5040 INCHES
						YMRP 0.0000 INCHES
						ZMRP 150.0004 INCHES
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MACH 1.965

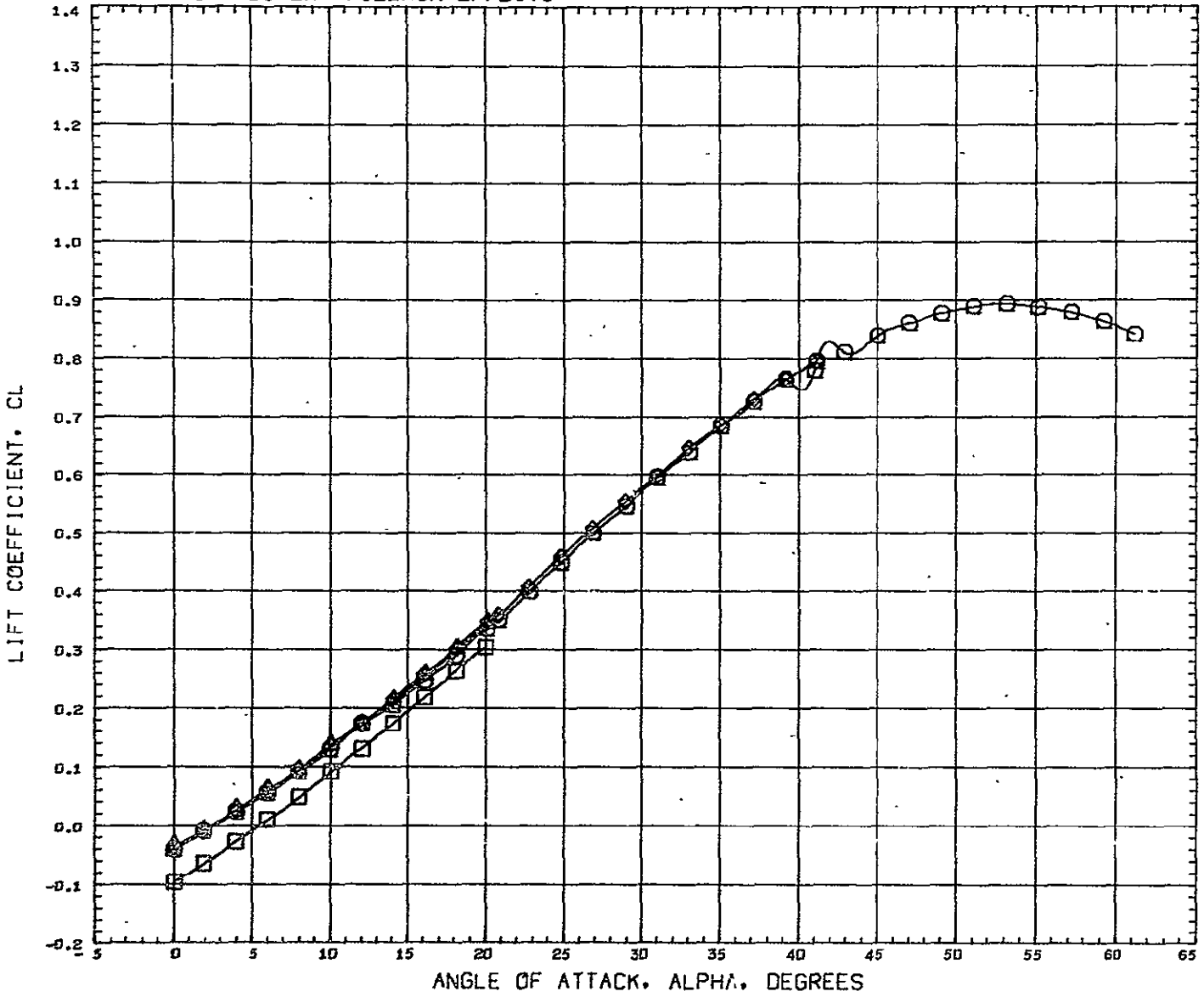
DELTA WING ORBITER-AILERON EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(R2755S)	MSFC478 NR DELTA ORBITER B5W17E1DV17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(R2760A)	MSFC478 NR DELTA ORBITER B5W17E1DV17J2X	0.000	-20.000	0.000	0.000	REFL 821.2004 INCHES
(R2761S)	MSFC478 NR DELTA ORBITER B5W17E1DV17J2X	0.000	-30.000	0.000	0.000	REFB 1422.8040 INCHES
(R2762A)	MSFC478 NR DELTA ORBITER B5W17E1DV17J2X	-30.000	30.000	0.000	0.000	XNRP 1422.5040 INCHES
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						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 2.590

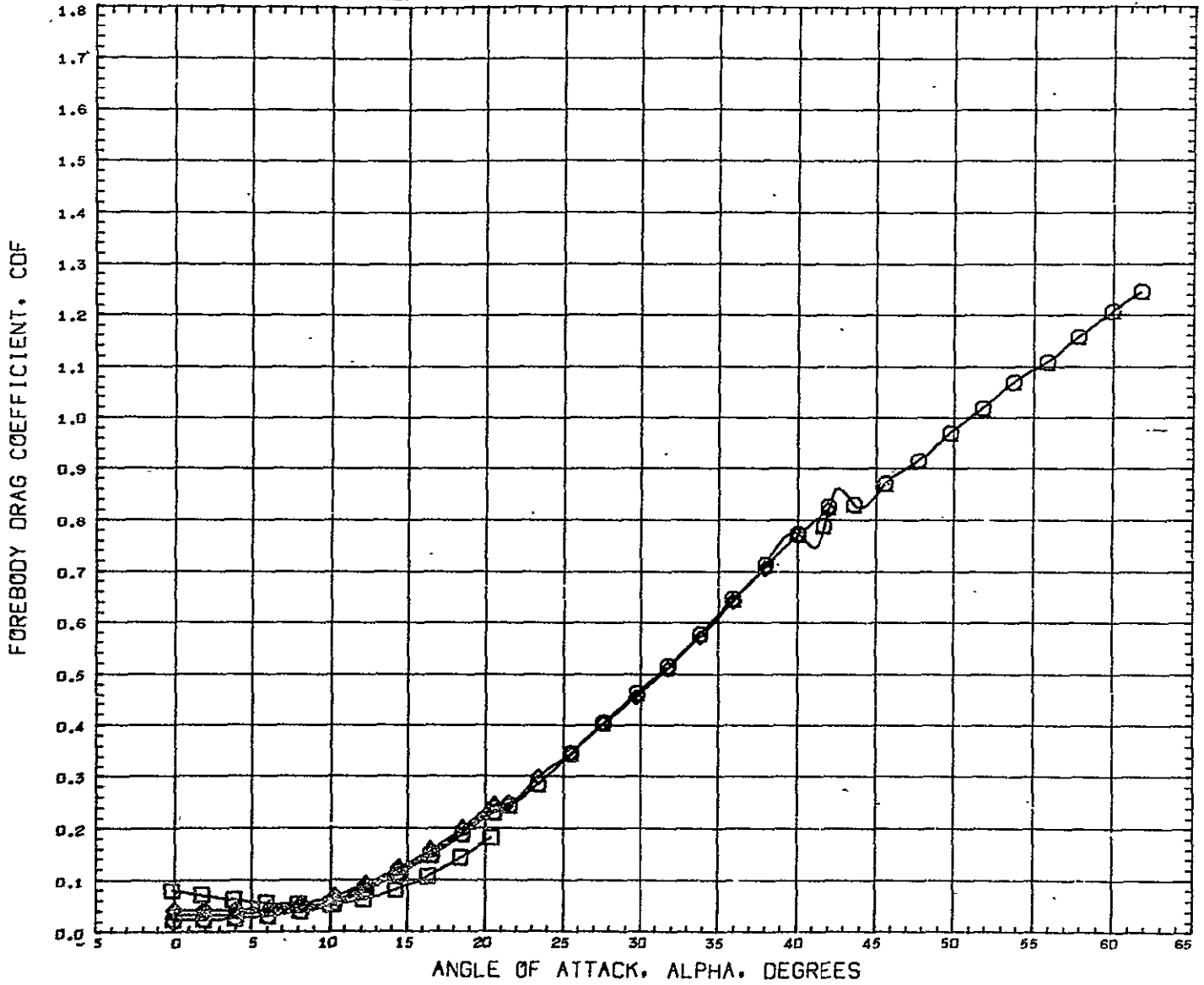
DELTA WING ORBITER-AILERON EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(R2755S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(R2760A)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	-20.000	0.000	0.000	REFL 821.2004 INCHES
(R2761S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	-30.000	0.000	0.000	REFB 1422.8040 INCHES
(R2762A)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	-30.000	30.000	0.000	0.000	XMRP 1422.5040 INCHES
						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

HACH 4.959

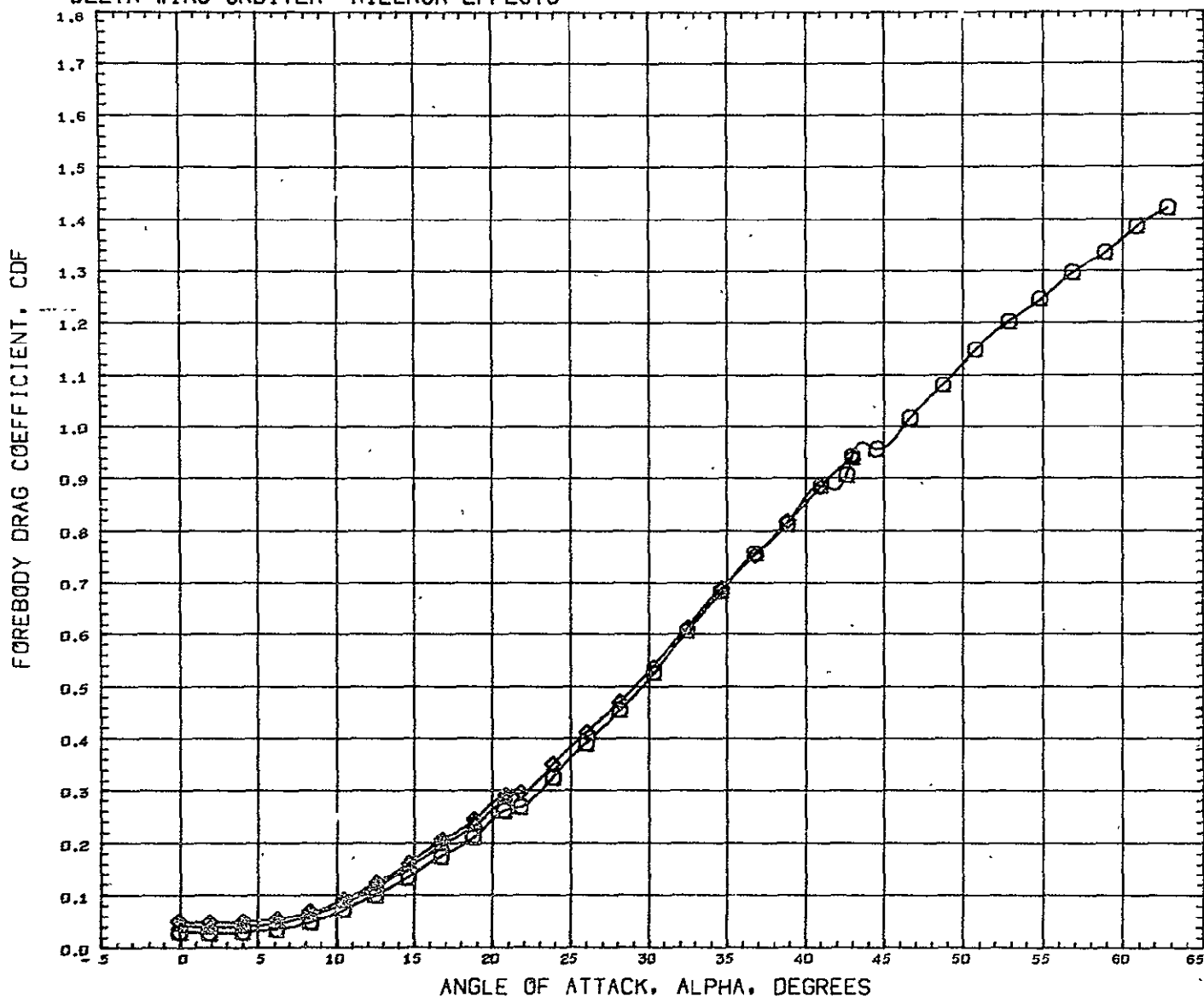
DELTA WING ORBITER- AILERON EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(R2756S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(R2760A)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	-20.000	0.000	0.000	REFL 821.2004 INCHES
(R2761S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	-30.000	0.000	0.000	REFB 1422.0040 INCHES
(R2762A)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	-30.000	30.000	0.000	0.000	XMRP 1422.5040 INCHES
						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 0.598

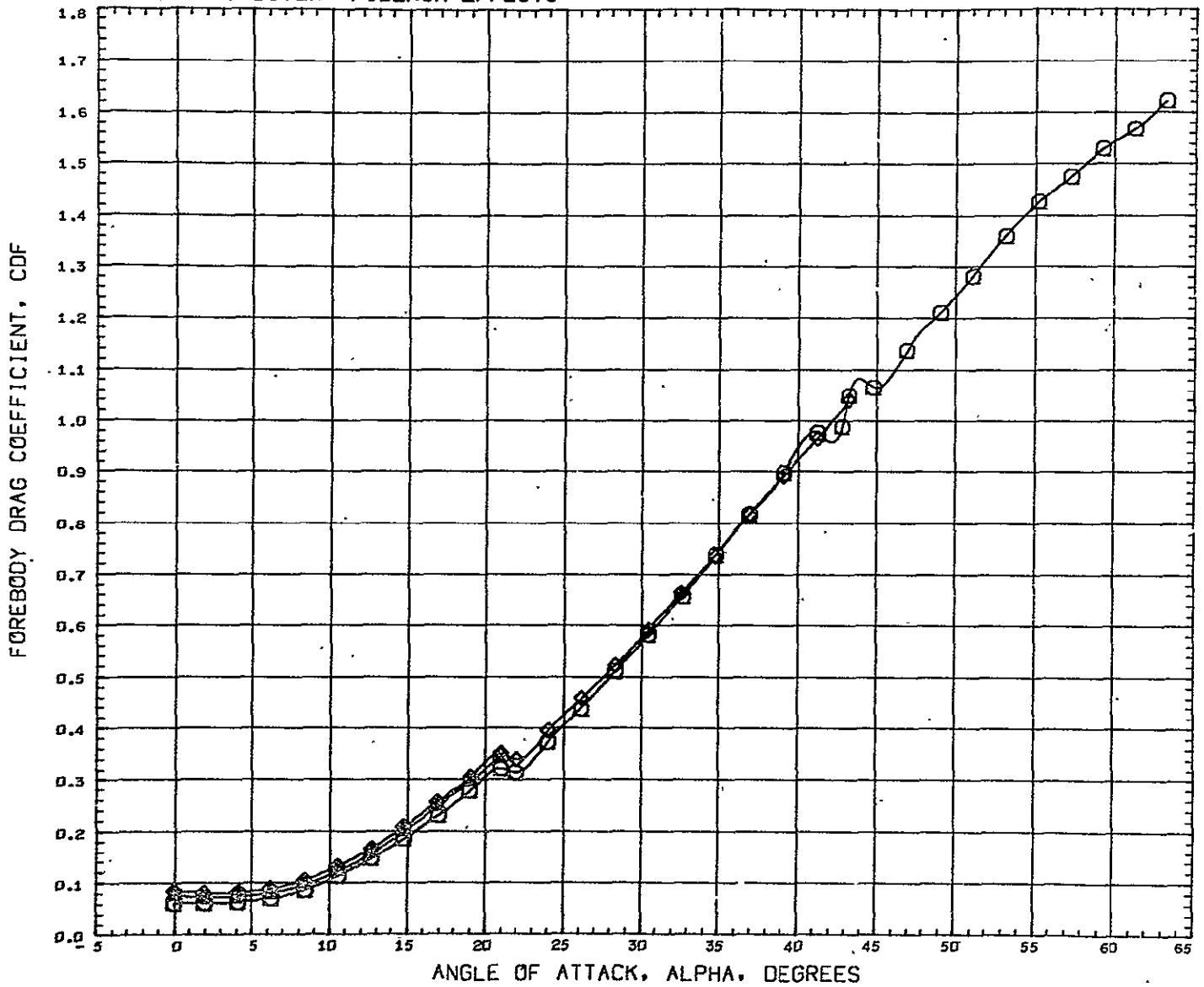
DELTA WING ORBITER-AILERON EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR - AILERON	RUDDER	RUDFLR	REFERENCE INFORMATION
(R2756S)	HSFC478 NR DELTA ORBITER B5W17E1DV17J2X	0.000 0.000	0.000	0.000	REFS 6084.0040 SQ FT
(R2760A)	HSFC478 NR DELTA ORBITER B5W17E1DV17J2X	0.000 -20.000	0.000	0.000	REFL 821.2004 INCHES
(R2761S)	HSFC478 NR DELTA ORBITER B5W17E1DV17J2X	0.000 -30.000	0.000	0.000	REFB 1422.8040 INCHES
(R2762A)	HSFC478 NR DELTA ORBITER B5W17E1DV17J2X	-30.000 30.000	0.000	0.000	XMPF 1422.5040 INCHES
					YMRP 0.0000 INCHES
					ZMRP 130.0004 INCHES
					SCALE 0.0035 SCALE

HACH G.899

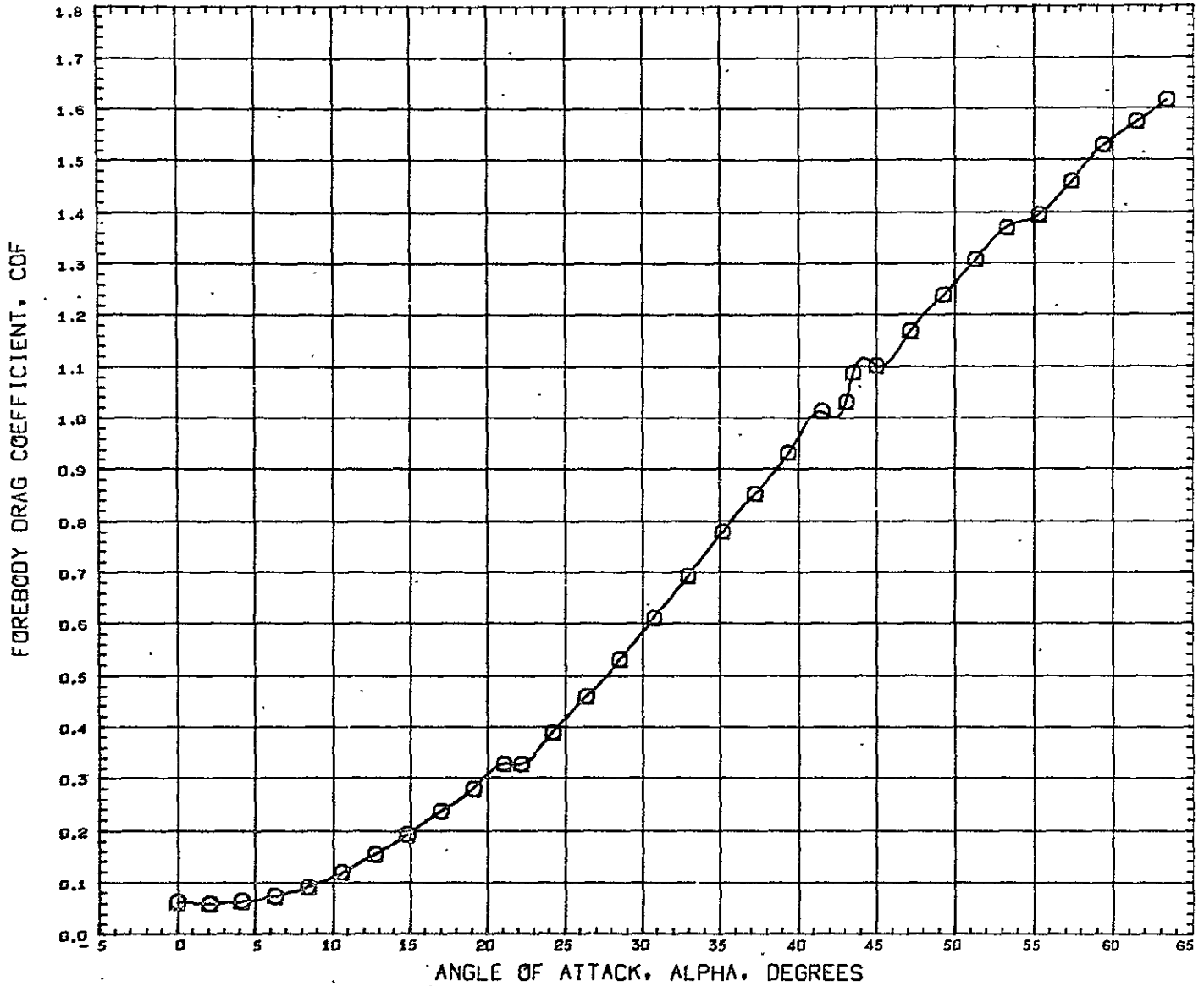
DELTA WING ORBITER- AILERON EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(R2756S)	MSFC478 NR DELTA ORBITER B5W17E1DV17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(R2760A)	MSFC478 NR DELTA ORBITER B5W17E1DV17J2X	0.000	-20.000	0.000	0.000	REFL 821.2004 INCHES
(R2761S)	MSFC478 NR DELTA ORBITER B5W17E1DV17J2X	0.000	-30.000	0.000	0.000	REFB 1422.8040 INCHES
(R2762A)	MSFC478 NR DELTA ORBITER B5W17E1DV17J2X	-30.000	30.000	0.000	0.000	XMRF 1422.5040 INCHES
						YMRF 0.0000 INCHES
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						SCALE 0.0035 SCALE

MACH 1.003

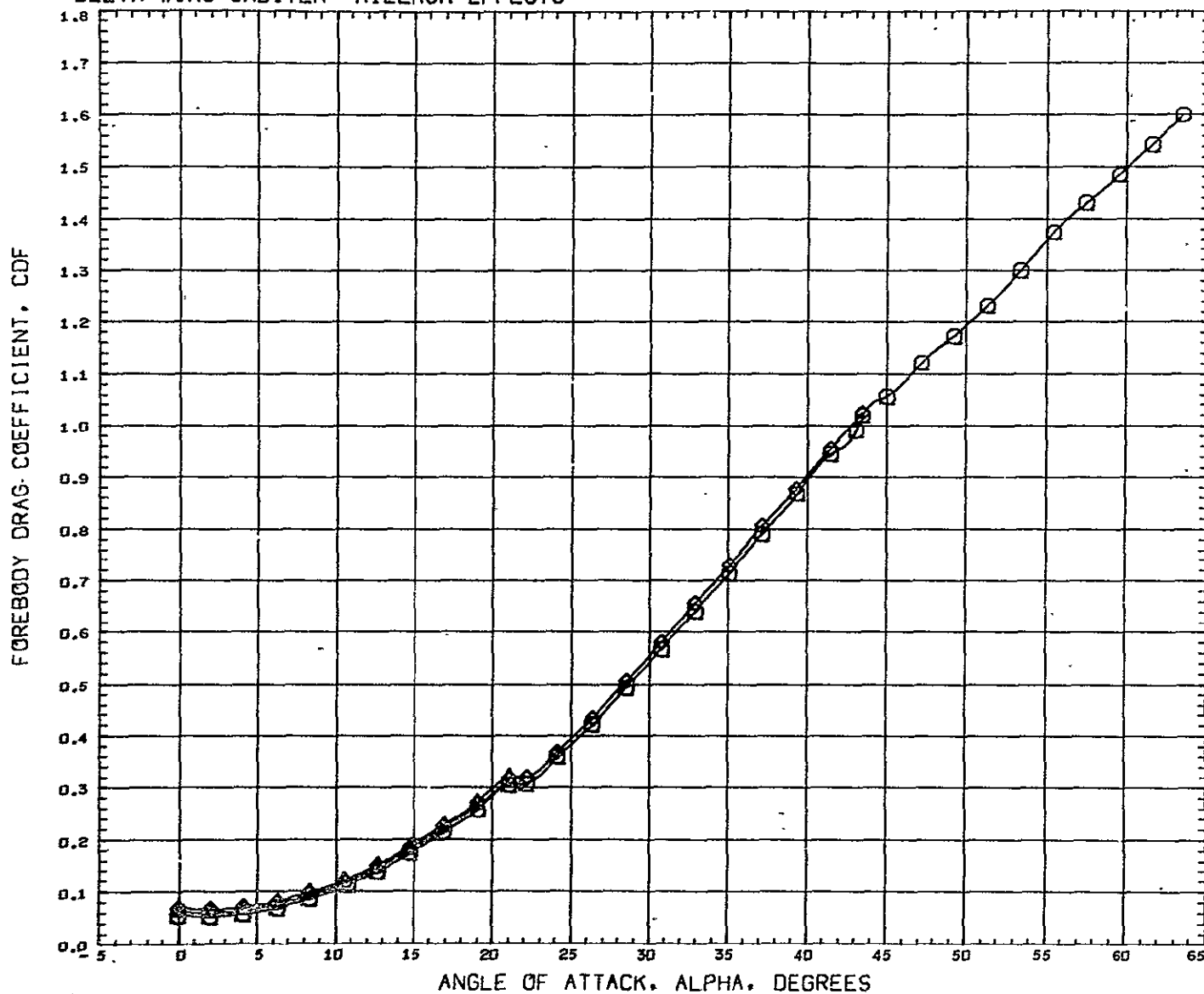
DELTA WING ORBITER-AILERON EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(R2756S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(R2760A)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	-20.000	0.000	0.000	REFL 821.2004 INCHES
(R2761S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	-30.000	0.000	0.000	REFB 1422.8040 INCHES
(R2762A)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	-30.000	30.000	0.000	0.000	XMRP 1422.5040 INCHES
						YMRF 0.0000 INCHES
						ZMRF 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 1.199

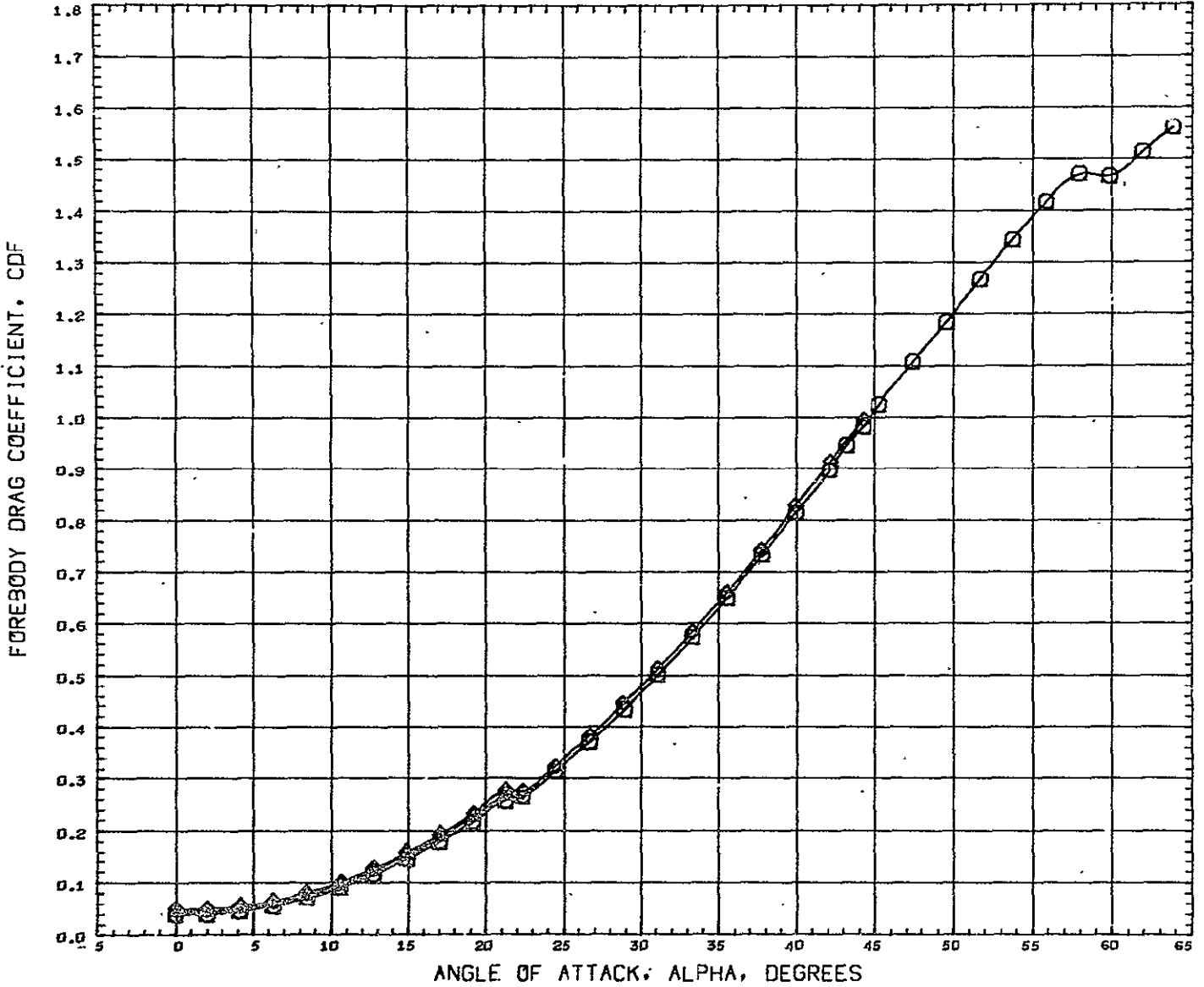
DELTA WING ORBITER- AILERON EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(R2756S)	MSFC478 NR DELTA ORBITER B5W17E1DV17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(R2760A)	MSFC478 NR DELTA ORBITER B5W17E1DV17J2X	0.000	-20.000	0.000	0.000	REFL 821.2004 INCHES
(R2761S)	MSFC478 NR DELTA ORBITER B5W17E1DV17J2X	0.000	-30.000	0.000	0.000	REFB 1422.8040 INCHES
(R2762A)	MSFC478 NR DELTA ORBITER B5W17E1DV17J2X	-30.000	30.000	0.000	0.000	XMRP 1422.5010 INCHES
						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
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MACH 1.458

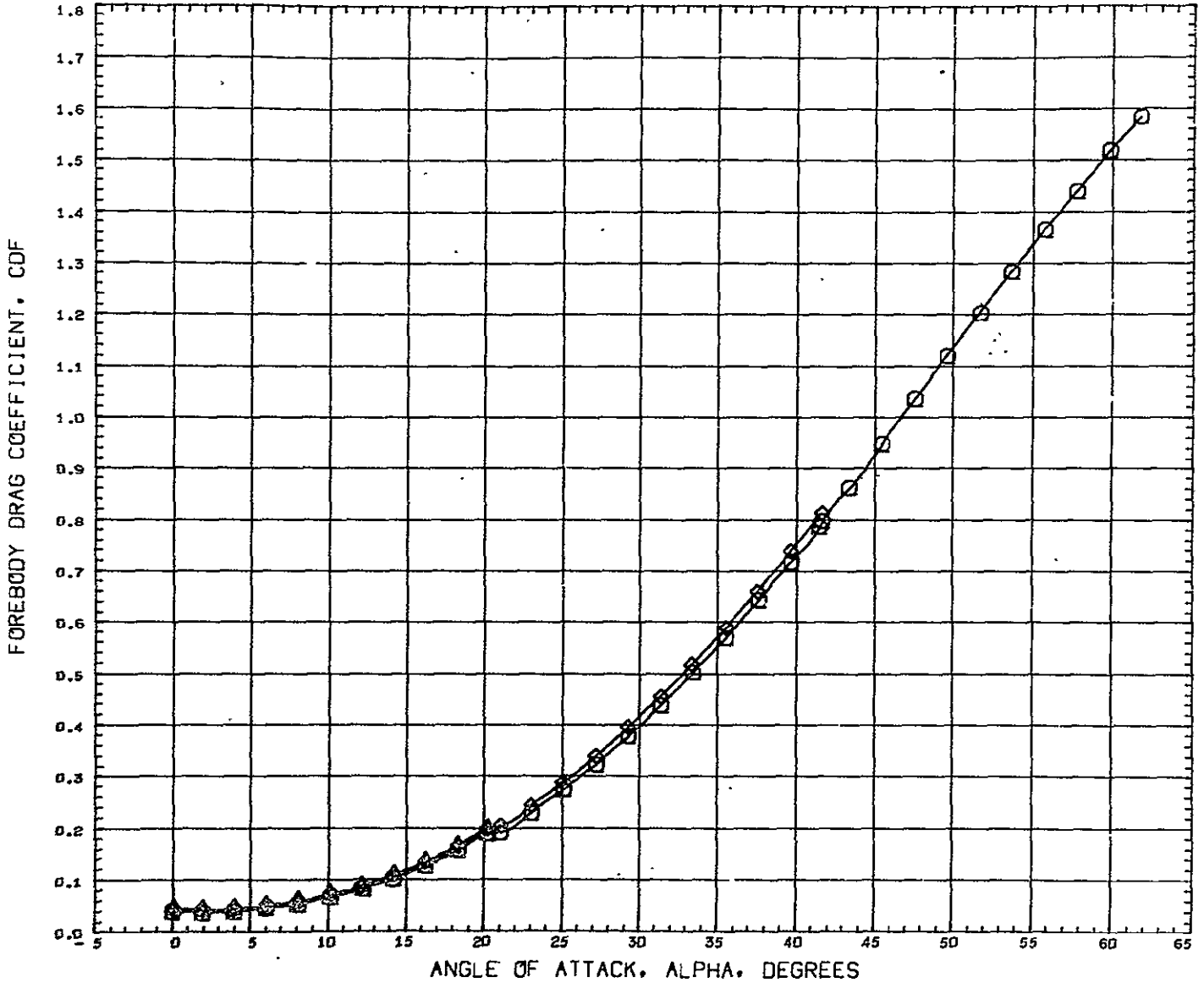
DELTA WING ORBITER- AILERON EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(R2756S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	0.000	0.000	REFS 6984.0040 SQ FT
(R2760A)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	-20.000	0.000	0.000	REFL 821.2004 INCHES
(R2761S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	-30.000	0.000	0.000	REFB 1422.8040 INCHES
(R2762A)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	-30.000	30.000	0.000	0.000	XMRP 1422.5040 INCHES YMRP 0.0000 INCHES ZMRP 130.0004 INCHES SCALE 0.0035 SCALE

MACH 1.965

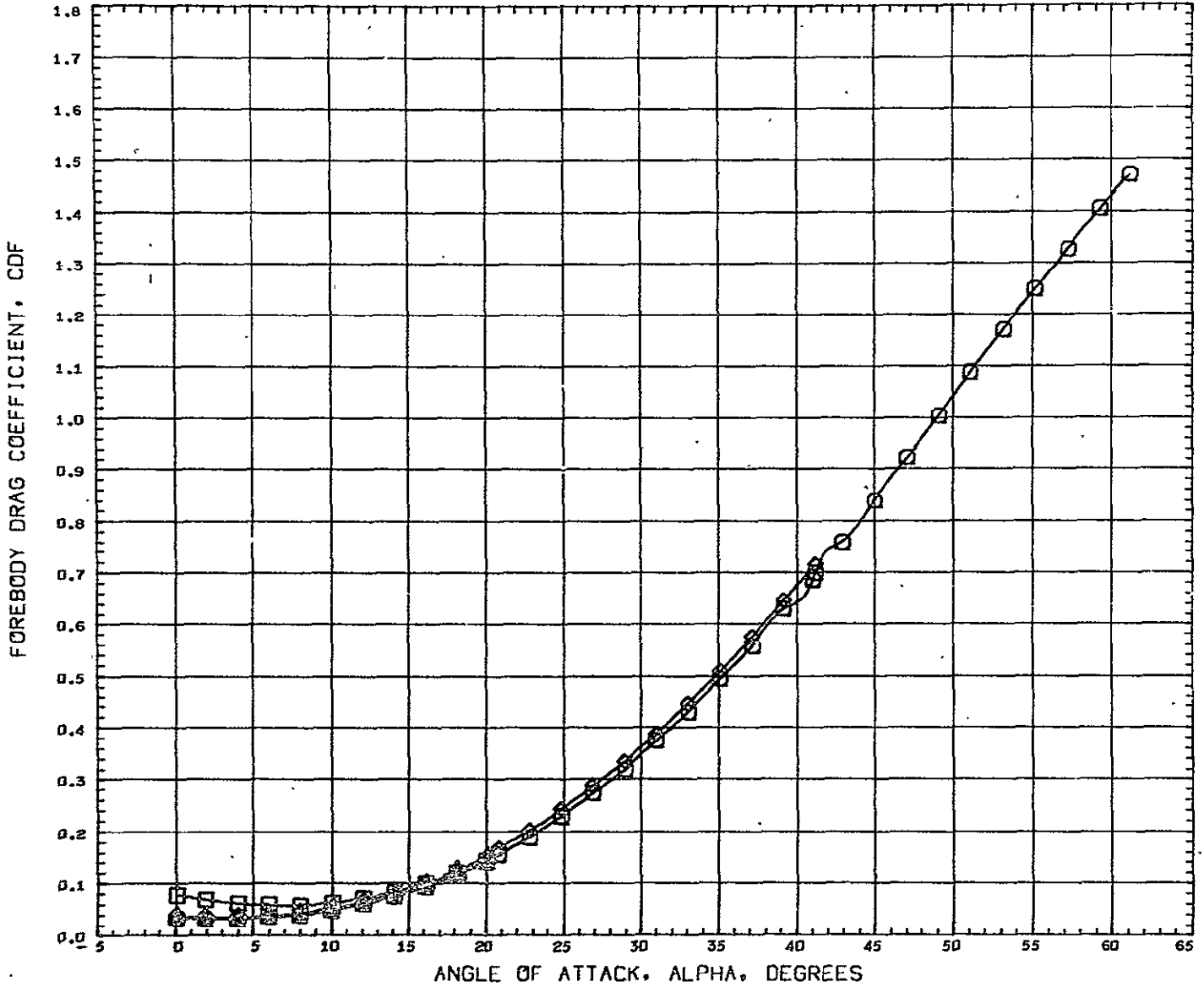
DELTA WING ORBITER- AILERON EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(R2756S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(R2760A)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	-20.000	0.000	0.000	REFL 821.2004 INCHES
(R2761S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	-30.000	0.000	0.000	REFB 1422.8040 INCHES
(R2762A)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	-30.000	30.000	0.000	0.000	XMRP 1422.5040 INCHES
						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 2.990

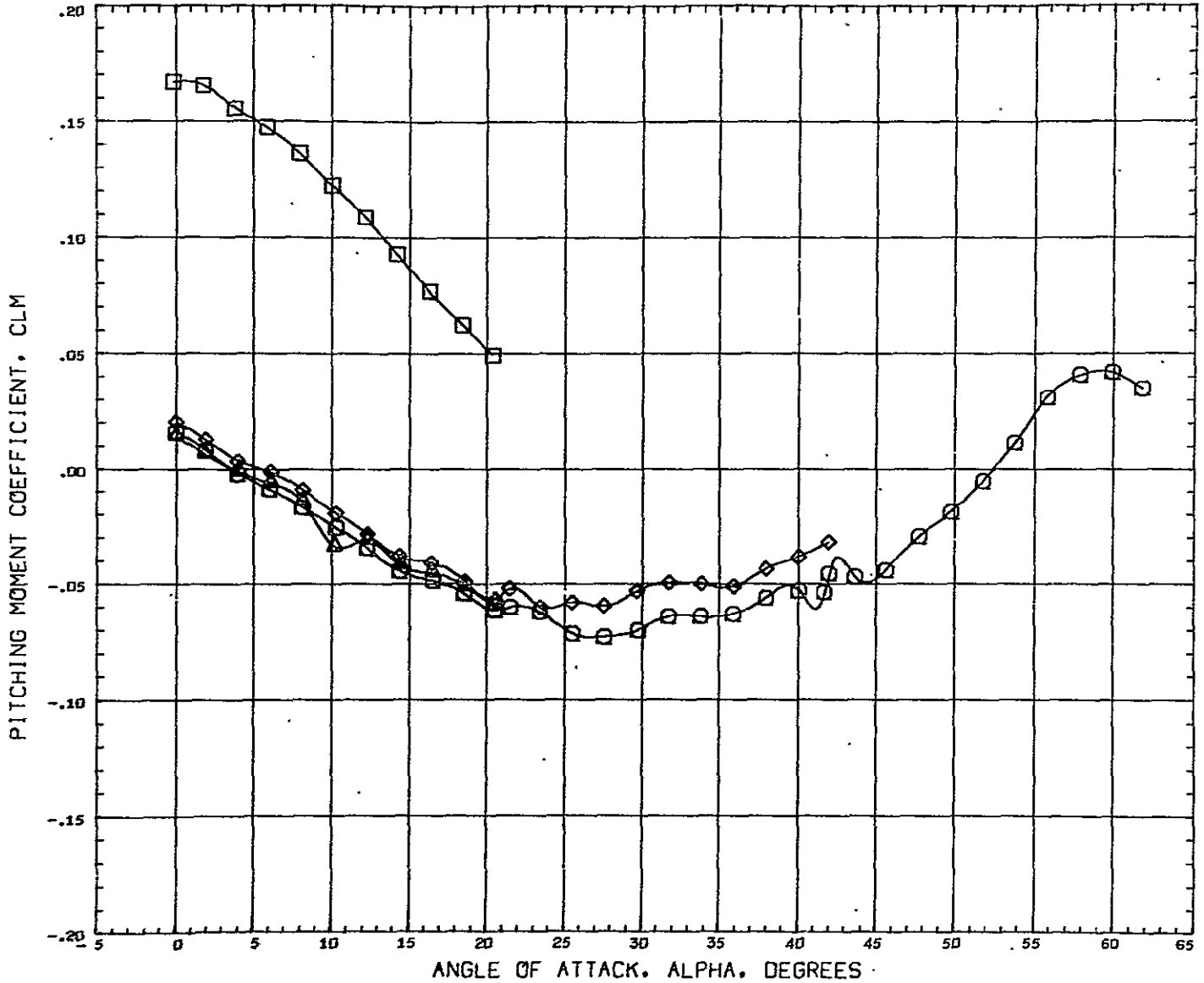
DELTA WING ORBITER-AILERON EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(R2756S)	MSFC478 NR DELTA ORBITER 85W17E10V17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(R2760A)	MSFC478 NR DELTA ORBITER 85W17E10V17J2X	0.000	-20.000	0.000	0.000	REFL 821.2004 INCHES
(R2761S)	MSFC478 NR DELTA ORBITER 85W17E10V17J2X	0.000	-30.000	0.000	0.000	REFB 1422.8040 INCHES
(R2762A)	MSFC478 NR DELTA ORBITER 85W17E10V17J2X	-30.000	30.000	0.000	0.000	XMRP 1422.5040 INCHES
						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 4.959

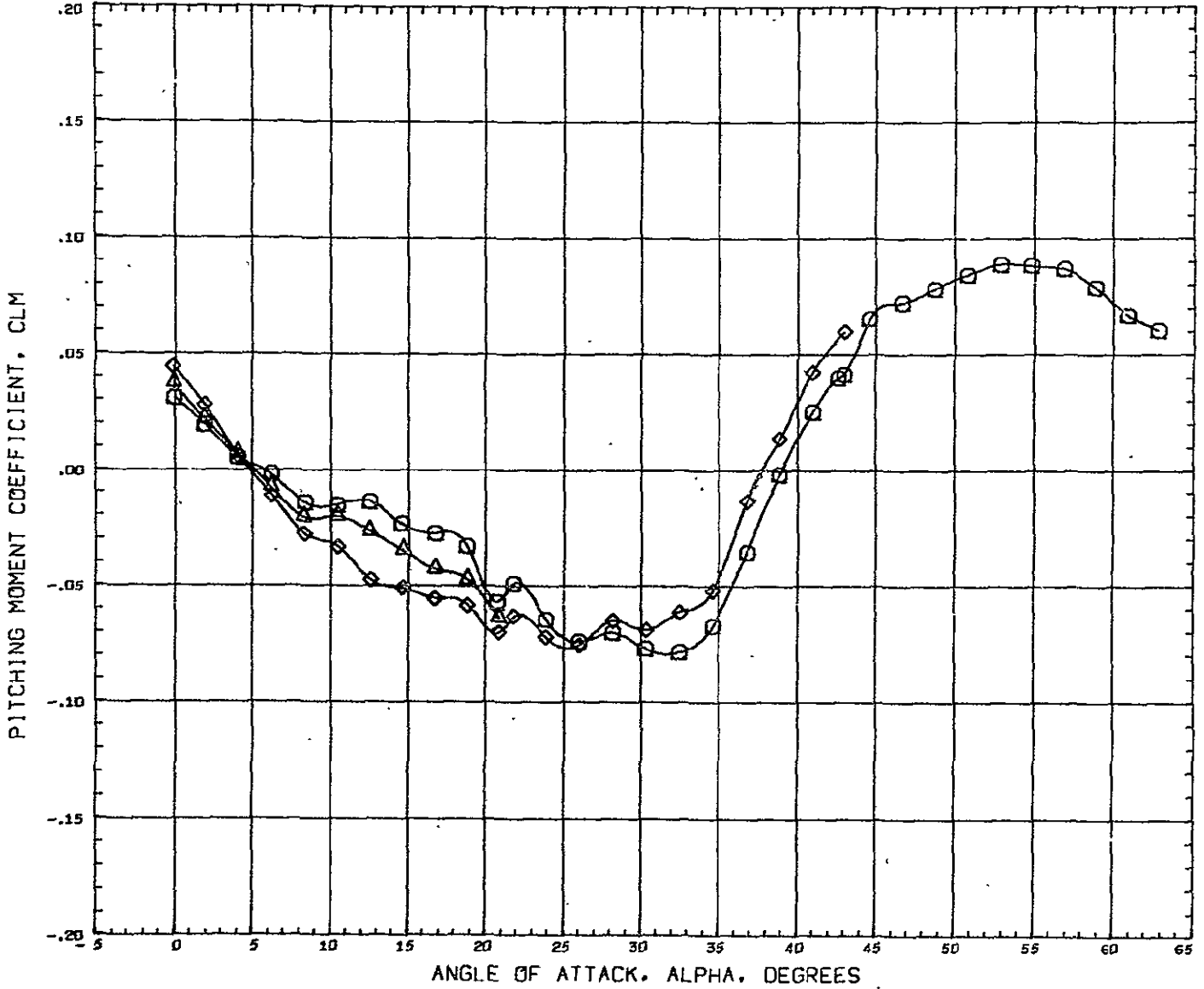
DELTA WING ORBITER-AILERON EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(R2756S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(R2760A)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	-20.000	0.000	0.000	REF1 821.2004 INCHES
(R2761S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	-30.000	0.000	0.000	REFB 1422.8040 INCHES
(R2762A)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	-30.000	30.000	0.000	0.000	XMRP 1422.5040 INCHES
						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 0.998

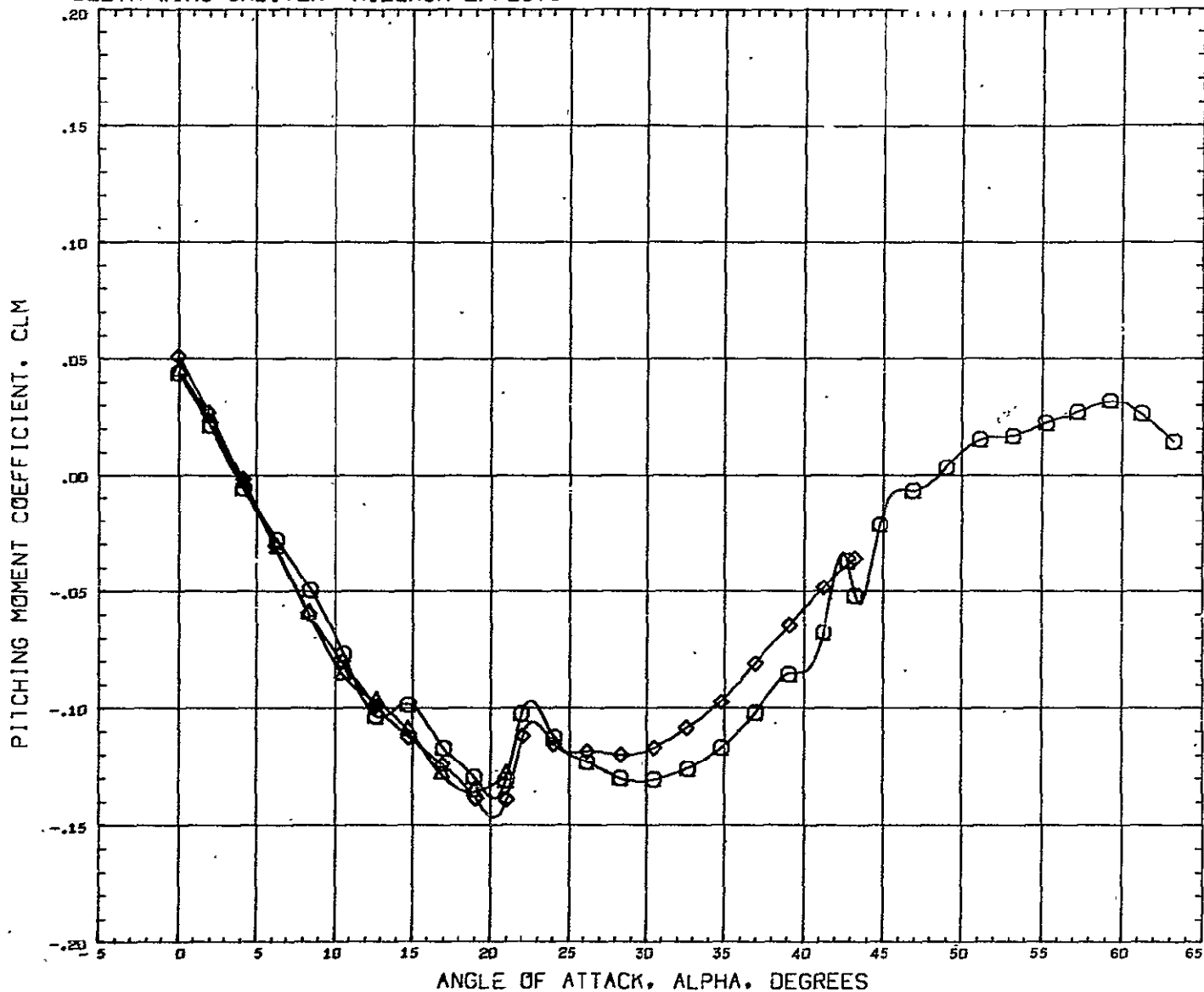
DELTA WING ORBITER-AILERON EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
{R2756S}	MSFC478 NR DELTA ORBITER 85W17E10V17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
{R2760A}	MSFC478 NR DELTA ORBITER 85W17E10V17J2X	0.000	-20.000	0.000	0.000	REFL 821.2004 INCHES
{R2761S}	MSFC478 NR DELTA ORBITER 85W17E10V17J2X	0.000	-30.000	0.000	0.000	REFB 1422.8040 INCHES
{R2762A}	MSFC478 NR DELTA ORBITER 85W17E10V17J2X	-30.000	30.000	0.000	0.000	XMRP 1422.5040 INCHES
						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 0.899

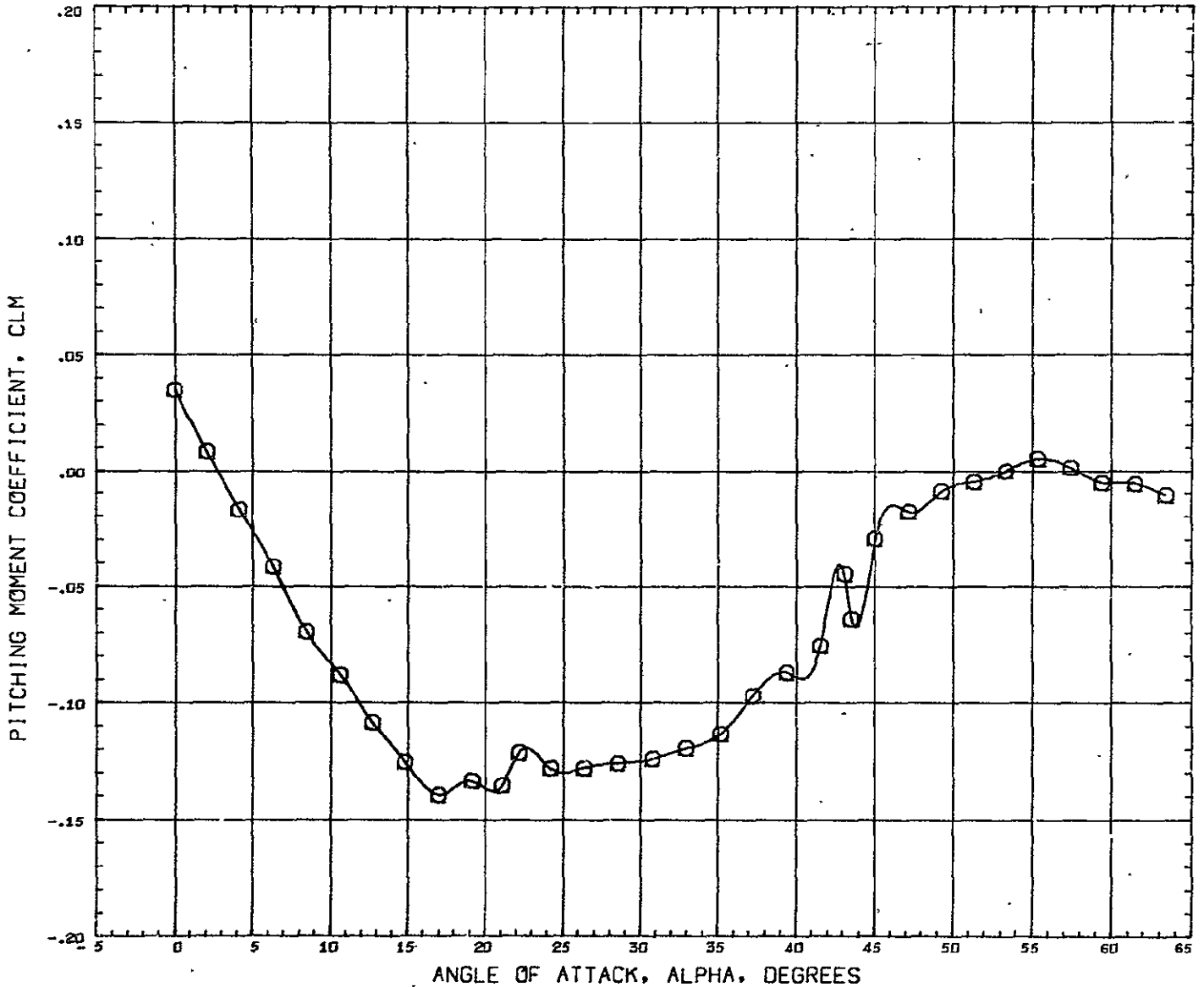
DELTA WING ORBITER- AILERON EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(R2756S)	MSFC478 NR DELTA ORBITER B5W17E1DV17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(R2760A)	MSFC478 NR DELTA ORBITER B5W17E1DV17J2X	0.000	-20.000	0.000	0.000	REFL 821.2004 INCHES
(R2761S)	MSFC478 NR DELTA ORBITER B5W17E1DV17J2X	0.000	-30.000	0.000	0.000	REFB 1422.8040 INCHES
(R2762A)	MSFC478 NR DELTA ORBITER B5W17E1DV17J2X	-30.000	30.000	0.000	0.000	XMRF 1422.5040 INCHES
						YMRF 0.0000 INCHES
						ZMRF 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 1.003

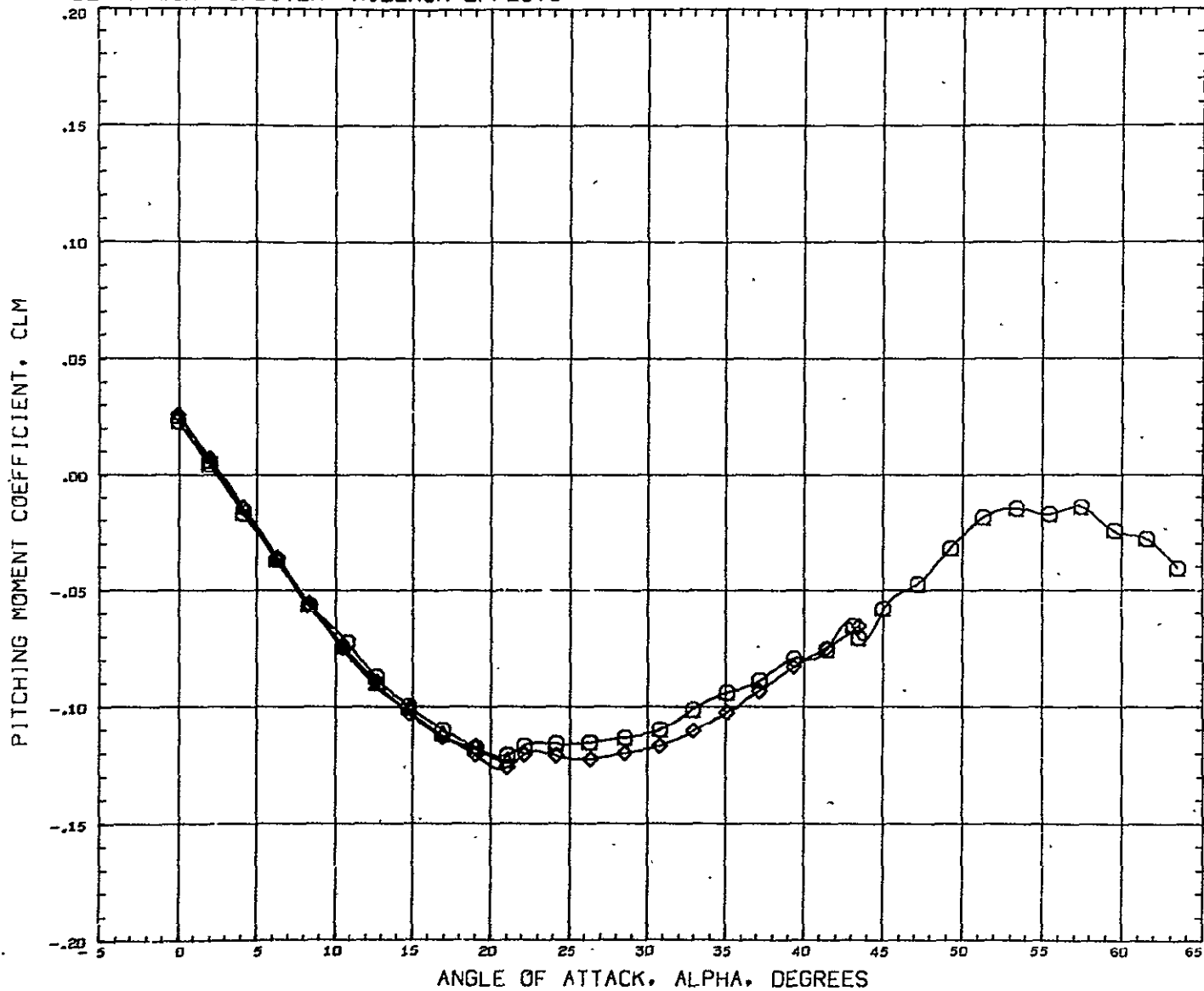
DELTA WING ORBITER- AILERON EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(R2756S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(R2765A)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	-20.000	0.000	0.000	REFL 821.2004 INCHES
(R2761S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	-30.000	0.000	0.000	REFB 1422.5040 INCHES
(R2762A)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	-30.000	30.000	0.000	0.000	XNRP 1422.5040 INCHES
						YNRP 0.0000 INCHES
						ZNRP 130.0004 INCHES
						SCALE 0.0035 SCALE

HACH 1.199

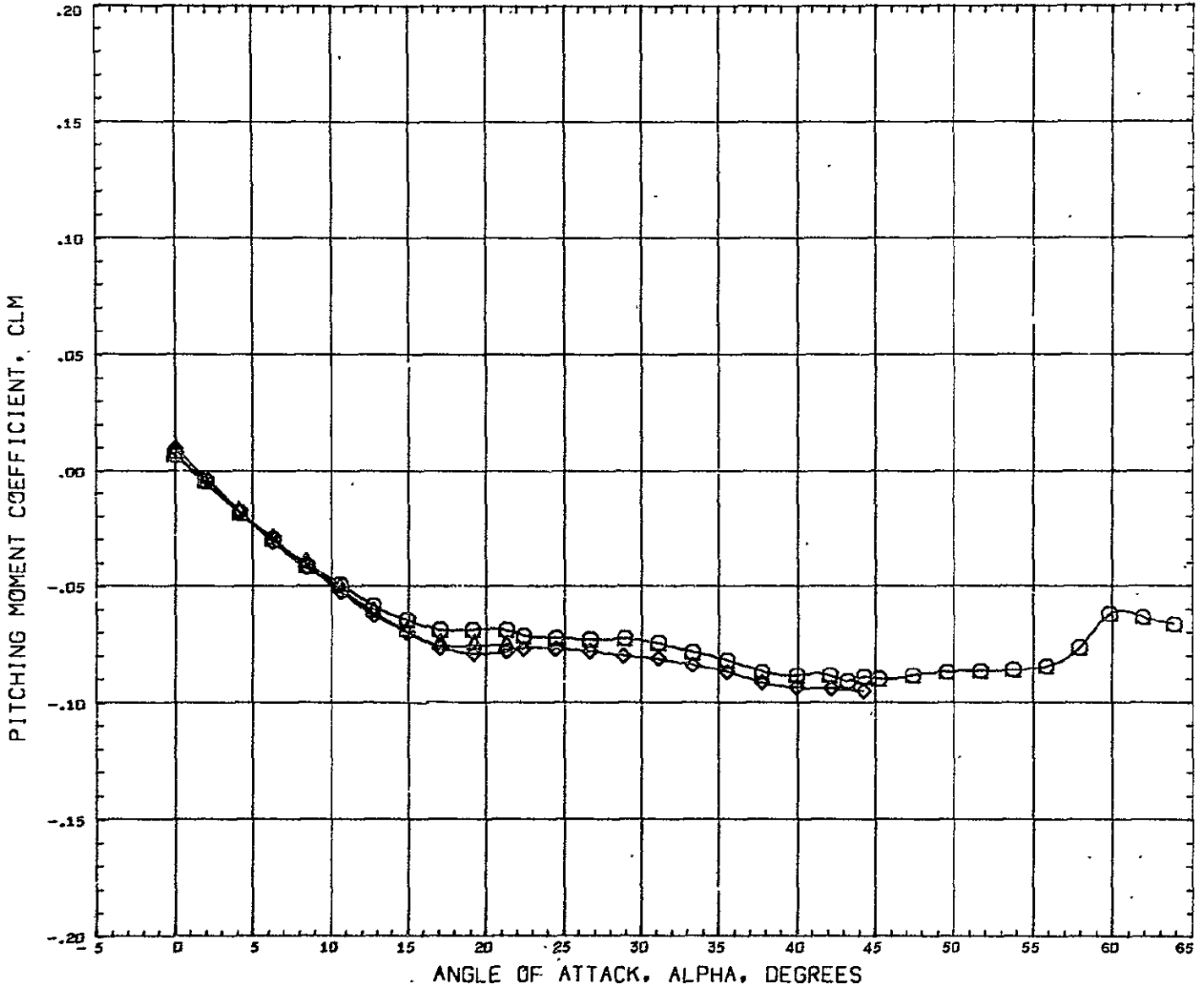
DELTA WING ORBITER-AILERON EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(R2756S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(R2760A)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	-20.000	0.000	0.000	REFL 821.2004 INCHES
(R2761S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	-30.000	0.000	0.000	REFB 1422.8046 INCHES
(R2762A)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	-30.000	30.000	0.000	0.000	XMRP 1422.5040 INCHES
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						SCALE 0.0035 SCALE

MACH 1.458

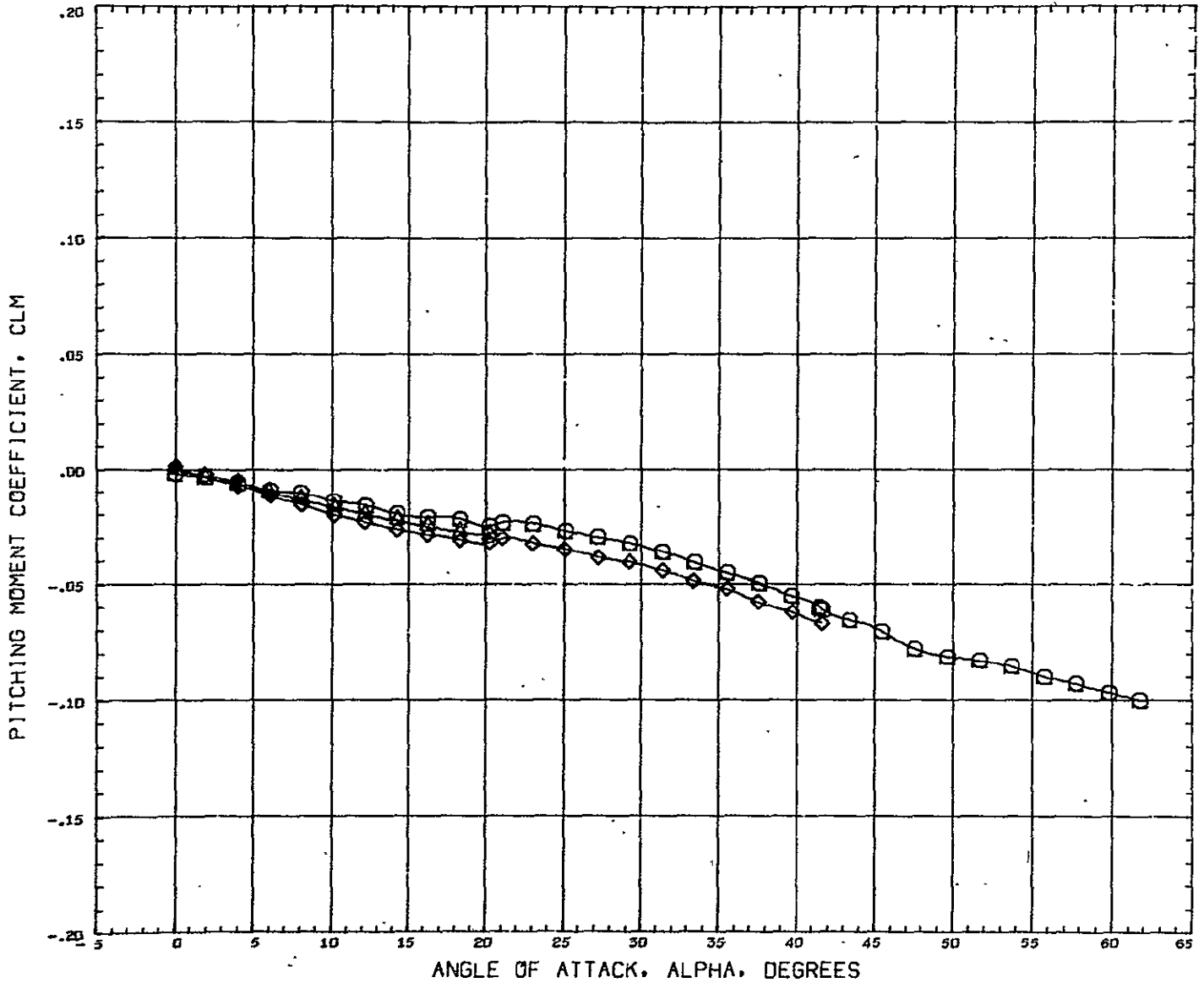
DELTA WING ORBITER- AILERON EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(R2756S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(R2760A)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	-20.000	0.000	0.000	REFL 821.2004 INCHES
(R2761S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	-30.000	0.000	0.000	REFB 1422.8048 INCHES
(R2762A)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	-30.000	30.000	0.000	0.000	XMRP 1422.5040 INCHES
						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 1.965

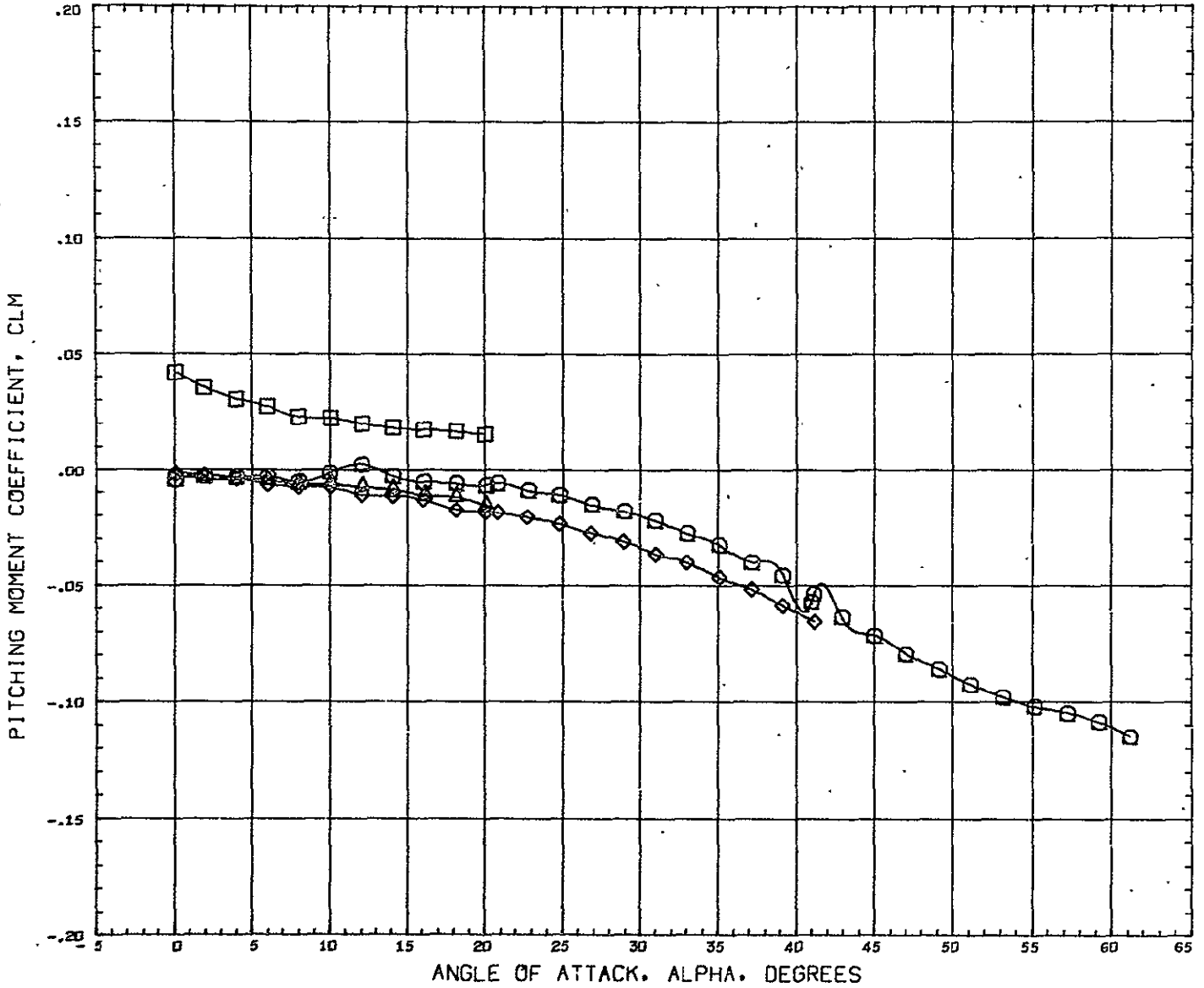
DELTA WING ORBITER-AILERON EFFECTS



DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(R2756S)	○	MSFC478 NR DELTA ORBITER B5W17E1DV17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(R2760A)	△	MSFC478 NR DELTA ORBITER B5W17E1DV17J2X	0.000	-20.000	0.000	0.000	REFL 821.2004 INCHES
(R2761S)	◇	MSFC478 NR DELTA ORBITER B5W17E1DV17J2X	0.000	-30.000	0.000	0.000	REFB 1422.8040 INCHES
(R2762A)	□	MSFC478 NR DELTA ORBITER B5W17E1DV17J2X	-30.000	30.000	0.000	0.000	XMRP 1422.5040 INCHES
							YMRP 0.0000 INCHES
							ZMRP 130.0004 INCHES
							SCALE 0.0035 SCALE

MACH 2.990

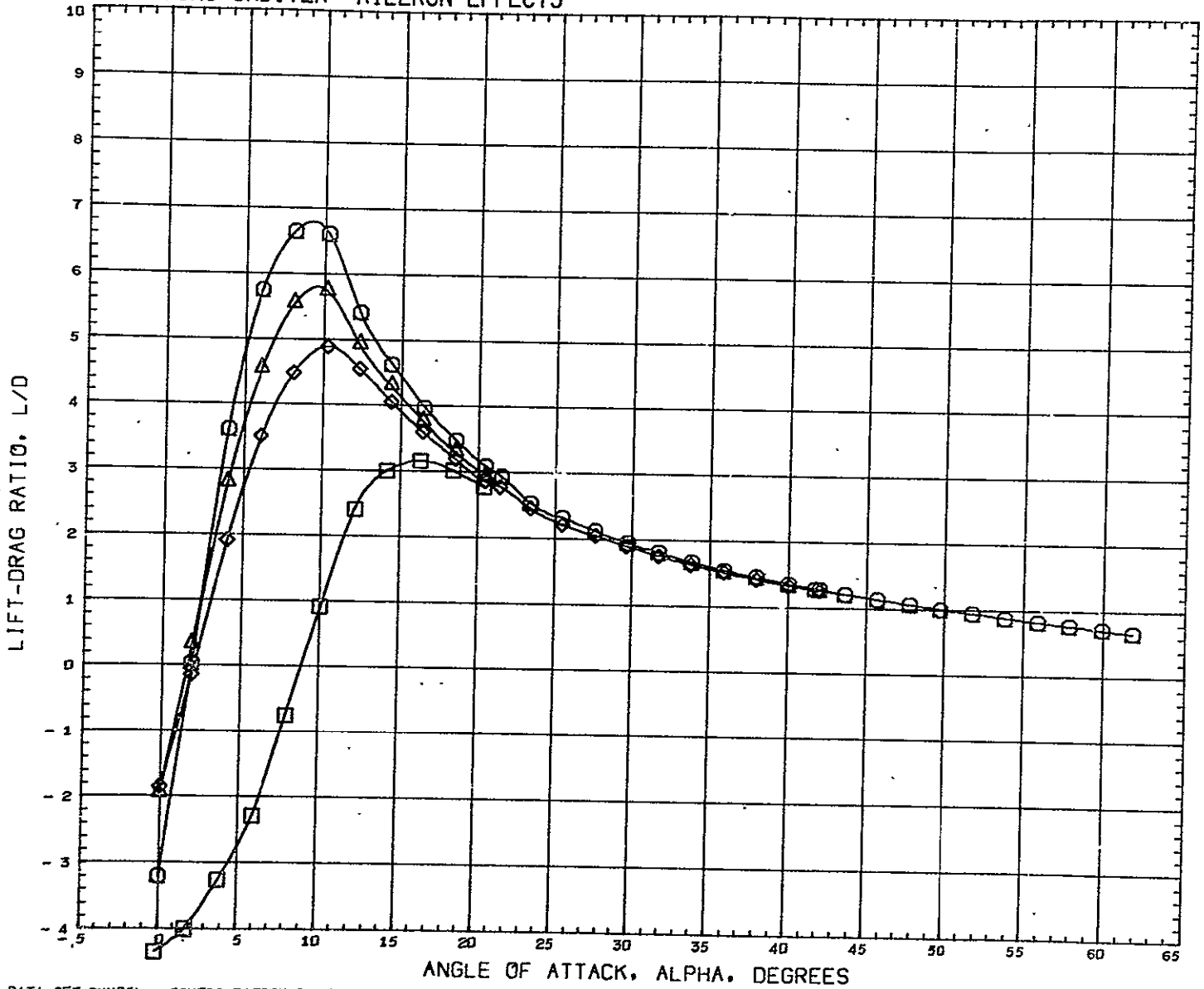
DELTA WING ORBITER- AILERON EFFECTS



DATA SET SYMBOL	SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(R2756S)	○	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(R2760A)	△	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	-20.000	0.000	0.000	REFL 821.2004 INCHES
(R2761S)	◇	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	-30.000	0.000	0.000	REFB 1422.8040 INCHES
(R2762A)	□	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	-30.000	30.000	0.000	0.000	XMRP 1422.5040 INCHES
							YMRF 0.0000 INCHES
							ZMRP 130.0004 INCHES
							SCALE 0.0035 SCALE

MACH 4.959

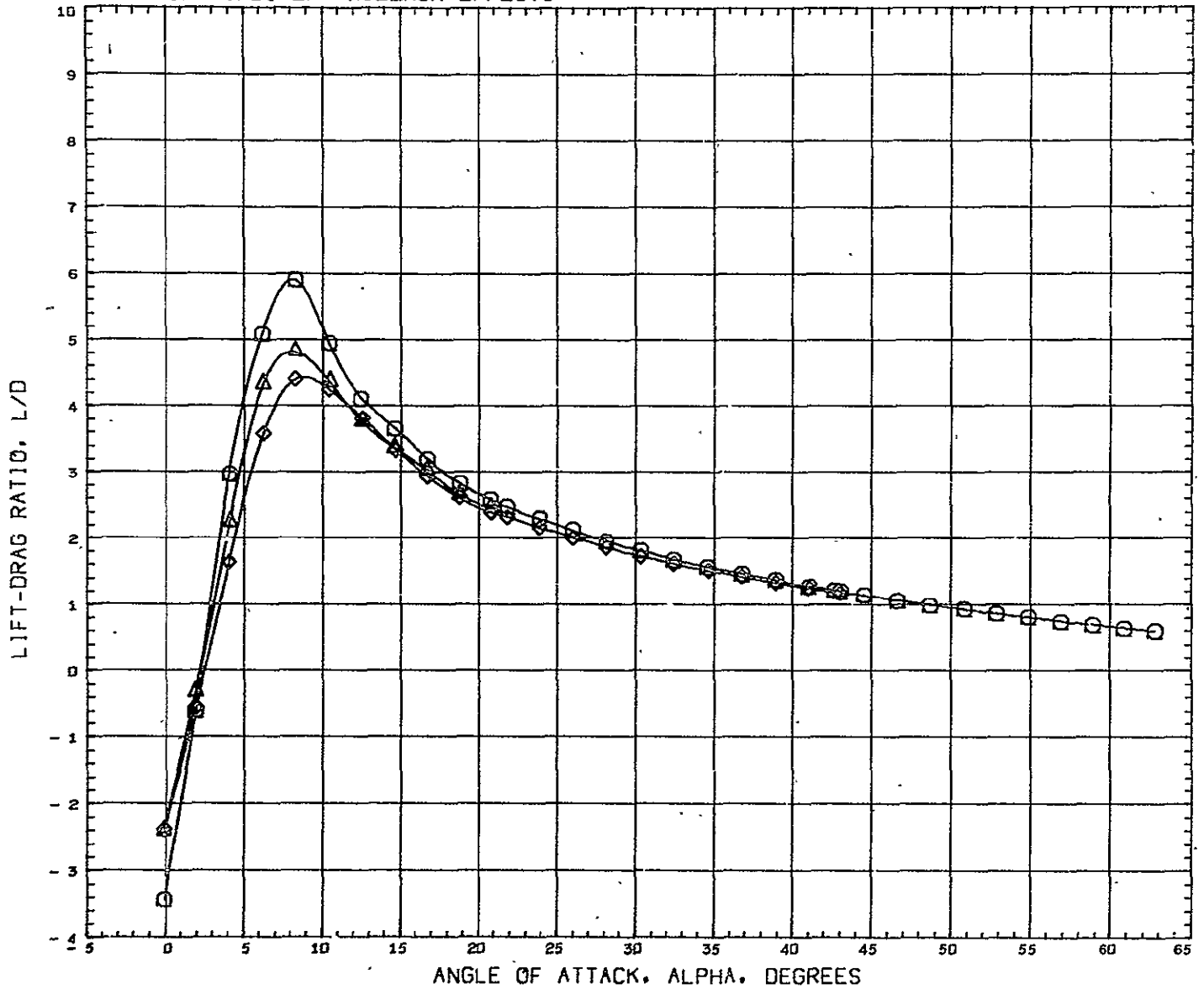
DELTA WING ORBITER-AILERON EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(R2756S)	MSFC478 NR DELTA ORBITER B5W17E1DV17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ. FT
(R2760A)	MSFC478 NR DELTA ORBITER B5W17E1DV17J2X	0.000	-20.000	0.000	0.000	REFL 821.2004 INCHES
(R2761S)	MSFC478 NR DELTA ORBITER B5W17E1DV17J2X	0.000	-30.000	0.000	0.000	REFB 1422.3040 INCHES
(R2762A)	MSFC478 NR DELTA ORBITER B5W17E1DV17J2X	-30.000	30.000	0.000	0.000	XMPF 1422.5040 INCHES
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						ZMPF 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 0.598

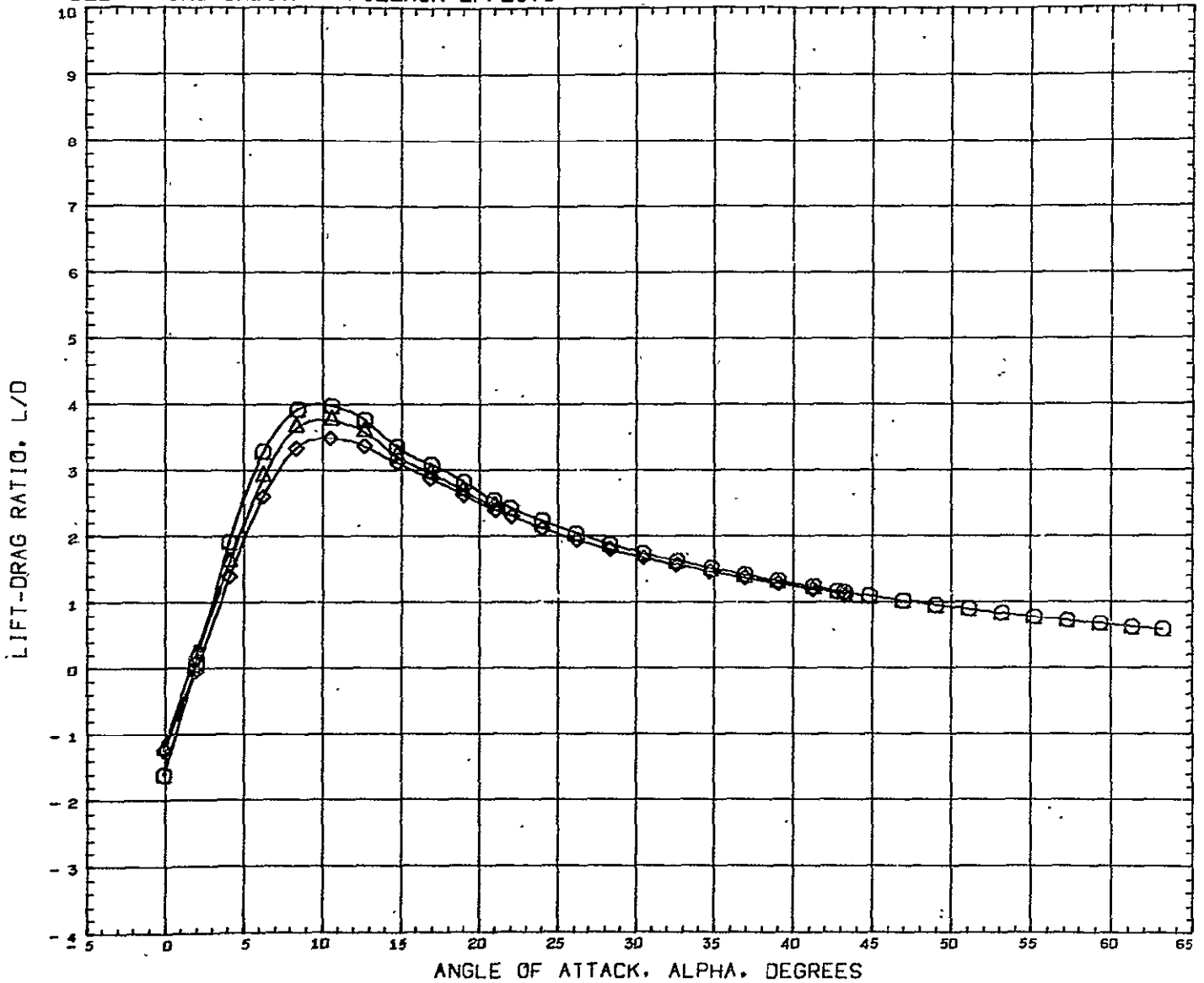
DELTA WING ORBITER-AILERON EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(R2756S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(R2760A)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	-20.000	0.000	0.000	REFL 821.2004 INCHES
(R2761S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	-30.000	0.000	0.000	REFB 1422.8040 INCHES
(R2762A)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	-30.000	30.000	0.000	0.000	XMRP 1422.5040 INCHES
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						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 0.899

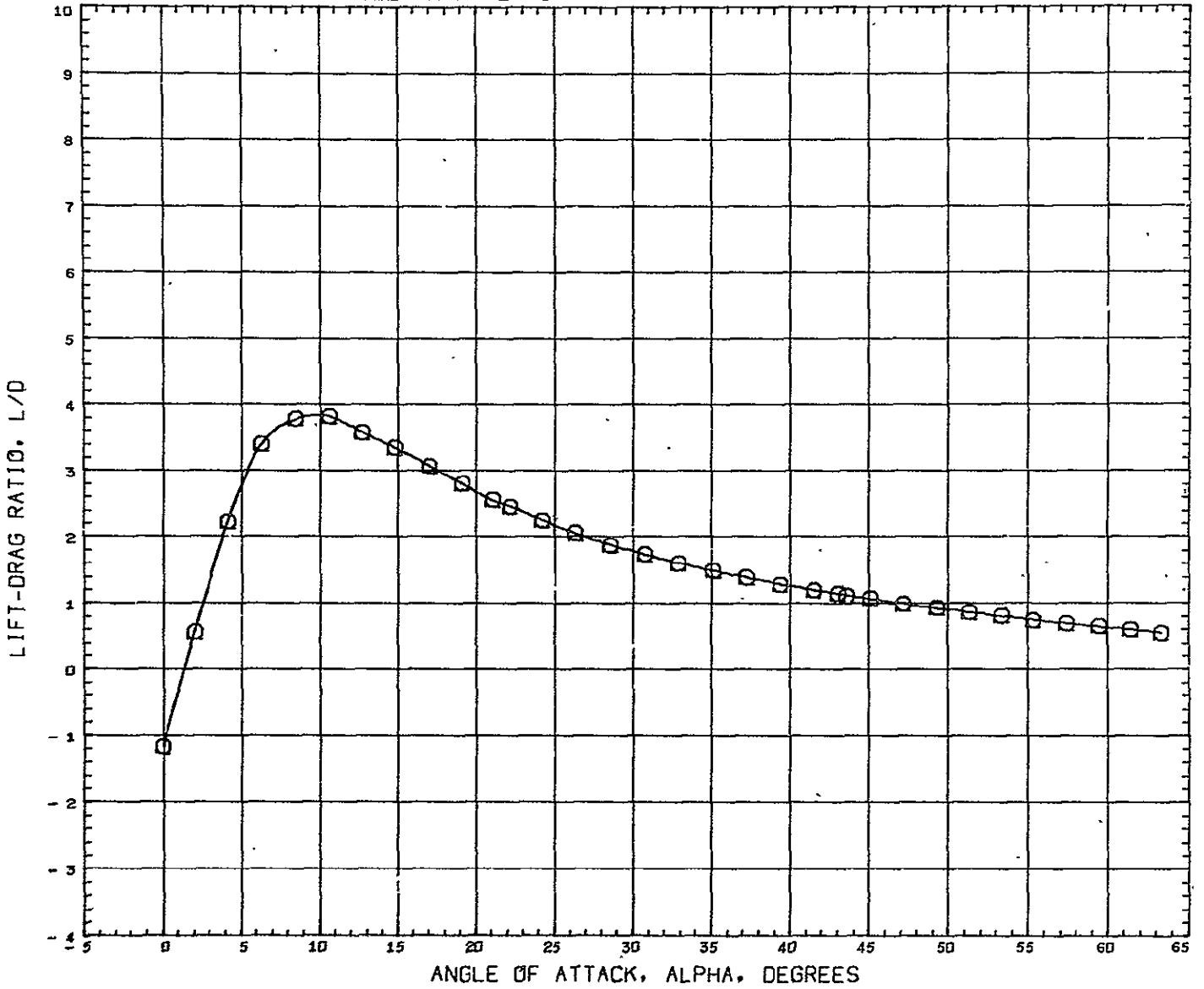
DELTA WING ORBITER- AILERON EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(R2756S)	MSFC478 NR DELTA CRBITER B5W17E10V17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(R2769A)	MSFC478 NR DELTA CRBITER B5W17E10V17J2X	0.000	-20.000	0.000	0.000	REFL 821.2004 INCHES
(R2761S)	MSFC478 NR DELTA CRBITER B5W17E10V17J2X	0.000	-30.000	0.000	0.000	REFB 1422.8040 INCHES
(R2762A)	MSFC478 NR DELTA CRBITER B5W17E10V17J2X	-30.000	30.000	0.000	0.000	XMRP 1422.5040 INCHES
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						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

HACH 1.003

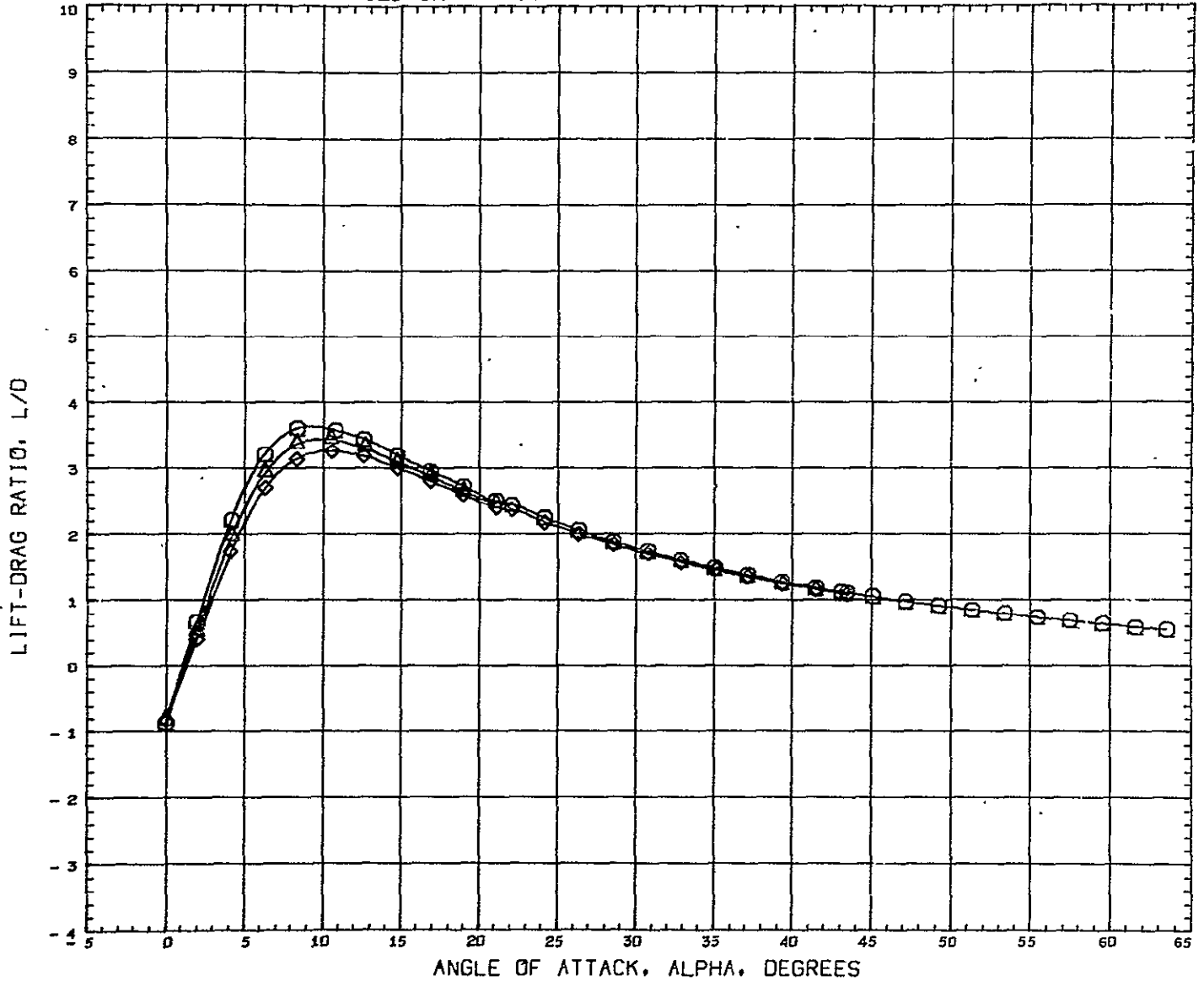
DELTA WING ORBITER-AILERON EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(R2756S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(R2760A)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	-20.000	0.000	0.000	REFL 821.2004 INCHES
(R2761S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	-30.000	0.000	0.000	REFB 1422.8040 INCHES
(R2762A)	MSFC478 NR DELTA ORBITER B5W17E10V17J2	-30.000	30.000	0.000	0.000	XMRP 1422.5040 INCHES
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						ZMRP 130.0004 INCHES
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MACH 1.199

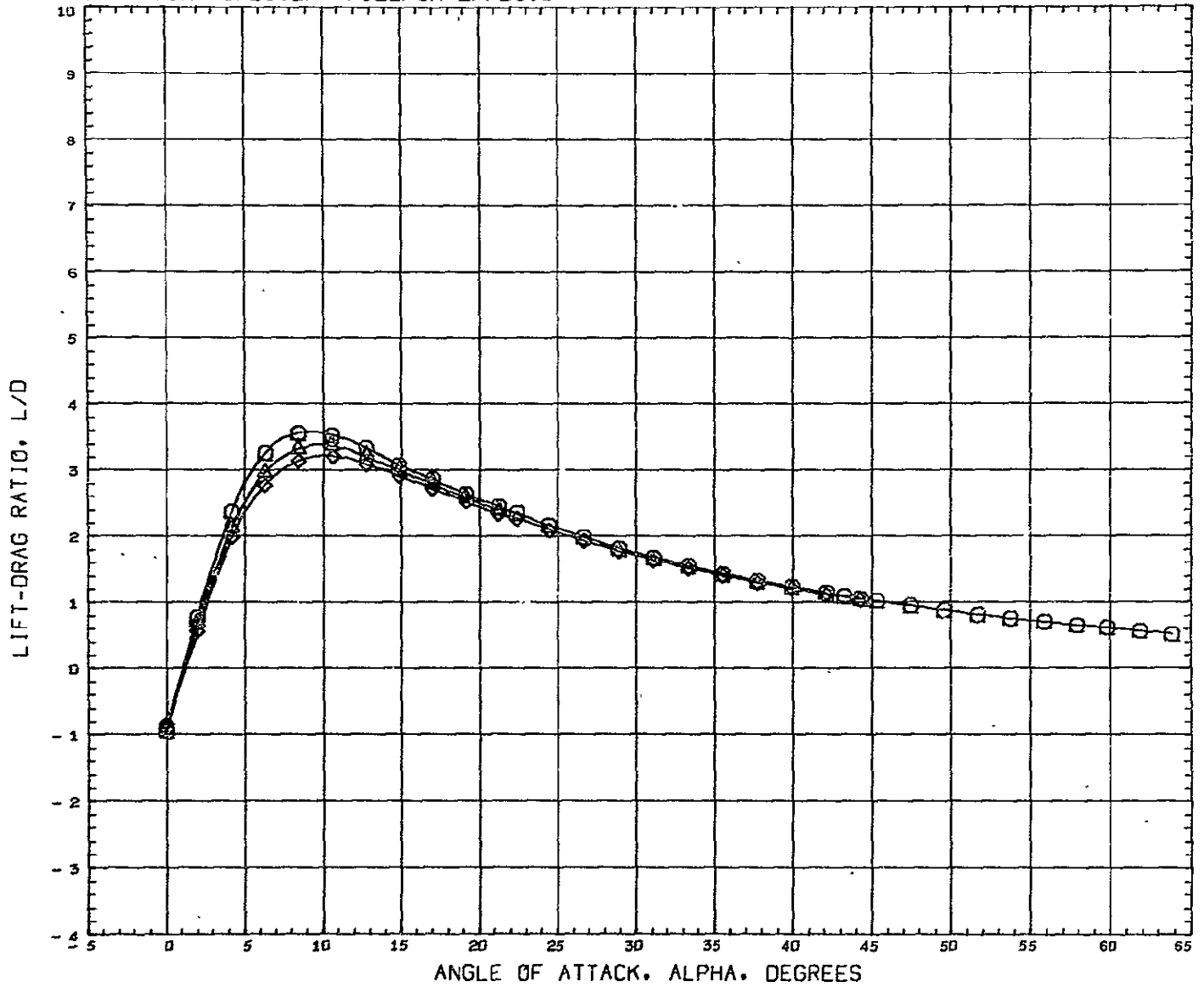
DELTA WING ORBITER- AILERON EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(R2756S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(R2760A)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	-20.000	0.000	0.000	REFL 821.2004 INCHES
(R2761S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	-30.000	0.000	0.000	REFB 1422.8040 INCHES
(R2762A)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	-30.000	30.000	0.000	0.000	XMRP 1422.5040 INCHES
						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 1.458

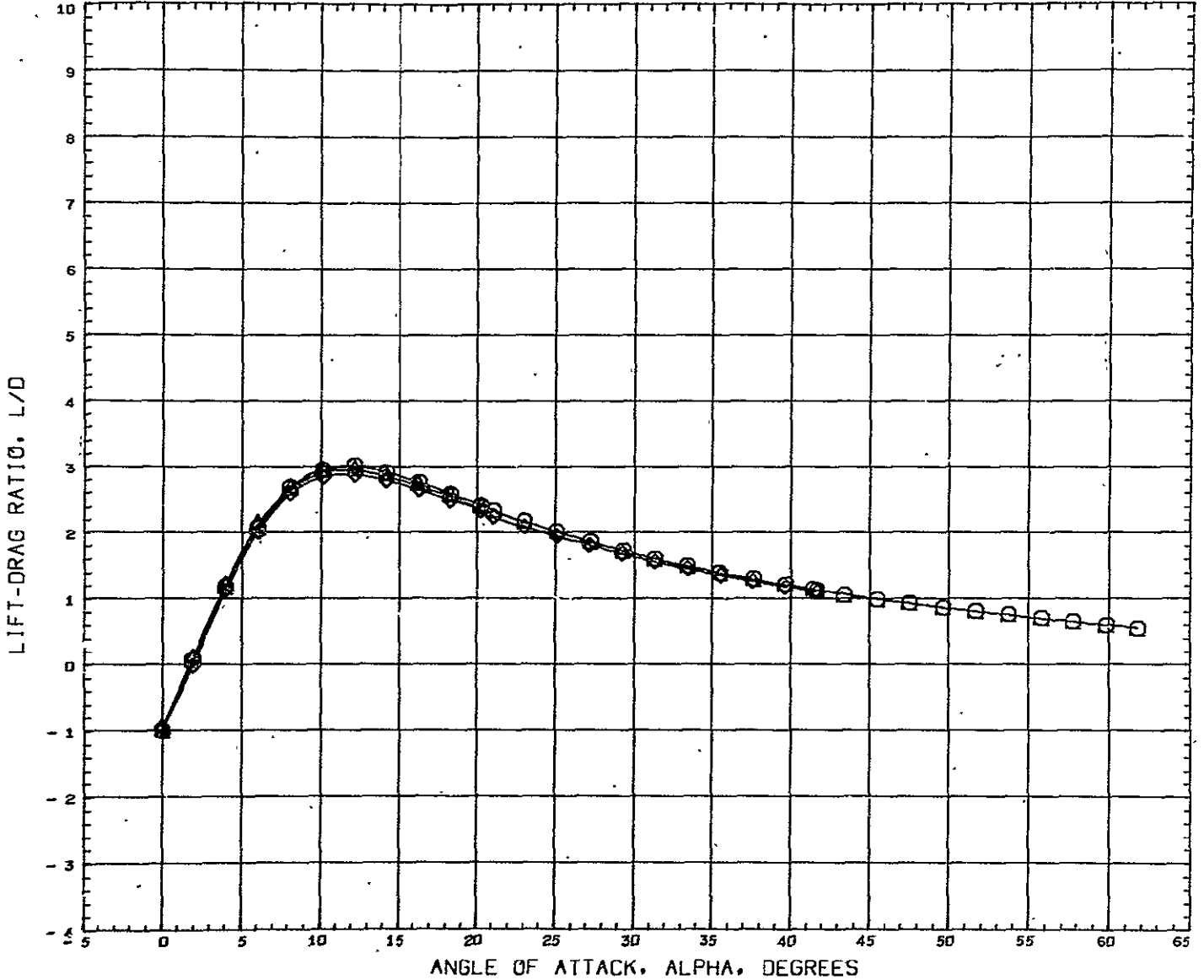
DELTA WING ORBITER-AILERON EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(R2756S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(R2760A)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	-20.000	0.000	0.000	REFL 821.2004 INCHES
(R2761S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	-30.000	0.000	0.000	REFB 1422.8040 INCHES
(R2762A)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	-30.000	30.000	0.000	0.000	XMRP 1422.5040 INCHES
						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 1.905

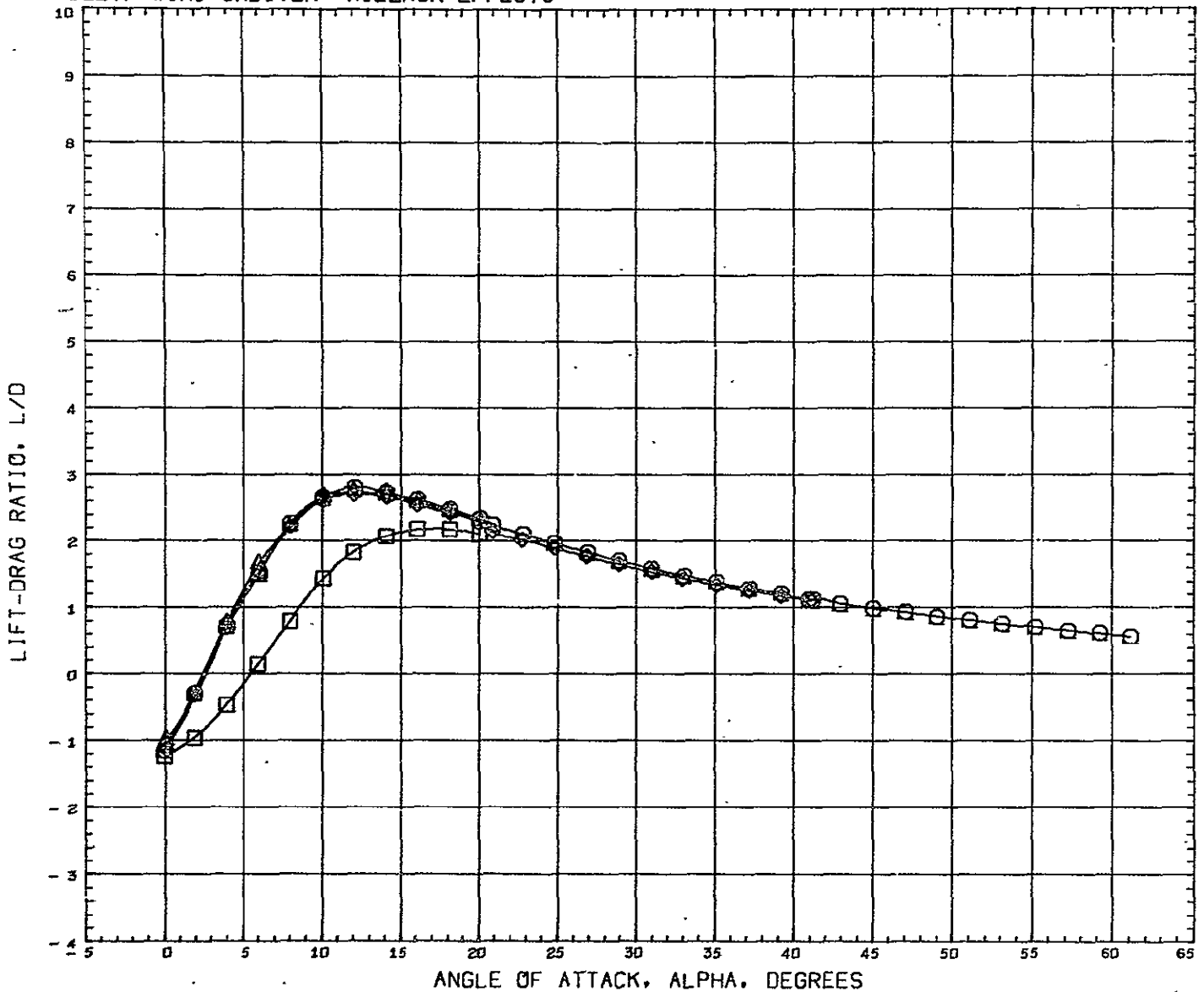
DELTA WING ORBITER-AILERON EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(R2756S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(R2760A)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	-20.000	0.000	0.000	REFL 821.2004 INCHES
(R2761S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	-30.000	0.000	0.000	REFB 1422.8040 INCHES
(R2762A)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	-30.000	30.000	0.000	0.000	XMRP 1422.5040 INCHES
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						SCALE 0.0035 SCALE

MACH 2.990

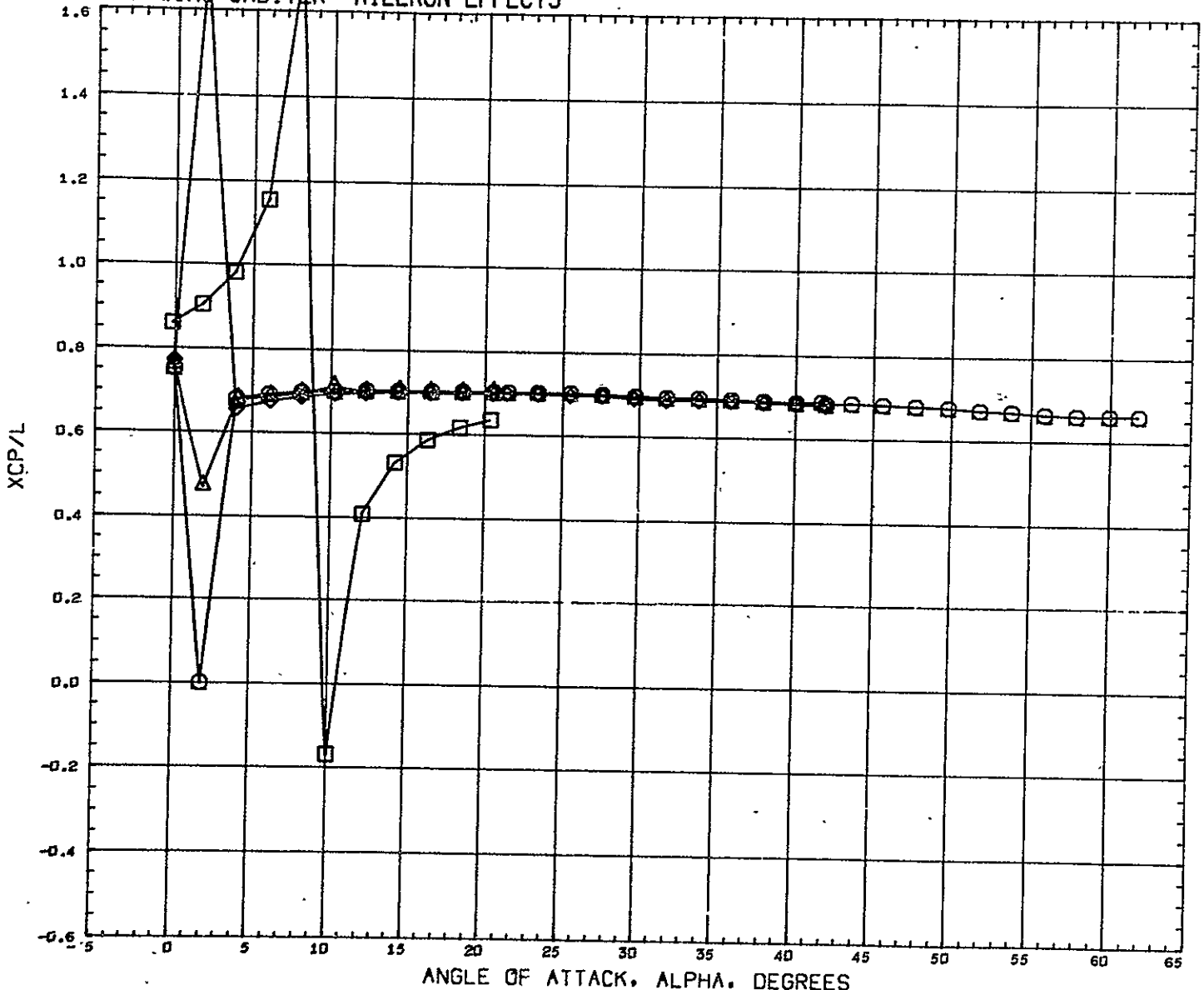
DELTA WING ORBITER- AILERON EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(R27565)	MSFC478 NR DELTA ORBITER B5W17E1DV17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(R2760A)	MSFC478 NR DELTA ORBITER B5W17E1DV17J2X	0.000	-20.000	0.000	0.000	REFL 821.2004 INCHES
(R27615)	MSFC478 NR DELTA ORBITER B5W17E1DV17J2X	0.000	-30.000	0.000	0.000	REFB 1422.8040 INCHES
(R2762A)	MSFC478 NR DELTA ORBITER B5W17E1DV17J2X	-30.000	30.000	0.000	0.000	XMRF 1422.5040 INCHES
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						SCALE 0.0035 SCALE

MACH 4.959

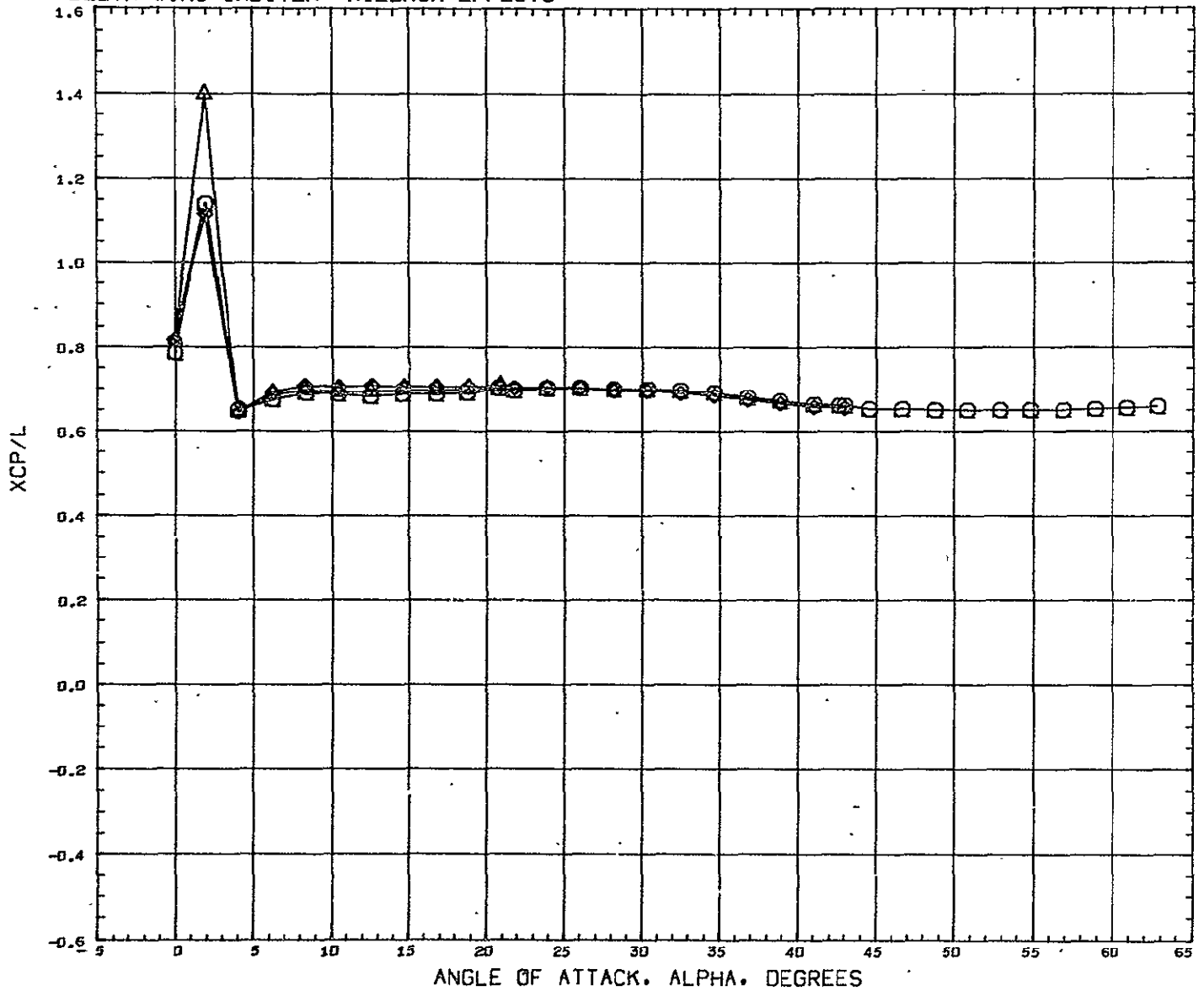
DELTA WING ORBITER- AILERON EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(R2736S)	MSFC478 NR DELTA ORBITER 85W17E10V17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(R2760A)	MSFC478 NR DELTA ORBITER 85W17E10V17J2X	0.000	-20.000	0.000	0.000	REFL 821.2004 INCHES
(R2761S)	MSFC478 NR DELTA ORBITER 85W17E10V17J2X	0.000	-30.000	0.000	0.000	REFB 1422.8040 INCHES
(R2762A)	MSFC478 NR DELTA ORBITER 85W17E10V17J2X	-30.000	30.000	0.000	0.000	XMRP 1422.5040 INCHES
						YMRP 0.0000 INCHES
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MACH 0.598

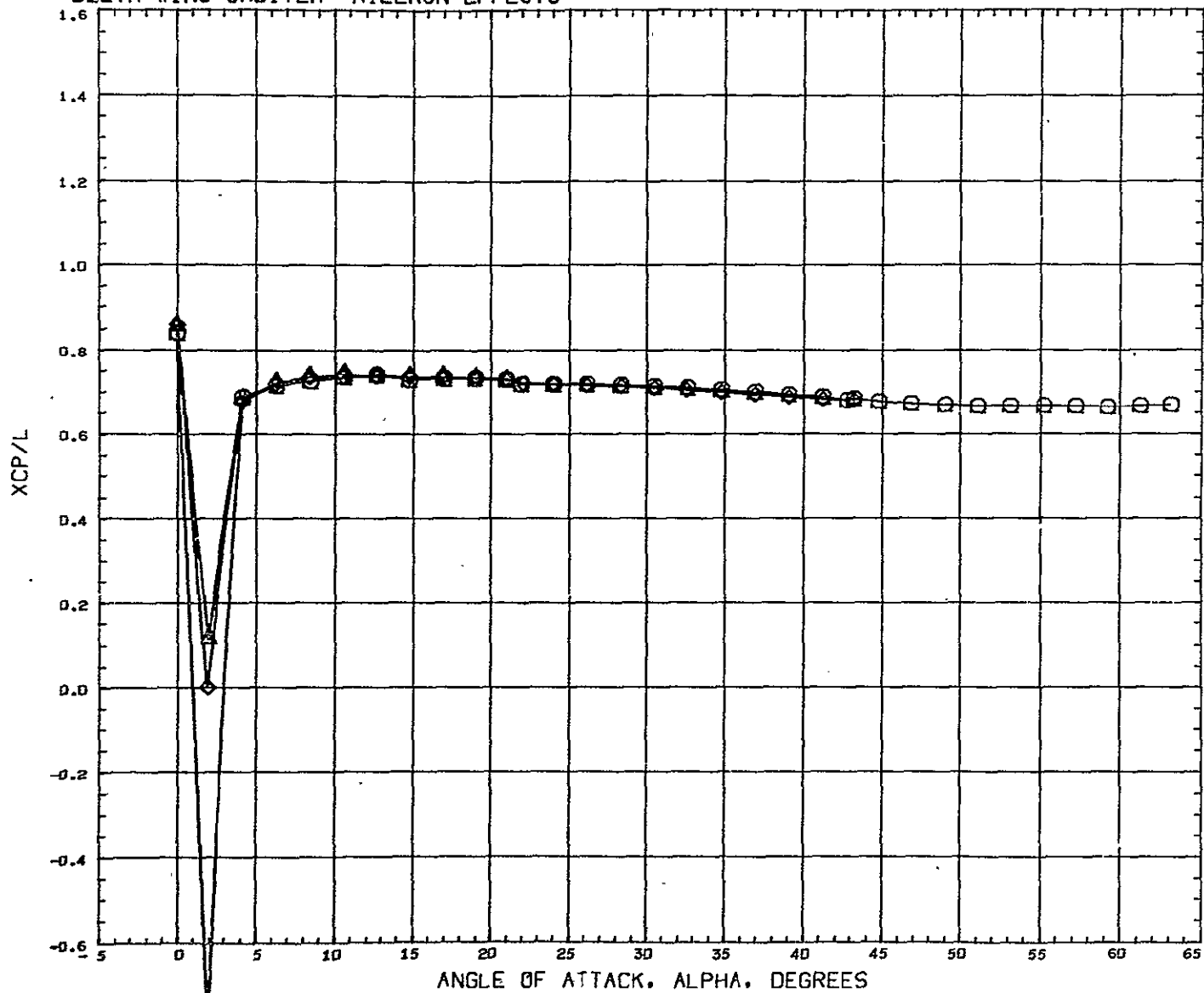
DELTA WING ORBITER- AILERON EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(R27565)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(R2760A)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	-20.000	0.000	0.000	REFL 821.2004 INCHES
(R2761S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	-30.000	0.000	0.000	REFB 1422.8040 INCHES
(R2762A)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	-30.000	30.000	0.000	0.000	XMRP 1422.5040 INCHES
						YMRP 0.0000 INCHES
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						SCALE 0.0035 SCALE

MACH 0.099

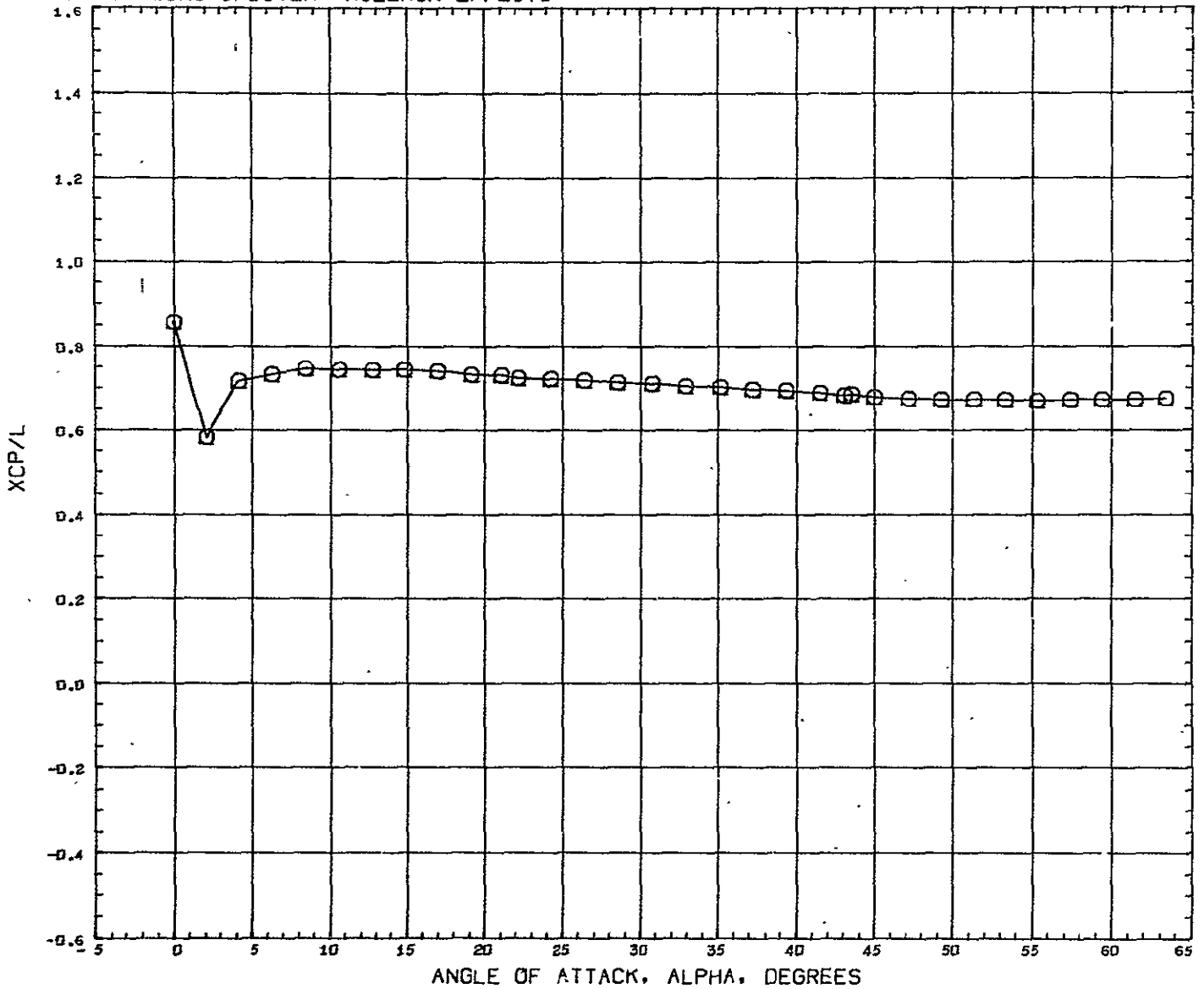
DELTA WING ORBITER- AILERON EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(R2756S)	HSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(R2760A)	HSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	-20.000	0.000	0.000	REFL 821.2004 INCHES
(R2761S)	HSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	-30.000	0.000	0.000	REFB 1422.8040 INCHES
(R2762A)	HSFC478 NR DELTA ORBITER B5W17E10V17J2X	-30.000	30.000	0.000	0.000	XMRP 1422.5040 INCHES
						YMRP 0.0000 INCHES
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						SCALE 0.0035 SCALE

MACH 1.003

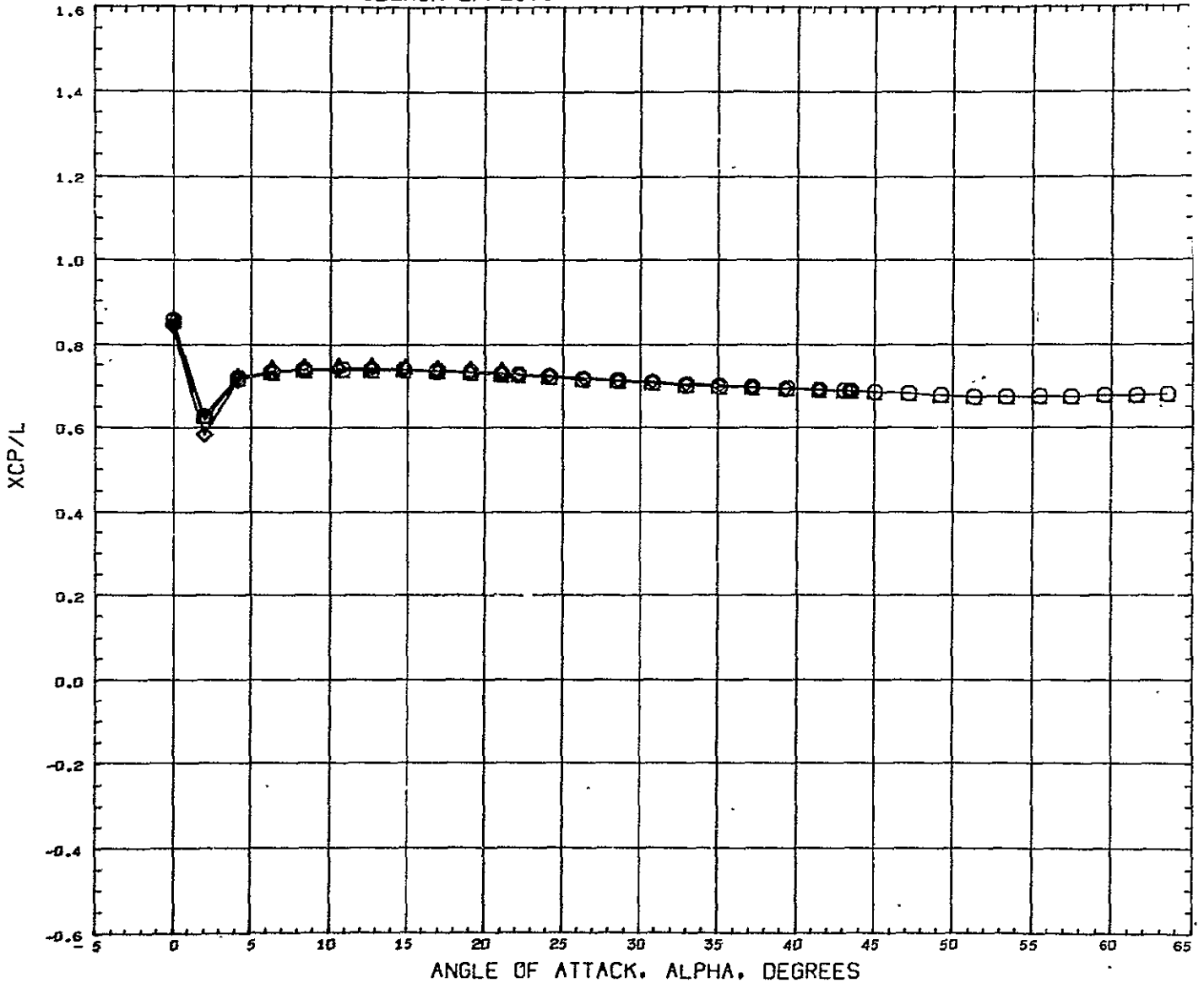
DELTA WING ORBITER-AILERON EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(R2756S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(R2760A)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	-20.000	0.000	0.000	REFL 821.2004 INCHES
(R2761S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	-30.000	0.000	0.000	REFB 1422.8040 INCHES
(R2762A)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	-30.000	30.000	0.000	0.000	XMRP 1422.5040 INCHES
						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 1.199

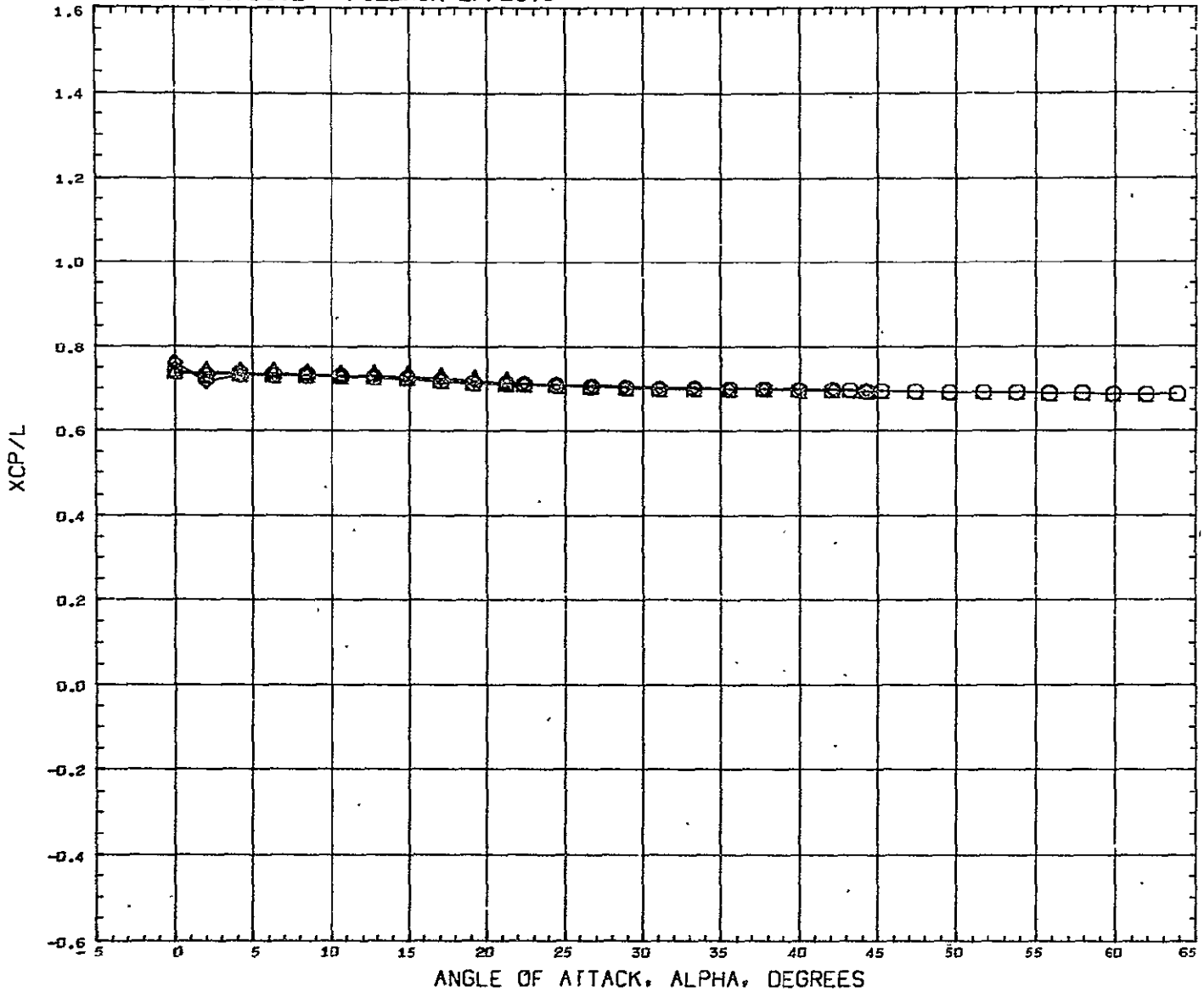
DELTA WING ORBITER-AILERON EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(R2756S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(R2760A)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	-20.000	0.000	0.000	REFL 821.2004 INCHES
(R2761S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	-30.000	0.000	0.000	REFB 1422.8040 INCHES
(R2762A)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	-30.000	30.000	0.000	0.000	XNRF 1422.5040 INCHES
						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 1.455

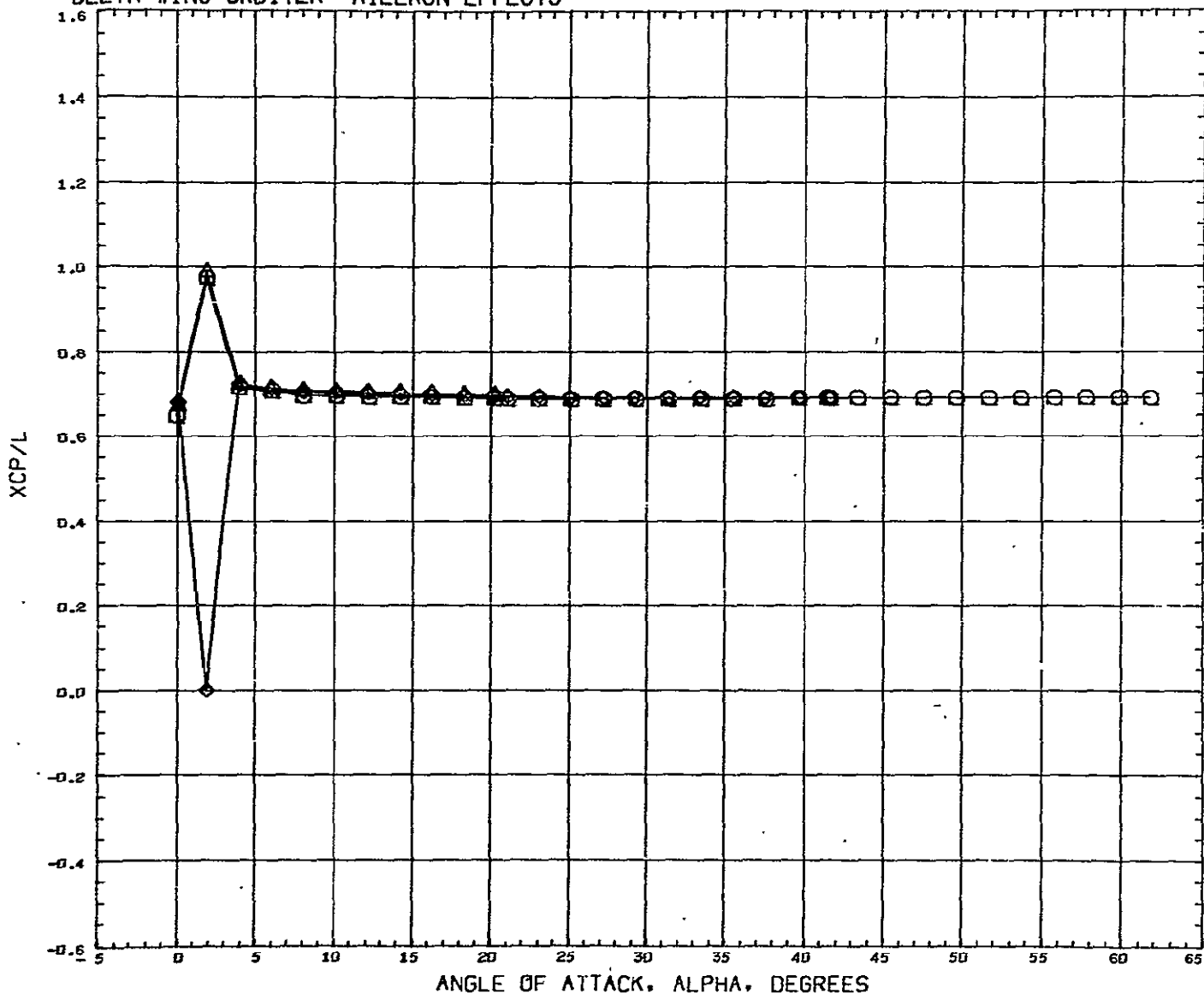
DELTA WING ORBITER- AILERON EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(R2756S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(R2760A)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	-20.000	0.000	0.000	REFL 821.2004 INCHES
(R2761S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	-30.000	0.000	0.000	REFB 1422.8040 INCHES
(R2762A)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	-30.000	30.000	0.000	0.000	XMRP 1422.5040 INCHES
						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0036 SCALE

MACH 1.965

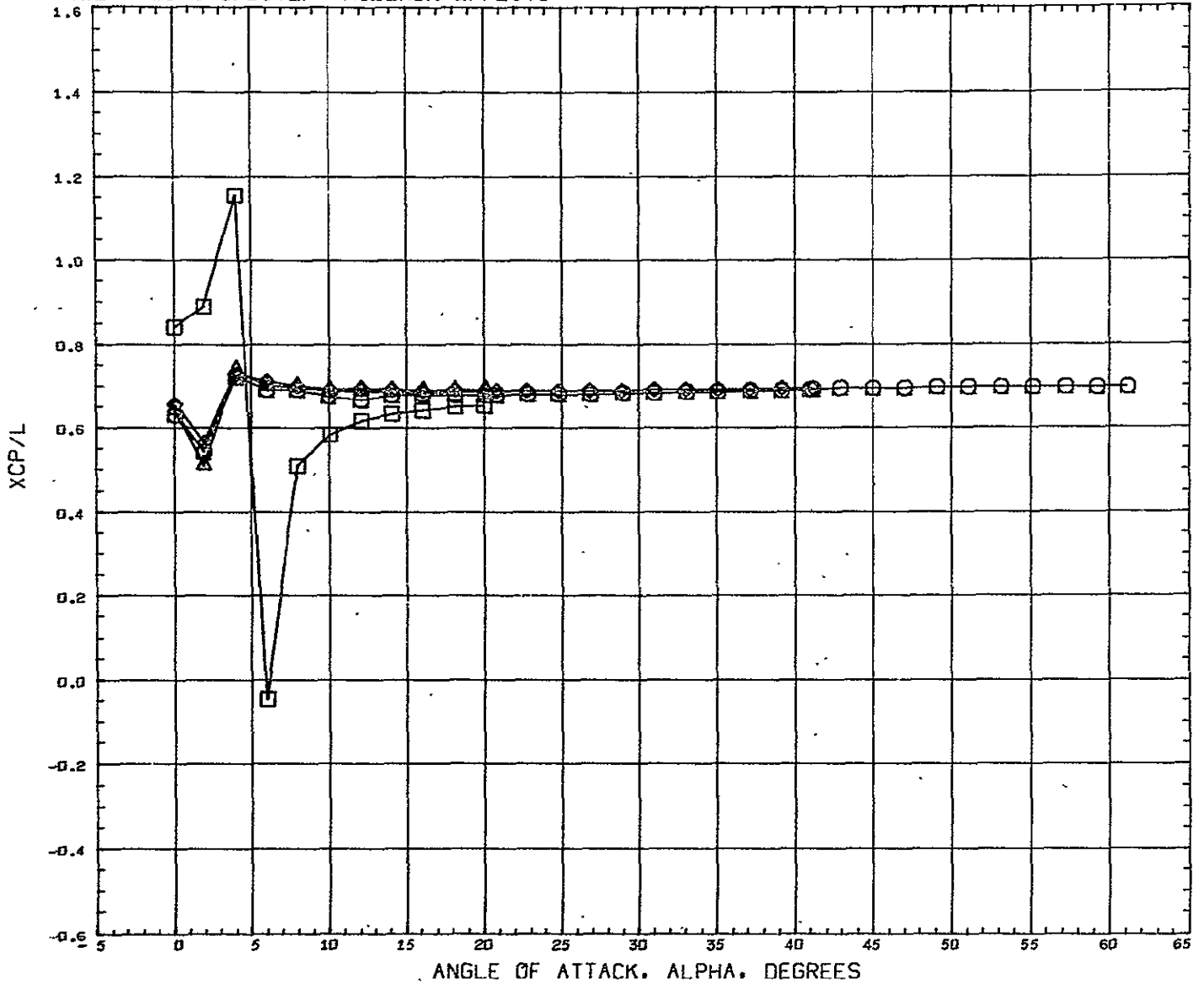
DELTA WING ORBITER- AILERON EFFECTS



DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(R2756S)	○	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(R2760A)	△	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	-20.000	0.000	0.000	REFL 821.2004 INCHES
(R2761S)	◇	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	-30.000	0.000	0.000	REFB 1422.8040 INCHES
(R2762A)	□	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	-30.000	30.000	0.000	0.000	XNRF 1422.5040 INCHES YNRF 0.0000 INCHES ZNRF 130.0004 INCHES SCALE 0.0035 SCALE

MACH 2.990

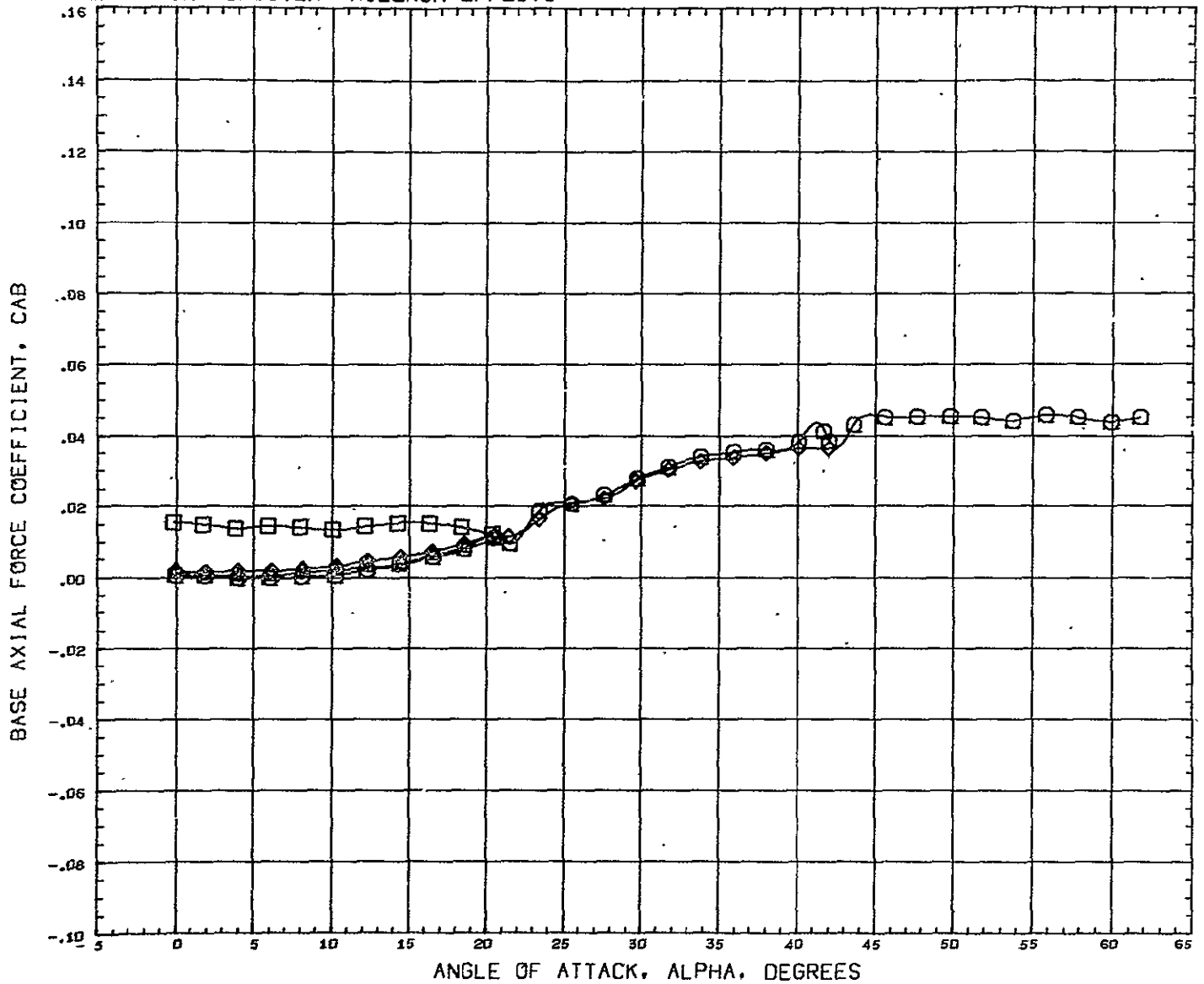
DELTA WING ORBITER-AILERON EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(R2756S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(R2760A)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	-20.000	0.000	0.000	REFL 821.2004 INCHES
(R2761S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	-30.000	0.000	0.000	REFB 1422.8041 INCHES
(R2762A)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	-30.000	30.000	0.000	0.000	XMRP 1422.5040 INCHES
						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 4.959

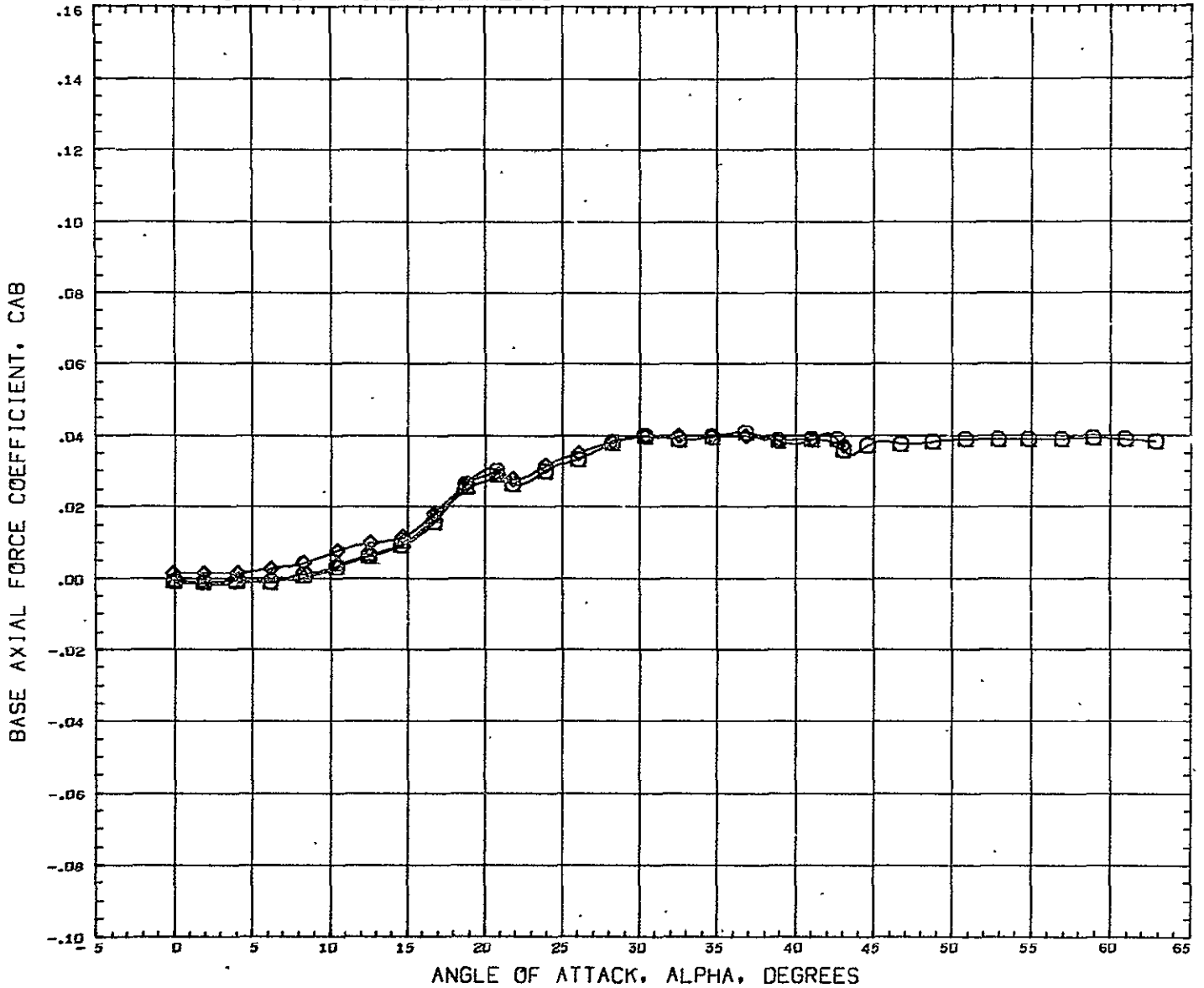
DELTA WING ORBITER-AILERON EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(R2756S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(R2760A)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	-20.000	0.000	0.000	REFL 821.2004 INCHES
(R2761S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	-30.000	0.000	0.000	REFB 1422.8040 INCHES
(R2762A)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	-30.000	30.000	0.000	0.000	XMRP 1422.8040 INCHES
						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 0.558

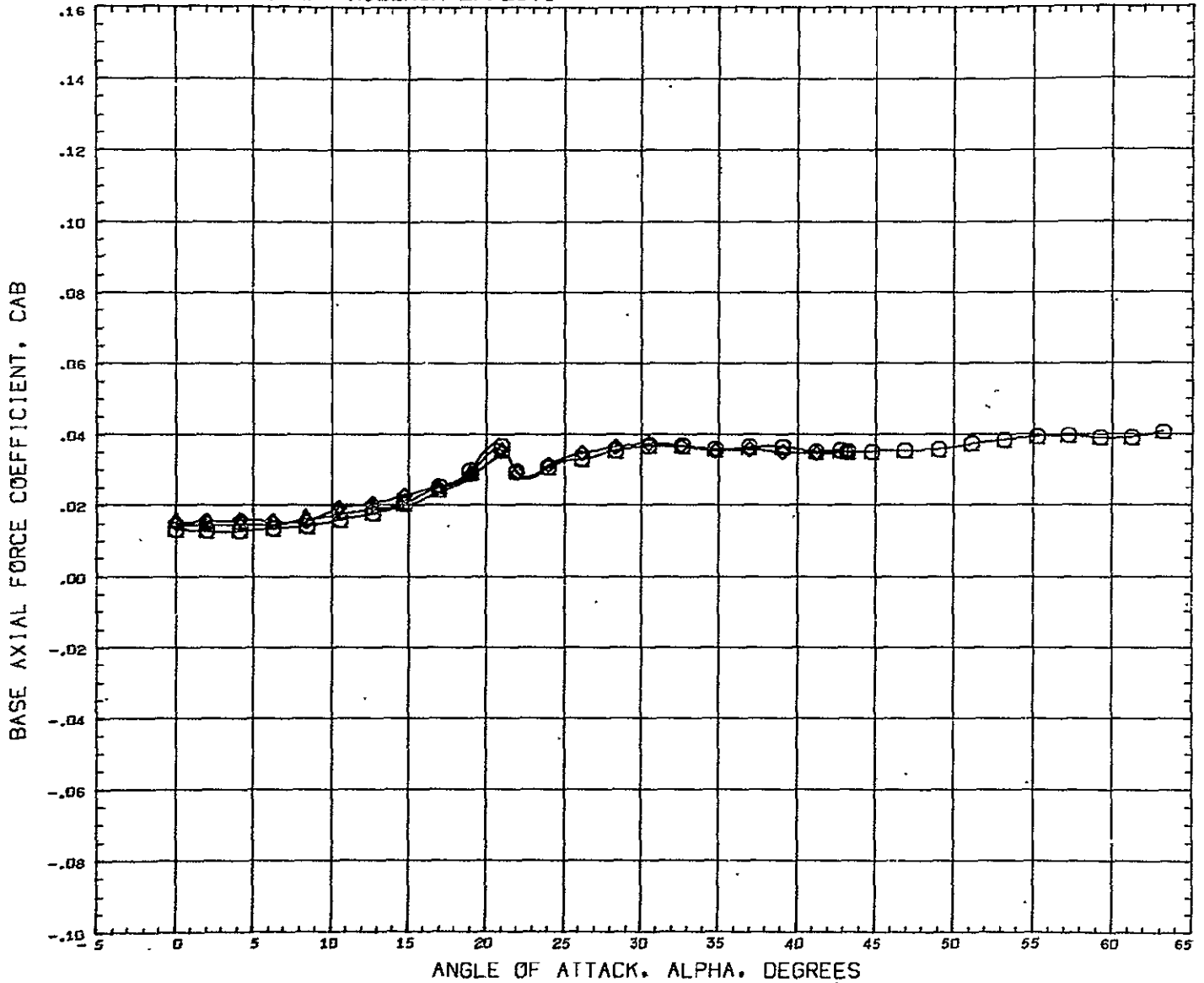
DELTA WING ORBITER-AILERON EFFECTS



DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(R2756S)	△	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(R2760A)	▽	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	-20.000	0.000	0.000	REFL 821.2004 INCHES
(R2761S)	◇	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	-30.000	0.000	0.000	REFB 1422.8040 INCHES
(R2762A)	□	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	-30.000	30.000	0.000	0.000	XMRP 1422.5040 INCHES YMRP 0.0000 INCHES ZMRP 130.6004 INCHES SCALE 0.0035 SCALE

MACH 0.899

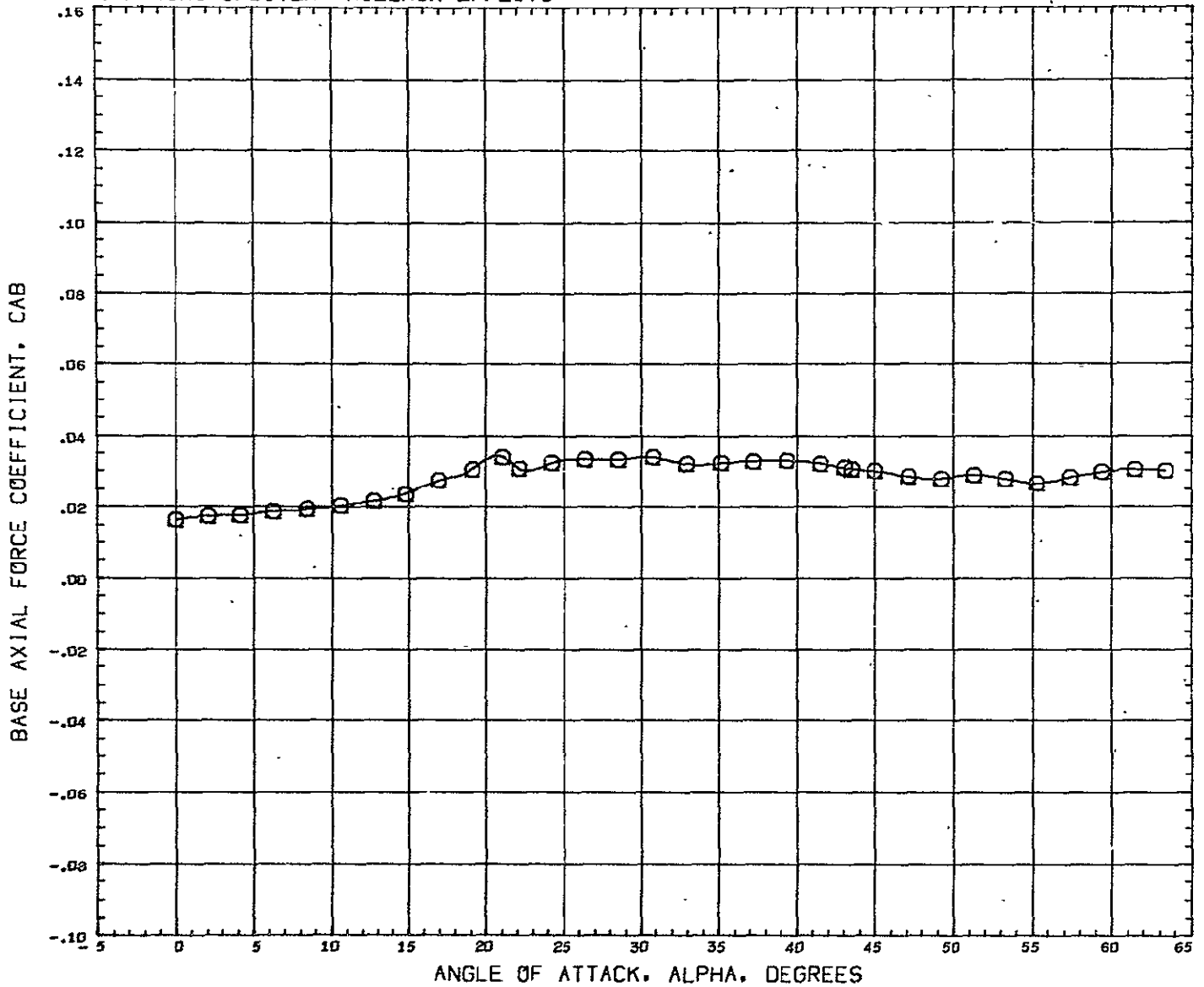
DELTA WING ORBITER-AILERON EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(R2756S)	HSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(R2760A)	HSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	-20.000	0.000	0.000	REFL 821.2004 INCHES
(R2761S)	HSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	-30.000	0.000	0.000	REFB 1422.8040 INCHES
(R2762A)	HSFC478 NR DELTA ORBITER B5W17E10V17J2X	-30.000	30.000	0.000	0.000	XMRP 1422.5040 INCHES
						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 1.003

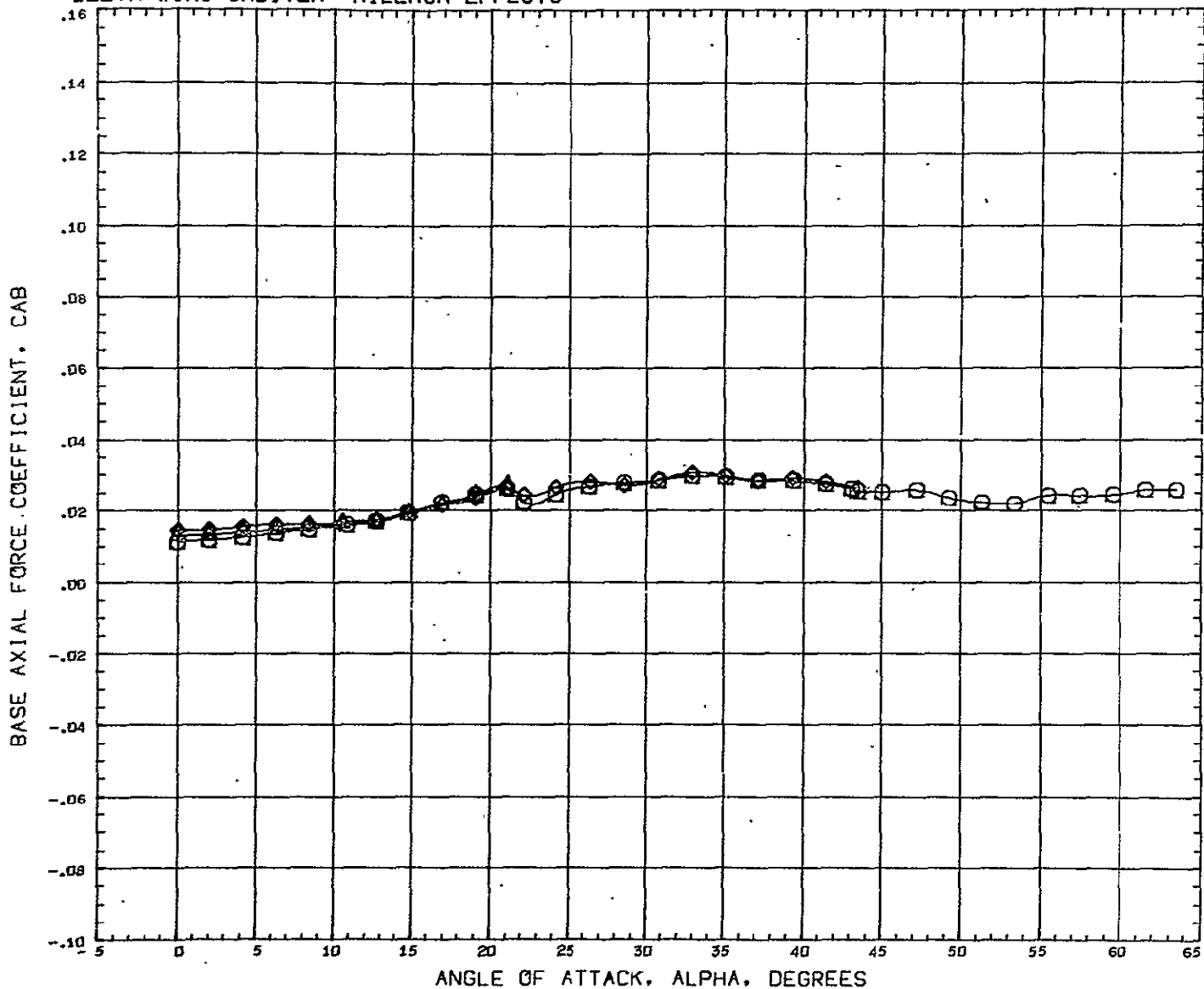
DELTA WING ORBITER- AILERON EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(R2756S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(R2760A)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	-20.000	0.000	0.000	REFL 821.2004 INCHES
(R2761S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	-30.000	0.000	0.000	REFB 1422.8040 INCHES
(R2762A)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	-30.000	30.000	0.000	0.000	XMRP 1422.5040 INCHES
						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 1.193

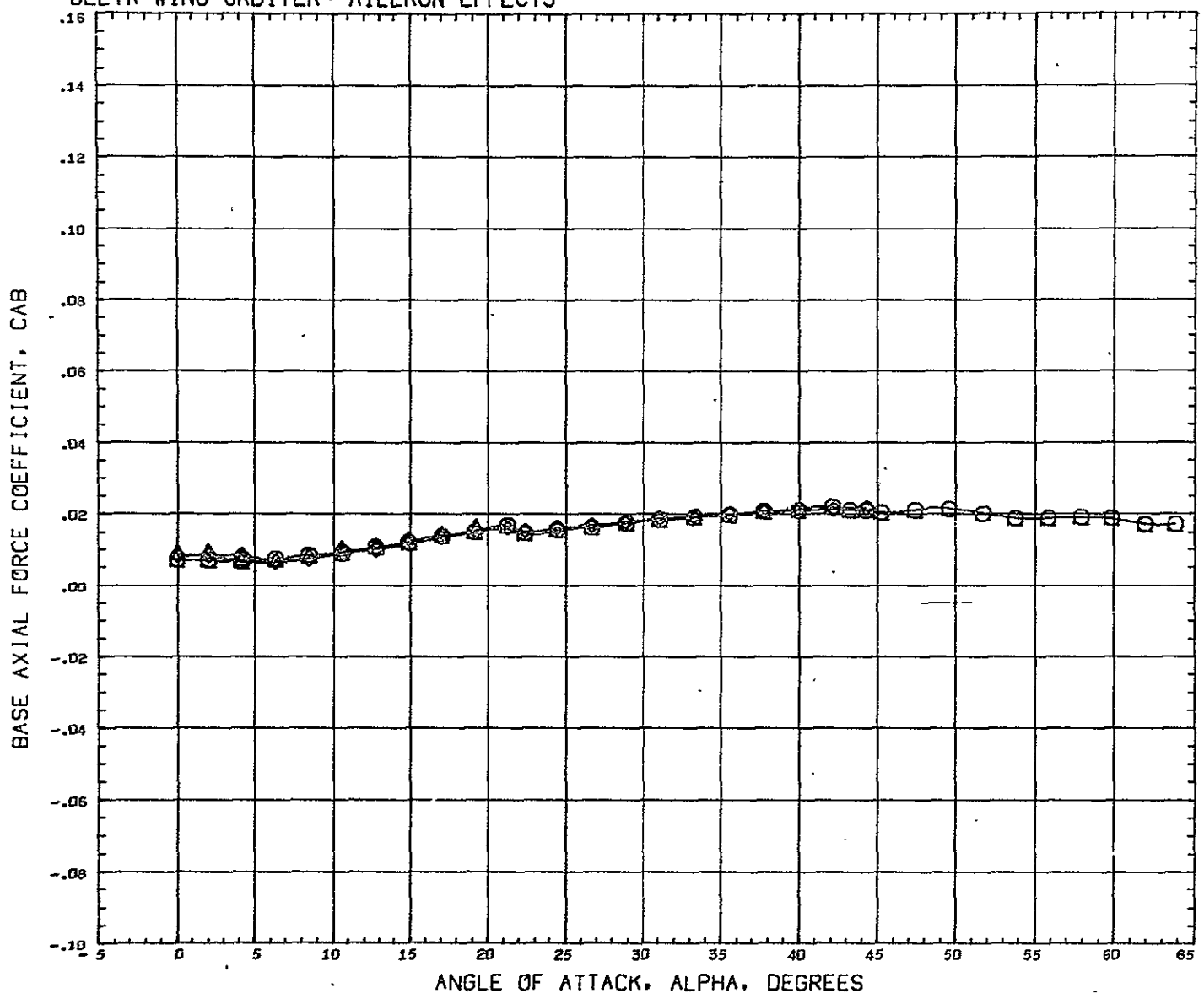
DELTA WING ORBITER-AILERON EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(R2756S)	MSFC478 NR DELTA ORBITER B5W17E1DV17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(R2760A)	MSFC478 NR DELTA ORBITER B5W17E1DV17J2X	0.000	-20.000	0.000	0.000	REFL 821.2004 INCHES
(R2761S)	MSFC478 NR DELTA ORBITER B5W17E1DV17J2X	0.000	-30.000	0.000	0.000	REFB 1422.8040 INCHES
(R2762A)	MSFC478 NR DELTA ORBITER B5W17E1DV17J2X	-30.000	30.000	0.000	0.000	XMRP 1422.504C INCHES
						YMRP 0.0000 INCHES
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MACH 1.458

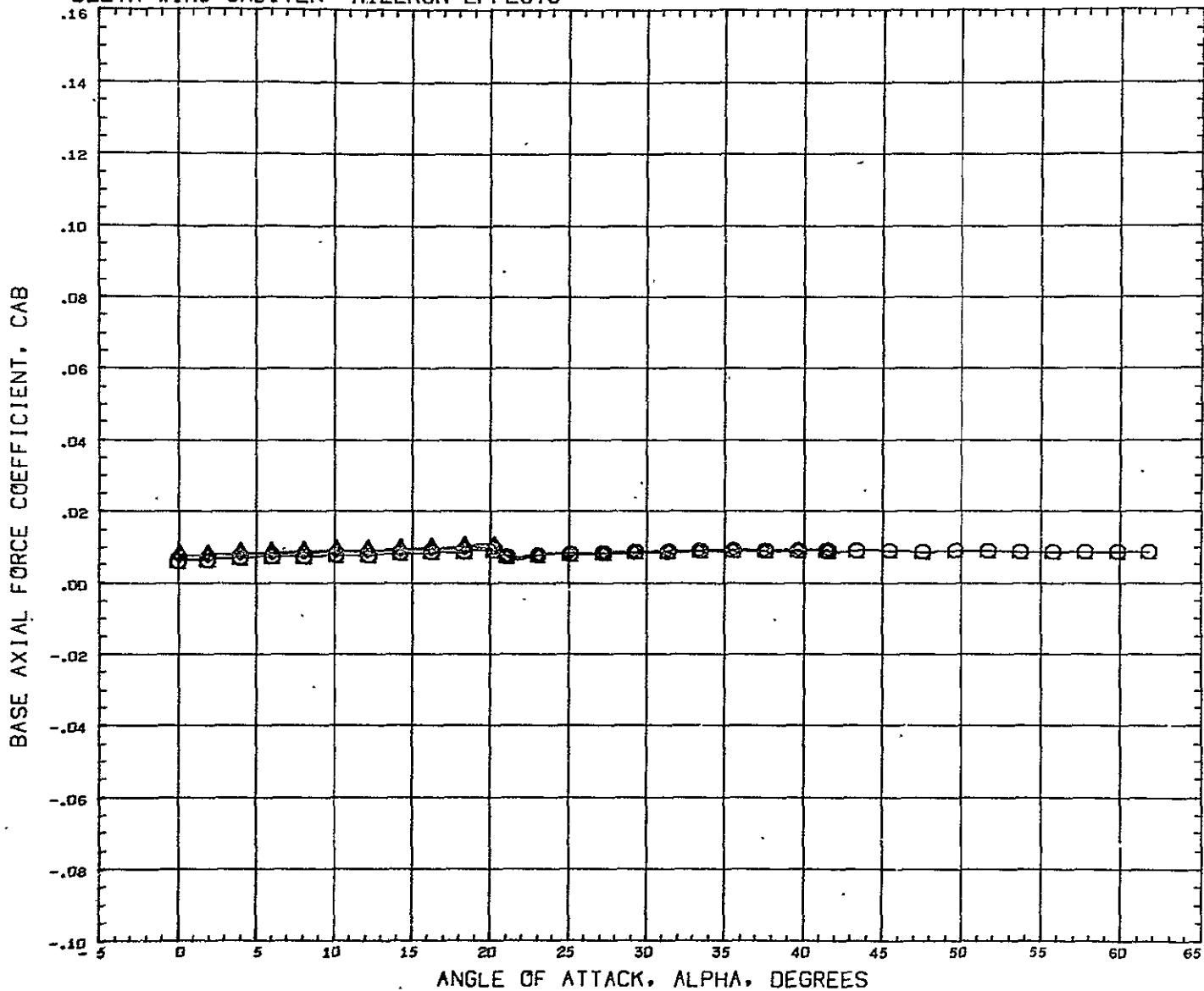
DELTA WING ORBITER- AILERON EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(R2756S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(R2760A)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	-20.000	0.000	0.000	REFL 821.2004 INCHES
(R2761S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	-30.000	0.000	0.000	REFB 1422.8040 INCHES
(R2762A)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	-30.000	30.000	0.000	0.000	XMRP 1422.5040 INCHES
						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 1.965

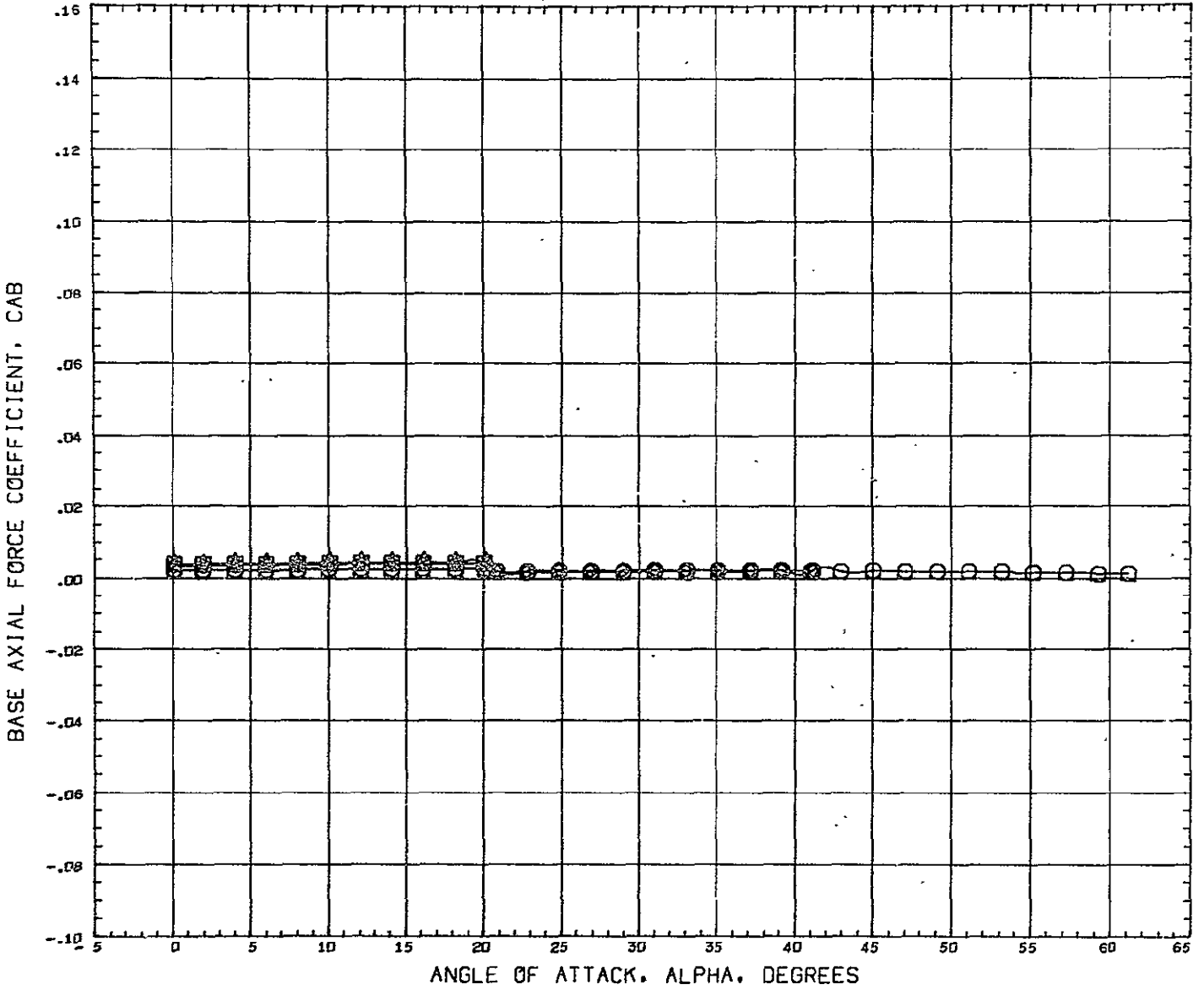
DELTA WING ORBITER-AILERON EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(R2756S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(R2760A)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	-20.000	0.000	0.000	REFL 821.2004 INCHES
(R2761S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	-30.000	0.000	0.000	REFB 1422.8040 INCHES
(R2762A)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	-30.000	30.000	0.000	0.000	XMRP 1422.5040 INCHES
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HACH 2.990

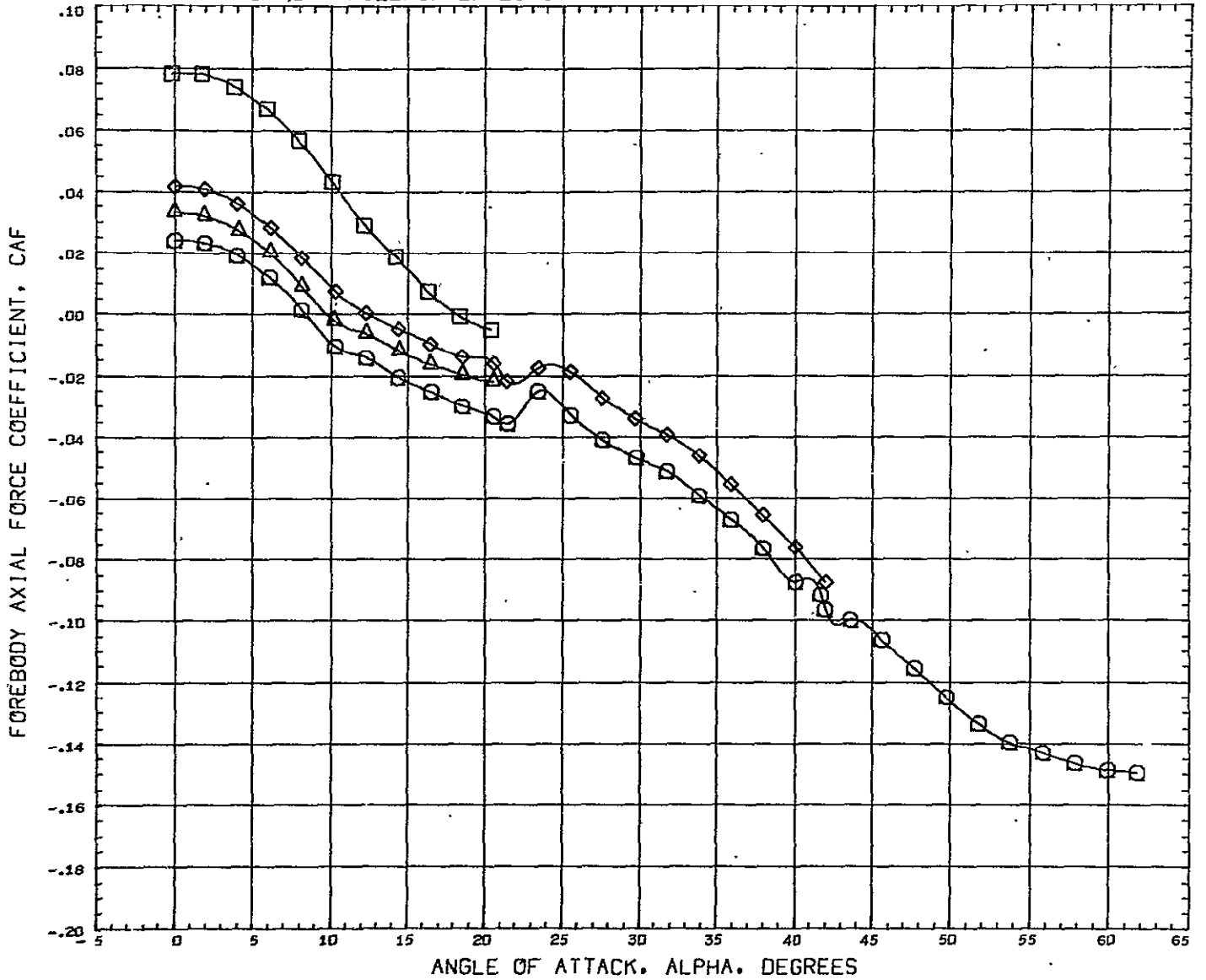
DELTA WING ORBITER- AILERON EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(R2756S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	0.000	0.000	REFS 6084.0540 SQ FT
(R2760A)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	-20.000	0.000	0.000	REFL 821.2004 INCHES
(R2761S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	-30.000	0.000	0.000	REFB 1422.8040 INCHES
(R2762A)	MSFC478 NR DELTA ORBITER B5W17E10V17J2Y	-30.000	30.000	0.000	0.000	XNRF 1422.5040 INCHES
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						ZNRF 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 4.959

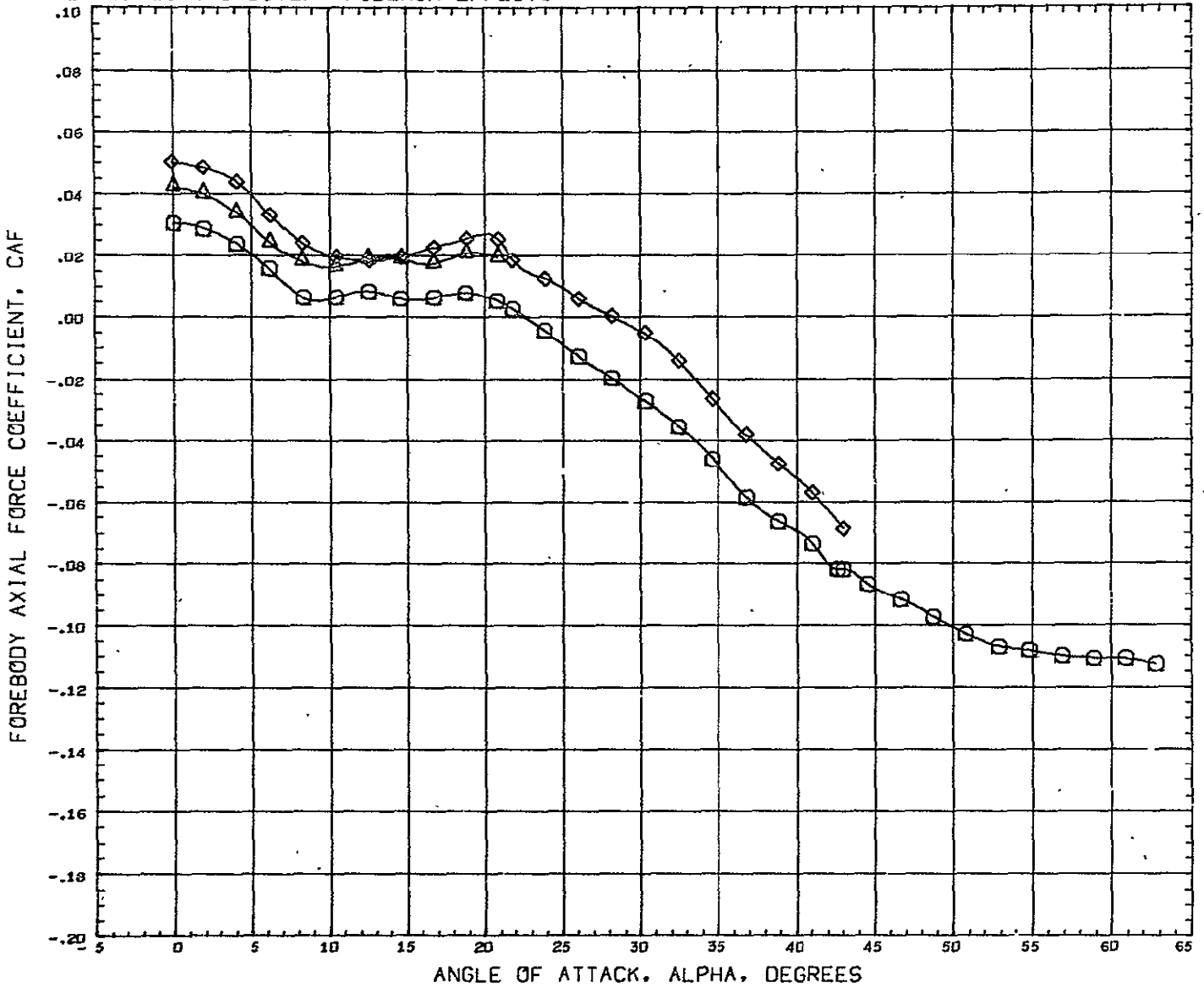
DELTA WING ORBITER-AILERON EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(B2756S)	MSFC478 NR DELTA ORBITER B5W17E1DV17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(B2760A)	MSFC478 NR DELTA ORBITER B5W17E1DV17J2X	0.000	-20.000	0.000	0.000	REFL 821.2004 INCHES
(B2761S)	MSFC478 NR DELTA ORBITER B5W17E1DV17J2X	0.000	-30.000	0.000	0.000	REFB 1422.8040 INCHES
(B2762A)	MSFC478 NR DELTA ORBITER B5W17E1DV17J2X	-30.000	30.000	0.000	0.000	XMRP 1422.5040 INCHES
						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 0.598

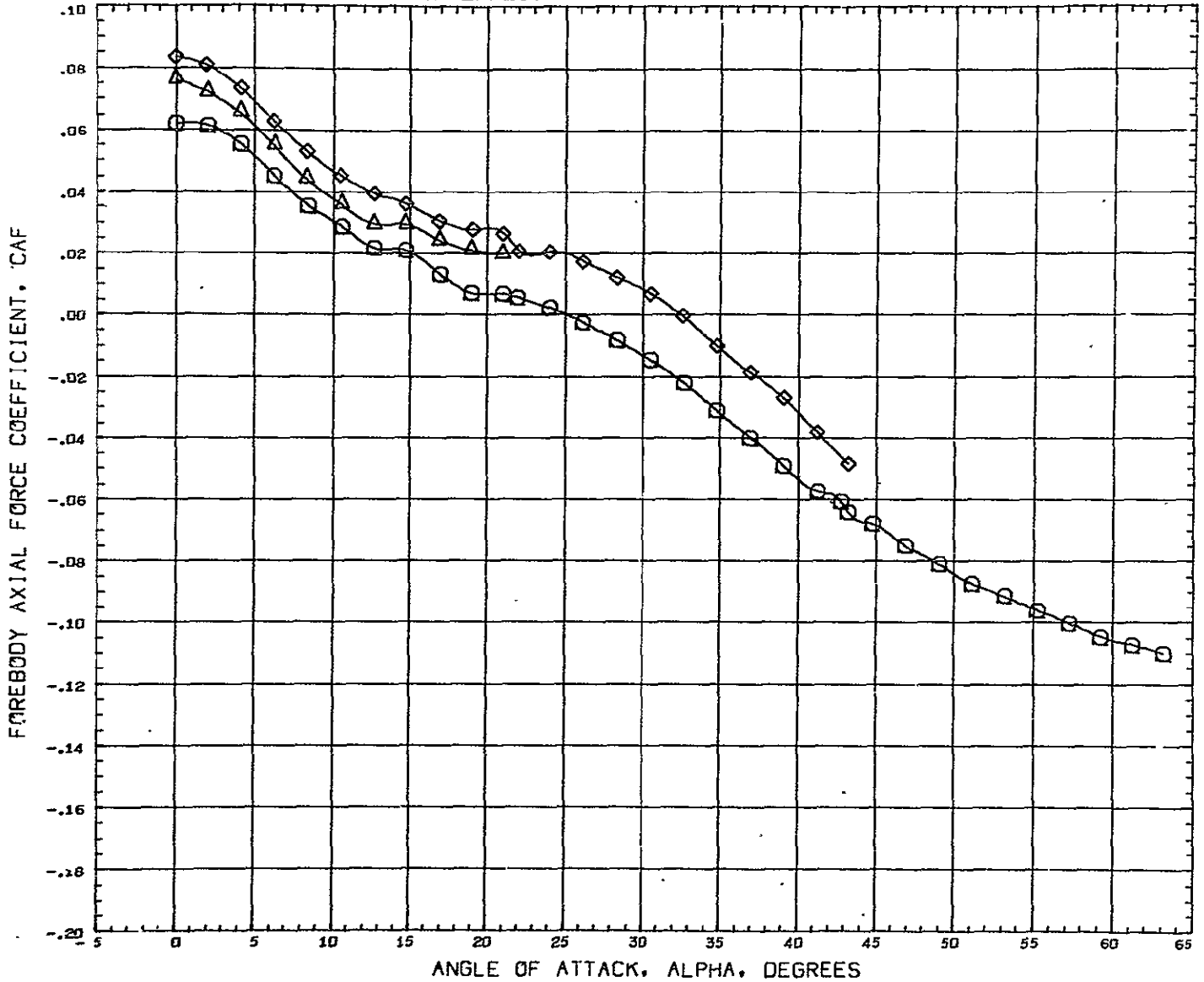
DELTA WING ORBITER- AILERON EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(B2756S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(B2760A)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	-20.000	0.000	0.000	REFL 821.2004 INCHES
(B2761S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	-30.000	0.000	0.000	REFB 1422.8040 INCHES
(B2762A)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	-30.000	30.000	0.000	0.000	XMRP 1422.8040 INCHES
						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 0.899

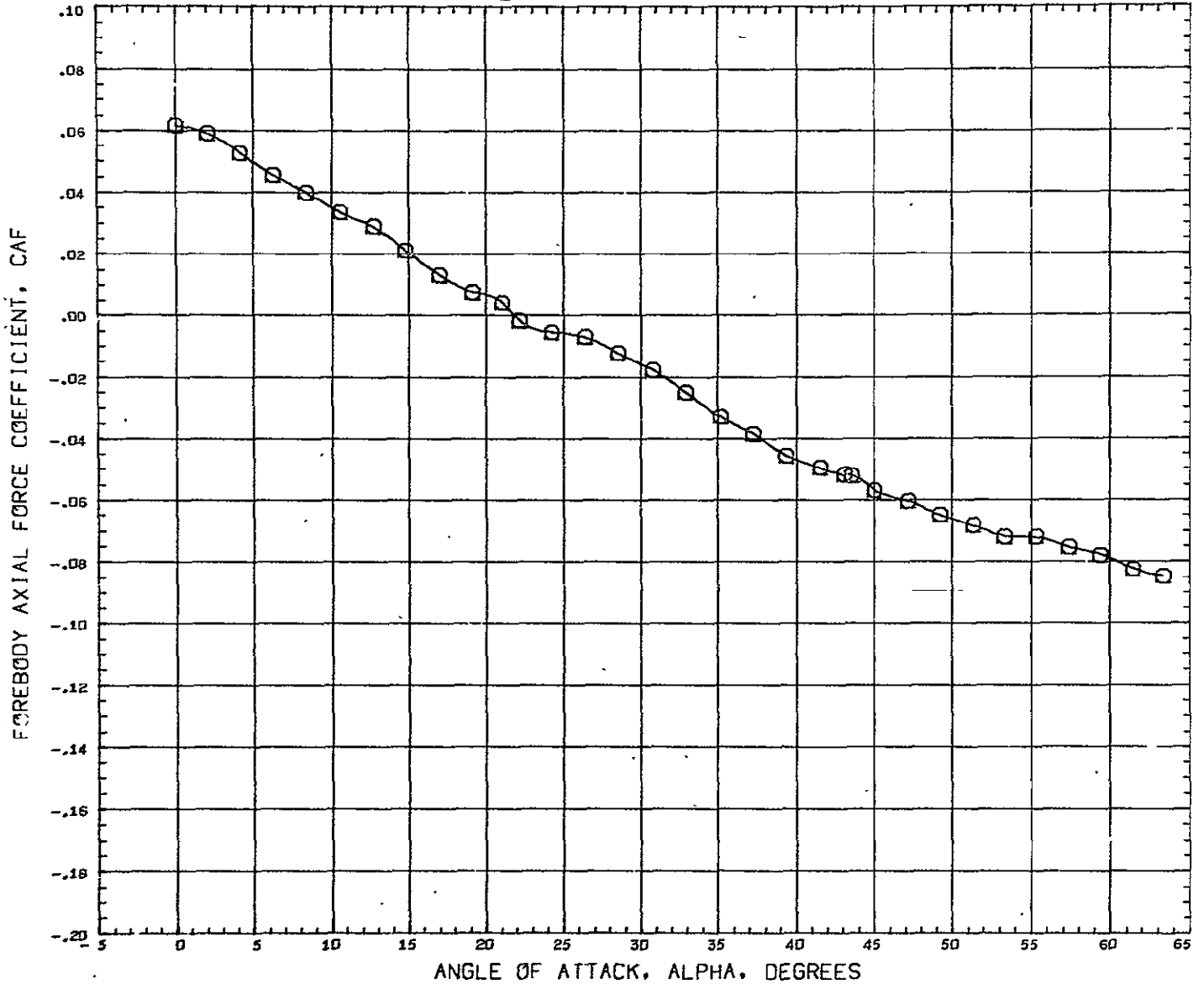
DELTA WING ORBITER-AILERON EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(B2756S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(B2760L)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	-20.000	0.000	0.000	REFL 821.2004 INCHES
(B2761S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	-30.000	0.000	0.000	REFB 1422.8040 INCHES
(B2762A)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	-30.000	30.000	0.000	0.000	XMRP 1422.8040 INCHES YMRP 0.0000 INCHES ZMRP 130.0004 INCHES SCALE 0.0035 SCALE

MACH 1.003

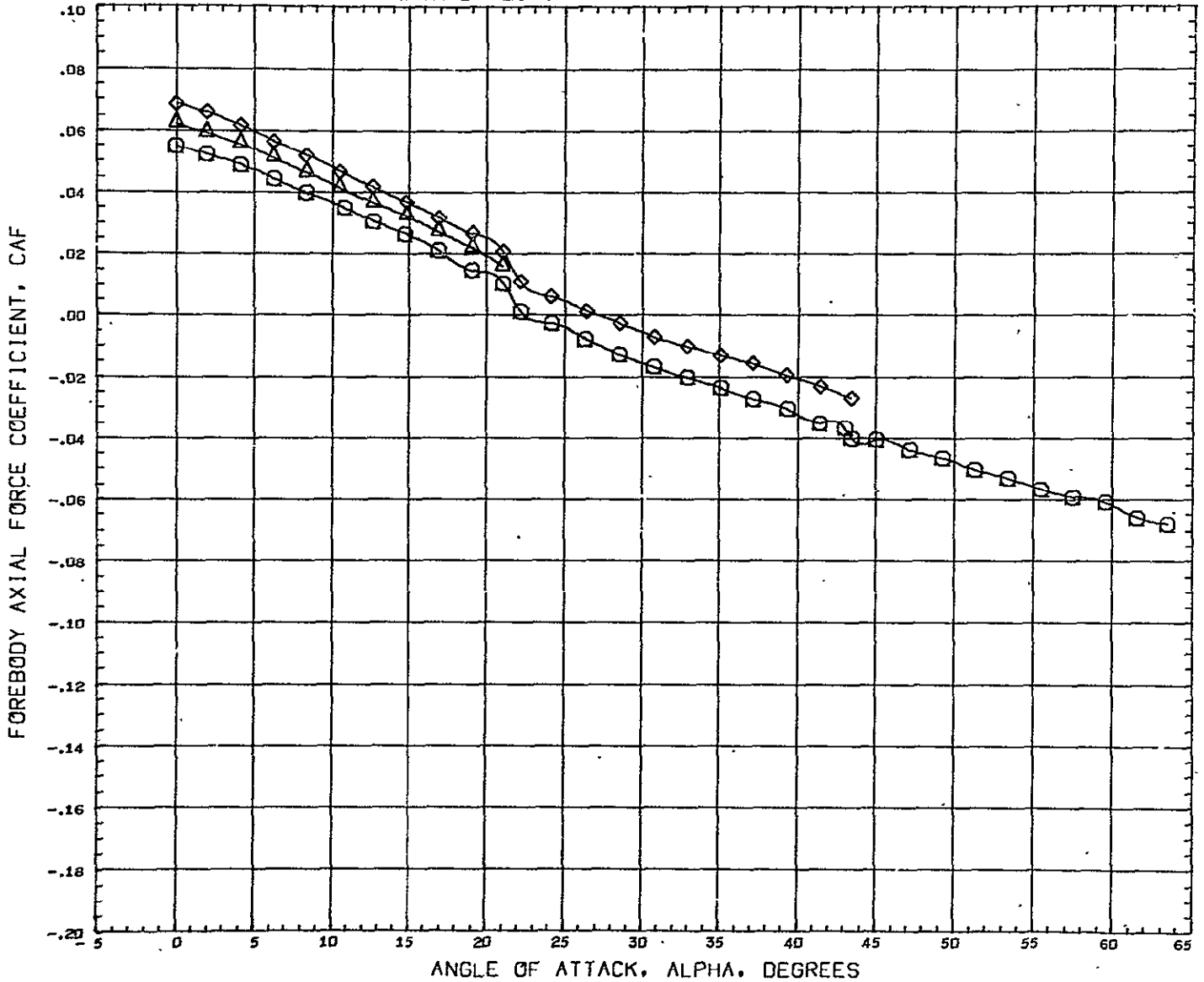
DELTA WING ORBITER-AILERON EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(B2756S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(B2760A)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	-20.000	0.000	0.000	REFL .821.2004 INCHES
(B2761S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	-30.000	0.000	0.000	REFB 1422.8040 INCHES
(B2762A)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	-30.000	30.000	0.000	0.000	YMRP 1422.5040 INCHES
						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 1.199

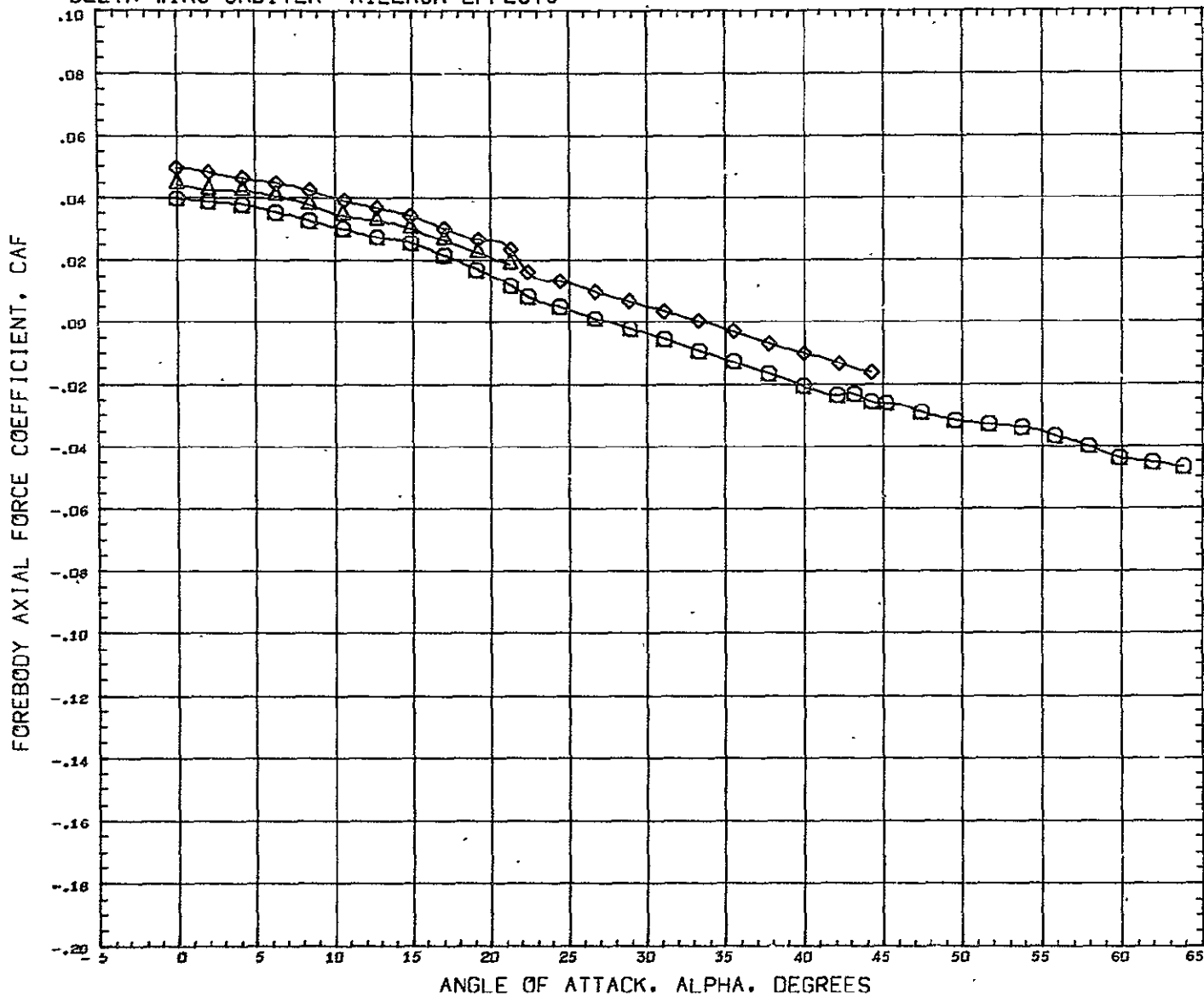
DELTA WING ORBITER-AILERON EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(B2756S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(B2760A)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	-20.000	0.000	0.000	REFL 821.2004 INCHES
(B2761S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	-30.000	0.000	0.000	REFB 1422.8040 INCHES
(B2762A)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	-30.000	30.000	0.000	0.000	YMRP 1422.5040 INCHES
						YMRP 0.0000 INCHES
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HACH 1.458

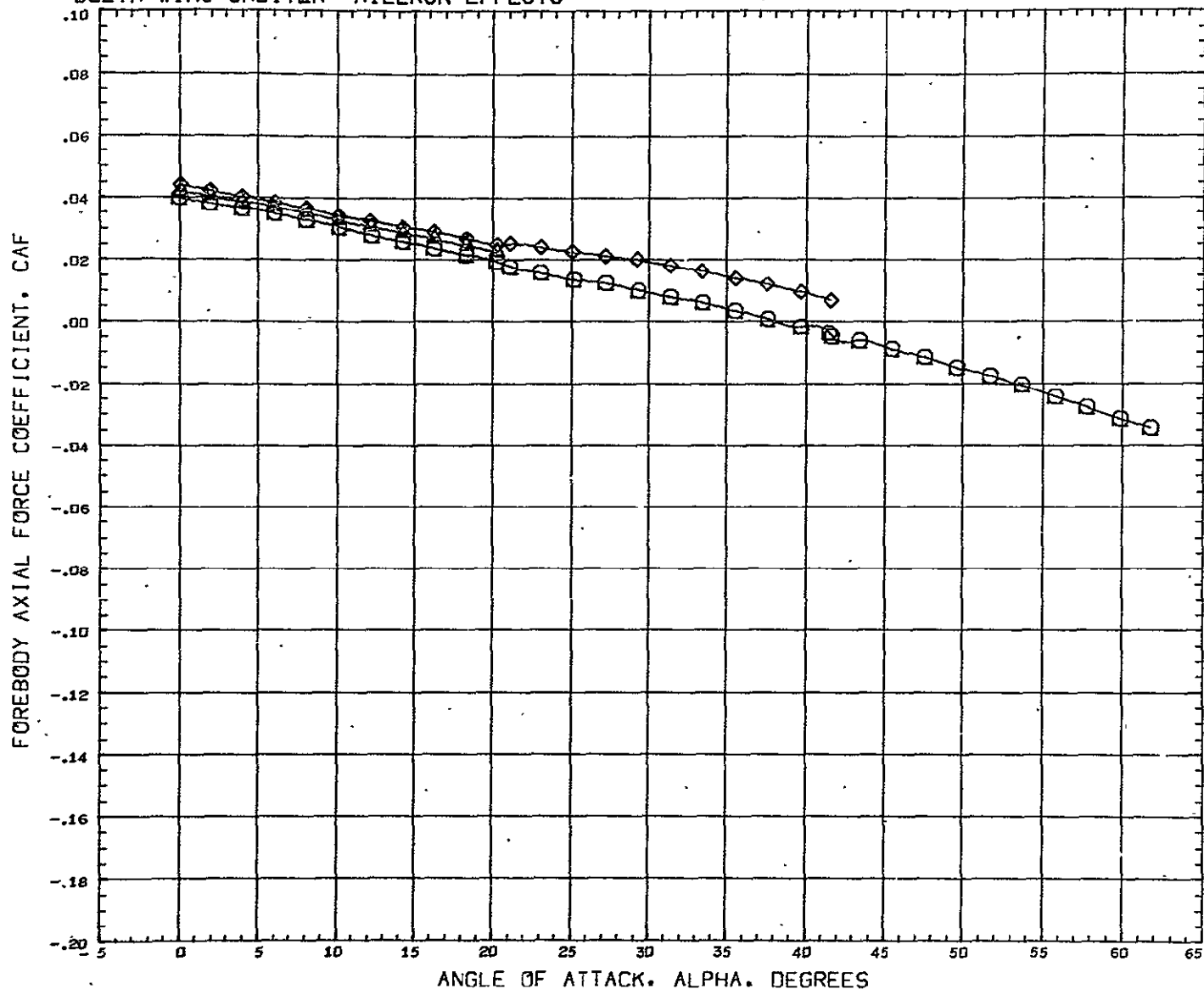
DELTA WING ORBITER-AILERON EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION	
(B2756S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	0.000	0.000	REFS	6084.0040 SQ FT
(B2760A)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	-20.000	0.000	0.000	REFL	821.2004 INCHES
(B2761S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	-30.000	0.000	0.000	REFB	1422.8040 INCHES
(B2762A)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	-30.000	30.000	0.000	0.000	XMRP	1422.5040 INCHES
						YMRP	0.0000 INCHES
						ZMRP	130.0004 INCHES
						SCALE	0.0036 SCALE

MACH 1.965

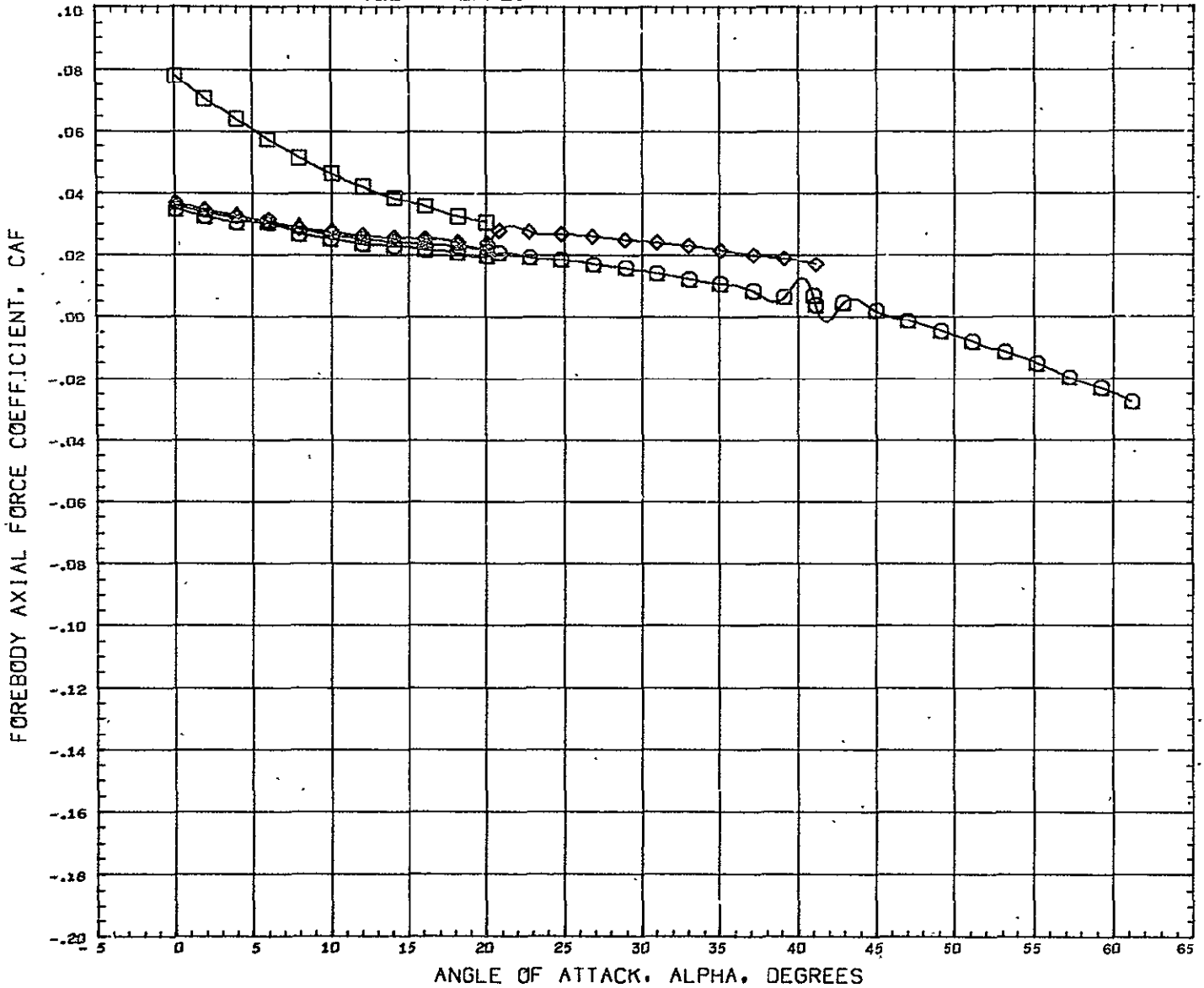
DELTA WING ORBITER-AILERON EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(B2756S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(B2760A)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	-20.000	0.000	0.000	REFL 821.2004 INCHES
(B2761S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	-30.000	0.000	0.000	REFE 1422.8040 INCHES
(B2762A)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	-30.000	30.000	0.000	0.000	XMRP 1422.5040 INCHES
						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 2.990

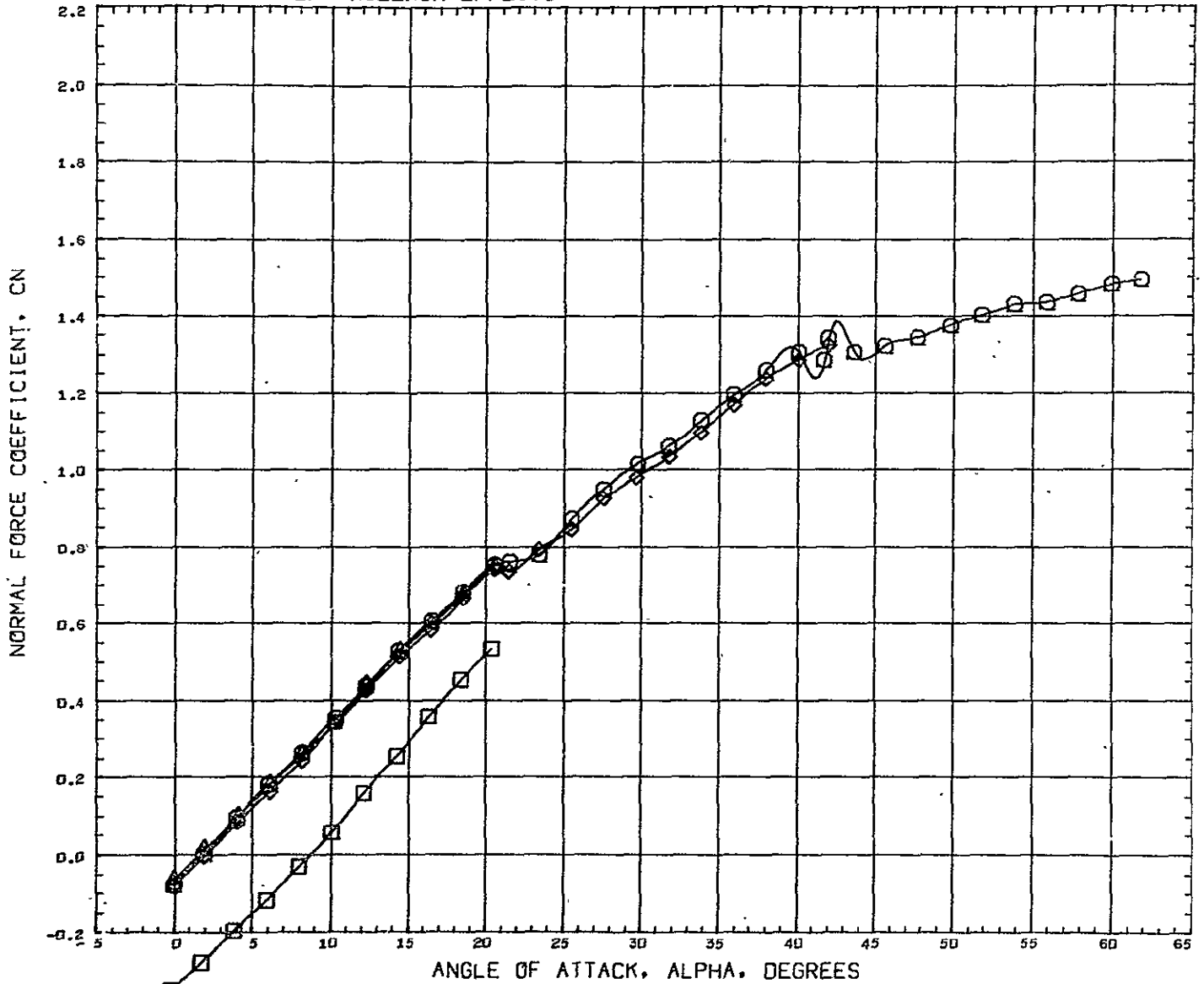
DELTA WING ORBITER-AILERON EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(B2756S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(B2769A)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	-20.000	0.000	0.000	REFL 821.2004 INCHES
(B2761S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	-30.000	0.000	0.000	REFB 1422.8040 INCHES
(B2762A)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	-30.000	30.000	0.000	0.000	XMRP 1422.5040 INCHES YMRP 0.0000 INCHES ZMRP 130.0004 INCHES SCALE 0.0035 SCALE

MACH 4.959

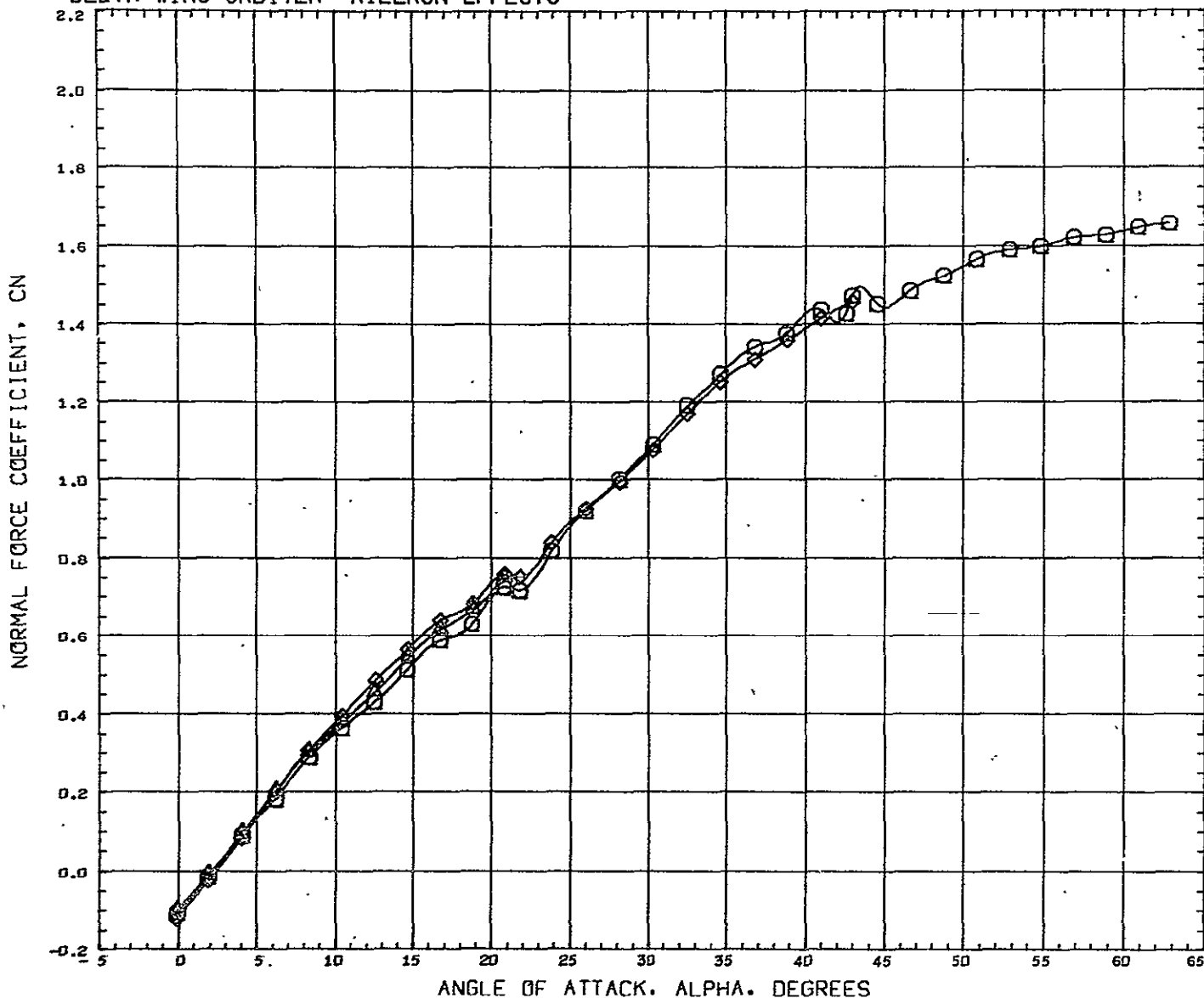
DELTA WING ORBITER-AILERON EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(B2756S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(B2760A)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	-20.000	0.000	0.000	REFL 821.2004 INCHES
(B2761S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	-30.000	0.000	0.000	REFB 1422.8040 INCHES
(B2762A)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	-30.000	30.000	0.000	0.000	XMRP 1422.5040 INCHES
						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 0.598

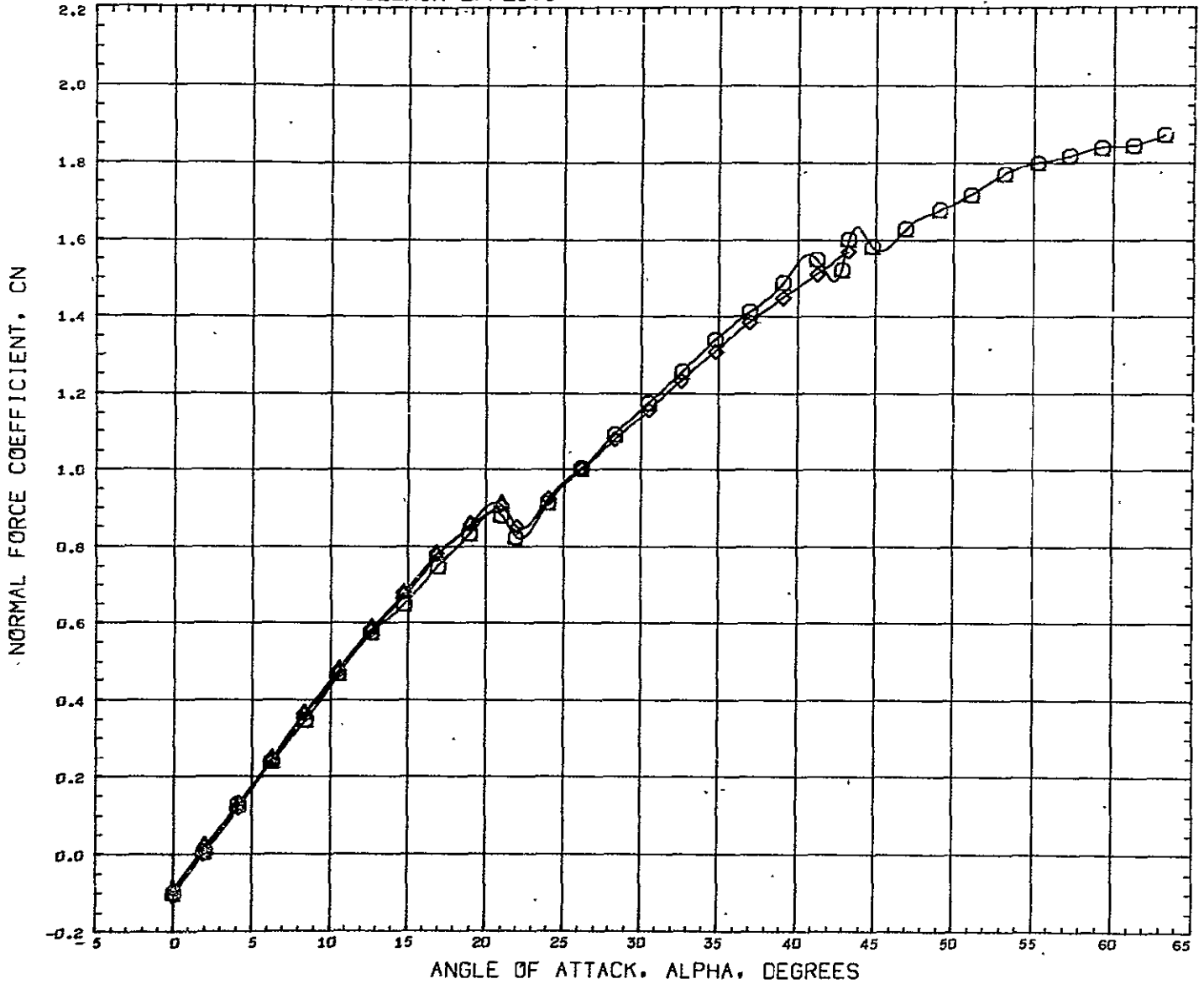
DELTA WING ORBITER-AILERON EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(B27565)	HSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(B2760A)	HSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	-20.000	0.000	0.000	REFL 821.2004 INCHES
(B27615)	HSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	-30.000	0.000	0.000	REFB 1422.8040 INCHES
(B2762A)	HSFC478 NR DELTA ORBITER B5W17E10V17J2X	-30.000	30.000	0.000	0.000	XMRP 1422.5040 INCHES
						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 0.895

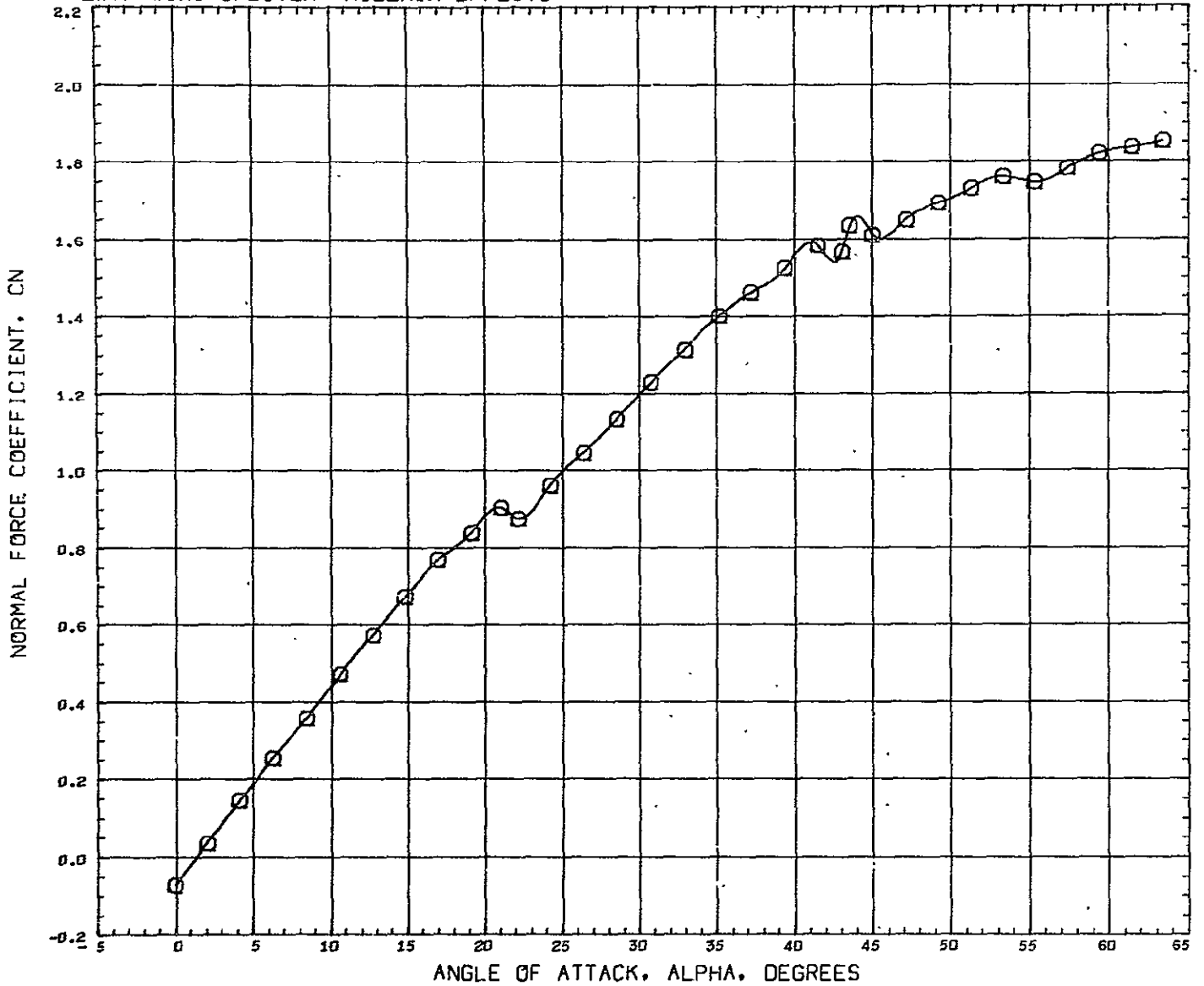
DELTA WING ORBITER- AILERON EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(B2756S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(B2760A)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	-20.000	0.000	0.000	REFL 821.2004 INCHES
(B2761S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	-30.000	0.000	0.000	REFB 1422.8040 INCHES
(B2762A)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	-30.000	30.000	0.000	0.000	YMRP 1422.8040 INCHES
						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 INCHES SCALE

MACH 1.083

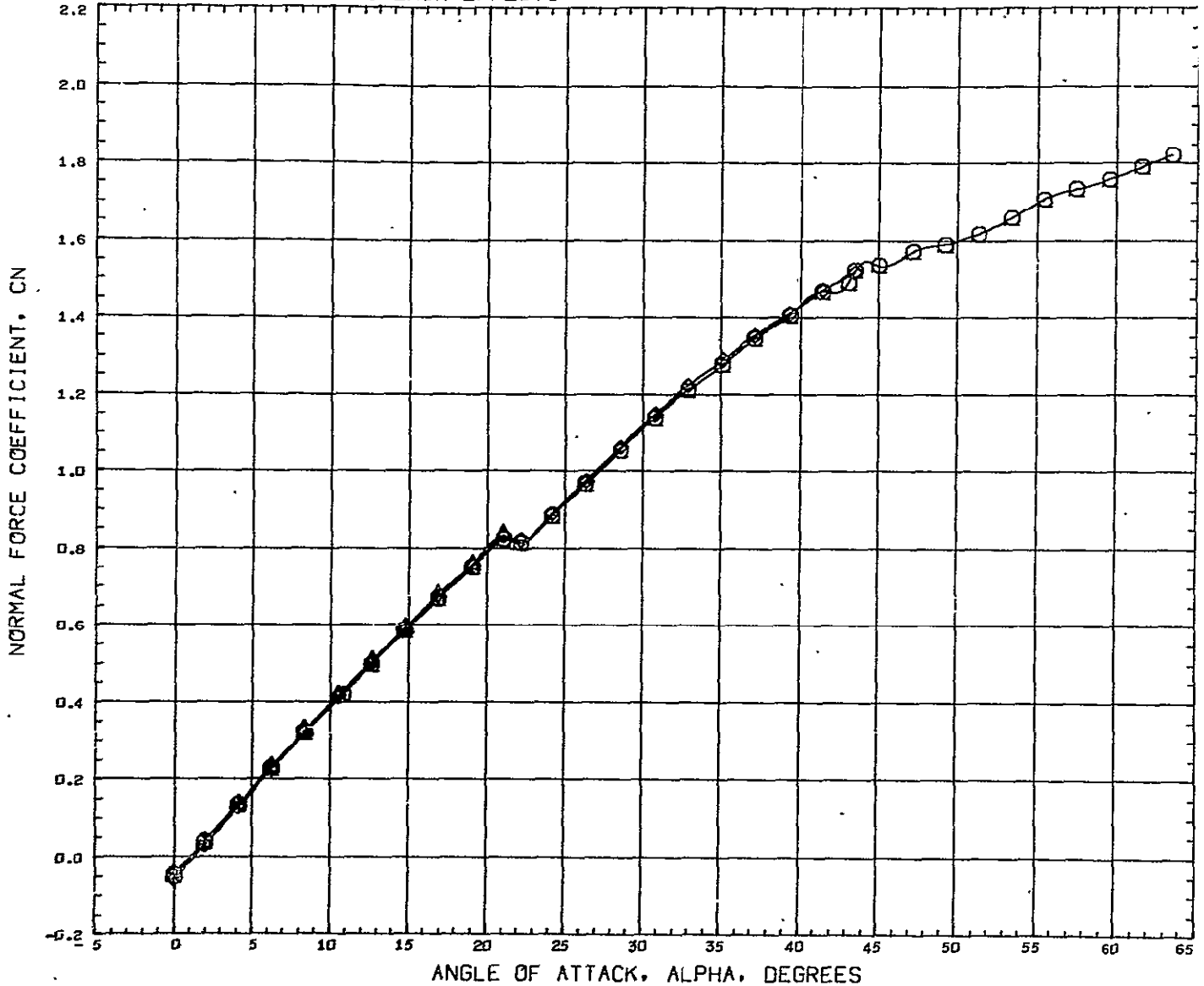
DELTA WING ORBITER-AILERON EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRCN	RUDDER	RUDFLR	REFERENCE INFORMATION
(B2756S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(B2760A)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	-20.000	0.000	0.000	REFL 821.2004 INCHES
(B2761S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	-30.000	0.000	0.000	REFB 1422.8044 INCHES
(B2762A)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	-30.000	30.000	0.000	0.000	XMRP 1422.5040 INCHES
						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 1.199

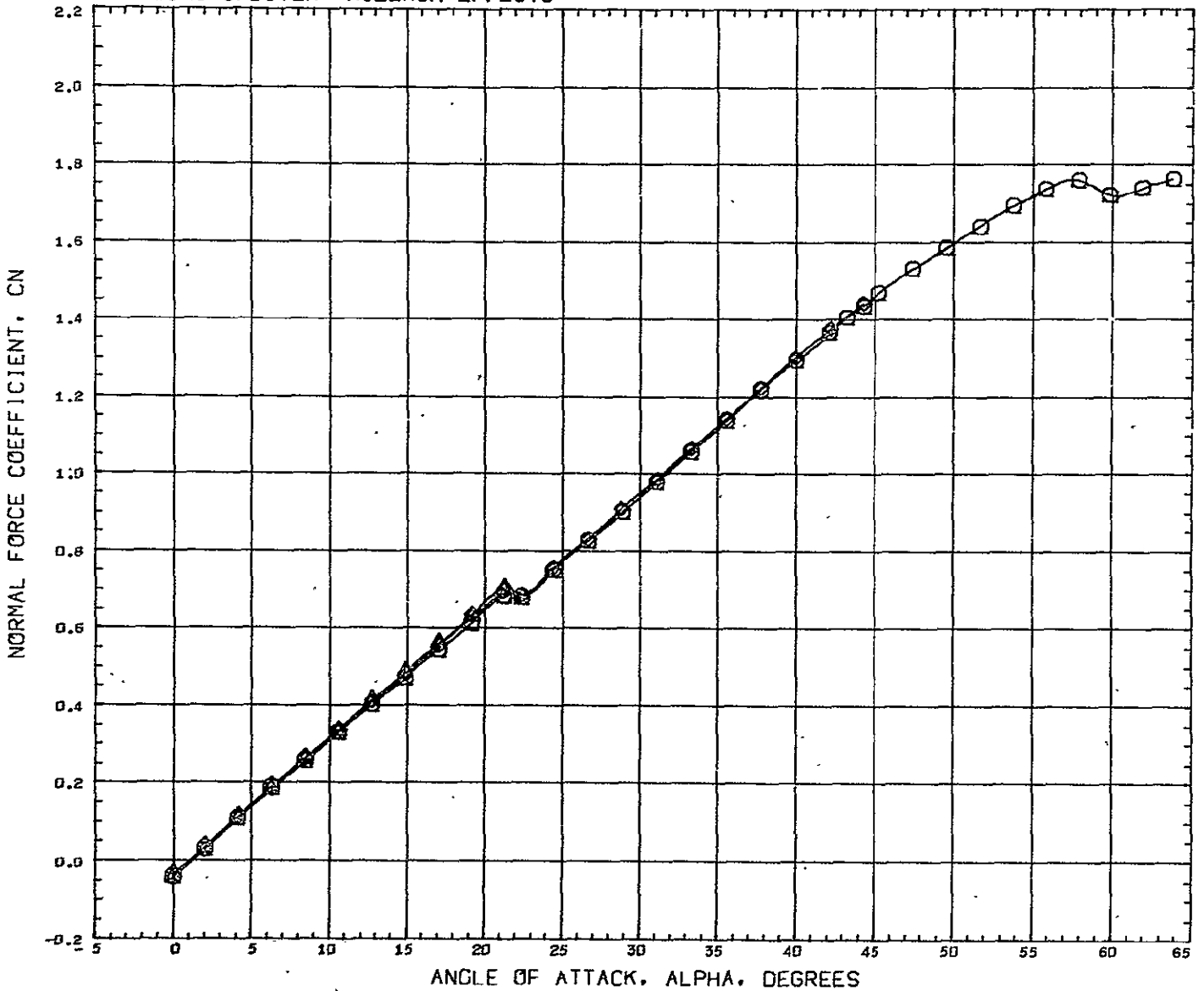
DELTA WING ORBITER-AILERON EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(82756S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(82760A)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	-20.000	0.000	0.000	REFL 821.2004 INCHES
(82761S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	-30.000	0.000	0.000	REFB 1422.8040 INCHES
(82762A)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	-30.000	30.000	0.000	0.000	XMRF 1422.5040 INCHES
						YMRF 0.0000 INCHES
						ZMRF 130.0004 INCHES
						SCALE D.0035 SCALE

MACH 1.458

DELTA WING ORBITER- AILERON EFFECTS

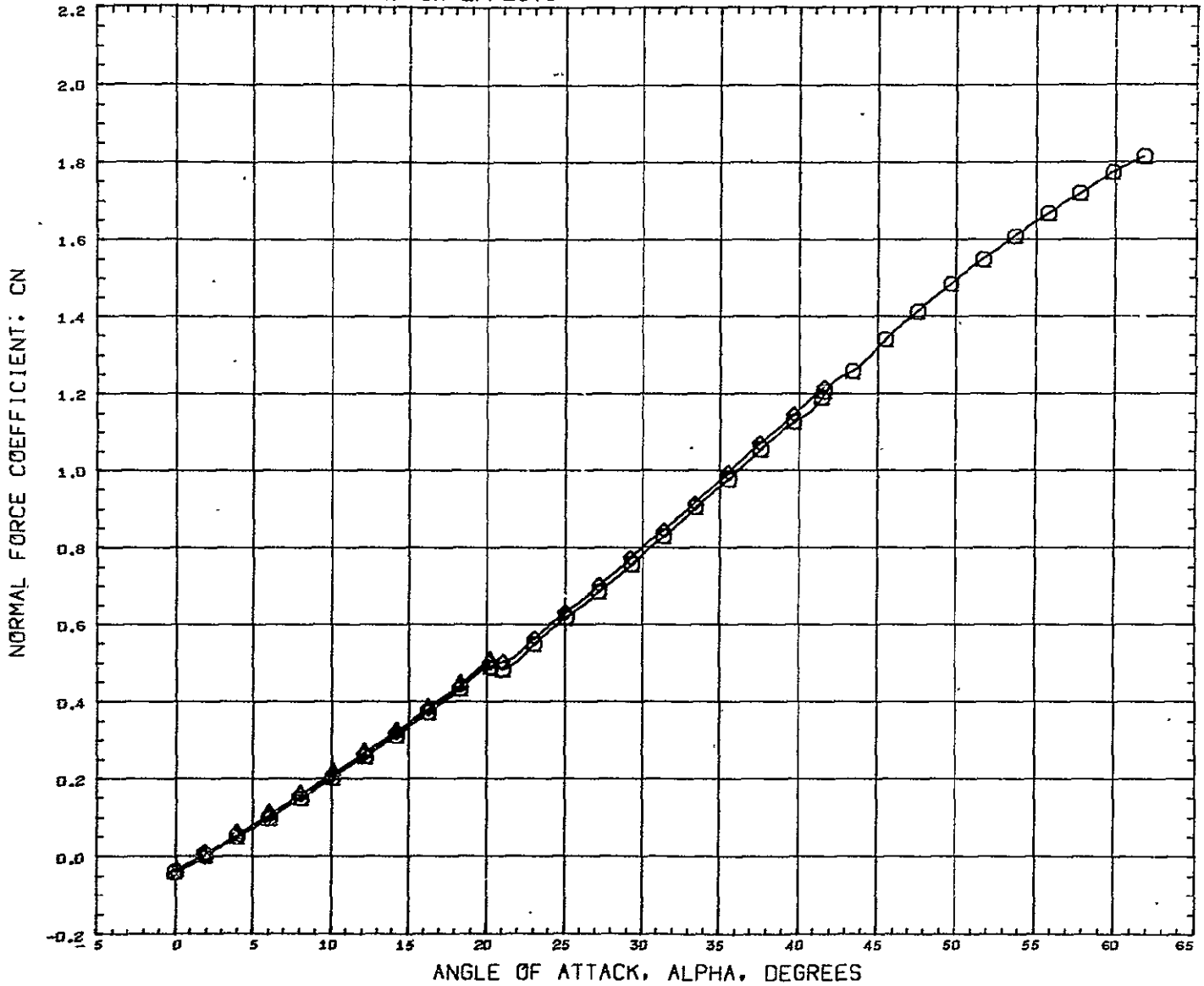


DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(B2756S)	MSFC478 NR DELTA ORBITER B5W17E1DV17J2X
(B2760A)	MSFC478 NR DELTA ORBITER B5W17E1DV17J2X
(B2761S)	MSFC478 NR DELTA ORBITER B5W17E1DV17J2X
(B2762A)	MSFC478 NR DELTA ORBITER B5W17E1DV17J2X

ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
0.000	-20.000	0.000	0.000	REFL 821.2004 INCHES
0.000	-30.000	0.000	0.000	REFB 1422.8040 INCHES
-30.000	30.000	0.000	0.000	XMRP 1422.5040 INCHES
				YMRP 0.0000 INCHES
				ZMRP 130.0004 INCHES
				SCALE 0.0035 SCALE

MACH 1.965

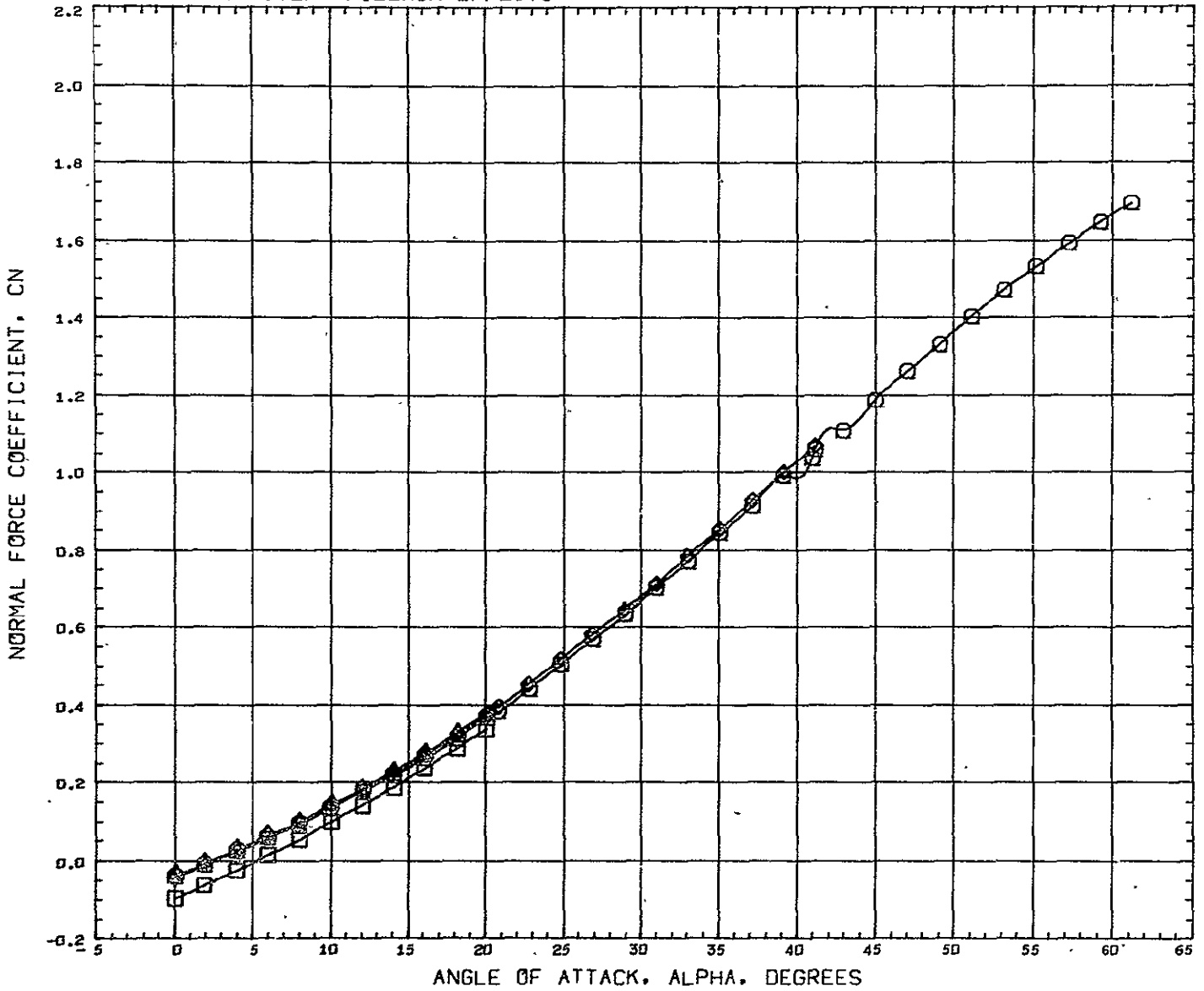
DELTA WING ORBITER- AILERON EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(B2756S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(B2760A)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	-20.000	0.000	0.000	REFL 821.2004 INCHES
(B2761S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	-30.000	0.000	0.000	REF6 1422.8040 INCHES
(B2762A)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	-30.000	30.000	0.000	0.000	XMRP 1422.5040 INCHES
						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 2.990

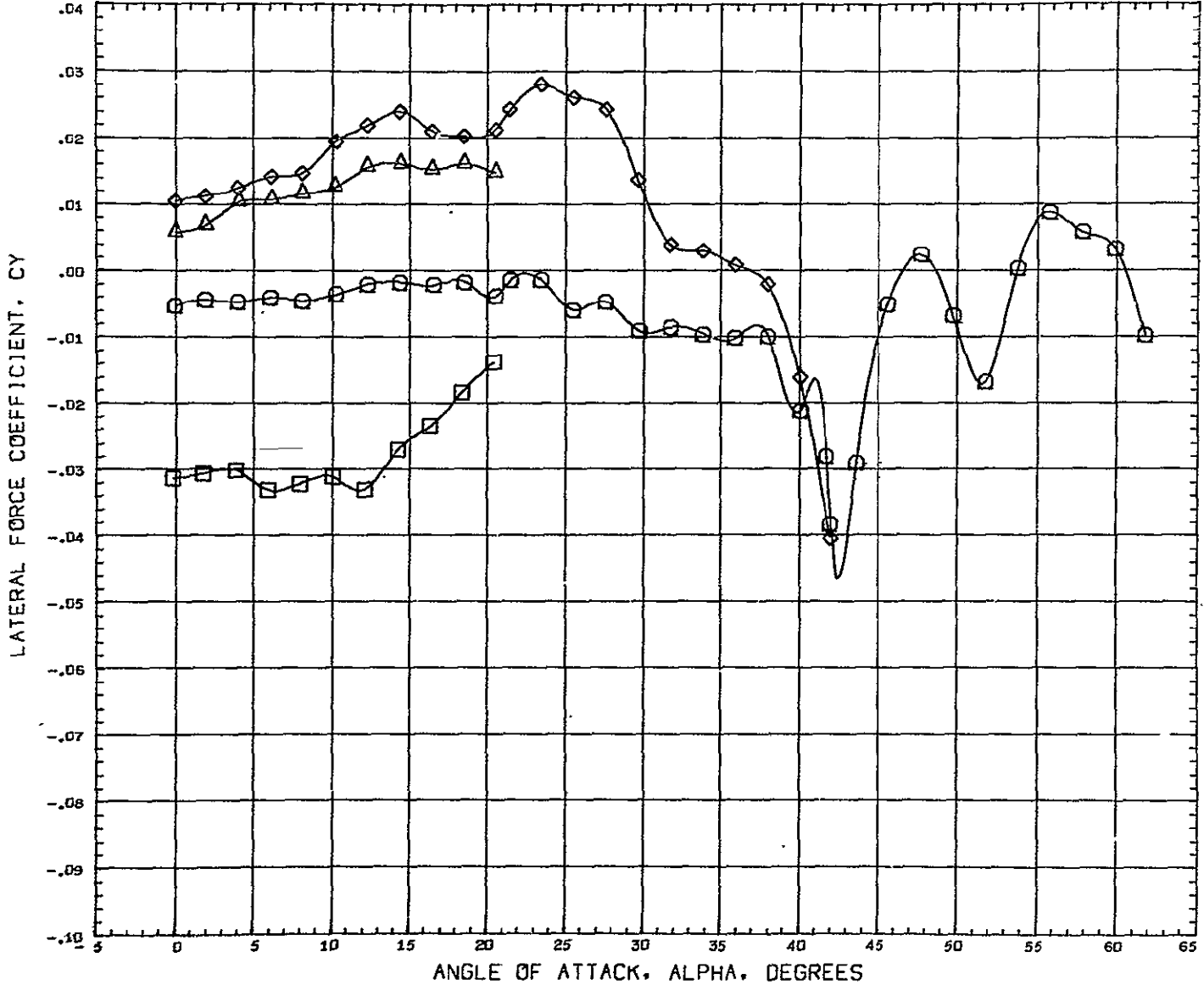
DELTA WING ORBITER-AILERON EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(B2756S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(B2760A)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	-20.000	0.000	0.000	REFL 821.2004 INCHES
(B2761S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	-30.000	0.000	0.000	REFB 1422.8040 INCHES
(B2762A)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	-30.000	30.000	0.000	0.000	XMRP 1422.5040 INCHES
						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 4.959

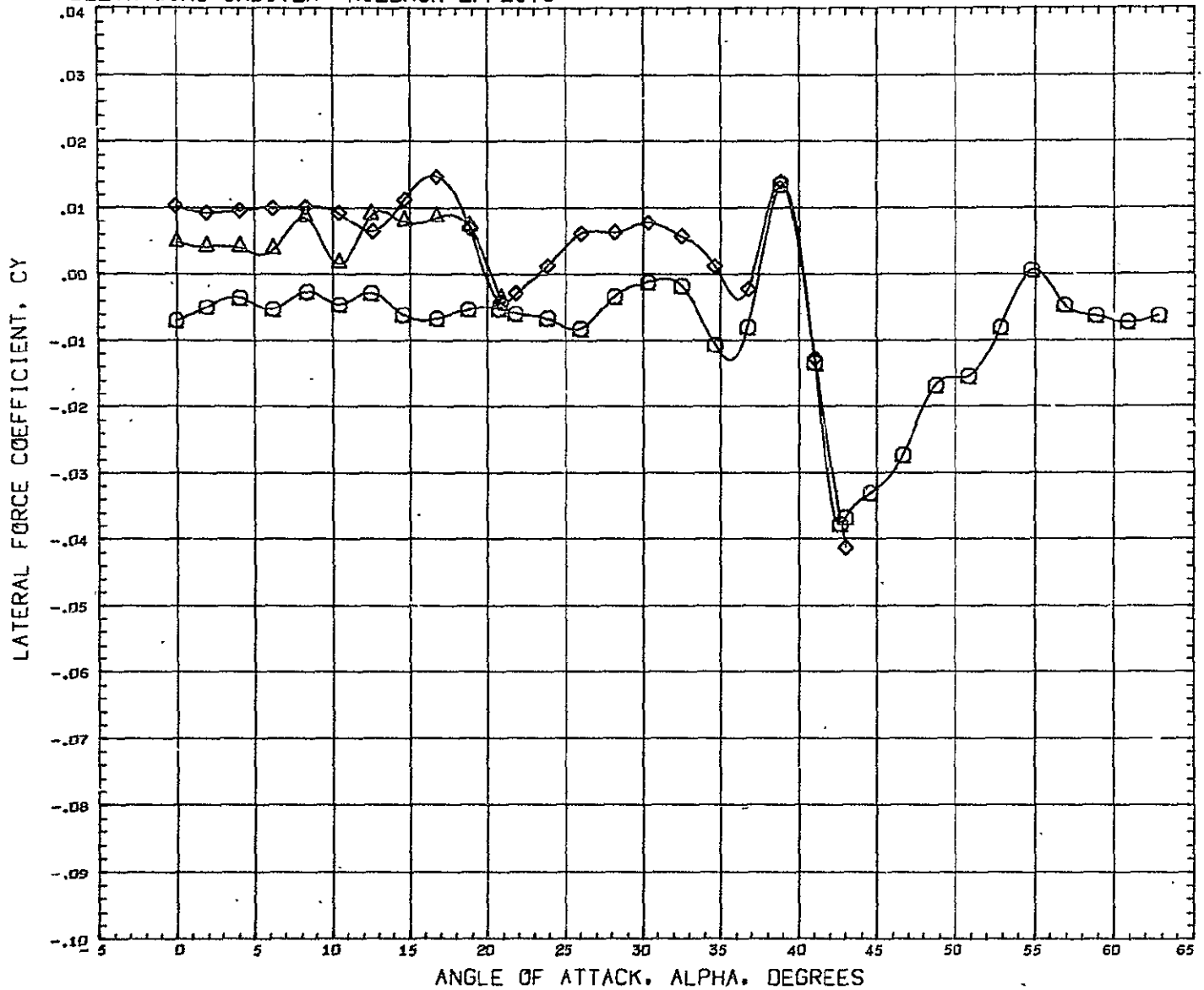
DELTA WING ORBITER-AILERON EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(R2756S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(R2760A)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	-20.000	0.000	0.000	REFL 821.2004 INCHES
(R2761S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	-30.000	0.000	0.000	REFB 1422.8040 INCHES
(R2762A)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	-30.000	30.000	0.000	0.000	XMRP 1422.5040 INCHES
						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 0.598

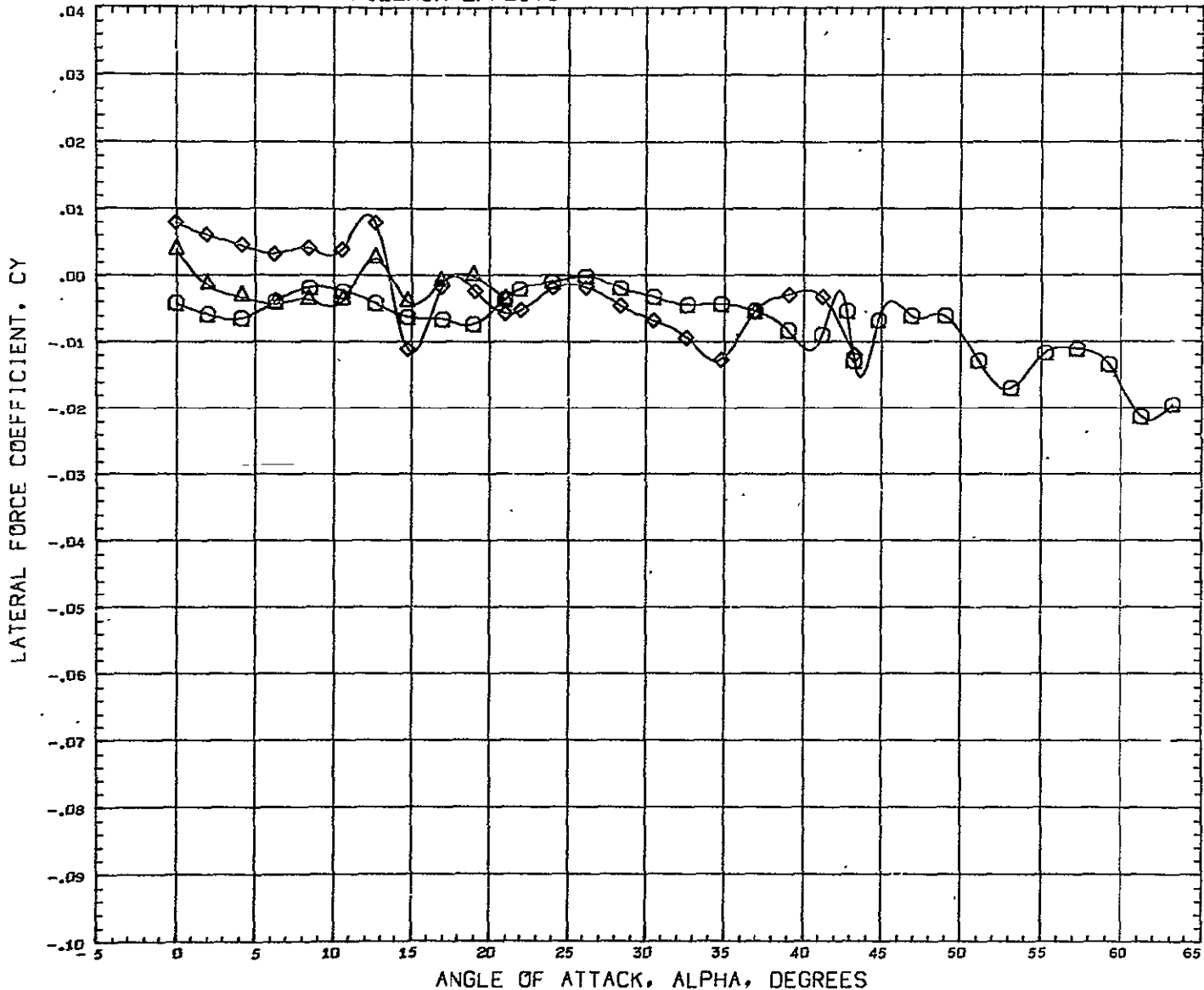
DELTA WING ORBITER-AILERON EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(R27565)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(R2760A)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	-20.000	0.000	0.000	REFL 821.2004 INCHES
(R2761S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	-30.000	0.000	0.000	REFB 1422.8040 INCHES
(R2762A)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	-30.000	30.000	0.000	0.000	XMRP 1422.5040 INCHES
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MACH 0.859

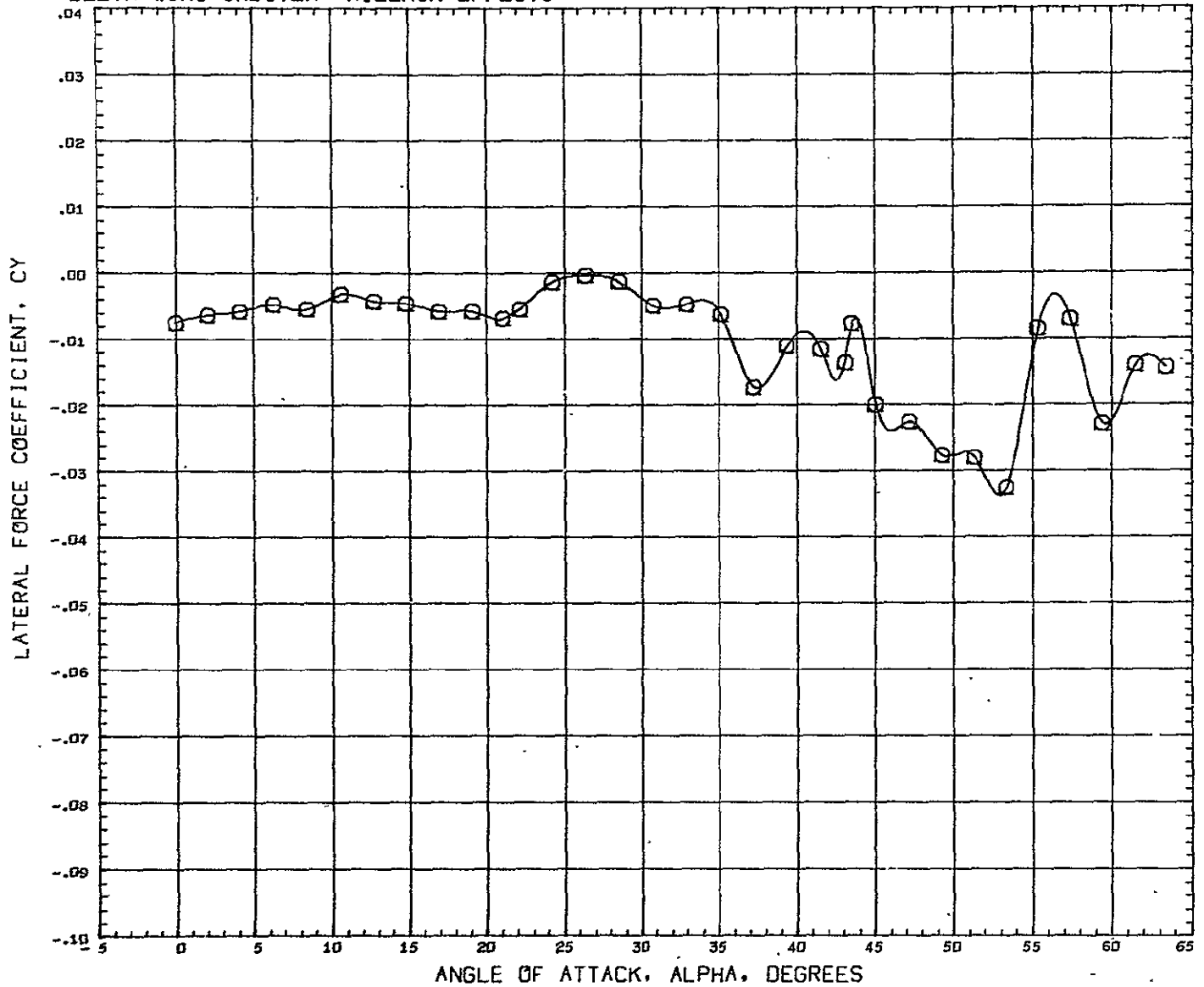
DELTA WING ORBITER-AILERON EFFECTS



DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(R2756S)	○	MSFC478 NR DELTA ORBITER B5W17E1DV17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(R2760A)	△	MSFC478 NR DELTA ORBITER B5W17E1DV17J2X	0.000	-20.000	0.000	0.000	REFL 821.2004 INCHES
(R2761S)	◇	MSFC478 NR DELTA ORBITER B5W17E1DV17J2X	0.000	-30.000	0.000	0.000	REFB 1422.8040 INCHES
(R2762A)	□	MSFC478 NR DELTA ORBITER B5W17E1DV17J2X	-30.000	30.000	0.000	0.000	XMRP 1422.3040 INCHES
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							ZMRP 130.0004 INCHES
							SCALE 0.0035 SCALE

MACH 1.003

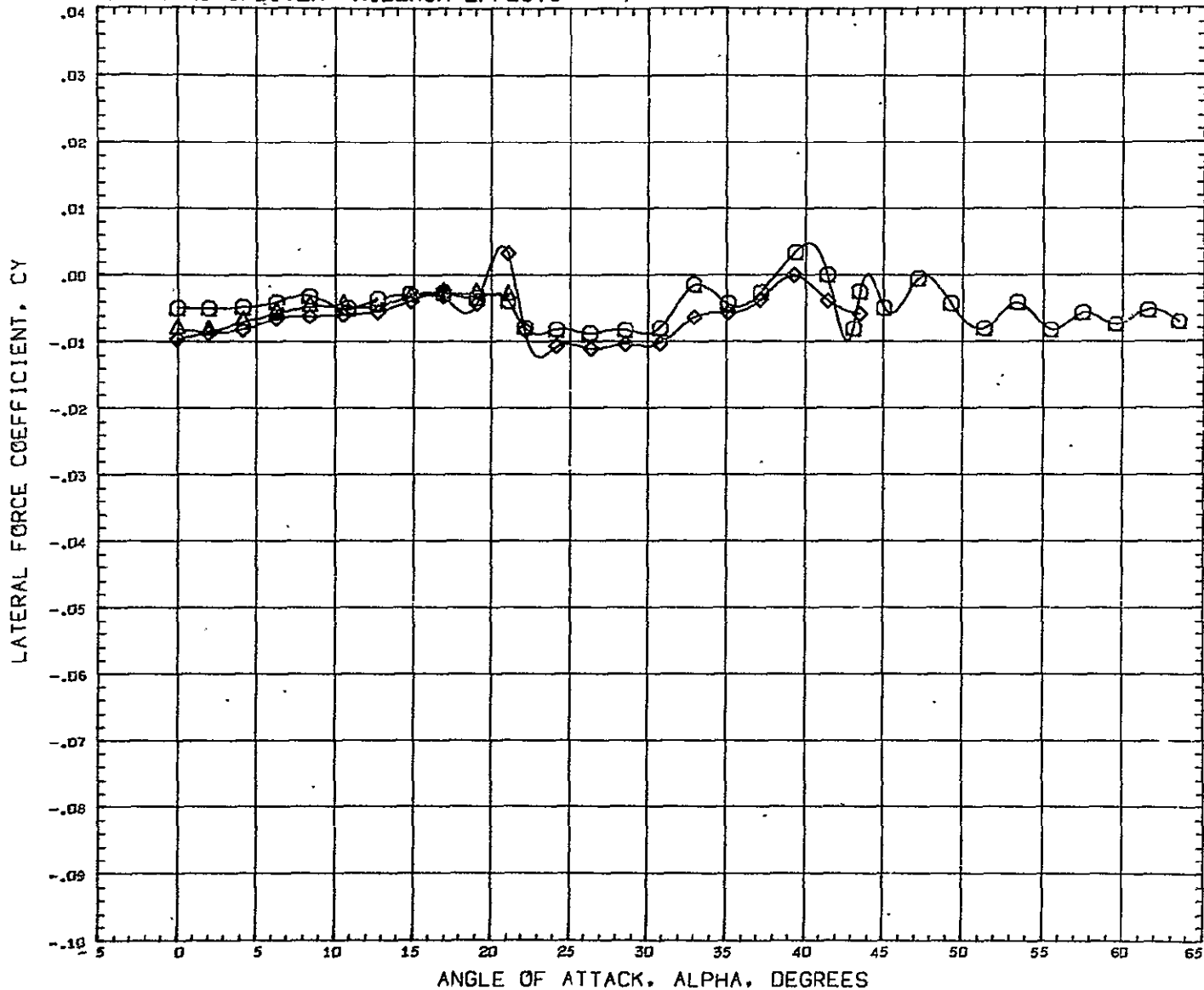
DELTA WING ORBITER-AILERON EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(R2756S)	HSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(R2760A)	HSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	-20.000	0.000	0.000	REFL 821.2054 INCHES
(R2761S)	HSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	-30.000	0.000	0.000	REFB 1422.8040 INCHES
(R2762A)	HSFC478 NR DELTA ORBITER B5W17E10V17J2X	-30.000	30.000	0.000	0.000	XMRP 1422.5040 INCHES
						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 1.199

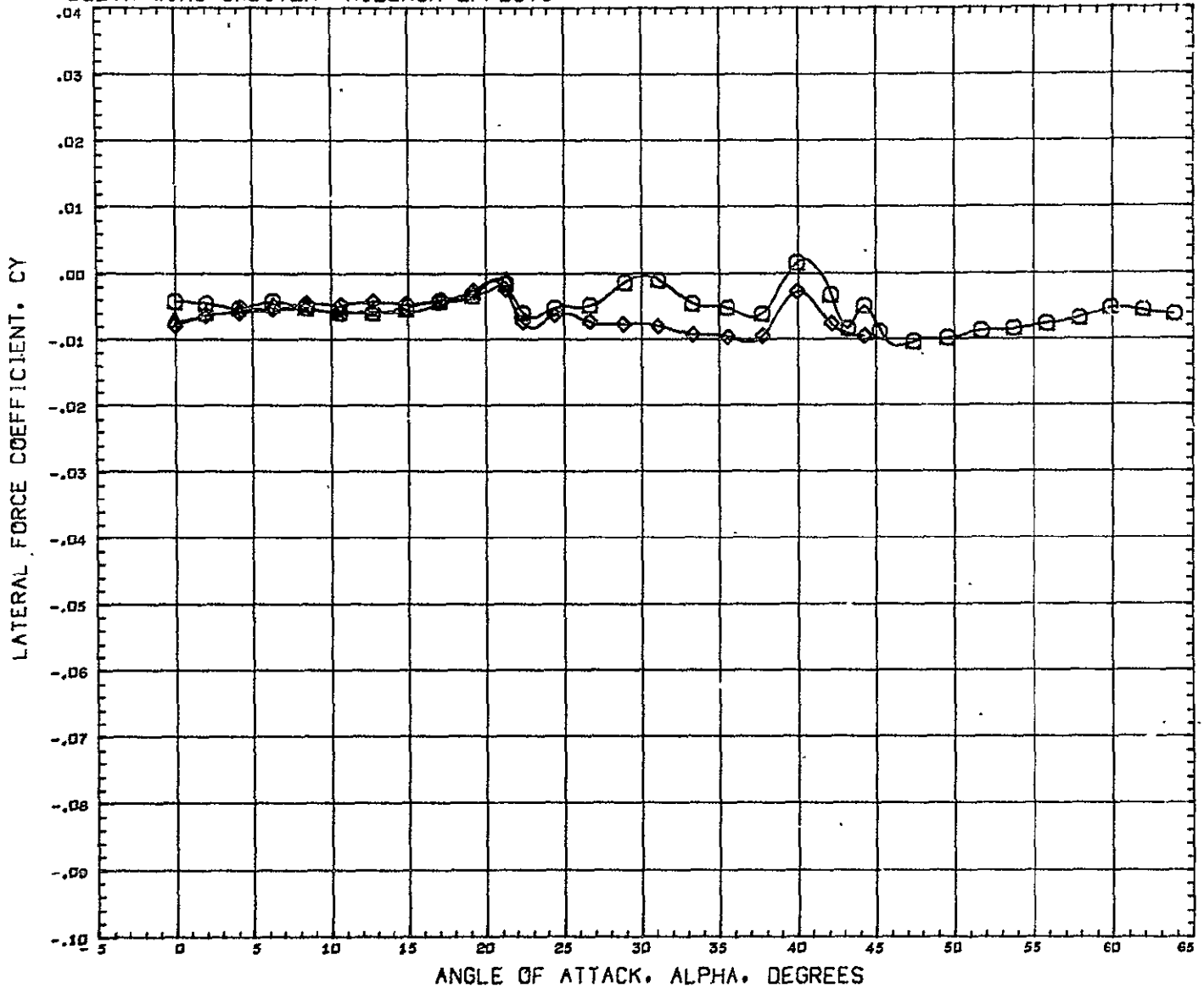
DELTA WING ORBITER-AILERON EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(R2756S)	MSFC478 NR DELTA ORBITER 85W17E10V17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(R2760A)	MSFC478 NR DELTA ORBITER 85W17E10V17J2X	0.000	-20.000	0.000	0.000	REFL 821.2004 INCHES
(R2761S)	MSFC478 NR DELTA ORBITER 85W17E10V17J2X	0.000	-30.000	0.000	0.000	REFB 1422.8040 INCHES
(R2762A)	MSFC478 NR DELTA ORBITER 85W17E10V17J2X	-30.000	30.000	0.000	0.000	XMRP 1422.5040 INCHES
						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

HACH 1.458

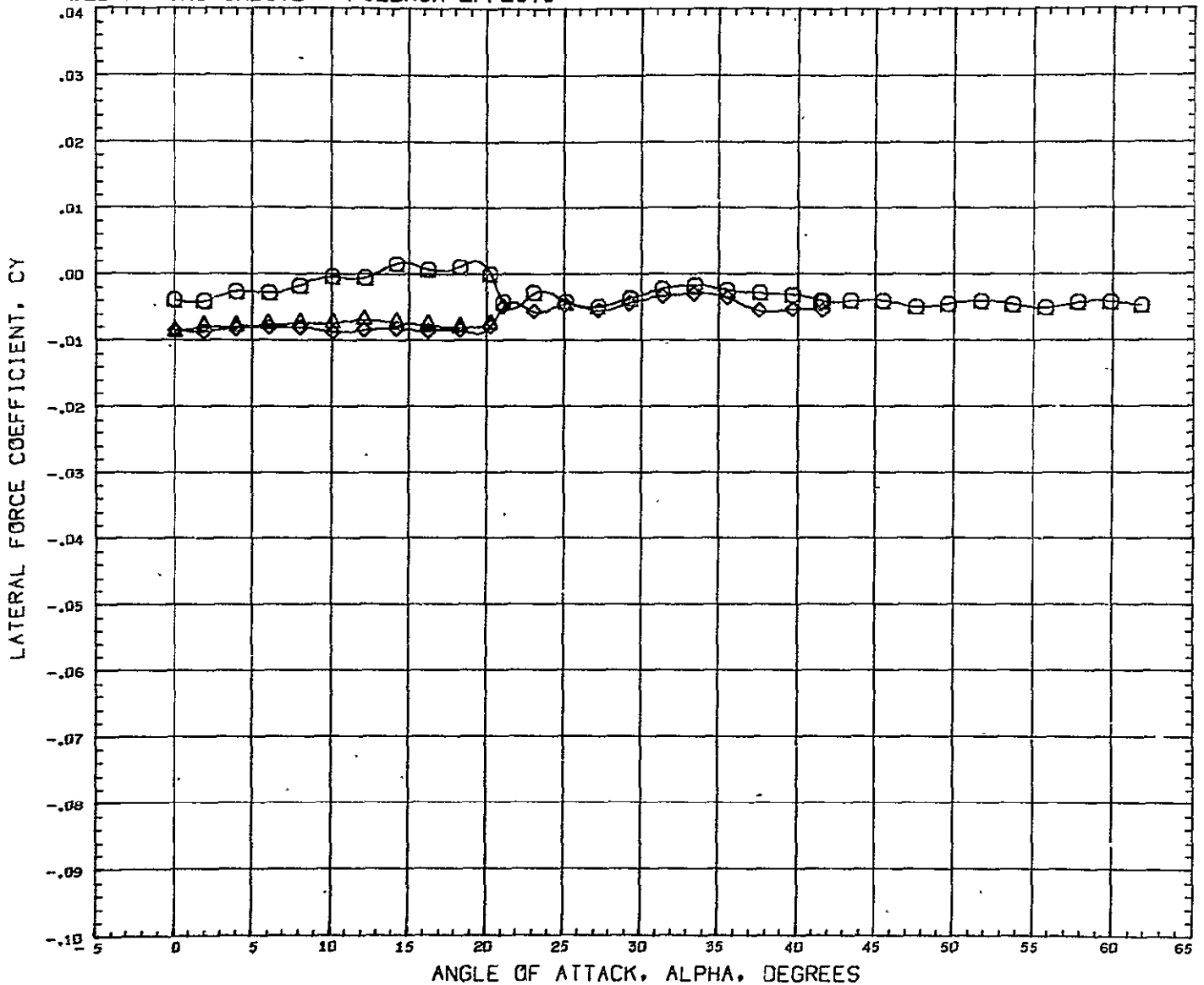
DELTA WING ORBITER- AILERON EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(R2756S)	MSFC478 NR DELTA ORBITER B5W17E1DV17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(R2760A)	MSFC478 NR DELTA ORBITER B5W17E1DV17J2X	0.000	-20.000	0.000	0.000	REFL 821.2004 INCHES
(R2761S)	MSFC478 NR DELTA ORBITER B5W17E1DV17J2X	0.000	-30.000	0.000	0.000	REFB 1422.8040 INCHES
(R2762A)	MSFC478 NR DELTA ORBITER B5W17E1DV17J2X	-30.000	30.000	0.000	0.000	XMRP 1422.8040 INCHES
						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 1.965

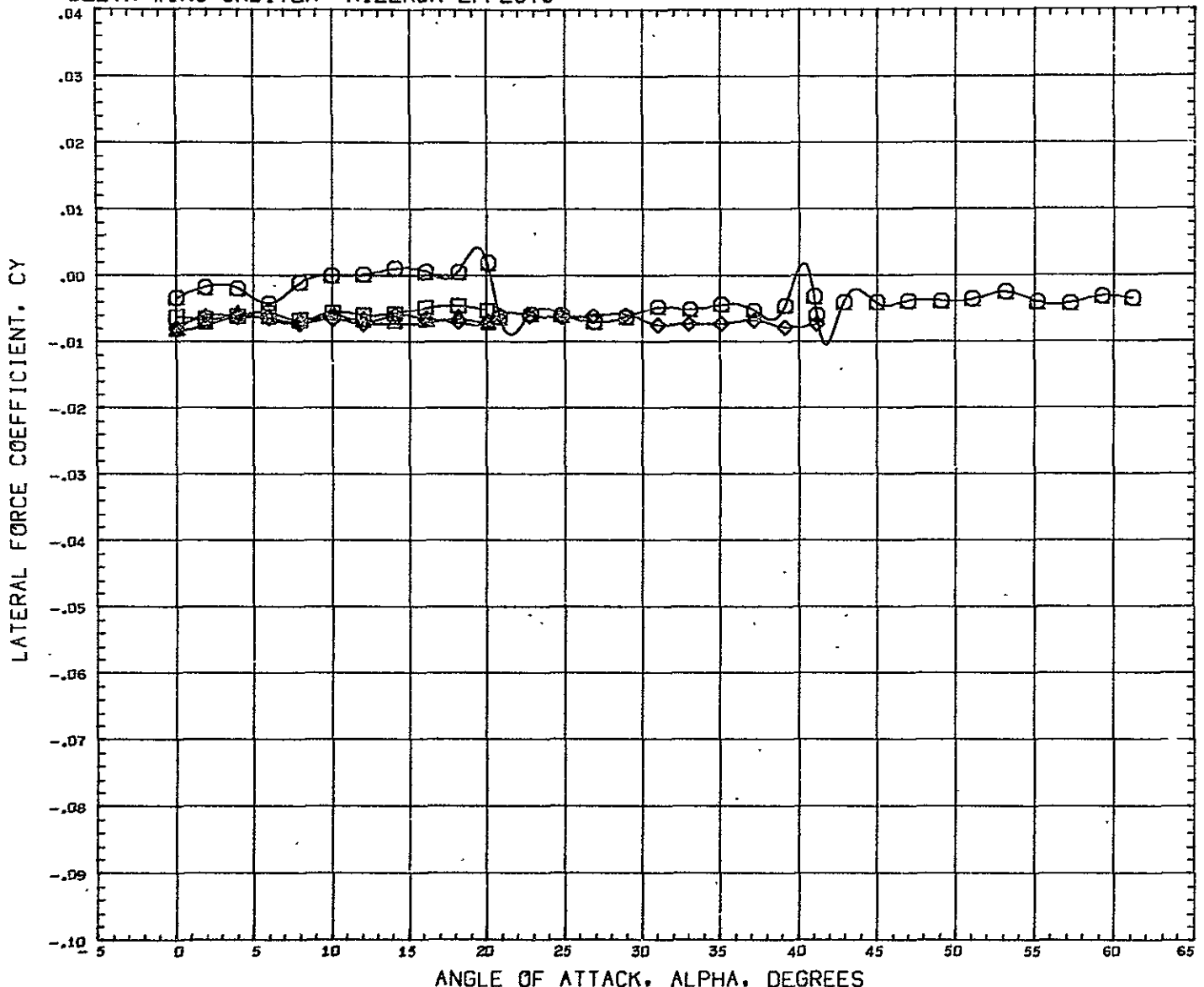
DELTA WING ORBITER- AILERON EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(R2756S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(R2760A)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	-20.000	0.000	0.000	REFL 821.2004 INCHES
(R2761S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	-30.000	0.000	0.000	REFB 1422.8040 INCHES
(R2762A)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	-30.000	30.000	0.000	0.000	XMRP 1422.5040 INCHES
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						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 2.990

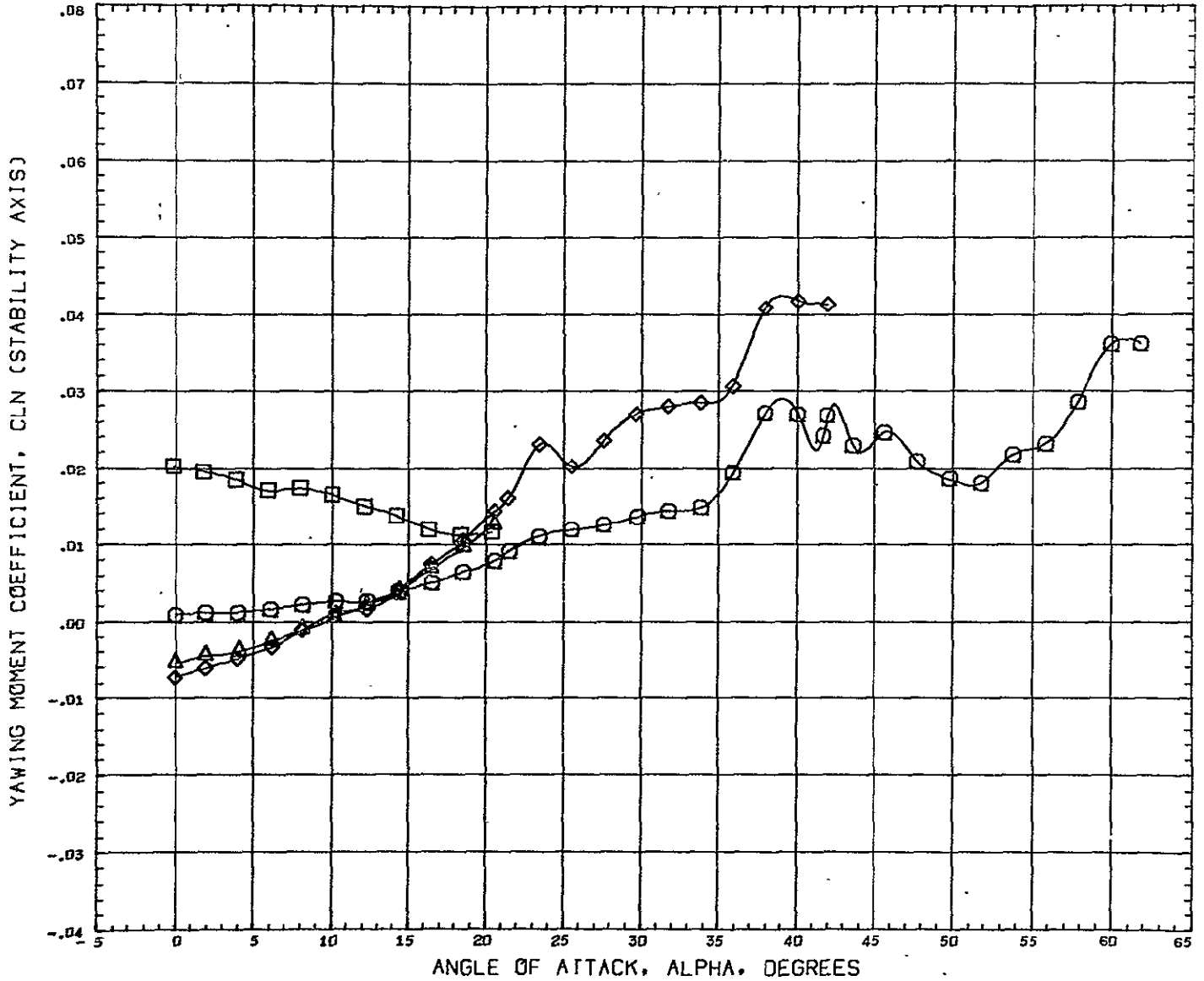
DELTA WING ORBITER- AILERON EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(R2756S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040' SQ FT
(R2760A)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	-20.000	0.000	0.000	REFL 821.2004 INCHES
(R2761S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	-30.000	0.000	0.000	REFB 1422.8040 INCHES
(R2762A)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	-30.000	30.000	0.000	0.000	XMRP 1422.5040 INCHES
						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0030 SCALE

MACH 4.959

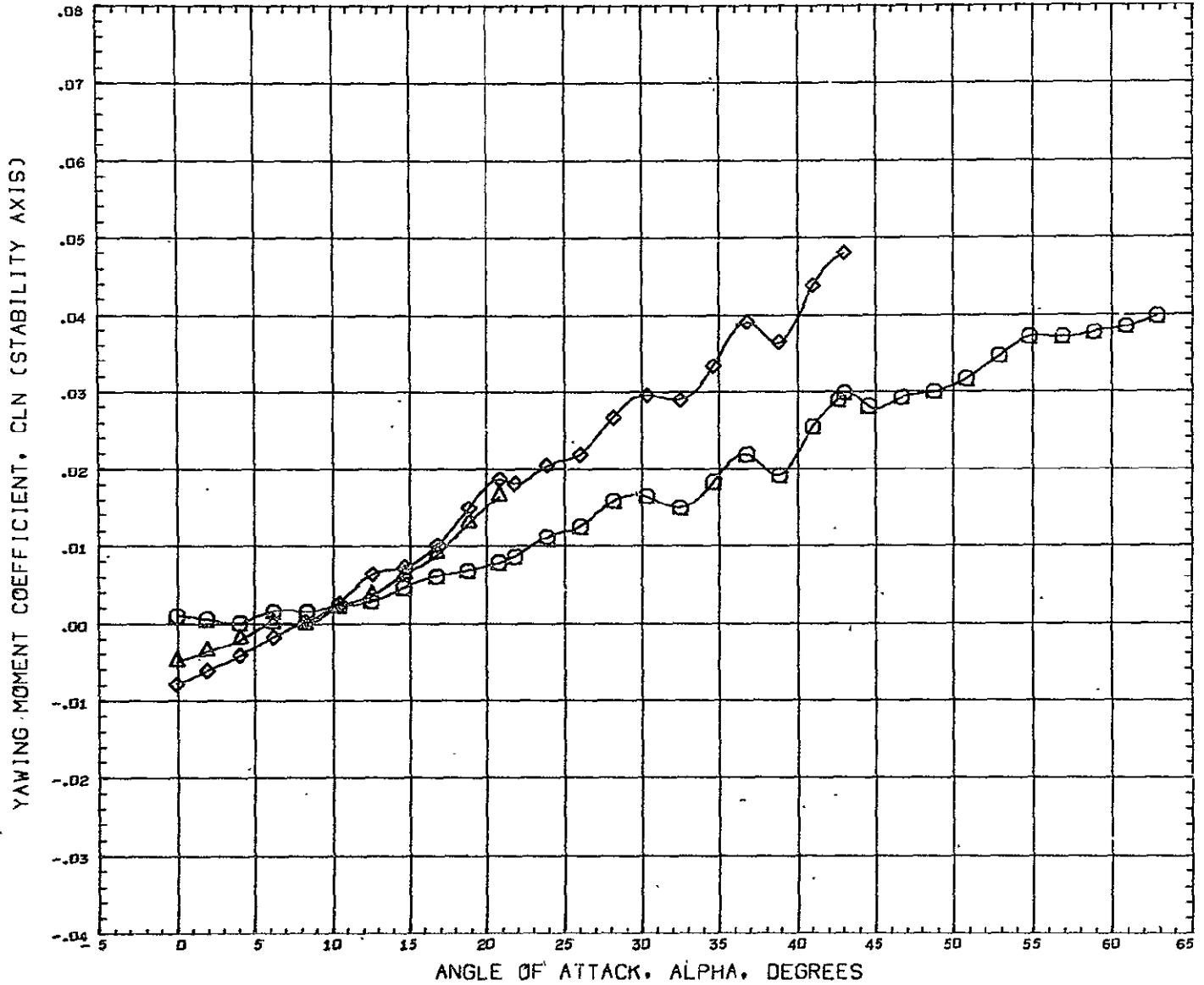
DELTA WING ORBITER- AILERON EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(R2750S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(R2760A)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	-20.000	0.000	0.000	REFL 821.2004 INCHES
(R2761S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	-30.000	0.000	0.000	REFB 1422.8040 INCHES
(R2762A)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	-30.000	30.000	0.000	0.000	XMRP 1422.5040 INCHES
						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 0.598

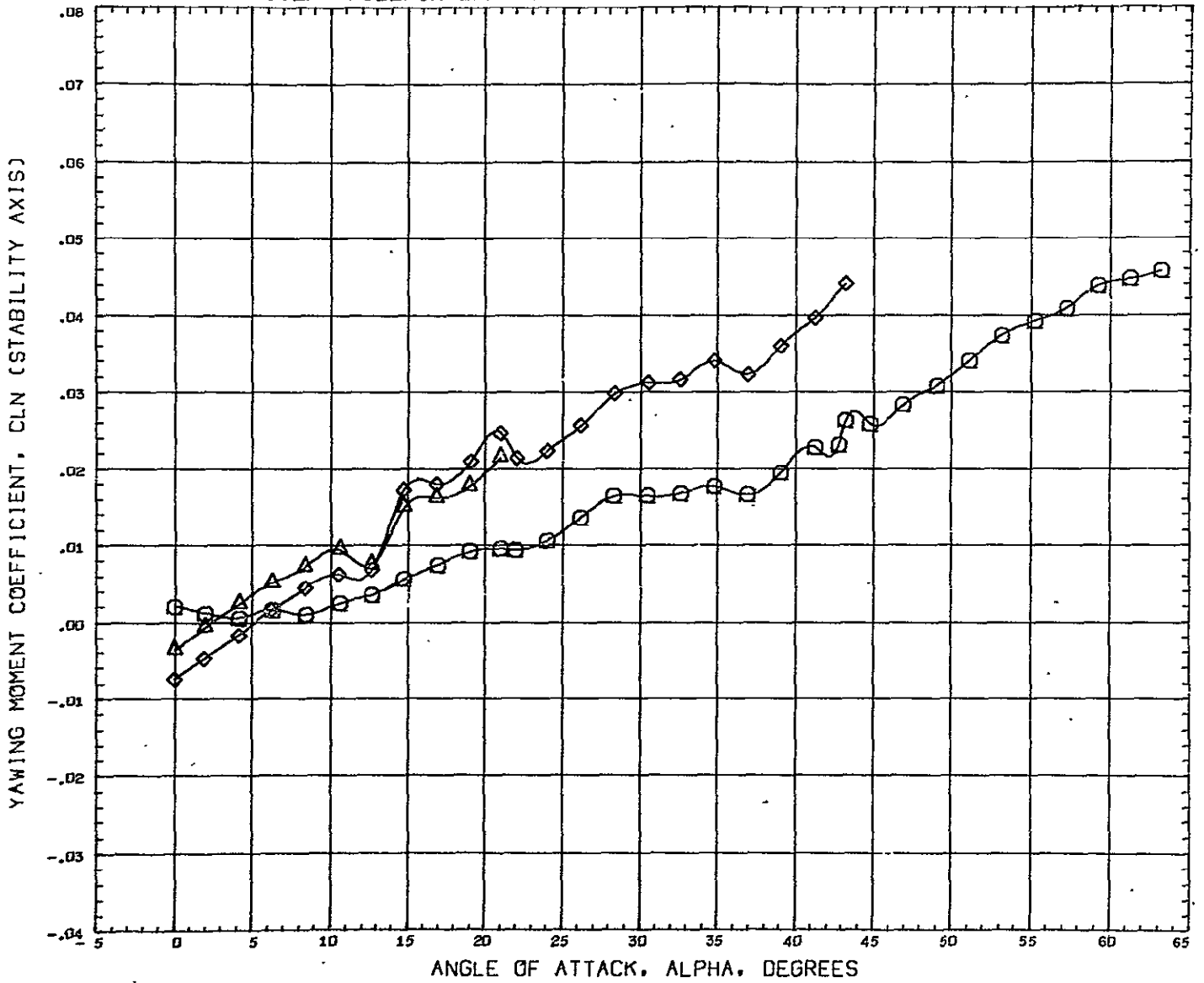
DELTA WING ORBITER- AILERON EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(R2756S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(R2760A)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	-20.000	0.000	0.000	REFL 821.2004 INCHES
(R2761S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	-30.000	0.000	0.000	REFB 1422.8040 INCHES
(R2762A)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	-30.000	30.000	0.000	0.000	YMRF 1422.5040 INCHES
						YMRP 0.0000 INCHES
						ZMRF 130.0004 INCHES
						SCALE 0.0035 SCALE

HACH 9.895

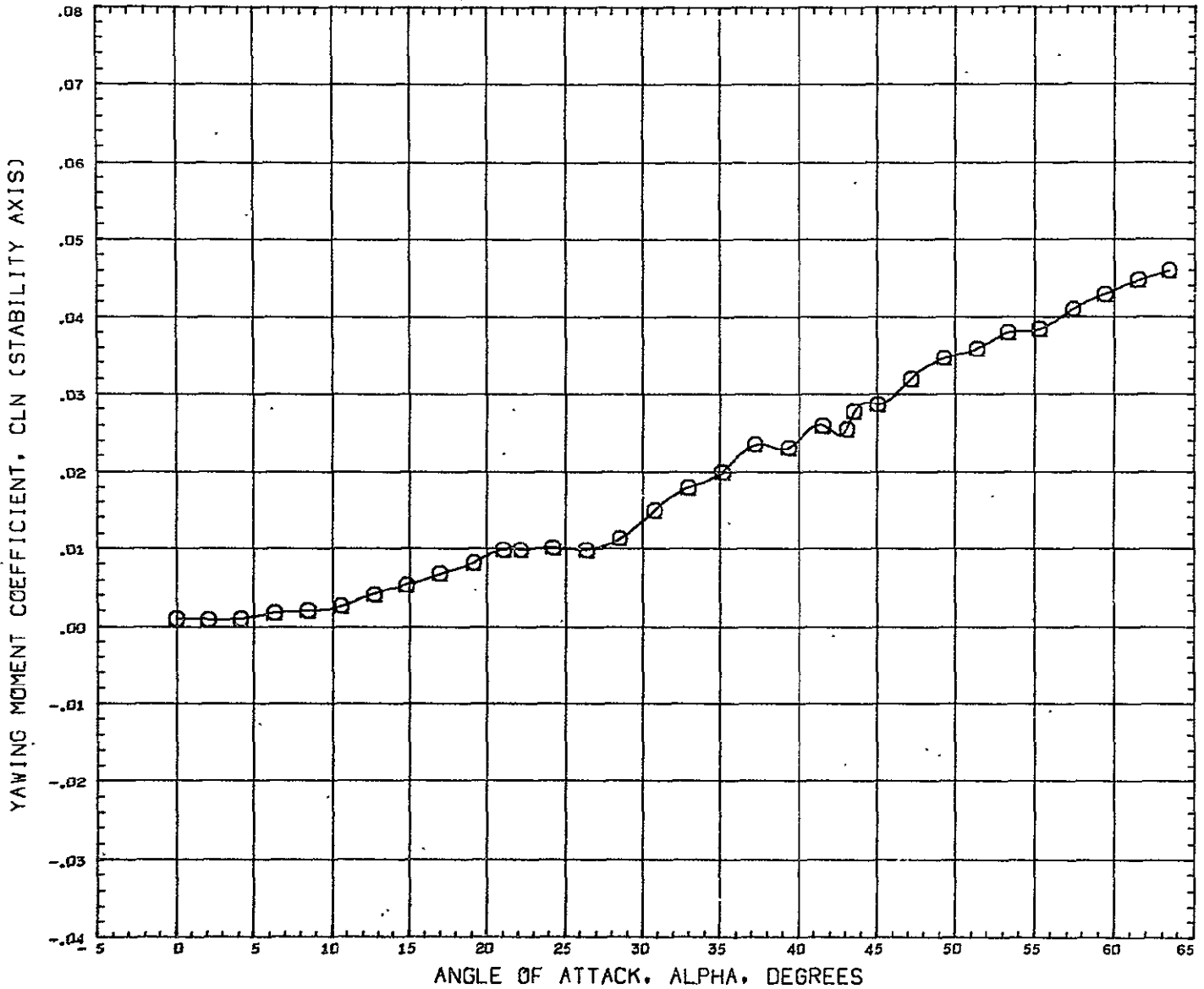
DELTA WING ORBITER-AILERON EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(R2756S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(R2760A)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	-20.000	0.000	0.000	REFL 821.2004 INCHES
(R2761S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	-30.000	0.000	0.000	REFB 1422.8040 INCHES
(R2762A)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	-30.000	30.000	0.000	0.000	XMRP 1422.5040 INCHES
						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 1.003

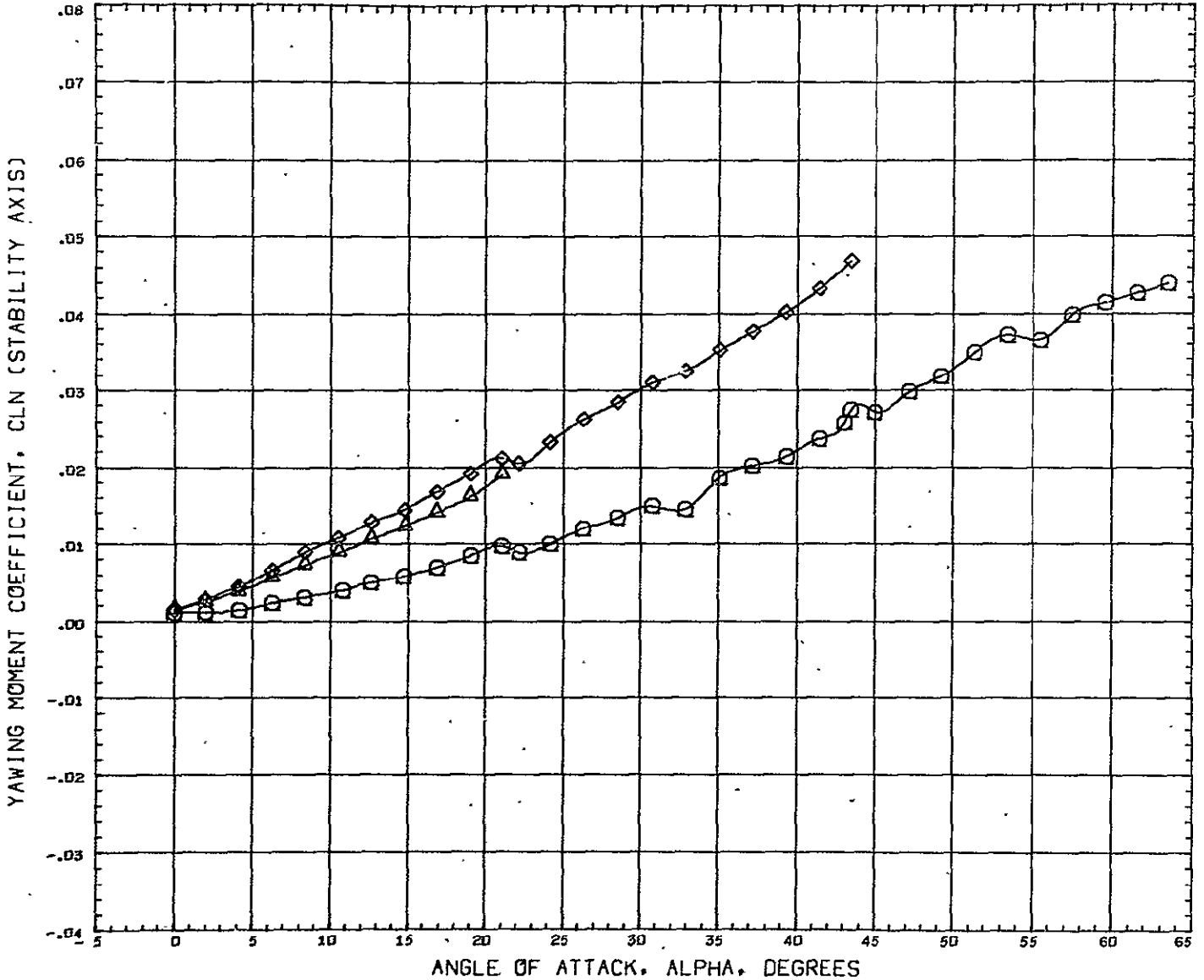
DELTA WING ORBITER-AILERON EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION*	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(R2756S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(R2760A)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	-20.000	0.000	0.000	REFL 821.2004 INCHES
(R2761S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	-30.000	0.000	0.000	REFB 1422.8040 INCHES
(R2762A)	MSFC478 NR DELTA ORBITER B5W17E10V17J2Y	-30.000	50.000	0.000	0.000	XMRP 1422.5040 INCHES
						YHRF 0.0000 INCHES
						ZHRF 130.0004 INCHES
						SCALE 0.0035 SCALE

PACH 1.199

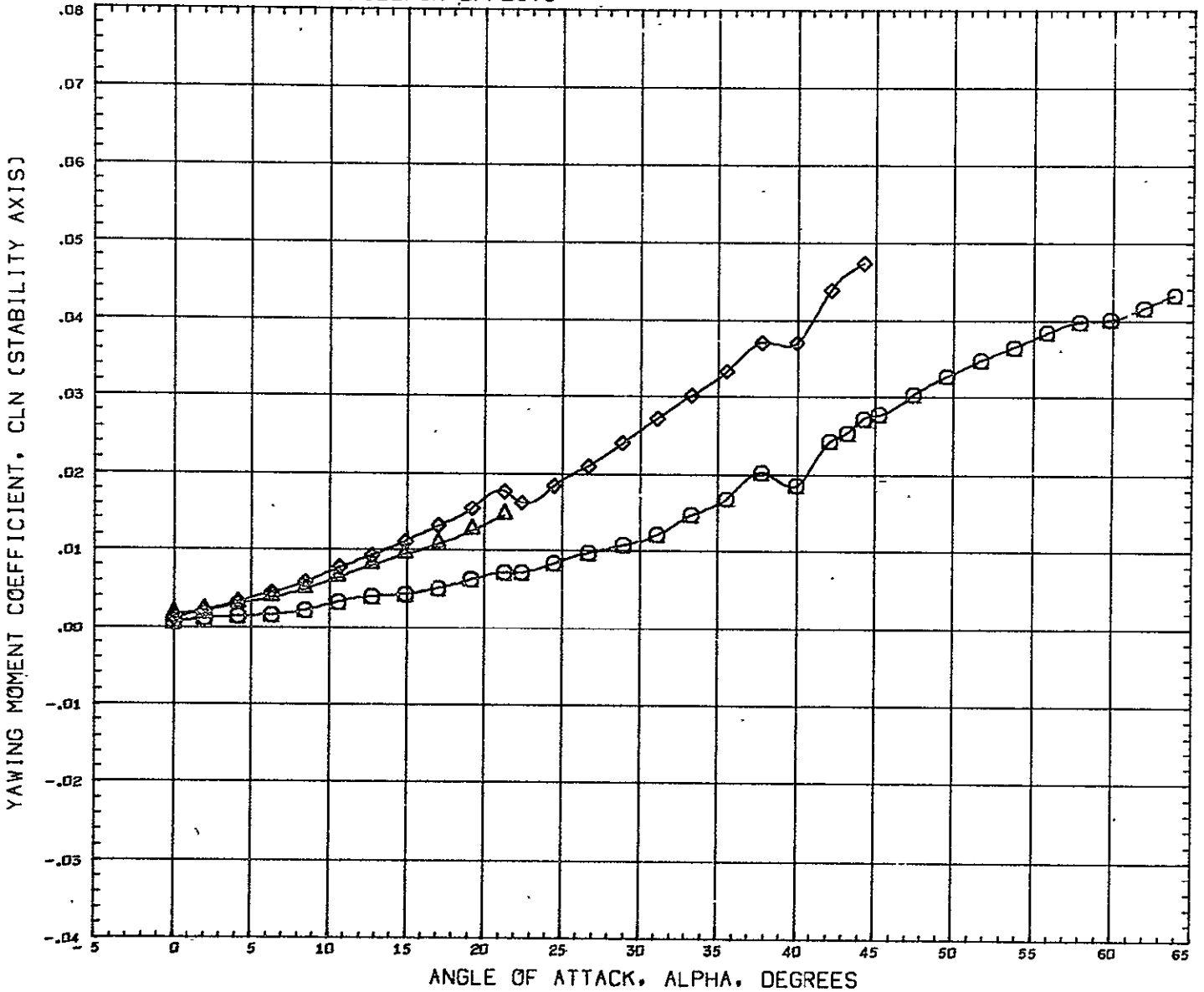
DELTA WING ORBITER- AILERON EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(R2756S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(R2760A)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	-20.000	0.000	0.000	REFL 821.2004 INCHES
(R2761S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	-30.000	0.000	0.000	REFB 1422.8040 INCHES
(R2762A)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	-30.000	30.000	0.000	0.000	XMRP 1422.5040 INCHES
						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 1.458

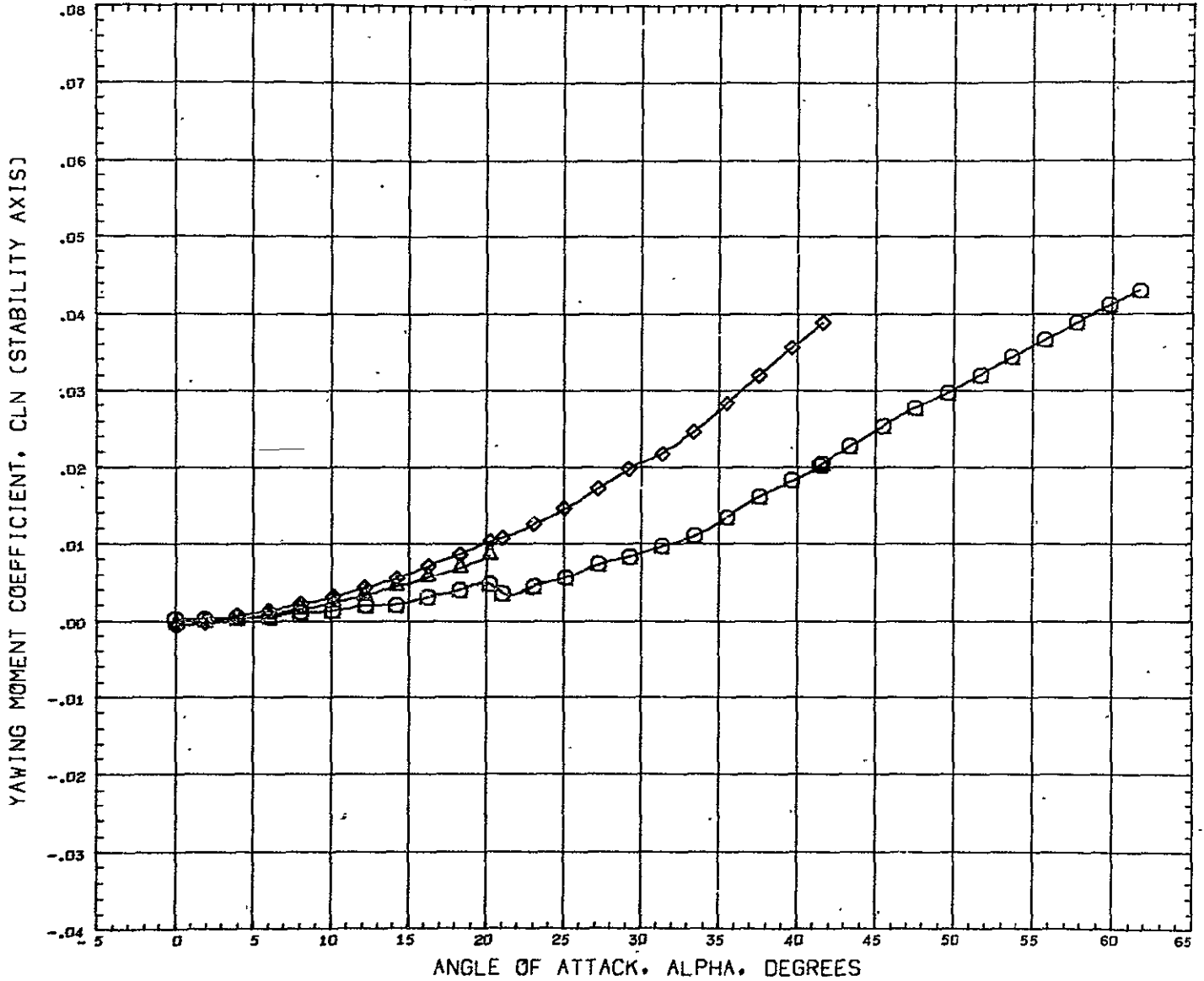
DELTA WING ORBITER- AILERON EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(R2756S)	MSFC478 NR DELTA ORBITER B5W17E1DV17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(R2760A)	MSFC478 NR DELTA ORBITER B5W17E1DV17J2X	0.000	-20.000	0.000	0.000	REFL 821.2004 INCHES
(R2761S)	MSFC478 NR DELTA ORBITER B5W17E1DV17J2X	0.000	-30.000	0.000	0.000	REFB 1422.8040 INCHES
(R2762A)	MSFC478 NR DELTA ORBITER B5W17E1CV17J2Y	-30.000	30.000	0.000	0.000	XMRP 1422.5040 INCHES
						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

HACH 1.965

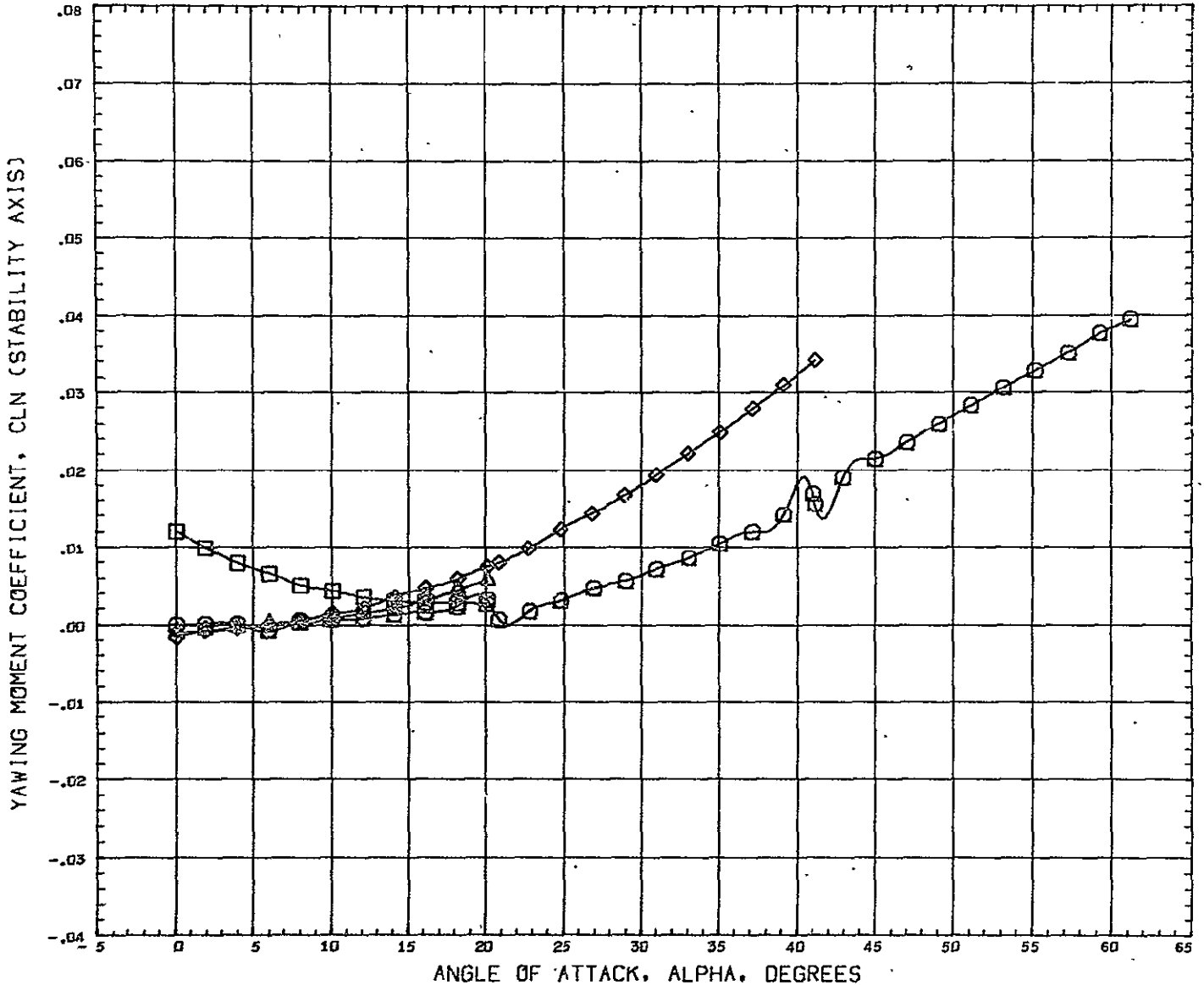
DELTA WING ORBITER-AILERON EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(R2756S)	MSFC478 NR DELTA ORBITER B5W17E1DV17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(R2760A)	MSFC478 NR DELTA ORBITER B5W17E1DV17J2X	0.000	-20.000	0.000	0.000	REFL 821.2004 INCHES
(R2761S)	MSFC478 NR DELTA ORBITER B5W17E1DV17J2X	0.000	-30.000	0.000	0.000	REFB 1422.8040 INCHES
(R2762A)	MSFC478 NR DELTA ORBITER B5W17E1DV17J2X	-30.000	30.000	0.000	0.000	XMRP 1422.5040 INCHES
						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH

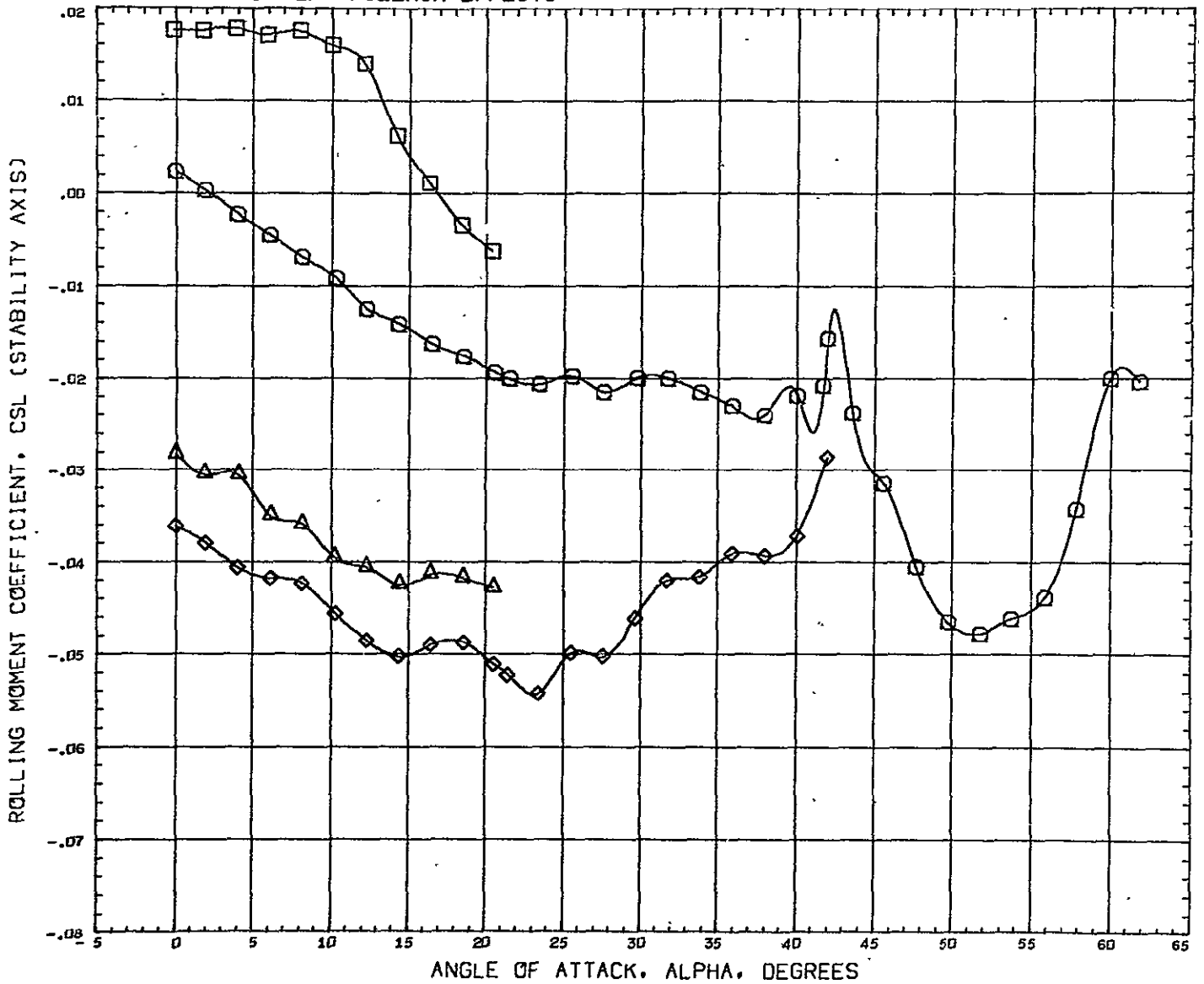
DELTA WING ORBITER- AILERON EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(R27565)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(R2760A)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	-20.000	0.000	0.000	REFL 821.2004 INCHES
(R27615)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	-30.000	0.000	0.000	REFB 1422.8040 INCHES
(R2762A)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	-30.000	30.000	0.000	0.000	XMRP 1422.5040 INCHES
						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 4.959

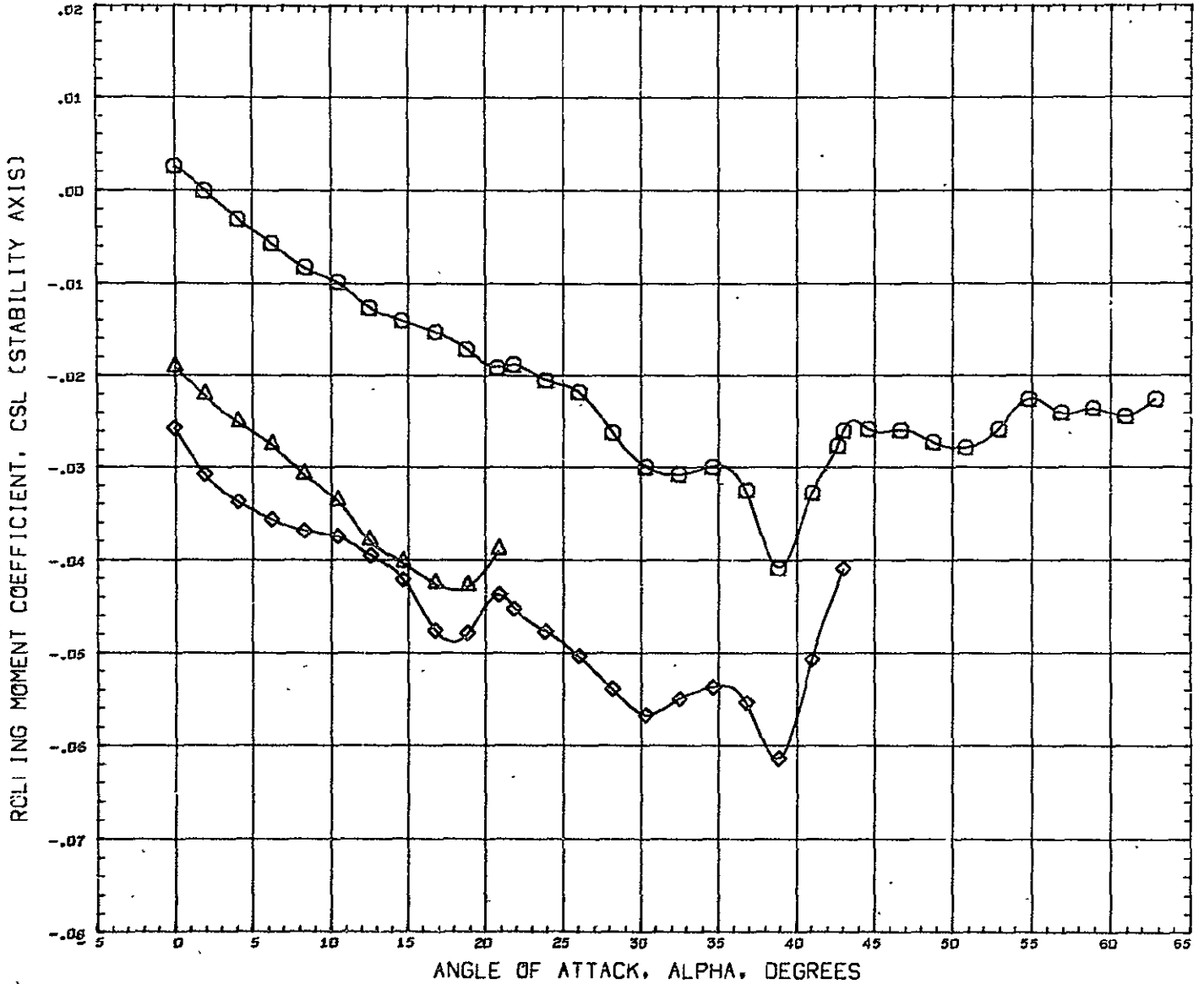
DELTA WING ORBITER-AILERON EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(R2756S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(R2760A)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	-20.000	0.000	0.000	REFL 821.2004 INCHES
(R2761S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	-30.000	0.000	0.000	REFB 1422.5040 INCHES
(R2762A)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	-30.000	30.000	0.000	0.000	XMRP 1422.5040 INCHES
						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 0.598

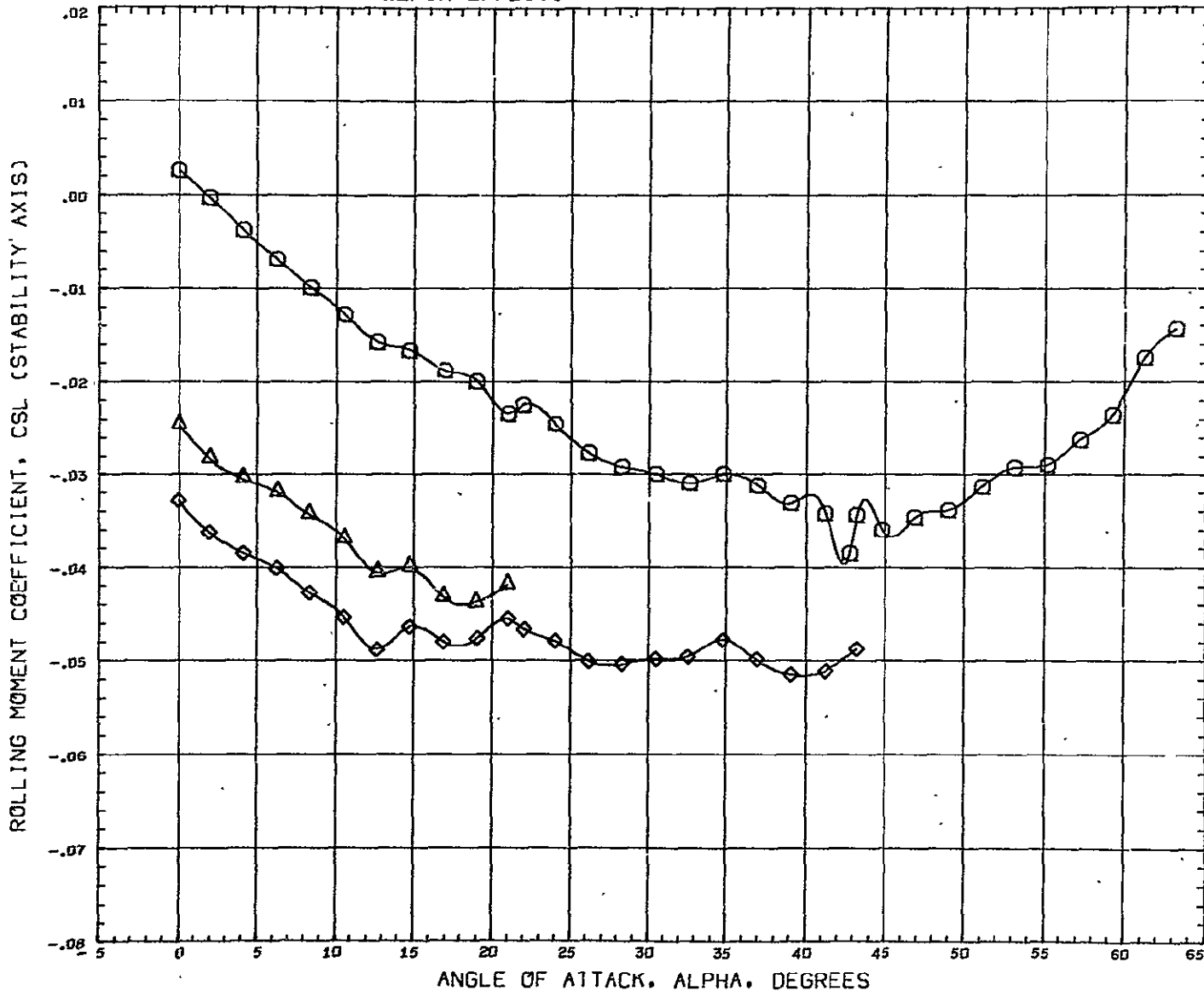
DELTA WING ORBITER-AILERON EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(R2756S)	MSFC478 NR DELTA ORBITER 85W17E10V17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(R2760A)	MSFC478 NR DELTA ORBITER 85W17E10V17J2X	0.000	-20.000	0.000	0.000	REFL 921.2004 INCHES
(R2761S)	MSFC478 NR DELTA ORBITER 85W17E10V17J2X	0.000	-30.000	0.000	0.000	REFB .1422.3040 INCHES
(R2762A)	MSFC478 NR DELTA ORBITER 85W17E10V17J2X	-30.000	30.000	0.000	0.000	XMRP 1422.5040 INCHES
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						ZMRP 130.0004 INCHES
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MACH 0.899

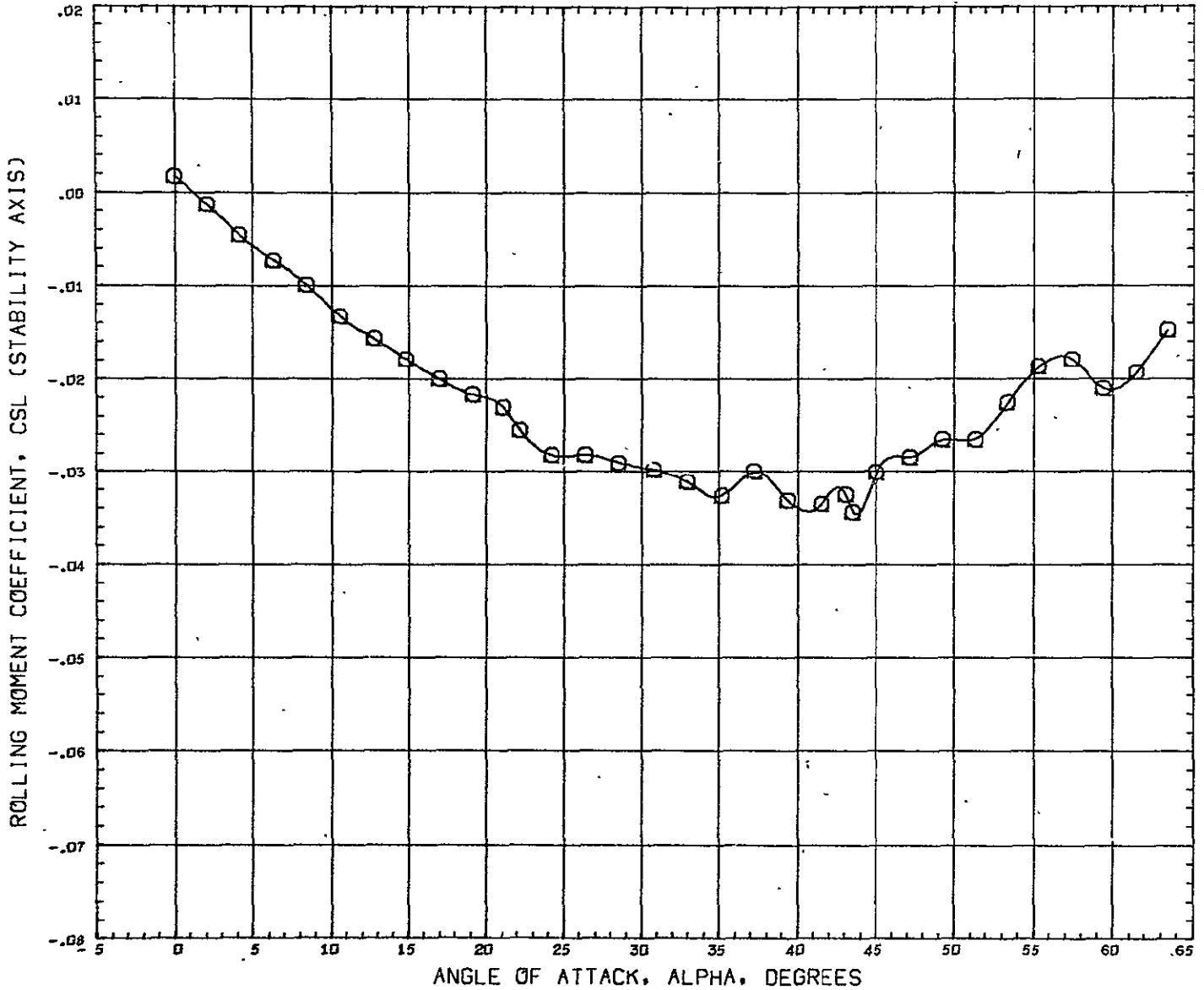
DELTA WING ORBITER- AILERON EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(R2756S)	MSFC478 NR DELTA ORBITER 85W17E10V17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(R2760A)	MSFC478 NR DELTA ORBITER 85W17E10V17J2X	0.000	-20.000	0.000	0.000	REFL 821.2004 INCHES
(R2761S)	MSFC478 NR DELTA ORBITER 85W17E10V17J2X	0.000	-30.000	0.000	0.000	REFB 1422.8040 INCHES
(R2762A)	MSFC478 NR DELTA ORBITER 85W17E10V17J2X	-30.000	30.000	0.000	0.000	XMRF 1422.5040 INCHES YMRP 0.0000 INCHES ZMRP 130.0004 INCHES SCALE 0.0035 SCALE

MACH 1.093

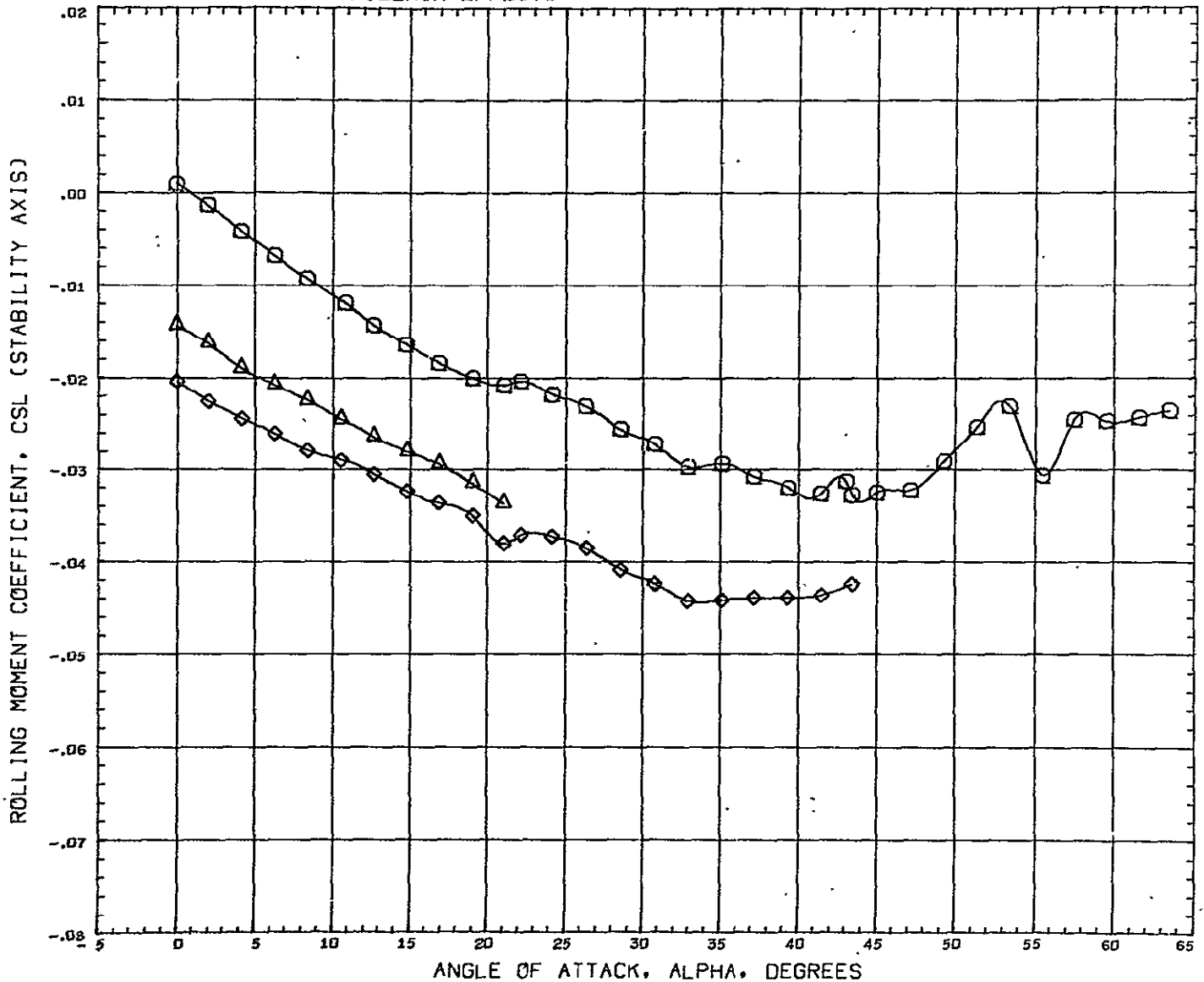
DELTA WING ORBITER-AILERON EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(R2756S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(R2760A)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	-20.000	0.000	0.000	REFL 821.2004 INCHES
(R2761S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	-30.000	0.000	0.000	REFB 1422.5040 INCHES
(R2762A)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	-30.000	30.000	0.000	0.000	XMRP 1422.5040 INCHES
						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 1.199

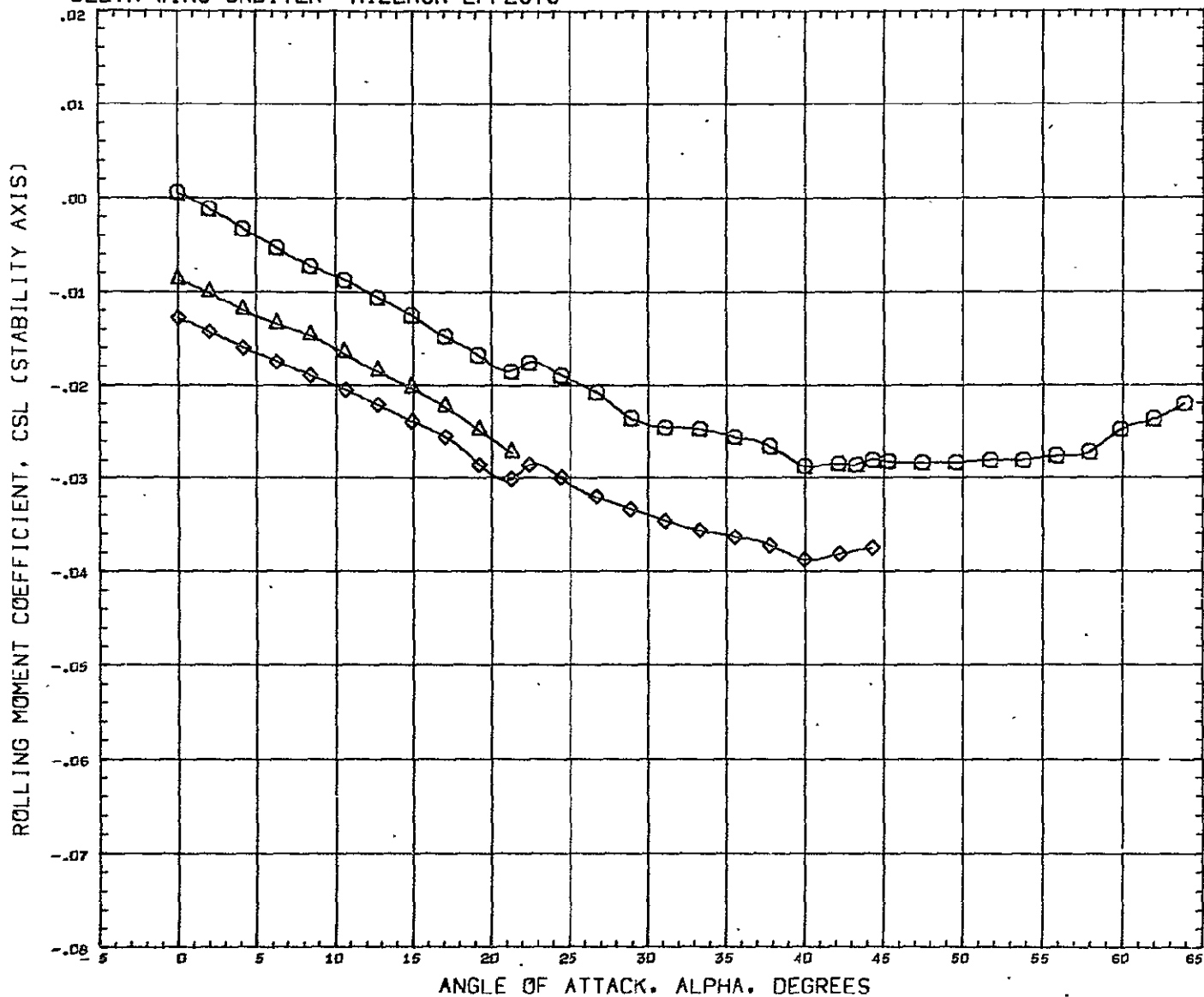
DELTA WING ORBITER- AILERON EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(R2756S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(R2760A)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	-20.000	0.000	0.000	REFL 821.2004 INCHES
(R2761S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	-30.000	0.000	0.000	REFB 1422.6040 INCHES
(R2762A)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	-30.000	30.000	0.000	0.000	XMRP 1422.5040 INCHES
						YMRP 0.0000 INCHES
						ZMRP 150.0004 INCHES
						SCALE 0.0035 SCALE

MACH 1.458

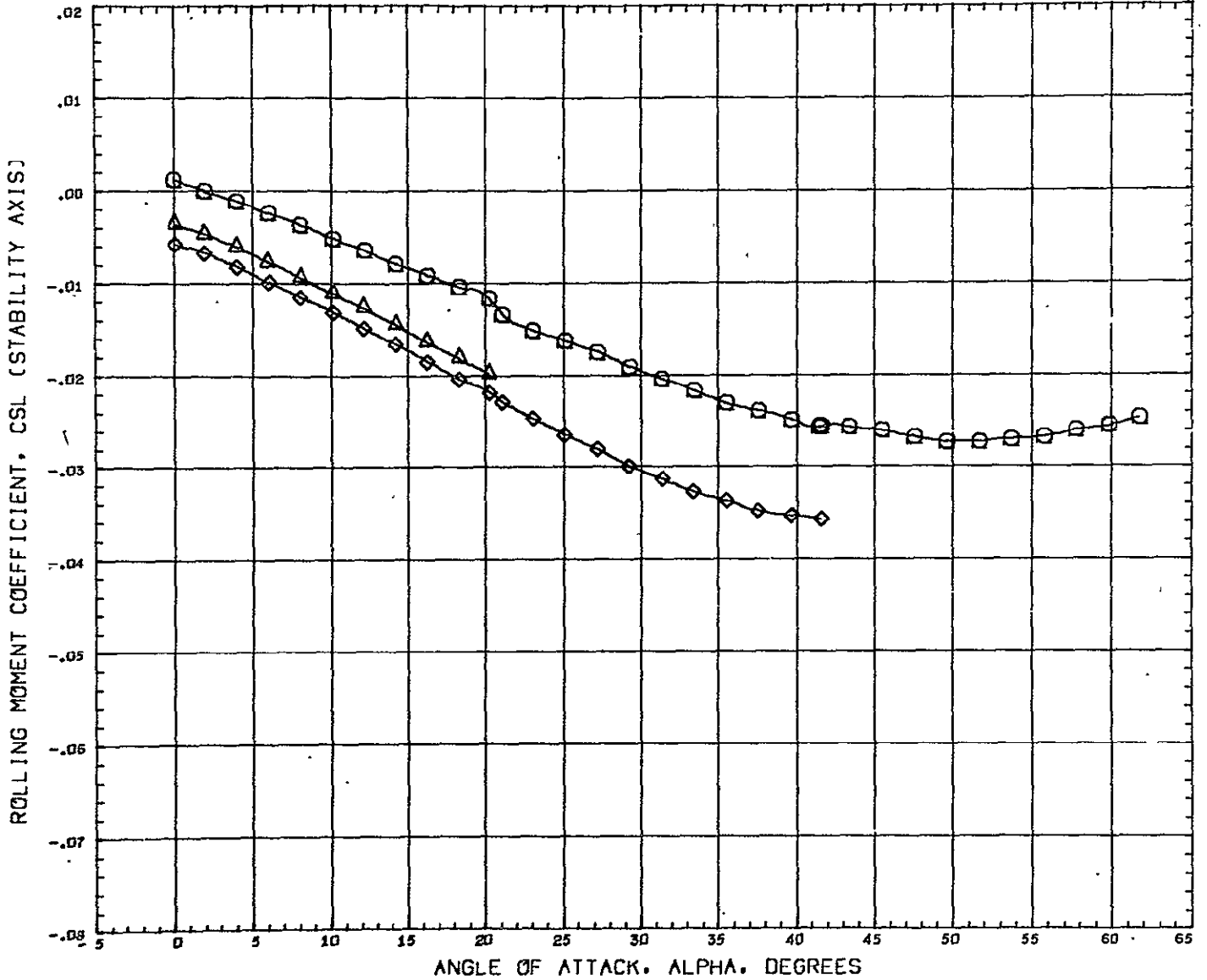
DELTA WING ORBITER-AILERON EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(R2756S)	MSFC478 NR DELTA ORBITER B5W17E1DV17J2X	0.000	0.000	0.000	0.000	REFS 5084.0040 SQ FT
(R2760A)	MSFC478 NR DELTA ORBITER B5W17E1DV17J2X	0.000	-20.000	0.000	0.000	REFL 821.2004 INCHES
(R2761S)	MSFC478 NR DELTA ORBITER B5W17E1DV17J2X	0.000	-30.000	0.000	0.000	REFB 1422.8040 INCHES
(R2762A)	MSFC478 NR DELTA ORBITER B5W17E1DV17J2X	-30.000	30.000	0.000	0.000	XMRP 1422.5040 INCHES
						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 1.965

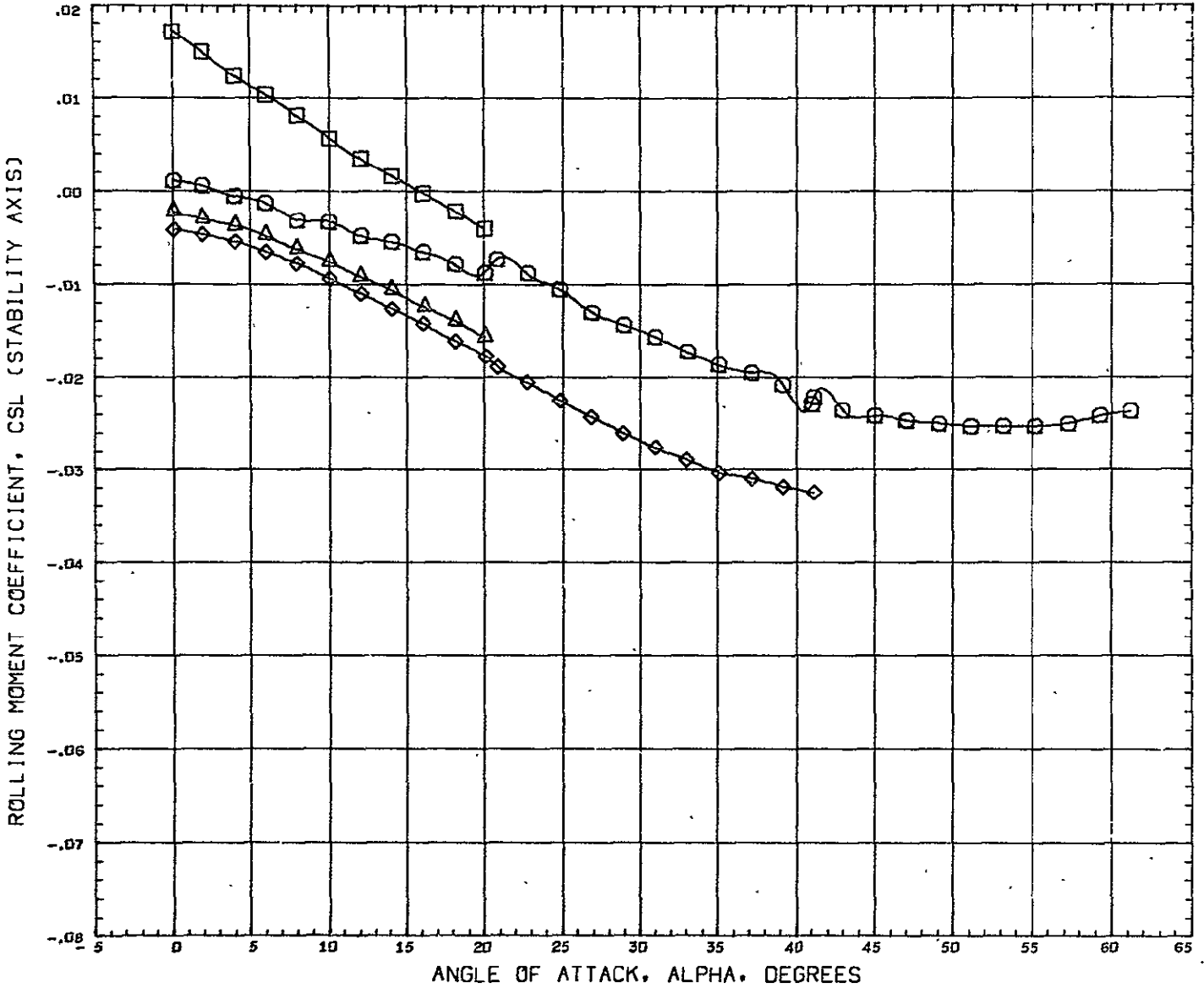
DELTA WING ORBITER- AILERON EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(R2756S)	MSFC478 NR DELTA ORBITER 85W17E10V17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(R2760A)	MSFC478 NR DELTA ORBITER 85W17E10V17J2X	0.000	-20.000	0.000	0.000	REFL 821.2004 INCHES
(R2761S)	MSFC478 NR DELTA ORBITER 85W17E10V17J2X	0.000	-30.000	0.000	0.000	REFB 1422.8040 INCHES
(R2762A)	MSFC478 NR DELTA ORBITER 85W17E10V17J2X	-30.000	30.000	0.000	0.000	XMRP 1422.5040 INCHES
						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 2.990

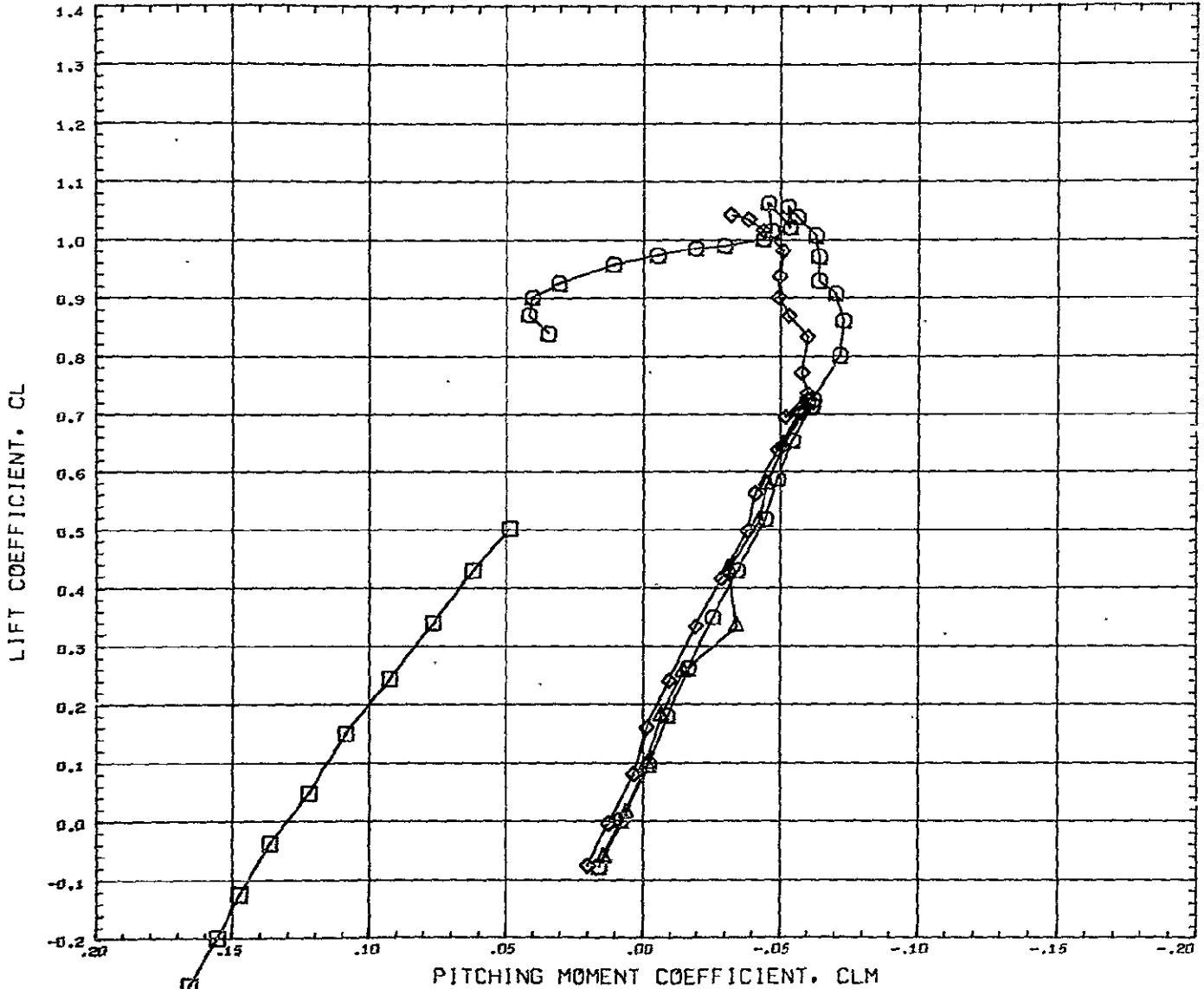
DELTA WING ORBITER- AILERON EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(R2756S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	-J.000	0.000	0.000	REFS 6084.0040 SQ FT
(R2760A)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	-20.000	0.000	0.000	REFL 821.2004 INCHES
(R2761S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	-30.000	0.000	0.000	REFB 1422.8040 INCHES
(R2762A)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	-30.000	30.000	0.000	0.000	XMRP 1422.8040 INCHES YMRP 0.0000 INCHES ZMRP 130.0004 INCHES SCALE 0.0035 SCALE

HACH 4.959

DELTA WING ORBITER-AILERON EFFECTS



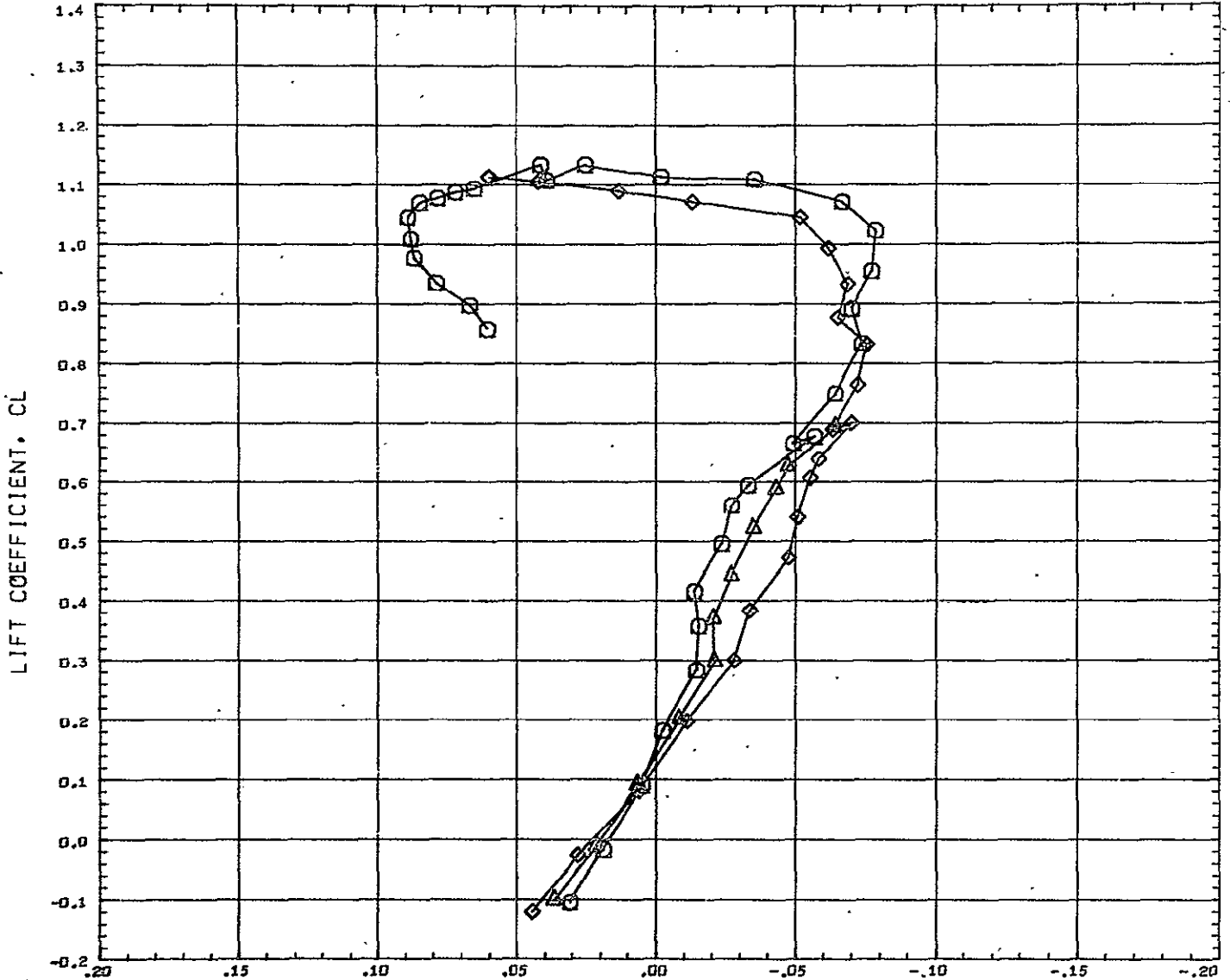
DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(R2756S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X
(R2769A)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X
(R2761S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X
(R2762A)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X

ELVATR	AILRON	RUDDER	RUDFLR
0.000	0.000	0.000	0.000
0.000	-20.000	0.000	0.000
0.000	-30.000	0.000	0.000
-30.000	30.000	0.000	0.000

REFERENCE INFORMATION	
REFS	6064.0040 SQ FT
REFL	821.2094 INCHES
REFB	1422.8049 INCHES
XMRP	1422.5040 INCHES
YMRP	0.0000 INCHES
ZMRP	130.0004 INCHES
SCALE	0.0035 SCALE

MACH 0.598

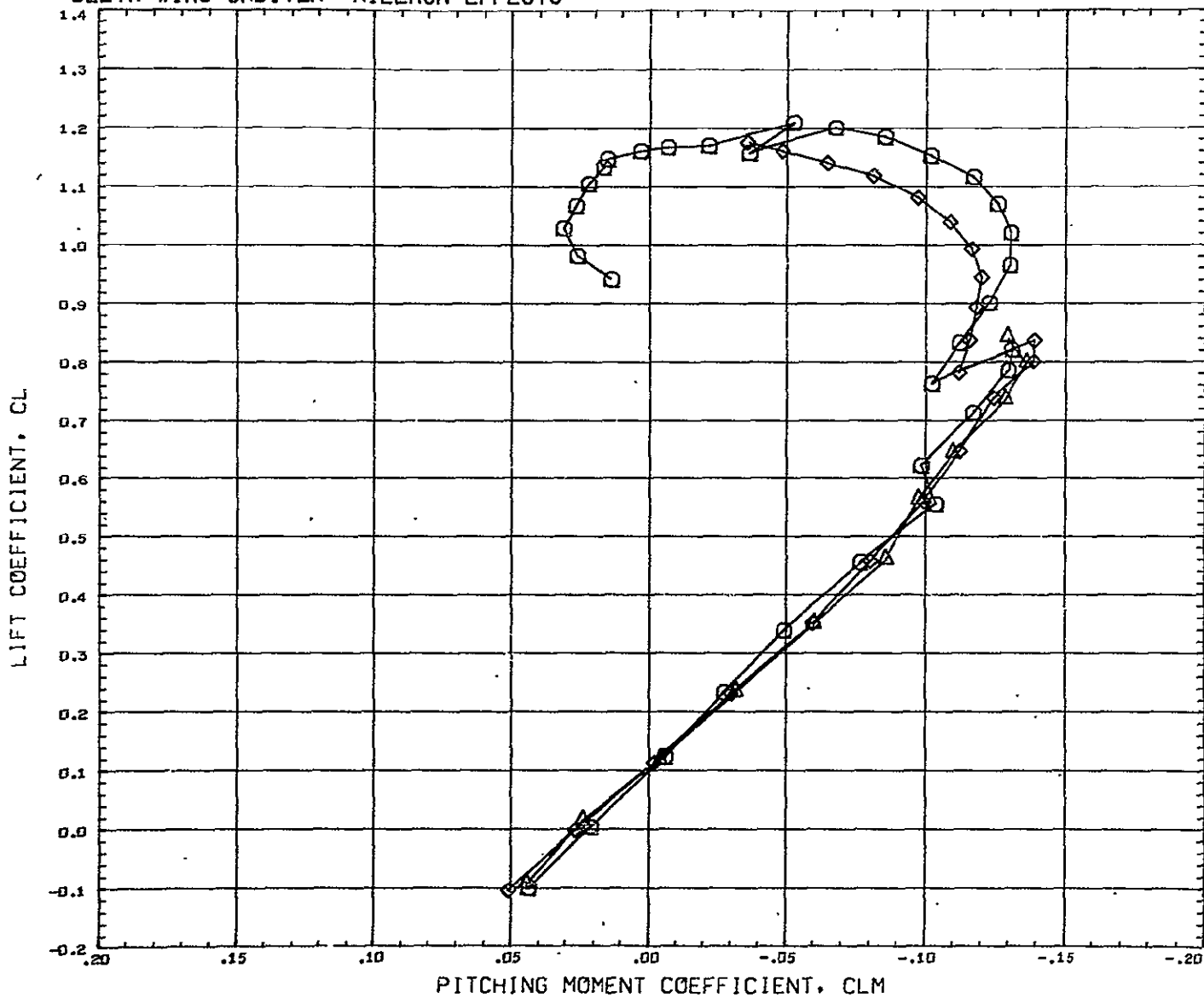
DELTA WING ORBITER-AILERON EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(R2756S)	MSFC478 NR DELTA ORBITER 65W17E10V17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(R2760A)	MSFC478 NR DELTA ORBITER 65W17E10V17J2X	0.000	-20.000	0.000	0.000	REFL 821.2004 INCHES
(R2761S)	MSFC478 NR DELTA ORBITER 65W17E10V17J2X	0.000	-30.000	0.000	0.000	REFB 1422.8040 INCHES
(R2762A)	MSFC478 NR DELTA ORBITER 65W17E10V17J2X	-30.000	30.000	0.000	0.000	XMRP 1422.5040 INCHES
						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 0.899

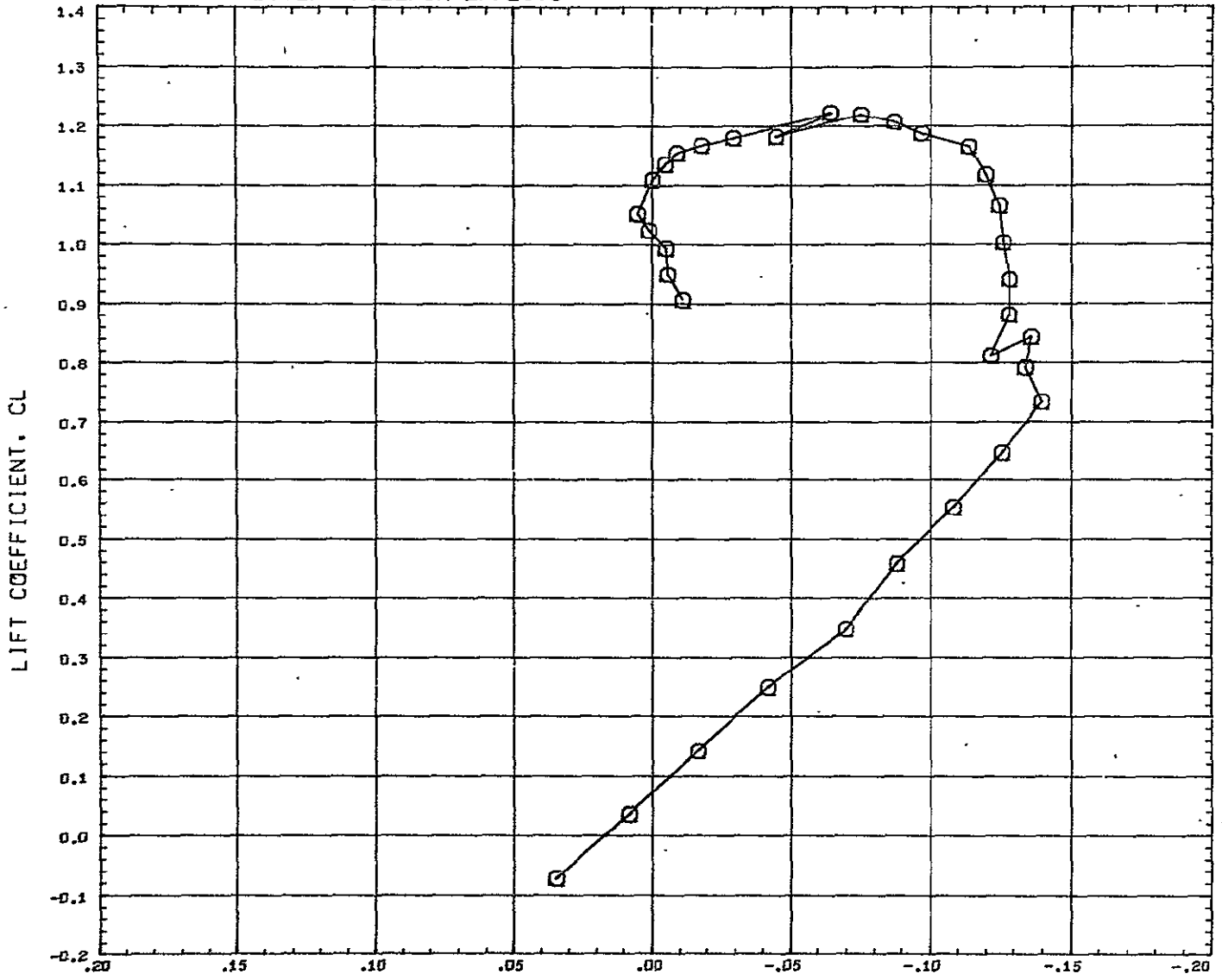
DELTA WING ORBITER- AILERON EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(R27565)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(R2760A)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	-20.000	0.000	0.000	REFL 821.2004 INCHES
(R27615)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	-30.000	0.000	0.000	REFB 1422.8040 INCHES
(R2762A)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	-30.000	30.000	0.000	0.000	XMRP 1422.5040 INCHES
						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 1.003

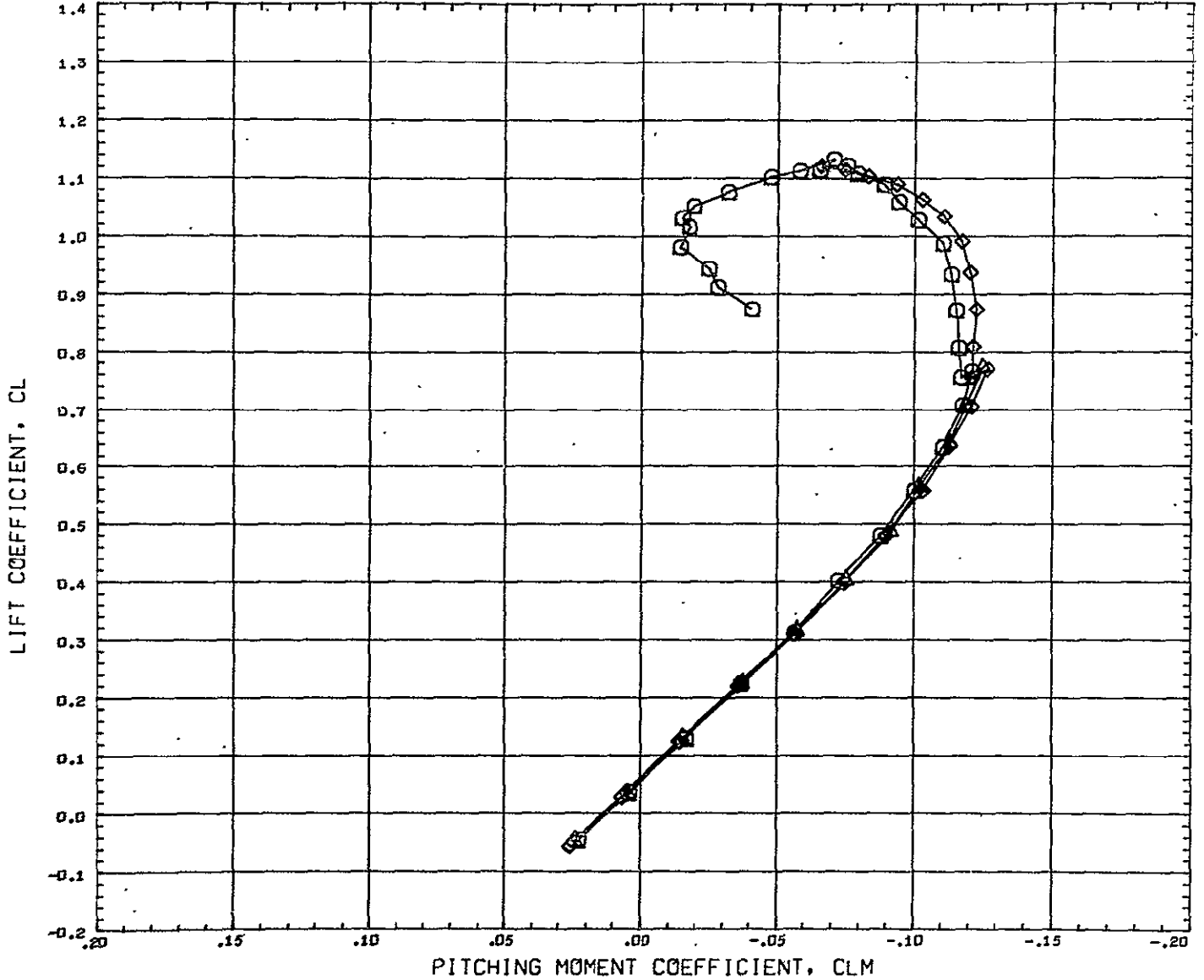
DELTA WING ORBITER-AILERON EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(R2756S)	MSFC478 NR DELTA ORBITER BSW17E10V17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(R2760A)	MSFC478 NR DELTA ORBITER BSW17E10V17J2X	0.000	-20.000	0.000	0.000	REFL 821.2004 INCHES
(R2761S)	MSFC478 NR DELTA ORBITER BSW17E10V17J2X	0.000	-30.000	0.000	0.000	REFB 1422.6040 INCHES
(R2762A)	MSFC478 NR DELTA ORBITER BSW17E10V17J2X	-30.000	30.000	0.000	0.000	XMRP 1422.5040 INCHES
						YMRF 0.0000 INCHES
						ZMRF 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 1.199

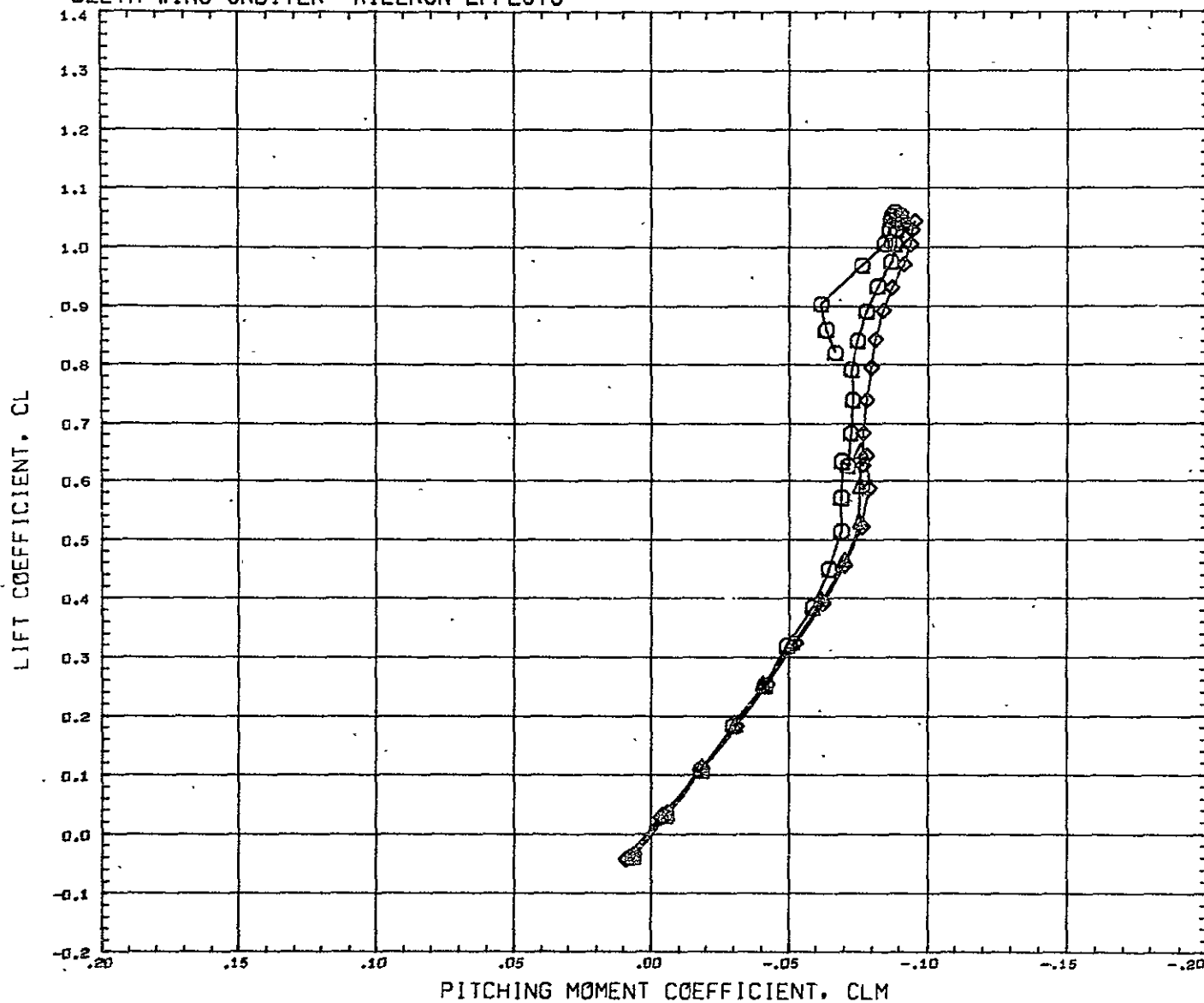
DELTA WING ORBITER- AILERON EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(R2756S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(R2760A)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	-20.000	0.000	0.000	REFL 821.2004 INCHES
(R2761S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	-30.000	0.000	0.000	REFB 1422.8040 INCHES
(R2762A)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	-30.000	30.000	0.000	0.000	XMRP 1422.504L INCHES
						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 1.458

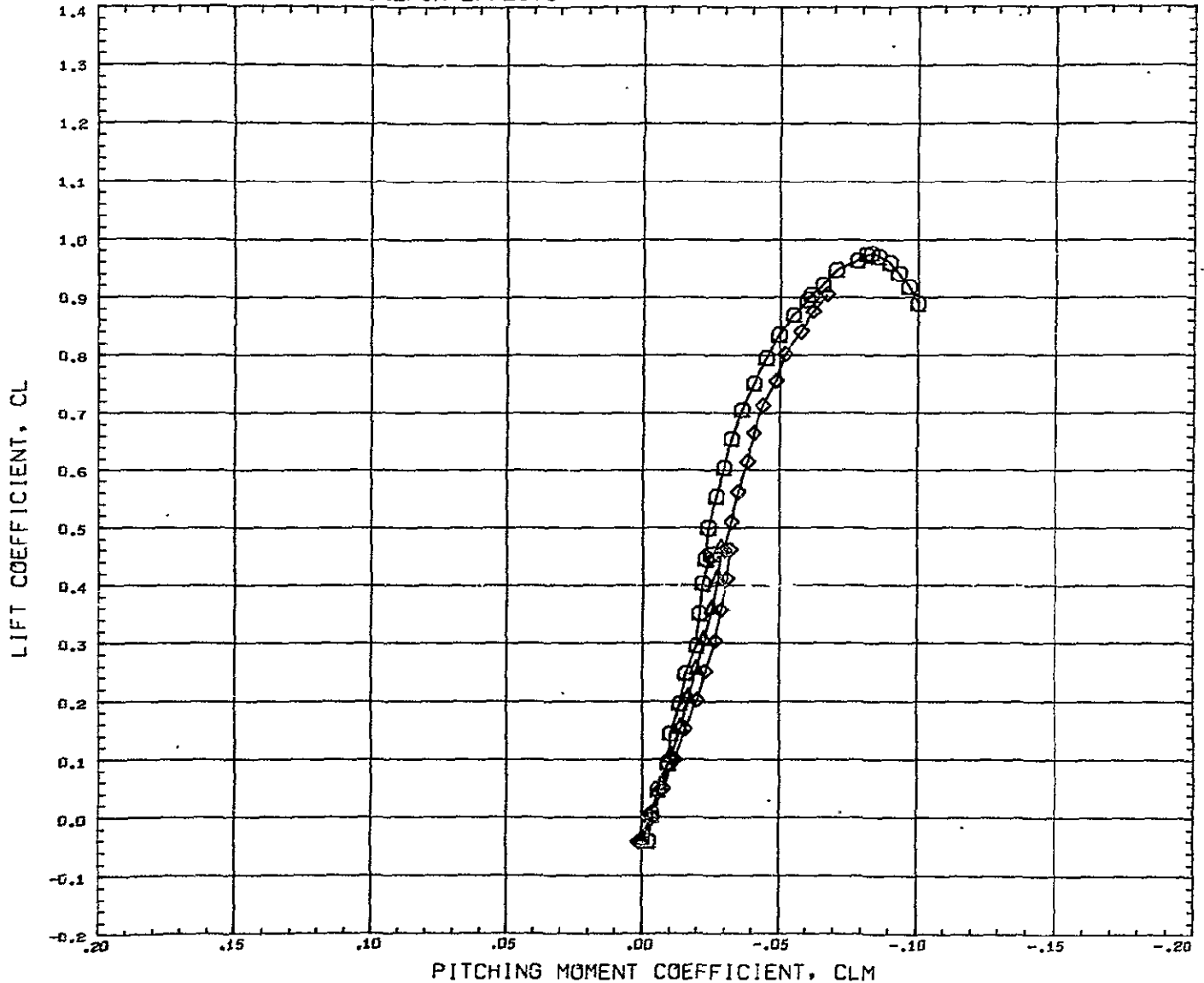
DELTA WING ORBITER-AILERON EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(R27565)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(R2760A)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	-20.000	0.000	0.000	REFL 821.2004 INCHES
(R27615)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	-30.000	0.000	0.000	REFB 1422.8040 INCHES
(R2762A)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	-30.000	30.000	0.000	0.000	XMRP 1422.5040 INCHES
						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 1.965

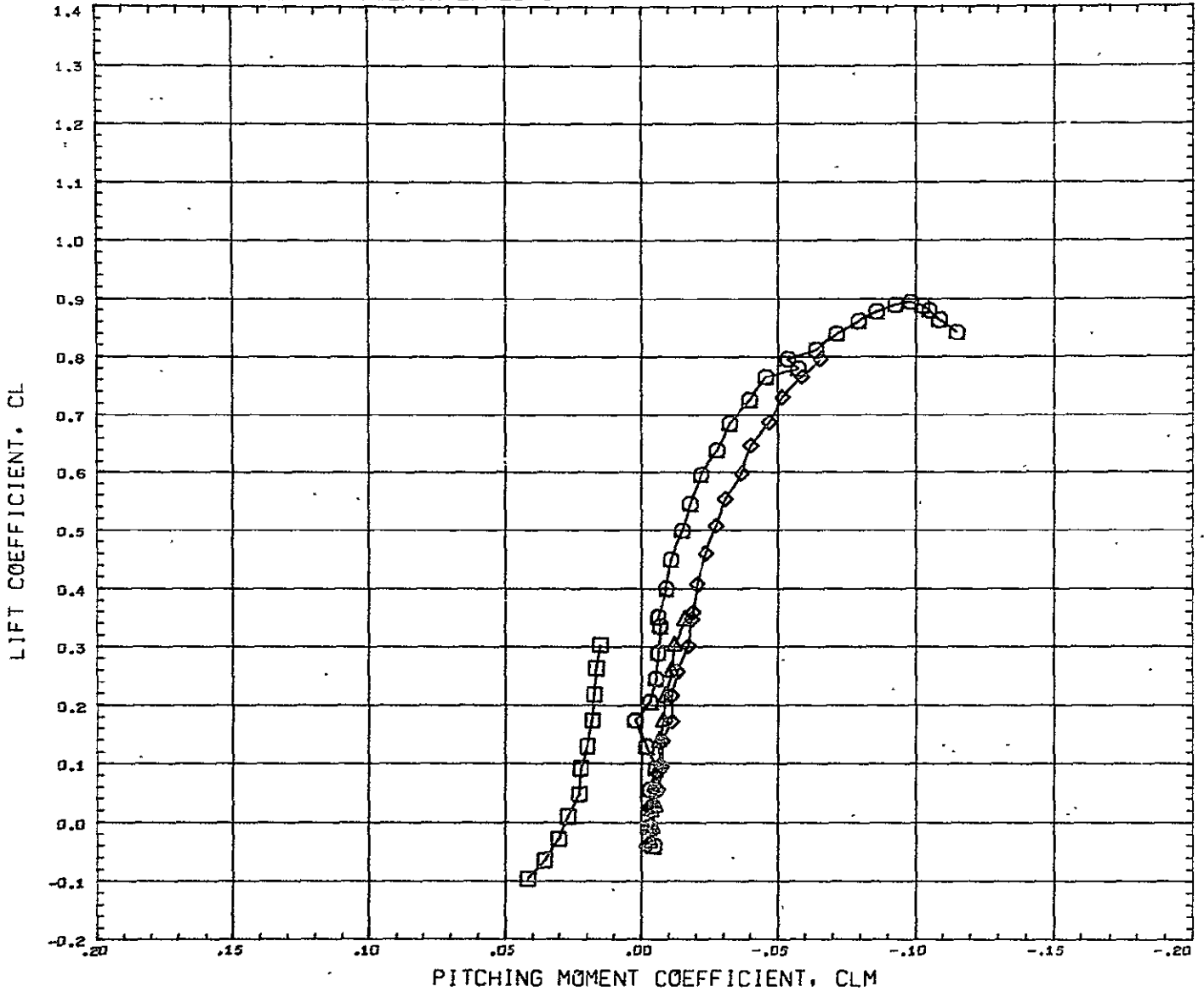
DELTA WING ORBITER-AILERON EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(R2756S)	MSFC478 NR DELTA ORBITER 85W17E10V17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(R2760A)	MSFC478 NR DELTA ORBITER 85W17E10V17J2X	0.000	-20.000	0.000	0.000	REFL 821.2004 INCHES
(R2761S)	MSFC478 NR DELTA ORBITER 85W17E10V17J2X	0.000	-30.000	0.000	0.000	REFB 1422.8040 INCHES
(R2762A)	MSFC478 NR DELTA ORBITER 85W17E10V17J2X	-30.000	30.000	0.000	0.000	XMRP 1422.5040 INCHES
						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 2.990

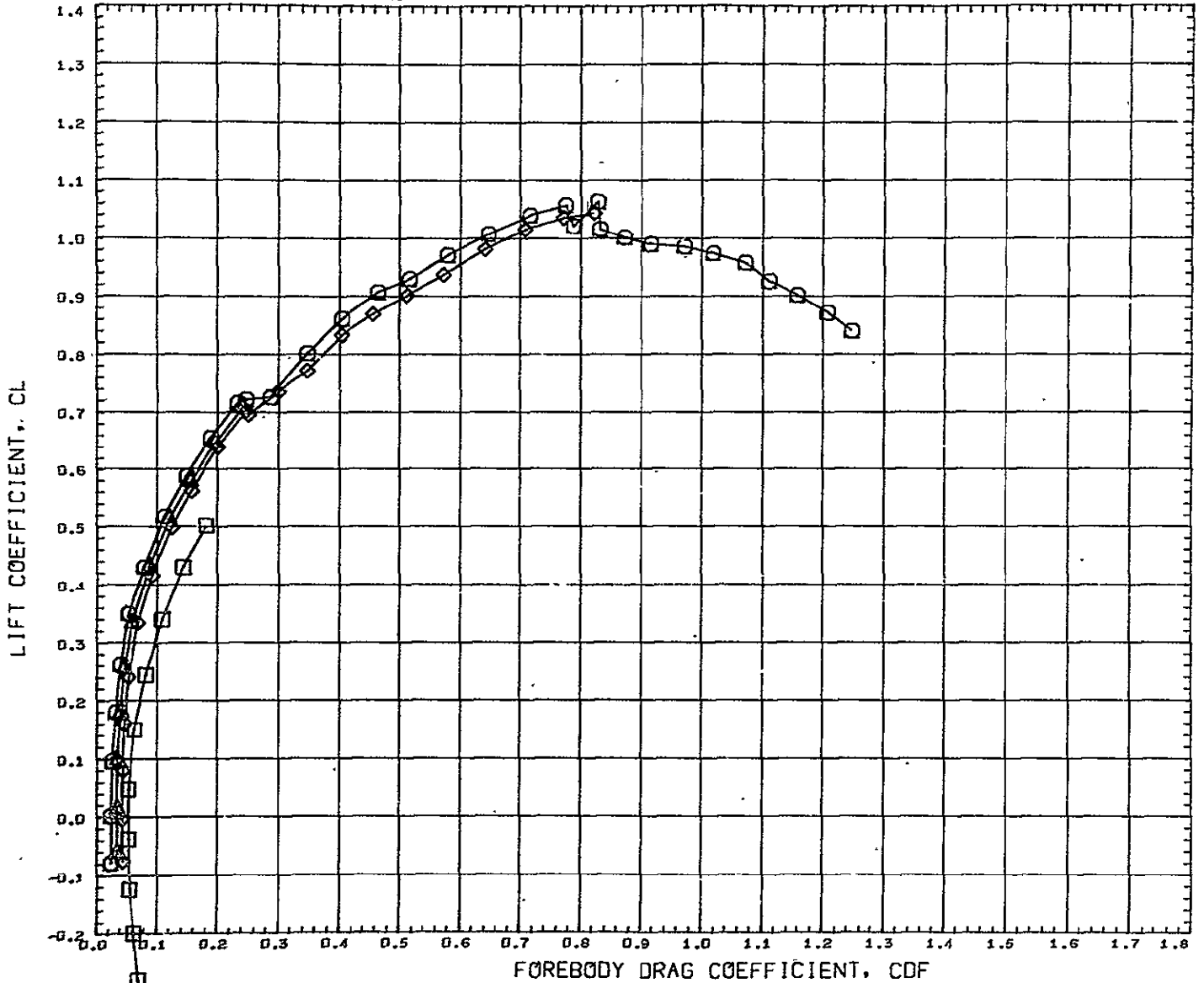
DELTA WING ORBITER- AILERON EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(R2756S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(R2760A)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	-20.000	0.000	0.000	REFL 821.2004 INCHES
(R2761S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	-30.000	0.000	0.000	REFB 1422.8040 INCHES
(R2762A)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	-30.000	30.000	0.000	0.000	XMRP 1422.5040 INCHES YMRP 0.0000 INCHES ZMRP 130.0004 INCHES SCALE 0.0035 SCALE

MACH 4.959

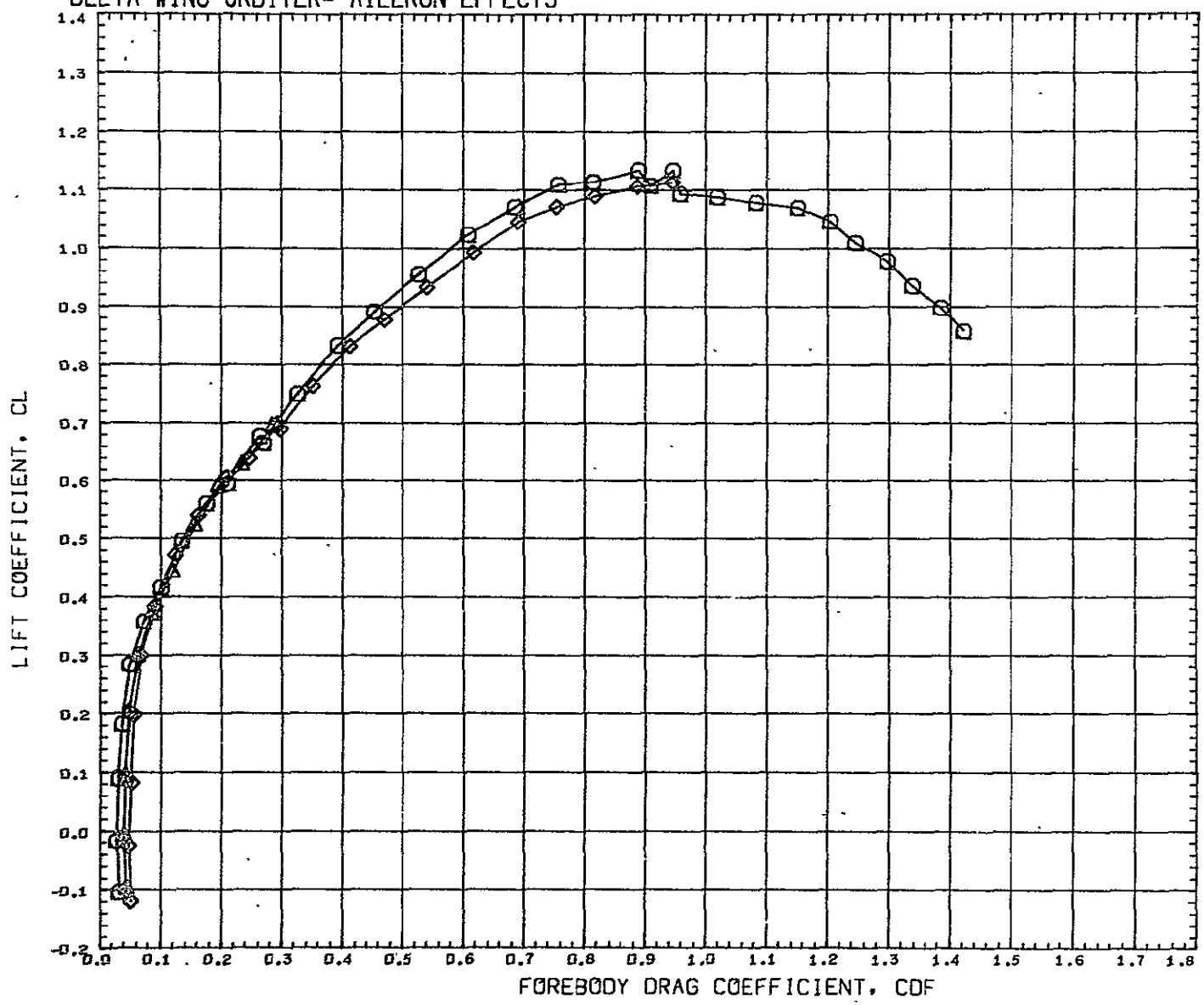
DELTA WING ORBITER- AILERON EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(R2756S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(R2760A)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	-20.000	0.000	0.000	REFL 821.2004 INCHES
(R2761S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	-30.000	0.000	0.000	REFE 1422.8040 INCHES
(R2762A)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	-30.000	30.000	0.000	0.000	XMRP 1422.5040 INCHES
						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 0.598

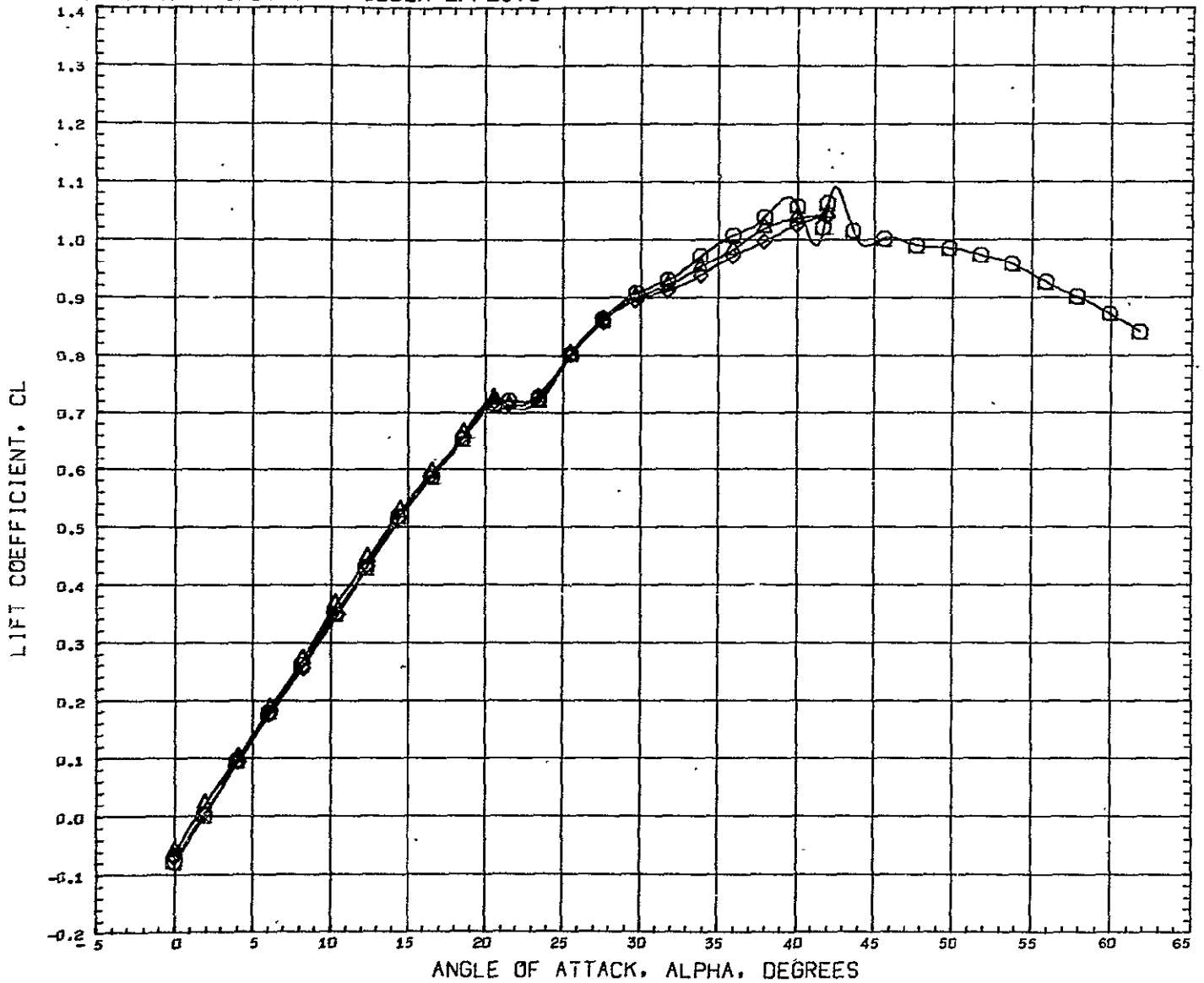
DELTA WING ORBITER-AILERON EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(R2756S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(R2760A)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	-20.000	0.000	0.000	REFL 821.2004 INCHES
(R2761S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	-30.000	0.000	0.000	REFB 1422.8040 INCHES
(R2762A)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	-30.000	30.000	0.000	0.000	XMRP 1422.5040 INCHES YMRP 0.0000 INCHES ZMRP 130.0004 INCHES SCALE 0.0035 SCALE

MACH 0.899

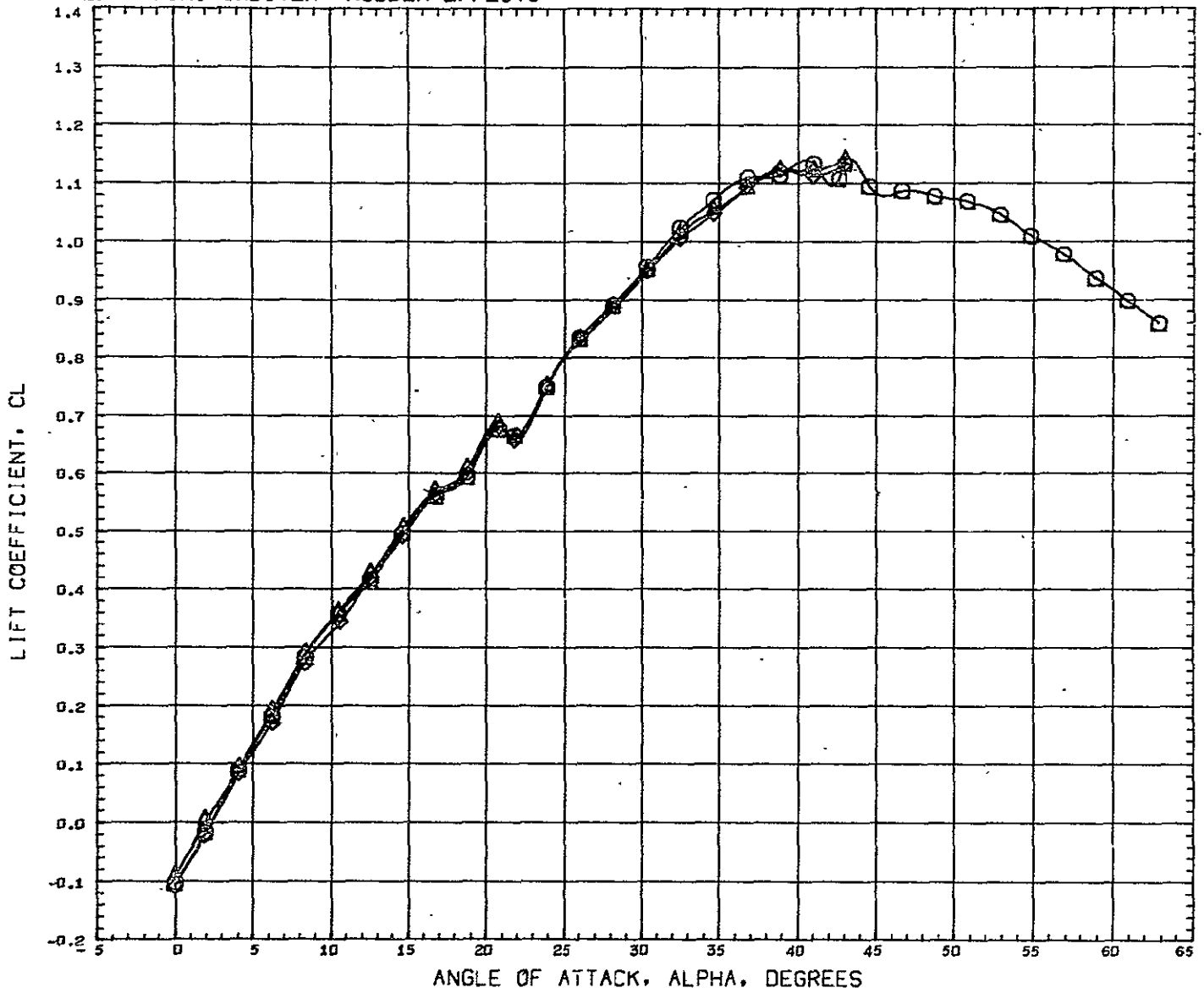
DELTA WING ORBITER- RUDDER EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(R2756S)	HSFC478 NR DELTA ORBITER 65W17E10V17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(R2763S)	HSFC478 NR DELTA ORBITER 65W17E10V17J2X	0.000	0.000	-10.000	0.000	REFL 821.2004 INCHES
(R2764S)	HSFC478 NR DELTA ORBITER 65W17E10V17J2X	0.000	0.000	-20.000	0.000	REFB 1422.8040 INCHES
						XMRP 1422.5040 INCHES
						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 0.596

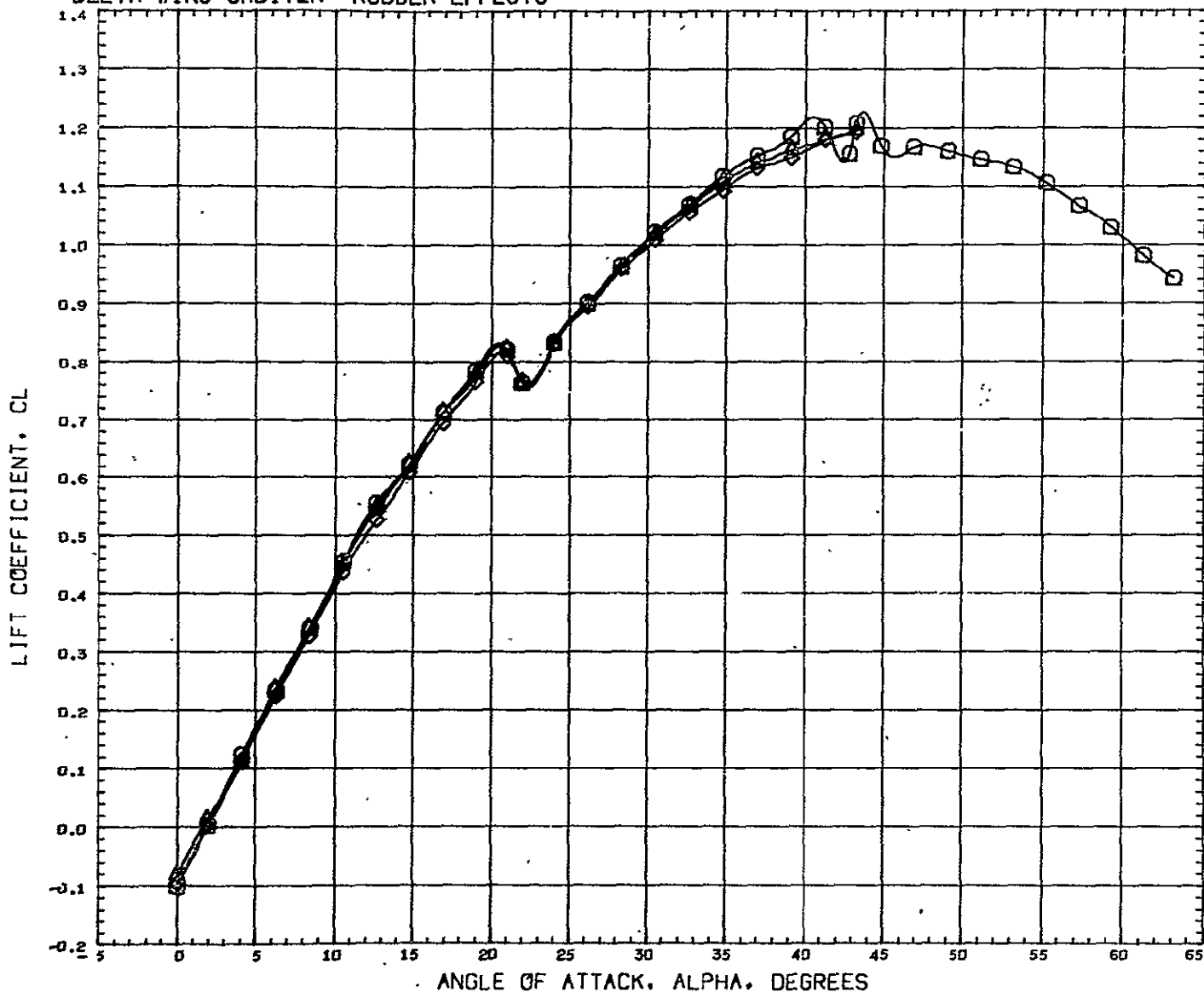
DELTA WING ORBITER- RUDDER EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(R27565)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	3.000	0.000	REFS 6084.0040 SQ FT
(R27635)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	-10.000	0.000	REFL 821.2004 INCHES
(R27645)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	-20.000	0.000	REFB 1422.8040 INCHES
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						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 0.895

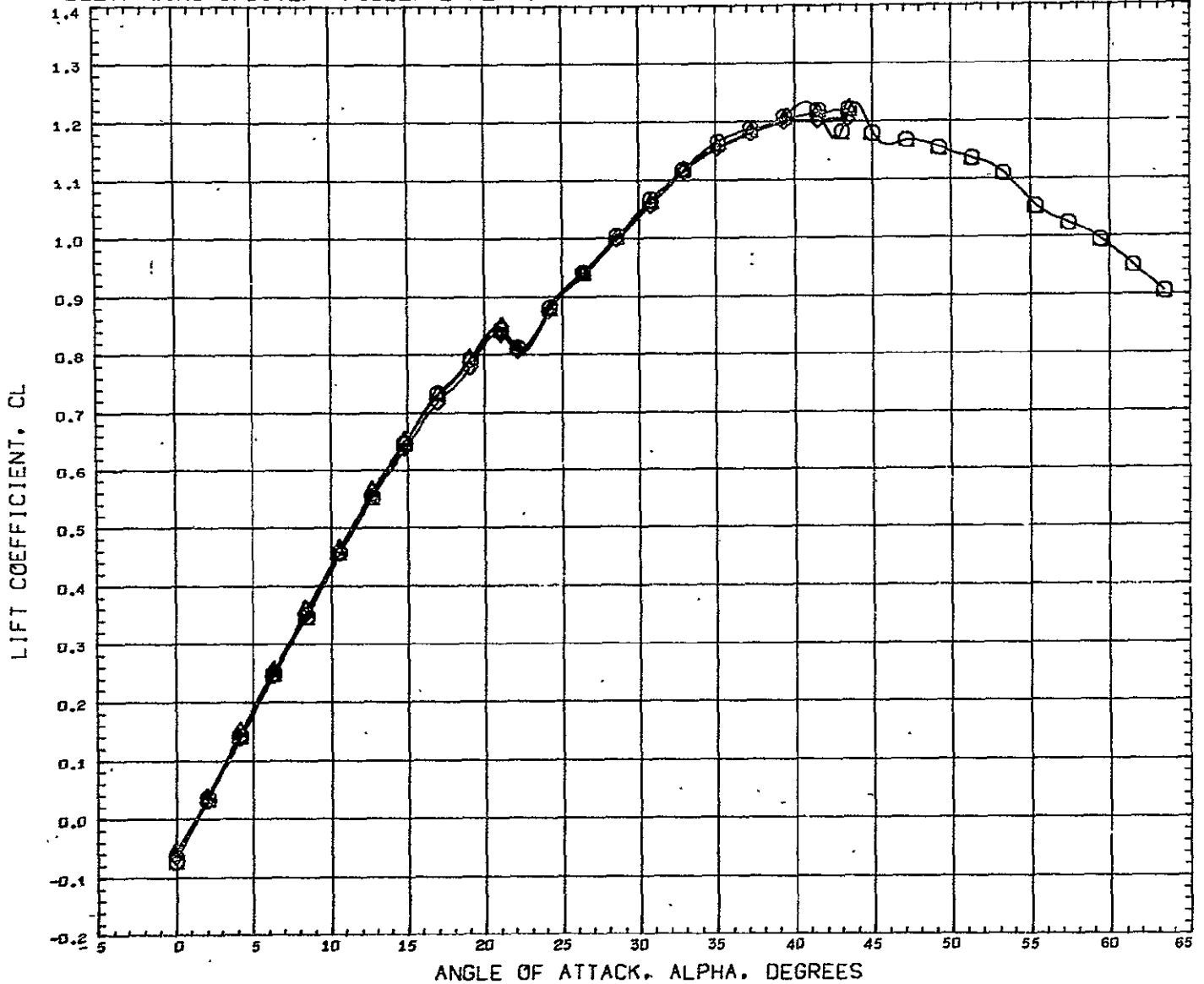
DELTA WING ORBITER- RUDDER EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(R2756S)	MSFC478 NR DELTA ORBITER 85W17E10V17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(R2763S)	MSFC478 NR DELTA ORBITER 85W17E10V17J2X	0.000	0.000	-10.000	0.000	REFL 821.2004 INCHES
(R2764S)	MSFC478 NR DELTA ORBITER 85W17E10V17J2X	0.000	0.000	-20.000	0.000	REFB 1422.8040 INCHES
						XMRP 1422.5040 INCHES
						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 1.003

DELTA WING ORBITER- RUDDER EFFECTS

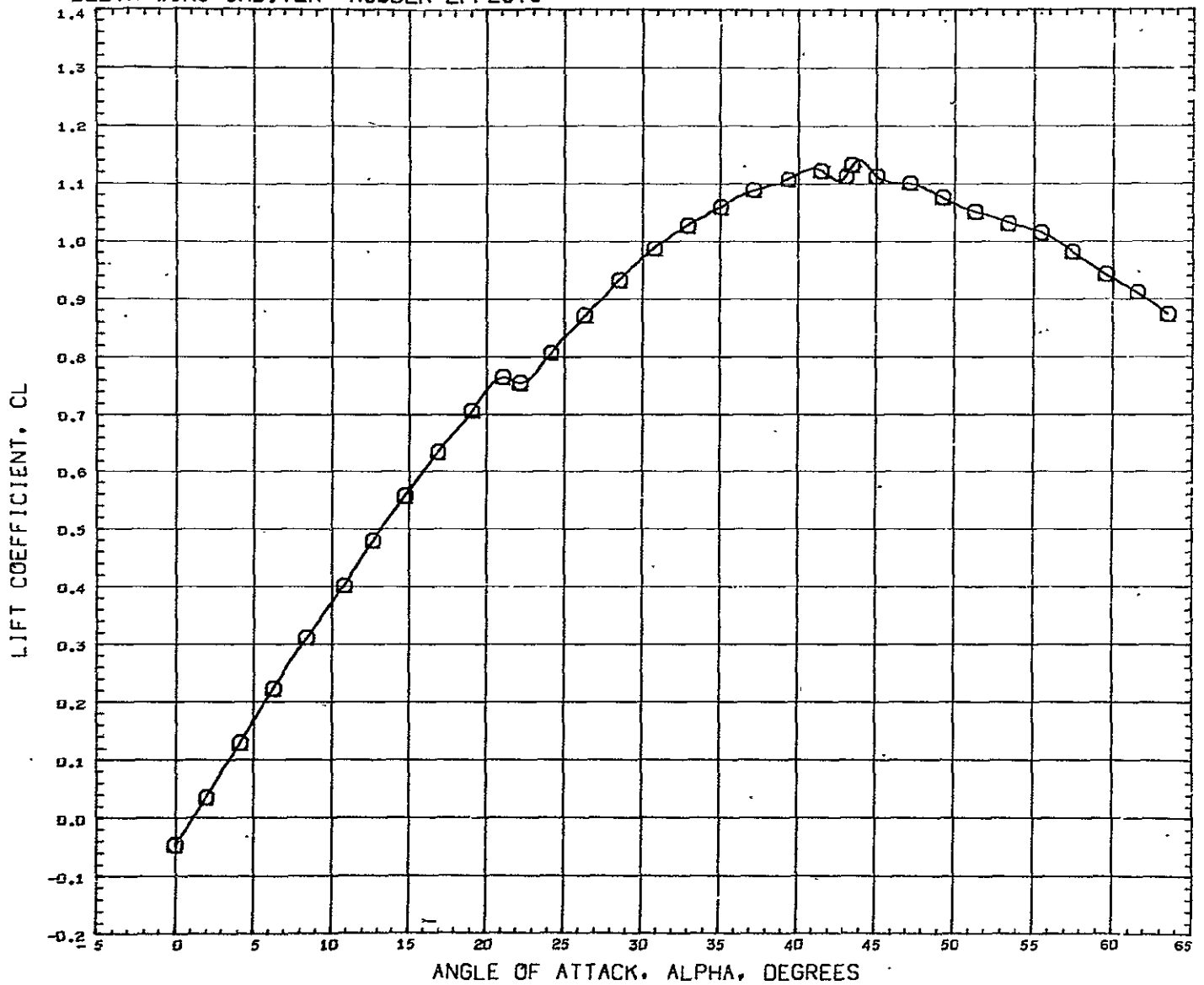


DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(R2736S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X
(R2763S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X
(R2764S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X

ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
0.000	0.000	-10.000	0.000	REFL 821.2004 INCHES
0.000	0.000	-20.000	0.000	REFS 1422.8040 INCHES
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				YMRP 0.0000 INCHES
				ZMRP 130.0004 INCHES
				SCALE 0.0035 SCALE

MACH 1.199

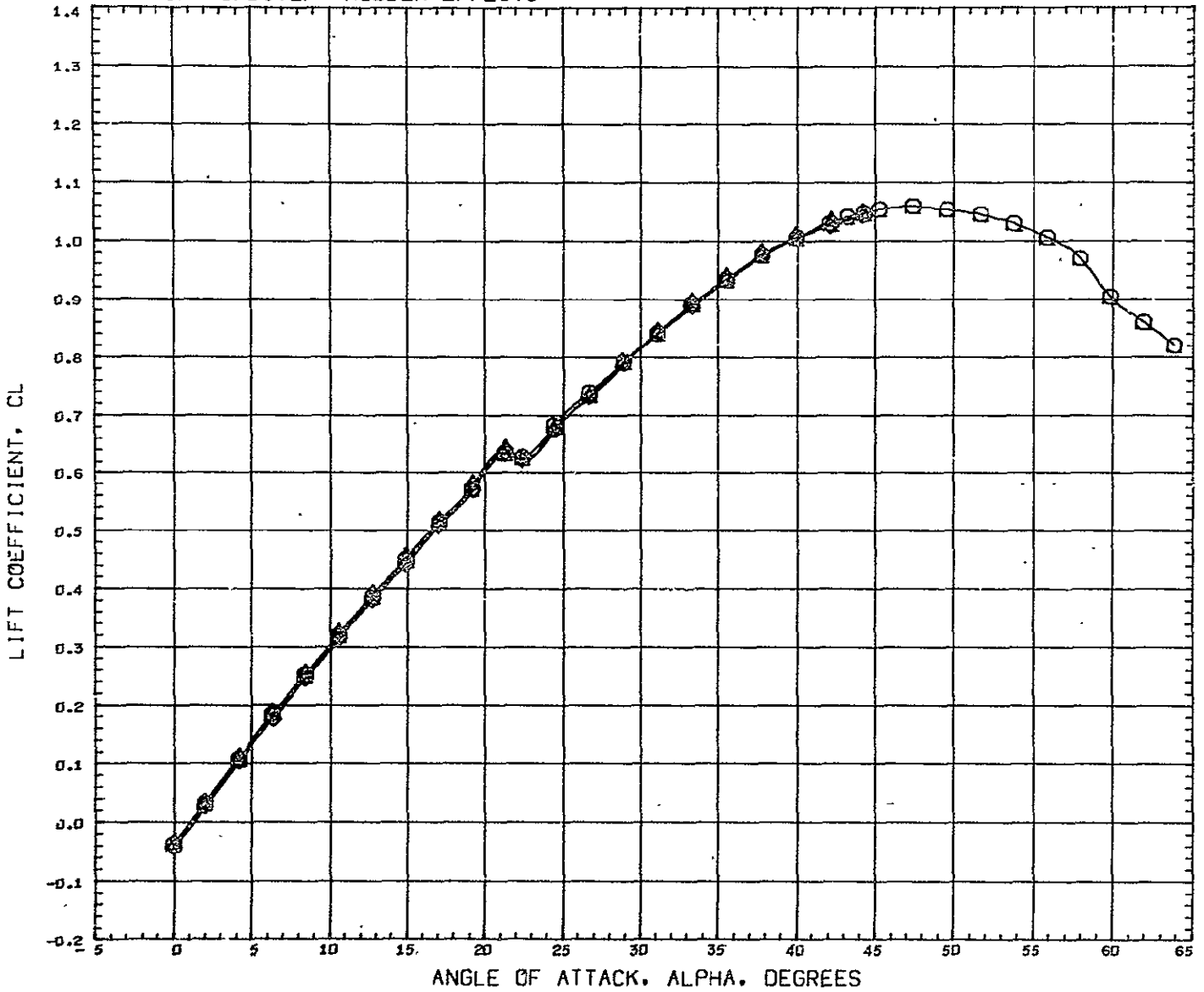
DELTA WING ORBITER- RUDDER EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(R2756S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(R2763S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	-10.000	0.000	REFL 821.2004 INCHES
(P2764S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	-20.000	0.000	REFB 1422.8040 INCHES
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						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 1.458

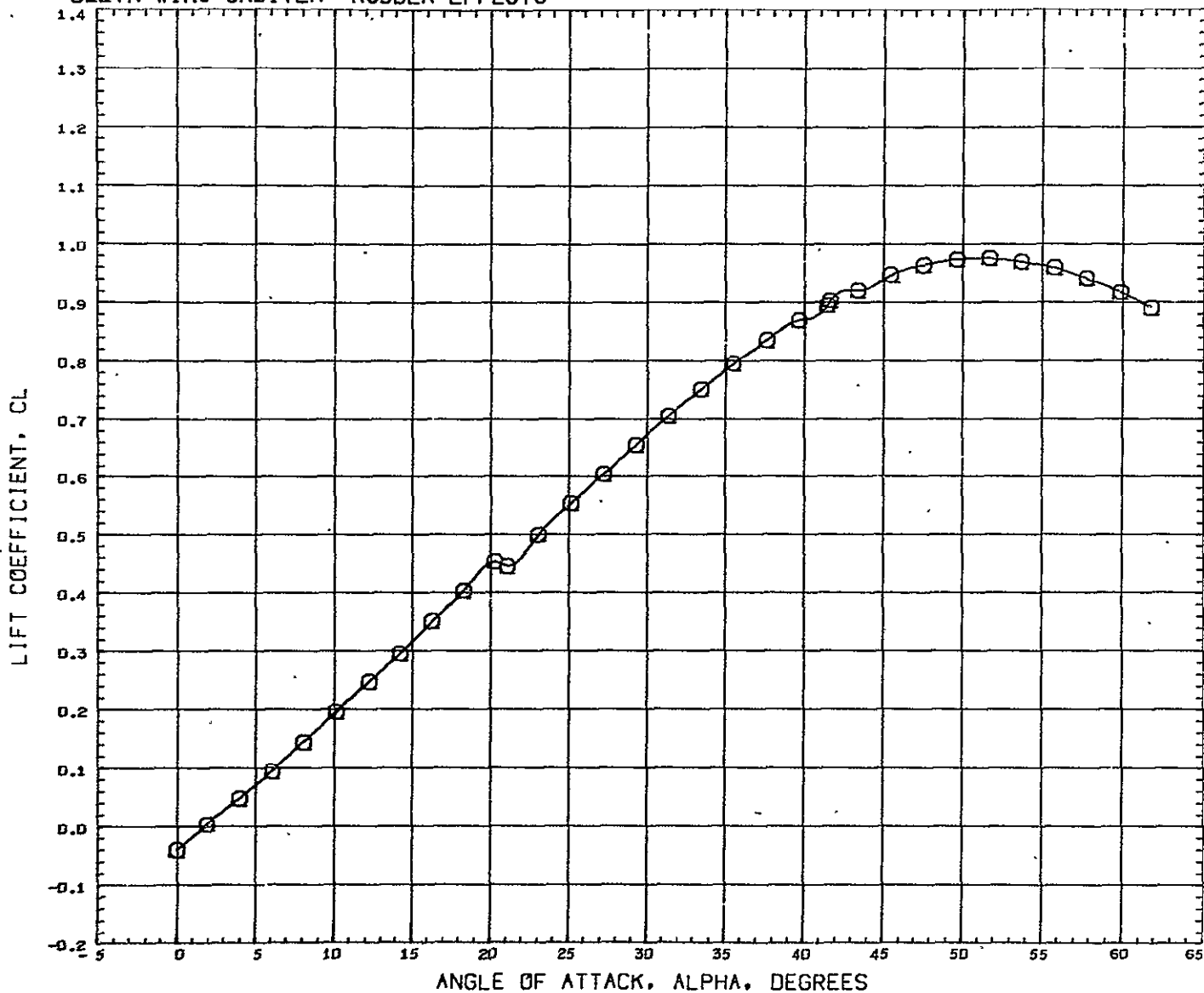
DELTA WING ORBITER- RUDDER EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(R2756S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(R2763S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	-10.000	0.000	REFL 821.2004 INCHES
(R2764S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	-20.000	0.000	REFB 1422.8049 INCHES
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						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 1.965

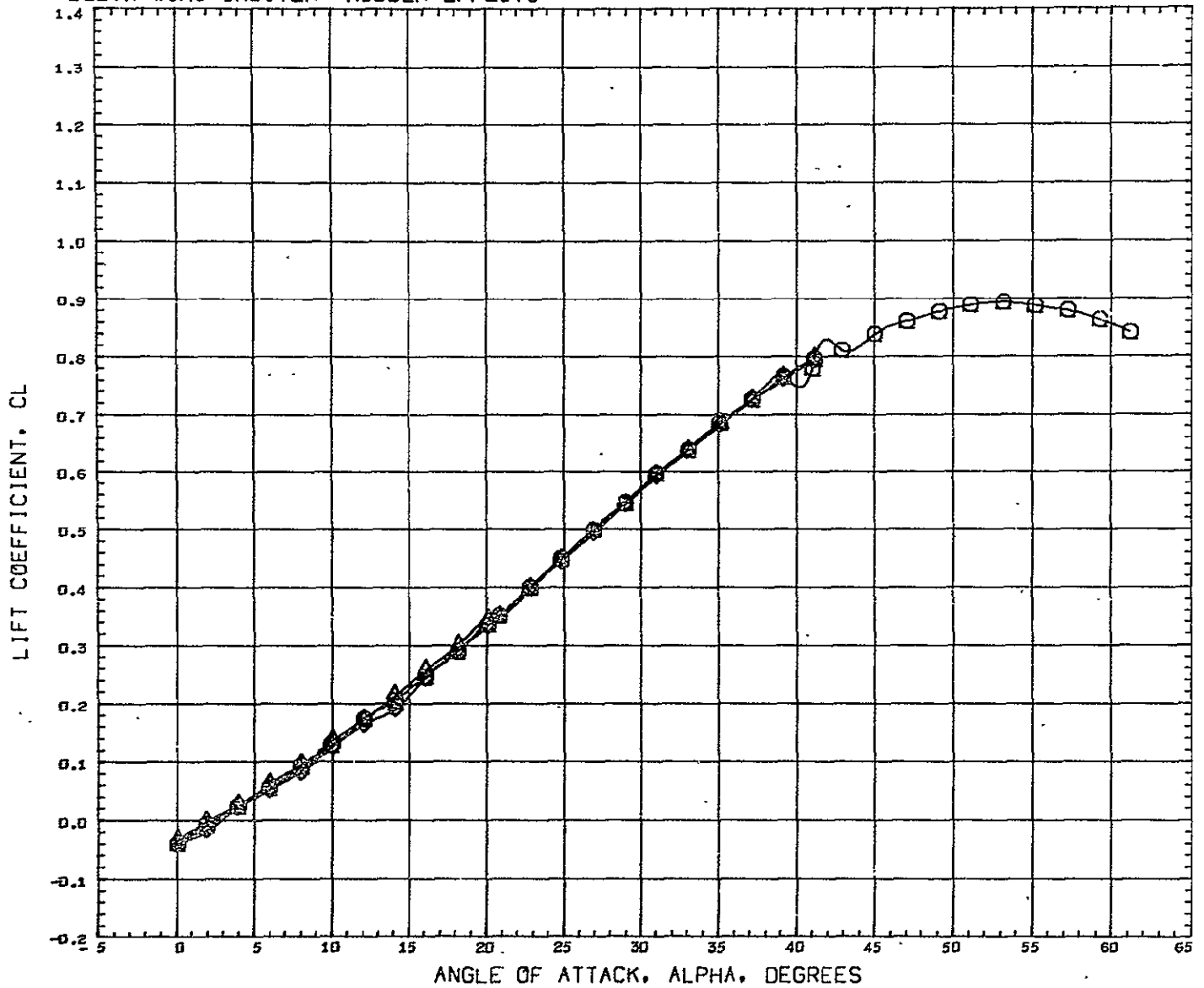
DELTA WING ORBITER- RUDDER EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(R2756S)	MSFC478 NR DELTA ORBITER B5W17E1DV17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(R2763S)	MSFC478 NR DELTA ORBITER B5W17E1DV17J2X	0.000	0.000	-10.000	0.000	REFL 821.2004 INCHES
(R2764S)	MSFC478 NR DELTA ORBITER B5W17E1DV17J2X	0.000	0.000	-20.000	0.000	REFB 1422.6040 INCHES
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						YNRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 2.990

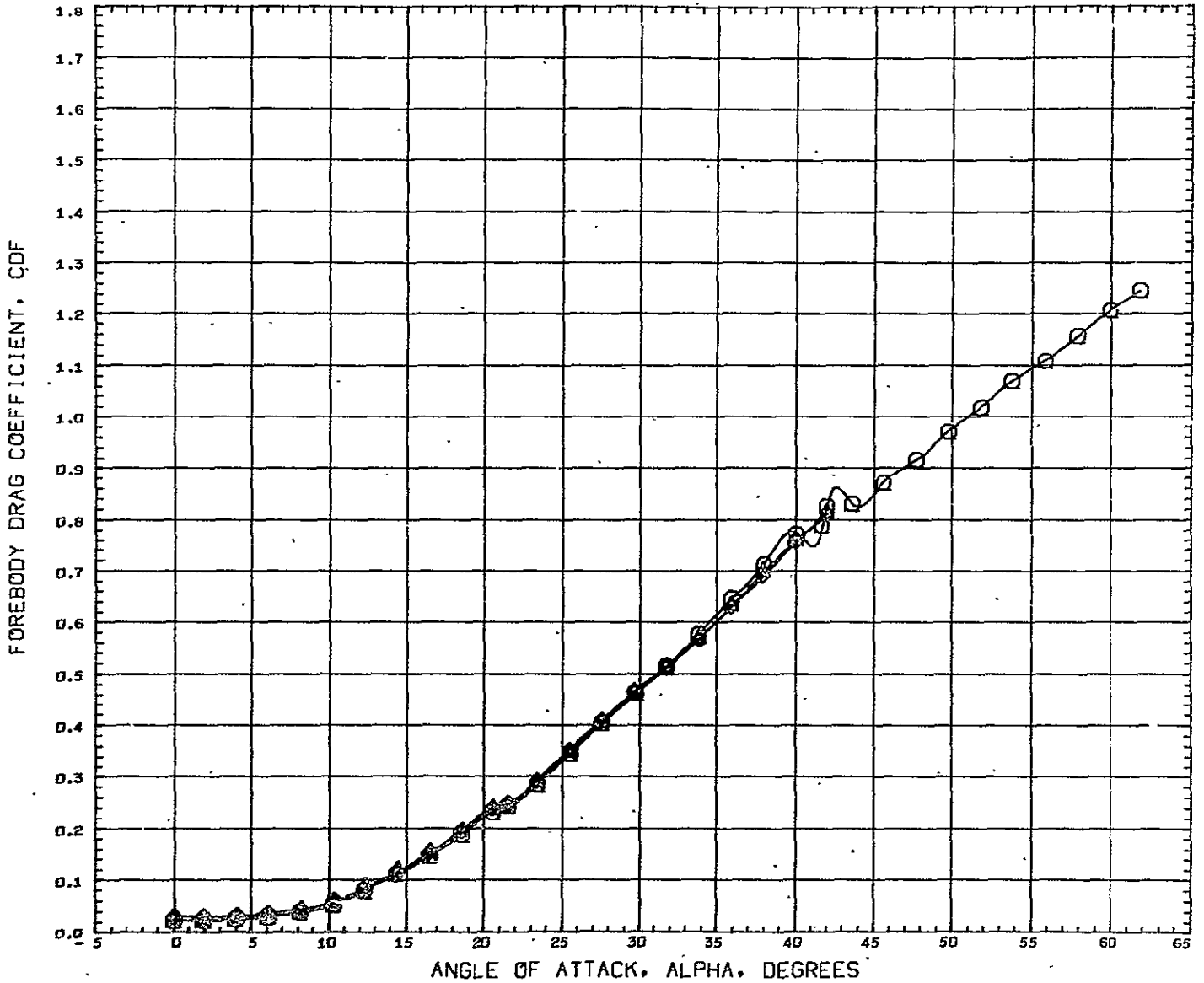
DELTA WING ORBITER- RUDDER EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(R2756S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(R2763S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	-10.000	0.000	REFL 821.2004 INCHES
(R2764S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	-20.000	0.000	REFB 1422.8040 INCHES
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						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 4.959

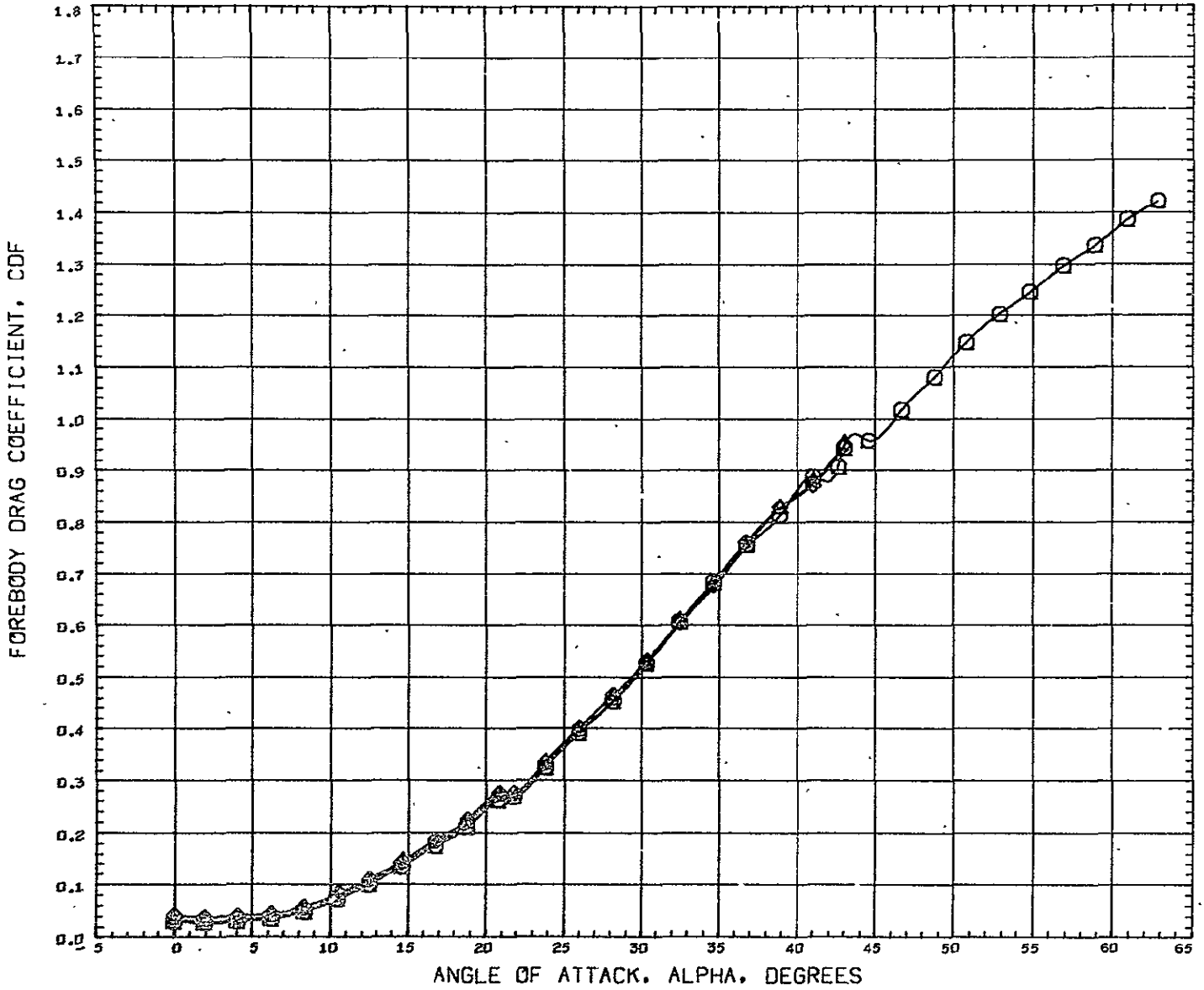
DELTA WING ORBITER- RUDDER EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(R2756S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(R2763S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	-10.000	0.000	REFL 821.2004 INCHES
(R2764S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	-20.000	0.000	REFB 1422.8040 INCHES
						XMRP 1422.5040 INCHES
						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 0.598

DELTA WING ORBITER- RUDDER EFFECTS

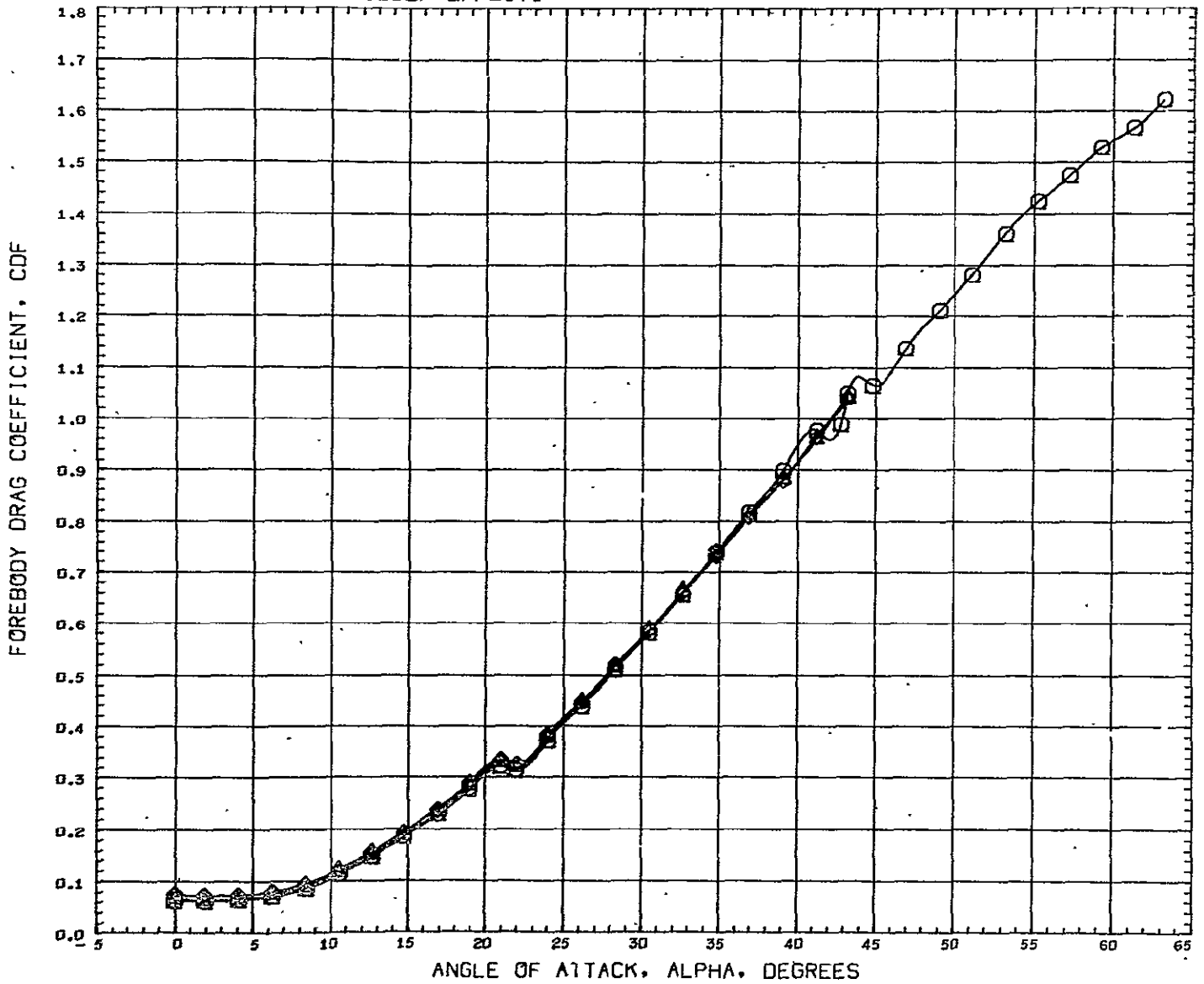


DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(R2756S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X
(R2763S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X
(R2764S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X

ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
0.000	0.000	-10.000	0.000	REFL 821.2004 INCHES
0.000	0.000	-20.000	0.000	REFS 1422.8040 INCHES
				XMRP 1422.5040 INCHES
				YMRP 0.0000 INCHES
				ZMRP 130.0004 INCHES
				SCALE 0.0035 SCALE

MACH 0.899

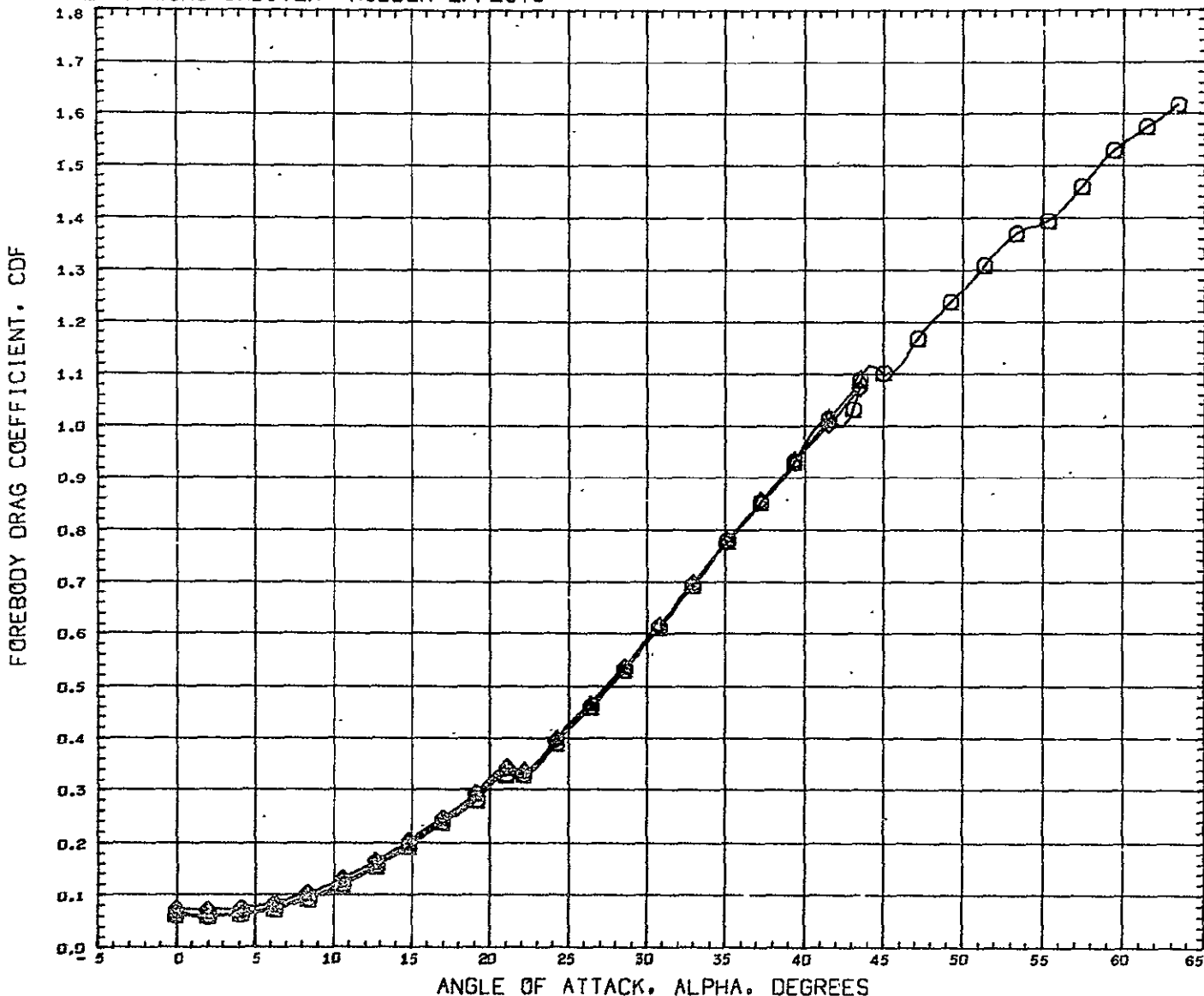
DELTA WING ORBITER- RUDDER EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(R2756S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(R2763S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	-10.000	0.000	REFL 821.2004 INCHES
(R2764S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	-20.000	0.000	REFB 1422.8040 INCHES
						XMRP 1422.5040 INCHES
						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 1.003

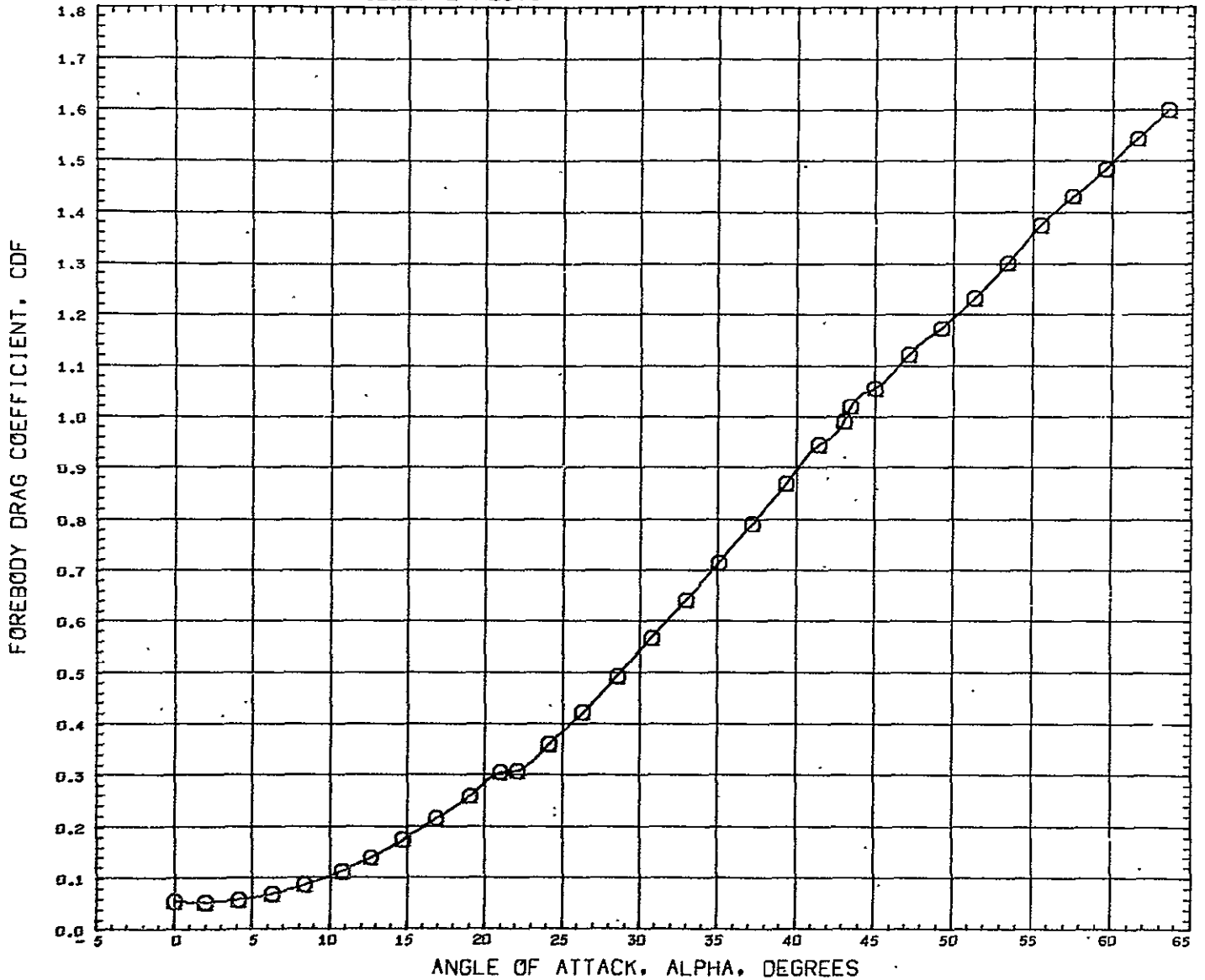
DELTA WING ORBITER- RUDDER EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(R2756S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(R2763S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	-10.000	0.000	REFL 821.2004 INCHES
(R2764S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	-20.000	0.000	REFB 1422.8040 INCHES
						XMRP 1422.5040 INCHES
						YMRF 0.0000 INCHES
						ZMRF 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 1.199

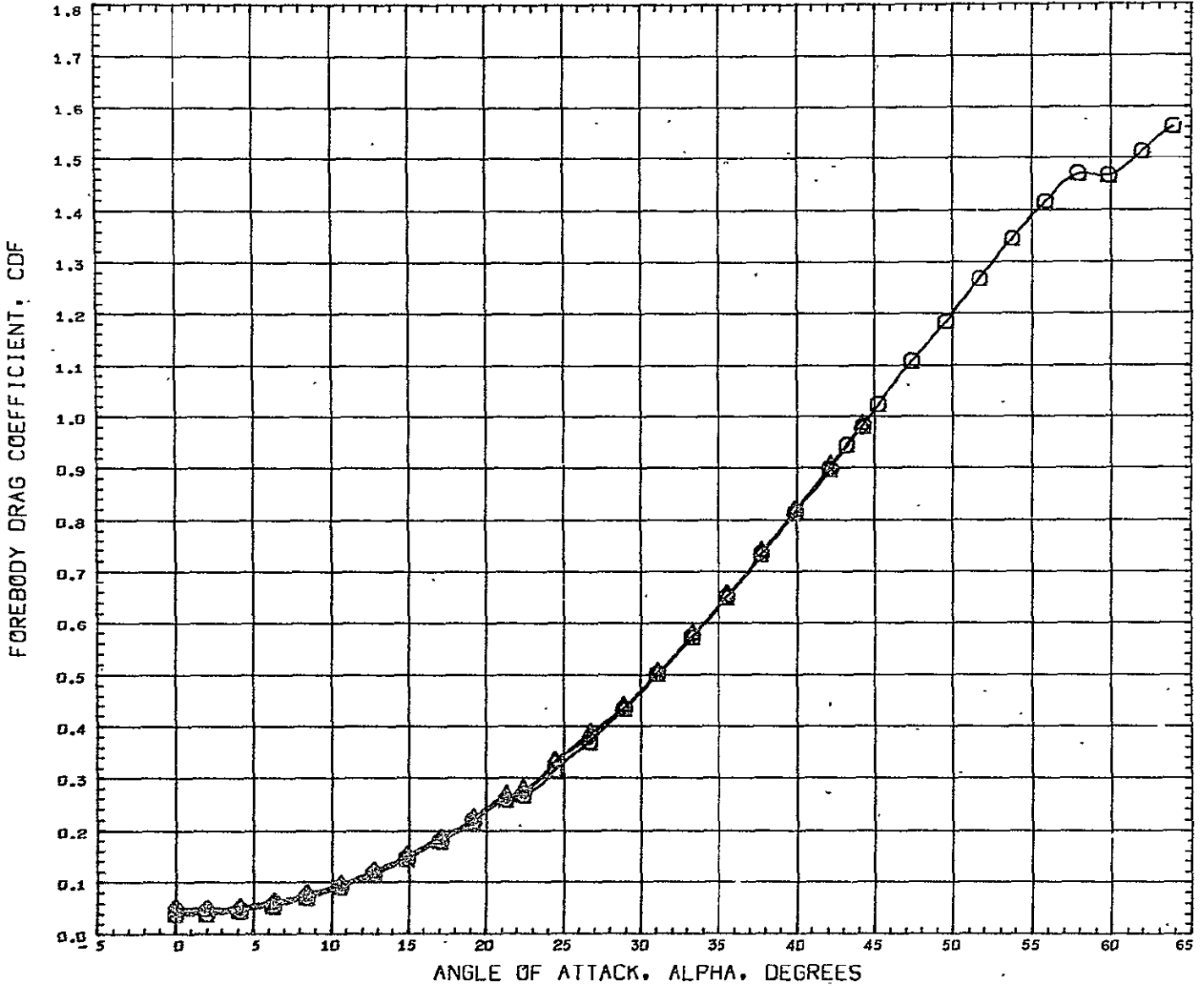
DELTA WING ORBITER- RUDDER EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(R2756S)	MSFC478 NR DELTA ORBITER B5W17E1DV17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(R2763S)	MSFC478 NR DELTA ORBITER B5W17E1DV17J2X	0.000	0.000	-10.000	0.000	REFL 821.2004 INCHES
(R2764S)	MSFC478 NR DELTA ORBITER B5W17E1DV17J2X	0.000	0.000	-20.000	0.000	REFB 1422.8040 INCHES
						XMRP 1422.5040 INCHES
						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 1.458

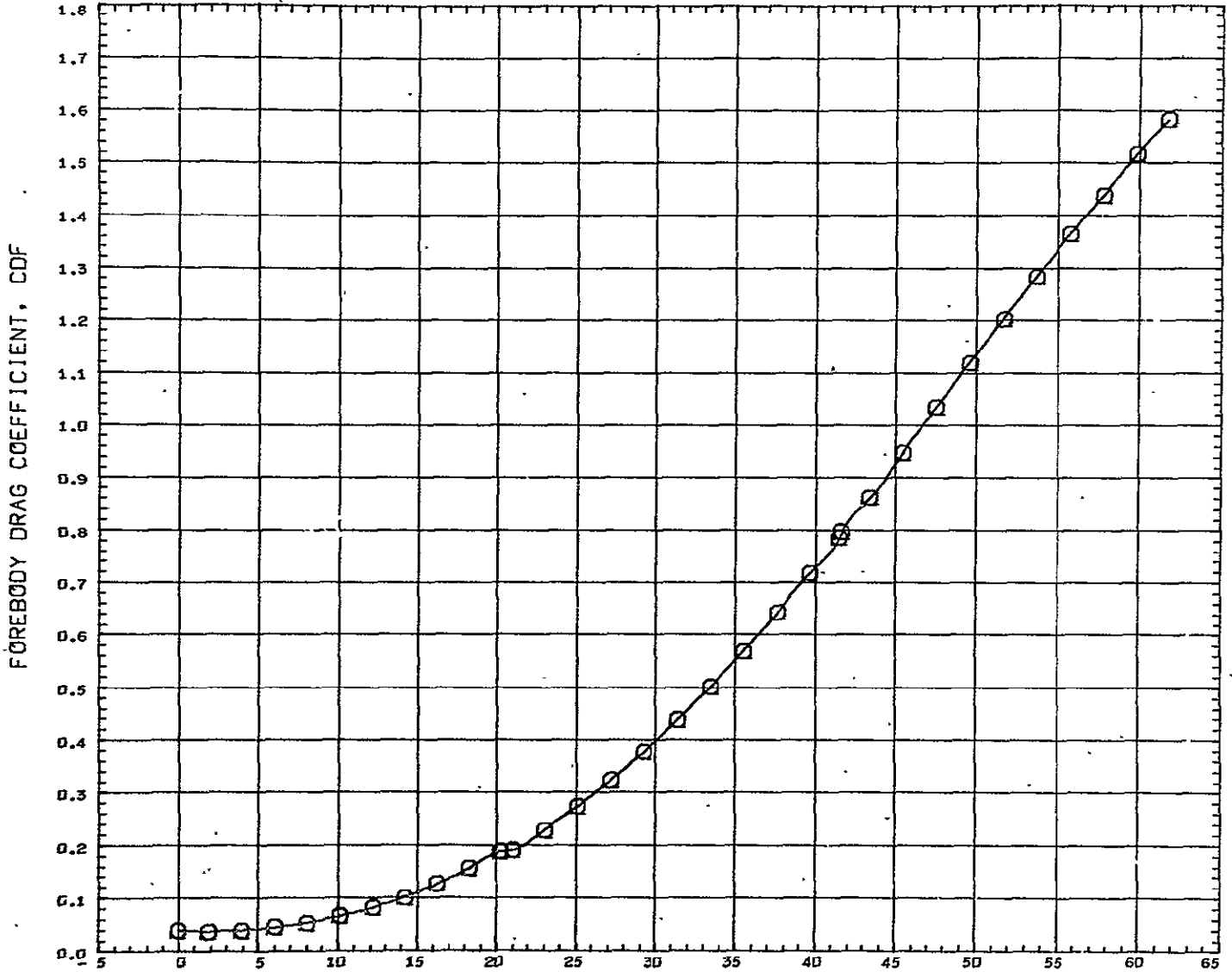
DELTA WING ORBITER- RUDDER EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(R2756S)	MSFC478 NR DELTA ORBITER B5W17E1DV17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(R2763S)	MSFC478 NR DELTA ORBITER B5W17E1DV17J2X	0.000	0.000	-10.000	0.000	REFL 821.2004 INCHES
(R2764S)	MSFC478 NR DELTA ORBITER B5W17E1DV17J2X	0.000	0.000	-20.000	0.000	REFB 1422.8040 INCHES
						XMRP 1422.5040 INCHES
						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 1.965

DELTA WING ORBITER- RUDDER EFFECTS

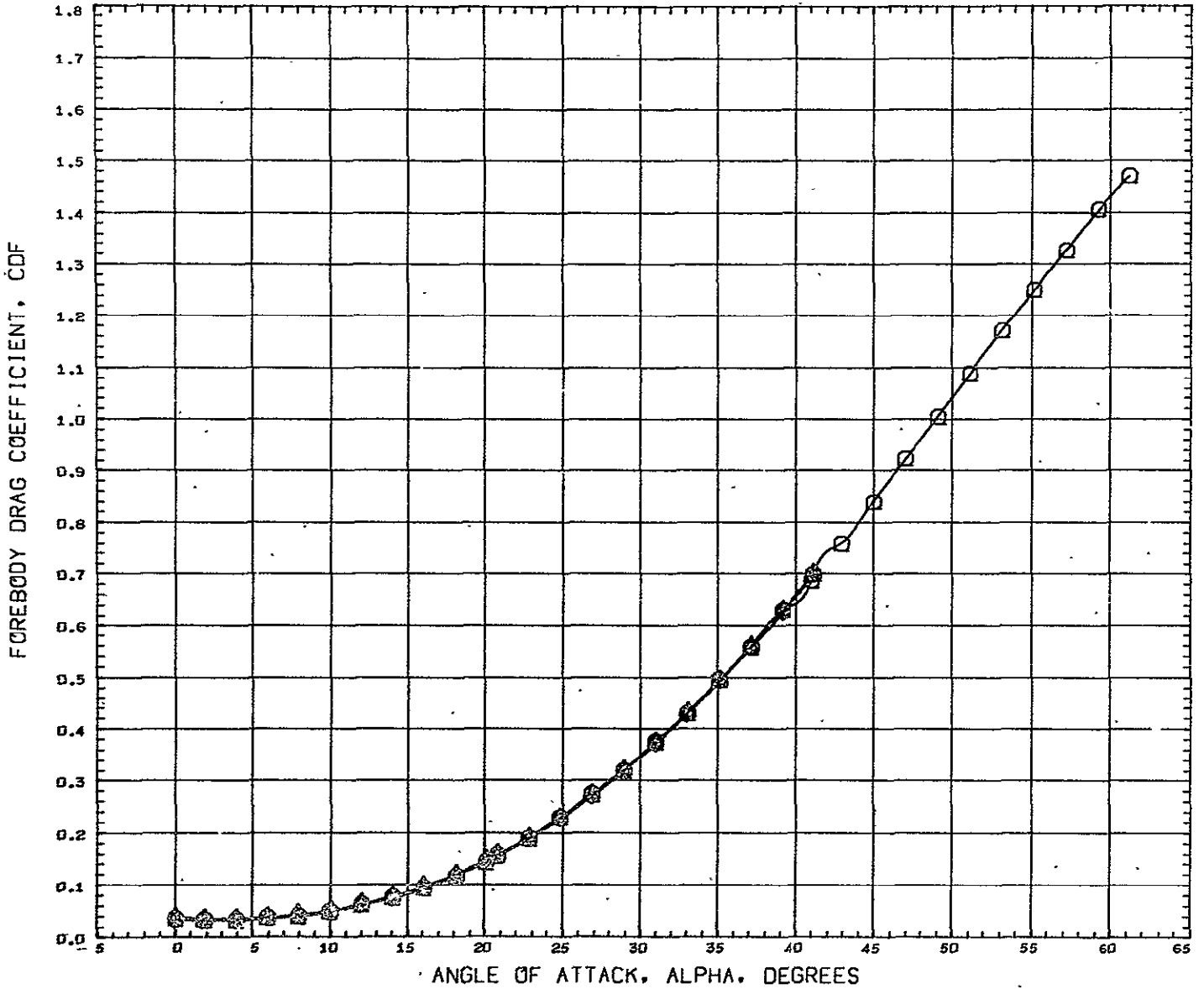


ANGLE OF ATTACK, ALPHA, DEGREES

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(R2756S)	HSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	0.000	0.000	REFS 6684.0040 SQ FT
(R2763S)	HSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	-10.000	0.000	REFL 821.2004 INCHES
(R2764S)	HSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	-20.000	0.000	REFB 1422.8040 INCHES
						XMRP 1422.5040 INCHES
						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 2.990

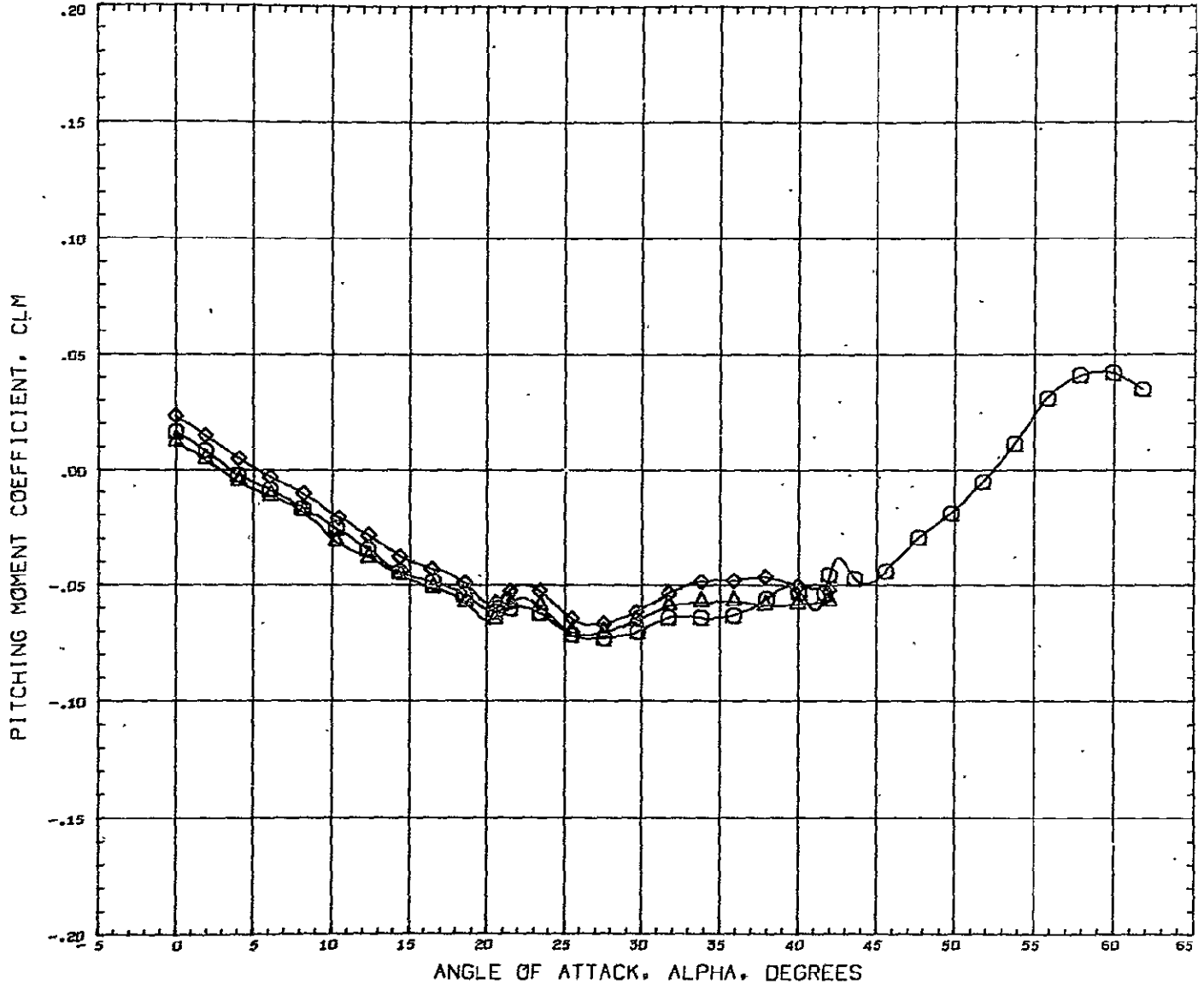
DELTA WING ORBITER- RUDDER EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(R2756S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(R2763S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	-10.000	0.000	REFL 821.2004 INCHES
(R2764S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	-20.000	0.000	REFB 1422.8040 INCHES
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						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 4.959

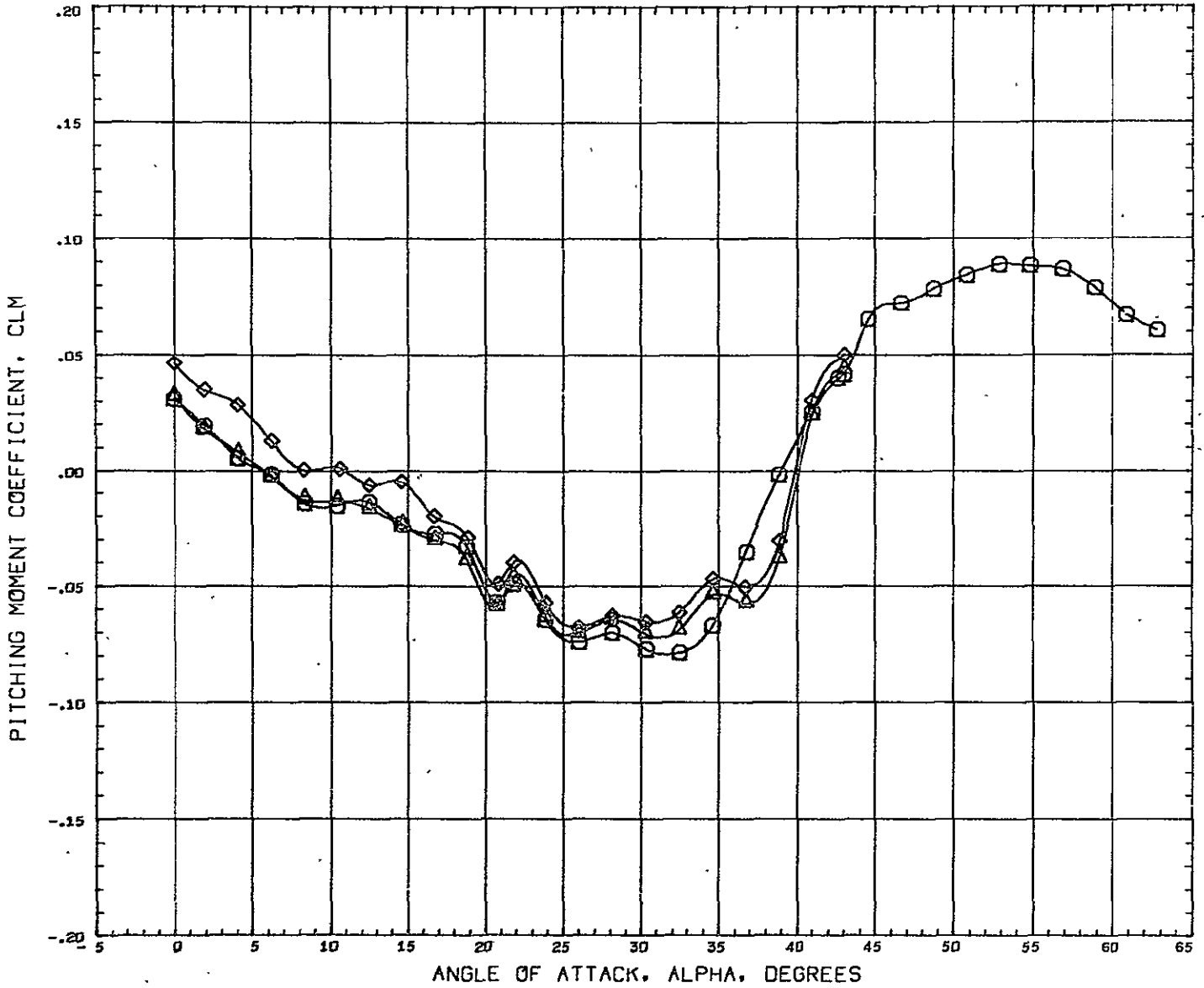
DELTA WING ORBITER- RUDDER EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(R2756S)	MSFC478 NR DELTA ORBITER B5W17E1DV17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(R2763S)	MSFC478 NR DELTA ORBITER B5W17E1DV17J2X	0.000	0.000	-10.000	0.000	REFL 821.2004 INCHES
(R2764S)	MSFC478 NR DELTA ORBITER B5W17E1DV17J2X	0.000	0.000	-20.000	0.000	REFB 1422.8040 INCHES
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MACH 5.593

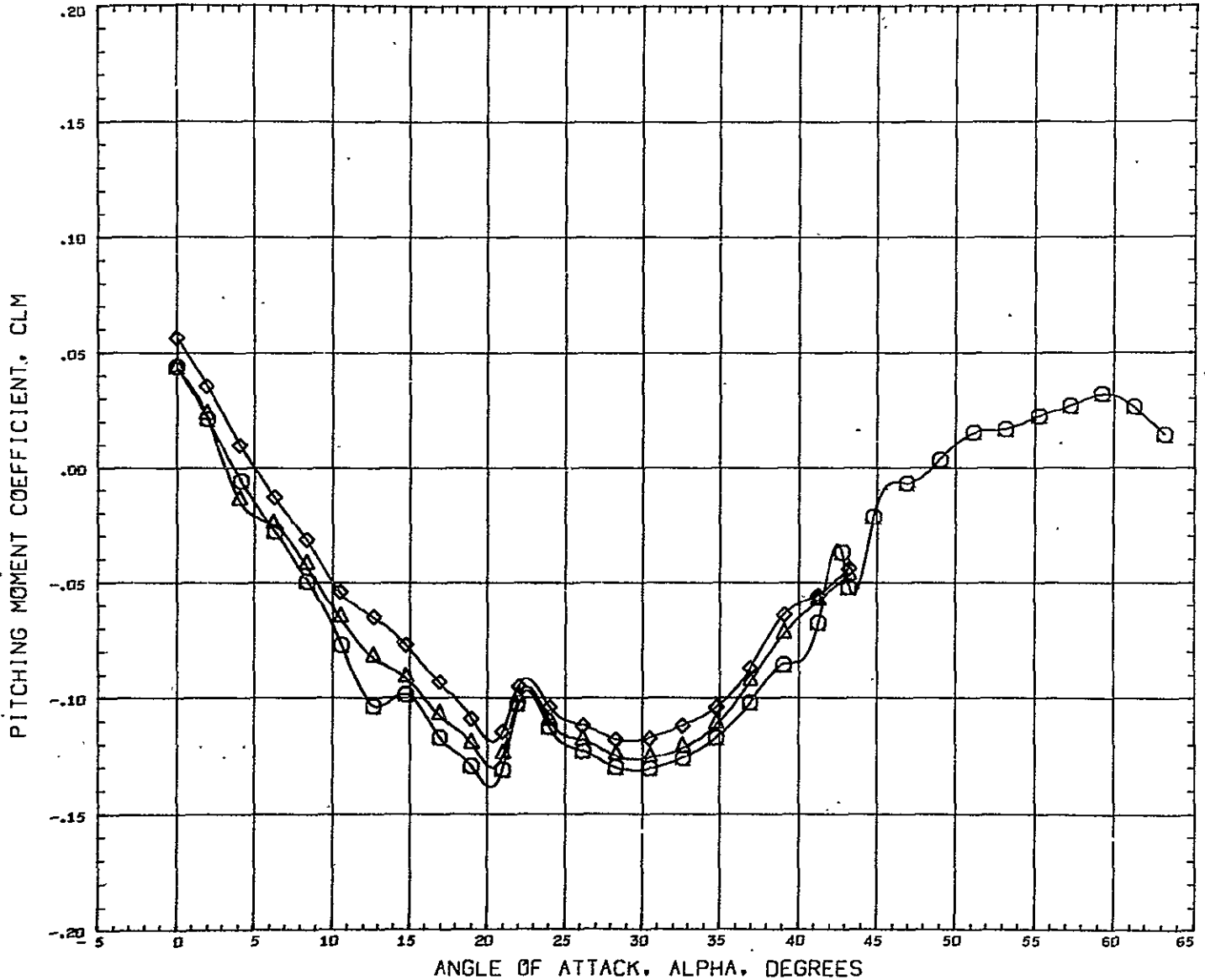
DELTA WING ORBITER- RUDDER EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(R2756S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(R2763S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	-10.000	0.000	REFL 821.2004 INCHES
(R2764S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	-20.000	0.000	REFB 1422.8040 INCHES
						XMRP 1422.5040 INCHES
						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 0.899

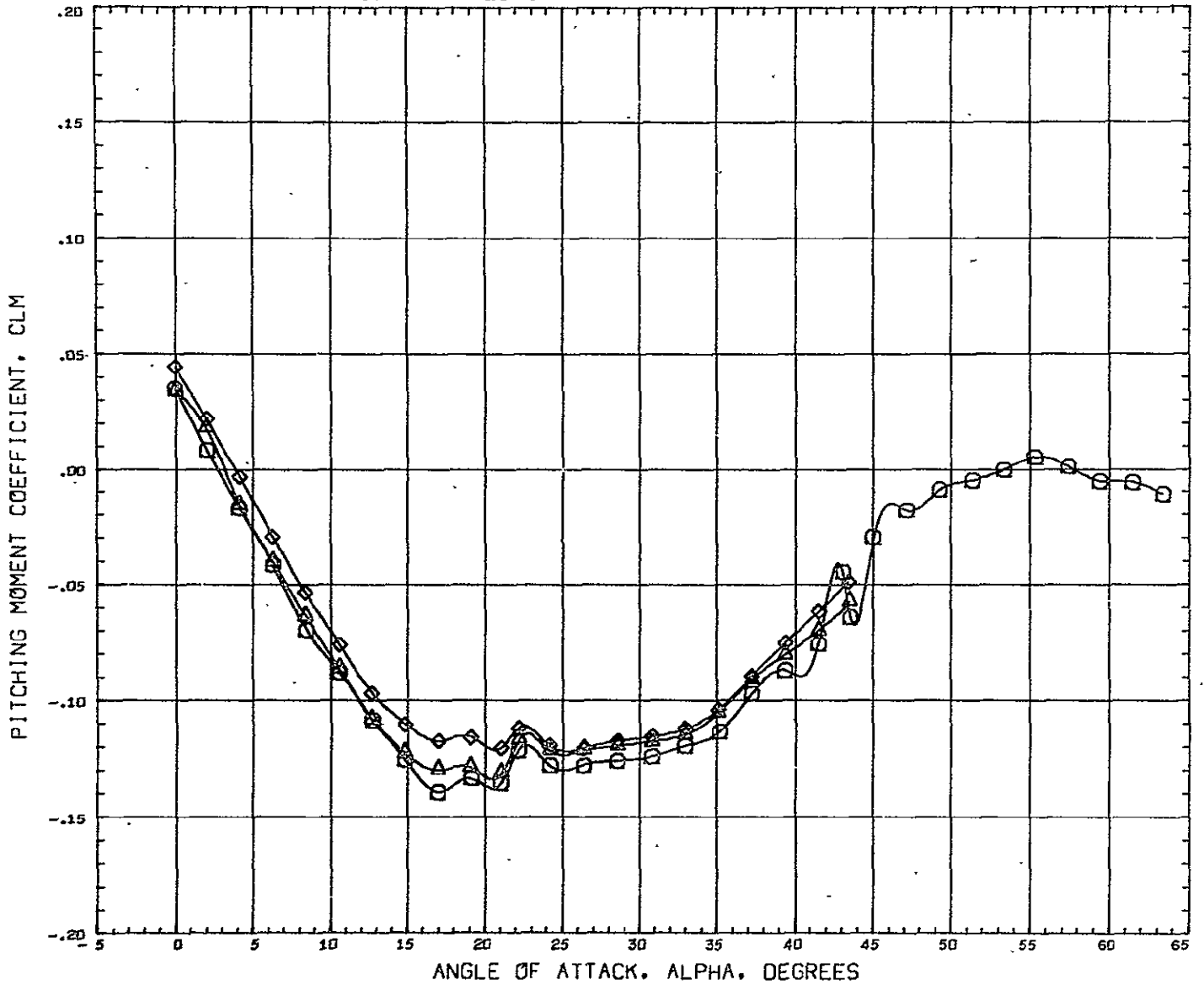
DELTA WING ORBITER- RUDDER EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AIRCRN	RUDDER	RUDFLR	REFERENCE INFORMATION
(R2756S)	MSFC478 NR DELTA ORBITER B5W17E1DV17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(R2763S)	MSFC478 NR DELTA ORBITER B5W17E1DV17J2X	0.000	0.000	-10.000	0.000	REFL 821.2004 INCHES
(R2764S)	MSFC478 NR DELTA ORBITER B5W17E1DV17J2X	0.000	0.000	-20.000	0.000	REFB 1422.8040 INCHES
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						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 1.000

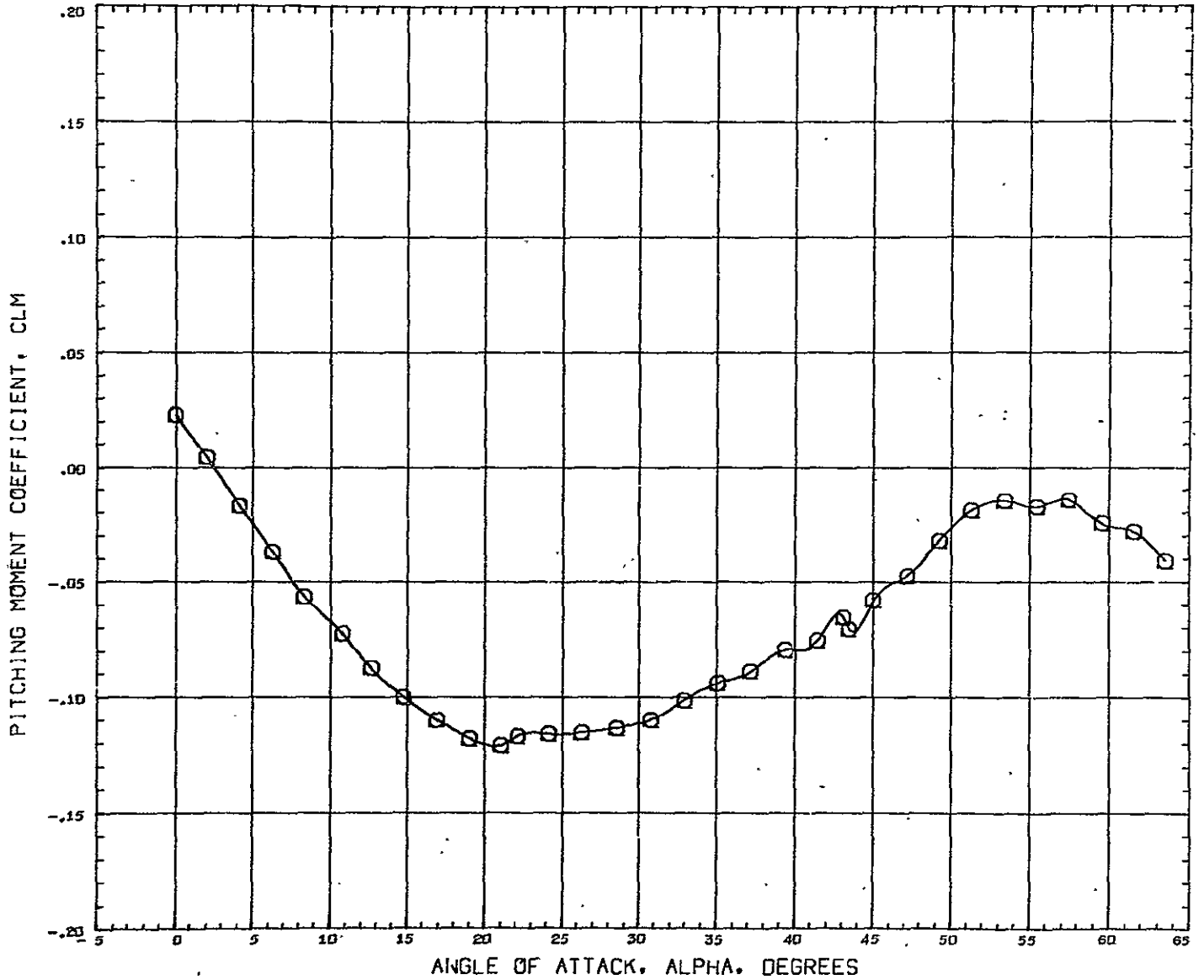
DELTA WING ORBITER- RUDDER EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(R2756S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(R2763S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	-10.000	0.000	REFL 821.2004 INCHES
(R2764S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	-20.000	0.000	REFB 1422.8040 INCHES
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						YMRP 0.0000 INCHES
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						SCALE 0.0035 SCALE

MACH 1.193

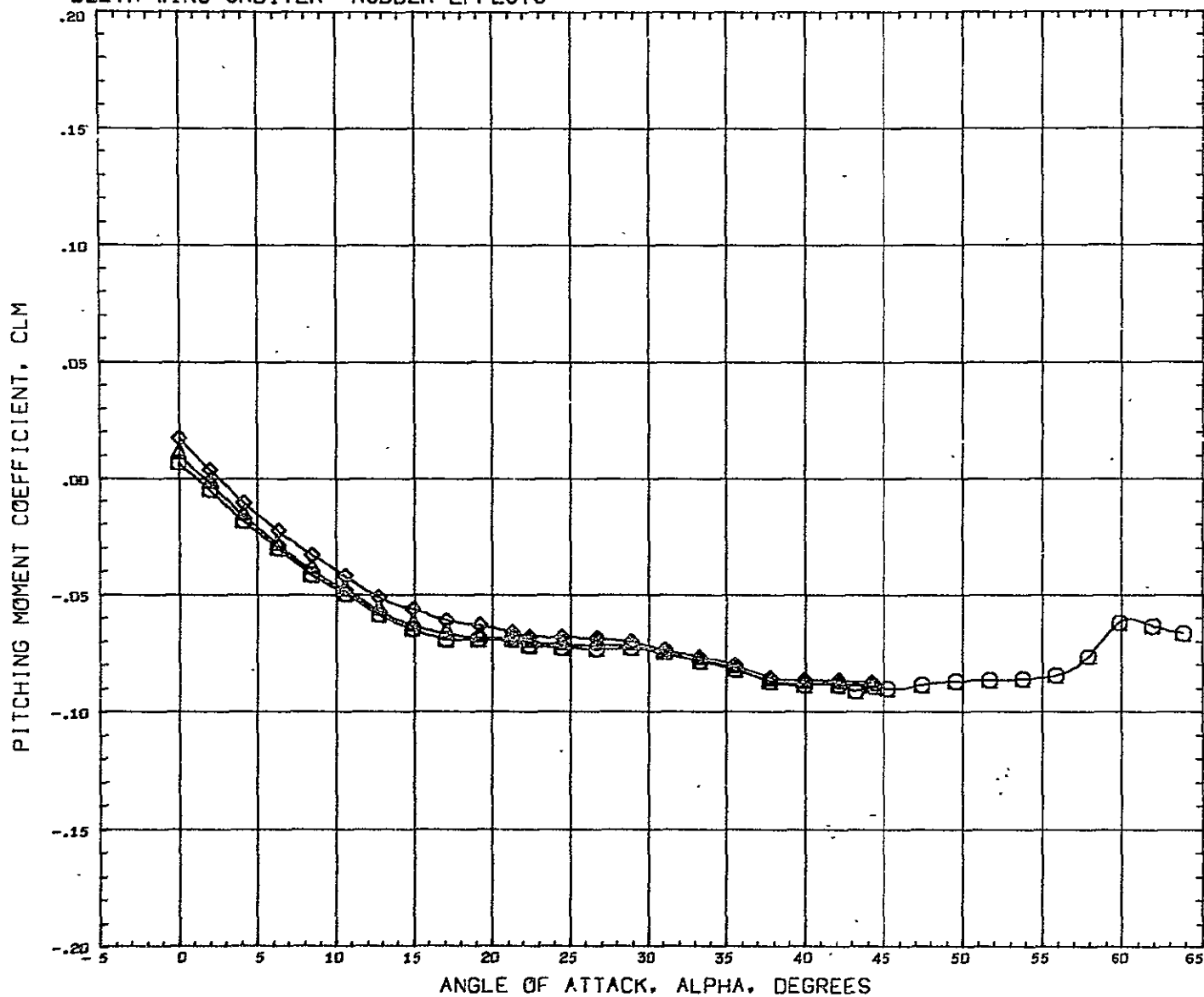
DELTA WING ORBITER- RUDDER EFFECTS



DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(R2756S)	○	MSFC478 NR DELTA ORBITER 85W17E10V17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(R2763S)	△	MSFC478 NR DELTA ORBITER 85W17E10V17J2X	0.000	0.000	-10.000	0.000	REFL 821.2004 INCHES
(R2764S)	◇	MSFC478 NR DELTA ORBITER 85W17E10V17J2X	0.000	0.000	-20.000	0.000	REFE 1422.8040 INCHES
							XNRP 1422.5040 INCHES
							YNRP 0.0000 INCHES
							ZNRP 130.0004 INCHES
							SCALE 0.0035 SCALE

MACH 1.458

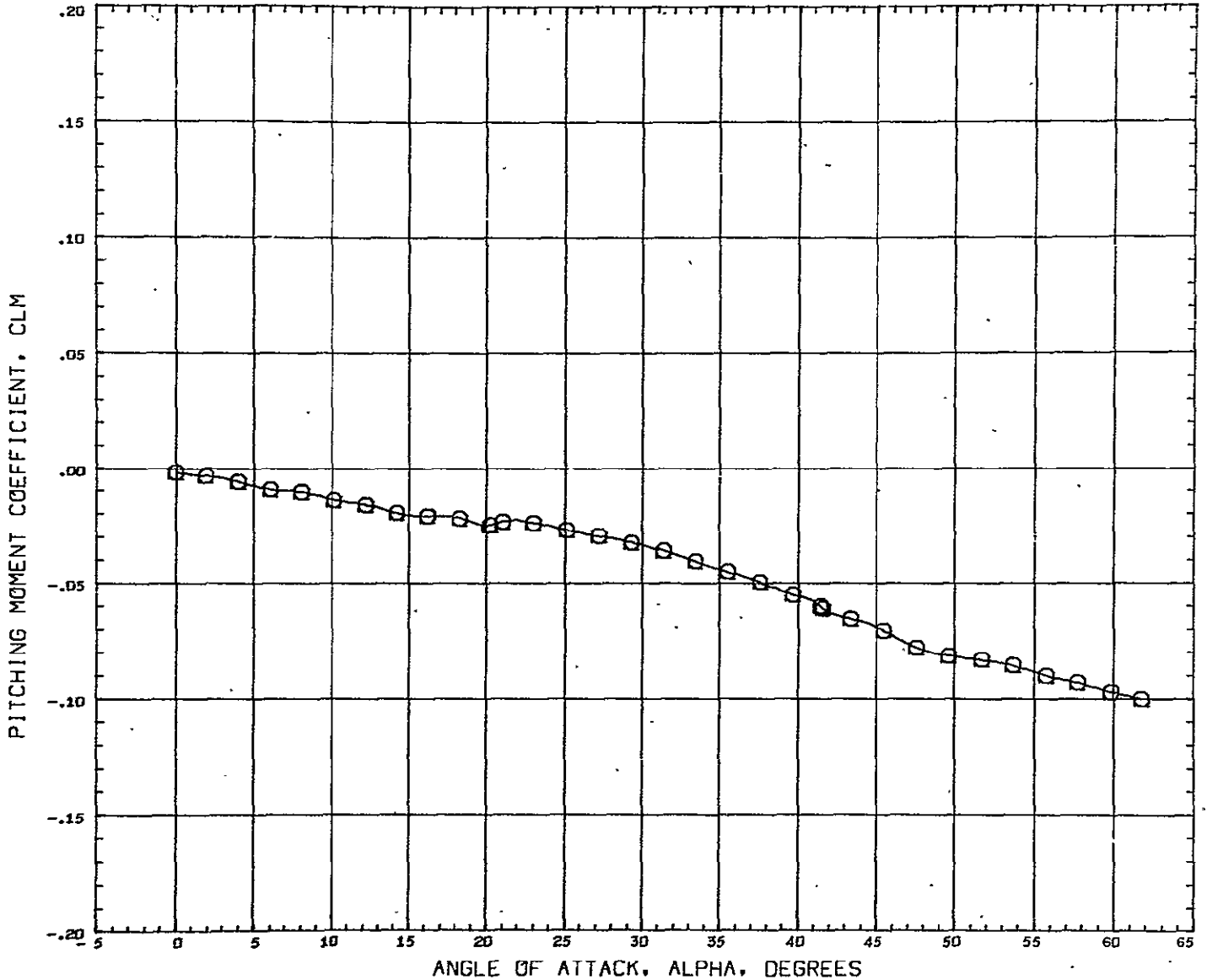
DELTA WING ORBITER- RUDDER EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(R2756S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(R2763S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	-10.000	0.000	REFL 821.2004 INCHES
(R2764S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	-20.000	0.000	REFB 1422.8040 INCHES
						XMRP 1422.5040 INCHES
						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 1.965

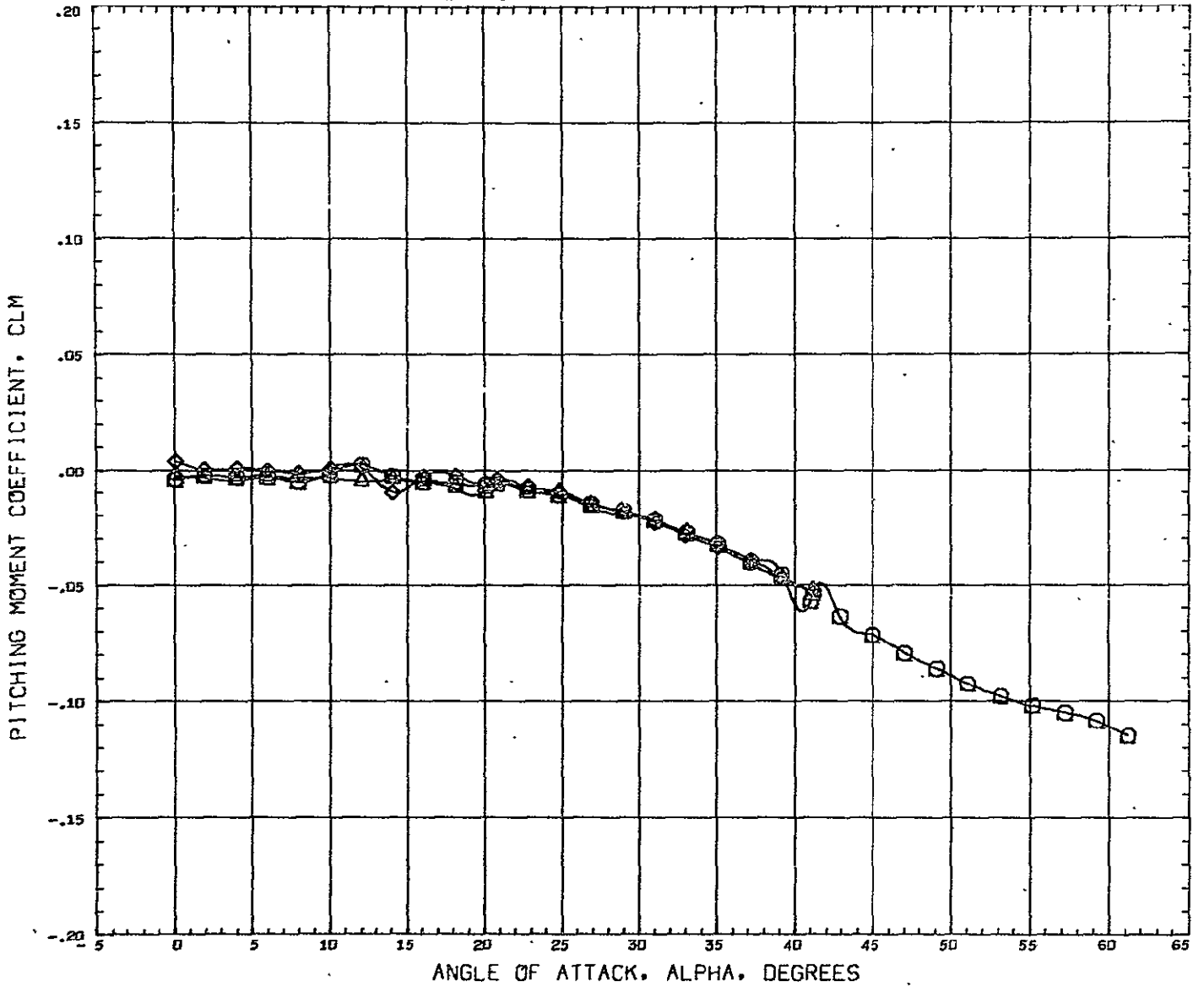
DELTA WING ORBITER- RUDDER EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(R2756S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(R2763S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	-10.000	0.000	REFL 821.2004 INCHES
(R2764S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	-20.000	0.000	REFB 1422.8040 INCHES
						XMRP 1422.5040 INCHES
						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 2.995

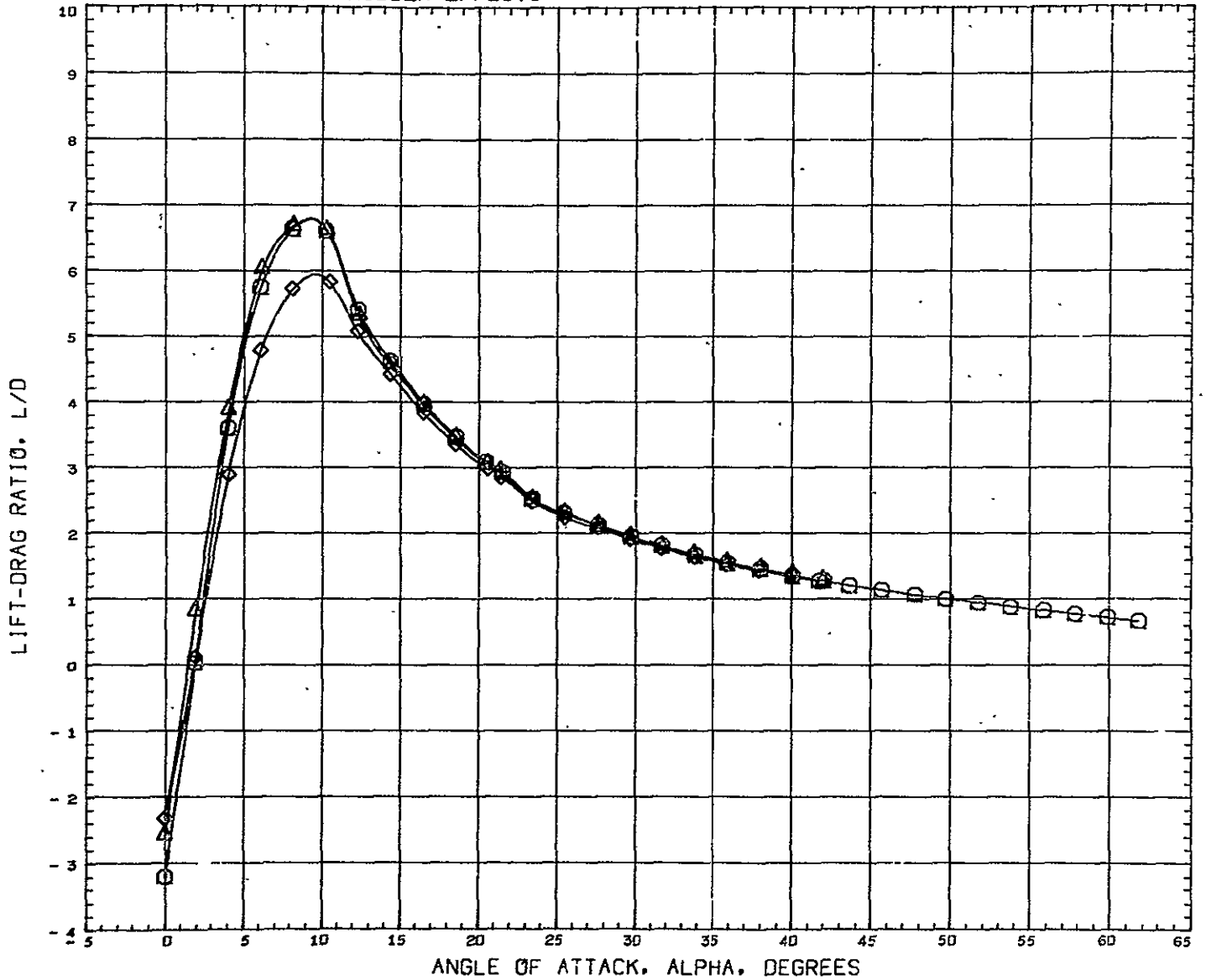
DELTA WING ORBITER- RUDDER EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(R2756S)	MSFC478 NR DELTA ORBITER B5W17E1DV17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(R2763S)	MSFC478 NR DELTA ORBITER B5W17E1DV17J2X	0.000	0.000	-10.000	0.000	REFL 821.2004 INCHES
(R2764S)	MSFC478 NR DELTA ORBITER B5W17E1DV17J2X	0.000	0.000	-20.000	0.000	REFB 1422.8040 INCHES
						XMRP 1422.5040 INCHES
						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 4.959

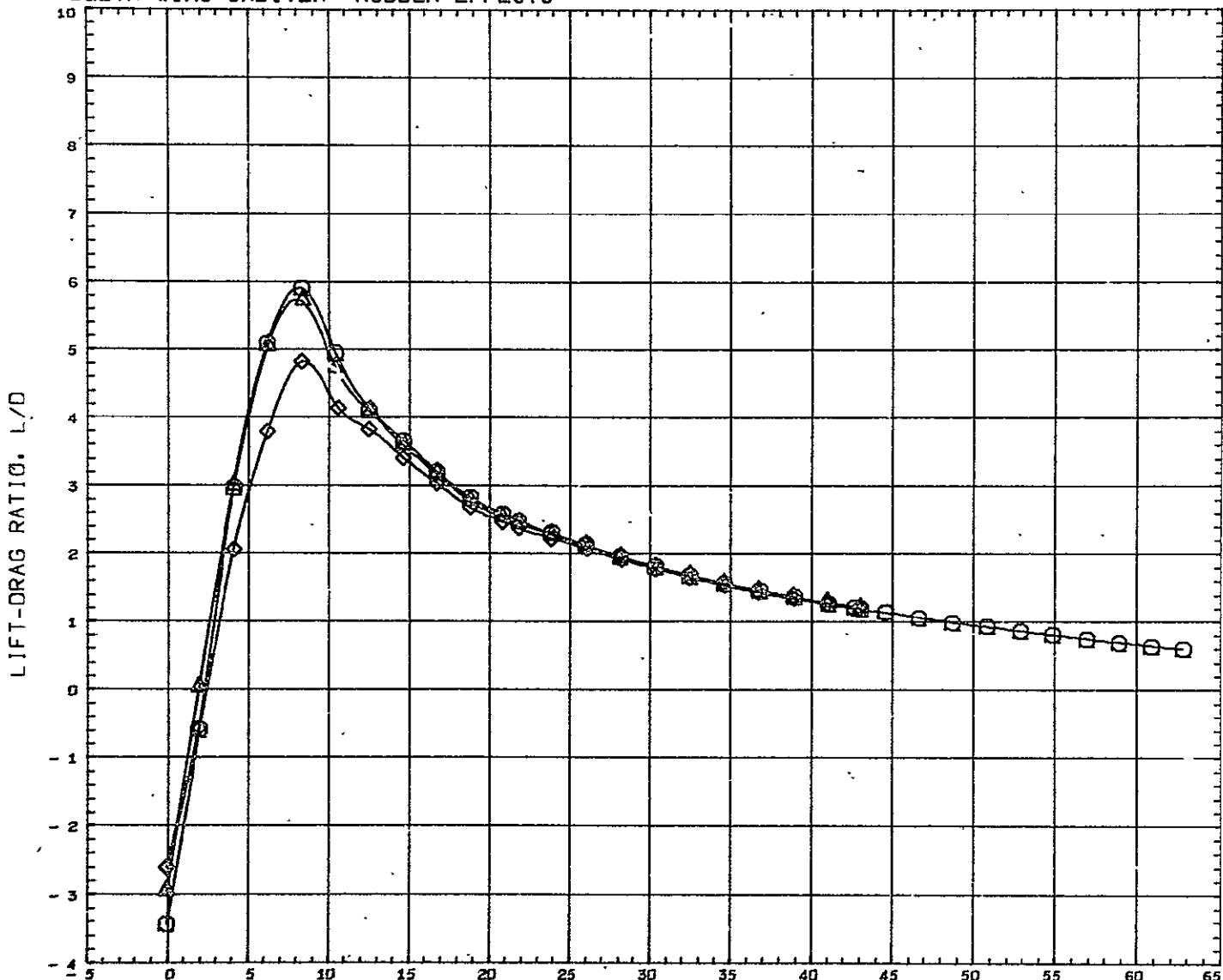
DELTA WING ORBITER- RUDDER EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(R2756S)	□ HSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	3.000	0.000	REFS 6084.0040 SQ FT
(R2763S)	△ HSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	-10.000	0.000	REFL 821.2004 INCHES
(R2764S)	◇ HSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	-20.000	0.000	REFB 1422.8040 INCHES
						XMRF 1422.5040 INCHES
						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

PACH 0.598

DELTA WING ORBITER- RUDDER EFFECTS

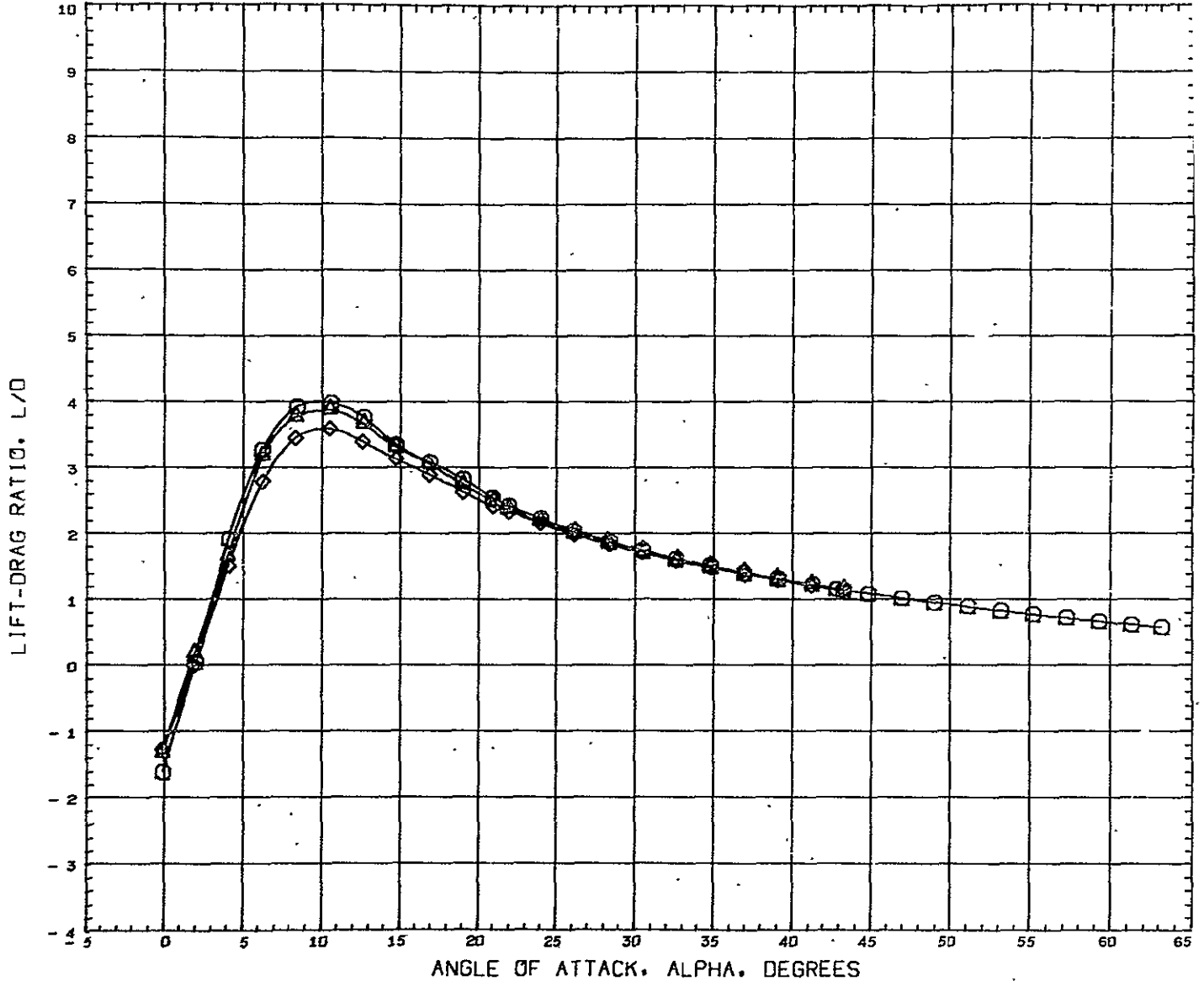


ANGLE OF ATTACK, ALPHA, DEGREES

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(R2756S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(R2763S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	-10.000	0.000	REFL 821.2004 INCHES
(R2764S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	-20.000	0.000	REFB 1422.8040 INCHES
						XMRP 1422.5040 INCHES
						YMRP 0.0000 INCHES
						ZMRP 150.0004 INCHES
						SCALE 0.0035 SCALE

MACH 0.899

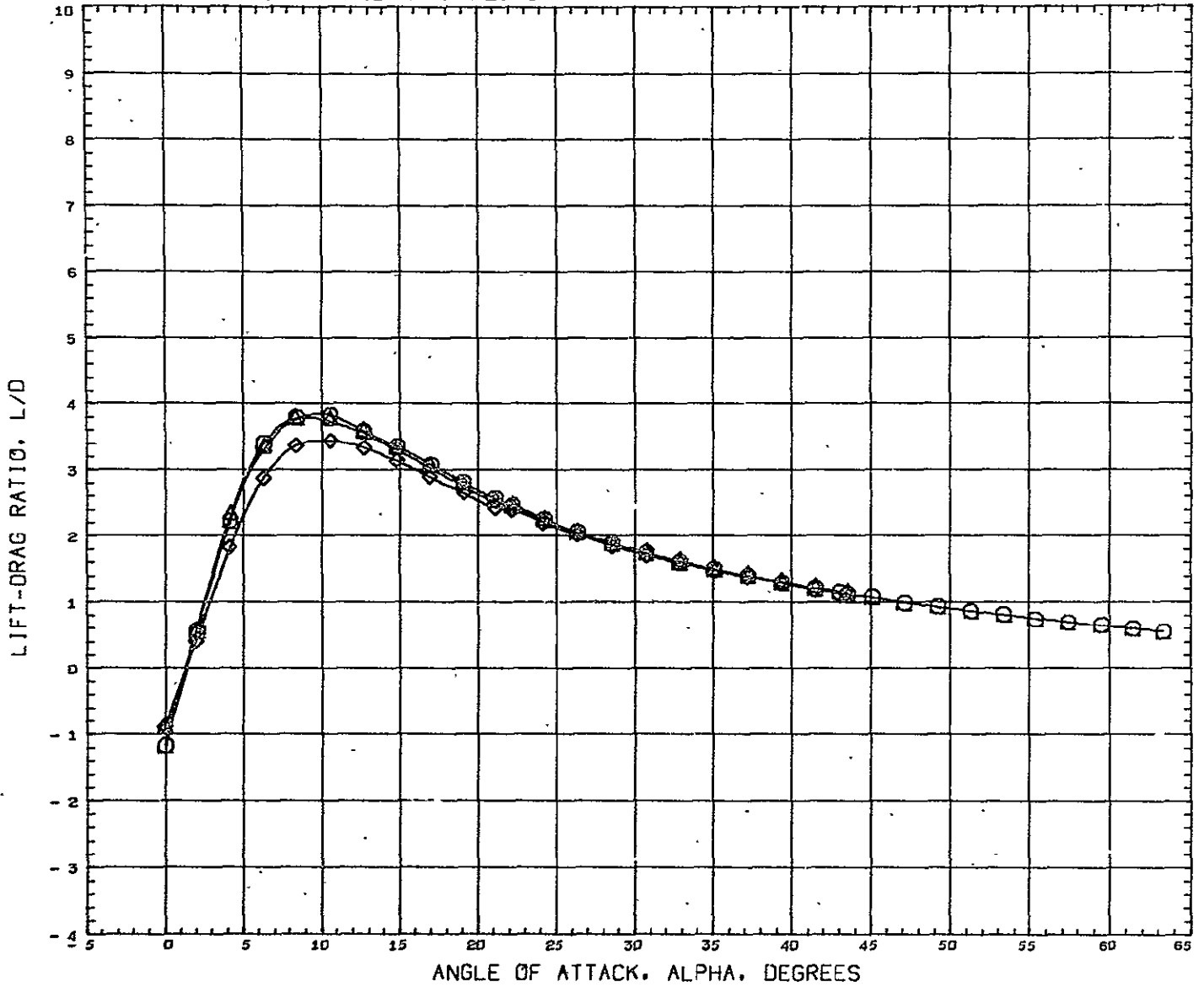
DELTA WING ORBITER- RUDDER EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(R2756S)	MSFC478 NR DELTA ORBITER B5W17E1DV17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(R2763S)	MSFC478 NR DELTA ORBITER B5W17E1DV17J2X	0.000	0.000	-10.000	0.000	REFL 821.2004 INCHES
(R2764S)	MSFC478 NR DELTA ORBITER B5W17E1DV17J2X	0.000	0.000	-20.000	0.000	REFB 1422.8040 INCHES
						XMRP 1422.5040 INCHES
						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 1.003

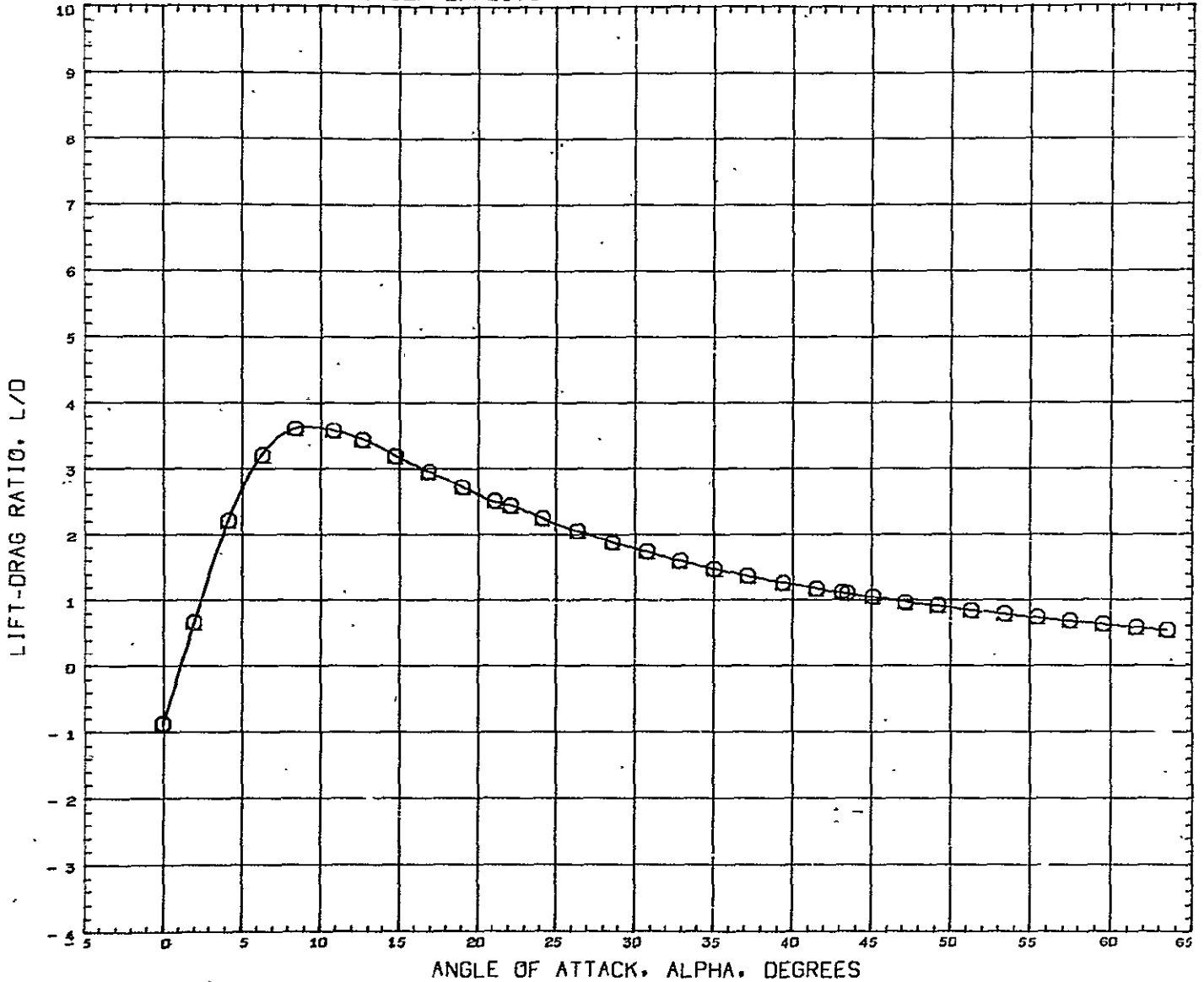
DELTA WING ORBITER-- RUDDER EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(R2756S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(R2763S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	-10.000	0.000	REFL 821.2004 INCHES
(R2764S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	-20.000	0.000	REFB 1422.8040 INCHES
						XMRP 1422.5040 INCHES
						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 1.199

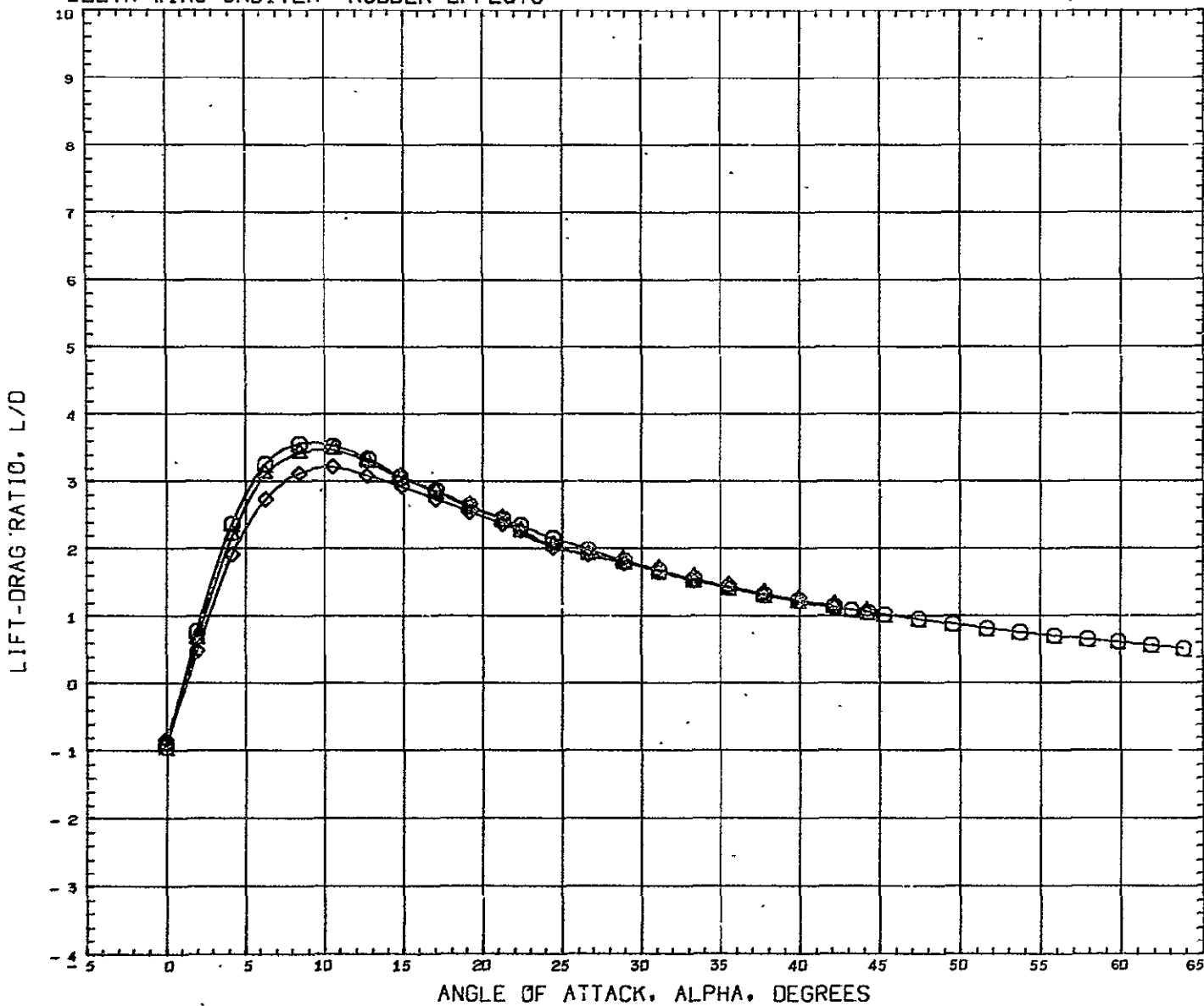
DELTA WING ORBITER- RUDDER EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(R2756S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(R2763S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	-10.000	0.000	REFL 821.2004 INCHES
(R2764S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	-20.000	0.000	REFB 1422.8040 INCHES
						XMRP 1422.5540 INCHES
						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 1.458

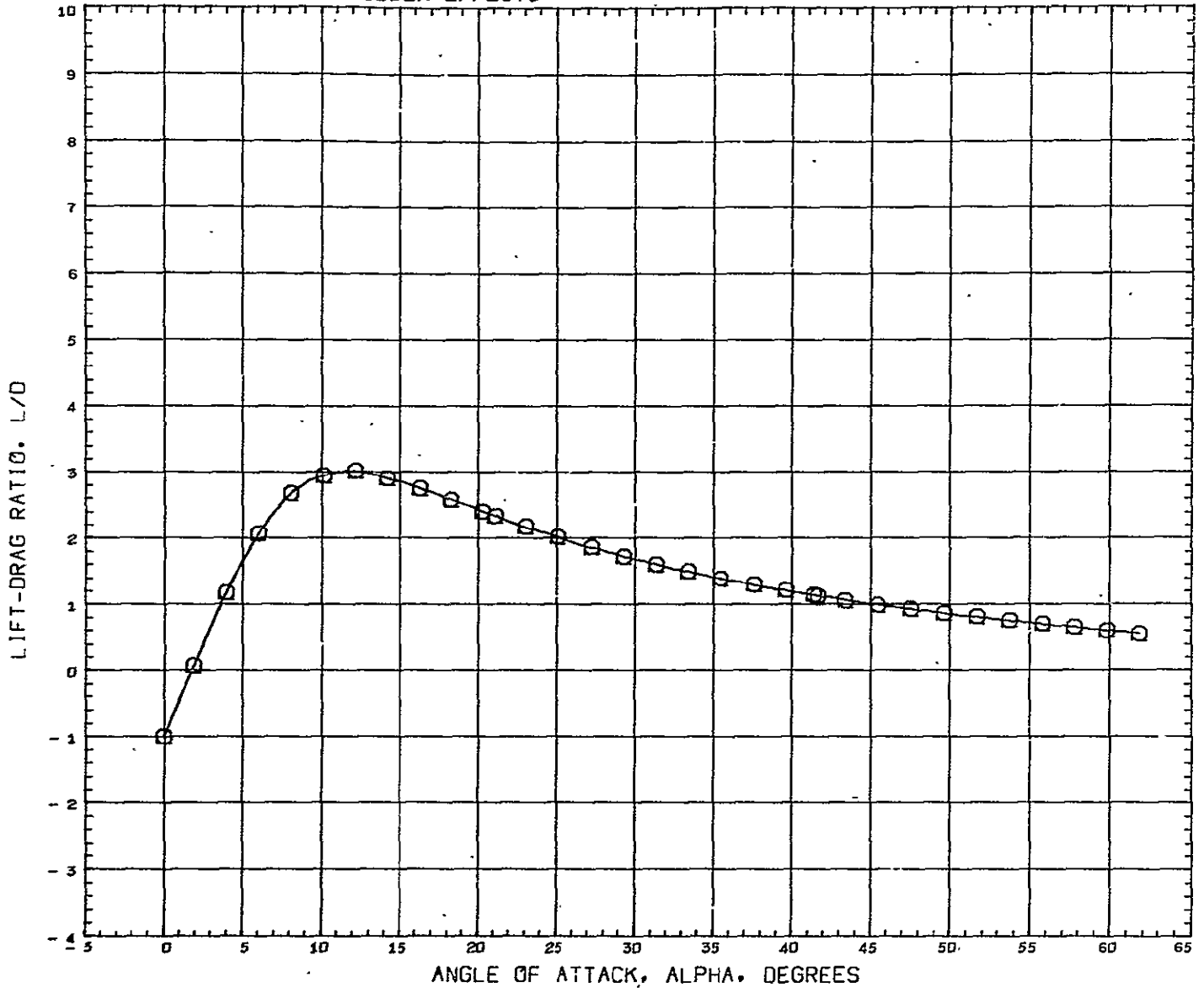
DELTA WING ORBITER- RUDDER EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(R27565)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(R27635)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	-10.000	0.000	REFL 821.2004 INCHES
(R27645)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	-20.000	0.000	REFB 1422.8040 INCHES
						XMRP 1422.5040 INCHES
						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 1.965

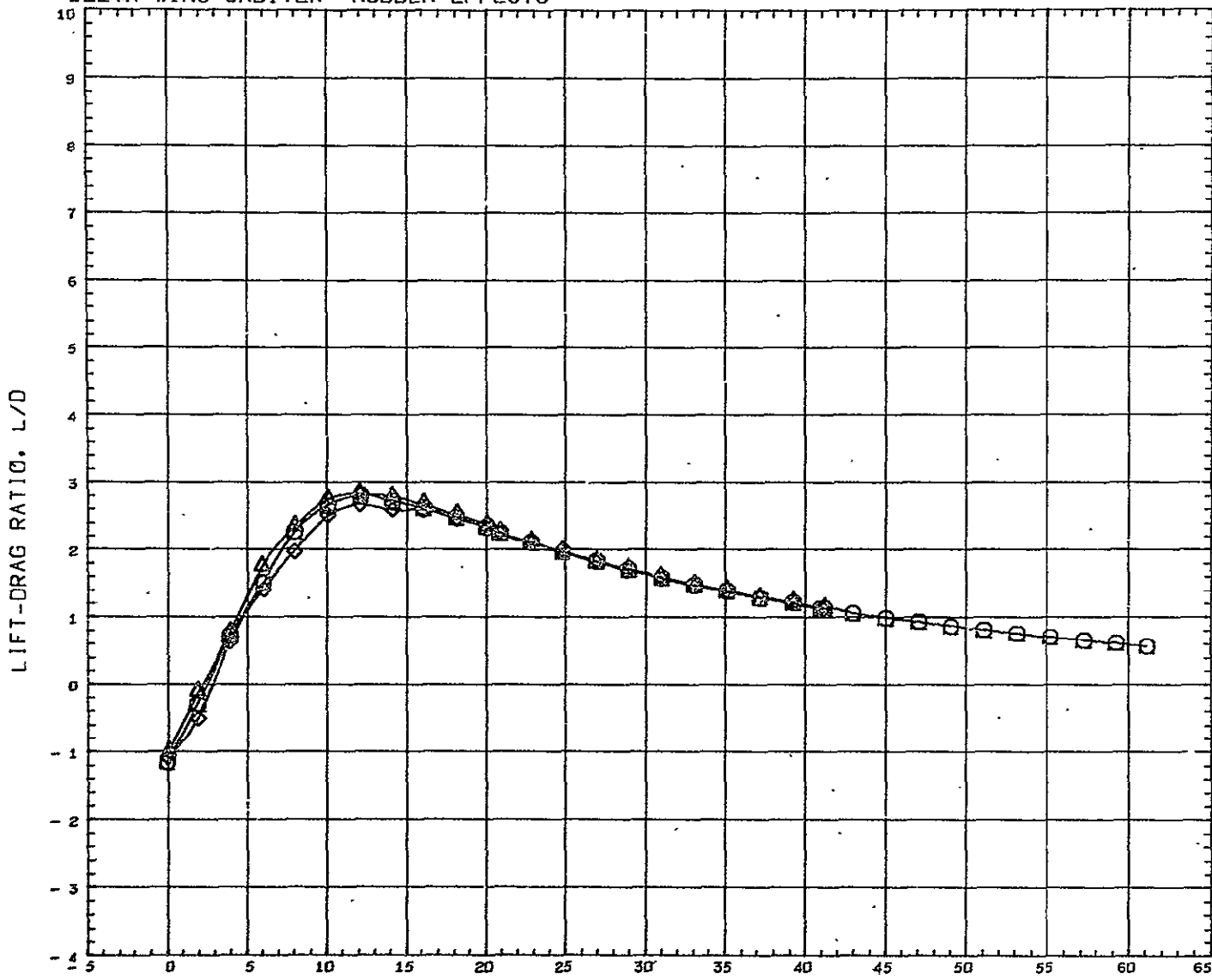
DELTA WING ORBITER- RUDDER EFFECTS



DATA SET-SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(R2756S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(R2763S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	-10.000	0.000	REFL 821.2004 INCHES
(R2764S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	-20.000	0.000	REFB 1422.8040 INCHES
						XMRP 1422.5040 INCHES
						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 2.990

DELTA WING ORBITER- RUDDER EFFECTS

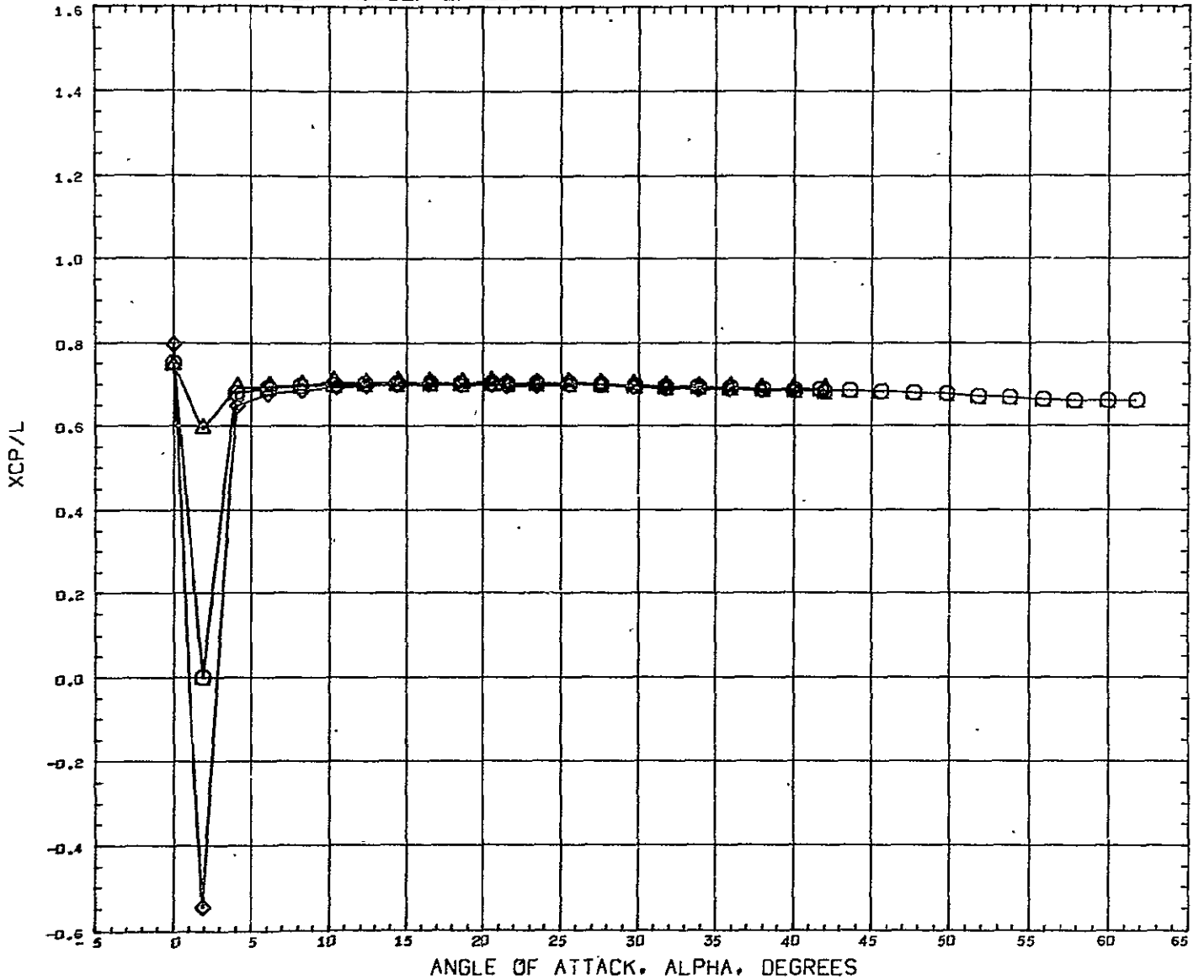


ANGLE OF ATTACK, ALPHA, DEGREES

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(R2756S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(R2763S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	-10.000	0.000	REFL 821.2004 INCHES
(R2764S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	-20.000	0.000	REFB 1422.8040 INCHES
						XMRP 1422.5040 INCHES
						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 4.959

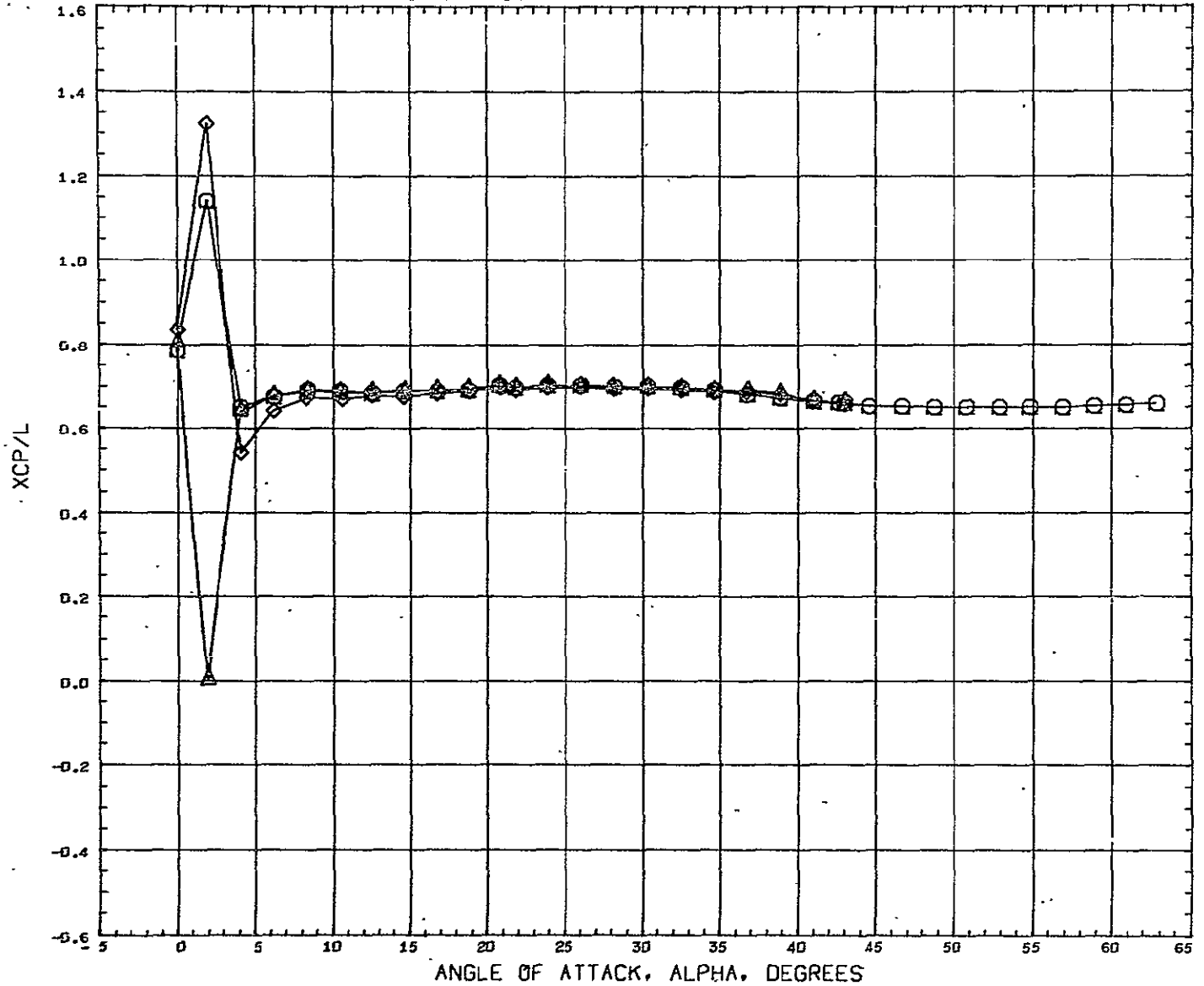
DELTA WING ORBITER- RUDDER EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(R2756S)	MSFC478 NR DELTA ORBITER B5W17E1DV17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(R2763S)	MSFC478 NR DELTA ORBITER B5W17E1DV17J2X	0.000	0.000	-10.000	0.000	REFL 821.2004 INCHES
(R2764S)	MSFC478 NR DELTA ORBITER B5W17E1DV17J2X	0.000	0.000	-20.000	0.000	REFB 1422.8040 INCHES
						XMRP 1422.5040 INCHES
						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 0.596

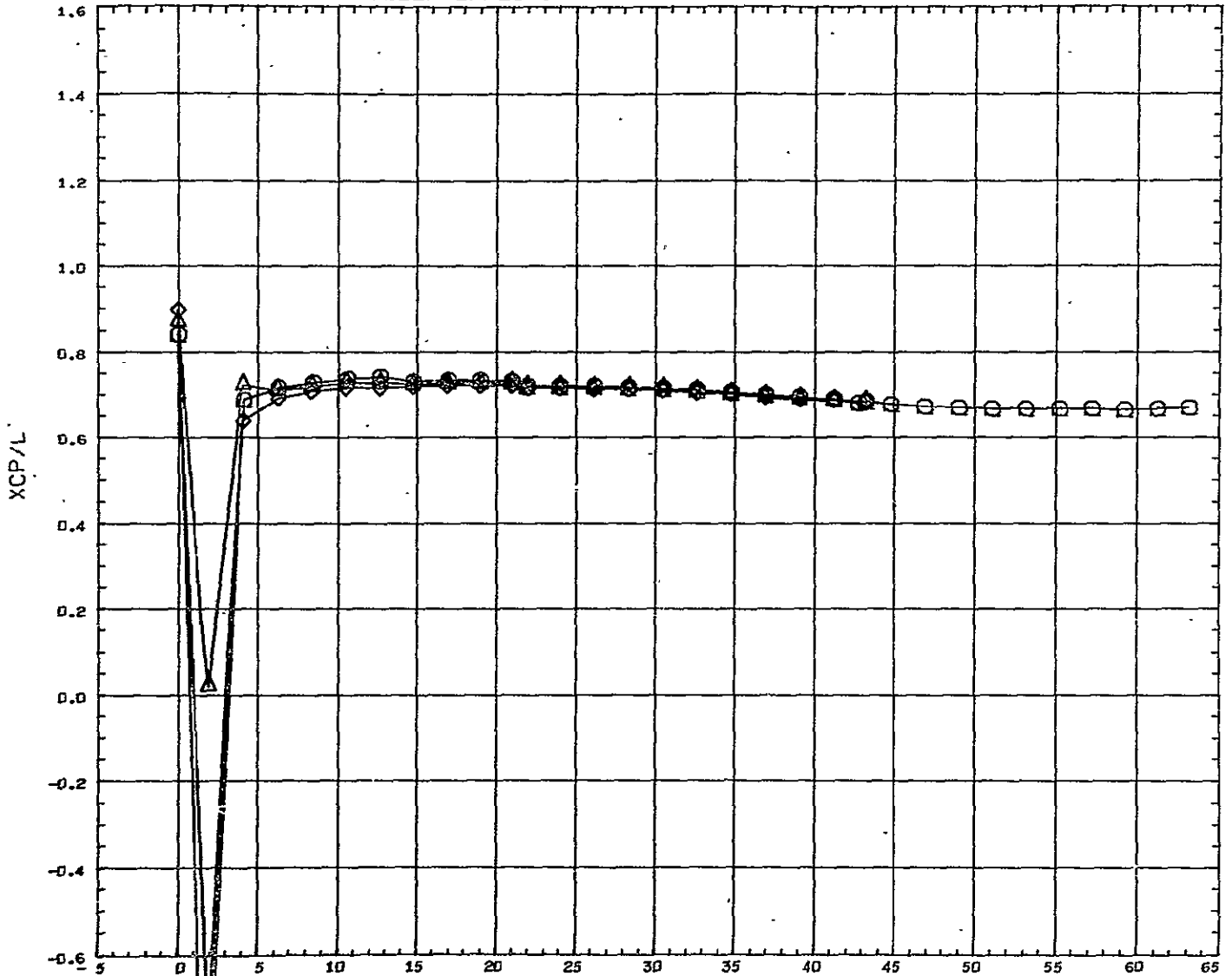
DELTA WING ORBITER- RUDDER EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(R2756S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(R2763S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	-10.000	0.000	REFL 821.2004 INCHES
(R2764S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	-20.000	0.000	REFB 1422.8040 INCHES
						XMRP 1422.5040 INCHES
						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 0.899

DELTA WING ORBITER- RUDDER EFFECTS

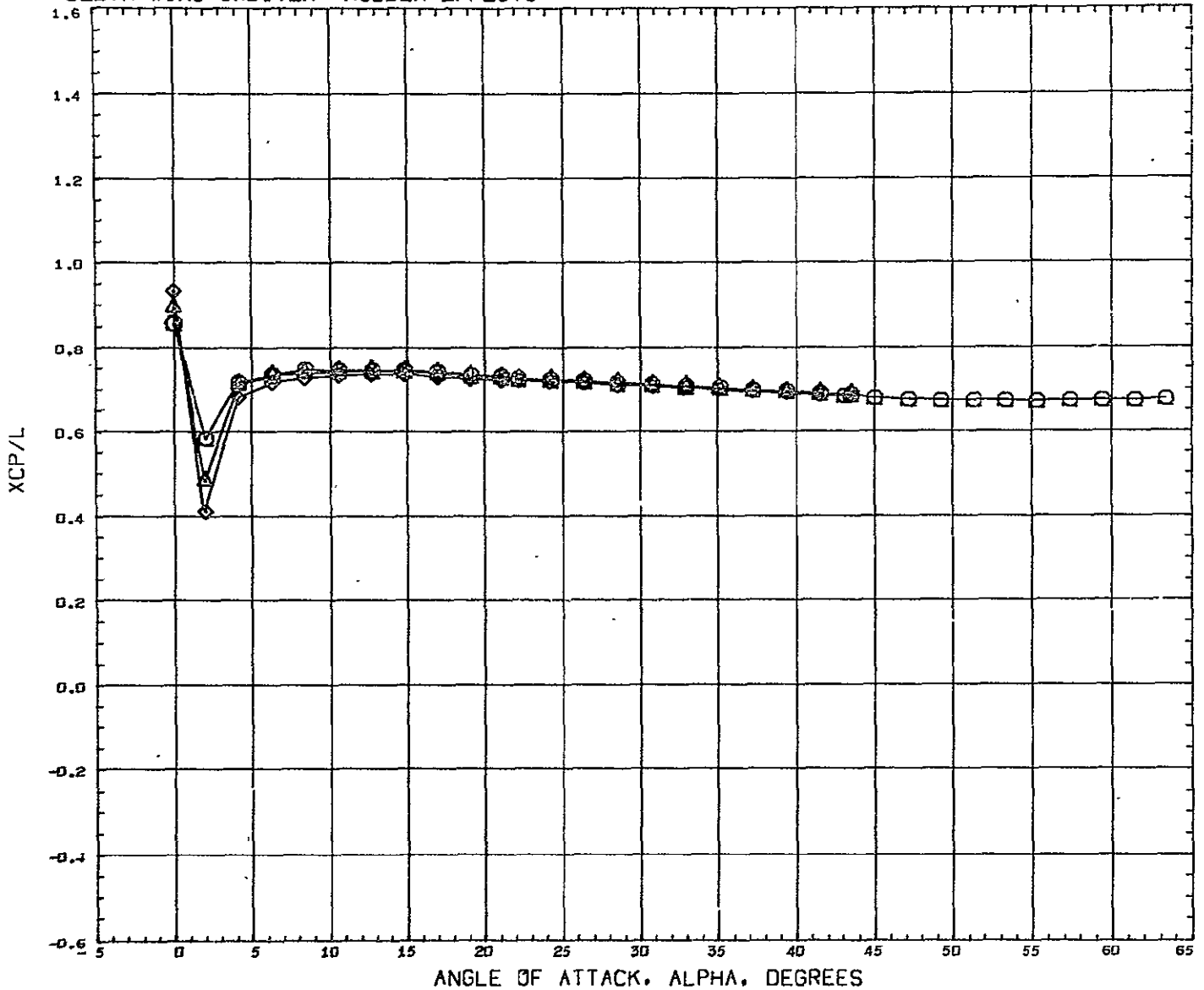


ANGLE OF ATTACK, ALPHA, DEGREES

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AIRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(R2756S)	HSFC 78 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(R2763S)	HSFC 78 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	-10.000	0.000	REFL 821.2004 INCHES
(R2764S)	HSFC 78 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	-20.000	0.000	REFB 1422.8040 INCHES
						XMRP 1422.5040 INCHES
						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 1.003

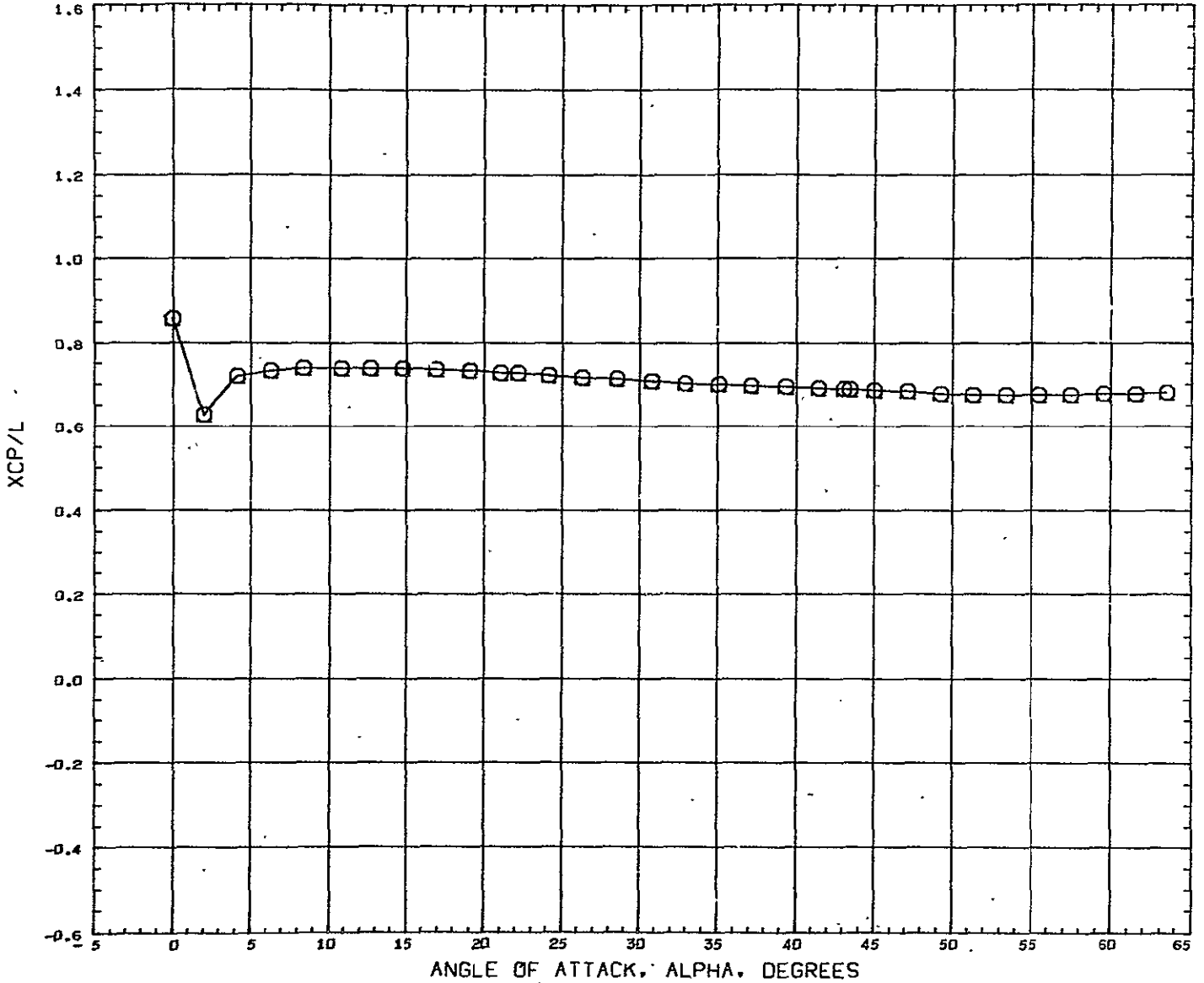
DELTA WING ORBITER- RUDDER EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(R2756S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(R2763S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	-10.000	0.000	REFL 821.2004 INCHES
(R2764S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	-20.000	0.000	REFB 1422.8040 INCHES
						XMRP 1422.5040 INCHES
						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 1.199

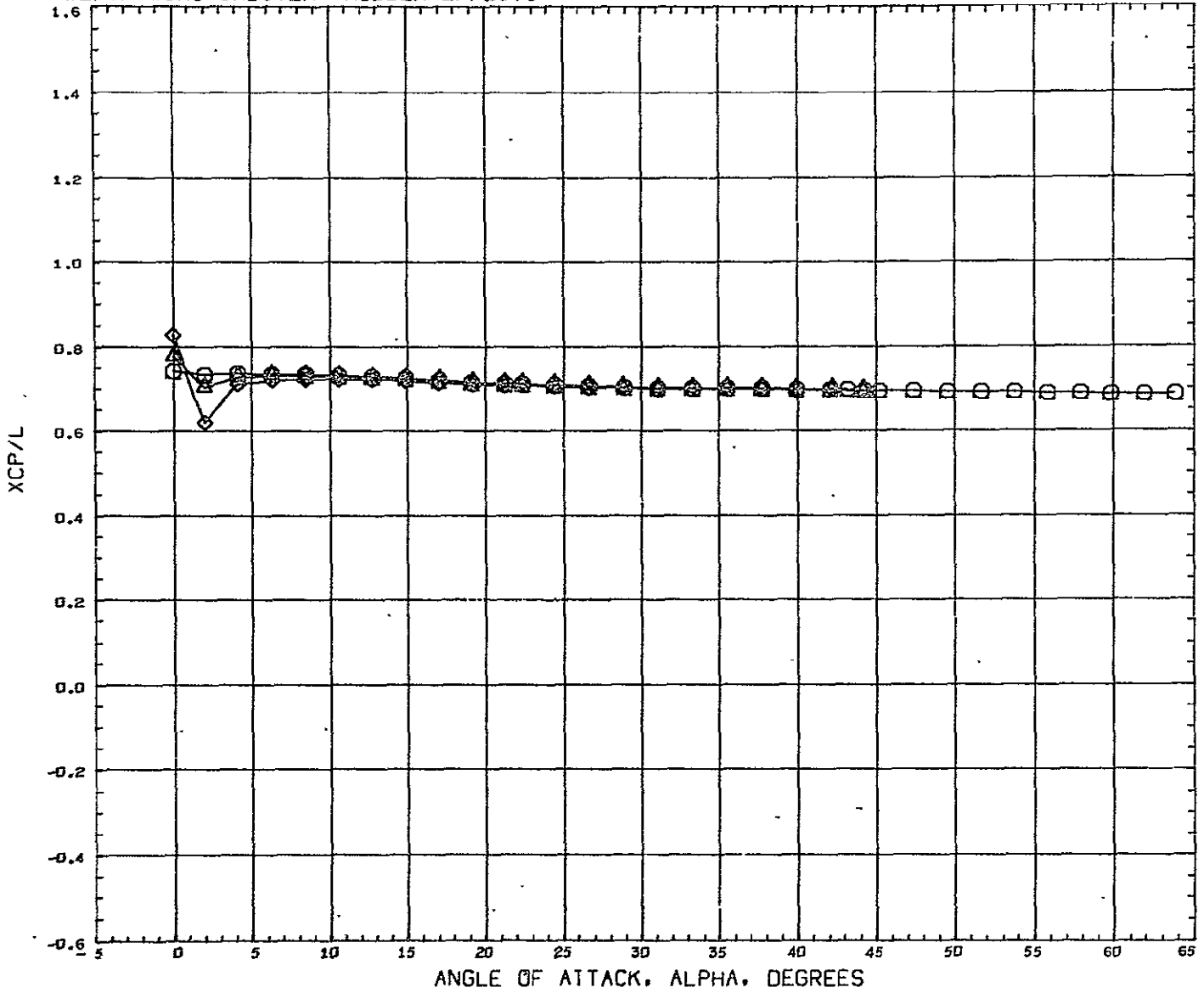
DELTA WING ORBITER- RUDDER EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(R2756S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(R2763S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	-10.000	0.000	REFL 821.2004 INCHES
(R2764S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	-20.000	0.000	REFB 1422.8040 INCHES XMRP 1422.5040 INCHES YMRP 0.0000 INCHES ZMRP 130.0004 INCHES SCALE 0.0035 SCALE

HACH 1.458

DELTA WING ORBITER- RUDDER EFFECTS

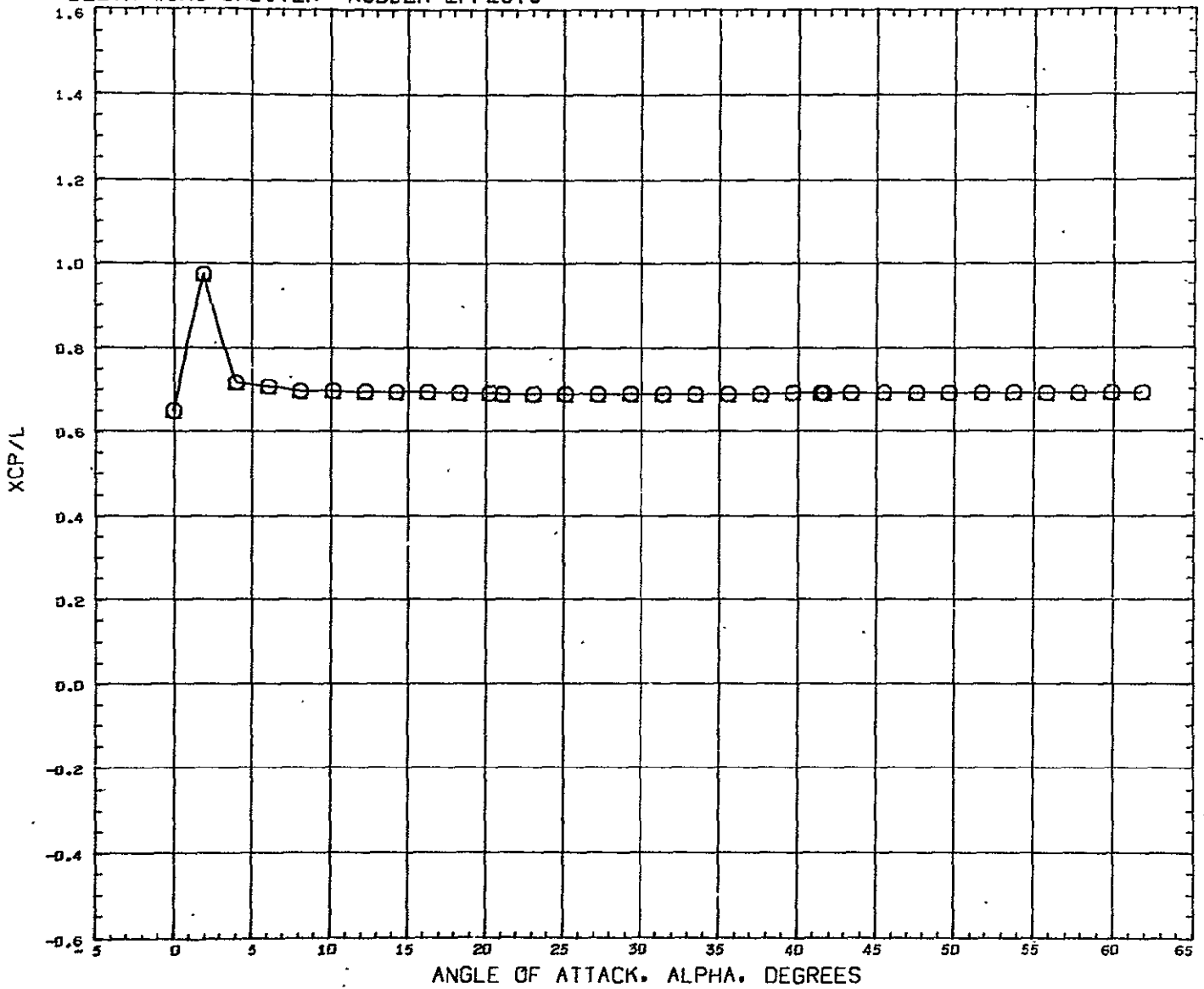


DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(R2756S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X
(R2763S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X
(R2764S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X

ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
0.000	0.000	-10.000	0.000	REFL 821.2004 INCHES
0.000	0.000	-20.000	0.000	REFB 1422.8040 INCHES
				XMRP 1422.5040 INCHES
				YMRP 0.0000 INCHES
				ZMRP 130.0004 INCHES
				SCALE 0.0035 SCALE

MACH 1.965

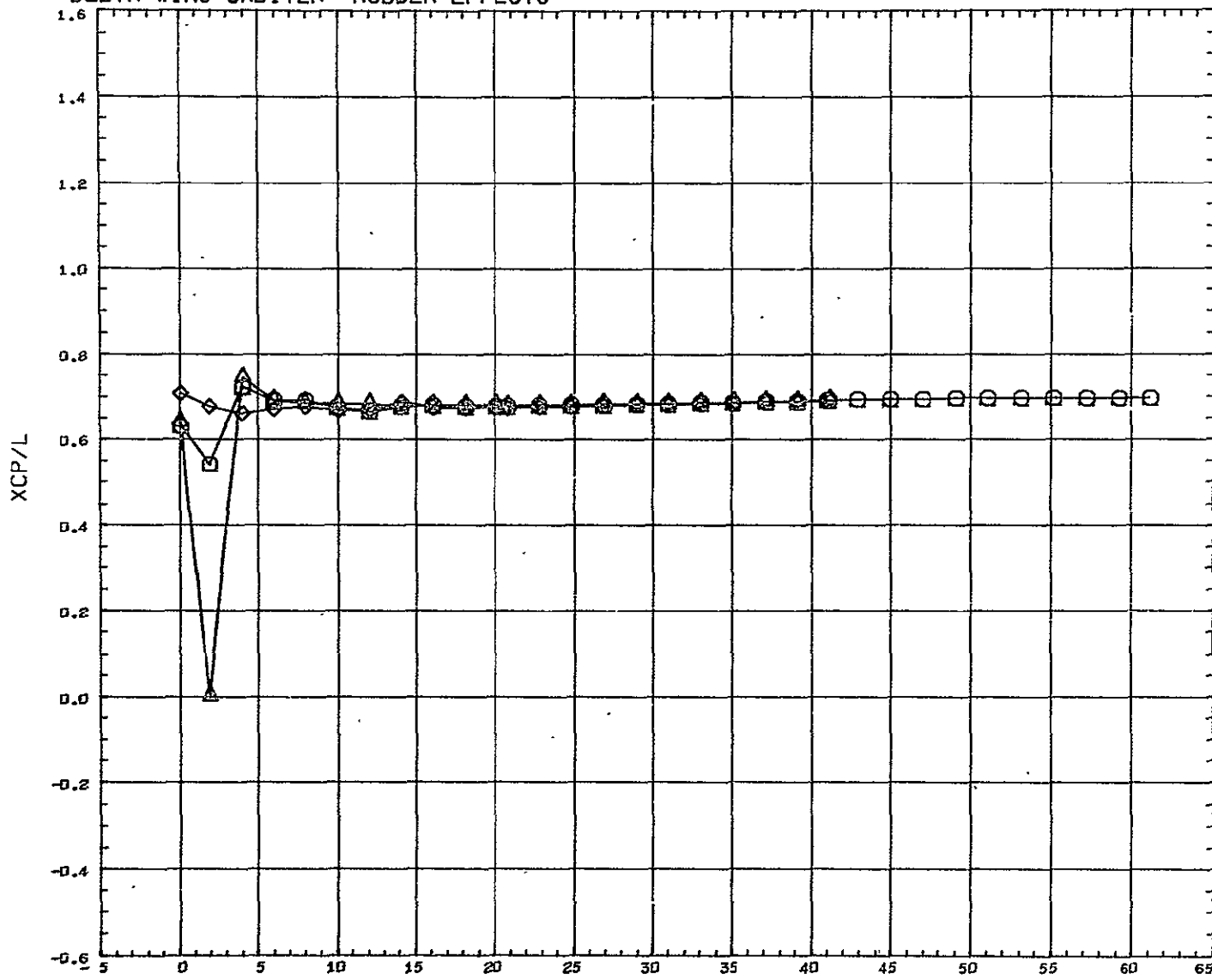
DELTA WING ORBITER- RUDDER EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(R2756S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	0.000	0.000	REFS 6984.0040 SQ FT
(R2763S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	-10.000	0.000	REFL 821.2004 INCHES
(R2764S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	-20.000	0.000	REFB 1422.8010 INCHES
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						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 2.990

DELTA WING ORBITER- RUDDER EFFECTS

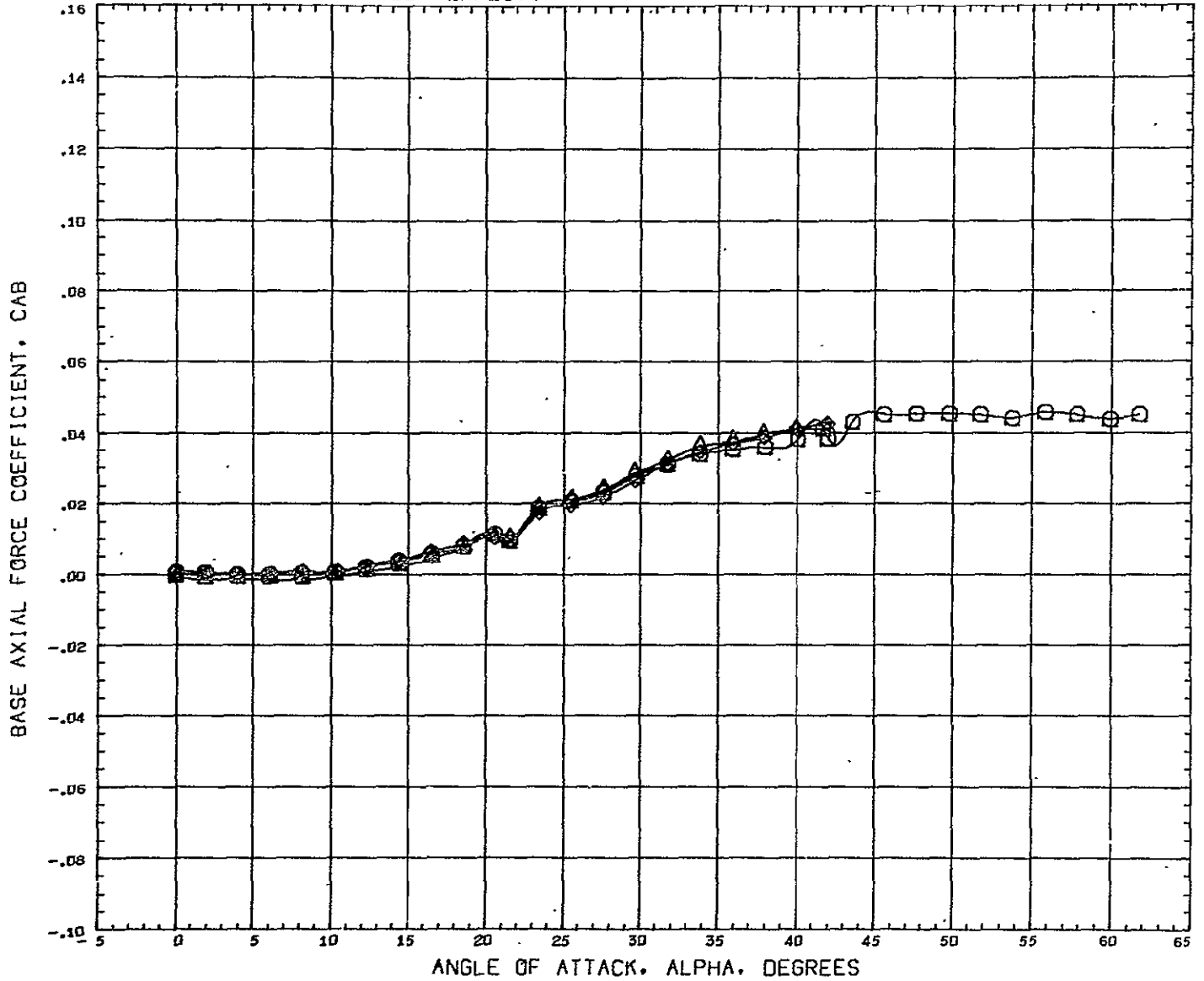


ANGLE OF ATTACK, ALPHA, DEGREES

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(R27566)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(R27635)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	-10.000	0.000	REFL 821.2004 INCHES
(R27645)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	-20.000	0.000	REFB 1422.8040 INCHES
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						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 4.959

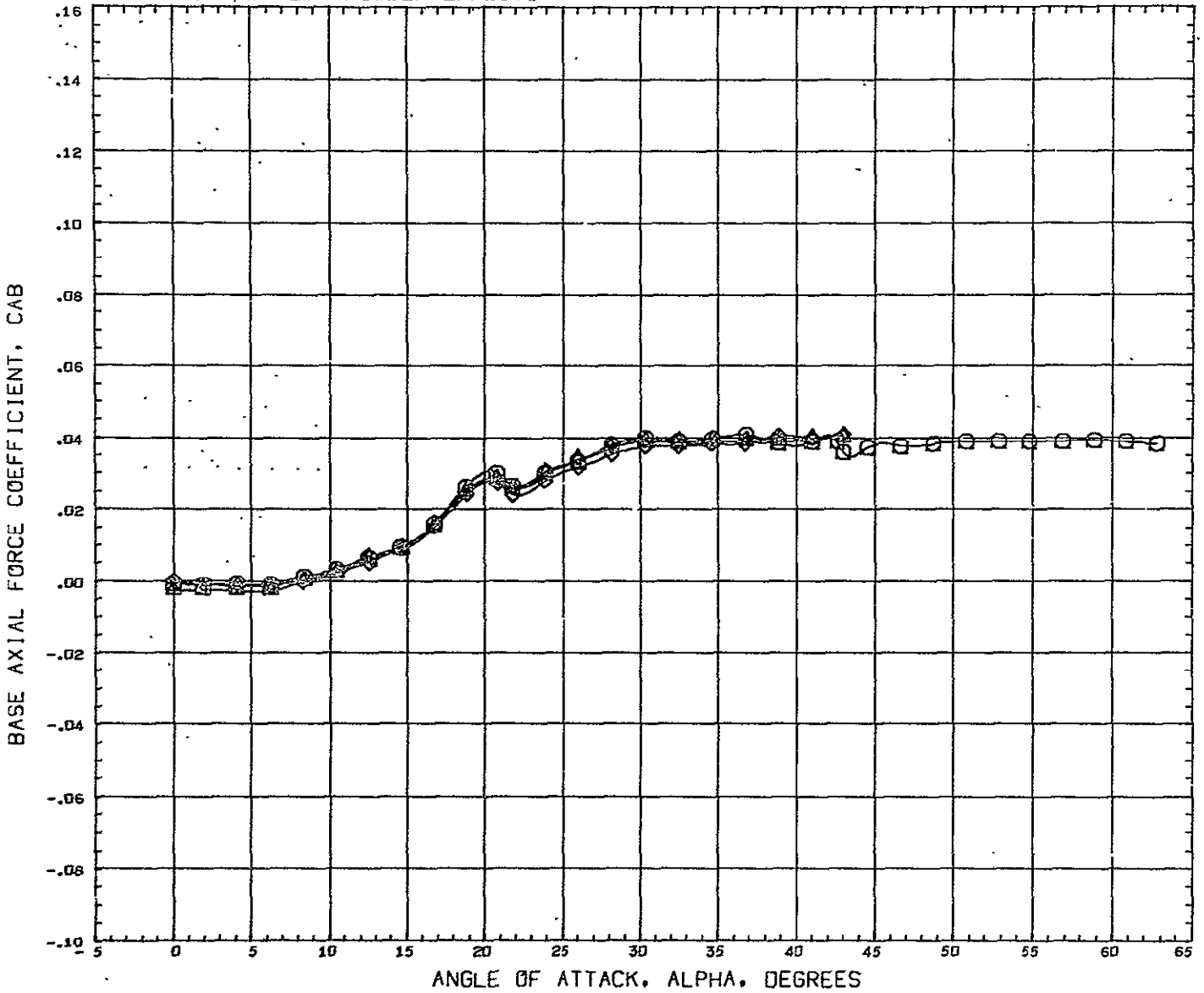
DELTA WING ORBITER- RUDDER EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(R2756S)	MSFC478 NR DELTA ORBITER B5W17E1DV17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(R2753S)	MSFC478 NR DELTA ORBITER B5W17E1DV17J2X	0.000	0.000	-10.000	0.000	REFL 821.2004 INCHES
(R2764S)	MSFC478 NR DELTA ORBITER B5W17E1DV17J2X	0.000	0.000	-20.000	0.000	REFB 1422.8040 INCHES
						XMRP 1422.5040 INCHES
						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 0.598

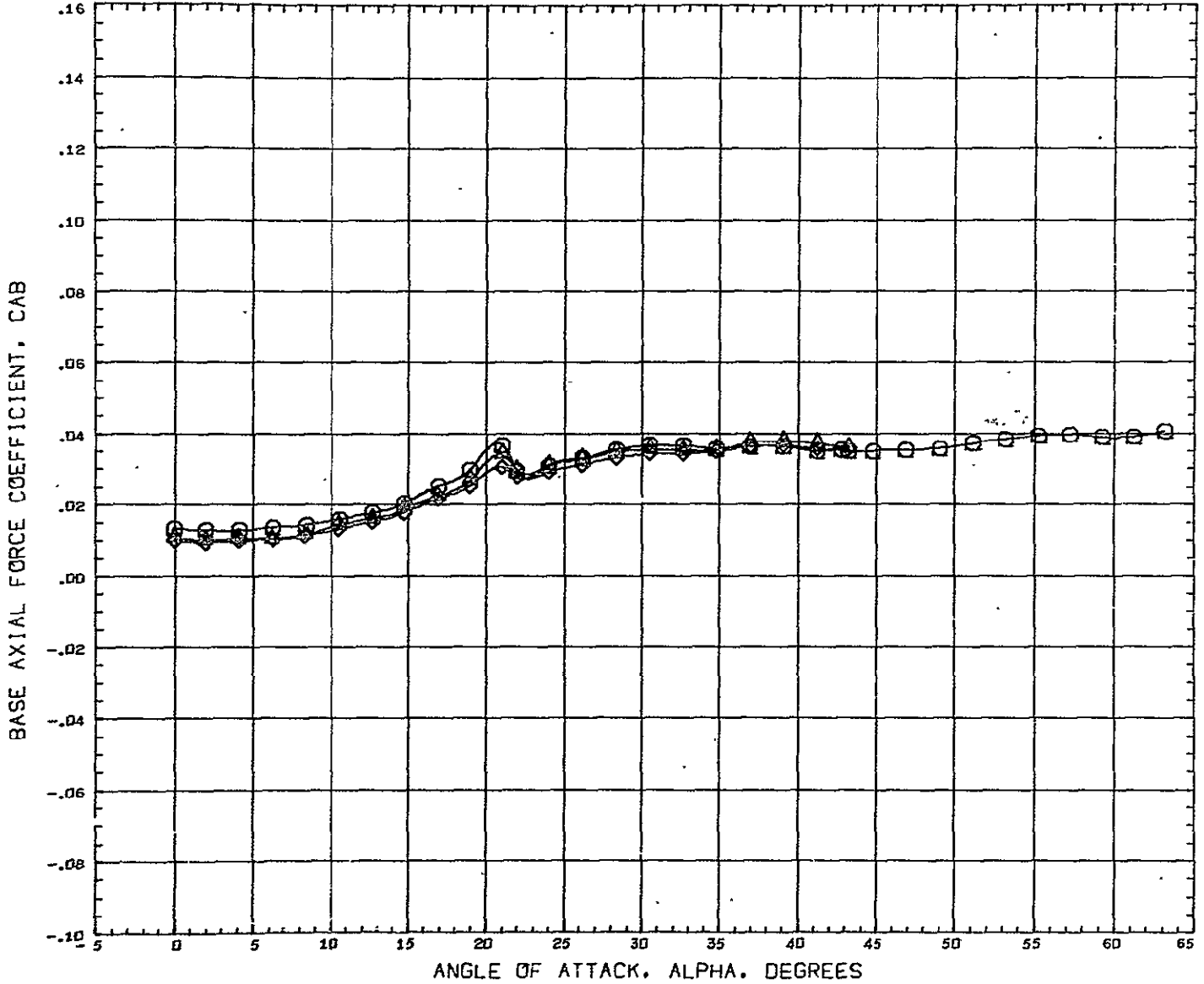
DELTA WING ORBITER- RUDDER EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(R2756S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(R2763S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	-10.000	0.000	REFL 821.2004 INCHES
(R2764S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	-20.000	0.000	REFB 1422.8040 INCHES
						XMRP 1422.5040 INCHES
						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 0.899

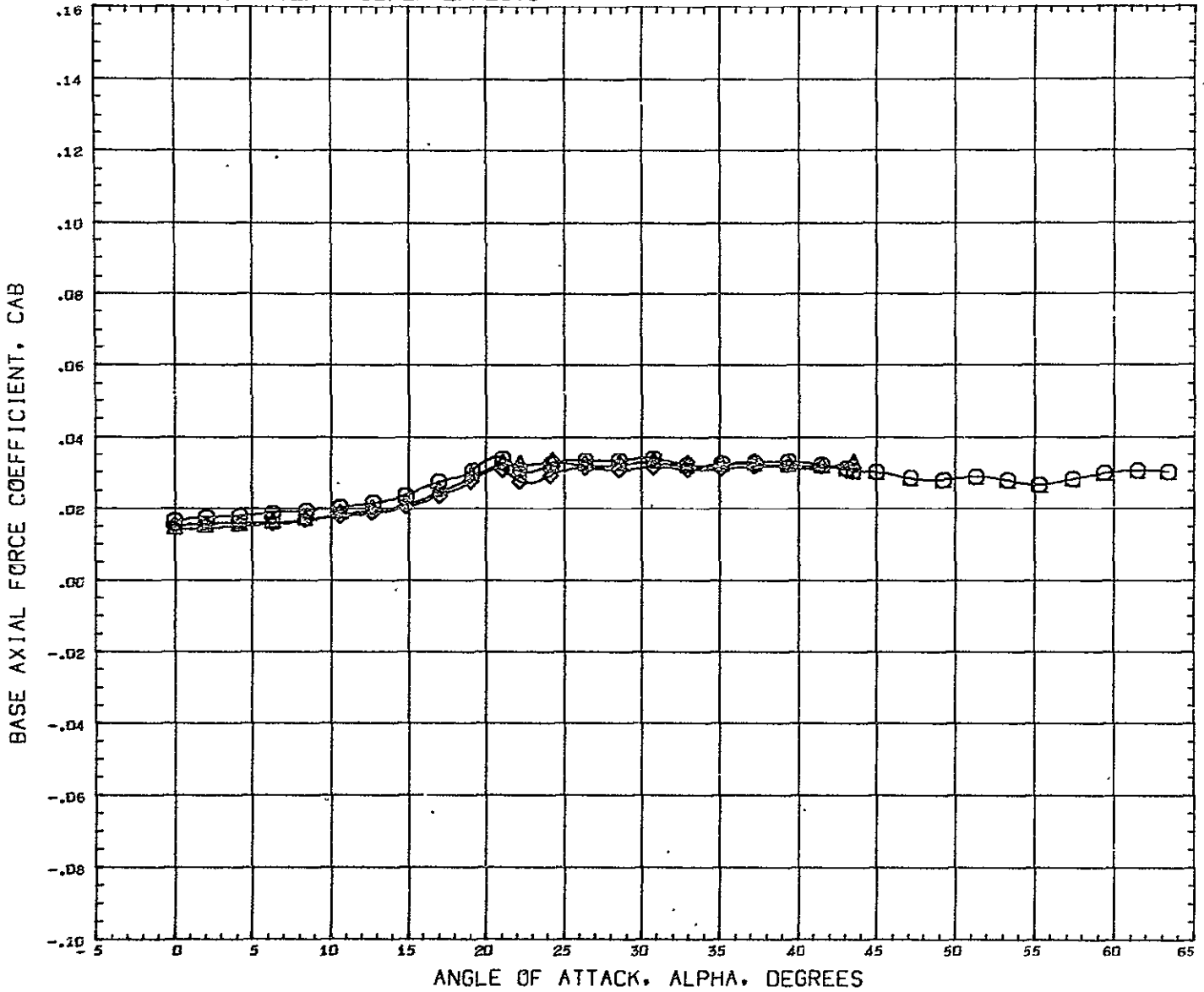
DELTA WING ORBITER- RUDDER EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(R27565)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(R27635)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	-10.000	0.000	REFL 821.2004 INCHES
(R27645)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	-20.000	0.000	REFB 1422.8040 INCHES
						XMRP 1422.5010 INCHES
						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 1.003

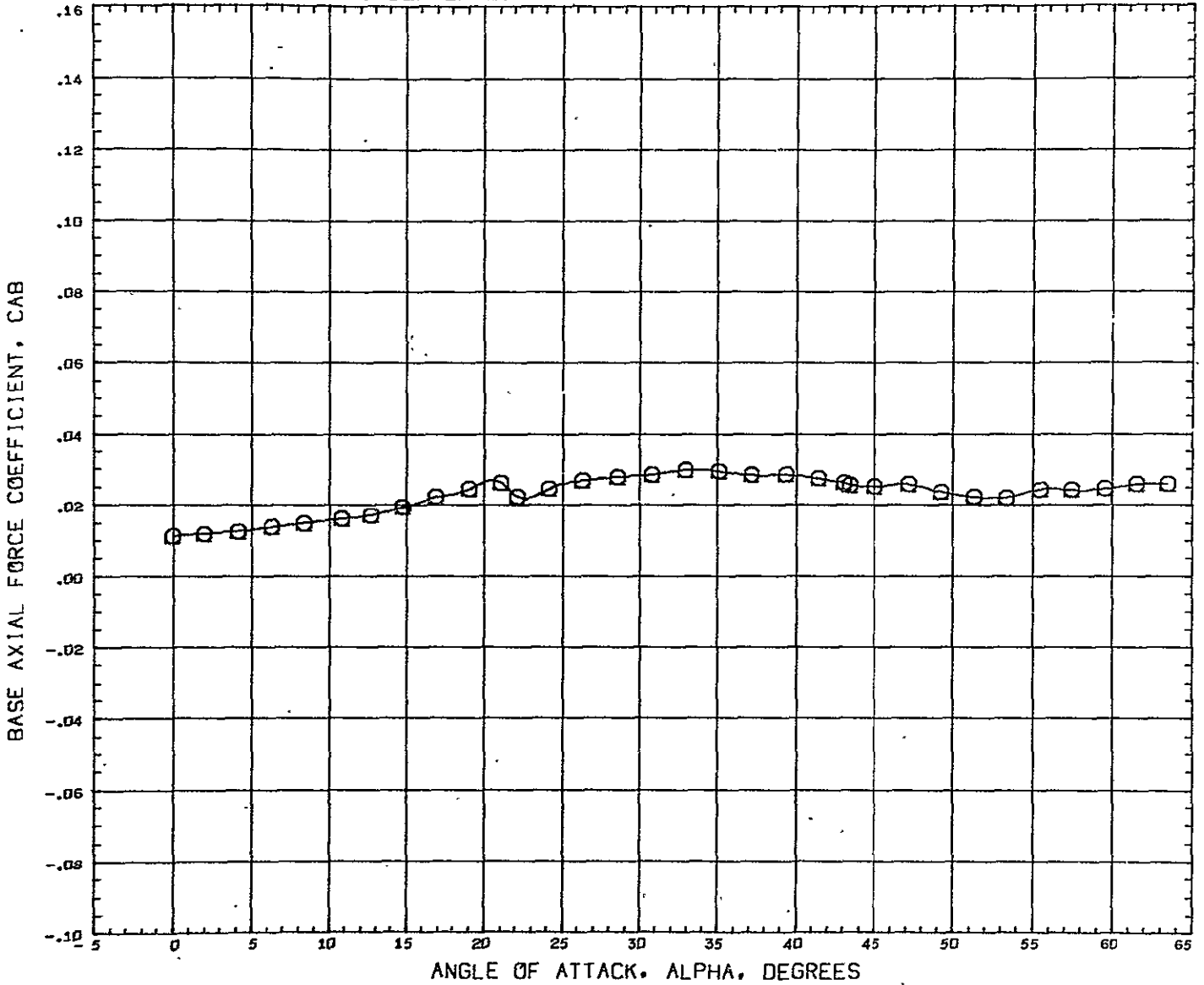
DELTA WING ORBITER- RUDDER EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(R2756S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(R2763S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	-10.000	0.000	REFL 821.2004 INCHES
(R2764S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	-20.000	0.000	REFB 1422.8040 INCHES
						XMRP 1422.5040 INCHES
						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 1.159

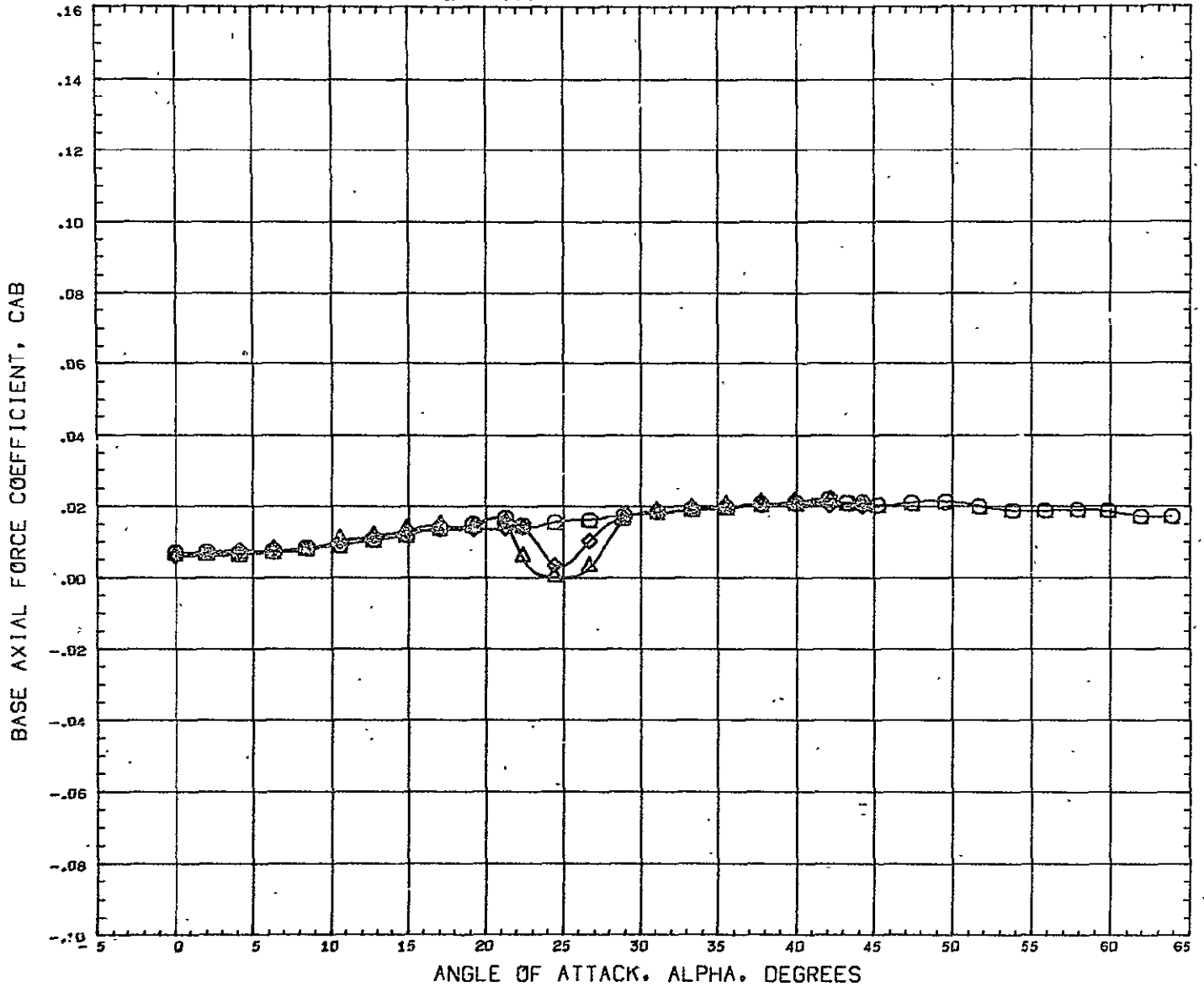
DELTA WING ORBITER- RUDDER EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(R2756S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(R2763S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	-10.000	0.000	REFL 821.2004 INCHES
(R2764S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	-20.000	0.000	REFB 1422.8040 INCHES
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						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 1.458

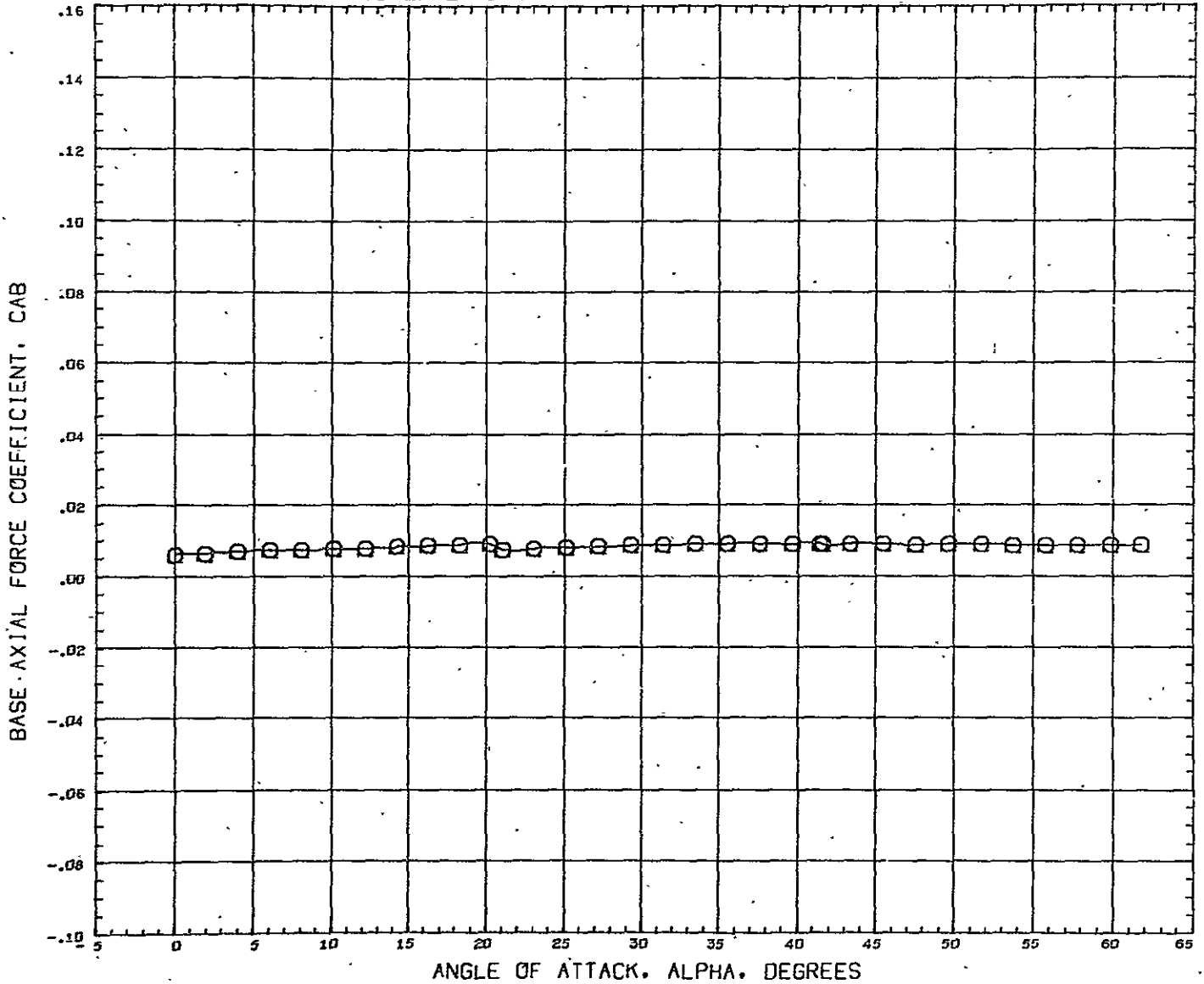
DELTA WING ORBITER- RUDDER EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(R2756S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(R2763S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	-10.000	0.000	REFL 821.2004 INCHES
(R2764S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	-20.000	0.000	REFB 1422.8040 INCHES
						XMRP 1422.5040 INCHES
						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 1.965

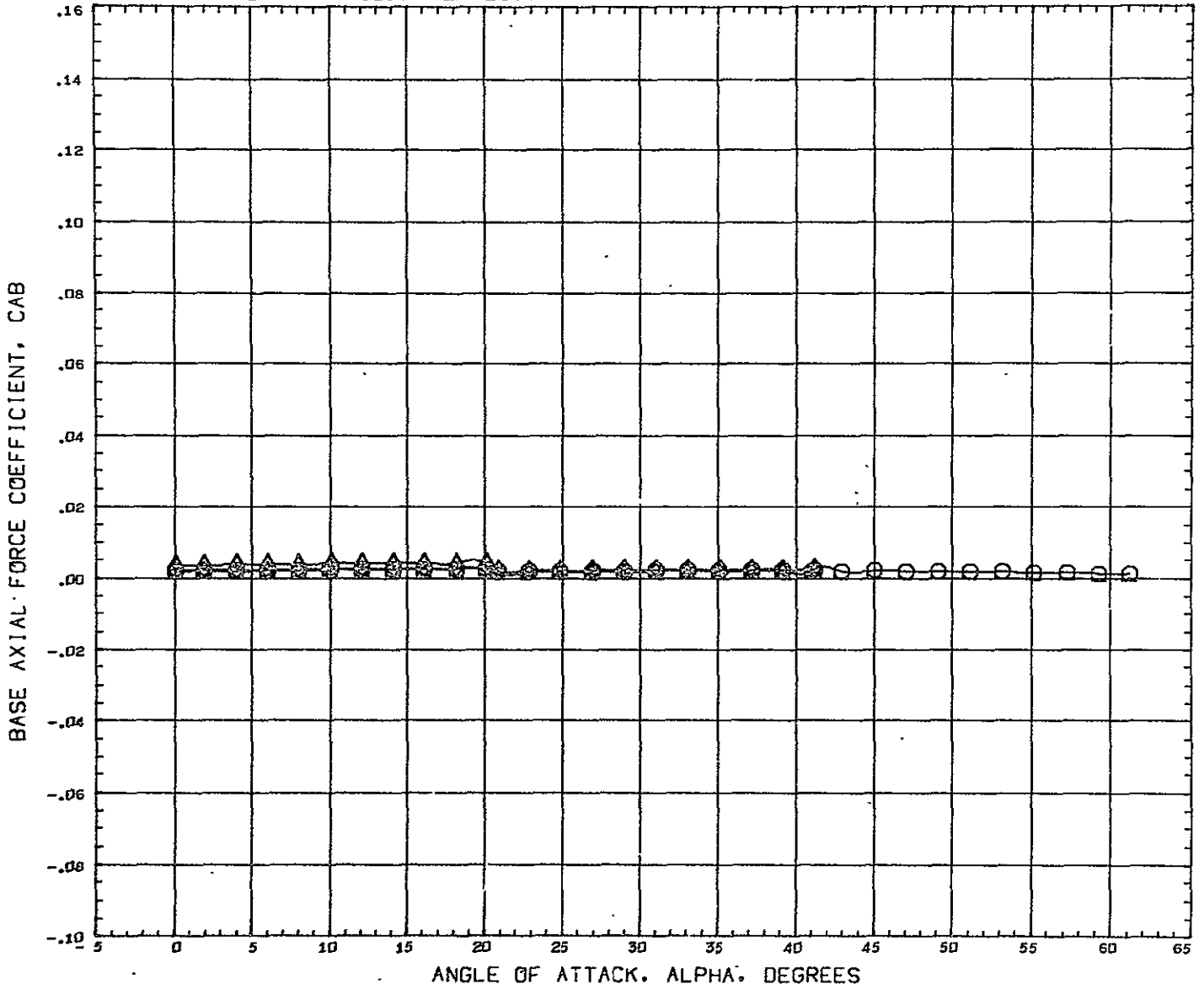
DELTA WING ORBITER- RUDDER EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(R27565)	MSFC478 NR DELTA ORBITER 65W17E10V17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(R27636)	MSFC478 NR DELTA ORBITER 65W17E10V17J2X	0.000	0.000	-10.000	0.000	REFL 821.2004 INCHES
(R27645)	MSFC478 NR DELTA ORBITER 65W17E10V17J2X	0.000	0.000	-20.000	0.000	REFB 1422.8040 INCHES
						XMRP 1422.5040 INCHES
						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 2.990

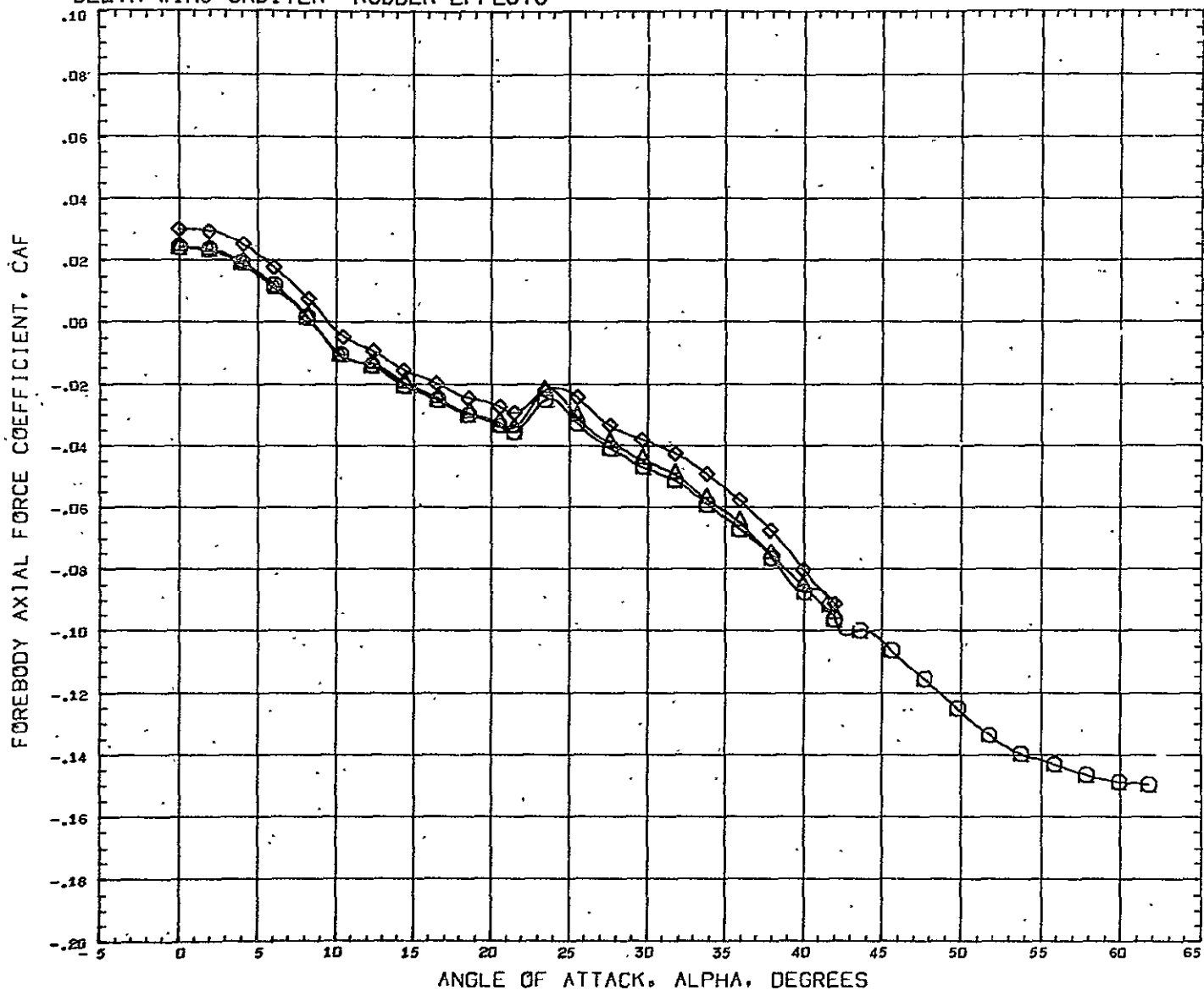
DELTA WING ORBITER- RUDDER EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(#27565)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(#27635)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	-10.000	0.000	REFL 821.2004 INCHES
(#27645)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	-20.000	0.000	REFB 1422.8040 INCHES
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						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 4.959

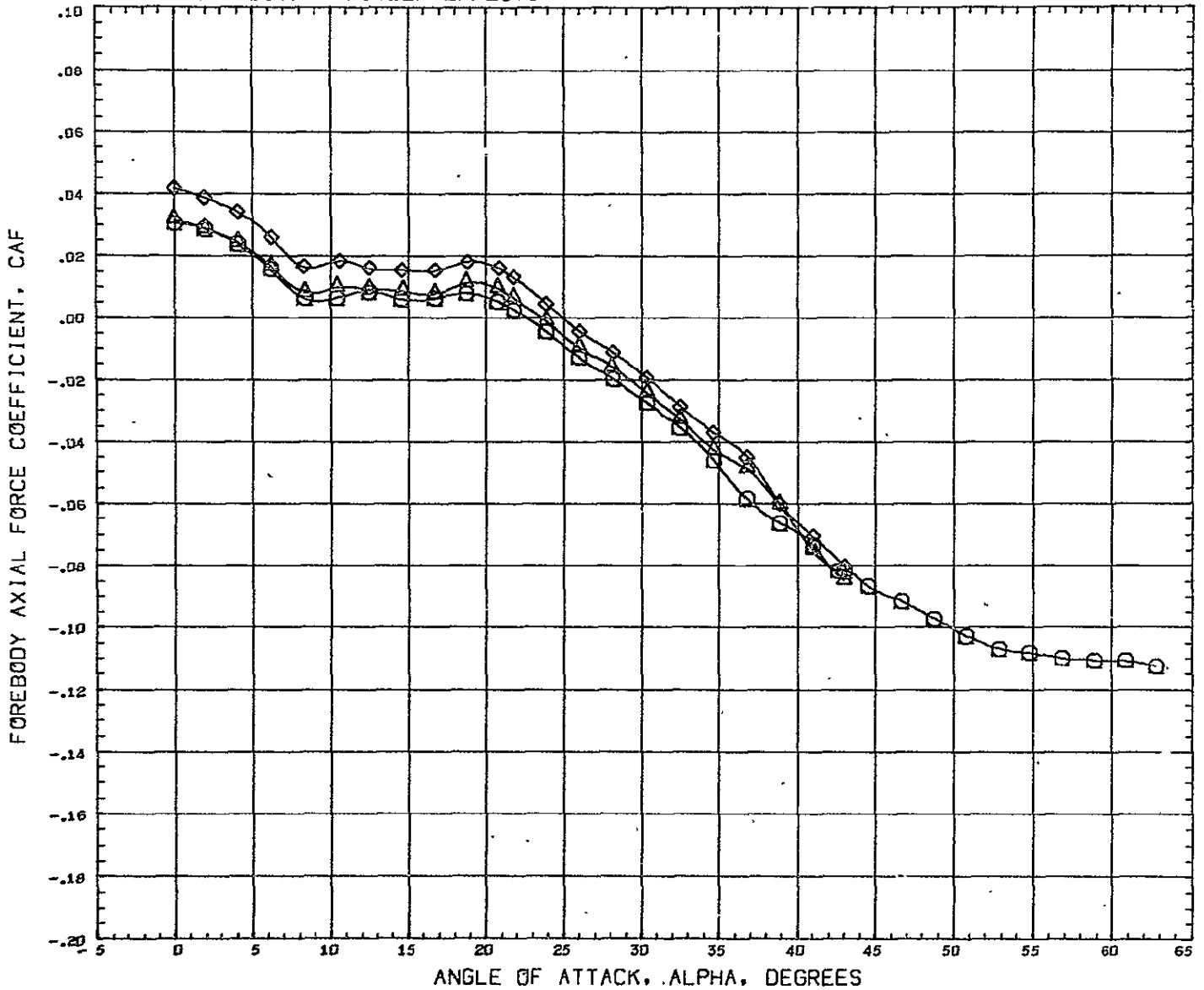
DELTA WING ORBITER- RUDDER EFFECTS



DATA SCT	SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(B2756S)	○	HSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(B2763S)	△	HSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	-10.000	0.000	REFL 821.2004 INCHES
(B2764S)	◇	HSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	-20.000	0.000	REFB 1422.8040 INCHES
							XMRP 1422.5040 INCHES
							YMRP 0.0000 INCHES
							ZMRP 130.0004 INCHES
							SCALE 0.0035 SCALE

MACH 0.598

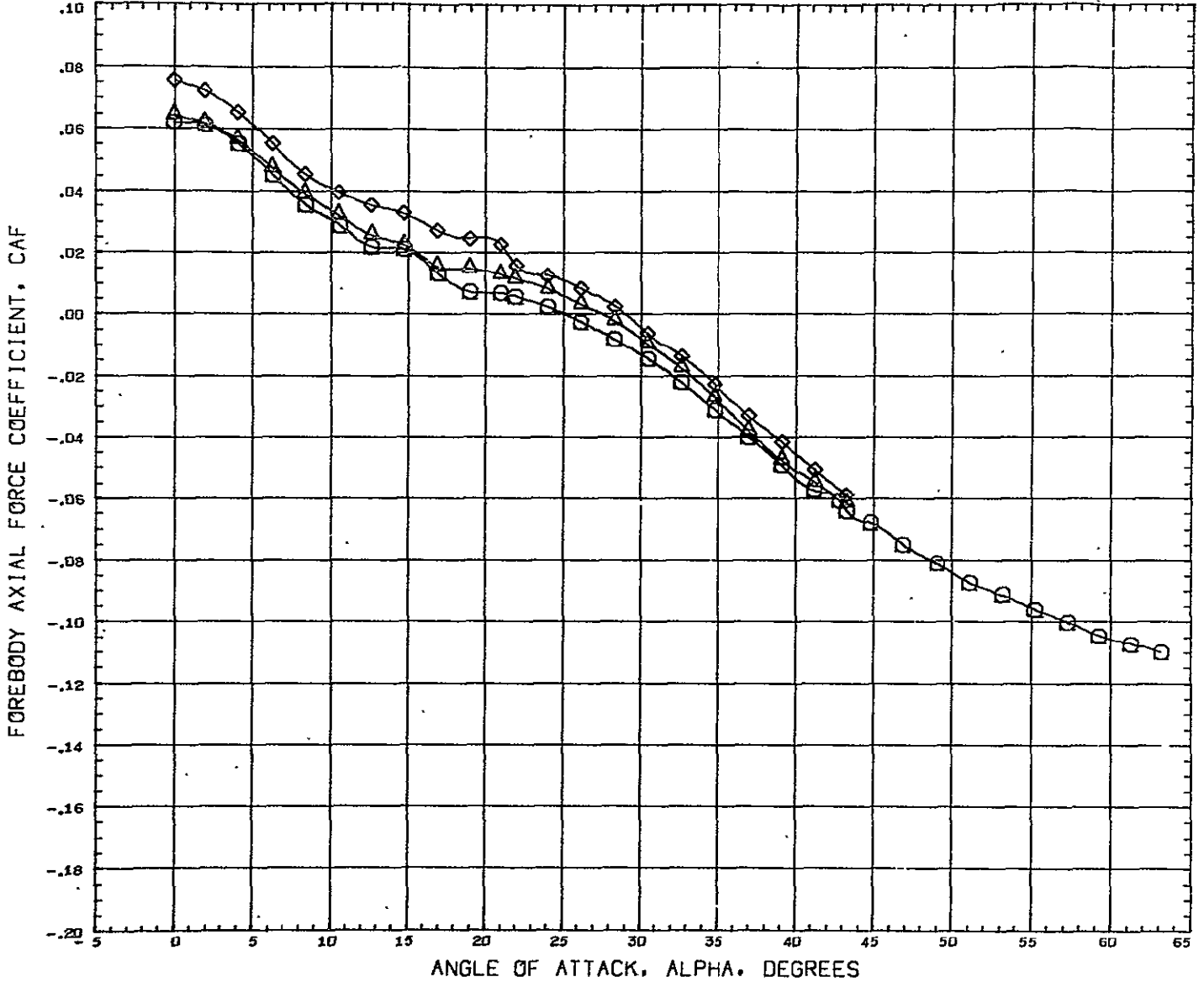
DELTA WING ORBITER- RUDDER EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(B2756S)	HSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(B2763S)	HSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	-10.000	0.000	REFL 821.2004 INCHES
(B2764S)	HSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	-20.000	0.000	REFB 1422.8040 INCHES
						XMRP 1422.5040 INCHES
						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 0.899

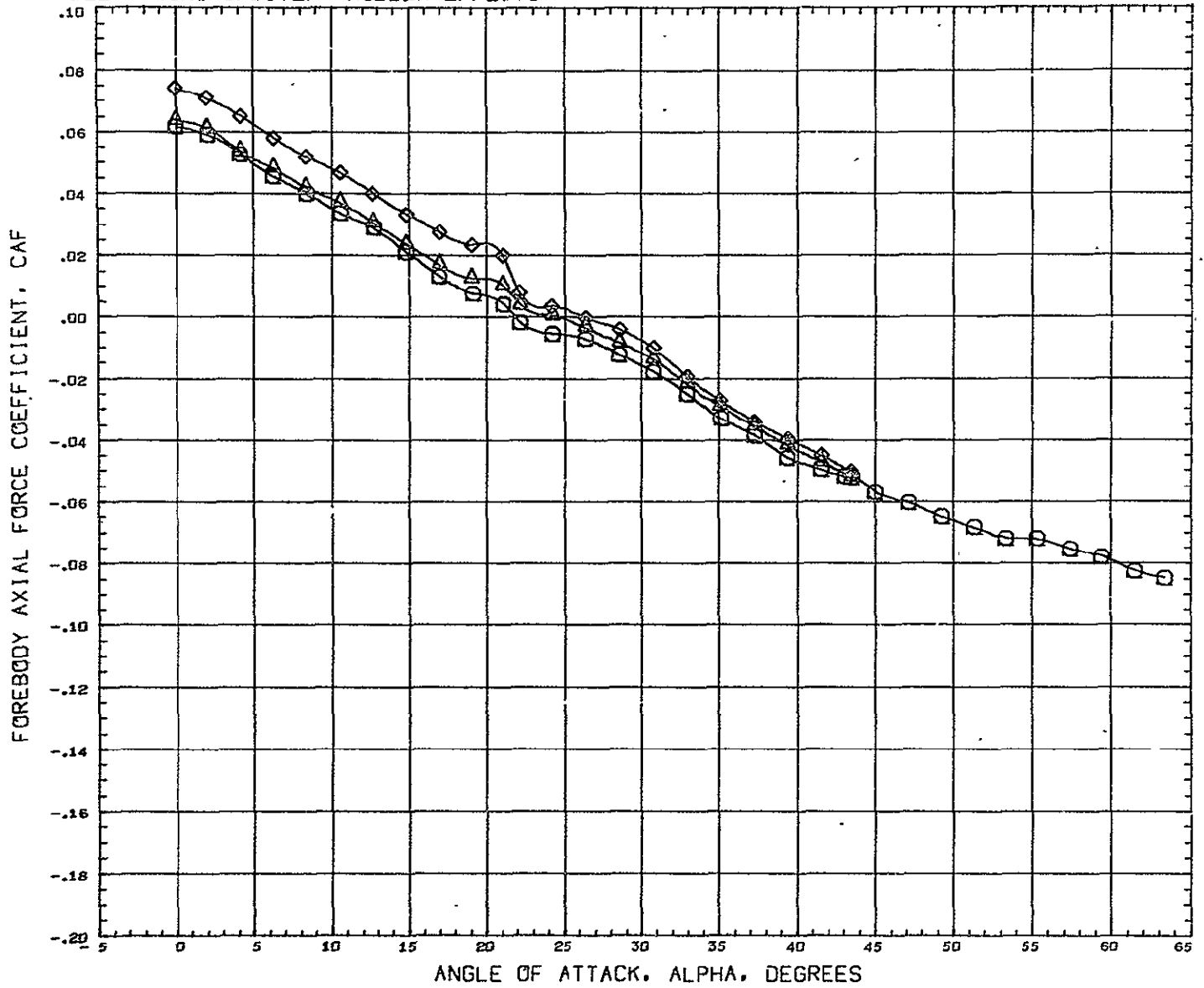
DELTA WING ORBITER- RUDDER EFFECTS



DATA SET SYMBOL	SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(B2756S)	○	MSFC478 NR DELTA ORBITER B5W17E1DV17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(B2763S)	△	MSFC478 NR DELTA ORBITER B5W17E1DV17J2X	0.000	0.000	-10.000	0.000	REPL 821.2004 INCHES
(B2764S)	◇	MSFC478 NR DELTA ORBITER B5W17E1DV17J2X	0.000	0.000	-20.000	0.000	REFB 1422.8040 INCHES
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							YMRP 0.0000 INCHES
							ZMRP 130.0004 INCHES
							SCALE 0.0035 SCALE

MACH 1.003

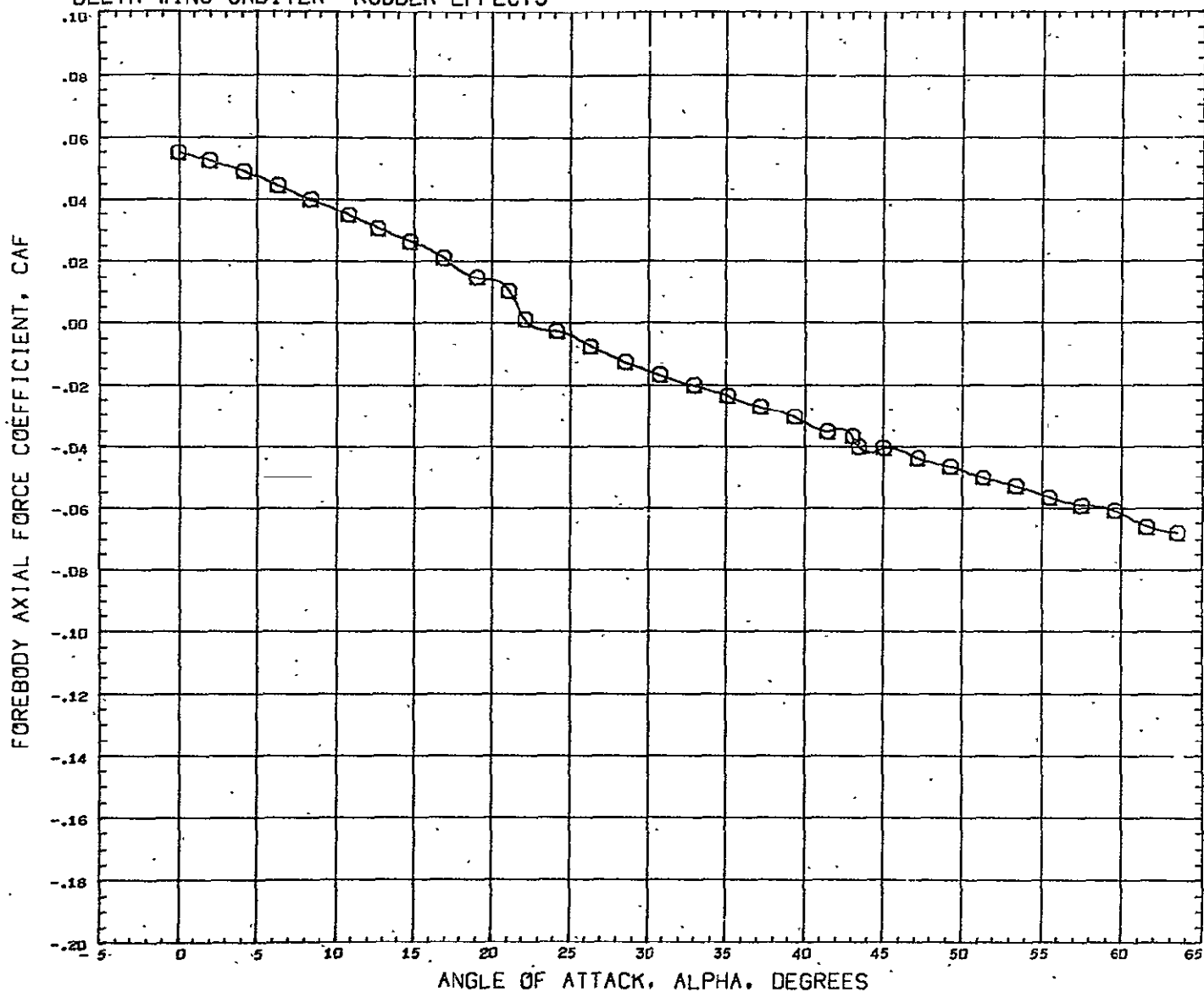
DELTA WING ORBITER- RUDDER EFFECTS



DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(B2756S)	○	MSFC478 NR DELTA ORBITER B5W17E1DV17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(B2763S)	△	MSFC478 NR DELTA ORBITER B5W17E1DV17J2X	0.000	0.000	-10.000	0.000	REFL 821.2004 INCHES
(B2764S)	◇	MSFC478 NR DELTA ORBITER B5W17E1DV17J2X	0.000	0.000	-20.000	0.000	REFB 1422.8040 INCHES
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							YMRP 0.0000 INCHES
							ZMRP 130.0004 INCHES
							SCALE 0.0035 SCALE

MACH 1.199

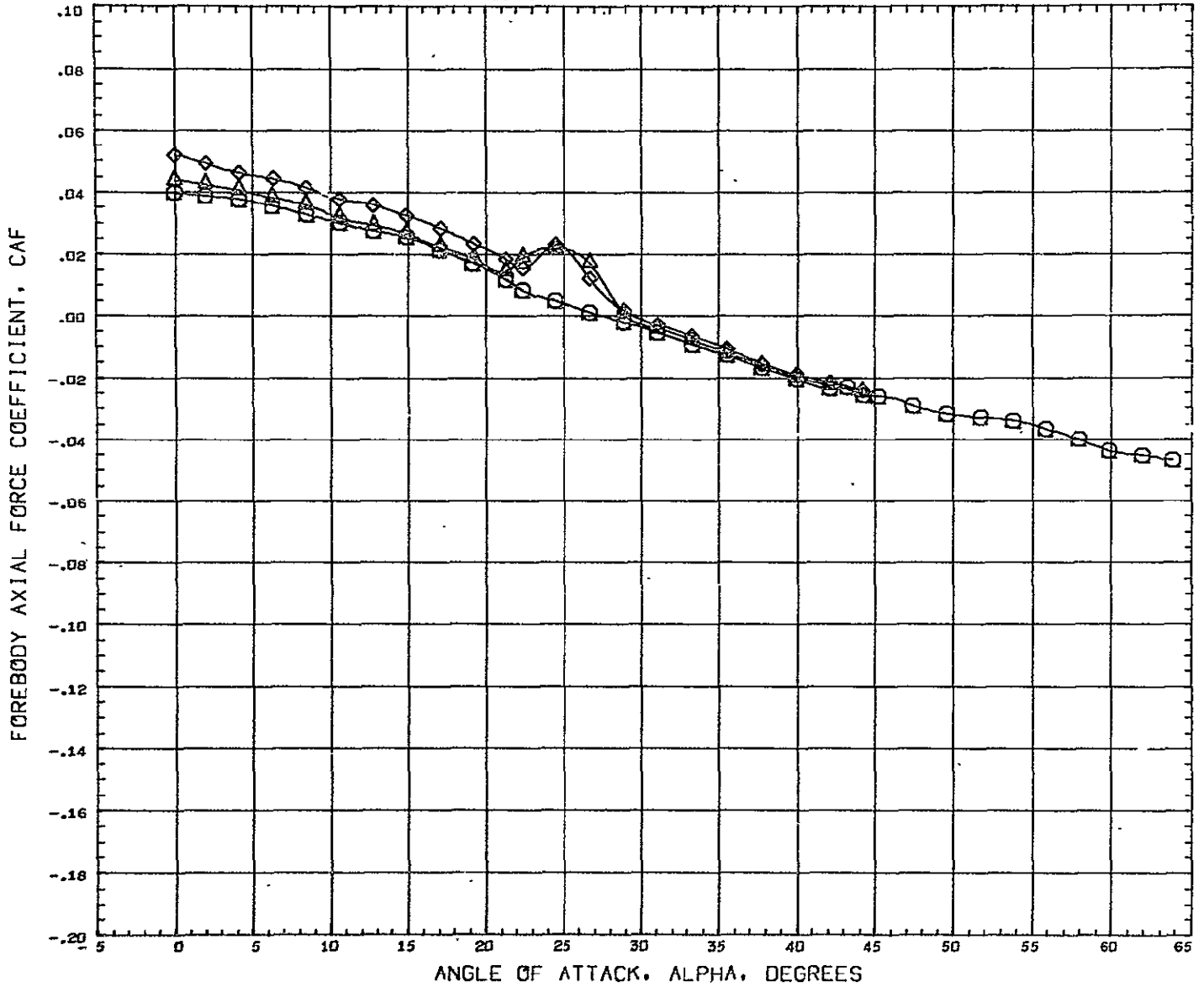
DELTA WING ORBITER- RUDDER EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(B2756S)	MSFC478 NR DELTA ORBITER B5W17E1DV17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(B2763S)	MSFC478 NR DELTA ORBITER B5W17E1DV17J2X	0.000	0.000	-10.000	0.000	REFL 821.2004 INCHES
(B2764S)	MSFC478 NR DELTA ORBITER B5W17E1DV17J2X	0.000	0.000	-20.000	0.000	REFB 1422.8040 INCHES
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						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 1.458

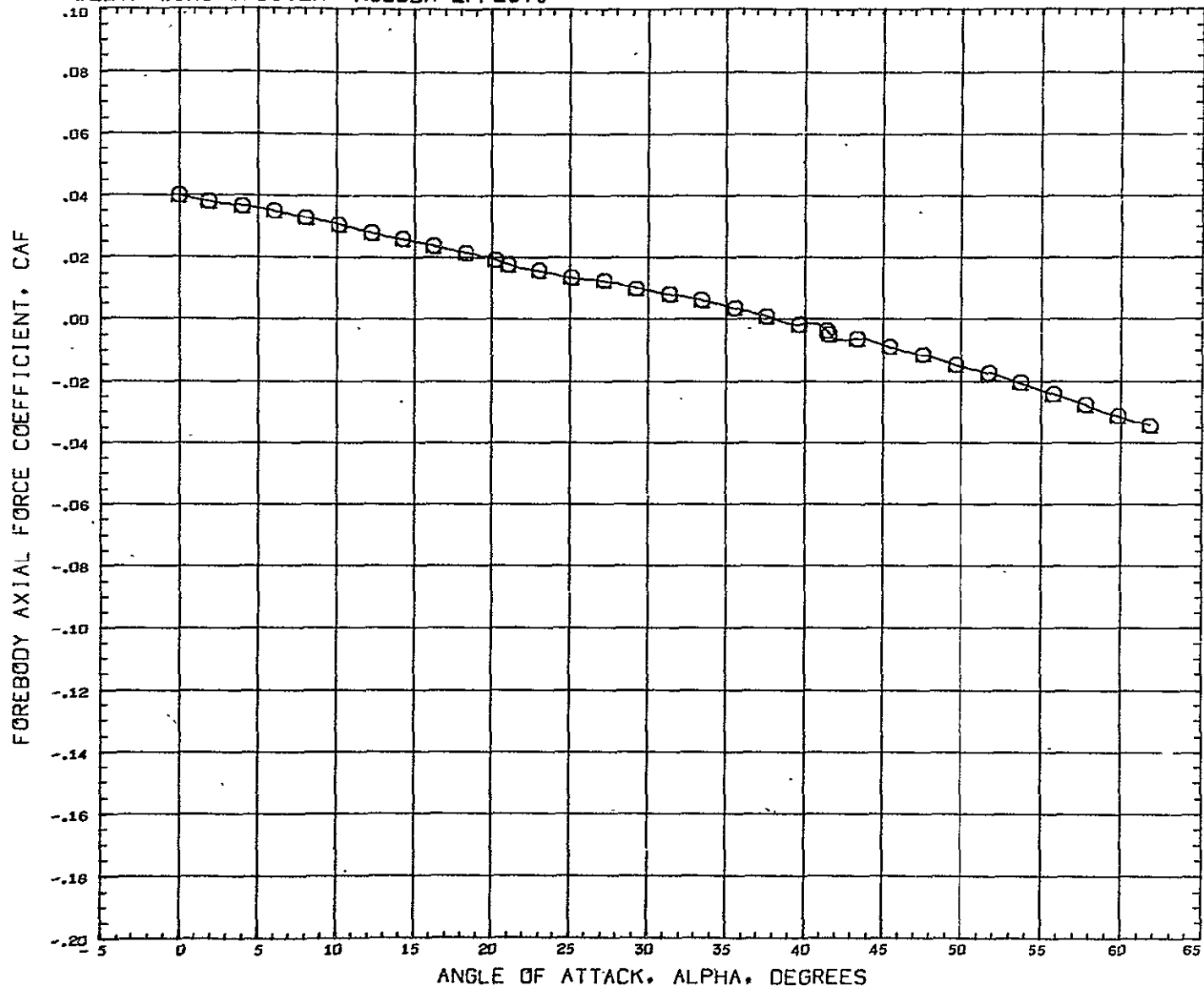
DELTA WING ORBITER- RUDDER EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(B2756S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(B2763S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	-10.000	0.000	REFL 821.2004 INCHES
(B2764S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	-20.000	0.000	REFB 1422.8040 INCHES
						XMRP 1422.5040 INCHES
						YMRP 0.0000 INCHES
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						SCALE 0.0035 SCALE

MACH 1.965

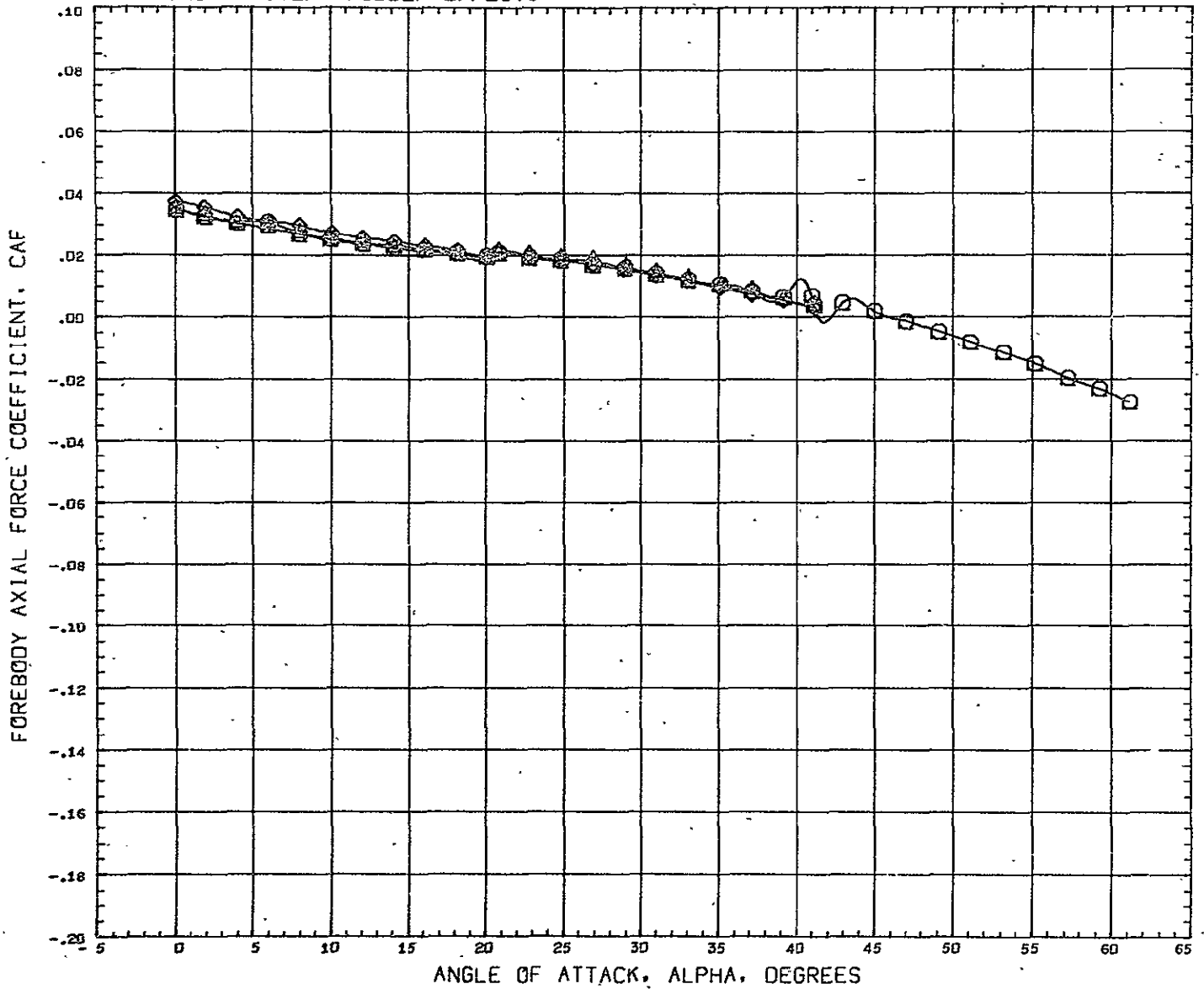
DELTA WING ORBITER- RUDDER EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(B2756S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(B2763S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	-10.000	0.000	REFL 821.2004 INCHES
(B2764S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	-20.000	0.000	REFB 1422.8940 INCHES
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						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 2.990

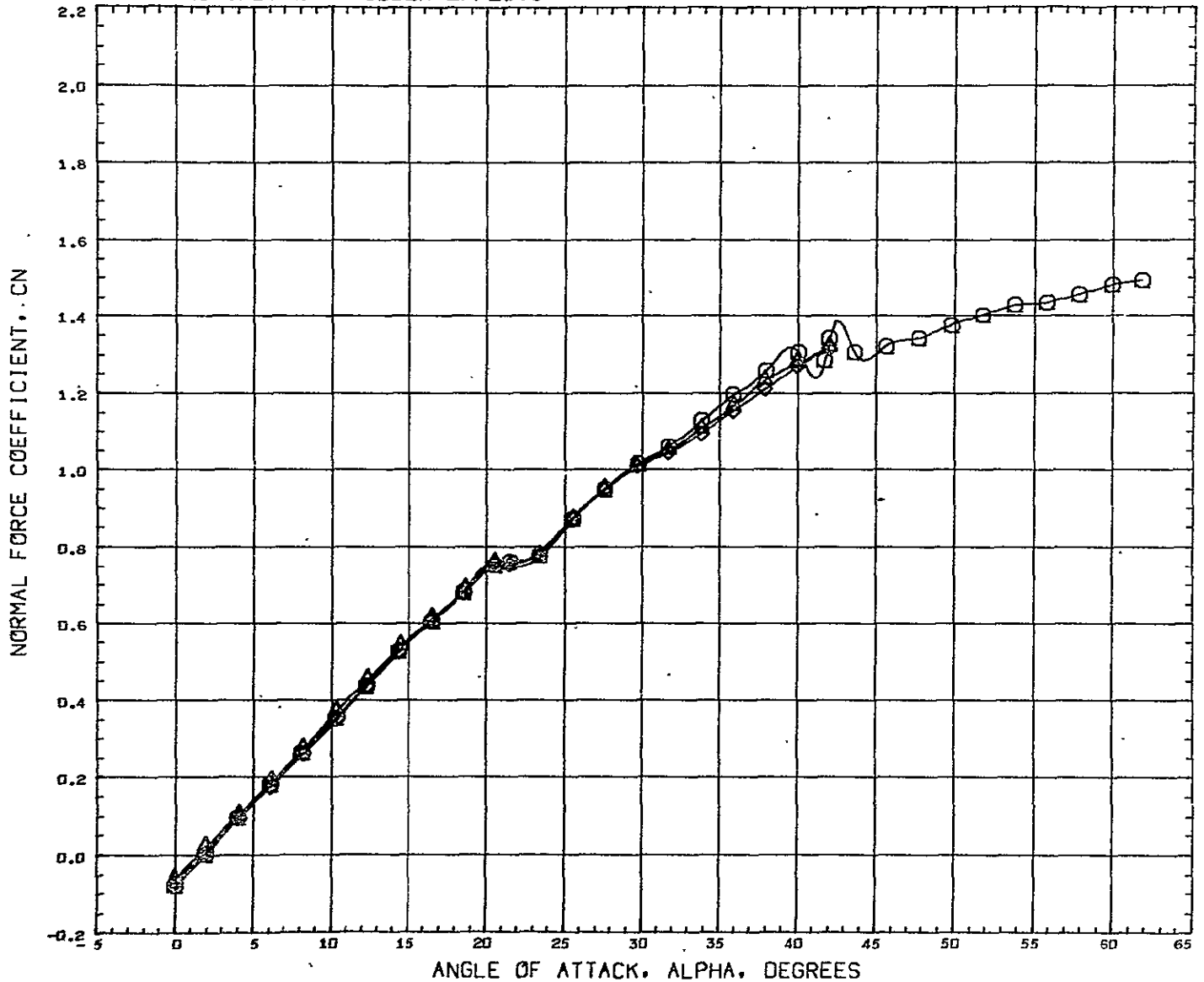
DELTA WING ORBITER- RUDDER EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(B2756S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(B2763S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	-10.000	0.000	REFL 821.2004 INCHES
(B2764S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	-20.000	0.000	REFB 1422.8040 INCHES
						XMRP 1422.5040 INCHES
						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

HACH 4.959

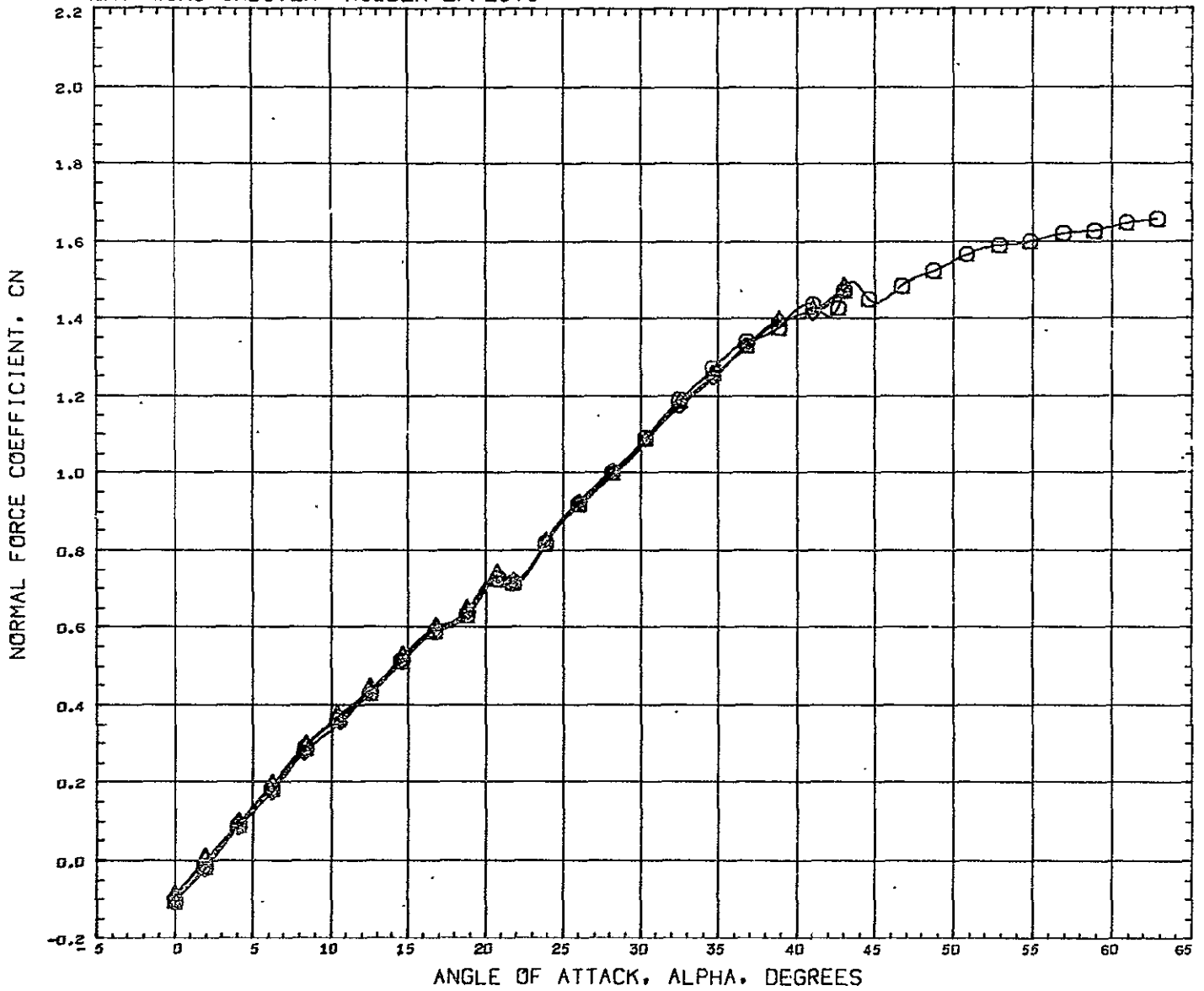
DELTA WING ORBITER- RUDDER EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(827565)	MSFC478 NR DELTA ORBITER B5W17E1DV17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(827635)	MSFC478 NR DELTA ORBITER B5W17E1DV17J2X	0.000	0.000	-10.000	0.000	REFL 821.2004 INCHES
(827645)	MSFC478 NR DELTA ORBITER B5W17E1DV17J2X	0.000	0.000	-20.000	0.000	REFB 1422.8040 INCHES
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						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 0.599

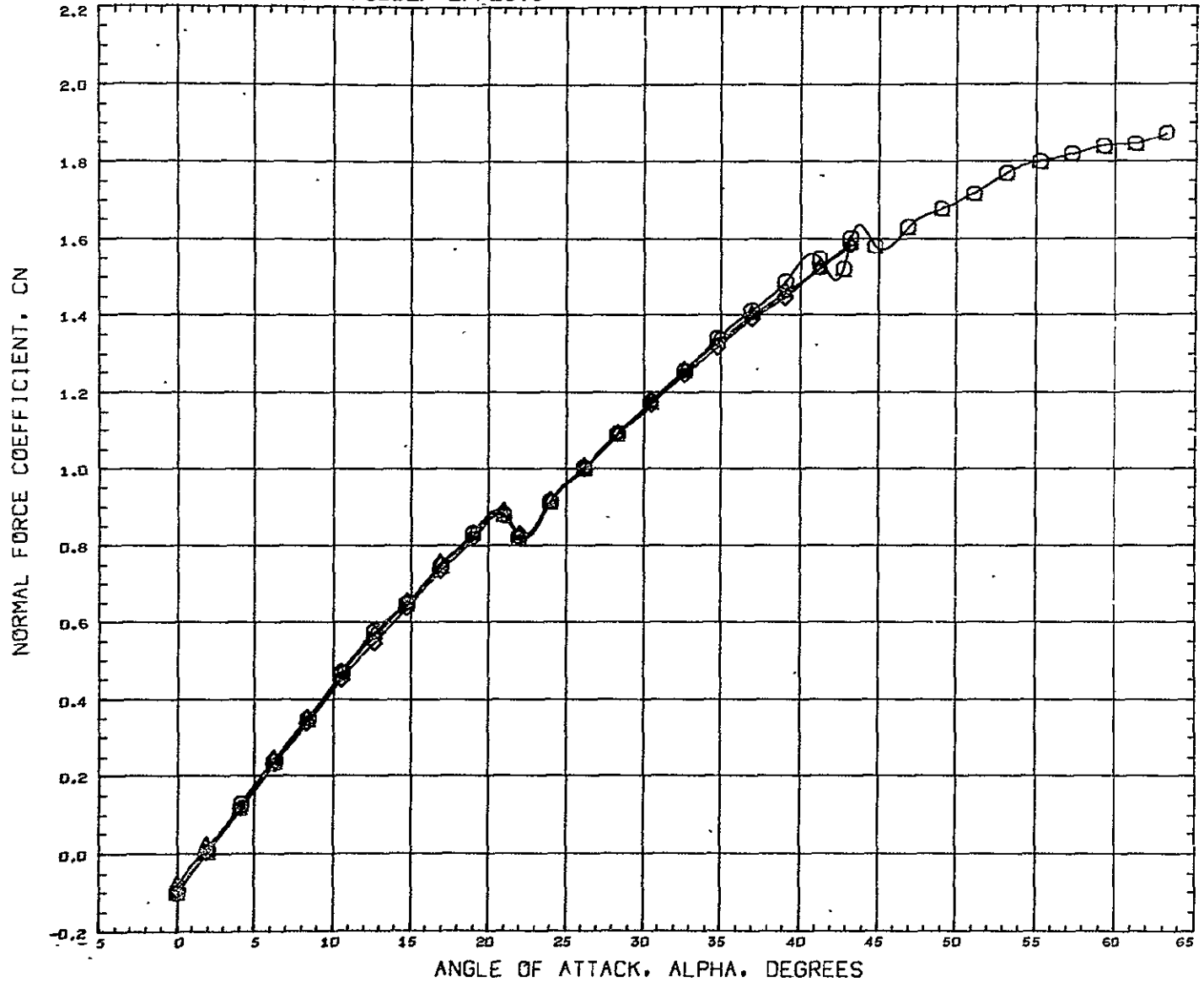
DELTA WING ORBITER- RUDDER EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(B2756S)	MSFC478 NR DELTA ORBITER B5W17E1DV17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(B2763S)	MSFC478 NR DELTA ORBITER B5W17E1DV17J2X	0.000	0.000	-10.000	0.000	REFL 821.2004 INCHES
(B2764S)	MSFC478 NR DELTA ORBITER B5W17E1DV17J2X	0.000	0.000	-20.000	0.000	REFB 1422.8040 INCHES
						XMRP 1422.5040 INCHES
						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

PACH 0.899

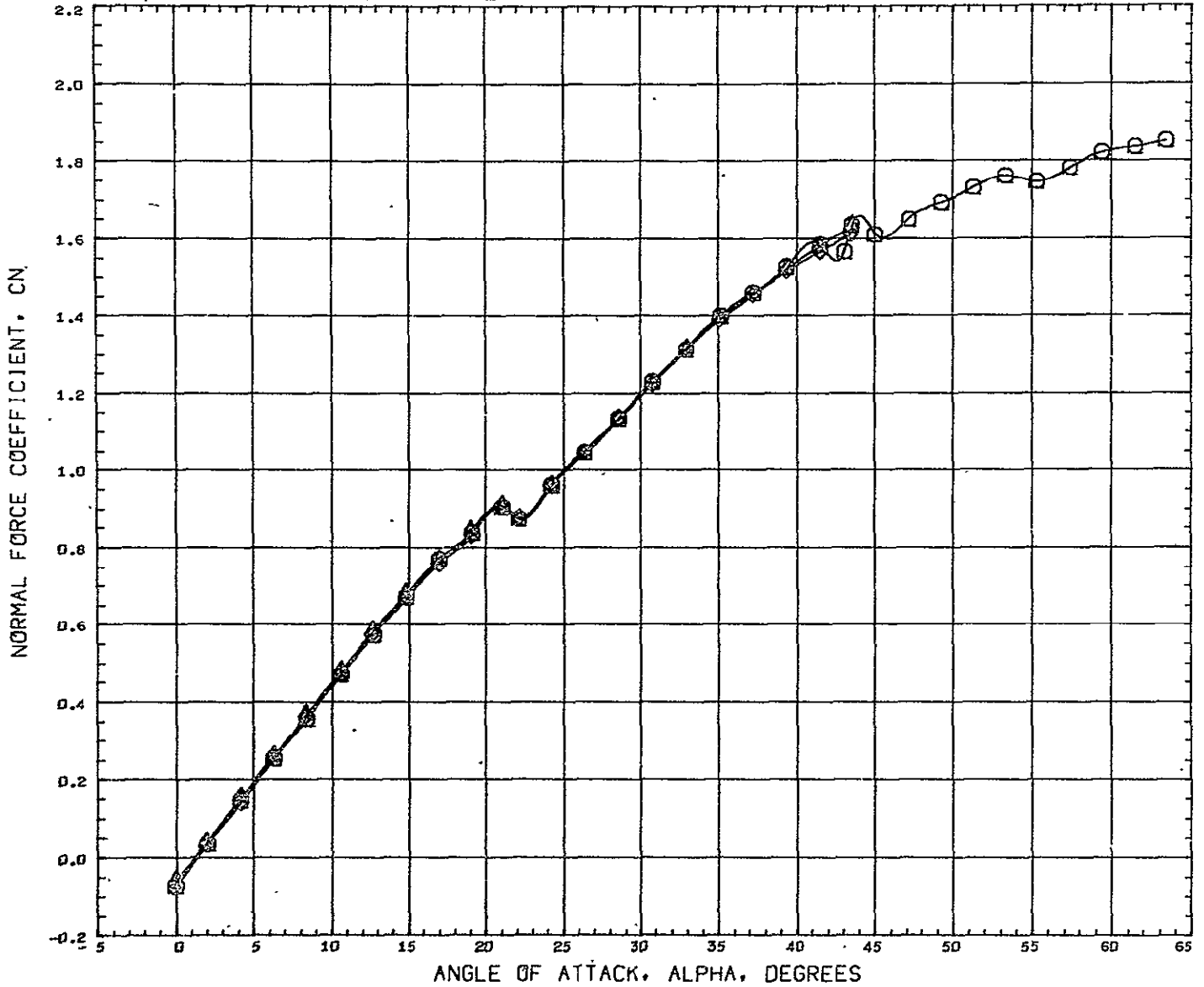
DELTA WING ORBITER- RUDDER EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(B2756S)	○ HSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(B2763S)	△ HSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	-10.000	0.000	REFL 821.2004 INCHES
(B2764S)	◇ HSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	-20.000	0.000	REFB 1422.8040 INCHES
						XMRP 1422.5040 INCHES
						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 1.003

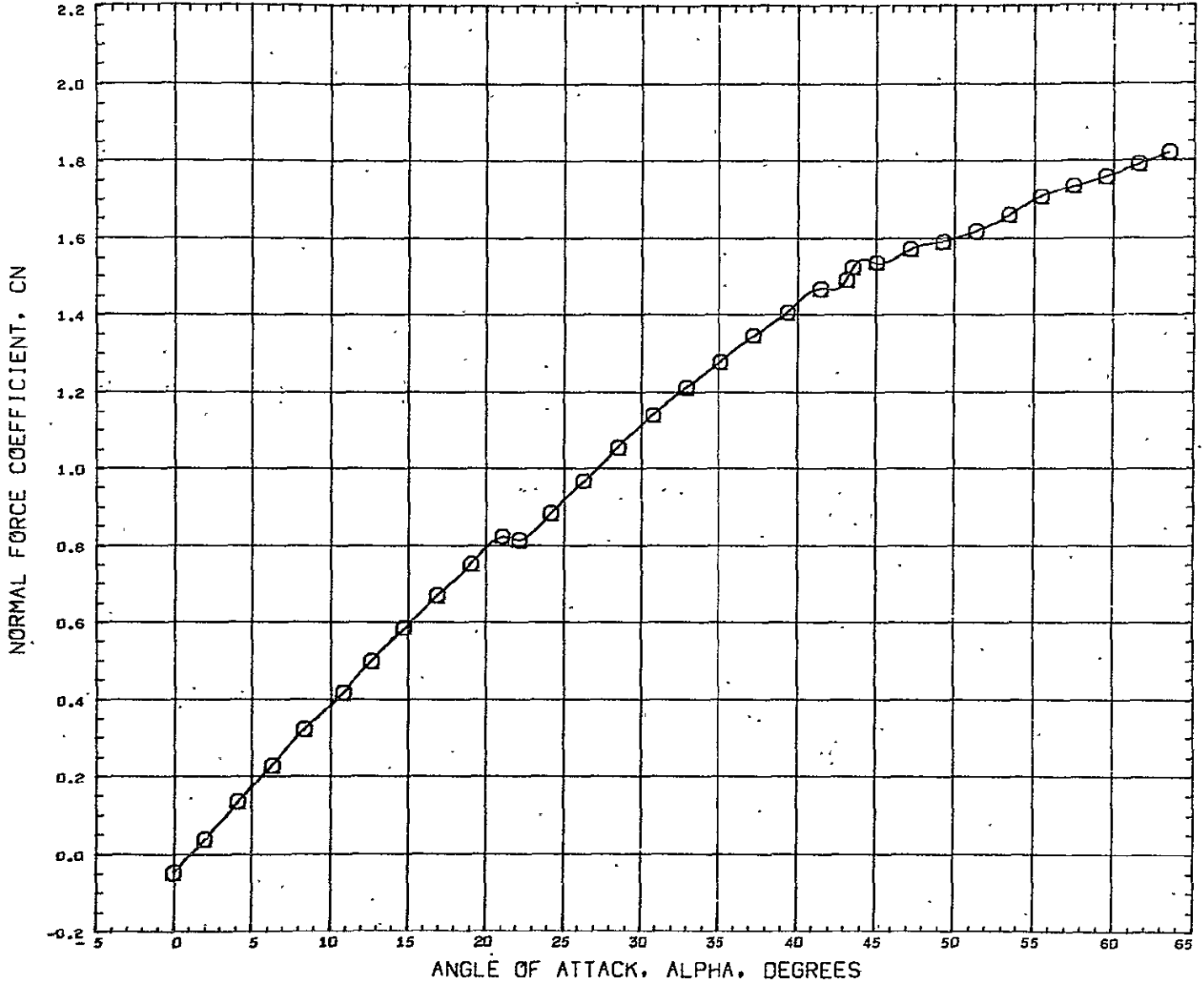
DELTA WING ORBITER- RUDDER EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(B2756S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(B2763S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	-10.000	0.000	REFL 821.2004 INCHES
(B2764S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	-20.000	0.000	REFB 1422.8040 INCHES
						XMRP 1422.5040 INCHES
						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 1.198

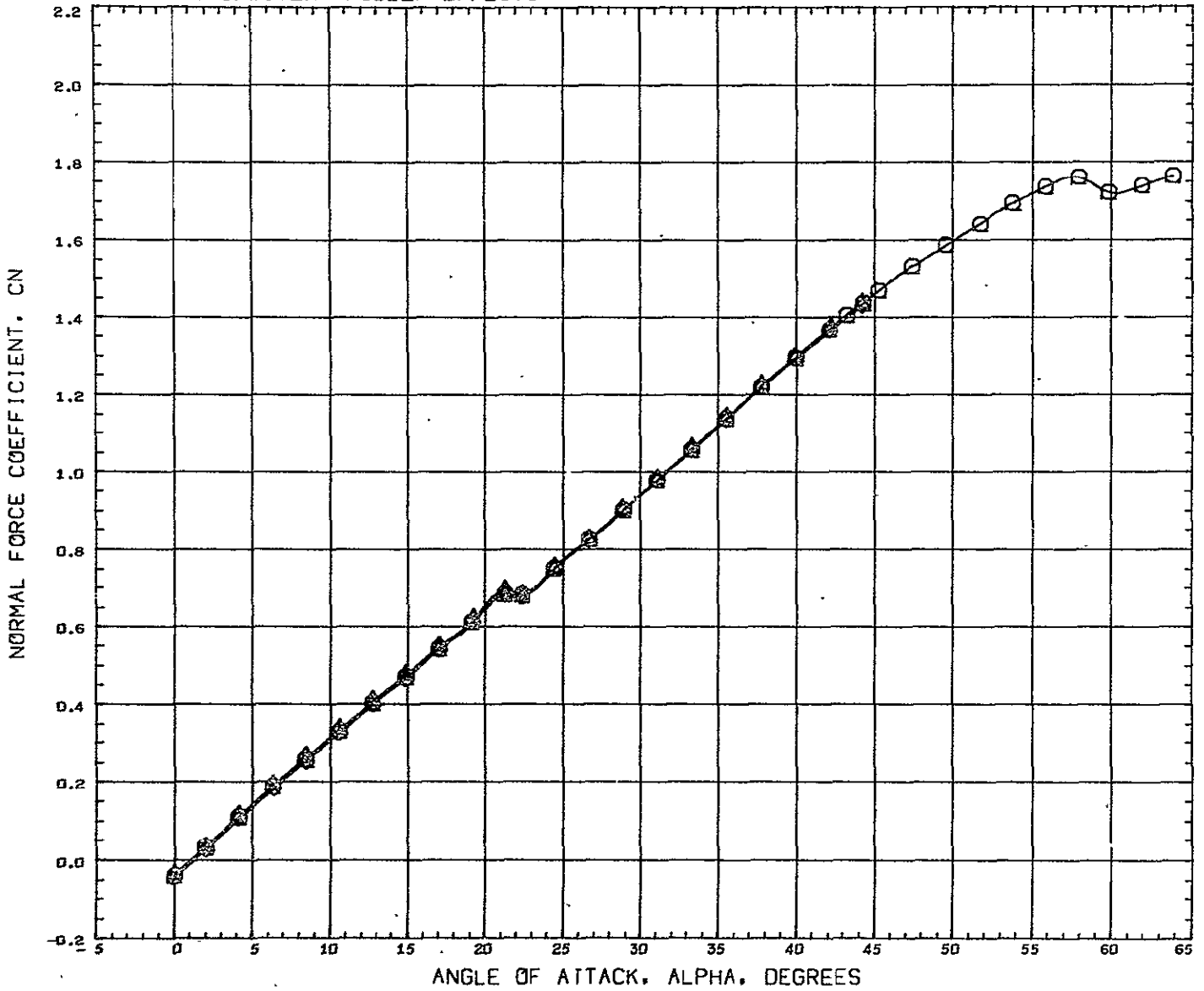
DELTA WING ORBITER- RUDDER EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(B2756S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(B2763S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	-10.000	0.000	REFL 821.2004 INCHES
(B2764S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	-20.000	0.000	REFB 1422.8040 INCHES
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						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
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HACH 1.458

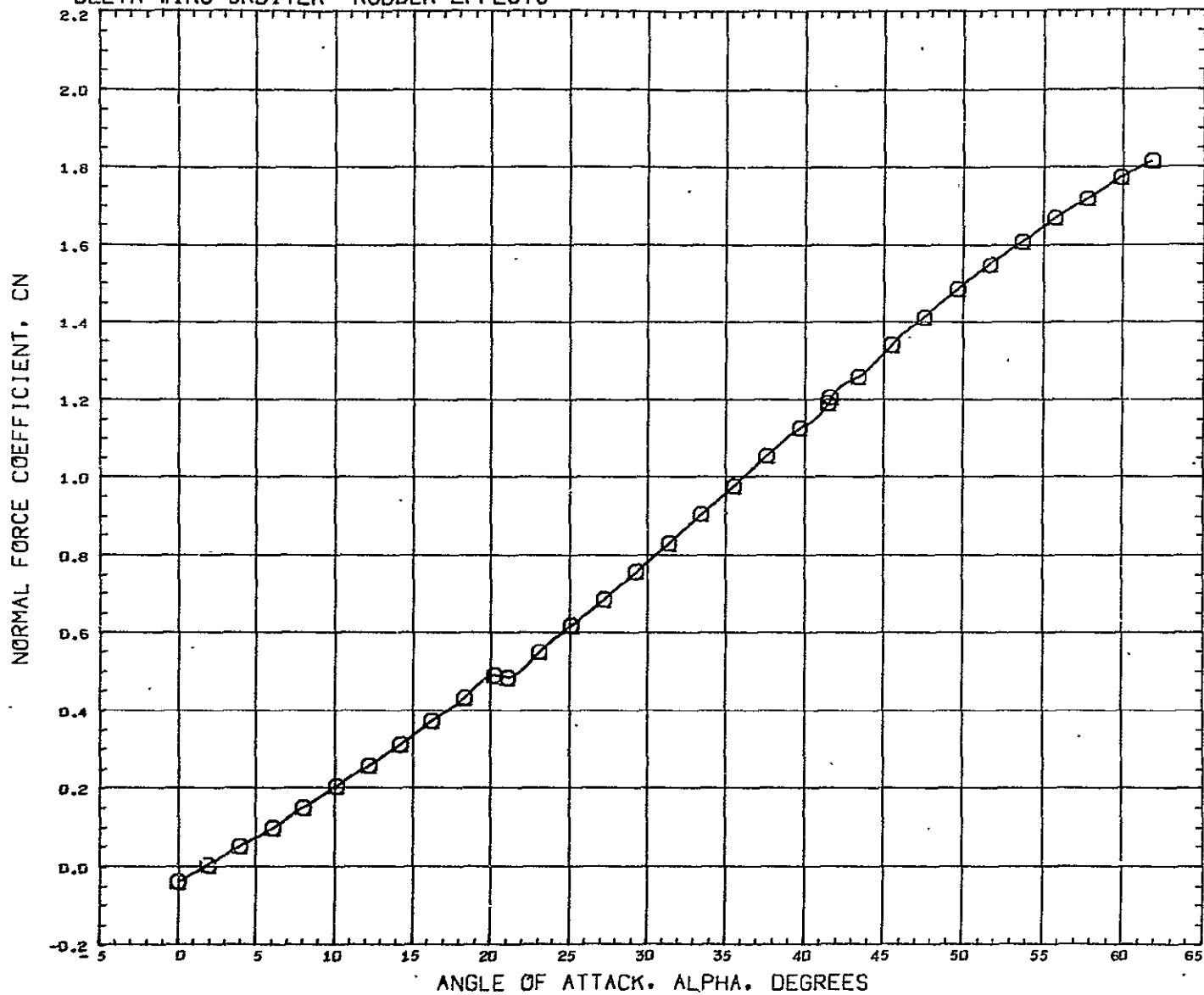
DELTA WING ORBITER- RUDDER EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(B2756S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(B2763S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	-10.000	0.000	REFL 821.2004 INCHES
(B2764S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	-20.000	0.000	REFB 1422.8040 INCHES
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						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 1.965

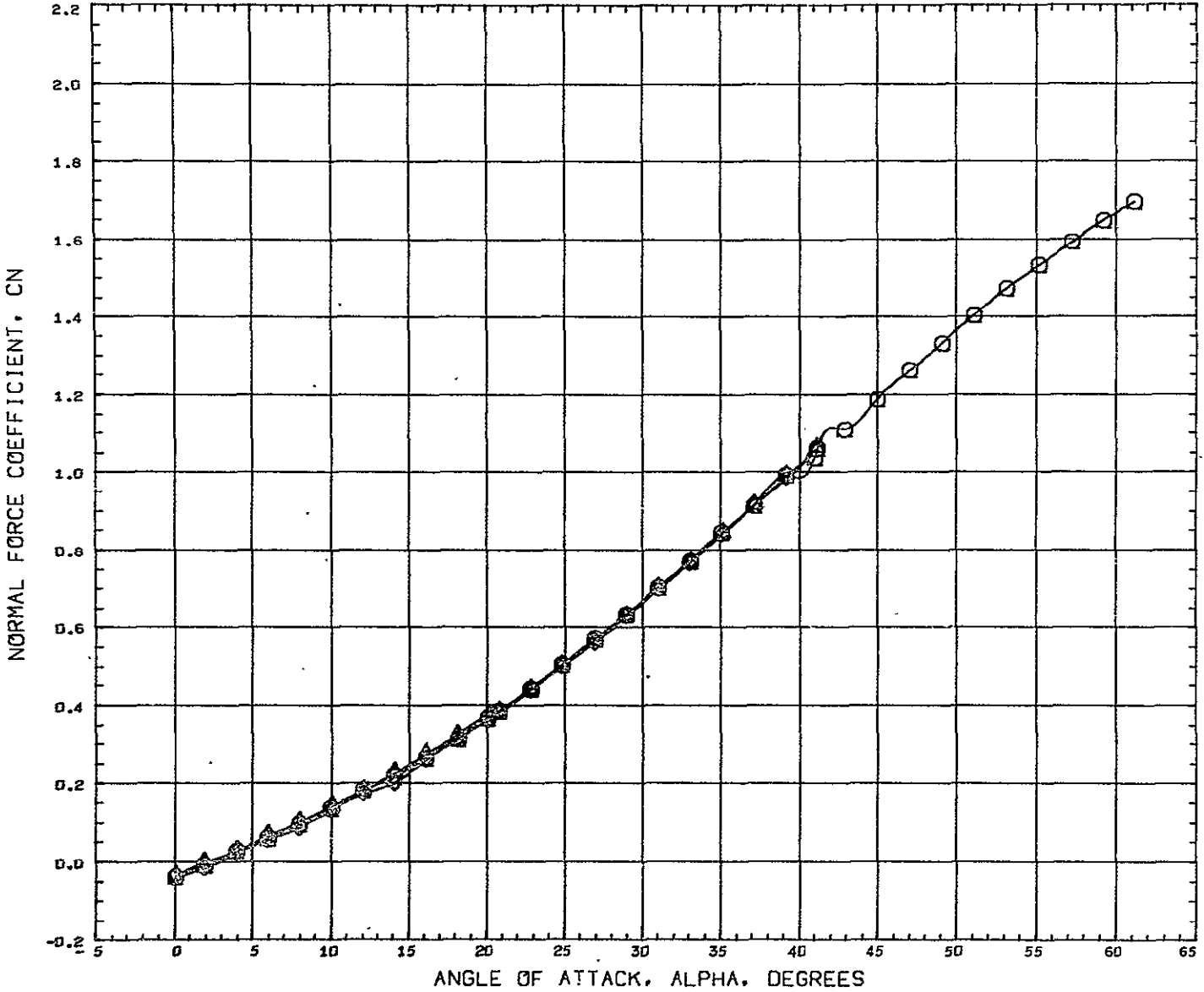
DELTA WING ORBITER- RUDDER EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(B2756S)	○ MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(B2763S)	△ MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	-10.000	0.000	REFL 821.2004 INCHES
(B2764S)	◇ MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	-20.000	0.000	REFB 1422.8040 INCHES
						XMRP 1422.5040 INCHES
						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 2.990

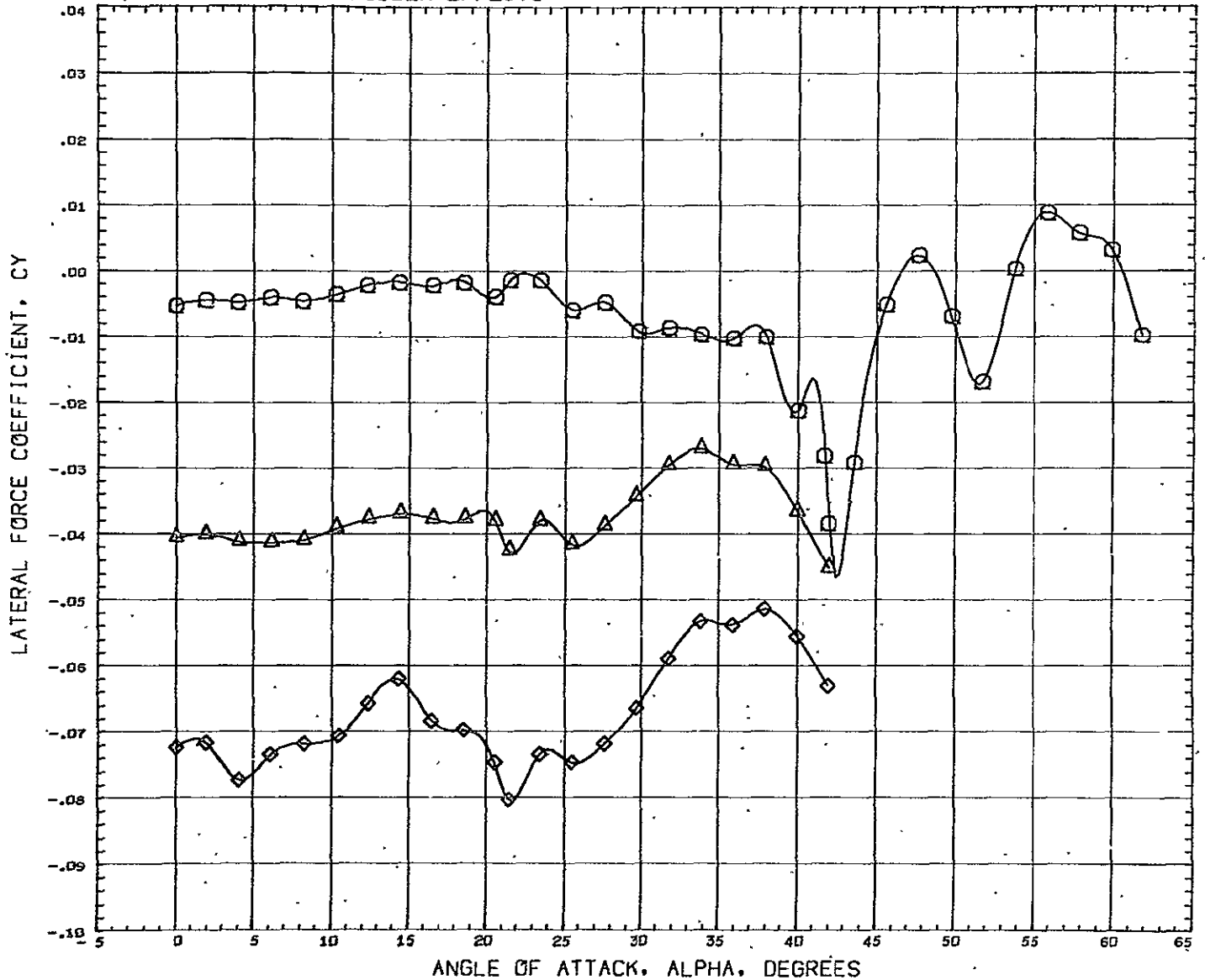
DELTA WING ORBITER- RUDDER EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(B2756S)	MSFC478 NR DELTA ORBITER B5W17E1DV17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(B2763S)	MSFC478 NR DELTA ORBITER B5W17E1DV17J2X	0.000	0.000	-10.000	0.000	REFL 821.2004 INCHES
(B2764S)	MSFC478 NR DELTA ORBITER B5W17E1DV17J2X	0.000	0.000	-20.000	0.000	REFB 1422.8040 INCHES
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						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 4.959

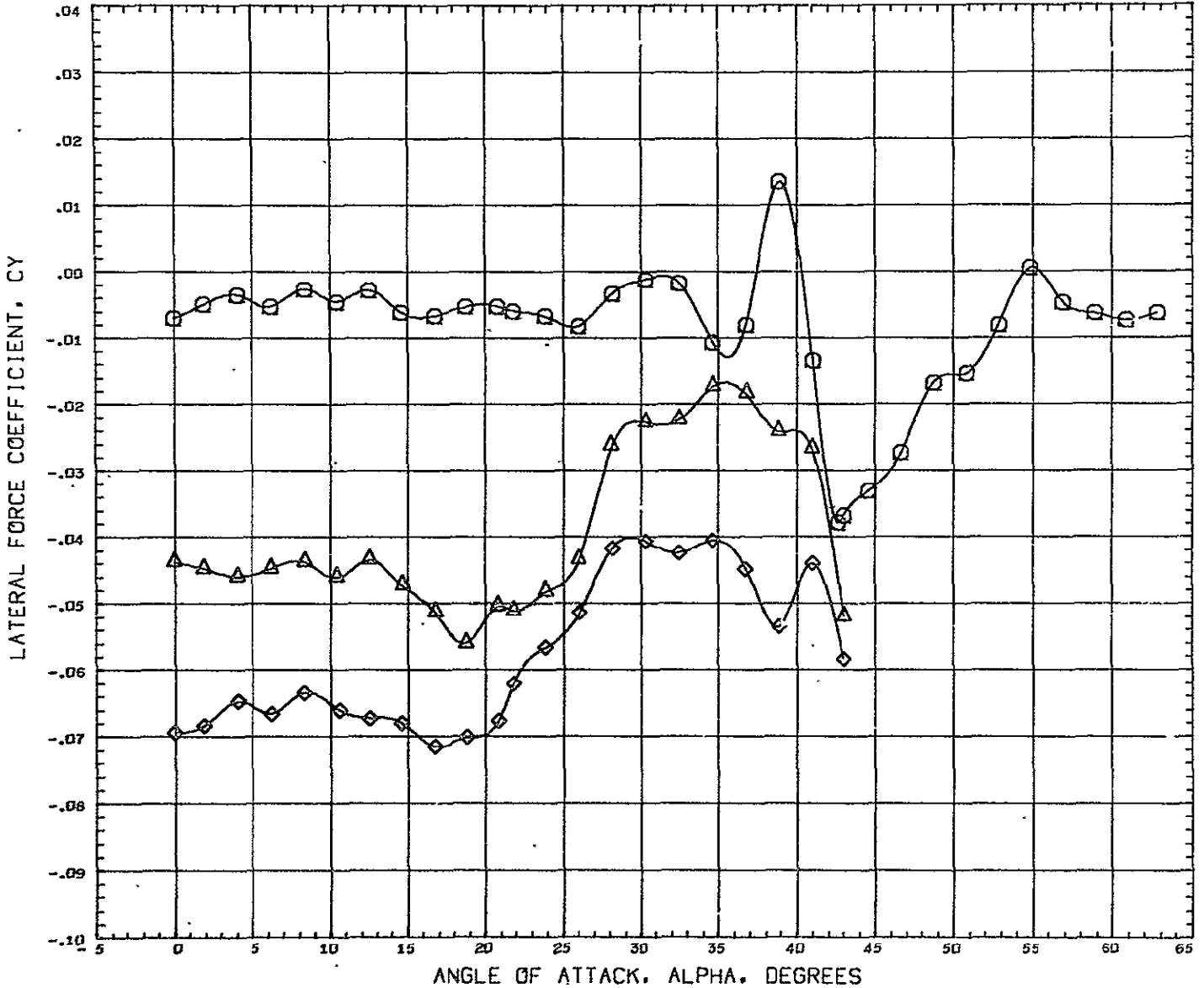
DELTA WING ORBITER- RUDDER EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILTRN	RUDDER	RUDFLR	REFERENCE INFORMATION
(R2756S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(R2763S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	-10.000	0.000	REFL 821.2004 INCHES
(R2764S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	-20.000	0.000	REFB 1422.8040 INCHES
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						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 0.598

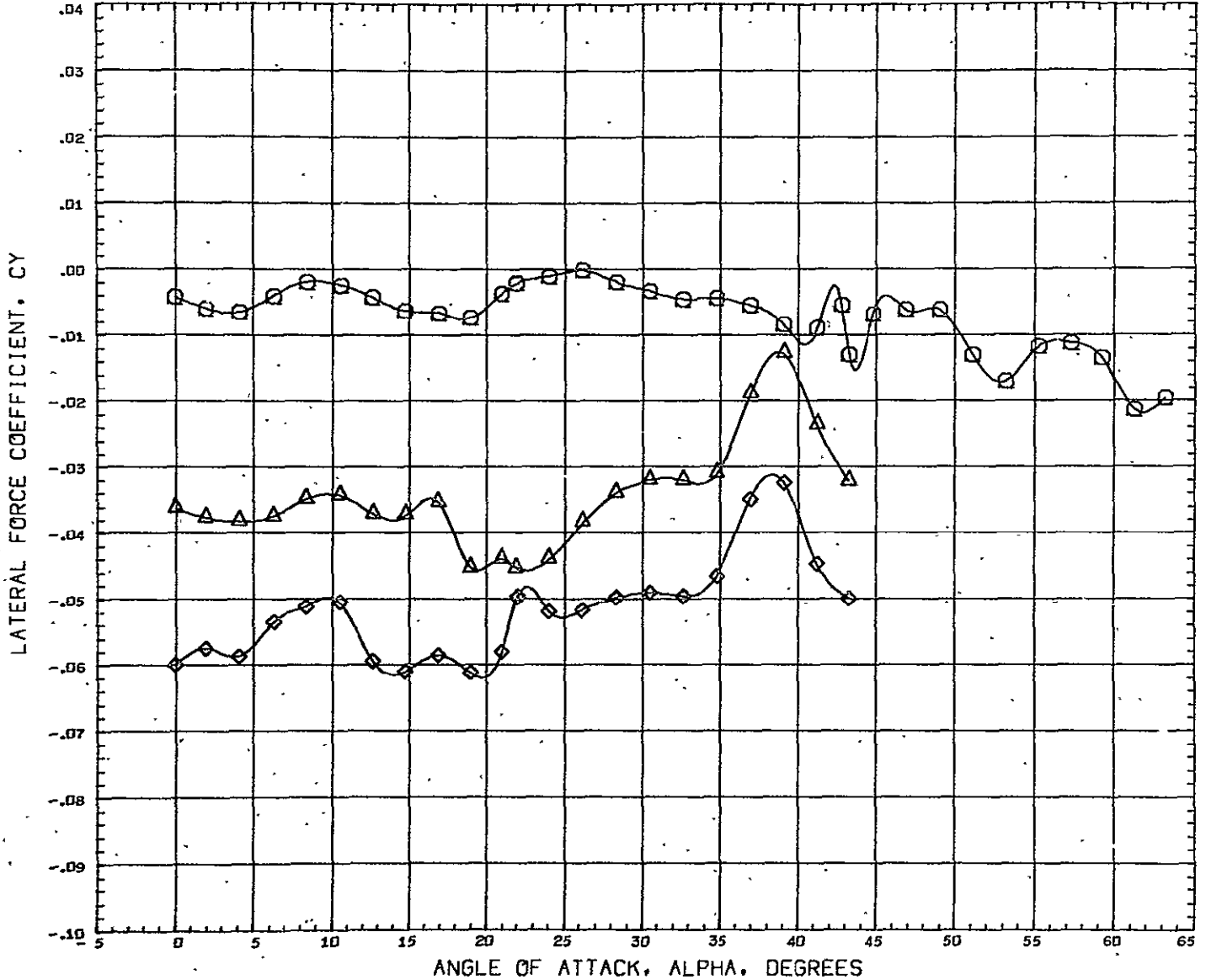
DELTA WING ORBITER- RUDDER EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(R2756S)	MSFC478 NR DELTA ORBITER B5W17E1DV17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(R2753S)	MSFC478 NR DELTA ORBITER B5W17C1DV17J2X	0.000	0.000	-10.000	0.000	REFL 821.2004 INCHES
(R2754S)	MSFC478 NR DELTA ORBITER B5W17E1DV17J2X	0.000	0.000	-20.000	0.000	REFB 1422.8049 INCHES
						XMRP 1422.5040 INCHES
						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 0.899

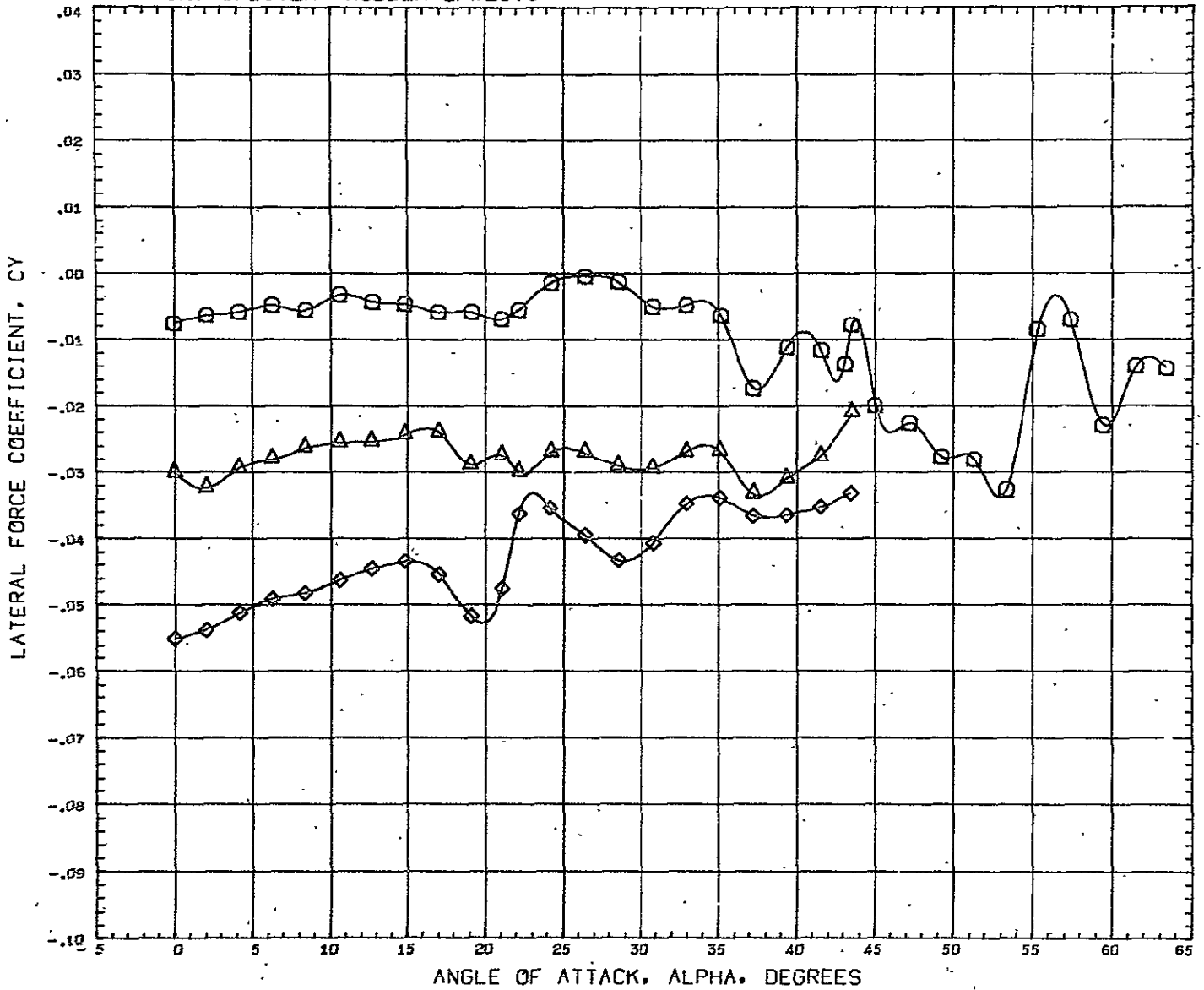
DELTA WING ORBITER- RUDDER EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRCN	RUDDER	RUDFLR	REFERENCE INFORMATION
(R2756S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	0.000	0.000	REFS 6984.0040 SQ FT
(R2763S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	-10.000	0.000	REFL 821.2004 INCHES
(R2764S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	-20.000	0.000	REFB 1422.8040 INCHES
						XMRP 1422.5040 INCHES
						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 1.003

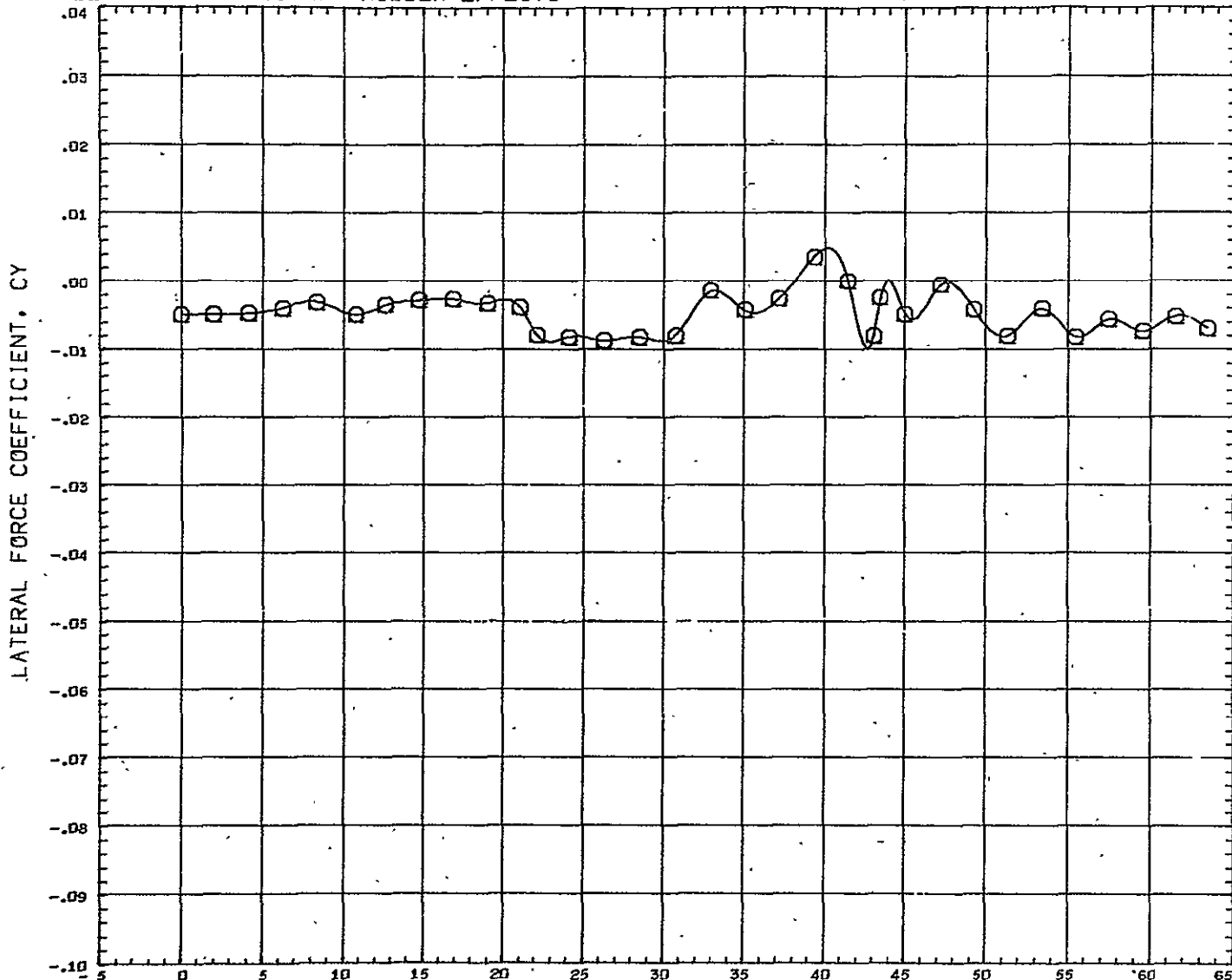
DELTA WING ORBITER- RUDDER EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILTRN	RUDDER	RUDFLR	REFERENCE INFORMATION
(R27566)	MSFC478 NR DELTA ORBITER B5W17E1DV17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(R27638)	MSFC478 NR DELTA ORBITER B5W17E1DV17J2X	0.000	0.000	-10.000	0.000	REFL 821.2004 INCHES
(R27645)	MSFC478 NR DELTA ORBITER B5W17E1DV17J2X	0.000	0.000	-20.000	0.000	REFB 1422.8040 INCHES
						XMRP 1422.5040 INCHES
						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

PACH 1.199

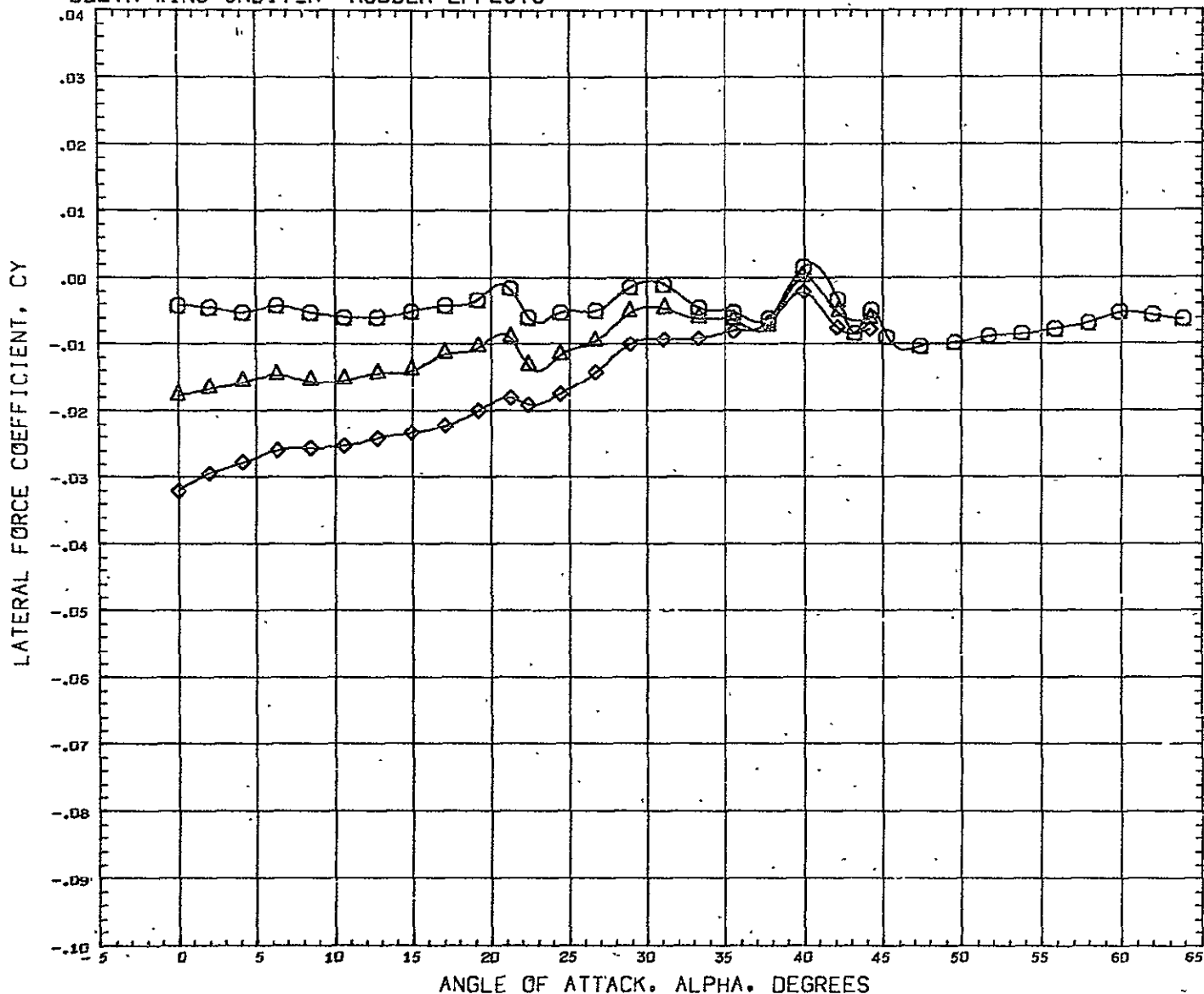
DELTA WING ORBITER- RUDDER EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(R2756S)	MSFC478 NR DELTA ORBITER B5W17E1DV17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(R2763S)	MSFC478 NR DELTA ORBITER B5W17E1DV17J2X	0.000	0.000	-10.000	0.000	REFL 821.2004 INCHES
(R2764S)	MSFC478 NR DELTA ORBITER B5W17E1DV17J2X	0.000	0.000	-20.000	0.000	REFB 1422.8040 INCHES
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						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

PACH 1.459

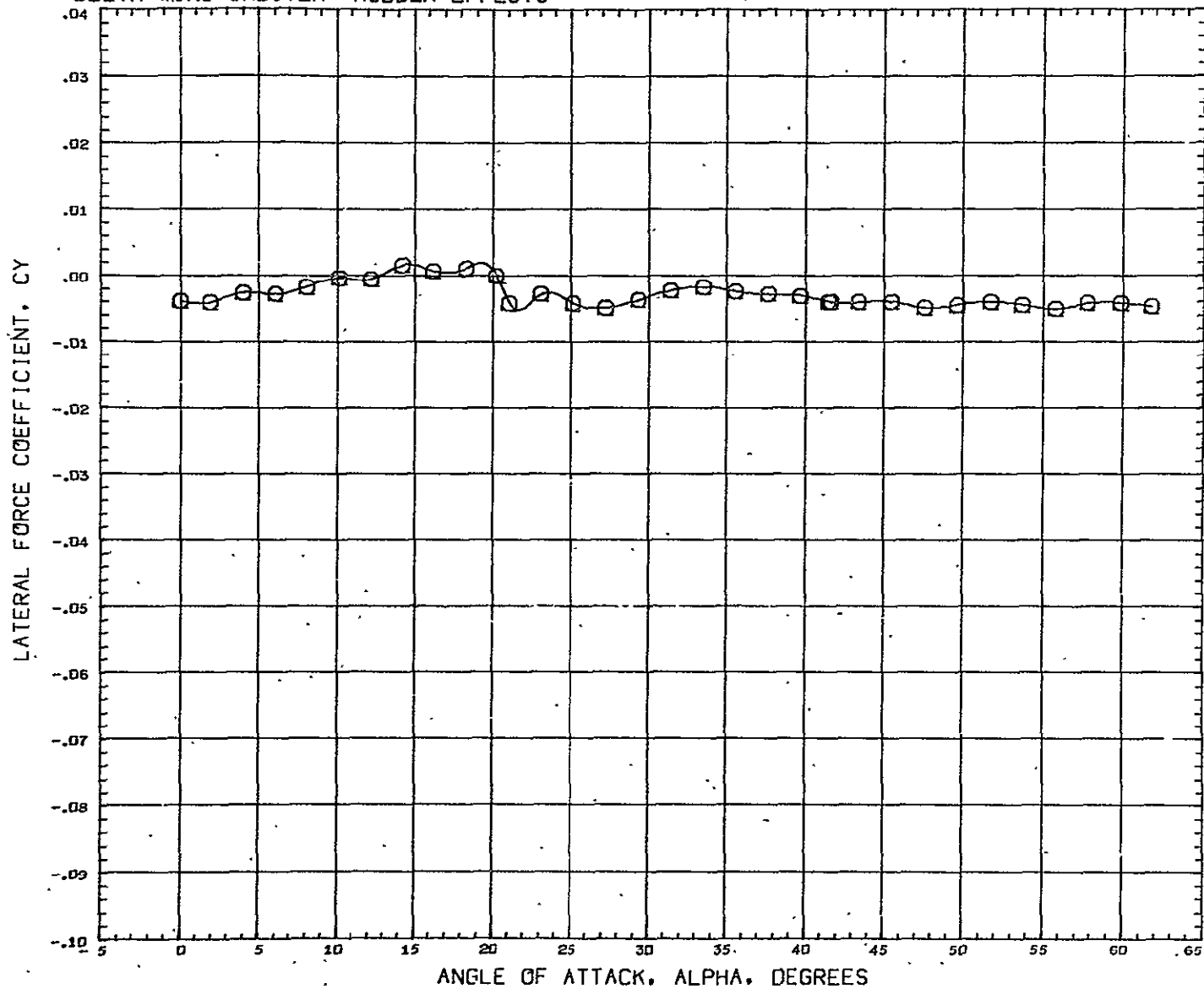
DELTA WING ORBITER- RUDDER EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(R2756S)	MSFC478 NR DELTA ORBITER B5W17E1DV17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(R2763S)	MSFC478 NR DELTA ORBITER B5W17E1DV17J2X	0.000	0.000	-10.000	0.000	REFL 821.2004 INCHES
(R2764S)	MSFC478 NR DELTA ORBITER B5W17E1DV17J2X	0.000	0.000	-20.000	0.000	REFB 1422.8040 INCHES
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						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 1.965

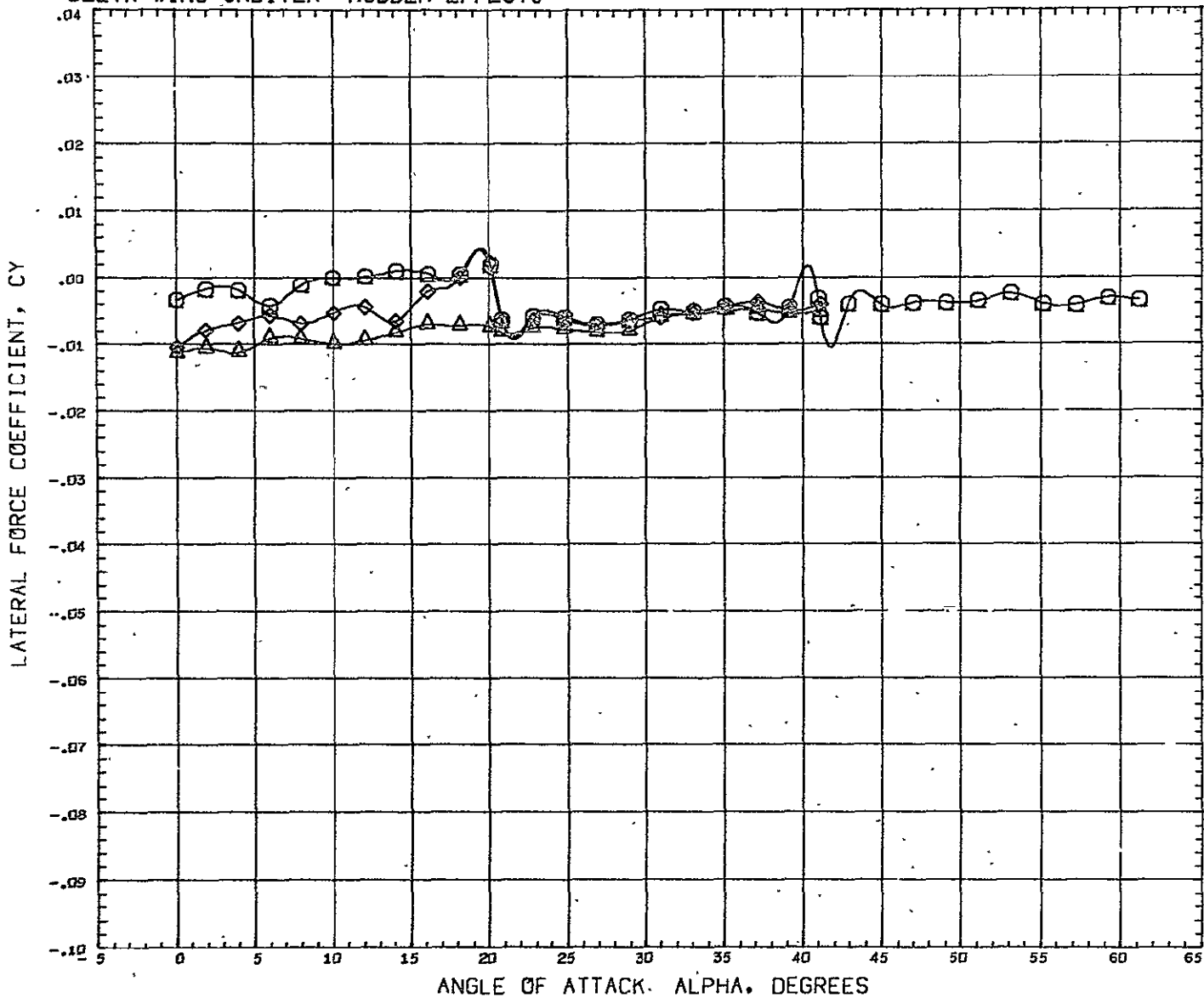
DELTA WING ORBITER- RUDDER EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(R2756S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(R2763S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	-10.000	0.000	REFL 821.2004 INCHES
(R2764S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	-20.000	0.000	REFB 1422.5040 INCHES
						XMRP 1422.5040 INCHES
						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 2.990

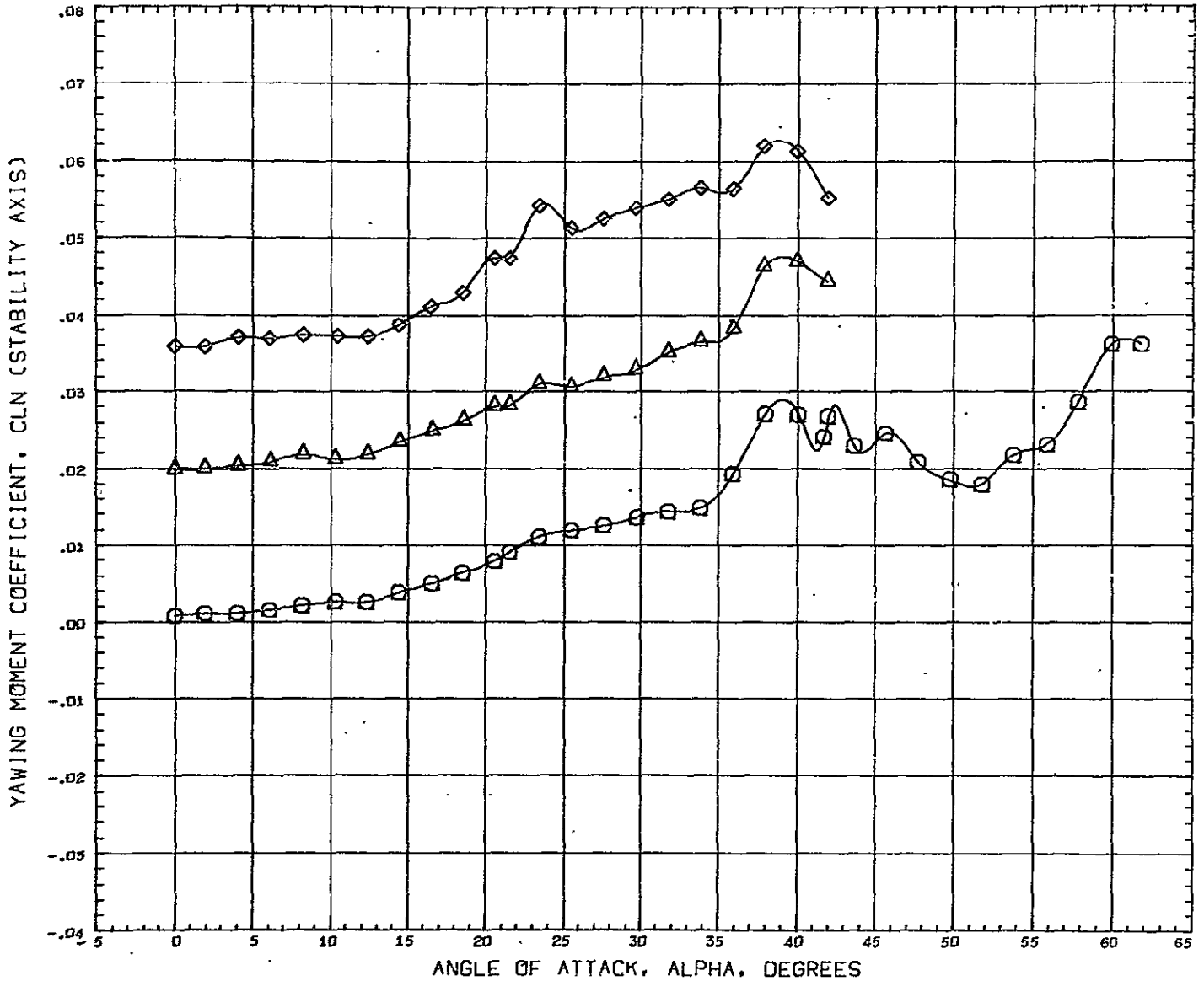
DELTA WING ORBITER- RUDDER EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(R27565)	MSFC47B NR DELTA ORBITER B5W17E1DV17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(R27635)	MSFC47B NR DELTA ORBITER B5W17E1DV17J2X	0.000	0.000	-10.000	0.000	REFL 821.2004 INCHES
(R27645)	MSFC47B NR DELTA ORBITER B5W17E1DV17J2X	0.000	0.000	-20.000	0.000	REFB 1422.8040 INCHES
						XMRP 1422.5040 INCHES
						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 4.959

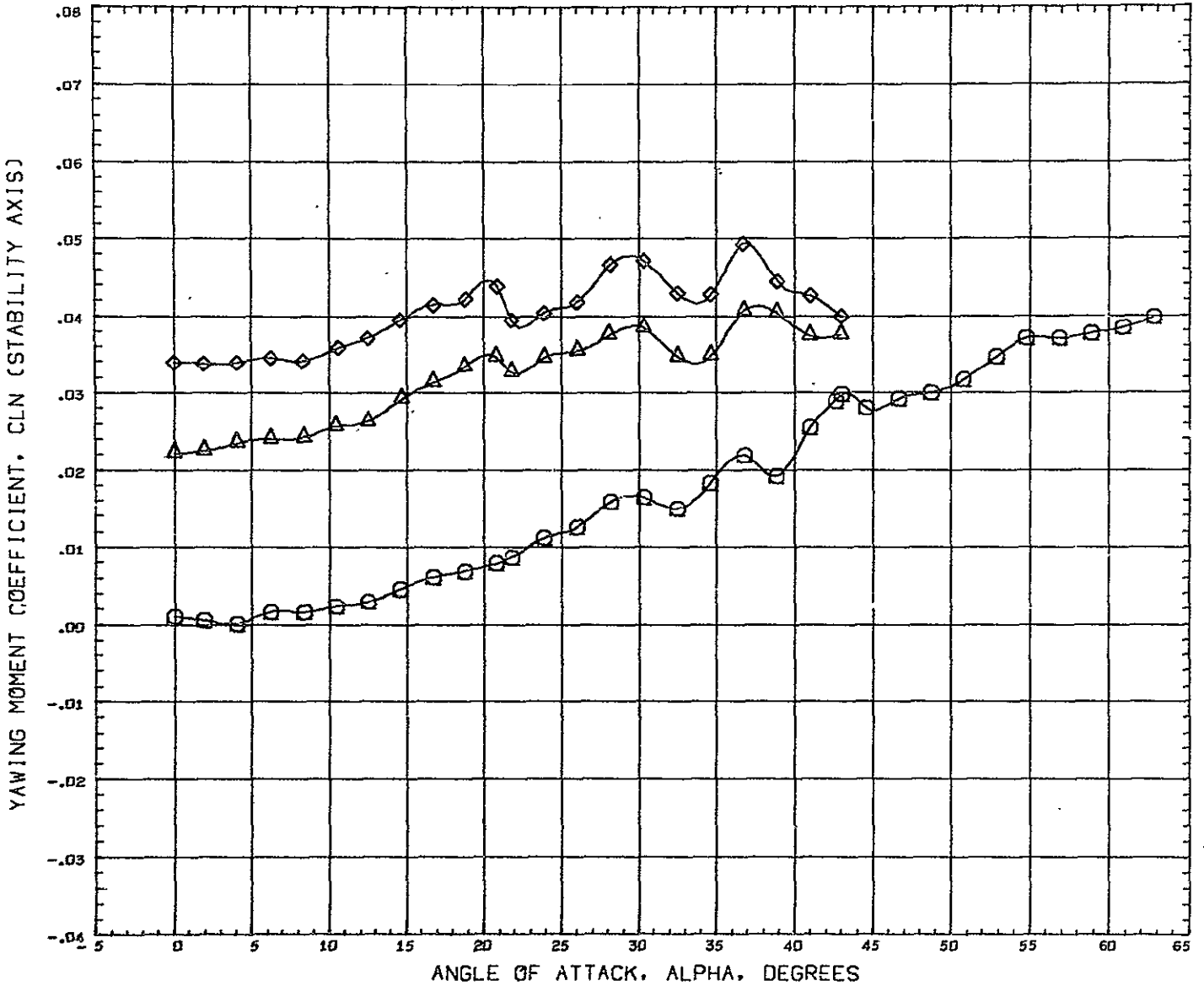
DELTA WING ORBITER- RUDDER EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(#2756S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(#2763S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	-10.000	0.000	REFL 821.2004 INCHES
(#2764S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	-20.000	0.000	REFB 1422.8040 INCHES
						YMRP 1422.5040 INCHES
						ZMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 0.598

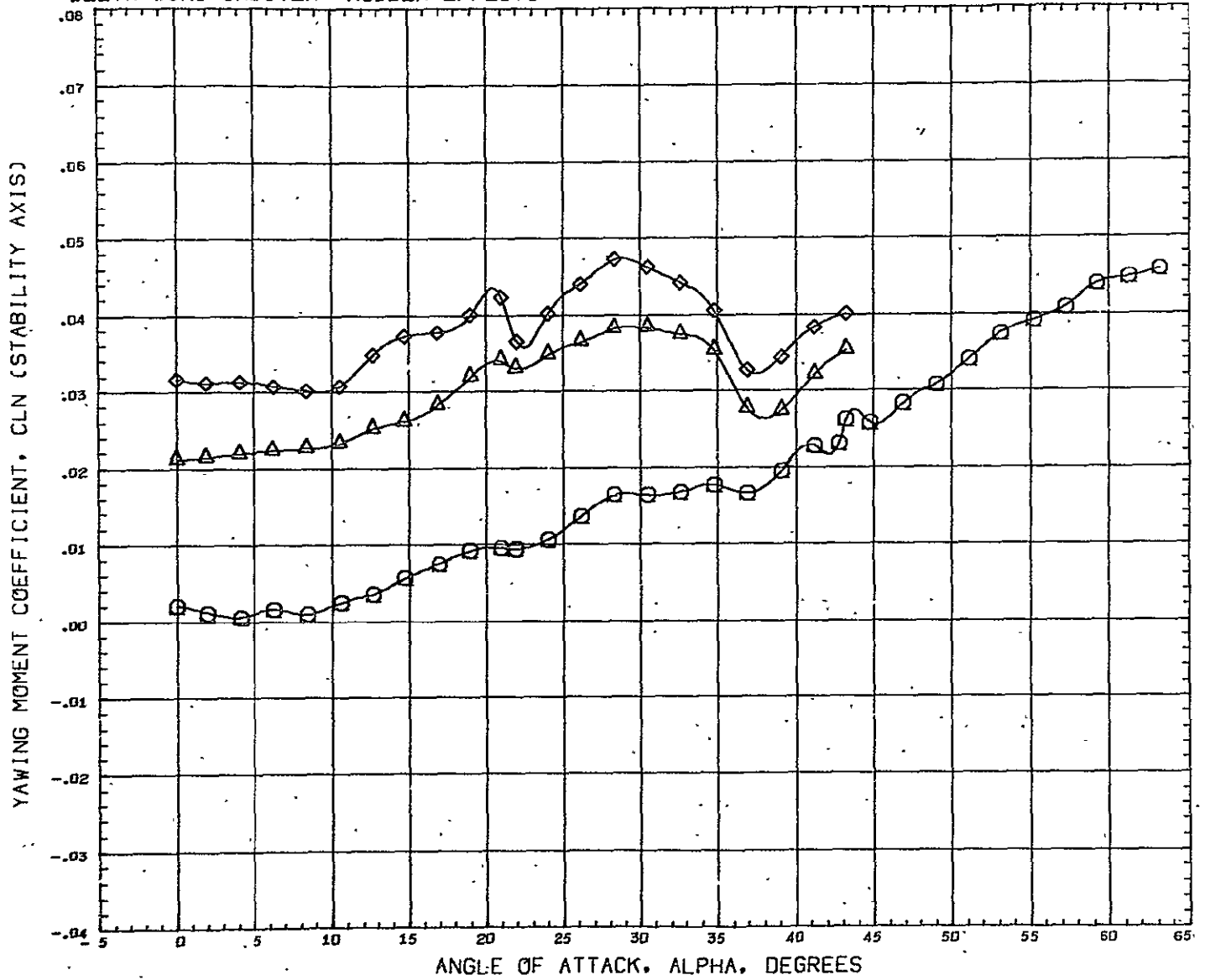
DELTA WING ORBITER- RUDDER EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(R2756S)	MSFC478 NR DELTA ORBITER B5W17E1DV17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(R2763S)	MSFC478 NR DELTA ORBITER B5W17E1DV17J2X	0.000	0.000	-10.000	0.000	REFL 821.2004 INCHES
(R2764S)	MSFC478 NR DELTA ORBITER B5W17E1DV17J2X	0.000	0.000	-20.000	0.000	REFB 1422.8040 INCHES
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						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 0.839

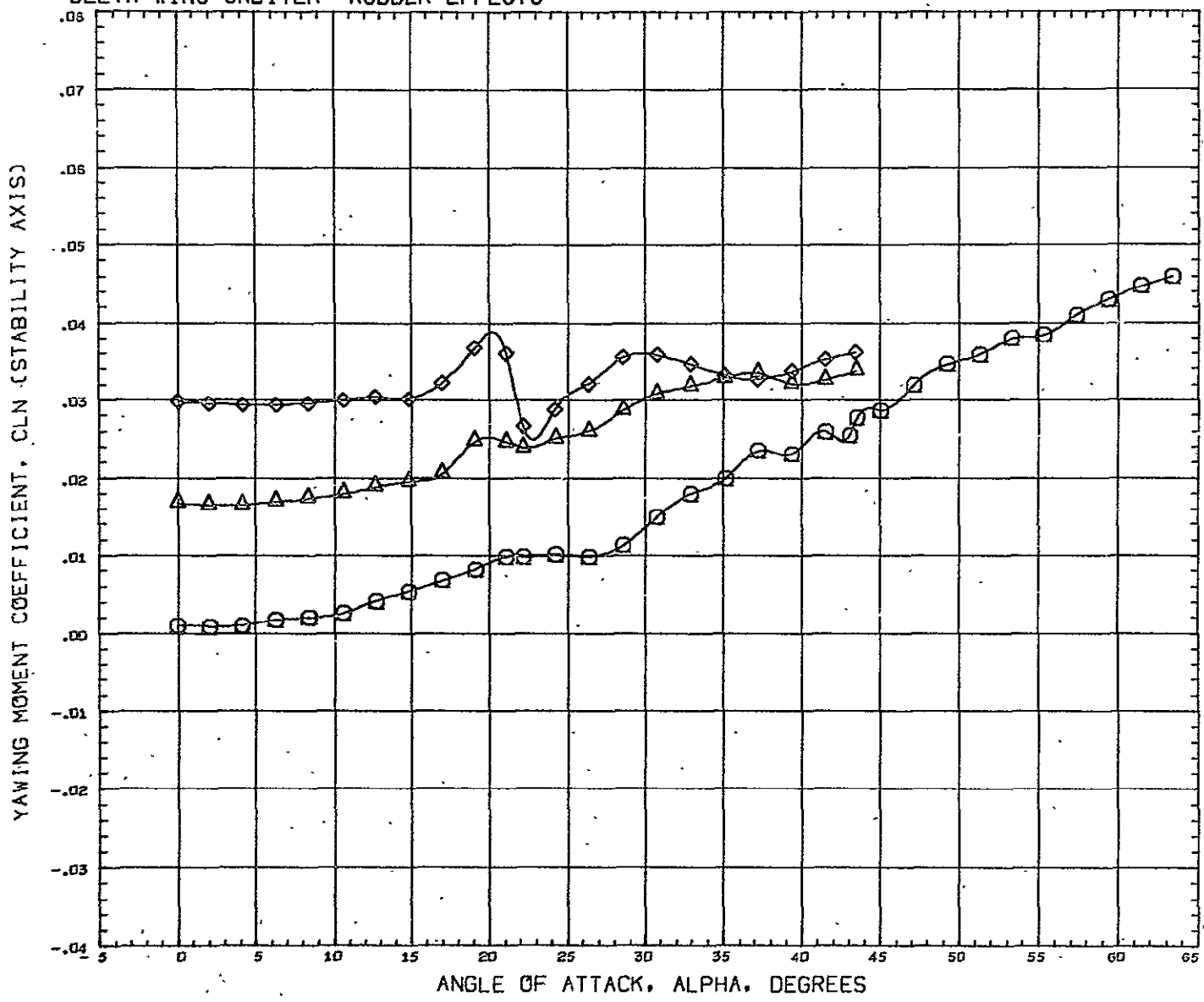
DELTA WING ORBITER- RUDDER EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(R2756S)	MSFC478 NR DELTA ORBITER 05W17E10V17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ. FT
(R2763S)	MSFC478 NR DELTA ORBITER 05W17E10V17J2X	0.000	0.000	-10.000	0.000	REFL 821.2004 INCHES
(R2764S)	MSFC478 NR DELTA ORBITER 05W17E10V17J2X	0.000	0.000	-20.000	0.000	REFB 1422.8041 INCHES
						XMRP 1422.5040 INCHES
						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 1.003

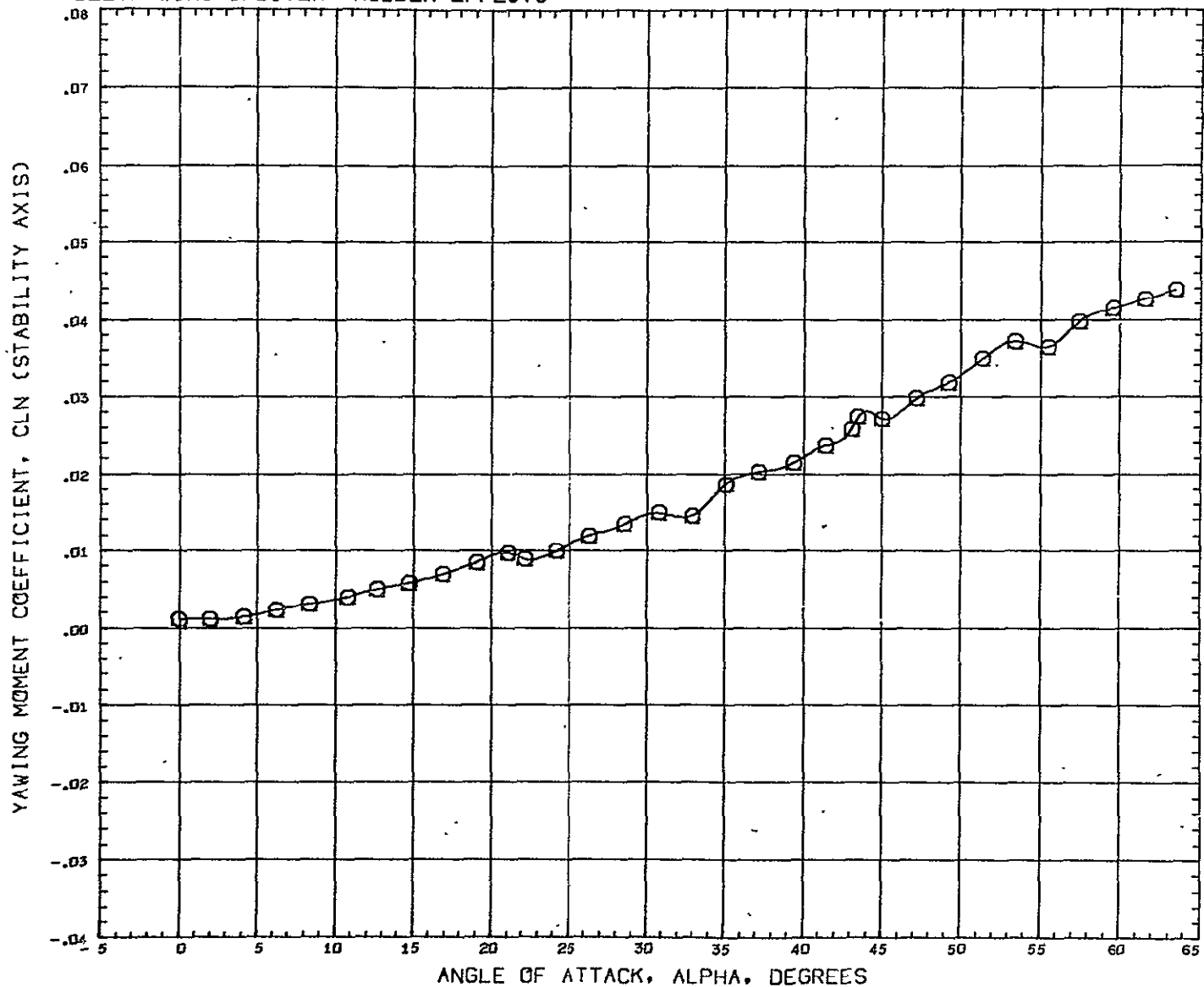
DELTA WING ORBITER- RUDDER EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(R2756S)	MSFC47B NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(R2763S)	MSFC47B NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	-10.000	0.000	REFL 821.2004 INCHES
(R2764S)	MSFC47B NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	-20.000	0.000	REFB 1422.8040 INCHES
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						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 1.159

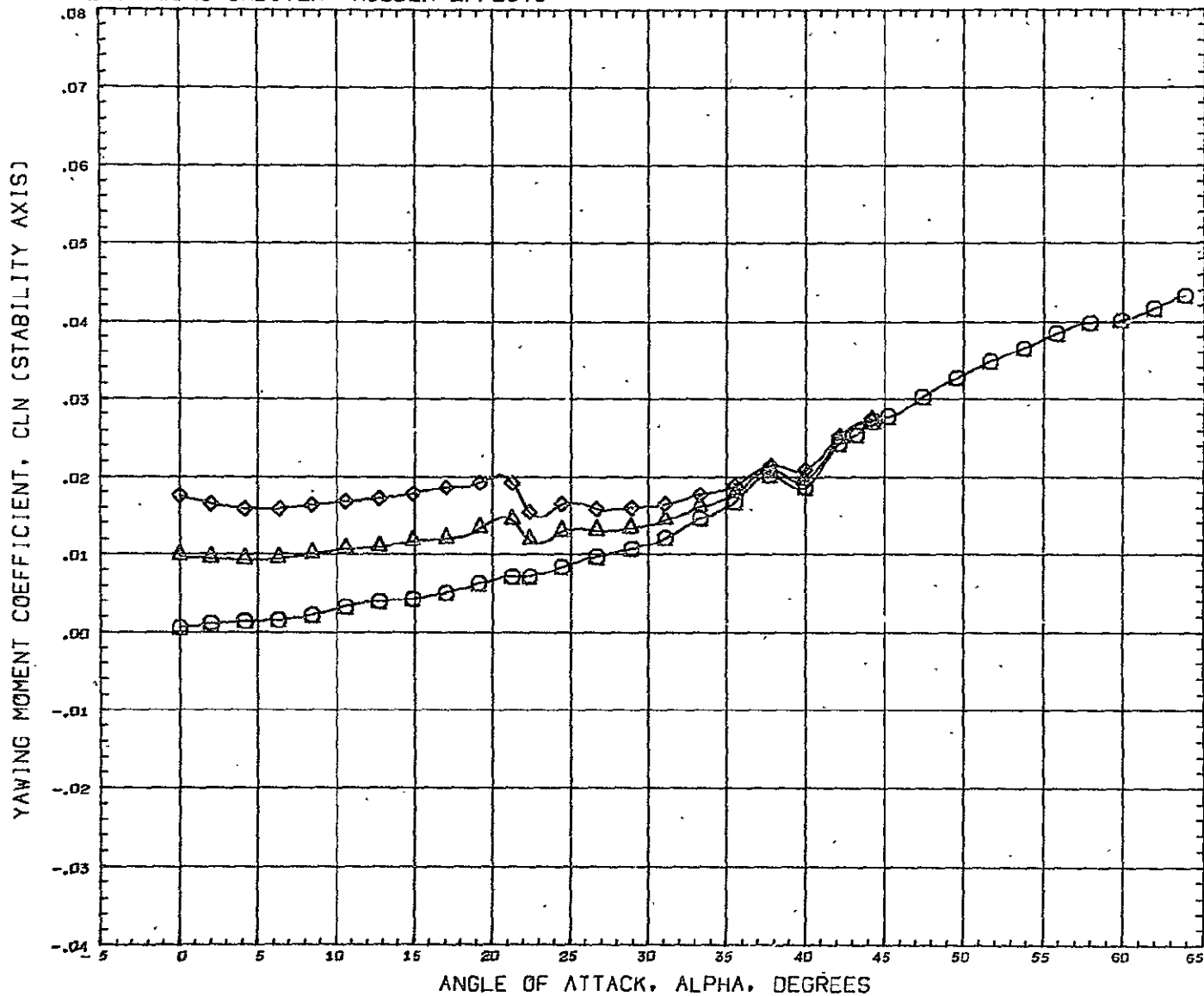
DELTA WING ORBITER- RUDDER EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(R2756S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(R2763S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	-10.000	0.000	REFL 821.2004 INCHES
(R2764S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	-20.000	0.000	REFB 1422.8040 INCHES
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						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

HACH 1.458

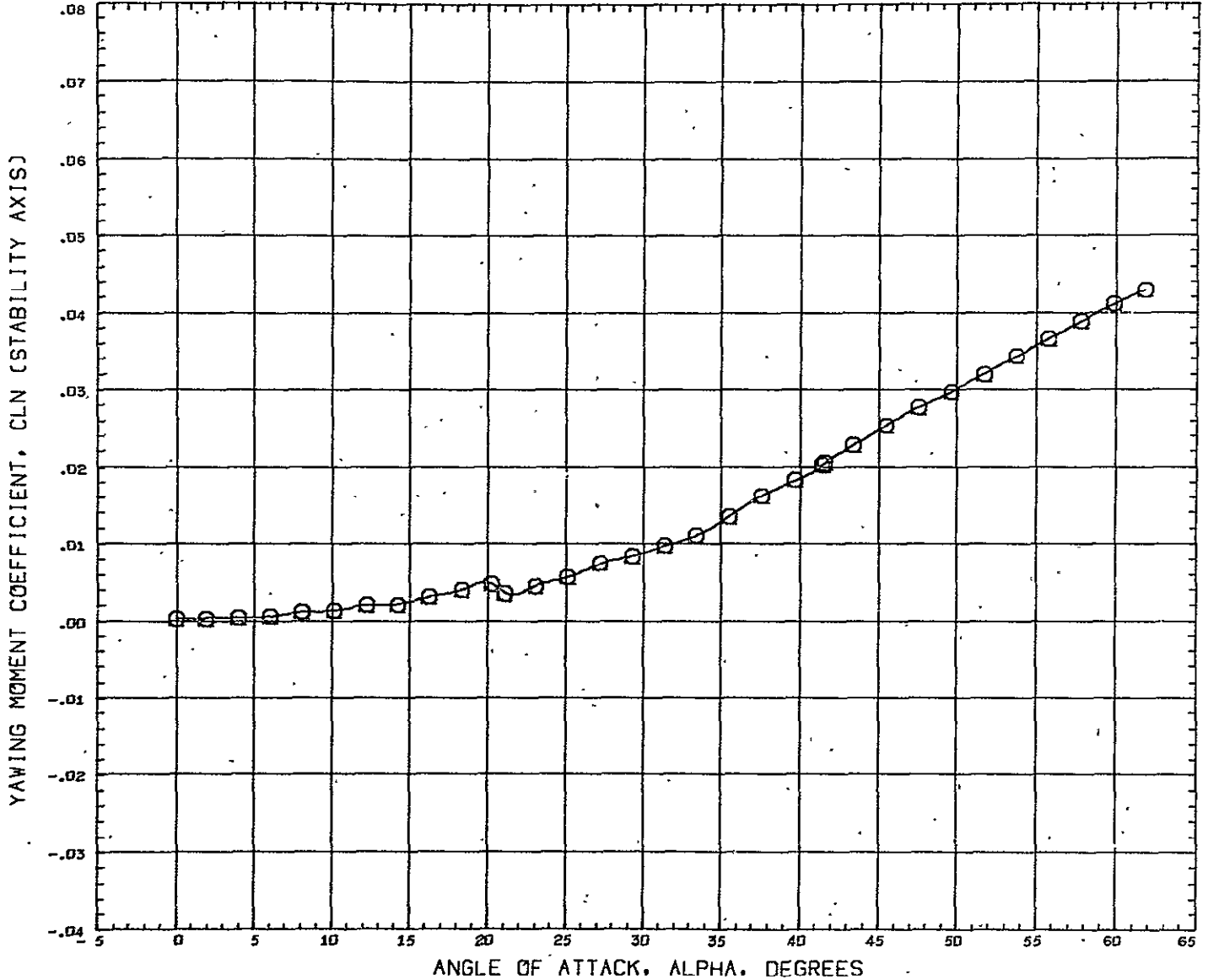
DELTA WING ORBITER- RUDDER EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AIRCEN	RUDDER	RUDFLR	REFERENCE INFORMATION
(R2756S)	MSFC478 NR DELTA ORBITER B5W17E1DV17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(R2763S)	MSFC478 NR DELTA ORBITER B5W17E1DV17J2X	0.000	0.000	-10.000	0.000	REFL 821.2004 INCHES
(R2764S)	MSFC478 NR DELTA ORBITER B5W17E1DV17J2X	0.000	0.000	-20.000	0.000	REFB 1422.8040 INCHES
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						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 1.965

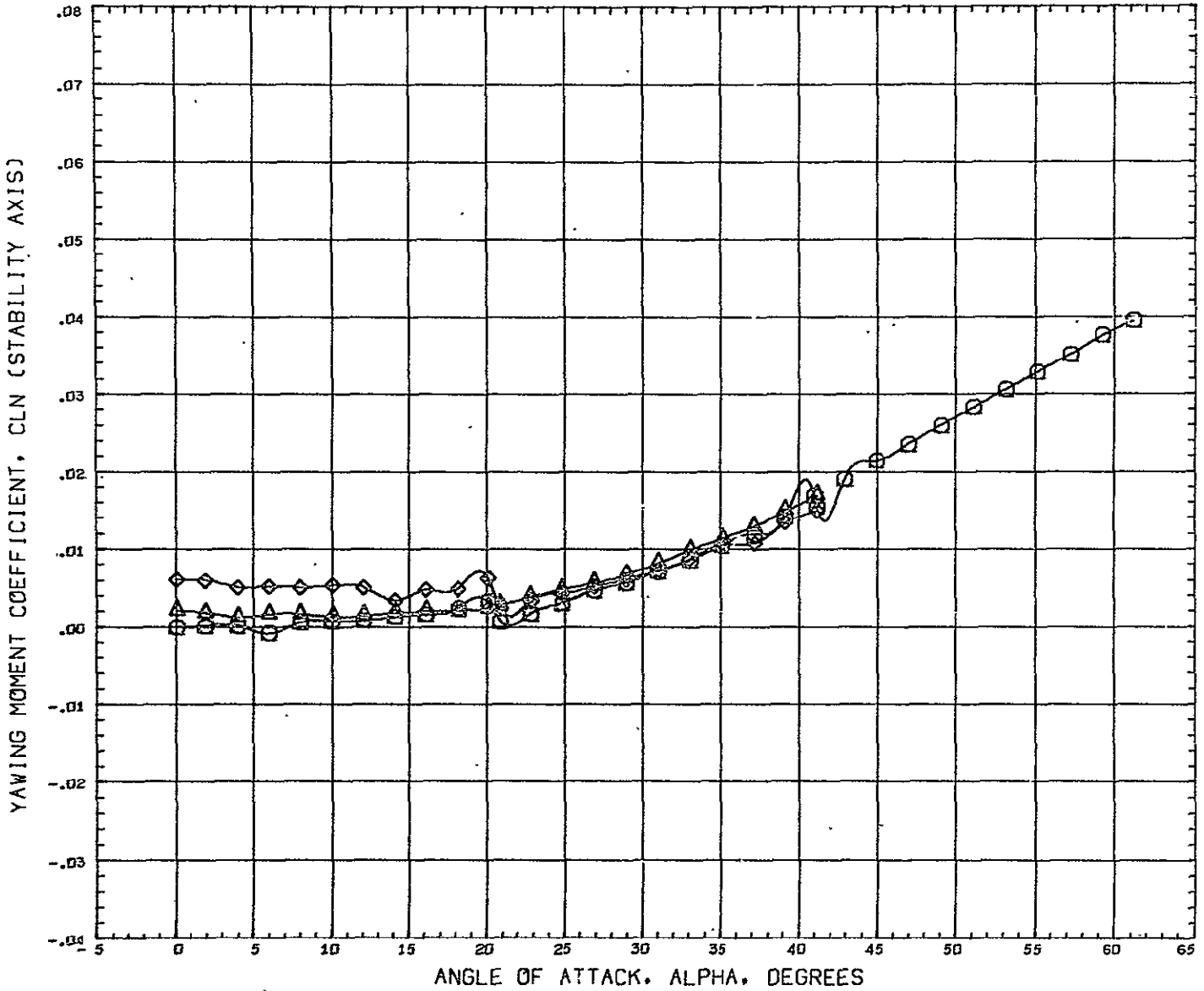
DELTA WING ORBITER- RUDDER EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(R2756S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(R2763S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	-10.000	0.000	REFL 821.2004 INCHES
(R2764S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	-20.000	0.000	REFB 1422.8040 INCHES
						XMRP 1422.5040 INCHES
						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 2.990

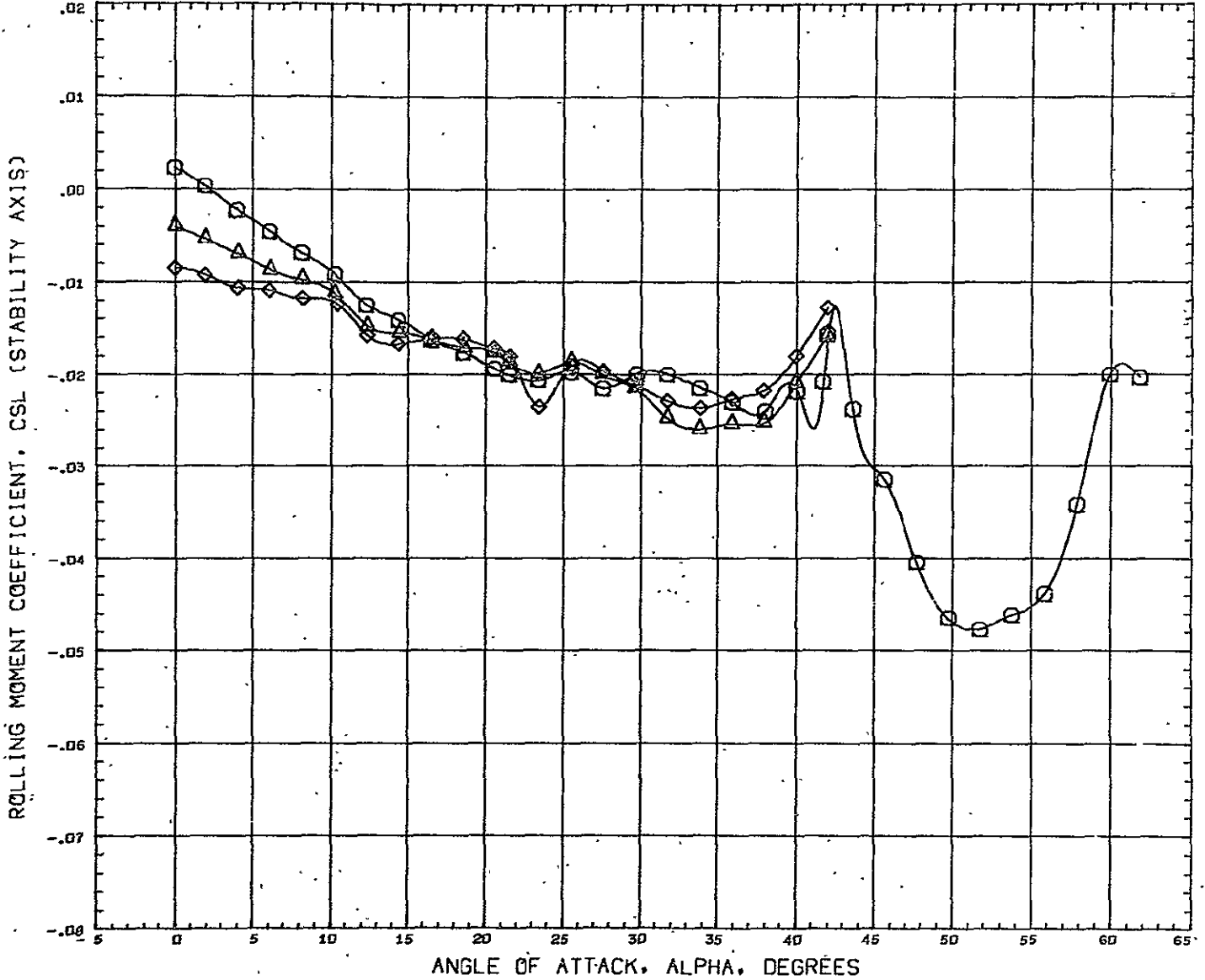
DELTA WING ORBITER- RUDDER EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(R27565)	MSFC47B NR DELTA ORBITER B5W17E1DV17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(R27635)	MSFC47B NR DELTA ORBITER B5W17E1DV17J2X	0.000	0.000	-10.000	0.000	REFL 821.2004 INCHES
(R27645)	MSFC47B NR DELTA ORBITER B5W17E1DV17J2X	0.000	0.000	-20.000	0.000	REFB 1422.8040 INCHES
						XMRP 1422.5040 INCHES
						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 4.959

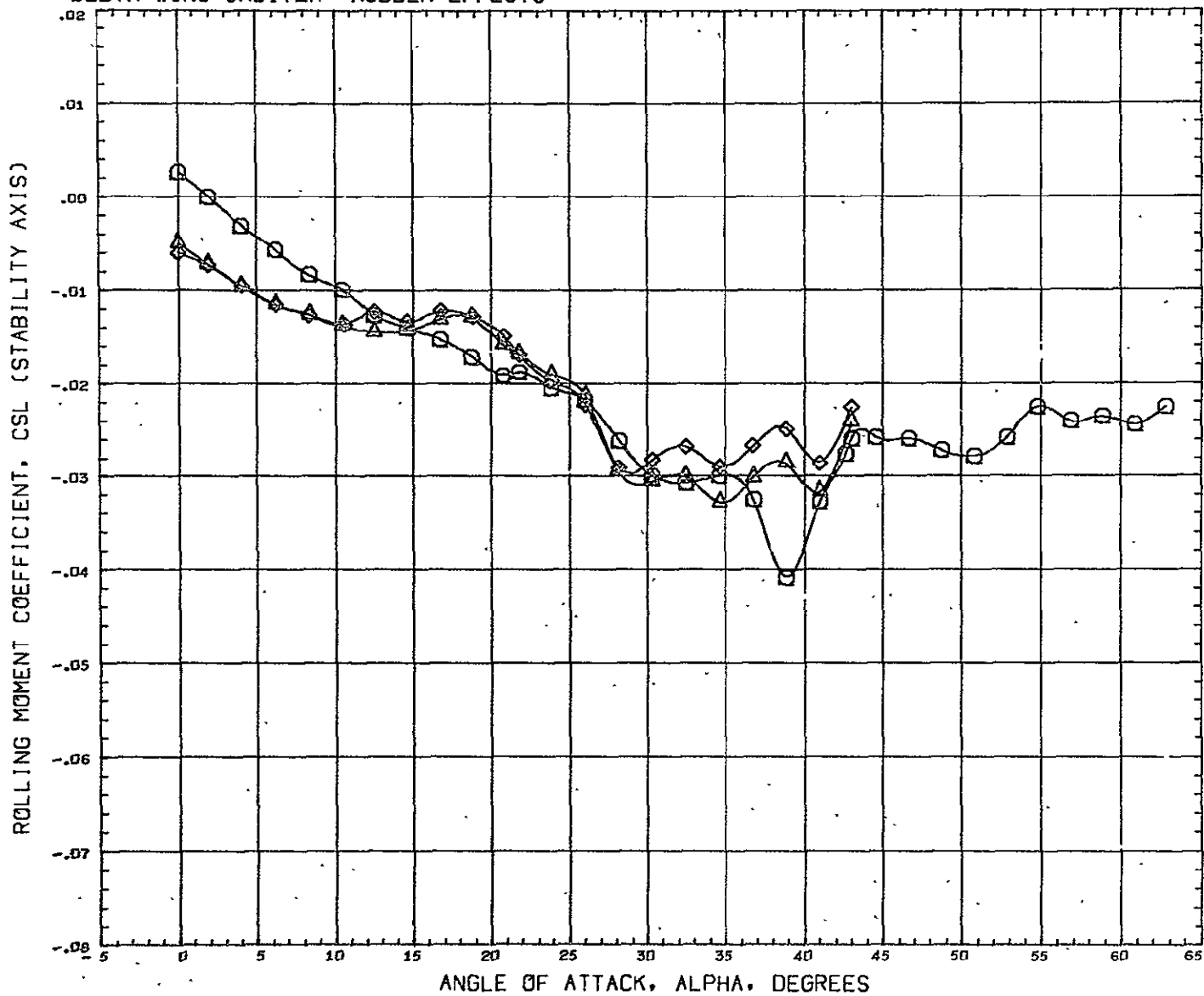
DELTA WING ORBITER- RUDDER EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(R2756S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(R2763S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	-10.000	0.000	REFL 821.2004 INCHES
(R2764S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	-20.000	0.000	REFB 1422.8040 INCHES
						XMRP 1422.3040 INCHES
						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 0.598

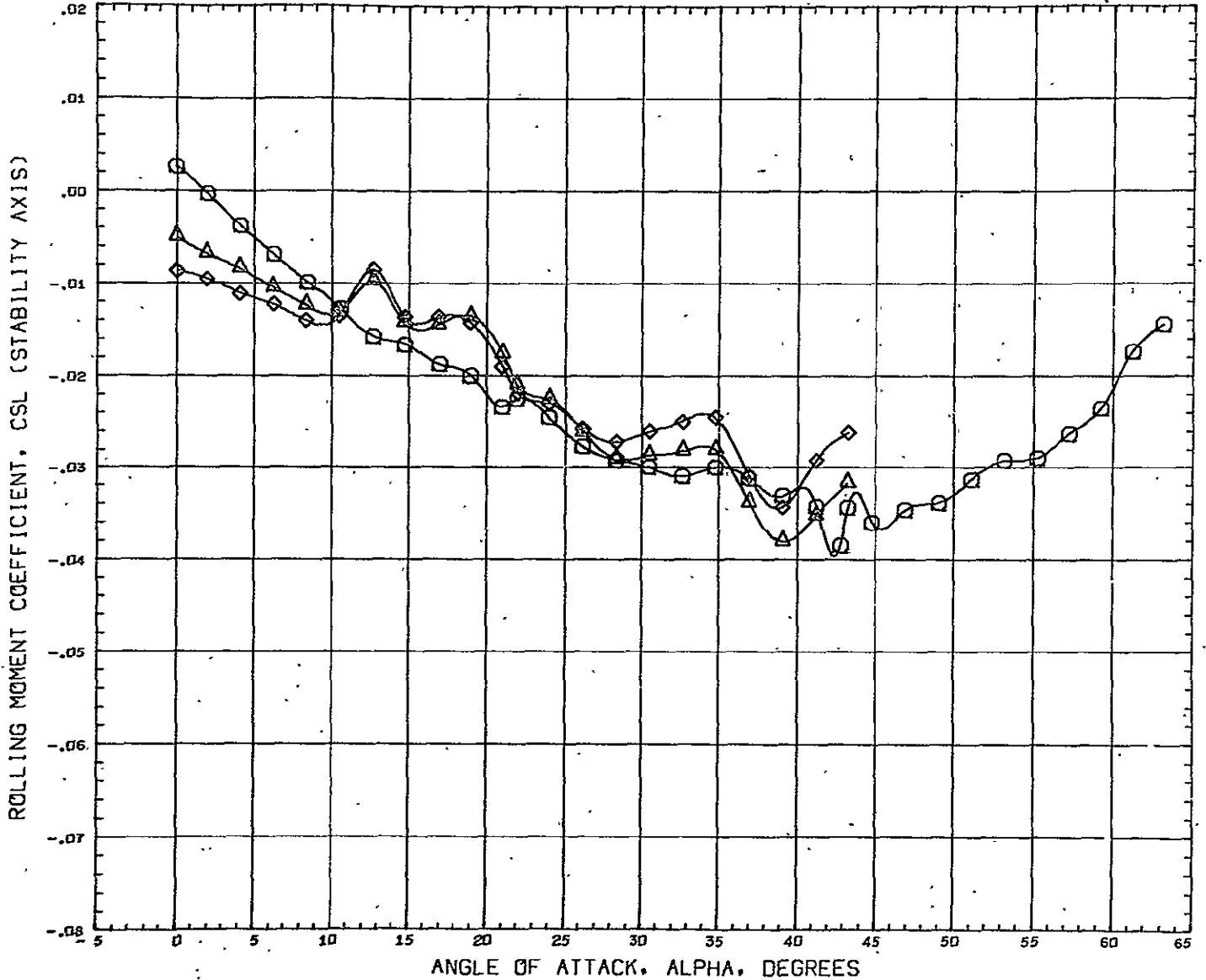
DELTA WING ORBITER- RUDDER EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(R2756S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(R2763S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	-10.000	0.000	REFL 821.2004 INCHES
(R2764S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	-20.000	0.000	REFB 1422.8040 INCHES
						XMRP 1422.5040 INCHES
						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 0.899

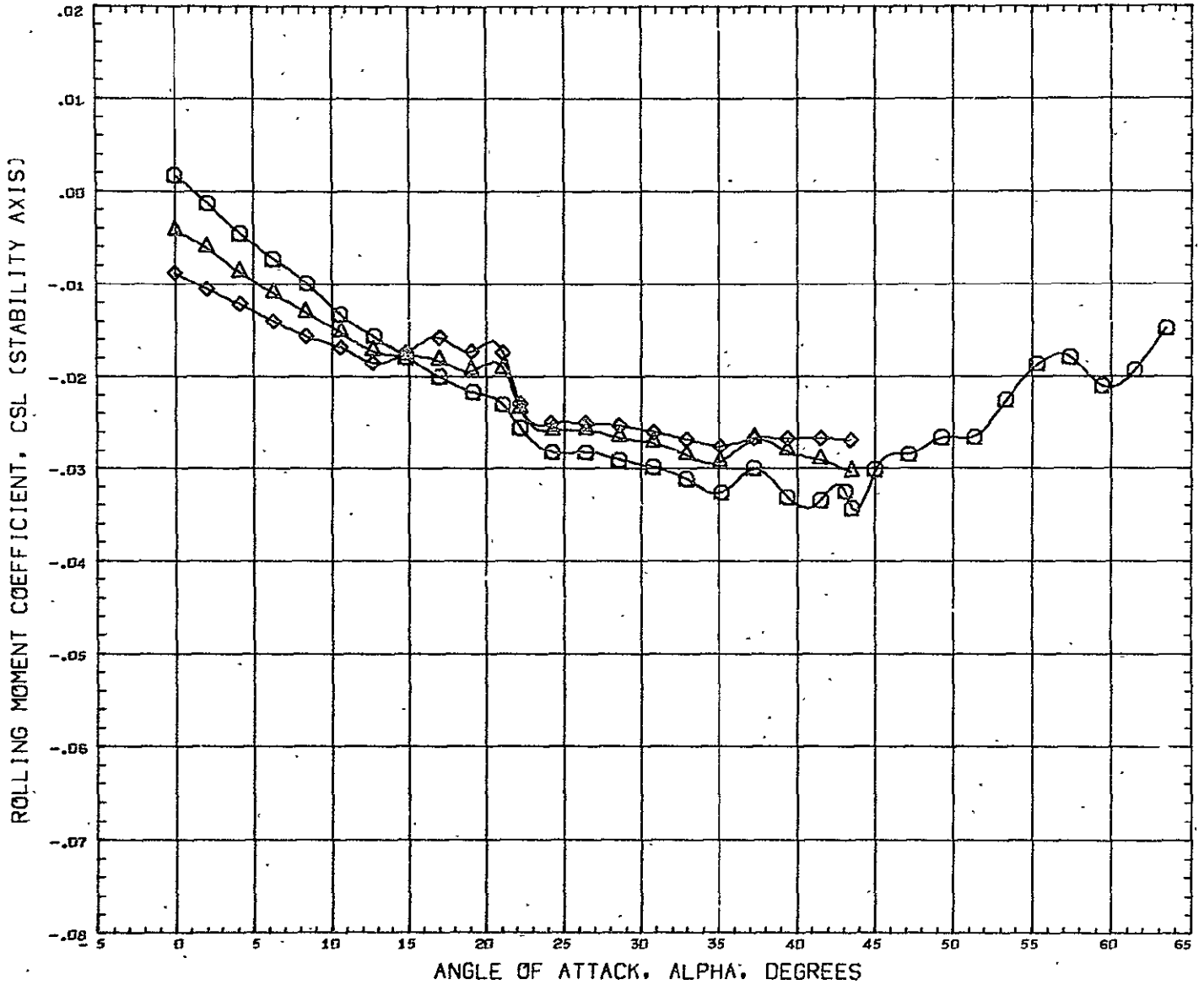
DELTA WING ORBITER- RUDDER EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(R2756S)	MSFC478 NR DELTA ORBITER B5W17E1DV17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(R2763S)	MSFC478 NR DELTA ORBITER B5W17E1DV17J2X	0.000	0.000	-10.000	0.000	REFL 821.2004 INCHES
(R2764S)	MSFC478 NR DELTA ORBITER B5W17E1DV17J2X	0.000	0.000	-20.000	0.000	REFB 1422.8040 INCHES
						XMRP 1422.5040 INCHES
						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 1.003

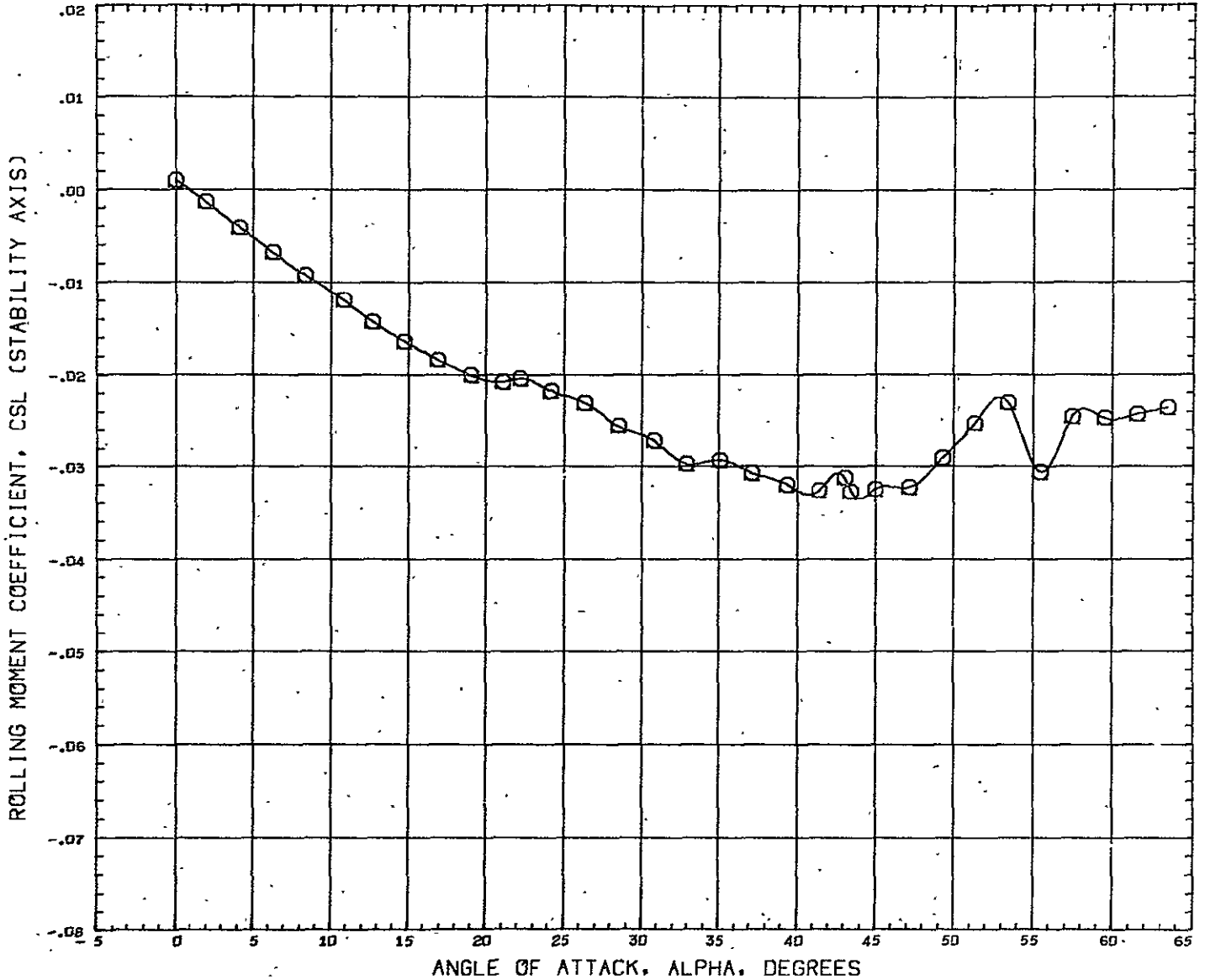
DELTA WING ORBITER- RUDDER EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(R2756S)	MSFC478 NR DELTA ORBITER B5W17E1DV17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(R2763S)	MSFC478 NR DELTA ORBITER B5W17E1DV17J2X	0.000	0.000	-10.000	0.000	REFL 821.2004 INCHES
(R2764S)	MSFC478 NR DELTA ORBITER B5W17E1DV17J2X	0.000	0.000	-20.000	0.000	REFB 1422.8040 INCHES
						XMRP 1422.5040 INCHES
						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 1.199

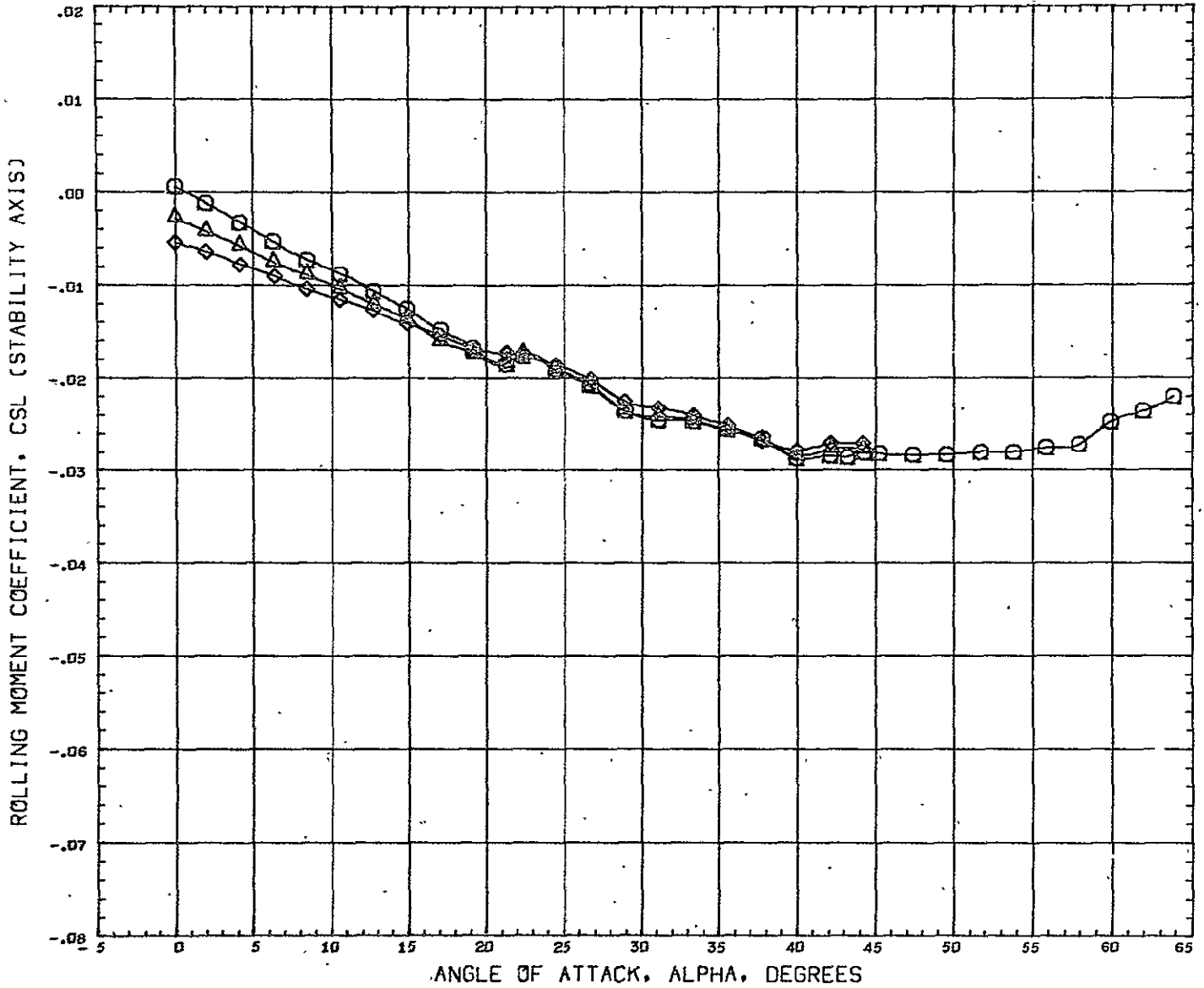
DELTA WING ORBITER- RUDDER EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(R2756S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(R2763S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	-10.000	0.000	REFL 821.2004 INCHES
(R2764S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	-20.000	0.000	REFB 1422.8040 INCHES
						XMRP 1422.5040 INCHES
						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 1.458

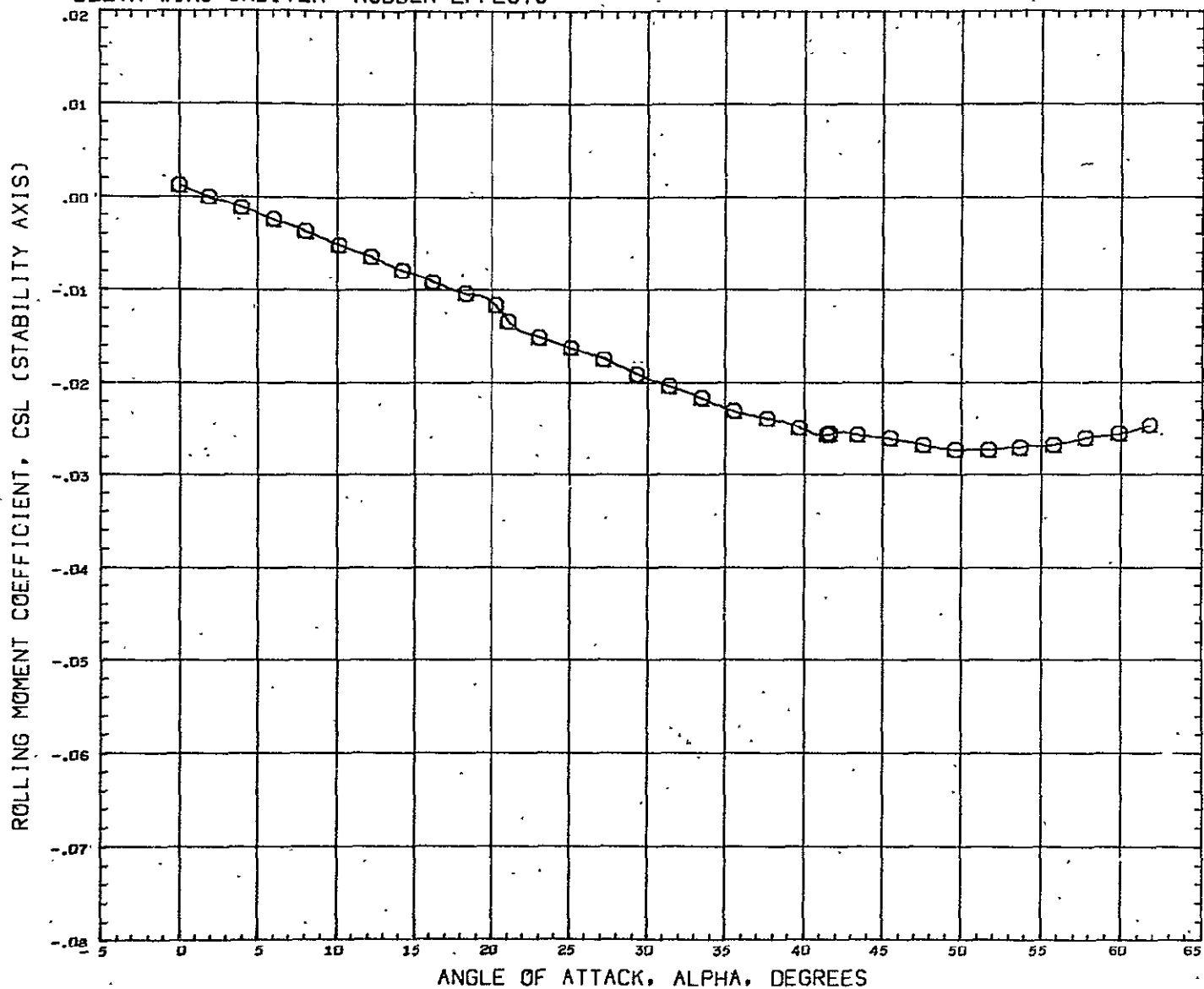
DELTA WING ORBITER- RUDDER EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(R27565)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(R27635)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	-10.000	0.000	REFL 821.2004 INCHES
(R27645)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	-20.000	0.000	REFB 1422.8040 INCHES
						XMRP 1422.5040 INCHES
						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 1.965

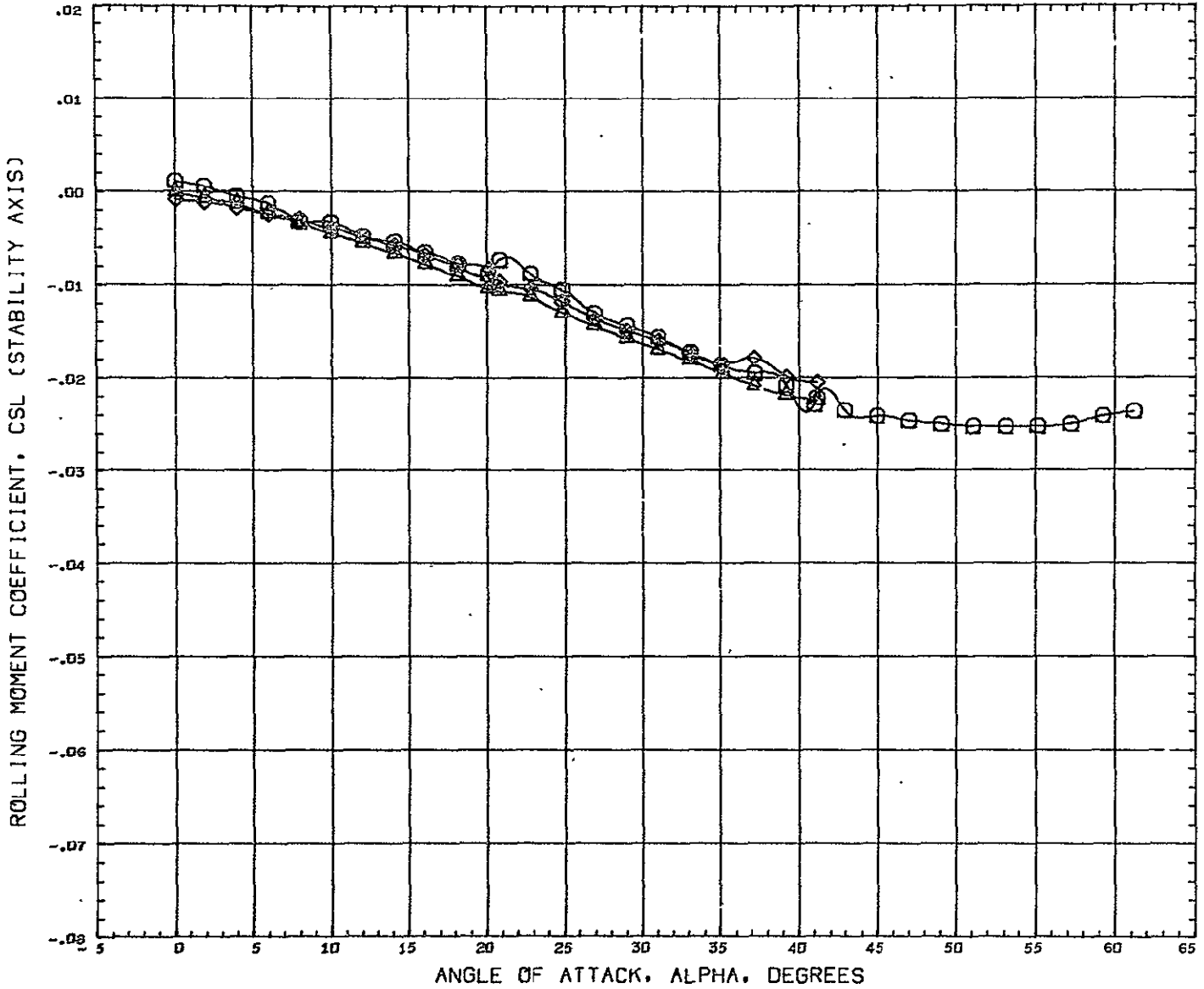
DELTA WING ORBITER- RUDDER EFFECTS



DATA SET SYMBO	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDPLR	REFERENCE INFORMATION
(R2756S)	MSFC478 NR DELTA ORBITER B5M17E10V17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(R2763S)	MSFC478 NR DELTA ORBITER B5M17E10V17J2X	0.000	0.000	-10.000	0.000	REFL 821.2004 INCHES
(R2764S)	MSFC478 NR DELTA ORBITER B5M17E10V17J2X	0.000	0.000	-20.000	0.000	REFB 1422.8040 INCHES
						XMRP 0.0000 INCHES
						YMRP 130.0004 INCHES
						ZMRP 0.0035 SCALE

PACH 2.990

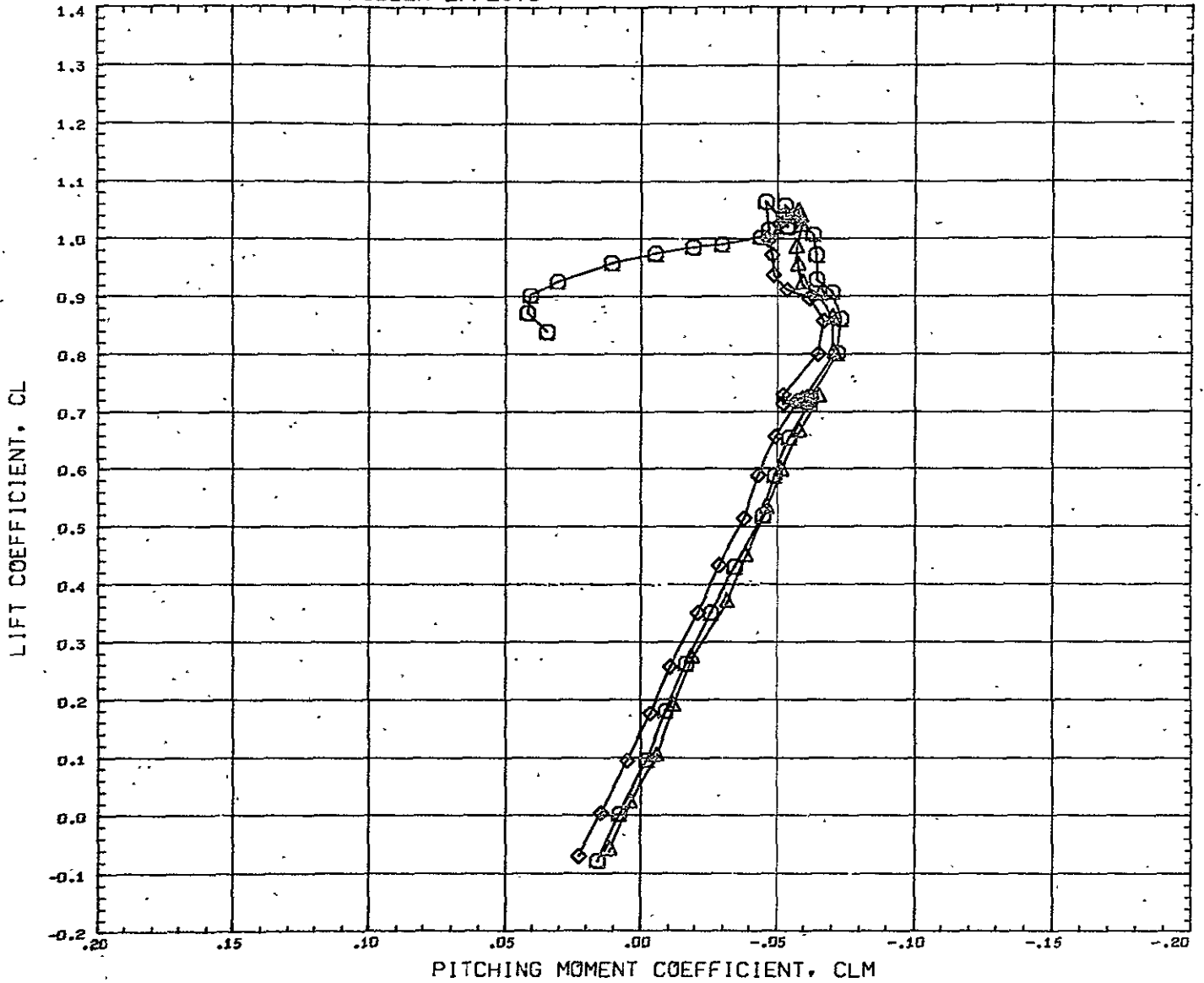
DELTA WING ORBITER- RUDDER EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(R27565)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(R27635)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	-10.000	0.000	REFL 821.2004 INCHES
(R27645)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	-20.000	0.000	REFB 1422.8040 INCHES
						XMRP 1422.5040 INCHES
						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 4.959

DELTA WING ORBITER - RUDDER EFFECTS

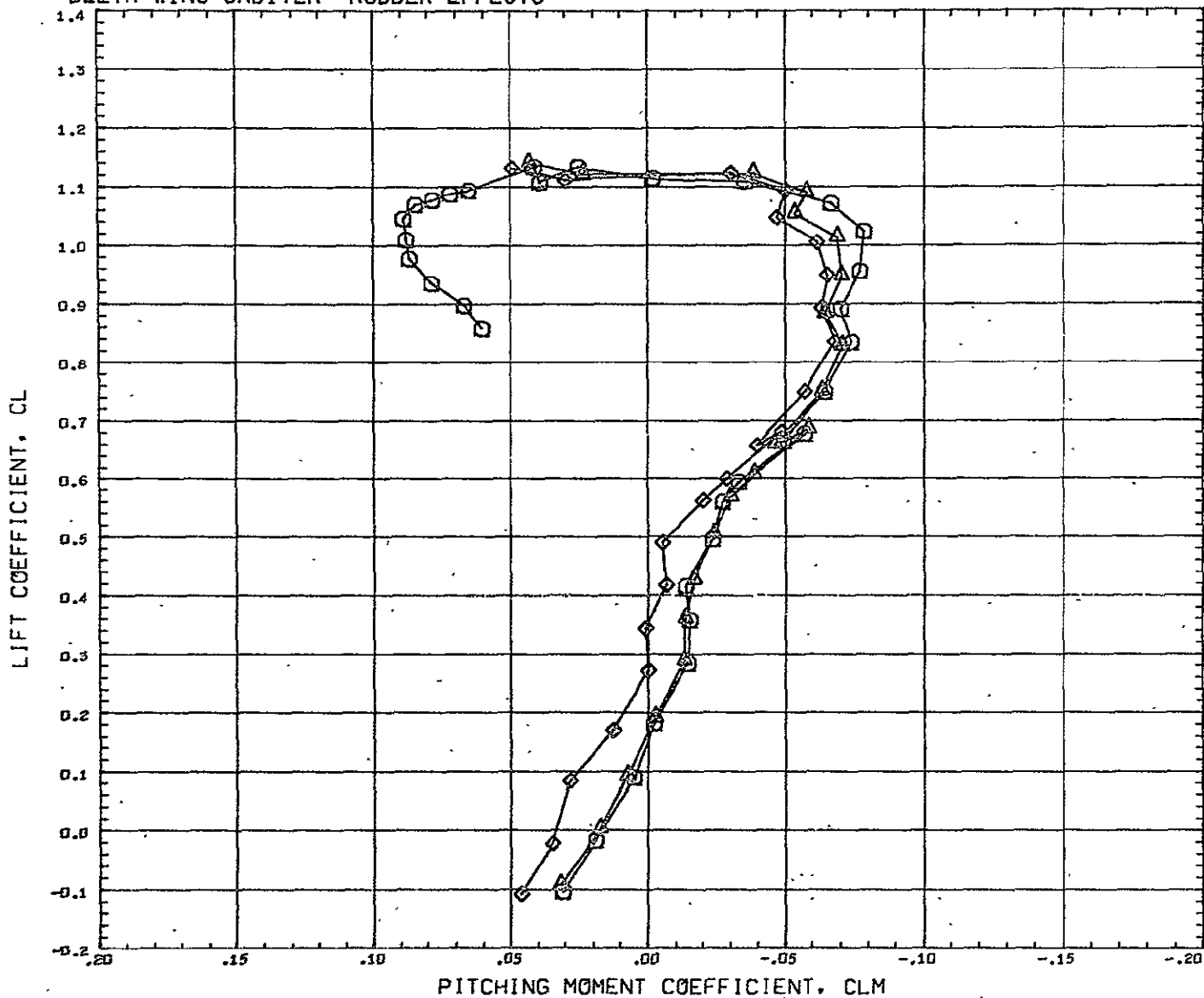


DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(R2756S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X
(R2763S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X
(R2764S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X

ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
0.000	0.000	-10.000	0.000	REFL 821.2004 INCHES
0.000	0.000	-20.000	0.000	REFB 1422.8040 INCHES
				XMRP 1422.5040 INCHES
				YMRP 0.0000 INCHES
				ZMRP 130.0004 INCHES
				SCALE 0.0035 SCALE

MACH 0.598

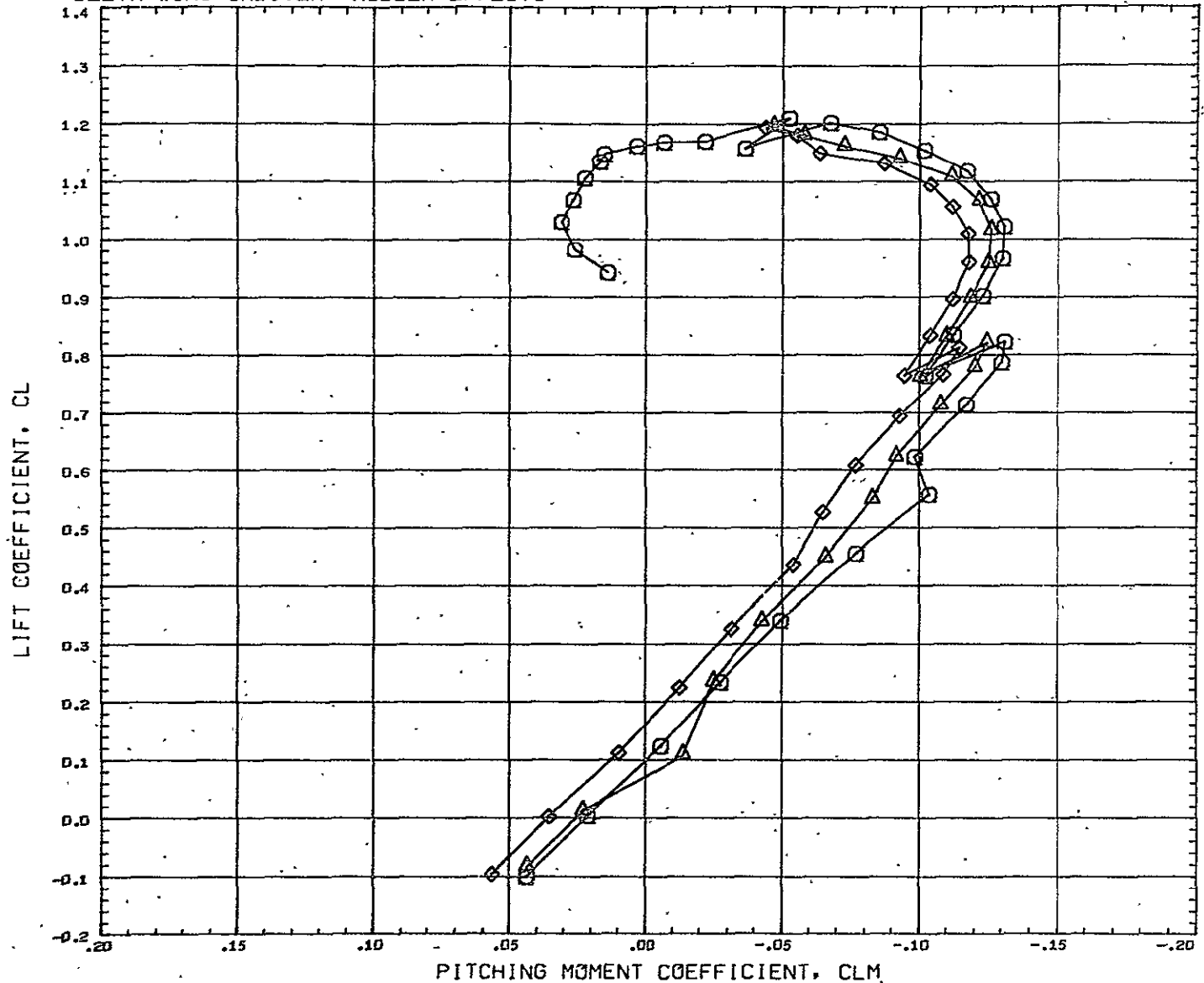
DELTA WING ORBITER- RUDDER EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(R2756S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(R2763S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	-10.000	0.000	REFL 821.2004 INCHES
(R2764S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	-20.000	0.000	REFB 1422.8040 INCHES
						XMRP 1422.5040 INCHES
						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 0.899

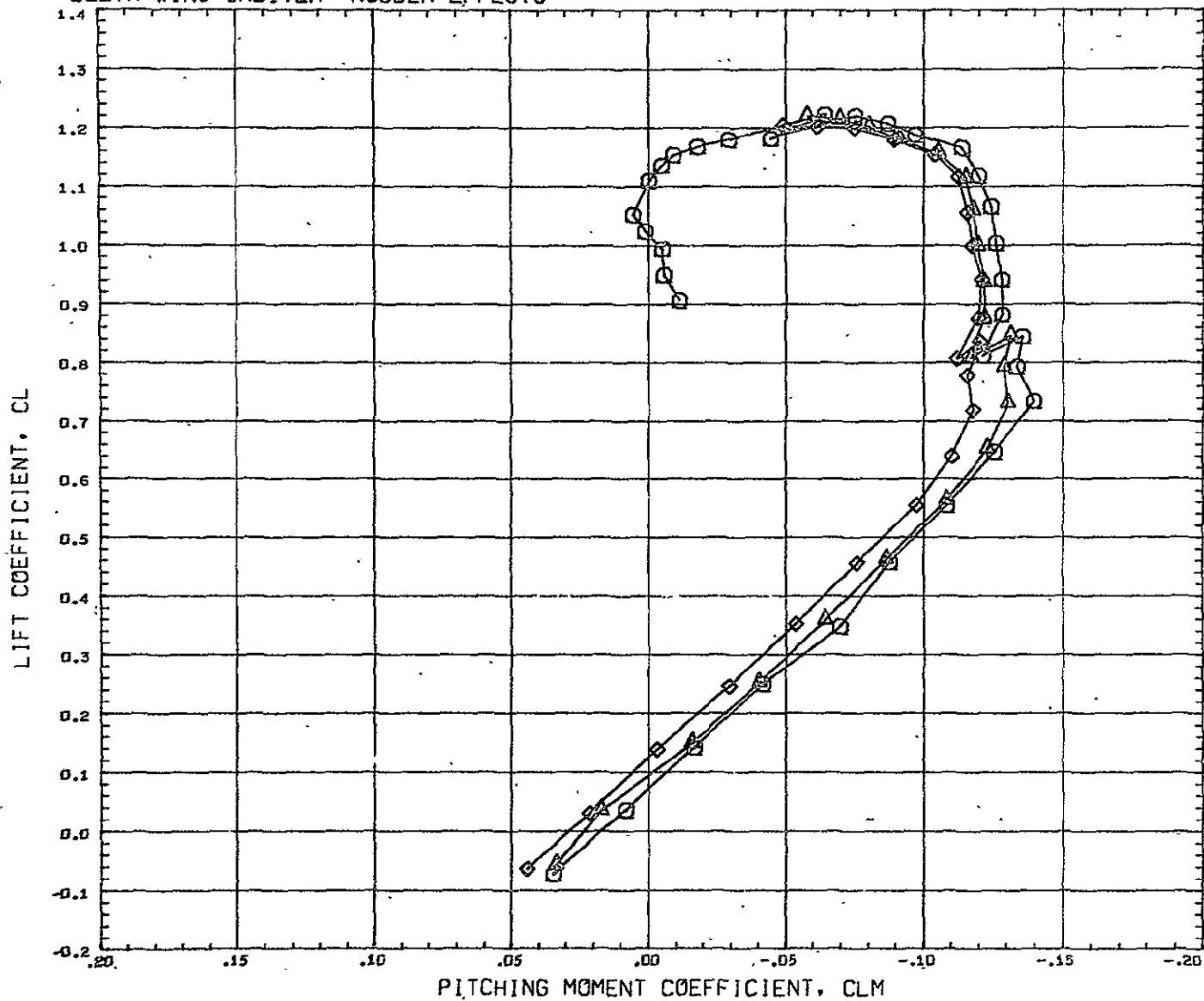
DELTA WING ORBITER- RUDDER EFFECTS



DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	A:LRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(R2756S)	○	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(R2763S)	△	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	-10.000	0.000	REFL 821.2004 INCHES
(R2764S)	◇	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	-20.000	0.000	REFB 1422.8040 INCHES XMRP 1422.5040 INCHES YMRP 0.0000 INCHES ZMRP 130.0004 INCHES SCALE 0.0035 SCALE

MACH 1.000

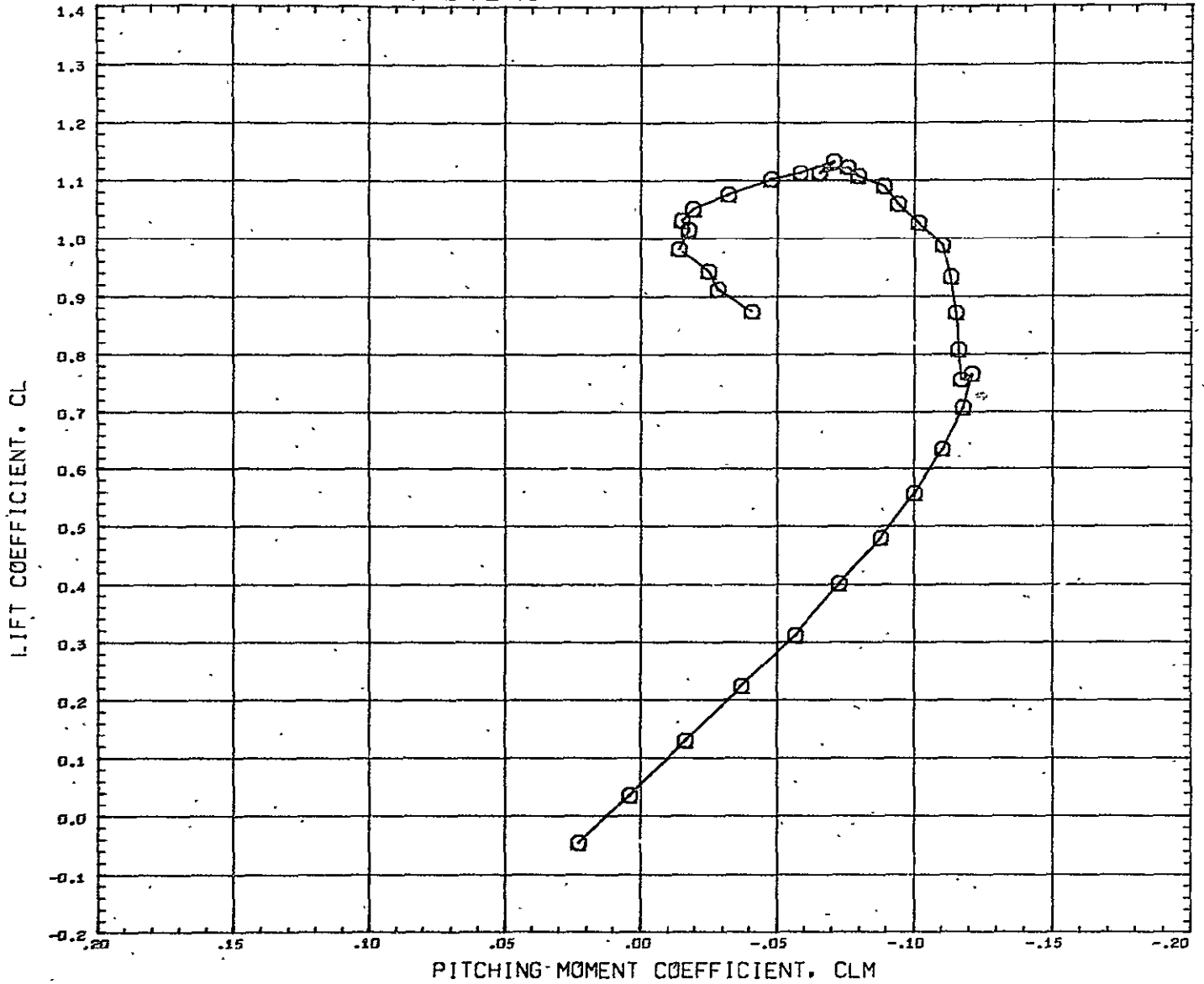
DELTA WING ORBITER- RUDDER EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(R2756S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(R2763S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	-10.000	0.000	REFL 821.2004 INCHES
(R2764S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	-20.000	0.000	REFB 1422.8040 INCHES
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						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 1.199

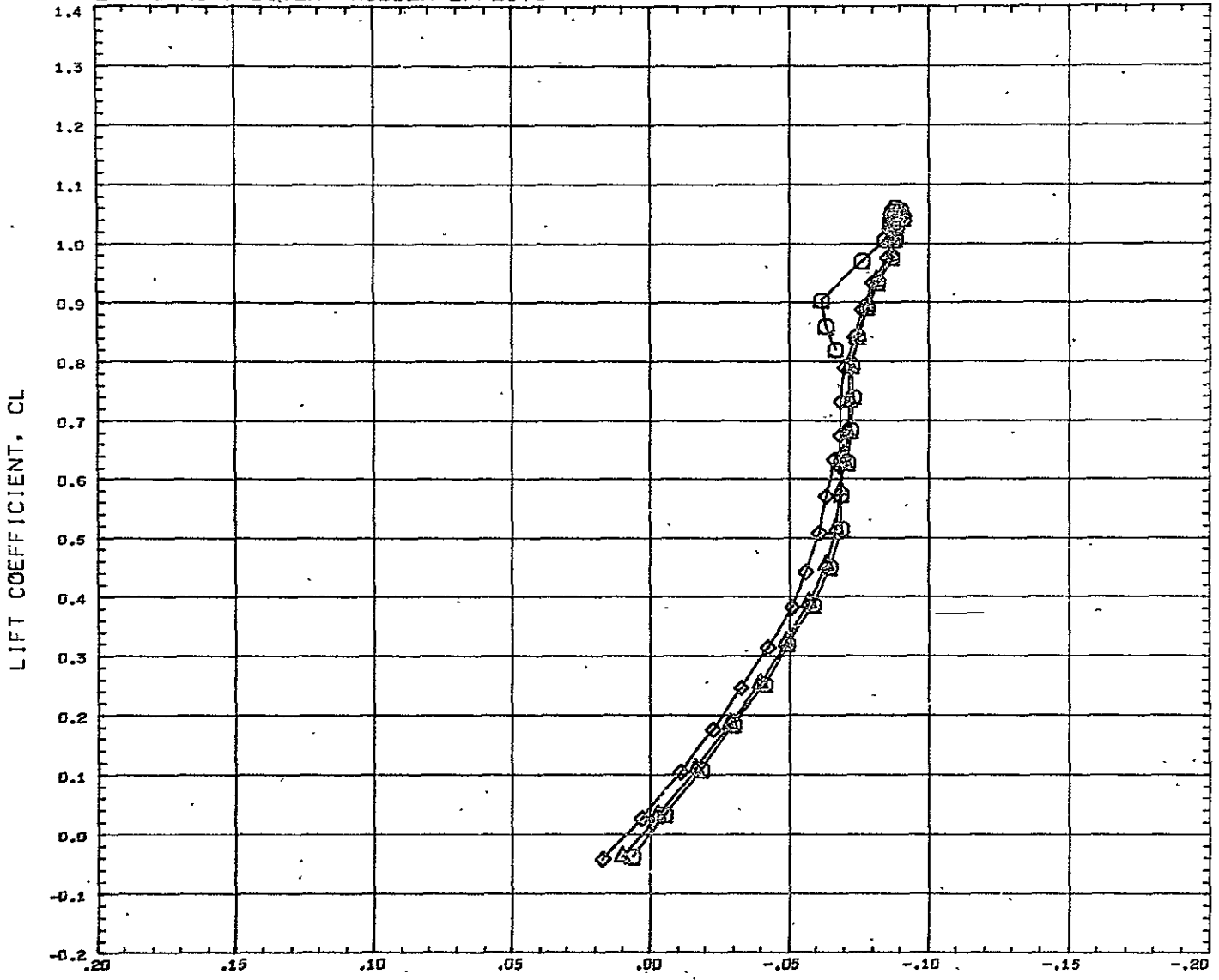
DELTA WING ORBITER- RUDDER EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(R2756S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(R2763S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	-10.000	0.000	REFL 821.2004 INCHES
(R2764S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	-20.000	0.000	REFB 1422.8040 INCHES
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						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 1.456

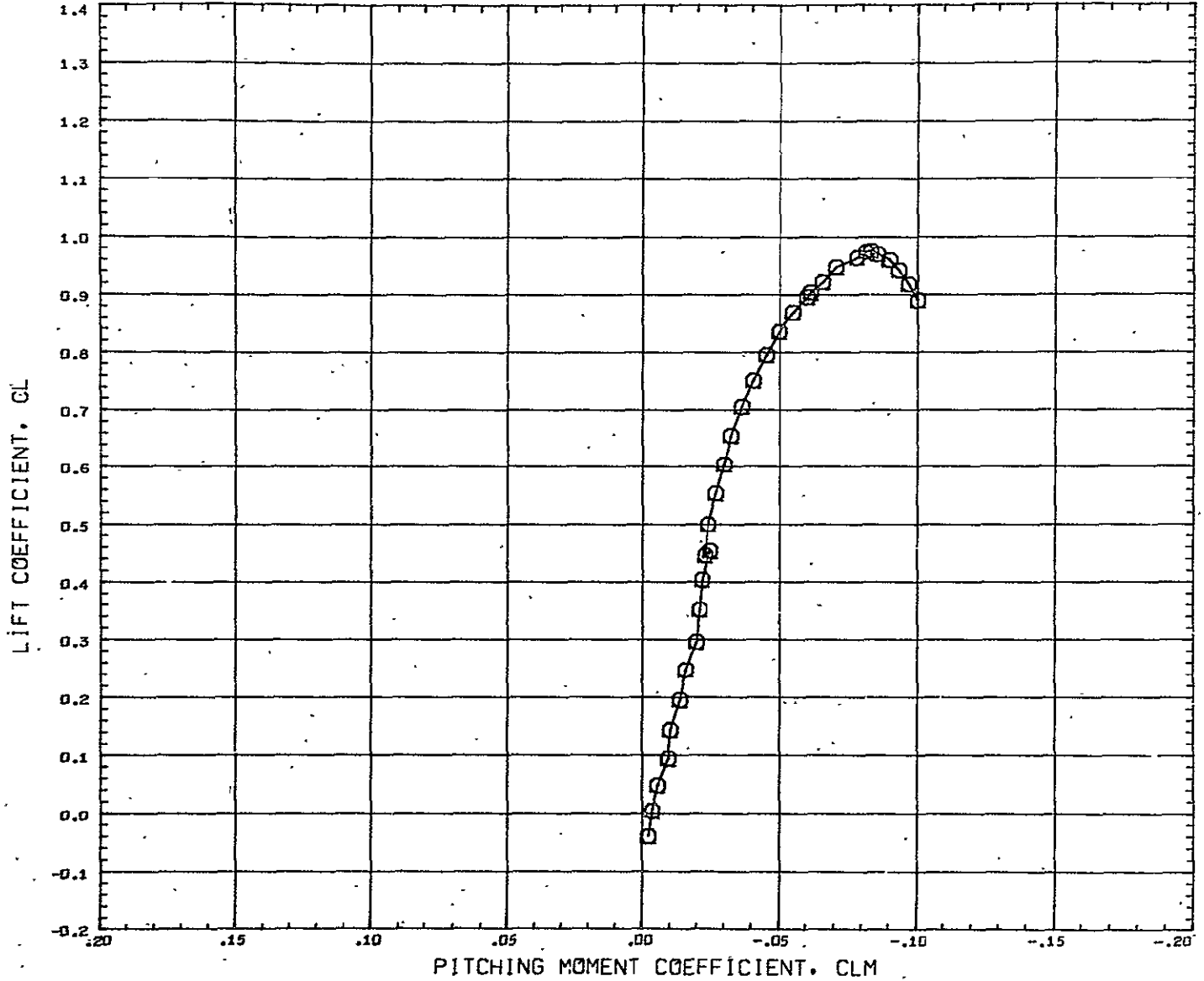
DELTA WING ORBITER- RUDDER EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(R2756S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(R2763S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	-10.000	0.000	REFL 821.2004 INCHES
(R2764S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	-20.000	0.000	REFB 1422.8040 INCHES
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						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 1.965

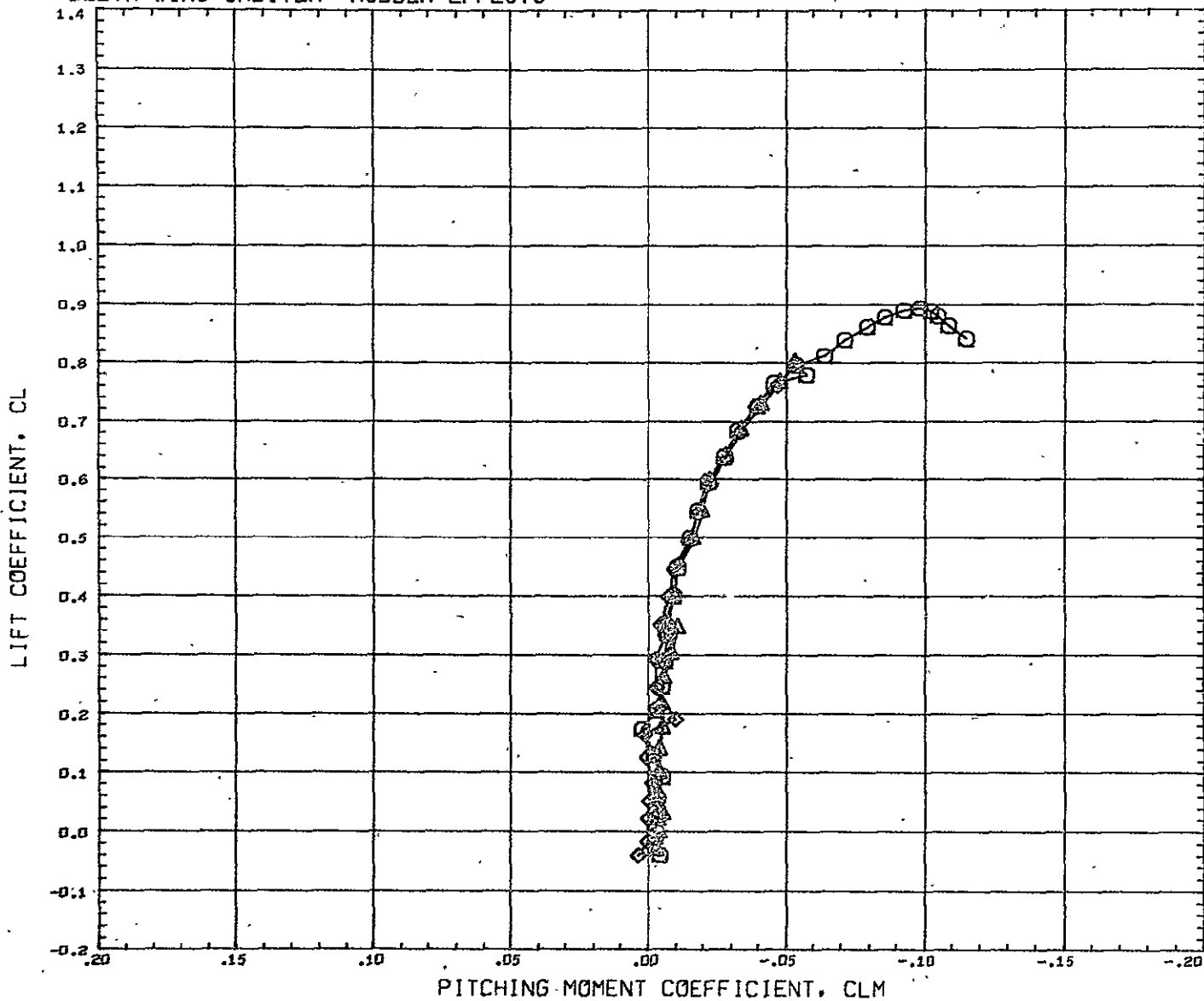
DELTA WING ORBITER- RUDDER EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(R2756S)	MSFC478 NR DELTA ORBITER 85W17E10V17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(R2763S)	MSFC478 NR DELTA ORBITER 85W17E10V17J2X	0.000	0.000	-10.000	0.000	REFL 821.2004 INCHES
(R2764S)	MSFC478 NR DELTA ORBITER 85W17E10V17J2X	0.000	0.000	-20.000	0.000	REFB 1422.8040 INCHES
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						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

HACH 2.990

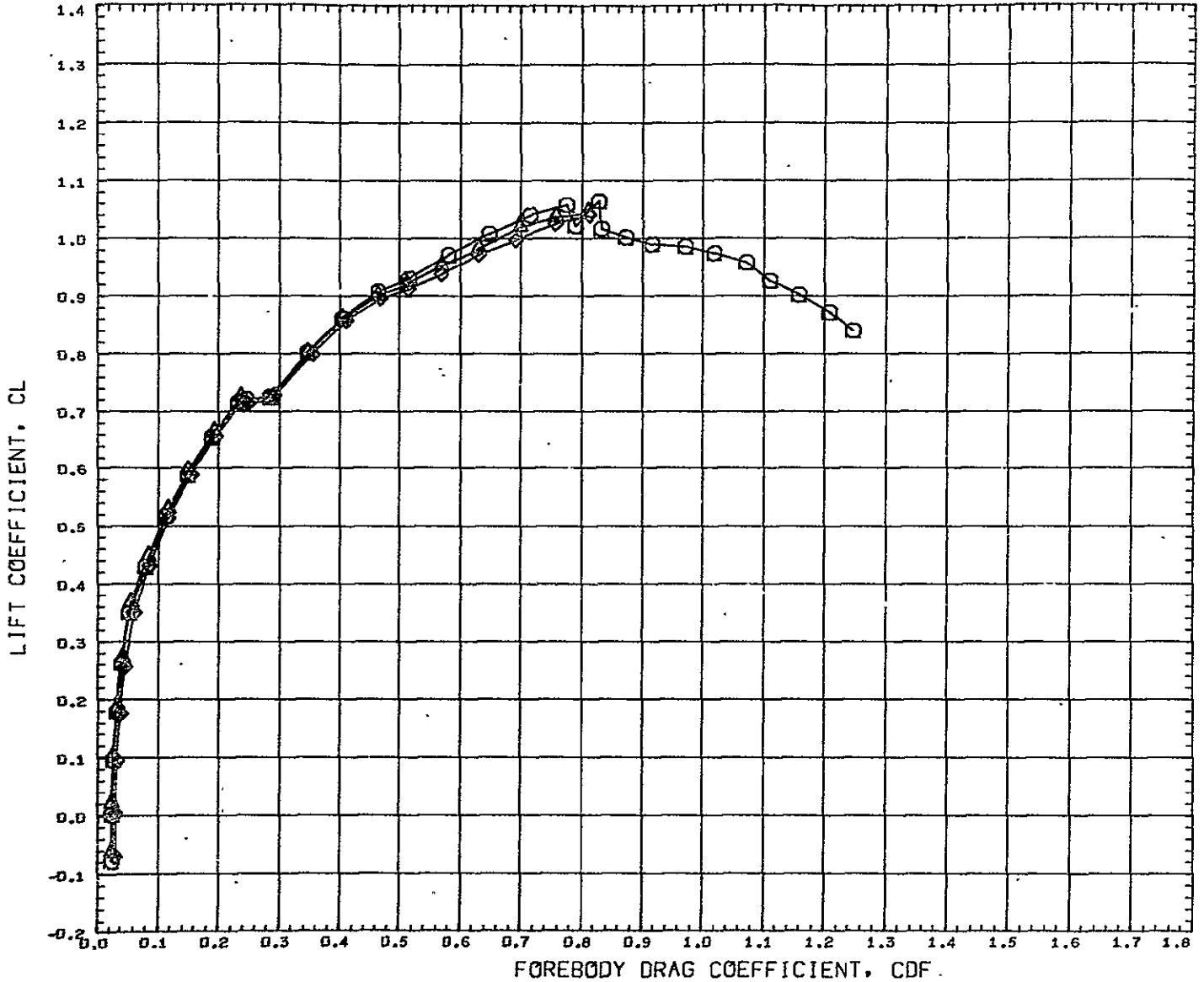
DELTA WING ORBITER- RUDDER EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(R2756S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(R2763S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	-10.000	0.000	REFL 821.2004 INCHES
(R2764S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	-20.000	0.000	REFB 1422.8047 INCHES
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						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 4.959

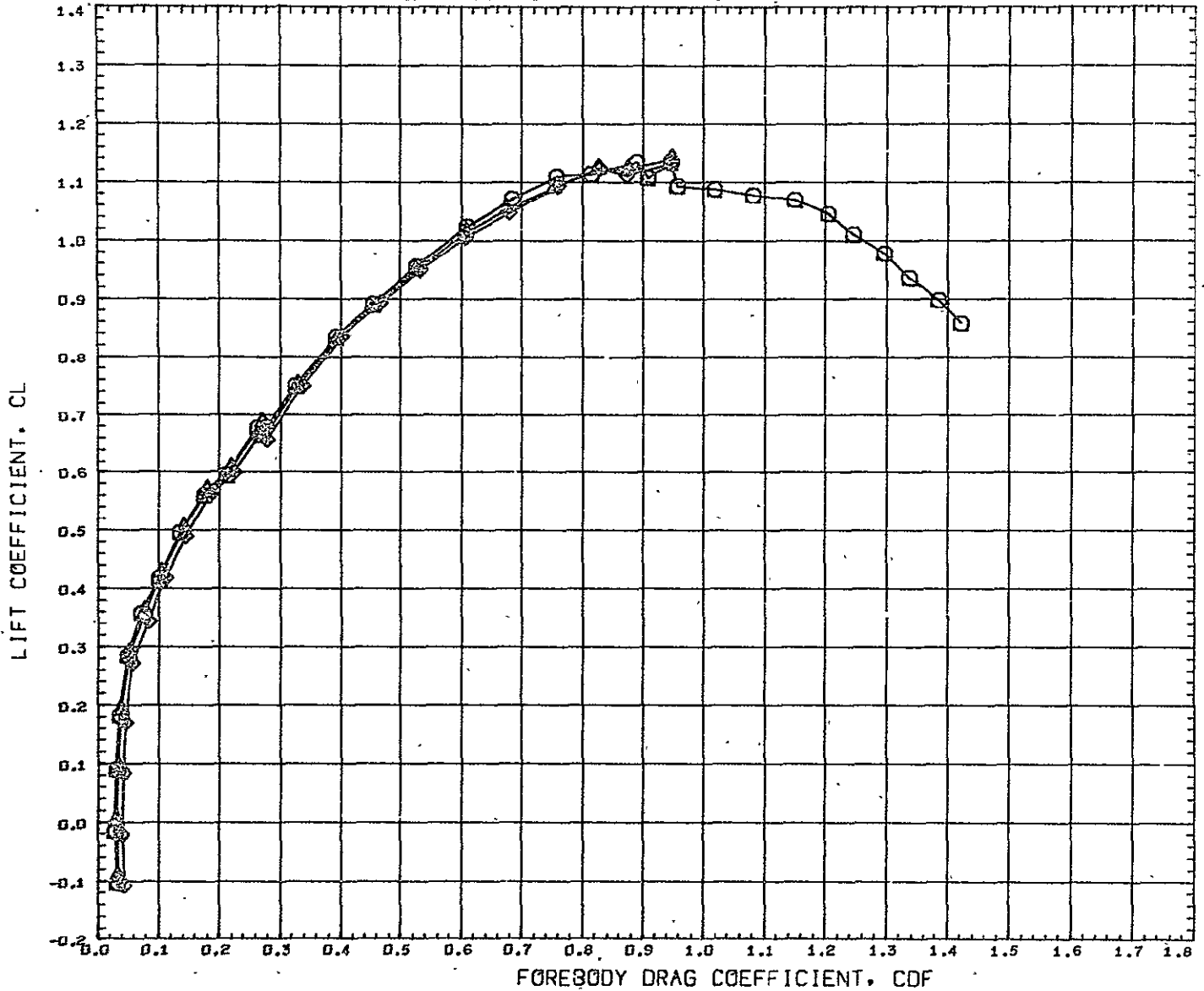
DELTA WING ORBITER- RUDDER EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
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(R2763S)	HSFC478 NR DELTA ORBITER B5W17E1DV17J2X	0.000	0.000	-10.000	0.000	REFL 821.2004 INCHES
(R2764S)	HSFC478 NR DELTA ORBITER B5W17E1DV17J2X	0.000	0.000	-20.000	0.000	REFB 1422.8040 INCHES
						XMRP 1422.5640 INCHES
						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 0.596

DELTA WING ORBITER- RUDDER EFFECTS

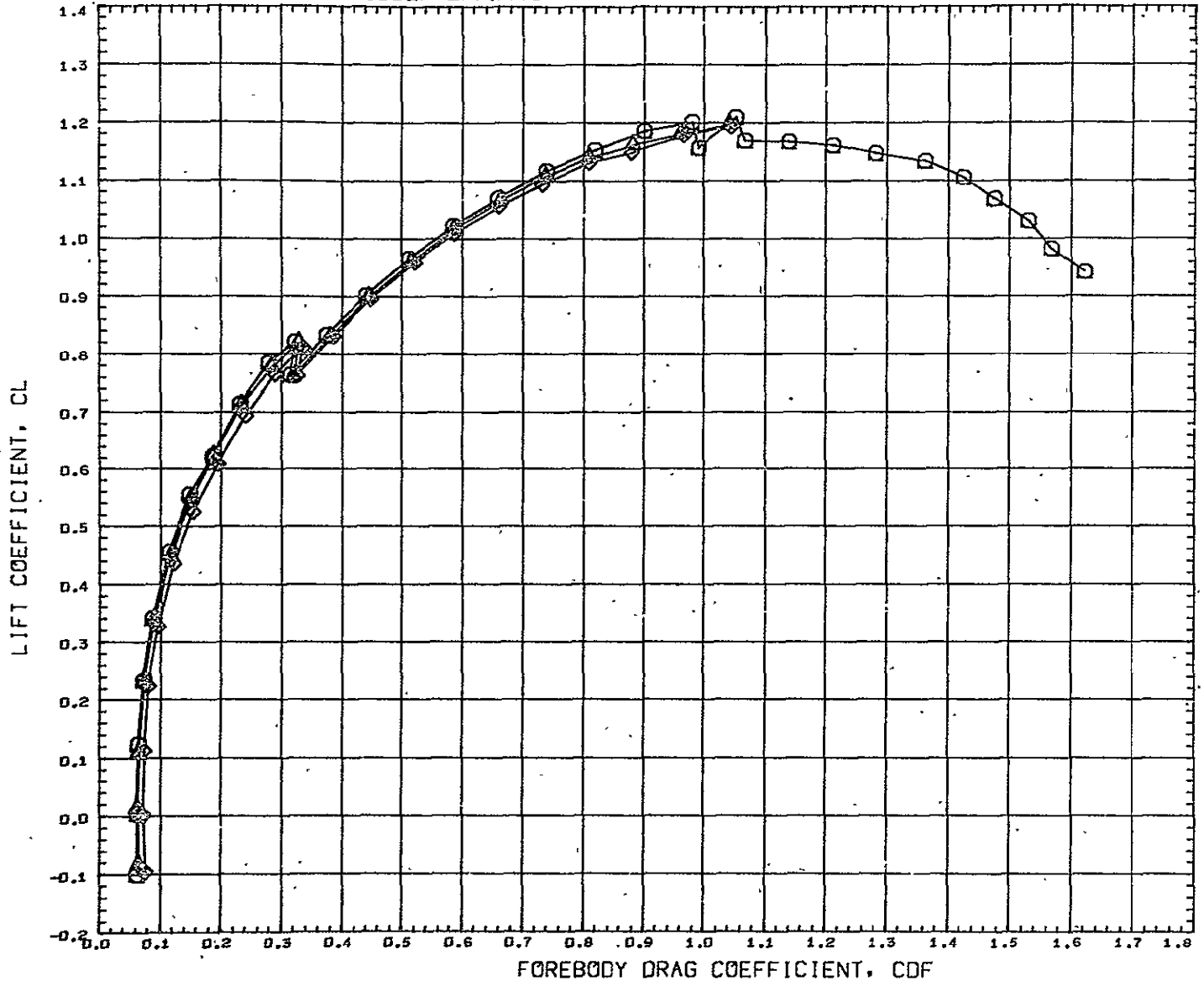


FOREBODY DRAG COEFFICIENT, CDF

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(R27565)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(R27635)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	-10.000	0.000	REFL 821.2004 INCHES
(R27645)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	-20.000	0.000	REFB 1422.8040 INCHES
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						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 9.899

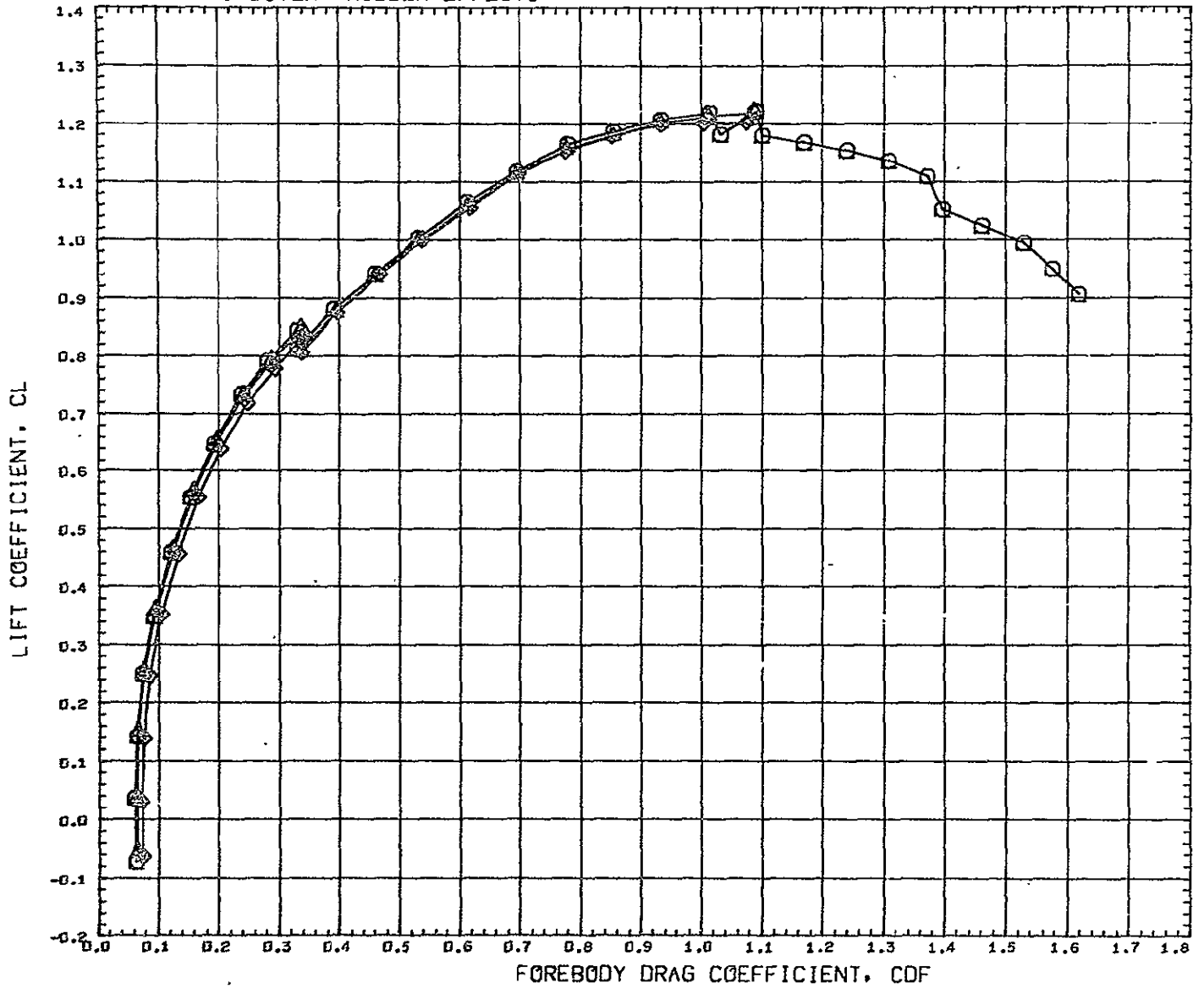
DELTA WING ORBITER- RUDDER EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(R2756S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(R2763S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	-10.000	0.000	REFL 821.2004 INCHES
(R2764S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	-20.000	0.000	REFB 1422.8040 INCHES
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MACH 1.003

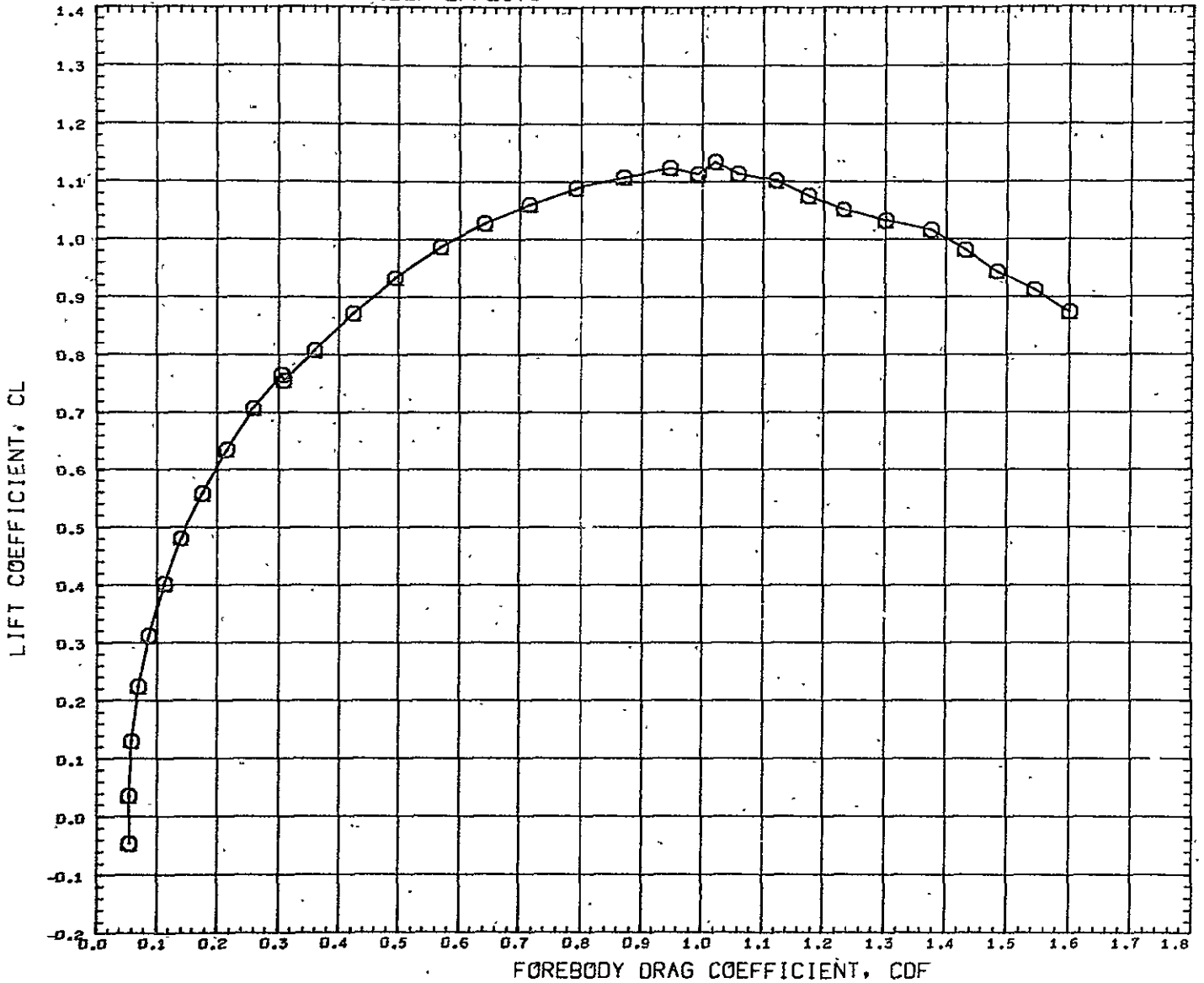
DELTA WING ORBITER- RUDDER EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(R2756S)	MSFC478 NR DELTA ORBITER B5W17E1DV17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(R2763S)	MSFC478 NR DELTA ORBITER B5W17E1DV17J2X	0.000	0.000	-10.000	0.000	REFL 821.2004 INCHES
(R2764S)	MSFC478 NR DELTA ORBITER B5W17E1DV17J2X	0.000	0.000	-20.000	0.000	REFB 1422.8040 INCHES
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						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 1.199

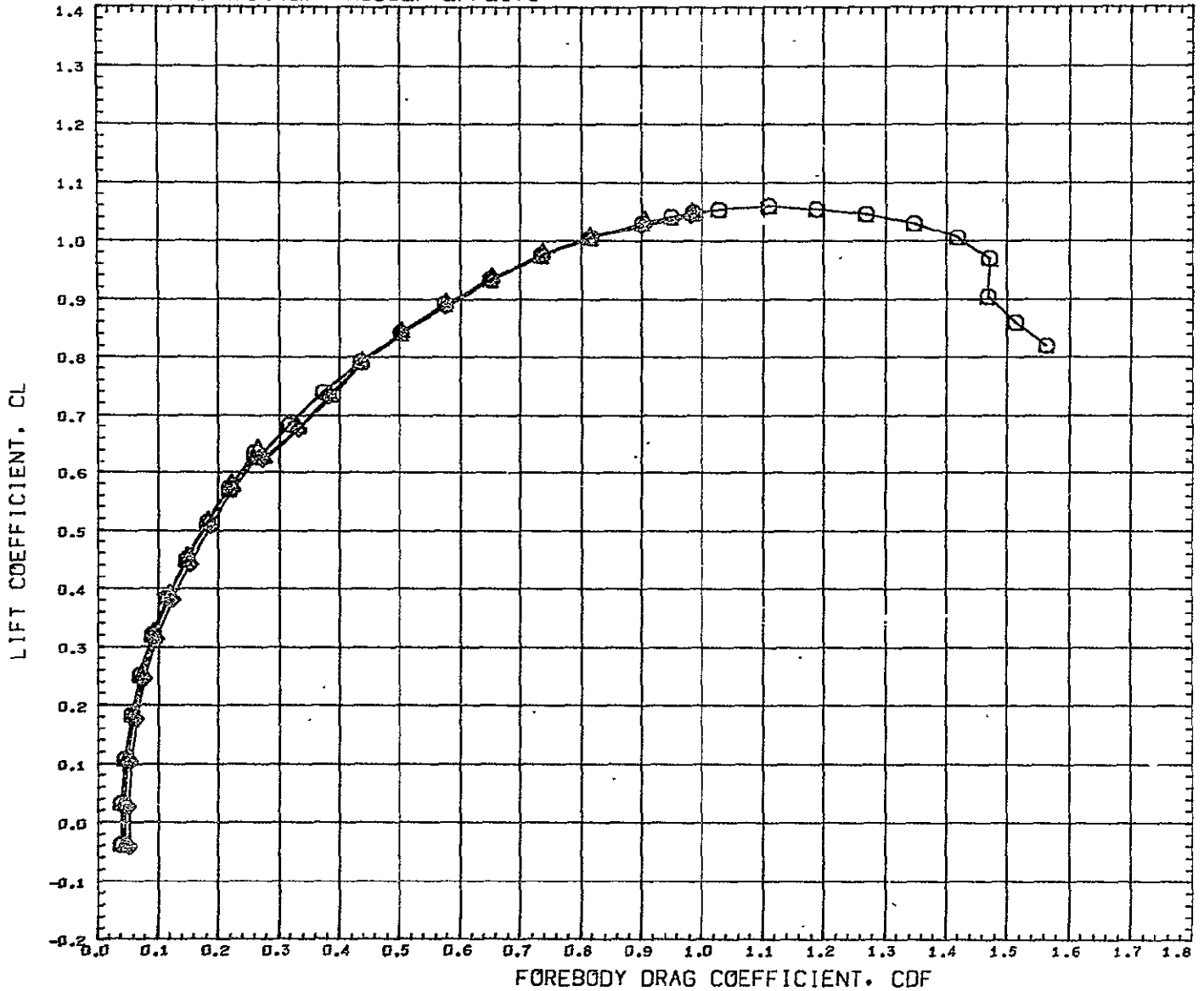
DELTA WING ORBITER- RUDDER EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION
(R2756S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	0.000	0.000	REFS 6084.0040 SQ FT
(R2763S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	-10.000	0.000	REFL 821.2004 INCHES
(R2764S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	-20.000	0.000	REFB 1422.8040 INCHES
						YMRP 1422.5040 INCHES
						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 1.458

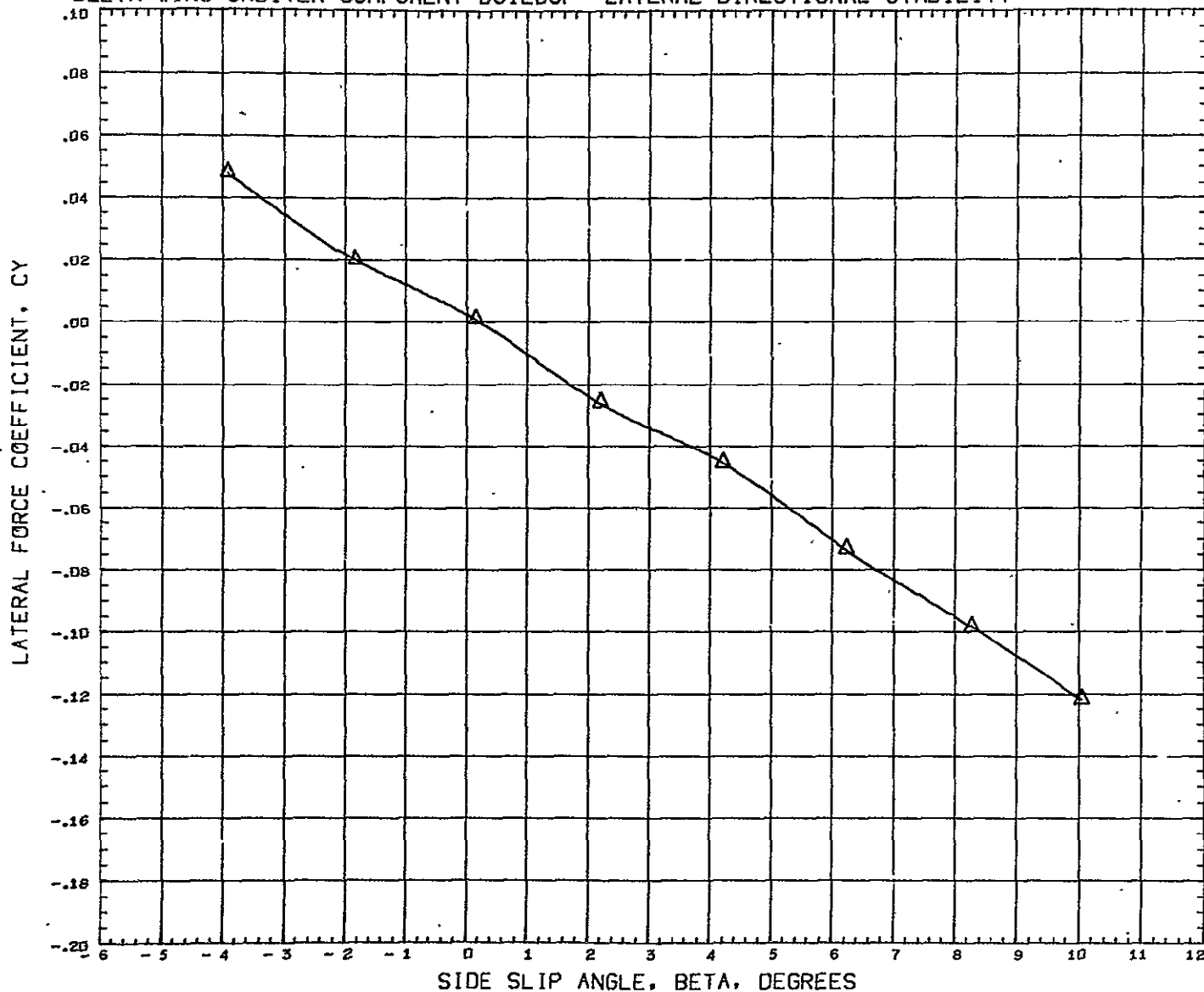
DELTA WING ORBITER- RUDDER EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELVATR	AILRON	RUDDER	RUDFLR	REFERENCE INFORMATION		
(R2756S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	0.000	0.000	REFS	6084.0040	SQ FT
(R2763S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	-10.000	0.000	REFL	821.2004	INCHES
(R2764S)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	0.000	0.000	-20.000	0.000	REFB	1422.8040	INCHES
						XMRP	1422.5040	INCHES
						YMRP	0.0000	INCHES
						ZMRP	130.0004	INCHES
						SCALE	0.0035	SCALE

MACH 1.965

DELTA WING ORBITER-COMPONENT BUILDUP- LATERAL DIRECTIONAL STABILITY

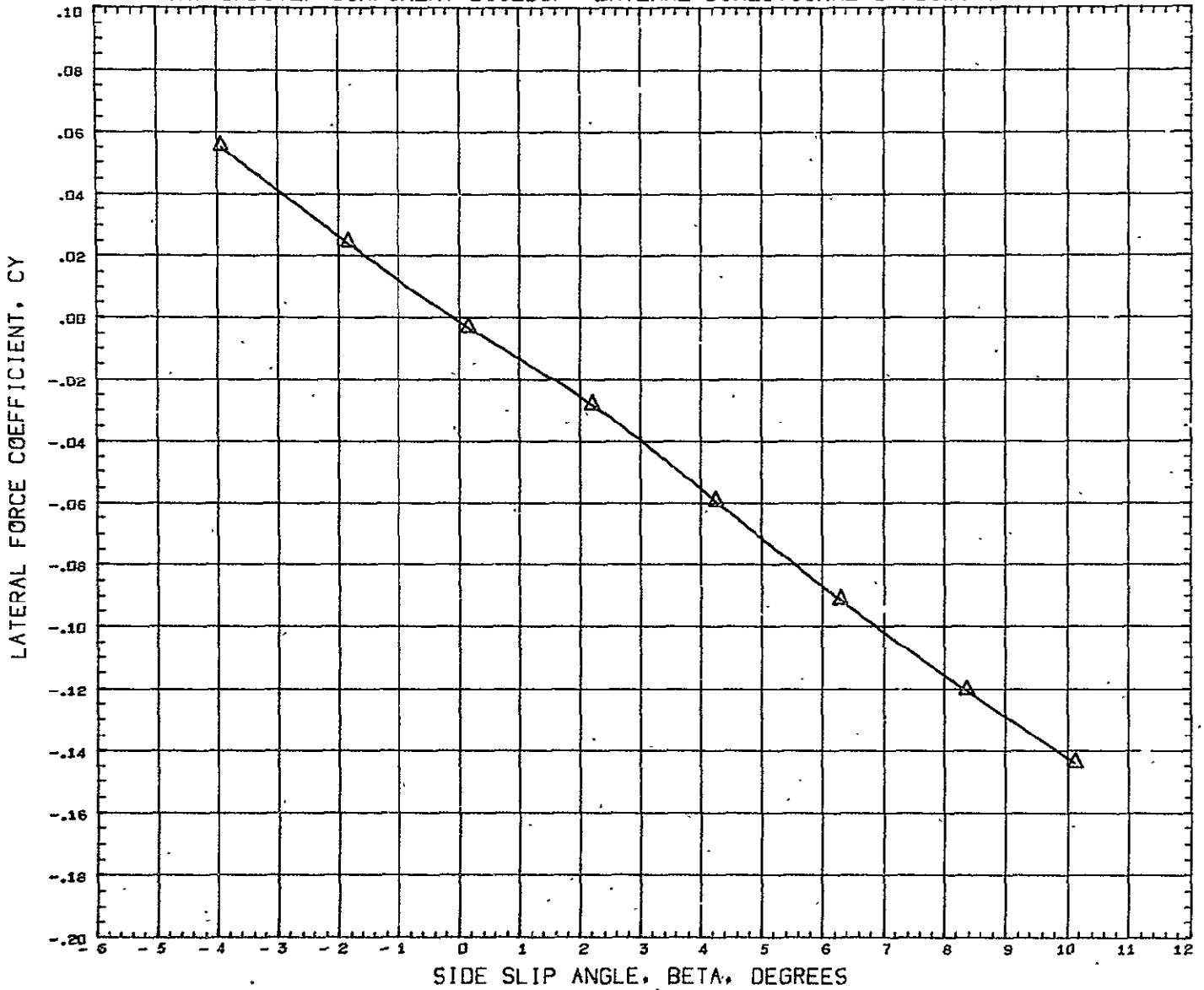


DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(R2781D) ○	MSFC478 NR DELTA ORBITER B5W17E10X
(R2773D) △	MSFC478 NR DELTA ORBITER B5W17E10V17J2X

ALPHA	RUDDER	RUDFLR	ELVATR	REFERENCE INFORMATION
-0.650			0.000	REFS 6084.0040 SQ FT
-0.070	0.000	15.000	0.000	REFL 821.2004 INCHES
				REFB 1422.8040 INCHES
				XMRP 1422.5040 INCHES
				YMRP 0.0000 INCHES
				ZMRP 130.0004 INCHES
				SCALE 0.0035 SCALE

MACH 5.603

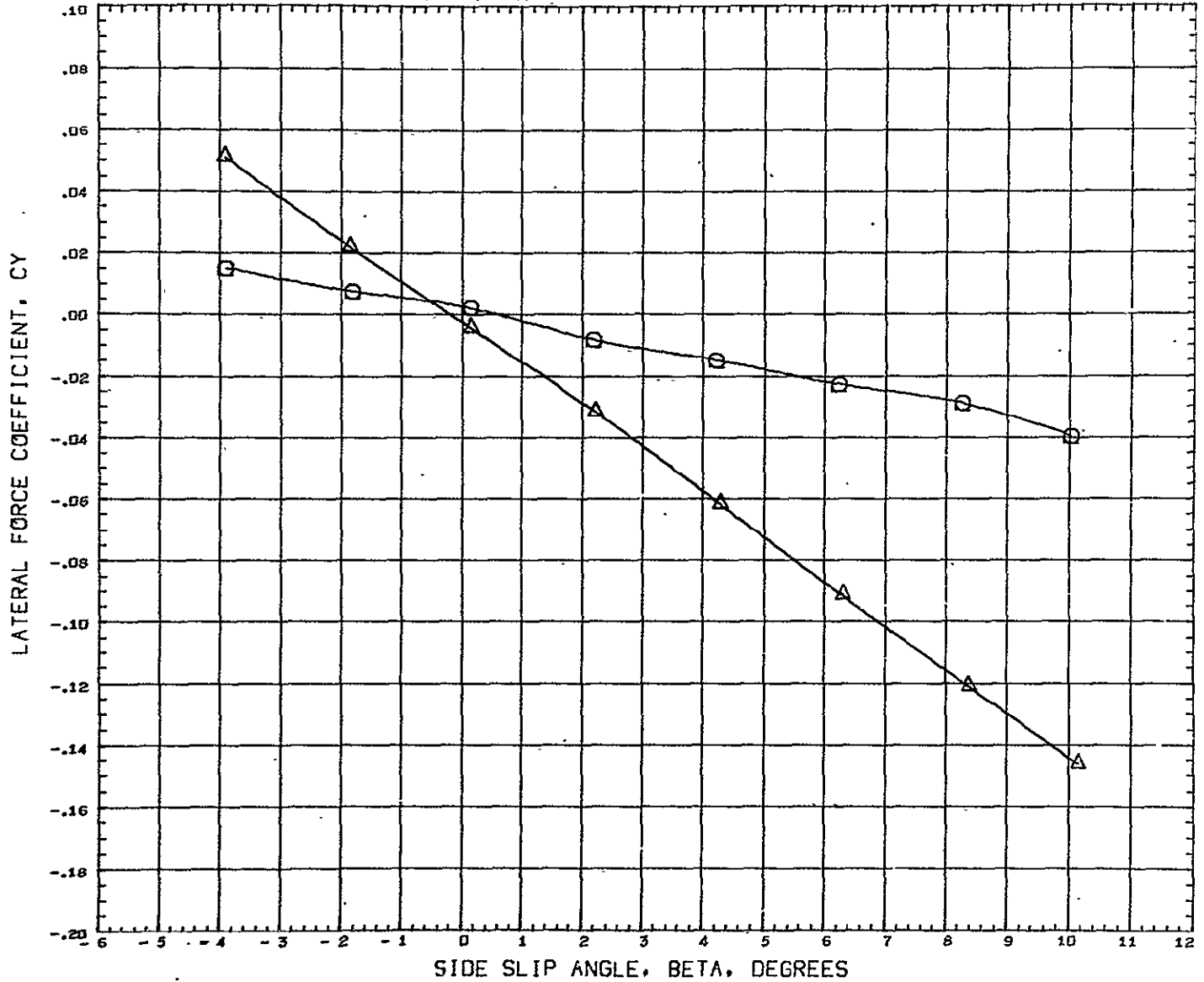
DELTA WING ORBITER-COMPONENT BUILDUP- LATERAL DIRECTIONAL STABILITY



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	RUDDER	RUDFLR	ELVATR	REFERENCE INFORMATION
(R2781D)	MSFC478 NR DELTA ORBITER B5W17E10X	-0.050			0.000	REFS 6084.0040 SQ FT
(R2773C)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	-0.070	0.000	15.000	0.000	REFL 821.2004 INCHES
						REFB 1422.8040 INCHES
						XMRP 1422.5040 INCHES
						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 1.000

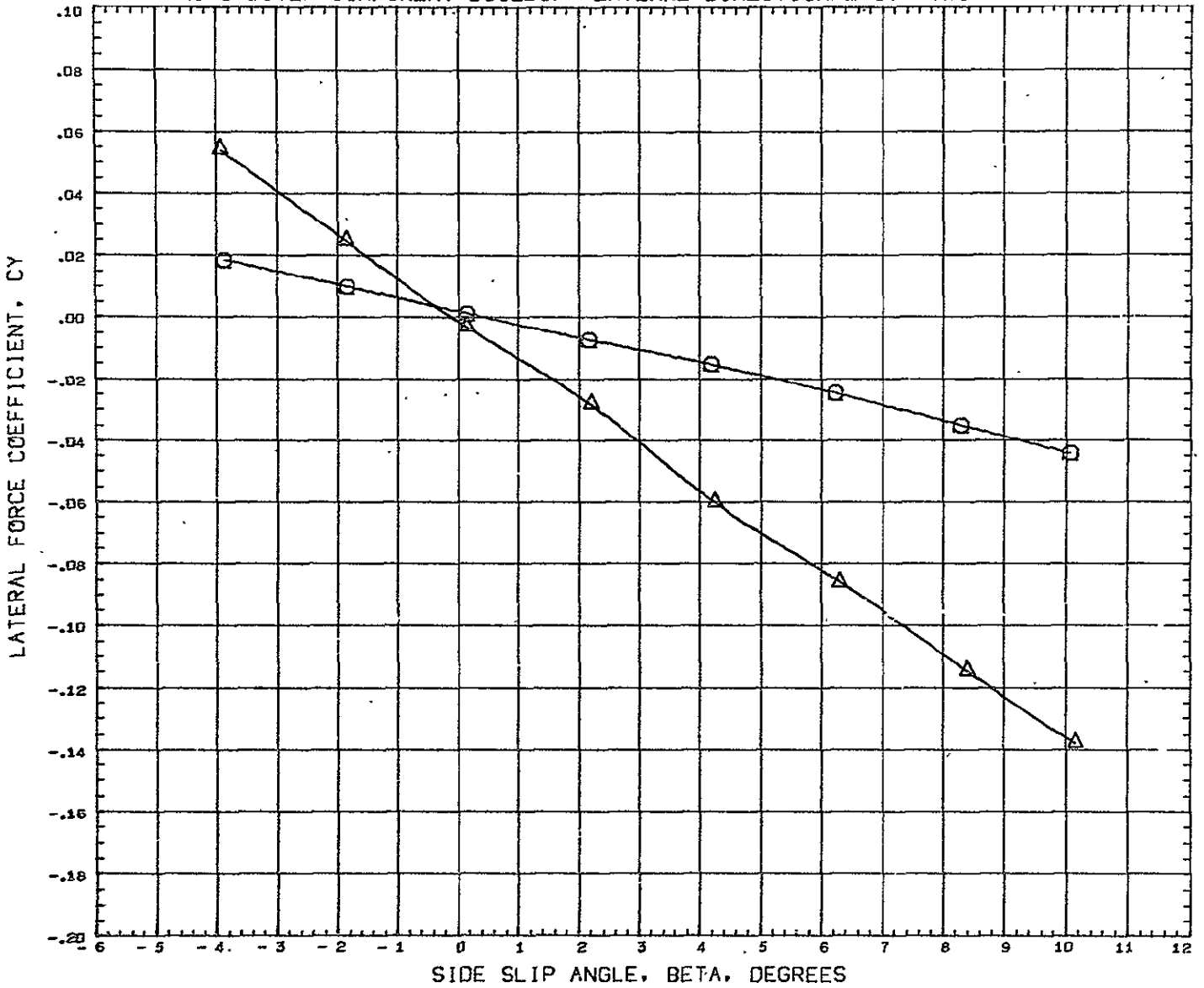
DELTA WING ORBITER-COMPONENT BUILDUP- LATERAL DIRECTIONAL STABILITY



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	RUDDER	RUDFLR	ELVATR	REFERENCE INFORMATION
(R2761D)	MSFC478 NR DELTA ORBITER B5W17E10X	-0.050			0.000	REFS 6084.0040 SQ FT
(R2773D)	MSFC478 NR DELTA ORBITER B5W17E1DV17J2X	-0.070	0.000	15.000	0.000	REFL 821.2004 INCHES
						REFB 1422.8040 INCHES
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						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

HACH 1.197

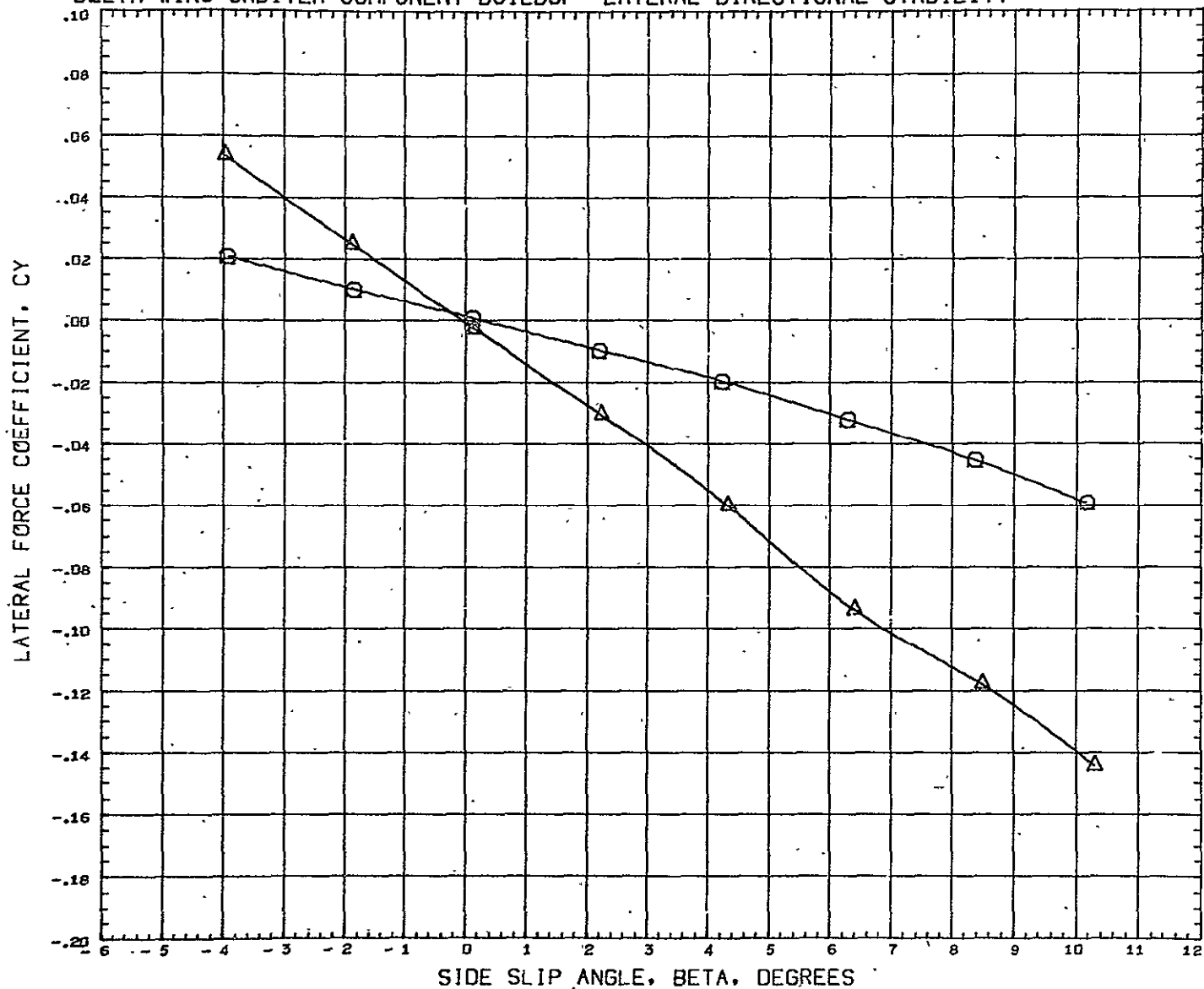
DELTA WING ORBITER-COMPONENT BUILDUP- LATERAL DIRECTIONAL STABILITY



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	RUDDER	RUDFLR	ELVATR	REFERENCE INFORMATION
(R2781D)	MSFC478 NR DELTA ORBITER B5W17E10X	-0.050			0.000	REFS 6084.0040 SQ FT-
(R2773D)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	-0.070	0.000	15.000	0.000	REFL 821.2004 INCHES
						REFB 1422.8040 INCHES
						XMRP 1422.5040 INCHES
						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
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MACH 1.458

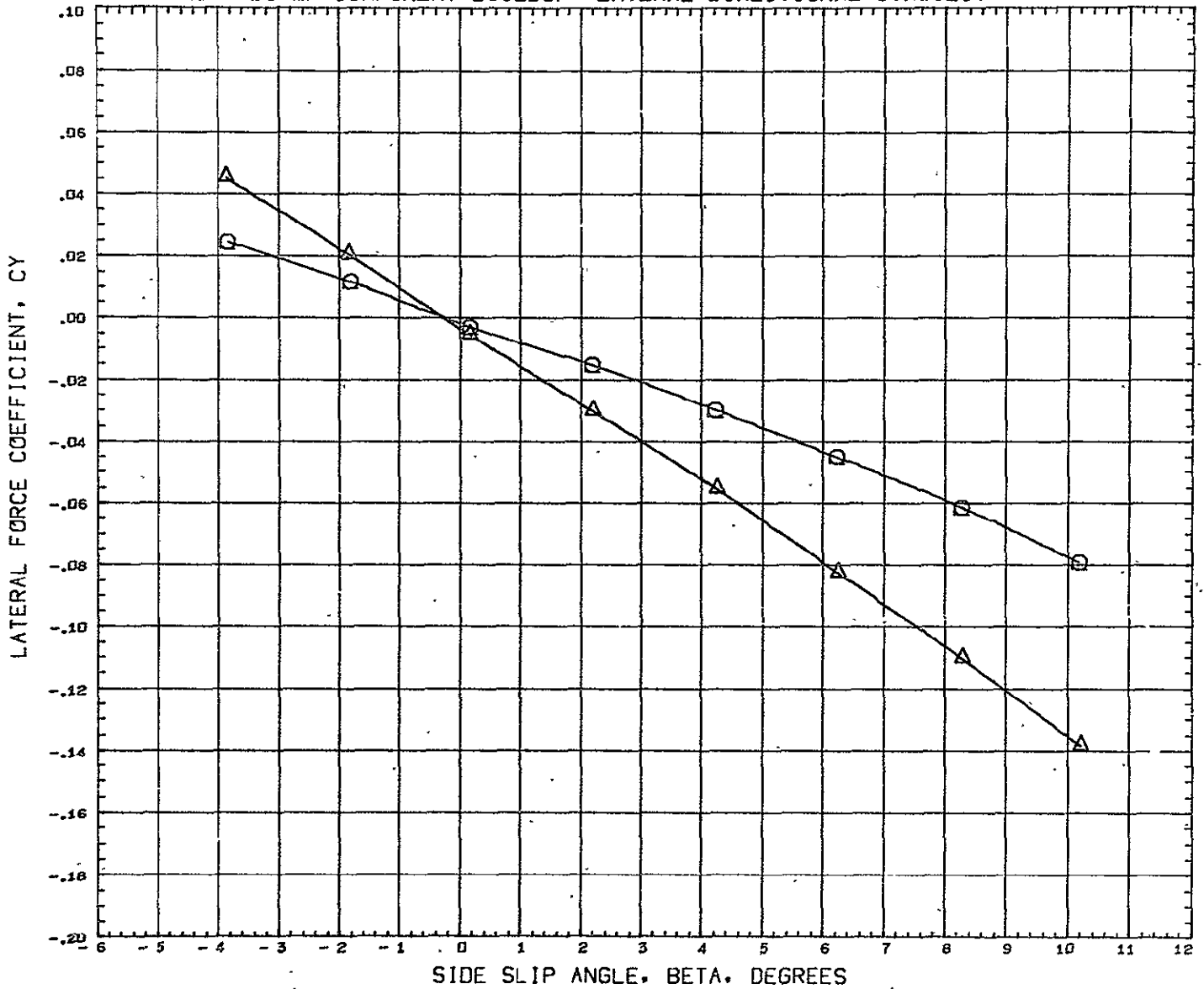
DELTA WING ORBITER-COMPONENT BUILDUP- LATERAL DIRECTIONAL STABILITY



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	RUDDER	RUDFLR	ELVATR	REFERENCE INFORMATION
(R2781D)	MSFC478 NR DELTA ORBITER B5W17E10X	-0.050			0.000	REFS 6084.0040 SQ FT REFL 821.2004 INCHES
(R2773D)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	-0.070	0.000	15.000	0.000	REFB 1422.8040 INCHES XMRP 1422.5040 INCHES YMRP 0.0000 INCHES ZMRP 150.0004 INCHES SCALE 0.0035 SCALE

MACH 1.957

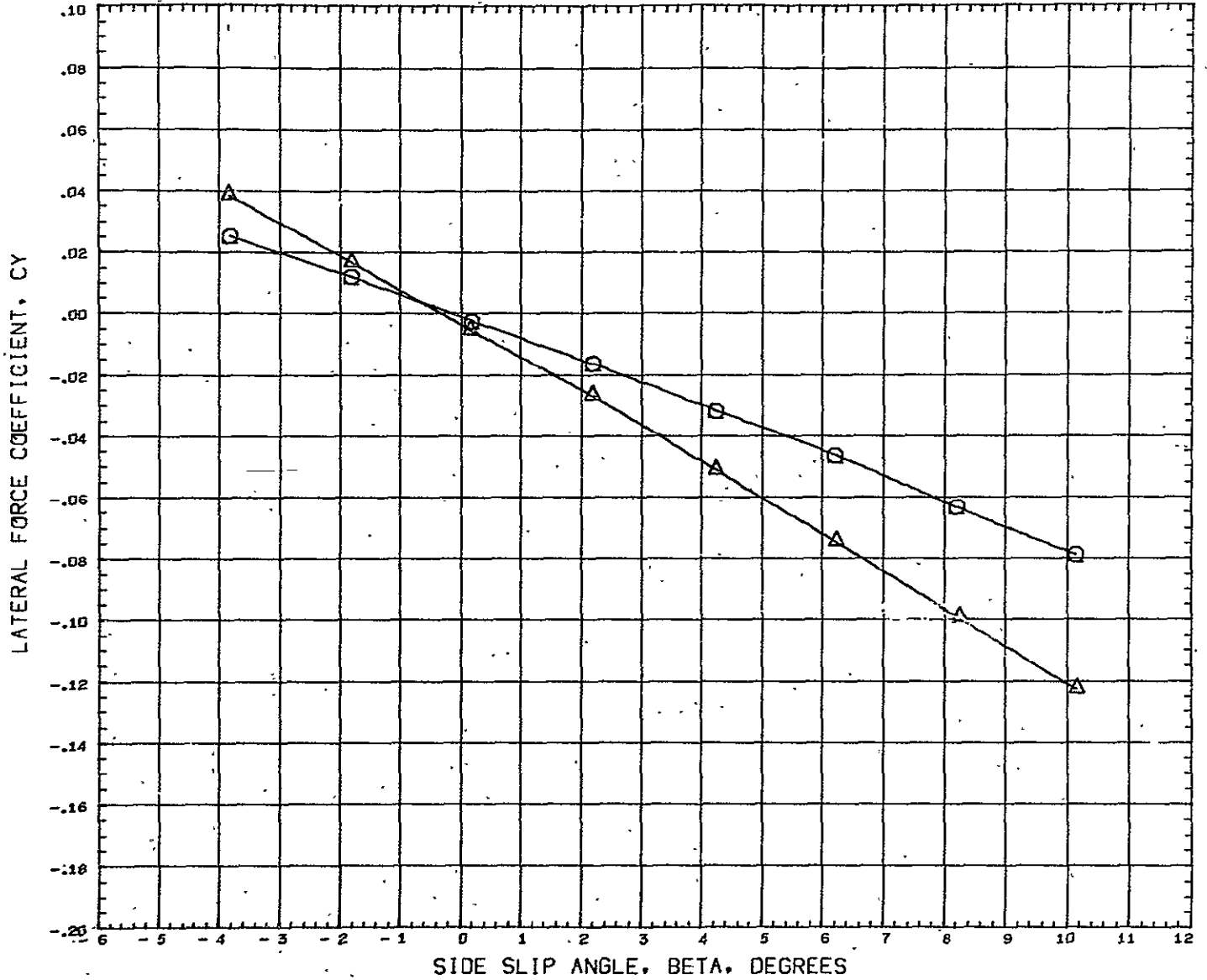
DELTA WING ORBITER-COMPONENT BUILDUP- LATERAL DIRECTIONAL STABILITY



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	RUDDER	RUDFLR	ELVATR	REFERENCE INFORMATION
(R2761D)	MSFC478 NR DELTA ORBITER B5W17E10X	-0.050			0.000	REFS 6034.0040 SQ FT
(R2773D)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	-0.070	0.000	15.000	0.000	REFL 821.2004 INCHES
						REFB 1422.8040 INCHES
						XMRP 1422.5040 INCHES
						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

PACH 2.990

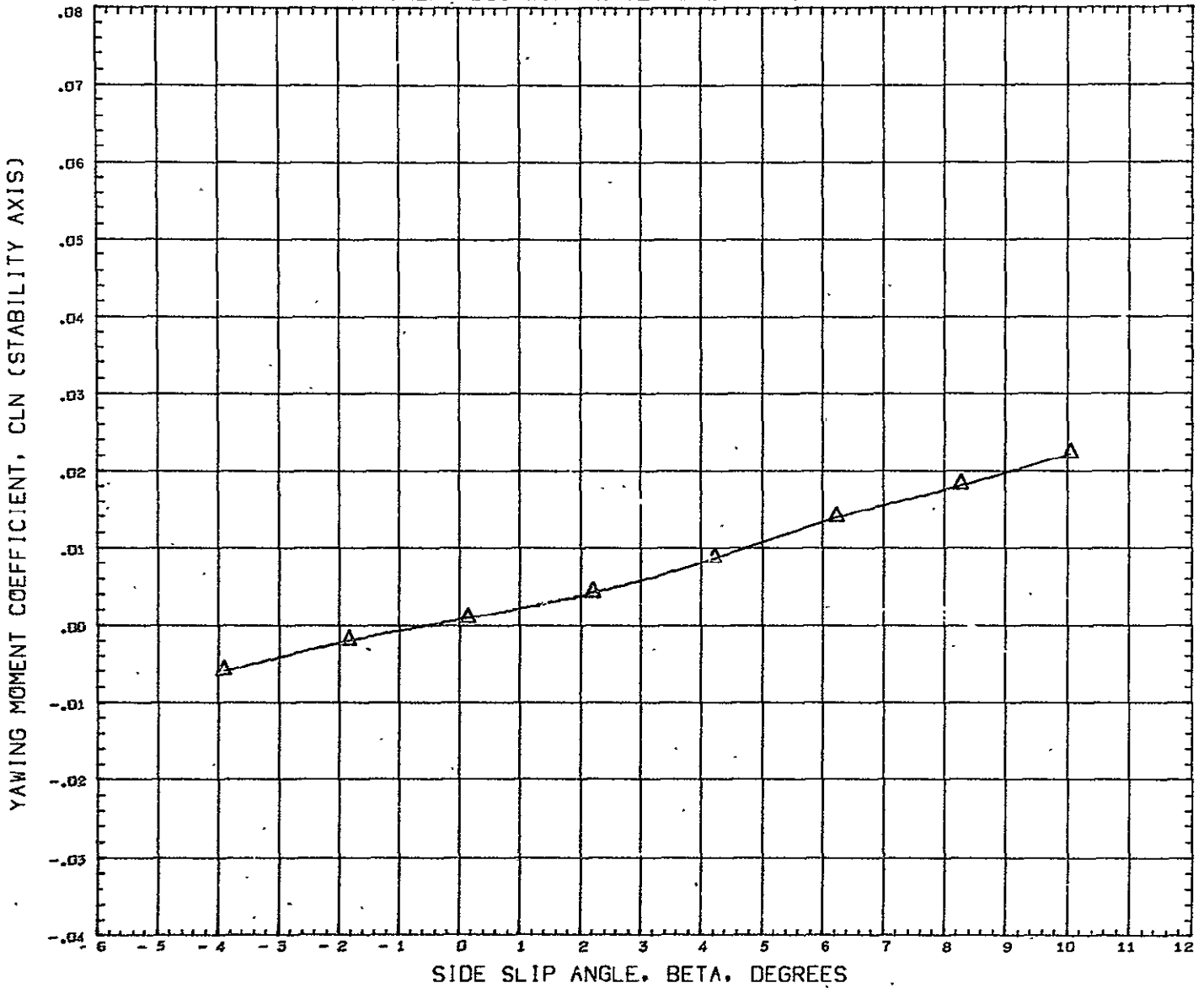
DELTA WING ORBITER-COMPONENT BUILDUP- LATERAL DIRECTIONAL STABILITY



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	RUDDER	RUCFLR	ELVATR	REFERENCE INFORMATION
(R2781D)	MSFC478 NR DELTA ORBITER B5W17E10X	-0.050			0.000	REFS 6084.0040 SQ FT
(R2773D)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	-0.070	0.000	15.000	0.000	REFL 821.2004 INCHES
						REFB 1422.8040 INCHES
						XMRP 1422.5040 INCHES
						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 4.959

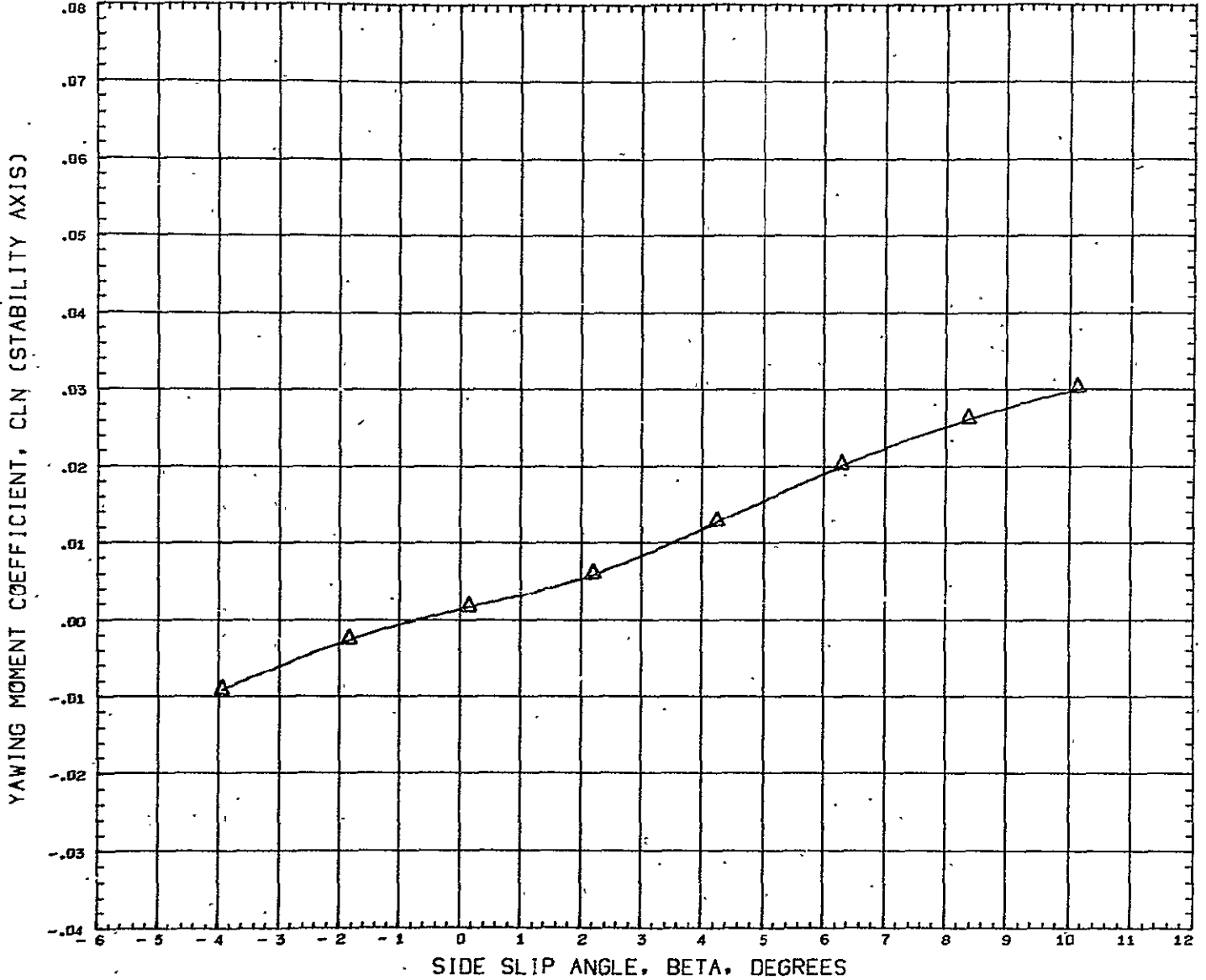
DELTA WING ORBITER-COMPONENT BUILDUP- LATERAL DIRECTIONAL STABILITY



DATA SET SYMBO	CONFIGURATION DESCRIPTION	ALPHA	RUDDER	RUDFLR	ELVATR	REFERENCE INFORMATION
(R2781D)	MSFC478 NR DELTA ORBITER B5W17E1DX	-0.050			0.000	REFS 6084.0040 SQ FT
(R2773C)	MSFC478 NR DELTA ORBITER B5W17E1DV17J2X	-0.070	0.000	15.000	0.000	REFL 821.2004 INCHES
						REFB 1422.8040 INCHES
						XMRP 1422.5040 INCHES
						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

HACH 0.603

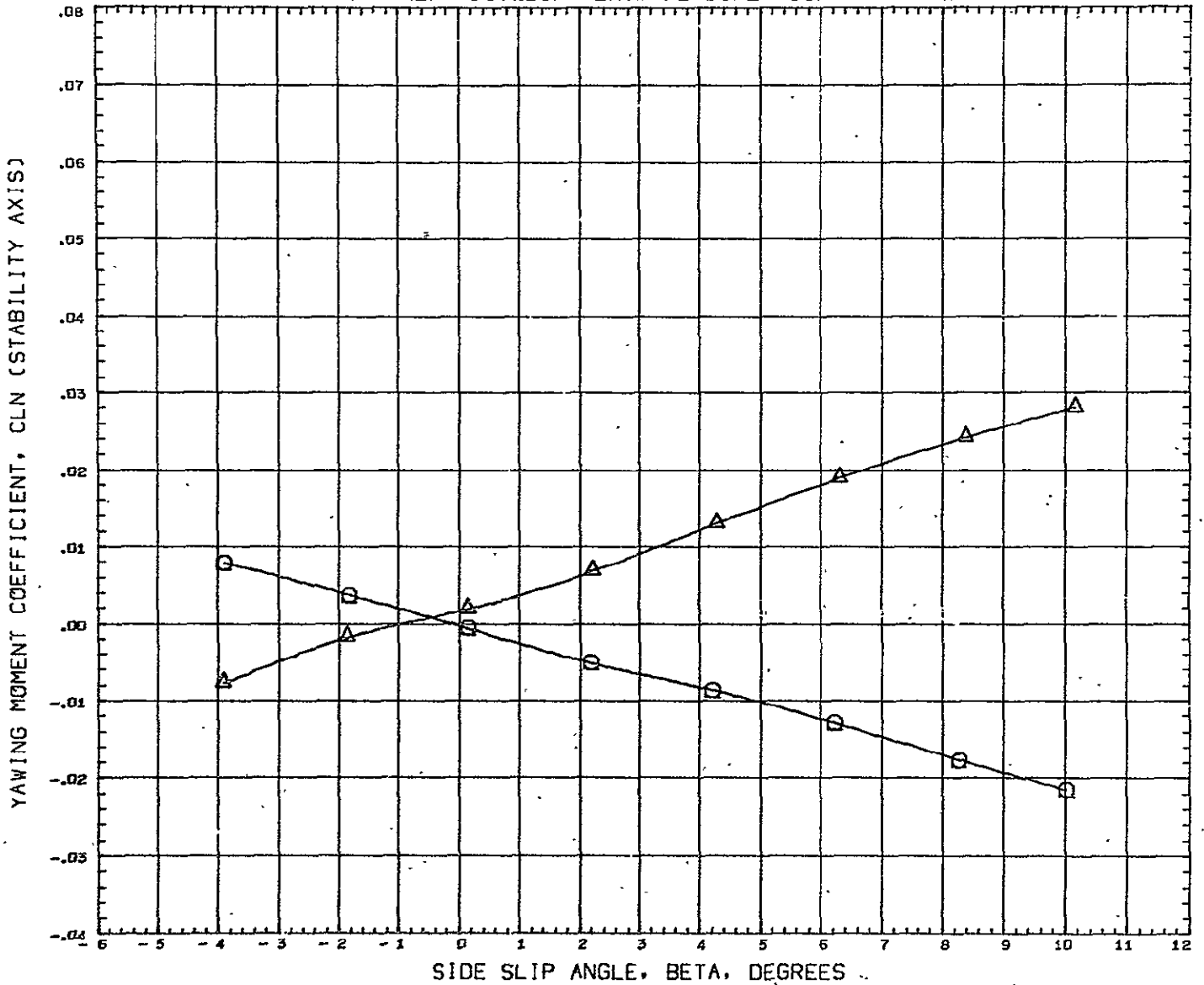
DELTA WING ORBITER-COMPONENT BUILDUP- LATERAL DIRECTIONAL STABILITY



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	RUDDER	RUDFLR	ELVATR	REFERENCE INFORMATION
(R2781D)	MSFC478 NR DELTA ORBITER B5W17E10X	-0.050			0.000	REFS 6084.0040 SQ FT
(R2773D)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	-0.070	0.000	15.000	0.000	REFL 821.2004 INCHES
						REFB 1422.8040 INCHES
						XMRP 1422.5040 INCHES
						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 1.000

DELTA WING ORBITER-COMPONENT BUILDUP- LATERAL DIRECTIONAL STABILITY

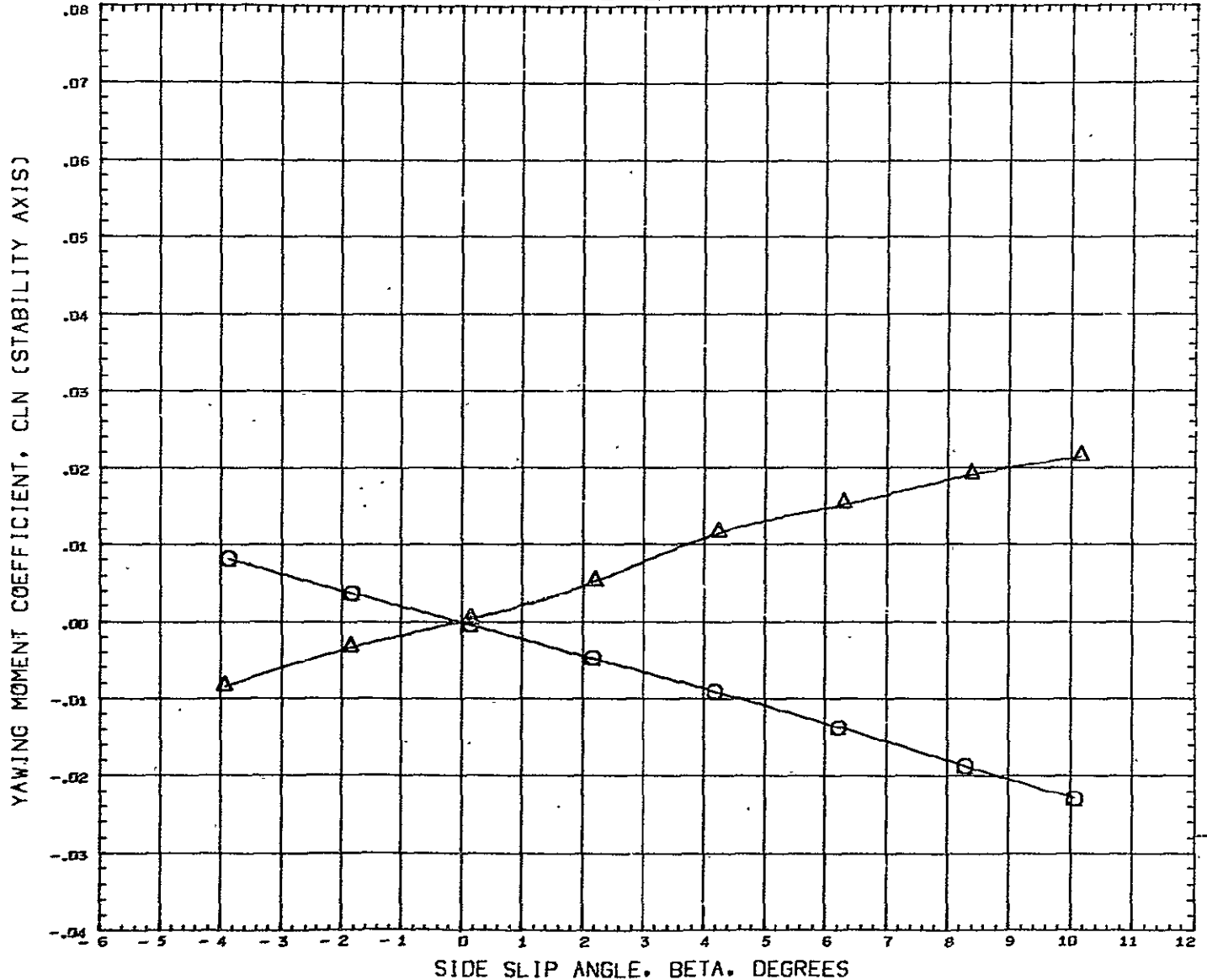


DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (R2781D) ○ MSFC478 NR DELTA ORBITER B5W17E10X
 (R2773D) △ MSFC478 NR DELTA ORBITER B5W17E10V17J2X

ALPHA	RUDDER	RUDFLR	ELVATR	REFERENCE INFORMATION
-0.050			0.000	REFS 6084.0040 SQ FT
-0.070	0.000	15.000	0.000	REFL 821.2004 INCHES
				REFB 1422.8040 INCHES
				XMRP 1422.5040 INCHES
				YMRP 0.0000 INCHES
				ZMRP 130.0004 INCHES
				SCALE 0.0035 SCALE

HACH 1.197

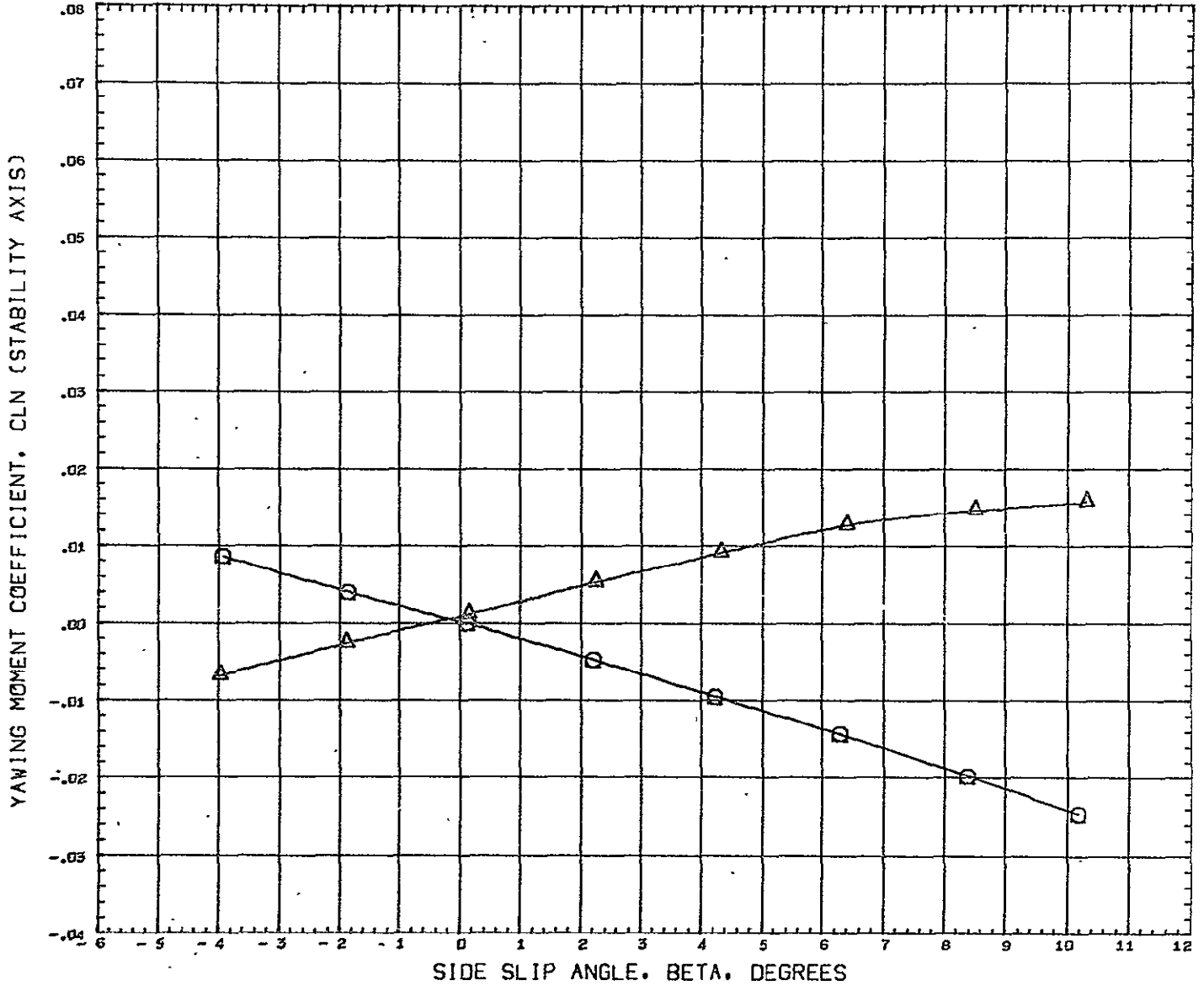
DELTA WING ORBITER-COMPONENT BUILDUP- LATERAL DIRECTIONAL STABILITY



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	RUDDER	RUDFLR	ELVATR	REFERENCE INFORMATION
(R2781D)	MSFC478 NR DELTA ORBITER B5W17E10X	-0.050			0.000	REFS 6084.0040 SQ FT
(R2773D)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	-0.070	0.000	15.000	0.000	REFL 821.2004 INCHES
						REFB 1422.8040 INCHES
						XMRP 1422.5040 INCHES
						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 1.458

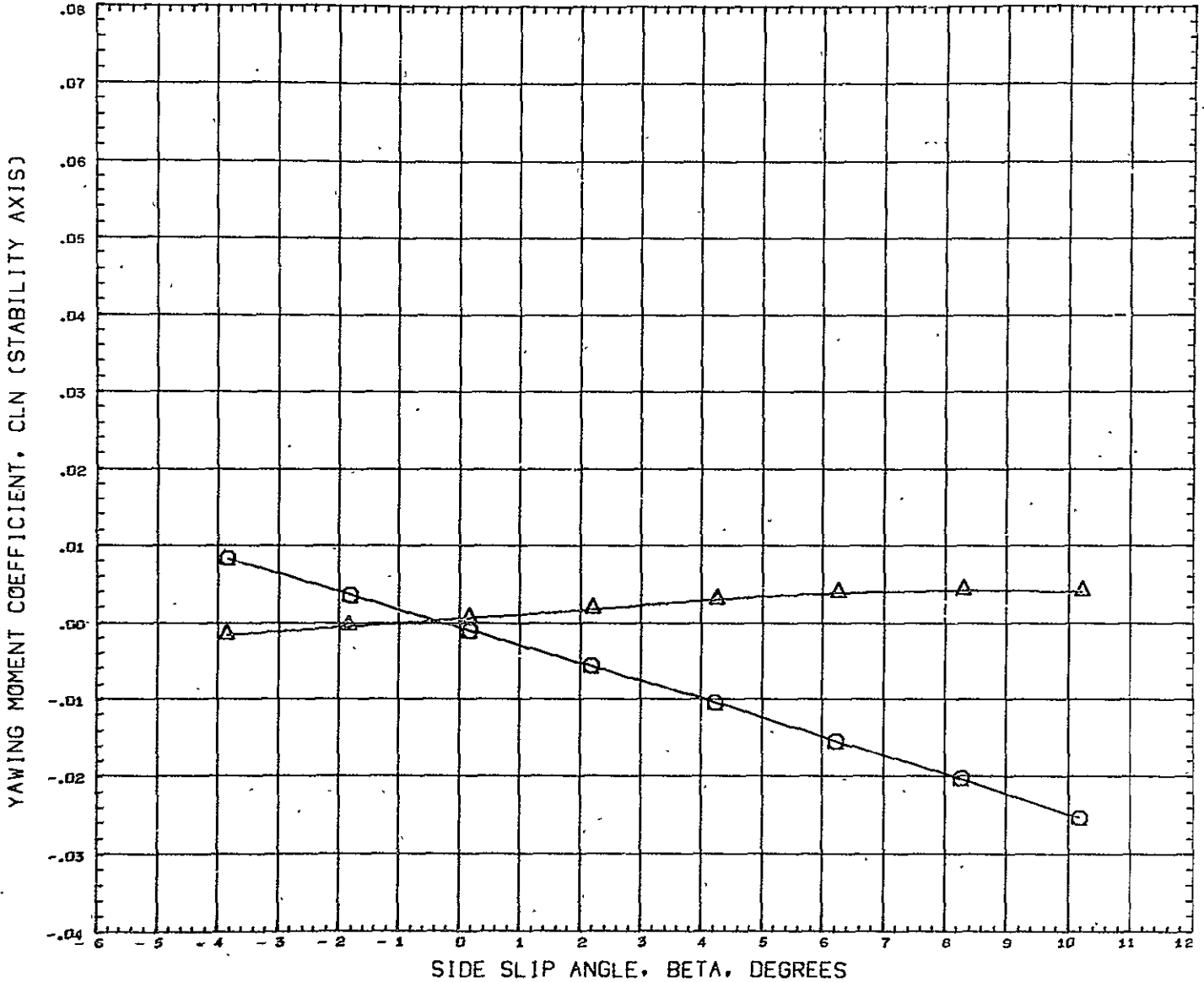
DELTA WING ORBITER-COMPONENT BUILDUP- LATERAL DIRECTIONAL STABILITY



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	RUDDER	RUDFLR	ELVATR	REFERENCE INFORMATION
(R2781D)	MSFC478 NR DELTA ORBITER B5W17E1DX	-0.050			0.000	REFS 6084.0040 SQ FT
(R2773D)	MSFC478 NR DELTA ORBITER B5W17E1DV17J2X	-0.070	0.000	15.000	0.000	REFL 821.2004 INCHES
						REFB 1422.8040 INCHES
						XMRP 1422.5040 INCHES
						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 1.957

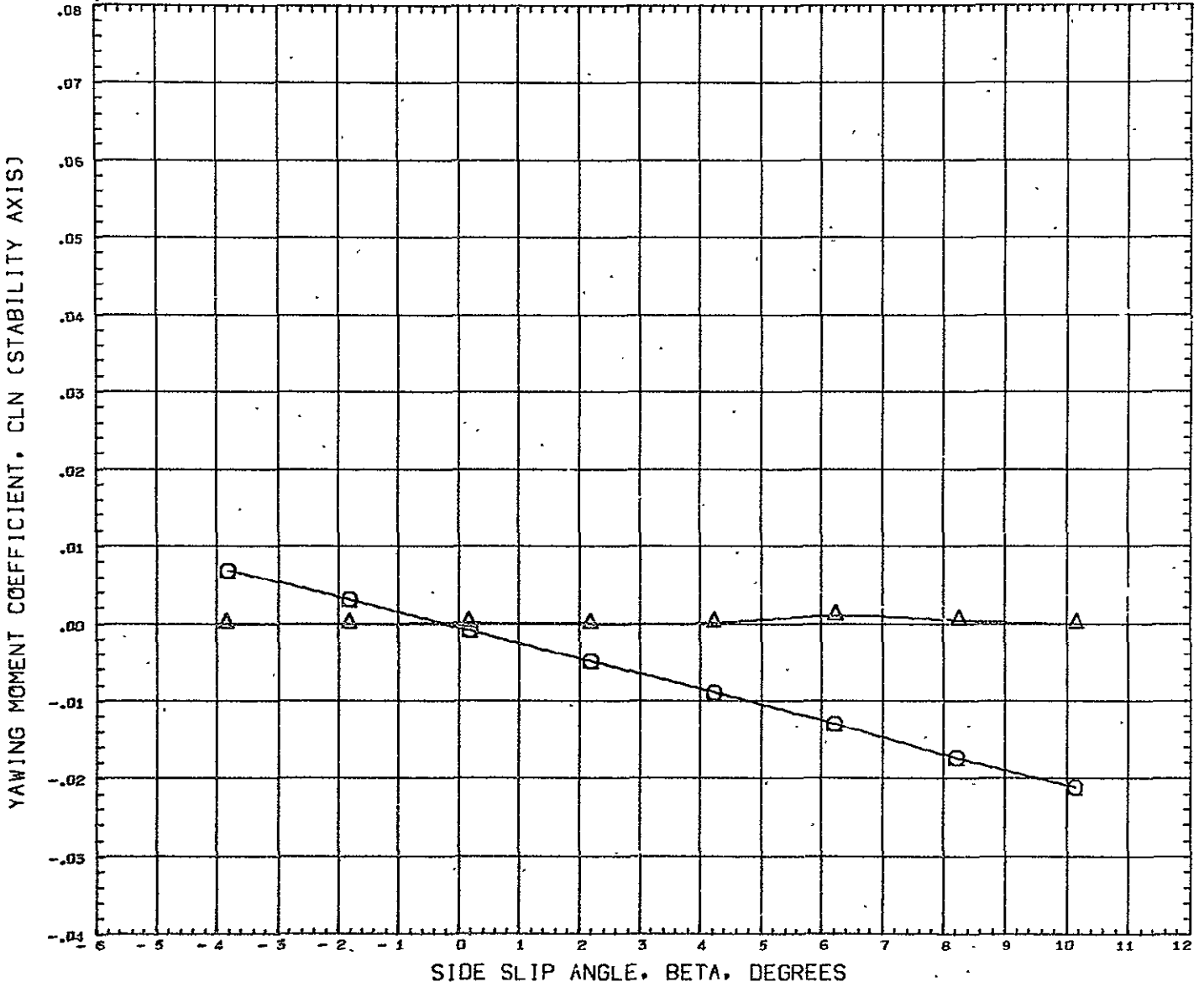
DELTA WING ORBITER-COMPONENT BUILDUP- LATERAL DIRECTIONAL STABILITY



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	RUDDER	RUDFLR	ELVATR	REFERENCE INFORMATION
(R2781D)	MSFC478 NR DELTA ORBITER B5W17E1DX	-0.050			0.000	REFS 6084.0040 SQ FT
(R2773D)	MSFC478 NR DELTA ORBITER B5W17E1DV17J2X	-0.070	0.000	15.000	0.000	REFL 821.2004 INCHES
						REFB 1422.8040 INCHES
						XNRF 1422.5040 INCHES
						YNRF 0.0000 INCHES
						ZNRF 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 2.990

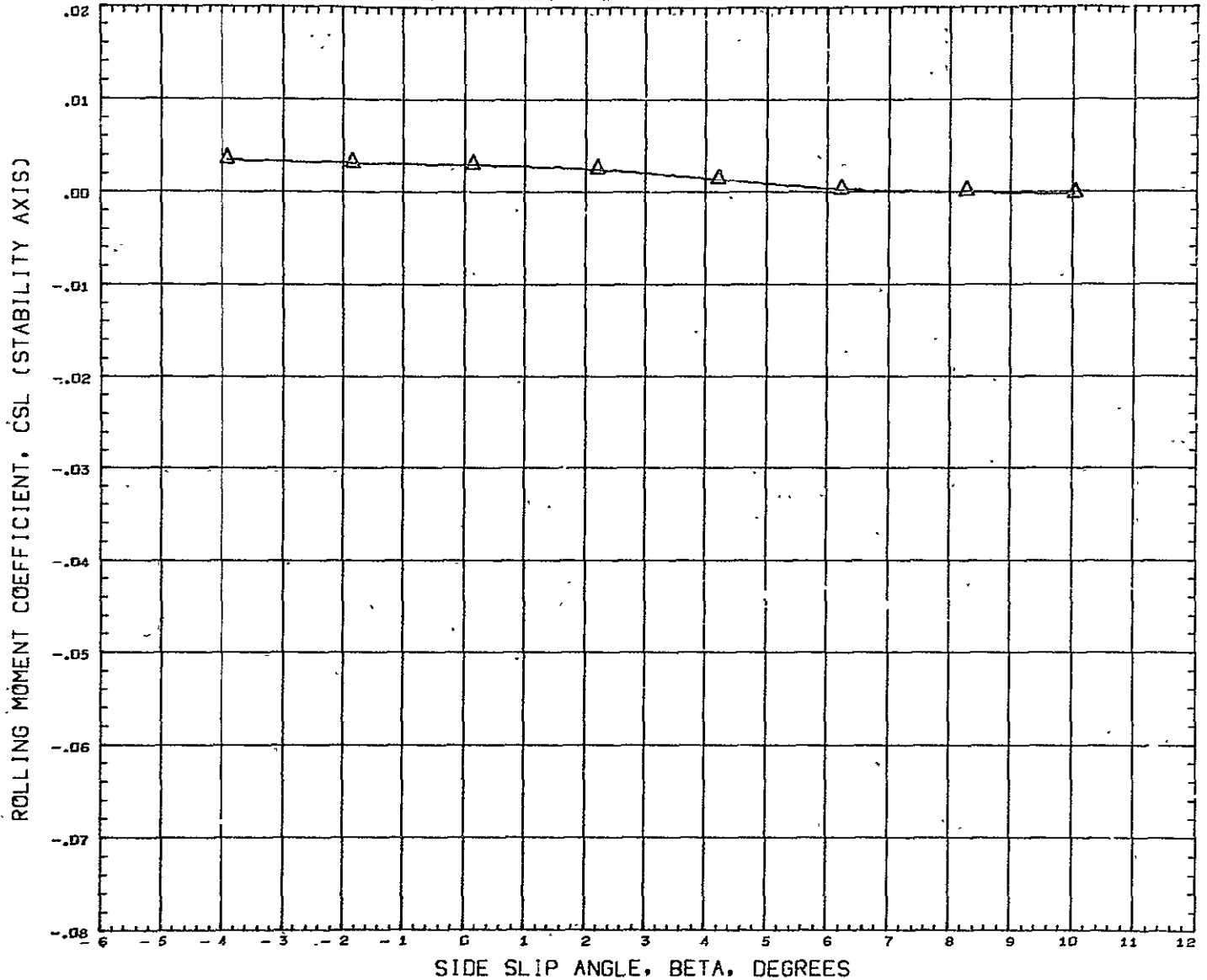
DELTA WING ORBITER-COMPONENT BUILDUP- LATERAL DIRECTIONAL STABILITY



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	RUDDER	RUDFLR	ELVATR	REFERENCE INFORMATION
(R2781D)	MSFC478 NR DELTA ORBITER B5W17E1GX	-0.050			0.000	REFS 6084.0040 SQ FT
(R2773D)	MSFC478 NR DELTA ORBITER B5W17E1DV17J2X	-0.070	0.000	15.000	0.000	REFL 821.2004 INCHES
						REFB 1422.8040 INCHES
						XMRP 1422.5040 INCHES
						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 4.959

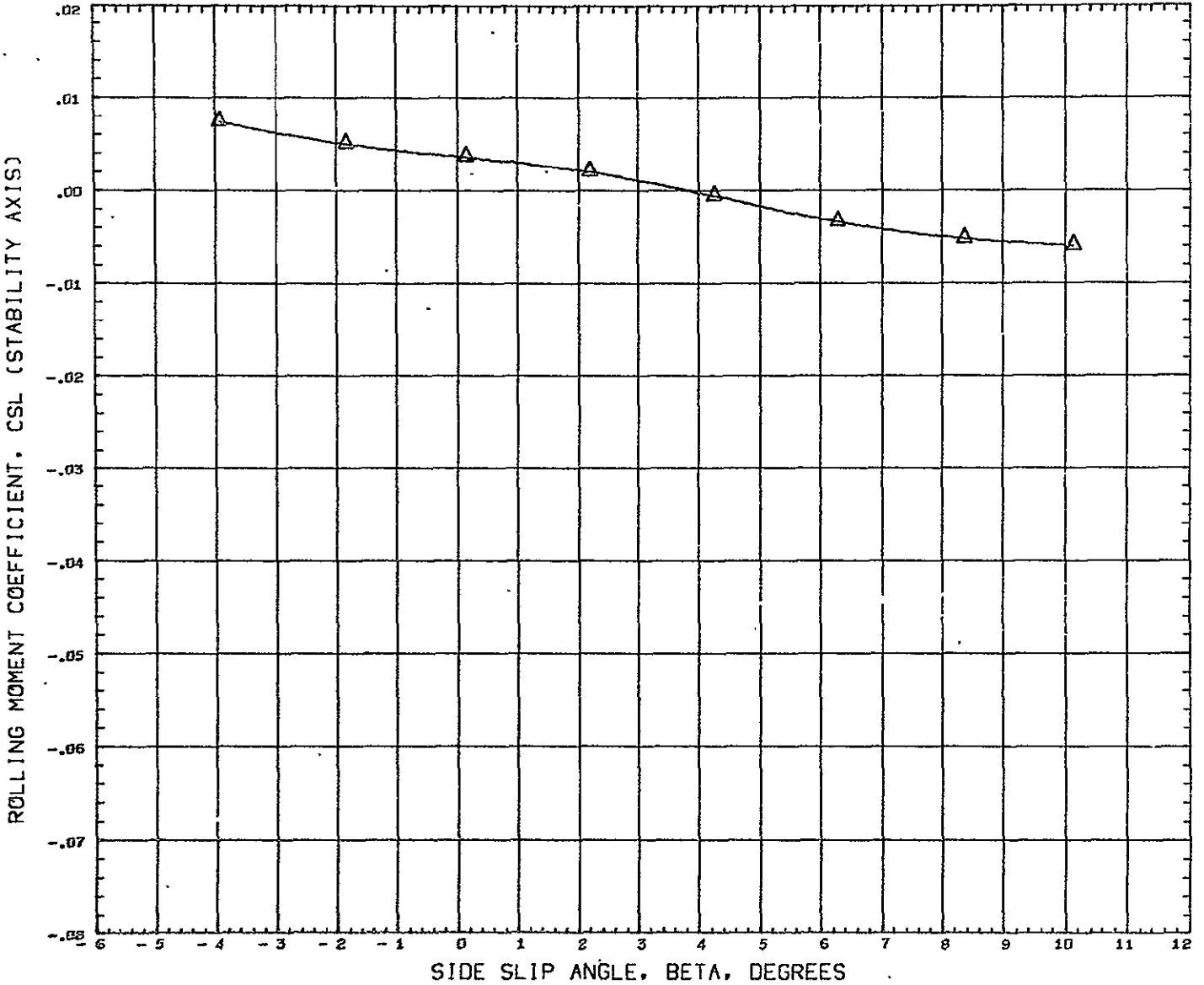
DELTA WING ORBITER-COMPONENT BUILDUP- LATERAL DIRECTIONAL STABILITY



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	RUDDER	RUDFLR	ELVATR	REFERENCE INFORMATION
(R2781D)	MSFC478 NR DELTA ORBITER B5W17E1DX	-0.050			0.000	REFS 6084.0040 SQ FT
(R2773D)	MSFC478 NR DELTA ORBITER B5W17E1DV17J2X	-0.070	0.000	15.000	0.000	REFL 821.2004 INCHES
						REFB 1422.8040 INCHES
						XMRP 1422.5040 INCHES
						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE .0.0035 SCALE

MACH 9.603

DELTA WING ORBITER-COMPONENT BUILDUP- LATERAL DIRECTIONAL STABILITY



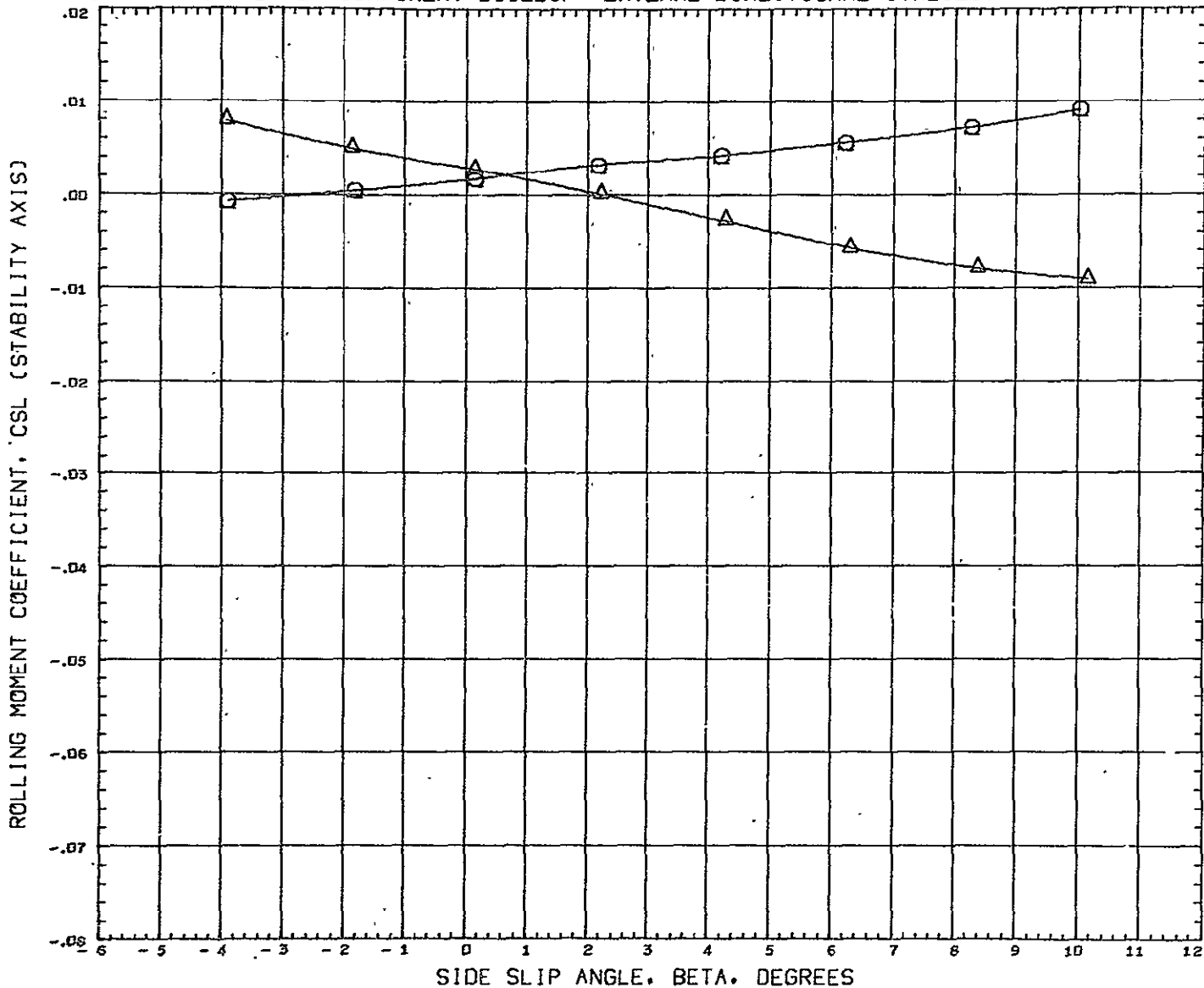
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(R2773D) △	MSFC478 NR DELTA ORBITER B5W17E10V17J2X

ALPHA	RUDDER	RUDFLR	ELVATR
-0.050			0.000
-0.070	0.000	15.000	0.000

REFERENCE INFORMATION		
REFS	6984.0040	SQ FT
REFL	821.2000	INCHES
REFB	1422.3040	INCHES
XMRP	1422.5040	INCHES
YMRP	0.0000	INCHES
ZMRP	130.0000	INCHES
SCALE	0.0035	SCALE

HACH 1.000

DELTA WING ORBITER-COMPONENT BUILDUP- LATERAL DIRECTIONAL STABILITY



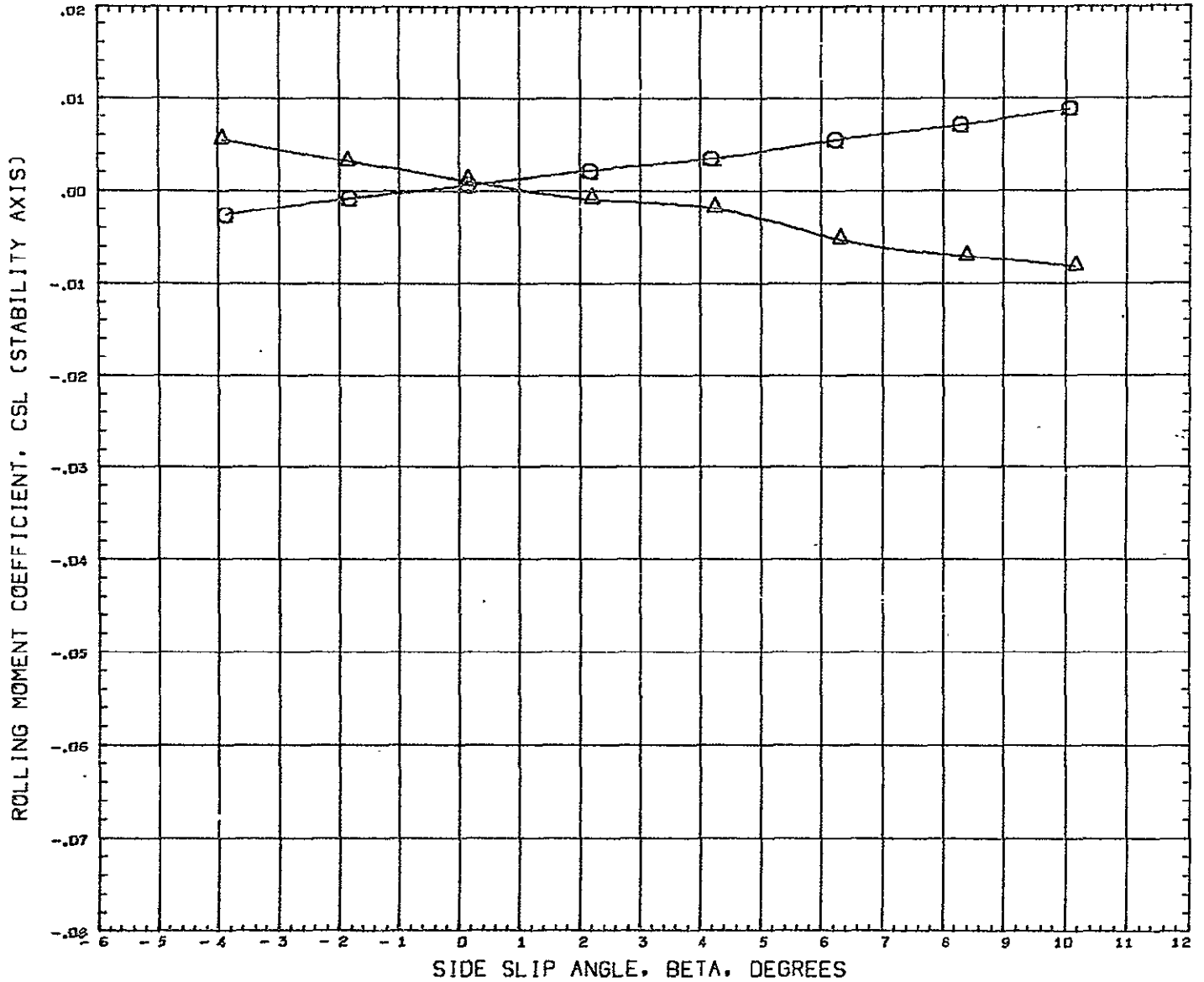
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(R2781D)	MSFC478 NR DELTA ORBITER B5W17E10X
(R2773D)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X

ALPHA	RUDDER	RUDFLR	ELVATR
-0.050	0.000	15.000	0.000
-0.070	0.000	15.000	0.000

REFERENCE INFORMATION	
REFS	6084.0040 SQ FT
REFL	821.2004 INCHES
REFB	1422.8040 INCHES
XMRP	1422.5040 INCHES
YMRP	0.0000 INCHES
ZMRP	130.0004 INCHES
SCALE	0.0035 SCALE

MACH 1.197

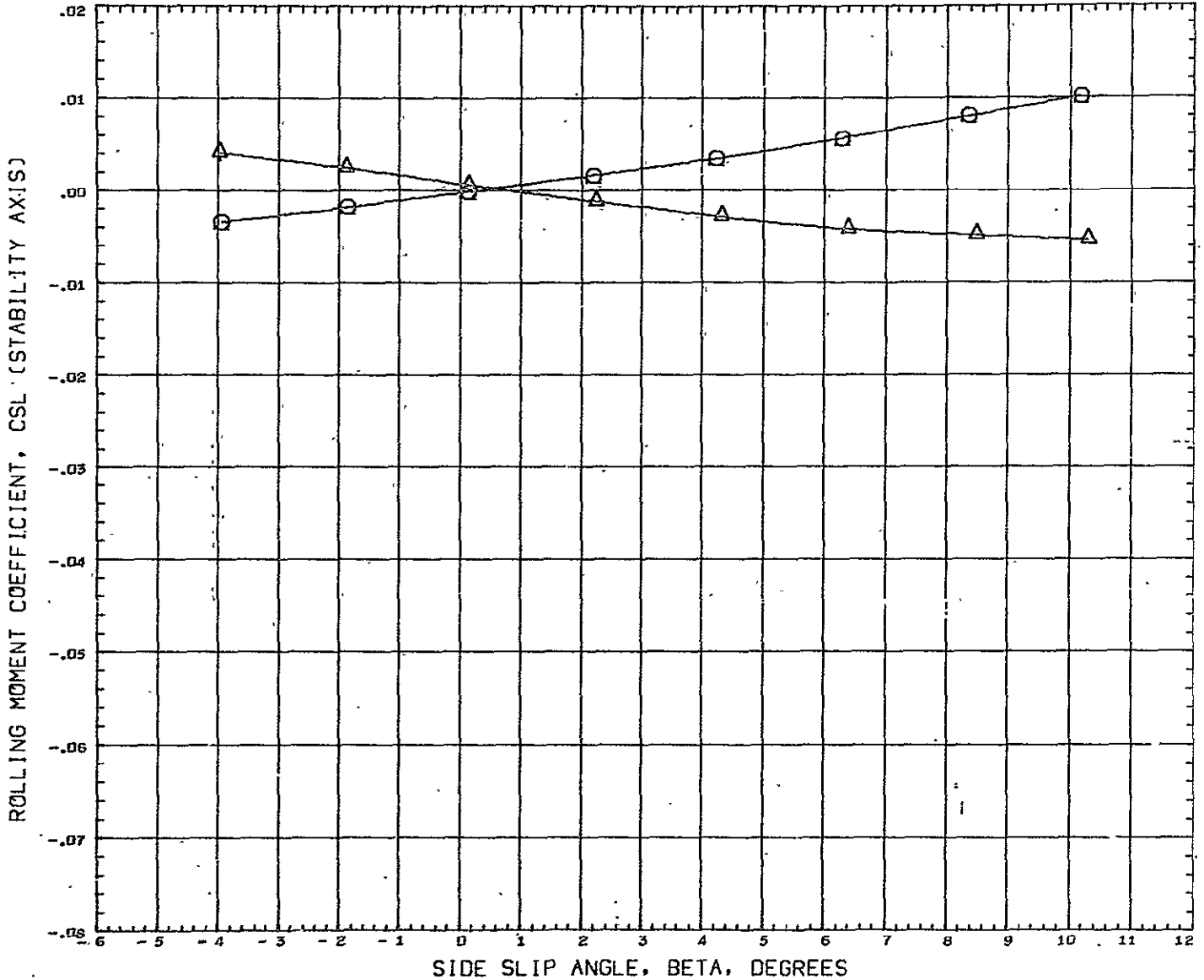
DELTA WING ORBITER-COMPONENT BUILDUP- LATERAL DIRECTIONAL STABILITY



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	RUDDER	RUDFLR	ELVATR	REFERENCE INFORMATION
(R2761D)	MSFC478 NR DELTA ORBITER B5W17E10X	-0.050			0.000	REFS 6084.0040 SQ FT
(R2773D)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	-0.070	0.000	15.000	0.000	REFL 821.2004 INCHES
						REFB 1422.3040 INCHES
						XMRP 1422.5040 INCHES
						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 1.458

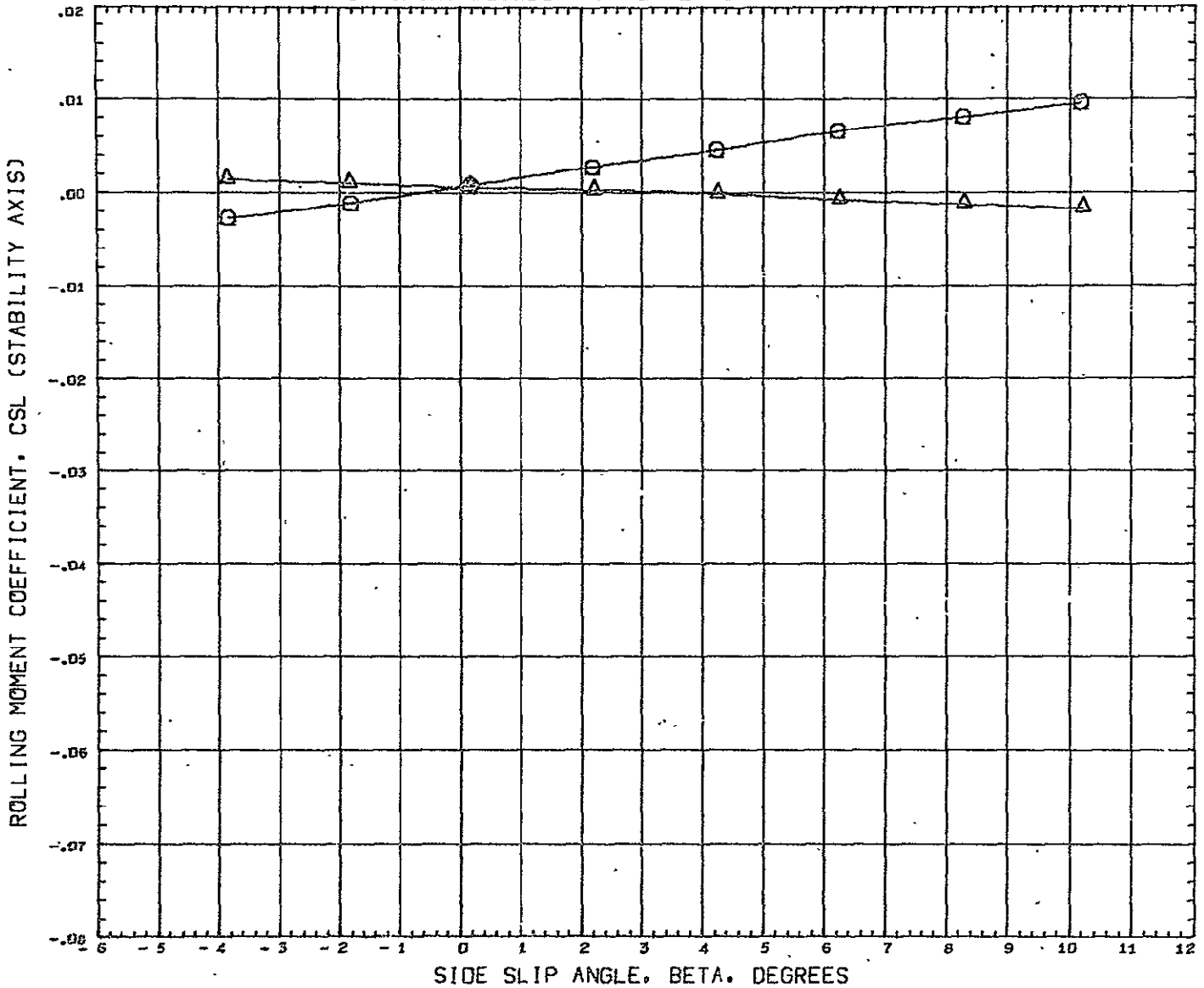
DELTA WING ORBITER-COMPONENT BUILDUP- LATERAL DIRECTIONAL STABILITY



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	RUDDER	RUDFLR	ELVATR	REFERENCE INFORMATION
(R2781D)	MSFC478 NR DELTA ORBITER B5W17E10X	-0.050			0.000	REFS 6084.0040 SQ FT
(R2773D)	MSFC478 NR DELTA ORBITER B5W17E1DV17J2X	-0.070	0.000	15.000	0.000	REFL 821.2004 INCHES
						REFB 1422.8040 INCHES
						XMRP 1422.5540 INCHES
						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 1.057

DELTA WING ORBITER-COMPONENT BUILDUP- LATERAL DIRECTIONAL STABILITY



DATA SET SYMBOL CONFIGURATION DESCRIPTION

(R2781D) ○ HSFC478 NR DELTA ORBITER B5W17E1DX

(R2773D) △ HSFC478 NR DELTA ORBITER B5W17E1DV17J2X

ALPHA RUDDER RUDFLR ELVATR

-0.050 0.000 15.000 0.000

-0.070 0.000 15.000 0.000

REFERENCE INFORMATION

REFS 6084.0040 SQ FT

REFL 821.2004 INCHES

REFB 1422.8040 INCHES

XMRP 1422.5040 INCHES

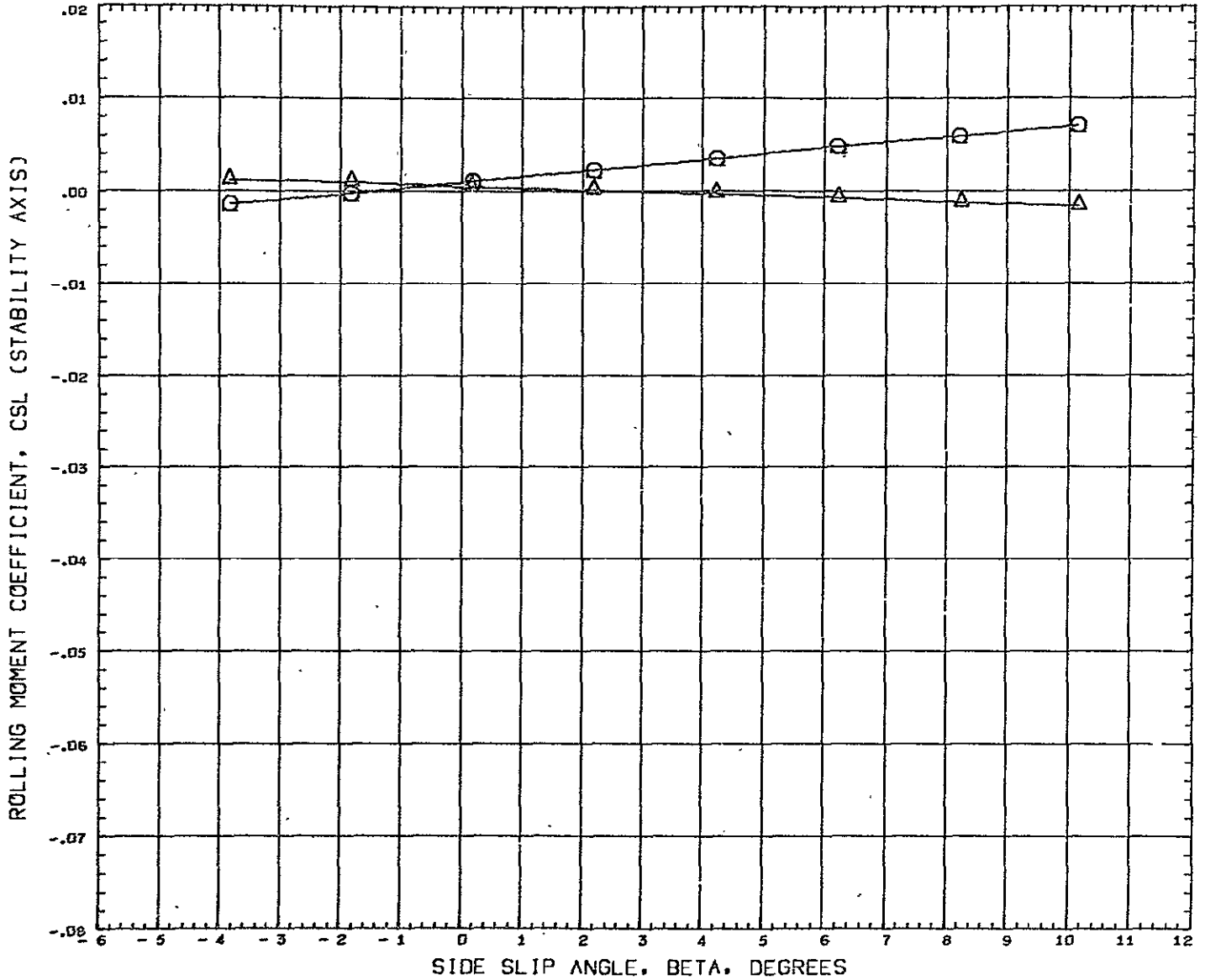
YMRP 0.0000 INCHES

ZMRP 130.0004 INCHES

SCALE 0.0035 SCALE

MACH 2.990

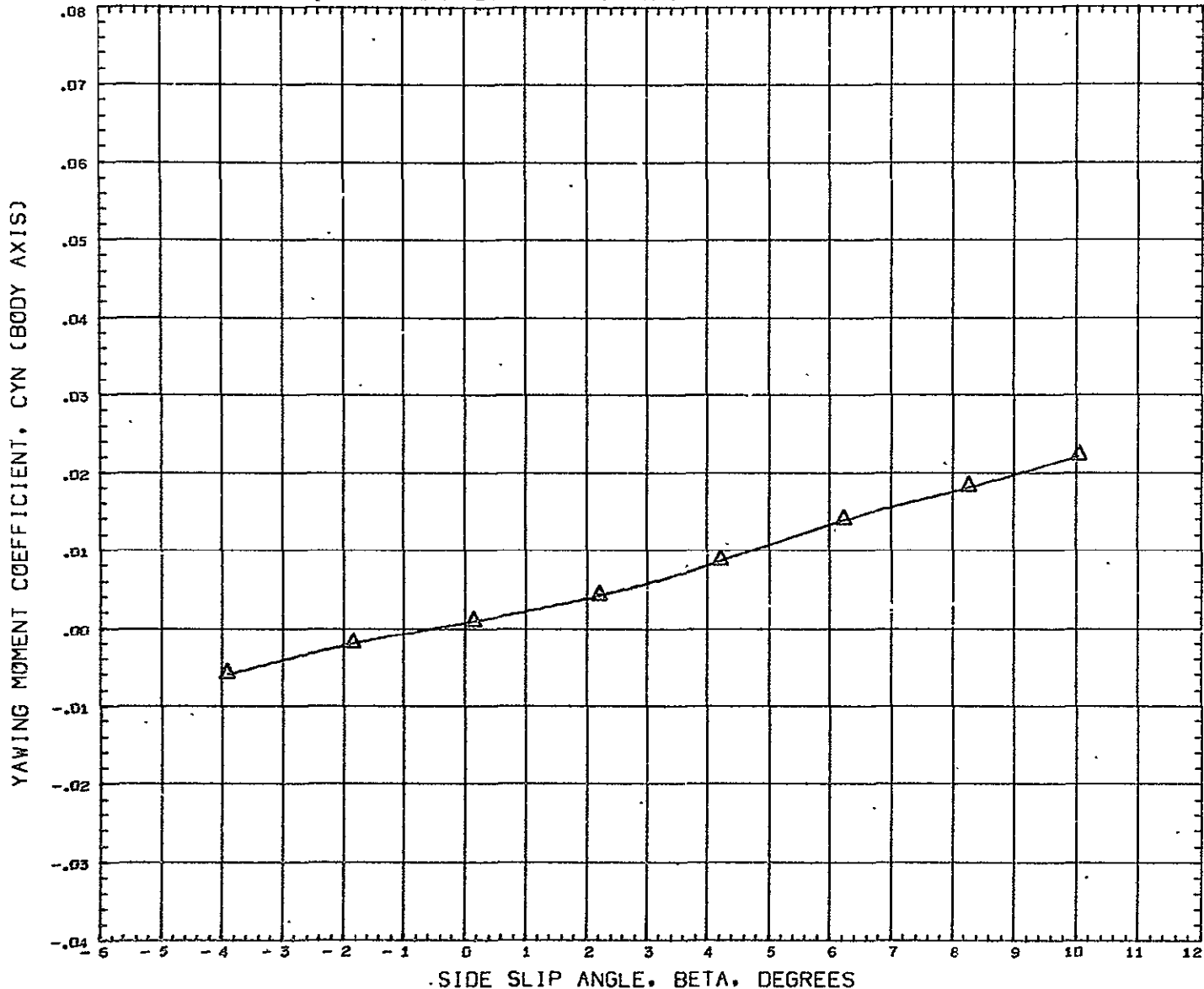
DELTA WING ORBITER-COMPONENT BUILDUP- LATERAL DIRECTIONAL STABILITY



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	RUDDER	RUDFLR	ELVATR	REFERENCE INFORMATION
(R2781D)	MSFC478 NR DELTA ORBITER B5W17E10X	-0.050			0.000	REFS 6084.0040 SQ FT
(R2773D)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	-0.070	0.000	15.000	0.000	REFL 821.2004 INCHES
						REFB 1422.8040 INCHES
						XMRP 1422.5040 INCHES
						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 4.959

DELTA WING ORBITER-COMPONENT BUILDUP- LATERAL DIRECTIONAL STABILITY



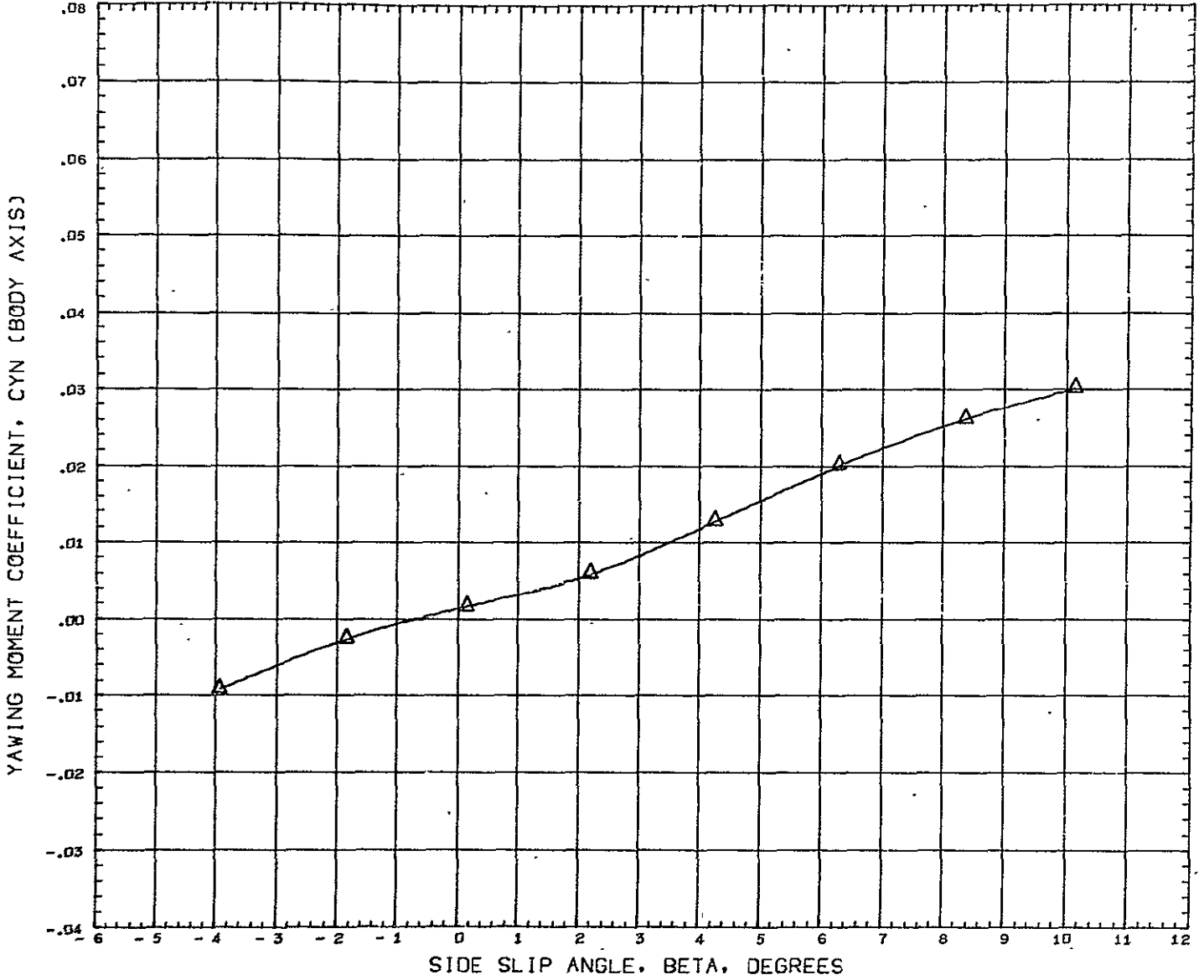
DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (B2761D) \bigcirc MSFC478 NR DELTA ORBITER B5W17E10X
 (B2773D) \triangle MSFC478 NR DELTA ORBITER B5W17E10V17J2X

ALPHA RUDDER RUDFLR ELVATR
 -0.050 0.000 15.000 0.000
 -0.070 0.000 15.000 0.000

REFERENCE INFORMATION
 REFS 6084.0040 SQ FT
 REFL 821.2074 INCHES
 REFB 1422.8040 INCHES
 XMRP 1422.5040 INCHES
 YMRP 0.0000 INCHES
 ZMRP 130.0004 INCHES
 SCALE 0.0035 SCALE

MACH 0.603

DELTA WING ORBITER-COMPONENT BUILDUP- LATERAL DIRECTIONAL STABILITY



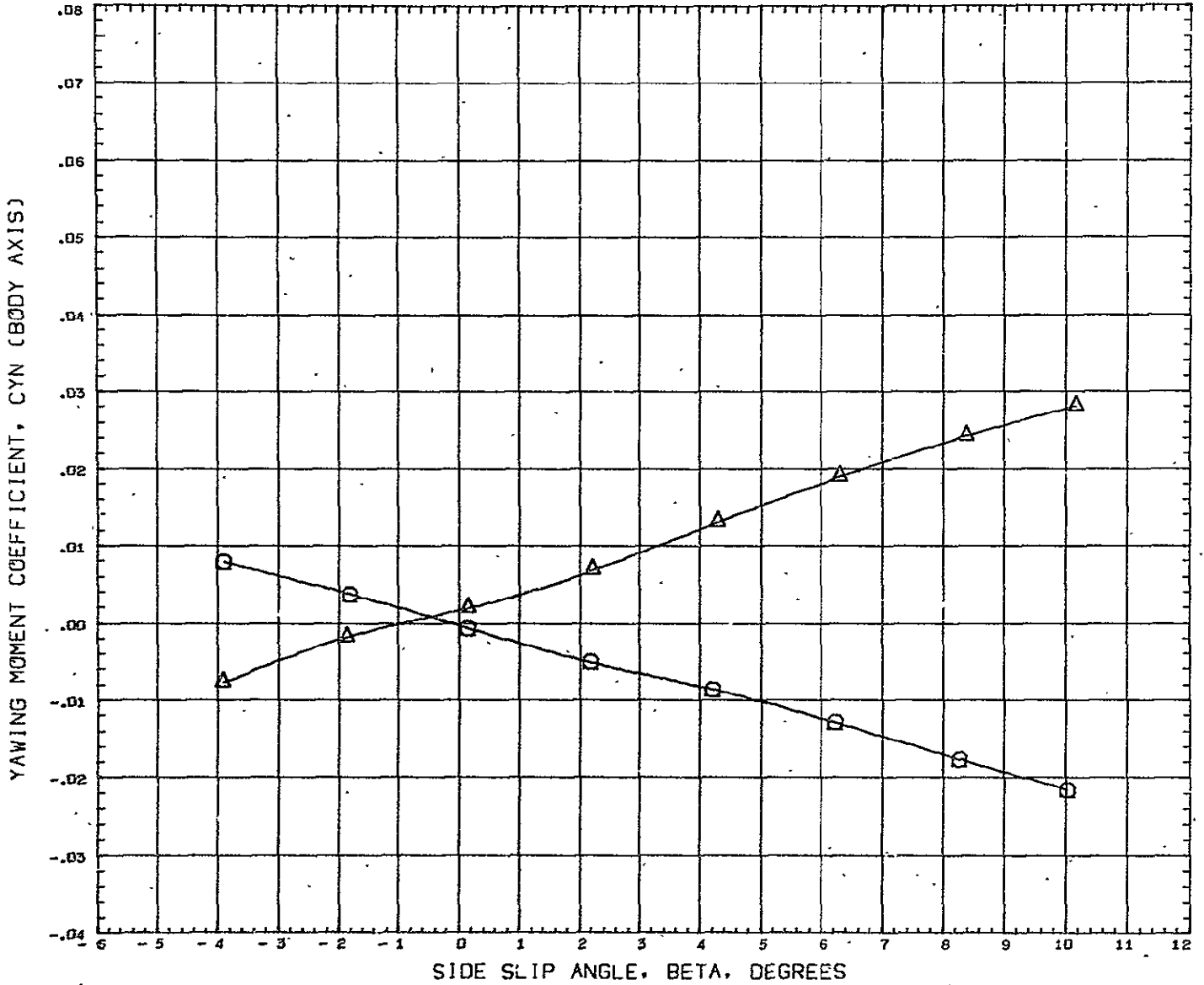
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 (B2773D) Δ MSFC478 NR DELTA ORBITER B5W17E1DV17J2_X

ALPHA RUDDER PUDFLR ELVATR
 -0.050 0.000 15.000 0.000
 -0.070 0.000 15.000 0.000

REFERENCE INFORMATION
 REFS 6984.0040 SQ FT
 REFL 821.2004 INCHES
 REFD 1422.8040 INCHES
 XMRP 1422.5040 INCHES
 YMRP 0.0000 INCHES
 ZMRP 130.0004 INCHES
 SCALE 0.0035 SCALE

MACH 1.000

DELTA WING ORBITER-COMPONENT BUILDUP- LATERAL DIRECTIONAL STABILITY



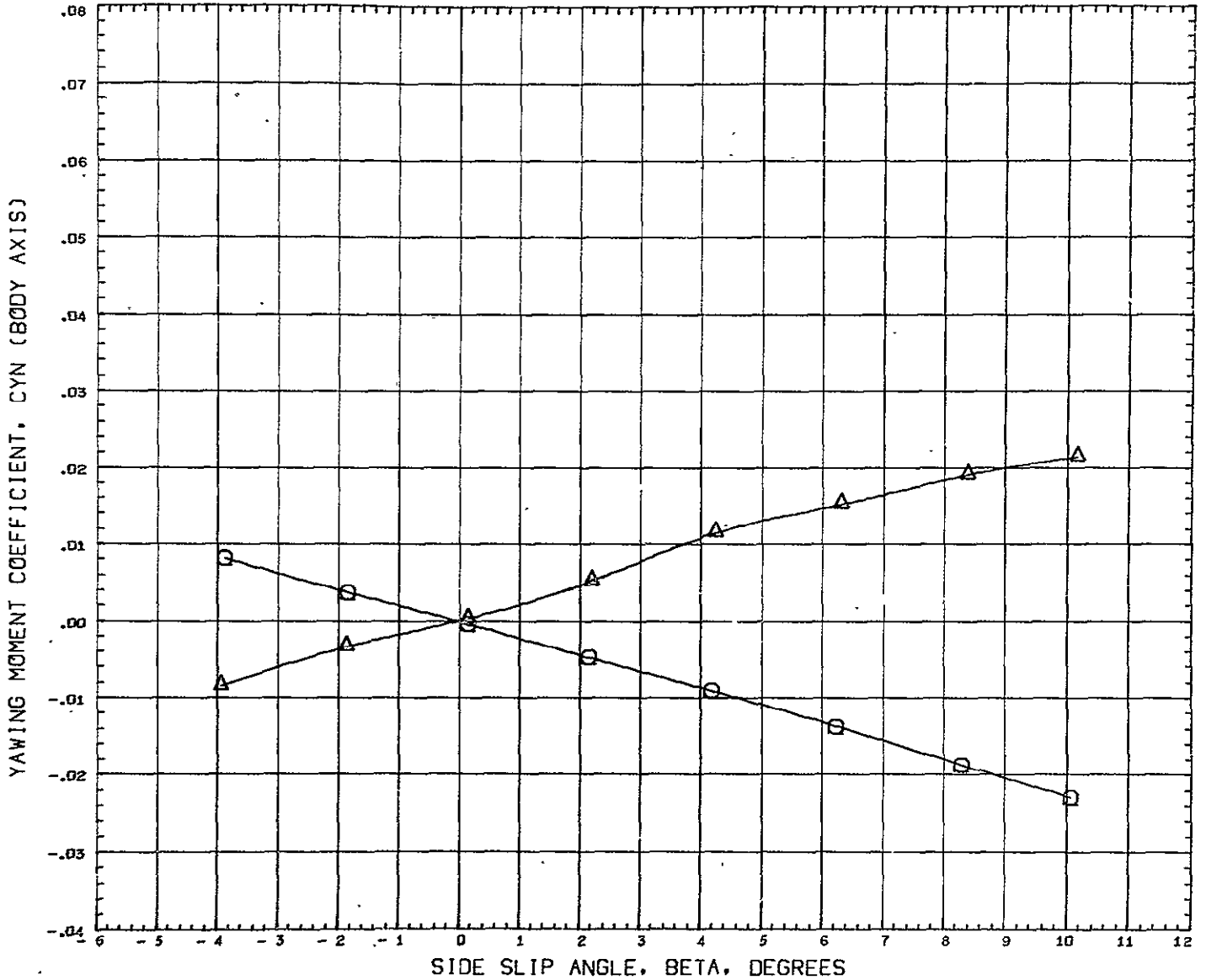
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(B2781D)	MSFC478 NR DELTA ORBITER B5W17E10X
(B2773D)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X

ALPHA	RUDDER	RUDFLR	ELVATR
-0.050			0.000
-0.070	0.000	15.000	0.000

REFERENCE INFORMATION		
REFS	6084.0000	SQ FT
REFL	821.2004	INCHES
REFB	1422.8040	INCHES
XMRP	1422.5040	INCHES
YMRP	0.0000	INCHES
ZMRP	130.0004	INCHES
SCALE	0.0035	SCALE

HACH 1.197

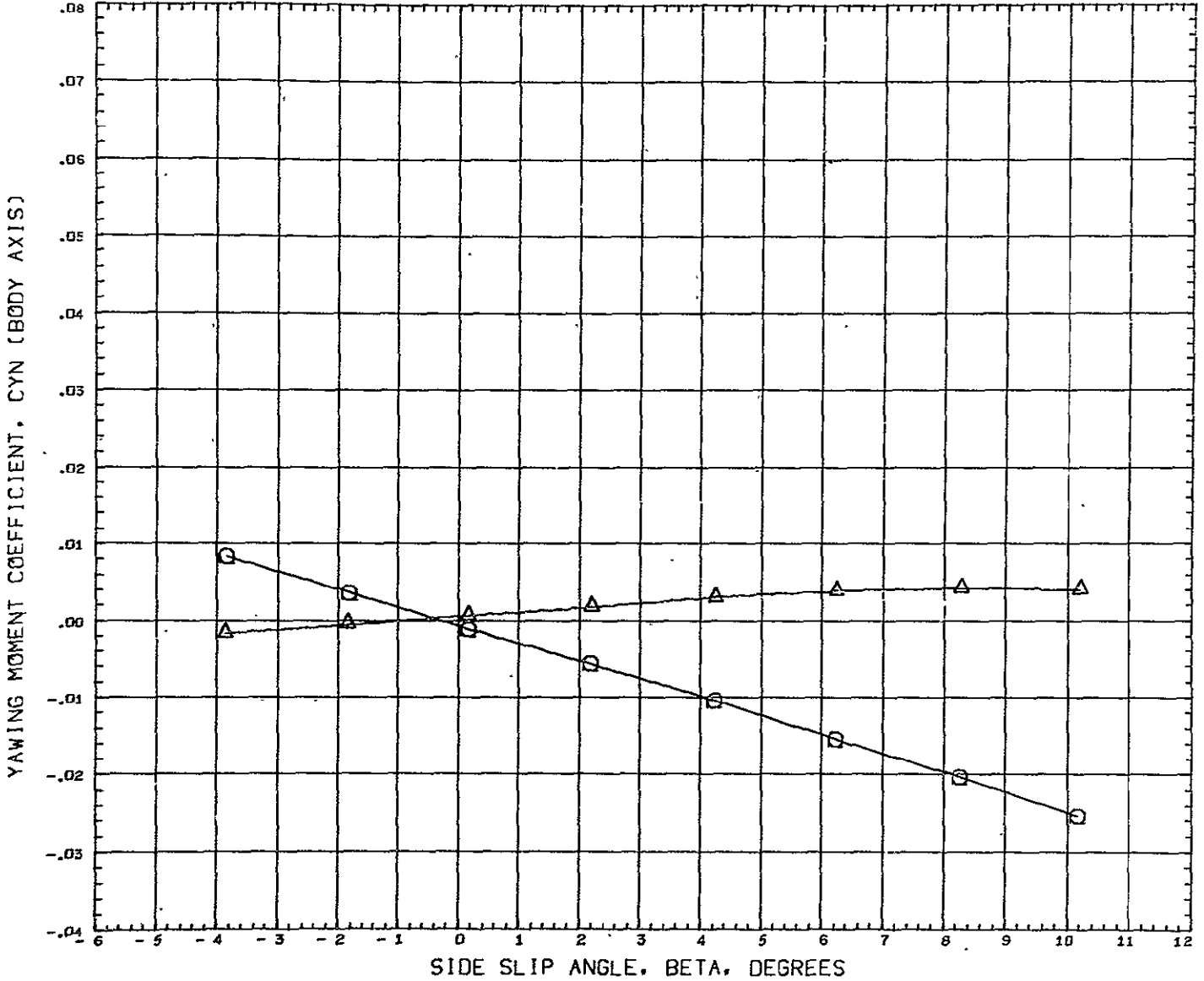
DELTA WING ORBITER-COMPONENT BUILDUP- LATERAL DIRECTIONAL STABILITY



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	RUDDER	RUDFLR	ELVATR	REFERENCE INFORMATION
(B2781D)	MSFC478 NR DELTA ORBITER B5W17E10X	-0.050			0.000	REFS 6084.0040 SQ FT
(B2773D)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	-0.070	0.000	15.000	0.000	REFL 821.2004 INCHES
						REFB 1422.9040 INCHES
						XMRP 1422.5040 INCHES
						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 1.458

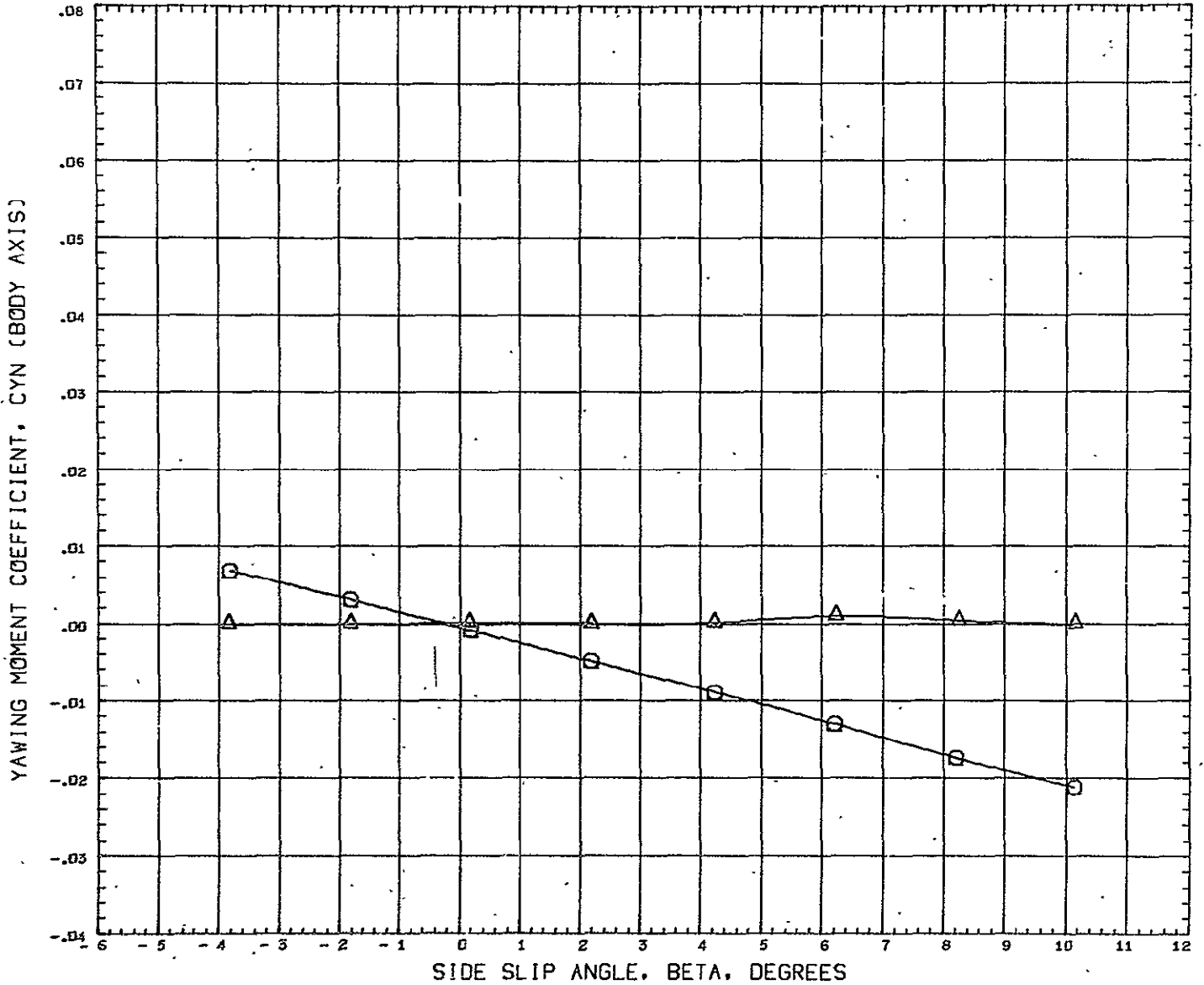
DELTA WING ORBITER-COMPONENT BUILDUP- LATERAL DIRECTIONAL STABILITY



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	RUDDER	RUDFLR	ELVATR	REFERENCE INFORMATION
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(22773D) A	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	-0.070	0.000	15.000	0.000	REFL 821.2004 INCHES
						REFB 1422.8040 INCHES
						XMRP 1422.5040 INCHES
						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

PACH 2.990

DELTA WING ORBITER-COMPONENT BUILDUP- LATERAL DIRECTIONAL STABILITY



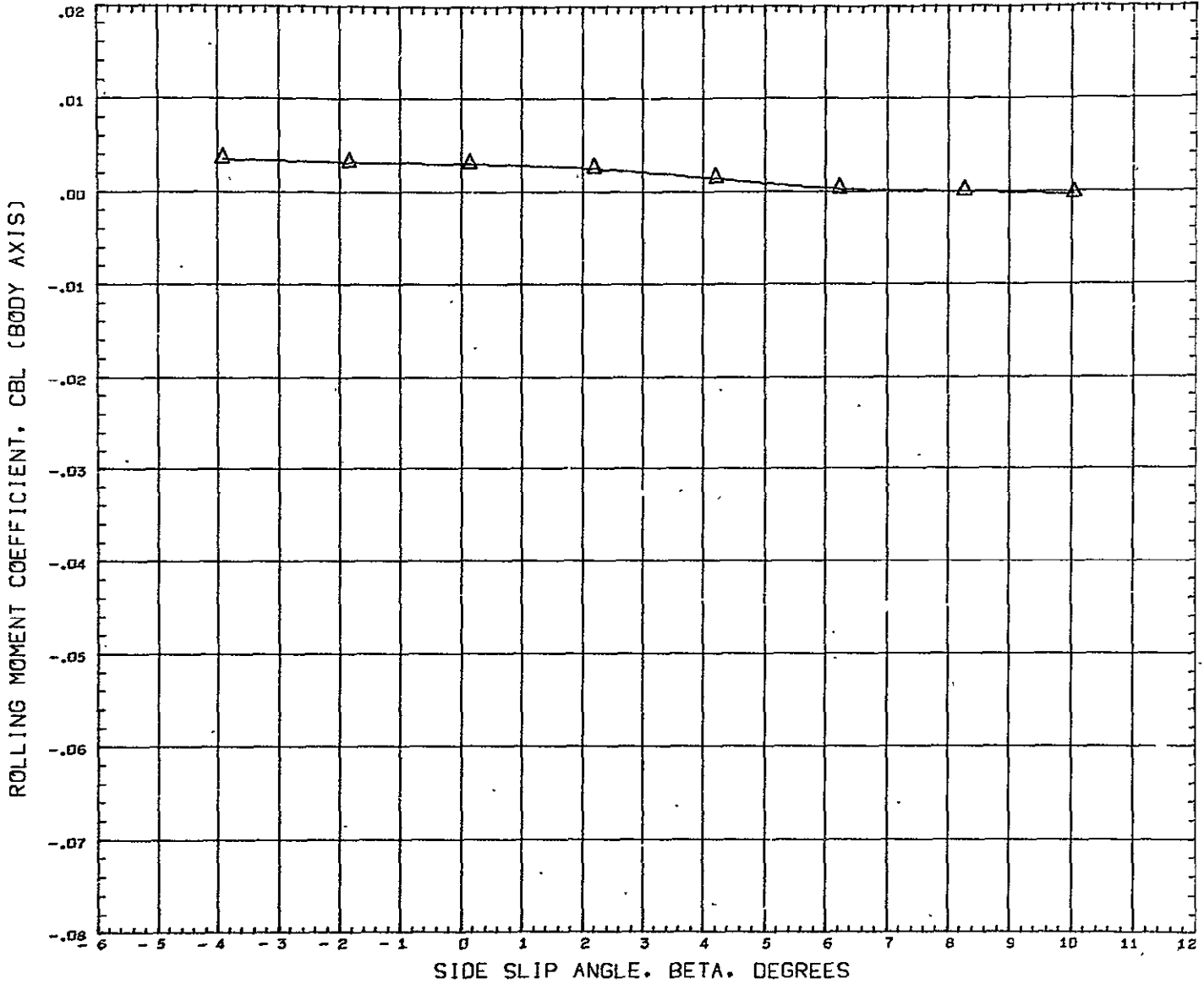
DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(B2761D) \odot	MSFC478 NR DELTA ORBITER B5W17E10X
(B2773D) \triangle	MSFC478 NR DELTA ORBITER B5W17E10V17J2X

ALPHA	RUDDER	PUDFLR	ELVATR
-0.050			0.000
-0.070	0.000	15.000	0.000

REFERENCE INFORMATION		
REFS	6084.0040	SQ FT
REFL	821.2004	INCHES
REFB	1422.8040	INCHES
XMRP	1422.5040	INCHES
YNRP	0.0000	INCHES
ZMRP	130.0004	INCHES
SCALE	0.0035	SCALE

MACH 4.959

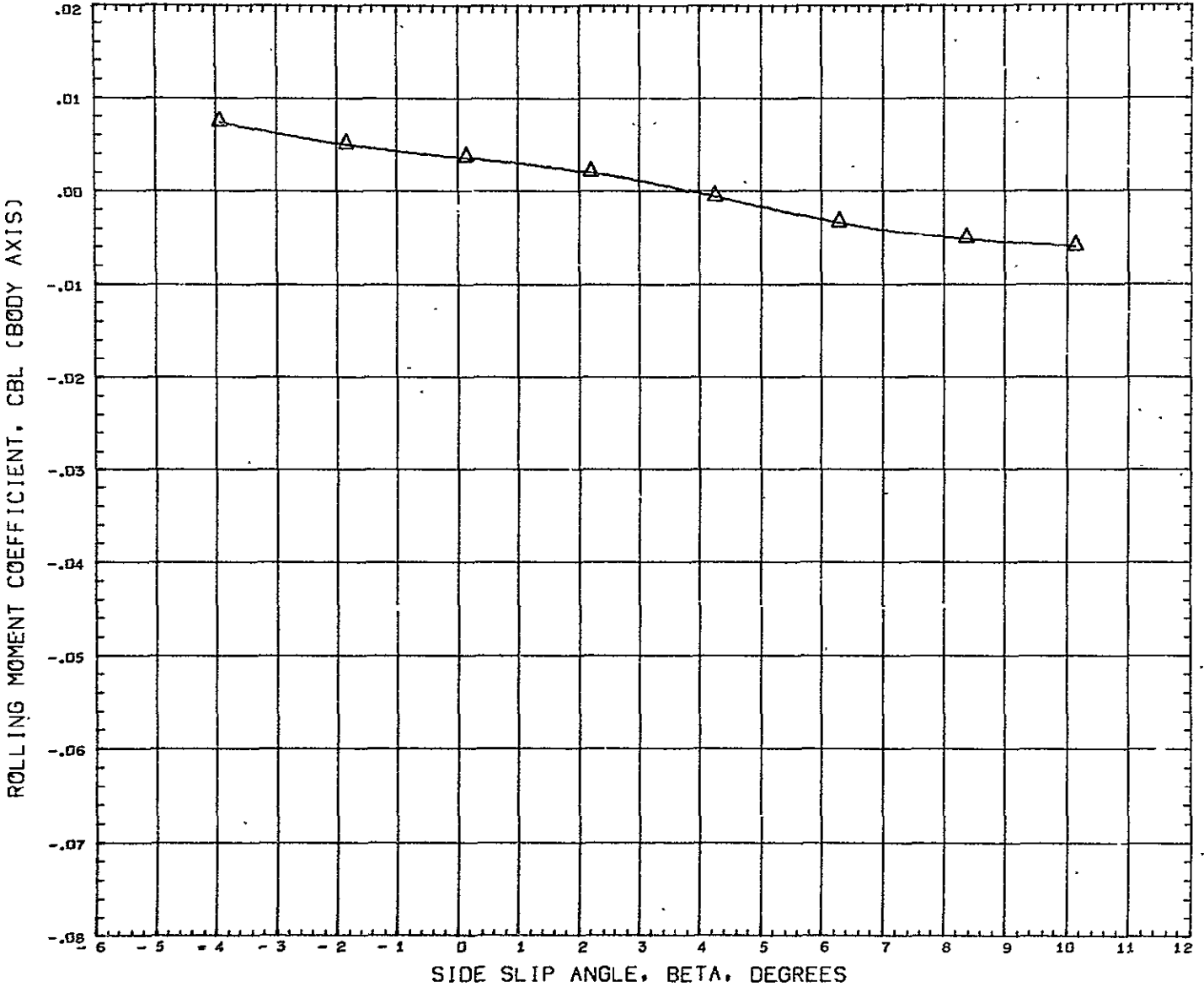
DELTA WING ORBITER-COMPONENT BUILDUP- LATERAL DIRECTIONAL STABILITY



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	RUDDER	RUDFLR	ELVATR	REFERENCE INFORMATION
(B2761D)	HSFC478 NR DELTA ORBITER B5W17E10X	-0.050			0.000	REFS 6084.0040 SQ FT
(B2773D)	HSFC478 NR DELTA ORBITER B5W17E10V17J2X	-0.070	0.000	15.000	0.000	REFL 821.2004 INCHES
						REFS 1422.8040 INCHES
						XMRP 1422.5040 INCHES
						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

PACH 0.603

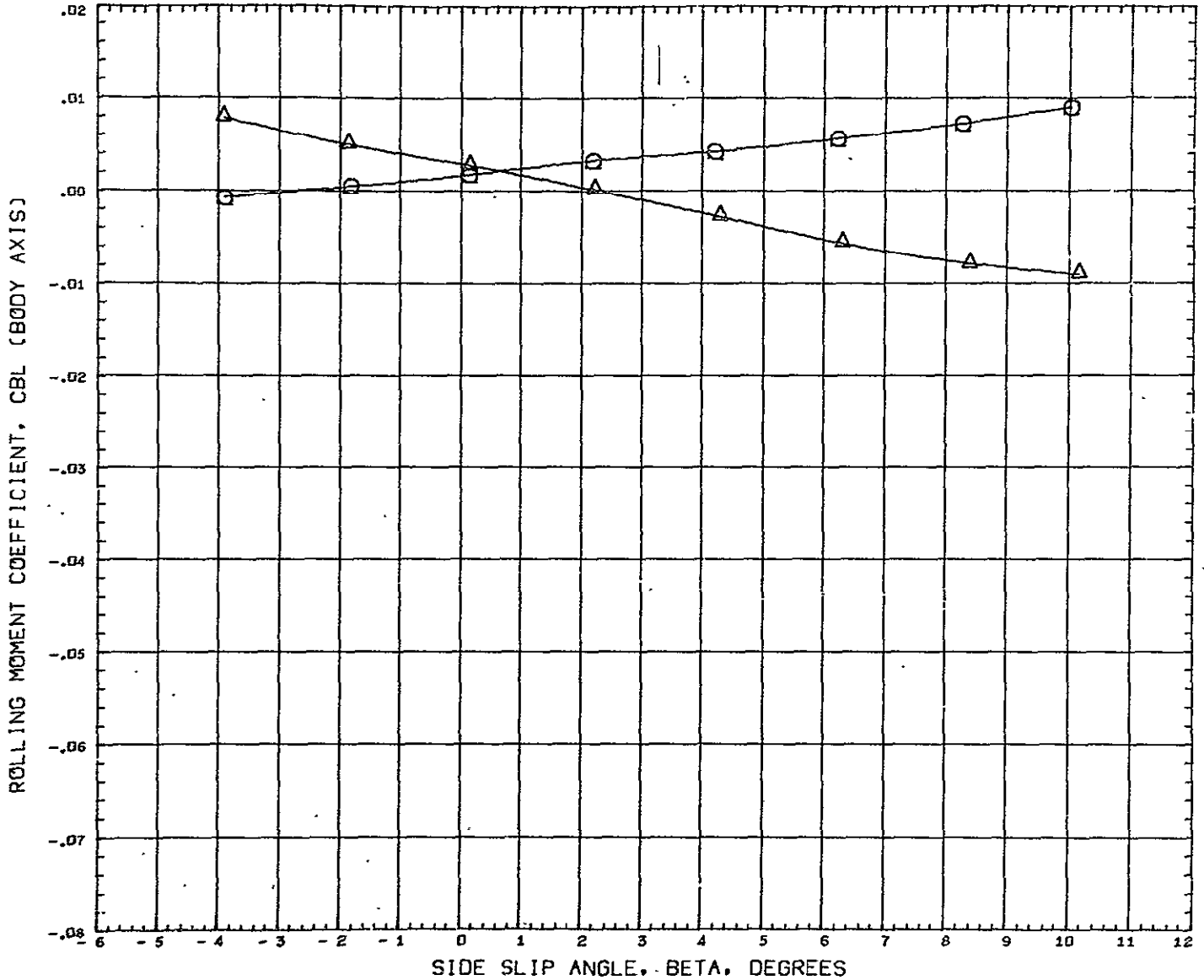
DELTA WING ORBITER-COMPONENT BUILDUP- LATERAL DIRECTIONAL STABILITY



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	RUDDER	RUDFLR	ELVATR	REFERENCE INFORMATION
(B2781D)	MSFC478 NR DELTA ORBITER B5W17E1DX	-0.050			0.000	REFS 6084.0040 SQ FT
(B2773D)	MSFC478 NR DELTA ORBITER B5W17E1DV17J2X	-0.070	0.000	15.000	0.000	REFL 821.2004 INCHES
						REFB 1422.8040 INCHES
						XMRP 1422.5040 INCHES
						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 1.000

DELTA WING ORBITER-COMPONENT BUILDUP- LATERAL DIRECTIONAL STABILITY

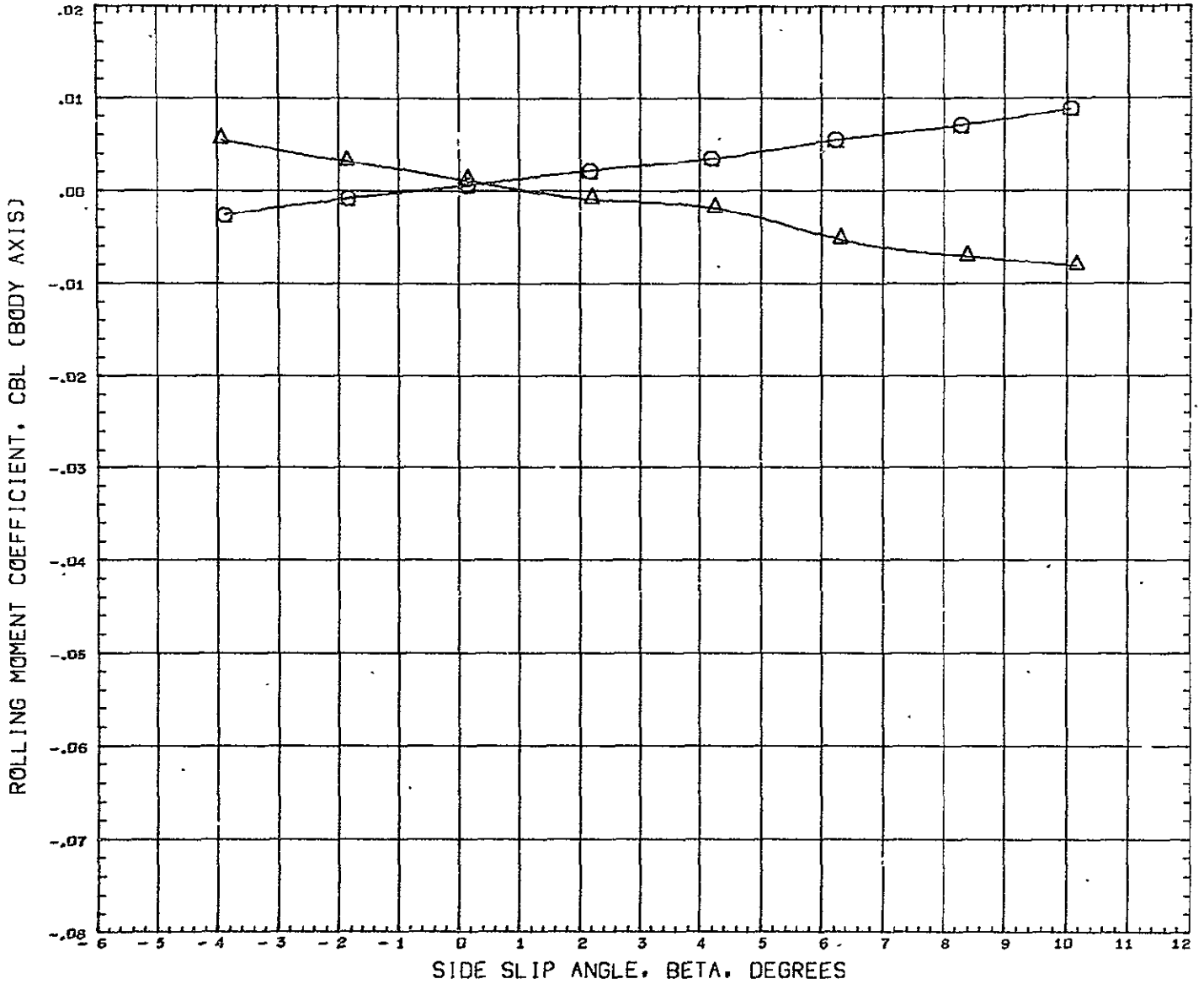


DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (B2781D) Q MSFC478 NR DELTA ORBITER B5W17E10X
 (B2773D) A MSFC478 NR DELTA ORBITER B5W17E10V17J2X

ALPHA	RUDDER	RUDFLR	ELVATR	REFERENCE INFORMATION
-0.050			0.000	REFS 6084.0040 SQ FT
-0.070	0.000	15.000	0.000	REFL 821.2004 INCHES
				REFB 1422.8040 INCHES
				XMRP 1422.5040 INCHES
				YMRP 0.0000 INCHES
				ZMRP 130.0004 INCHES
				SCALE 0.0035 SCALE

MACH 1.197

DELTA WING ORBITER-COMPONENT BUILDUP- LATERAL DIRECTIONAL STABILITY



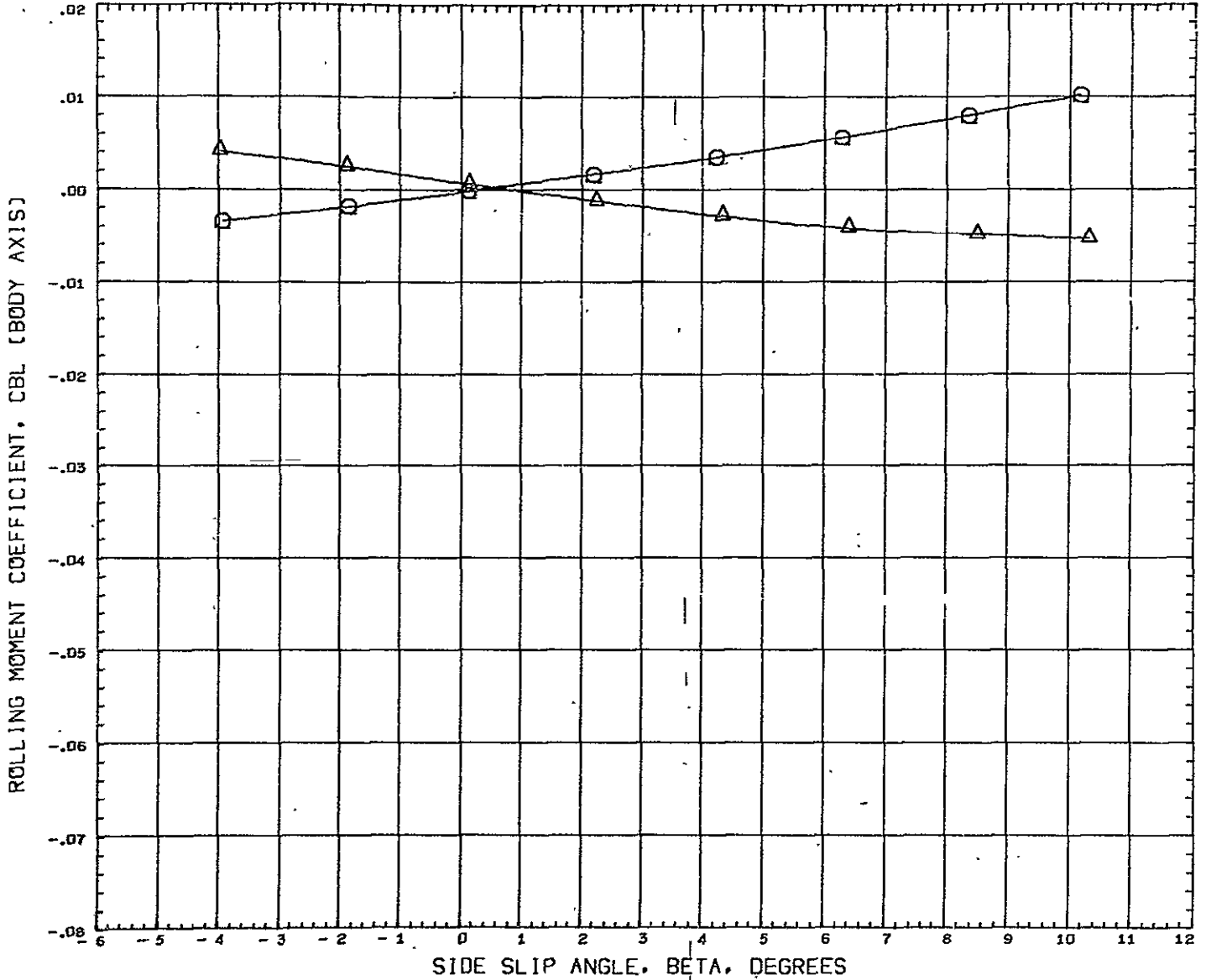
DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(B2761D)	MSFC478 NR DELTA ORBITER B5W17E10X
(B2773C)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X

ALPHA	RUDDER	RUDFLR	ELVATR
-0.050			0.000
-0.070	0.000	15.000	0.000

REFERENCE INFORMATION		
REFS	6084.0040	SQ FT
REFL	821.2004	INCHES
REFB	1422.8040	INCHES
XMRP	1422.5040	INCHES
YMRP	0.0000	INCHES
ZMRP	130.0004	INCHES
SCALE	0.0035	SCALE

MACH 1.456

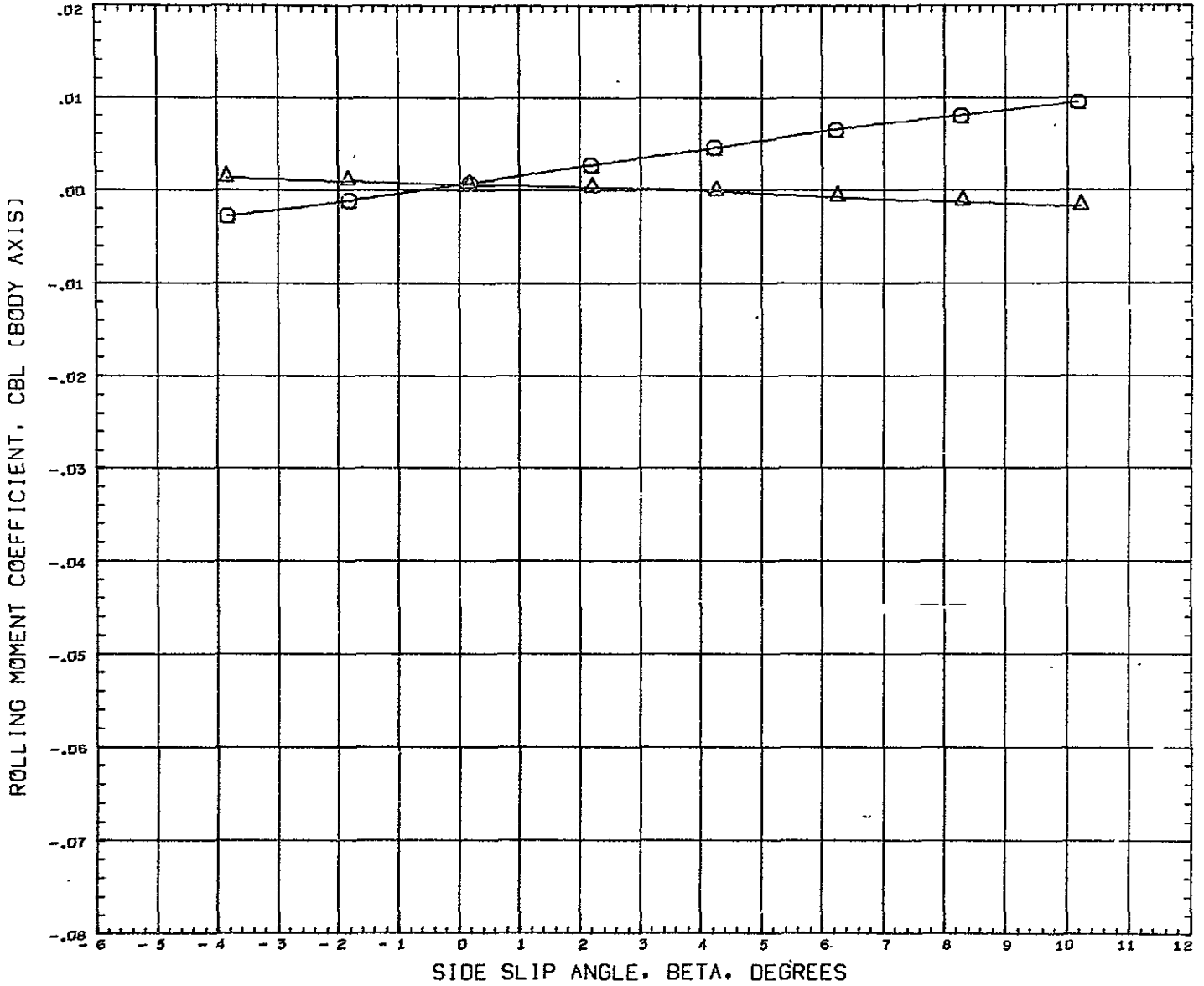
DELTA WING ORBITER-COMPONENT BUILDUP- LATERAL DIRECTIONAL STABILITY



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	RUDDER	RUDFLR	ELVATR	REFERENCE INFORMATION
(B2781D)	MSFC478 NR DELTA ORBITER B5W17E10X	-0.050			0.000	REFS 6084.0040 SQ FT
(B2773D)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	-0.070	0.000	15.000	0.000	REFL 821.2004 INCHES
						REFB 1422.6040 INCHES
						XMRP 1422.5040 INCHES
						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 1.957

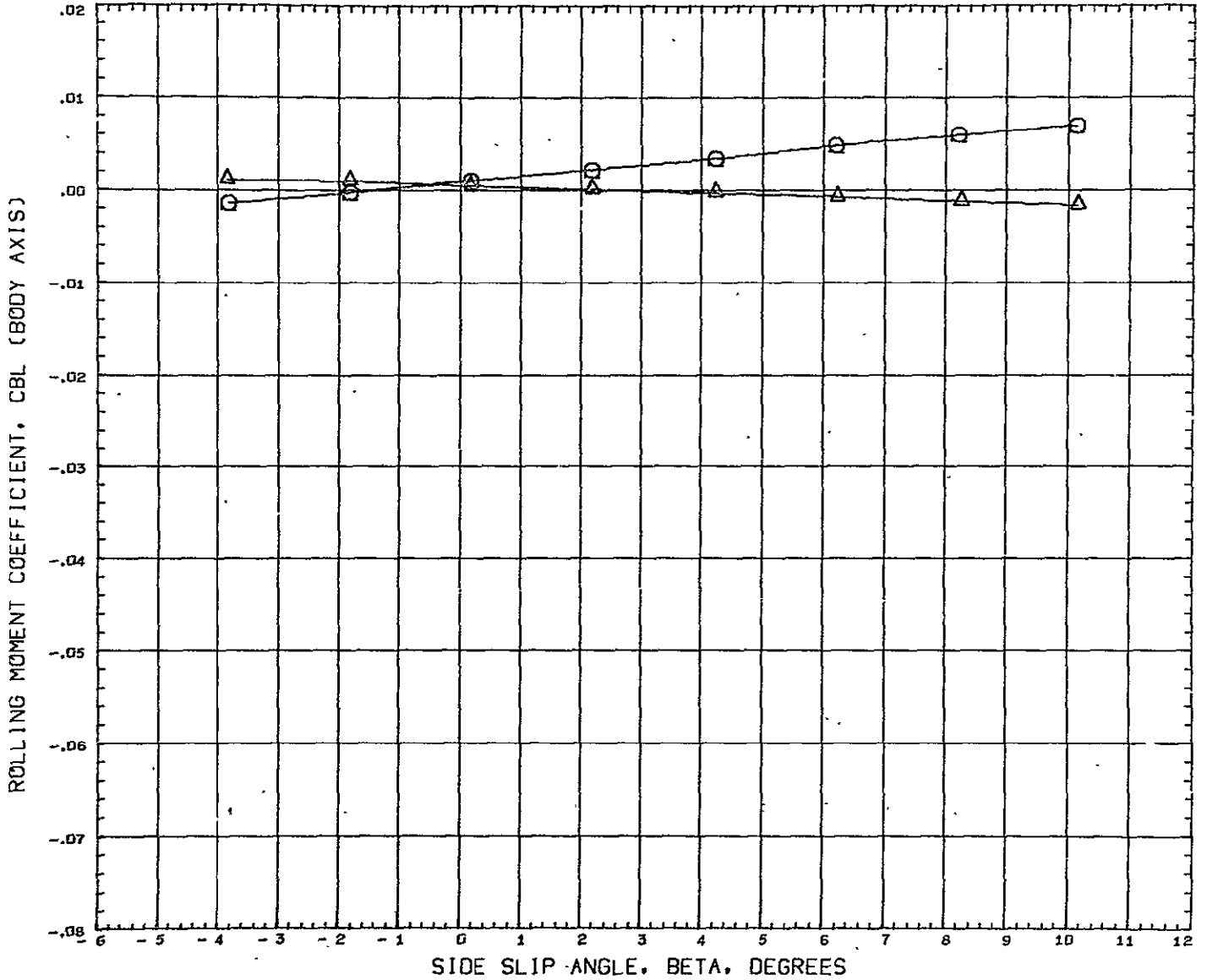
DELTA WING ORBITER-COMPONENT BUILDUP- LATERAL DIRECTIONAL STABILITY



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	RUDDER	RUDFLR	ELVATR	REFERENCE INFORMATION
(B2781D)	MSFC478 NR DELTA ORBITER B5W17E10X	-0.050			0.000	REFS 6084.0040 SQ FT
(B2773D)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	-0.070	0.000	15.000	0.000	REFL 821.2004 INCHES
						REFB 1422.8040 INCHES
						XMRP 1422.5040 INCHES
						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 2.995

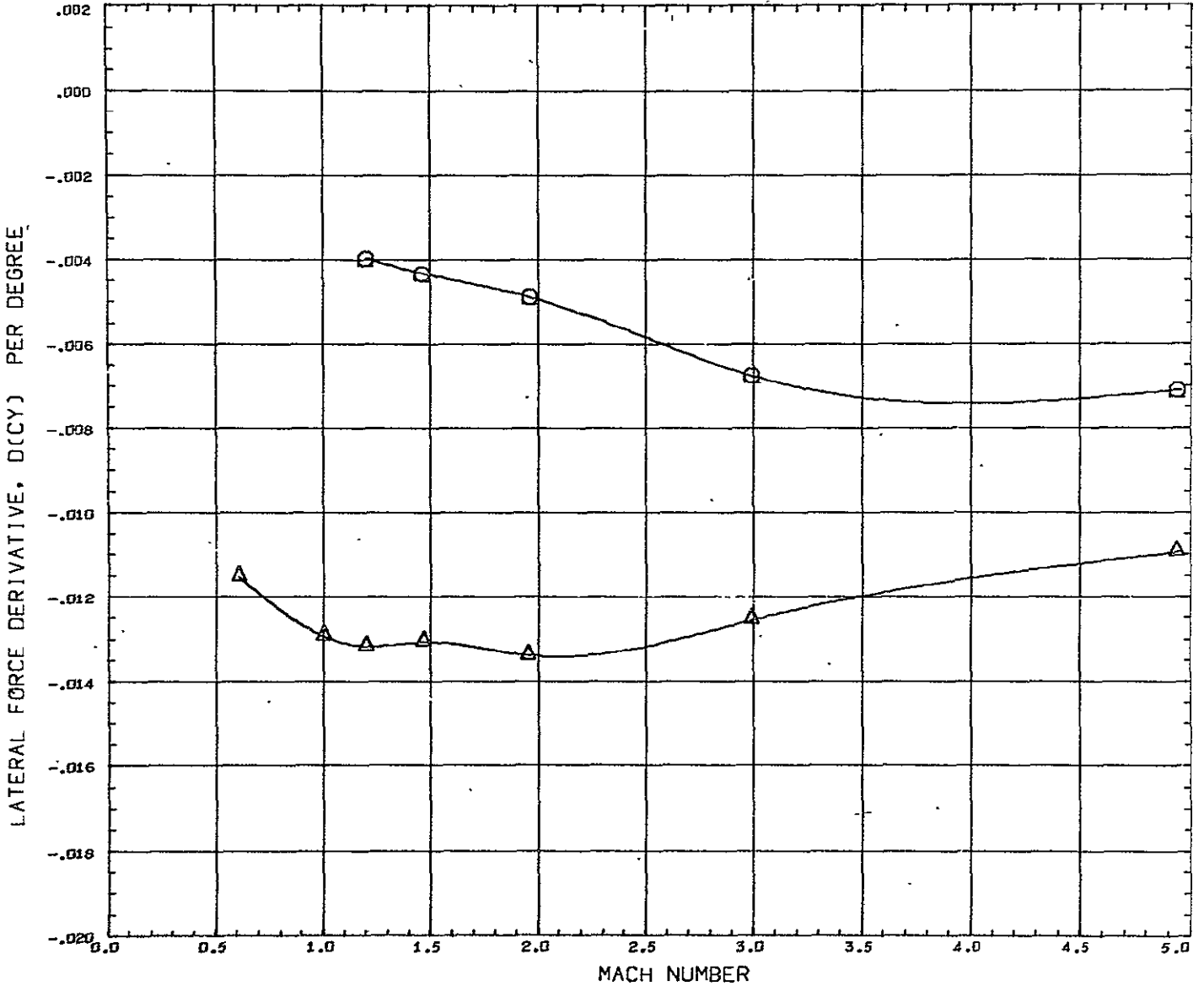
DELTA WING ORBITER-COMPONENT BUILDUP- LATERAL DIRECTIONAL STABILITY



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	RUDDER	RUDFLR	ELVATR	REFERENCE INFORMATION
(B2781D) O	HSFC478 NR DELTA ORBITER B5W17E10X	-0.050			0.000	REFS 6084.0040 SQ FT
(B2773D) Δ	HSFC478 NR DELTA ORBITER B5W17E10V17J2X	-0.070	0.000	15.000	0.000	REFL 821.2004 INCHES
						REFB 1422.8040 INCHES
						XMRP 1422.5040 INCHES
						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 4.959

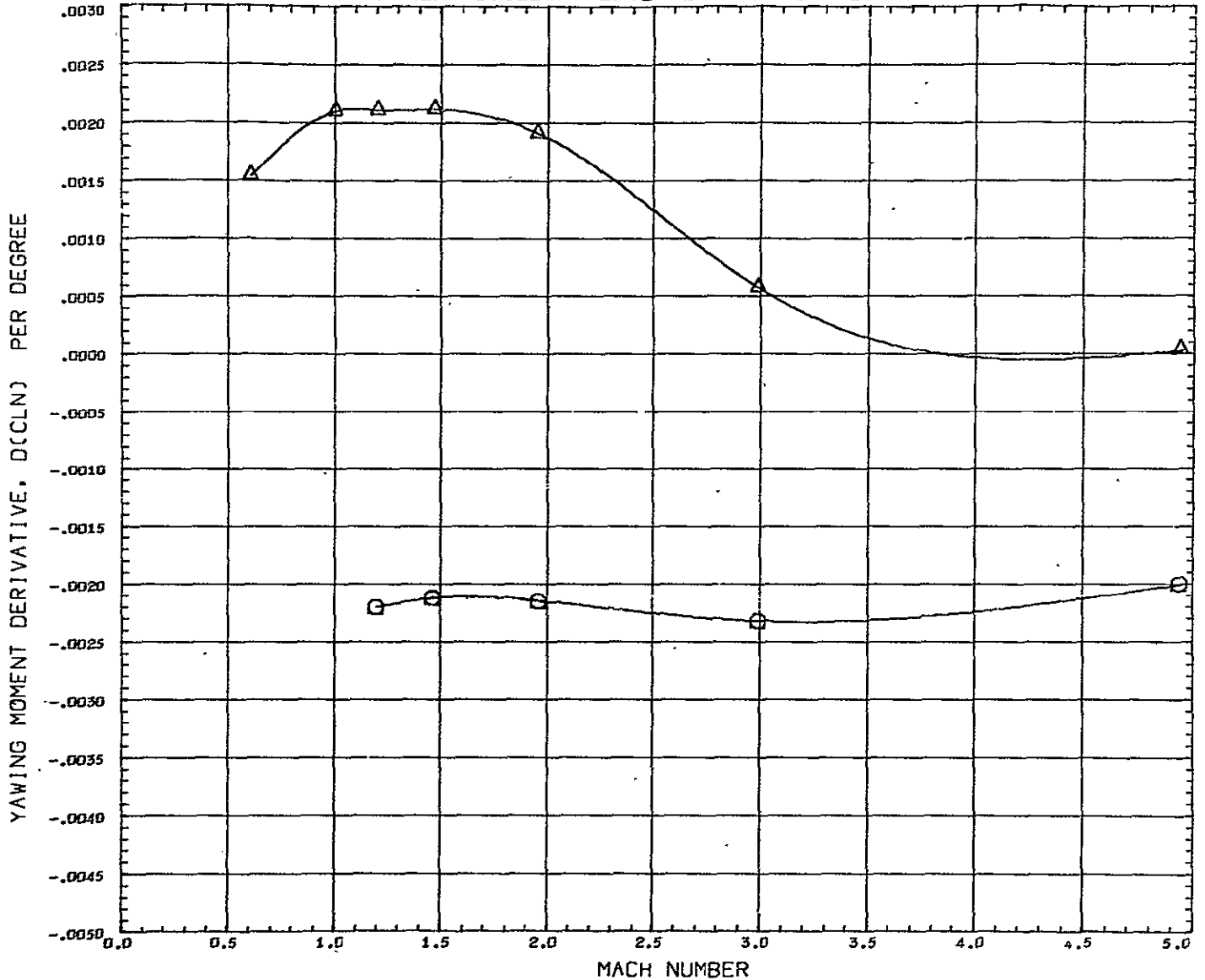
DELTA WING ORBITER-COMPONENT BUILDUP- LATERAL DIRECTIONAL STABILITY



DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(R2781D) ○	MSFC478 NR DELTA ORBITER B5W17E10X
(R2773D) △	MSFC478 NR DELTA ORBITER B5W17E19V17J2X

ALPHA	RUDDER	RUDFLR	ELVATR	REFERENCE INFORMATION
-0.050			0.000	REFS 6084.0040 SQ FT
-0.070	0.000	15.000	0.000	REFL 821.2004 INCHES
				REFB 1422.8040 INCHES
				XMRF 1422.5040 INCHES
				YMRF 0.0000 INCHES
				ZMRF 130.0004 INCHES
				SCALE 0.0035 SCALE

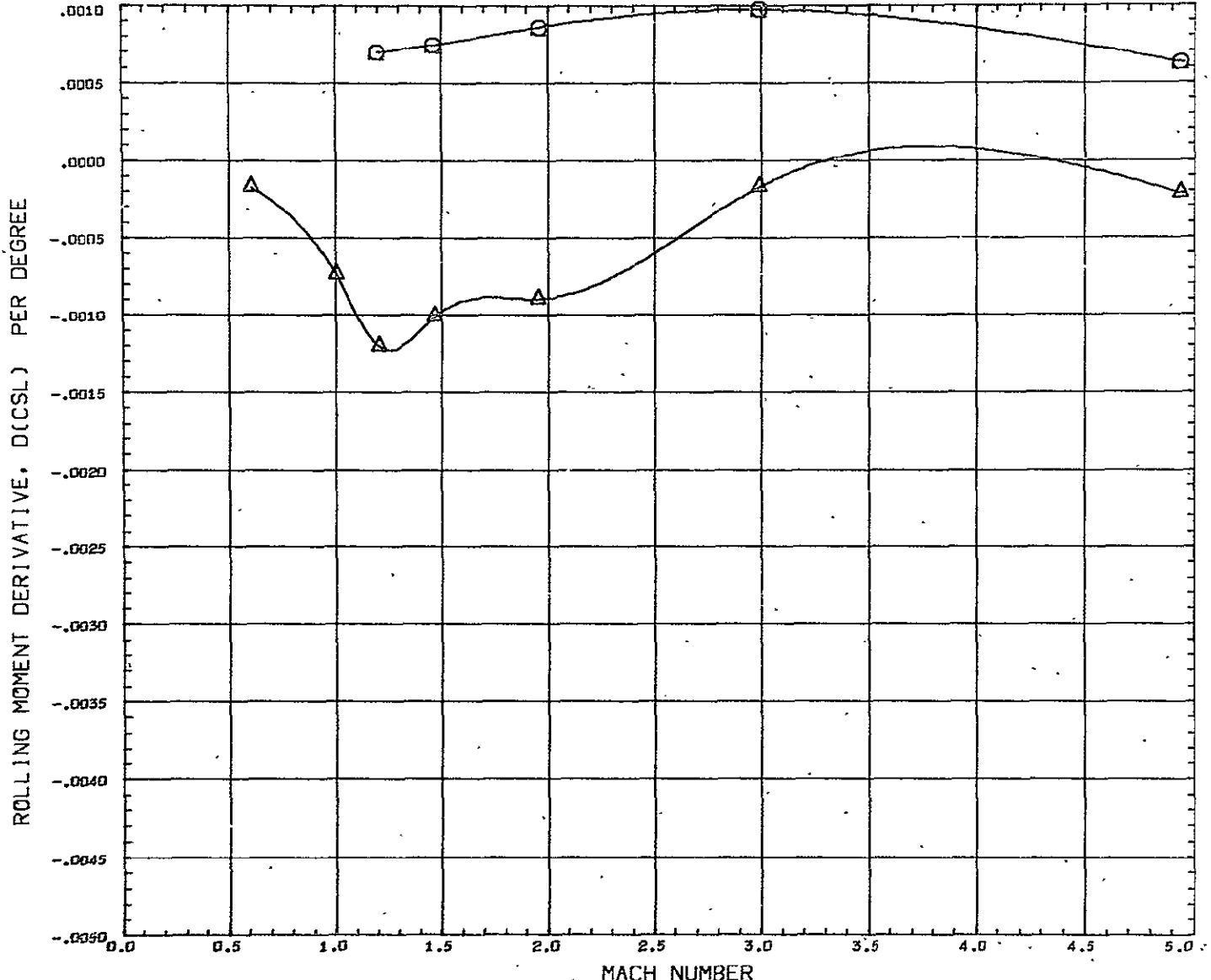
DELTA WING ORBITER-COMPONENT BUILDUP- LATERAL DIRECTIONAL STABILITY



DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(R2781D) ○	MSFC478 NR DELTA ORBITER B5W17E10X
(R2773D) △	MSFC478 NR DELTA ORBITER B5W17E10V17J2X

ALPHA	RUDDER	RUDFLR	ELVATR	REFERENCE INFORMATION
-0.050			0.000	REFS 6084.0040 SQ FT
-0.070	0.000	15.000	0.000	REFL 821.2004 INCHES
				REFB 1422.8040 INCHES
				XMRP 1422.5040 INCHES
				YNRP 0.0000 INCHES
				ZMRP 130.0004 INCHES
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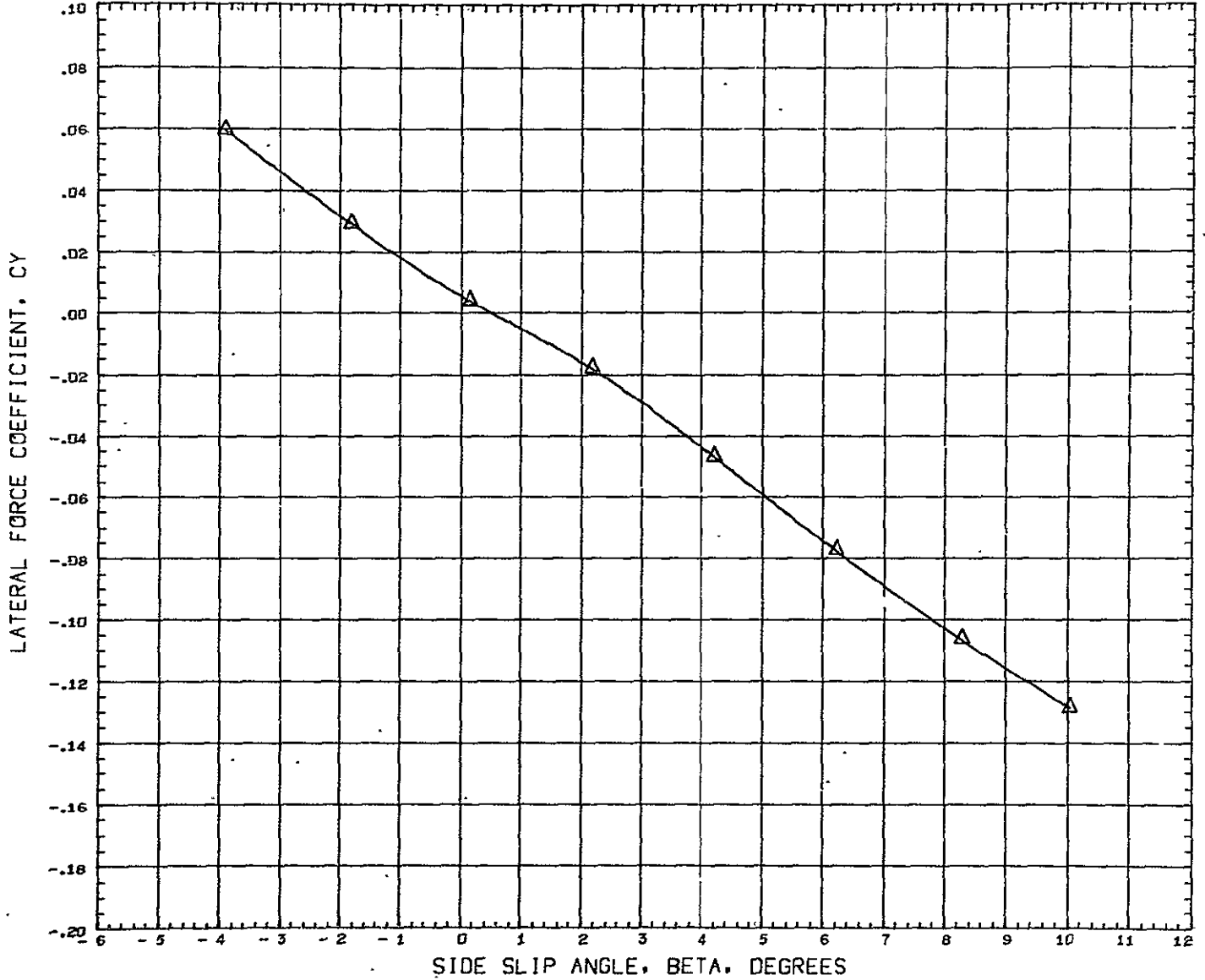
DELTA WING ORBITER-COMPONENT BUILDUP- LATERAL DIRECTIONAL STABILITY



DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (R2781D) ○ HSFC478 NR DELTA ORBITER B5W17E10X
 (R2773D) △ HSFC478 NR DELTA ORBITER B5W17E10V17J2X

ALPHA	RUDDER	RUDFLR	ELVATR	REFERENCE INFORMATION
-0.050			0.000	REFS 6084.0040 SQ FT
-0.070	0.000	15.000	0.000	REFL 821.2004 INCHES
				REFB 1422.8040 INCHES
				XMRP 1422.5040 INCHES
				YMRP 0.0000 INCHES
				ZMRP 130.0004 INCHES
				SCALE 0.0035 SCALE

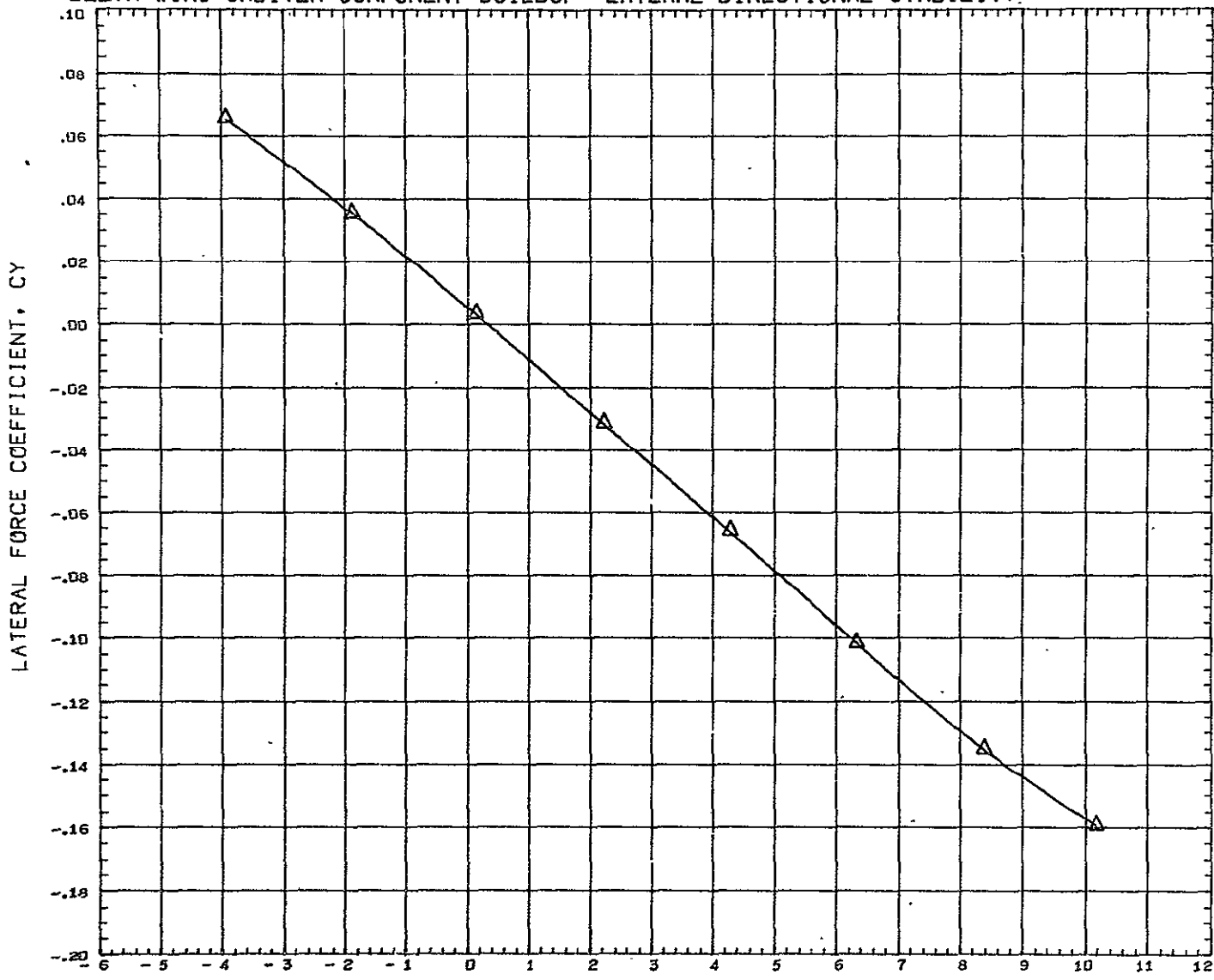
DELTA WING ORBITER-COMPONENT BUILDUP- LATERAL DIRECTIONAL STABILITY



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	RUDDER	RUDFLR	ELVATR	REFERENCE INFORMATION
(R2702D)	HSFC478 NR DELTA ORBITER BSW17E10X	15.860			0.000	REFS 6084.0040 SQ FT
(R2774D)	HSFC478 NR DELTA ORBITER BSW17E10V17J2X	15.470	0.000	15.000	0.000	REFL 821.2004 INCHES
						REFB 1422.8040 INCHES
						XMRP 1422.5040 INCHES
						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

PACH 5.651

DELTA WING ORBITER-COMPONENT BUILDUP- LATERAL DIRECTIONAL STABILITY



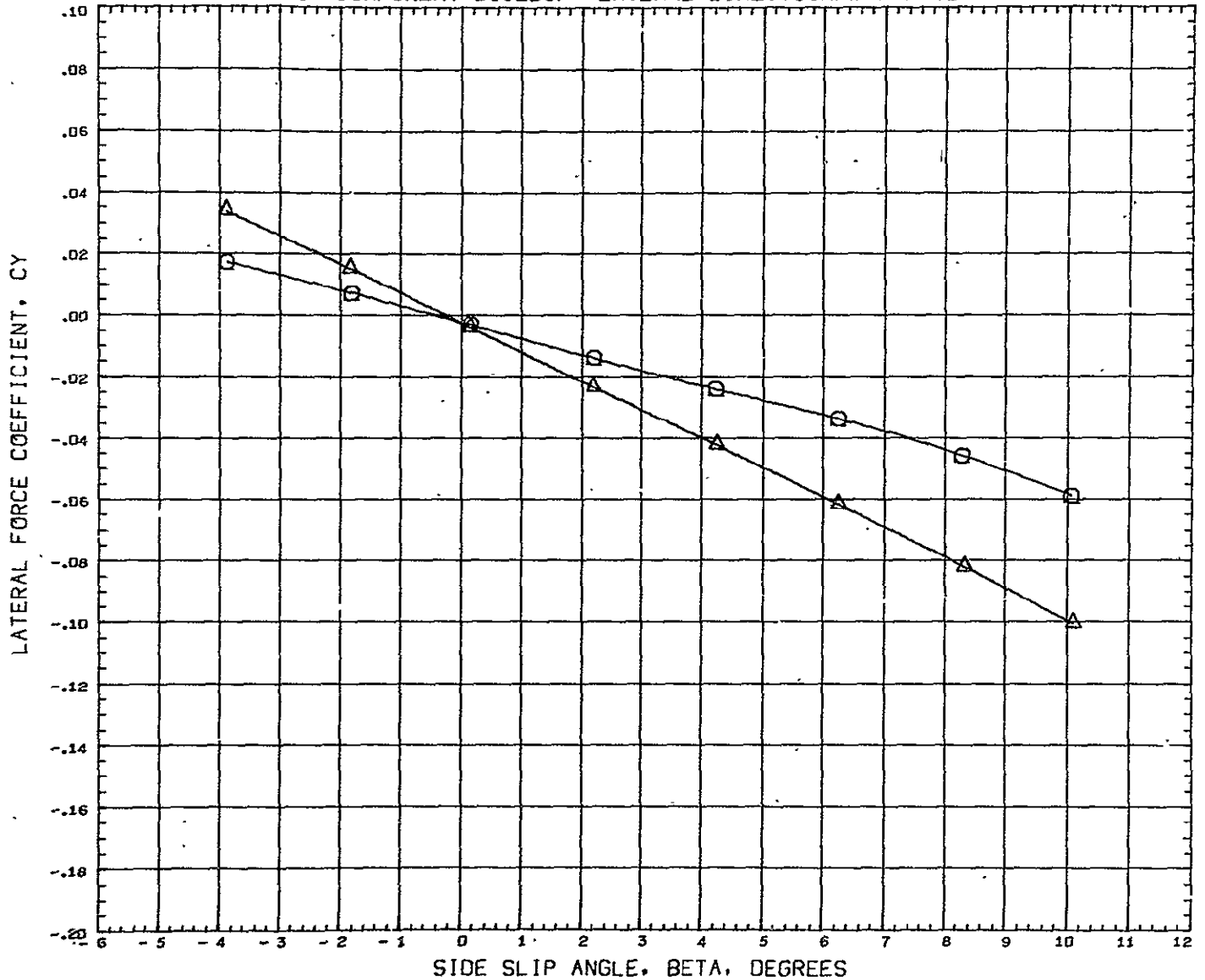
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 (R2782D) ○ HSFC478 NR DELTA ORBITER B5W1E10X
 (R2774D) △ HSFC478 NR DELTA ORBITER B5W1E1DV17J2X

ALPHA RUDDER RUDFLR ELVATR
 15.860 0.000
 15.470 0.000 15.000 0.000

REFERENCE INFORMATION
 REFS 6084.0040 SQ FT
 REFL 821.2004 INCHES
 REFB 1422.8040 INCHES
 XMRP 1422.5040 INCHES
 YMRP 0.0000 INCHES
 ZMRP 130.0004 INCHES
 SCALE 0.0035 SCALE

MACH 1.002

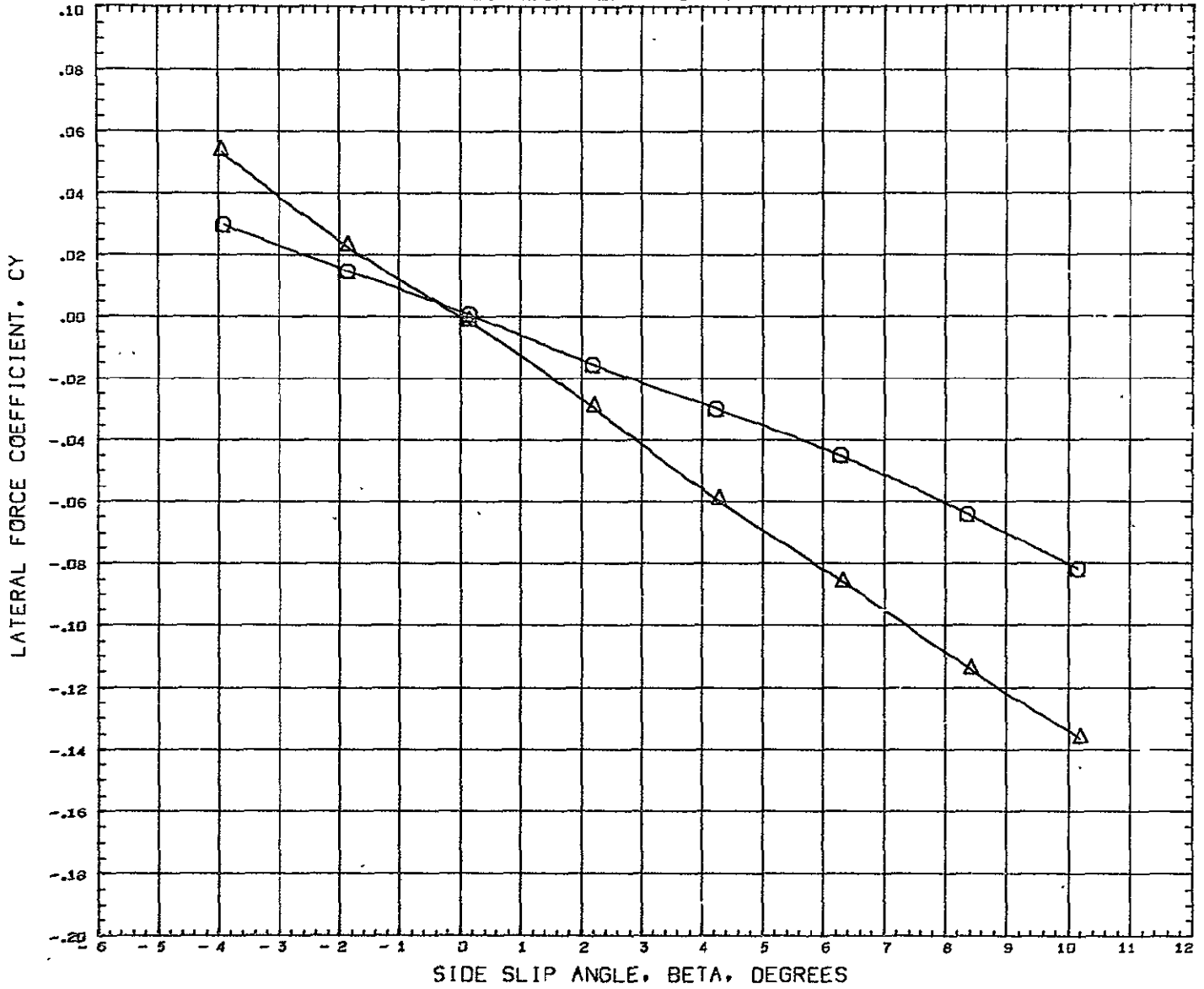
DELTA WING ORBITER-COMPONENT BUILDUP- LATERAL DIRECTIONAL STABILITY



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	RUDDER	RUDFLR	ELVATR	REFERENCE INFORMATION
(R2782D)	MSFC478 NR DELTA ORBITER B5W17E10X	15.860			0.000	REFS 6084.0040 SQ FT
(R2774D)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	15.470	0.000	15.000	0.000	REFL 821.2004 INCHES
						REFB 1422.8040 INCHES
						XMRP 1422.5040 INCHES
						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

HACH 1.198

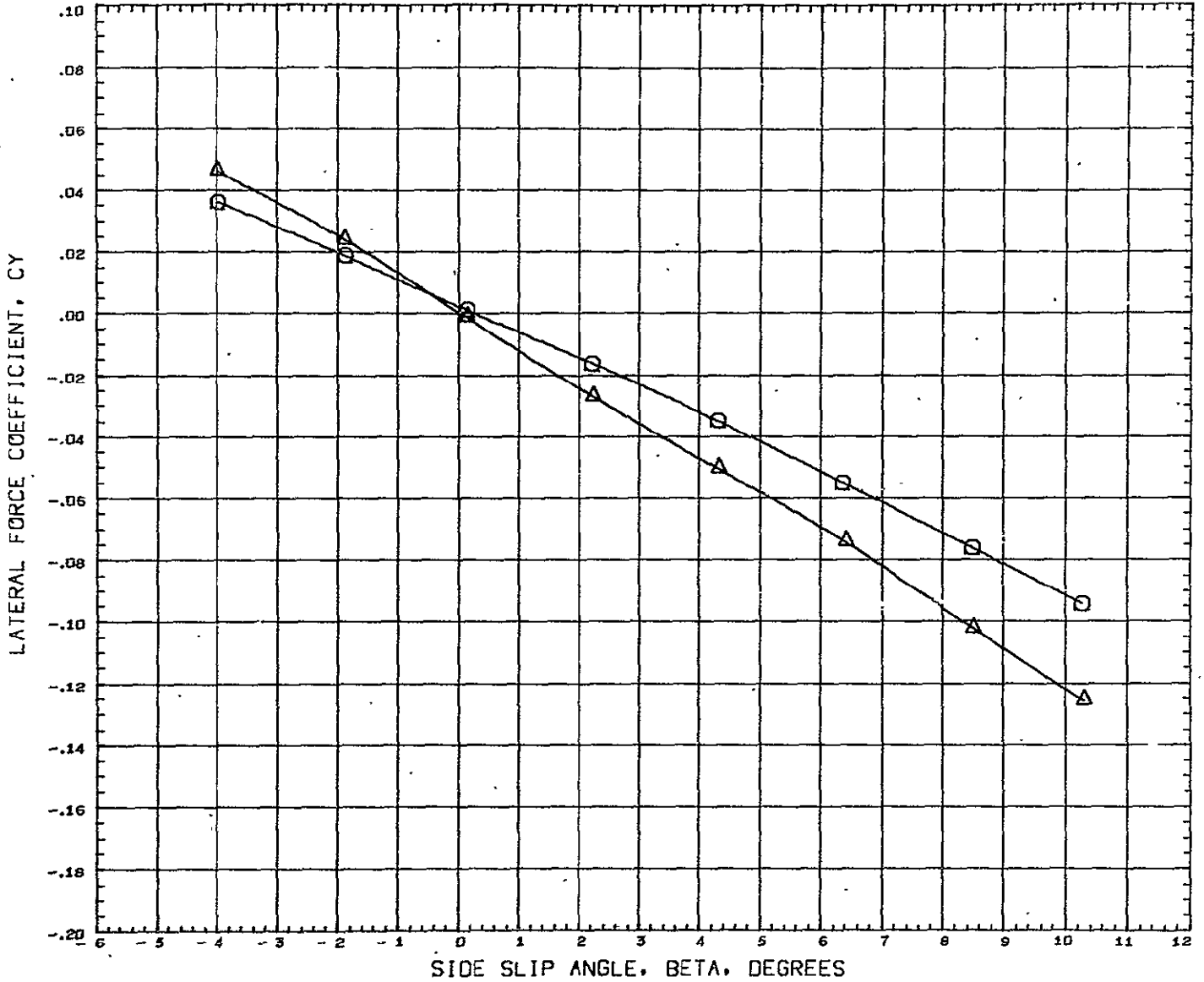
DELTA WING ORBITER-COMPONENT BUILDUP- LATERAL DIRECTIONAL STABILITY



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	RUDDER	RUDFLR	ELVATR	REFERENCE INFORMATION
(R2782D)	MSFC478 NR DELTA ORBITER B5W17E10X	15.860			0.000	REFS 6084.0040 SQ FT
(R2774D)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	15.470	0.000	15.000	0.000	REFL 821.2004 INCHES
						REFB 1422.8040 INCHES
						XMRP 1422.5040 INCHES
						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 1.459

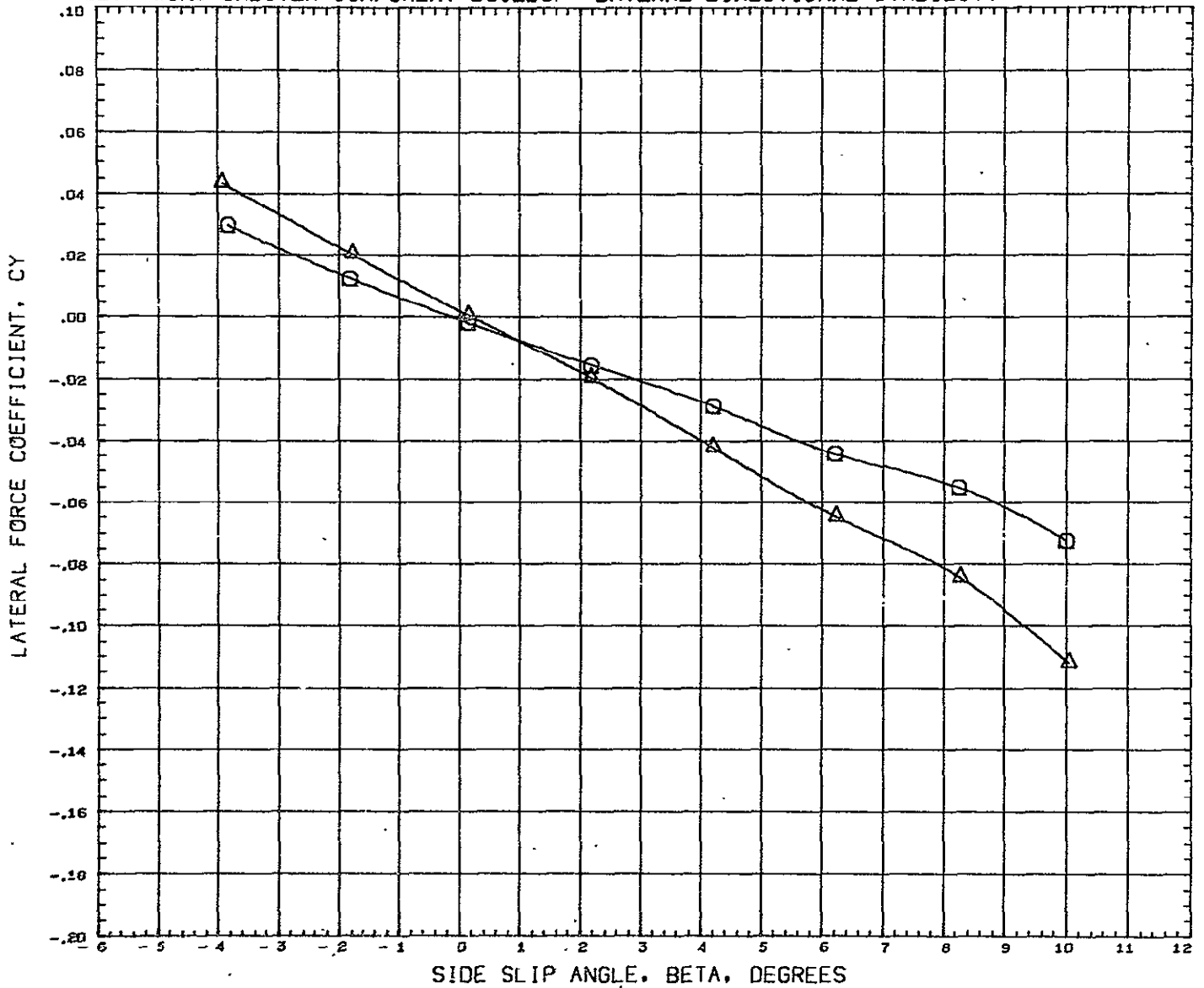
DELTA WING ORBITER-COMPONENT BUILDUP- LATERAL DIRECTIONAL STABILITY



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	RUDDER	RUDFLR	ELVATR	REFERENCE INFORMATION
(R2702D)	MSFC478 NR DELTA ORBITER B5W17E1DX	15.860			0.000	REFS 6084.0040 SQ FT
(R2774D)	MSFC478 NR DELTA ORBITER B5W17E1DV17J2X	15.470	0.000	15.000	0.000	REFL 821.2004 INCHES
						REFB 1422.8040 INCHES
						XMRP 1422.5040 INCHES
						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 1.956

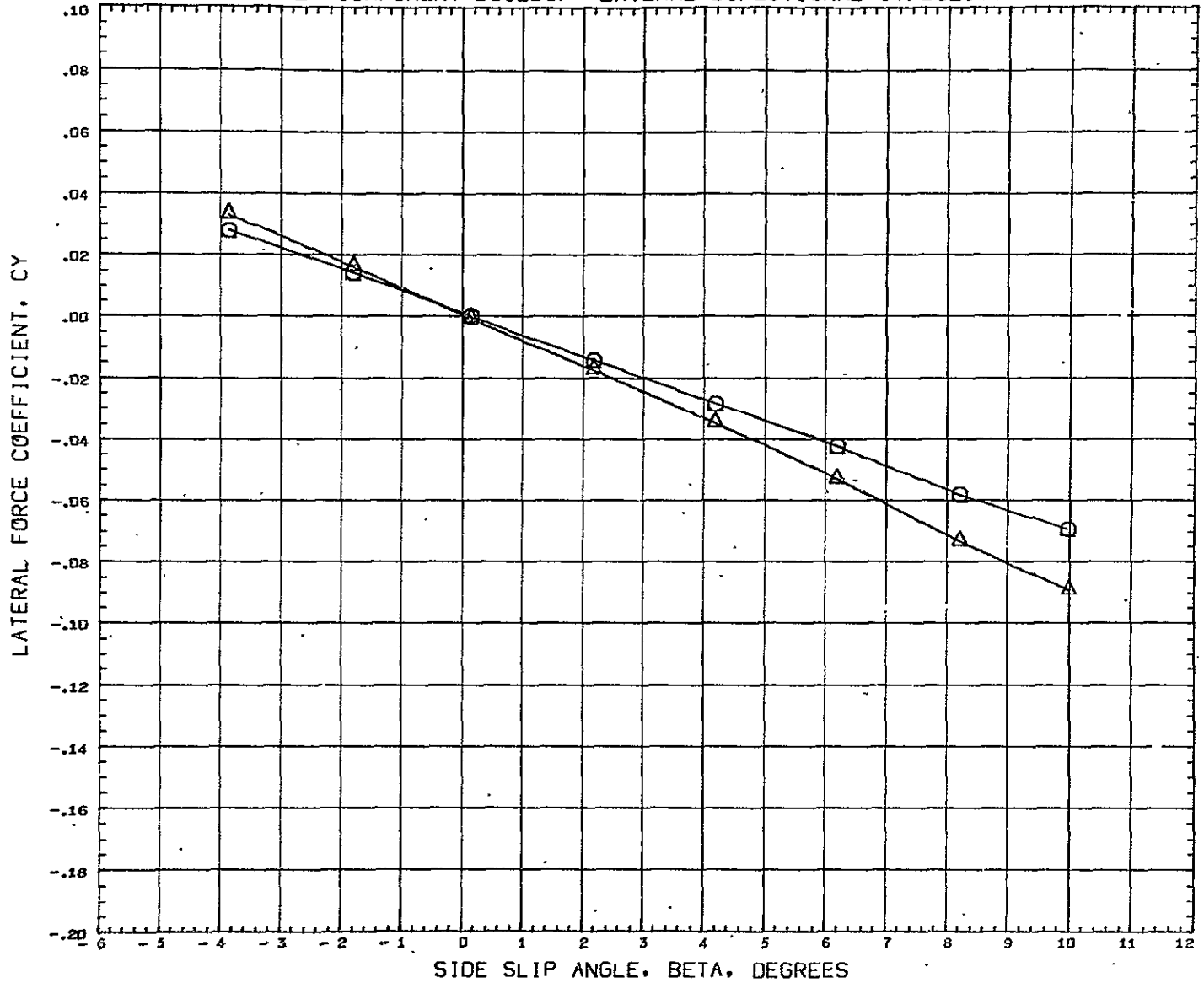
DELTA WING ORBITER-COMPONENT BUILDUP- LATERAL DIRECTIONAL STABILITY



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	RUDDER	FUDFLR	ELVATR	REFERENCE INFORMATION	
(R2782D)	MSFC478 NR DELTA ORBITER B5W17E10X	15.860			0.000	REFS	6084.0040 SQ FT
(R2774D)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	15.470	0.000	15.000	0.000	REFL	821.2004 INCHES
						REFD	1422.8040 INCHES
						XMRP	1422.5040 INCHES
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						ZMRP	130.0004 INCHES
						SCALE	0.0035 SCALE

MACH 2.990

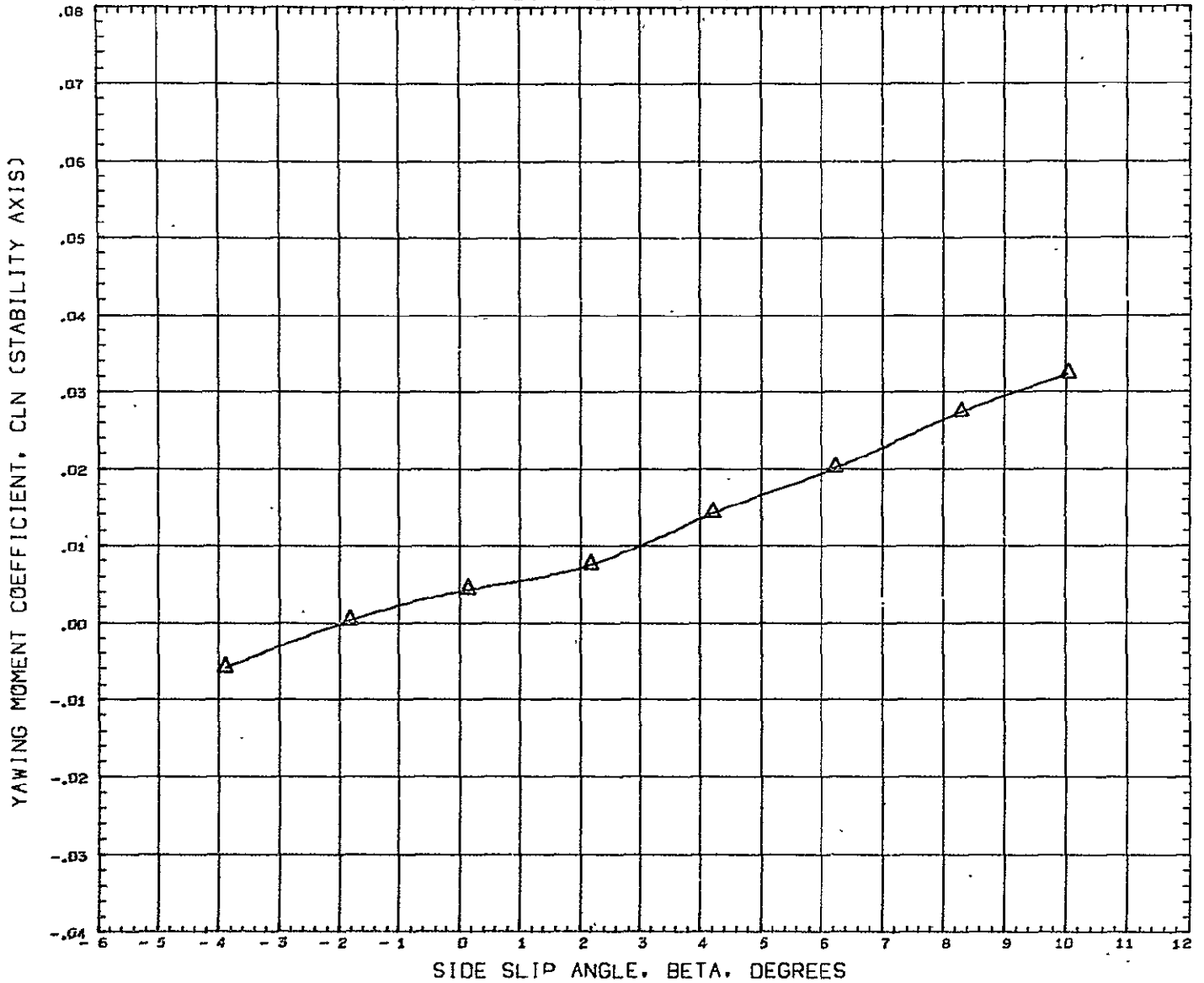
DELTA WING ORBITER-COMPONENT BUILDUP- LATERAL DIRECTIONAL STABILITY



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	RUDDER	RUDFLR	ELVATR	REFERENCE INFORMATION
(R2782D)	MSFC478 NR DELTA ORBITER B5W17E10X	15.86D			0.000	REFS 6084.004D SQ FT
(R2774D)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	15.47D	0.000	15.000	0.000	REFL 821.2004 INCHES
						REFB 1422.804D INCHES
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						YMRP 0.000J INCHES
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MACH 4.959

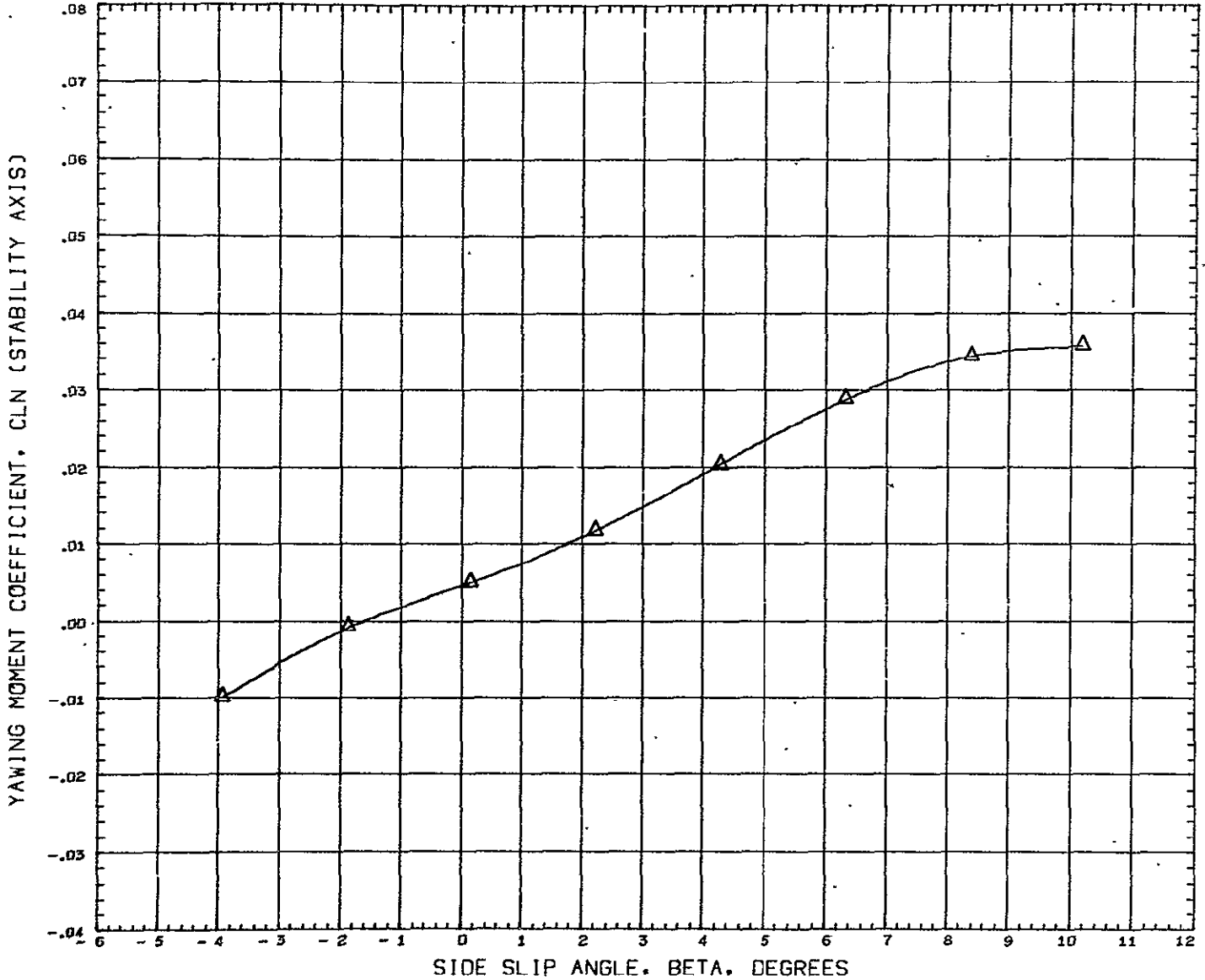
DELTA WING ORBITER-COMPONENT BUILDUP- LATERAL DIRECTIONAL STABILITY



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	RUDDER	RUDFLR	ELVATR	REFERENCE INFORMATION
(R2782D)	MSFC478 NR DELTA ORBITER B5W17E10X	15.860			0.000	REFS 6084.0040 SQ FT
(R2774D)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	15.470	0.000	15.000	0.000	REFL 821.2004 INCHES
						REFB 1422.8040 INCHES
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						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 0.601

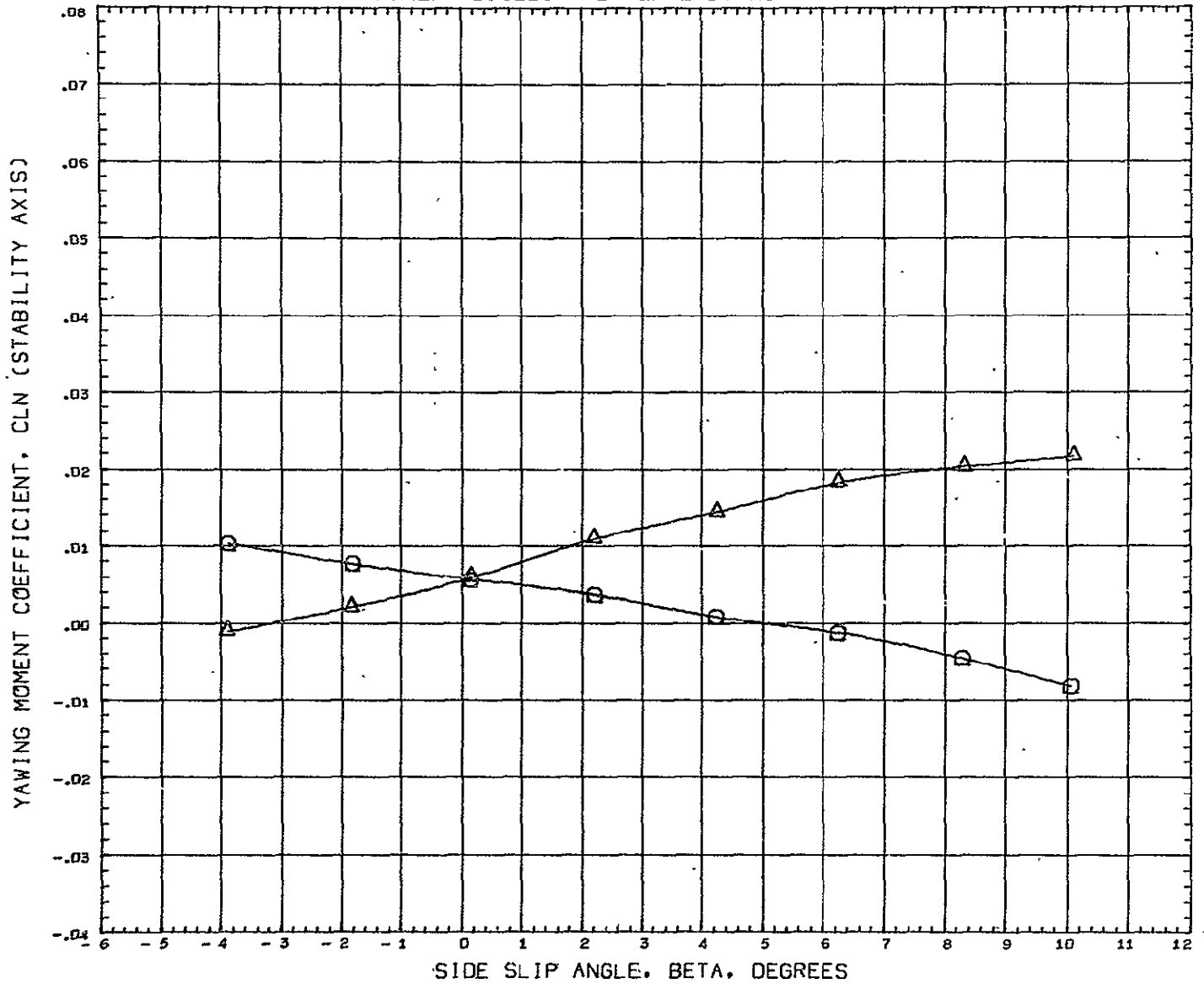
DELTA WING ORBITER-COMPONENT BUILDUP- LATERAL DIRECTIONAL STABILITY



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	RUDDER	RUDFLR	ELVATR	REFERENCE INFORMATION
(R2782D)	MSFC478 NR DELTA ORBITER B5W17E1DX	15.860			0.000	REFS 6084.0040 SQ FT
(R2774D)	MSFC478 NR DELTA ORBITER B5W17E1DV17J2X	15.470	0.000	15.000	0.000	REFL 821.2004 INCHES
						REFB 1422.8040 INCHES
						XMRP 1422.5040 INCHES
						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 1.002

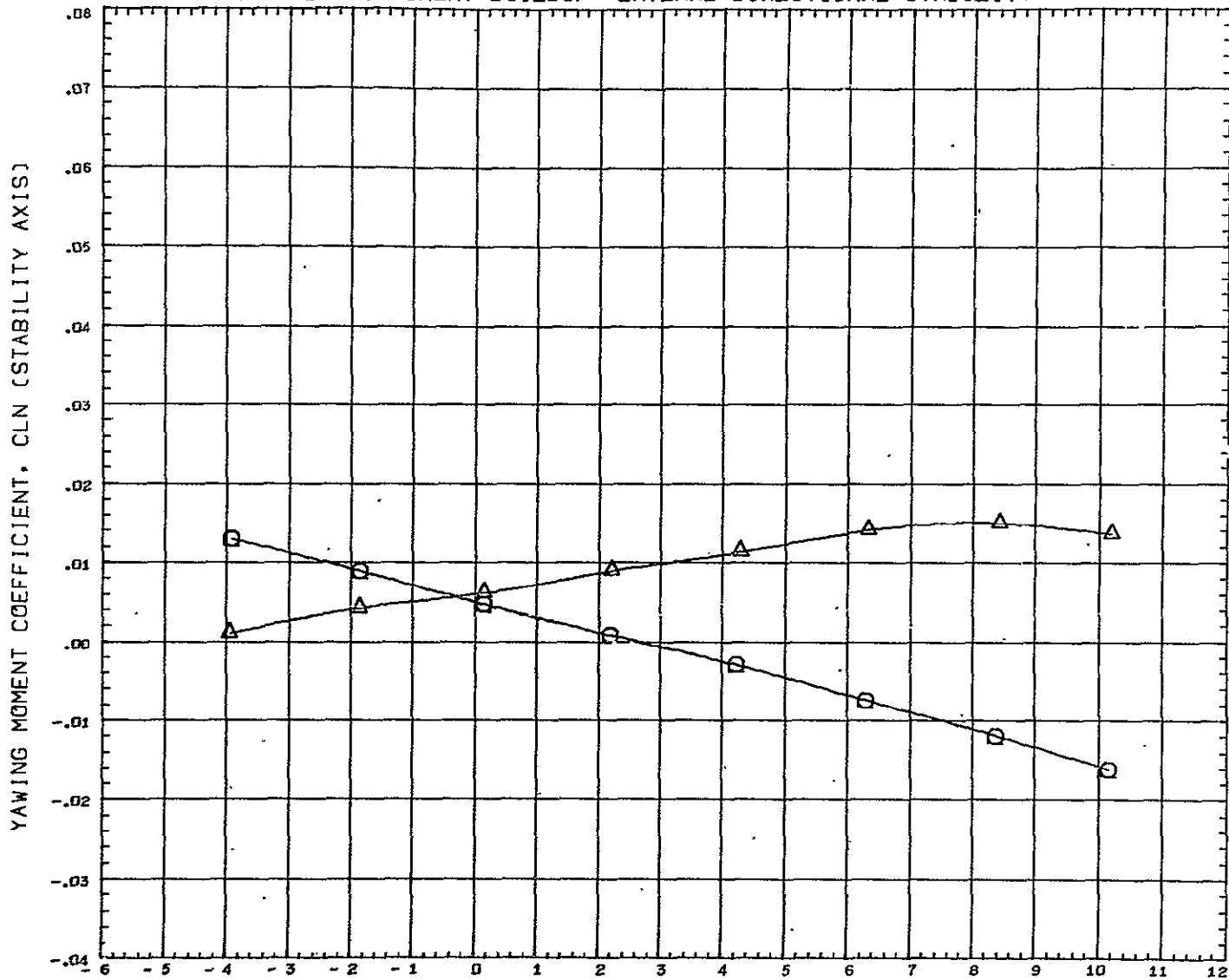
DELTA WING ORBITER-COMPONENT BUILDUP- LATERAL DIRECTIONAL STABILITY



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	RUDDER	RUDFLR	ELVATR	REFERENCE INFORMATION
(R27623)	MSFC478 NR DELTA ORBITER B5W17E10X	15.869			0.000	REFS 6084.0040 SQ FT
(R2774D)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	15.470	0.000	15.000	0.000	REFL 821.2004 INCHES
						REFB 1422.8040 INCHES
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						YMRP 0.0000 INCHES
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						SCALE 0.0035 SCALE

MACH 1.198

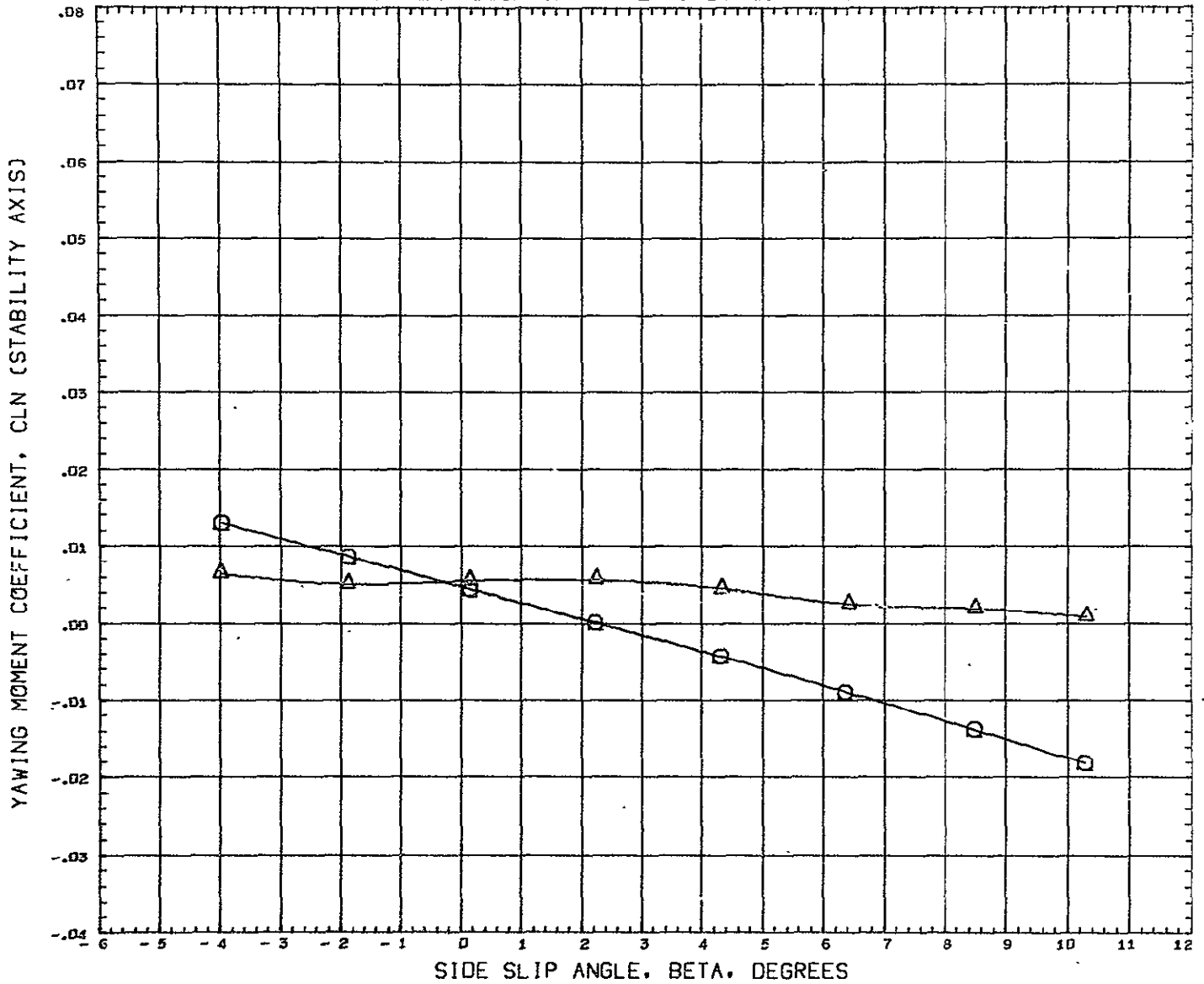
DELTA WING ORBITER-COMPONENT BUILDUP- LATERAL DIRECTIONAL STABILITY



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	RUDDER	RUDFLR	ELVATR	REFERENCE INFORMATION
(R2782D) \circ	MSFC478 NR DELTA ORBITER B5W17E1GX	15.860			0.000	REFS 6084.0040 SQ FT
(R2774D) Δ	MSFC478 NR DELTA ORBITER B5W17E1DV17J2X	15.470	0.000	15.000	0.000	REFL 821.2004 INCHES
						REFB 1422.8040 INCHES
						XMRP 1422.5040 INCHES
						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 1.459

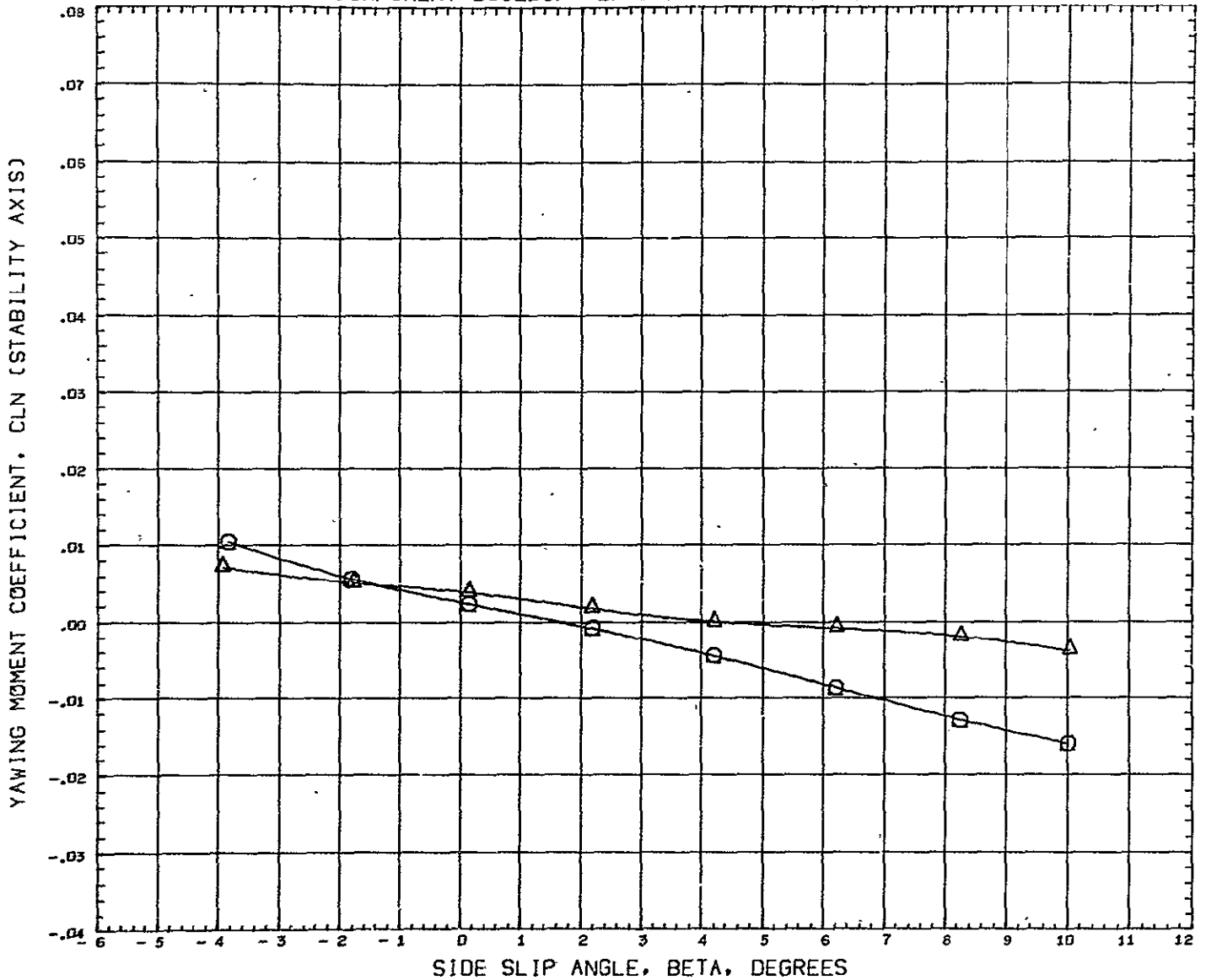
DELTA WING ORBITER-COMPONENT BUILDUP- LATERAL DIRECTIONAL STABILITY



DATA SET- SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	RUDDER	RUDFLR	ELVATR	REFERENCE INFORMATION
(R2782D) □	MSFC478 NR DELTA ORBITER B5W17E10X	15.860			0.000	REFS 6984.0040 SQ FT
(R2774D) △	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	15.470	0.000	15.000	0.000	REFL 821.2004 INCHES
						REFB 1422.8040 INCHES
						XHRP 1422.5040 INCHES
						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 1.976

DELTA WING ORBITER-COMPONENT BUILDUP- LATERAL DIRECTIONAL STABILITY



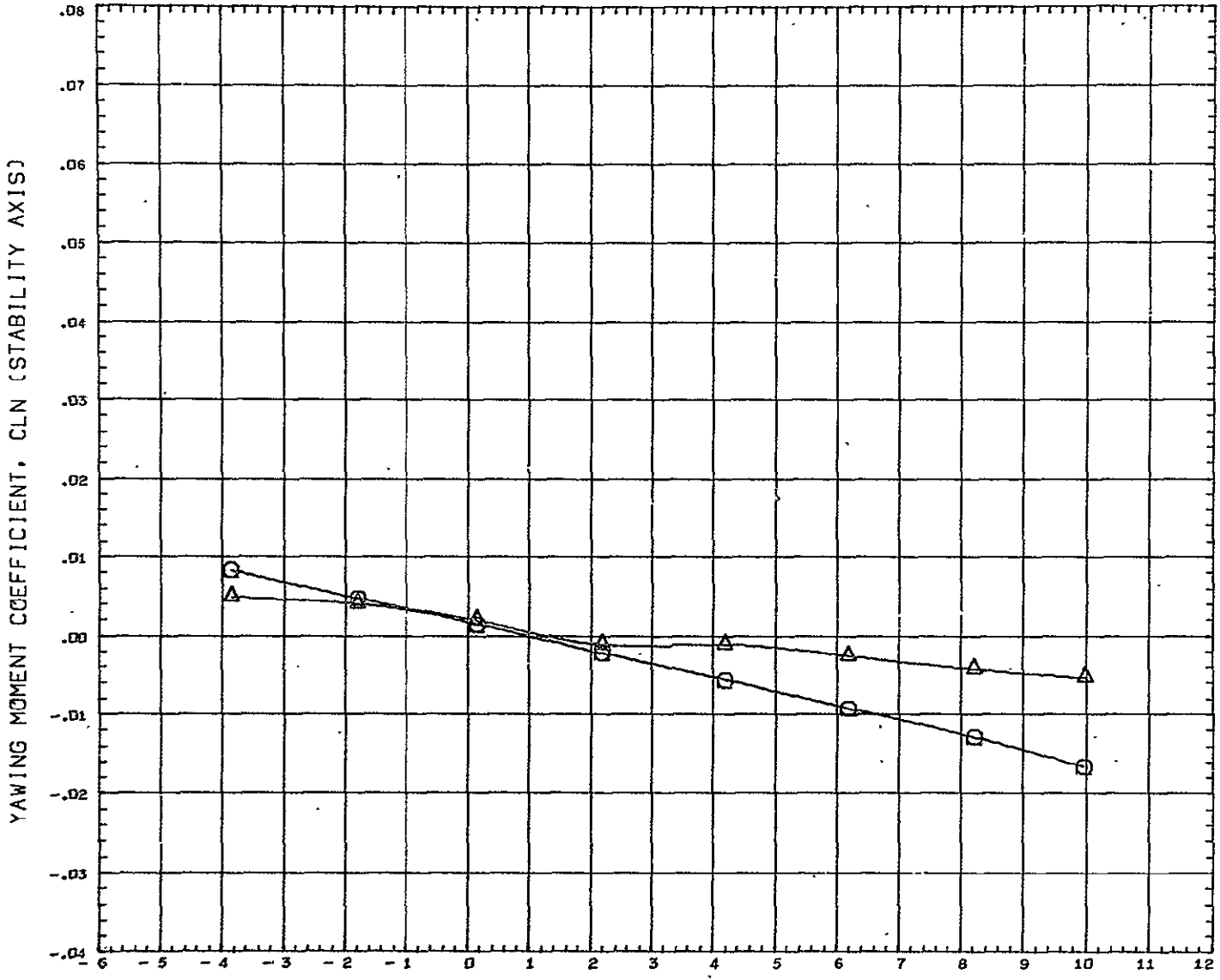
DATA SET SYMBOL CONFIGURATION DESCRIPTION
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 (R2774D) △ MSFC478 NR DELTA ORBITER B5W17E10V17J2X

ALPHA RUDDER RUDFLR ELVATR
 15.860 0.000 15.000 0.000
 15.470 0.000 15.000 0.000

REFERENCE INFORMATION
 REFS 6084.0040 SQ FT
 REFL 821.2004 INCHES
 REFB 1422.8040 INCHES
 XMRP 1422.5040 INCHES
 YMRP 0.0000 INCHES
 ZMRP 130.0004 INCHES
 SCALE 0.0035 SCALE

MACH 2.990

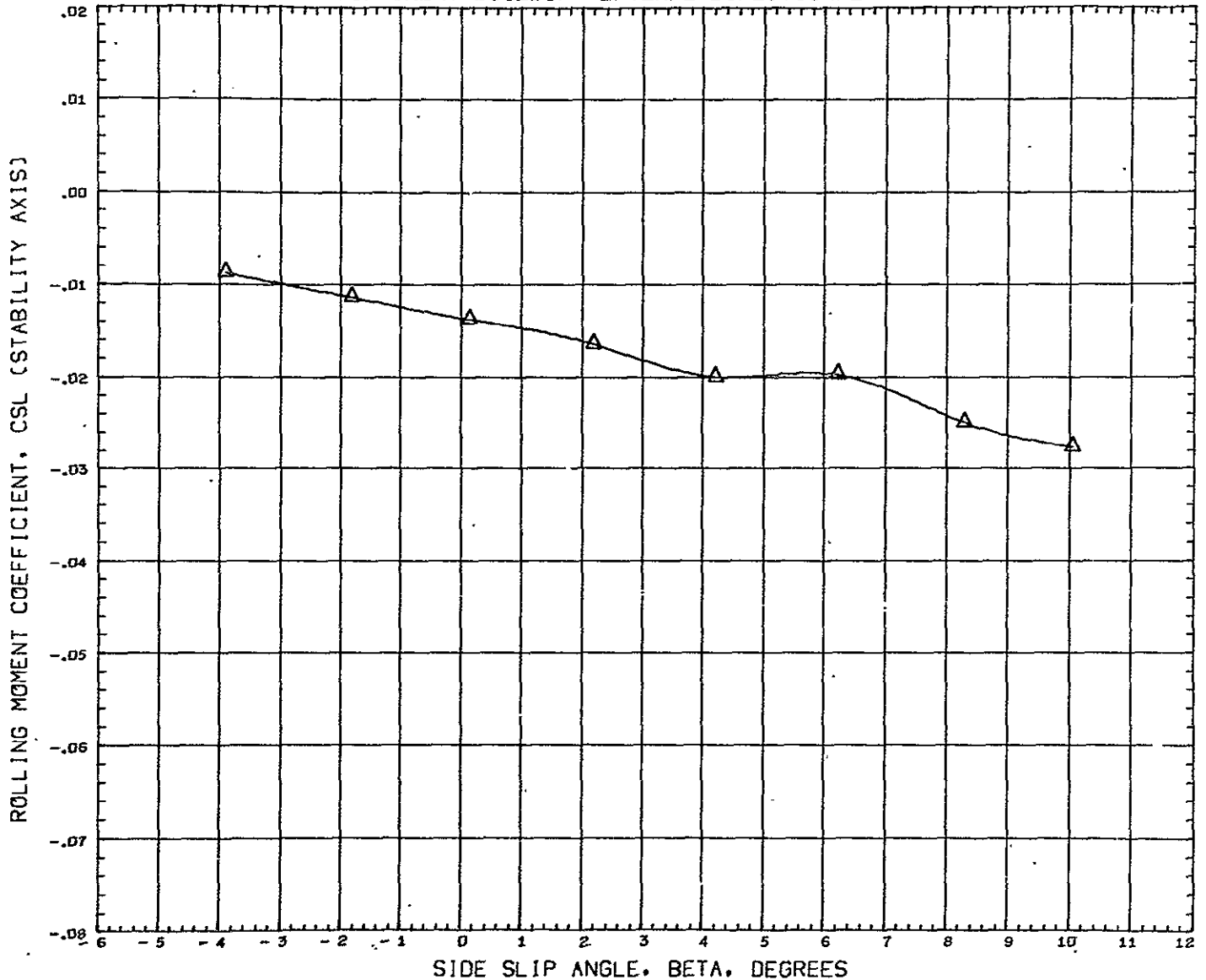
DELTA WING ORBITER-COMPONENT BUILDUP- LATERAL DIRECTIONAL STABILITY



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	RUDDER	RUDFLR	ELVATR	REFERENCE INFORMATION
(R2782D)	MSFC478 NR DELTA ORBITER B5W17E10X	15.860			0.000	REFS 6084.0040 SQ FT
(R2774D)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	15.470	0.000	15.000	0.000	REFL 821.2004 INCHES
						REFB 1422.8040 INCHES
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						YNRF 0.0000 INCHES
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MACH 4.959

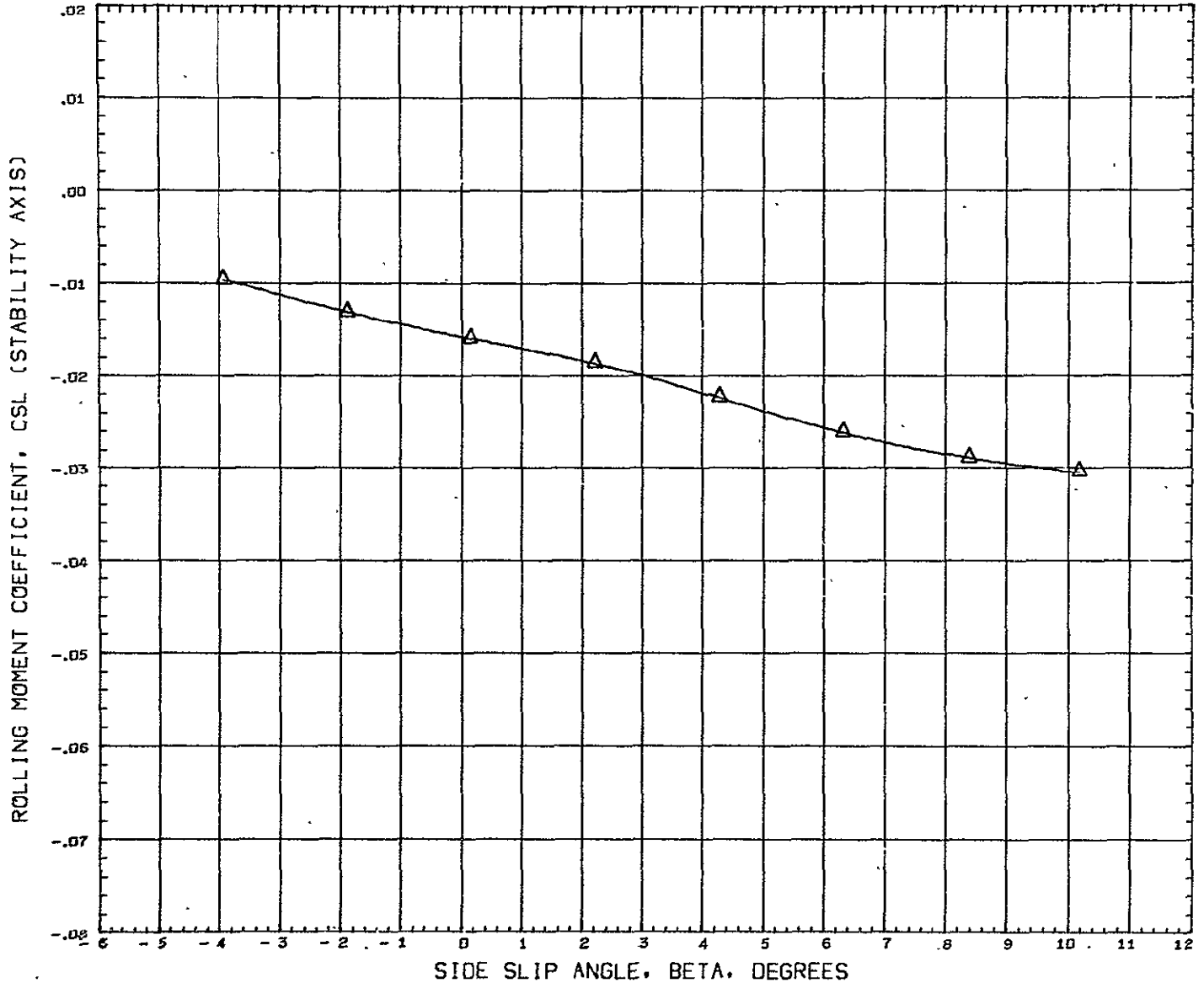
DELTA WING ORBITER-COMPONENT BUILDUP- LATERAL DIRECTIONAL STABILITY



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	RUDDER	RUDFLR	ELVATR	REFERENCE INFORMATION
(R2782D)	MSFC478 NR DELTA ORBITER B5W17E10X	15.860			0.000	REFS .6084.0040 SQ FT
(R2774D)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	15.470	0.000	15.000	0.000	REFL 821.2004 INCHES
						REFB 1422.8040 INCHES
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MACH 0.601

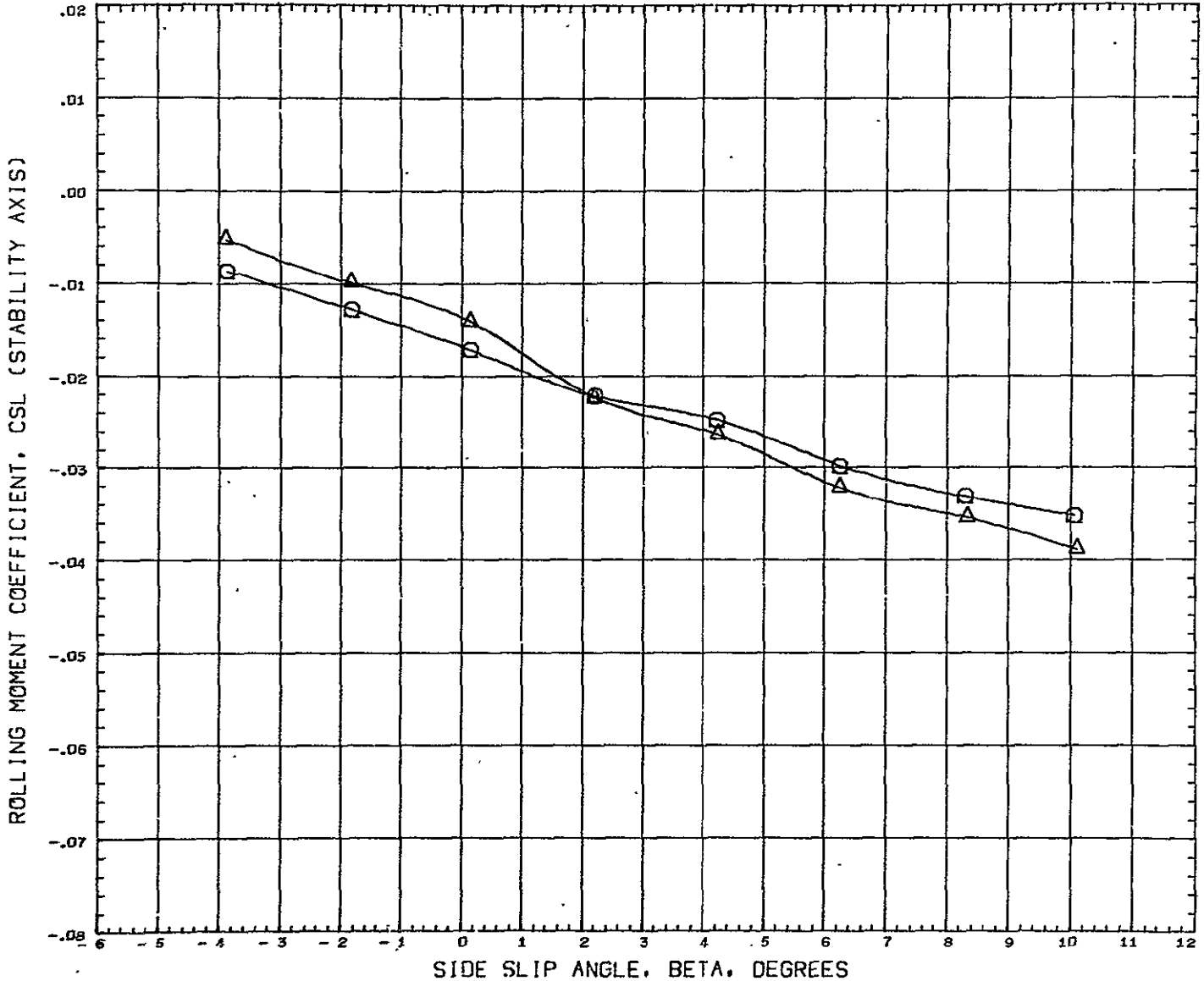
DELTA WING ORBITER-COMPONENT BUILDUP- LATERAL DIRECTIONAL STABILITY



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	RUDDER	RUDFLR	ELVATR	REFERENCE INFORMATION
(R2782D)	MSFC478 NR DELTA ORBITER B5W17E10X	15.860			0.000	REFS 6084.0040 SQ FT
(R2774D)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	15.470	0.000	15.000	0.000	REFL 821.2004 INCHES
						REFB 1422.6040 INCHES
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						YMRP 0.0000 INCHES
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						SCALE 0.0035 SCALE

MACH 1.002

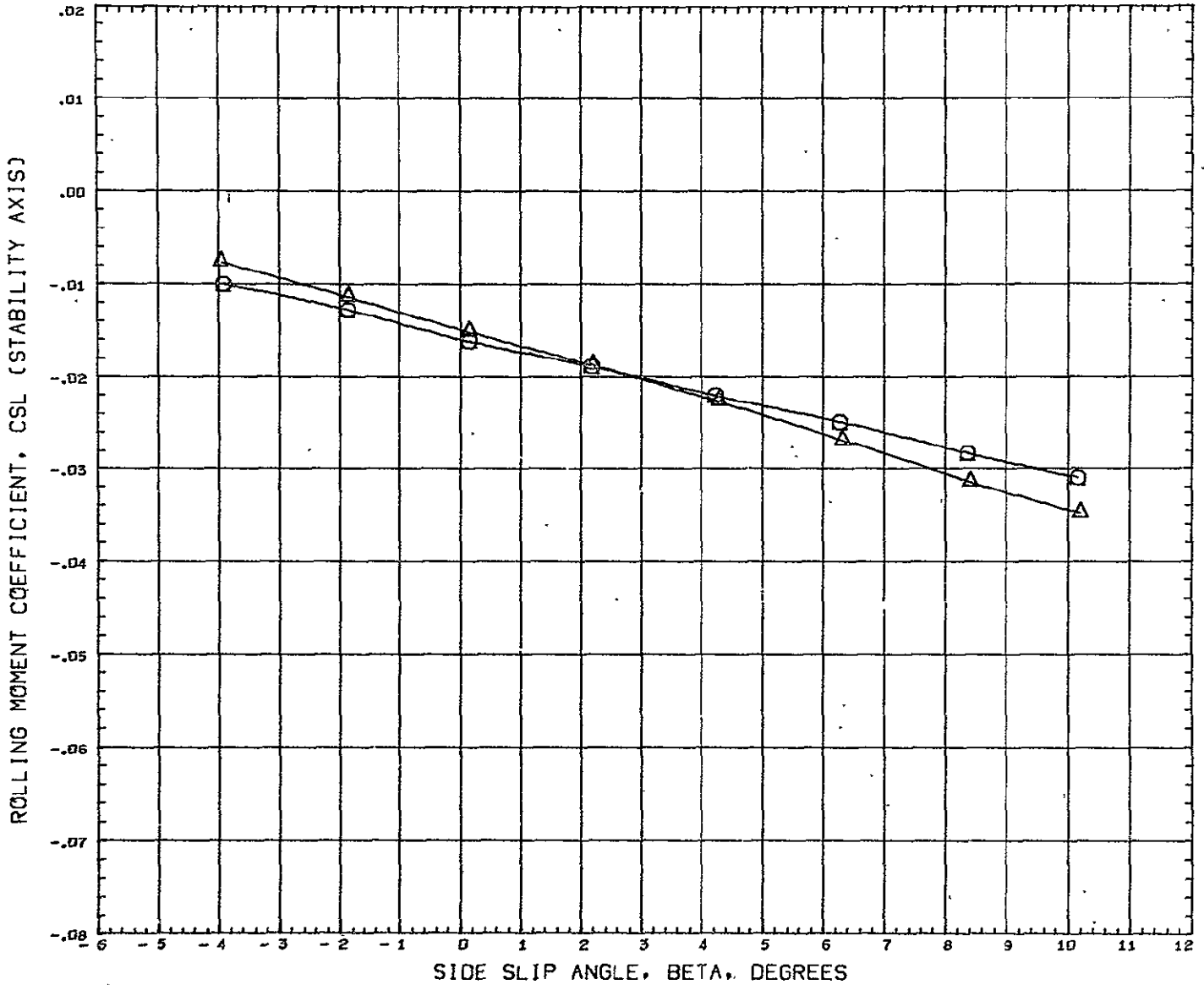
DELTA WING ORBITER-COMPONENT BUILDUP- LATERAL DIRECTIONAL STABILITY



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	RUDDER	RUDDFLR	ELVATR	REFERENCE INFORMATION
(R2782D)	MSFC478 NR DELTA ORBITER B5W17E1DX	15.860			0.000	REFS 6084.0040 SQ FT
(R2774D)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	15.470	0.000	15.000	0.000	REFL 821.2004 INCHES
						REFB 1422.8040 INCHES
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HACH 1.198

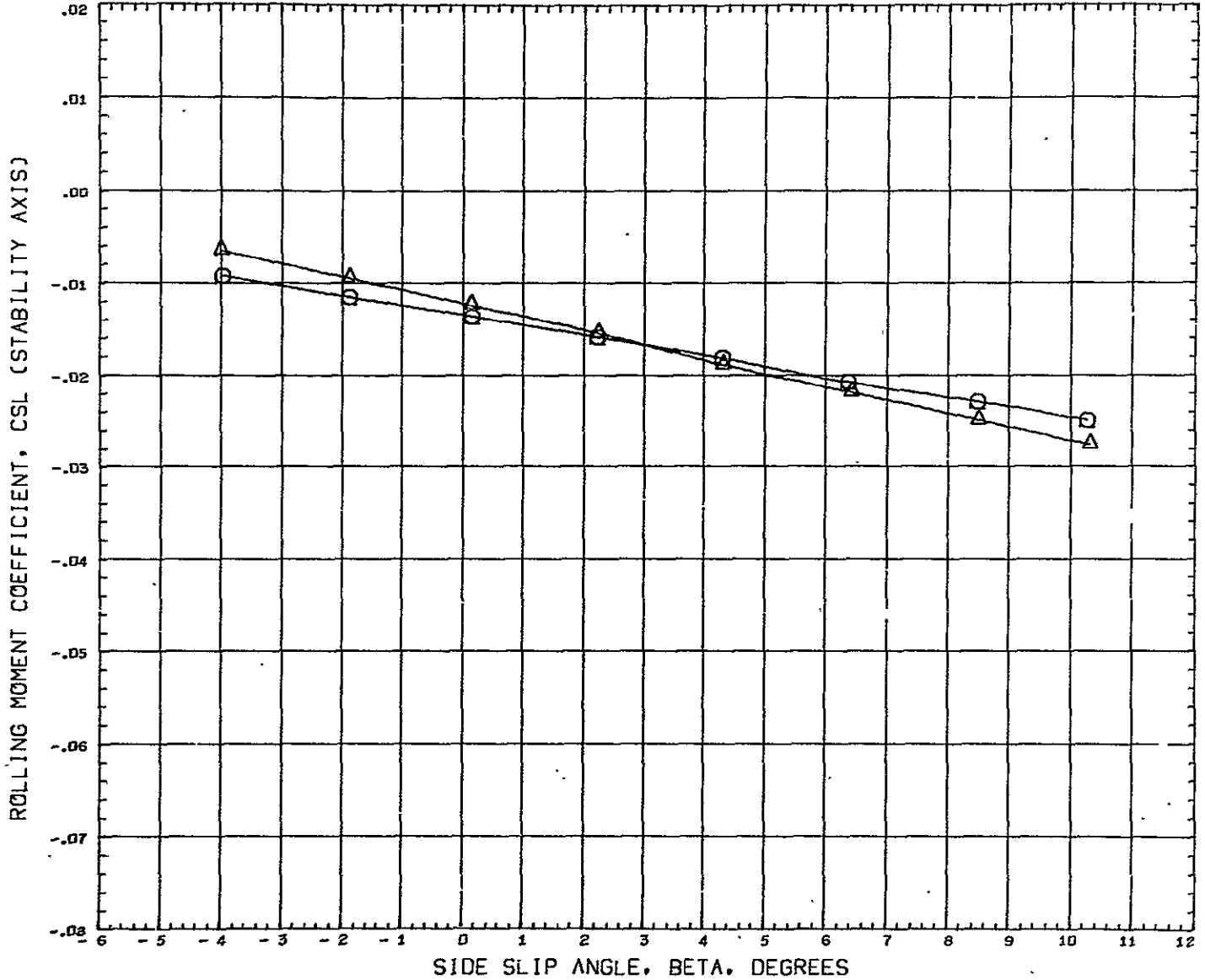
DELTA WING ORBITER-COMPONENT BUILDUP- LATERAL DIRECTIONAL STABILITY



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	RUDDER	RUDFLR	ELVATR	REFERENCE INFORMATION
(R2762D)	MSFC478 NR DELTA ORBITER B5W17E1DX	15.860			0.000	REFS 6084.0040 SQ FT
(R2774D)	MSFC478 NR DELTA ORBITER B5W17E1DV17J2X	15.470	0.000	15.000	0.000	REFL 821.2004 INCHES
						REFB 1422.8040 INCHES
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MACH 1.459

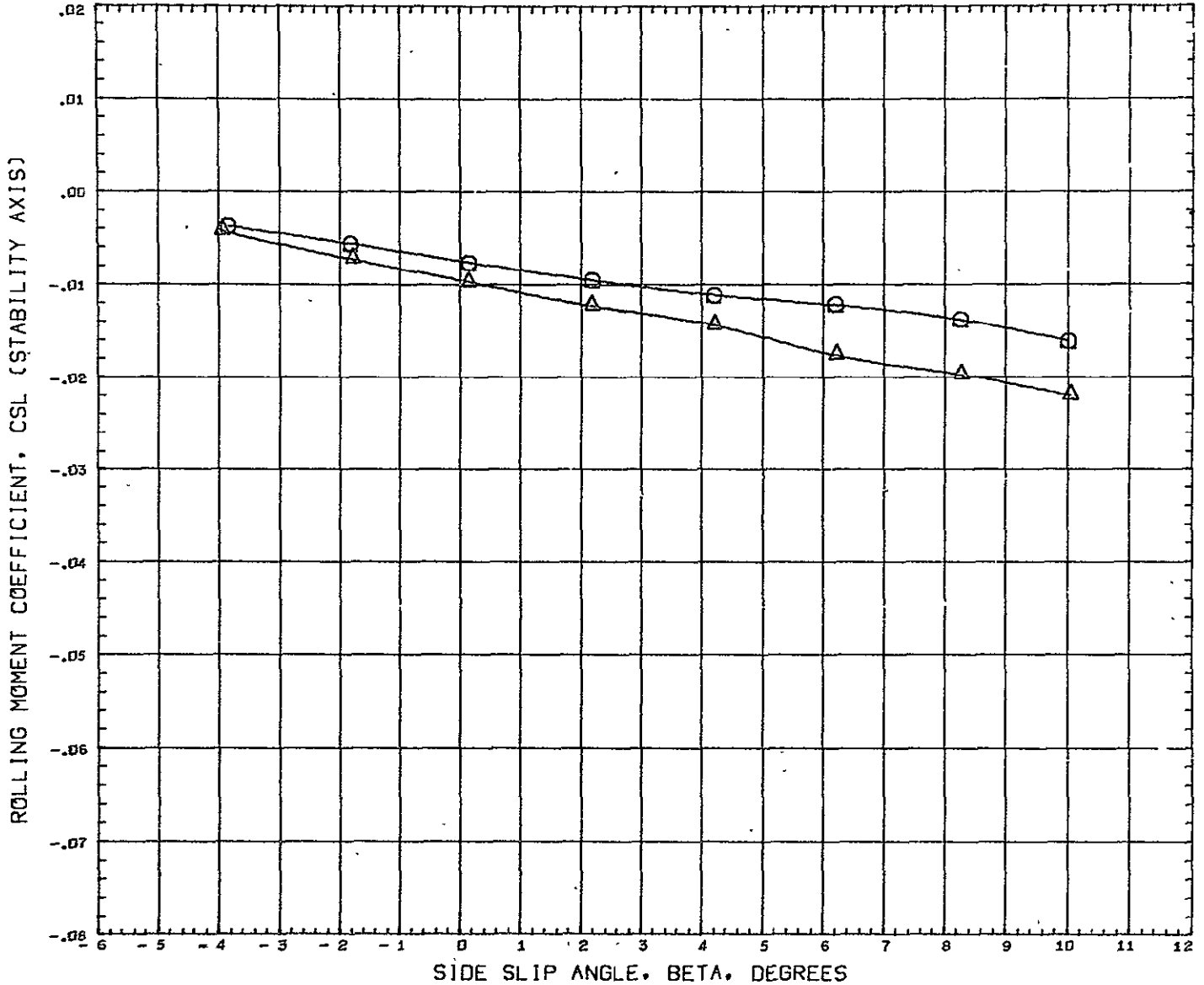
DELTA WING ORBITER-COMPONENT BUILDUP- LATERAL DIRECTIONAL STABILITY



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	RUDDER	RUDFLR	ELVATR	REFERENCE INFORMATION
(R2702D)	MSFC478 NR DELTA ORBITER B5W17E10X	15.860			0.000	REFS 6084.0040 SQ FT
(R2774D)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	15.470	0.000	15.000	0.000	REFL 821.2004 INCHES
						REFB 1422.8040 INCHES
						XMRP 1422.5040 INCHES
						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 1.956

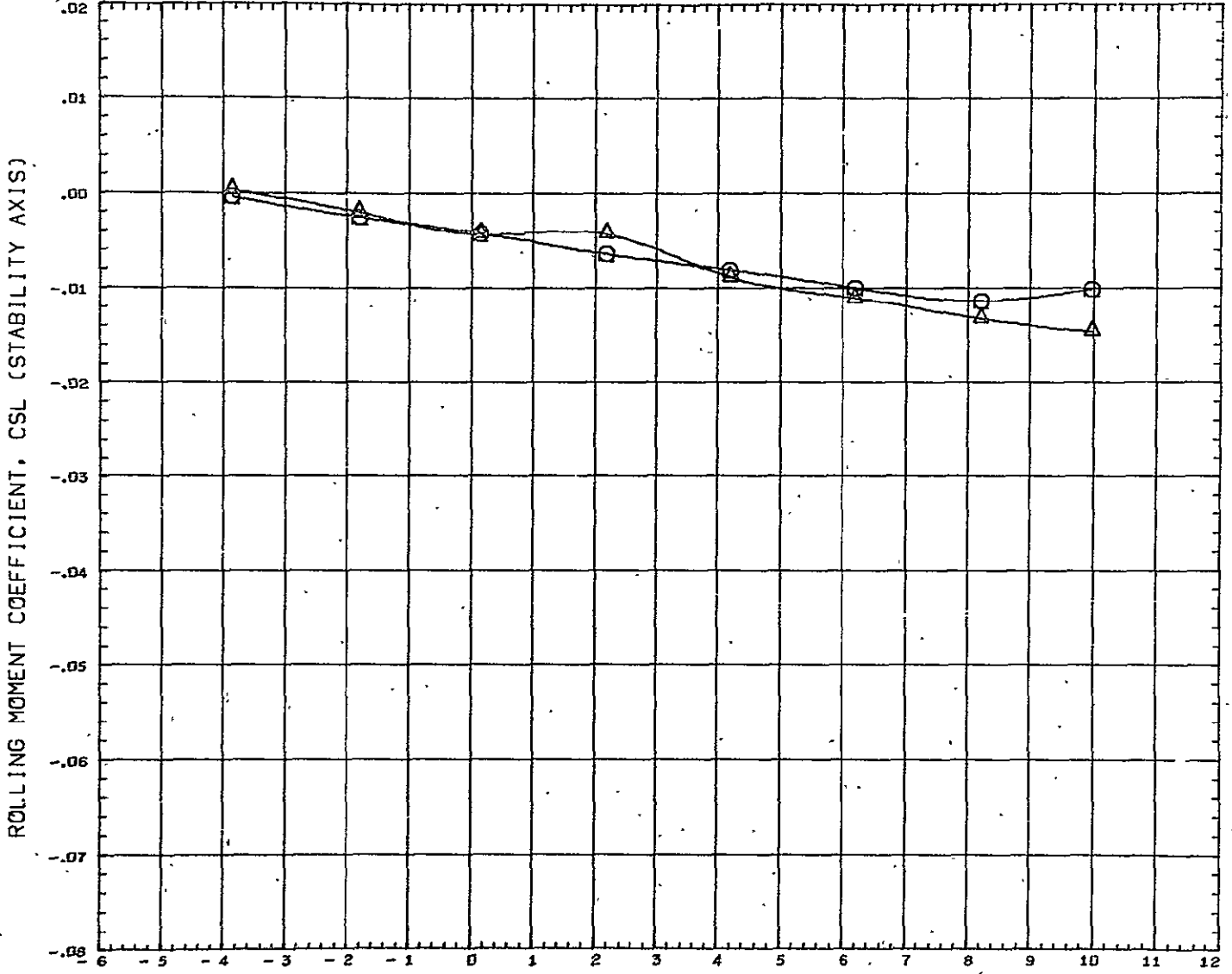
DELTA WING ORBITER-COMPONENT BUILDUP- LATERAL DIRECTIONAL STABILITY



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	RUDDER	RUDFLR	ELVATR	REFERENCE INFORMATION
(R2782C)	MSFC478 NR DELTA ORBITER 85W17E10X	15.860			0.000	REFS 6084.0040 SQ FT
(R2774D)	MSFC478 NR DELTA ORBITER 85W17E10V17J2X	15.470	0.000	15.000	0.000	REFL 821.2004 INCHES
						REFB 1422.8040 INCHES
						XMRP 1422.5040 INCHES
						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 2.995

DELTA WING ORBITER-COMPONENT BUILDUP- LATERAL DIRECTIONAL STABILITY

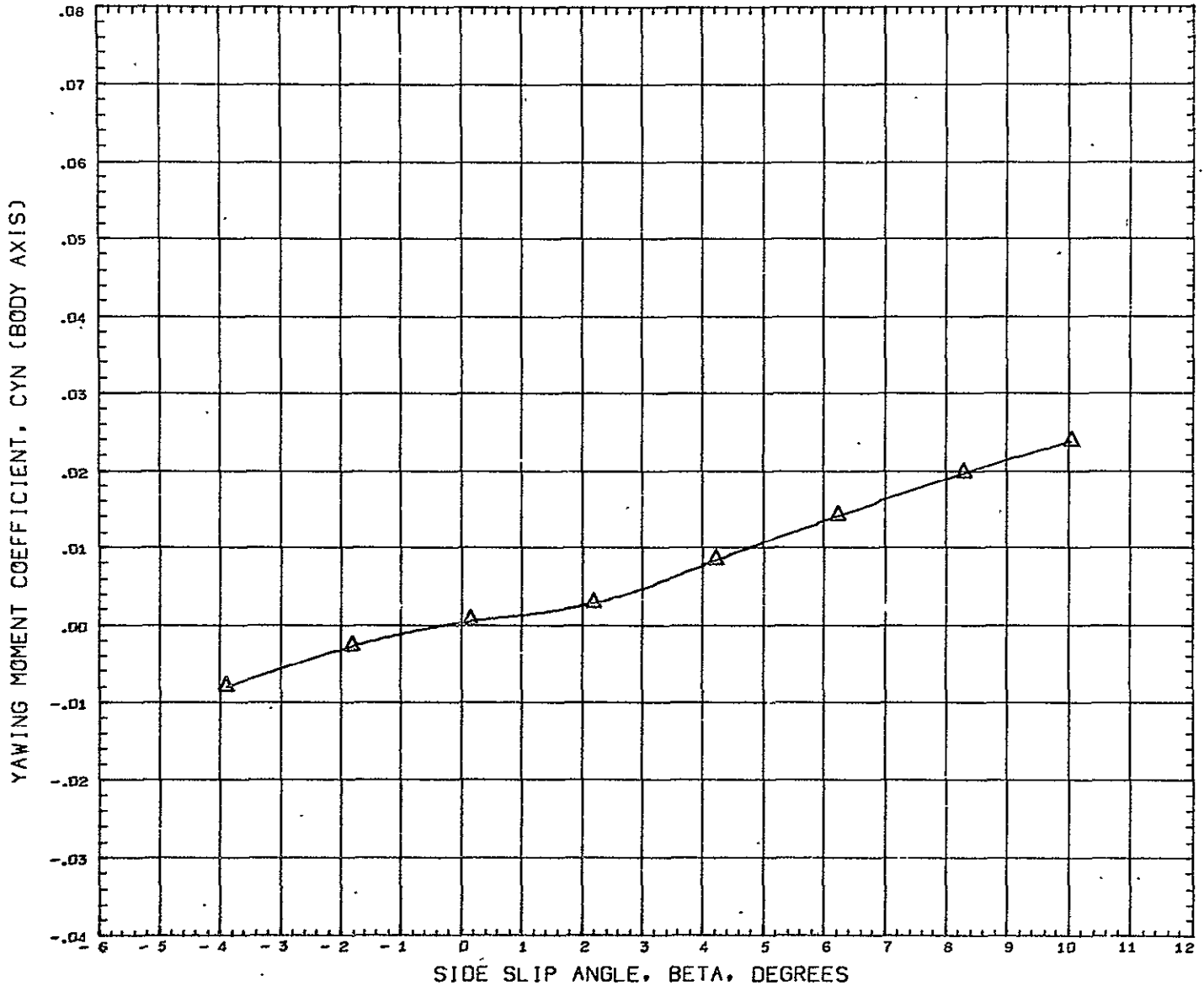


SIDE SLIP ANGLE, BETA, DEGREES

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	RUDDER	RUDFLR	ELVATR	REFERENCE INFORMATION
(R2782D)	○ MSFC478 NR DELTA ORBITER B5W17E10X	15.860			0.000	REFS 6084.0040 SQ FT
(R2774D)	△ MSFC478 NR DELTA ORBITER B5W17E10V17J2X	15.470	0.000	15.000	0.000	REFL 821.2004 INCHES
						REFB 1422.8040 INCHES
						XMRP 1422.5040 INCHES
						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 4.959

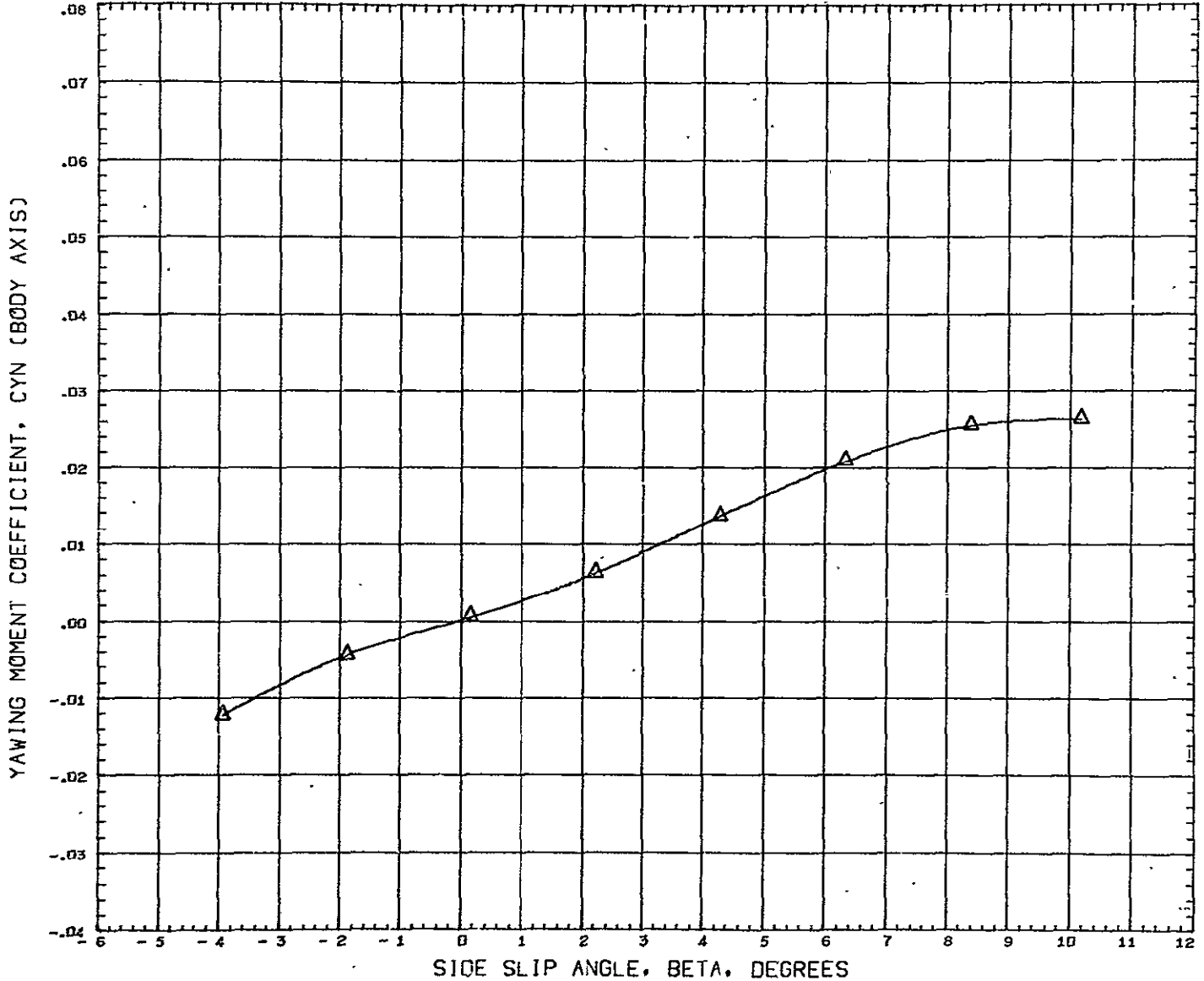
DELTA WING ORBITER-COMPONENT BUILDUP- LATERAL DIRECTIONAL STABILITY



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	RUDDER	RUDFLR	ELVATR	REFERENCE INFORMATION
(82782D)	MSFC478 NR DELTA ORBITER B5W17E10X	15.860			0.000	REFS 6084.0040 SQ FT
(82774D)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	15.470	0.000	15.000	0.000	REFL 821.2004 INCHES
						REFB 1422.8040 INCHES
						XNRF 1422.5040 INCHES
						YNRF 0.0000 INCHES
						ZNRF 130.0004 INCHES
						SCALE 0.0035 SCALE

PACH 0.601

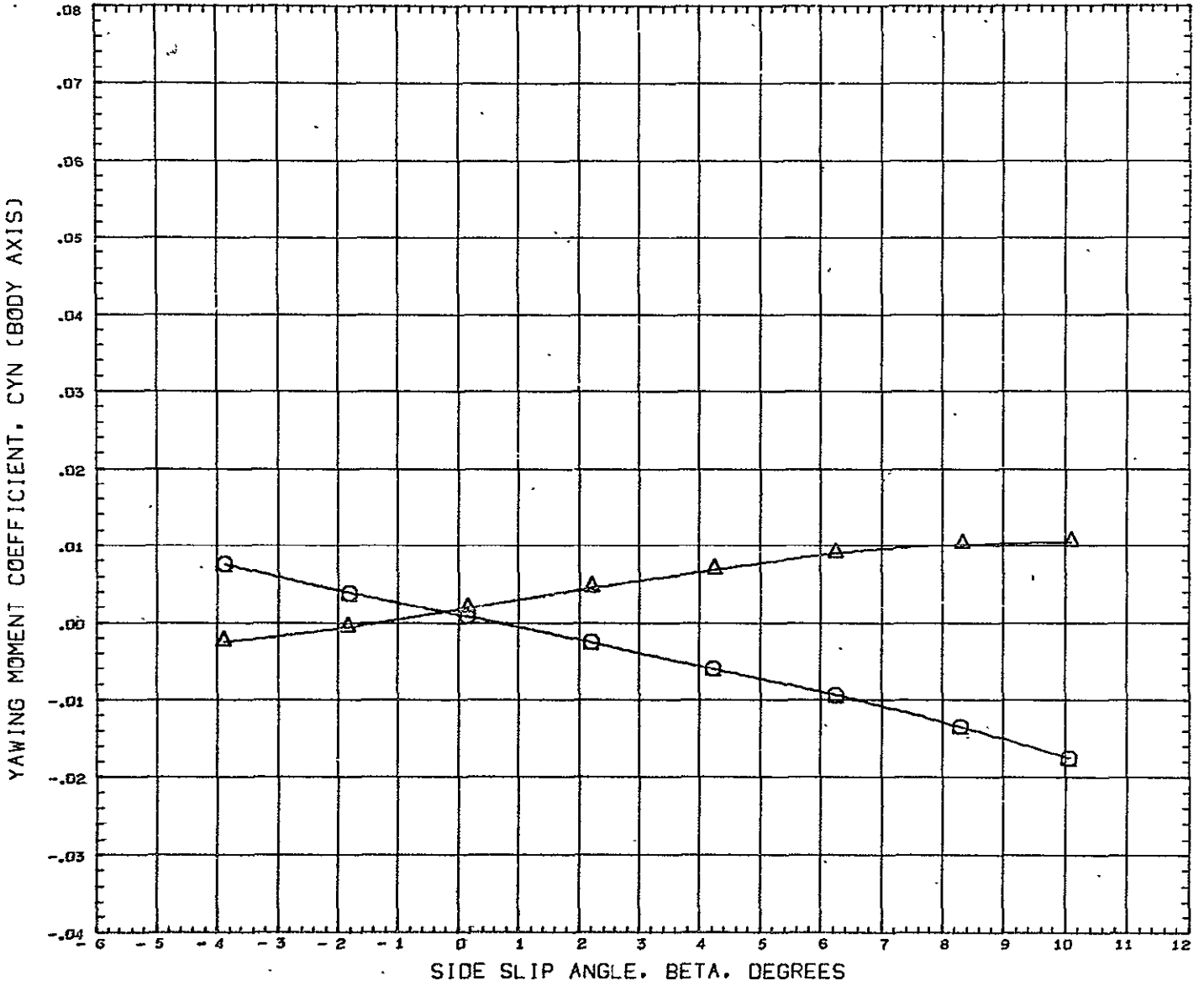
DELTA WING ORBITER-COMPONENT BUILDUP- LATERAL DIRECTIONAL STABILITY



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	RUDDER	RUDFLR	ELVATR	REFERENCE INFORMATION	
(B2762D)	MSFC478 NR DELTA ORBITER B5W17E1DX	15.860			0.000	REFS	6084.0040 SQ FT
(B2774D)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	15.470	0.000	15.000	0.000	REFL	821.2004 INCHES
						REFB	1422.8040 INCHES
						XMRP	1422.5040 INCHES
						YMRP	0.0000 INCHES
						ZMRP	130.0004 INCHES
						SCALE	0.0035 SCALE

MACH 1.002

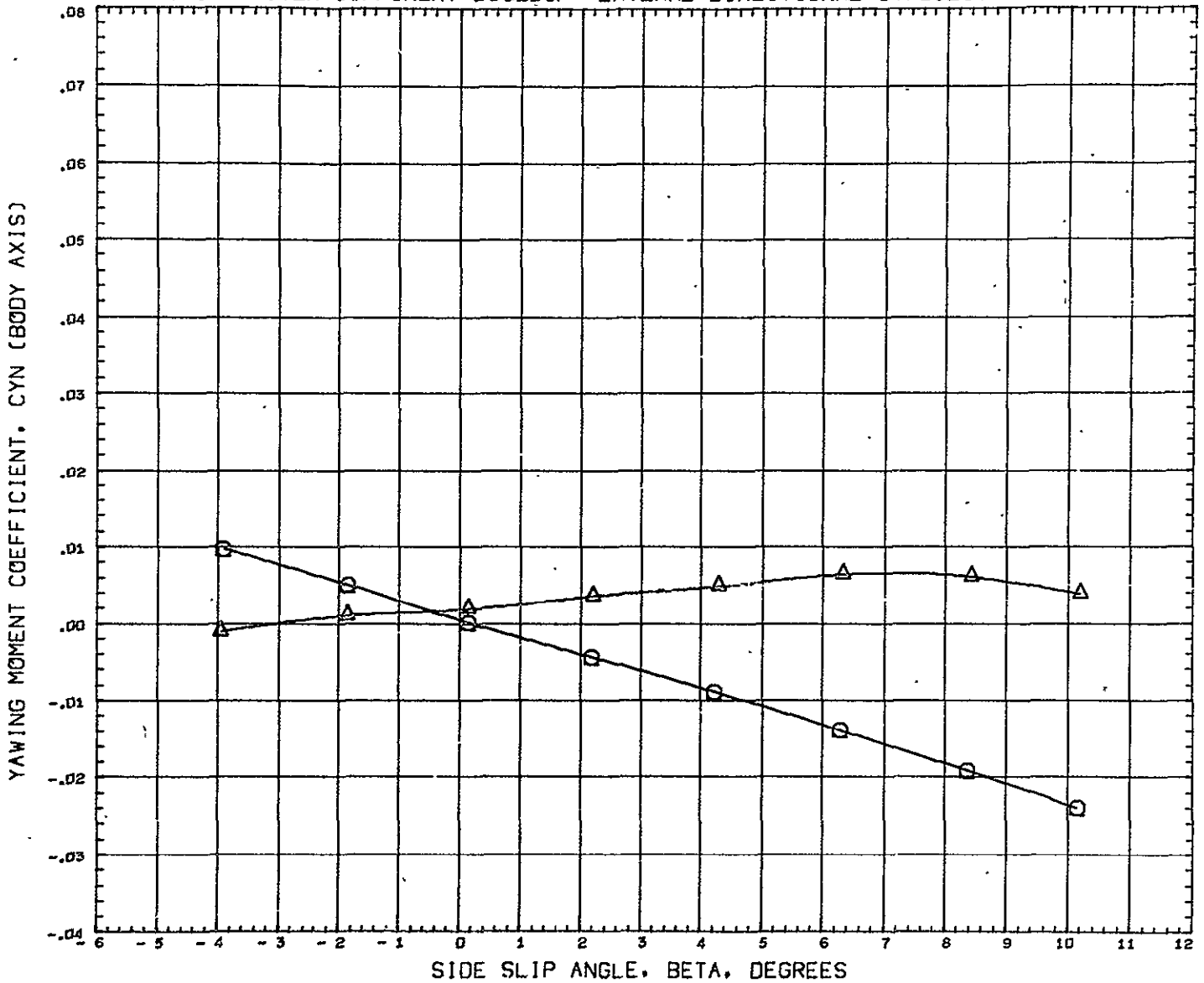
DELTA WING ORBITER-COMPONENT BUILDUP- LATERAL DIRECTIONAL STABILITY



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	RUDDER	RUDFLR	ELVATR	REFERENCE INFORMATION
(B2782D)	MSFC478 NR DELTA ORBITER B5W17E1DX	15.860			0.000	REFS 6084.0040 SQ FT
(B2774D)	MSFC478 NR DELTA ORBITER B5W17E1DV17J2X	15.470	0.000	15.000	0.000	REFL 821.2004 INCHES
						REFB 1422.8040 INCHES
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						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 1.198

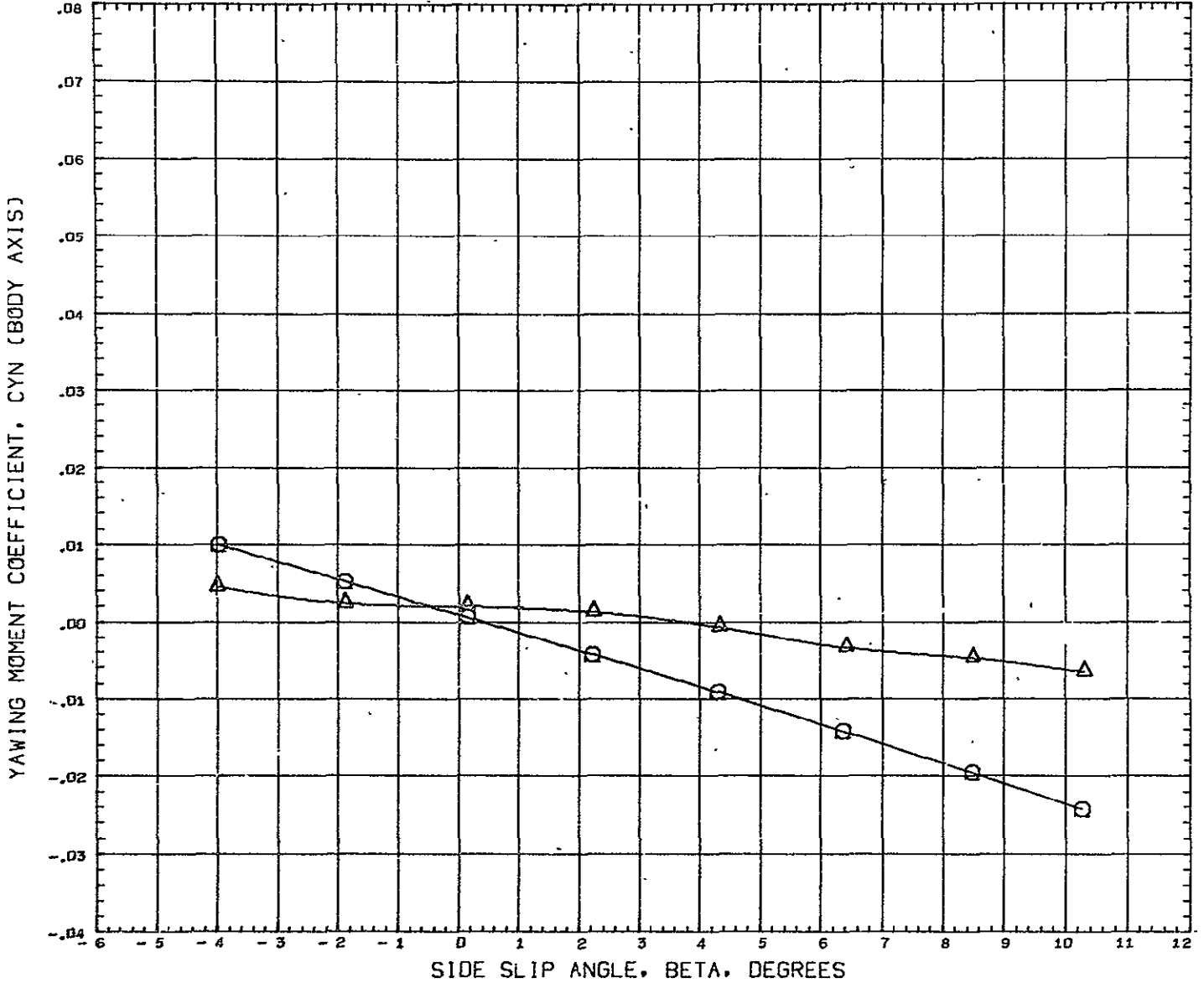
DELTA WING ORBITER-COMPONENT BUILDUP- LATERAL DIRECTIONAL STABILITY



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	RUDDER	RUDFLR	ELVATR	REFERENCE INFORMATION
(B2782C)	MSFC478 NR DELTA ORBITER B5W17E10X	15.860			0.000	REFS 6084.0040 SQ FT
(B2774D)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	15.470	0.000	15.000	0.000	REFL 821.2004 INCHES
						REFB 1422.8040 INCHES
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						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

PACH 1.459

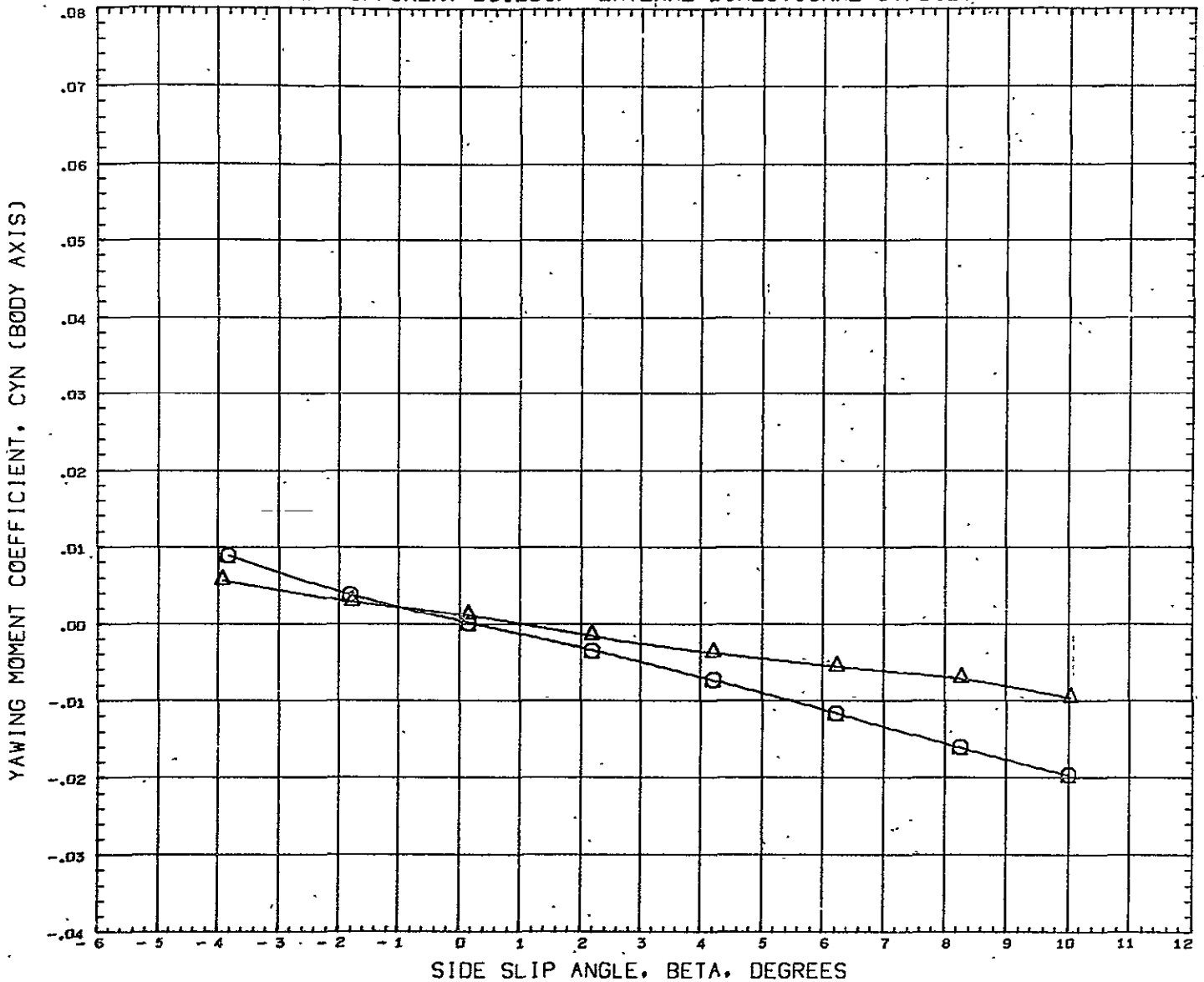
DELTA WING ORBITER-COMPONENT BUILDUP- LATERAL DIRECTIONAL STABILITY



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	RUDDER	RUDFLR	ELVATR	REFERENCE INFORMATION
(B2782D)	MSFC478 NR DELTA ORBITER B5W17E10X	15.860			0.000	REFS 6084.0040 SQ FT
(B2774D)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	15.470	0.000	15.000	0.000	REFL 821.2004 INCHES
						REFB 1422.8040 INCHES
						XMRP 1422.5040 INCHES
						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 1.956

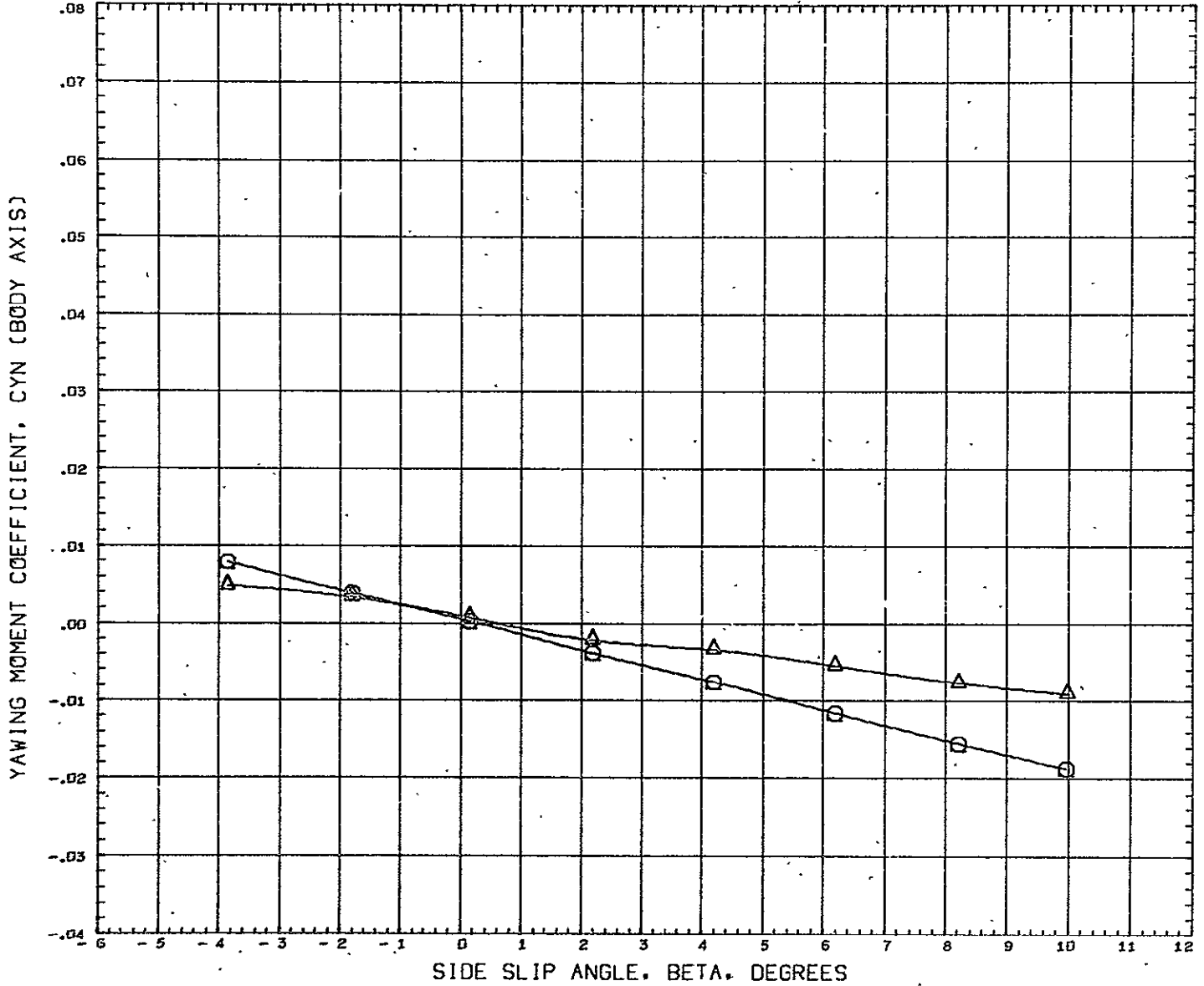
DELTA WING ORBITER-COMPONENT BUILDUP- LATERAL DIRECTIONAL STABILITY



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	RUDDER	RUDFLR	ELVATR	REFERENCE INFORMATION
(B2782D)	MSFC478 NR DELTA ORBITER B5W17E10X	15.860			0.000	REFS 6084.0040 SQ FT
(B2774D)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	15.470	0.000	15.000	0.000	REFL 821.2004 INCHES
						REFB 1422.8040 INCHES
						XMRP 1422.5040 INCHES
						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

HACH 2.995

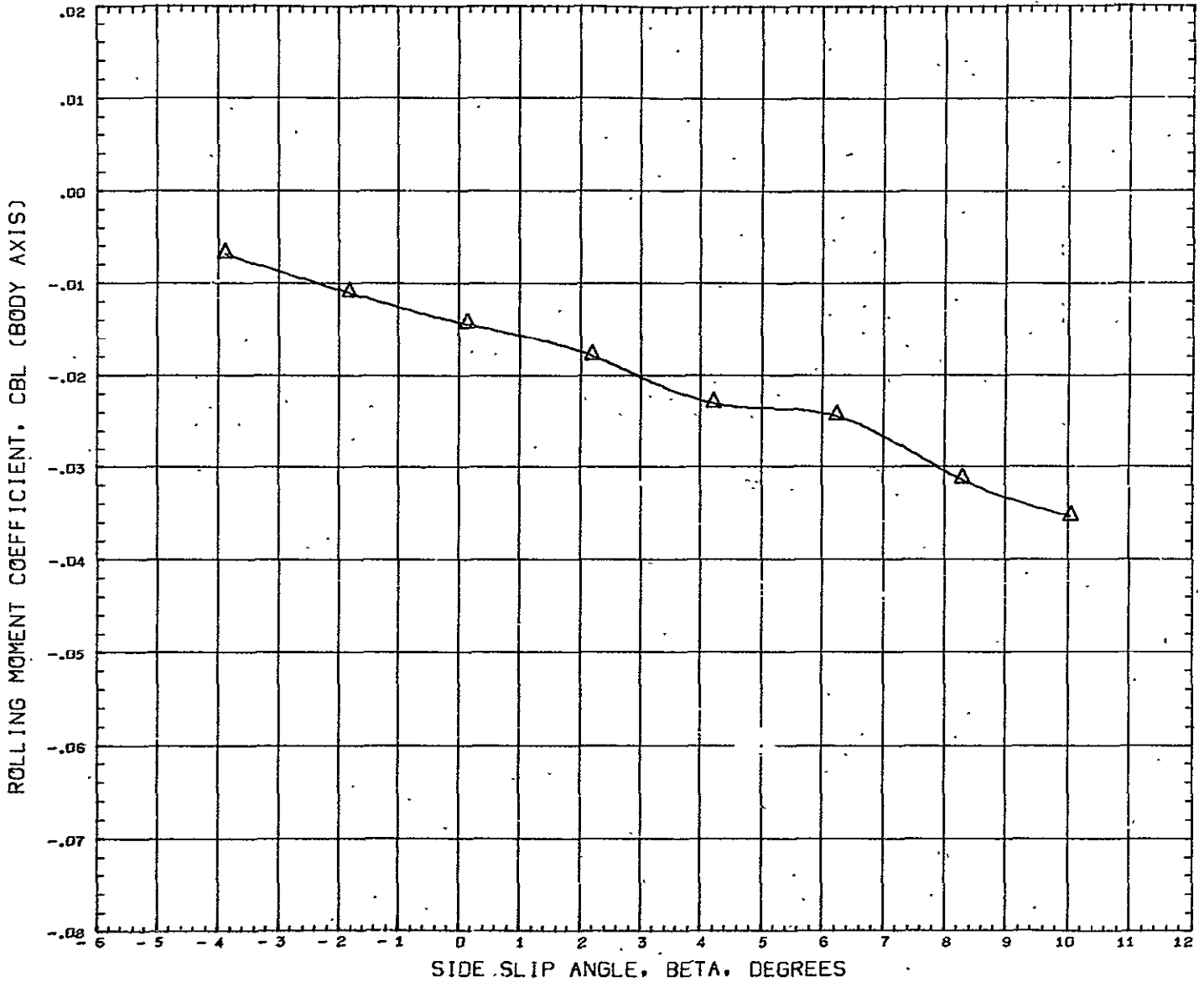
DELTA WING ORBITER-COMPONENT BUILDUP- LATERAL DIRECTIONAL STABILITY



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	RUDDER	RUDFLR	ELVATR	REFERENCE INFORMATION
(B2782D)	MSFC478 NR DELTA ORBITER B5W17E1DX	15.860			0.000	REFS 6084.0040 SQ FT
(B2774D)	MSFC478 NR DELTA ORBITER B5W17E1DV17J2X	15.470	0.000	15.000	0.000	REFL 821.2004 INCHES
						REFB 1422.8040 INCHES
						XMRP 1422.5040 INCHES
						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 4.959

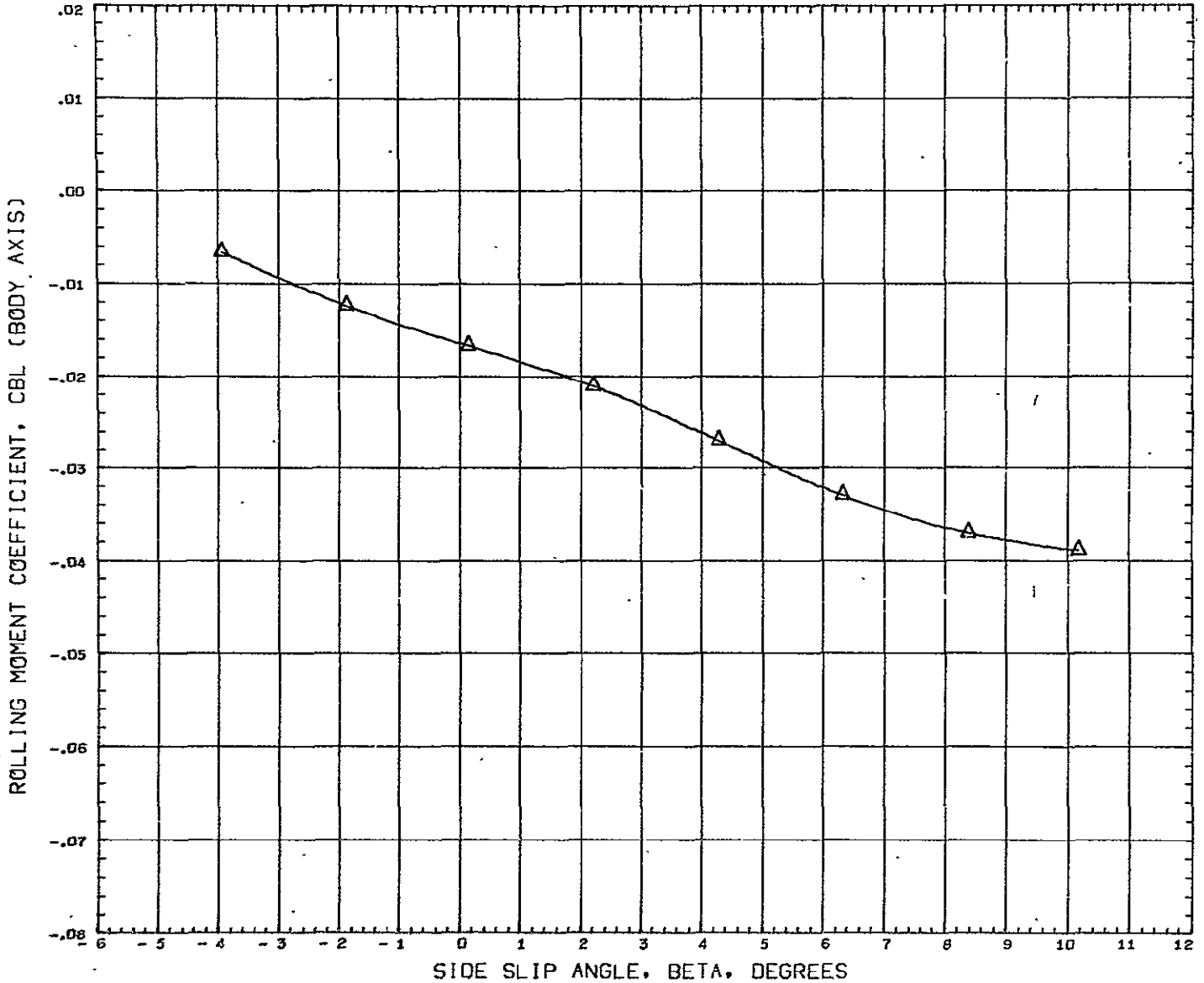
DELTA WING ORBITER-COMPONENT BUILDUP- LATERAL DIRECTIONAL STABILITY



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	RUDDER	RUDFLR	ELVATR	REFERENCE INFORMATION
(B2782D)	MSFC478 NR DELTA ORBITER B5W17E10X	.15.860			0.000	REFS 6084.0040 SQ FT
(B2774D)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	15.470	0.000	15.000	0.000	REFL 821.2004 INCHES
						REFB 1422.8040 INCHES
						XHRF 1422.5040 INCHES
						YHRF 0.0000 INCHES
						ZHRF 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 0.601

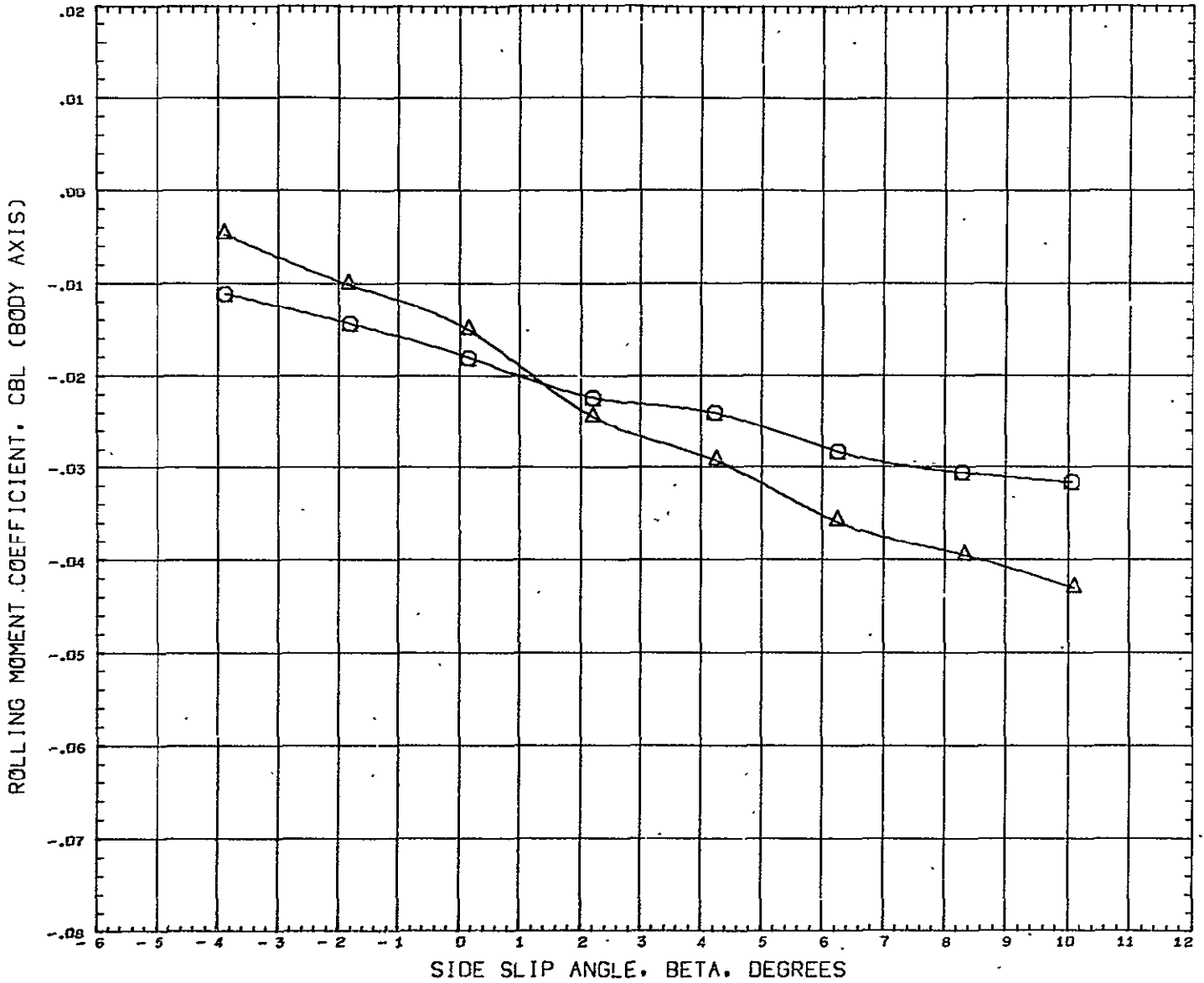
DELTA WING ORBITER-COMPONENT BUILDUP- LATERAL DIRECTIONAL STABILITY



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	RUDDER	RUDFLR	ELVATR	REFERENCE INFORMATION
(B2782D)	MSFC478 NR DELTA ORBITER B5W17E1UX	15.860			0.000	REFS 6084.0040 SQ FT
(B2774D)	MSFC478 NR DELTA ORBITER B5W17E1DV17J2X	15.470	0.000	15.000	0.000	REFL 821.2004 INCHES
						REFB 1422.8040 INCHES
						XMRP 1422.5040 INCHES
						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 1.002

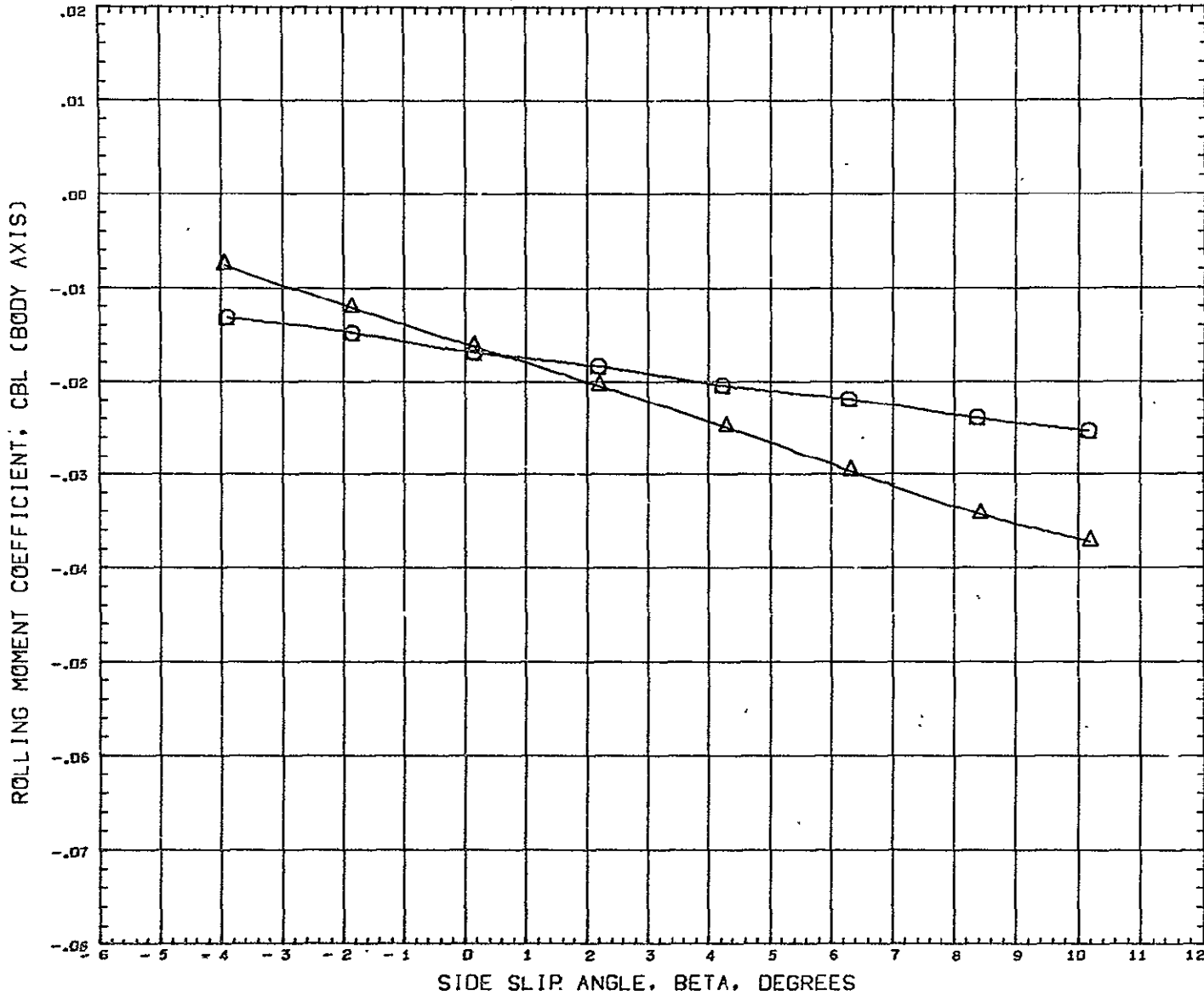
DELTA WING ORBITER-COMPONENT BUILDUP- LATERAL DIRECTIONAL STABILITY



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	RUDDER	RUDFLR	ELVATR	REFERENCE INFORMATION
(B2782D)	MSFC478 NR DELTA ORBITER B5W17E10X	15.860			0.000	REFS 6084.0040 SQ FT
(B2774D)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	15.470	0.000	15.000	0.000	REFL 821.2004 INCHES
						REFB 1422.8040 INCHES
						XMRP 1422.5040 INCHES
						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 1.198

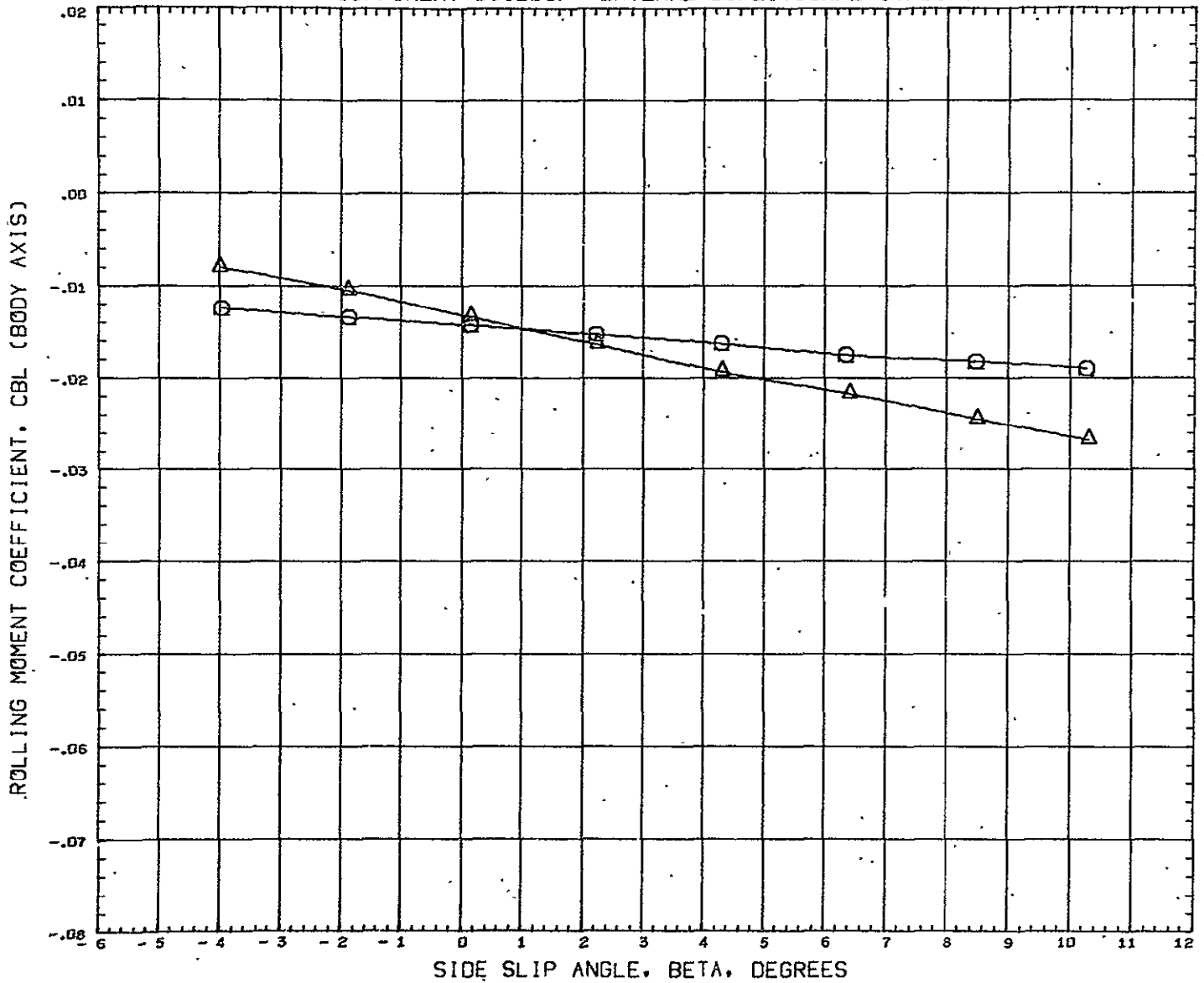
DELTA WING ORBITER-COMPONENT BUILDUP- LATERAL DIRECTIONAL STABILITY



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	RUDDER	RUCFLR	ELVATR	REFERENCE INFORMATION
(82762D)	MSFC478 NR DELTA ORBITER B5W17E1UX	15.860			0.000	REFS 6084.0040 SQ FT
(82774D)	MSFC478 NR DELTA ORBITER B5W17E1DV17J2X	15.470	0.000	15.000	0.000	REFL 821.2004 INCHES
						REFB 1422.8040 INCHES
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						YMRP 0.0000 INCHES
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						SCALE 0.0035 SCALE

MACH 1.459

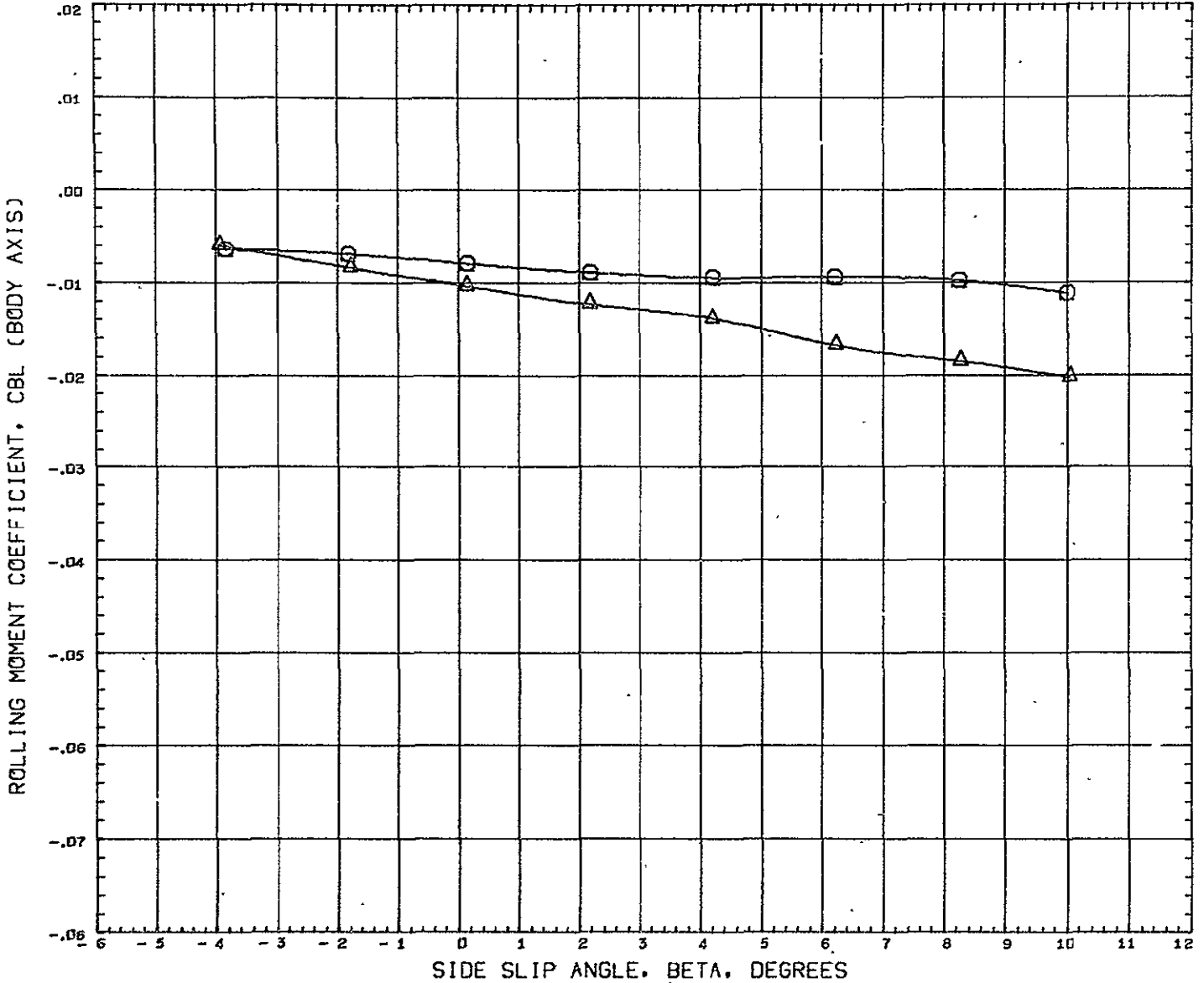
DELTA WING ORBITER-COMPONENT BUILDUP- LATERAL DIRECTIONAL STABILITY



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	RUDDER	RUDFLR	ELVATR	REFERENCE INFORMATION
(B2782C)	MSFC478 NP DELTA ORBITER B5W17E10X	15.860			0.000	REFS 6084.0040 SQ FT
(B2774D)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	15.470	0.000	15.000	0.000	REFL 821.2004 INCHES
						REFB 1422.8040 INCHES
						XMRP 1422.5040 INCHES
						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 1.956

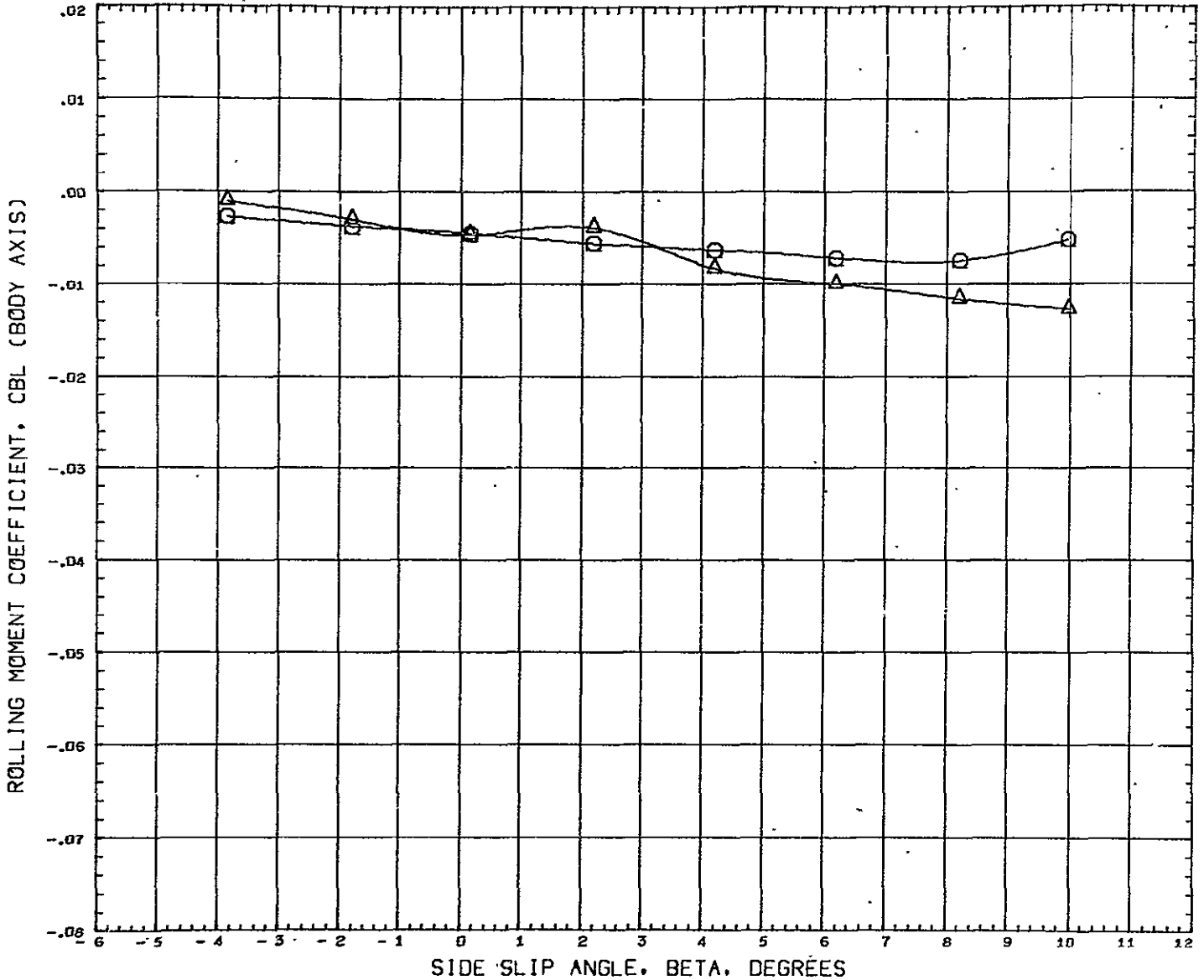
DELTA WING ORBITER-COMPONENT BUILDUP- LATERAL DIRECTIONAL STABILITY



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	RUDDER	RUDFLR	ELVATR	REFERENCE INFORMATION
(B2782D)	MSFC478 NR DELTA ORBITER B5W17E1UX	15.860			0.000	REFS 6084.0040 SQ FT
(B2774D)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	15.470	0.000	15.000	0.000	REFL 821.2004 INCHES
						REFB 1422.8040 INCHES
						XMRP 1422.5040 INCHES
						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 2.995

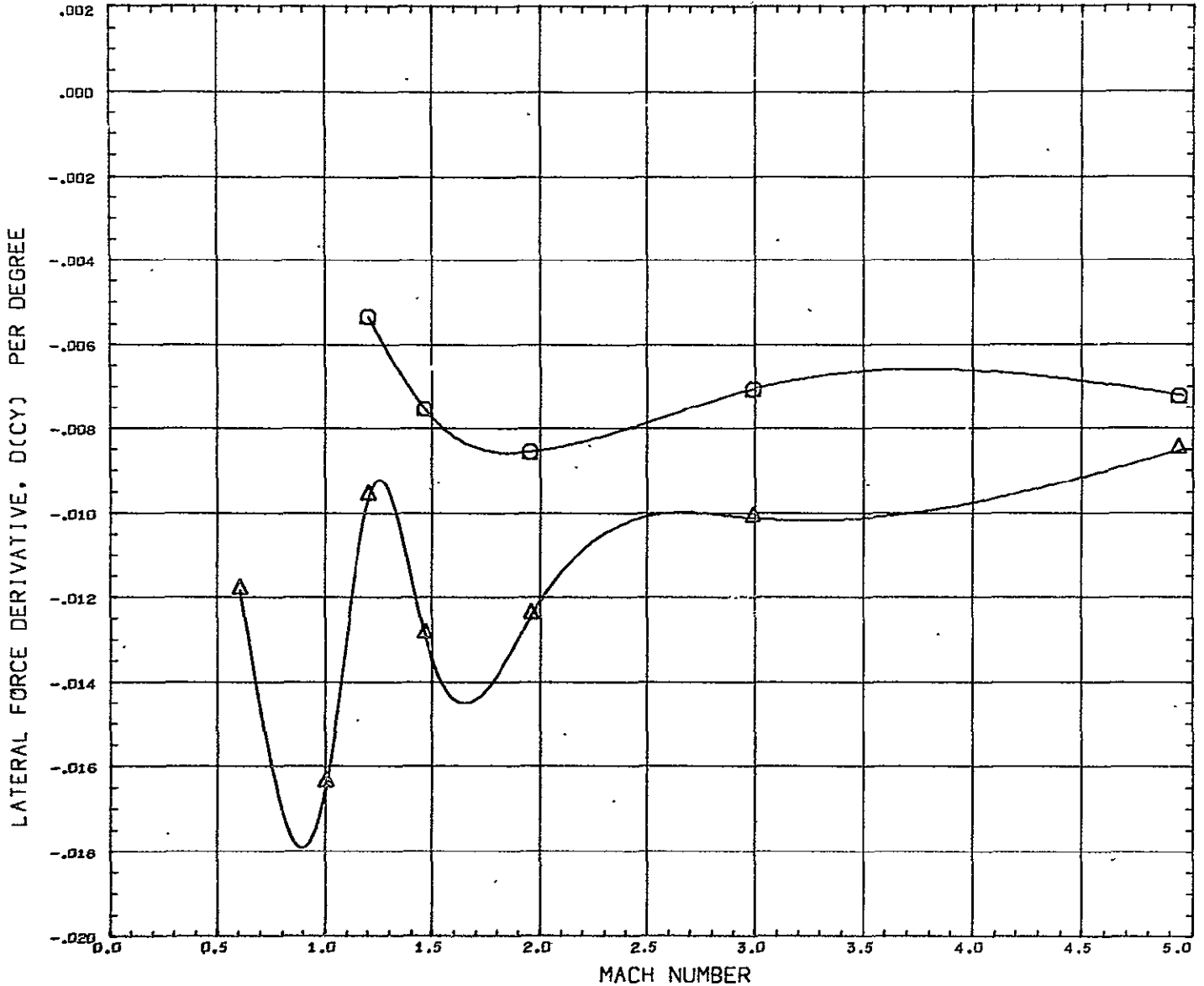
DELTA WING ORBITER-COMPONENT BUILDUP- LATERAL DIRECTIONAL STABILITY



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	RUDDER	RUDFLR	ELVATR	REFERENCE INFORMATION
(B2782D)	MSFC478 NR DELTA ORBITER B5W17E1DX	15.860			0.000	REFS 6084.0040 SQ FT
(B2774D)	MSFC478 NR DELTA ORBITER B5W17E1DV17J2X	15.470	0.000	15.000	0.000	REFL 821.2004 INCHES
						REFB 1422.8040 INCHES
						XMRF 1422.5040 INCHES
						YMRF 0.0000 INCHES
						ZMRF 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 4.959

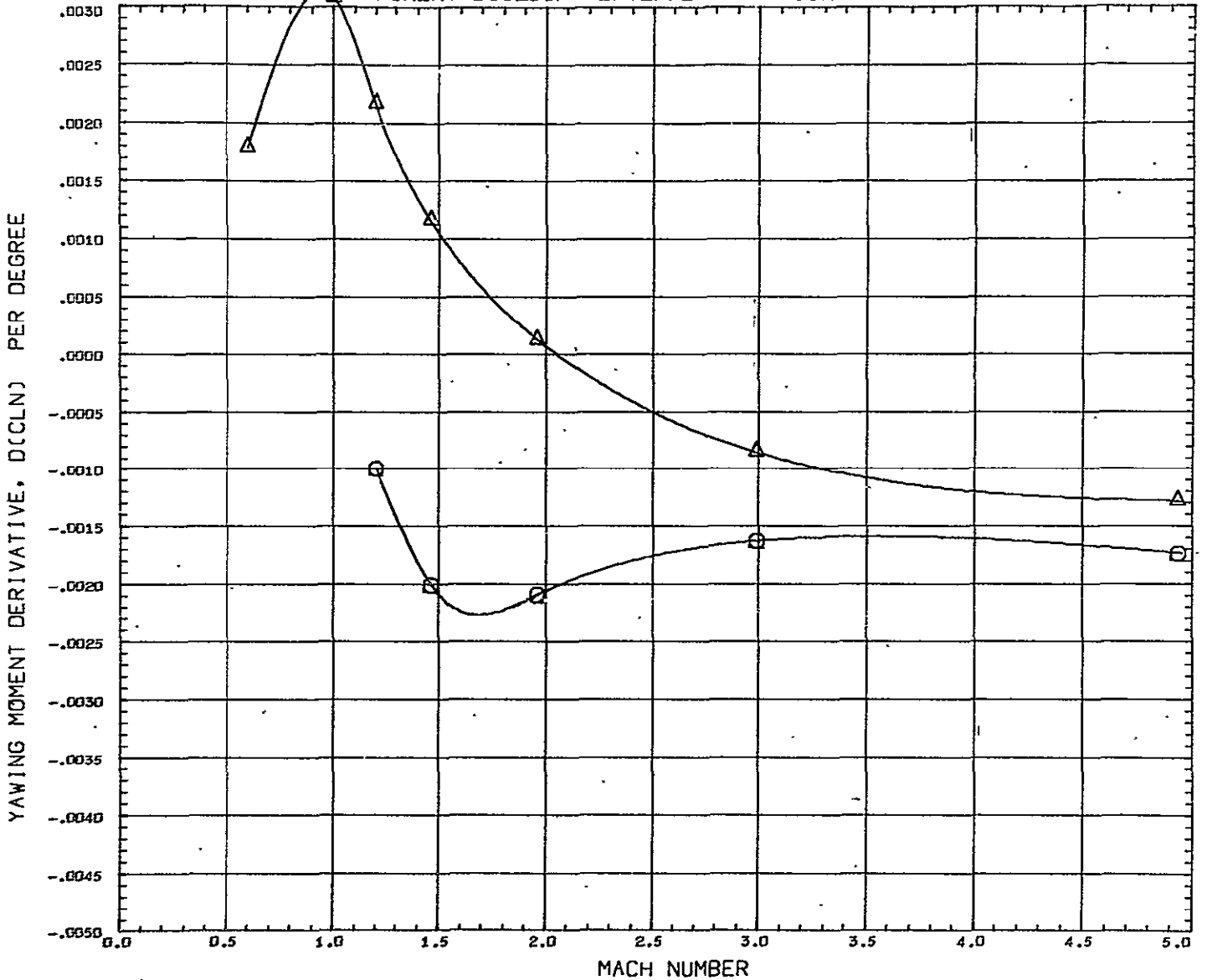
DELTA WING ORBITER-COMPONENT BUILDUP- LATERAL DIRECTIONAL STABILITY



DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(R2782D)	HSFC478 NR DELTA ORBITER B5W17E10X
(R2774D)	HSFC478 NR DELTA ORBITER B5W17E10V17J2X

ALPHA	RUDDER	RUDFLR	ELVATR	REFERENCE INFORMATION
15.860			0.000	REFS 6084.0040 SQ FT
15.470	0.000	15.000	0.000	REFL 821.2004 INCHES
				REFB 1422.8040 INCHES
				XMRP 1422.5040 INCHES
				YMRP 0.0000 INCHES
				ZMRP 130.0004 INCHES
				SCALE 0.0035 SCALE

DELTA WING ORBITER COMPONENT BUILDUP- LATERAL DIRECTIONAL STABILITY

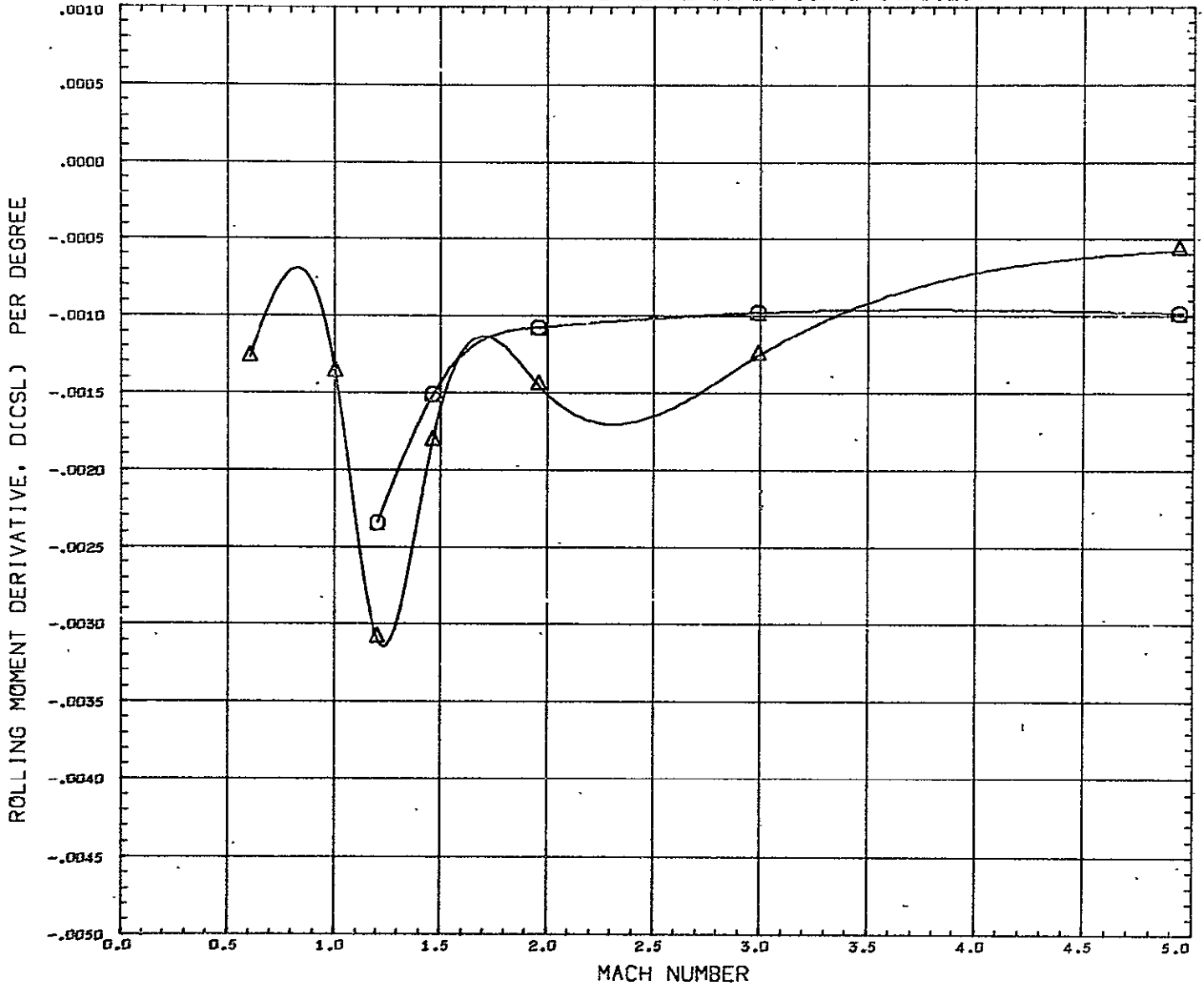


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MACH NUMBER

ALPHA	RUDDER	RUDFLR	ELVATR	REFERENCE INFORMATION
15.860			0.000	REFS 6084.0040 SQ FT
15.470	0.000	15.000	0.000	REFL 821.2004 INCHES
				REFB 1422.8040 INCHES
				YMRP 1422.5040 INCHES
				ZMRP 0.0000 INCHES
				ZMRP 130.0004 INCHES
				SCALE 0.0035 SCALE

DELTA WING ORBITER-COMPONENT BUILDUP- LATERAL DIRECTIONAL STABILITY

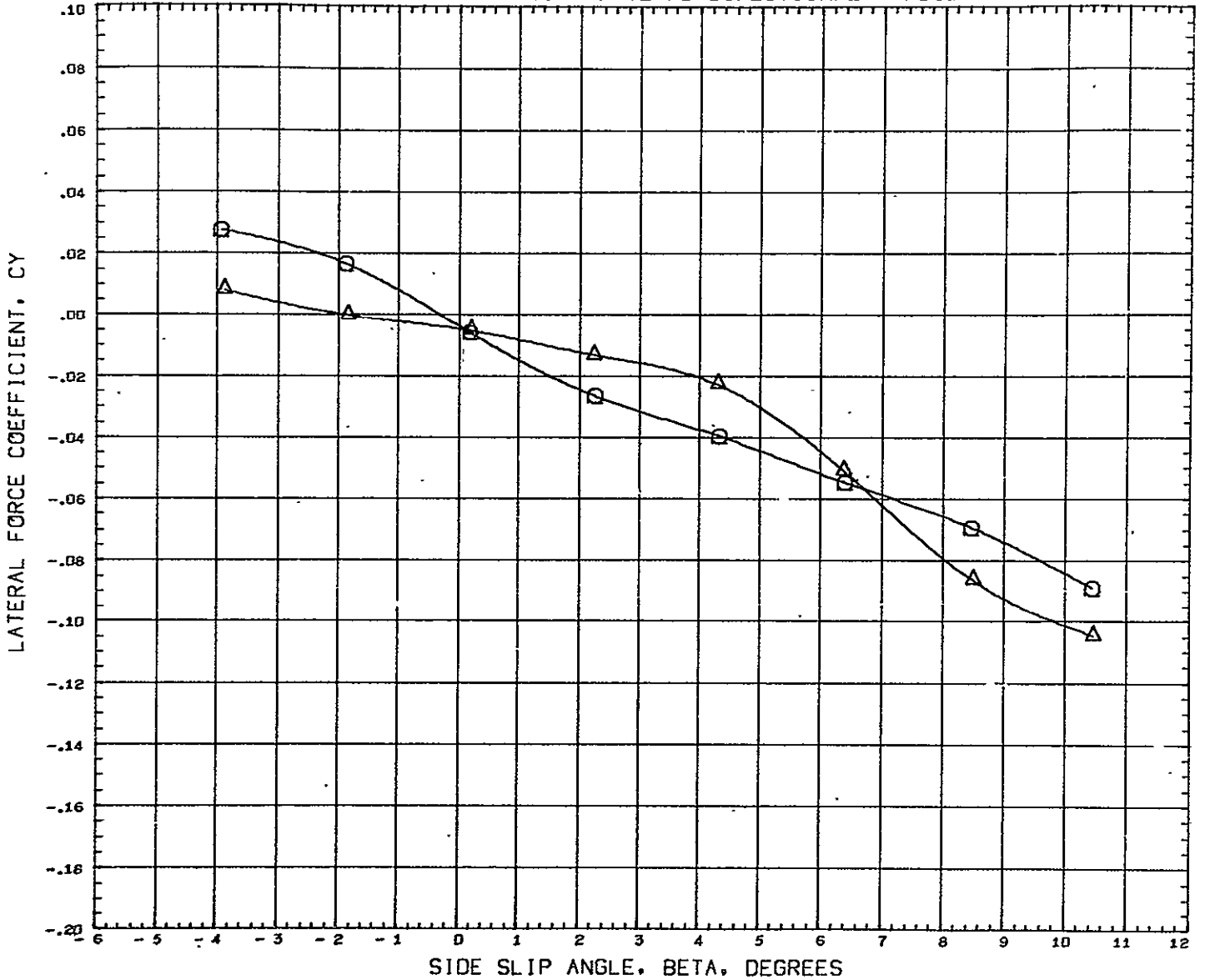


DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(R2762D) ○	MSFC478 NR DELTA ORBITER B5W17E10X
(R2774D) △	MSFC478 NR DELTA ORBITER B5W17E1DV17J2X

ALPHA	RUDDER	RUDFLR	ELVATR
15.860			0.000
15.470	0.000	15.000	0.000

REFERENCE INFORMATION	
REFS	6084.0040 SQ FT
REFL	821.2004 INCHES
REFB	1422.8040 INCHES
XMRF	1422.5040 INCHES
YMRF	0.0000 INCHES
ZMRF	130.0004 INCHES
SCALE	0.0035 SCALE

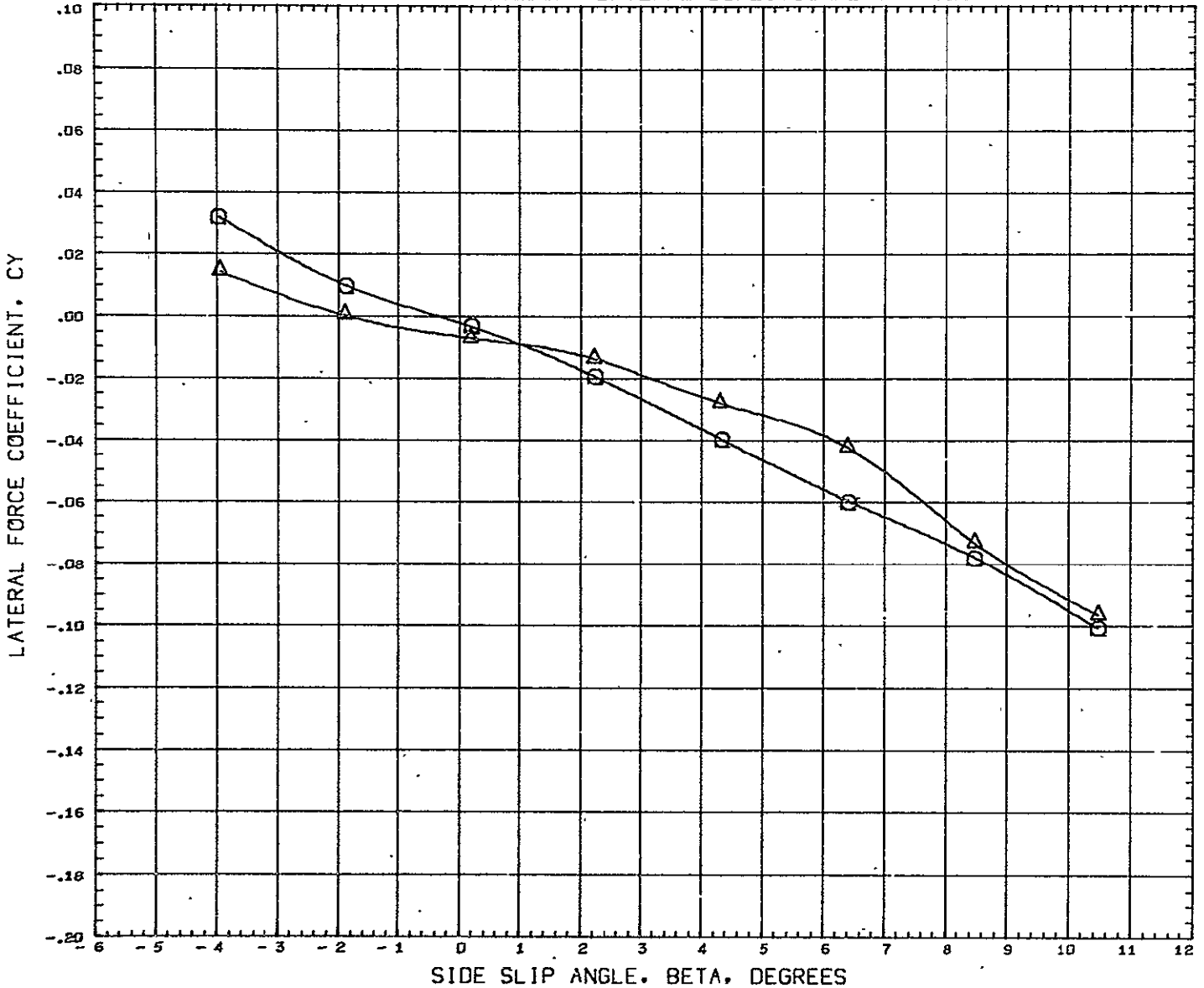
DELTA WING ORBITER-COMPONENT BUILDUP- LATERAL DIRECTIONAL STABILITY



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	RUDDER	RUDFLR	ELVATR	REFERENCE INFORMATION
(R2783D)	MSFC478 NR DELTA ORBITER B5W17E10X	32.900			0.000	REFS 6084.0040 SQ FT
(R2775D)	MSFC478 NR DELTA ORBITER B5W17E1DV17J2X	32.880	0.000	15.000	0.000	REFL 821.2004 INCHES
						REFB 1422.8040 INCHES
						XMRP 1422.5040 INCHES
						YMRP 0.0000 INCHES
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						SCALE 0.0035 SCALE

HACH 1.198

DELTA WING ORBITER-COMPONENT BUILDUP- LATERAL DIRECTIONAL STABILITY



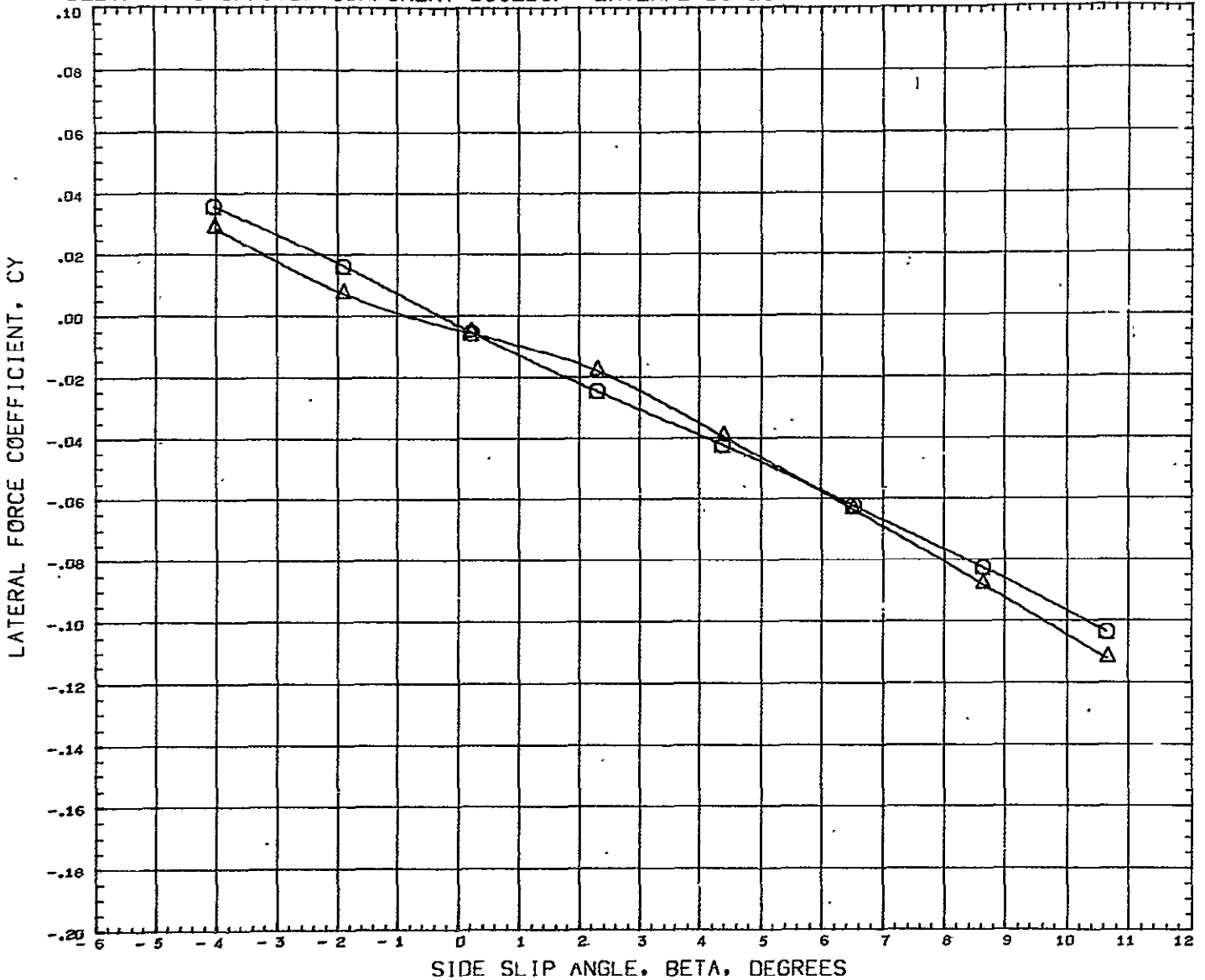
DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(R2763D) ○	HSFC478 NR DELTA ORBITER B5W17E10X
(R2775D) △	HSFC478 NR DELTA ORBITER B5W17E10V17J2X

ALPHA	32.900
RUDDER	0.000
RUDFLR	15.000
ELVATR	0.000

REFERENCE INFORMATION
REFS 6084.0040 SQ FT
REFL 821.2004 INCHES
REFB 1422.8040 INCHES
XMRP 1422.5040 INCHES
YMRP 0.0000 INCHES
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SCALE 0.0035 SCALE

MACH 1.461

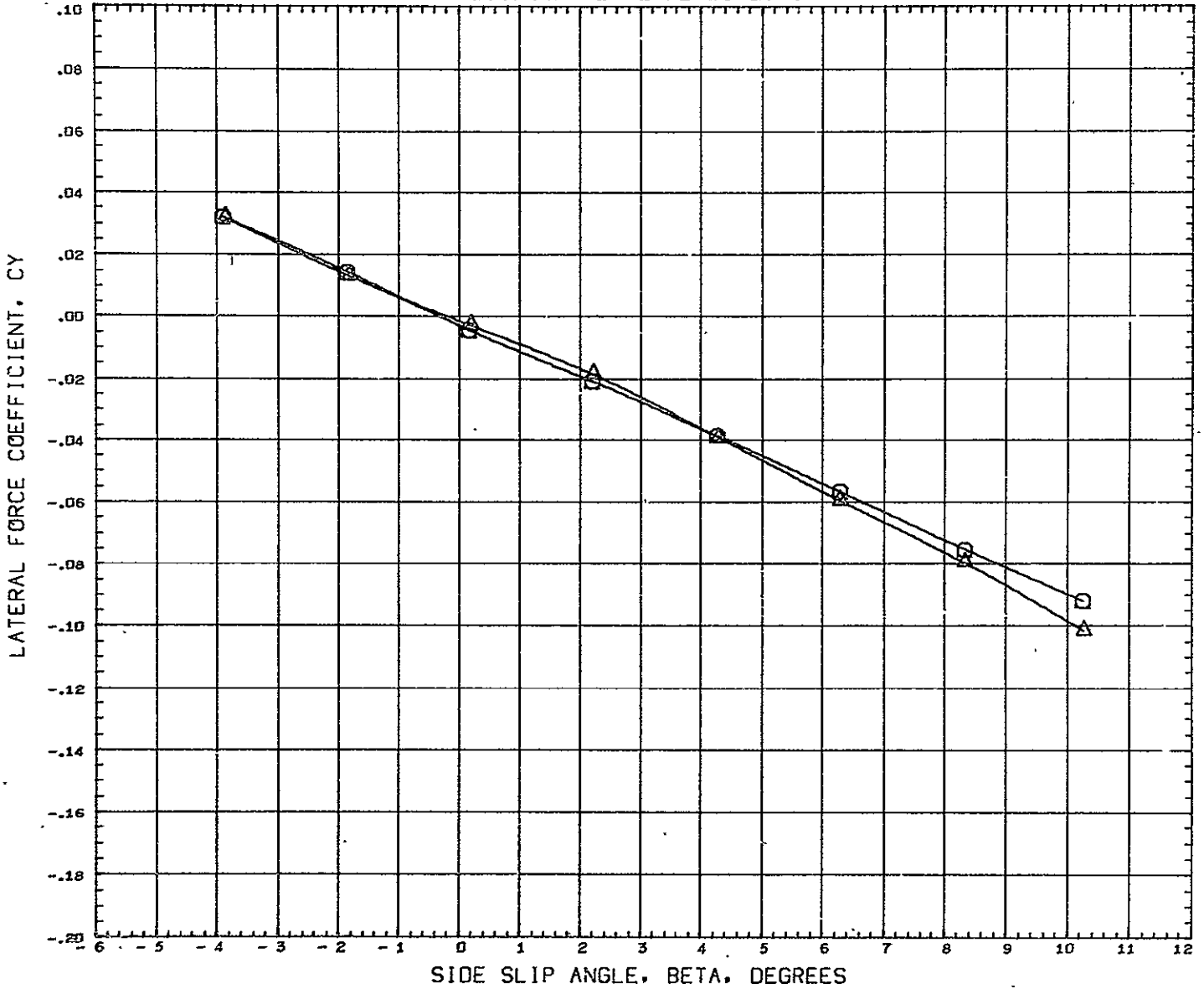
DELTA WING ORBITER-COMPONENT BUILDUP- LATERAL DIRECTIONAL STABILITY



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	RUDDER	RUDFLR	ELVATR	REFERENCE INFORMATION
(R2783D)	MSFC478 NR DELTA ORBITER B5W17E10X	32.900			0.000	REFS 6084.0040 SQ FT
(R2775D)	MSFC478 NR DELTA ORBITER B5W17E1DV17J2X	32.880	0.000	15.000	0.000	REFL 821.2004 INCHES
						REFB 1422.8040 INCHES
						XHRF 1422.5040 INCHES
						YHRF 0.0000 INCHES
						ZHRF 130.0004 INCHES
						SCALE 0.0035 SCALE

PACH 1.961

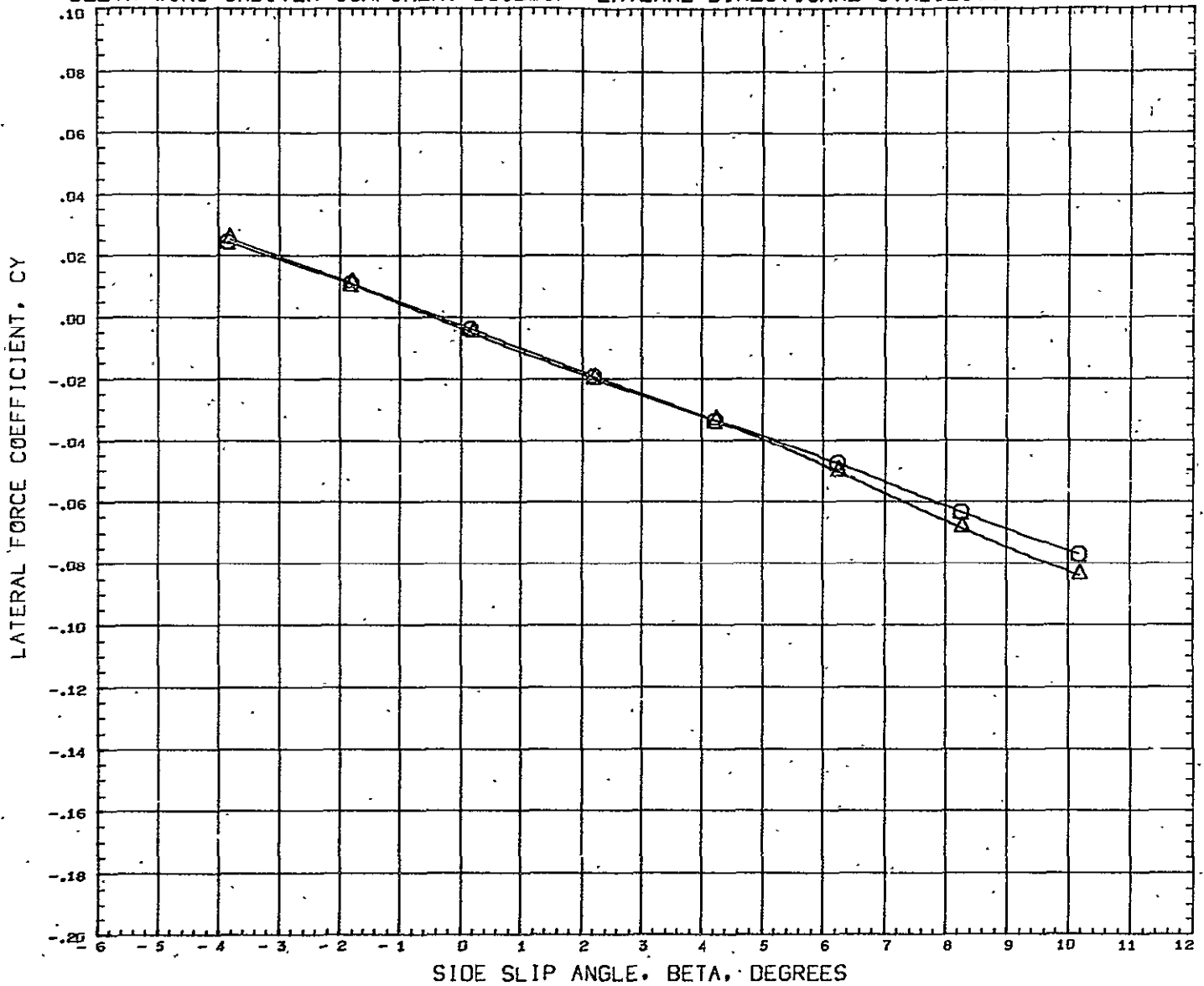
DELTA WING ORBITER-COMPONENT BUILDUP- LATERAL DIRECTIONAL STABILITY



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	RUDDER	RUDFLR	ELVATR	REFERENCE INFORMATION
(R2783D)	MSFC478 NR DELTA ORBITER B5W17E10X	32.900			0.000	REFS 6084.0040 SQ FT
(R2775D)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	32.880	0.000	15.000	0.000	REFL 821.2004 INCHES
						REFB 1422.8040 INCHES
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						YMRP 0.0000 INCHES
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						SCALE 0.0035 SCALE

MACH 2.990

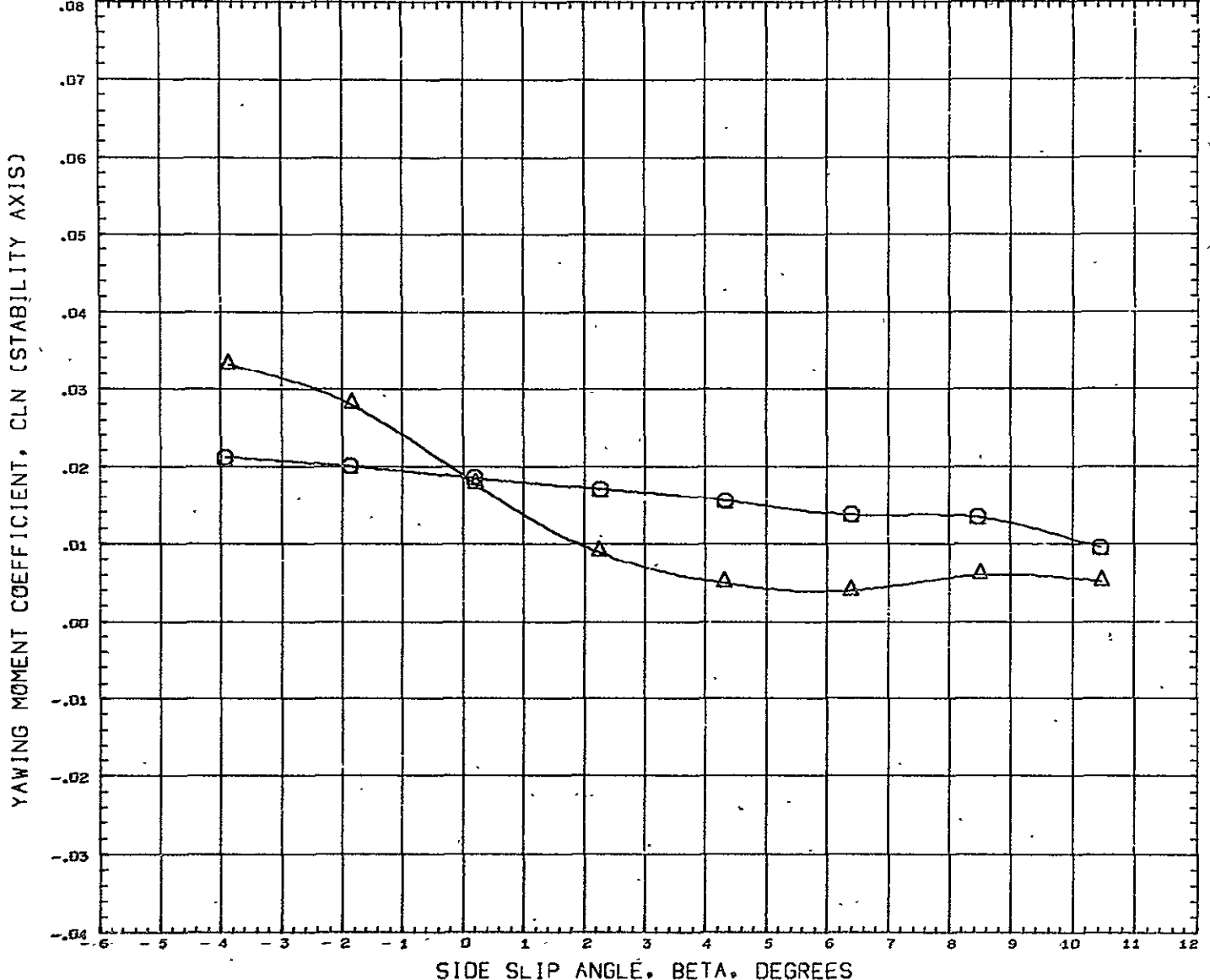
DELTA WING ORBITER-COMPONENT BUILDUP- LATERAL DIRECTIONAL STABILITY



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	RUDDER	RUDFLR	ELVATR	REFERENCE INFORMATION
(R2783D)	MSFC478 NR DELTA ORBITER B5W17E10X	32.900			0.000	REFS 6084.0040 SQ FT
(R2775D)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	32.880	0.000	15.000	0.000	REFL 821.2004 INCHES
						REFB 1422.8040 INCHES
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MACH 4.959

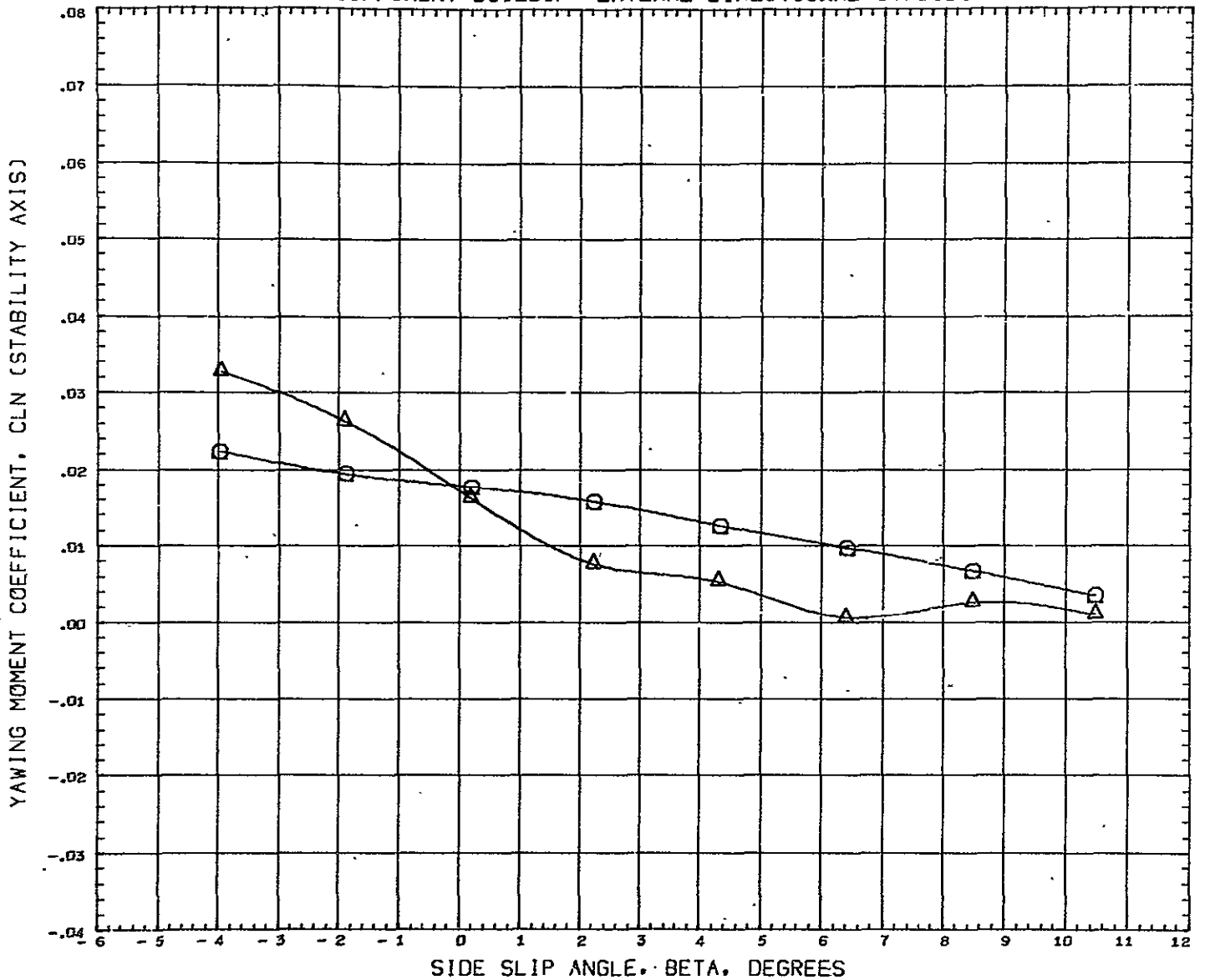
DELTA WING ORBITER-COMPONENT BUILDUP- LATERAL DIRECTIONAL STABILITY



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	RUDDER	RUDFLR	ELVATR	REFERENCE INFORMATION
(R2783D)	○ HSFC478 NR DELTA ORBITER B5W17E10X	32.900			0.000	REFS 6084.0040 SQ FT
(R2775D)	△ HSFC478 NR DELTA ORBITER B5W17E10V17J2X	32.880	0.000	15.000	0.000	REFL 821.2004 INCHES
						REFB 1422.8040 INCHES
						XMRP 1422.5010 INCHES
						YMRP 0.0000 INCHES
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						SCALE 0.0035 SCALE

MACH 1.198

DELTA WING ORBITER-COMPONENT BUILDUP- LATERAL DIRECTIONAL STABILITY



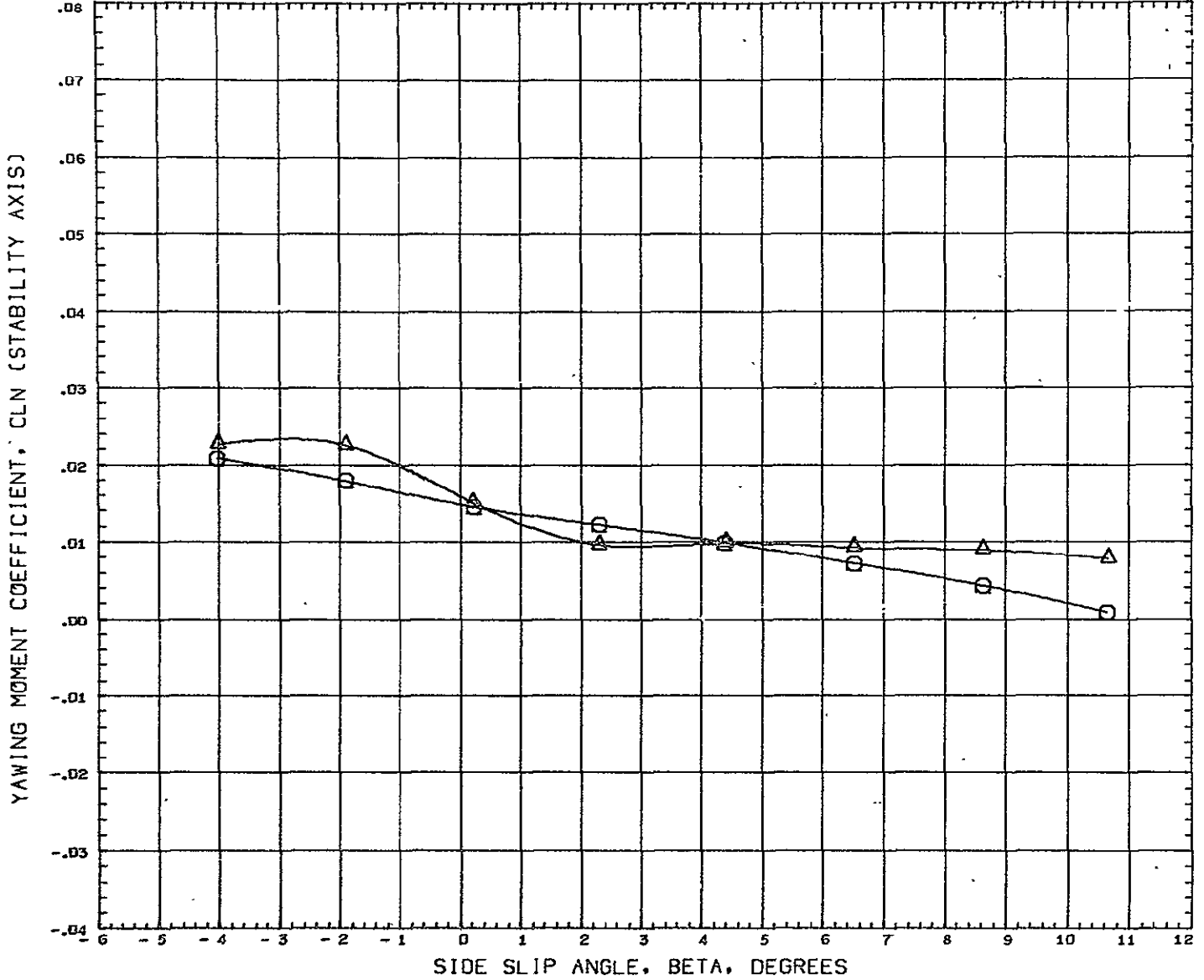
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(R2775D)	MSFC478 NR DELTA ORBITER B5W.7E10V17J2X

ALPHA	RUDDER	RUDFLR	ELVATR
32.900			0.000
32.880	0.000	15.000	0.000

REFERENCE INFORMATION		
REFS	6084.0040	SQ FT
REFL	821.2004	INCHES
REFB	1422.8040	INCHES
XMRP	1422.5040	INCHES
YMRP	0.0000	INCHES
ZMRP	130.0004	INCHES
SCALE	0.0035	SCALE

MACH 1.461

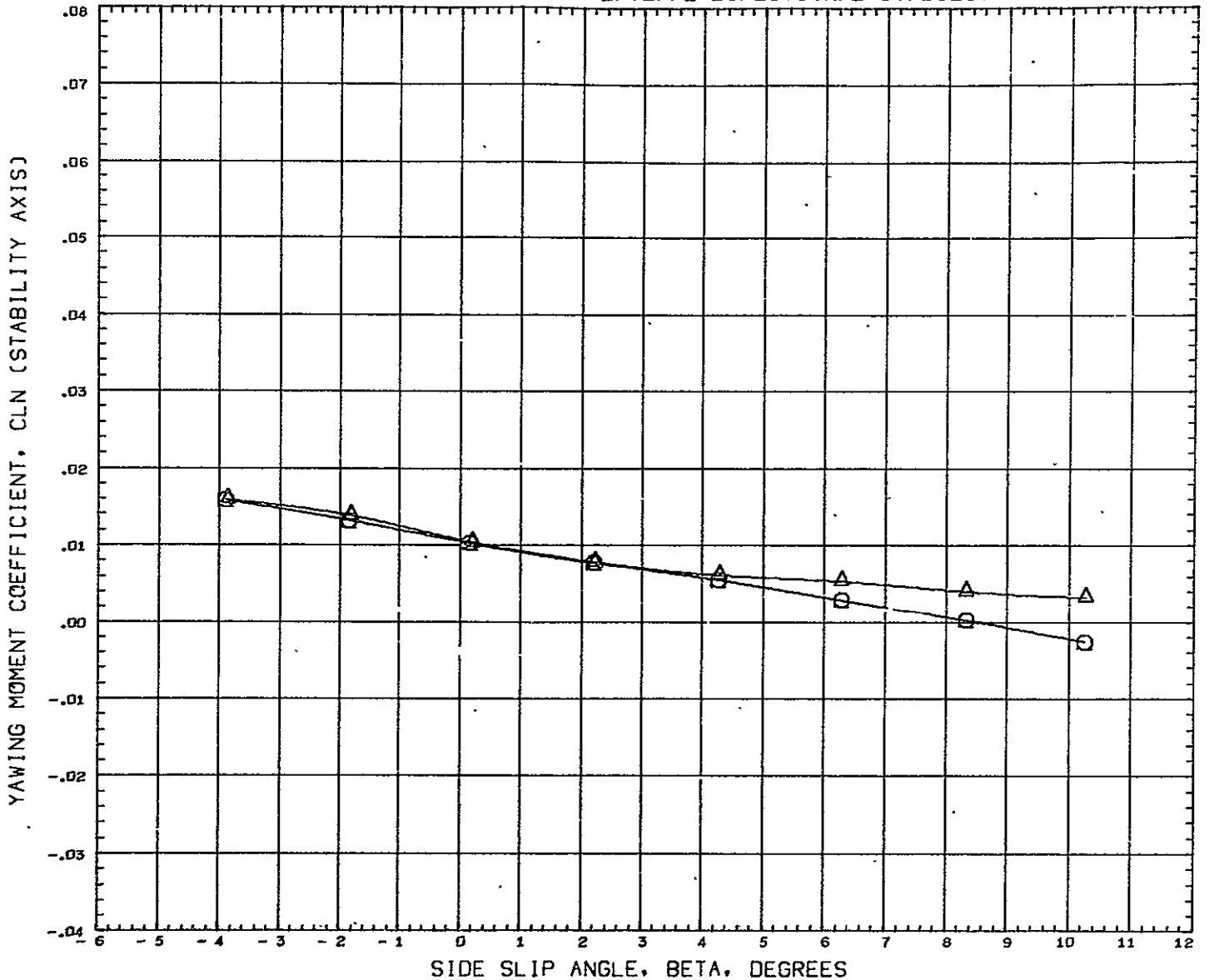
DELTA WING ORBITER-COMPONENT BUILDUP- LATERAL DIRECTIONAL STABILITY



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	RUDDER	RUDFLR	ELVATR	REFERENCE INFORMATION
(R2783D)	MSFC478 NR DELTA ORBITER B5W17E10X	32.900			0.000	REFS 6084.0040 SQ FT
(R2775D)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	32.880	0.000	15.000	0.000	REFL 821.2004 INCHES
						REFB 1422.8040 INCHES
						XMRP 1422.5040 INCHES
						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 1.961

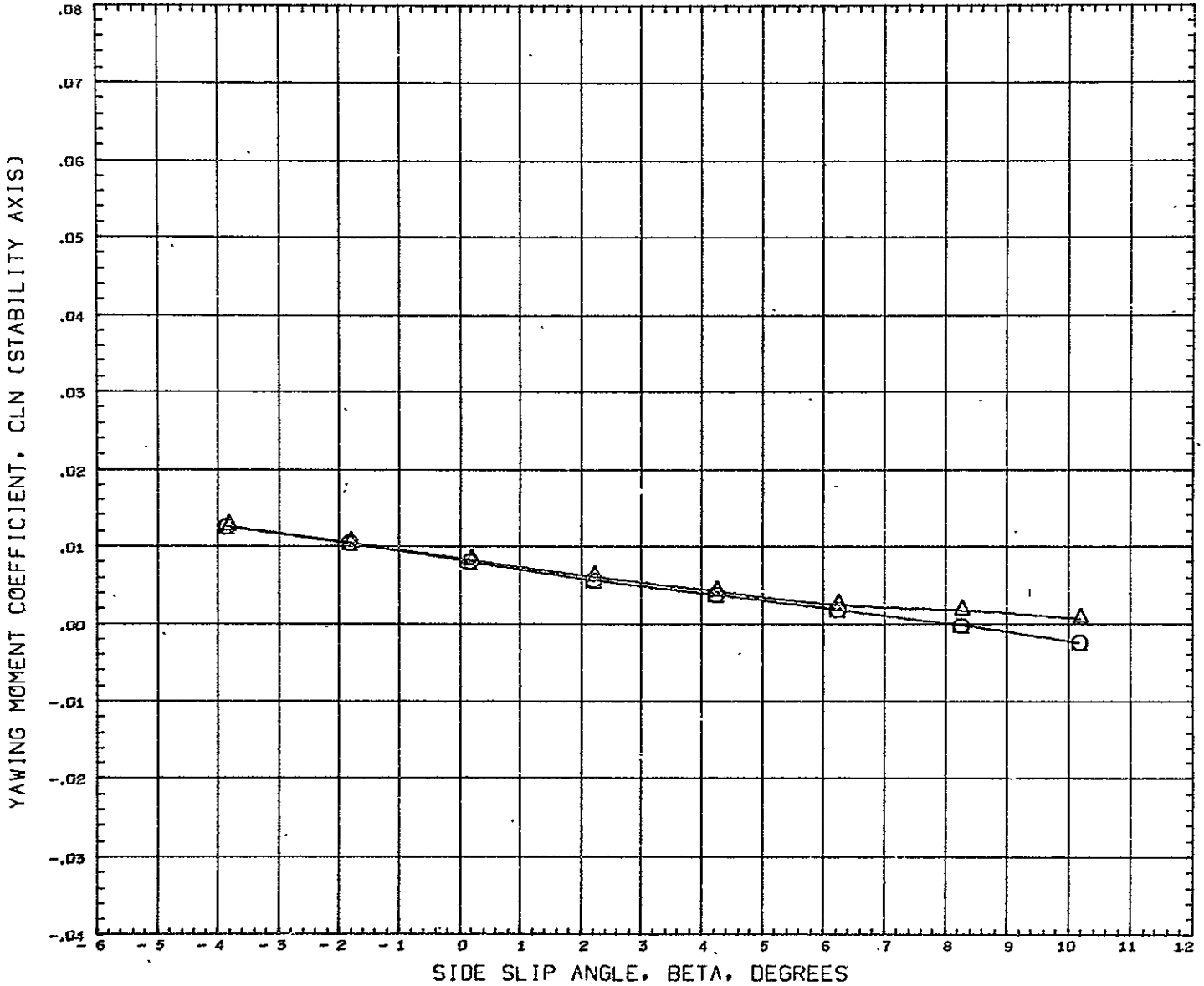
DELTA WING ORBITER-COMPONENT BUILDUP- LATERAL DIRECTIONAL STABILITY



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	RUDDER	RUDFLR	ELVATR	REFERENCE INFORMATION
(R2783D)	MSFC478 NR DELTA ORBITER B5W17E10X	32.900			0.000	REFS 6084.0040 SQ FT
(R2775D)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	32.880	0.000	15.000	0.000	REFL 821.2004 INCHES
						REFB 1422.8040 INCHES
						XMRP 1422.5040 INCHES
						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 2.995

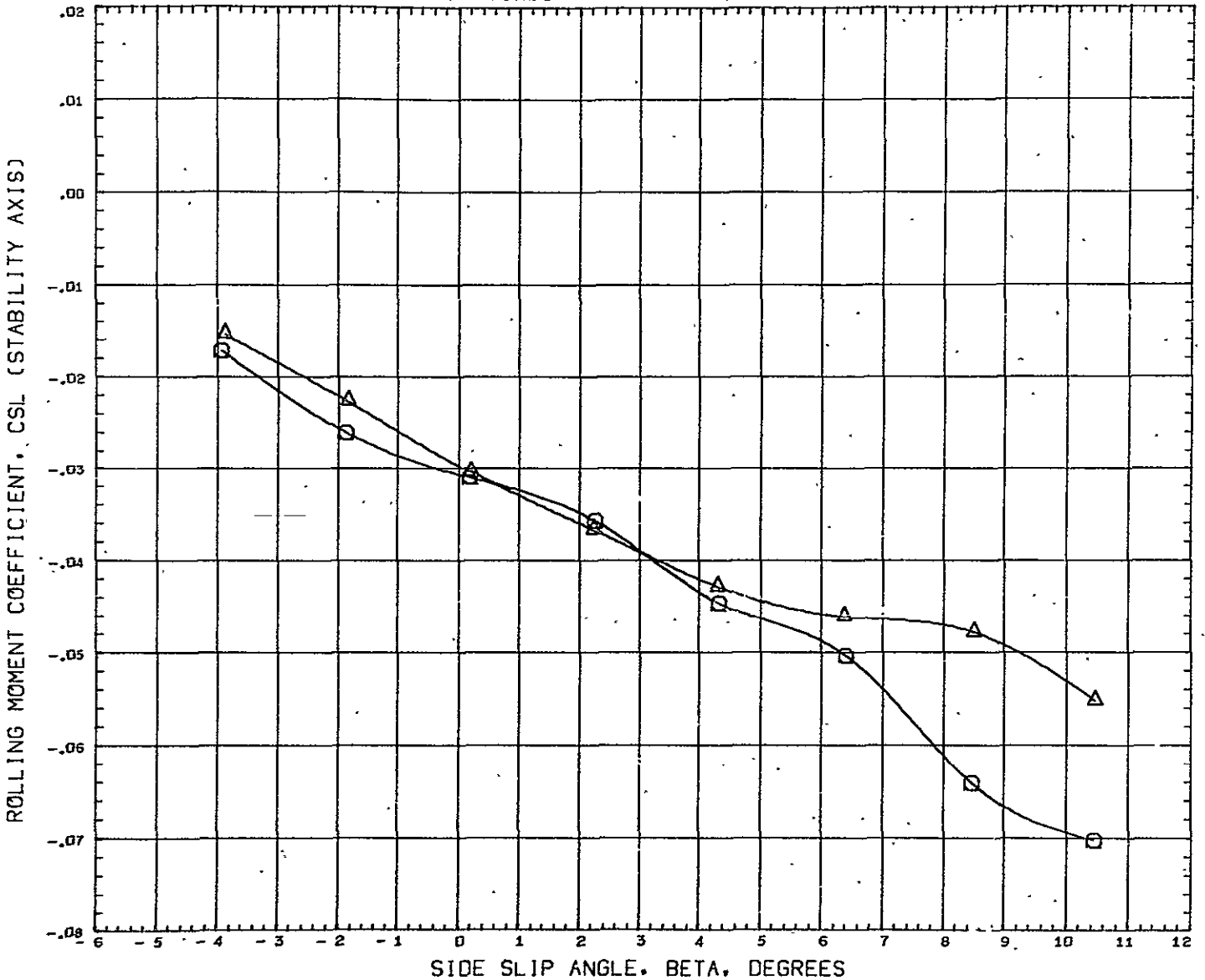
DELTA WING ORBITER-COMPONENT BUILDUP- LATERAL DIRECTIONAL STABILITY



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	RUDDER	RUDFLR	ELVATR	REFERENCE INFORMATION
(R2783D)	MSFC478 NR DELTA ORBITER B5W17E10X	32.900			0.000	REFS 6084.0040 SQ FT
(R2775D)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	32.800	0.000	15.000	0.000	REFL 821.2004 INCHES
						REFB 1422.8040 INCHES
						XMRP 1422.5040 INCHES
						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 4.959

DELTA WING ORBITER-COMPONENT BUILDUP- LATERAL DIRECTIONAL STABILITY



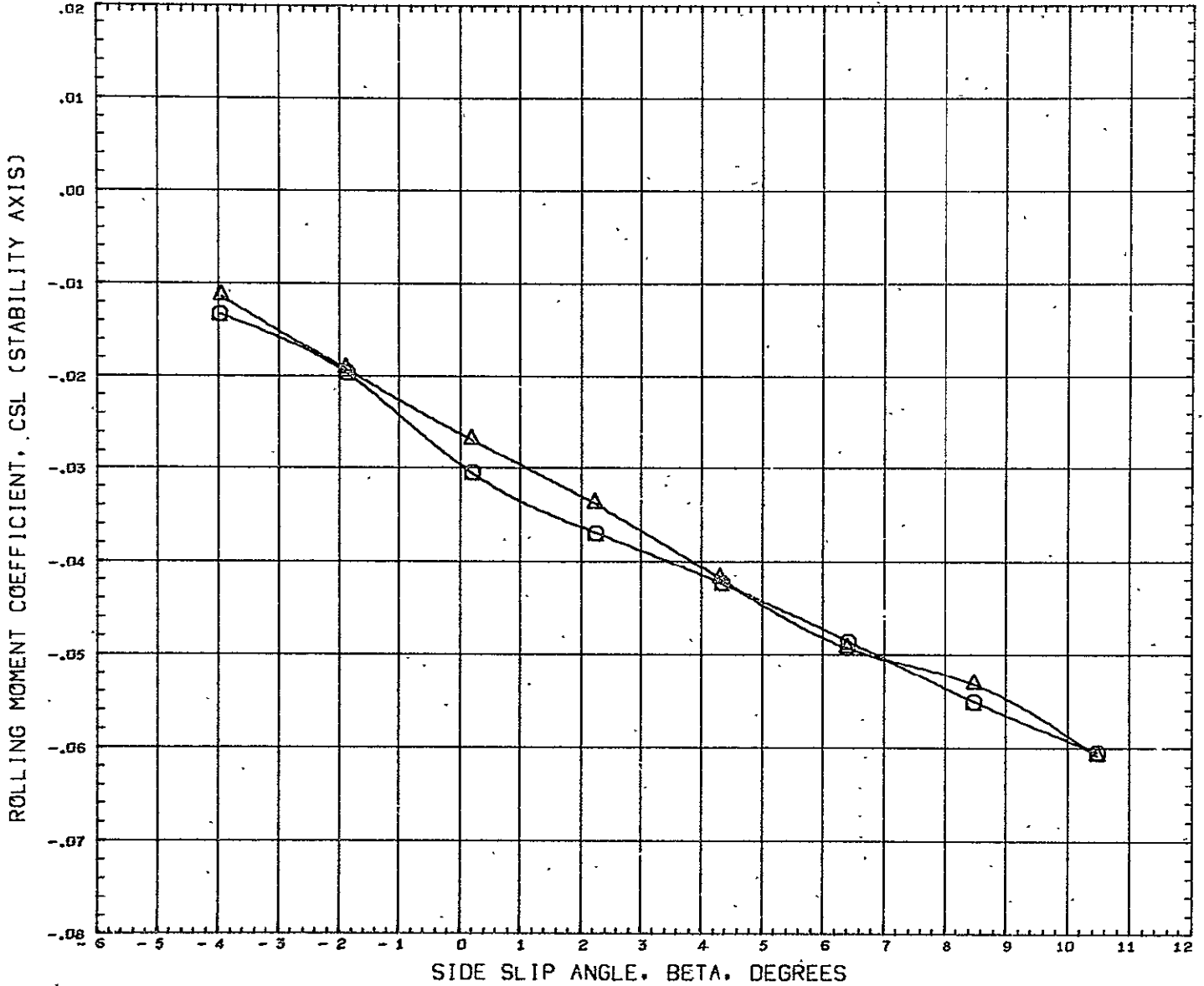
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(R2783D) ○	MSFC478 NR DELTA ORBITER B5W17E1DX
(R2775E) △	MSFC478 NR DELTA ORBITER B5W17E1DV17J2X

ALPHA	RUDDER	RUDFLR	ELVATR
32.900			.0.000
32.880	0.000	15.000	0.000

REFERENCE INFORMATION		
REFS	6084.0040	SQ FT
REFL	821.2004	INCHES
REFB	1422.8040	INCHES
XMRF	1422.5640	INCHES
YMRF	0.0000	INCHES
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SCALE	0.0035	SCALE

MACH 1.198

DELTA WING ORBITER-COMPONENT BUILDUP- LATERAL DIRECTIONAL STABILITY



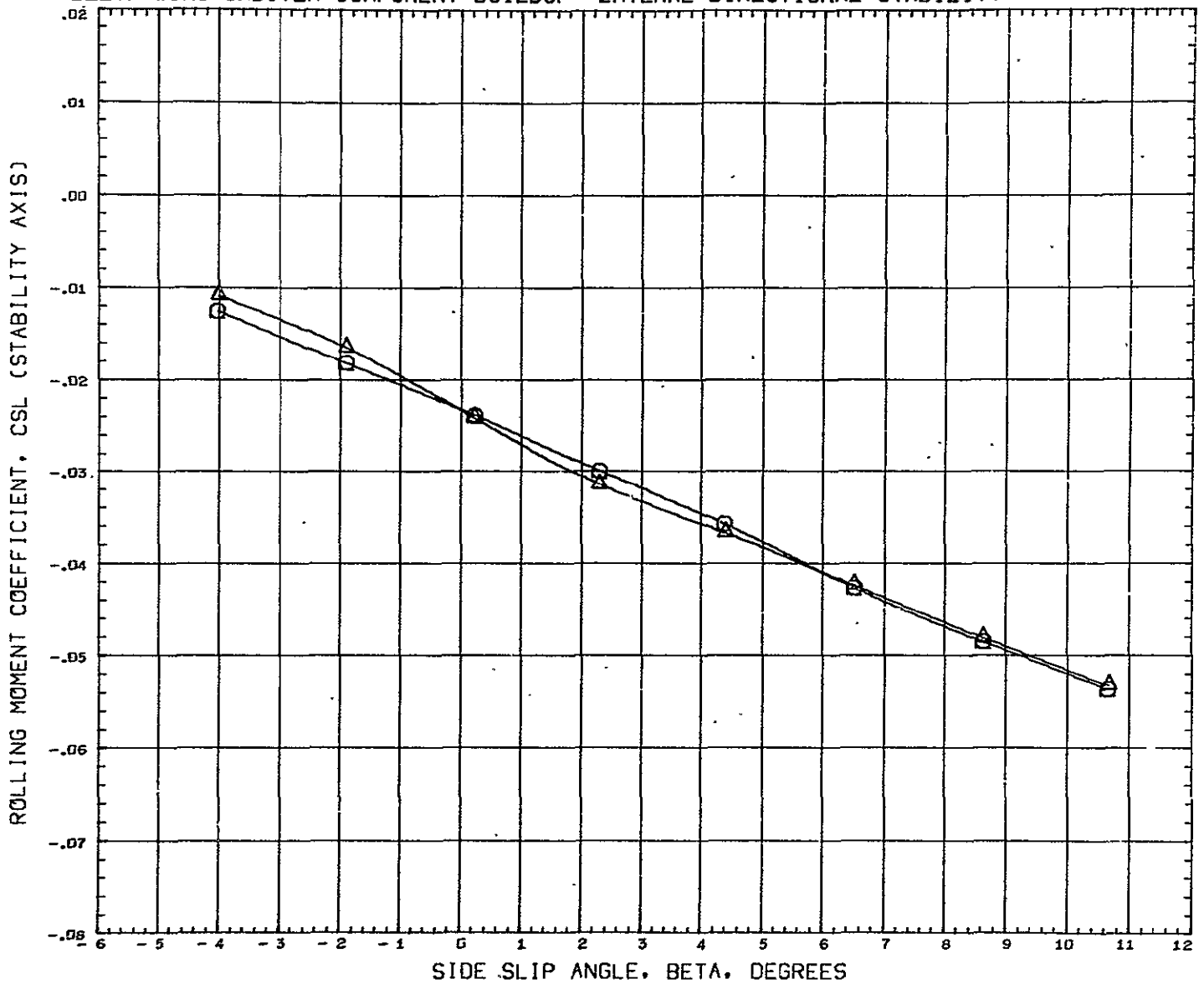
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(R2775D) △	MSFC478 NR DELTA ORBITER B5W17E10V17J2X

ALPHA	RUDDER	RUDFLR	ELVATR
32.900			0.000
32.880	0.000	15.000	0.030

REFERENCE INFORMATION	
REFS	6084.0040 SQ FT
REFL	821.2004 INCHES
REFB	1422.8040 INCHES
XMRP	1422.5040 INCHES
YMRP	0.0000 INCHES
ZMRP	130.0004 INCHES
SCALE	0.0035 SCALE

MACH 1.461

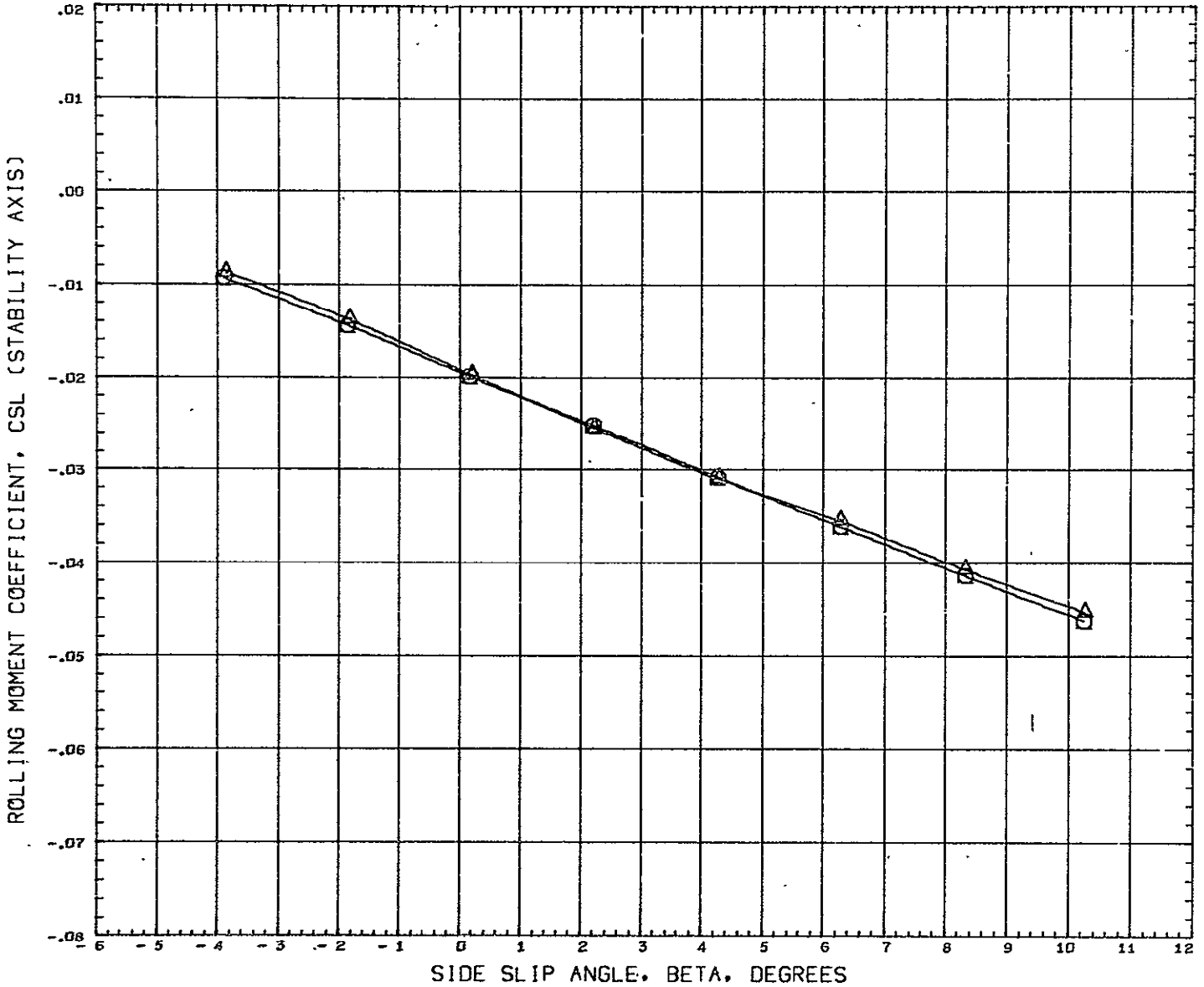
DELTA WING ORBITER-COMPONENT BUILDUP- LATERAL DIRECTIONAL STABILITY



DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	RUDDER	RUDFLR	ELVATR	REFERENCE INFORMATION	
(R2763D)	○	MSFC478 NR DELTA ORBITER B5W17E10X	32.900			0.000	REFS	6084.0040 SQ FT
(R2775D)	△	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	32.880	0.000	15.000	0.000	REFL	821.2004 INCHES
							REFB	1422.8040 INCHES
							XMRP	1422.5040 INCHES
							YMRP	0.0000 INCHES
							ZMRP	130.0004 INCHES
							SCALE	0.0035 SCALE

MACH 1.961

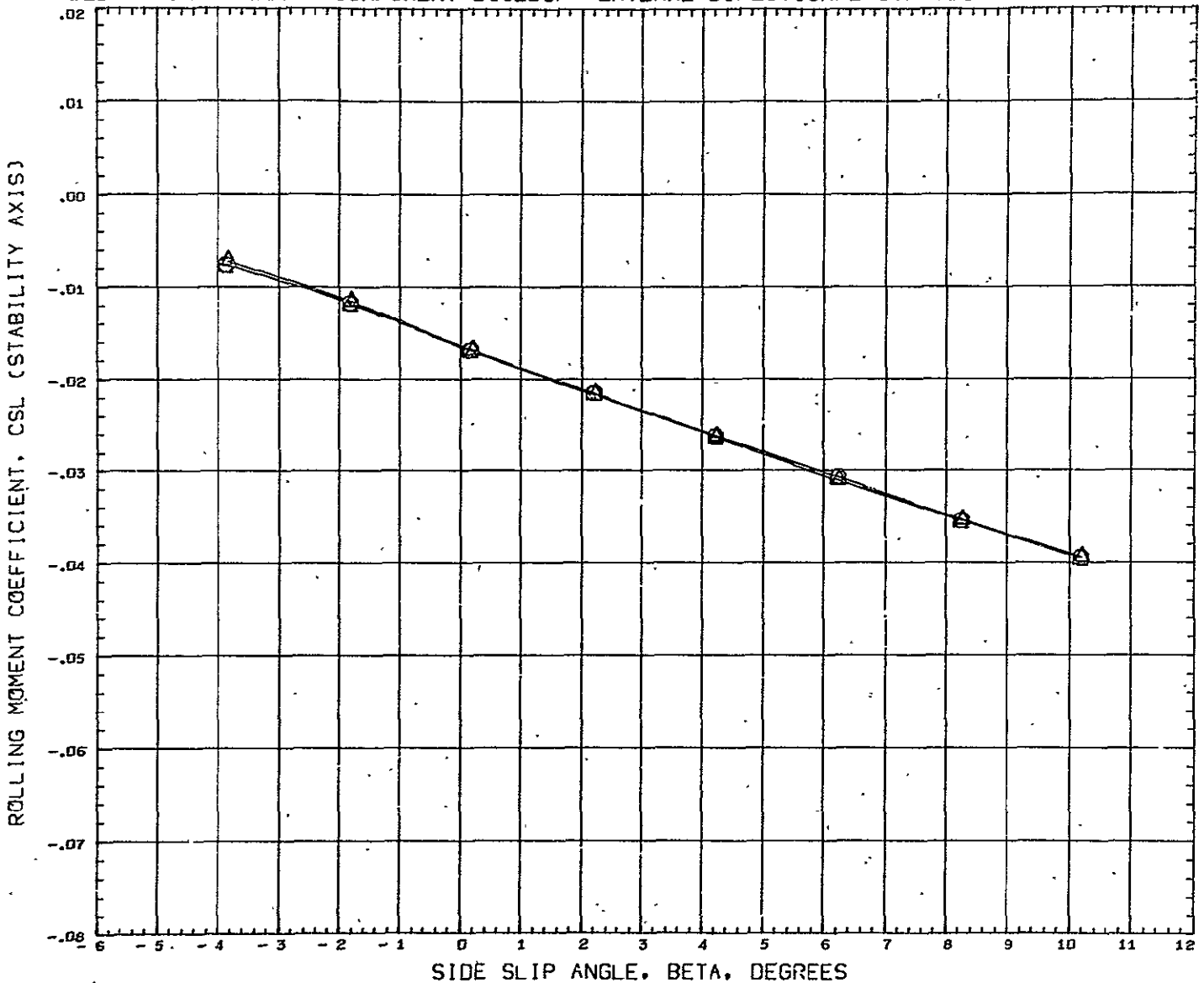
DELTA WING ORBITER-COMPONENT BUILDUP- LATERAL DIRECTIONAL STABILITY



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	RUDDER	RUDFLR	ELVATR	REFERENCE INFORMATION
(R2783D)	MSFC478 NR DELTA ORBITER B5W17E10X	32.900			0.000	REFS 6084.0040 SQ FT
(R2775D)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	32.800	0.000	15.000	0.000	REFL 821.2004 INCHES
						REFB 1422.8040 INCHES
						XMRP 1422.5040 INCHES
						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 2.990

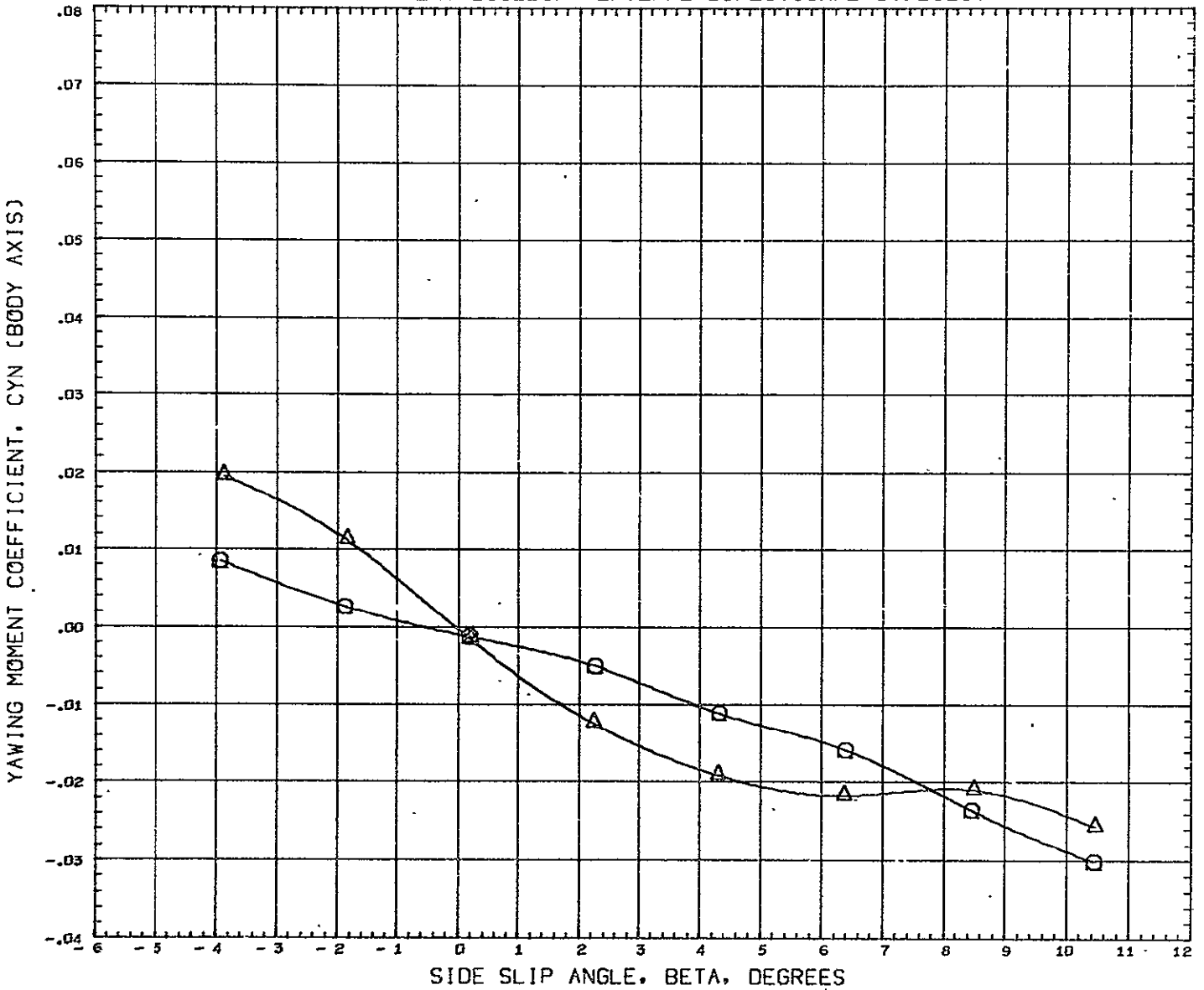
DELTA WING ORBITER-COMPONENT BUILDUP- LATERAL DIRECTIONAL STABILITY



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	RUDDER	RUDFLR	ELVATR	REFERENCE INFORMATION
(R2783D)	MSFC478 NR DELTA ORBITER B5W17E10X	32.900			0.000	REFS 6084.0040 SQ FT
(R2775D)	MSFC478 NR DELTA ORBITER B5W17E1DV17J2X	32.880	0.000	15.000	0.000	REFL 821.2004 INCHES
						REFB 1422.8040 INCHES
						XMRP 1422.5040 INCHES
						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 4.959

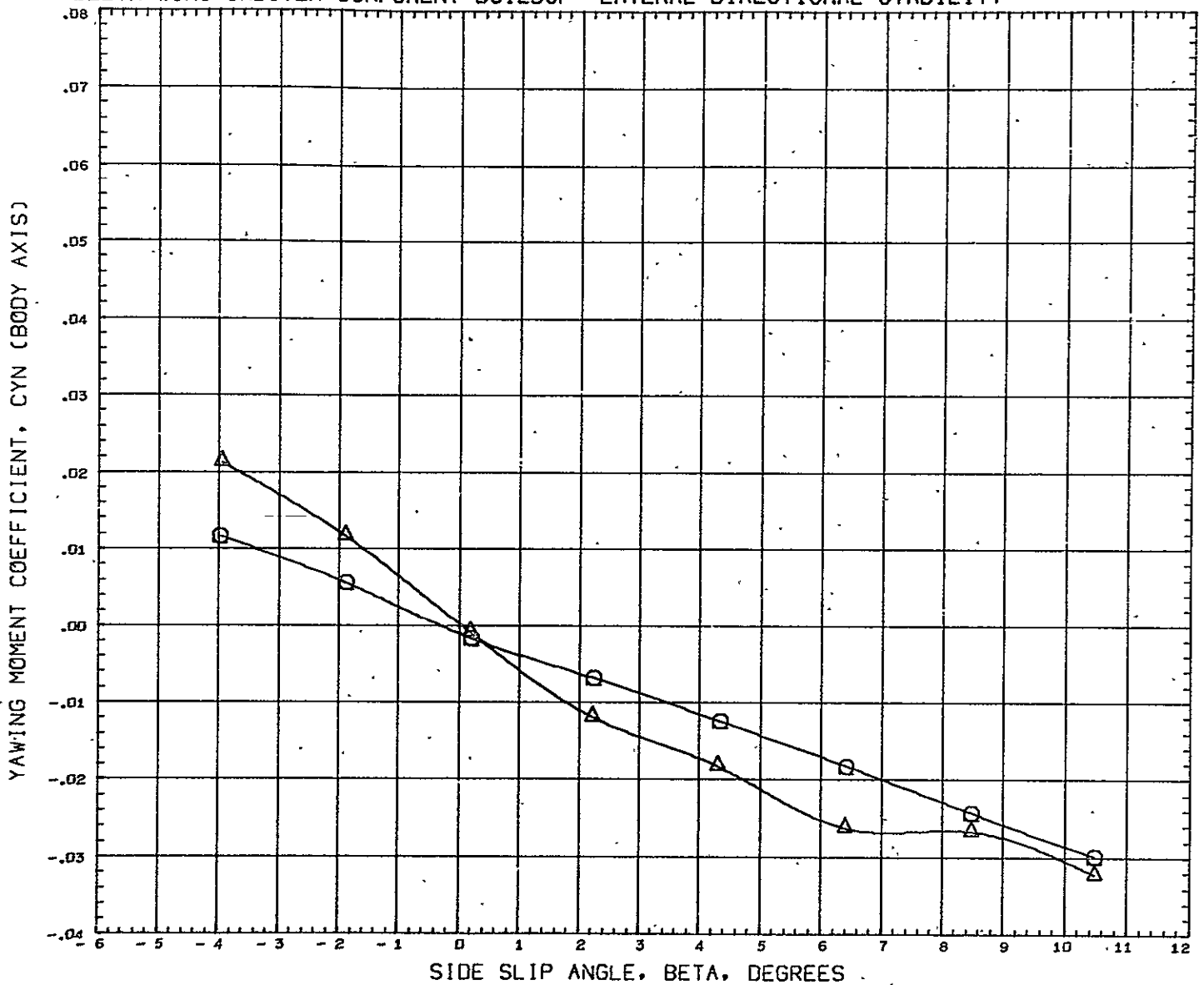
DELTA WING ORBITER-COMPONENT BUILDUP- LATERAL DIRECTIONAL STABILITY



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	RUDDER	RUDFLR	ELVATR	REFERENCE INFORMATION
(B2783D) ○	MSFC478 NR DELTA ORBITER B5W17E1GX	32.900			0.000	REFS 6084.0040 SQ FT
(B2775D) △	MSFC478 NR DELTA ORBITER B5W17E1DV17J2X	32.880	0.000	15.000	0.000	REFL 821.2054 INCHES
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						YMRP 0.0000 INCHES
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						SCALE 0.0035 SCALE

MACH 1.198

DELTA WING ORBITER-COMPONENT BUILDUP- LATERAL DIRECTIONAL STABILITY



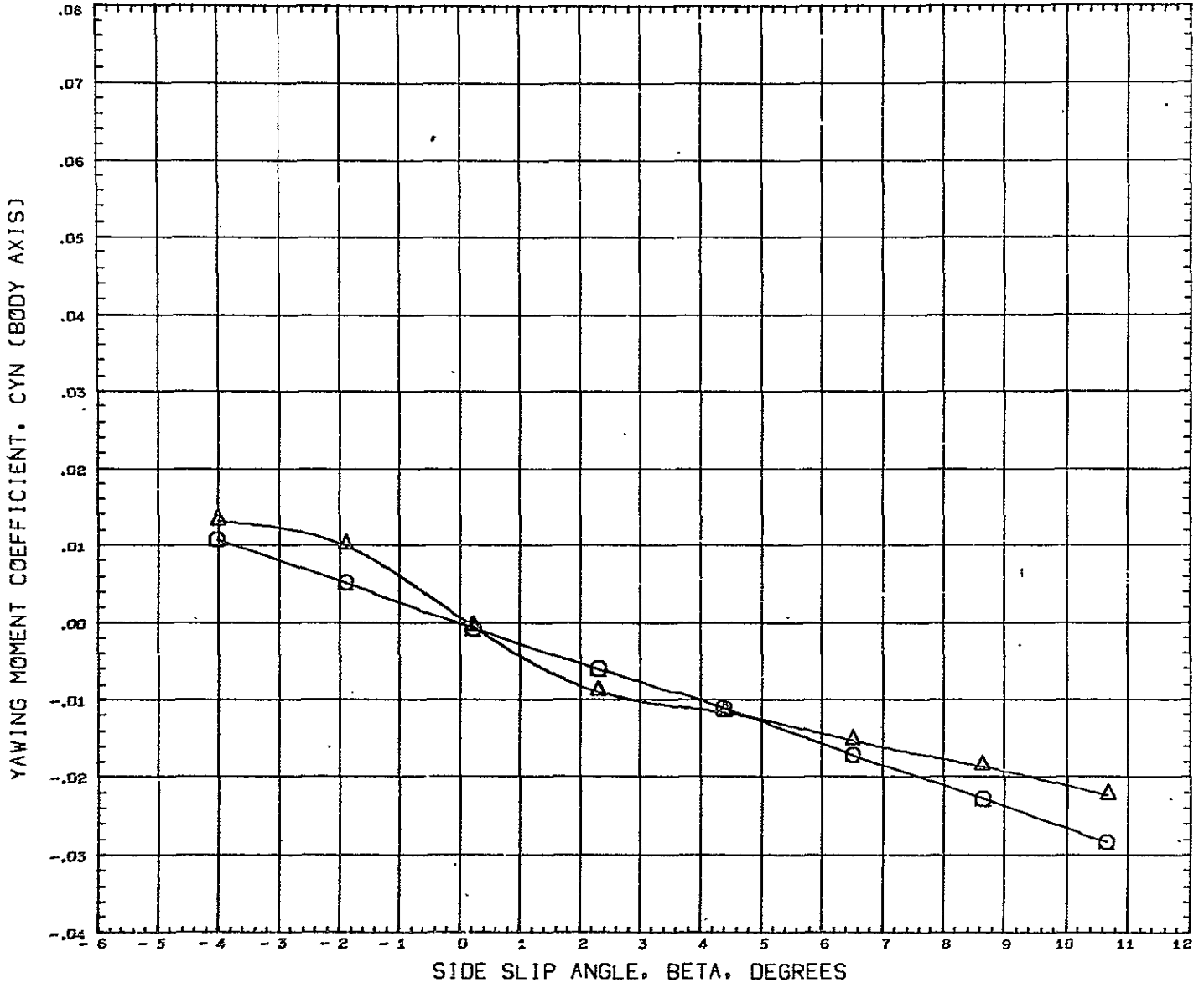
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 (B2783D) ○ MSFC478 NR DELTA ORBITER B5W17E10X
 (B2775D) △ MSFC478 NR DELTA ORBITER B5W17E10V17J2X

ALPHA 32.900
 RUDDER 0.000
 RUDFLR 15.000
 ELVATR 0.000

REFERENCE INFORMATION
 REFS 6064.0040 SQ FT
 REFL 821.2004 INCHES
 REFB 1422.8040 INCHES
 XMRP 1422.5040 INCHES
 YMRP 0.0000 INCHES
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 SCALE 0.0035 SCALE

MACH 1.461

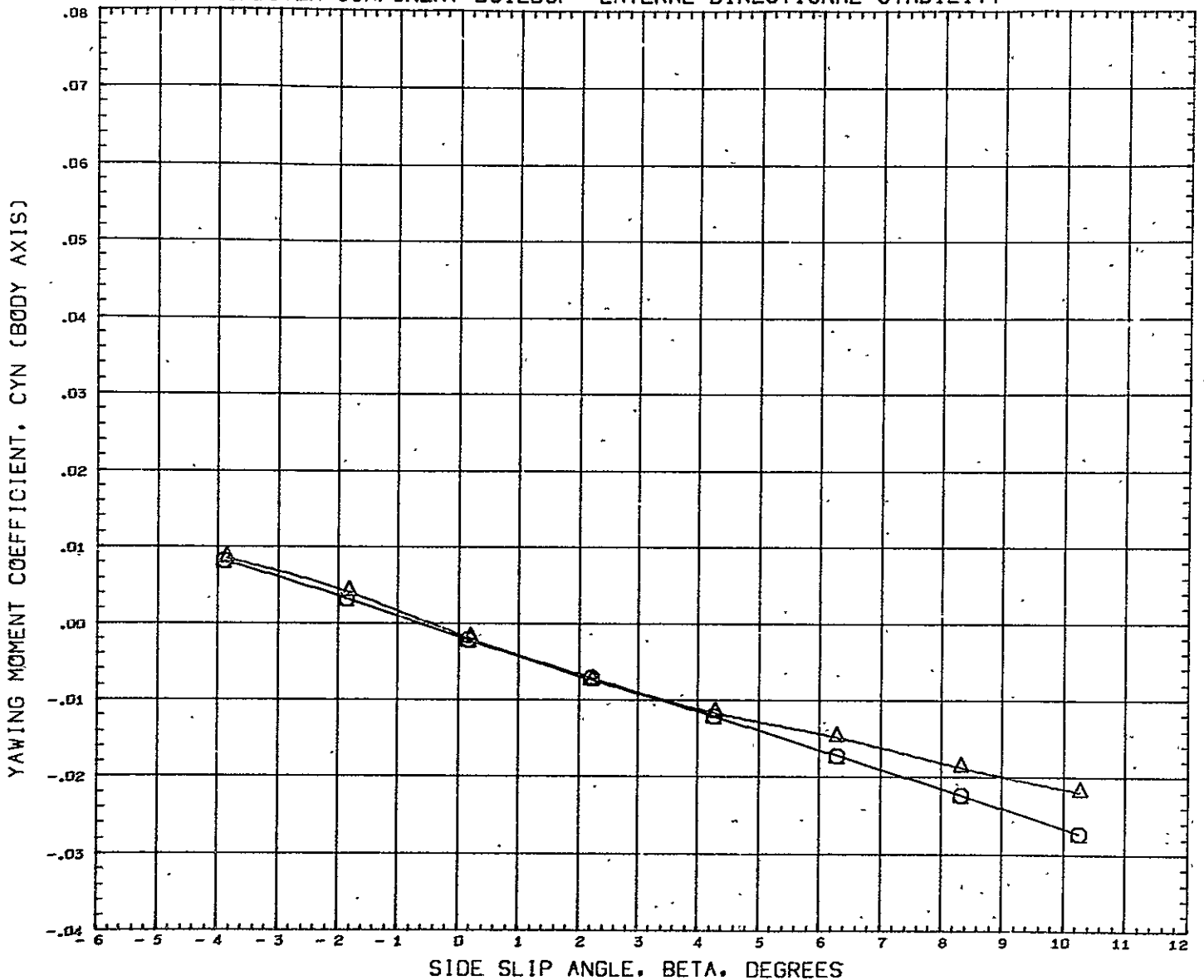
DELTA WING ORBITER-COMPONENT BUILDUP- LATERAL DIRECTIONAL STABILITY



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	RUDDER	RUDFLR	ELVATR	REFERENCE INFORMATION
(B2783D)	MSFC478 NR DELTA ORBITER B5W17E10X	32.900			0.000	REFS 6084.0040 SQ FT
(B2775D)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	32.880	0.000	15.000	0.000	REFL 821.2004 INCHES
						REF3 1422.8040 INCHES
						XMRP 1422.5040 INCHES
						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 1.961

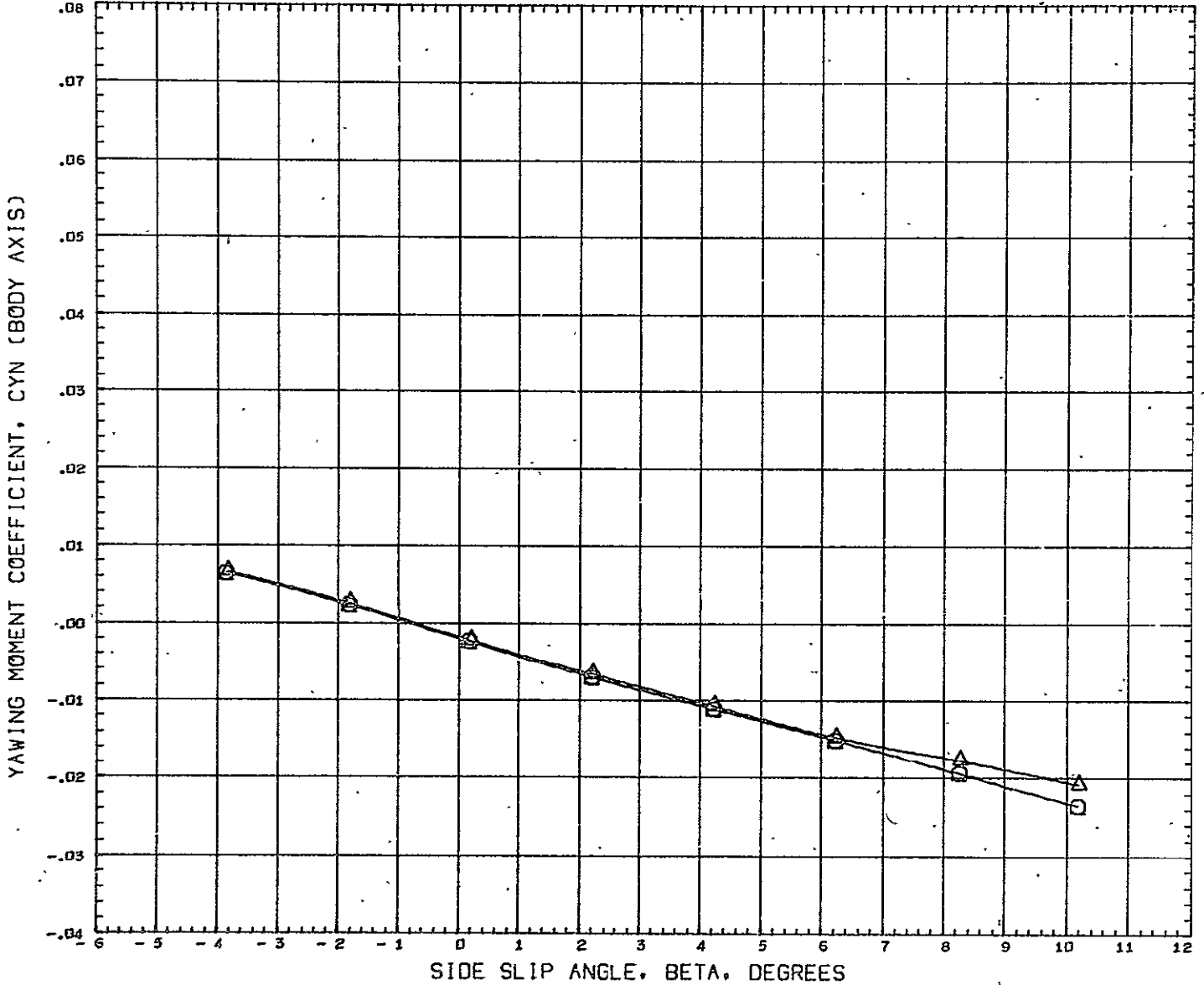
DELTA WING ORBITER-COMPONENT BUILDUP- LATERAL DIRECTIONAL STABILITY



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	RUDDER	RUDFLR	ELVATR	REFERENCE INFORMATION
(B2783D)	MSFC478 NR DELTA ORBITER B5W17E1GX	32.900			0.000	REFS 6084.0040 SQ FT
(B2775D)	MSFC478 NR DELTA ORBITER B5W17E1OV17J2X	32.880	0.000	15.000	0.000	REFL 821.2004 INCHES
						REFB 1422.8040 INCHES
						XMRP 1422.5040 INCHES
						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 2.990

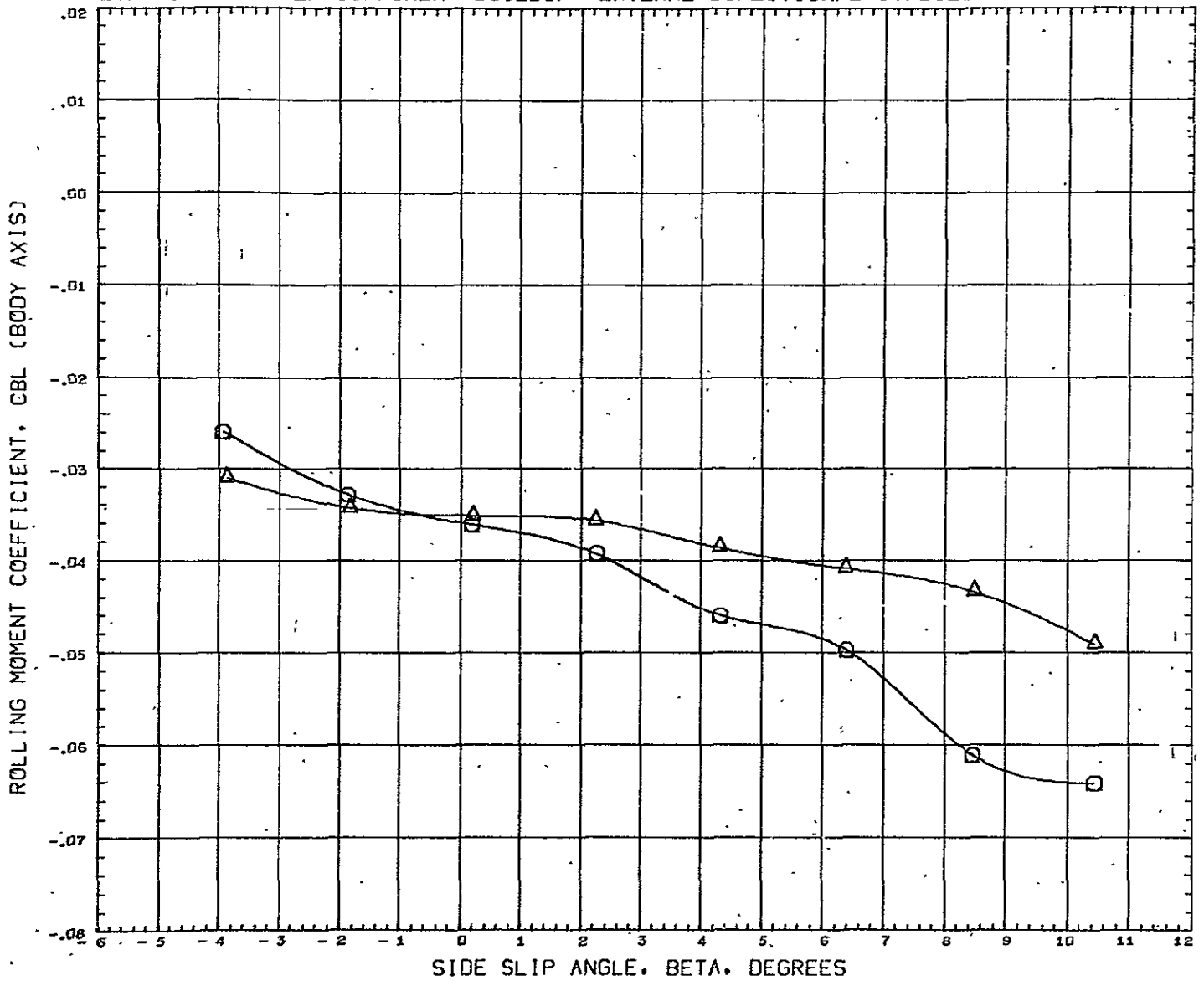
DELTA WING ORBITER-COMPONENT BUILDUP- LATERAL DIRECTIONAL STABILITY



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	RUDDER	RUDFLR	ELVATR	REFERENCE INFORMATION
(B2783D)	MSFC478 NR DELTA ORBITER B5W17E10X	32.900			0.000	REFS 6084.0040 SQ FT
(B2775D)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	32.880	0.000	15.000	0.000	REFL 821.2004 INCHES
						REFB 1422.8040 INCHES
						XMRP 1422.5040 INCHES
						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 4.959

DELTA WING ORBITER-COMPONENT BUILDUP- LATERAL DIRECTIONAL STABILITY



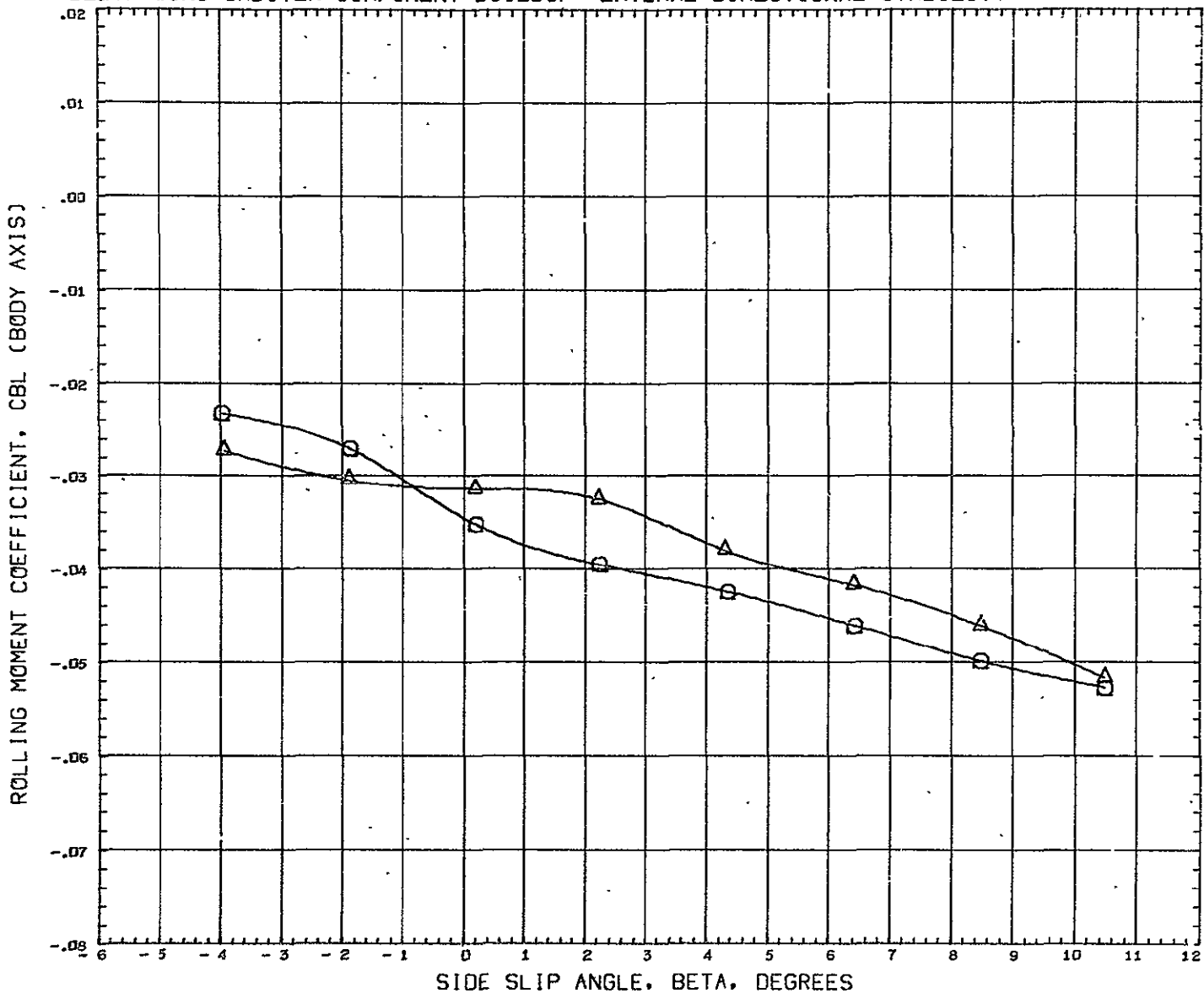
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 (22775D) △ MSFC478 NR DELTA ORBITER 05W17E10V17J2X

ALPHA RUDDER RUDFLR ELVATR
 32.900 0.000 15.000 0.000
 32.880 0.000 15.000 0.000

REFERENCE INFORMATION
 REFS 6084.0040 SQ FT
 REFL 821.2004 INCHES
 REFB 1422.8940 INCHES
 XMRP 1422.5040 INCHES
 YMRP 0.0000 INCHES
 ZMRP 130.0004 INCHES
 SCALE 0.0035 SCALE

MACH 1.198

DELTA WING ORBITER-COMPONENT BUILDUP- LATERAL DIRECTIONAL STABILITY



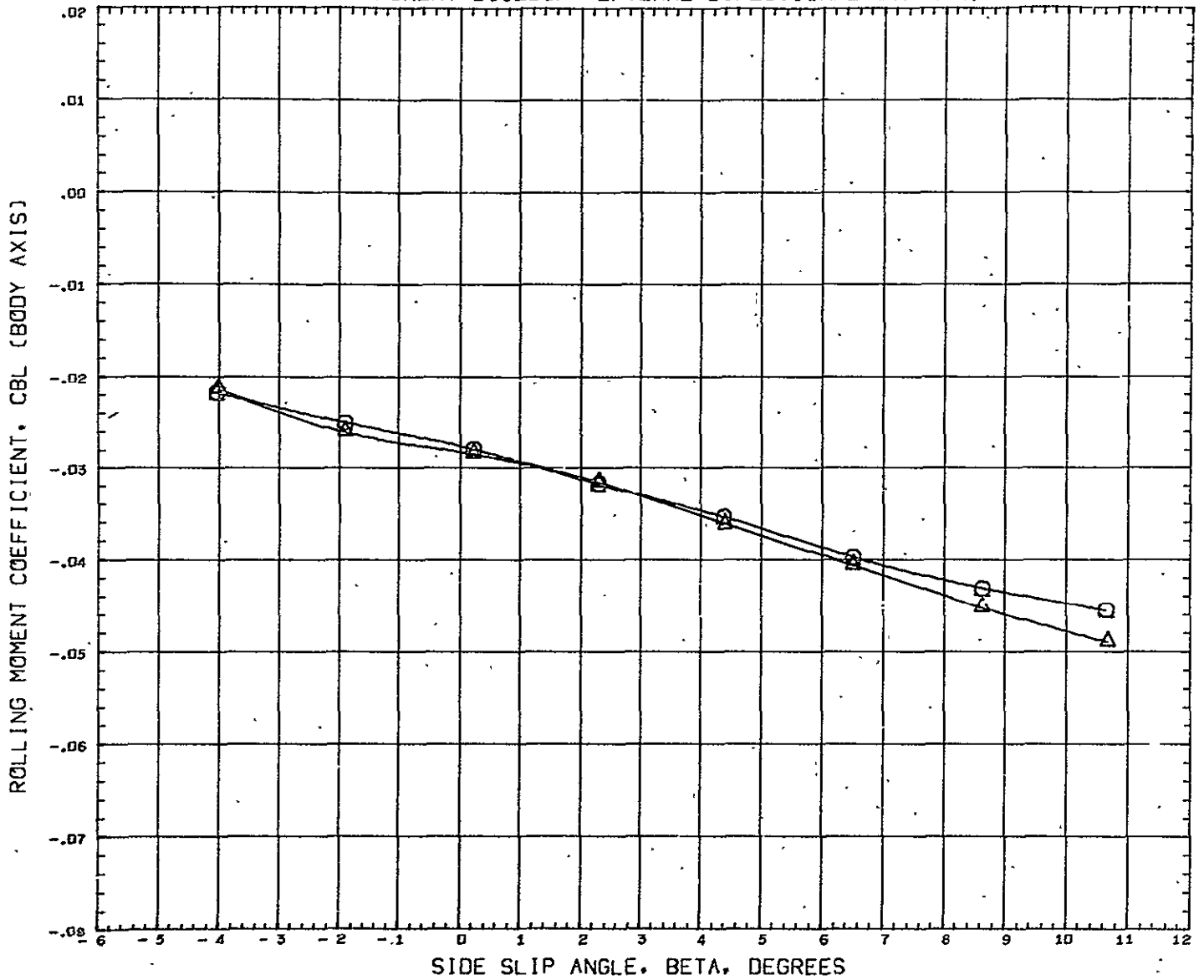
DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (B2763D) \circ MSFC478 NR DELTA ORBITER B5W17E1DX
 (B2775D) \triangle MSFC478 NR DELTA ORBITER B5W17E1DV17J2X

ALPHA 32.900 RUDDER 0.000 RUDFLR 15.000 ELVATR 0.000
 32.880 0.000 0.000

REFERENCE INFORMATION
 REFS 6084.0040 SQ FT
 REFL 821.2004 INCHES
 REFB 1422.8040 INCHES
 XMRP 1422.5040 INCHES
 YMRP 0.0000 INCHES
 ZMRP 130.0004 INCHES
 SCALE 0.0035 SCALE

MACH 1.461

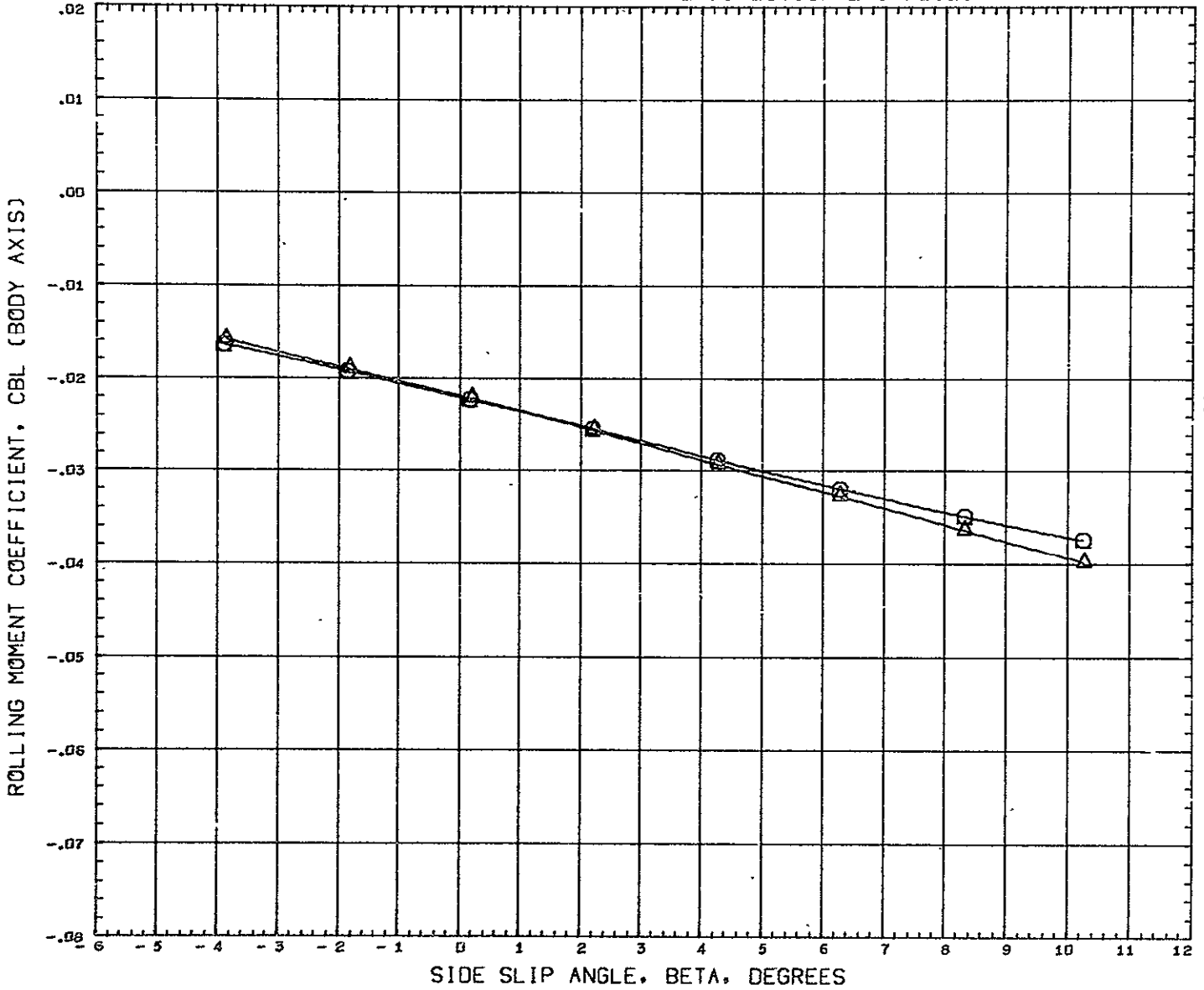
DELTA WING ORBITER-COMPONENT BUILDUP- LATERAL DIRECTIONAL STABILITY



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	RUDDER	RUDFLR	ELVATR	REFERENCE INFORMATION
(02763D)	MSFC478 NR DELTA ORBITER B5W17E10X	32.900			0.000	REFS 6084.0040 SQ FT
(02775D)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	32.880	0.000	15.000	0.000	REFL 821.2004 INCHES
						REFB 1422.8040 INCHES
						XMRP 1422.5040 INCHES
						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 1.961

DELTA WING ORBITER-COMPONENT BUILDUP- LATERAL DIRECTIONAL STABILITY



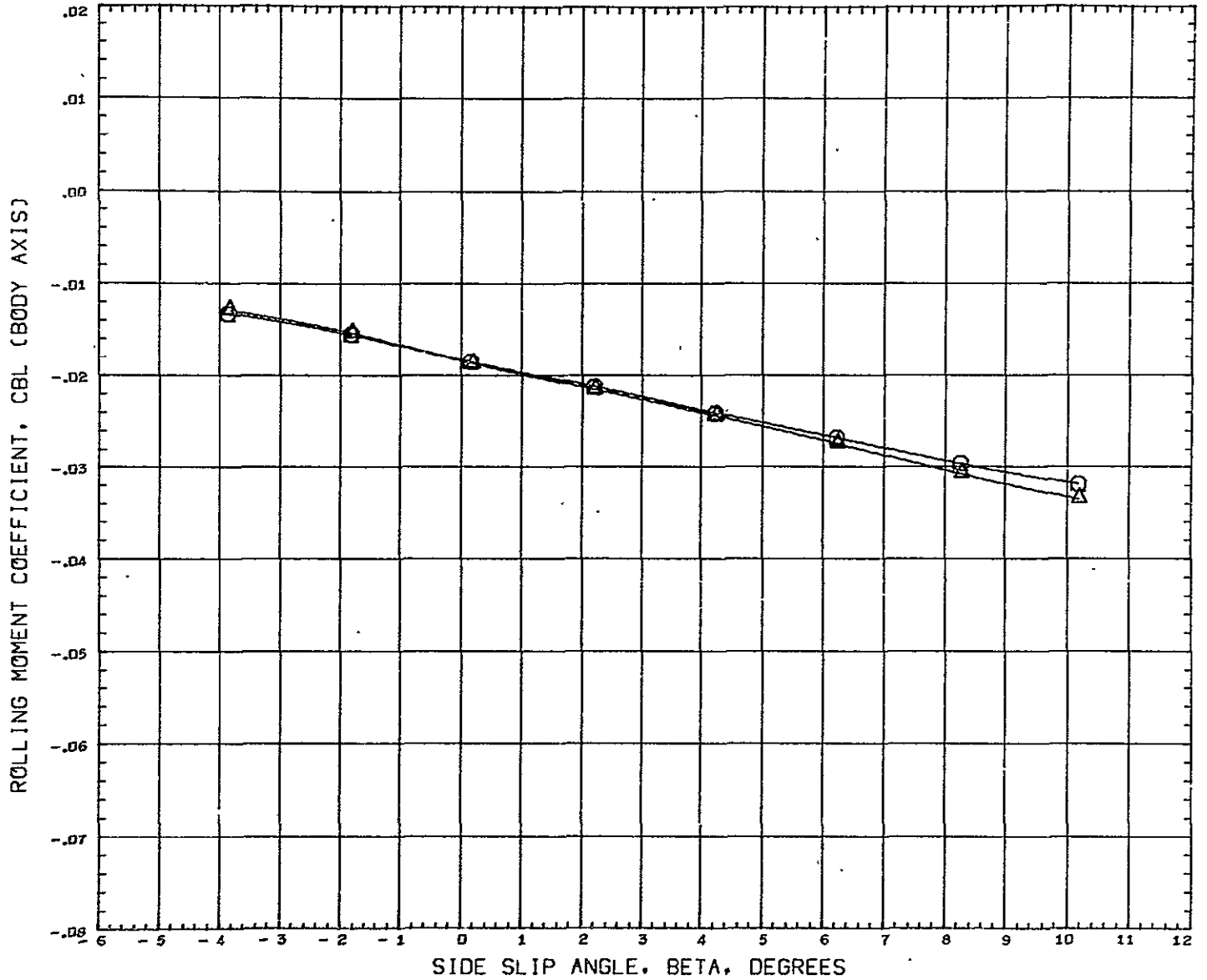
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(B2783D) ○	MSFC478 NR DELTA ORBITER B5W17E10X
(B2775E) △	MSFC478 NR DELTA ORBITER B5W17E10V17J2X

ALPHA	RUDDER	RUDFLR	ELVATR
32.900			0.000
32.880	0.000	15.000	0.000

REFERENCE INFORMATION		
REFS	6084.0040	SQ FT
REFL	821.2004	INCHES
REF3	1422.8040	INCHES
XMRP	1422.5040	INCHES
YMRP	0.0000	INCHES
ZMRP	130.0004	INCHES
SCALE	0.0035	SCALE

MACH 2.990

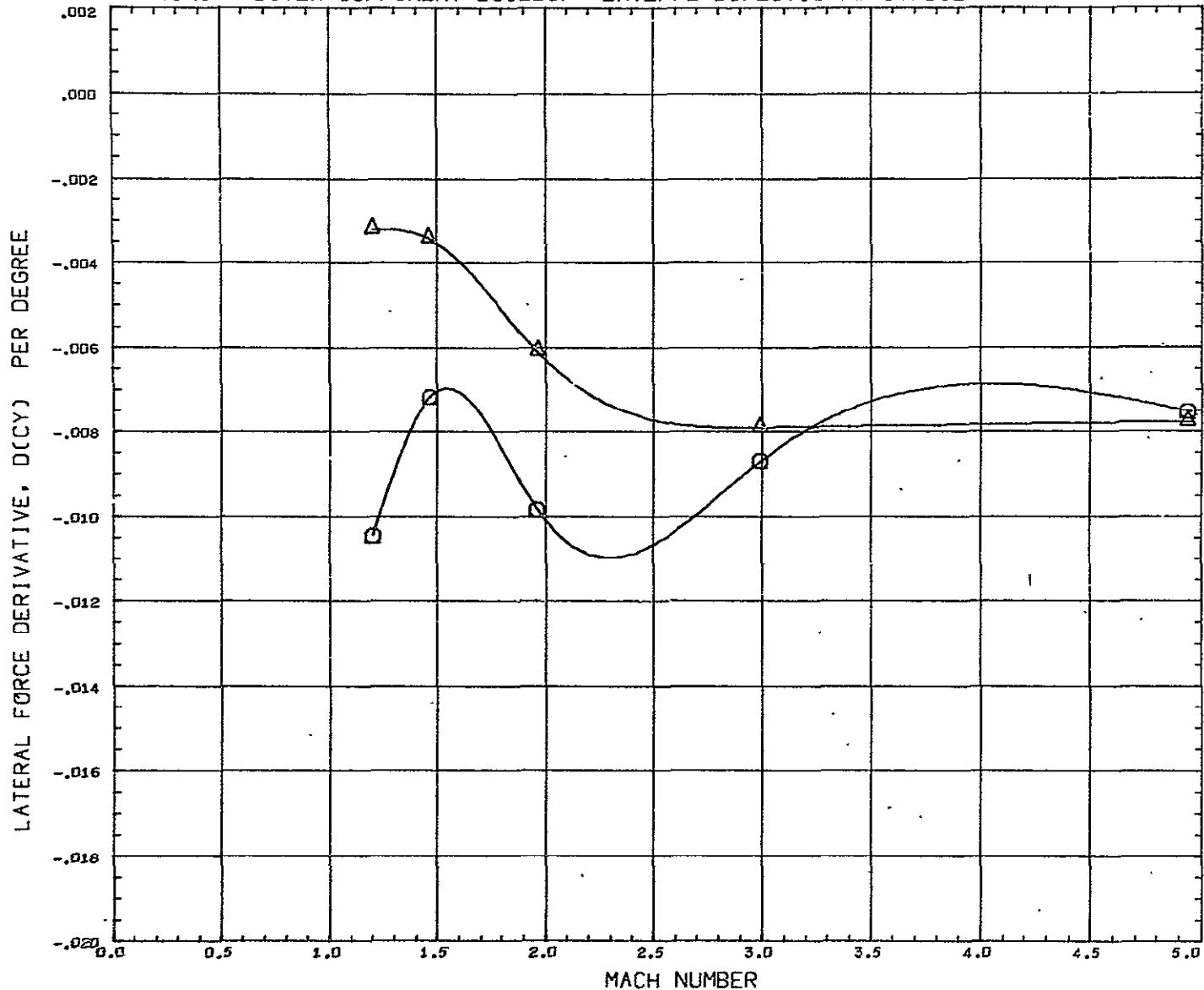
DELTA WING ORBITER-COMPONENT BUILDUP- LATERAL DIRECTIONAL STABILITY



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	RUDDER	RUDFLR	ELVATR	REFERENCE INFORMATION
(B2783D)	MSFC478 NR DELTA ORBITER B5W17E10X	32.900			0.000	REFS 6084.0040 SQ FT
(B2775D)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	32.880	0.000	15.000	0.000	REFL 821.2004 INCHES
						REFS 1422.8040 INCHES
						XMRP 1422.5070 INCHES
						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

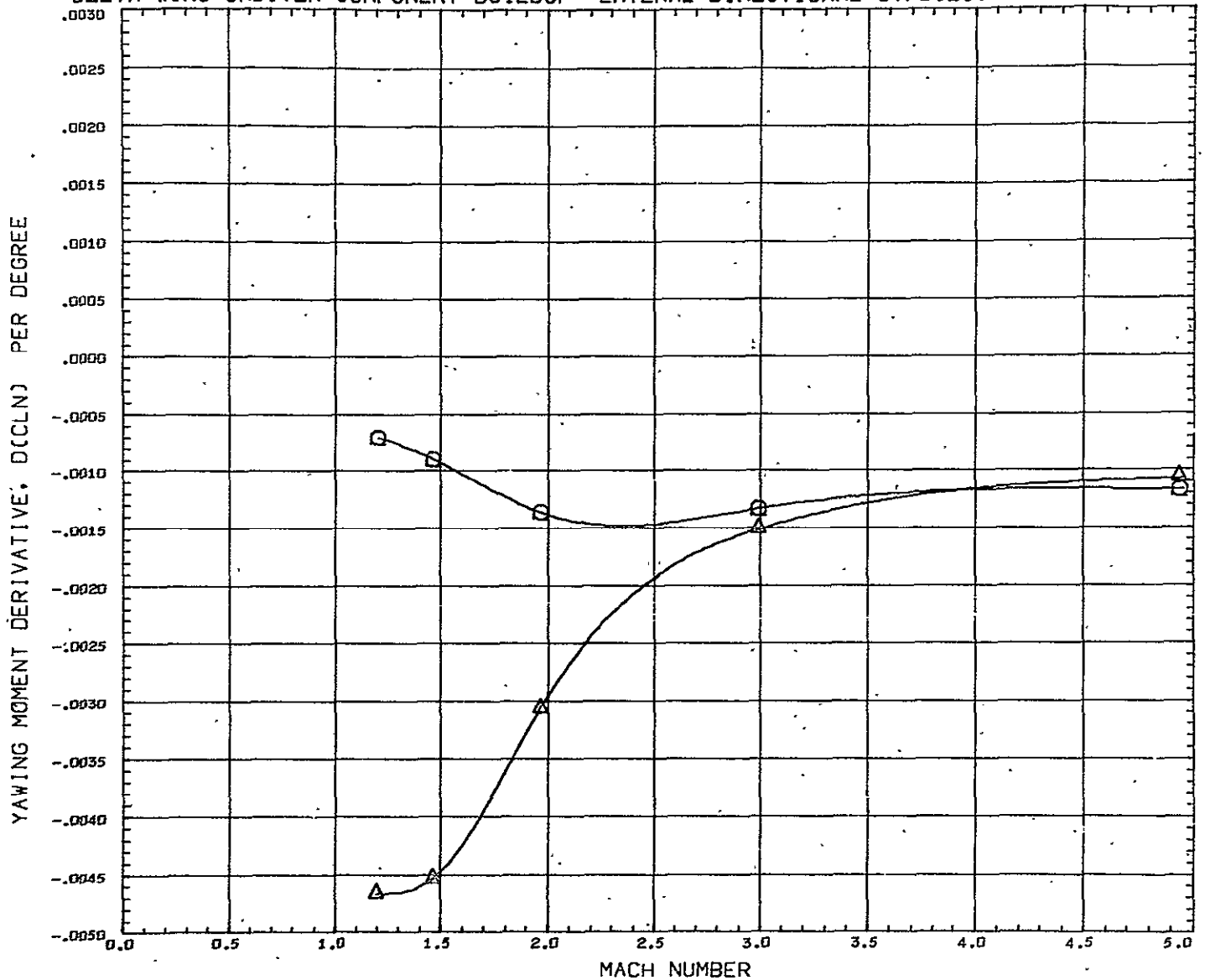
MACH 4.959

DELTA WING ORBITER-COMPONENT BUILDUP- LATERAL DIRECTIONAL STABILITY



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	RUDDER	RUDFLR	ELVATR	REFERENCE INFORMATION
(R2763D)	MSFC478 NR DELTA ORBITER B5W17E10X	32.900			0.000	REFS 6084.0040 SQ FT
(R2775D)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	32.880	0.000	15.000	0.000	REFL 821.2004 INCHES
						REFD 1422.8040 INCHES
						XMRP 1422.5040 INCHES
						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

DELTA WING ORBITER-COMPONENT BUILDUP- LATERAL DIRECTIONAL STABILITY

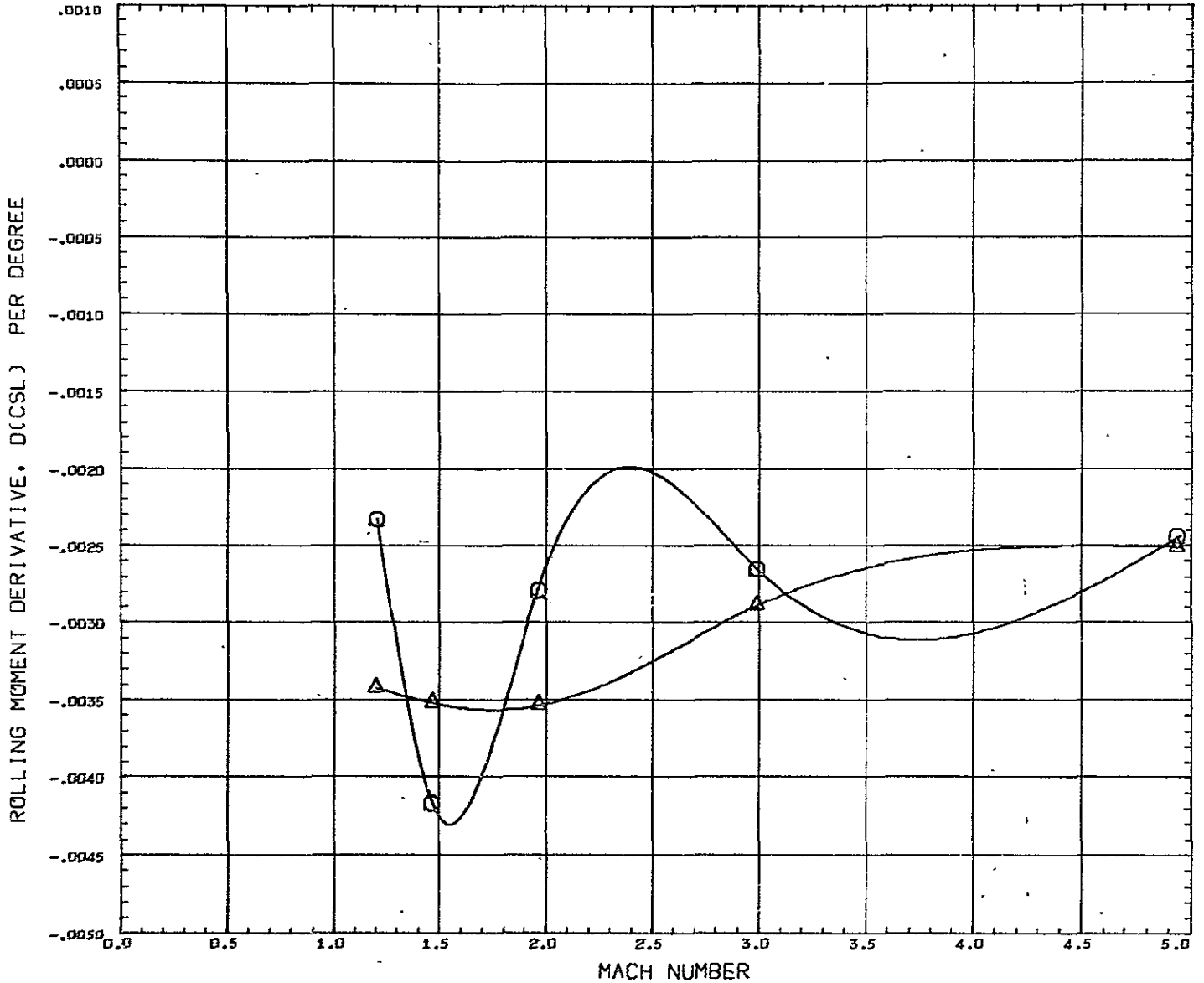


DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(R2783D) ○	MSFC478 NR DELTA ORBITER B5W17E10X
(R2775D) △	MSFC478 NR DELTA ORBITER B5W17E10V17J2X

MACH NUMBER

ALPHA	RUDDER	RUDFLR	ELVATR	REFERENCE INFORMATION
32.900			0.000	REFS 6084.0040 SQ FT
32.880	0.000	15.000	0.000	REFL 821.2004 INCHES
				REFB 1422.8040 INCHES
				XMRP 1422.5040 INCHES
				YMRP 0.0000 INCHES
				ZMRP 130.0004 INCHES
				SCALE 0.0035 SCALE

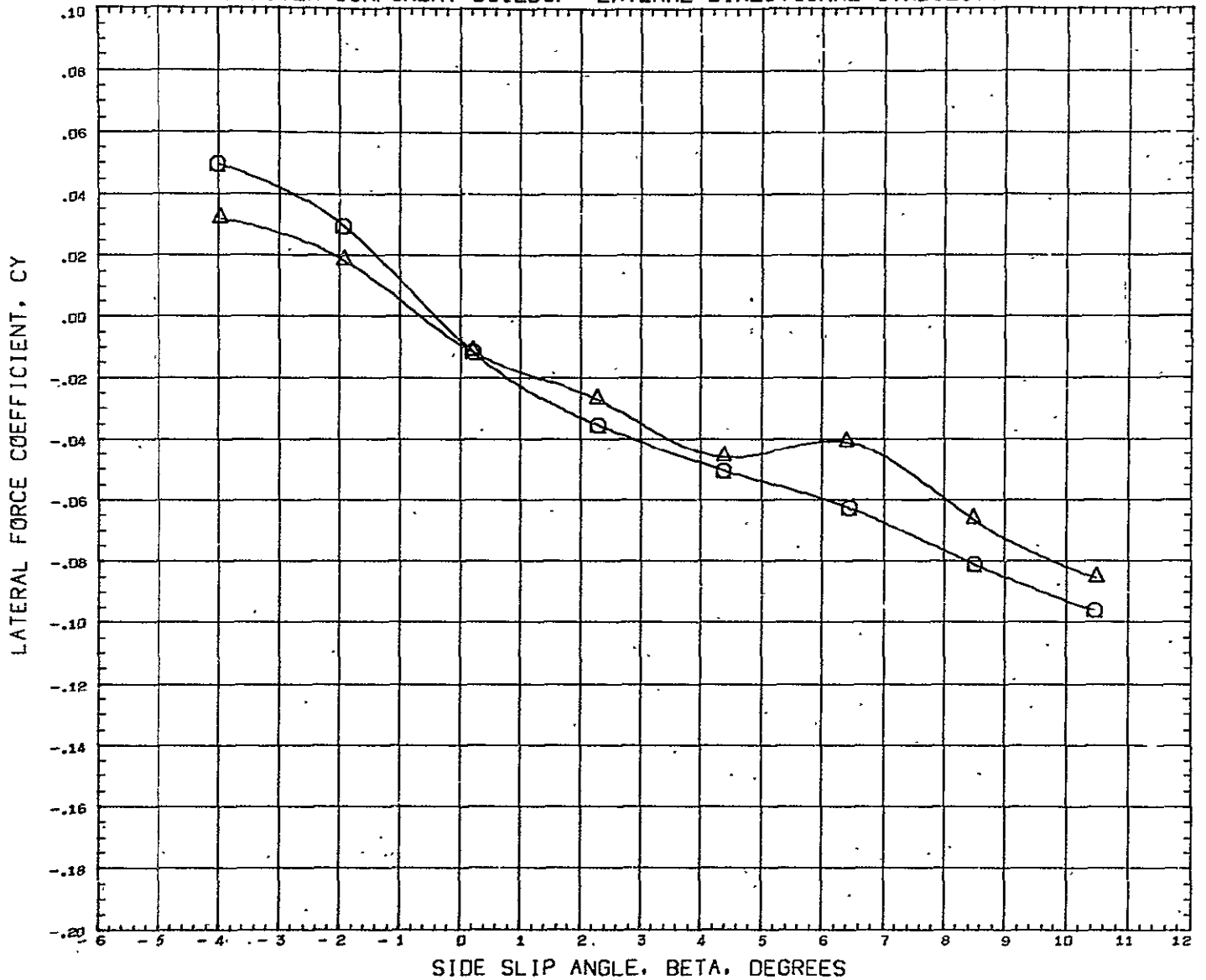
DELTA WING ORBITER-COMPONENT BUILDUP- LATERAL DIRECTIONAL STABILITY



DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(R2783D) ○	MSFC478 NR DELTA ORBITER B5W17E10X
(R2775D) △	MSFC478 NR DELTA ORBITER B5W17E10V17J2X

ALPHA	RUDDER	RUDFLR	ELVATR	REFERENCE INFORMATION
32.900			0.000	REFS 6084.0040 SQ FT
32.880	0.000	15.000	0.000	REFL 821.2004 INCHES
				REFB 1422.8040 INCHES
				XMRP 1422.5040 INCHES
				YMRP 0.0000 INCHES
				ZMRP 130.0004 INCHES
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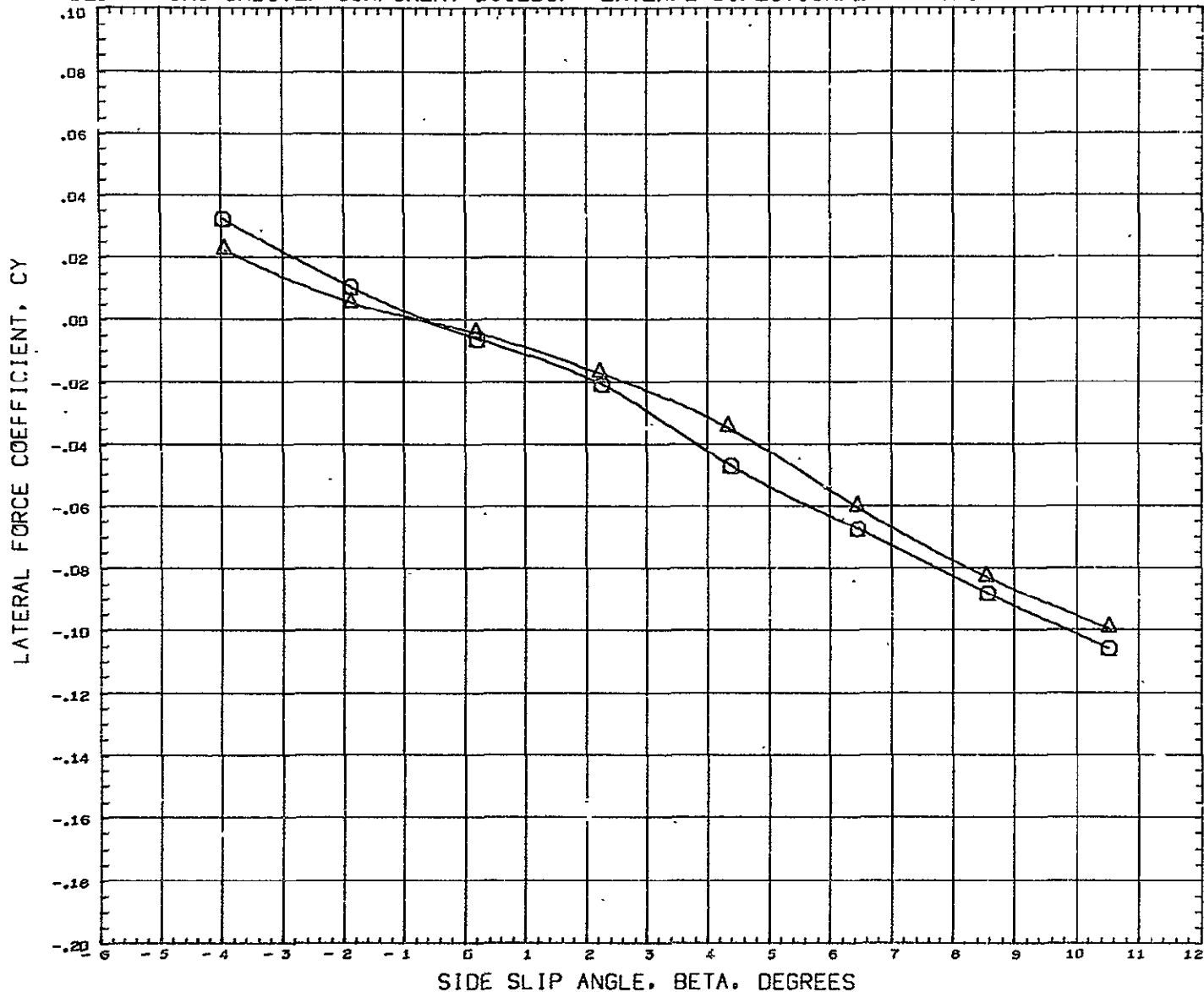
DELTA WING ORBITER-COMPONENT BUILDUP- LATERAL DIRECTIONAL STABILITY



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	RUDDER	RUDFLR	ELVATR	REFERENCE INFORMATION
(R2784D)	MSFC478 NR DELTA ORBITER B5W17E10X	48.280			0.000	REFS 6084.0040 SQ FT
(R2776D)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	48.260	0.000	15.000	0.000	REFL 821.2004 INCHES
						REFB 1422.8040 INCHES
						XMRP 1422.5040 INCHES
						YMRP 0.0000 INCHES
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						SCALE 0.0035 SCALE

HACH 1.199

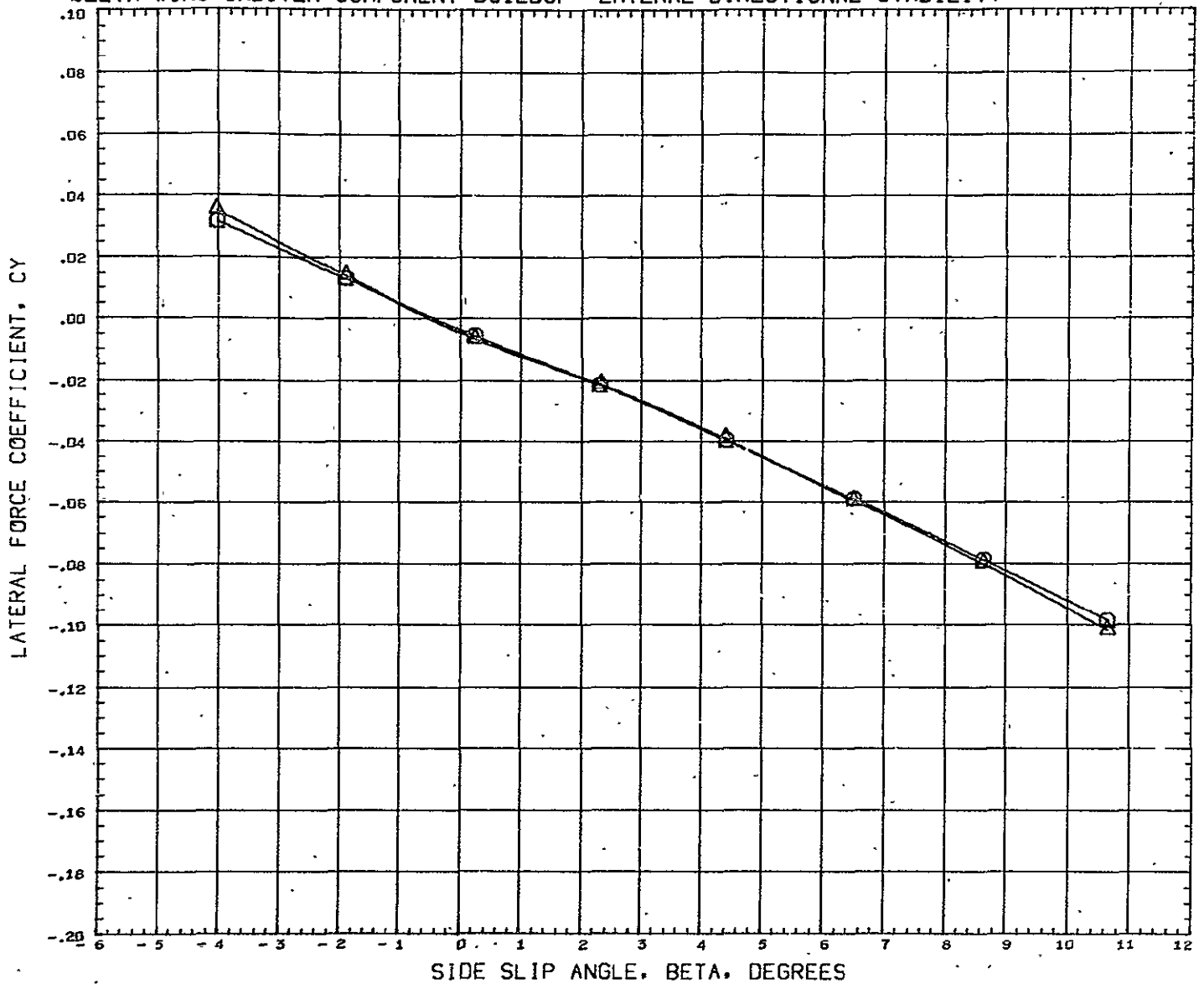
DELTA WING ORBITER-COMPONENT BUILDUP- LATERAL DIRECTIONAL STABILITY



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	RUDDER	RUDFLR	ELVATR	REFERENCE INFORMATION
(R2784D)	MSFC478 NR DELTA ORBITER B5W17E1DX	48.280			0.000	REFS 6084.0040 SQ FT
(R2776D)	MSFC478 NR DELTA ORBITER B5W17E1DV17J2X	48.260	0.000	15.000	0.000	REFL 821.2004 INCHES
						REFB 1422.8040 INCHES
						XMRP 1422.5040 INCHES
						YMRP 0.0000 INCHES
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						SCALE 0.0035 SCALE

MACH 1.458

DELTA WING ORBITER-COMPONENT BUILDUP- LATERAL DIRECTIONAL STABILITY

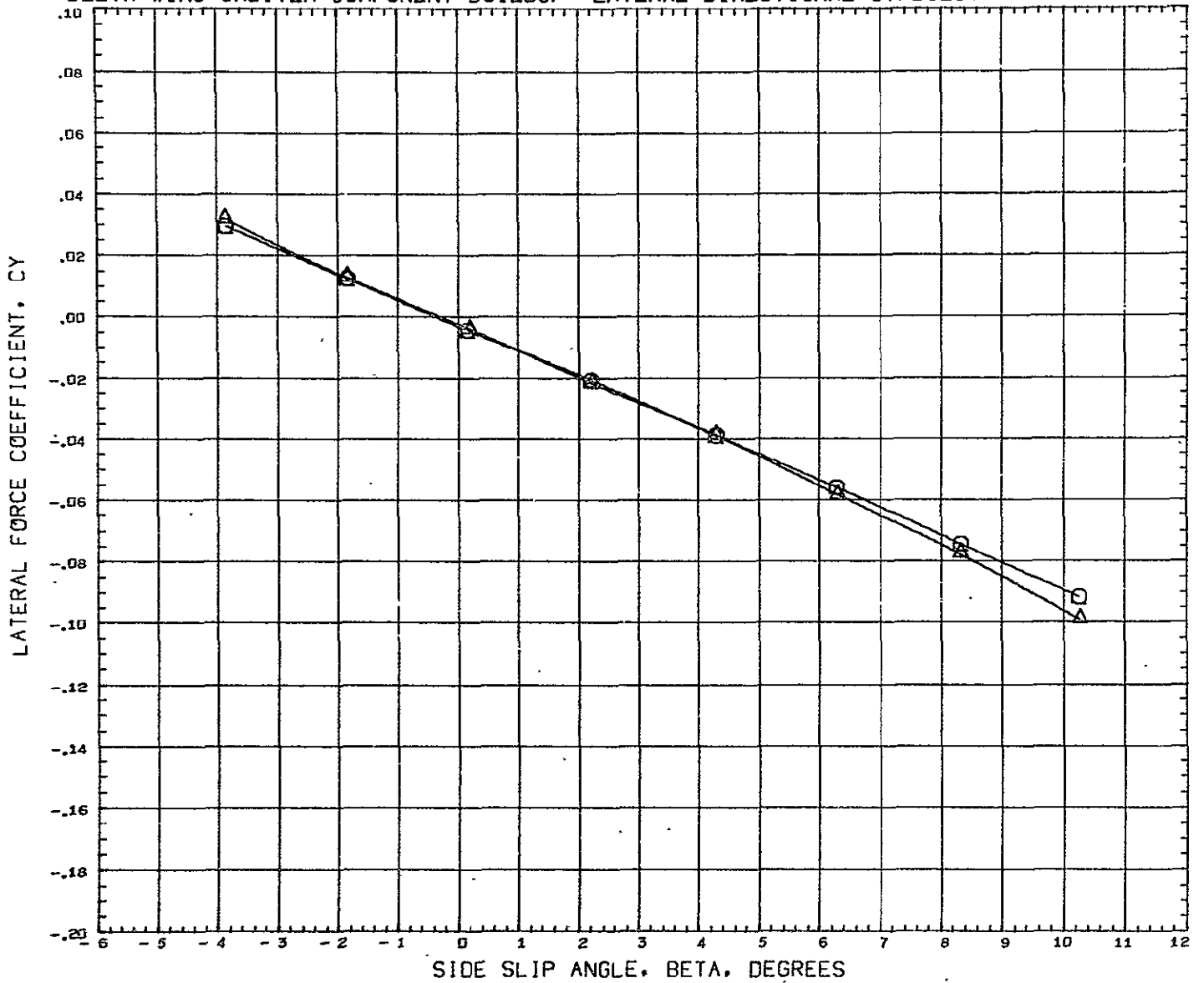


DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(R2764D) □	MSFC478 NR DELTA ORBITER B5W17E10X
(R2776D) △	MSFC478 NR DELTA ORBITER B5W17E10V17J2X

ALPHA	RUDDER	RUDFLR	ELVATR	REFERENCE INFORMATION
48.280			0.000	REFS 6084.0040 SQ FT
48.260	0.000	15.000	0.000	REFL 821.2004 INCHES
				REFB 1422.8040 INCHES
				XNRF 1422.5040 INCHES
				YNRF 0.0000 INCHES
				ZNRF 130.0004 INCHES
				SCALE 0.0035 SCALE

MACH 1.960

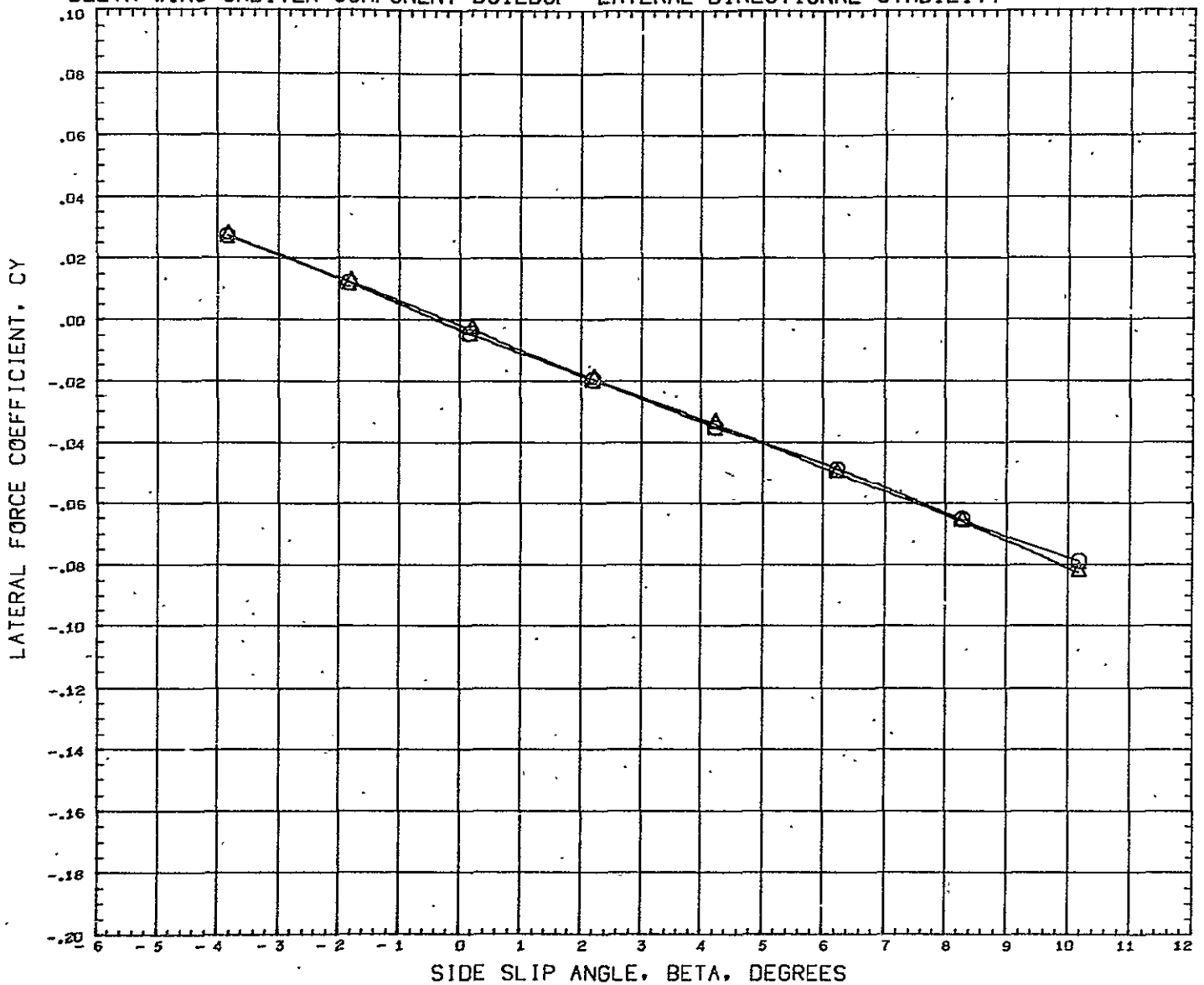
DELTA WING ORBITER-COMPONENT BUILDUP- LATERAL DIRECTIONAL STABILITY



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	RUDDER	RUDFLR	ELVATR	REFERENCE INFORMATION
(R2764D)	MSFC478 NR DELTA ORBITER B5W17E10X	48.280			0.000	REFS 6084.0040 SQ FT
(R2776D)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	48.260	0.000	15.000	0.000	REFL 821.2004 INCHES
						REFB 1422.8040 INCHES
						XMRP 1422.5040 INCHES
						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 2.993

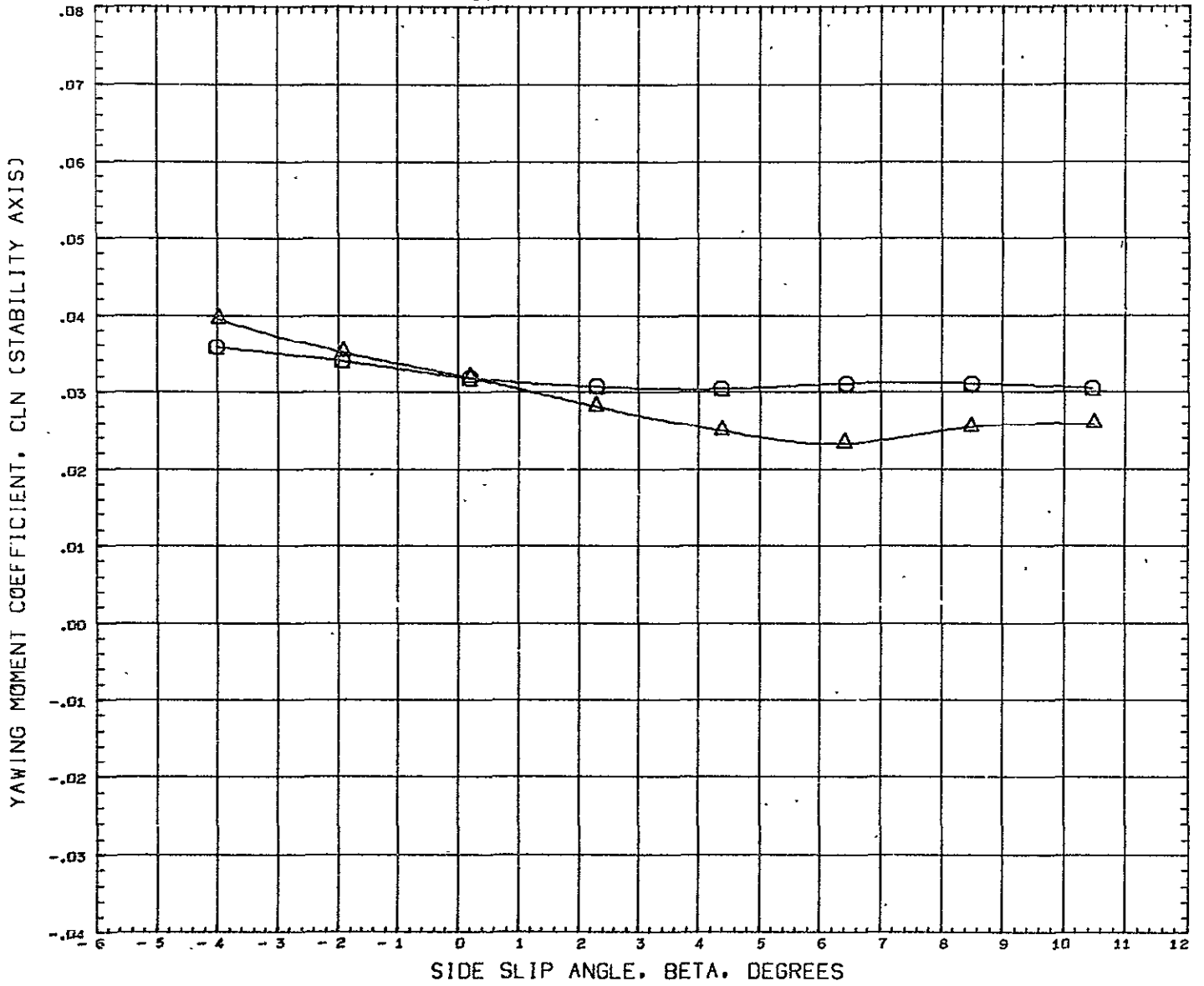
DELTA WING ORBITER-COMPONENT BUILDUP- LATERAL DIRECTIONAL STABILITY



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	RUDDER	RUDFLR	ELVATR	REFERENCE INFORMATION
(R2784D)	MSFC478 NR DELTA ORBITER B5W17E10X	48.280			0.000	REFS 6084.0040 SQ FT
(R2776D)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	48.260	0.000	15.000	0.000	REFL 821.2004 INCHES
						REFB 1422.8040 INCHES
						XMRP 1422.5040 INCHES
						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 4.959

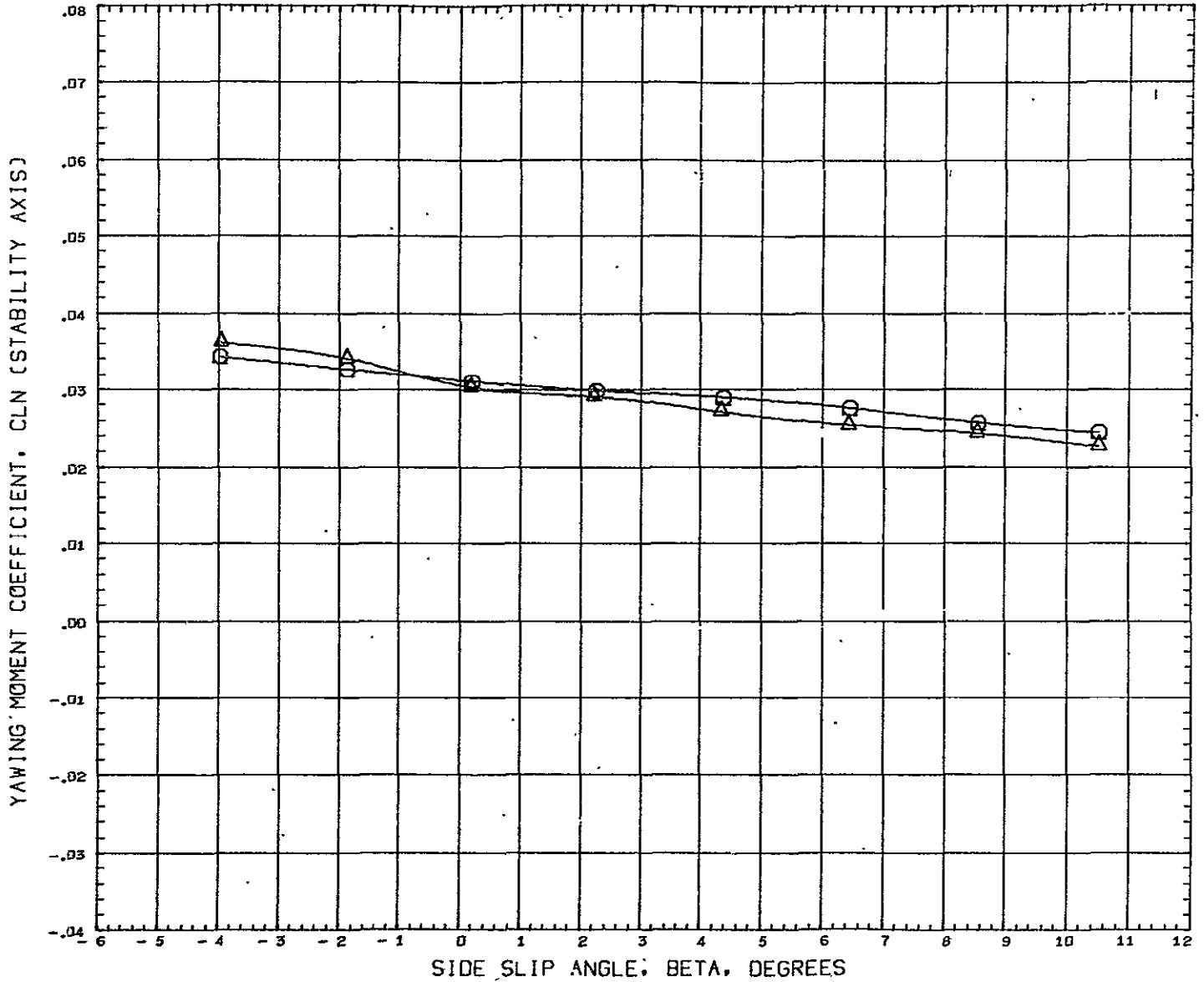
DELTA WING ORBITER-COMPONENT BUILDUP- LATERAL DIRECTIONAL STABILITY



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	RUDDER	RUDFLR	ELVATR	REFERENCE INFORMATION
(R2764D)	MSFC478 NR DELTA ORBITER B5W17E1UX	48.280			0.000	REFS 6084.0040 SQ FT
(R2776D)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	48.260	0.000	15.000	0.000	REFL 821.2004 INCHES
						REFB 1422.8040 INCHES
						XMRP 1422.5040 INCHES
						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

PACH 1.199

DELTA WING ORBITER-COMPONENT BUILDUP- LATERAL DIRECTIONAL STABILITY



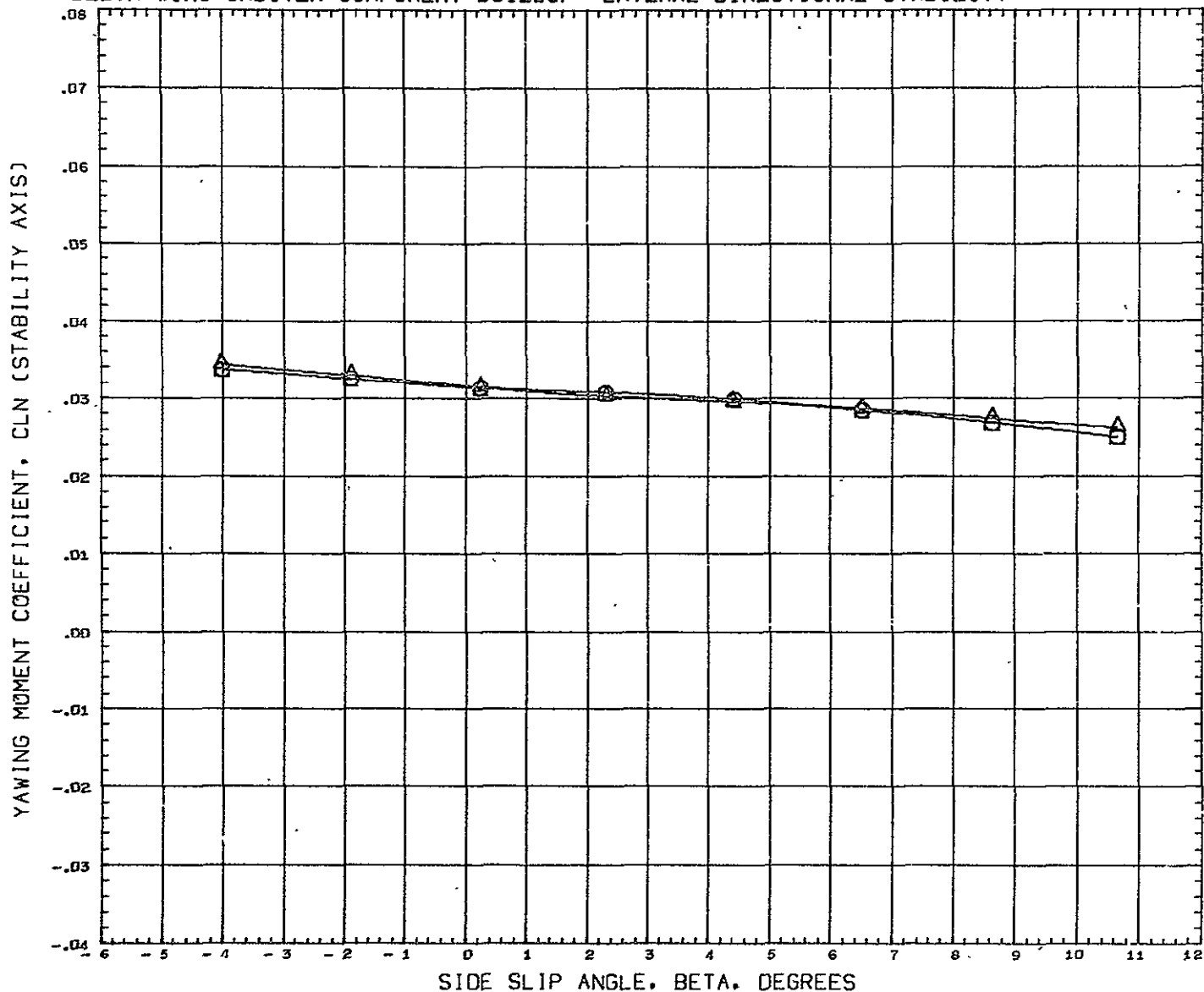
DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(R2784D)	MSFC478 NR DELTA ORBITER B5W17E1UX
(R2776D)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X

ALPHA	RUDDER	RUDFLR	ELVATR
48.260			0.000
48.260	0.000	15.000	0.000

REFERENCE INFORMATION		
REFS	6084.0040	SQ FT
REFL	821.2004	INCHES
REFB	1422.8040	INCHES
XMRP	1422.5040	INCHES
YMRP	0.0000	INCHES
ZMRP	130.0004	INCHES
SCALE	0.0035	SCALE

HACH 1.458

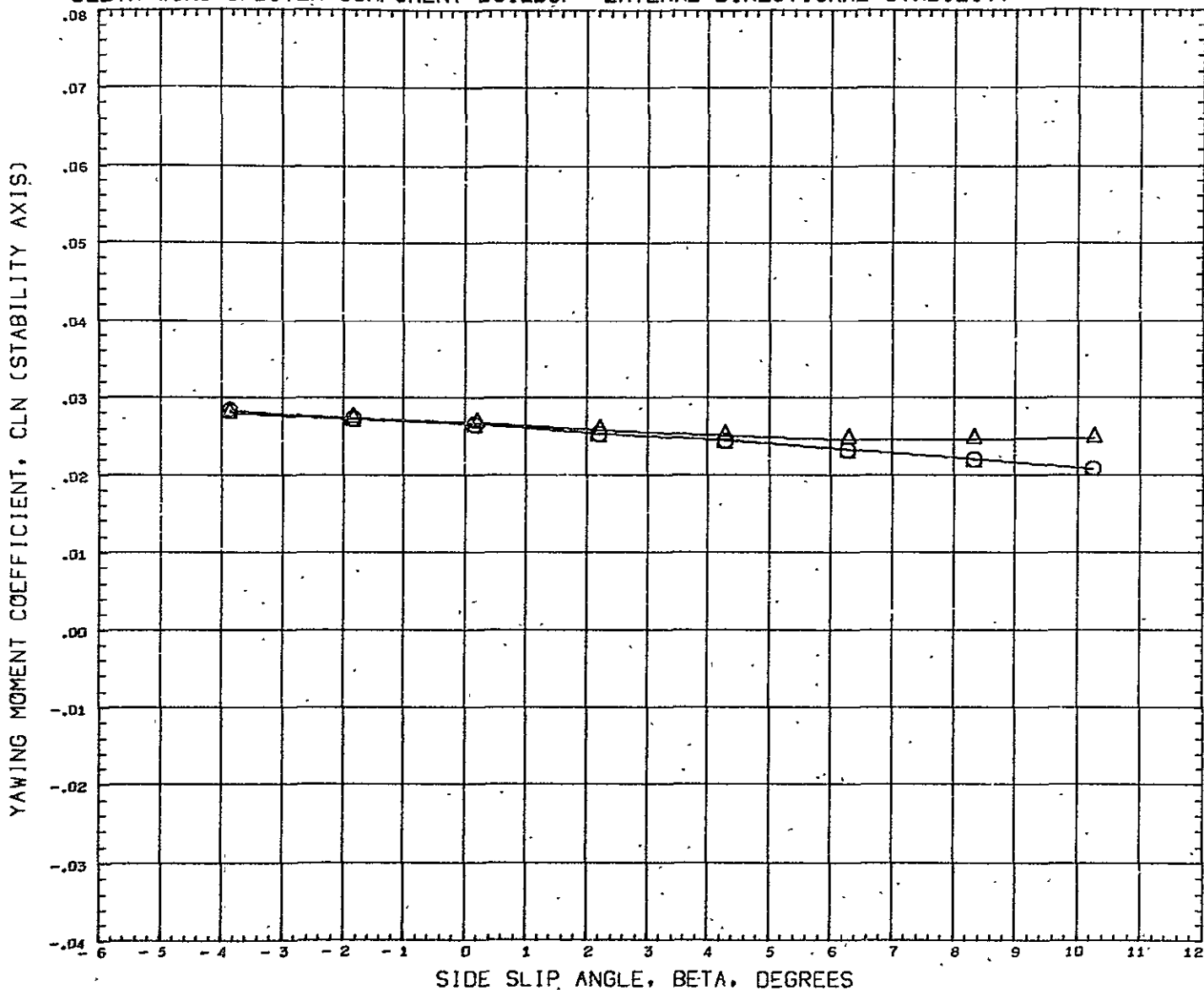
DELTA WING ORBITER-COMPONENT BUILDUP- LATERAL DIRECTIONAL STABILITY



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	RUDDER	RUDFLR	ELVATR	REFERENCE INFORMATION
(R2784D)	MSFC478 NR DELTA ORBITER B5W17E1DX	48.280			0.000	REFS 6084.0040 SQ FT
(R2776D)	MSFC478 NR DELTA ORBITER B5W17E1DV17J2X	48.260	0.000	15.000	0.000	REFL 821.2004 INCHES
						REFD 1422.8040 INCHES
						XNRF 1422.5040 INCHES
						YMRF 0.0000 INCHES
						ZMRF 130.0004 INCHES
						SCALE 0.0036 SCALE

MACH 1.965

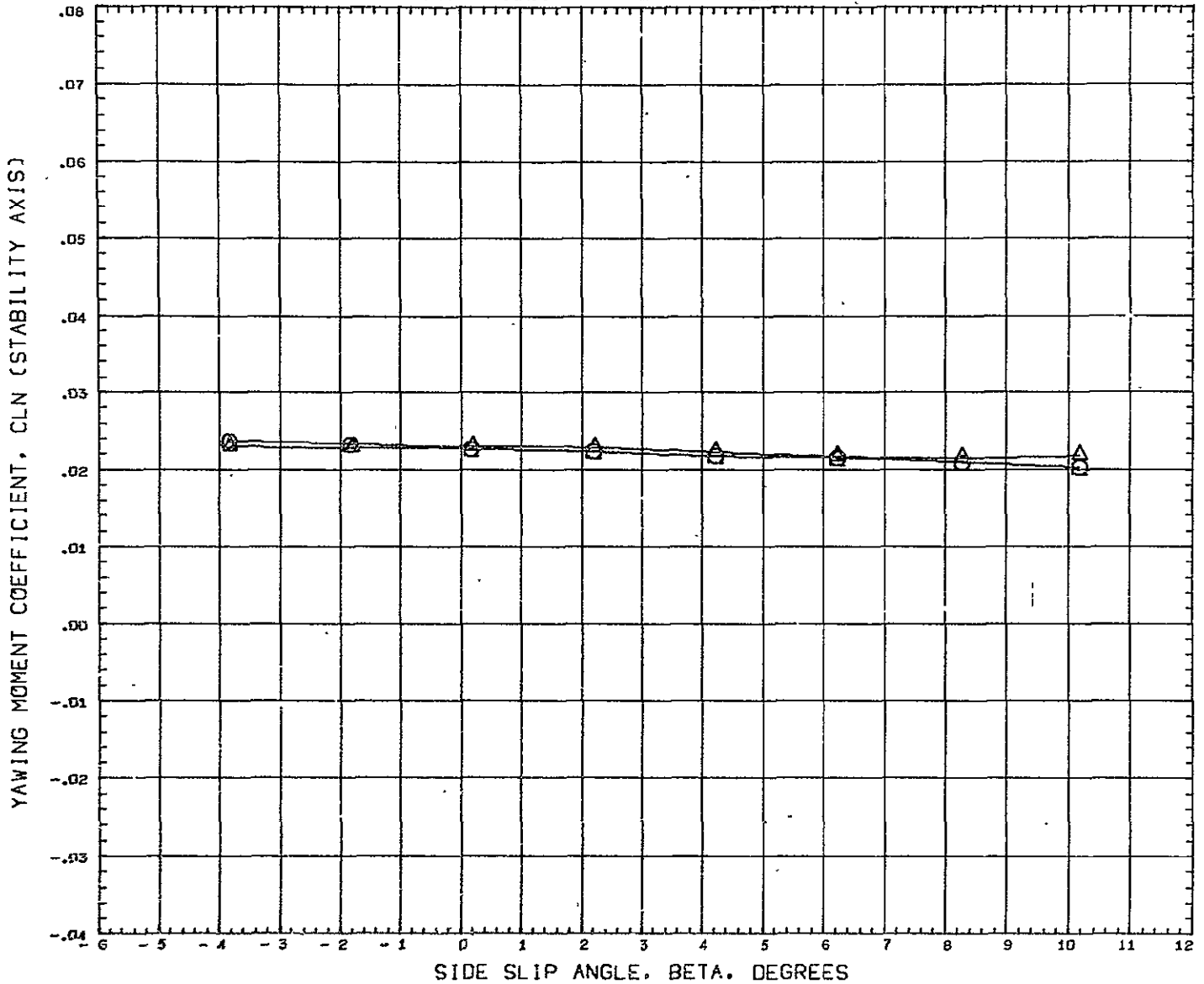
DELTA WING ORBITER-COMPONENT BUILDUP- LATERAL DIRECTIONAL STABILITY



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	RUDDER	RUDFLR	ELVATR	REFERENCE INFORMATION
(R2784D)	MSFC478 NR DELTA ORBITER B5W17E10X	48.280			0.000	REFS 6084.0040 SQ. FT
(R2776D)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	48.260	0.000	15.000	0.000	REFL 821.2004 INCHES
						REFD 1422.8040 INCHES
						XMRP 1422.5040 INCHES
						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0055 SCALE

MACH 2.990

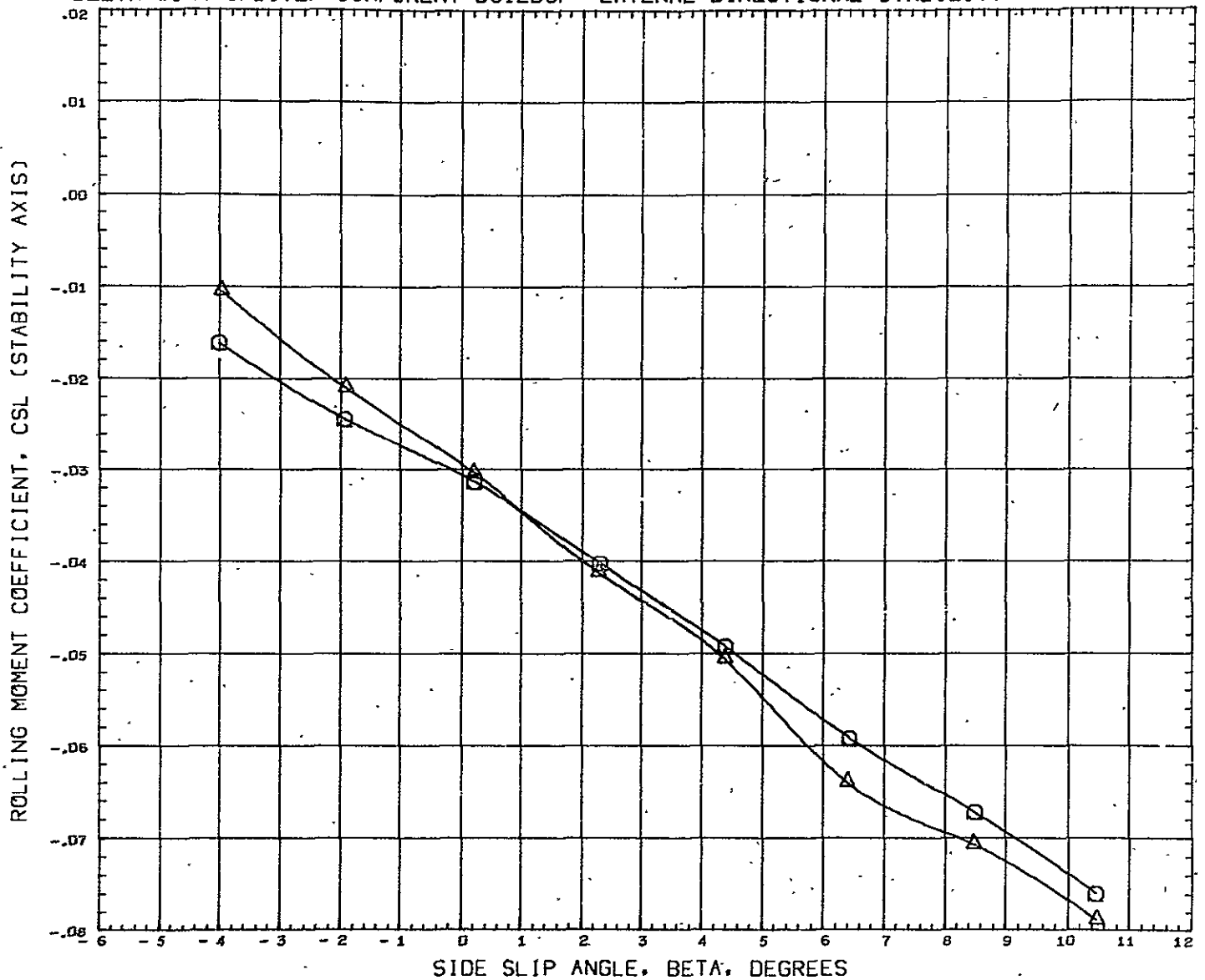
DELTA WING ORBITER-COMPONENT BUILDUP- LATERAL DIRECTIONAL STABILITY



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	RUDDER	RUDFLR	ELVATR	REFERENCE INFORMATION
(R27840)	MSFC478 NR DELTA ORBITER B5W17E10X	48.280			0.000	REFS 6084.0040 SQ FT
(R27760)	MSFC478 NR DELTA ORBITER B5W17E19V17J2X	48.260	0.000	15.000	0.000	REFL 821.2001 INCHES
						REFB 1422.8040 INCHES
						XMRF 1422.5040 INCHES
						YMRF 0.0000 INCHES
						ZMRF 130.0004 INCHES
						SCALE 0.0035 SCALE

HACH 4.959

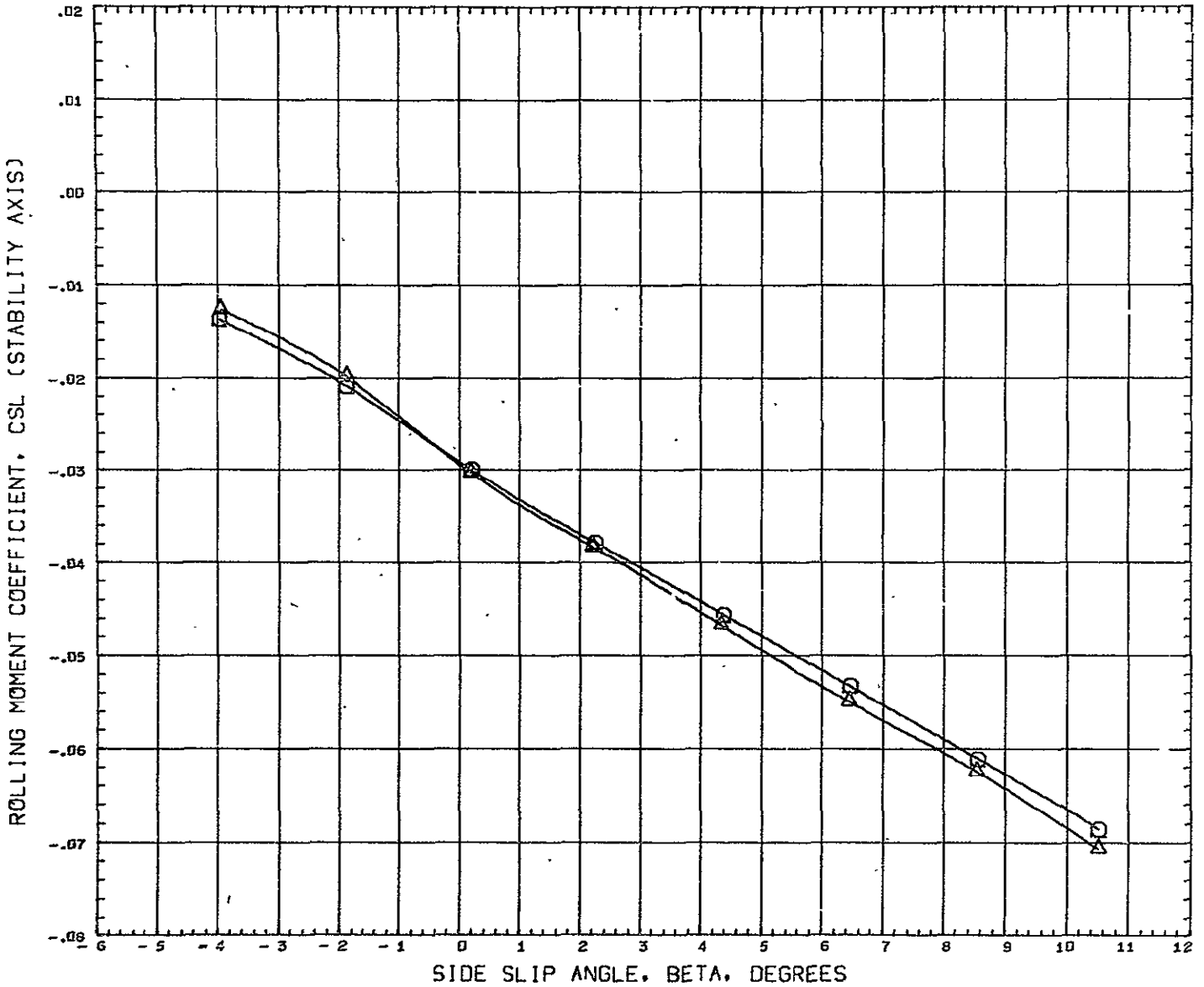
DELTA WING ORBITER-COMPONENT BUILDUP- LATERAL DIRECTIONAL STABILITY



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	RUDDER	RUDFLR	ELVATR	REFERENCE INFORMATION
(R2764D)	MSFC478 NR DELTA ORBITER B5W17E10X	48.280			0.000	REFS 6084.0040 SQ FT
(R2776D)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	48.260	0.000	15.000	0.000	REFL 821.2004 INCHES
						REFB 1422.8040 INCHES
						XMRP 1422.5040 INCHES
						YMRP 0.0004 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 1.199

DELTA WING ORBITER-COMPONENT BUILDUP- LATERAL DIRECTIONAL STABILITY



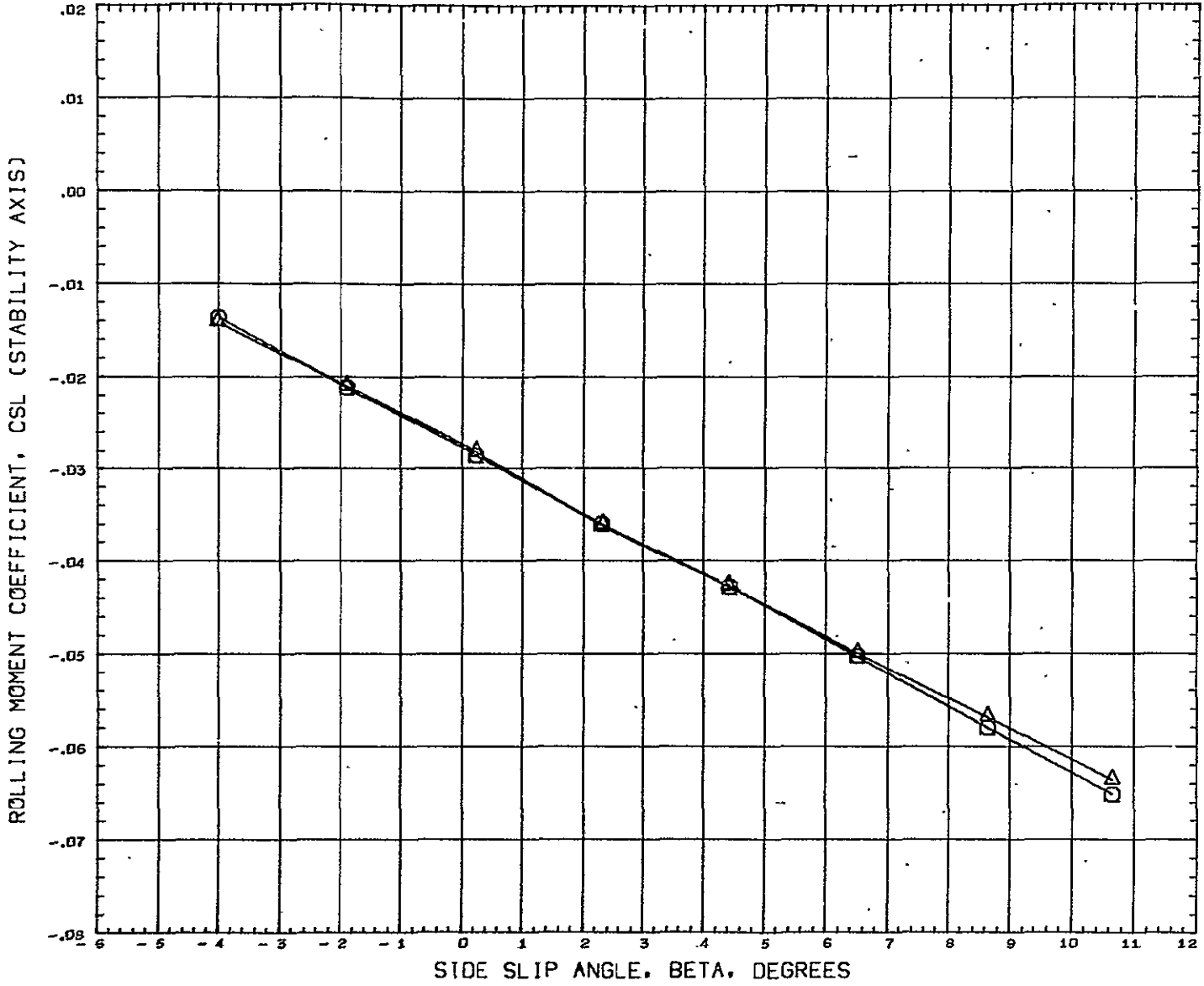
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 (R2776D) A MSFC478 NR DELTA ORBITER B5W17E1DV17J2X

ALPHA RUDDER RUDFLR ELVATR
 48.280 0.000 15.000 0.000
 48.260 0.000 15.000 0.000

REFERENCE INFORMATION
 REFS 6084.0040 SQ FT
 REFL 821.2004 INCHES
 REFB 1422.8040 INCHES
 XMRP 1422.5040 INCHES
 YMRP 0.0000 INCHES
 ZMRP 130.0004 INCHES
 SCALE 0.0035 SCALE

MACH 1.458

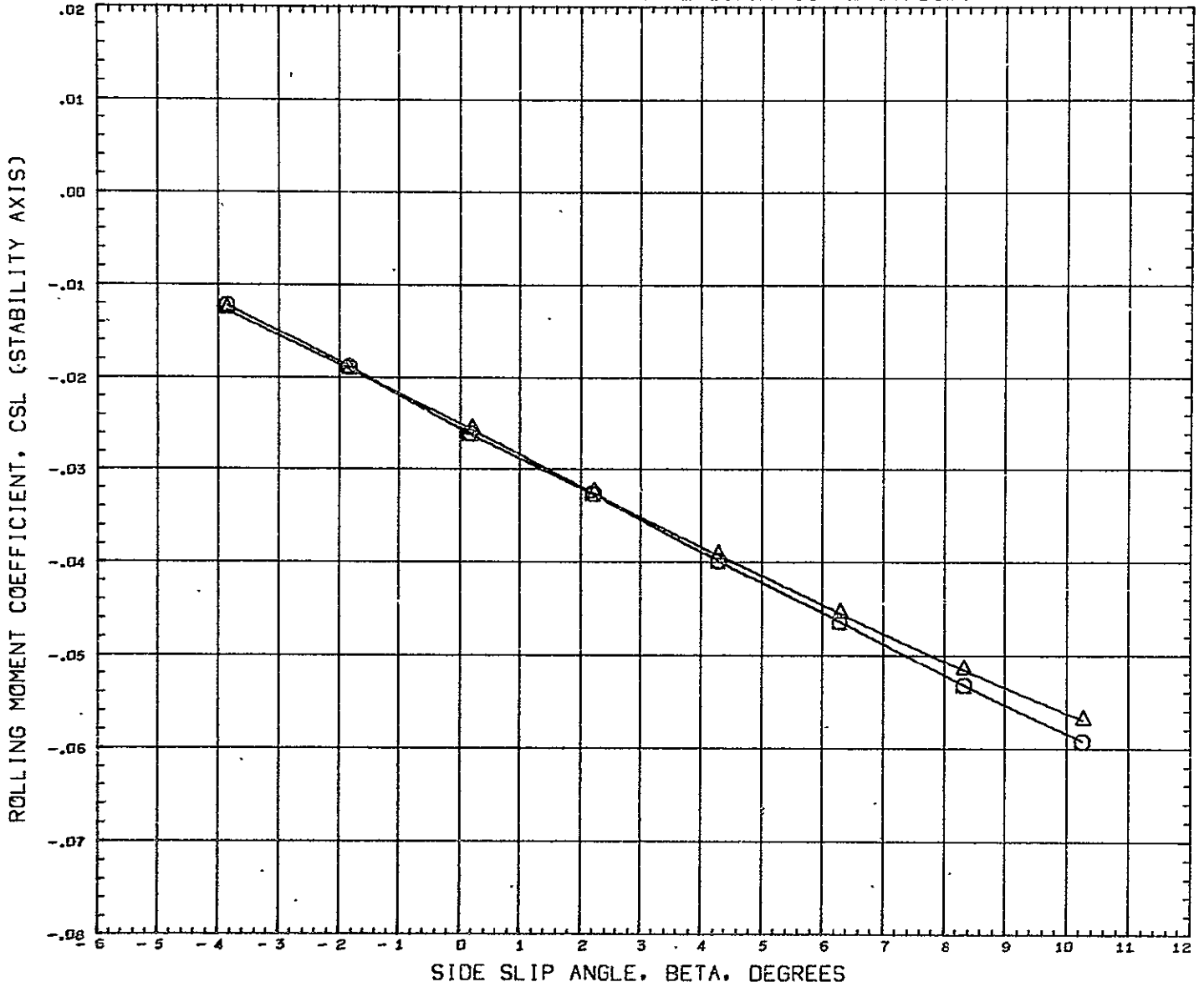
DELTA WING ORBITER-COMPONENT BUILDUP- LATERAL DIRECTIONAL STABILITY



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	RUDDER	RUDFLR	ELVATR	REFERENCE INFORMATION
(R2764D)	⊙ HSFC478 NR DELTA ORBITER B5W17E10X	48.280			0.000	REFS 6084.0040 SQ FT
(R2776D)	⊕ HSFC478 NR DELTA ORBITER B5W17E10V17J2X	48.260	0.000	15.000	0.000	REFL 821.2004 INCHES
						REFB 1422.8040 INCHES
						XMRP 1422.5040 INCHES
						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 1.960

DELTA WING ORBITER-COMPONENT BUILDUP- LATERAL DIRECTIONAL STABILITY

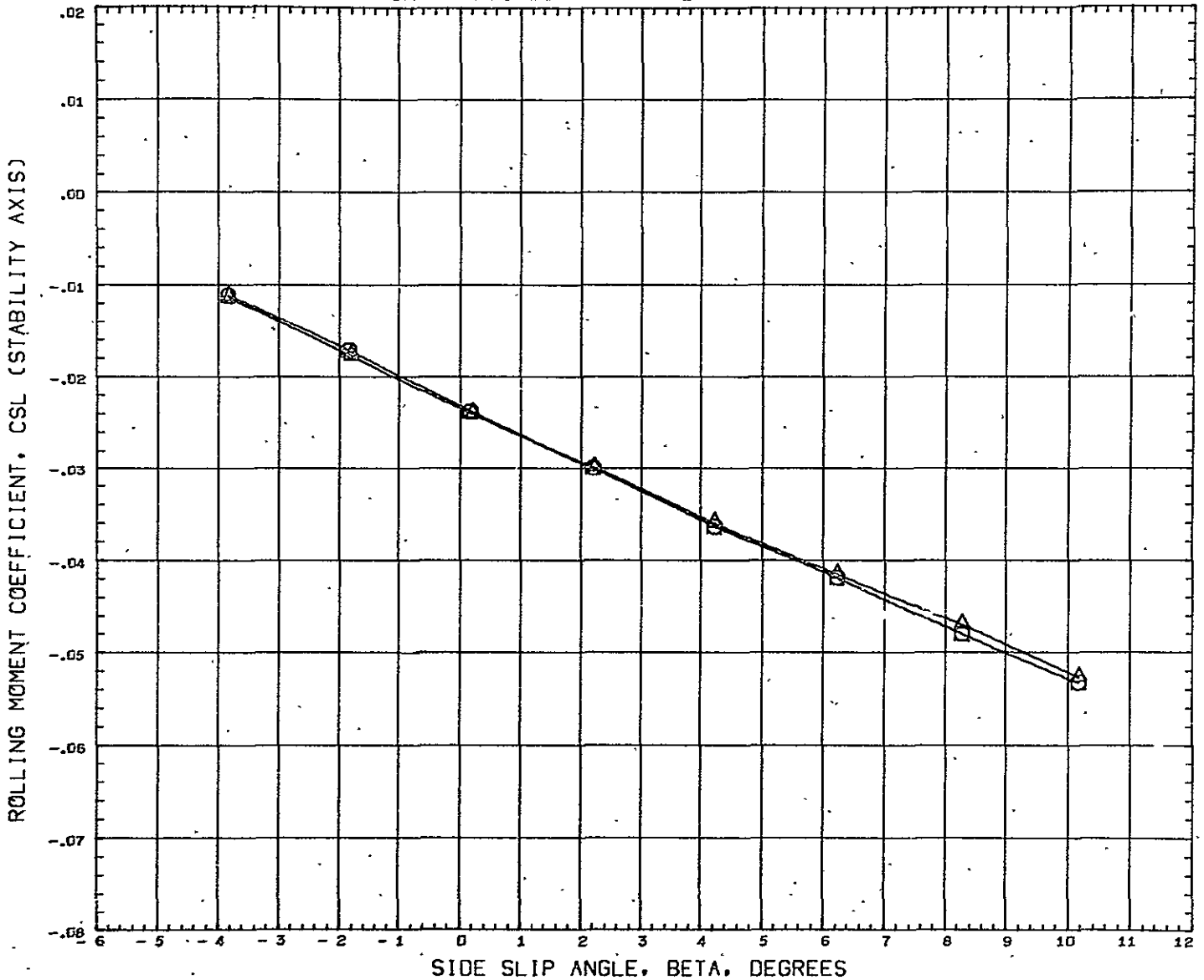


DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(R2784D) ○	MSFC478 NR DELTA ORBITER B5W17E10X
(R2776D) △	MSFC478 NR DELTA ORBITER B5W17E10V17J2X

ALPHA	RUDDER	RUDFLR	ELVATR	REFERENCE INFORMATION
48.260			0.000	REFS .6084.0040 SQ FT
48.260	0.000	15.000	0.000	REFL 821.2004 INCHES
				REFB 1422.8040 INCHES
				YMRP 1422.5040 INCHES
				YMRP 0.0000 INCHES
				ZMRP 130.0004 INCHES
				SCALE 0.0035 SCALE

MACH 2.990

DELTA WING ORBITER-COMPONENT BUILDUP- LATERAL DIRECTIONAL STABILITY



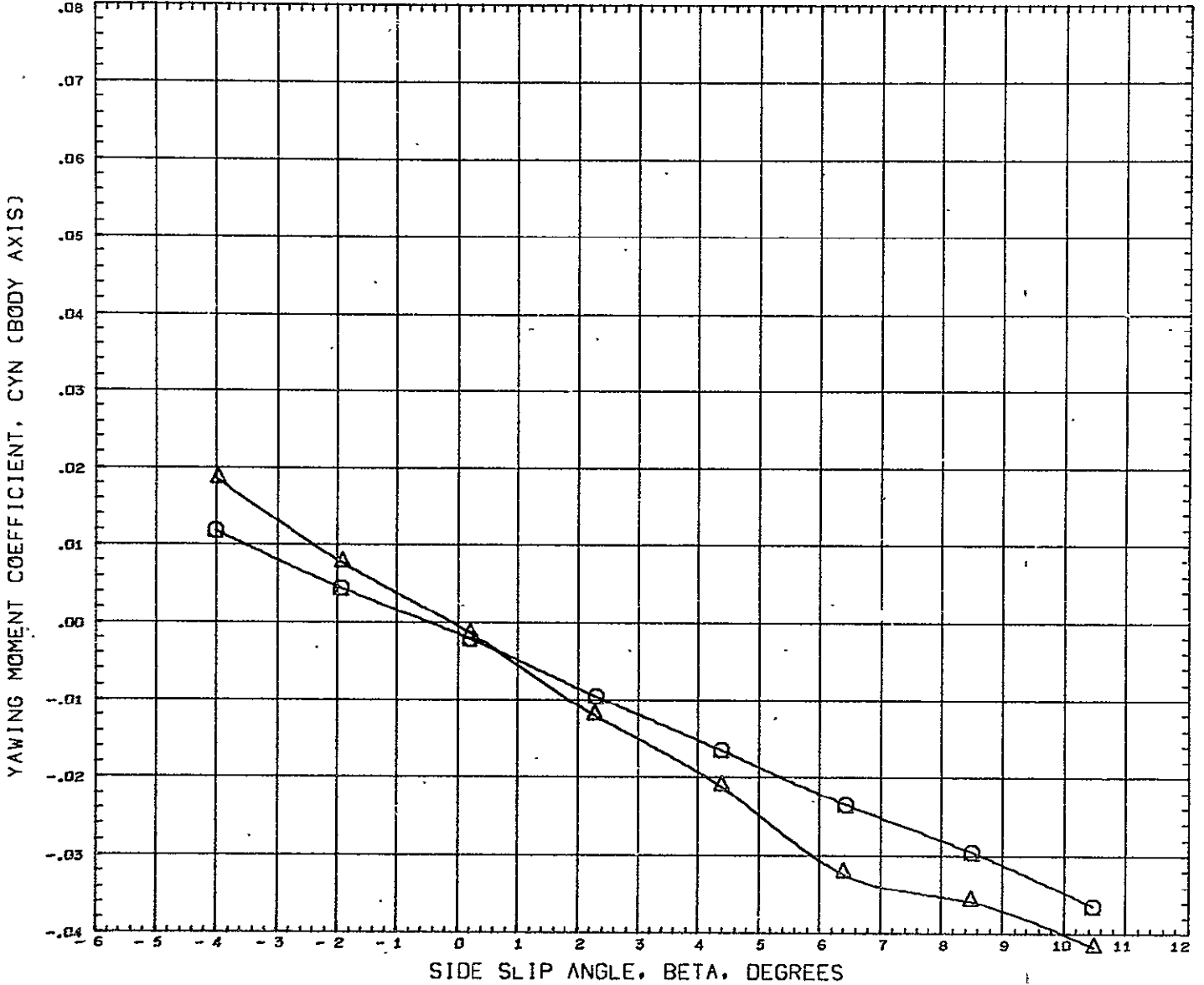
DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(R2784D) \odot	MSFC478 NR DELTA ORBITER B5W17E10X
(R2776D) \triangle	MSFC478 NR DELTA ORBITER B5W17E1DV17J2X

ALPHA	RUDDER	RUDFLR	ELVATR
48.280			0.000
48.260	0.000	15.000	0.000

REFERENCE INFORMATION		
REFS	6084.0040	SQ FT
REFL	821.2004	INCHES
REFB	1422.8040	INCHES
XMRP	1422.5040	INCHES
YMRP	0.0000	INCHES
ZMRP	130.0004	INCHES
SCALE	0.0035	SCALE

MACH 4.959

DELTA WING ORBITER-COMPONENT BUILDUP- LATERAL DIRECTIONAL STABILITY



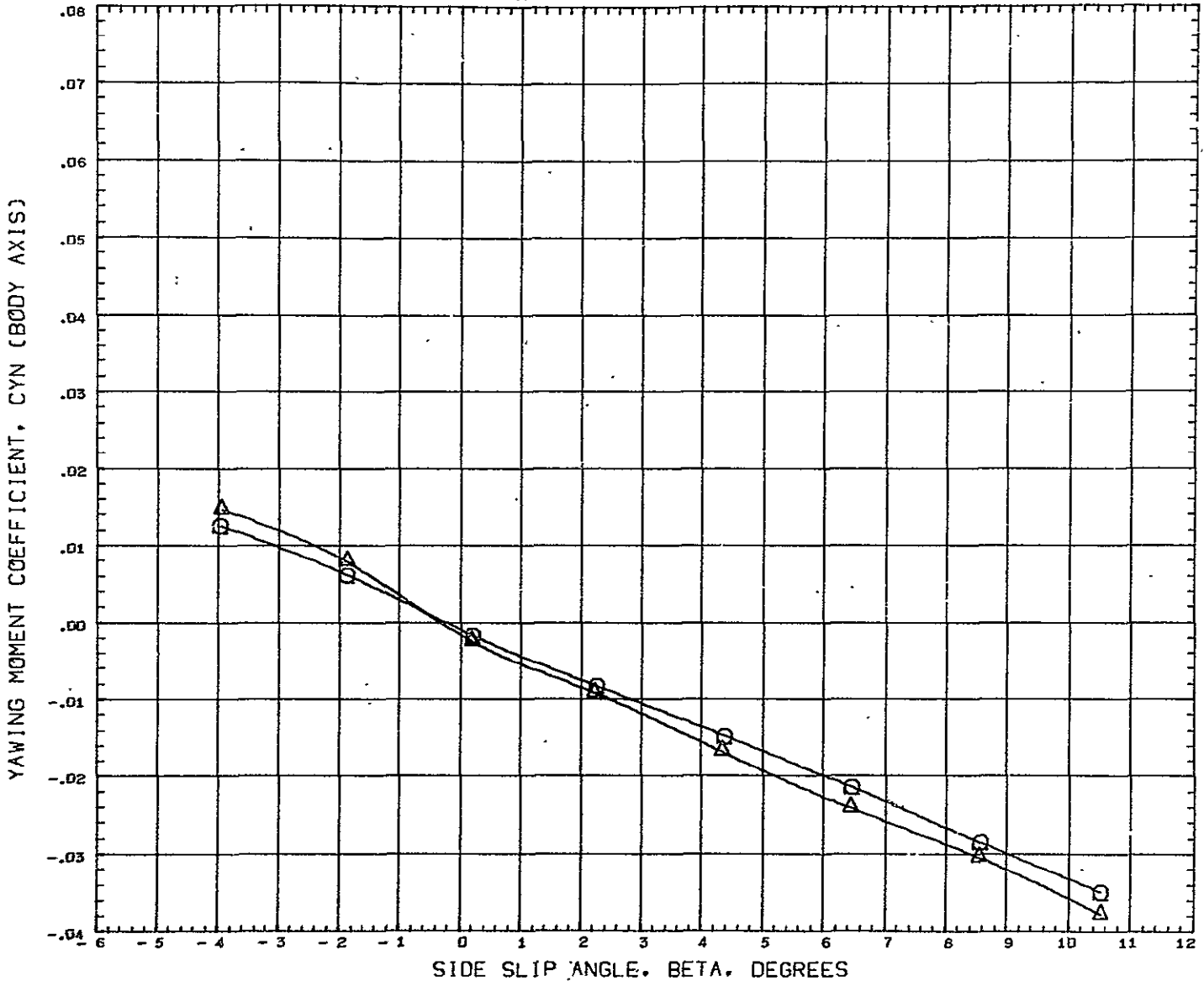
DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (B2784C) ○ MSFC478 NR DELTA ORBITER B5W17E1DX
 (B2776C) △ MSFC478 NR DELTA ORBITER B5W17E1DV17J2X

ALPHA RUDDER RUDFLR ELVATR
 48.280 0.000 15.000 0.000
 48.260 0.000 15.000 0.000

REFERENCE INFORMATION
 REFS 6084.0040 SQ FT
 REFL 821.2004 INCHES
 REFB 1422.8040 INCHES
 XMRF 1422.5040 INCHES
 YMRF 0.0000 INCHES
 ZMRF 130.0004 INCHES
 SCALE 0.0035 SCALE

MACH 1.199

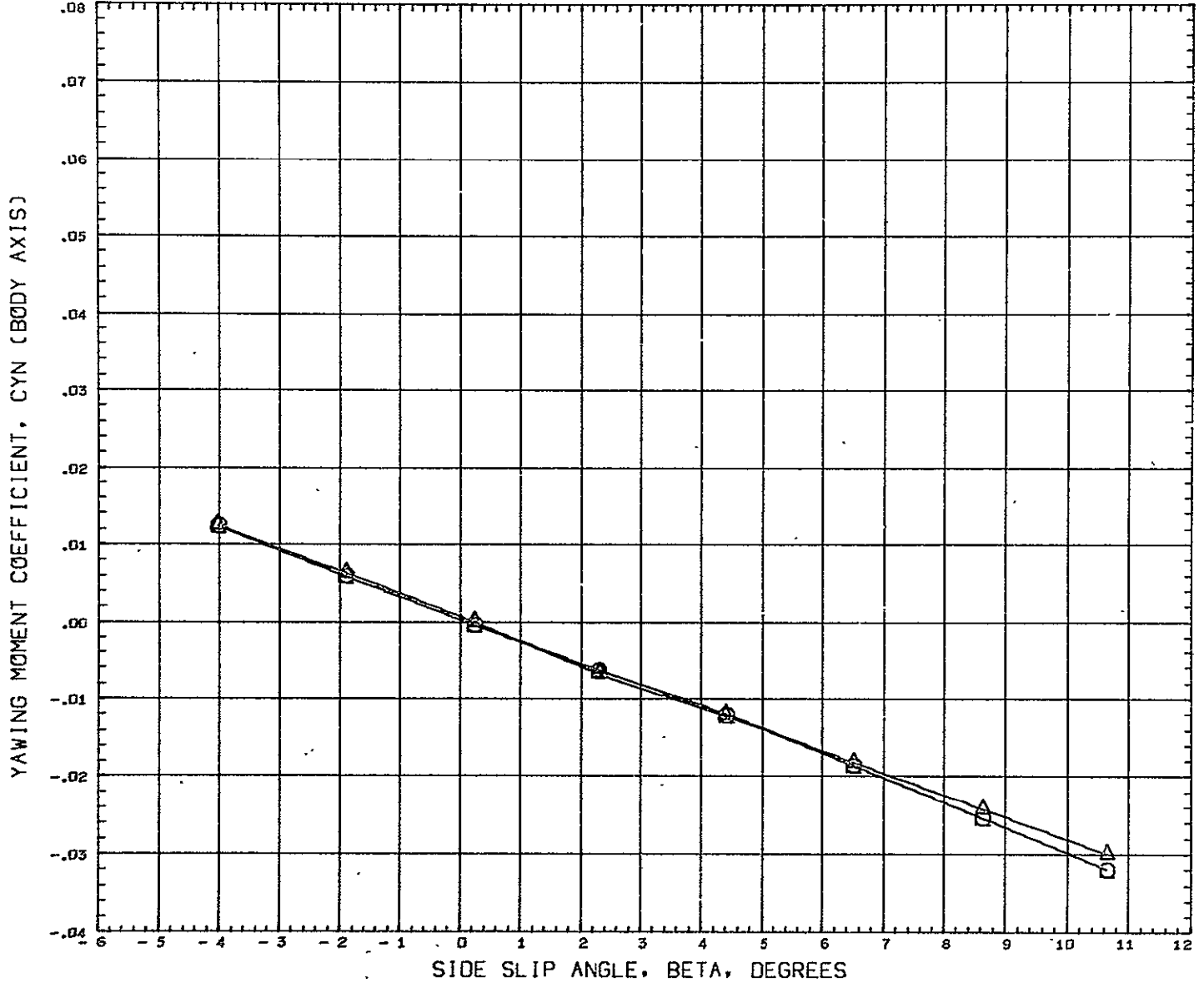
DELTA WING ORBITER-COMPONENT BUILDUP- LATERAL DIRECTIONAL STABILITY



DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	RUDDER	RUDFLR	ELVATR	REFERENCE INFORMATION
(82784D)	○	MSFC478 NR DELTA ORBITER B5W17E10X	48.280			0.000	REFS 6084.0040 SQ FT
(82776D)	△	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	48.260	0.000	15.000	0.000	REFL 821.2004 INCHES
							REFB 1422.8040 INCHES
							XMRP 1422.5040 INCHES
							YMRP 0.0000 INCHES
							ZMRP 130.0004 INCHES
							SCALE 0.0035 SCALE

MACH 1.458

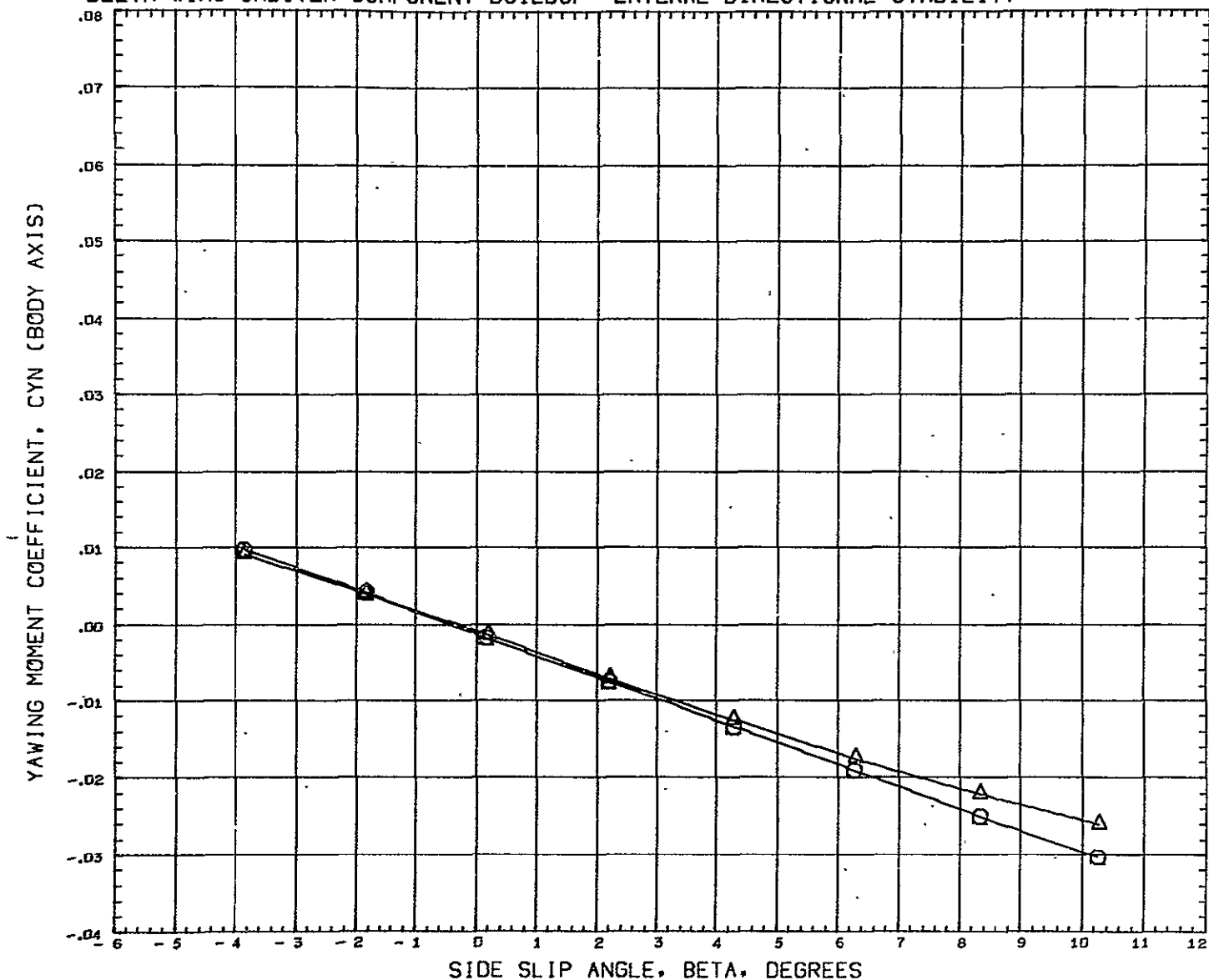
DELTA WING ORBITER-COMPONENT BUILDUP- LATERAL DIRECTIONAL STABILITY



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	RUDDER	RUDDLER	ELVATR	REFERENCE INFORMATION
(B2784D)	MSFC478 NR DELTA ORBITER B5W17E10X	48.280			0.000	REFS 6084.0040 SQ FT
(B2776D)	MSFC478 NR DELTA ORBITER B5W17E1DV17J2X	48.260	0.000	15.000	0.000	REFL 821.2004 INCHES
						REFB 1422.8040 INCHES
						XMRP 1422.5040 INCHES
						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 1.960

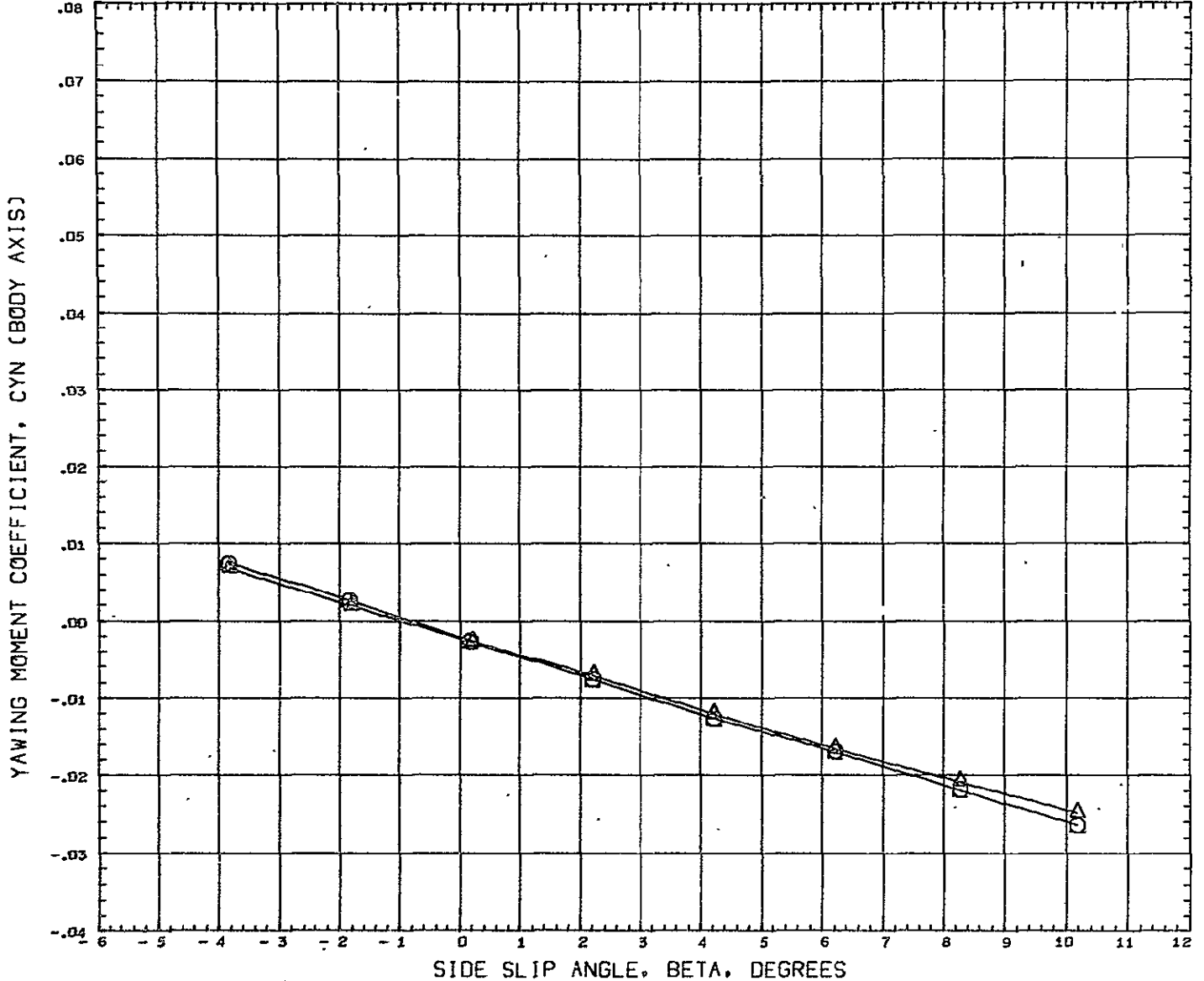
DELTA WING ORBITER-COMPONENT BUILDUP- LATERAL DIRECTIONAL STABILITY



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	RUDDER	RUDFLR	ELVATR	REFERENCE INFORMATION
(B2784D)	MSFC478 NR DELTA ORBITER B5W17E10X	48.280			0.000	REFS 6084.0040 SQ FT
(B2776D)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	48.260	0.000	15.000	0.000	REFL 821.2004 INCHES
						REFB 1422.8040 INCHES
						XMRP 1422.5040 INCHES
						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 2.990

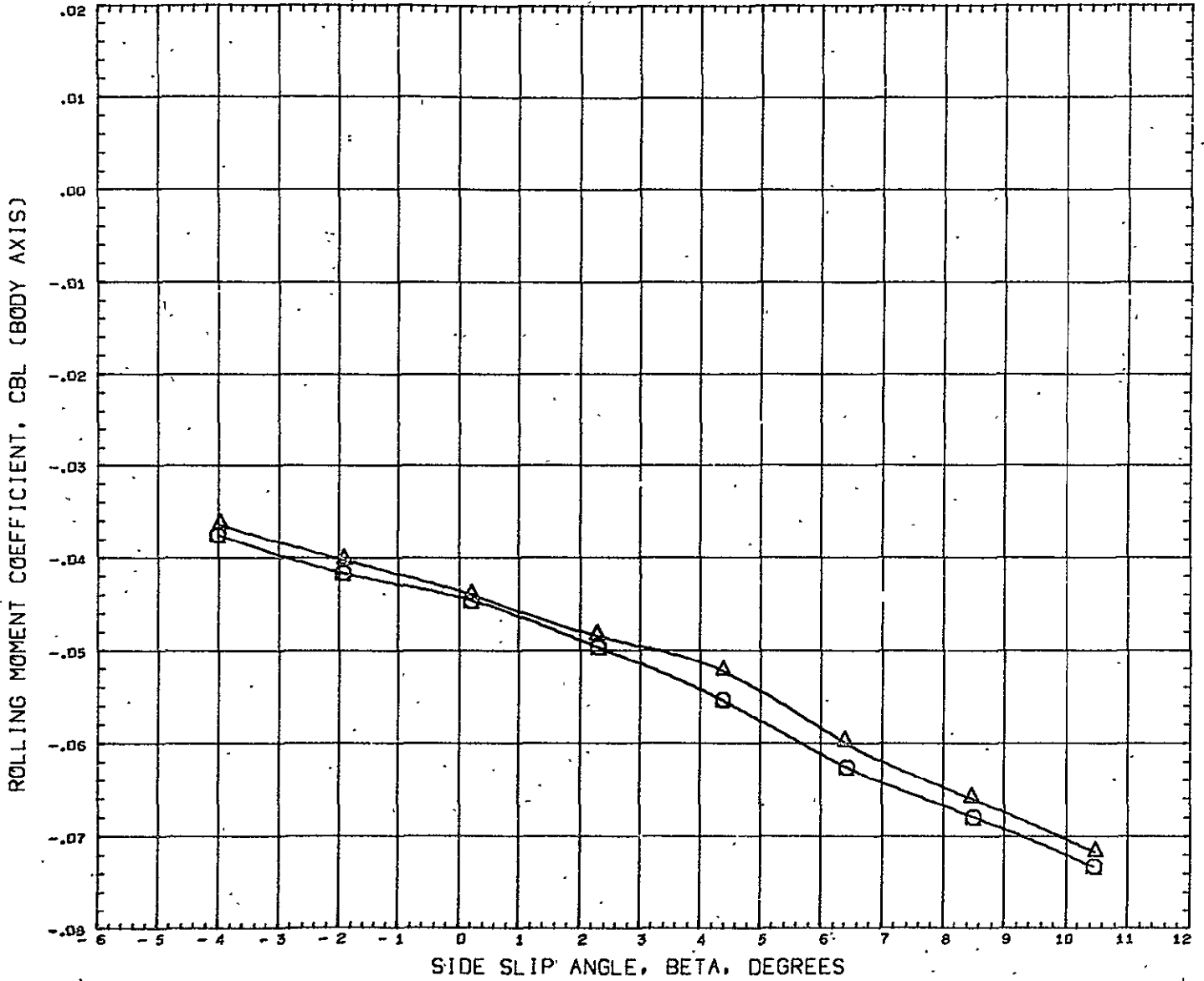
DELTA WING ORBITER-COMPONENT BUILDUP- LATERAL DIRECTIONAL STABILITY



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	RUDDER	RUDFLR	ELVATR	REFERENCE INFORMATION
(B2784D)	MSFC478 NR DELTA ORBITER B5W17E10X	48.280			0.000	REFS 6084.0040 SQ FT
(B2776D)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	48.260	0.000	15.000	0.000	REFL 821.2004 INCHES
						REFB 1422.8040 INCHES
						XMRP 1422.5040 INCHES
						YMRP 0.0005 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH . 4.950

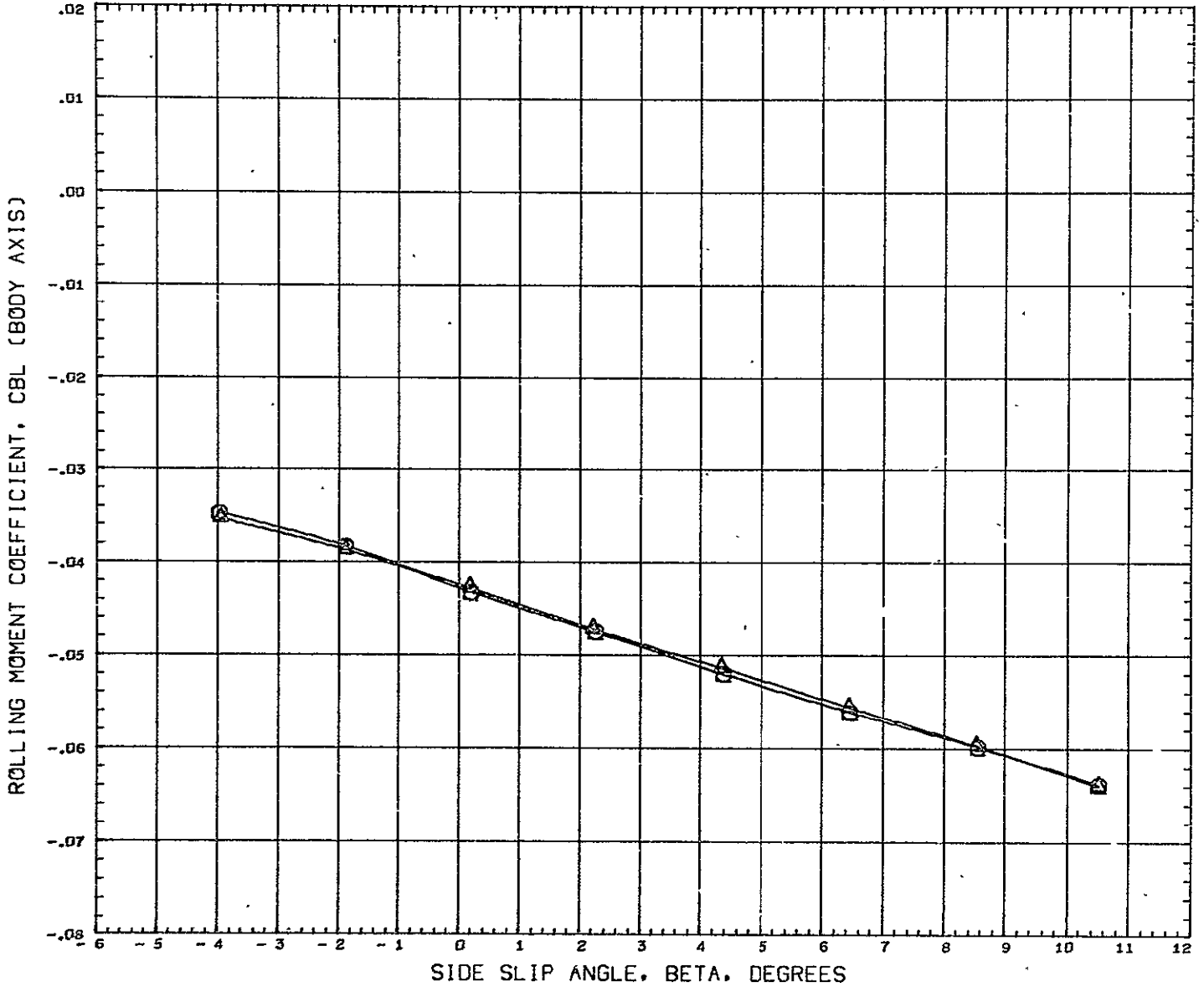
DELTA WING ORBITER-COMPONENT BUILDUP- LATERAL DIRECTIONAL STABILITY



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	RUDDER	RUDFLR	ELVATR	REFERENCE INFORMATION
(22784D)	MSFC478 NR DELTA ORBITER B5W17E10X	48.280			0.000	REFS 6084.0040 SQ FT
(22776D)	MSFC478 NR DELTA ORBITER B5W17E1DV17J2X	48.260	0.000	15.000	0.000	REFL 821.2004 INCHES
						REFS 1422.8010 INCHES
						XMRP 1422.5040 INCHES
						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 1.199

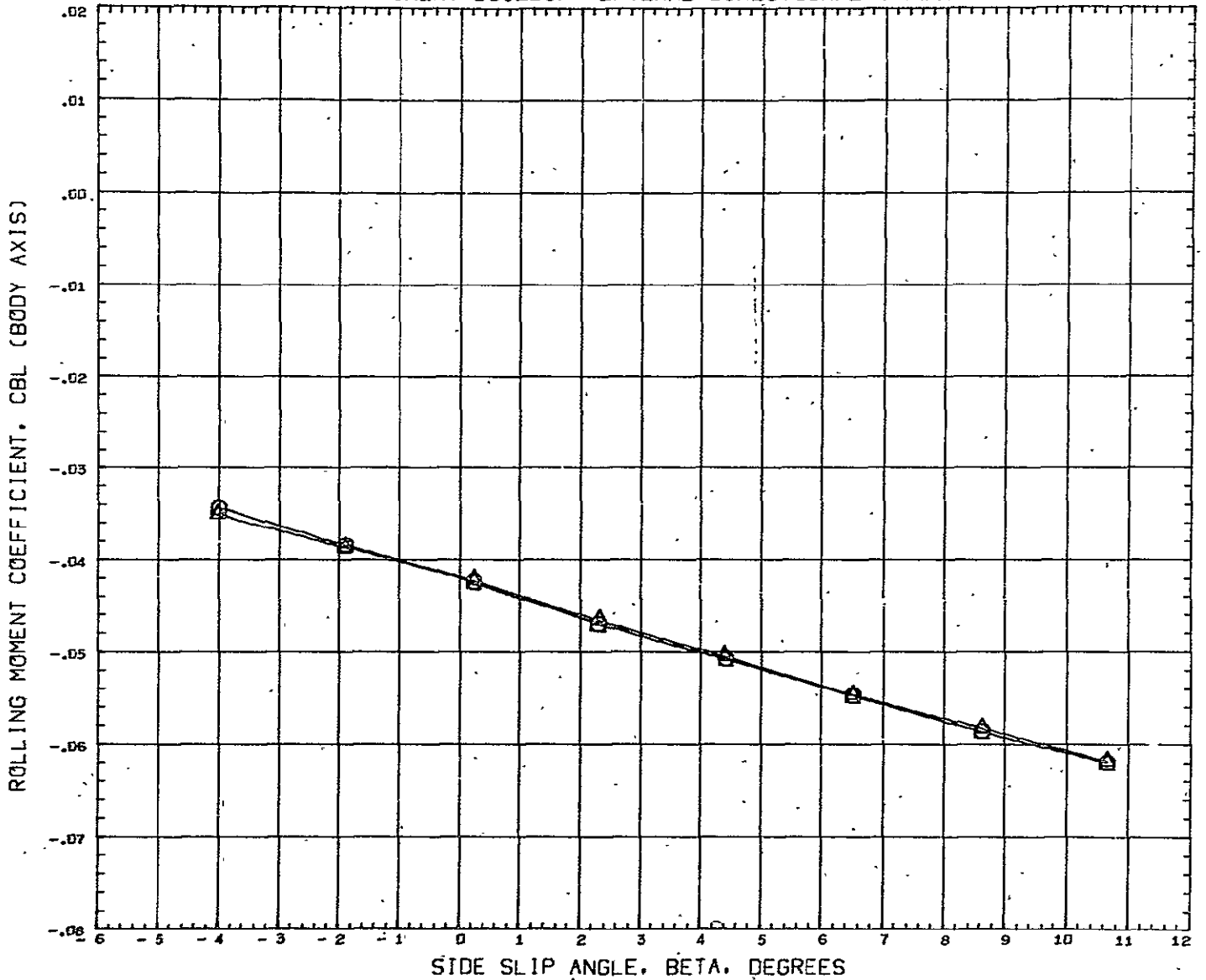
DELTA WING ORBITER-COMPONENT BUILDUP- LATERAL DIRECTIONAL STABILITY



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	RUDDER	RUDFLR	ELVATR	REFERENCE INFORMATION
(S2784D)	MSFC478 NR DELTA ORBITER B5W17E10X	48.280			0.000	REFS 6084.0040 SQ FT
(S2776D)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	48.260	0.000	15.000	0.000	REFL 821.2004 INCHES
						REFB 1422.8040 INCHES
						XMRP 1422.5040 INCHES
						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 1.456

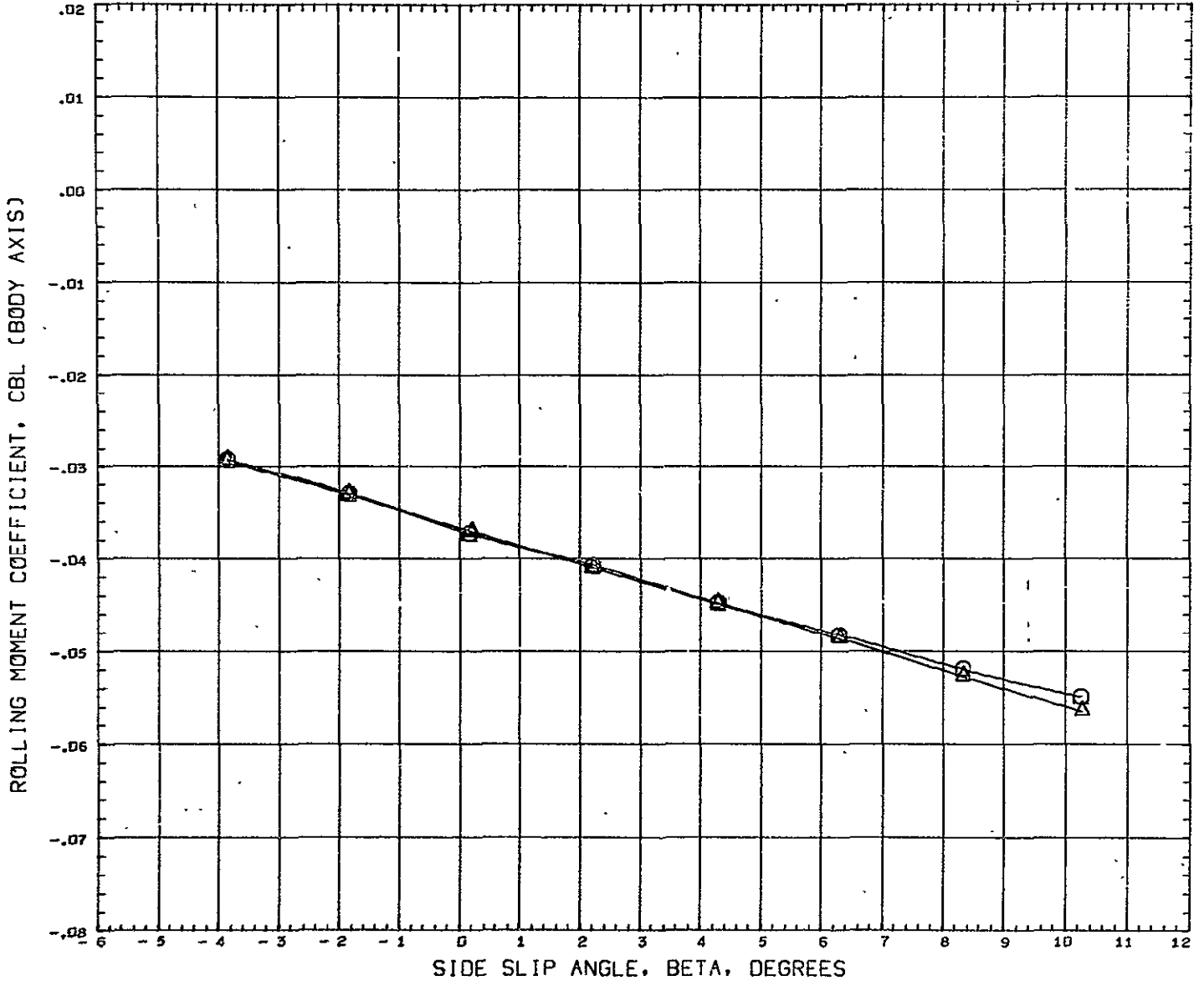
DELTA WING ORBITER-COMPONENT BUILDUP- LATERAL DIRECTIONAL STABILITY



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	RUDDER	RUDFLR	ELVATR	REFERENCE INFORMATION
(B2784D)	HSFC478 NR DELTA ORBITER B5W17E10X	48.280			0.000	REFS 6984.0040 50 FT
(B2776D)	HSFC478 NR DELTA ORBITER B5W17E10V17J2X	48.260	0.000	15.000	0.000	REFL 821.2004 INCHES
						REFB 1422.8040 INCHES
						XMRP 1422.5040 INCHES
						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

MACH 1.960

DELTA WING ORBITER-COMPONENT BUILDUP- LATERAL DIRECTIONAL STABILITY



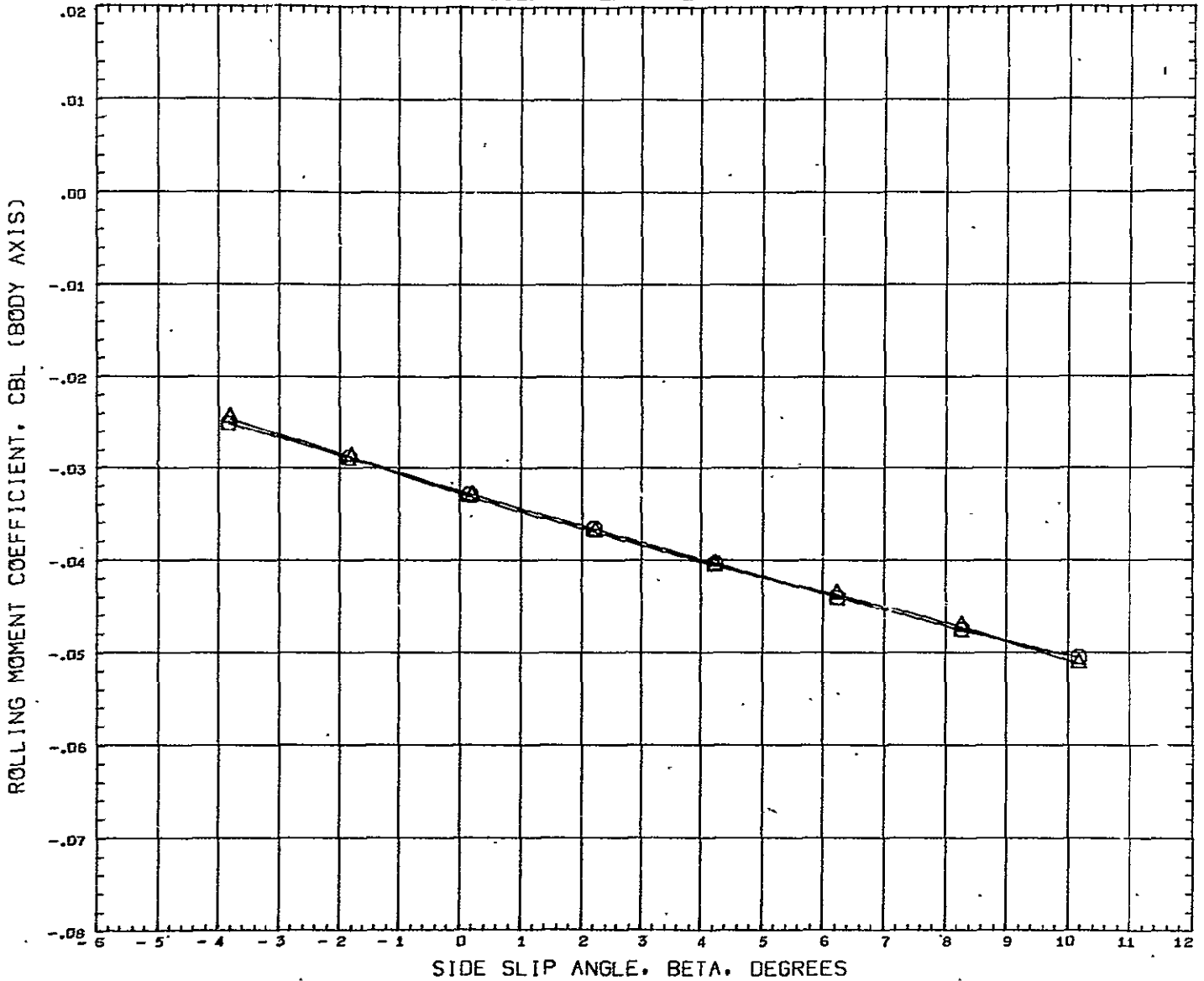
DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(B2784D) ○	MSFC478 NR DELTA ORBITER B5W17E10X
(B2776D) △	MSFC478 NR DELTA ORBITER B5W17E10V17J2X

ALPHA	RUDDER	RUDFLR	ELVATR
48.280			0.000
48.260	0.000	15.000	0.000

REFERENCE INFORMATION		
REFS	6084.0040	SQ FT
REFL	821.2004	INCHES
REFB	1422.8040	INCHES
XMRP	1422.5040	INCHES
YMRP	0.0000	INCHES
ZMRP	130.0004	INCHES
SCALE	0.0035	SCALE

MACH 2.995

DELTA WING ORBITER-COMPONENT BUILDUP- LATERAL DIRECTIONAL STABILITY



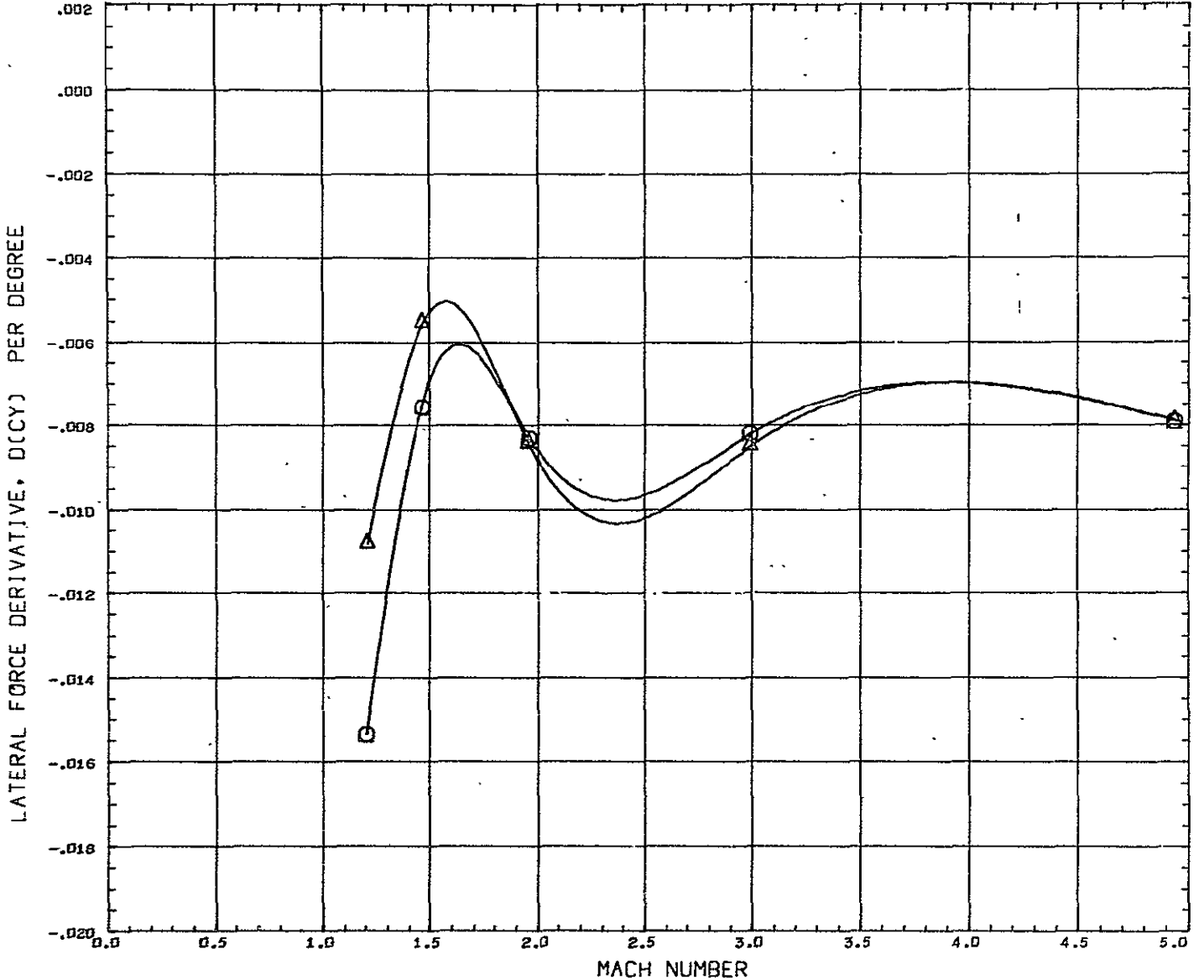
DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(B2784D)	MSFC478 NR DELTA ORBITER B5W17E10X
(B2776D)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X

ALPHA	RUDDER	RUDFLR	ELVATR
48.280	0.000	15.000	0.000
48.260	0.000	15.000	0.000

REFERENCE INFORMATION		
REFS	6084.0040	SQ FT
REFL	821.2004	INCHES
REFB	1422.8040	INCHES
XMRP	1422.5040	INCHES
YMRP	0.0000	INCHES
ZMRP	130.0004	INCHES
SCALE	0.0035	SCALE

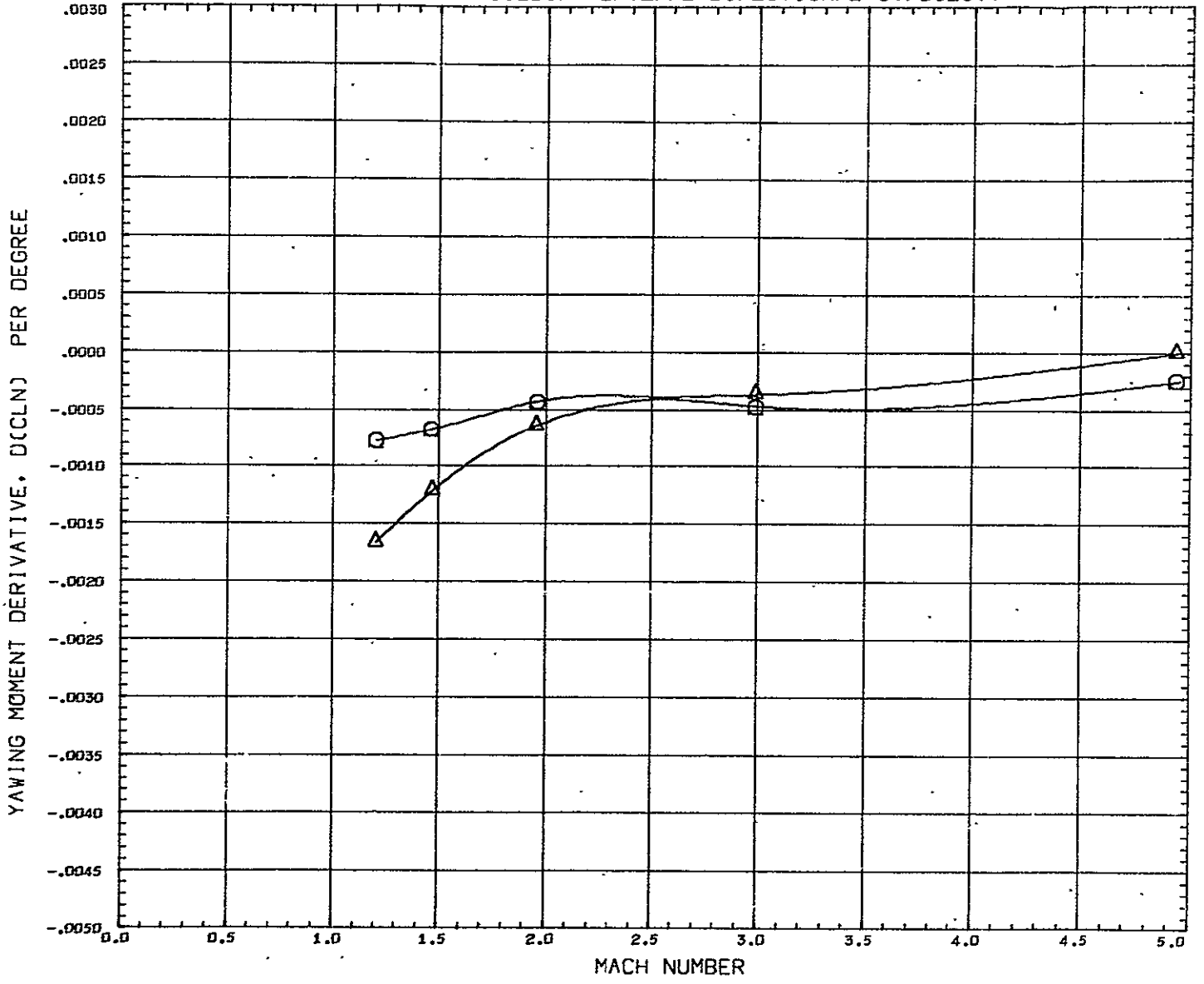
MACH 4.959

DELTA WING ORBITER-COMPONENT BUILDUP- LATERAL DIRECTIONAL STABILITY



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	RUDDER	RUDFLR	ELVATR	REFERENCE INFORMATION
(R2764D)	MSFC478 NR DELTA ORBITER B5W17E10X	48.280			0.000	REFS 6084.0040 SQ FT
(R2776D)	MSFC478 NR DELTA ORBITER B5W17E10V17J2X	48.260	0.000	15.000	0.000	REFL 821.2004 INCHES
						REFB 1422.8040 INCHES
						XMRP 1422.5040 INCHES
						YMRP 0.0000 INCHES
						ZMRP 130.0004 INCHES
						SCALE 0.0035 SCALE

DELTA WING ORBITER-COMPONENT BUILDUP- LATERAL DIRECTIONAL STABILITY

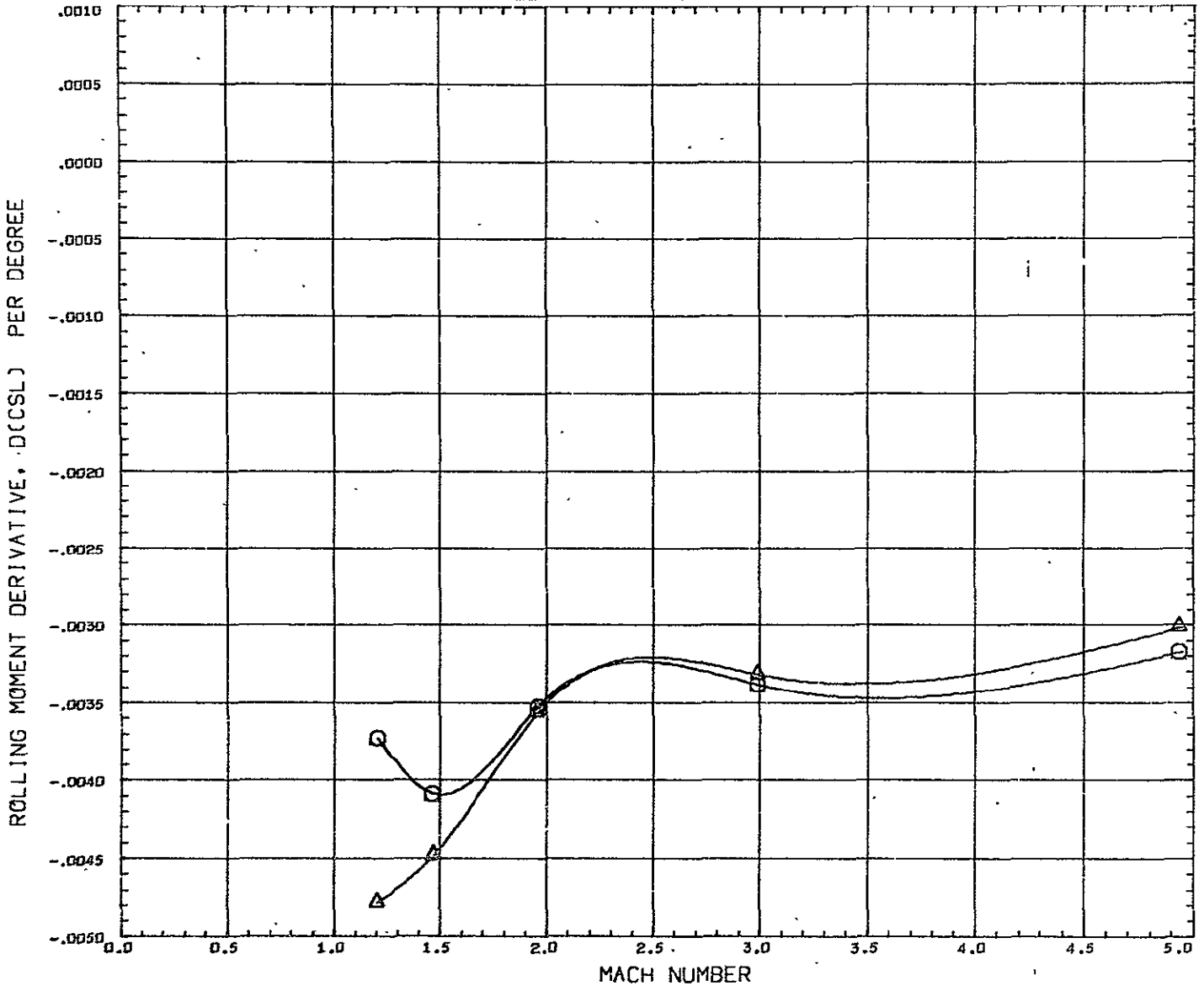


DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(R2784D) ○	MSFC478 NR DELTA ORBITER B5W17E10X
(R2776D) △	MSFC478 NR DELTA ORBITER B5W17E10V17J2X

MACH NUMBER

ALPHA	RUDDER	RUDFLR	ELVATR	REFERENCE INFORMATION
48.280			0.000	REFS 6084.0040 SQ FT
48.260	0.000	15.000	0.000	REFL 821.2004 INCHES
				REFB 1422.8040 INCHES
				XMRP 1422.5040 INCHES
				YMRP 0.0000 INCHES
				ZMRP 130.0004 INCHES
				SCALE 0.0035 SCALE

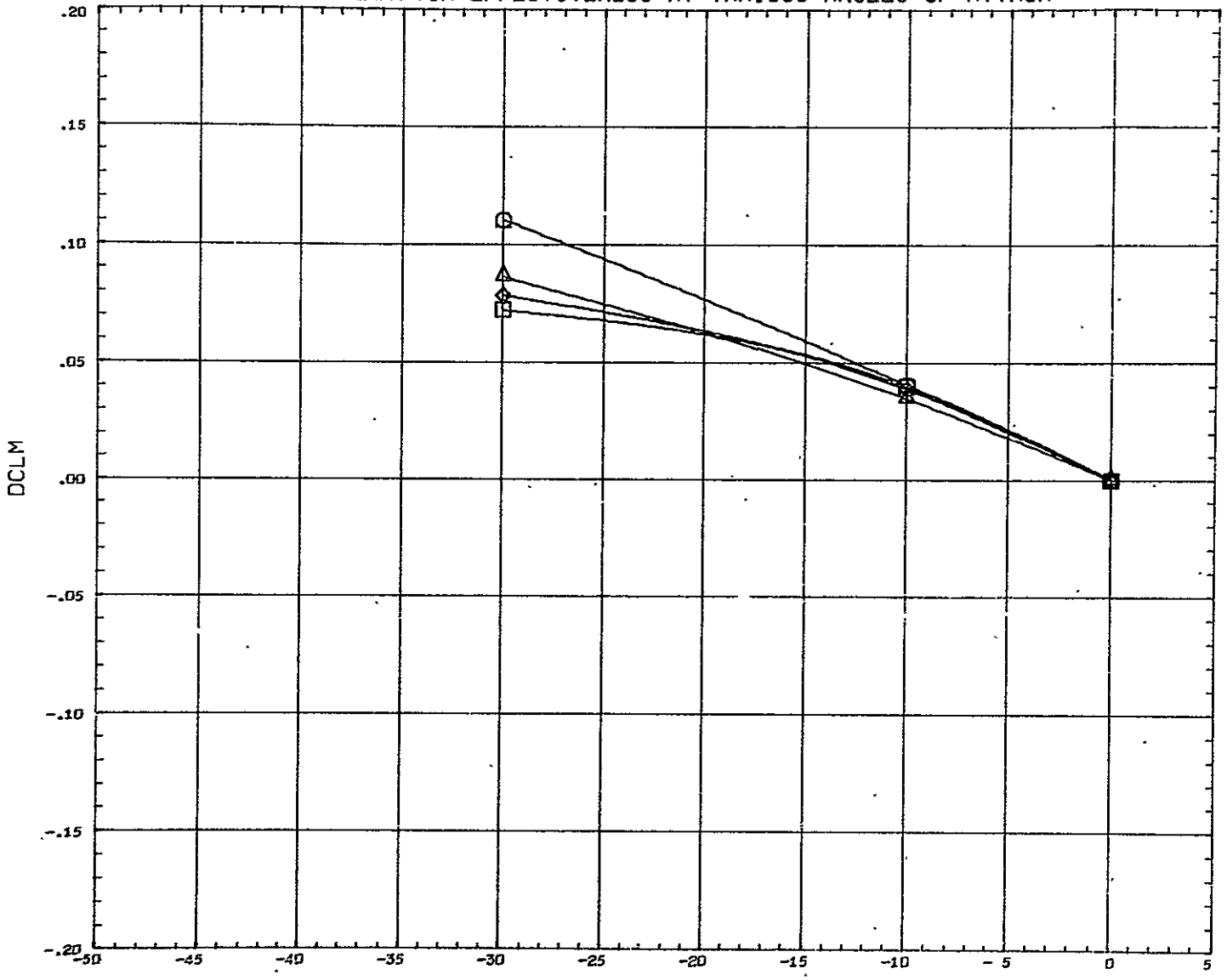
DELTA WING ORBITER-COMPONENT BUILDUP- LATERAL DIRECTIONAL STABILITY



DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(R2784D) ○	MSFC478 NR DELTA ORBITER B5W17E1DX
(R2776D) △	MSFC478 NR DELTA ORBITER B5W17E1DV17J2X

ALPHA	RUDDER	RUDFLR	ELVATR	REFERENCE INFORMATION
48.280			0.000	REFS 6084.0040 SQ FT
48.260	0.000	15.000	0.000	REFL 921.2004 INCHES
				REFB 1422.8010 INCHES
				XMRP 1422.5040 INCHES
				YMRP 0.0000 INCHES
				ZMRP 130.0004 INCHES
				SCALE 0.0035 SCALE

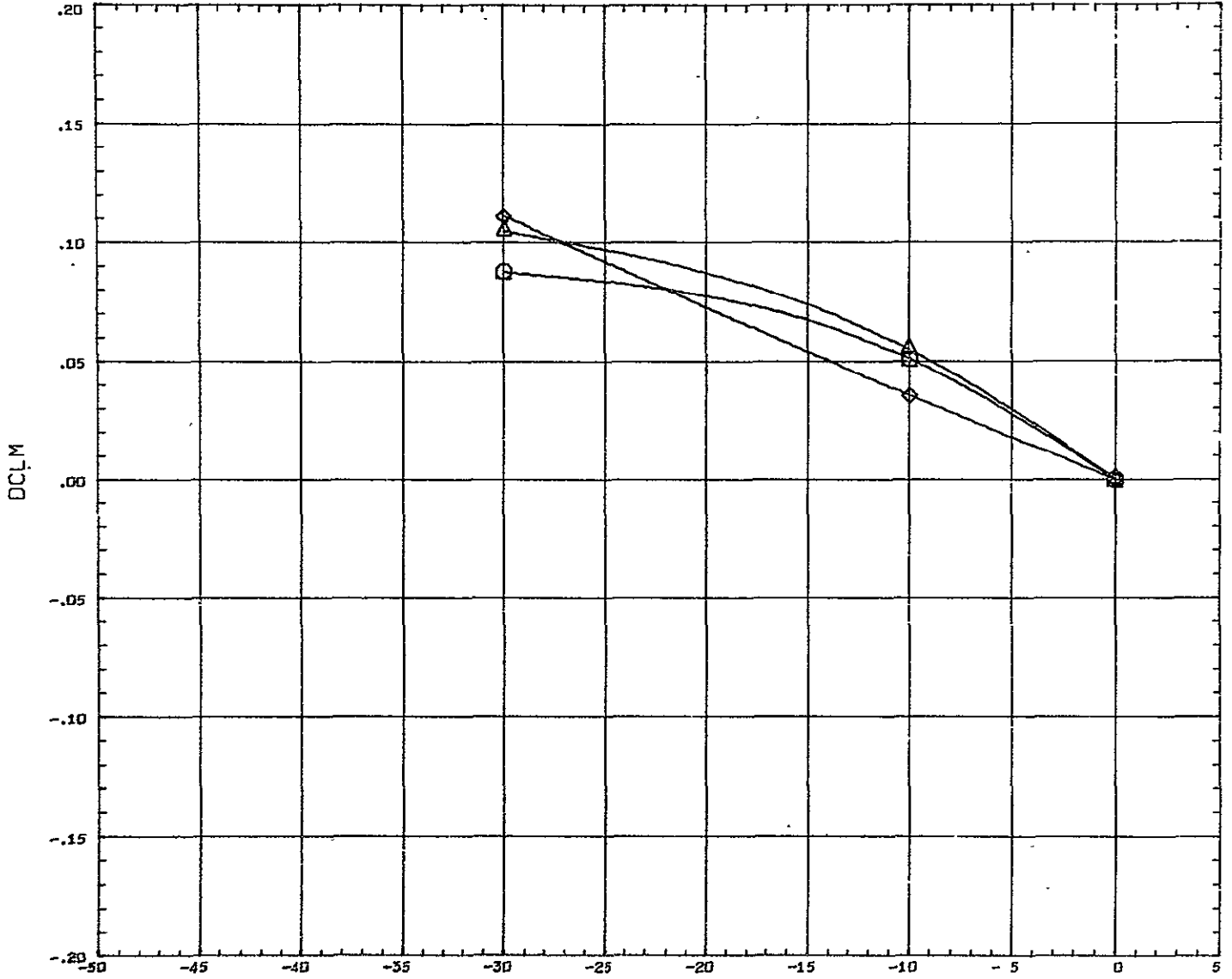
DELTA WING ORBITER-ELEVATOR EFFECTIVENESS AT VARIOUS ANGLES OF ATTACK



SYMBOL	ALPHA	PARAMETRIC VALUES				DATA SOURCE				REFERENCE INFORMATION		
		MACH	BETA	RUDDER		DATASET	ELVATR	DATASET	ELVATR	FEFS		
○	5.000	1.460	0.000	0.000	D2758S	- 30.000	D2757S	- 10.000	6084.0040		SQ FT	
△	10.000	0.000	0.000	0.000	D2758S	- 30.000	D2757S	- 10.000	821.2004		INCHES	
◇	20.000	0.000	0.000	0.000	D2756S	0.000			1422.8040		INCHES	
□	30.000	0.000	0.000	0.000					1422.8040		INCHES	
									YMRP	0.0000	INCHES	
									ZMRP	130.0004	INCHES	
									SCALE	0.0035	SCALE	

DATA HIST. CODE #GI#CM

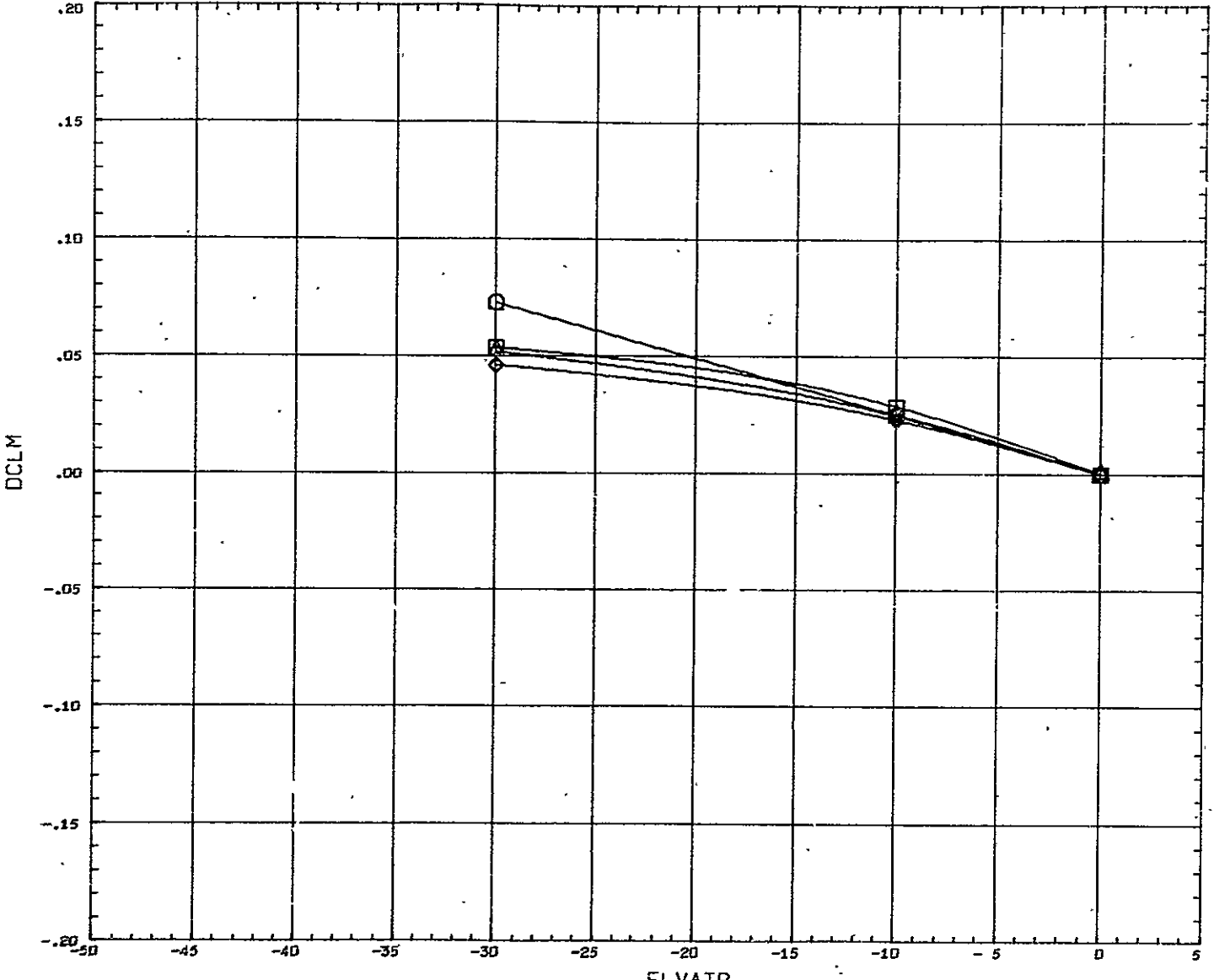
DELTA WING ORBITER-ELEVATOR EFFECTIVENESS AT VARIOUS ANGLES OF ATTACK



SYMBOL	ALPHA	PARAMETRIC VALUES				DATA SOURCE				REFERENCE INFORMATION		
○	45.000	MACH	1.460	BETA	0.000	DATASET	ELVATR	DATASET	ELVATR	REFS	6084.0040	SQ FT
△	50.000	AILRON	0.000	RUDDER	0.000	D2758S	- 30.000	D2757S	- 10.000	REFL	821.2004	INCHES
◇	60.000	RUDFLR	0.000			D2756S	0.000			REFB	1422.8040	INCHES
										XMRP	1422.5040	INCHES
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										ZMRP	130.0004	INCHES
										SCALE	0.0035	SCALE

DATA HIST. CODE #GI#CM

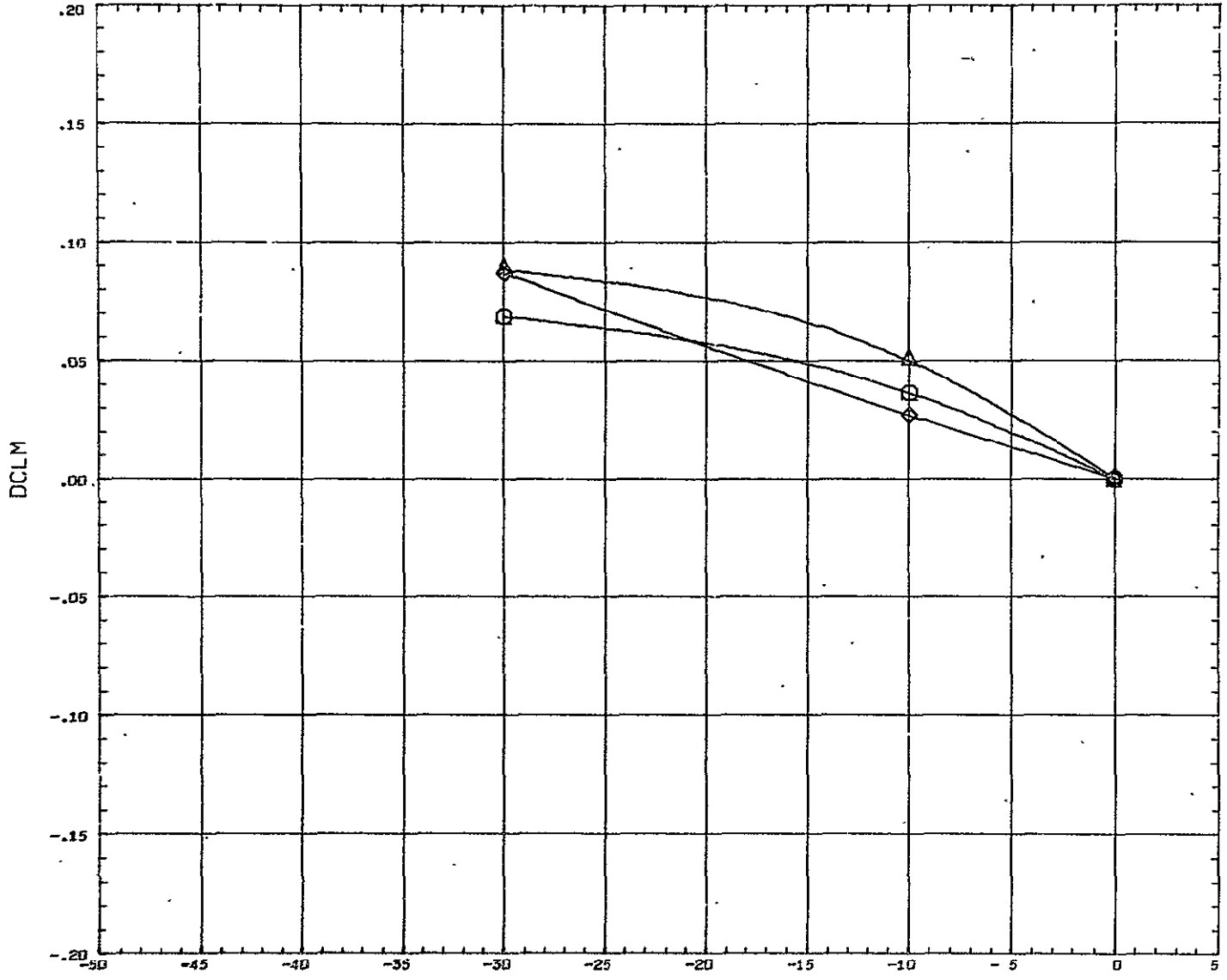
DELTA WING ORBITER-ELEVATOR EFFECTIVENESS AT VARIOUS ANGLES OF ATTACK



SYMBOL	ALPHA	PARAMETRIC VALUES				DATA SOURCE				REFERENCE INFORMATION			
○	9.000	MACH	1.960	BETA	0.000	DATASET	ELVATR	DATASET	ELVATR	REFS	6084.0040	SQ FT	
△	10.000	AILRON	0.000	RUEDER	0.000	D2758S	- 30.000	0.000	D2757S	- 10.000	REFL	821.2004	INCHES
◇	20.000	RUDFLR	0.000			D2756S	0.000				REFB	1422.8040	INCHES
□	30.000										XMRP	1422.5040	INCHES
											YMRP	0.0000	INCHES
											ZMRP	130.0004	INCHES
											SCALE	0.0035	SCALE

DATA HIST. CODE #GI#CM

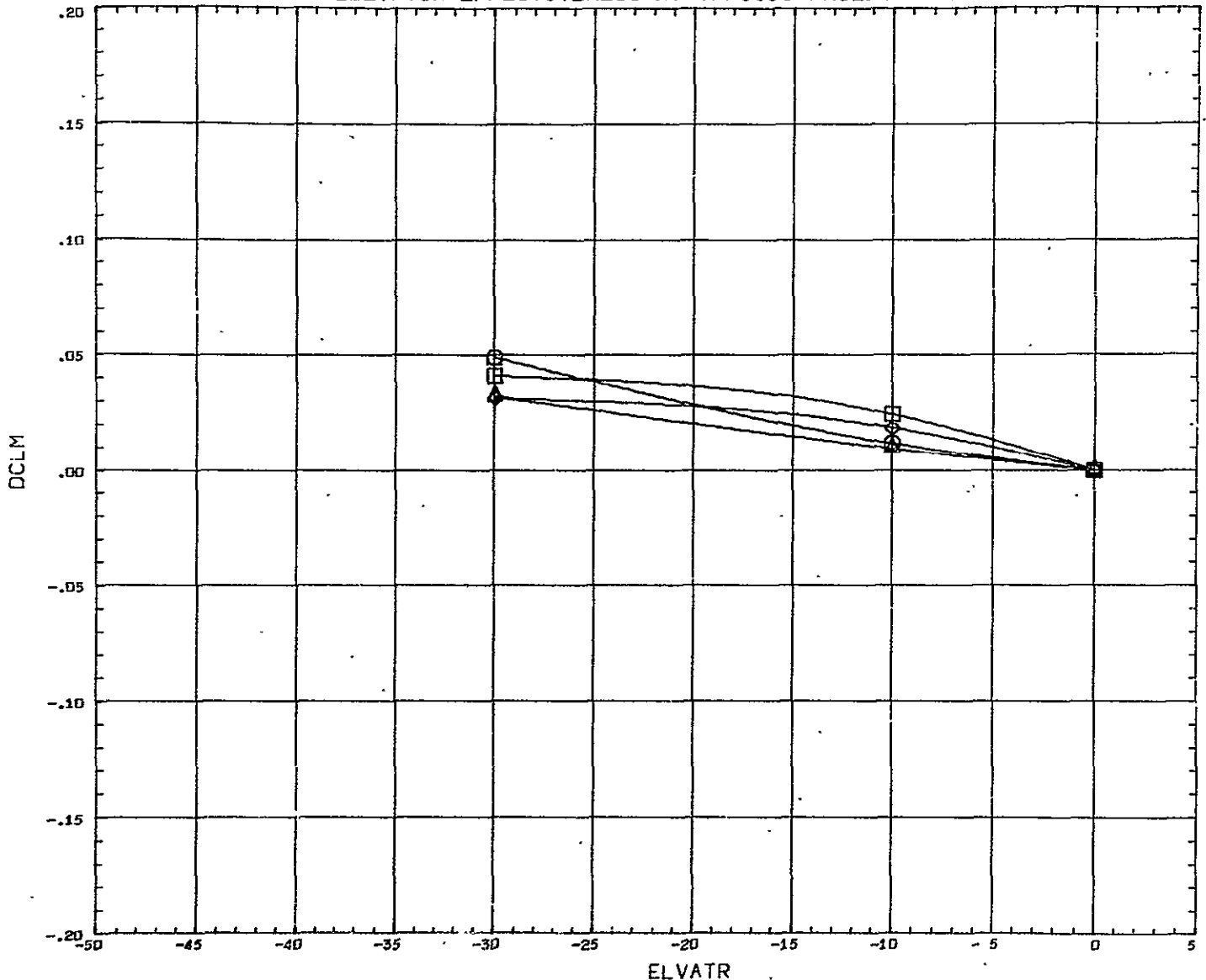
DELTA WING ORBITER-ELEVATOR EFFECTIVENESS AT VARIOUS ANGLES OF ATTACK



SYMBOL	ALPHA	PARAMETRIC VALUES				DATA SOURCE				REFERENCE INFORMATION		
○	40.000	MACH	1.960	BETA	0.000	DATASET	ELVATR	DATASET	ELVATR	REFS	6084.0040	SQ FT
△	50.000	AILRON	0.000	RUDDER	0.000	D2758S	- 30.000	D2757S	- 10.000	REFL	821.2004	INCHES
◇	60.000	RUDFLR	0.000			D2756S	0.000			REFB	1422.8040	INCHES
										XMRF	1422.5040	INCHES
										YMRF	0.0000	INCHES
										ZMRF	130.0004	INCHES
										SCALE	0.0035	SCALE

DATA HIST. CODE #GI#CH

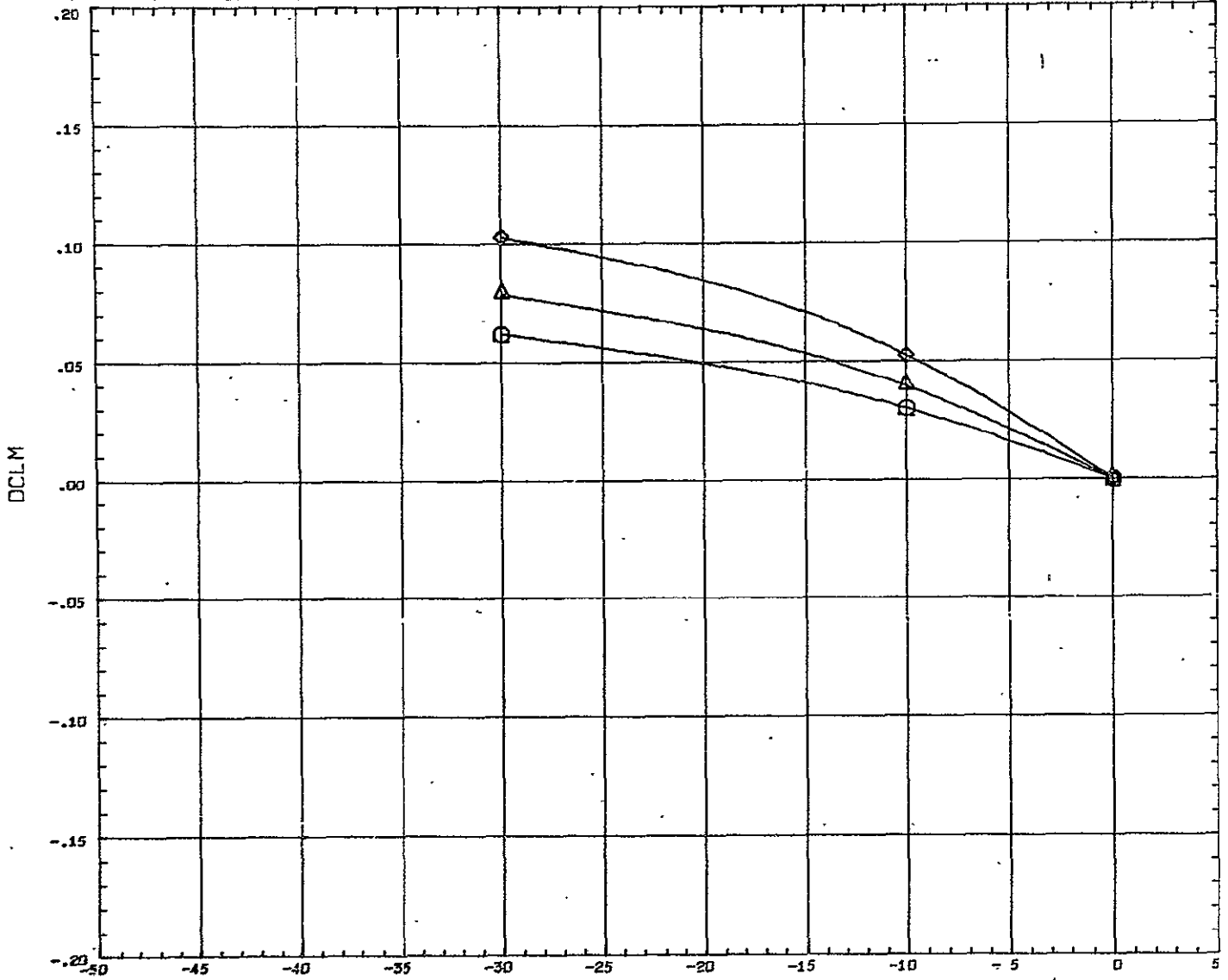
DELTA WING ORBITER-ELEVATOR EFFECTIVENESS AT VARIOUS ANGLES OF ATTACK



SYMBOL	ALPHA	PARAMETRIC VALUES				DATA SOURCE				REFERENCE INFORMATION		
		MACH	BETA	BETA	BETA	ELVATR	ELVATR	ELVATR	ELVATR	REFS	INCHES	SCALE
○	0.000	2.095	0.000	0.000	0.000	D2758S	-30.000	0.000	D2757S	-10.000	6084.0040	SQ FT
△	10.000	AILRON	0.000	R-ORDER	0.000	D2758S	-30.000	0.000	D2757S	-10.000	821.2094	INCHES
◇	20.000	RUDFLR	0.000			D2756S	0.000				1422.8040	INCHES
□	30.000										1422.5040	INCHES
											0.0000	INCHES
											130.0004	INCHES
											0.0035	SCALE

DATA HIST. CODE #G1#CM

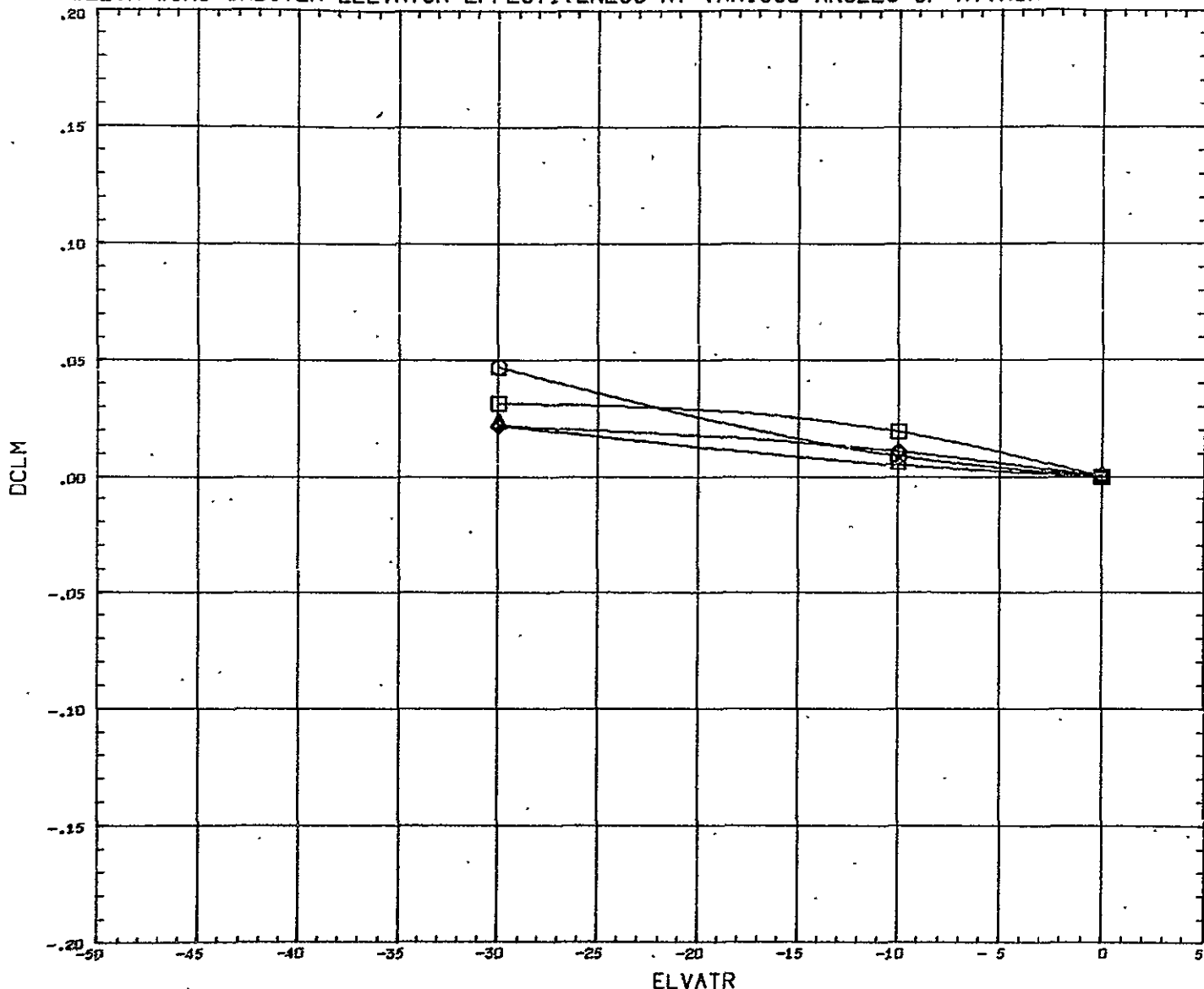
DELTA WING ORBITER-ELEVATOR EFFECTIVENESS AT VARIOUS ANGLES OF ATTACK



SYMBOL	ALPHA	PARAMETRIC VALUES				DATA SOURCE				REFERENCE INFORMATION		
○	40.000	MACH	2.990	BETA	0.000	DATASET	ELVATR	DATASET	ELVATR	REFS	6084.0040	SQ. FT
△	50.000	AILERON	0.000	RUDDER	0.000	D2758S	- 30.000	D2757S	- 10.000	REFL	821.2004	INCHES
◇	60.000	RUDFLR	0.000			D2756S	0.000			REFB	1422.8040	INCHES
										XMRP	1422.5040	INCHES
										YMRP	0.0000	INCHES
										ZMRP	130.0004	INCHES
										SCALE	0.0035	SCALE

DATA HIST. CODE #GI#CM

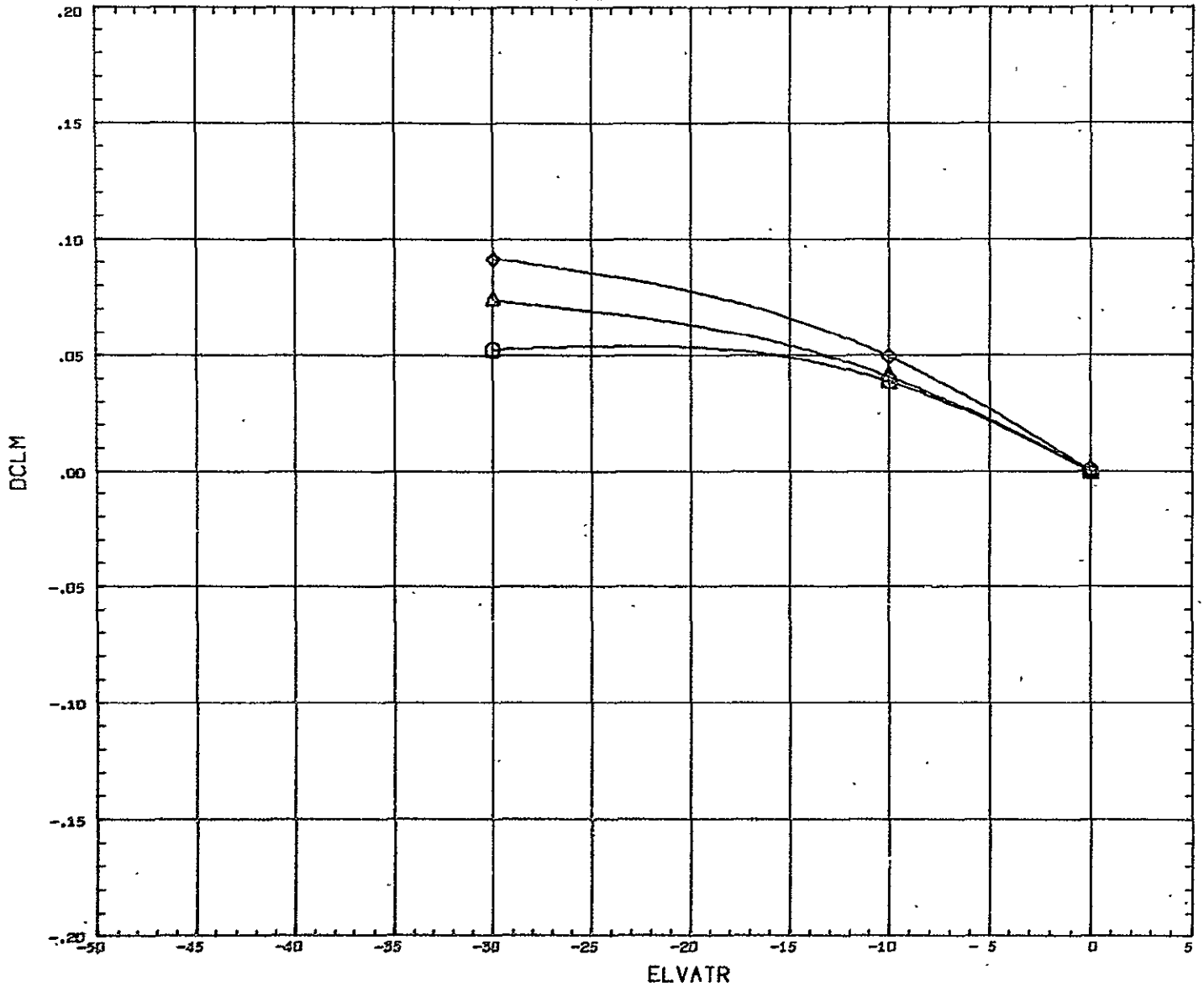
DELTA WING ORBITER-ELEVATOR EFFECTIVENESS AT VARIOUS ANGLES OF ATTACK



SYMBOL	ALPHA	PARAMETRIC VALUES				DATA SOURCE				REFERENCE INFORMATION																
		MACH	BETA	AILRON	RUDDER	DATASET	ELVATR	DATASET	ELVATR	REFS	REFL	REFB	XMRP	ZMRP	SCALE											
○	0.000	4.960	0.000	0.000	0.000	0.000	02756S	- 30.000	0.000	02757S	- 10.000	6084.0040	821.2004	1422.8040	0.0000	130.0004	0.0035	SQ FT	INCHES	INCHES	INCHES	INCHES	INCHES	SCALE		
△	10.000																									
◇	20.000																									
□	30.000																									

DATA HIST. CODE *GI#CM

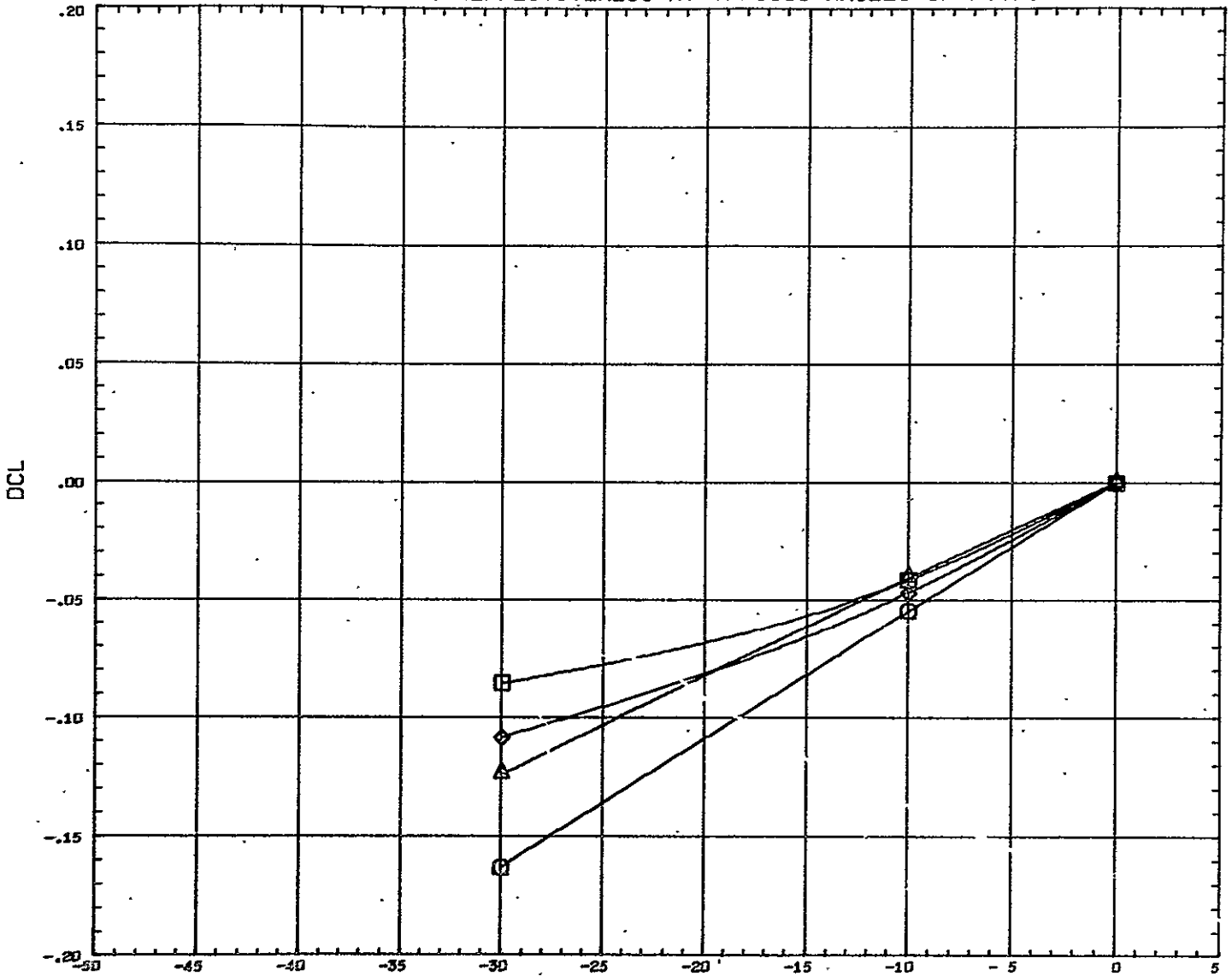
DELTA WING ORBITER-ELEVATOR EFFECTIVENESS AT VARIOUS ANGLES OF ATTACK



SYMBOL	ALPHA	PARAMETRIC VALUES				DATA SOURCE				REFERENCE INFORMATION																
		MACH	BETA	AILRON	RUDDER	ELVATR	ELVATR	ELVATR	REFS	REFL	REFB	XMRP	ZMRP	SCALE												
○	40.000	4.960	0.000	0.000	0.000	D2758S	- 30.000	0.000	D2757S	- 10.000	6084.0040	821.2004	1422.8040	1422.5040	0.0000	130.0004	0.0005	SQ FT	INCHES	INCHES	INCHES	INCHES	INCHES	SCALE		
△	50.000																									
◇	60.000																									

DATA HIST. CODE *GI*CM

DELTA WING ORBITER-ELEVATOR EFFECTIVENESS AT VARIOUS ANGLES OF ATTACK

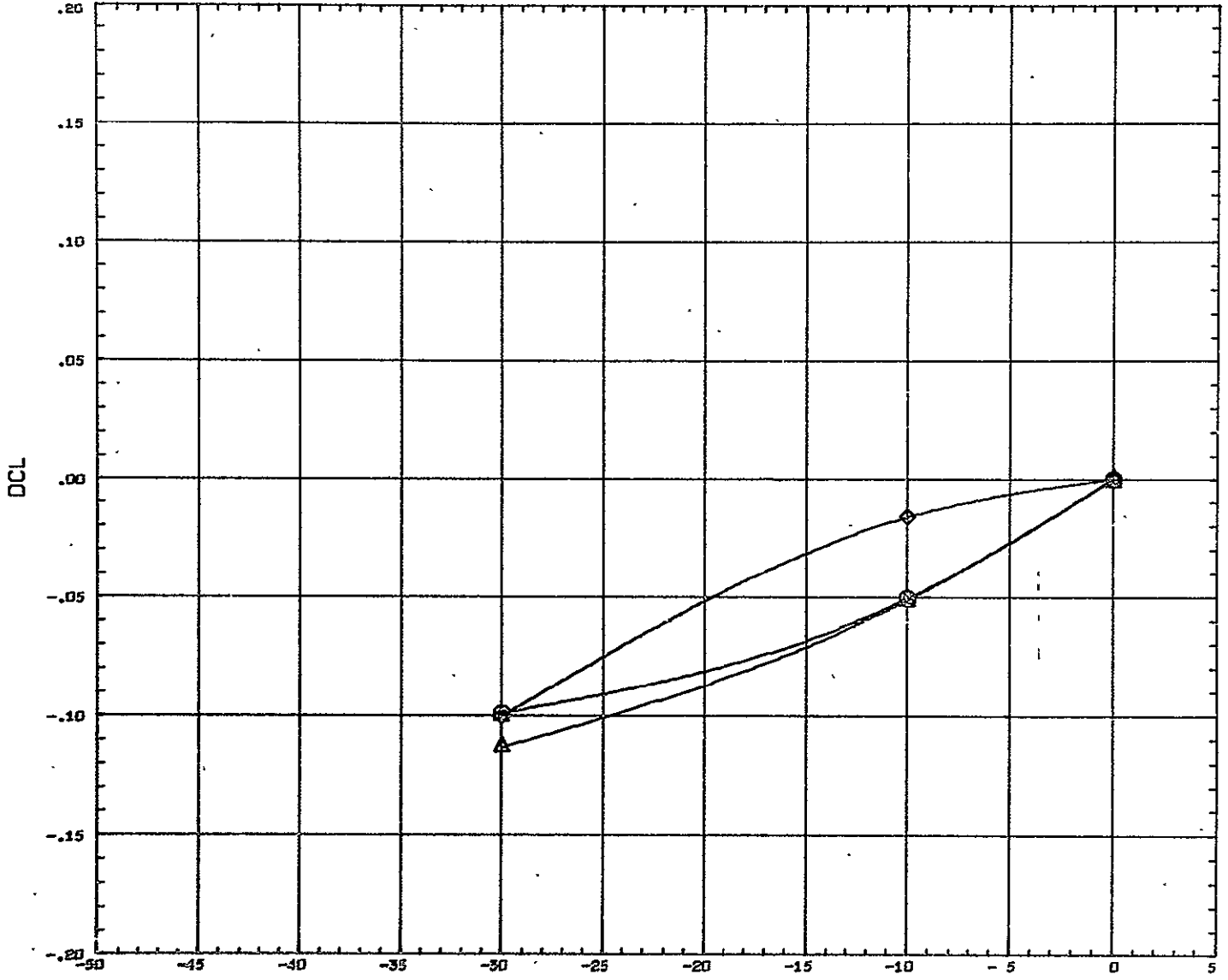


ELVATR

SYMBOL	ALPHA	MACH	PARAMETRIC VALUES		DATASET		DATA SOURCE		REFERENCE INFORMATION		
○	0.000	1.460	BETA	0.000	D2758S	- 30.000	D2757S	- 10.000	REFS	6084.0040	SQ FT
△	10.000	AILRON	0.000	RUDDER	0.000				REFL	821.2004	INCHES
◇	20.000	RUDFLR	0.000		D2756S	0.000			REFB	1422.8040	INCHES
□	30.000								XMRP	1422.5040	INCHES
									YMRP	0.0000	INCHES
									ZMRP	130.0004	INCHES
									SCALE	0.0035	SCALE

DATA HIST. CODE *61*CH

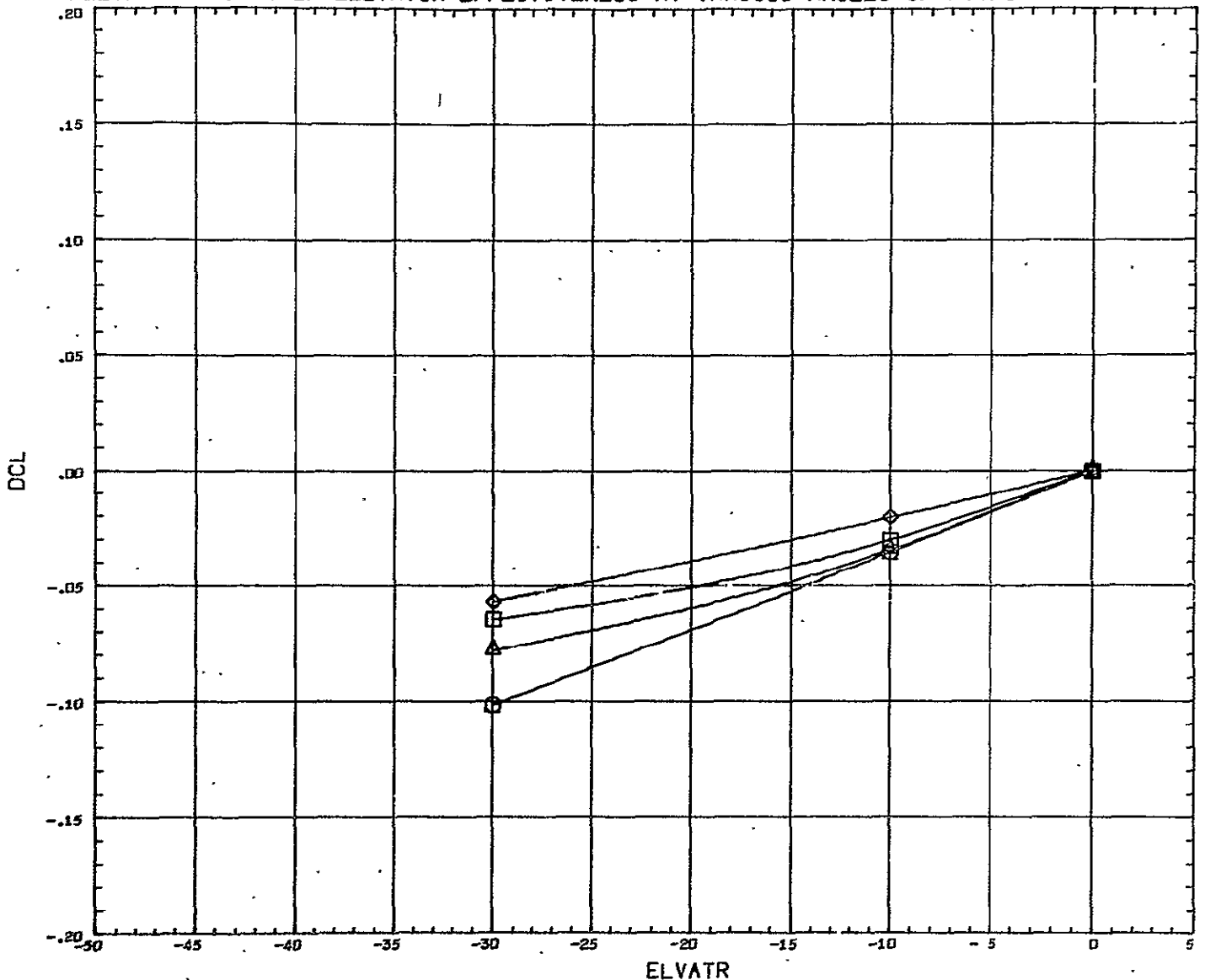
DELTA WING ORBITER-ELEVATOR EFFECTIVENESS AT VARIOUS ANGLES OF ATTACK



SYMBOL	ALPHA	PARAMETRIC VALUES				DATA SOURCE				REFERENCE INFORMATION		
○	40.000	MACH	1.460	ZETA	0.000	DATASET	ELVATR	DATASET	ELVATR	REFS	6084.0040	SQ FT
△	50.000	AILRON	0.000	RUDDER	0.000	D2758S	- 30.000	D2757S	- 10.000	REFL	821.2004	INCHES
◇	60.000	RUDFLR	0.000			D2756S	0.000			REFB	1422.8040	INCHES
										XMRP	1422.5040	INCHES
										YMRP	0.0000	INCHES
										ZMRP	130.0004	INCHES
										SCALE	0.0035	SCALE

DATA HIST. CODE *GI*CM

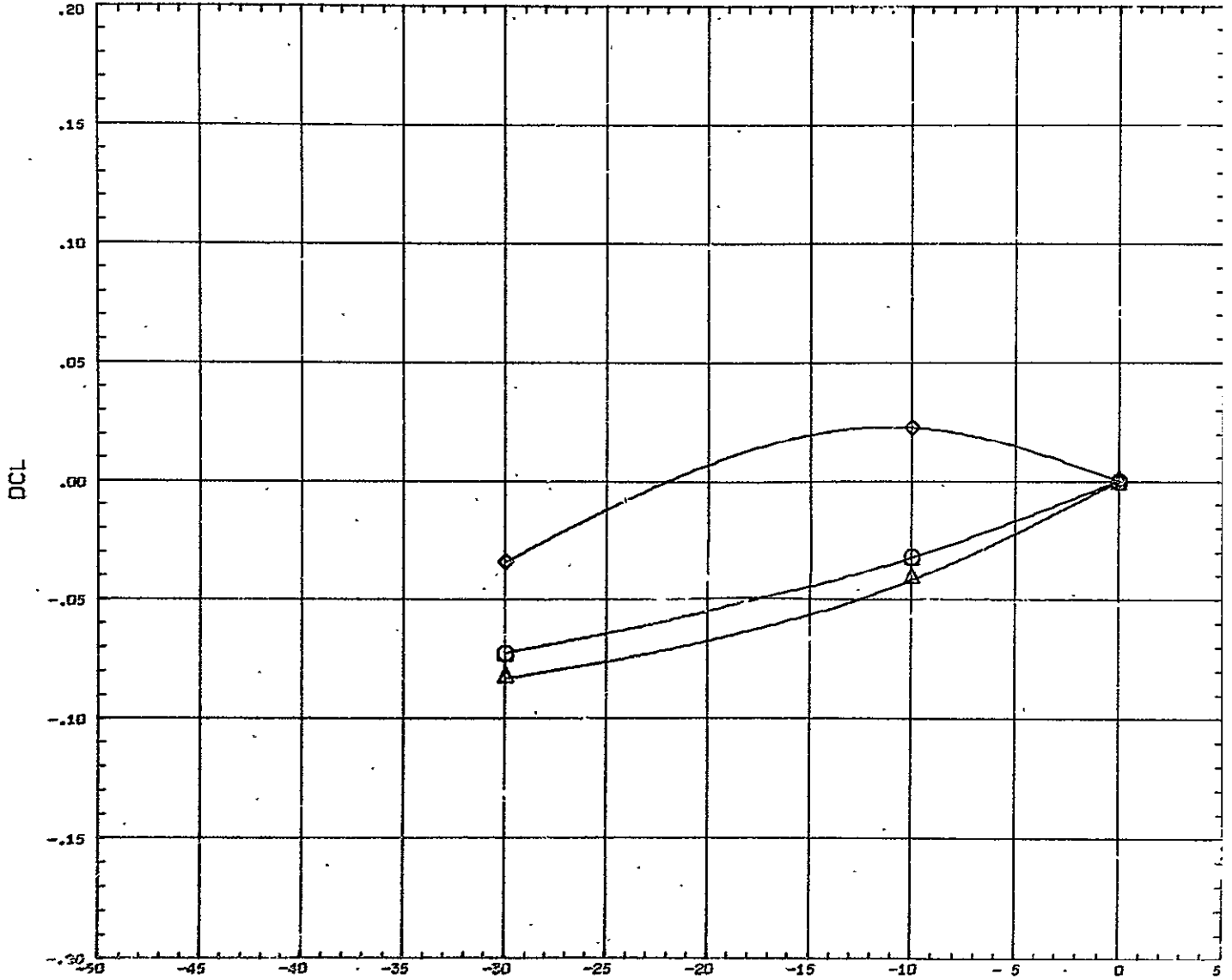
DELTA WING ORBITER-ELEVATOR EFFECTIVENESS AT VARIOUS ANGLES OF ATTACK



SYMBOL	ALPHA	PARAMETRIC VALUES				DATA SOURCE				REFERENCE INFORMATION			
○	0.000	MACH	1.960	BETA	0.000	DATASET	ELVATR	DATASET	ELVATR	REFS	6084.0040	SQ FT	
△	10.000	AILRON	0.000	RUDDER	0.000	D2758S	- 30.000	D2757S	- 10.000	REFL	821.2004	INCHES	
◇	20.000	RUDFLR	0.000			D2756S	0.000			REFB	1422.6040	INCHES	
□	30.000									XMRP	1422.5040	INCHES	
										YMRP	0.0000	INCHES	
										ZMRP	130.0004	INCHES	
										SCALE	0.0035	SCALE	

DATA HIST. CODE *GI*CH

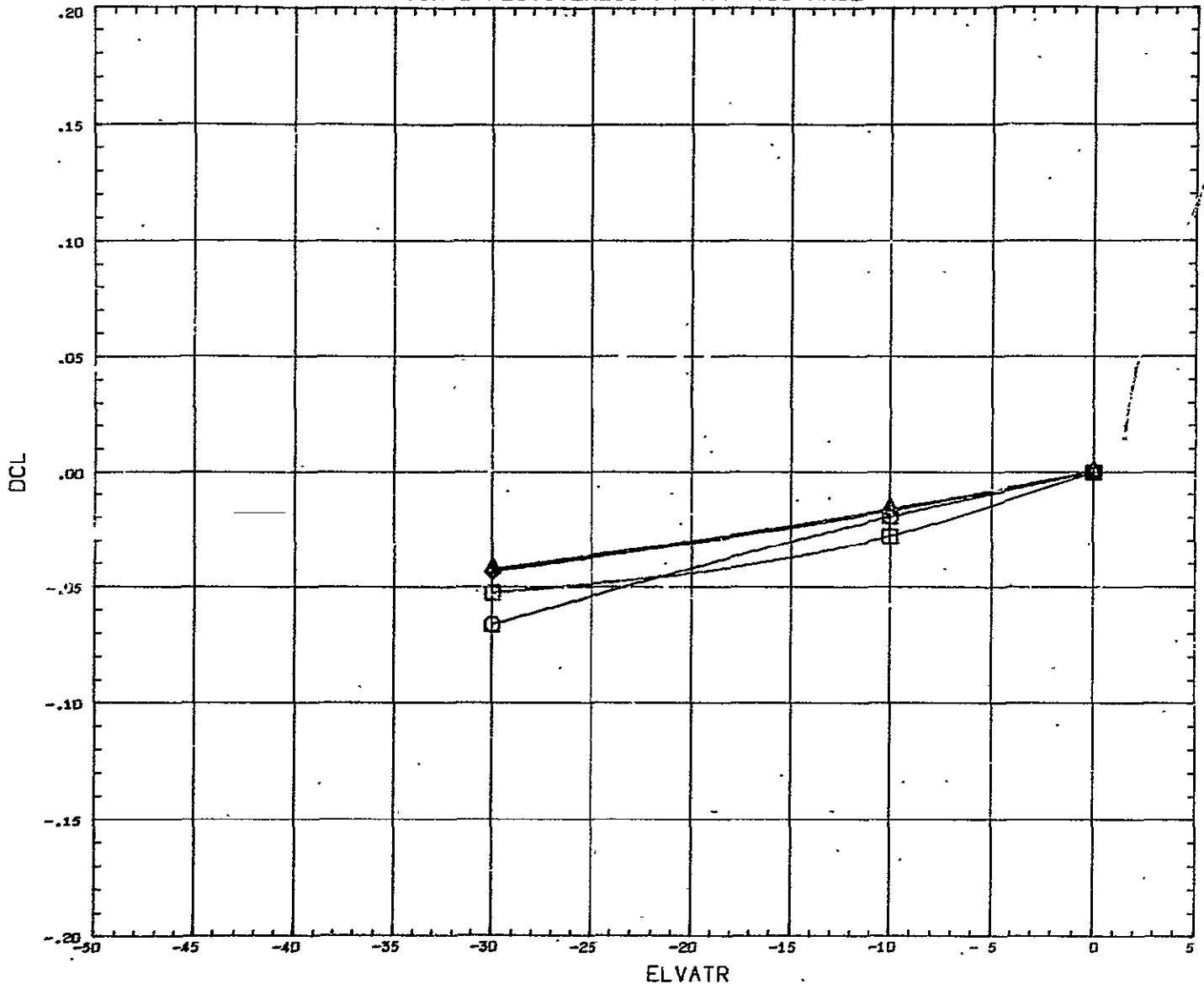
DELTA WING ORBITER-ELEVATOR EFFECTIVENESS AT VARIOUS ANGLES OF ATTACK



SYMBOL	ALPHA	PARAMETRIC VALUES				DATA SOURCE				REFERENCE INFORMATION		
○	40.000	MACH	1.960	BETA	0.000	DATASET	ELVATR	DATASET	ELVATR	REFS	6084.0040	SQ FT
△	50.000	AILRON	0.000	RUDDER	0.000	D2758S	- 30.000	0.000	D2757S	- 10.000	821.2004	INCHES
◇	60.000	RUDFLR	0.000			D2756S	0.000				1422.8040	INCHES
											1422.5040	INCHES
											0.0000	INCHES
											130.0004	INCHES
											0.0035	SCALE

DATA HIST. CODE #GI#CM

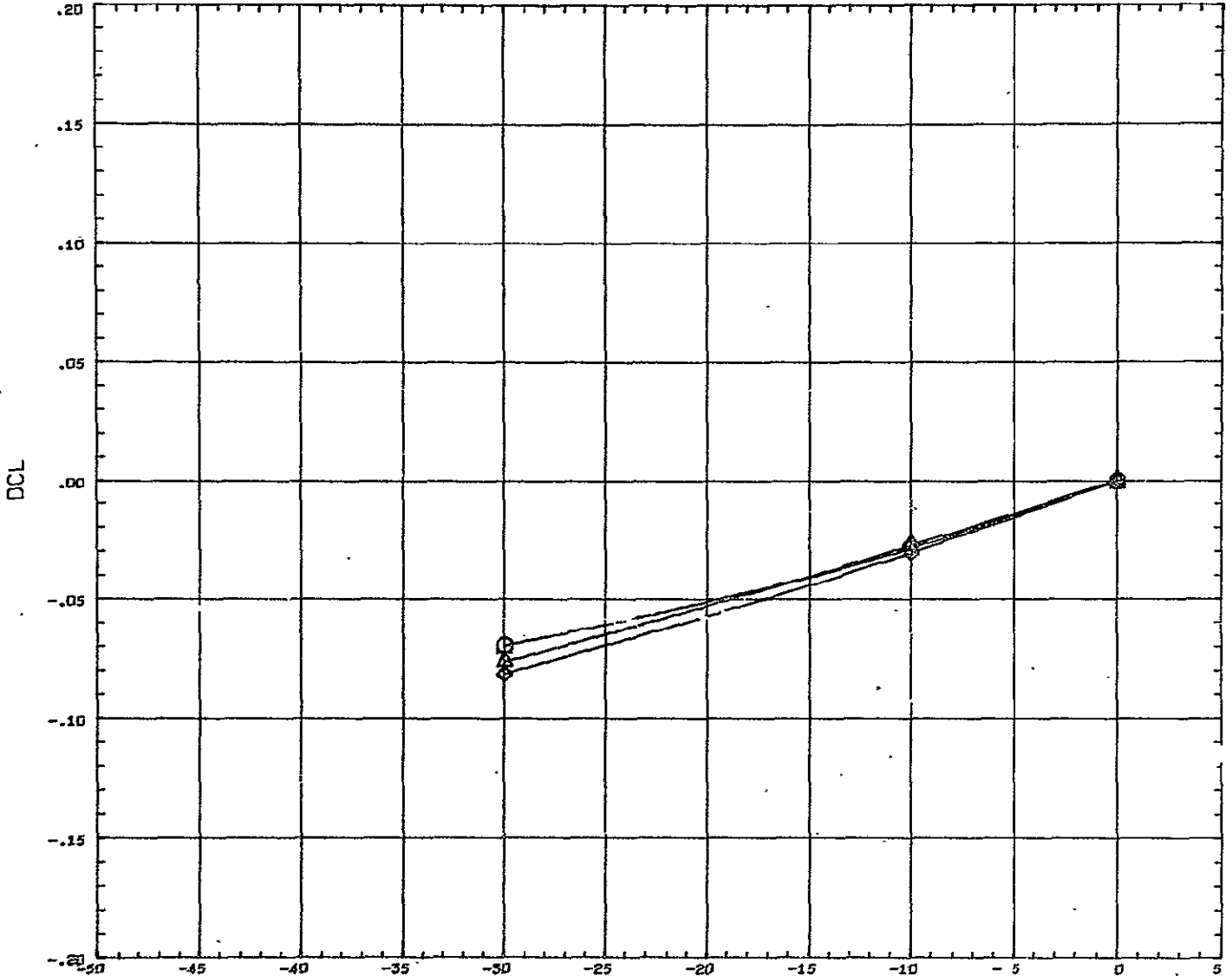
DELTA WING ORBITER-ELEVATOR EFFECTIVENESS AT VARIOUS ANGLES OF ATTACK



SYMBOL	ALPHA	PARAMETRIC VALUES				DATA SOURCE				REFERENCE INFORMATION			
○	0.000	MACH	2.990	BETA	0.000	DATASET	ELVATR	DATASET	ELVATR	REFS	6084.0040	88 FT	
△	10.000	AILRON	0.000	RUDDER	0.000	D2758S	- 30.000	D2757S	- 10.000	REFL	821.2004	INCHES	
◇	20.000	RUDFLR	0.000			D2756S	0.000			REFB	1422.8040	INCHES	
□	30.000									XMRP	1422.5040	INCHES	
										YMRP	0.0000	INCHES	
										ZMRP	130.0004	INCHES	
										SCALE	0.0035	SCALE	

DATA HIST. CODE #61#CN

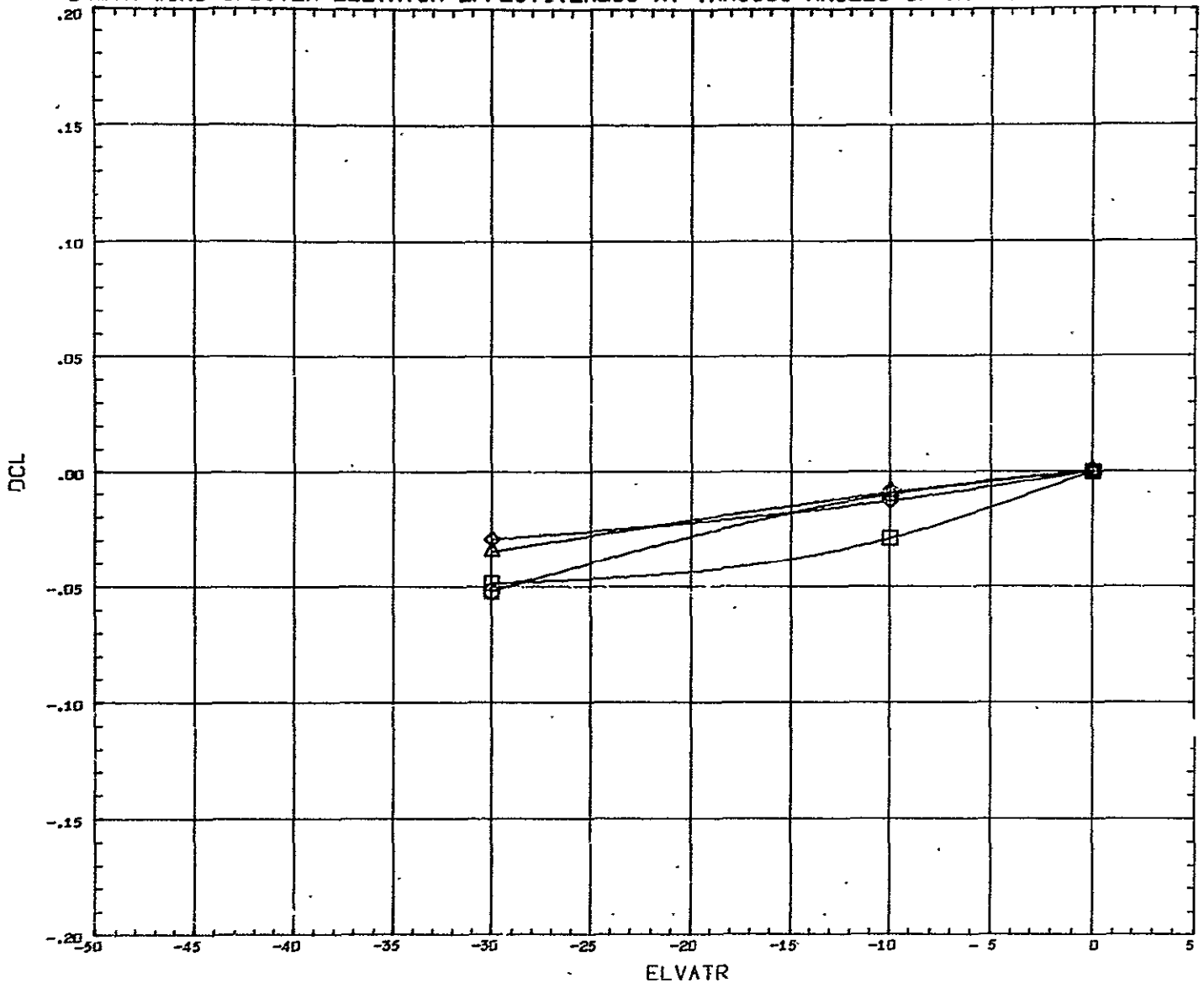
DELTA WING ORBITER-ELEVATOR EFFECTIVENESS AT VARIOUS ANGLES OF ATTACK



SYMBOL	ALPHA	PARAMETRIC VALUES				DATA SOURCE				REFERENCE INFORMATION		
		MACH	BETA	RUDDER	BETA	DATASET	ELVATR	DATASET	ELVATR	REFS	SCALE	SCALE
○	40.000	2.990	0.000	0.000	0.000	0.000	02758S	-30.000	02757S	-10.000	6084.0040	SQ FT
△	50.000	0.000	0.000	0.000	0.000	0.000	02758S	-30.000	02757S	-10.000	821.2004	INCHES
◇	60.000	0.000	0.000	0.000	0.000	0.000	02756S	0.000			1422.8040	INCHES
											1422.5040	INCHES
											0.0000	INCHES
											130.0004	INCHES
											0.0035	SCALE

DATA HIST. CODE #G1#CM

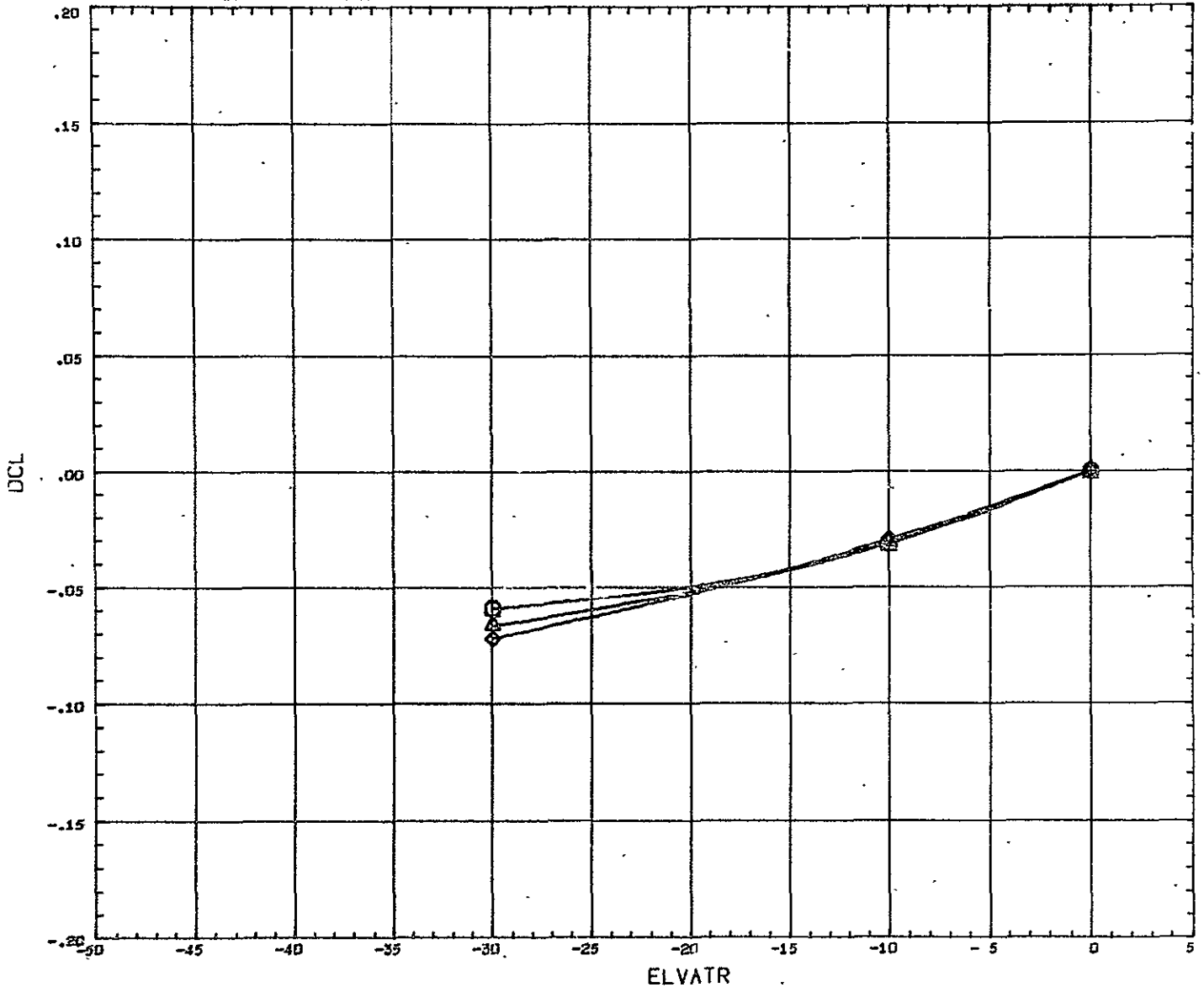
DELTA WING ORBITER-ELEVATOR EFFECTIVENESS AT VARIOUS ANGLES OF ATTACK



SYMBOL	PARAMETRIC VALUES				DATA SOURCE				REFERENCE INFORMATION	
	ALPHA	MACH	BETA	BETA	DATASET	ELVATR	DATASET	ELVATR	REFS	SCALE
○	0.000	4.960	0.000	0.000	D2758S	- 30.000	D2757S	- 10.000	-6084.0040	SQ. FT
△	10.000	AILRON	0.000	0.000	D2758S	- 30.000	D2757S	- 10.000	821.2004	INCHES
◇	20.000	RUDFLR	0.000	0.000	D2756S	0.000			1422.8040	INCHES
□	30.000								1422.5040	INCHES
									0.0000	INCHES
									100.0004	INCHES
									0.0035	SCALE

DATA HIST. CODE #GI#CH

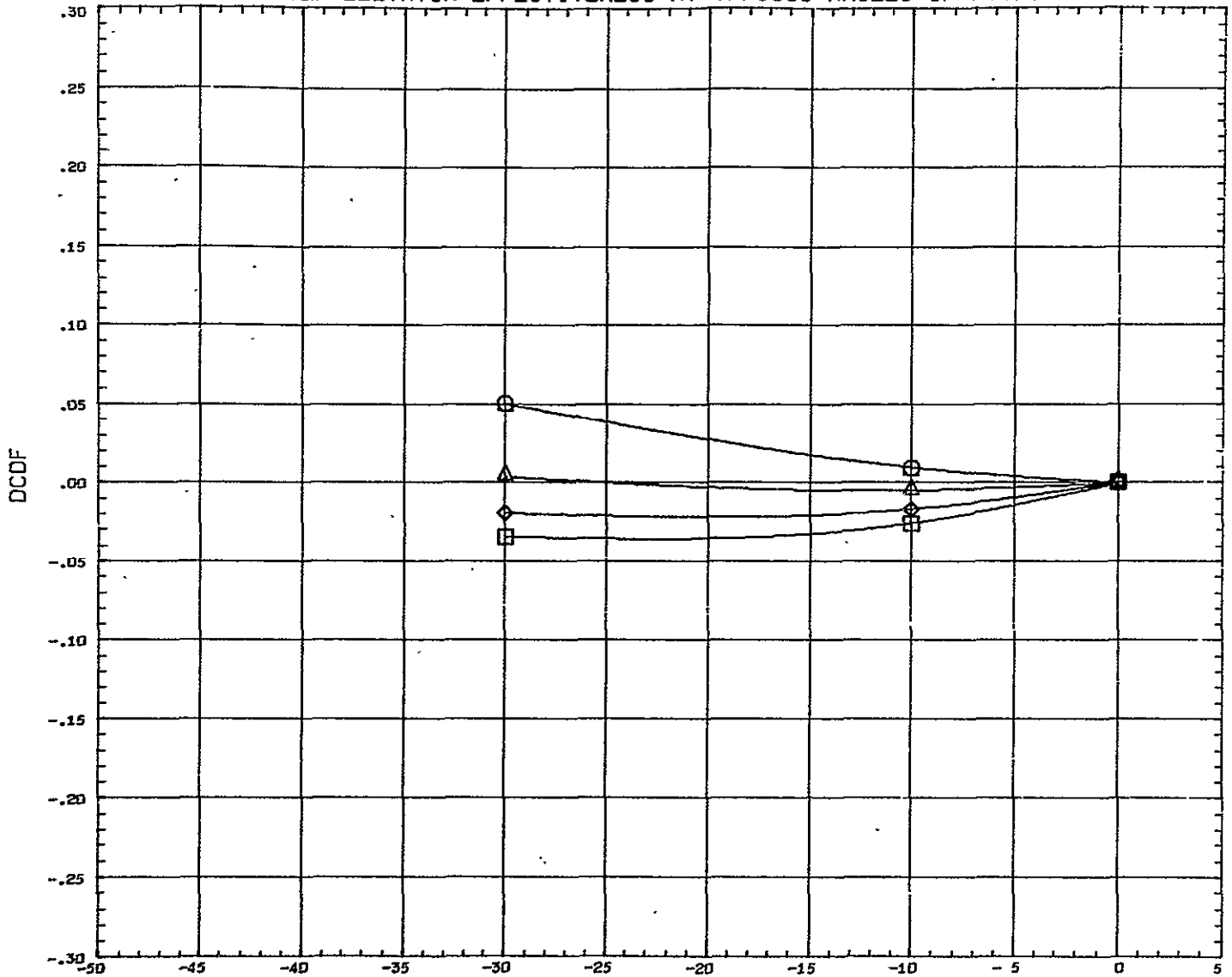
DELTA WING ORBITER-ELEVATOR EFFECTIVENESS AT VARIOUS ANGLES OF ATTACK



SYMBOL	ALPHA	PARAMETRIC VALUES				DATA SOURCE				REFERENCE INFORMATION		
○	40.000	MACH	4.960	BETA	0.000	DATASET	ELVATR	DATASET	ELVATR	REFS	6084.0040	SQ FT
△	50.000	AIRCRN	0.000	RUDDER	0.000	D2758S	- 30.000	D2757S	- 10.000	REFL	821.2004	INCHES
◇	60.000	RUDFLR	0.000			D2756S	0.000			REFB	1422.8040	INCHES
										XMRP	1422.5040	INCHES
										YMRP	0.0000	INCHES
										ZMRP	130.0004	INCHES
										SCALE	0.0035	SCALE

DATA HIST. CODE #GICM

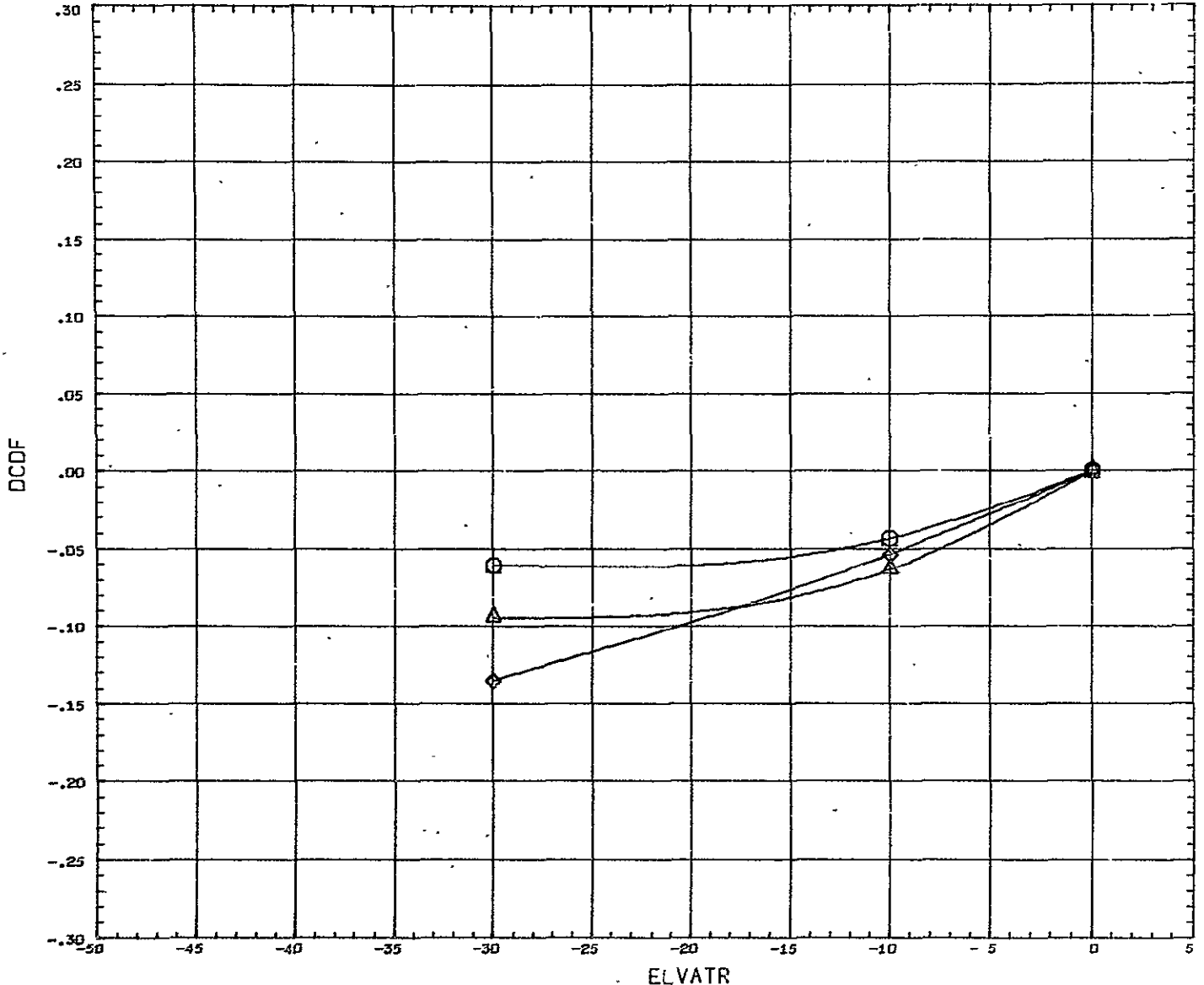
DELTA WING ORBITER-ELEVATOR EFFECTIVENESS AT VARIOUS ANGLES OF ATTACK



SYMBOL	ALPHA	PARAMETRIC VALUES				DATA SOURCE				REFERENCE INFORMATION		
○	0.000	MACH	1.460	BETA	0.000	DATASET	ELVATR	DATASET	ELVATR	REFS	6084.0041	SQ FT
△	10.000	AILRON	0.000	RUDDER	0.000	D2758S	- 30.000	D2757S	- 10.000	REFL	821.274	INCHES
◇	20.000	RUDFLR	0.000			D2756S	0.000			REFB	1422.8040	INCHES
□	30.000									XMRP	1422.5040	INCHES
										YMRP	0.0000	INCHES
										ZMRP	130.0004	INCHES
										SCALE	0.0035	SCALE

DATA HIST. CODE #GI#CH

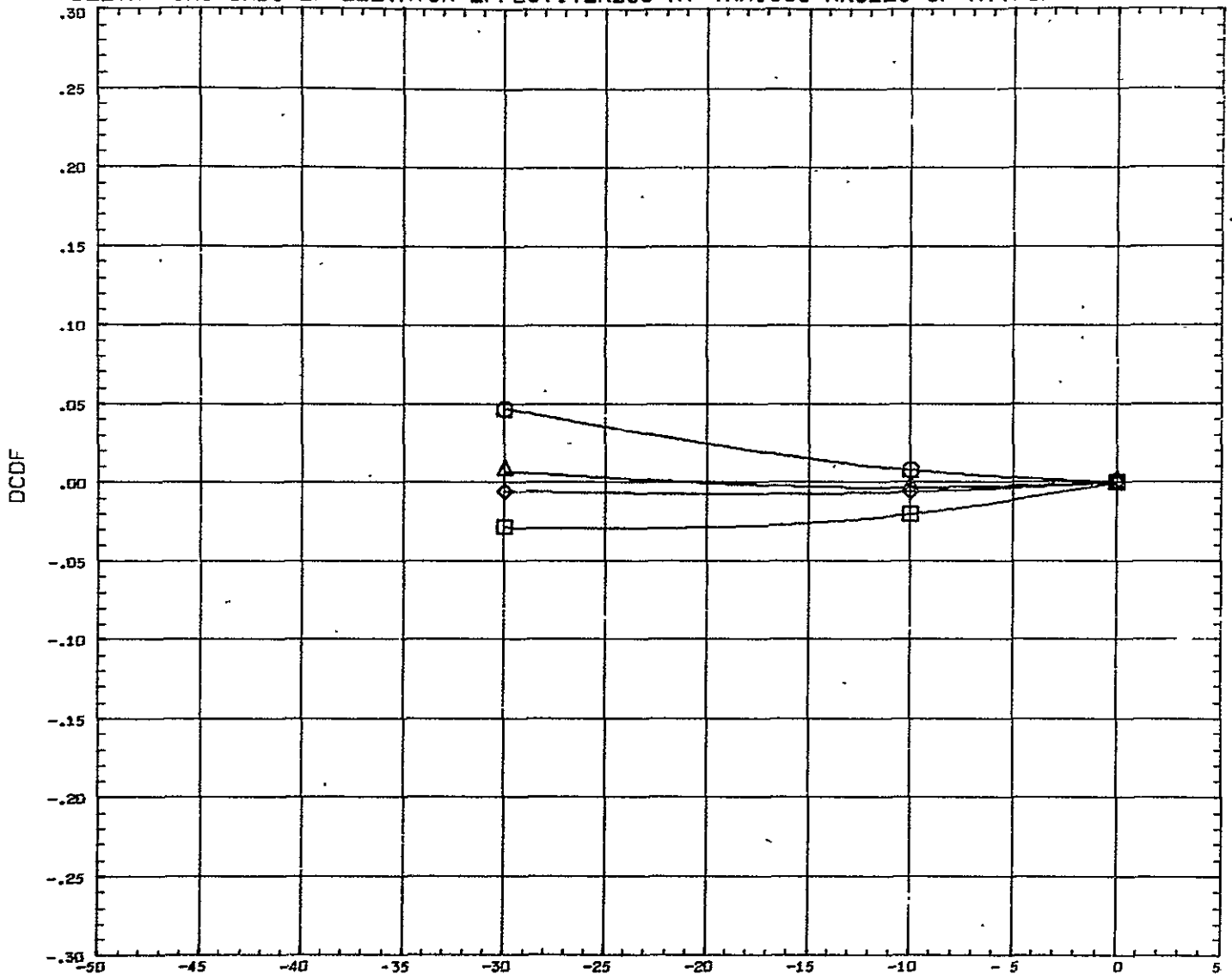
DELTA WING ORBITER-ELEVATOR EFFECTIVENESS AT VARIOUS ANGLES OF ATTACK



SYMBOL	ALPHA	PARAMETRIC VALUES				DATA SOURCE				REFERENCE INFORMATION				
		MACH	BETA	RUDDER	RUDDER	ELVATR	ELVATR	ELVATR	REFS	REFL	REFB	YMRP	ZMRP	SCALE
○	40.000	1.460	0.000	0.000	D2758S	-30.000	D2757S	-10.000	6084.0040	821.2004	1422.8040	0.0000	130.0004	0.0035
△	50.000	0.000	0.000	0.000	D2758S	-30.000	D2757S	-10.000						
◇	60.000	0.000	0.000	0.000	D2756S	0.000								

DATA HIST. CODE #GI#CH

DELTA WING ORBITER-ELEVATOR EFFECTIVENESS AT VARIOUS ANGLES OF ATTACK

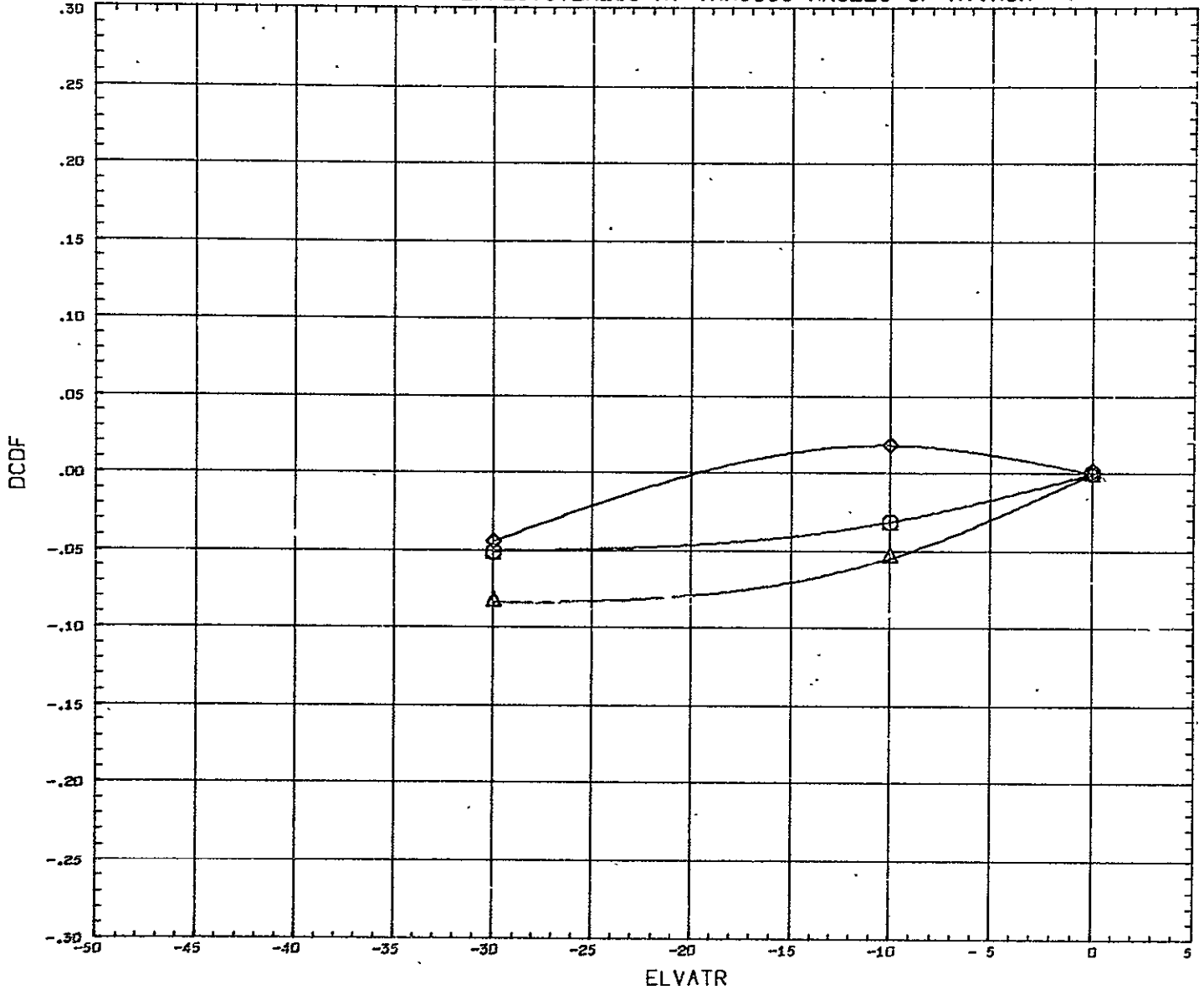


ELVATR

SYMBOL	ALPHA	PARAMETRIC VALUES				DATA SOURCE				REFERENCE INFORMATION		
○	0.000	MACH	1.980	DELTA	0.000	DATASET	ELVATR	DATASET	ELVATR	REFS	6084.0040	SQ FT
△	10.000	AILRON	0.000	RUDDER	0.000	D2758S	- 30.000	D2757S	- 10.000	REFL	821.2004	INCHES
◇	20.000	RUDFLR	0.000			D2756S	0.000			REFB	1422.8040	INCHES
□	30.000									XMRP	1422.5040	INCHES
										YMRP	0.0000	INCHES
										ZMRP	130.0004	INCHES
										SCALE	0.0035	SCALE

DATA HIST. CODE *G1#CH

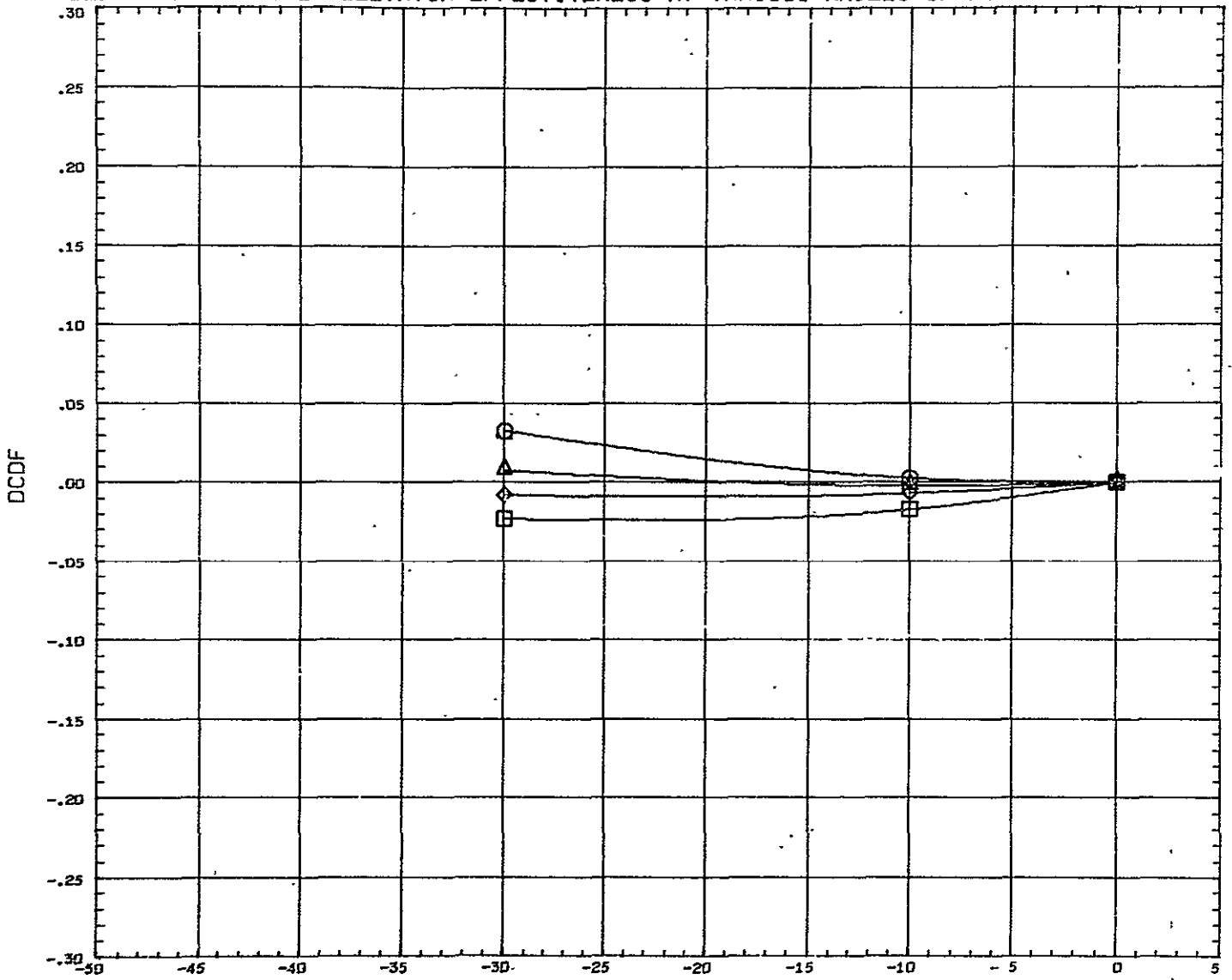
DELTA WING ORBITER-ELEVATOR EFFECTIVENESS AT VARIOUS ANGLES OF ATTACK



SYMBOL	PARAMETRIC VALUES				DATA SOURCE				REFERENCE INFORMATION		
	ALPHA	MACH	BETA	RUDDER	DATASET	ELVATR	DATASET	ELVATR	REFS	INCHES	SCALE
○	40.000	1.965	0.000	0.000	D2758S	- 30.000	D2757S	- 10.000	6084.0040	821.2004	0.0035
△	50.000	0.000	0.000	0.000	D2758S	- 30.000	D2757S	- 10.000	1422.8040	1422.5040	0.0000
◇	60.000	0.000	0.000	0.000	D2756S	0.000			130.0004	130.0004	0.0035

DATA HIST. CODE #01#CM

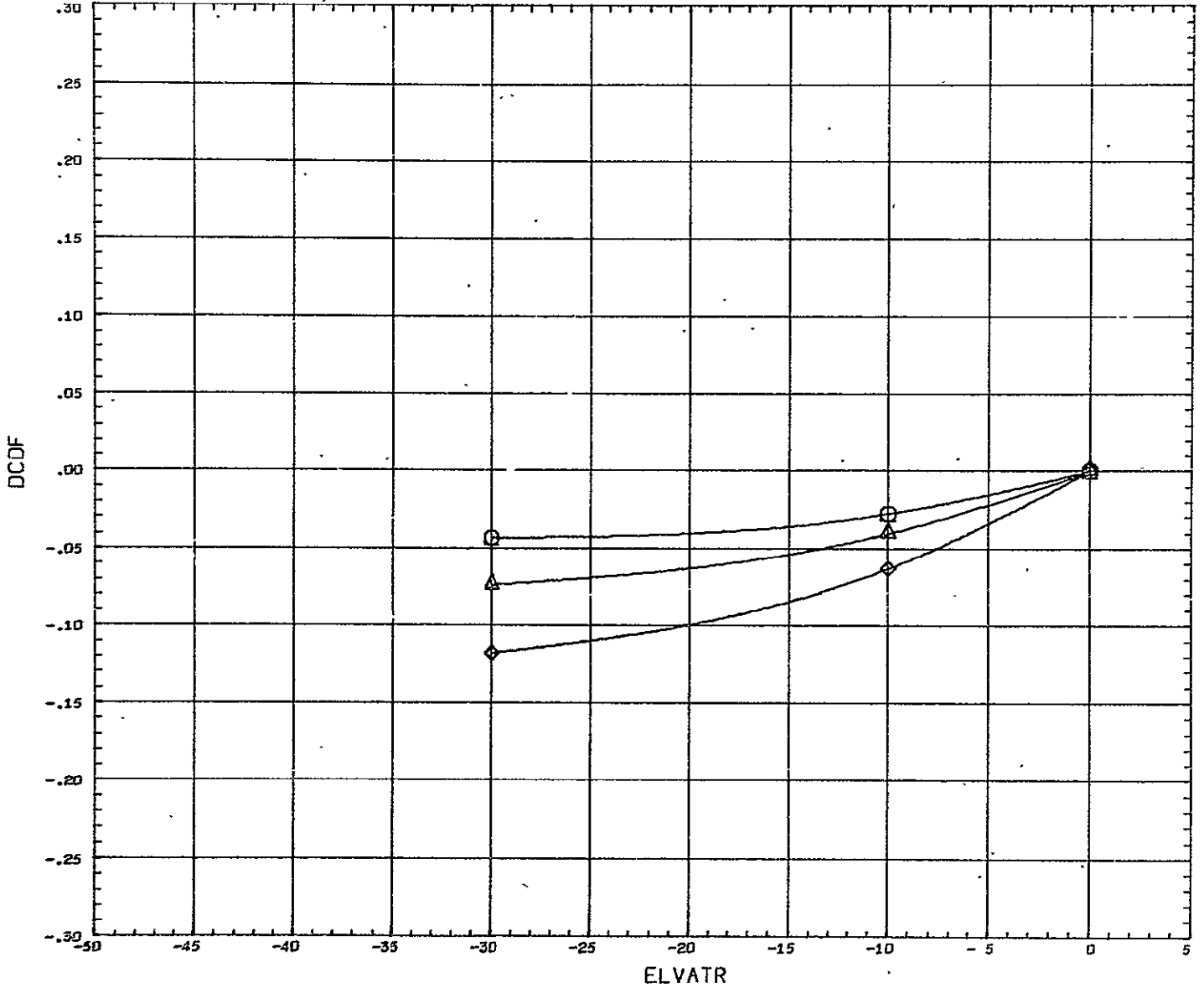
DELTA WING ORBITER-ELEVATOR EFFECTIVENESS AT VARIOUS ANGLES OF ATTACK



SYMBOL	ALPHA	PARAMETRIC VALUES				DATA SOURCE				REFERENCE INFORMATION		
○	0.000	MACH	2.990	BETA	0.000	DATASET	ELVATR	DATASET	ELVATR	REFS	6084.0040	SQ FT
△	10.000	AILRON	0.000	RUDDER	0.000	D2758S	- 30.000	D2757S	- 10.000	REFL	821.2004	INCHES
◇	20.000	RUDFLR	0.000			D2756S	0.000			REFB	1422.8040	INCHES
□	30.000									XMRP	1422.5040	INCHES
										YMRP	0.0000	INCHES
										ZMRP	130.0004	INCHES
										SCALE	0.0035	SCALE

DATA HIST. CODE #GI#CH

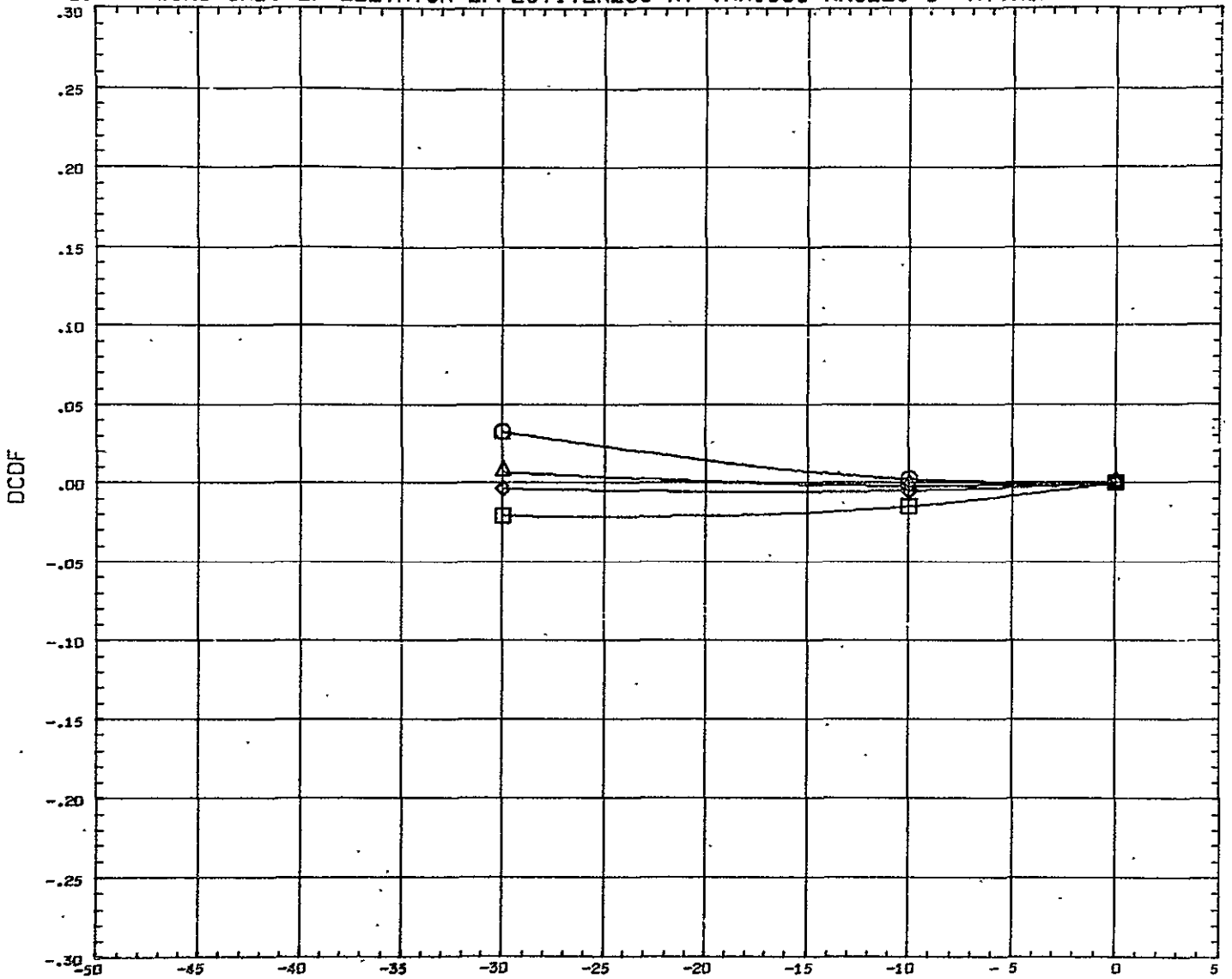
DELTA WING ORBITER-ELEVATOR EFFECTIVENESS AT VARIOUS ANGLES OF ATTACK



SYMBOL	ALPHA	PARAMETRIC VALUES				DATA SOURCE				REFERENCE INFORMATION		
○	40.000	MACH	2.990	BETA	0.000	DATASET	ELVATR	DATASET	ELVATR	REFS	6084.0040	SQ FT
△	50.000	ATLRCA	0.000	RUDDER	0.000	D2758S	- 30.000	D2757S	- 10.000	REFL	821.2004	INCHES
◇	60.000	RUDFLR	0.000			D2756S	0.000			REFB	1422.8040	INCHES
										XMRP	1422.5040	INCHES
										YMRP	0.0000	INCHES
										ZMRP	130.0004	INCHES
										SCALE	0.0035	SCALE

DATA HIST. CODE *GI#CM

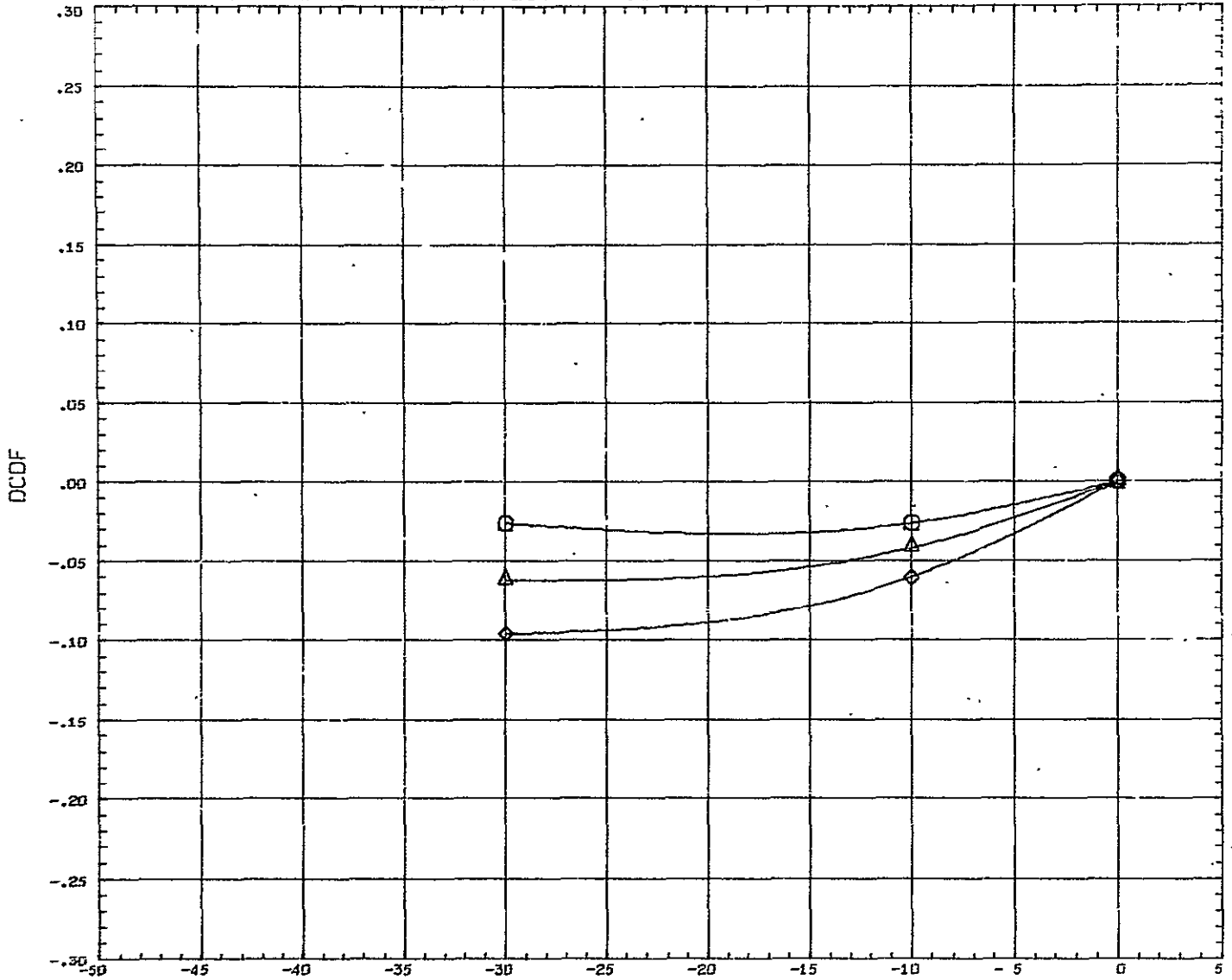
DELTA WING ORBITER-ELEVATOR EFFECTIVENESS AT VARIOUS ANGLES OF ATTACK



SYMBOL	ALPHA	PARAMETRIC VALUES				DATA SOURCE				REFERENCE INFORMATION		
○	0.000	MACH	4.960	BETA	0.000	DATASET	ELVATR	DATASET	ELVATR	REFS	6084.0040	SQ FT
△	10.000	AILRON	0.000	RUDDER	0.000	D2758S	- 30.000	D2757S	- 10.000	REFL	821.2004	INCHES
◇	20.000	RUDFLE	0.000			D2756S	0.000			REFB	1422.8040	INCHES
□	30.000									YMRP	1422.5040	INCHES
										ZMRP	0.0000	INCHES
										ZMRP	130.0004	INCHES
										SCALE	0.0035	SCALE

DATA HIST. CODE #GI#CH

DELTA WING ORBITER-ELEVATOR EFFECTIVENESS AT VARIOUS ANGLES OF ATTACK

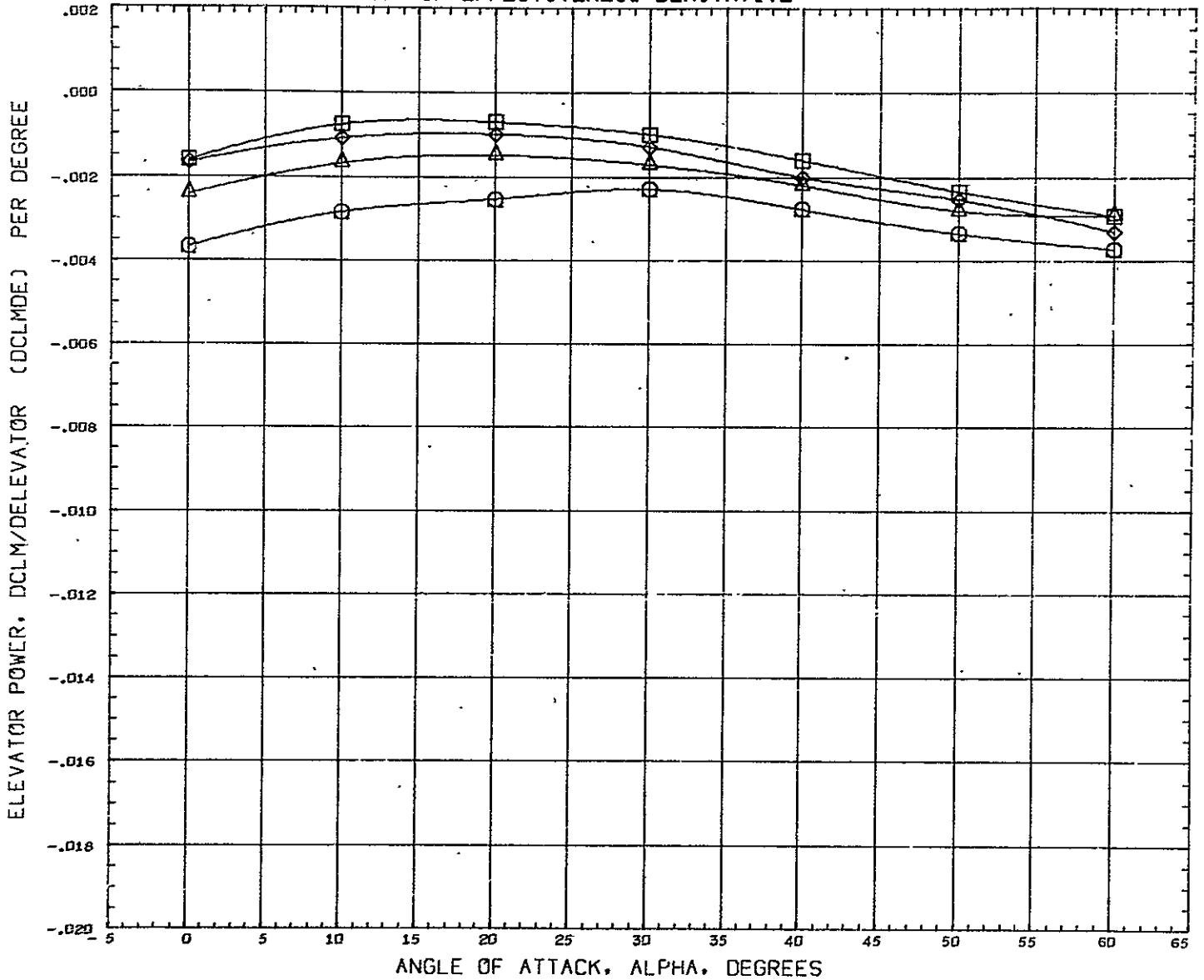


ELVATR

SYMBOL	ALPHA	PARAMETRIC VALUES			DATA SOURCE				REFERENCE INFORMATION			
○	40.000	MACH	4.960	DELTA	0.000	DATASET	ELVATR	DATASET	ELVATR	REFS	6064.0040	SQ FT
△	50.000	AILRON	0.000	RUDDER	0.000	D2758S	- 30.000	D2757S	- 10.000	REFL	821.2004	INCHES
◇	60.000	RUDFLR	0.000			D2756S	0.000			REFB	1422.8040	INCHES
										XMRP	1422.5040	INCHES
										YHRF	0.0000	INCHES
										ZMRF	130.0004	INCHES
										SCALE	0.0035	SCALE

DATA HIST. CODE #617CM

DELTA WING ORBITER-ELEVATOR EFFECTIVENESS DERIVATIVE

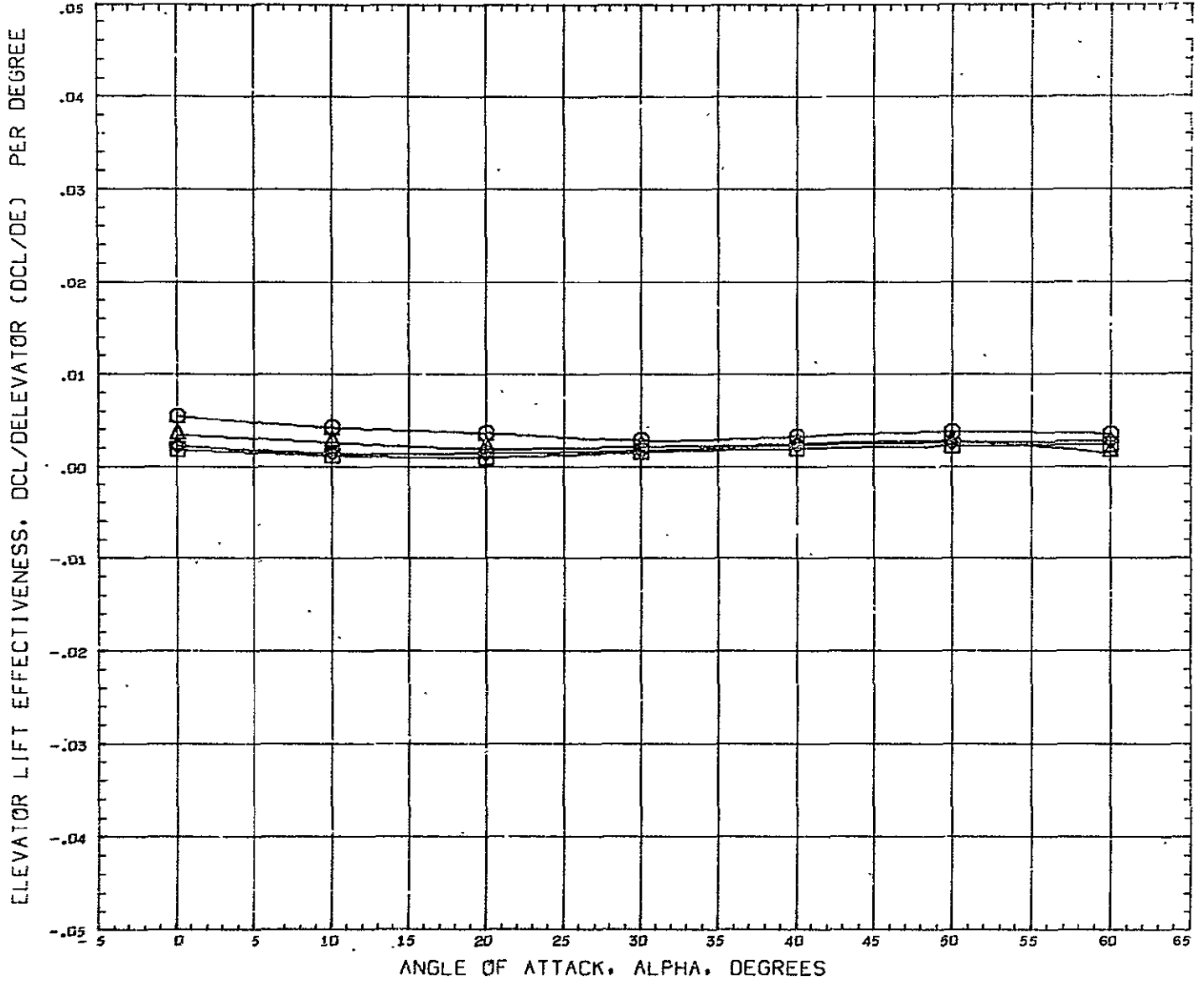


SYMBOL	MACH	PARAMETRIC VALUES			
○	1.460	BETA	0.000	AILRON	0.000
△	1.960	RUDDER	0.000	RUDFLR	0.000
◇	2.990				
□	4.960				

REFERENCE INFORMATION		
REFS	6084.0040	sq FT
REFL	821.2004	INCHES
REFB	1422.8040	INCHES
XMRP	1422.5040	INCHES
YMRP	0.0000	INCHES
ZMRP	130.0004	INCHES
SCALE	0.0035	SCALE

DATA HIST. CODE #F

DELTA WING ORBITER-ELEVATOR EFFECTIVENESS DERIVATIVE

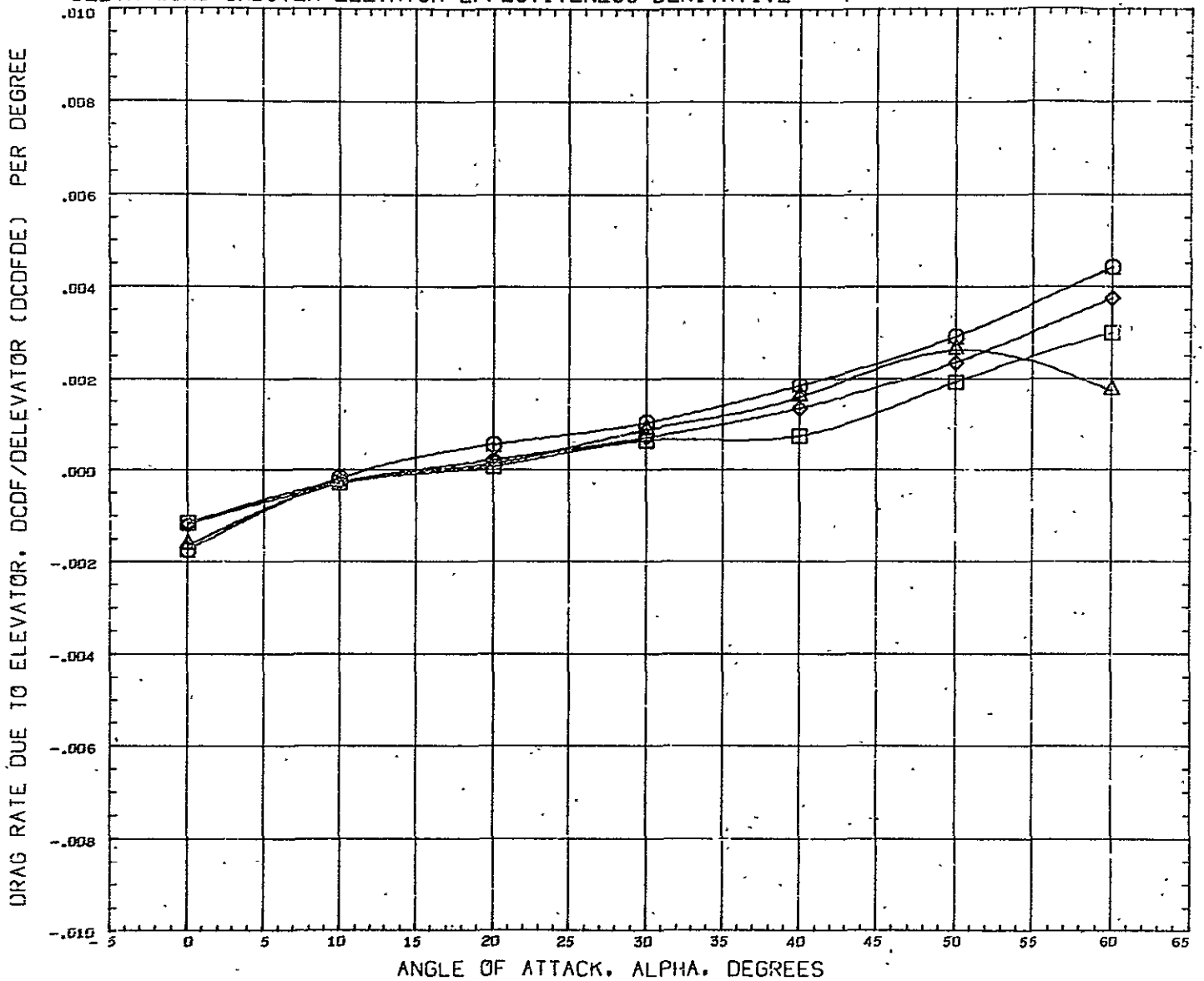


SYMBOL	MACH	PARAMETRIC VALUES			
○	1.465	BETA	0.000	AILRON	0.000
△	1.960	RUDDER	0.000	RUDFLR	0.000
◇	2.995				
□	4.960				

REFERENCE INFORMATION		
REFS	6084.0040	SQ FT
REFL	821.2004	INCHES
REFD	1422.8040	INCHES
XMRP	1422.5040	INCHES
YMRP	0.0000	INCHES
ZMRP	130.0004	INCHES
SCALE	0.0035	SCALE

DATA HIST. CODE #P

DELTA WING ORBITER-ELEVATOR EFFECTIVENESS DERIVATIVE

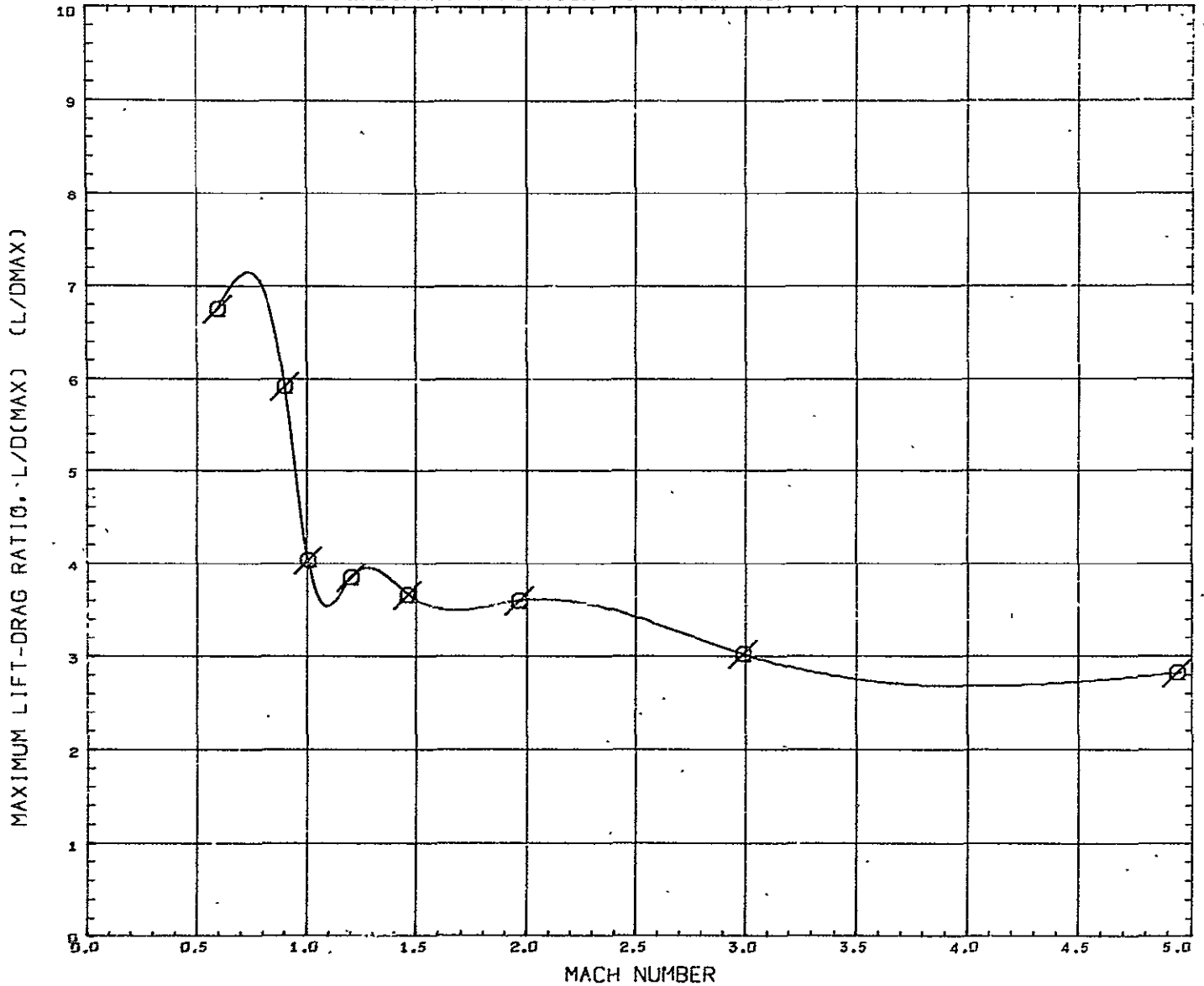


SYMBOL	MACH	PARAMETRIC VALUES			
○	1.460	BETA	0.000	AIRCEN	0.000
△	1.960	RUDDER	0.000	RUDFLR	0.000
◇	2.990				
□	4.960				

REFERENCE INFORMATION		
REFS	6084.0040	SQ FT
REFL	821.2004	INCHES
REFB	1422.8040	INCHES
XMRP	1422.5040	INCHES
YMRP	0.0000	INCHES
ZMRP	130.0004	INCHES
SCALE	0.0035	SCALE

DATA HIST. CODE #F

DELTA WING ORBITER- L/D(MAX) VARIATION WITH MACH NUMBER

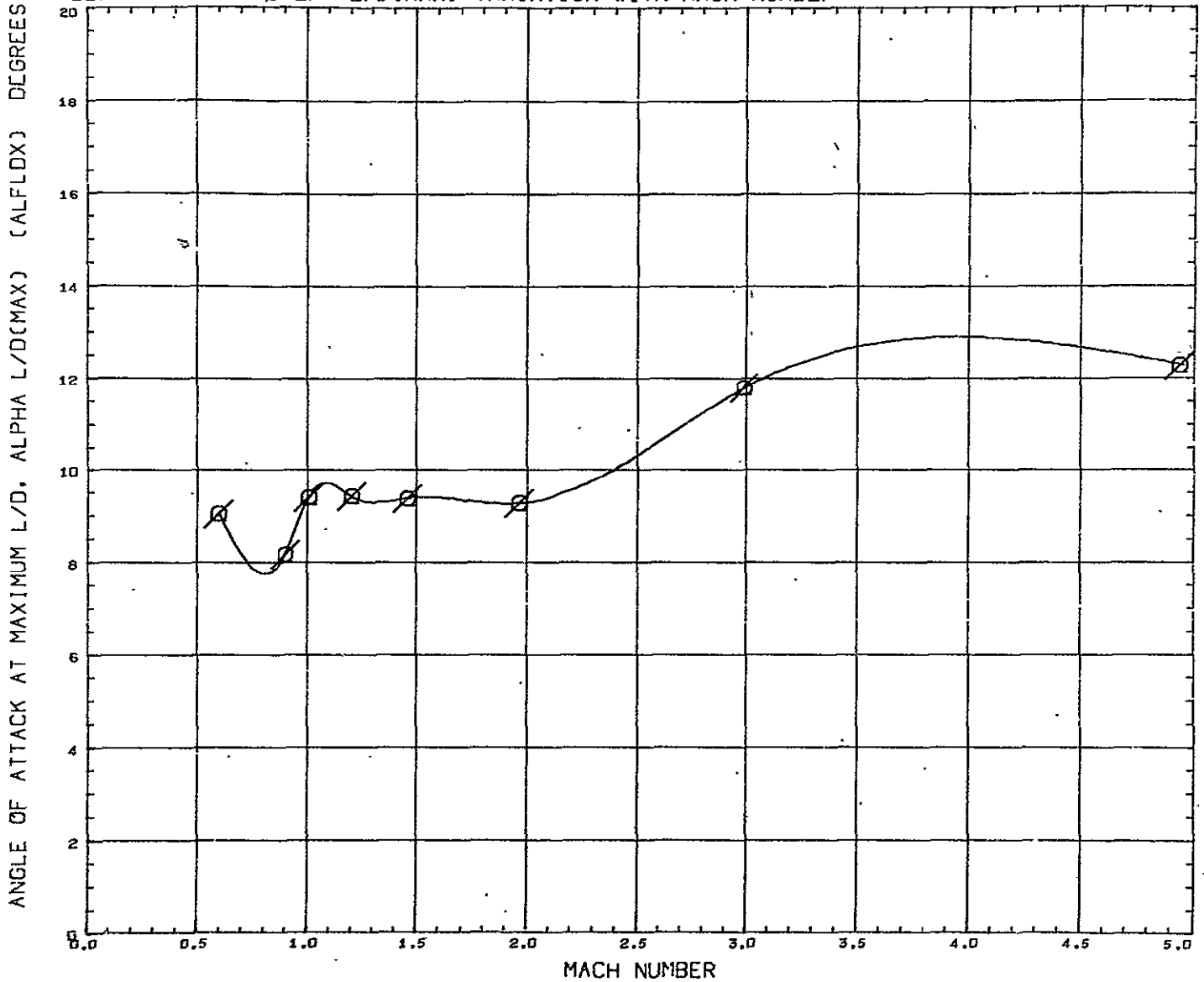


PARAMETRIC VALUES
 BETA 0.000 ELVATR 0.000
 AILRON 0.000 RUDDER 0.000
 RUDFLR 0.000

REFERENCE INFORMATION
 REFS 6084.0040 SQ FT
 REFL 821.2004 INCHES
 REFB 1422.8546 INCHES
 XMRP 1422.5040 INCHES
 YMRP 0.0000 INCHES
 ZMRP 130.0004 INCHES
 SCALE 0.0035 SCALE

DATA HIST. CODE #GF

DELTA WING ORBITER- L/D(MAX) VARIATION WITH MACH NUMBER

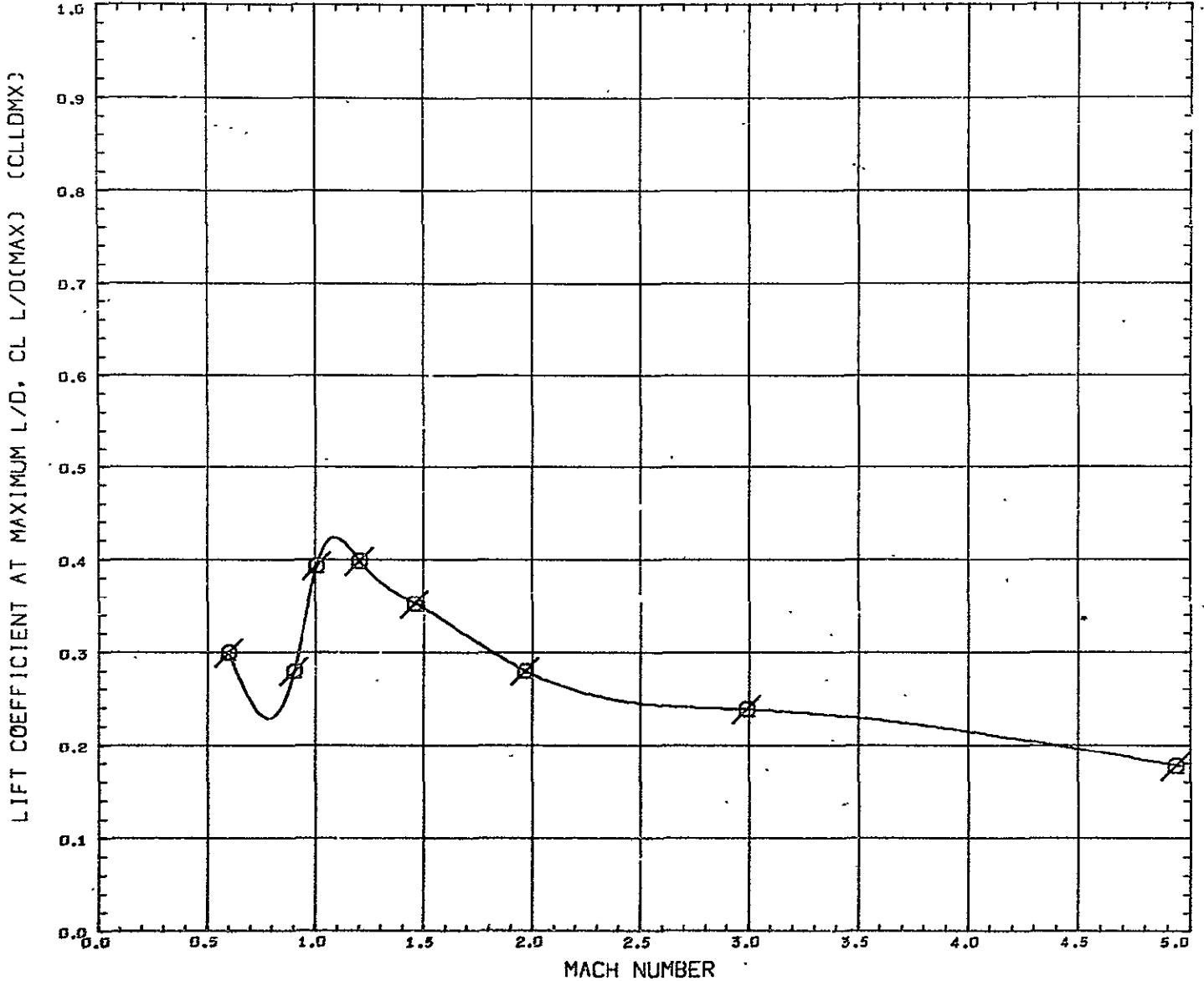


PARAMETRIC VALUES
 BETA 0.000 ELVATR 0.000
 AILRON 0.000 RUDDER 0.000
 RUEFLR 0.000

REFERENCE INFORMATION
 REFS 6084.0040 SQ FT
 REFL 821.2004 INCHES
 REF8 1422.8040 INCHES
 XMRP 1422.5040 INCHES
 YMRP 0.0000 INCHES
 ZMRP 130.0004 INCHES
 SCALE 0.0035 SCALE

DATA HIST. CODE #GF

DELTA WING ORBITER- L/D(MAX) VARIATION WITH MACH NUMBER

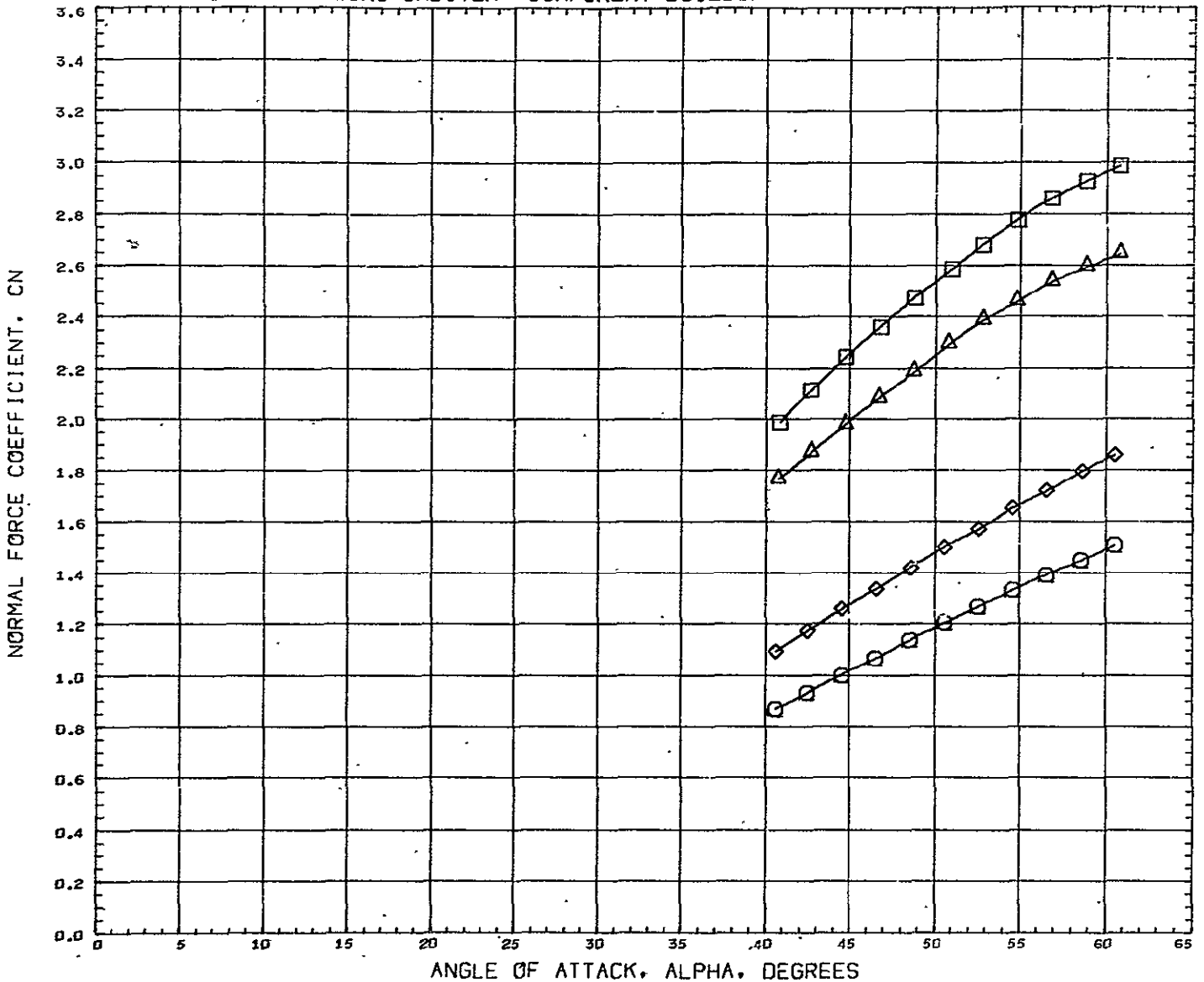


PARAMETRIC VALUES
 BETA 0.000 ELVATR 0.000
 AILRON 0.000 RUDDER 0.000
 RUDFLR 0.000

REFERENCE INFORMATION
 REFS 6084.0040 SQ FT
 REFL 821.2004 INCHES
 REFB 1422.8040 INCHES
 XHRP 1422.5040 INCHES
 YHRP 0.0000 INCHES
 ZMRP 130.0004 INCHES
 SCALE 0.0035 SCALE

DATA HIST. CODE #GF

STRAIGHT WING ORBITER- COMPONENT BUILDUP



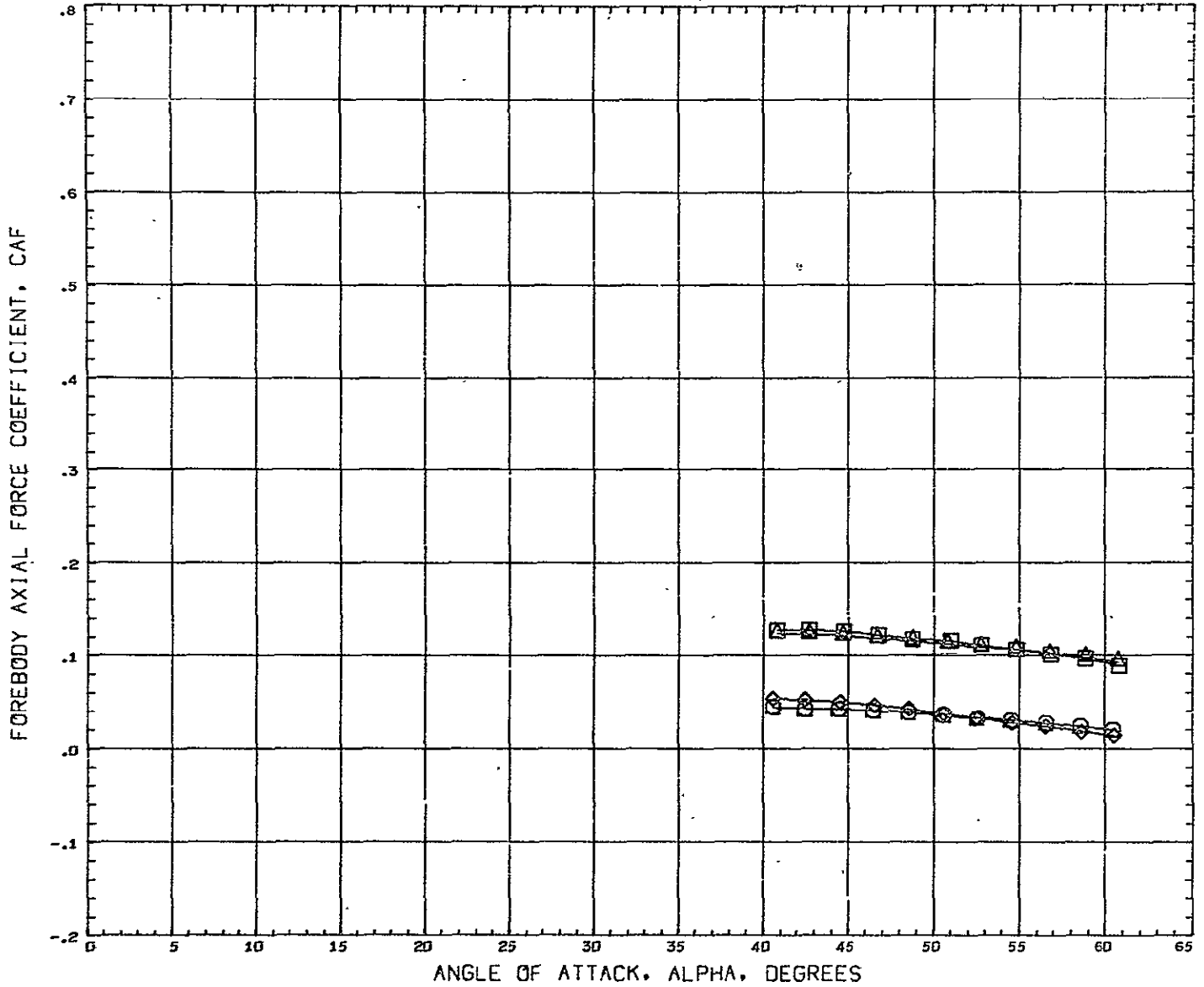
DATA SET SYMBOL	SYMBOL	CONFIGURATION DESCRIPTION
(C2701C)	○	MSFC478 NR ST ORBITER B6
(C2702C)	△	MSFC478 NR ST ORBITER B6W10
(C2703C)	◇	MSFC478 NR ST ORBITER B6H12
(D2712C)	□	MSFC478 NR ST ORBITER B6W10H12

BETA	HTAIL	AILRON
0.000		
0.000		
0.000	0.000	0.000
0.000	0.000	0.000

REFERENCE INFORMATION		
REFS	3084.0040	SQ FT
REFL	322.9004	INCHES
REFB	1490.0040	INCHES
XMRP	1293.0040	INCHES
YMRP	0.0000	INCHES
ZMRP	50.5000	INCHES
SCALE	0.0035	SCALE

MACH 4.959

STRAIGHT WING ORBITER- COMPONENT BUILDUP



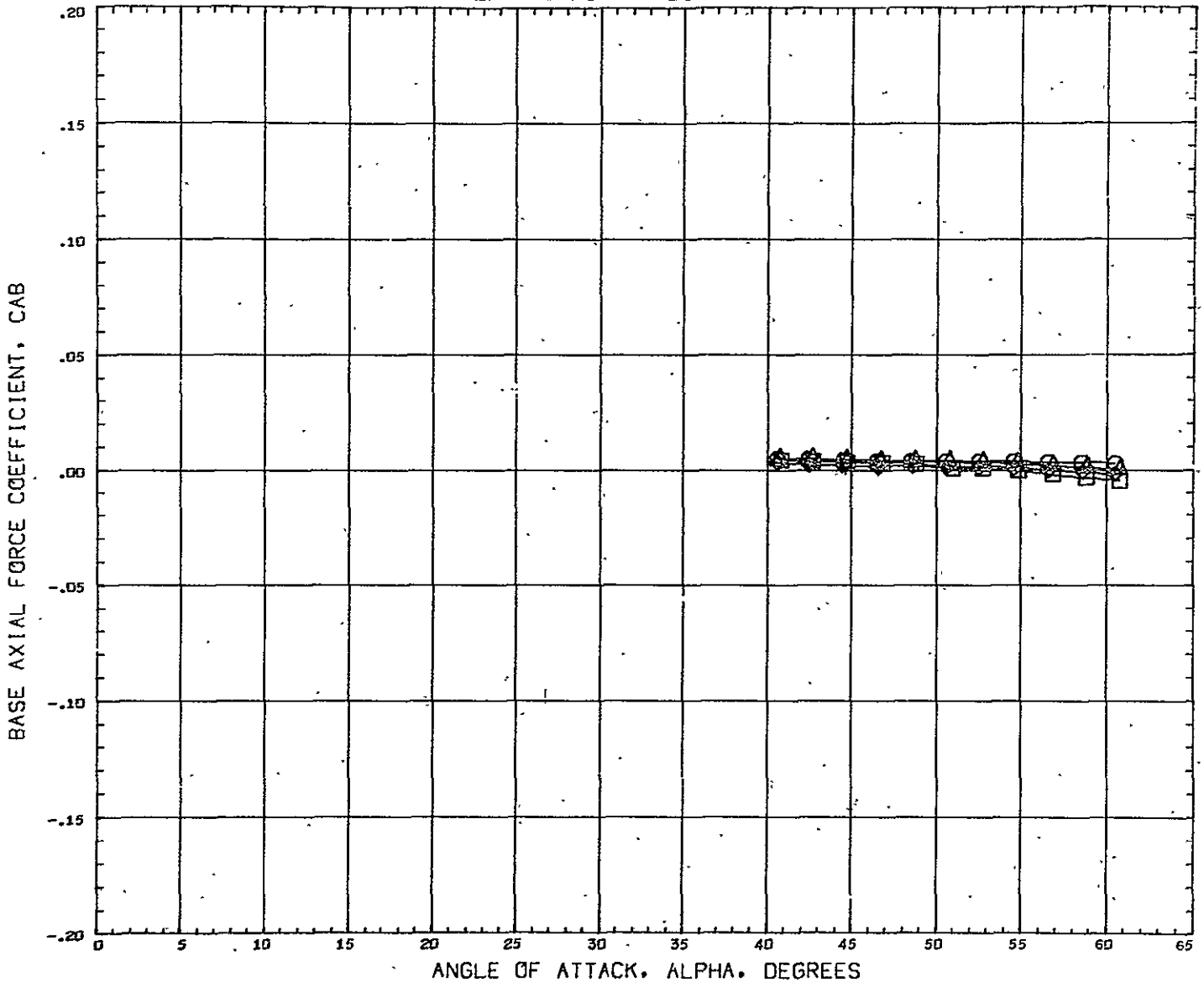
DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(C2701C)	MSFC478 NR ST ORBITER B6
(C2702C)	MSFC478 NR ST ORBITER B6W10
(C2703C)	MSFC478 NR ST ORBITER B6H12
(C2712C)	MSFC478 NR ST ORBITER B6W10H12

BETA	HTAIL	AILRON
0.000		
0.000		
0.000	0.000	0.000
0.000	0.000	0.000

REFERENCE INFORMATION		
REFS	3084.0040	SQ FT
REFL	322.9004	INCHES
REFB	1490.0040	INCHES
XMRP	1293.0040	INCHES
YMRP	0.0000	INCHES
ZMRP	50.5000	INCHES
SCALE	0.0035	SCALE

MACH 4.959

STRAIGHT WING ORBITER- COMPONENT BUILDUP



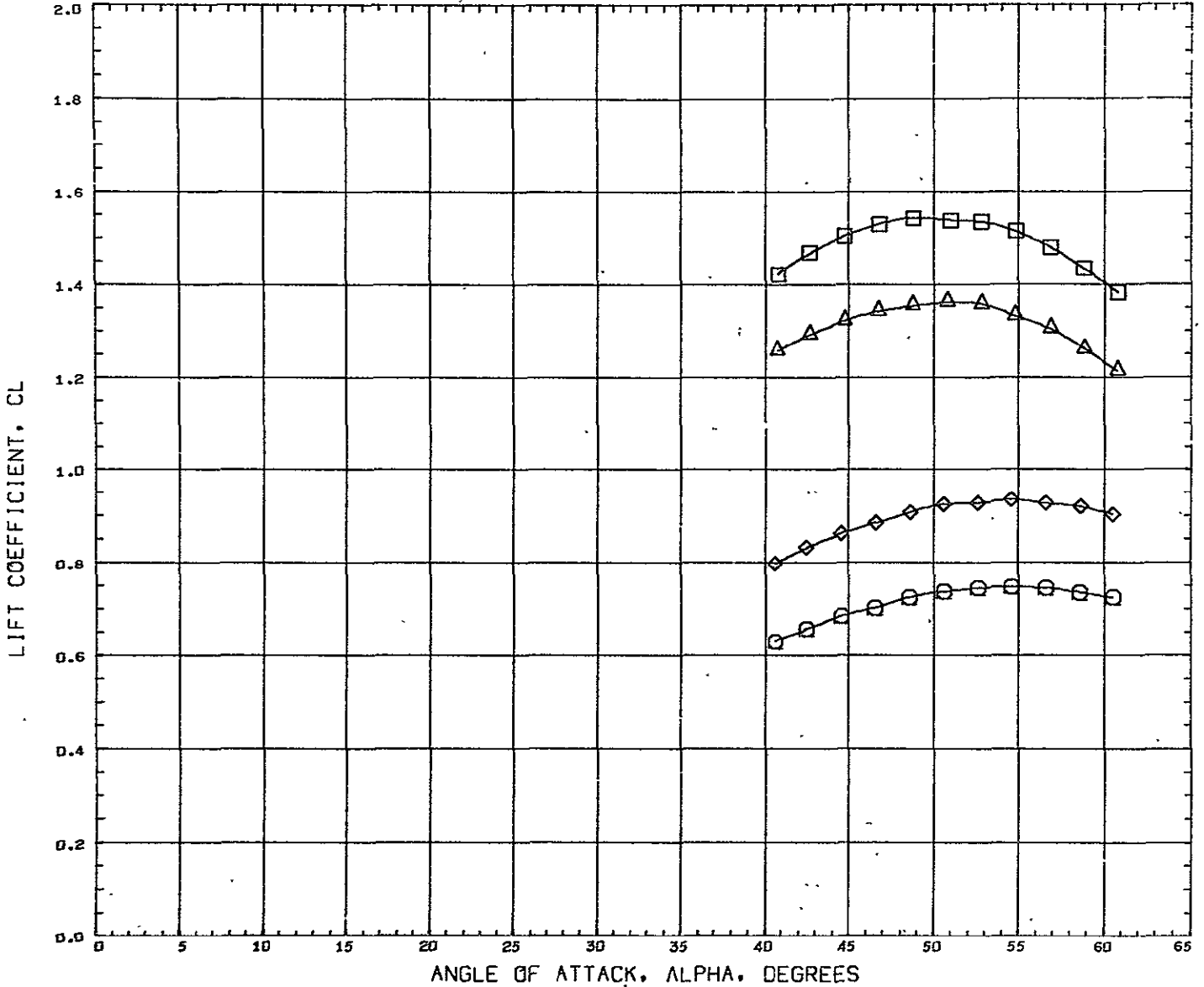
DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(C2701C)	MSFC478 NR ST ORBITER B6
(C2702C)	MSFC478 NR ST ORBITER B6W10
(C2703C)	MSFC478 NR ST ORBITER B6H12
(C2712C)	MSFC478 NR ST ORBITER B6W10H12

BETA	HTAIL	AILRON
0.000		
0.000	0.000	0.000
0.000	0.000	0.000

REFERENCE INFORMATION		
REFS	3084.0040	SQ FT
REFL	322.9004	INCHES
REFB	1490.0040	INCHES
XMRP	1293.0040	INCHES
YMRP	0.0000	INCHES
ZMRP	50.5000	INCHES
SCALE	0.0035	SCALE

MACH 4.959

STRAIGHT WING ORBITER- COMPONENT BUILDUP



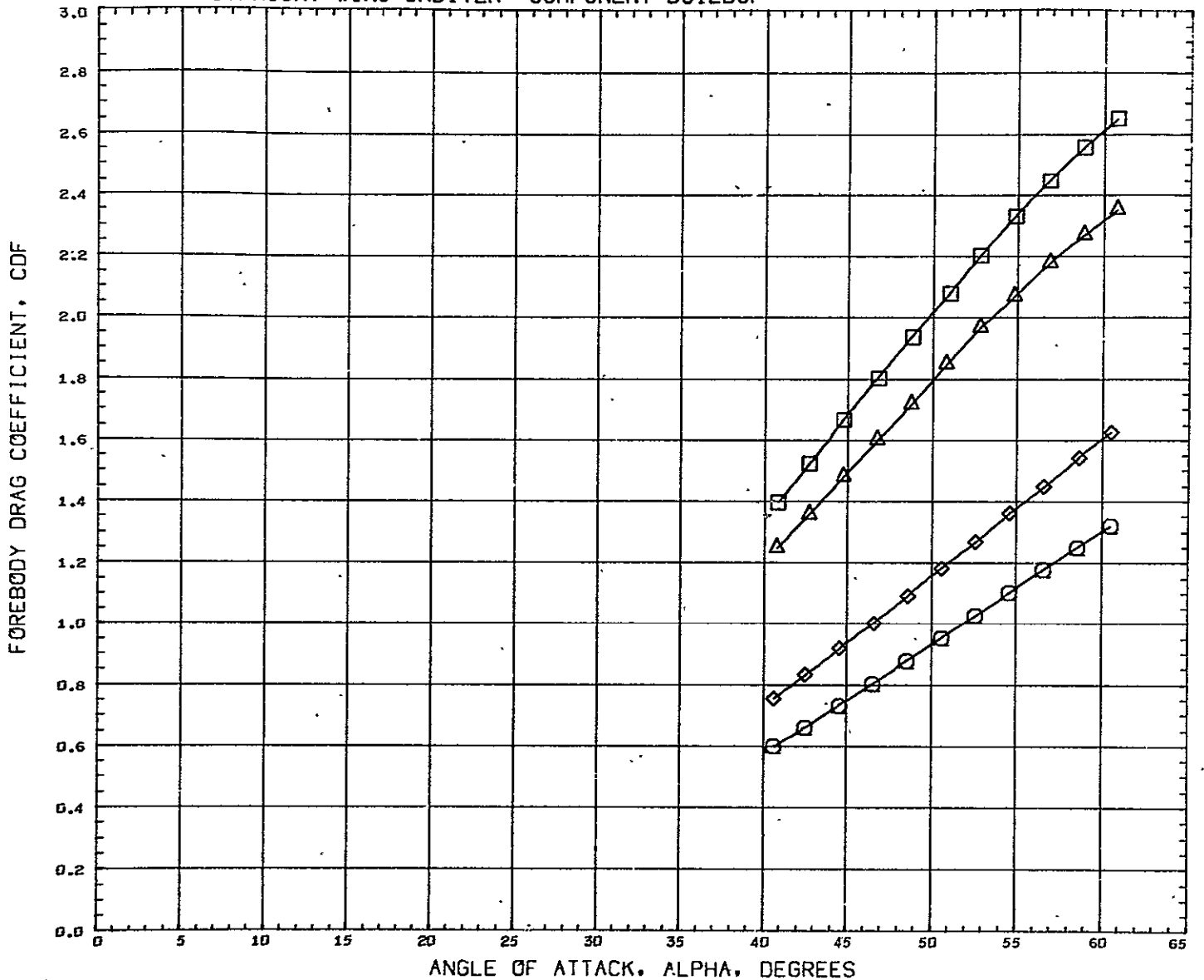
DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(C2701C)	MSFC478 NR ST ORBITER B6
(C2702C)	MSFC478 NR ST ORBITER B6W10
(C2703C)	MSFC478 NR ST ORBITER B6H12
(D2712C)	MSFC478 NR ST ORBITER B6W10H12

BETA	HTAIL	AILRON
0.000		
0.000		
0.000	0.000	0.000
0.000	0.000	0.000

REFERENCE INFORMATION		
REFS	3084.0040	SQ FT
REFL	322.9004	INCHES
REFB	1490.0040	INCHES
XMRP	1293.0040	INCHES
YMRP	0.0000	INCHES
ZMRP	50.5000	INCHES
SCALE	0.0035	SCALE

MACH 4.959

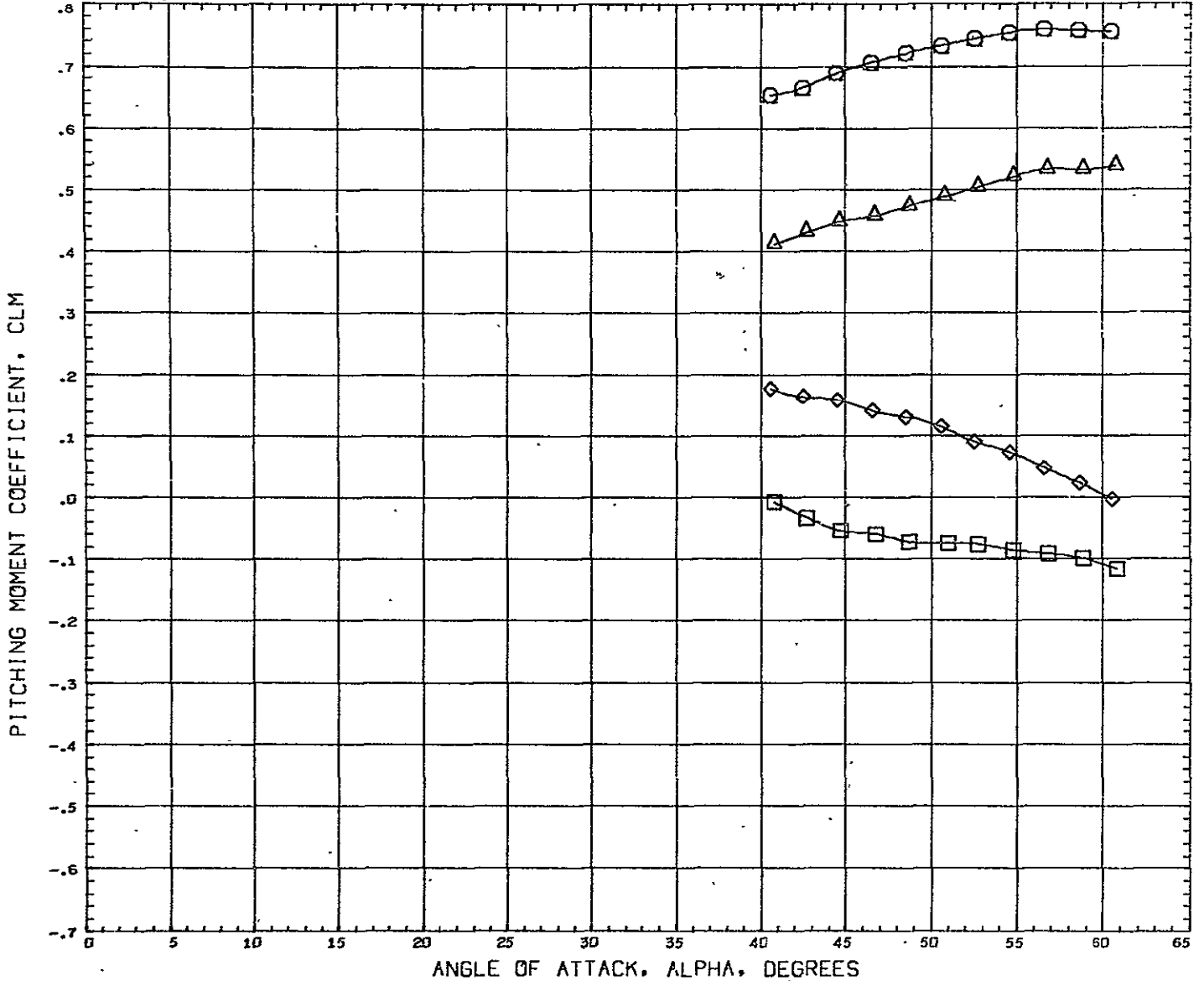
STRAIGHT WING ORBITER- COMPONENT BUILDUP



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	HTAIL	AILRON	REFERENCE INFORMATION	
(C2701C)	MSFC478 NR ST ORBITER B6	0.000			REFS	3084.0040 SQ FT
(C2702C)	MSFC478 NR ST ORBITER B6W10	0.000			REFL	322.9004 INCHES
(C2703C)	MSFC478 NR ST ORBITER B6H12	0.000	0.000	0.000	REFB	1490.0040 INCHES
(D2712C)	MSFC478 NR ST ORBITER B6W10H12	0.000	0.000	0.000	XMRP	1293.0040 INCHES
					YMRP	0.0000 INCHES
					ZMRP	50.5000 INCHES
					SCALE	0.0035 SCALE

MACH 4.959

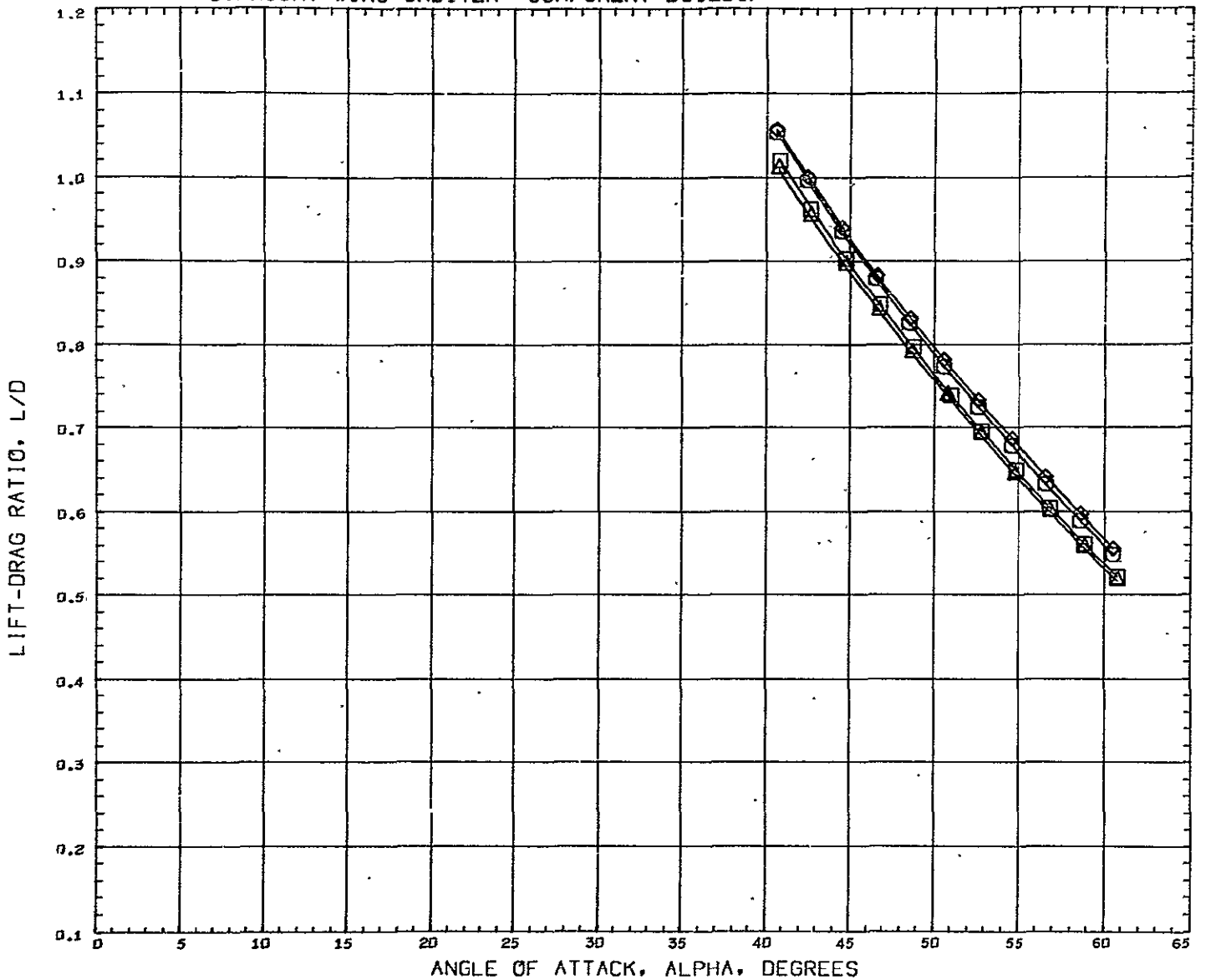
STRAIGHT WING ORBITER- COMPONENT BUILDUP



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	HTAIL	AILRON	REFERENCE INFORMATION	
(C2701C)	MSFC478 NR ST ORBITER B6	0.000			REFS	3084.0040 SQ FT
(C2702C)	MSFC478 NR ST ORBITER B6W10	0.000			REFL	322.9004 INCHES
(C2703C)	MSFC478 NR ST ORBITER B6H12	0.000	0.000	0.000	REFB	1490.0040 INCHES
(D2712C)	MSFC478 NR ST ORBITER B6W10H12	0.000	0.000	0.000	XMRP	1293.0040 INCHES
					YMRP	0.0000 INCHES
					ZMRP	50.5000 INCHES
					SCALE	0.0035 SCALE

MACH 4.959

STRAIGHT WING ORBITER- COMPONENT BUILDUP



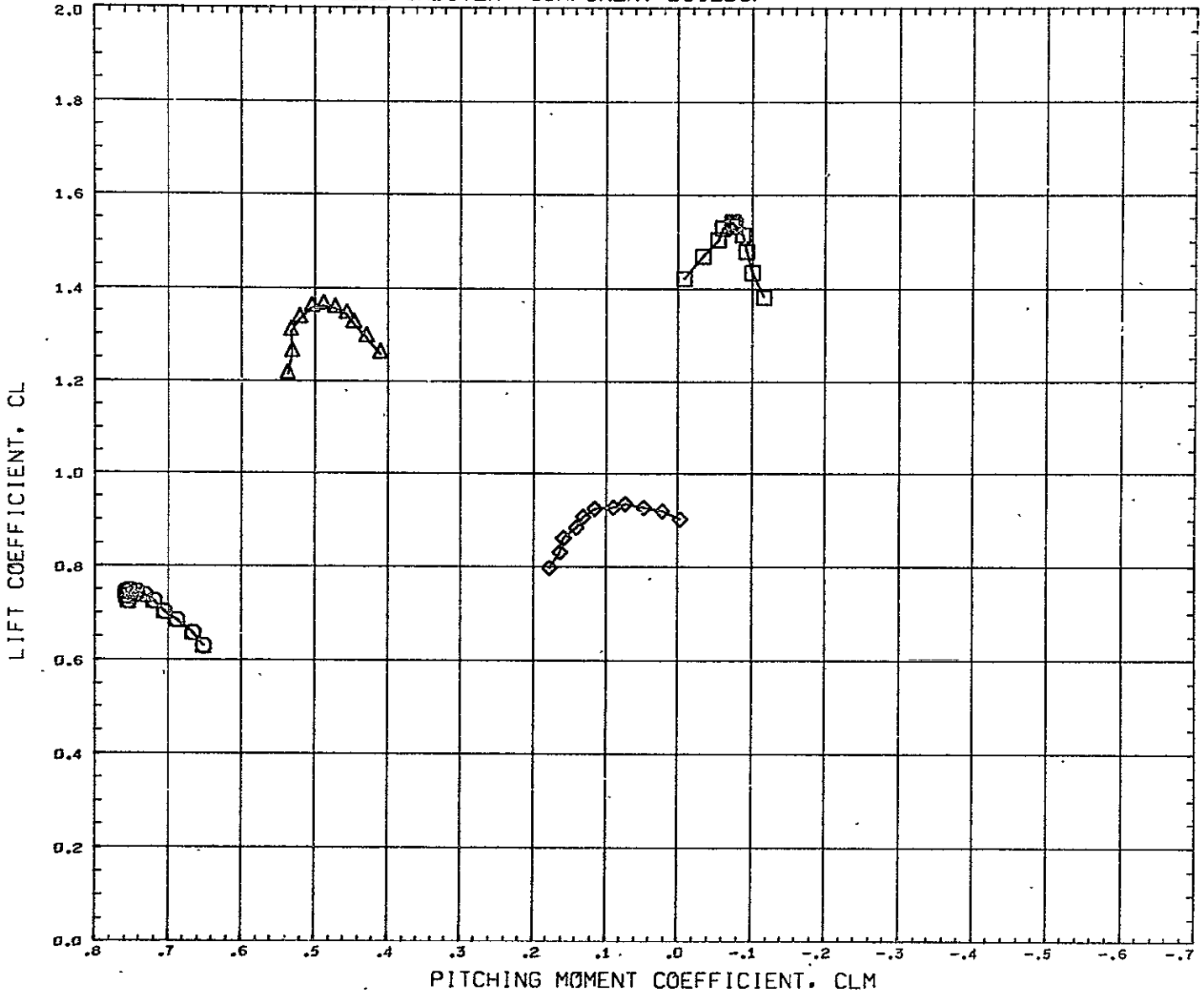
DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(C2701C)	MSFC478 NR ST ORBITER B6
(C2702C)	MSFC478 NR ST ORBITER J6W10
(C2703C)	MSFC478 NR ST ORBITER B6H12
(C2712C)	MSFC478 NR ST ORBITER B6W10H12

BETA	HTAIL	AILRON
0.000		
0.000		
0.000	0.000	0.000
0.000	0.000	0.000

REFERENCE INFORMATION		
REFS	3084.0040	SQ FT
REFL	322.9004	INCHES
REFB	1490.0040	INCHES
XMRP	1293.0040	INCHES
YMRP	0.0000	INCHES
ZMRP	50.5000	INCHES
SCALE	0.0035	SCALE

MACH 4.959

STRAIGHT WING ORBITER- COMPONENT BUILDUP



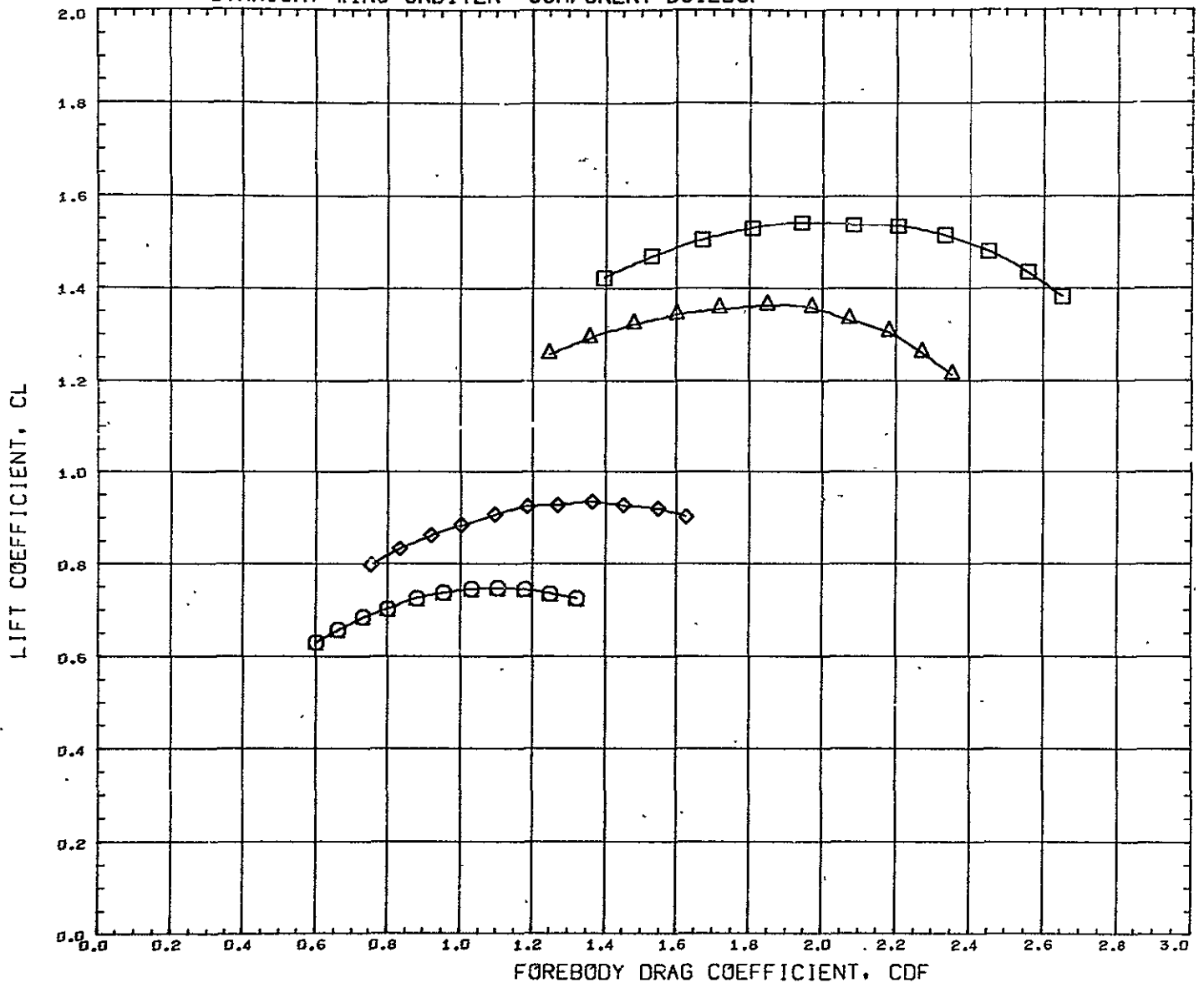
DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(C2701C)	MSFC478 NR ST ORBITER 36
(C2702C)	MSFC478 NR ST ORBITER B6WLD
(C2703C)	MSFC478 NR ST ORBITER B6H12
(D2712C)	MSFC478 NR ST ORBITER B6W19H12

BETA	HTAIL	AILRON
0.000		
0.000		
0.000	0.000	0.000
0.000	0.000	0.000

REFERENCE INFORMATION		
REFS	3084.0040	SQ FT
REFL	322.9004	INCHES
REFB	1490.0040	INCHES
XMRP	1293.0040	INCHES
YMRP	0.0000	INCHES
ZMRP	50.5000	INCHES
SCALE	0.0035	SCALE

PACH 4.959

STRAIGHT WING ORBITER- COMPONENT BUILDUP



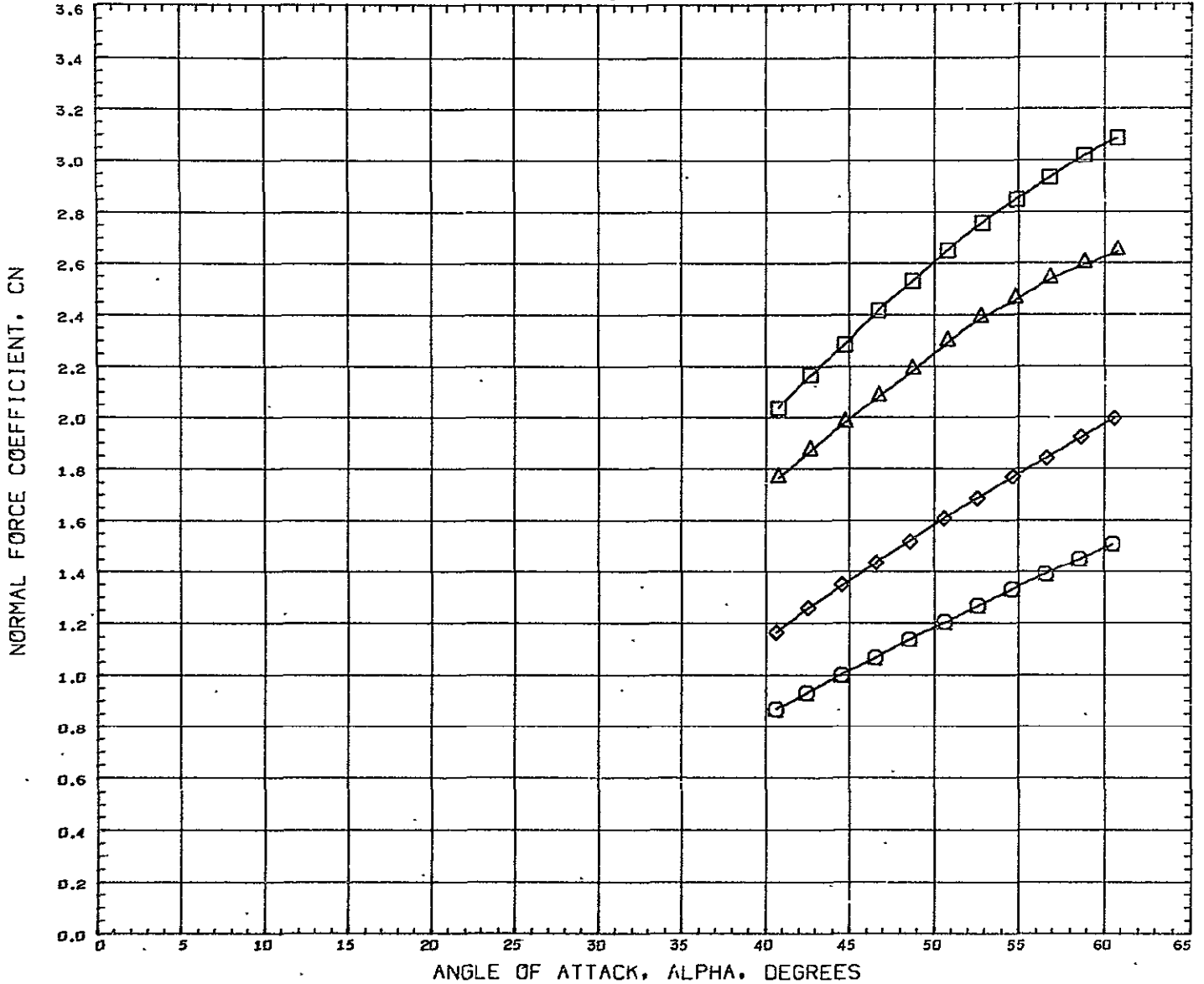
DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(C2701C)	MSFC478 NR ST ORBITER B6
(C2702C)	MSFC478 NR ST ORBITER B6H10
(C2703C)	MSFC478 NR ST ORBITER B6H12
(D2712C)	MSFC478 NR ST ORBITER J6W10H12

BETA	HTAIL	AILRON
0.000		
0.000		
0.000	0.000	0.000
0.000	0.000	0.000

REFERENCE INFORMATION		
REFS	3084.0040	SQ FT
REFL	322.9004	INCHES
REFB	1490.0040	INCHES
XMRP	1293.0040	INCHES
YMRP	0.0000	INCHES
ZMRP	50.5000	INCHES
SCALE	0.0035	SCALE

MACH 4.959

STRAIGHT WING ORBITER- COMPONENT BUILDUP



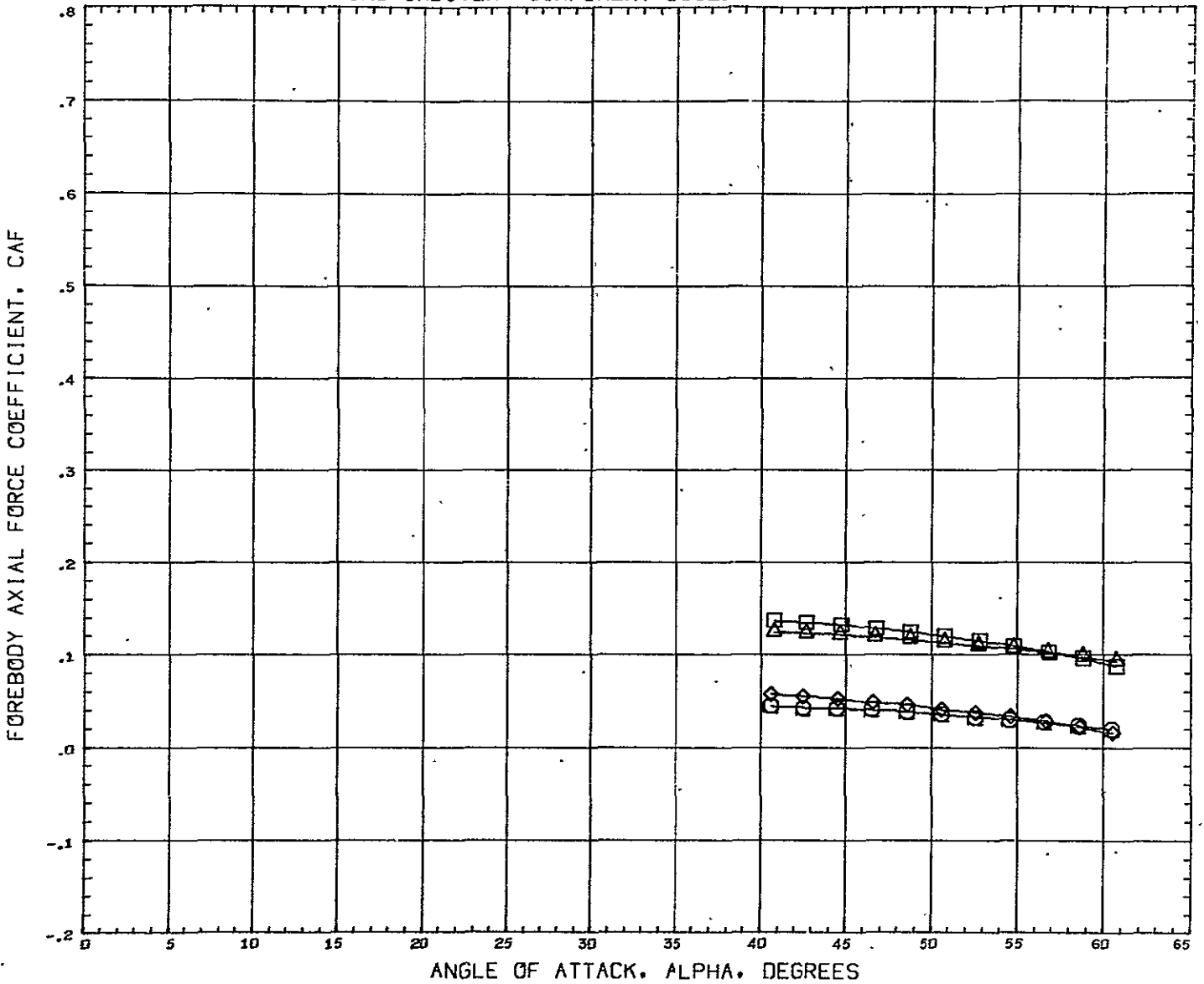
DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(C2731C)	MSFC478 NR ST ORBITER B6
(C2732C)	MSFC478 NR ST ORBITER B6W14
(C2721C)	MSFC478 NR ST ORBITER B6H16E14
(C2733C)	MSFC478 NR ST ORBITER B6W14H16E14

BETA	ELVATR	AILRON
0.000		
0.000		
0.000	0.000	0.000
0.000	0.000	0.000

REFERENCE INFORMATION	
REFS	3084.0040 SQ FT
REFL	322.9004 INCHES
REFB	1490.0040 INCHES
XMRP	1293.0040 INCHES
YMRP	0.0000 INCHES
ZMRP	50.5000 INCHES
SCALE	0.0035 SCALE

MACH 4.959

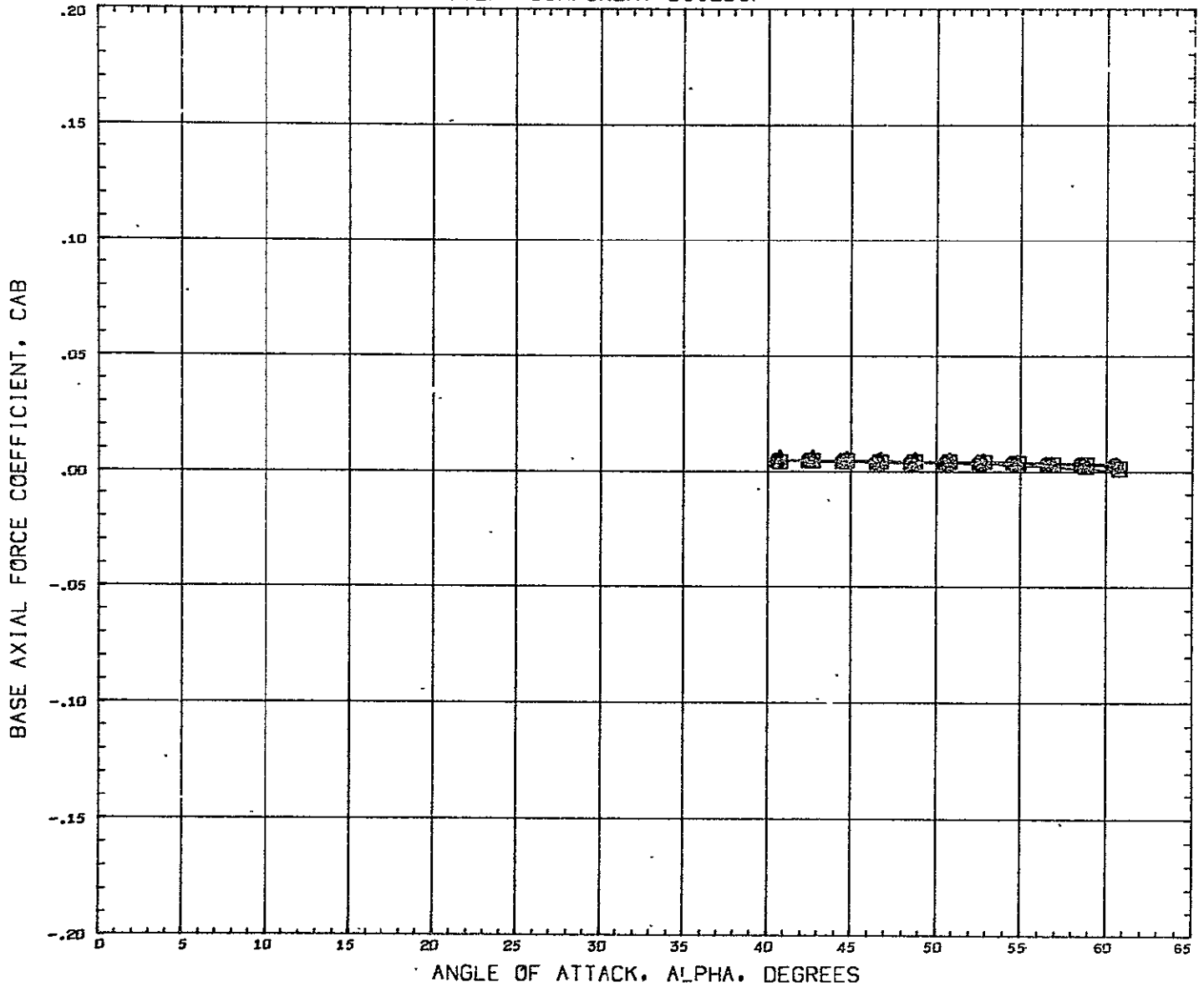
STRAIGHT WING ORBITER- COMPONENT BUILDUP



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELVATR	AILRON	REFERENCE INFORMATION
(C2701C)	HSFC478 NR ST ORBITER B6	0.000			REFS 3084.0040 SQ FT
(C2702C)	HSFC478 NR ST ORBITER B6W10	0.000			REFL 322.9004 INCHES
(C2721C)	HSFC478 NR ST ORBITER B6H16E14	0.000	1.000	0.000	REFB 1490.0040 INCHES
(C2730C)	HSFC478 NP ST ORBITER B6W10H16E14	0.000	0.000	0.000	XMRP 1293.0040 INCHES
					YMRP 0.0000 INCHES
					ZMRP 50.5000 INCHES
					SCALE 0.0035 SCALE

MACH 4.959

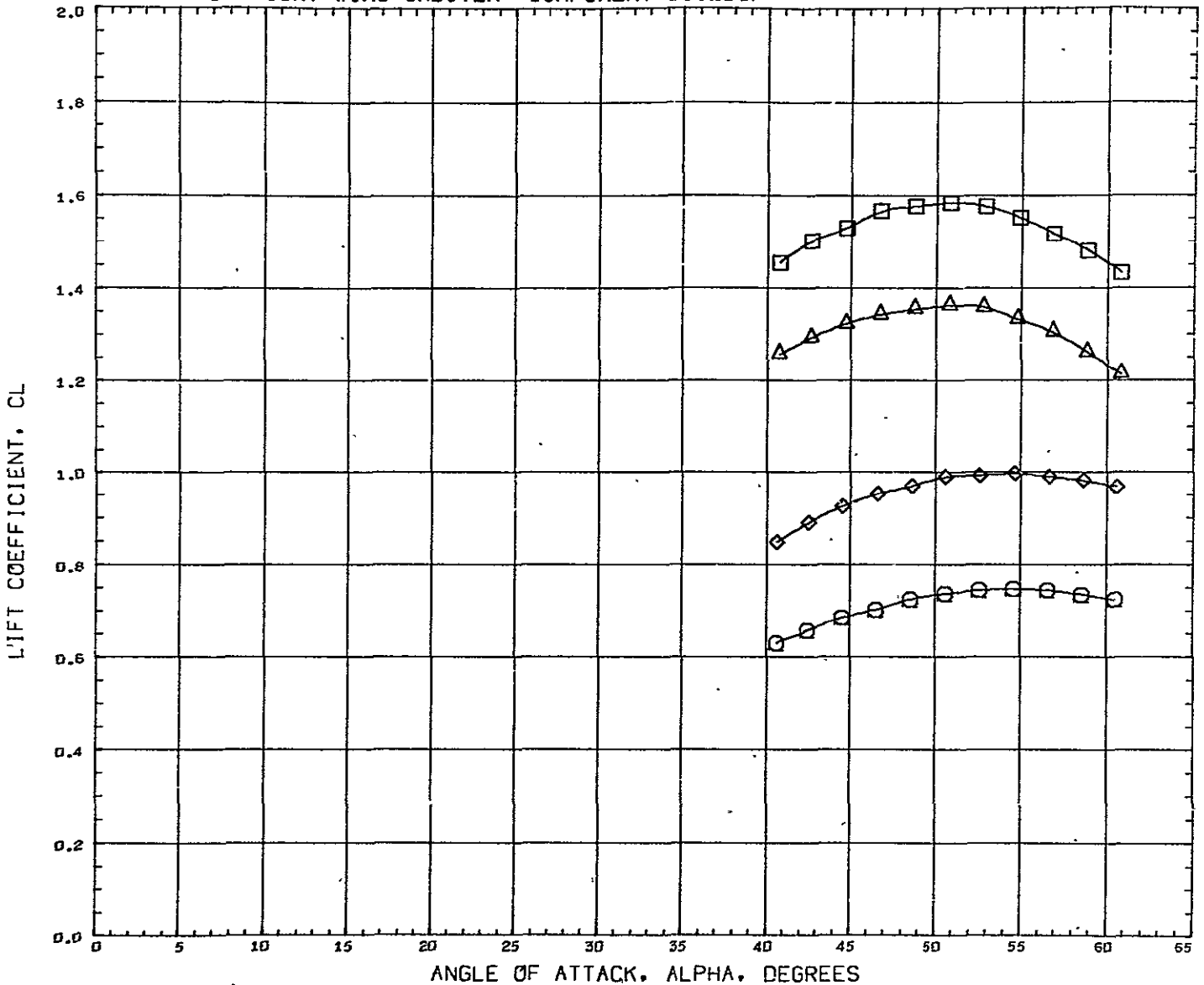
STRAIGHT WING ORBITER- COMPONENT BUILDUP



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELVATR	AILRON	REFERENCE INFORMATION
(C2701C)	MSFC478 NR ST ORBITER B6	0.000			REFS 3084.0040 SQ FT
(C2702C)	MSFC478 NR ST ORBITER E6W10	0.000			REFL 322.9004 INCHES
(C2721C)	MSFC478 NR ST ORBITER B6H16E14	0.000	0.000	0.000	REFB 1490.0040 INCHES
(C2730C)	MSFC478 NR ST ORBITER B6H10H16E14	0.000	0.000	0.000	XMRP 1293.0040 INCHES
					YMRP 0.0000 INCHES
					ZMRP - 50.5000 INCHES
					SCALE 0.0035 SCALE

MACH 4.959

STRAIGHT WING ORBITER- COMPONENT BUILDUP



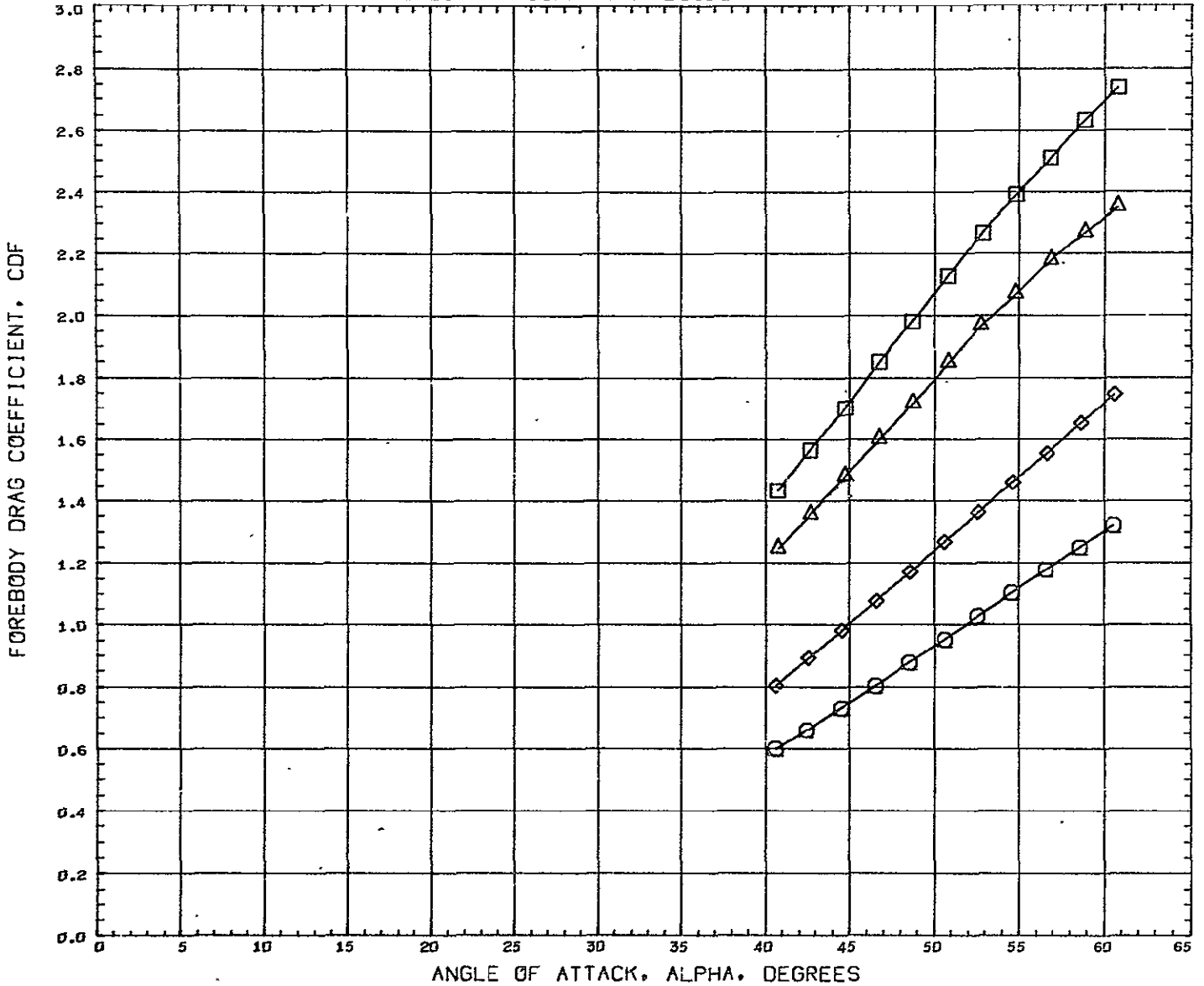
DATA SET SYMBOL	SYMBOL	CONFIGURATION DESCRIPTION
(C2701C)	○	MSFC478 NR ST ORBITER 36
(C2702C)	△	MSFC478 NR ST ORBITER B6W10
(C2721C)	◇	MSFC478 NR ST ORBITER B6W16E14
(C2739C)	□	MSFC478 NR ST ORBITER B6W19H16E14

BETA	ELVATR	AILRON
0.000		
0.000	0.000	0.000
0.000	0.000	0.000

REFERENCE INFORMATION		
REFS	3084.0040	SQ FT
REFL	322.9004	INCHES
REFB	1490.0040	INCHES
XMRP	1293.0040	INCHES
YMRP	0.0000	INCHES
ZMRP	50.5000	INCHES
SCALE	0.0035	SCALE

MACH 4.959

STRAIGHT WING ORBITER- COMPONENT BUILDUP



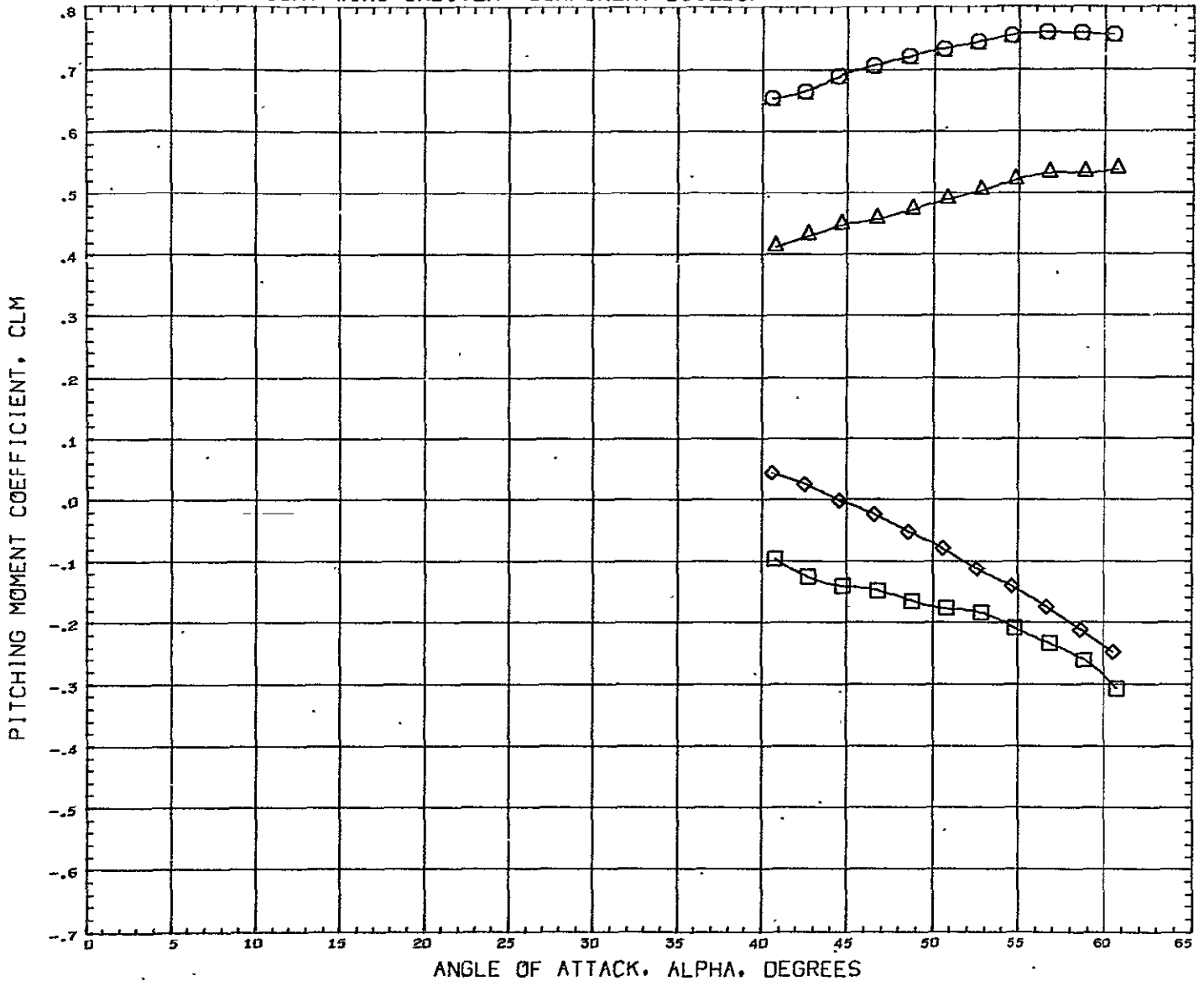
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(C2701C)	○	MSFC478 NR ST ORBITER R6
(C2702C)	△	MSFC478 NR ST ORBITER B6W10
(C2721C)	◇	MSFC478 NR ST ORBITER B6H16E14
(C2730C)	□	MSFC478 NR ST ORBITER B6M0H16E14

BETA	ELVATR	AILRON
0.000		
0.000		
0.000	0.000	0.000
0.000	0.000	0.000

REFERENCE INFORMATION		
REFS	3084.0040	SQ FT
REFL	322.9004	INCHES
REFB	1490.0040	INCHES
XMRP	1293.0040	INCHES
YMRP	0.0000	INCHES
ZMRP	50.5000	INCHES
SCALE	0.0035	SCALE

MACH 4.959

STRAIGHT WING ORBITER- COMPONENT BUILDUP



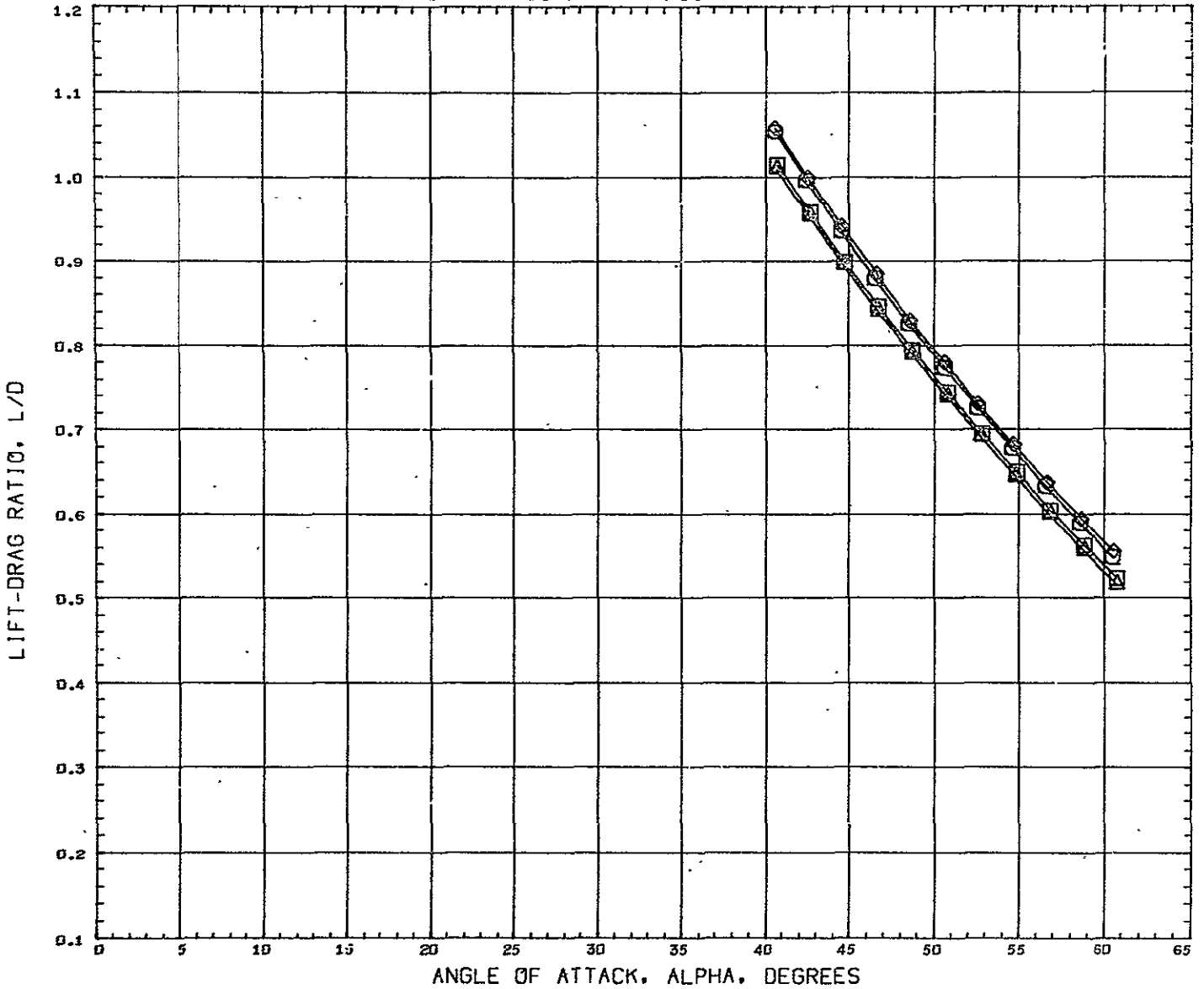
DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(C2701C)	MSFC478 NR ST ORBITER B6
(C2702C)	MSFC478 NR ST ORBITER B6WIG
(C2721C)	MSFC478 NR ST ORBITER B6H16E14
(C2730C)	MSFC478 NR ST ORBITER B6W1DHI6E14

BETA	ELVATR	AILRON
0.000		
0.000		
0.000	0.000	0.000
0.000	0.000	0.000

REFERENCE INFORMATION	
REFS	3084.0040 SQ FT
REFL	322.9004 INCHES
REFB	1490.0040 INCHES
XMRP	1293.0040 INCHES
YMRP	0.0000 INCHES
ZMRP	50.5000 INCHES
SCALE	0.0035 SCALE

HACH 4.959

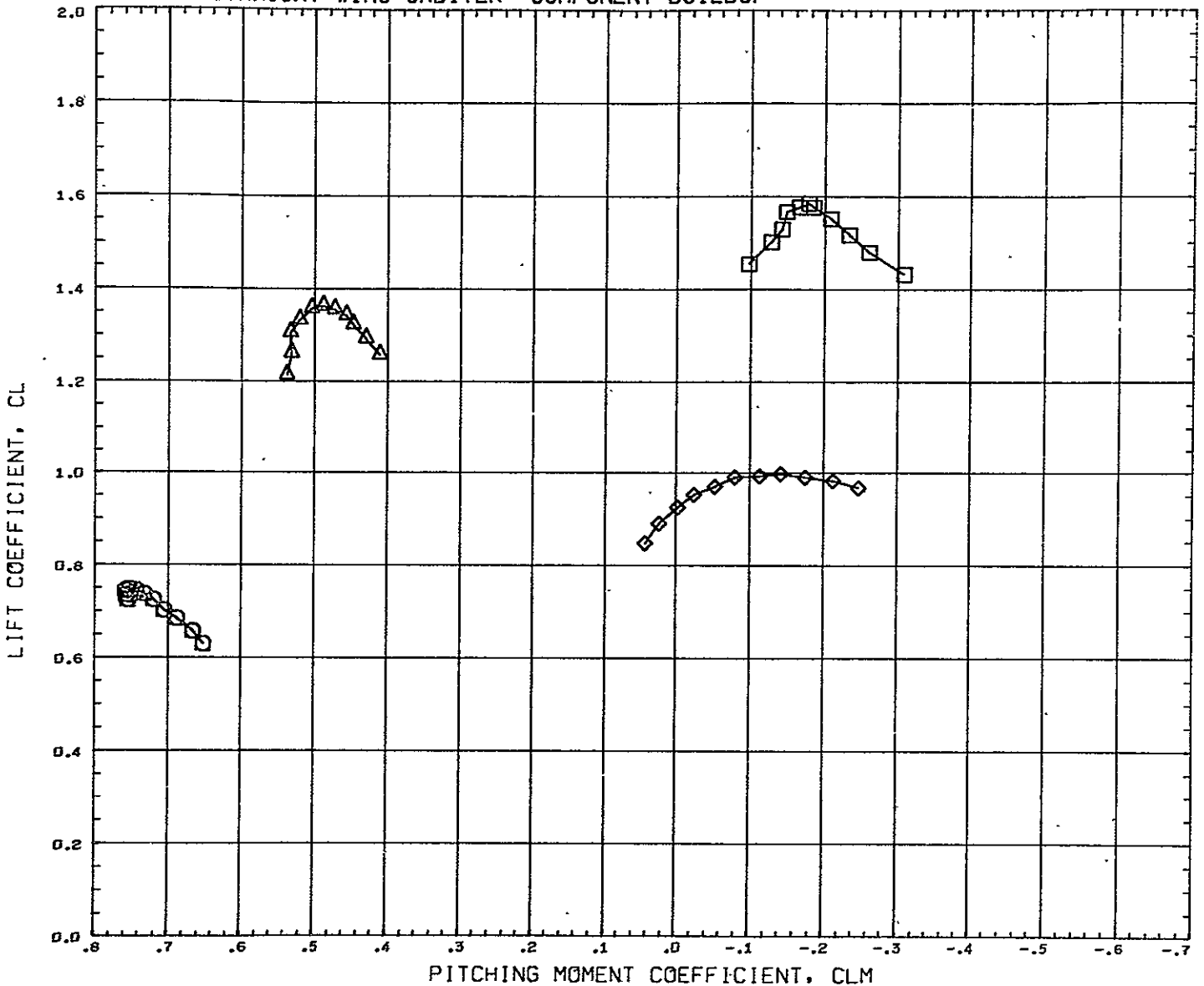
STRAIGHT WING ORBITER- COMPONENT BUILDUP



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELVATR	AILRON	REFERENCE INFORMATION
(C2701C)	MSFC478 NR ST ORBITER D6	0.000			REFS 3984.0040 SQ FT
(C2702C)	MSFC478 NR ST ORBITER B6W1D	0.000			REFL 322.9004 INCHES
(C2721C)	MSFC478 NR ST ORBITER B6H16E14	0.000	0.000	0.000	REFB 1490.0040 INCHES
(C2739C)	MSFC478 NR ST ORBITER B6WLDH16E14	0.000	0.000	0.000	XMRP 1293.0040 INCHES
					YMRP 0.0000 INCHES
					ZMRP 50.5000 INCHES
					SCALE 0.0035 SCALE

MACH 4.959

STRAIGHT WING ORBITER- COMPONENT BUILDUP



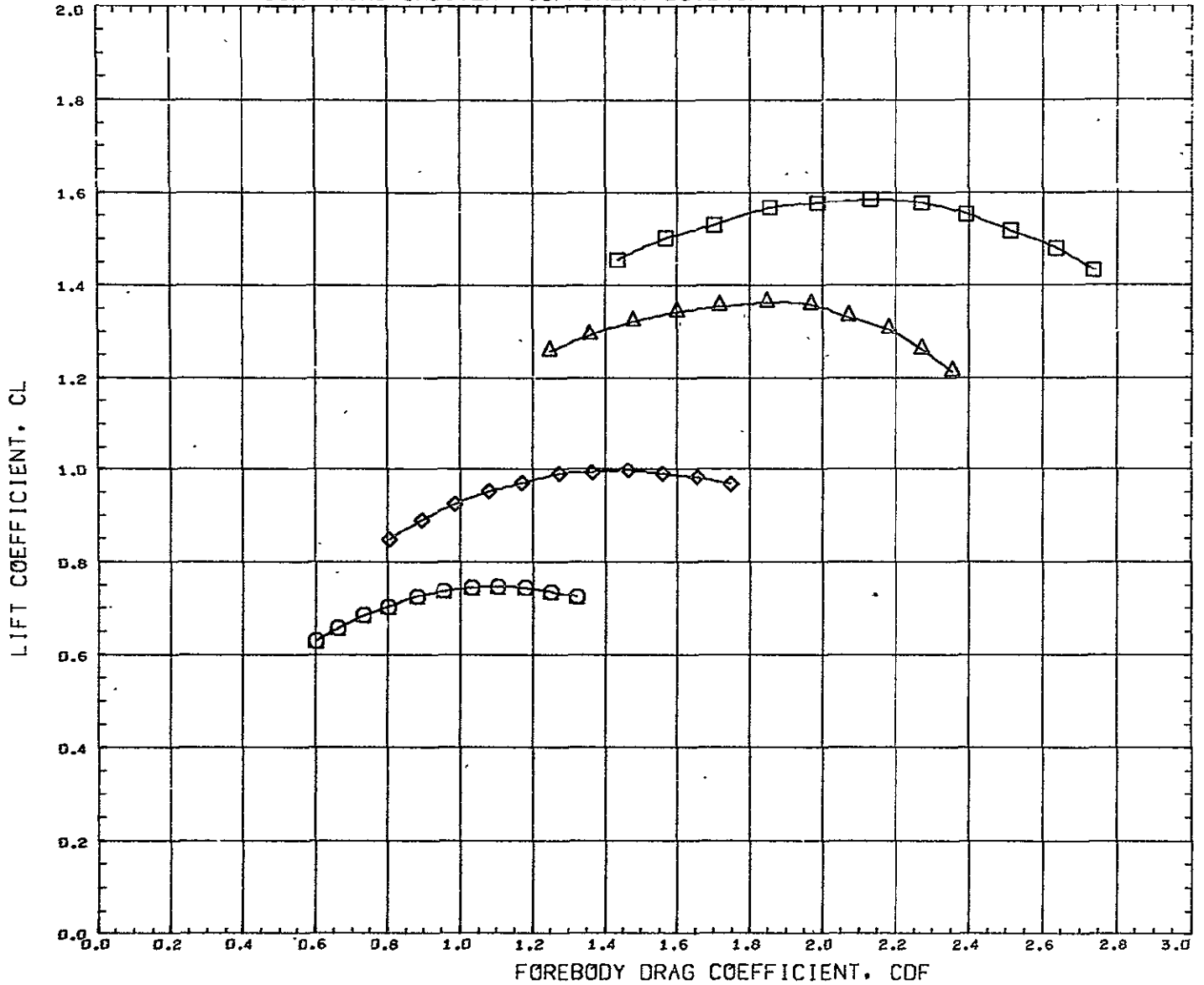
DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(C2701C)	MSFC478 NR ST ORBITER J6
(C2702C)	MSFC478 NR ST ORBITER B6W10
(C2721C)	MSFC478 NR ST ORBITER B6W16E14
(C2730C)	MSFC478 NR ST ORBITER B6W16E14

BETA	ELVATR	AILRON
0.000		
0.000		
0.000	0.000	0.000
0.000	0.000	0.000

REFERENCE INFORMATION		
REFS	3084.0040	SQ FT
REFL	322.9004	INCHES
REFB	1490.0040	INCHES
XHRP	1293.0040	INCHES
YMRP	0.0000	INCHES
ZMRP	50.5000	INCHES
SCALE	0.0035	SCALE

MACH 4.959

STRAIGHT WING ORBITER- COMPONENT BUILDUP



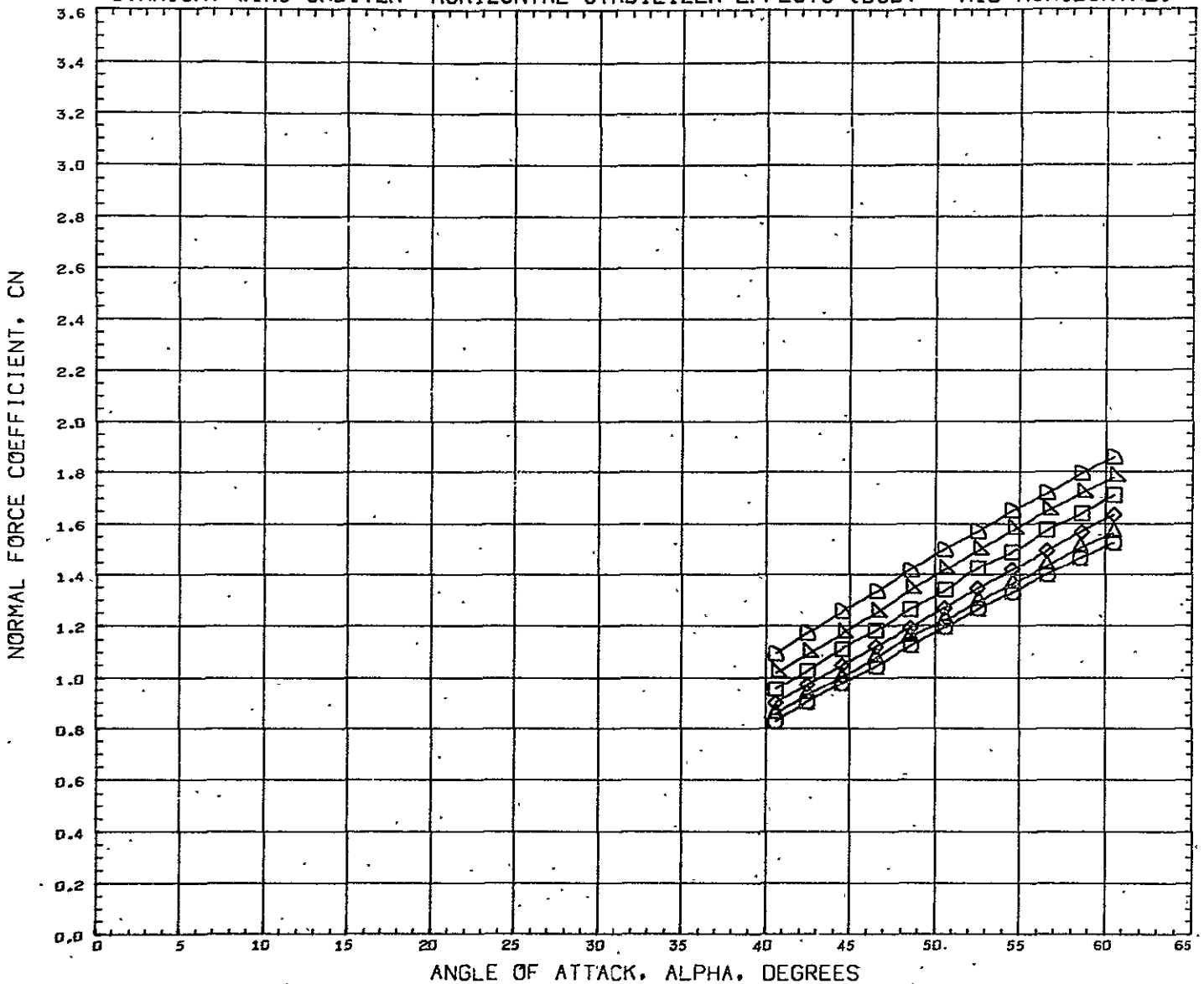
DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(C2701C)	MSFC478 NR ST ORBITER B6
(C2702C)	MSFC478 NR ST ORBITER B6W10
(C2721C)	MSFC478 NR ST ORBITER B6H16E14
(C2730C)	MSFC478 NR ST ORBITER B6W10H16E14

BETA	ELVATR	AILRON
0.000		
0.000		
0.000	0.000	0.000
0.000	0.000	0.000

REFERENCE INFORMATION	
REFS	3084.0040 SQ FT
REFL	322.9004 INCHES
REFB	1490.0040 INCHES
YMRP	1293.0040 INCHES
ZMRP	0.0000 INCHES
ZMRP	- 50.5000 INCHES
SCALE	0.0035 SCALE

MACH 4.939

STRAIGHT WING ORBITER - HORIZONTAL STABILIZER EFFECTS (BODY + MID-HORIZONTAL)



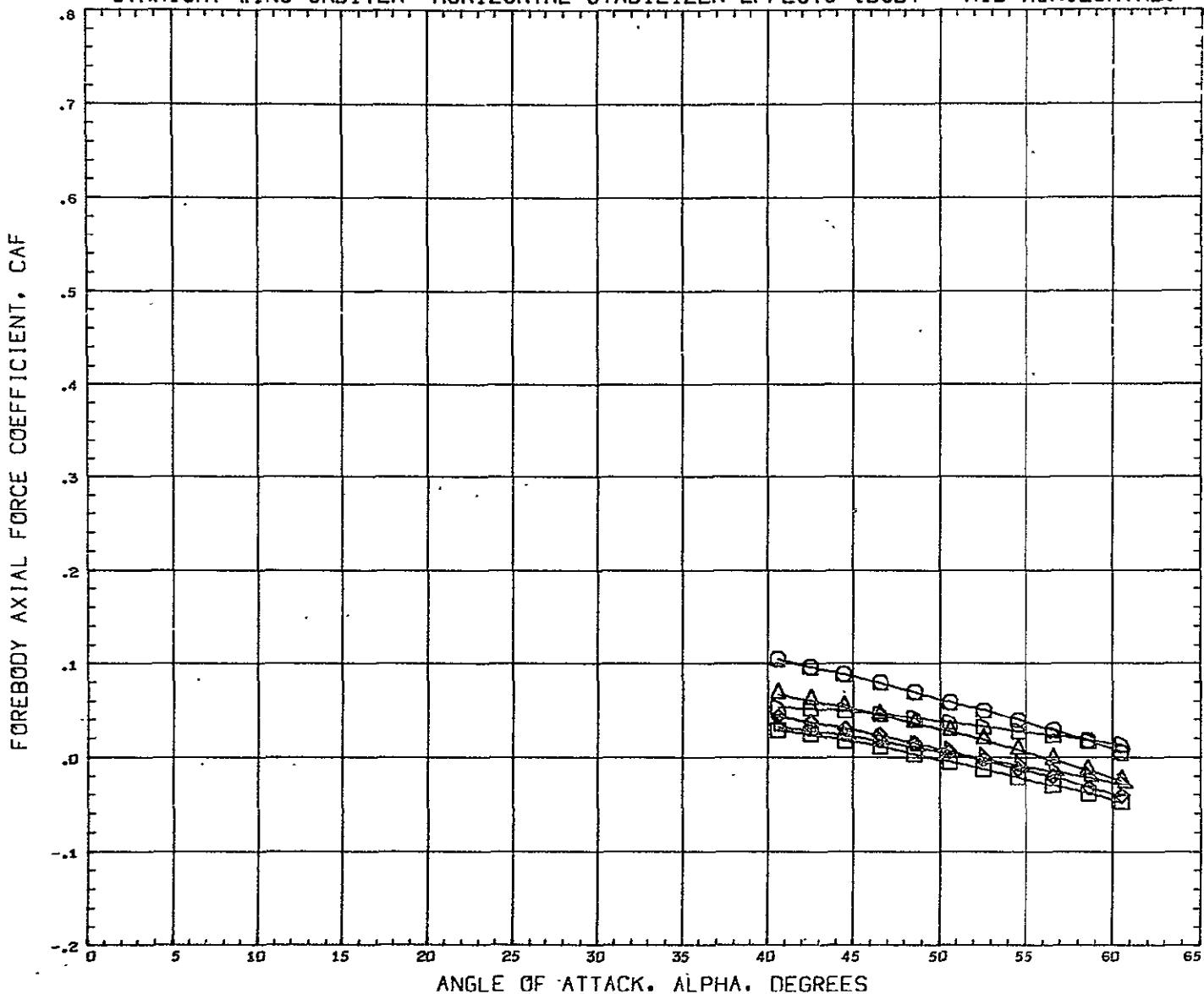
DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(C2711C)	MSFC478 NR ST ORBITER B6H12
(C2715C)	MSFC478 NR ST ORBITER B6H12
(C2759C)	MSFC478 NR ST ORBITER B6H12
(C2758C)	MSFC478 NR ST ORBITER B6H12
(C2757C)	MSFC478 NR ST ORBITER B6H12
(C2753C)	MSFC478 NR ST ORBITER B6H12

BETA	HTAIL	AILRON
0.000	-50.000	0.000
0.000	-40.000	0.000
0.000	-30.000	0.000
0.000	-20.000	0.000
0.000	-10.000	0.000
0.000	0.000	0.000

REFERENCE INFORMATION		
REFS	3084.0040	SQ FT
REFL	322.9004	INCHES
REFB	1490.0040	INCHES
XMRP	1293.0040	INCHES
YMRP	0.0000	INCHES
ZMRP	50.5000	INCHES
SCALE	0.0035	SCALE

KACH 4.959

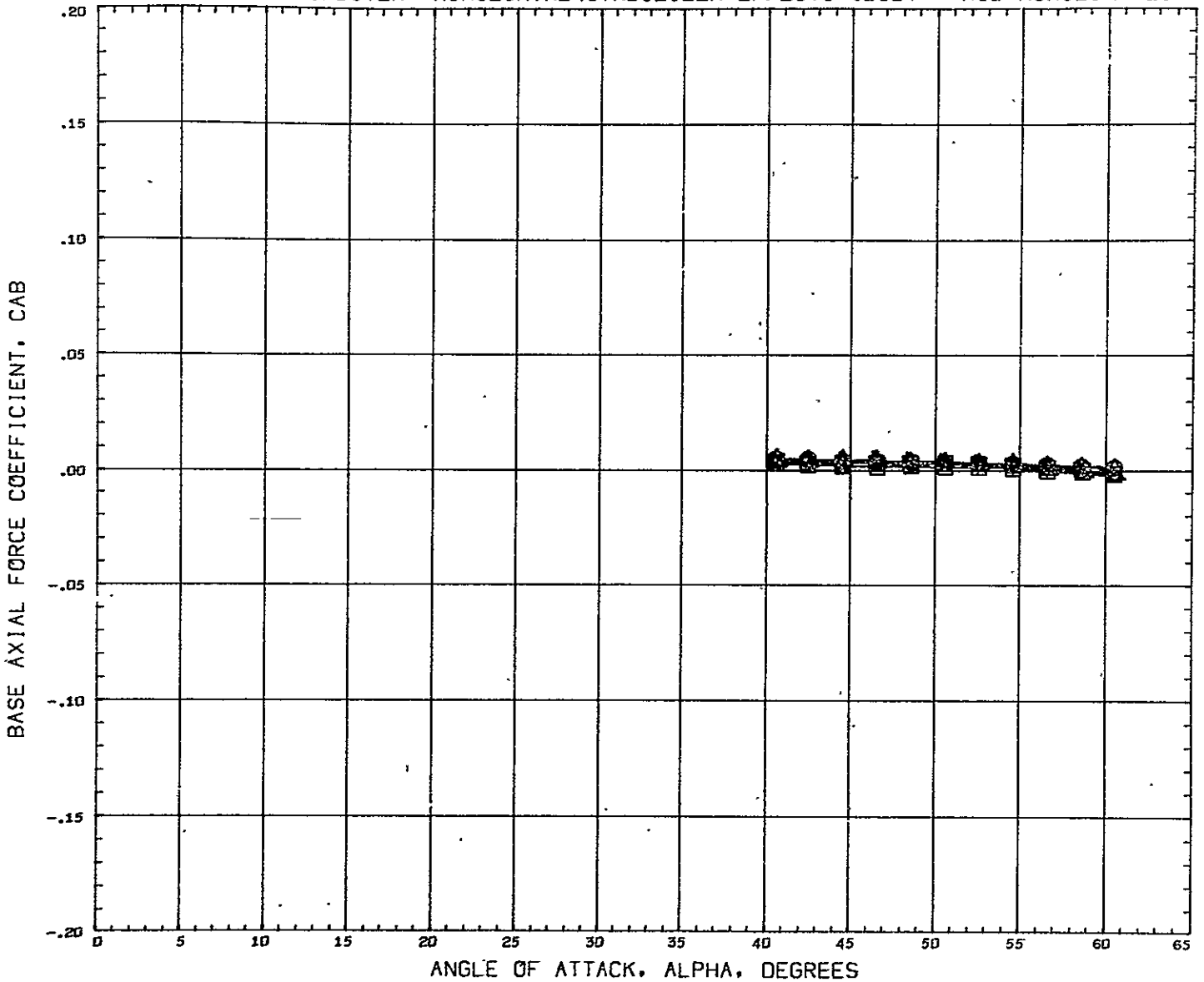
STRAIGHT WING ORBITER - HORIZONTAL STABILIZER EFFECTS (BODY + MID-HORIZONTAL)



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	HTAIL	AILRON	REFERENCE INFORMATION	
(C2711C)	MSFC478 NR ST ORBITER B6H12	0.000	-50.000	0.000	REFS	3084.0040 SQ FT
(C2719C)	MSFC478 NR ST ORBITER B6H12	0.000	-40.000	0.000	REFL	322.9004 INCHES
(C2759C)	MSFC478 NR ST ORBITER B6H12	0.000	-30.000	0.000	REFB	1490.0040 INCHES
(C2798C)	MSFC478 NR ST ORBITER B6H12	0.000	-20.000	0.000	XMRP	1293.0040 INCHES
(C2797C)	MSFC478 NR ST ORBITER B6H12	0.000	-10.000	0.000	YMRP	0.0000 INCHES
(C2793C)	MSFC478 NR ST ORBITER B6H12	0.000	0.000	0.000	ZMRP	- 50.5000 INCHES
					SCALE	0.0035 SCALE

MACH 4.959

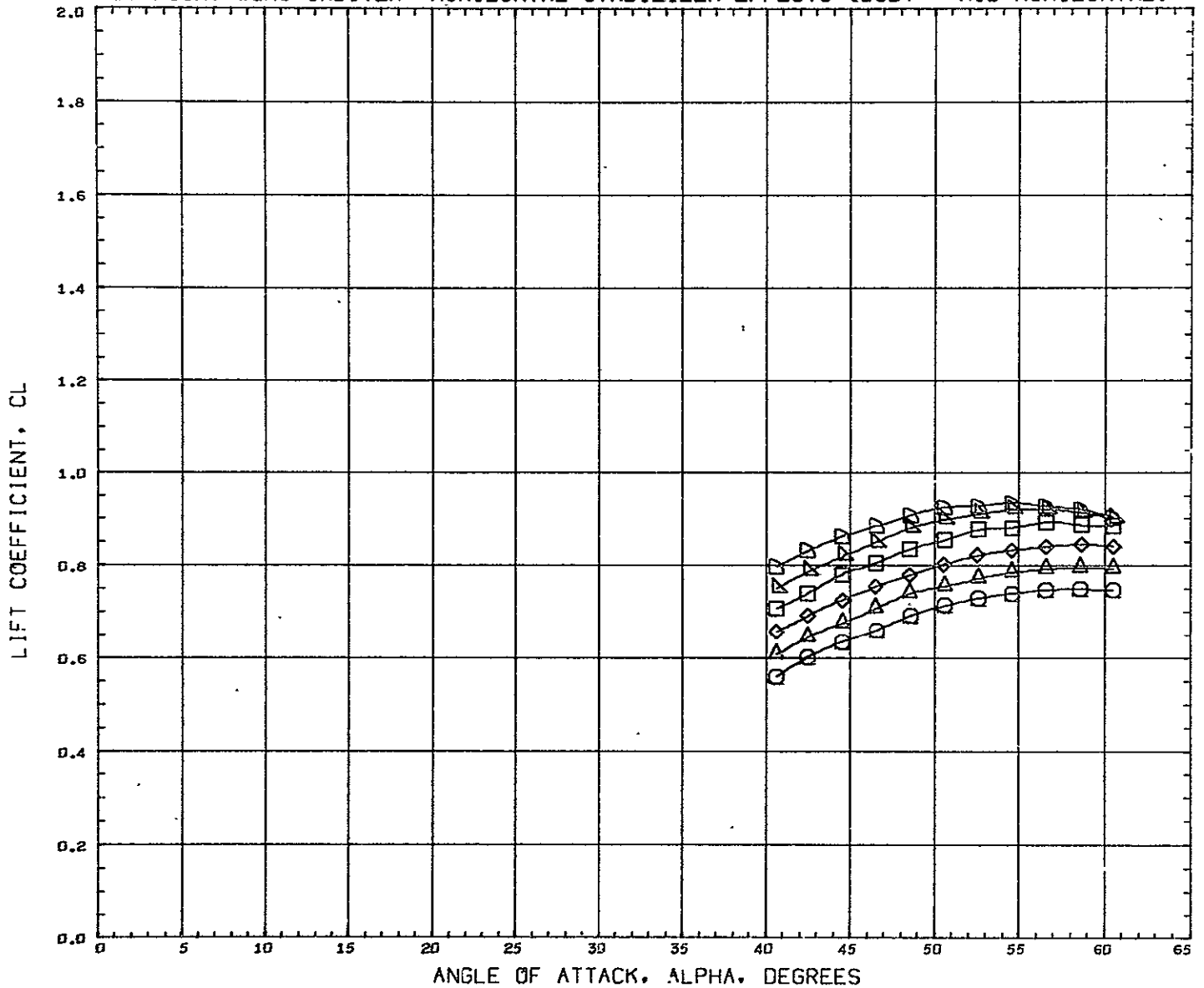
STRAIGHT WING ORBITER - HORIZONTAL STABILIZER EFFECTS (BODY + MID-HORIZONTAL)



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	HTAIL	AILRON	REFERENCE INFORMATION
(C2711C)	MSFC478 NR ST ORBITER B6H12	0.000	-50.000	0.000	REFS 3084.0040 SQ FT
(C2715C)	MSFC478 NR ST ORBITER B6H12	0.000	-40.000	0.000	REFL 322.9004 INCHES
(C2759C)	MSFC478 NR ST ORBITER B6H12	0.000	-30.000	0.000	REFB 1490.0040 INCHES
(C2756C)	MSFC478 NR ST ORBITER B6H12	0.000	-20.000	0.000	XMRP 1293.0040 INCHES
(C2757C)	MSFC478 NR ST ORBITER B6H12	0.000	-10.000	0.000	YMRP 0.0000 INCHES
(C2753C)	MSFC478 NR ST ORBITER B6H12	0.000	0.000	0.000	ZMRP - 50.5000 INCHES
					SCALE 0.0035 SCALE

MACH 4.959

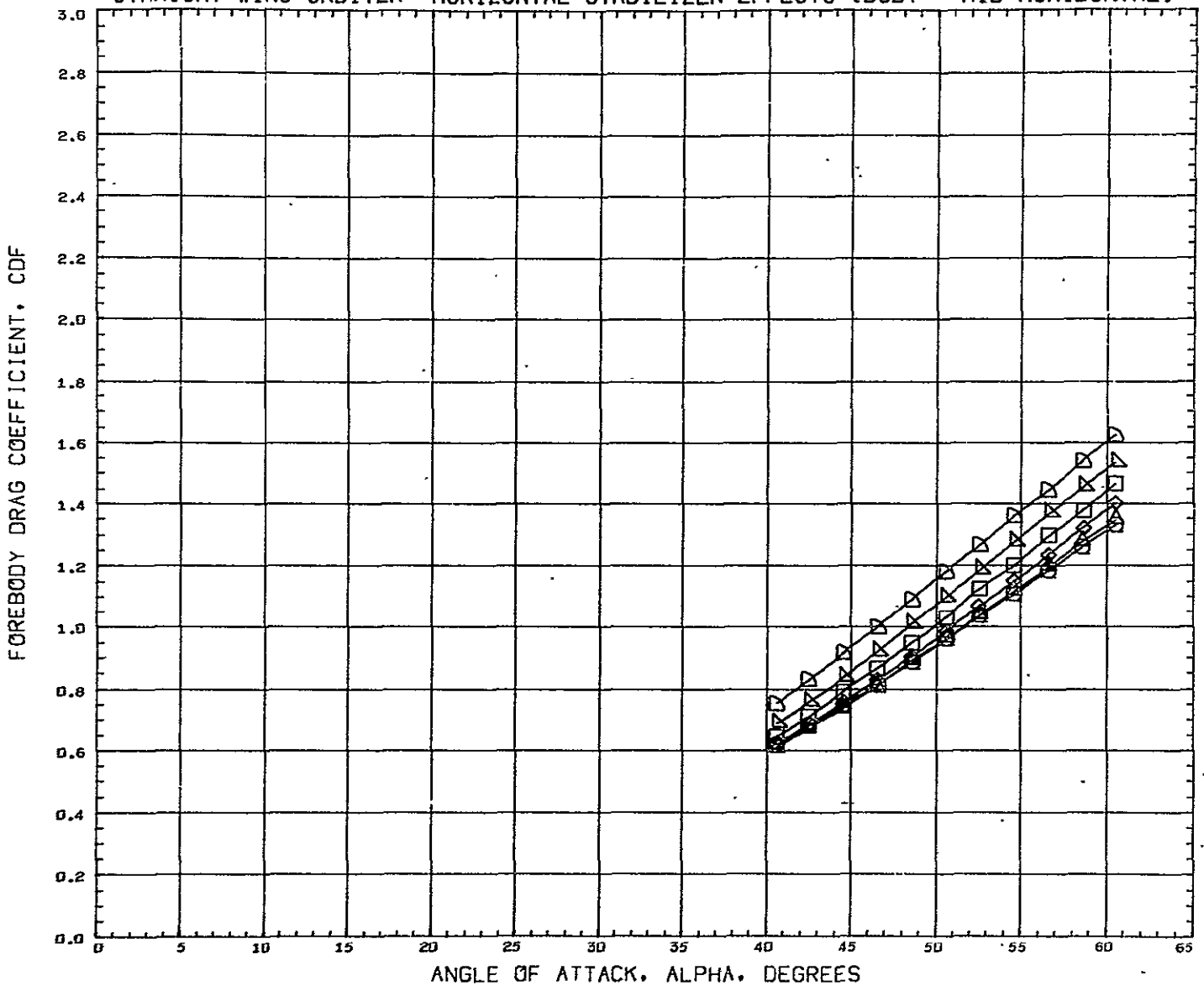
STRAIGHT WING ORBITER -HORIZONTAL STABILIZER EFFECTS (BODY + MID-HORIZONTAL)



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	HTAIL	AILRON	REFERENCE INFORMATION
(C2711C)	MSFC478 NR ST ORBITER B6H12	0.000	-50.000	0.000	REFS 3084.0040 SQ FT
(C2710C)	MSFC478 NR ST ORBITER B6H12	0.000	-40.000	0.000	REFL 322.9004 INCHES
(C2709C)	MSFC478 NR ST ORBITER B6H12	0.000	-30.000	0.000	REFB 1490.0040 INCHES
(C2708C)	MSFC478 NR ST ORBITER B6H12	0.000	-20.000	0.000	XMRP 1293.0040 INCHES
(C2707C)	MSFC478 NR ST ORBITER B6H12	0.000	-10.000	0.000	YMRP 0.0000 INCHES
(C2703C)	MSFC478 NR ST ORBITER B6H12	0.000	0.000	0.000	ZMRP 50.5000 INCHES
					SCALE 0.0035 SCALE

MACH 4.959

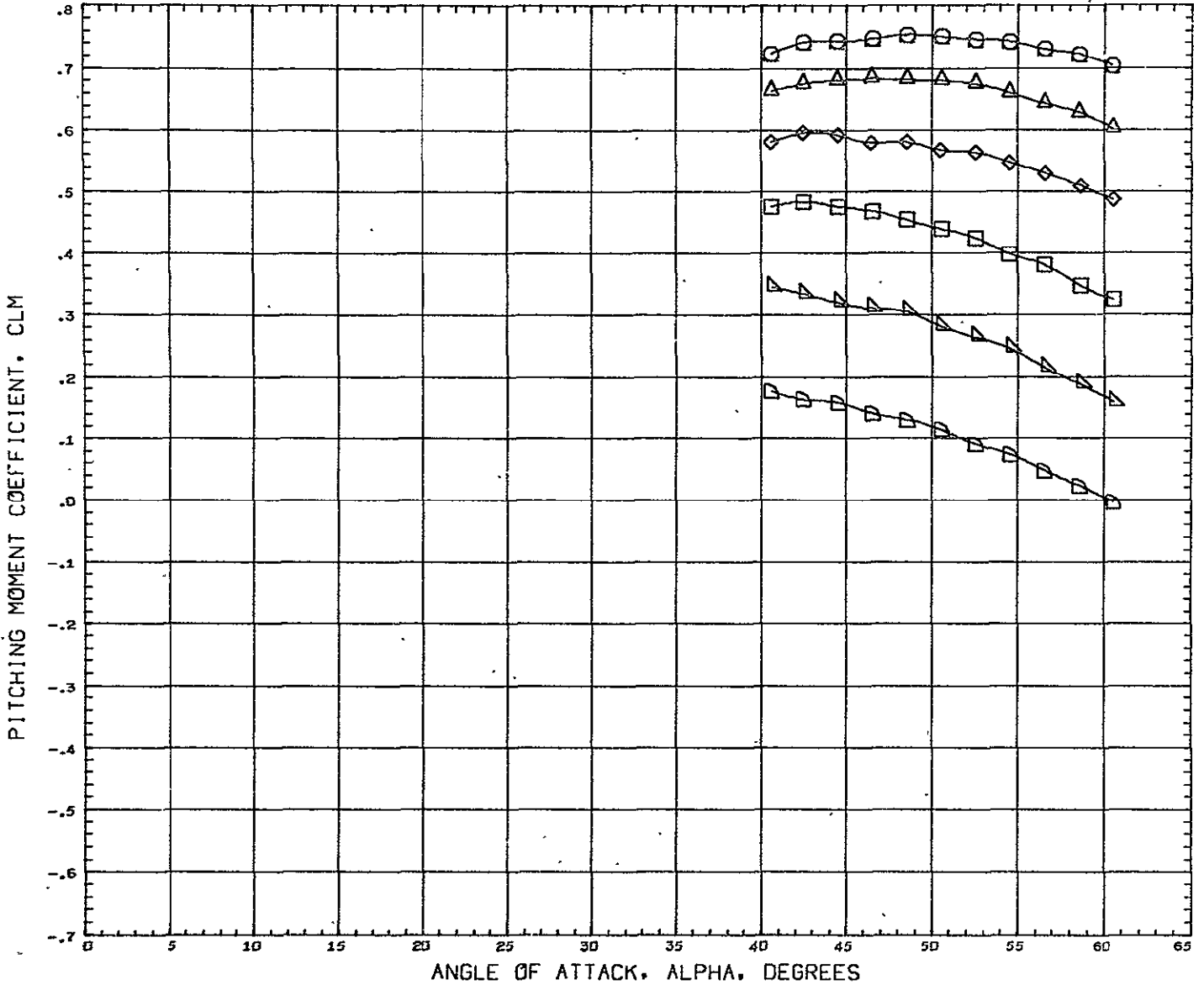
STRAIGHT WING ORBITER - HORIZONTAL STABILIZER EFFECTS (BODY + MID-HORIZONTAL)



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	HTAIL	AILRON	REFERENCE INFORMATION
(C2711C)	MSFC478 NR ST ORBITER B6H12	0.000	-50.000	0.000	REFS 3084.0040 SQ FT
(C2715C)	MSFC478 NR ST ORBITER B6H12	0.000	-40.000	0.000	REFL 322.9004 INCHES
(C2709C)	MSFC478 NR ST ORBITER B6H12	0.000	-30.000	0.000	REFB 1490.0040 INCHES
(C2708C)	MSFC478 NR ST ORBITER B6H12	0.000	-20.000	0.000	XMRP 1293.0040 INCHES
(C2707C)	MSFC478 NR ST ORBITER B6H12	0.000	-10.000	0.000	YMRP 0.0000 INCHES
(C2703C)	MSFC478 NR ST ORBITER B6H12	0.000	0.000	0.000	ZMRP - 50.0000 INCHES
					SCALE 0.0035 SCALE

MACH 4.959

STRAIGHT WING ORBITER - HORIZONTAL STABILIZER EFFECTS (BODY + MID-HORIZONTAL)



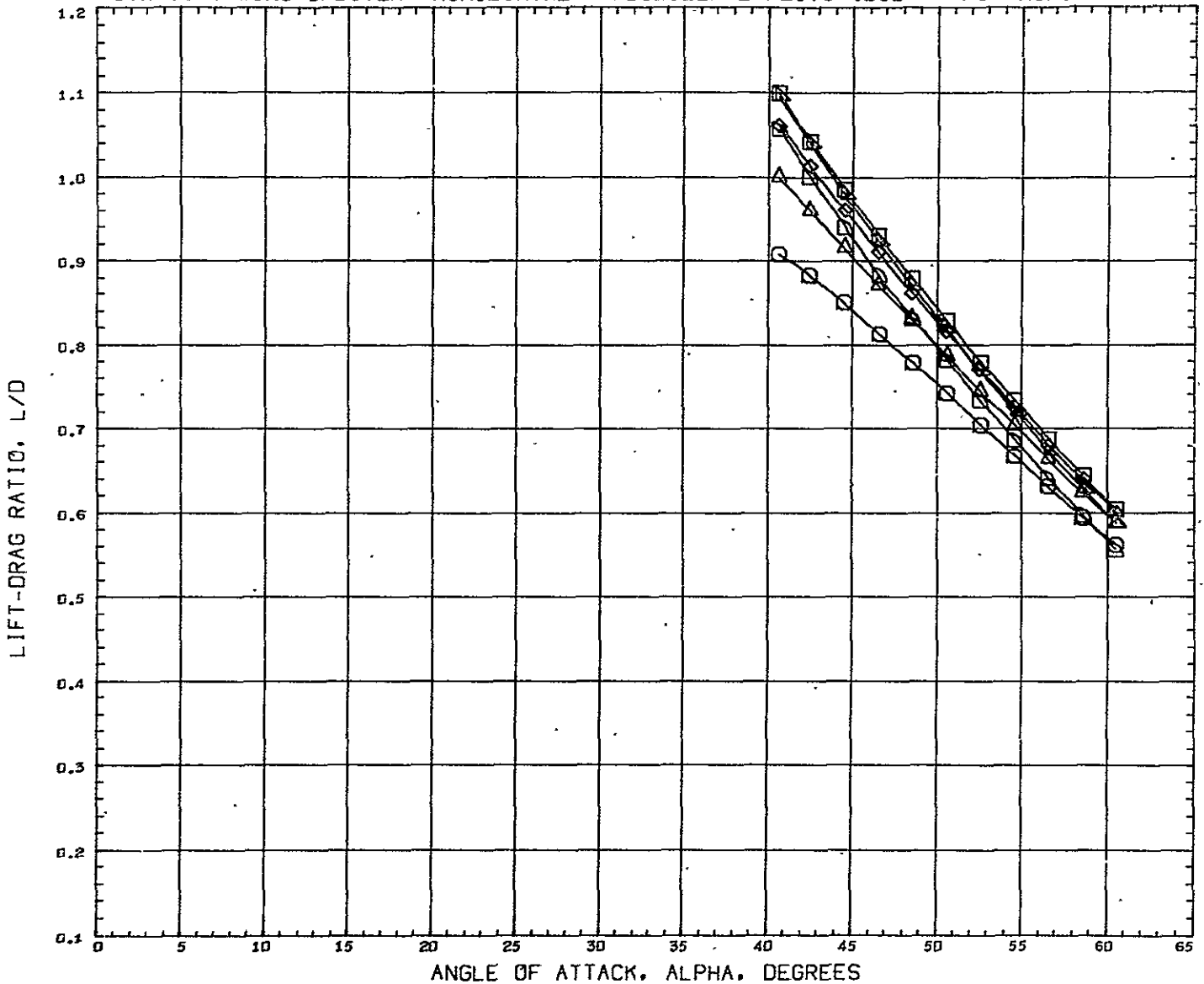
DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(C2711C)	HSFC478 NR ST ORBITER B6H12
(C2719C)	HSFC478 NR ST ORBITER B6H12
(C2749C)	HSFC478 NR ST ORBITER B6H12
(C2756C)	HSFC478 NR ST ORBITER B6H12
(C2757C)	HSFC478 NR ST ORBITER B6H12
(C2753C)	HSFC478 NR ST ORBITER B6H12

MACH 4.959

BETA	HTAIL	AILRON
0.000	-30.000	0.000
0.000	-40.000	0.000
0.000	-30.000	0.000
0.000	-20.000	0.000
0.000	-10.000	0.000
0.000	0.000	0.000

REFERENCE INFORMATION	
REFS	3084.0040 SQ FT
REFL	322.9004 INCHES
REFB	1490.0040 INCHES
YMRP	1293.0040 INCHES
ZMRP	0.0000 INCHES
ZMRP	50.5000 INCHES
SCALE	0.0035 SCALE

STRAIGHT WING ORBITER - HORIZONTAL STABILIZER EFFECTS (BODY + MID-HORIZONTAL)



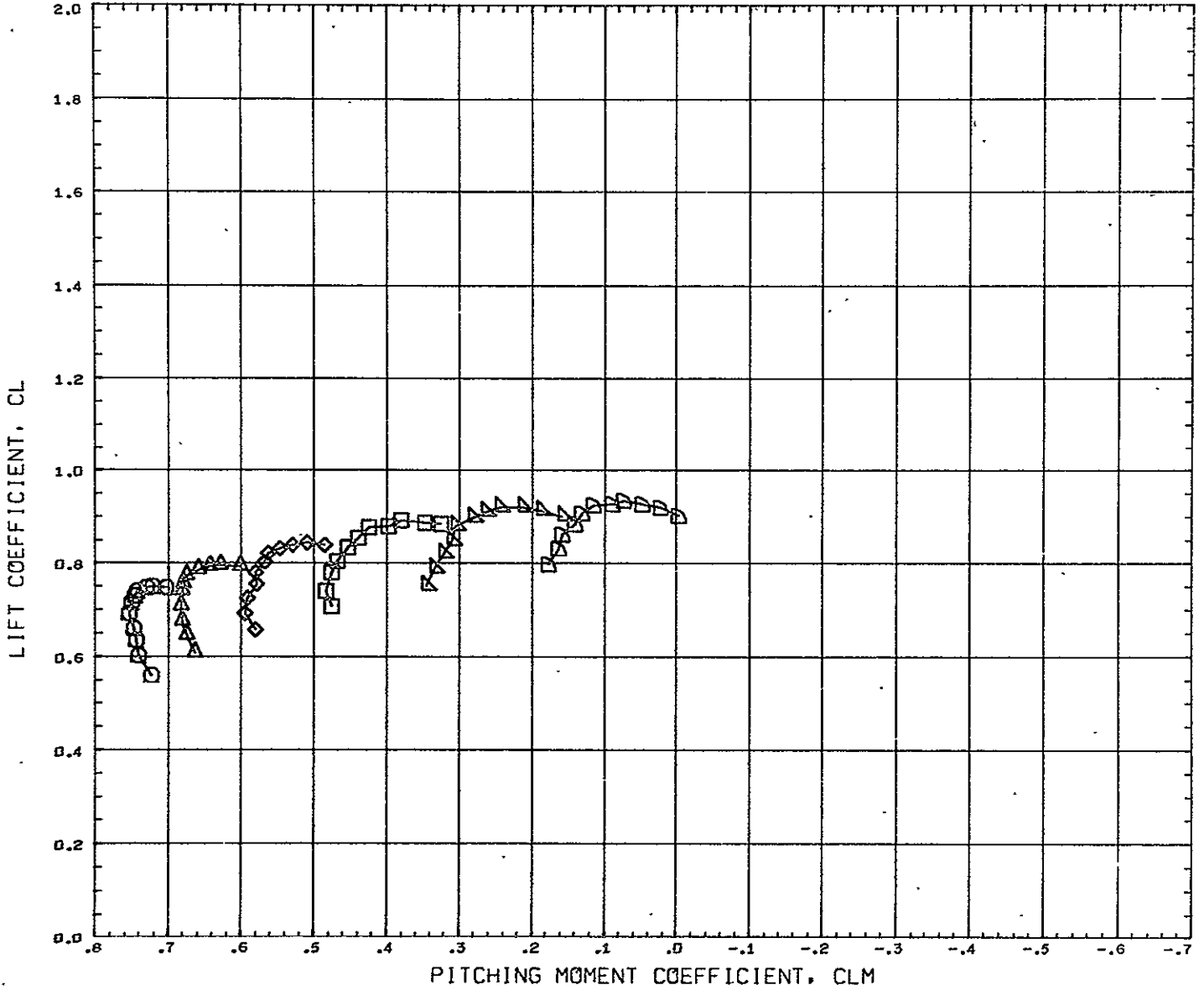
DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(C2711C)	MSFC478 NR ST ORBITER B6H12
(C2715C)	MSFC478 NR ST ORBITER B6H12
(C2709C)	MSFC478 NR ST ORBITER B6H12
(C2756C)	MSFC478 NR ST ORBITER B6H12
(C2707C)	MSFC478 NR ST ORBITER B6H12
(C2753C)	MSFC478 NR ST ORBITER B6H12

D7E0A
 MACH 4.959

BETA	HTAIL	AILRON
0.000	-50.000	0.000
0.000	-40.000	0.000
0.000	-30.000	0.000
0.000	-20.000	0.000
0.000	-10.000	0.000
0.000	0.000	0.000

REFERENCE INFORMATION	
REFS	3084.0040 SQ FT
REFL	322.9004 INCHES
REFB	1490.0040 INCHES
XNRF	1293.0040 INCHES
YNRF	0.0000 INCHES
ZNRF	50.5000 INCHES
SCALE	0.0035 SCALE

STRAIGHT WING ORBITER - HORIZONTAL STABILIZER EFFECTS (BODY + MID-HORIZONTAL)



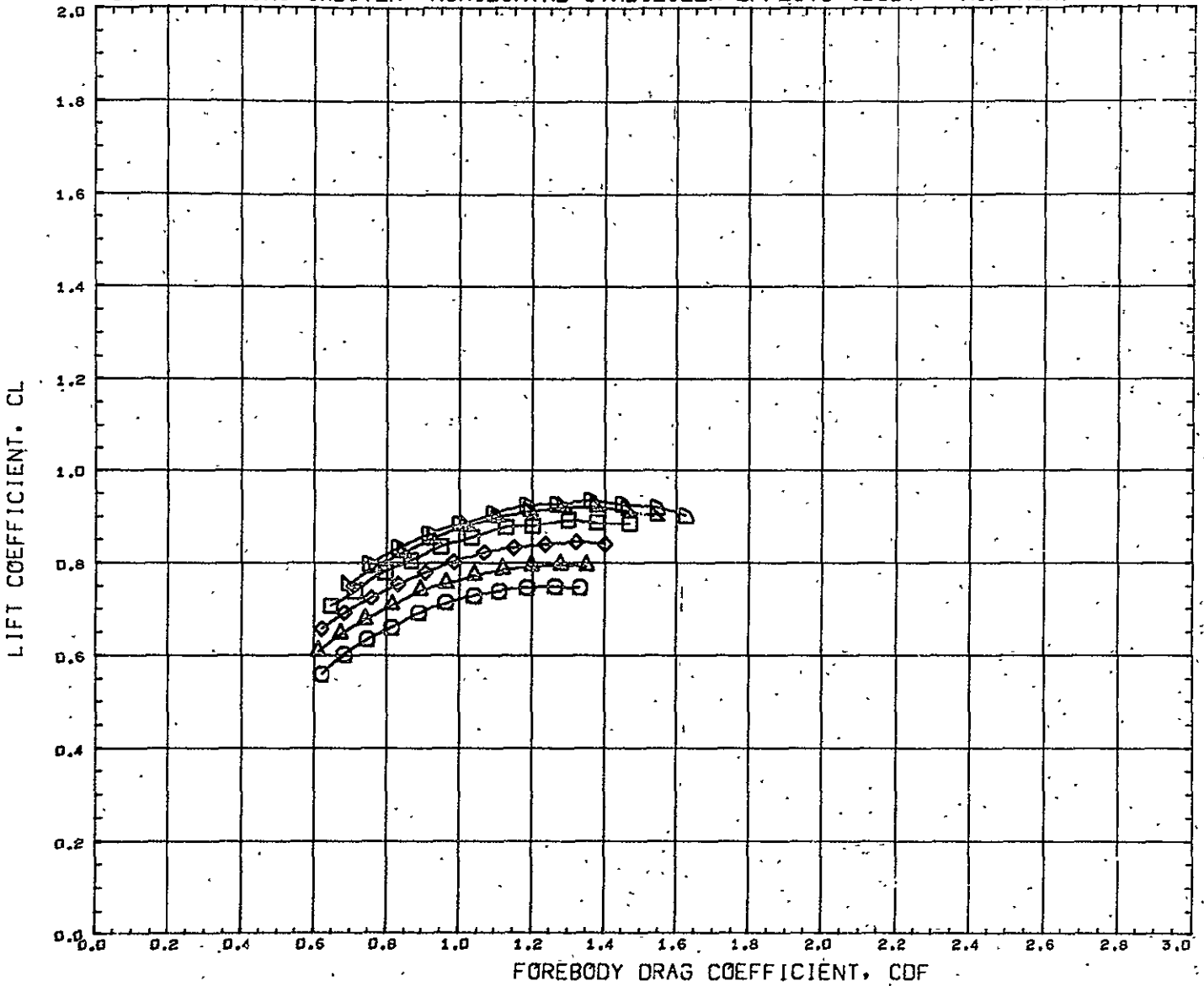
DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(C2711C)	MSFC478 NR ST ORBITER 86H12
(C2715C)	MSFC478 NR ST ORBITER 86H12
(C2759C)	MSFC478 NR ST ORBITER 86H12
(C2756C)	MSFC478 NR ST ORBITER 86H12
(C2757C)	MSFC478 NR ST ORBITER 86H12
(C2753C)	MSFC478 NR ST ORBITER 86H12

MACH 4.959

BETA	HTAIL	AILRON
0.000	-50.000	0.000
0.000	-40.000	0.000
0.000	-30.000	0.000
0.000	-20.000	0.000
0.000	-10.000	0.000
0.000	0.000	0.000

REFERENCE INFORMATION		
REFS	3084.0040	SQ FT
REFL	322.9004	INCHES
REFB	1490.0040	INCHES
XMRP	1293.0040	INCHES
YMRP	0.0000	INCHES
ZMRP	- 50.5000	INCHES
SCALE	0.0035	SCALE

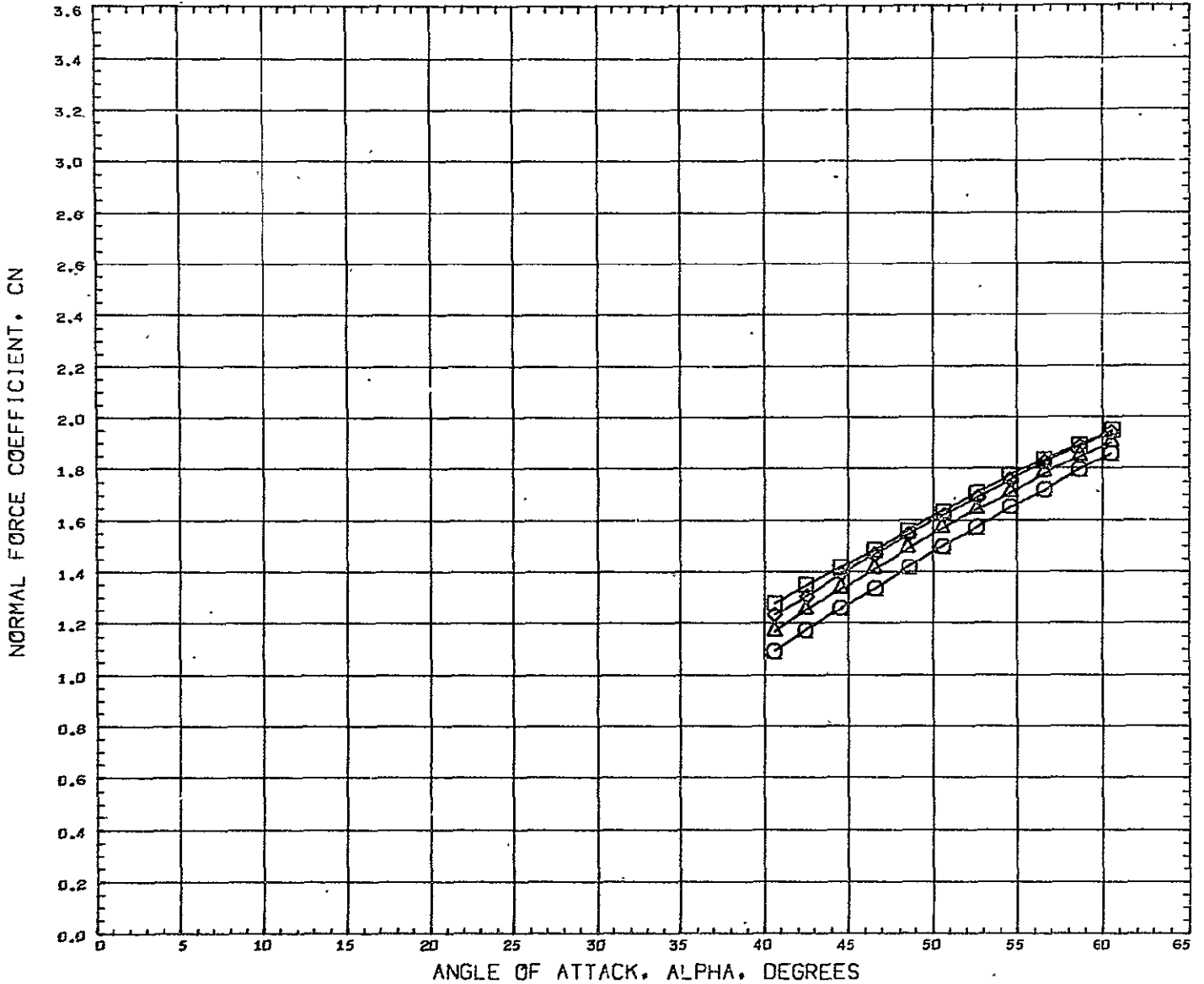
STRAIGHT WING ORBITER -HORIZONTAL STABILIZER EFFECTS (BODY + MID-HORIZONTAL)



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	HTAIL	AILRON	REFERENCE INFORMATION
(C2711C)	MSFC478 NR ST ORBITER 06H12	0.000	-50.000	0.000	REFS 3084.0040 SQ FT
(C2715C)	MSFC478 NR ST ORBITER 06H12	0.000	-40.000	0.000	REFL 322.9004 INCHES
(C2759C)	MSFC478 NR ST ORBITER 06H12	0.000	-30.000	0.000	REFB 1490.0040 INCHES
(C2758C)	MSFC478 NR ST ORBITER 06H12	0.000	-20.000	0.000	XMRP 1293.0040 INCHES
(C2757C)	MSFC478 NR ST ORBITER 06H12	0.000	-10.000	0.000	YMRP 0.0000 INCHES
(C2753C)	MSFC478 NR ST ORBITER 06H12	0.000	0.000	0.000	ZMRP 50.5000 INCHES
					SCALE 0.0035 SCALE

MACH 4.959

STRAIGHT WING ORBITER - HORIZONTAL STABILIZER EFFECTS (BODY + MID-HORIZONTAL)



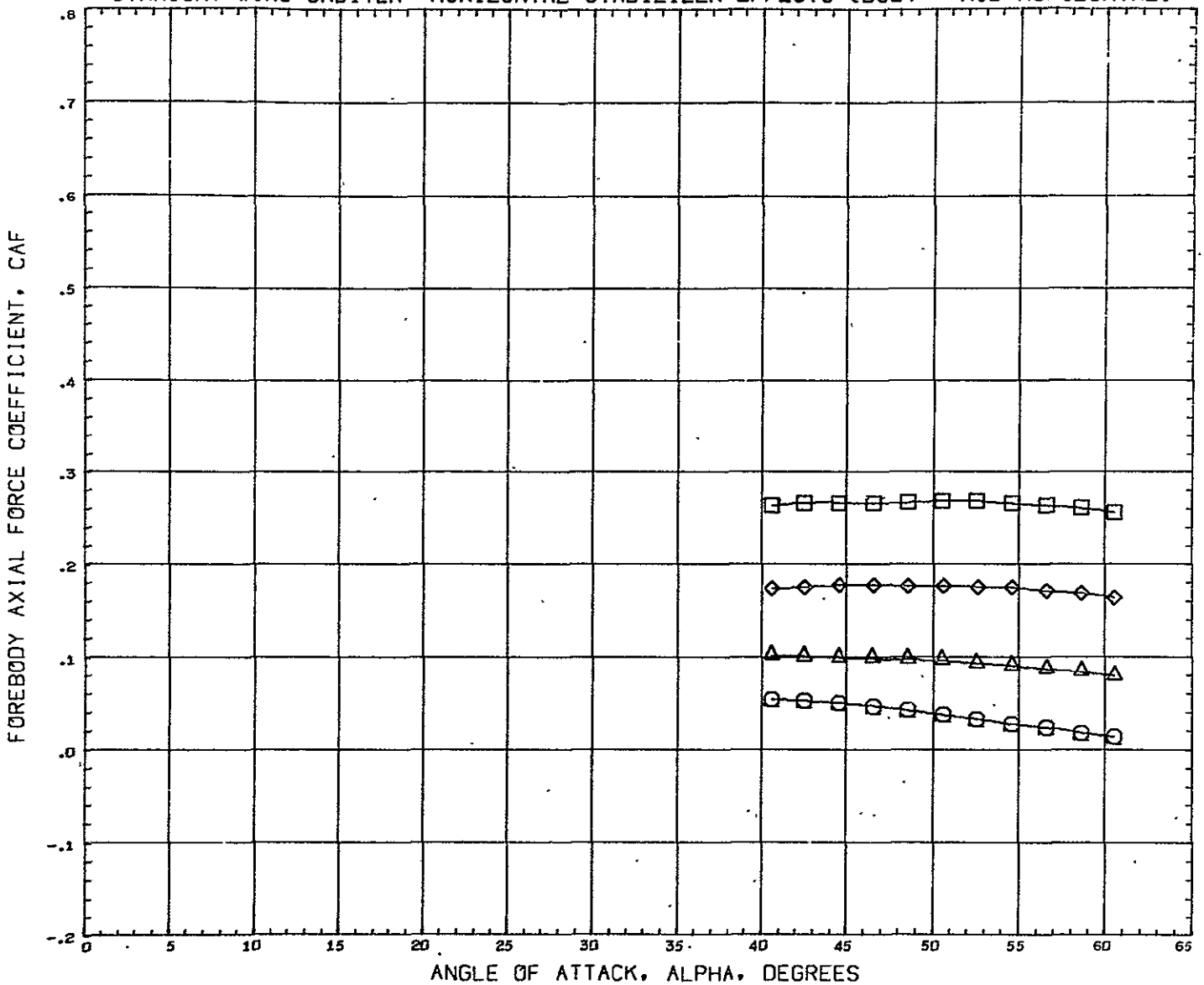
DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(C2703C)	MSFC478 NR ST ORBITER B6H12
(C2704C)	MSFC478 NR ST ORBITER D6H12
(C2705C)	MSFC478 NR ST ORBITER B6H12
(C2706C)	MSFC478 NR ST ORBITER B6H12

BETA	HTAIL	AILRON
0.000	0.000	0.000
0.000	10.000	0.000
0.000	20.000	0.000
0.000	30.000	0.000

REFERENCE INFORMATION		
REFS	3084.0040	SQ FT
REFL	322.9004	INCHES
REFB	1490.0040	INCHES
XMRP	1293.0040	INCHES
YMRP	0.0000	INCHES
ZMRP	50.5000	INCHES
SCALE	0.0035	SCALE

MACH 4.959

STRAIGHT WING ORBITER - HORIZONTAL STABILIZER EFFECTS (BODY + MID-HORIZONTAL)



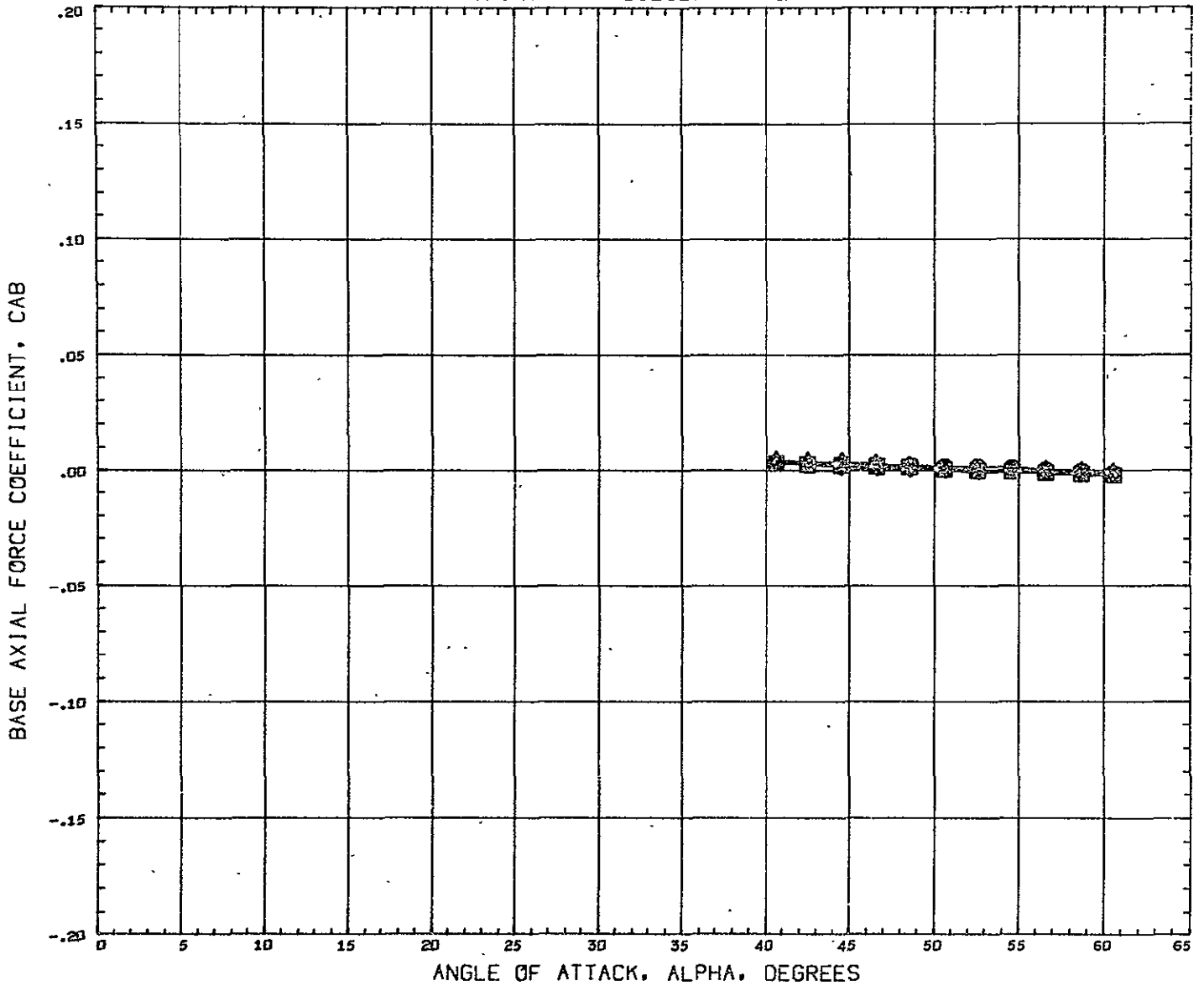
DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(C27D3C)	MSFC478 NR ST ORBITER B6H12
(C27D4C)	MSFC478 NR ST ORBITER B6H12
(C27D5C)	MSFC478 NR ST ORBITER B6H12
(C27D6C)	MSFC478 NR ST ORBITER B6H12

BETA	HTAIL	AILRON
0.000	0.000	0.000
0.000	10.000	0.000
0.000	20.000	0.000
0.000	30.000	0.000

REFERENCE INFORMATION		
REFS	3084.0040	SQ FT
REFL	322.9004	INCHES
REFB	1490.0040	INCHES
XMRP	1293.0040	INCHES
YMRP	0.0000	INCHES
ZMRP	50.5005	INCHES
SCALE	0.0035	SCALE

PACH 4.959

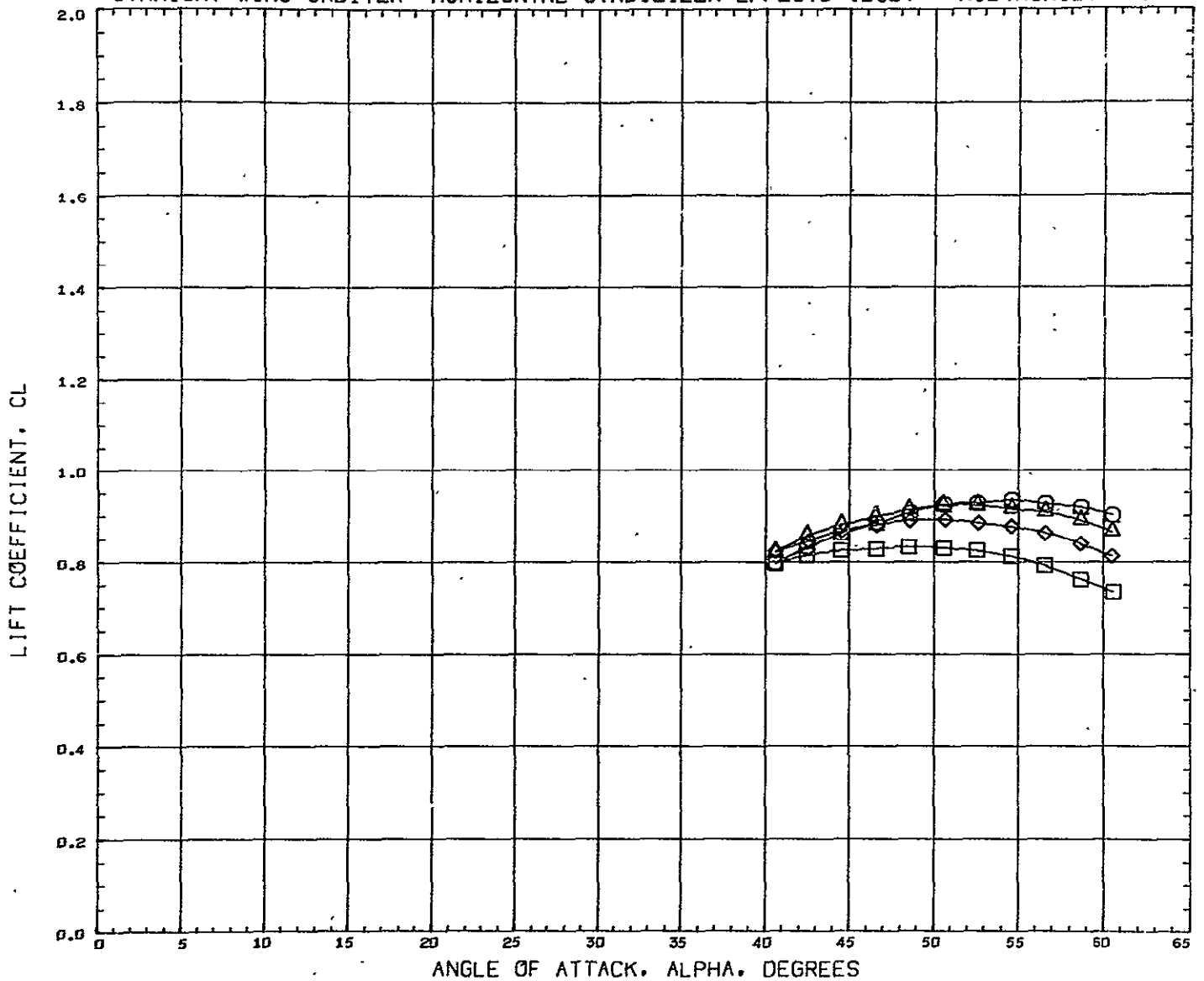
STRAIGHT WING ORBITER - HORIZONTAL STABILIZER EFFECTS (BODY + MID-HORIZONTAL)



DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	BETA	HTAIL	AILRON	REFERENCE INFORMATION	
(C27D3C)	□	MSFC478 NR ST ORBITER B6H12	0.000	0.000	0.000	REFS	3084.0040 SQ FT
(C27D4C)	△	MSFC478 NR ST ORBITER B6H12	0.000	10.000	0.000	REFL	322.9004 INCHES
(C27D5C)	◇	MSFC478 NR ST ORBITER B6H12	0.000	20.000	0.000	REFB	1490.0040 INCHES
(C27D6C)	○	MSFC478 NR ST ORBITER B6H12	0.000	30.000	0.000	XMRP	1293.0040 INCHES
						YMRP	0.0000 INCHES
						ZMRP	50.5000 INCHES
						SCALE	0.0035 SCALE

MACH 2.959

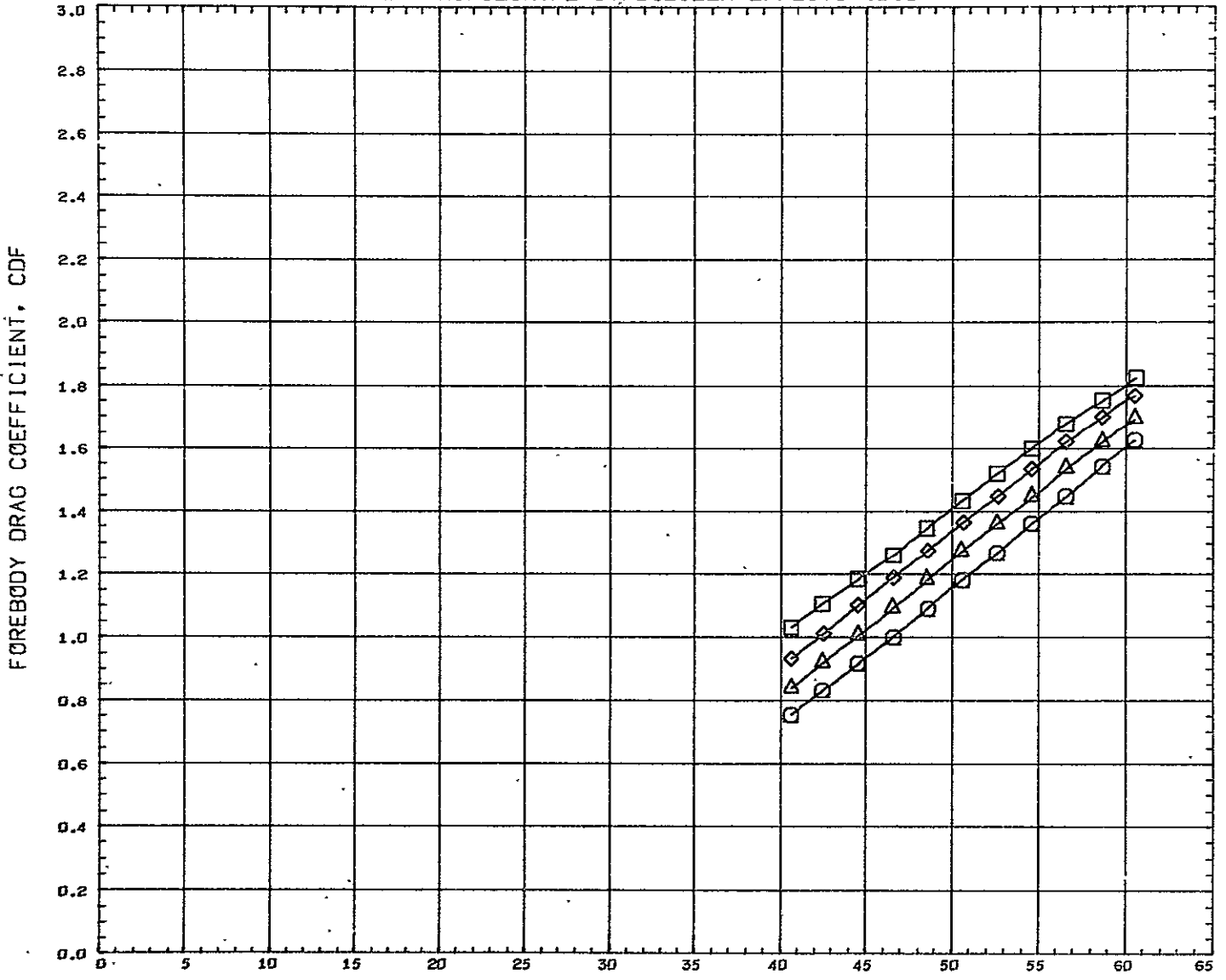
STRAIGHT WING ORBITER - HORIZONTAL STABILIZER EFFECTS (BODY + MID-HORIZONTAL)



DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	BETA	HTAIL	AILRON	REFERENCE INFORMATION	
(C2753C)	○	MSFC478 NR ST ORBITER B6H12	0.000	0.000	0.000	REFS	3084.0040 SQ FT
(C2754C)	△	MSFC478 NR ST ORBITER B6H12	0.000	10.000	3.000	REFL	322.9004 INCHES
(C2755C)	◇	MSFC478 NR ST ORBITER B6H12	0.000	20.000	0.000	REFB	1493.0040 INCHES
(C2756C)	□	MSFC478 NR ST ORBITER B6H12	0.000	30.000	0.000	XMRP	1293.0040 INCHES
						YMRP	0.0000 INCHES
						ZMRP	50.5000 INCHES
						SCALE	0.0035 SCALE

MACH 4.959

STRAIGHT WING ORBITER - HORIZONTAL STABILIZER EFFECTS (BODY + MID-HORIZONTAL)



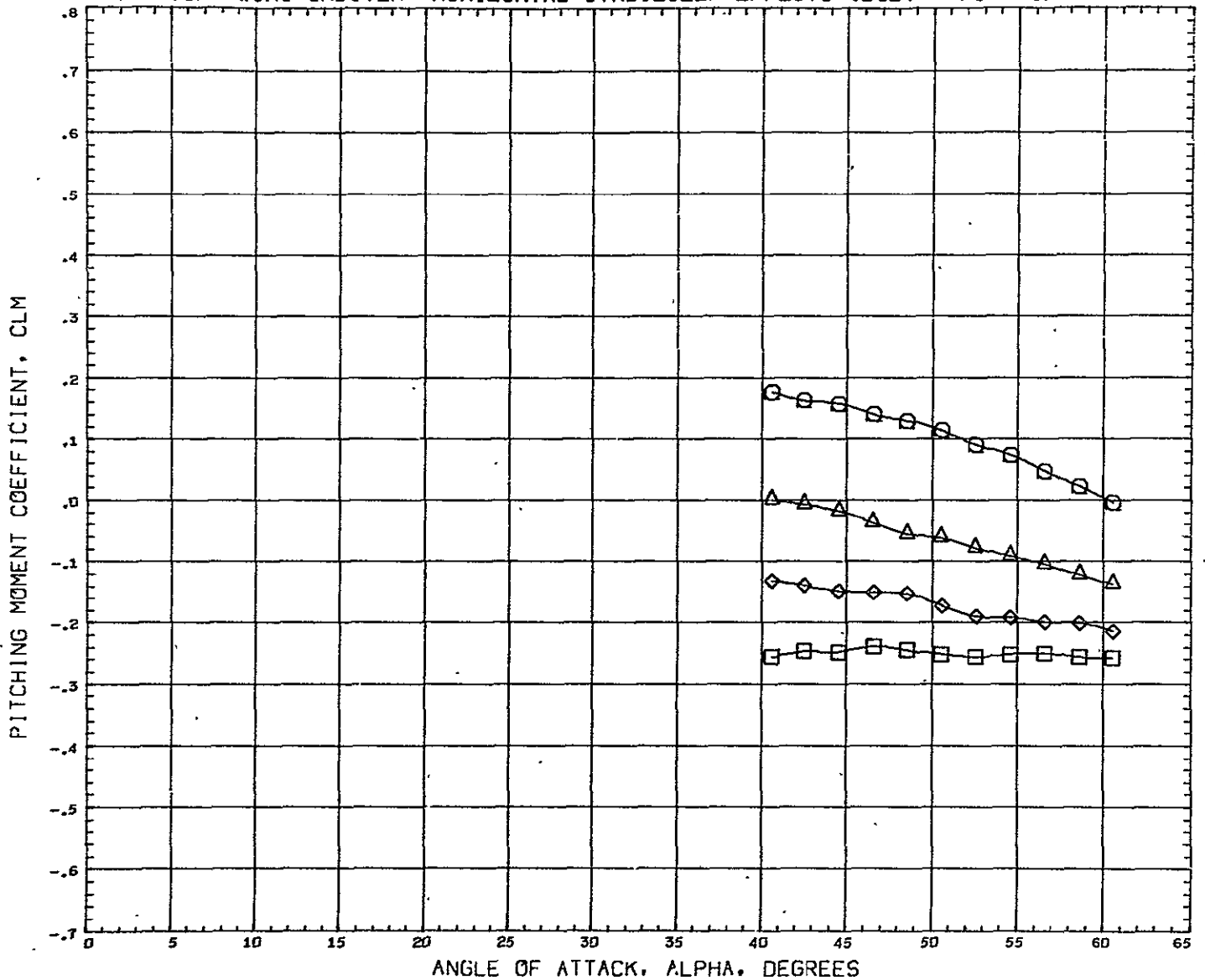
DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(C27D3C)	MSFC478 NR ST ORBITER B6H12
(C27D4C)	MSFC478 NR ST ORBITER B6H12
(C27D5C)	MSFC478 NR ST ORBITER B6H12
(C27D6C)	MSFC478 NR ST ORBITER B6H12

BETA	HTAIL	AILRON
0.000	0.000	0.000
0.000	10.000	0.000
0.000	20.000	0.000
0.000	30.000	0.000

REFERENCE INFORMATION		
REFS	3084.0040	SQ FT
REFL	322.9004	INCHES
REFB	1490.0040	INCHES
XMRP	1293.0040	INCHES
YMRP	0.0000	INCHES
ZMRP	50.5000	INCHES
SCALE	0.0035	SCALE

MACH 4.959

STRAIGHT WING ORBITER - HORIZONTAL STABILIZER EFFECTS (BODY + MID-HORIZONTAL)



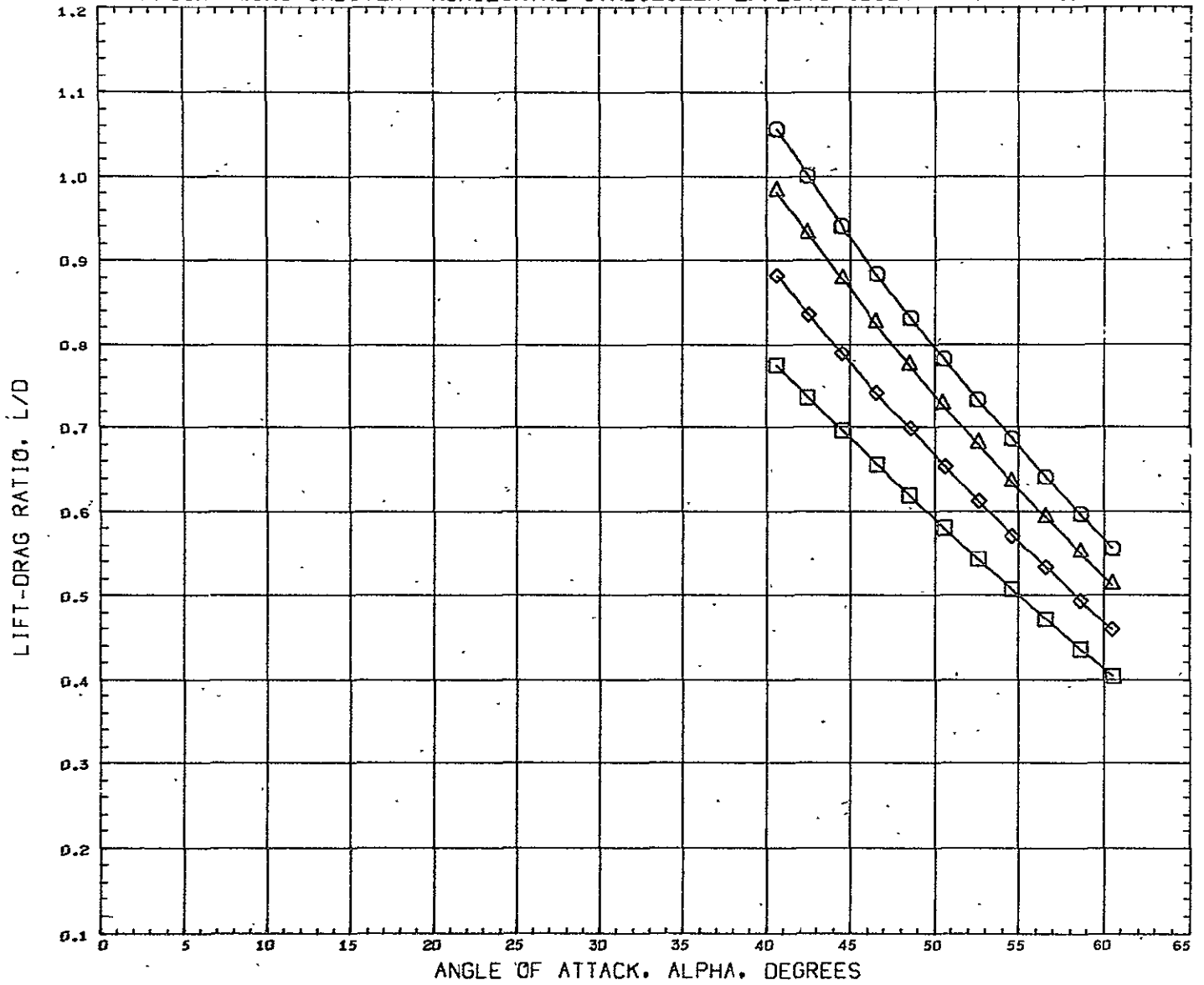
DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(C2703C)	MSFC478 NR ST ORBITER B6H12
(C2704C)	MSFC478 NR ST ORBITER B6H12
(C2705C)	MSFC478 NR ST ORBITER B6H12
(C2706C)	MSFC478 NR ST ORBITER B6H12

BETA	HTAIL	AILRON
0.000	0.000	0.000
0.000	10.000	0.000
0.000	20.000	0.000
0.000	30.000	0.000

REFERENCE INFORMATION		
REFS	3084.0040	SQ FT
REFL	322.9004	INCHES
REFB	1490.0040	INCHES
XMRP	1293.0040	INCHES
YMRP	0.0000	INCHES
ZMRP	50.0000	INCHES
SCALE	0.0035	SCALE

MACH 4.959

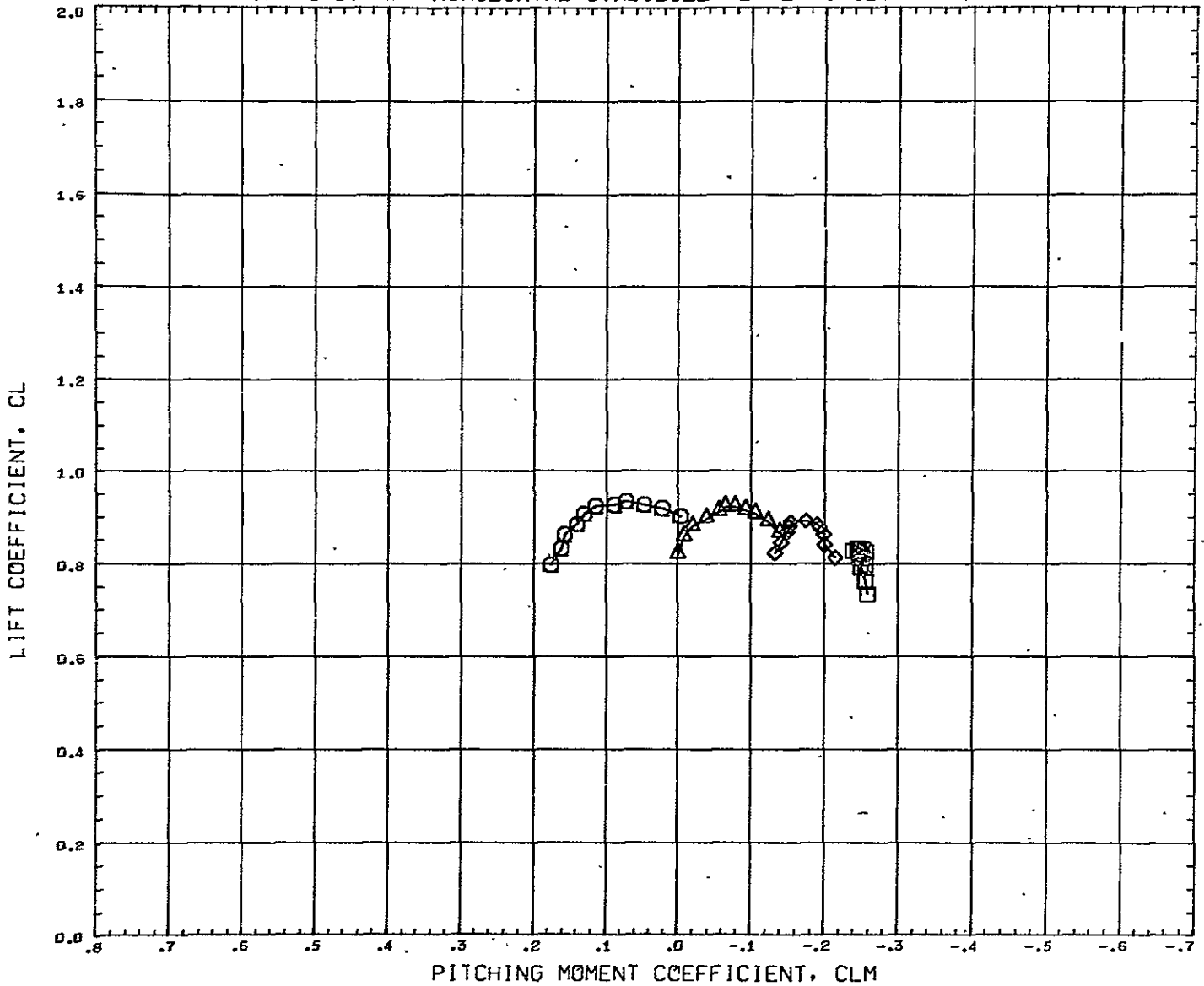
STRAIGHT WING ORBITER - HORIZONTAL STABILIZER EFFECTS (BODY + MID-HORIZONTAL)



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	HTAIL	AILRON	REFERENCE INFORMATION
(C2753C)	HSFC478 NR ST ORBITER 86H12	0.000	0.000	0.000	REFS 3084.0040 SQ FT
(C2754C)	HSFC478 NR ST ORBITER 86H12	0.000	10.000	0.000	REFL 322.9004 INCHES
(C2755C)	HSFC478 NR ST ORBITER 86H12	0.000	20.000	0.000	REFB 1490.0040 INCHES
(C2756C)	HSFC478 NR ST ORBITER 86H12	0.000	30.000	0.000	XMRP 1293.0040 INCHES
					YMRP 0.0000 INCHES
					ZMRP 50.5000 INCHES
					SCALE 0.0035 SCALE

PACH 4.959

STRAIGHT WING ORBITER - HORIZONTAL STABILIZER EFFECTS (BODY + MID-HORIZONTAL)



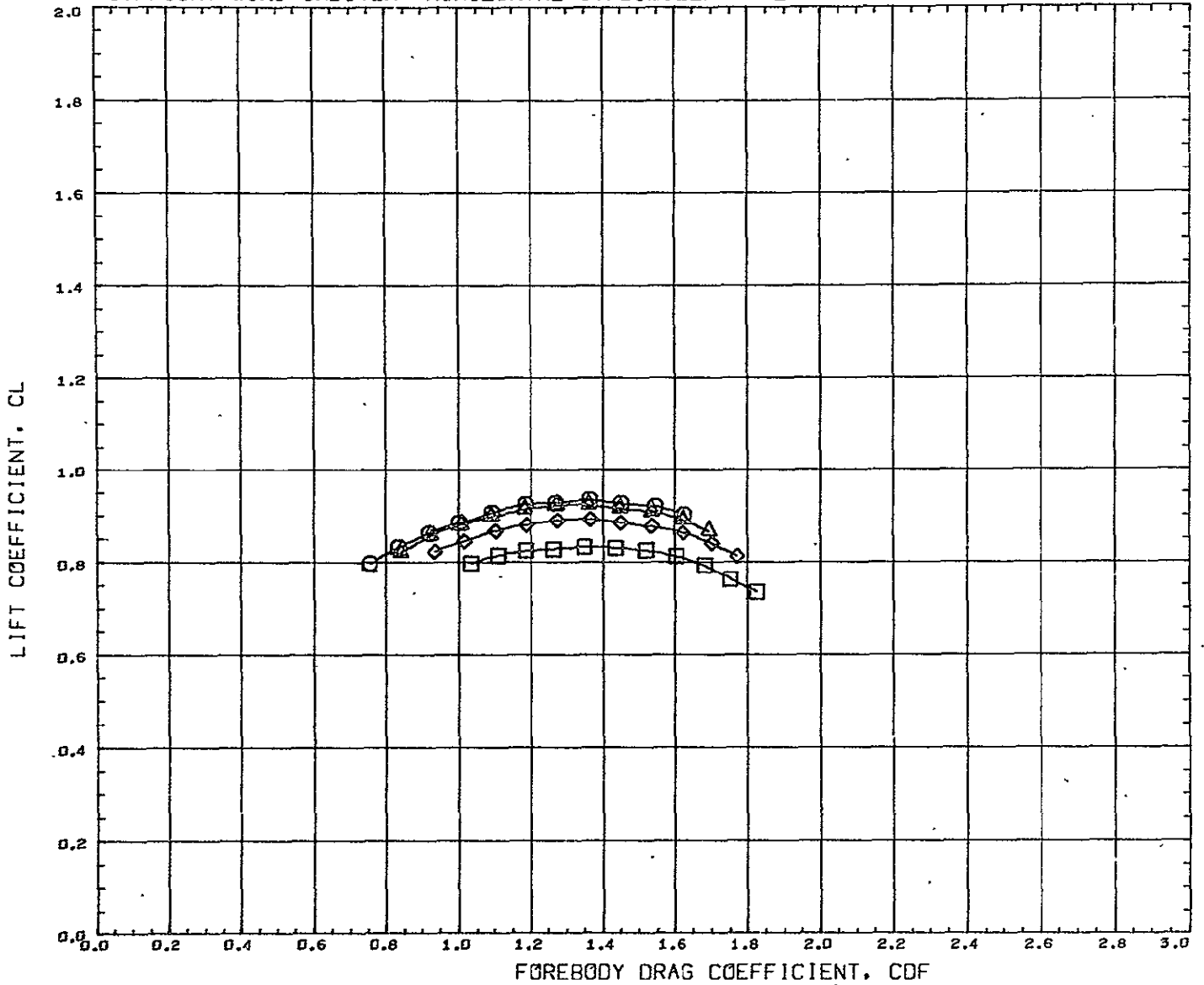
DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(C2703C) ○	MSFC478 NR ST ORBITER B6H12
(C2704C) △	MSFC478 NR ST ORBITER B6H12
(C2705C) ◇	MSFC478 NR ST ORBITER B6H12
(C2706C) □	MSFC478 NR ST ORBITER B6H12

BETA	HTAIL	AILRON
0.000	0.000	0.000
0.000	10.000	0.000
0.000	20.000	0.000
0.000	30.000	0.000

REFERENCE INFORMATION		
REFS	3084.0040	SQ FT
REFL	322.9004	INCHES
REFB	1490.0040	INCHES
XMRP	1293.0040	INCHES
YMRP	0.0000	INCHES
ZMRP	50.5000	INCHES
SCALE	0.0035	SCALE

MACH 4.959

STRAIGHT WING ORBITER - HORIZONTAL STABILIZER EFFECTS (BODY + MID-HORIZONTAL)



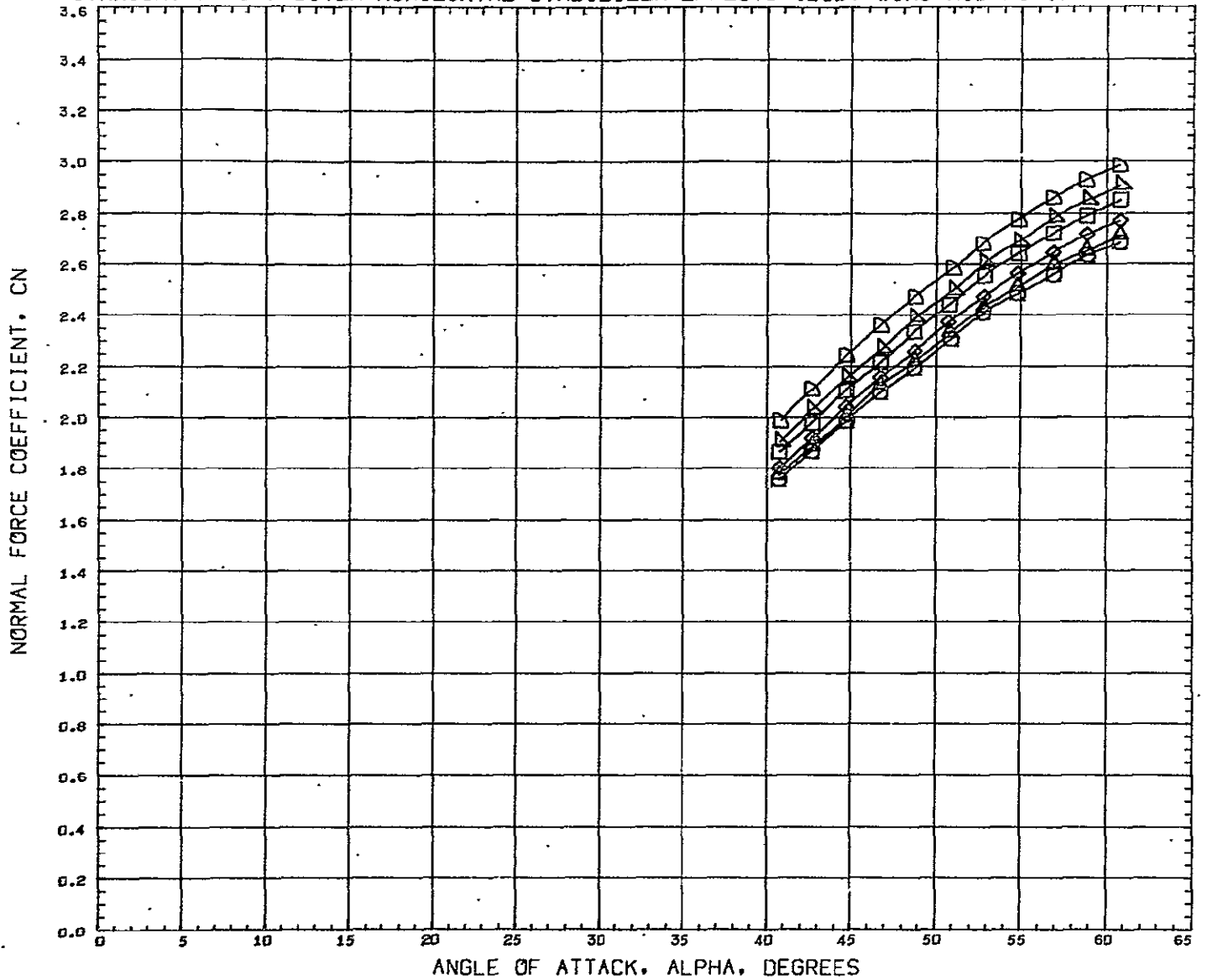
DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(C27D3C)	MSFC478 NR ST ORBITER B6H12
(C27D4C)	MSFC478 NR ST ORBITER B6H12
(C27D5C)	MSFC478 NR ST ORBITER B6H12
(C27D6C)	MSFC478 NR ST ORBITER B6H12

BETA	HTAIL	AILRON
0.000	0.000	0.000
0.000	10.000	0.000
0.000	20.000	0.000
0.000	30.000	0.000

REFERENCE INFORMATION		
REFS	3084.0040	SQ FT
REFL	322.9004	INCHES
REFB	1490.0040	INCHES
XMRP	1293.0040	INCHES
YMRP	0.0000	INCHES
ZMRP	50.5000	INCHES
SCALE	0.0035	SCALE

MACH . . . 4.959

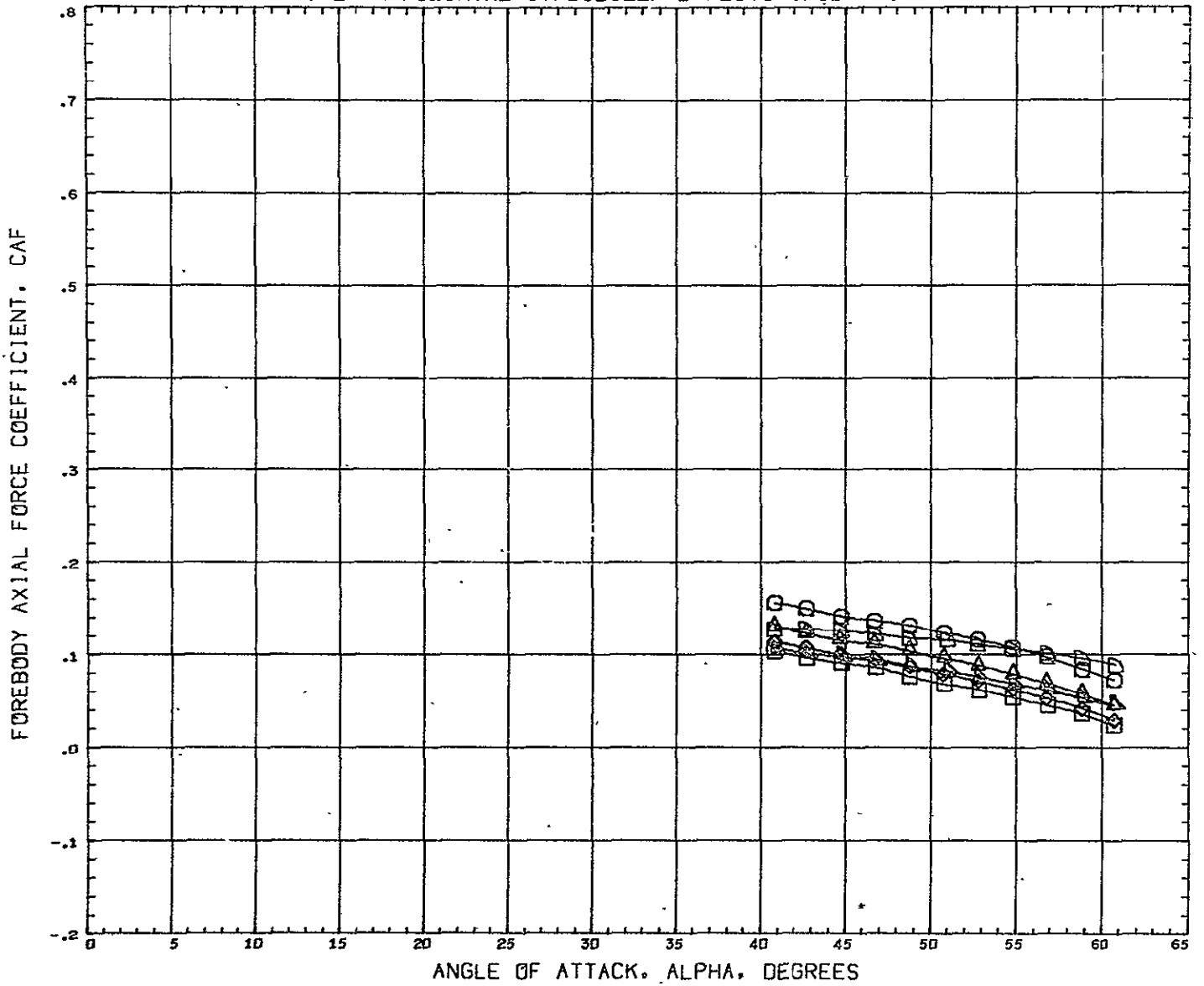
STRAIGHT WING ORBITER-HORIZONTAL STABILIZER EFFECTS (BODY+WING+MID-HORIZONTAL)



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	HTAIL	AILRON	REFERENCE INFORMATION
(C2720C)	MSFC478 NR ST ORBITER 86W10H12	0.000	-50.000	0.000	REFS 3084.0040 SQ FT
(D2719C)	MSFC478 NR ST ORBITER 86W10H12	0.000	-40.000	0.000	REFL 322.9004 INCHES
(C2718C)	MSFC478 NR ST ORBITER 86W10H12	0.000	-30.800	0.000	REFB 1490.0040 INCHES
(D2717C)	MSFC478 NR ST ORBITER 86W10H12	0.000	-20.000	0.000	YMRP 1293.0040 INCHES
(C2716C)	MSFC478 NR ST ORBITER 86W10H12	0.000	-10.000	0.000	YMRP 0.0000 INCHES
(D2712C)	MSFC478 NR ST ORBITER 86W10H12	0.000	0.000	0.000	ZMRP - 50.5000 INCHES
					SCALE 0.0035 SCALE

MACH 4.959

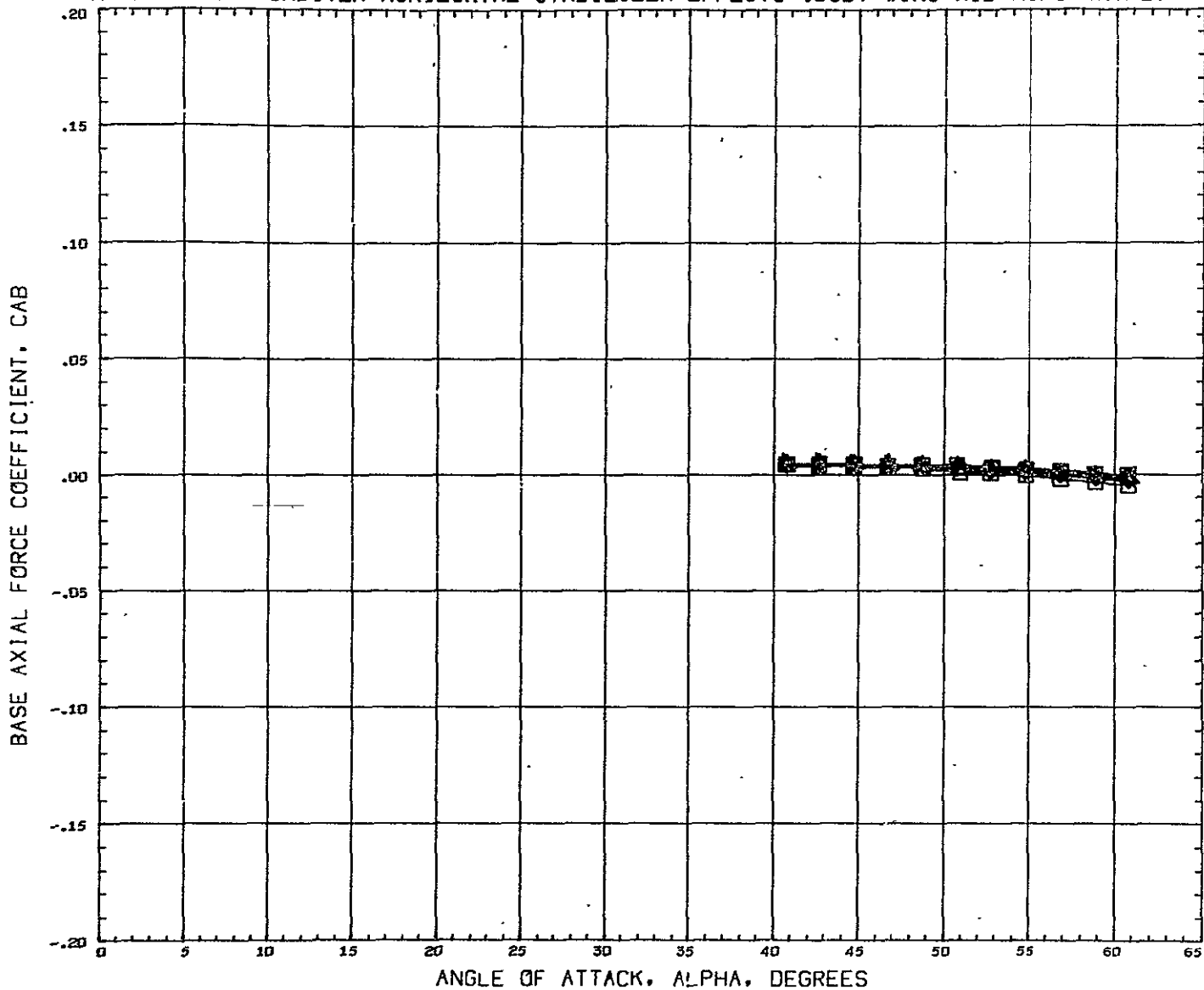
STRAIGHT WING ORBITER-HORIZONTAL STABILIZER EFFECTS (BODY+WING+MID-HORIZONTAL)



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	HTAIL	AILRON	REFERENCE INFORMATION
(C2725C)	MSFC478 NR ST ORBITER B6W1DH12	0.000	-50.000	0.000	REFS 3084.0040 SQ FT
(C2719C)	MSFC478 NR ST ORBITER B6W1DH12	0.000	-40.000	0.000	REFL 322.9004 INCHES
(C2718C)	MSFC478 NR ST ORBITER B6W1DH12	0.000	-30.000	0.000	REFB 1490.0040 INCHES
(C2717C)	MSFC478 NR ST ORBITER B6W1DH12	0.000	-20.000	0.000	XNRF 1293.0040 INCHES
(C2716C)	MSFC478 NR ST ORBITER B6W1DH12	0.000	-10.000	0.000	YMRF 0.0000 INCHES
(C2712C)	MSFC478 NR ST ORBITER B6W1DH12	0.000	0.000	0.000	ZMRF - 50.5000 INCHES
					SCALE 0.0035 SCALE

MACH 4.959

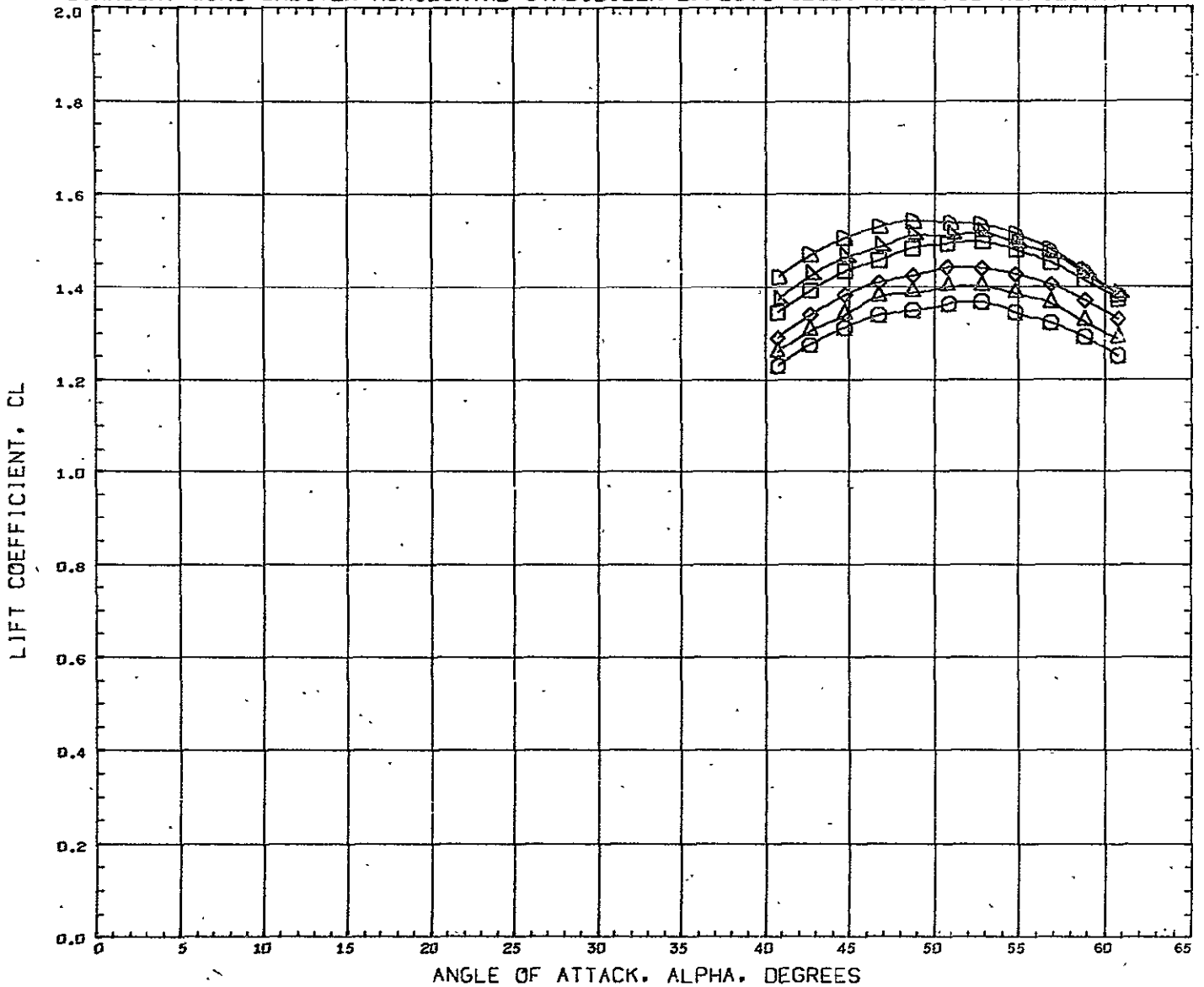
STRAIGHT WING ORBITER-HORIZONTAL STABILIZER EFFECTS (BODY+WING+MID-HORIZONTAL)



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	HTAIL	AILRON	REFERENCE INFORMATION
(C2720C)	MSFC478 NR ST ORBITER 86WIDH12	0.000	-50.000	0.000	REFS 3084.0040 SQ FT
(C2719C)	MSFC478 NR ST ORBITER 86WIDH12	0.000	-40.000	0.000	REFL 322.9004 INCHES
(C2718C)	MSFC478 NR ST ORBITER 86WIDH12	0.000	-30.800	0.000	REFB 1490.0040 INCHES
(C2717C)	MSFC478 NR ST ORBITER 86WIDH12	0.000	-20.000	0.000	WIRP 1293.0040 INCHES
(C2716C)	MSFC478 NR ST ORBITER 86WIDH12	0.000	-10.000	0.000	YMRP 0.0000 INCHES
(C2712C)	MSFC478 NR ST ORBITER 86WIDH12	0.000	0.000	0.000	ZMRP 50.5000 INCHES
					SCALE 0.0035 SCALE

MACH 4.959

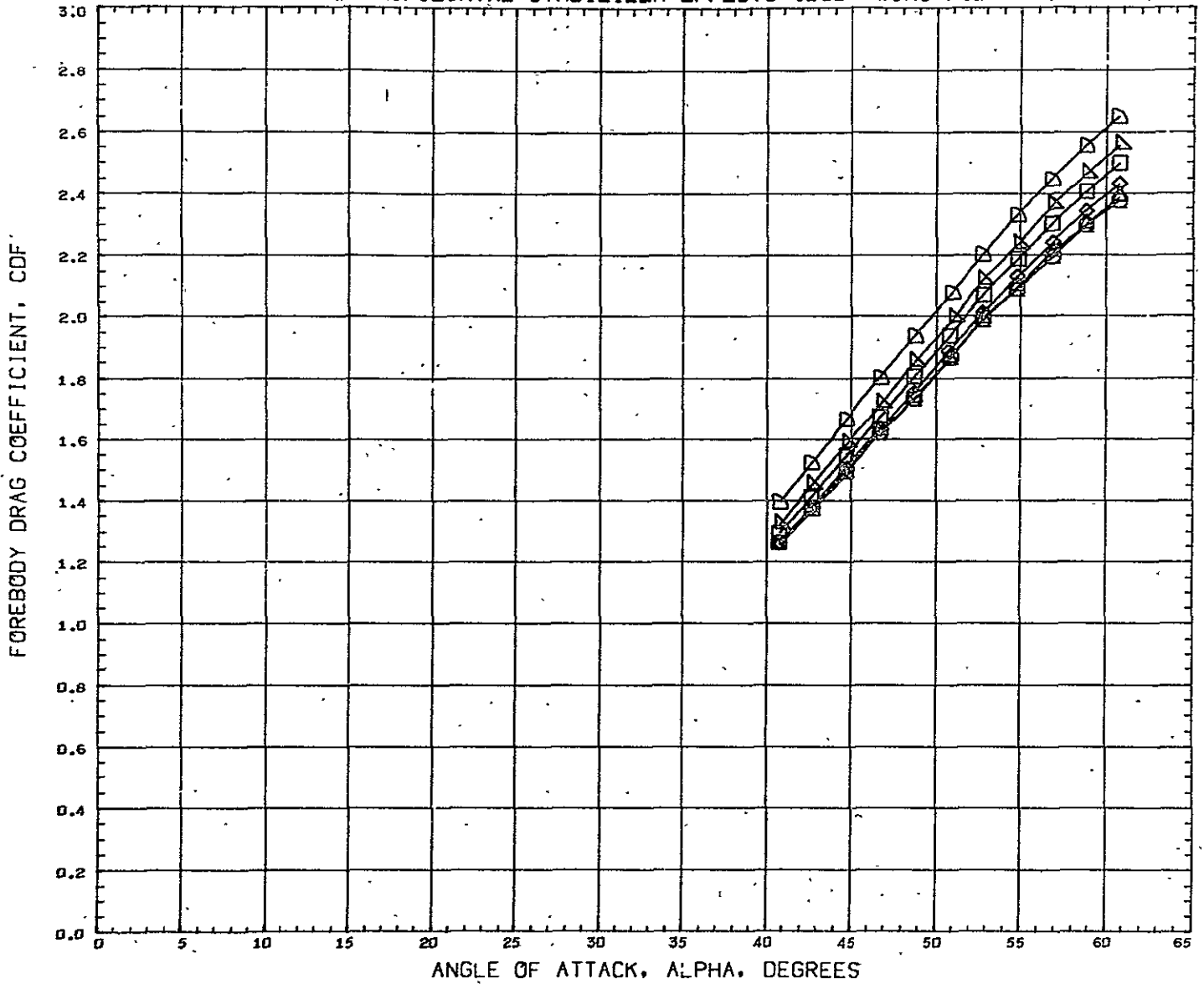
STRAIGHT WING ORBITER-HORIZONTAL STABILIZER EFFECTS (BODY+WING+MID-HORIZONTAL)



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	HTAIL	AILRON	REFERENCE INFORMATION	
(C2729C)	MSFC478 NR ST ORBITER B6W10H12	0.000	-50.000	0.000	REFS	3084.0040 SQ FT
(C2719C)	MSFC478 NR ST ORBITER B6W10H12	0.000	-40.000	0.000	REFL	322.9004 INCHES
(C2718C)	MSFC478 NR ST ORBITER B6W10H12	0.000	-30.000	0.000	REFB	1490.0040 INCHES
(C2717C)	MSFC478 NR ST ORBITER B6W10H12	0.000	-20.000	0.000	XMRP	1293.0040 INCHES
(C2716C)	MSFC478 NR ST ORBITER B6W10H12	0.000	-10.000	0.000	YMRP	0.0000 INCHES
(C2712C)	MSFC478 NR ST ORBITER B6W10H12	0.000	0.000	0.000	ZMRP	50.5000 INCHES
					SCALE	0.0035 SCALE

MACH 4.959

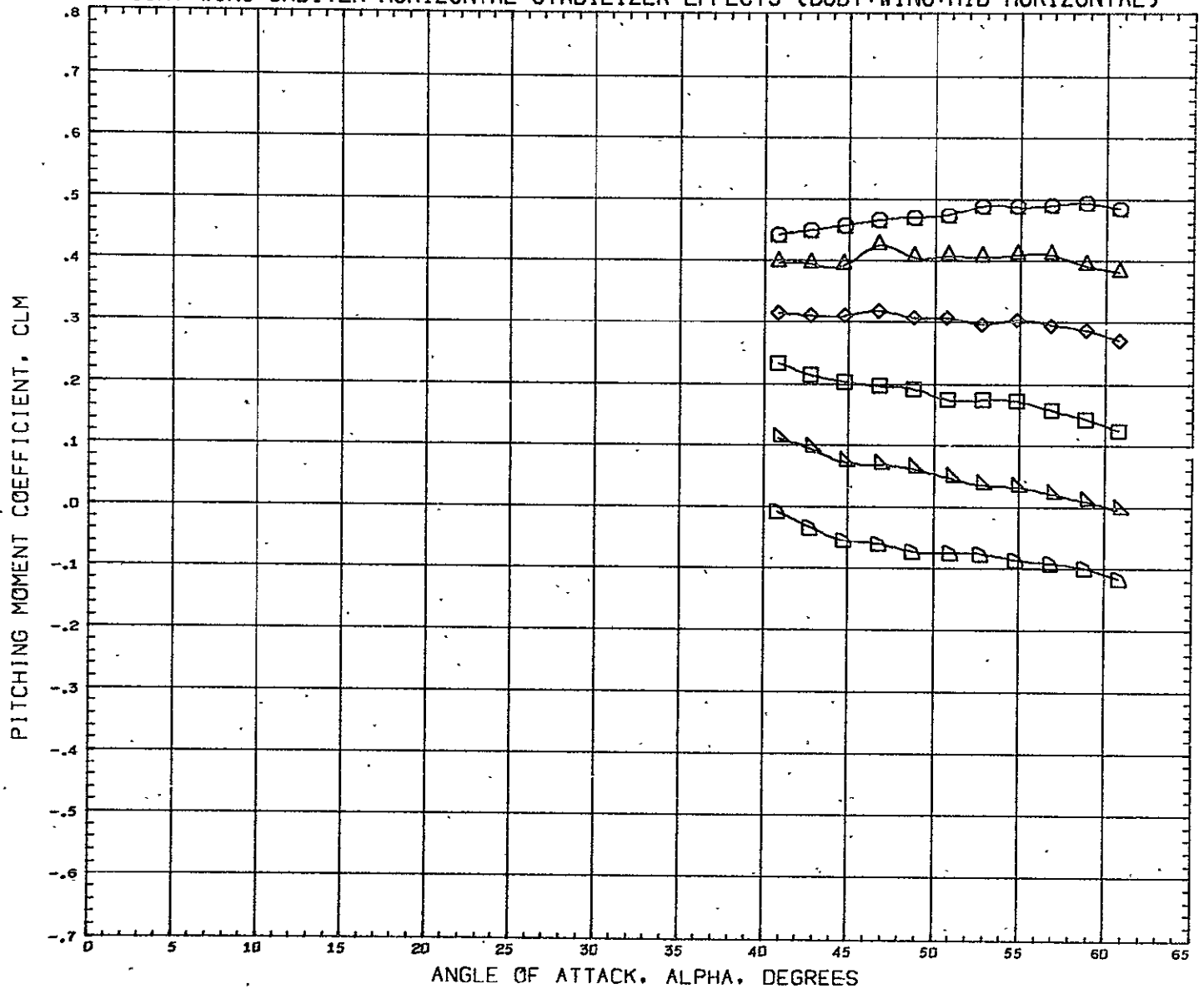
STRAIGHT WING ORBITER-HORIZONTAL STABILIZER EFFECTS (BODY+WING+MID-HORIZONTAL)



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	HTAIL	AILRON	REFERENCE INFORMATION
(C2720C)	MSFC478 NR ST ORBITER B6W10H12	0.000	-50.000	0.000	REFS 3084.0040 SQ FT
(D2719C)	MSFC478 NR ST ORBITER B6W10H12	0.000	-40.000	0.000	REFL 322.9004 INCHES
(C2718C)	MSFC478 NR ST ORBITER B6W10H12	0.000	-30.800	0.000	REFB 1490.0040 INCHES
(D2717C)	MSFC478 NR ST ORBITER B6W10H12	0.000	-20.000	0.000	XMRP 1293.0040 INCHES
(C2716C)	MSFC478 NR ST ORBITER B6W10H12	0.000	-10.000	0.000	YMRP 0.0000 INCHES
(D2712C)	MSFC478 NF ST ORBITER B6W10H12	0.000	0.000	0.000	ZMRP 50.5000 INCHES
					SCALE 0.0035 SCALE

MACH 4.959

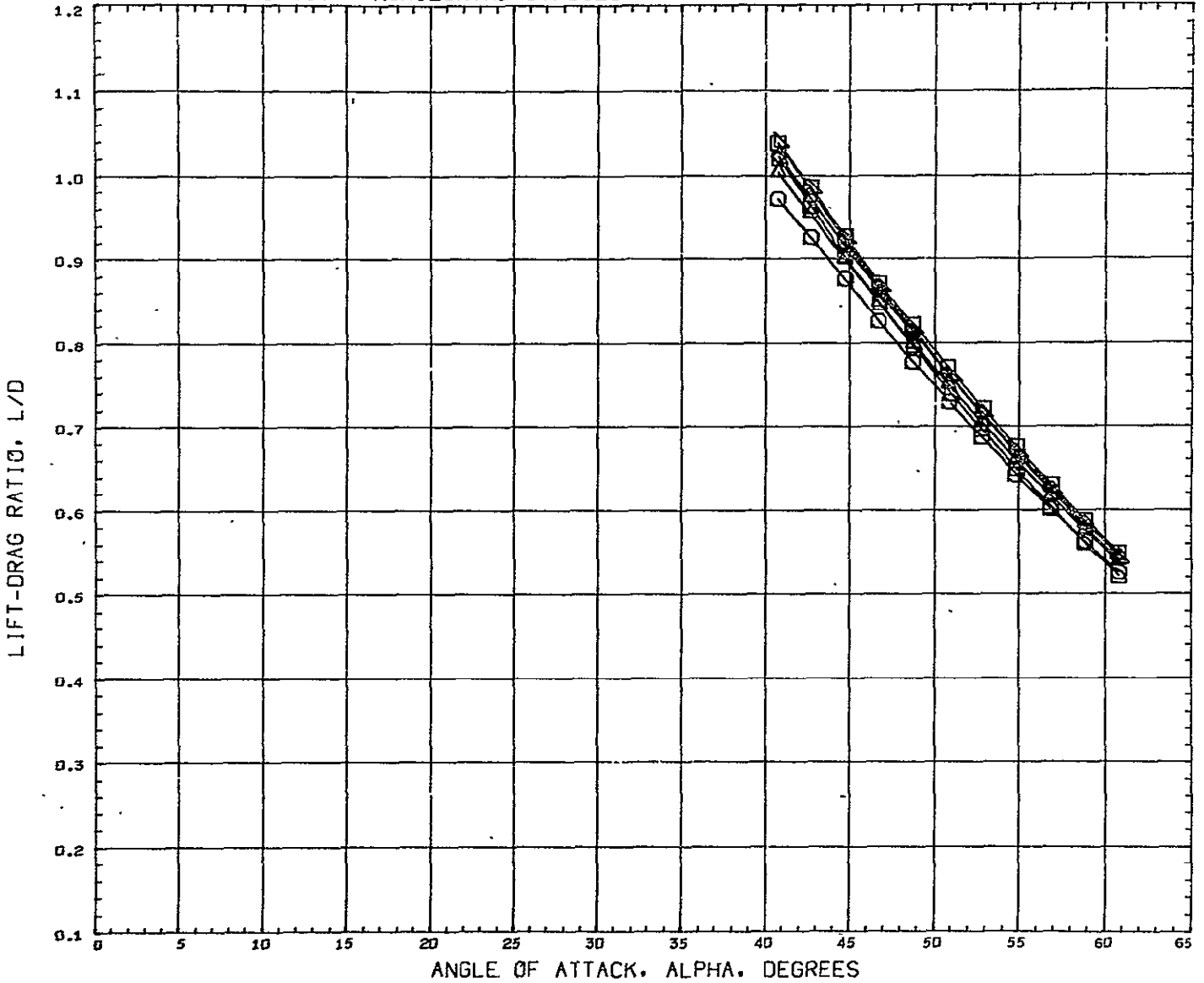
STRAIGHT WING ORBITER-HORIZONTAL STABILIZER EFFECTS (BODY+WING+MID-HORIZONTAL)



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	HTAIL	AILRON	REFERENCE INFORMATION
(C2720C)	MSFC478 NR ST ORBITER B6W1DH12	0.000	-50.000	0.000	REFS 3084.0040 SQ FT
(C2719C)	MSFC478 NR ST ORBITER B6W1DH12	0.000	-40.000	0.000	REFL 322.9004 INCHES
(C2718C)	MSFC478 NR ST ORBITER B6W1DH12	0.000	-30.000	0.000	REFB 1490.0040 INCHES
(C2717C)	MSFC478 NR ST ORBITER B6W1DH12	0.000	-20.000	0.000	XMRP 1293.0040 INCHES
(C2716C)	MSFC478 NR ST ORBITER B6W1DH12	0.000	-10.000	0.000	YMRP 0.0000 INCHES
(C2712C)	MSFC478 NR ST ORBITER B6W1DH12	0.000	0.000	0.000	ZMRP - 50.5000 INCHES
					SCALE 0.0035 SCALE

MACH 4.959

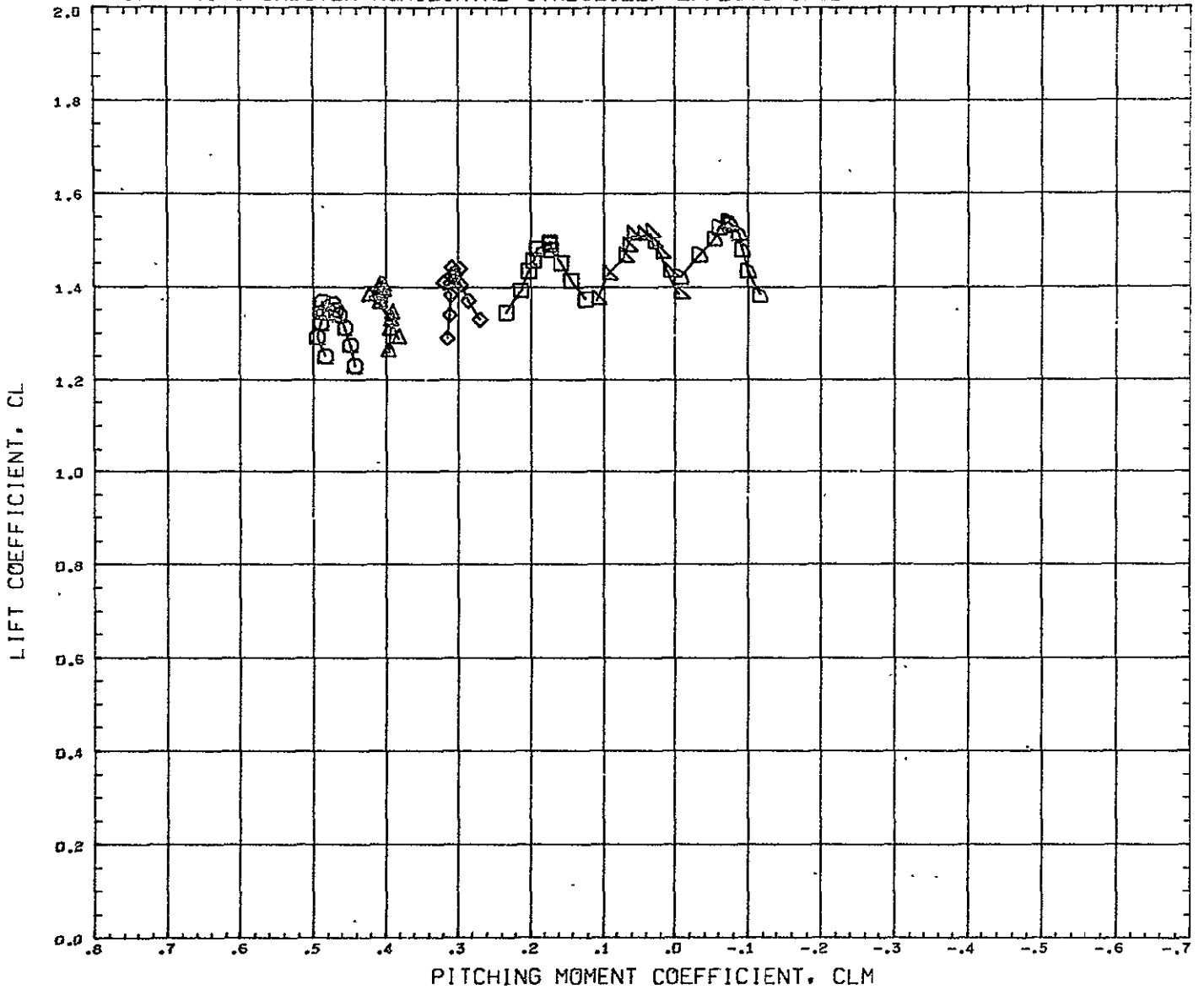
STRAIGHT WING ORBITER-HORIZONTAL STABILIZER EFFECTS (BODY+WING+MID-HORIZONTAL)



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	HTAIL	AILRON	REFERENCE INFORMATION
(C2725C)	MSFC478 NR ST ORBITER B6W10H12	0.000	-50.000	0.000	REFS 3084.0045 SQ FT
(C2719C)	MSFC478 NR ST ORBITER B6W10H12	0.000	-40.000	0.000	REFL 322.9004 INCHES
(C2718C)	MSFC478 NR ST ORBITER B6W10H12	0.000	-30.800	0.000	REFB 1490.0040 INCHES
(C2717C)	MSFC478 NR ST ORBITER B6W10H12	0.000	-20.800	0.000	XMRP 1293.0040 INCHES
(C2716C)	MSFC478 NR ST ORBITER B6W10H12	0.000	-10.000	0.000	YMRP 0.0000 INCHES
(C2712C)	MSFC478 NR ST ORBITER B6W10H12	0.000	0.000	0.000	ZMRP - 50.5000 INCHES
					SCALE 0.0035 SCALE

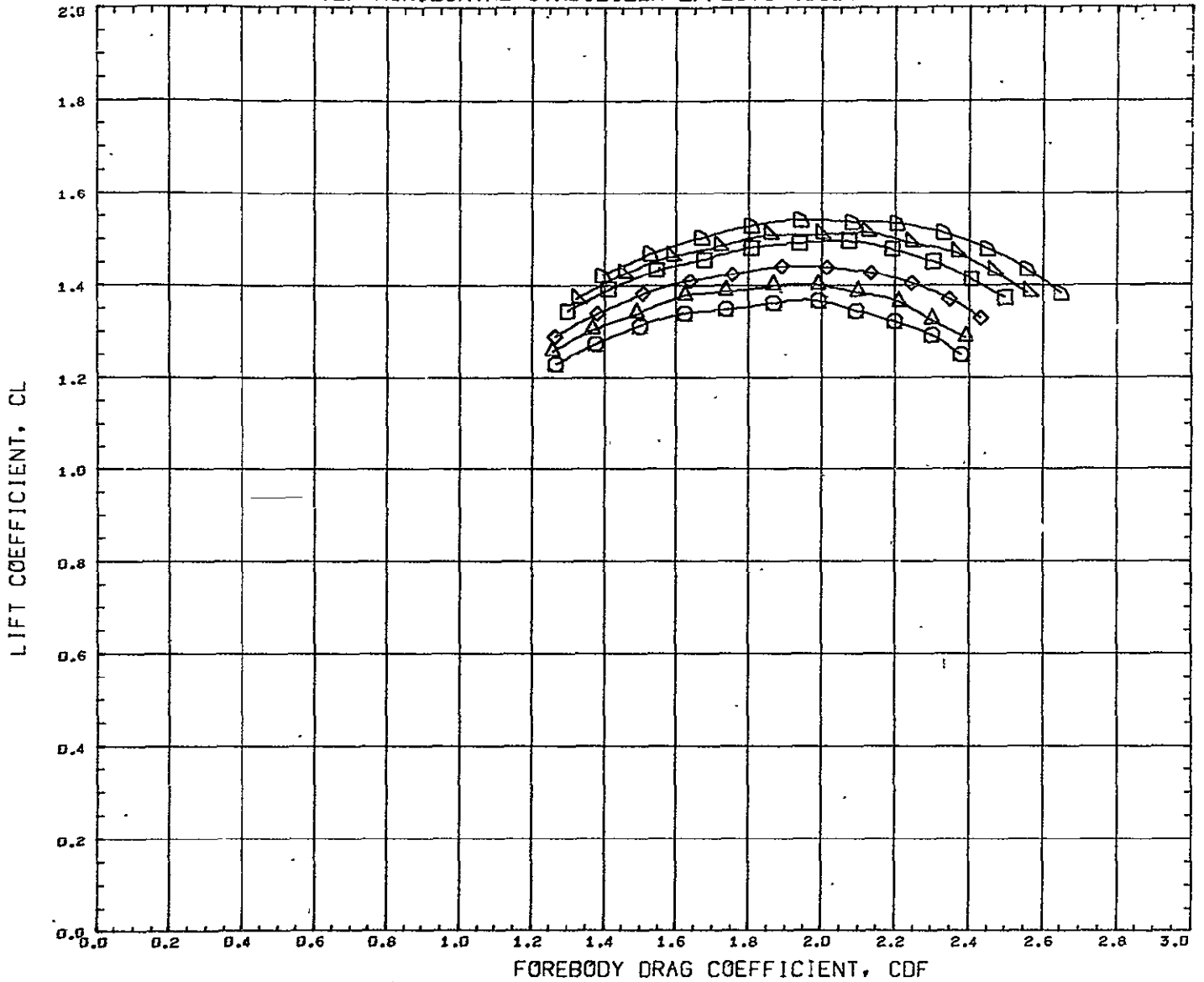
HACH 4.959

STRAIGHT WING ORBITER-HORIZONTAL STABILIZER EFFECTS (BODY+WING+MID-HORIZONTAL)



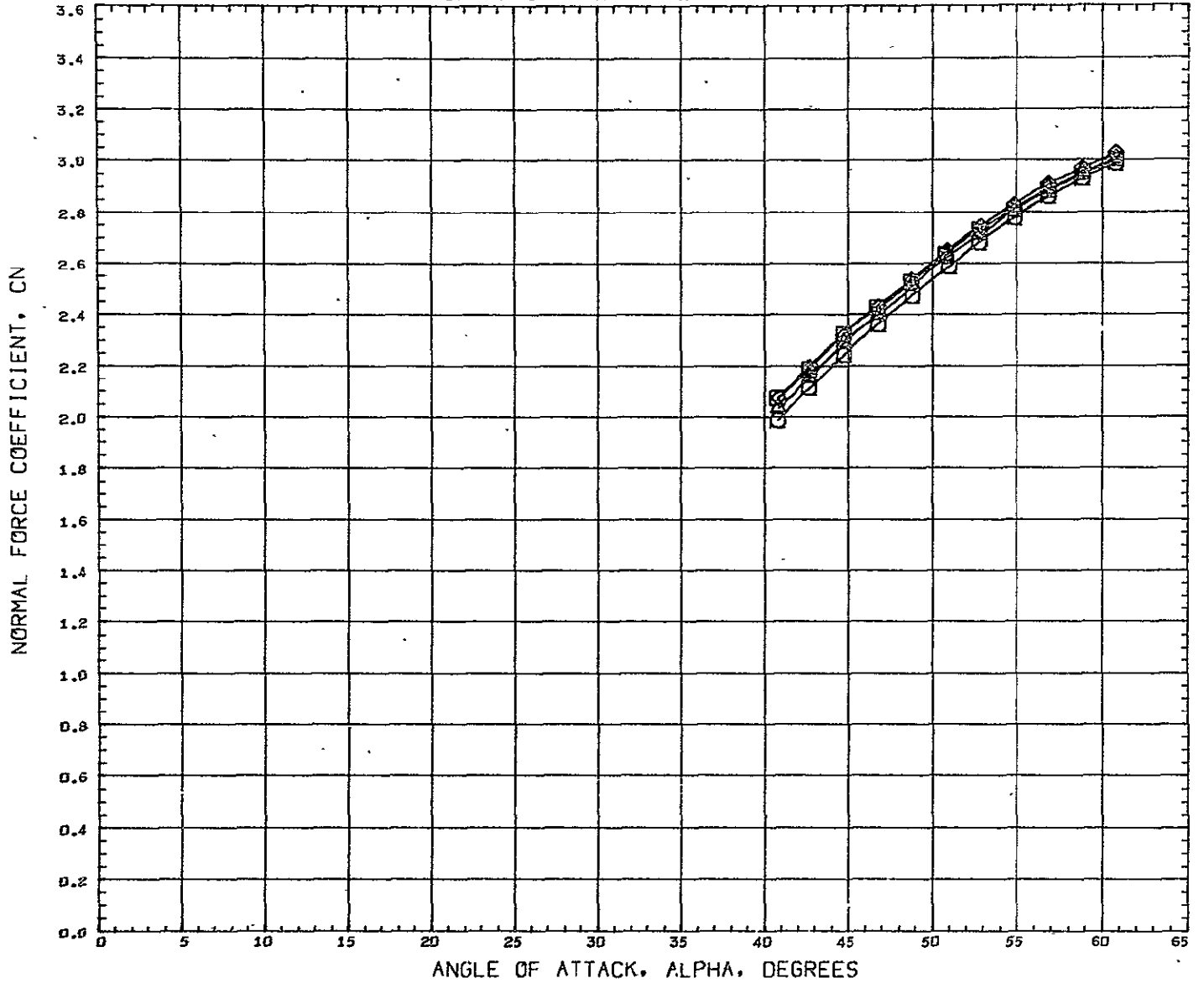
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	HTAIL	AILRON	REFERENCE INFORMATION
(C2729C)	MSFC478 NR ST ORBITER 36WIDH12	0.000	-50.000	0.000	REFS 3084.0040 SQ FT
(D2719C)	MSFC478 NR ST ORBITER 86WIDH12	0.000	-40.000	0.000	REFL 322.9004 INCHES
(C2718C)	MSFC478 NR ST ORBITER 86WIDH12	0.000	-30.000	0.000	REFD 1490.0040 INCHES
(D2717C)	MSFC478 NR ST ORBITER 86WIDH12	0.000	-20.000	0.000	XMRP 1293.0040 INCHES
(C2716C)	MSFC478 NR ST ORBITER 86WIDH12	0.000	-10.000	0.000	YMRP 0.0000 INCHES
(D2712C)	MSFC478 NR ST ORBITER 86WIDH12	0.000	0.000	0.000	ZMRP - 50.5000 INCHES
	MACH 4.959				SCALE 0.0035 SCALE

STRAIGHT WING ORBITER-HORIZONTAL STABILIZER EFFECTS (BODY+WING+MID-HORIZONTAL)



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	HTAIL	AILRON	REFERENCE INFORMATION
(C2720C)	MSFC478 NR ST ORBITER 06WIDH12	0.000	-50.000	0.000	REFS 3084.0040 SQ FT
(D2719C)	MSFC478 NR ST ORBITER 06WIDH12	0.000	-40.000	0.000	REFL 322.9004 INCHES
(C2718C)	MSFC478 NR ST ORBITER 06WIDH12	0.000	-30.000	0.000	REFB 1490.0040 INCHES
(D2717C)	MSFC478 NR ST ORBITER 06WIDH12	0.000	-20.000	0.000	XMRP 1293.0040 INCHES
(C2716C)	MSFC478 NR ST ORBITER 06WIDH12	0.000	-10.000	0.000	YHRP 0.0000 INCHES
(D2712C)	MSFC478 NR ST ORBITER 06WIDH12	0.000	0.000	0.000	ZMRP 50.5000 INCHES
	MACH 4.959				SCALE 0.0035 SCALE

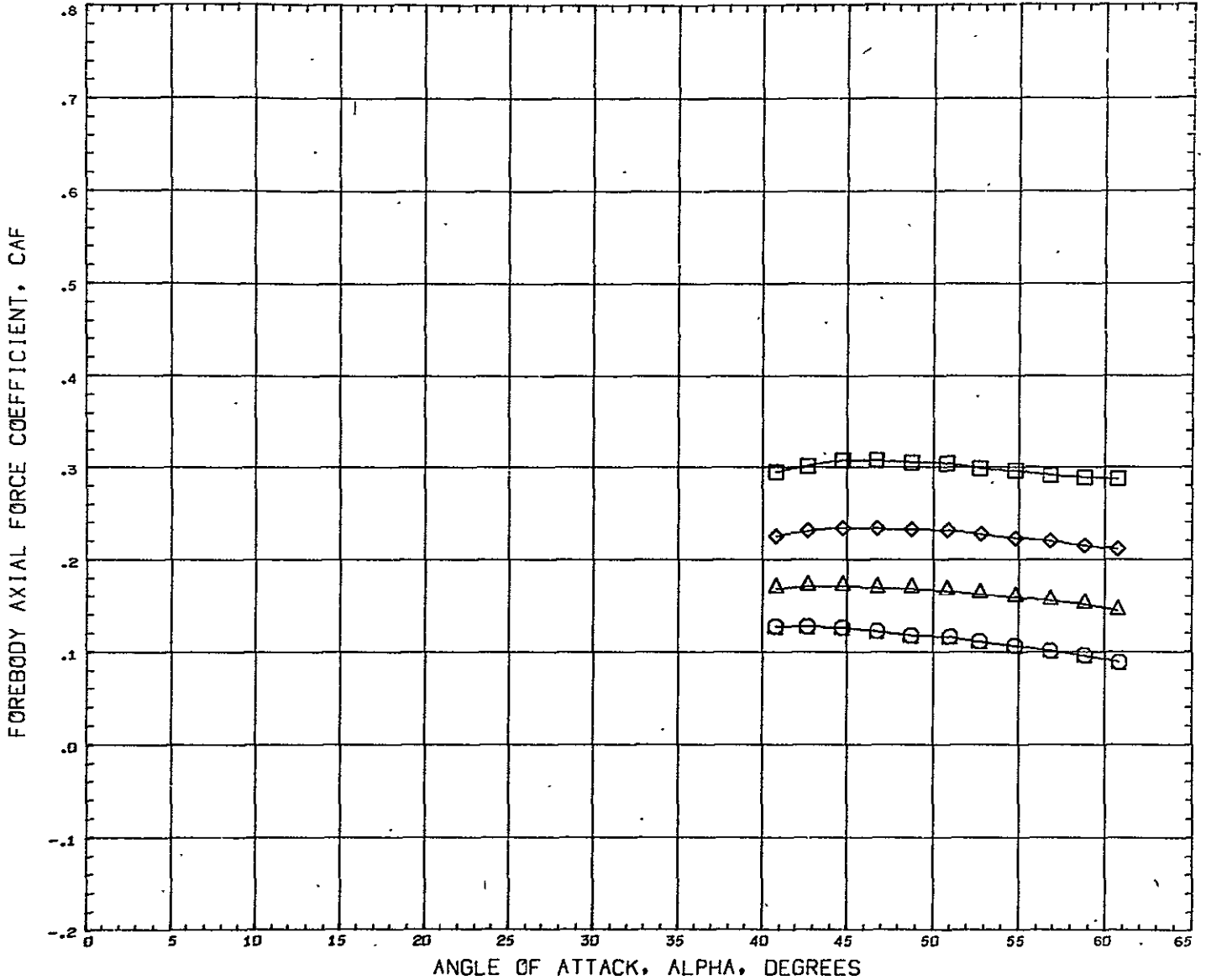
STRAIGHT WING ORBITER-HORIZONTAL STABILIZER EFFECTS (BODY+WING+MID-HORIZONTAL)



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	HTAIL	AILRON	REFERENCE INFORMATION	
(D2712C)	MSFC478 NR ST ORBITER B6W1DH12	0.000	0.000	0.000	REFS	3084.0040 SQ FT
(C2713C)	MSFC478 NR ST ORBITER B6W1DH12	0.000	10.000	0.000	.REFL	322.9004 INCHES
(C2714C)	MSFC478 NR ST ORBITER B6W1DH12	0.000	20.000	0.000	REFB	1490.0040 INCHES
(C2715C)	MSFC478 NR ST ORBITER B6W1DH12	0.000	30.000	0.000	XMRP	1293.0040 INCHES
					YMRP	0.0000 INCHES
					ZMRP	50.5000 INCHES
					SCALE	0.0035 SCALE

MACH 4.959

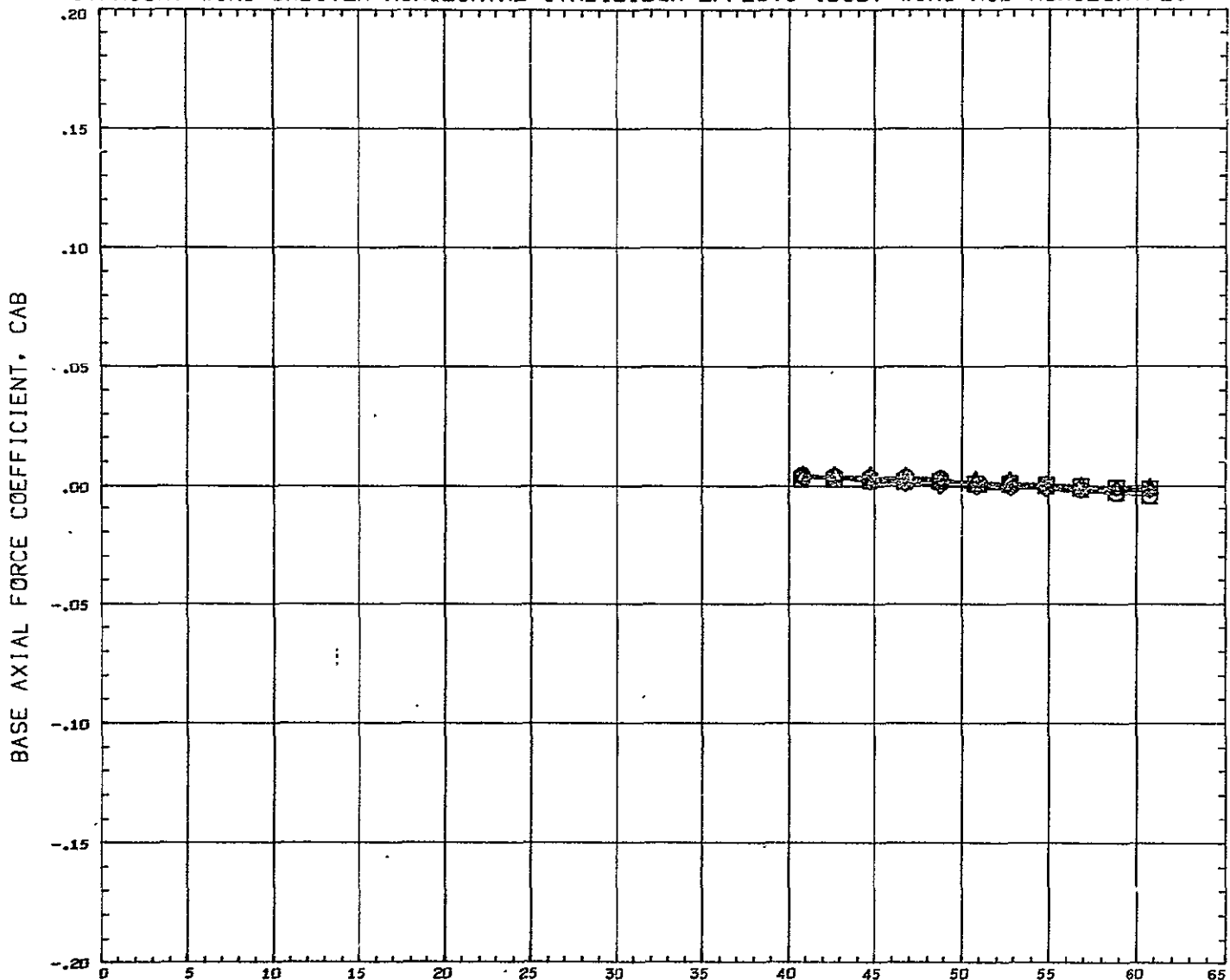
STRAIGHT WING ORBITER-HORIZONTAL STABILIZER EFFECTS (BODY+WING+MID-HORIZONTAL)



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	HTAIL	AILRON	REFERENCE INFORMATION	
(D2712C)	MSFC478 NR ST ORBITER B6W10H12	0.000	0.000	0.000	REFS	3084.0040 SQ FT
(C2713C)	MSFC478 NR ST ORBITER B6W10H12	0.000	10.000	0.000	REFL	322.9004 INCHES
(C2714C)	MSFC478 NR ST ORBITER B6W15H12	0.000	20.000	0.000	REFD	1490.0040 INCHES
(C2715C)	MSFC478 NR ST ORBITER B6W10H12	0.000	30.000	0.000	XMRP	1293.0040 INCHES
					YMRP	0.0000 INCHES
					ZMRP	50.5000 INCHES
					SCALE	0.0035 SCALE

MACH 4.959

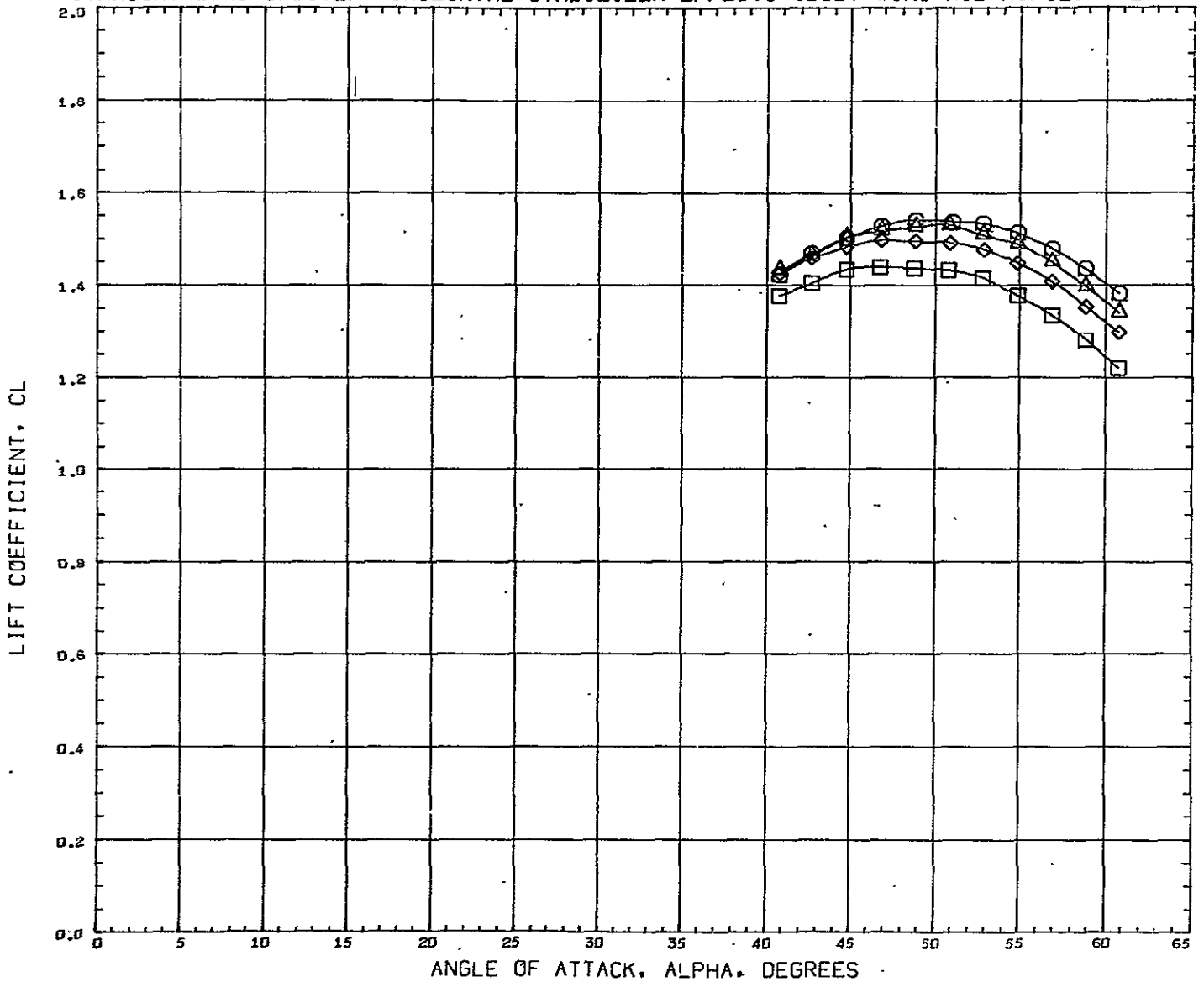
STRAIGHT WING ORBITER-HORIZONTAL STABILIZER EFFECTS (BODY+WING+MID-HORIZONTAL)



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	HTAIL	AILRON	REFERENCE INFORMATION
(02712C)	MSFC478 NR ST ORBITER B6WIDH12	0.000	0.000	0.000	REFS 3084.0040 SQ FT
(02713C)	MSFC478 NR ST ORBITER B6WIDH12	0.000	10.000	0.000	REFL 322.9004 INCHES
(02714C)	MSFC478 NR ST ORBITER B6WIDH12	0.000	20.000	0.000	REFB 1490.0040 INCHES
(02715C)	MSFC478 NR ST ORBITER B6WIDH12	0.000	30.000	0.000	XMRP 1293.0040 INCHES
					YMRP 0.0000 INCHES
					ZMRP - 50.5000 INCHES
					SCALE 0.0035 SCALE

PACH 4.959

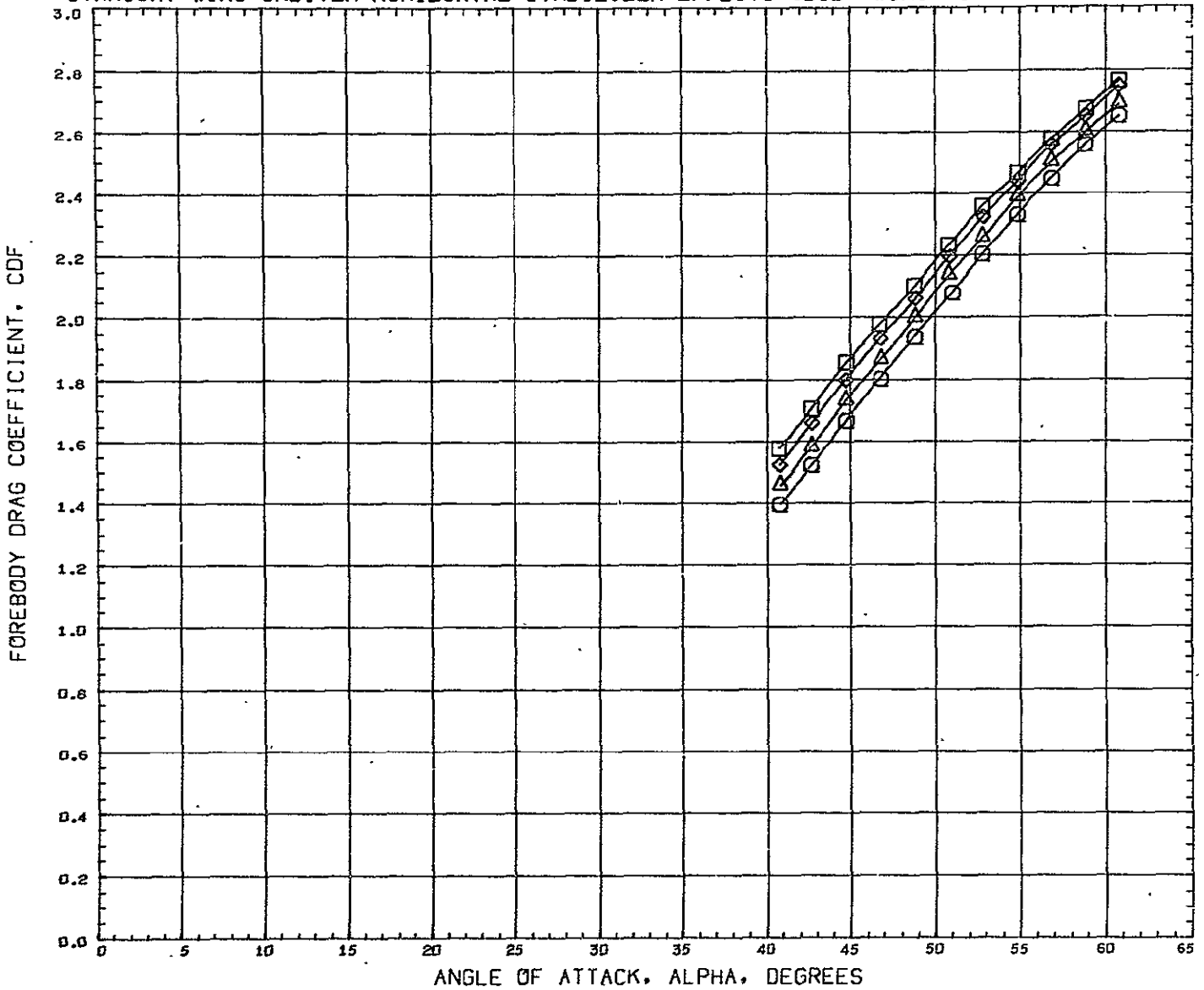
STRAIGHT WING ORBITER-HORIZONTAL STABILIZER EFFECTS (BODY+WING+MID-HORIZONTAL)



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	HTAIL	AILRON	REFERENCE INFORMATION
(D2712C)	MSFC478 NR ST ORBITER B6W10H12	0.000	0.000	0.000	REFS 3084.0040 SQ FT
(C2713C)	MSFC478 NR ST ORBITER B6W12H12	0.000	10.000	0.000	REFL 322.9004 INCHES
(C2714C)	MSFC478 NR ST ORBITER B6W14H12	0.000	20.000	0.000	REFB 1490.0040 INCHES
(C2715C)	MSFC478 NR ST ORBITER B6W16H12	0.000	30.000	0.000	XMRP 1293.0040 INCHES
					YMRP 0.0000 INCHES
					ZMRP - 50.5000 INCHES
					SCALE 0.0035 SCALE

PACH 4.959

STRAIGHT WING ORBITER-HORIZONTAL STABILIZER EFFECTS (BODY+WING+MID-HORIZONTAL)



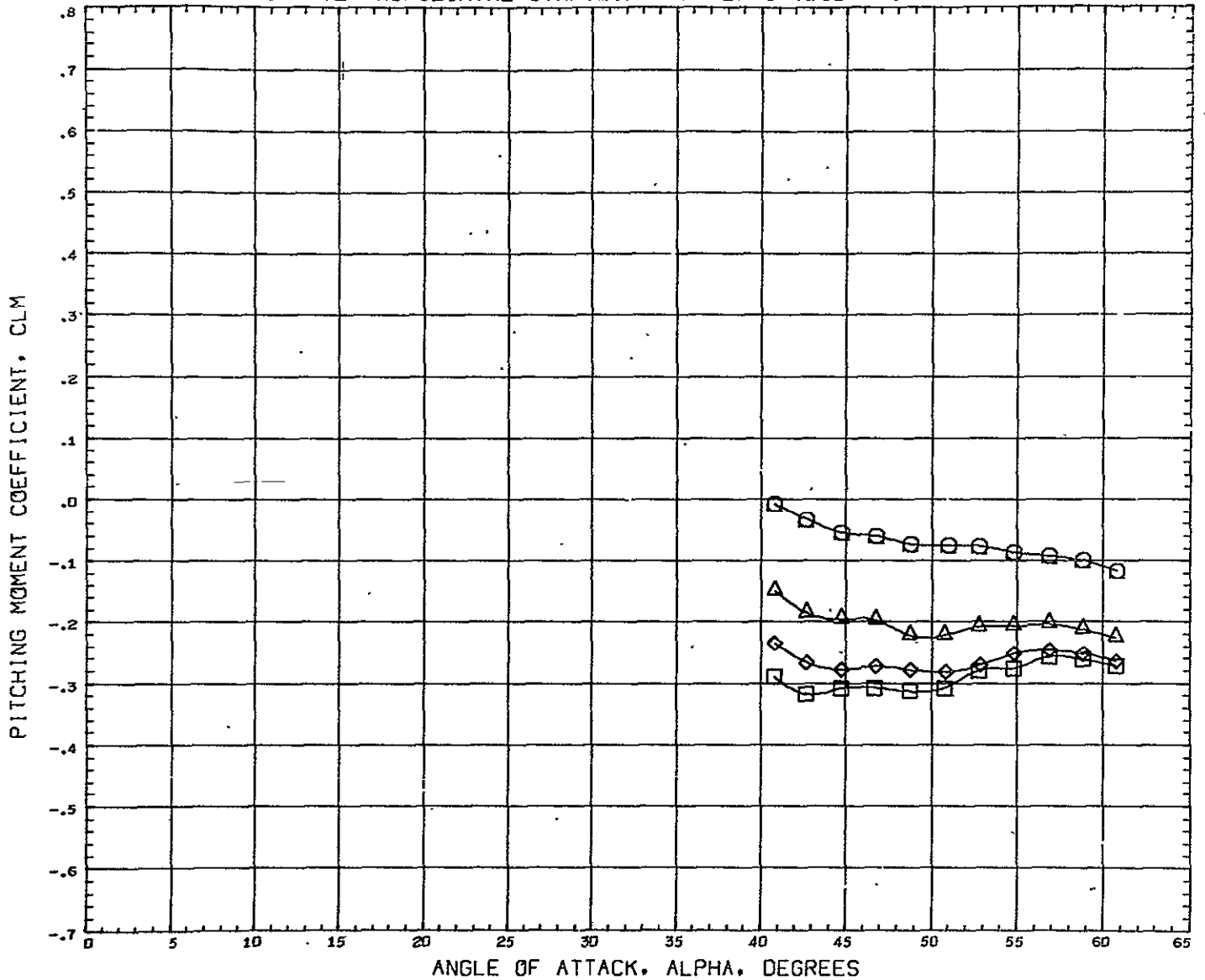
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(D2712C)	○	MSFC478 NR ST ORBITER B6W1D12
(C2713C)	△	MSFC478 NR ST ORBITER B6W1D12
(C2714C)	◇	MSFC478 NR ST ORBITER B6W1D12
(C2715C)	□	MSFC478 NR ST ORBITER B6W1D12

BETA	HTAIL	AILRON
0.000	0.000	0.000
0.000	10.000	0.000
0.000	20.000	0.000
0.000	30.000	0.000

REFERENCE INFORMATION		
REFS	3084.0040	SQ FT
REFL	322.9004	INCHES
REFB	1490.0040	INCHES
XMRP	1293.0040	INCHES
YMRP	0.0000	INCHES
ZMRP	50.5000	INCHES
SCALE	0.0035	SCALE

MACH 4.959

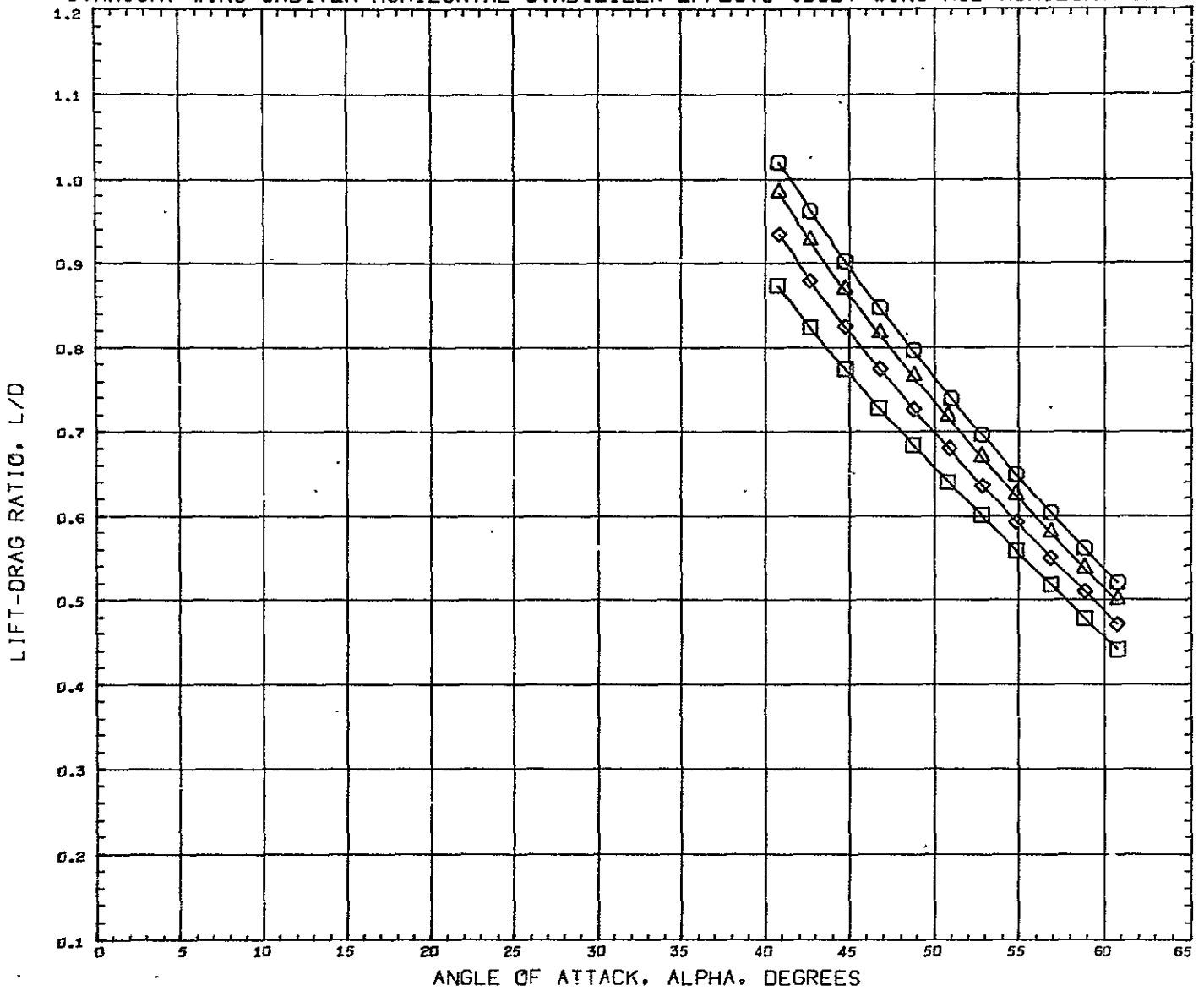
STRAIGHT WING ORBITER-HORIZONTAL STABILIZER EFFECTS (BODY+WING+MID-HORIZONTAL)



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	HTAIL	AILRON	REFERENCE INFORMATION
(02712C)	MSFC478 NR ST ORBITER B6W1DH12	0.000	0.000	0.000	REFS 3084.0040 50 FT
(02713C)	MSFC478 NR ST ORBITER B6W1DH12	0.000	10.000	0.000	REFL 322.9004 INCHES
(02714C)	MSFC478 NR ST ORBITER B6W1DH12	0.000	20.000	0.000	REFB 1490.0040 INCHES
(02715C)	MSFC478 NR ST ORBITER B6W1DH12	0.000	30.000	0.000	XMRP 1293.0040 INCHES
					YMRP 0.0000 INCHES
					ZMRP - 50.5000 INCHES
					SCALE 0.0035 SCALE

MACH 4.959

STRAIGHT WING ORBITER-HORIZONTAL STABILIZER EFFECTS (BODY+WING+MID-HORIZONTAL)



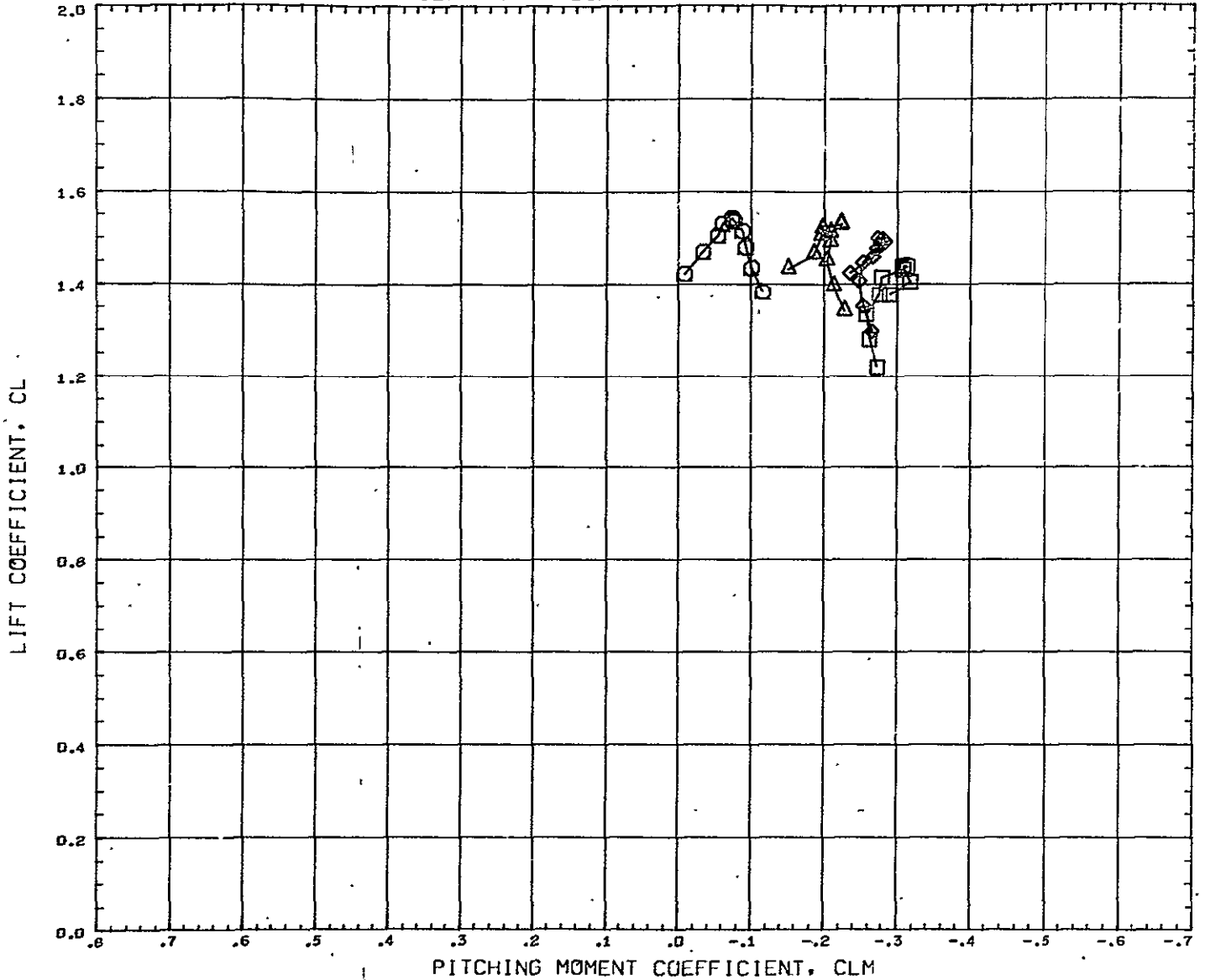
DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(D2712C) ○	MSFC478 NR ST ORBITER B6W1DH12
(C2713C) △	MSFC478 NR ST ORBITER B6W1DH12
(C2714C) ◇	MSFC478 NR ST ORBITER B6W1DH12
(C2715C) □	MSFC478 NR ST ORBITER B6W1DH12

BETA	HTAIL	AILRON
0.000	0.000	0.000
0.000	10.000	0.000
0.000	20.000	0.000
0.000	30.000	0.000

REFERENCE INFORMATION	
REFS	3084.0040 SQ FT
REFL	322.9004 INCHES
REFB	1490.0040 INCHES
XMRP	1293.0040 INCHES
YMRP	0.0000 INCHES
ZMRP	50.5000 INCHES
SCALE	0.0035 SCALE

MACH 4.959

STRAIGHT WING ORBITER-HORIZONTAL STABILIZER EFFECTS (BODY+WING+MID-HORIZONTAL)



DATA SET SYMBOL - CONFIGURATION DESCRIPTION

(D2712C)	○	MSFC478 NR ST ORBITER B6W1DH12
(C2713C)	△	MSFC478 NR ST ORBITER B6W1DH12
(C2714C)	◇	MSFC478 NR ST ORBITER B6W1DH12
(C2715C)	□	MSFC478 NR ST ORBITER B6W1DH12

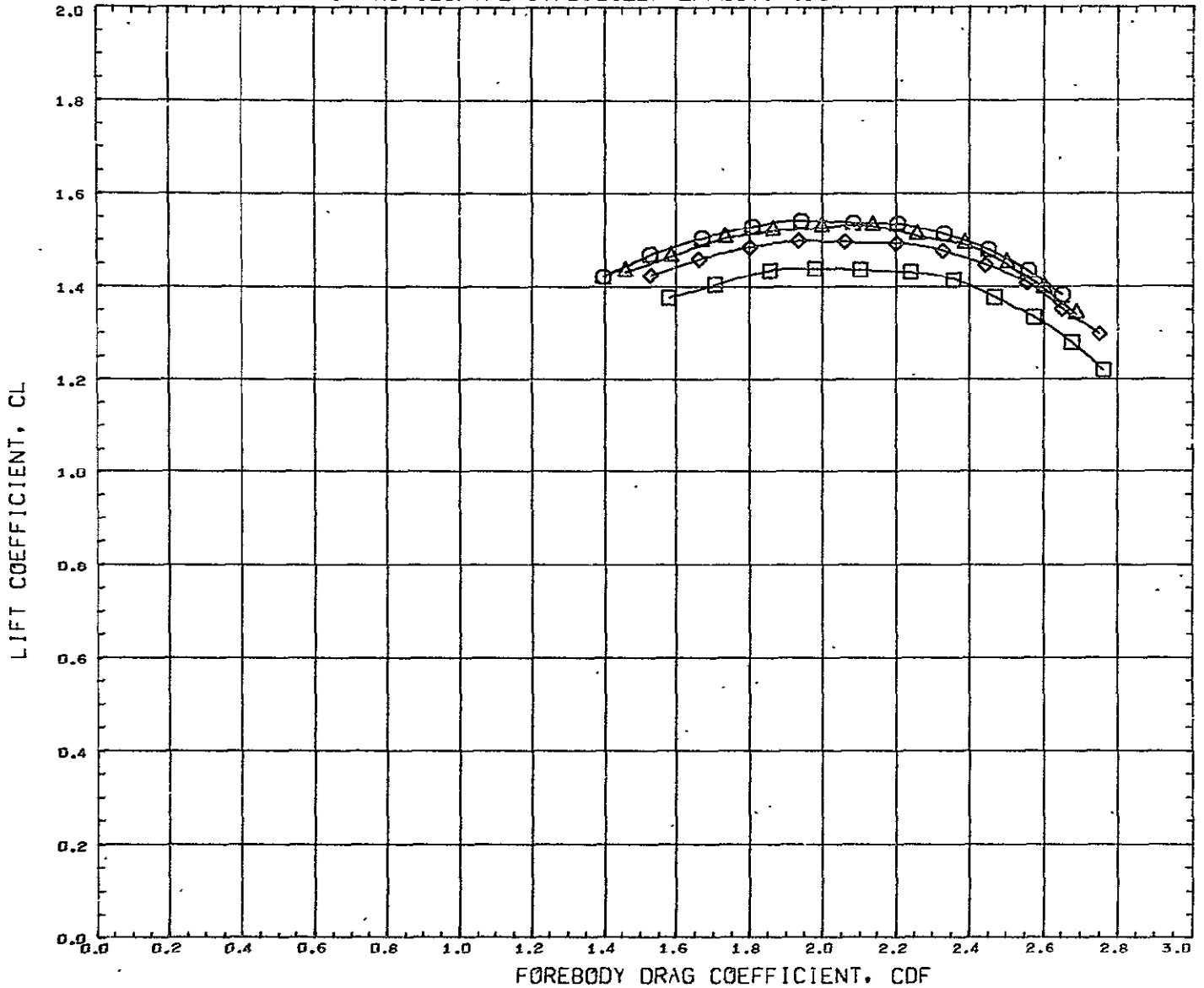
BETA	HTAIL	AILRON
0.000	0.000	0.000
0.000	10.000	0.000
0.000	20.000	0.000
0.000	30.000	0.000

REFERENCE INFORMATION

REFS	3084.0040	SQ FT
REFL	322.9004	INCHES
REFB	1490.0040	INCHES
XMRP	1293.0040	INCHES
YMRP	0.0000	INCHES
ZMRP	50.5000	INCHES
SCALE	0.0035	SCALE

MACH 4.959

STRAIGHT WING ORBITER-HORIZONTAL STABILIZER EFFECTS (BODY+WING+MID-HORIZONTAL)

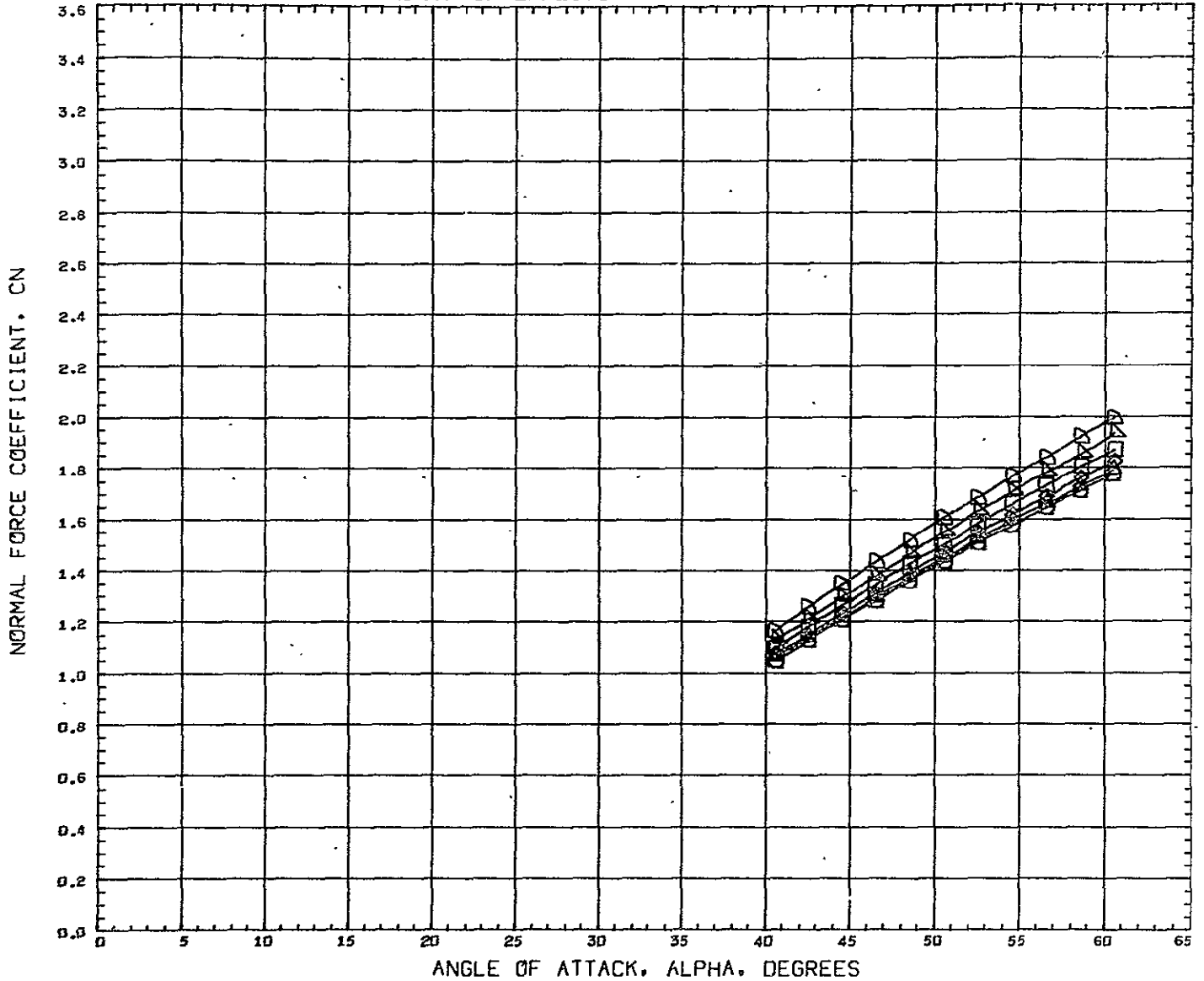


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	HTAIL	AILRON	REFERENCE INFORMATION
(C2712C)	MSFC478 NR ST ORBITER B6WIDH12	0.000	0.000	0.000	REFS 3084.0040 SQ FT.
(C2713C)	MSFC478 NR ST ORBITER B6WIDH12	0.000	10.000	0.000	REFL 322.9004 INCHES
(C2714C)	MSFC478 NR ST ORBITER B6WIDH12	0.000	20.000	0.000	REFB 1490.0040 INCHES
(C2715C)	MSFC478 NR ST ORBITER B5WIDH12	0.000	30.000	0.000	XMRP 1293.0040 INCHES
					YMRP 0.0000 INCHES
					ZMRP - 50.5000 INCHES
					SCALE 0.0035 SCALE

MACH 4.959

STRAIGHT WING ORBITER- ELEVATOR EFFECTS

(BODY + LOW-HORIZONTAL)

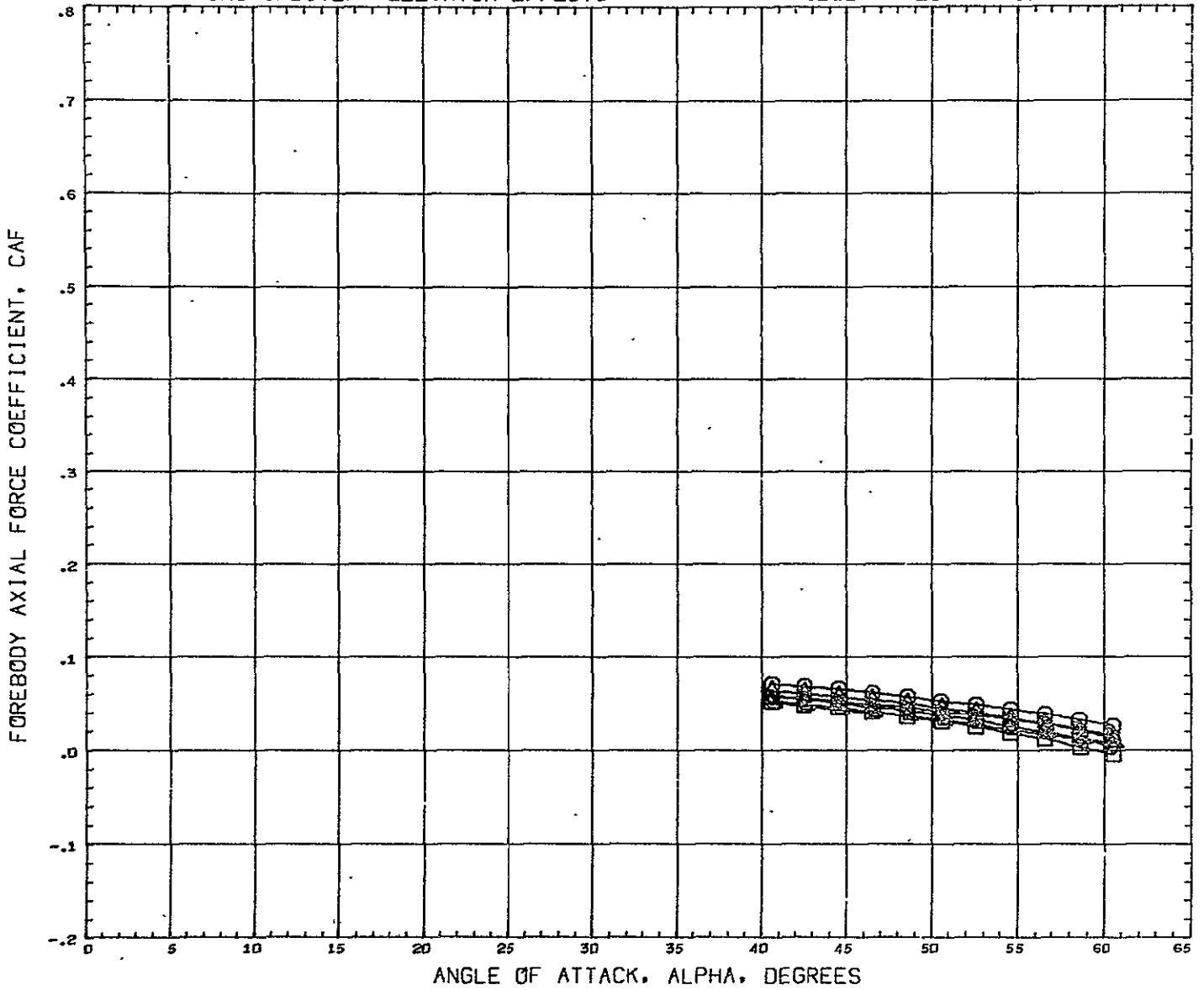


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELVATR	AILRON.	REFERENCE INFORMATION
(C2729C)	HSFC478 NR ST ORBITER B6H16E14	0.000	-50.000	0.000	REFS 3084.0040 SQ FT
(C2728C)	HSFC478 NR ST ORBITER B6H16E14	0.000	-40.000	0.000	REFL 322.9004 INCHES
(C2727C)	HSFC478 NR ST ORBITER B6H16E14	0.000	-30.000	0.000	REFB 1490.0040 INCHES
(C2726C)	HSFC478 NR ST ORBITER B6H16E14	0.000	-20.000	0.000	XMRP 1293.0040 INCHES
(C2725C)	HSFC478 NR ST ORBITER B6H16E14	0.000	-10.000	0.000	YMRP 0.0000 INCHES
(C2721C)	HSFC478 NR ST ORBITER B6H16E14	0.000	0.000	0.000	ZMRP - 50.5000 INCHES
					SCALE 0.0035 SCALE

PACH 4.959

STRAIGHT WING ORBITER- ELEVATOR EFFECTS

(BODY + LOW-HORIZONTAL)

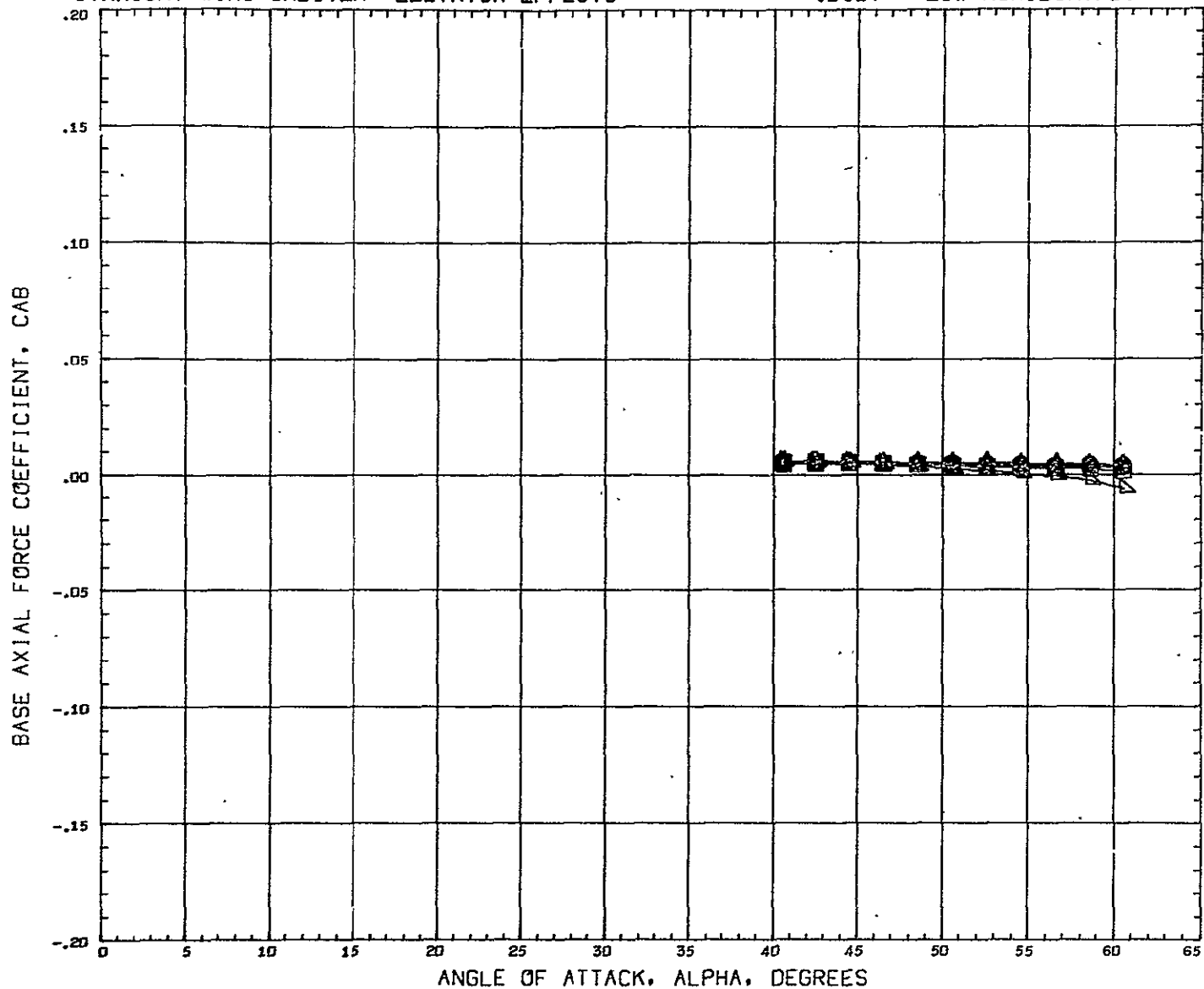


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELVATR	AILRON	REFERENCE INFORMATION
(C2729C)	MSFC478 NR ST ORBITER B6H16E14	0.000	-50.000	0.000	REFS 3084.0040 SQ FT
(C2728C)	MSFC478 NR ST ORBITER B6H16E14	0.000	-40.000	0.000	REFL 322.9004 INCHES
(C2727C)	MSFC478 NR ST ORBITER B6H16E14	0.000	-30.000	0.000	REFB 1490.0040 INCHES
(C2726C)	MSFC478 NR ST ORBITER B6H16E14	0.000	-20.000	0.000	XMRP 1293.0040 INCHES
(C2725C)	MSFC478 NR ST ORBITER B6H16E14	0.000	-10.000	0.000	YMRP 0.0000 INCHES
(C2721C)	MSFC478 NR ST ORBITER B6H16E14	0.000	0.000	0.000	ZMRP 50.5000 INCHES
					SCALE 0.0035 SCALE

MACH 4.909

STRAIGHT WING ORBITER- ELEVATOR EFFECTS

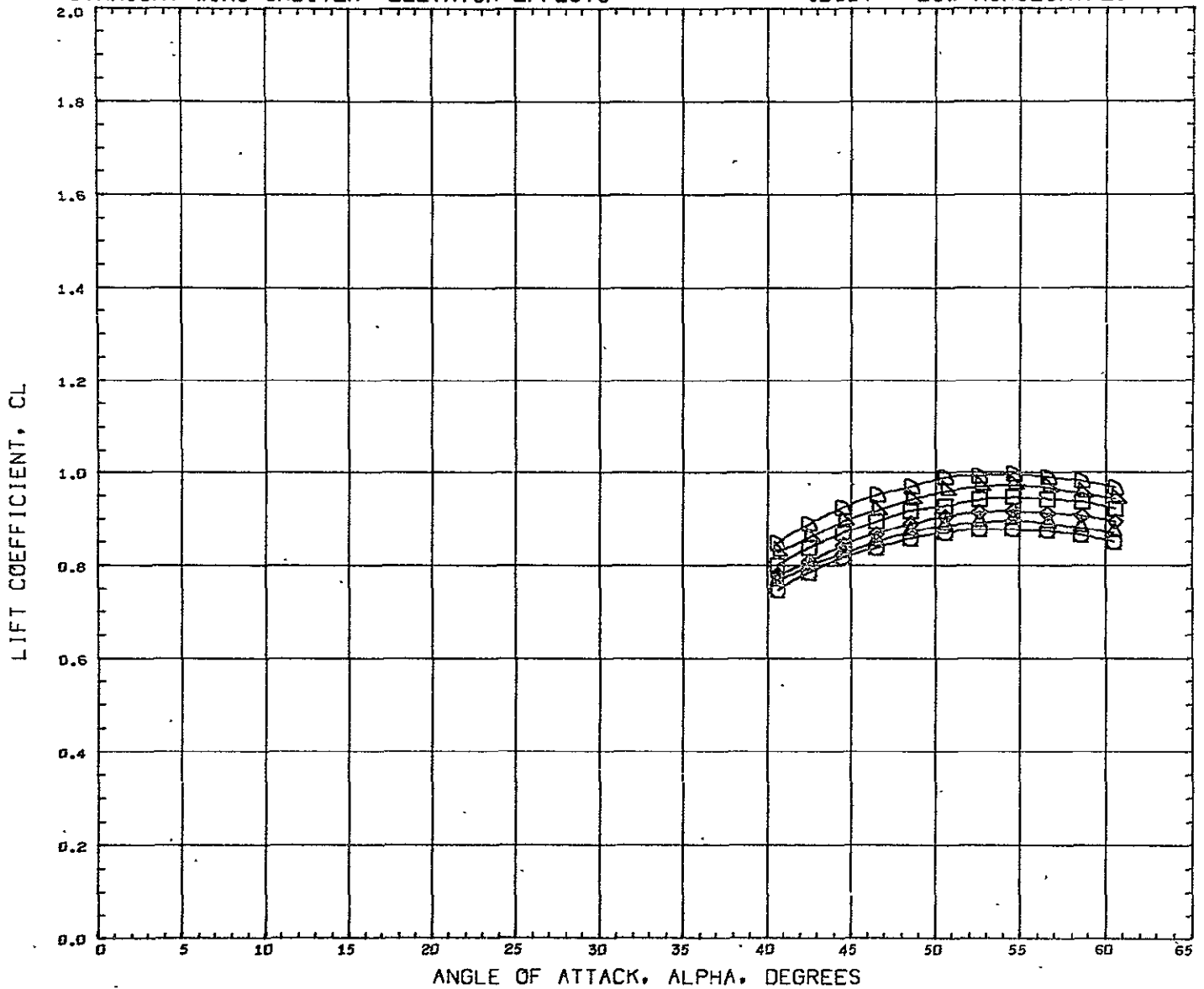
(BODY + LOW-HORIZONTAL)



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELVATR	AILRON	REFERENCE INFORMATION
(C2729C)	MSFC478 NR ST ORBITER B6H16E14	0.000	-50.000	0.000	REFS 3084.0040 SQ FT
(C2728C)	MSFC478 NR ST ORBITER B6H16E14	0.000	-40.000	0.000	REFL 522.9004 INCHES
(C2727C)	MSFC478 NR ST ORBITER B6H16E14	0.000	-30.000	0.000	REFB 1490.0040 INCHES
(C2726C)	MSFC478 NR ST ORBITER B6H16E14	0.000	-20.000	0.000	XMRP 1293.0040 INCHES
(C2725C)	MSFC478 NR ST ORBITER B6H16E14	0.000	-10.000	0.000	YMRP 0.0000 INCHES
(C2721C)	MSFC478 NR ST ORBITER B6H16E14	0.000	0.000	0.000	ZMRP - 50.5000 INCHES
	MACH 4.959				SCALE 0.0035 SCALE

STRAIGHT WING ORBITER- ELEVATOR EFFECTS

(BODY + LOW-HORIZONTAL)

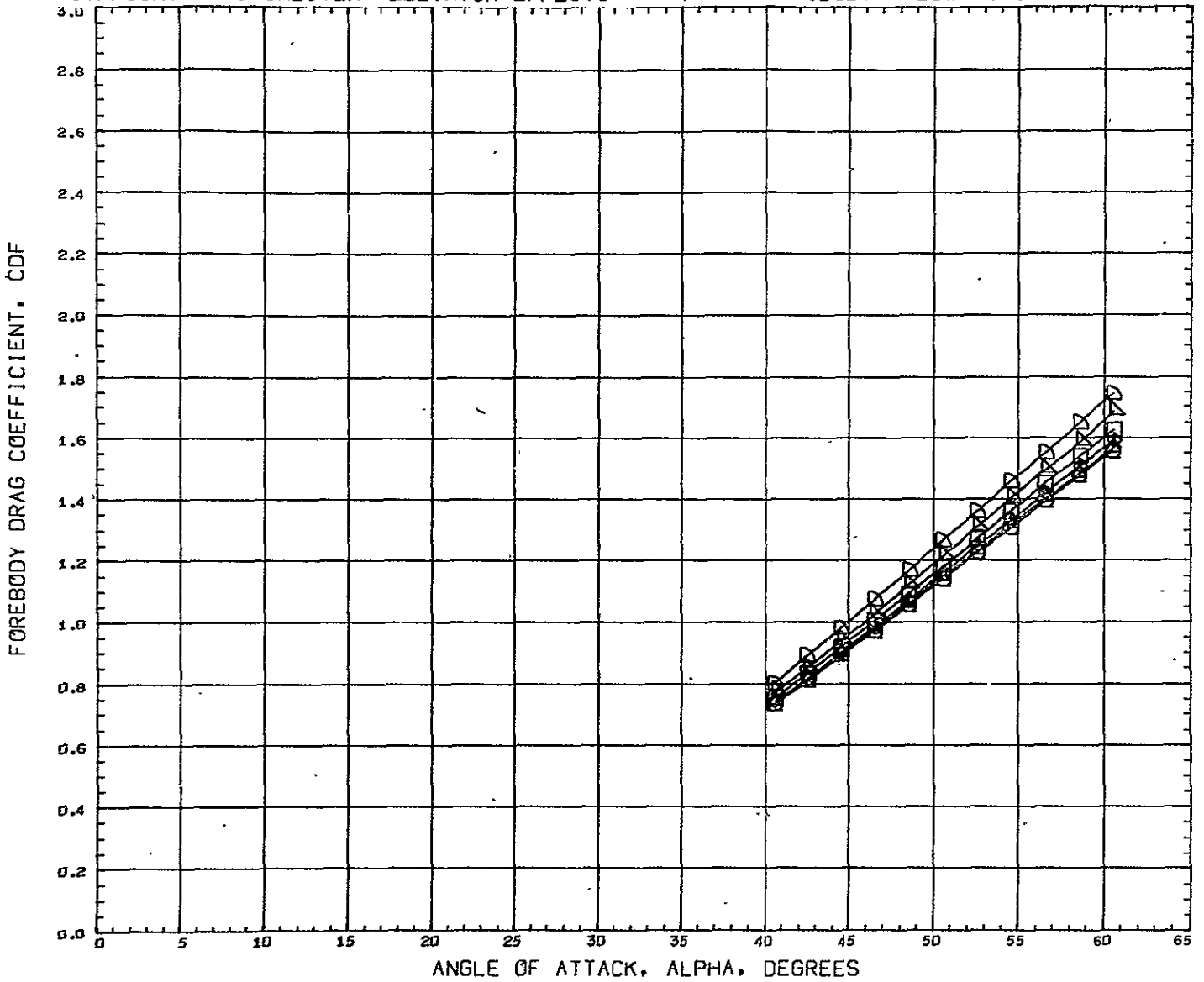


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELVATR	AILRON	REFERENCE INFORMATION
(C2729C)	MSFC478 NR ST ORBITER B6H16E14	0.000	-50.000	0.000	REFS 3084.0040 SQ FT
(C2728C)	MSFC478 NR ST ORBITER B6H16E14	0.000	-40.000	0.000	REFL 322.9004 INCHES
(C2727C)	MSFC478 NR ST ORBITER B6H16E14	0.000	-30.000	0.000	REFB 1490.0040 INCHES
(C2726C)	MSFC478 NR ST ORBITER B6H16E14	0.000	-20.000	0.000	XMRP 1293.0040 INCHES
(C2725C)	MSFC478 NR ST ORBITER B6H16E14	0.000	-10.000	0.000	YMRP 0.0000 INCHES
(C2721C)	MSFC478 NR ST ORBITER B6H16E14	0.000	0.000	0.000	ZMRP - 50.5000 INCHES
					SCALE 0.0035 SCALE

MACH 4.959

STRAIGHT WING ORBITER- ELEVATOR EFFECTS

(BODY + LOW-HORIZONTAL)

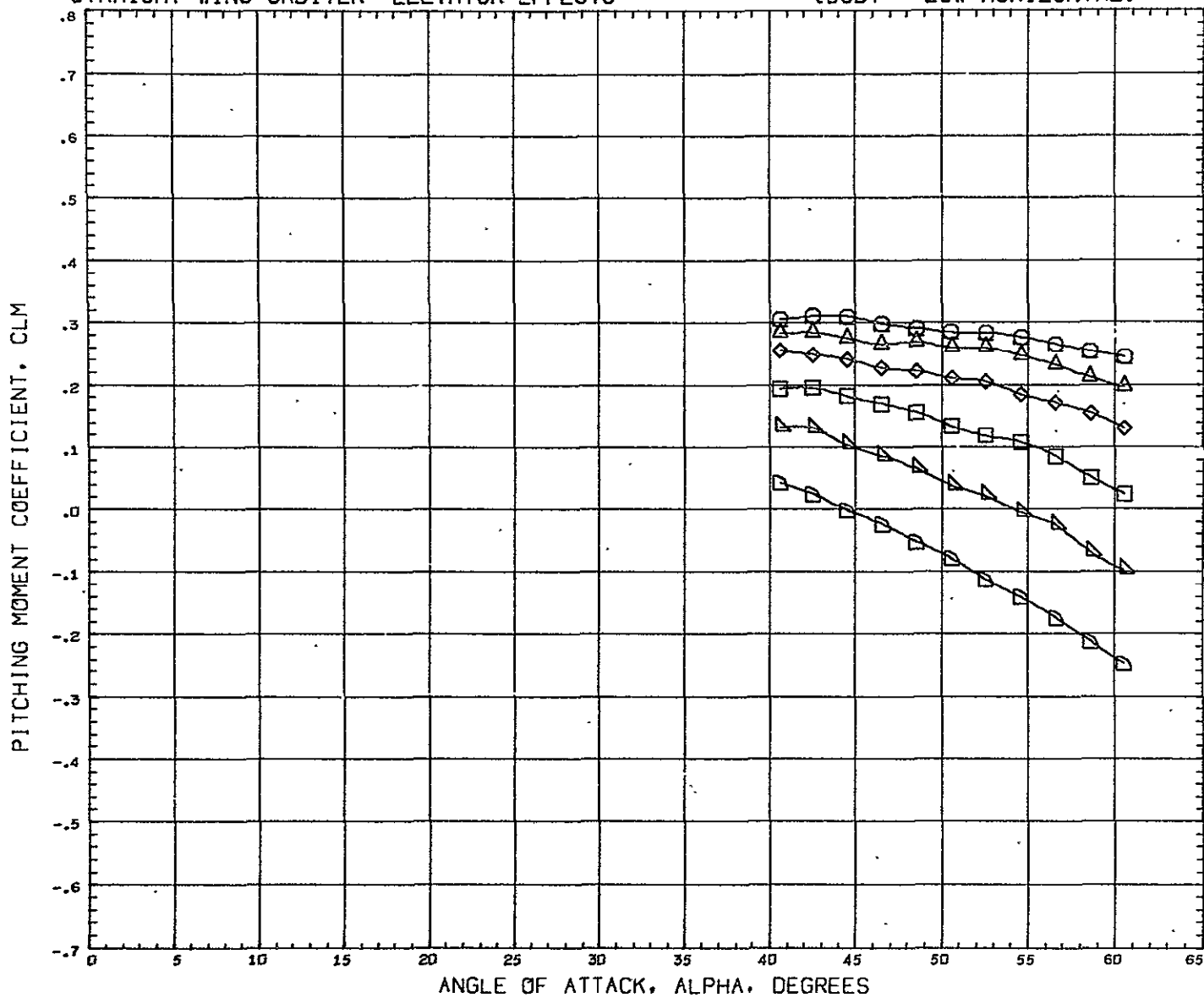


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELVATR	AILRON	REFERENCE INFORMATION
(C2729C)	MSFC478 NR ST ORBITER B6H16E14	0.000	-50.000	0.000	REFS 3084.0040 SQ FT
(C2728C)	MSFC478 NR ST ORBITER B6H16E14	0.000	-40.000	0.000	REFL 322.9004 INCHES
(C2727C)	MSFC478 NR ST ORBITER B6H16E14	0.000	-30.000	0.000	REFB 1490.0040 INCHES
(C2726C)	MSFC478 NR ST ORBITER B6H16E14	0.000	-20.000	0.000	XMRP 1293.0040 INCHES
(C2725C)	MSFC478 NR ST ORBITER B6H16E14	0.000	-10.000	0.000	YMRP 0.0000 INCHES
(C2721C)	MSFC478 NR ST ORBITER B6H16E14	0.000	0.000	0.000	ZMRP - 50.5000 INCHES
					SCALE 0.0035 SCALE

MACH 4.959

STRAIGHT WING ORBITER- ELEVATOR EFFECTS

(BODY + LOW-HORIZONTAL)

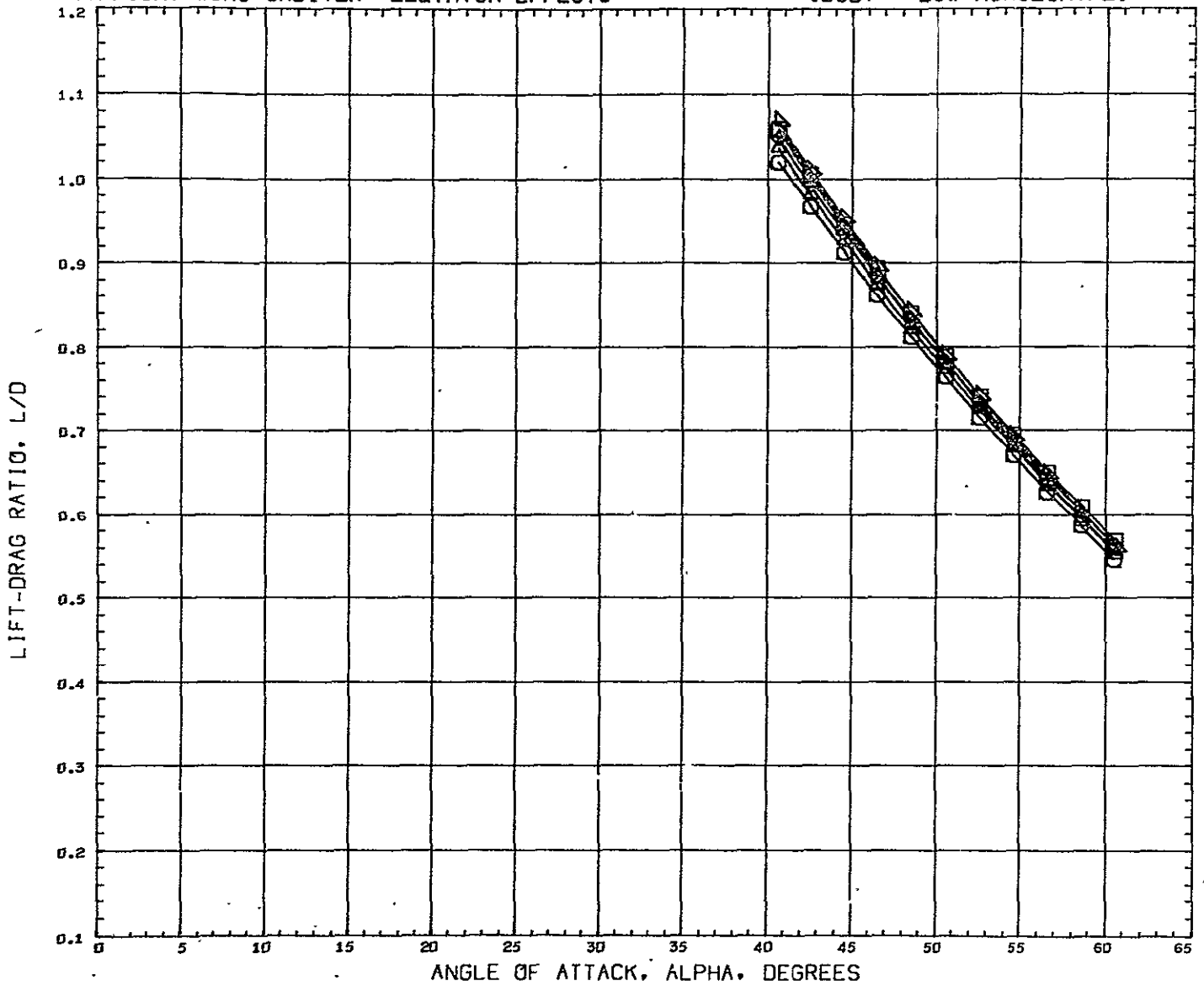


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELVATR	AILRON	REFERENCE INFORMATION
(C2729C)	MSFC478 NR ST ORBITER B6H16E14	0.000	-50.000	0.000	REFS 3084.0040 SQ FT
(C2728C)	MSFC478 NR ST ORBITER B6H16E14	0.000	-40.000	0.000	REFL 322.9004 INCHES
(C2727C)	MSFC478 NR ST ORBITER B6H16E14	0.000	-30.000	0.000	REFB 1490.0040 INCHES
(C2726C)	MSFC478 NR ST ORBITER B6H16E14	0.000	-20.000	0.000	XMRP 1293.0040 INCHES
(C2725C)	MSFC478 NR ST ORBITER B6H16E14	0.000	-10.000	0.000	YMRP 0.0000 INCHES
(C2721C)	MSFC478 NR ST ORBITER B6H16E14	0.000	0.000	0.000	ZMRP 50.5000 INCHES
					SCALE 0.0035 SCALE

MACH 4.959

STRAIGHT WING ORBITER- ELEVATOR EFFECTS

(BODY + LOW-HORIZONTAL)

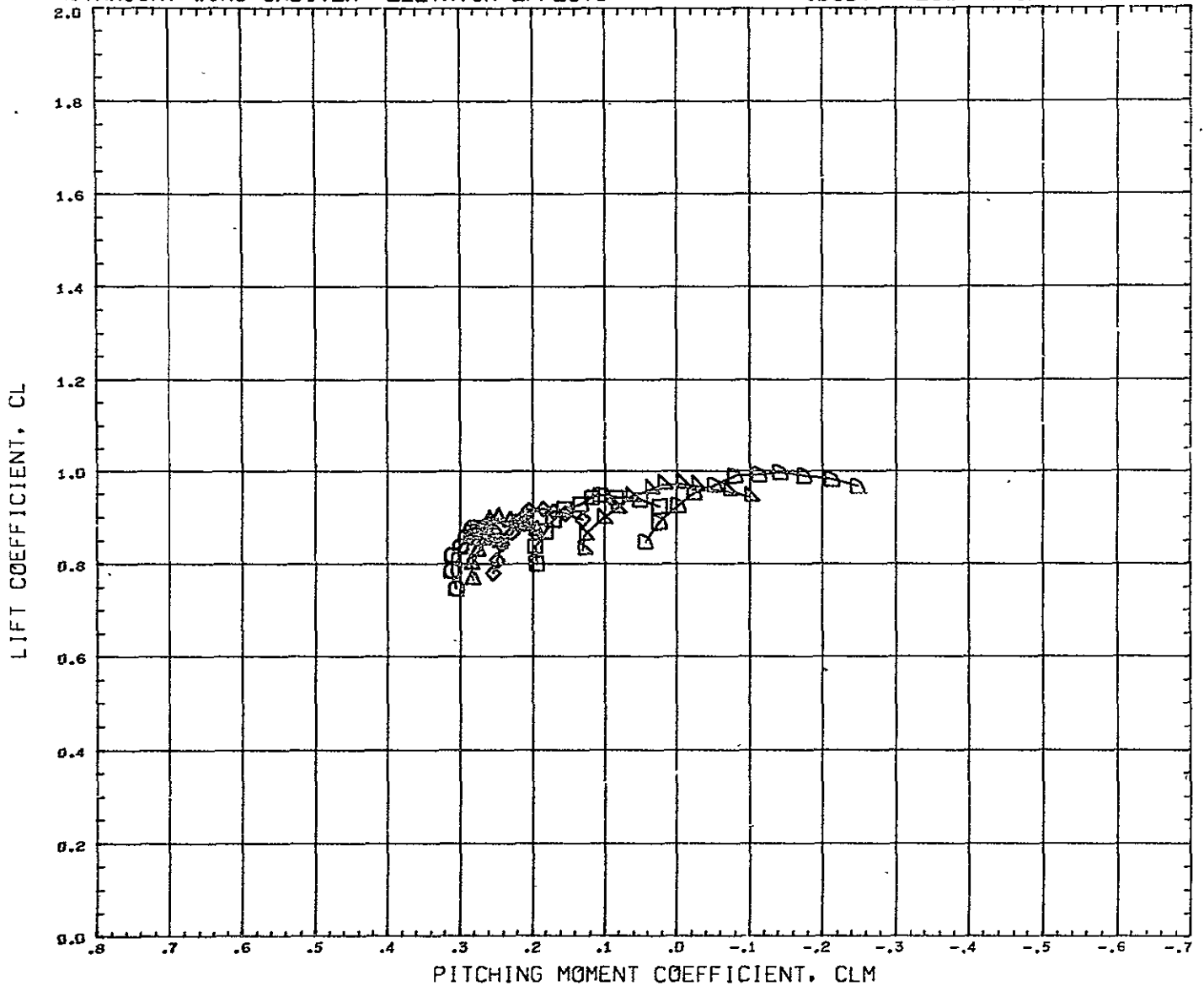


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELVATR	AILRON	REFERENCE INFORMATION
(C2729C)	MSFC478 NR ST ORBITER B6H16E14	0.000	-50.000	0.000	REFS 3084.0040 SQ FT
(C2728C)	MSFC478 NR ST ORBITER B6H16E14	0.000	-40.000	0.000	REFL 322.9004 INCHES
(C2727C)	MSFC478 NR ST ORBITER B6H16E14	0.000	-30.000	0.000	REFB 1490.0040 INCHES
(C2726C)	MSFC478 NR ST ORBITER B6H16E14	0.000	-20.000	0.000	XMRF 1293.0040 INCHES
(C2725C)	MSFC478 NR ST ORBITER B6H16E14	0.000	-10.000	0.000	YMRF 0.0000 INCHES
(C2721C)	MSFC478 NR ST ORBITER B6H16E14	0.000	0.000	0.000	ZMRF - 50.5000 INCHES
					SCALE 0.0035 SCALE

MACH 4.959

STRAIGHT WING ORBITER- ELEVATOR EFFECTS

(BODY + LOW-HORIZONTAL)

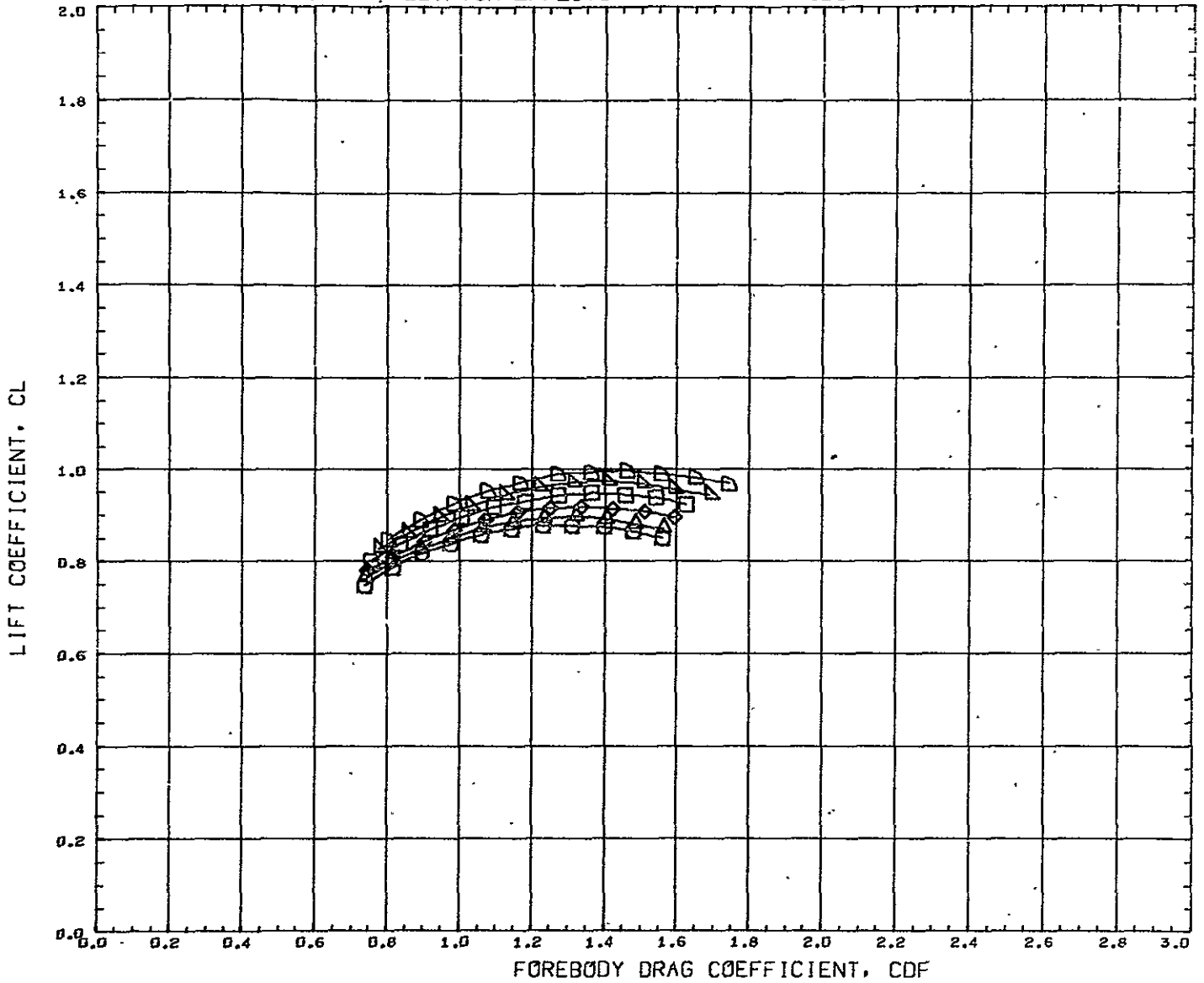


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELVATR	AILRON	REFERENCE INFORMATION
(C2729C)	MSFC478 NR ST ORBITER 06H16E14	0.000	-50.000	0.000	REFS 3084.0040 SQ FT
(C2728C)	MSFC478 NR ST ORBITER 06H16E14	0.000	-40.000	0.000	REFL 322.9004 INCHES
(C2727C)	MSFC478 NR ST ORBITER 06H16E14	0.000	-30.000	0.000	REFB 1490.0040 INCHES
(C2726C)	MSFC478 NR ST ORBITER 06H16E14	0.000	-20.000	0.000	XMRP 1293.0040 INCHES
(C2725C)	MSFC478 NR ST ORBITER 06H16E14	0.000	-10.000	0.000	YMRP 0.0000 INCHES
(C2723C)	MSFC478 NR ST ORBITER 06H16E14	0.000	0.000	0.000	ZMRP - 50.5000 INCHES
					SCALE 0.0035 SCALE

HACH 4.959

STRAIGHT WING ORBITER- ELEVATOR EFFECTS

(BODY + LOW-HORIZONTAL)

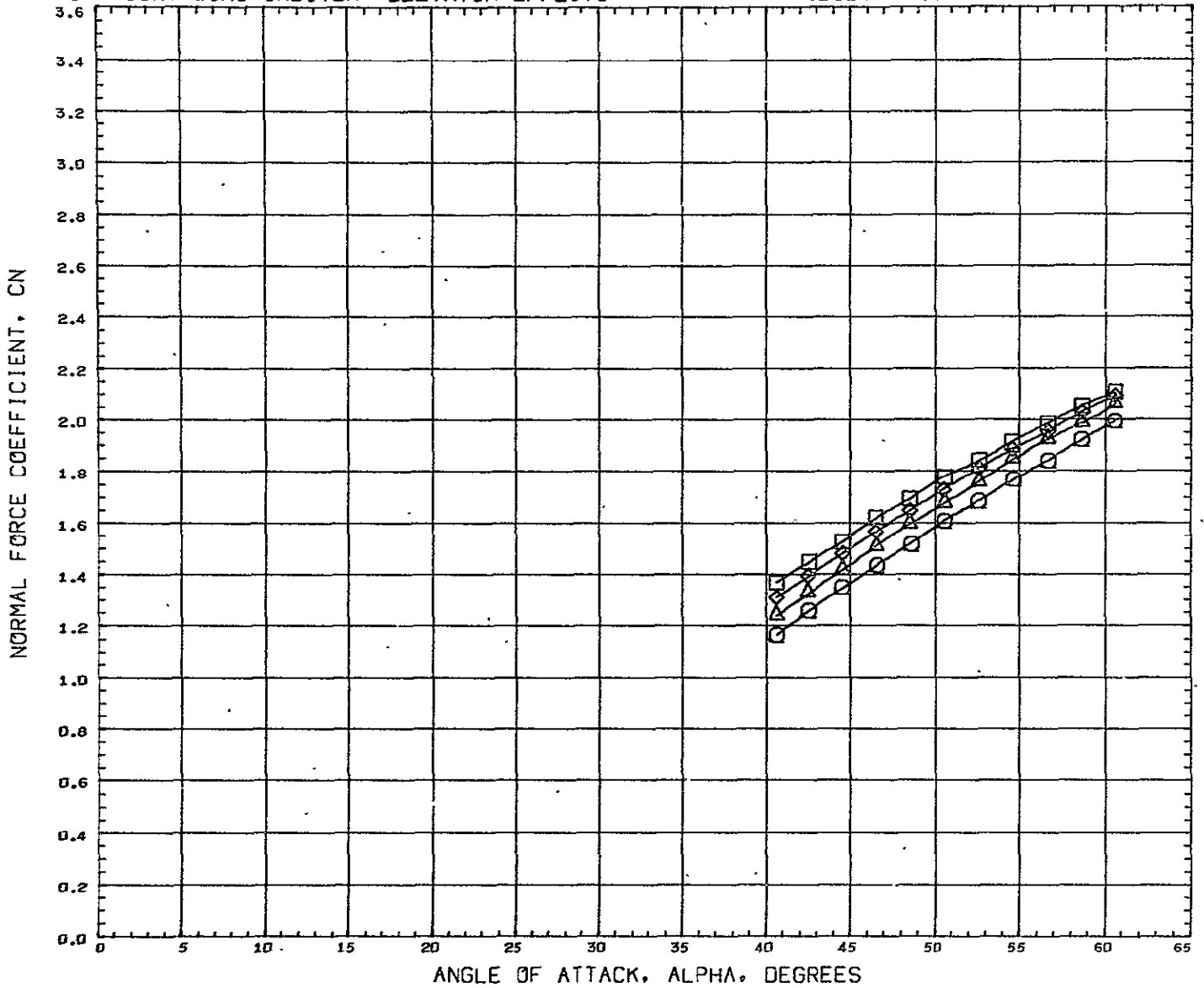


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELVATR	AILRON	REFERENCE INFORMATION
(C2729C)	MSFC478 NR ST ORBITER B6H16E14	0.000	-50.000	0.000	REFS 3084.0040 SQ FT
(C2728C)	MSFC478 NR ST ORBITER B6H16E14	0.000	-40.000	0.000	REFL 322.9004 INCHES
(C2727C)	MSFC478 NR ST ORBITER B6H16E14	0.000	-30.000	0.000	REFB 1490.0040 INCHES
(C2726C)	MSFC478 NR ST ORBITER B6H16E14	0.000	-20.000	0.000	XMRP 1293.0040 INCHES
(C2725C)	MSFC478 NR ST ORBITER B6H16E14	0.000	-10.000	0.000	YMRP 0.0000 INCHES
(C2724C)	MSFC478 NR ST ORBITER B6H16E14	0.000	0.000	0.000	ZMRP - 50.5000 INCHES
					SCALE 0.0035 SCALE

HACH 4.959

STRAIGHT WING ORBITER- ELEVATOR EFFECTS

(BODY + LOW-HORIZONTAL)



DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(C2721C)	MSFC478 NR ST ORBITER B6H16E14
(C2722C)	MSFC478 NR ST ORBITER B6H16E14
(C2723C)	MSFC478 NR ST ORBITER B6H16E14
(C2724C)	MSFC478 NR ST ORBITER B6H16E14

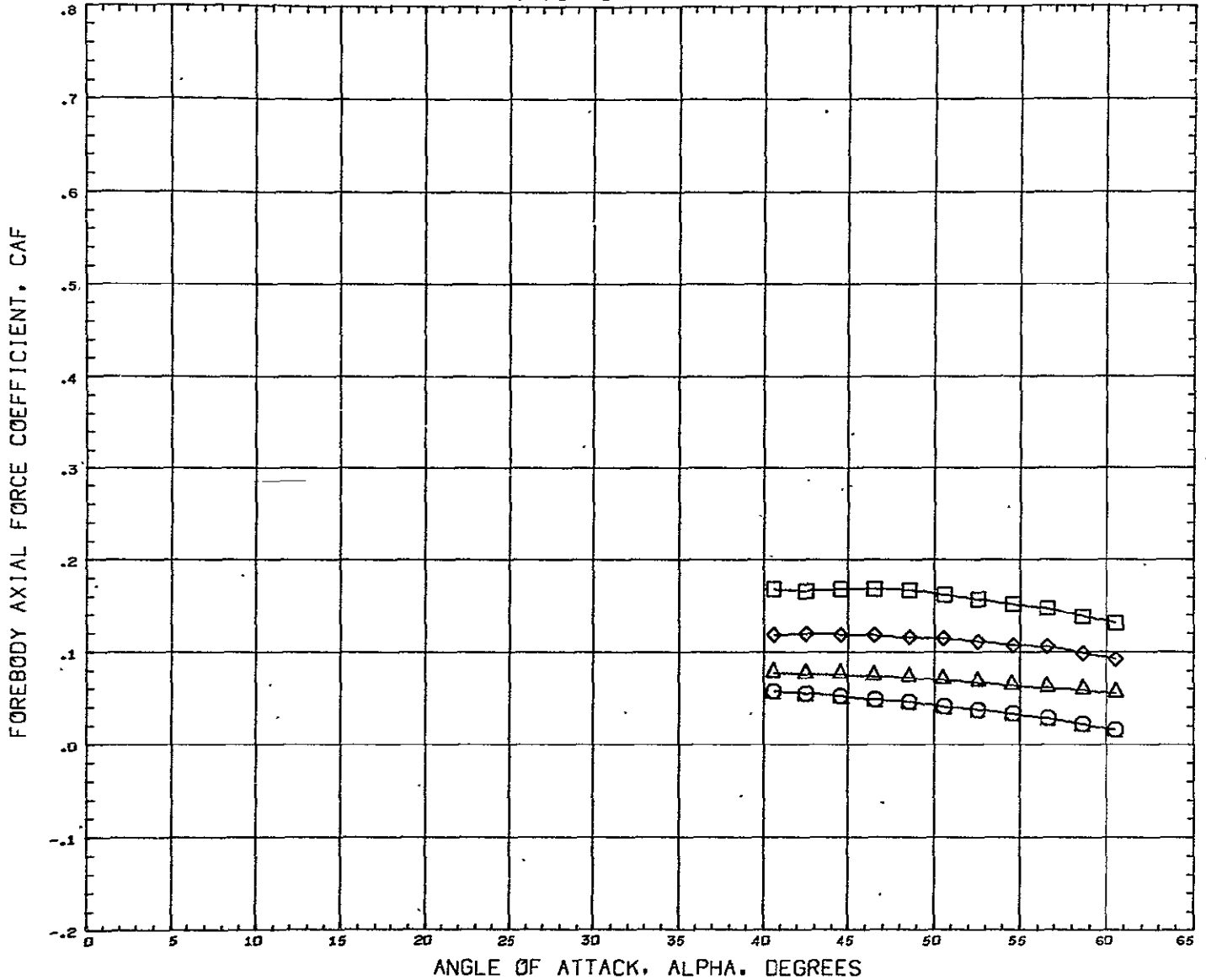
BETA	ELVATR	AILRON
0.000	0.000	0.000
0.000	10.000	0.000
0.000	20.000	0.000
0.000	30.000	0.000

REFERENCE INFORMATION		
REFS	3084.0040	SQ FT
REFL	322.9004	INCHES
REFD	1490.0040	INCHES
XMRP	1293.0040	INCHES
YMRP	0.0000	INCHES
ZMRP	50.5000	INCHES
SCALE	0.0035	SCALE

MACH 4.959

STRAIGHT WING ORBITER- ELEVATOR EFFECTS

(BODY + LOW-HORIZONTAL)



DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(C2721C)	MSFC478 NR ST ORBITER B6H16E14
(C2722C)	MSFC478 NR ST ORBITER B6H16E14
(C2723C)	MSFC478 NR ST ORBITER B6H16E14
(C2724C)	MSFC478 NR ST ORBITER B6H16E14

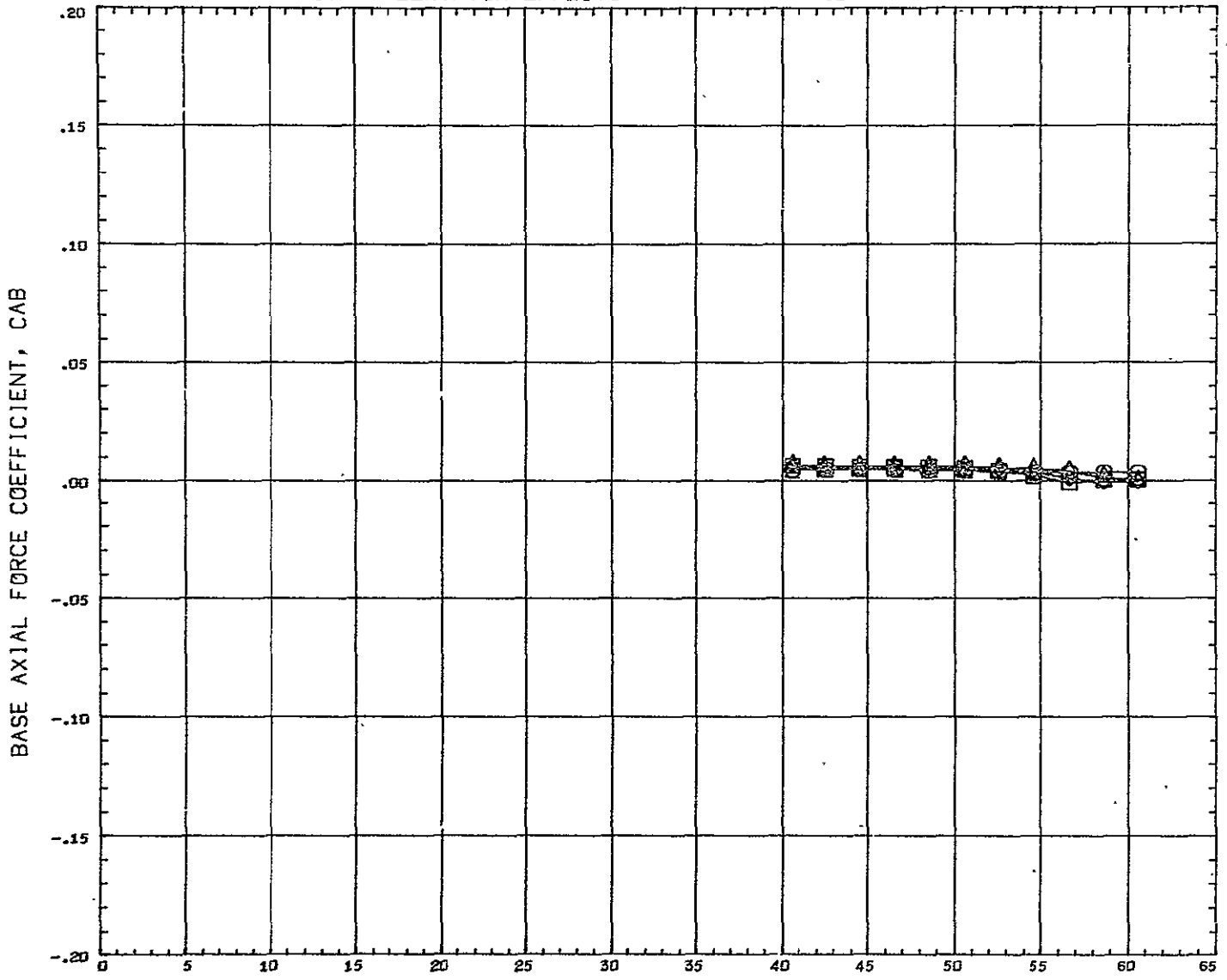
BETA	ELVATR	AILRON
0.000	0.000	0.000
0.000	10.000	0.000
0.000	20.000	0.000
0.000	30.000	0.000

REFERENCE INFORMATION	
REFS	3084.0040 SQ FT
REFL	322.9004 INCHES
REFB	1490.0040 INCHES
XMRP	1293.0040 INCHES
YMRP	0.0000 INCHES
ZMRP	50.5000 INCHES
SCALE	0.0035 SCALE

MACH 4.959

STRAIGHT WING ORBITER- ELEVATOR EFFECTS

(BODY + LOW-HORIZONTAL)



DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(C2721C)	MSFC478 NR ST ORBITER B6H16E14
(C2722C)	MSFC478 NR ST ORBITER B6H16E14
(C2723C)	MSFC478 NR ST ORBITER B6H16E14
(C2724C)	MSFC478 NR ST ORBITER B6H16E14

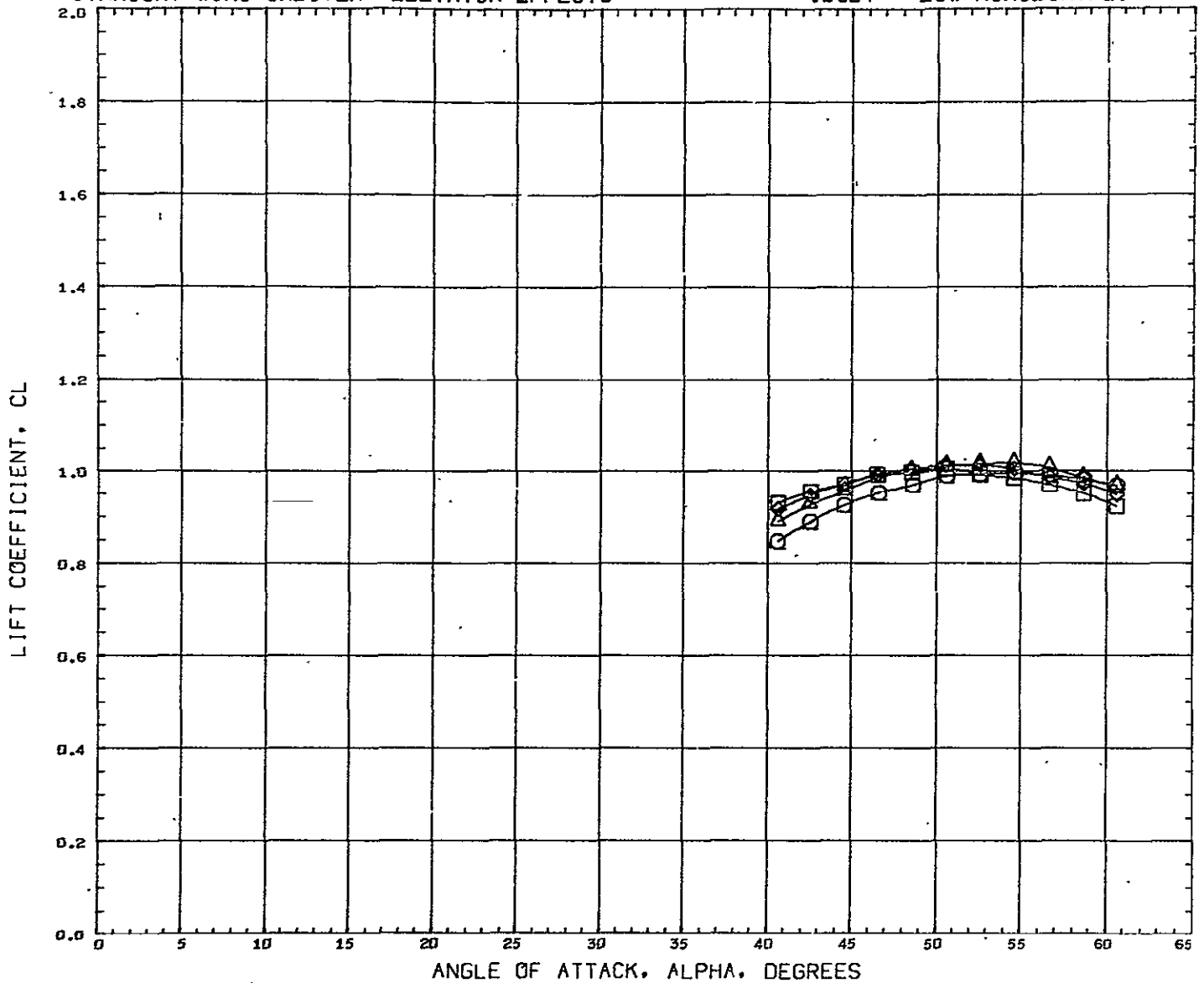
BETA	ELVATR	AILRON
0.000	0.000	0.000
0.000	10.000	0.000
0.000	20.000	0.000
0.000	30.000	0.000

REFERENCE INFORMATION		
REFS	3084.0040	SQ FT
REFL	322.9004	INCHES
REFB	1490.0040	INCHES
XMRP	1293.0040	INCHES
YMRP	0.0000	INCHES
ZMRP	50.5000	INCHES
SCALE	0.0035	SCALE

MACH 4.959

STRAIGHT WING ORBITER- ELEVATOR EFFECTS

(BODY + LOW-HORIZONTAL)

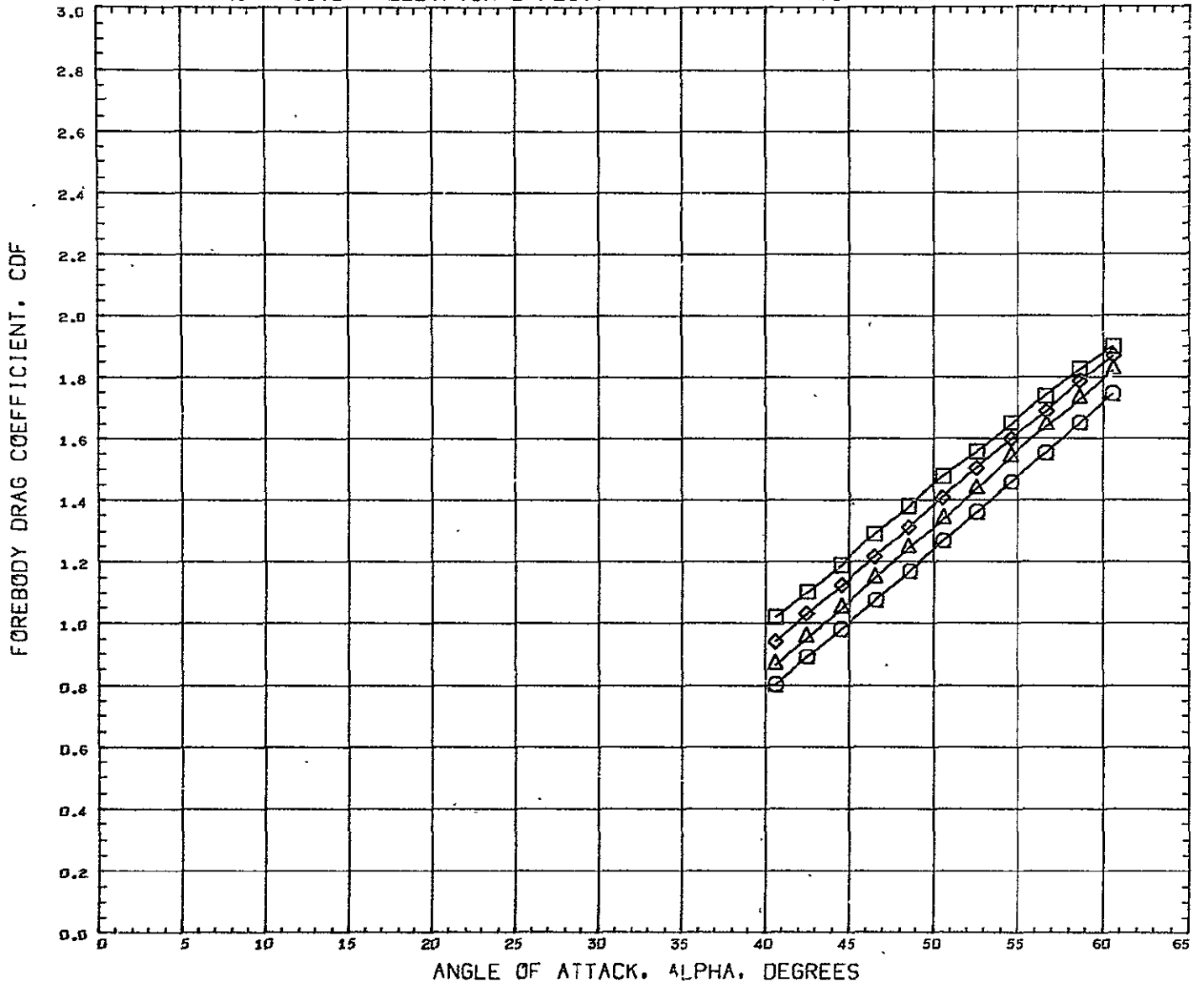


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELVATR	AILRON	REFERENCE INFORMATION
(C2721C)	MSFC478 NR ST ORBITER B6H16E14	0.000	0.000	0.000	REFS 3084.0040 SQ FT
(C2722C)	MSFC478 NR ST ORBITER B6H16E14	0.000	10.000	0.000	REFL 322.9004 INCHES
(C2723C)	MSFC478 NR ST ORBITER B6H16E14	0.000	20.000	0.000	REFB 1490.0040 INCHES
(C2724C)	MSFC478 NR ST ORBITER B6H16E14	0.000	30.000	0.000	XMRP 1293.0040 INCHES
					YMRP 0.0000 INCHES
					ZMRP - 50.5000 INCHES
					SCALE 0.0035 SCALE

MACH 4.959

STRAIGHT WING ORBITER- ELEVATOR EFFECTS

(BODY + LOW-HORIZONTAL)

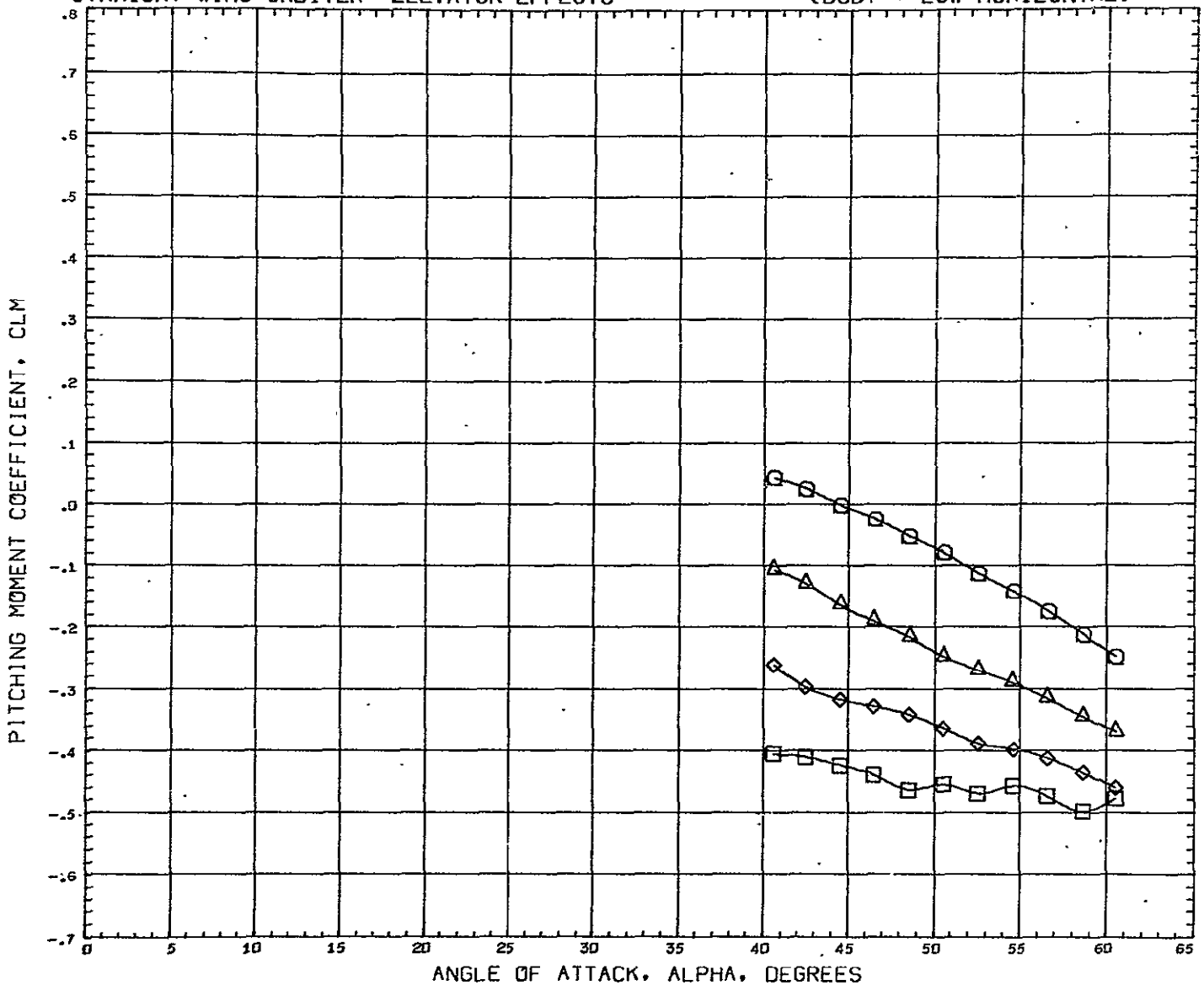


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELVATR	AILRON	REFERENCE INFORMATION
(C2721C)	MSFC478 NR ST ORBITER 66H16E14	0.000	0.000	0.000	REFS 3084.0040 SQ FT
(C2722C)	MSFC478 NR ST ORBITER 66H16E14	0.000	10.000	0.000	REFL 322.9004 INCHES
(C2723C)	MSFC478 NR ST ORBITER 66H16E14	0.000	20.000	0.000	REFB 1490.0040 INCHES
(C2724C)	MSFC478 NR ST ORBITER 66H16E14	0.000	30.000	0.000	XMRP 1293.0040 INCHES
					YMRP 0.0000 INCHES
					ZMRP - 50.5000 INCHES
					SCALE 0.0035 SCALE

PACH 4.959

STRAIGHT WING ORBITER- ELEVATOR EFFECTS

(BODY + LOW-HORIZONTAL)

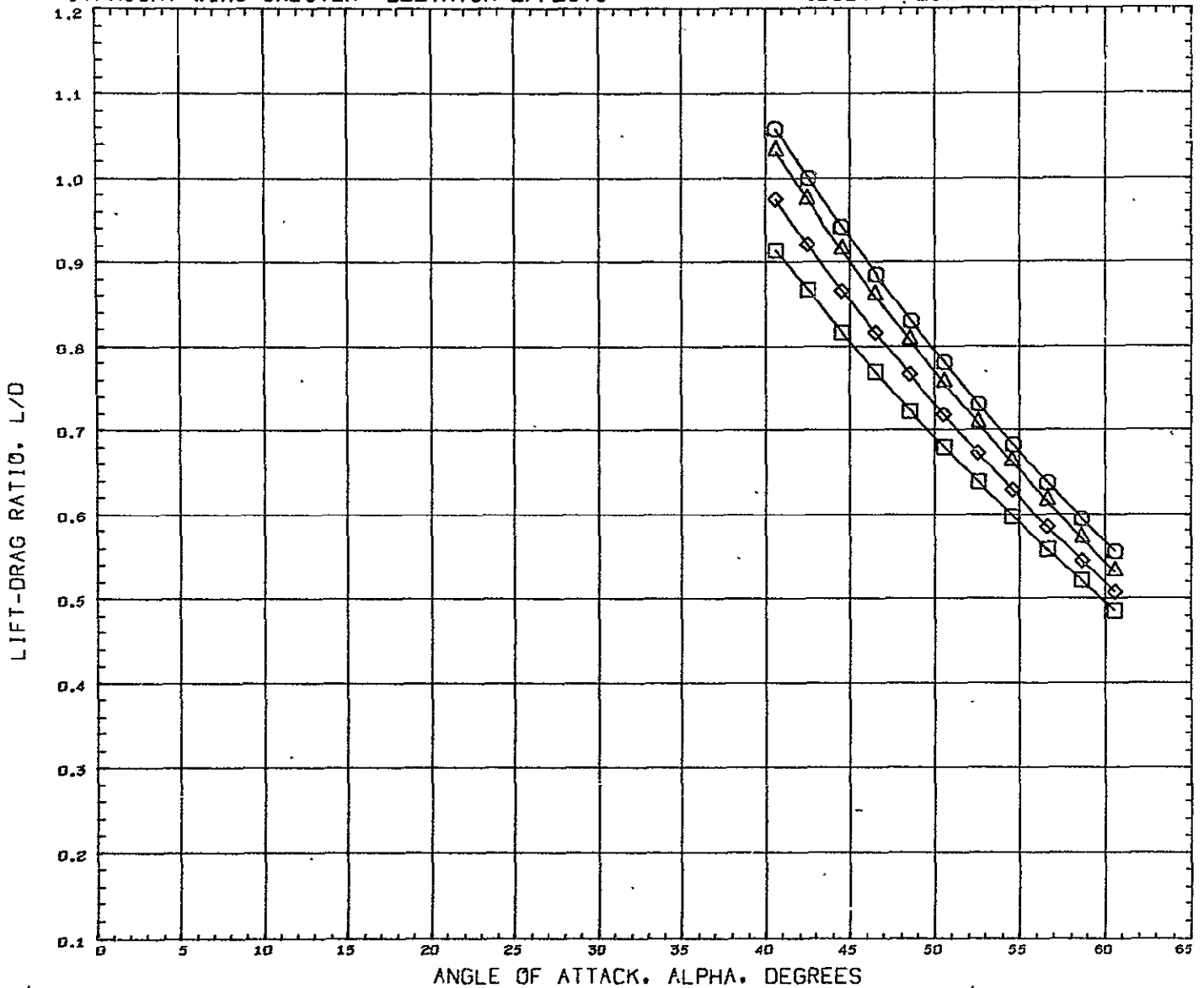


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELVATR	AILRON	REFERENCE INFORMATION
(C2721C)	MSFC478 NR ST ORBITER B6H16E14	0.000	0.000	0.000	REFS 3084.0040 SQ FT
(C2722C)	MSFC478 NR ST ORBITER B6H16E14	0.000	10.000	0.000	REFL 322.9004 INCHES
(C2723C)	MSFC478 NR ST ORBITER B6H16E14	0.000	20.000	0.000	REFB 1490.0040 INCHES
(C2724C)	MSFC478 NR ST ORBITER B6H16E14	0.000	30.000	0.000	XMRP 1293.0040 INCHES
					YMRP 0.0000 INCHES
					ZMRP - 50.5000 INCHES
					SCALE 0.0035 SCALE

MACH 4.959

STRAIGHT WING ORBITER- ELEVATOR EFFECTS

(BODY + LOW-HORIZONTAL)



DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(C2721C) ○	MSFC478 NR ST ORBITER B6H16E14
(C2722C) △	MSFC478 NR ST ORBITER B6H16E14
(C2723C) ◇	MSFC478 NR ST ORBITER B6H16E14
(C2724C) □	MSFC478 NR ST ORBITER B6H16E14

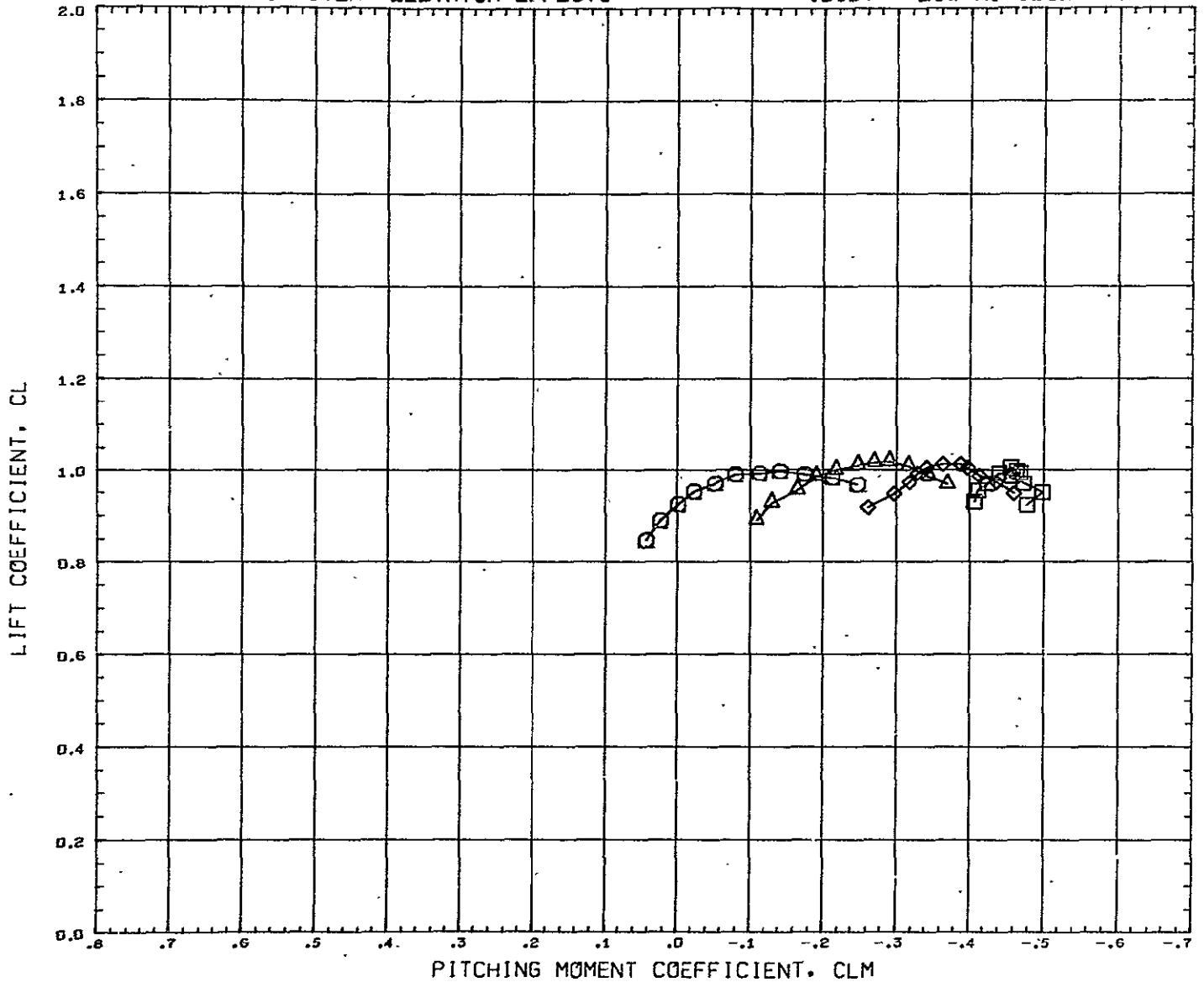
BETA	ELVATR	AILRON
0.000	0.000	0.000
0.000	10.000	0.000
0.000	20.000	0.000
0.000	30.000	0.000

REFERENCE INFORMATION		
REFS	3084.0040	SQ FT
REFL	322.9004	INCHES
REFB	1490.0040	INCHES
XMRP	1293.0040	INCHES
YMRP	0.0000	INCHES
ZMRP	50.5000	INCHES
SCALE	0.0035	SCALE

MACH 4.959

STRAIGHT WING ORBITER- ELEVATOR EFFECTS

(BODY + LOW-HORIZONTAL)



DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(C2721C)	MSFC478 NR ST ORBITER B6H16E14
(C2722C)	MSFC478 NR ST ORBITER B6H16E14
(C2723C)	MSFC478 NR ST ORBITER B6H16E14
(C2724C)	MSFC478 NR ST ORBITER B6H16E14

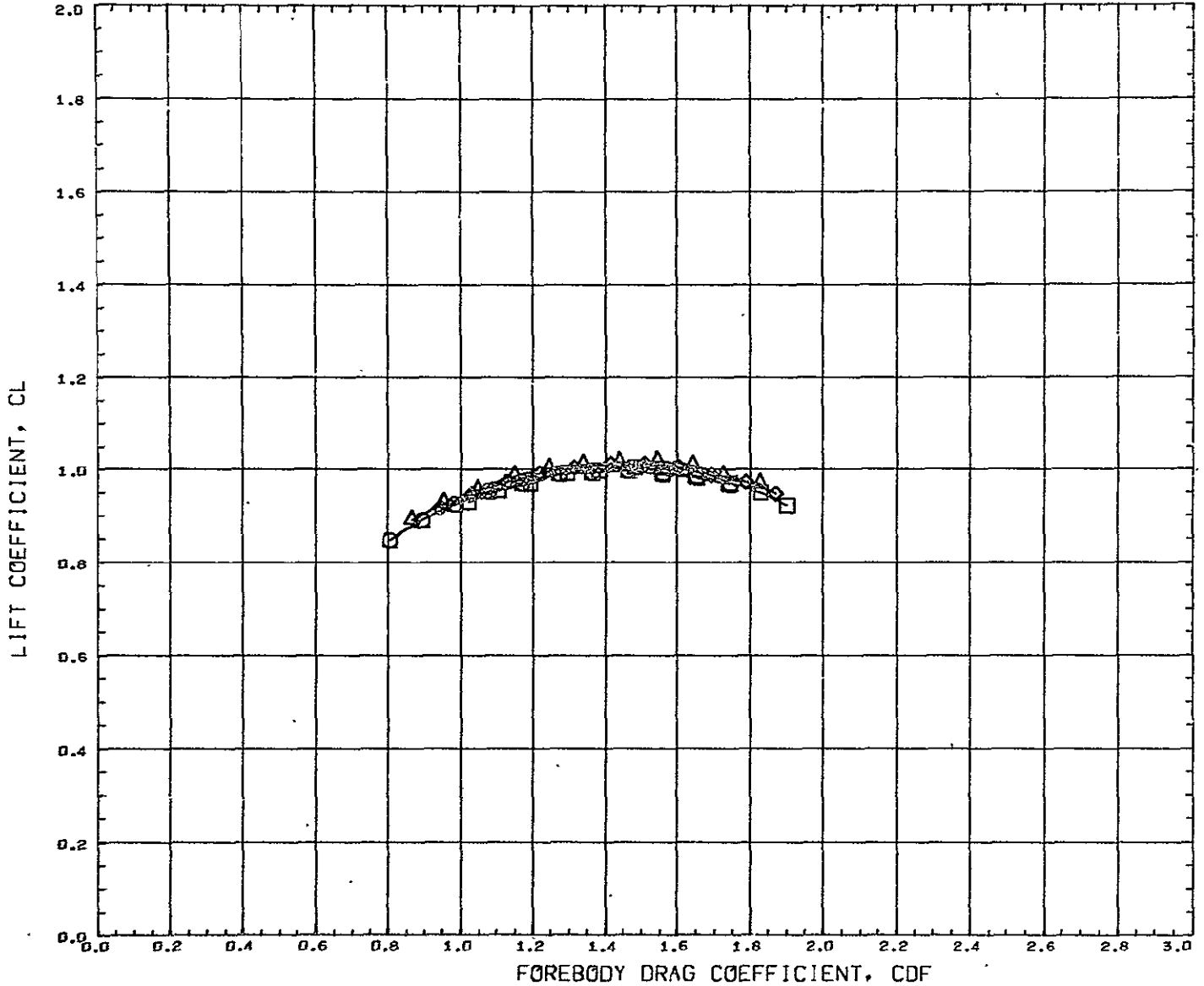
BETA	ELVATR	AILRON
0.000	0.000	0.000
0.000	10.000	0.000
0.000	20.000	0.000
0.000	30.000	0.000

REFERENCE INFORMATION		
REFS	3084.0040	SQ FT
REFL	322.9004	INCHES
REFB	1490.0040	INCHES
XMRP	1293.0040	INCHES
YMRP	0.0000	INCHES
ZMRP	50.5000	INCHES
SCALE	0.0035	SCALE

MACH 4.959

STRAIGHT WING ORBITER- ELEVATOR EFFECTS

(BODY + LOW-HORIZONTAL)



DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(C2721C)	MSFC478 NR ST ORBITER B6H16E14
(C2722C)	MSFC478 NR ST ORBITER B6H16E14
(C2723C)	MSFC478 NR ST ORBITER B6H16E14
(C2724C)	MSFC478 NR ST ORBITER B6H16E14

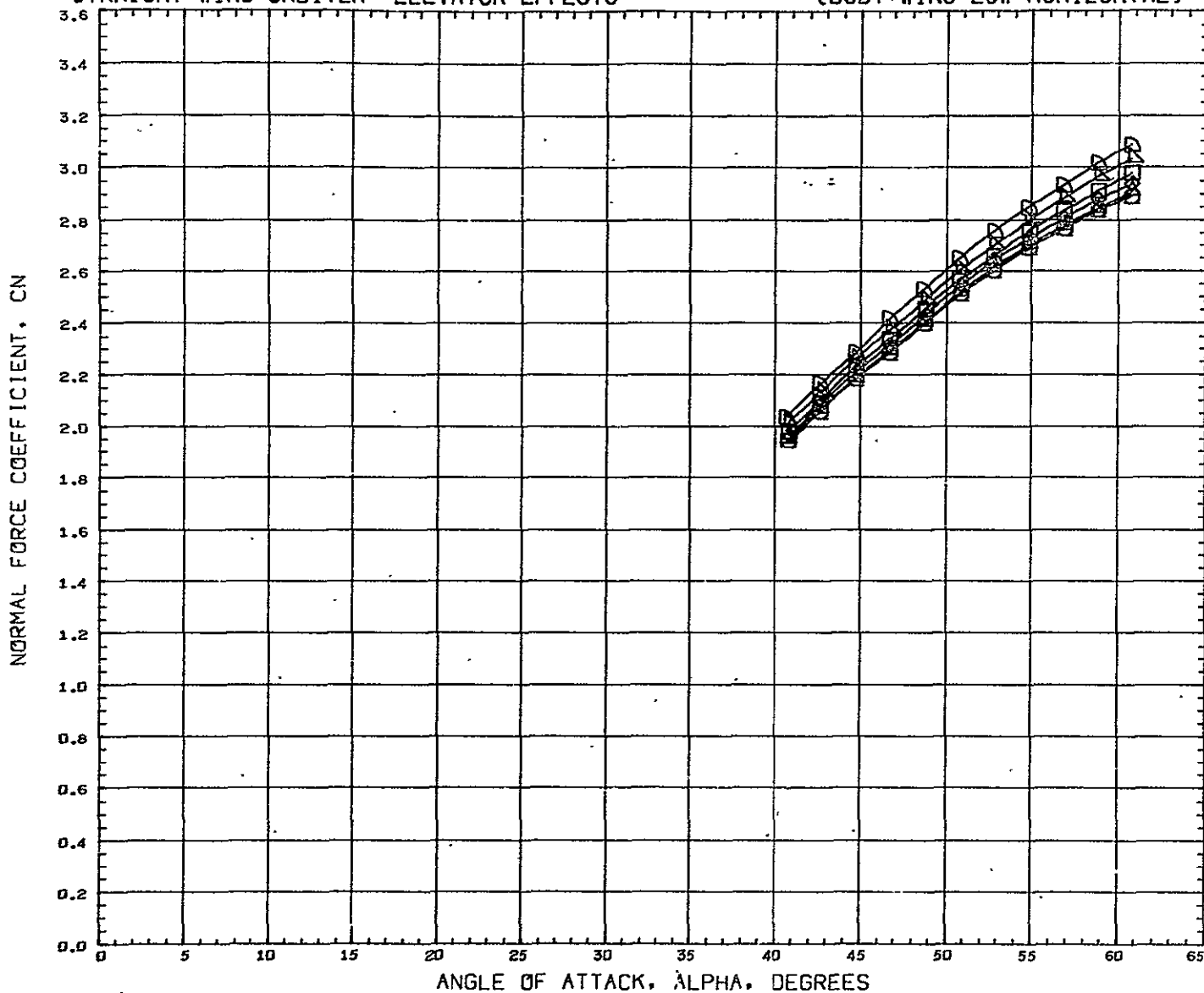
BETA	ELVATR	AILRON
0.000	0.000	0.000
0.000	10.000	0.000
0.000	20.000	0.000
0.000	30.000	0.000

REFERENCE INFORMATION		
REFS	3084.0040	SQ FT
REFL	322.9004	INCHES
REFB	1490.0040	INCHES
XMRP	1293.0040	INCHES
YMRP	0.0000	INCHES
ZMRP	50.5000	INCHES
SCALE	0.0035	SCALE

MACH 4.959

STRAIGHT WING ORBITER- ELEVATOR EFFECTS

(BODY+WING+LOW-HORIZONTAL)

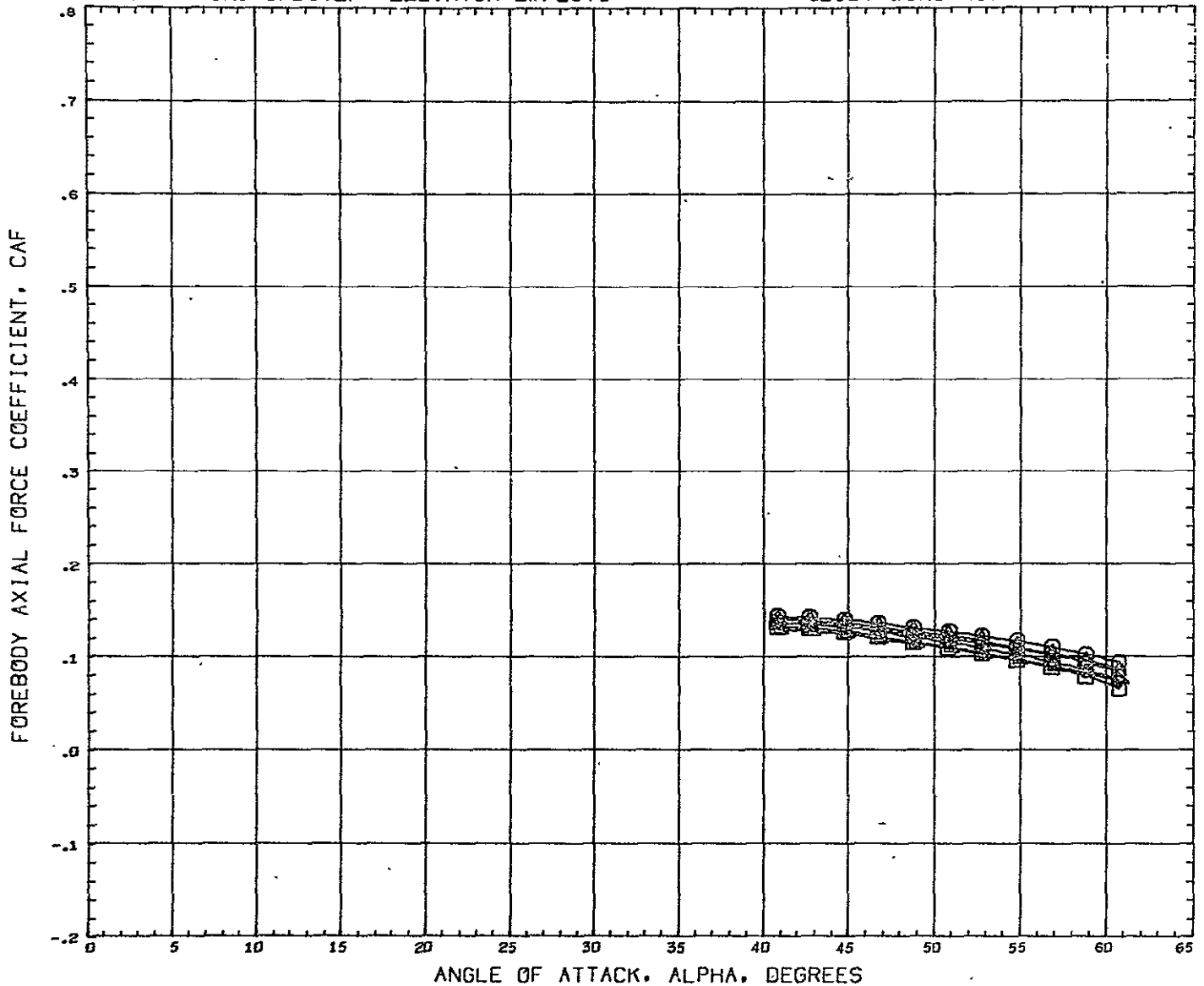


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELVATR	AILRON	REFERENCE INFORMATION
(C2738C)	MSFC478 NR ST ORBITER B6WIDH16E14	0.000	-50.000	0.000	REFS 3084.0040 SQ' FT
(C2737C)	MSFC478 NR ST ORBITER B6WIDH16E14	0.000	-40.000	0.000	REFL 322.9004 INCHES
(C2736C)	MSFC478 NR ST ORBITER B6WIDH16E14	0.000	-30.000	0.000	REFB 1490.0040 INCHES
(C2735C)	MSFC478 NR ST ORBITER B6WIDH16E14	0.000	-20.000	0.000	XMRP 1293.0040 INCHES
(C2734C)	MSFC478 NR ST ORBITER B6WIDH16E14	0.000	-10.000	0.000	YMRP 0.0000 INCHES
(C2733C)	MSFC478 NR ST ORBITER B6WIDH16E14	0.000	0.000	0.000	ZMRP - 50.5000 INCHES
					SCALE 0.0035 SCALE

MACH 4.959

STRAIGHT WING ORBITER- ELEVATOR EFFECTS

(BODY+WING+LOW-HORIZONTAL)

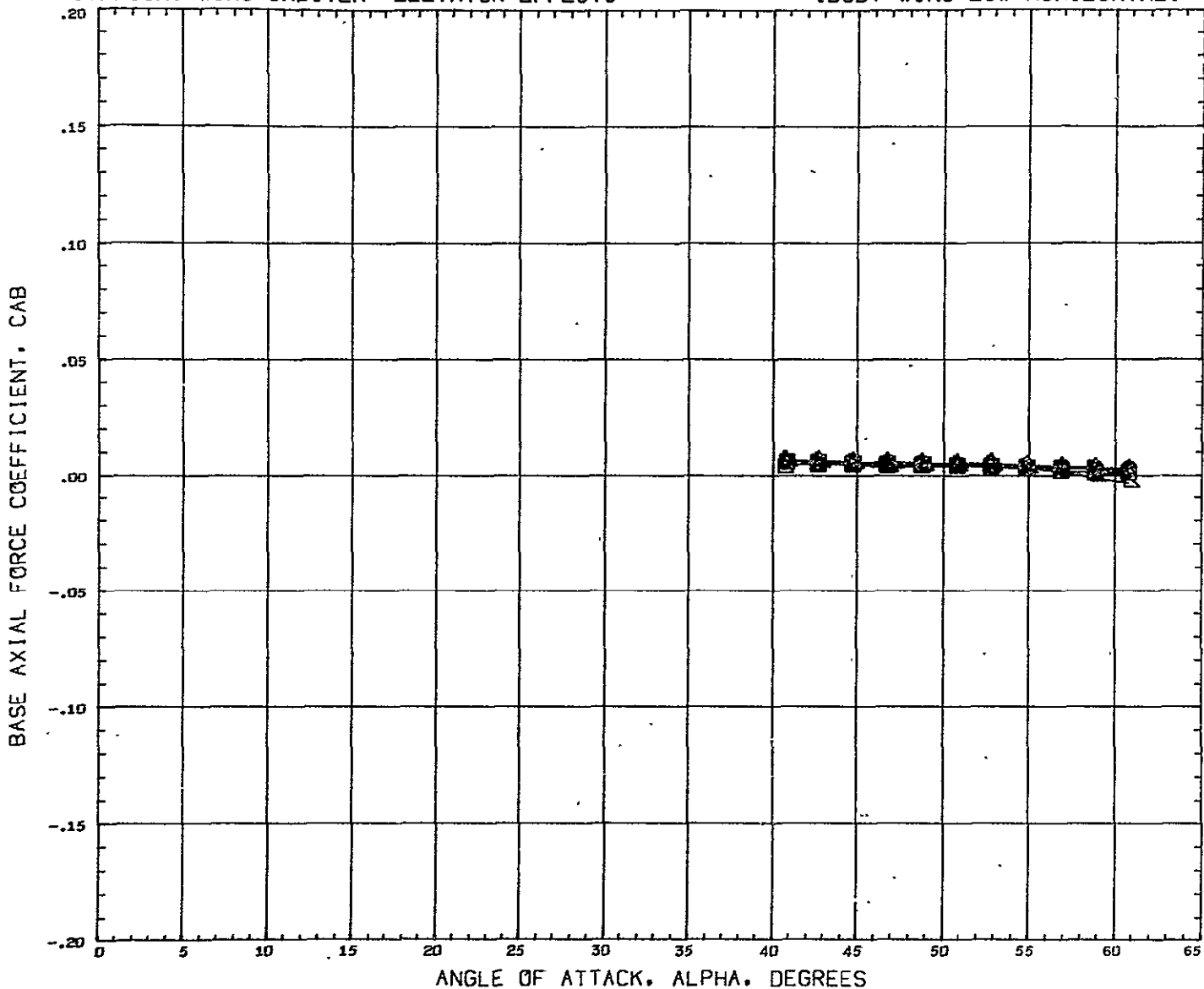


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELVATR	AILRON	REFERENCE INFORMATION
(C2738C)	MSFC478 NR ST ORBITER B6WIDH16E14	0.000	-50.000	0.000	REFS 3084.0040 SQ FT
(C2737C)	MSFC478 NR ST ORBITER B6WIDH16E14	0.000	-40.000	0.000	REFL 322.9004 INCHES
(C2736C)	MSFC478 NR ST ORBITER B6WIDH16E14	0.000	-30.000	0.000	REFB 1490.0040 INCHES
(C2735C)	MSFC478 NR ST ORBITER B6WIDH16E14	0.000	-20.000	0.000	XMRP 1293.0040 INCHES
(C2734C)	MSFC478 NR ST ORBITER B6WIDH16E14	0.000	-10.000	0.000	YMRP 0.0000 INCHES
(C2733C)	MSFC478 NR ST ORBITER B6WIDH16E14	0.000	0.000	0.000	ZMRP - 50.5000 INCHES
					SCALE 0.0035 SCALE

MACH 4.959

STRAIGHT WING ORBITER- ELEVATOR EFFECTS

(BODY+WING+LOW-HORIZONTAL)

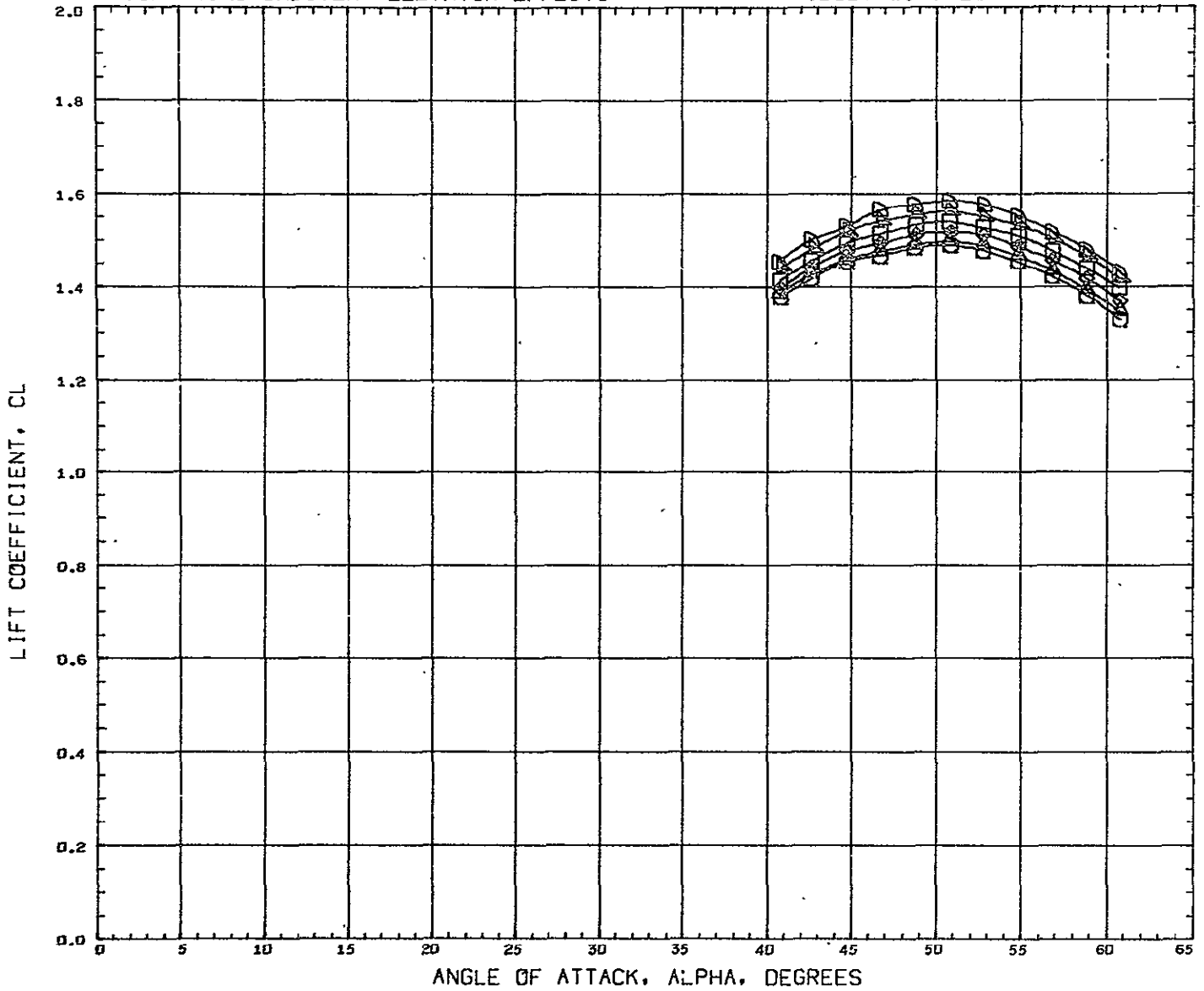


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELVATR	AILRON	REFERENCE INFORMATION
(C2738C)	MSFC478 NR ST ORBITER B6WIDH16E14	0.000	-50.000	0.000	REFS 3084.0040 SQ FT
(C2737C)	MSFC478 NR ST ORBITER B6WIDH16E14	0.000	-40.000	0.000	REFL 322.9004 INCHES
(C2736C)	MSFC478 NR ST ORBITER B6WIDH16E14	0.000	-30.000	0.000	REFB 1499.0040 INCHES
(C2735C)	MSFC478 NR ST ORBITER B6WIDH16E14	0.000	-20.000	0.000	XMRP 1293.0040 INCHES
(C2734C)	MSFC478 NR ST ORBITER B6WIDH16E14	0.000	-10.000	0.000	YMRP 0.0000 INCHES
(C2730C)	MSFC478 NR ST ORBITER B6WIDH16E14	0.000	0.000	0.000	ZMRP - 50.5000 INCHES
					SCALE 0.0035 SCALE

PACH 4.959

STRAIGHT WING ORBITER- ELEVATOR EFFECTS

(BODY+WING+LOW-HORIZONTAL)

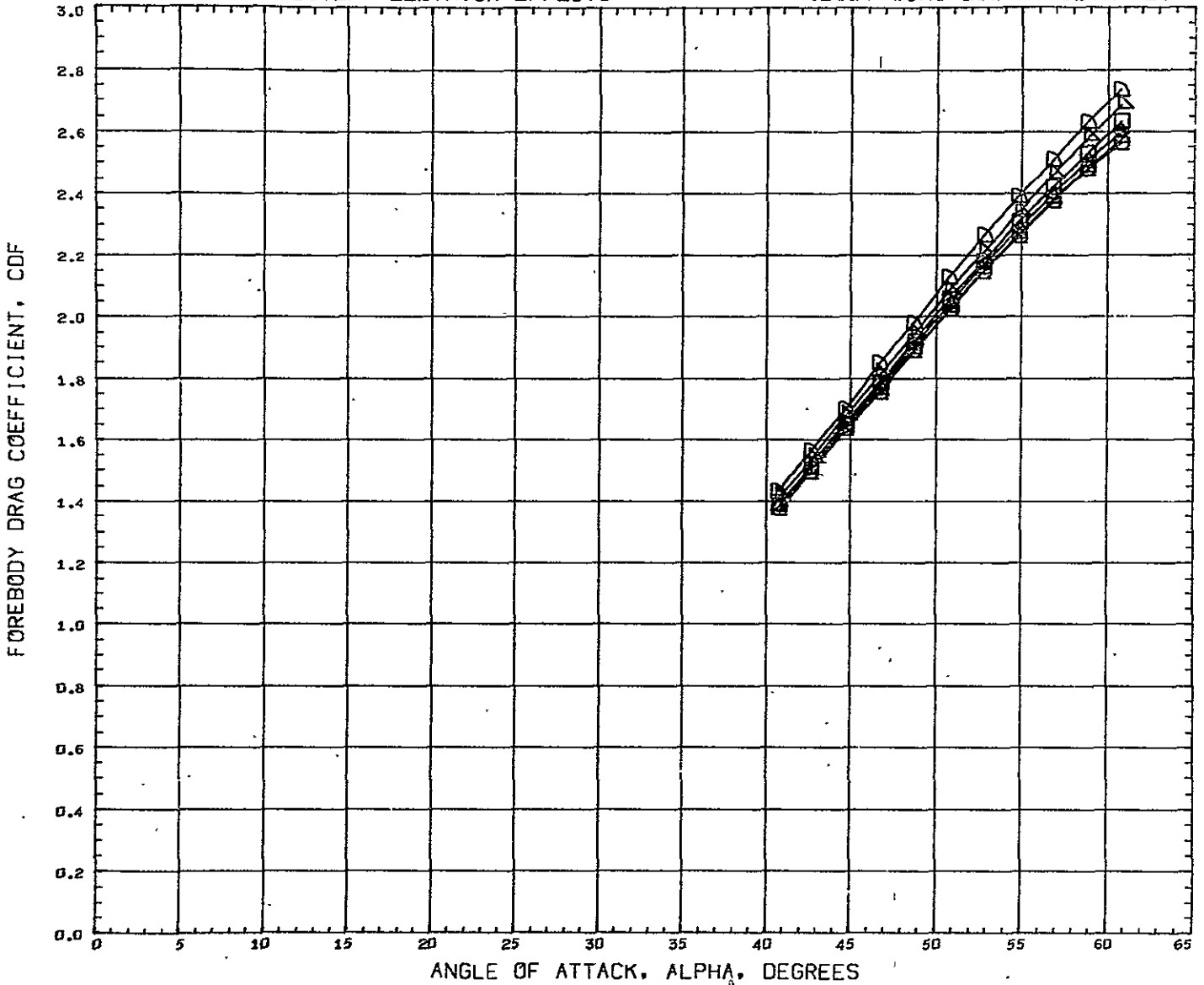


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELVATR	AILRON	REFERENCE INFORMATION	
(C2738C)	MSFC478 NR ST ORBITER B6WIDH16E14	0.000	-50.000	0.000	REFS	3084.0040 SQ FT
(C2737C)	MSFC478 NR ST ORBITER B6WIDH16E14	0.000	-40.000	0.000	REFL	322.9094 INCHES
(C2736C)	MSFC478 NR ST ORBITER B6WIDH16E14	0.000	-30.000	0.000	REFB	1490.0040 INCHES
(C2735C)	MSFC478 NR ST ORBITER B6WIDH16E14	0.000	-20.000	0.000	XMRP	1293.0040 INCHES
(C2734C)	MSFC478 NR ST ORBITER B6WIDH16E14	0.000	-10.000	0.000	YMRP	0.0000 INCHES
(C2730C)	MSFC478 NR ST ORBITER B6WIDH16E14	0.000	0.000	0.000	ZMRP	50.5000 INCHES
					SCALE	0.0035 SCALE

MACH 4.959

STRAIGHT WING ORBITER- ELEVATOR EFFECTS

(BODY+WING+LOW-HORIZONTAL)

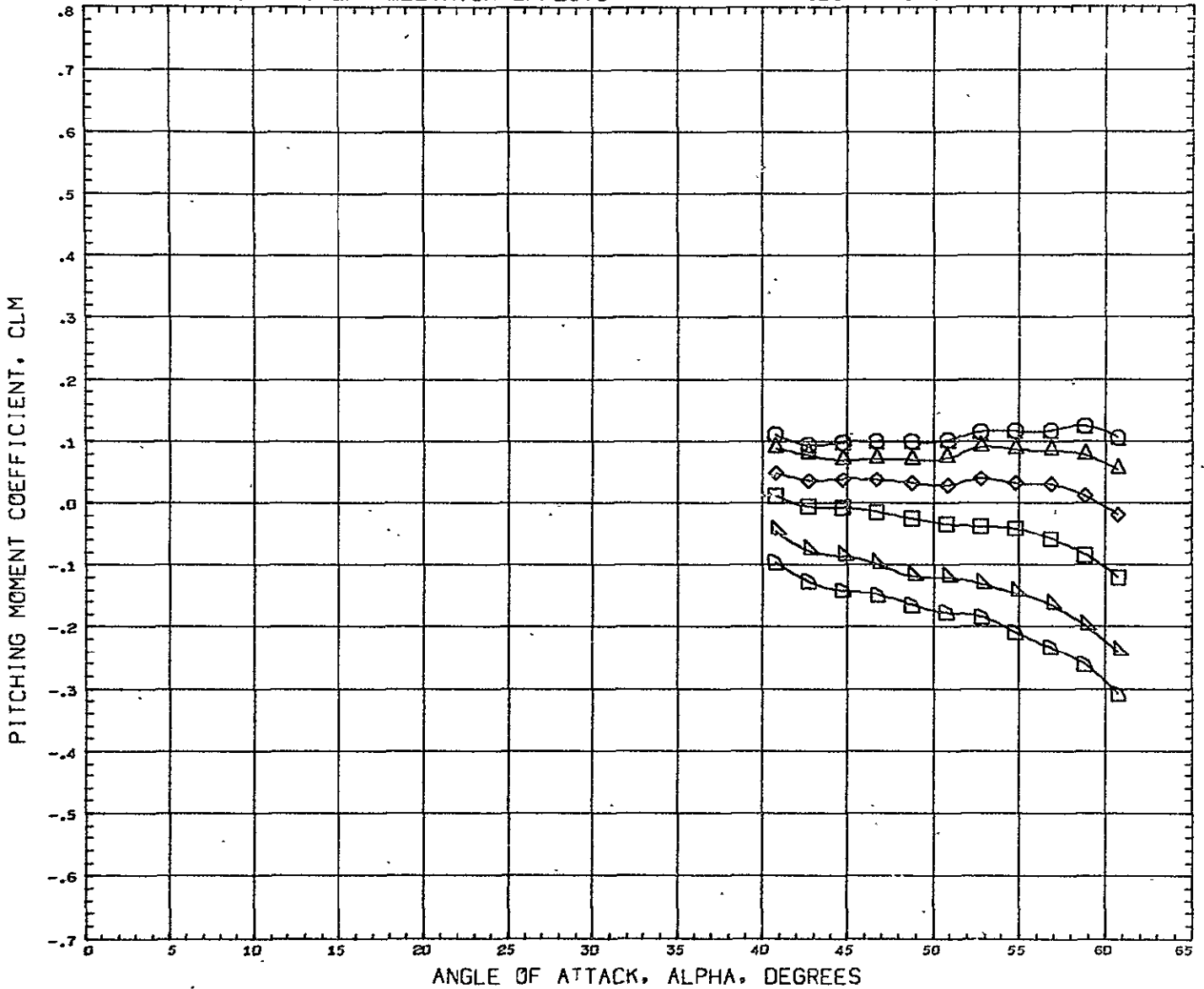


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELVATR	AILRON	REFERENCE INFORMATION
(C2738C)	MSFC478 NR ST ORBITER B6W1DH16E14	0.000	-50.000	0.000	REFS 3084.0040 SQ FT
(C2737C)	MSFC478 NR ST ORBITER B6W1DH16E14	0.000	-40.000	0.000	REFL 322.9004 INCHES
(C2736C)	MSFC478 NR ST ORBITER B6W1DH16E14	0.000	-30.000	0.000	REFB 1490.0040 INCHES
(C2735C)	MSFC478 NR ST ORBITER B6W1DH16E14	0.000	-20.000	0.000	XMRP 1293.0040 INCHES
(C2734C)	MSFC478 NR ST ORBITER B6W1DH16E14	0.000	-10.000	0.000	YMRP 0.0000 INCHES
(C2739C)	MSFC478 NR ST ORBITER B6W1DH16E14	0.000	0.000	0.000	ZMRP - 50.5000 INCHES
					SCALE 0.0035 SCALE

MACH 4.959

STRAIGHT WING ORBITER- ELEVATOR EFFECTS

(BODY+WING+LOW-HORIZONTAL)



DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(C2736C)	MSFC478 NR ST ORBITER B6WADH16E14
(C2737C)	MSFC478 NR ST ORBITER B6WADH16E14
(C2736C)	MSFC478 NR ST ORBITER B6WADH16E14
(C2735C)	MSFC478 NR ST ORBITER B6WADH16E14
(C2734C)	MSFC478 NR ST ORBITER B6WADH16E14
(C2730C)	MSFC478 NR ST ORBITER B6WADH16E14

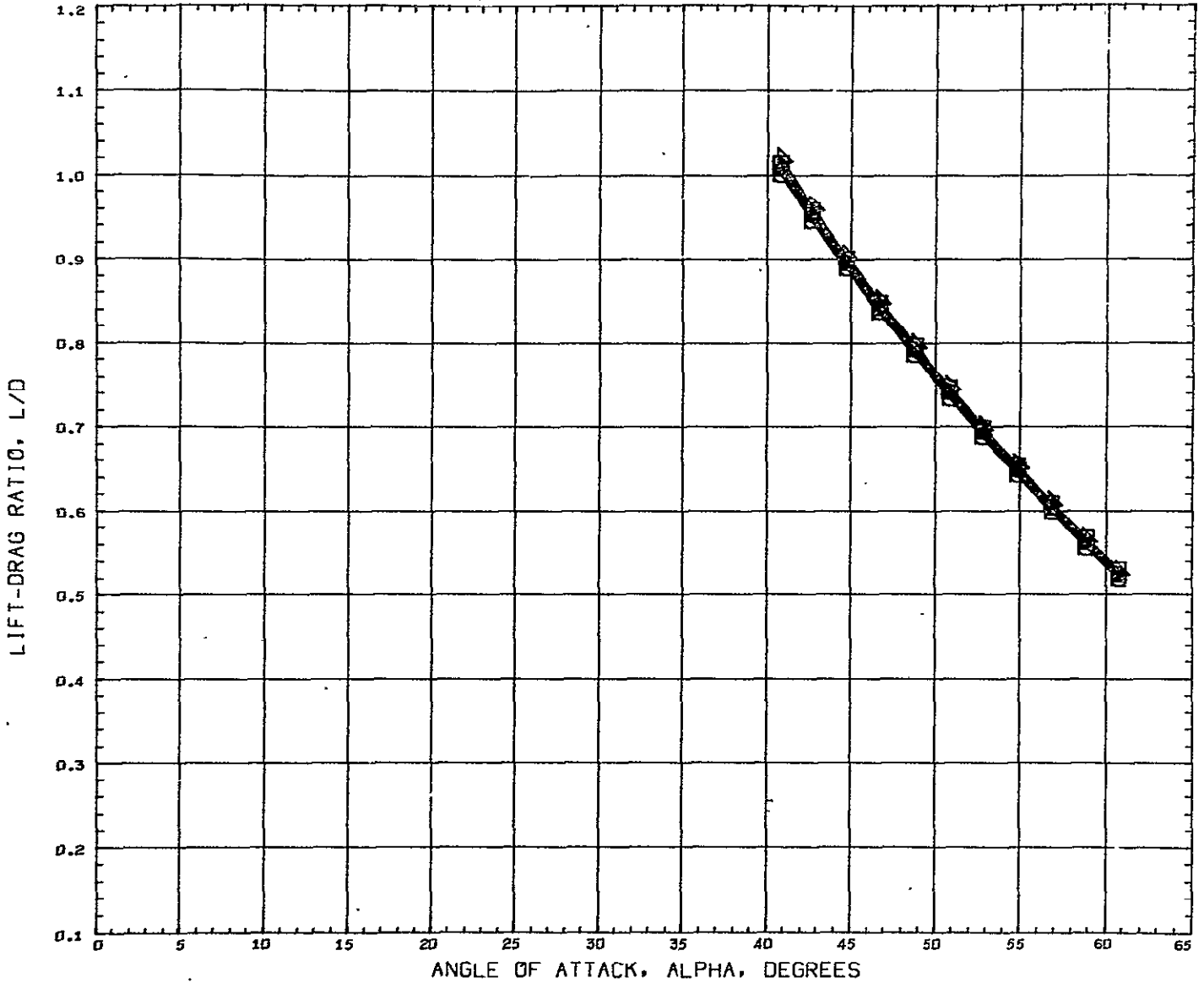
BETA	ELVATR	AILRON
0.000	-50.000	0.000
0.000	-40.000	0.000
0.000	-30.000	0.000
0.000	-20.000	0.000
0.000	-10.000	0.000
0.000	0.000	0.000

REFERENCE INFORMATION		
REFS	3084.0040	SQ FT
REFL	322.9004	INCHES
REFB	1490.0040	INCHES
XMRP	1293.0040	INCHES
YMRP	0.0000	INCHES
ZMRP	50.5000	INCHES
SCALE	0.0035	SCALE

MACH 4.959

STRAIGHT WING ORBITER- ELEVATOR EFFECTS

(BODY+WING+LOW-HORIZONTAL)



DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(C2738C)	HSFC478 NR ST ORBITER B6W10H16E14
(C2737C)	HSFC478 NR ST ORBITER B6W10H16E14
(C2736C)	HSFC478 NR ST ORBITER B6W10H16E14
(C2735C)	HSFC478 NR ST ORBITER B6W10H16E14
(C2734C)	HSFC478 NR ST ORBITER B6W10H16E14
(C2733C)	HSFC478 NR ST ORBITER B6W10H16E14

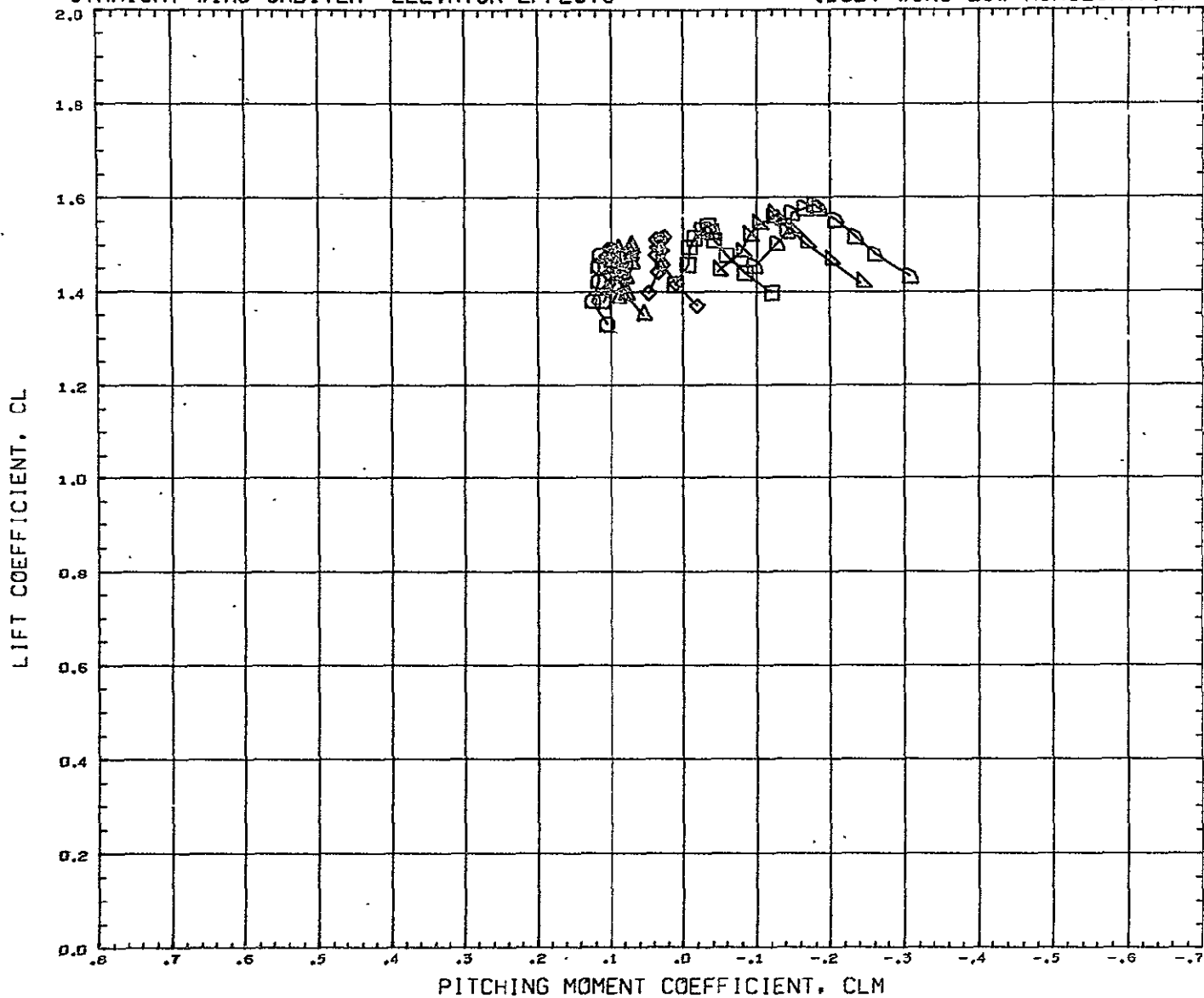
BETA	ELVATR	AILRON
0.000	-50.000	0.000
0.000	-40.000	0.000
0.000	-30.000	0.000
0.000	-20.000	0.000
0.000	-10.000	0.000
0.000	0.000	0.000

REFERENCE INFORMATION		
REFS	3084.0040	SQ FT
REFL	322.9004	INCHES
REFB	1490.0040	INCHES
XMRP	1293.0040	INCHES
YMRP	0.0000	INCHES
ZMRP	50.5000	INCHES
SCALE	0.0035	SCALE

MACH 4.959

STRAIGHT WING ORBITER- ELEVATOR EFFECTS

(BODY+WING+LOW-HORIZONTAL)

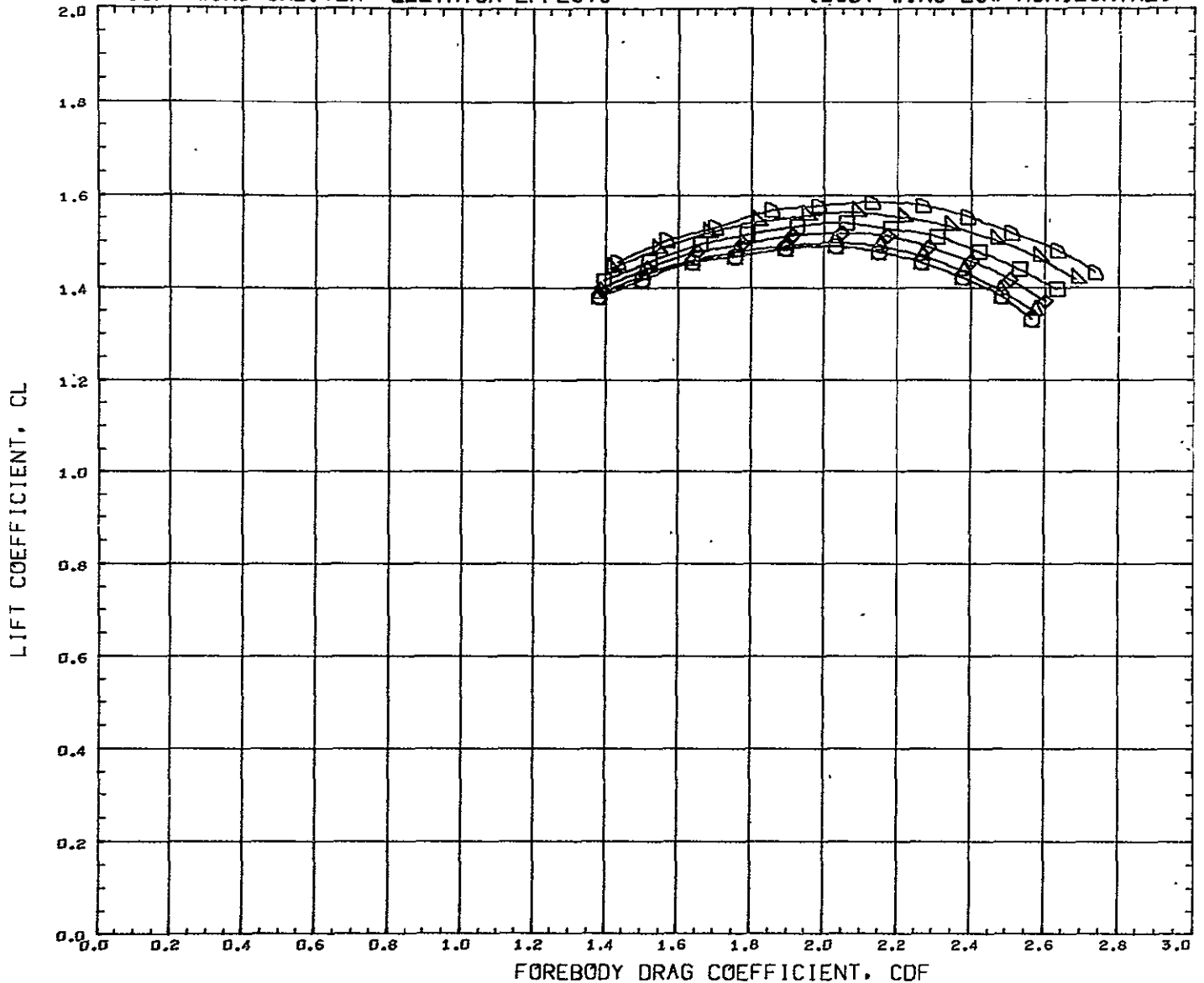


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELVATR	AILRON	REFERENCE INFORMATION
(C2738C)	MSFC478 NR ST ORBITER B6WLDH16E14	0.000	-50.000	0.000	REFS 3084.0040 SQ FT
(C2737C)	MSFC478 NR ST ORBITER B6WLDH16E14	0.000	-40.000	0.000	REFL 322.9004 INCHES
(C2736C)	MSFC478 NR ST ORBITER B6WLDH16E14	0.000	-30.000	0.000	REFB 1490.0040 INCHES
(C2735C)	MSFC478 NR ST ORBITER B6WLDH16E14	0.000	-20.000	0.000	XMRP 1293.0040 INCHES
(C2734C)	MSFC478 NR ST ORBITER B6WLDH16E14	0.000	-10.000	0.000	YMRP 0.0000 INCHES
(C2739C)	MSFC478 NR ST ORBITER B6WLDH16E14	0.000	0.000	0.000	ZMRP - 50.5000 INCHES
					SCALE 0.0035 SCALE

PACH 4.929

STRAIGHT WING ORBITER- ELEVATOR EFFECTS-

(BODY+WING+LOW-HORIZONTAL)

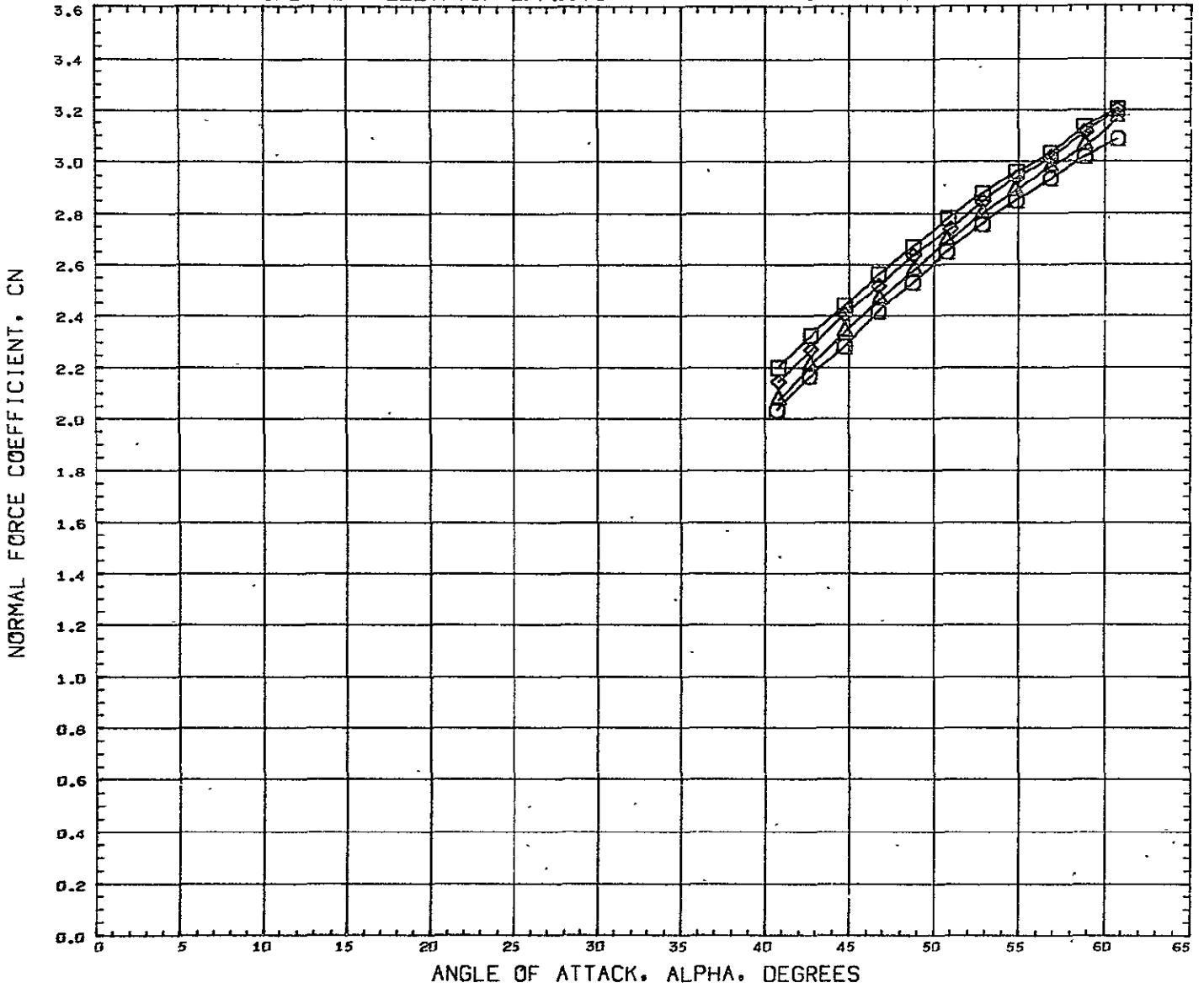


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELVATR	AILRON	REFERENCE INFORMATION
(C2738C)	MSFC478 NR ST ORBITER B6W1D16E14	0.000	-50.000	0.000	REFS 3084.0040 SQ FT
(C2737C)	MSFC478 NR ST ORBITER B6W1D16E14	0.000	-40.000	0.000	REFL 322.9004 INCHES
(C2736C)	MSFC478 NR ST ORBITER B6W1D16E14	0.000	-30.000	0.000	REFB 1490.0040 INCHES
(C2735C)	MSFC478 NR ST ORBITER B6W1D16E14	0.000	-20.000	0.000	XMRP 1293.0040 INCHES
(C2734C)	MSFC478 NR ST ORBITER B6W1D16E14	0.000	-10.000	0.000	YMRP 0.0000 INCHES
(C2735C)	MSFC478 NR ST ORBITER B6W1D16E14	0.000	0.000	0.000	ZMRP - 50.5000 INCHES
					SCALE 0.0035 SCALE

MACH 4.959

STRAIGHT WING ORBITER- ELEVATOR EFFECTS

(BODY+WING+LOW-HORIZONTAL)

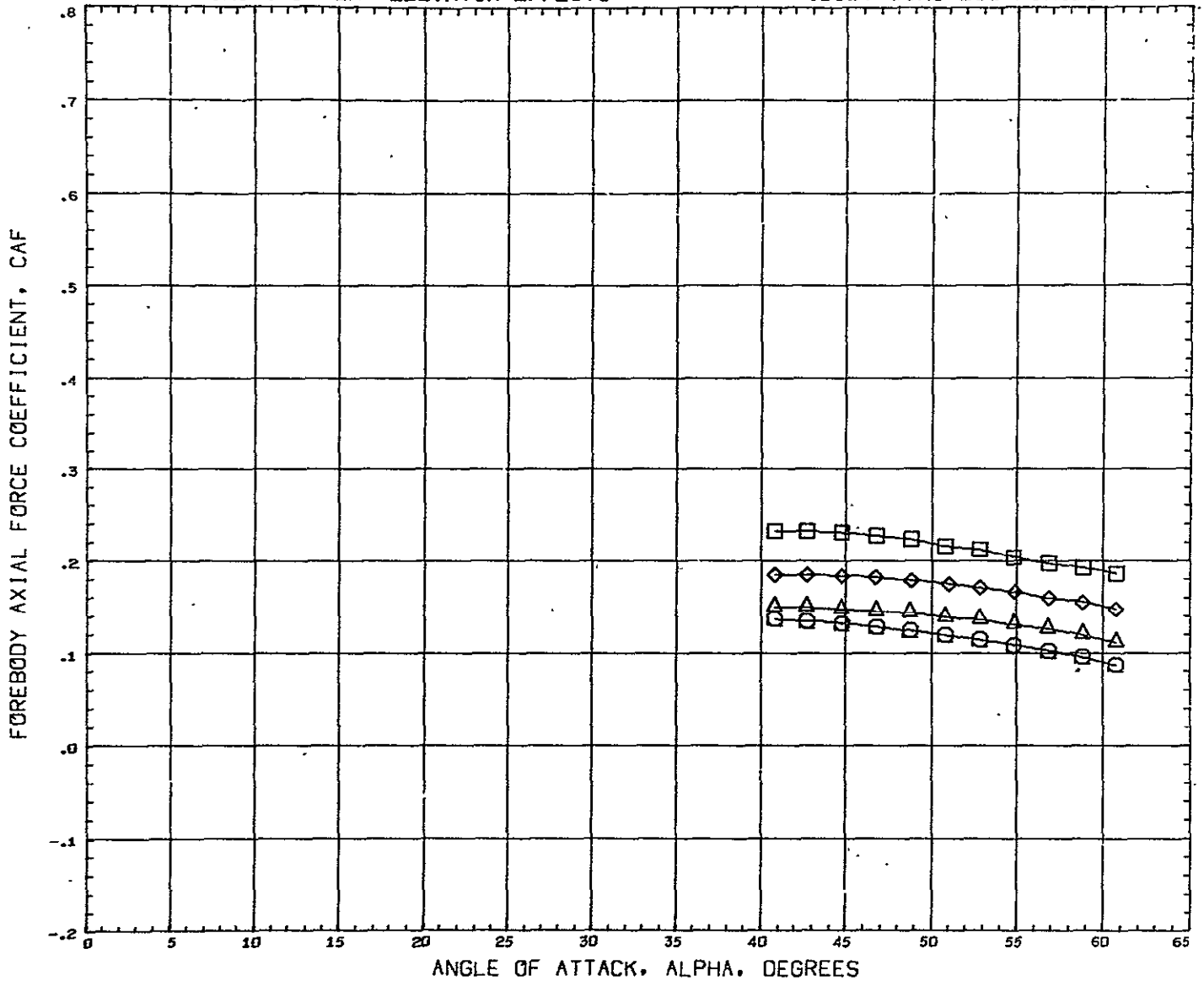


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELVATR	AILRON	REFERENCE INFORMATION	
(C2730C)	HSFC478 NR ST ORBITER B6WIDH16E14	0.000	0.000	0.000	REFS	3084.0040 SQ. FT
(C2731C)	HSFC478 NR ST ORBITER B6WIDH16E14	0.000	10.000	0.000	REFL	322.9004 INCHES
(C2732C)	HSFC478 NR ST ORBITER B6WIDH16E14	0.000	20.000	0.000	REFB	1490.0040 INCHES
(C2733C)	HSFC478 NR ST ORBITER B6WIDH16E14	0.000	30.000	0.000	XMRP	1293.0040 INCHES
					YMRP	0.0000 INCHES
					ZMRP	50.5000 INCHES
					SCALE	0.0035 SCALE

HACH 4.959

STRAIGHT WING ORBITER- ELEVATOR EFFECTS

(BODY+WING+LOW-HORIZONTAL)

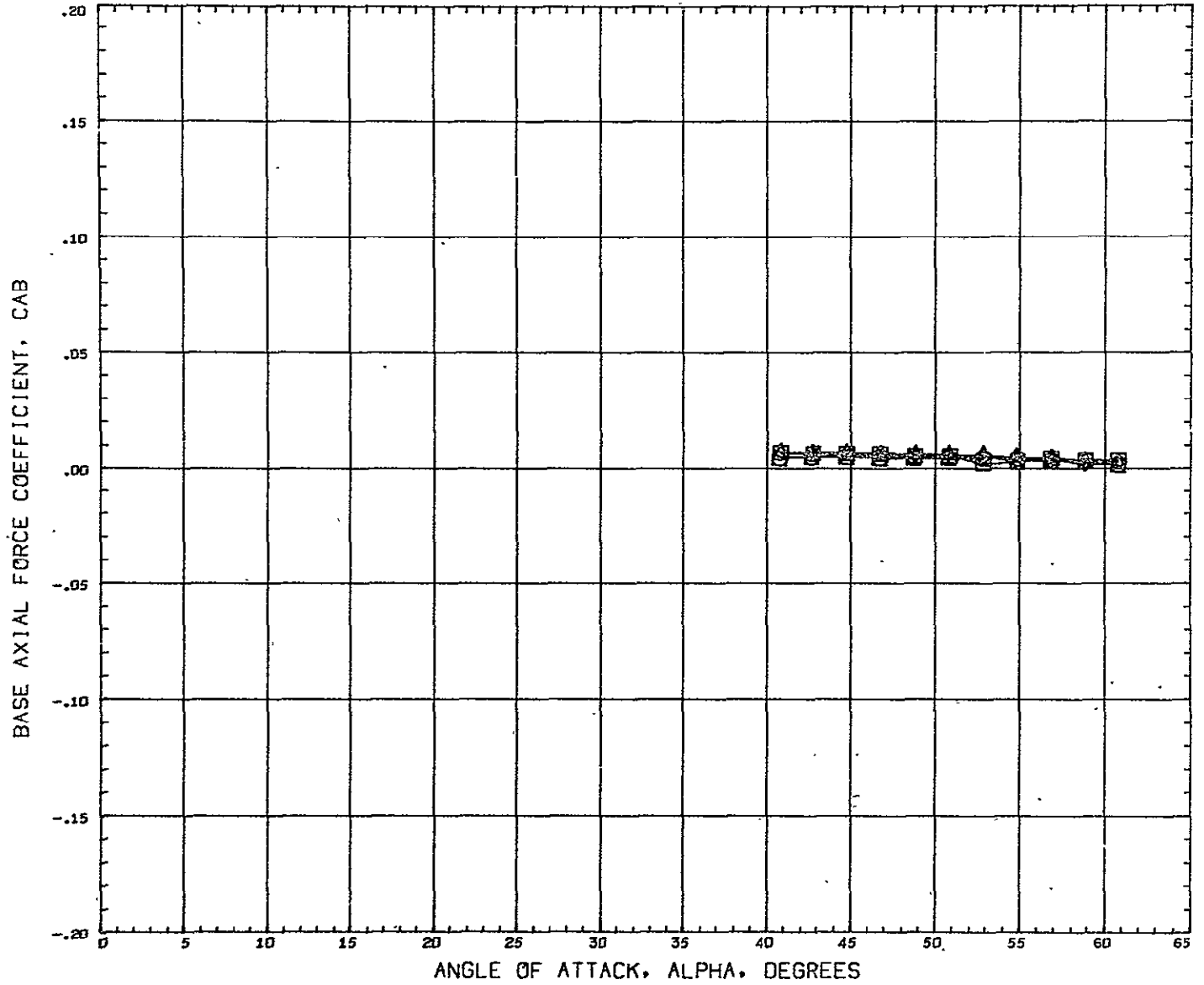


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELVATR	AILRON	REFERENCE INFORMATION
(C2730C)	MSFC478 NR ST ORBITER B6WIDH16E14	0.000	0.000	0.000	REFS 3084.0040 SQ FT
(C2731C)	MSFC478 NR ST ORBITER B6WIDH16E14	0.000	10.000	0.000	REFL 322.9004 INCHES
(C2732C)	MSFC478 NR ST ORBITER B6WIDH16E14	0.000	20.000	0.000	REFB 1490.0040 INCHES
(C2733C)	MSFC478 NR ST ORBITER B6WIDH16E14	0.000	30.000	0.000	YHRF 1293.0040 INCHES
					YHRF -0.0000 INCHES
					ZHRF - 50.5000 INCHES
					SCALE 0.0035 SCALE

MACH 4.959

STRAIGHT WING ORBITER- ELEVATOR EFFECTS

(BODY+WING+LOW-HORIZONTAL)

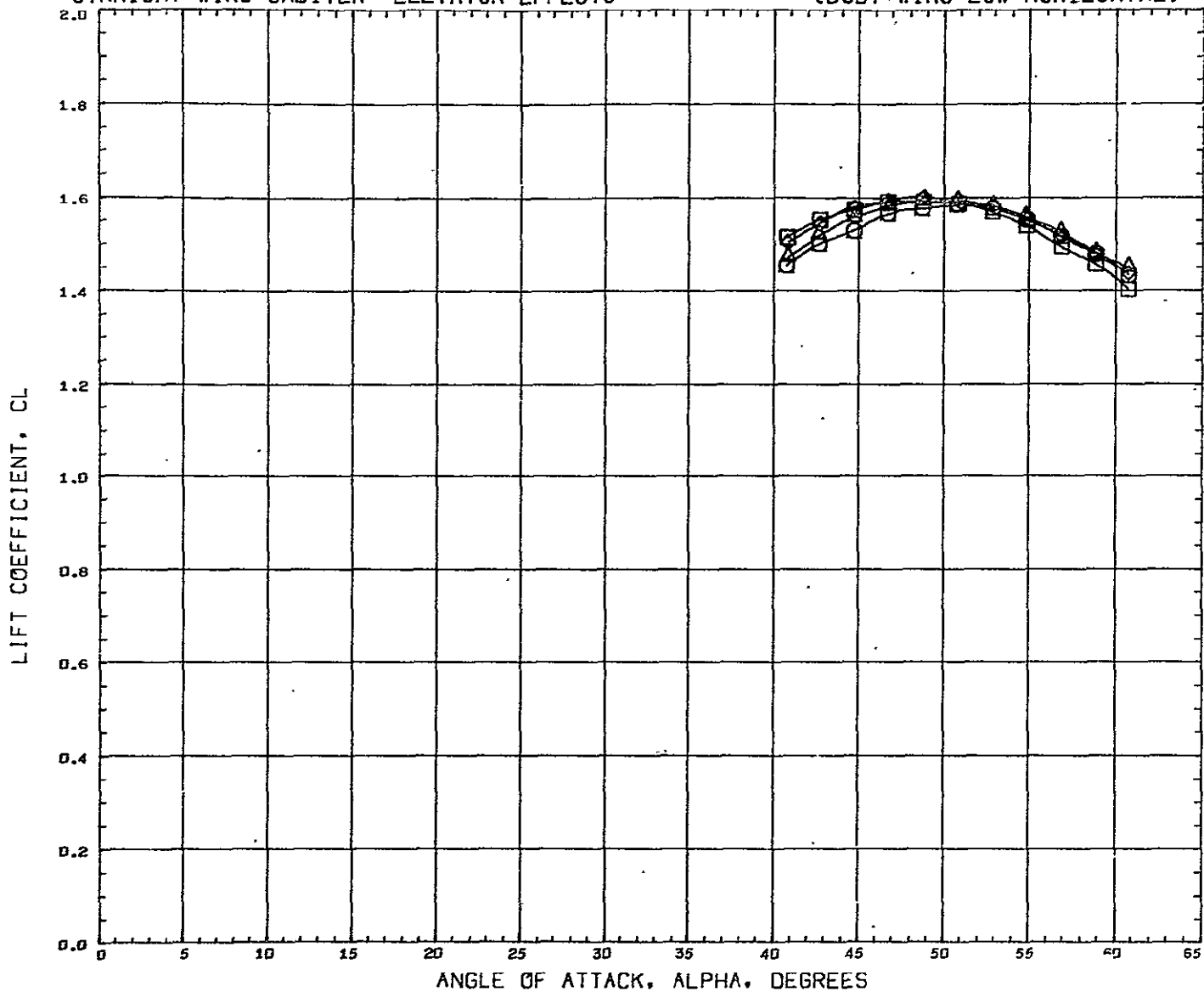


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELVATR	AILRON	REFERENCE INFORMATION	
(C2730C)	MSFC478 NR ST ORBITER B6W1DH16E14	0.000	0.000	0.000	REFS	3084.0040 SQ FT
(C2731C)	MSFC478 NR ST ORBITER B6W1DH16E14	0.000	10.000	0.000	REFL	322.9004 INCHES
(C2732C)	MSFC478 NR ST ORBITER B6W1DH16E14	0.000	20.000	0.000	REFB	1490.0040 INCHES
(C2733C)	MSFC478 NR ST ORBITER B6W1DH16E14	0.000	30.000	0.000	XMRP	1293.0040 INCHES
					YMRP	0.0000 INCHES
					ZMRP	50.5000 INCHES
					SCALE	0.0005 SCALE

MACH 4.959

STRAIGHT WING ORBITER- ELEVATOR EFFECTS

(BODY+WING+LOW-HORIZONTAL)

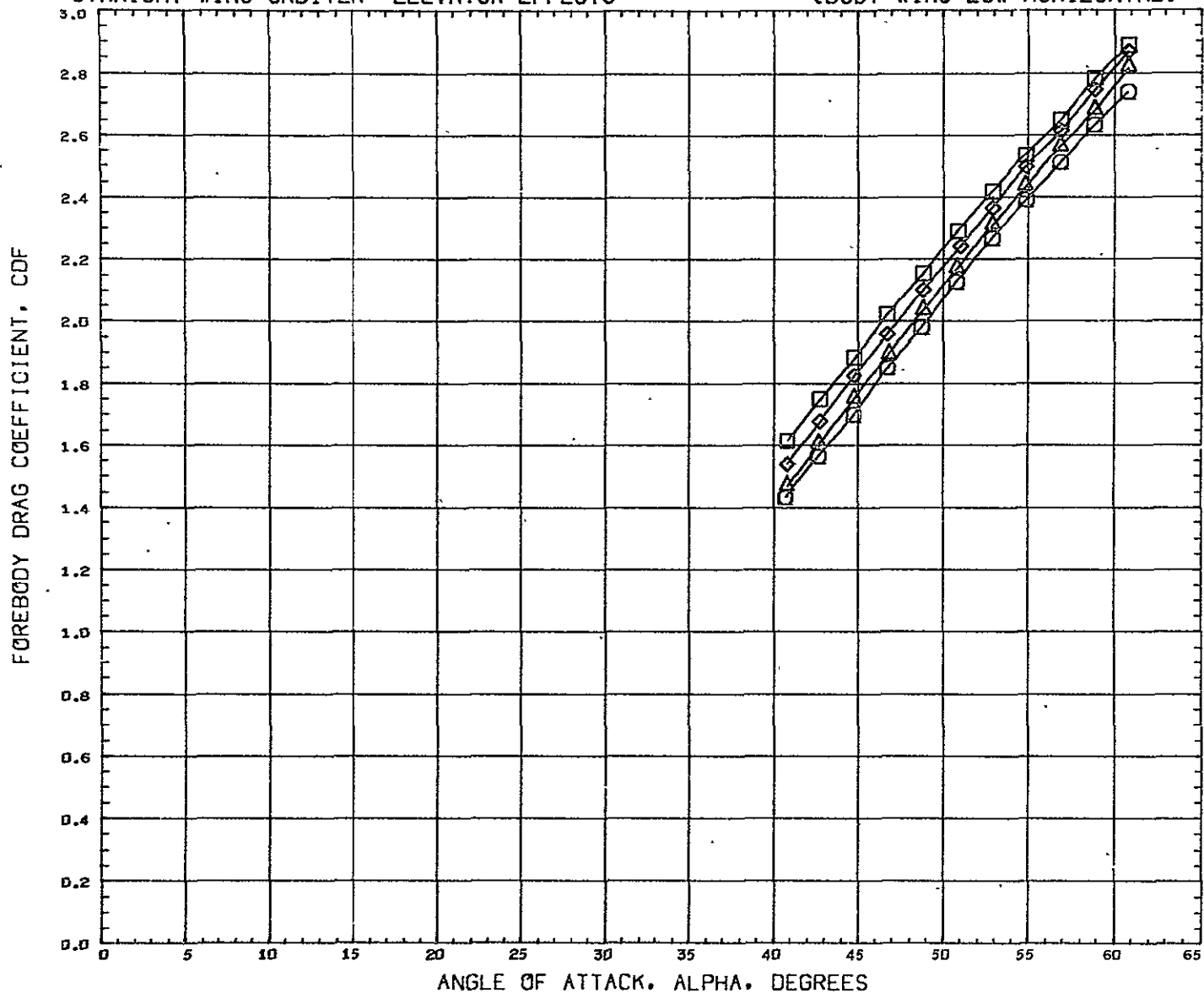


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELVATR	AILRON	REFERENCE INFORMATION
(C2730C)	MSFC478 NR ST ORBITER B6W1DH16E14	0.000	0.000	0.000	REFS 3084.0040 SQ FT
(C2731C)	MSFC478 NR ST ORBITER B6W1DH16E14	0.000	10.000	0.000	REFL 322.9004 INCHES
(C2732C)	MSFC478 NR ST ORBITER B6W1DH16E14	0.000	20.000	0.000	REFB 1490.0040 INCHES
(C2733C)	MSFC478 NR ST ORBITER B6W1DH16E14	0.000	30.000	0.000	XMRP 1293.0040 INCHES
					YMRP 0.0000 INCHES
					ZMRP 50.5000 INCHES
					SCALE 0.0035 SCALE

MACH 4.959

STRAIGHT WING ORBITER- ELEVATOR EFFECTS

(BODY+WING+LOW-HORIZONTAL)



DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(C2739C)	MSFC478 NR ST ORBITER B6WIDH16E14
(C2731C)	MSFC478 NR ST ORBITER B6WIDH16E14
(C2732C)	MSFC478 NR ST ORBITER B6WIDH16E14
(C2733C)	MSFC478 NR ST ORBITER B6WIDH16E14

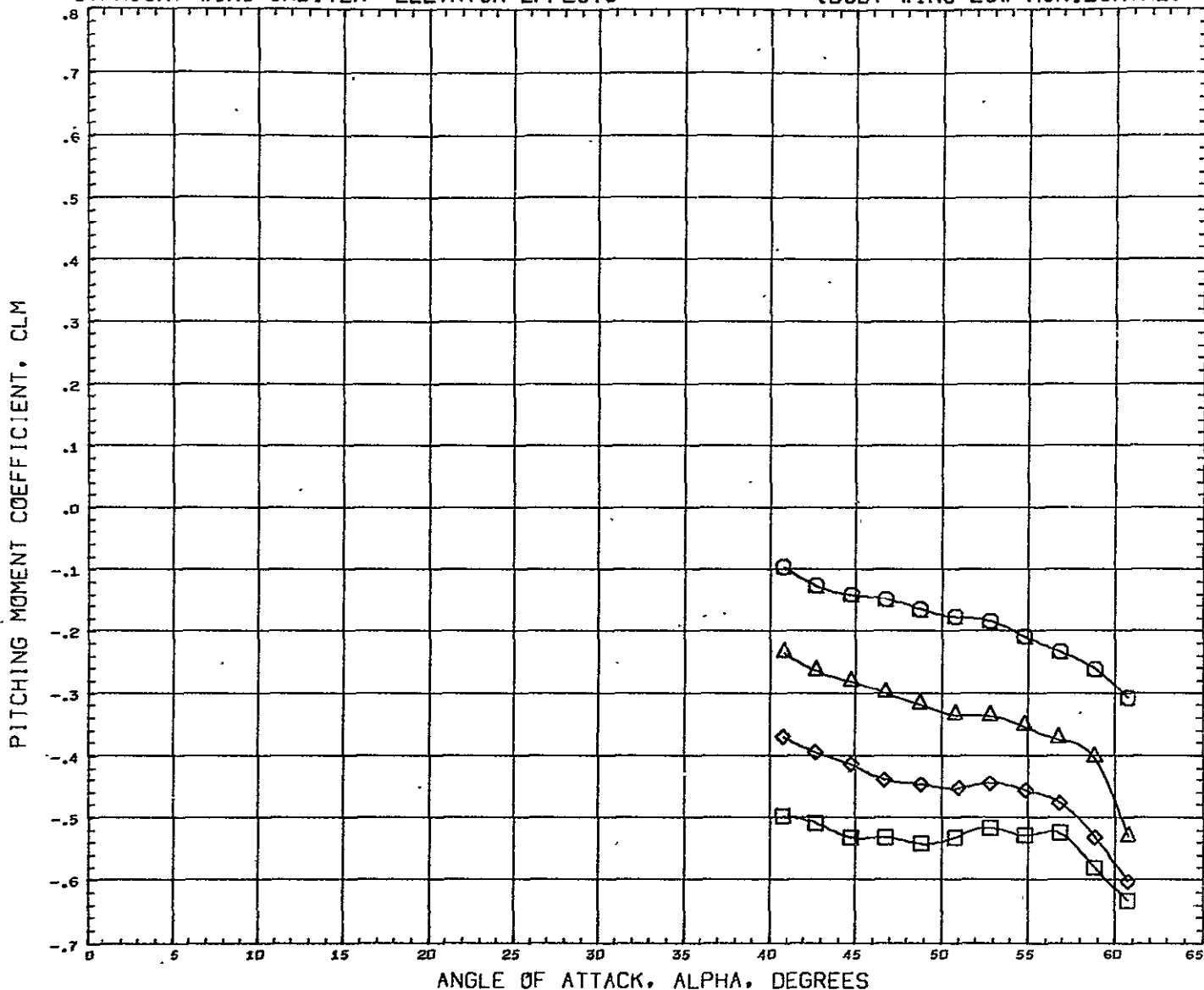
BETA	ELVATR	AILRON
0.000	0.000	0.000
0.000	10.000	0.000
0.000	20.000	0.000
0.000	30.000	0.000

REFERENCE INFORMATION		
REFS	3084.0040	Sq FT
REFL	322.9004	INCHES
REFB	1490.0040	INCHES
XMRP	1293.0040	INCHES
YMRP	0.0000	INCHES
ZMRP	50.5000	INCHES
SCALE	0.0035	SCALE

MACH 4.959

STRAIGHT WING ORBITER- ELEVATOR EFFECTS

(BODY+WING+LOW-HORIZONTAL)



DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(C2730C)	MSFC478 NR ST ORBITER B6WIDH16E14
(C2731C)	MSFC478 NR ST ORBITER B6WIDH16E14
(C2732C)	MSFC478 NR ST ORBITER B6WIDH16E14
(C2733C)	MSFC478 NR ST ORBITER B6WIDH16E14

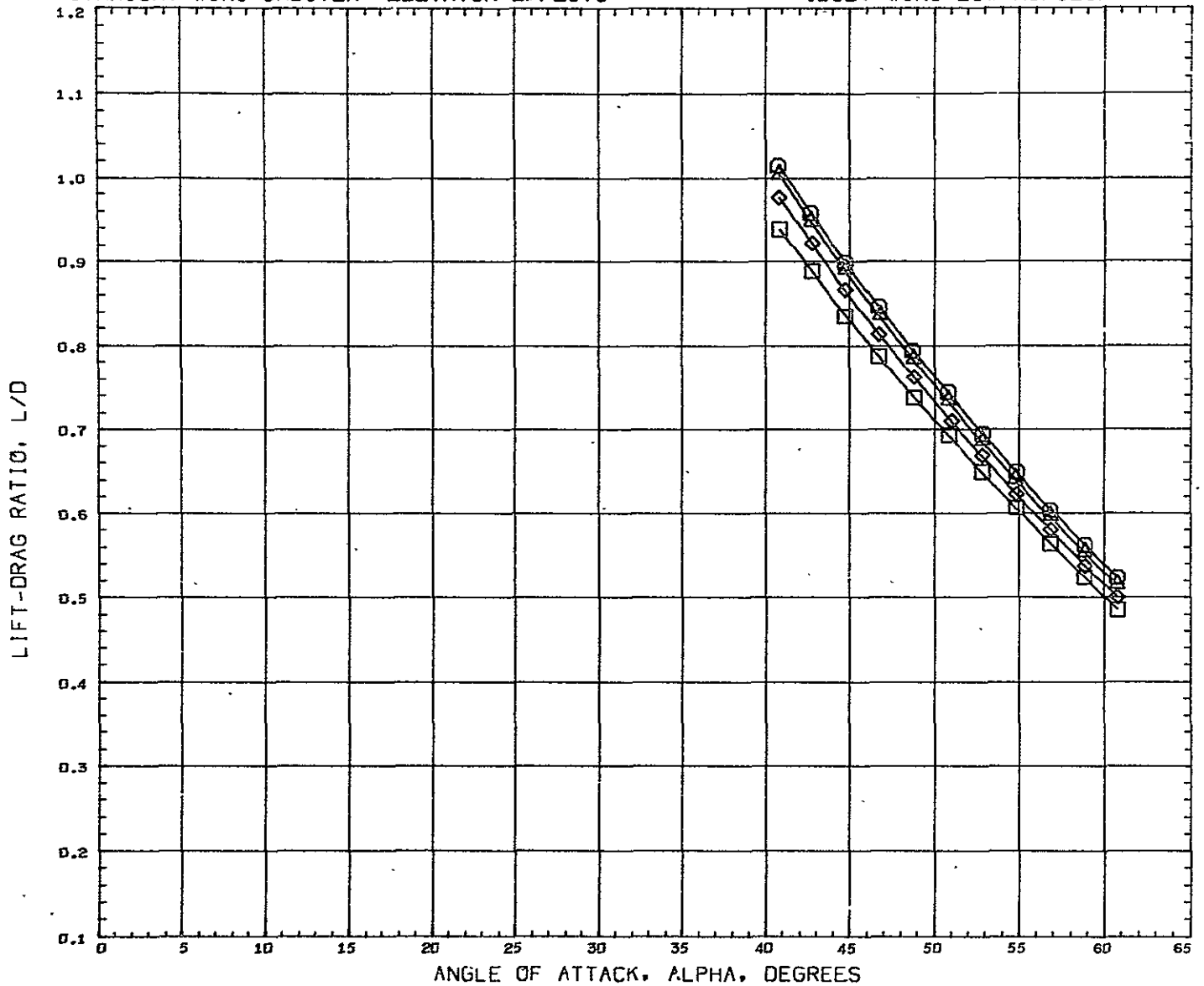
BETA	ELVATR	AILRON
0.000	0.000	0.000
0.000	10.000	0.000
0.000	20.000	0.000
0.000	30.000	0.000

REFERENCE INFORMATION		
REFS	3084.0040	SQ FT
REFL	322.9004	INCHES
REFB	1490.0040	INCHES
XMRP	1293.0040	INCHES
YMRP	0.0000	INCHES
ZMRP	50.5000	INCHES
SCALE	0.0035	SCALE

MACH 4.959

STRAIGHT WING ORBITER- ELEVATOR EFFECTS

(BODY+WING+LOW-HORIZONTAL)



DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(C2730C)	MSFC478 NR ST ORBITER B6W1DH16E14
(C2731C)	MSFC478 NR ST ORBITER B6W1DH16E14
(C2732C)	MSFC478 NR ST ORBITER B6W1DH16E14
(C2733C)	MSFC478 NR ST ORBITER B6W1DH16E14

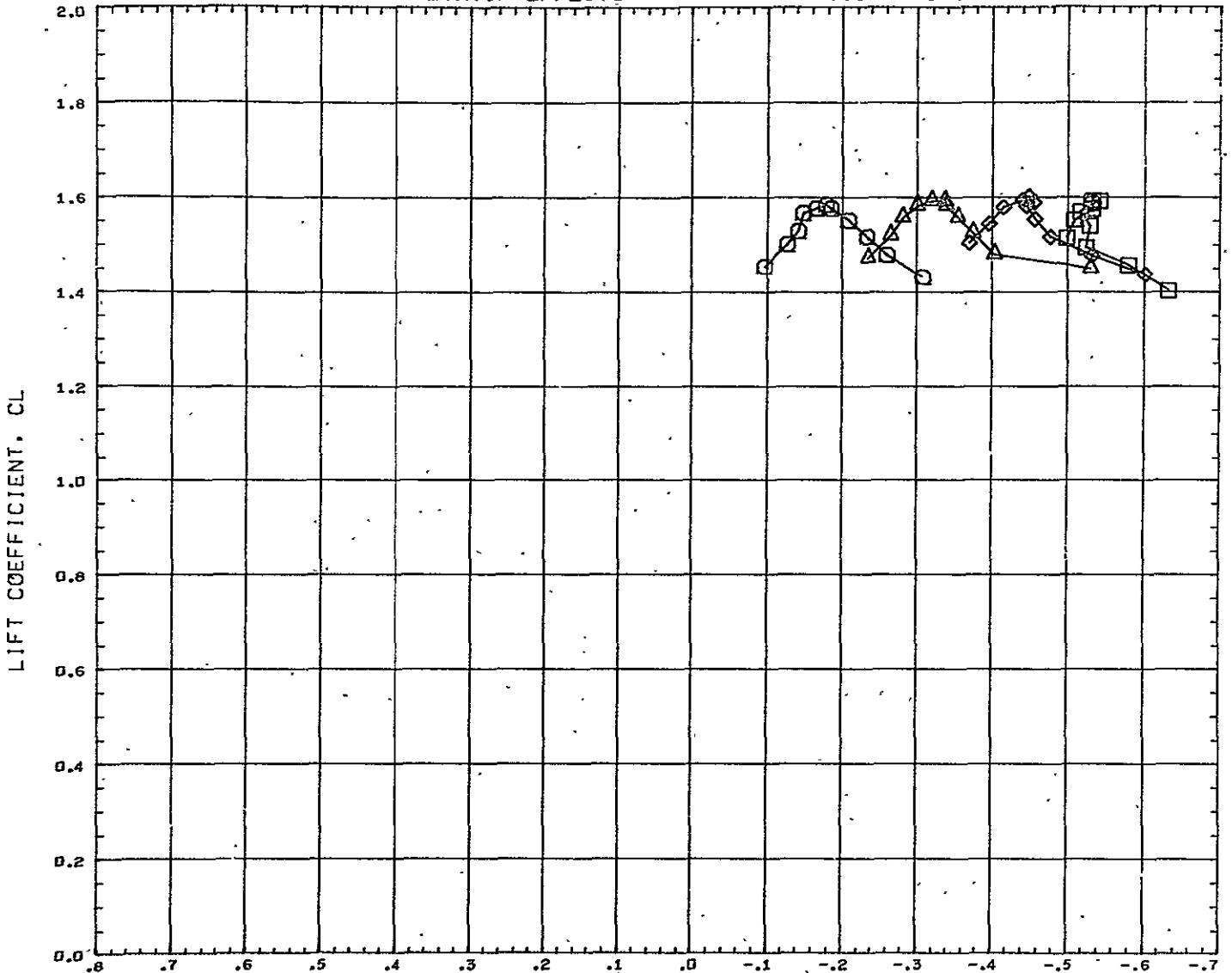
BETA	ELVATR	AILRON
0.000	0.000	0.000
0.000	10.000	0.000
0.000	20.000	0.000
0.000	30.000	0.000

REFERENCE INFORMATION		
REFS	3084.0040	SQ FT
REFL	322.9004	INCHES
REFB	1490.0040	INCHES
XNRF	1293.0040	INCHES
YNRF	0.0000	INCHES
ZNRF	50.5000	INCHES
SCALE	0.0035	SCALE

MACH 4.959

STRAIGHT WING ORBITER- ELEVATOR EFFECTS

(BODY+WING+LOW-HORIZONTAL)



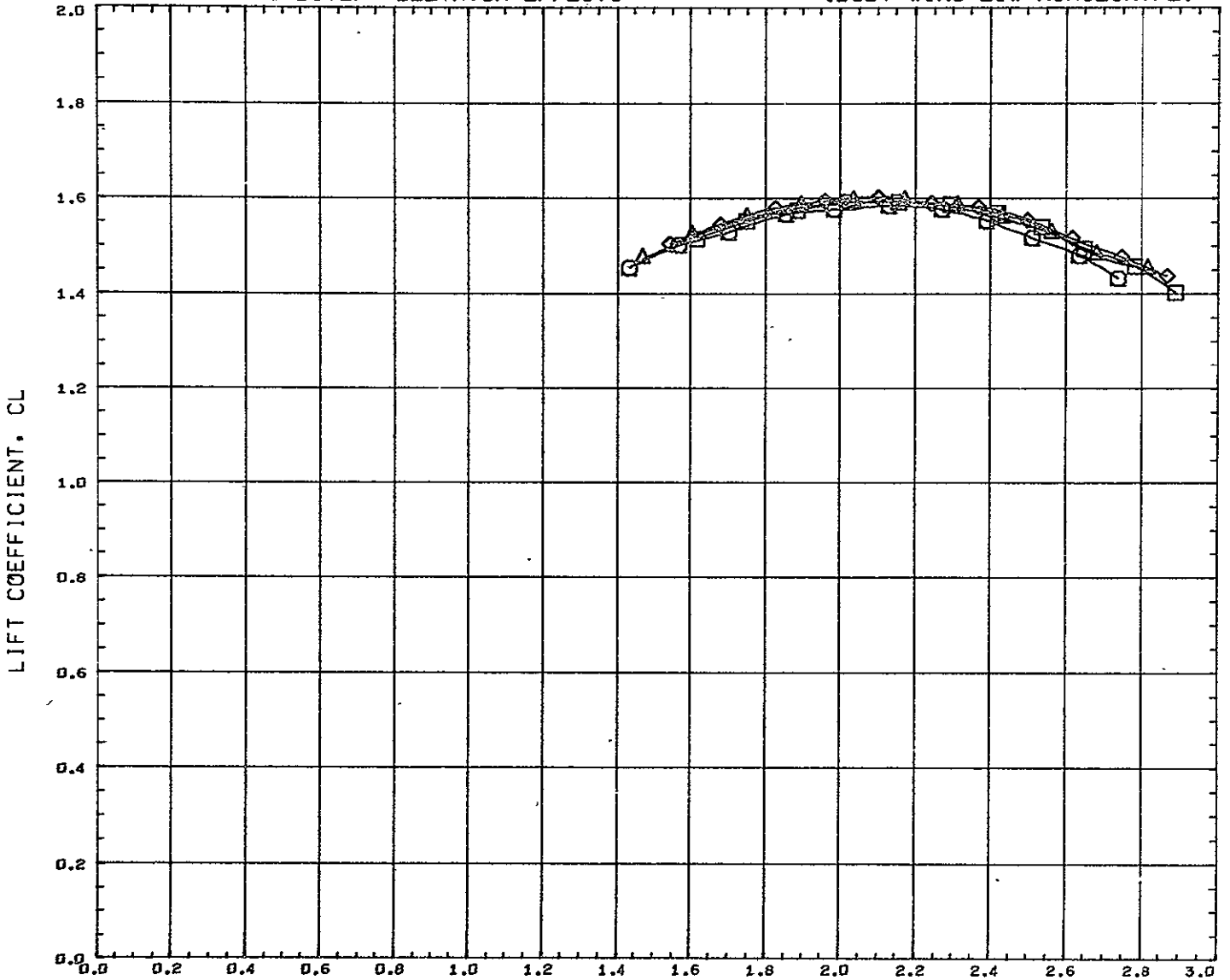
PITCHING MOMENT COEFFICIENT, CLM

DATA SET SYMBO	CONFIGURATION DESCRIPTION	BETA	ELVATR	AILRON	REFERENCE INFORMATION
(C2730C)	MSFC478 NR ST ORBITER B6WIDH16E14	0.000	0.000	0.000	REFS 3084.0040 SQ FT
(C2731C)	MSFC478 NR ST ORBITER B6WIDH16E14	0.000	10.000	0.000	REFL 322.9004 INCHES
(C2732C)	MSFC478 NR ST ORBITER B6WIDH16E14	0.000	20.000	0.000	REFB 1490.0040 INCHES
(C2733C)	MSFC478 NR ST ORBITER B6WIDH16E14	0.000	30.000	0.000	XMRP 1293.0040 INCHES
					YMRP 0.0000 INCHES
					ZMRP 50.5000 INCHES
					SCALE 0.0035 SCALE

MACH 4.959

STRAIGHT WING ORBITER- ELEVATOR EFFECTS

(BODY+WING+LOW-HORIZONTAL)



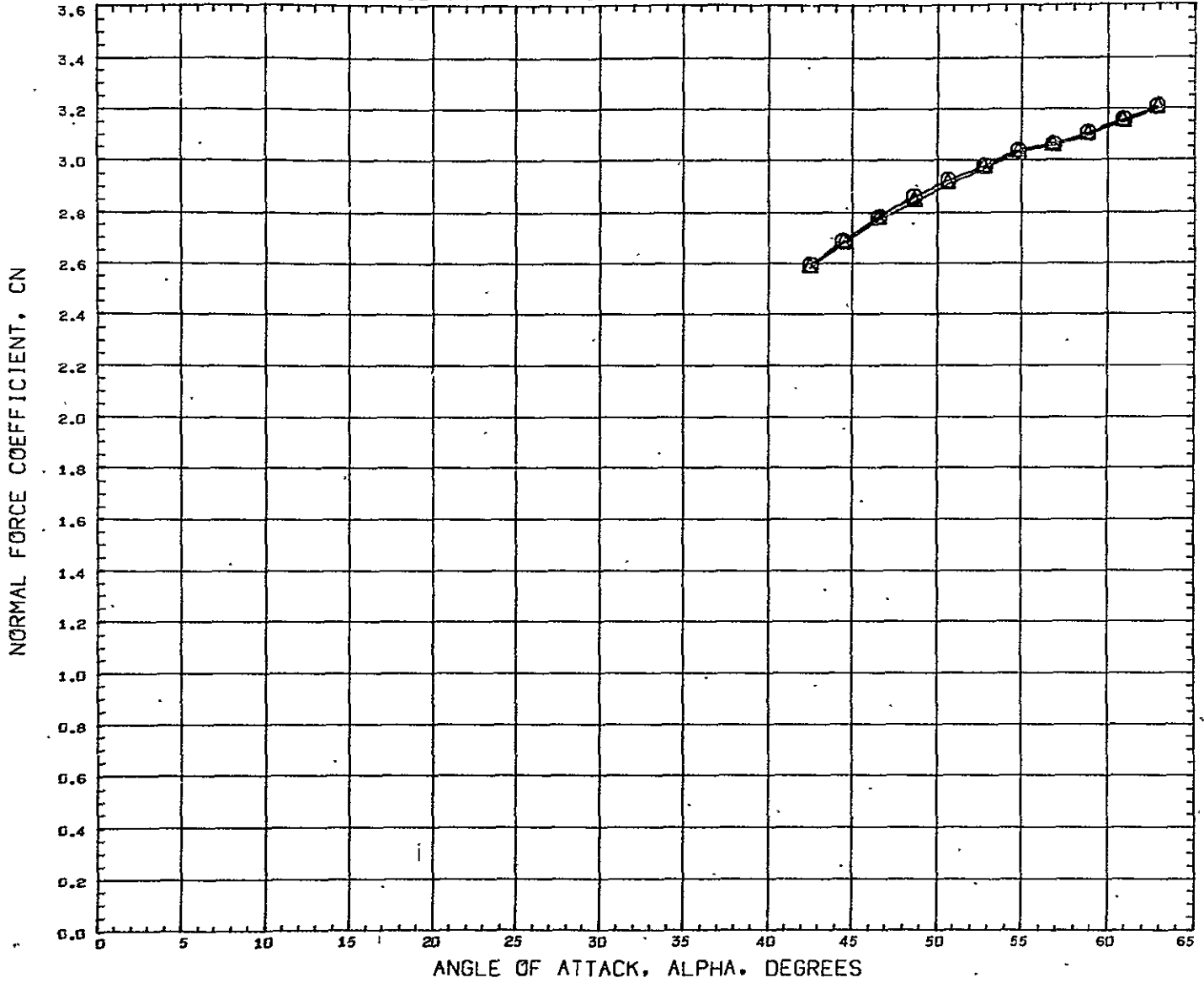
DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(C2730C)	MSFC478 NR ST ORBITER B6W1DH16E14
(C2731C)	MSFC478 NR ST ORBITER B6W1DH16E14
(C2732C)	MSFC478 NR ST ORBITER B6W1DH16E14
(C2733C)	MSFC478 NR ST ORBITER B6W1DH16E14

BETA	ELVATR	AILRON
0.000	0.000	0.000
0.000	10.000	0.000
0.000	20.000	0.000
0.000	30.000	0.000

REFERENCE INFORMATION		
REFS	3084.0040	SQ FT
REFL	322.9004	INCHES
REFB	1490.0040	INCHES
XNRF	1293.0040	INCHES
YNRF	0.0000	INCHES
ZMRF	50.5000	INCHES
SCALE	0.0035	SCALE

MACH 4.959

STRAIGHT WING ORBITER-AILERON EFFECTS, MID-HORIZONTAL TAIL



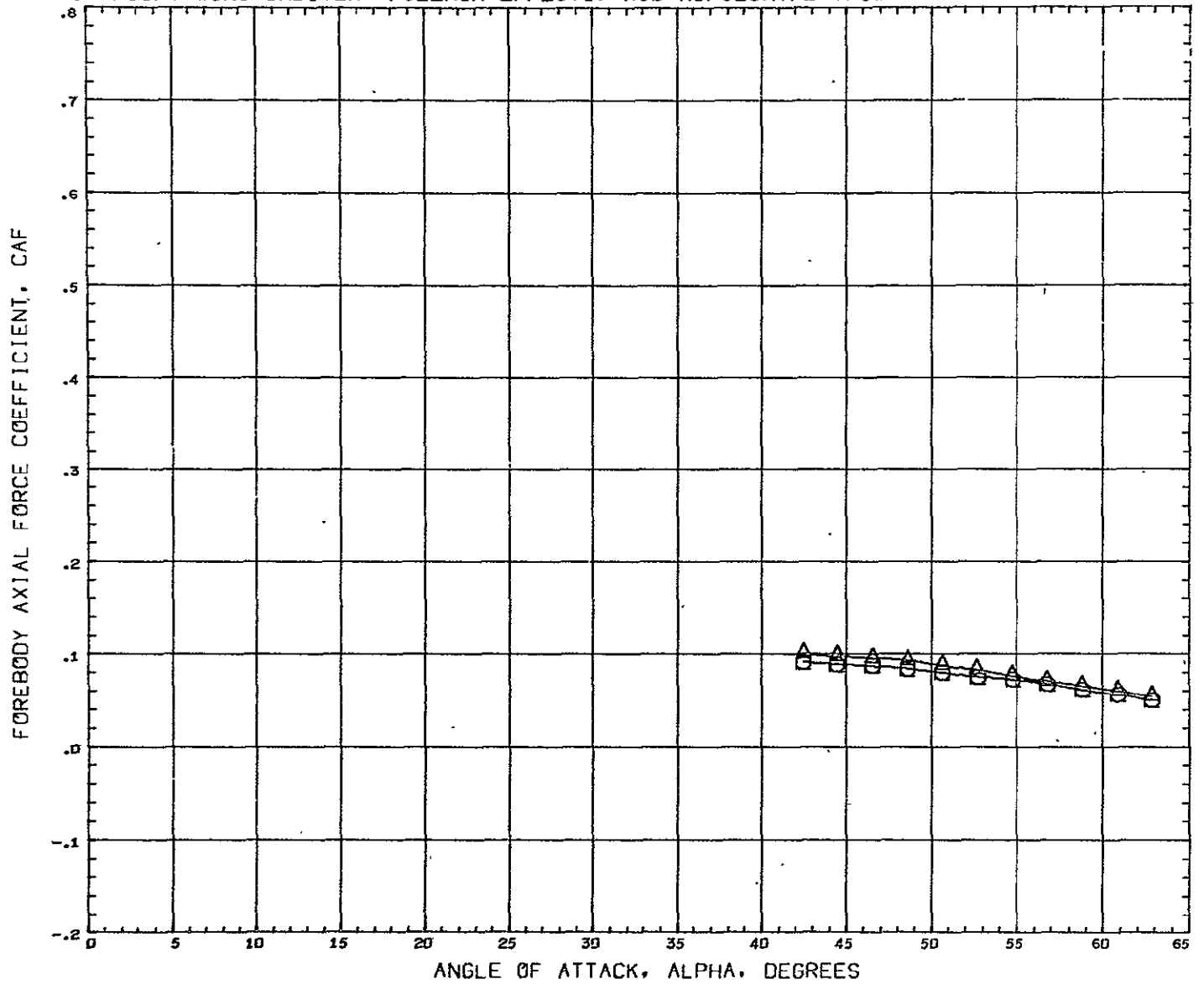
DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(E2712C)	MSFC478 NR ST ORBITER B6W10H12
(E2739C)	MSFC478 NR ST ORBITER B6W10H12

BETA	.HTAIL	AILRON
0.000	0.000	0.000
0.000	0.000	20.000

REFERENCE INFORMATION	
REFS	3084.0040 SQ FT
REFL	322.9004 INCHES
REFB	1490.0040 INCHES
XMRP	1293.0040 INCHES
YMRP	0.0000 INCHES
ZMRP	50.5000 INCHES
SCALE	0.0035 SCALE

MACH 1.956

STRAIGHT WING ORBITER- AILERON EFFECTS, MID-HORIZONTAL TAIL



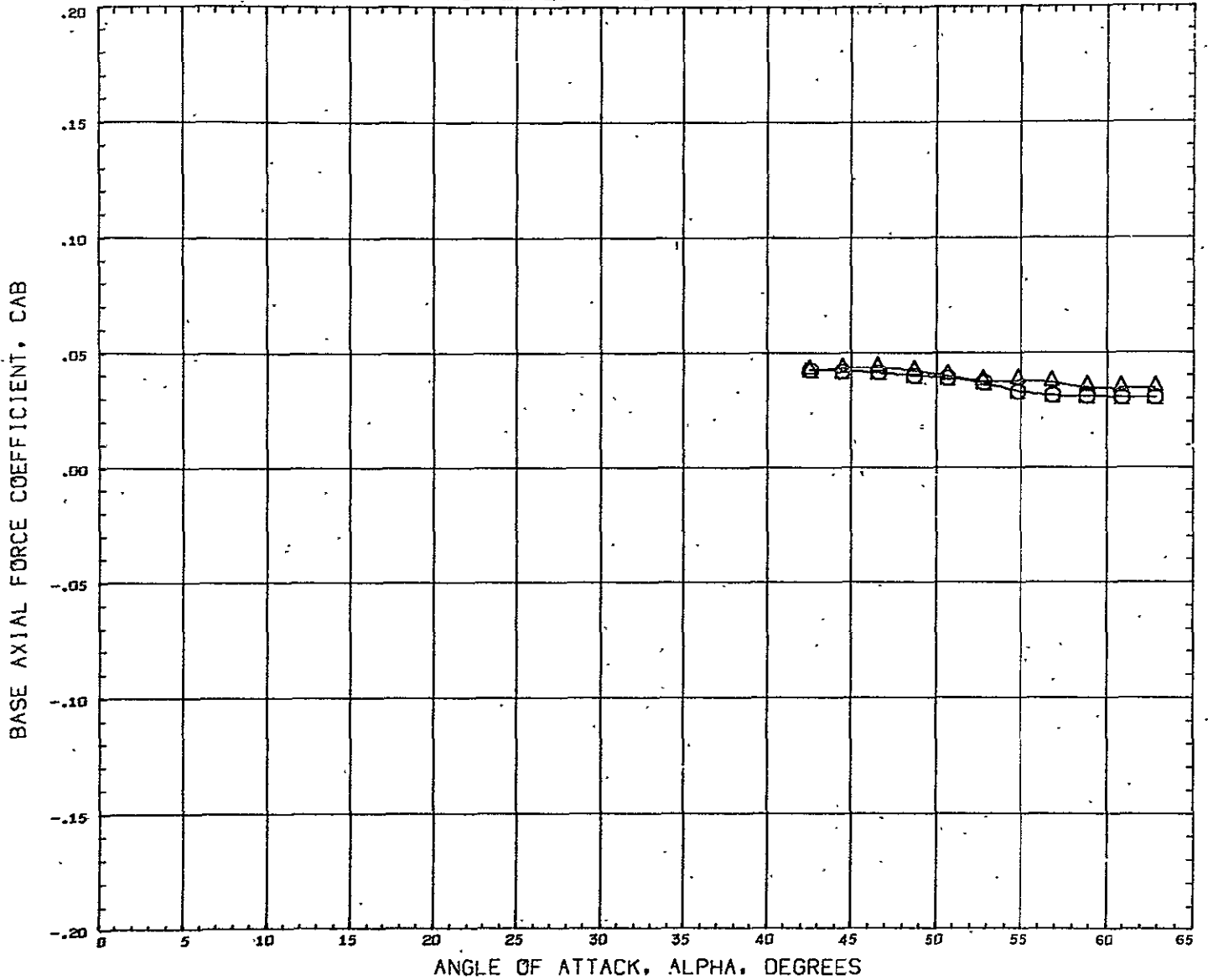
DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(E2712C) \square	MSFC478 NR ST ORBITER B6W10H12
(E2739C) \triangle	MSFC478 NR ST ORBITER B6W10H12

BETA	HTAIL	AILRON
0.000	0.000	0.000
0.000	0.000	20.000

REFERENCE INFORMATION		
REFS	3084.0040	SQ FT
REFL	322.9004	INCHES
REFB	1490.0040	INCHES
XMRP	1293.0040	INCHES
YMRP	0.0000	INCHES
ZMRP	50.5000	INCHES
SCALE	0.0035	SCALE

MACH 1.956

STRAIGHT WING ORBITER- AILERON EFFECTS, MID-HORIZONTAL TAIL



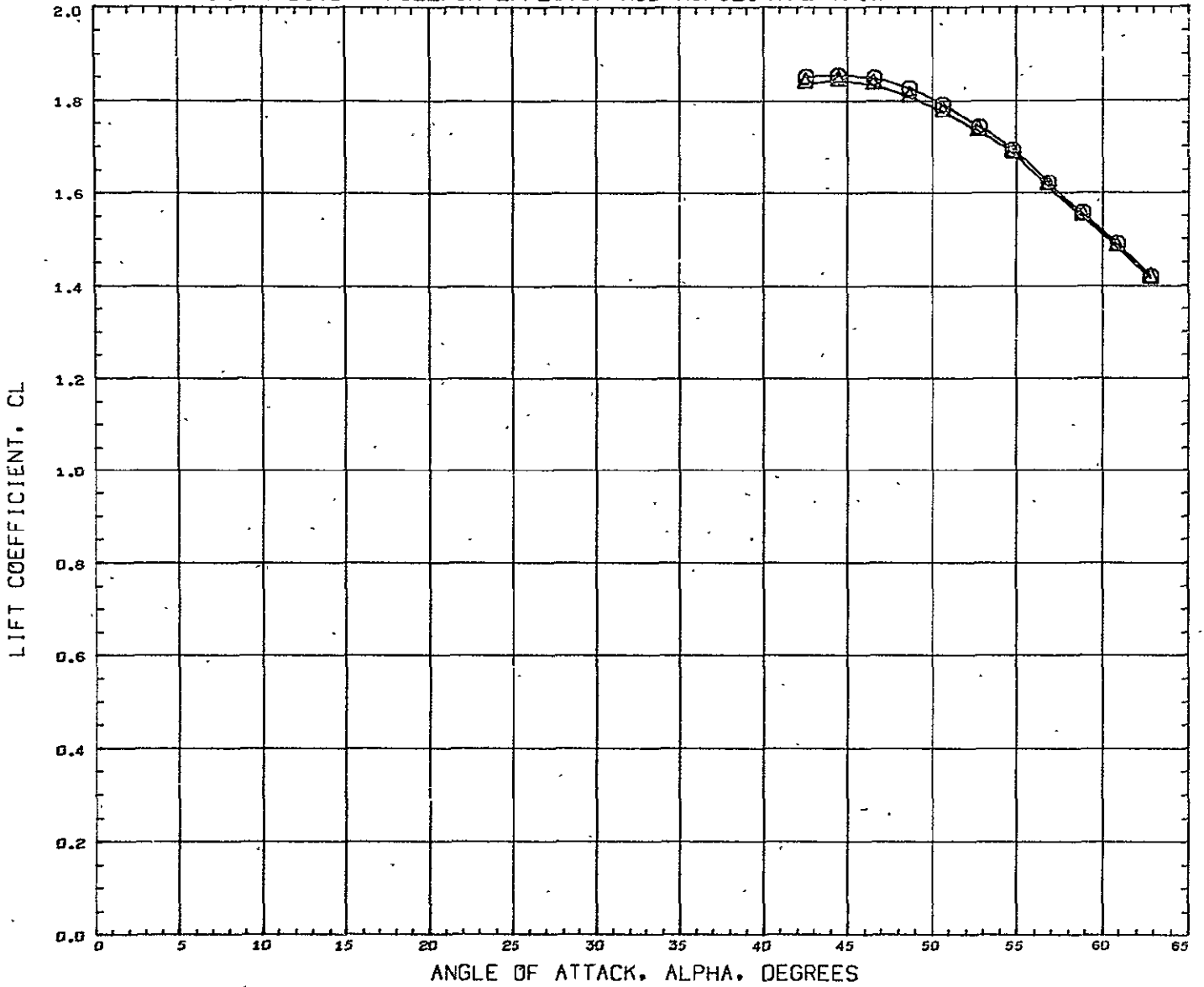
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(E2712C)	MSFC478 NR ST ORBITER B6W10H12
(E2739C)	MSFC478 NR ST ORBITER B6W10H12

BETA	HTAIL	AILRON
0.000	0.000	0.000
0.000	0.000	20.000

REFERENCE INFORMATION		
REFS	3084.0040	SQ FT
REFL	322.9004	INCHES
REFB	1490.0040	INCHES
XMRP	1293.0040	INCHES
YMRP	0.0000	INCHES
ZMRP	50.5000	INCHES
SCALE	0.0035	SCALE

MACH 1.956

STRAIGHT WING ORBITER-AILERON EFFECTS, MID-HORIZONTAL TAIL



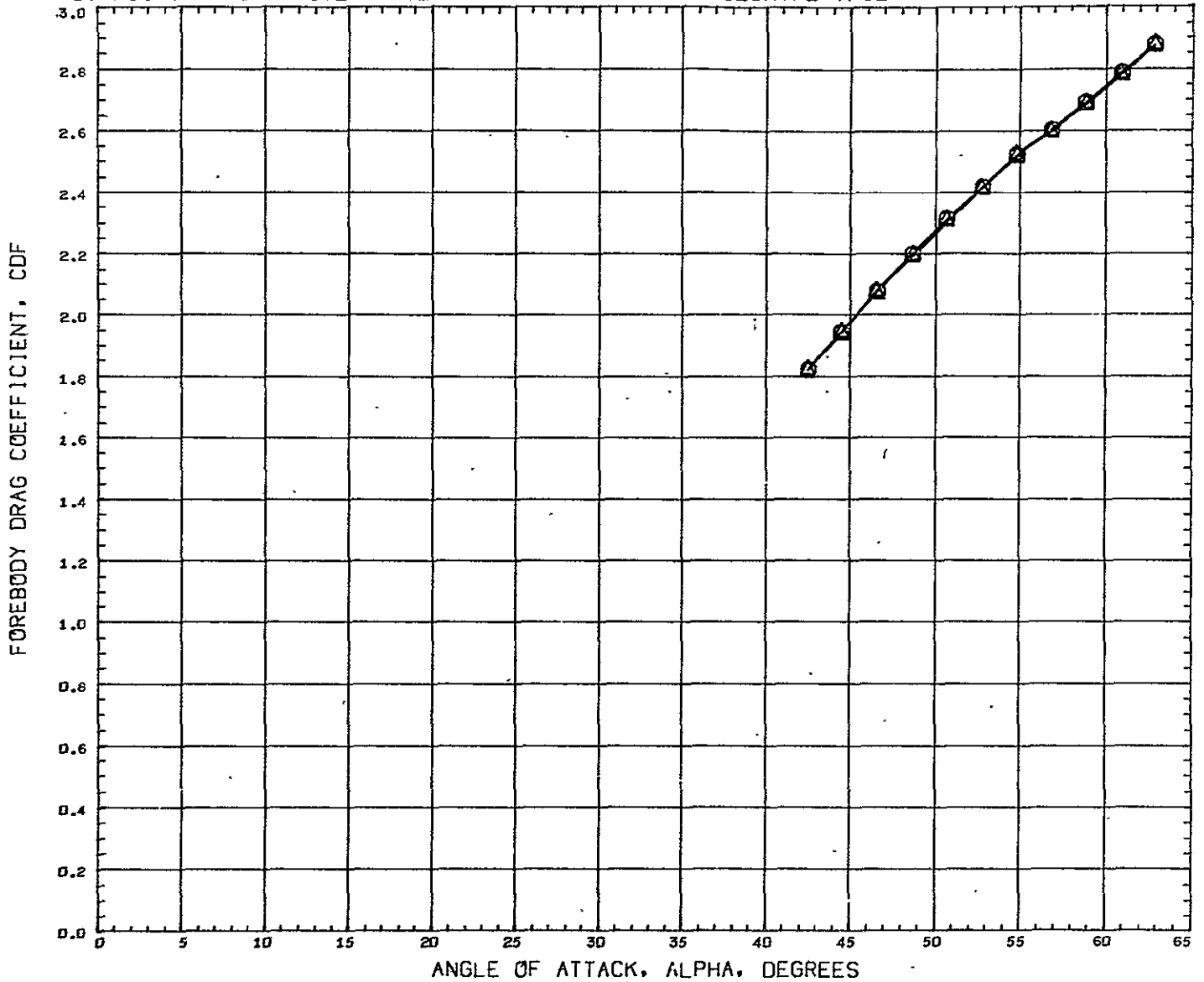
DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (E2712C) \circ MSFC478 NR ST ORBITER B6W10H12
 (E2739C) Δ MSFC478 NR ST ORBITER B6W10H12

BETA HTAIL AILERON
 0.000 0.000 0.000
 0.000 0.000 20.000

REFERENCE INFORMATION
 REFS 3084.0040 SQ FT
 REFL 322.9004 INCHES
 REFB 1490.0040 INCHES
 XMRP 1293.0040 INCHES
 YMRP 0.0000 INCHES
 ZMRP - 50.5000 INCHES
 SCALE 0.0035 SCALE

MACH 1.956

STRAIGHT WING ORBITER-AILERON EFFECTS, MID-HORIZONTAL TAIL



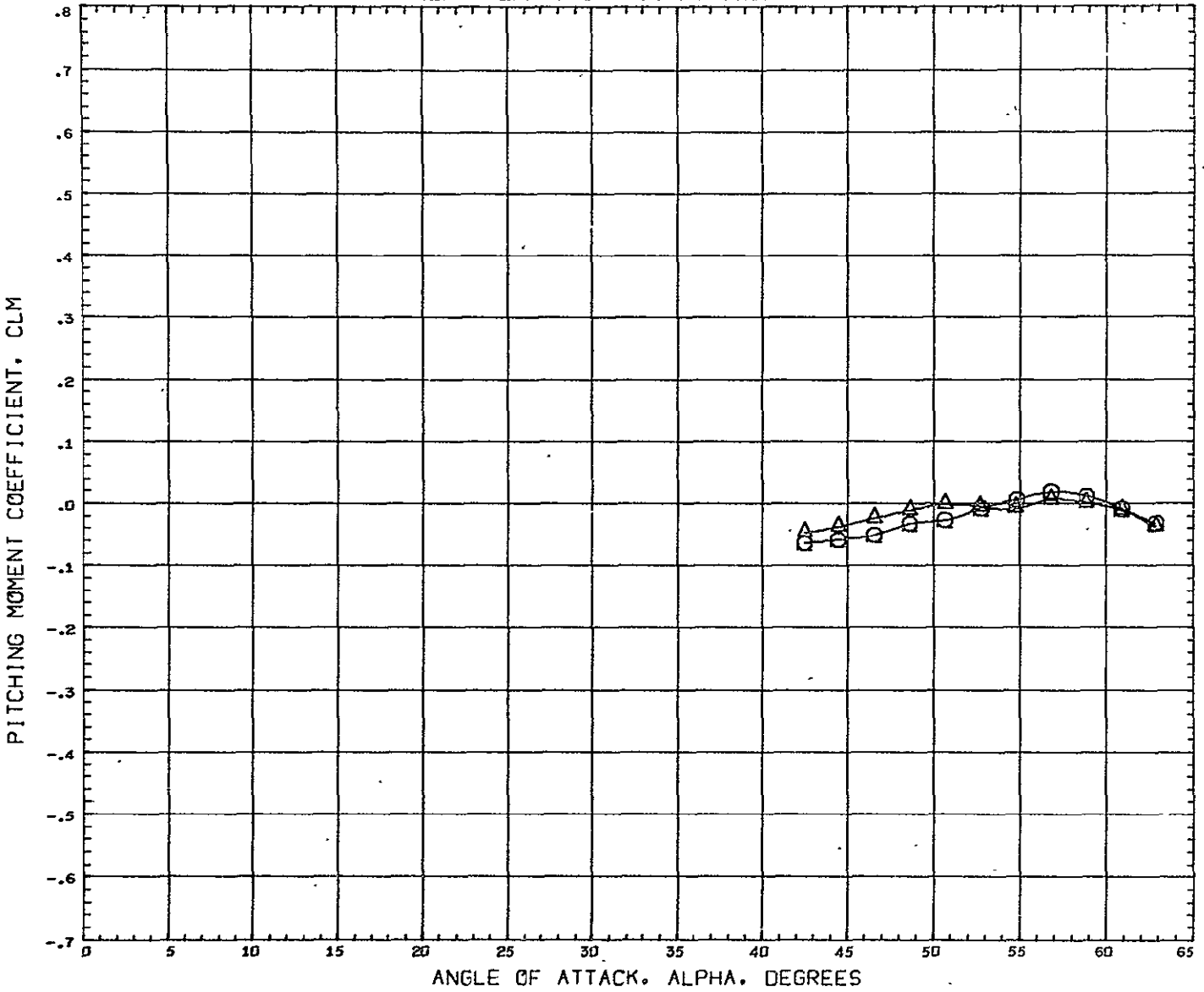
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 (E2739C) \triangle HSFC478 NR ST ORBITER B6WIDH12

BETA HTAIL AILRON
 0.000 0.000 0.000
 0.000 0.000 20.000

REFERENCE INFORMATION
 REFS 3084.0040 SQ FT
 REFL 322.9004 INCHES
 REFB 1490.0040 INCHES
 XMRP 1293.0040 INCHES
 YMRP 0.0000 INCHES
 ZMRP 50.5000 INCHES
 SCALE 0.0035 SCALE

MACH 1.956

STRAIGHT WING ORBITER-AILERON EFFECTS, MID-HORIZONTAL TAIL



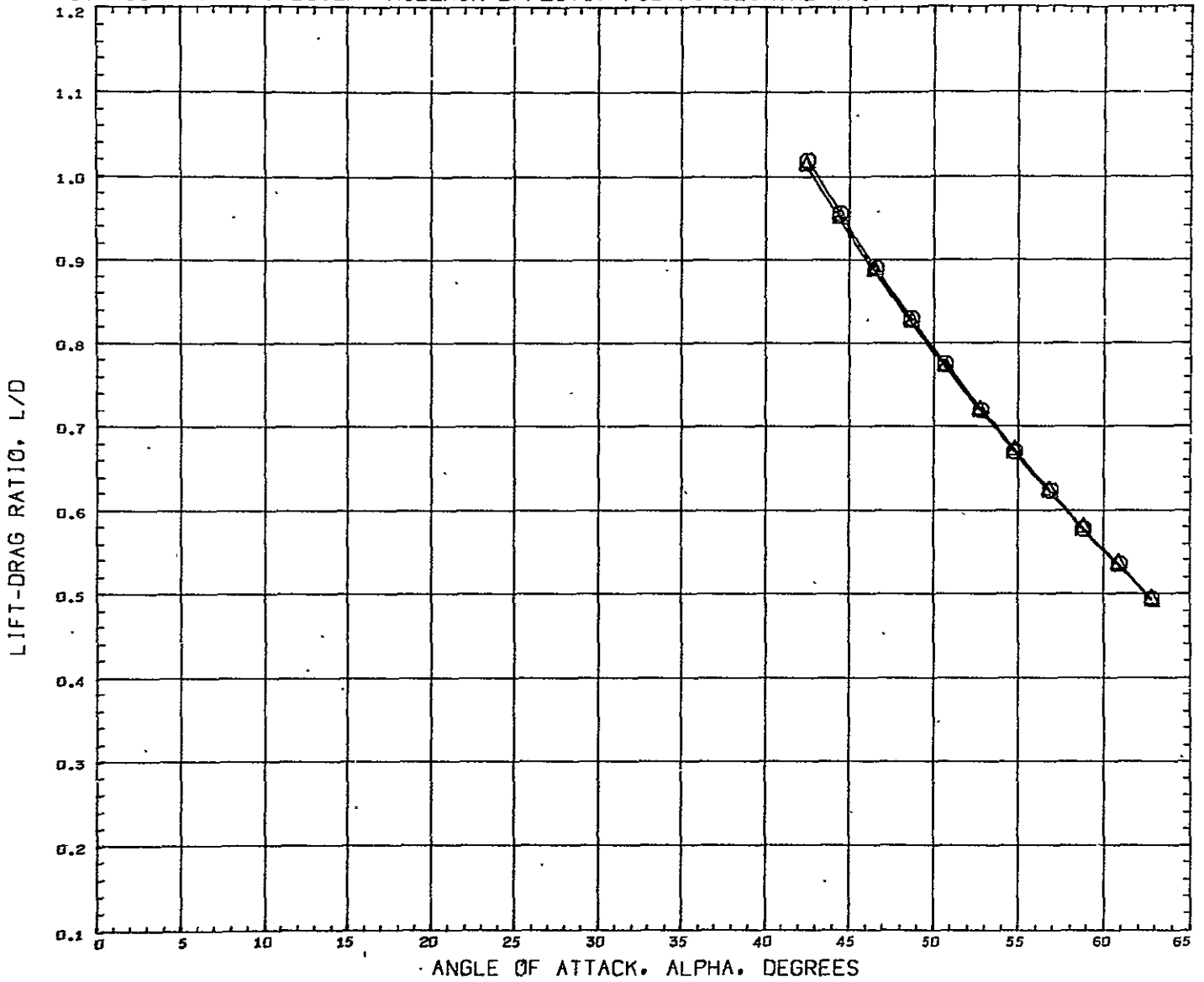
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 (E2739C) △ MSFC478 NR ST ORBITER B6W10H12

BETA HTAIL AILERON
 0.000 0.000 0.000
 0.000 0.000 20.000

REFERENCE INFORMATION
 REFS 3084.0040 SQ FT
 REFL 322.9004 INCHES
 REFB 1490.0040 INCHES
 XMRP 1293.0040 INCHES
 YMRP 0.0000 INCHES
 ZMRP 50.5000 INCHES
 SCALE 0.0035 SCALE

MACH 1.956

STRAIGHT WING ORBITER-AILERON EFFECTS, MID-HORIZONTAL TAIL



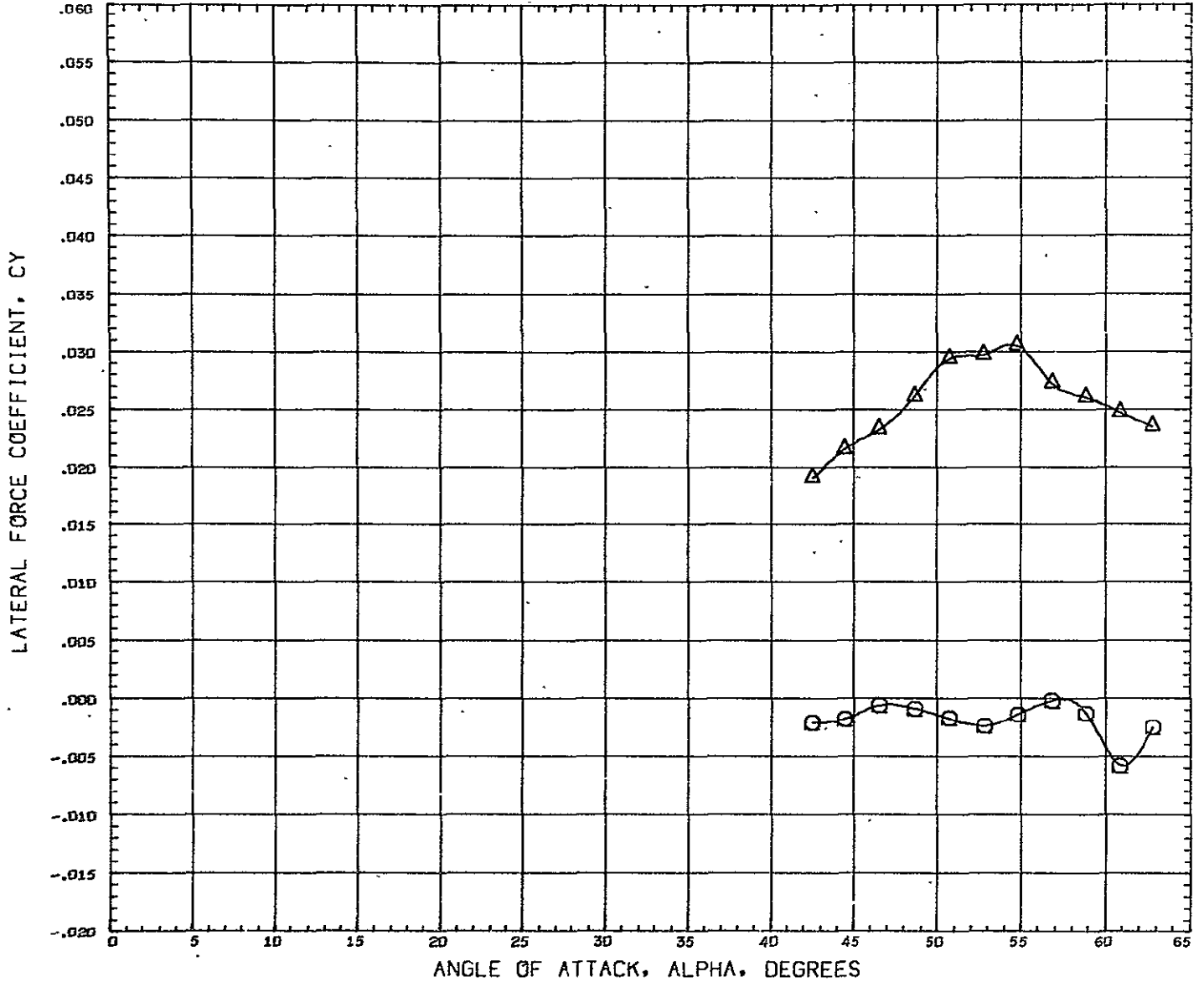
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 (E2739C) Δ MSFC478 NR ST ORBITER B6W10H12

BETA HTAIL AILERON
 0.000 0.000 0.000
 0.000 0.000 20.000

REFERENCE INFORMATION
 REFS 3084.0040 SQ FT
 REFL 322.9004 INCHES
 REFB 1490.0040 INCHES
 XMRP 1293.0040 INCHES
 YMRP 0.0000 INCHES
 ZMRP 50.5000 INCHES
 SCALE 0.0035 SCALE

MACH 1.956

STRAIGHT WING ORBITER-AILERON EFFECTS, MID-HORIZONTAL TAIL



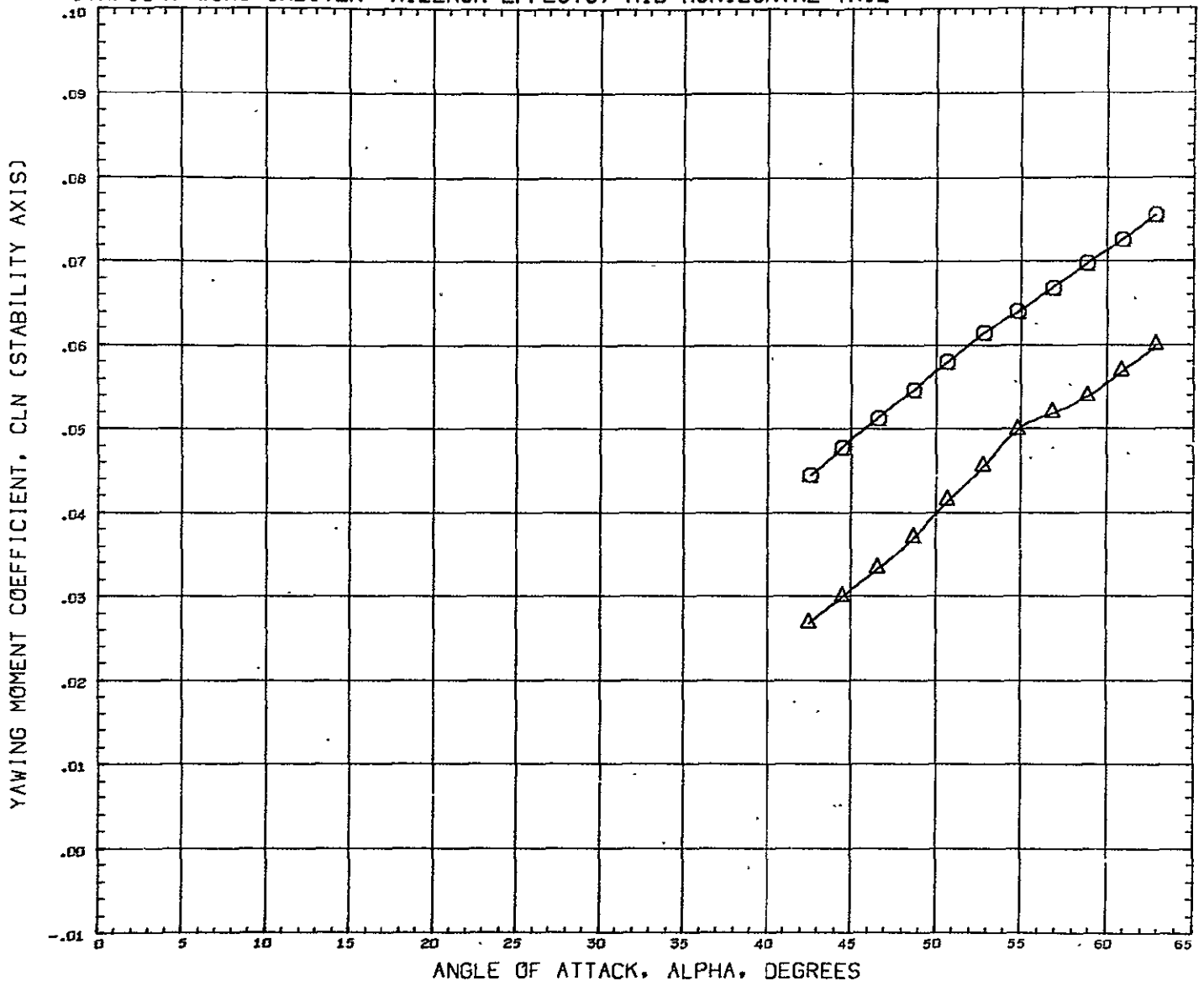
DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(E2712C) ○	MSFC478 NR ST ORBITER B6W10H12
(E2739C) △	MSFC478 NR ST ORBITER B6W10H12

BETA	HTAIL	AILRON
0.000	0.000	0.000
0.000	0.000	20.000

REFERENCE INFORMATION		
REFS	3084.0040	SQ FT
REFL	322.9004	INCHES
REFB	1490.0040	INCHES
XMRP	1293.0040	INCHES
YMRP	0.0000	INCHES
ZMRP	50.5000	INCHES
SCALE	0.0035	SCALE

MACH 1.956

STRAIGHT WING ORBITER-AILERON EFFECTS, MID-HORIZONTAL TAIL



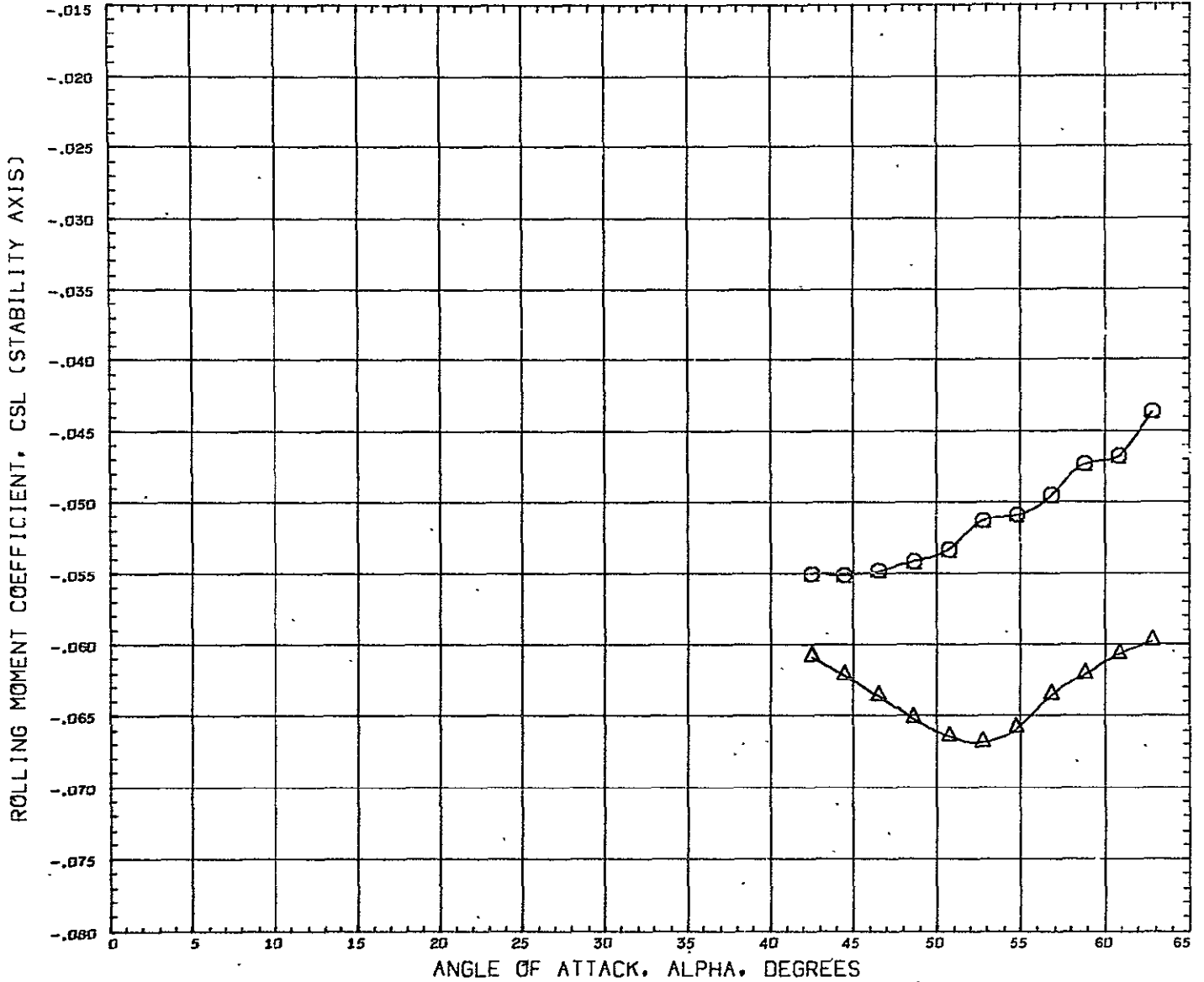
DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(E2712C) ○	MSFC478 NR ST ORBITER B6W1DH12
(E2739C) △	MSFC478 NR ST ORBITER B6W1DH12

BETA	HTAIL	AILRON
0.000	0.000	0.000
0.000	0.000	20.000

REFERENCE INFORMATION		
REFS	3084.0040	Sq FT
REFL	322.9004	INCHES
REFB	1490.0040	INCHES
XMRP	1293.0040	INCHES
YMRP	0.0000	INCHES
ZMRP	50.5000	INCHES
SCALE	0.0035	SCALE

MACH 1.956

STRAIGHT WING ORBITER- AILERON EFFECTS, MID-HORIZONTAL TAIL



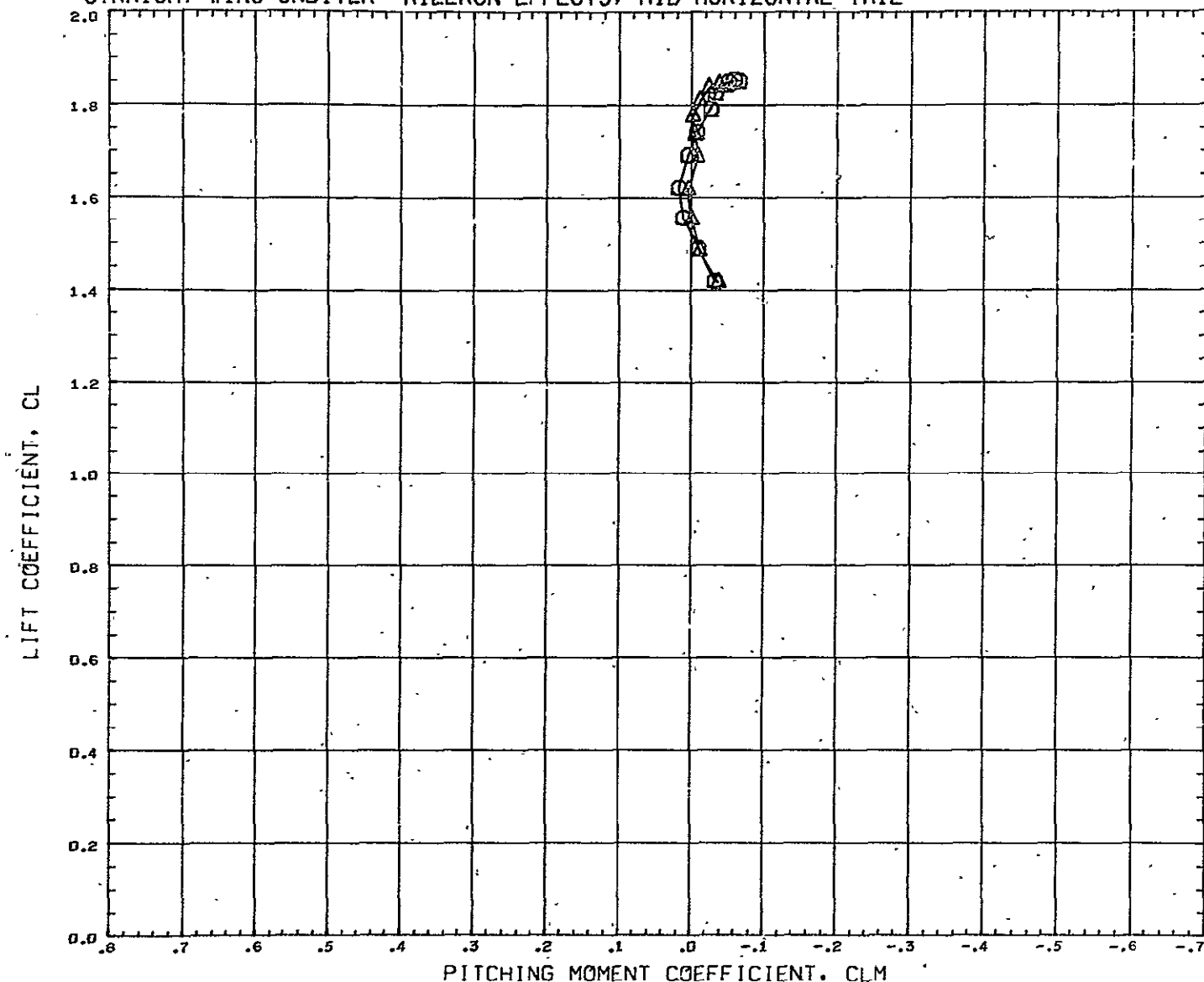
DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(E2712C)	MSFC478 NR ST ORBITER B6W10H12
(E2739C)	MSFC478 NR ST ORBITER B6W10H12

BETA	HTAIL	AILRON
0.000	0.000	0.000
0.000	0.000	20.000

REFERENCE INFORMATION		
REFS	3084.0040	SQ FT
REFL	322.9004	INCHES
REFB	1490.0040	INCHES
YMRP	1293.0040	INCHES
ZMRP	0.0000	INCHES
ZMRP	- 50.5000	INCHES
SCALE	0.0035	SCALE

PACH 1.956

STRAIGHT WING ORBITER- AILERON EFFECTS, MID-HORIZONTAL TAIL



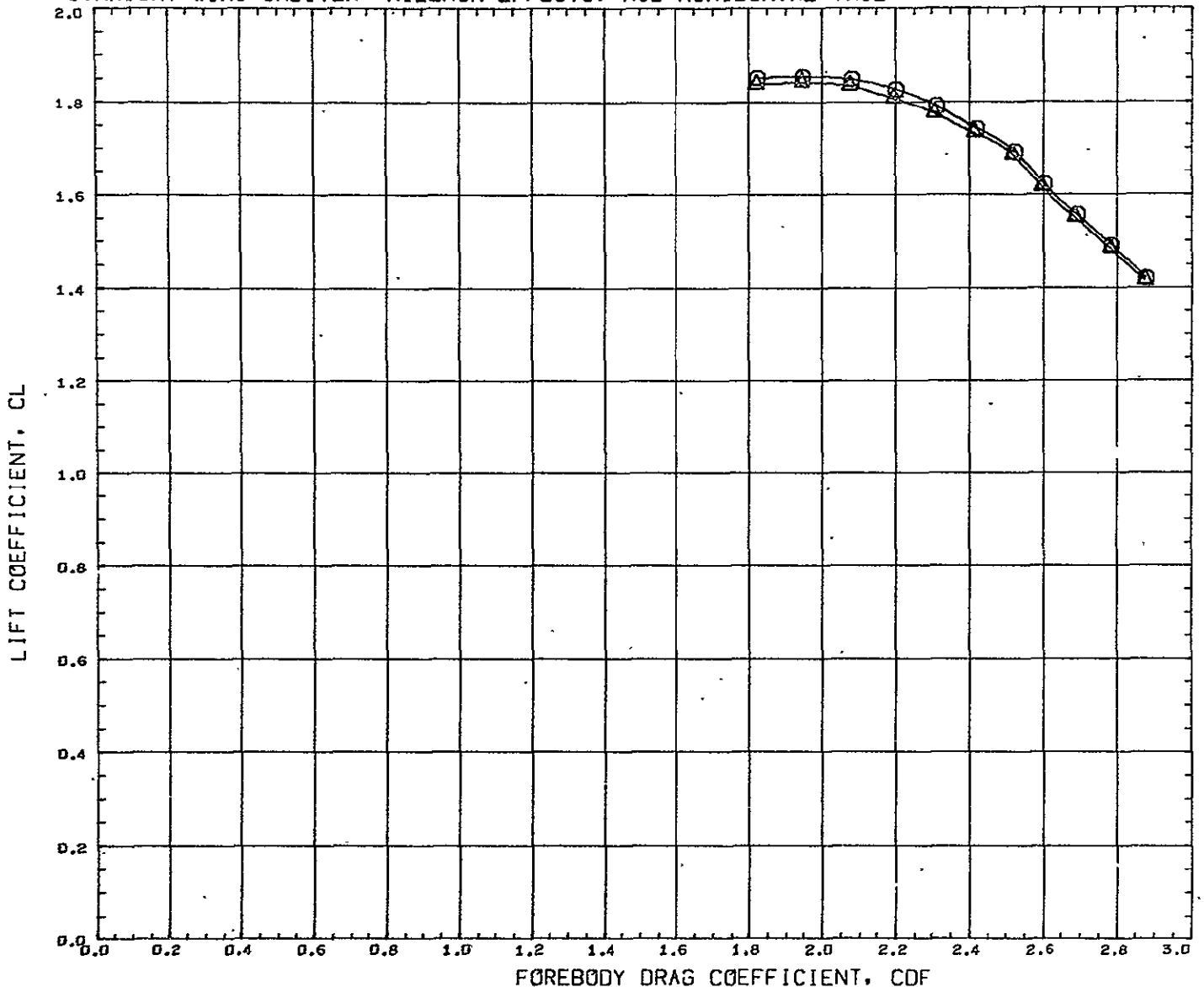
DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(E2712C) ○	MSFC478 NR ST ORBITER B6W1DH12
(E2739C) △	MSFC478 NR ST ORBITER B6W1DH12

BETA	HTAIL	AILRON
0.000	0.000	0.000
0.000	0.000	20.000

REFERENCE INFORMATION		
REFS	3084.0040	SQ FT
REFL	322.9004	INCHES
REFB	1490.0040	INCHES
XMRP	1293.0040	INCHES
YMRP	0.0000	INCHES
ZMRP	50.5000	INCHES
SCALE	0.0035	SCALE

MACH 1.956

STRAIGHT WING ORBITER-AILERON EFFECTS, MID-HORIZONTAL TAIL



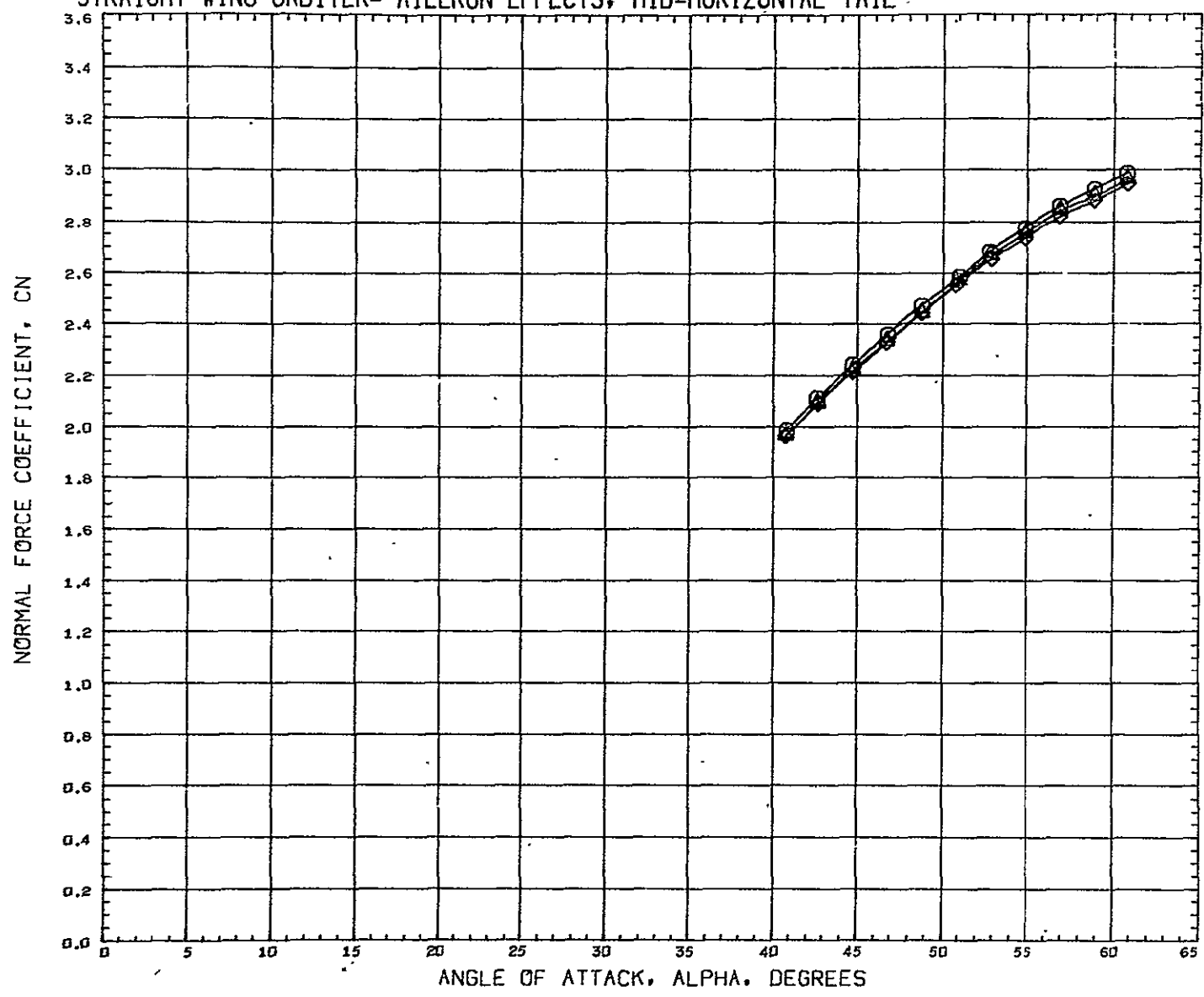
DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (E2712C) ○ MSFC478 NR ST ORBITER B6WIDH12
 (E2739C) △ MSFC478 NR ST ORBITER B6WIDH12

BETA HTAIL AILERON
 0.000 0.000 0.000
 0.000 0.000 20.000

REFERENCE INFORMATION
 REFS 3084.0040 SQ FT
 REFL 322.9004 INCHES
 REFB 1490.0040 INCHES
 XMRP 1293.0040 INCHES
 YMRP 0.0000 INCHES
 ZMRP - 50.5000 INCHES
 SCALE 0.0035 SCALE

MACH 1.956

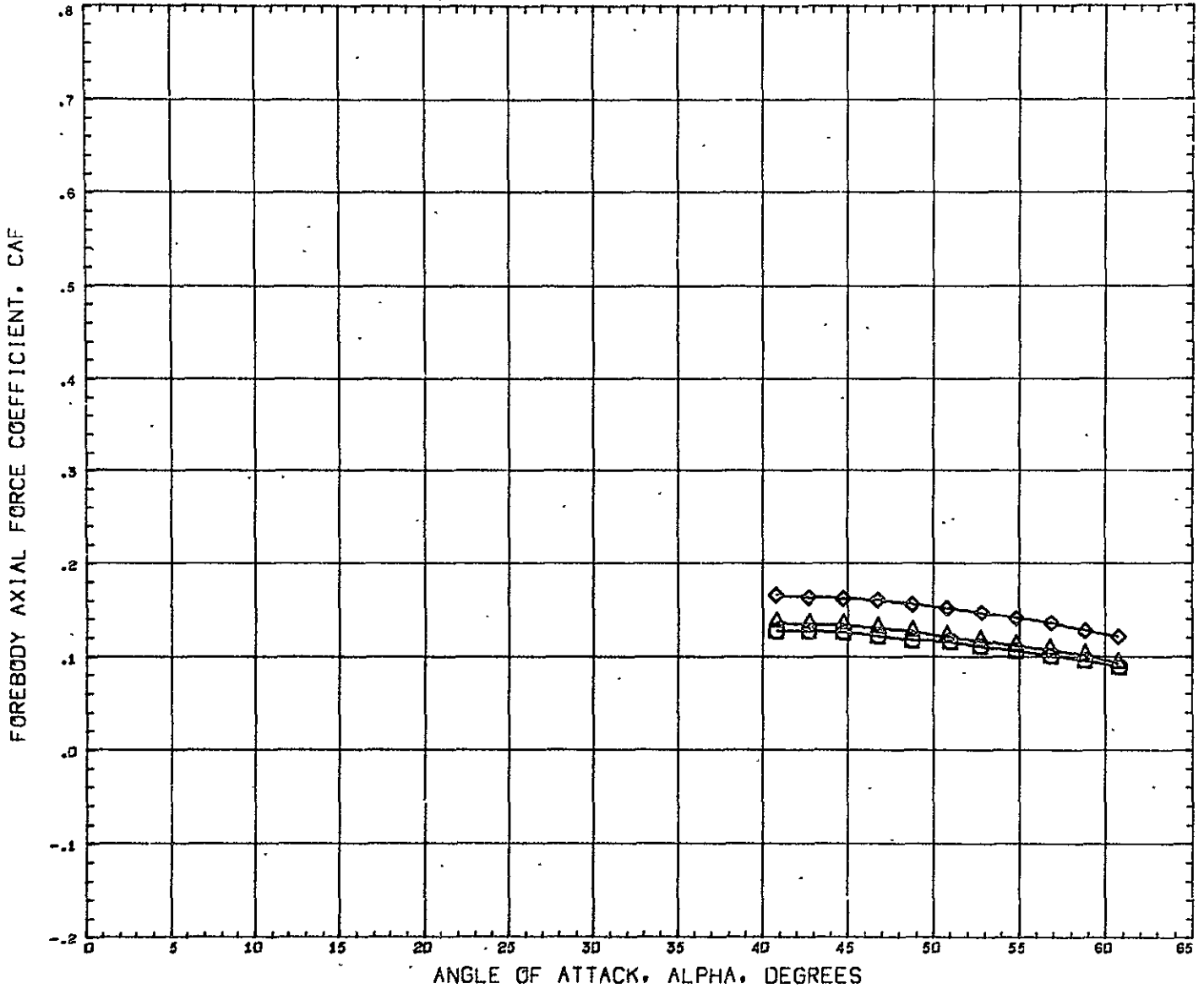
STRAIGHT WING ORBITER- AILERON EFFECTS, MID-HORIZONTAL TAIL



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	HTAIL	AILRON	REFERENCE INFORMATION
(C2712C)	MSFC478 NR ST ORBITER 86W10H12	0.000	0.000	0.000	REFS 3084.0040 SQ FT
(C2739C)	MSFC478 NR ST ORBITER 86W10H12	0.000	0.000	20.000	REFL 322.9004 INCHES
(C2747C)	MSFC478 NR ST ORBITER 86W10H12	0.000	0.000	40.000	REFB 1490.0040 INCHES
					XMRP 1293.0040 INCHES
					YMRP 0.0000 INCHES
					ZMRP - 50.5000 INCHES
					SCALE 0.0035 SCALE

MACH 4.959

STRAIGHT WING ORBITER-AILERON EFFECTS, MID-HORIZONTAL TAIL



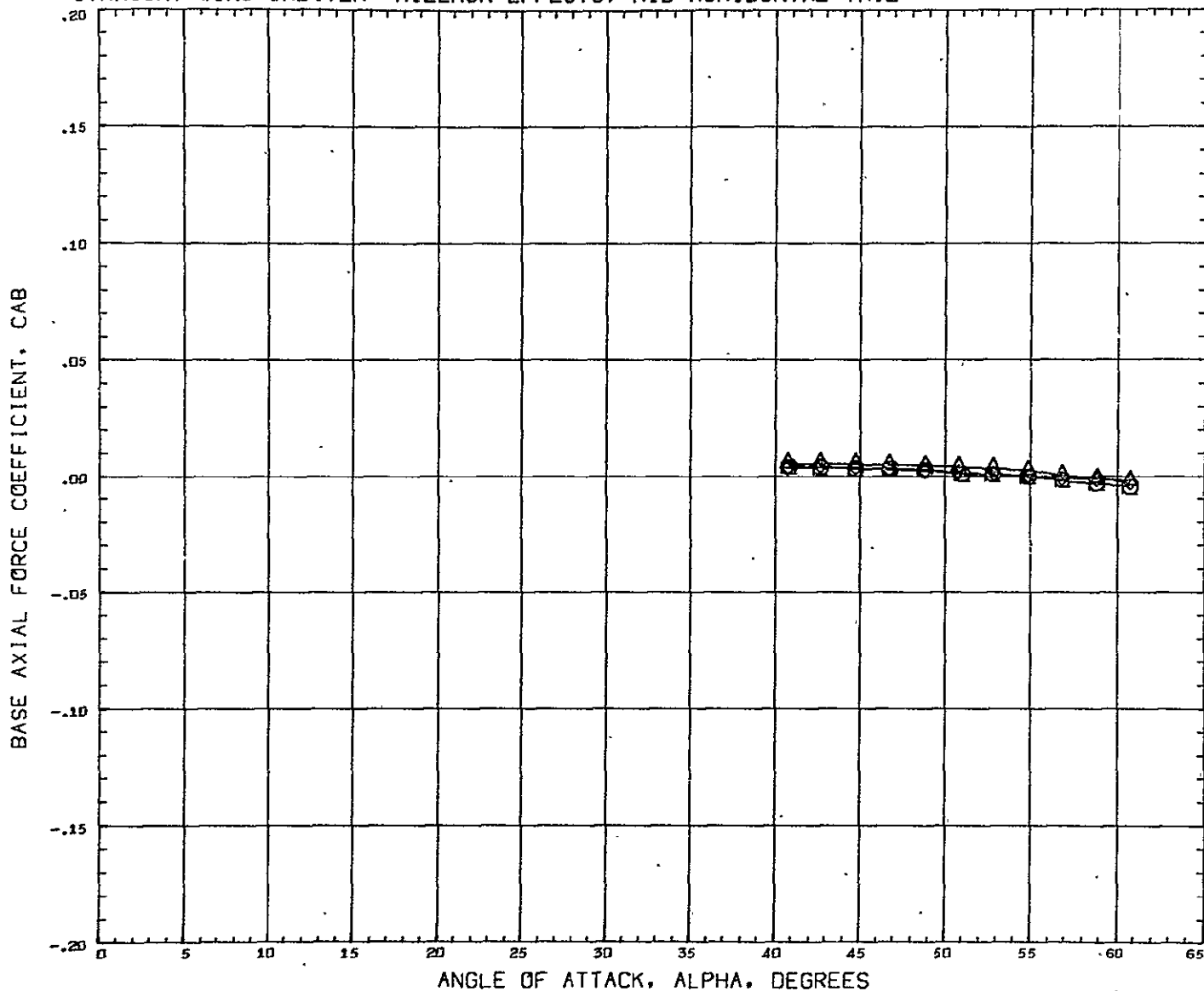
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(D2712C)	MSFC478 NR ST ORBITER B6W10H12
(D2739C)	MSFC478 NR ST ORBITER B6W10H12
(C2747C)	MSFC478 NR ST ORBITER B6W10H12

BETA	HTAIL	AILRON
0.000	0.000	0.000
0.000	0.000	20.000
0.000	0.000	40.000

REFERENCE INFORMATION	
REFS	3084.0040 SQ FT
REFL	322.9004 INCHES
REFD	1490.0040 INCHES
XMRP	1293.0040 INCHES
YMRP	0.0000 INCHES
ZMRP	50.5000 INCHES
SCALE	0.0033 SCALE

MACH 4.959

STRAIGHT WING ORBITER-AILERON EFFECTS, MID-HORIZONTAL TAIL



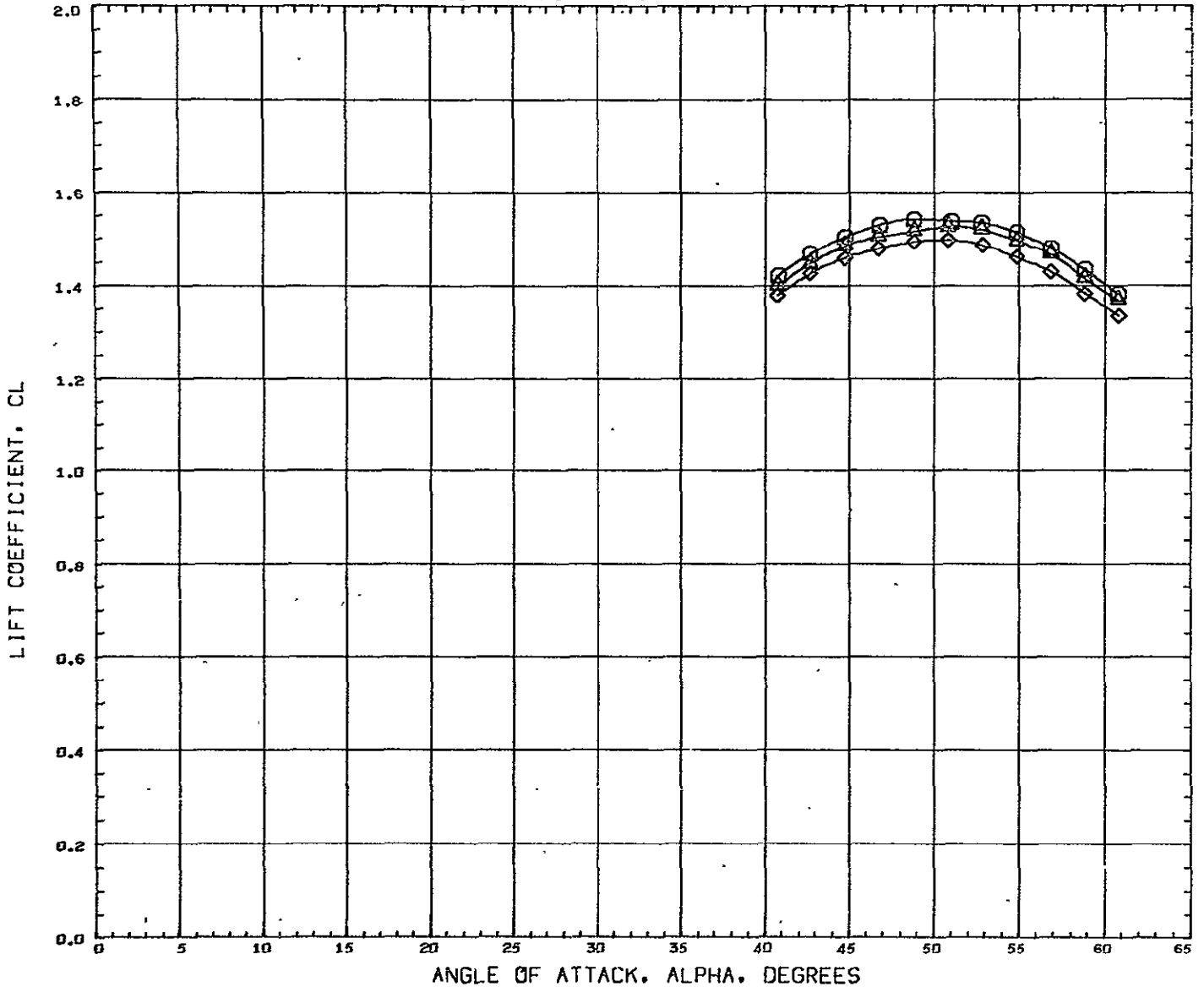
DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(D2712C)	MSFC478 NR ST ORBITER B6W1DH12
(D2739C)	MSFC478 NR ST ORBITER B6W1DH12
(C2747C)	MSFC478 NR ST ORBITER B6W1DH12

BETA	HTAIL	AILRON
0.000	0.000	0.000
0.000	0.000	20.000
0.000	0.000	40.000

REFERENCE INFORMATION		
REFS	3084.0040	SQ FT
REFL	322.9004	INCHES
REFB	1490.0640	INCHES
XMRP	1293.0040	INCHES
YMRP	0.0000	INCHES
ZMRP	50.5000	INCHES
SCALE	0.0036	SCALE

MACH 4.959

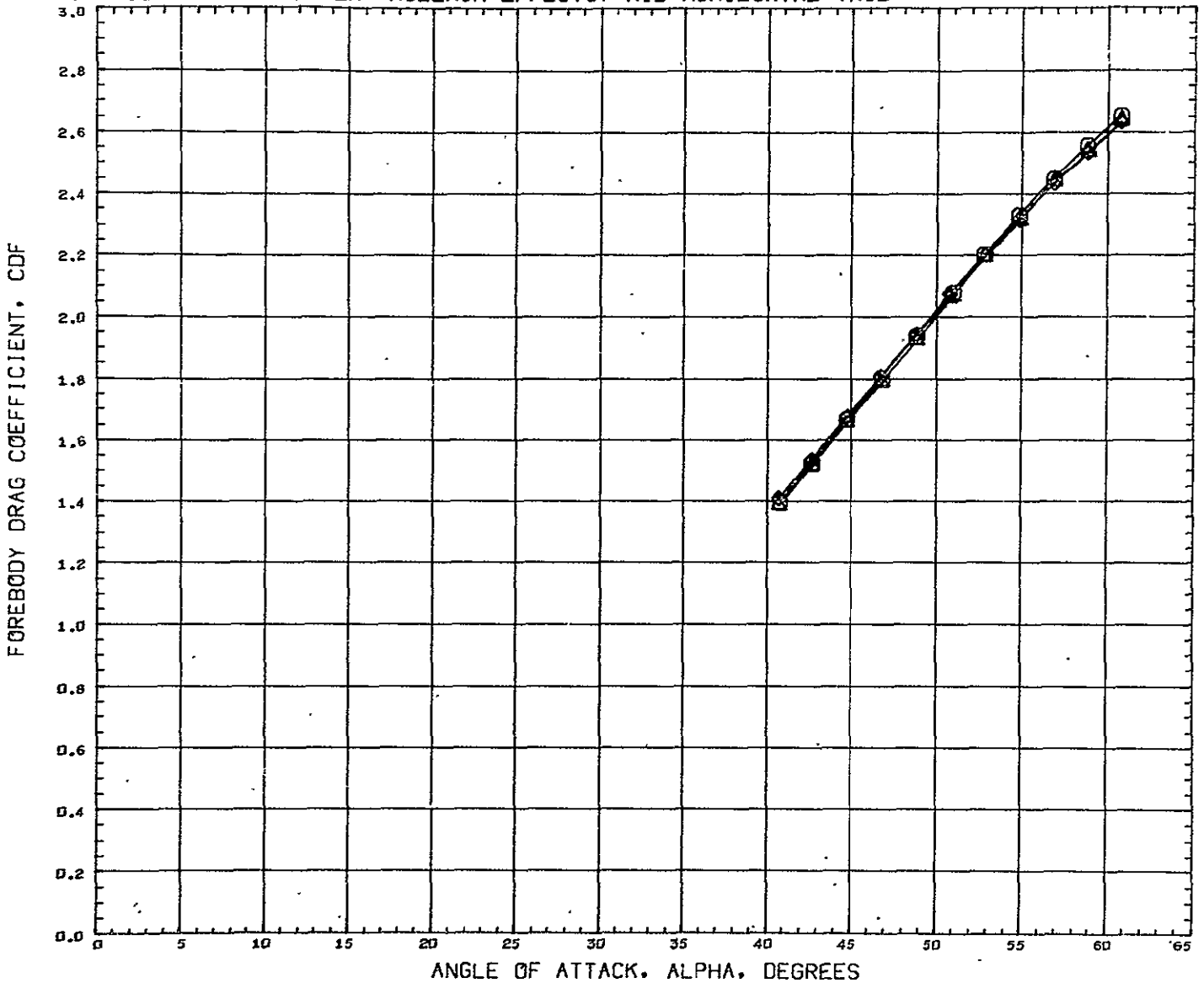
STRAIGHT WING ORBITER- AILERON EFFECTS, MID-HORIZONTAL TAIL



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	HTAIL	AILRON	REFERENCE INFORMATION
(D2712C)	MSFC478 NR ST ORBITER B6MIDH12	0.000	0.000	0.000	REFS 3984.0040 SQ FT
(D2739C)	MSFC478 NR ST ORBITER B6MIDH12	0.000	0.000	20.000	REFL 322.9004 INCHES
(C2747C)	MSFC478 NR ST ORBITER B6MIDH12	0.000	0.000	40.000	REFB 1490.0040 INCHES
					XMRP 1293.0040 INCHES
					YMRP 0.0000 INCHES
					ZMRP 50.5000 INCHES
					SCALE 0.0035 SCALE

HACH 4.959

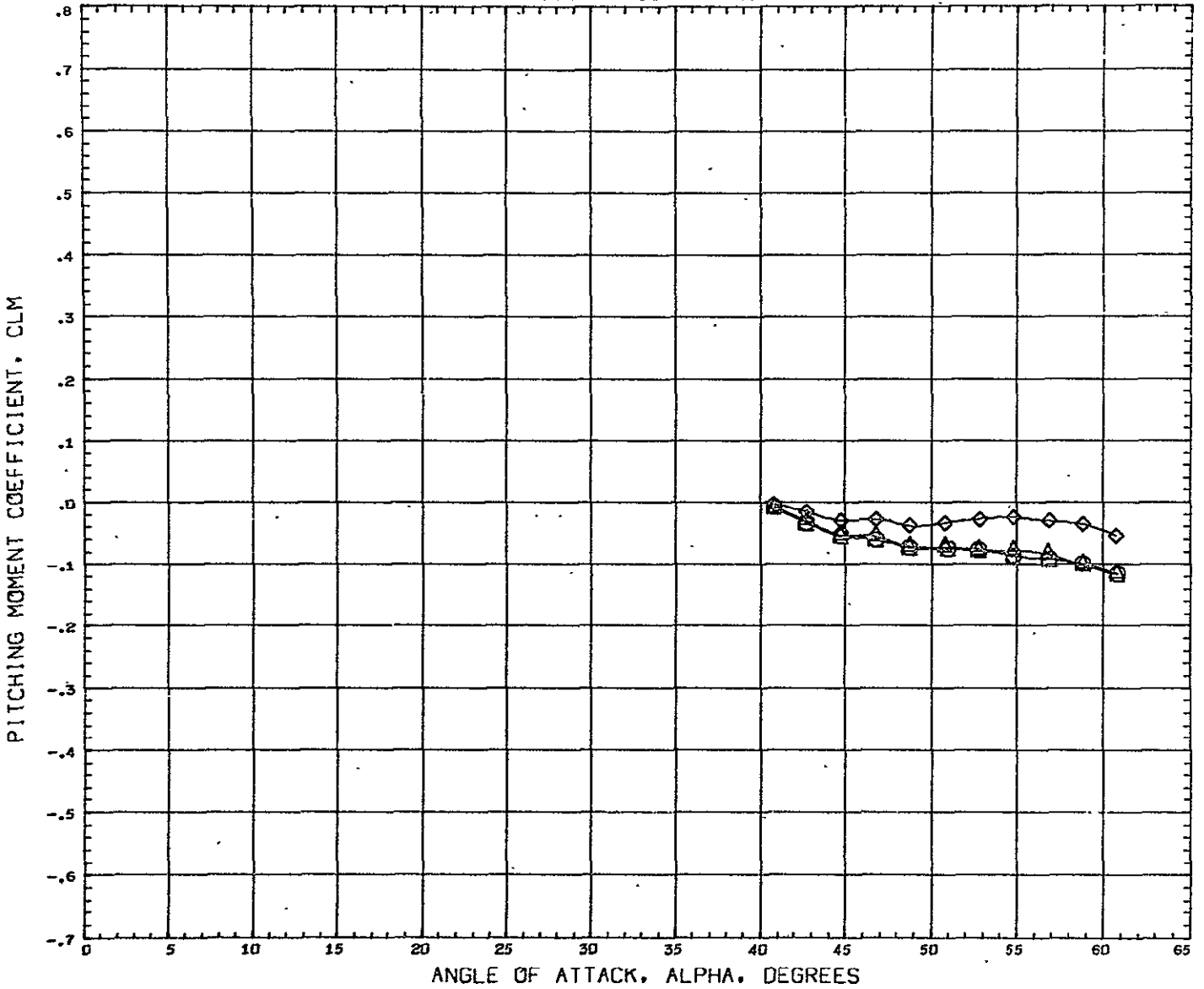
STRAIGHT WING ORBITER-AILERON EFFECTS, MID-HORIZONTAL TAIL



DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	BETA	HTAIL	AILRON	REFERENCE INFORMATION
(D2712C)	○	MSFC478 NR ST ORBITER B6W1DH12	0.000	0.000	0.000	REFS 3084.0040 SQ FT
(D2739C)	△	MSFC478 NR ST ORBITER B6W1DH12	0.000	0.000	20.000	REFL 322.9004 INCHES
(C2747C)	◇	MSFC478 NR ST ORBITER B6W1DH12	0.000	0.000	40.000	REFB 1490.0040 INCHES
						XMRP 1293.0040 INCHES
						YMRP 0.0000 INCHES
						ZMRP 50.5000 INCHES
						SCALE 0.0035 SCALE

MACH 4.959

STRAIGHT WING ORBITER-AILERON EFFECTS, MID-HORIZONTAL TAIL



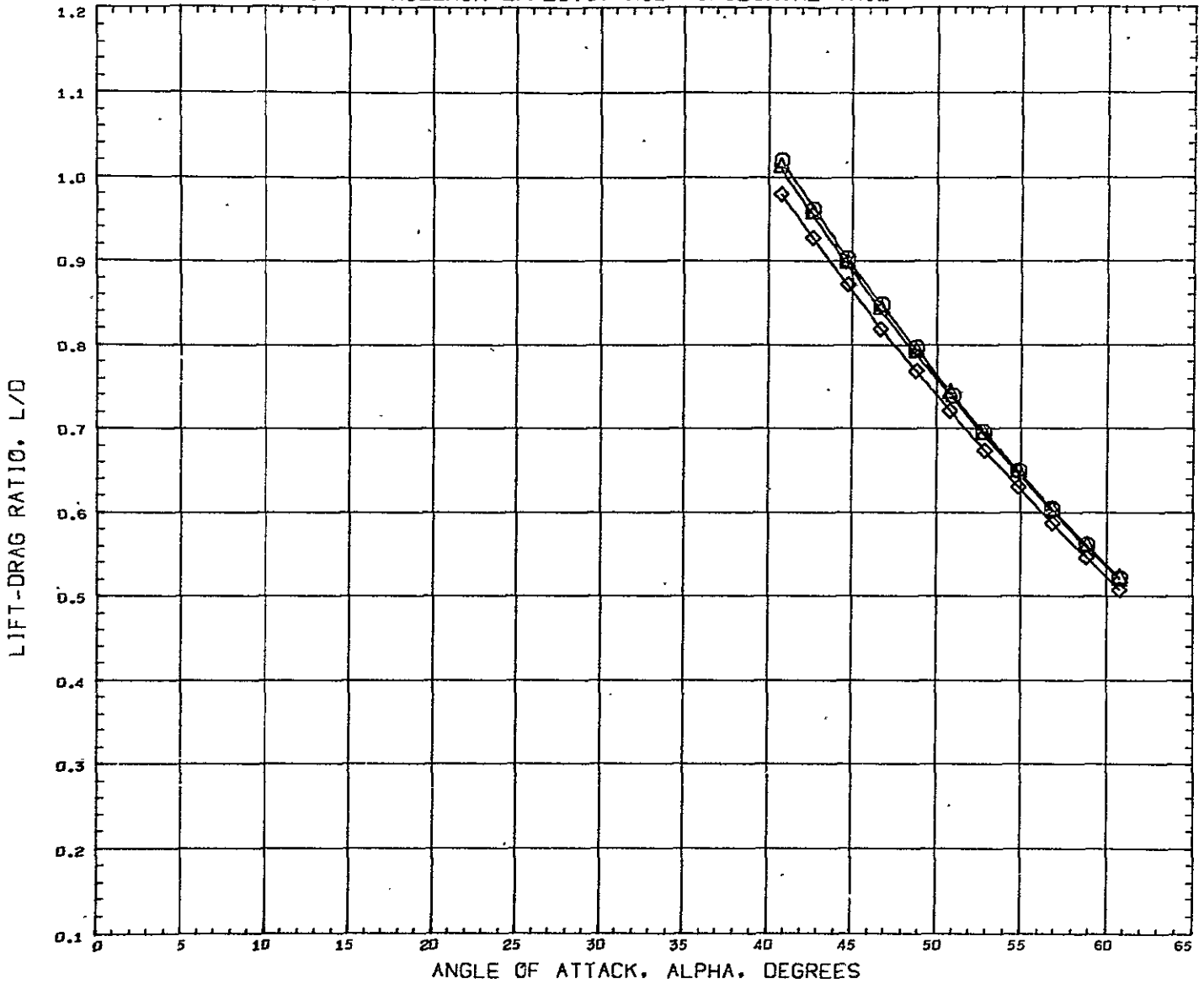
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(D2739C)	MSFC478 NR ST ORBITER B6W10H12
(C2747C)	MSFC478 NR ST ORBITER B6W10H12

BETA	HTAIL	AILRON
0.000	0.000	0.000
0.000	0.000	20.000
0.000	0.000	40.000

REFERENCE INFORMATION	
REFS	3084.0040 SQ FT
REFL	322.9004 INCHES
REFB	1490.0040 INCHES
XMRP	1293.0040 INCHES
YMRP	0.0000 INCHES
ZMRP	50.5000 INCHES
SCALE	0.0035 SCALE

MACH 4.959

STRAIGHT WING ORBITER-AILERON EFFECTS, MID-HORIZONTAL TAIL



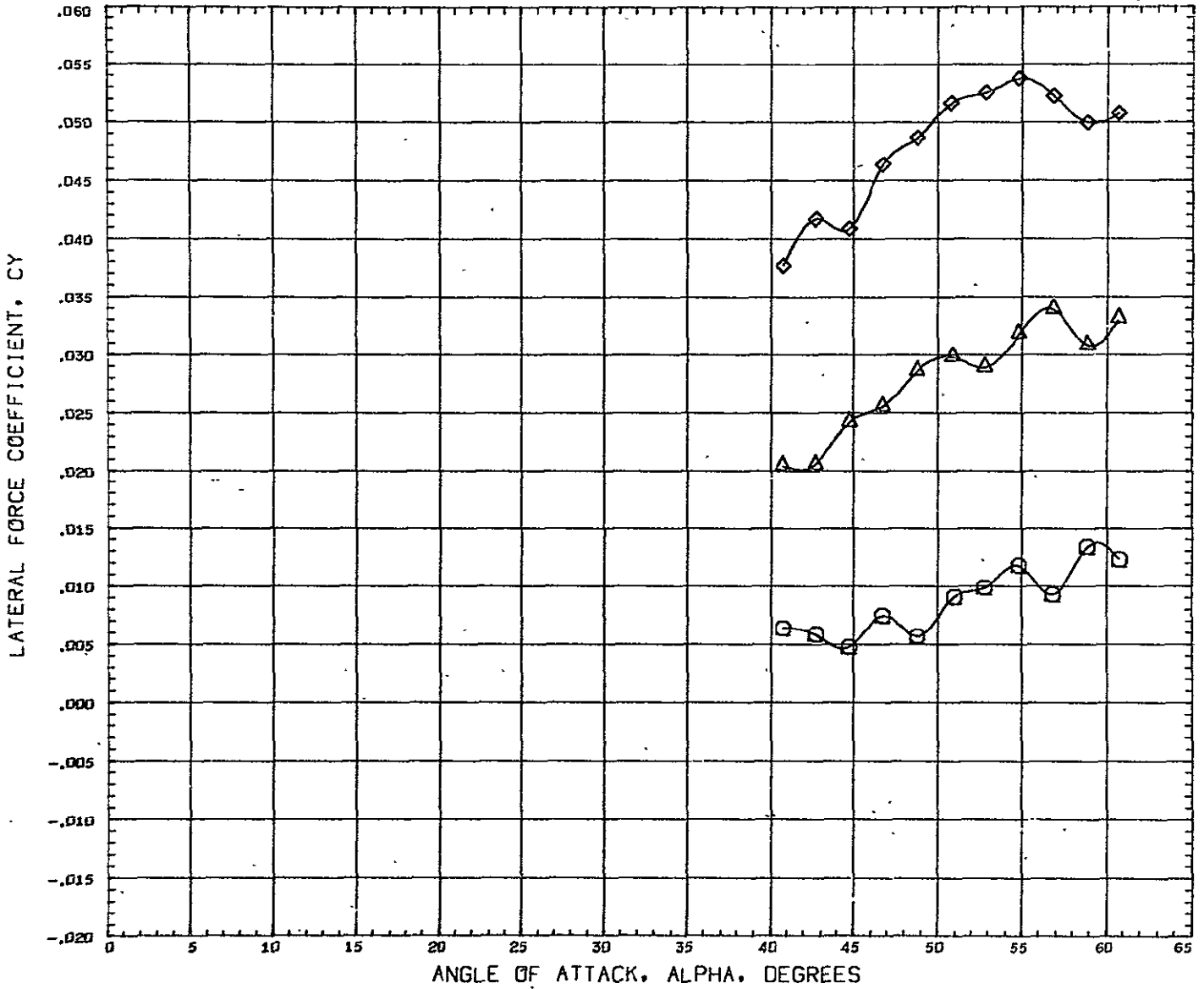
DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(D2712C)	MSFC478 NR ST ORBITER 36W1DH12
(D2719C)	MSFC478 NR ST ORBITER B6W1DH12
(C2747C)	MSFC478 NR ST ORBITER B6W1DH12

BETA	HTAIL	AILRON
0.000	0.000	0.000
0.000	0.000	20.000
0.000	0.000	40.000

REFERENCE INFORMATION		
REFS	3084.0040	SQ FT
REFL	322.9004	INCHES
REFB	1490.0040	INCHES
XHRF	1293.0040	INCHES
YHRF	0.0000	INCHES
ZHRF	50.5000	INCHES
SCALE	0.0035	SCALE

MACH 4.959

STRAIGHT WING ORBITER-AILERON EFFECTS, MID-HORIZONTAL TAIL



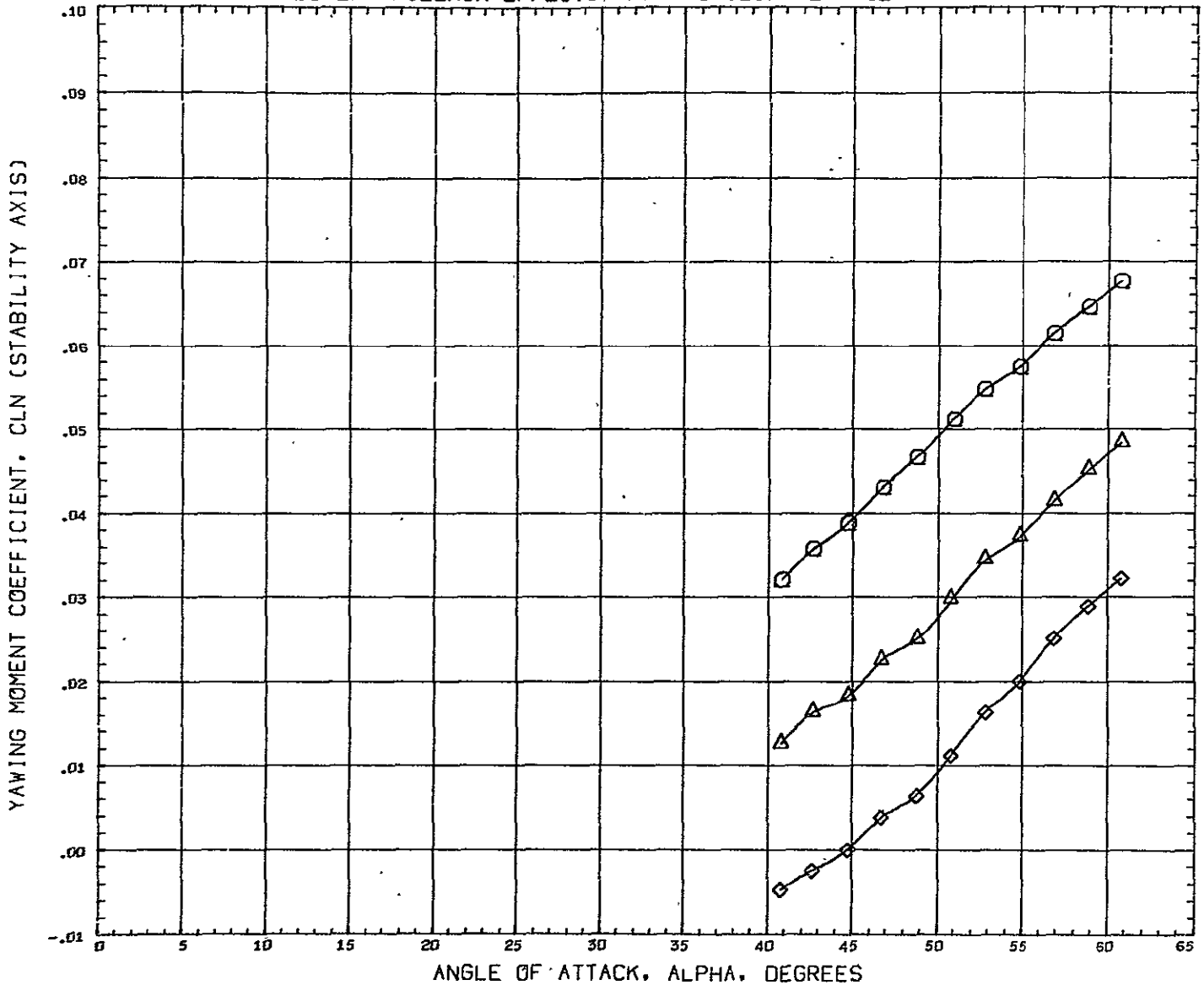
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(D2712C)	MSFC478 NR ST ORBITER 06WIDH12
(D2739C)	MSFC478 NR ST ORBITER B6WIDH12
(C2747C)	MSFC478 NR ST ORBITER B6WIDH12

BETA	HTAIL	AILRON
0.000	0.000	0.000
0.000	0.000	20.000
0.000	0.000	40.000

REFERENCE INFORMATION		
REFS	3084.0040	SQ FT
REFL	322.9004	INCHES
REFB	1490.0040	INCHES
XMRP	1293.0040	INCHES
YMRP	0.0000	INCHES
ZMRP	50.5000	INCHES
SCALE	0.0035	SCALE

MACH 4.959

STRAIGHT WING ORBITER-AILERON EFFECTS, MID-HORIZONTAL TAIL



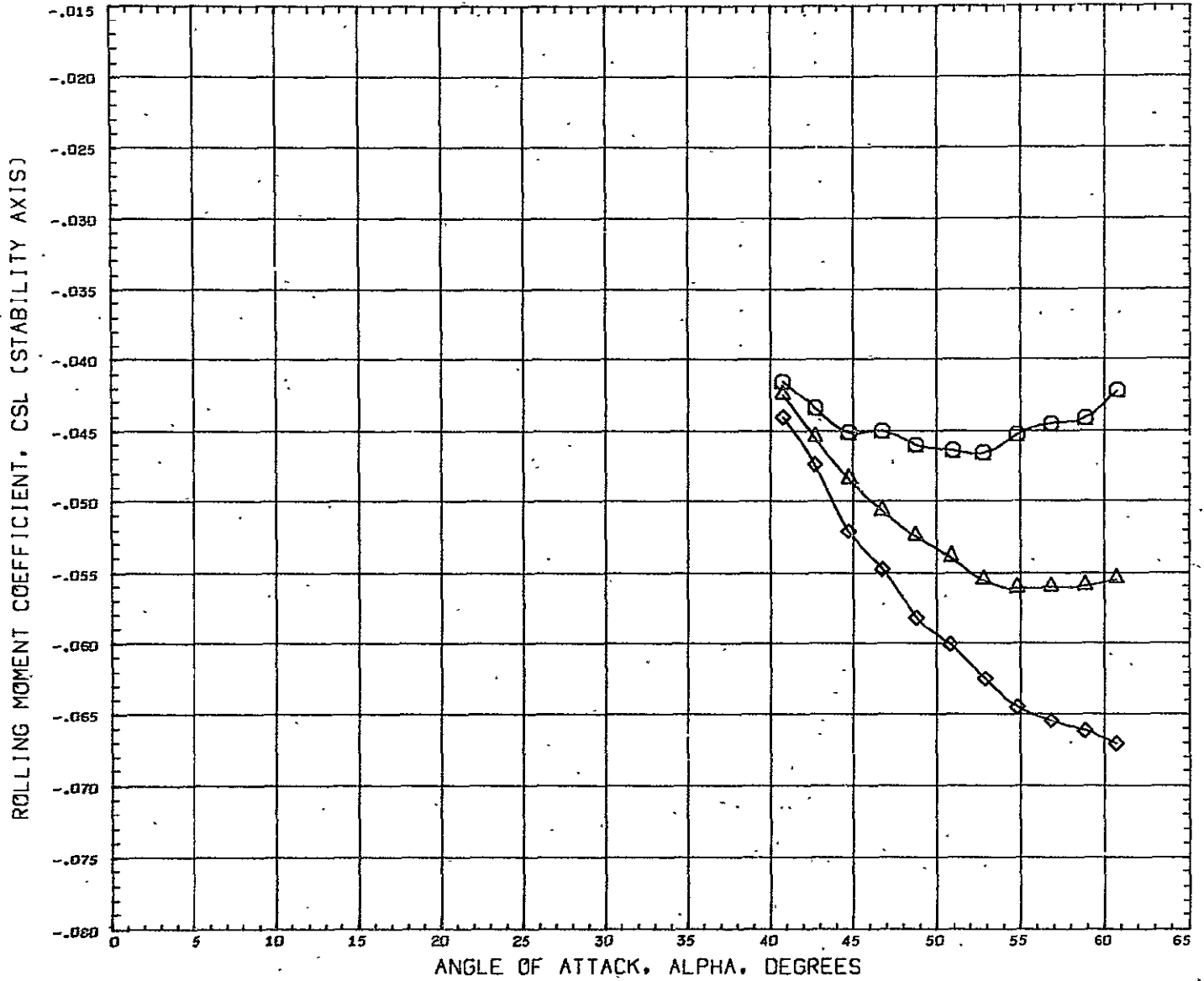
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(D2712C)	○	MSFC478 NR ST ORBITER B6WIDH12
(D2739C)	△	MSFC478 NR ST ORBITER B6WIDH12
(C2747C)	◇	MSFC478 NR ST ORBITER B6WIDH12

BETA	HTAIL	AILRON
0.000	0.000	0.000
0.000	0.000	20.000
0.000	0.000	40.000

REFERENCE INFORMATION		
REFS	3084.0040	SQ FT
REFL	322.9004	INCHES
REFB	1490.0040	INCHES
XMRP	1293.0040	INCHES
YMRP	0.0000	INCHES
ZMRP	50.5000	INCHES
SCALE	0.0035	SCALE

MACH 4.959

STRAIGHT WING ORBITER-AILERON EFFECTS, MID-HORIZONTAL TAIL



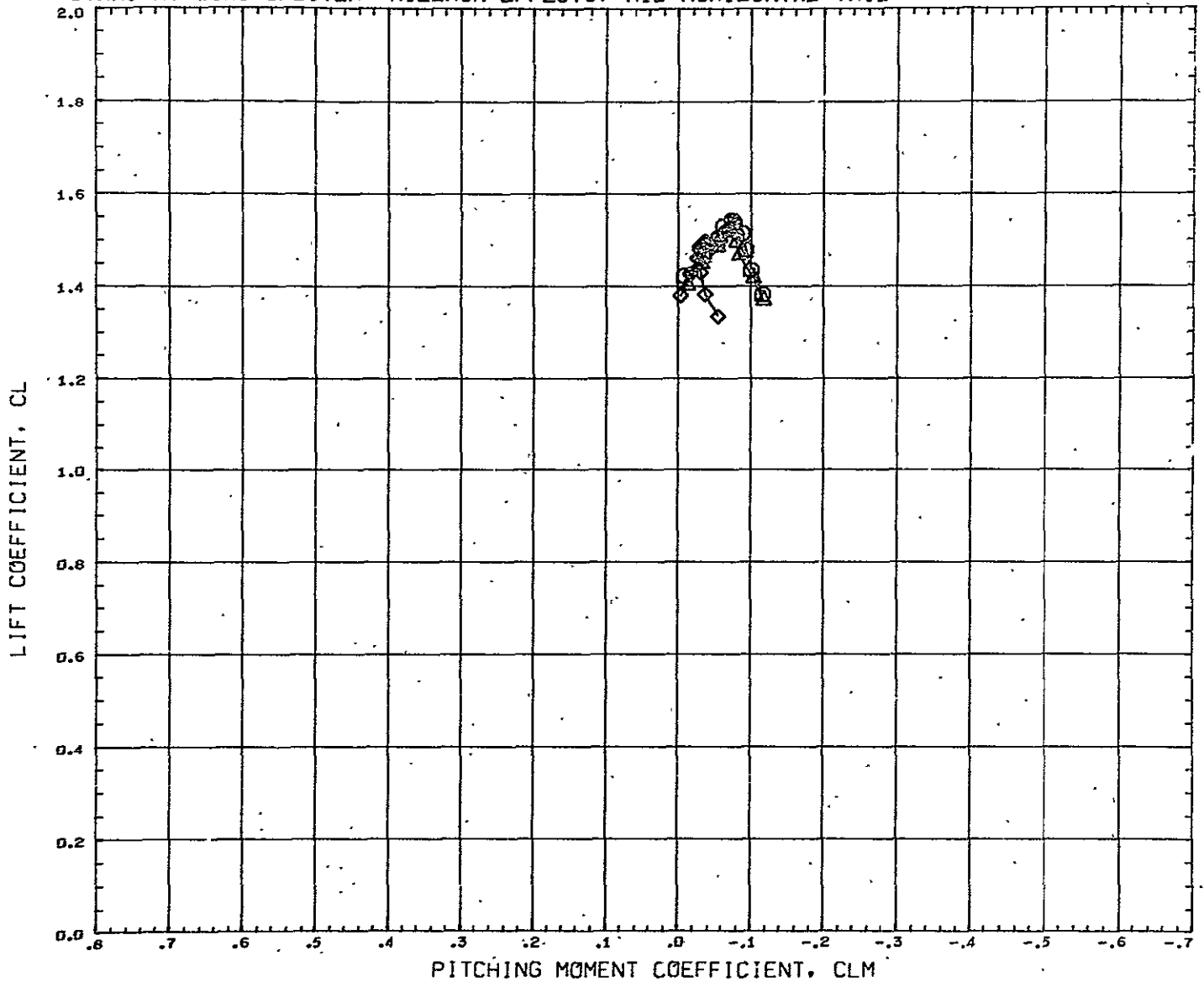
DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(D2712C) ○	HSFC478 NR ST ORBITER B6W10H12
(D2739C) △	HSFC478 NR ST ORBITER B6W10H12
(C2747C) ◇	HSFC478 NR ST ORBITER B6W10H12

BETA	HTAIL	AILRON
0.000	0.000	0.000
0.000	0.000	20.000
0.000	0.000	40.000

REFERENCE INFORMATION		
REFS	3084.0040	SQ FT
REFL	322.9004	INCHES
REFB	1490.0040	INCHES
XMRP	1293.0040	INCHES
YMRP	0.0000	INCHES
ZMRP	.50.5000	INCHES
SCALE	0.0035	SCALE

MACH 4.559

STRAIGHT WING ORBITER-AILERON EFFECTS, MID-HORIZONTAL TAIL



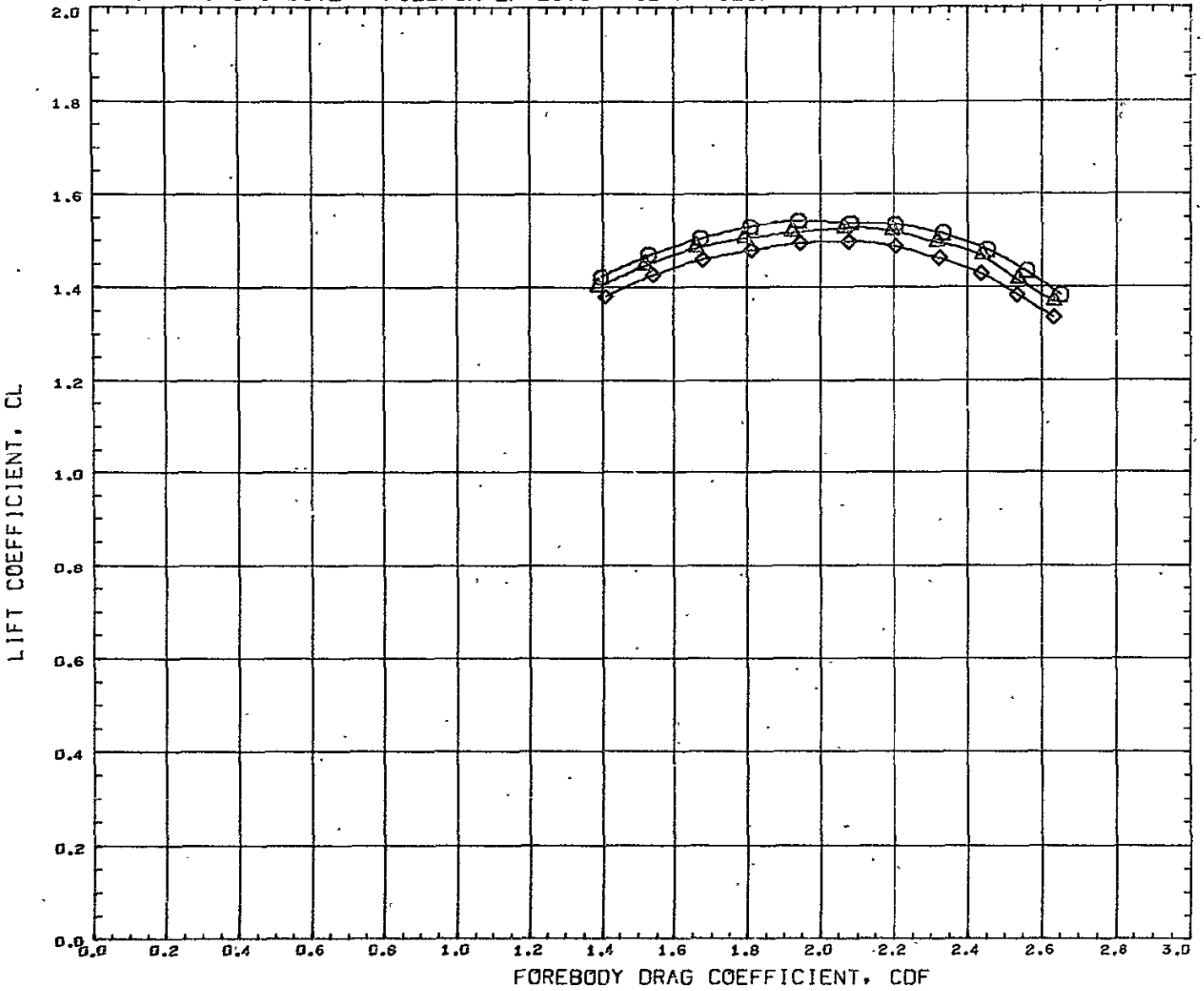
DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(D2712C)	MSFC478 NR ST ORBITER B6WIDH12
(D2739C)	MSFC478 NR ST ORBITER B6WIDH12
(C2747C)	MSFC478 NR ST ORBITER B6WIDH12

BETA	HTAIL	AILRON
0.000	0.000	0.000
0.000	0.000	20.000
0.000	0.000	40.000

REFERENCE INFORMATION		
REFS	3084.0040	SQ FT
REFL	322.9004	INCHES
REFB	1499.0040	INCHES
XMRP	1293.0040	INCHES
YMRP	0.0000	INCHES
ZMRP	50.5000	INCHES
SCALE	0.0035	SCALE

MACH 4.959

STRAIGHT WING ORBITER- AILERON EFFECTS, MID-HORIZONTAL TAIL



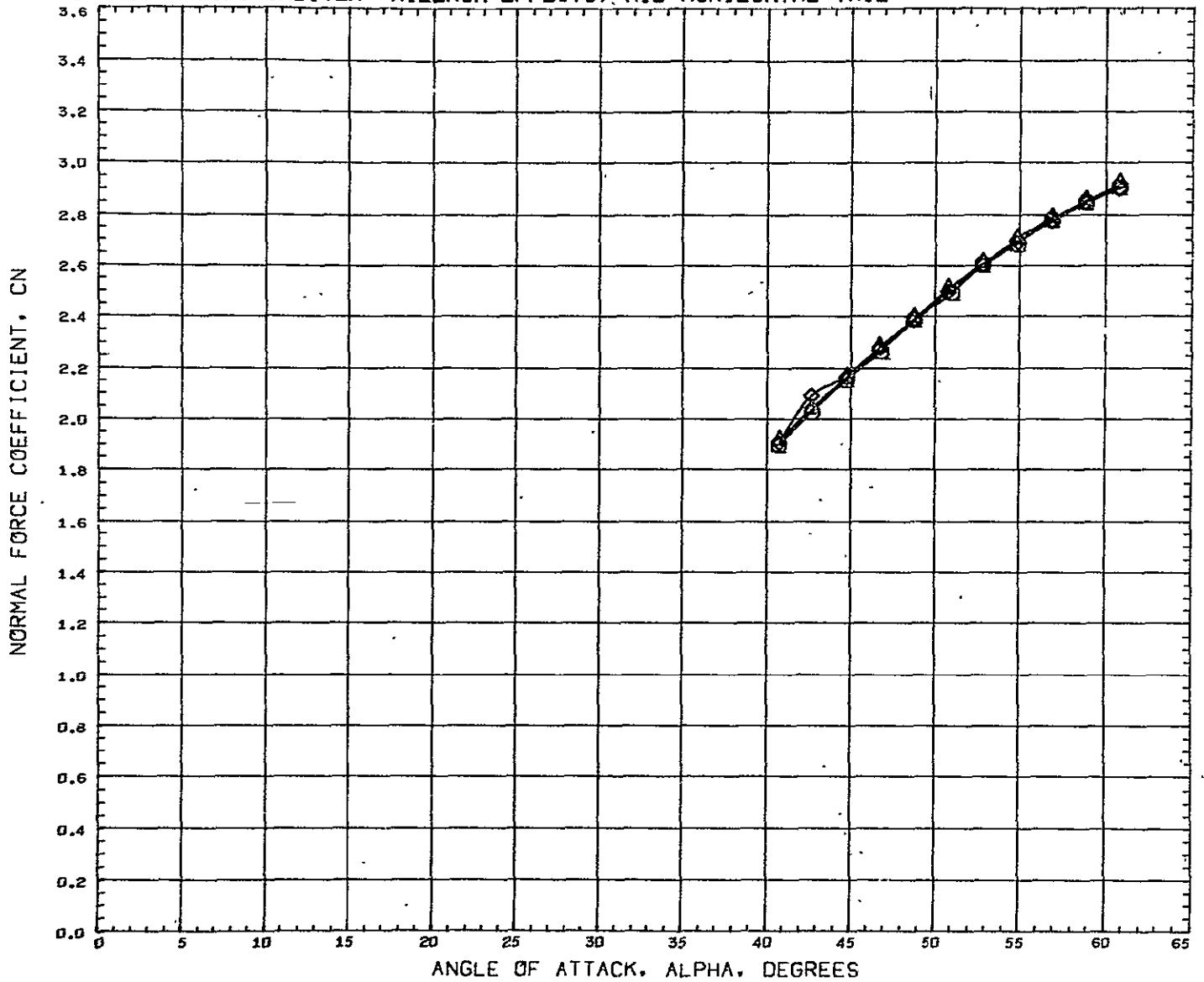
DATA SET SYMBOL	CONFIGURATION DESCRIPTION
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(D2739C)	MSFC478 NR ST ORBITER B6W1DH12
(C2747C)	MSFC478 NR ST ORBITER B6W1DH12

BETA	HTAIL	AILRON
0.000	0.000	0.000
0.000	0.000	20.000
0.000	0.000	40.000

REFERENCE INFORMATION		
REFS	3084.0040	SQ FT
REFL	322.9004	INCHES
REFB	1490.0040	INCHES
XMRF	1293.0040	INCHES
YMRF	0.0000	INCHES
ZMRF	50.5000	INCHES
SCALE	0.0035	SCALE

MACH 4.959

STRAIGHT WING ORBITER- AILERON EFFECTS, MID-HORIZONTAL TAIL



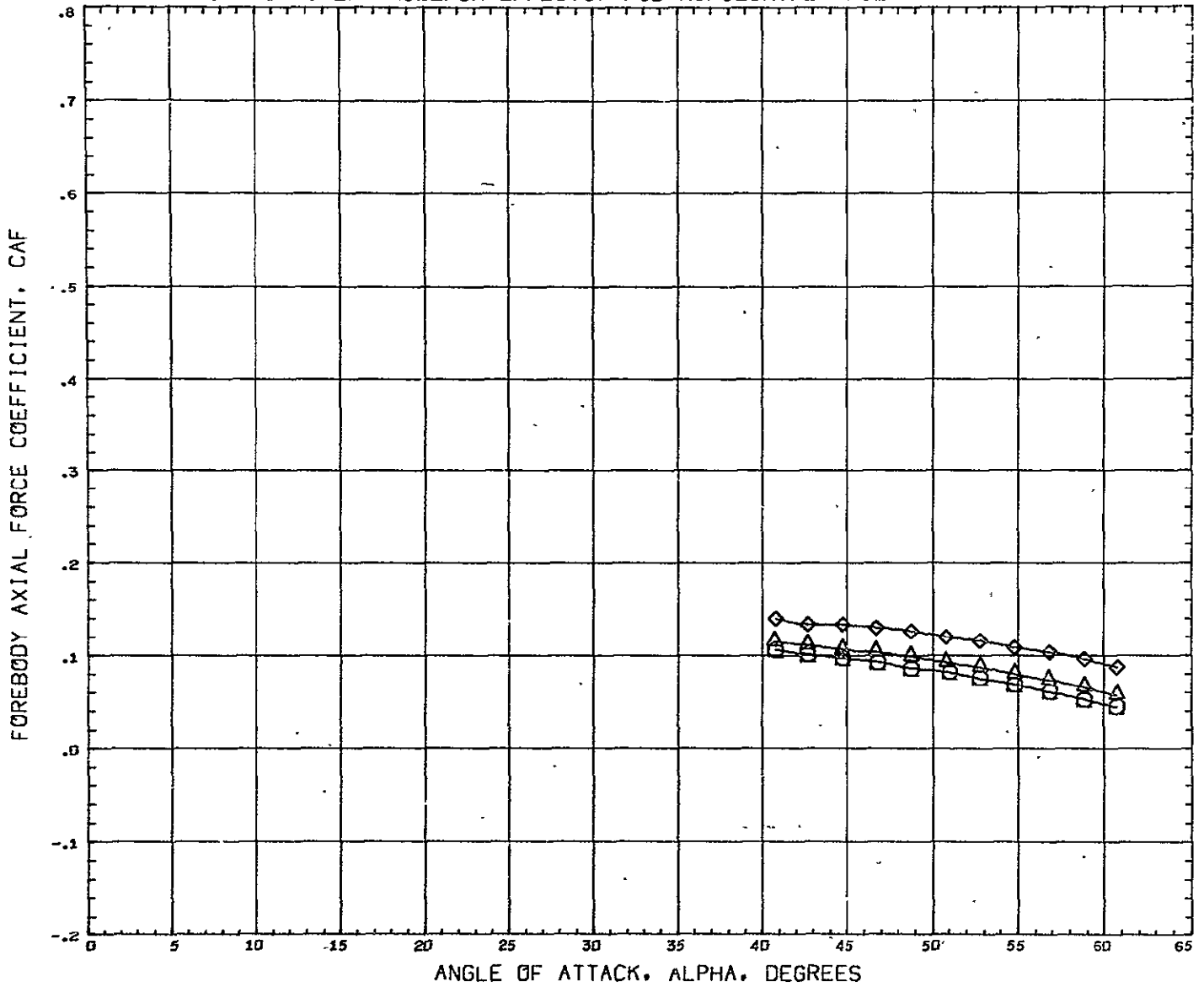
DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(C2716C)	HSFC478 NR ST ORBITER B6W1D12
(C2744C)	HSFC478 NR ST ORBITER B6W1D12
(C2745C)	HSFC478 NR ST ORBITER B6W1D12

BETA	HTAIL	AILRON
0.000	-10.000	0.000
0.000	-10.000	20.000
0.000	-10.000	40.000

REFERENCE INFORMATION		
REFS	3084.0040	SQ FT
REFL	322.9004	INCHES
REFF	1490.0040	INCHES
XMRP	1293.0040	INCHES
YMRP	0.0000	INCHES
ZMRP	50.5000	INCHES
SCALE	0.0035	SCALE

PACH 4.959

STRAIGHT WING ORBITER-AILERON EFFECTS, MID-HORIZONTAL TAIL



DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(C2716C) ○	HSFC478 NR ST ORBITER B6W1DH12
(C2744C) △	HSFC478 NR ST ORBITER B6W1DH12
(C2749C) ◇	HSFC478 NR ST ORBITER B6W1DH12

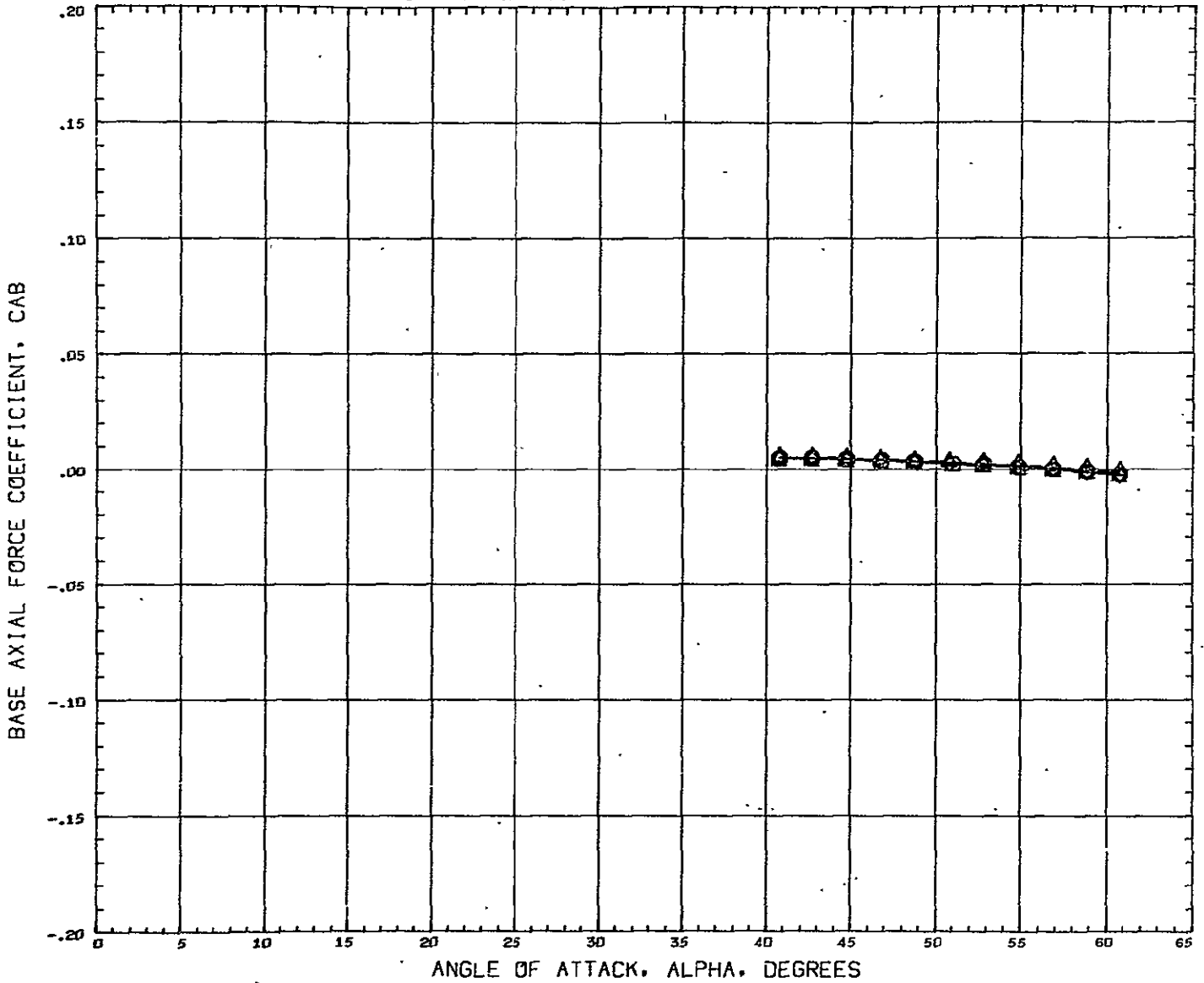
BETA	HTAIL	AILRON
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0.000	-10.000	20.000
0.000	-10.000	40.000

REFERENCE INFORMATION

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REFL	322.0004	INCHES
REFB	1493.0040	INCHES
XMRP	1293.0040	INCHES
YMRP	0.0000	INCHES
ZMRP	50.5000	INCHES
SCALE	0.0035	SCALE

MACH 4.959

STRAIGHT WING ORBITER- AILERON EFFECTS, MID-HORIZONTAL TAIL



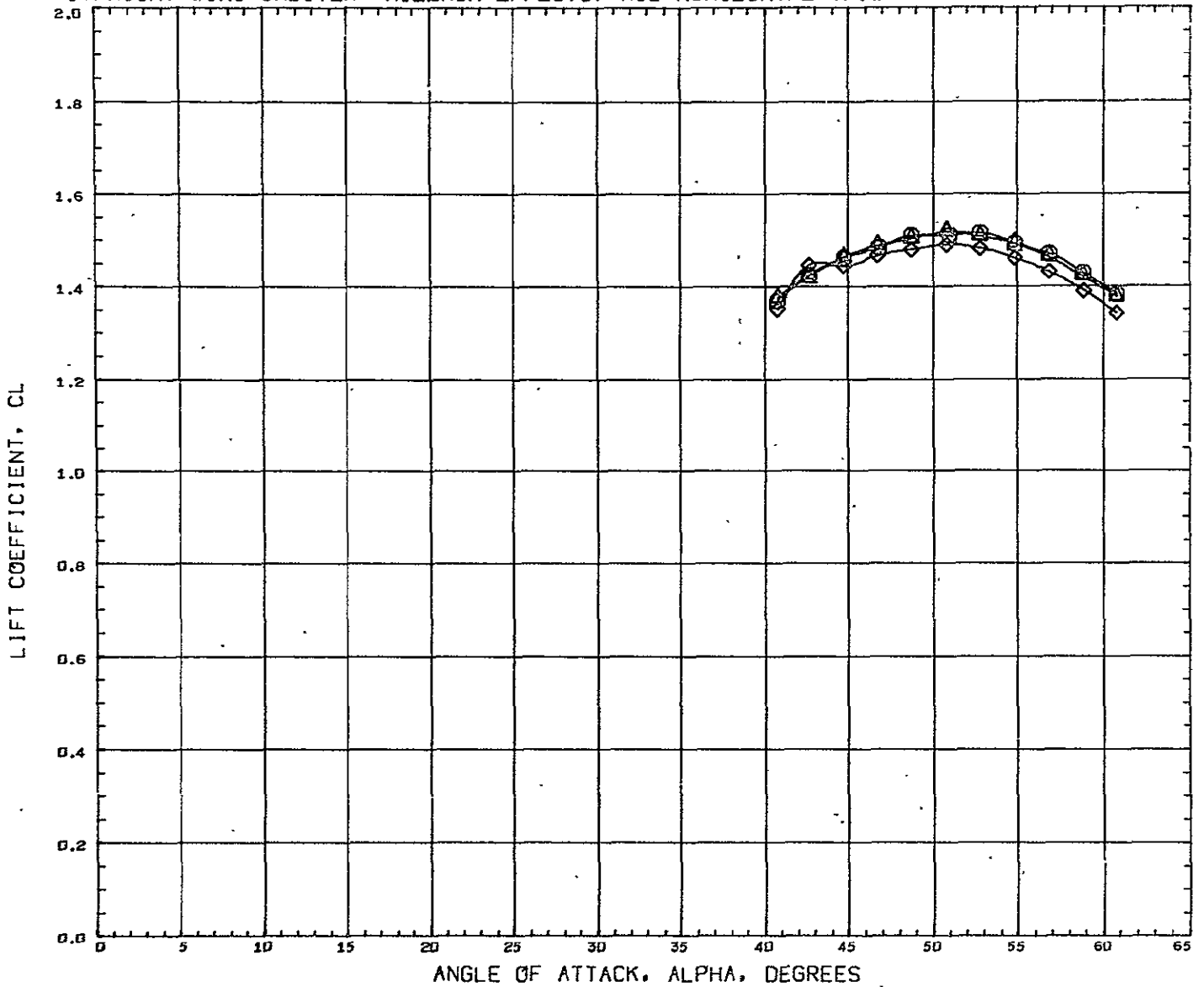
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(C2744C)	MSFC478 NR ST ORBITER B6WIDH12
(C2740C)	MSFC478 NR ST ORBITER B6WIDH12

BETA	HTAIL	AILRON
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0.000	-10.000	20.000
0.000	-10.000	40.000

REFERENCE INFORMATION		
REFS	3084.0040	SQ FT
REFL	322.9004	INCHES
REFB	1490.0040	INCHES
XMRP	1293.0040	INCHES
YMRP	0.0000	INCHES
ZMRP	50.5000	INCHES
SCALE	0.0035	SCALE

MACH 4.959

STRAIGHT WING ORBITER-AILERON EFFECTS, MID-HORIZONTAL TAIL



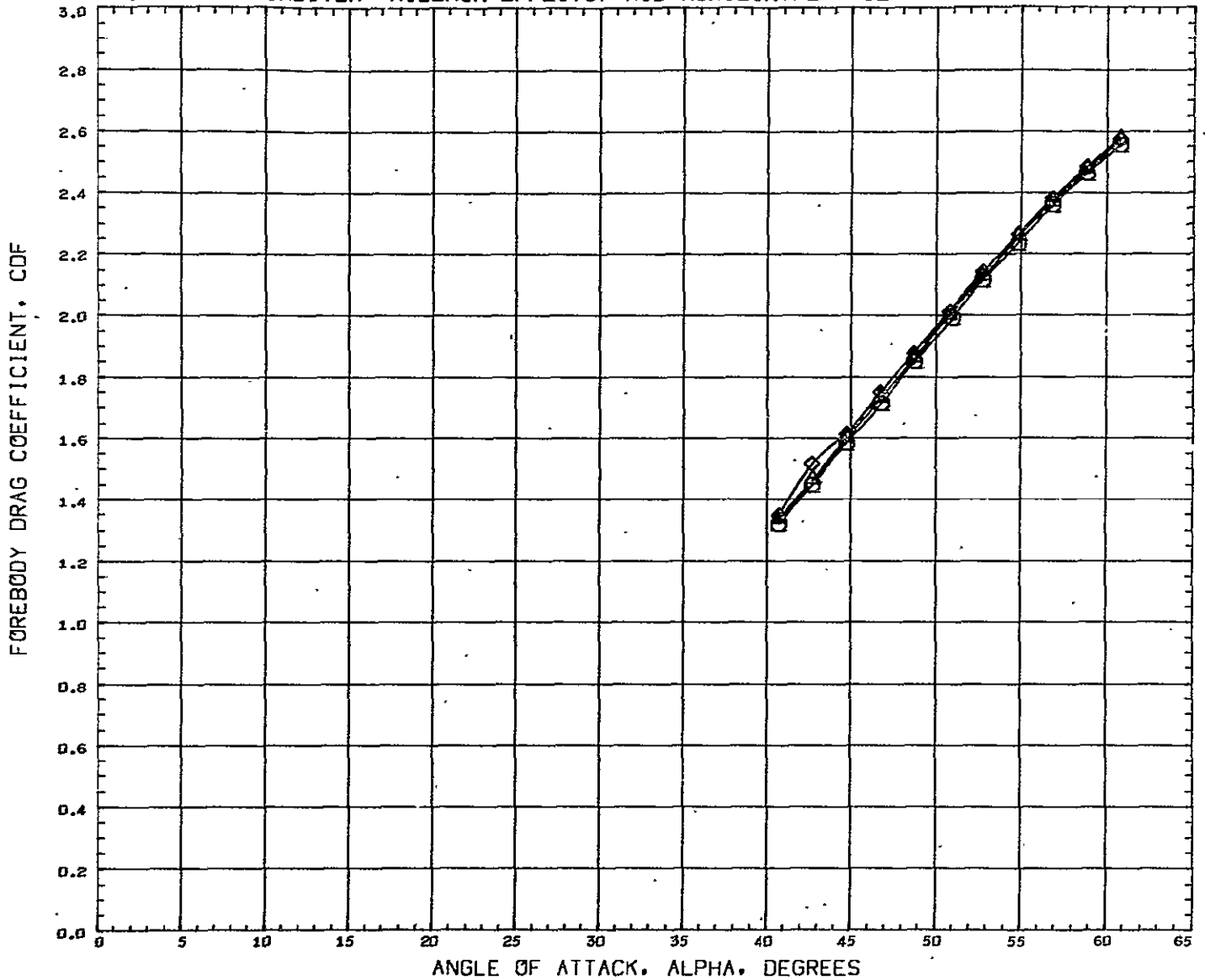
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(C2716C)	MSFC478 NR ST ORBITER B6W10H12
(C2744C)	MSFC478 NR ST ORBITER B6W10H12
(C2749C)	MSFC478 NR ST ORBITER B6W10H12

BETA	HTAIL	AILRON
0.000	-10.000	0.000
0.000	-10.000	20.000
0.000	-10.000	40.000

REFERENCE INFORMATION		
REFS	3084.0040	SQ FT
REFL	322.9004	INCHES
REFB	1490.0040	INCHES
XMRP	1293.0040	INCHES
YMRP	0.0000	INCHES
ZMRP	50.5000	INCHES
SCALE	0.0035	SCALE

MACH 4.959

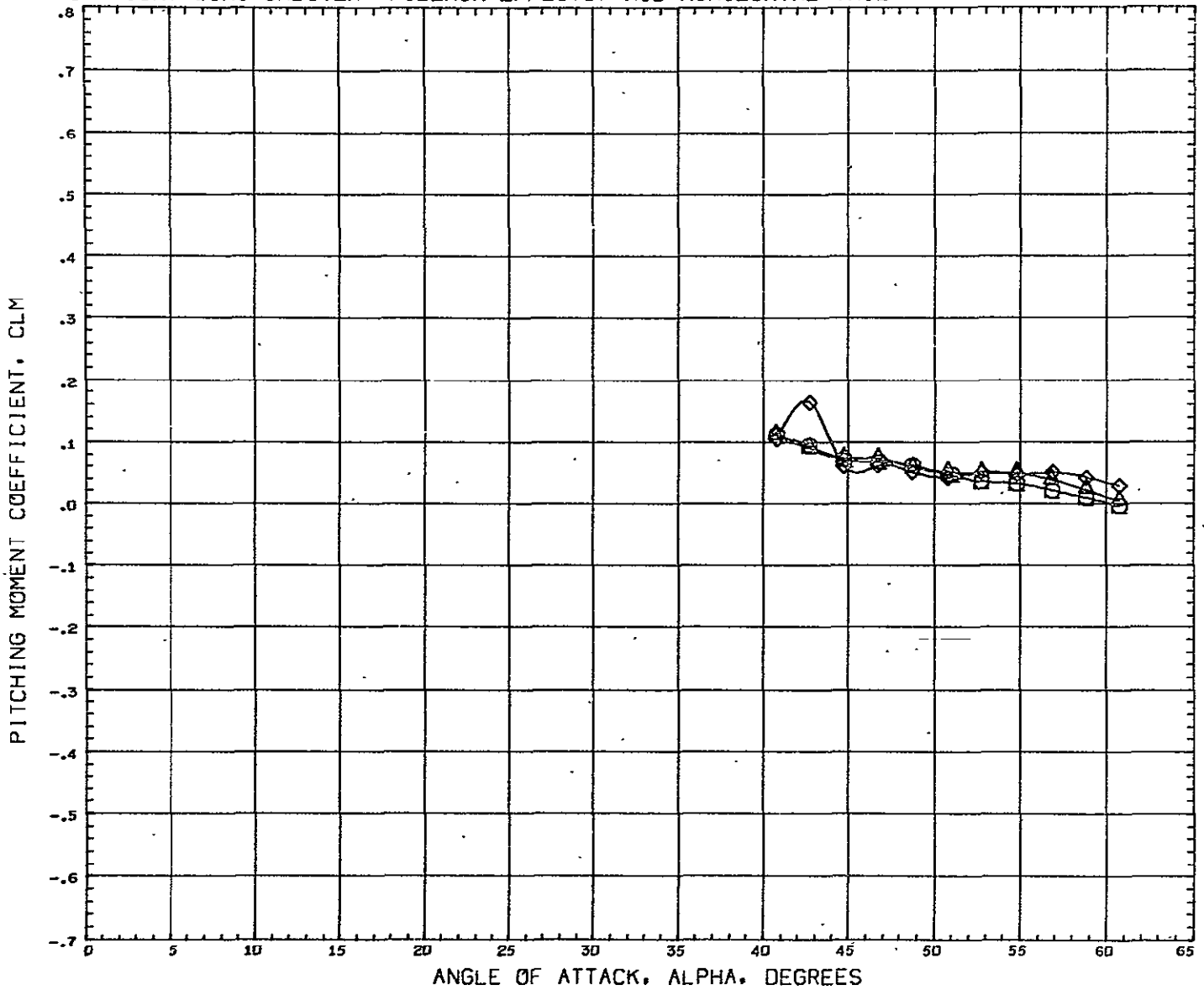
STRAIGHT WING ORBITER- AILERON EFFECTS, MID-HORIZONTAL TAIL



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	HTAIL	AILRON	REFERENCE INFORMATION
(C2716C)	MSFC478 NR ST ORBITER B6W1DH12	0.000	-10.000	0.000	REFS 3084.0040 SQ FT
(C2744C)	MSFC478 NR ST ORBITER B6W1DH12	0.000	-10.000	20.000	REFL 322.9004 INCHES
(C2745C)	MSFC478 NR ST ORBITER B6W1DH12	0.000	-10.000	40.000	REFB 1490.0040 INCHES
					XMRP 1293.0040 INCHES
					YMRP 0.0000 INCHES
					ZMRP - 50.5000 INCHES
					SCALE 0.0035 SCALE

MACH 4.959

STRAIGHT WING ORBITER- AILERON EFFECTS, MID-HORIZONTAL TAIL



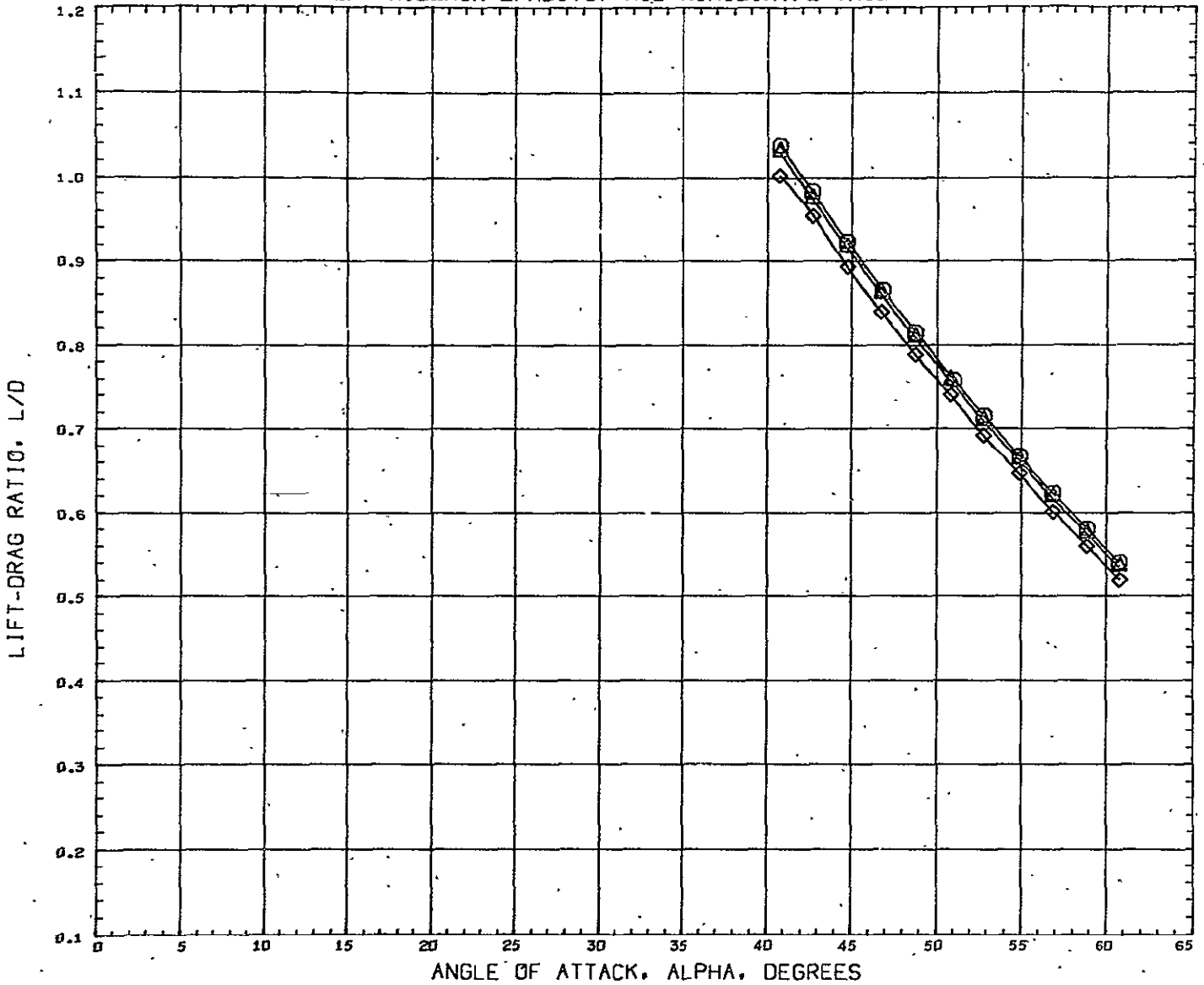
DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(C2716C)	MSFC478 NR ST ORBITER D6WIDH12
(C2744C)	MSFC478 NR ST ORBITER B6WIDH12
(C2749C)	MSFC478 NR ST ORBITER B6WIDH12

BETA	HTAIL	AILRON
0.000	-10.000	0.000
0.000	-10.000	20.000
0.000	-10.000	40.000

REFERENCE INFORMATION		
REFS	3084.0040	SQ FT
REFL	322.9004	INCHES
REFB	1490.0040	INCHES
YMRP	1293.0040	INCHES
ZMRP	0.0000	INCHES
ZMRP	50.5000	INCHES
SCALE	0.0035	SCALE

MACH 4.959

STRAIGHT WING ORBITER-AILERON EFFECTS, MID-HORIZONTAL TAIL



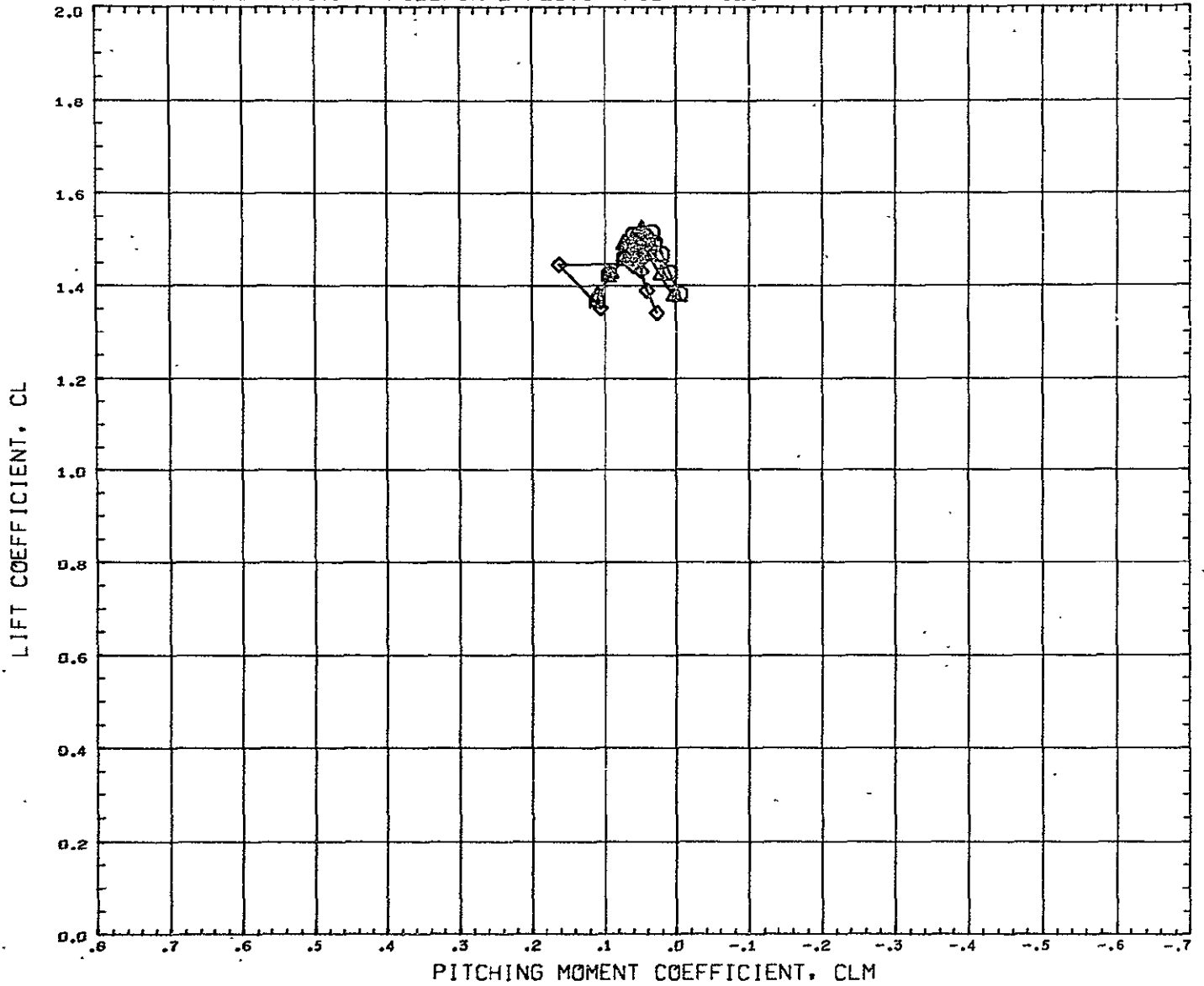
DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(C2716C)	MSFC478 NR ST ORBITER B6W1DH12
(C2744C)	MSFC478 NR ST ORBITER B6W1DH12
(C2749C)	MSFC478 NR ST ORBITER B6W1DH12

BETA	HTAIL	AILRON-
0.000	-10.000	0.000
0.000	-10.000	20.000
0.000	-10.000	40.000

REFERENCE INFORMATION		
REFS	3084.0040	SQ FT
REFL	322.9004	INCHES
REFB	1490.0040	INCHES
XNRP	1293.0040	INCHES
YNRP	0.0000	INCHES
ZNRP	50.5000	INCHES
SCALE	0.0035	SCALE

MACH 4.959

STRAIGHT WING ORBITER- AILERON EFFECTS, MID-HORIZONTAL TAIL



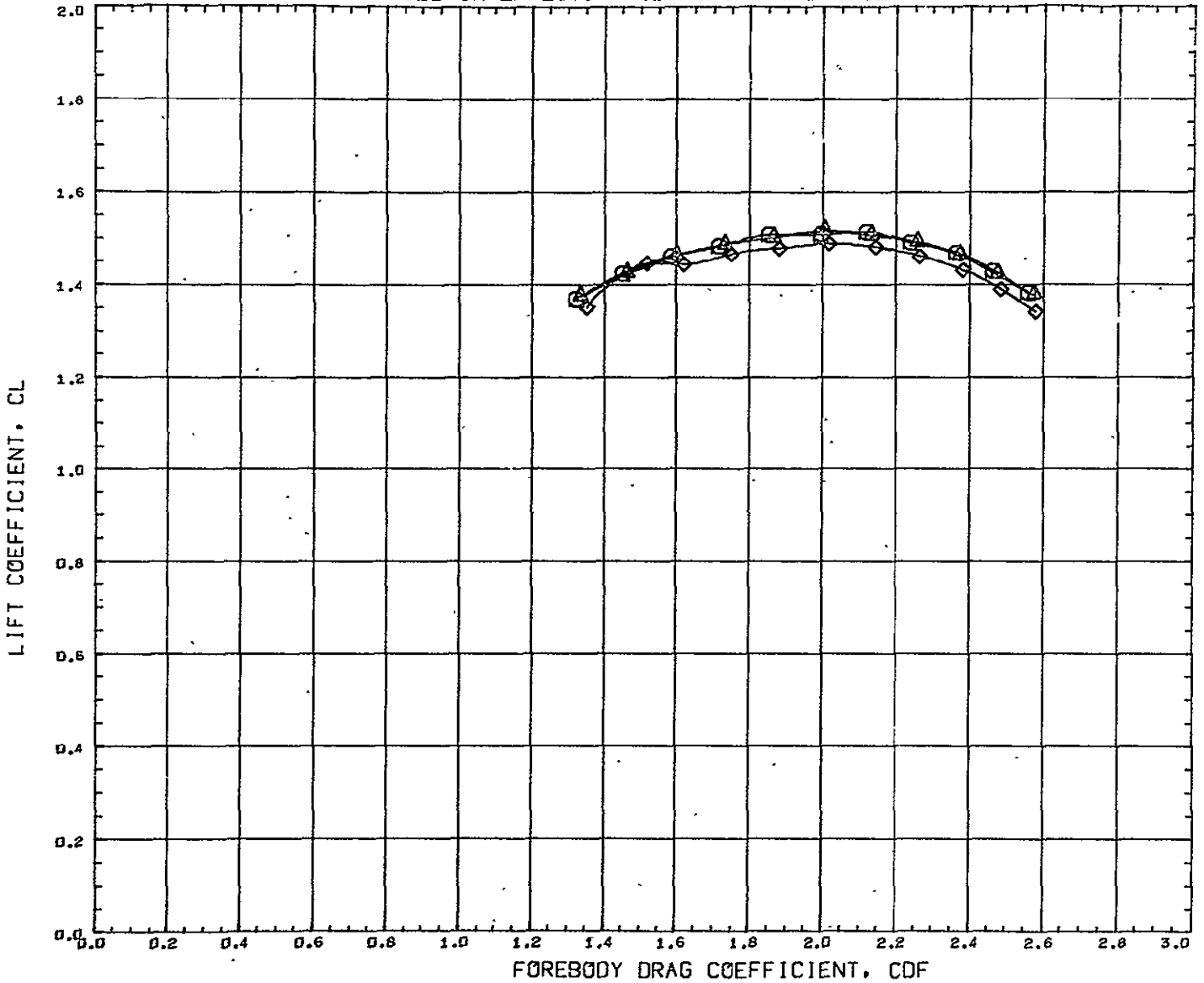
DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(C2716C)	MSFC478 NR ST ORBITER B6WIDH12
(C2744C)	MSFC478 NR ST ORBITER B6WIDH12
(C2749C)	MSFC478 NR ST ORBITER B6WIDH12

BETA	HTAIL	AILRON
0.000	-10.000	0.000
0.000	-10.000	20.000
0.000	-10.000	40.000

REFERENCE INFORMATION		
REFS	3084.0040	SQ FT
REFL	322.9904	INCHES
REFB	1490.0040	INCHES
XMRP	1293.0040	INCHES
YMRP	0.0000	INCHES
ZMRP	-50.5000	INCHES
SCALE	0.0035	SCALE

MACH 4.959

STRAIGHT WING ORBITER- AILERON EFFECTS, MID-HORIZONTAL TAIL



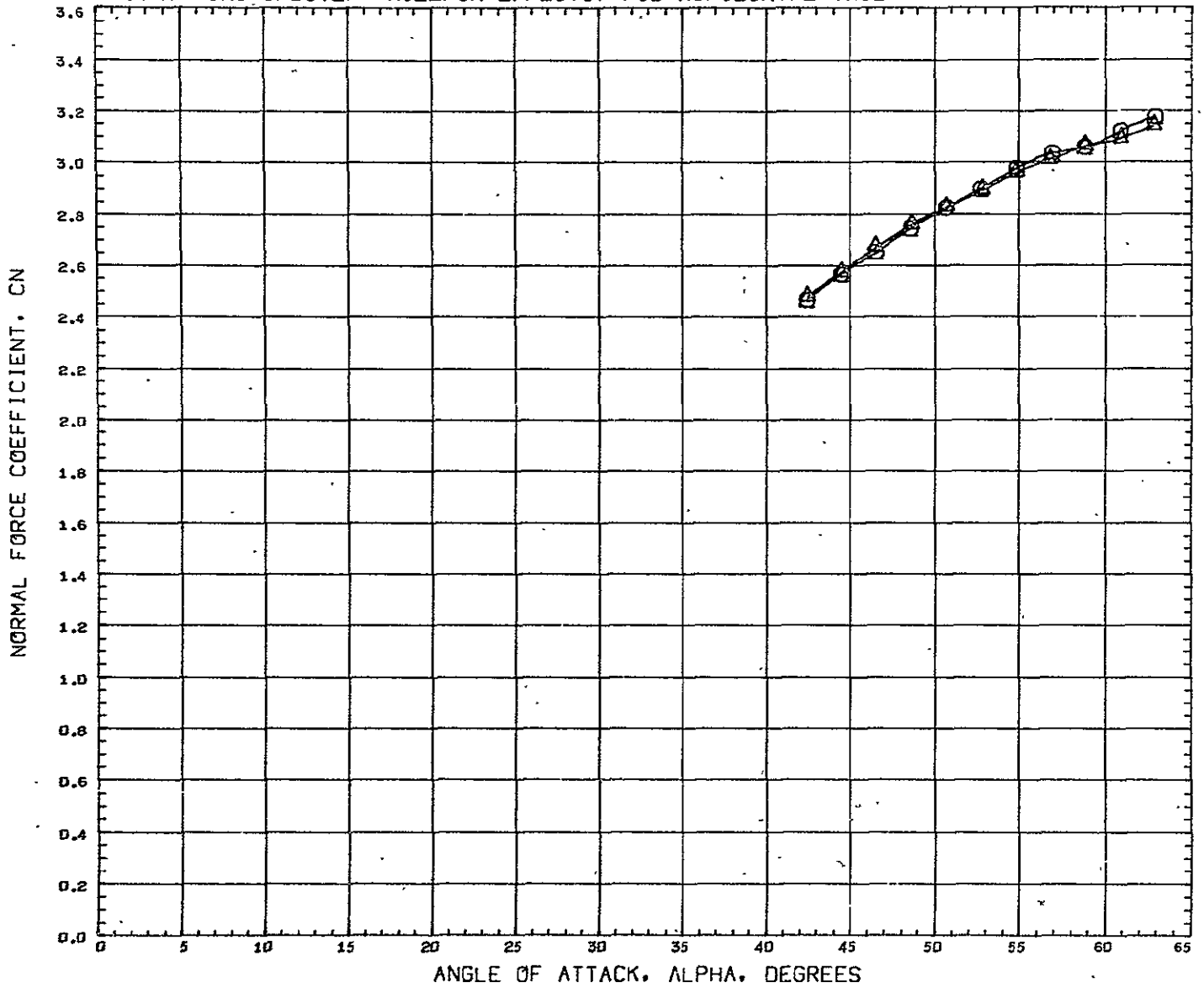
DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(C2716C)	HSFC478 NR ST ORBITER B6W10H12
(C2744C)	HSFC478 NR ST ORBITER B6W10H12
(C2745C)	HSFC478 NR ST ORBITER B6W10H12

BETA	HTAIL	AILRON
0.000	-10.000	0.000
0.000	-10.000	20.000
0.000	-10.000	40.000

REFERENCE INFORMATION	
REFS	3084.0040 SQ FT
REFL	322.9004 INCHES
REFB	1490.0040 INCHES
XMRP	1293.0040 INCHES
YMRP	0.0000 INCHES
ZMRP	50.5000 INCHES
SCALE	0.0035 SCALE

MACH 4.959

STRAIGHT WING ORBITER-AILERON EFFECTS, MID-HORIZONTAL TAIL



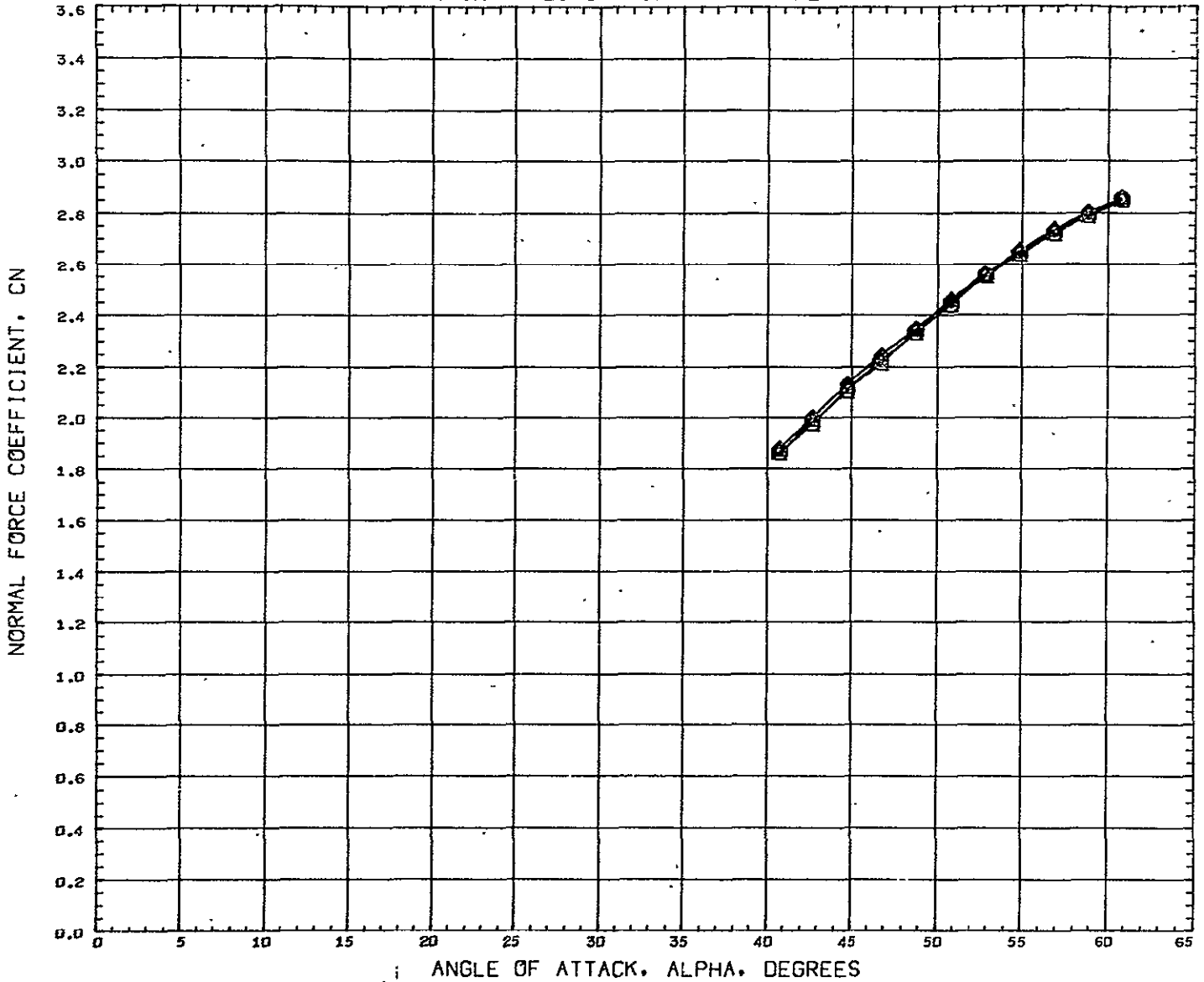
DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(C2717C)	MSFC478 NR ST ORBITER B6W1DH12
(C2741C)	MSFC478 NR ST ORBITER B6W1DH12
(C2745C)	MSFC478 NR ST ORBITER B6W1DH12

BETA	HTAIL	AILRON
0.000	-20.000	0.000
0.010	-20.000	20.000
0.000	-20.000	40.000

REFERENCE INFORMATION	
REFS	3084.0040 SQ FT
REFL	322.9004 INCHES
REFB	1490.0040 INCHES
YMRP	1293.0040 INCHES
ZMRP	0.0000 INCHES
ZMRP	50.5000 INCHES
SCALE	0.0035 SCALE

MACH 1.956

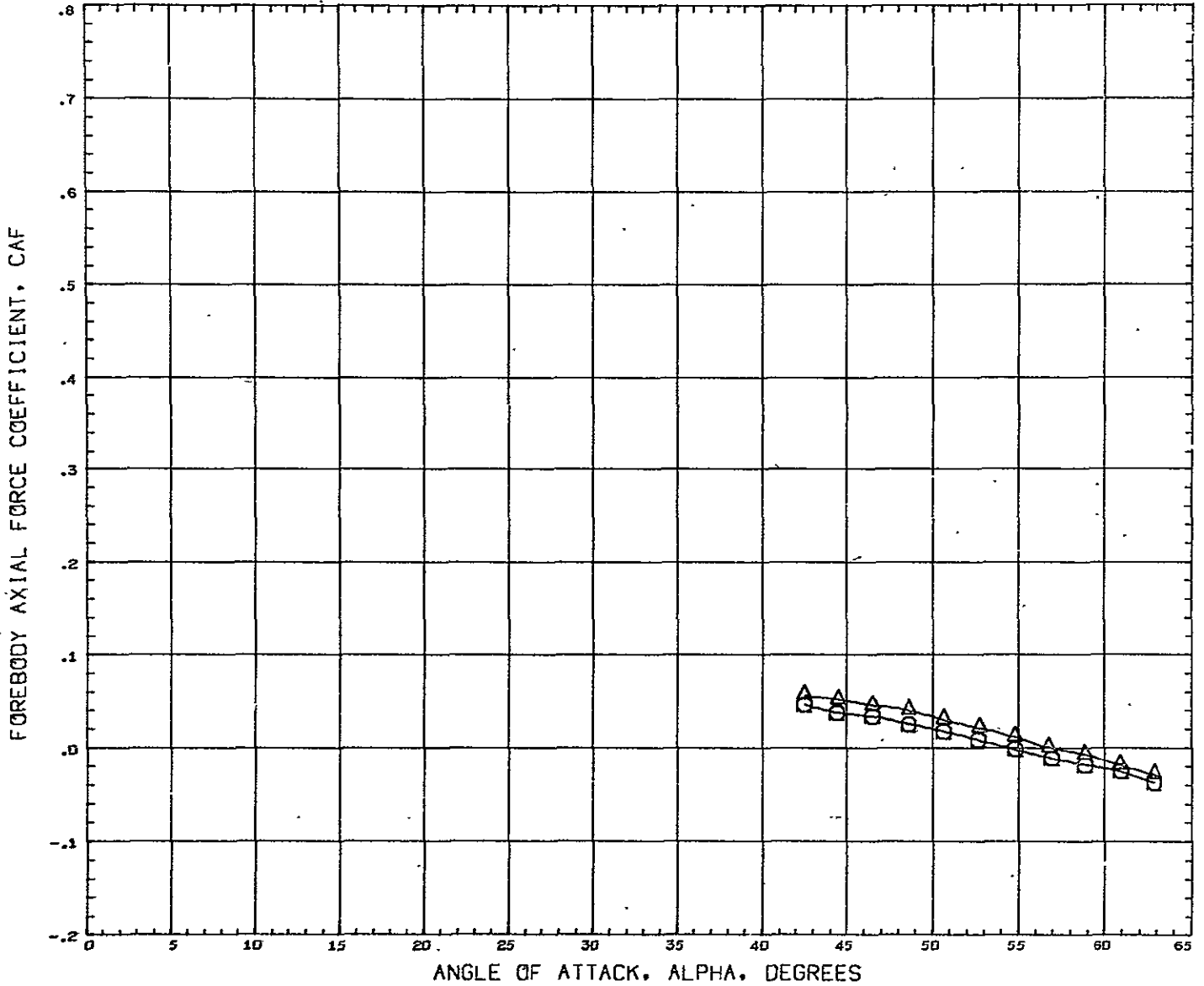
STRAIGHT WING ORBITER-AILERON EFFECTS, MID-HORIZONTAL TAIL



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	HTAIL	AILRON	REFERENCE INFORMATION
(C2717C)	MSFC478 NR ST ORBITER B6W10H12	0.000	-20.000	0.000	REFS 3084.0040 SQ FT
(C2741C)	MSFC478 NR ST ORBITER B6W10H12	0.010	-20.000	20.000	REFL 322.9004 INCHES
(C2745C)	MSFC478 NR ST ORBITER B6W10H12	0.000	-20.000	40.000	REFD 1490.0040 INCHES
					XMRP 1293.0040 INCHES
					YMRP 0.0000 INCHES
					ZMRP 50.5000 INCHES
					SCALE 0.0035 SCALE

PACH 4.959

STRAIGHT WING ORBITER- AILERON EFFECTS, MID-HORIZONTAL TAIL



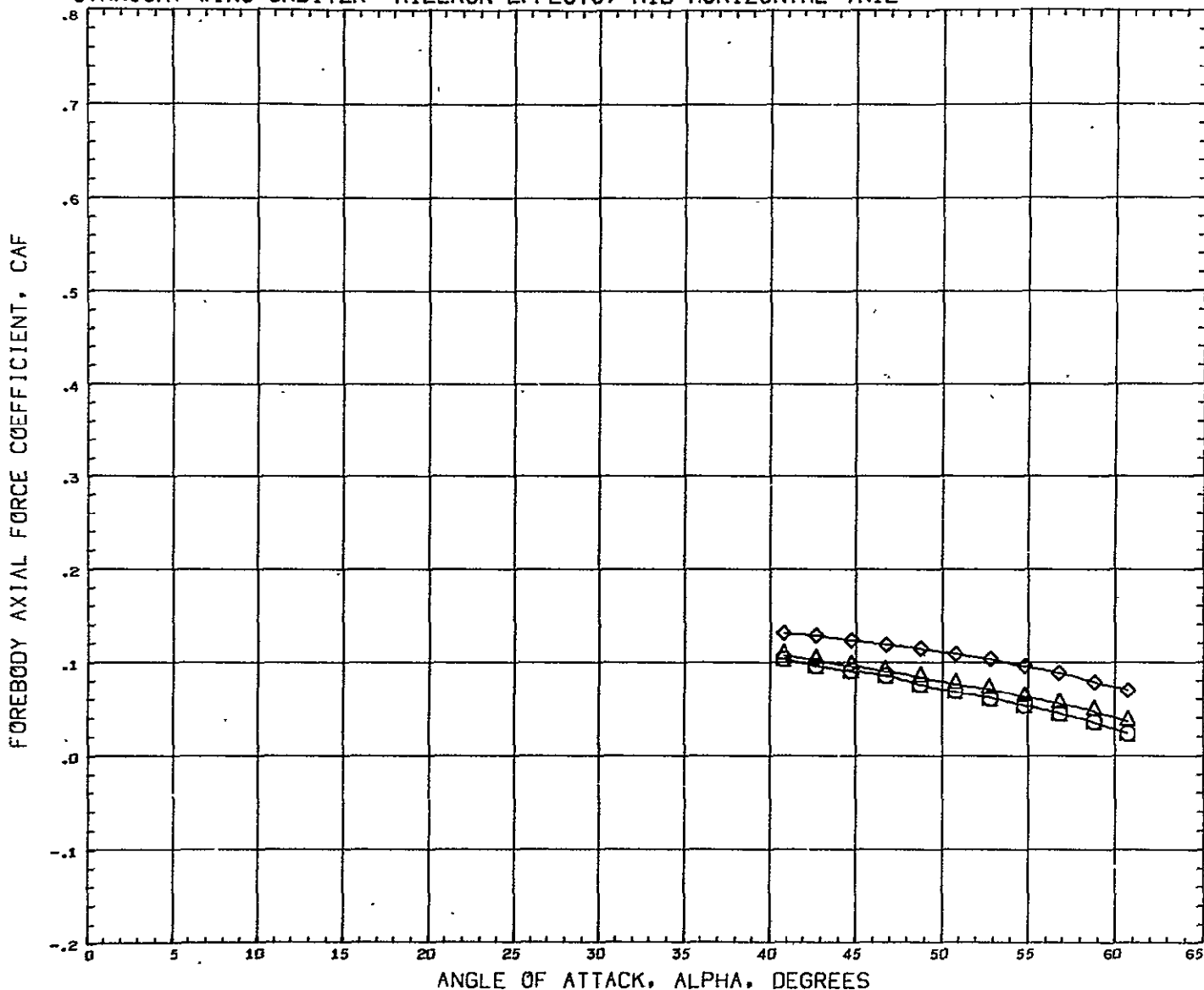
DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(C2717C)	MSFC478 NR ST ORBITER B6W10H12
(C2741C)	MSFC478 NR ST ORBITER B6W10H12
(C2745C)	MSFC478 NR ST ORBITER B6W10H12

BETA	HTAIL	AILRON
0.000	-20.000	0.000
0.010	-20.000	20.000
0.000	-20.000	40.000

REFERENCE INFORMATION		
REFS	3084.0040	SQ FT
REFL	322.9004	INCHES
REFB	1490.0040	INCHES
XMRP	1293.0040	INCHES
YMRP	0.0000	INCHES
ZMRP	50.5000	INCHES
SCALE	0.0035	SCALE

MACH 1.956

STRAIGHT WING ORBITER- AILERON EFFECTS, MID-HORIZONTAL TAIL



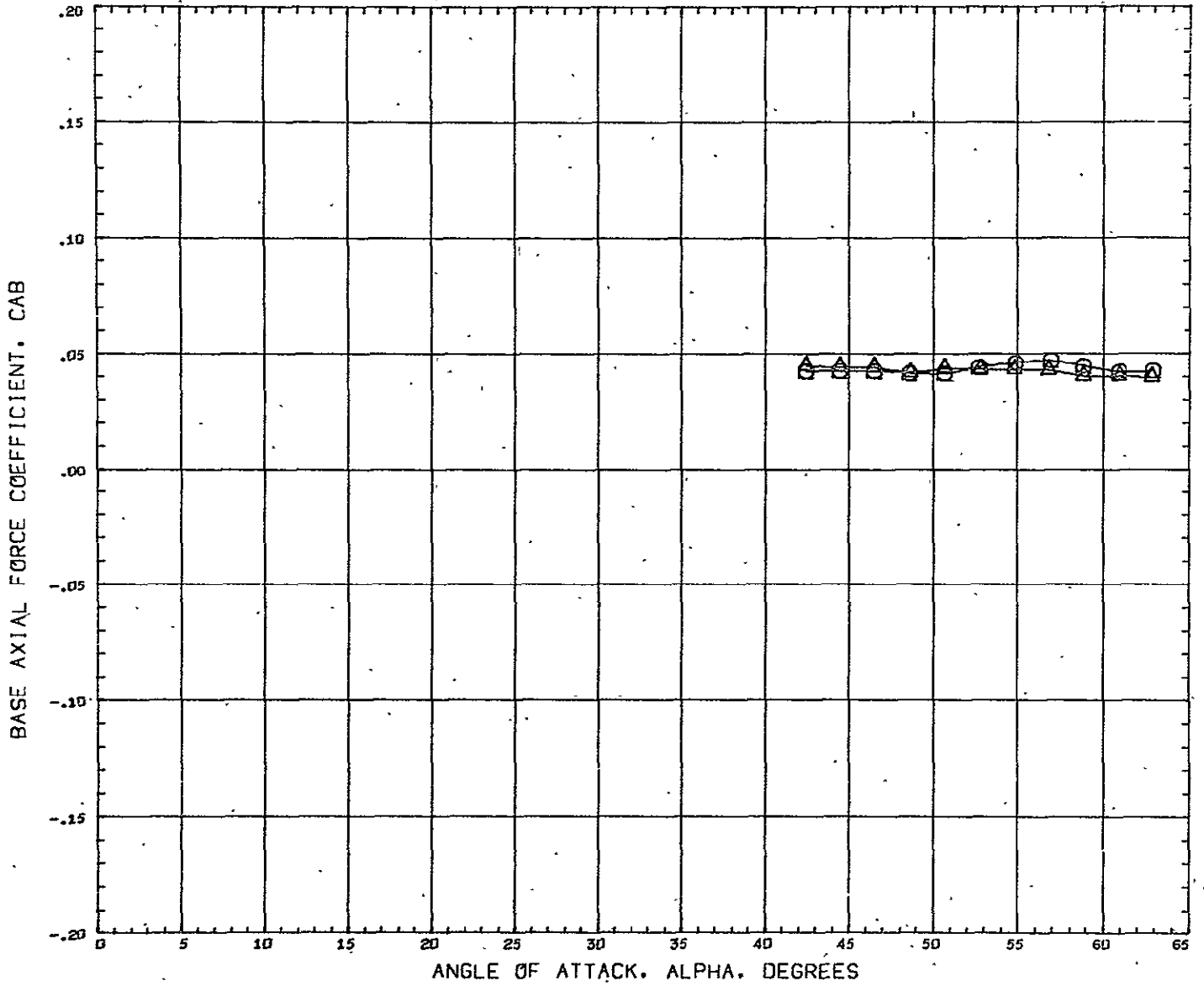
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(C2741C)	MSFC478 NR ST ORBITER B6WIDH12
(C2745C)	MSFC478 NR ST ORBITER B6WIDH12

BETA	HTAIL	AILRON
0.000	-20.000	0.000
0.010	-20.000	20.000
0.000	-20.000	40.000

REFERENCE INFORMATION		
REFS	3084.0040	SQ FT
REFL	322.9004	INCHES
REFB	1499.0040	INCHES
XMRP	1293.0040	INCHES
YMRP	0.0000	INCHES
ZMRP	50.5000	INCHES
SCALE	0.0035	SCALE

MACH 4.959

STRAIGHT WING ORBITER-AILERON EFFECTS, MID-HORIZONTAL TAIL



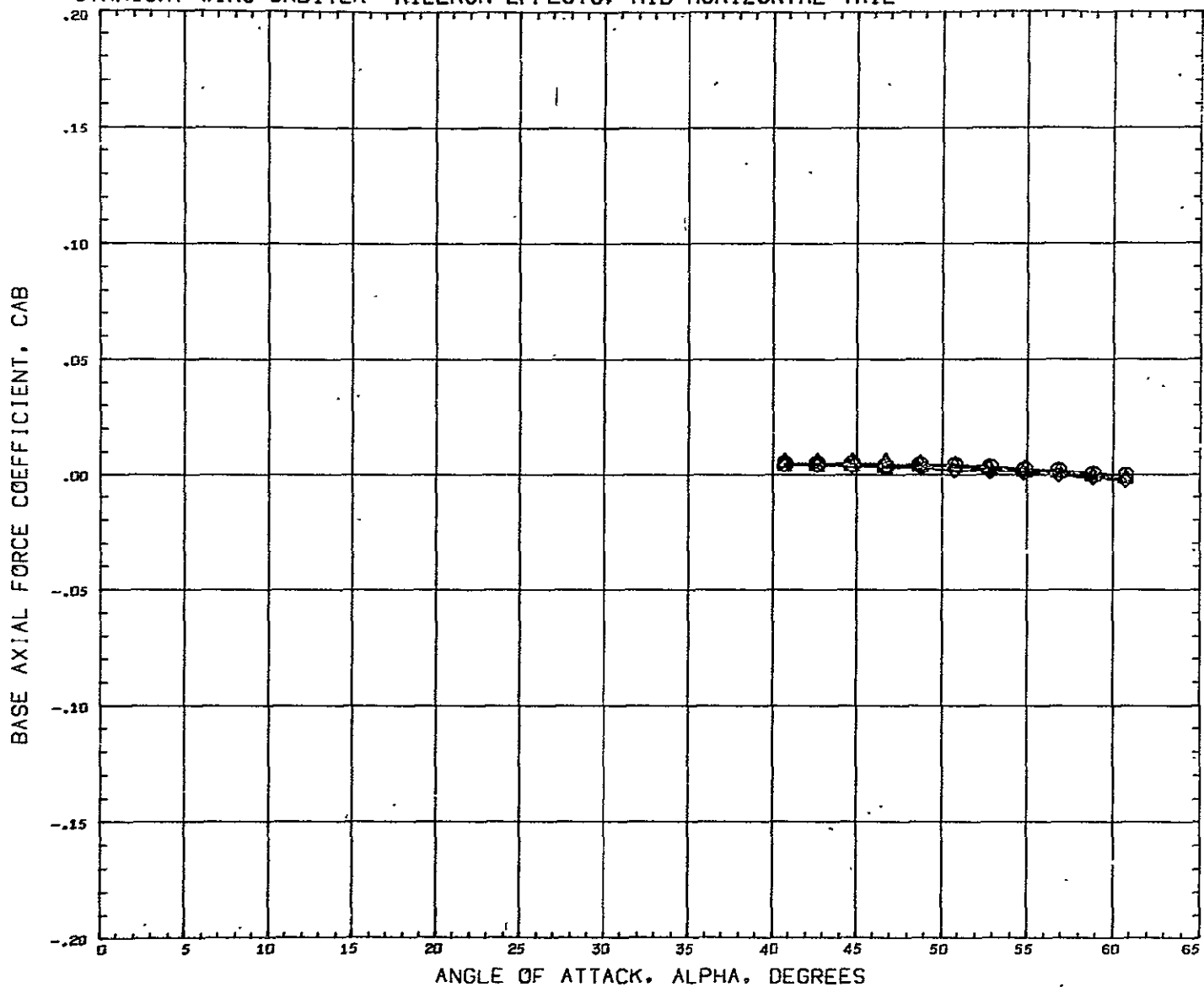
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(C2717C)	MSFC478 NR ST ORBITER B6W1DH12
(C2741C)	MSFC478 NR ST ORBITER B6W1DH12
(C2745C)	MSFC478 NR ST ORBITER B6W1DH12

BETA	HTAIL	AILRON
0.000	-20.000	0.000
0.010	-20.000	20.000
0.000	-20.000	40.000

REFERENCE INFORMATION	
REFS	3084.0040 SQ FT
REFL	322.9004 INCHES
REFB	1490.0040 INCHES
XMRP	1293.0040 INCHES
YMRP	0.0000 INCHES
ZMRP	50.5000 INCHES
SCALE	0.0035 SCALE

MACH 1.956

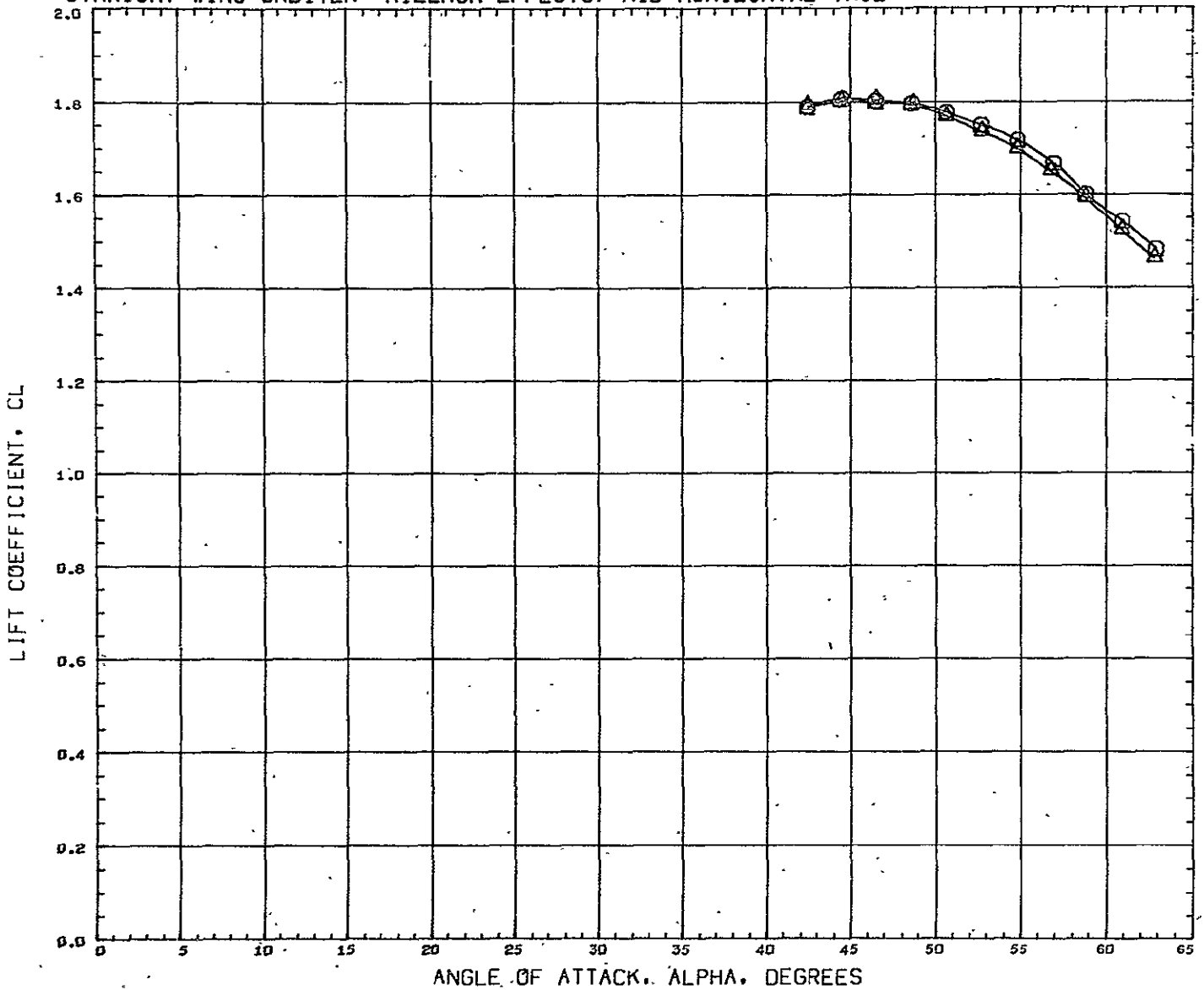
STRAIGHT WING ORBITER-AILERON EFFECTS, MID-HORIZONTAL TAIL



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	HTAIL	AILRON	REFERENCE INFORMATION
(C2717C)	MSFC478 NR ST ORBITER B6W1DH12	0.000	-20.000	0.000	REFS 3084.0040 SQ FT
(C2741C)	MSFC478 NR ST ORBITER B6W1DH12	0.010	-20.000	20.000	REFL 322.9004 INCHES
(C2745C)	MSFC478 NR ST ORBITER B6W1DH12	0.000	-20.000	40.000	REFB 1490.0040 INCHES
					XMRP 1293.0040 INCHES
					YMRP 0.0000 INCHES
					ZMRP 50.5000 INCHES
					SCALE 0.0035 SCALE

MACH 4.559

STRAIGHT WING ORBITER-AILERON EFFECTS, MID-HORIZONTAL TAIL



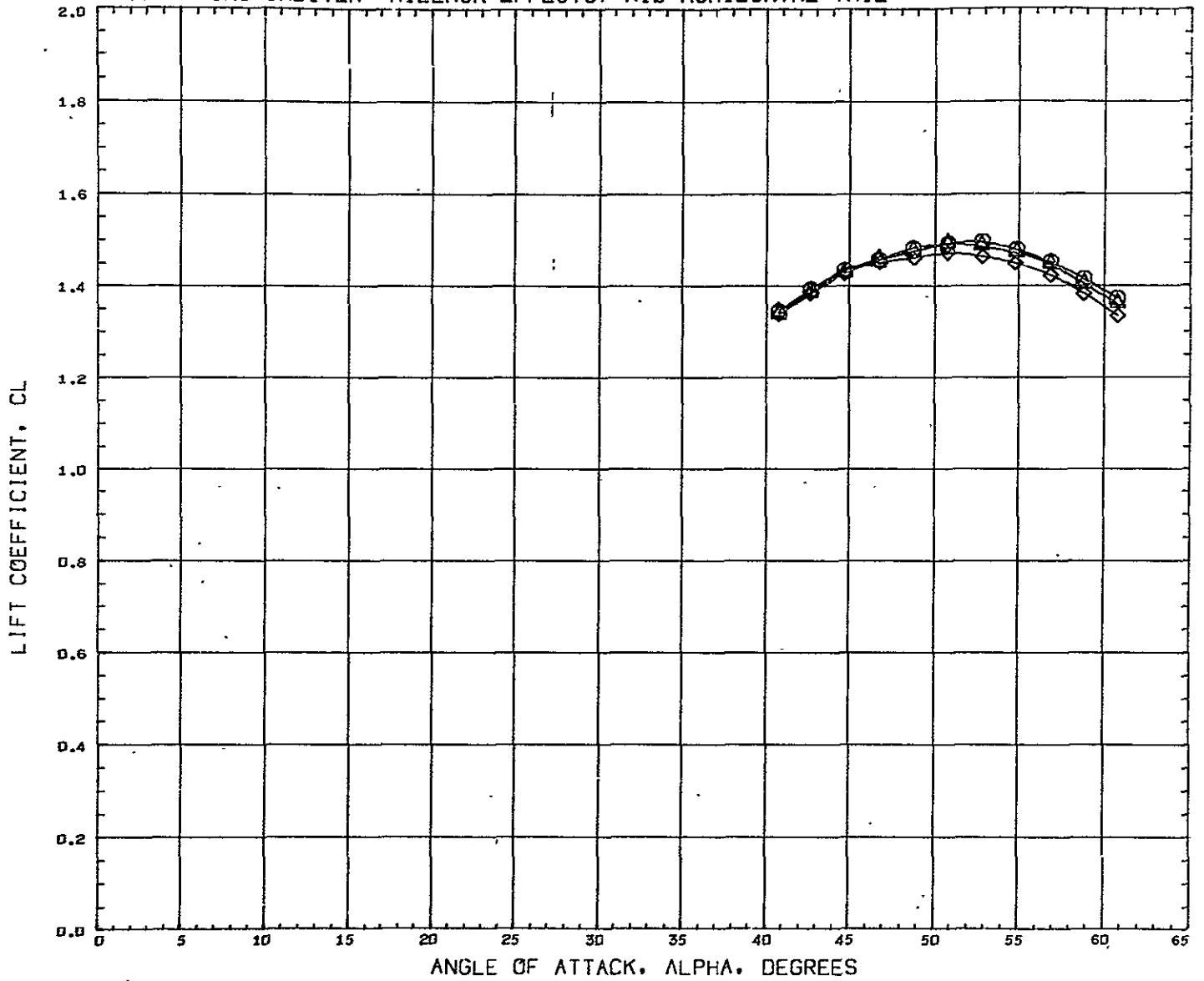
DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(C2717C)	MSFC476 NR ST ORBITER B6W1DH12
(C2741C)	MSFC478 NR ST ORBITER B6W1DH12
(C2745C)	MSFC478 NR ST ORBITER B6W1DH12

BETA	HTAIL	AILRON
0.000	-20.000	0.000
0.010	-20.000	20.000
0.000	-20.000	40.000

REFERENCE INFORMATION		
REFS	3084.0040	SQ FT
REFL	322.9004	INCHES
REFB	1490.0040	INCHES
XMRP	1293.0045	INCHES
YMRP	0.0000	INCHES
ZMRP	50.5000	INCHES
SCALE	0.0035	SCALE

MACH 1.956

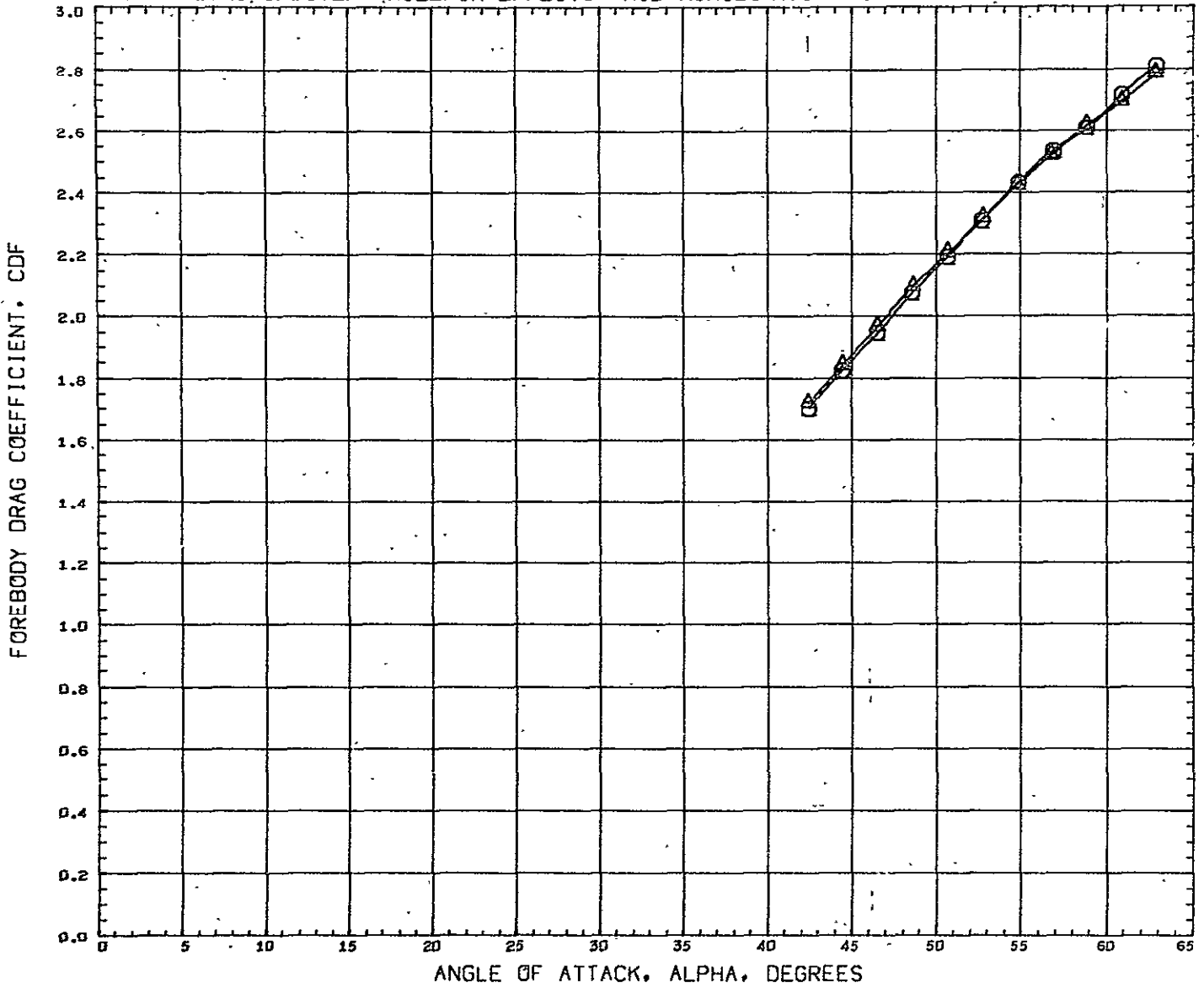
STRAIGHT WING ORBITER- AILERON EFFECTS, MID-HORIZONTAL TAIL



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	HTAIL	AILRON	REFERENCE INFORMATION	
(C2717C)	MSFC478 NR ST ORBITER 86W10H12	0.000	-20.000	0.000	REFS	3084.0040 SQ FT
(C2741C)	MSFC478 NR ST ORBITER 86W10H12	0.010	-20.000	20.000	REFL	322.9004 INCHES
(C2745C)	MSFC478 NR ST ORBITER 86W10H12	0.000	-20.000	40.000	REFB	1490.0040 INCHES
					XMRP	1293.0040 INCHES
					YMRP	0.0000 INCHES
					ZMRP	50.5000 INCHES
					SCALE	0.0035 SCALE

MACH 4.959

STRAIGHT WING ORBITER-AILERON EFFECTS, MID-HORIZONTAL TAIL



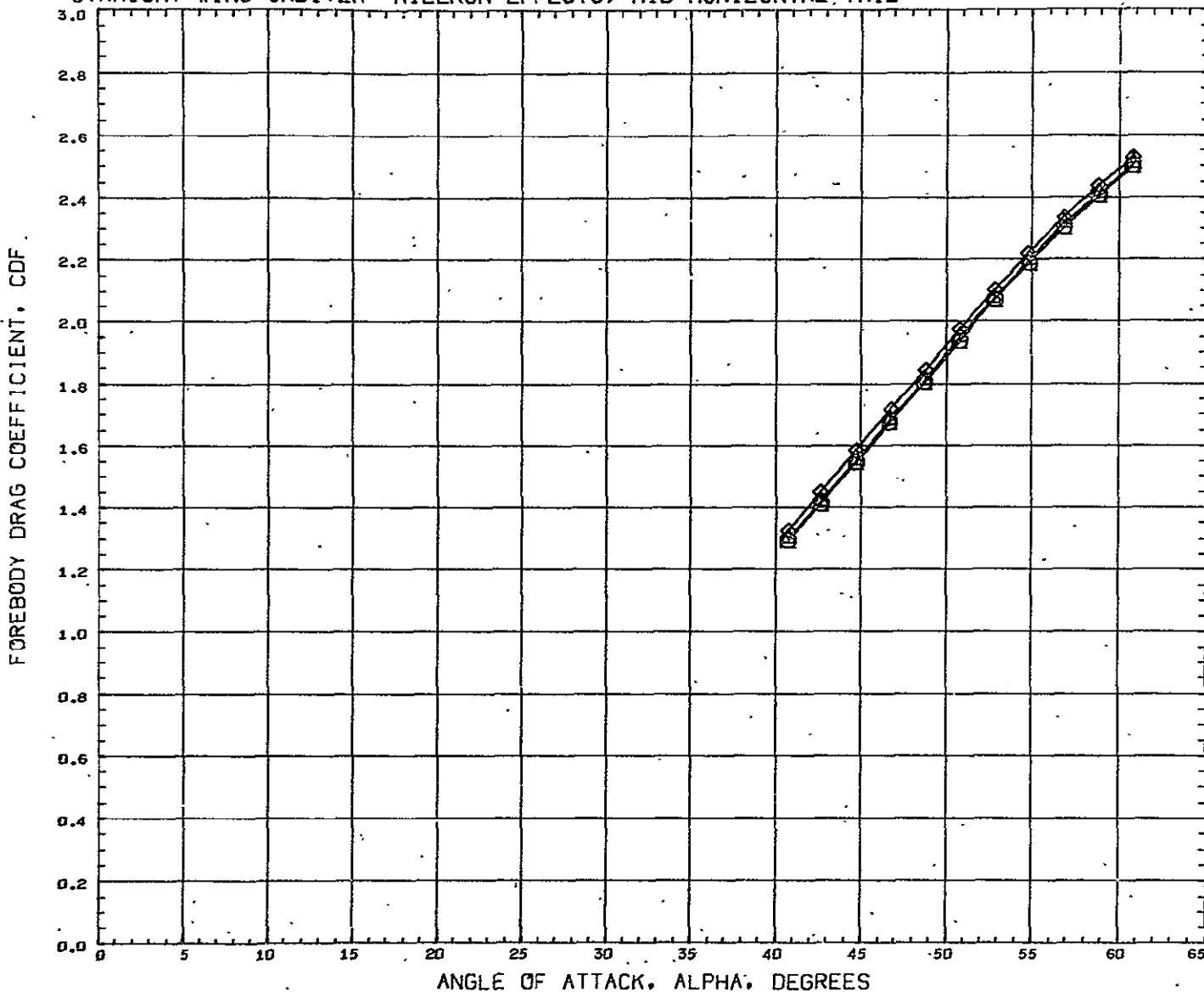
DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(C2717C)	MSFC478 NR ST ORBITER B6W1DH12
(C2741C)	MSFC478 NR ST ORBITER B6W1DH12
(C2745C)	MSFC478 NR ST ORBITER B6W1DH12

BETA	HTAIL	AILRON
0.000	-20.000	0.000
0.010	-20.000	20.000
0.000	-20.000	40.000

REFERENCE INFORMATION	
REFS	3084.0040 SQ FT
REFL	322.9004 INCHES
REFB	1495.0040 INCHES
XMRP	1293.0040 INCHES
YMRP	0.0000 INCHES
ZMRP	50.5000 INCHES
SCALE	0.0035 SCALE

MACH 1.956

STRAIGHT WING ORBITER- AILERON EFFECTS, MID-HORIZONTAL TAIL



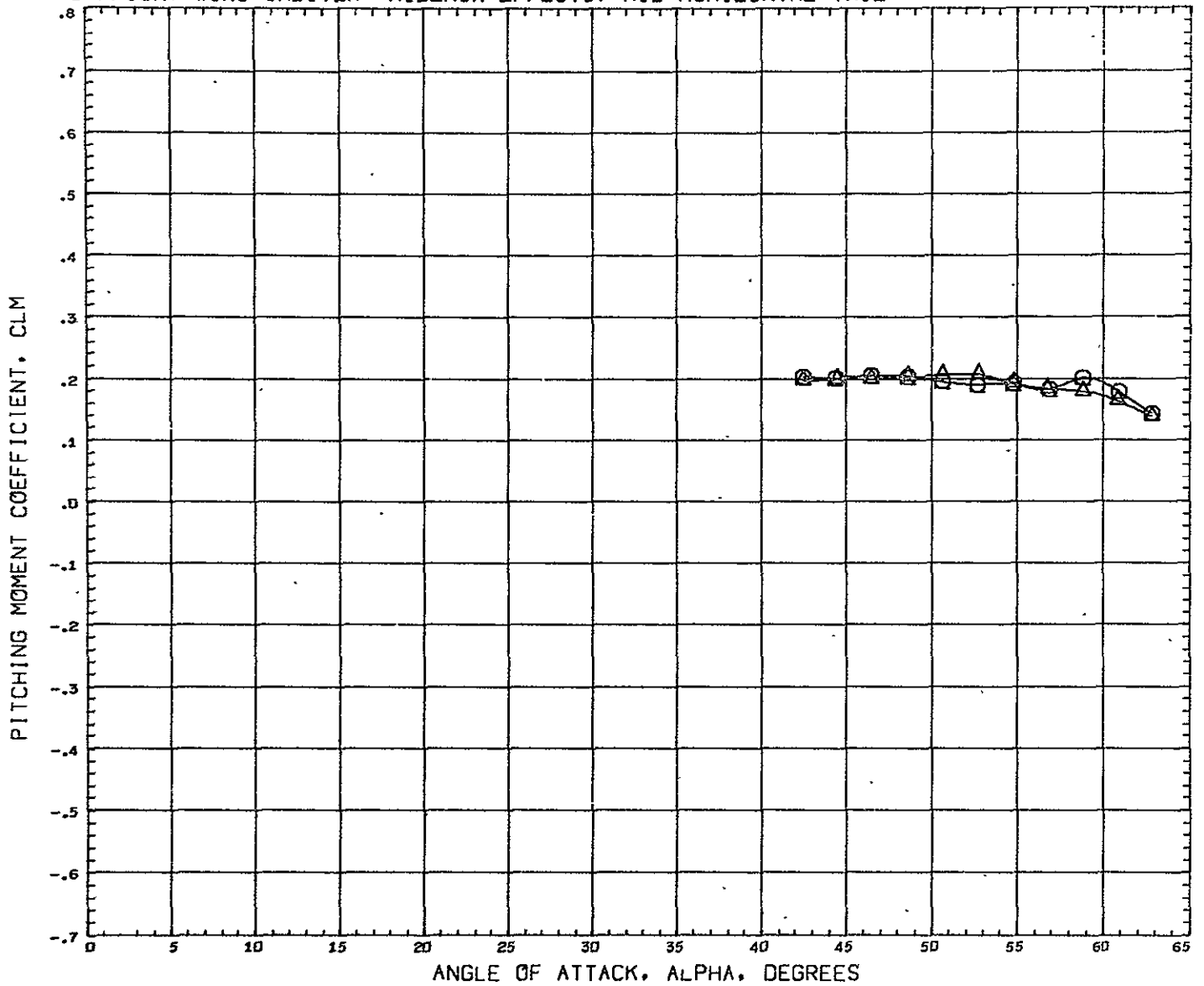
DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(C2717C)	MSFC478 NR ST ORBITER B6W10H12
(C2741C)	MSFC478 NR ST ORBITER B6W10H12
(C2745C)	MSFC478 NR ST ORBITER B6W10H12

BETA	HTAIL	AILRON
0.000	-20.000	0.000
0.010	-20.000	20.000
0.000	-20.000	40.000

REFERENCE INFORMATION		
REFS	3084.0040	SQ FT
REFL	322.9004	INCHES
REFB	1490.0040	INCHES
XMRP	1293.0040	INCHES
YMRP	0.0000	INCHES
ZMRP	50.5000	INCHES
SCALE	0.0035	SCALE

MACH 4.959

STRAIGHT WING ORBITER-AILERON EFFECTS, MID-HORIZONTAL TAIL



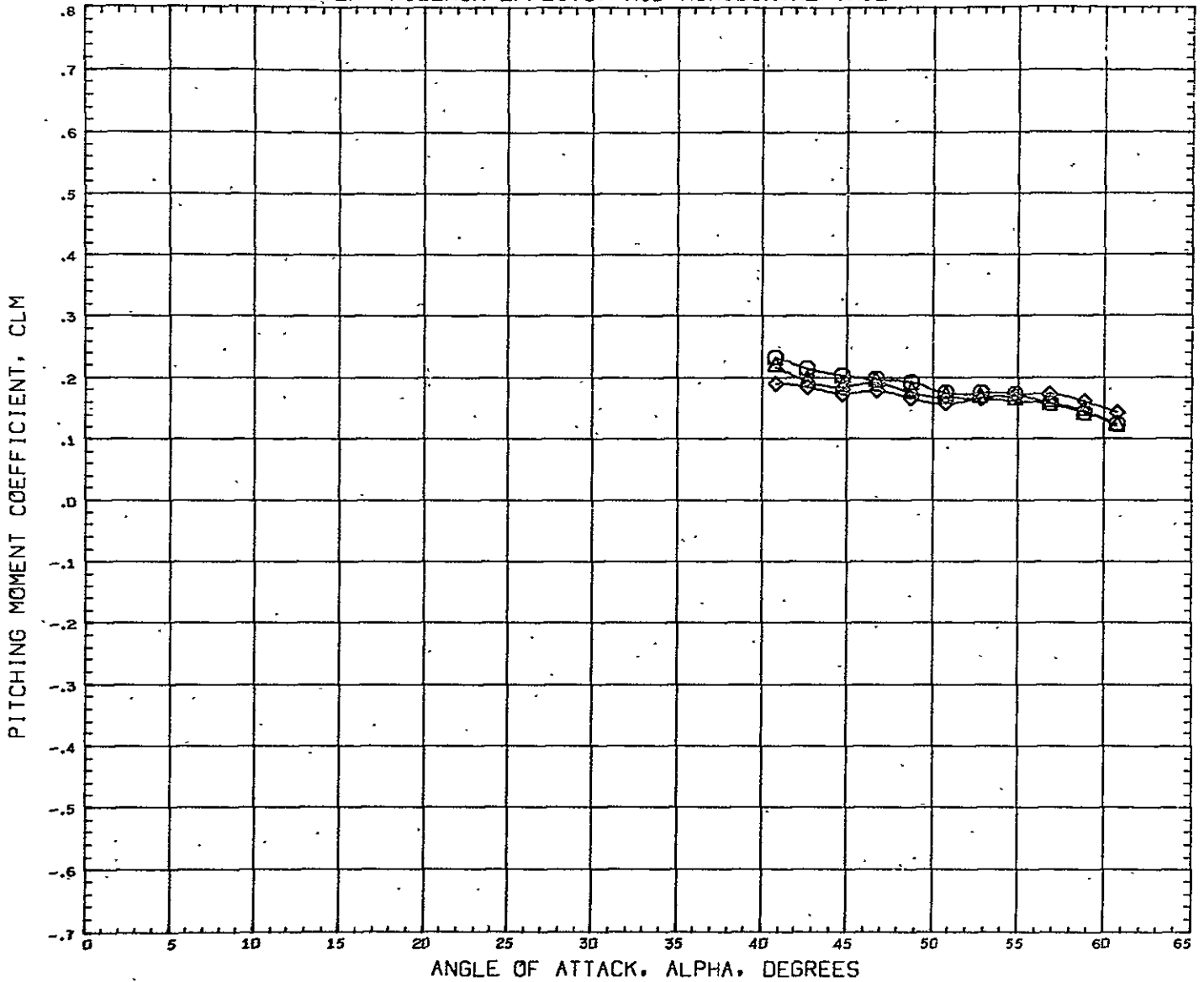
DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(C2717C)	MSFC478 NR ST ORBITER B6W10H12
(C2741C)	MSFC478 NR ST ORBITER B6W10H12
(C2745C)	MSFC478 NR ST ORBITER B6W10H12

BETA	HTAIL	AILRON
0.000	-20.000	0.000
0.010	-20.000	20.000
0.000	-20.000	40.000

REFERENCE INFORMATION		
REFS	3084.0040	SQ FT
REFL	322.9004	INCHES
REFB	1490.0040	INCHES
XMRP	1293.0040	INCHES
YMRP	0.0000	INCHES
ZMRP	50.5000	INCHES
SCALE	0.0035	SCALE

MACH 1.950

STRAIGHT WING ORBITER-AILERON EFFECTS, MID-HORIZONTAL TAIL



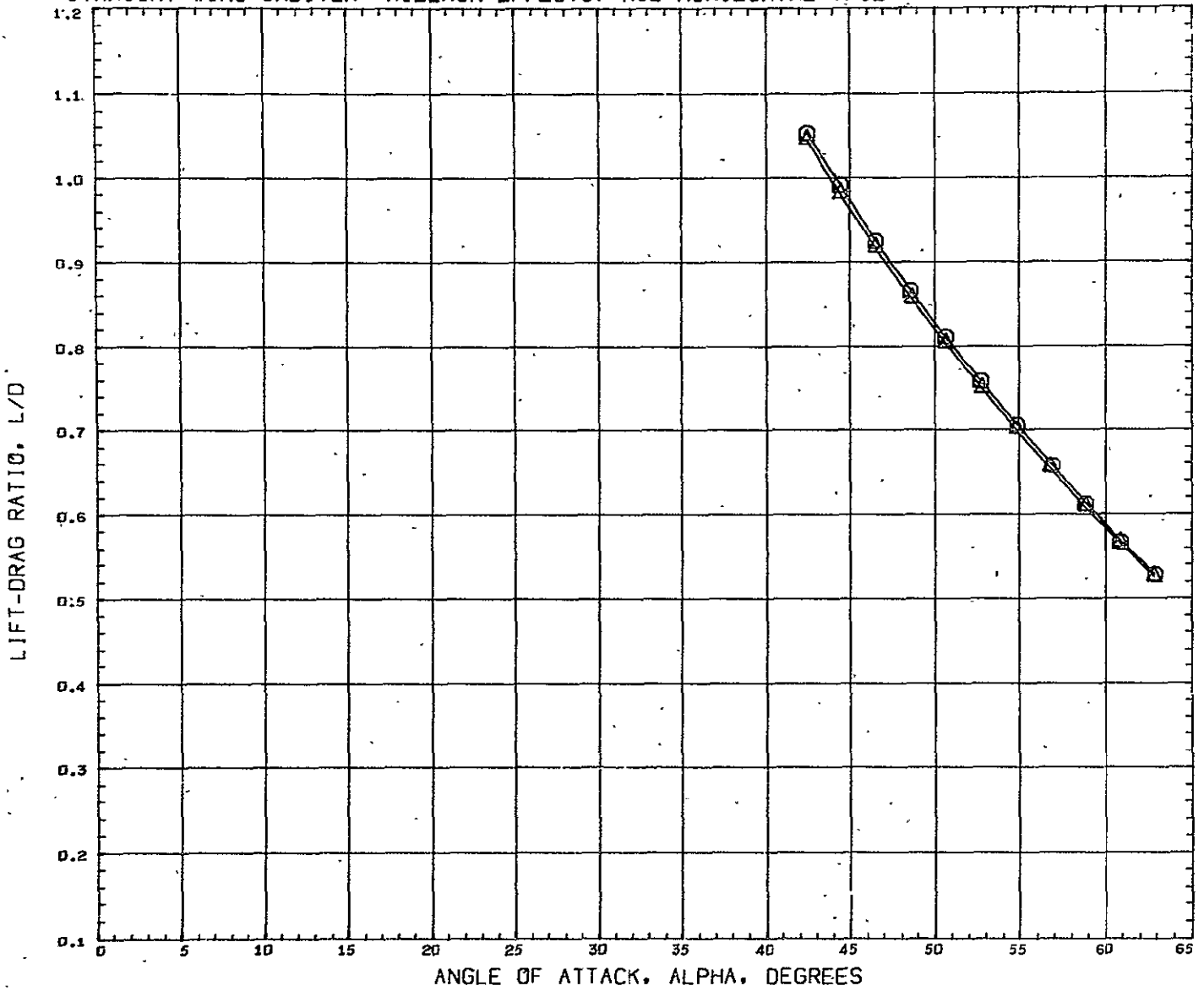
DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(C2717C)	MSFC478 NR ST ORBITER 06W1DH12
(C2741C)	MSFC478 NR ST ORBITER 06W1DH12
(C2745C)	MSFC478 NR ST ORBITER 06W1DH12

BETA°	HTAIL	AILRON
0.000	-20.000	0.000
0.010	-20.000	20.000
0.000	-20.000	40.000

REFERENCE INFORMATION		
REFS	3084.0040	SQ FT
REFL	322.9004	INCHES
REFB	1499.0040	INCHES
XMRP	1293.0040	INCHES
YMRP	0.0000	INCHES
ZMRP	50.5000	INCHES
SCALE	0.0035	SCALE

MACH 4.959

STRAIGHT WING ORBITER-AILERON EFFECTS, MID-HORIZONTAL TAIL



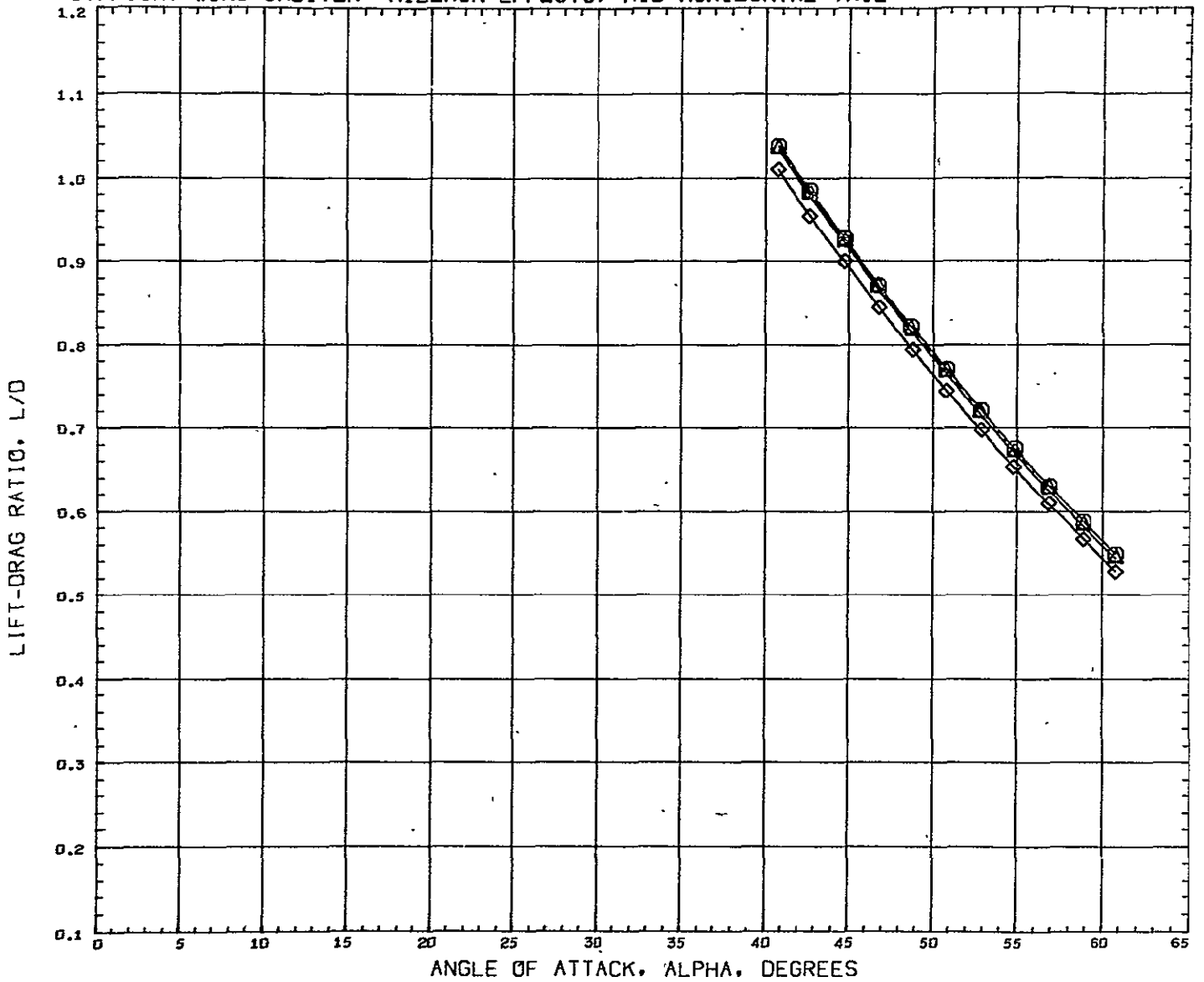
DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(C2717C)	MSFC478 NR ST ORBITER B6WIDH12
(C2721C)	MSFC478 NR ST ORBITER B6WIDH12
(C2745C)	MSFC478 NR ST ORBITER B6WIDH12

BETA	HTAIL	AILRON
0.000	-20.000	0.000
0.010	-20.000	20.000
0.000	-20.000	40.000

REFERENCE INFORMATION		
REFS	3084.0040	SQ FT
REFL	322.9004	INCHES
REFB	1490.0040	INCHES
XMRP	1293.0040	INCHES
YMRP	0.0000	INCHES
ZMRP	50.5000	INCHES
SCALE	0.0035	SCALE

MACH 1.956

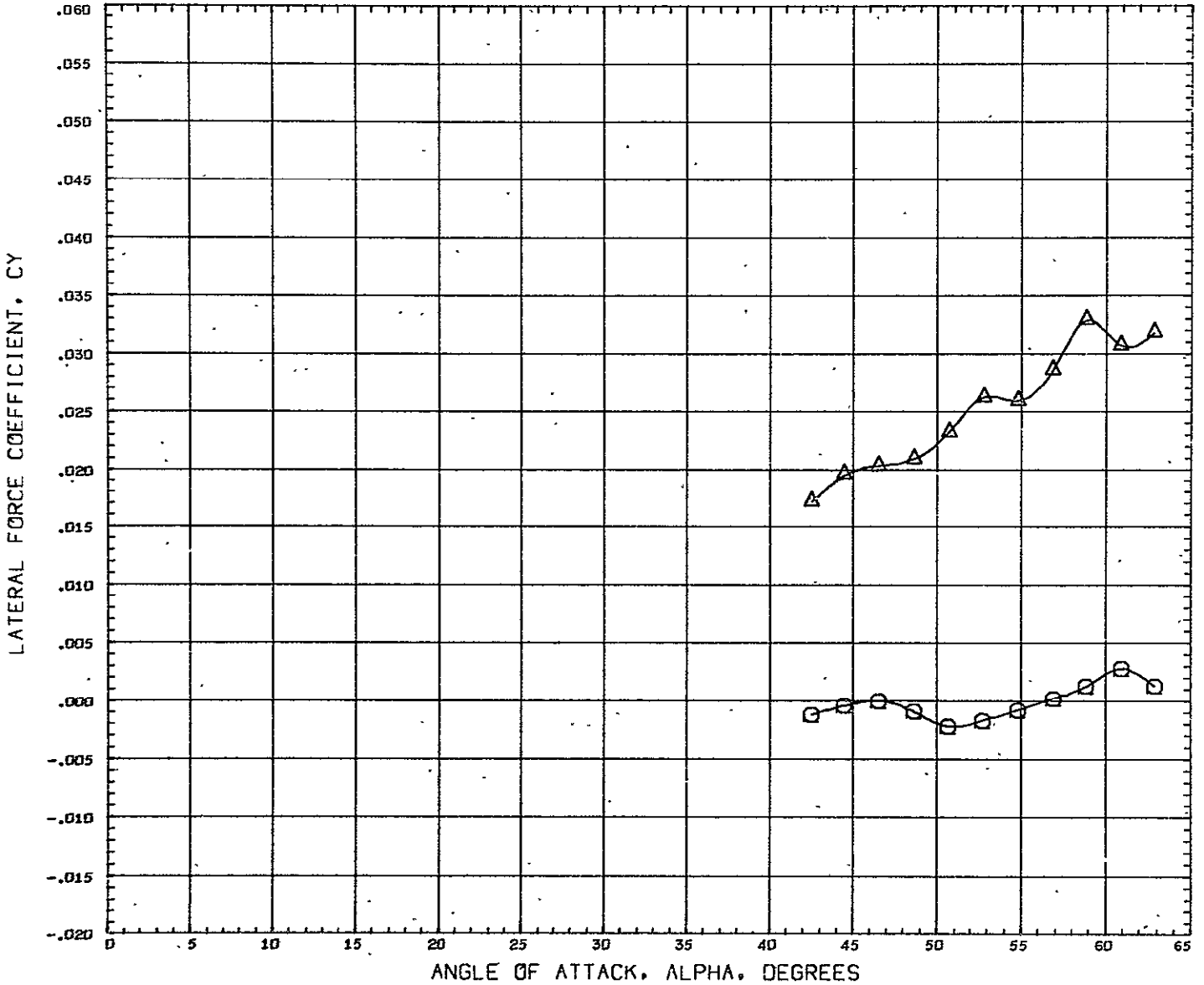
STRAIGHT WING ORBITER-AILERON EFFECTS, MID-HORIZONTAL TAIL



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	HTAIL	AILRON	REFERENCE INFORMATION
(C2717C)	MSFC478 NR ST ORBITER B6W10H12	0.000	-20.000	0.000	REFS 3084.0040 SQ FT
(C2741C)	MSFC478 NR ST ORBITER B6W10H12	0.010	-20.000	20.000	REFL 322.9004 INCHES
(C2745C)	MSFC478 NR ST ORBITER B6W10H12	0.000	-20.000	40.000	REFB 1490.0040 INCHES
					XNRF 1293.0040 INCHES
					YMRP 0.0000 INCHES
					ZMRP - 50.5000 INCHES
					SCALE 0.0035 SCALE

PACH 4.859

STRAIGHT WING ORBITER-AILERON EFFECTS, MID-HORIZONTAL TAIL



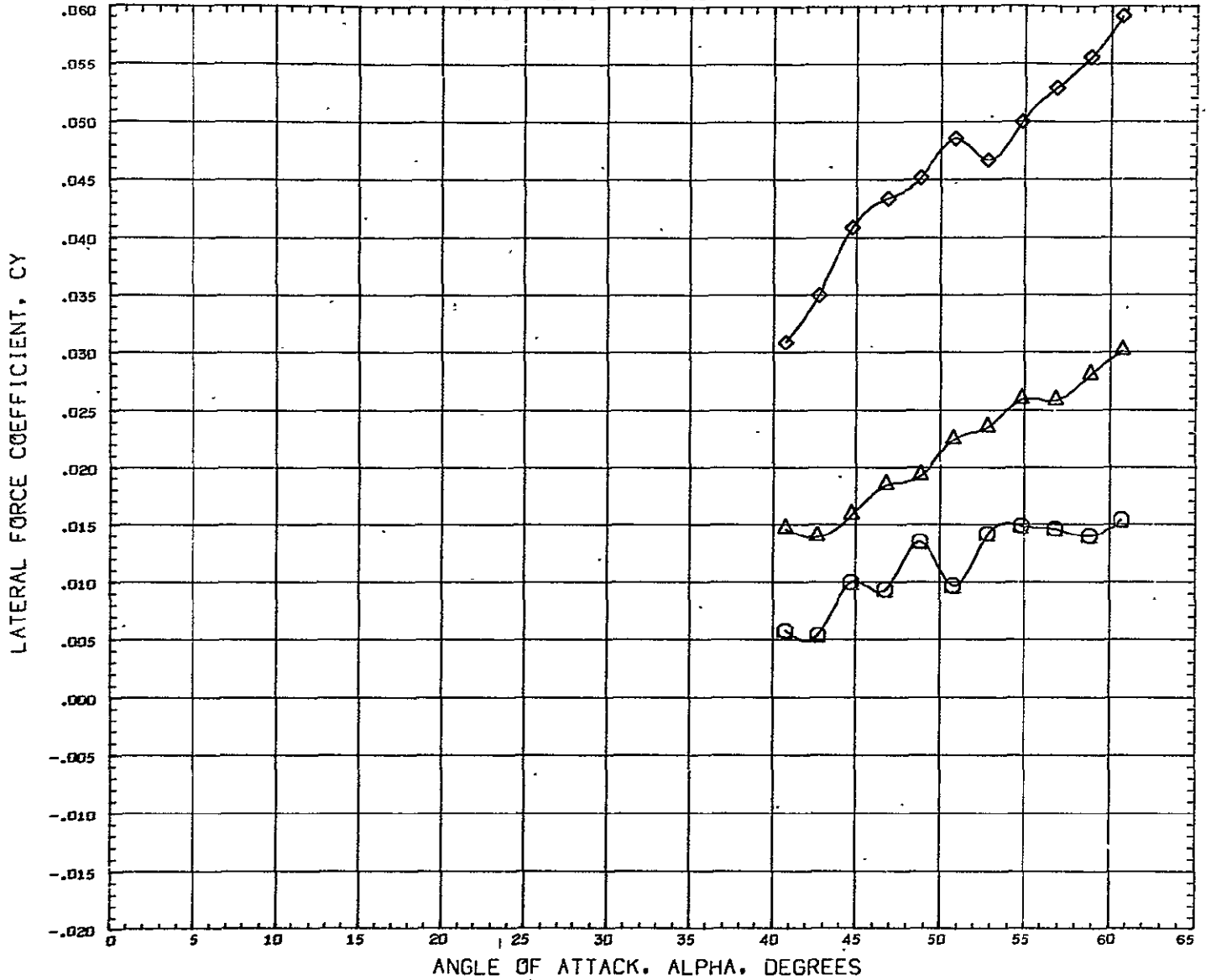
DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(C2717C)	MSFC478 NR ST ORBITER B6WIDH12
(C2721C)	MSFC478 NR ST ORBITER B6WIDH12
(C2745C)	MSFC478 NR ST ORBITER B6WIDH12

BETA	HTAIL	AILRON
0.000	-20.000	0.000
0.010	-20.000	20.000
0.000	-20.000	40.000

REFERENCE INFORMATION		
REFS	3084.0040	SQ FT
REFL	322.9004	INCHES
REFB	1490.0040	INCHES
XMRF	1293.0040	INCHES
YMRF	0.0000	INCHES
ZMRP	50.5000	INCHES
SCALE	0.0035	SCALE

MACH 1.556

STRAIGHT WING ORBITER-AILERON EFFECTS, MID-HORIZONTAL TAIL



DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(C2717C)	MSFC478 NR ST ORBITER B6W10H12
(C2741C)	MSFC478 NR ST ORBITER B6W10H12
(C2745C)	MSFC478 NR ST ORBITER B6W10H12

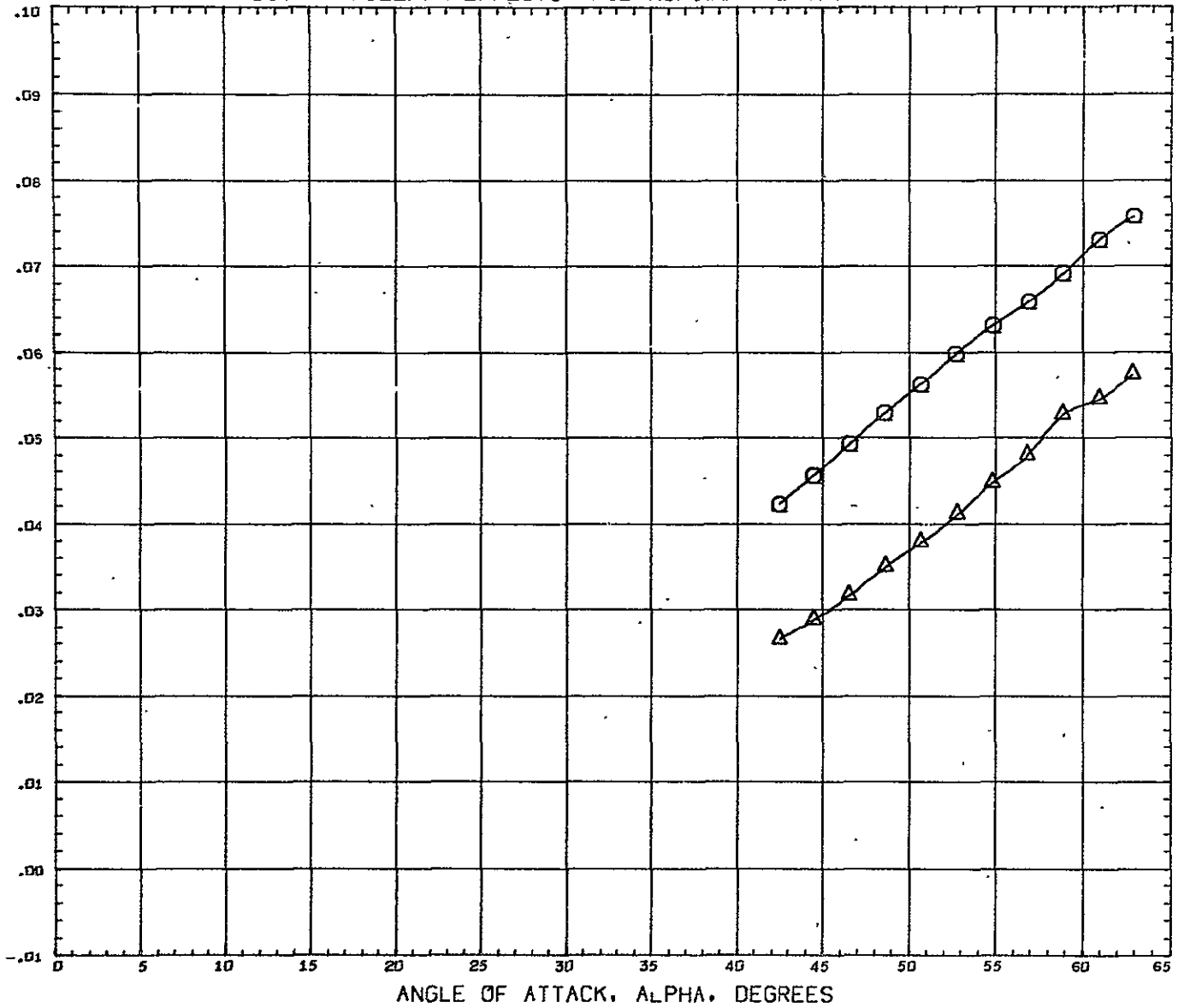
BETA	HTAIL	AILRON
0.000	-20.000	0.000
0.010	-20.000	20.000
0.000	-20.000	40.000

REFERENCE INFORMATION	
REFS	3084.0040 SQ FT
REFL	322.9004 INCHES
REFD	1490.0040 INCHES
XMRP	1293.0040 INCHES
YMRP	0.0000 INCHES
ZMRP	50.5000 INCHES
SCALE	0.0035 SCALE

PACH 4.959

STRAIGHT WING ORBITER-AILERON EFFECTS, MID-HORIZONTAL TAIL

YAWING MOMENT COEFFICIENT, CLN (STABILITY AXIS)



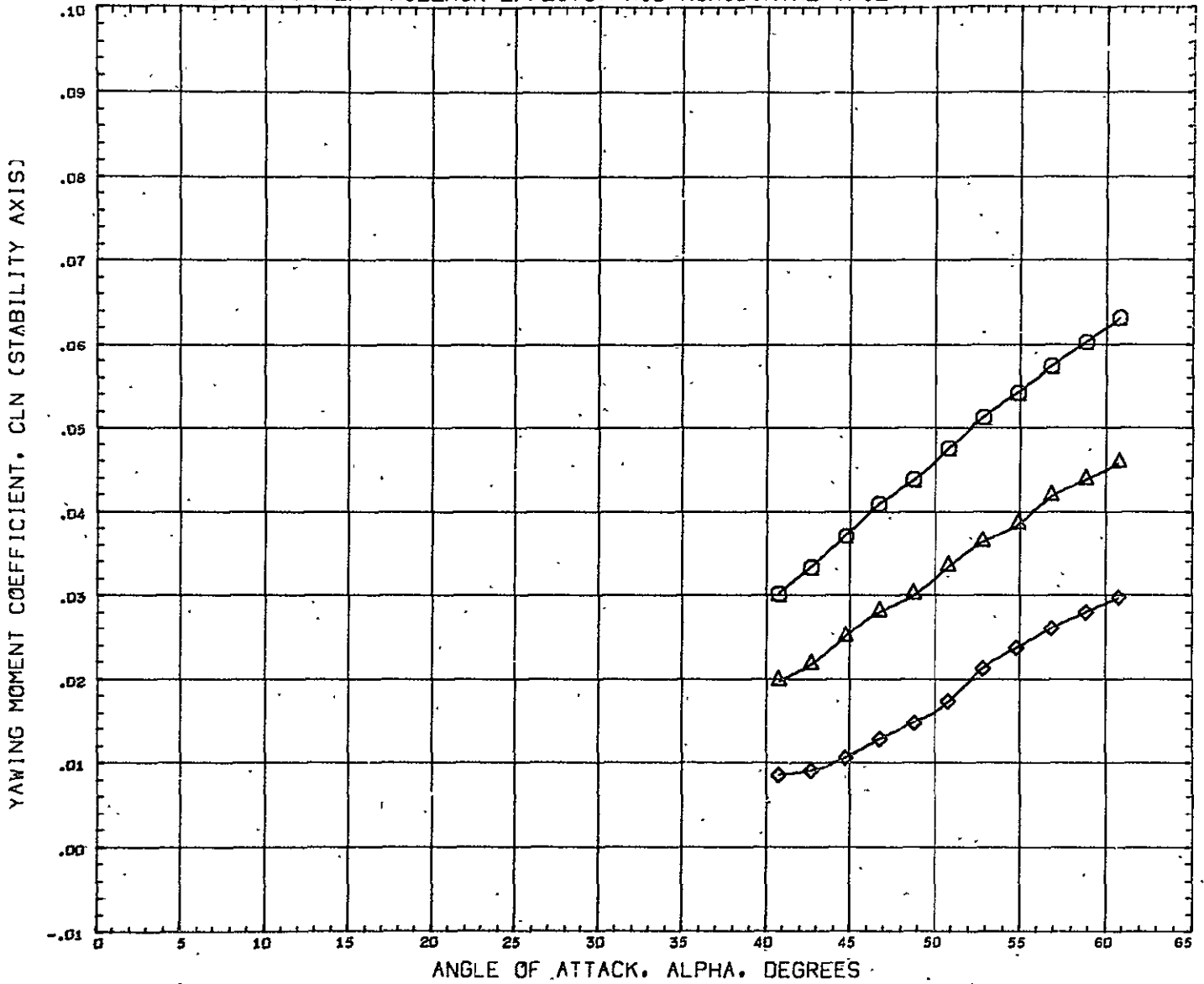
DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(C2717C)	HSFC478 NR ST ORBITER B6W10H12
(C2741C)	HSFC478 NR ST ORBITER B6W10H12
(C2745C)	HSFC478 NR ST ORBITER B6W10H12

BETA	HTAIL	AILRON
0.000	-20.000	0.000
0.010	-20.000	20.000
0.000	-20.000	40.000

REFERENCE INFORMATION		
REFS	3084.0040	SQ FT
REFL	322.9004	INCHES
REFB	1490.0040	INCHES
XMRP	1293.0040	INCHES
YMRP	0.0000	INCHES
ZMRP	50.5000	INCHES
SCALE	0.0035	SCALE

HACH 1.956

STRAIGHT WING ORBITER-AILERON EFFECTS, MID-HORIZONTAL TAIL



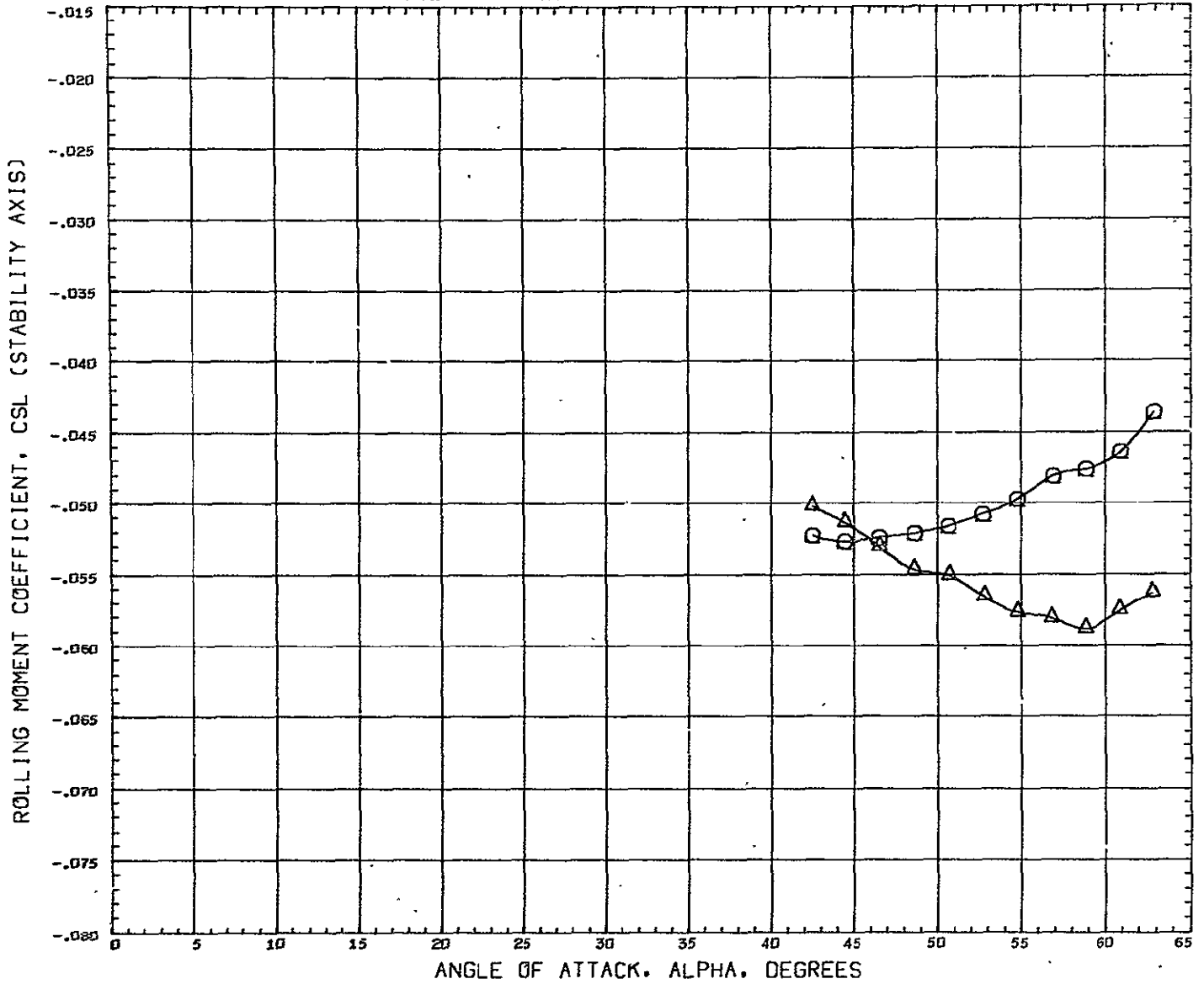
DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(C2717C)	MSFC478 NR ST ORBITER B6W10H12
(C2741C)	MSFC478 NR ST ORBITER B6W10H12
(C2745C)	MSFC478 NR ST ORBITER B6W10H12

BETA	HTAIL	AILRON
0.000	-20.000	0.000
0.010	-20.000	20.000
0.000	-20.000	40.000

REFERENCE INFORMATION	
REFS	3084.0040 SQ FT
REFL	322.9004 INCHES
REFB	1490.0040 INCHES
XMRP	1293.0040 INCHES
YMRP	0.0000 INCHES
ZMRP	50.5000 INCHES
SCALE	0.0035 SCALE

MACH 4.959

STRAIGHT WING ORBITER-AILERON EFFECTS, MID-HORIZONTAL TAIL



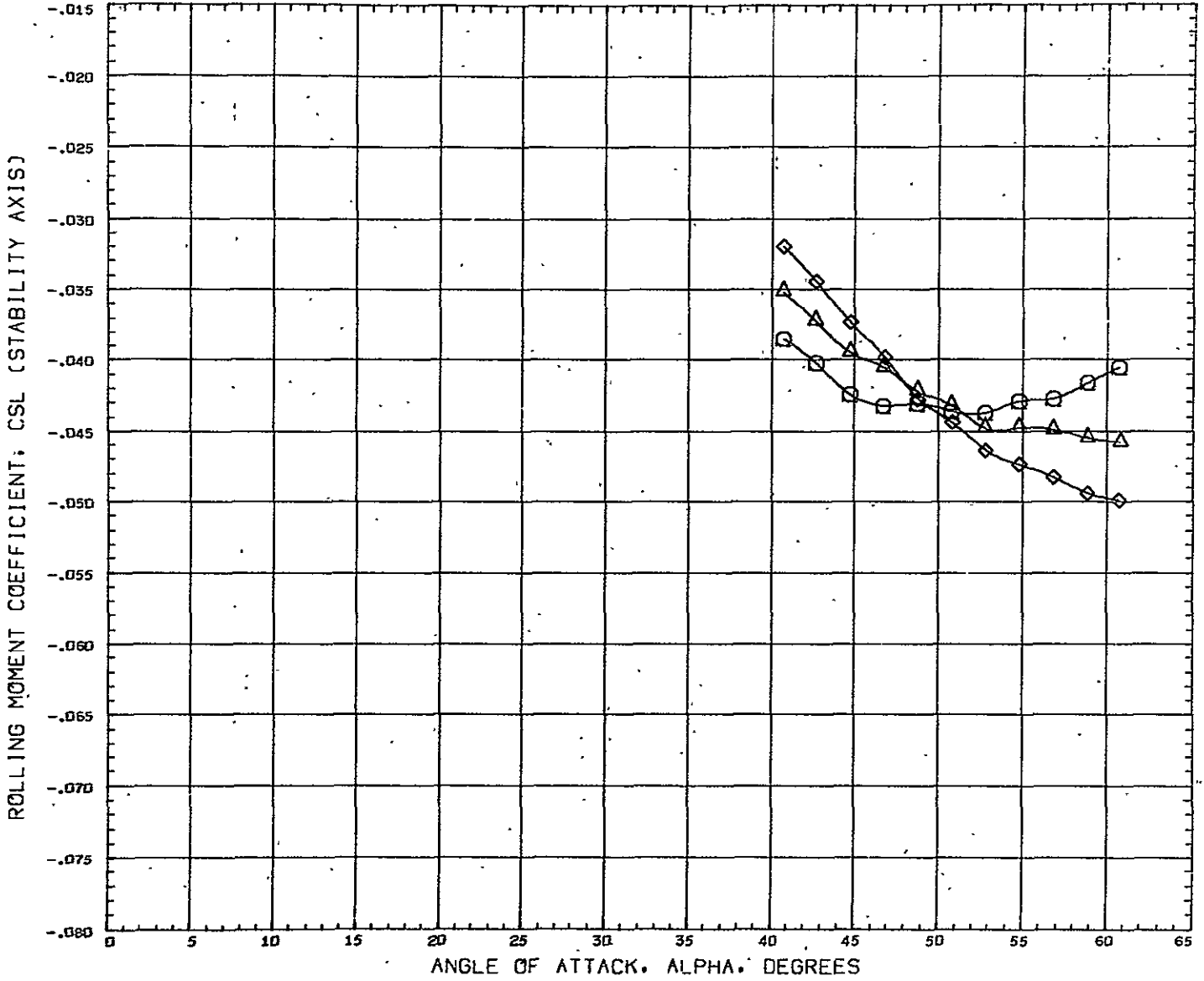
DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(C2717C) ○	MSFC478 NR ST ORBITER B6W10H12
(C2741C) △	MSFC478 NR ST ORBITER B6W10H12
(C2745C) ◇	MSFC478 NR ST ORBITER B6W10H12

BETA	HTAIL	AILRON
0.000	-20.000	0.000
0.010	-20.000	20.000
0.000	-20.000	40.000

REFERENCE INFORMATION	
REFS	3084.0040 SQ FT
REFL	322.9004 INCHES
REFB	1490.0040 INCHES
XMRP	1293.0040 INCHES
YMRP	0.0000 INCHES
ZMRP	50.5000 INCHES
SCALE	0.0035 SCALE

MACH 1.956

STRAIGHT WING ORBITER-AILERON EFFECTS, MID-HORIZONTAL TAIL



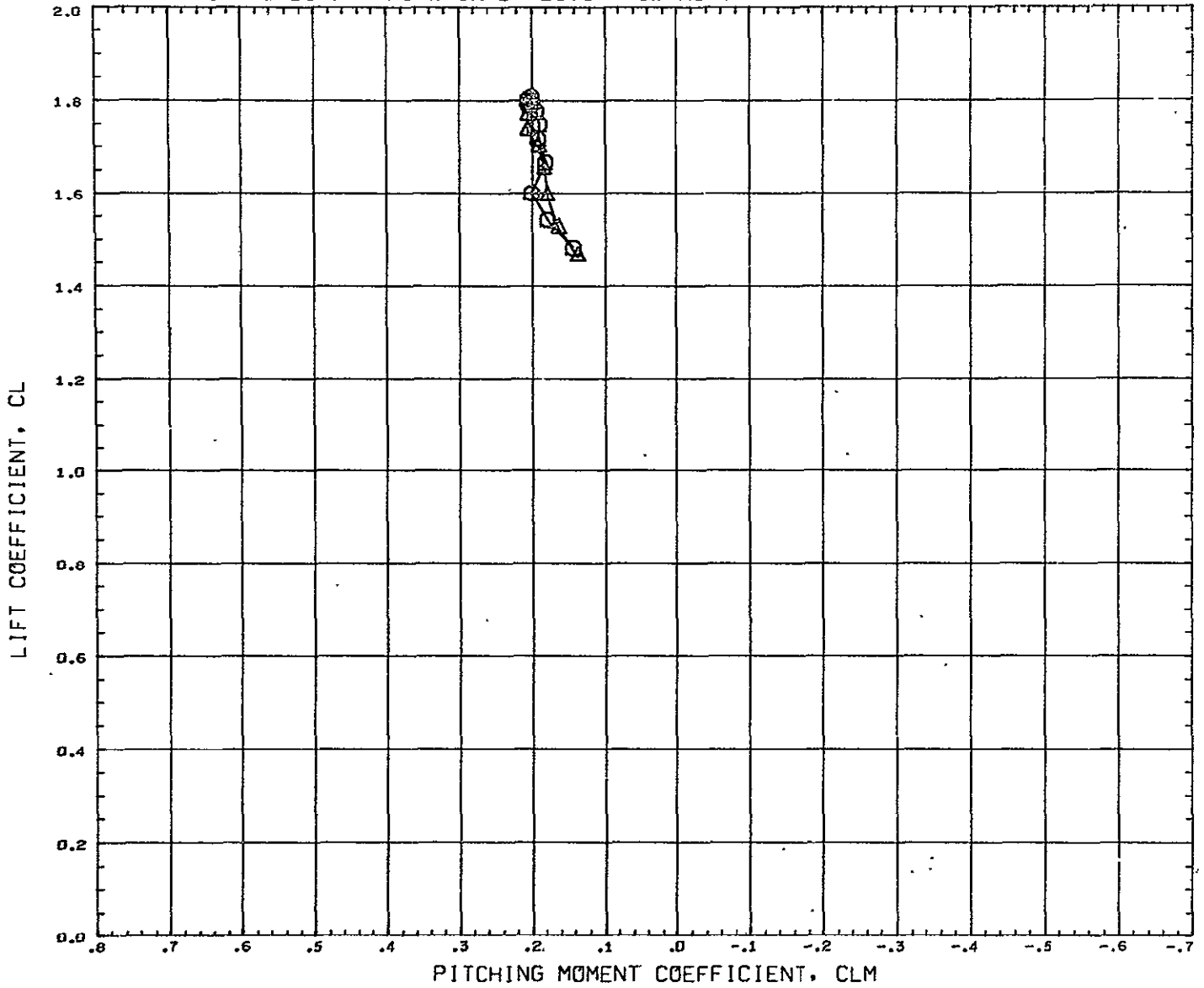
DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(C2717C) □	MSFC478 NR ST ORBITER B6W10H12
(C2741C) △	MSFC478 NR ST ORBITER C6W10H12
(C2745C) ◇	MSFC478 NR ST ORBITER B6W10H12

BETA	HTAIL	AILRON
0.000	-20.000	0.000
0.010	-20.000	20.000
0.000	-20.000	40.000

REFERENCE INFORMATION		
REFS	3084.0040	SQ FT
REFL	322.9004	INCHES
REFB	1490.0040	INCHES
XMRP	1293.0040	INCHES
YMRP	0.0000	INCHES
ZMRP	50.5000	INCHES
SCALE	0.0035	SCALE

MACH 4.959

STRAIGHT WING ORBITER- AILERON EFFECTS, MID-HORIZONTAL TAIL



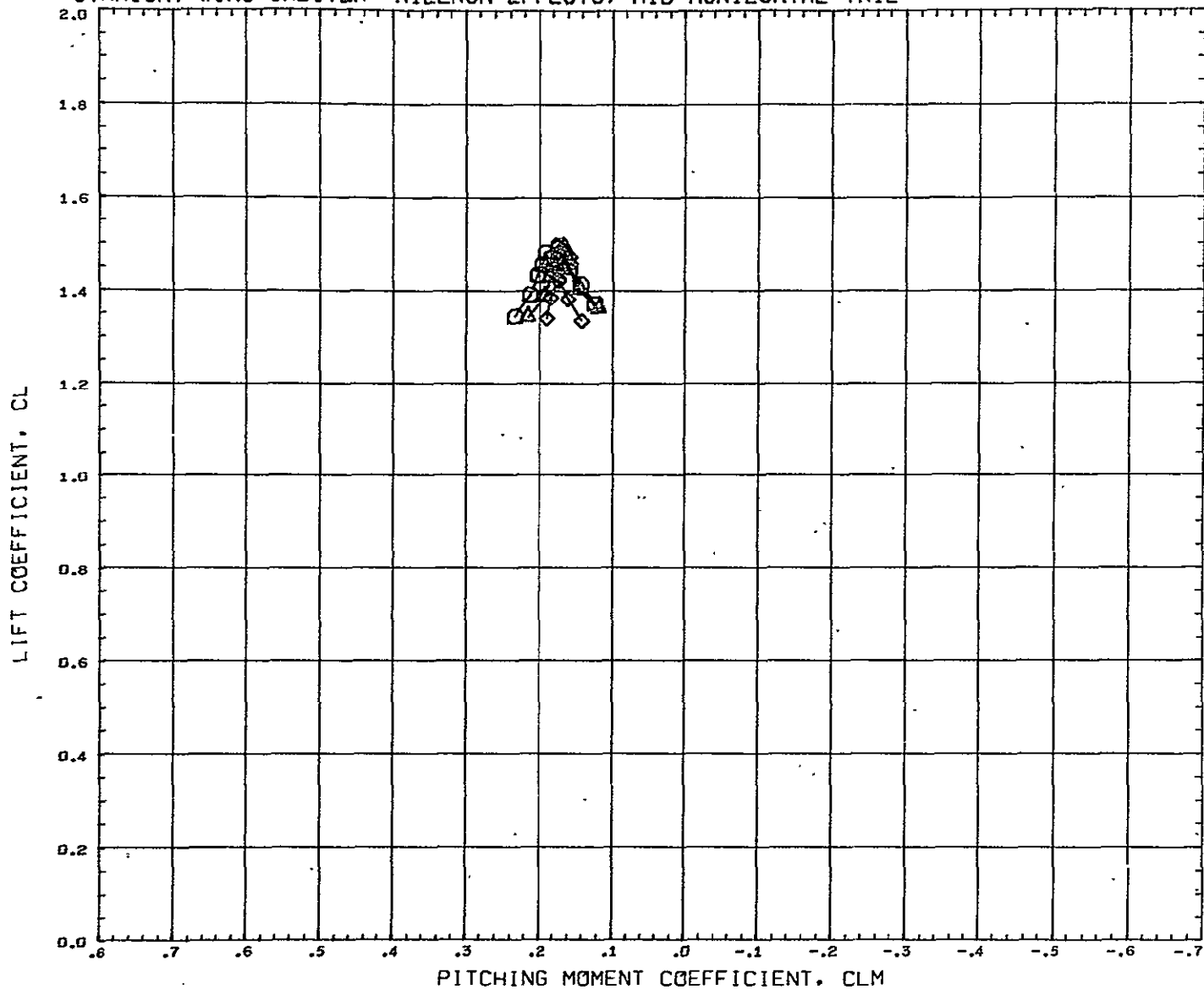
DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(C2717C)	MSFC478 NR ST ORBITER B6WIDH12
(C2741C)	MSFC478 NR ST ORBITER B6WIDH12
(C2745C)	MSFC478 NR ST ORBITER B6WIDH12

BETA	HTAIL	AILRON
0.000	-20.000	0.000
0.010	-20.000	20.000
0.000	-20.000	40.000

REFERENCE INFORMATION		
REFS	3084.0040	SQ. FT
REFL	322.9004	INCHES
REFB	1490.0040	INCHES
XMRP	1293.0040	INCHES
YMRP	0.0000	INCHES
ZMRP	50.5000	INCHES
SCALE	0.0035	SCALE

MACH 1.956

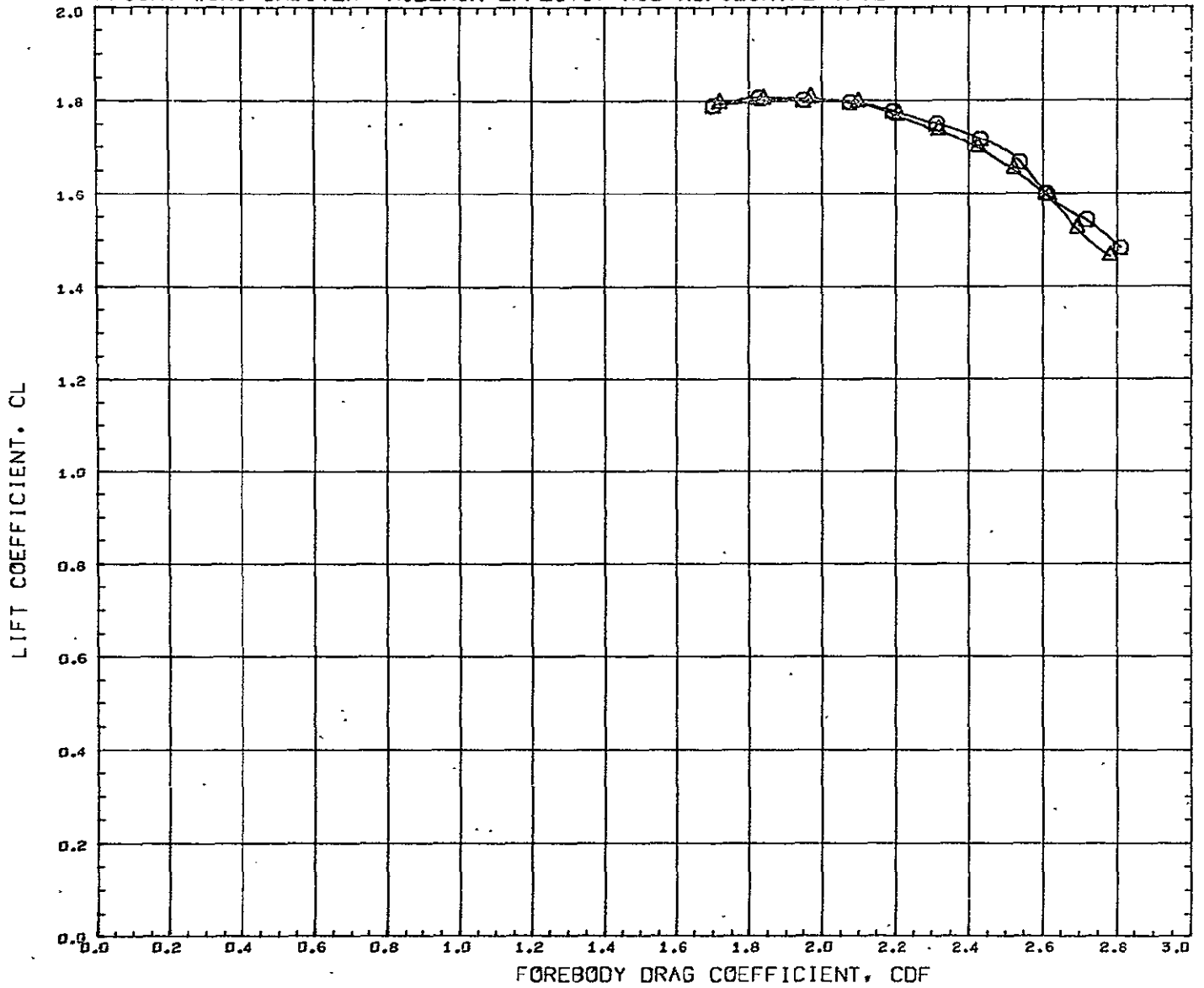
STRAIGHT WING ORBITER-AILERON EFFECTS, MID-HORIZONTAL TAIL



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	HTAIL	AILRON	REFERENCE INFORMATION
(C2717C)	MSFC478 NR ST ORBITER B6WIDH12	0.000	-20.000	0.000	REFS 3084.0040 SQ FT
(C2741C)	MSFC478 NR ST ORBITER B6WIDH12	0.010	-20.000	20.000	REFL 322.9004 INCHES
(C2745C)	MSFC478 NR ST ORBITER B6WIDH12	0.000	-20.000	40.000	REFB 1490.0040 INCHES
					XMRP 1293.0020 INCHES
					YMRP 0.0000 INCHES
					ZMRP - 50.5000 INCHES
					SCALE 0.0035 SCALE

MACH 4.959

STRAIGHT WING ORBITER- AILERON EFFECTS, MID-HORIZONTAL TAIL



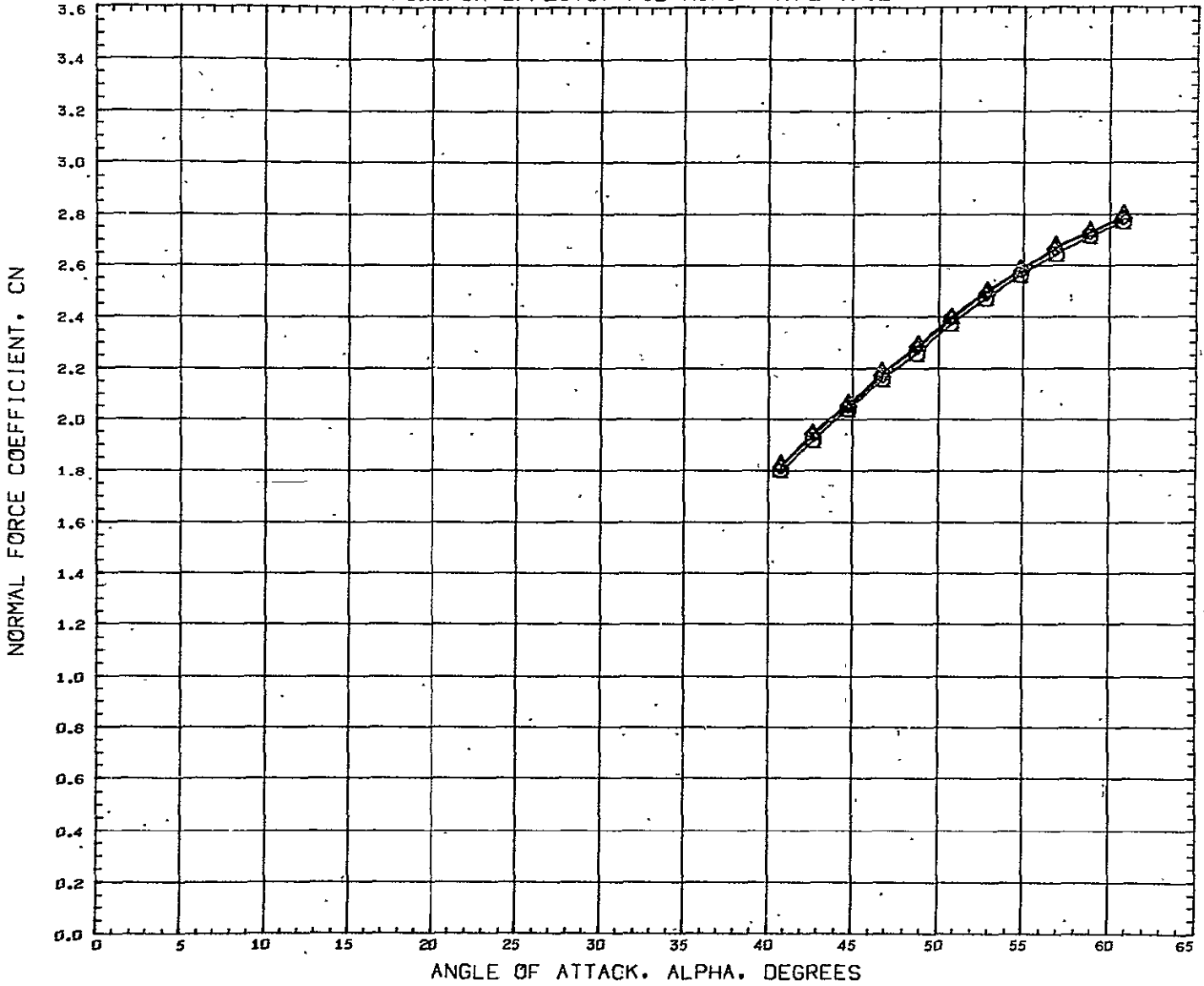
DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(C2717C)	MSFC478 NR ST ORBITER B6WIDH12
(C2741C)	MSFC478 NR ST ORBITER B6WIDH12
(C2745C)	MSFC478 NR ST ORBITER B6WIDH12

BETA	HTAIL	AILRON
0.000	-20.000	0.000
0.010	-20.000	20.000
0.000	-20.000	40.000

REFERENCE INFORMATION		
REFS	3084.0040	SQ FT
REFL	322.9004	INCHES
REFB	1490.0040	INCHES
XMRP	1293.0040	INCHES
YMRP	0.0000	INCHES
ZMRP	50.5000	INCHES
SCALE	0.0035	SCALE

MACH 1.956

STRAIGHT WING ORBITER-AILERON EFFECTS, MID-HORIZONTAL TAIL



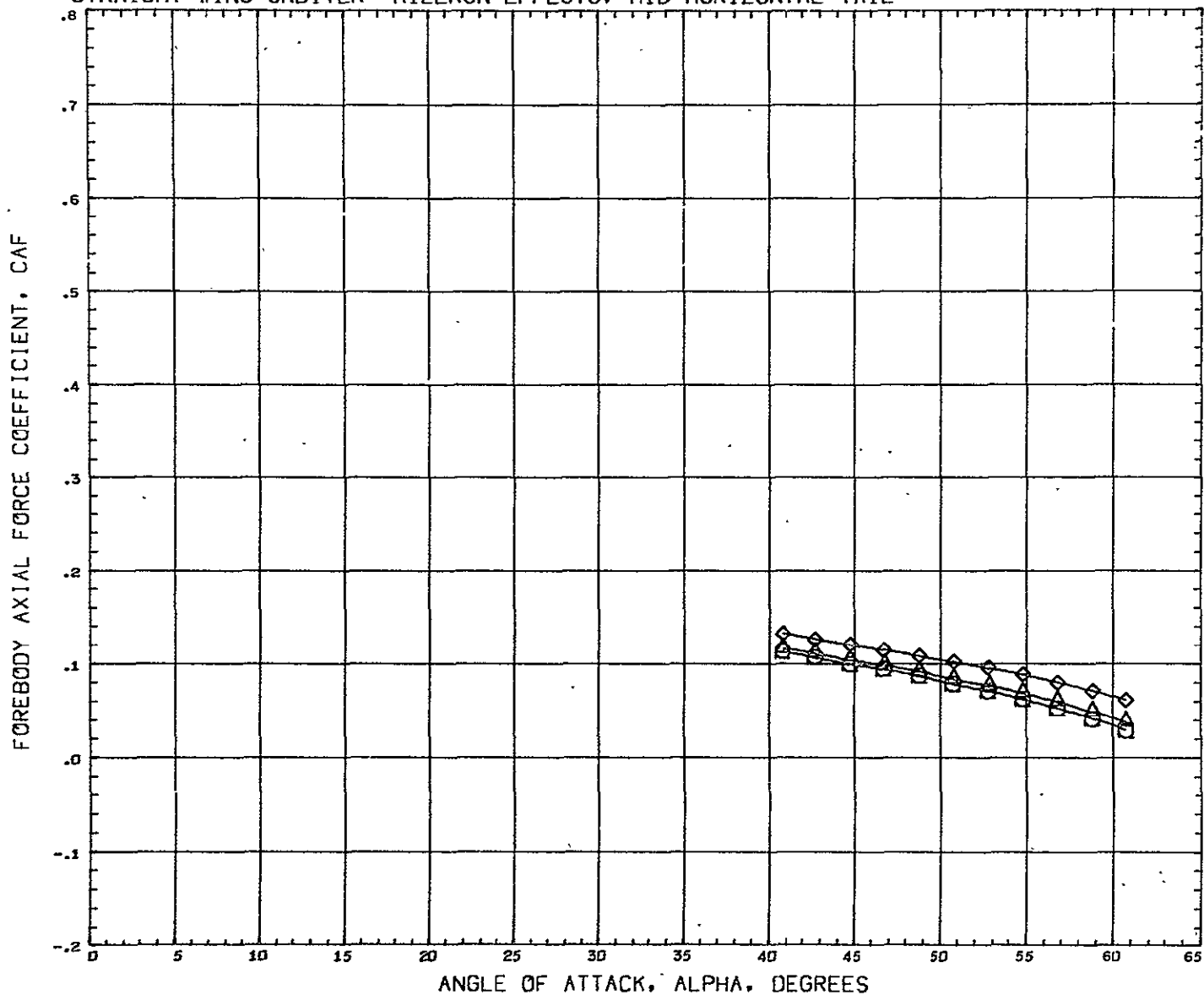
DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(C2718C)	MSFC478 NR ST ORBITER B6W10H12
(C2746C)	MSFC478 NR ST ORBITER B6W10H12
(C2742C)	MSFC478 NR ST ORBITER B6W10H12

BETA	HTAIL	AILRON
0.000	-30.800	0.000
0.000	-30.000	20.000
0.000	-30.000	40.000

REFERENCE INFORMATION	
REFS	3084.0040 SQ FT
REFL	322.9004 INCHES
REFB	1490.0040 INCHES
XMRF	1293.0040 INCHES
YMRP	0.0000 INCHES
ZMRP	50.5000 INCHES
SCALE	0.0035 SCALE

MACH 4.959

STRAIGHT WING ORBITER- AILERON EFFECTS, MID-HORIZONTAL TAIL



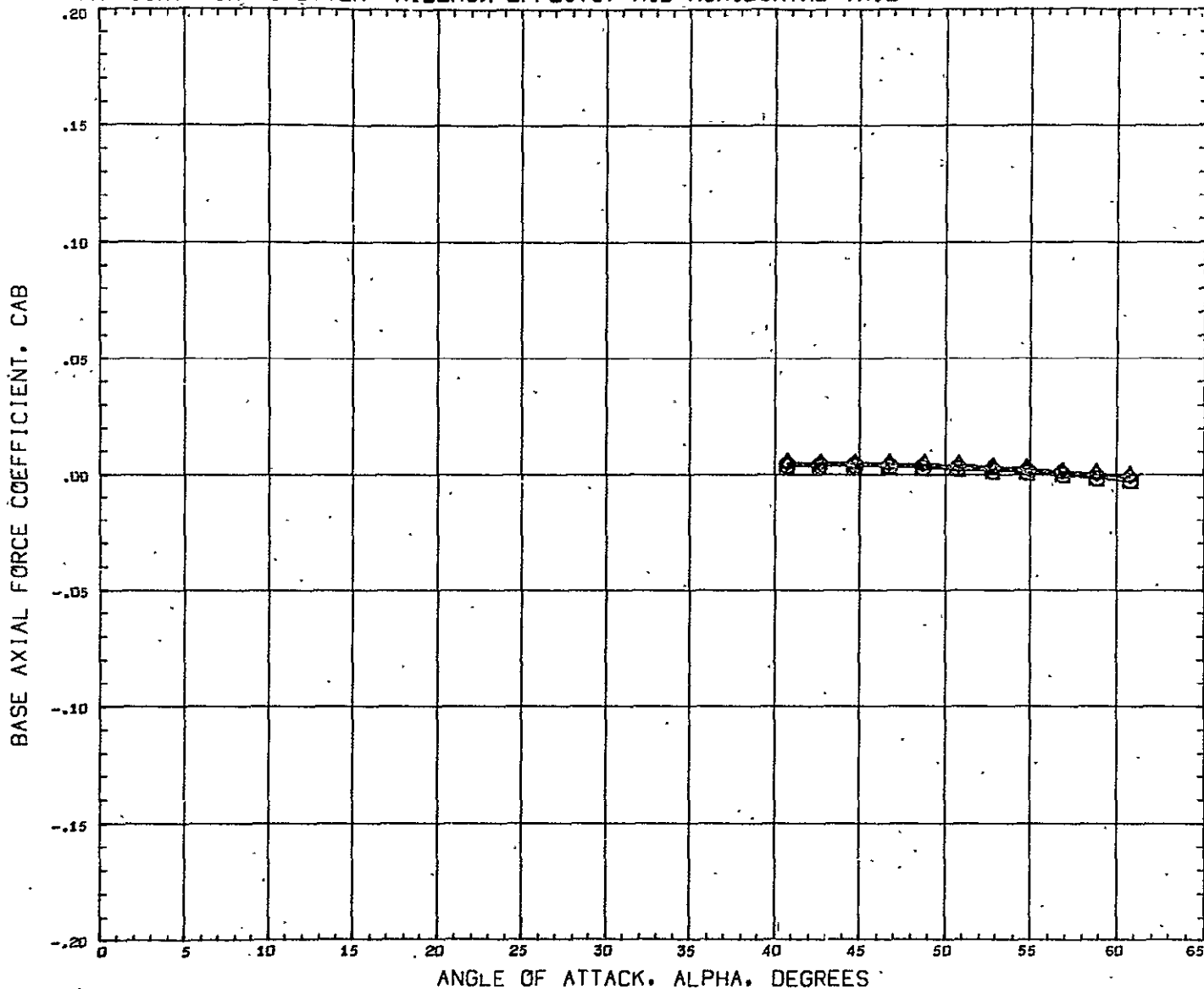
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(C2718C)	○	MSFC478 NR ST ORBITER B6WIDH12
(C2746C)	△	MSFC478 NR ST ORBITER B6WIDH12
(C2742C)	◇	MSFC478 NR ST ORBITER B6WIDH12

BETA	HTAIL	AILRON
0.000	-30.800	0.000
0.000	-30.000	20.000
0.000	-30.000	40.000

REFERENCE INFORMATION.		
REFS	3084.0040	SQ FT
REFL	322.9004	INCHES
REFB	1490.0040	INCHES
XMRP	1293.0040	INCHES
YMRP	0.0000	INCHES
ZMRP	50.5000	INCHES
SCALE	0.0035	SCALE

MACH 4.959

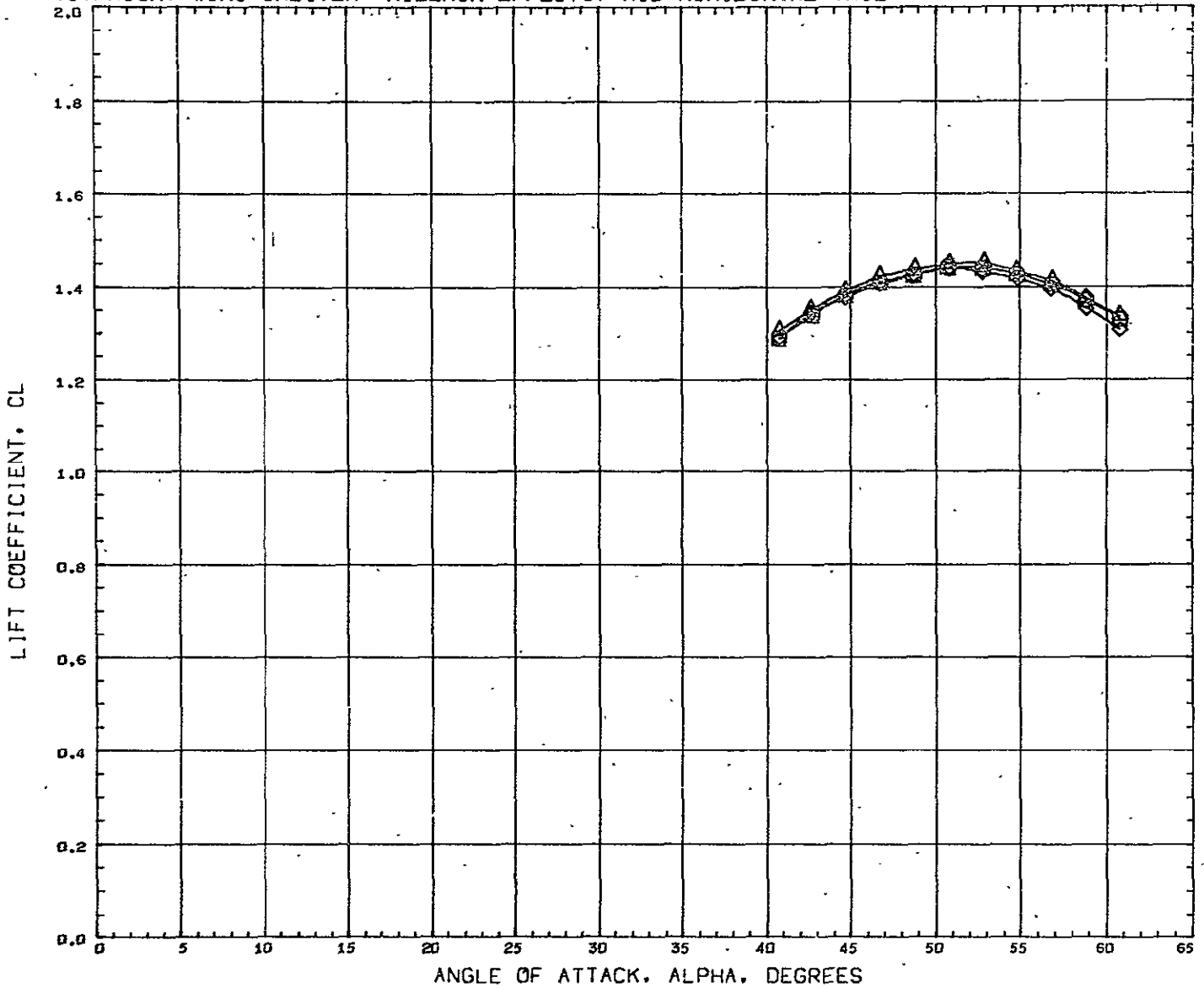
STRAIGHT WING ORBITER-AILERON EFFECTS, MID-HORIZONTAL TAIL



DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	BETA	HTAIL	AILRON	REFERENCE INFORMATION	
(C2718C)	□	MSFC478 NR ST ORBITER B6W10H12	0.000	-30.800	0.000	REFS	3084.0040 SQ FT
(C2746C)	△	MSFC478 NR ST ORBITER B6W10H12	0.000	-30.000	20.000	REFL	322.9004 INCHES
(C2742C)	◇	MSFC478 NR ST ORBITER B6W10H12	0.000	-30.000	40.000	REFB	1490.0040 INCHES
						XMRP	1293.0040 INCHES
						YMRP	0.0000 INCHES
						ZMRP	50.5000 INCHES
						SCALE	0.0035 SCALE

MACH 4.959

STRAIGHT WING ORBITER- AILERON EFFECTS, MID-HORIZONTAL TAIL



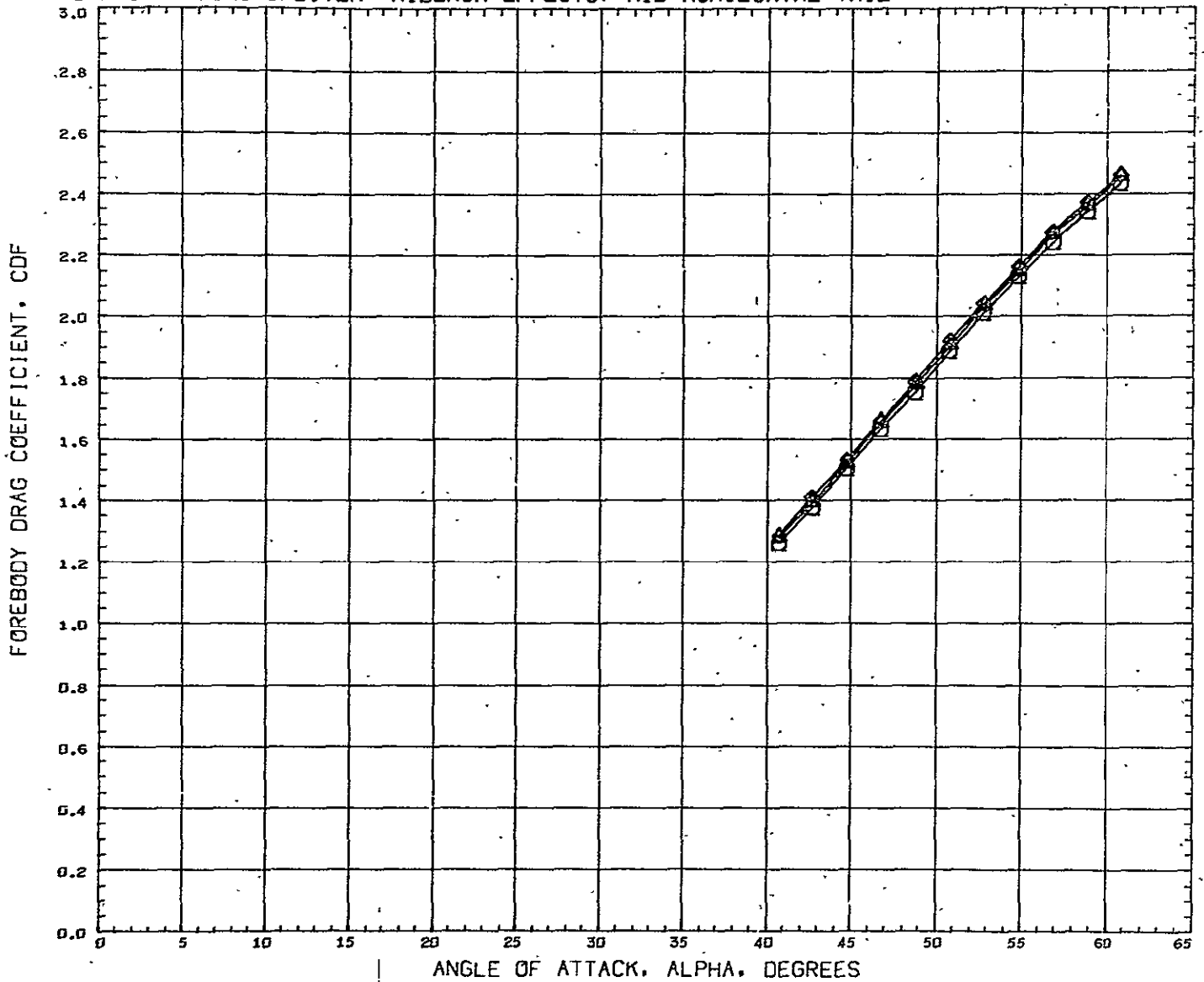
DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(C2718C)	MSFC478 NR ST ORBITER B6WIDH12
(C2746C)	MSFC478 NR ST ORBITER B6WIDH12
(C2742C)	MSFC478 NR ST ORBITER B6WIDH12

BETA	HTAIL	AILRON
0.000	-30.000	0.000
0.000	-30.000	20.000
0.000	-30.000	40.000

REFERENCE INFORMATION		
REFS	3084.0040	SQ FT
REFL	322.9004	INCHES
REFB	1490.0040	INCHES
XMRP	1293.0040	INCHES
YMRP	0.0000	INCHES
ZMRP	50.5000	INCHES
SCALE	0.0035	SCALE

MACH 4.959

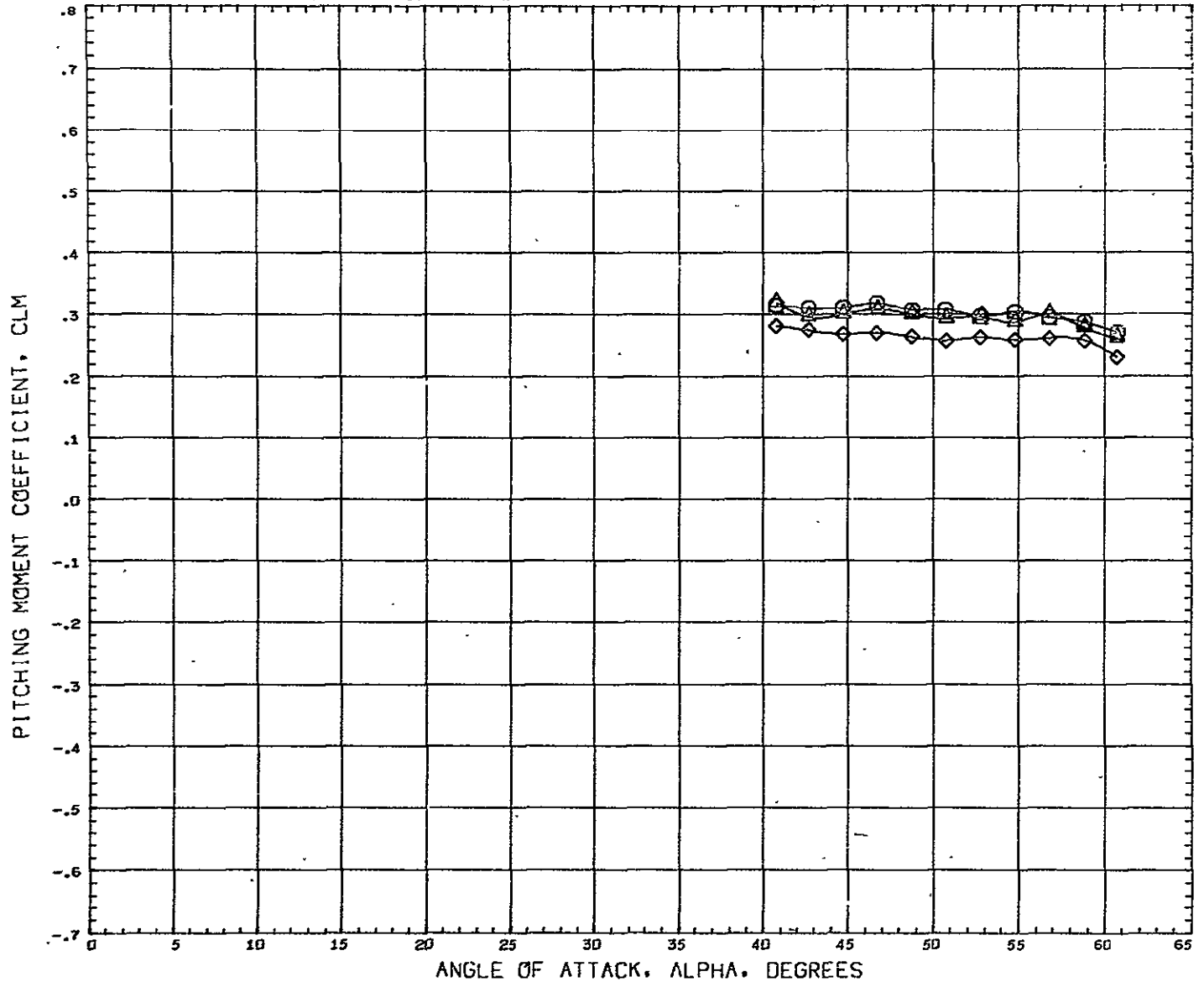
STRAIGHT WING ORBITER- AILERON EFFECTS, MID-HORIZONTAL TAIL



DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	BETA	HTAIL	AILRON	REFERENCE INFORMATION	
(C2718C)	○	MSFC478 NR ST ORBITER B6W1DH12	0.000	-30.800	0.000	REFS	3084.0040 SQ FT
(C2748C)	△	MSFC478 NR ST ORBITER B6W1DH12	0.000	-30.000	20.000	REFL	322.9004 INCHES
(C2742C)	◇	MSFC478 NR ST ORBITER B6W1DH12	0.000	-30.000	40.000	REFB	1490.0040 INCHES
						XMRP	1293.0040 INCHES
						YMRP	0.0000 INCHES
						ZMRP	50.5000 INCHES
						SCALE	0.0035 SCALE

MACH 4.959

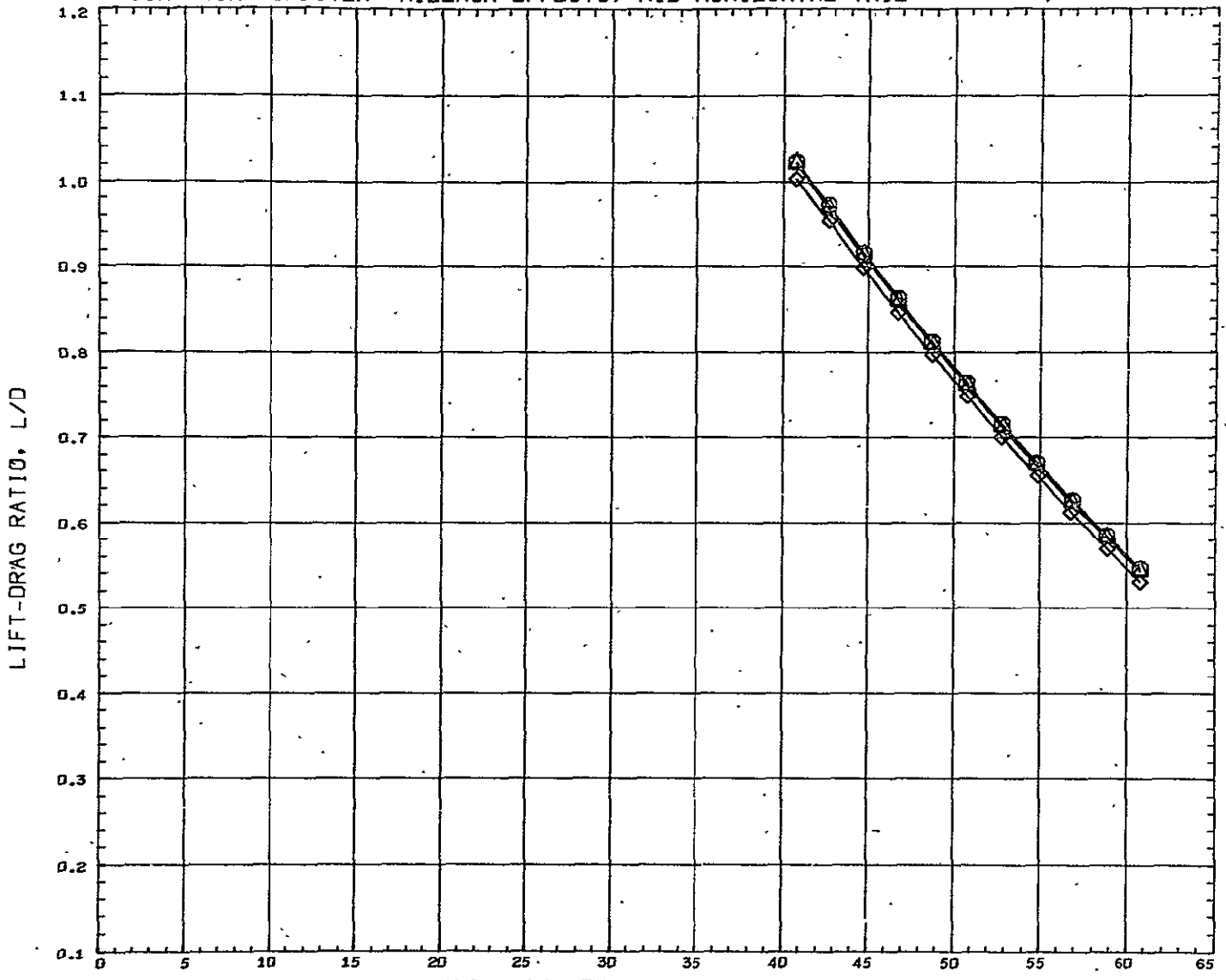
STRAIGHT WING ORBITER-AILERON EFFECTS, MID-HORIZONTAL TAIL



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	HTAIL	AILRON	REFERENCE INFORMATION
(C2718C)	MSFC478 NR ST ORBITER B6W1DH12	0.000	-30.800	0.000	REFS 3084.0040 SQ FT
(C2746C)	MSFC478 NR ST ORBITER B6W1DH12	0.000	-30.000	20.000	REFL 322.9004 INCHES
(C2742C)	MSFC478 NR ST ORBITER B6W1DH12	0.000	-30.000	40.000	REFB 1490.0040 INCHES
					XIRP 1293.0040 INCHES
					YMRP 0.0000 INCHES
					ZMRP 50.5000 INCHES
					SCALE 0.0035 SCALE

MACH 4.959

STRAIGHT WING ORBITER-AILERON EFFECTS, MID-HORIZONTAL TAIL



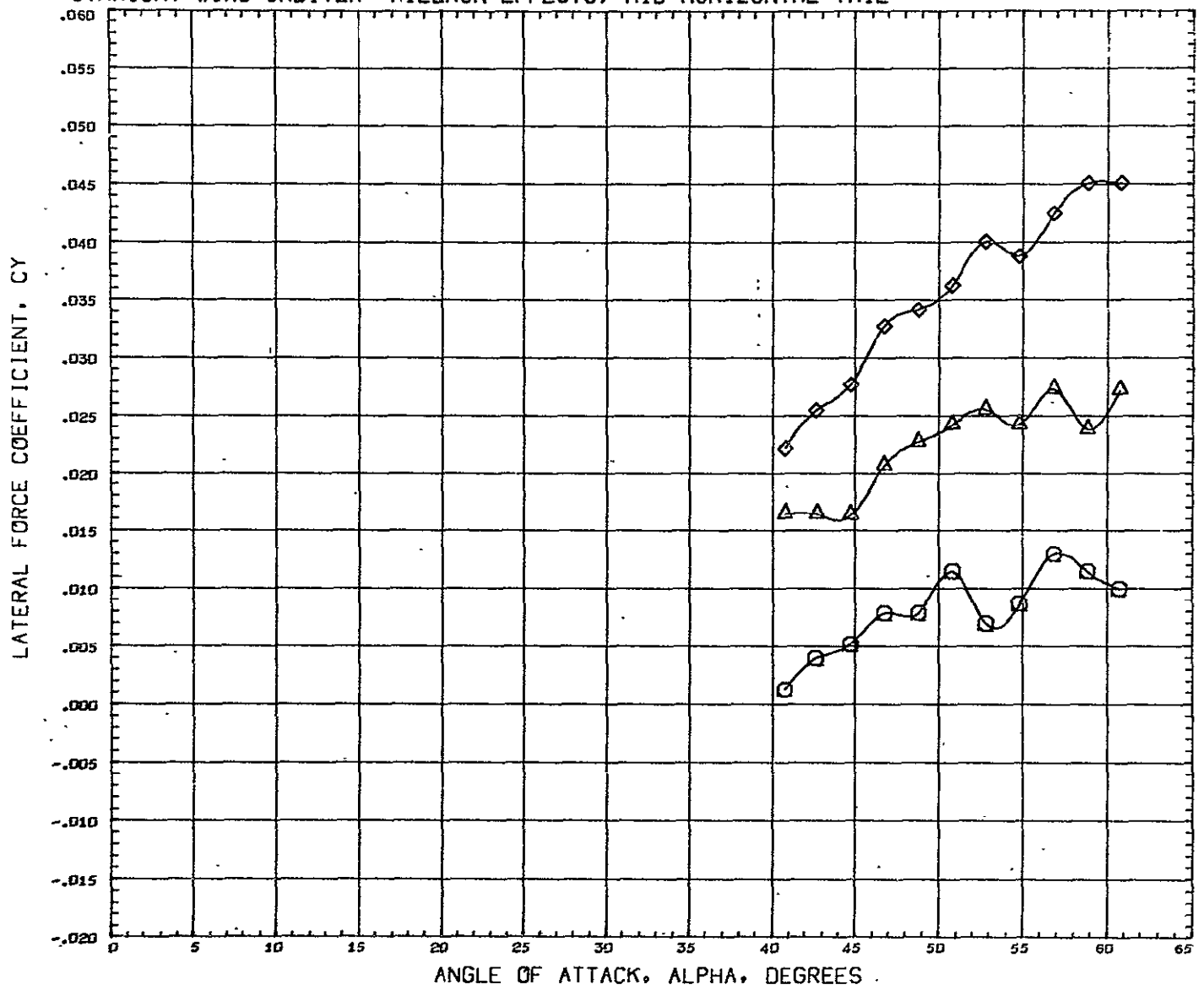
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(C2718C)	MSFC478 NR ST ORBITER B6W10H12
(C2746C)	MSFC478 NR ST ORBITER B6W10H12
(C2742C)	MSFC478 NR ST ORBITER B6W10H12

BETA	HTAIL	AILRON
0.000	-30.800	0.000
0.000	-30.000	20.000
0.000	-30.000	40.000

REFERENCE INFORMATION		
REFS	3084.0040	SQ FT
REFL	322.9004	INCHES
REFB	1490.0040	INCHES
XMRP	1293.0040	INCHES
YMRP	0.0000	INCHES
ZMRP	50.5000	INCHES
SCALE	0.0035	SCALE

MACH 4.959

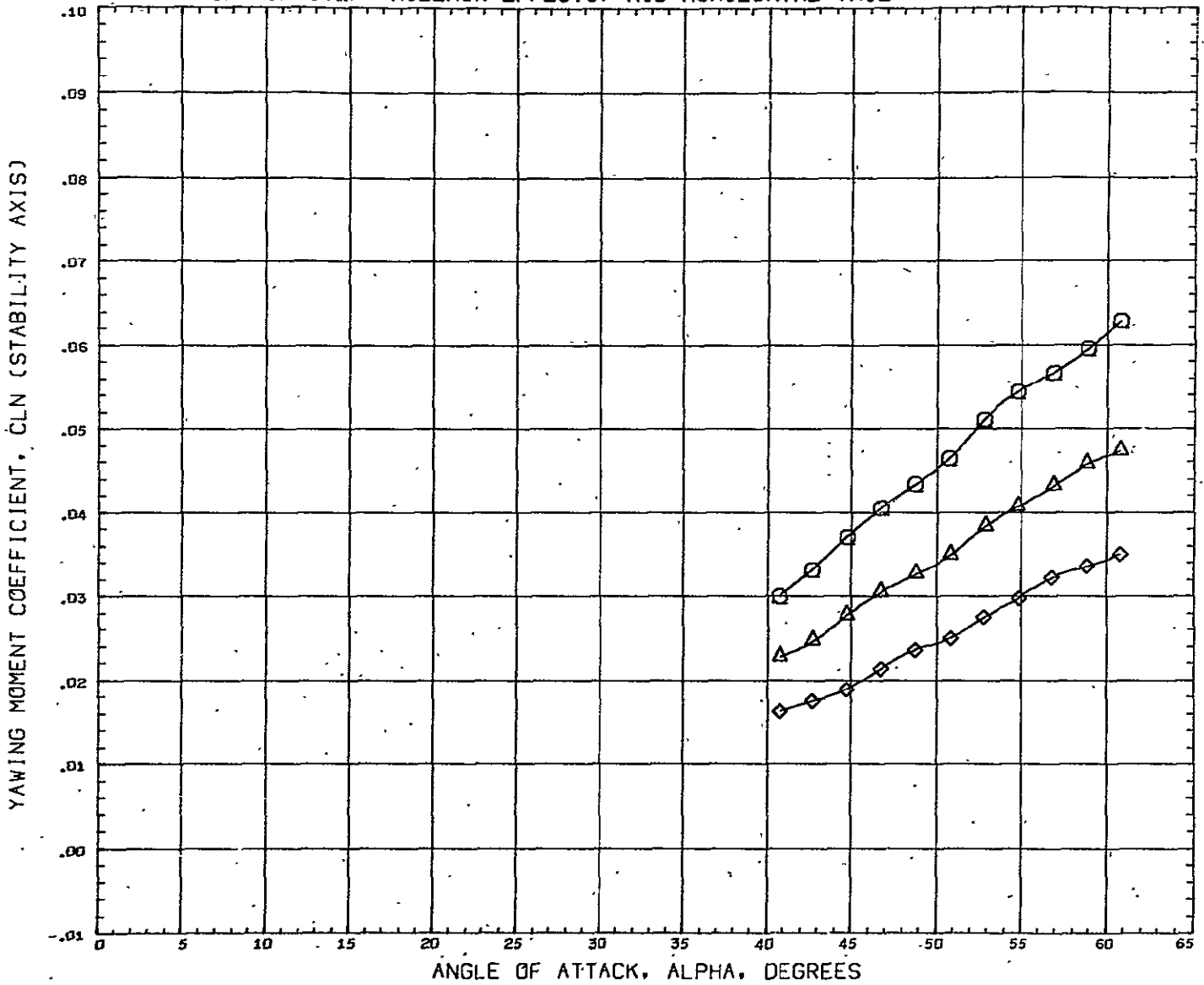
STRAIGHT WING ORBITER-AILERON EFFECTS, MID-HORIZONTAL TAIL



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	HTAIL	AILRON	REFERENCE INFORMATION
(C2718C)	MSFC478 NR ST ORBITER B6W1DH12	0.000	-30.800	0.000	REFS 3084.0040 SQ FT
(C2716C)	MSFC478 NR ST ORBITER B6W1DH12	0.000	-30.000	20.000	REFL 322.9004 INCHES
(C2712C)	MSFC478 NR ST ORBITER B6W1DH12	0.000	-30.000	40.000	REFB 1490.0040 INCHES
					XMRP 1293.0040 INCHES
					YMRP 0.0000 INCHES
					ZMRP 50.5000 INCHES
					SCALE 0.0035 SCALE

MACH 4.959

STRAIGHT WING ORBITER- AILERON EFFECTS, MID-HORIZONTAL TAIL



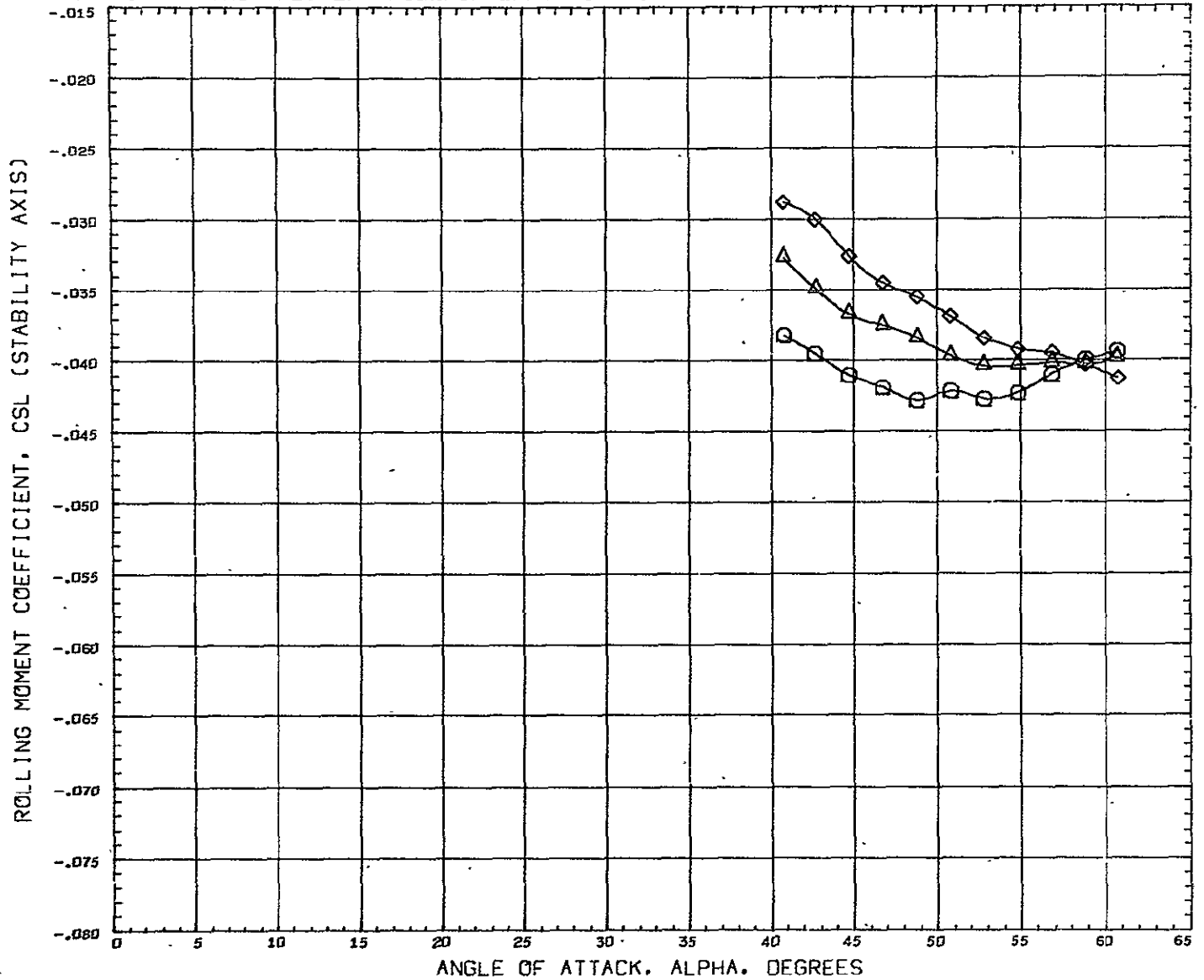
DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(C2716C)	MSFC478 NR ST ORBITER B6WIDH12
(C2716C)	MSFC478 NR ST ORBITER B6WIDH12
(C2712C)	MSFC478 NR ST ORBITER B6WIDH12

BETA	HTAIL	AILRON
0.000	-30.800	0.000
0.000	-30.000	20.000
0.000	-30.000	40.000

REFERENCE INFORMATION		
REFS	3084.0040	SQ FT
REFL	322.9004	INCHES
REFB	1490.0040	INCHES
XNRP	1293.0040	INCHES
YNRP	0.0000	INCHES
ZNRP	50.5000	INCHES
SCALE	0.0035	SCALE

MACH 4.959

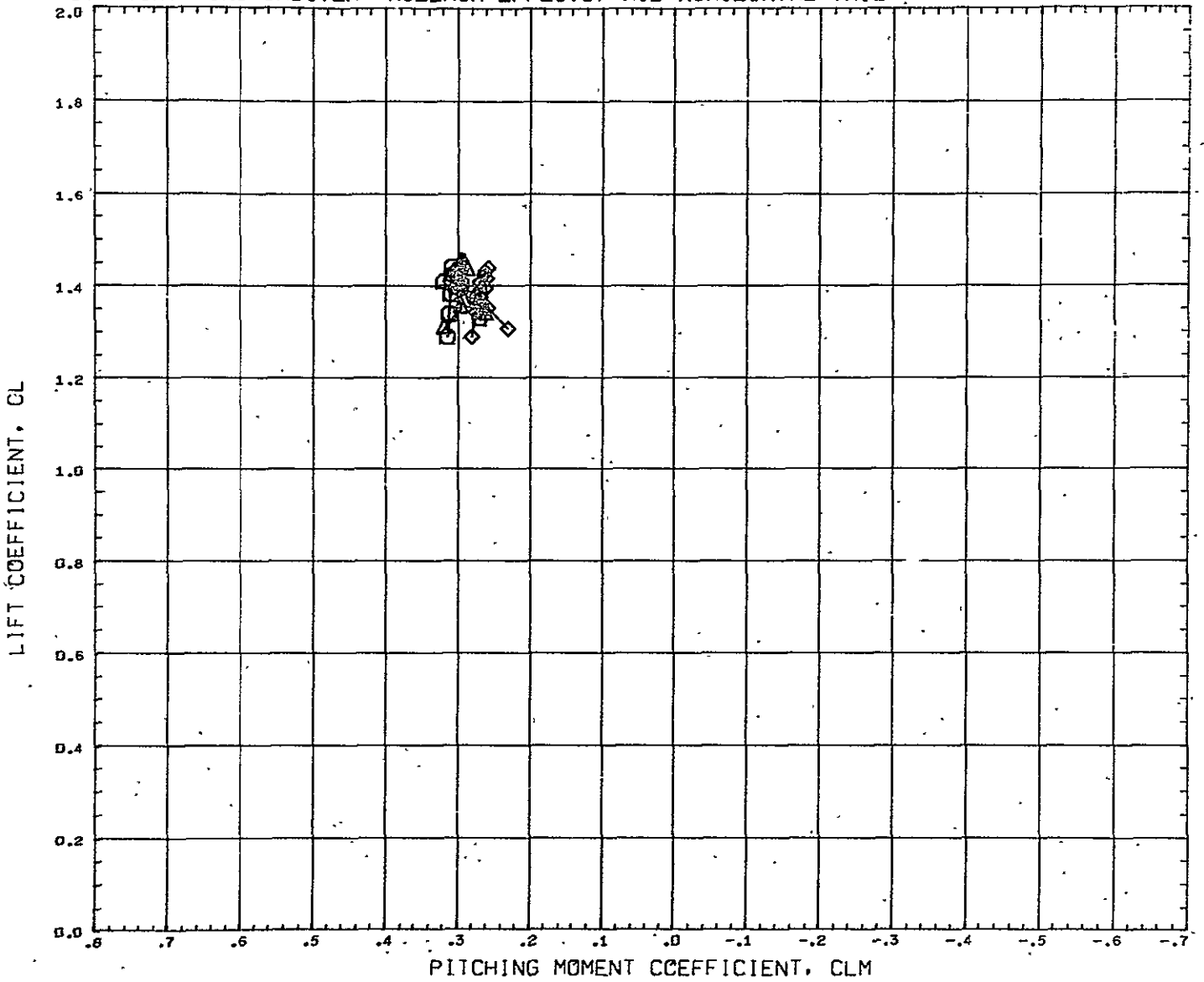
STRAIGHT WING ORBITER- AILERON EFFECTS, MID-HORIZONTAL TAIL



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	HTAIL	AILRON	REFERENCE INFORMATION
(C2718C) ○	MSFC478 NR ST ORBITER 86W10H12	0.000	-30.800	0.000	REFS 3084.0040 SQ FT
(C2716C) △	MSFC478 NR ST ORBITER 86W10H12	0.000	-30.000	20.000	REFL 322.9004 INCHES
(C2722C) ◇	MSFC478 NR ST ORBITER 86W10H12	0.000	-30.000	40.000	REFB 1490.0040 INCHES
					XMRP 1293.0040 INCHES
					YMRP 0.0000 INCHES
					ZMRP 50.5000 INCHES
					SCALE 0.0035 SCALE

MACH 4.959

STRAIGHT WING ORBITER-AILERON EFFECTS; MID-HORIZONTAL TAIL



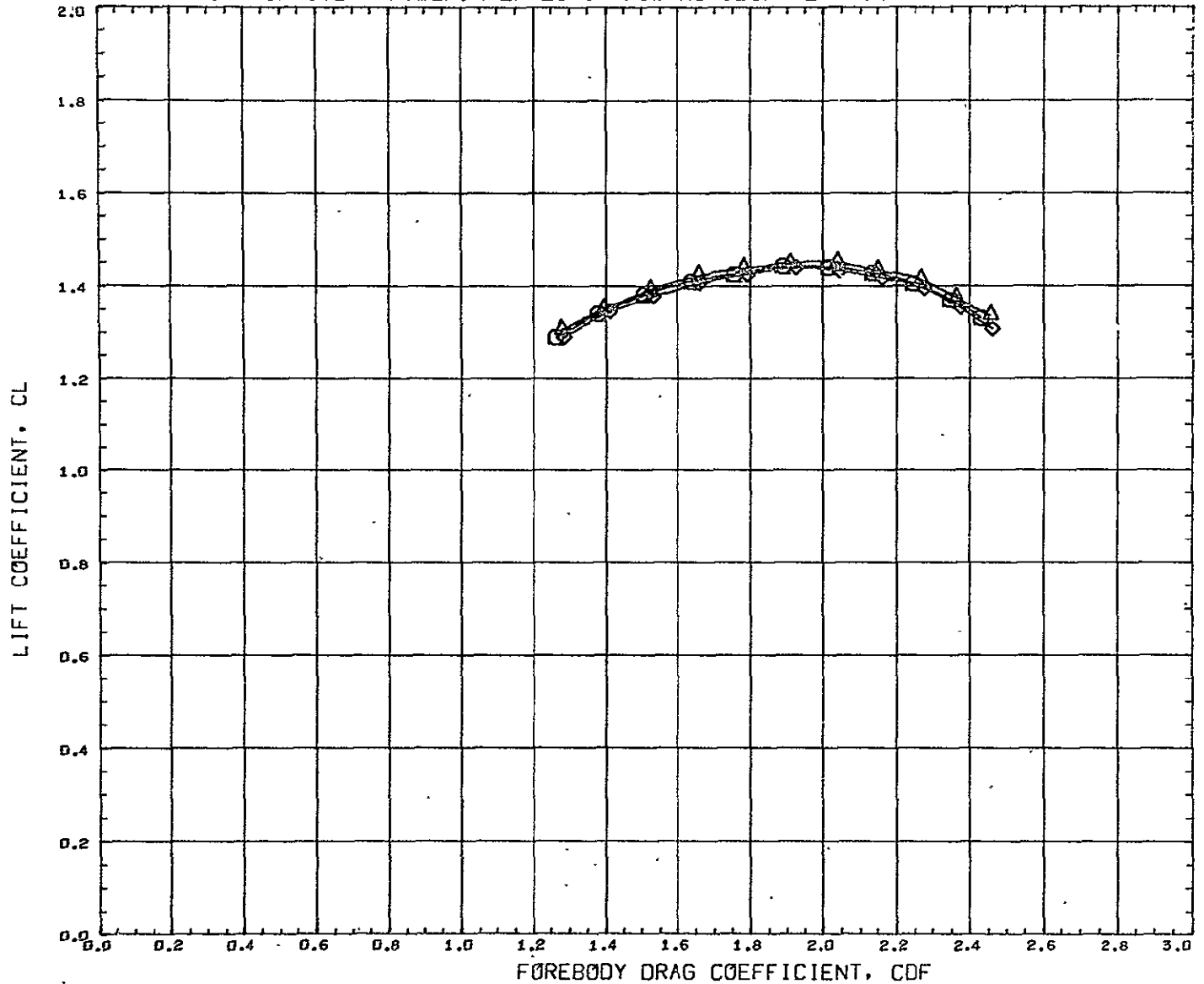
DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(C2718C)	○ HSFC478 NR ST ORBITER B6WIDH12
(C2746C)	△ HSFC478 NR ST ORBITER B6WIDH12
(C2742C)	◇ HSFC478 NR ST ORBITER B6WIDH12

BETA	HTAIL	AILRON
0.000	-30.800	0.000
0.000	-30.000	20.000
0.000	-30.000	40.000

REFERENCE INFORMATION		
REFS	3584.0040	SQ FT
REFL	322.9004	INCHES
REFB	1490.0040	INCHES
XIRP	1293.0040	INCHES
YMRP	0.0000	INCHES
ZMRP	50.5000	INCHES
SCALE	0.0035	SCALE

MACH 4.959

STRAIGHT WING ORBITER- AILERON EFFECTS, MID-HORIZONTAL TAIL



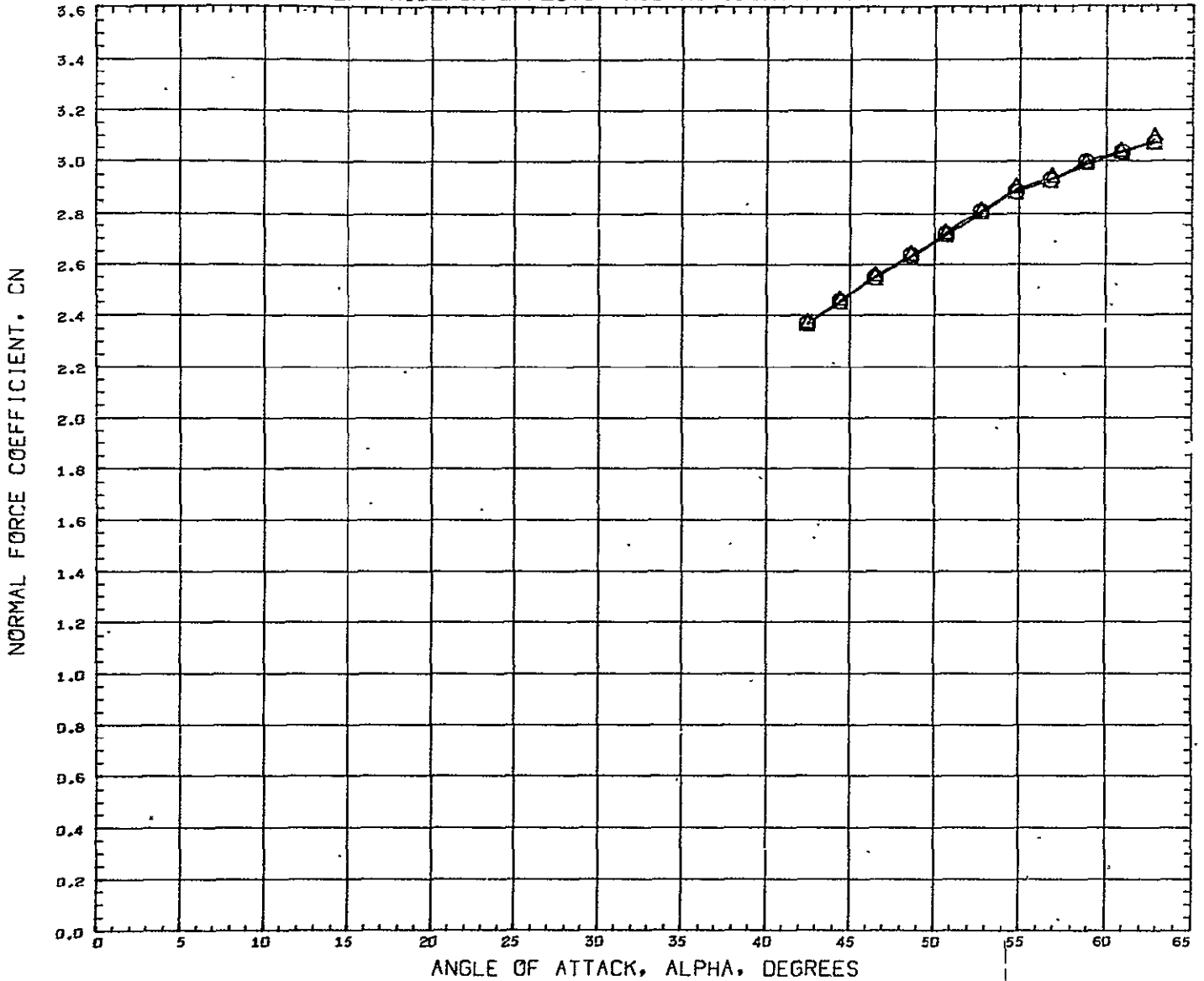
DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(C2718C)	MSFC478 NR ST ORBITER 86WIDH12
(C2746C)	MSFC478 NR ST ORBITER 86WIDH12
(C2742C)	MSFC478 NR ST ORBITER 86WIDH12

BETA	HTAIL	AILRON
0.000	-30.800	0.000
0.000	-30.000	20.000
0.000	-30.000	40.000

REFERENCE INFORMATION		
REFS	3084.0040	SQ FT
REFL	322.9004	INCHES
REFB	1490.0040	INCHES
XNRF	1293.0040	INCHES
YNRF	0.0000	INCHES
ZNRF	50.5000	INCHES
SCALE	0.0035	SCALE

MACH 4.959

STRAIGHT WING ORBITER-AILERON EFFECTS, MID-HORIZONTAL TAIL



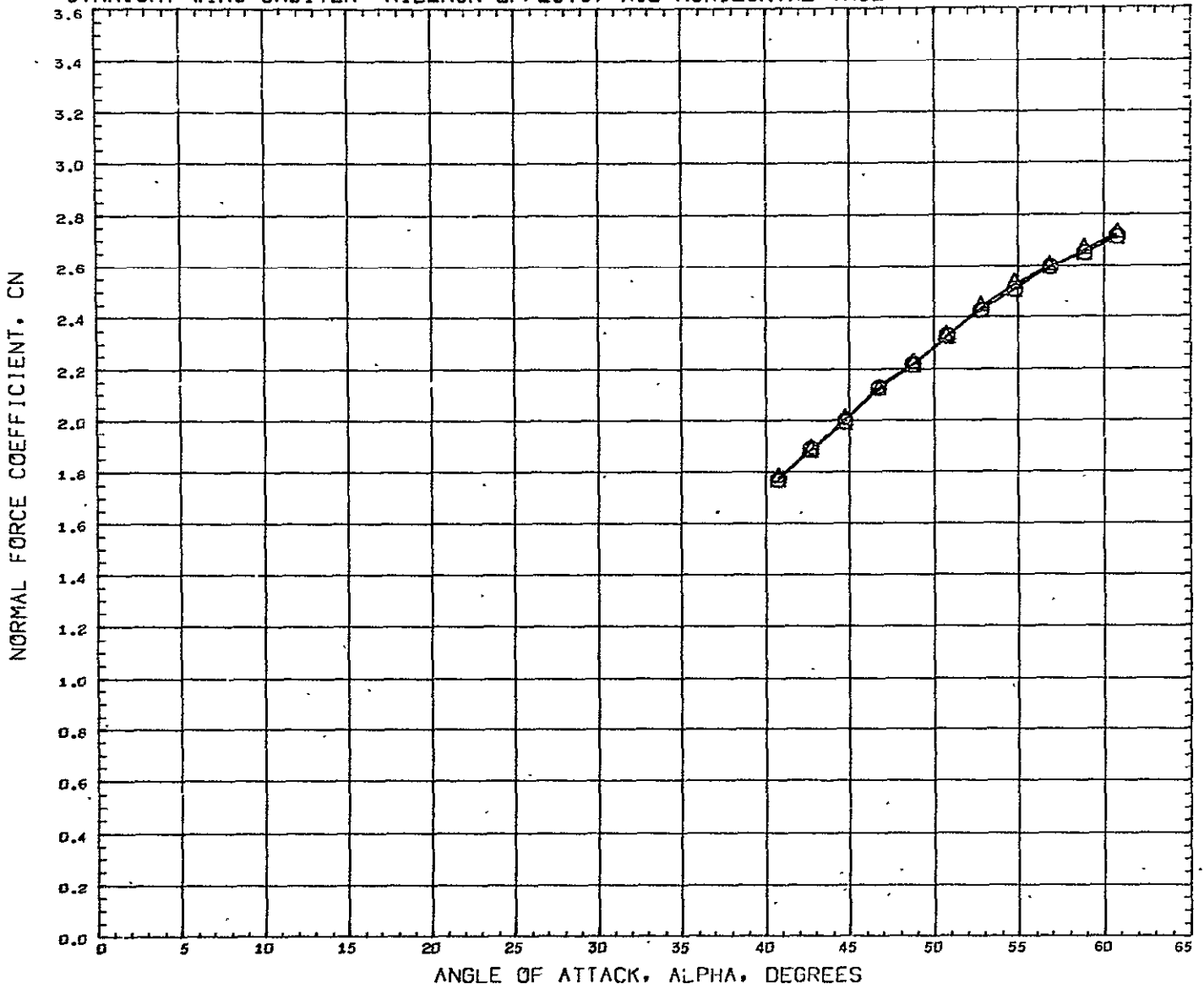
DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(C2719C) ○	MSFC478 NR ST ORBITER B6WLDH12
(C2743C) △	MSFC478 NR ST ORBITER B6WLDH12

BETA	HTAIL	AILRON
0.000	-40.000	0.000
0.000	-40.000	20.000

REFERENCE INFORMATION		
REFS	3084.0040	SQ FT
REFL	322.9004	INCHES
REFB	1490.0040	INCHES
XMRP	1293.0040	INCHES
YMRP	0.0000	INCHES
ZMRP	50.5000	INCHES
SCALE	0.0035	SCALE

MACH 1.950

STRAIGHT WING ORBITER-AILERON EFFECTS, MID-HORIZONTAL TAIL



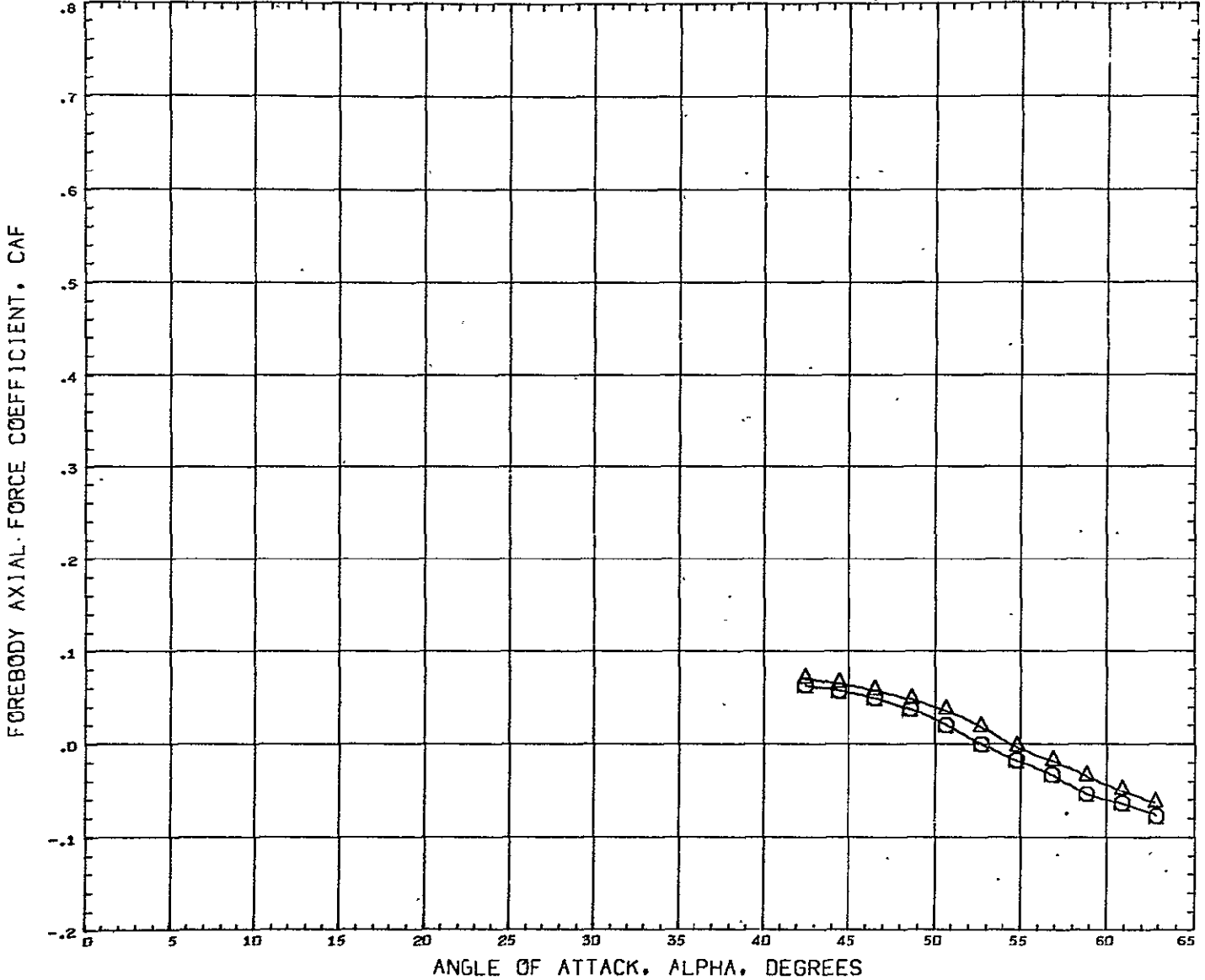
DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(C2719C)	MSFC478 NR ST ORBITER B6WIDH12
(C2743C)	MSFC478 NR ST ORBITER B6WIDH12

BETA	HTAIL	AILRON
0.000	-40.000	0.000
0.000	-40.000	20.000

REFERENCE INFORMATION		
REFS	3084.0040	SQ FT
REFL	322.9004	INCHES
REFB	1490.0040	INCHES
XMRP	1293.0040	INCHES
YMRP	0.0000	INCHES
ZHRP	50.5000	INCHES
SCALE	0.0035	SCALE

MACH 4.953

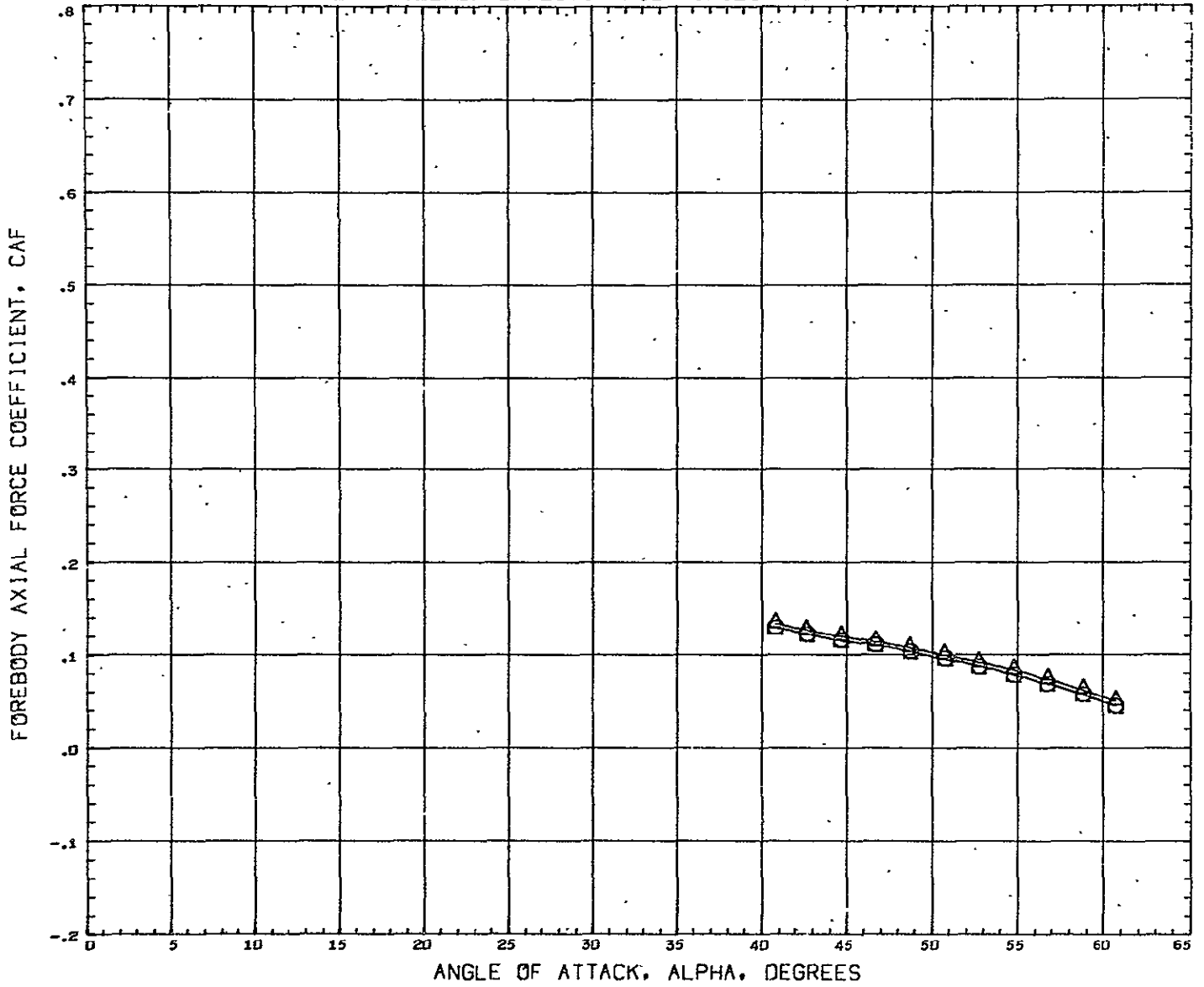
STRAIGHT WING ORBITER- AILERON EFFECTS, MID-HORIZONTAL TAIL



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	HTAIL	AILRON	REFERENCE INFORMATION
(C2719C)	MSFC478 NR ST ORBITER B6W10H12	0.000	-40.000	0.000	REFS 3084.0040 SQ FT
(C2743C)	MSFC478 NR ST ORBITER B6W10H12	0.000	-40.000	20.000	REFL 322.9004 INCHES
					REFB 1490.0040 INCHES
					XMRP 1293.0040 INCHES
					YMRP 0.0000 INCHES
					ZMRP - 50.5000 INCHES
					SCALE 0.0035 SCALE

MACH 1.956

STRAIGHT WING ORBITER-AILERON EFFECTS, MID-HORIZONTAL TAIL



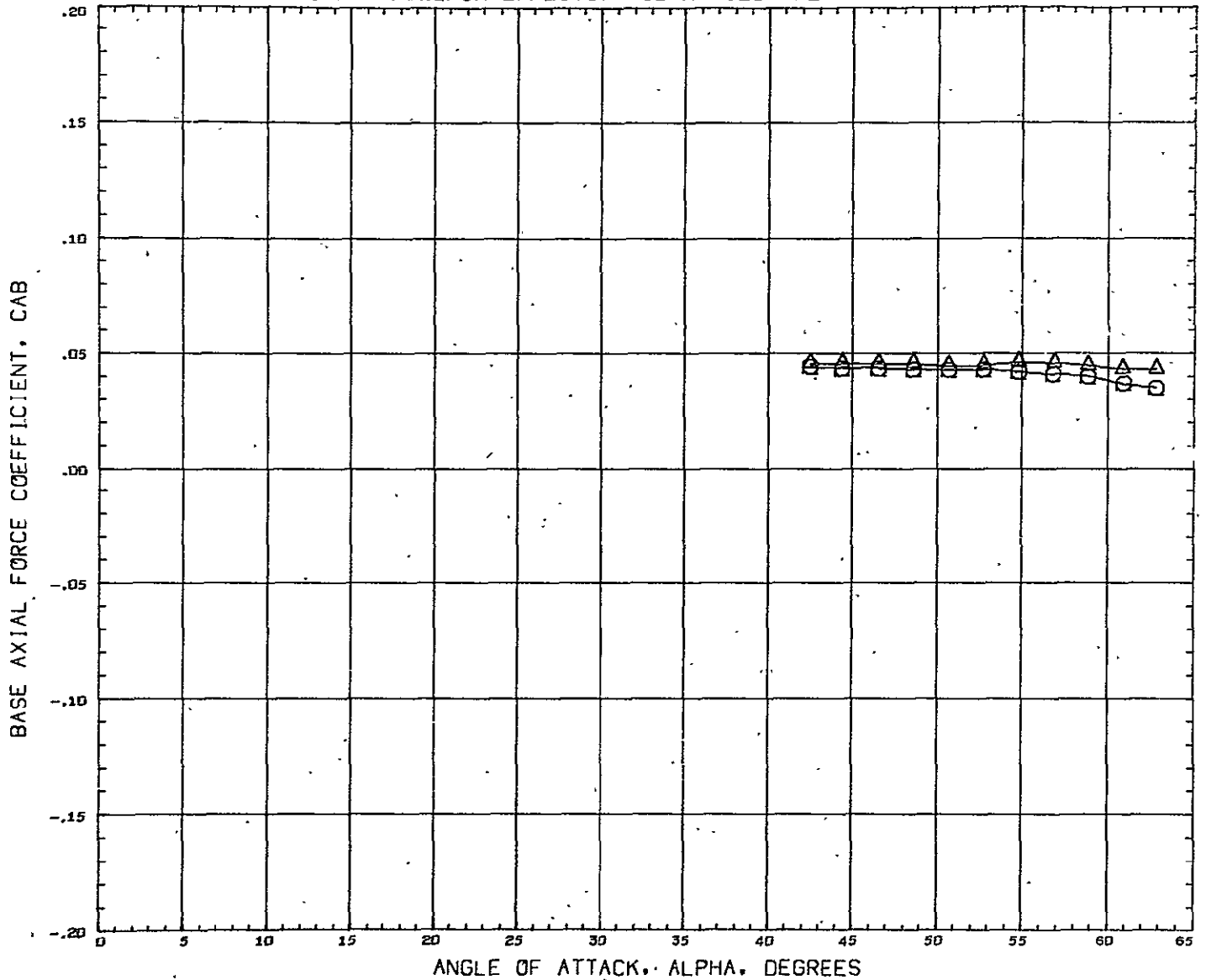
DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(C2719C) \square	MSFC478 NR ST ORBITER B6WIDH12
(C2743C) \triangle	MSFC478 NR ST ORBITER B6WIDH12

BETA	HTAIL	AILRON
0.000	-40.000	0.000
0.000	-40.000	20.000

REFERENCE INFORMATION		
REFS	3984.0045	SQ FT
REFL	322.9004	INCHES
REFB	1490.0040	INCHES
XMRP	1293.0040	INCHES
YMRP	0.0000	INCHES
ZMRP	50.5000	INCHES
SCALE	0.0035	SCALE

MACH 4.959

STRAIGHT WING ORBITER-AILERON EFFECTS, MID-HORIZONTAL TAIL



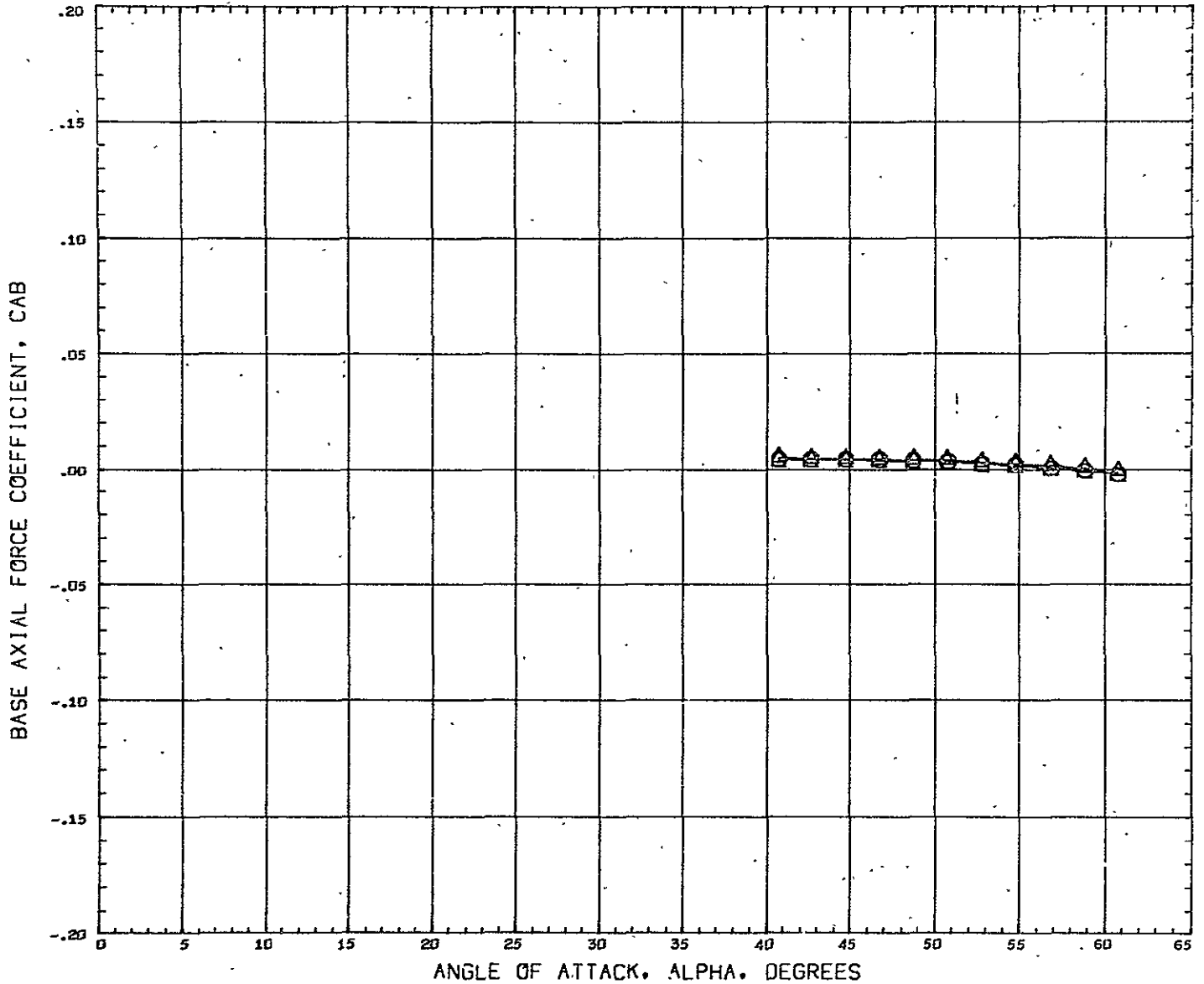
DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(C2719C) ○	MSFC478 NR ST ORBITER B6W1DH12
(C2723C) △	MSFC478 NR ST ORBITER B6W1DH12

BETA	HTAIL	AILRON
0.000	-40.000	0.000
0.000	-40.000	20.000

REFERENCE INFORMATION		
REFS	3084.0040	SQ FT
REFL	322.9004	INCHES
REFB	1490.0040	INCHES
XMRP	1293.0040	INCHES
YMRP	0.0005	INCHES
ZMRP	50.5000	INCHES
SCALE	0.0035	SCALE

MACH 1.956

STRAIGHT WING ORBITER- AILERON EFFECTS, MID-HORIZONTAL TAIL



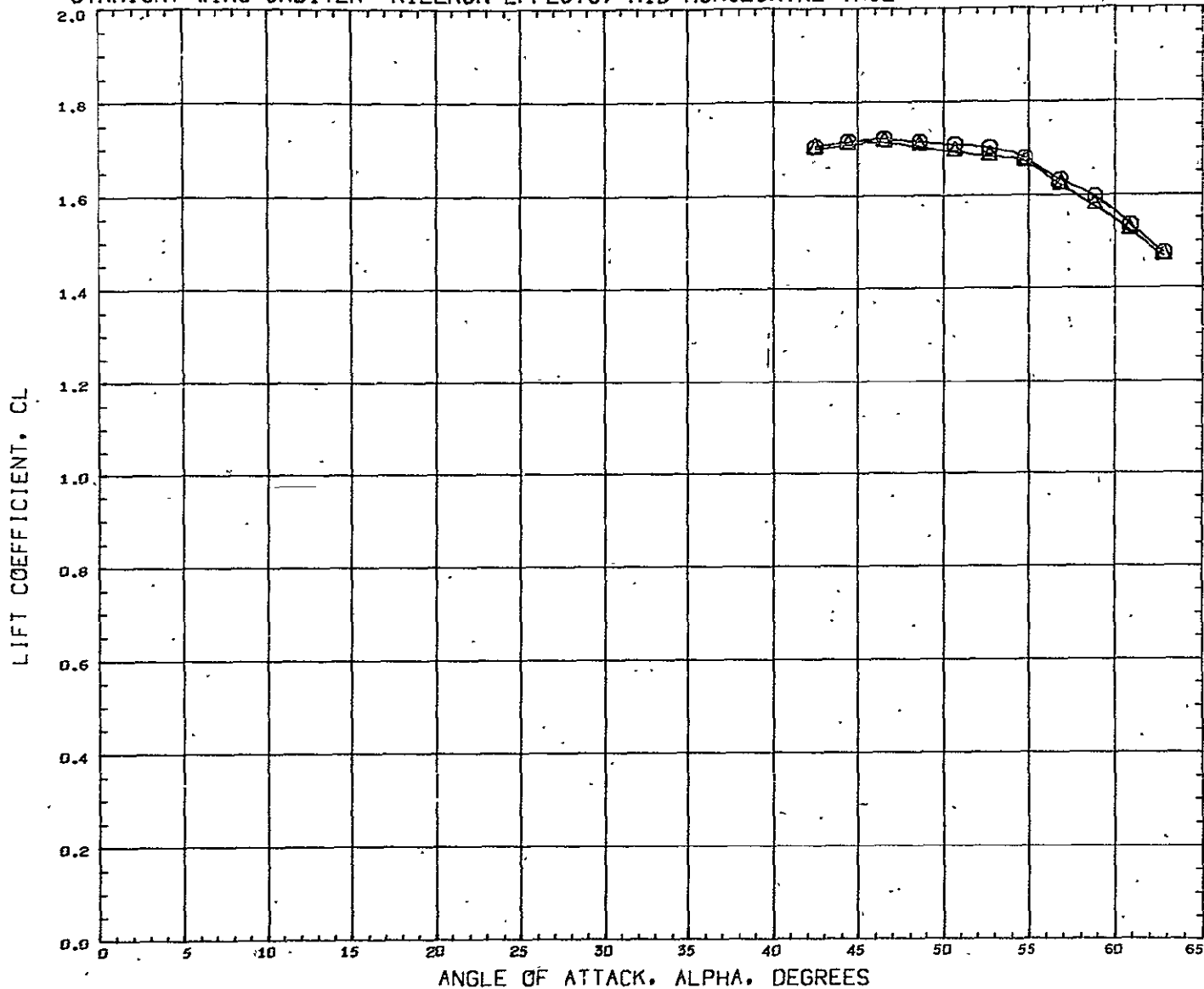
DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(C2719C) ○	HSFC478 NR ST ORBITER B6W10H12
(C2743C) △	HSFC478 NR ST ORBITER B6W10H12

BETA	HTAIL	AILRON
0.000	-40.000	0.000
0.000	-40.000	20.000

REFERENCE INFORMATION		
REFS	3084.0040	SQ FT
REFL	322.9004	INCHES
REFB	1490.0040	INCHES
XMRP	1293.0040	INCHES
YMRP	0.0000	INCHES
ZMRP	50.5000	INCHES
SCALE	0.0035	SCALE

MACH 4.959

STRAIGHT WING ORBITER-AILERON EFFECTS, MID-HORIZONTAL TAIL



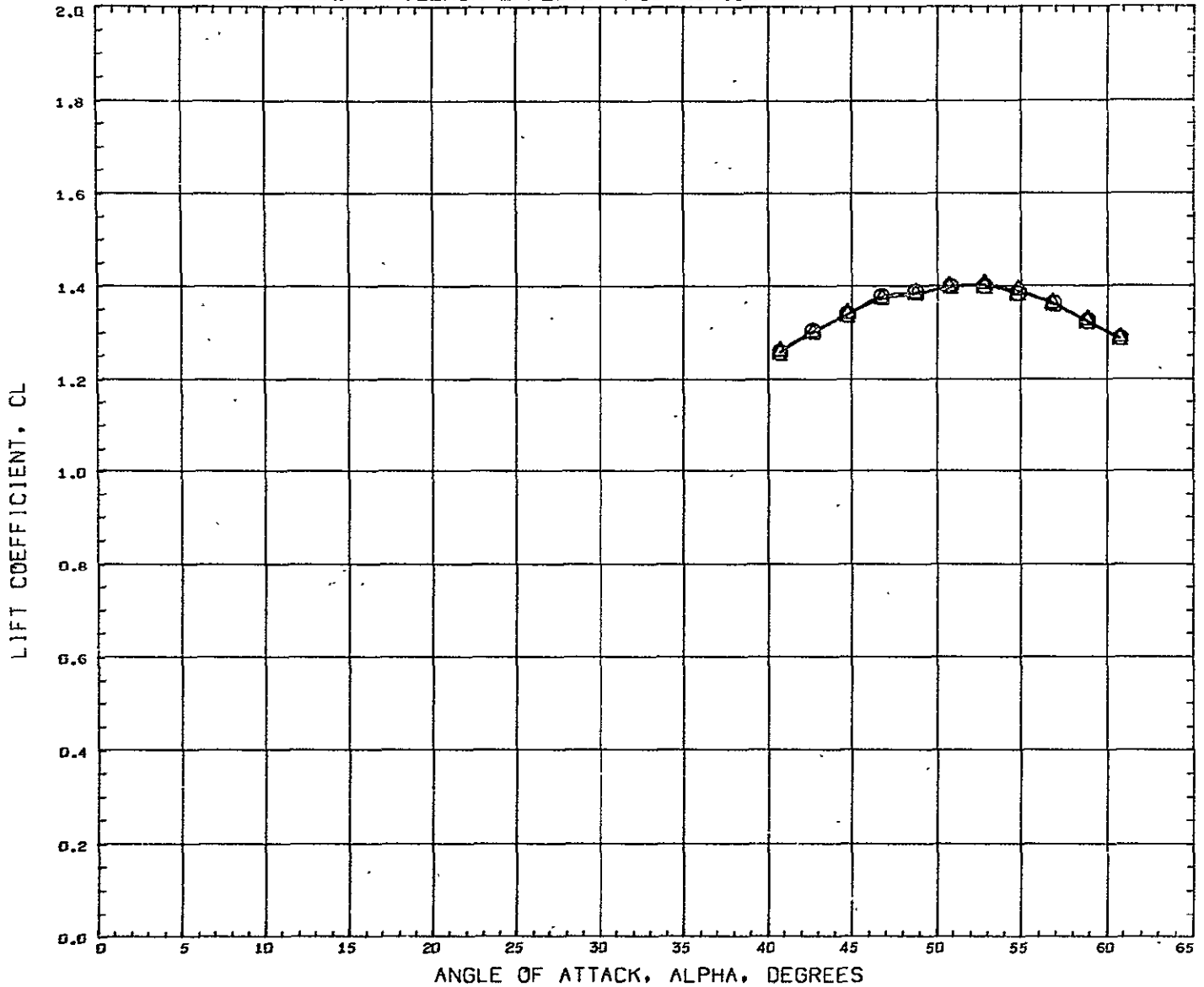
DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(C2719C) \square	MSFC478 NR ST ORBITER B6W19H12
(C2743C) \triangle	MSFC478 NR ST ORBITER B6W19H12

BETA	HTAIL	AILRON
0.000	-40.000	0.000
0.000	-40.000	20.000

REFERENCE INFORMATION	
REFS	3084.0040 SQ FT
REFL	322.9004 INCHES
REFB	1490.0040 INCHES
XMRP	1293.0040 INCHES
YMRP	0.0000 INCHES
ZMRP	50.5000 INCHES
SCALE	0.0035 SCALE

MACH 1.956

STRAIGHT WING ORBITER-AILERON EFFECTS, MID-HORIZONTAL TAIL



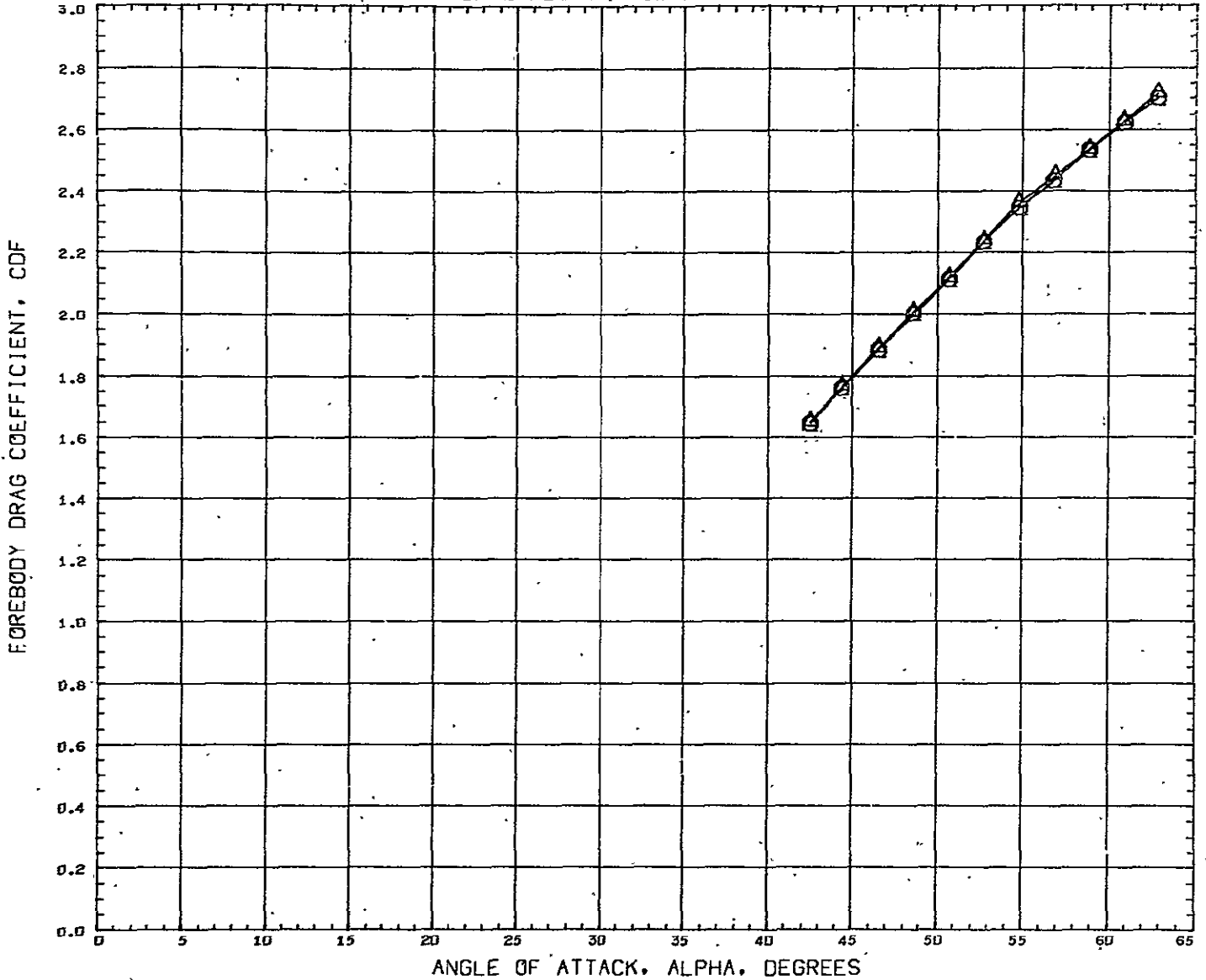
DATA SET SYMBOL CONFIGURATION DESCRIPTION
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 (C2743C) ◻ MSFC478 NR ST ORBITER 06WIDH12

BETA' HTAIL AILRON
 0.000 -40.000 0.000
 0.000 -40.000 20.000

REFERENCE INFORMATION
 REFS 3084.0040 SQ FT
 REFL 322.9004 INCHES
 REFB 1490.0040 INCHES
 XMRP 1293.0040 INCHES
 YMRP 0.0000 INCHES
 ZMRP - 50.5000 INCHES
 SCALE 0.0035 SCALE

MACH 4.959

STRAIGHT WING ORBITER-AILERON EFFECTS, MID-HORIZONTAL TAIL



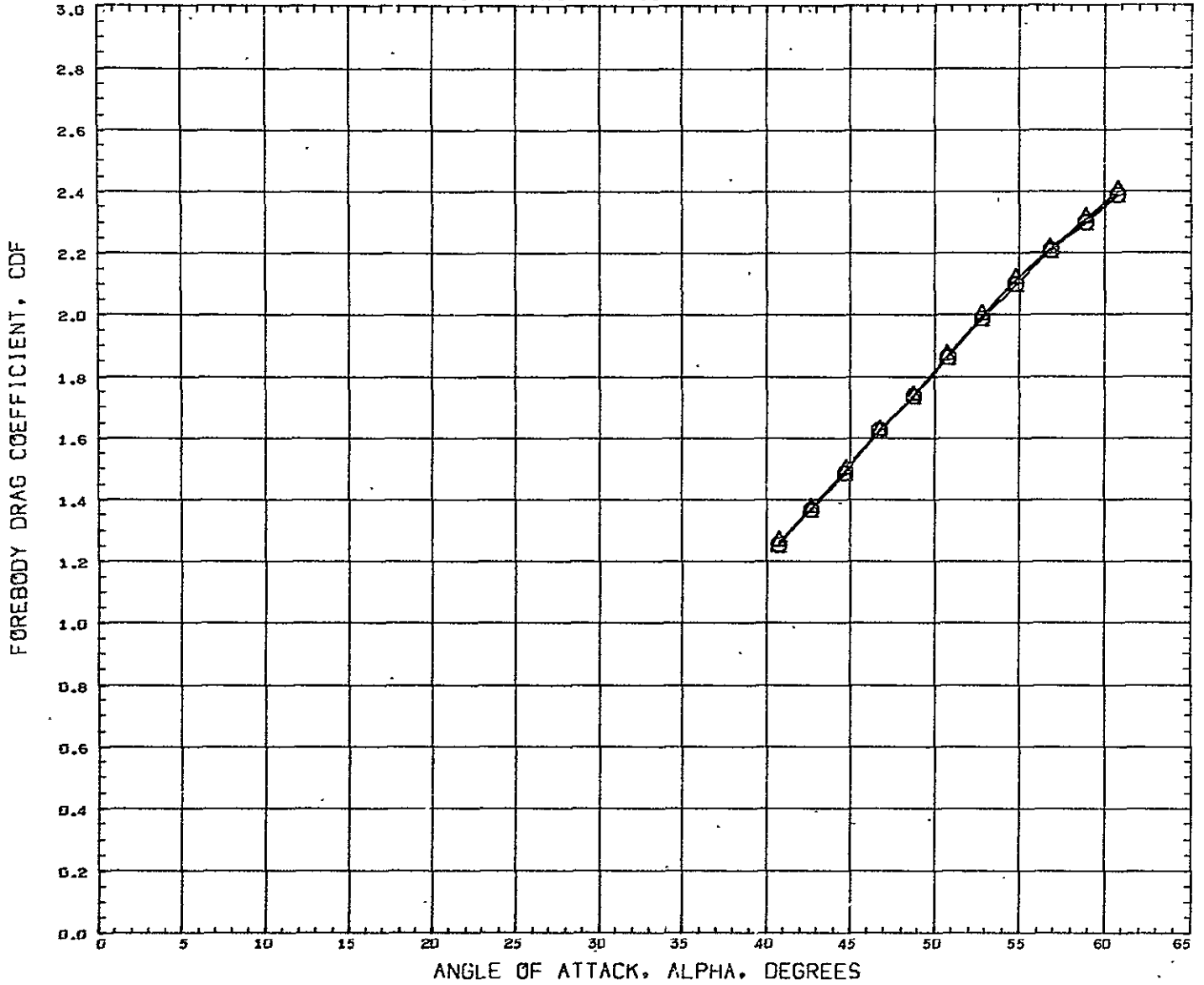
DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(C2719C) \square	MSFC478 NR ST ORBITER B6W1DH12
(C2743C) \triangle	MSFC478 NR ST ORBITER B6W1DH12

BETA	HTAIL	AILRON
0.000	-40.000	0.000
0.000	-40.000	20.000

REFERENCE INFORMATION		
REFS	3084.0040	SQ FT
REFL	322.9004	INCHES
REFB	1490.0040	INCHES
XMRP	1293.0040	INCHES
YMRP	0.0000	INCHES
ZMRP	50.5000	INCHES
SCALE	0.0035	SCALE

MACH 1.956

STRAIGHT WING ORBITER-AILERON EFFECTS, MID-HORIZONTAL TAIL



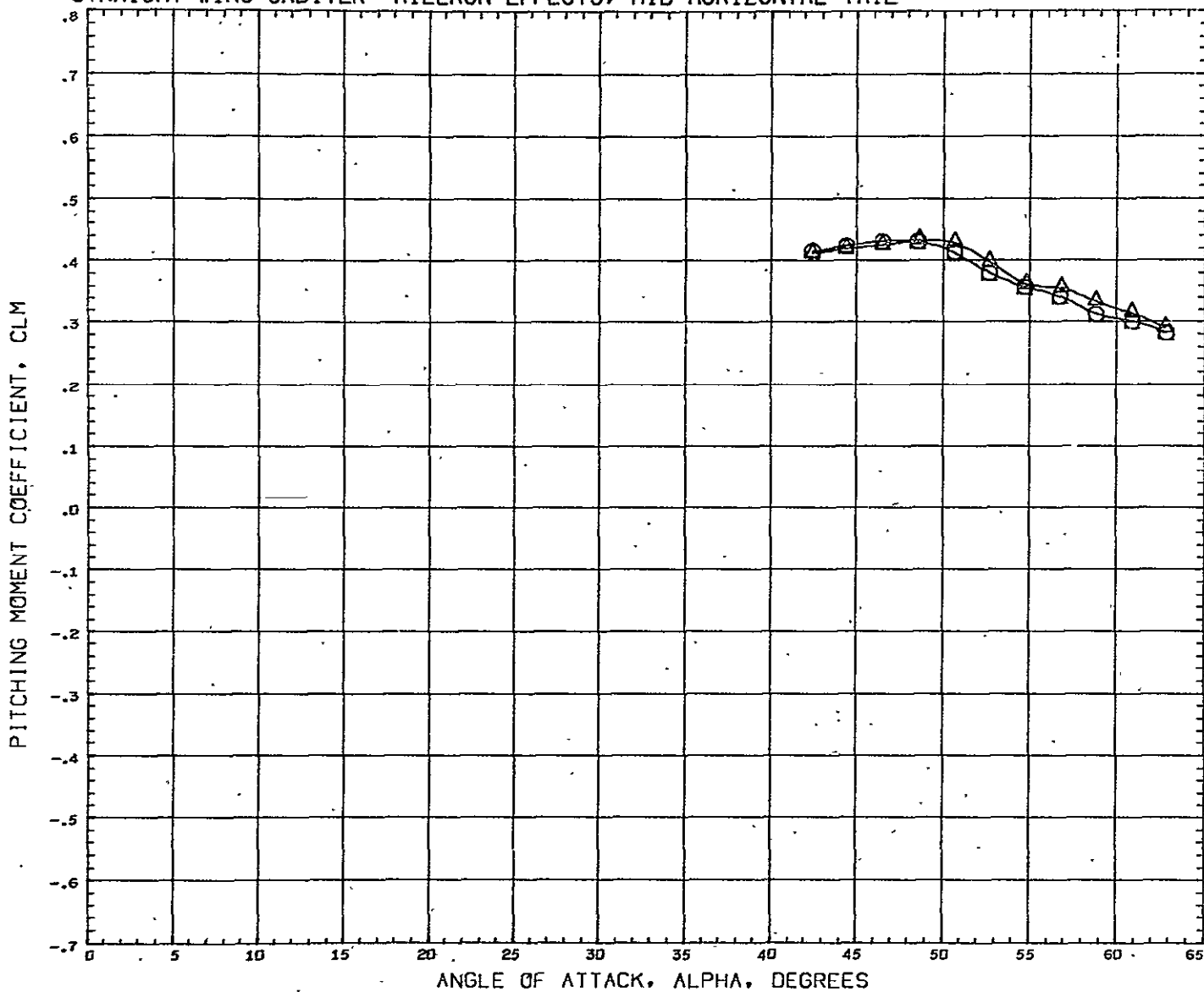
DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (C2719C) ○ MSFC478 NR ST ORBITER B6W1DH12
 (C2743C) △ MSFC478 NR ST ORBITER B6W1DH12

BETA HTAIL AILERON
 0.000 -40.000 0.000
 0.000 -40.000 20.000

REFERENCE INFORMATION
 REFS 3084.0040 SQ FT
 REFL 322.9004 INCHES
 REFB 1490.0040 INCHES
 XMRP 1293.0040 INCHES
 YMRP 0.0000 INCHES
 ZMRP 50.5000 INCHES
 SCALE 0.0035 SCALE

MACH 4.959

STRAIGHT WING ORBITER-AILERON EFFECTS, MID-HORIZONTAL TAIL



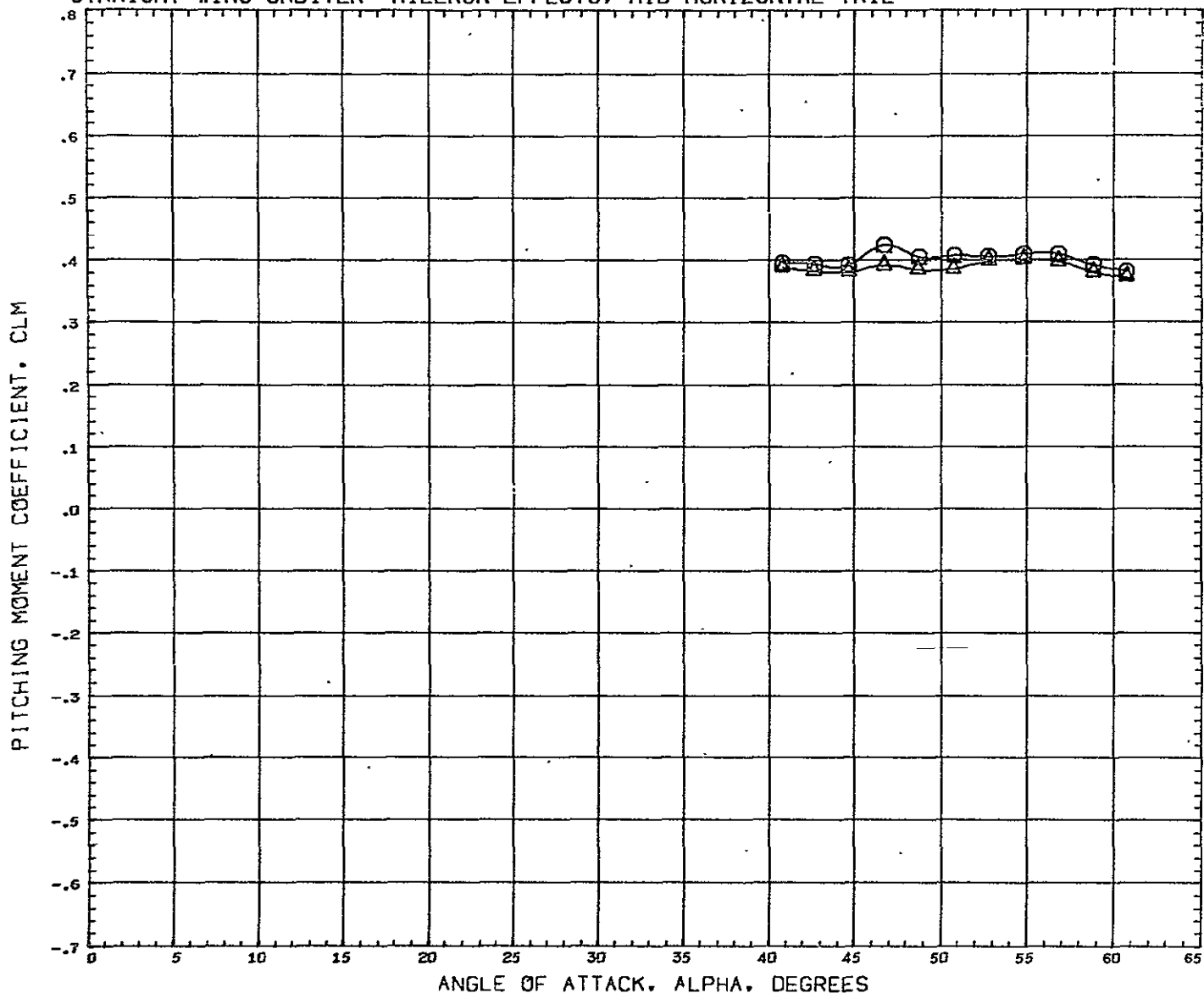
DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (C2719C) ○ MSFC478 NR ST ORBITER B6WIDH12
 (C2743C) △ MSFC478 NR ST ORBITER B6WIDH12

BETA HTAIL AILRON
 0.000 -40.000 0.000
 0.000 -40.000 20.000

REFERENCE INFORMATION
 REFS 3084.0040 SQ FT
 REFL 322.9004 INCHES
 REFB 1490.0040 INCHES
 XMRP 1293.0040 INCHES
 YMRP 0.0000 INCHES
 ZMRP 50.5000 INCHES
 SCALE 0.0035 SCALE

MACH 1.956

STRAIGHT WING ORBITER-AILERON EFFECTS, MID-HORIZONTAL TAIL



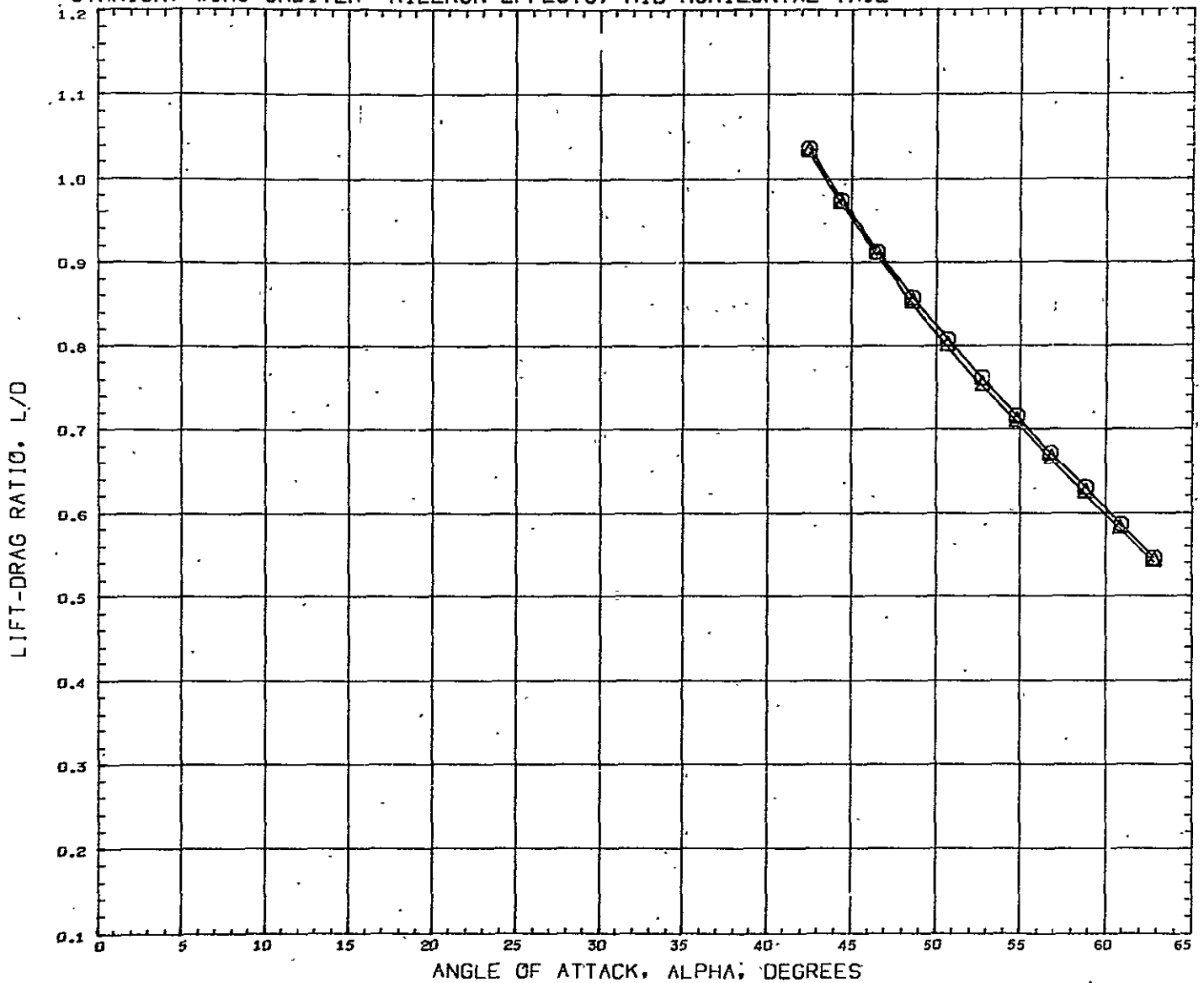
DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(C2719C) ○	HSFC478 NR ST ORBITER B6WIDH12
(C2743C) △	HSFC478 NR ST ORBITER B6WIDH12

BETA	HTAIL	AILRON
0.000	-40.000	0.000
0.000	-40.000	20.000

REFERENCE INFORMATION		
REFS	3084.0040	SQ FT
REFL	322.9004	INCHES
REFB	1490.0040	INCHES
XMRP	1293.0040	INCHES
YMRP	0.0000	INCHES
ZMRP	50.5000	INCHES
SCALE	0.0035	SCALE

MACH 4.959

STRAIGHT WING ORBITER-AILERON EFFECTS, MID-HORIZONTAL TAIL



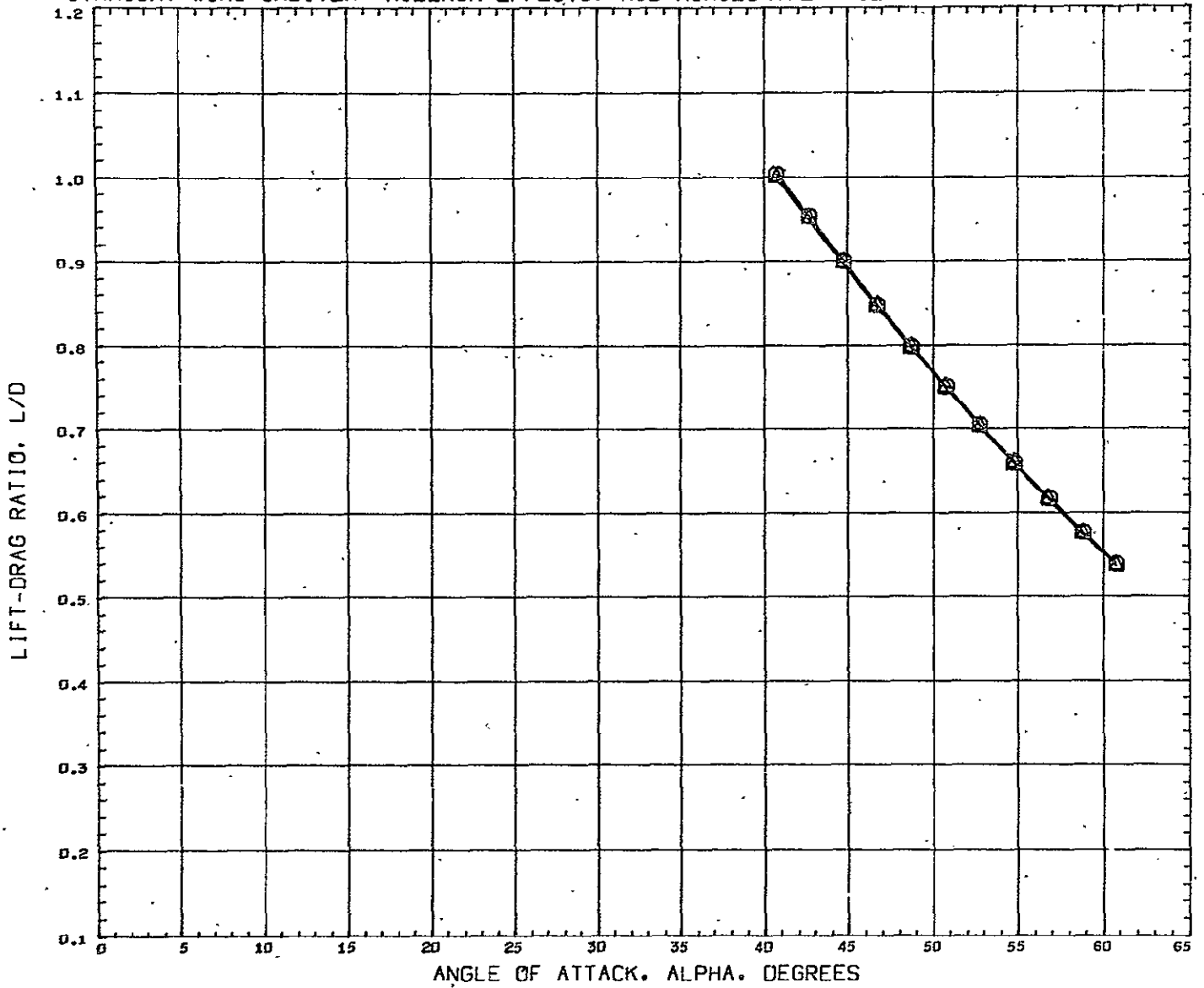
DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(C2719C) \square	HSFC478 NR ST ORBITER B6W10H12
(C2743C) \triangle	HSFC478 NR ST ORBITER B6W10H12

BETA	HTAIL	AILRON
0.000	-40.000	0.000
0.000	-40.000	20.000

REFERENCE INFORMATION		
REFS	.3084,0040	SQ FT
REFL	322.9004	INCHES
REFB	1490.0040	INCHES
XMRP	1293.0040	INCHES
YMRP	0.0000	INCHES
ZMRP	50.5000	INCHES
SCALE	0.0035	SCALE

MACH 1.956

STRAIGHT WING ORBITER- AILERON EFFECTS, MID-HORIZONTAL TAIL



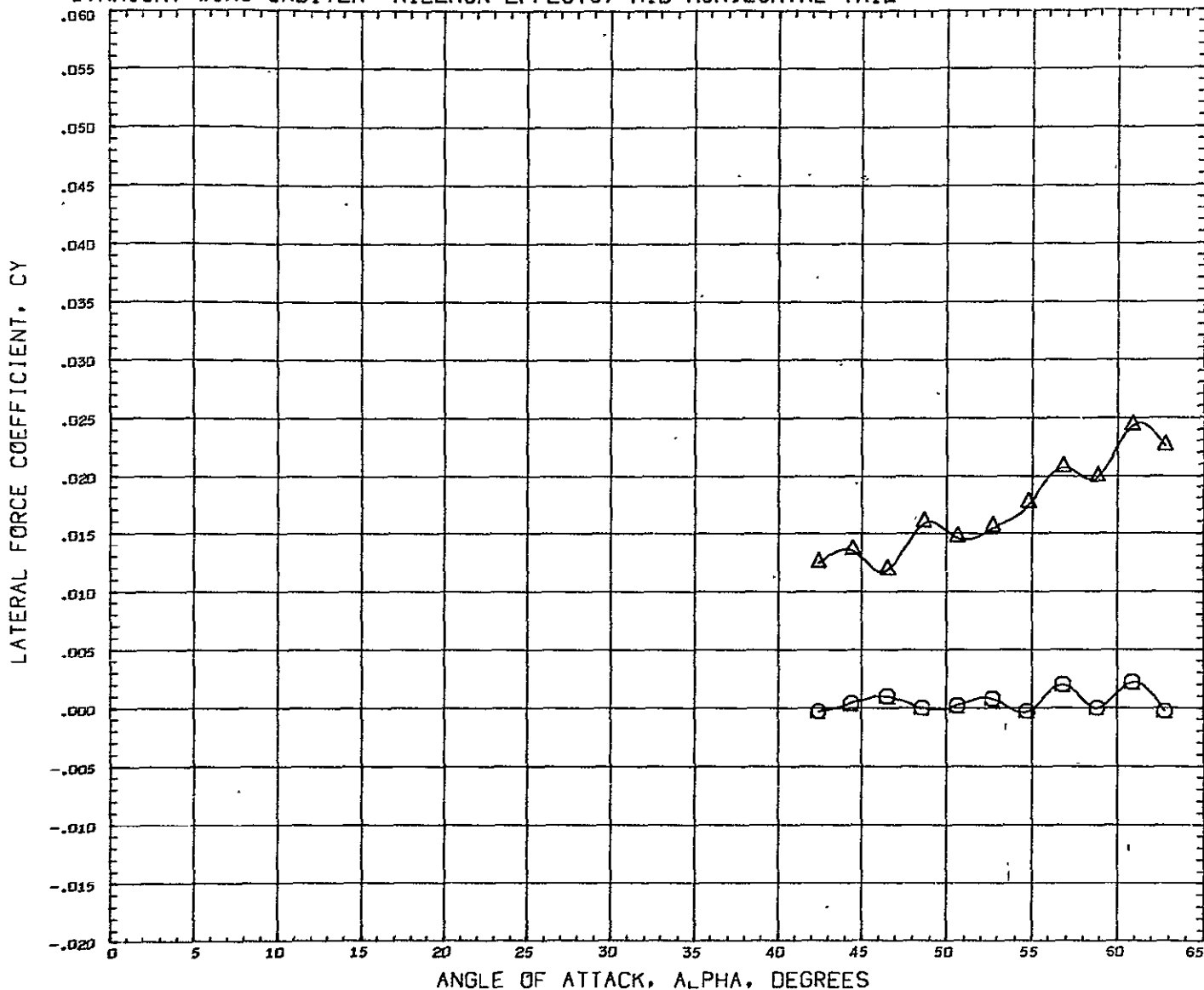
DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (C2719C) \square MSFC478 NR ST ORBITER 26WIDTH12
 (C2743C) \triangle MSFC478 NR ST ORBITER 26WIDTH12

BETA HTAIL AILRON
 0.000 -40.000 0.000
 0.000 -40.000 20.000

REFERENCE INFORMATION
 REFS 3084.0040 SQ FT
 REFL 322.9004 INCHES
 REFB 1490.0040 INCHES
 XMRP 1293.0040 INCHES
 YMRP 0.0000 INCHES
 ZMRP - 50.5000 INCHES
 SCALE 0.0035 SCALE

MACH 4.959

STRAIGHT WING ORBITER- AILERON EFFECTS, MID-HORIZONTAL TAIL



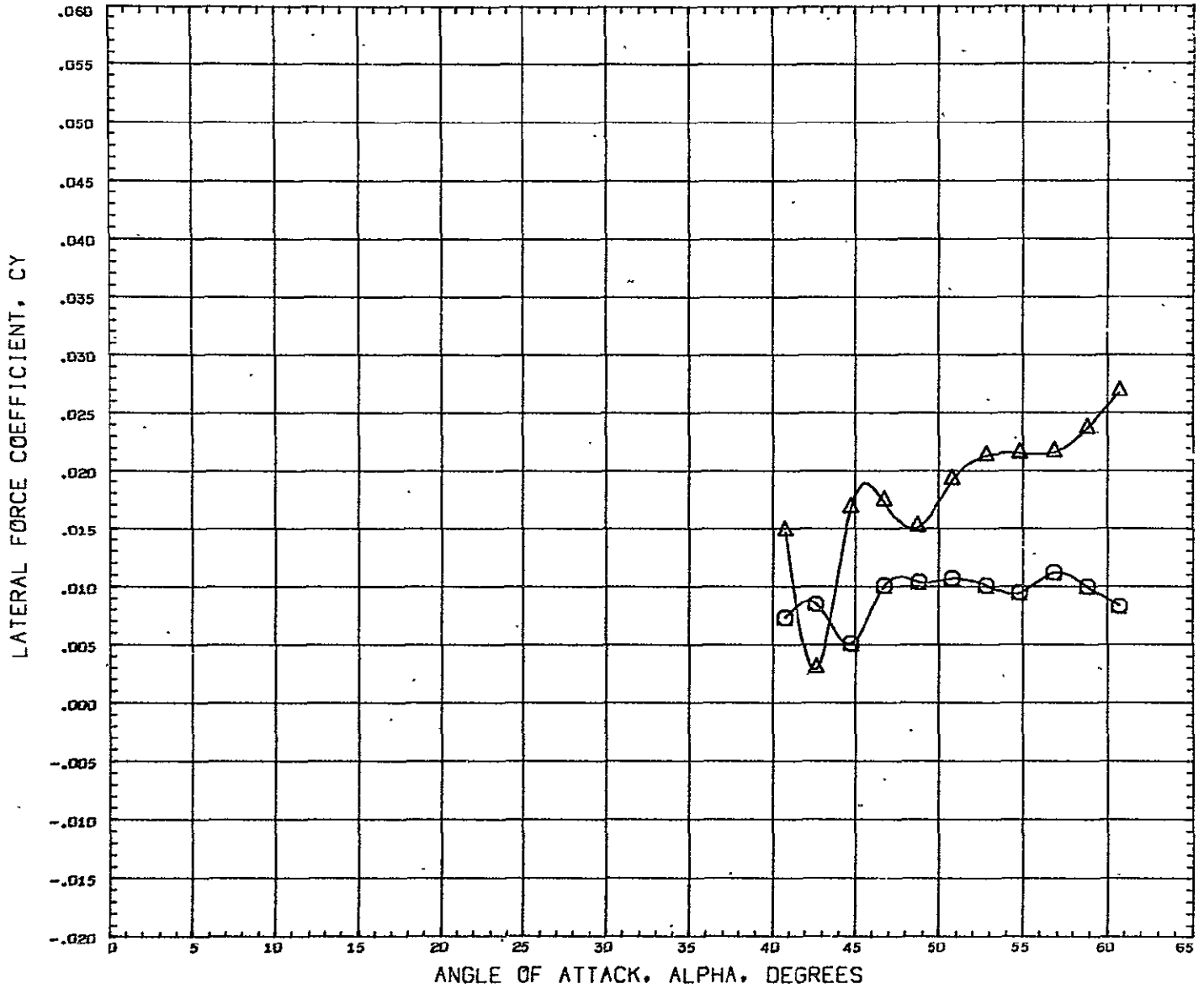
DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (C2719C) ○ MSFC478 NR ST ORBITER R6W1DH12
 (C2743C) △ MSFC478 NR ST ORBITER R6W1DH12

BETA HTAIL AILERON
 0.000 -40.000 0.000
 0.000 -40.000 20.000

REFERENCE INFORMATION
 REFS 3084.0040 SQ FT
 REFL 322.9004 INCHES
 REFB 1499.0040 INCHES
 XMRP 1293.0049 INCHES
 YMRP 0.0000 INCHES
 ZMRP - 50.5000 INCHES
 SCALE 0.0035 SCALE

MACH 1.950

STRAIGHT WING ORBITER-AILERON EFFECTS, MID-HORIZONTAL TAIL



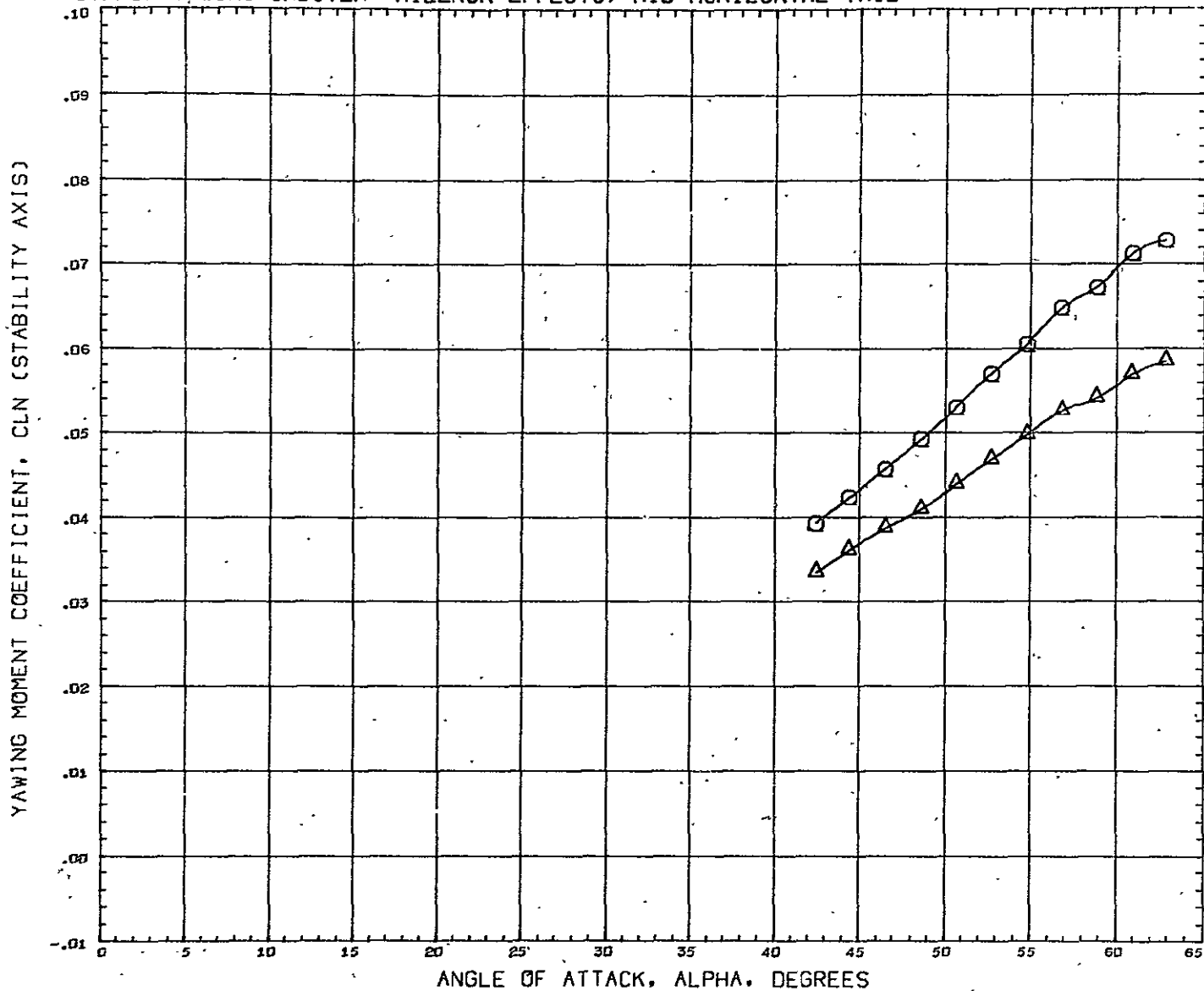
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(C2719C) ○	MSFC478 NR ST ORBITER B6W10H12
(C2743C) △	MSFC478 NR ST ORBITER B6W10H12

BETA	HTAIL	AILRON
0.000	-40.000	0.000
0.000	-40.000	20.000

REFERENCE INFORMATION		
REFS	3084.0040	SQ FT
REFL	322.9004	INCHES
REFB	1490.0540	INCHES
XMRP	1293.0040	INCHES
YMRP	0.0000	INCHES
ZMRP	50.5000	INCHES
SCALE	0.0035	SCALE

PACH 4.959

STRAIGHT WING ORBITER-AILERON EFFECTS, MID-HORIZONTAL TAIL



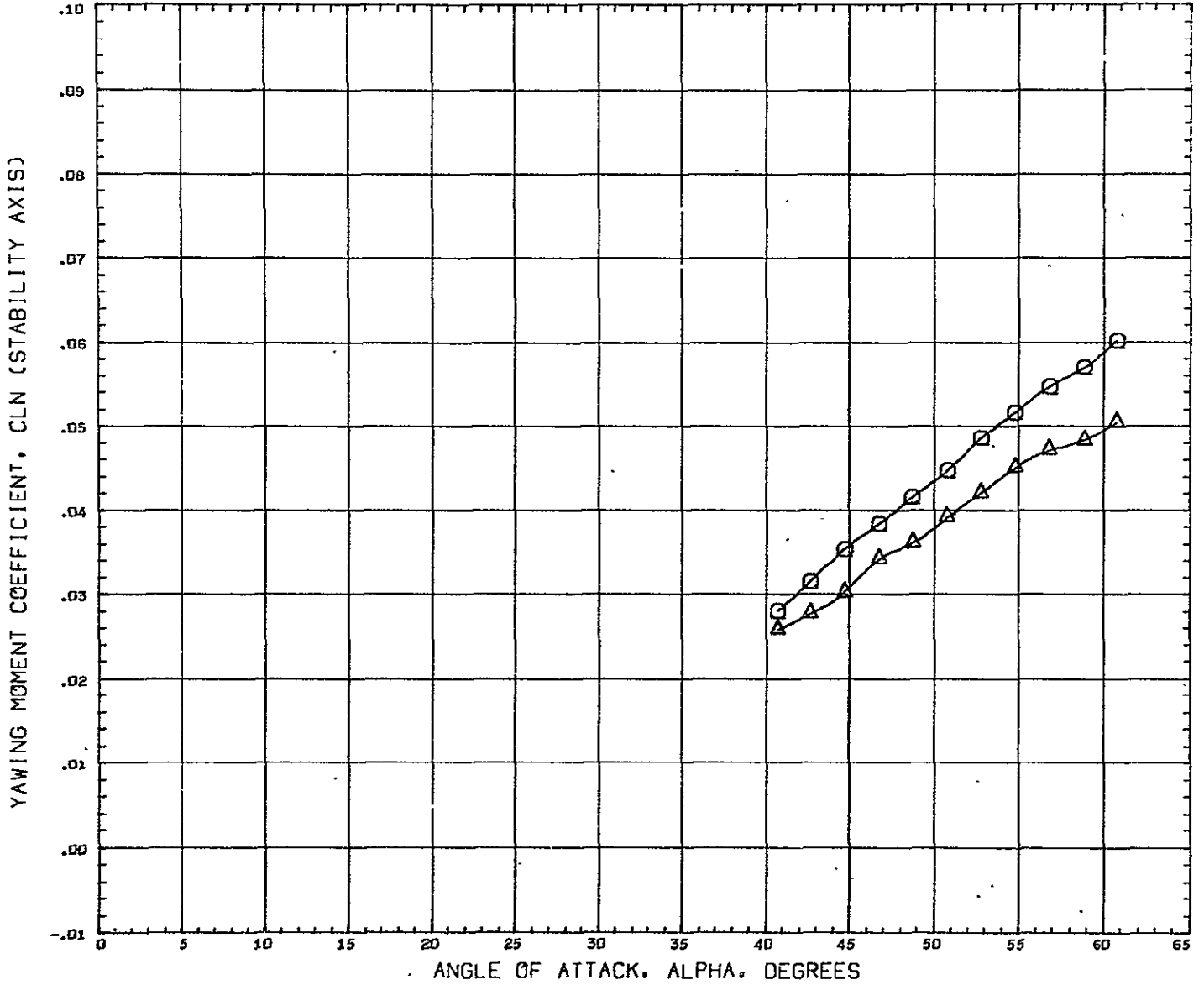
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 (C2743C) △ MSFC478 NR ST ORBITER 66WLDH12

BETA HTAIL AILRON
 0.000 -40.000 0.000
 5.000 -40.000 20.000

REFERENCE INFORMATION
 REFS 3084.0040 SQ FT
 REFL 322.9004 INCHES
 REFB 1490.0040 INCHES
 XMRP 1293.0040 INCHES
 YMRP 0.0000 INCHES
 ZMRP 50.5000 INCHES
 SCALE 0.0035 SCALE

HACH 1.956

STRAIGHT WING ORBITER-AILERON EFFECTS, MID-HORIZONTAL TAIL



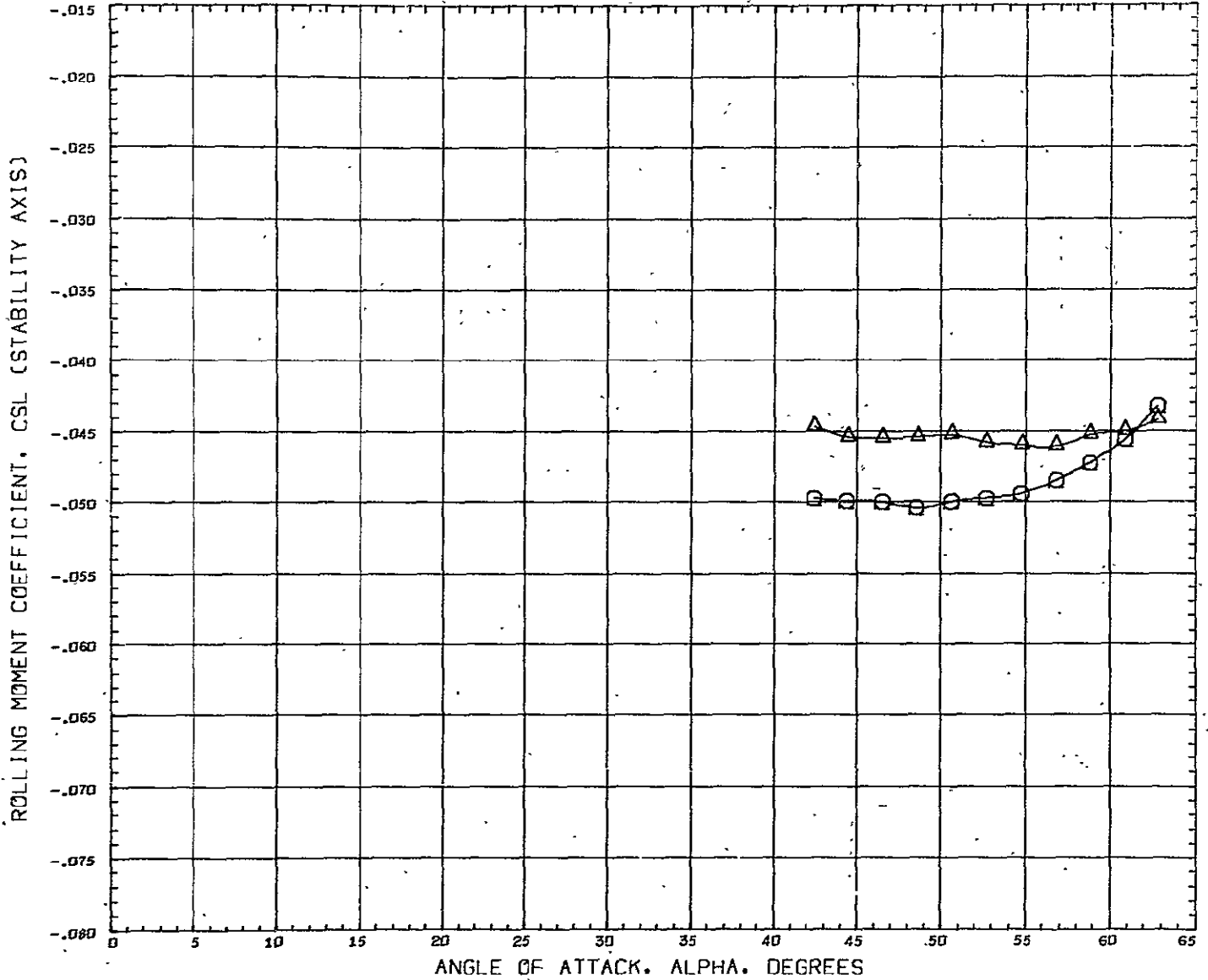
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 (C2743C) △ HSFC478 NR ST ORBITER Ø6W1ØH12

BETA HTAIL AILERON
 0.000 -40.000 0.000
 0.000 -40.000 20.000

REFERENCE INFORMATION
 REFS 3084.0040 SQ FT
 REFL 322.9004 INCHES
 REFD 1490.0040 INCHES
 XMRF 1293.0040 INCHES
 YMRF 0.0000 INCHES
 ZMRF 50.5000 INCHES
 SCALE 0.0035 SCALE

PACH 4.959

STRAIGHT WING ORBITER-AILERON EFFECTS, MID-HORIZONTAL TAIL



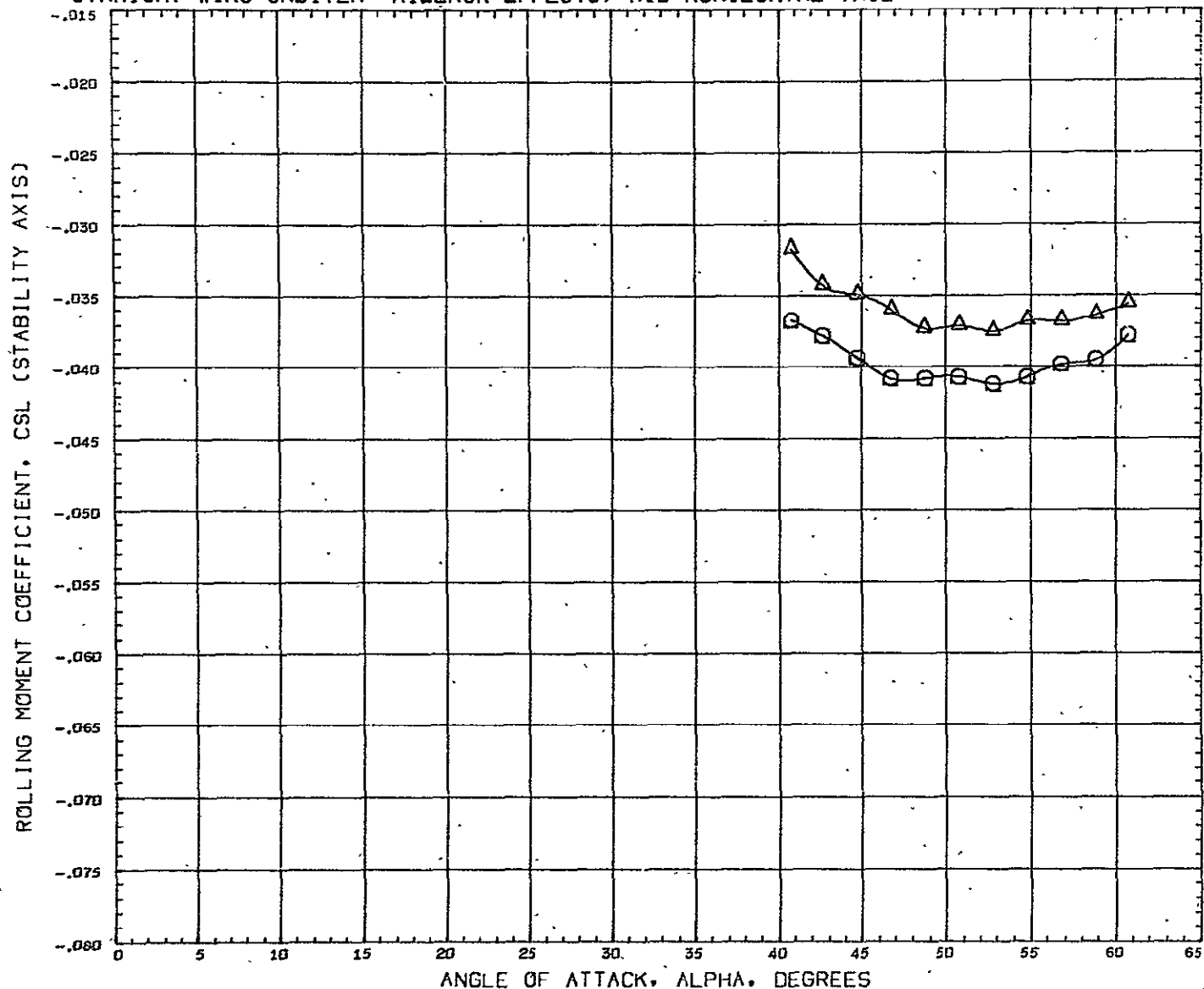
DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(C2719C) ○	MSFC478 NR ST ORBITER 26WLDH12
(C2723C) △	MSFC478 NR ST ORBITER 86WLDH12

BETA	HTAIL	AILRON
0.000	-40.000	0.000
0.000	-40.000	-20.000

REFERENCE INFORMATION		
REFS	3084.0040	SQ FT
REFL	322.9004	INCHES
REFB	1490.0040	INCHES
XMRP	1293.0040	INCHES
YMRP	0.0000	INCHES
ZMRP	50.5000	INCHES
SCALE	0.0035	SCALE

MACH 1.956

STRAIGHT WING ORBITER- AILERON EFFECTS, MID-HORIZONTAL TAIL



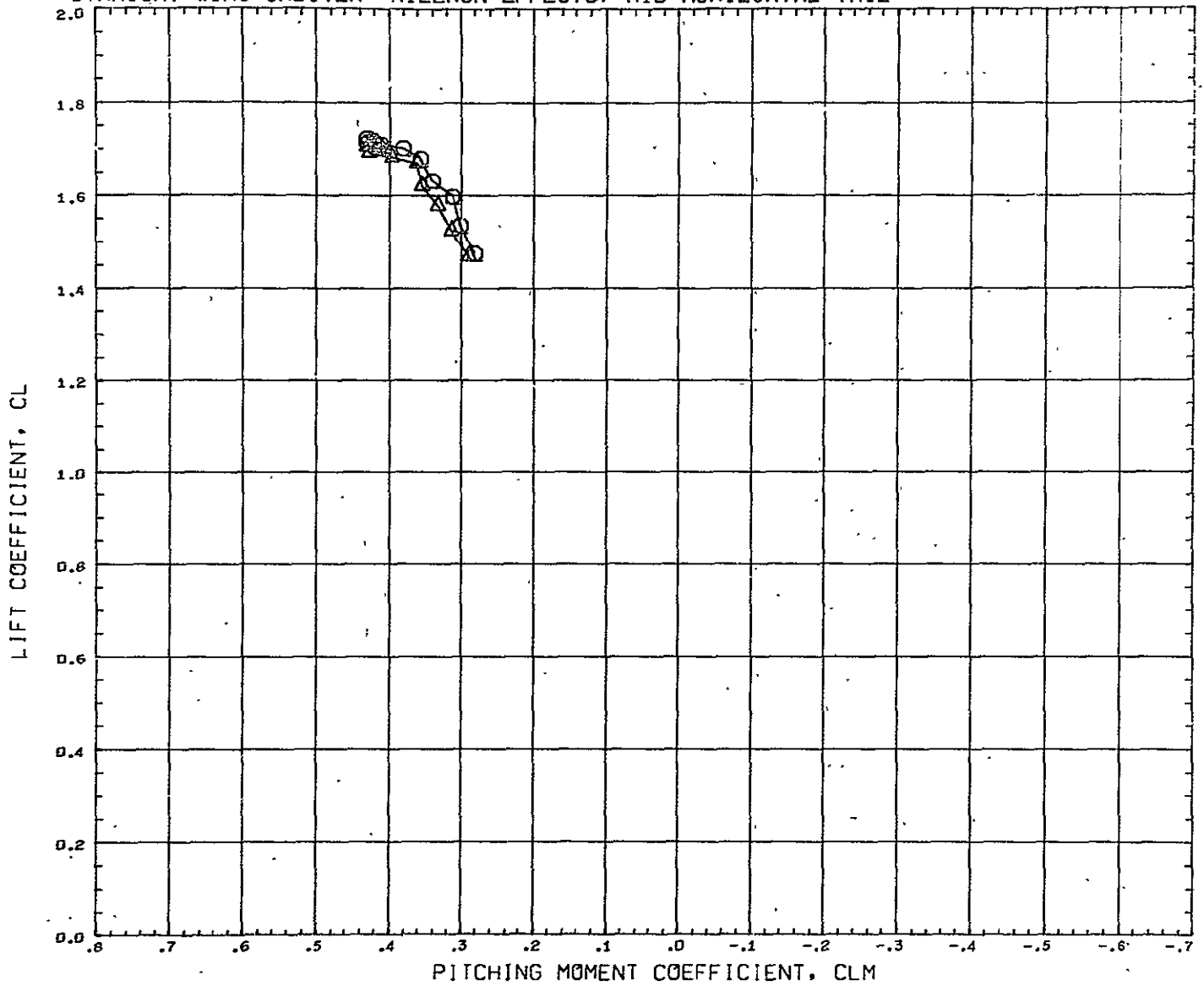
DATA SET SYMBOL	CONFIGURATION DESCRIPTION
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(C2723C)	MSFC478 NR ST ORBITER B6WIDH12

BETA	HTAIL	AILRON
0.000	-40.000	0.000
0.000	-40.000	20.000

REFERENCE INFORMATION		
REFS	3084.0040	SQ FT
REFL	322.9004	INCHES
REFB	1490.0040	INCHES
XMRP	1293.0040	INCHES
YMRP	0.0000	INCHES
ZMRP	50.5000	INCHES
SCALE	0.0035	SCALE

MACH 4.959

STRAIGHT WING ORBITER- AILERON EFFECTS, MID-HORIZONTAL TAIL



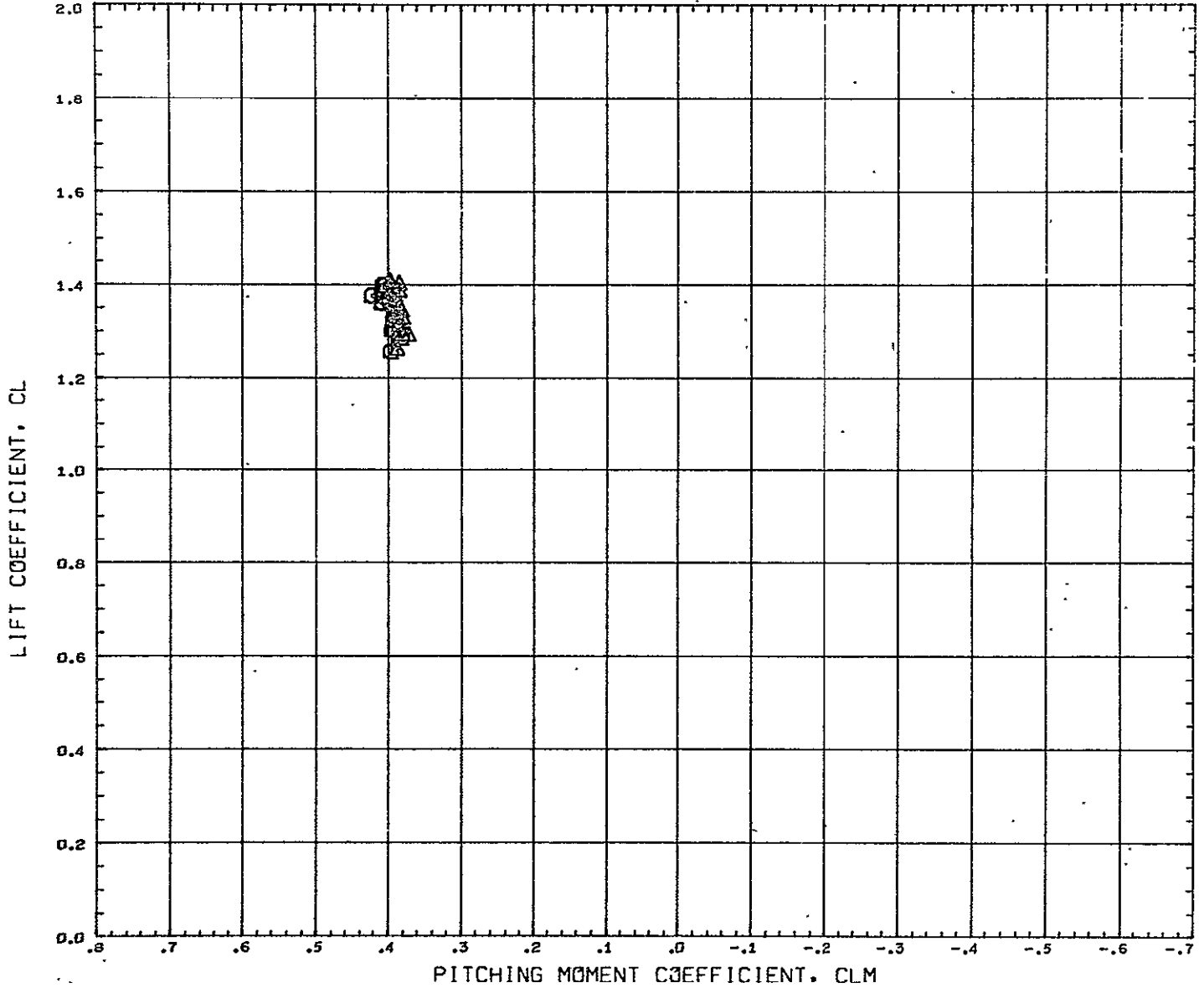
DATA SET SYMBOL CONFIGURATION DESCRIPTION
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 (C2743C) △ MSFC478 NR ST ORBITER B6W10H12

BETA HTAIL AILERON
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 0.000 -40.000 20.000

REFERENCE INFORMATION
 REFS 3084.0040 SQ FT
 REFL 322.9004 INCHES
 REFB 1490.0040 INCHES
 XMRP 1293.0040 INCHES
 YMRP 0.0000 INCHES
 ZMRP 50.5000 INCHES
 SCALE 0.0035 SCALE

MACH 1.956

STRAIGHT WING ORBITER- AILERON EFFECTS, MID-HORIZONTAL TAIL



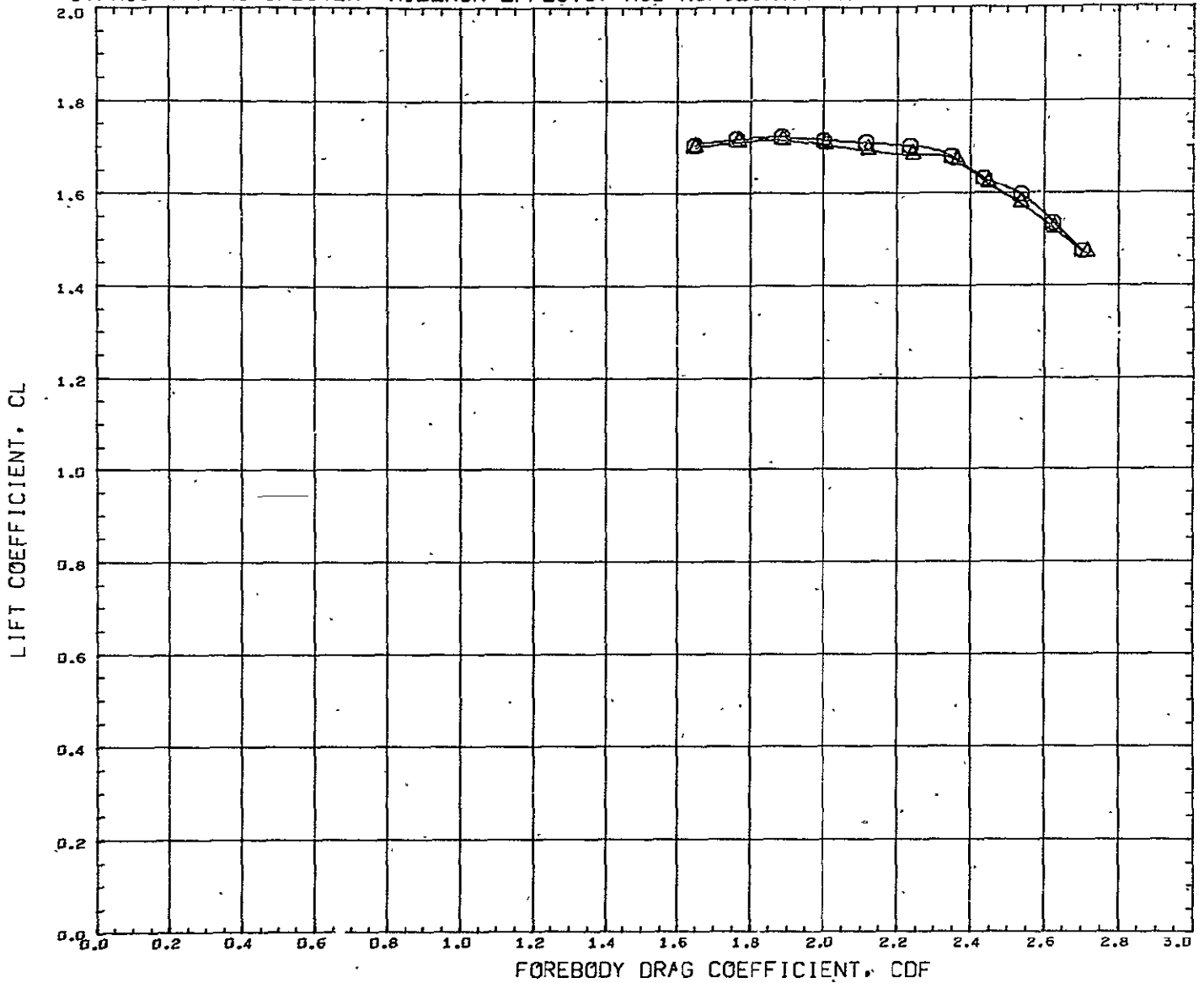
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(C2719C)	MSFC478 NR ST ORBITER B6W10H12
(C2743C)	MSFC478 NR ST ORBITER B6W10H12

BETA	HTAIL	AILRON
0.000	-40.000	0.000
0.000	-40.000	20.000

REFERENCE INFORMATION	
REFS	3084.0040 SQ FT
REFL	322.9004 INCHES
REFB	1490.0040 INCHES
XMRP	1293.0040 INCHES
YMRP	0.0000 INCHES
ZMRP	50.5000 INCHES
SCALE	0.0035 SCALE

PACH 4.959

STRAIGHT WING ORBITER- AILERON EFFECTS, MID-HORIZONTAL TAIL



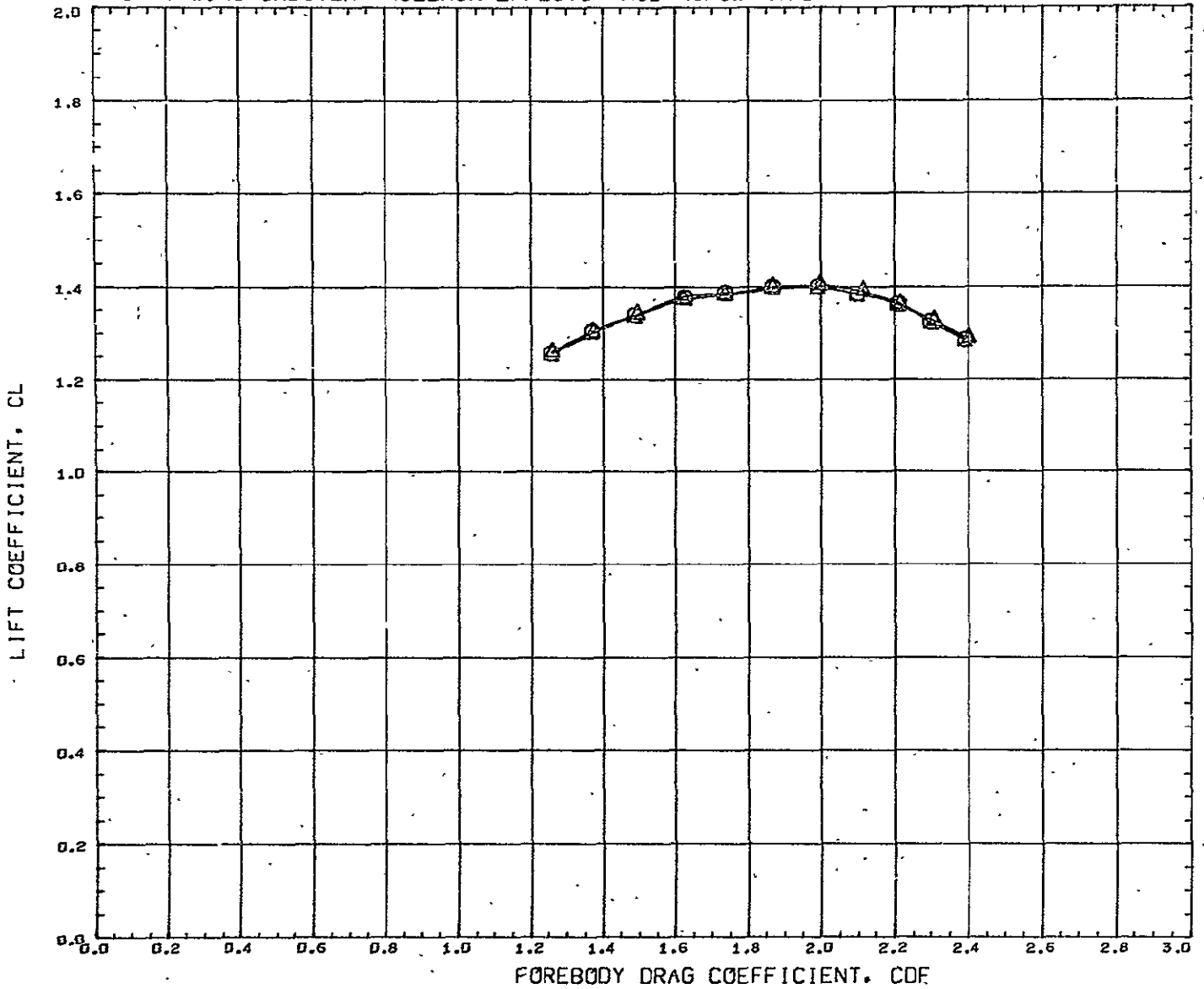
DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(C2719C) ○	MSFC478 NR ST ORBITER B6WIDH12
(C2743C) △	MSFC478 NR ST ORBITER B6WIDH12

BETA	HTAIL	AILRON
0.000	-40.000	0.000
0.000	-40.000	20.000

REFERENCE INFORMATION		
REFS	3084.0040	SQ FT
PEFL	322.9004	INCHES
REFB	1490.0040	INCHES
XMRP	1293.0040	INCHES
YMRP	0.0000	INCHES
ZMRP	50.5000	INCHES
SCALE	0.0035	SCALE

MACH 1.956

STRAIGHT WING ORBITER- AILERON EFFECTS, MID-HORIZONTAL TAIL



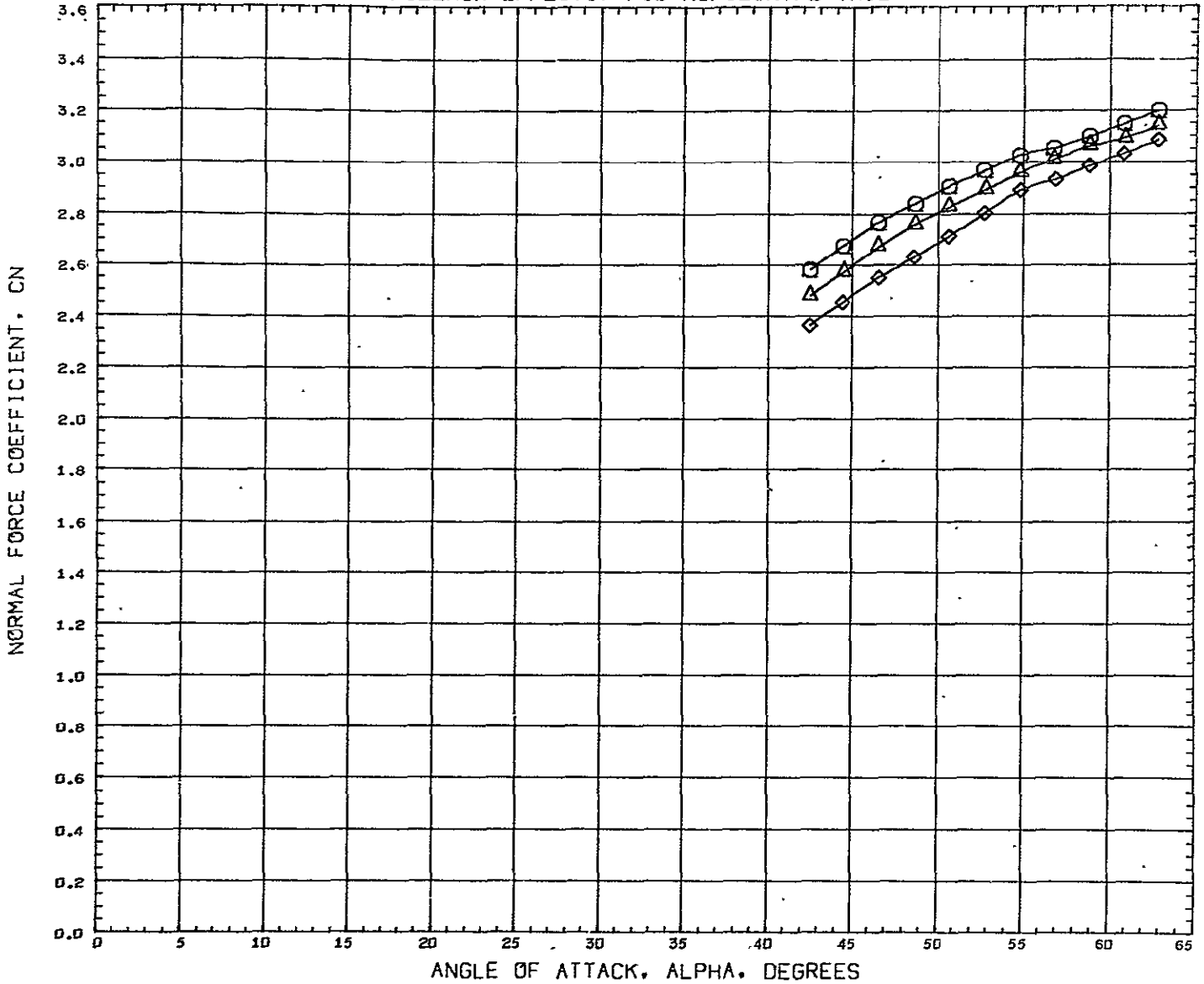
DATA SET SYMBOL	CONFIGURATION DESCRIPTION
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(C2743C) \triangle	MSFCA78 NR ST ORBITER B6W1OH12

BETA	HTAIL	AILRON
1.000	-40.000	0.000
0.900	-40.000	20.000

REFERENCE INFORMATION	
REFS	3084.0040 SQ FT
REFL	322.9004 INCHES
REFB	1490.0040 INCHES
XMRP	1293.0040 INCHES
YMRP	0.0000 INCHES
ZMRP	50.5000 INCHES
SCALE	0.0035 SCALE

MACH 4.959

STRAIGHT WING ORBITER-AILERON EFFECTS, MID-HORIZONTAL TAIL



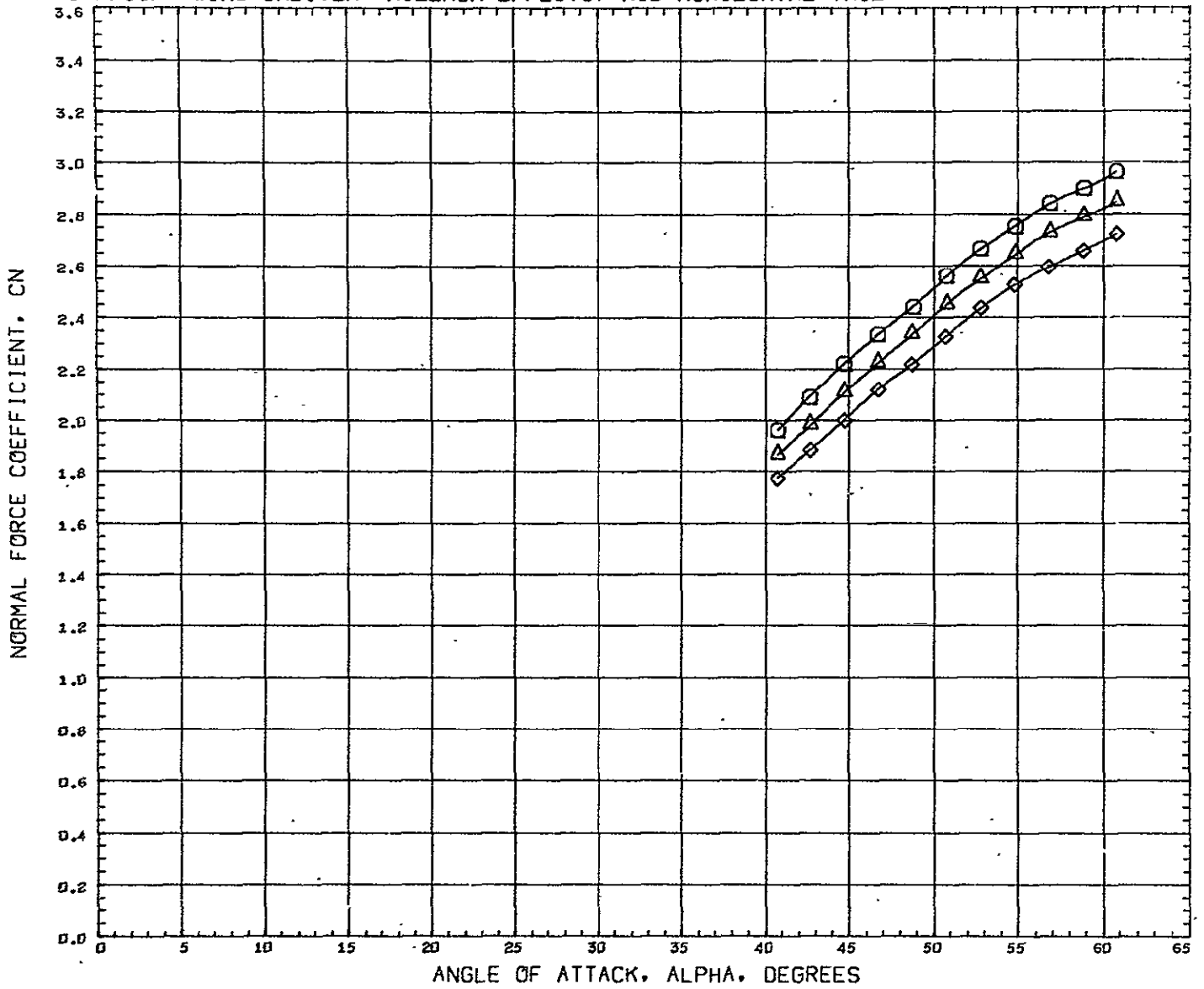
DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(C2739C)	HSFC478 NR ST ORBITER B6WIDH12
(C2741C)	HSFC478 NR ST ORBITER B6WIDH12
(C2743C)	HSFC478 NR ST ORBITER B6WIDH12

BETA	HTAIL	AILRON
0.000	0.000	20.000
0.010	-20.000	20.000
0.000	-40.000	20.000

REFERENCE INFORMATION	
REFS	3084.0040 SQ FT
REFL	322.9004 INCHES
REFB	1490.0040 INCHES
XHRP	1293.0040 INCHES
YMRP	0.0000 INCHES
ZMRP	50.5000 INCHES
SCALE	0.0035 SCALE

PACH 1.959

STRAIGHT WING ORBITER-AILERON EFFECTS, MID-HORIZONTAL TAIL



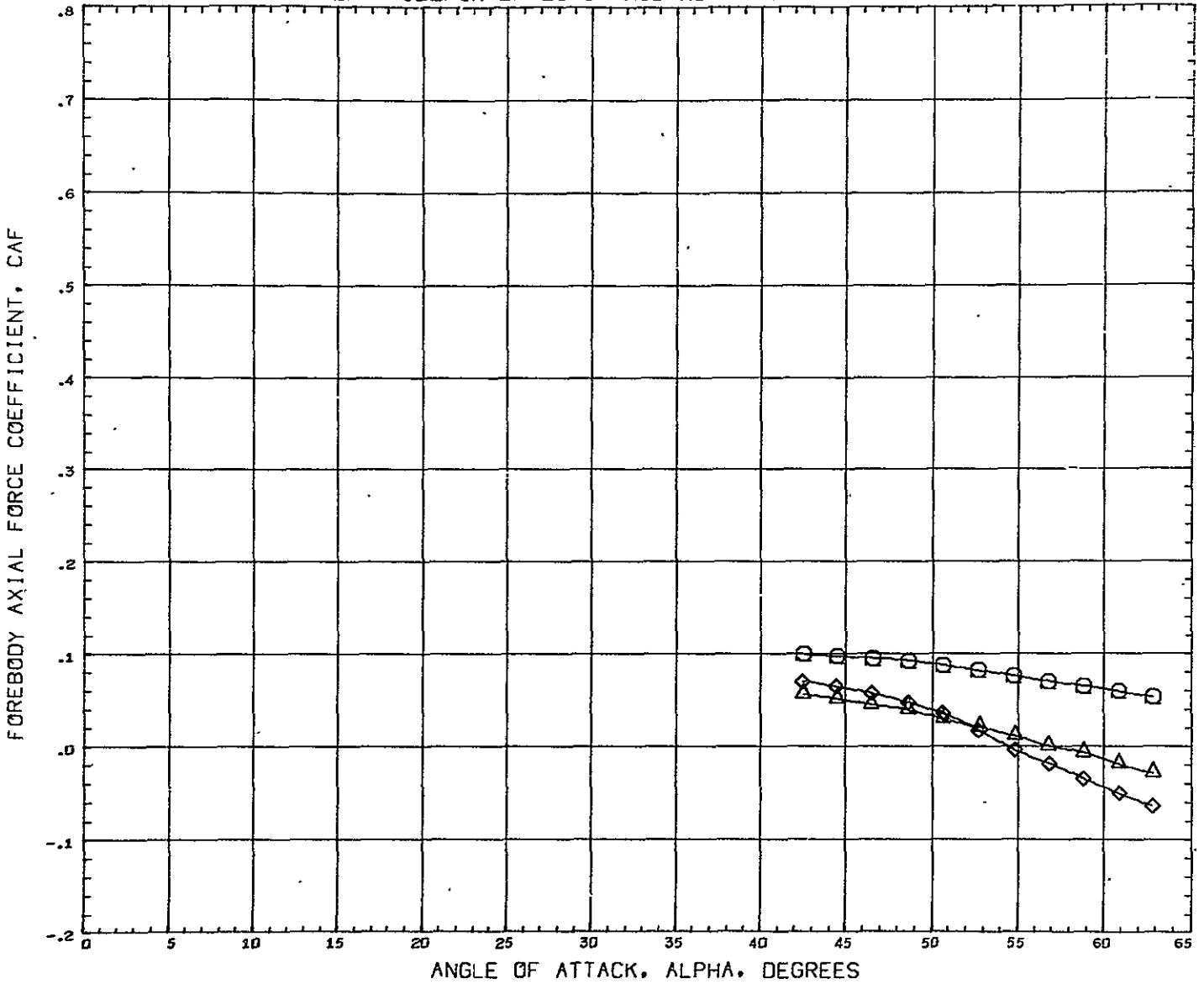
DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(C2739C)	MSFC478 NR ST ORBITER B6WLDH12
(C2741C)	MSFC478 NR ST ORBITER B6WLDH12
(C2743C)	MSFC478 NR ST ORBITER B6WLDH12

BETA	HTAIL	AILRON
0.000	0.000	20.000
0.010	-20.000	20.000
0.000	-40.000	20.000

REFERENCE INFORMATION	
REFS	3084.0040 SQ FT
REFL	322.9004 INCHES
REFB	1490.0040 INCHES
XMRP	1293.0040 INCHES
YMRP	0.0000 INCHES
ZMRP	50.5000 INCHES
SCALE	0.0035 SCALE

MACH 4.959

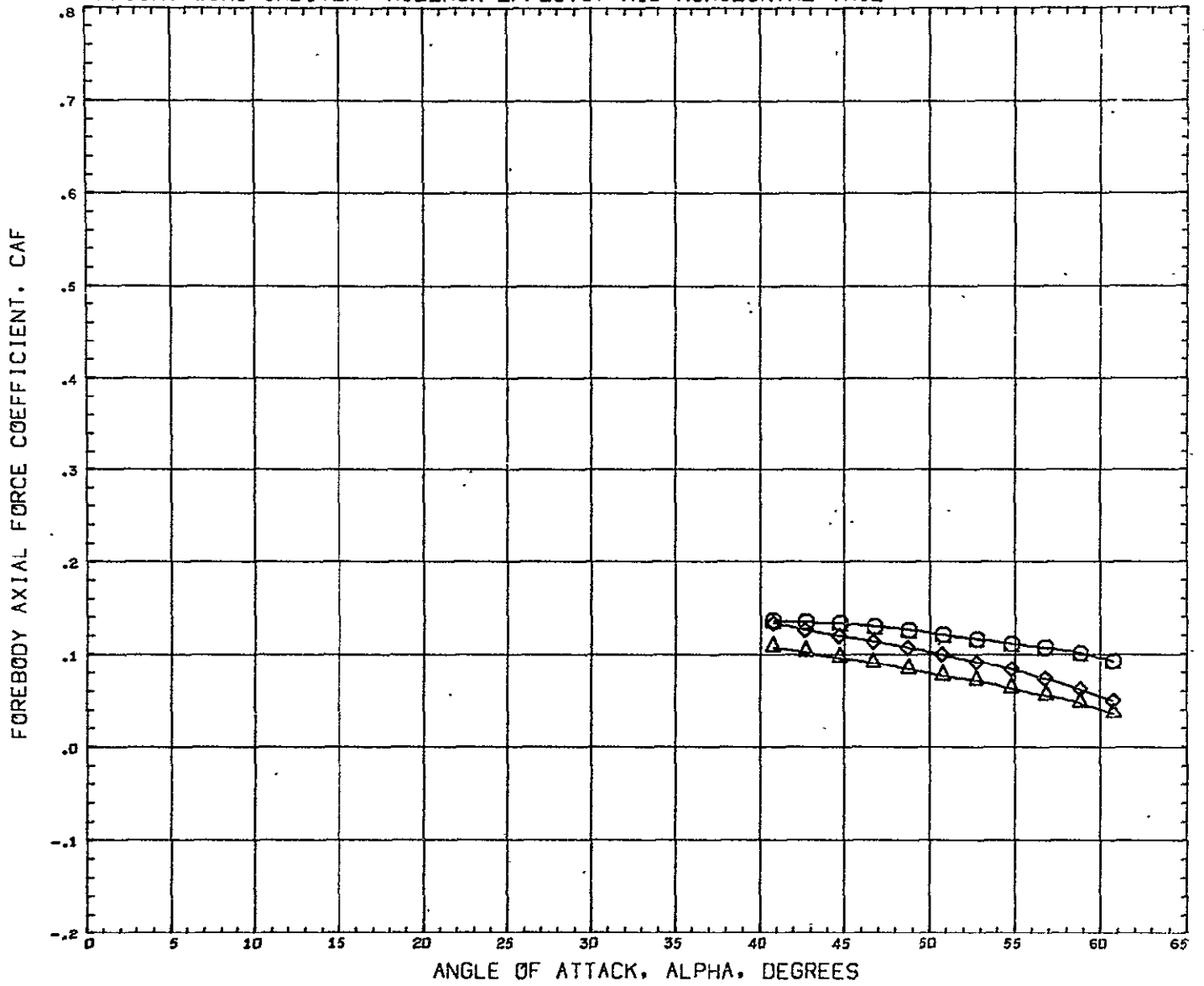
STRAIGHT WING ORBITER-AILERON EFFECTS, MID-HORIZONTAL TAIL



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	HTAIL	AILRON	REFERENCE INFORMATION
(C2739C)	MSFC478 NR ST ORBITER B6W1DH12	0.000	0.000	20.000	REFS 3984.0040 SQ FT
(C2741C)	MSFC478 NR ST ORBITER B6W1DH12	0.010	-20.000	20.000	REFL 322.9004 INCHES
(C2743C)	MSFC478 NR ST ORBITER B6W1DH12	0.000	-40.000	20.000	REFB 1490.0040 INCHES
					XMRP 1293.0040 INCHES
					YMRP 0.0000 INCHES
					ZMRP 50.5000 INCHES
					SCALE 0.0035 SCALE

MACH 1.959

STRAIGHT WING ORBITER- AILERON EFFECTS, MID-HORIZONTAL TAIL



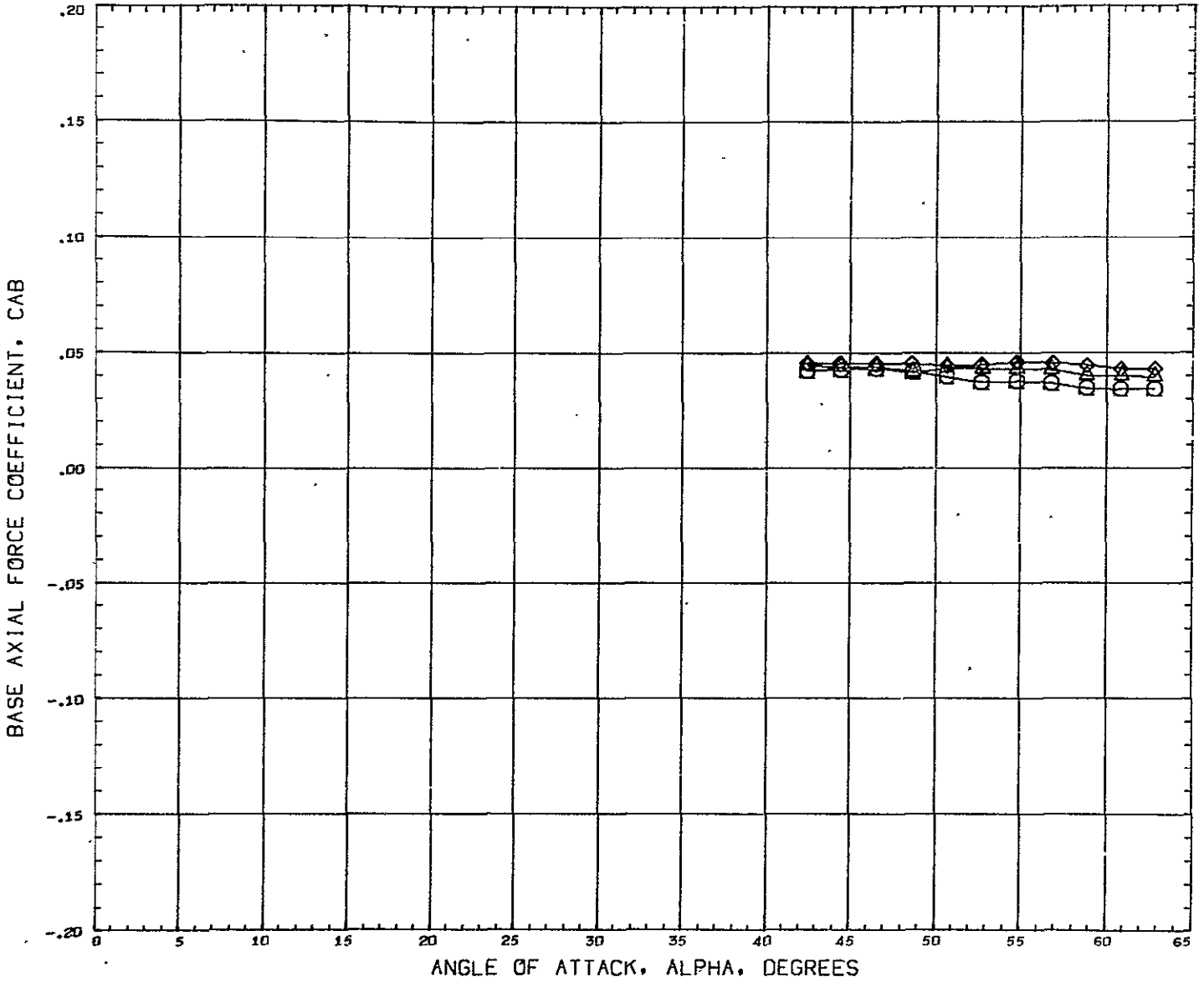
DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(C2739C)	MSFC478 NR ST ORBITER B6WIDH12
(C2741C)	MSFC478 NR ST ORBITER B6WIDH12
(C2743C)	MSFC478 NR ST ORBITER B6WIDH12

BETA	HTAIL	AILRON
0.000	0.000	20.000
0.010	-20.000	20.000
0.000	-40.000	20.000

REFERENCE INFORMATION		
REFS	3084.0040	SQ FT
REPL	322.9004	INCHES
REFB	1490.0040	INCHES
XMRP	1293.0040	INCHES
YMRP	0.0000	INCHES
ZMRP	50.5000	INCHES
SCALE	0.0035	SCALE

MACH 4.959

STRAIGHT WING ORBITER-AILERON EFFECTS, MID-HORIZONTAL TAIL



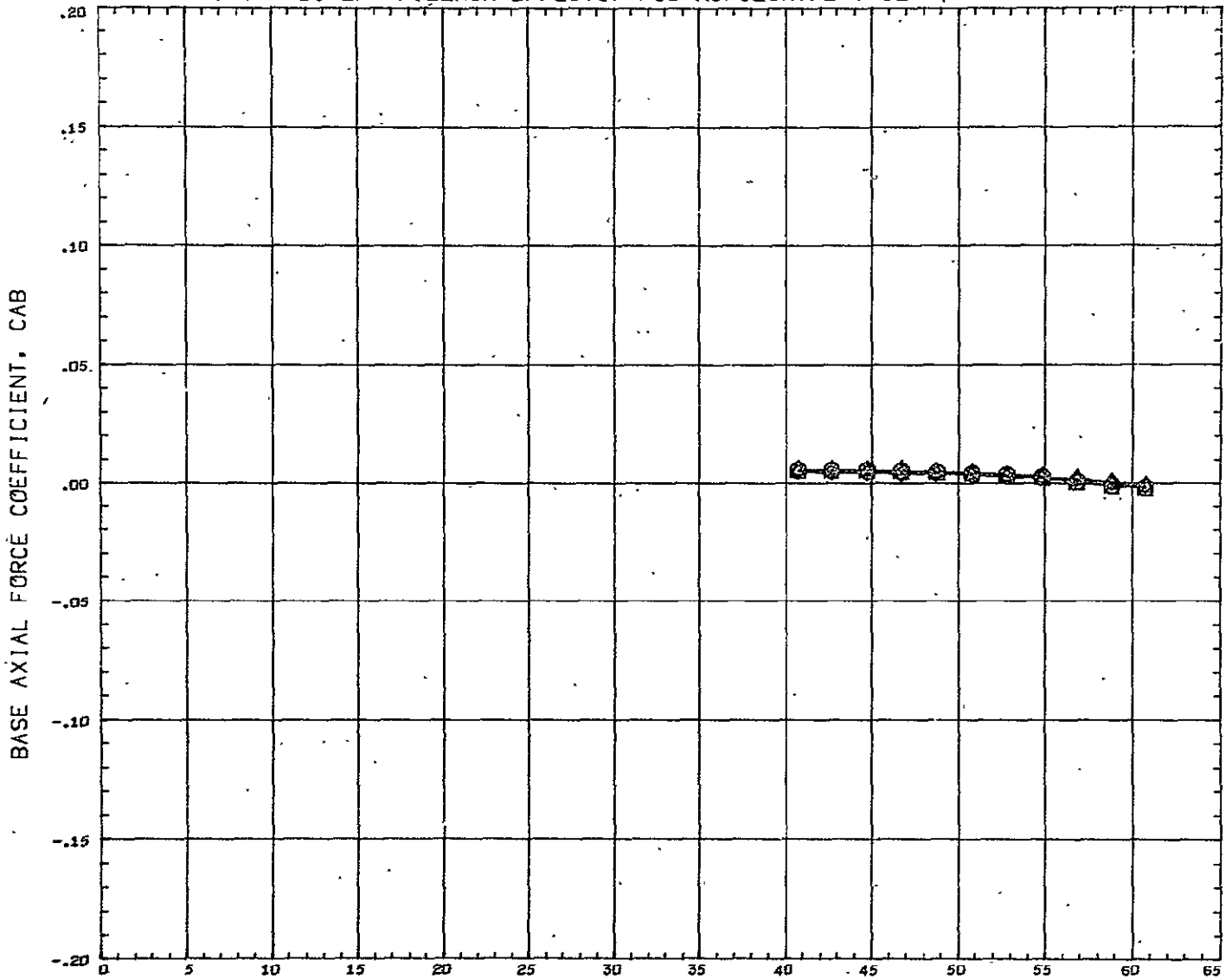
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(C2739C)	○	HSFC478 NR ST ORBITER B6W10H12
(C2741C)	△	HSFC478 NR ST ORBITER B6W10H12
(C2743C)	◇	HSFC478 NR ST ORBITER B6W10H12

BETA	HTAIL	AILRON
0.000	0.000	20.000
0.010	-20.000	20.000
0.000	-40.000	20.000

REFERENCE INFORMATION		
REFS	3084.0040	SQ FT
REFL	322.9004	INCHES
REFB	1490.0040	INCHES
XMRP	1293.0040	INCHES
YMRP	0.0000	INCHES
ZMRP	50.5000	INCHES
SCALE	0.0035	SCALE

MACH 1.959

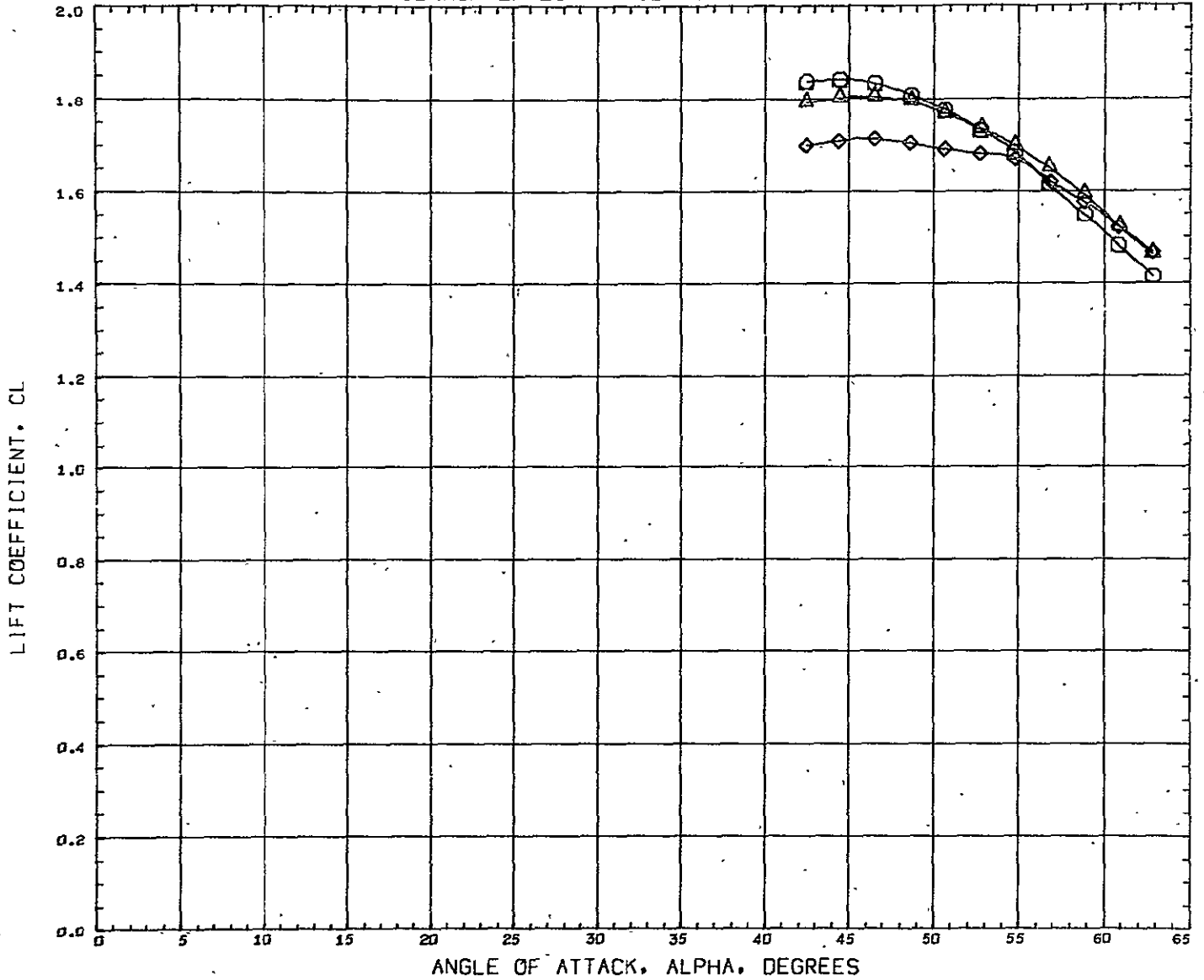
STRAIGHT WING ORBITER-AILERON EFFECTS, MID-HORIZONTAL TAIL



DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	BETA	HTAIL	AILRON	REFERENCE INFORMATION
(C2739C)	○	MSFC478 NR ST ORBITER 06WIDH12	0.000	0.000	20.000	REFS 3084.0040 SQ FT
(C2741C)	△	MSFC478 NR ST ORBITER 06WIDH12	0.010	-20.000	20.000	REFL 322.9004 INCHES
(C2743C)	◇	MSFC478 NR ST ORBITER 06WIDH12	0.000	-40.000	20.000	REFB 1490.0040 INCHES
						XMRP 1293.0040 INCHES
						YMRP 0.0000 INCHES
						ZMRP - 50.5000 INCHES
						SCALE 0.0035 SCALE

MACH 4.959

STRAIGHT WING ORBITER-AILERON EFFECTS, MID-HORIZONTAL TAIL



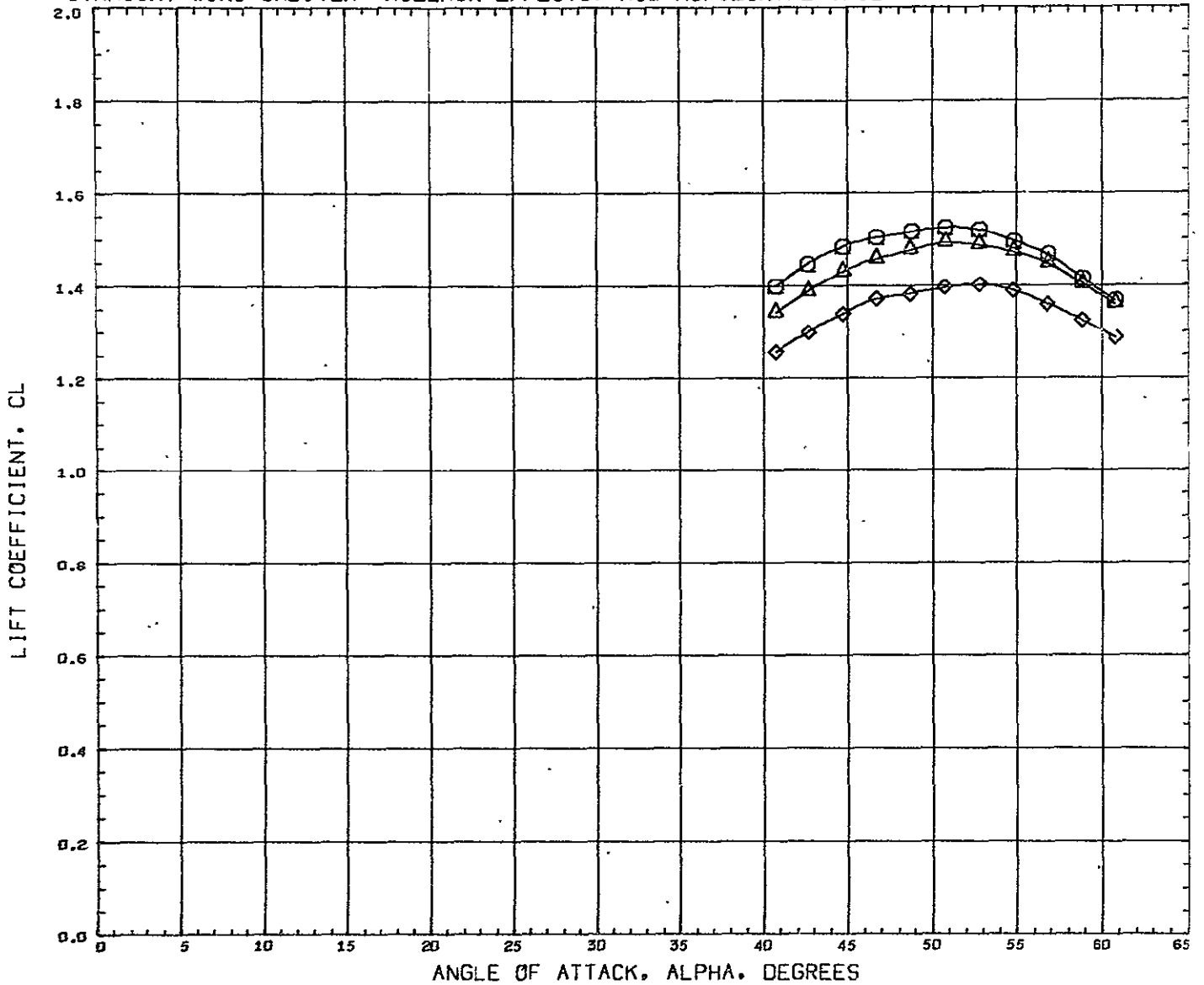
DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(C2739C) ○	MSFC478 NR ST ORBITER B6WIDH12
(C2741C) △	MSFC478 NR ST ORBITER B6WIDH12
(C2743C) ◇	MSFC478 NR ST ORBITER F6WIDH12

BETA	HTAIL	AILRON
0.000	0.000	20.000
0.010	-20.000	20.000
0.000	-40.000	20.000

REFERENCE INFORMATION		
REFS	3084.0040	SQ FT
REFL	322.9004	INCHES
REFB	1490.0040	INCHES
XMRP	1293.004L	INCHES
YMRP	0.0000	INCHES
ZMRP	50.5000	INCHES
SCALE	0.0035	SCALE

PACH 1.959

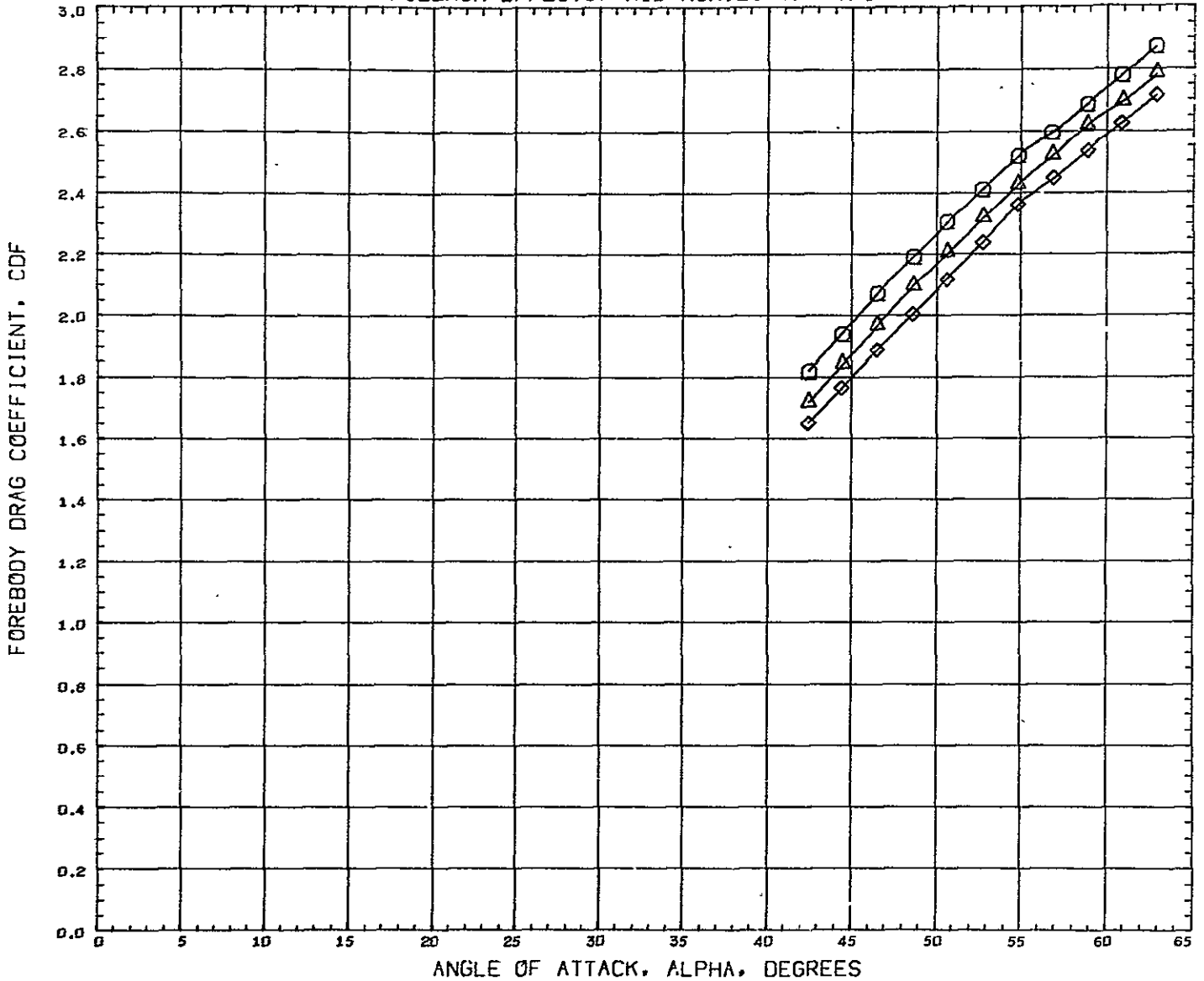
STRAIGHT WING ORBITER-AILERON EFFECTS, MID-HORIZONTAL TAIL



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	HTAIL	AILRON	REFERENCE INFORMATION
(C2739C)	MSFC478 NR ST ORBITER B6W10H12	0.000	0.000	20.000	REFS 3084.0040 SQ FT
(C2741C)	MSFC478 NR ST ORBITER B6W10H12	0.010	-20.000	20.000	REFL 322.9004 INCHES
(C2743C)	MSFC478 NR ST ORBITER B6W10H12	0.000	-40.000	20.000	REFB 1490.0040 INCHES
					XMRP 1293.0040 INCHES
					YMRP 0.0000 INCHES
					ZMRP - 50.5000 INCHES
					SCALE 0.0035 SCALE

MACH 4.959

STRAIGHT WING ORBITER-AILERON EFFECTS, MID-HORIZONTAL TAIL



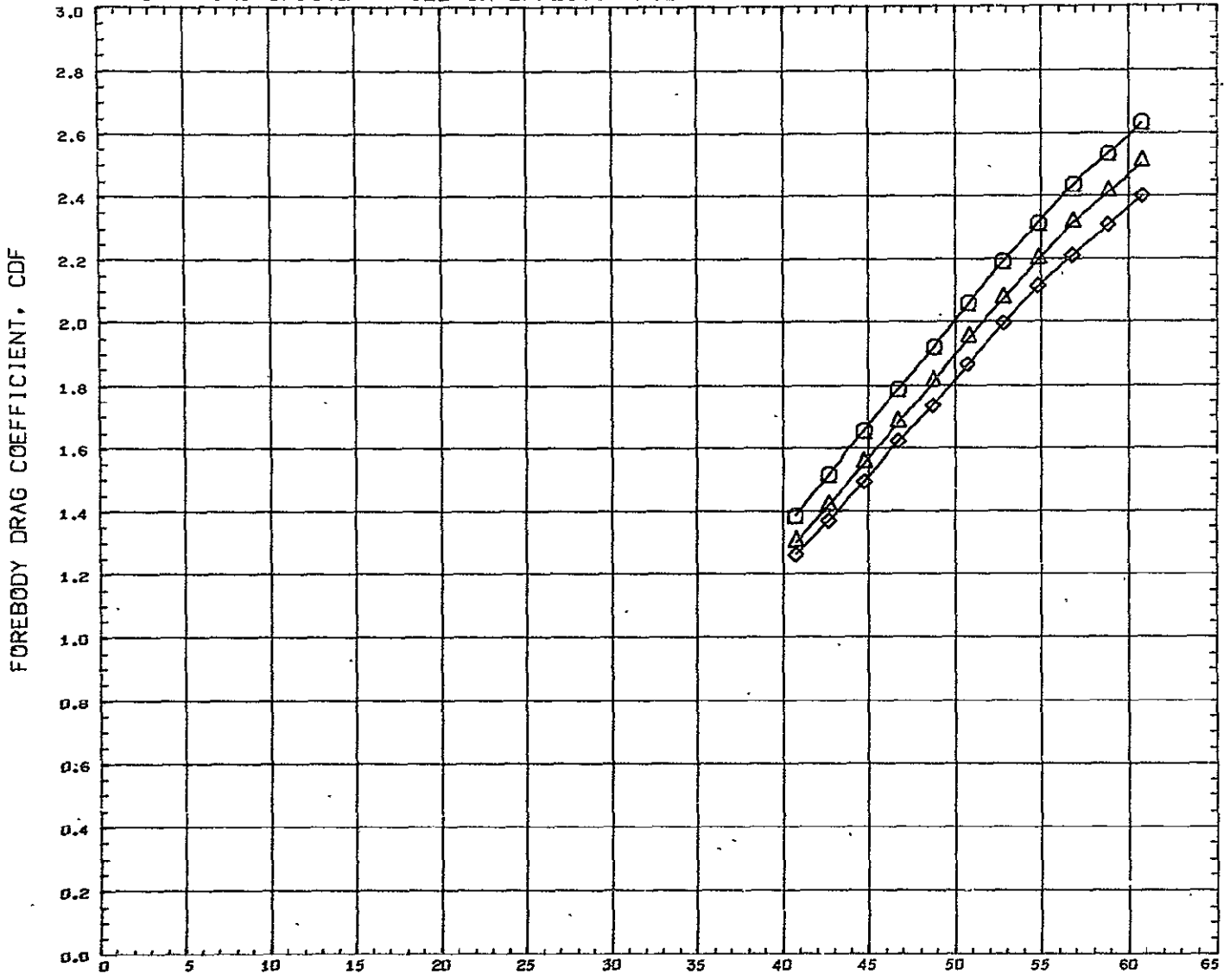
DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(C2739C)	MSFC478 NR ST ORBITER B6W10H12
(C2741C)	MSFC478 NR ST ORBITER B6W10H12
(C2743C)	MSFC478 NR ST ORBITER B6W10H12

BETA	HTAIL	AILRON
0.000	0.000	20.000
0.010	-20.000	20.000
0.000	-40.000	20.000

REFERENCE INFORMATION		
REFS	3084.0040	SQ FT
REFL	322.9004	INCHES
REFB	1490.0040	INCHES
YMRP	1293.0040	INCHES
ZMRP	0.0000	INCHES
ZMRP	- 50.5000	INCHES
SCALE	0.0035	SCALE

MACH 1.959

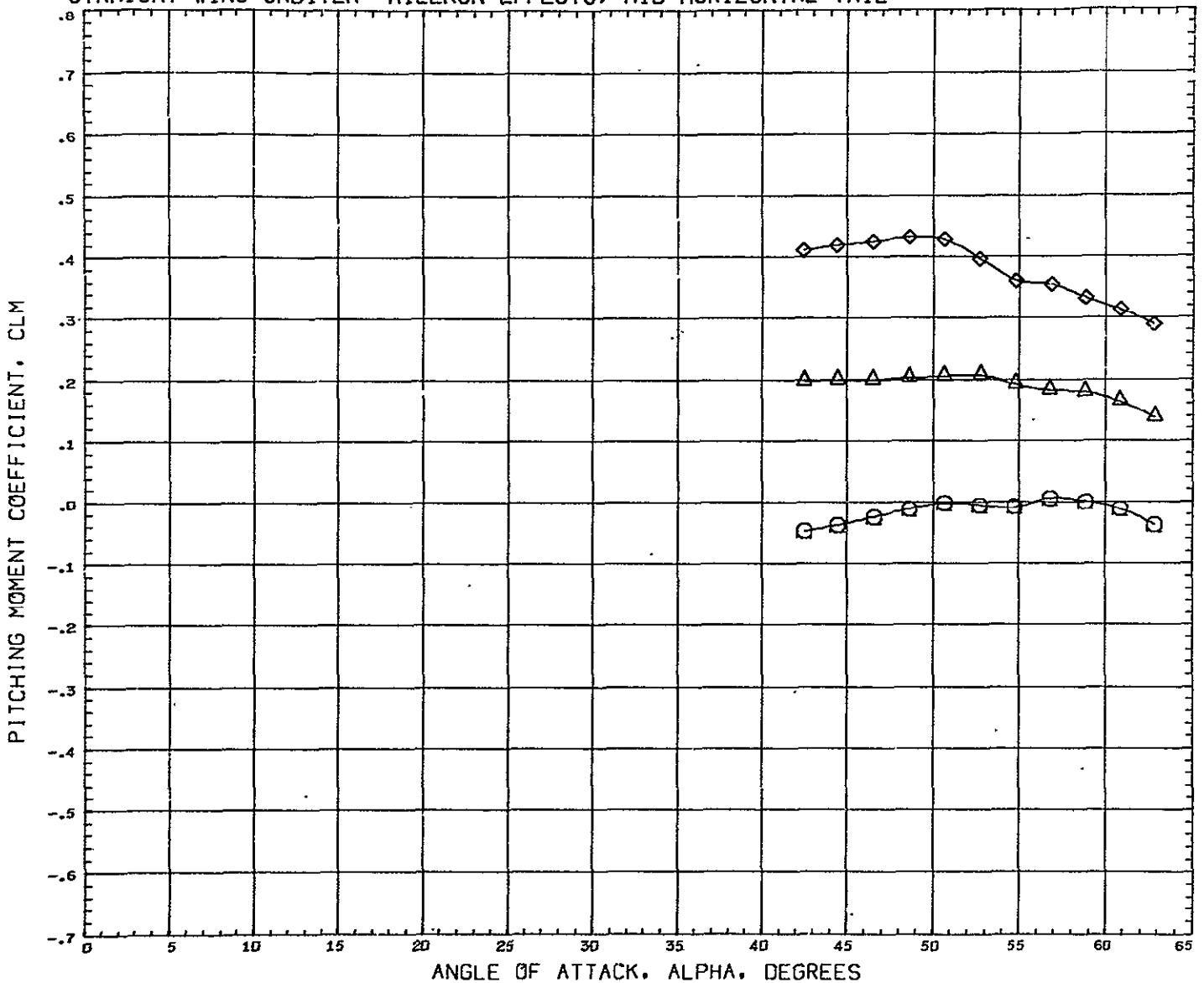
STRAIGHT WING ORBITER-AILERON EFFECTS, MID-HORIZONTAL TAIL



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	HTAIL	AILRON	REFERENCE INFORMATION	
(C2739C)	MSFC478 NR ST ORBITER B6W10H12	0.000	0.000	20.000	REFS	3084.0040 SQ FT
(C2741C)	MSFC478 NR ST ORBITER B6W10H12	0.010	-20.000	20.000	REFL	322.9004 INCHES
(C2743C)	MSFC478 NR ST ORBITER B6W10H12	0.000	-40.000	20.000	REFB	1490.0040 INCHES
					XMRP	1293.0040 INCHES
					YMRP	0.0000 INCHES
					ZMRP	50.5000 INCHES
					SCALE	0.0035 SCALE

MACH 4.959

STRAIGHT WING ORBITER-AILERON EFFECTS, MID-HORIZONTAL TAIL



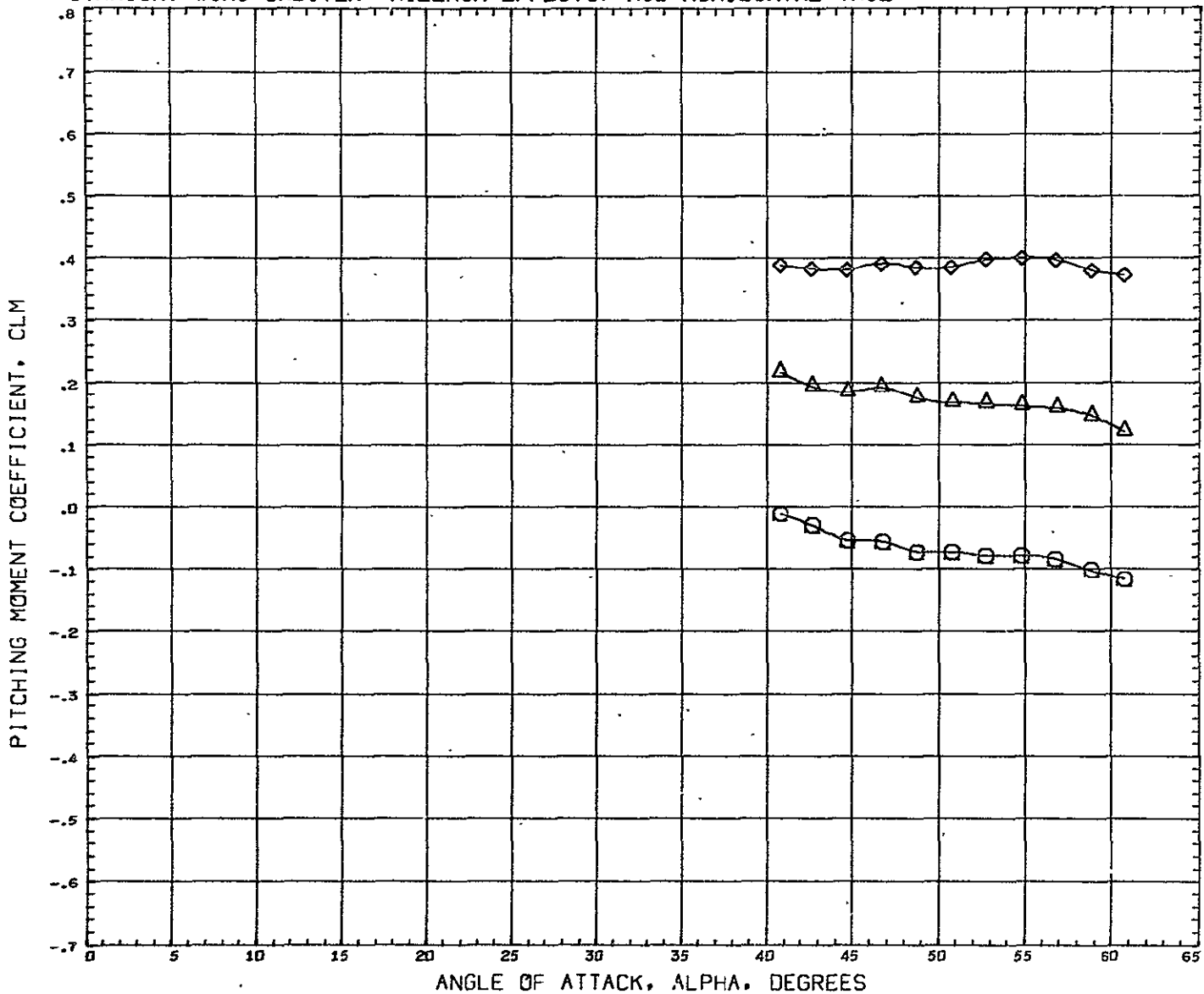
DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(C2739C) ○	MSFC478 NR ST ORBITER B6W10H12
(C2741C) △	MSFC478 NR ST ORBITER B6W10H12
(C2743C) ◇	MSFC478 NR ST ORBITER B6W10H12

BETA	HTAIL	AILRON
0.000	0.000	20.000
0.010	-20.000	20.000
0.000	-40.000	20.000

REFERENCE INFORMATION	
REFS	3084.0040 SQ FT
REFL	322.9004 INCHES
REFB	1490.0040 INCHES
XMRP	1293.0040 INCHES
YMRP	0.0000 INCHES
ZMRP	50.5000 INCHES
SCALE	0.0035 SCALE

MACH 1.959

STRAIGHT WING ORBITER-AILERON EFFECTS, MID-HORIZONTAL TAIL



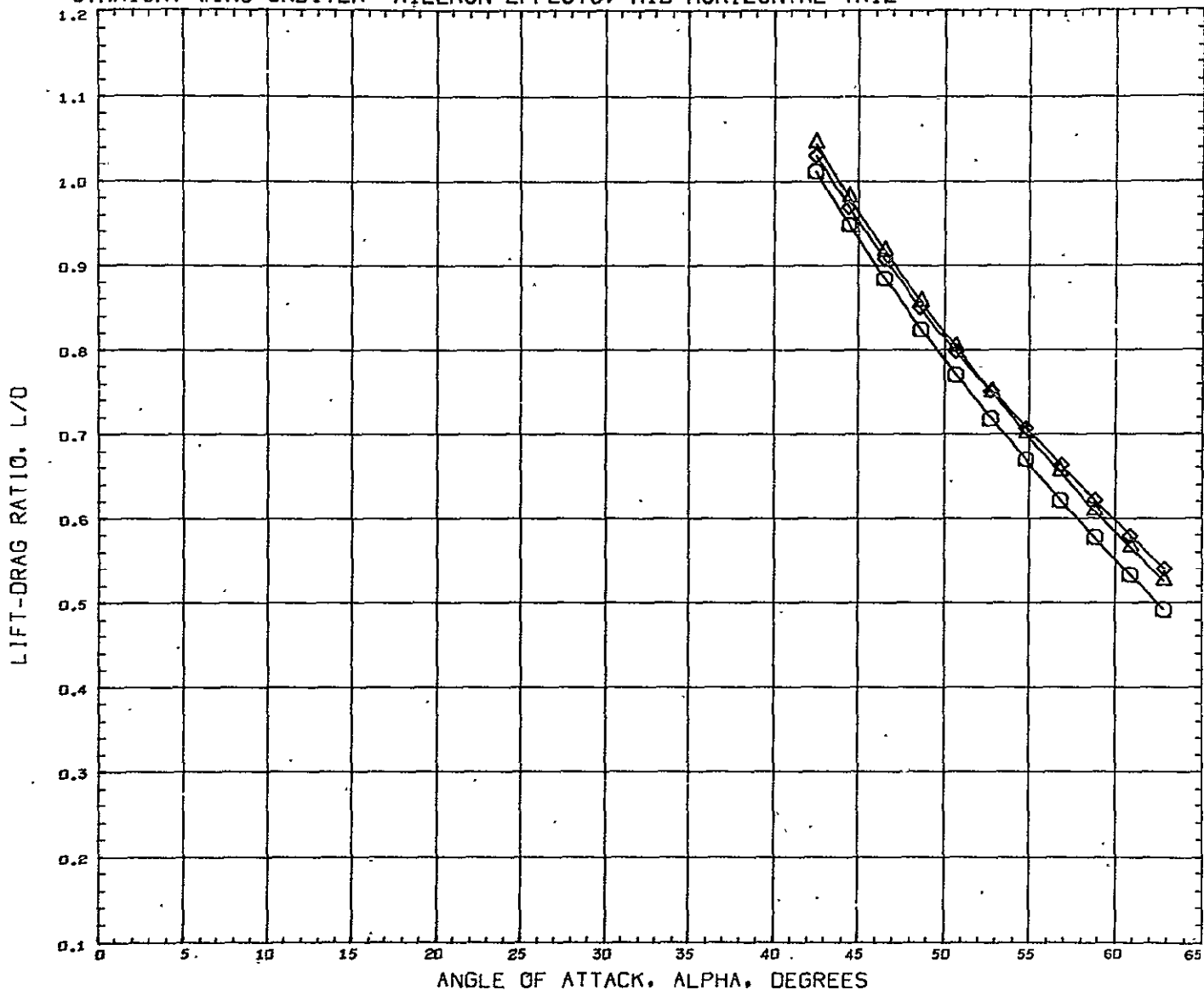
DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(C2739C)	MSFC478 NR ST ORBITER B6W10H12
(C2741C)	MSFC478 NR ST ORBITER B6W10H12
(C2743C)	MSFC478 NR ST ORBITER B6W10H12

BETA	HTAIL	AILRON
0.000	0.000	20.000
0.010	-20.000	20.000
0.000	-40.000	20.000

REFERENCE INFORMATION	
REFS	3084.0040 SQ FT
REFL	322.9004 INCHES
REFB	1490.0040 INCHES
XMRP	1293.0042 INCHES
YMFP	0.0000 INCHES
ZMRF	50.5000 INCHES
SCALE	0.0035 SCALE

HACH 4.959

STRAIGHT WING ORBITER-AILERON EFFECTS, MID-HORIZONTAL TAIL



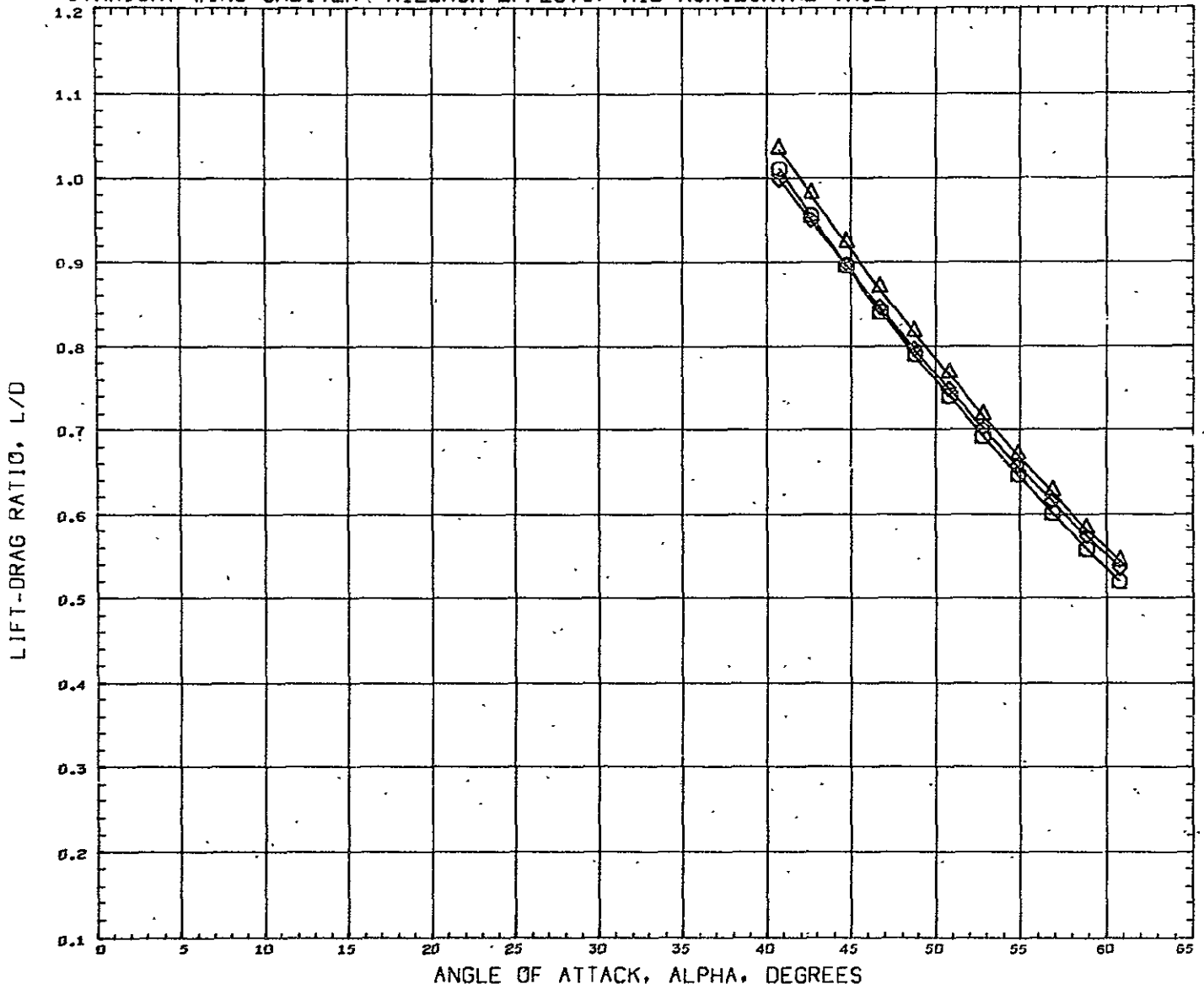
DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(C2739C)	MSFC478 NR ST ORBITER 86WIDH12
(C2741C)	MSFC478 NR ST ORBITER 86WIDH12
(C2743C)	MSFC478 NR ST ORBITER 86WIDH12

BETA	HTAIL	AILRON
0.000	0.000	20.000
0.010	-20.000	20.000
0.000	-40.000	20.000

REFERENCE INFORMATION		
REFS	3084.0040	90 FT
REFL	322.9004	INCHES
REFB	1490.0040	INCHES
XMRP	1293.0040	INCHES
YMRP	0.0000	INCHES
ZMRP	50.5000	INCHES
SCALE	0.0035	SCALE

MACH 1.959

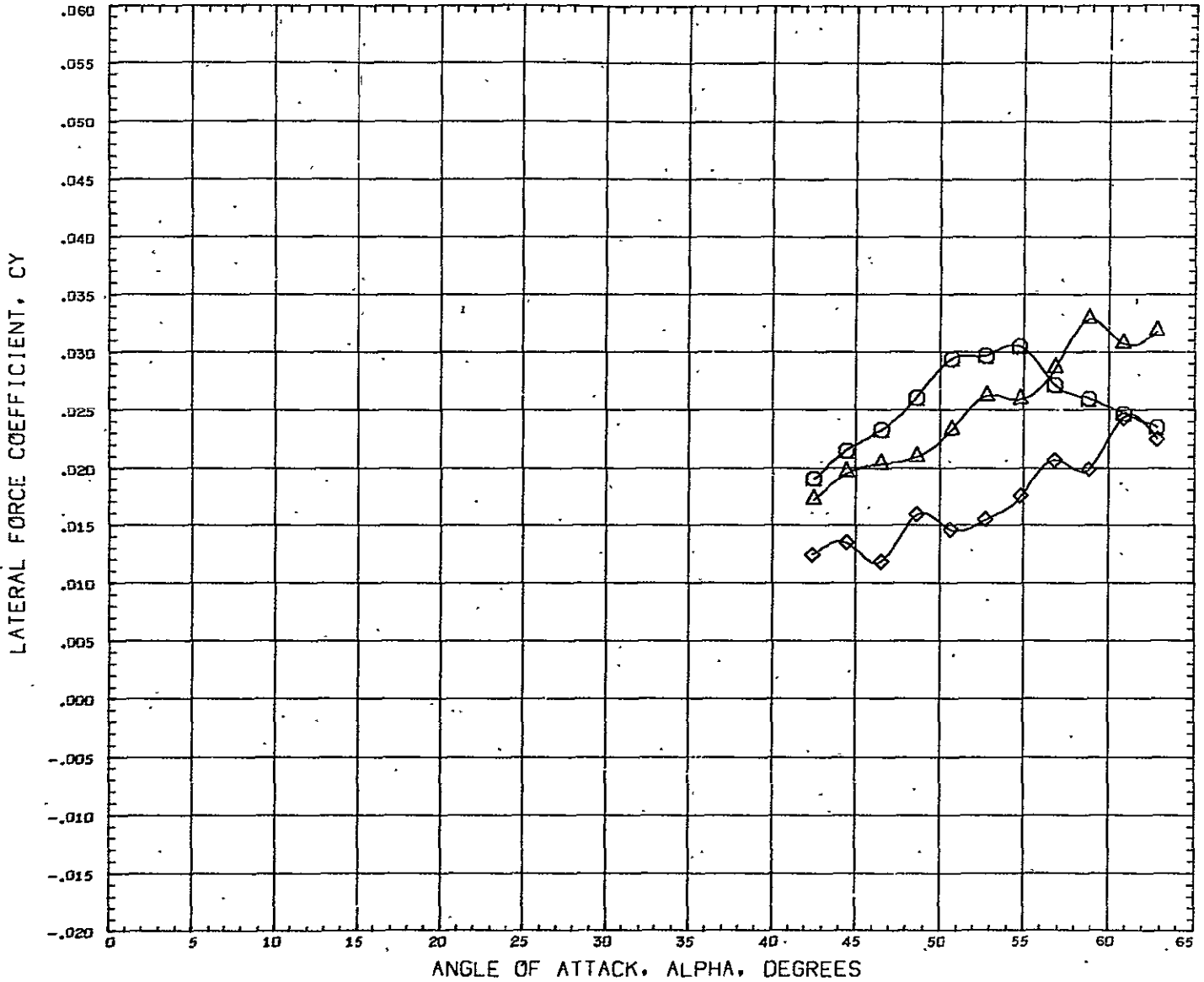
STRAIGHT WING ORBITER-AILERON EFFECTS, MID-HORIZONTAL TAIL



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	HTAIL	AILRON	REFERENCE INFORMATION
(C2739C)	MSFC478 NR ST ORBITER B6W1DH12	0.000	0.000	20.000	REFS 3084.0040 SQ FT
(C2741C)	MSFC478 NR ST ORBITER B6W1DH12	0.010	-20.000	20.000	REFL 322.9004 INCHES
(C2743C)	MSFC478 NR ST ORBITER B6W1DH12	0.000	-40.000	20.000	REFB 1490.0040 INCHES
					XMRP 1293.0040 INCHES
					YMRP 0.0000 INCHES
					ZMRP - 50.5000 INCHES
					SCALE 0.0035 SCALE

MACH 4.959

STRAIGHT WING ORBITER- AILERON EFFECTS, MID-HORIZONTAL TAIL



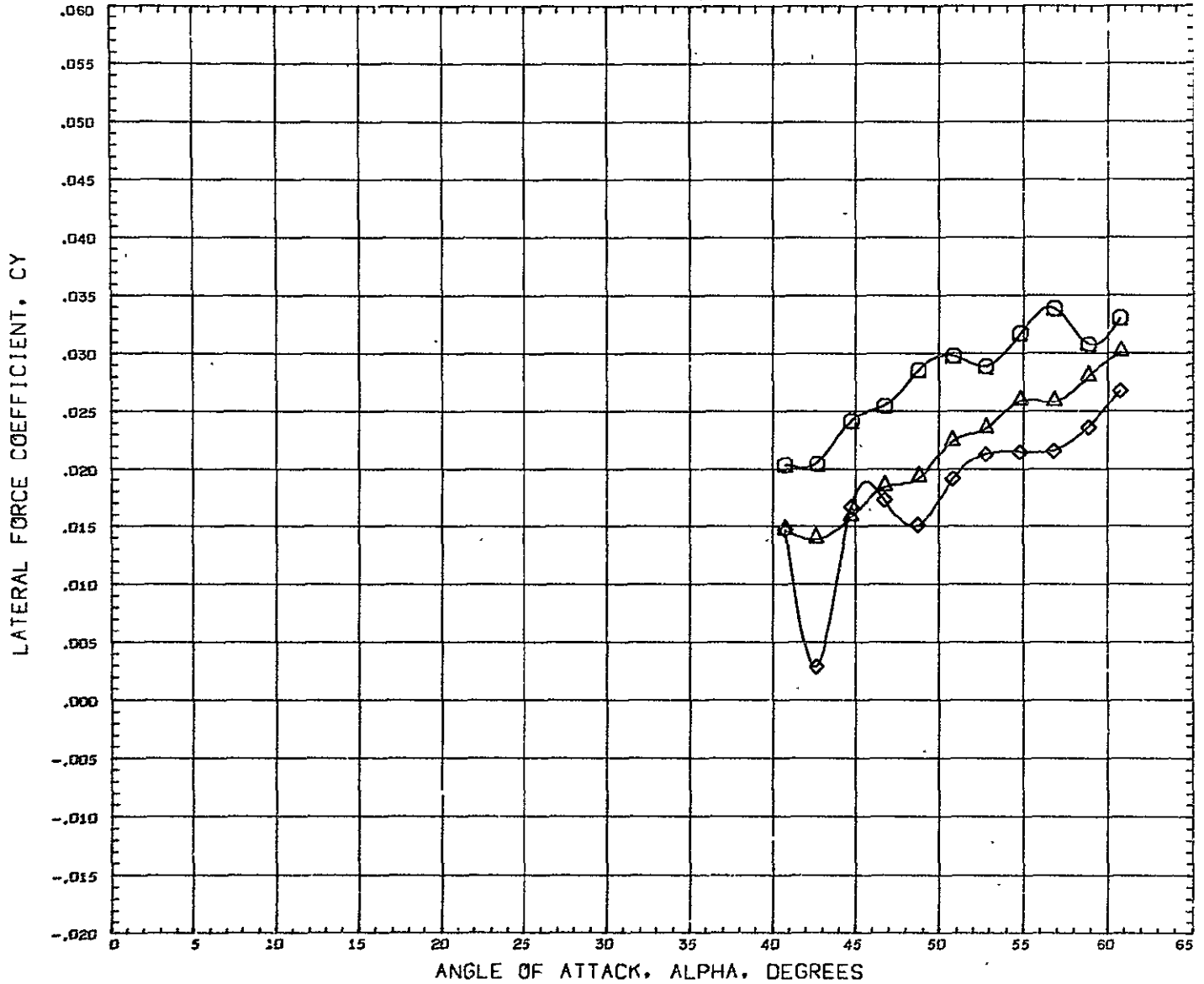
DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(C2739C)	MSFC478 NR ST ORBITER B6W10H12
(C2741C)	MSFC478 NR ST ORBITER B6W10H12
(C2743C)	MSFC478 NR ST ORBITER B6W10H12

BETA	HTAIL	AILRON
0.000	0.000	20.000
0.010	-20.000	20.000
0.000	-40.000	20.000

REFERENCE INFORMATION	
REFS	3084.0040 SQ FT
REFL	322.9004 INCHES
REFB	1490.0040 INCHES
XMRP	1293.0040 INCHES
YMRP	0.0000 INCHES
ZMRP	50.5000 INCHES
SCALE	0.0035 SCALE

MACH 1.959

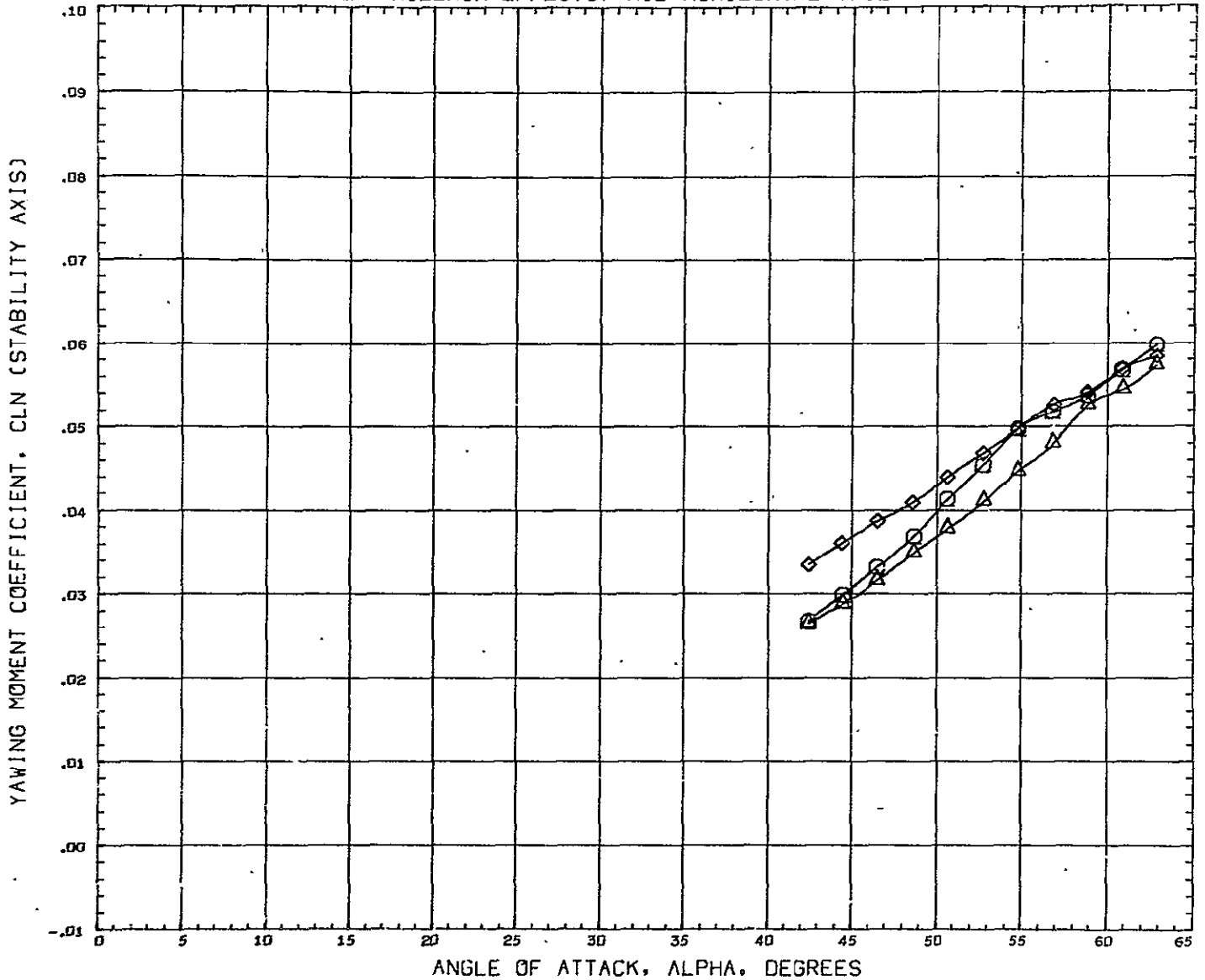
STRAIGHT WING ORBITER- AILERON EFFECTS, MID-HORIZONTAL TAIL



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	HTAIL	AILRON	REFERENCE INFORMATION
(C2739C)	MSFC478 NR ST ORBITER B6W10H12	0.000	0.000	20.000	REFS 3084.0040 SQ FT
(C2741C)	MSFC478 NR ST ORBITER B6W10H12	0.010	-20.000	20.000	REFL 322.9004 INCHES
(C2743C)	MSFC478 NR ST ORBITER B6W10H12	0.000	-40.000	20.000	REFB 1490.0040 INCHES
					XMRP 1293.0043 INCHES
					YMRP 0.0003 INCHES
					ZMRP 50.5000 INCHES
					SCALE 0.0035 SCALE

MACH 4.959

STRAIGHT WING ORBITER- AILERON EFFECTS, MID-HORIZONTAL TAIL



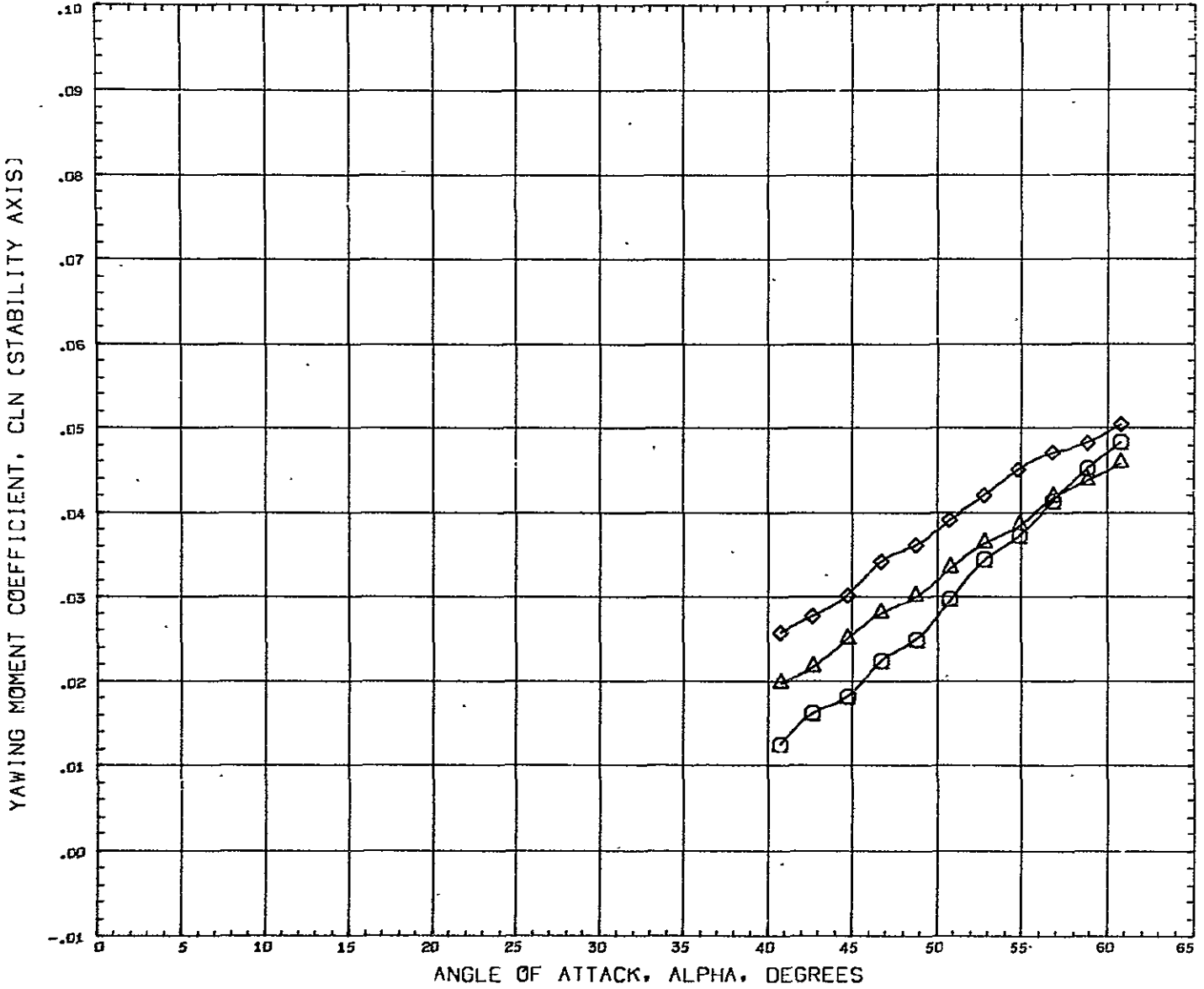
DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(C2739C)	MSFC478 NR ST ORBITER B6W10H12
(C2741C)	MSFC478 NR ST ORBITER B6W10H12
(C2743C)	MSFC478 NR ST ORBITER B6W10H12

BETA	HTAIL	AILRON
0.000	0.000	20.000
0.010	-20.000	20.000
0.000	-40.000	20.000

REFERENCE INFORMATION		
REFS	3084.0040	SQ FT
REFL	322.9004	INCHES
REFB	1490.0040	INCHES
XMRP	1293.0040	INCHES
YMRP	0.0000	INCHES
ZMRP	50.5000	INCHES
SCALE	0.0035	SCALE

MACH 1.959

STRAIGHT WING ORBITER-AILERON EFFECTS, MID-HORIZONTAL TAIL



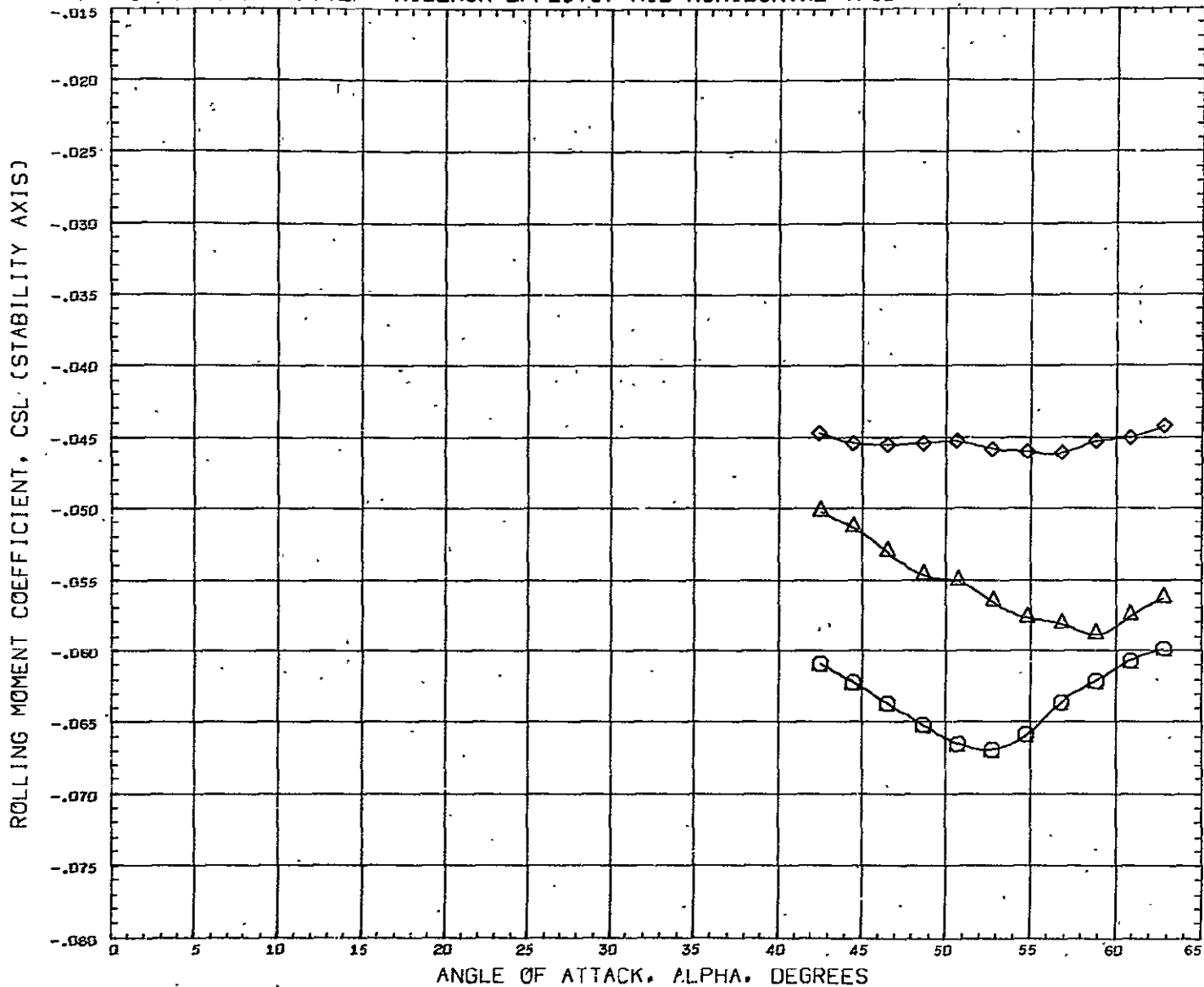
DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(C2739C)	MSFC478 NR ST ORBITER B6W1DH12
(C2741C)	MSFC478 NR ST ORBITER B6W1DH12
(C2743C)	MSFC478 NR ST ORBITER B6W1DH12

BETA	HTAIL	AILRON
0.000	0.000	20.000
0.010	-20.000	20.000
0.000	-40.000	20.000

REFERENCE INFORMATION		
REFS	3084.0040	SQ FT
REFL	322.9004	INCHES
REFB	1490.0040	INCHES
XMRP	1293.0040	INCHES
YMRP	0.0000	INCHES
ZMRP	50.5000	INCHES
SCALE	0.0035	SCALE

MACH 4.959

STRAIGHT WING ORBITER-AILERON EFFECTS, MID-HORIZONTAL TAIL



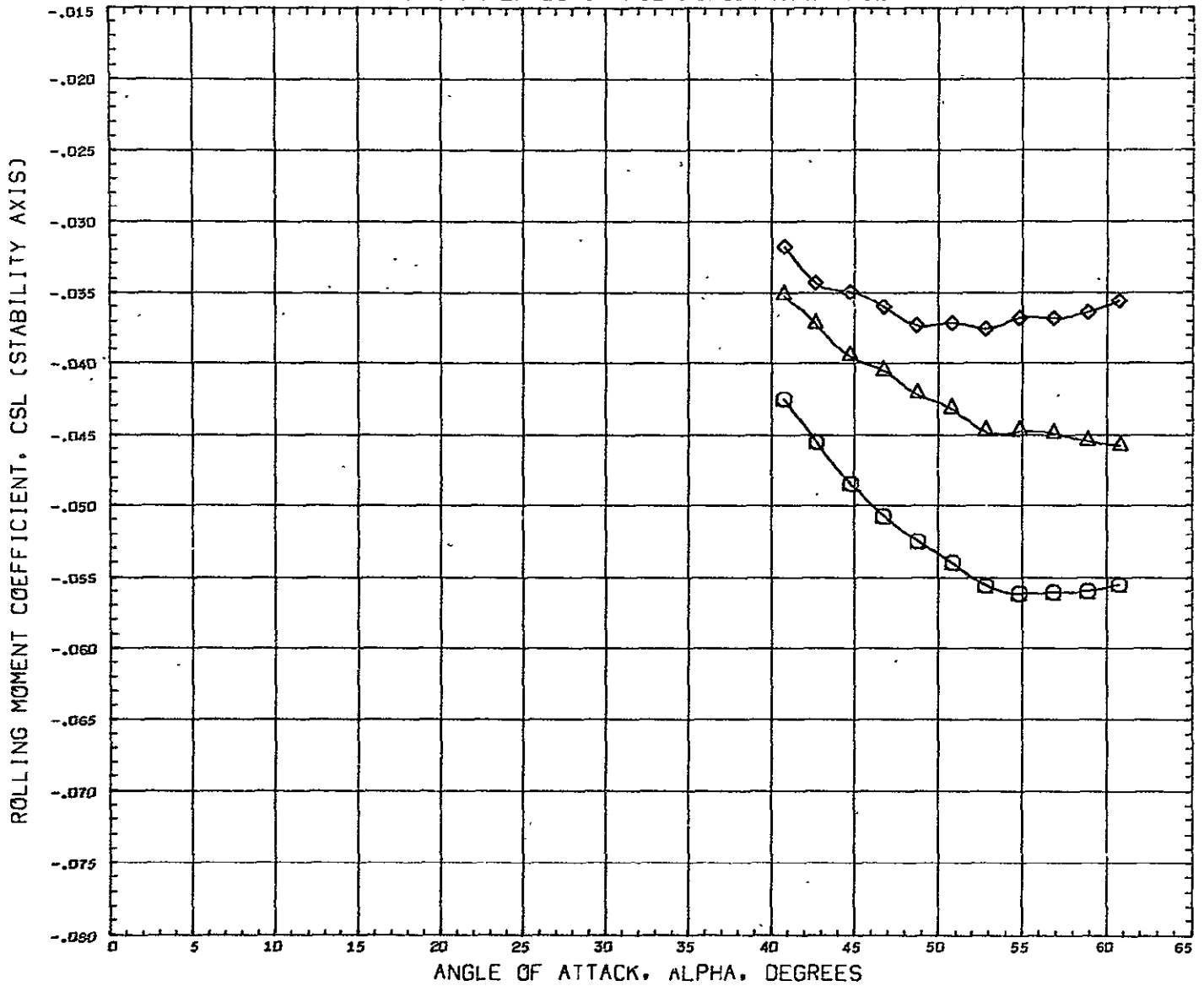
DATA SET SYMBOL	CONFIGURATION DESCRIPTION
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(C2741C)	MSFC478 NR ST ORBITER 06W10H12
(C2743C)	MSFC478 NR ST ORBITER 06W10H12

BETA	HTAIL	AILRON
0.000	0.000	20.000
0.010	-20.000	20.000
0.000	-40.000	20.000

REFERENCE INFORMATION	
REFS	3084.0040 SQ FT.
REFL	322.9004 INCHES
REFB	1490.0040 INCHES
XMRP	1293.0040 INCHES
YMRP	0.0000 INCHES
ZMRP	50.5000 INCHES
SCALE	0.0035 SCALE

PACH 1.959

STRAIGHT WING ORBITER-AILERON EFFECTS, MID-HORIZONTAL TAIL



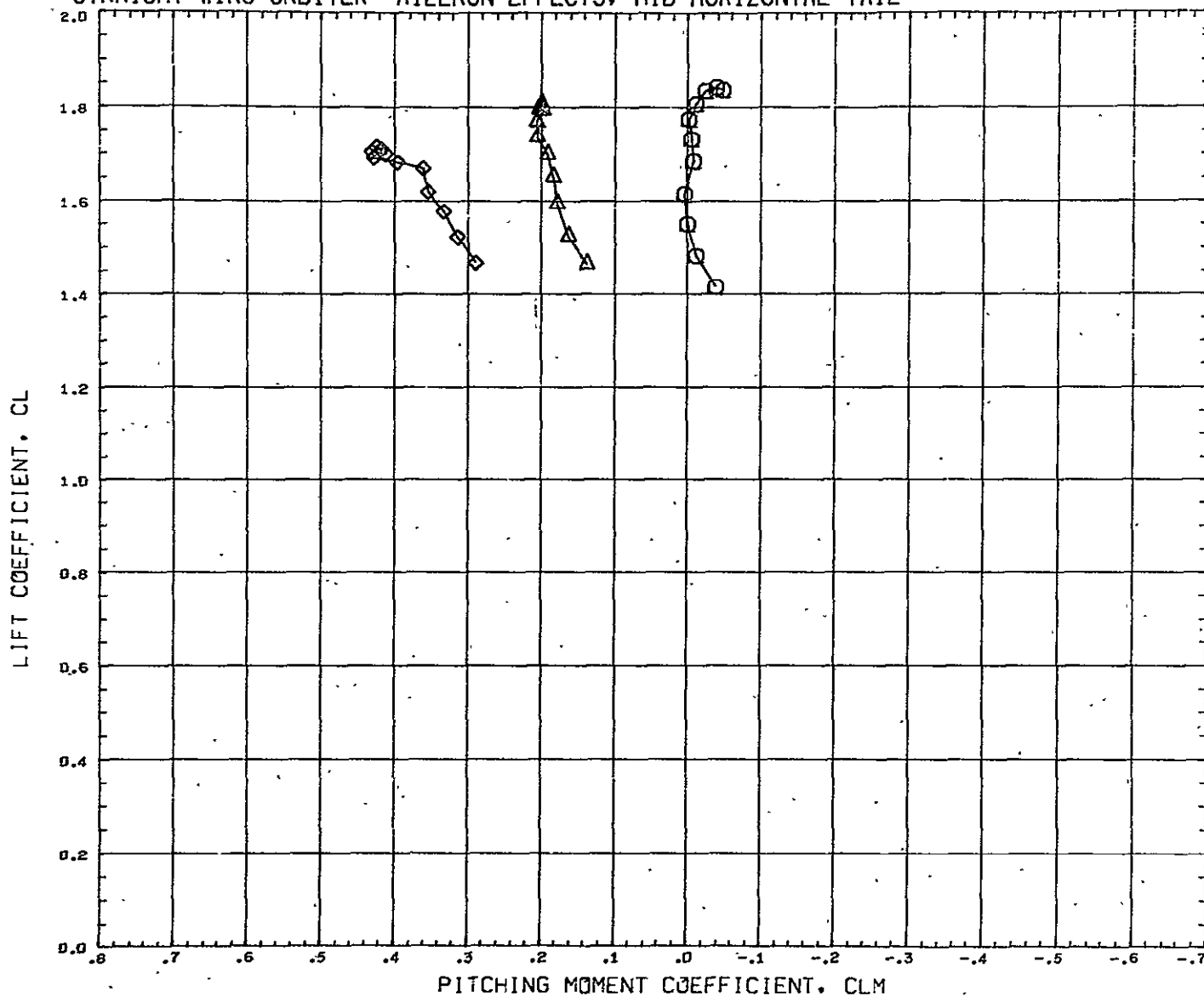
DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(C2739C) ○	MSFC478 NR ST ORBITER B6W1DH12
(C2741C) △	MSFC478 NR ST ORBITER B6W1DH12
(C2743C) ◇	MSFC478 NR ST ORBITER B6W1DH12

BETA	HTAIL	AILRON
0.000	0.000	20.000
0.010	-20.000	20.000
0.000	-40.000	20.000

REFERENCE INFORMATION	
REFS	3084.0040 SQ FT
REFL	322.9004 INCHES
REFB	1490.0040 INCHES
XMRP	1293.0040 INCHES
YMRP	0.0000 INCHES
ZMRP	50.5000 INCHES
SCALE	0.0035 SCALE

MACH 4.959

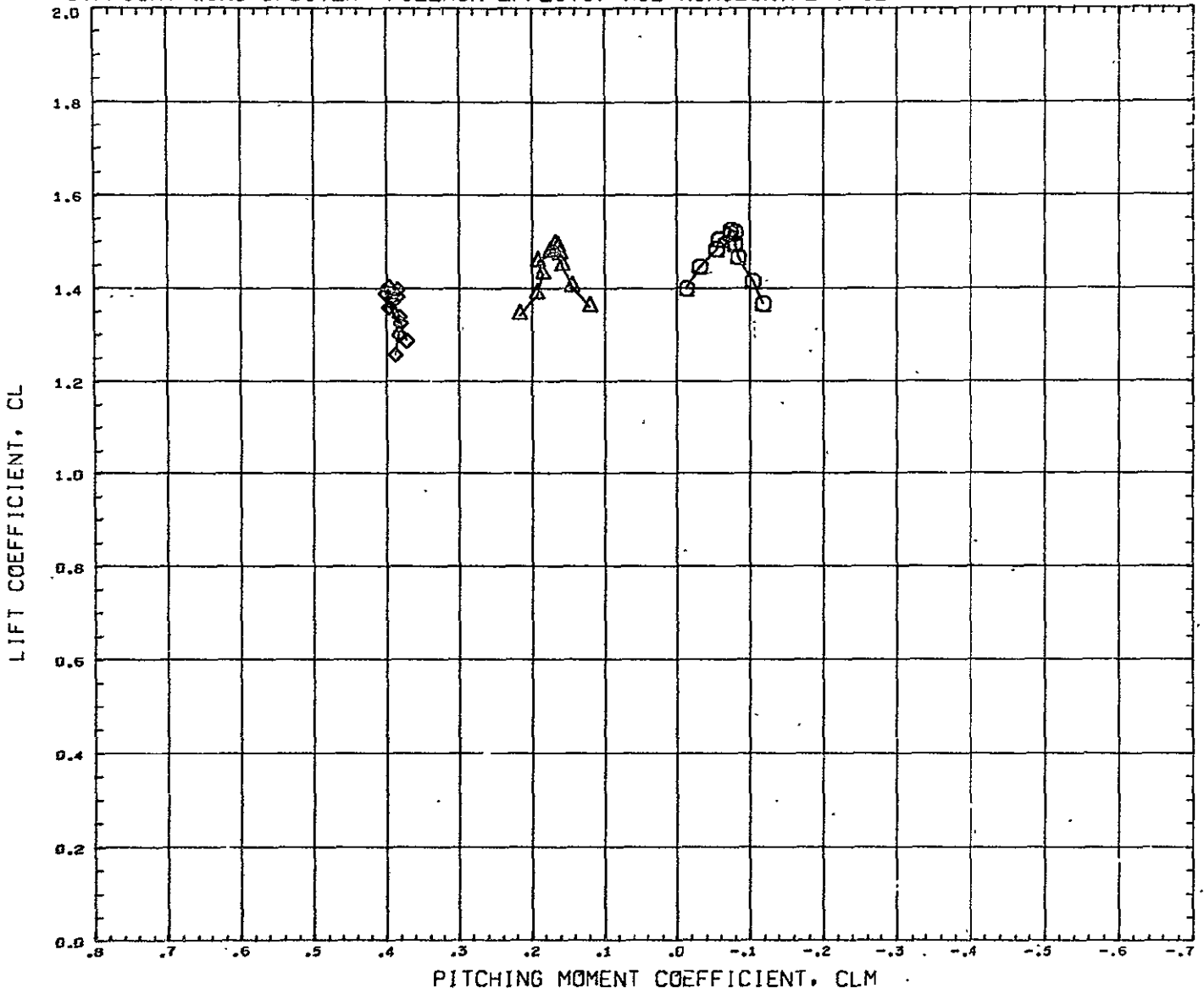
STRAIGHT WING ORBITER-AILERON EFFECTS, MID-HORIZONTAL TAIL



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	HTAIL	AILRON	REFERENCE INFORMATION
(C2739C)	MSFC478 NR ST ORBITER B6W10H12	0.000	0.000	20.000	REFS 3084.0040 SQ FT
(C2741C)	MSFC478 NR ST ORBITER B6W10H12	0.010	-20.000	20.000	REFL 322.9004 INCHES
(C2743C)	MSFC478 NR ST ORBITER B6W10H12	0.000	-40.000	20.000	REFB 1490.0040 INCHES
					XMRP 1293.0040 INCHES
					YMRP 0.0000 INCHES
					ZMRP - 50.5000 INCHES
					SCALE 0.0035 SCALE

MACH 1.959

STRAIGHT WING ORBITER-AILERON EFFECTS, MID-HORIZONTAL TAIL



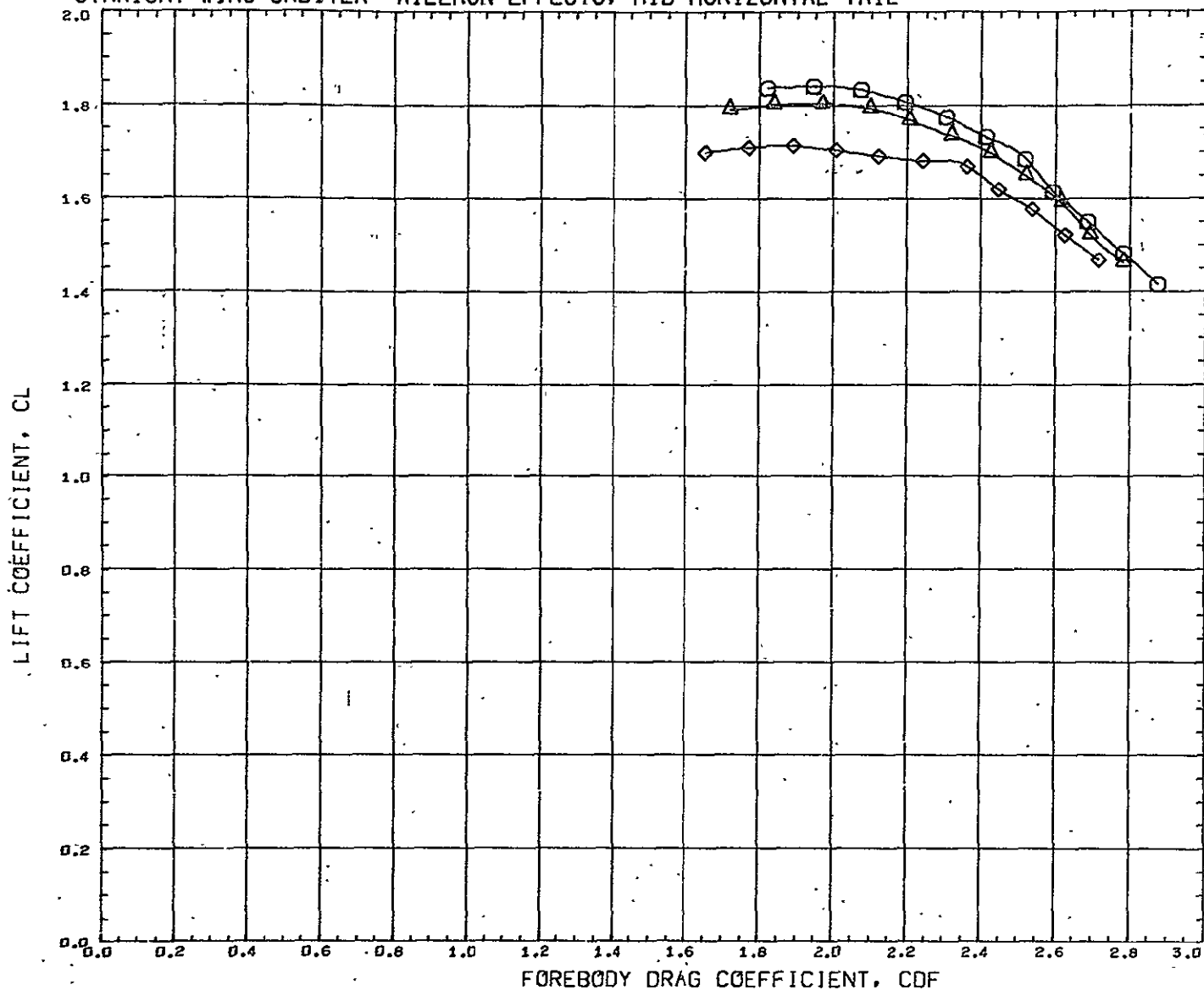
DATA SET SYMBOL	CONFIGURATION DESCRIPTION
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(C2741C)	MSFC478 NR ST ORBITER B6WIDH12
(C2743C)	MSFC478 NR ST ORBITER B6WIDH12

BETA	HTAIL	AILRON
0.000	0.000	20.000
0.010	-20.000	20.000
0.000	-40.000	20.000

REFERENCE INFORMATION		
REFS	3084.0040	SQ FT
REFL	322.9004	INCHES
REFB	1490.0040	INCHES
XMRP	1293.0040	INCHES
YMRP	0.0000	INCHES
ZMRP	50.0000	INCHES
SCALE	0.0035	SCALE

MACH 4.959

STRAIGHT WING ORBITER-AILERON EFFECTS, MID-HORIZONTAL TAIL



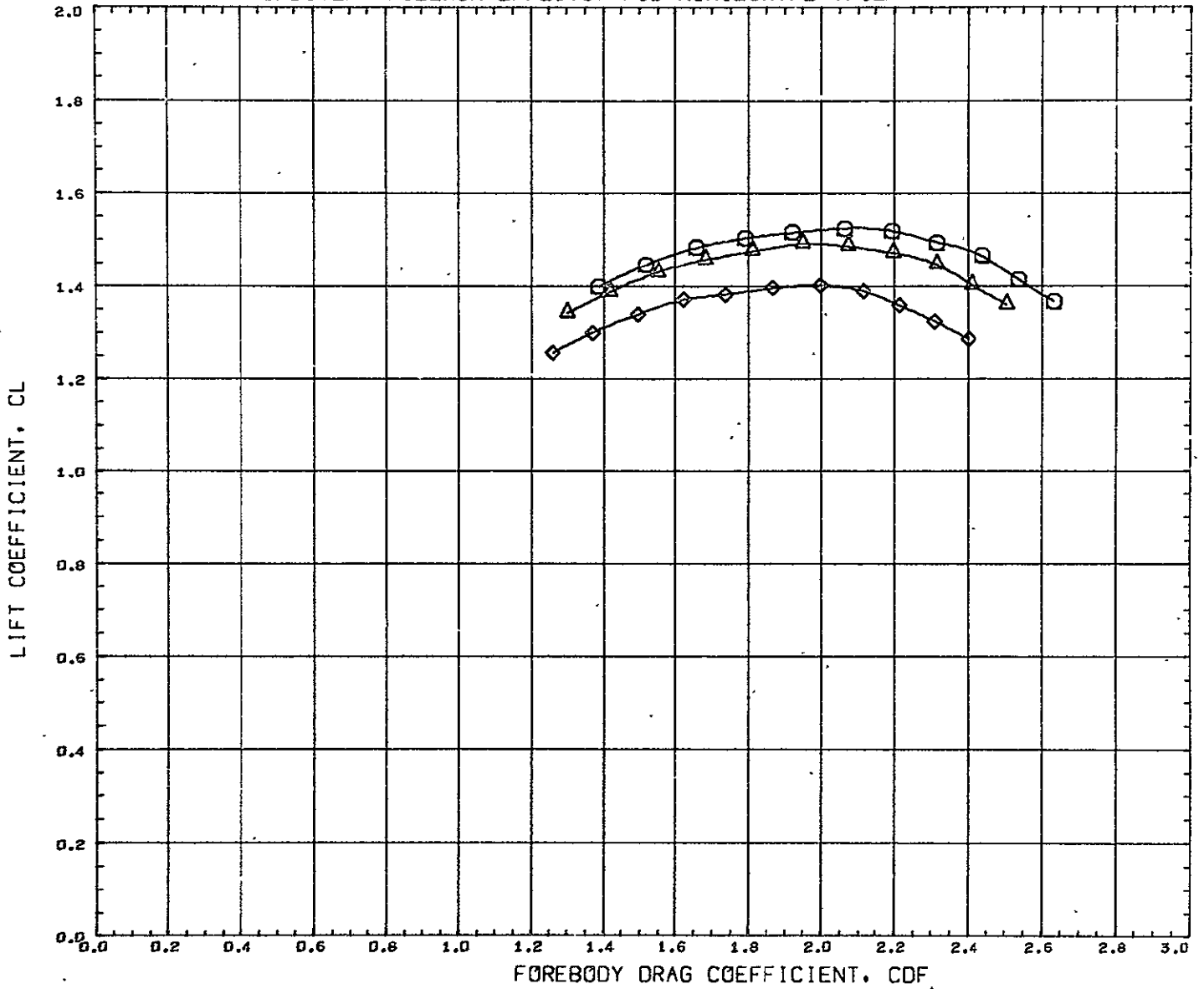
DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(C2739C)	MSFC478 NR ST ORBITER B6WIDTH12
(C2741C)	MSFC478 NR ST ORBITER B6WIDTH12
(C2743C)	MSFC478 NR ST ORBITER B6WIDTH12

BETA	HTAIL	AILRON
0.000	0.000	20.000
0.010	-20.000	20.000
0.000	-40.000	20.000

REFERENCE INFORMATION		
REFS	3084.0040	SQ FT
REFL	322.9004	INCHES
REFB	1490.0040	INCHES
XMRP	1293.0040	INCHES
YMRP	0.0000	INCHES
ZMRP	50.5000	INCHES
SCALE	0.0035	SCALE

PACH 1.959

STRAIGHT WING ORBITER-AILERON EFFECTS, MID-HORIZONTAL TAIL



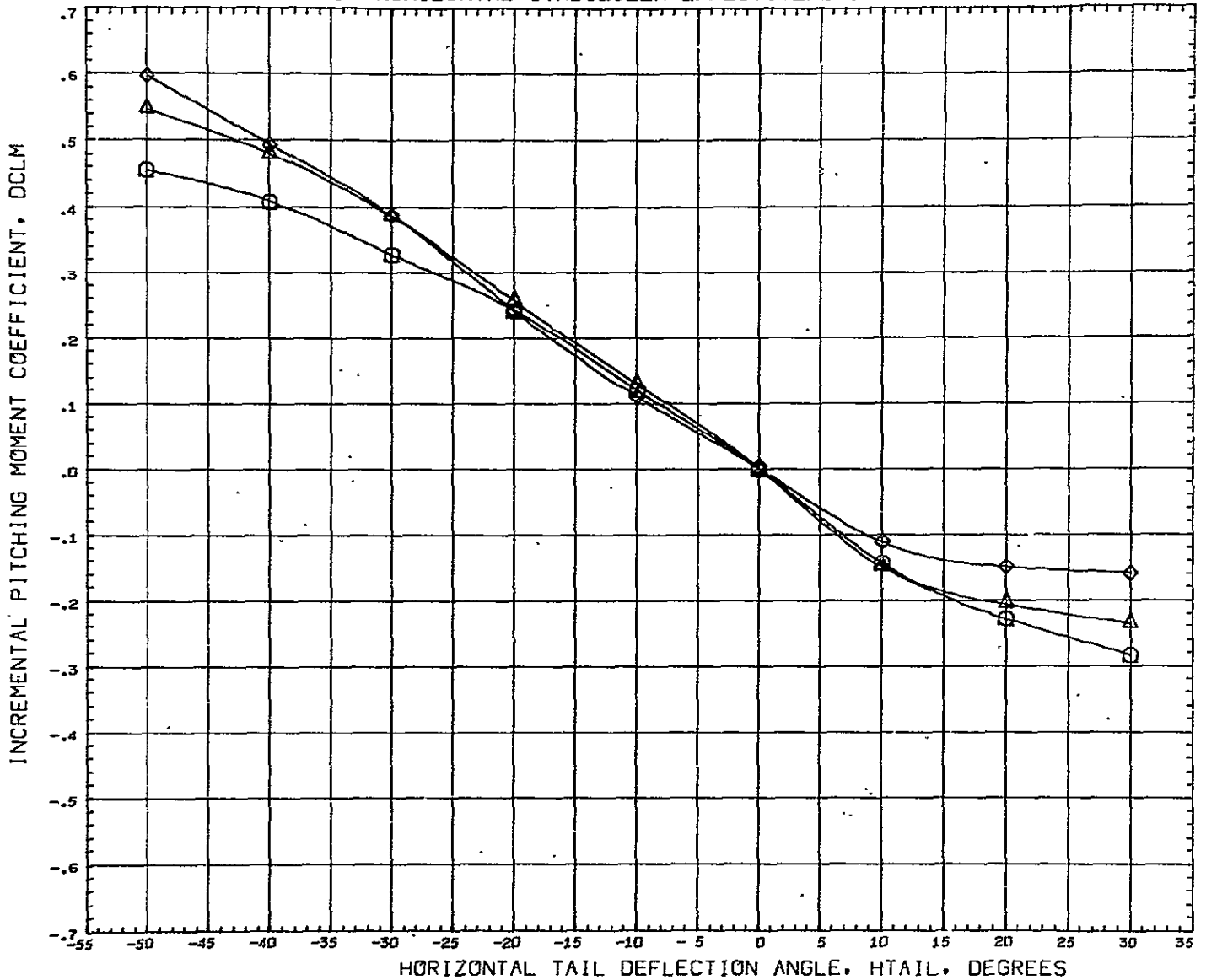
DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(C2739C)	MSFC478 NR ST ORBITER B6W1DH12
(C2741C)	MSFC478 NR ST ORBITER B6W1DH12
(C2743C)	MSFC478 NR ST ORBITER B6W1DH12

BETA	HTAIL	AILRON
0.000	0.000	20.000
0.010	-20.000	20.000
0.000	-40.000	20.000

REFERENCE INFORMATION	
REFS	3084.0040 SQ FT.
REFL	322.9004 INCHES
REFB	1490.0040 INCHES
XNRF	1293.0040 INCHES
YNRF	0.0000 INCHES
ZNRF	50.5000 INCHES
SCALE	0.0035 SCALE

PACH 4.909

STRAIGHT WING ORBITER-HORIZONTAL STABILIZER EFFECTIVENESS AT VARIOUS ALPHAS

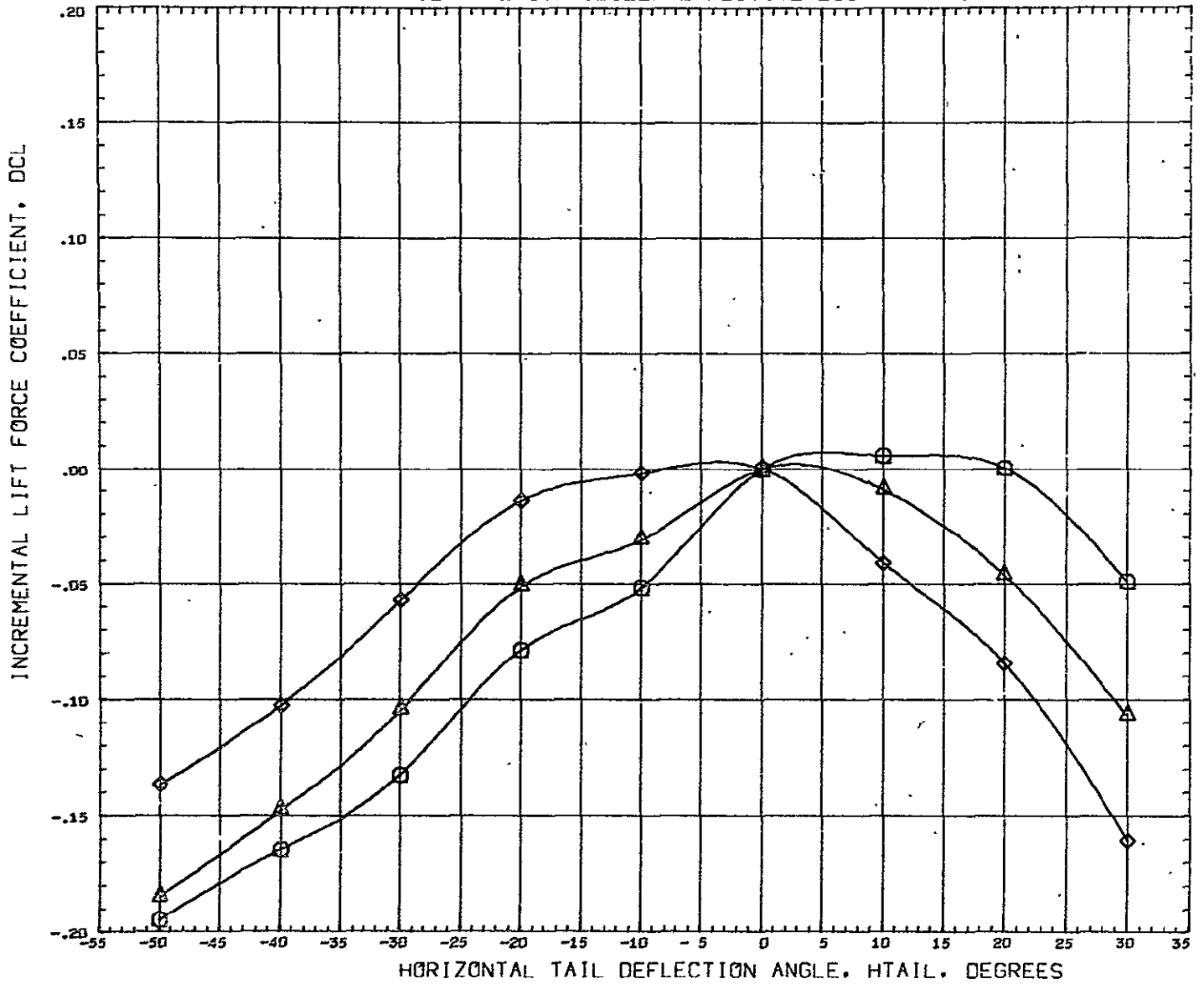


SYMBOL	ALPHA	MACH	PARAMETRIC VALUES	BETA	DATA SOURCE	HTAIL	DATA SOURCE	HTAIL	REFERENCE INFORMATION
○	41.000	MACH	4.969	BETA	0.000	F2720C	-50.000	F2719C	-40.000
△	50.000	ATLECON	0.000			F2718C	-30.000	F2717C	-20.000
◇	60.000					F2716C	-10.000	F2712C	0.000
						F2713C	10.000	F2714C	20.000
						F2715C	30.000		

REFS	SCALE	REFERENCE INFORMATION
3084.0040	0.0035	50 FT
322.9004		INCHES
1490.0040		INCHES
1293.0040		INCHES
0.0000		INCHES
50.5000		INCHES
0.0035		SCALE

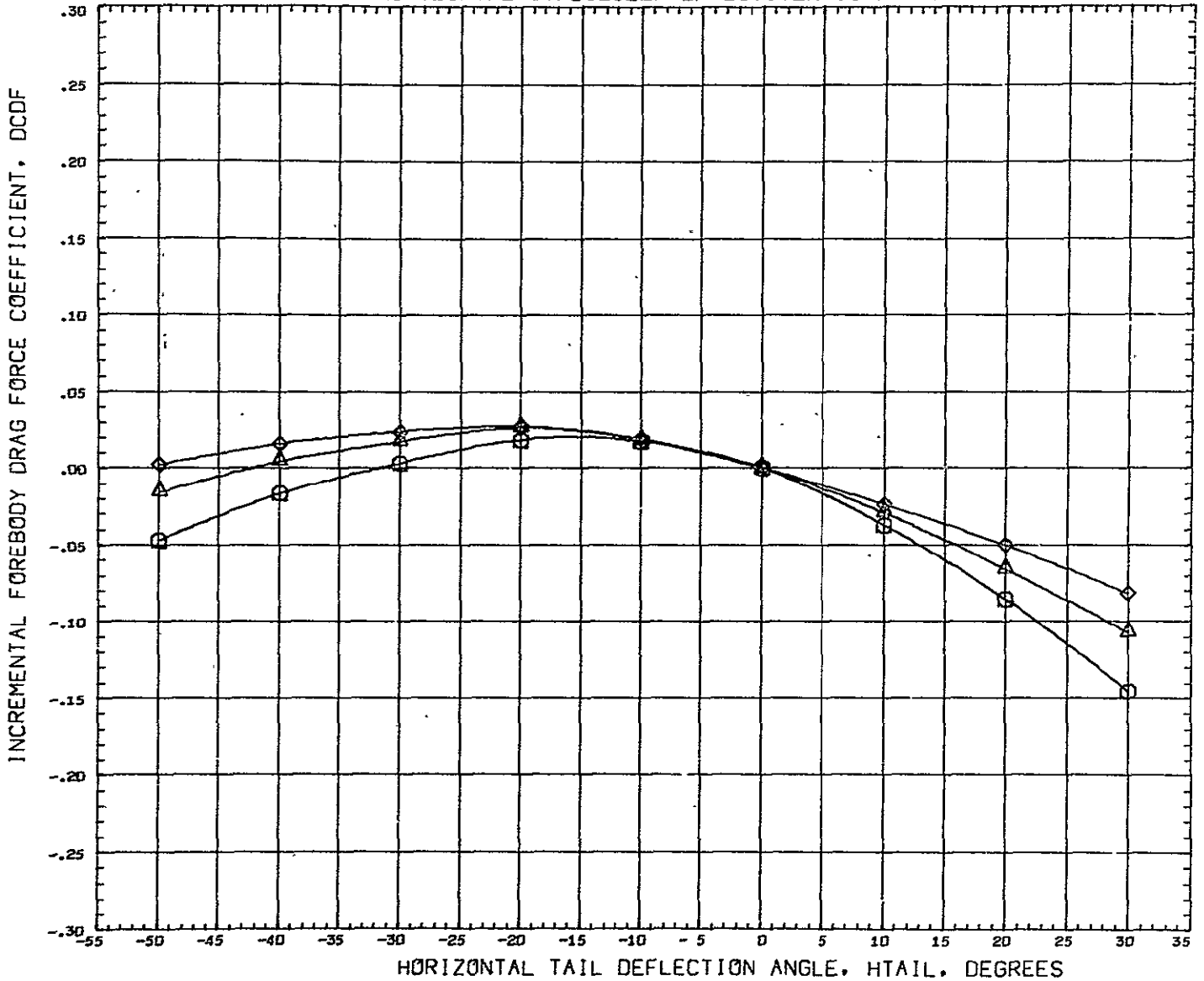
DATA HIST. CODE #EI#CH

STRAIGHT WING ORBITER-HORIZONTAL STABILIZER EFFECTIVENESS AT VARIOUS ALPHAS



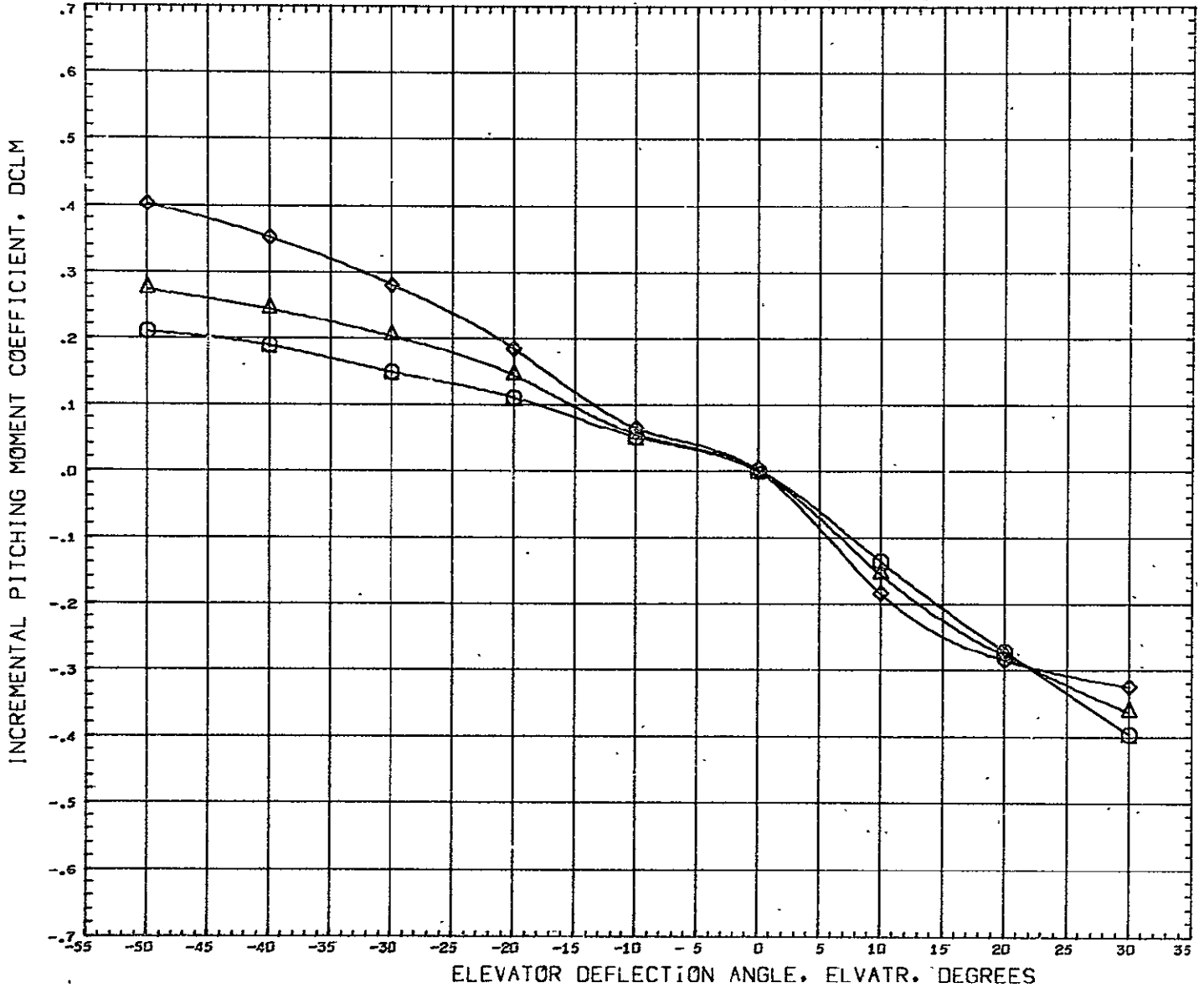
SYMBOL	ALPHA	MACH	PARAMETRIC VALUES	DATA SOURCE	REFERENCE INFORMATION
○	41.000	4.960	SETA 0.000	F2720C	3084.0040 SQ FT
△	50.000	4.960	SETA 0.000	F2718C	322.9004 INCHES
◇	60.000	4.960	SETA 0.000	F2716C	1490.0040 INCHES
				F2712C	1293.0040 INCHES
				F2714C	0.0000 INCHES
					50.5000 INCHES
					0.0035 SCALE

STRAIGHT WING ORBITER-HORIZONTAL STABILIZER EFFECTIVENESS AT VARIOUS ALPHAS



SYMBOL	ALPHA	MACH	PARAMETRIC VALUES	DATA SOURCE	REFERENCE INFORMATION
○	41.000	4.960	ETA 0.000	F2720C - 50.000	REFS 3084.0040 SQ FT
△	50.000	AILRON	0.000	F2718C - 30.000	REFL 322.9004 INCHES
◇	60.000			F2716C - 10.000	REFB 1490.0040 INCHES
				F2713C 10.000	XMRP 1293.0040 INCHES
				F2715C 30.000	YMRP 0.0000 INCHES
					ZMRP - 50.5000 INCHES
					SCALE 0.0035 SCALE

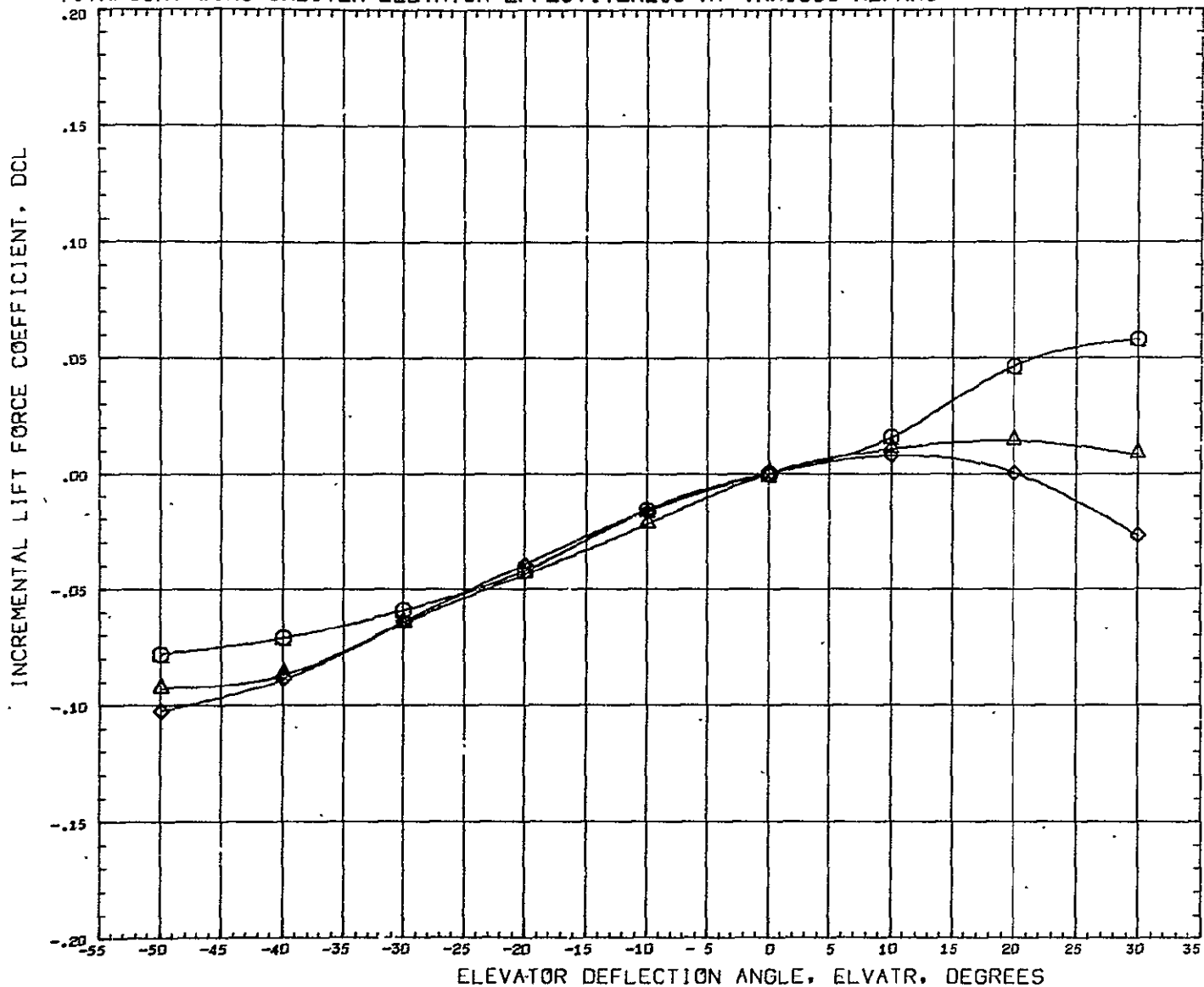
STRAIGHT WING ORBITER-ELEVATOR EFFECTIVENESS AT VARIOUS ALPHAS



SYMBOL	ALPHA	MACH	PARAMETRIC VALUES	BETA	0.000	DATA SOURCE	DATA SOURCE	ELVATR	ELVATR	REFS	3084.0040	SQ FT
○	41.000	4.960				F2738C	F2737C	-50.000	-40.000	REFL	322.9004	INCHES
△	50.000	4.960				F2736C	F2735C	-30.000	-20.000	REFB	1490.0040	INCHES
◇	60.000	4.960				F2734C	F2730C	-10.000	0.000	XMRP	1293.0040	INCHES
						F2731C	F2732C	10.000	20.000	YMRP	0.0000	INCHES
						F2733C		30.000		ZMRP	50.6000	INCHES
										SCALE	0.0035	SCALE

DATA HIST. CODE #E10CM

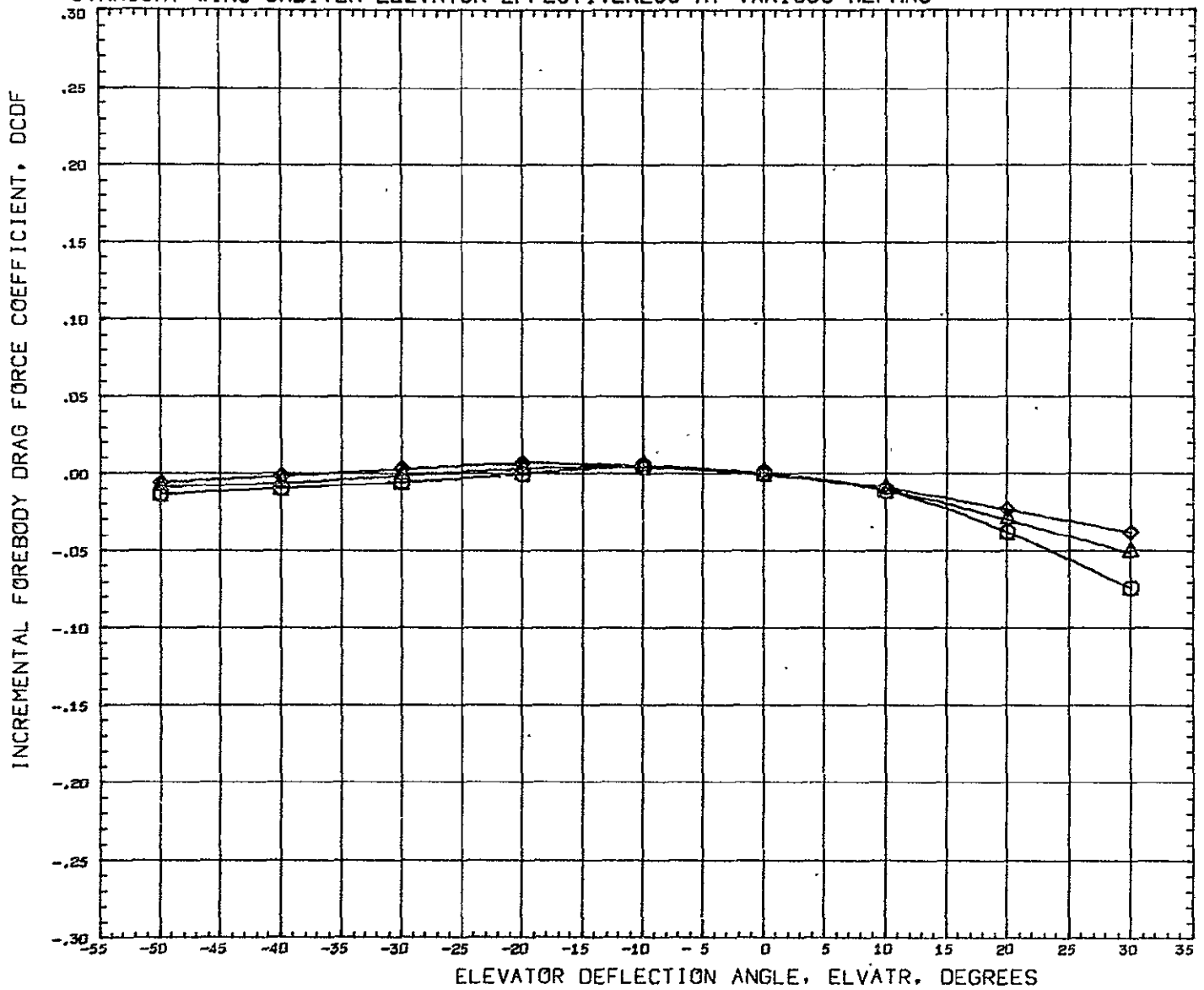
STRAIGHT WING ORBITER-ELEVATOR EFFECTIVENESS AT VARIOUS ALPHAS



SYMBOL	ALPHA	MACH	PARAMETRIC VALUES	BETA	0.000	DATA SOURCE				REFERENCE INFORMATION		
○	41.000	4.960				DATASET	ELVATR	DATASET	ELVATR	REFS	3084.0040	SQ FT
△	50.000	5.000				F2738C	- 50.000	F2737C	- 40.000	REFL	322.0004	INCHES
◇	60.000					F2736C	- 30.000	F2735C	- 20.000	REFB	1490.0040	INCHES
						F2734C	- 10.000	F2730C	0.000	XMRP	1293.0040	INCHES
						F2731C	10.000	F2732C	20.000	YMRP	0.0000	INCHES
						F2733C	30.000			ZMRP	50.5000	INCHES
										SCALE	0.0035	SCALE

DATA HIST. CODE #EI#CM

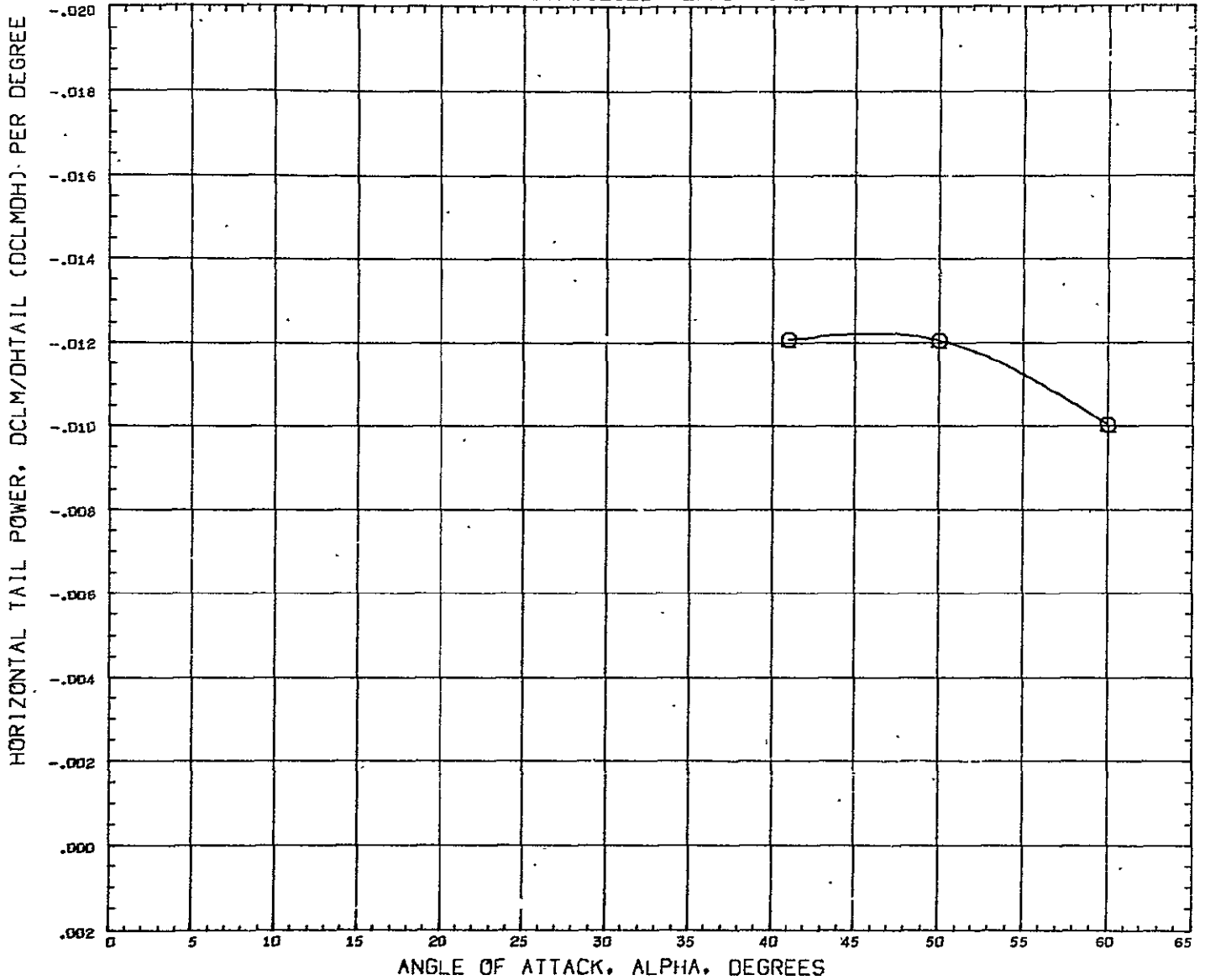
STRAIGHT WING ORBITER-ELEVATOR EFFECTIVENESS AT VARIOUS ALPHAS



SYMBOL	ALPHA	PARAMETRIC VALUES		DATA SOURCE				REFERENCE INFORMATION				
○	41.000	MACH	4.985	BETA	0.000	DATASET	ELVATR	DATASET	ELVATR	REFS	3084.0040	SQ FT
△	50.000	ATLRON	0.000			F2738C	- 50.000	F2737C	- 40.000	REFL	322.9004	INCHES
◇	60.000					F2736C	- 30.000	F2735C	- 20.000	REFB	1490.0040	INCHES
						F2734C	- 10.000	F2730C	0.000	XMRP	1293.0040	INCHES
						F2731C	10.000	F2732C	20.000	YMRP	0.0000	INCHES
						F2733C	30.000			ZMRP	50.5000	INCHES
										SCALE	0.0035	SCALE

DATA HIST. CODE #E14CH

STRAIGHT WING ORBITER-HORIZONTAL STABILIZER EFFECTIVENESS DERIVATIVES

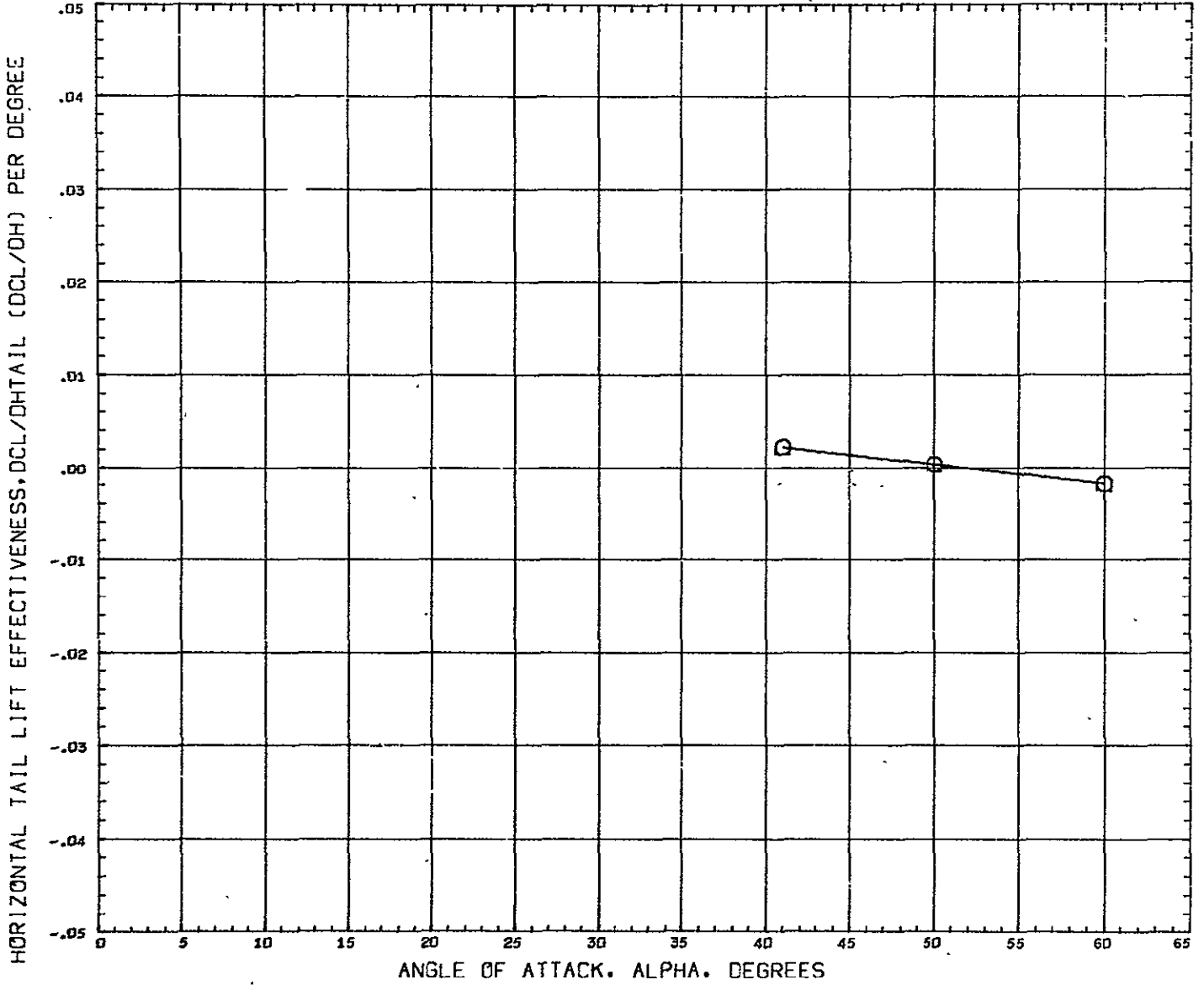


SYMBOL \bigcirc MACH 4.960 BETA 0.000 AILRON 0.000
 PARAMETRIC VALUES

REFERENCE INFORMATION
 REFS 3084.0040 SQ FT
 REFL 322.9004 INCHES
 REFF 1490.0040 INCHES
 XMRP 1293.0040 INCHES
 YMRP 0.0000 INCHES
 ZMRP 50.5000 INCHES
 SCALE 0.0035 SCALE

DATA HIST. CODE #F

STRAIGHT WING ORBITER-HORIZONTAL STABILIZER EFFECTIVENESS DERIVATIVES

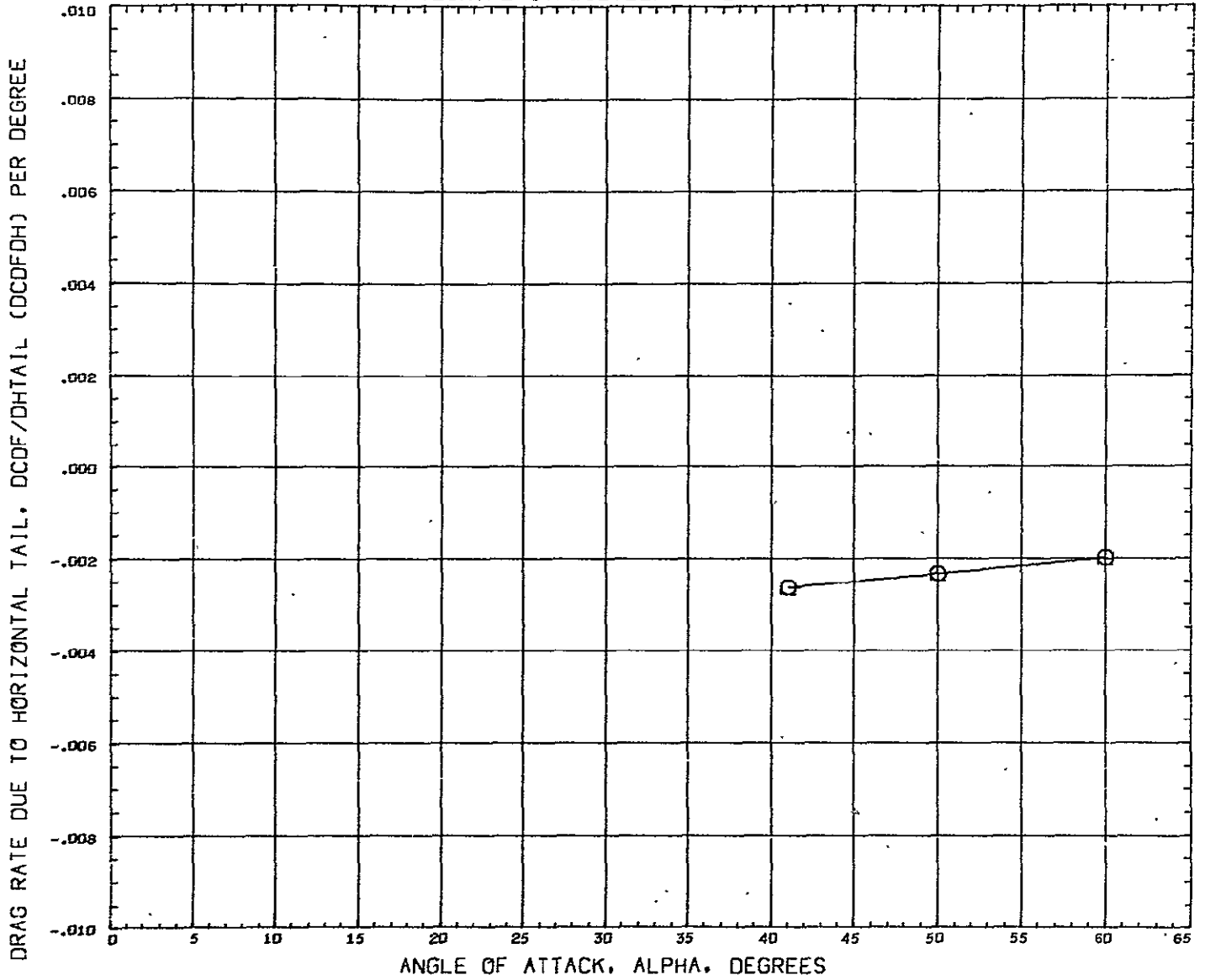


SYMBOL MACH BETA PARAMETRIC VALUES
 O 4.965 0.000 AILRON 0.000

REFERENCE INFORMATION
 REFS 3084.0040 SQ FT
 REFL 322.9004 INCHES
 REF6 1490.0040 INCHES
 XMRP 1293.0040 INCHES
 YMRP 0.0000 INCHES
 ZMRP - 50.5000 INCHES
 SCALE 0.0035 SCALE

DATA HIST. CODE #F

STRAIGHT WING ORBITER-HORIZONTAL STABILIZER EFFECTIVENESS DERIVATIVES

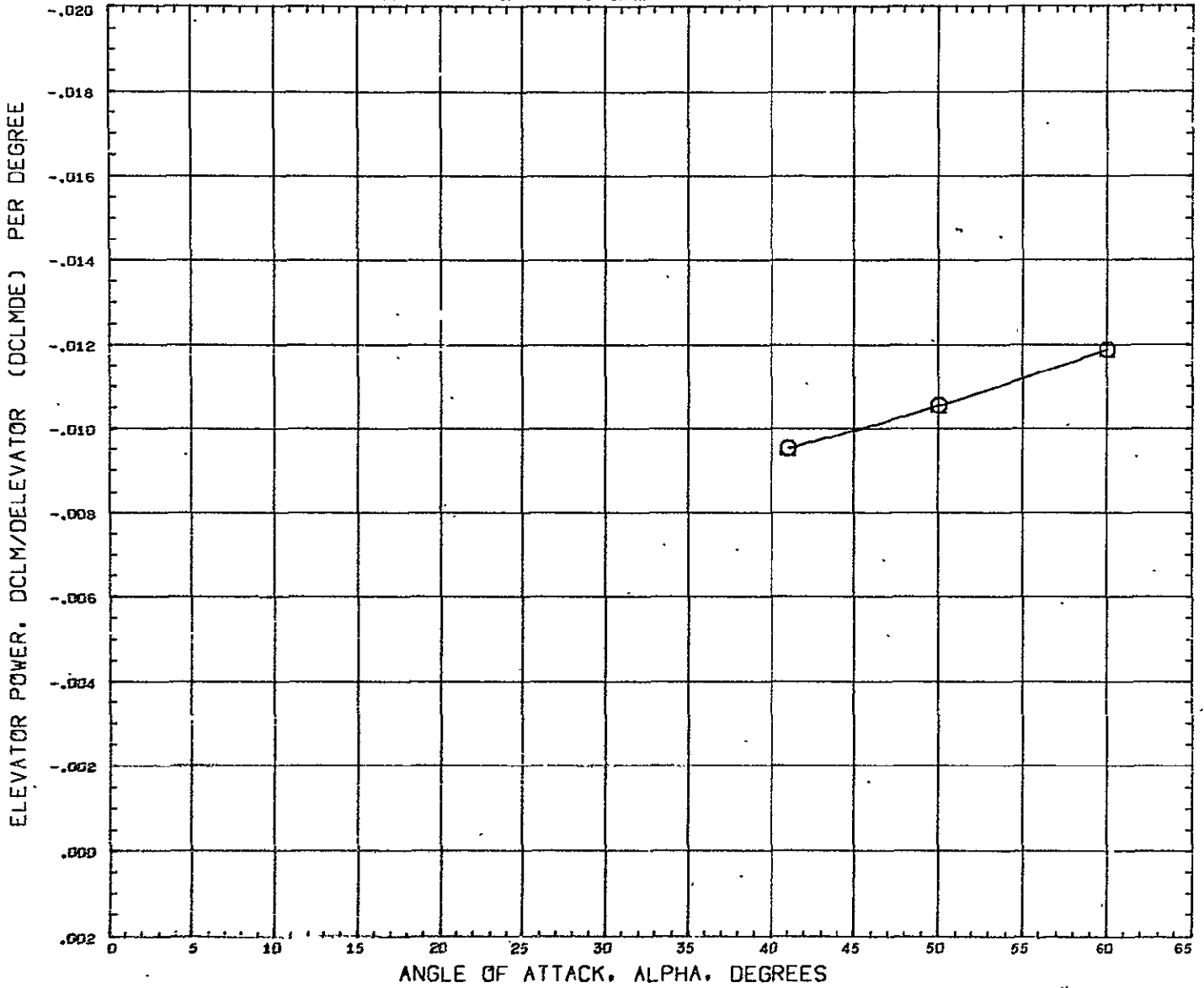


SYMBOL \circ MACH 4.960 BETA 0.000 AILRON 0.000
 PARAMETRIC VALUES

REFERENCE INFORMATION
 REFS 3084.0040 SQ FT
 REFL 322.9004 INCHES
 REFB 1490.0040 INCHES
 XMRP 1293.0040 INCHES
 YMRP 0.0000 INCHES
 ZMRP - 50.5000 INCHES
 SCALE 0.0035 SCALE

DATA HIST. CODE #F

STRAIGHT WING ORBITER-ELEVATOR EFFECTIVENESS DERIVATIVES



SYMBOL: \circ KACH 4.960 BETA 0.000 AILRON 0.000

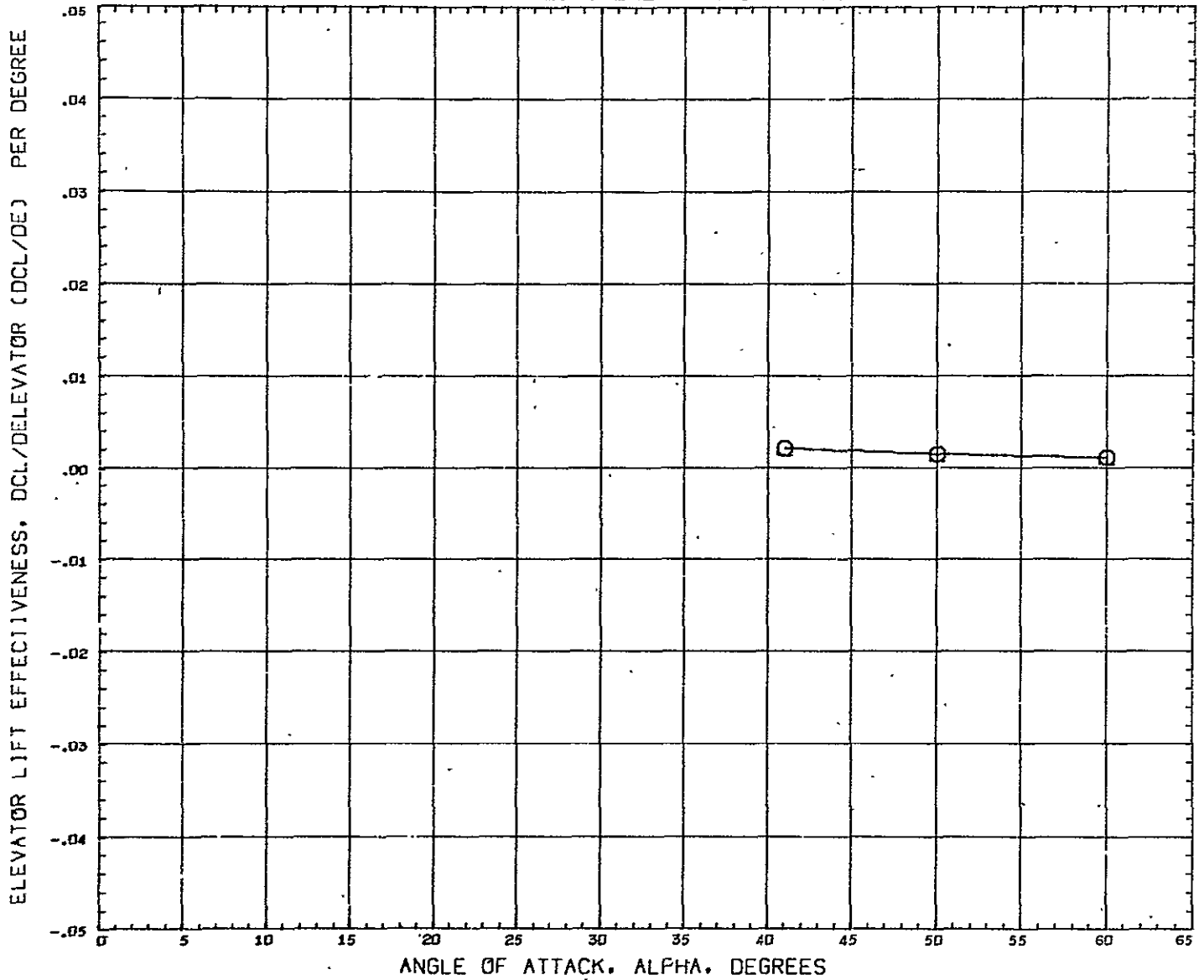
PARAMETRIC VALUES

REFERENCE INFORMATION

REFS	3084.0040	50 FT
REFL	322.9004	INCHES
REFB	1490.0040	INCHES
XMRP	1293.0040	INCHES
YMRP	0.0000	INCHES
ZMRP	50.5000	INCHES
SCALE	0.0035	SCALE

DATA HIST. CODE #P

STRAIGHT WING ORBITER-ELEVATOR EFFECTIVENESS DERIVATIVES

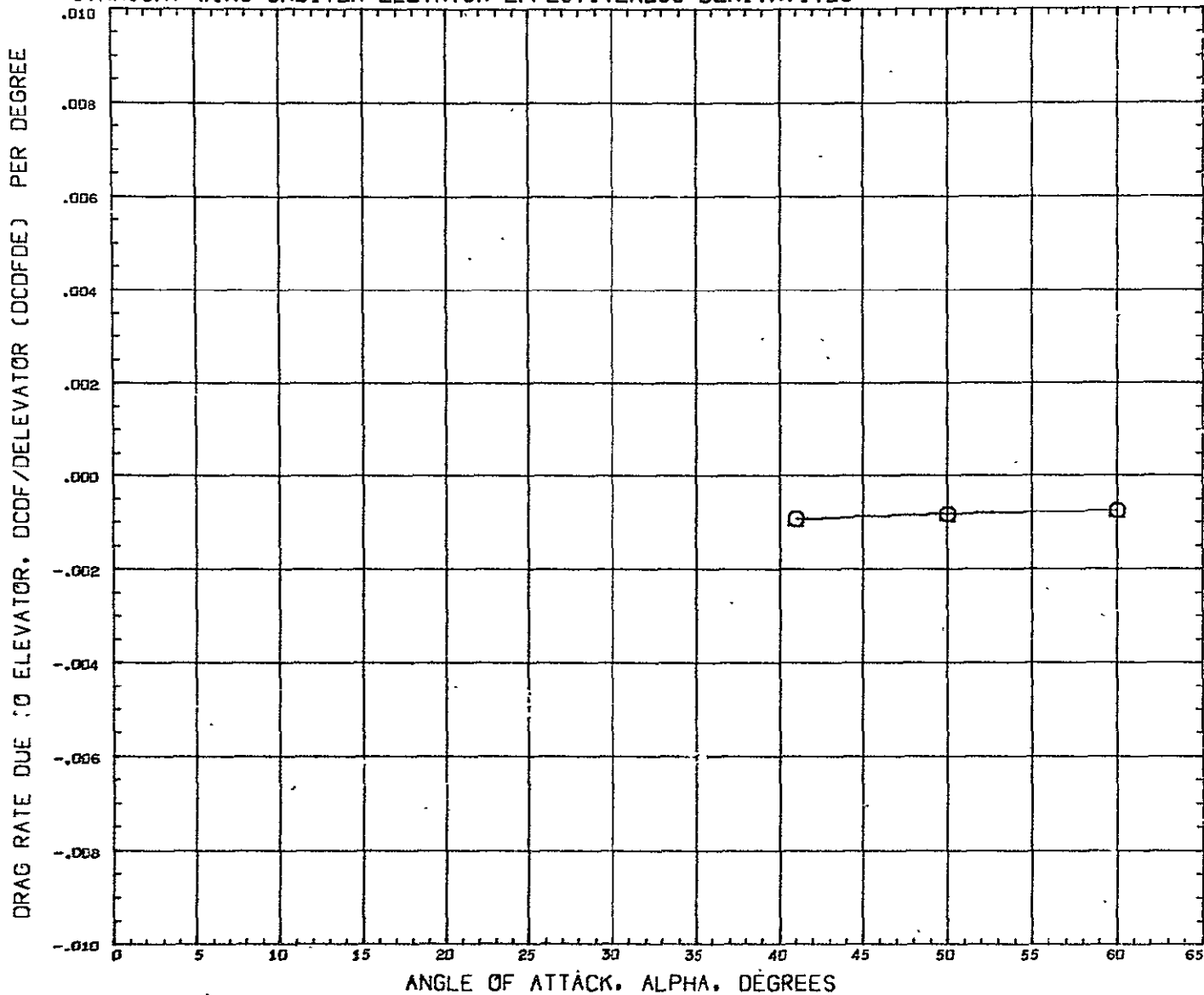


SYMBOL MACH PARAMETRIC VALUES
 O 4.960 BETA 0.000 AILRON 0.000

REFERENCE INFORMATION
 REFS 3084.0040 SQ FT
 REFL 322.9004 INCHES
 REFB 1490.0040 INCHES
 XMRP 1293.0040 INCHES
 YMRP 0.0000 INCHES
 ZMRP - 50.5000 INCHES
 SCALE 0.0035 SCALE

DATA HIST. CODE

STRAIGHT WING ORBITER-ELEVATOR EFFECTIVENESS DERIVATIVES



SYMBOL MACH BETA PARAMETRIC VALUES
 O 4.960 0.000 AILRON 0.000

REFERENCE INFORMATION
 REFS 3084.0040 SQ FT
 REFL 322.9004 INCHES
 REFB 1490.0040 INCHES
 XMRP 1293.0040 INCHES
 YMRP 0.0000 INCHES
 ZMRP 50.5000 INCHES
 SCALE 0.0035 SCALE

DATA HIST. CODE #P