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APRIL, 1971

REVISION A  
JULY 1971

— SPACE SHUTTLE —

**STATIC AERODYNAMIC CHARACTERISTICS  
OF THE BOEING SPACE SHUTTLE  
BOOSTER CONFIGURATION AT MACH  
0.10 TO 0.29**

By

Jacque Houser



UNIVERSITY OF WASHINGTON

LOW SPEED WIND TUNNEL

SADSAC SPACE SHUTTLE  
AEROTHERMODYNAMIC  
DATA MANAGEMENT SYSTEM

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SADSAC/SPACE SHUTTLE  
WIND TUNNEL TEST DATA REPORT

CONFIGURATION: BOEING 0.02992 SCALE BOOSTER

TEST PURPOSE: TO OBTAIN LOW SPEED PERFORMANCE, STABILITY AND  
CONTROL DATA

TEST FACILITY: UNIVERSITY OF WASHINGTON LOW SPEED TUNNEL

TESTING AGENCY: BOEING CO.

TEST NO. & DATE: UWAL 1021, JANUARY, 1971

TEST CONDUCTOR(S): JACQUE HOUSER - 206-773-2072

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## ABSTRACT

Experimental aerodynamic investigations have been conducted in the University of Washington Aeronautical Laboratory Low Speed Wind Tunnel on a Boeing Space Shuttle Booster Configuration. Test were conducted on a 0.02992 scale model vehicle during late January, 1971, over an angle of attack range from  $-8^{\circ}$  to  $+32^{\circ}$  and from  $-10^{\circ}$  to  $10^{\circ}$  sideslip at Mach numbers below 0.29. Tests variables included configuration build-up, elevator deflections of  $\pm 30^{\circ}$ , flap  $15^{\circ}$  and  $40^{\circ}$ , and stabilizer deflections of  $+10^{\circ}$  and  $-20^{\circ}$ .

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## SUMMARY

An investigation was conducted in the University of Washington Aeronautical Laboratory Low Speed Wind Tunnel to determine the static longitudinal and lateral aerodynamic characteristics of a Boeing Space Shuttle Booster Configuration. Tests were conducted on a 0.02992 scale model of the vehicle configuration during January, 1971, over an angle of attack range from  $-8^{\circ}$  to  $32^{\circ}$  and from  $-10^{\circ}$  to  $+10^{\circ}$  sideslip at Mach numbers below 0.29. Test variables included configuration buildup, elevator deflections of  $\pm 30^{\circ}$ , stabilizer deflections of  $+10^{\circ}$  to  $-20^{\circ}$ , and flap of  $15^{\circ}$  and  $40^{\circ}$ . Also tested were combinations of varying wing, horizontal stabilizer, and engine nacelle configurations.

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.

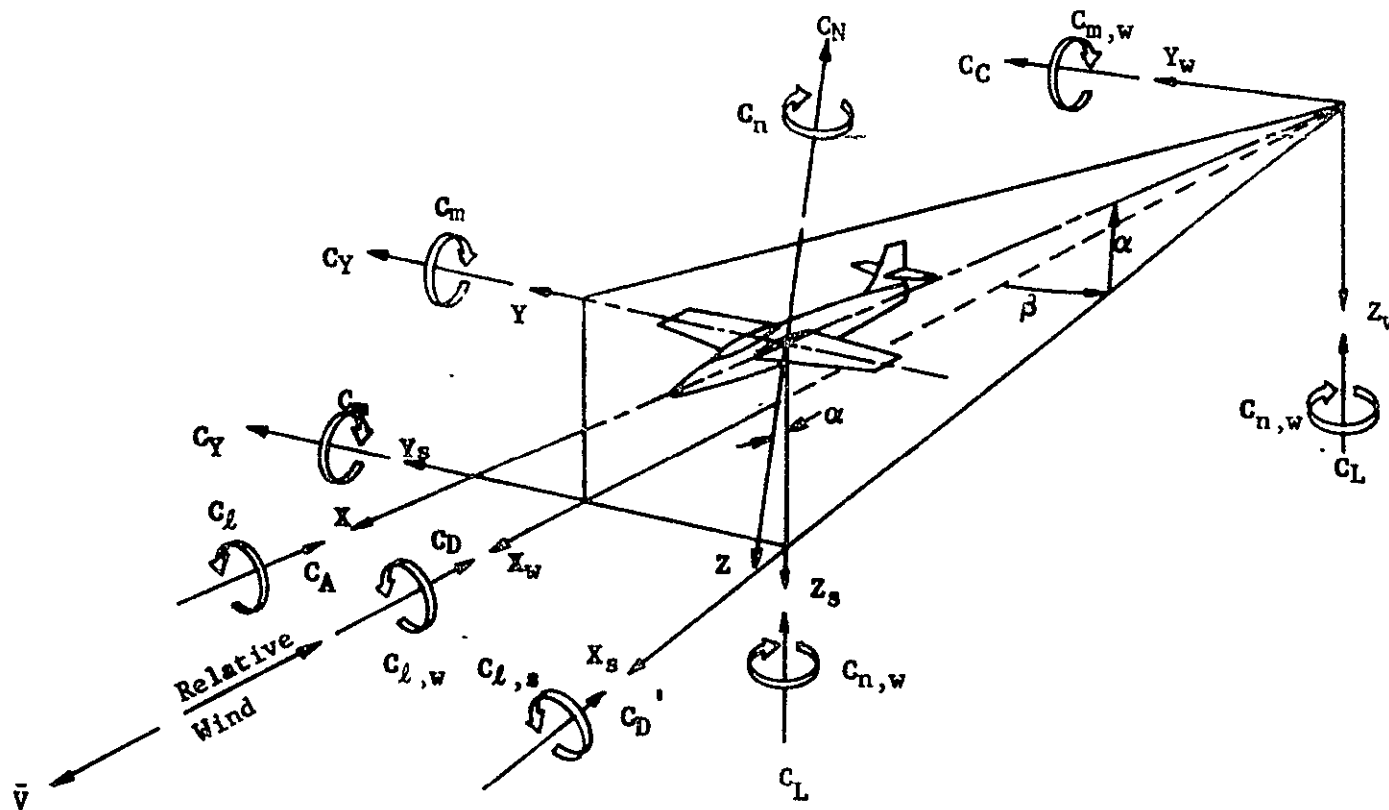


Figure 1. Axis systems, showing direction and sense of force and moment coefficients, angle of attack, and sideslip angle

| 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              | -              | -         |

SUMMARY OF SADSAC NOMENCLATURE - AERODYNAMIC FORCE AND MOMENT COEFFICIENTS

# CONFIGURATIONS INVESTIGATED.

## Configuration Nomenclature

|            |   |                                                            |
|------------|---|------------------------------------------------------------|
| $B_1$      | - | Body                                                       |
| $W_1, W_2$ | - | Wing with ailerons                                         |
| $H_1, H_2$ | - | Horizontal stabilizer with elevator                        |
| $V_1$      | - | Vertical tail with rudder                                  |
| $N_1$      | - | Engine pack/ $N_2$ - Engine pack with flow-through engines |
| $F_1$      | - | Simulated Fowler flap                                      |
| $S_1$      | - | Spoiler                                                    |

Dimensional data for these components are given on the configuration descriptor forms which follow.

## Configuration Combinations Tested

|                   |                           |                       |
|-------------------|---------------------------|-----------------------|
| $B_1$             | $B_1 W_1 H_1 N_1$         | $B_1 W_2 H_1 V_1$     |
| $B_1 N_1$         | $B_1 W_1 H_1 V_1$         | $B_1 W_2 H_1 V_1 N_2$ |
| $B_1 W_1 N_1$     | $B_1 W_1 H_1 V_1 N_1$     | $B_1 W_2 H_1 V_1 N_1$ |
| $B_1 H_1 N_1$     | $B_1 W_1 H_1 V_1 N_1 F_1$ | $B_1 W_2 N_1$         |
| $B_1 V_1 N_1$     | $B_1 W_2 H_1 V_1$         | $H_1 W_2$             |
| $B_1 W_1 V_1 N_1$ | $B_1 W_2 H_1 V_1 N_2$     |                       |

The above configurations were tested with the following surface deflection angles where appropriate:

|            |                                |
|------------|--------------------------------|
| Aileron    | $0^\circ$                      |
| Stabilizer | $-20^\circ, 0^\circ, 10^\circ$ |
| Elevator   | $-30^\circ, 0^\circ, 30^\circ$ |
| Rudder     | $0^\circ$                      |
| Flap       | $15^\circ, 40^\circ$           |

TEST UWAL-1021 DATA SET COLLATION SHEET

SHEET 1 of 3

☐ PRETEST

☒ POSTTEST

| DATA SET IDENTIFIER | CONFIGURATION                                                              | SCHD.    |         | PARAMETERS/VALUES |            |            |            | NO. of RUNS | MACH NUMBERS (OR ALTERNATE INDEPENDENT VARIABLE) |      |      |      |  |  |  |  |  |  |
|---------------------|----------------------------------------------------------------------------|----------|---------|-------------------|------------|------------|------------|-------------|--------------------------------------------------|------|------|------|--|--|--|--|--|--|
|                     |                                                                            | $\alpha$ | $\beta$ | $\delta_d$        | $\delta_s$ | $\delta_e$ | $\delta_r$ |             | 0.10                                             | 0.15 | 0.26 | 0.29 |  |  |  |  |  |  |
| RU1011              | B <sub>1</sub>                                                             | A        | 0°      | -                 | -          | -          | -          |             |                                                  |      |      |      |  |  |  |  |  |  |
| 016                 | B <sub>1</sub>                                                             | 0°       | C       | -                 | -          | -          | -          |             |                                                  | 005  |      |      |  |  |  |  |  |  |
| 026                 | B <sub>1</sub> N <sub>1</sub>                                              | 0°       | C       | -                 | -          | -          | -          |             |                                                  | 4    |      |      |  |  |  |  |  |  |
| 021                 | B <sub>1</sub> N <sub>1</sub>                                              | 0°       | C       | -                 | -          | -          | -          |             |                                                  | 7    |      |      |  |  |  |  |  |  |
| 031                 | B <sub>1</sub> W <sub>1</sub> N <sub>1</sub>                               | A        | 0°      | -                 | -          | -          | -          |             |                                                  | 6    |      |      |  |  |  |  |  |  |
| 041                 | B <sub>1</sub> H <sub>1</sub> N <sub>1</sub>                               | A        | 0°      | 0°                | -          | -          | -          |             |                                                  | 12   |      |      |  |  |  |  |  |  |
| 051                 | B <sub>1</sub> V <sub>1</sub> N <sub>1</sub>                               | A        | 0°      | -                 | -          | -          | 0°         |             |                                                  | 8    |      |      |  |  |  |  |  |  |
| 056                 | B <sub>1</sub> V <sub>1</sub> N <sub>1</sub>                               | 0°       | C       | -                 | -          | -          | 0°         |             |                                                  | 9    |      |      |  |  |  |  |  |  |
| 061                 | B <sub>1</sub> W <sub>1</sub> V <sub>1</sub> N <sub>1</sub>                | A        | 0°      | 0°                | -          | -          | 0°         |             |                                                  | 10   |      |      |  |  |  |  |  |  |
| 076                 | B <sub>1</sub> W <sub>1</sub> H <sub>1</sub> N <sub>1</sub>                | 0°       | C       | 0°                | 0°         | 0°         | -          |             |                                                  | 13   |      |      |  |  |  |  |  |  |
| 071                 | B <sub>1</sub> W <sub>1</sub> H <sub>1</sub> N <sub>1</sub>                | A        | 0°      | 0°                | 0°         | 0°         | -          |             |                                                  | 15   |      |      |  |  |  |  |  |  |
| 081                 | B <sub>1</sub> W <sub>1</sub> H <sub>1</sub> V <sub>1</sub>                | A        | 0°      | 0°                | 0°         | 0°         | 0°         |             |                                                  | 14   |      |      |  |  |  |  |  |  |
| 086                 | B <sub>1</sub> W <sub>1</sub> H <sub>1</sub> V <sub>1</sub>                | 0°       | C       | -                 | -          | -          | -          |             |                                                  | 17   |      |      |  |  |  |  |  |  |
| 091                 | B <sub>1</sub> W <sub>1</sub> H <sub>1</sub> V <sub>1</sub> N <sub>1</sub> | A        | 0°      | -                 | -          | -          | -          |             |                                                  | 16   |      |      |  |  |  |  |  |  |
| A91                 |                                                                            | A        | 0°      | -                 | -          | -          | -          |             |                                                  | 18   |      |      |  |  |  |  |  |  |
| 095                 |                                                                            | B        | 0°      | -                 | -          | -          | -          |             | 20                                               |      |      |      |  |  |  |  |  |  |
| A95                 |                                                                            | B        | 0°      | -                 | -          | -          | -          |             |                                                  | 22   |      |      |  |  |  |  |  |  |
| 093                 |                                                                            | A        | -1°     | -                 | -          | -          | -          |             |                                                  | 21   |      |      |  |  |  |  |  |  |
| 09A                 |                                                                            | 0°       | D       | -                 | -          | -          | -          |             |                                                  | 23   |      |      |  |  |  |  |  |  |
| 097                 |                                                                            | 10°      | C       | -                 | -          | -          | -          |             |                                                  | 24   |      |      |  |  |  |  |  |  |
|                     |                                                                            |          |         |                   |            |            |            |             |                                                  | 25   |      |      |  |  |  |  |  |  |

|    |    |     |     |     |     |     |    |    |    |    |    |    |    |
|----|----|-----|-----|-----|-----|-----|----|----|----|----|----|----|----|
| 1  | 7  | 13  | 19  | 25  | 31  | 37  | 43 | 49 | 55 | 61 | 67 | 75 | 76 |
| CL | CD | CLM | CLN | CLY | BSL | CDB |    |    |    |    |    |    |    |

COEFFICIENTS:

$\alpha$  or  $\beta$

SCHEDULES

A)  $-8^\circ \rightarrow 32^\circ$ ,  $\Delta\alpha = 2^\circ$

B)  $-8^\circ \rightarrow 14^\circ$ ,  $\Delta\alpha = 2^\circ$

C)  $-4^\circ \rightarrow 10^\circ$ ,  $\Delta\beta = 2^\circ$

D)  $-10^\circ \rightarrow 10^\circ$ ,  $\Delta\beta = 2^\circ$

IDPVAR(1) IDPVAR(2) NDV

TEST UWAL-1021 DATA SET COLLATION SHEET

SHEET 2 of 3

☐ PRETEST

☒ POSTTEST

| DATA SET IDENTIFIER | CONFIGURATION                  | SCHD.    |         | PARAMETERS/VALUES |            |            |            | NO. of RUNS | MACH NUMBERS (OR ALTERNATE INDEPENDENT VARIABLE) |      |      |      |  |  |  |  |  |  |
|---------------------|--------------------------------|----------|---------|-------------------|------------|------------|------------|-------------|--------------------------------------------------|------|------|------|--|--|--|--|--|--|
|                     |                                | $\alpha$ | $\beta$ | $\delta_A$        | $\delta_B$ | $\delta_C$ | $\delta_D$ |             | 0.10                                             | 0.15 | 0.26 | 0.29 |  |  |  |  |  |  |
| RU1098              | B, W, H, V, N,                 | 20       | C       | 0°                | 0°         | 0°         | 0°         |             |                                                  |      | 26   |      |  |  |  |  |  |  |
| 099                 | B, W, H, V, N,                 | 32       | C       | 0°                | 0°         | 0°         | 0°         |             |                                                  |      | 27   |      |  |  |  |  |  |  |
| 101                 | B, W, H, V, N, F <sup>15</sup> | A        | 0°      |                   |            |            |            |             |                                                  |      | 42   |      |  |  |  |  |  |  |
| 104                 | B, W, H, V, N, F <sup>15</sup> | A        | -10°    |                   |            |            |            |             |                                                  |      | 41   |      |  |  |  |  |  |  |
| 141                 | B, W, H, V, N, F <sup>40</sup> | A        | 0°      |                   |            |            |            |             |                                                  |      | 38   |      |  |  |  |  |  |  |
| 142                 |                                |          | -4°     |                   |            |            |            |             |                                                  |      | 39   |      |  |  |  |  |  |  |
| 144                 |                                |          | -10°    |                   |            |            |            |             |                                                  |      | 40   |      |  |  |  |  |  |  |
| 151                 |                                |          | 0°      |                   | -20°       |            |            |             |                                                  |      | 29   |      |  |  |  |  |  |  |
| 171                 |                                |          |         |                   | 10°        |            |            |             |                                                  |      | 37   |      |  |  |  |  |  |  |
| 181                 | B, W, H, V, N,                 |          |         |                   | -20°       |            |            |             |                                                  |      | 28   |      |  |  |  |  |  |  |
| 201                 |                                |          |         |                   | 10°        |            |            |             |                                                  |      | 36   |      |  |  |  |  |  |  |
| 211                 |                                |          |         |                   | 0°         | -30°       |            |             |                                                  |      | 44   |      |  |  |  |  |  |  |
| 241                 |                                |          |         |                   | 0°         | 30°        |            |             |                                                  |      | 43   |      |  |  |  |  |  |  |
| 291                 | B, W, H, V, N, F <sup>40</sup> |          |         |                   | -20°       | -30°       |            |             |                                                  |      | 30   |      |  |  |  |  |  |  |
| 321                 |                                |          |         |                   | -20°       | 30°        |            |             |                                                  |      | 31   |      |  |  |  |  |  |  |
| 331                 | B, W, H, V, N,                 |          |         |                   | -20°       | 30°        |            |             |                                                  |      | 32   |      |  |  |  |  |  |  |
| 341                 |                                |          |         |                   | 10°        | 30°        |            |             |                                                  |      | 35   |      |  |  |  |  |  |  |
| 351                 |                                |          |         |                   | 10°        | -30°       |            |             |                                                  |      | 34   |      |  |  |  |  |  |  |
| 361                 |                                |          |         |                   | -20°       | -30°       |            |             |                                                  |      | 33   |      |  |  |  |  |  |  |

|    |    |     |     |    |     |     |    |    |    |    |    |    |    |
|----|----|-----|-----|----|-----|-----|----|----|----|----|----|----|----|
| 1  | 7  | 13  | 19  | 25 | 31  | 37  | 43 | 49 | 55 | 61 | 67 | 75 | 76 |
| CL | CD | CLM | CLN | CV | CSL | CDB |    |    |    |    |    |    |    |

COEFFICIENTS:

$\alpha$  or  $\beta$

SCHEDULES

A) -8° → 32°,  $\Delta\alpha = 2^\circ$

B) -8° → 10°,  $\Delta\alpha = 2^\circ$

C) -4° → 10°,  $\Delta\beta = 2^\circ$

D) -10° → 10°,  $\Delta\beta = 2^\circ$

→ IDPVAR(1) IDPVAR(2) NDV

NASA-MSFC-MAF

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SHEET 3 of 3

☒ POSTTEST

7

COEFFICIENTS: IDPVAR(1) IDPVAR(2) NDV

## SCHEDULES

D)  $-10^\circ \rightarrow 10^\circ$ ,  $\Delta\beta = 2^\circ$

## FACILITY DESCRIPTION

The F. K. Kirsten 8' x 12' wind tunnel of the University of Washington Aeronautical Laboratory (UWAL) is a double return closed circuit wind tunnel. The test section is 8 feet high and 12 feet wide with corner fillets 1 1/2 feet on the side. The test section is vented to the atmosphere at the test section - diffuser junction. A maximum velocity of 250 mph is attained through two 500 H.P. D.C. drive motors; one located in each return leg of the circuit.

The normal mode of mounting force models is on a single strut up through the test section floor from an external, six-component virtual-center balance. Balance output is normally digitized and punched in cards in a format compatible with the University of Washington IBM 709 computer. The total range of angles in the pitch mode is approximately 40°. The range of angles in the yaw mode is ±30°.

## TEST CONDITIONS

Data were recorded under conditions as described in Table I, which also gives an estimate of the data accuracy.

The model was single strut mounted on the UWAL external balance using the UWAL single strut and pitch arm #2 and the UWAL #3 wind shield. In order to assure a turbulent boundary layer, on all runs #80 grit was applied at a density of 80-100 grains/inch at the following locations.

|                               |                                                    |
|-------------------------------|----------------------------------------------------|
| Body                          | - Fus. Sta. 8 1/10 inch wide strip                 |
| Wing                          | - both surfaces at 10% chord, 1/10 inch wide strip |
| Vertical and Horizontal Tails | - both surfaces @ 10% chord, 1/10 inch strip       |

TABLE I  
TEST CONDITIONS

[illegible]

BALANCE UTILIZED: UWAL External 6-Component

**CAPACITY:**

|   |                                                                                     |                   |
|---|-------------------------------------------------------------------------------------|-------------------|
| L |  | <u>2500 lb.</u>   |
|   | SF                                                                                  | <u>250 lb.</u>    |
| D |  | <u>250 lb</u>     |
|   | PM                                                                                  | <u>5000 in-lb</u> |
|   | YM                                                                                  | <u>5000 in-lb</u> |
|   | RM                                                                                  | <u>5000 in-lb</u> |

ACCURACY:\*

|     |       |
|-----|-------|
| 1.0 | lb.   |
| 0.1 | lb.   |
| 0.1 | lb.   |
| 1.0 | in-lb |
| 1.0 | in-lb |
| 1.0 | in-lb |

COEFFICIENT  
'TOLERANCE':

0.25 % of  $C_{L \max}$   
.1 % of  $C_r \max$   
.05 % of  $C_D \max$   
.05 % of  $C_m \max$   
.025 % of  $C_n \max$   
.01 % of  $C_{L \max}$

COMMENTS: \* Minimum Readable Value

## DATA REDUCTION

The six component force and moment data were recorded using an external six-component virtual-center balance. The force and moments have been reduced to coefficient form in stability axis system utilizing the following reference values.

$$S_{REF} = \text{wing planform area} = 4.42 \text{ ft}^2$$

$$b = \text{wing span} = 66.60 \text{ inches}$$

$$l_{REF} = \bar{c} = \text{wing mean aerodynamic chord} = 10.1 \text{ inches}$$

Moments are referenced about a center of gravity location which is at fuselage station 55.636 buttock line 0.0, and water line 5.86 inches (see Figure 4).

Additionally, static pressures were recorded at (9) positions on the body base and were averaged to obtain a base drag coefficient.

$$C_{D_b} = \left\{ \frac{p_\infty - \frac{(p_1 + p_2 + \dots + p_9)}{9}}{q} \right\} \left\{ \frac{A_b}{S_{REF}} \right\} \cos \alpha$$

$$\text{where } A_b = 117.5 \text{ in}^2$$

The data have been corrected for low speed wall effects by the methods given in UWAL Report WC 111-A, and for solid and wake blockage effects by methods according to Boeing memo G-8354-14.

# SUMMARY PLOT INDEX

| PLOT TITLE                     | PLOTTED<br>COEFFICIENTS<br>SCHEDULE | CONDITIONS VARYING | MACH<br>NUMBER | $\alpha$<br>SCHEDULE | $\beta$<br>SCHEDULE | PAGES |
|--------------------------------|-------------------------------------|--------------------|----------------|----------------------|---------------------|-------|
| Configuration Buildup          | A                                   | Configuration      | .153           | -8°- 32°             | 0°                  | 1-10  |
| Configuration Buildup          | B                                   | Configuration      | .153           | -8°- 32°             | 0°                  | 11-12 |
| Configuration Buildup          | C                                   | Configuration      | .153           | -8°- 32°             | 0°                  | 13-14 |
| Effect of Reynolds Number      | A                                   | Reynolds Number    | .101-.285      | -8°- 32°             | 0°                  | 15-19 |
| Effect of Reynolds Number      | B                                   | Reynolds Number    | .101-.285      | -8°- 32°             | 0°                  | 20    |
| Effect of Reynolds Number      | C                                   | Reynolds Number    | .101-.285      | -8°- 32°             | 0°                  | 21    |
| Effect of Sideslip             | D                                   | Sideslip Angle     | .154           | -8°- 32°             | 0°/-10°             | 22-29 |
| Effect of Sideslip             | B                                   | Sideslip Angle     | .154           | -8°- 32°             | 0°/-10°             | 30    |
| Effect of Sideslip             | C                                   | Sideslip Angle     | .154           | -8°- 32°             | 0°/-10°             | 31    |
| Flap Effectiveness Beta = 0°   | A                                   | Flap Angle         | .154           | -8°- 32°             | 0°                  | 32-36 |
| Flap Effectiveness Beta = 0°   | B                                   | Flap Angle         | .154           | -8°- 32°             | 0°                  | 37    |
| Flap Effectiveness Beta = 0°   | C                                   | Flap Angle         | .154           | -8°- 32°             | 0°                  | 38    |
| Flap Effectiveness Beta = -4°  | D                                   | Flap Angle         | .154           | -8°- 32°             | -4°                 | 39-46 |
| Flap Effectiveness Beta = -4°  | B                                   | Flap Angle         | .154           | -8°- 32°             | -4°                 | 47    |
| Flap Effectiveness Beta = -4°  | C                                   | Flap Angle         | .154           | -8°- 32°             | -4°                 | 48    |
| Flap Effectiveness Beta = -10° | D                                   | Flap Angle         | .154           | -8°- 32°             | -10°                | 49-56 |
| Flap Effectiveness Beta = -10° | B                                   | Flap Angle         | .154           | -8°- 32°             | -10°                | 57    |
| Flap Effectiveness Beta = -10° | C                                   | Flap Angle         | .154           | -8°- 32°             | -10°                | 58    |

SUMMARY PLOT INDEX  
(Continued)

| PLOT TITLE                                                 | PLOTTED<br>COEFFICIENTS<br>SCHEDULE | CONDITIONS VARYING           | MACH<br>NUMBER | SCHEDULE | SCHEDULE | PAGES |
|------------------------------------------------------------|-------------------------------------|------------------------------|----------------|----------|----------|-------|
| Stabilizer Effectiveness,<br>Flaps Up                      | A                                   | Horizontal Stabili-<br>zer   | .154           | -8°- 32° | 0°       | 59-63 |
| Stabilizer Effectiveness<br>Flaps Up                       | B                                   | Horizontal Stabili-<br>zer   | .154           | -8°- 32° | 0°       | 64    |
| Stabilizer Effectiveness<br>Flaps Up                       | C                                   | Horizontal Stabili-<br>zer   | .154           | -8°- 32° | 0°       | 65    |
| Stabilizer Effectiveness<br>Flap = 40                      | A                                   | Horizontal Stabili-<br>zer   | .154           | -8°- 32° | 0°       | 66-70 |
| Stabilizer Effectiveness<br>Flap = 40                      | B                                   | Horizontal Stabili-<br>zer   | .154           | -8°- 32° | 0°       | 71    |
| Stabilizer Effectiveness<br>Flap = 40                      | C                                   | Horizontal Stabili-<br>zer   | .154           | -8°- 32° | 0°       | 72    |
| Elevator Effectiveness, Flaps<br>Up, Horizontal Tail = 0   | A                                   | Elevator Deflection<br>Angle | .154           | -8°- 32° | 0°       | 73-77 |
| Elevator Effectiveness, Flaps<br>Up, Horizontal Tail = 0   | B                                   | Elevator Deflection<br>Angle | .154           | -8°- 32° | 0°       | 78    |
| Elevator Effectiveness, Flaps<br>Up, Horizontal Tail = 0   | C                                   | Elevator Deflection<br>Angle | .154           | -8°- 32° | 0°       | 79    |
| Elevator Effectiveness, Flaps<br>Up, Horizontal Tail = -20 | A                                   | Elevator Deflection<br>Angle | .154           | -8°- 32° | 0°       | 80-84 |
| Elevator Effectiveness, Flaps<br>Up, Horizontal Tail = -20 | B                                   | Elevator Deflection<br>Angle | .154           | -8°- 32° | 0°       | 85    |
| Elevator Effectiveness, Flaps<br>Up, Horizontal Tail = -20 | C                                   | Elevator Deflection<br>Angle | .154           | -8°- 32° | 0°       | 86    |

SUMMARY PLOT INDEX  
(Continued)

| PLOT TITLE                                                  | PLOTTED<br>COEFFICIENTS<br>SCHEDULE | CONDITIONS VARYING           | NUMBER | $\alpha$<br>SCHEDULE | $\beta$<br>SCHEDULE | PAGES   |
|-------------------------------------------------------------|-------------------------------------|------------------------------|--------|----------------------|---------------------|---------|
| Elevator Effectiveness, Flaps<br>Up, Horizontal Tail = 10   | A                                   | Elevator Deflection          | .154   | -8° - 32°            | 0°                  | 87-91   |
| Elevator Effectiveness, Flaps<br>Up, Horizontal Tail = 10   | B                                   | Elevator Deflection<br>Angle | .154   | -8° - 32°            | 0°                  | 92      |
| Elevator Effectiveness, Flaps<br>Up, Horizontal Tail = 10   | C                                   | Elevator Deflection<br>Angle | .154   | -8° - 32°            | 0°                  | 93      |
| Elevator Effectiveness, Flap =<br>40, Horizontal Tail = -20 | A                                   | Elevator Deflection<br>Angle | .154   | -8° - 32°            | 0°                  | 94-98   |
| Elevator Effectiveness, Flap =<br>40, Horizontal Tail = -20 | B                                   | Elevator Deflection<br>Angle | .154   | -8° - 32°            | 0°                  | 99      |
| Elevator Effectiveness, Flap =<br>40, Horizontal Tail = -20 | C                                   | Elevator Deflection<br>Angle | .154   | -8° - 32°            | 0°                  | 100     |
| Effect of Aft Wing and Large<br>Stabilizer                  | A                                   | Configuration                | .153   | -8° - 32°            | 0°                  | 101-105 |
| Effect of Aft Wing and Large<br>Stabilizer                  | B                                   | Configuration                | .153   | -8° - 32°            | 0°                  | 106     |
| Effect of Aft Wing and Large<br>Stabilizer                  | C                                   | Configuration                | .153   | -8° - 32°            | 0°                  | 107     |
| Effect of Nacelles and Aft<br>Wing                          | A                                   | Configuration                | .154   | -8° - 32°            | 0°                  | 108-112 |
| Effect of Nacelles and Aft<br>Wing                          | B                                   | Configuration                | .154   | -8° - 32°            | 0°                  | 113     |

SUMMARY PLOT INDEX  
(Continued)

| PLOT TITLE                                 | PLOTTED<br>COEFFICIENTS<br>SCHEDULE | CONDITIONS VARYING | MACH<br>NUMBER | $\alpha$<br>SCHEDULE | $\beta$<br>SCHEDULE | PAGES   |
|--------------------------------------------|-------------------------------------|--------------------|----------------|----------------------|---------------------|---------|
| Effect of Nacelles and Aft Wing            | C                                   | Configuration      | .154           | -8° - 32°            | 0°                  | 114     |
| Effect of Nacelles and Aft Wing - Tail Off | A                                   | Configuration      | .154           | -8° - 32°            | 0°                  | 115-119 |
| Effect of Nacelles and Aft Wing - Tail Off | B                                   | Configuration      | .154           | -8° - 32°            | 0°                  | 120     |
| Effect of Nacelles and Aft Wing - Tail Off | C                                   | Configuration      | .154           | -8° - 32°            | 0°                  | 121     |
| Configuration Buildup In Yaw               | E                                   | Configuration      | .153           | 0°                   | -10° - 10°          | 122-128 |
| Configuration Buildup In Yaw               | F                                   | Configuration      | .153           | 0°                   | -10° - 10°          | 129     |
| Combined Pitch and Yaw                     | E                                   | Angle of Attack    | .154           | 0° - 32°             | -10° - 10°          | 130-136 |
| Combined Pitch and Yaw                     | F                                   | Angle of Attack    | .154           | 0° - 32°             | -10° - 10°          | 137     |

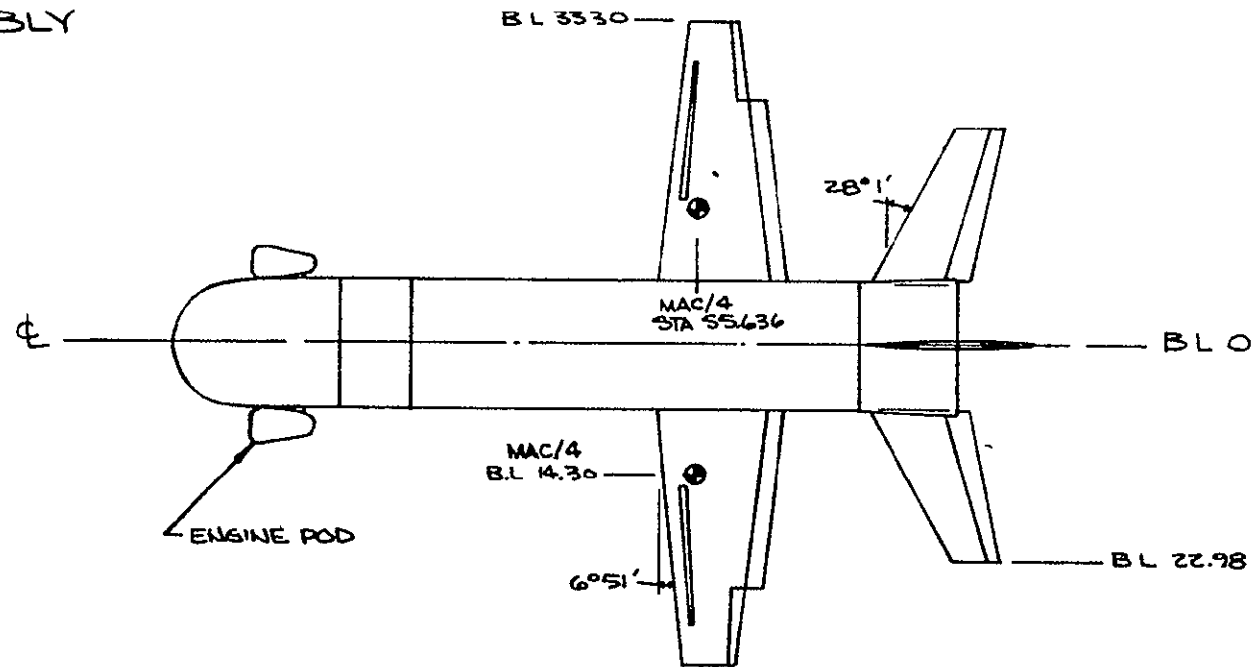
COEFFICIENT SCHEDULE

| A                | B         | C          | D                | E               | F          |
|------------------|-----------|------------|------------------|-----------------|------------|
| CL vs. $\alpha$  | CL vs. CD | CL vs. CLM | CL vs. $\alpha$  | CY vs. $\beta$  | CY vs. CLN |
| CD vs. $\alpha$  |           |            | CD vs. $\alpha$  | CLN vs. $\beta$ |            |
| CLM vs. $\alpha$ |           |            | CLM vs. $\alpha$ | CSL vs. $\beta$ |            |
| L/D vs. $\alpha$ |           |            | CY vs. $\alpha$  | CL vs. $\beta$  |            |
| CDB vs. $\alpha$ |           |            | CLN vs. $\alpha$ | CLM vs. $\beta$ |            |
|                  |           |            | L/D vs. $\alpha$ | CDB vs. $\beta$ |            |
|                  |           |            | CDB vs. $\alpha$ |                 |            |

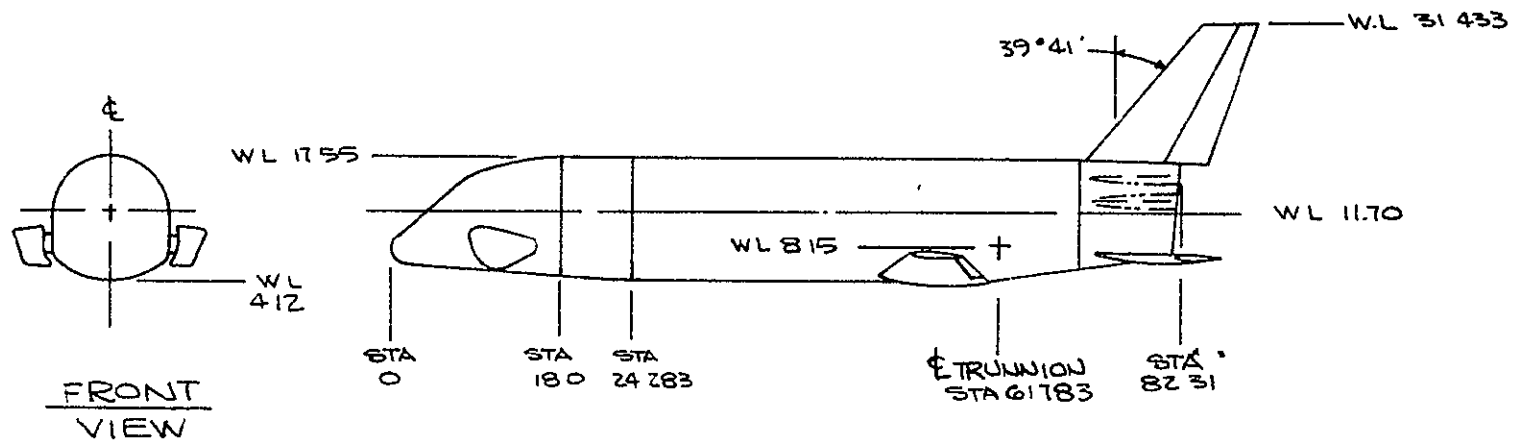
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MODEL SKETCHES AND PHOTOGRAPHS

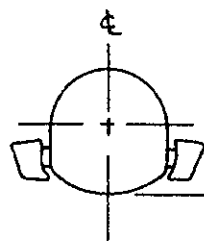
AX 1193E-2  
ASSEMBLY



PLAN VIEW



SIDE VIEW



FRONT VIEW

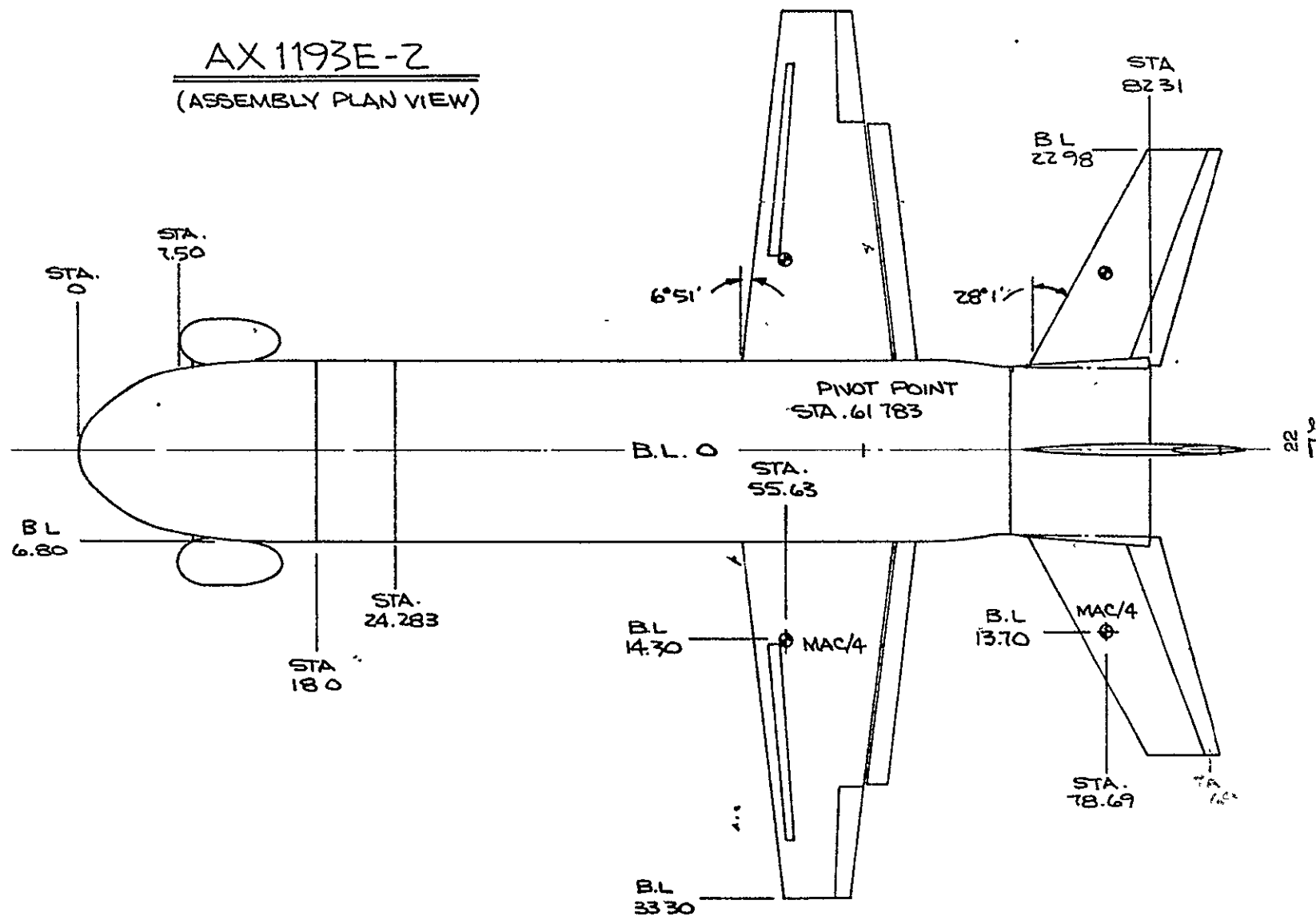
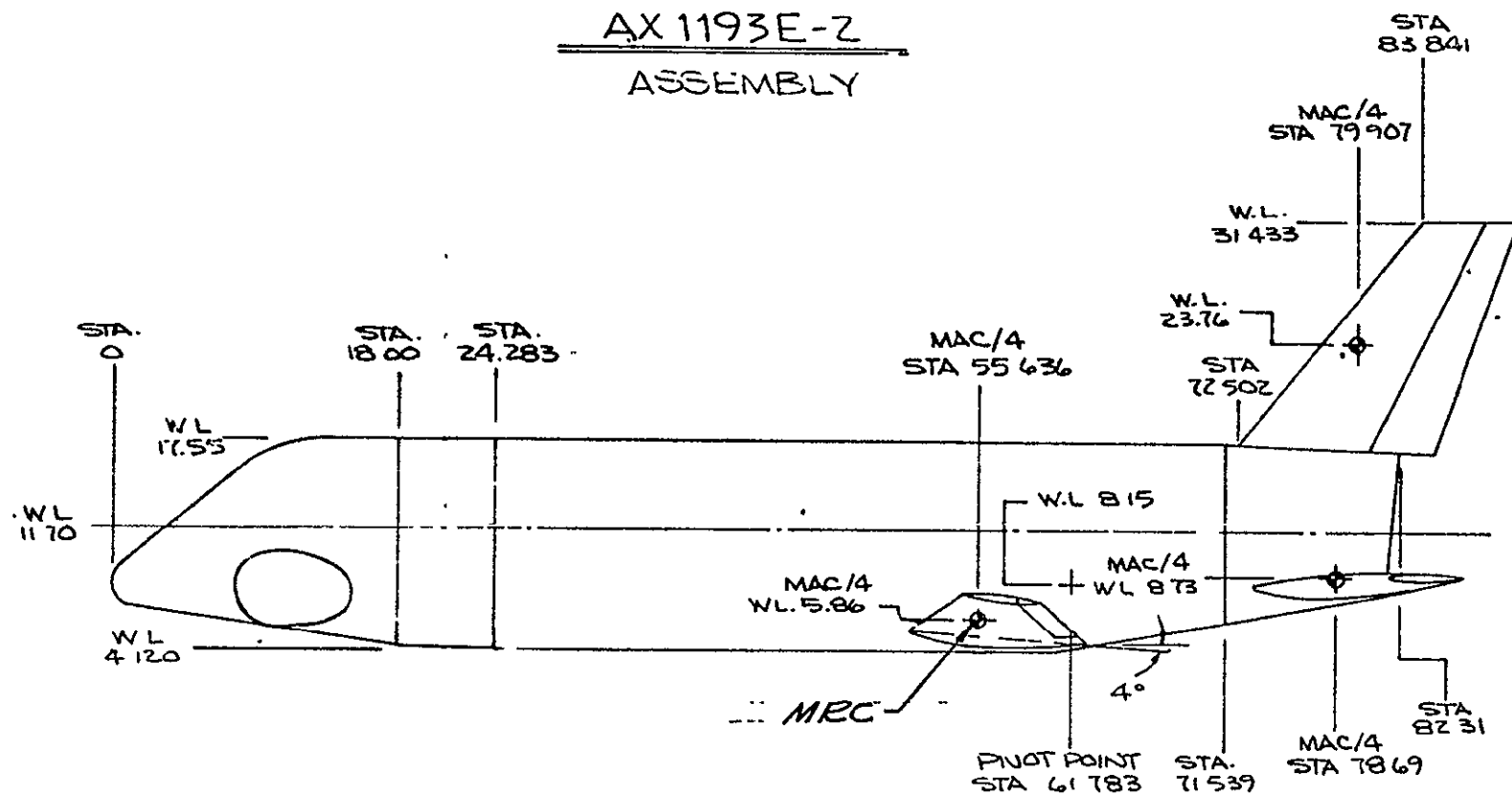


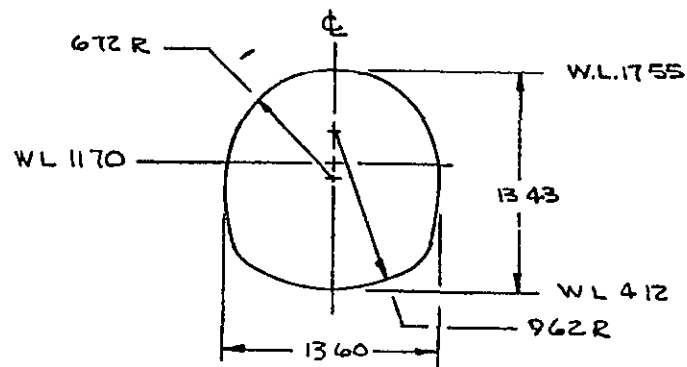
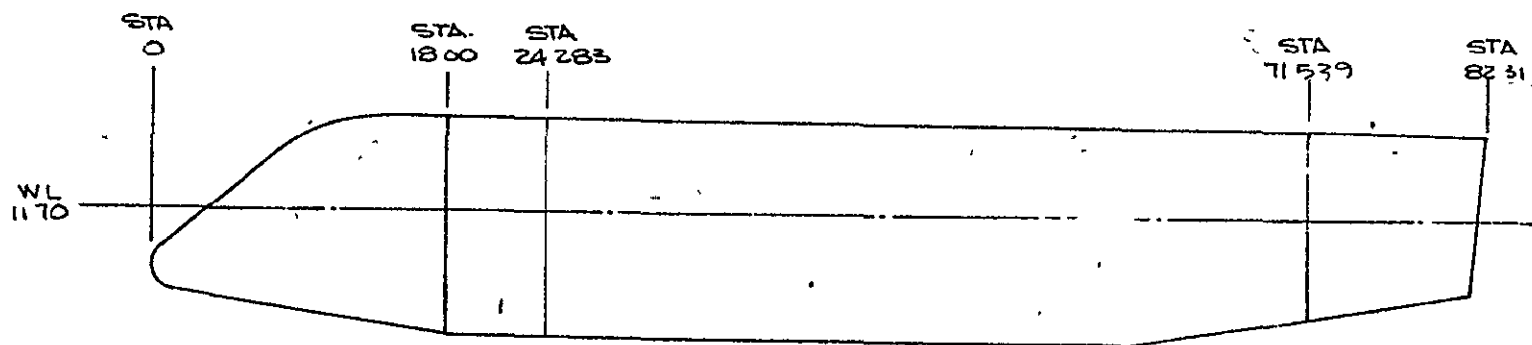
FIGURE 3. PLAN VIEW B, W, V, H, N, S, + F.



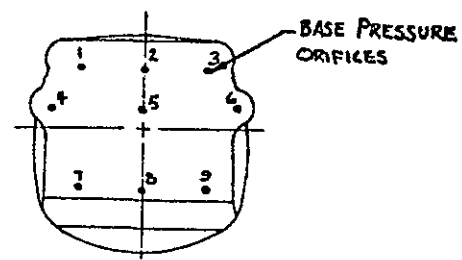
23

FIGURE 4. SIDE VIEW B, W, V, H, N,

# AX 1193E-Z BODY, B<sub>1</sub>



SECTION  
@ STA 24283



REAR VIEW

FIGURE 5. Body B<sub>1</sub>

# AX 1193E-Z, C<sub>6</sub> WING, W<sub>2</sub>

REF. 29-4610Z

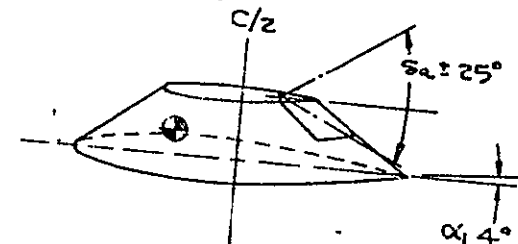
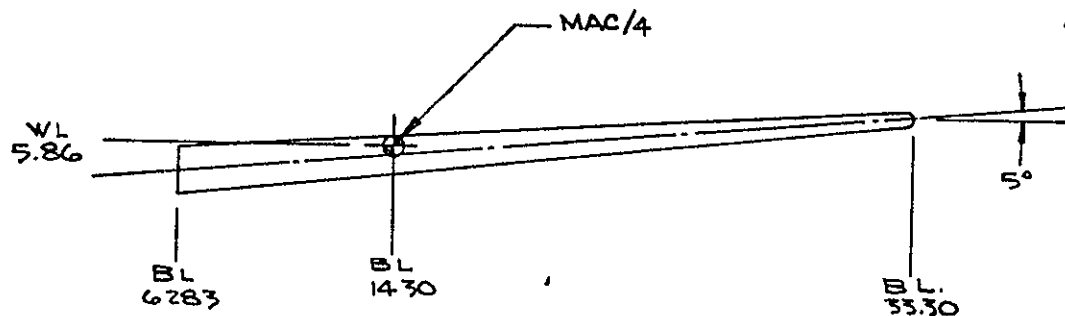
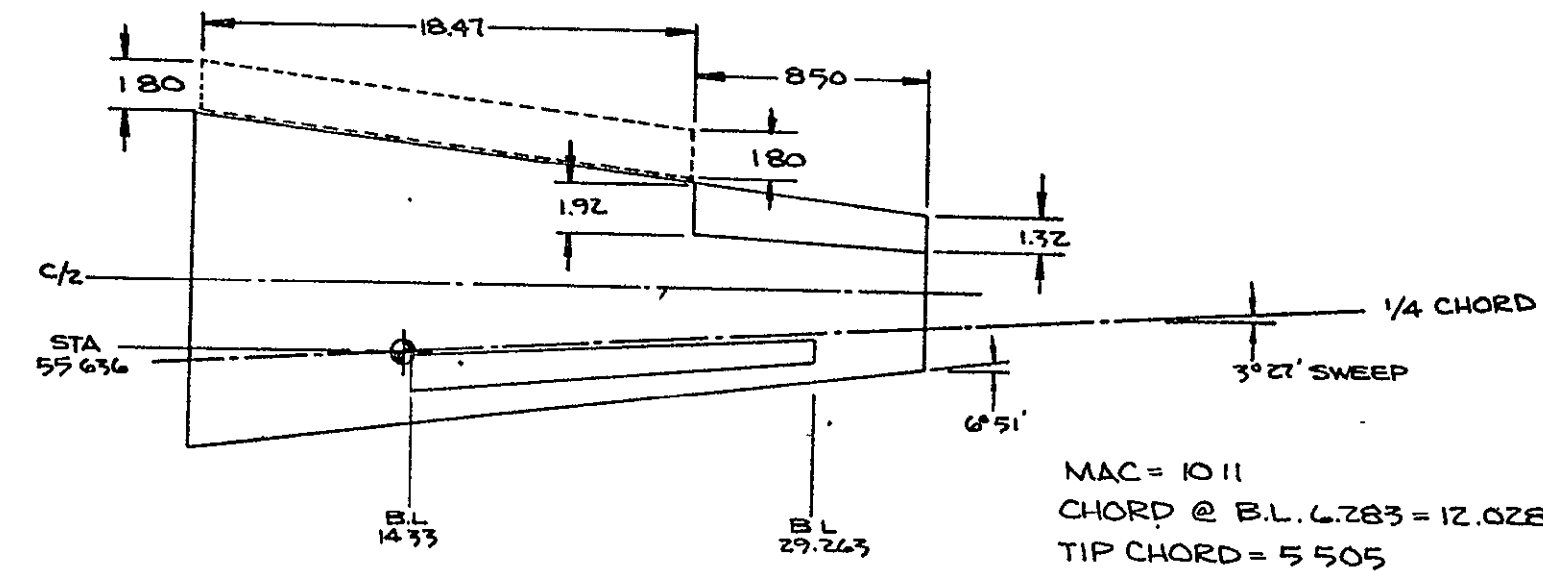


FIGURE 6. WING- W<sub>1</sub>, W<sub>2</sub>

# AX 1193E-Z, HORIZ. TAIL H<sub>1</sub>

REF: Z9-46103

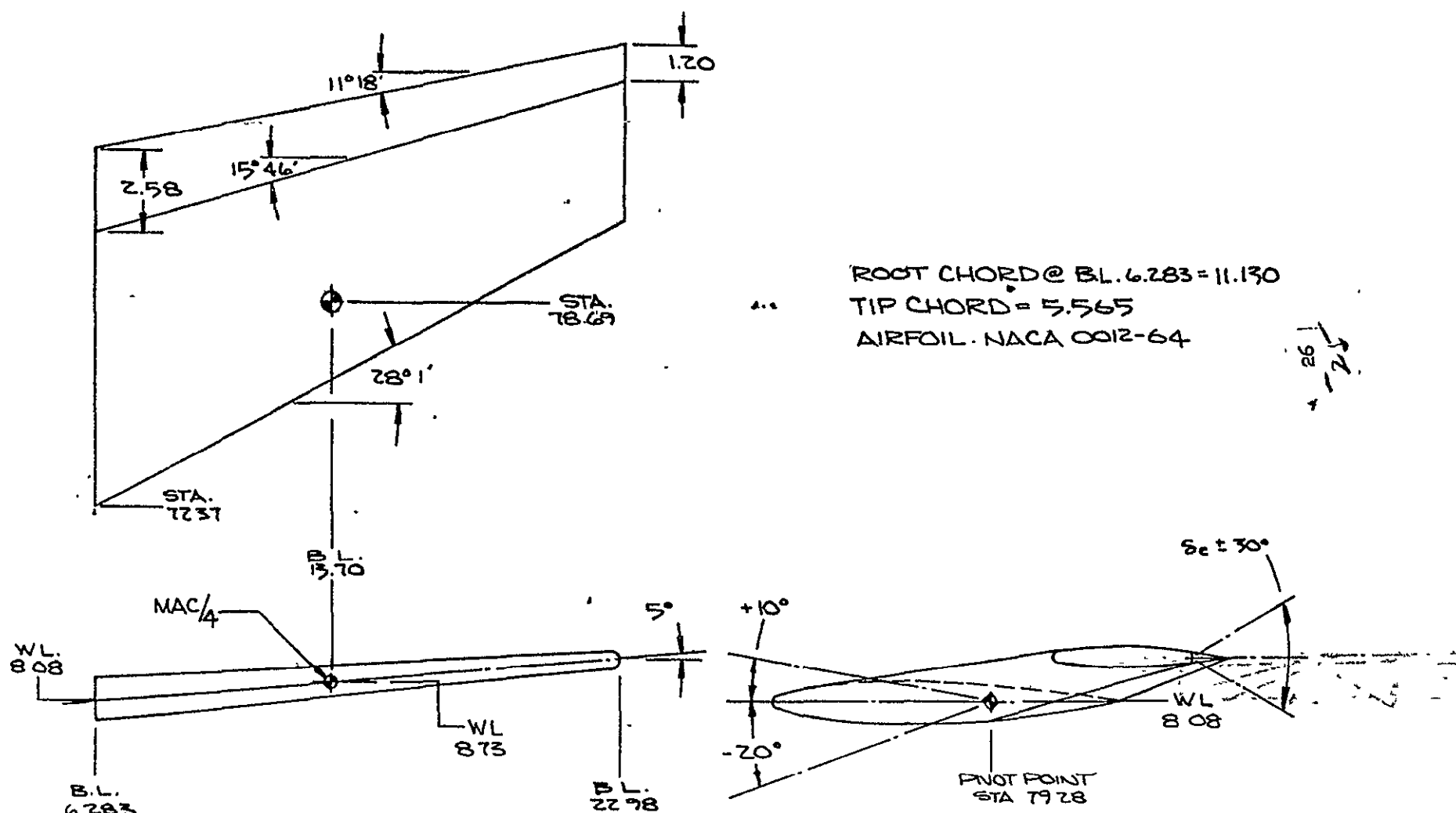
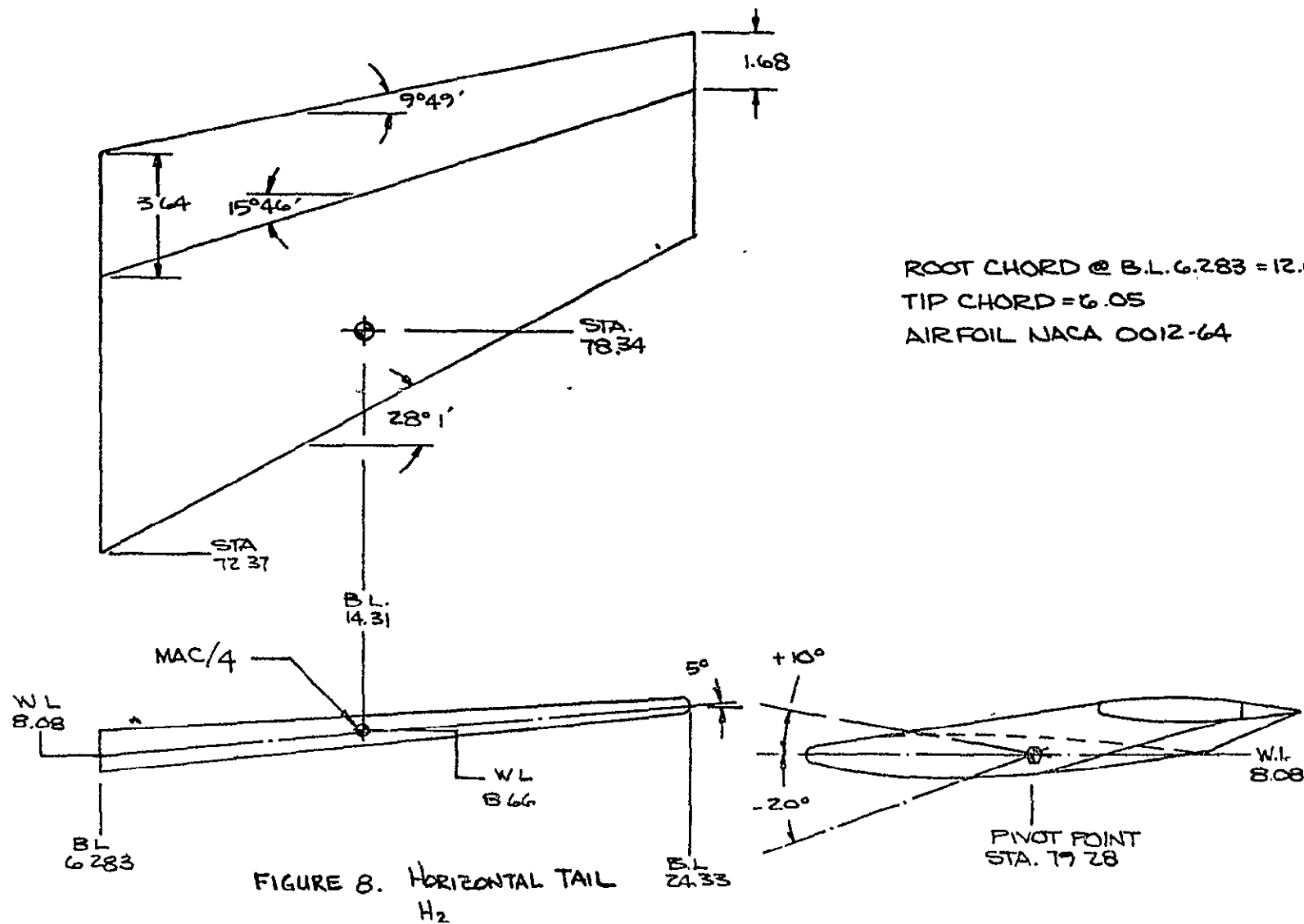


FIGURE 7. HORIZONTAL TAIL, H<sub>1</sub>

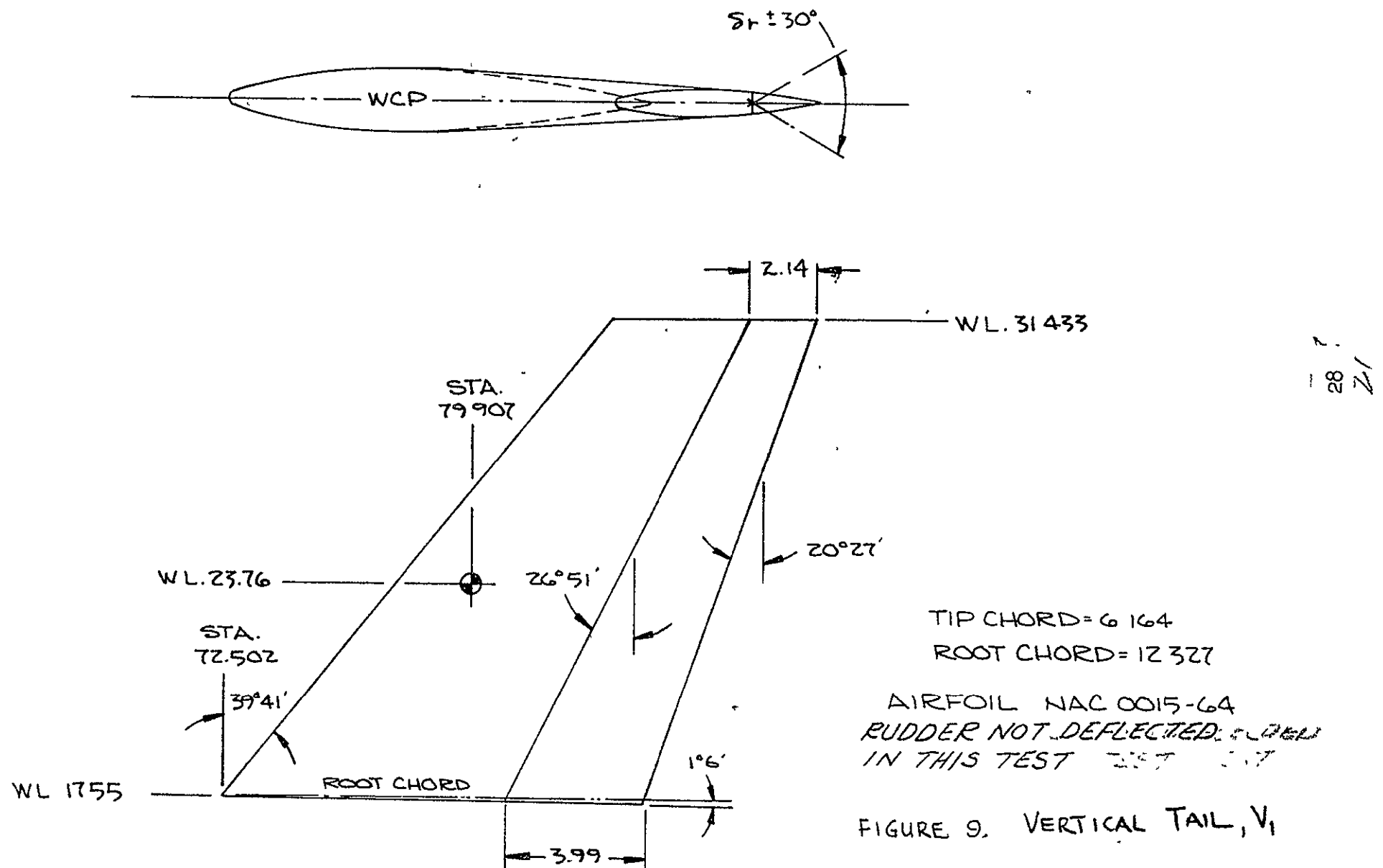
# AX1193E-2, HORIZ. TAIL H<sub>2</sub>

REF DWG. Z9-46148



# AX 1193E-Z VERTICAL TAIL, V<sub>1</sub>

REF: 1193-30



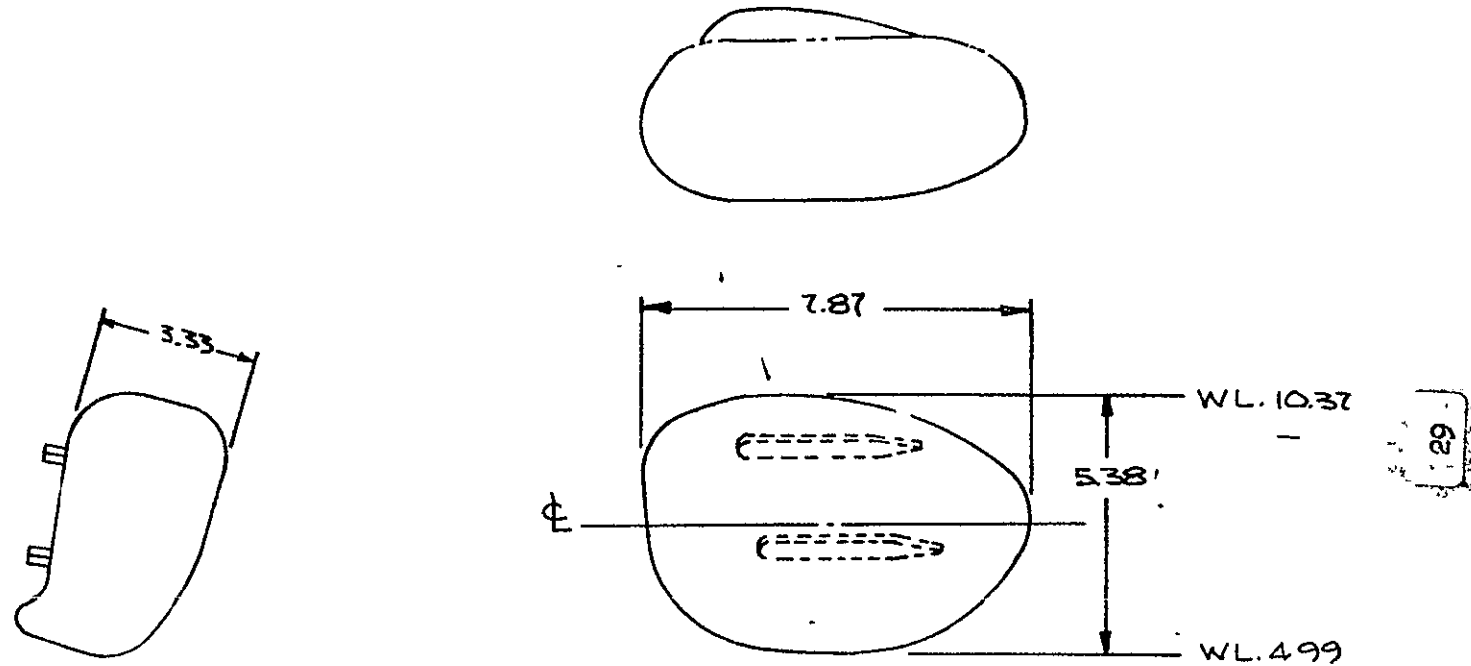
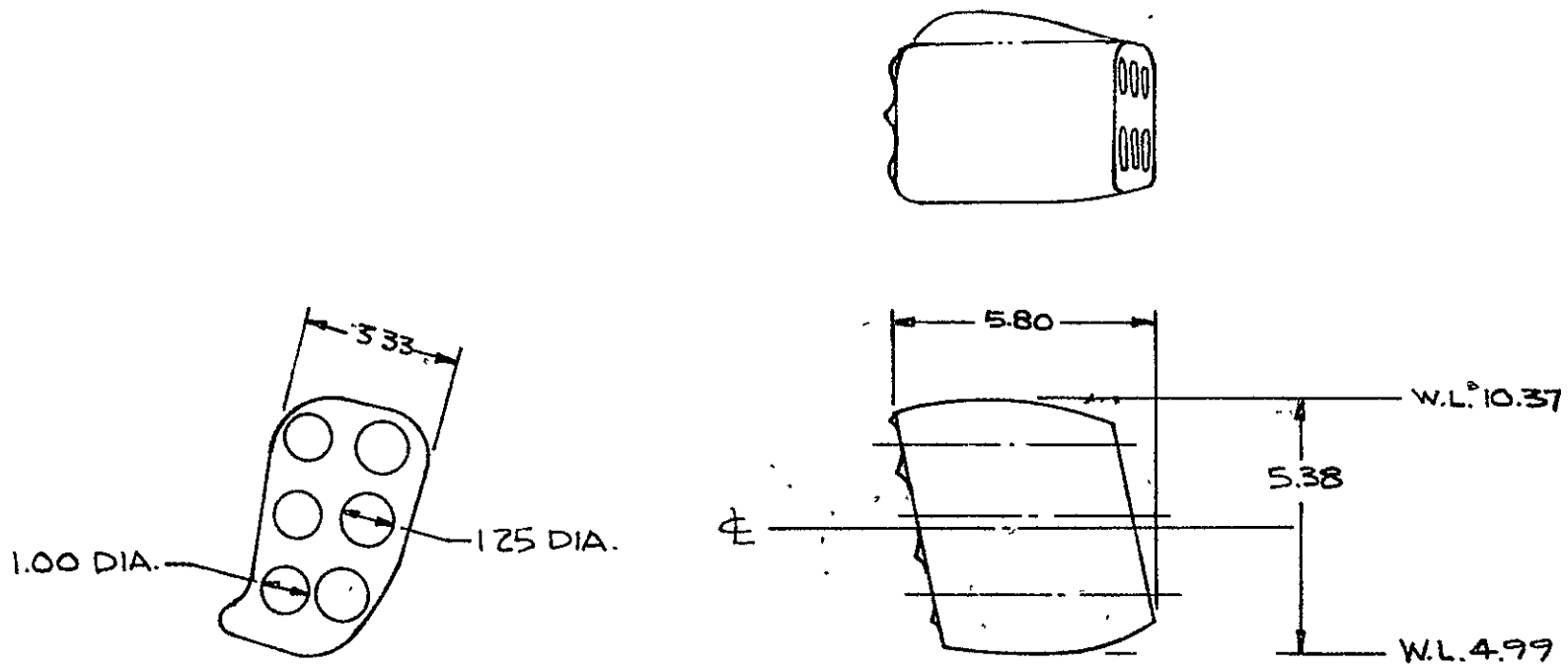


FIGURE 10. <sup>N<sub>1</sub></sup> ENGINE POD  
REF DWG 1193-46



N<sub>2</sub>  
 FIGURE 11. ENGINE POD  
 REF: DWG 1193-50

30  
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# AX 1193E-2 FLAP PROFILE AND POSITIONS

REF: 1193-31

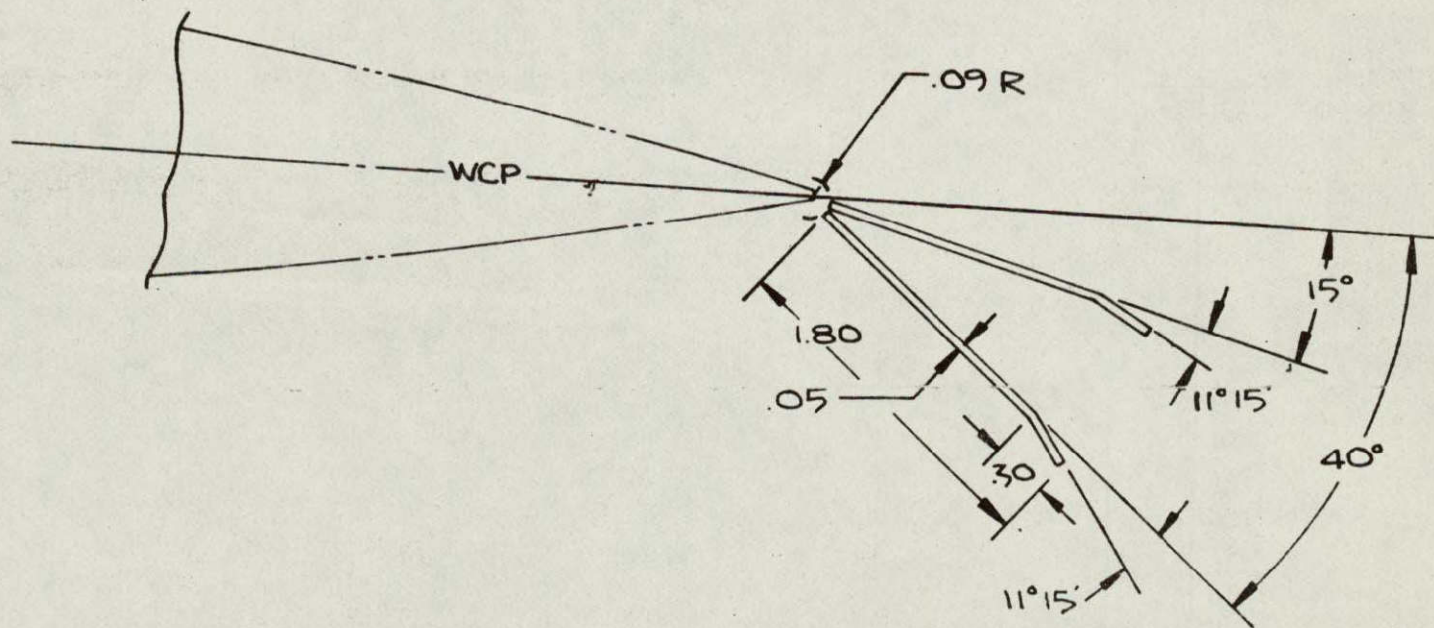


FIGURE 12. SIMULATED FOWLER FLAP, F<sub>1</sub>

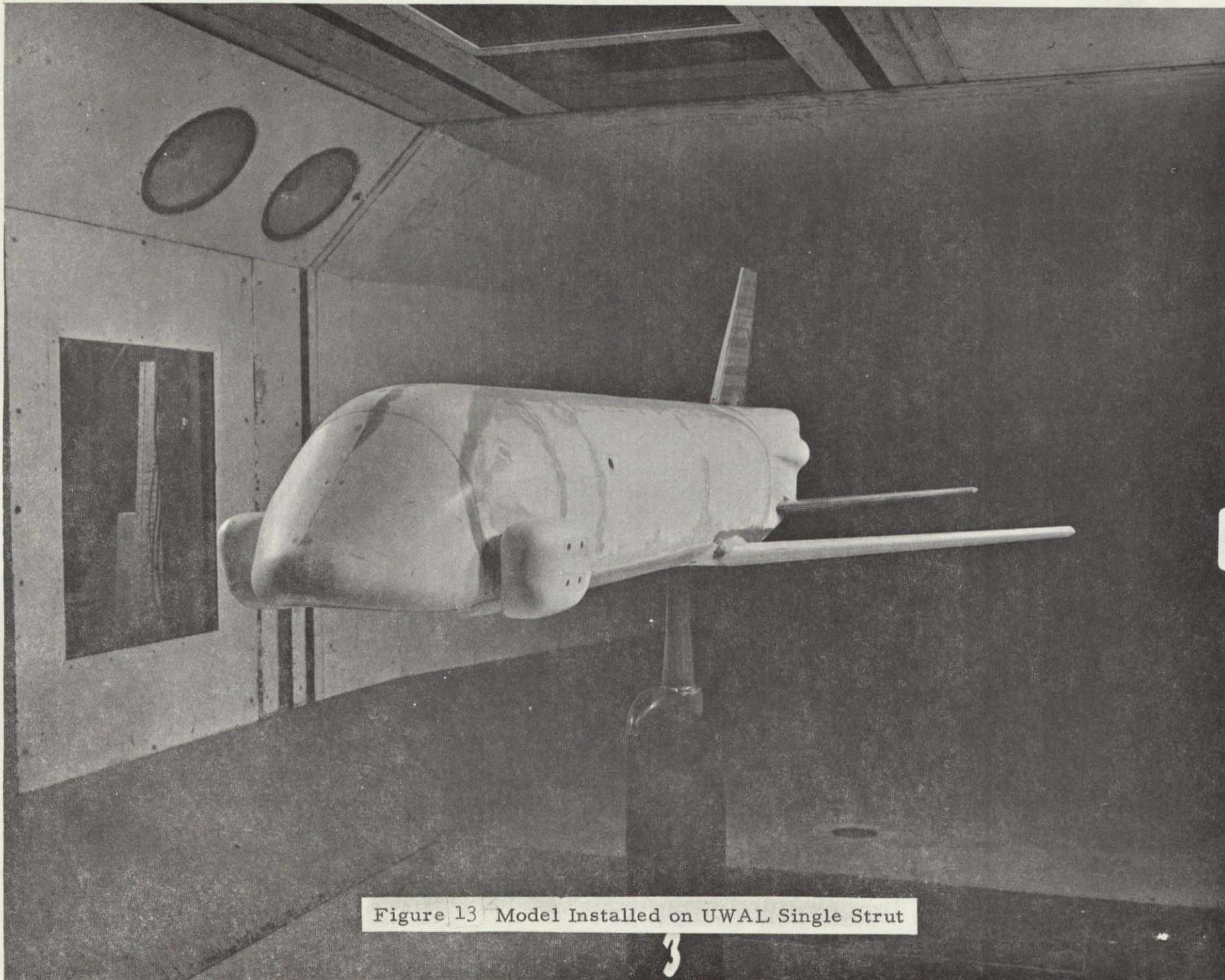


Figure 13 Model Installed on UWAL Single Strut

NOT REPRODUCIBLE

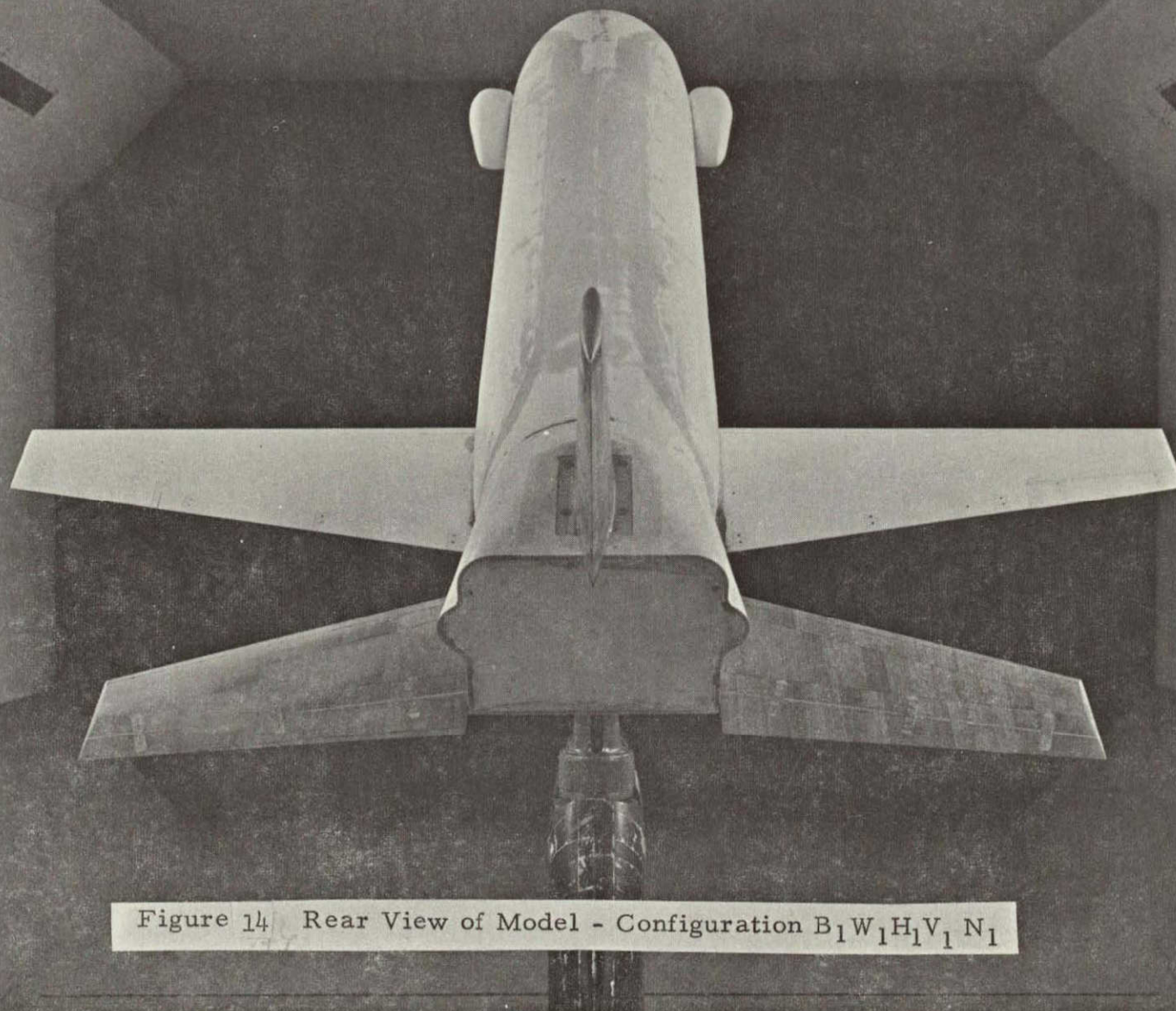


Figure 14 Rear View of Model - Configuration  $B_1W_1H_1V_1N_1$

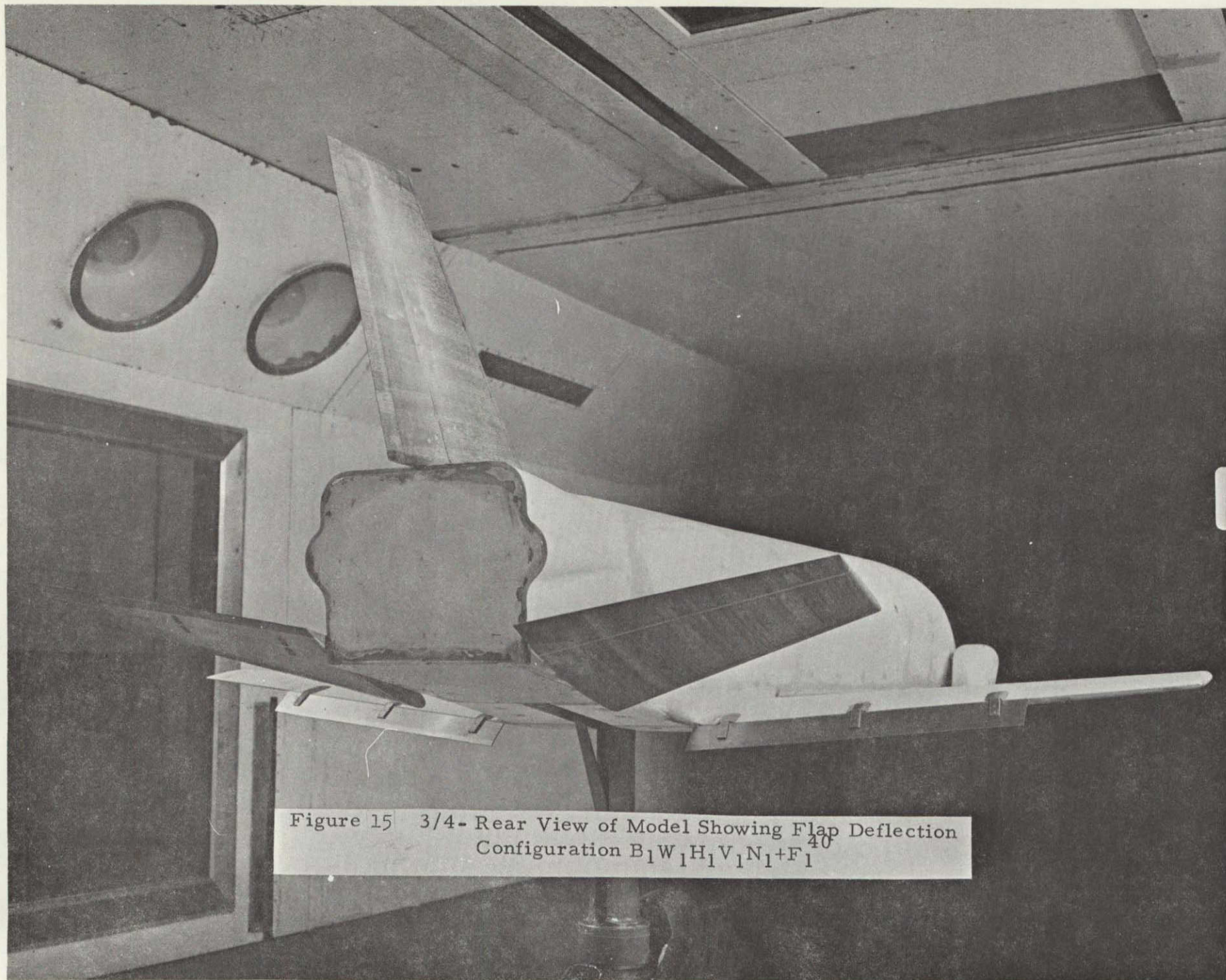


Figure 15 3/4- Rear View of Model Showing Flap Deflection  
Configuration  $B_1W_1H_1V_1N_1+F_1$

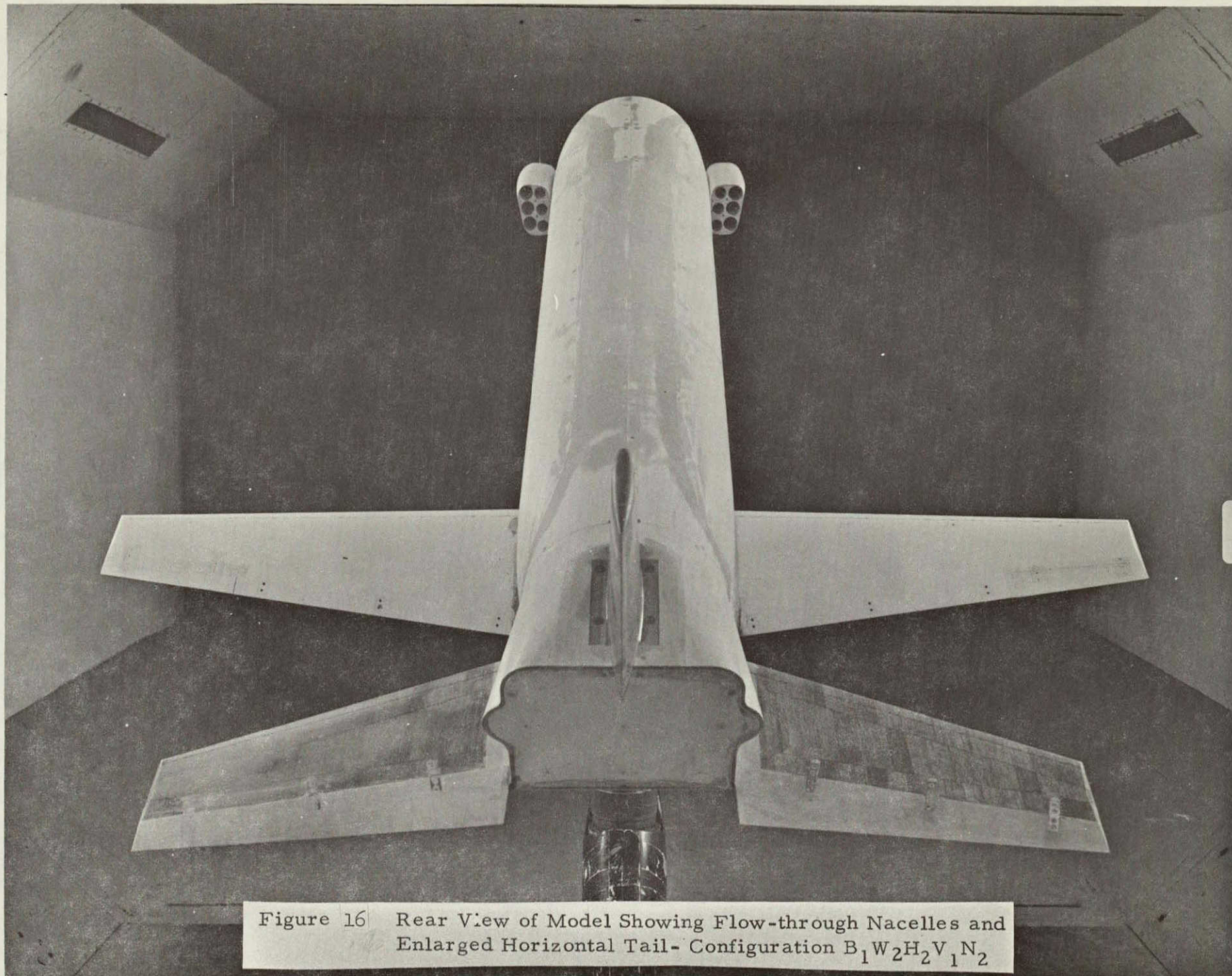


Figure 16 Rear View of Model Showing Flow-through Nacelles and Enlarged Horizontal Tail- Configuration  $B_1W_2H_2V_1N_2$

MODEL COMPONENT DESCRIPTIONS

MODEL COMPONENT: BODY - B<sub>1</sub>

GENERAL DESCRIPTION: A 0.02992 scale booster body  
derived from the Model 979-107 Booster

DRAWING NUMBER: 29-44294 orig.  
1193-43 modif.

| <u>DIMENSIONS:</u>   | <u>FULL-SCALE</u>           | <u>MODEL SCALE</u>          |
|----------------------|-----------------------------|-----------------------------|
| Length               | <u>2751 in</u>              | <u>82.31 in</u>             |
| Max. Width           | <u>420 in</u>               | <u>13.60 in</u>             |
| Max. Depth           | <u>400 in</u>               | <u>13.43 in</u>             |
| Fineness Ratio       | <u>6.55</u>                 | <u>6.0</u>                  |
| Area                 |                             |                             |
| Max. Cross-Sectional | <u>                    </u> | <u>150.6 in<sup>2</sup></u> |
| Planform             | <u>                    </u> | <u>                    </u> |
| Wetted               | <u>                    </u> | <u>                    </u> |
| Base                 | <u>895.8 ft<sup>2</sup></u> | <u>117.5 in<sup>2</sup></u> |

MODEL COMPONENT: Wing - W<sub>1</sub> (W<sub>2</sub> is wing W<sub>1</sub> moved 2.06" aft (M.S.))

GENERAL DESCRIPTION: A 0.02992 scale Model 979-107 wing

DRAWING NUMBER: Model: 29-46102  
Full Scale: 164-10038

DIMENSIONS:

FULL-SCALE

MODEL SCALE

TOTAL DATA

|                            |                                       |                                      |
|----------------------------|---------------------------------------|--------------------------------------|
| Area                       |                                       |                                      |
| Planform                   | <u>4438 <math>\frac{1}{2}</math></u>  | <u>4.42 <math>\frac{1}{2}</math></u> |
| Wetted                     |                                       |                                      |
| Span (equivalent)          | <u>185.9 <math>\frac{1}{2}</math></u> | <u>66.6</u>                          |
| Aspect Ratio               | <u>7.0</u>                            | <u>6.98</u>                          |
| Rate of Taper              | <u>0.121</u>                          | <u>0.122</u>                         |
| Taper Ratio                | <u>0.4</u>                            | <u>0.404</u>                         |
| Dihedral Angle, degrees    | <u>5.0°</u>                           | <u>5.0°</u>                          |
| Incidence Angle, degrees   | <u>4.0°</u>                           | <u>4.0°</u>                          |
| Aerodynamic Twist, degrees | <u>0°</u>                             | <u>0°</u>                            |
| Toe-In Angle               | <u>—</u>                              | <u>—</u>                             |
| Cant Angle                 | <u>—</u>                              | <u>—</u>                             |
| Sweep Back Angles, degrees |                                       |                                      |
| Leading Edge               | <u>6°-54'</u>                         | <u>6°-57'</u>                        |
| Trailing Edge              | <u>-6°-54'</u>                        | <u>-6°-57'</u>                       |
| 0.25 Element Line          | <u>30-27'</u>                         | <u>30-27'</u>                        |
| Chords:                    |                                       |                                      |
| Root (Wing Sta. 0.0)       | <u>455 in</u>                         | <u>13.613</u>                        |
| Tip, (equivalent)          | <u>184 in</u>                         | <u>5.505</u>                         |
| MAC                        | <u>338 in</u>                         | <u>10.117</u>                        |
| Fus. Sta. of .25 MAC       | <u>2857.5</u>                         | <u>55.636 *</u>                      |
| W.P. of .25 MAC            | <u>255</u>                            | <u>5.86</u>                          |
| B.L. of .25 MAC            | <u>478</u>                            | <u>14.3</u>                          |
| Airfoil Section            |                                       |                                      |
| Root                       | <u>NACA 0015-64</u>                   | <u>NACA 0015-64</u>                  |
| Tip                        | <u>Same</u>                           | <u>Same</u>                          |

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      |  |  |

\* 57.70 for W<sub>2</sub>

MODEL COMPONENT: Horizontal Tail - H<sub>1</sub>

GENERAL DESCRIPTION: A 0.02992 scale Model 1979-107  
horizontal tail with movable elevator

DRAWING NUMBER: Full scale BAC 164-10038  
Model scale 29-46103

| <u>DIMENSIONS:</u>                                  | <u>FULL-SCALE</u>          | <u>MODEL SCALE</u>                    |
|-----------------------------------------------------|----------------------------|---------------------------------------|
| Area (exposed)                                      | <u>2164 ft<sup>2</sup></u> | <u>139.38 in<sup>2</sup> ea. side</u> |
| Span (equivalent)                                   | <u>128 ft</u>              | <u>45.96 in</u>                       |
| Inb'd equivalent chord                              | <u>372 in.</u>             | <u>11.130 @ BL 6.283</u>              |
| Outb'd equivalent chord                             | <u>186 in.</u>             | <u>5.565 in</u>                       |
| Ratio movable surface chord/<br>total surface chord |                            |                                       |
| At Inb'd equiv. chord                               | <u>0.234</u>               | <u>0.232</u>                          |
| At Outb'd equiv. chord                              | <u>0.215</u>               | <u>0.216</u>                          |
| Sweep Back Angles, degrees                          |                            |                                       |
| Leading Edge                                        | <u>27°-36'</u>             | <u>28° 1'</u>                         |
| Tailing Edge                                        | <u>12°</u>                 | <u>11°-12'</u>                        |
| Hingeline                                           | <u>15°-30'</u>             | <u>15°-46'</u>                        |
| Area Moment (Normal to hinge line)                  | <u>615 ft<sup>3</sup></u>  | <u>28.4 in<sup>3</sup></u>            |
| elevator one side                                   |                            |                                       |
| Angular travel                                      |                            |                                       |
| horiz tail                                          | <u>-20° to +10°</u>        | <u>-20°, -10°, 0°, +10°</u>           |
| elevator                                            | <u>-30° to +30°</u>        | <u>-30°, -15°, 0°, 15°, 30°</u>       |

MODEL COMPONENT: Horizontal Tail - H2

GENERAL DESCRIPTION: A 0.02992 scale horizontal tail  
with fixed elevator

DRAWING NUMBER: Model Scale 29-46148

| <u>DIMENSIONS:</u>                                  | <u>FULL-SCALE</u> | <u>MODEL SCALE</u>                  |
|-----------------------------------------------------|-------------------|-------------------------------------|
| Area (exposed)                                      | _____             | <u>167.7 in<sup>2</sup> ea side</u> |
| Span (equivalent)                                   | _____             | <u>48.66 in</u>                     |
| Inb'd equivalent chord                              | _____             | <u>12.04 @ BL 6.283</u>             |
| Outb'd equivalent chord                             | _____             | <u>6.05</u>                         |
| Ratio movable surface chord/<br>total surface chord |                   |                                     |
| At Inb'd equiv. chord                               | _____             | <u>0.302</u>                        |
| At Outb'd equiv. chord                              | _____             | <u>0.278</u>                        |
| Sweep Back Angles, degrees                          |                   |                                     |
| Leading Edge                                        | _____             | <u>28°-1'</u>                       |
| Tailing Edge                                        | _____             | <u>9°-49'</u>                       |
| Hingeline                                           | _____             | <u>15°-46'</u>                      |
| Area Moment (Normal to hinge line)                  | _____             | <u>64.3 in<sup>3</sup></u>          |

MODEL COMPONENT: Vertical Tail - V1

GENERAL DESCRIPTION: A 0.02992 scale Model 979-107  
vertical tail with movable rudder

DRAWING NUMBER: RAL S.O. 1193-30 Model  
BAL 164-10012 Fullscale

| <u>DIMENSIONS:</u>                                  | <u>FULL-SCALE</u>                      | <u>MODEL SCALE</u>                     |
|-----------------------------------------------------|----------------------------------------|----------------------------------------|
| Area                                                | <u>1000 <math>\text{ft}^2</math></u>   | <u>128.33 <math>\text{in}^2</math></u> |
| Span (equivalent)                                   | <u>464 in</u>                          | <u>13.883 in.</u>                      |
| Aspect Ratio                                        | <u>1.5</u>                             | <u>1.5</u>                             |
| Inb'd equivalent chord                              | <u>412 in</u>                          | <u>12.327 in</u>                       |
| Outb'd equivalent chord                             | <u>206 in</u>                          | <u>6.164 in.</u>                       |
| Ratio movable surface chord/<br>total surface chord |                                        |                                        |
| At Inb'd equiv. chord                               | <u>0.324</u>                           | <u>0.324</u>                           |
| At Outb'd equiv. chord                              | <u>0.347</u>                           | <u>0.347</u>                           |
| Sweep Back Angles, degrees                          |                                        |                                        |
| Leading Edge                                        | <u>39° 40'</u>                         | <u>39° 41'</u>                         |
| Tailing Edge                                        | <u>20° 27'</u>                         | <u>20° 27'</u>                         |
| Hingeline                                           | <u>26° 50'</u>                         | <u>26° 51'</u>                         |
| Area Moment (Normal to hinge line) rudder           | <u>1231.5 <math>\text{ft}^3</math></u> | <u>59.57 <math>\text{in}^3</math></u>  |
| Airfoil Section                                     | NACA 0015-64                           |                                        |

MODEL COMPONENT: Fly-home Engine Pack - N<sub>1</sub>

GENERAL DESCRIPTION: Right- and left-hand engine packs  
approximating configuration proposed for Model 979-107  
booster.

DRAWING NUMBER: 1193-46

| <u>DIMENSIONS:</u>   | <u>FULL-SCALE</u> | <u>MODEL SCALE</u>          |
|----------------------|-------------------|-----------------------------|
| Length               | _____             | <u>7.87 in.</u>             |
| Max. Width           | _____             | <u>3.33 in.</u>             |
| Max. Depth           | _____             | <u>5.38 in.</u>             |
| Fineness Ratio       | _____             | <u>2.36</u>                 |
| Area                 |                   |                             |
| Max. Cross-Sectional | _____             | <u>16.6 in<sup>2</sup>.</u> |
| Planform             | _____             | _____                       |
| Wetted               | _____             | _____                       |
| Base                 | _____             | _____                       |

MODEL COMPONENT: Fly-home Engine Pack - Nz

GENERAL DESCRIPTION: Right- and left-hand engine packs  
with six flow-through simulated engines each.

DRAWING NUMBER: 1193-50

| <u>DIMENSIONS:</u>   | <u>FULL-SCALE</u> | <u>MODEL SCALE</u>         |
|----------------------|-------------------|----------------------------|
| Length               |                   | <u>5.80 in</u>             |
| Max. Width           |                   | <u>3.33 in</u>             |
| Max. Depth           |                   | <u>5.38 in</u>             |
| Fineness Ratio       |                   | <u>1.74</u>                |
| Area                 |                   |                            |
| Max. Cross-Sectional |                   | <u>16.6 in<sup>2</sup></u> |
| Planform             |                   |                            |
| Wetted               |                   |                            |
| Base                 |                   | <u>5.2 in<sup>2</sup></u>  |
| Engine Diameter      |                   |                            |
| Inboard (3)          |                   | <u>1.0 in</u>              |
| Outboard (3)         |                   | <u>1.25 in</u>             |

MODEL COMPONENT: Wing Flaps - F.

GENERAL DESCRIPTION: 0.02992 scale flaps simulating  
constant chord Fowler flaps on the Model  
979-102 booster.

DRAWING NUMBER: Model BAC S.O. 1193-31  
Full scale BAC 164-10038

| <u>DIMENSIONS:</u>                                       | <u>FULL-SCALE</u>            | <u>MODEL SCALE</u>          |
|----------------------------------------------------------|------------------------------|-----------------------------|
| Area                                                     | <u>256.25 ft<sup>2</sup></u> | <u>33.25 in<sup>2</sup></u> |
| Span (equivalent)                                        | <u>51.25 ft</u>              | <u>18.47 in.</u>            |
| Inb'd equivalent chord                                   | <u>60 in.</u>                | <u>1.8 in.</u>              |
| Outb'd equivalent chord                                  | <u>60 in.</u>                | <u>1.8 in.</u>              |
| Ratio movable surface chord/<br>total surface chord      |                              |                             |
| At Inb'd equiv. chord                                    | <u>0.15</u>                  | <u>0.15</u>                 |
| At Outb'd equiv. chord                                   | <u>0.22</u>                  | <u>0.22</u>                 |
| Sweep Back Angles, degrees                               |                              |                             |
| Leading Edge                                             | <u>6°-51'</u>                | <u>6°-57'</u>               |
| Tailing Edge                                             | <u>6°-51'</u>                | <u>6°-57'</u>               |
| Hingeline                                                | <u>6°-57'</u>                | <u>6°-57'</u>               |
| Area Moment (Normal to hinge line)<br>about leading edge | <u>610.63 ft<sup>3</sup></u> | <u>29.92 in<sup>3</sup></u> |

MODEL COMPONENT: Spoilers - 5.

GENERAL DESCRIPTION: 0.02992 scale two-position spoilers  
simulating the Model 979-107 booster spoilers.  
Positions of 45° and 80° available

DRAWING NUMBER: BAC 50. 1193-28 model

| <u>DIMENSIONS:</u>                                  | <u>FULL-SCALE</u>            | <u>MODEL SCALE</u>          |
|-----------------------------------------------------|------------------------------|-----------------------------|
| Area (each side)                                    | <u>123.26 ft<sup>2</sup></u> | <u>15.9 in.<sup>2</sup></u> |
| Span (equivalent) each side                         | <u>41.67 ft</u>              | <u>14.93 in.</u>            |
| Inb'd equivalent chord                              | <u>44 in.</u>                | <u>1.32 in.</u>             |
| Outb'd equivalent chord                             | <u>27 in.</u>                | <u>0.81 in.</u>             |
| Ratio movable surface chord/<br>total surface chord |                              |                             |
| At Inb'd equiv. chord                               | <u>0.13</u>                  | <u>0.13</u>                 |
| At Outb'd equiv. chord                              | <u>0.127</u>                 | <u>0.127</u>                |
| Sweep Back Angles, degrees                          |                              |                             |
| Leading Edge                                        | <u>5.5°</u>                  | <u>5.5°</u>                 |
| Tailing Edge                                        | <u>3.33°</u>                 | <u>3.33°</u>                |
| Hingeline                                           | <u>5.5°</u>                  | <u>5.5°</u>                 |
| Area Moment (Normal to hinge line)<br>about L.E.    | <u>195.16 ft<sup>3</sup></u> | <u>8.93 in.<sup>3</sup></u> |

## STANDARD NOMENCLATURE

# NOMENCLATURE

| <u>SYMBOL</u> | <u>SADSAC<br/>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 $\ell_{ref}$ 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<br/>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<br/>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, $C_{n,s} = C_{n,w}$ |
| $C_{n,w}$     | 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<br/>SYMBOL</u> | <u>DEFINITION</u>                                          |
|---------------|--------------------------|------------------------------------------------------------|
| $F_Y$         |                          | side force; N, lb                                          |
|               | N/A                      | normal to axial force ratio                                |
| $\ell_{ref}$  | 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;<br>N-m, ft-lb      |
| $M_{x,s}$     |                          | rolling moment in the stability axis system;<br>N-m, ft-lb |

# NOMENCLATURE (continued)

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

# NOMENCLATURE (continued)

| <u>SYMBOL</u> | <u>SADSAC<br/>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                                                 |
| $\alpha$      | 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 |
| $\beta$       | BETA                     | sideslip angle, angle between the wind $X_w$ -axis and the projection of this axis on the body X-Z-plane; deg         |
| $\gamma$      |                          | ratio of specific heats                                                                                               |
| $\Gamma$      | DIHDRL                   | wing dihedral angle; deg                                                                                              |
| $\delta$      |                          | control surface deflection angle; deg                                                                                 |
|               |                          | positive deflections are:                                                                                             |
|               | 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 <sup>3</sup>                                                                        |

# NOMENCLATURE (continued)

| <u>SYMBOL</u> | <u>SADSAC<br/>SYMBOL</u> | <u>DEFINITION</u>                                                                                                                  |
|---------------|--------------------------|------------------------------------------------------------------------------------------------------------------------------------|
| $\theta$      |                          | pitch angle, angle of rotation about the body Y-axis, positive when the positive Z-axis is rotated toward the positive X-axis; deg |
| $\phi$        | 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  |
| $\psi$        | 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      |
| $\infty$          | freestream condition      |

## TABULATED DATA LISTING

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

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

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

|           |                |
|-----------|----------------|
| NASA AMES | Mr. V. Stevens |
| NASA MSC  | Mr. Ray Nelson |

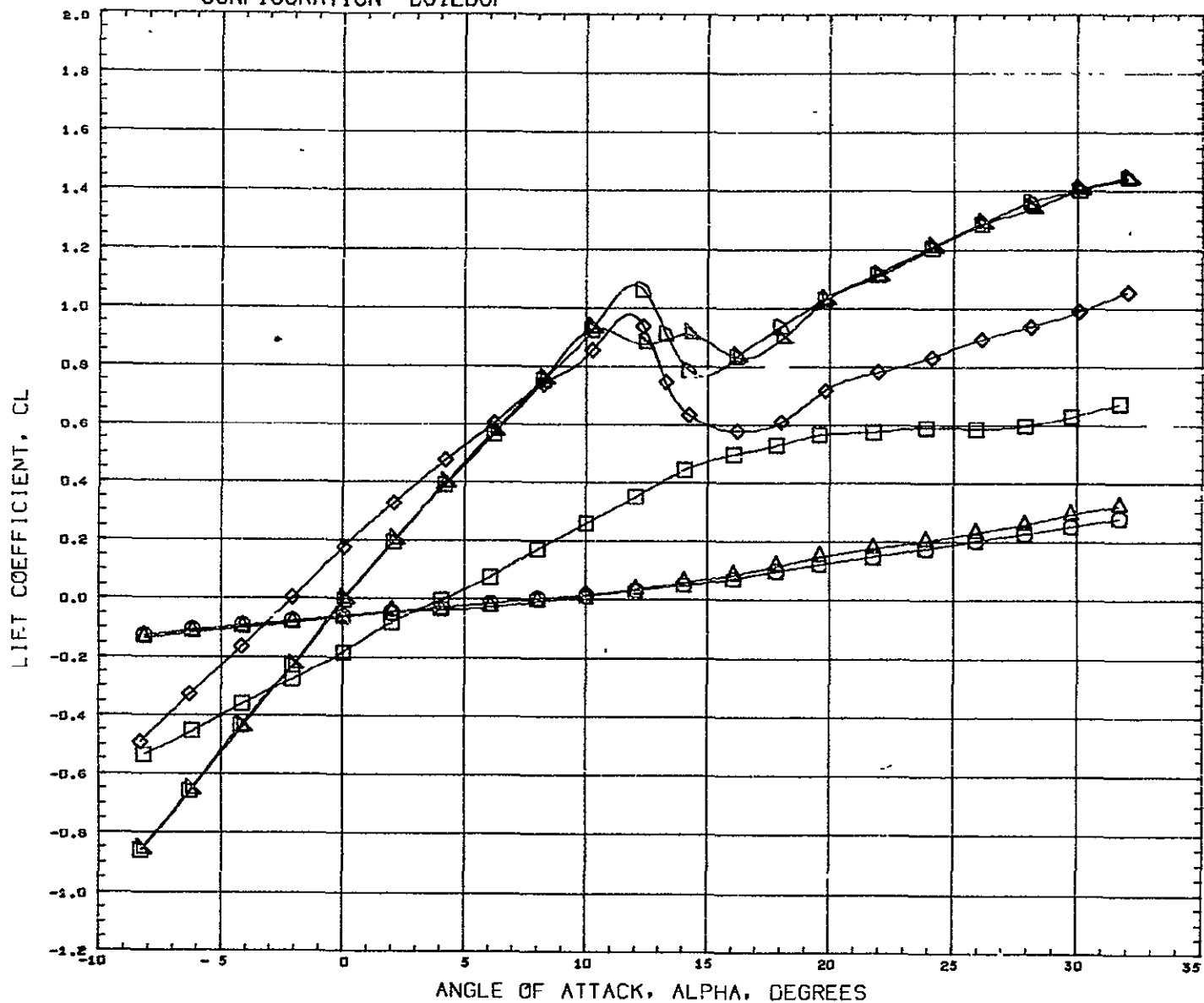
If copies of this listing are desired, please contact the above or the cognizant SADSAC personnel who, for this data, is:

J. R. Ziler  
Department 2780  
Chrysler Corporation Space Division  
New Orleans, La. 70129

(504) 255-2304

DATA

# CONFIGURATION BUILDUP



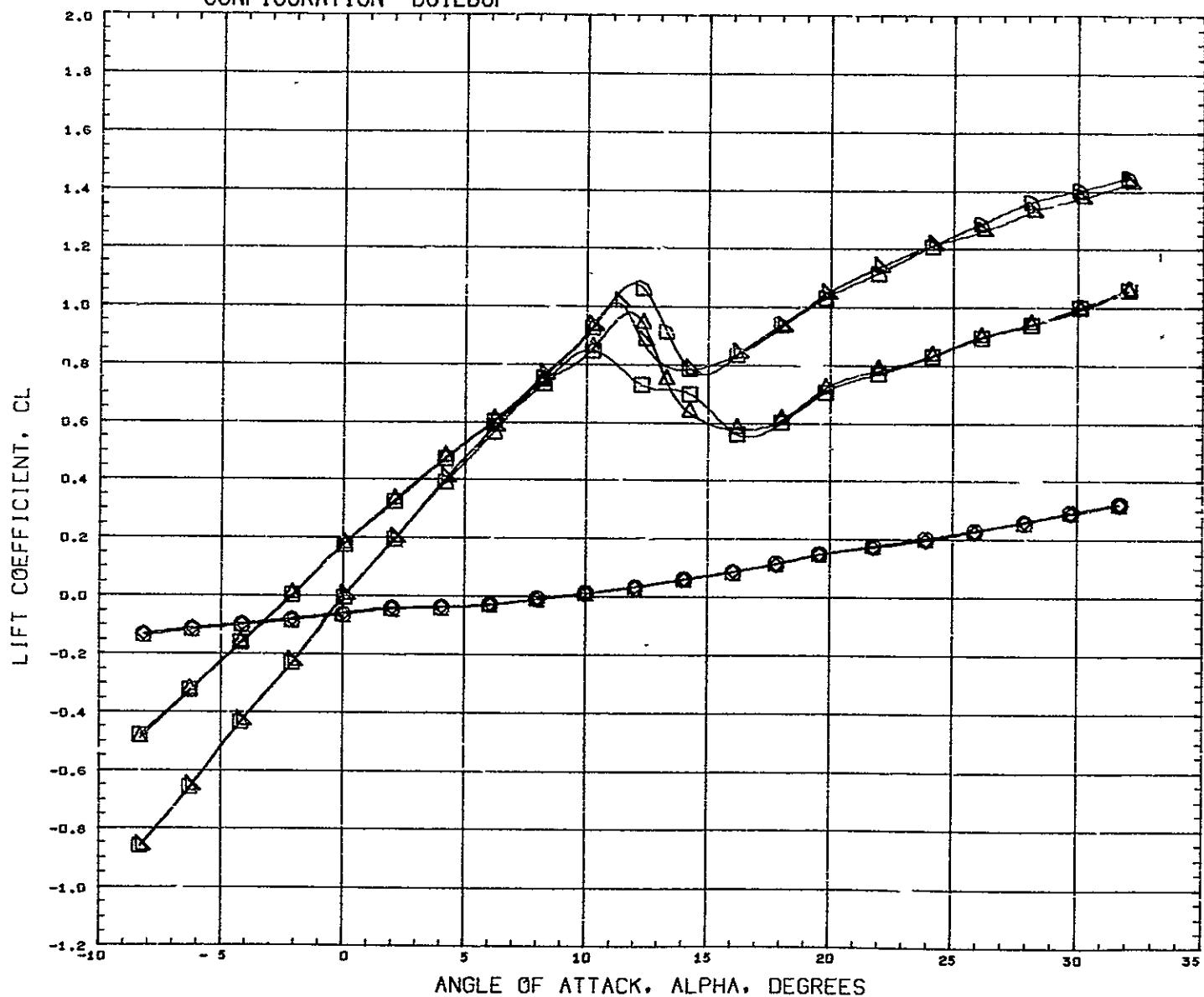
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| (AU1011)        | UWAL-1021 BAC C-6 BOOSTER |
| (AU1021)        | UWAL-1021 BAC C-6 BOOSTER |
| (AU1031)        | UWAL-1021 BAC C-6 BOOSTER |
| (AU1041)        | UWAL-1021 BAC C-6 BOOSTER |
| (AU1071)        | UWAL-1021 BAC C-6 BOOSTER |
| (AU1091)        | UWAL-1021 BAC C-6 BOOSTER |

| BETA       |
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| B1         |
| B1N1       |
| B1W1N1     |
| B1H1N1     |
| B1W1H1N1   |
| B1W1H1V1N1 |

| REFERENCE INFORMATION |
|-----------------------|
| REFS                  |
| REFL                  |
| REFB                  |
| XMRP                  |
| YMRP                  |
| ZMRP                  |
| SCALE                 |

MACH 0.153

# CONFIGURATION BUILDUP



| DATA SET SYMBOL | CONFIGURATION DESCRIPTION |
|-----------------|---------------------------|
| (AU1021)        | UWAL-1021 BAC C-6 BOOSTER |
| (AU1031)        | UWAL-1021 BAC C-6 BOOSTER |
| (AU1051)        | UWAL-1021 BAC C-6 BOOSTER |
| (AU1061)        | UWAL-1021 BAC C-6 BOOSTER |
| (AU1081)        | UWAL-1021 BAC C-6 BOOSTER |
| (AU1091)        | UWAL-1021 RAC C-6 BOOSTER |

MACH 0.153

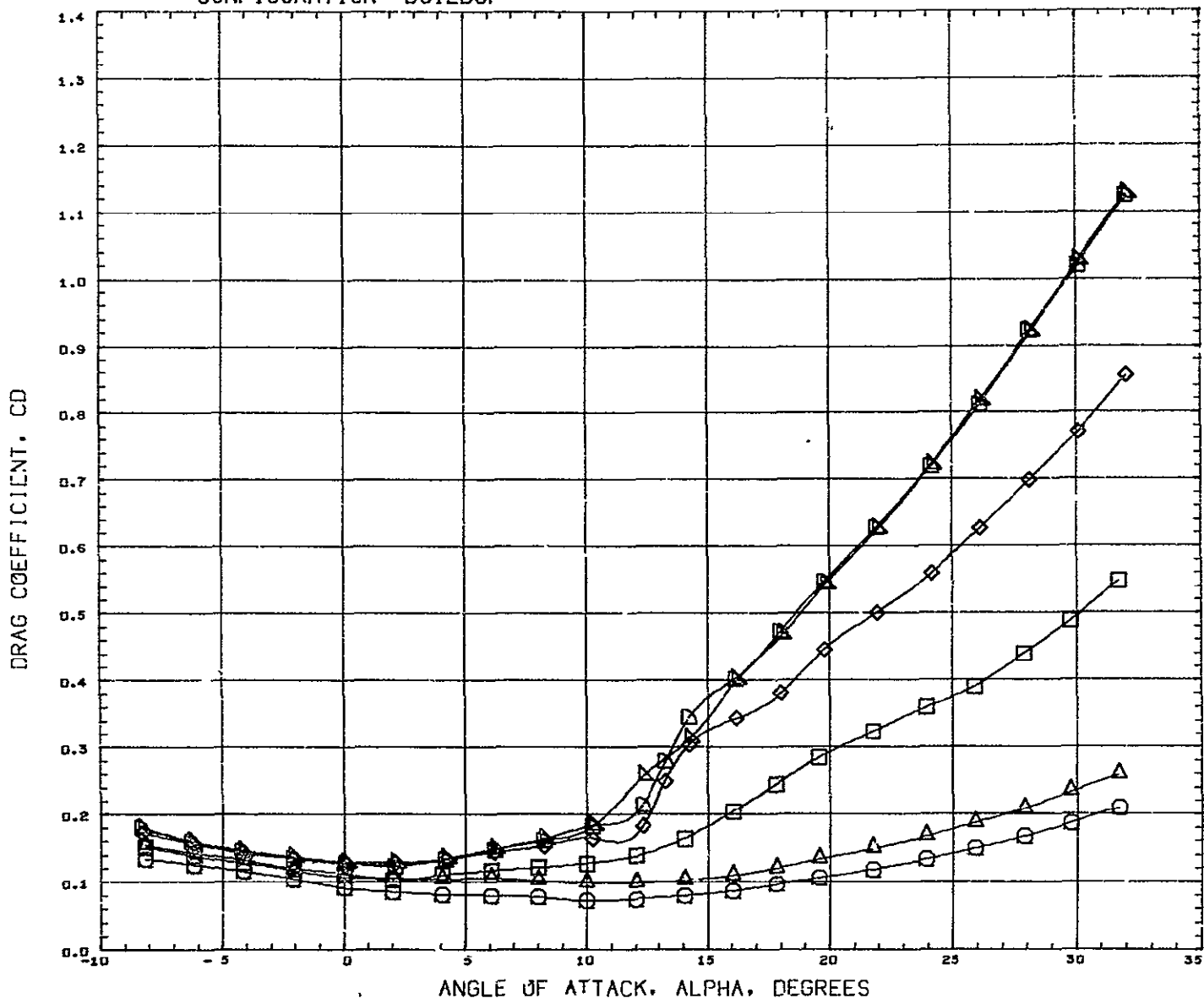
ANGLE OF ATTACK, ALPHA, DEGREES

BETA  
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0.000  
0.000  
0.000

REFERENCE INFORMATION

|       |         |         |
|-------|---------|---------|
| REFS  | 4.4200  | SQ.FT.  |
| REFL  | 10.1000 | INCHES  |
| REFB  | 66.3000 | INCHES  |
| XMRP  | 55.6360 | INCHES  |
| YMRP  | 0.0000  | INCHES  |
| ZMRP  | 5.8600  | INCHES  |
| SCALE | 2.9920  | PERCENT |

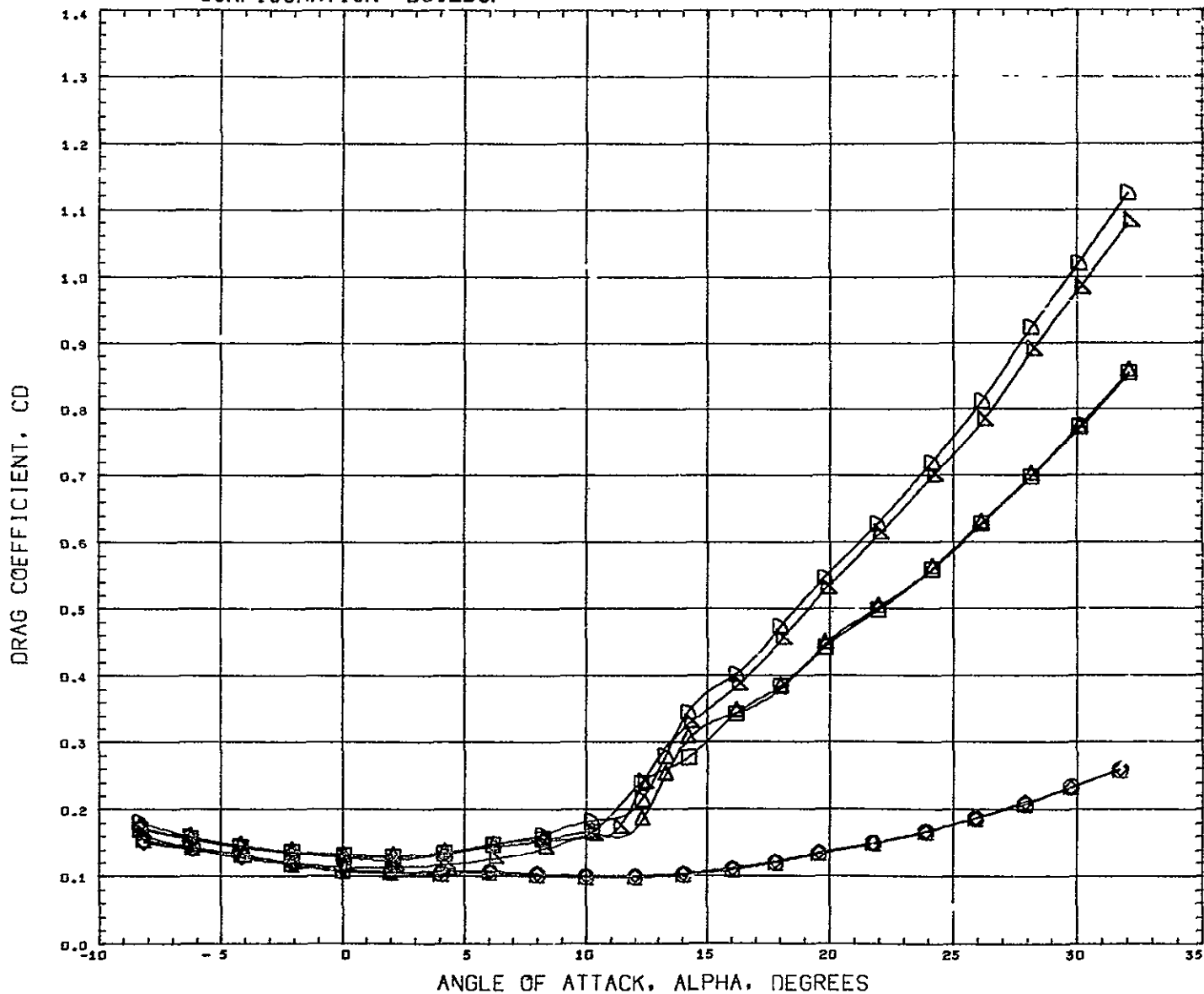
# CONFIGURATION BUILDUP



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| (AU1021)        | UWAL-1021 BAC C-6 BOOSTER | 0.000 | REFL 10.1000 INCHES   |
| (AU1031)        | UWAL-1021 BAC C-6 BOOSTER | 0.000 | REFB 66.6000 INCHES   |
| (AU1041)        | UWAL-1021 BAC C-6 BOOSTER | 0.000 | XMRP 55.6360 INCHES   |
| (AU1071)        | UWAL-1021 BAC C-6 BOOSTER | 0.000 | YMRP 0.0000 INCHES    |
| (AU1091)        | UWAL-1021 BAC C-6 BOOSTER | 0.000 | ZMRP 5.8600 INCHES    |
|                 |                           |       | SCALE 2.9920 PERCENT  |

HACH 0.153

# CONFIGURATION BUILDUP



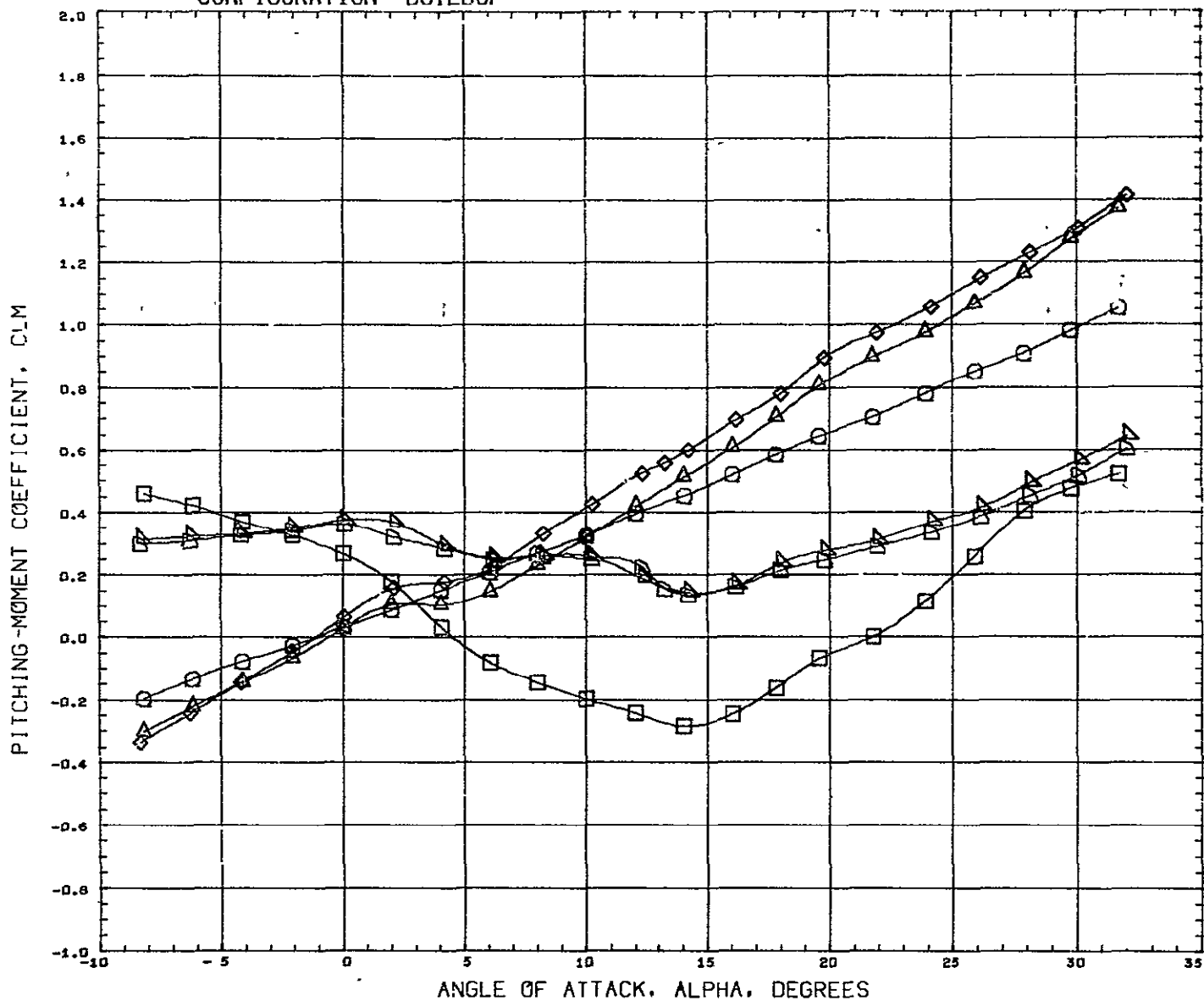
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| {AU1051}        | UWAL-1021 BAC C-6 BOOSTER |
| {AU1061}        | UWAL-1021 BAC C-6 BOOSTER |
| {AU1081}        | UWAL-1021 BAC C-6 BOOSTER |
| {AU1091}        | UWAL-1021 BAC C-6 BOOSTER |

| BETA  |
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| 0.000 |
| 0.000 |
| 0.000 |

| REFERENCE INFORMATION |                |
|-----------------------|----------------|
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| REFL                  | 10.1000 INCHES |
| REFB                  | 66.6000 INCHES |
| XMRP                  | 55.6360 INCHES |
| YMRP                  | 0.0000 INCHES  |
| ZMRP                  | 5.8600 INCHES  |
| SCALE                 | 2.9920 PERCENT |

MACH 0.155

# CONFIGURATION BUILDUP



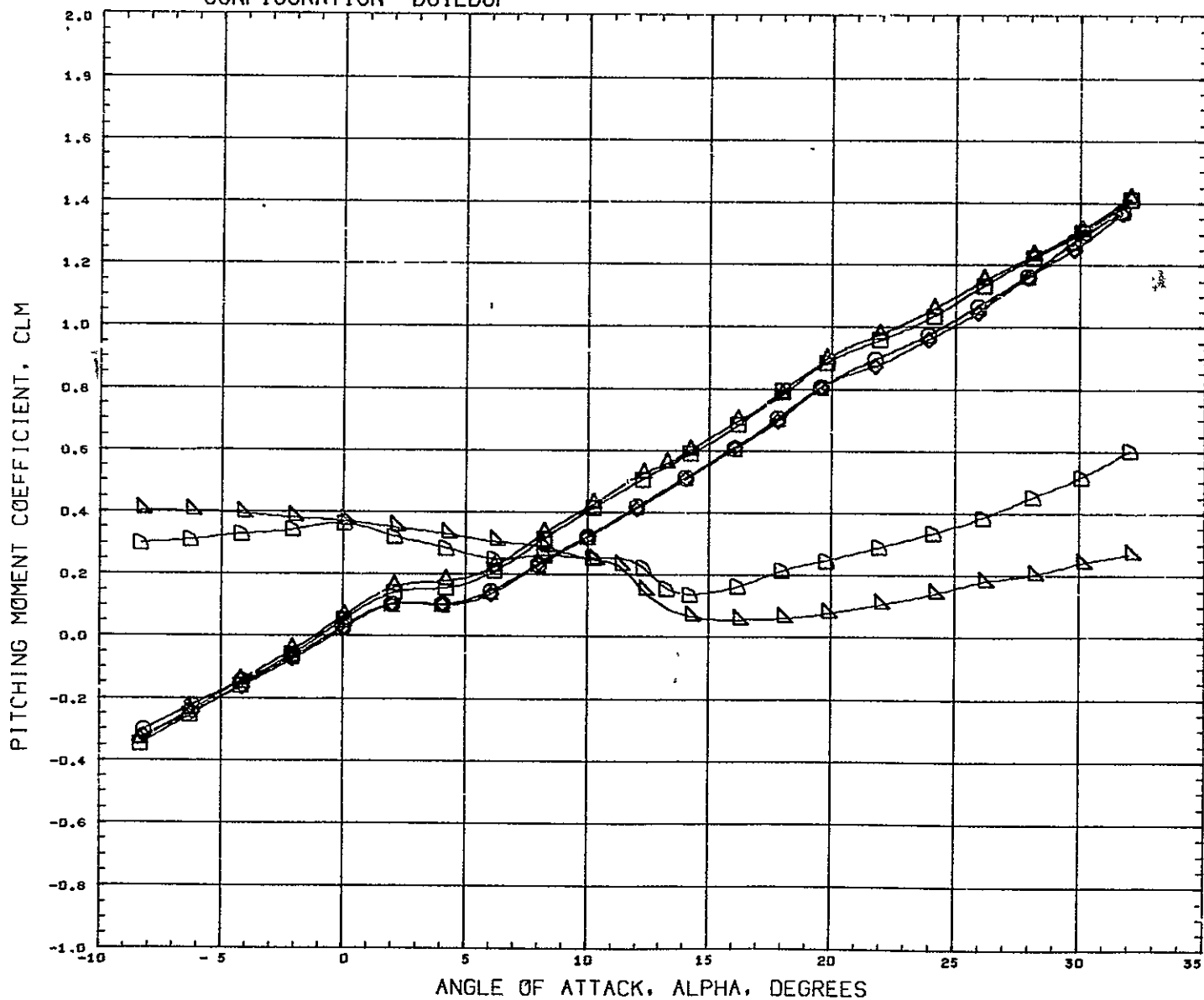
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| (AU1021)        | UWAL-1021 BAC C-6 BOOSTER |
| (AU1031)        | UWAL-1021 BAC C-6 BOOSTER |
| (AU1041)        | UWAL-1021 BAC C-6 BOOSTER |
| (AU1071)        | UWAL-1021 BAC C-6 BOOSTER |
| (AU1091)        | UWAL-1021 BAC C-6 BOOSTER |

| BETA  |
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| 0.000 |
| 0.000 |
| 0.000 |
| 0.000 |

| REFERENCE INFORMATION |
|-----------------------|
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| REFB 66.6000 INCHES   |
| XMRP 53.6360 INCHES   |
| YMRP 0.0000 INCHES    |
| ZMRP 5.8600 INCHES    |
| SCALE 2.9920 PERCENT  |

MACH 0.153

# CONFIGURATION BUILDUP



| DATA SET SYMBOL | CONFIGURATION DESCRIPTION |
|-----------------|---------------------------|
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| (AU1031)        | UWAL-1021 BAC C-6 BOOSTER |
| (AU1051)        | UWAL-1021 BAC C-6 BOOSTER |
| (AU1061)        | UWAL-1021 BAC C-6 BOOSTER |
| (AU1081)        | UWAL-1021 BAC C-6 BOOSTER |
| (AU1091)        | UWAL-1021 BAC C-6 BOOSTER |

MACH

0.153

ANGLE OF ATTACK, ALPHA, DEGREES

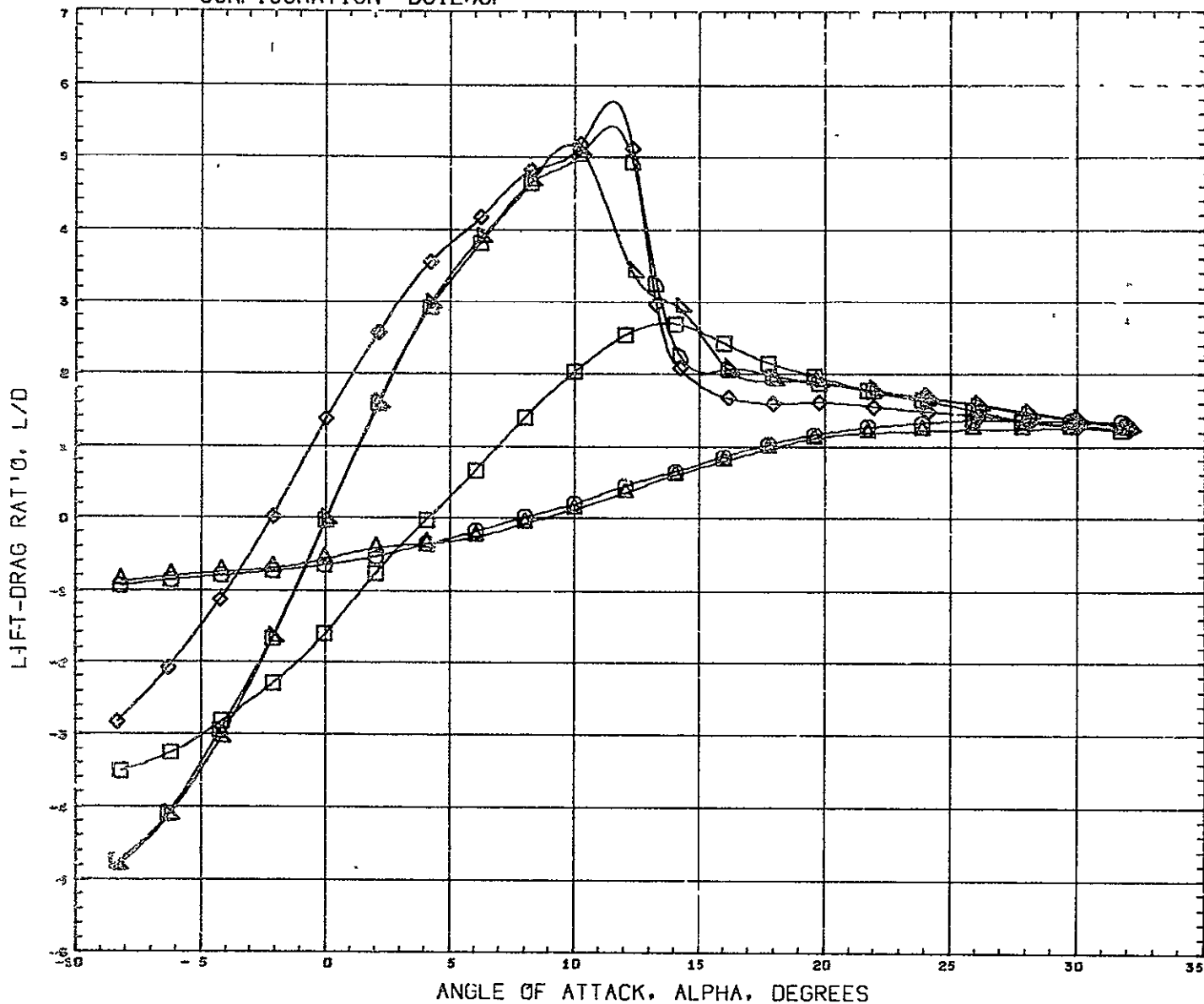
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REFERENCE INFORMATION

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REFL 10 101 J INCHES  
REFB 66.6000 INCHES  
XMRP 55.6360 INCHES  
YMRP 0.0000 INCHES  
ZMRP 5.8660 INCHES  
SCALE 2 9920 PERCENT

# CONFIGURATION BUILDUP



DATA SET SYMBOL CONFIGURATION DESCRIPTION

|          |                           |
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| (AU1022) | UWAL-1021 SAC C-6 BOOSTER |
| (AU1031) | UWAL-1021 SAC C-6 BOOSTER |
| (AU1048) | UWAL-1021 SAC C-6 BOOSTER |
| (AU1071) | UWAL-1021 SAC C-6 BOOSTER |
| (AU1091) | UWAL-1021 SAC C-6 BOOSTER |

MACH

0.153

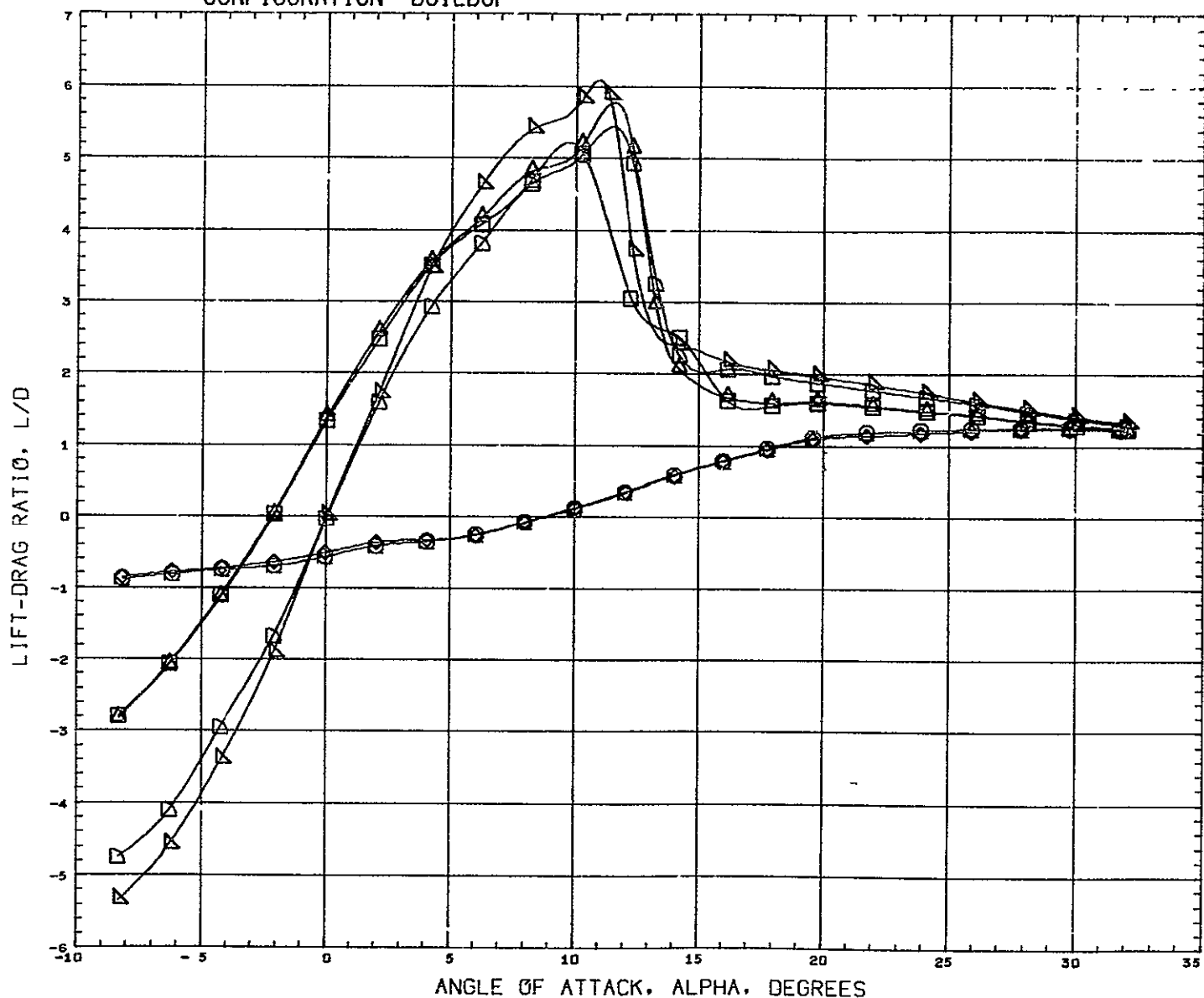
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| B1W1N1     | 0.000 |
| B1H1N1     | 0.000 |
| B1W1H1N1   | 0.000 |
| B1W1H1V1N1 | 0.000 |

REFERENCE INFORMATION

|       |         |         |
|-------|---------|---------|
| REFS  | 4.4201  | SQ.FT.  |
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| REFB  | 66.0000 | INCHES  |
| XMRP  | 55.6360 | INCHES  |
| YMRP  | 0.0000  | INCHES  |
| ZMRP  | 5.8600  | INCHES  |
| SCALE | 2.9920  | PERCENT |

# CONFIGURATION BUILDUP

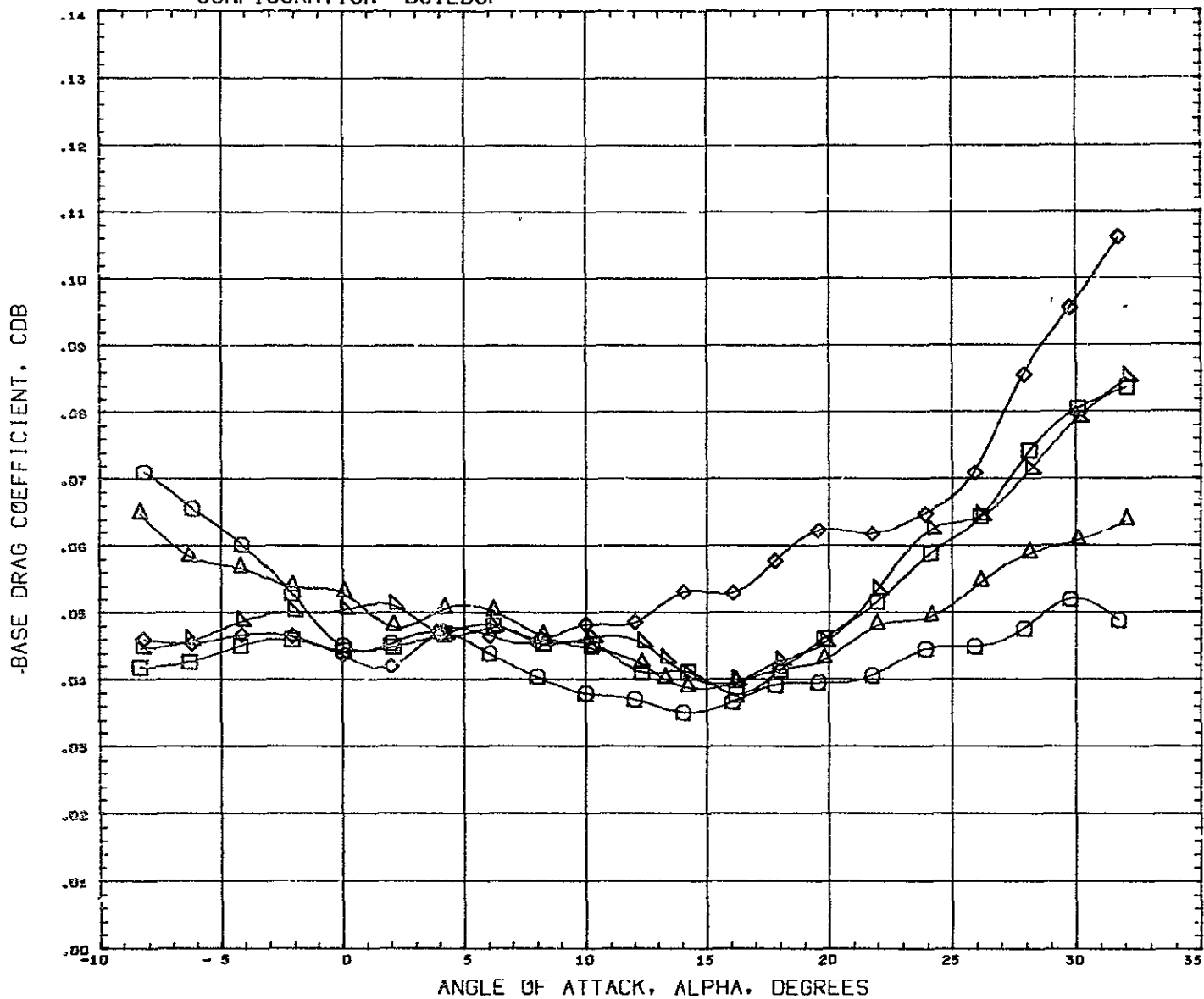


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| (AU1021)        | UWAL-1021 BAC C-6 BOOSTER |
| (AU1031)        | UWAL-1021 BAC C-6 BOOSTER |
| (AU1051)        | UWAL-1021 BAC C-6 BOOSTER |
| (AU1061)        | UWAL-1021 BAC C-6 BOOSTER |
| (AU1081)        | UWAL-1021 BAC C-6 BOOSTER |
| (AU1091)        | UWAL-1021 BAC C-6 BOOSTER |

| BETA  |
|-------|
| 0.000 |
| 0.000 |
| 0.000 |
| 0.000 |
| 0.000 |
| 0.000 |

| REFERENCE INFORMATION |
|-----------------------|
| REFS 4.4200 SQ.FT.    |
| REFL 10.1000 INCHES   |
| REFB 66.3000 INCHES   |
| XMRP 55.6360 INCHES   |
| YMRP 0.0000 INCHES    |
| ZMRP 5.8600 INCHES    |
| SCALE 2.9923 PERCENT  |

# CONFIGURATION BUILDUP



| DATA SET SYMBOL | CONFIGURATION DESCRIPTION |
|-----------------|---------------------------|
| (AU1021)        | UWAL-1021 BAC C-6 BOOSTER |
| (AU1051)        | UWAL-1021 BAC C-6 BOOSTER |
| (AU1741)        | UWAL-1021 BAC C-6 BOOSTER |
| (AU1072)        | UWAL-1021 BAC C-6 BOOSTER |
| (AU1093)        | UWAL-1021 BAC C-6 BOOSTER |

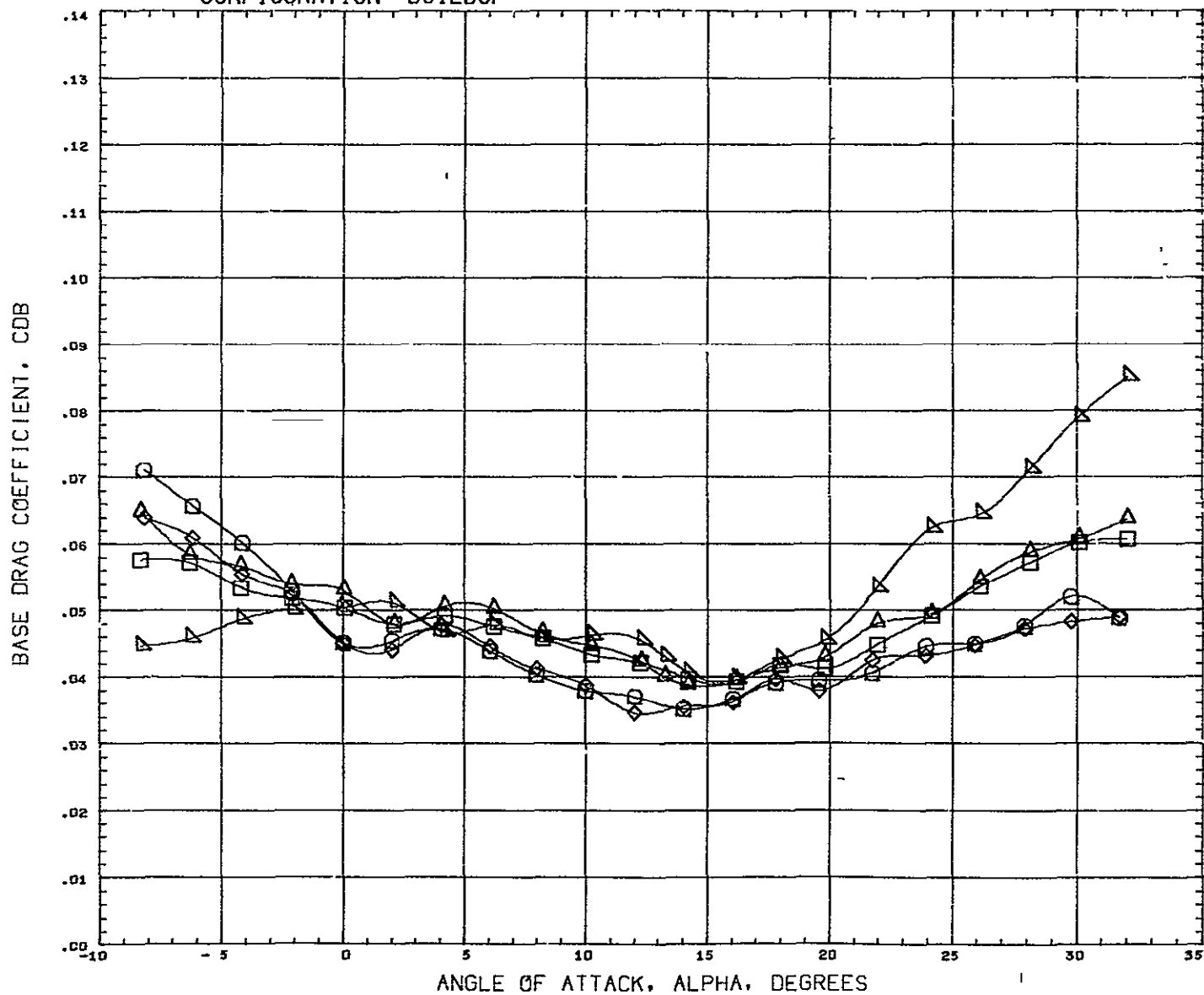
ANGLE OF ATTACK, ALPHA, DEGREES

| BETA  |
|-------|
| 0.000 |
| 0.000 |
| 0.000 |
| 0.000 |
| 0.000 |

| REFERENCE INFORMATION |         |         |
|-----------------------|---------|---------|
| REFS                  | 4.420L  | SQ.FT.  |
| REFL                  | 10.1000 | INCHES  |
| REFB                  | 66.6200 | INCHES  |
| XMRP                  | 55.6360 | INCHES  |
| YMRP                  | 0.0000  | INCHES  |
| ZMRP                  | 5.8600  | INCHES  |
| SCALE                 | 2.9920  | PERCENT |

MACH 0.153

# CONFIGURATION BUILDUP



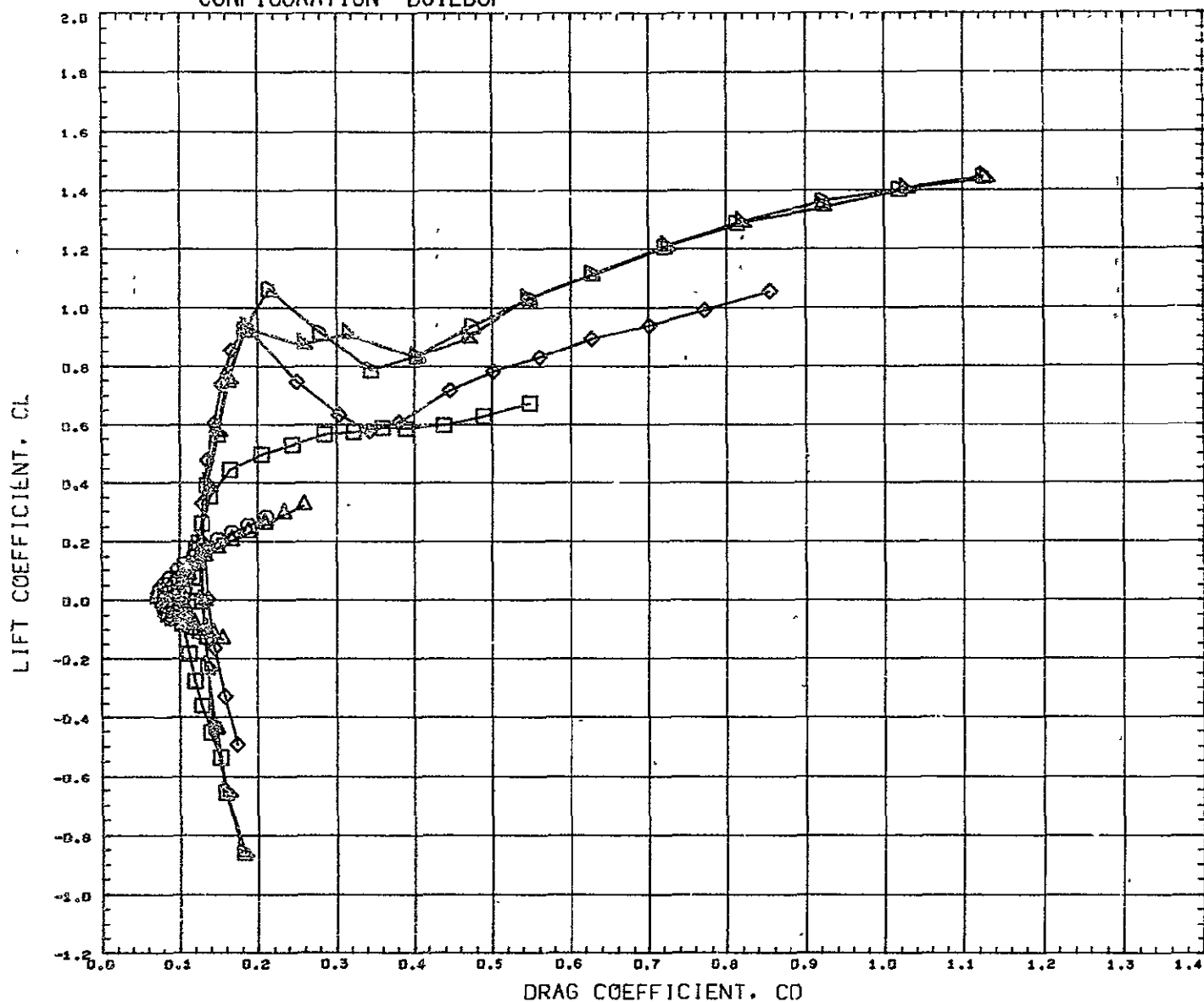
| DATA SET SYMBOL | CONFIGURATION DESCRIPTION |
|-----------------|---------------------------|
| (AU1021)        | UWAL-1021 BAC C-6 BOOSTER |
| (AU1031)        | UWAL-1021 BAC C-6 BOOSTER |
| (AU1051)        | UWAL-1021 BAC C-6 BOOSTER |
| (AU1061)        | UWAL-1021 BAC C-6 BOOSTER |
| (AU1091)        | UWAL-1021 BAC C-6 BOOSTER |

| BETA       |
|------------|
| B1N1       |
| B1W1N1     |
| B1V1N1     |
| B1W1V1N1   |
| B1W1H1V1N1 |

| REFERENCE INFORMATION |
|-----------------------|
| REFS                  |
| REFL                  |
| REFB                  |
| XMRP                  |
| YMRP                  |
| ZMRP                  |
| SCALE                 |

MACH 0.153

# CONFIGURATION BUILDUP



| DATA SET SYMBOL | CONFIGURATION DESCRIPTION |
|-----------------|---------------------------|
| (AU1021)        | UWAL-1021 BAC C-6 BOOSTER |
| (AU1022)        | UWAL-1021 BAC C-6 BOOSTER |
| (AU1023)        | UWAL-1021 BAC C-6 BOOSTER |
| (AU1024)        | UWAL-1021 BAC C-6 BOOSTER |
| (AU1025)        | UWAL-1021 BAC C-6 BOOSTER |
| (AU1026)        | UWAL-1021 BAC C-6 BOOSTER |

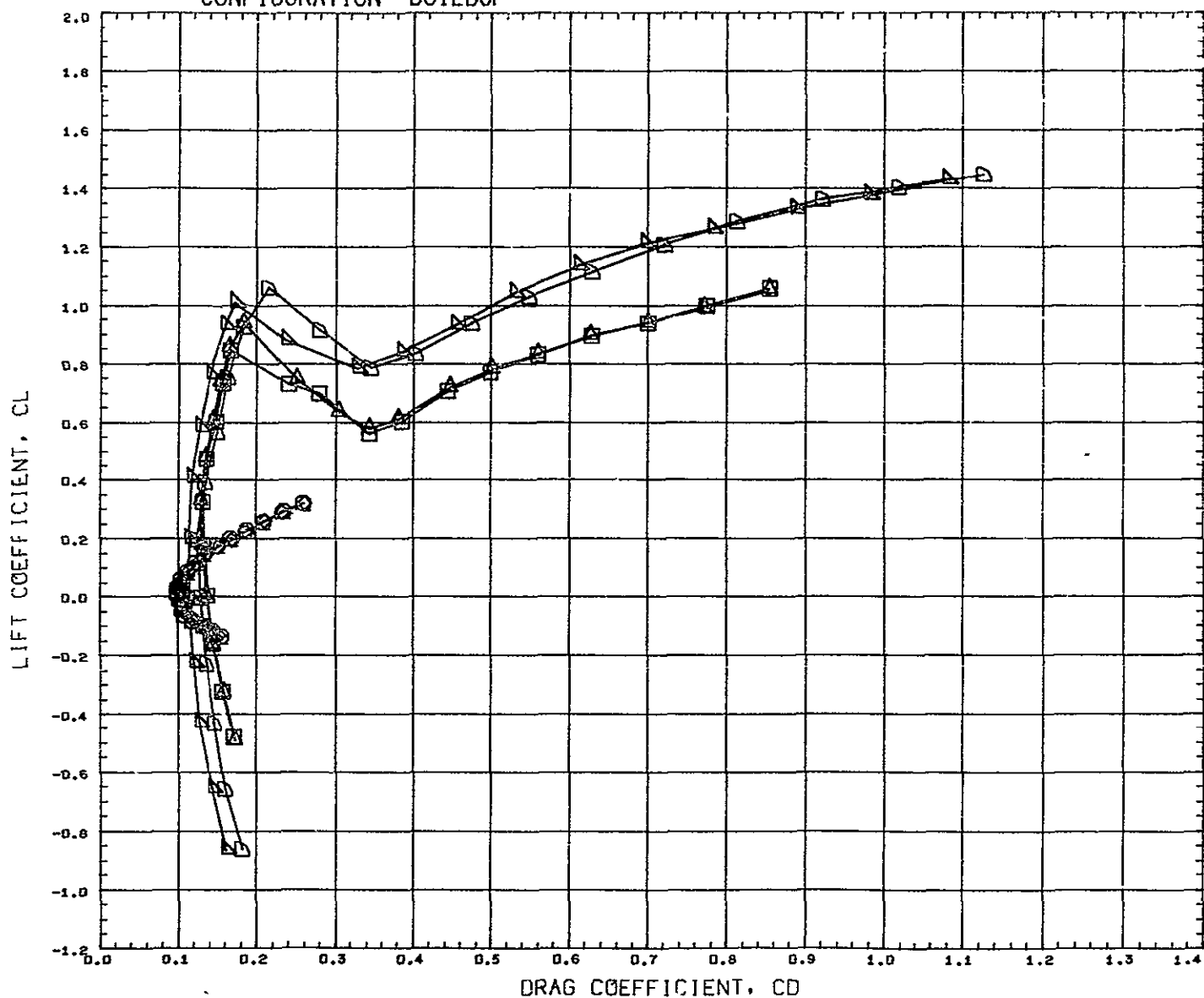
|            |
|------------|
| B1         |
| B1N1       |
| B1W1N1     |
| B1H1N1     |
| B1W1H1N1   |
| B1W1H1V1N1 |

| BETA  |
|-------|
| 0.000 |
| 0.000 |
| 0.000 |
| 0.000 |
| 0.000 |
| 0.000 |

| REFERENCE INFORMATION |
|-----------------------|
| REFS 4.4210 SQ.FT.    |
| REFL 10.1500 INCHES   |
| REFB 66.6000 INCHES   |
| XMRP 55.6360 INCHES   |
| YMRP 0.0000 INCHES    |
| ZMRP 5.8600 INCHES    |
| SCALE 2.9920 PERCENT  |

HACH 0.153

# CONFIGURATION BUILDUP



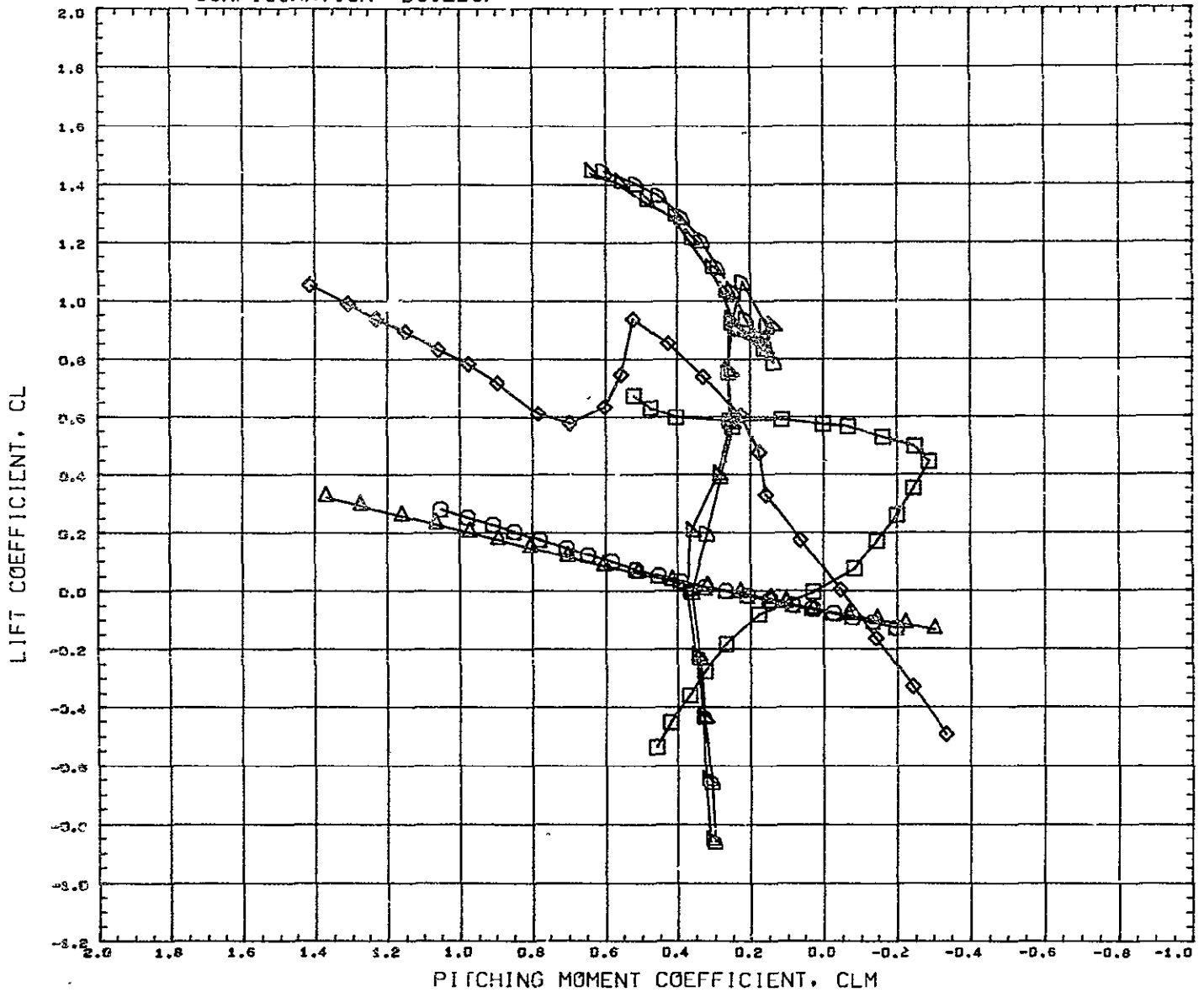
| DATA SET SYMBOL | CONFIGURATION DESCRIPTION |
|-----------------|---------------------------|
| (AU1021)        | UWAL-1021 BAC C-5 BOOSTER |
| (AU1031)        | UWAL-1021 BAC C-6 BOOSTER |
| (AU1051)        | UWAL-1021 BAC C-6 BOOSTER |
| (AU1061)        | UWAL-1021 BAC C-6 BOOSTER |
| (AU1081)        | UWAL-1021 BAC C-6 BOOSTER |
| (AU1091)        | UWAL-1021 BAC C-6 BOOSTER |

| BETA       |
|------------|
| B1N1       |
| B1W1N1     |
| B1V1N1     |
| B1W1V1N1   |
| B1W1H1V1   |
| B1W1H1V1N1 |

| REFERENCE INFORMATION |
|-----------------------|
| REFS 4.4210 SQ.FT.    |
| REFL 11.1000 INCHES   |
| REFB 66.8000 INCHES   |
| XMRP 55.6360 INCHES   |
| YMRP 0.0000 INCHES    |
| ZMRP 5.8600 INCHES    |
| SCALE 2.9920 PERCENT  |

MACH 0.153

# CONFIGURATION BUILDUP



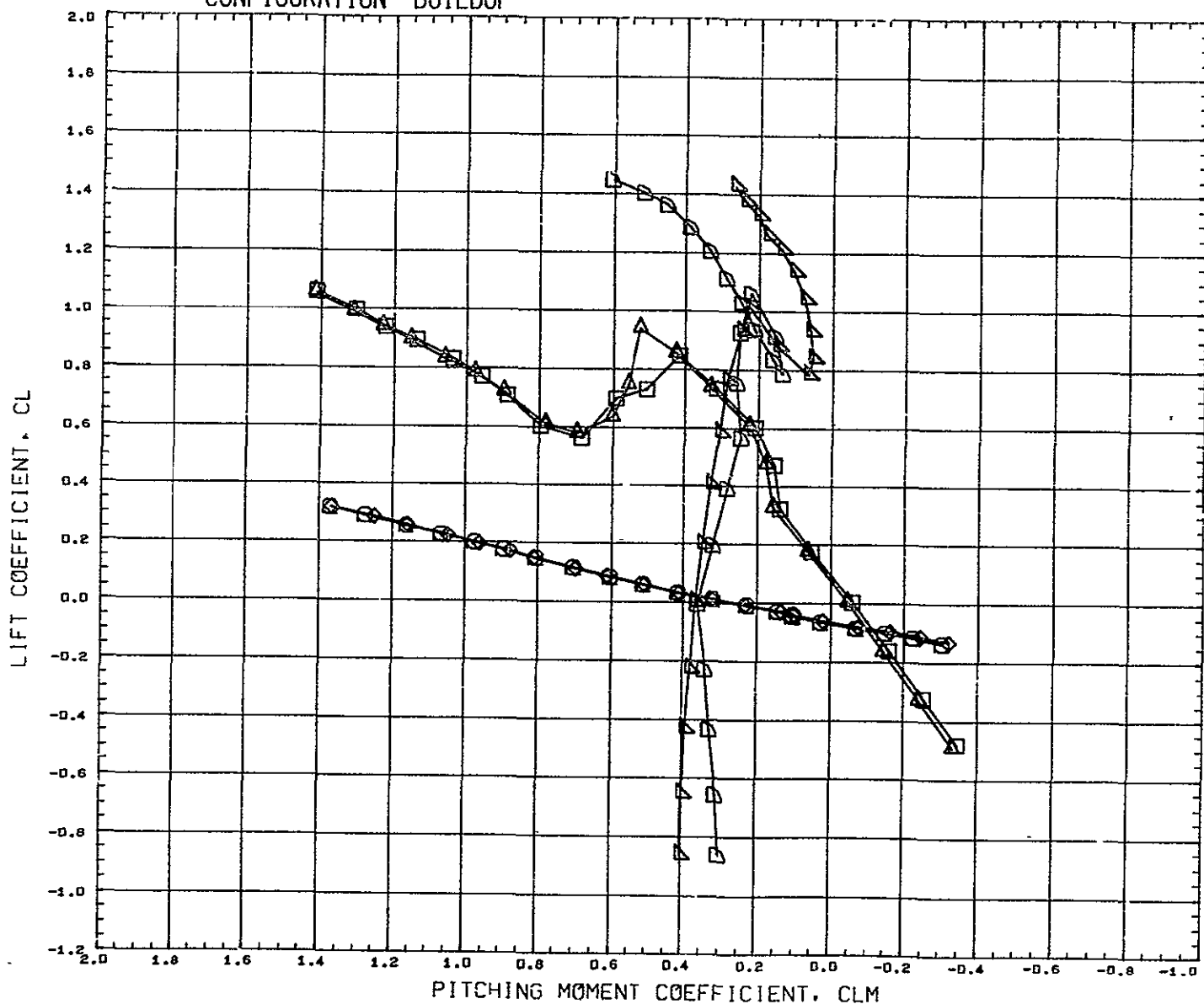
| DATA SET SYMBOL | CONFIGURATION DESCRIPTION |
|-----------------|---------------------------|
| (AU1011)        | UVAL-1021 BAC C-6 BOOSTER |
| (AU1021)        | UVAL-1021 BAC C-6 BOOSTER |
| (AU1031)        | UVAL-1021 BAC C-6 BOOSTER |
| (AU1041)        | UVAL-1021 BAC C-6 BOOSTER |
| (AU1071)        | UVAL-1021 BAC C-6 BOOSTER |
| (AU1081)        | UVAL-1021 BAC C-6 BOOSTER |

| BETA  |
|-------|
| 0.000 |
| 0.000 |
| 0.000 |
| 0.000 |
| 0.000 |
| 0.000 |

| REFERENCE INFORMATION |         |         |
|-----------------------|---------|---------|
| REFS                  | 4.4201  | SQ.FT.  |
| REFL                  | 10.1000 | INCHES  |
| REFB                  | 66.6000 | INCHES  |
| XMRP                  | 55.6360 | INCHES  |
| YMRP                  | 0.0000  | INCHES  |
| ZMRP                  | 5.8600  | INCHES  |
| SCALE                 | 2.9920  | PERCENT |

→ACN 0.153

# CONFIGURATION BUILDUP



| DATA SET SYMBOL | CONFIGURATION DESCRIPTION |
|-----------------|---------------------------|
| (AU1021)        | UWAL-1021 BAC C-6 BOOSTER |
| (AU1031)        | UWAL-1021 BAC C-6 BOOSTER |
| (AU1051)        | UWAL-1021 BAC C-6 BOOSTER |
| (AU1061)        | UWAL-1021 BAC C-6 BOOSTER |
| (AU1081)        | UWAL-1021 BAC C-6 BOOSTER |
| (AU1091)        | UWAL-1021 BAC C-6 BOOSTER |

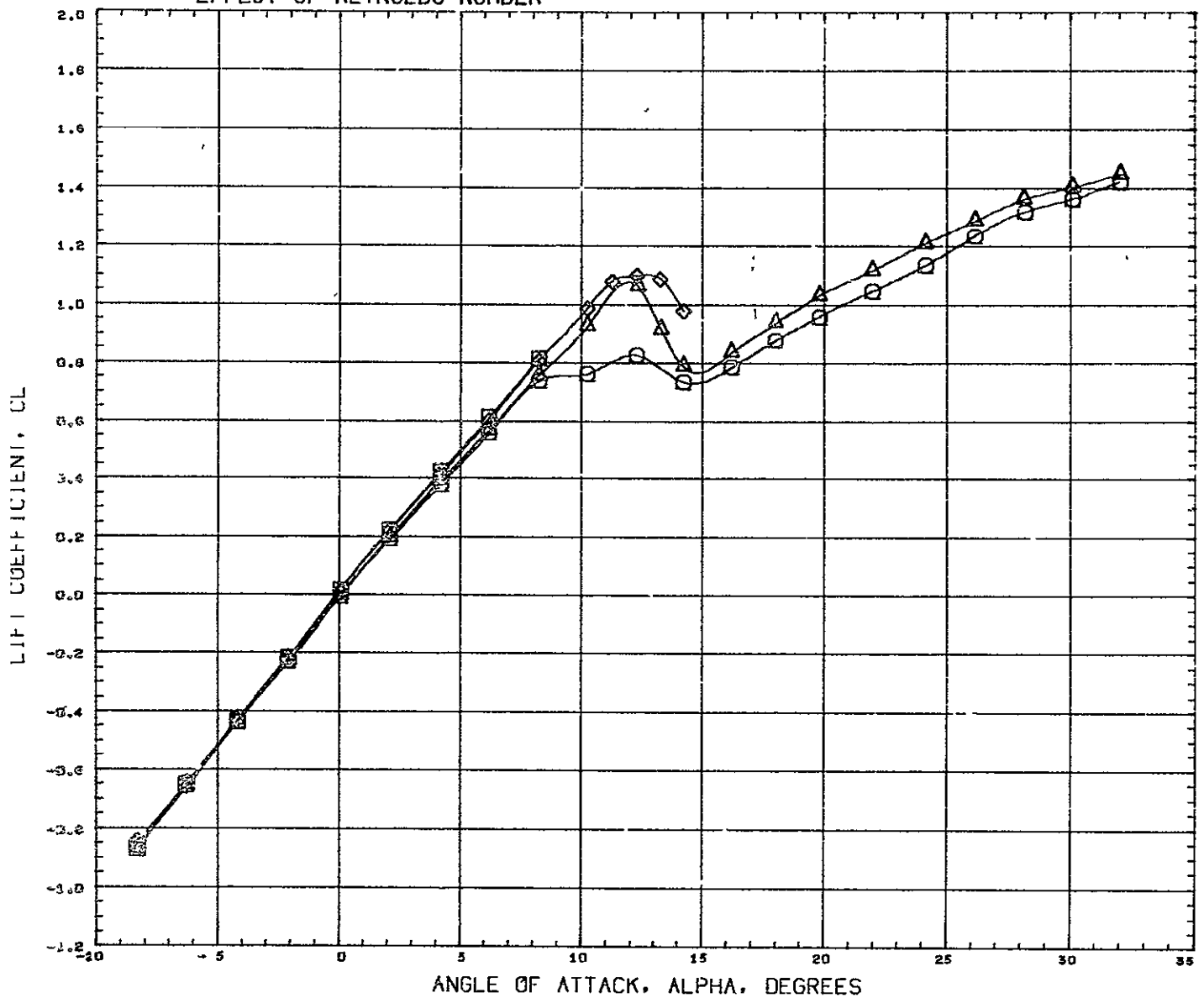
MACH 0.153

PITCHING MOMENT COEFFICIENT, CLM

| BETA  |
|-------|
| 0.000 |
| 0.000 |
| 0.000 |
| 0.000 |
| 0.000 |
| 0.000 |

| REFERENCE INFORMATION |         |         |
|-----------------------|---------|---------|
| REFS                  | 4.4204  | SQ.FT.  |
| RCFL                  | 10.1063 | INCHES  |
| REFB                  | 66.6000 | INCHES  |
| XMRP                  | 55.6360 | INCHES  |
| YMRP                  | 0.0000  | INCHES  |
| ZMRP                  | 5.8600  | INCHES  |
| SCALE                 | 2.9920  | PERCENT |

# EFFECT OF REYNOLDS NUMBER



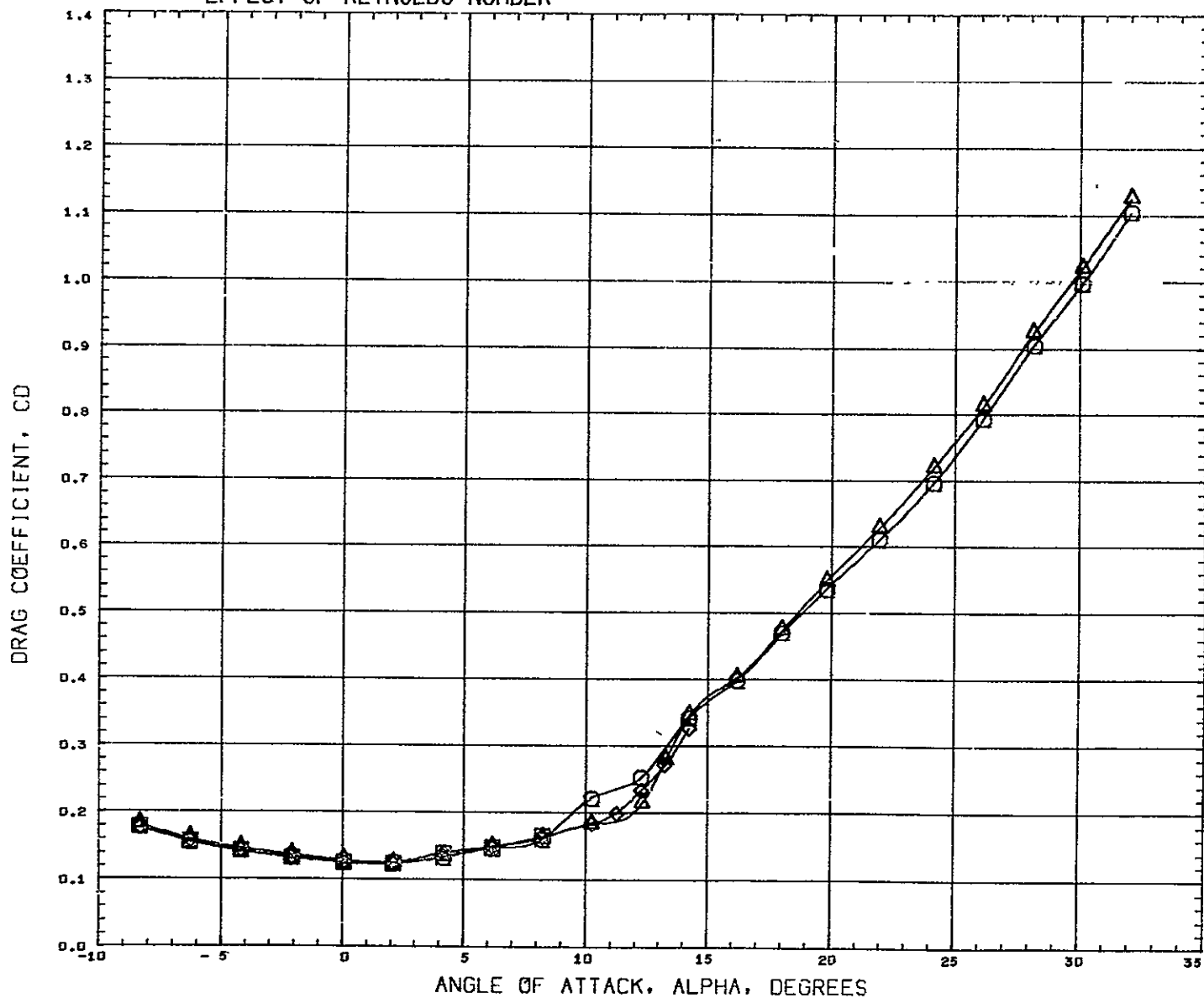
| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | B1W1H1V1N1 |
|-----------------|---------------------------|------------|
| (AUSA91)        | UWAL-1021 SAC C-6 BOOSTER | B1W1H1V1N1 |
| (AUID91)        | UWAL-1021 SAC C-6 BOOSTER | B1W1H1V1N1 |
| (AUID95)        | UWAL-1021 SAC C-6 BOOSTER | B1W1H1V1N1 |
| (AUSA95)        | UWAL-1021 SAC C-6 BOOSTER | B1W1H1V1N1 |

| RN/L  | BETA  |
|-------|-------|
| 0.700 | 0.000 |
| 1.100 | 0.000 |
| 1.800 | 0.000 |
| 2.000 | 0.000 |

| REFERENCE INFORMATION |         |         |
|-----------------------|---------|---------|
| REFS                  | 4.4200  | SG.FT.  |
| REFL                  | 10.1000 | INCHES  |
| REFB                  | 66.6000 | INCHES  |
| XMRP                  | 55.6360 | INCHES  |
| YMRP                  | 0.0000  | INCHES  |
| ZMRP                  | 5.8600  | INCHES  |
| SCALE                 | 2.9920  | PERCENT |

MACH 0.101

# EFFECT OF REYNOLDS NUMBER



| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION |
|----------|--------|---------------------------|
| (AU1A91) | ○      | UWAL-1021 BAC C-6 BOOSTER |
| (AU1091) | △      | UWAL-1021 BAC C-6 BOOSTER |
| (AU1025) | ◇      | UWAL-1021 BAC C-6 BOOSTER |
| (AU1A95) | □      | UWAL-1021 BAC C-6 BOOSTER |

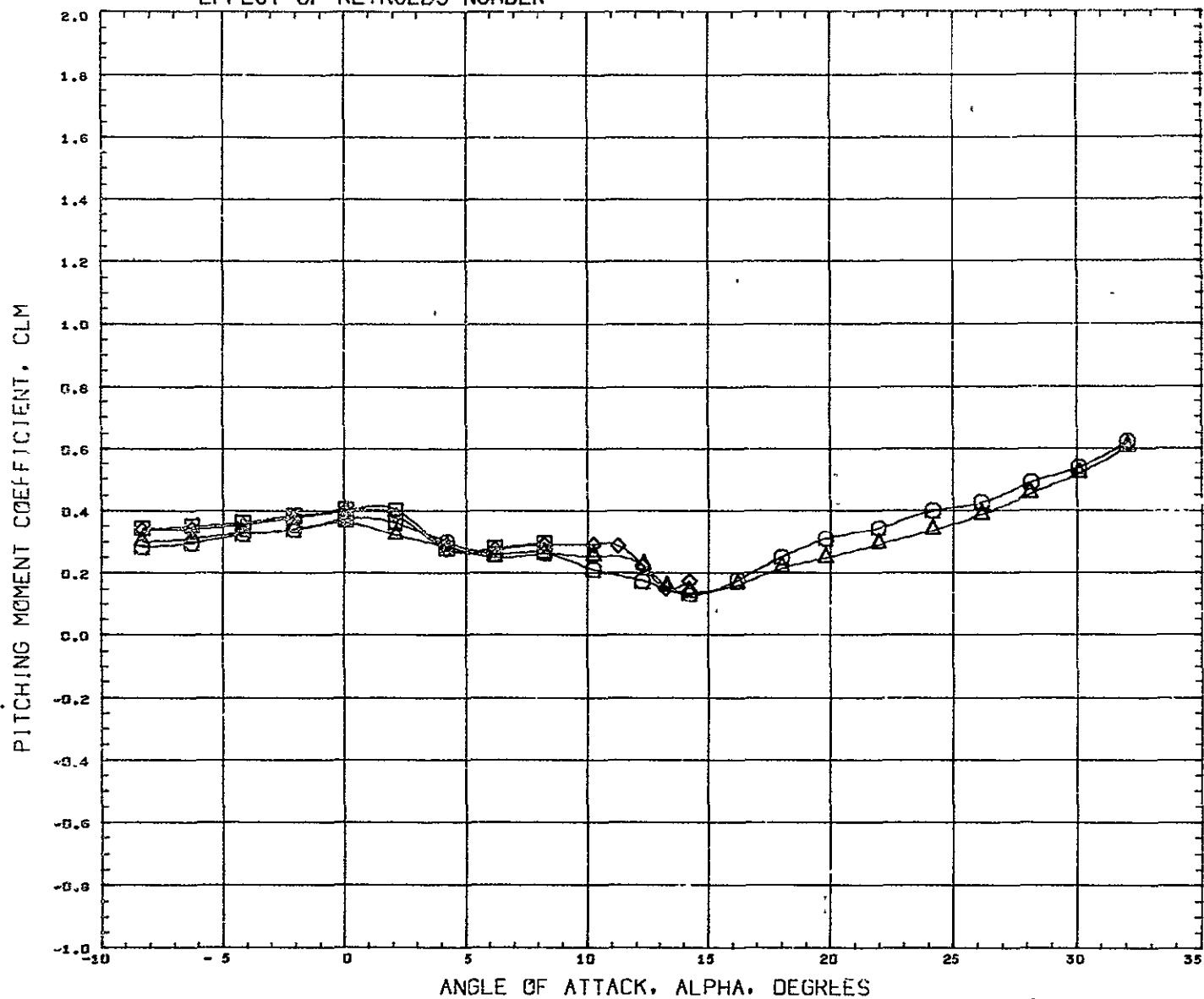
ANGLE OF ATTACK, ALPHA, DEGREES

| RN/L  | BETA  |
|-------|-------|
| 0.700 | 0.000 |
| 1.100 | 0.000 |
| 1.800 | 0.000 |
| 2.000 | 0.000 |

| REFERENCE INFORMATION |         |         |
|-----------------------|---------|---------|
| REFS                  | 4 420L  | SQ.FT.  |
| REFL                  | 10.1000 | INCHES  |
| REFB                  | 66.6000 | INCHES  |
| XMRP                  | 55.6360 | INCHES  |
| YMRP                  | 0.0000  | INCHES  |
| ZMRP                  | 5.8600  | INCHES  |
| SCALE                 | 2.9920  | PERCENT |

NACH 0.101

# EFFECT OF REYNOLDS NUMBER



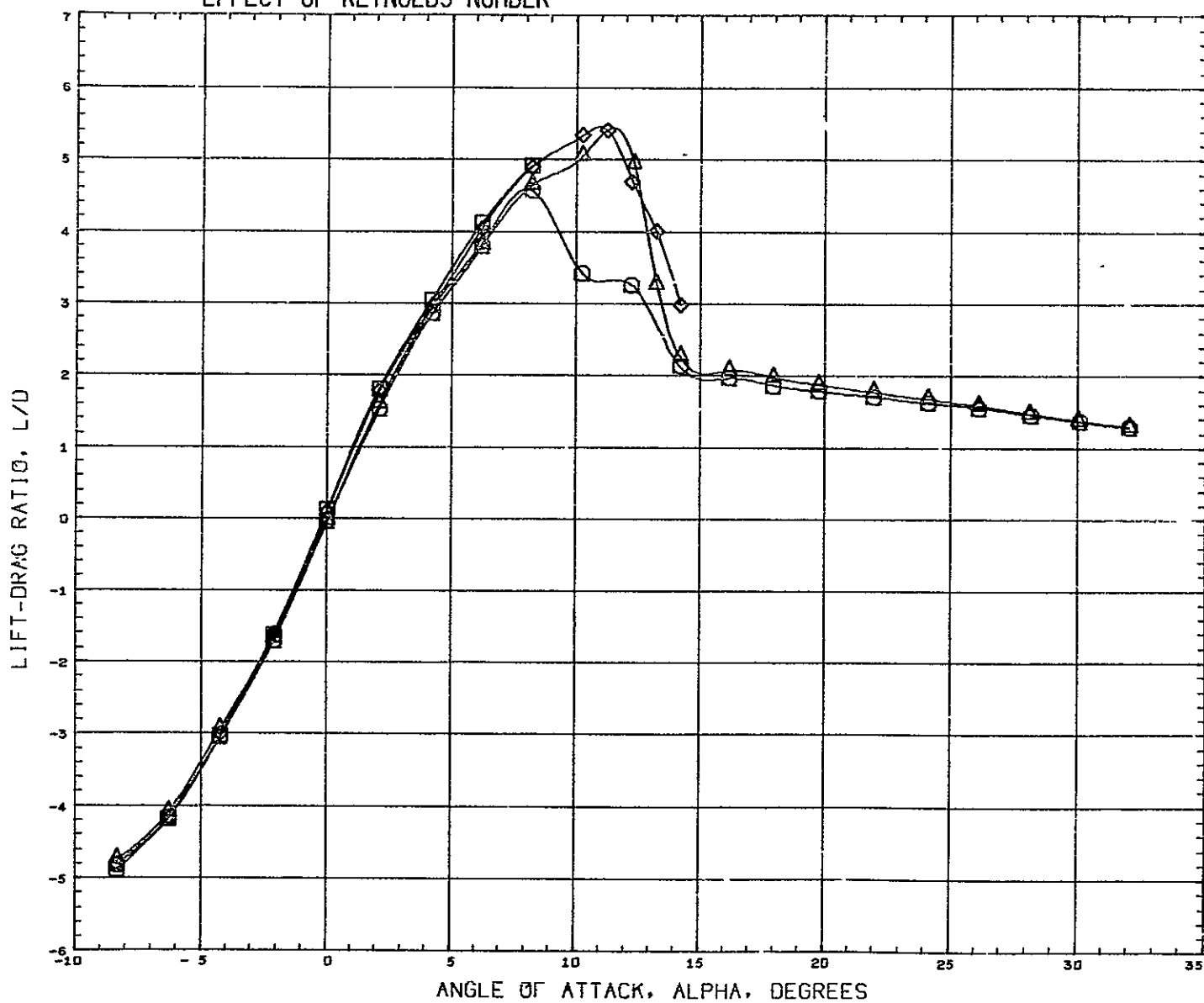
| DATA SET SYMBOL | CONFIGURATION DESCRIPTION |            |
|-----------------|---------------------------|------------|
| {AU1A91}        | UVAL-1021 BAC C-6 BOOSTER | B1W1H1V1N1 |
| {AU1091}        | UVAL-1021 BAC C-6 BOOSTER | B1W1H1V1N1 |
| {AU1095}        | UVAL-1021 BAC C-6 BOOSTER | B1W1H1V1N1 |
| {AU1A95}        | UVAL-1021 BAC C-6 BOOSTER | B1W1H1V1N1 |

| RN/L  | BETA  |
|-------|-------|
| 0.700 | 0.000 |
| 1.100 | 0.000 |
| 1.800 | 0.000 |
| 2.000 | 0.000 |

| REFERENCE INFORMATION |         |        |
|-----------------------|---------|--------|
| PEFS                  | 4 4230  | SQ.FT. |
| REFL                  | 10.1800 | INCHES |
| REFB                  | 66.6000 | INCHES |
| XMRP                  | 55.6360 | INCHES |
| YMRP                  | 0.0000  | INCHES |
| ZMRP                  | 5.8600  | INCHES |
| SCALE                 | 2.9920  | PERCNT |

MACH 0.101

# EFFECT OF REYNOLDS NUMBER



| DATA SET SYMBOL | CONFIGURATION DESCRIPTION |
|-----------------|---------------------------|
| (AUIA91)        | UWAL-1021 BAC C-6 BOOSTER |
| (AUI091)        | UWAL-1021 BAC C-6 BOOSTER |
| (AUI095)        | UWAL-1021 BAC C-6 BOOSTER |
| (AUIA95)        | UWAL-1021 BAC C-6 BOOSTER |

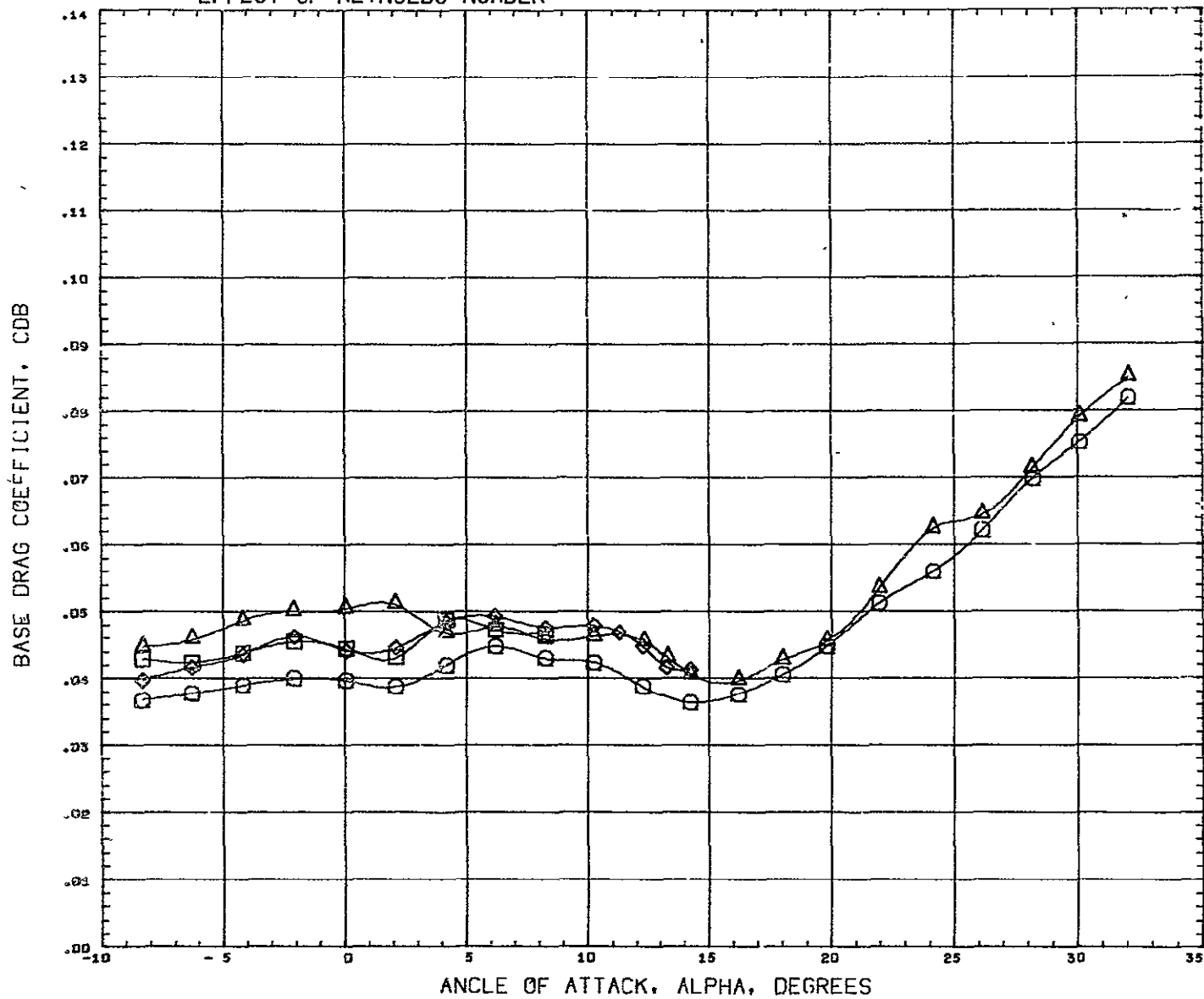
ANGLE OF ATTACK, ALPHA, DEGREES

| RN/L  | BETA  |
|-------|-------|
| 0.700 | 0.000 |
| 1.100 | 0.000 |
| 1.800 | 0.000 |
| 2.000 | 0.000 |

| REFERENCE INFORMATION |         |         |
|-----------------------|---------|---------|
| REFS                  | 4.4200  | SQ. FT. |
| REFL                  | 10.1000 | INCHES  |
| REFB                  | 66.6000 | INCHES  |
| XMRP                  | 55.6360 | INCHES  |
| YMRP                  | 0.0000  | INCHES  |
| ZMRP                  | 5.8600  | INCHES  |
| SCALE                 | 2.9920  | PERCENT |

MACH 0.101

# EFFECT OF REYNOLDS NUMBER



| DATA SET SYMBOL | CONFIGURATION DESCRIPTION |
|-----------------|---------------------------|
| (AU3A91)        | UWAL-1021 BAC C-6 BOOSTER |
| (AU1091)        | UWAL-1021 BAC C-6 BOOSTER |
| (AU1095)        | UWAL-1021 BAC C-6 BOOSTER |
| (AU1295)        | UWAL-1021 BAC C-6 BOOSTER |

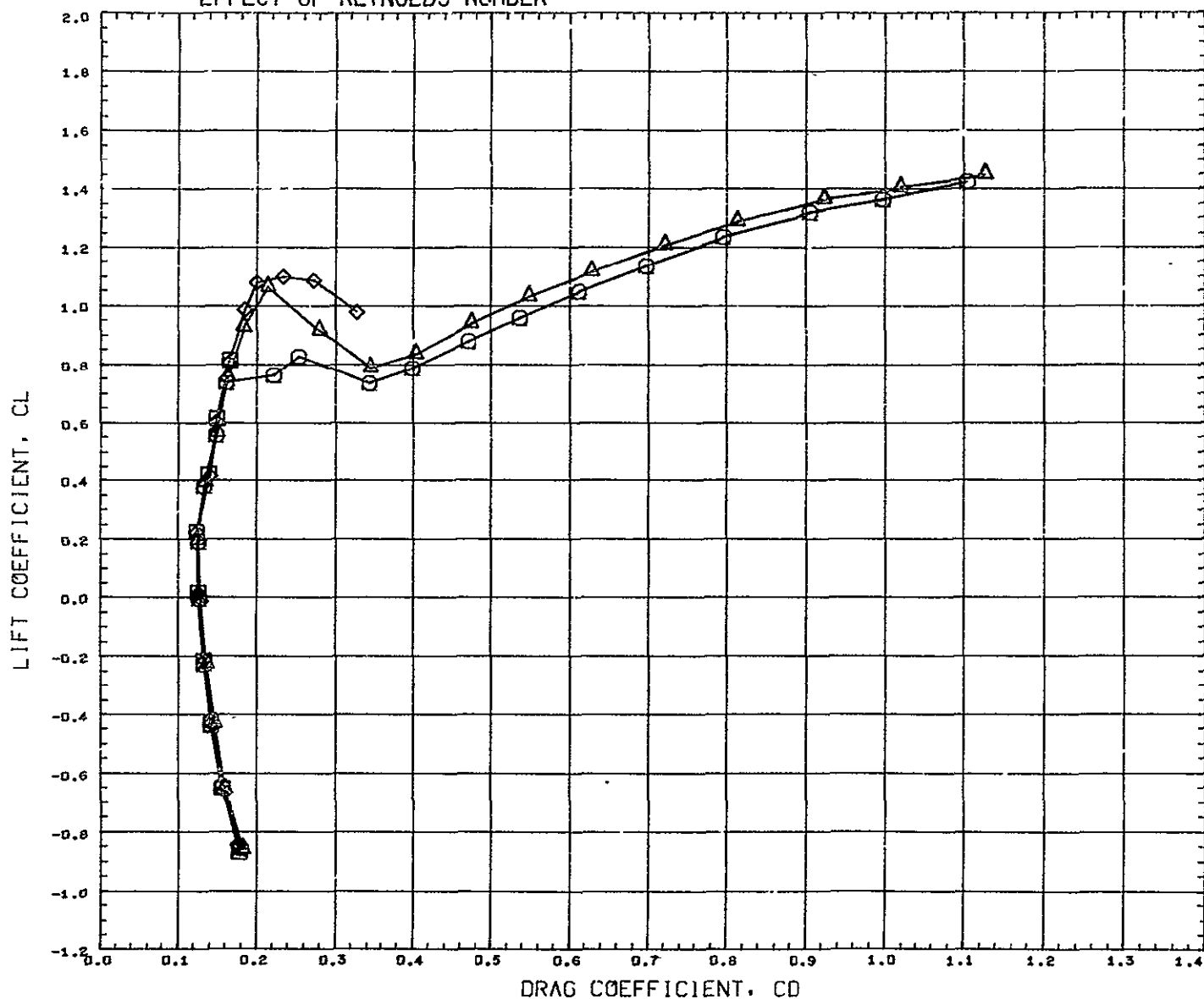
ANGLE OF ATTACK, ALPHA, DEGREES

| RN/L  | BETA  |
|-------|-------|
| 0.700 | 0.000 |
| 1.100 | 0.000 |
| 1.800 | 0.000 |
| 2.000 | 0.000 |

| REFERENCE INFORMATION |         |         |
|-----------------------|---------|---------|
| REFS                  | 4.4200  | SQ.FT.  |
| REFL                  | 10.1003 | INCHES  |
| REFB                  | 66.6000 | INCHES  |
| XMRP                  | 55.6360 | INCHES  |
| YNRP                  | 0.0000  | INCHES  |
| ZMRP                  | 5.8600  | INCHES  |
| SCALE                 | 2.9920  | PERCENT |

MACH 0.101

# EFFECT OF REYNOLDS NUMBER



| DATA SET SYMBOL | CONFIGURATION DESCRIPTION |
|-----------------|---------------------------|
| (AU1A91)        | UWAL-1021 BAC C-6 BOOSTER |
| (AU1091)        | UWAL-1021 BAC C-6 BOOSTER |
| (AU1095)        | UWAL-1021 BAC C-6 BOOSTER |
| (AU1A95)        | UWAL-1021 BAC C-6 BOOSTER |

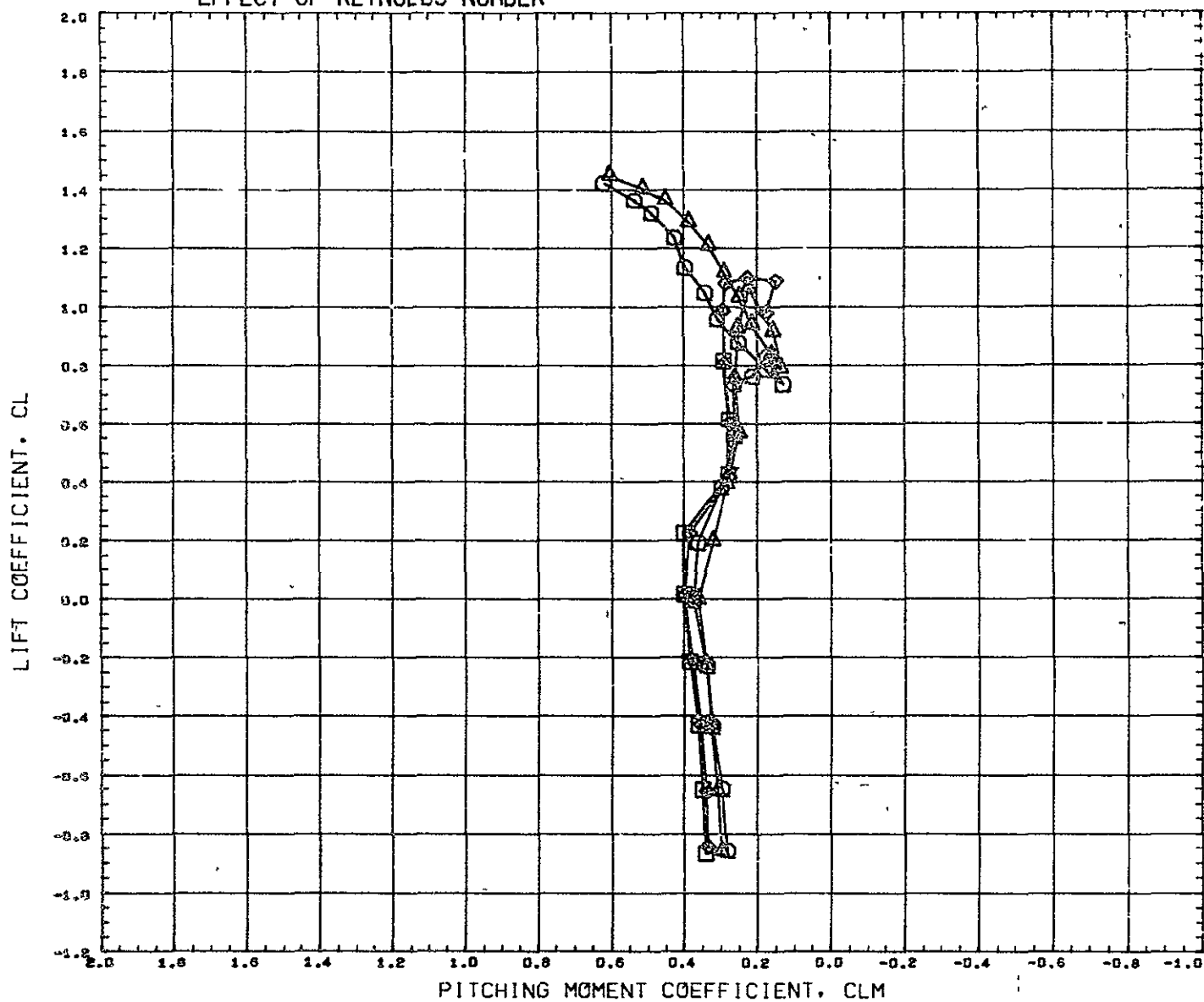
| DATA SET SYMBOL | CONFIGURATION DESCRIPTION |
|-----------------|---------------------------|
| (AU1A91)        | B1W1H1V1N1                |
| (AU1091)        | B1W1H1V1N1                |
| (AU1095)        | B1W1H1V1N1                |
| (AU1A95)        | B1W1H1V1N1                |

| RN/L  | BETA  |
|-------|-------|
| 0.700 | 0.000 |
| 1.100 | 0.000 |
| 1.800 | 0.000 |
| 2.000 | 0.000 |

| REFERENCE INFORMATION |         |         |
|-----------------------|---------|---------|
| REFS                  | 4.4203  | SQ.FT   |
| REFL                  | 10.1000 | INCHES  |
| REFB                  | 66.6000 | INCHES  |
| XMRP                  | 55.6360 | INCHES  |
| YMRP                  | 0.0000  | INCHES  |
| ZMRP                  | 5.8600  | INCHES  |
| SCALE                 | 2.9920  | PERCENT |

MACH 0.151

# EFFECT OF REYNOLDS NUMBER



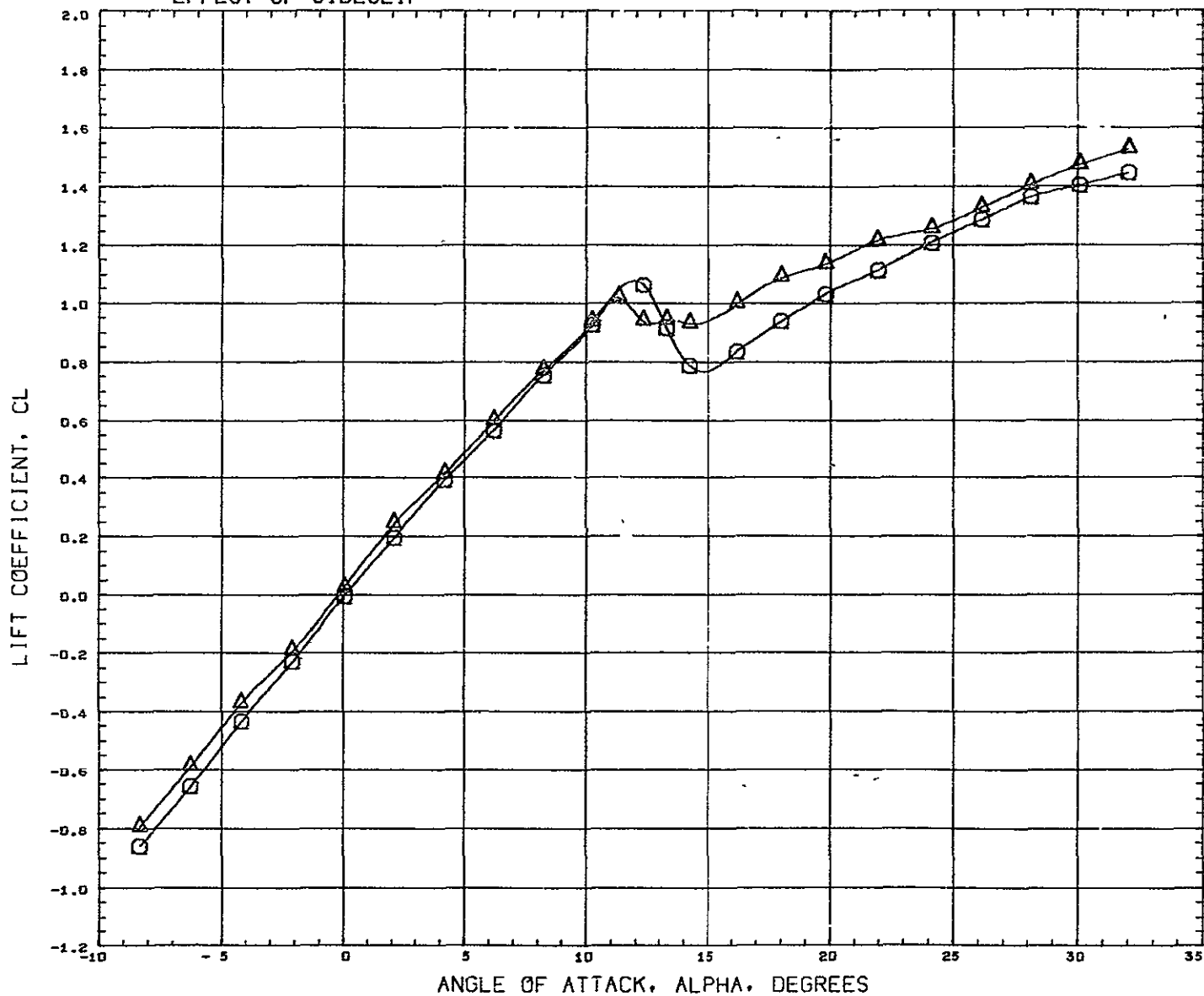
| DATA SET SYMBOL | CONFIGURATION DESCRIPTION |            |
|-----------------|---------------------------|------------|
| (AUS191)        | UWAL-1021 BAC C-6 BOOSTER | Δ1W1H1V1N1 |
| (AUS192)        | UWAL-1021 BAC C-6 BOOSTER | Δ1W1H1V1N1 |
| (AUS193)        | UWAL-1021 BAC C-6 BOOSTER | Δ1W1H1V1N1 |
| (AUS194)        | UWAL-1021 BAC C-6 BOOSTER | Δ1W1H1V1N1 |

| RN/L  | BETA  |
|-------|-------|
| 0.700 | 0.000 |
| 1.100 | 0.000 |
| 1.800 | 0.000 |
| 2.000 | 0.000 |

| REFERENCE INFORMATION |         |        |
|-----------------------|---------|--------|
| REFS                  | 4.4200  | SQ.FT. |
| REFL                  | 10.1000 | INCHES |
| REFB                  | 66.0000 | INCHES |
| XMRP                  | 55.6360 | INCHES |
| YMRP                  | 0.0000  | INCHES |
| ZMRP                  | 5.8600  | INCHES |
| SCALE                 | 2.9920  | PERCNT |

MACH 0.101

# EFFECT OF SIDESLIP



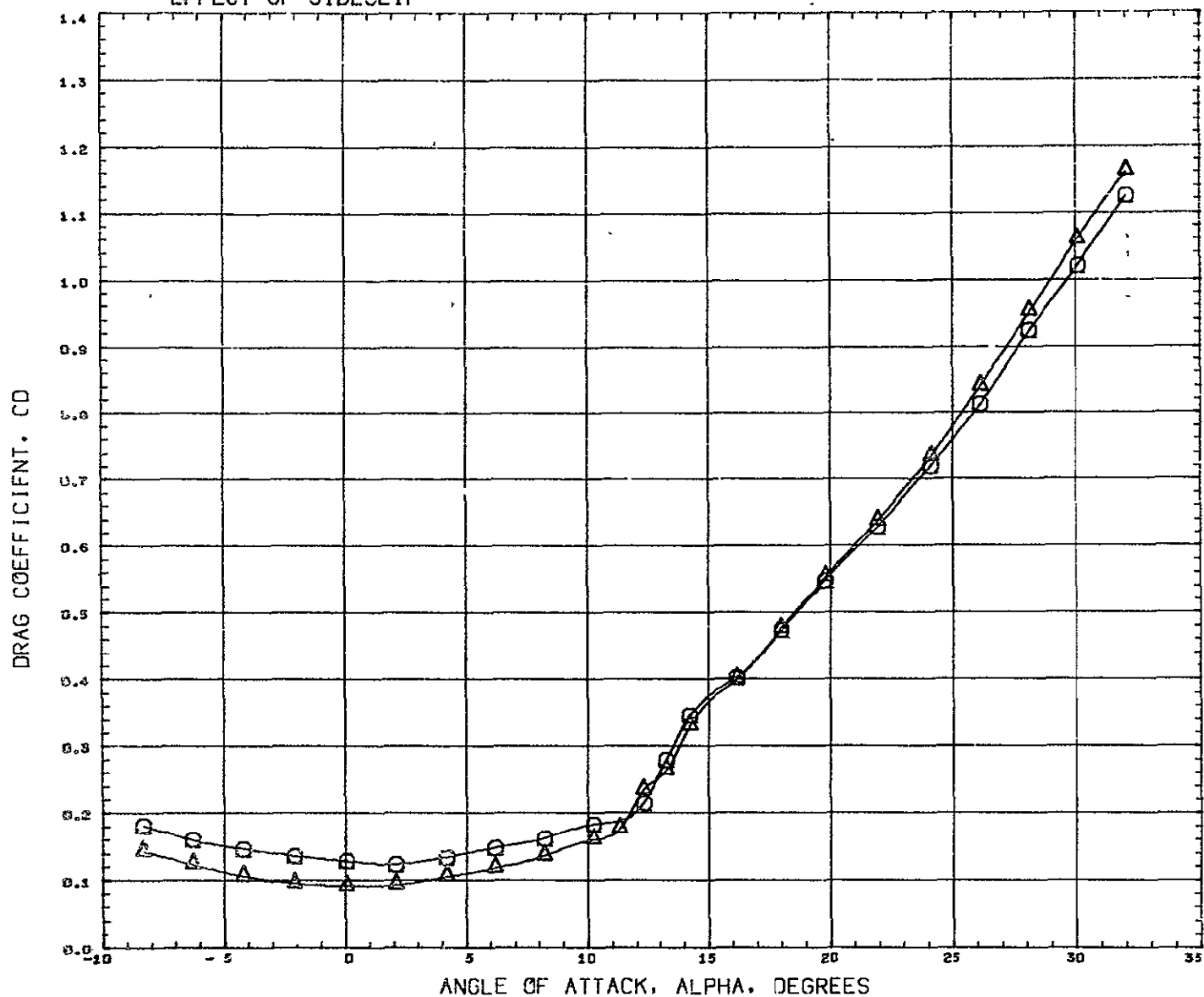
DATA SET SYMBOL CONFIGURATION DESCRIPTION  
 (AU1091)  $\square$  UVAL-1021 BAC C-6 BOOSTER B1W1H1V1N1  
 (AU1093)  $\triangle$  UVAL-1021 BAC C-6 BOOSTER B1W1H1V1N1

BETA  
 0.000  
 -10.000

REFERENCE INFORMATION  
 REFS 4.4200 SQ.FT.  
 REFL 10.1000 INCHES  
 REFB 66.0000 INCHES  
 XMRP 55.6360 INCHES  
 YMRP 0.0000 INCHES  
 ZMRP 5.8600 INCHES  
 SCALE 2.9920 PERCENT

MACH 0.154

# EFFECT OF SIDESLIP



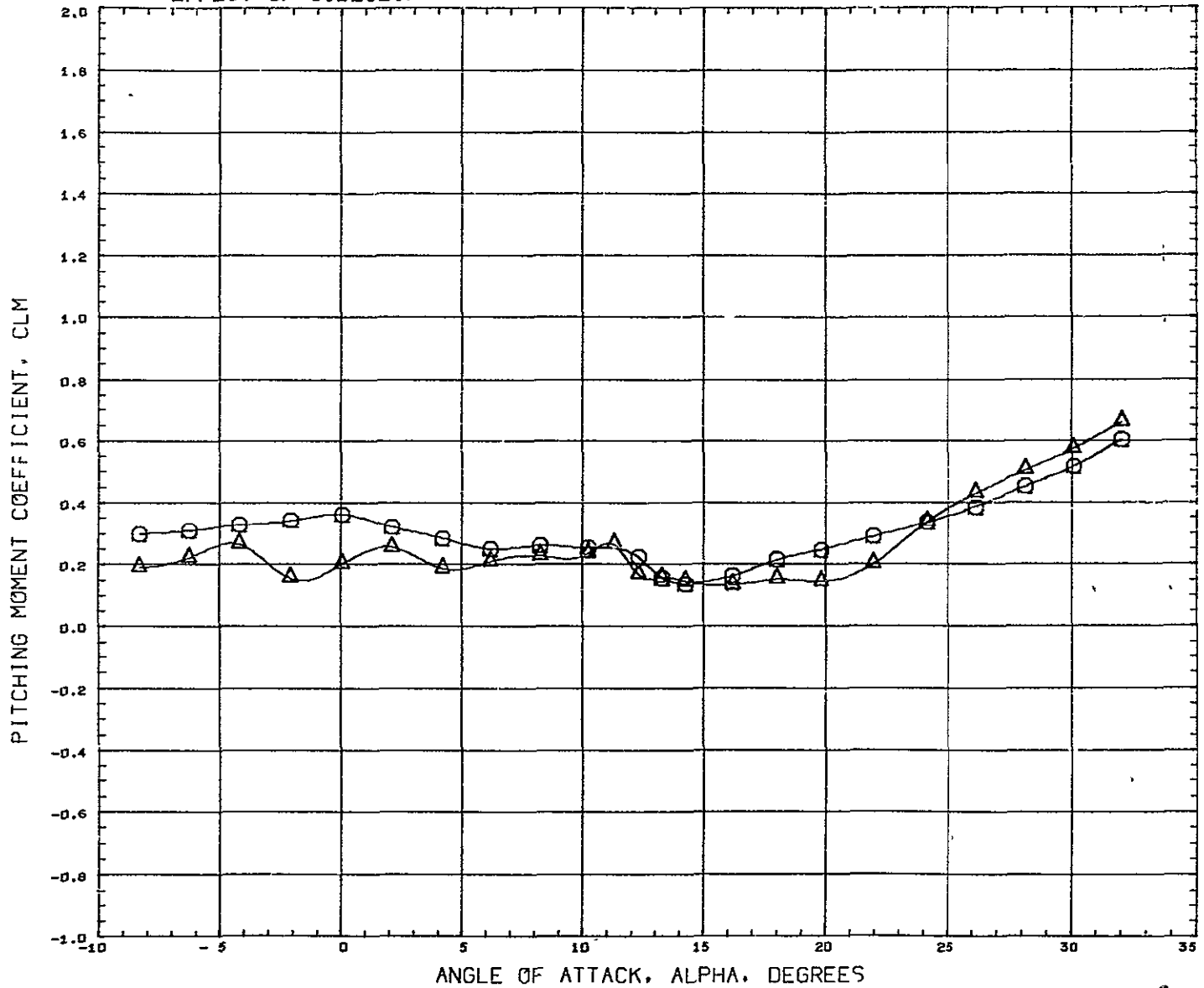
DATA SET SYMBOL CONFIGURATION DESCRIPTION  
 {AU1091} UVAL-1021 BAC C-6 BOOSTER 91W1H1V1N1  
 {AU1093} UVAL-1021 BAC C-6 BOOSTER 91W1H1V1N1

BETA  
 9.000  
 -10.000

REFERENCE INFORMATION  
 REFS 4.4200 SQ.FT.  
 REFL 10.1000 INCHES  
 REFB 66.6300 INCHES  
 XMRP 55.6360 INCHES  
 YMRP 0.0000 INCHES  
 ZMRP 5.8600 INCHES  
 SCALE 2.9920 PERCENT

MACH 0.154

# EFFECT OF SIDESLIP



DATA SET SYMBOL CONFIGURATION DESCRIPTION

(AU1091)

U

UAL-1021 BAC C-6 BOOSTER

BIWH1V1N1

(AU1093)

T

UAL-1021 BAC C-6 BOOSTER

BIWH1V1N1

BETA

0.000

-10.000

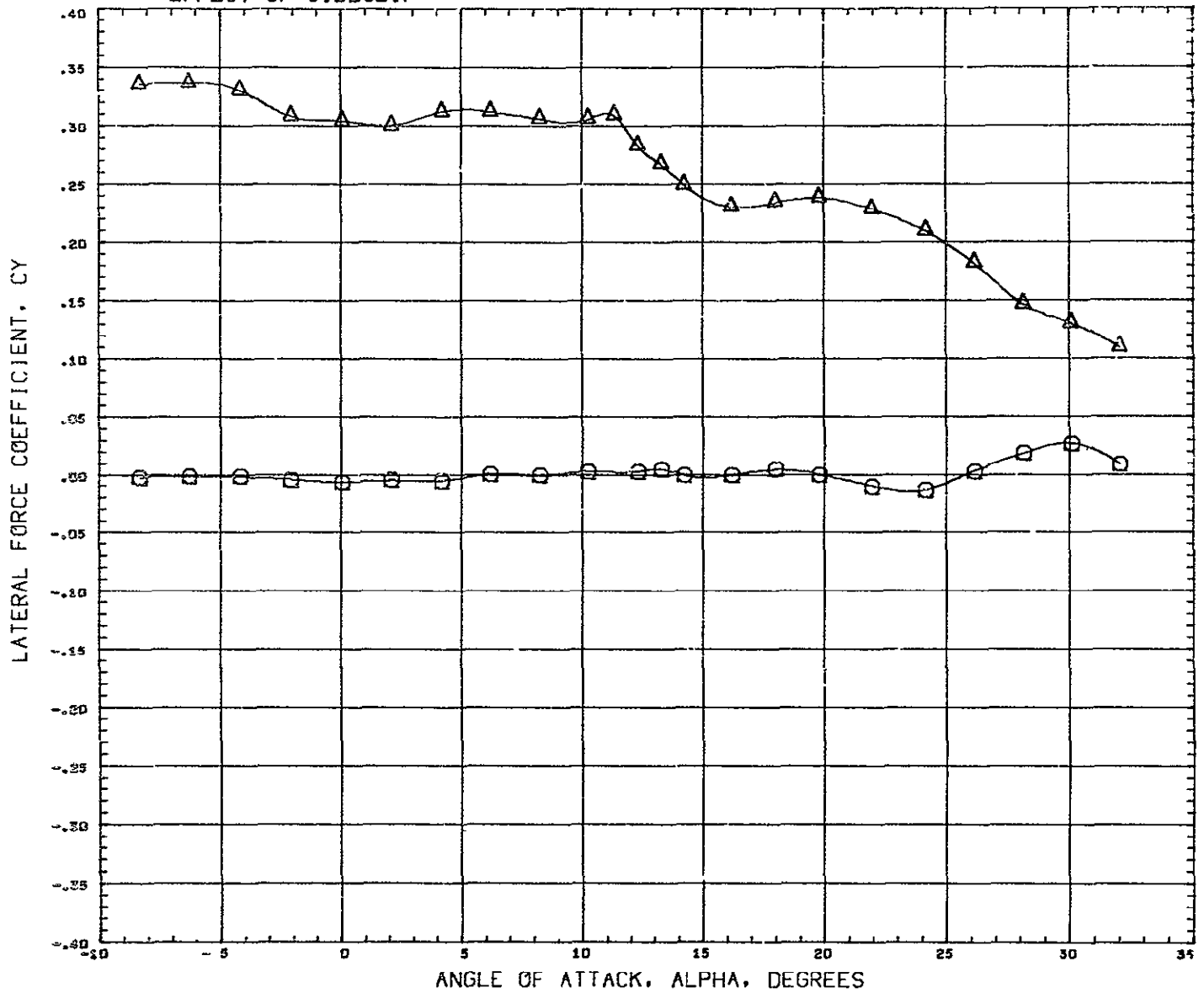
REFERENCE INFORMATION

REFS 4.4200 SQ.FT.  
REFL 10.1000 INCHES  
REFB 66.6000 INCHES  
XMRP 55.6360 INCHES  
YMRP 0.0000 INCHES  
ZHRP 5.8600 INCHES  
SCALE 2.9920 PERCENT

MACH

0.154

# EFFECT OF SIDESLIP



DATA SET SYMBOL CONFIGURATION DESCRIPTION  
 (AU1091) UVAL-1021 BAC C-6 BOOSTER  
 (AU1093) UVAL-1021 BAC C-6 BOOSTER

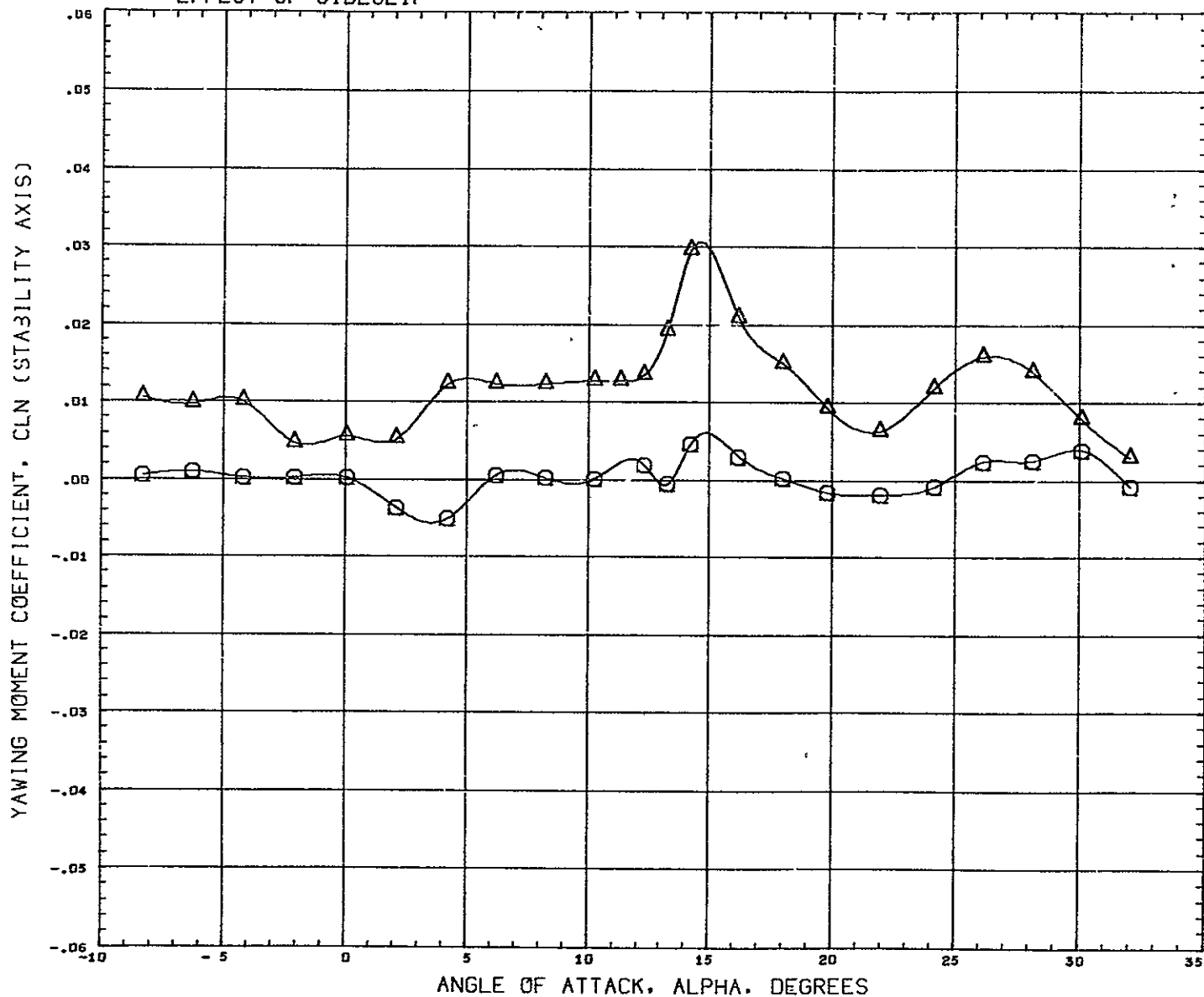
B1W1H1V1N1  
 B1W1H1V1N1

BETA  
 0.000  
 -10.000

REFERENCE INFORMATION  
 REFS 4.4200 SQ.FT.  
 REFL 10.1000 INCHES  
 REFB 66.6000 INCHES  
 XMRP 55.6360 INCHES  
 YMRP 0.0000 INCHES  
 ZMRP 5.8600 INCHES  
 SCALE 2.9920 PERCENT

HACH 0.154

# EFFECT OF SIDESLIP



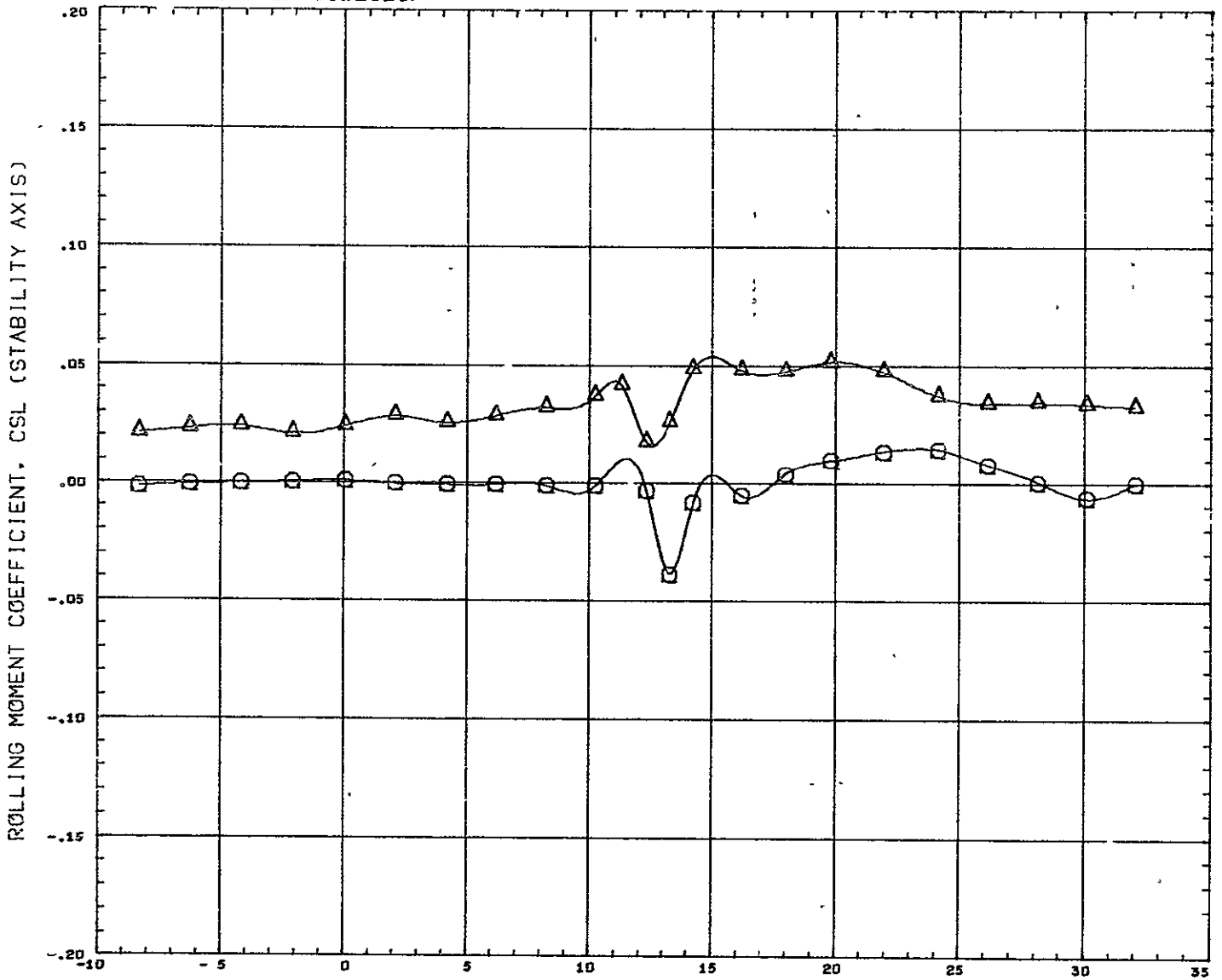
DATA SET SYMBOL    CONFIGURATION DESCRIPTION  
 (AU1091)    ◻    UWAL-1021 BAC C-6 BOOSTER  
 (AU1093)    ◻    UWAL-1021 BAC C-6 BOOSTER

B1W1H1V1N1    BETA  
 B1W1H1V1N1    0.000  
                  -10.000

REFERENCE INFORMATION  
 REFS    4    420"    SQ.FT.  
 REFL    10.1000    INCHES  
 REFB    66.6000    INCHES  
 XMRP    55.6360    INCHES  
 YMRP    0.0000    INCHES  
 ZMRP    5.8600    INCHES  
 SCALE    2.9920    PERCENT

MACH    0.154

# EFFECT OF SIDESLIP



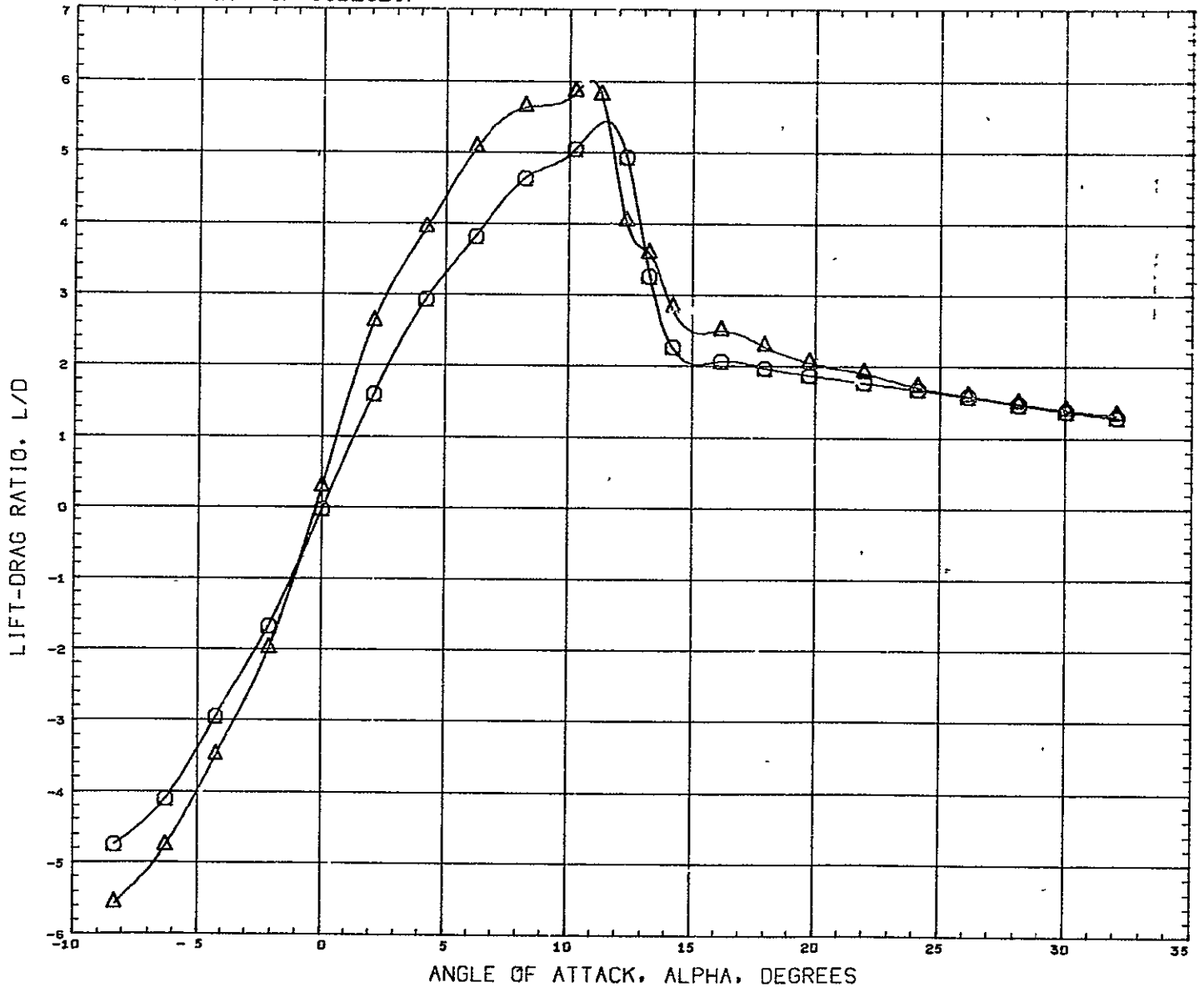
DATA SET SYMBOL CONFIGURATION DESCRIPTION  
 (AUI091) UVAL-1021 BAC C-6 BOOSTER B1W1H1V1N1  
 (AUI093) UVAL-1021 BAC C-6 BOOSTER B1W1H1V1N1

BETA  
 0.000  
 -10.000

REFERENCE INFORMATION  
 REFS 4.42011 SQ. FT.  
 REFL 10.1013 INCHES  
 REFB 66.6000 INCHES  
 XMRP 55.6360 INCHES  
 YMRP 0.0000 INCHES  
 ZMRP 5.8600 INCHES  
 SCALE 2.9920 PERCENT

HACH 0.154

# EFFECT OF SIDESLIP



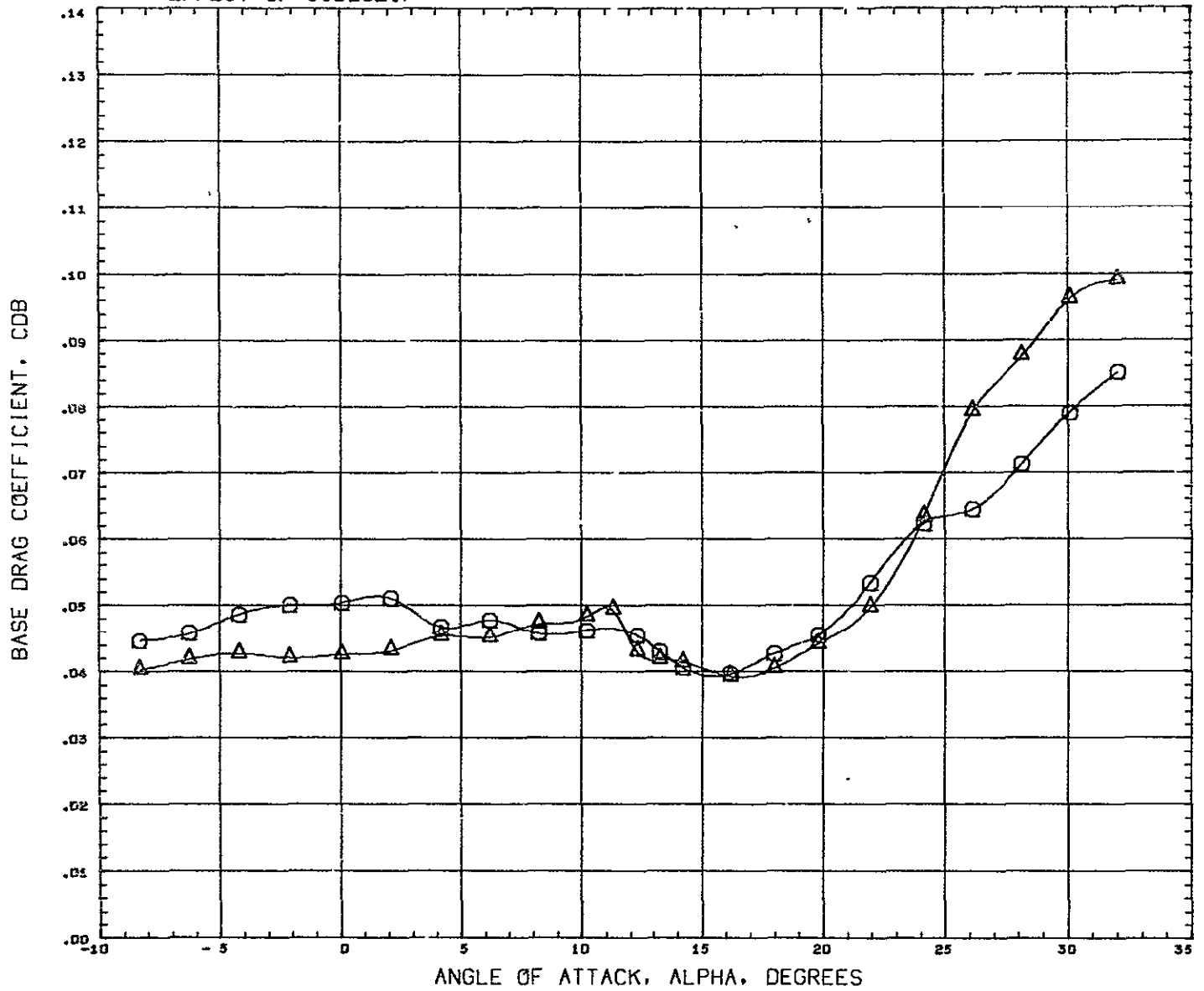
DATA SET SYMBOL CONFIGURATION DESCRIPTION  
 (AU1091) UAL-1021 BAC C-6 BOOSTER  
 (AU1093) UAL-1021 BAC C-6 BOOSTER

B1W1H1V1N1 BETA  
 B1W1H1V1N1 0.000  
 -10.000

REFERENCE INFORMATION  
 REFS 4.4290 SQ.FT.  
 REFL 10.1000 INCHES  
 REFB 66.6000 INCHES  
 XMRP 55.6360 INCHES  
 YMRP 0.0000 INCHES  
 ZMRP 5.8600 INCHES  
 SCALE 2.9920 PERCENT

MACH 0.154

# EFFECT OF SIDESLIP



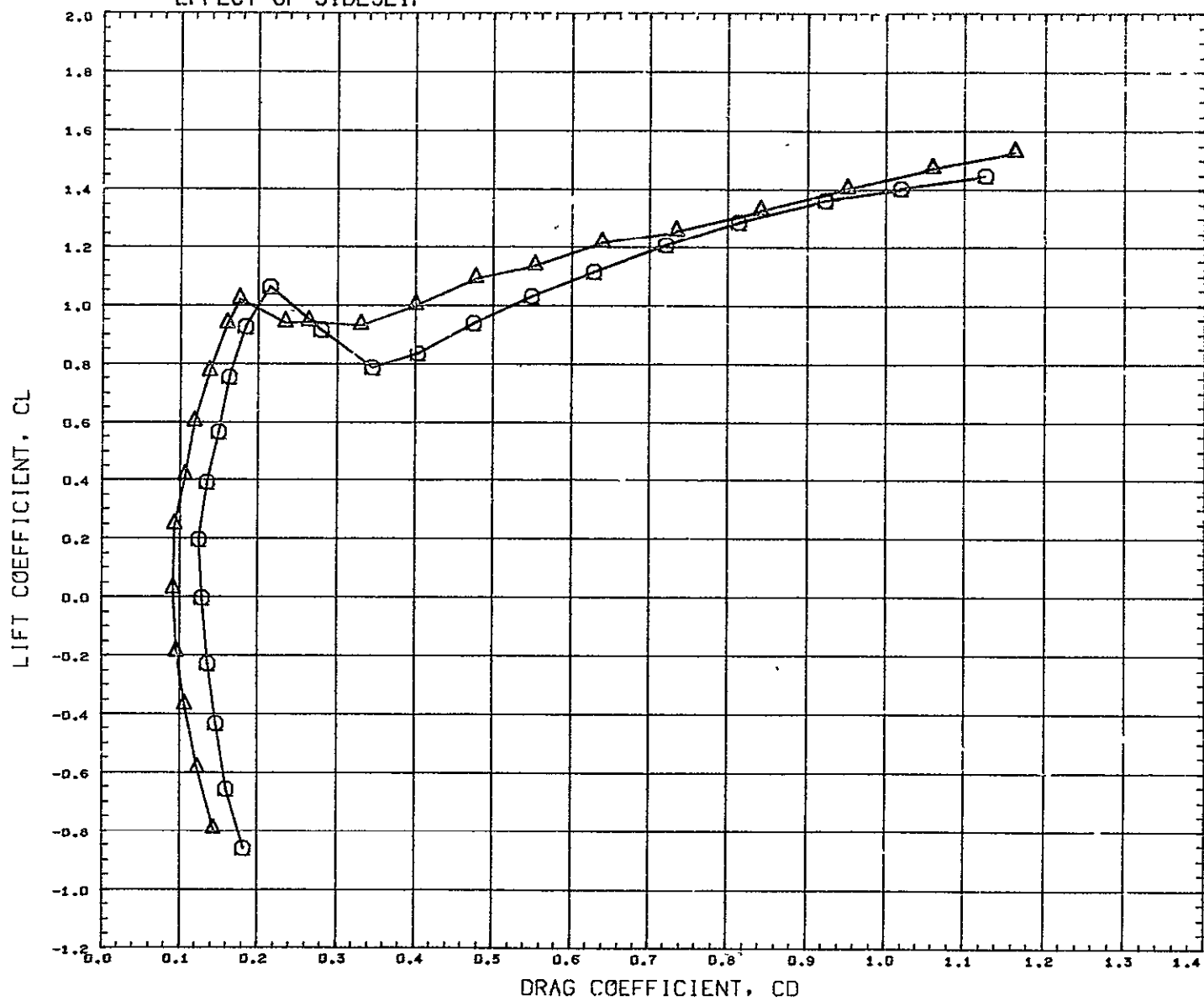
DATA SET SYMBOL CONFIGURATION DESCRIPTION  
 (AUS091) UVAL-1021 BAC C-6 BOOSTER  
 (AUS093) UVAL-1021 BAC C-6 BOOSTER

BETA  
 0.000  
 -10.000

REFERENCE INFORMATION  
 REFS 4.4200 SQ.FT.  
 REFL 10.1000 INCHES  
 REFB 66.6000 INCHES  
 XMRP 55.6360 INCHES  
 YMRP 0.0000 INCHES  
 ZMRP 5.8600 INCHES  
 SCALE 2.9920 PERCENT

MACH 0.154

# EFFECT OF SIDESLIP



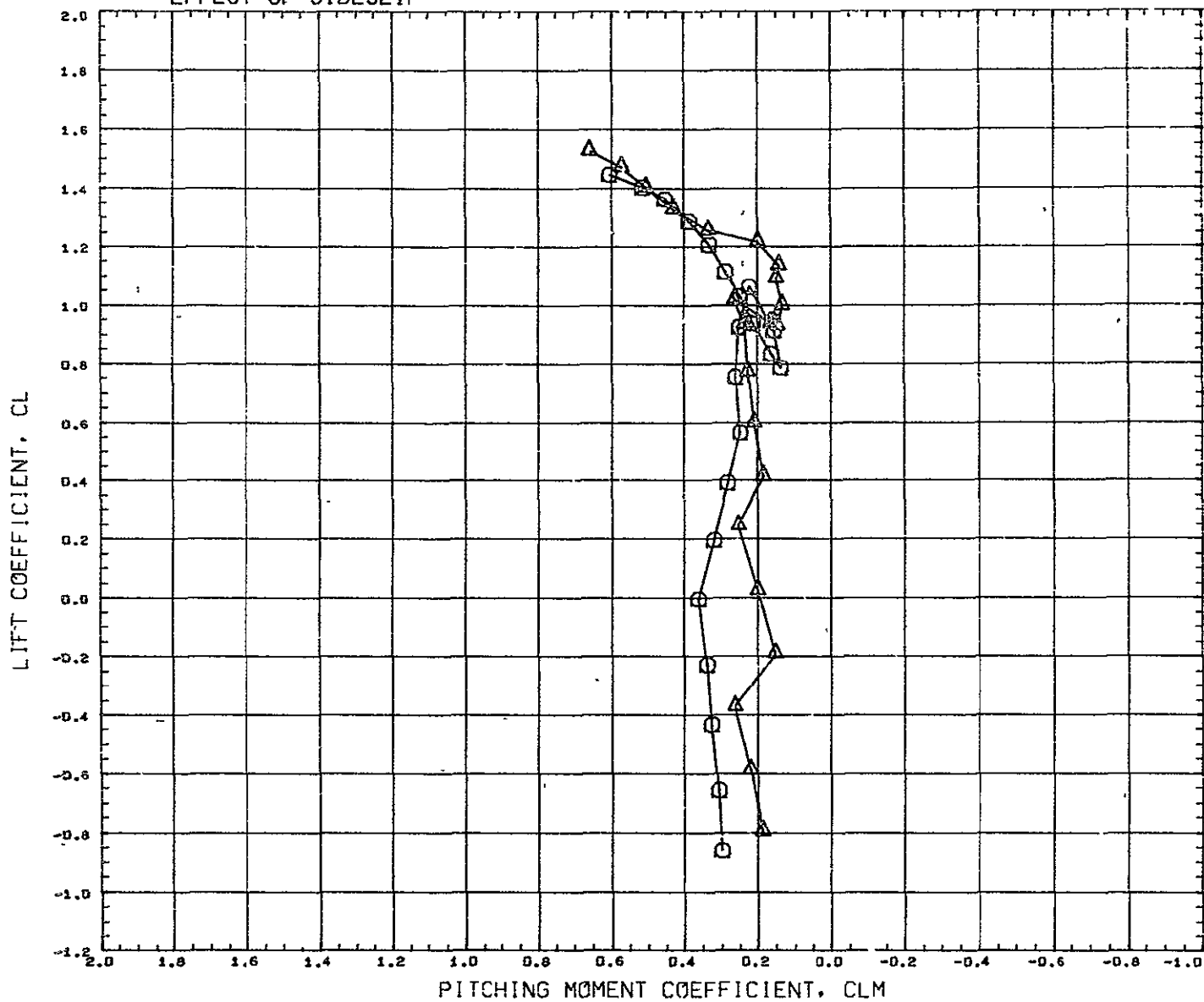
DATA SET SYMBOL CONFIGURATION DESCRIPTION  
 (AU1091) UWAL-1021 BAC C-6 BOOSTER B1W1H1V1N1  
 (AU1093) UWAL-1021 BAC C-6 BOOSTER B1W1H1V1N1

BETA  
 0.000  
 -10.000

REFERENCE INFORMATION  
 REFS 4.42CD SQ.FT.  
 REFL 10.1600 INCHES  
 REFB 66.5000 INCHES  
 XMRP 55.6360 INCHES  
 YMRP 0.0000 INCHES  
 ZMRP 5.8600 INCHES  
 SCALE 2.9920 PERCENT

MACH 0.154

# EFFECT OF SIDESLIP



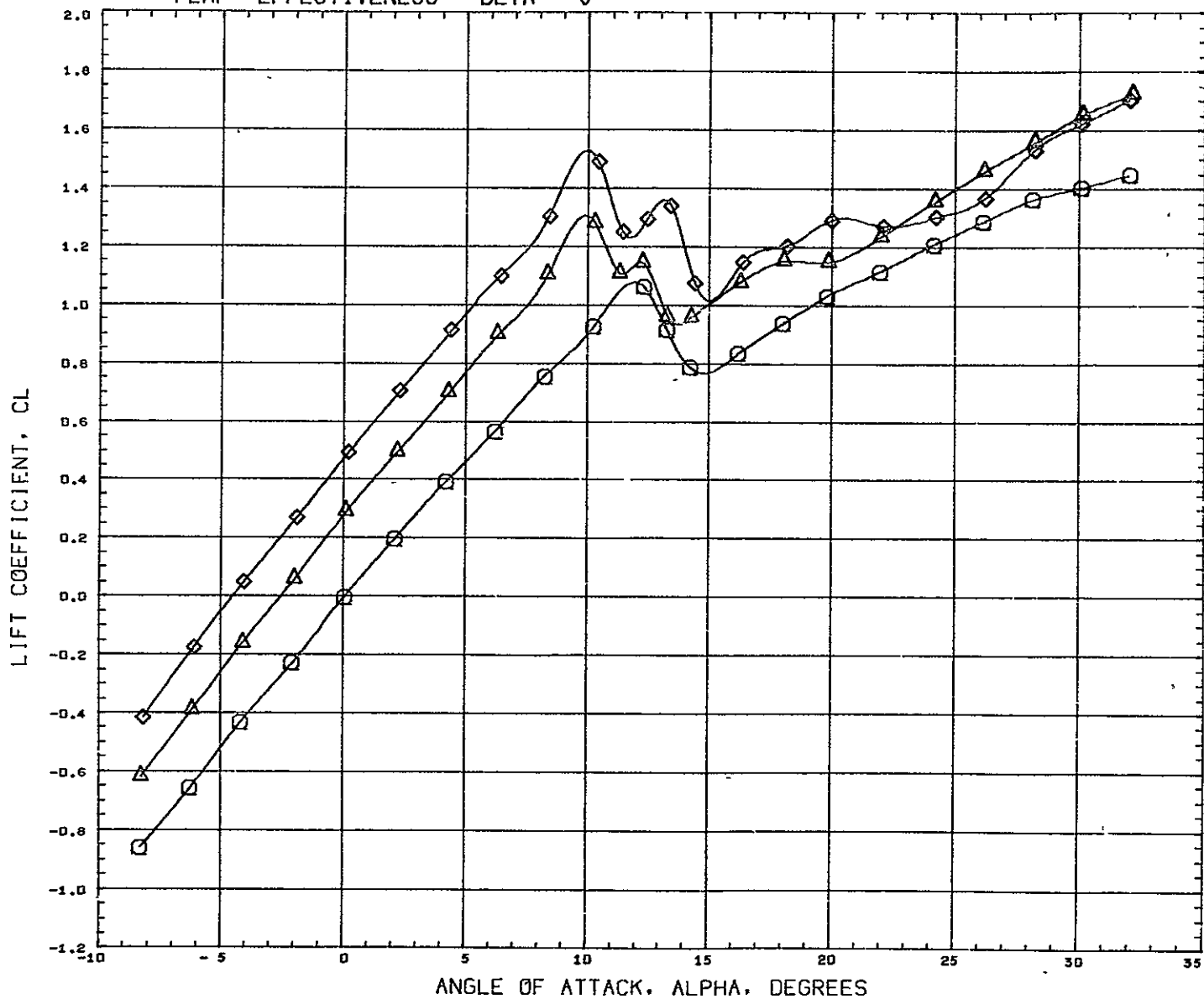
DATA SET SYMBOL CONFIGURATION DESCRIPTION  
 (AUS091)  $\square$  UVAL-1021 BAC C-6 BOOSTER  
 (AUS093)  $\triangle$  UVAL-1021 BAC C-6 BOOSTER

BETA  
 0.000  
 -10.000

REFERENCE INFORMATION  
 REFS 4.4200 SQ.FT.  
 REFL 10.1000 INCHES  
 REFB 66.3000 INCHES  
 XMRP 55.6360 INCHES  
 YMRP 0.0000 INCHES  
 ZMRP 5.8600 INCHES  
 SCALE 2.9920 PERCENT

MACH 0.154

# FLAP EFFECTIVENESS BETA = 0



| DATA SET SYMBOL | CONFIGURATION DESCRIPTION |
|-----------------|---------------------------|
| (AU1091)        | UWAL-1021 BAC C-6 BOOSTER |
| (AU1101)        | UWAL-1021 BAC C-6 BOOSTER |
| (AU1141)        | UWAL-1021 BAC C-6 BOOSTER |

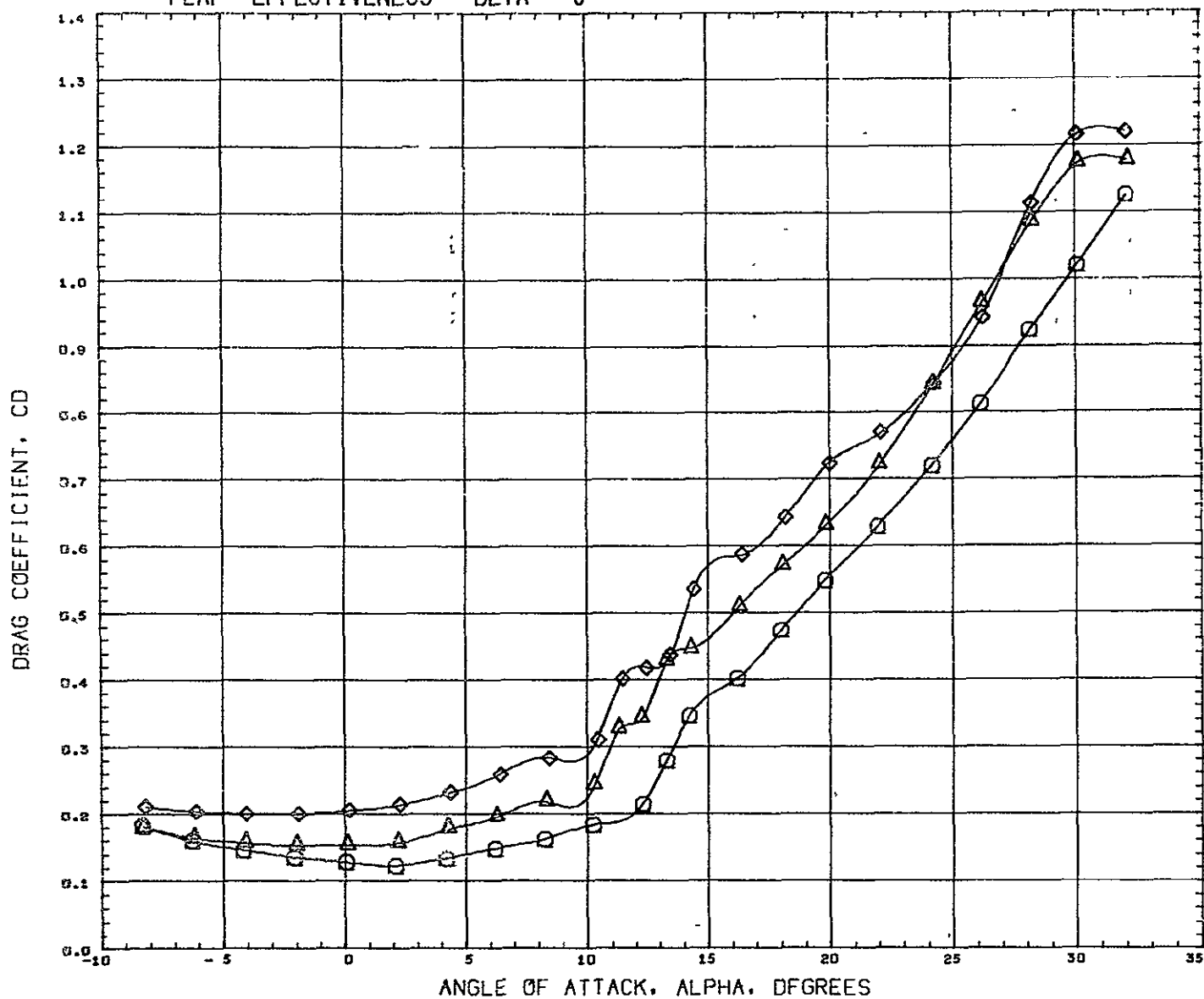
ANGLE OF ATTACK, ALPHA, DEGREES

| FLAP   | BETA  |
|--------|-------|
| 0.000  | 0.000 |
| 15.000 | 0.000 |
| 40.000 | 0.000 |

| REFERENCE INFORMATION |         |         |
|-----------------------|---------|---------|
| REFS                  | 4.4200  | SQ.FT.  |
| REFL                  | 10.1000 | INCHES  |
| REFB                  | 66.6300 | INCHES  |
| XMRP                  | 55.6360 | INCHES  |
| YMRP                  | 0.0000  | INCHES  |
| ZMRP                  | 5.8600  | INCHES  |
| SCALE                 | 2.9920  | PERCENT |

MACH 0.154

# FLAP EFFECTIVENESS BETA = 0



DATA SET SYMBOL CONFIGURATION DESCRIPTION

(AU1091) UWAL-1021 BAC C-6 BOOSTER B1W1H1V1N1

(AU1101) UWAL-1021 BAC C-6 BOOSTER B1W1H1V1N1F115

(AU1141) UWAL-1021 BAC C-6 BOOSTER B1W1H1V1N1F140

FLAP BETA

0.000 0.000

15.000 0.000

40.000 0.000

REFERENCE INFORMATION

REFS 4.4200 SQ.FT.

REFL 10.1000 INCHES

REFB 66.6300 INCHES

XMRP 55.6360 INCHES

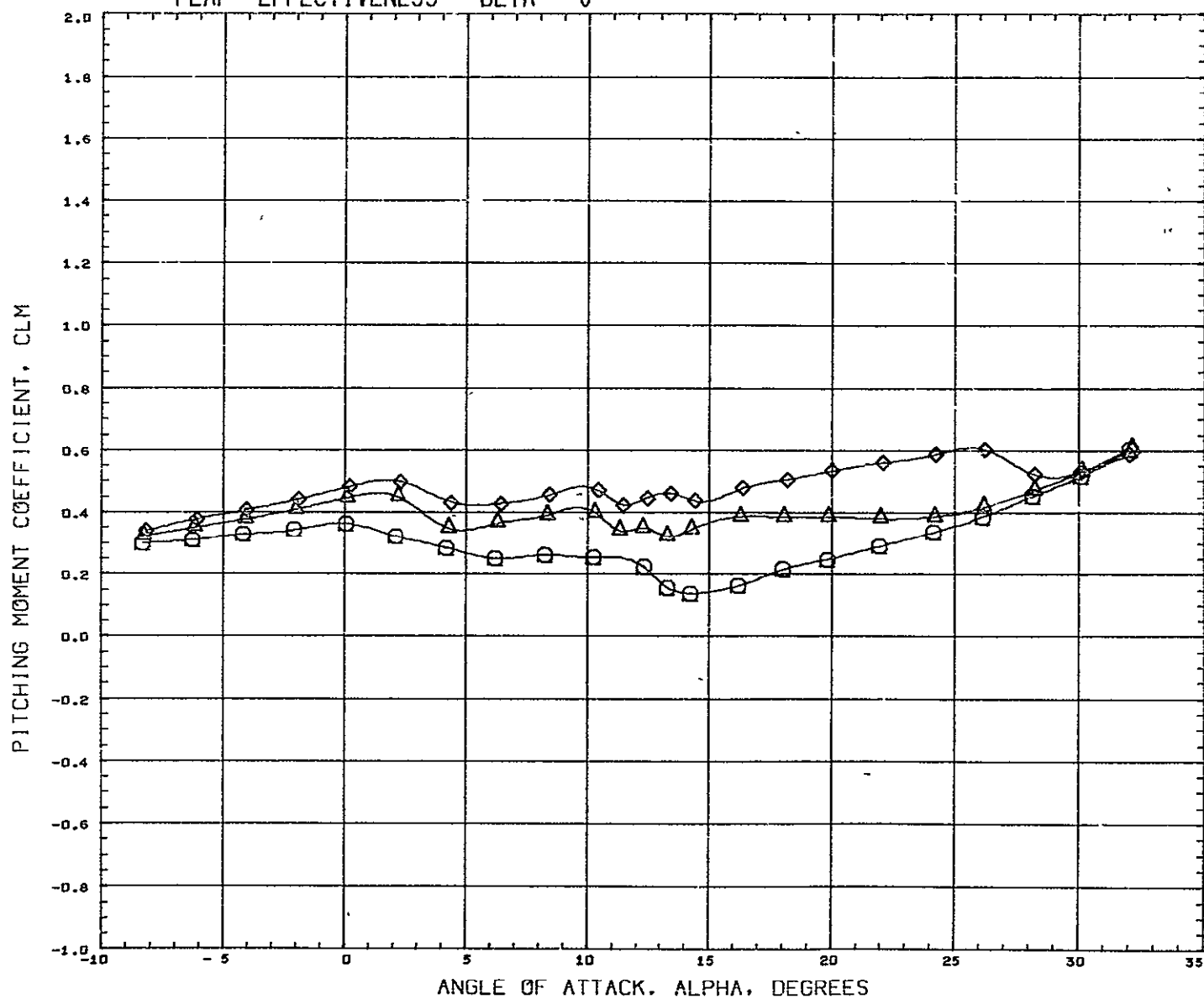
YMRP 0.0000 INCHES

ZMRP 5.8600 INCHES

SCALE 2.9920 PERCENT

MACH 0.154

# FLAP EFFECTIVENESS BETA = 0



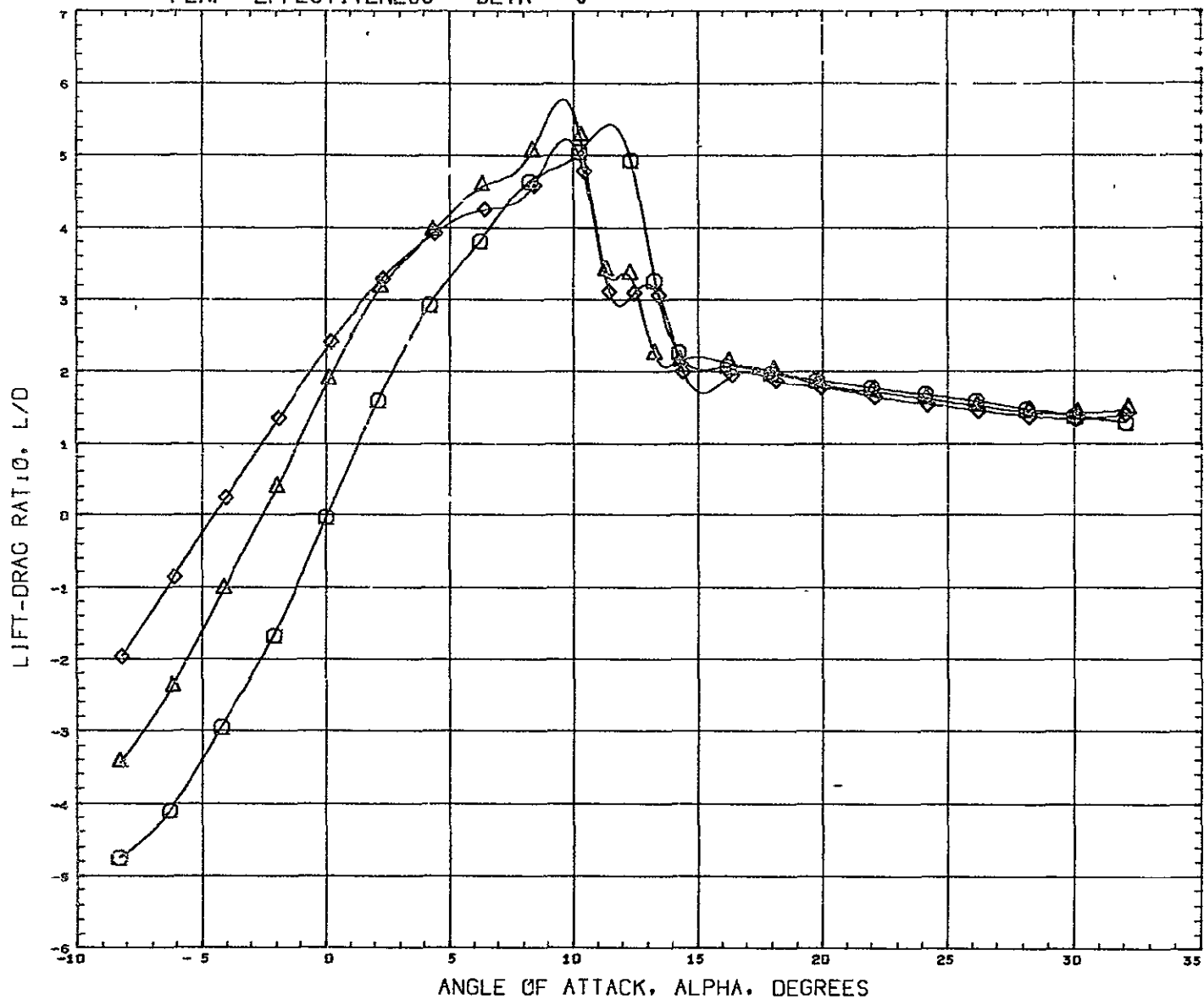
| DATA SET SYMBOL | CONFIGURATION DESCRIPTION |
|-----------------|---------------------------|
| (AU1091)        | UWAL-1021 BAC C-6 BOOSTER |
| (AU1101)        | UWAL-1021 BAC C-6 BOOSTER |
| (AU1141)        | UWAL-1021 BAC C-6 BOOSTER |

| FLAP   | BETA  |
|--------|-------|
| 0.000  | 0.000 |
| 15.000 | 0.000 |
| 40.000 | 0.000 |

| REFERENCE INFORMATION |         |         |
|-----------------------|---------|---------|
| REFS                  | 4.4203  | SQ.FT.  |
| REFL                  | 10.1000 | INCHES  |
| REFB                  | 66.6000 | INCHES  |
| XMRP                  | 55.6360 | INCHES  |
| YMRP                  | 0.0000  | INCHES  |
| ZMRP                  | 5.8600  | INCHES  |
| SCALE                 | 2.9920  | PERCENT |

HACH D.154

# FLAP EFFECTIVENESS BETA = 0



DATA SET SYMBOL CONFIGURATION DESCRIPTION

(AUS091) UWAL-1021 BAC C-6 BOOSTER

(AUS101) UWAL-1021 BAC C-6 BOOSTER

(AUS141) UWAL-1021 BAC C-6 BOOSTER

B1W1H1V1N1  
B1W1H1V1N1F15  
B1W1H1V1N1F140

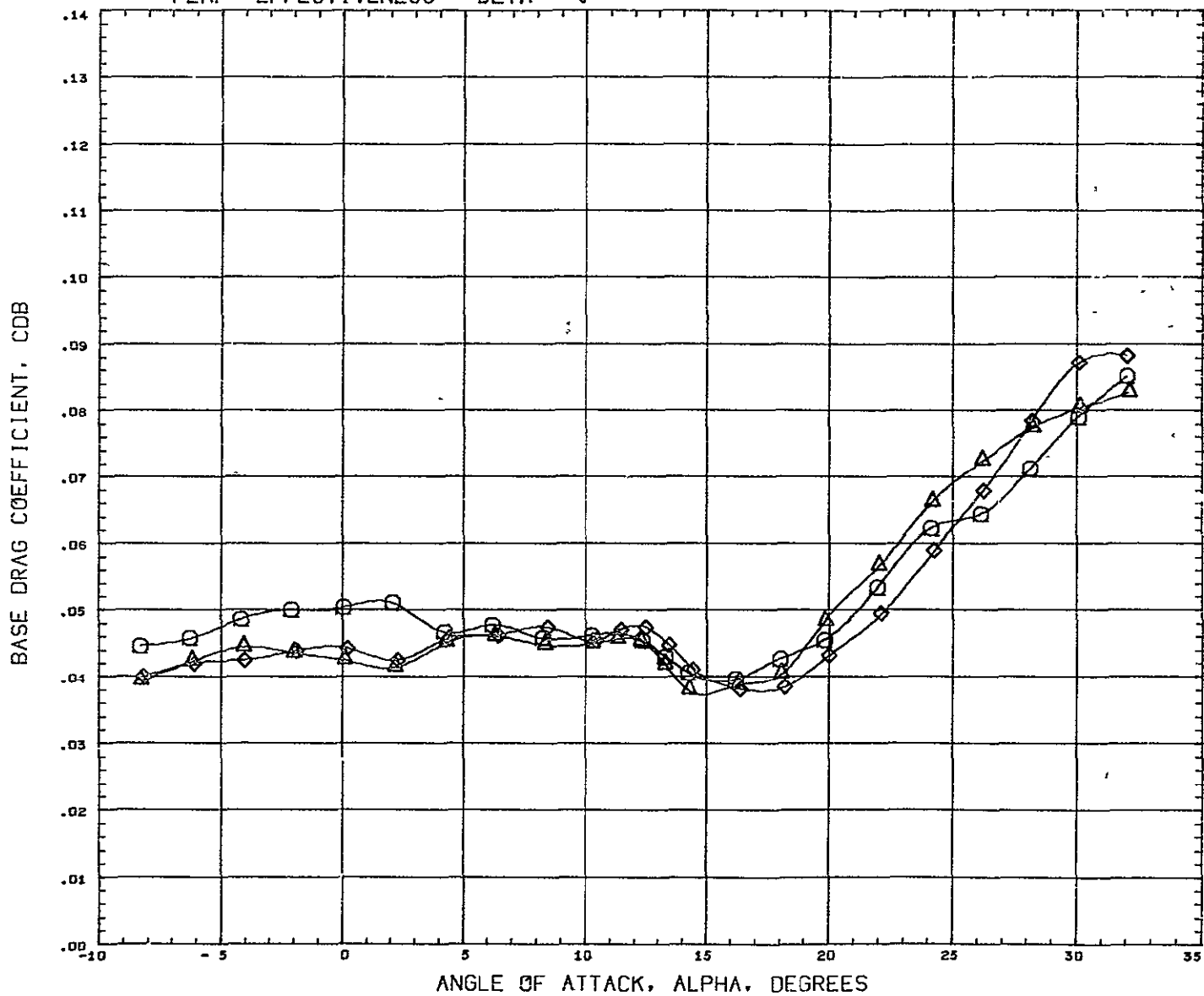
FLAP BETA  
0.000 0.000  
15.000 0.000  
40.000 0.000

REFERENCE INFORMATION

REFS 4.4200 SQ.FT.  
REFL 16.1000 INCHES  
REFB 66.6000 INCHES  
XMRP 55.6360 INCHES  
YMRP 0.0000 INCHES  
ZMRP 5.8600 INCHES  
SCALE 2.9920 PERCENT

MACH 0.154

# FLAP EFFECTIVENESS BETA = 0



| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION  |
|----------|--------|----------------------------|
| (AU1091) | ○      | UWAL-1021 BAC C-6 BOOSTER. |
| (AU1101) | △      | UWAL-1021 BAC C-6 BOOSTER  |
| (AU1141) | ◇      | UWAL-1021 BAC C-6 BOOSTER  |

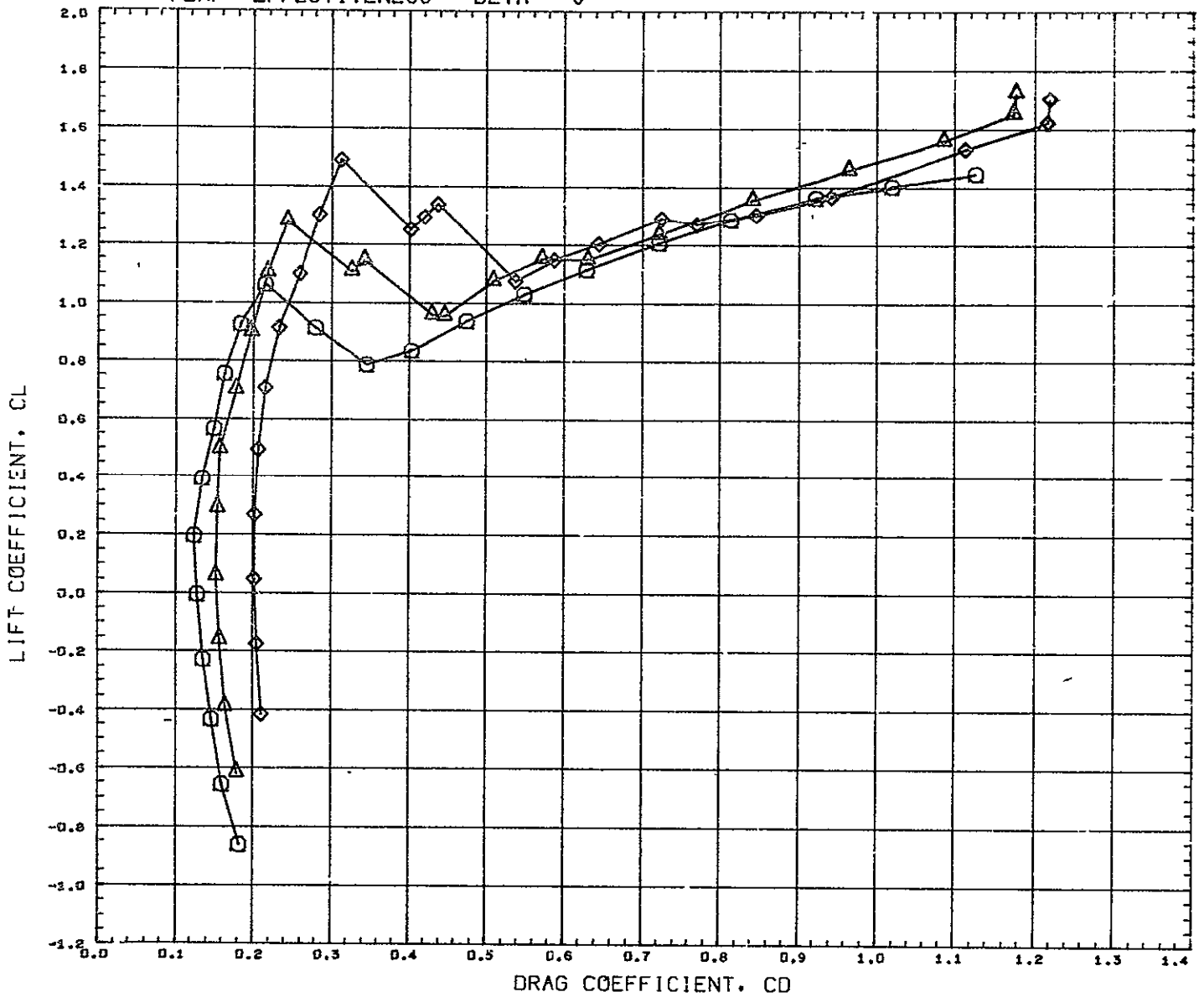
ANGLE OF ATTACK, ALPHA, DEGREES

| FLAP   | BETA  |
|--------|-------|
| 0.000  | 0.000 |
| 15.000 | 0.000 |
| 40.000 | 0.000 |

| REFERENCE INFORMATION |         |         |
|-----------------------|---------|---------|
| REFS                  | 4.4200  | SQ.FT.  |
| REFL                  | 10.1000 | INCHES  |
| REFB                  | 66.6300 | INCHES  |
| XMRF                  | 55.6360 | INCHES  |
| YMRF                  | 0.0000  | INCHES  |
| ZMRF                  | 5.8600  | INCHES  |
| SC/LE                 | 2.9920  | PERCENT |

MACH 0.154

# FLAP EFFECTIVENESS BETA = 0



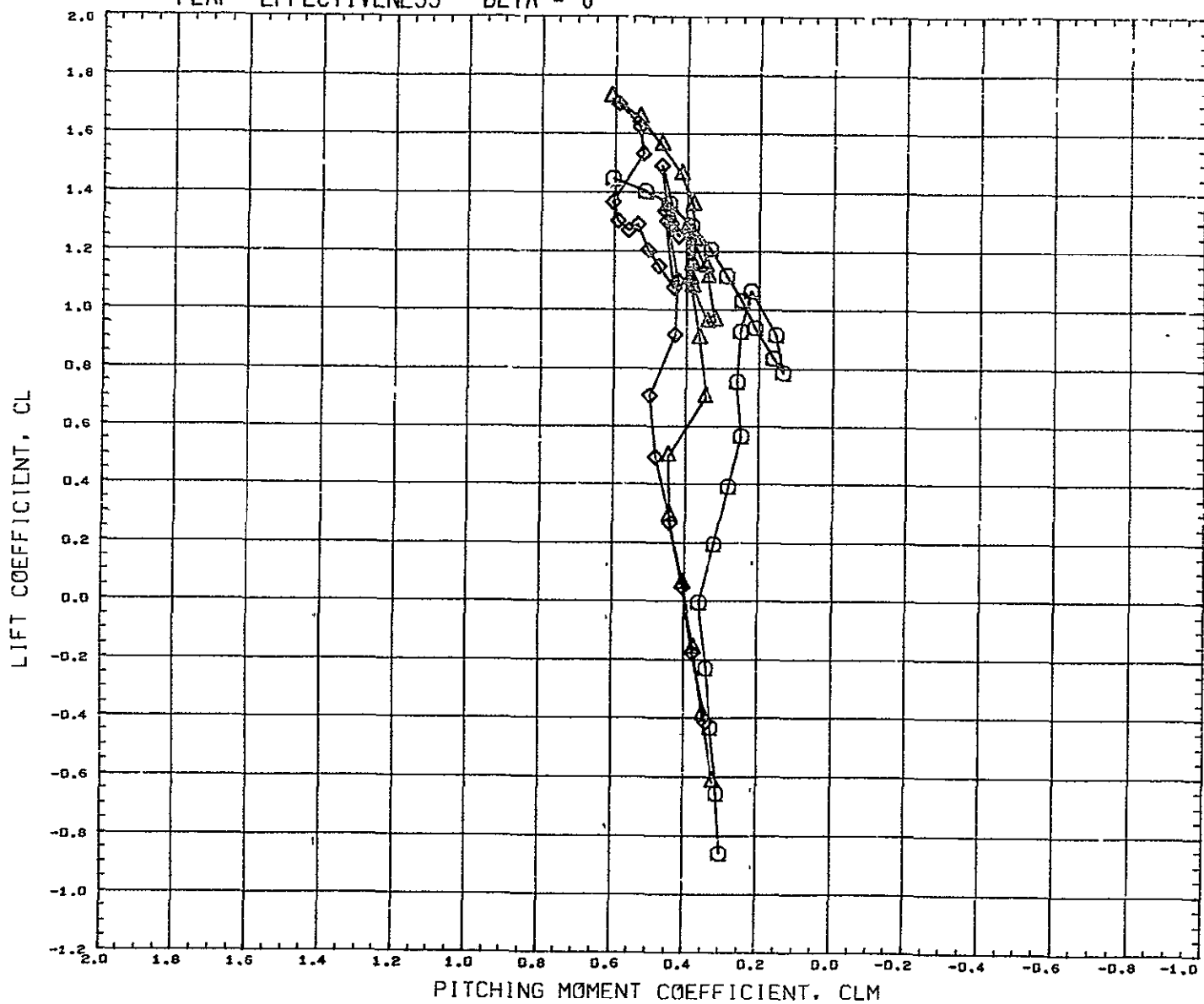
| DATA SET SYMBOL | CONFIGURATION DESCRIPTION |
|-----------------|---------------------------|
| (AU2091)        | UVAL-1021 BAC C-6 BOOSTER |
| (AU1101)        | UVAL-1021 BAC C-6 BOOSTER |
| (AU1142)        | UVAL-1021 BAC C-6 BOOSTER |

| FLAP   | BETA  |
|--------|-------|
| 0.000  | 0.000 |
| 15.000 | 0.000 |
| 40.000 | 0.000 |

| REFERENCE INFORMATION |         |         |
|-----------------------|---------|---------|
| REFS                  | 4.4200  | SQ.FT.  |
| REFL                  | 10.1020 | INCHES  |
| REFB                  | 66.6000 | INCHES  |
| XMRP                  | 55.6360 | INCHES  |
| YMRP                  | 0.0000  | INCHES  |
| ZMRP                  | 5.8600  | INCHES  |
| SCALE                 | 2.9920  | PERCENT |

MACH 0.154

# FLAP EFFECTIVENESS BETA = 0



| DATA SET SYMBOL | CONFIGURATION DESCRIPTION |
|-----------------|---------------------------|
| (AU1091)        | UVAL-1021 BAC C-6 BOOSTER |
| (AU1101)        | UVAL-1021 BAC C-6 BOOSTER |
| (AU1141)        | UVAL-1021 BAC C-6 BOOSTER |

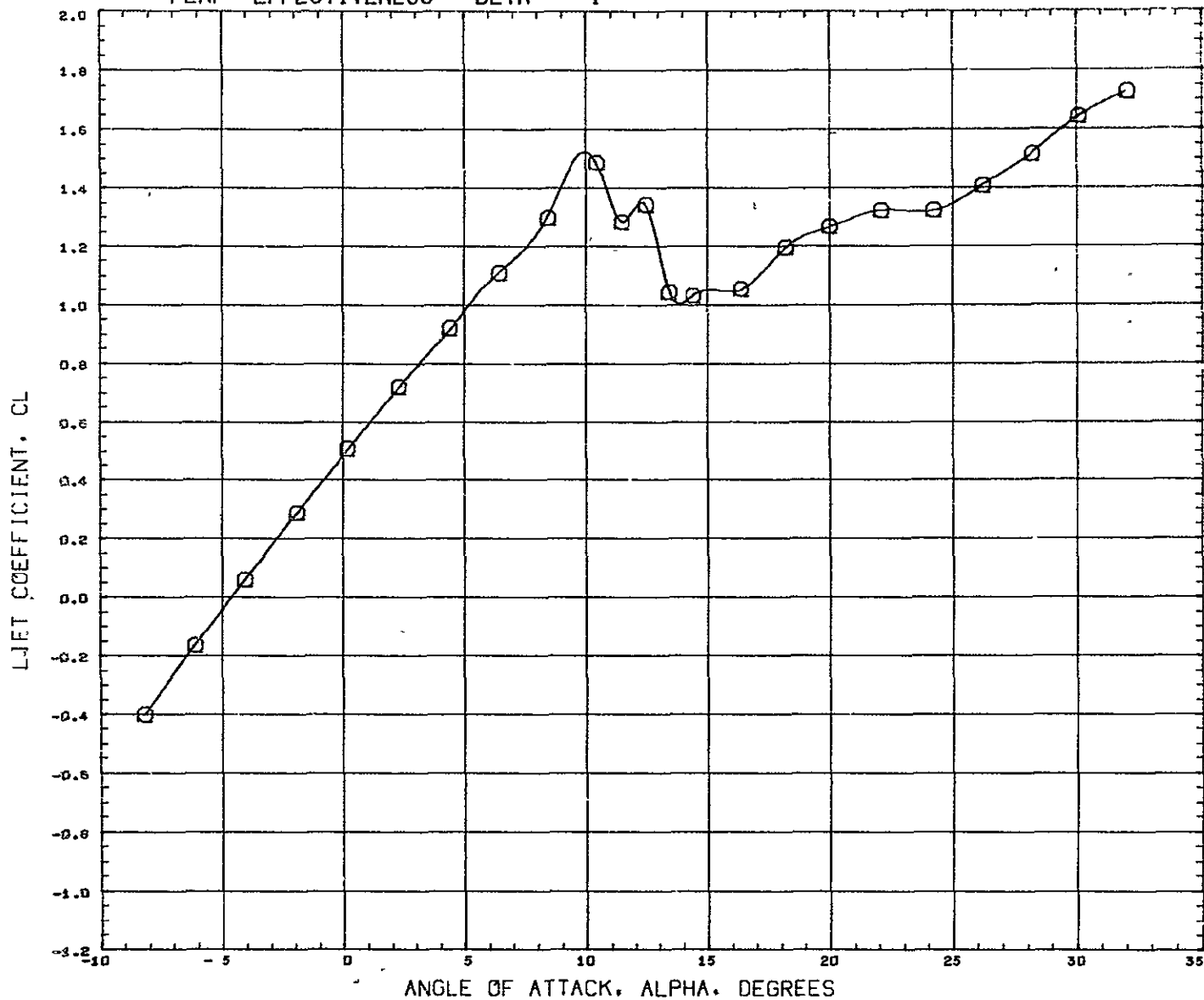
PITCHING MOMENT COEFFICIENT, CLM

| FLAP   | BETA  |
|--------|-------|
| 0.000  | 0.000 |
| 15.000 | 0.000 |
| 40.000 | 0.000 |

| REFERENCE INFORMATION |         |         |
|-----------------------|---------|---------|
| REFS                  | 4.4203  | SQ.FT.  |
| REFL                  | 10.1000 | INCHES  |
| REFB                  | 66.0000 | INCHES  |
| XMRP                  | 55.6360 | INCHES  |
| YMRP                  | 0.0000  | INCHES  |
| ZMRP                  | 5.8600  | INCHES  |
| SCALE                 | 2.9920  | PERCENT |

MACH 0.154

# FLAP EFFECTIVENESS BETA = -4

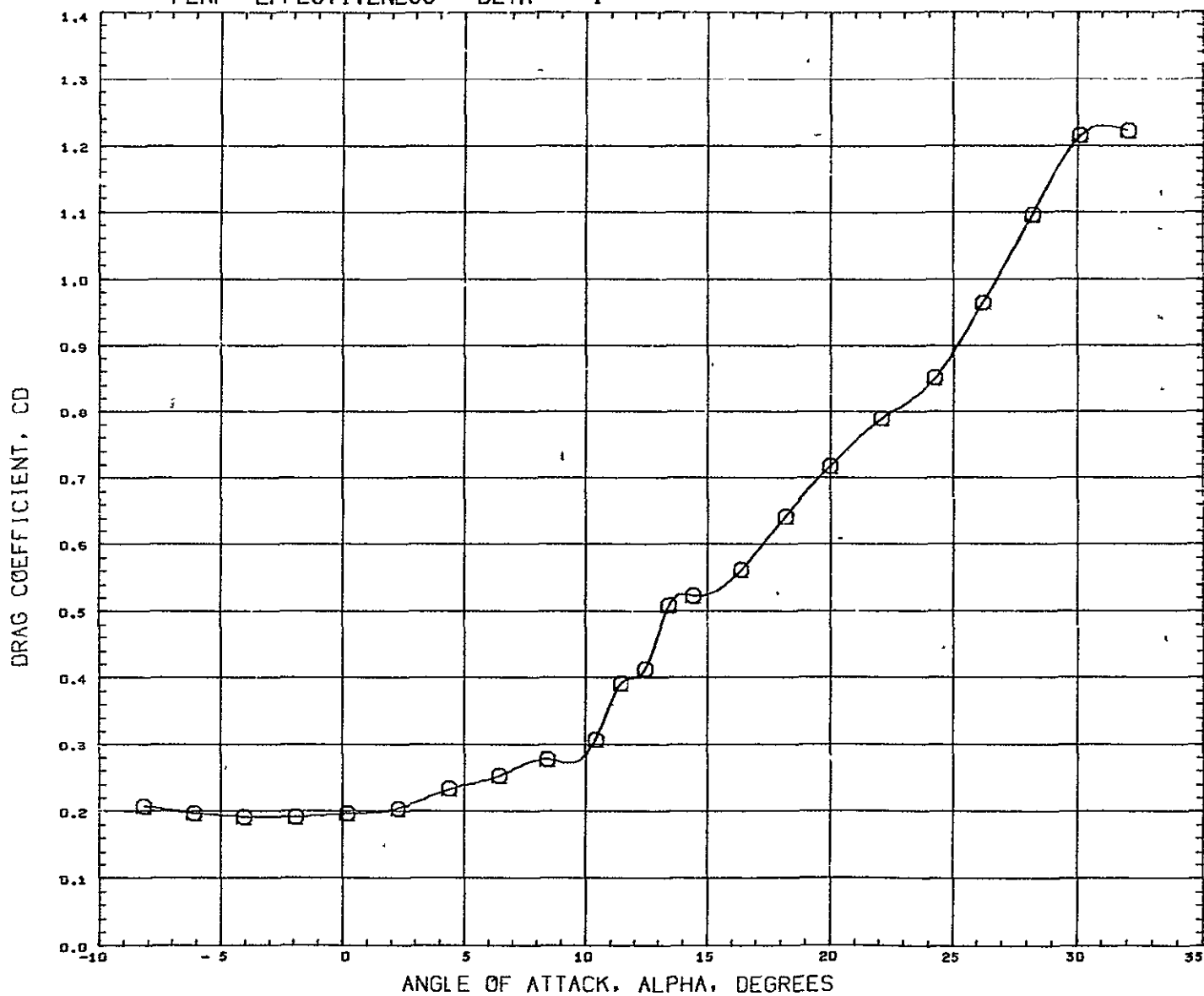


|        |       |                   |         |        |        |
|--------|-------|-------------------|---------|--------|--------|
| SYMBOL | MACH  | PARAMETRIC VALUES |         |        |        |
| ○      | 0.154 | BETA              | - 4.000 | AILRON | 0.000  |
|        |       | HTAIL             | 0.000   | ELEVTR | 0.000  |
|        |       | RUDDER            | 0.000   | FLAP   | 40.000 |

|                       |         |         |
|-----------------------|---------|---------|
| REFERENCE INFORMATION |         |         |
| REFS                  | 4.4200  | 50. FT. |
| REFL                  | 10.1069 | INCHES  |
| REFB                  | 66.6000 | INCHES  |
| XMRF                  | 55.6360 | INCHES  |
| YMRP                  | 0.0000  | INCHES  |
| ZMRP                  | 5.8600  | INCHES  |
| SCALE                 | 2.9920  | PERCENT |

DATA HIST. COEF V

# FLAP EFFECTIVENESS BETA = -4



| SYMBOL | MACH  | PARAMETRIC VALUES |         |        |        | REFERENCE INFORMATION |         |         |
|--------|-------|-------------------|---------|--------|--------|-----------------------|---------|---------|
| ○      | 0.154 | BETA              | - 4.000 | AILRON | 0.000  | REFS                  | 4.4200  | SQ.FT.  |
|        |       | HTAIL             | 0.000   | ELEVTR | 0.900  | REFL                  | 10.1000 | INCHES  |
|        |       | RUDDER            | 0.000   | FLAP   | 43.000 | REFB                  | 66.6000 | INCHES  |
|        |       |                   |         |        |        | XMRP                  | 55.6360 | INCHES  |
|        |       |                   |         |        |        | YMRP                  | 0.0000  | INCHES  |
|        |       |                   |         |        |        | ZMRP                  | 5.8600  | INCHES  |
|        |       |                   |         |        |        | SCALE                 | 2.9920  | PERCENT |

DATA HIST. CODE V

UWAL-1021 BAC C-6 BOOSTER

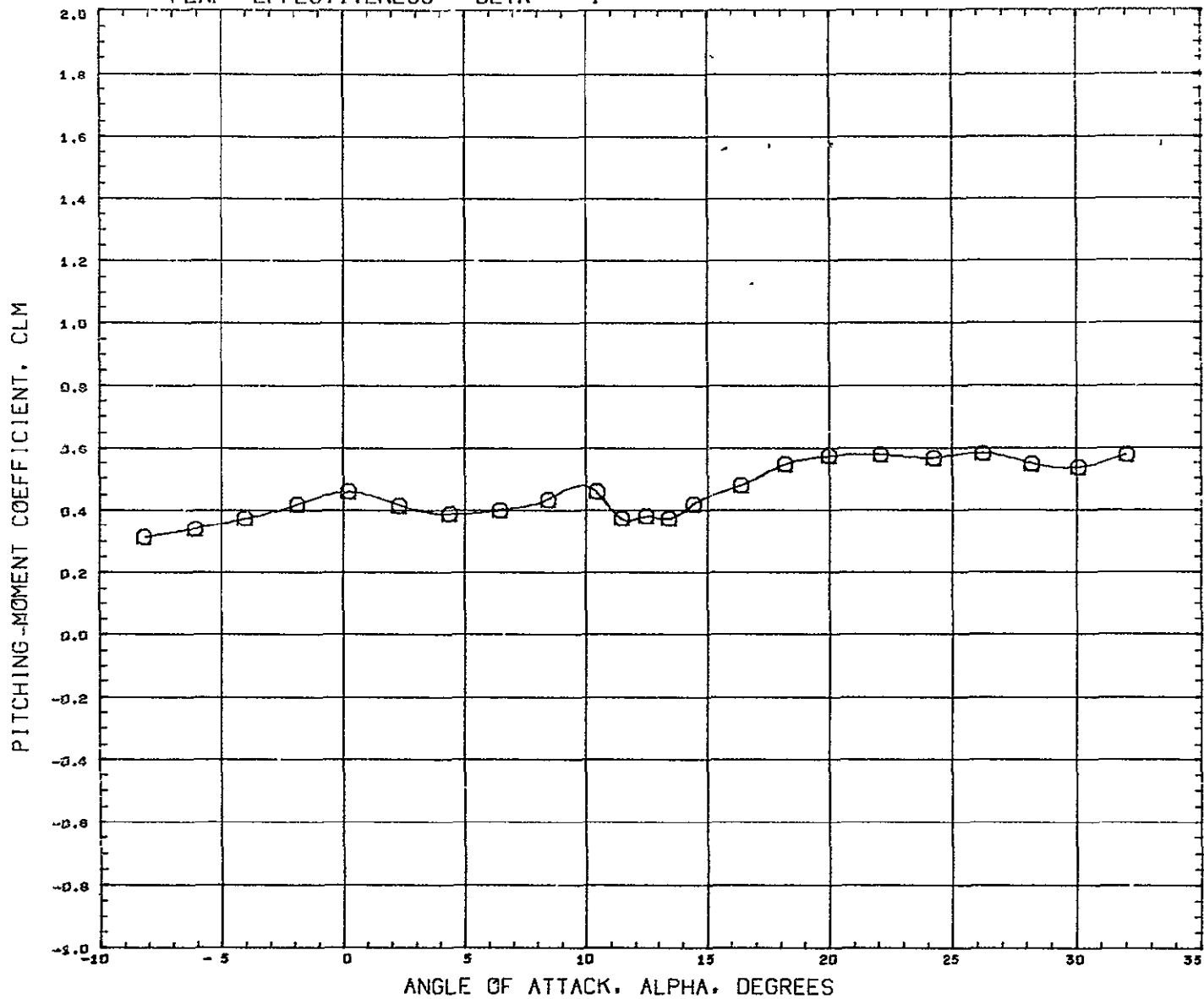
BIW1H1V1N1F140

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# FLAP EFFECTIVENESS BETA = -4

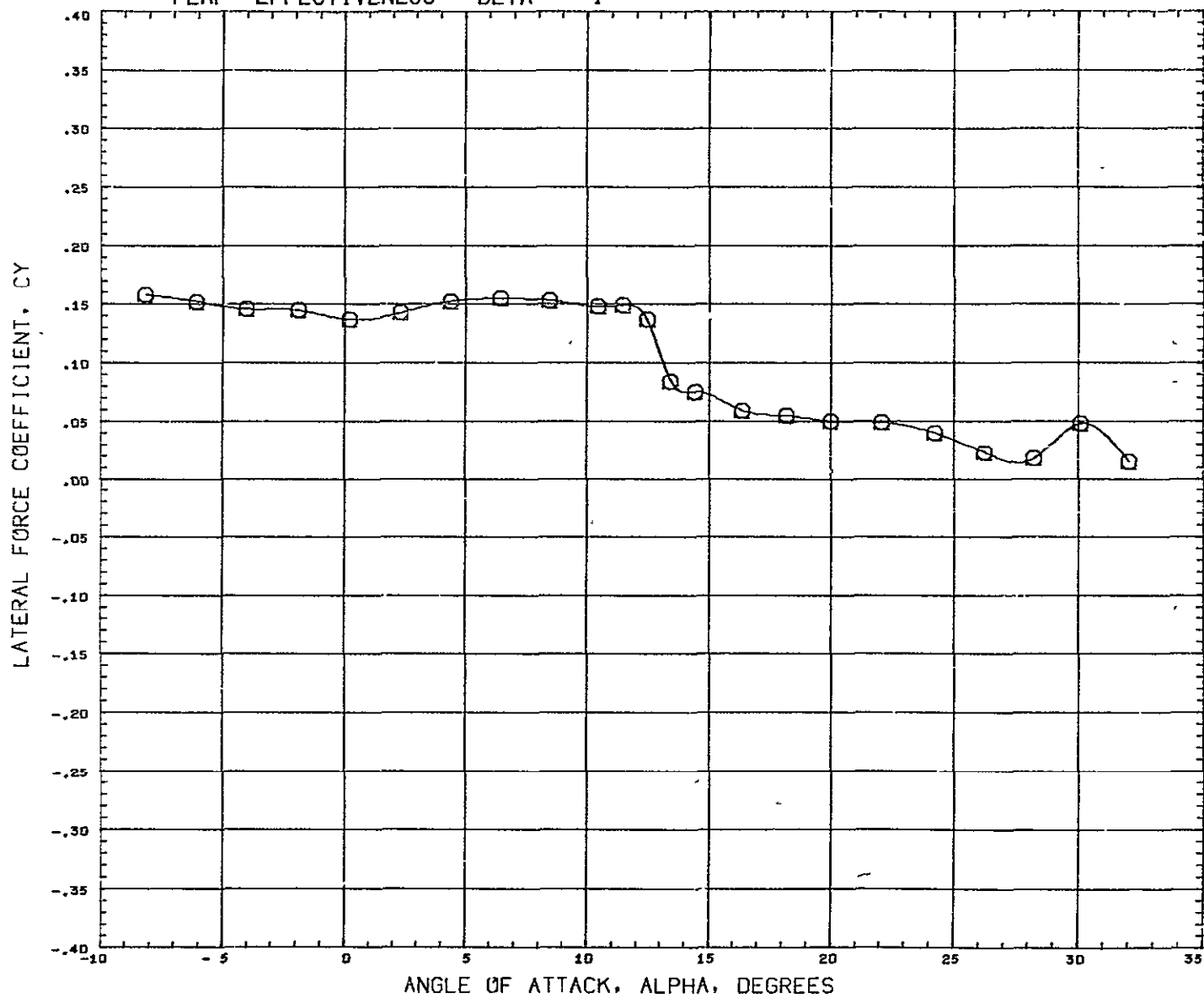


|        |       |                   |         |        |        |
|--------|-------|-------------------|---------|--------|--------|
| SYMBOL | MACH  | PARAMETRIC VALUES |         |        |        |
| ○      | 0.154 | BETA              | - 4.000 | AILRON | 0.000  |
|        |       | HTAIL             | 0.000   | ELEVTR | 0.000  |
|        |       | RUDDER            | 0.000   | FLAP   | 40.000 |

|                       |         |         |
|-----------------------|---------|---------|
| REFERENCE INFORMATION |         |         |
| REFS                  | 4.4200  | SQ.FT   |
| REFL                  | 10.1000 | INCHES  |
| REFB                  | 56.6000 | INCHES  |
| XNRP                  | 55.6360 | INCHES  |
| YNRP                  | 0.0000  | INCHES  |
| ZNRP                  | 5.8600  | INCHES  |
| SCALE                 | 2.9920  | PERCENT |

DATA HIST. CODE V

# FLAP EFFECTIVENESS BETA = -4

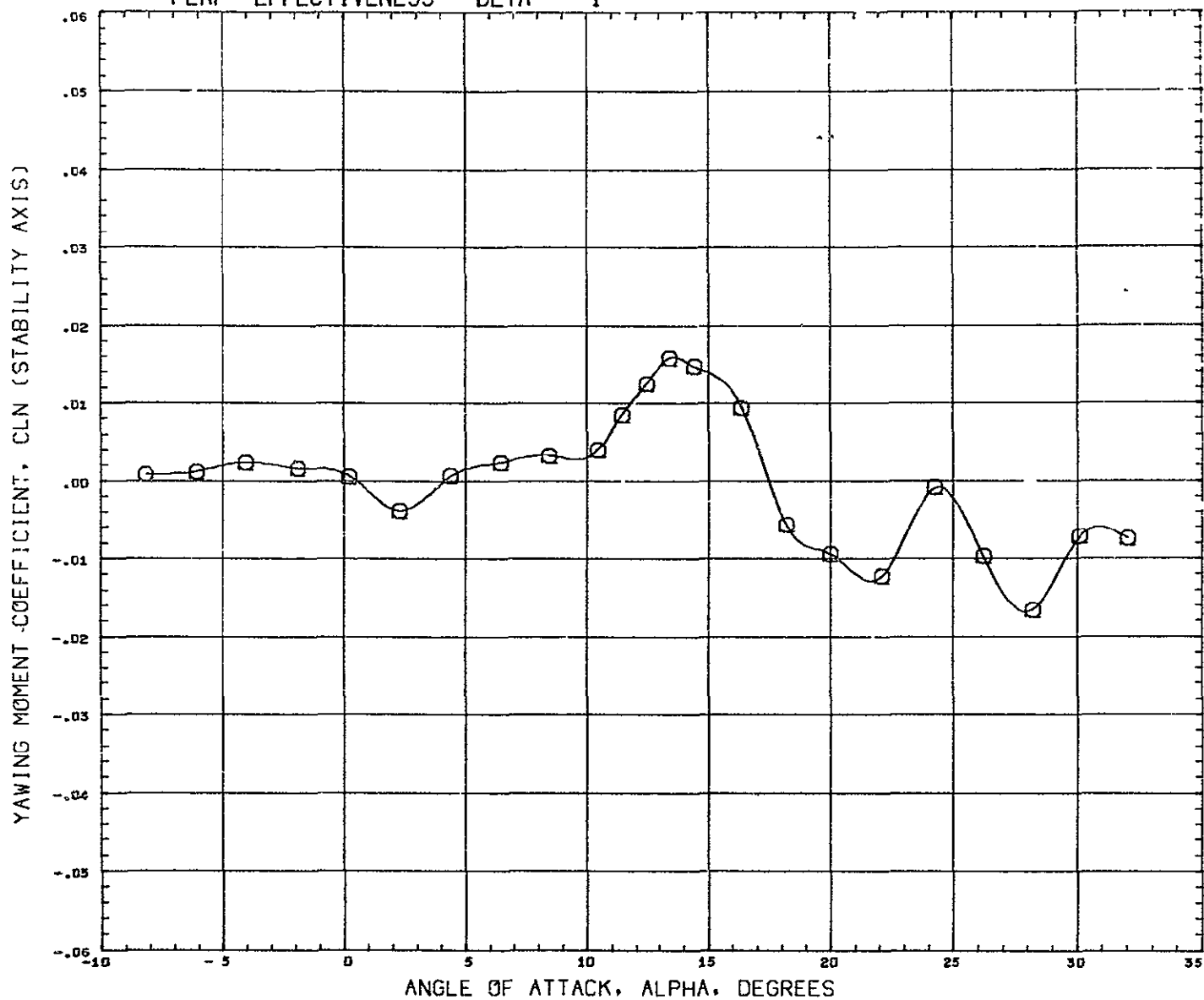


|             |               |                   |         |        |        |
|-------------|---------------|-------------------|---------|--------|--------|
| SYMBOL<br>○ | MACH<br>0.154 | PARAMETRIC VALUES |         |        |        |
|             |               | BETA              | - 4.000 | AILRON | 0.000  |
|             |               | HTAIL             | 0.000   | ELEVTR | 0.000  |
|             |               | RUDDER            | 0.000   | FLAP   | 40.000 |

|                       |         |         |
|-----------------------|---------|---------|
| REFERENCE INFORMATION |         |         |
| REFS                  | 4.4200  | SQ.FT.  |
| REFL                  | 10.1000 | INCHES  |
| REFB                  | 66.6000 | INCHES  |
| XMRP                  | 55 6360 | INCHES  |
| YMRP                  | 0.0000  | INCHES  |
| ZMRP                  | 5.8600  | INCHES  |
| SCALE                 | 2.9920  | PERCENT |

DATA HIST. CODE V

# FLAP EFFECTIVENESS BETA = -4

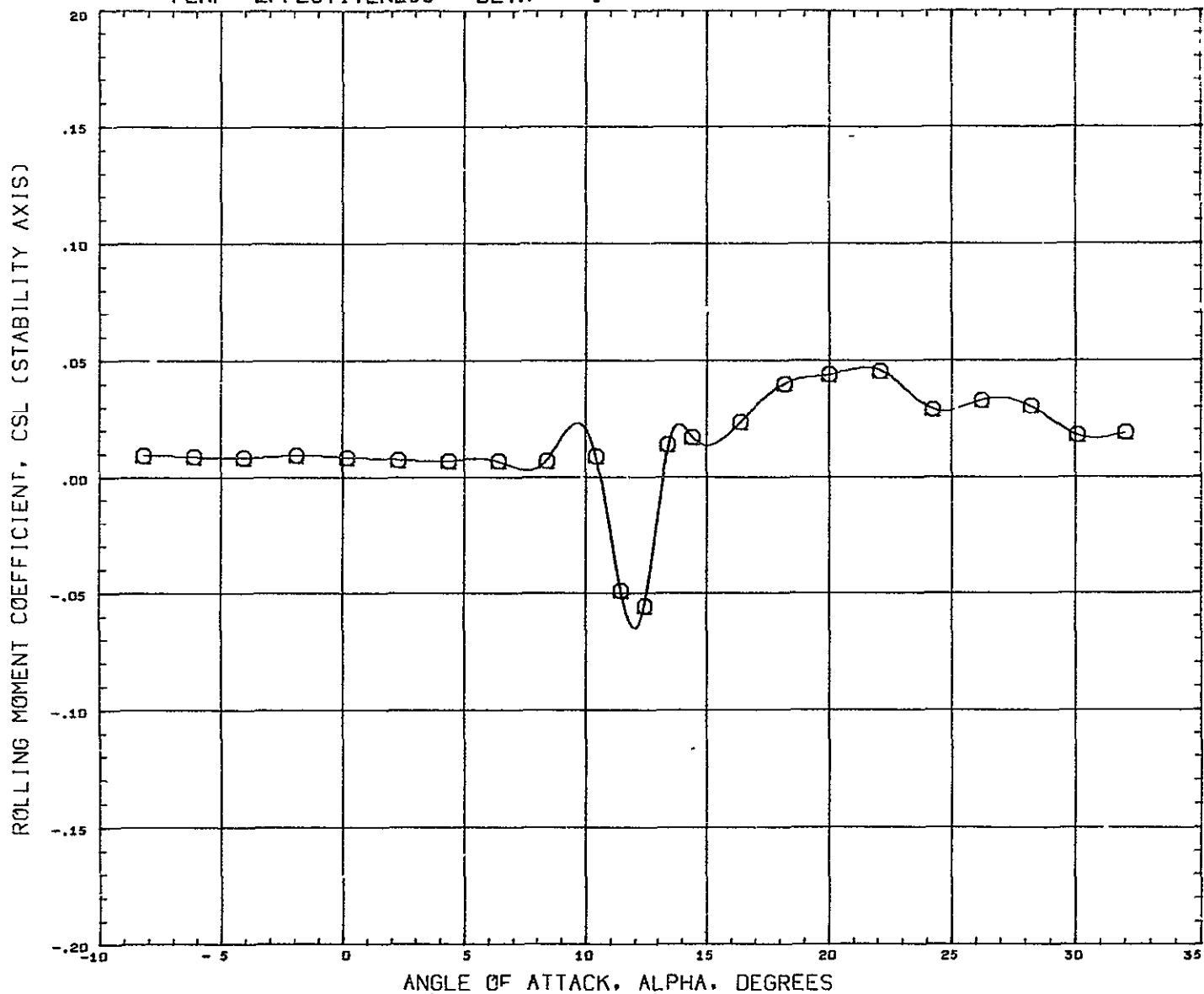


|        |       |                   |         |        |        |
|--------|-------|-------------------|---------|--------|--------|
| SYMBOL | MACH  | PARAMETRIC VALUES |         |        |        |
| ○      | 0.154 | BETA              | - 4.000 | AILRON | 0.000  |
|        |       | HTAIL             | 0.000   | ELEVTR | 0.000  |
|        |       | RUDDER            | 0.000   | FLAP   | 40.000 |

| REFERENCE INFORMATION |         |         |
|-----------------------|---------|---------|
| REFS                  | 4.4200  | SQ.FT.  |
| REFL                  | 10.1000 | INCHES  |
| REFB                  | 66.6000 | INCHES  |
| XMRP                  | 55.6360 | INCHES  |
| YMRP                  | 0.0000  | INCHES  |
| ZMRP                  | 5.8600  | INCHES  |
| SCALE                 | 2.9920  | PERCENT |

DATA HIST. CODE Y

# FLAP EFFECTIVENESS BETA = -4

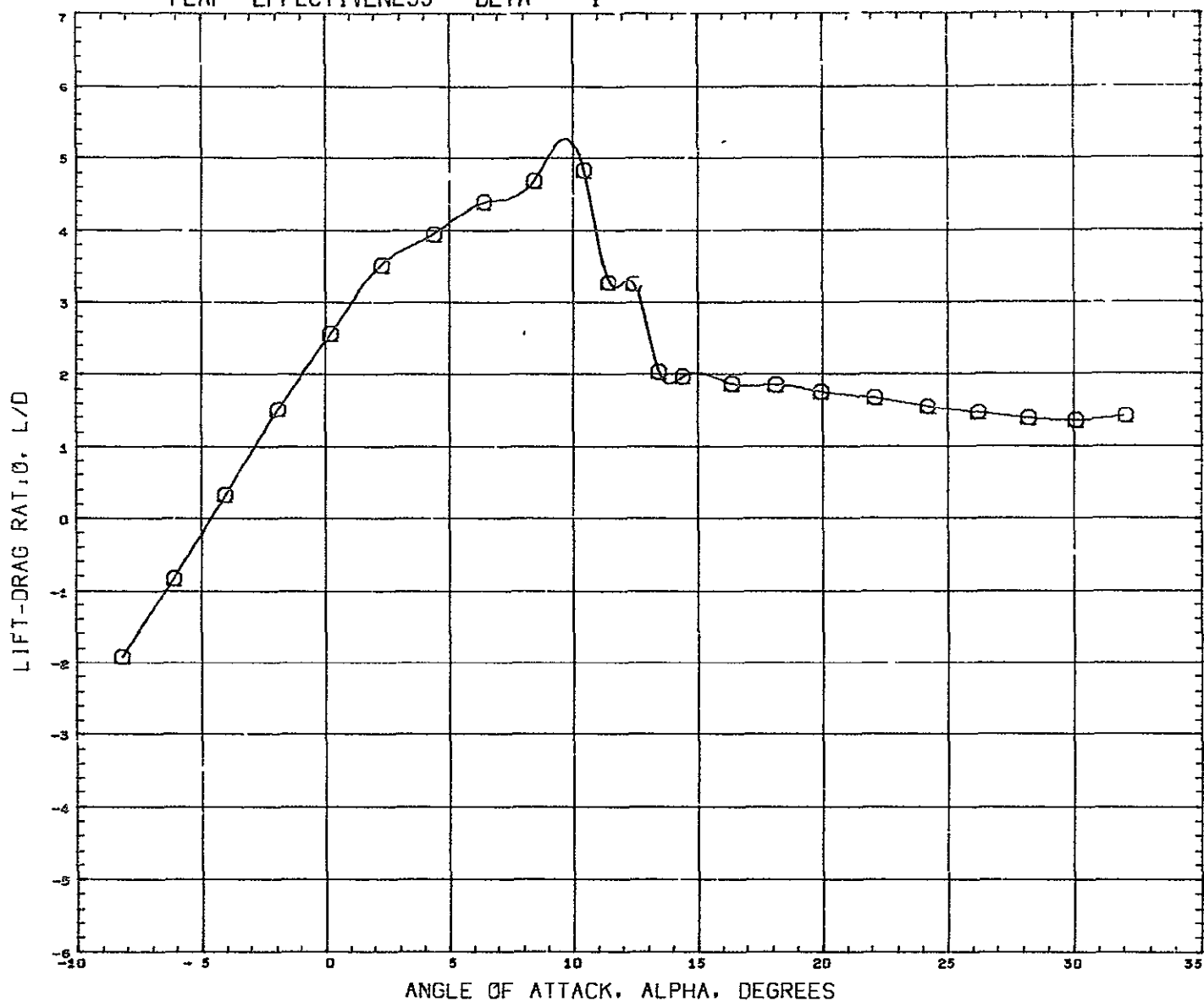


|        |       |                   |         |        |        |
|--------|-------|-------------------|---------|--------|--------|
| SYMBOL | HACH  | PARAMETRIC VALUES |         |        |        |
| ○      | 0.154 | BETA              | - 4.000 | WILSON | 0.000  |
|        |       | HTAIL             | 0.000   | ELEVTR | 0.000  |
|        |       | RUDDER            | 0.000   | FLAP   | 40.000 |

|                       |         |         |
|-----------------------|---------|---------|
| REFERENCE INFORMATION |         |         |
| REFS                  | 4.4200  | SQ.FT.  |
| REFL                  | 10.1000 | INCHES  |
| REFB                  | 66.6000 | INCHES  |
| XMRP                  | 55.6360 | INCHES  |
| YMRP                  | 0.0000  | INCHES  |
| ZMRP                  | 5.8600  | INCHES  |
| SCALE                 | 2.9920  | PERCENT |

DATA HIST. CODE V

# FLAP EFFECTIVENESS BETA = -4



| SYMBOL |  | MACH  |  | PARAMETRIC VALUES |         |        |        | REFERENCE INFORMATION |         |         |
|--------|--|-------|--|-------------------|---------|--------|--------|-----------------------|---------|---------|
| O      |  | 0.154 |  | BETA              | - 4.000 | AILRON | 0.000  | REFS                  | 4 4200  | SQ.FT.  |
|        |  |       |  | HTAIL             | 0.000   | ELEVTR | 0.000  | REFL                  | 10 1000 | INCHES  |
|        |  |       |  | RUDDER            | 0.000   | FLAP   | 45.000 | REFB                  | 66.6000 | INCHES  |
|        |  |       |  |                   |         |        |        | XMRP                  | 55.6360 | INCHES  |
|        |  |       |  |                   |         |        |        | YMRP                  | 0.0000  | INCHES  |
|        |  |       |  |                   |         |        |        | ZMRP                  | 5.8600  | INCHES  |
|        |  |       |  |                   |         |        |        | SCALE                 | 2.9920  | PERCENT |

DATA HIST. CODE V

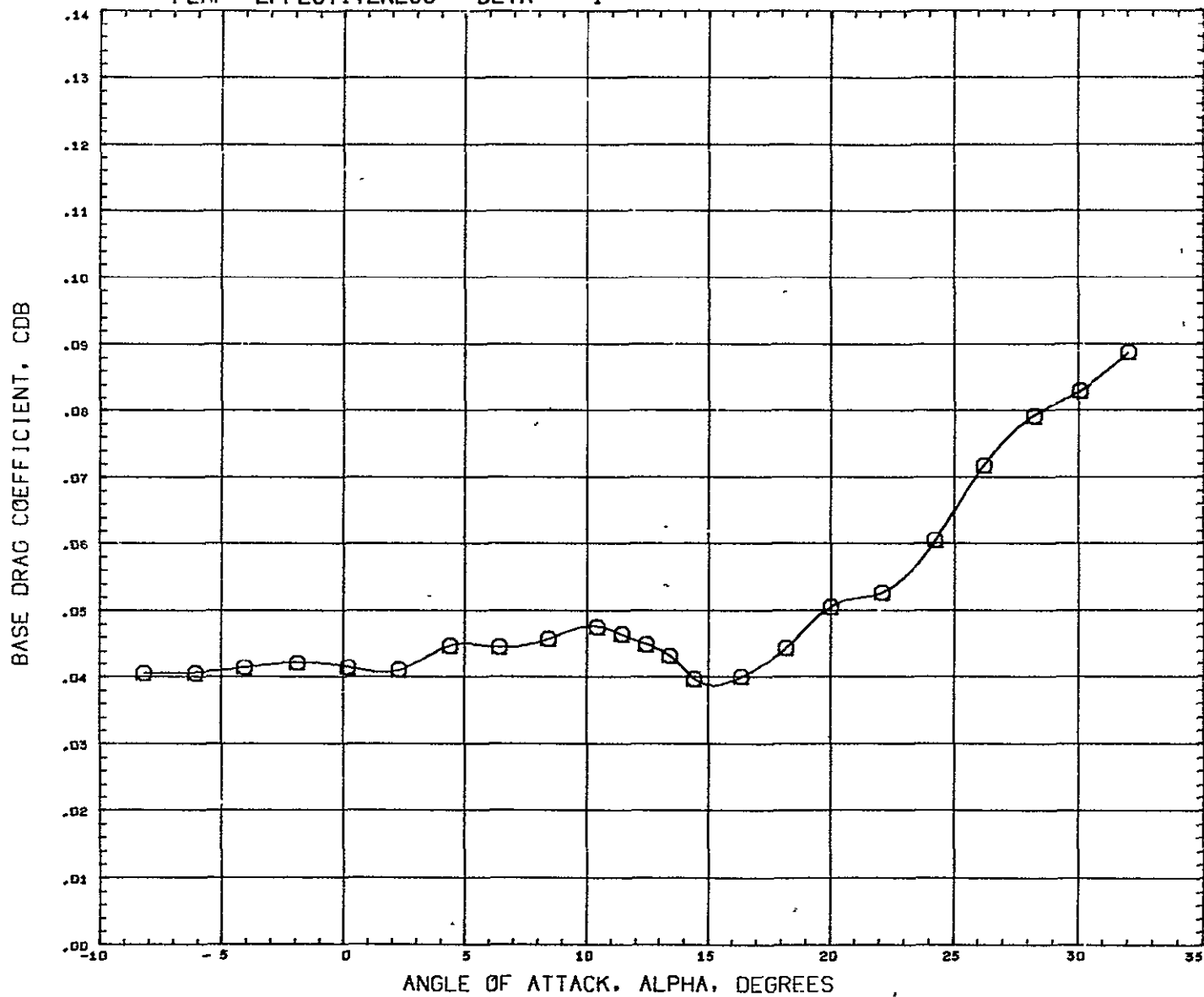
UWAL-1021 BAC C-6 BOOSTER

B1W1H1V1N1F140

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# FLAP EFFECTIVENESS BETA = -4

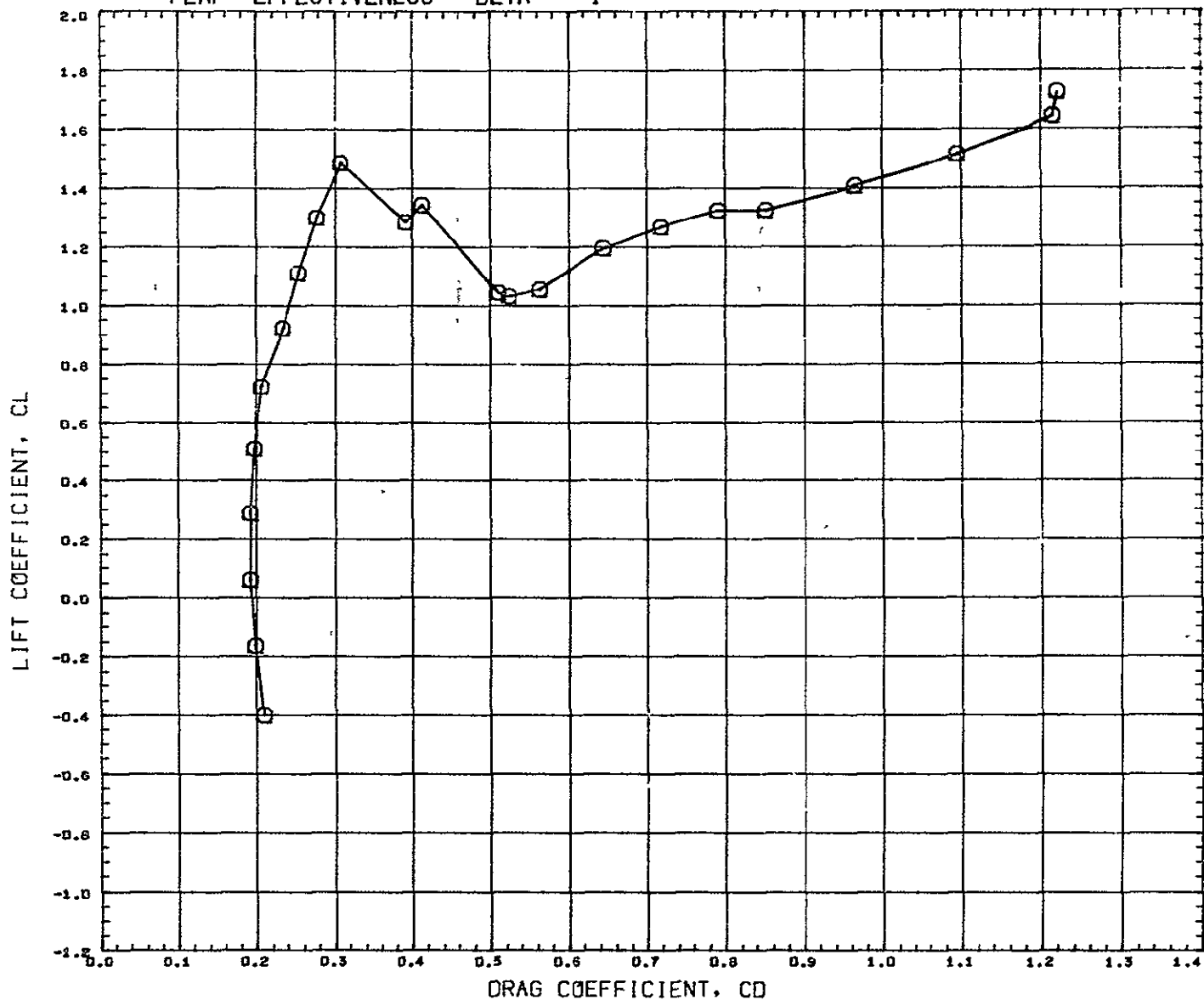


|        |       |                   |         |        |        |
|--------|-------|-------------------|---------|--------|--------|
| SYMBOL | MACH  | PARAMETRIC VALUES |         |        |        |
| ○      | 0.154 | BETA              | - 4.000 | AILRON | 0.000  |
|        |       | HTAIL             | 0.000   | ELEVTR | 0.000  |
|        |       | RUDDER            | 0.000   | FLAP   | 40.000 |

| REFERENCE INFORMATION |         |        |
|-----------------------|---------|--------|
| REFS                  | 4.4200  | SQ.FT. |
| REFL                  | 10.1000 | INCHES |
| REFB                  | 66.6000 | INCHES |
| XMRP                  | 55.6360 | INCHES |
| YMRP                  | 0.0000  | INCHES |
| ZMRP                  | 5.8600  | INCHES |
| SCALE                 | 2 9920  | PERCNT |

DATA HIST. CODE V

# FLAP EFFECTIVENESS BETA = -4



|        |       |                   |        |        |        |
|--------|-------|-------------------|--------|--------|--------|
| SYMBOL | MACH  | PARAMETRIC VALUES |        |        |        |
| ○      | 0.154 | BETA              | -4.000 | AILRON | 0.000  |
|        |       | HTAIL             | 0.000  | ELEVTR | 0.000  |
|        |       | RUDDER            | 0.000  | FLAP   | 40.000 |

|                       |         |         |
|-----------------------|---------|---------|
| REFERENCE INFORMATION |         |         |
| REFS                  | 4.4200  | sq.ft.  |
| REFL                  | 10.1000 | INCHES  |
| REFB                  | 66.6000 | INCHES  |
| XMRP                  | 55.6360 | INCHES  |
| YMRP                  | 0.0000  | INCHES  |
| ZMRP                  | 5.8600  | INCHES  |
| SCALE                 | 2.9920  | PERCENT |

DATA HIST. CODE

UWAL-1021 BAC C-6 BOOSTER

B1W1H1V1N1F140

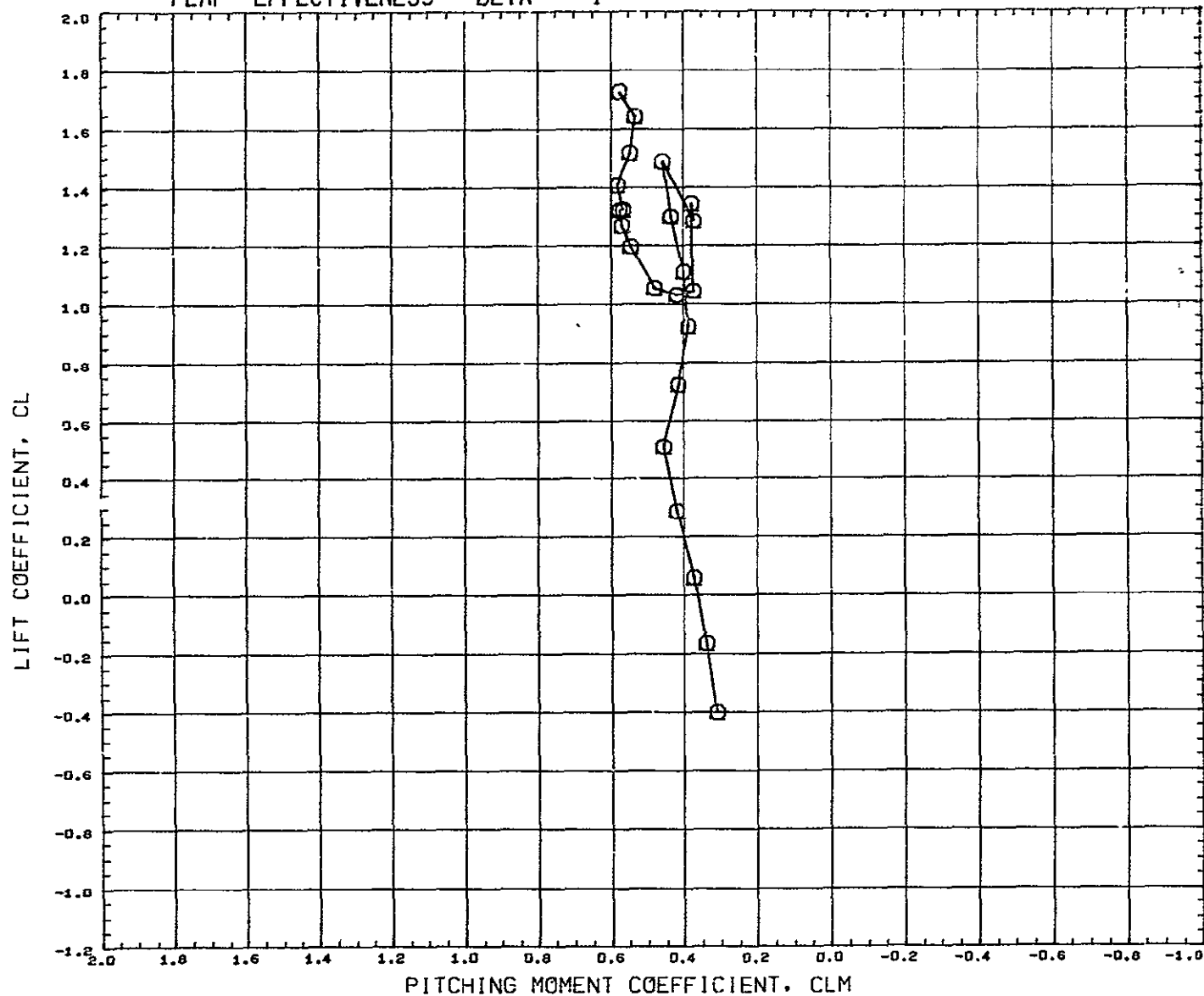
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# FLAP EFFECTIVENESS BETA = -4

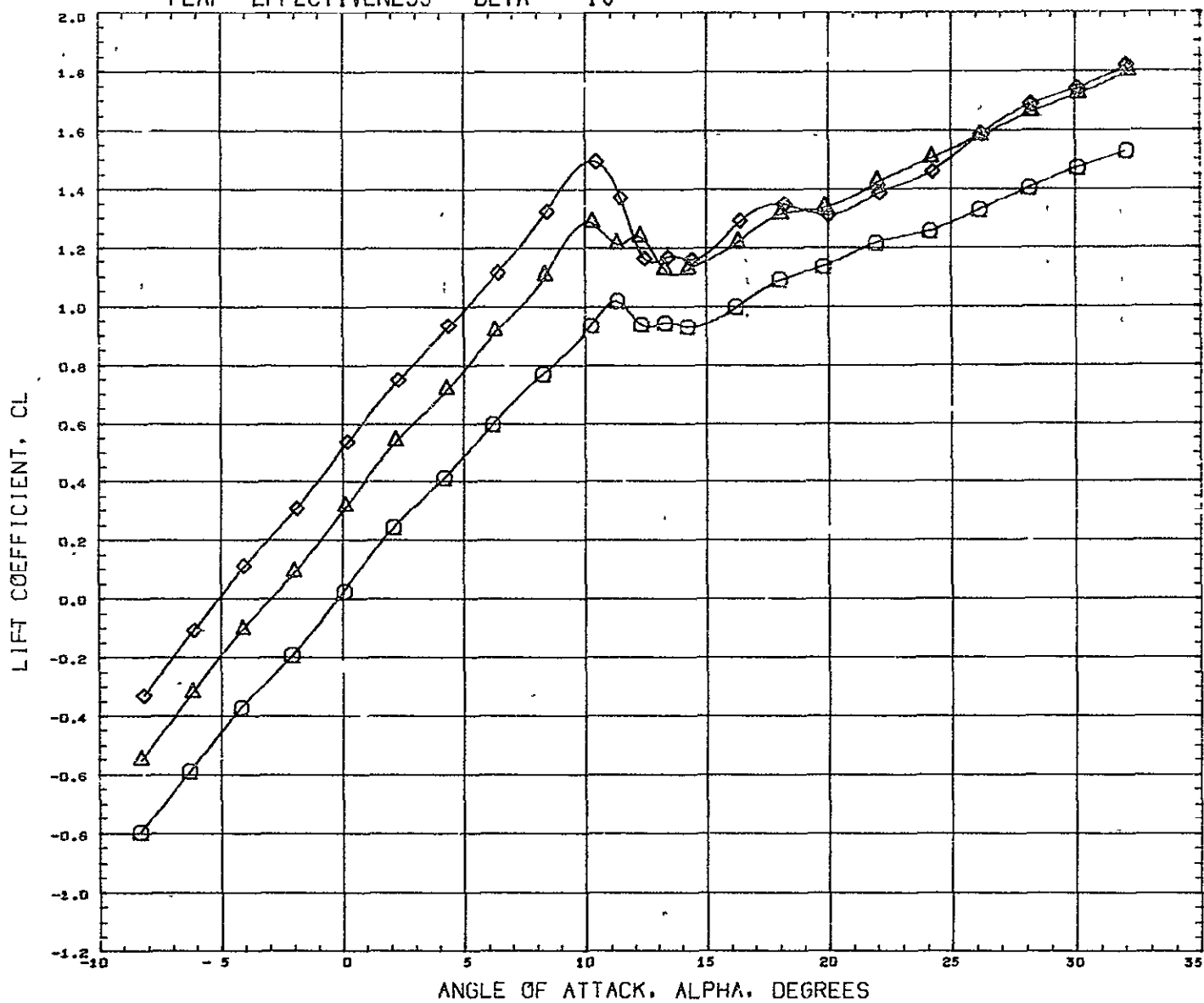


|        |       |                   |         |        |        |
|--------|-------|-------------------|---------|--------|--------|
| SYMBOL | MACH  | PARAMETRIC VALUES |         |        |        |
| ○      | 0.154 | BETA              | - 4.000 | AILRON | 0.000  |
|        |       | HTAIL             | 0.000   | ELEVTR | 0.000  |
|        |       | RUDDER            | 0.000   | FLAP   | 40.500 |

|                       |         |         |
|-----------------------|---------|---------|
| REFERENCE INFORMATION |         |         |
| REFS                  | 4.4200  | SQ.FT.  |
| REFL                  | 10.1050 | INCHES  |
| REFB                  | 66.6000 | INCHES  |
| XMRP                  | 55.6360 | INCHES  |
| YMRP                  | 0.0000  | INCHES  |
| ZMRP                  | 5.8600  | INCHES  |
| SCALE                 | 2.9920  | PERCENT |

DATA HIST. CODE V

# FLAP EFFECTIVENESS BETA = -10



DATA SET SYMBOL : CONFIGURATION DESCRIPTION

(AU1093) UVAL-1021 BAC C-6 BOOSTER B1W1H1V1N1

(AU1104) UVAL-1021 BAC C-6 BOOSTER B1W1H1V1N1F115

(AU1144) UVAL-1021 BAC C-6 BOOSTER B1W1H1V1N1F140

FLAP BETA

0.000 -10.000

15.000 -10.000

40.000 -10.000

REFERENCE INFORMATION

REFS 4.4203 SQ.FT.

REFL 10.1000 INCHES

REFB 66.6000 INCHES

XMRP 55.6360 INCHES

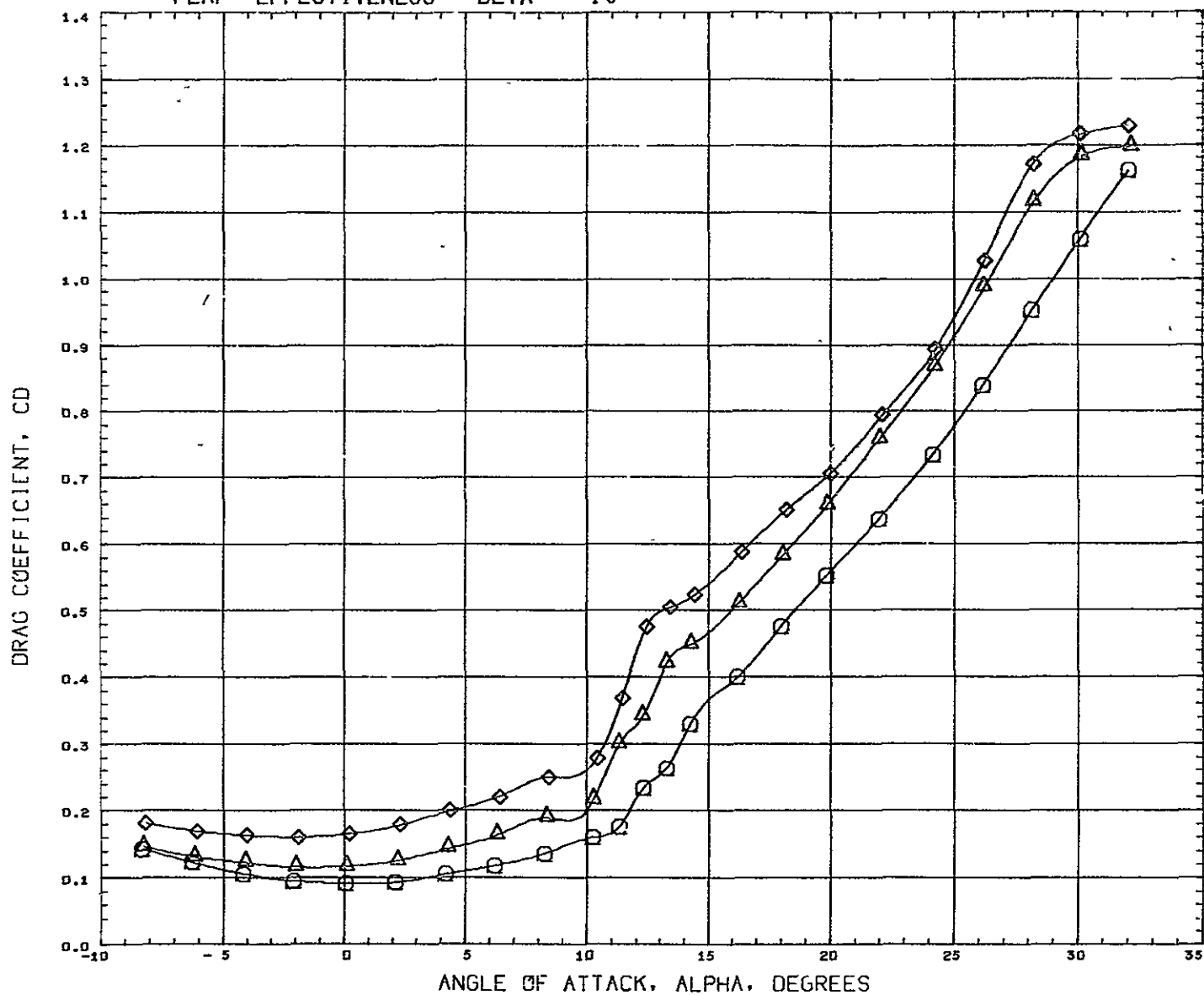
YMRP 0.0000 INCHES

ZMRP 5.8600 INCHES

SCALE 2.9920 PERCENT

MACH 0.154

# FLAP EFFECTIVENESS BETA = -10



| DATA SET SYMBOL | CONFIGURATION DESCRIPTION |
|-----------------|---------------------------|
| (AU1093)        | UWAL-1021 BAC C-6 BOOSTER |
| (AU1104)        | UWAL-1021 BAC C-6 BOOSTER |
| (AU1144)        | UWAL-1021 SAC C-6 BOOSTER |

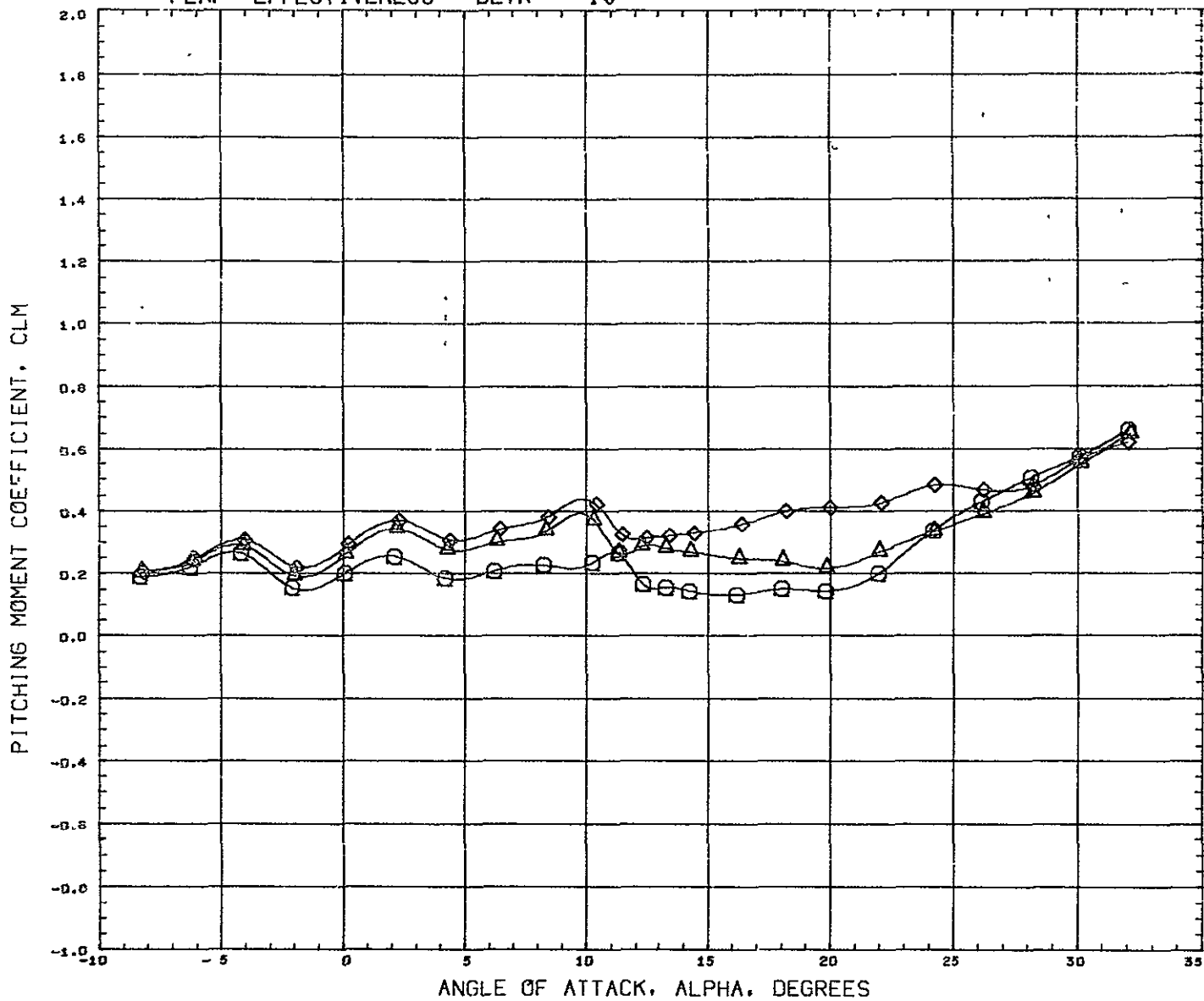
ANGLE OF ATTACK, ALPHA, DEGREES

| FLAP   | BETA    |
|--------|---------|
| 0.000  | -10.000 |
| 15.000 | -10.000 |
| 40.000 | -10.000 |

| REFERENCE INFORMATION |         |         |
|-----------------------|---------|---------|
| REFS                  | 4 4200  | SQ.FT   |
| REFL                  | 10.1000 | INCHES  |
| REFB                  | 66.6300 | INCHES  |
| XMRP                  | 55.6360 | INCHES  |
| YMRP                  | 0.0000  | INCHES  |
| ZMRP                  | 5.8600  | INCHES  |
| SCALE                 | 2.9920  | PERCENT |

HACH C D.154

# FLAP EFFECTIVENESS BETA = -10

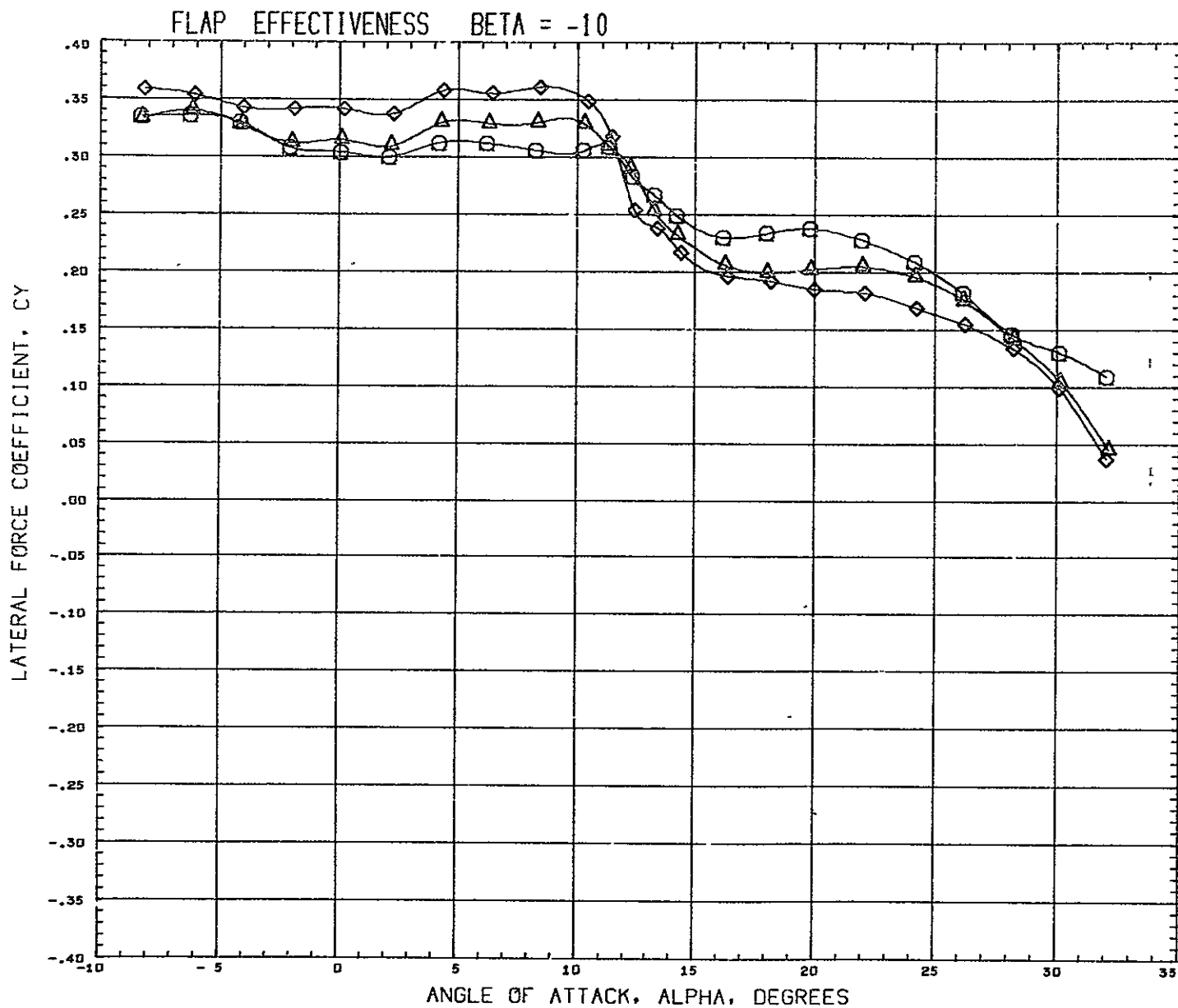


| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION |
|----------|--------|---------------------------|
| (AU1093) | ○      | UWAL-1021 BAC C-6 BOOSTER |
| (AU1104) | △      | UWAL-1021 BAC C-6 BOOSTER |
| (AU1144) | ◇      | UWAL-1021 BAC C-6 BOOSTER |

| FLAP   | BETA    |
|--------|---------|
| 0.000  | -10.000 |
| 15.000 | -10.000 |
| 40.000 | -10.000 |

| REFERENCE INFORMATION |         |         |
|-----------------------|---------|---------|
| REFS                  | 4.4209  | SQ.FT.  |
| REFL                  | 10.1000 | INCHES  |
| REFB                  | 66.6000 | INCHES  |
| XMRP                  | 55.6360 | INCHES  |
| YMRP                  | 0.0000  | INCHES  |
| ZMRP                  | 5.8600  | INCHES  |
| SCALE                 | 2.9920  | PERCENT |

MACH 0.154



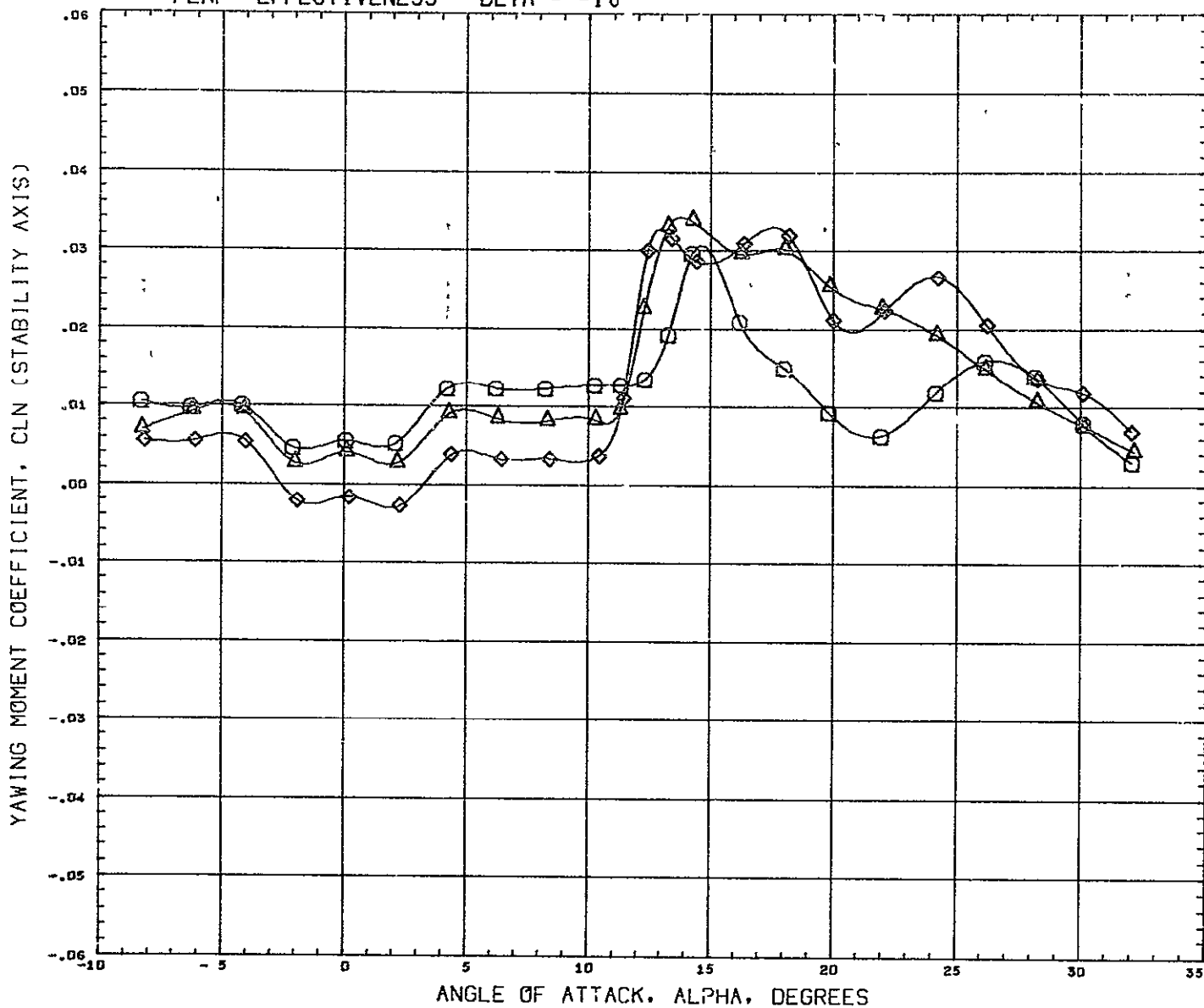
| DATA SET SYMBOL | CONFIGURATION DESCRIPTION |
|-----------------|---------------------------|
| (AU1093)        | UWAL-1021 BAC C-6 BOOSTER |
| (AU1104)        | UWAL-1021 BAC C-6 BOOSTER |
| (AU1144)        | UWAL-1021 BAC C-6 BOOSTER |

| FLAP   | BETA    |
|--------|---------|
| 0.000  | -10.000 |
| 15.000 | -10.000 |
| 40.000 | -10.000 |

| REFERENCE INFORMATION |         |         |
|-----------------------|---------|---------|
| REFS                  | 4.4206  | SQ.FT.  |
| REFL                  | 10.1000 | INCHES  |
| REFB                  | 66.6000 | INCHES  |
| XMRP                  | 55.6360 | INCHES  |
| YMRP                  | 0.0000  | INCHES  |
| ZMRP                  | 5.8600  | INCHES  |
| SCALE                 | 2.9920  | PERCENT |

MACH    0.154

# FLAP EFFECTIVENESS BETA = -10



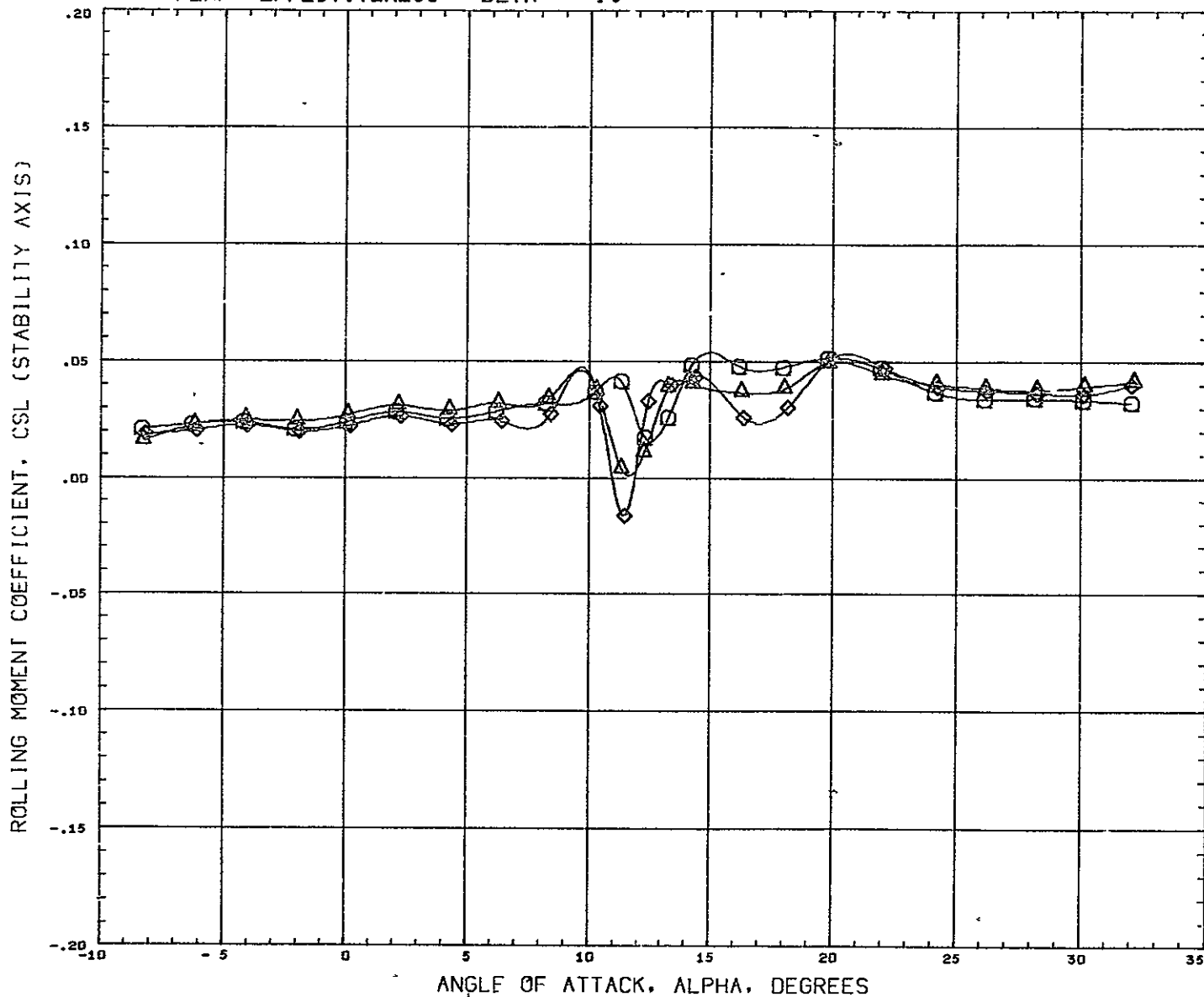
DATA SET SYMBOL CONFIGURATION DESCRIPTION  
 (AUI093)  $\square$  UWAL-1021 BAC C-6 BOOSTER B1W1H1V1N1  
 (AUI104)  $\triangle$  UWAL-1021 BAC C-6 BOOSTER B1W1H1V1N1F115  
 (AUI144)  $\diamond$  UWAL-1021 BAC C-6 BOOSTER B1W1H1V1N1F140

FLAP BETA  
 0.000 -10.000  
 15.000 -10.000  
 40.000 -10.000

REFERENCE INFORMATION  
 REFS 4.4209 SQ.FT.  
 REFL 10 1000 INCHES  
 REFB 66.0000 INCHES  
 XMRP 55 6360 INCHES  
 YMRP 0.0000 INCHES  
 ZMRP 5.8600 INCHES  
 SCALE 2 9920 PERCENT

MACH 0.154

# FLAP EFFECTIVENESS BETA = -10



| DATA SET SYMBOL | CONFIGURATION DESCRIPTION |
|-----------------|---------------------------|
| (AU1093)        | UWAL-1021 BAC C-6 BOOSTER |
| (AU1104)        | UWAL-1021 BAC C-6 BOOSTER |
| (AU1144)        | UWAL-1021 BAC C-6 BOOSTER |

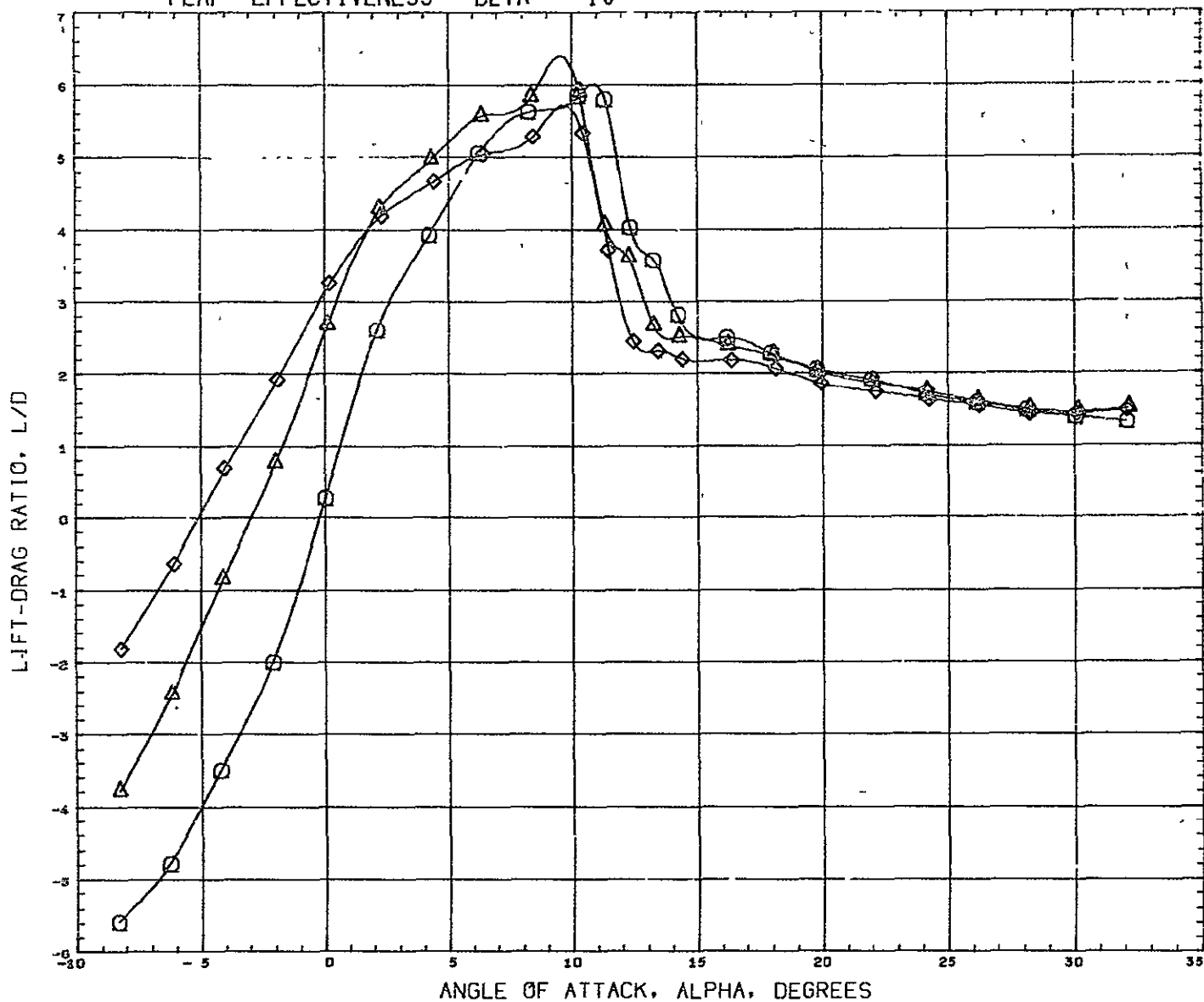
ANGLE OF ATTACK, ALPHA, DEGREES

| FLAP   | BETA    |
|--------|---------|
| 0.000  | -10.000 |
| 15.000 | -10.000 |
| 40.000 | -10.000 |

| REFERENCE INFORMATION |         |         |
|-----------------------|---------|---------|
| REFS                  | 4.4200  | SQ.FT.  |
| REFL                  | 10.1060 | INCHES  |
| REFB                  | 66.6700 | INCHES  |
| XMRP                  | 55.6360 | INCHES  |
| YMRP                  | 0.0000  | INCHES  |
| ZMRP                  | 5.8600  | INCHES  |
| SCALE                 | 2.9920  | PERCENT |

MACH 0.154

# FLAP EFFECTIVENESS BETA = -10



DATA SET SYMBOL CONFIGURATION DESCRIPTION

(AU1093) UAL-1021 BAC C-6 BOOSTER

(AU1104) UAL-1021 BAC C-6 BOOSTER

(AU1144) UAL-1021 BAC C-6 BOOSTER

FLAP BETA

0.000 -10.000

15.000 -10.000

40.000 -10.000

REFERENCE INFORMATION

REFS 4.4200 SQ.FT.

REFL 10.1000 INCHES

REFB 66.6000 INCHES

XMRP 55.6360 INCHES

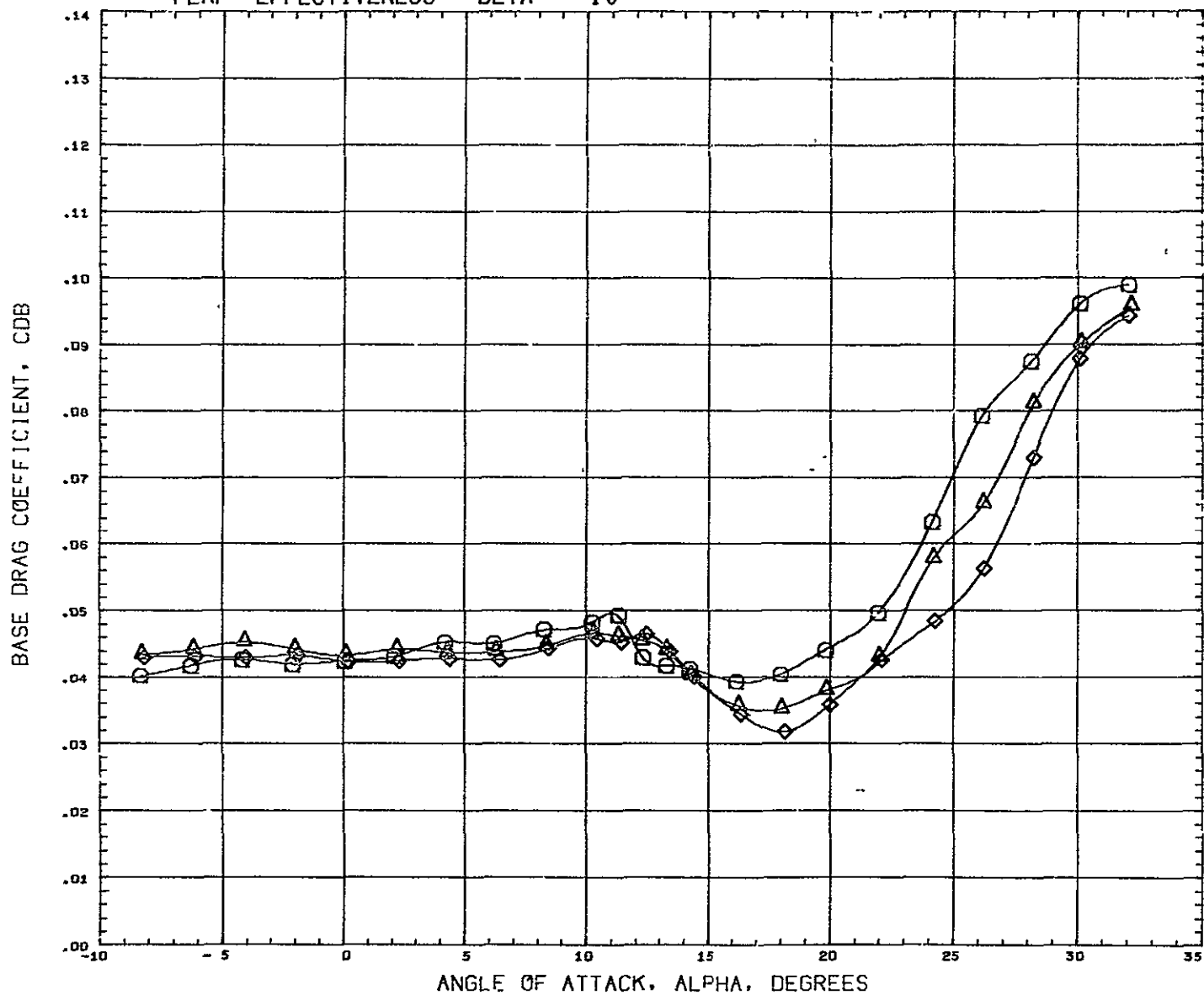
YMRP 0.0000 INCHES

ZMRP 5.8600 INCHES

SCALE 2.9920 PERCENT

MACH 0.154

# FLAP EFFECTIVENESS BETA = -10



| DATA SET SYMBOL | CONFIGURATION DESCRIPTION |
|-----------------|---------------------------|
| (AU1093)        | UVAL-1021 BAC C-6 BOOSTER |
| (AU1104)        | UVAL-1021 BAC C-6 BOOSTER |
| (AU1144)        | UVAL-1021 BAC C-6 BOOSTER |

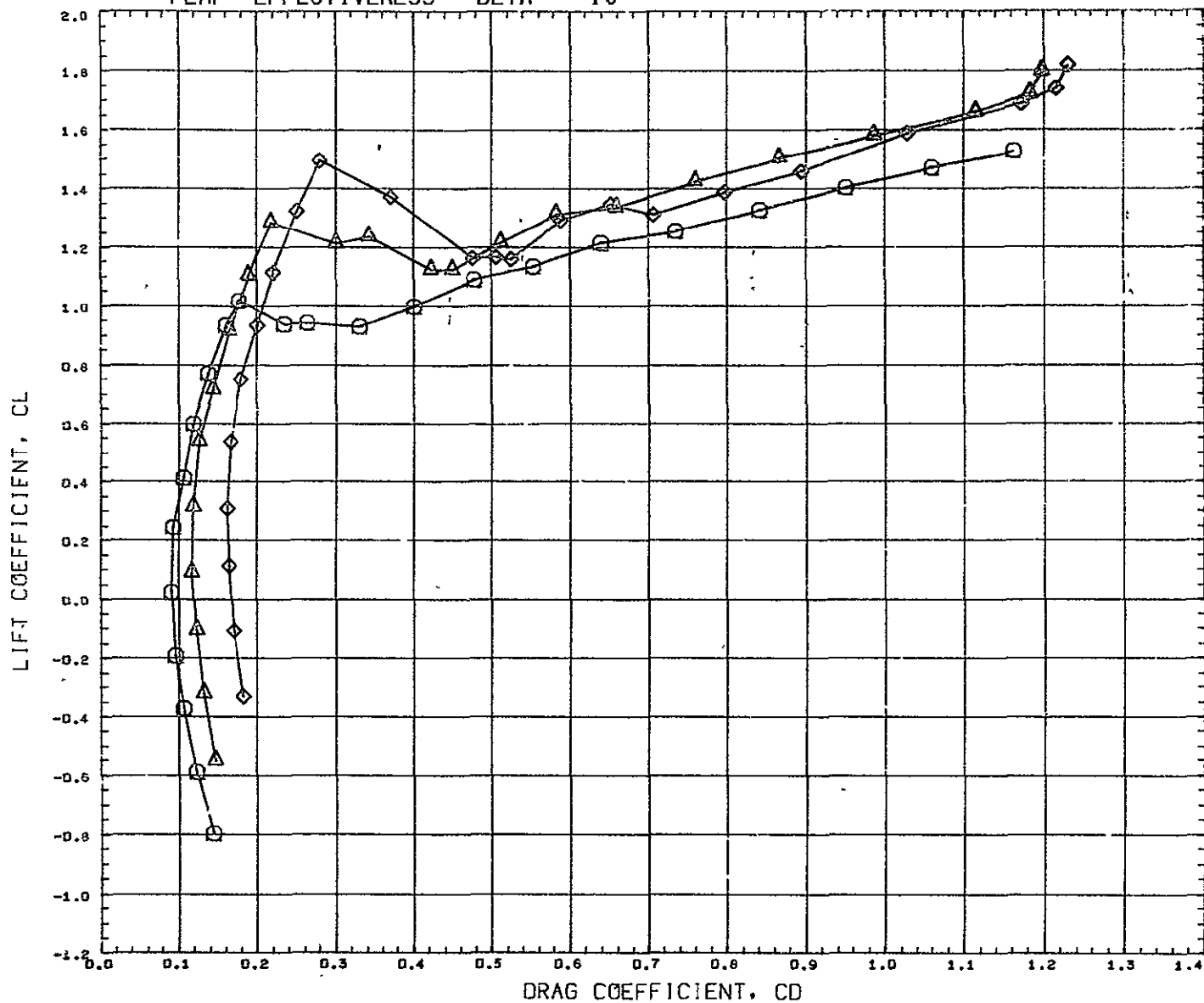
ANGLE OF ATTACK, ALPHA, DEGREES

| FLAP   | BETA    |
|--------|---------|
| 0.000  | -10.000 |
| 15.000 | -10.000 |
| 40.000 | -10.000 |

| REFERENCE INFORMATION |         |         |
|-----------------------|---------|---------|
| REFS                  | 4.4201  | SQ.FT.  |
| REFL                  | 14.1000 | INCHES  |
| REFB                  | 66.6000 | INCHES  |
| XMRP                  | 55.6360 | INCHES  |
| YMRP                  | 0.0000  | INCHES  |
| ZMRP                  | 5.8600  | INCHES  |
| SCALE                 | 2.9920  | PERCENT |

MACH 0.154

# FLAP EFFECTIVENESS BETA = -10



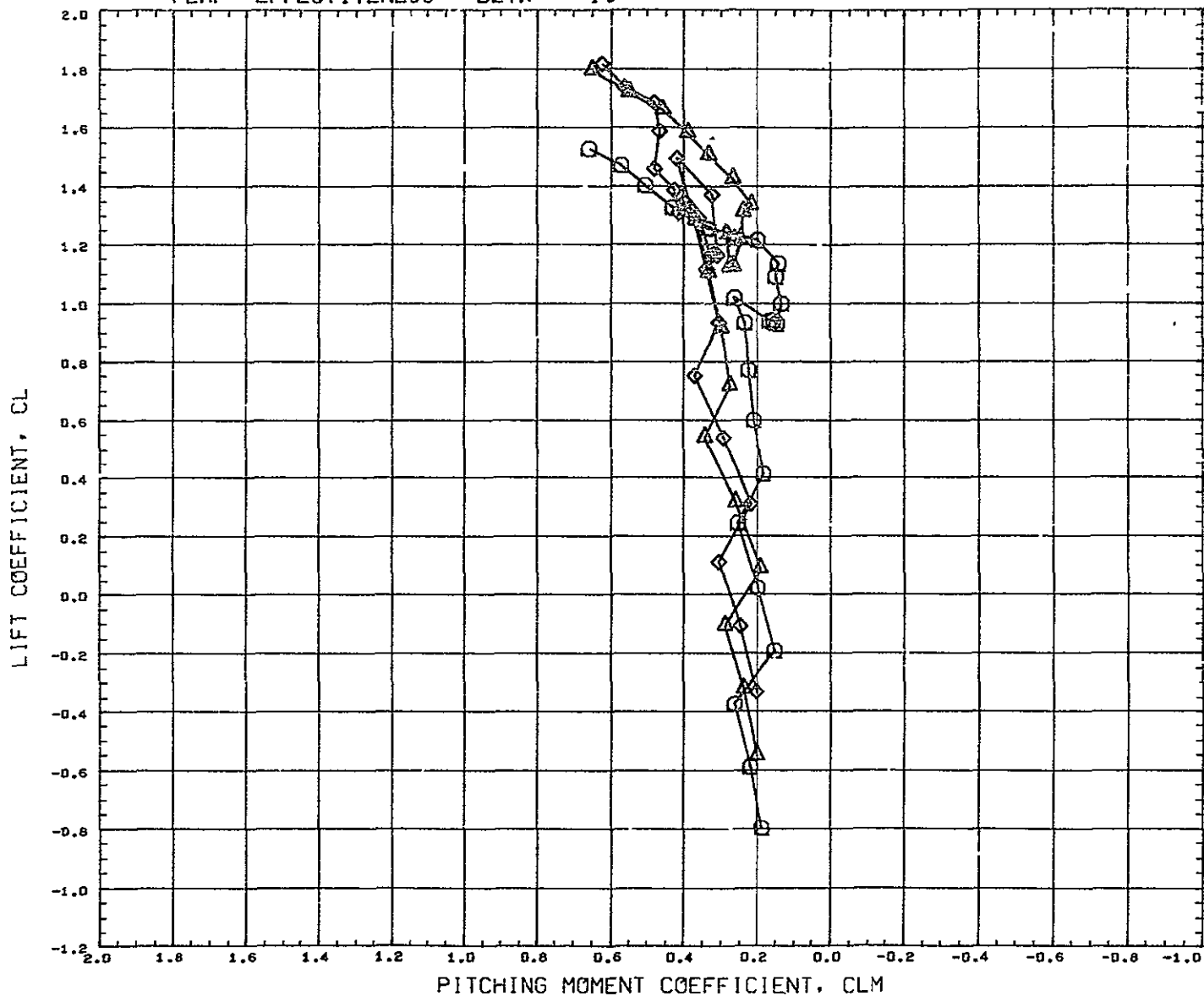
| DATA SET SYMBOL | CONFIGURATION DESCRIPTION |
|-----------------|---------------------------|
| (AU1093)        | UWAL-1021 BAC C-6 BOOSTER |
| (AU1104)        | UWAL-1021 BAC C-6 BOOSTER |
| (AU1144)        | UWAL-1021 BAC C-6 BOOSTER |

| FLAP   | BETA    |
|--------|---------|
| 0.000  | -10.000 |
| 15.000 | -10.000 |
| 40.000 | -10.000 |

| REFERENCE INFORMATION |         |         |
|-----------------------|---------|---------|
| REFS                  | 4.4200  | 90.FT.  |
| REFL                  | 10.1000 | INCHES  |
| REFB                  | 66.6000 | INCHES  |
| XMRP                  | 55.6360 | INCHES  |
| YMRP                  | 0.0000  | INCHES  |
| ZMRP                  | 5.8600  | INCHES  |
| SCALE                 | 2.9920  | PERCENT |

MACH 0.154

# FLAP EFFECTIVENESS BETA = -10



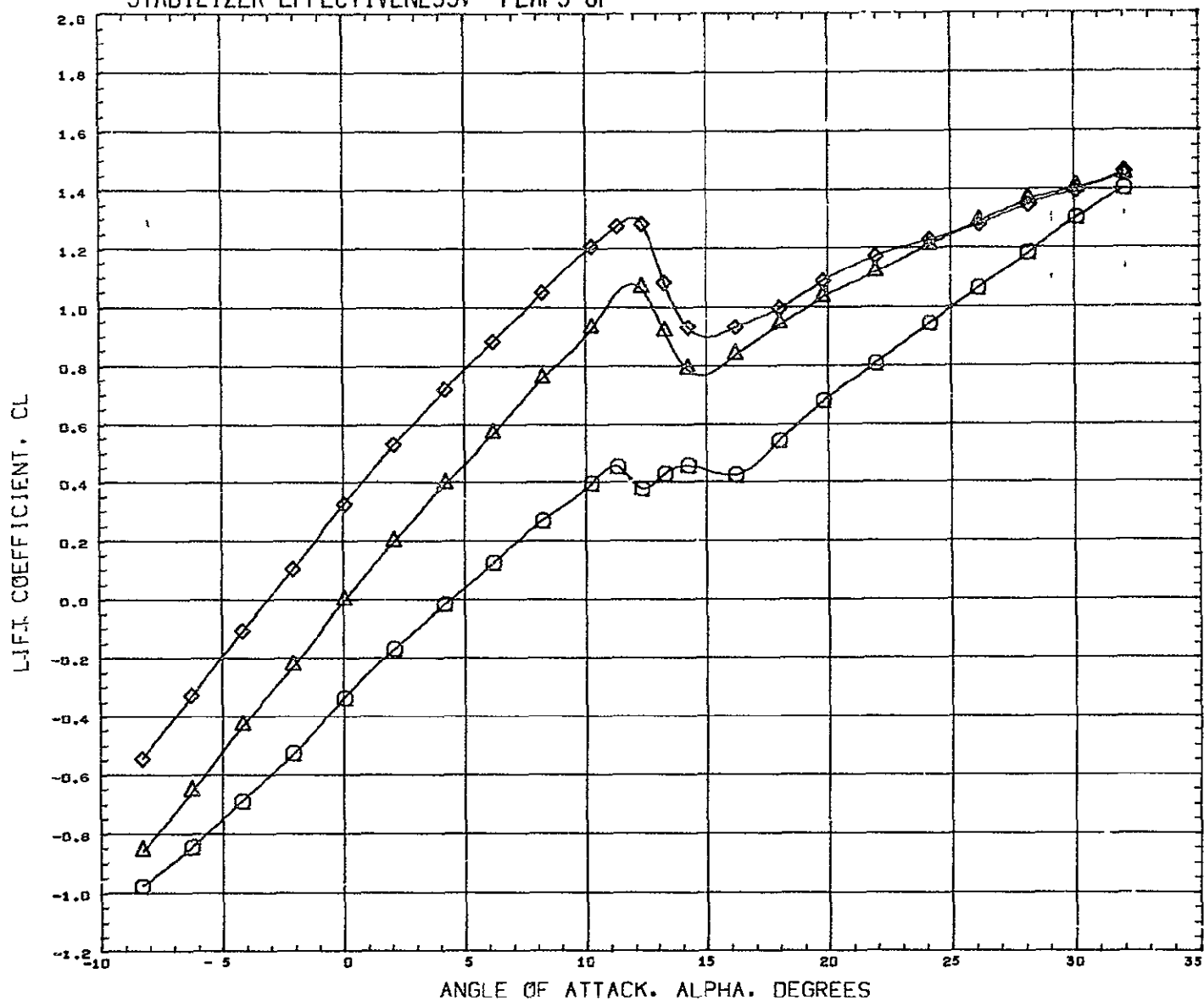
| DATA SET SYMBOL | CONFIGURATION DESCRIPTION |
|-----------------|---------------------------|
| (AU1093)        | UWAL-1021 BAC C-6 BOOSTER |
| (AU1104)        | UWAL-1021 BAC C-6 BOOSTER |
| (AU1144)        | UWAL-1021 BAC C-6 BOOSTER |

| FLAP   | BETA    |
|--------|---------|
| 0.000  | -10.000 |
| 15.000 | -10.000 |
| 40.000 | -10.000 |

| REFERENCE INFORMATION |
|-----------------------|
| REFS 4.4200 SQ.FT.    |
| REFL 10.1000 INCHES   |
| REFB 66.6000 INCHES   |
| XMRP 55.6360 INCHES   |
| YMRP 0.0000 INCHES    |
| ZMRP 5.8600 INCHES    |
| SCALE 2.9920 PERCENT  |

NACH 0.154

# STABILIZER EFFECTIVENESS, FLAPS UP



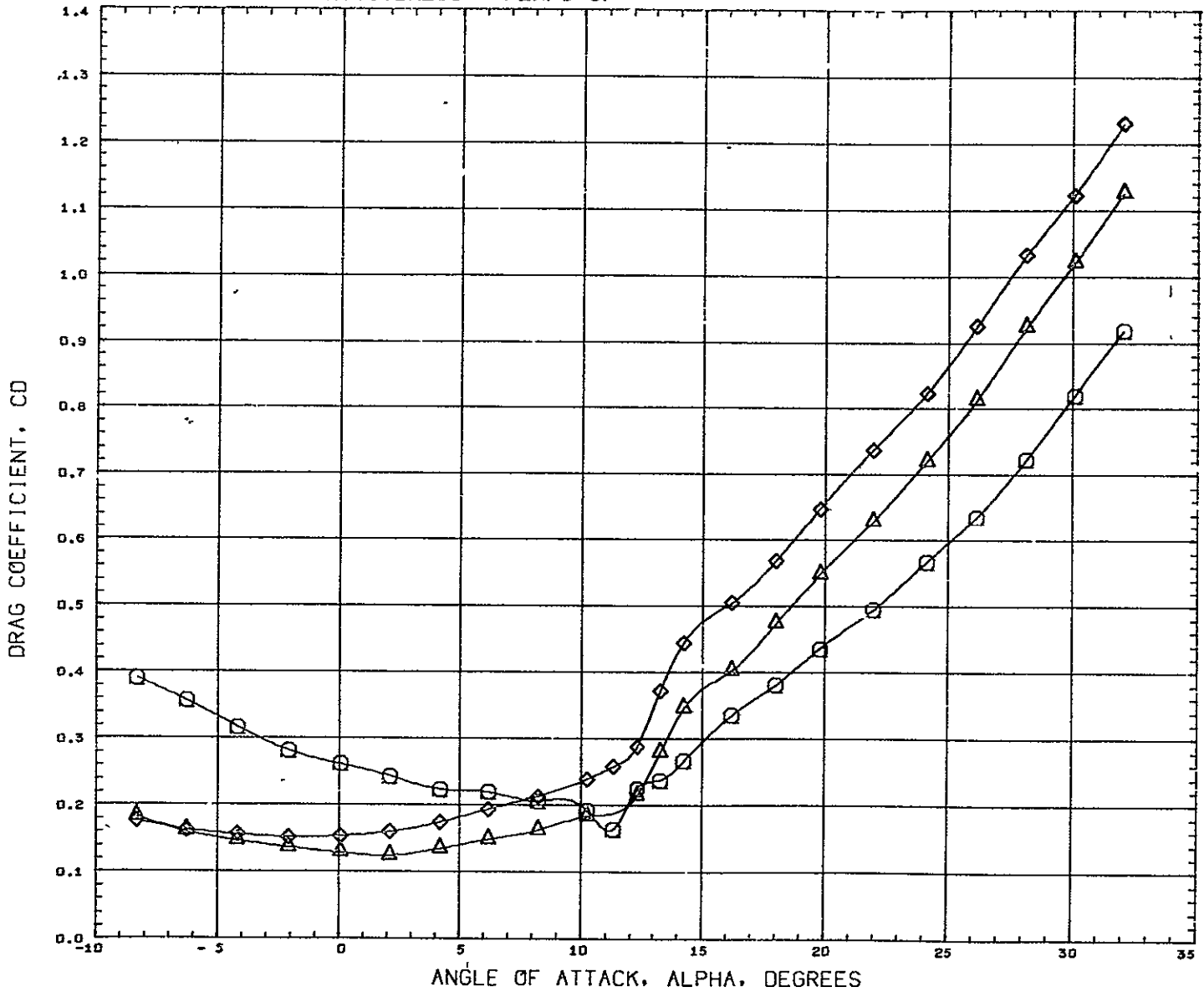
| DATA SET SYMBOL | CONFIGURATION DESCRIPTION |
|-----------------|---------------------------|
| (AU1101)        | UWAL-1021 BAC C-6 BOOSTER |
| (AU1091)        | UWAL-1021 BAC C-6 BOOSTER |
| (AU1201)        | UWAL-1021 BAC C-6 BOOSTER |

| HTAIL   | BETA  |
|---------|-------|
| -20.000 | 0.000 |
| 0.000   | 0.000 |
| 10.000  | 0.000 |

| REFERENCE INFORMATION |         |         |
|-----------------------|---------|---------|
| REFS                  | 4.4200  | SQ.FT.  |
| REFL                  | 10.1000 | INCHES  |
| REFB                  | 66.6000 | INCHES  |
| XMRP                  | 55.6360 | INCHES  |
| YMRP                  | 0.0000  | INCHES  |
| ZMRP                  | 5.8600  | INCHES  |
| SCALE                 | 2.9920  | PERCENT |

MACH 0.154

# STABILIZER EFFECTIVENESS, FLAPS UP



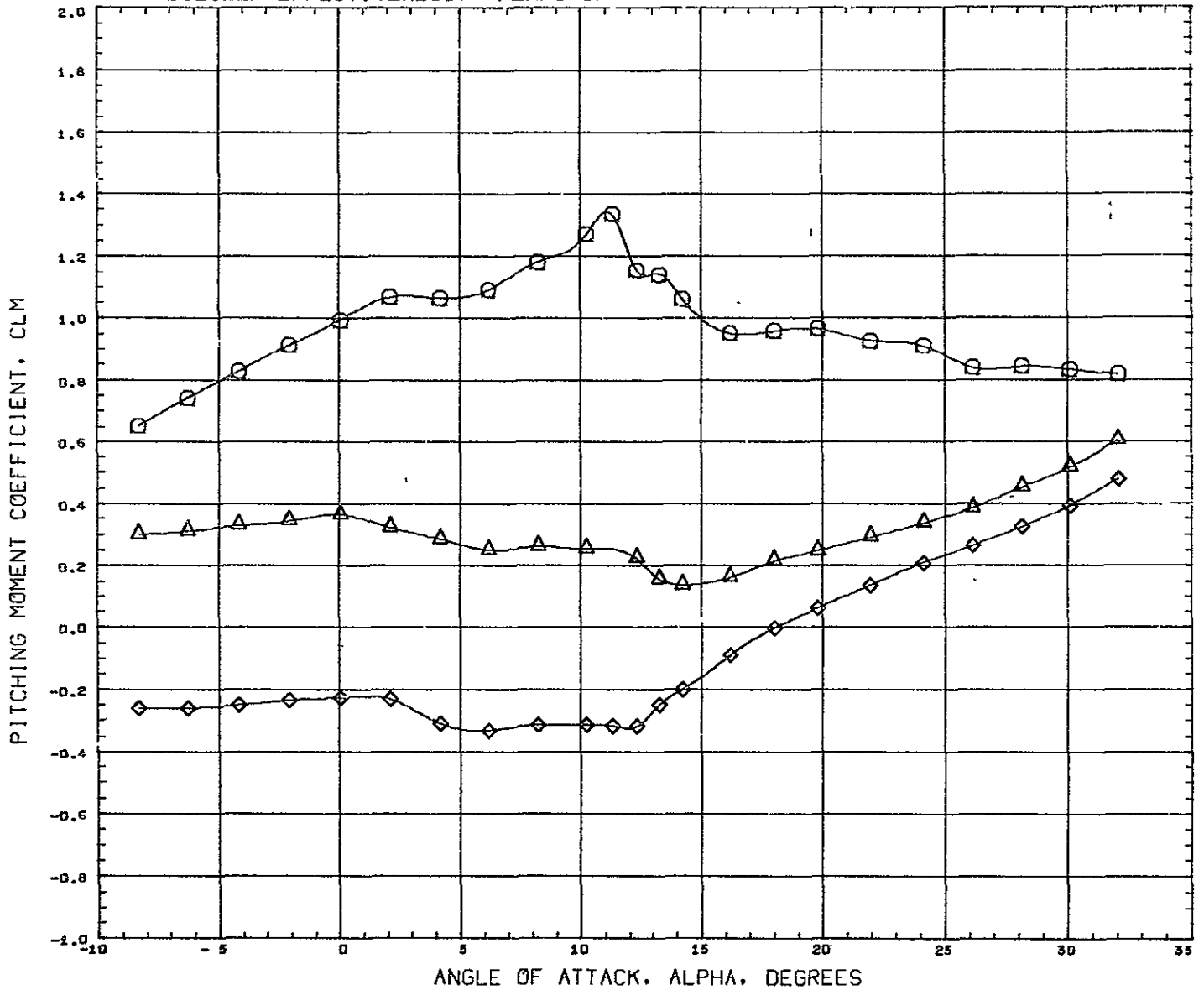
| DATA SET SYMBOL | CONFIGURATION DESCRIPTION |
|-----------------|---------------------------|
| (AU1181) ○      | UVAL-1021 BAC C-6 BOOSTER |
| (AU1091) △      | UVAL-1021 BAC C-6 BOOSTER |
| (AU1201) ◇      | UVAL-1021 BAC C-6 BOOSTER |

| HTAIL   | BETA  |
|---------|-------|
| -20.000 | 0.000 |
| 0.000   | 0.000 |
| 10.000  | 0.000 |

| REFERENCE INFORMATION |         |         |
|-----------------------|---------|---------|
| REFS                  | 4.4200  | SQ.FT   |
| REFL                  | 10.1000 | INCHES  |
| REFB                  | 66.6000 | INCHES  |
| XMRP                  | 55.6360 | INCHES  |
| YMRP                  | 0.0000  | INCHES  |
| ZMRP                  | 5.8600  | INCHES  |
| SCALE                 | 2.9920  | PERCENT |

MACH 0.154

# STABILIZER EFFECTIVENESS, FLAPS UP



DATA SET SYMBOL CONFIGURATION DESCRIPTION

(AU1181) UVAL-1021 BAC C-6 BOOSTER BIWIHIV1N1

(AU1091) UVAL-1021 BAC C-6 BOOSTER BIWIHIV1N1

(AU1201) UVAL-1021 BAC C-6 BOOSTER BIWIHIV1N1

HTAIL BETA

-20.000 0.000

0.000 0.000

10.000 0.000

REFERENCE INFORMATION

REFS 4.4200 SQ.FT.

REFL 10.1630 INCHES

REFB 66.6000 INCHES

XMRP 55.6360 INCHES

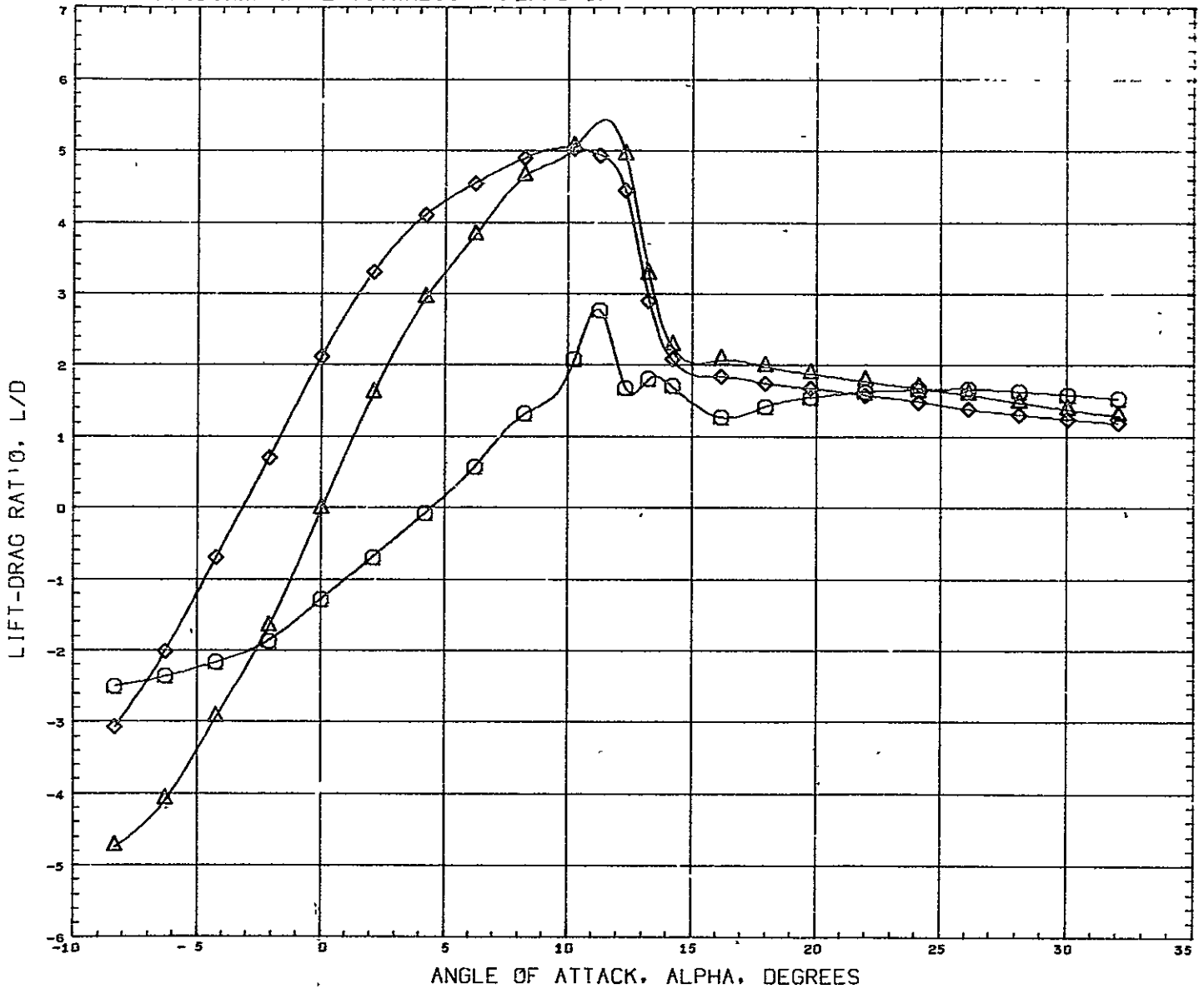
YMRP 0.0000 INCHES

ZMRP 5.8600 INCHES

SCALE 2.9920 PERCENT

MACH 0.154

# STABILIZER EFFECTIVENESS, FLAPS UP



| DATA SET SYMBOL | CONFIGURATION DESCRIPTION |
|-----------------|---------------------------|
| (AU1101)        | UWAL-1021 BAC C-6 BOOSTER |
| (AU1091)        | UWAL-1021 BAC C-6 BOOSTER |
| (AU1201)        | UWAL-1021 BAC C-6 BOOSTER |

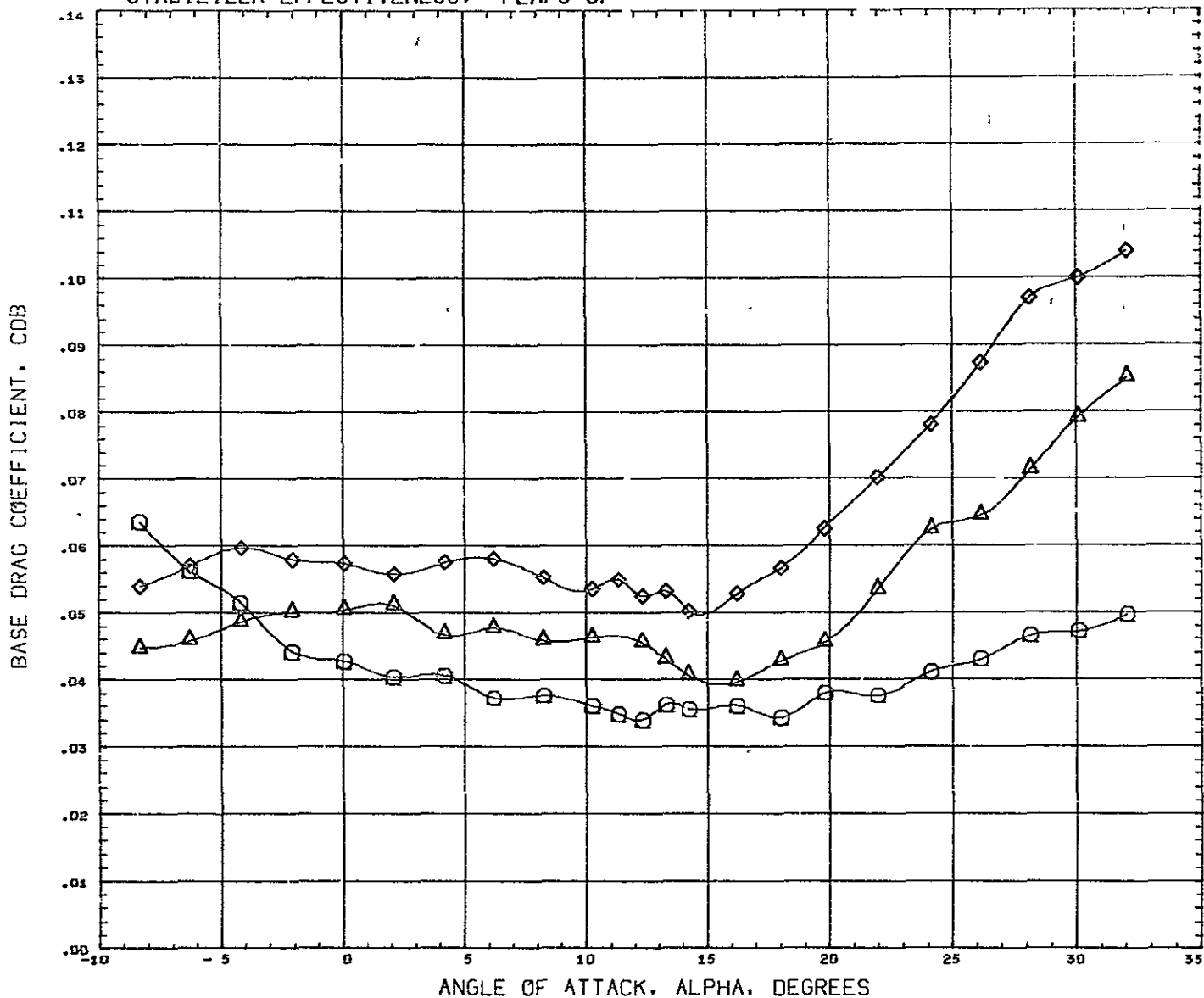
ANGLE OF ATTACK, ALPHA, DEGREES

| HTAIL   | BETA  |
|---------|-------|
| -20.000 | 0.000 |
| 0.000   | 0.000 |
| 10.000  | 0.000 |

| REFERENCE INFORMATION |         |         |
|-----------------------|---------|---------|
| REFS                  | 4 420"  | SQ.FT.  |
| REFL                  | 10.1000 | INCHES  |
| REFB                  | 66.6000 | INCHES  |
| XMRF                  | 55.6360 | INCHES  |
| YMRF                  | 0.0000  | INCHES  |
| ZMRF                  | 5.8600  | INCHES  |
| SCALE                 | 2.9920  | PERCENT |

MACH 0.154

# STABILIZER EFFECTIVENESS, FLAPS UP



| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION |
|----------|--------|---------------------------|
| (AU1181) | □      | UVAL-1021 BAC C-6 BOOSTER |
| (AU1091) | △      | UVAL-1021 BAC C-6 BOOSTER |
| (AU1201) | ◇      | UVAL-1021 BAC C-6 BOOSTER |

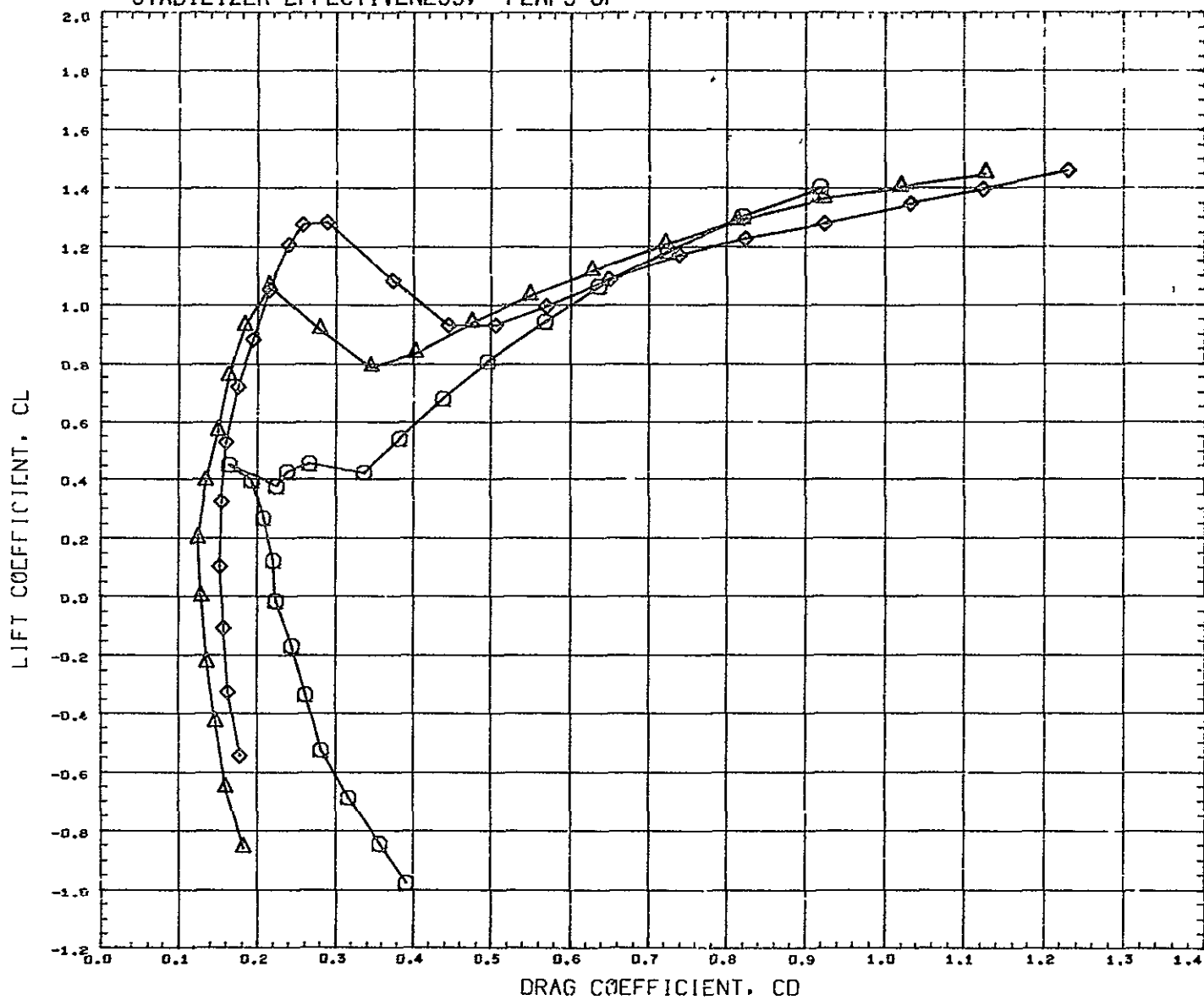
ANGLE OF ATTACK, ALPHA, DEGREES

| HTAIL   | BETA  |
|---------|-------|
| -20,000 | 0.000 |
| 0,000   | 0.000 |
| 10,000  | 0.000 |

| REFERENCE INFORMATION |         |         |
|-----------------------|---------|---------|
| REFS                  | 4.4200  | SQ.FT.  |
| RCFL                  | 16.1060 | INCHES  |
| REFB                  | 66.6200 | INCHES  |
| XMRP                  | 55.6360 | INCHES  |
| YMRP                  | 0.0000  | INCHES  |
| ZMRP                  | 5.8600  | INCHES  |
| SCALE                 | 2.9920  | PERCENT |

MACH 0.154

# STABILIZER EFFECTIVENESS, FLAPS UP



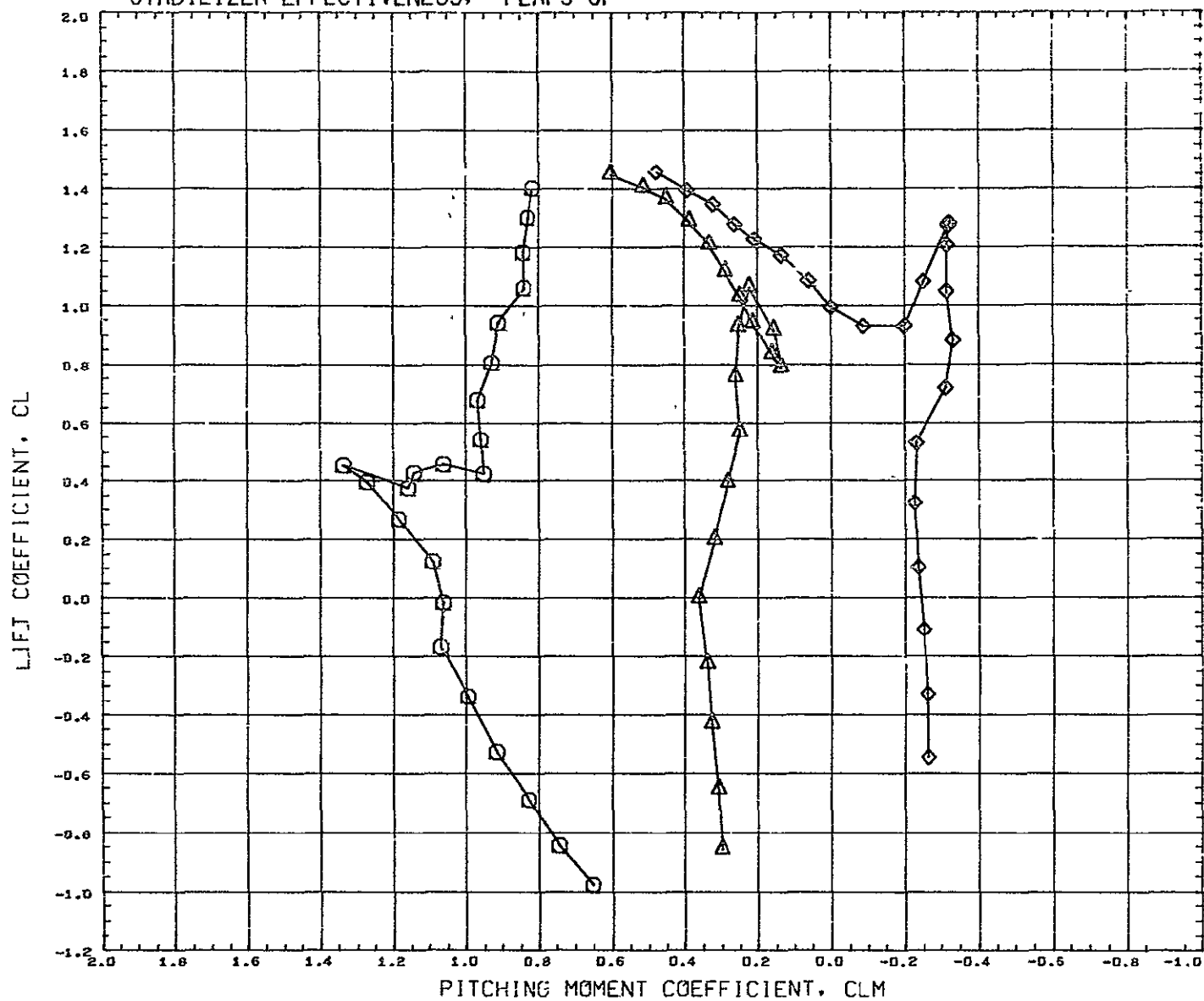
| DATA SET SYMBOL | CONFIGURATION DESCRIPTION |
|-----------------|---------------------------|
| (AU1181)        | UWAL-1021 BAC C-6 BOOSTER |
| (AU1091)        | UWAL-1021 BAC C-6 BOOSTER |
| (AU1201)        | UWAL-1021 BAC C-6 BOOSTER |

| HTAIL   | BETA  |
|---------|-------|
| -20.000 | 0.000 |
| 0.000   | 0.000 |
| 10.000  | 0.000 |

| REFERENCE INFORMATION |
|-----------------------|
| REFS 4.4200 SQ.FT.    |
| REFL 10 100J INCHES   |
| REFB 66.6000 INCHES   |
| XMRP 55.6360 INCHES   |
| YMRP 0.0000 INCHES    |
| ZMRP 5.8600 INCHES    |
| SCALE 2.9920 PERCENT  |

MACH 0.154

# STABILIZER EFFECTIVENESS, FLAPS UP



| DATA SET SYMBOL | CONFIGURATION DESCRIPTION |
|-----------------|---------------------------|
| (AU101)         | UVAL-1021 BAC C-6 BOOSTER |
| (AU1091)        | UVAL-1021 BAC C-6 BOOSTER |
| (AU1201)        | UVAL-1021 BAC C-6 BOOSTER |

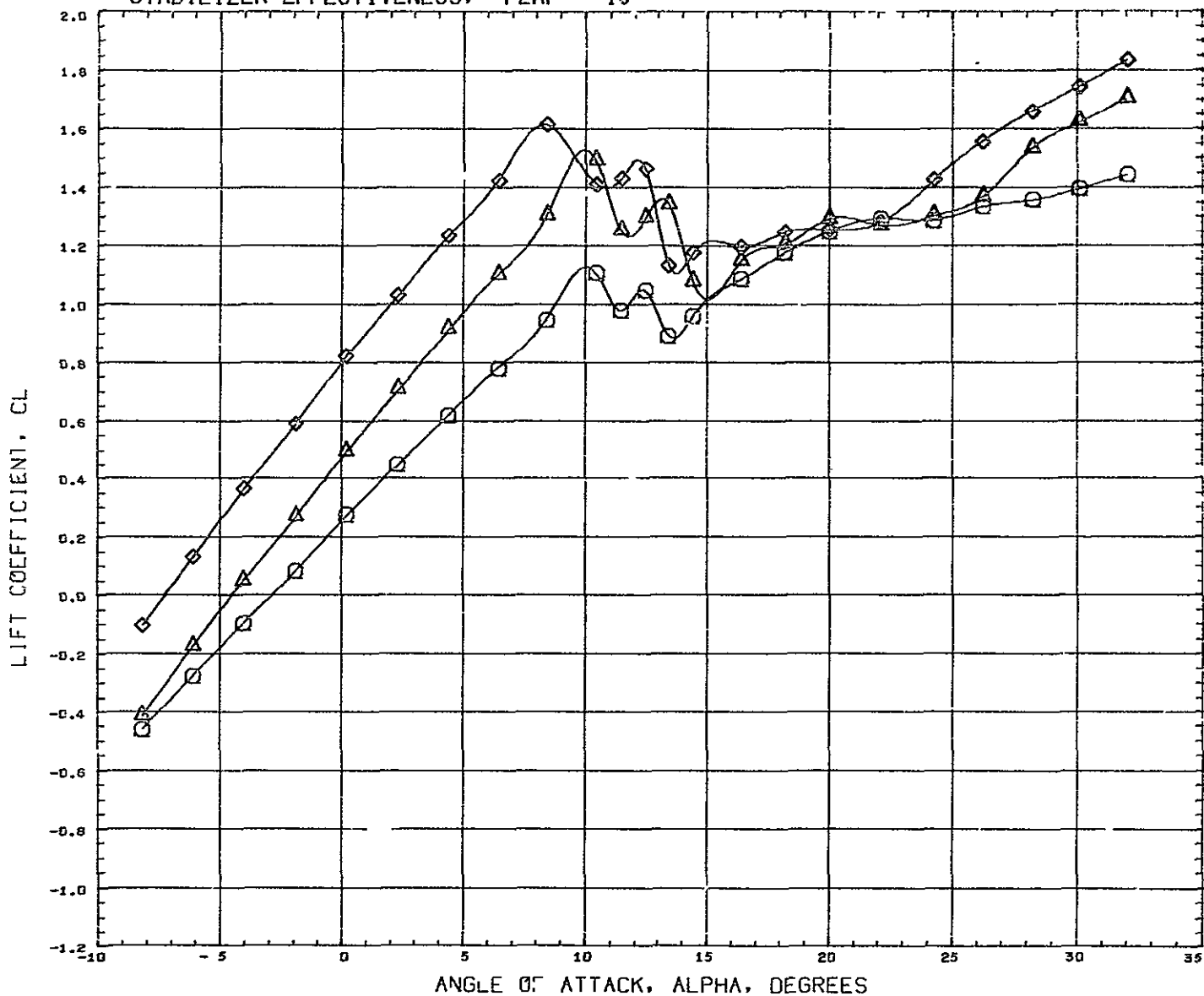
PITCHING MOMENT COEFFICIENT, CLM

| HTAIL   | BETA  |
|---------|-------|
| -20.000 | 0.000 |
| 0.000   | 0.000 |
| 10.000  | 0.000 |

| REFERENCE INFORMATION |                |
|-----------------------|----------------|
| REFS                  | 4.4200 SQ.FT.  |
| REFL                  | 10.1000 INCHES |
| REFB                  | 66.6000 INCHES |
| XMRP                  | 55.6360 INCHES |
| YMRP                  | 0.0000 INCHES  |
| ZMRP                  | 5.8600 INCHES  |
| SCALE                 | 2 9920 PERCENT |

MACH 0.154

# STABILIZER EFFECTIVENESS, FLAP = 40



| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION |
|----------|--------|---------------------------|
| (AU1151) | □      | UWAL-1021 BAC C-6 BOOSTER |
| (AU1141) | △      | UWAL-1021 BAC C-6 BOOSTER |
| (AU1171) | ◇      | UWAL-1021 BAC C-6 BOOSTER |

ANGLE OF ATTACK, ALPHA, DEGREES

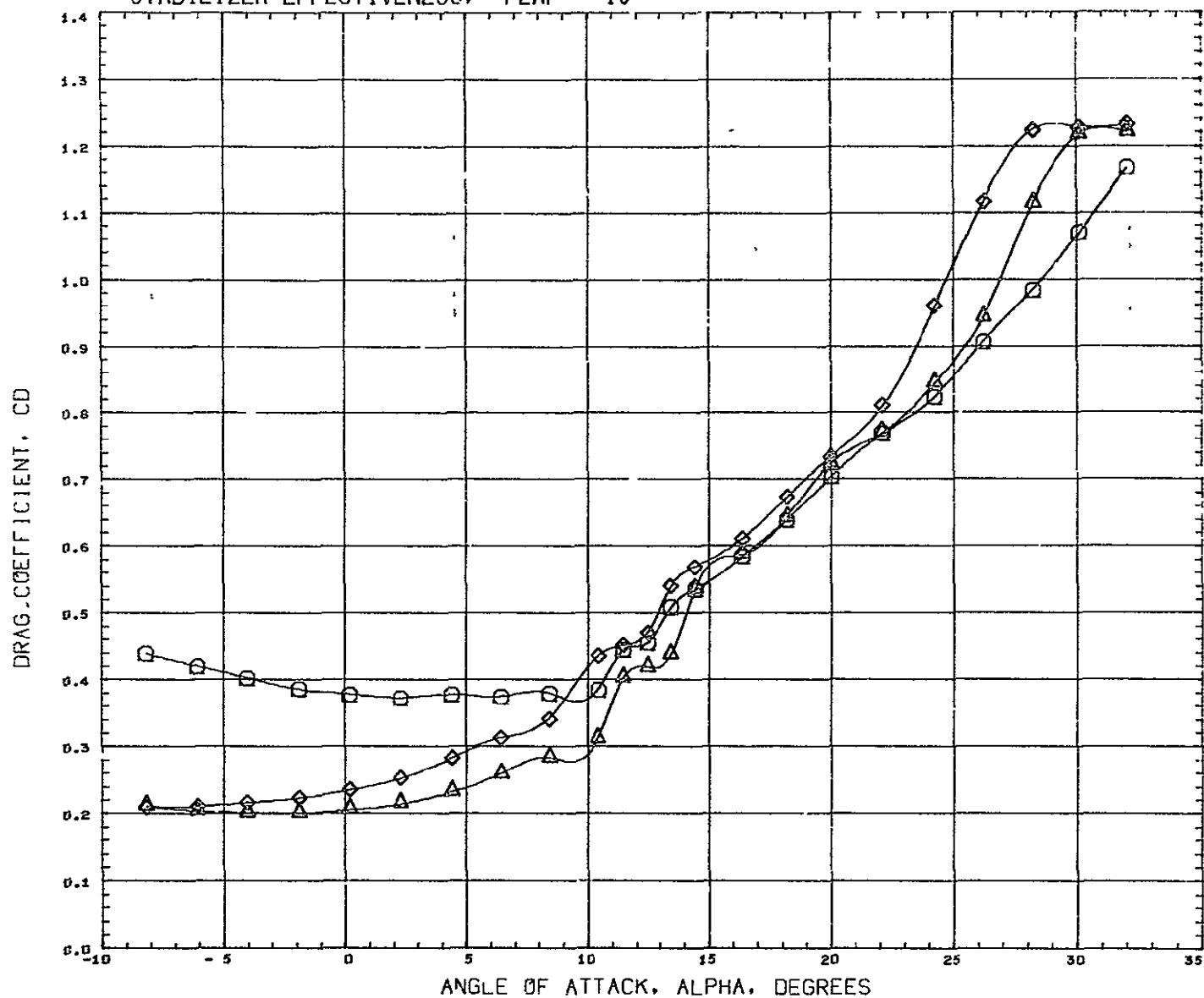
|          | HTAIL   | BETA  |
|----------|---------|-------|
| (AU1151) | -20.000 | 0.000 |
| (AU1141) | 0.000   | 0.000 |
| (AU1171) | 10.000  | 0.000 |

## REFERENCE INFORMATION

|       |         |        |
|-------|---------|--------|
| REFS  | 4.4200  | SQ.FT. |
| REFL  | 10.1000 | INCHES |
| REFB  | 66.6000 | INCHES |
| XMRP  | 55.6360 | INCHES |
| YMRP  | 0.0000  | INCHES |
| ZMRP  | 5.8600  | INCHES |
| SCALE | 2.9920  | PERCNT |

MACH . 0.154

# STABILIZER EFFECTIVENESS, FLAP = 40



DATA SET SYMBOL    CONFIGURATION DESCRIPTION

(AUI151)    ◯    UWAL-1021 BAC C-6 BOOSTER    81W1H1V1N1F140

(AUI141)    △    UWAL-1021 BAC C-6 BOOSTER    81W1H1V1N1F140

(AUI171)    ◇    UWAL-1021 BAC C-6 BOOSTER    81W1H1V1N1F140

NTAIL    BETA

-20.000    0.000

0.000    0.000

10.000    0.000

REFERENCE INFORMATION

REFS    4.4200    SQ.FT.

REFL    10 100    INCHES

REFB    66.6000    INCHES

XMRF    55.6360    INCHES

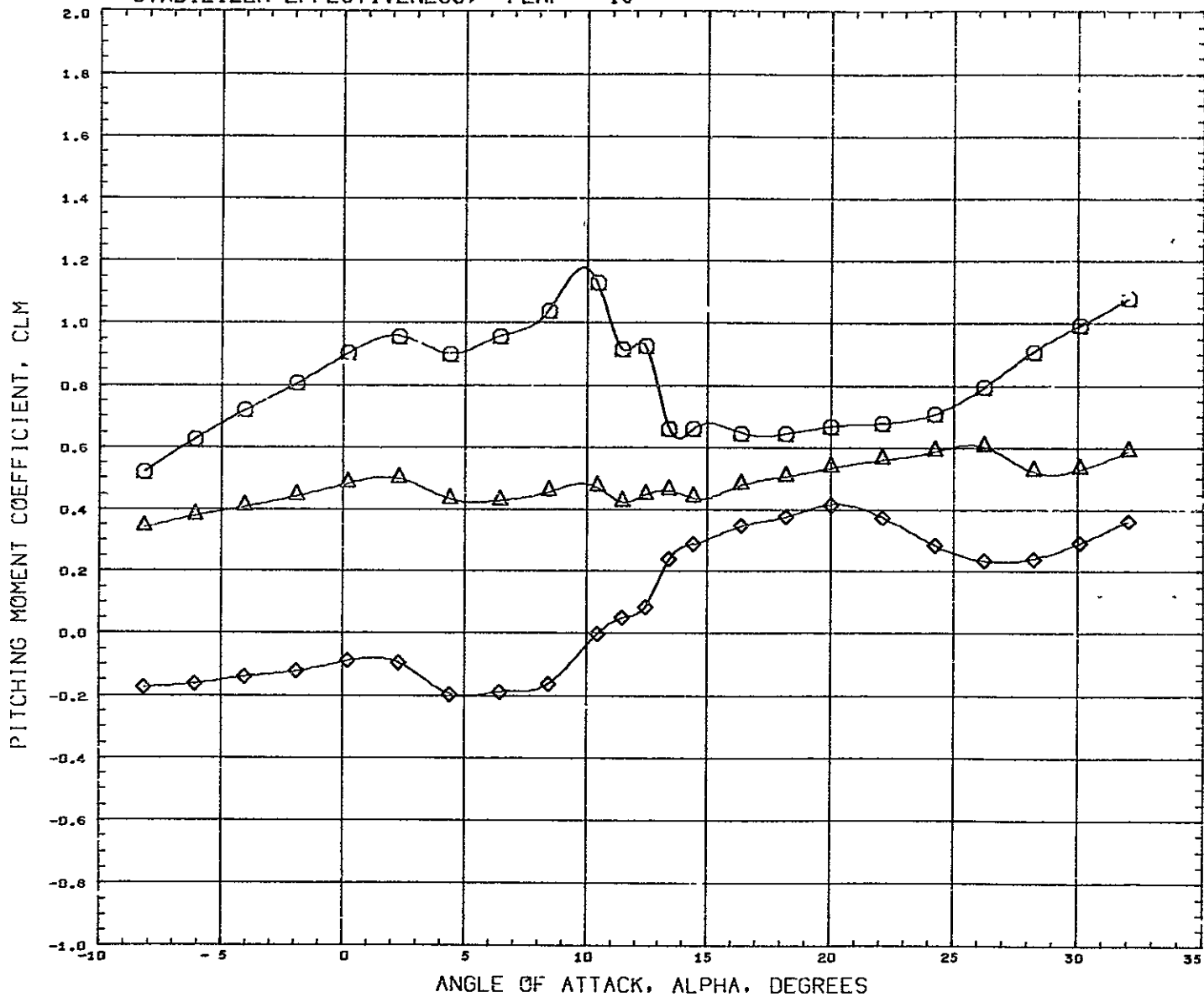
YMRF    0.0000    INCHES

ZMRF    5.8600    INCHES

SCALE    2.9920    PERCENT

MACH    D.154

# STABILIZER EFFECTIVENESS, FLAP = 40



DATA SET SYMBOL CONFIGURATION DESCRIPTION

(AU1151) (AU1141) (AU1171)

UVAL-1021 BAC C-6 BOOSTER

UVAL-1021 BAC C-6 BOOSTER

B1W1H1V1N1F140

B1W1H1V1N1F140

B1W1H1V1N1F140

HTAIL

BETA

-20.000

0.000

0.000

0.000

10.000

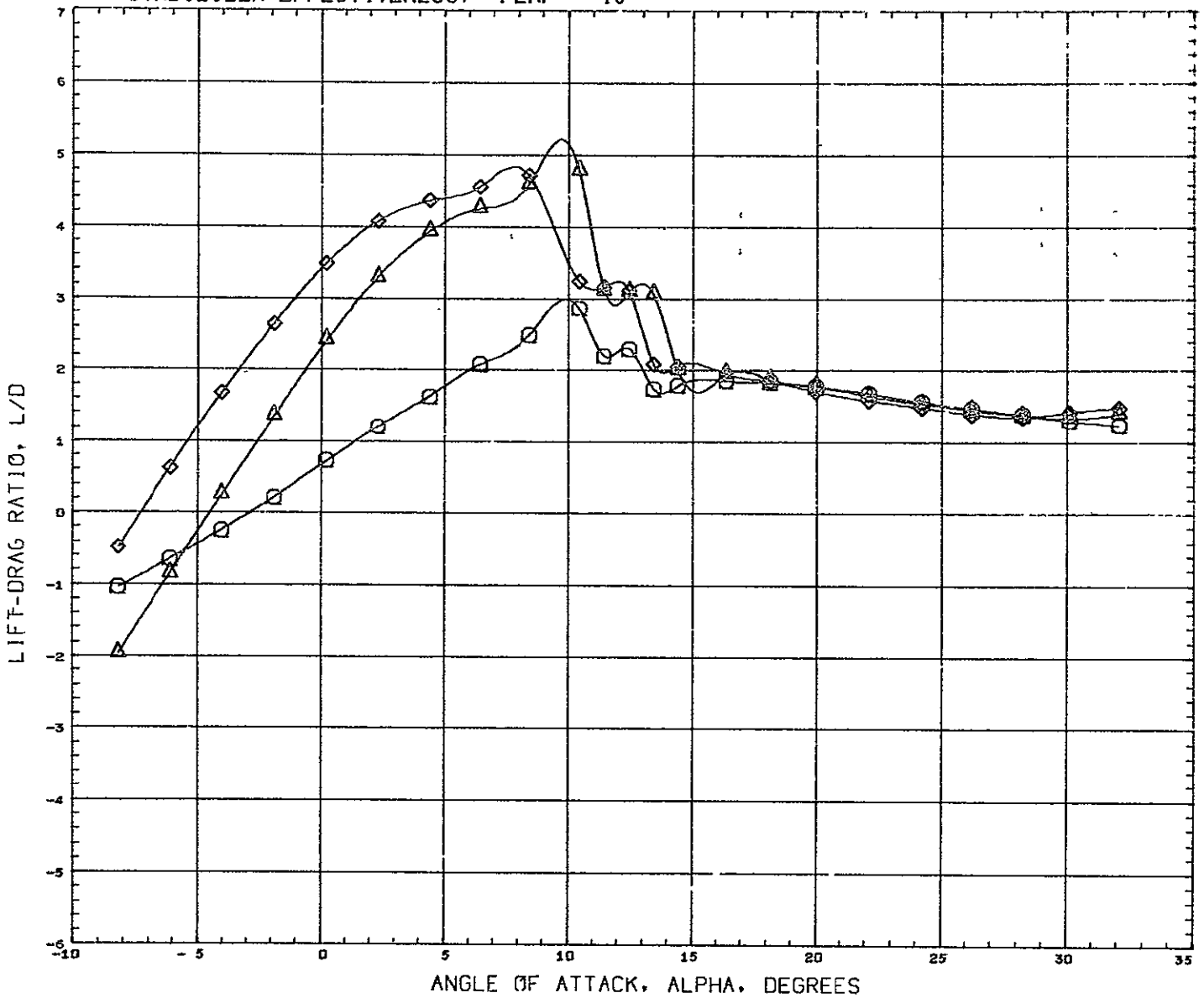
0.000

REFERENCE INFORMATION

REFS 4.4201 SQ.FT.  
REFL 10.1050 INCHES  
REFB 66.6900 INCHES  
XMRP 55.6360 INCHES  
YMRP 0.0000 INCHES  
ZMRP 5.8600 INCHES  
SCALE 2.9920 PERCENT

PACH 0.154

# STABILIZER EFFECTIVENESS, FLAP = 40



| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION |
|----------|--------|---------------------------|
| (AU1151) | ○      | UWAL-1021 BAC C-6 BOOSTER |
| (AU1141) | △      | UWAL-1021 BAC C-6 BOOSTER |
| (AU1171) | ◇      | UWAL-1021 BAC C-6 BOOSTER |

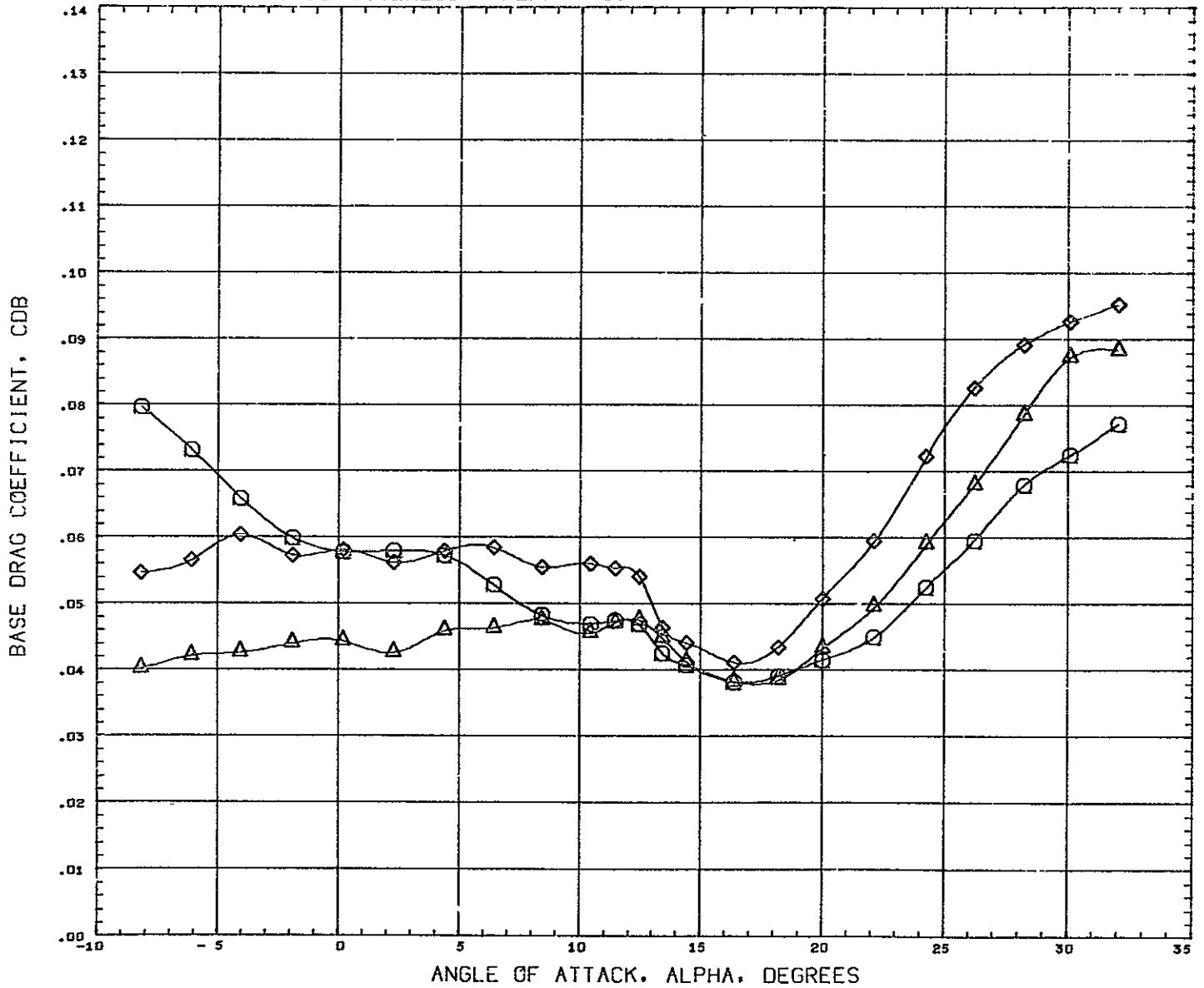
ANGLE OF ATTACK, ALPHA, DEGREES

| HTAIL   | BETA  |
|---------|-------|
| -20.000 | 0.000 |
| 0.000   | 0.000 |
| 10.000  | 0.000 |

| REFERENCE INFORMATION |         |         |
|-----------------------|---------|---------|
| REFS                  | 4.4200  | SQ.FT.  |
| REFL                  | 10.1000 | INCHES  |
| REFB                  | 66.6000 | INCHES  |
| XMRP                  | 55.6360 | INCHES  |
| YMRP                  | 0.0000  | INCHES  |
| ZMRP                  | 5.8600  | INCHES  |
| SCALE                 | 2.9920  | PERCENT |

MACH 0.154

# STABILIZER EFFECTIVENESS, FLAP = 40



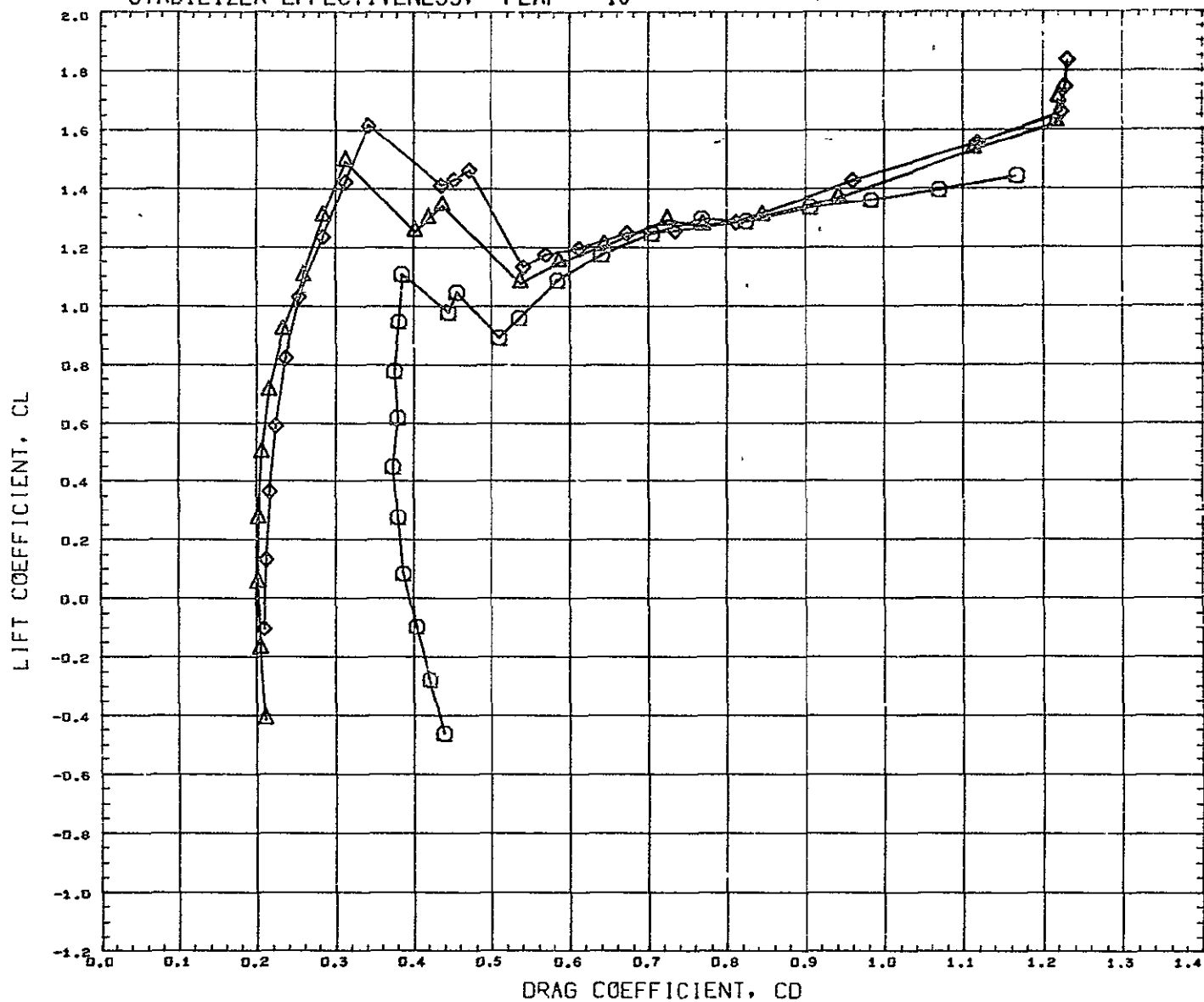
| DATA SET SYMBOL | CONFIGURATION DESCRIPTION |
|-----------------|---------------------------|
| (AU1151)        | UVAL-1021 BAC C-6 BOOSTER |
| (AU1141)        | UVAL-1021 BAC C-6 BOOSTER |
| (AU1171)        | UVAL-1021 BAC C-6 BOOSTER |

| HTAIL   | BETA  |
|---------|-------|
| -20.000 | 0.000 |
| 0.000   | 0.000 |
| 10.000  | 0.000 |

| REFERENCE INFORMATION |         |         |
|-----------------------|---------|---------|
| REFS                  | 4.4200  | SQ.FT.  |
| REFL                  | 10 1000 | INCHES  |
| REFB                  | 66.6000 | INCHES  |
| XMRP                  | 55.6360 | INCHES  |
| YMRP                  | 0.0000  | INCHES  |
| ZMRP                  | 5.8600  | INCHES  |
| SCALE                 | 2.9920  | PERCENT |

HACH , 0.154

# STABILIZER EFFECTIVENESS, FLAP = 40



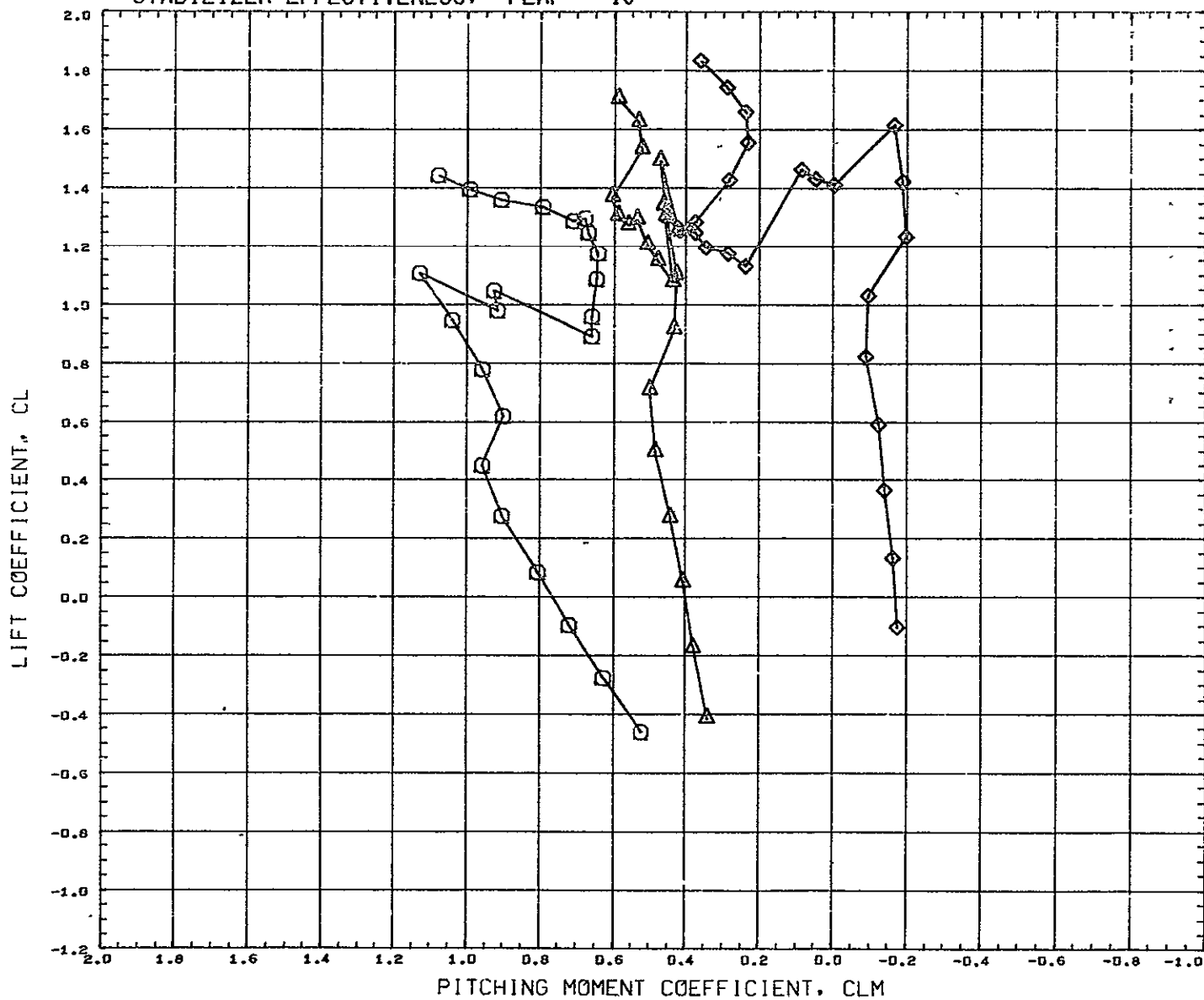
| DATA SET SYMBOL | CONFIGURATION DESCRIPTION |
|-----------------|---------------------------|
| (AU1151)        | UWAL-1021 BAC C-6 BOOSTER |
| (AU1141)        | UWAL-1021 BAC C-6 BOOSTER |
| (AU1171)        | UWAL-1021 BAC C-6 BOOSTER |

| HTAIL   | BETA  |
|---------|-------|
| -20.000 | 0.000 |
| 0.000   | 0.000 |
| 10.000  | 0.000 |

| REFERENCE INFORMATION |         |         |
|-----------------------|---------|---------|
| REFS                  | 4.4201  | SQ.FT.  |
| REFL                  | 10.1000 | INCHES  |
| REFB                  | 66.6000 | INCHES  |
| XMRF                  | 55.6360 | INCHES  |
| YMRP                  | 0.0000  | INCHES  |
| ZMRP                  | 5.8600  | INCHES  |
| SCALE                 | 2.9920  | PERCENT |

MACH 0.154

# STABILIZER EFFECTIVENESS, FLAP = 40



| DATA SET SYMBOL | CONFIGURATION DESCRIPTION |
|-----------------|---------------------------|
| (AU1151)        | UWAL-1021 BAC C-6 BOOSTER |
| (AU1141)        | UWAL-1021 BAC C-6 BOOSTER |
| (AU1171)        | UWAL-1021 BAC C-6 BOOSTER |

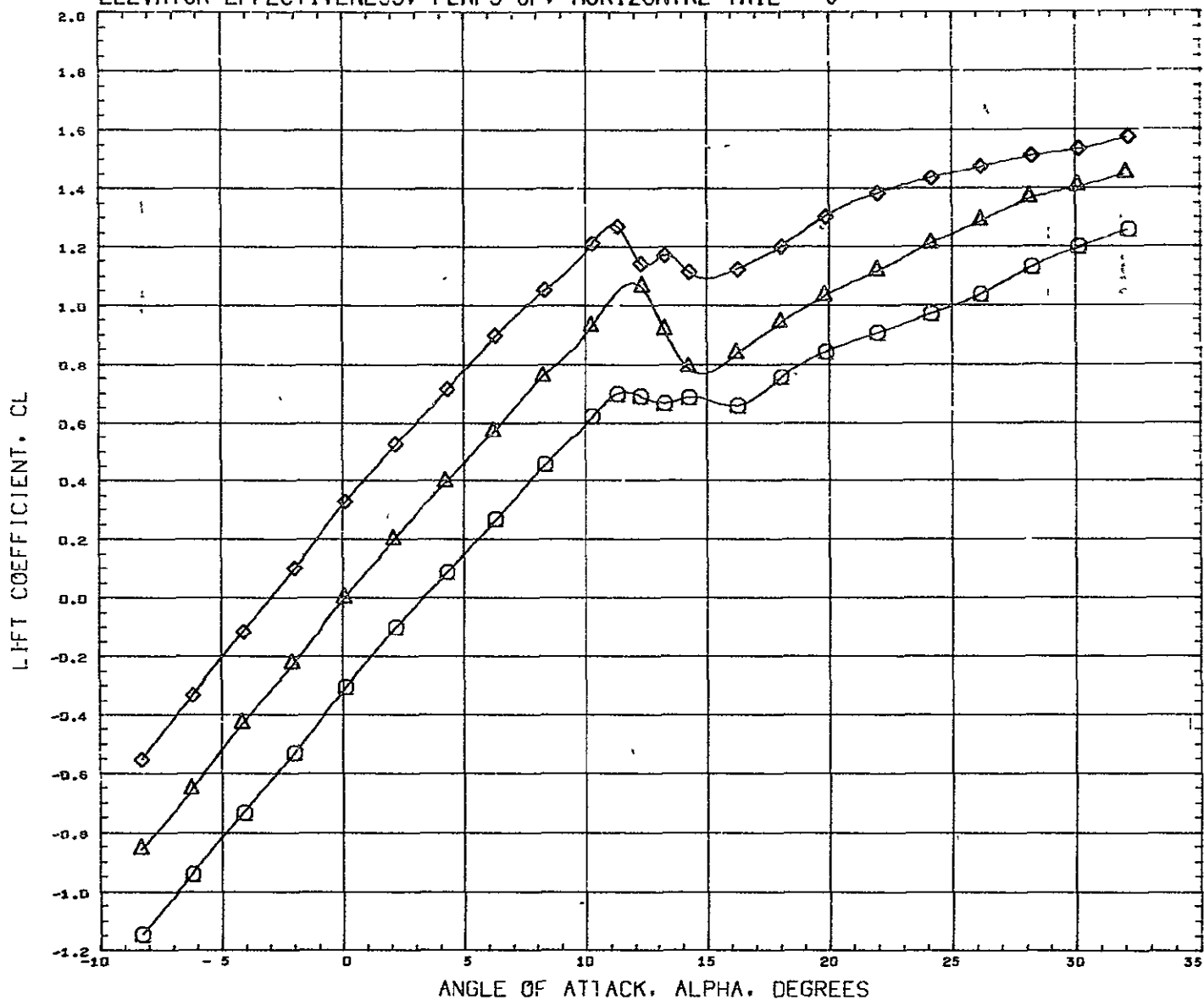
PITCHING MOMENT COEFFICIENT, CLM

| HTAIL   | BETA  |
|---------|-------|
| -20.000 | 0.000 |
| 0.000   | 0.000 |
| 10.000  | 0.000 |

| REFERENCE INFORMATION |                 |
|-----------------------|-----------------|
| REFS                  | 4.420J SQ.FT.   |
| REFL                  | 15.10' 0 INCHES |
| REFB                  | 66 6000 INCHES  |
| XMRF                  | 55.6360 INCHES  |
| YMRF                  | 0.0000 INCHES   |
| ZMRF                  | 5 8600 INCHES   |
| SCALE                 | 2.9920 PERCENT  |

MACH 0.154

# ELEVATOR EFFECTIVENESS, FLAPS UP, HORIZONTAL TAIL = 0



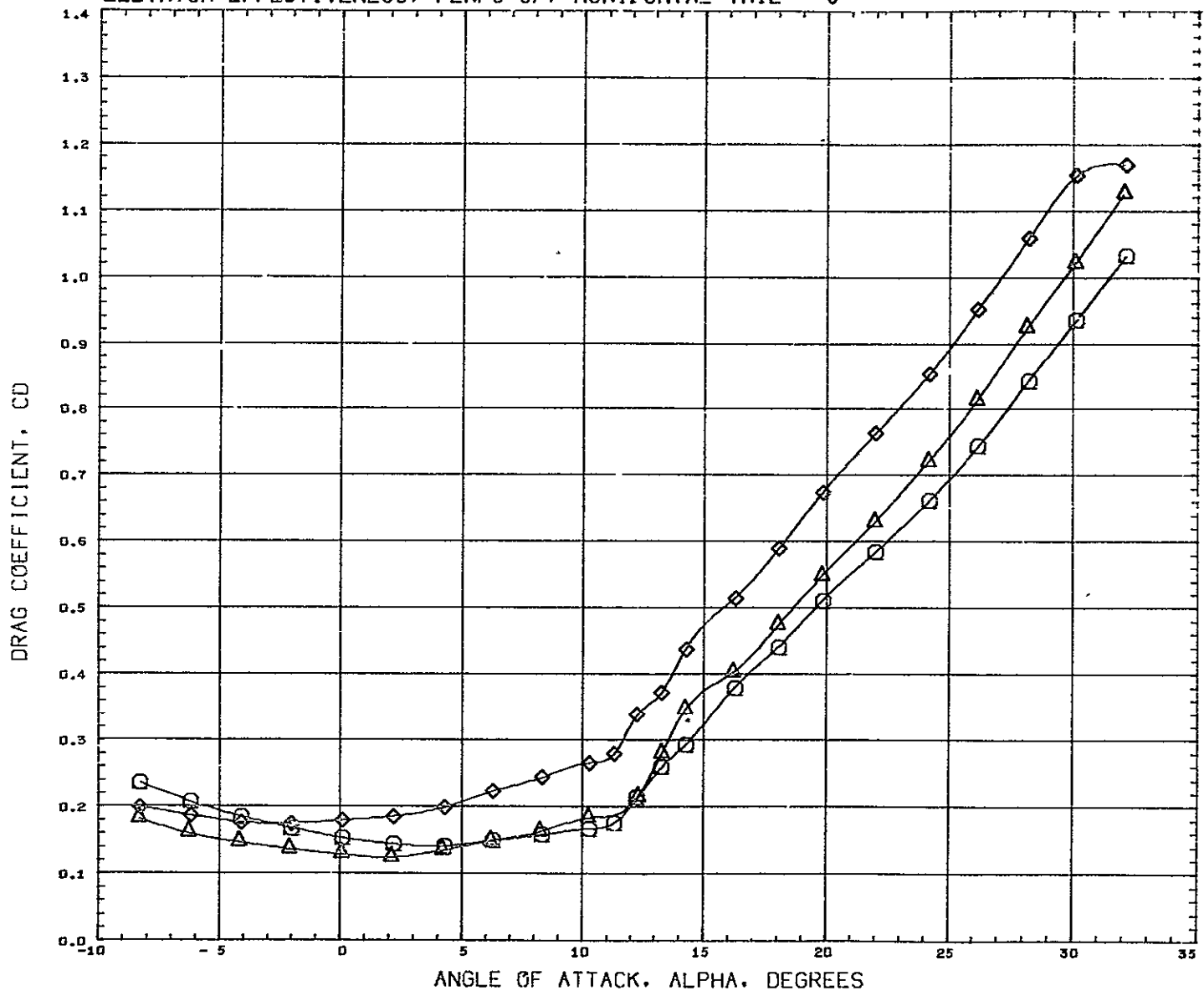
| DATA SET SYMBOL | CONFIGURATION DESCRIPTION |
|-----------------|---------------------------|
| (AU1211)        | UWAL-1021 BAC C-6 BOOSTER |
| (AU1091)        | UWAL-1021 BAC C-6 BOOSTER |
| (AU1241)        | UWAL-1021 BAC C-6 BOOSTER |

| CLVTR   | MTAIL | BETA  |
|---------|-------|-------|
| -30.000 | 0.000 | 0.000 |
| 0.000   | 0.000 | 0.000 |
| 30.000  | 0.000 | 0.000 |

| REFERENCE INFORMATION |                |
|-----------------------|----------------|
| REFS                  | 4.4203 SQ FT.  |
| REFL                  | 10.1000 INCHES |
| REFB                  | 66.6000 INCHES |
| XMRP                  | 55.6360 INCHES |
| YMRP                  | 0.0000 INCHES  |
| ZMRP                  | 5.8600 INCHES  |
| SCALE                 | 2.9920 PERCENT |

MACH 0.154

# ELEVATOR EFFECTIVENESS, FLAPS UP, HORIZONTAL TAIL = 0



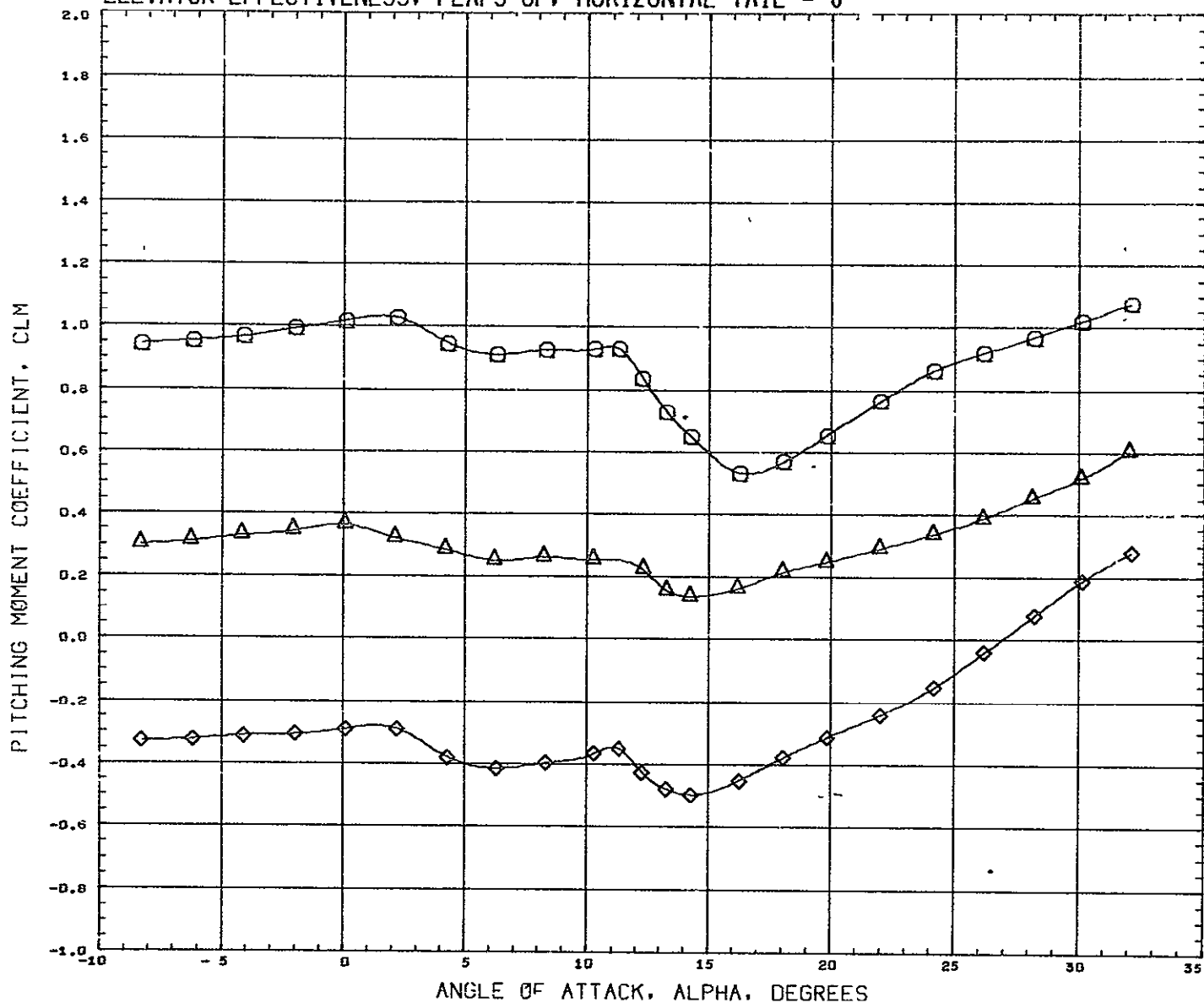
| DATA SET SYMBOL | CONFIGURATION DESCRIPTION |
|-----------------|---------------------------|
| (AU1211)        | UVAL-1021 BAC C-6 BOOSTER |
| (AU1091)        | UVAL-1021 BAC C-6 BOOSTER |
| (AU1241)        | UVAL-1021 BAC C-6 BOOSTER |

| ELEVTR  | HTAIL | BETA  |
|---------|-------|-------|
| -30.000 | 0.000 | 0.000 |
| 0.000   | 0.000 | 0.000 |
| 30.000  | 0.000 | 0.000 |

| REFERENCE INFORMATION |         |         |
|-----------------------|---------|---------|
| REFS                  | 4.4200  | SQ.FT   |
| REFL                  | 10.1000 | INCHES  |
| REFB                  | 66.9000 | INCHES  |
| XMRF                  | 55.6360 | INCHES  |
| YMRF                  | 0.0000  | INCHES  |
| ZMRF                  | 5.8600  | INCHES  |
| SCALE                 | 2.9920  | PERCENT |

MACH 0.154

# ELEVATOR EFFECTIVENESS, FLAPS UP, HORIZONTAL TAIL = 0



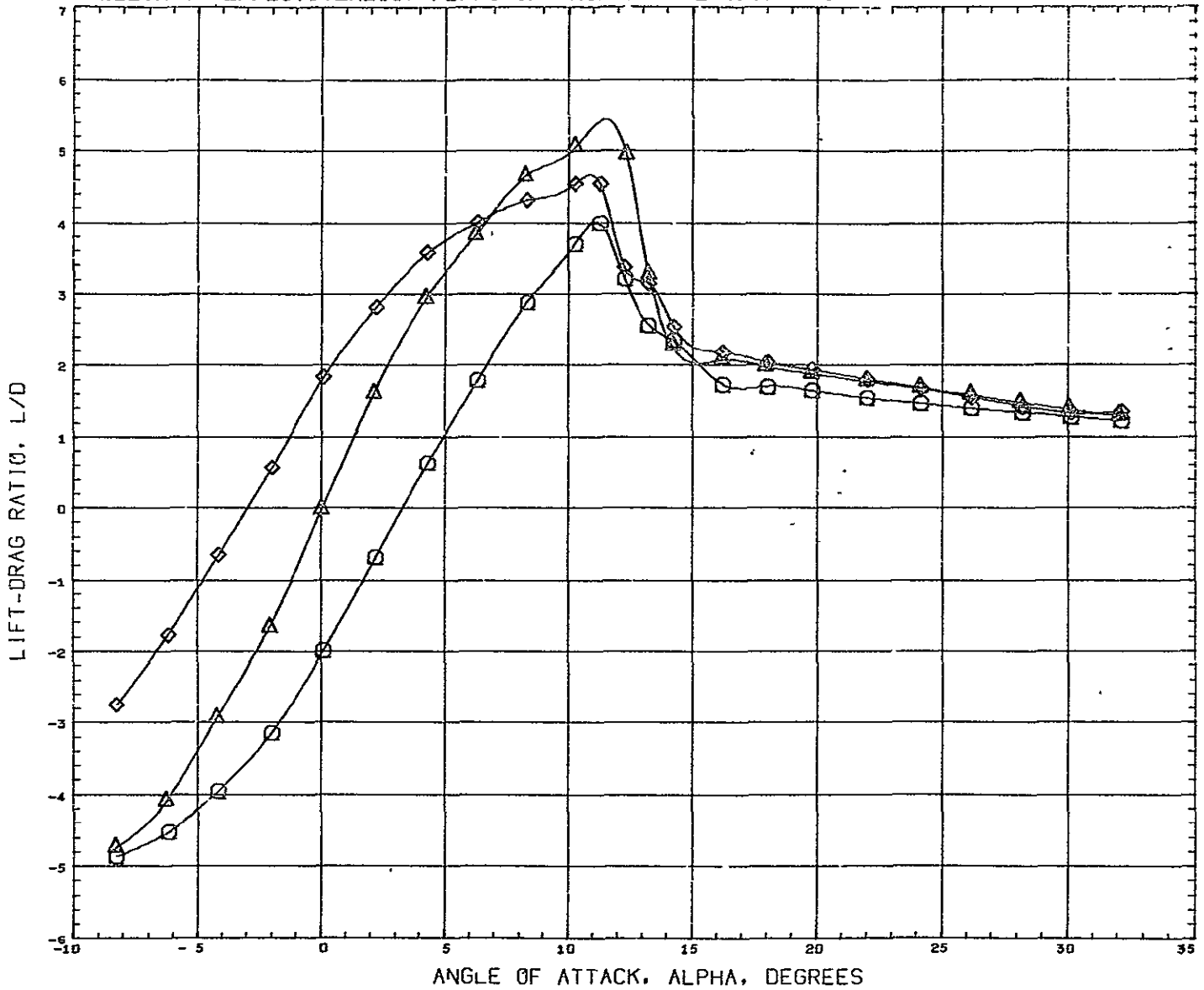
DATA SET SYMBOL CONFIGURATION DESCRIPTION  
 (AU1211) UVAL-1021 BAC C-6 BOOSTER  
 (AU1091) UVAL-1021 BAC C-6 BOOSTER  
 (AU1241) UVAL-1021 BAC C-6 BOOSTER

ELEVTR HTAIL BETA  
 -30.000 0.000 0.000  
 0.000 0.000 0.000  
 30.000 0.000 0.000

REFERENCE INFORMATION  
 REFS 4.4201 SQ.FT.  
 REFL 10.1000 INCHES  
 REFB 66.0000 INCHES  
 XMRP 55.6360 INCHES  
 YMRP 0.0000 INCHES  
 ZMRP 5.8600 INCHES  
 SCALE 2.9920 PERCENT

MACH 0.154

# ELEVATOR EFFECTIVENESS, FLAPS UP, HORIZONTAL TAIL = 0



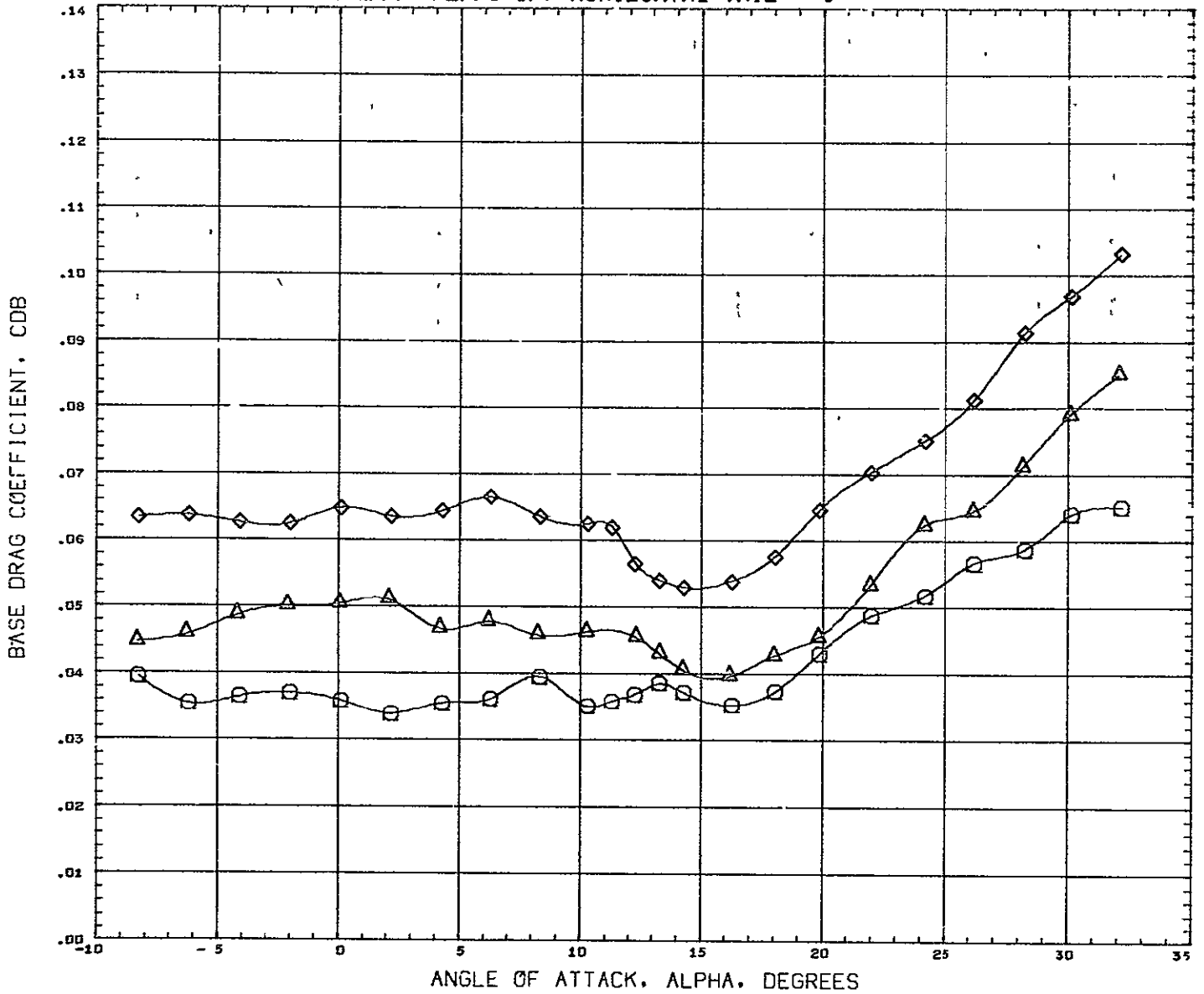
| DATA SET SYMBOL | CONFIGURATION DESCRIPTION |
|-----------------|---------------------------|
| (AU1211)        | UVAL-1021 BAC C-6 BOOSTER |
| (AU1091)        | UVAL-1021 BAC C-6 BOOSTER |
| (AU1241)        | UVAL-1021 BAC C-6 BOOSTER |

| ELEVTR  | HTAIL | BETA  |
|---------|-------|-------|
| -30.000 | 0.000 | 0.000 |
| 0.000   | 0.000 | 0.000 |
| 30.000  | 0.000 | 0.000 |

| REFERENCE INFORMATION |         |        |
|-----------------------|---------|--------|
| REFS                  | 4.4200  | SQ.FT. |
| REFL                  | 10.1000 | INCHES |
| REF8                  | 66.6000 | INCHES |
| XMRP                  | 55.6360 | INCHES |
| YMRP                  | 0.0000  | INCHES |
| ZMRP                  | 5.8600  | INCHES |
| SCALE                 | 2.9920  | PERCNT |

MACH 2 0.154

# ELEVATOR EFFECTIVENESS, FLAPS UP, HORIZONTAL TAIL = 0



DATA SET SYMBOL CONFIGURATION DESCRIPTION

(AUI211) UVAL-1021 BAC C-6 BOOSTER

(AUI091) UVAL-1021 BAC C-6 BOOSTER

(AUI241) UVAL-1021 BAC C-6 BOOSTER

ELEVTR HTAIL BETA

-30.000 0.000 0.000

0.000 0.000 0.000

30.000 0.000 0.000

REFERENCE INFORMATION

REFS 4.4200 SQ.FT

REFL 10.1130 INCHES

REFB 66.5000 INCHES

XMRP 55.6360 INCHES

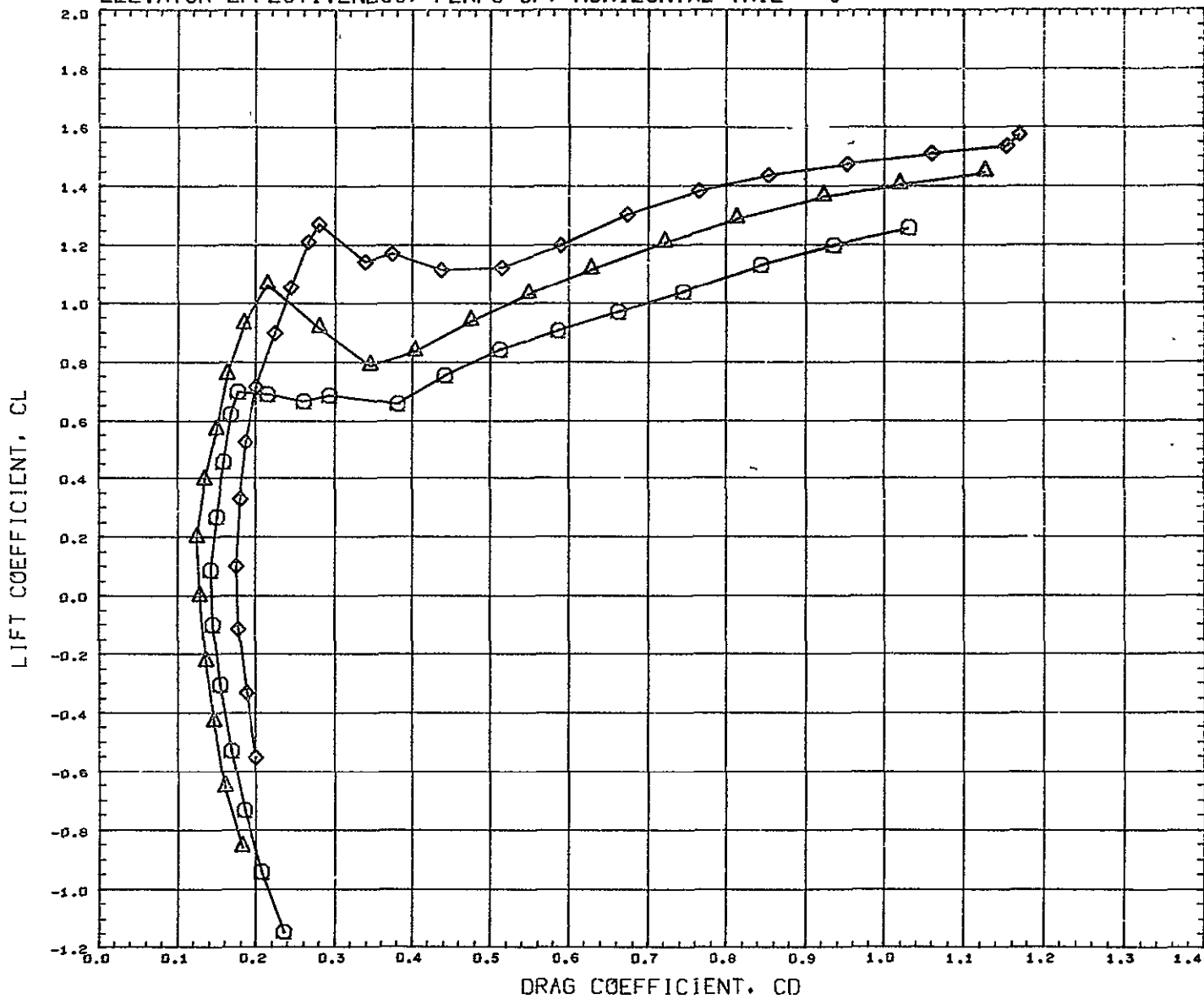
YMRP 0.0000 INCHES

ZMRP 5.8600 INCHES

SCALE 2.9920 PERCENT

MACH 0.154

# ELEVATOR EFFECTIVENESS, FLAPS UP, HORIZONTAL TAIL = 0



| DATA SET SYMBOL | CONFIGURATION DESCRIPTION |
|-----------------|---------------------------|
| (AU1211)        | UWAL-1021 BAC C-6 BOOSTER |
| (AU1091)        | UWAL-1021 BAC C-6 BOOSTER |
| (AU1241)        | UWAL-1021 BAC C-6 BOOSTER |

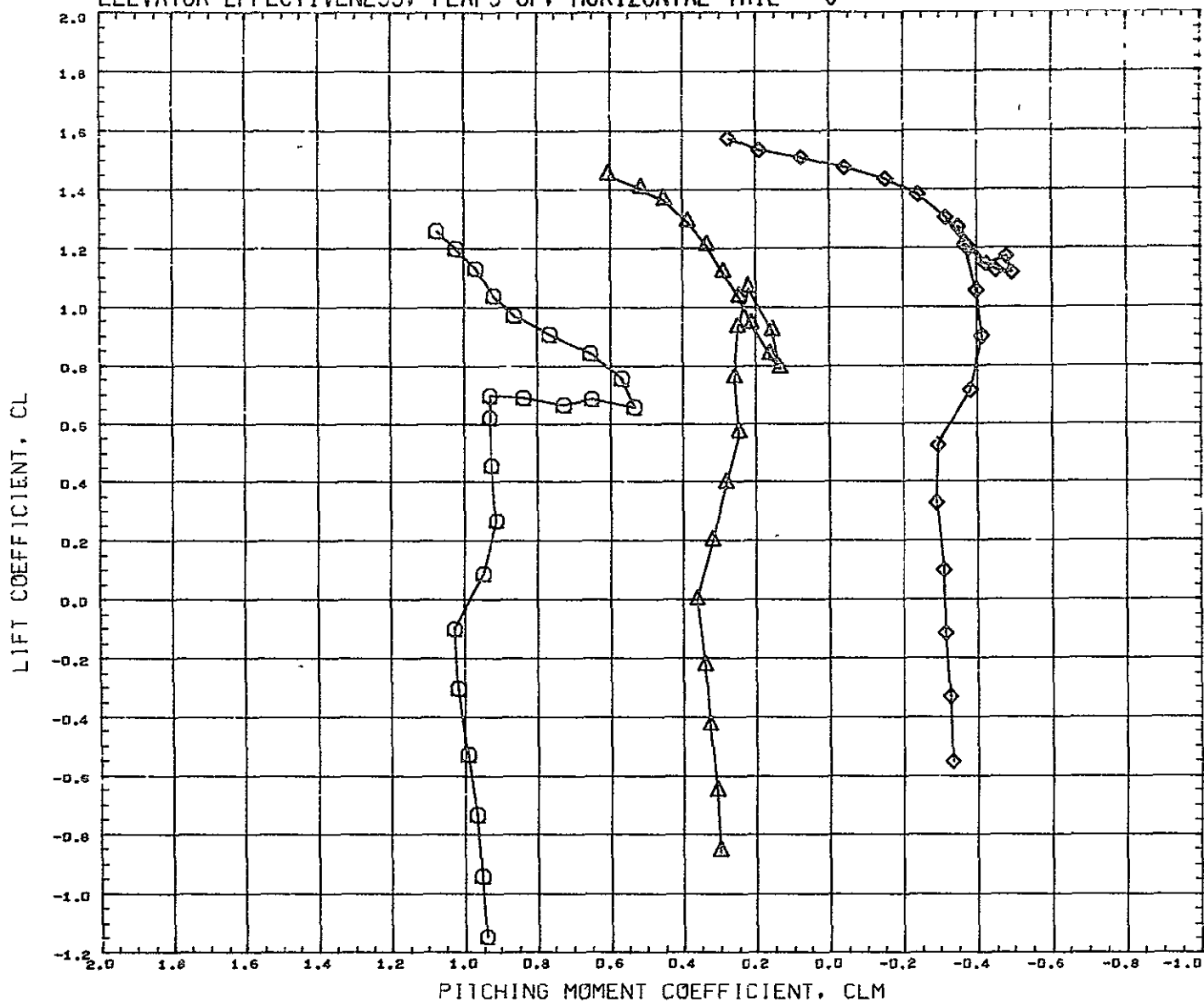
| B1W1H1V1N1 |
|------------|
| B1W1H1V1N1 |
| B1W1H1V1N1 |
| B1W1H1V1N1 |

| ELEVTR  | HTAIL | BETA  |
|---------|-------|-------|
| -30.000 | 0.000 | 0.000 |
| 0.000   | 0.000 | 0.000 |
| 30.000  | 0.000 | 0.000 |

| REFERENCE INFORMATION |         |         |
|-----------------------|---------|---------|
| REFS                  | 4.4200  | SQ.FT.  |
| REFL                  | 10.1000 | INCHES  |
| REFB                  | 66.0000 | INCHES  |
| XMRF                  | 55.6360 | INCHES  |
| YMRF                  | 0.0000  | INCHES  |
| ZMRF                  | 5.8600  | INCHES  |
| SCALE                 | 2.9920  | PERCENT |

MACH 0.154

# ELEVATOR EFFECTIVENESS, FLAPS UP, HORIZONTAL TAIL = 0



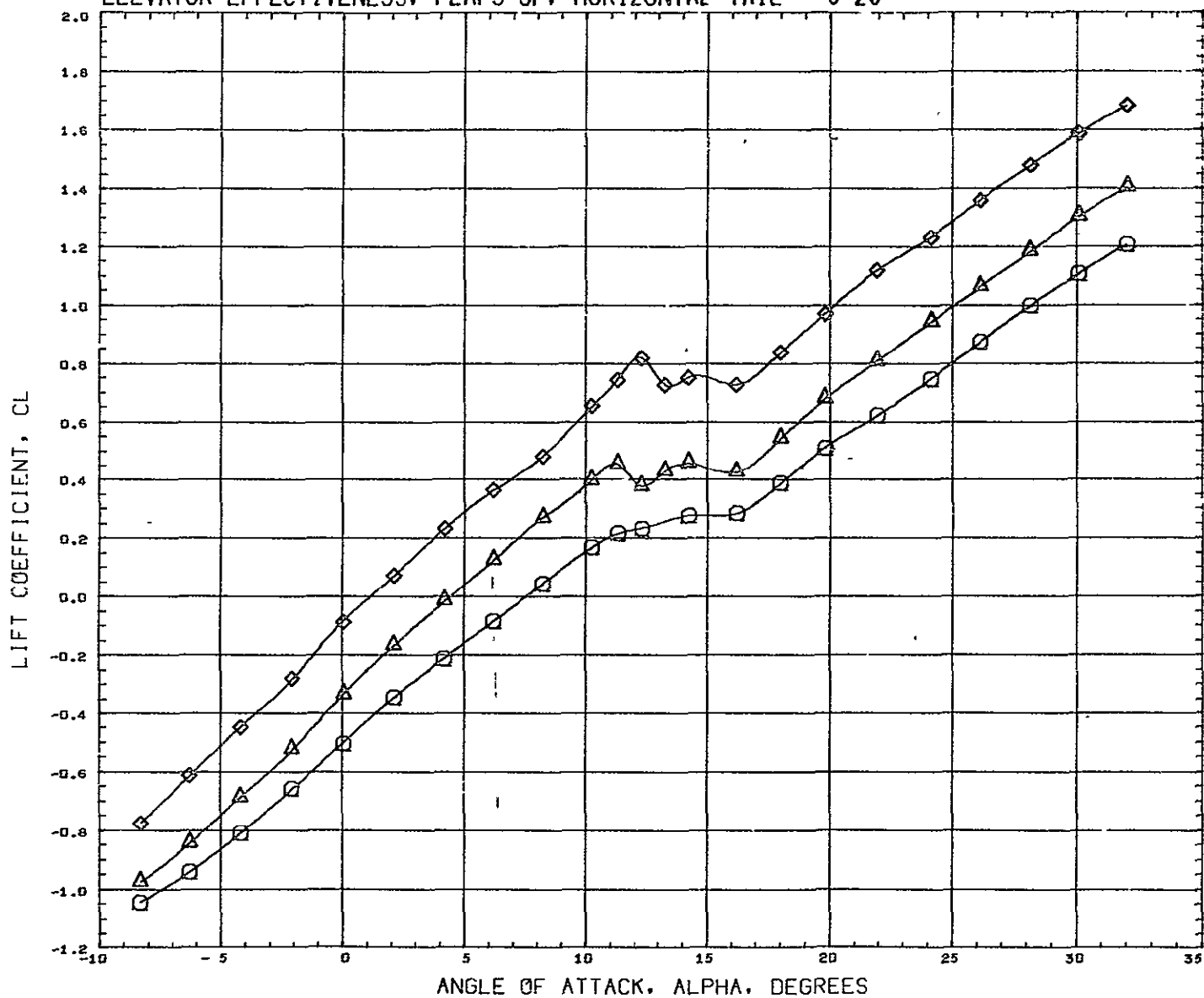
| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION |
|----------|--------|---------------------------|
| (AU1211) | ○      | UVAL-1021 BAC C-6 BOOSTER |
| (AU1091) | △      | UVAL-1021 BAC C-6 BOOSTER |
| (AU1241) | ◇      | UVAL-1021 BAC C-6 BOOSTER |

| ELEVTR  | HTAIL | BETA  |
|---------|-------|-------|
| -30.000 | 0.000 | 0.000 |
| 0.000   | 0.000 | 0.000 |
| 30.000  | 0.000 | 0.050 |

| REFERENCE INFORMATION |         |         |
|-----------------------|---------|---------|
| REFS                  | 4 420"  | 50 FT   |
| REFL                  | 10 1000 | INCHES  |
| REFD                  | 66.6000 | INCHES  |
| XMRP                  | 55.6360 | INCHES  |
| YMRP                  | 0.0000  | INCHES  |
| ZMRP                  | 5.8600  | INCHES  |
| SCALE                 | 2.9920  | PERCENT |

MACH 0.154

# ELEVATOR EFFECTIVENESS, FLAPS UP, HORIZONTAL TAIL = 0-20



| DATA SET SYMBOL | CONFIGURATION DESCRIPTION |
|-----------------|---------------------------|
| (AU1361)        | UWAL-1021 BAC C-6 BOOSTER |
| (AU1381)        | UWAL-1021 BAC C-6 BOOSTER |
| (AU1331)        | UWAL-1021 BAC C-6 BOOSTER |

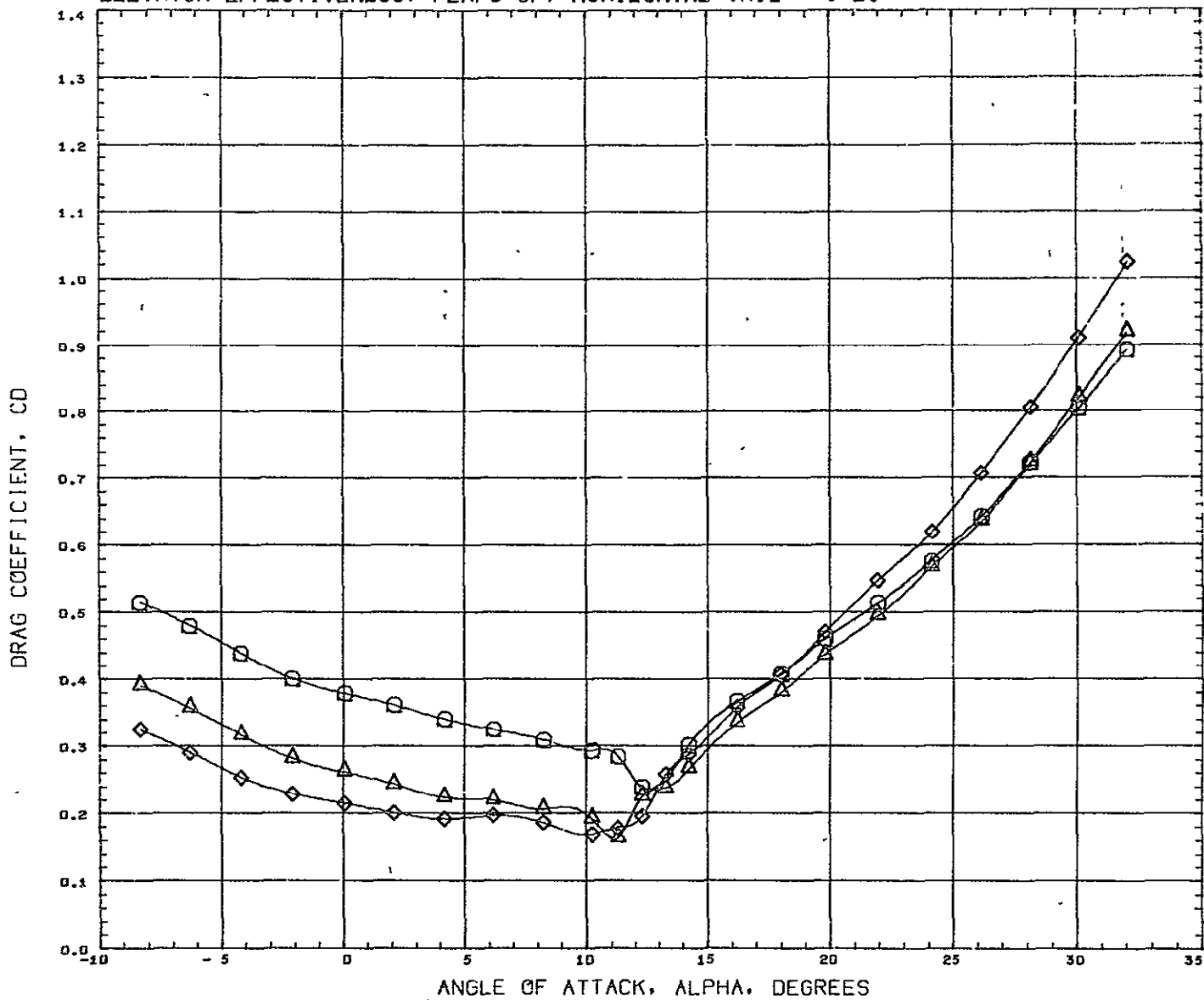
ANGLE OF ATTACK, ALPHA, DEGREES

| ELEVTR  | HTAIL   | BETA  |
|---------|---------|-------|
| -30.000 | -20.000 | 0.000 |
| 0.000   | -20.000 | 0.000 |
| 30.000  | -20.000 | 0.000 |

| REFERENCE INFORMATION |         |         |
|-----------------------|---------|---------|
| REFS                  | 4.4200  | SQ.FT.  |
| REFL                  | 10.1000 | INCHES  |
| REFB                  | 66.6000 | INCHES  |
| XMRP                  | 55.6360 | INCHES  |
| YMRP                  | 0.0000  | INCHES  |
| ZMRP                  | 5.8600  | INCHES  |
| SCALE                 | 2.9920  | PERCENT |

MACH : 0.154

# ELEVATOR EFFECTIVENESS, FLAPS UP, HORIZONTAL TAIL = 0-20



DATA SET SYMBOL    CONFIGURATION DESCRIPTION

(AU1361)    ◻    UVAL-1021 BAC C-6 BOOSTER    B1W1H1V1N1

(AU1181)    ◴    UVAL-1021 BAC C-6 BOOSTER    B1W1H1V1N1

(AU1331)    ◊    UVAL-1021 BAC C-6 BOOSTER    B1W1H1V1N1

ELEVTR    HTAIL    BETA

-30.000    -20.000    0.000

0.000    -20.000    0.000

30.000    -20.000    0.000

REFERENCE INFORMATION

REFS    4 420"    SQ.FT.

REFL    10 1000    INCHES

REFB    66.6200    INCHES

XMRP    55.6360    INCHES

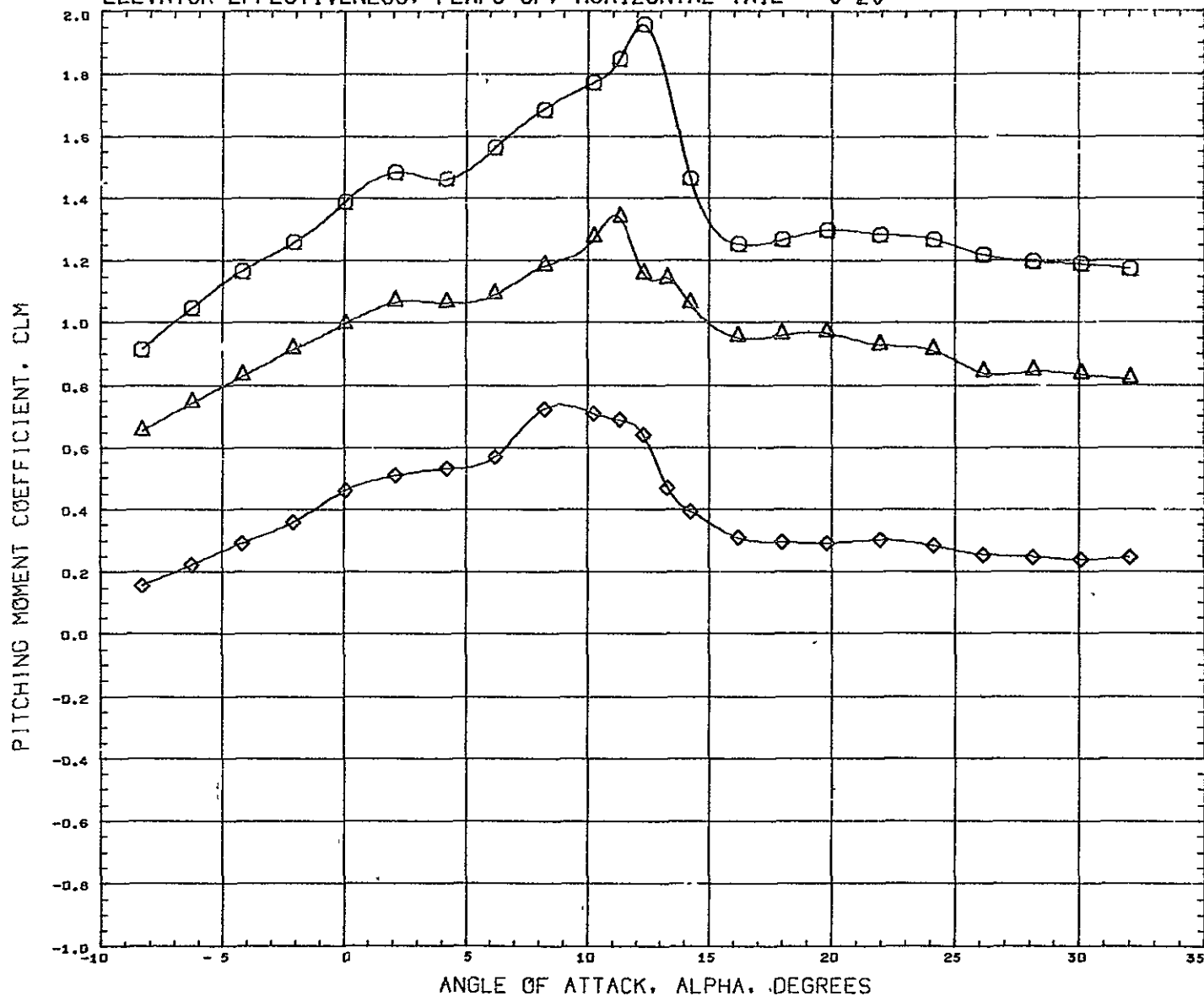
YMRP    0.0000    INCHES

ZMRP    5.8600    INCHES

SCALE    2.9920    PERCENT

MACH    0.154

# ELEVATOR EFFECTIVENESS, FLAPS UP, HORIZONTAL TAIL = 0-20



| DATA SET SYMBOL | CONFIGURATION DESCRIPTION |
|-----------------|---------------------------|
| (AU1361)        | UWAL-1021 BAC C-6 BOOSTER |
| (AU1181)        | UWAL-1021 BAC C-6 BOOSTER |
| (AU1331)        | UWAL-1021 BAC C-6 BOOSTER |

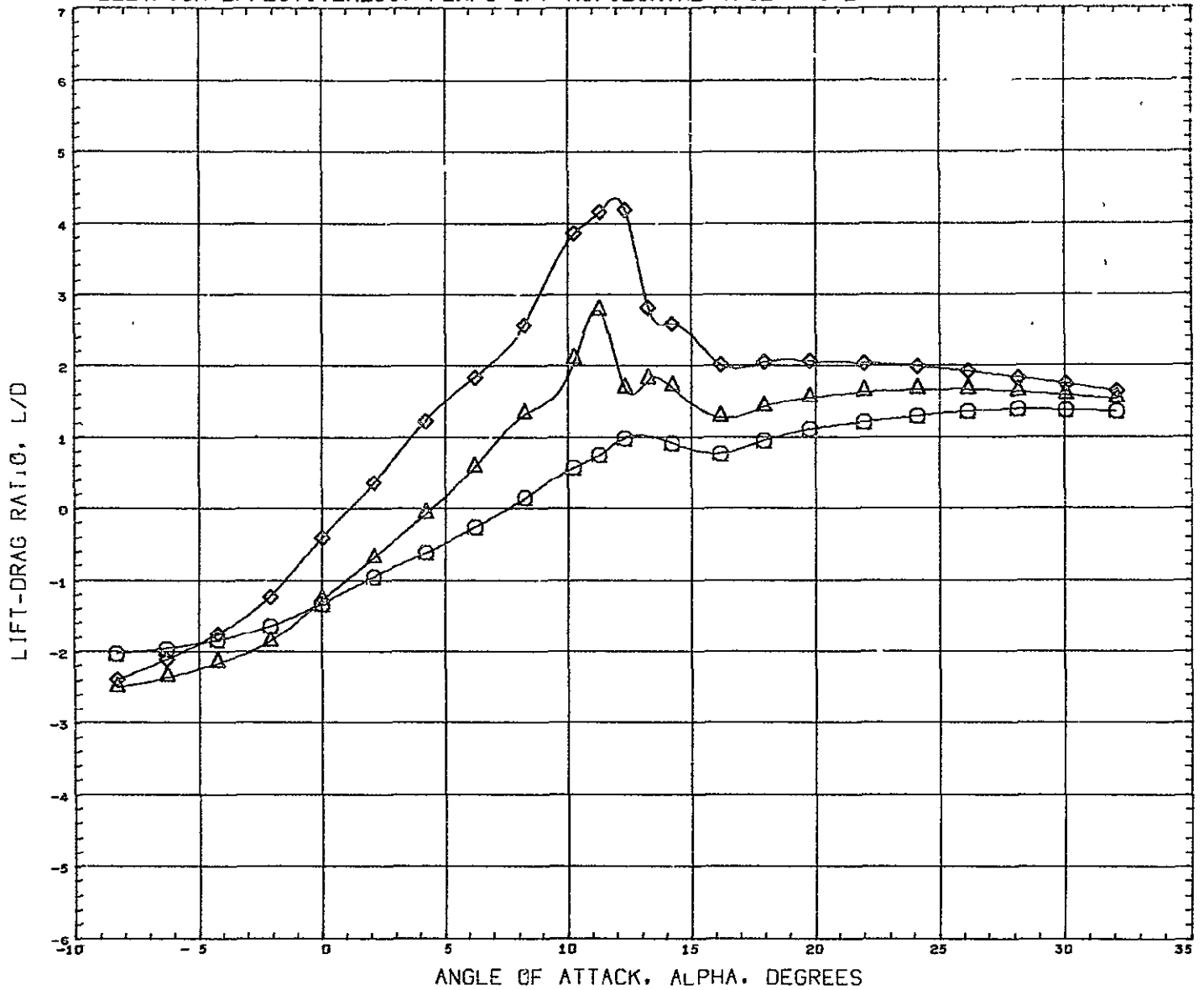
ANGLE OF ATTACK, ALPHA, DEGREES

| ELEVTR  | HTAIL   | BETA  |
|---------|---------|-------|
| -30.000 | -20.000 | 0.000 |
| 0.000   | -20.000 | 0.000 |
| 30.000  | -20.000 | 0.000 |

| REFERENCE INFORMATION |         |         |
|-----------------------|---------|---------|
| REFS                  | 4.4200  | SQ FT.  |
| REFL                  | 10.1000 | INCHES  |
| REFB                  | 66.3000 | INCHES  |
| XMRP                  | 55.6360 | INCHES  |
| YMRP                  | 0.0000  | INCHES  |
| ZMRP                  | 5.8600  | INCHES  |
| SCALE                 | 2.9920  | PERCENT |

MACH 0.154

# ELEVATOR EFFECTIVENESS, FLAPS UP, HORIZONTAL TAIL = 0-20



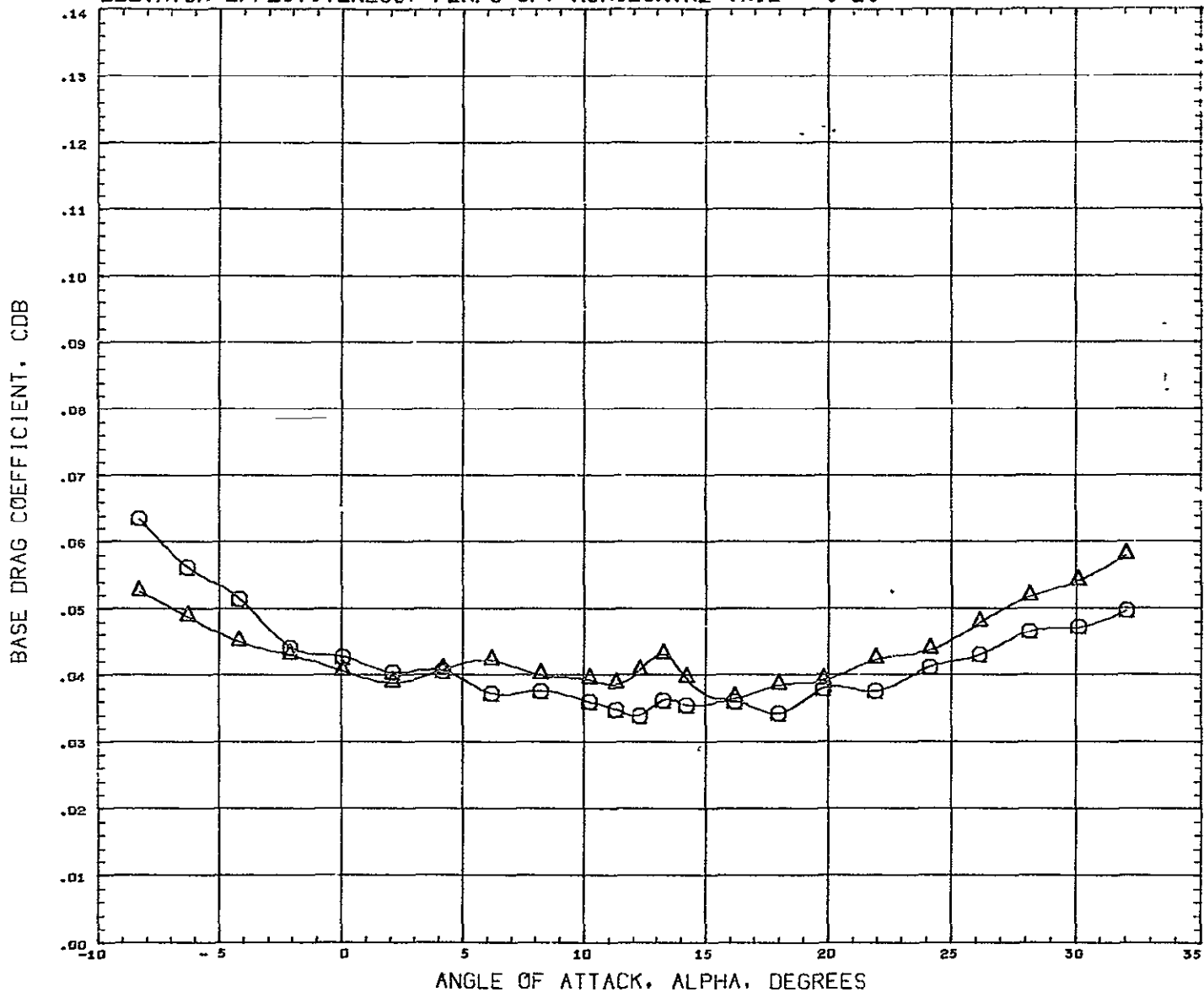
| DATA SET SYMBOL | CONFIGURATION DESCRIPTION |
|-----------------|---------------------------|
| (AU1361)        | UWAL-1021 BAC C-6 BOOSTER |
| (AU1381)        | UWAL-1021 BAC C-6 BOOSTER |
| (AU1331)        | UWAL-1021 BAC C-6 BOOSTER |

| ELEVTR  | HTAIL   | BETA  |
|---------|---------|-------|
| -30.000 | -20.000 | 0.000 |
| 0.000   | -20.000 | 0.000 |
| 30.000  | -20.000 | 0.000 |

| REFERENCE INFORMATION |                |
|-----------------------|----------------|
| REFS                  | 4.42116 SQ.FT. |
| REFL                  | 16.1000 INCHES |
| REFB                  | 66.8000 INCHES |
| XMRP                  | 55.6360 INCHES |
| YMRP                  | 0.0000 INCHES  |
| ZMRP                  | 5.8600 INCHES  |
| SCALE                 | 2.9920 PERCENT |

MACH 0.154

# ELEVATOR EFFECTIVENESS, FLAPS UP, HORIZONTAL TAIL = 0-20



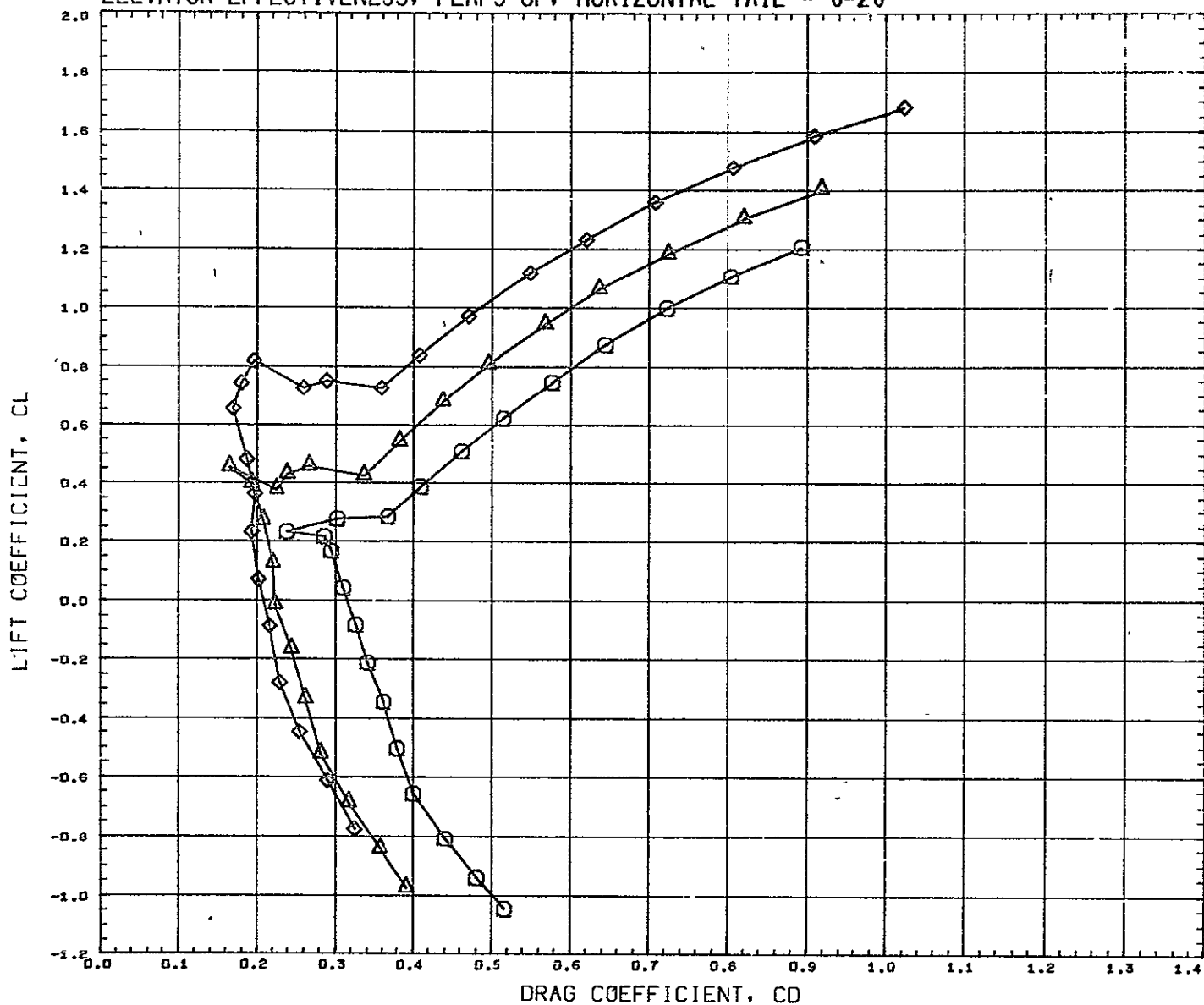
| DATA SET SYMBOL | CONFIGURATION DESCRIPTION |
|-----------------|---------------------------|
| (AU1181)        | UAL-1021 BAC C-6 BOOSTER  |
| (AU1331)        | UAL-1021 BAC C-6 BOOSTER  |

| ELEVTR | HTAIL   | BETA  |
|--------|---------|-------|
| 0.000  | -20.000 | 0.000 |
| 30.000 | -20.000 | 0.000 |

| REFERENCE INFORMATION |         |         |
|-----------------------|---------|---------|
| REFS                  | 4.420"  | SQ.FT   |
| REFL                  | 10.1000 | INCHES  |
| REFB                  | 66.6000 | INCHES  |
| XMRP                  | 55.6360 | INCHES  |
| YMRP                  | 0.0000  | INCHES  |
| ZMRP                  | 5.8600  | INCHES  |
| SCALE                 | 2.9920  | PERCENT |

NACH 0.154

# ELEVATOR EFFECTIVENESS, FLAPS UP, HORIZONTAL TAIL = 0-20



| DATA SET SYMBOL | CONFIGURATION DESCRIPTION |
|-----------------|---------------------------|
| (AU1361)        | UVAL-1021 BAC C-6 BOOSTER |
| (AU1181)        | UVAL-1021 BAC C-6 BOOSTER |
| (AU1391)        | UVAL-1021 BAC C-6 BOOSTER |

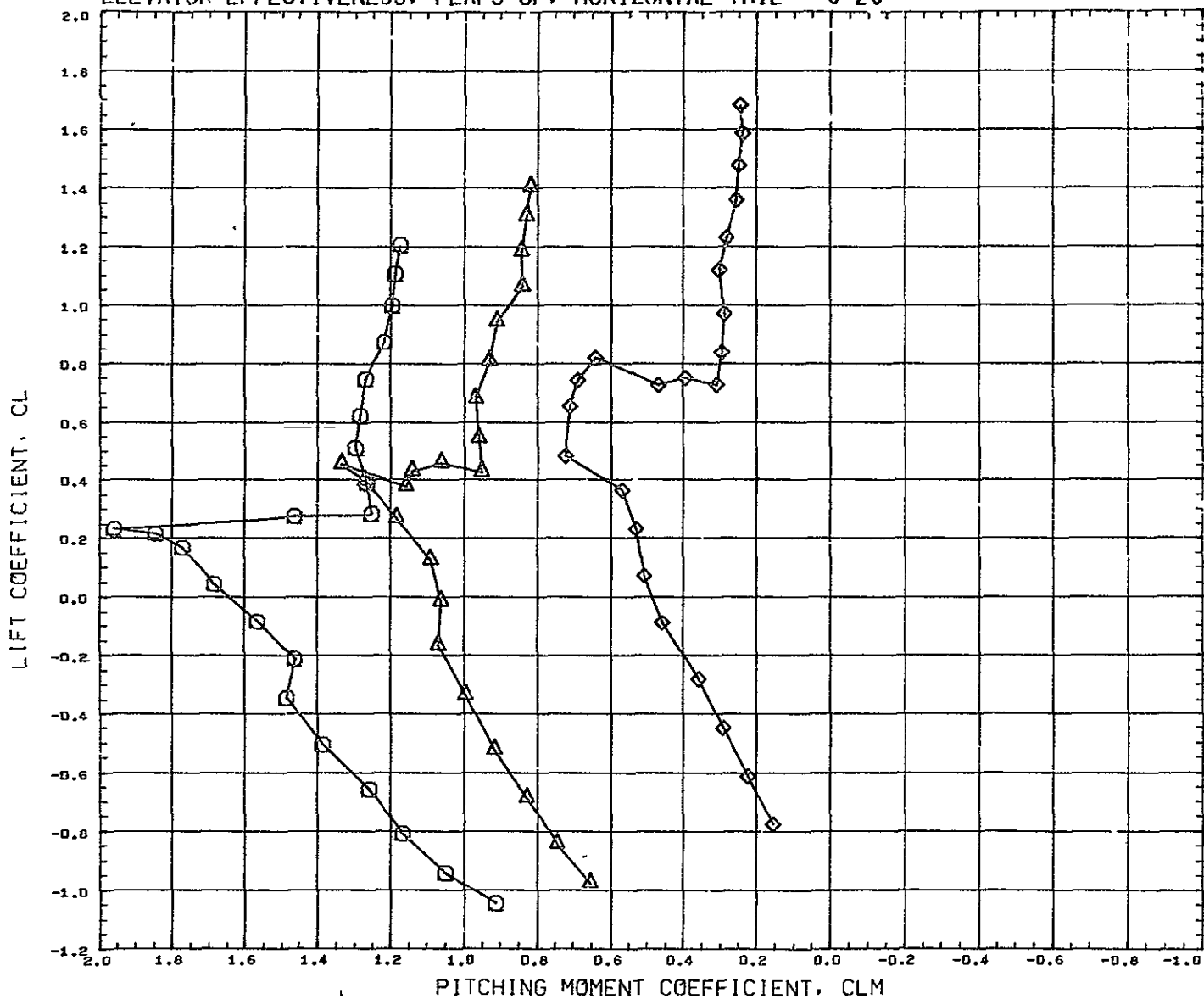
|            |
|------------|
| B1W1H1V1N1 |
| B1W1H1V1N1 |
| B1W1H1V1N1 |

| ELEVTR  | HTAIL   | BETA  |
|---------|---------|-------|
| -30.000 | -20.000 | 0.000 |
| 0.000   | -20.000 | 0.000 |
| 30.000  | -20.000 | 0.000 |

| REFERENCE INFORMATION |                |
|-----------------------|----------------|
| REFS                  | 4.4250 SQ.FT.  |
| REFL                  | 10.1630 INCHES |
| REFB                  | 66.6000 INCHES |
| XMRF                  | 55.6360 INCHES |
| YMRP                  | 0.0000 INCHES  |
| ZMRP                  | 5.8600 INCHES  |
| SCALE                 | 2.9920 PERCENT |

MACH 0.154

# ELEVATOR EFFECTIVENESS, FLAPS UP, HORIZONTAL TAIL = 0-20



| DATA SET SYMBOL | CONFIGURATION DESCRIPTION |
|-----------------|---------------------------|
| (AU1361)        | UWAL-1021 BAC C-6 BOOSTER |
| (AU1181)        | UWAL-1021 BAC C-6 BOOSTER |
| (AU1331)        | UWAL-1021 BAC C-6 BOOSTER |

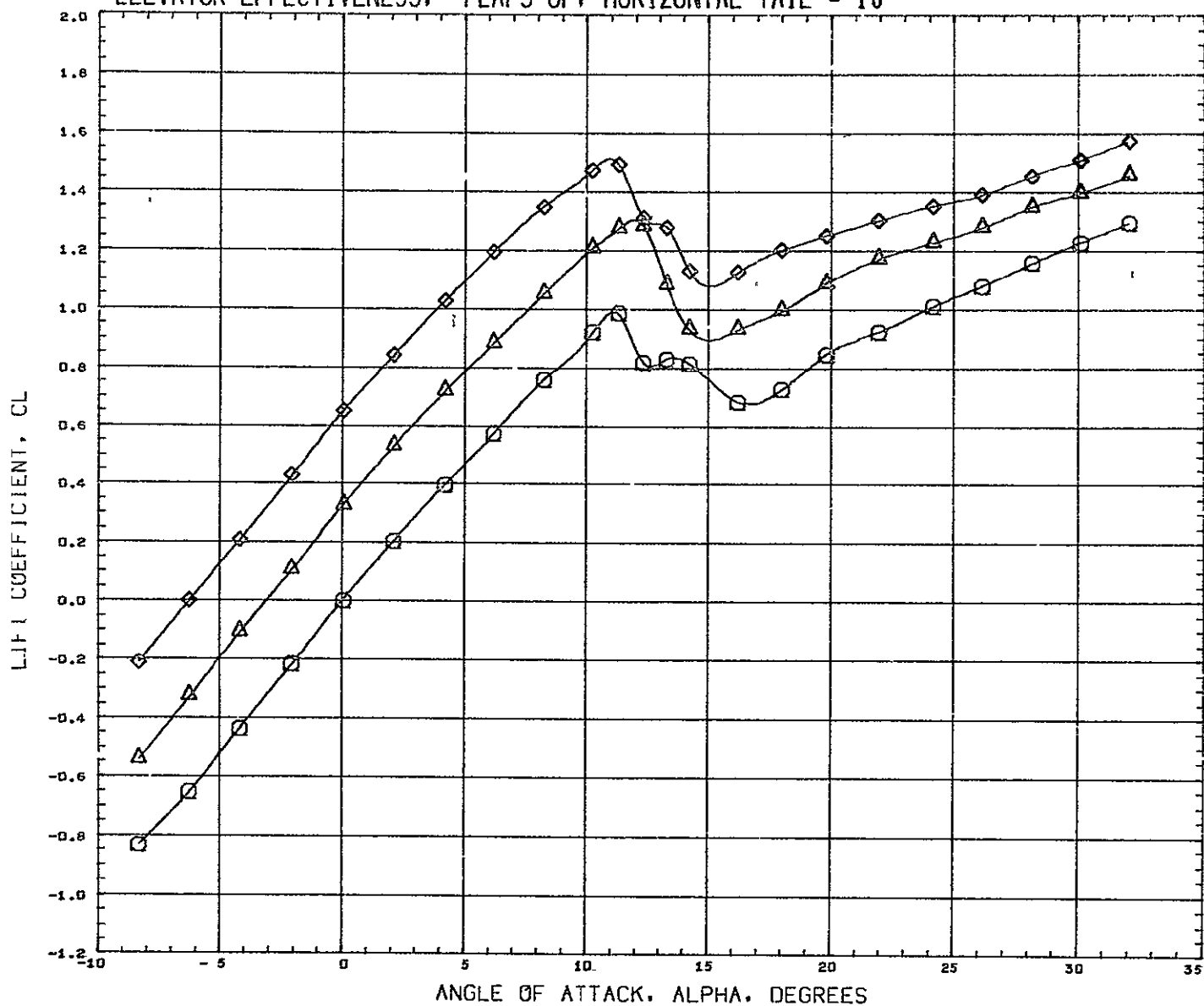
PITCHING MOMENT COEFFICIENT, CLM

| ELEVTR  | HTAIL   | BETA  |
|---------|---------|-------|
| -30.000 | -20.000 | 0.000 |
| 0.000   | -20.000 | 0.000 |
| 30.000  | -20.000 | 0.000 |

| REFERENCE INFORMATION |         |         |
|-----------------------|---------|---------|
| REFS                  | 4.4200  | SQ.FT.  |
| RETL                  | 10.1000 | INCHES  |
| REFB                  | 66.6000 | INCHES  |
| XMRP                  | 55.6360 | INCHES  |
| YMRP                  | 0.0000  | INCHES  |
| ZMRP                  | 5.8600  | INCHES  |
| SCALE                 | 2.9920  | PERCENT |

MACH 0.154

# ELEVATOR EFFECTIVENESS, FLAPS UP, HORIZONTAL TAIL = 10



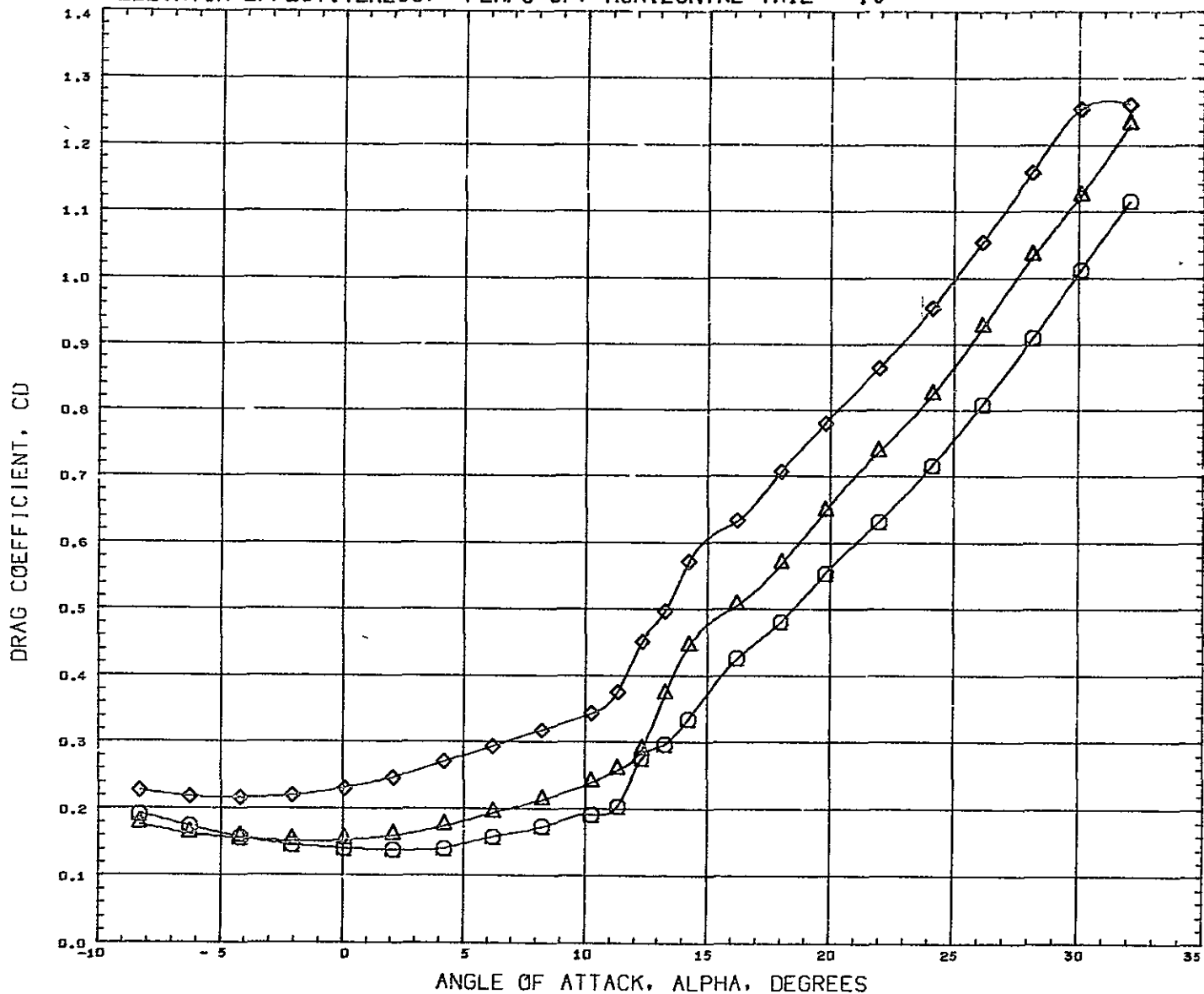
| DATA SET SYMBOL | CONFIGURATION DESCRIPTION |
|-----------------|---------------------------|
| (AU1351)        | UWAL-1021 BAC C-6 BOOSTER |
| (AU1201)        | UWAL-1021 BAC C-6 BOOSTER |
| (AU1341)        | UWAL-1021 BAC C-6 BOOSTER |

| ELEVTR  | HTAIL  | BETA  |
|---------|--------|-------|
| -30.000 | 10.000 | 0.000 |
| 0.000   | 10.000 | 0.000 |
| 30.000  | 10.000 | 0.000 |

| REFERENCE INFORMATION |                |
|-----------------------|----------------|
| REFS                  | 4.4200 SQ.FT.  |
| REFL                  | 10.1000 INCHES |
| REFB                  | 66.6000 INCHES |
| XMRP                  | 55.6360 INCHES |
| YMRP                  | 0.0000 INCHES  |
| ZMRP                  | 5.8600 INCHES  |
| SCALE                 | 2.9920 PERCENT |

MACH 0.154

# ELEVATOR EFFECTIVENESS, FLAPS UP, HORIZONTAL TAIL = 10



| DATA SET SYMBOL | CONFIGURATION DESCRIPTION |
|-----------------|---------------------------|
| (AU1351)        | UVAL-1021 BAC C-6 BOOSTER |
| (AU1201)        | UVAL-1021 BAC C-6 BOOSTER |
| (AU1341)        | UVAL-1021 BAC C-6 BOOSTER |

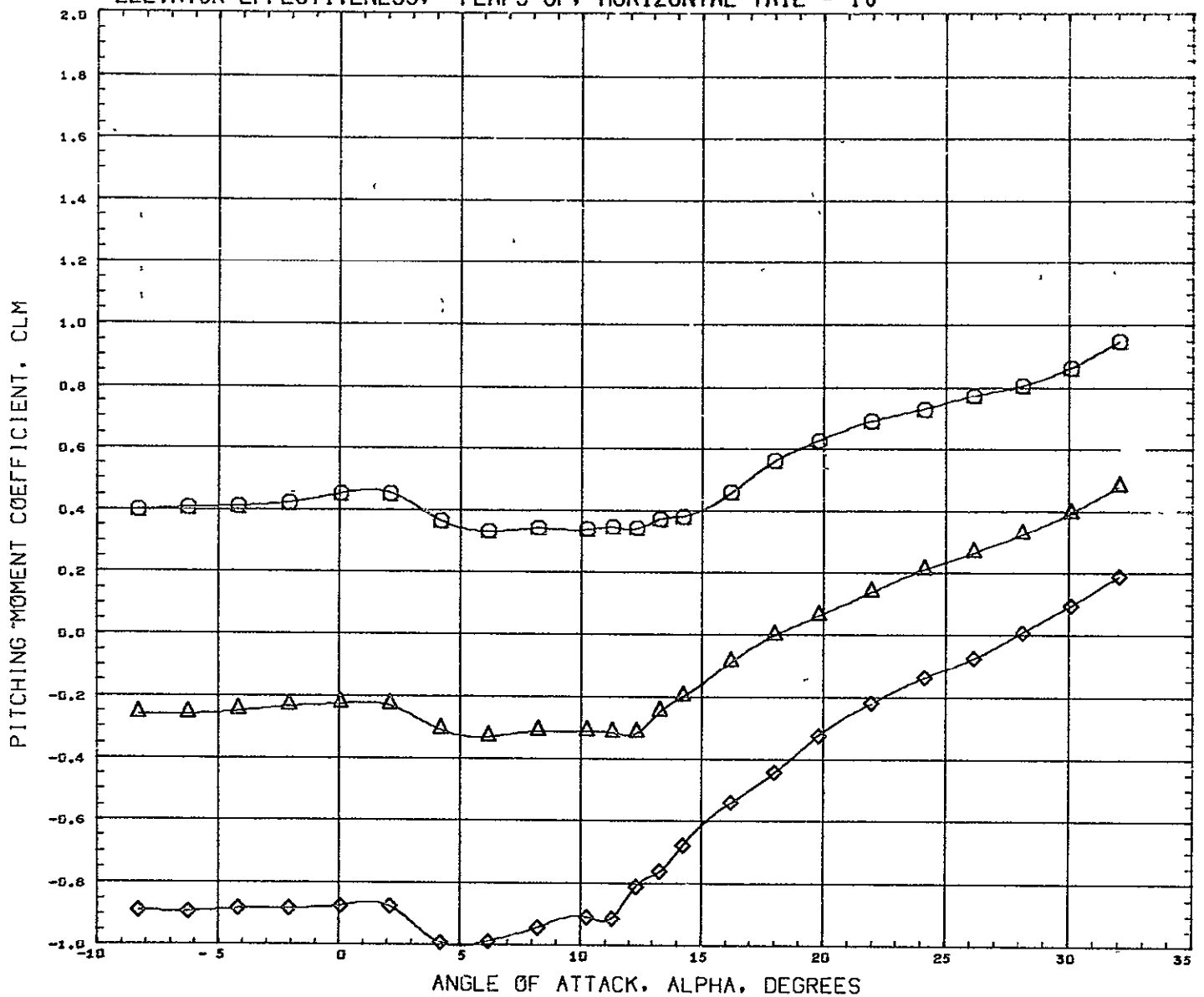
ANGLE OF ATTACK, ALPHA, DEGREES

| ELEVTR  | HTAIL  | BETA  |
|---------|--------|-------|
| -30.000 | 10.000 | 0.000 |
| 0.000   | 10.000 | 0.000 |
| 30.000  | 10.000 | 0.000 |

| REFERENCE INFORMATION |         |         |
|-----------------------|---------|---------|
| REFS                  | 4.4200  | SQ.FT.  |
| REFL                  | 10.1000 | INCHES  |
| REFB                  | 66.6000 | INCHES  |
| XMRP                  | 55.6360 | INCHES  |
| YMRP                  | 0.0000  | INCHES  |
| ZMRP                  | 5.0600  | INCHES  |
| SCALE                 | 2.9920  | PERCENT |

MACH 0.154

# ELEVATOR EFFECTIVENESS, FLAPS UP, HORIZONTAL TAIL = 10



DATA SET SYMBOL CONFIGURATION DESCRIPTION

(AUI351) UWAL-1021 BAC C-6 BOOSTER B1W1H1V1N1

(AUI201) UWAL-1021 BAC C-6 BOOSTER B1W1H1V1N1

(AUI341) UWAL-1021 BAC C-6 BOOSTER B1W1H1V1N1

ELEVTR HTAIL BETA

-30.000 10.000 0.000

0.000 10.000 0.000

30.000 10.000 0.000

REFERENCE INFORMATION

REFS 4.4210 SQ.FT.

REFL 10.1000 INCHES

REFB 66.5000 INCHES

XMRP 55.6360 INCHES

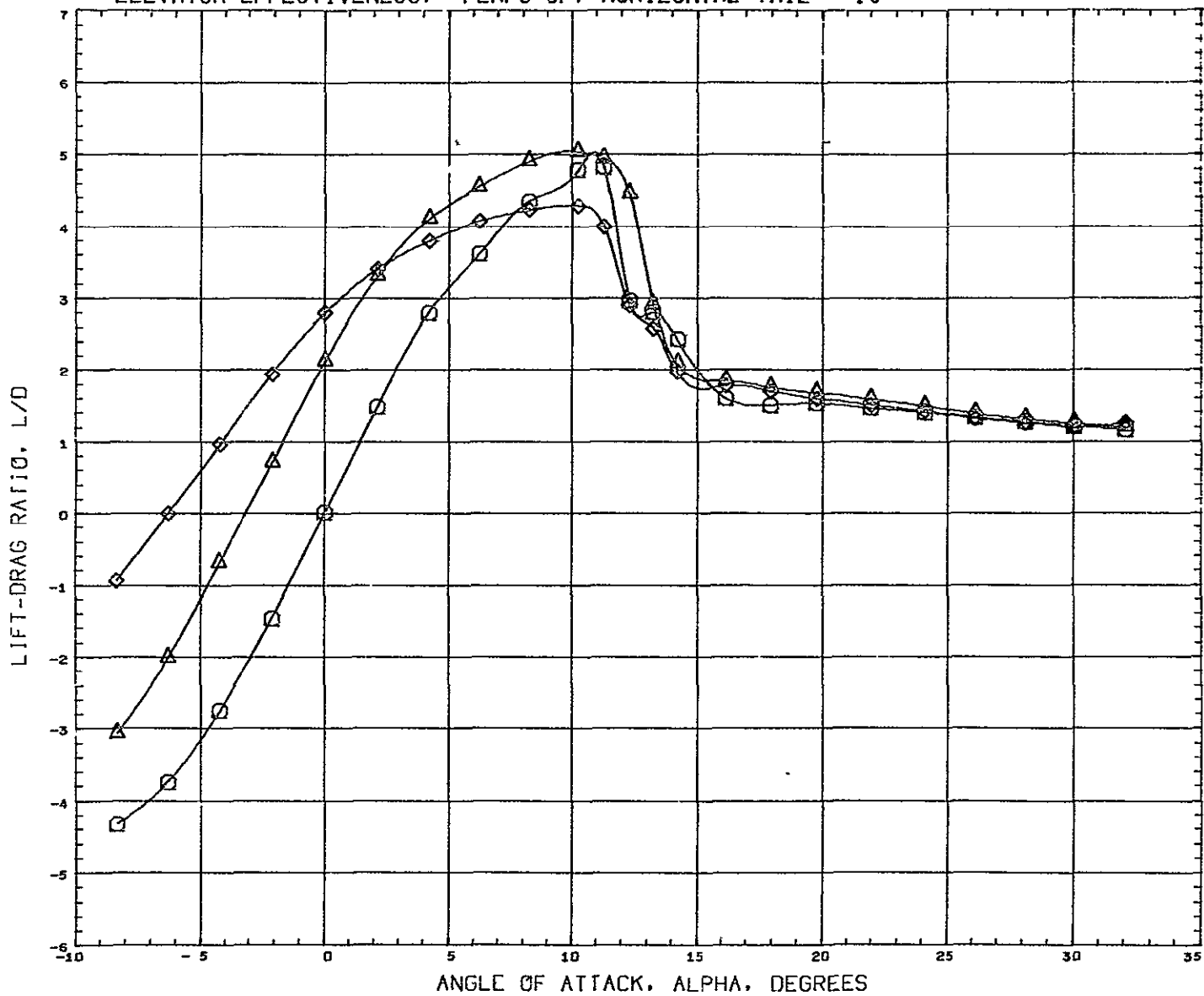
YMRP 0.0000 INCHES

ZMRP 5.8600 INCHES

SCALE 2.9920 PERCENT

MACH 0.154

# ELEVATOR EFFECTIVENESS, FLAPS UP, HORIZONTAL TAIL = 10



DATA SET SYMBOL CONFIGURATION DESCRIPTION  
 (AU1351)  $\square$  UVAL-1021 BAC C-6 BOOSTER  
 (AU1201)  $\triangle$  UVAL-1021 BAC C-6 BOOSTER  
 (AU1341)  $\diamond$  UVAL-1021 BAC C-6 BOOSTER

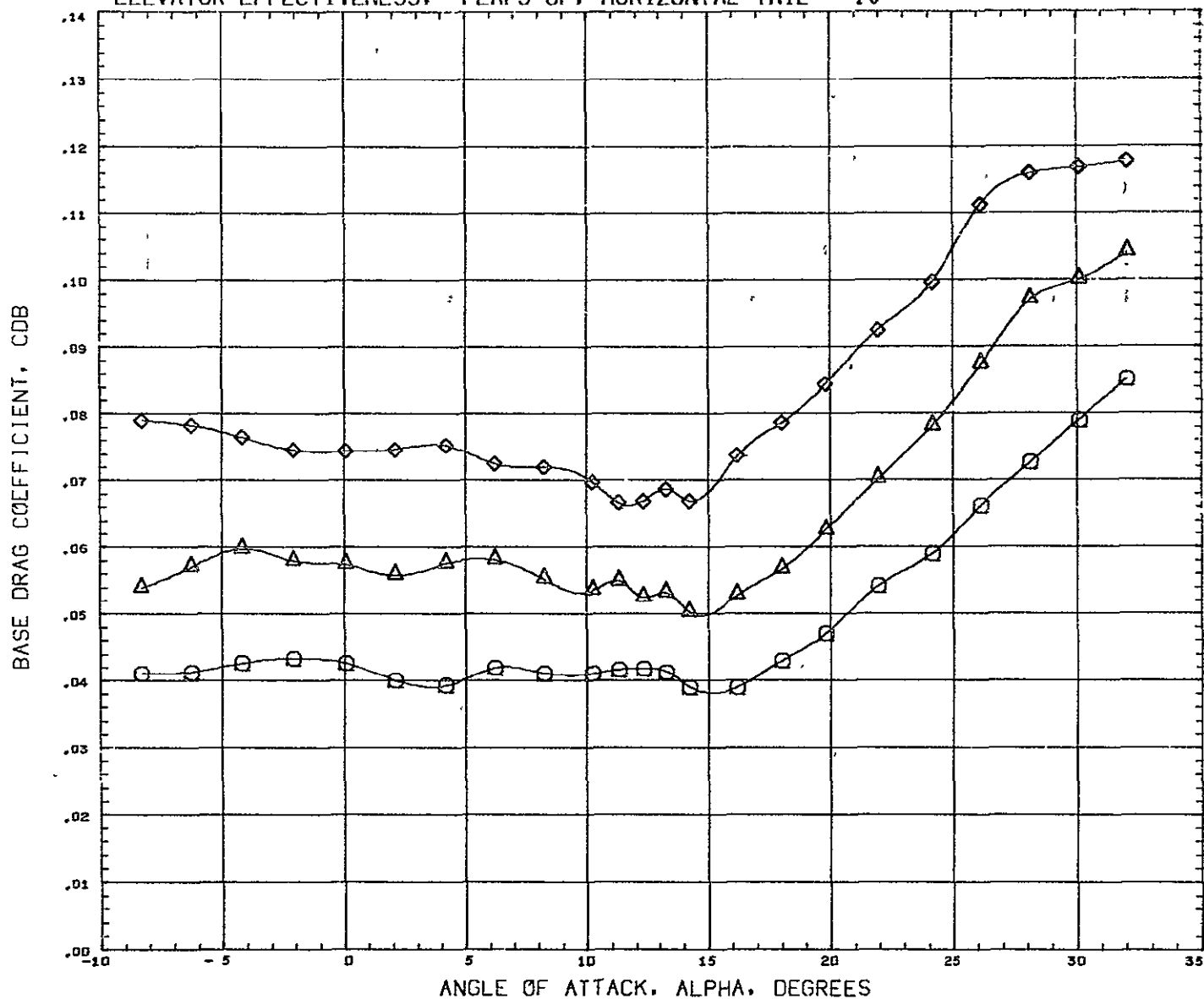
B1W1H1V1N1  
 B1W1H1V1N1  
 B1W1H1V1N1

ELEVTR HTAIL BETA  
 -30.000 10.000 0.000  
 0.000 10.000 0.000  
 30.000 10.000 0.000

REFERENCE INFORMATION  
 REFS 4.4210 SQ.FT.  
 REFL 16.1000 INCHES  
 REFB 66.8000 INCHES  
 XMRP 55.6360 INCHES  
 YMRP 0.0000 INCHES  
 ZMRP 5.8600 INCHES  
 SCALE 2.9920 PERCENT

MACH 0.154

# ELEVATOR EFFECTIVENESS, FLAPS UP, HORIZONTAL TAIL = 10



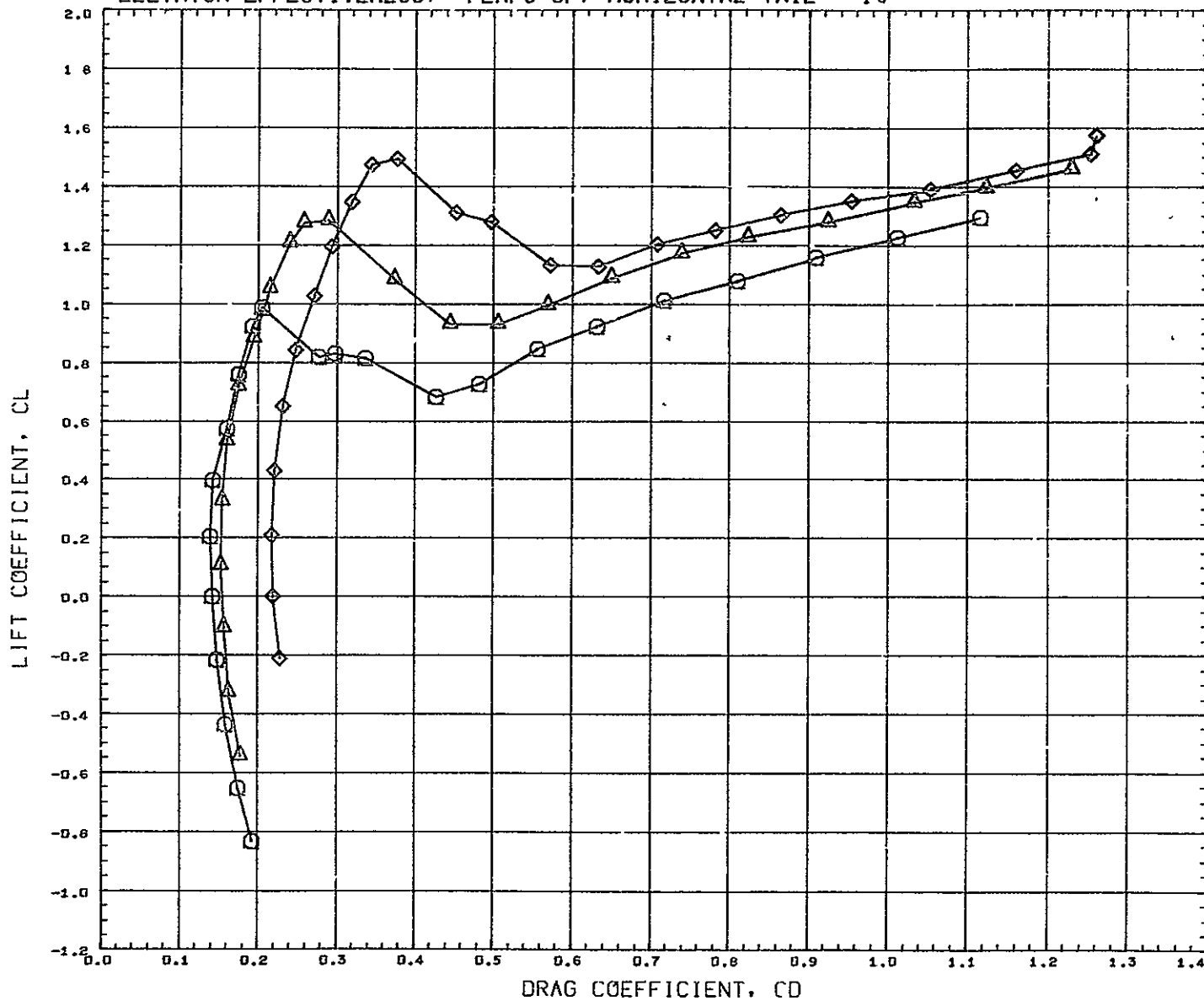
| DATA SET SYMBOL | CONFIGURATION DESCRIPTION |
|-----------------|---------------------------|
| (AU1351)        | UVAL-1021 BAC C-6 BOOSTER |
| (AU1204)        | UVAL-1021 BAC C-6 BOOSTER |
| (AU1341)        | UVAL-1021 BAC C-6 BOOSTER |

| ELEVTR  | HTAIL  | BETA  |
|---------|--------|-------|
| -30.000 | 10.000 | 0.000 |
| 0.000   | 10.000 | 0.000 |
| 30.000  | 10.000 | 0.000 |

| REFERENCE INFORMATION |         |         |
|-----------------------|---------|---------|
| REFS                  | 4.420J  | SQ.FT.  |
| REFL                  | 10.1000 | INCHES  |
| REFB                  | 66.6000 | INCHES  |
| XMRP                  | 55.6360 | INCHES  |
| ZMRP                  | 5.8600  | INCHES  |
| SCALE                 | 2.9920  | PERCENT |

HACH D.154

# ELEVATOR EFFECTIVENESS, FLAPS UP, HORIZONTAL TAIL = 10



DRAG COEFFICIENT, CD

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION |
|-----------------|---------------------------|
| (AU1351)        | UWAL-1021 BAC C-6 BOOSTER |
| (AU1201)        | UWAL-1021 BAC C-6 BOOSTER |
| (AU1341)        | UWAL-1021 BAC C-6 BOOSTER |

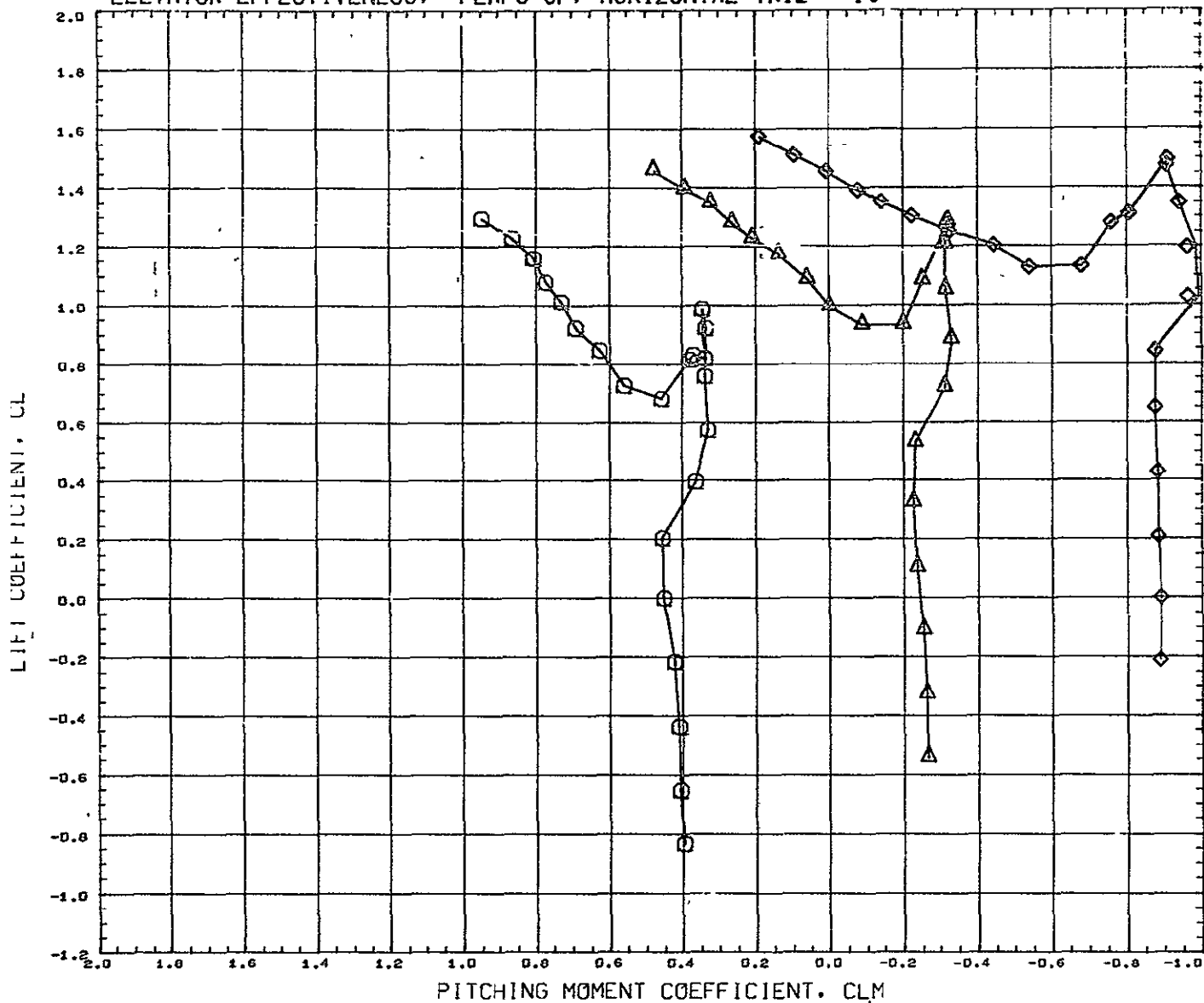
| B1W1H1V1N1 |
|------------|
| B1W1H1V1N1 |
| B1W1H1V1N1 |

| ELEVTR  | HTAIL  | BETA  |
|---------|--------|-------|
| -30.000 | 10.000 | 0.000 |
| 0.000   | 10.000 | 0.000 |
| 30.000  | 10.000 | 0.000 |

| REFERENCE INFORMATION |         |         |
|-----------------------|---------|---------|
| REFS                  | 4.4200  | SQ.FT.  |
| REFL                  | 10.1000 | INCHES  |
| REFB                  | 66.0000 | INCHES  |
| XMRP                  | 55.6360 | INCHES  |
| YMRP                  | 0.0000  | INCHES  |
| ZMRP                  | 5.8600  | INCHES  |
| SCALE                 | 2.9920  | PERCENT |

MACH 0.254

# ELEVATOR EFFECTIVENESS, FLAPS UP, HORIZONTAL TAIL = 10



| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION |
|----------|--------|---------------------------|
| (AUI351) | ○      | UWAL-1021 BAC C-6 BOOSTER |
| (AUI201) | △      | UWAL-1021 BAC C-6 BOOSTER |
| (AUI341) | ◇      | UWAL-1021 BAC C-6 BOOSTER |

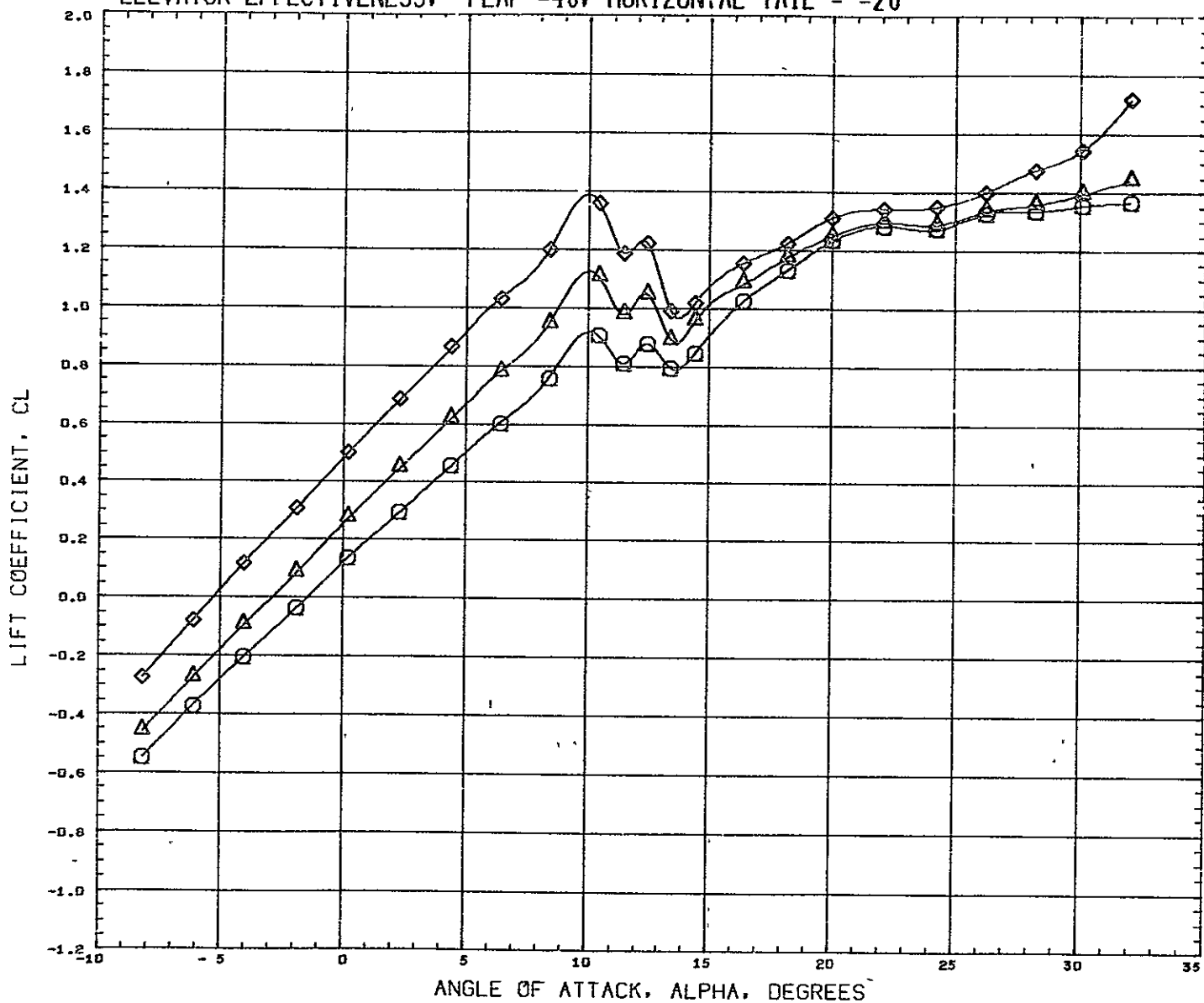
PITCHING MOMENT COEFFICIENT, CLM

| ELEVTR  | HTAIL  | BETA  |
|---------|--------|-------|
| -30.000 | 10.000 | 0.000 |
| 0.000   | 10.000 | 0.000 |
| 30.000  | 10.000 | 0.000 |

| REFERENCE INFORMATION |                |
|-----------------------|----------------|
| REFS                  | 4.4200 SQ.FT.  |
| REFL                  | 10.100L INCHES |
| REFB                  | 66.6070 INCHES |
| XMRP                  | 55.6360 INCHES |
| YMRP                  | 0.0000 INCHES  |
| ZMRP                  | 5.8600 INCHES  |
| SCALE                 | 2.9920 PERCENT |

MACH 0.154

# ELEVATOR EFFECTIVENESS, FLAP =40, HORIZONTAL TAIL = -20



| DATA SET SYMBOL | CONFIGURATION DESCRIPTION |
|-----------------|---------------------------|
| (AU1291)        | UVAL-1021 BAC C-6 BOOSTER |
| (AU1151)        | UVAL-1021 BAC C-6 BOOSTER |
| (AU1321)        | UVAL-1021 BAC C-6 BOOSTER |

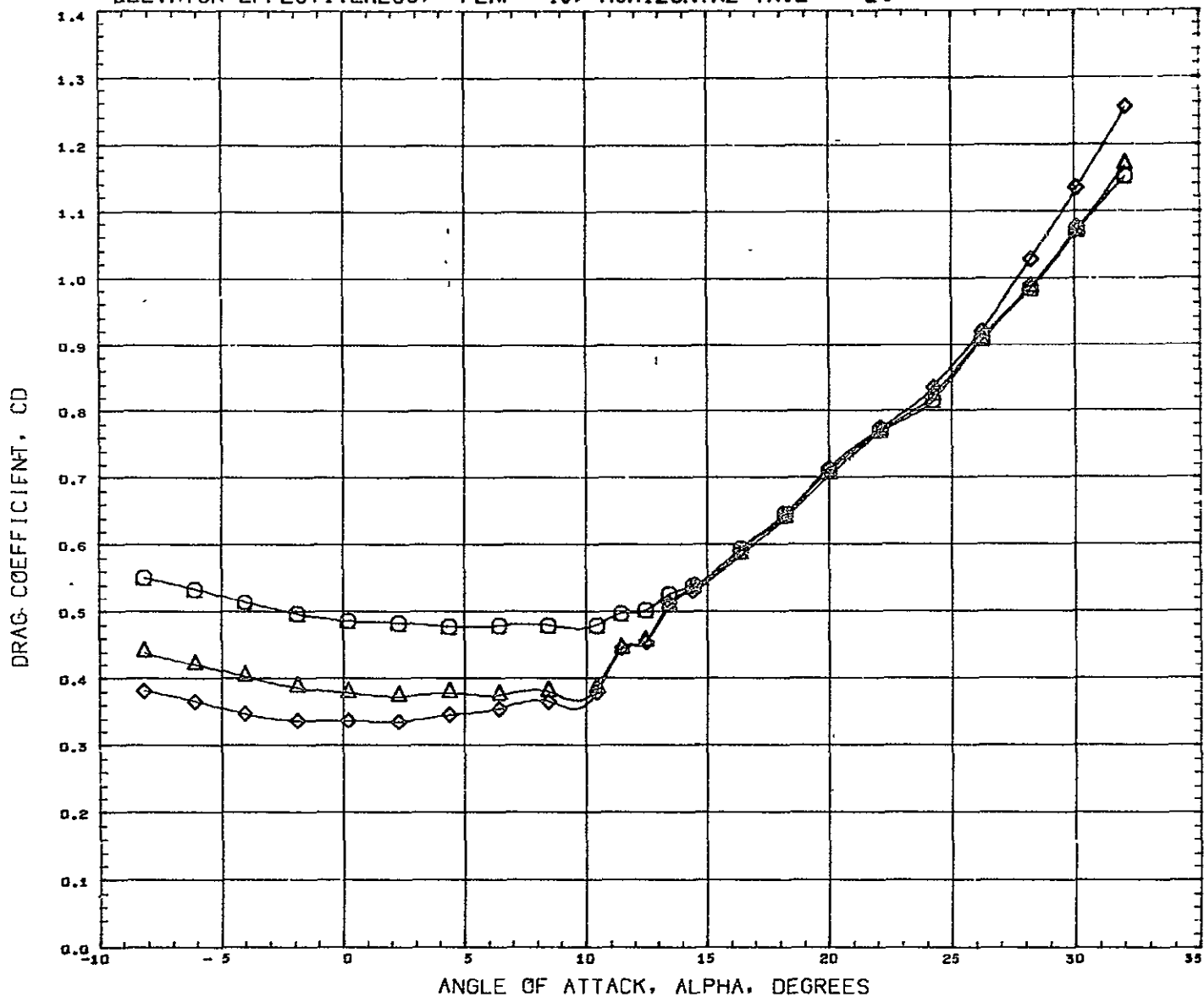
ANGLE OF ATTACK, ALPHA, DEGREES

| ELEVTR  | HTAIL   | BETA  |
|---------|---------|-------|
| -30.000 | -20.000 | 0.000 |
| 0.000   | -20.000 | 0.000 |
| 30.000  | -20.000 | 0.000 |

| REFERENCE INFORMATION |                |
|-----------------------|----------------|
| REFS                  | 4.4276 SQ.FT.  |
| REFL                  | 10.1000 INCHES |
| REFB                  | 66.6000 INCHES |
| XMRP                  | 55.6360 INCHES |
| YMRP                  | 0.0000 INCHES  |
| ZMRP                  | 5.8690 INCHES  |
| SCALE                 | 2.9920 PERCENT |

MACH C 0.155

# ELEVATOR EFFECTIVENESS, FLAP = 40, HORIZONTAL TAIL = -20



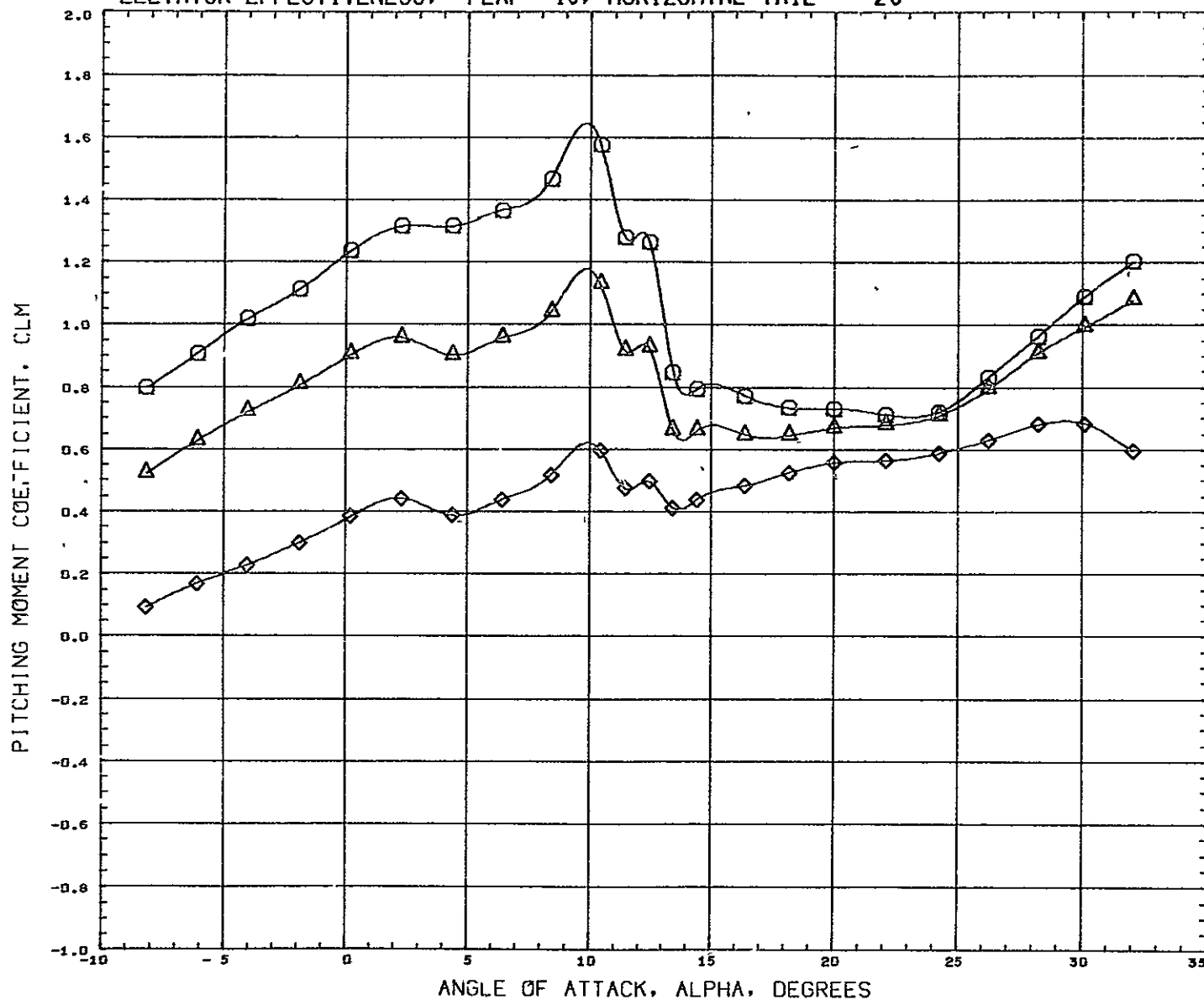
| DATA SET SYMBOL | CONFIGURATION DESCRIPTION |
|-----------------|---------------------------|
| (AU1291)        | UWAL-1021 BAC C-6 BOOSTER |
| (AU1151)        | UWAL-1021 BAC C-6 BOOSTER |
| (AU1321)        | UWAL-1021 BAC C-6 BOOSTER |

| ELEVTR  | HTAIL   | BETA  |
|---------|---------|-------|
| -30.000 | -20.000 | 0.000 |
| 0.000   | -20.000 | 0.000 |
| 30.000  | -20.000 | 0.000 |

| REFERENCE INFORMATION |        |         |
|-----------------------|--------|---------|
| REFS                  | 4.420  | SQ FT.  |
| REFL                  | 10.100 | INCHES  |
| REFB                  | 66.600 | INCHES  |
| XMRP                  | 55.636 | INCHES  |
| YMRP                  | 0.000  | INCHES  |
| ZMRP                  | 5.860  | INCHES  |
| SCALE                 | 2.992  | PERCENT |

HACH 0.155

# ELEVATOR EFFECTIVENESS, FLAP =40, HORIZONTAL TAIL = -20



DATA SET SYMBOL CONFIGURATION DESCRIPTION

(AU1291)  $\circ$  UVAL-1021 BAC C-6 BOOSTER

(AU1151)  $\triangle$  UVAL-1021 BAC C-6 BOOSTER

(AU1321)  $\diamond$  UVAL-1021 BAC C-6 BOOSTER

B1W1H1V1N1F140

B1W1H1V1N1F140

B1W1H1V1N1F140

ELEVTR HTAIL BETA

-30.000 -20.000 0.000

0.000 -20.000 0.000

30.000 -20.000 0.000

REFERENCE INFORMATION

REFS 4.4200 SQ.FT.

REFL 19.1000 INCHES

REFB 66.6000 INCHES

XMRP 55.6360 INCHES

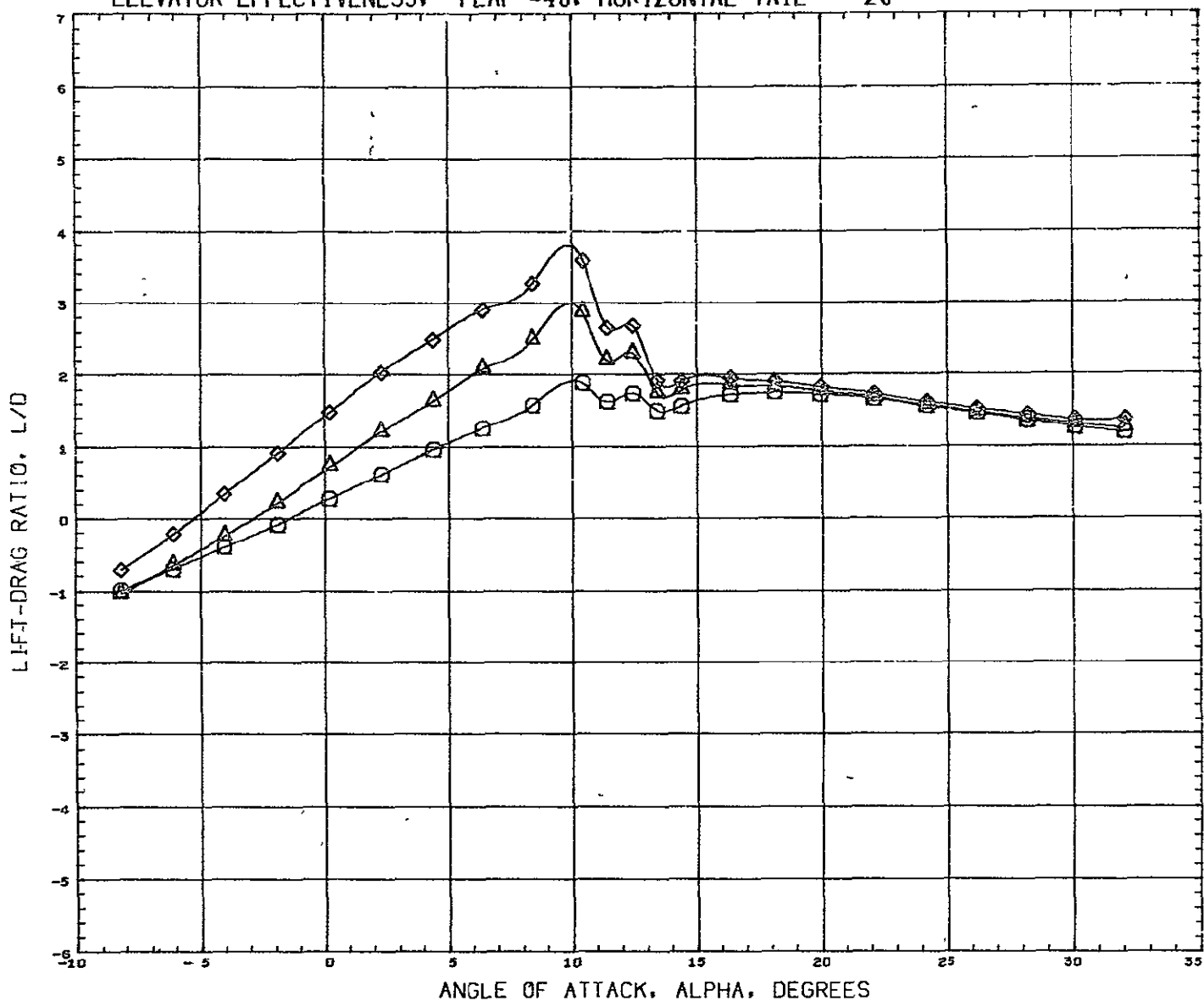
YNRP 0.0000 INCHES

ZMRP 5.8600 INCHES

SCALE 2.9920 PERCENT

MACH 0.155

# ELEVATOR EFFECTIVENESS, FLAP = 40, HORIZONTAL TAIL = -20



DATA SET SYMBOL CONFIGURATION DESCRIPTION  
 (AU1291) UVAL-1021 BAC C-6 BOOSTER  
 (AU1151) UVAL-1021 BAC C-6 BOOSTER  
 (AU1321) UVAL-1021 BAC C-6 BOOSTER

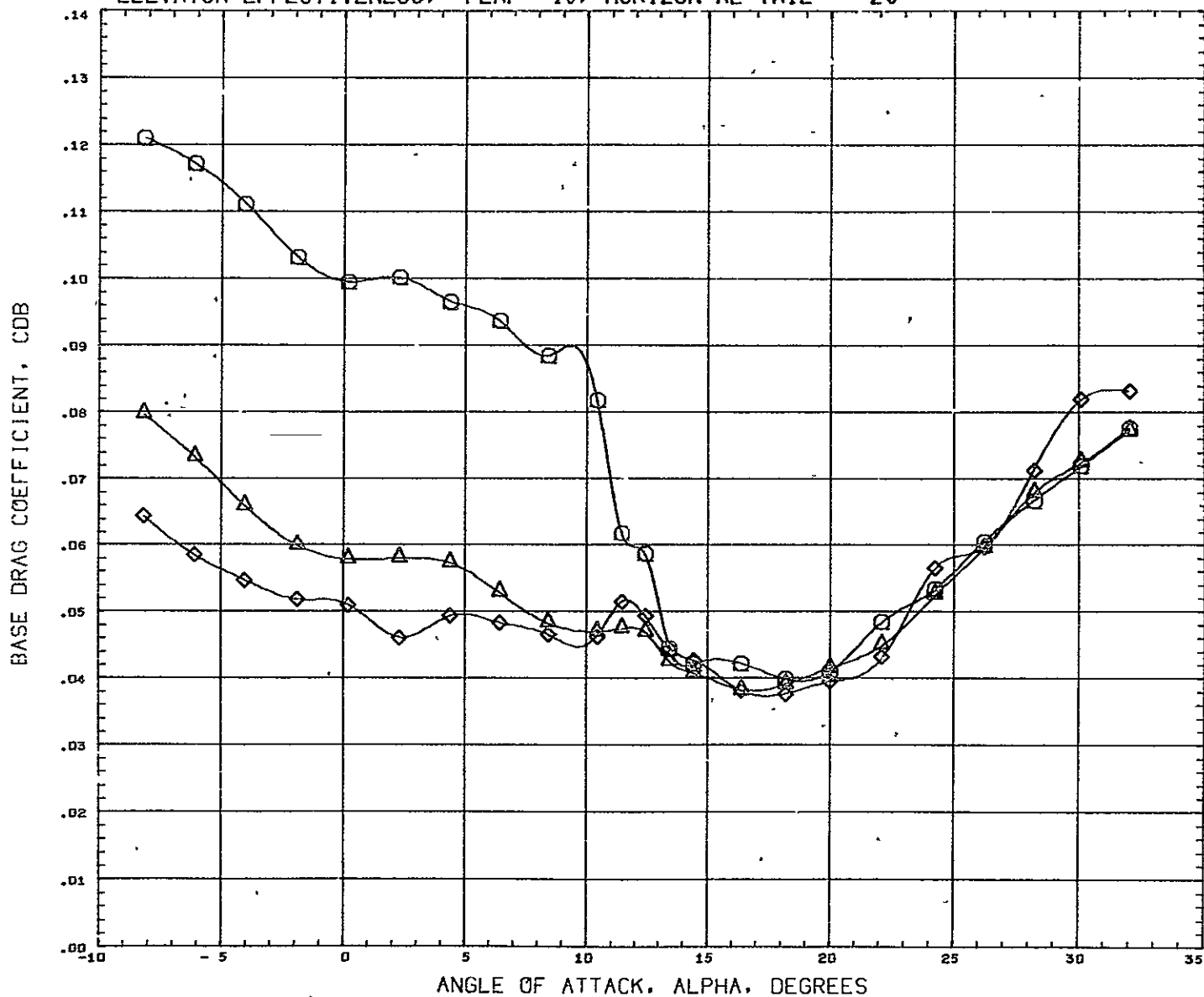
B1W1H1V1N1F140  
 B1W1H1V1N1F140  
 B1W1H1V1N1F140

ELEVTR HTAIL BETA  
 -30.000 -20.000 0.000  
 0.000 -20.000 0.000  
 30.000 -20.000 0.000

REFERENCE INFORMATION  
 REFS 4.4203 SQ.FT.  
 REFL 10.1006 INCHES  
 REFB 66.0000 INCHES  
 XMRP 55.6360 INCHES  
 YMRP 0.0000 INCHES  
 ZMRP 5.8600 INCHES  
 SCALE 2.9920 PERCENT

MACH 0.155

# ELEVATOR EFFECTIVENESS, FLAP =40, HORIZONTAL TAIL = -20



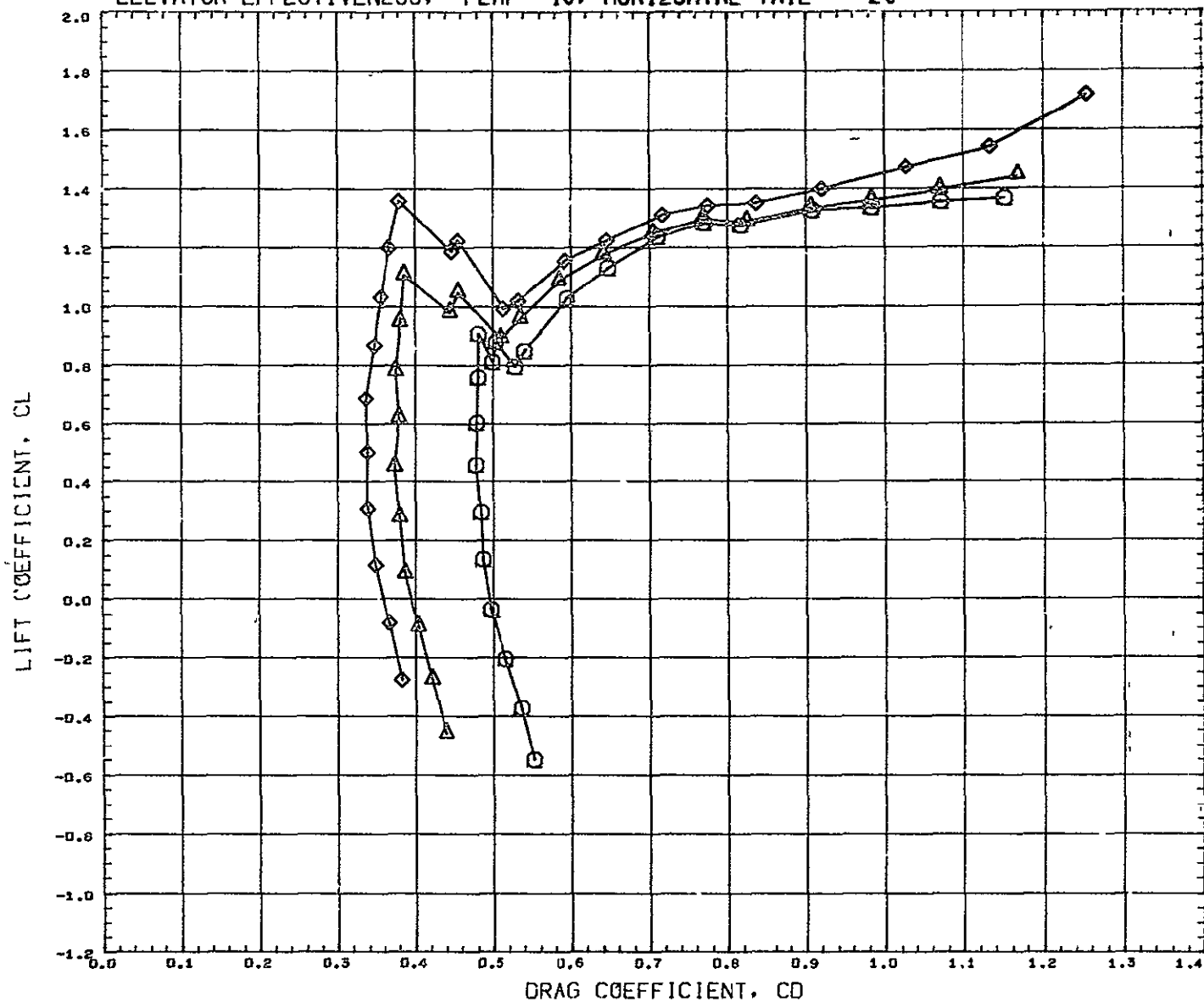
| DATA SET SYMBOL | CONFIGURATION DESCRIPTION |
|-----------------|---------------------------|
| (AU1291)        | UWAL-1021 BAC C-6 BOOSTER |
| (AU1151)        | UWAL-1021 BAC C-6 BOOSTER |
| (AU1321)        | UWAL-1021 BAC C-6 BOOSTER |

| ELEVTR  | HTAIL   | BETA  |
|---------|---------|-------|
| -30.000 | -20.000 | 0.000 |
| 0.000   | -20.000 | 0.000 |
| 30.000  | -20.000 | 0.000 |

| REFERENCE INFORMATION |         |        |
|-----------------------|---------|--------|
| REFS                  | 4 4204  | SQ.FT. |
| RCFL                  | 10 1003 | INCHES |
| REFB                  | 66.0000 | INCHES |
| XMRP                  | 55.6360 | INCHES |
| YMRP                  | 0.0000  | INCHES |
| ZMRP                  | 5.8600  | INCHES |
| SCALE                 | 2.9920  | PERCNT |

MACH 0.155

# ELEVATOR EFFECTIVENESS, FLAP = 40, HORIZONTAL TAIL = -20



| DATA SET SYMBOL | CONFIGURATION DESCRIPTION |
|-----------------|---------------------------|
| (AU1291)        | UVAL-1021 BAC C-6 BOOSTER |
| (AU1311)        | UVAL-1021 BAC C-6 BOOSTER |
| (AU1321)        | UVAL-1021 BAC C-6 BOOSTER |

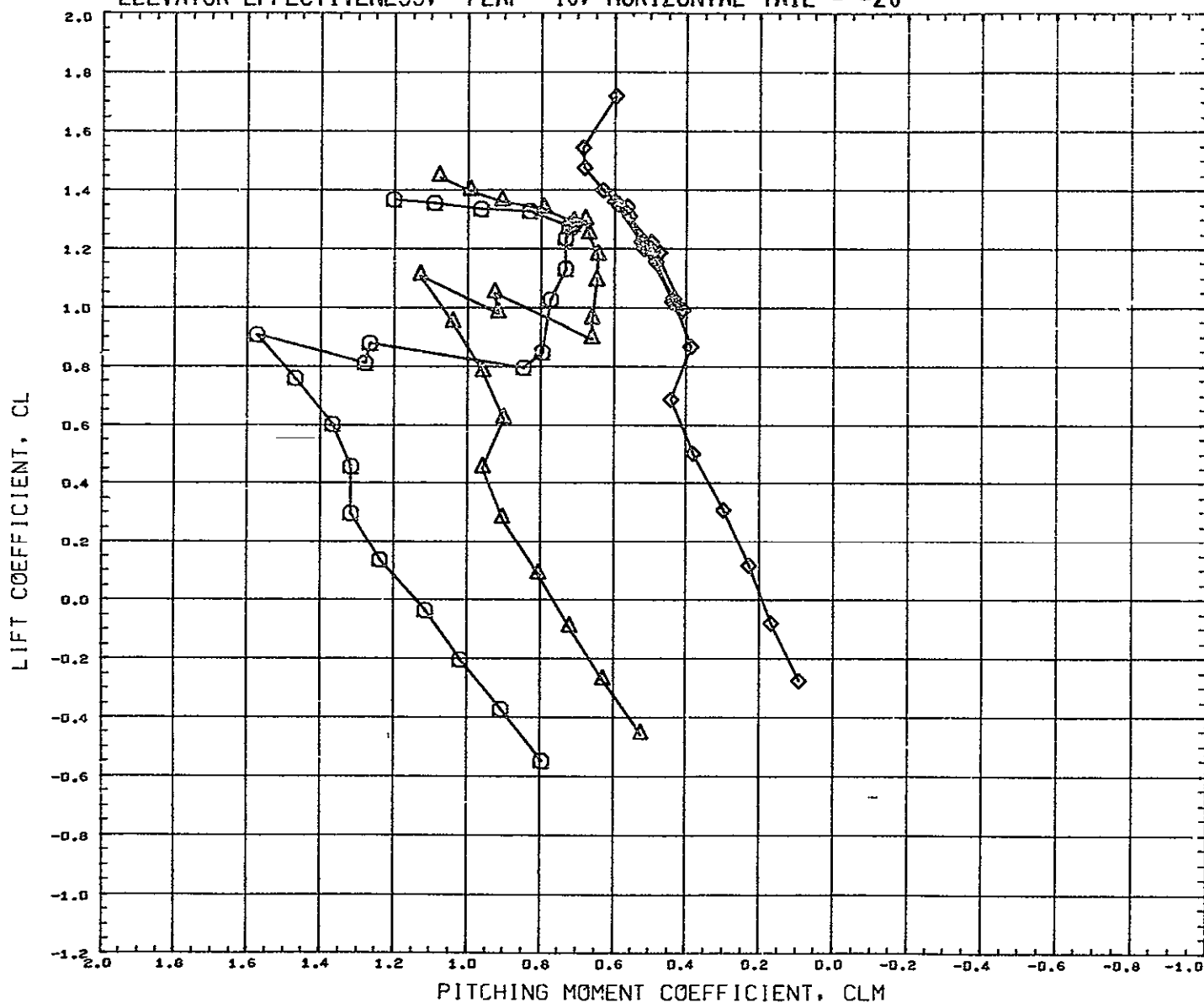
| B1W1H1V1N1F140 |
|----------------|
| B1W1H1V1N1F140 |
| B1W1H1V1N1F140 |

| ELEVTR  | HTAIL   | BETA  |
|---------|---------|-------|
| -30.000 | -20.000 | 0.000 |
| 0.000   | -20.000 | 0.000 |
| 30.000  | -20.000 | 0.000 |

| REFERENCE INFORMATION |         |         |
|-----------------------|---------|---------|
| REFS                  | 4.4200  | 50. FT. |
| REFL                  | 10.1000 | INCHES  |
| REFB                  | 66.6000 | INCHES  |
| XMRP                  | 55.6360 | INCHES  |
| YMRP                  | 0.0000  | INCHES  |
| ZMRP                  | 5.8600  | INCHES  |
| SCALE                 | 2.9920  | PERCENT |

MACH 0.155

# ELEVATOR EFFECTIVENESS, FLAP = 40, HORIZONTAL TAIL = -20



DATA SET SYMBOL CONFIGURATION DESCRIPTION

(AU1291) UVAL-1021 BAC C-6 BOOSTER B1W1H1V1N1F140

(AU1151) UVAL-1021 BAC C-6 BOOSTER B1W1H1V1N1F140

(AU1321) UVAL-1021 BAC C-6 BOOSTER B1W1H1V1N1F140

ELEVTR HTAIL BETA

-30.000 -20.000 0.000

0.000 -20.000 0.000

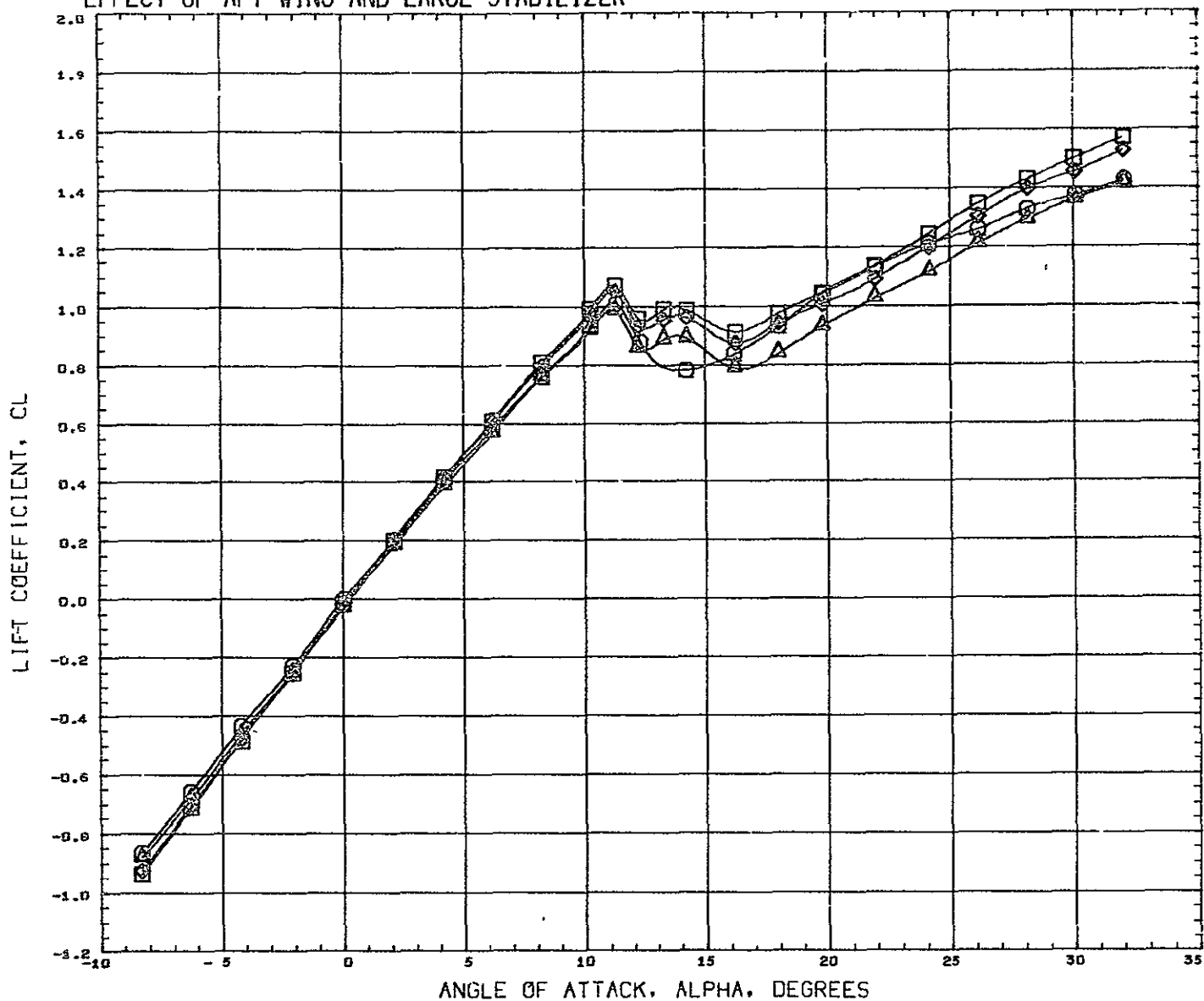
30.000 -20.000 0.000

## REFERENCE INFORMATION

REFS 4.4200 SQ.FT.  
 RFFL 10.1000 INCHES  
 REFB 66.6000 INCHES  
 XMRP 55.6360 INCHES  
 YMRP 0.0000 INCHES  
 ZMRP 5.8600 INCHES  
 SCALE 2.9920 PERCENT

MACH 0.155

# EFFECT OF AFT WING AND LARGE STABILIZER



| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION |
|----------|--------|---------------------------|
| (AU1081) | ○      | UVAL-1021 BAC C-6 BOOSTER |
| (AU1481) | △      | UVAL-1021 BAC C-6 BOOSTER |
| (AU1451) | ◇      | UVAL-1021 BAC C-6 BOOSTER |
| (AU1461) | □      | UVAL-1021 BAC C-6 BOOSTER |

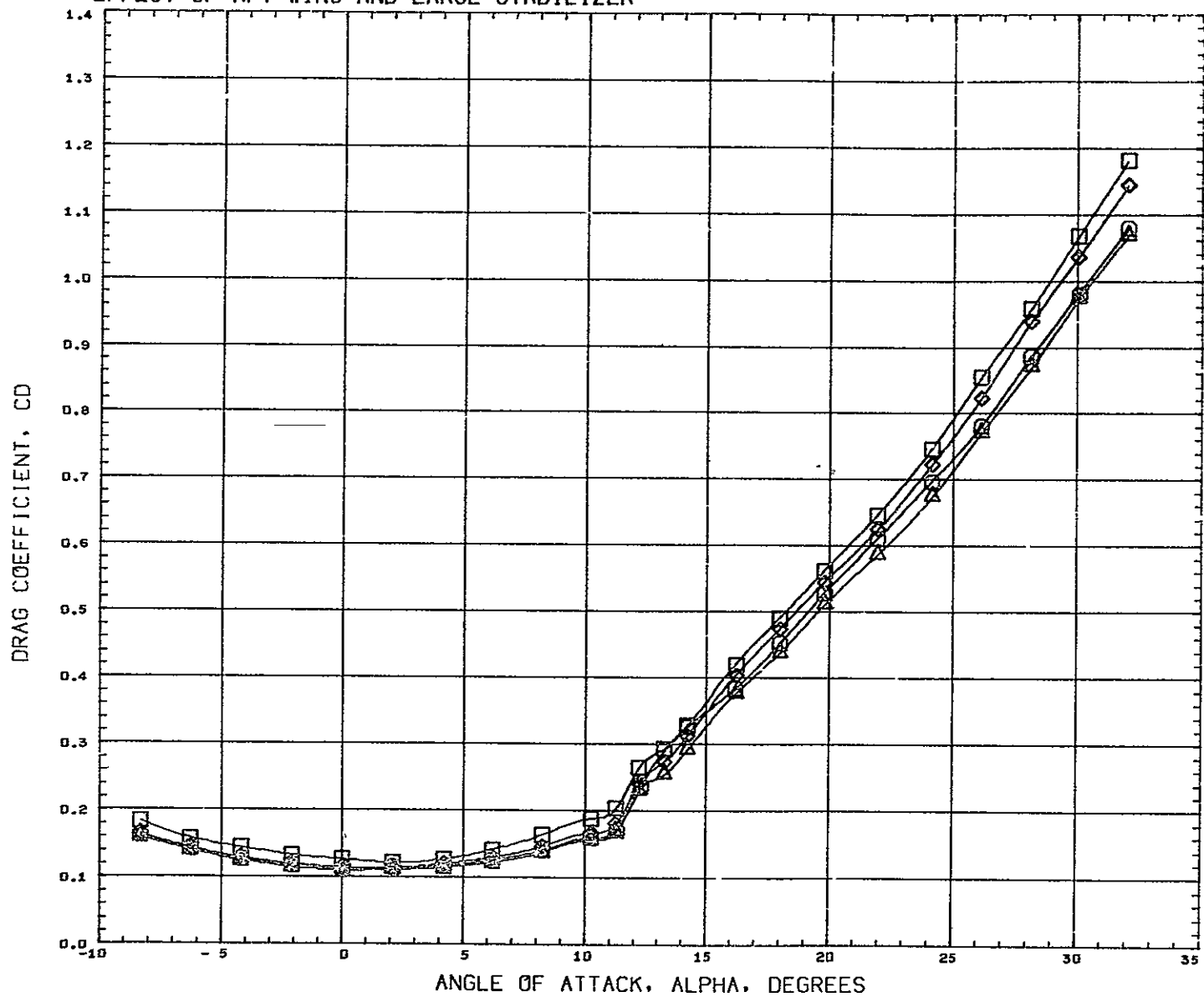
ANGLE OF ATTACK, ALPHA, DEGREES

| BETA  |
|-------|
| 0.000 |
| 0.000 |
| 0.000 |
| 0.000 |

| REFERENCE INFORMATION |         |         |
|-----------------------|---------|---------|
| REFS                  | 4.4200  | SQ.FT   |
| REFL                  | 10.1000 | INCHES  |
| REFB                  | 66.0000 | INCHES  |
| XNRP                  | 55.6360 | INCHES  |
| YNRP                  | 0.0000  | INCHES  |
| ZNRP                  | 5.8600  | INCHES  |
| SCALE                 | 2.9920  | PERCENT |

MACH 0.153

# EFFECT OF AFT WING AND LARGE STABILIZER



| DATA SET SYMBOL | CONFIGURATION DESCRIPTION |
|-----------------|---------------------------|
| (AU1081)        | UWAL-1021 BAC C-6 BOOSTER |
| (AU1481)        | UWAL-1021 BAC C-6 BOOSTER |
| (AU1451)        | UWAL-1021 BAC C-6 BOOSTER |
| (AU1461)        | UWAL-1021 BAC C-6 BOOSTER |

ANGLE OF ATTACK, ALPHA, DEGREES

BETA

0.000

0.000

0.000

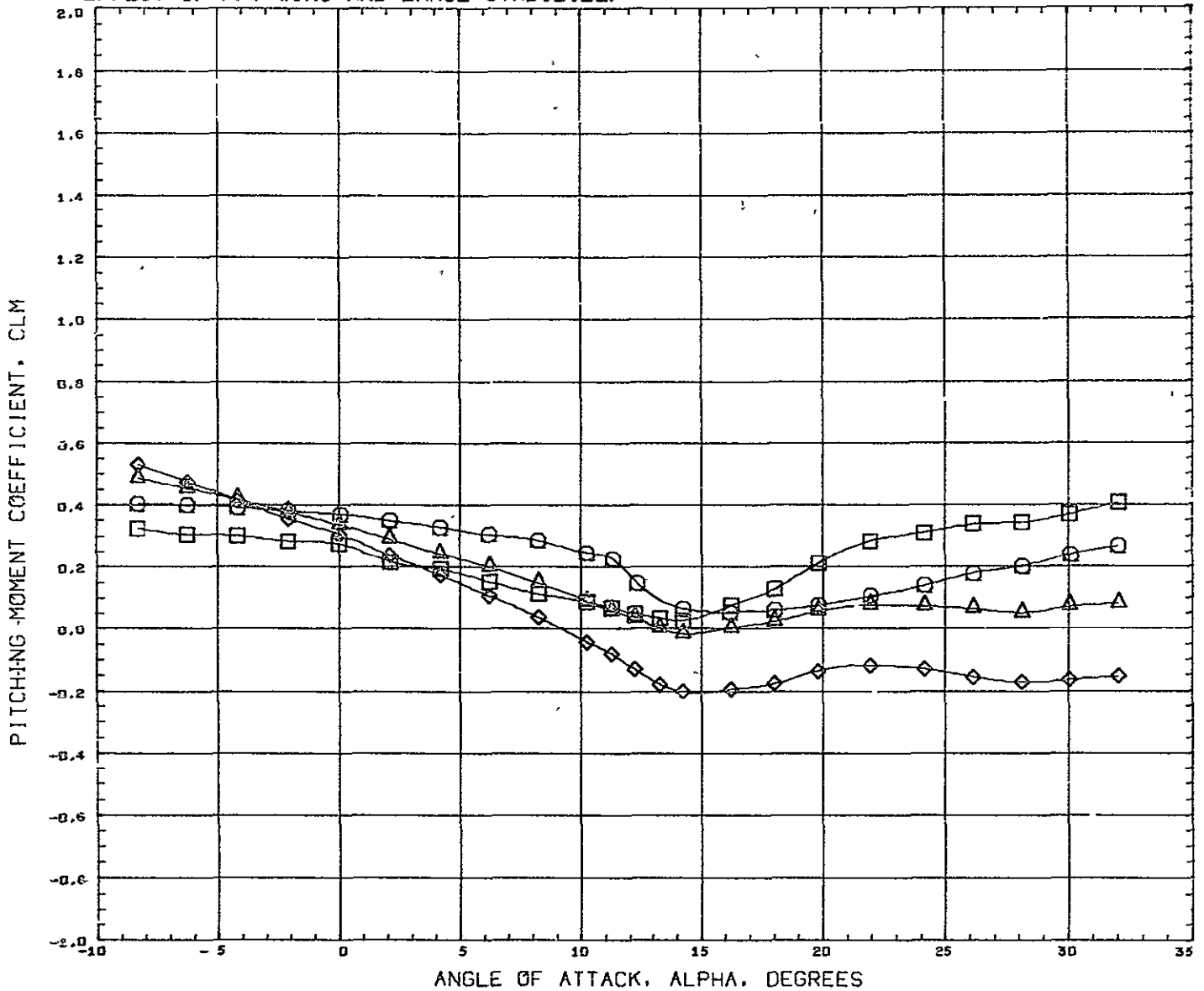
0.000

REFERENCE INFORMATION

|       |         |         |
|-------|---------|---------|
| REFS  | 4.4200  | SQ.FT.  |
| REFL  | 19.1000 | INCHES  |
| REFB  | 66.6000 | INCHES  |
| XMRF  | 55.6360 | INCHES  |
| YMRF  | 0.0000  | INCHES  |
| ZMRF  | 5.8600  | INCHES  |
| SCALE | 2.9920  | PERCENT |

MACH 0.153

# EFFECT OF AFT WING AND LARGE STABILIZER



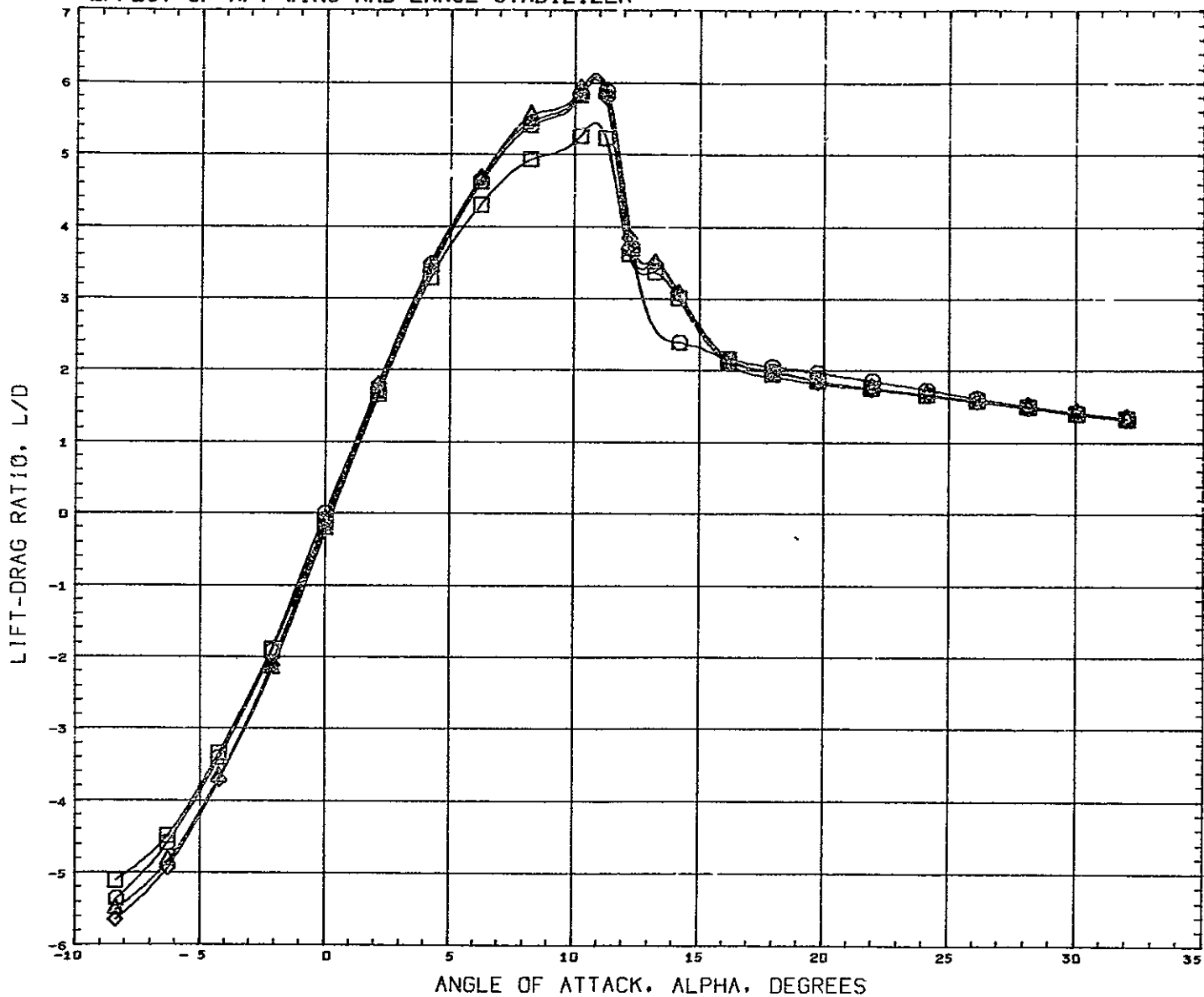
| DATA SET SYMBOL | CONFIGURATION DESCRIPTION |
|-----------------|---------------------------|
| (AU1081)        | UWAL-1021 BAC C-6 BOOSTER |
| (AU1481)        | UWAL-1021 BAC C-6 BOOSTER |
| (AU1451)        | UWAL-1021 BAC C-6 BOOSTER |
| (AU1461)        | UWAL-1021 BAC C-6 BOOSTER |

| BETA  |
|-------|
| 0.000 |
| 0.000 |
| 0.000 |
| 0.000 |

| REFERENCE INFORMATION |         |         |
|-----------------------|---------|---------|
| REFS                  | 4.4200  | SQ.FT.  |
| REFL                  | 10.1000 | INCHES  |
| REFB                  | 66.6000 | INCHES  |
| XMRP                  | 55.6360 | INCHES  |
| YMRP                  | 0.0000  | INCHES  |
| ZMRP                  | 5.8600  | INCHES  |
| SCALE                 | 2.9920  | PERCENT |

MACH 0.153

# EFFECT OF AFT WING AND LARGE STABILIZER



| DATA SET SYMBOL | CONFIGURATION DESCRIPTION |
|-----------------|---------------------------|
| (AU1081)        | UWAL-1021 BAC C-6 BOOSTER |
| (AU1481)        | UWAL-1021 BAC C-6 BOOSTER |
| (AU1451)        | UWAL-1021 BAC C-6 BOOSTER |
| (AU1461)        | UWAL-1021 BAC C-6 BOOSTER |

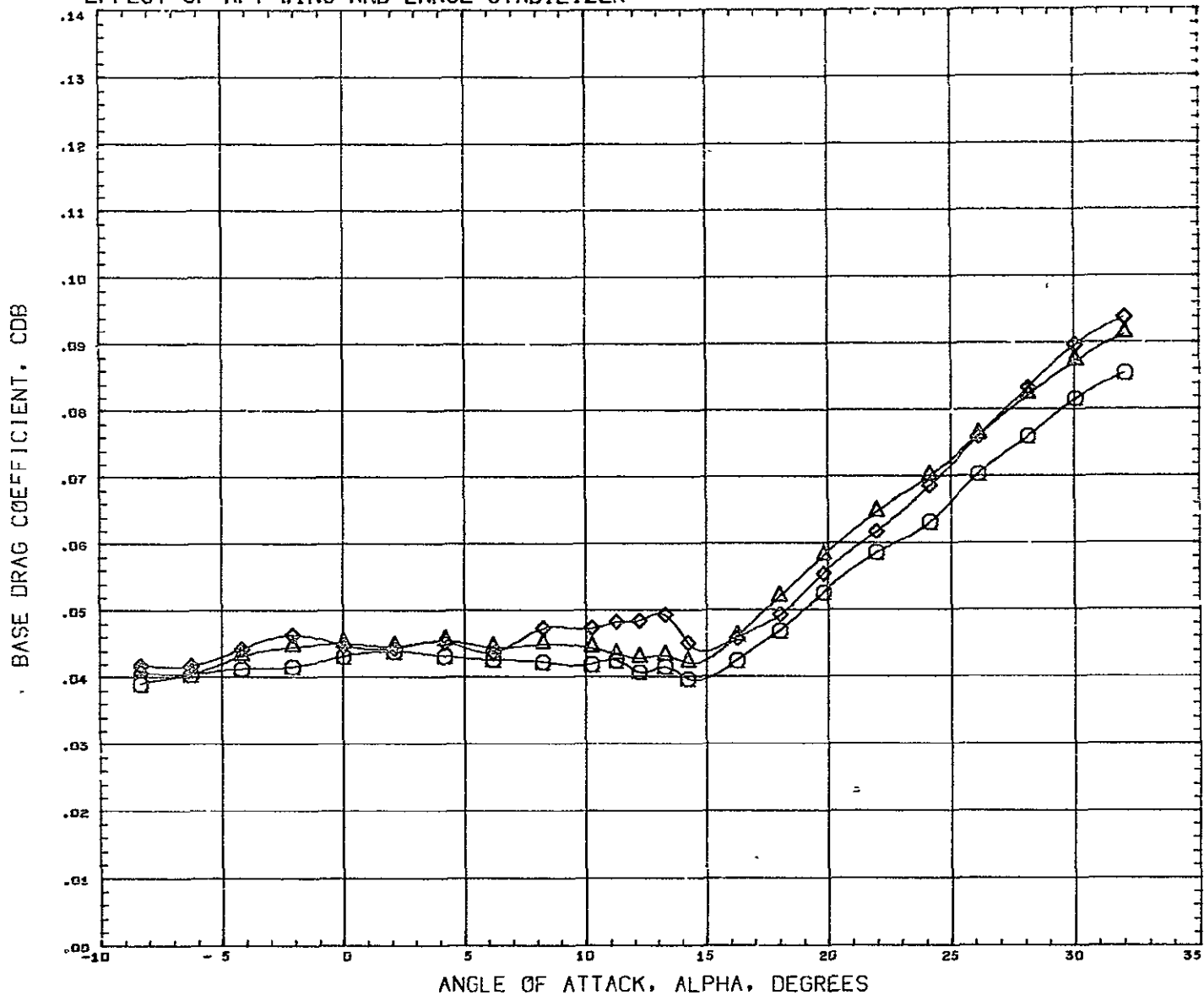
ANGLE OF ATTACK, ALPHA, DEGREES

| BETA  |
|-------|
| 0.000 |
| 0.000 |
| 0.000 |
| 0.000 |

| REFERENCE INFORMATION |         |        |
|-----------------------|---------|--------|
| REFS                  | 4.4200  | SQ.FT. |
| REFL                  | 10.1000 | INCHES |
| REFB                  | 66.5000 | INCHES |
| XMRP                  | 55.6360 | INCHES |
| YMRP                  | 0.0000  | INCHES |
| ZMRP                  | 5.8600  | INCHES |
| SCALE                 | 2.9920  | PERCNT |

MACH 0.153

# EFFECT OF AFT WING AND LARGE STABILIZER



| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION |
|----------|--------|---------------------------|
| (AU1481) | ○      | UWAL-1021 BAC C-6 BOOSTER |
| (AU1451) | △      | UWAL-1021 BAC C-6 BOOSTER |
| (AU1461) | ◇      | UWAL-1021 BAC C-6 BOOSTER |

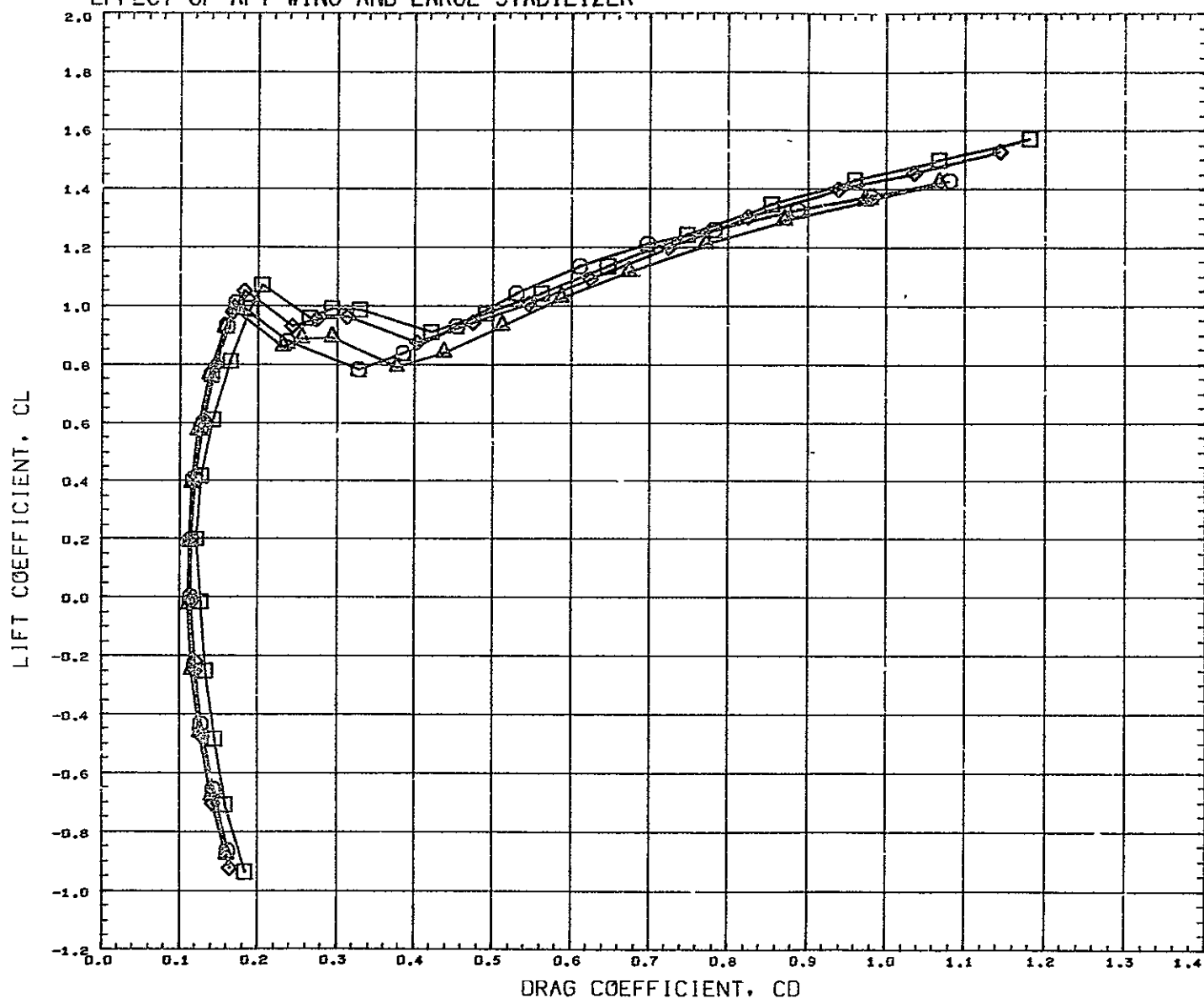
ANGLE OF ATTACK, ALPHA, DEGREES

| BETA  |
|-------|
| 0.000 |
| 0.000 |
| 0.000 |

| REFERENCE INFORMATION |         |        |
|-----------------------|---------|--------|
| REFS                  | 4.4200  | SQ.FT  |
| REFL                  | 10 10°3 | INCHES |
| REFB                  | 66.6000 | INCHES |
| XMRP                  | 55.6360 | INCHES |
| YMRP                  | 0.0000  | INCHES |
| ZMRP                  | 5 6600  | INCHES |
| SCALE                 | 2 9920  | PERCNT |

MACH 0.154

# EFFECT OF AFT WING AND LARGE STABILIZER



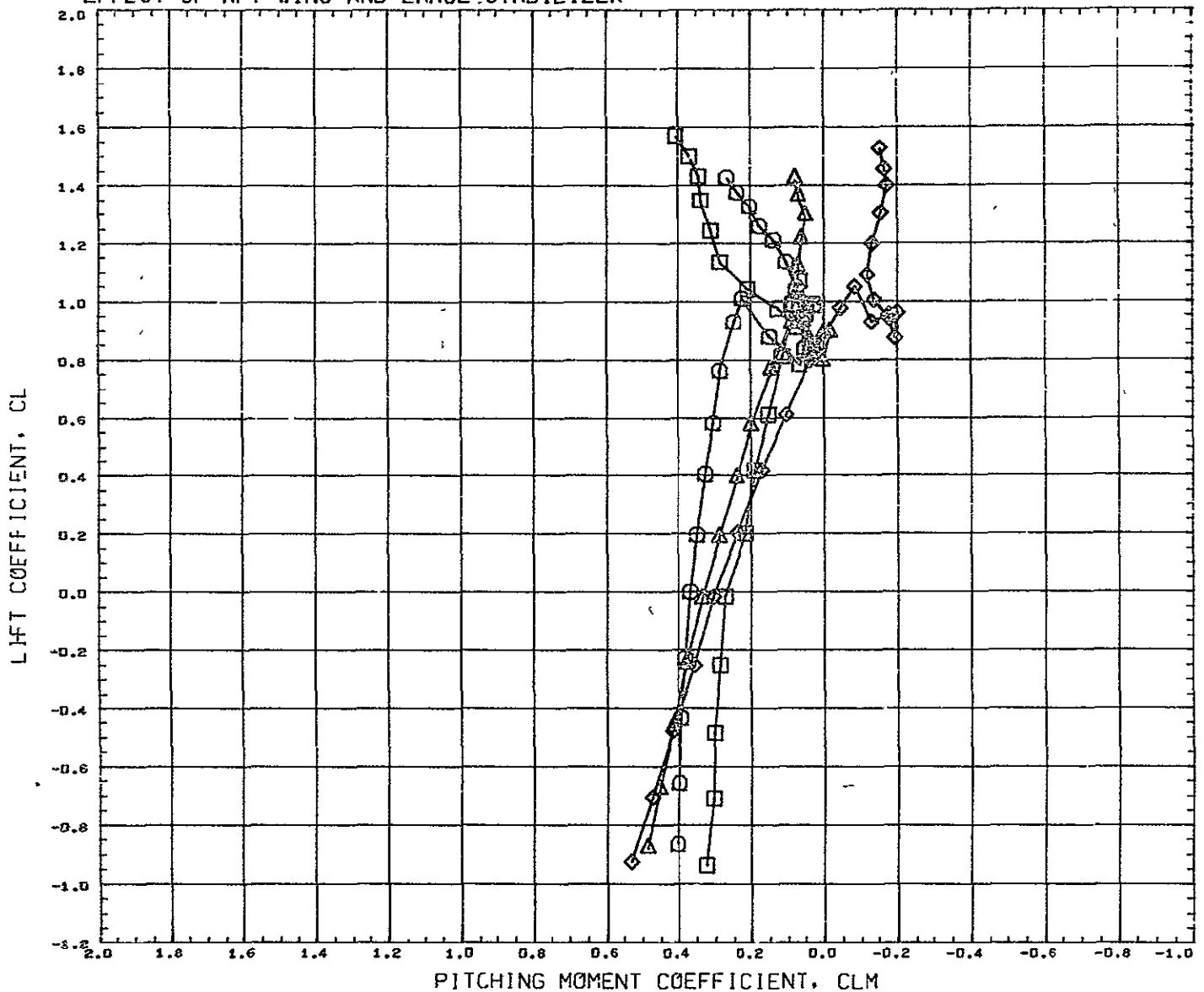
| DATA SET SYMBOL | CONFIGURATION DESCRIPTION |
|-----------------|---------------------------|
| (AU1081)        | UWAL-1021 BAC C-6 BOOSTER |
| (AU1481)        | UWAL-1021 BAC C-6 BOOSTER |
| (AU1451)        | UWAL-1021 BAC C-6 BOOSTER |
| (AU1461)        | UWAL-1021 BAC C-6 BOOSTER |

| BETA  |
|-------|
| 0.000 |
| 0.000 |
| 0.000 |
| 0.000 |

| REFERENCE INFORMATION |         |         |
|-----------------------|---------|---------|
| REFS                  | 4.4270  | SQ.FT.  |
| REFL                  | 10.1130 | INCHES  |
| REFB                  | 66.5200 | INCHES  |
| XMRP                  | 55.6360 | INCHES  |
| YMRP                  | 0.0000  | INCHES  |
| ZMRP                  | 5.8600  | INCHES  |
| SCALE                 | 2.9920  | PERCENT |

MACH 0.153

# EFFECT OF AFT WING AND LARGE STABILIZER



| DATA SET SYMBOL | CONFIGURATION DESCRIPTION |
|-----------------|---------------------------|
| (AU1081)        | UWAL-1021 BAC C-6 BOOSTER |
| (AU1461)        | UWAL-1021 BAC C-6 BOOSTER |
| (AU1451)        | UWAL-1021 BAC C-6 BOOSTER |
| (AU1461)        | UWAL-1021 BAC C-6 BOOSTER |

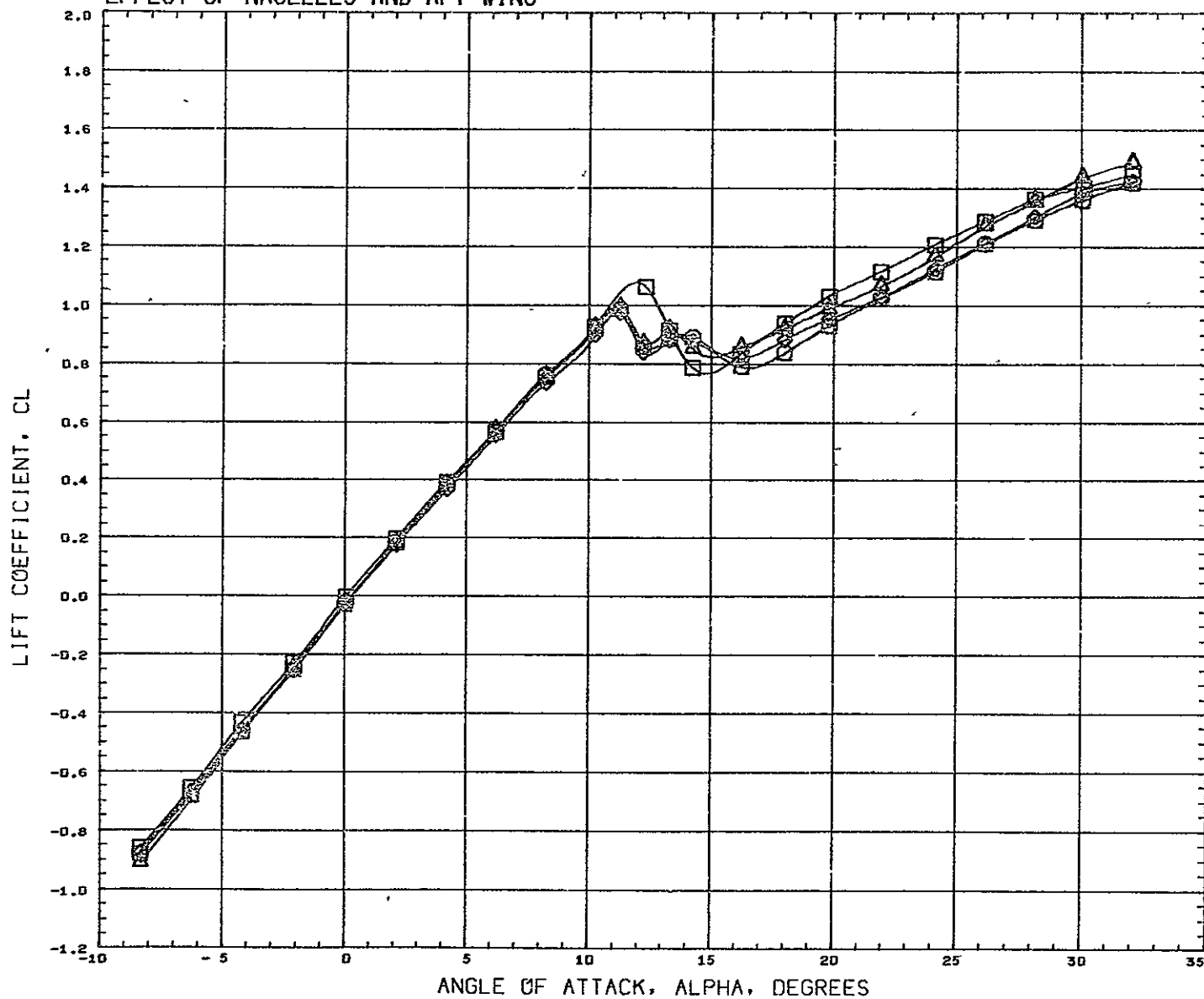
PITCHING MOMENT COEFFICIENT, CLM

| BETA  |
|-------|
| 0.000 |
| 0.000 |
| 0.000 |
| 0.000 |

| REFERENCE INFORMATION |         |        |
|-----------------------|---------|--------|
| REFS                  | 4.420C  | SQ FT. |
| REFL                  | 15 1000 | INCHES |
| REFB                  | 66.6000 | INCHES |
| XMRP                  | 55.6360 | INCHES |
| YMRP                  | 0.0000  | INCHES |
| ZMRP                  | 5.8600  | INCHES |
| SCALE                 | 2.9920  | PERCNT |

MACH 0.153

# EFFECT OF NACELLES AND AFT WING



| DATA SET SYMBOL | CONFIGURATION DESCRIPTION |
|-----------------|---------------------------|
| (AU1481)        | UWAL-1021 BAC C-6 BOOSTER |
| (AU1471)        | UWAL-1021 BAC C-6 BOOSTER |
| (AU1491)        | UWAL-1021 BAC C-6 BOOSTER |
| (AU1091)        | UWAL-1021 BAC C-6 BOOSTER |

ANGLE OF ATTACK, ALPHA, DEGREES

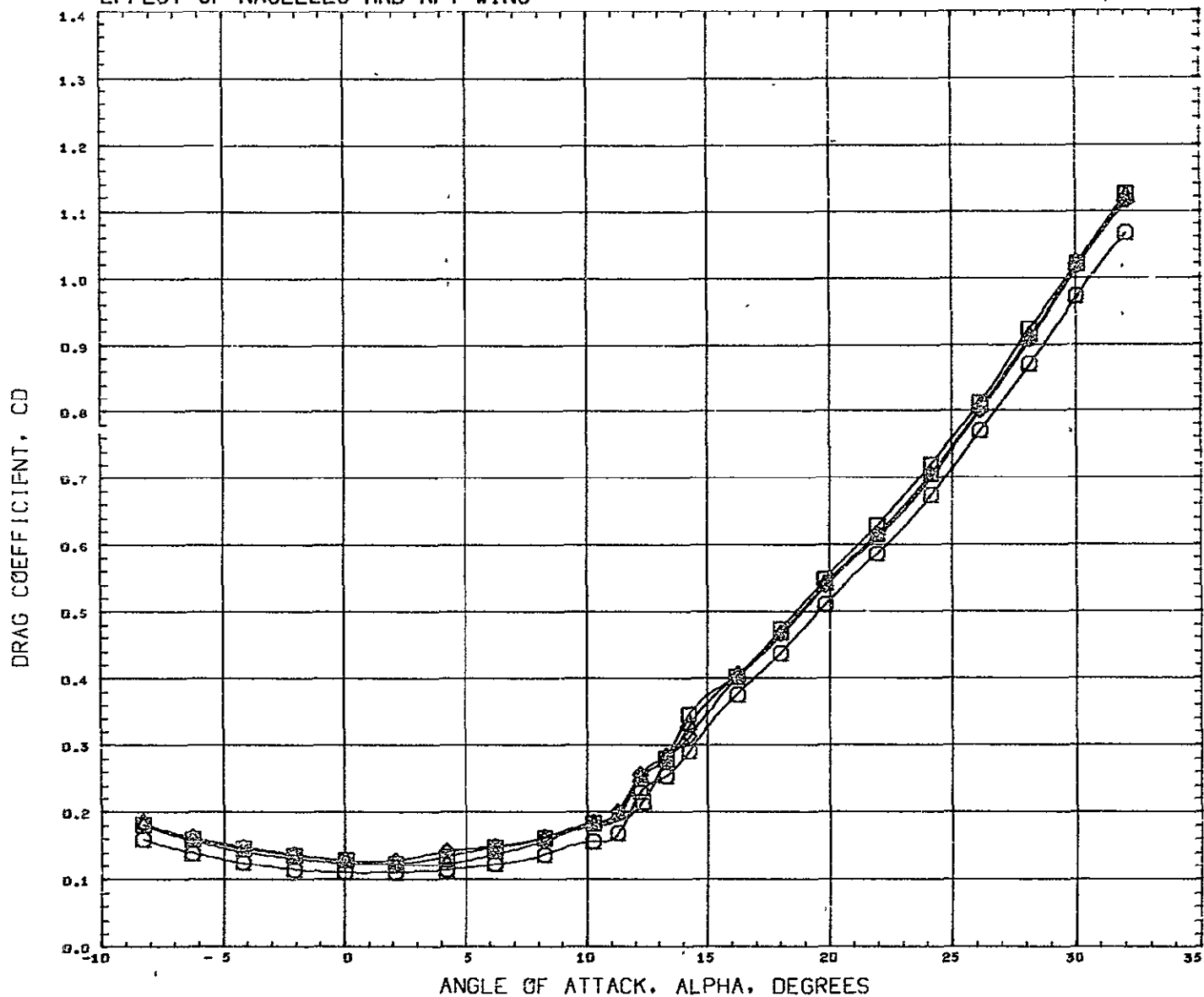
BETA

REFERENCE INFORMATION

|       |         |        |
|-------|---------|--------|
| REFS  | 4.4210  | SQ.FT. |
| REFL  | 10.1000 | INCHES |
| REFB  | 66.6000 | INCHES |
| XMRP  | 55.6360 | INCHES |
| YMRP  | 0.0000  | INCHES |
| ZMRP  | 5.8600  | INCHES |
| SCALE | 2.9920  | PERCNT |

MACH 0.154

# EFFECT OF NACELLES AND AFT WING



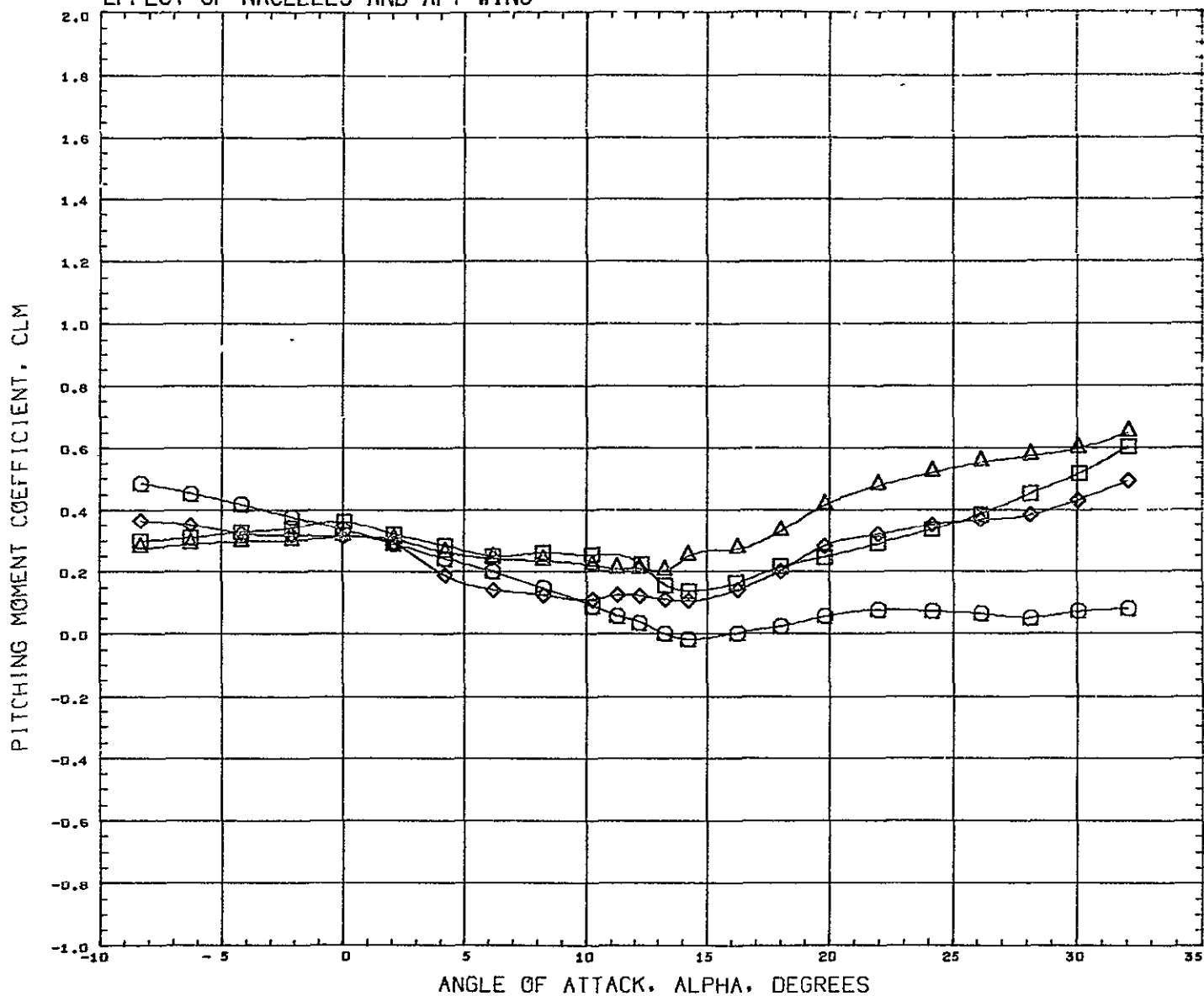
| DATA SET SYMBOL | CONFIGURATION DESCRIPTION |
|-----------------|---------------------------|
| (AU1481)        | UWAL-1D21 BAC C-6 BOOSTER |
| (AU1471)        | UWAL-1D21 BAC C-6 BOOSTER |
| (AU1491)        | UWAL-1D21 BAC C-6 BOOSTER |
| (AU1D91)        | UWAL-1D21 BAC C-6 BOOSTER |

| BETA  |
|-------|
| 0.000 |
| 0.000 |
| 0.000 |
| 0.000 |

| REFERENCE INFORMATION |         |         |
|-----------------------|---------|---------|
| REFS                  | 4 4200  | SQ.FT.  |
| REFL                  | 10.1000 | INCHES  |
| REFB                  | 66.6300 | INCHES  |
| XMRP                  | 55.6360 | INCHES  |
| YMRP                  | 0.0000  | INCHES  |
| ZMRP                  | 5.8600  | INCHES  |
| SCALE                 | 2.9920  | PERCENT |

NACH 0.154

# EFFECT OF NACELLES AND AFT WING



| DATA SET SYMBOL | CONFIGURATION DESCRIPTION |
|-----------------|---------------------------|
| (AU1481)        | UWAL-1021 BAC C-6 BOOSTER |
| (AU1471)        | UWAL-1021 BAC C-6 BOOSTER |
| (AU1491)        | UWAL-1021 BAC C-6 BOOSTER |
| (AU1091)        | UWAL-1021 BAC C-6 BOOSTER |

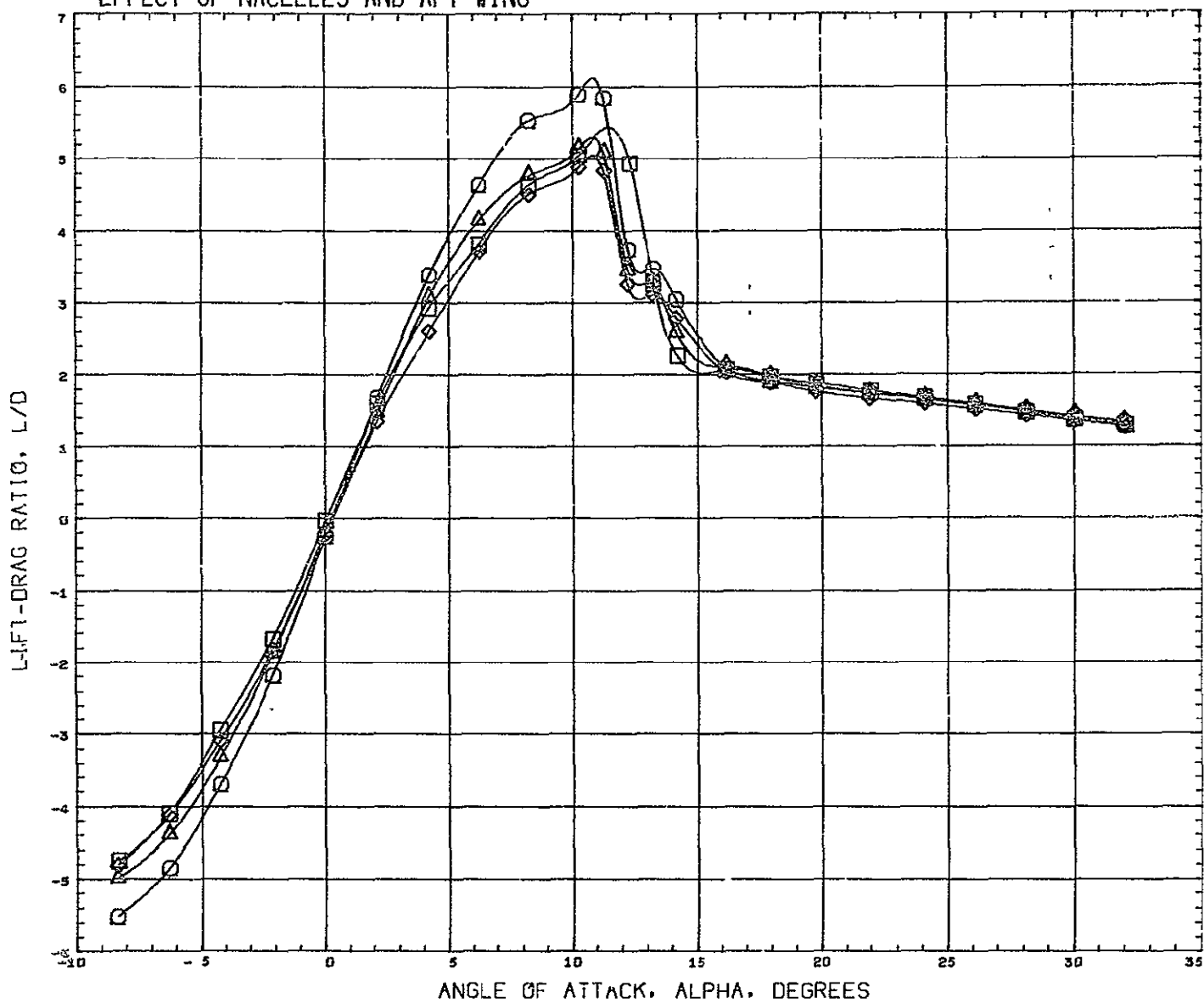
ANGLE OF ATTACK, ALPHA, DEGREES

| BETA  |
|-------|
| 0.000 |
| 0.000 |
| 0.000 |
| 0.000 |

| REFERENCE INFORMATION |         |         |
|-----------------------|---------|---------|
| REFS                  | 4.4210  | SQ.FT.  |
| REFL                  | 10.1000 | INCHES  |
| REFB                  | 66.8000 | INCHES  |
| XMRP                  | 55.6360 | INCHES  |
| YMRP                  | 0.0000  | INCHES  |
| ZMRP                  | 5.8600  | INCHES  |
| SCALE                 | 2.9920  | PERCENT |

MACH 0.154

# EFFECT OF NACELLES AND AFT WING



| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION |
|----------|--------|---------------------------|
| (AU1481) | ○      | UWAL-1021 BAC C-5 BOOSTER |
| (AU1471) | △      | UWAL-1021 BAC C-5 BOOSTER |
| (AU1491) | ◇      | UWAL-1021 BAC C-5 BOOSTER |
| (AU1091) | □      | UWAL-1021 BAC C-5 BOOSTER |

ANGLE OF ATTACK, ALPHA, DEGREES

BETA

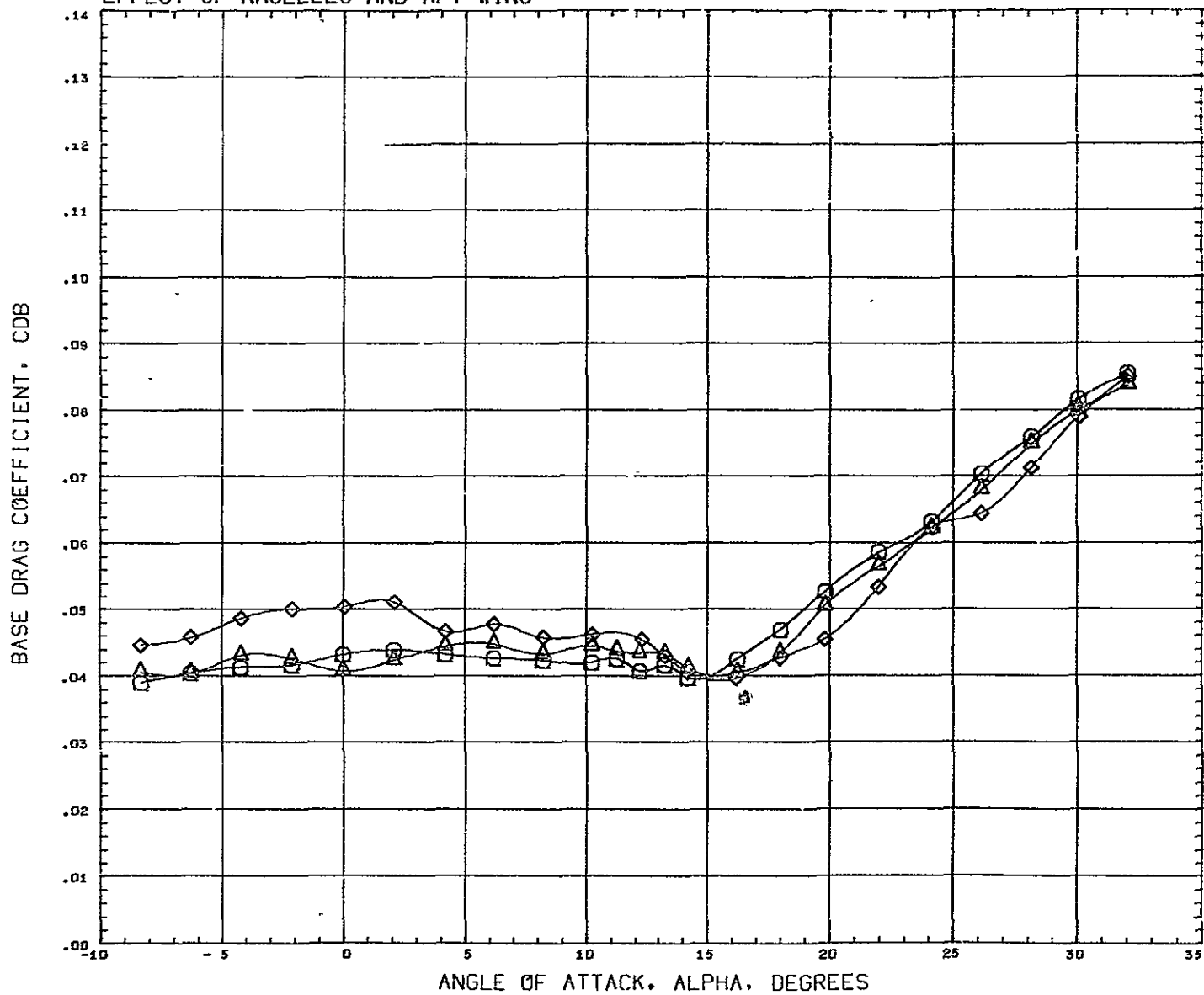
|            |       |
|------------|-------|
| B1W2H1V1   | 0.000 |
| B1W2H1V1N2 | 0.000 |
| B1W2H1V1N1 | 0.000 |
| B1W141V1N1 | 0.000 |

REFERENCE INFORMATION

|       |         |         |
|-------|---------|---------|
| REFS  | 4.4200  | SQ.FT.  |
| REFL  | 10.1009 | INCHES  |
| REFB  | 66.6000 | INCHES  |
| XMRF  | 55.6360 | INCHES  |
| YMRF  | 0.0000  | INCHES  |
| ZMRF  | 5.8600  | INCHES  |
| SCALE | 2.9920  | PERCENT |

MACH 0.154

# EFFECT OF NACELLES AND AFT WING



| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION |
|----------|--------|---------------------------|
| (AU1481) | ○      | UWAL-1021 BAC C-6 BOOSTER |
| (AU1491) | △      | UWAL-1021 BAC C-6 BOOSTER |
| (AU1091) | ◇      | UWAL-1021 BAC C-6 BOOSTER |

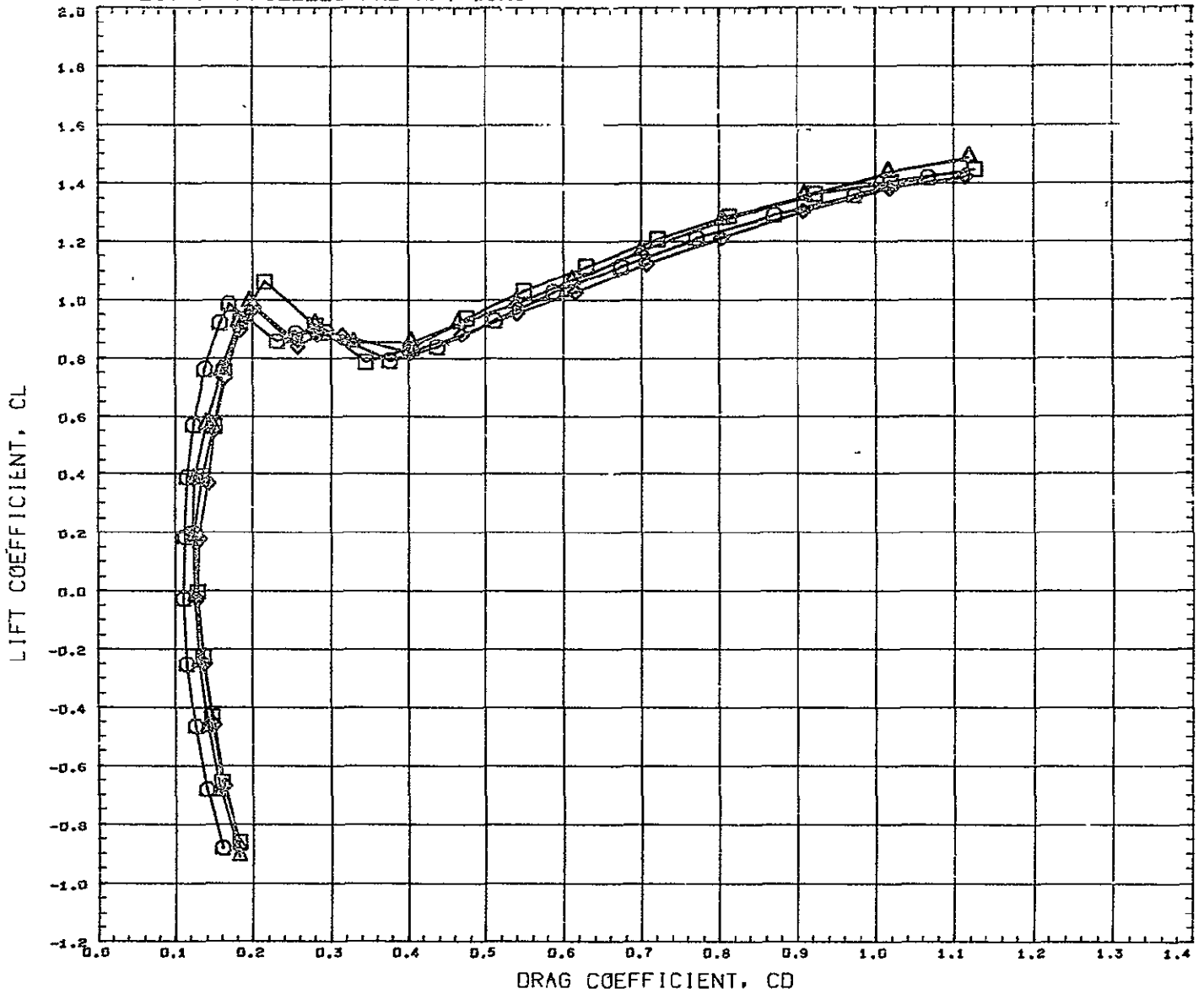
ANGLE OF ATTACK, ALPHA, DEGREES

| BETA  |
|-------|
| 0.000 |
| 0.000 |
| 0.000 |

| REFERENCE INFORMATION |         |         |
|-----------------------|---------|---------|
| REFS                  | 4.4200  | SQ.FT.  |
| REFL                  | 10.1000 | INCHES  |
| REFB                  | 66.6000 | INCHES  |
| XMRP                  | 55.6360 | INCHES  |
| YMRP                  | 0.0000  | INCHES  |
| ZMRP                  | 5.8600  | INCHES  |
| SCALE                 | 2.9920  | PERCENT |

MACH 0.154

# EFFECT OF NACELLES AND AFT WING



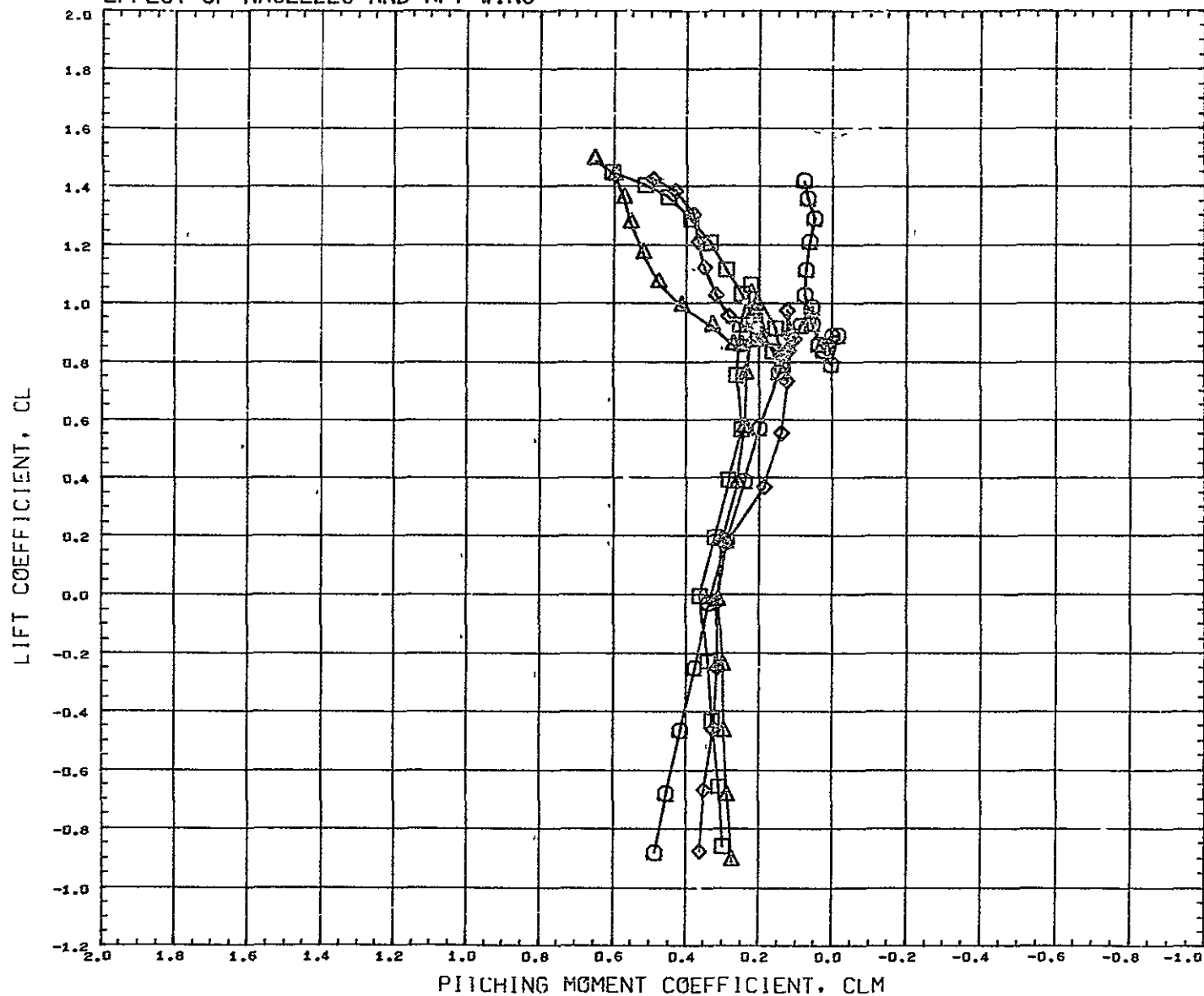
| DATA SET SYMBOL | CONFIGURATION DESCRIPTION |
|-----------------|---------------------------|
| (AU1481)        | UVAL-1021 BAC C-6 BOOSTER |
| (AU1471)        | UVAL-1021 BAC C-6 BOOSTER |
| (AU1491)        | UVAL-1021 BAC C-6 BOOSTER |
| (AU1091)        | UVAL-1021 BAC C-6 BOOSTER |

| BETA  |
|-------|
| 0.000 |
| 0.000 |
| 0.000 |
| 0.000 |

| REFERENCE INFORMATION |         |         |
|-----------------------|---------|---------|
| REFS                  | 4.4210  | SQ.FT.  |
| REFL                  | 11.1000 | INCHES  |
| REFB                  | 66.6000 | INCHES  |
| XNRF                  | 55.6360 | INCHES  |
| YNRF                  | 0.0000  | INCHES  |
| ZNRF                  | 5.8600  | INCHES  |
| SCALE                 | 2.9920  | PERCENT |

MACH 0.154

# EFFECT OF NACELLES AND AFT WING



| DATA SET SYMBOL | CONFIGURATION DESCRIPTION |
|-----------------|---------------------------|
| (AU1481)        | UVAL-1021 BAC C-6 BOOSTER |
| (AU1471)        | UVAL-1021 BAC C-6 BOOSTER |
| (AU1491)        | UVAL-1021 BAC C-6 BOOSTER |
| (AU1091)        | UVAL-1021 BAC C-6 BOOSTER |

PITCHING MOMENT COEFFICIENT, CLM

BETA

0.000

0.000

0.000

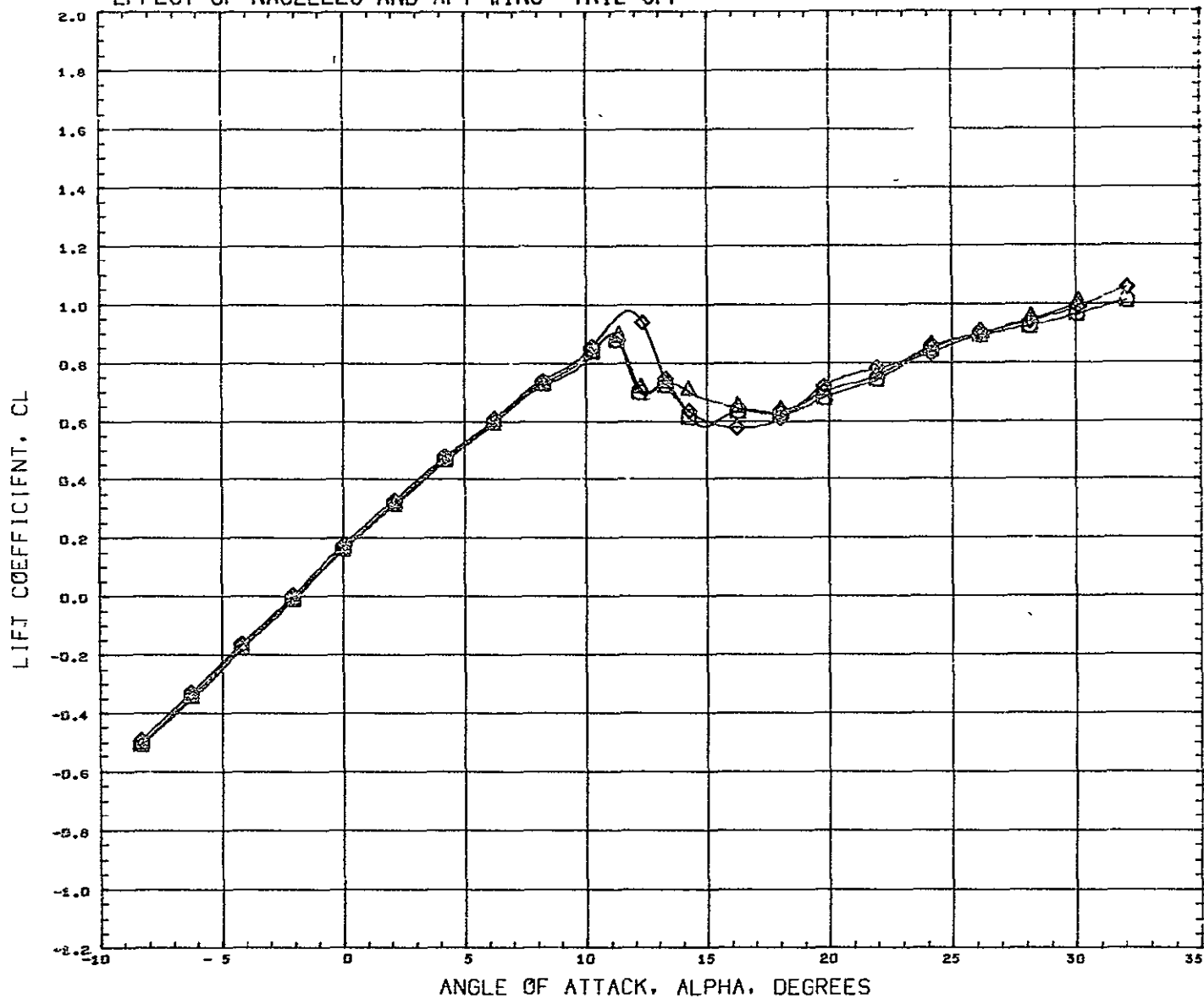
0.000

REFERENCE INFORMATION

|       |         |         |
|-------|---------|---------|
| REFS  | 4.4200  | 50 FT.  |
| REFL  | 10.1000 | INCHES  |
| REFB  | 66.6000 | INCHES  |
| XMRP  | 55.6360 | INCHES  |
| YMRP  | 0.0000  | INCHES  |
| ZMRP  | 5.8600  | INCHES  |
| SCALE | 2.9920  | PERCENT |

MACH 0.154

# EFFECT OF NACELLES AND AFT WING--TAIL OFF



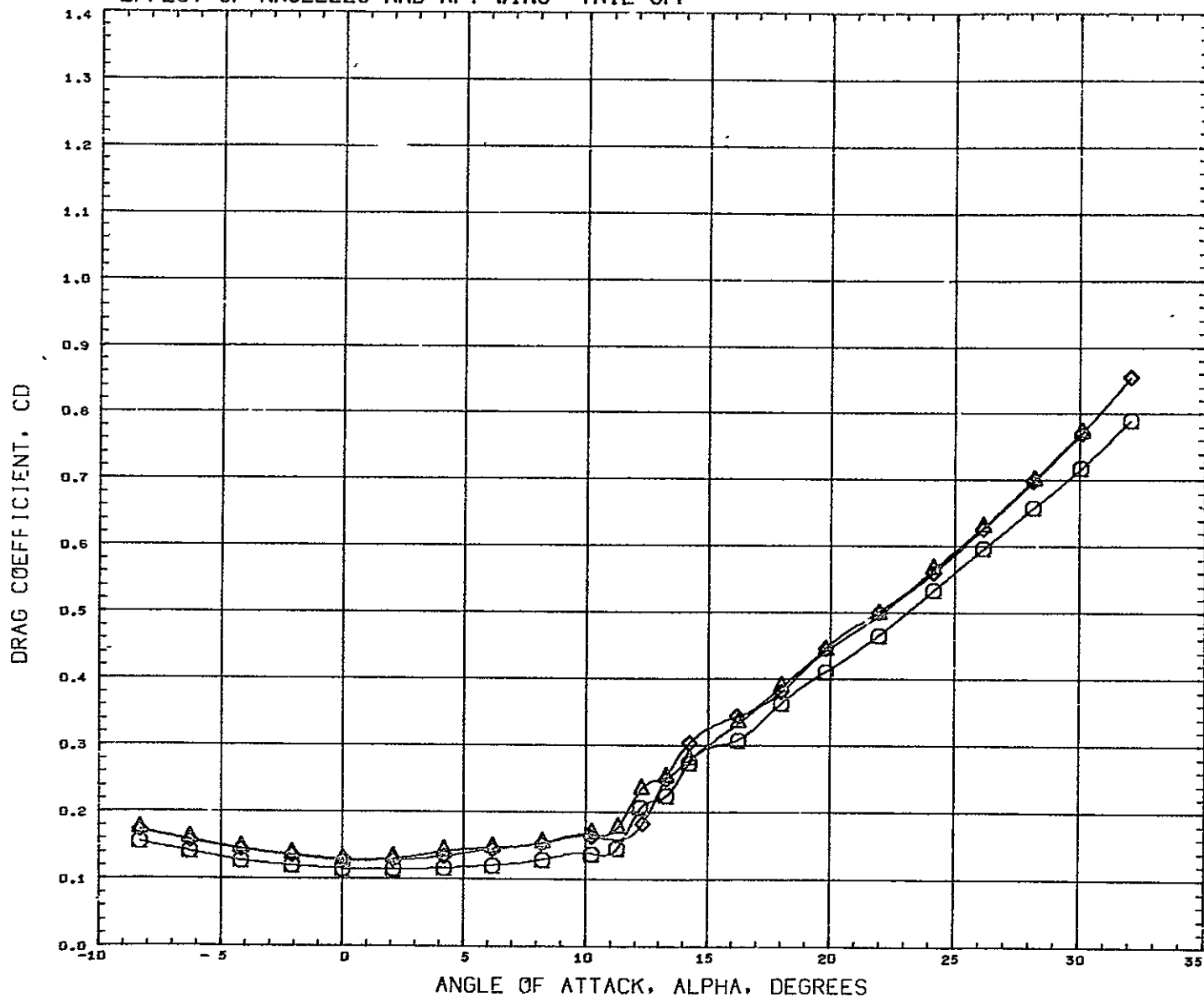
| DATA SET SYMBOL | CONFIGURATION DESCRIPTION |
|-----------------|---------------------------|
| (AU1511)        | UWAL-1021 BAC C-6 BOOSTER |
| (AU1501)        | UWAL-1021 BAC C-6 BOOSTER |
| (AU1031)        | UWAL-1021 BAC C-6 BOOSTER |

| BETA  |
|-------|
| 0.000 |
| 0.000 |
| 0.000 |

| REFERENCE INFORMATION |         |         |
|-----------------------|---------|---------|
| REFS                  | 4.4201  | SQ.FT.  |
| REFL                  | 10.1000 | INCHES  |
| REFB                  | 66.6500 | INCHES  |
| XMRP                  | 55.6360 | INCHES  |
| YMRP                  | 0.0000  | INCHES  |
| ZMRP                  | 5.8600  | INCHES  |
| SCALE                 | 2.9920  | PERCENT |

PACH 0.154

# EFFECT OF NACELLES AND AFT WING--TAIL OFF



| DATA SET SYMBOL | CONFIGURATION DESCRIPTION |
|-----------------|---------------------------|
| (AU1511)        | UVAL-1021 BAC C-6 BOOSTER |
| (AU1501)        | UVAL-1021 BAC C-6 BOOSTER |
| (AU1031)        | UVAL-1021 BAC C-6 BOOSTER |

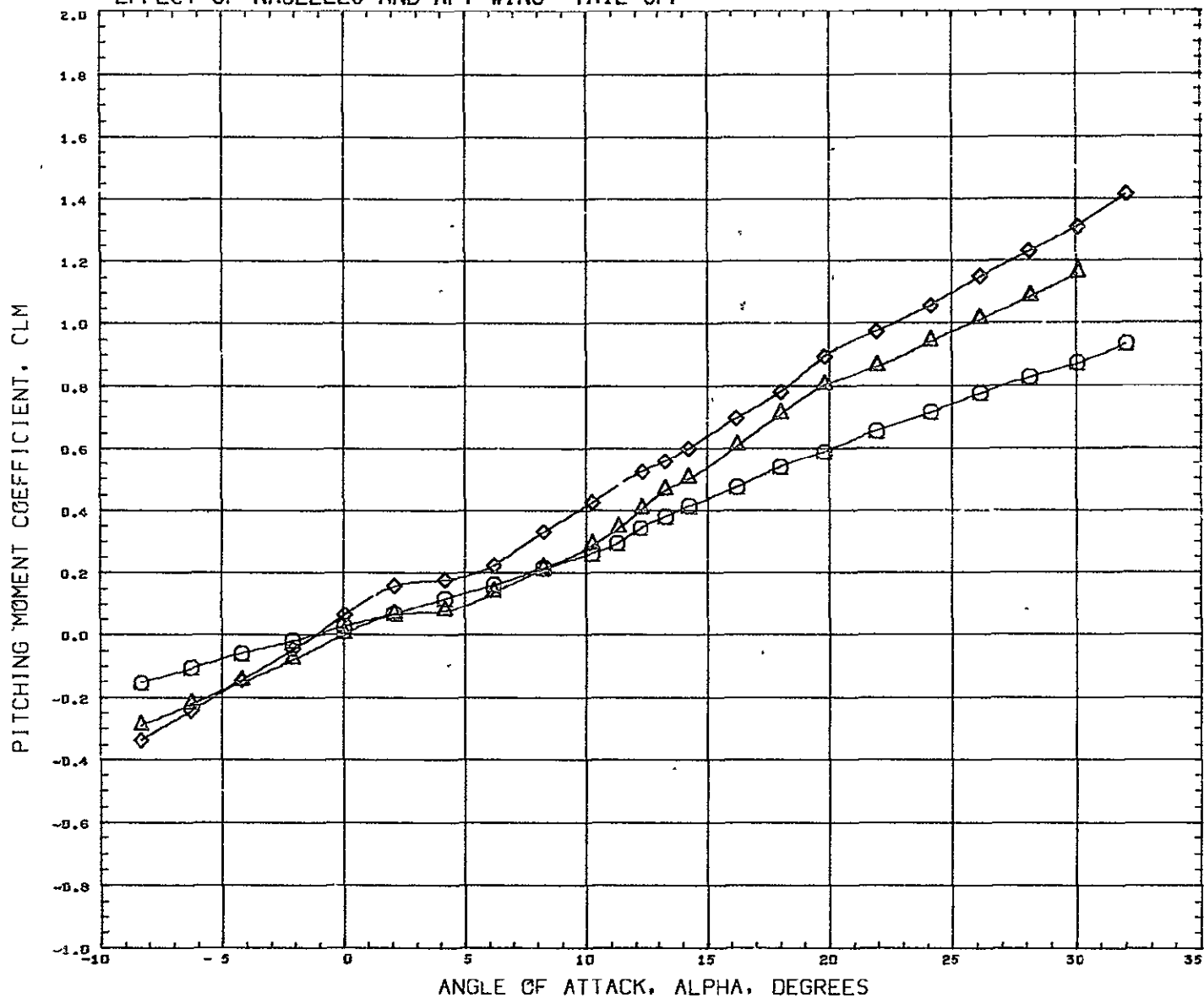
ANGLE OF ATTACK, ALPHA, DEGREES

| BETA  |
|-------|
| 0.000 |
| 0.000 |
| 0.000 |

| REFERENCE INFORMATION |         |         |
|-----------------------|---------|---------|
| REFS                  | 4.420F  | SQ.FT.  |
| REFL                  | 10.10L3 | INCHES  |
| REFB                  | 66.6000 | INCHES  |
| XMRP                  | 55.6360 | INCHES  |
| YMRP                  | 0.0000  | INCHES  |
| ZMRP                  | 5.8600  | INCHES  |
| SCALE                 | 2.9920  | PERCENT |

MACH 0.154

# EFFECT OF NACELLES AND AFT WING--TAIL OFF



| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION        |
|----------|--------|----------------------------------|
| (AUS111) | □      | UWAL-1021 BAC C-6 BOOSTER B1W2   |
| (AUI501) | △      | UWAL-1021 BAC C-6 BOOSTER B1W2N1 |
| (AUI031) | ◇      | UWAL-1021 BAC C-6 BOOSTER B1W1N1 |

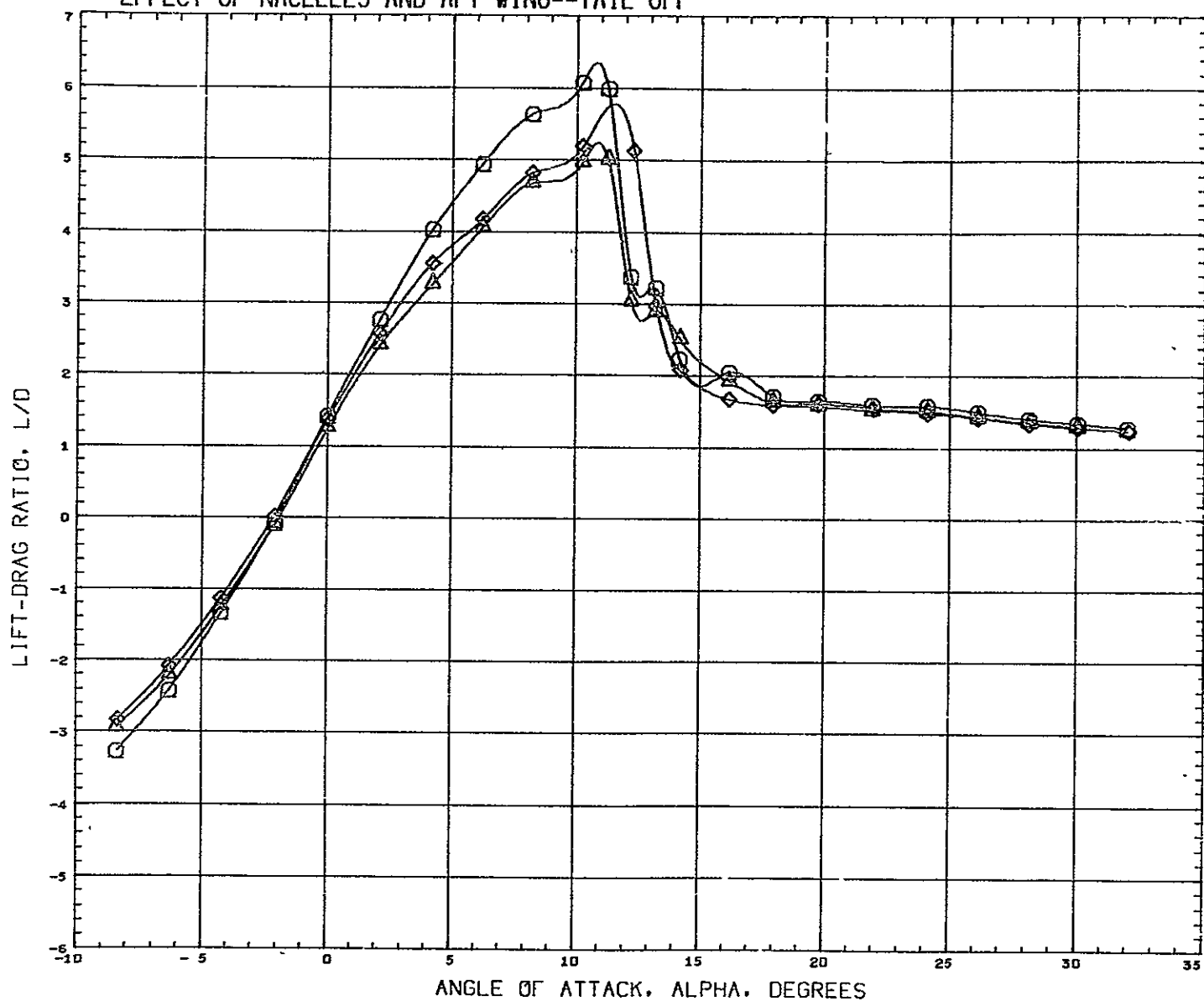
BETA  
0.000  
0.000  
0.000

REFERENCE INFORMATION

|       |         |         |
|-------|---------|---------|
| REFS  | 4.4200  | SG.FT.  |
| REFL  | 10.1000 | INCHES  |
| REFB  | 66.6000 | INCHES  |
| XMRP  | 55.6360 | INCHES  |
| YMRP  | 0.0000  | INCHES  |
| ZMRP  | 5.8600  | INCHES  |
| SCALE | 2.9920  | PERCENT |

MACH 0.154

# EFFECT OF NACELLES AND AFT WING--TAIL OFF



| DATA SET SYMBOL | CONFIGURATION DESCRIPTION |
|-----------------|---------------------------|
| (AU1511)        | UWAL-1021 BAC C-6 BOOSTER |
| (AU1501)        | UWAL-1021 BAC C-6 BOOSTER |
| (AU1031)        | UWAL-1021 BAC C-6 BOOSTER |

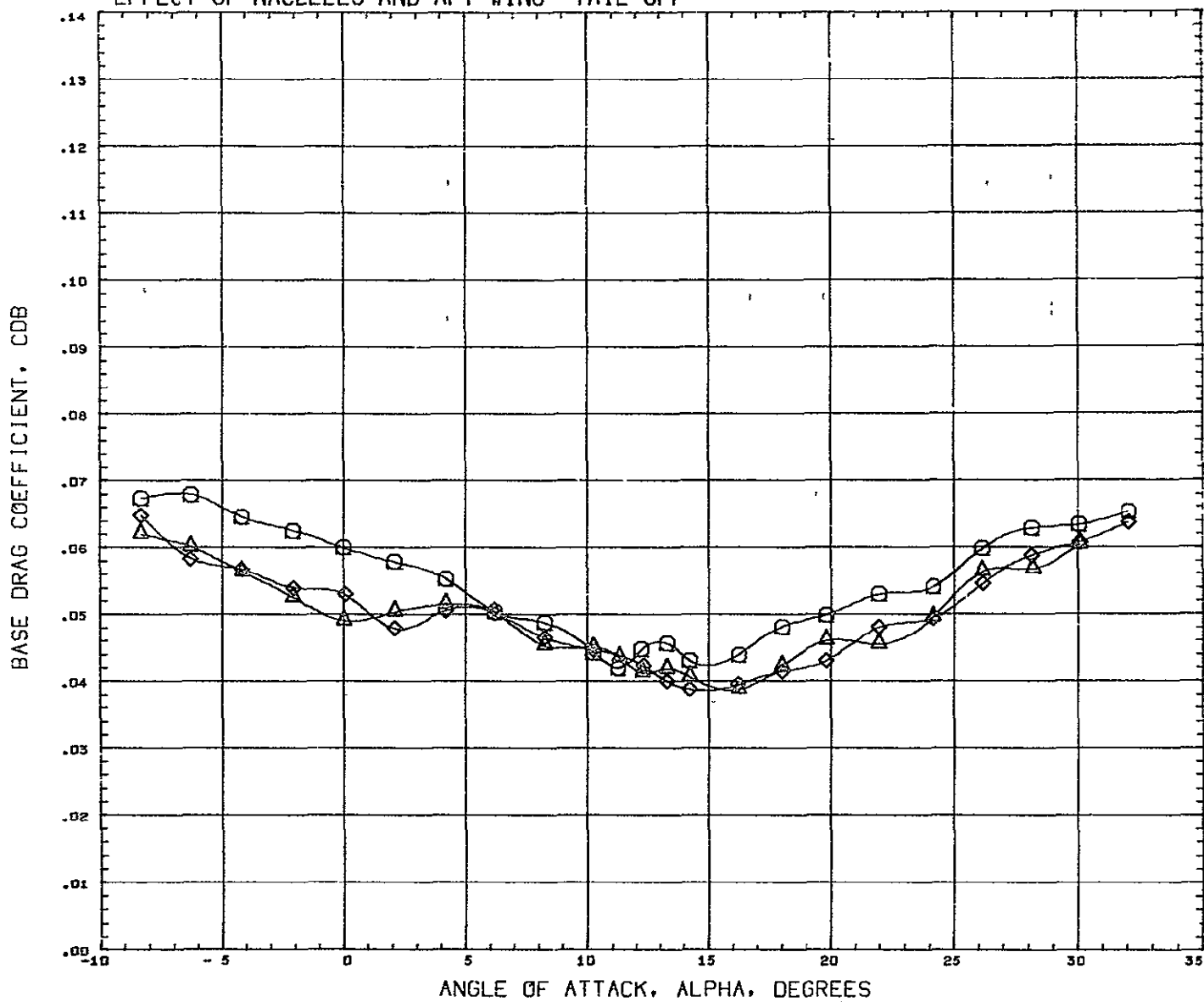
ANGLE OF ATTACK, ALPHA, DEGREES

| BETA  |
|-------|
| 0.000 |
| 0.000 |
| 0.000 |

MACH 0.154

| REFERENCE INFORMATION |         |         |
|-----------------------|---------|---------|
| REFS                  | 4.4200  | SG FT.  |
| REFL                  | 10.1000 | INCHES  |
| REFB                  | 66.6000 | INCHES  |
| XMRF                  | 55.6360 | INCHES  |
| YMRP                  | 0.0000  | INCHES  |
| ZMRP                  | 5.8600  | INCHES  |
| SCALE                 | 2.9920  | PERCENT |

# EFFECT OF NACELLES AND AFT WING--TAIL OFF



DATA SET SYMBOL CONFIGURATION DESCRIPTION

(AU1511)  
(AU1501)  
(AU1031)

□  
△  
◇

UVAL-1021 BAC C-6 BOOSTER  
UVAL-1021 BAC C-6 BOOSTER  
UVAL-1021 BAC C-6 BOOSTER

B1W2  
B1W2N1  
B1W1N1

BETA

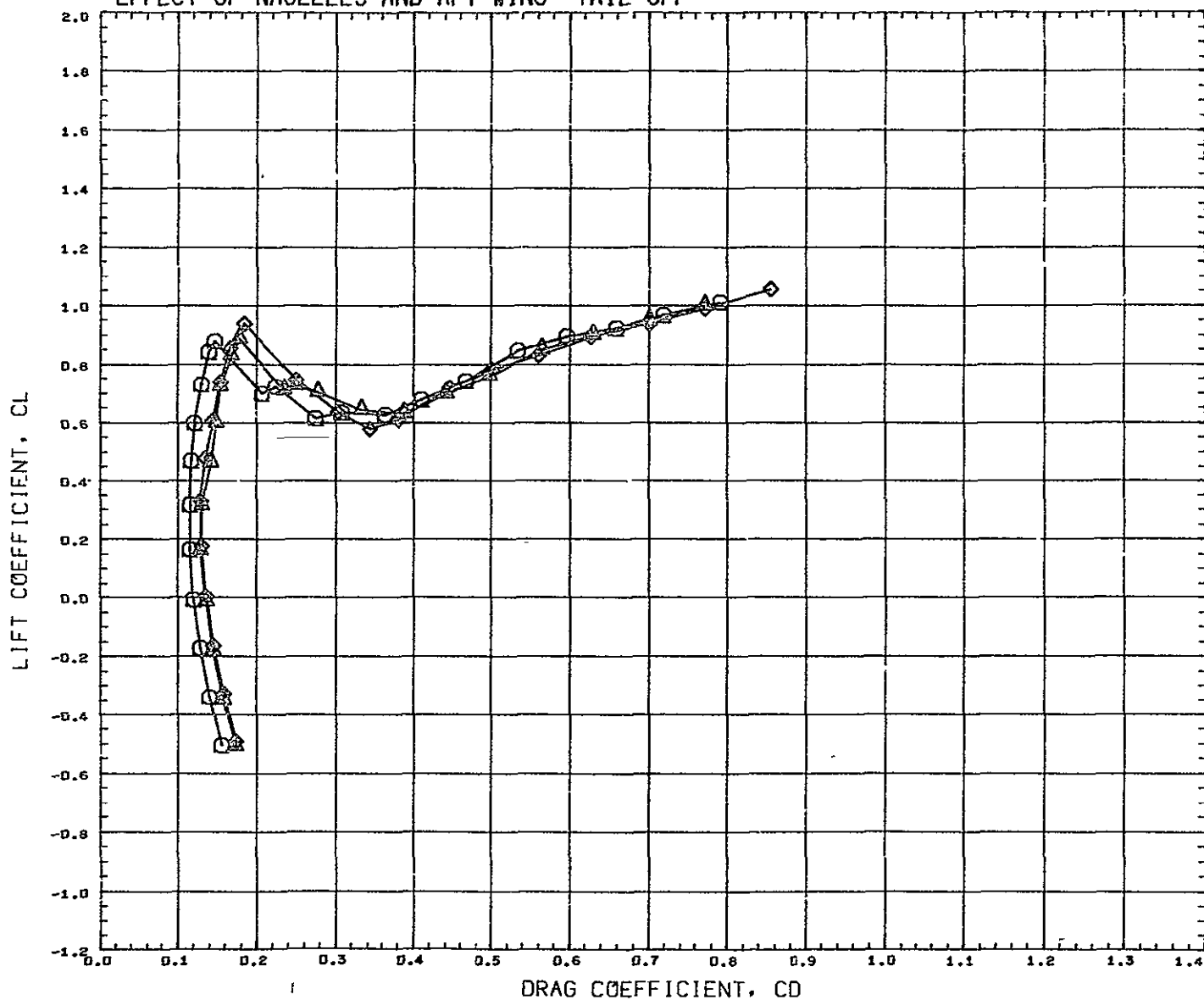
0.000  
0.000  
0.000

REFERENCE INFORMATION

REFS 4.4201 SQ.FT.  
REFL 10.1000 INCHES  
REFB 66.6000 INCHES  
XMRP 55.6360 INCHES  
YMRP 0.0000 INCHES  
ZMRP 5.8600 INCHES  
SCALE 2.9920 PERCENT

MACH 0.154

# EFFECT OF NACELLES AND AFT WING--TAIL OFF



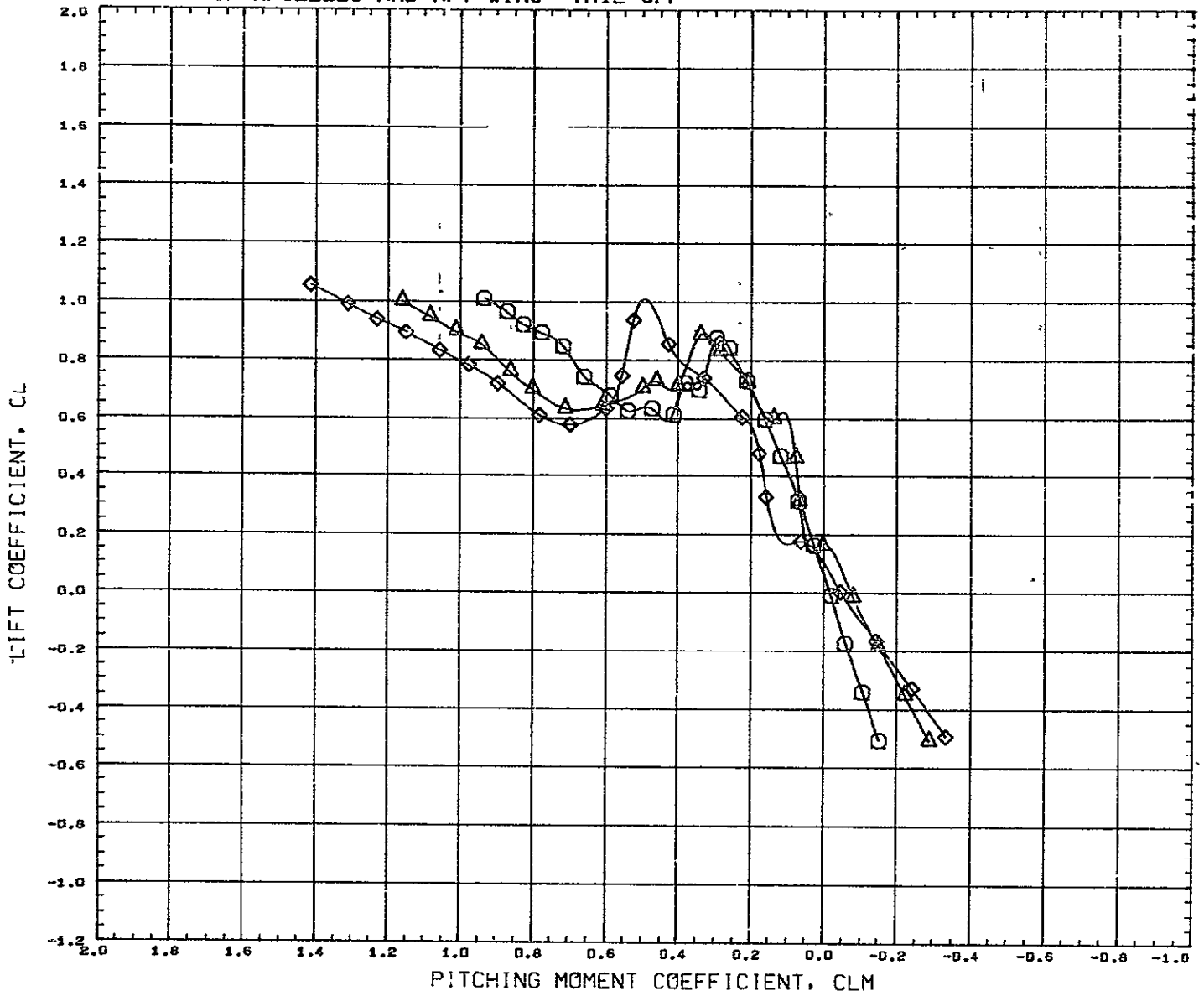
| DATA SET SYMBOL | CONFIGURATION DESCRIPTION |
|-----------------|---------------------------|
| (AU1511)        | UWAL-1021 BAC C-6 BOOSTER |
| (AU1501)        | UWAL-1021 BAC C-6 BOOSTER |
| (AU1031)        | UWAL-1021 BAC C-6 BOOSTER |

| BETA  |
|-------|
| 0.000 |
| 0.000 |
| 0.000 |

| REFERENCE INFORMATION |                |
|-----------------------|----------------|
| REFS                  | 4.4200 SQ.FT   |
| REFL                  | 10.1000 INCHES |
| REFB                  | 66.6000 INCHES |
| XMRP                  | 55.6360 INCHES |
| YMRP                  | 0.0000 INCHES  |
| ZMRP                  | 5.8600 INCHES  |
| SCALE                 | 2.9920 PERCENT |

MACH 0.154

# EFFECT OF NACELLES AND AFT WING--TAIL OFF



| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION |
|----------|--------|---------------------------|
| (AU1511) | ○      | UWAL-1021 BAC C-6 BOOSTER |
| (AU1501) | △      | UWAL-1021 BAC C-6 BOOSTER |
| (AU1031) | ◇      | UWAL-1021 BAC C-6 BOOSTER |

PITCHING MOMENT COEFFICIENT,  $C_{LM}$

BETA

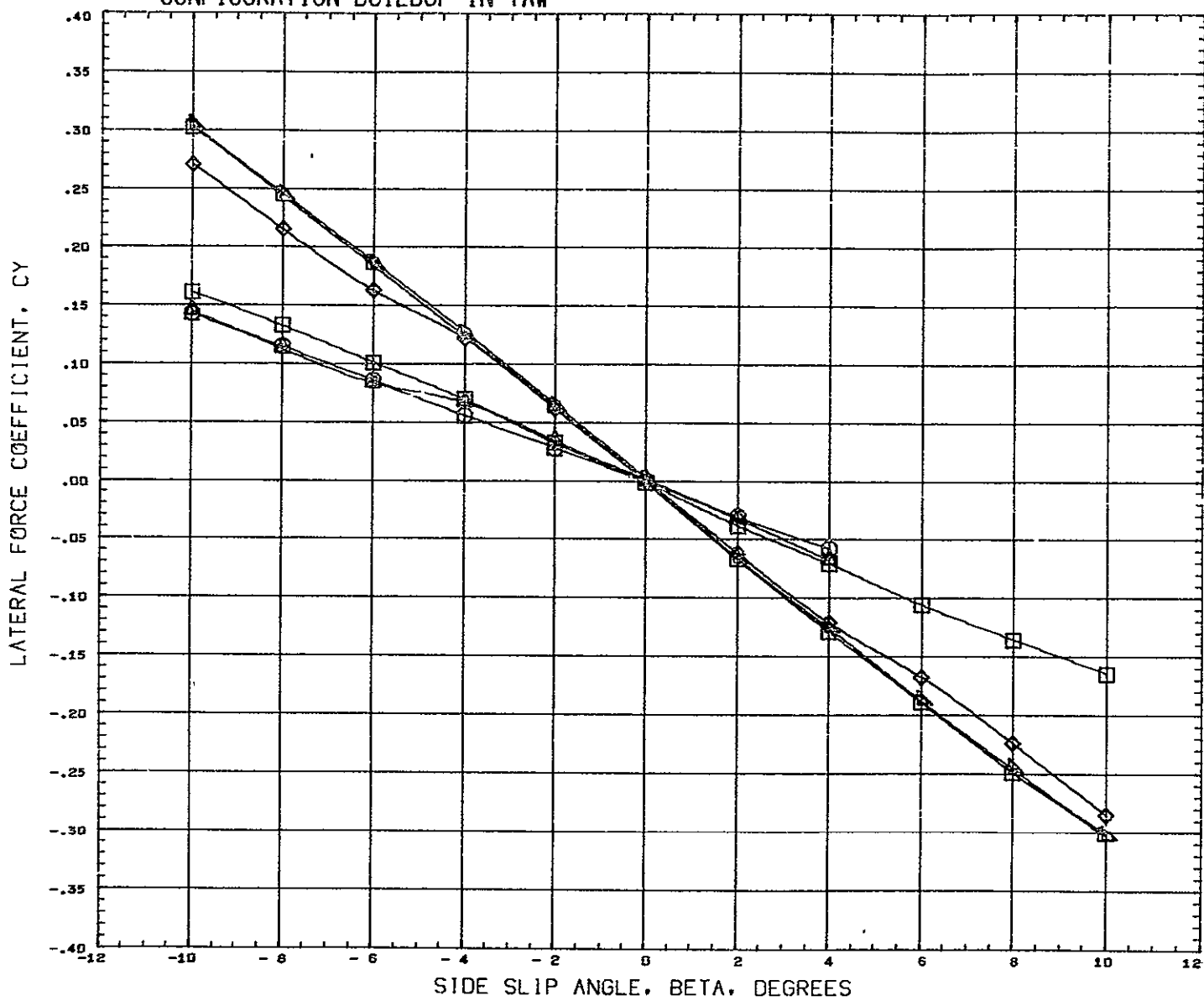
0.000  
0.000  
0.000

REFERENCE INFORMATION

|       |         |         |
|-------|---------|---------|
| REFS  | 4.4270  | SQ.FT.  |
| REFL  | 10.1000 | INCHES  |
| REFB  | 66.6000 | INCHES  |
| XMRP  | 55.6360 | INCHES  |
| YMRP  | 0.0000  | INCHES  |
| ZMRP  | 5.8600  | INCHES  |
| SCALE | 2.9920  | PERCENT |

MACH 0.154

# CONFIGURATION BUILDUP IN YAW

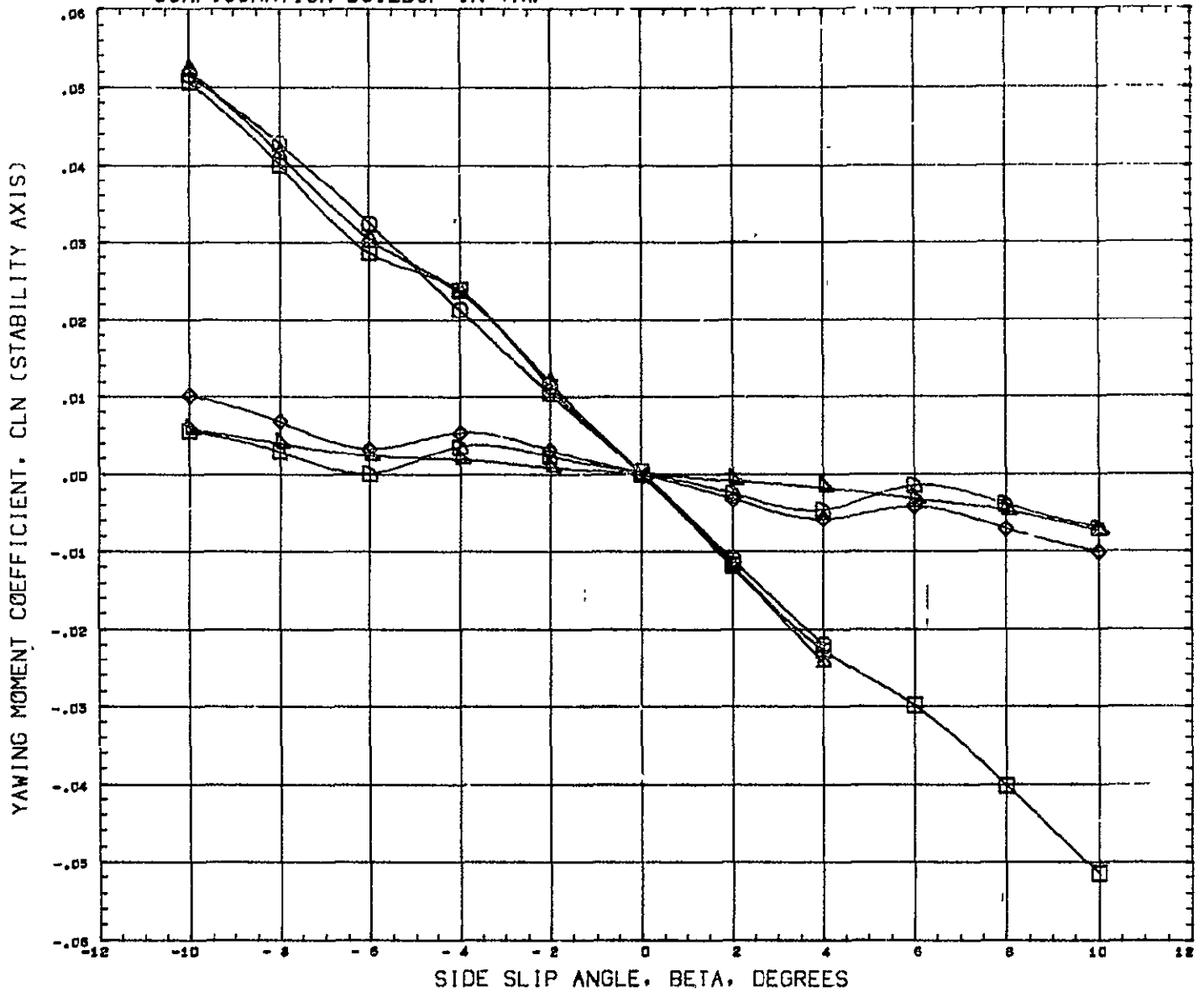


DATA SET SYMBOL CONFIGURATION DESCRIPTION  
 (AU1016) UVAL-1021 BAC C-6 BOOSTER B1  
 (AU1026) UVAL-1021 BAC C-6 BOOSTER B1N1  
 (AU1056) UVAL-1021 BAC C-6 BOOSTER B1V1N1  
 (AU1076) UVAL-1021 BAC C-6 BOOSTER B1W1V1N1  
 (AU1086) UVAL-1021 BAC C-6 BOOSTER B1W1H1V1  
 (AU109A) UVAL-1021 BAC C-6 BOOSTER B1W1H1V1N1  
 MACH 0.153

ALPHA  
 0.000  
 0.000  
 0.000  
 0.000  
 0.000  
 0.000

REFERENCE INFORMATION  
 REFS 4.420G SQ.FT.  
 REFL 10.1000 INCHES  
 REFB 66.6000 INCHES  
 XHRP 55.6360 INCHES  
 YHRP 0.0000 INCHES  
 ZHRP 5.8600 INCHES  
 SCALE 2.9920 PERCENT

# CONFIGURATION BUILDUP IN YAW



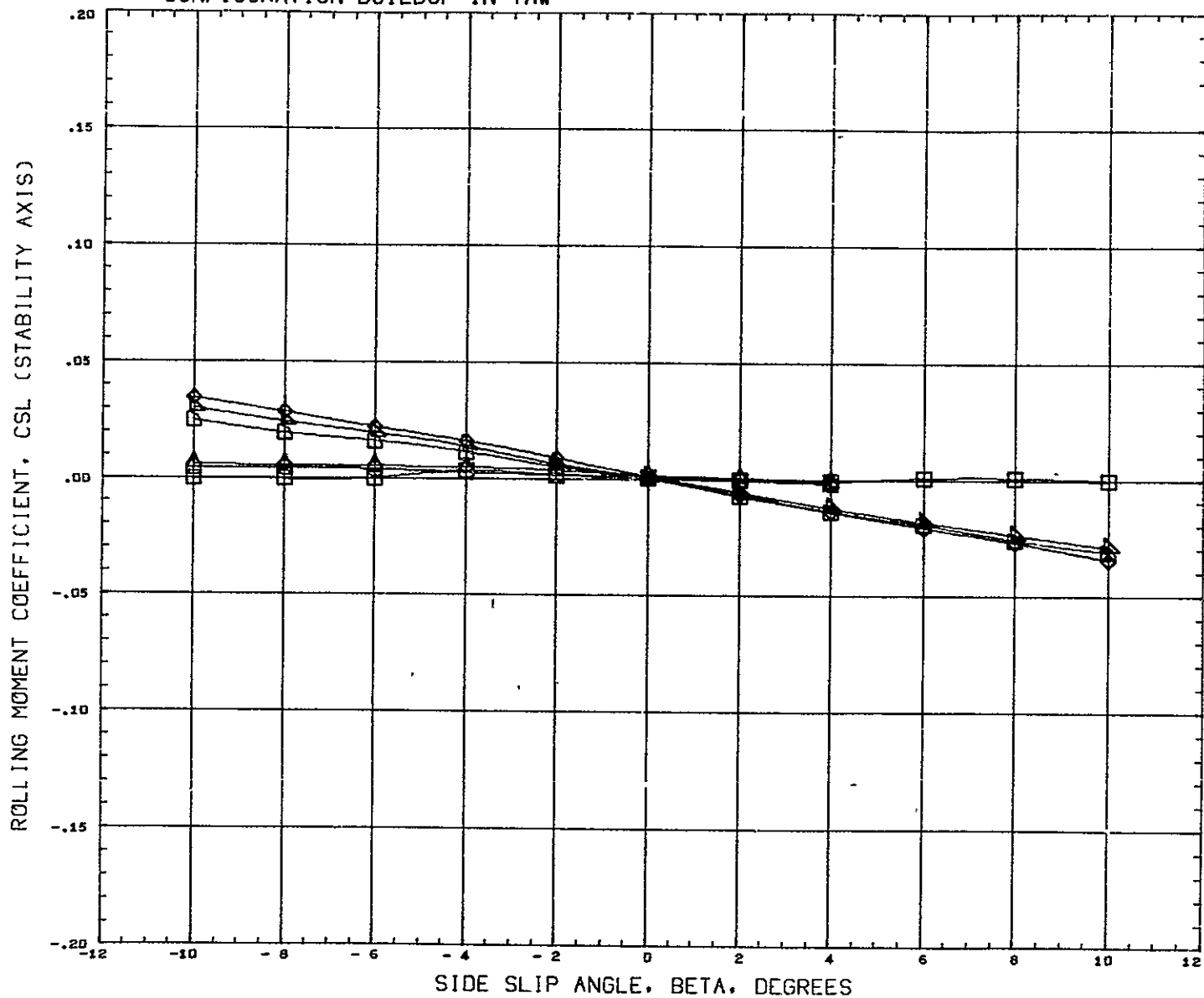
| DATA SET SYMBOL | CONFIGURATION DESCRIPTION |
|-----------------|---------------------------|
| (AU1016)        | UWAL-1021 BAC C-6 BOOSTER |
| (AU1028)        | UWAL-1021 BAC C-6 BOOSTER |
| (AU1058)        | UWAL-1021 BAC C-6 BOOSTER |
| (AU1078)        | UWAL-1021 BAC C-6 BOOSTER |
| (AU1088)        | UWAL-1021 BAC C-6 BOOSTER |
| (AU109A)        | UWAL-1021 BAC C-6 BOOSTER |

| ALPHA |
|-------|
| 0.000 |
| 0.000 |
| 0.000 |
| 0.000 |
| 0.000 |
| 0.000 |

| REFERENCE INFORMATION |                |
|-----------------------|----------------|
| REFS                  | 4.4200 SQ.FT.  |
| REFL                  | 10.1000 INCHES |
| REFB                  | 66.6100 INCHES |
| XMRP                  | 55.6360 INCHES |
| YMRP                  | 0.0000 INCHES  |
| ZMRP                  | 5.8600 INCHES  |
| SCALE                 | 2.9920 PERCENT |

MACH 0.155

# CONFIGURATION BUILDUP IN YAW



| DATA SET SYMBOL | CONFIGURATION DESCRIPTION |
|-----------------|---------------------------|
| (AU1016)        | UWAL-1021 BAC C-6 BOOSTER |
| (AU1026)        | UWAL-1021 BAC C-6 BOOSTER |
| (AU1056)        | UWAL-1021 BAC C-6 BOOSTER |
| (AU1076)        | UWAL-1021 BAC C-6 BOOSTER |
| (AU1086)        | UWAL-1021 BAC C-6 BOOSTER |
| (AU109A)        | UWAL-1021 BAC C-6 BOOSTER |

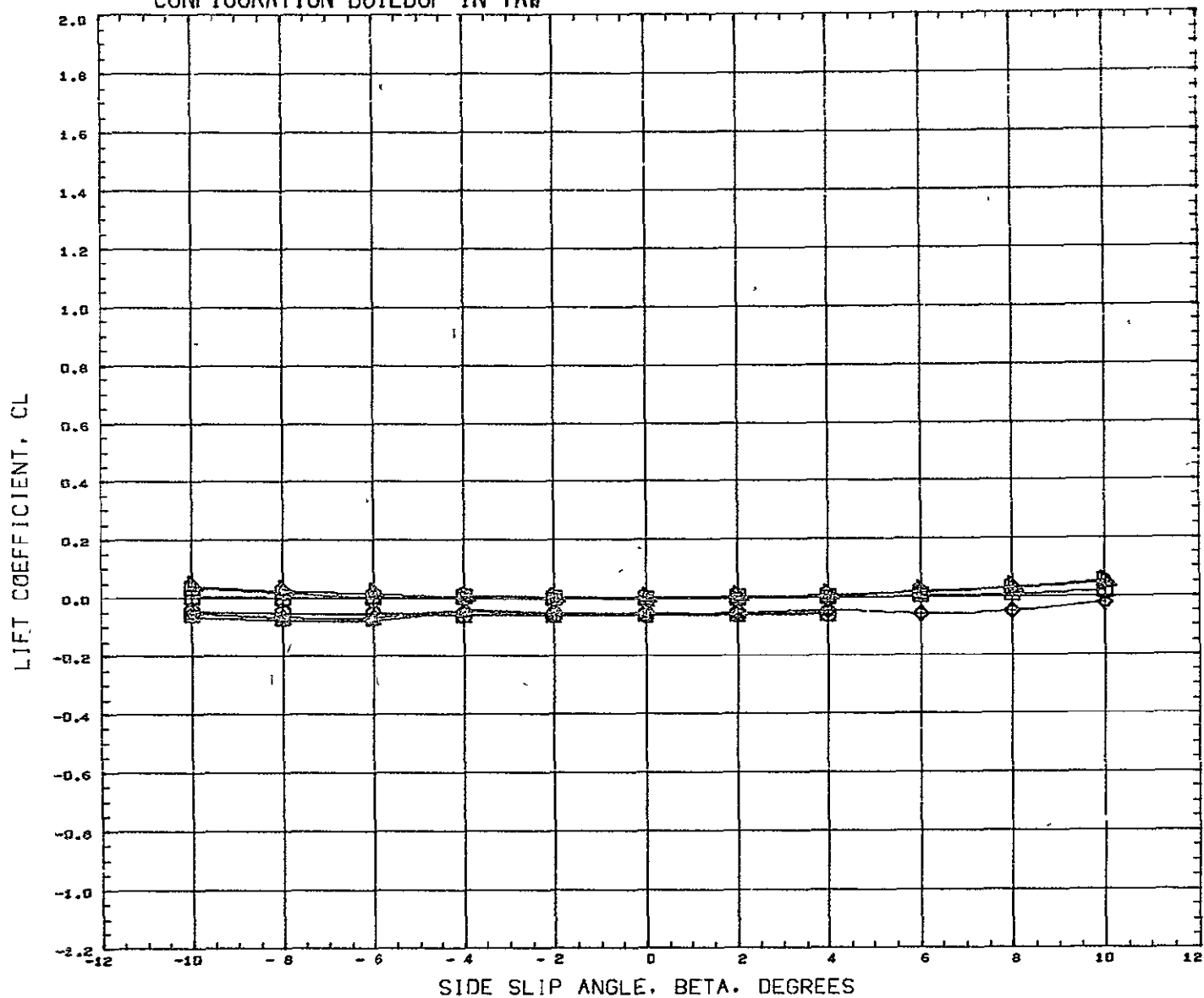
MACH 0.153

SIDE SLIP ANGLE, BETA, DEGREES

| ALPHA |
|-------|
| 0.000 |
| 0.000 |
| 0.000 |
| 0.000 |
| 0.000 |
| 0.000 |

| REFERENCE INFORMATION |         |         |
|-----------------------|---------|---------|
| REFS                  | 4.4200  | SQ.FT.  |
| REFL                  | 10.1000 | INCHES  |
| REFB                  | 66.6000 | INCHES  |
| XMRP                  | 55.6360 | INCHES  |
| YMRP                  | 0.0000  | INCHES  |
| ZMRP                  | 5.8600  | INCHES  |
| SCALE                 | 2.9920  | PERCENT |

# CONFIGURATION BUILDUP IN YAW



| DATA SET SYMBOL | CONFIGURATION DESCRIPTION |
|-----------------|---------------------------|
| (AU1016)        | UWAL-1021 BAC C-6 BOOSTER |
| (AU1026)        | UWAL-1021 BAC C-6 BOOSTER |
| (AU1056)        | UWAL-1021 BAC C-6 BOOSTER |
| (AU1076)        | UWAL-1021 BAC C-6 BOOSTER |
| (AU1086)        | UWAL-1021 BAC C-6 BOOSTER |
| (AU109A)        | UWAL-1021 BAC C-6 BOOSTER |

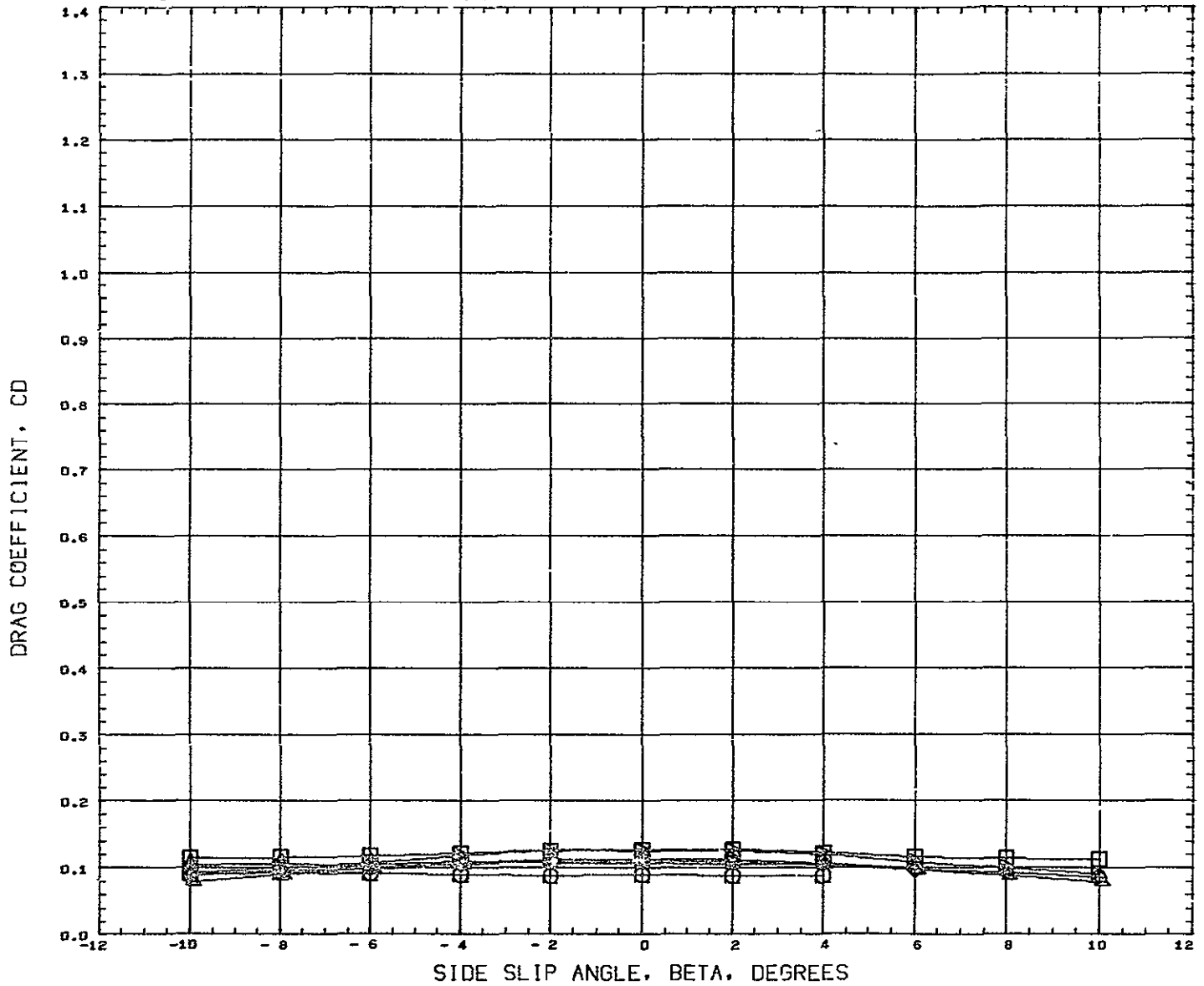
CR002A

MACH 0.153

| ALPHA |
|-------|
| 0.000 |
| 0.000 |
| 0.000 |
| 0.000 |
| 0.000 |
| 0.000 |
| 0.000 |

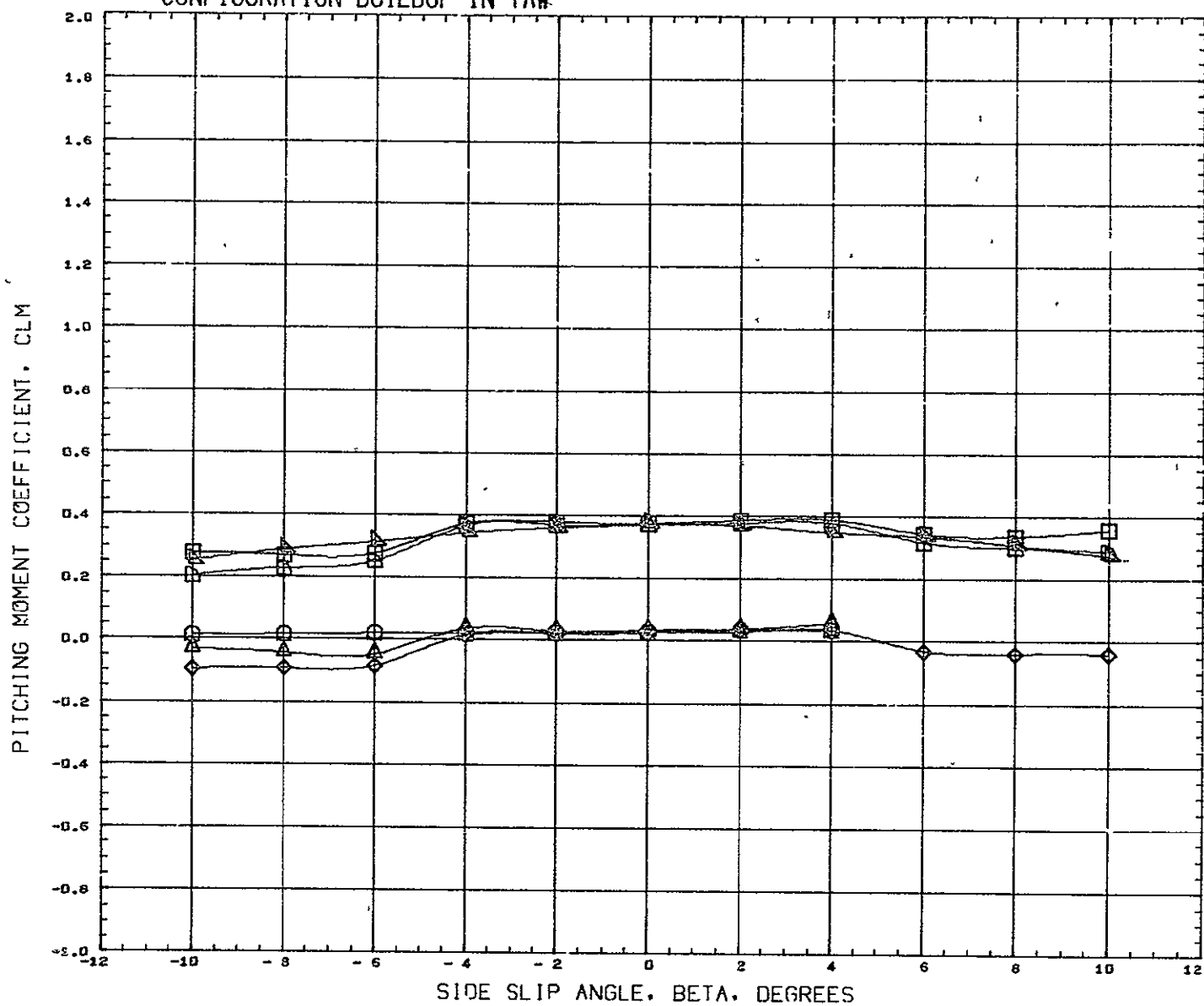
| REFERENCE INFORMATION |         |         |
|-----------------------|---------|---------|
| REFS                  | 4.4200  | 50 FT.  |
| REFL                  | 10.1000 | INCHES  |
| REFB                  | 66.6000 | INCHES  |
| XMRP                  | 55.6360 | INCHES  |
| YMRP                  | 0.0000  | INCHES  |
| ZMRP                  | 5.8600  | INCHES  |
| SCALE                 | 2.9920  | PERCENT |

# CONFIGURATION BUILDUP IN YAW



| DATA SET SYMBOL | CONFIGURATION DESCRIPTION            | ALPHA | REFERENCE INFORMATION |
|-----------------|--------------------------------------|-------|-----------------------|
| (AU1016)        | UWAL-1021 BAC C-6 BOOSTER B1         | 0.000 | REFS 4 4209 SQ.FT.    |
| (AU1026)        | UWAL-1021 BAC C-6 BOOSTER B1N1       | 0.000 | REFL 10.1000 INCHES   |
| (AU1056)        | UWAL-1021 BAC C-6 BOOSTER B1V1N1     | 0.000 | REFB 66 6000 INCHES   |
| (AU1076)        | UWAL-1021 BAC C-6 BOOSTER B1W1H1N1   | 0.000 | XMRP 55.6360 INCHES   |
| (AU1086)        | UWAL-1021 BAC C-6 BOOSTER B1W1H1V1   | 0.000 | YMRP 0.0000 INCHES    |
| (AU109A)        | UWAL-1021 BAC C-6 BOOSTER B1W1H1V1N1 | 0.000 | ZMRP 5.8600 INCHES    |
|                 |                                      |       | SCALE 2.9920 PERCENT  |
| MACH            | 0.153                                |       |                       |

# CONFIGURATION BUILDUP IN YAW



| DATA SET SYMBOL | CONFIGURATION DESCRIPTION |
|-----------------|---------------------------|
| (AU1016)        | UWAL-1021 BAC C-6 BOOSTER |
| (AU1026)        | UWAL-1021 BAC C-6 BOOSTER |
| (AU1056)        | UWAL-1021 BAC C-6 BOOSTER |
| (AU1076)        | UWAL-1021 BAC C-6 BOOSTER |
| (AU1086)        | UWAL-1021 BAC C-6 BOOSTER |
| (AU109A)        | UWAL-1021 BAC C-6 BOOSTER |

MACH 0.153

SIDE SLIP ANGLE, BETA, DEGREES

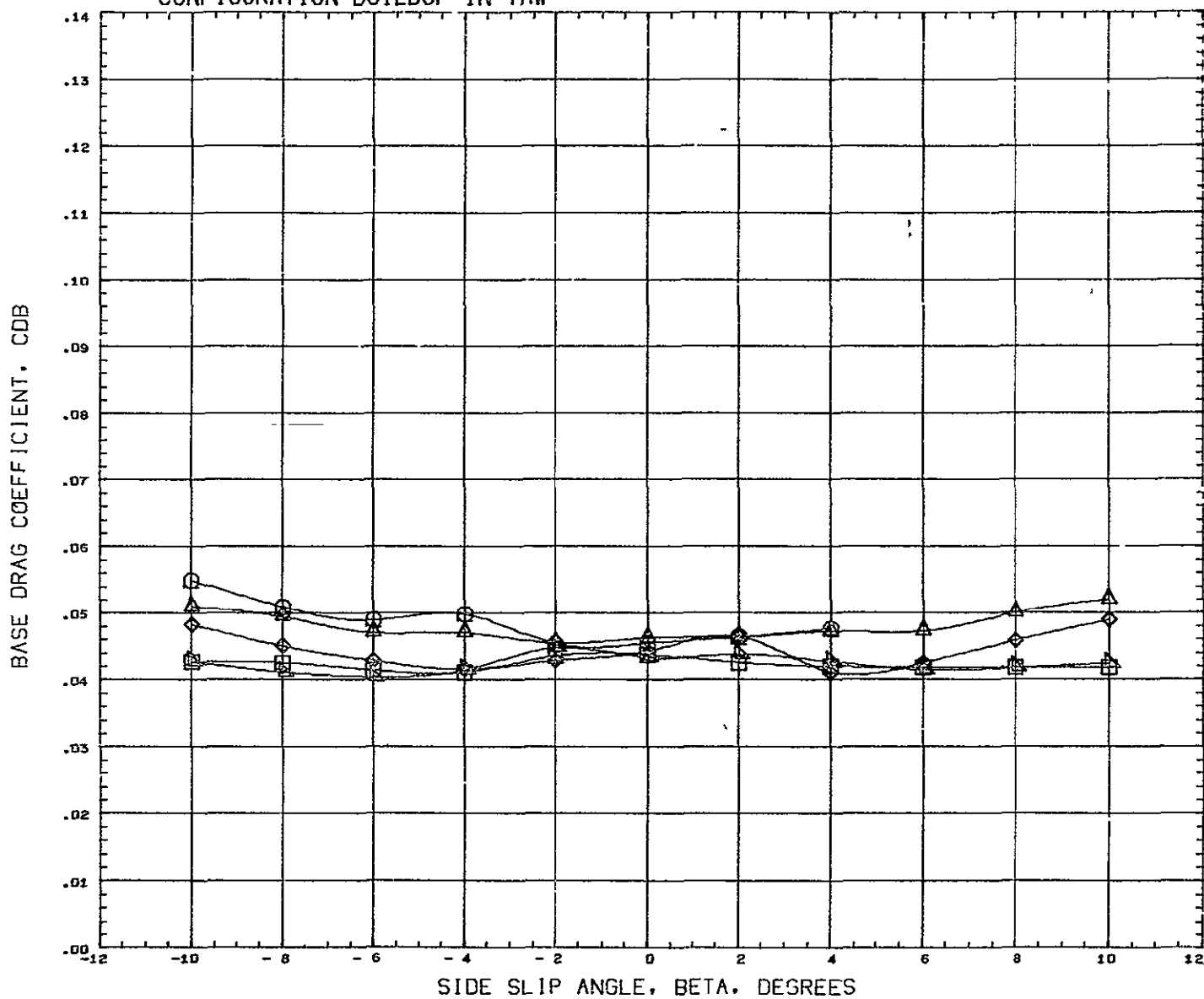
ALPHA

0.000  
0.000  
0.000  
0.000  
0.000  
0.000

REFERENCE INFORMATION

|       |         |         |
|-------|---------|---------|
| REFS  | 4.4200  | SQ.FT   |
| REFL  | 10.1000 | INCHES  |
| REFB  | 66.6000 | INCHES  |
| XMRP  | 55.6360 | INCHES  |
| YMRP  | 0.0000  | INCHES  |
| ZMRP  | 5.8600  | INCHES  |
| SCALE | 2.9920  | PERCENT |

# CONFIGURATION BUILDUP IN YAW



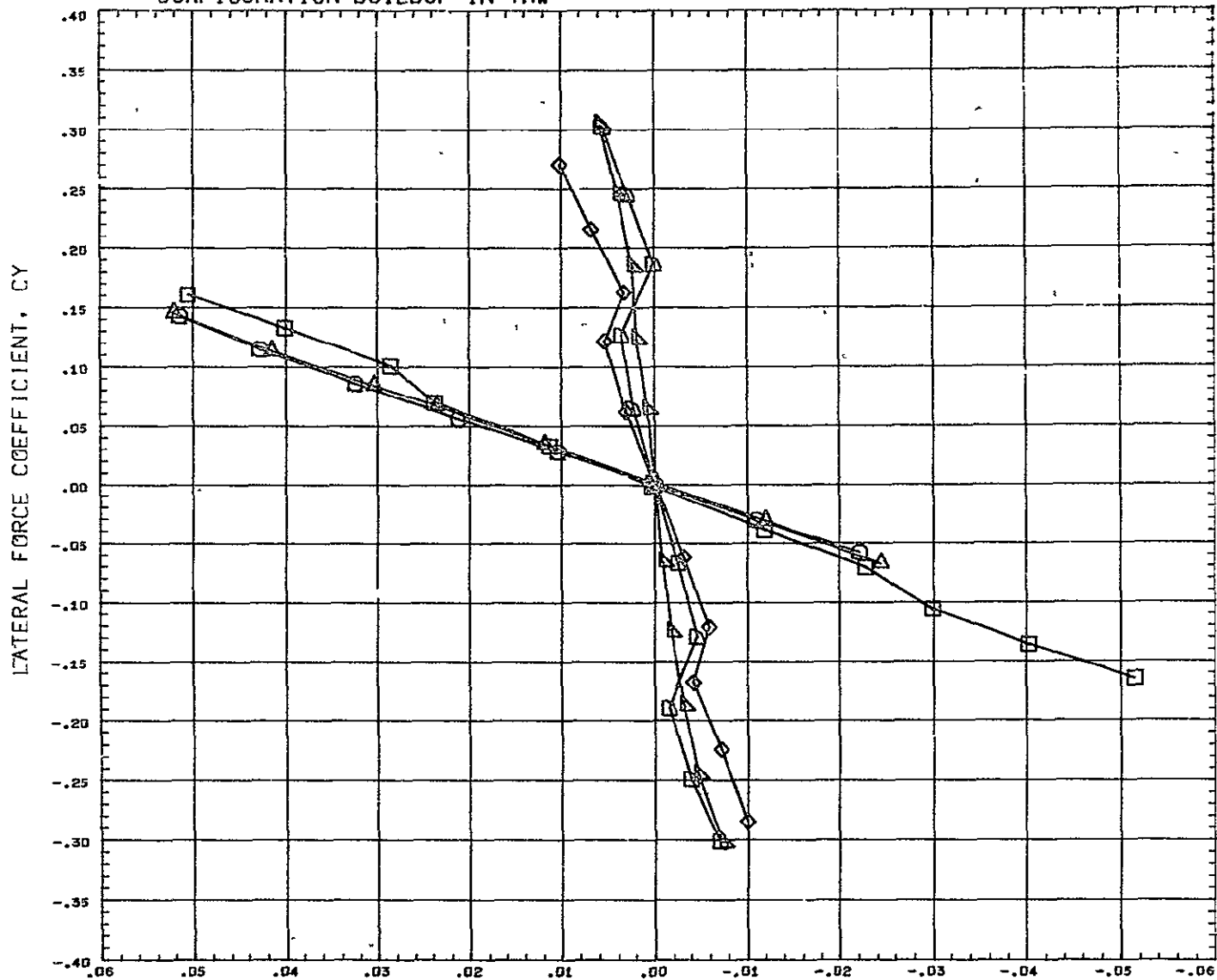
| DATA SET SYMBOL | CONFIGURATION DESCRIPTION            |
|-----------------|--------------------------------------|
| (AU1026)        | UWAL-1021 BAC C-6 BOOSTER B1N1       |
| (AU1056)        | UWAL-1021 BAC C-6 BOOSTER B1V1N1     |
| (AU1076)        | UWAL-1021 BAC C-6 BOOSTER B1W1H1N1   |
| (AU1086)        | UWAL-1021 BAC C-6 BOOSTER B1W1H1V1   |
| (AU109A)        | UWAL-1021 BAC C-6 BOOSTER B1W1H1V1N1 |

| ALPHA |
|-------|
| 0.000 |
| 0.000 |
| 0.000 |
| 0.000 |
| 0.000 |

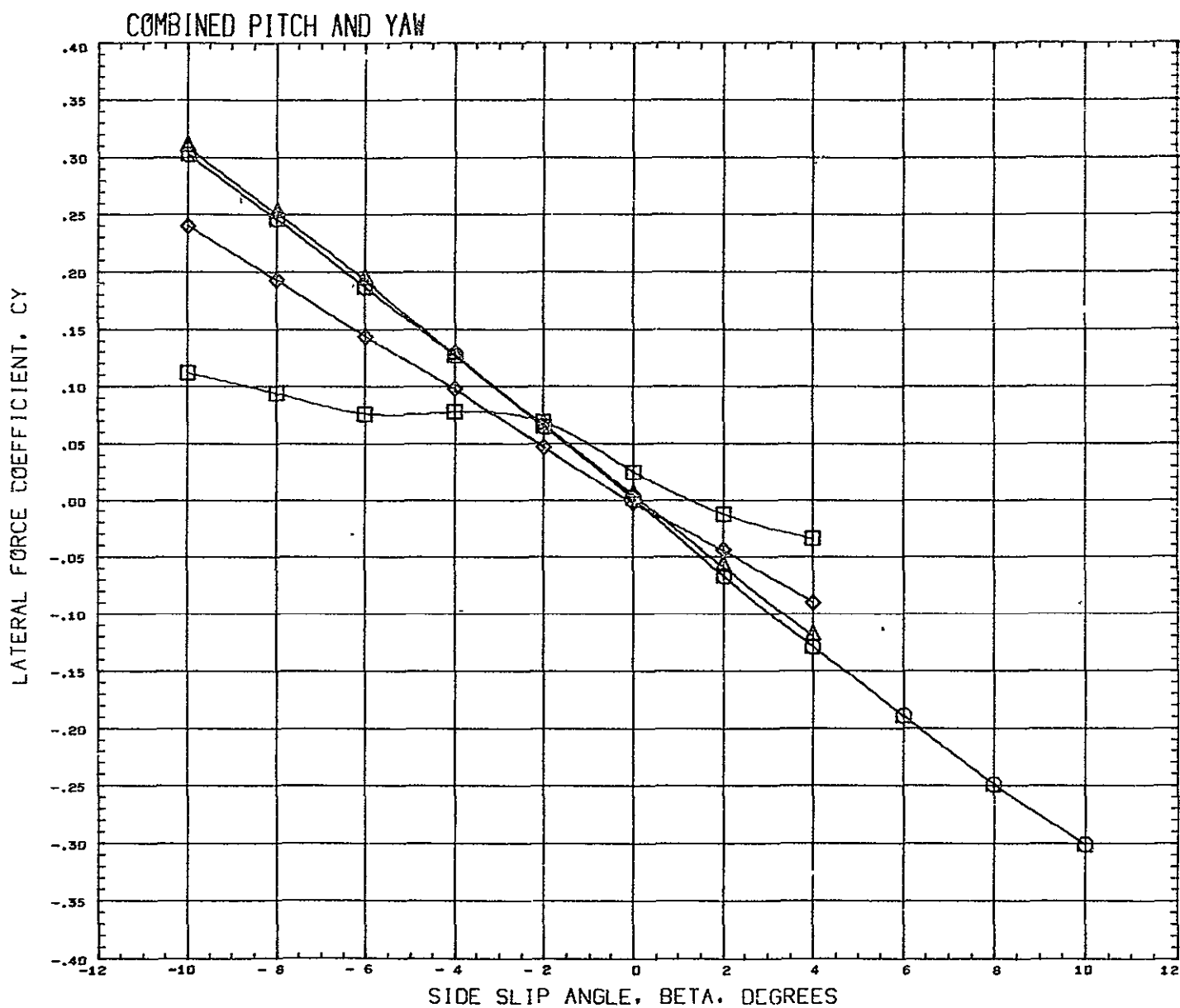
| REFERENCE INFORMATION |         |         |
|-----------------------|---------|---------|
| REFS                  | 4.4200  | SQ.FT.  |
| REFL                  | 10 1000 | INCHES  |
| REFB                  | 66.6000 | INCHES  |
| XMRP                  | 55.6360 | INCHES  |
| YMRP                  | 0.0000  | INCHES  |
| ZMRP                  | 5.8600  | INCHES  |
| SCALE                 | 2.9920  | PERCENT |

MACH 0.153

# CONFIGURATION BUILDUP IN YAW



| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | ALPHA | REFERENCE INFORMATION |
|-----------------|---------------------------|-------|-----------------------|
| (AU1016)        | UWAL-1021 BAC C-6 BOOSTER | 0.000 | REFS 4.42"0 SQ.FT.    |
| (AU1026)        | UWAL-1021 BAC C-6 BOOSTER | 0.000 | REFL 10.1000 INCHES   |
| (AU1056)        | UWAL-1021 BAC C-6 BOOSTER | 0.000 | REFB 66 6000 INCHES   |
| (AU1076)        | UWAL-1021 BAC C-6 BOOSTER | 0.000 | XMRP 55 6360 INCHES   |
| (AU1086)        | UWAL-1021 BAC C-6 BOOSTER | 0.000 | YMRP 0.0000 INCHES    |
| (AU109A)        | UWAL-1021 BAC C-6 BOOSTER | 0.000 | ZMRP 5.8600 INCHES    |
|                 |                           |       | SCALE 2 9920 PERCENT  |
| MACH            | 0.153                     |       |                       |

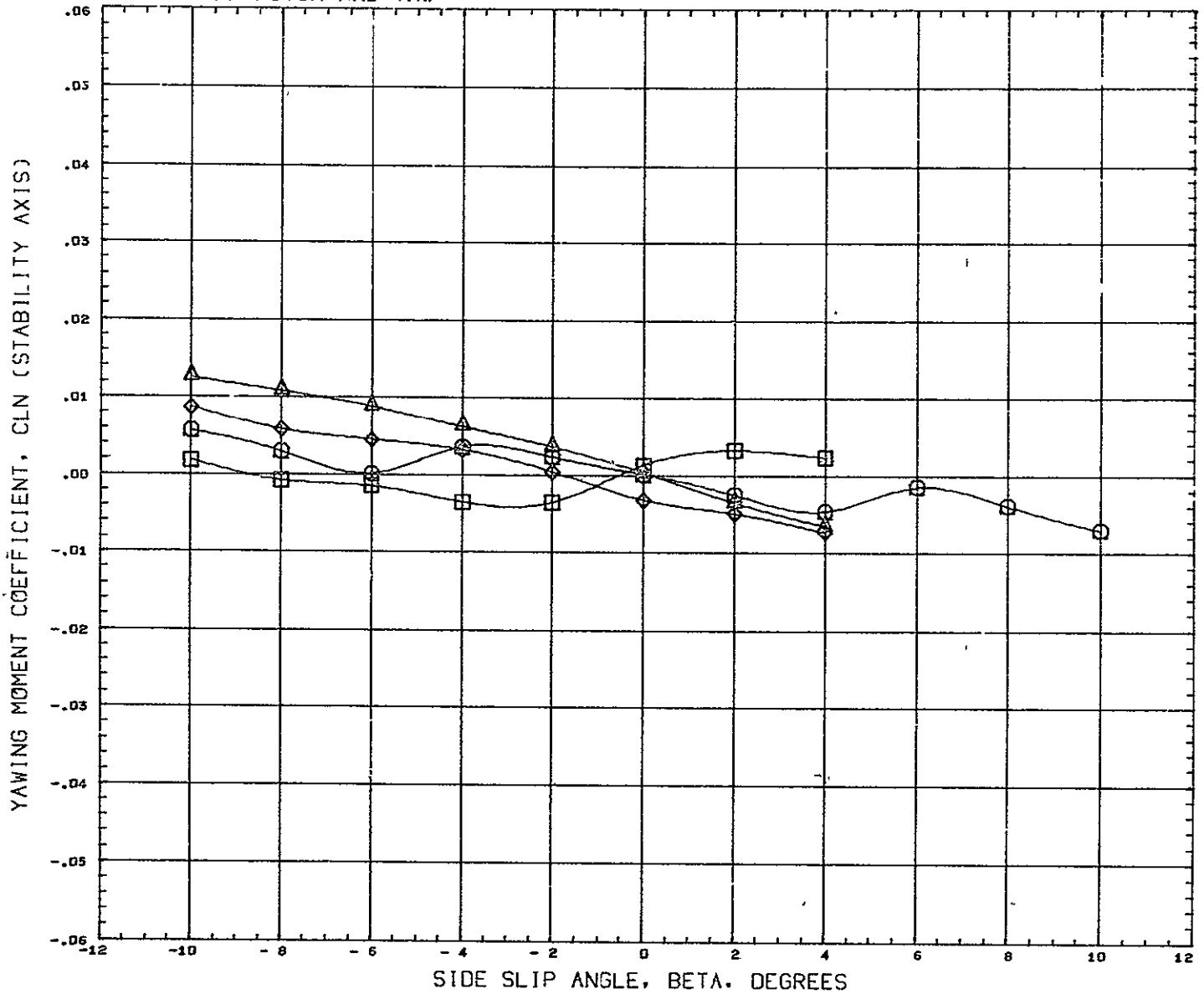


| DATA SET SYMBOL | SYMBOL | CONFIGURATION DESCRIPTION            |
|-----------------|--------|--------------------------------------|
| (AU109A)        | ○      | UWAL-1021 BAC C-6 BOOSTER B1W1H1V1N1 |
| (AU1097)        | △      | UWAL-1021 BAC C-6 BOOSTER B1W1H1V1N1 |
| (AU1098)        | ◇      | UWAL-1021 BAC C-6 BOOSTER B1W1H1V1N1 |
| (AU1099)        | □      | UWAL-1021 BAC C-6 BOOSTER B1W1H1V1N1 |

| ALPHA  |
|--------|
| 0.000  |
| 10.000 |
| 20.000 |
| 32.000 |

| REFERENCE INFORMATION |         |         |
|-----------------------|---------|---------|
| REFS                  | 4.4230  | SQ.FT   |
| REFL                  | 10.1000 | INCHES  |
| REFB                  | 66.6000 | INCHES  |
| XMRP                  | 55.6360 | INCHES  |
| YMRP                  | 0.0000  | INCHES  |
| ZMRP                  | 5.8600  | INCHES  |
| SCALE                 | 2.9920  | PERCENT |

# COMBINED PITCH AND YAW



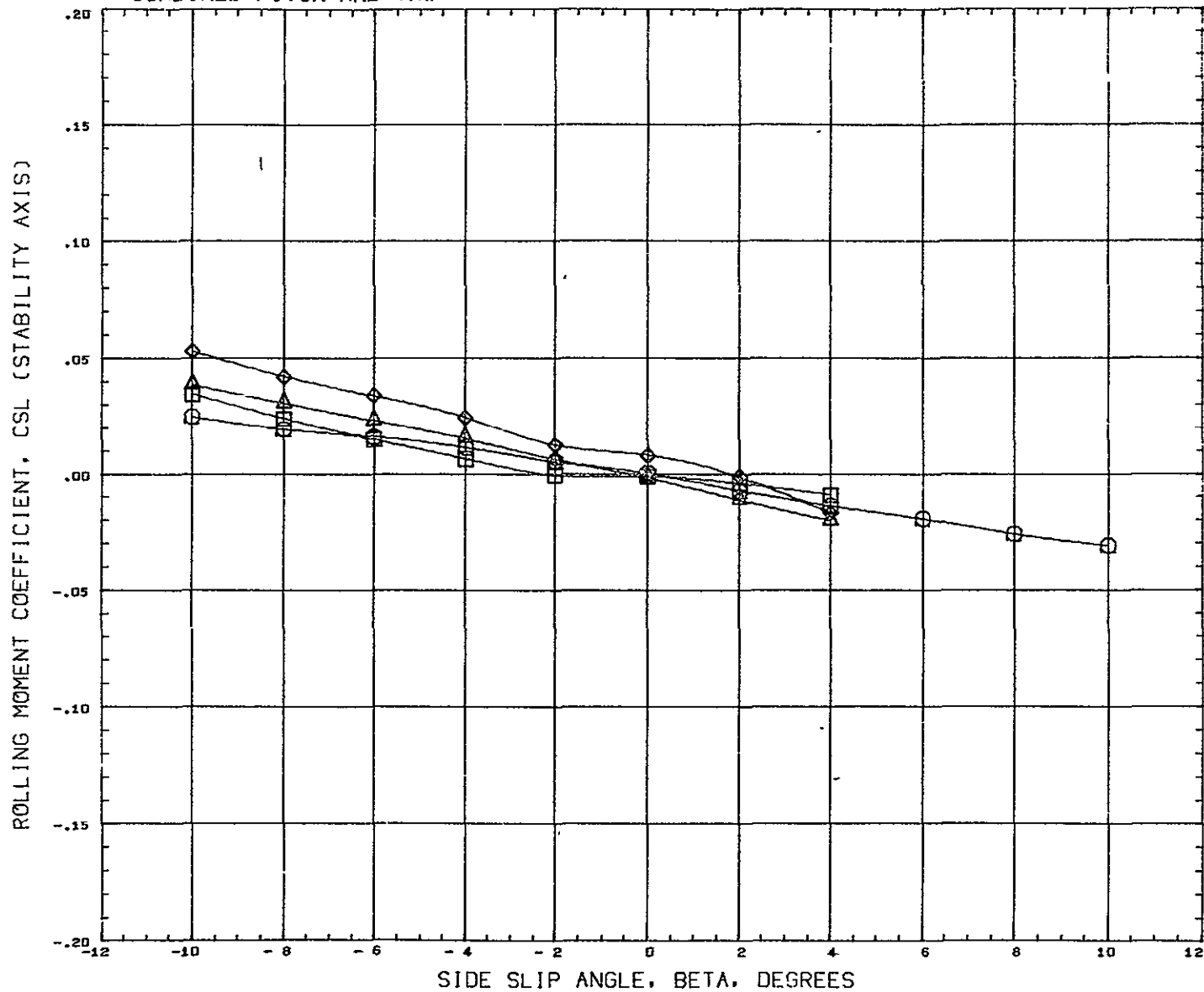
| DATA SET SYMBOL | CONFIGURATION DESCRIPTION |
|-----------------|---------------------------|
| (AU109A)        | UWAL-1021 BAC C-6 BOOSTER |
| (AU1097)        | UWAL-1021 BAC C-6 BOOSTER |
| (AU1098)        | UWAL-1021 BAC C-6 BOOSTER |
| (AU1099)        | UWAL-1021 BAC C-6 BOOSTER |

| ALPHA  |
|--------|
| 0.000  |
| 10.000 |
| 20.000 |
| 32.000 |

| REFERENCE INFORMATION |         |         |
|-----------------------|---------|---------|
| PEFS                  | 4.4230  | SQ FT.  |
| REFL                  | 10.1000 | INCHES  |
| REFB                  | 66.6000 | INCHES  |
| XMRF                  | 55.6360 | INCHES  |
| YMRF                  | 0.0000  | INCHES  |
| ZMRF                  | 5.8600  | INCHES  |
| SCALE                 | 2.9920  | PERCENT |

MACH 0.154

# COMBINED PITCH AND YAW



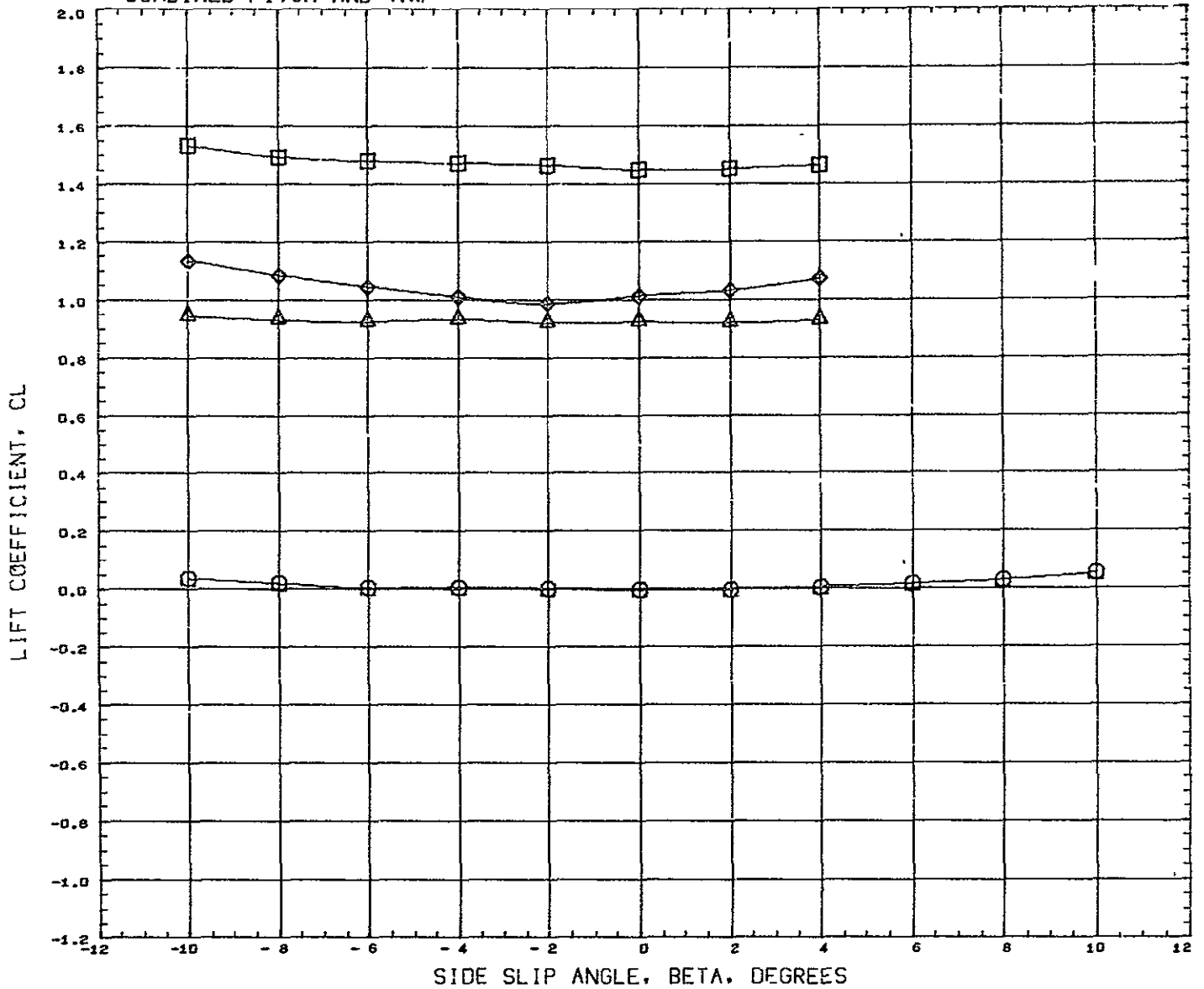
| DATA SET SYMBOL | CONFIGURATION DESCRIPTION            |
|-----------------|--------------------------------------|
| (AU109A)        | UWAL-1021 BAC C-6 BOOSTER B1W1H1V1N1 |
| (AU1097)        | UWAL-1021 BAC C-6 BOOSTER B1W1H1V1N1 |
| (AU1098)        | UWAL-1021 BAC C-6 BOOSTER B1W1H1V1N1 |
| (AU1099)        | UWAL-1021 BAC C-6 BOOSTER B1W1H1V1N1 |

| ALPHA  |
|--------|
| 0.000  |
| 10.000 |
| 20.000 |
| 32.000 |

| REFERENCE INFORMATION |         |         |
|-----------------------|---------|---------|
| REFS                  | 4 4213  | 30.00   |
| REFL                  | 10.1000 | INCHES  |
| RCFB                  | 66.6000 | INCHES  |
| XMRP                  | 55 6360 | INCHES  |
| YMRP                  | 0 0000  | INCHES  |
| ZMRP                  | 5.8600  | INCHES  |
| SCALE                 | 2.9920  | PERCENT |

MACH 0.154

# COMBINED PITCH AND YAW



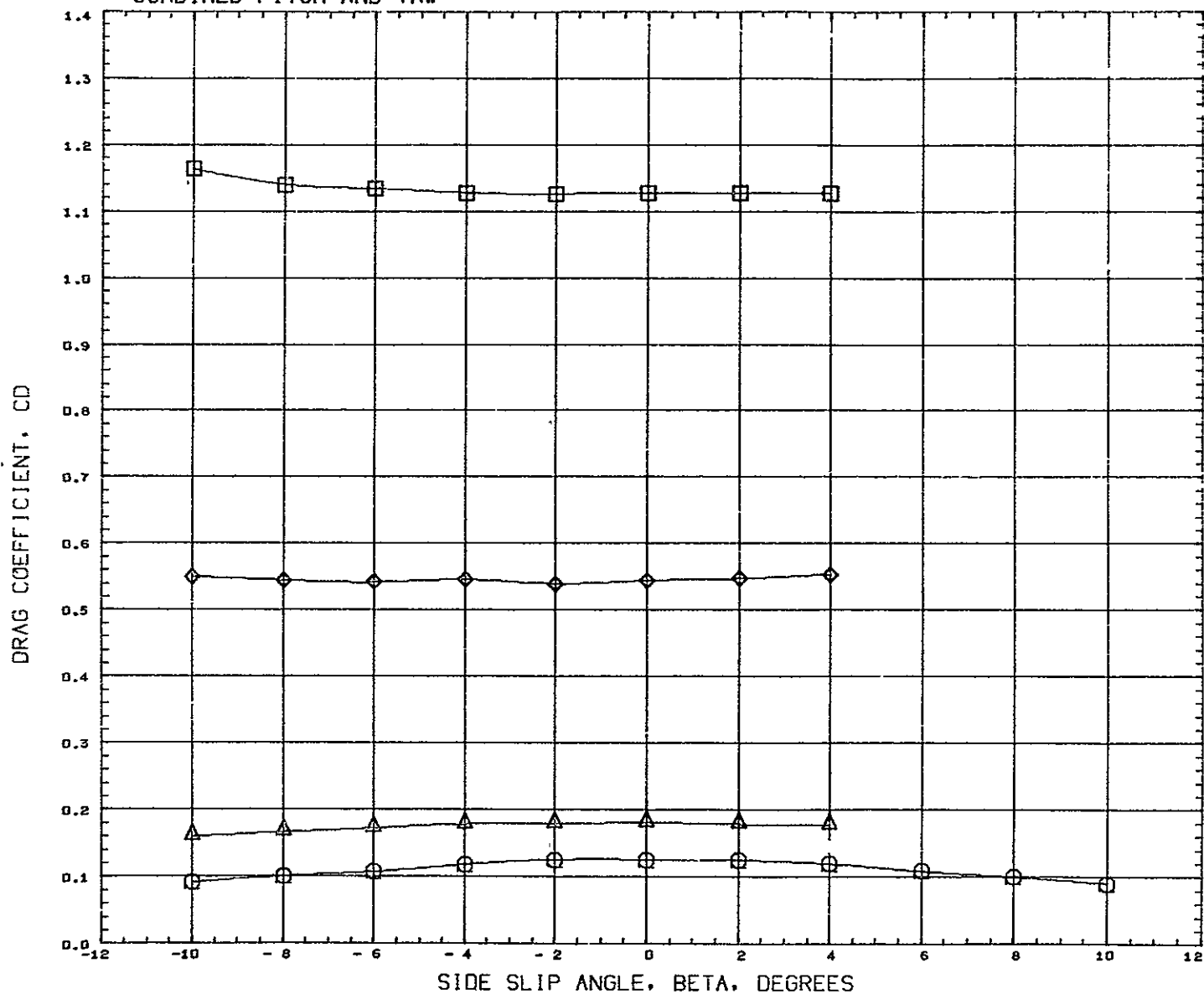
| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION |
|----------|--------|---------------------------|
| (AU109A) | ○      | UWAL-1021 BAC C-6 BOOSTER |
| (AU1097) | △      | UWAL-1021 BAC C-6 BOOSTER |
| (AU1098) | ◇      | UWAL-1021 BAC C-6 BOOSTER |
| (AU1099) | □      | UWAL-1021 BAC C-6 BOOSTER |

| BIW1H1V1N1 | ALPHA  |
|------------|--------|
| 81W1H1V1N1 | 0.000  |
| 81W1H1V1N1 | 10.000 |
| 81W1H1V1N1 | 20.000 |
| 81W1H1V1N1 | 32.000 |

| REFERENCE INFORMATION |         |         |
|-----------------------|---------|---------|
| REFS                  | ~ 4230  | SQ.FT   |
| REFL                  | 10.1000 | INCHES  |
| REFB                  | 66.6000 | INCHES  |
| XMRP                  | 55.6360 | INCHES  |
| YMRP                  | 0.0000  | INCHES  |
| ZMRP                  | 5.8600  | INCHES  |
| SCALE                 | 2.9920  | PERCENT |

MACH 0.154

# COMBINED PITCH AND YAW



| DATA SET SYMBOL | CONFIGURATION DESCRIPTION |
|-----------------|---------------------------|
| (AU109A)        | UWAL-1021 BAC C-6 BOOSTER |
| (AU1097)        | UWAL-1021 BAC C-6 BOOSTER |
| (AU1098)        | UWAL-1021 BAC C-6 BOOSTER |
| (AU1099)        | UWAL-1021 BAC C-6 BOOSTER |

SIDE SLIP ANGLE, BETA, DEGREES

ALPHA

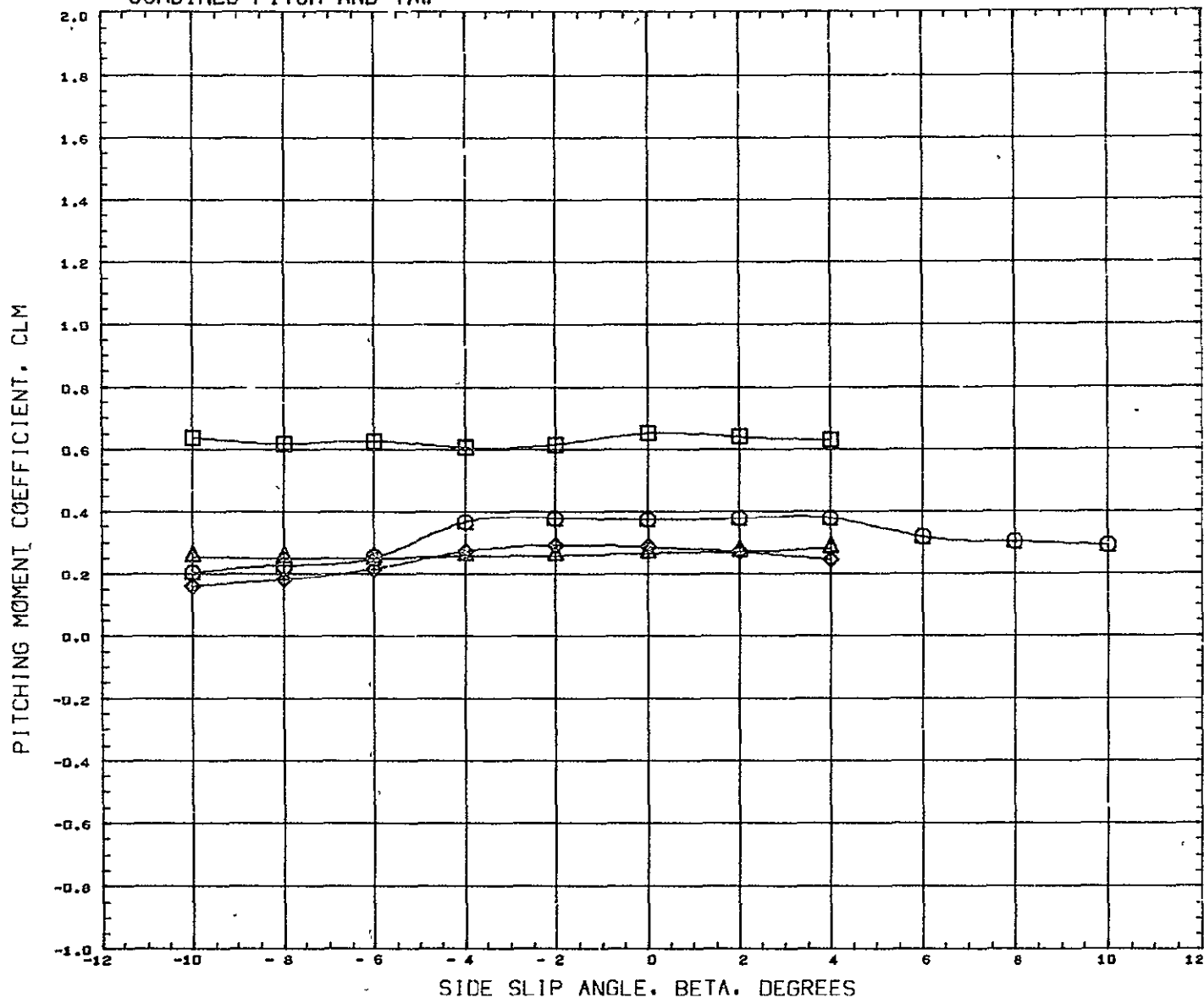
REFERENCE INFORMATION

|       |         |         |
|-------|---------|---------|
| REFS  | 4.4200  | SQ.FT.  |
| RFFL  | 10.1000 | INCHES  |
| REFB  | 66.6000 | INCHES  |
| XMRP  | 55.6360 | INCHES  |
| YMRP  | 0.0000  | INCHES  |
| ZMRP  | 5.8600  | INCHES  |
| SCALE | 2.9920  | PERCENT |

MACH

0.254

# COMBINED PITCH AND YAW



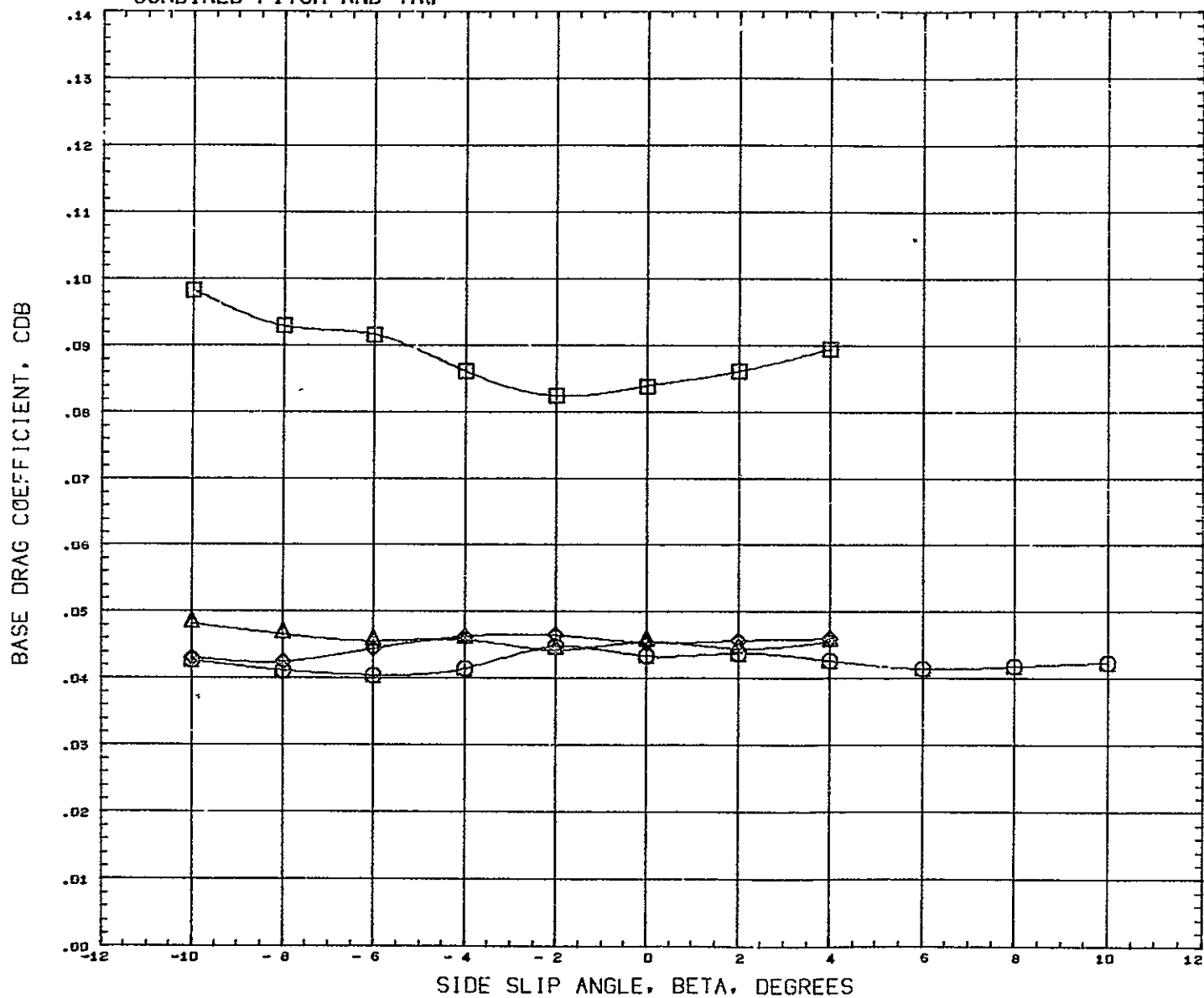
| DATA SET SYMBOL | CONFIGURATION DESCRIPTION |
|-----------------|---------------------------|
| (AU1096)        | UVAL-1021 BAC C-6 BOOSTER |
| (AU1097)        | UVAL-1021 BAC C-6 BOOSTER |
| (AU1098)        | UVAL-1021 BAC C-6 BOOSTER |
| (AU1099)        | UVAL-1021 BAC C-6 BOOSTER |

| ALPHA  |
|--------|
| 0.000  |
| 10.000 |
| 20.000 |
| 32.000 |

| REFERENCE INFORMATION |                |
|-----------------------|----------------|
| REFS                  | 4.4200 SQ.FT.  |
| REFL                  | 10.1000 INCHES |
| REFB                  | 66.6000 INCHES |
| XMRP                  | 55.6360 INCHES |
| YMRP                  | 0.0000 INCHES  |
| ZMRP                  | 5.8600 INCHES  |
| SCALE                 | 2.9920 PERCENT |

MACH 0.154

# COMBINED PITCH AND YAW



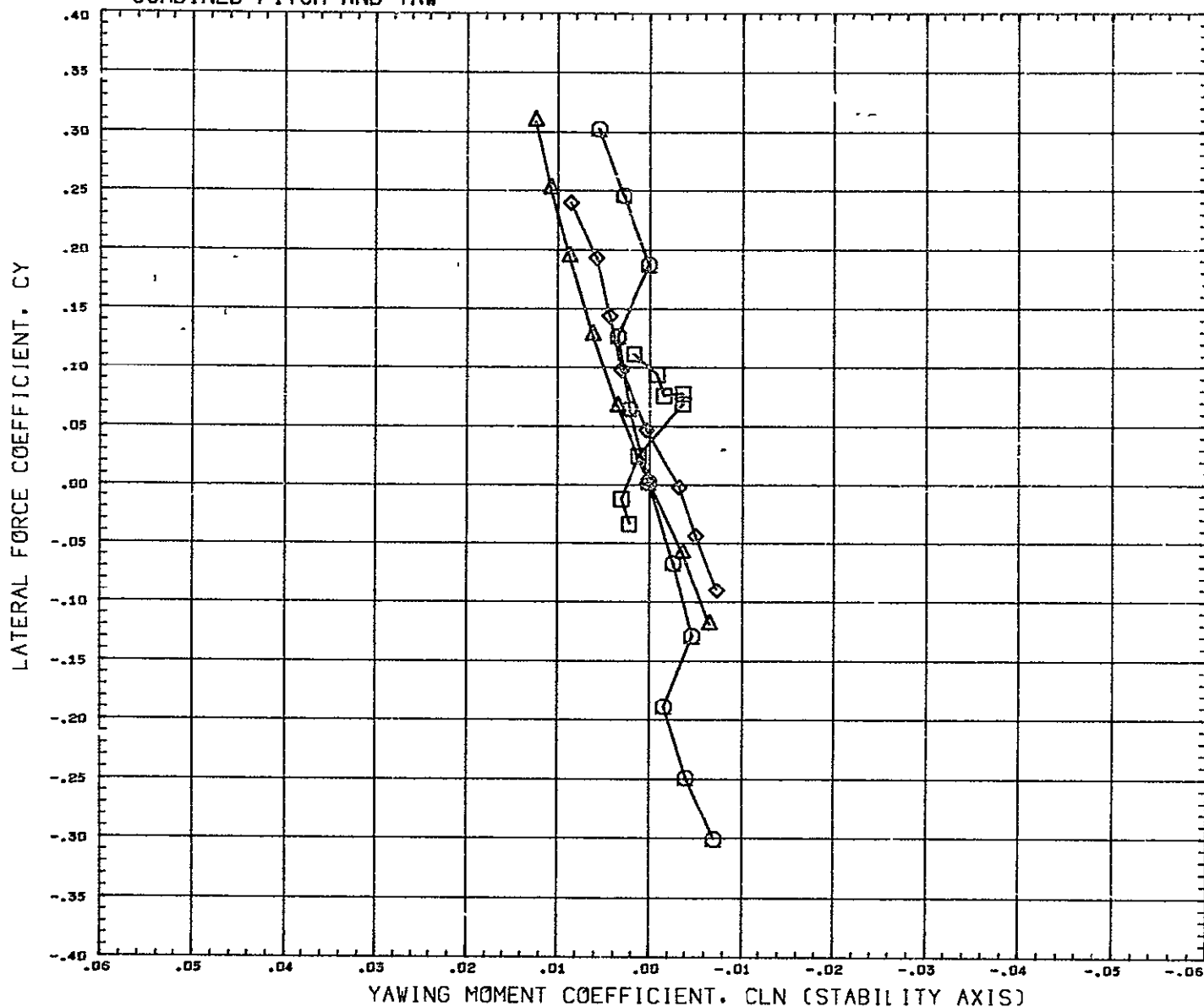
| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION |
|----------|--------|---------------------------|
| (AU109A) | ○      | UWAL-1021 BAC C-6 BOOSTER |
| (AU1097) | △      | UWAL-1021 BAC C-6 BOOSTER |
| (AU1098) | ◇      | UWAL-1021 BAC C-6 BOOSTER |
| (AU1099) | □      | UWAL-1021 BAC C-6 BOOSTER |

|            | ALPHA  |
|------------|--------|
| B1W1H1V1N1 | 0.000  |
| B1W1H1V1N1 | 10.000 |
| B1W1H1V1N1 | 20.000 |
| B1W1H1V1N1 | 32.000 |

| REFERENCE INFORMATION |          |        |
|-----------------------|----------|--------|
| REFS                  | 4.4200   | SQ.FT. |
| REFL                  | 10 10.30 | INCHES |
| REFB                  | 66.6000  | INCHES |
| XMRP                  | 55.6360  | INCHES |
| YMRP                  | 0.0000   | INCHES |
| ZMRP                  | 5.8600   | INCHES |
| SCALE                 | 2.9920   | PERCNT |

MACH D.154

# COMBINED PITCH AND YAW



| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION |
|----------|--------|---------------------------|
| (AU109A) | ○      | UWAL-1021 BAC C-6 BOOSTER |
| (AU1097) | △      | UWAL-1021 BAC C-6 BOOSTER |
| (AU1098) | ◇      | UWAL-1021 BAC C-6 BOOSTER |
| (AU1099) | □      | UWAL-1021 BAC C-6 BOOSTER |

| DESCRIPTION | ALPHA  |
|-------------|--------|
| B1W1H1V1N1  | 0.000  |
| B1W1H1V1N1  | 10.000 |
| B1W1H1V1N1  | 20.000 |
| B1W1H1V1N1  | 32.000 |

| REFERENCE INFORMATION |         |         |
|-----------------------|---------|---------|
| REFS                  | 4.4200  | SQ.FT.  |
| REFL                  | 10.1000 | INCHES  |
| REFB                  | 66.6000 | INCHES  |
| XMRP                  | 55.6360 | INCHES  |
| YMRP                  | 0.0000  | INCHES  |
| ZMRP                  | 5.8600  | INCHES  |
| SCALE                 | 2.9920  | PERCENT |

MACH 0.14