NASA TECHNICAL
MEMORANDUM

NASA TM X-62,256

NASA TM X-62,256

(NASA-TM-X-62256) AN EXPERIMENTAL INVESTIGATION OF THREE OBLIQUE-WING AND BODY COMBINATIONS AT MACH NUMBERS BETWEEN 0.60 AND 1.40 (NASA) 173 p HC $10.75 CSCL 01A G3/01

N73-32926

Unclas 19792

AN EXPERIMENTAL INVESTIGATION OF THREE OBLIQUE-WING AND BODY COMBINATIONS AT MACH NUMBERS BETWEEN 0.60 AND 1.40

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April 1973

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By Lawrence A. Graham, Robert T. Jones and Frederick W. Boltz

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SUMMARY

An experimental investigation was conducted in the Ames 11- by 11-Foot Transonic Wind Tunnel to determine the aerodynamic characteristics of three oblique high aspect ratio wings in combination with a high fineness-ratio Sears-Haack body. The three wings had the same elliptical planform and base line curvature but had different airfoil sections. One wing had an airfoil section designed to have a lift coefficient of 1.0 at a Mach number of 0.7, another to have shock-free supersonic flow over the upper surface, and the other to have a lift coefficient of 1.3 at a Mach number of 0.6.

Longitudinal and lateral-directional stability data were obtained at wing yaw angles of 0°, 45°, 50°, and 60° over a test Mach number range from 0.6 to 1.4 for angles of attack between -7° and 9°. Reynolds numbers for the study were 4 and 6 million per foot. Flow-visualization studies were made to examine the nature of the flow on the wing surfaces.

Notable differences were found in the aerodynamic characteristics of the three wing-body combinations, particularly in the lateral-directional characteristics. The aerodynamic efficiency of the three wing-body combinations was in most instances about the same, with two of the wings generally exhibiting slightly higher maximum values. The other wing was slightly more efficient at Mach numbers where supercritical flow existed on the wings.

INTRODUCTION

Theoretical predictions and indications related to the oblique-wing concept have been extensively discussed (as in references 1 and 2) and recently investigated experimentally in the NASA-Ames 11- by 11-Foot Transonic Wind Tunnel.

Theory indicates that in order to achieve maximum efficiency the oblique angle of the wing must be varied with Mach number in such a way that the component of velocity normal to the long axis of the wing remains subsonic and below the "drag rise" Mach number of the wing sections. The sections taken in the planes perpendicular to the long axis then have a "subsonic" shape with a rounded leading edge and camber to produce a high lift coefficient at a high critical Mach number. Three wings, having different airfoil sections in the planes perpendicular to the long axis of the wing, have been tested in the Ames 11- by 11-Foot Transonic Wind Tunnel. All wings have the same elliptical planform with an elliptic axis ratio of 10 to 1, an unswept aspect ratio of 12.7 and a thickness-chord ratio of 0.1.

One wing has an airfoil section derived by the well known NACA "4 digit" formula (see reference (3)). The shape parameters for the airfoil were selected on the basis of previous wind tunnel experience with the intention of achieving as high a lift coefficient as possible at a critical Mach number of 0.7. The section has a relatively blunt leading edge with a radius of 2 percent of the chord.

Another airfoil tested was designed by Bauer, Garabedian and Korn of the Courant Institute, New York University using a hodograph method to obtain a shock-free supersonic zone over the upper surface. Data on this airfoil are given as example 1 (figure 5 in Reference (4)).

The other airfoil was designed for purely subsonic flow at a Mach number Of 0.60. This airfoil has more camber and a design lift coefficient of 1.3 (based on the normal component velocity).

NOMENCLATURE

The axis systems and sign convention are shown in figure 1. Lift and drag are presented in the stability-axis coordinate system and all other forces and moments are presented in the body-axis coordinate system. Because the data were computer plotted the corresponding plot symbol, where used, is given together with the conventional symbol.

Symbol	Plot Symbol	Definition
b		wing span
c		wing chord
c_{root}		wing root chord
C_D	CD	drag coefficient, drag/qS

C_l	CBL	rolling-moment coefficient, rolling moment/qSb
C_L	CL	lift coefficient, lift/qS
C_m	CLM	pitching-moment coefficient, pitching moment/qSc_{root}
C_n	CYN	yawing-moment coefficient, yawing moment/qSb
C_Y	CY	side-force coefficient, side force/qS
H		maximum vertical distance from wing reference plane to wing base line at 0.4c for W_1
L		longitudinal distance along the body from body maximum diameter
(L/D)	L/D	lift-drag ratio
M	MACH	free-stream Mach number
q		free-stream dynamic pressure
Re	RN/L	unit Reynolds number, million per foot
S		wing area
t		wing thickness
W		body width
x		Cartesian coordinate
Y-Up		maximum distance from wing base line to wing upper surface measured perpendicular to the wing base line
Y-Lo		maximum distance from wing base line to wing lower surface measured perpendicular to the wing base line
Z-Up		vertical distance from wing chord to wing upper surface
Z-Lo		vertical distance from wing chord to wing lower surface
z		Cartesian coordinate
α	ALPHA	angle of attack

β	BETA	angle of sideslip
Λ	LAMBDA	angle between a perpendicular to the body longitudinal axis and the 0.25 chord line of the wing measured in a horizontal plane
ϕ		angle between vertical plane and the intersection of the circular portion of the body with the rectangular portion of the body

Subscripts

max	maximum value
o	zero trailing edge deflection
1	denotes original wing
2	denotes wing number 2, wing with 0.013c leading edge radius
4	denotes wing number 4, wing with 0.005c leading edge radius

Configuration Code

W	W	wing
F	F	trailing edge segment
B	B	body

TEST FACILITY

The tests were conducted in the Ames 11- by 11-Foot Transonic Wind Tunnel, which is a variable density, closed return, continuous flow type. This tunnel has an adjustable nozzle (two flexible walls) and a slotted test section to permit transonic testing over a Mach number range continously variable from 0.4 to 1.4.

MODEL DESCRIPTION

The model consisted of an elliptical planform wing mounted on top of a Sears-Haack body as shown in figure 2(a). Pertinent dimensions of the wings investigated and of the Sears-Haack body, which was common to all configurations, are given in tables 1 through 3 and in figures 2(a) through (d). A photograph of the model is shown in figure 2(e). The wing was pivoted in the horizontal plane about the 0.4 root chord point to obtain oblique angles of 0°, 45°, 50°, and 60° as shown in figure 2(a).

All wings had elliptical planforms with a straight 25-percent chord line (fig. 2(a)). Wing number 1, W_1, (see ref. 1) had an NACA 3610-02,40 airfoil section (fig. 2(d)) perpendicular to the unswept chord line. The second wing tested (wing number 2, W_2) had an airfoil section (fig. 3 (a)) designed using a hodograph method to obtain a shock-free supersonic zone over the upper surface. The third wing tested (wing number 4, W_4) had a subsonic airfoil section (fig. 3(b)) designed for a lift coefficient of 1.3 at a Mach number of 0.60. Airfoil coordinates for the three wings are given in table 2.

TESTING AND PROCEDURE

The models were sting mounted through the base of the model body as shown in figures 2(a) and 2(c), and force and moment data were obtained from an internally mounted six-component strain-gage balance. The moment center was on the body center line and longitudinally at the wing pivot point ($0.4c_{root}$). Tests were conducted at Reynolds numbers of 4 and 6 million per foot. The angle-of-attack range, selected to define maximum lift-to-drag ratio for each configuration, was nominally ± 8 degrees. Six component force and moment data were obtained for the wing at oblique angles of 0°, 45°, 50°, and 60°.

The measured balance data were adjusted to a condition corresponding to free-stream static pressure on the model base. The Mach number range for each oblique angle tested is shown in table 4.

RESULTS AND DISCUSSION

A complete index to the data figures is given in table 5. Among the noteworthy results of these experiments are the exceptionally high lift-drag ratios obtained in the transonic and low supersonic speed ranges.

Lift-to-drag ratios for the three wings are shown in figures 4 through 7 for the test Mach numbers and wing-sweep angles. Wing number 2 shows a maximum L/D value of 31 for M = 0.80 and zero wing sweep (fig. 4, pg. 21). Wing numbers 1 and 4 both had a maximum L/D value of 11 at M = 1.40 and 60° of wing sweep (fig. 7, pg. 140).

Wing number 2, which was designed to operate with shock-free supersonic flow over the upper surface showed the expected behavior. At zero wing sweep this airfoil extended the useful Mach number from 0.70 to approximately 0.80. At 60° sweep, however, the crosswise component of Mach number at M = 1.40 is only 0.70, not sufficient to achieve the design condition of this wing. Further refinement of airfoil selection for such oblique wings will depend on the extension of three dimensional wing theory beyond the linearized formulas now in use and probably also on more detailed wind tunnel studies.

Another noteworthy feature of the test results is the remarkably small shift of center of pressure for wing sweep variations from 0° to 60°. Comparing the pitching moment of the straight wing at M = 0.70 (fig. 4, pg. 9) with that of the same wing turned 60° shows only moderate changes in spite of the fact that the fore and aft dimension (streamwise chord) of the wing increased almost ten-fold when the wing was swept.

A similar result can be observed in the rolling moment measurements. Figure 4, page 13 shows rolling moments measured on the wings in the unyawed position. Presumably such moments arise from accidental manufacturing irregularities of the models. Figure 7, page 104 shows rolling moments of the same wings turned 60°. In the normal flight range these are only slightly greater than those developed on the straight, supposedly symmetrical wings. At larger angles of attack, however, effects of premature stalling of the downstream tip are observed on the oblique wings. This behavior may be compared with the premature tip stalling encountered with more conventional swept-back wings. With conventional swept-back wings stalling of the tips causes the airplane to pitch up. With the oblique wing only one tip stalls and the airplane may be expected to roll.

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April 2, 1973

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2. Jones, R. T.: New Design Goals and a New Shape for the SST. Astronautics and Aeronautics, December, 1972.

3. Abbott, Ira H.; and Von Doenhoff, Albert E.: Theory of Wing Sections. Dover Publications 60-1601, New York, 1959.

4. Bauer, F.; Garabedian, P.; and Korn, D.: Supercritical Wing Section. Lecture Notes in Economics and Mathematical Systems, No. 66. Springer Verlag, Berlin, Heidelberg, New York, 1972.

TABLE 1. - MODEL GEOMETRY

Body (Sears-Haack)

Length	
Closed	45.25 in
Cut-off	36.00 in
Maximum Diameter	3.37 in

Wing

Planform 10:1 ellipse about c/4	
Span (reference)	60.00 in
Area (reference)	278.00 in^2
Root chord	6.00 in
Aspect ratio	12.7
Maximum t/c	0.10
Incidence	0°
0.25c sweep	0°
Maximum thickness location, percent chord	40
Section	
W_1	NACA 3610-02,40
W_2	Garabedian, 0.013c nose radius
W_4	Garabedian, 0.005c nose radius

TABLE 2. - WING GEOMETRIC DATA*

Wing 1, W_1

Semi-Span	Chord	Y-Up/c	Y-Lo/c	H/c
0.000	6.000	.0775	.0298	.0000
1.000	5.997	.0775	.0298	-.0002
2.000	5.987	.0775	.0298	-.0008
3.000	5.970	.0775	.0298	-.0017
4.000	5.946	.0775	.0298	-.0029
5.000	5.915	.0775	.0298	-.0042
6.000	5.879	.0775	.0298	-.0056
7.000	5.834	.0775	.0298	-.0072
8.000	5.783	.0775	.0298	-.0090
9.000	5.724	.0775	.0298	-.0107
10.000	5.657	.0775	.0298	-.0124
10.986	5.583	.0775	.0298	-.0140
11.850	5.512	.0775	.0298	-.0154
12.635	5.442	.0775	.0298	-.0162
13.356	5.373	.0775	.0298	-.0175
14.024	5.304	.0775	.0298	-.0185
14.645	5.237	.0775	.0298	-.0193
15.226	5.170	.0775	.0298	-.0199
15.772	5.104	.0775	.0298	-.0206
16.286	5.039	.0775	.0298	-.0210
16.772	4.975	.0775	.0298	-.0213
17.233	4.911	.0775	.0298	-.0218
17.671	4.849	.0775	.0298	-.0221
18.087	4.787	.0775	.0298	-.0221
18.483	4.726	.0775	.0298	-.0222
18.862	4.666	.0775	.0298	-.0225
19.224	4.606	.0775	.0298	-.0224
19.570	4.548	.0775	.0298	-.0224
19.902	4.490	.0775	.0298	-.0225
20.220	4.432	.0775	.0298	-.0223
20.977	4.289	.0775	.0298	-.0219
21.533	4.178	.0775	.0298	-.0215
22.046	4.069	.0775	.0298	-.0209
22.523	3.963	.0775	.0298	-.0202
22.966	3.860	.0775	.0298	-.0194
23.379	3.760	.0775	.0298	-.0186
23.763	3.662	.0775	.0298	-.0177

* Semispan and chord are in inches

TABLE 2. - WING GEOMETRIC DATA - Continued.

Wing 1, W_1

Semi-Span	Chord	Y-Up/c	Y-Lo/c	H/c
24.123	3.567	.0775	.0298	-.0168
24.459	3.474	.0775	.0298	-.0158
24.773	3.384	.0775	.0298	-.0148
25.068	3.296	.0775	.0298	-.0137
25.344	3.210	.0775	.0298	-.0125
25.604	3.127	.0775	.0298	-.0112
25.848	3.046	.0775	.0298	-.0098
26.077	2.966	.0775	.0298	-.0088
26.293	2.889	.0775	.0298	-.0076
26.495	2.814	.0775	.0298	-.0060
26.686	2.741	.0775	.0298	-.0047
26.866	2.670	.0775	.0298	-.0034
27.036	2.600	.0758	.0292	-.0023
27.196	2.533	.0738	.0284	-.0008
27.347	2.467	.0721	.0276	.0008
27.489	2.403	.0703	.0270	.0022
27.624	2.340	.0688	.0265	.0034
27.751	2.279	.0671	.0259	.0048
27.870	2.220	.0653	.0252	.0063
27.984	2.163	.0643	.0245	.0079
28.091	2.106	.0613	.0237	.0095
28.345	1.965	.0590	.0229	.0137
28.524	1.859	.0565	.0221	.0167
28.684	1.758	.0546	.0210	.0205
28.825	1.662	.0529	.0205	.0241
28.952	1.572	.0515	.0197	.0274
29.064	1.487	.0504	.0195	.0309
29.164	1.406	.0491	.0185	.0349
29.254	1.330	.0481	.0180	.0383
29.333	1.258	.0469	.0183	.0429
29.405	1.190	.0462	.0176	.0471
29.468	1.125	.0453	.0178	.0516
29.529	1.064	.0442	.0169	.0555
29.600	.977	.0440	.0174	.0624
29.700	.846	.0449	.0165	.0757
29.800	.692	.0448	.0173	.0968
29.900	.489	.0450	.0163	.1431
30.000	.000	.0000	.0000	∞

TABLE 2. - WING GEOMETRIC DATA - Continued.

Wing 2, W_2

x/c	z/c	x/c	z/c	x/c	z/c
-.000259	.002799	.014919	.020037	.044480	.032330
-.000253	.003206	.014942	.020032	.044901	.032450
-.000245	.003358	.016227	.020802	.045314	.032567
-.000236	.003508	.016719	.021082	.045720	.032681
-.000225	.003655	.017617	.020584	.046122	.032792
-.000213	.003800	.018626	.022130	.046523	.032902
-.000198	.003941	.019108	.022389	.046935	.033011
-.000183	.004080	.020538	.023127	.047351	.033125
-.000156	.004281	.020582	.023202	.047772	.033236
-.000117	.004537	.022320	.024010	.048201	.033349
-.000068	.004814	.023832	.024723	.048640	.033462
-.000004	.005114	.024277	.024927	.049093	.033578
.000077	.005437	.025427	.025443	.049562	.033696
.000181	.005788	.026636	.025968	.050049	.033818
.000313	.006172	.027858	.026482	.050556	.033943
.000482	.006592	.031474	.027994	.051086	.034072
.000690	.007047	.031980	.028189	.051640	.034205
.000939	.007531	.032497	.028386	.052221	.034343
.001226	.008037	.032945	.028555	.052829	.034485
.001500	.008482	.033498	.028761	.053467	.014633
.001816	.008963	.034020	.028953	.054135	.034785
.002177	.009476	.034543	.029143	.054835	.034943
.002581	.010017	.035082	.029337	.055566	.035106
.003024	.010576	.035537	.029499	.056330	.035273
.003584	.011242	.036082	.029691	.057127	.035445
.003741	.011420	.036601	.029872	.057955	.035623
.003823	.011512	.037112	.030047	.058816	.035803
.004052	.011764	.037619	.030220	.059707	.035987
.004286	.012016	.038349	.030423	.060629	.036175
.004774	.012520	.038942	.030619	.061578	.036366
.005286	.013023	.039521	.030809	.062555	.036559
.005821	.013524	.040086	.030991	.063556	.036754
.006380	.014024	.040636	.031166	.064581	.036954
.006993	.014548	.041171	.031335	.065628	.037148
.007703	.015127	.041689	.031496	.066694	.037346
.008523	.015766	.042191	.031650	.067779	.037543
.009472	.016473	.042677	.031798	.068883	.037743
.010371	.017251	.043148	.031939	.070005	.037942
.011837	.018106	.043605	.032074	.071146	.038140
.013283	.019037	.044048	.032204	.072311	.038339

TABLE 2. - WING GEOMETRIC DATA - Continued.

Wing 2, W_2

x/c	z/c	x/c	z/c	x/c	z/c
.073503	.038540	.420081	.058866	.950000	.030800
.074730	.038742	.437854	.059084	.955000	.029550
.076001	.038949	.455795	.059249	.960000	.028400
.077328	.039260	.473858	.059360	.965000	.027150
.078729	.039379	.491996	.059416	.970000	.026000
.080223	.039609	.510163	.059416	.975000	.024800
.081835	.039851	.528315	.059362	.980000	.023150
.083594	.040110	.546409	.059253	.985000	.021750
.085532	.040390	.564404	.059088	.990000	.020000
.087689	.040654	.582260	.058870	.995000	.018350
.090107	.040976	.599941	.058599	1.000000	.016250
.092832	.041331	.617410	.058275	1.000000	.011500
.095916	.041721	.634633	.057900	.996930	.012309
.099411	.042151	.651577	.057474	.992183	.013346
.103374	.042623	.668211	.056998	.984458	.014902
.107860	.043139	.684502	.056473	.974208	.016590
.112926	.043700	.708417	.055897	.969617	.017227
.118625	.044307	.715919	.055271	.964869	.017799
.125010	.044957	.730965	.054590	.959372	.018372
.132127	.045650	.745497	.053849	.953100	.018917
.140017	.046380	.759430	.053036	.946064	.019625
.148713	.047144	.772646	.052143	.938325	.020235
.158242	.047936	.785031	.051216	.935056	.020502
.168619	.048749	.796561	.050304	.930826	.020947
.179851	.049576	.807278	.049408	.918220	.021598
.191936	.050410	.817242	.048524	.902981	.021796
.204859	.051244	.826502	.047657	.892173	.021526
.218596	.052066	.835095	.046812	.888918	.021610
.233111	.052876	.874772	.042382	.880800	.021338
.248369	.053661	.881389	.041550	.873936	.021038
.261499	.054286	.886521	.040890	.867017	.020651
.275210	.054893	.893973	.039903	.860072	.020179
.289481	.055476	.898775	.039245	.853133	.019744
.304289	.056033	.905727	.038267	.839225	.018253
.319605	.056559	.907539	.038022	.829378	.016944
.335396	.057049	.917272	.036560	.821363	.015678
.351625	.057502	.923762	.035541	.816907	.014932
.368251	.057912	.932355	.034142	.808726	.013456
.385233	.058278	.936350	.033414	.804319	.012614
.402526	.058597	.946280	.031675	.799694	.011703

TABLE 2. - WING GEOMETRIC DATA - Continued.

Wing 2, W_2

x/c	z/c	x/c	z/c	x/c	z/c
.794844	.010726	.511412	-.035139	.121072	-.037610
.789767	.009690	.502244	-.035896	.116816	-.037243
.784463	.008599	.492898	-.036626	.113390	-.036946
.778938	.007454	.483403	-.037324	.105636	-.036223
.773195	.006281	.473787	-.037990	.103263	-.035985
.770172	.005655	.464063	-.038623	.098167	-.035466
.767702	.005121	.454281	-.039217	.097820	-.035434
.762277	.004017	.444445	-.039774	.093341	-.034950
.760899	.003714	.434573	-.040292	.088930	-.034484
.756939	.002880	.419722	-.041001	.982042	-.033633
.751239	.001707	.404842	-.041625	.078825	-.033212
.747425	.000931	.389941	-.042168	.071082	-.032134
.746296	.000679	.375014	-.042632	.066312	-.031417
.741604	-.000291	.360044	-.043017	.064241	-.031090
.736259	-.001371	.342450	-.043369	.060793	-.030528
.735732	-.001500	.327518	-.043585	.058050	-.030061
.729835	-.002691	.326625	-.043595	.055317	-.029577
.727639	-.003147	.316009	-.043698	.053273	-.029201
.722656	-.004155	.310610	-.043734	.051242	-.028817
.718286	-.005028	.307293	-.043753	.049218	-.028421
.716080	-.005470	.294383	-.043786	.047205	-.028014
.713785	-.005940	.291384	-.043785	.045207	-.027596
.707523	-.007170	.279420	-.043752	.043227	-.027167
.706231	-.007440	.277862	-.043743	.041267	-.026727
.698425	-.008951	.264209	-.043634	.039329	-.026276
.696716	-.009296	.248682	-.043426	.037419	-.025814
.687638	-.011037	.245962	-.043375	.035541	-.025341
.687600	-.011037	.233501	-.043129	.033698	-.024858
.679061	-.012627	.229561	-.043038	.032960	-.024651
.674766	-.013435	.217370	-.042719	.032547	-.024546
.658057	-.016407	.203264	-.042270	.031022	-.024119
.643396	-.018887	.194206	-.041935	.029605	-.023700
.627219	-.021469	.185170	-.041562	.029466	-.023667
.609744	-.024068	.176128	-.041149	.027631	-.023102
.591249	-.026591	.167067	-.040695	.027484	-.023056
.591100	-.026613	.157951	-.040190	.027462	-.023057
.575291	-.028602	.151106	-.039779	.026683	-.022817
.557428	-.030667	.143697	-.039302	.025394	-.022392
.537560	-.032741	.136226	-.038784	.024693	-.022149
.520372	-.034358	.128686	-.038222	.024151	-.021972

TABLE 2. - WING GEOMETRIC DATA - Continued.

Wing 2, W_2

x/c	z/c	x/c	z/c	x/c	z/c
.022570	-.021413	.008173	-.013944	.002392	-.006487
.021473	-.021007	.008077	-.013865	.002258	-.006226
.021444	-.020997	.007909	-.013723	.002052	-.005812
.020750	-.020723	.007763	-.013599	.001912	-.005522
.020483	-.020627	.007667	-.013515	.001770	-.005221
.019814	-.020355	.007626	-.013479	.001557	-.004748
.018965	-.020017	.007561	-.013422	.001190	-.003936
.018883	-.019975	.007471	-.013340	.000948	-.003315
.017959	-.019583	.007085	-.012984	.000745	-.002757
.017228	-.019263	.007007	-.012909	.000576	-.002257
.016508	-.018936	.006963	-.012866	.000437	-.001812
.015799	-.018603	.006744	-.012655	.000321	-.001417
.015105	-.018266	.006485	-.012390	.000246	-.001147
.014428	-.017925	.006207	-.012094	.000172	-.000871
.013772	-.017582	.005911	-.011701	.000098	-.000589
.013138	-.017239	.005596	-.011390	.000000	-.000000
.012530	-.016898	.005266	-.010982	-.000009	.000317
.011950	-.016559	.004928	-.010542	-.000081	.000604
.011401	-.016226	.004591	-.010082	-.000131	.000896
.010882	-.015900	.004263	-.009613	-.000170	.001188
.010397	-.015583	.003950	-.009146	-.000201	.001475
.009945	-.015276	.003655	-.008688	-.000225	.001757
.009526	-.014982	.003399	-.008278	-.000243	.002032
.009140	-.014700	.003141	-.007841	-.000254	.002297
.008787	-.014433	.002886	-.007397	-.000260	.002553
.008465	-.014181	.002636	-.006944		

TABLE 2. - WING GEOMETRIC DATA - Concluded.

Wing 4, W_4

x/c	z/c	x/c	z/c	x/c	z/c
.99596	-.02586	.01149	-.00620	.00709	.01538
.98615	-.02306	.00943	-.00570	.01197	.01878
.96854	-.01899	.00774	-.00519	.02179	.02443
.94348	-.01488	.00674	-.00481	.03187	.02928
.91595	-.01191	.00592	-.00445	.04250	.03373
.89717	-.01051	.00467	-.00382	.06373	.04113
.87054	-.00923	.00343	-.00308	.09353	.04969
.82243	-.00837	.00257	-.00249	.13389	.05882
.77611	-.00873	.00165	-.00176	.17545	.06612
.74682	-.00927	.00104	-.00120	.22415	.07277
.71655	-.01008	.00048	-.00058	.28227	.07863
.68122	-.01118	0.00000	0.00000	.34741	.08291
.65330	-.01209	-.00045	.00079	.41444	.08502
.61351	-.01340	-.00073	.00146	.48168	.08487
.57465	-.01459	-.00086	.00191	.55738	.08191
.54359	-.01545	-.00097	.00244	.62052	.07704
.50010	-.01647	-.00103	.00290	.68276	.06982
.45495	-.01727	-.00106	.00345	.72012	.06433
.38597	-.01791	-.00104	.00403	.75413	.05845
.31761	-.01781	-.00098	.00463	.82318	.04432
.25034	-.01714	-.00077	.00572	.85663	.03610
.19880	-.01620	-.00052	.00653	.89115	.02678
.13965	-.01462	-.00021	.00732	.92448	.01698
.09339	-.01288	-.00026	.00830	.95410	.00764
.06022	-.01116	-.00073	.00909	.97175	.00178
.03967	-.00970	.00163	.01033	.99163	-.00516
.02583	-.00837	.00276	.01161	.99988	-.00810
.01539	-.00694	.00464	.01340	1.00000	-.01725

TABLE 3. - BODY DIMENSIONAL DATA

L	x	Dia	Area	W	z	Φ
.00	22.62	3.036	8.909	3.036	.000	90.0
.10	22.52	3.036	8.909	3.036	.000	90.0
.20	22.42	3.035	8.908	3.035	.000	90.0
.30	22.32	3.035	8.907	3.035	.000	90.0
.40	22.22	3.035	8.905	3.035	.000	90.0
.50	22.12	3.034	8.903	3.034	.000	90.0
.60	22.02	3.033	8.900	3.033	.000	90.0
.70	21.92	3.032	8.896	3.032	.000	90.0
.80	21.82	3.032	8.892	3.032	.000	90.0
.90	21.72	3.030	8.888	3.030	.000	90.0
1.00	21.62	3.029	8.883	3.029	.000	90.0
1.10	21.52	3.028	8.878	3.028	.000	90.0
1.20	21.42	3.026	8.872	3.026	.000	90.0
1.30	21.32	3.025	8.865	3.025	.000	90.0
1.40	21.22	3.023	8.858	3.023	.000	90.0
1.50	21.12	3.021	8.850	3.021	.000	90.0
1.60	21.02	3.019	8.842	3.019	.000	90.0
1.70	20.92	3.017	8.834	3.017	.000	90.0
1.80	20.82	3.015	8.825	3.015	.000	90.0
1.90	20.72	3.013	8.815	3.013	.000	90.0
2.00	20.62	3.010	8.805	3.010	.000	90.0
2.10	20.52	3.008	8.794	3.008	.000	90.0
2.20	20.42	3.005	8.783	3.005	.000	90.0
2.30	20.32	3.002	8.771	3.002	.000	90.0
2.40	20.22	2.999	8.759	2.999	.000	90.0
2.50	20.12	2.996	8.746	2.996	.000	90.0
2.60	20.02	2.993	8.733	2.993	.000	90.0
2.70	19.92	2.989	8.719	2.989	.000	90.0
2.80	19.82	2.986	8.705	2.986	.000	90.0
2.90	19.72	2.982	8.690	2.982	.000	90.0
3.00	19.62	2.979	8.675	2.979	.000	90.0
3.10	19.52	2.975	8.659	2.925	.000	90.0
3.20	19.42	2.971	8.643	2.971	.000	90.0
3.30	19.32	2.967	8.626	2.967	.000	90.0
3.40	19.22	2.962	8.609	2.962	.000	90.0
3.50	19.12	2.958	8.591	2.958	.000	90.0
3.60	19.02	2.953	8.573	2.953	.000	90.0
3.70	18.92	2.949	8.554	2.949	.000	90.0

* All dimensions are inches except Area, in^2, and Φ, degrees

TABLE 3. - BODY DIMENSIONAL DATA - Continued.

L	x	Dia	Area	W	z	Φ
3.80	18.82	2.944	8.535	2.944	.000	90.0
3.90	18.72	2.039	8.515	2.939	.000	90.0
4.00	18.62	2.934	8.495	2.934	.000	90.0
4.10	18.52	2.929	8.474	2.929	.000	90.0
4.20	18.42	2.924	8.452	2.924	.000	90.0
4.30	18.32	2.918	8.431	2.918	.000	90.0
4.40	18.22	2.913	8.400	2.913	.000	90.0
4.50	18.12	2.907	8.386	2.907	.000	90.0
4.60	18.02	2.902	8.362	2.900	.059	87.7
4.70	17.92	2.899	8.338	2.889	.119	85.3
4.80	17.82	2.896	8.314	2.878	.160	83.7
4.90	17.72	2.894	8.289	2.867	.199	82.1
5.00	17.62	2.891	8.264	2.854	.230	80.0
5.10	17.52	2.889	8.239	2.841	.262	79.6
5.20	17.42	2.886	8.212	2.828	.289	78.4
5.30	17.32	2.884	8.186	2.813	.318	77.3
5.40	17.22	2.882	8.158	2.798	.346	76.1
5.50	17.12	2.880	8.131	2.782	.372	75.0
5.60	17.02	2.877	8.103	2.766	.397	74.0
5.70	16.92	2.875	8.074	2.748	.423	72.9
5.80	16.82	2.873	8.045	2.730	.448	71.8
5.90	16.72	2.872	8.016	2.711	.474	70.7
6.00	16.62	2.870	7.986	2.691	.499	69.7
6.10	16.52	2.868	7.955	2.671	.523	68.6
6.20	16.42	2.866	7.924	2.649	.547	67.6
6.30	16.32	2.864	7.893	2.627	.571	66.5
6.40	16.22	2.863	7.861	2.604	.596	65.4
6.50	16.12	2.861	7.829	2.580	.619	64.4
6.60	16.02	2.859	7.796	2.554	.642	63.3
6.70	15.92	2.857	7.763	2.528	.665	62.2
6.80	15.82	2.856	7.729	2.501	.689	61.1
6.90	15.72	2.854	7.695	2.473	.712	60.1
7.00	15.62	2.853	7.660	2.444	.736	59.0
7.10	15.52	2.851	7.625	2.414	.758	57.9
7.20	15.42	2.849	7.590	2.383	.781	56.8
7.30	15.32	2.848	7.554	2.350	.804	55.6
7.40	15.22	2.846	7.518	2.317	.827	54.5
7.50	15.12	2.854	7.481	2.282	.857	53.1

TABLE 3. - BODY DIMENSIONAL DATA - Continued.

L	x	Dia	Area	W	z	Φ
7.60	15.02	2.861	7.444	2.245	.887	51.7
7.70	14.92	2.867	7.406	2.207	.915	50.3
7.80	14.82	2.873	7.368	2.168	.943	49.0
7.90	14.72	2.878	7.330	2.127	.969	47.7
8.00	14.62	2.883	7.291	2.085	.996	46.3
8.10	14.52	2.888	7.252	2.040	1.022	44.9
8.20	14.42	2.891	7.212	1.994	1.047	43.6
8.30	14.32	2.895	7.172	1.946	1.072	42.2
8.40	14.22	2.898	7.131	1.895	1.096	40.8
8.50	14.12	2.900	7.090	1.843	1.120	39.4
8.60	14.02	2.902	7.049	1.787	1.143	38.0
8.70	13.92	2.903	7.007	1.729	1.166	36.6
8.80	13.82	2.904	6.965	1.668	1.189	35.0
8.90	13.72	2.905	6.923	1.603	1.211	33.5
9.00	13.62	2.903	6.880	1.534	1.232	31.9
9.10	13.52	2.902	6.836	1.461	1.254	30.2
9.20	13.42	2.901	6.793	1.383	1.275	28.5
9.30	13.32	2.899	6.749	1.298	1.296	26.6
9.40	13.22	2.996	6.704	1.207	1.316	24.6
9.50	13.12	2.892	6.659	1.106	1.336	22.5
9.60	13.02	2.888	6.614	.992	1.356	20.1
9.70	12.92	2.883	6.568	.863	1.376	17.4
9.80	12.82	2.877	6.522	.707	1.394	14.2
9.90	12.72	2.870	6.476	.502	1.413	10.1
10.00	12.62	2.861	6.429	.000	1.431	.0
10.10	12.52	2.851	6.382			
10.20	12.42	2.840	6.335			
10.30	12.32	2.829	6.287			
10.40	12.22	2.819	6.239			
10.50	12.12	2.808	6.191			
10.60	12.02	2.796	6.142			
10.70	11.92	2.785	6.093			
10.80	11.82	2.774	6.044			
10.90	11.72	2.763	5.994			
11.00	11.62	2.751	5.944			
11.10	11.52	2.739	5.893			
11.20	11.42	2.727	5.843			
11.30	11.32	2.716	5.792			

TABLE 3. - BODY DIMENSIONAL DATA - Continued.

L	x	Dia	Area
11.40	11.22	2.704	5.740
11.50	11.12	2.691	5.689
11.60	11.02	2.679	5.637
11.70	10.92	2.667	5.585
11.80	10.82	2.654	5.532
11.90	10.72	2.641	5.480
12.00	10.62	2.629	5.427
12.10	10.52	2.616	5.373
12.20	10.42	2.603	5.320
12.30	10.32	2.589	5.266
12.40	10.22	2.576	5.212
12.50	10.12	2.563	5.158
12.60	10.02	2.549	5.103
12.70	9.92	2.535	5.048
12.80	9.82	2.521	4.993
12.90	9.72	2.507	4.938
13.00	9.62	2.493	4.883
13.10	9.52	2.479	4.827
13.20	9.42	2.465	4.771
13.30	9.32	2.450	4.715
13.40	9.22	2.436	4.659
13.50	9.12	2.421	4.602
13.60	9.02	2.406	4.546
13.70	8.92	2.391	4.489
13.80	8.82	2.375	4.432
13.90	8.72	2.360	4.374
14.00	8.62	2.345	4.317
14.10	8.52	2.329	4.260
14.20	8.42	2.313	4.202
14.30	8.32	2.297	4.144
14.40	8.22	2.281	4.086
14.50	8.12	2.265	4.028
14.60	8.02	2.248	3.970
14.70	7.92	2.232	3.912
14.80	7.82	2.215	3.853
14.90	7.72	2.198	3.795
15.00	7.62	2.181	3.736
15.10	7.52	2.164	3.677

TABLE 3. - BODY DIMENSIONAL DATA - Continued.

L	x	Dia	Area
15.20	7.42	2.146	3.619
15.30	7.32	2.129	3.560
15.40	7.22	2.111	3.501
15.50	7.12	2.093	3.442
15.60	7.02	2.075	3.383
15.70	6.92	2.057	3.324
15.80	6.82	2.039	3.265
15.90	6.72	2.020	3.206
16.00	6.62	2.002	3.147
16.10	6.52	1.983	3.088
16.20	6.42	1.964	3.029
16.30	6.32	1.944	2.970
16.40	6.22	1.925	2.911
16.50	6.12	1.905	2.852
16.60	6.02	1.886	2.793
16.70	5.92	1.866	2.734
16.80	5.82	1.845	2.675
16.90	5.72	1.825	2.616
17.00	5.62	1.805	2.558
17.10	5.52	1.784	2.499
17.20	5.42	1.763	2.441
17.30	5.32	1.742	2.382
17.40	5.22	1.720	2.324
17.50	5.12	1.699	2.266
17.60	5.02	1.677	2.208
17.70	4.92	1.655	2.151
17.80	4.82	1.633	2.093
17.90	4.72	1.610	2.036
18.00	4.62	1.587	1.979
18.10	4.52	1.564	1.922
18.20	4.42	1.541	1.866
18.30	4.32	1.518	1.809
18.40	4.22	1.494	1.753
18.50	4.12	1.470	1.697
18.60	4.02	1.446	1.642
18.70	3.92	1.421	1.587
18.80	3.82	1.397	1.532
18.90	3.72	1.372	1.478

TABLE 3. - BODY DIMENSIONAL DATA - Concluded.

L	x	Dia	Area
19.00	3.62	1.346	1.424
19.10	3.52	1.321	1.370
19.20	3.42	1.295	1.317
19.30	3.32	1.269	1.264
19.40	3.22	1.242	1.212
19.50	3.12	1.215	1.160
19.60	3.02	1.188	1.108
19.70	2.92	1.160	1.057
19.80	2.82	1.132	1.007
19.90	2.72	1.104	.957
20.00	2.62	1.075	.908
20.10	2.52	1.046	.860
20.20	2.42	1.017	.812
20.30	2.32	.987	.765
20.40	2.22	.956	.718
20.50	2.12	.926	.673
20.60	2.02	.894	.628
20.70	1.92	.862	.584
20.80	1.82	.830	.541
20.90	1.72	.797	.499
21.00	1.62	.763	.457
21.10	1.52	.729	.417
21.20	1.42	.694	.378
21.30	1.32	.658	.340
21.40	1.22	.621	.303
21.50	1.12	.583	.267
21.60	1.02	.545	.233
21.70	.92	.505	.200
21.80	.82	.464	.169
21.90	.72	.422	.140
22.00	.62	.378	.112
22.10	.52	.332	.086
22.20	.42	.283	.063
22.30	.32	.231	.042
22.40	.22	.175	.024
22.50	.12	.111	.010
22.60	.02	.029	.001
22.62	.00	.000	.000

TABLE 4. - TEST CONDITIONS

Configuration	Λ deg.	$Re/10^6$, per ft.	Mach Numbers										
			0.60	0.70	0.80	0.95	0.98	1.05	1.10	1.15	1.20	1.30	1.40
W_1 F_0 B	0	6	x	x	x								
	45	6		x	x	x	x	x					
	50	6			x	x	x		x	x	x		
W_1 F_0 B	60	6			x	x			x		x	x	x
W_2 F_0 B	0	4	x	x	x								
	45	4		x	x	x	x	x	x	x			
	50	4			x	x	x		x	x	x	x	
W_2 F_0 B	60	4			x	x			x		x	x	x
W_4 F_0 B	0	6	x	x	x								
	45	6	x	x	x	x	x	x					
	50	6			x	x	x		x	x	x		
W_4 F_0 B	60	6			x	x		x	x		x	x	x

TABLE 5. - INDEX OF DATA FIGURES

Note:

1. Positive directions of force coefficients, moment coefficients, and angles are indicated by arrows

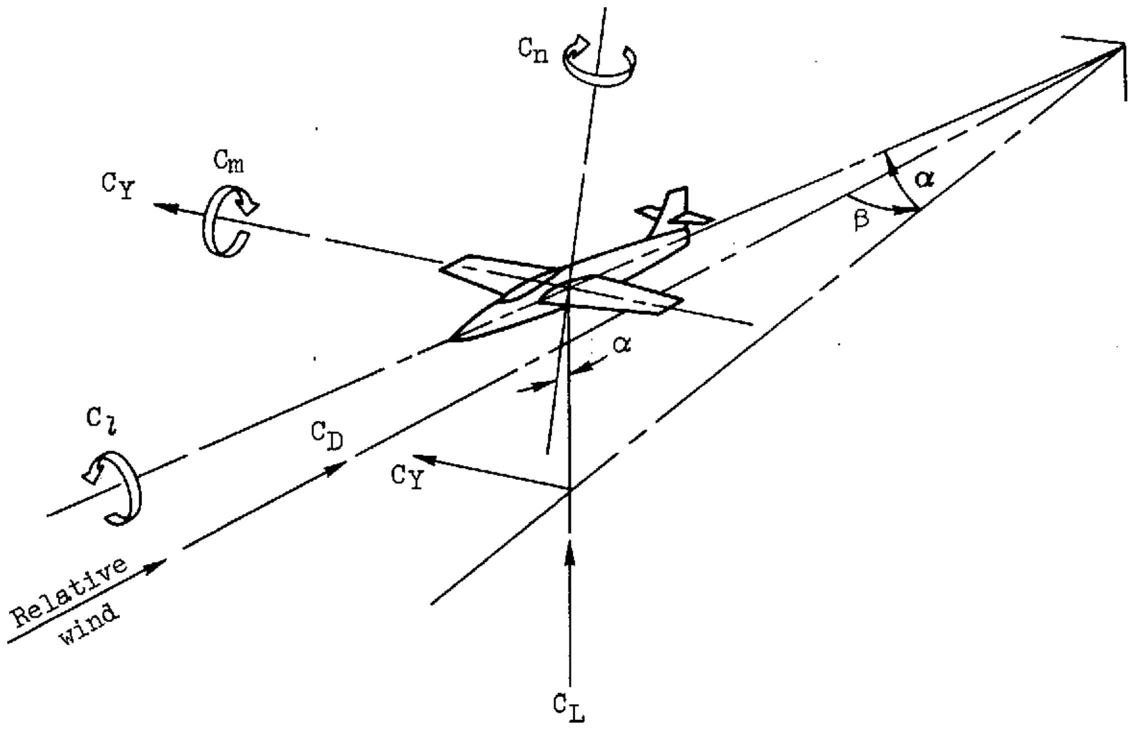
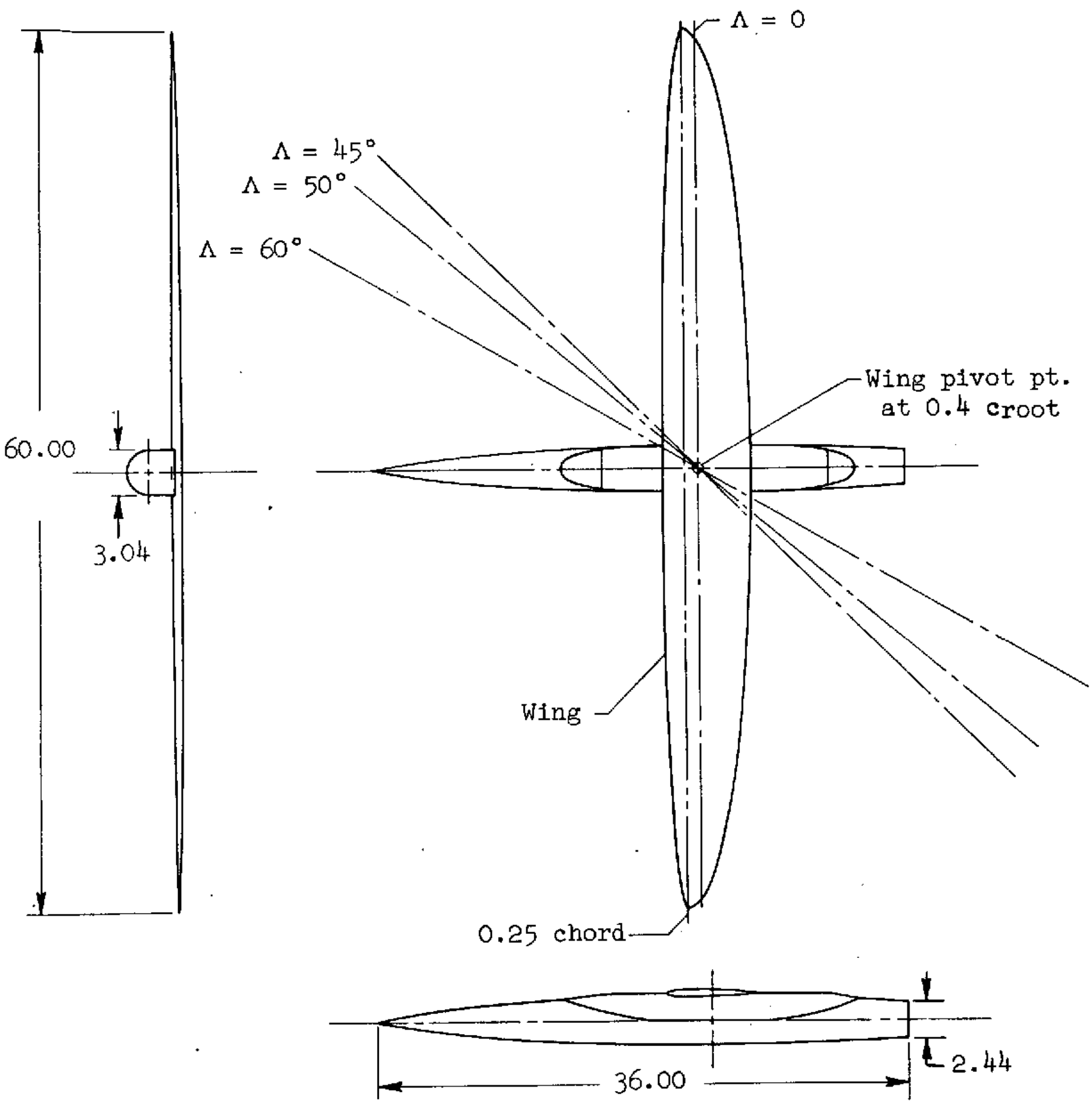


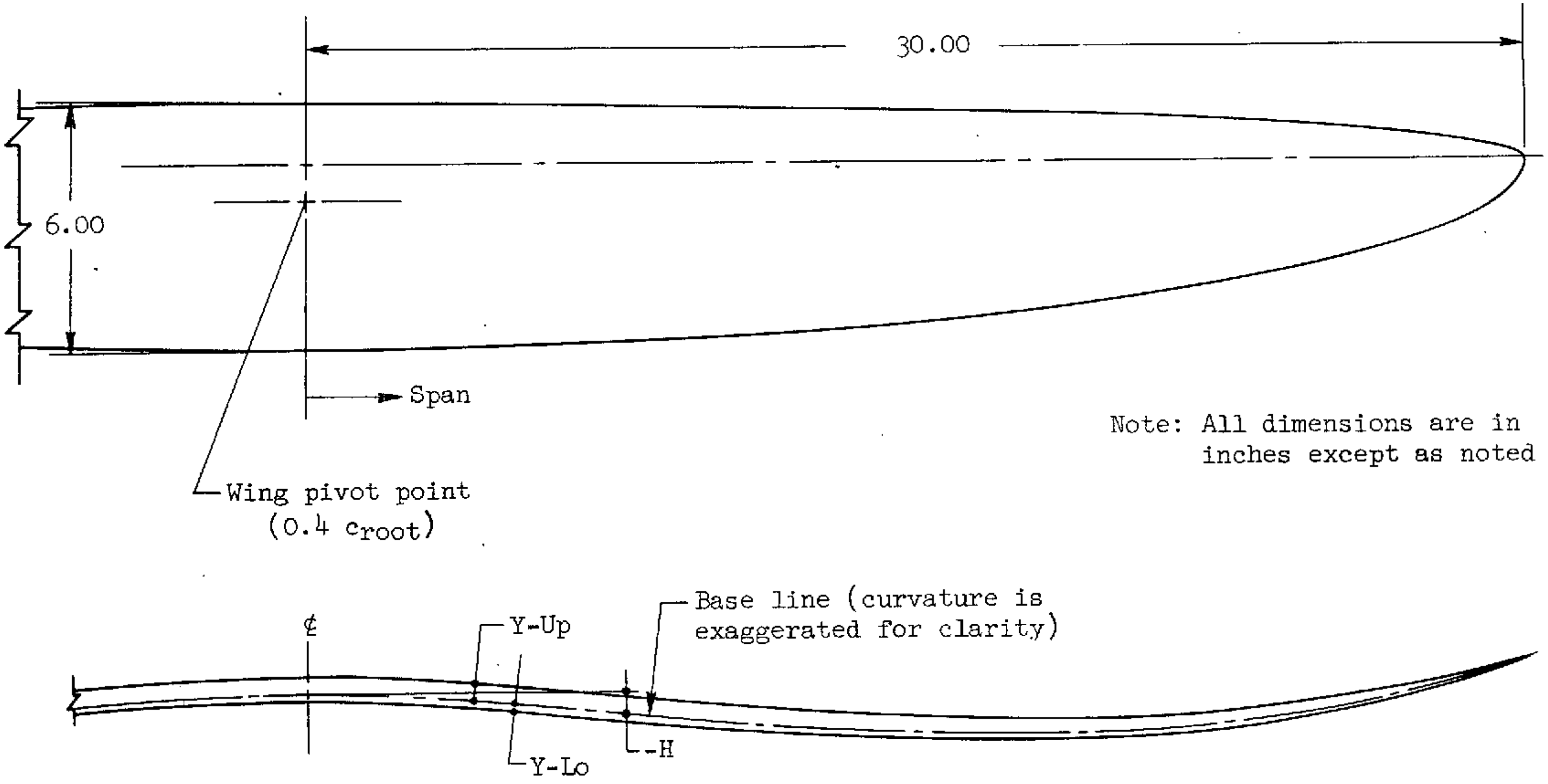
Figure 1.- Axis systems.

Note: All dimensions are in
inches except as noted



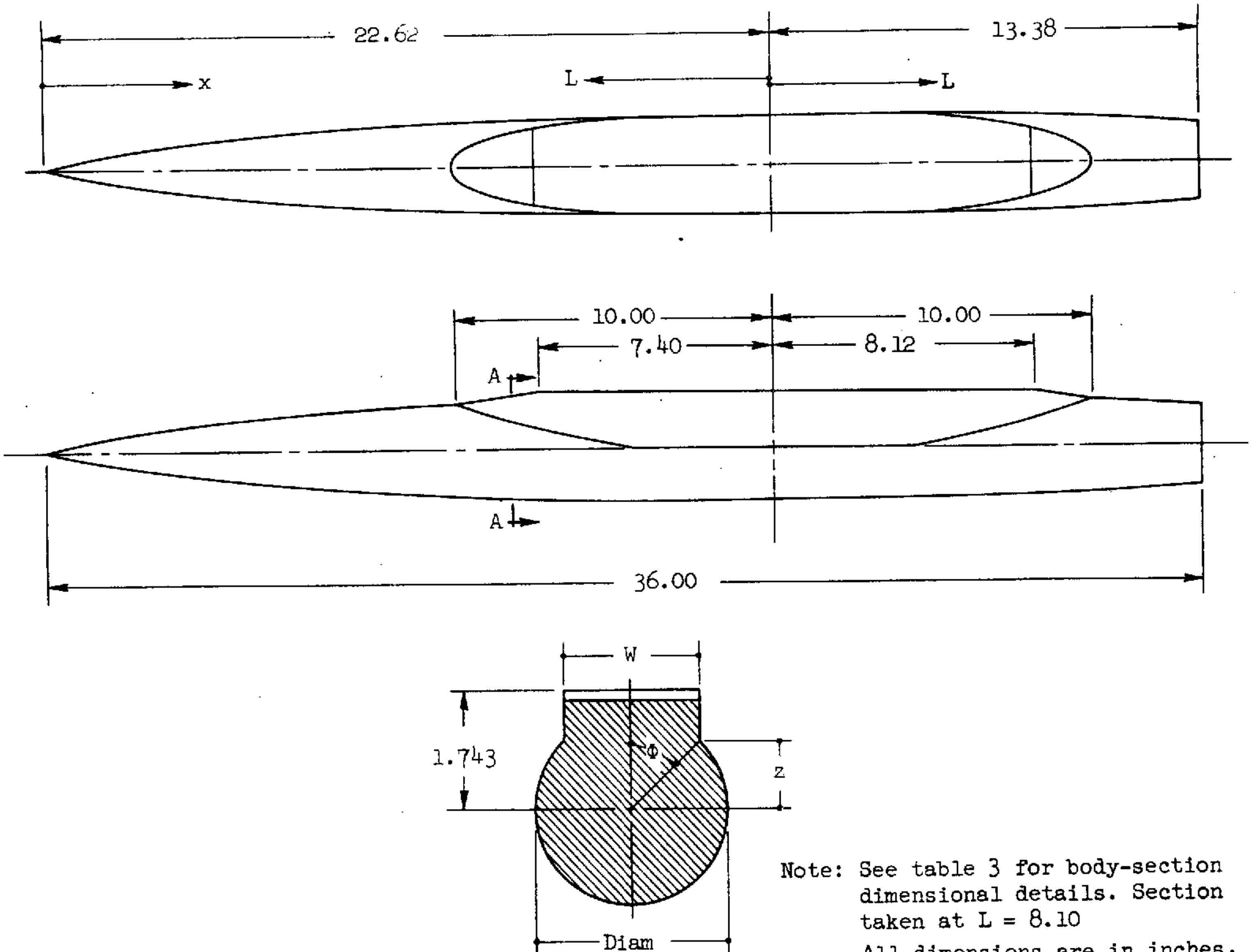
(a) Model drawing

Figure 2.- Oblique-wing/body model details and photograph.



(b) Wing planform and base line curvature

Figure 2.- Continued.



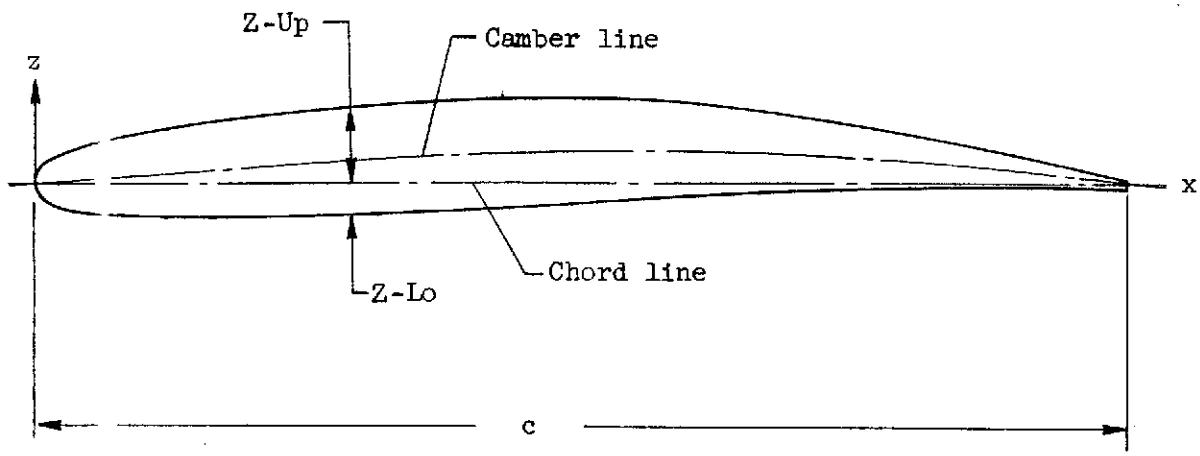
Note: See table 3 for body-section dimensional details. Section taken at L = 8.10

All dimensions are in inches, angles are in degrees

Section A-A

(c) Body dimensional data

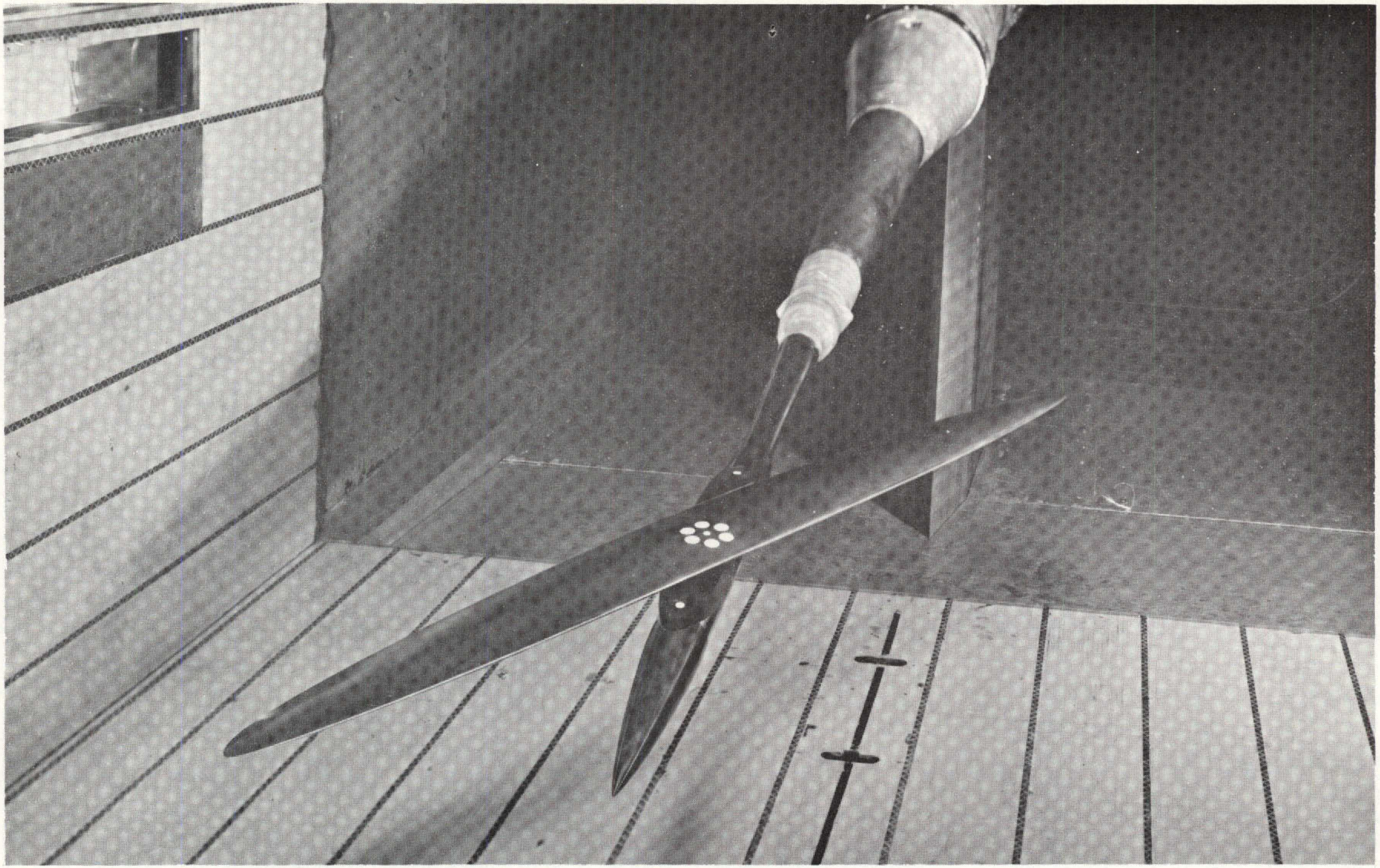
Figure 2.- Continued.



$\frac{x}{c}$	$\frac{t}{c}$	$\frac{\text{Camber}}{c}$	$\frac{\text{Z-Up}}{c}$	$\frac{\text{Z-Lo}}{c}$
.001	.01203	.00008	.00609	-.00594
.010	.03394	.00078	.01775	-.01619
.025	.04849	.00195	.02619	-.02230
.050	.06119	.00389	.03449	-.02671
.075	.06891	.00582	.04027	-.02864
.100	.07446	.00772	.04495	-.02951
.150	.08250	.01144	.05269	-.02981
.200	.08852	.01498	.05924	-.02928
.300	.09689	.02129	.06974	-.02715
.400	.10000	.02621	.07621	-.02379
.500	.09647	.02925	.07749	-.01899
.600	.08560	.02995	.07275	-.01285
.700	.06796	.02785	.06182	-.00613
.800	.04568	.02246	.04531	-.00038
.900	.02255	.01334	.02461	.00207
1.000	.00400	.00000	.00200	-.00200

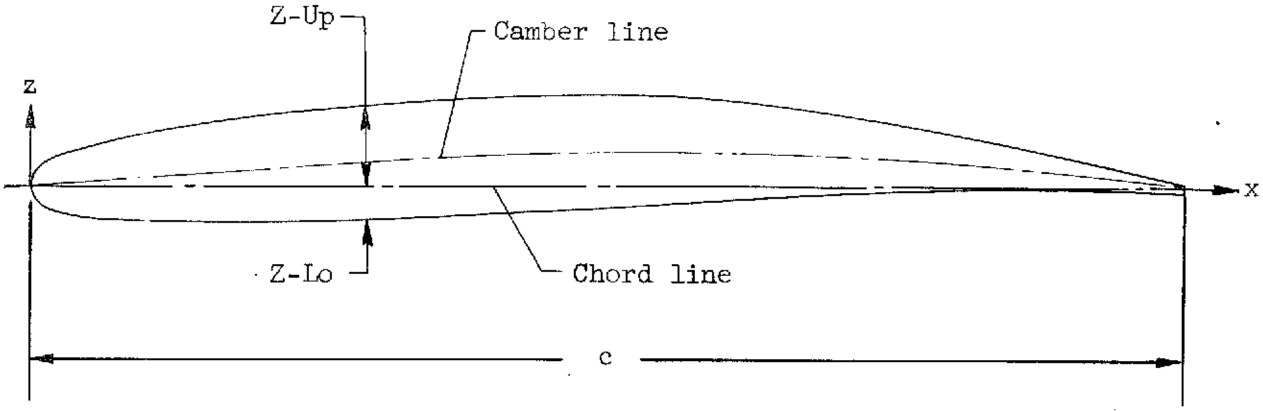
(d) ing section drawing and tabulated airfoil section data for wing number 1, W_1

Figure 2.- Continued.

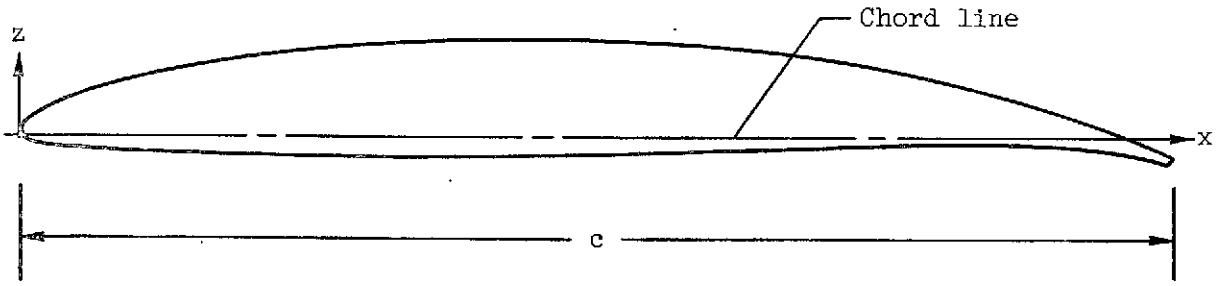


(e) Photograph of the model in the Ames 11- by 11-Foot Wind Tunnel, $\Lambda = 60^{\circ}$

Figure 2. - Concluded.



(a) Wing number 2, W_2
(see table 2 for section coordinates)



(b) Wing number 4, W_4
(see table 2 for section coordinates)

Figure 3.- Wing-section drawings.

DATA

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	BETA	LAMBDA	RN/L
(1AE003)	○	W1 F0 B	0.000	0.000	6.000
(1AE040)	△	W2 F0 B	0.000	0.000	6.000
(1AE065)	◇	W4 F0 B	0.000	0.000	6.000

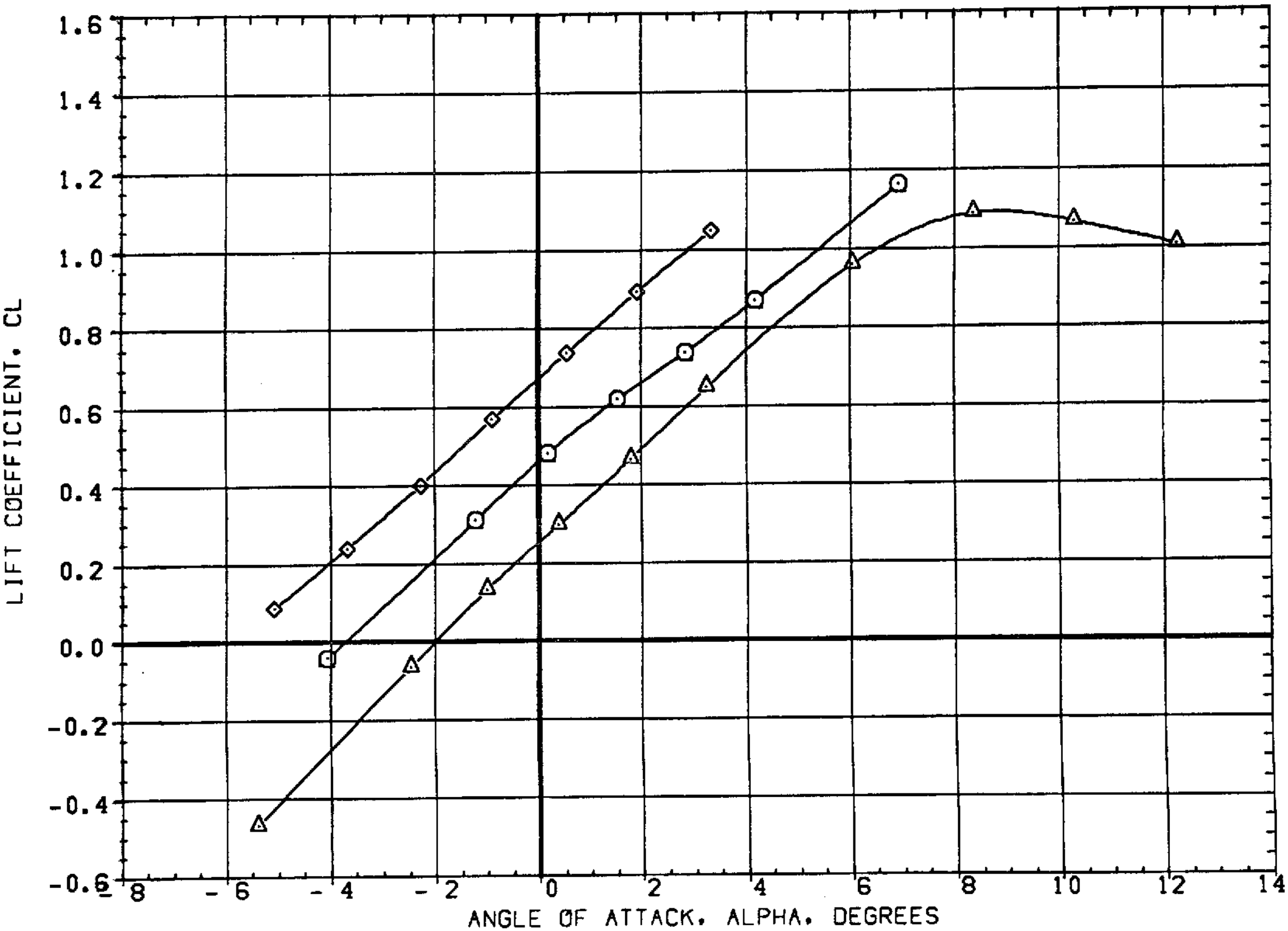


FIGURE 4 EFFECT OF WING AIRFOIL SECTION FOR AN OBLIQUE WING ANGLE OF 0 DEGREE

(A)MACH = .60

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	BETA	LAMBDA	RN/L
(1AE003)	○	W1 F0 B	0.000	0.000	6.000
(1AE040)	△	W2 F0 B	0.000	0.000	6.000
(1AE065)	◇	W4 F0 B	0.000	0.000	6.000

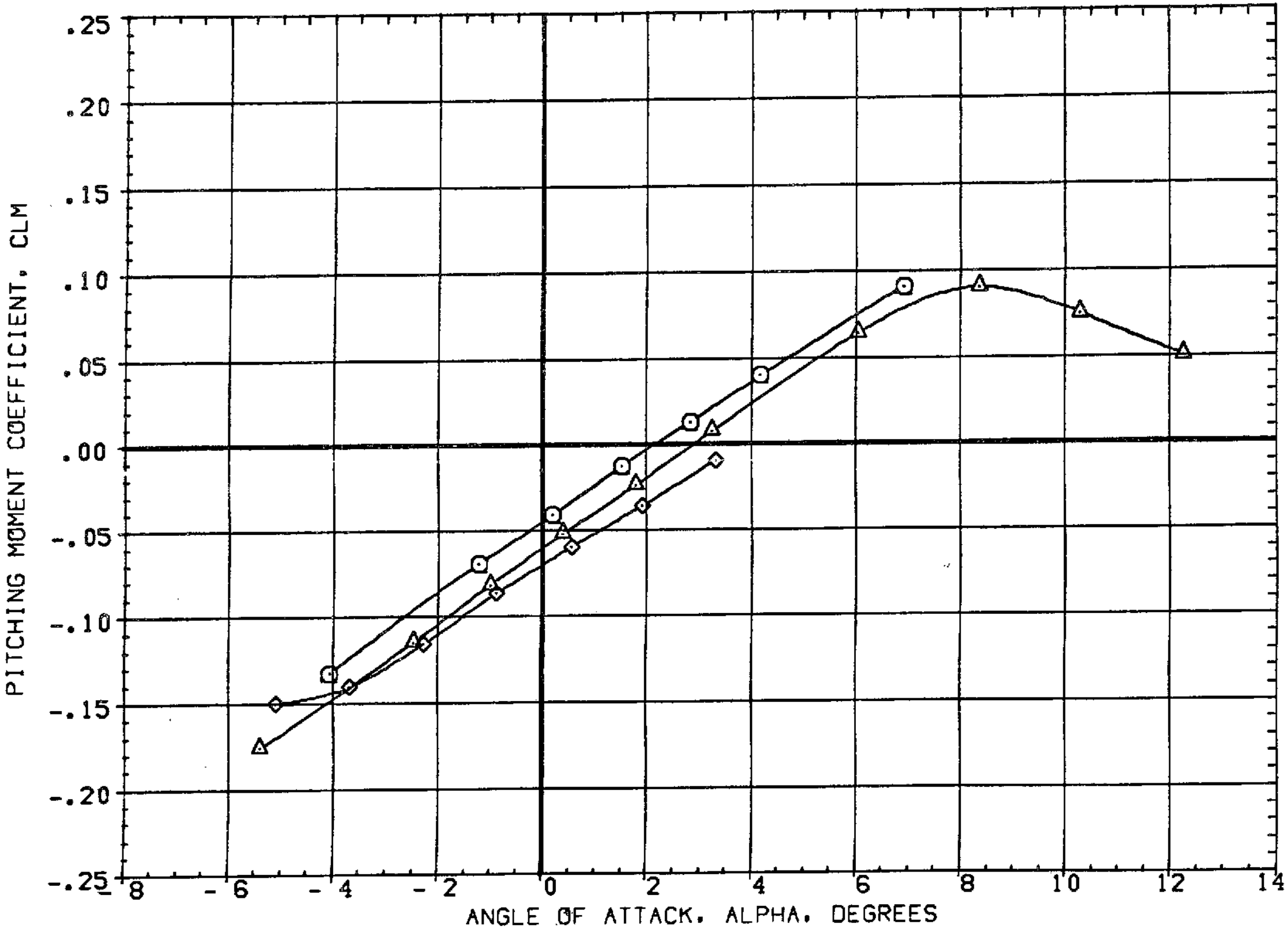


FIGURE 4 EFFECT OF WING AIRFOIL SECTION FOR AN OBLIQUE WING ANGLE OF 0 DEGREE

(A)MACH = .60

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	BETA	LAMBDA	RN/L
(1AE003)	○	W1 F0 B	0.000	0.000	6.000
(1AE040)	△	W2 F0 B	0.000	0.000	6.000
(1AE065)	◇	W4 F0 B	0.000	0.000	6.000

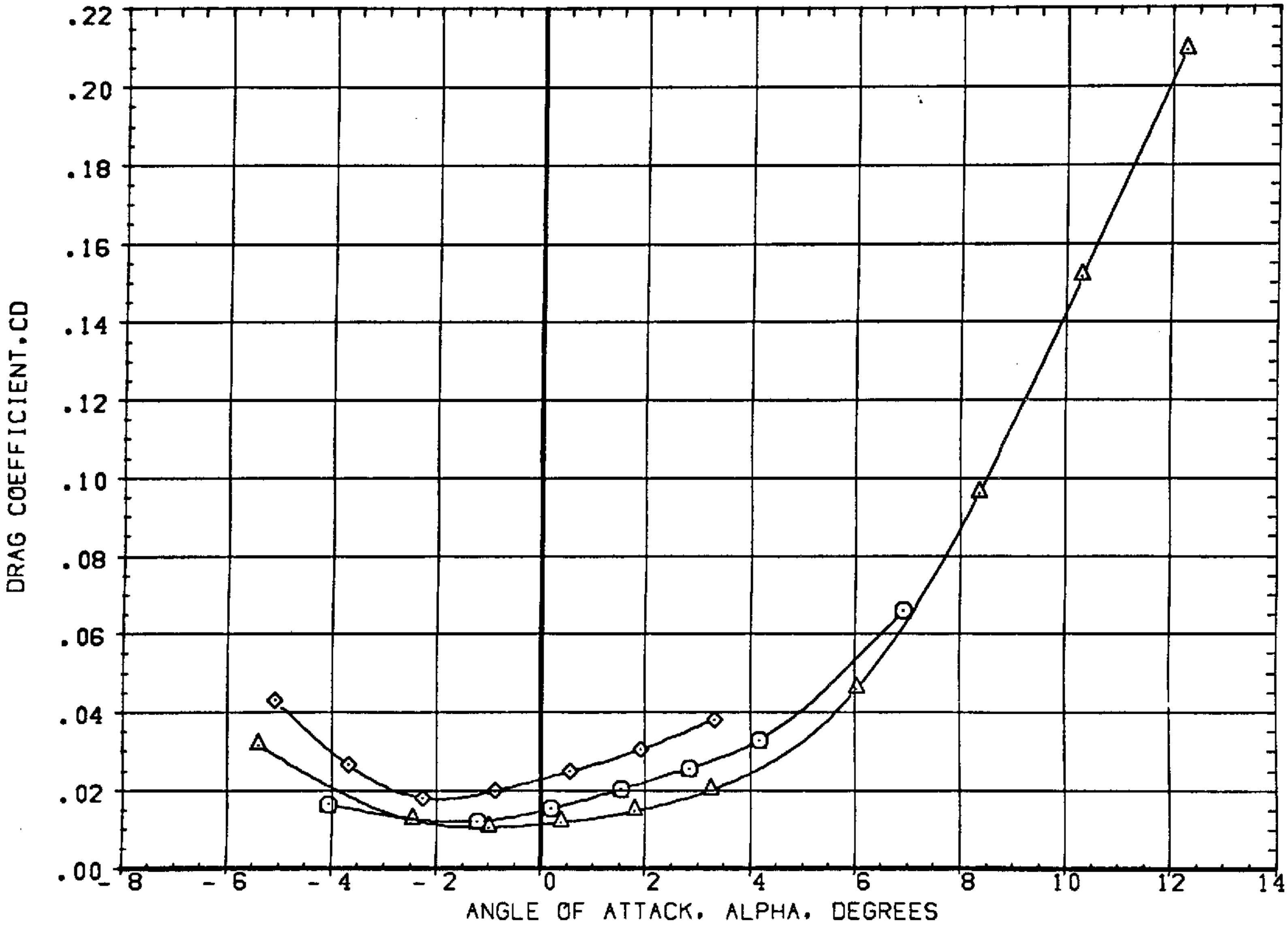


FIGURE 4 EFFECT OF WING AIRFOIL SECTION FOR AN OBLIQUE WING ANGLE OF 0 DEGREE

(A)MACH = .60

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	BETA	LAMBDA	RN/L
(1AE003)	○	W1 F0 B	0.000	0.000	6.000
(1AE040)	△	W2 F0 B	0.000	0.000	6.000
(1AE065)	◇	W4 F0 B	0.000	0.000	6.000

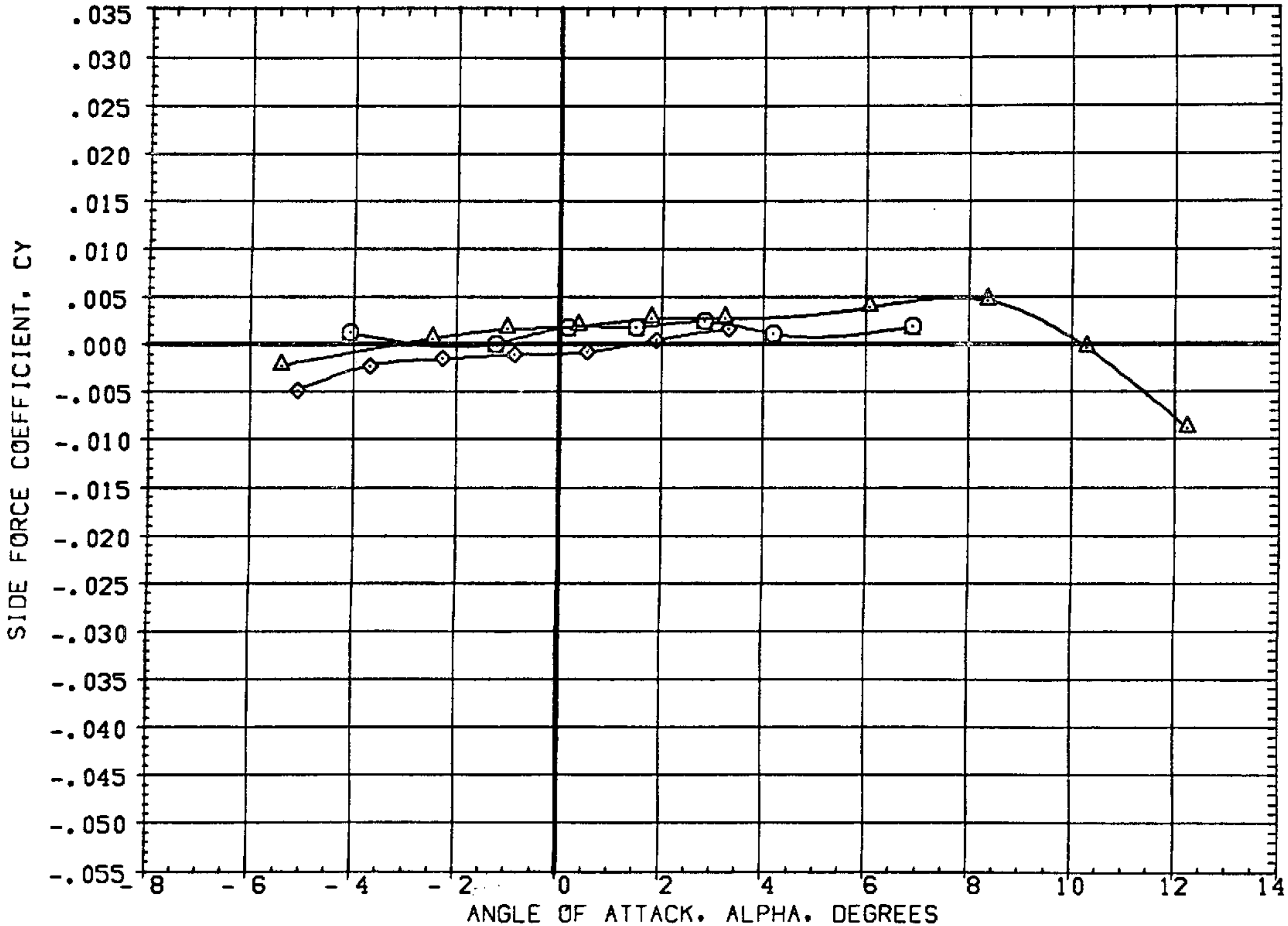


FIGURE 4 EFFECT OF WING AIRFOIL SECTION FOR AN OBLIQUE WING ANGLE OF 0 DEGREE

(A)MACH = .60

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	BETA	LAMBDA	RN/L
(1AE003)	○	W1 F0 B	0.000	0.000	6.000
(1AE040)	△	W2 F0 B	0.000	0.000	6.000
(1AE065)	◇	W4 F0 B	0.000	0.000	6.000

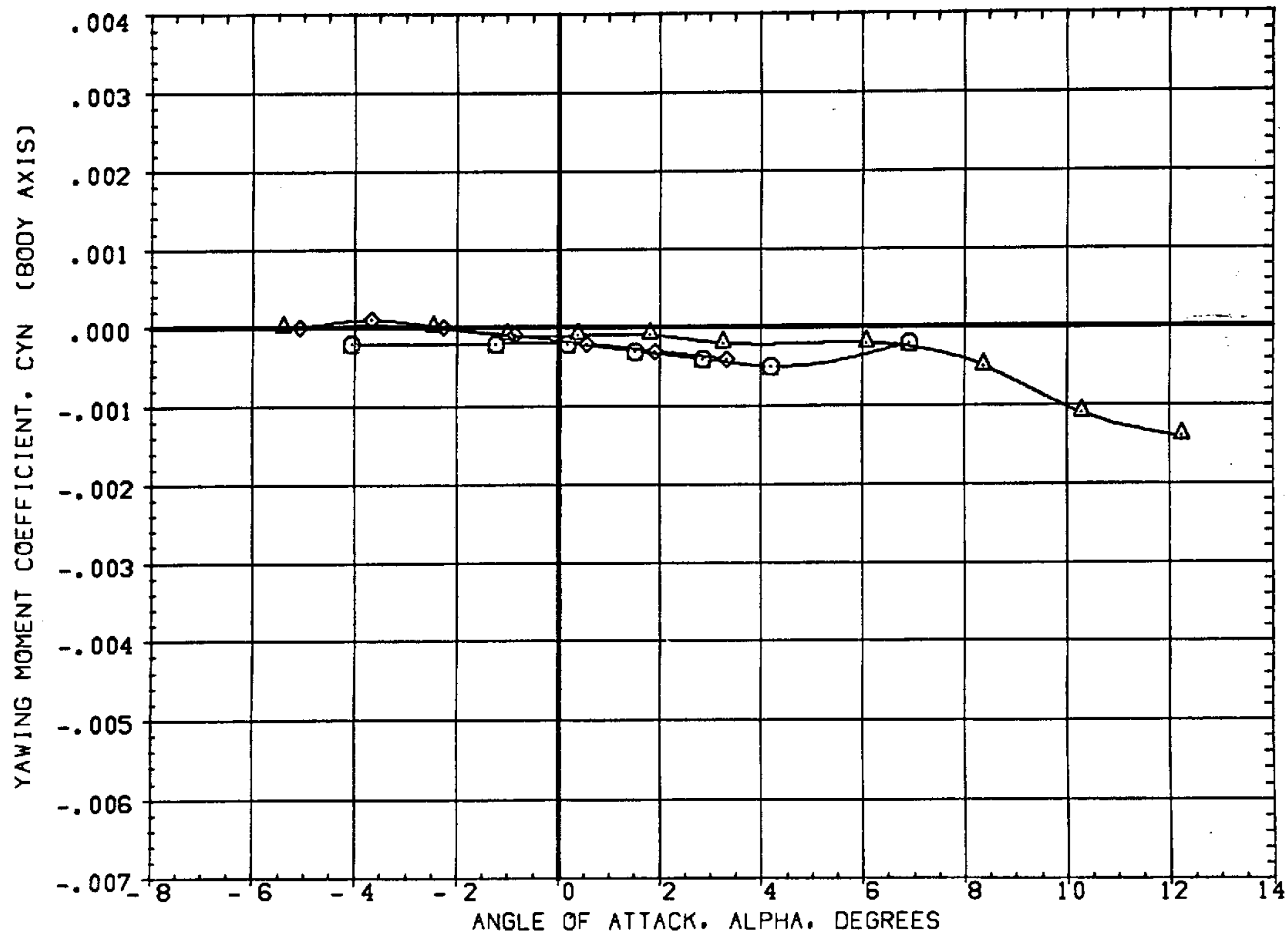


FIGURE 4 EFFECT OF WING AIRFOIL SECTION FOR AN OBLIQUE WING ANGLE OF 0 DEGREE

(A)MACH = .60

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	BETA	LAMBDA	RN/L
(1AE003)	○	W1 F0 B	0.000	0.000	6.000
(1AE040)	△	W2 F0 B	0.000	0.000	6.000
(1AE065)	◇	W4 F0 B	0.000	0.000	6.000

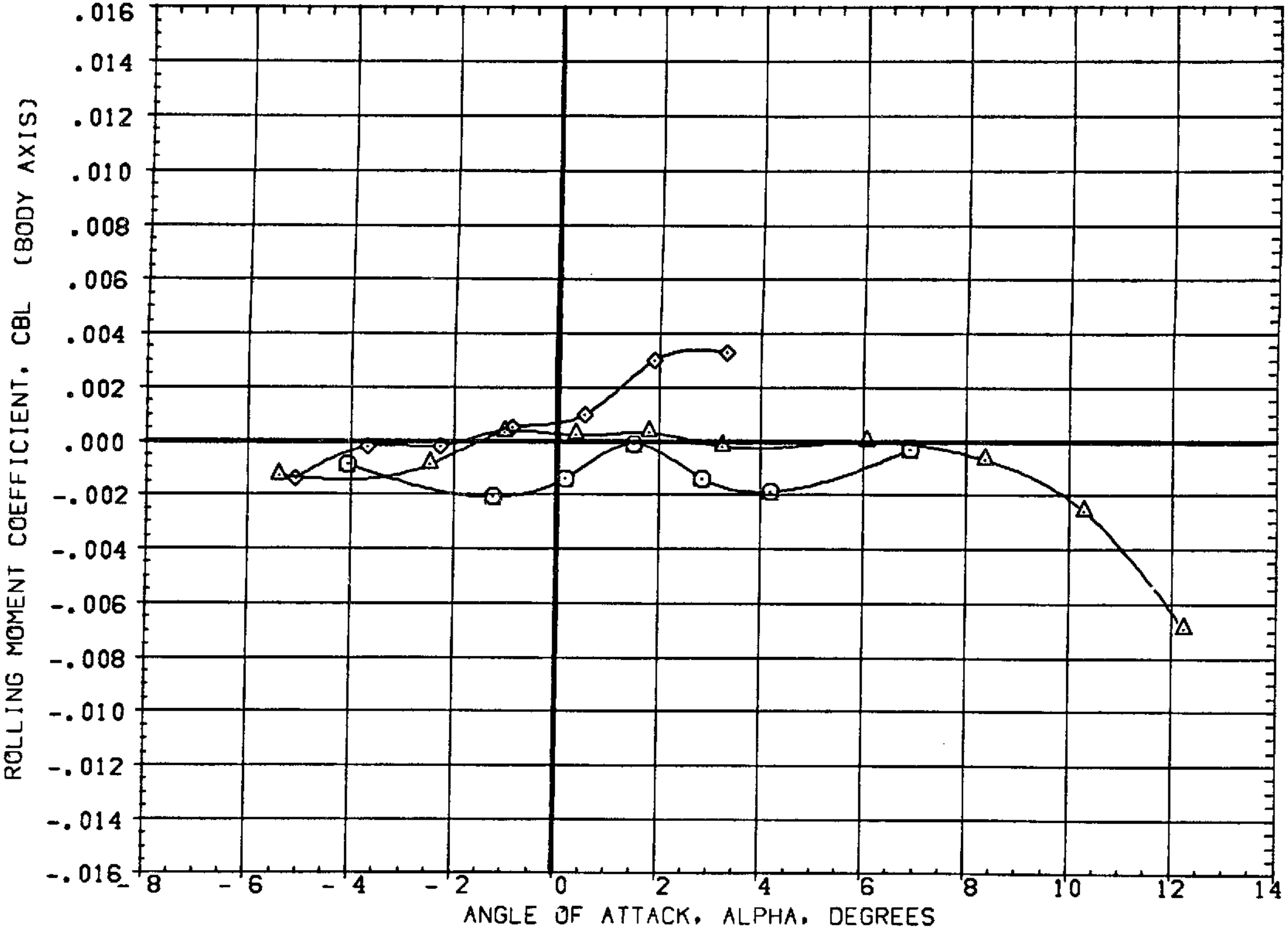


FIGURE 4 EFFECT OF WING AIRFOIL SECTION FOR AN OBLIQUE WING ANGLE OF 0 DEGREE

(A)MACH = .60

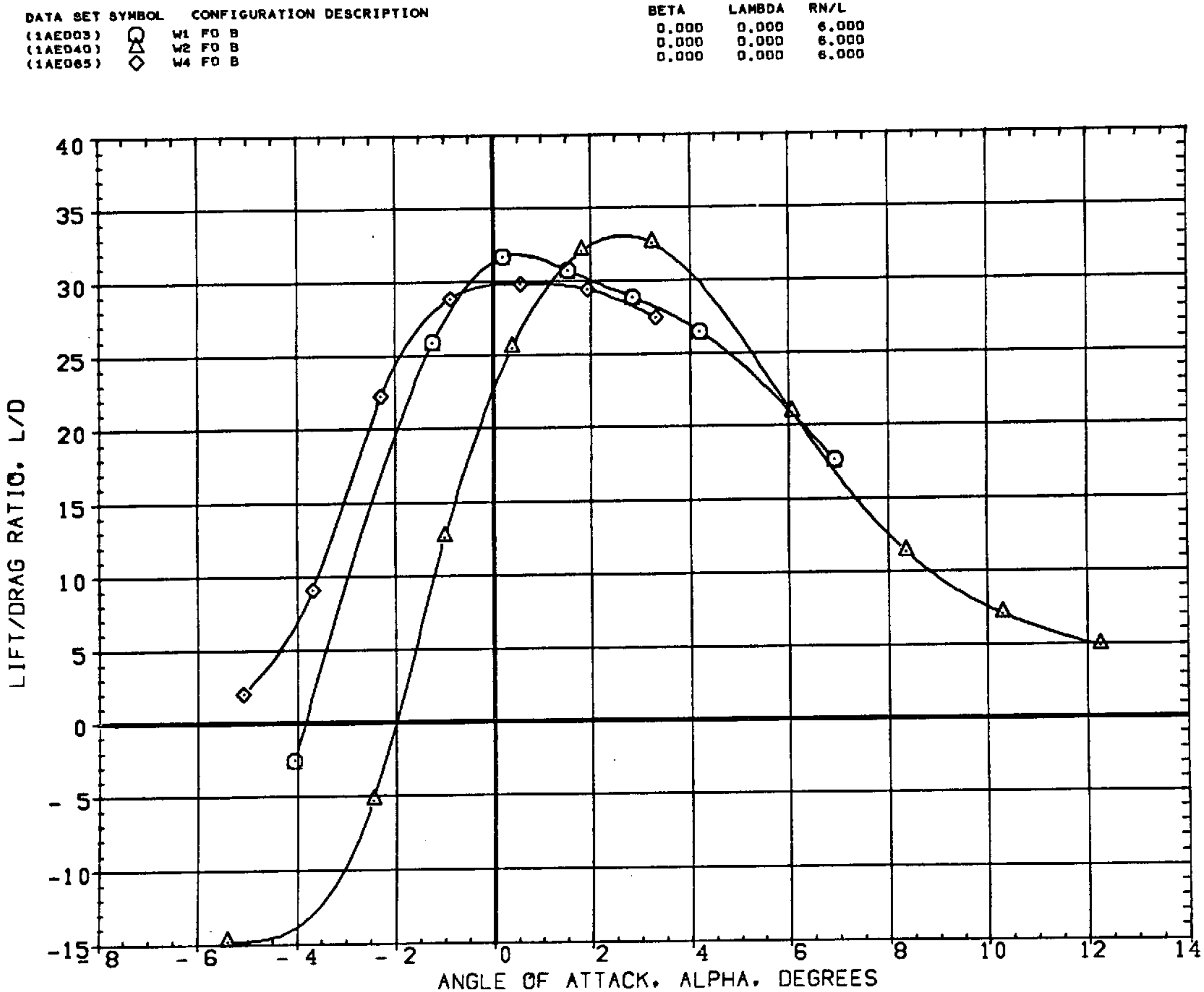


FIGURE 4 EFFECT OF WING AIRFOIL SECTION FOR AN OBLIQUE WING ANGLE OF 0 DEGREE

(A)MACH = .60

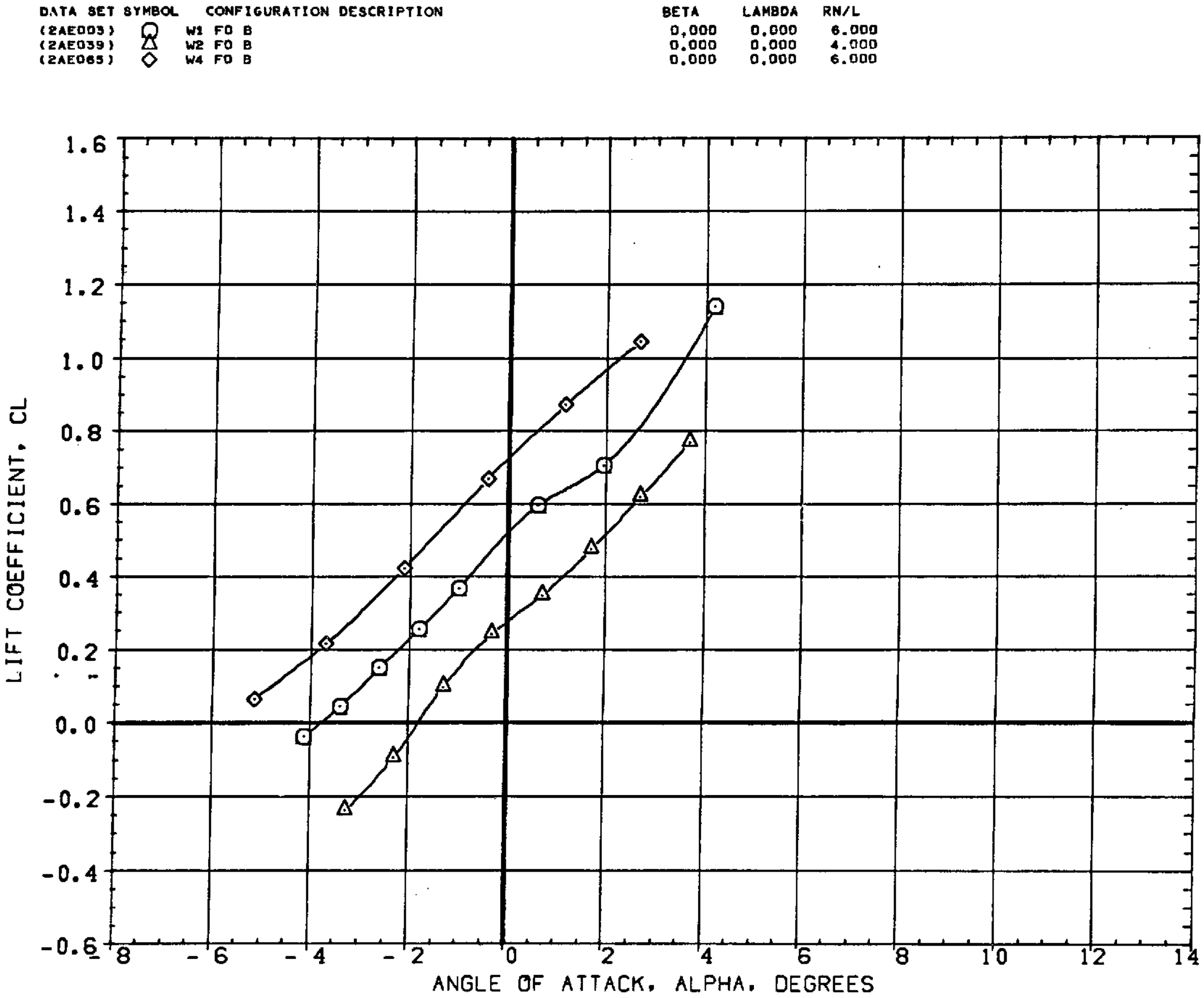


FIGURE 4 EFFECT OF WING AIRFOIL SECTION FOR AN OBLIQUE WING ANGLE OF 0 DEGREE

(A)MACH = .70

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	BETA	LAMBDA	RN/L
(2AE003)	⊙	W1 F0 B	0.000	0.000	6.000
(2AE039)	△	W2 F0 B	0.000	0.000	4.000
(2AE065)	◇	W4 F0 B	0.000	0.000	6.000

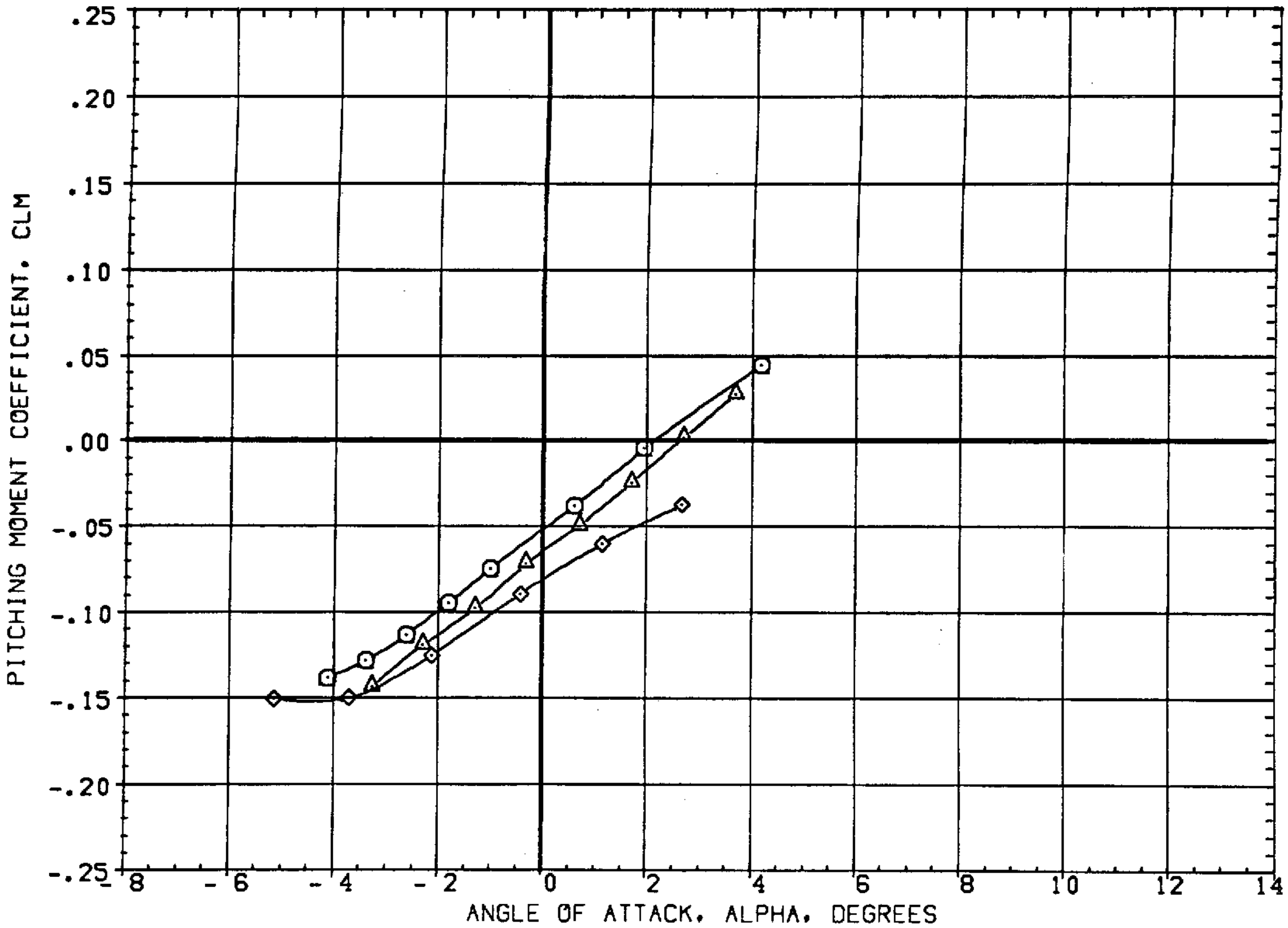


FIGURE 4 EFFECT OF WING AIRFOIL SECTION FOR AN OBLIQUE WING ANGLE OF 0 DEGREE

(A)MACH = .70

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	BETA	LAMBDA	RN/L
(2AE003)	○	W1 FO B	0.000	0.000	6.000
(2AE039)	△	W2 FO B	0.000	0.000	4.000
(2AE065)	◇	W4 FO B	0.000	0.000	6.000

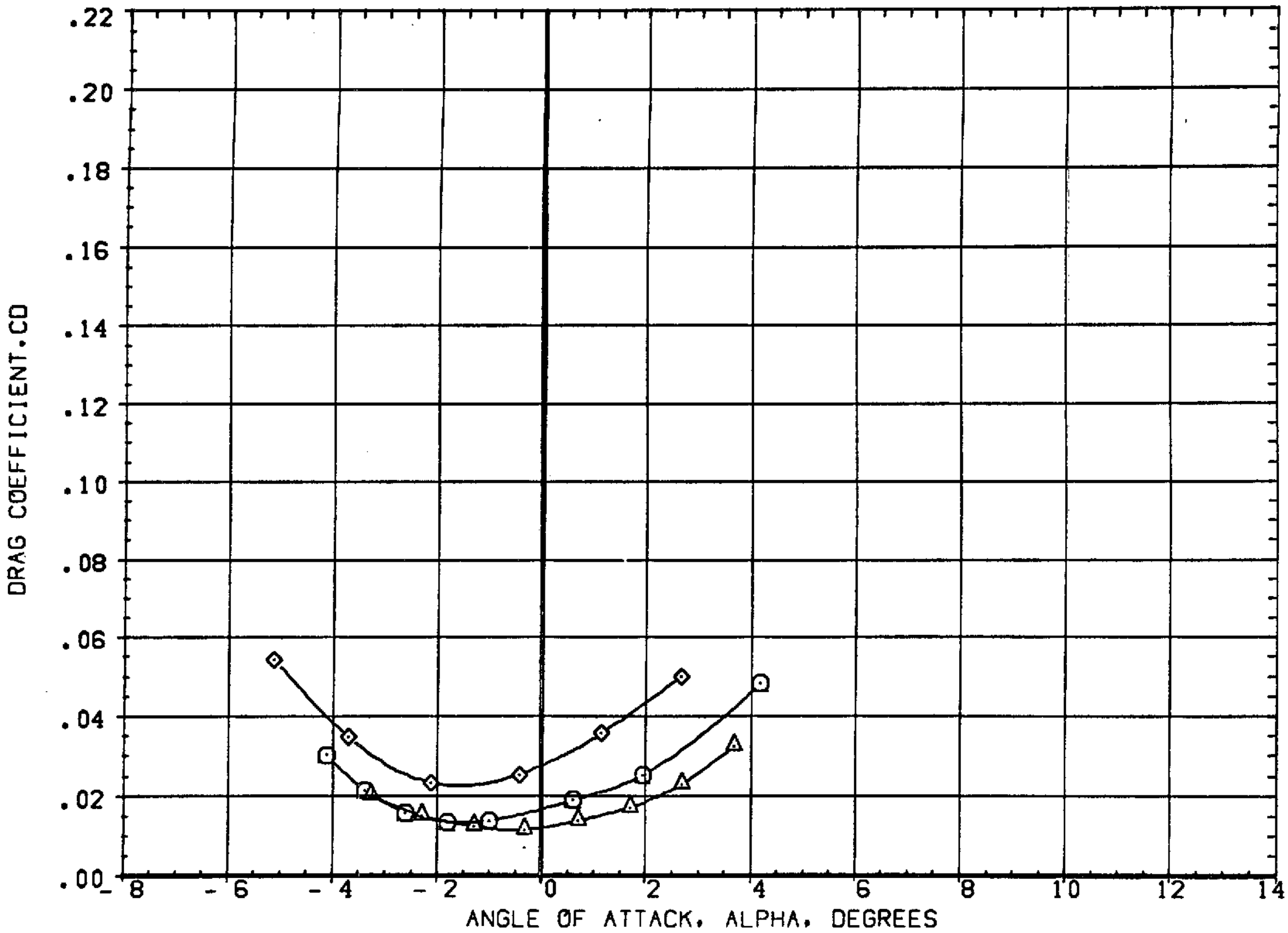


FIGURE 4 EFFECT OF WING AIRFOIL SECTION FOR AN OBLIQUE WING ANGLE OF 0 DEGREE

(A)MACH = .70

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	BETA	LAMBDA	RN/L
(2AE003)	○	W1 F0 B	0.000	0.000	6.000
(2AE039)	△	W2 F0 B	0.000	0.000	4.000
(2AE065)	◇	W4 F0 B	0.000	0.000	6.000

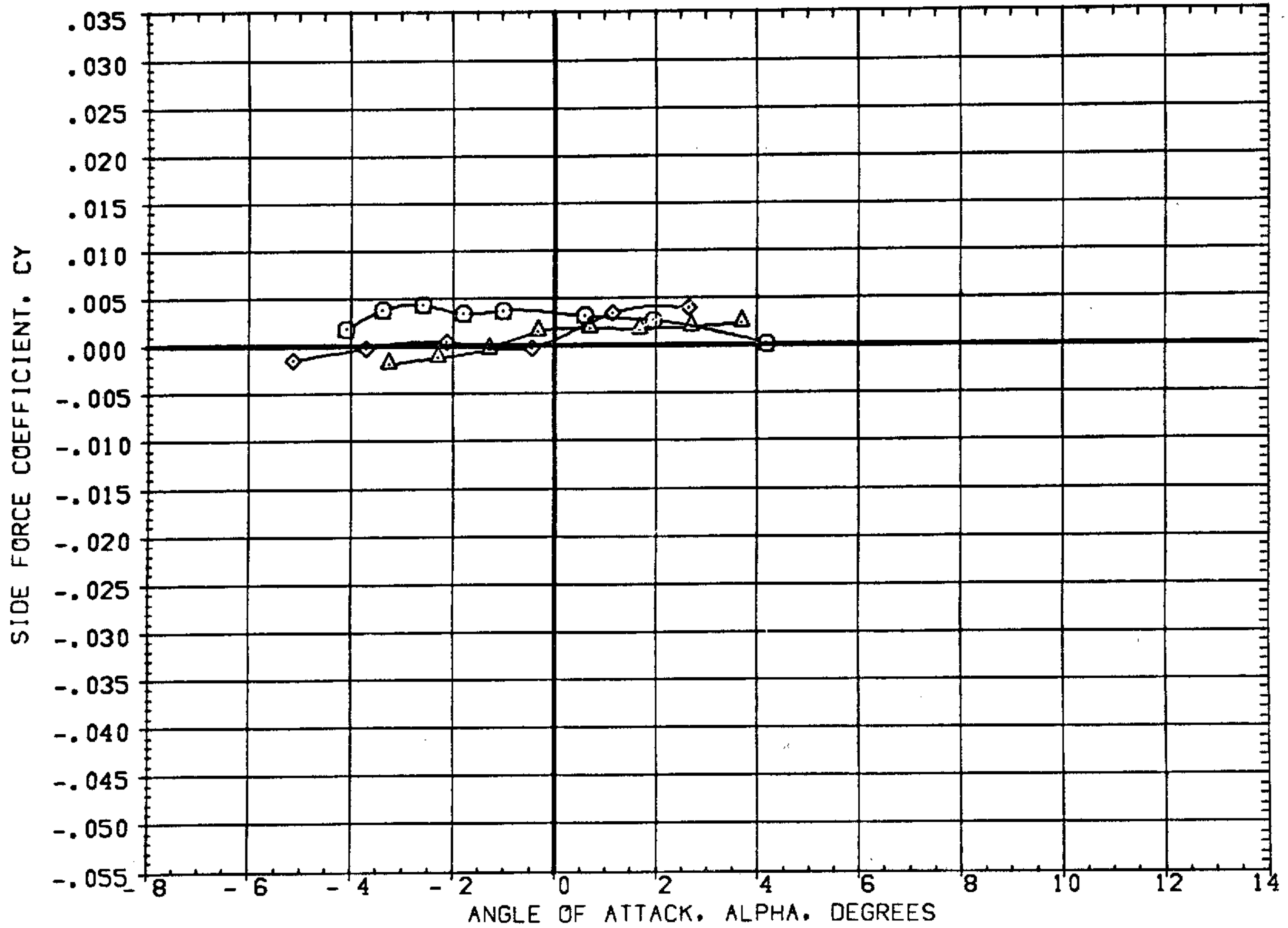


FIGURE 4 EFFECT OF WING AIRFOIL SECTION FOR AN OBLIQUE WING ANGLE OF 0 DEGREE

(A)MACH = .70

42

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	BETA	LAMBDA	RN/L
(2AE003)	○	W1 F0 B	0.000	0.000	6.000
(2AE039)	△	W2 F0 B	0.000	0.000	4.000
(2AE065)	◇	W4 F0 B	0.000	0.000	6.000

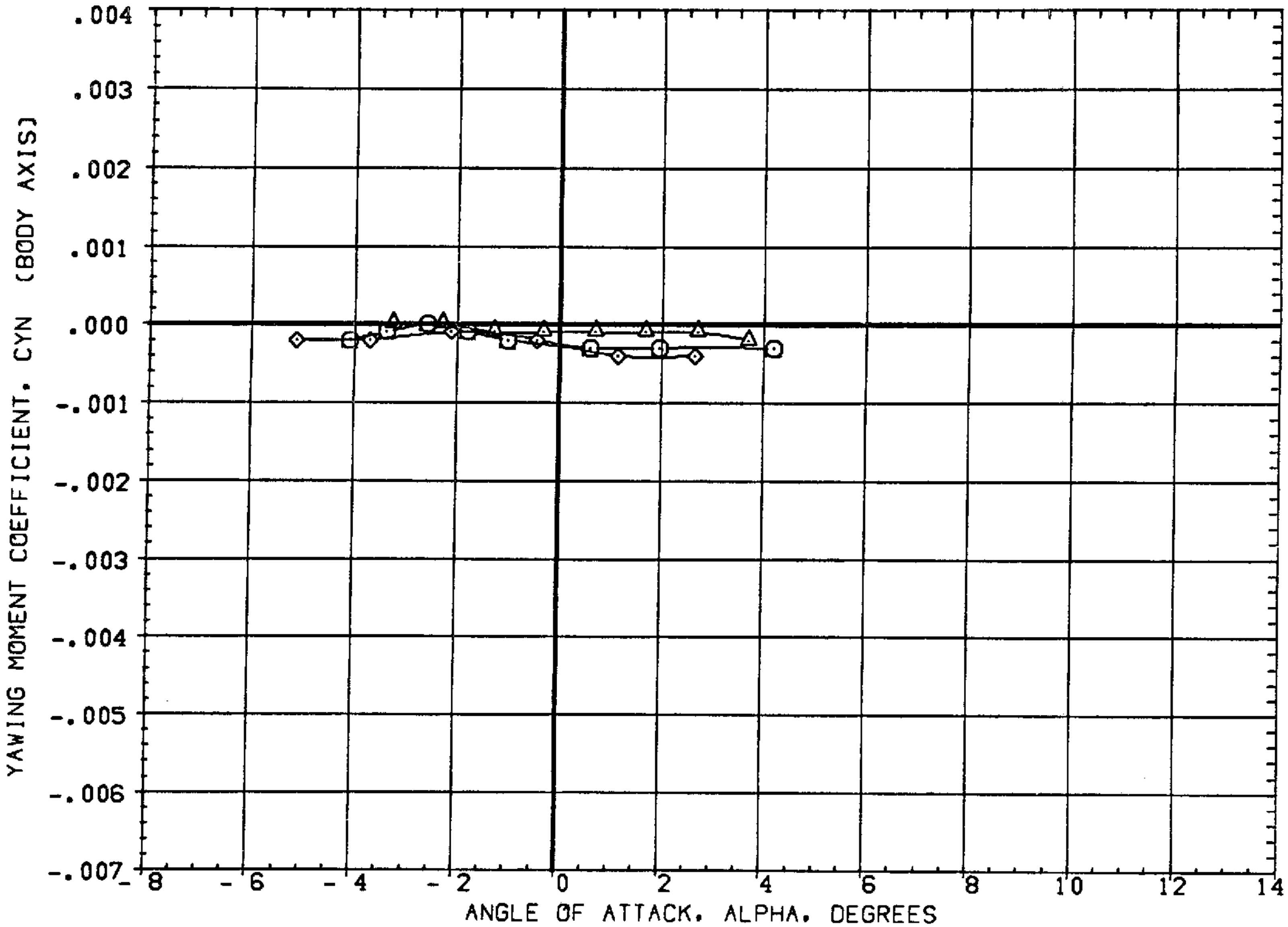


FIGURE 4 EFFECT OF WING AIRFOIL SECTION FOR AN OBLIQUE WING ANGLE OF 0 DEGREE

(A)MACH = .70

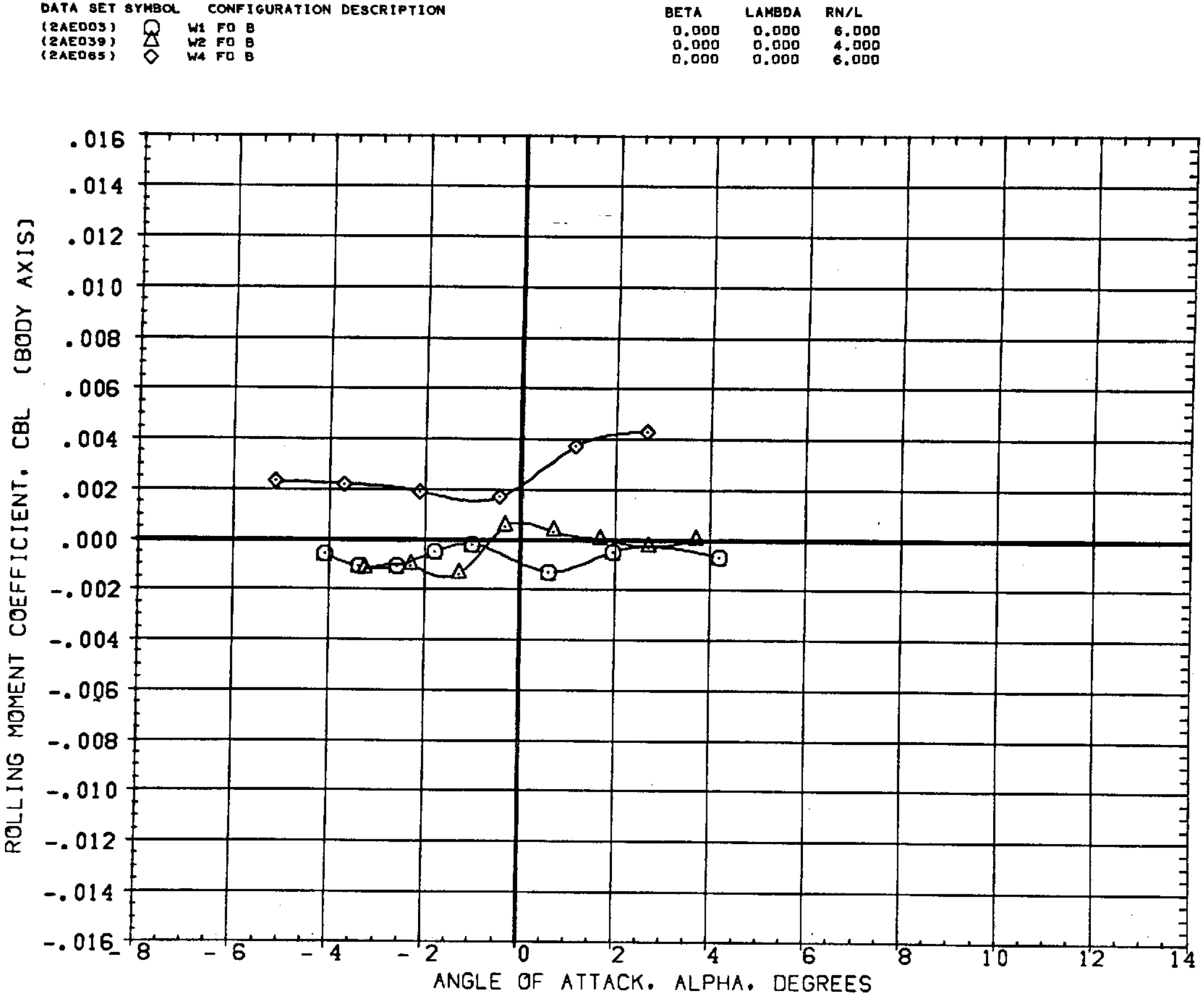


FIGURE 4 EFFECT OF WING AIRFOIL SECTION FOR AN OBLIQUE WING ANGLE OF 0 DEGREE
(A)MACH = .70

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	BETA	LAMBDA	RN/L
(2AE003)	○	W1 FO B	0.000	0.000	6.000
(2AE039)	△	W2 FO B	0.000	0.000	4.000
(2AE065)	◇	W4 FO B	0.000	0.000	6.000

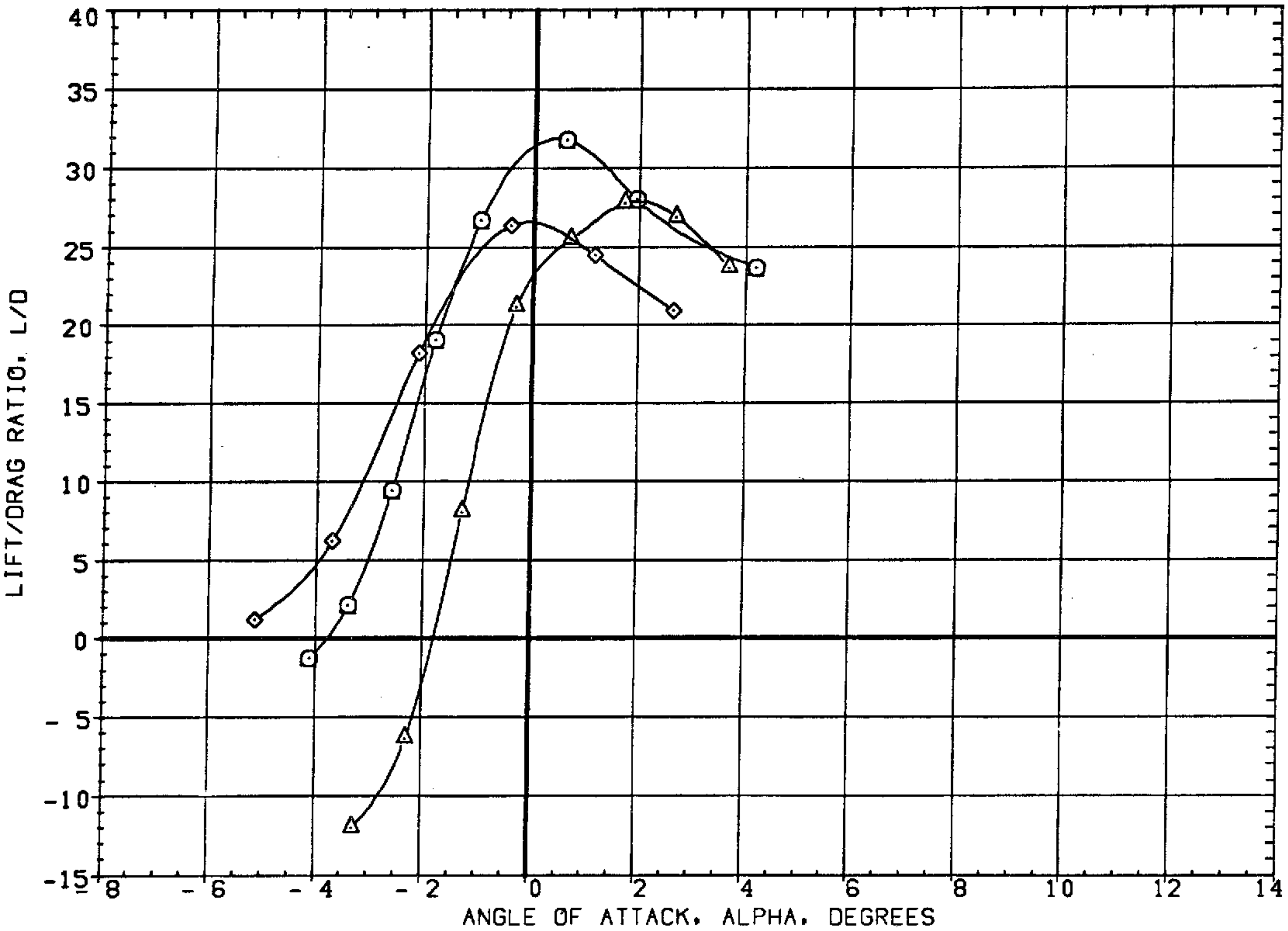


FIGURE 4 EFFECT OF WING AIRFOIL SECTION FOR AN OBLIQUE WING ANGLE OF 0 DEGREE

(A)MACH = .70

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	BETA	LAMBDA	RN/L
(3AE003)	○	W1 F0 B	0.000	0.000	6.000
(3AE039)	△	W2 F0 B	0.000	0.000	4.000
(3AE065)	◇	W4 F0 B	0.000	0.000	6.000

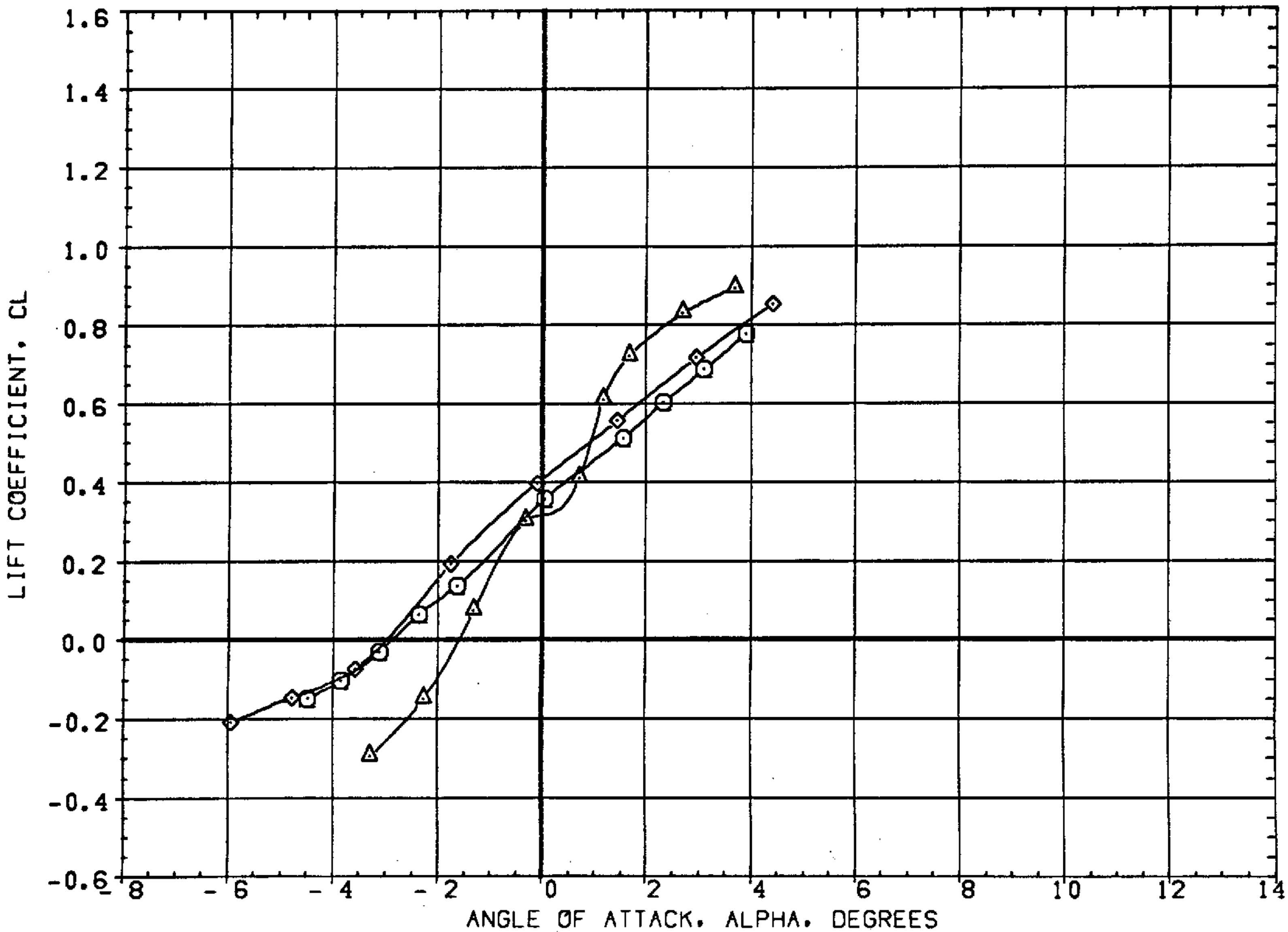


FIGURE 4 EFFECT OF WING AIRFOIL SECTION FOR AN OBLIQUE WING ANGLE OF 0 DEGREE

(A)MACH = .80

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	BETA	LAMBDA	RN/L
(3AE003)	○	W1 F0 B	0.000	0.000	6.000
(3AE039)	△	W2 F0 B	0.000	0.000	4.000
(3AE065)	◇	W4 F0 B	0.000	0.000	6.000

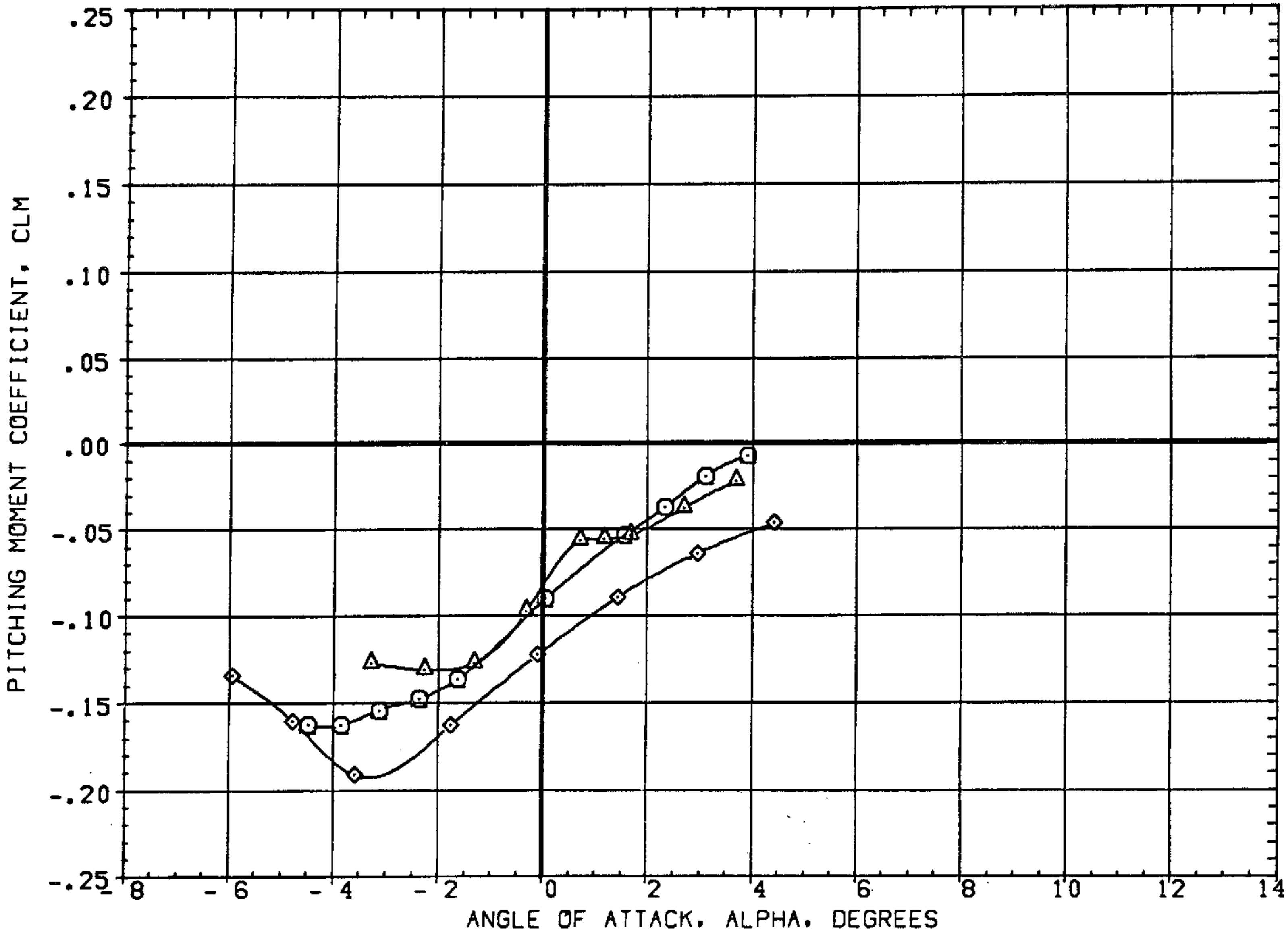


FIGURE 4 EFFECT OF WING AIRFOIL SECTION FOR AN OBLIQUE WING ANGLE OF 0 DEGREE

(A)MACH = .80

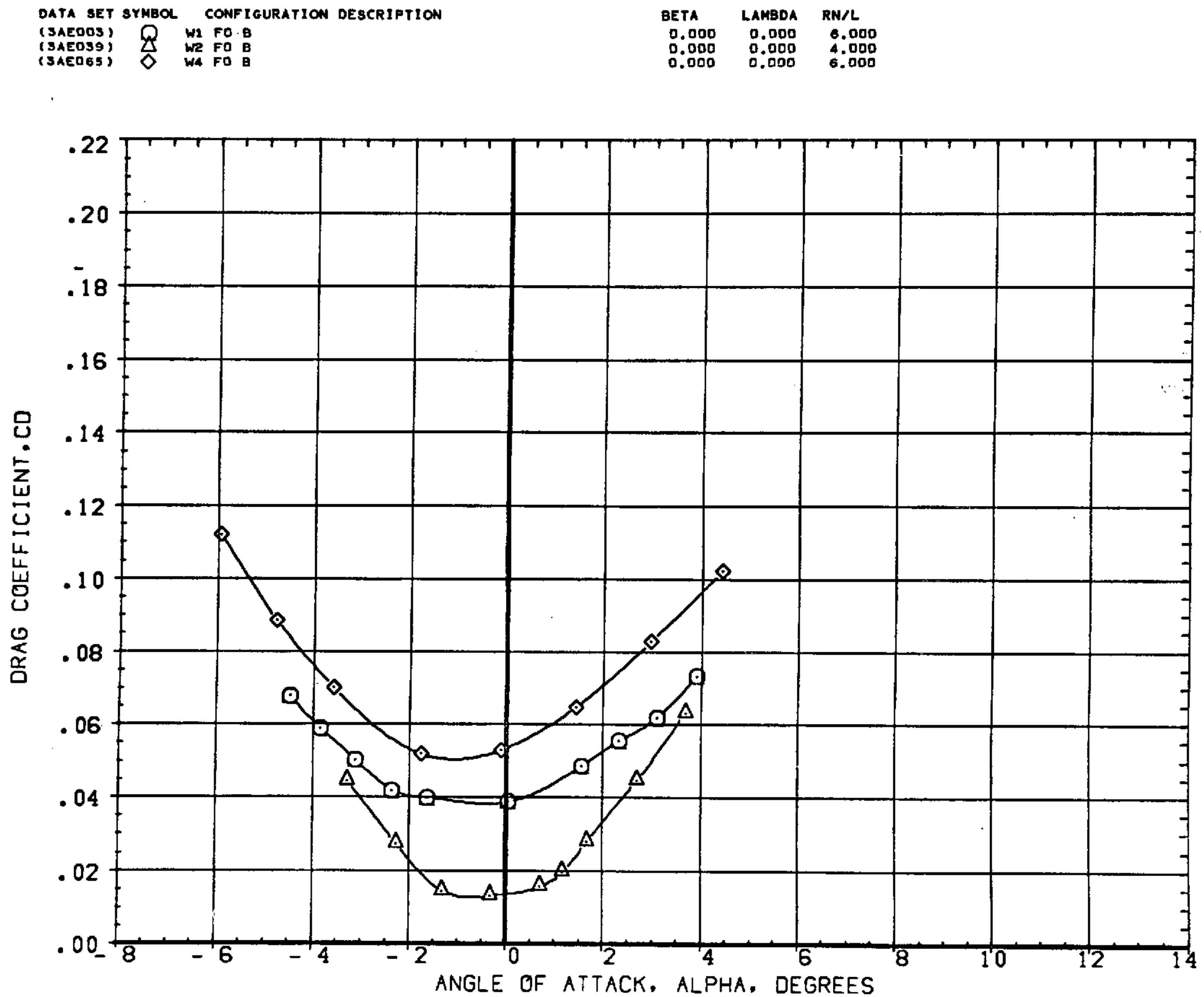


FIGURE 4 EFFECT OF WING AIRFOIL SECTION FOR AN OBLIQUE WING ANGLE OF 0 DEGREE
(A)MACH = .80

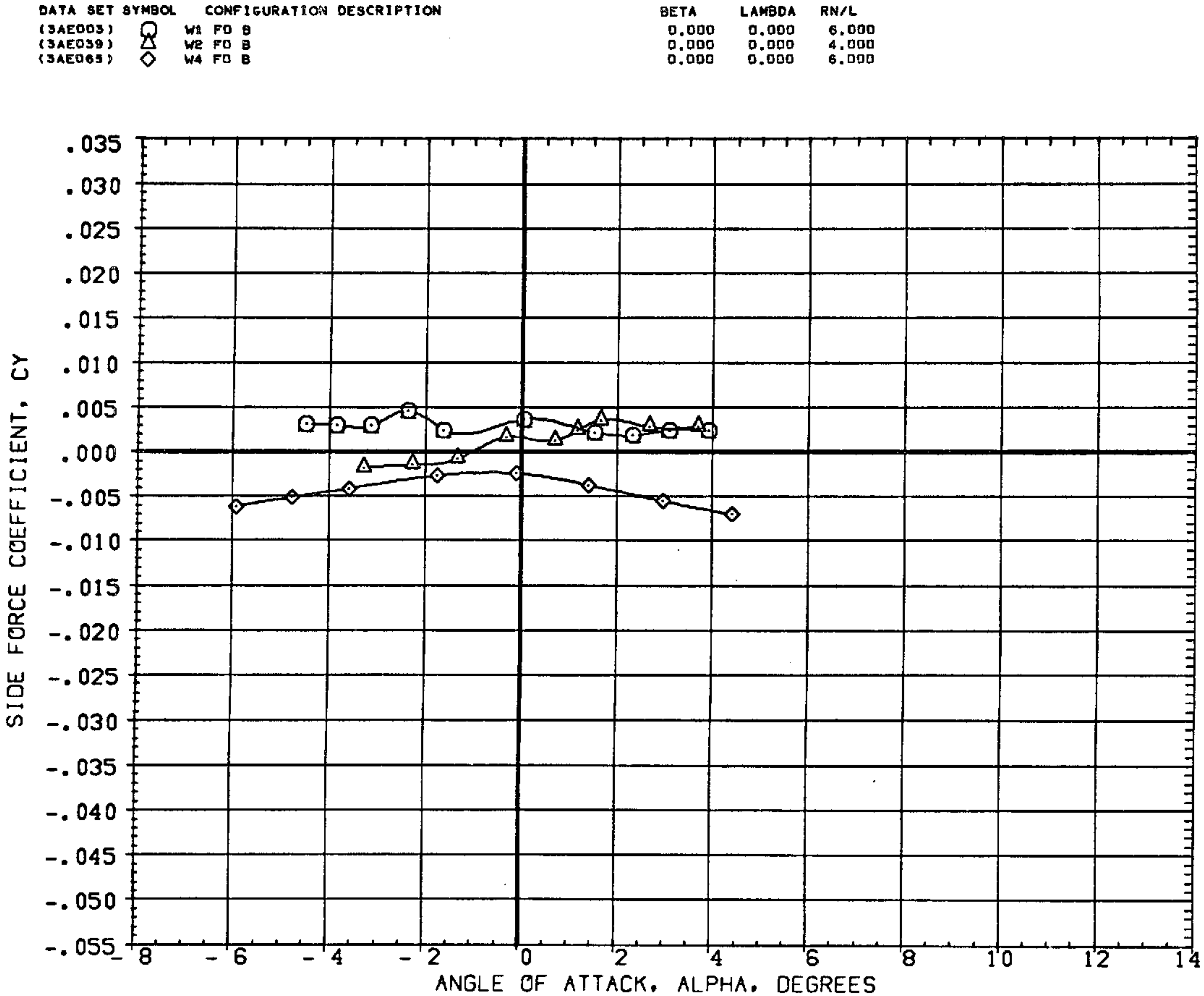


FIGURE 4 EFFECT OF WING AIRFOIL SECTION FOR AN OBLIQUE WING ANGLE OF 0 DEGREE

(A)MACH = .80

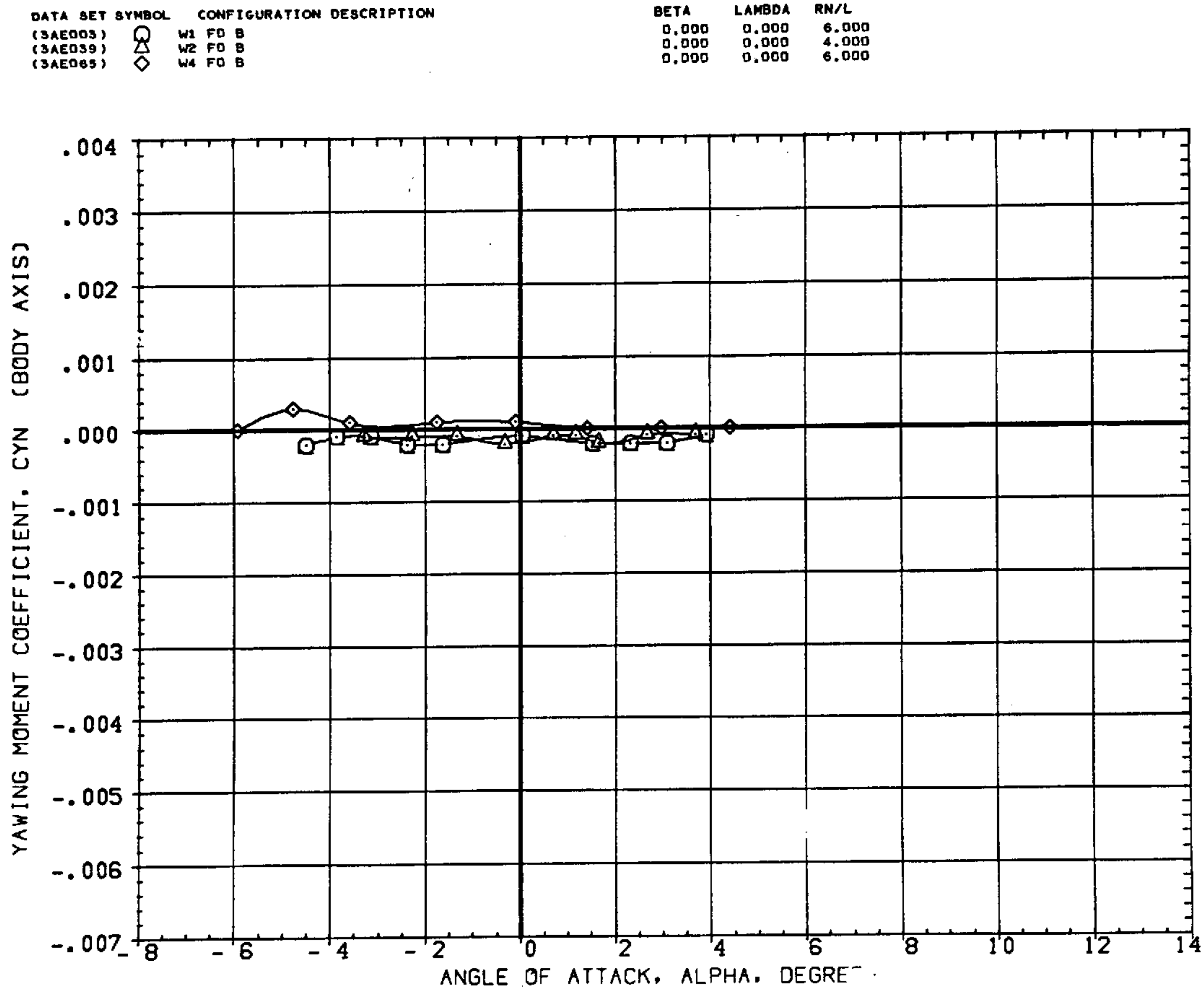


FIGURE 4 EFFECT OF WING AIRFOIL SECTION FOR AN OBLIQUE WING ANGLE OF 0 DEGREE

(A)MACH = .80

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	BETA	LAMBDA	RN/L
(3AE003)	○	W1 F0 B	0.000	0.000	6.000
(3AE039)	△	W2 F0 B	0.000	0.000	4.000
(3AE065)	◇	W4 F0 B	0.000	0.000	6.000

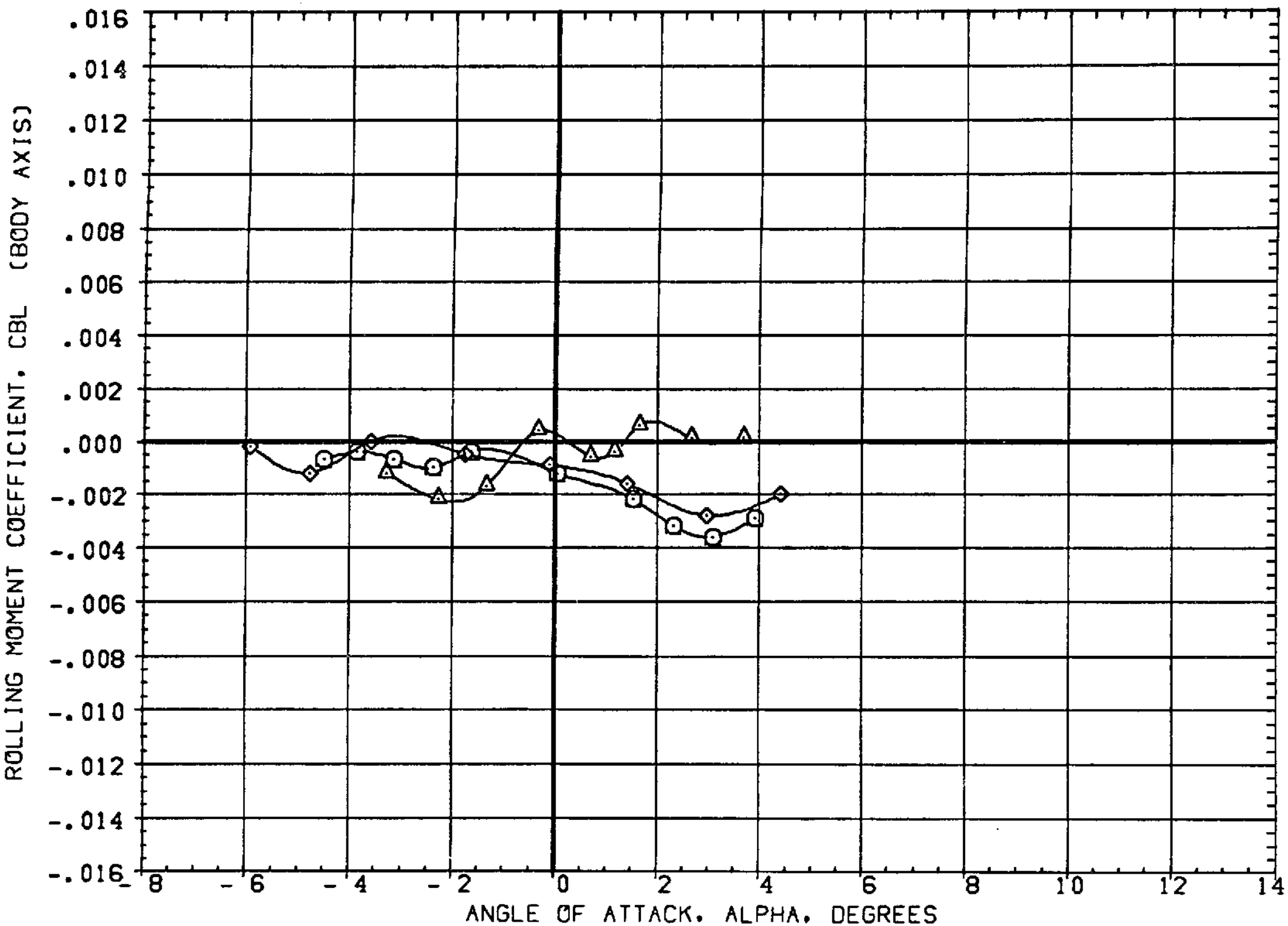


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FIGURE 4 EFFECT OF WING AIRFOIL SECTION FOR AN OBLIQUE WING ANGLE OF 0 DEGREE

(A)MACH = .80

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	BETA	LAMBDA	RN/L
(3AE003)	○	W1 F0 B	0.000	0.000	6.000
(3AE039)	△	W2 F0 B	0.000	0.000	4.000
(3AE065)	◇	W4 F0 B	0.000	0.000	6.000

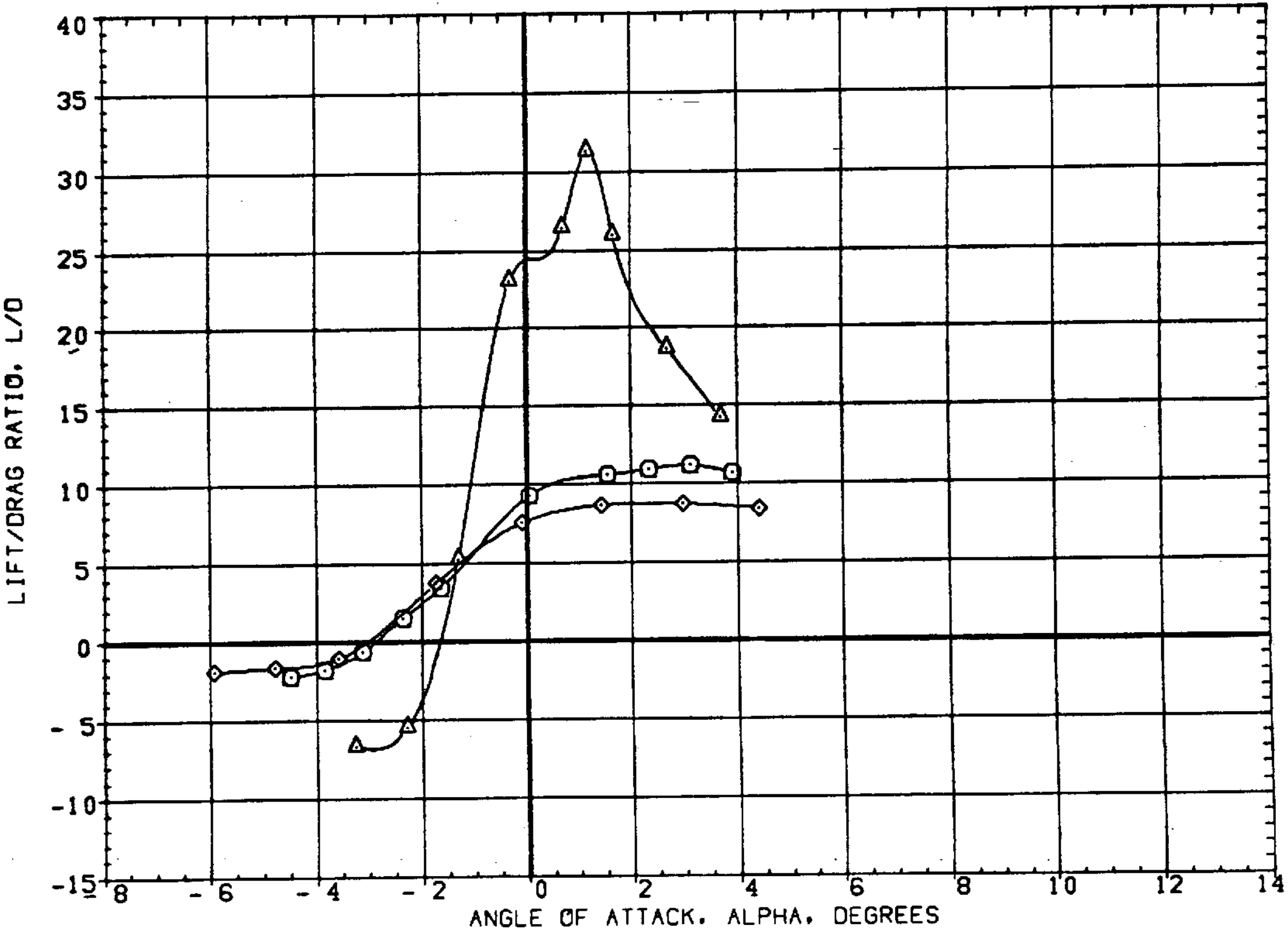


FIGURE 4 EFFECT OF WING AIRFOIL SECTION FOR AN OBLIQUE WING ANGLE OF 0 DEGREE

(A)MACH = .80

52

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	BETA	LAMBDA	RN/L
(2AE005)	○	W1 F0 B	0.000	45.000	6.000
(2AE041)	△	W2 F0 B	0.000	45.000	4.000
(2AE066)	◇	W4 F0 B	0.000	45.000	6.000

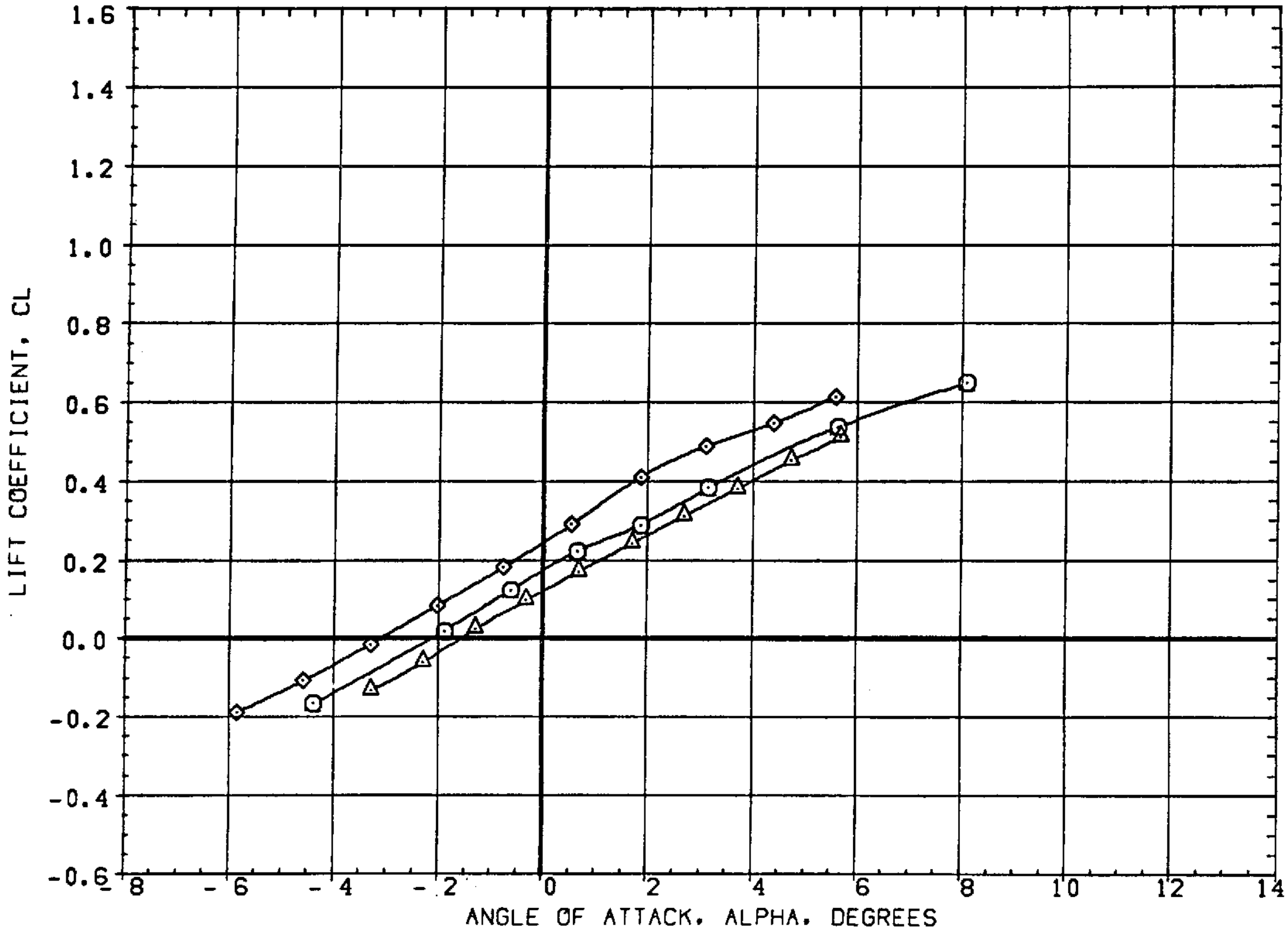


FIGURE 5 EFFECT OF WING AIRFOIL SECTION FOR AN OBLIQUE WING ANGLE OF 45 DEGREES

(A)MACH = .70

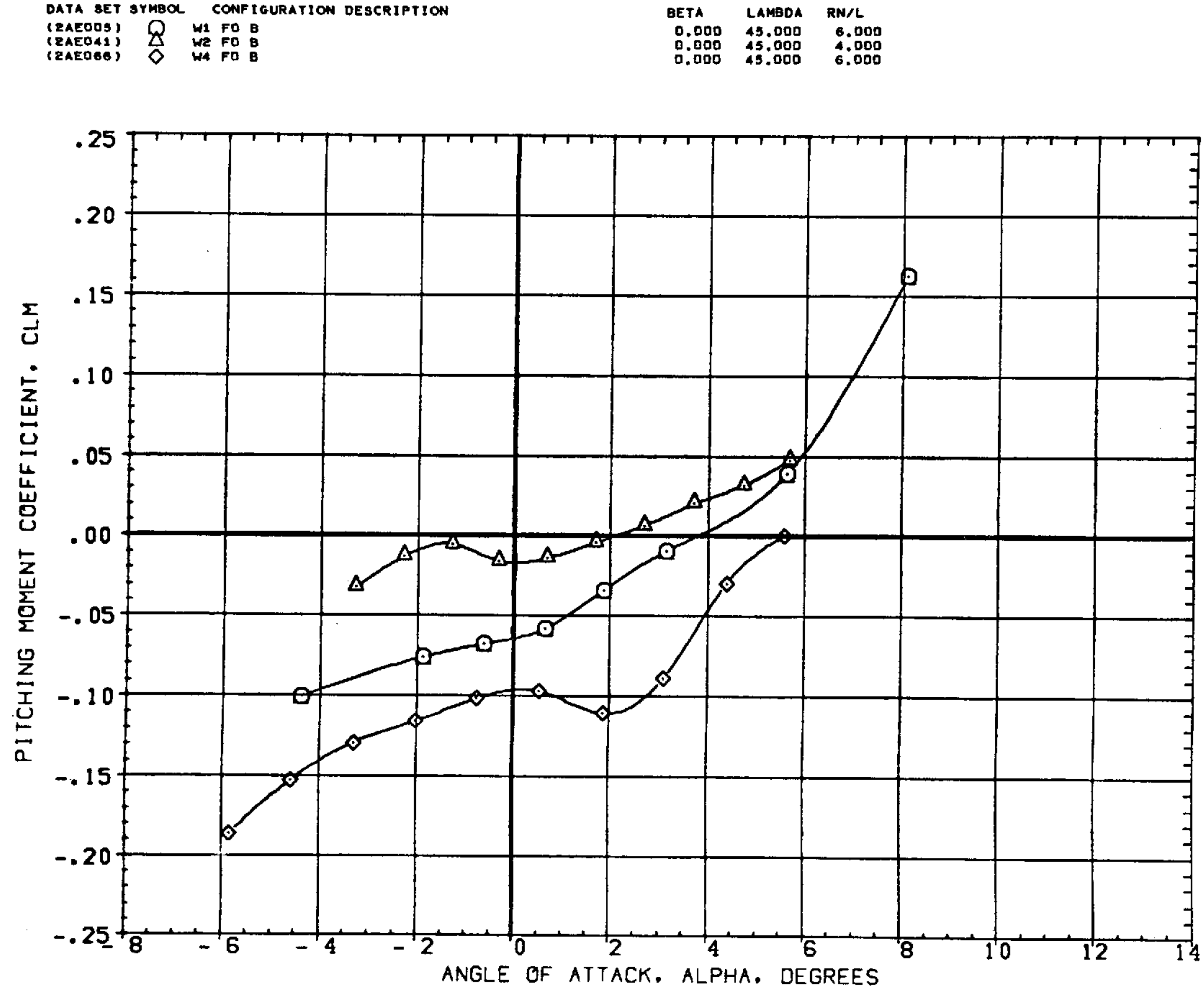


FIGURE 5 EFFECT OF WING AIRFOIL SECTION FOR AN OBLIQUE WING ANGLE OF 45 DEGREES

(A)MACH = .70

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	BETA	LAMBDA	RN/L
(2AE005)	○	W1 FO B	0.000	45.000	6.000
(2AE041)	△	W2 FO B	0.000	45.000	4.000
(2AE066)	◇	W4 FO B	0.000	45.000	6.000

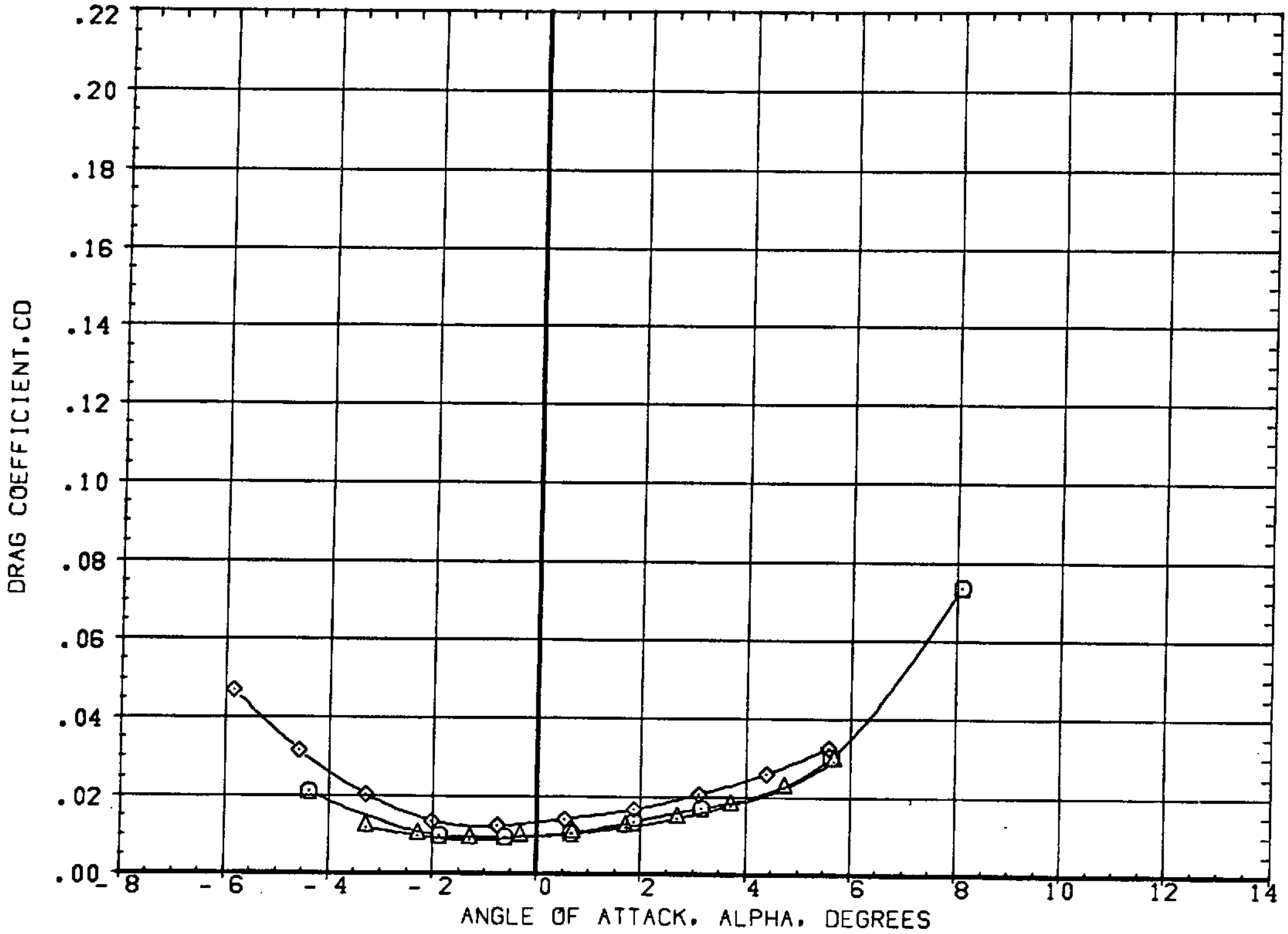


FIGURE 5 EFFECT OF WING AIRFOIL SECTION FOR AN OBLIQUE WING ANGLE OF 45 DEGREES

(A)MACH = .70

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	BETA	LAMBDA	RN/L
(2AE005)	○	W1 F0 B	0.000	45.000	6.000
(2AE041)	△	W2 F0 B	0.000	45.000	4.000
(2AE066)	◇	W4 F0 B	0.000	45.000	6.000

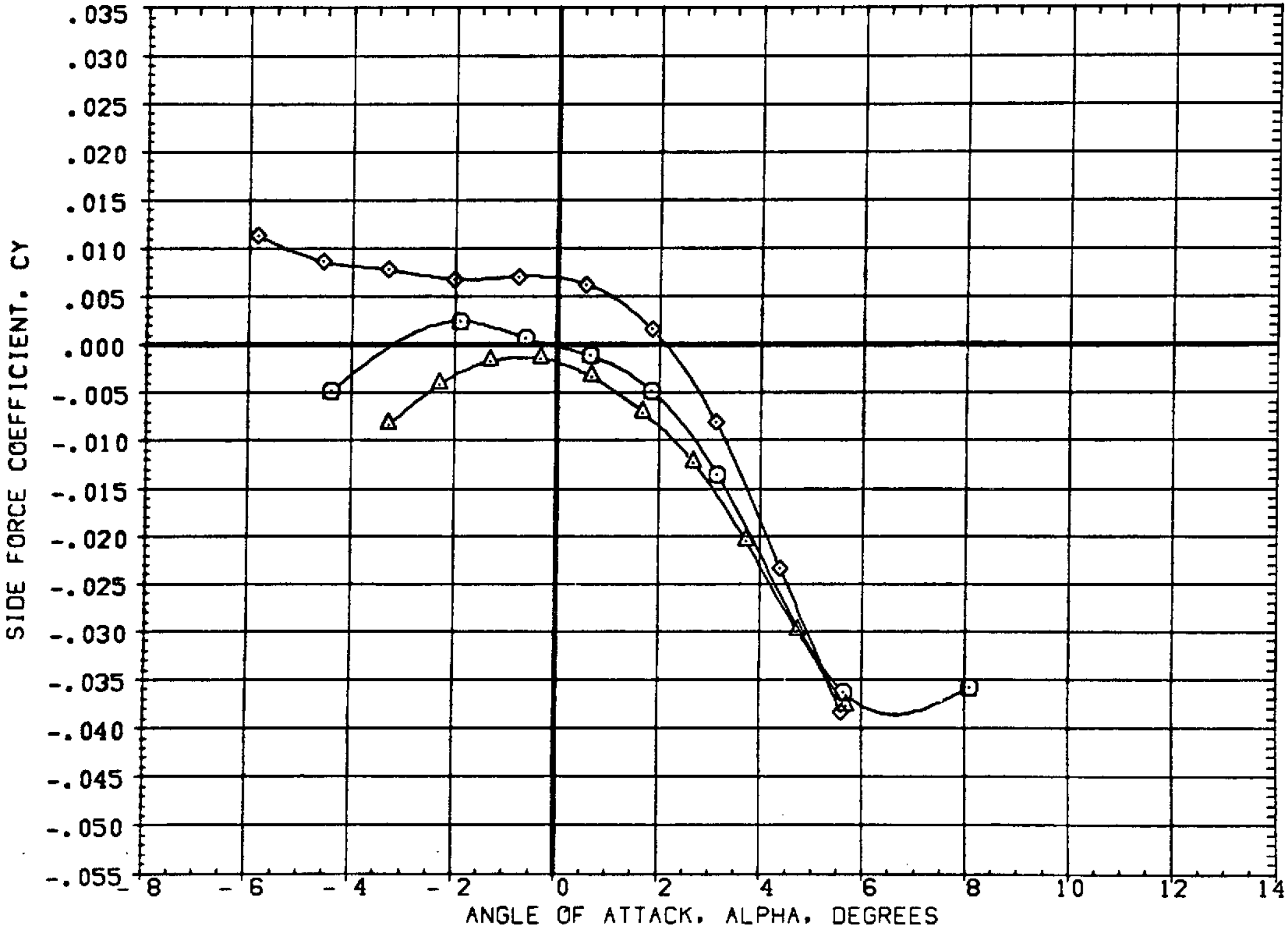


FIGURE 5 EFFECT OF WING AIRFOIL SECTION FOR AN OBLIQUE WING ANGLE OF 45 DEGREES

(A)MACH = .70

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	BETA	LAMBDA	RN/L
(2AE005)	○	W1 FO B	0.000	45.000	6.000
(2AE041)	△	W2 FO B	0.000	45.000	4.000
(2AE066)	◇	W4 FO B	0.000	45.000	6.000

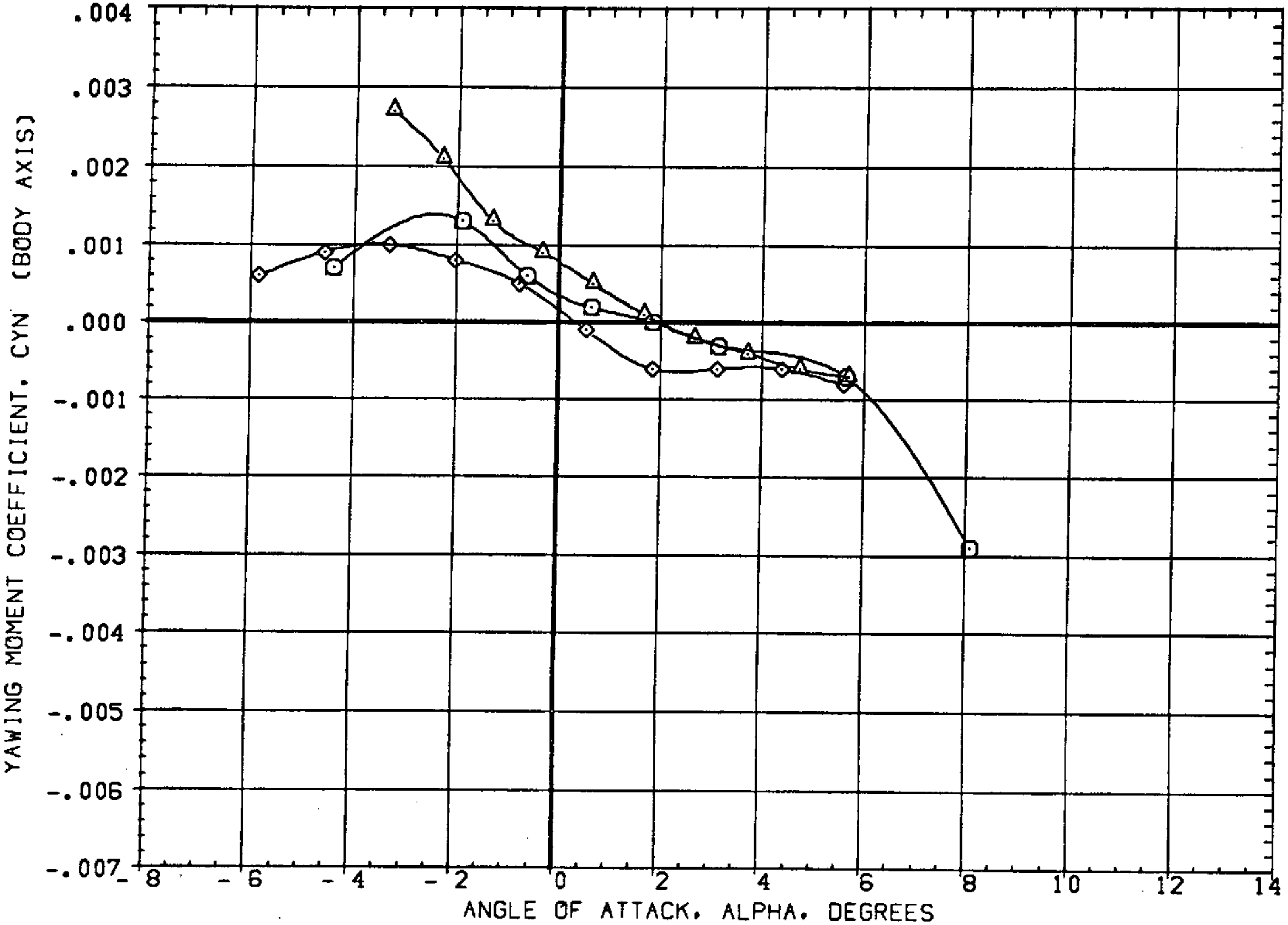


FIGURE 5 EFFECT OF WING AIRFOIL SECTION FOR AN OBLIQUE WING ANGLE OF 45 DEGREES

(A)MACH = .70

57

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	BETA	LAMBDA	RN/L
(2AE005)	○	W1 F0 B	0.000	45.000	6.000
(2AE041)	△	W2 F0 B	0.000	45.000	4.000
(2AE066)	◇	W4 F0 B	0.000	45.000	6.000

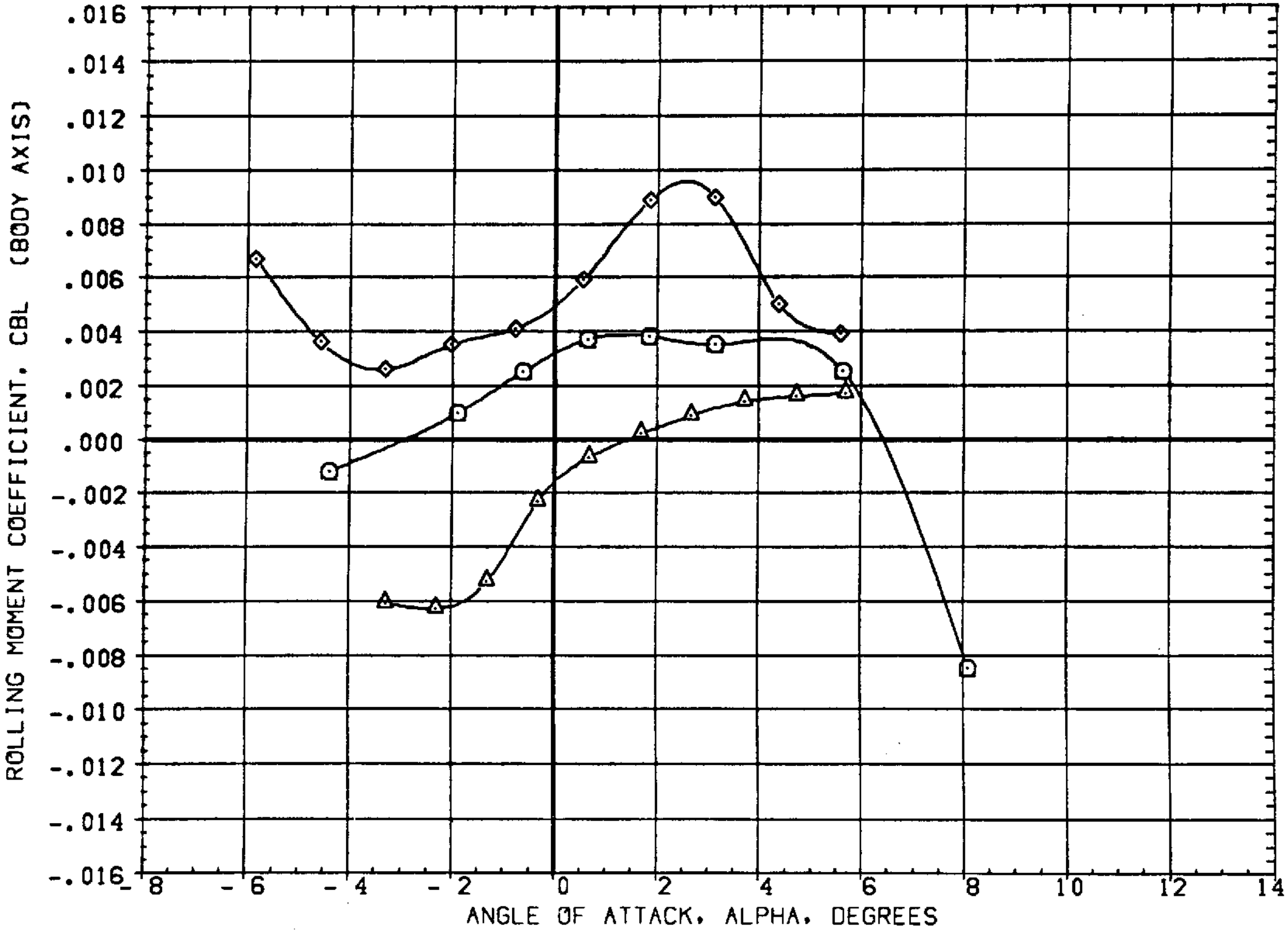


FIGURE 5 EFFECT OF WING AIRFOIL SECTION FOR AN OBLIQUE WING ANGLE OF 45 DEGREES

(A)MACH = .70

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	BETA	LAMBDA	RN/L
(2AE005)	○	W1 F0 B	0.000	45.000	6.000
(2AE041)	△	W2 F0 B	0.000	45.000	4.000
(2AE066)	◇	W4 F0 B	0.000	45.000	6.000

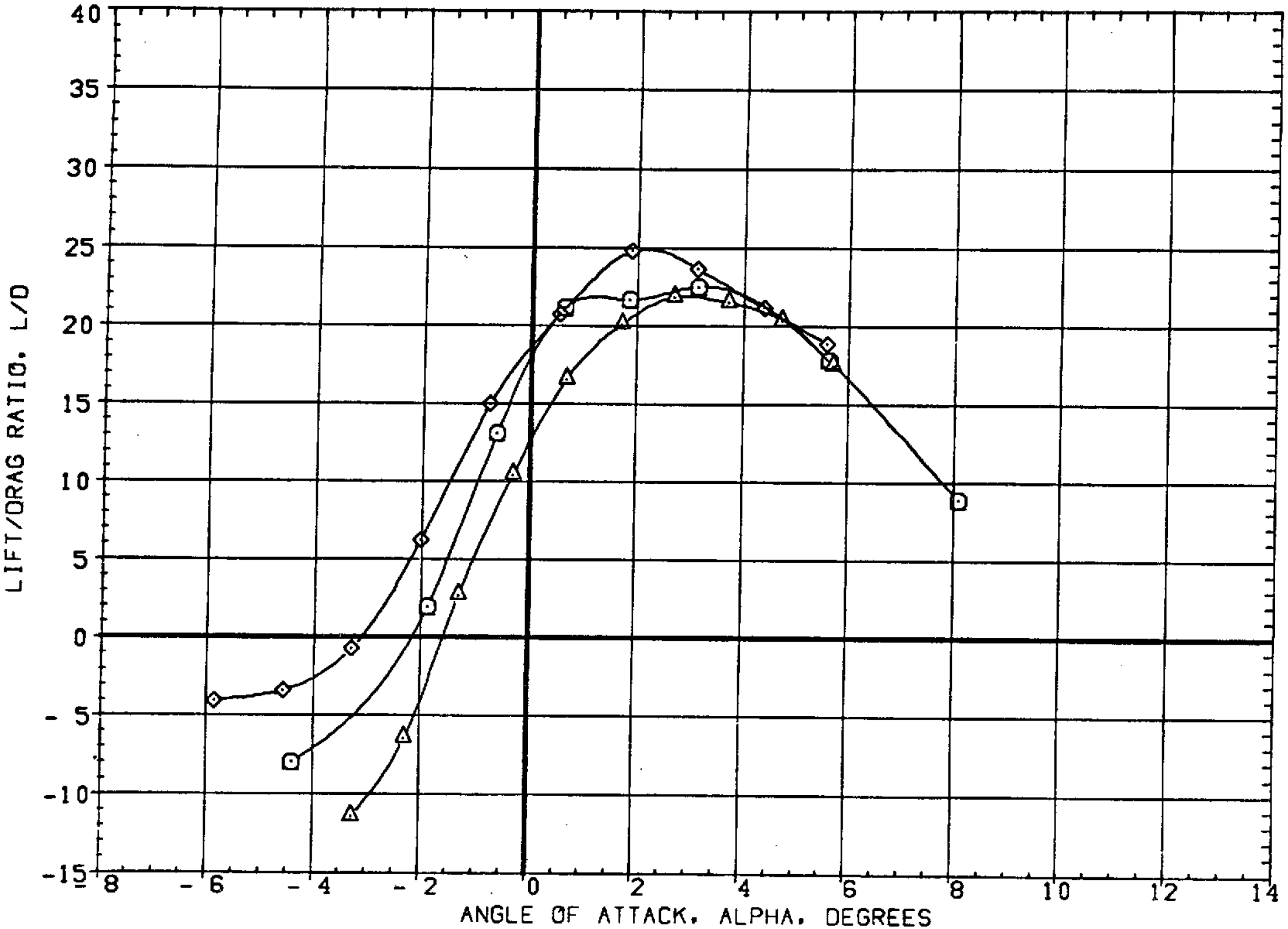


FIGURE 5 EFFECT OF WING AIRFOIL SECTION FOR AN OBLIQUE WING ANGLE OF 45 DEGREES

(A)MACH = .70

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	BETA	LAMBDA	RN/L
(3AE005)	○	W1 F0 B	0.000	45.000	6.000
(3AE041)	△	W2 F0 B	0.000	45.000	4.000
(3AE066)	◇	W4 F0 B	0.000	45.000	6.000

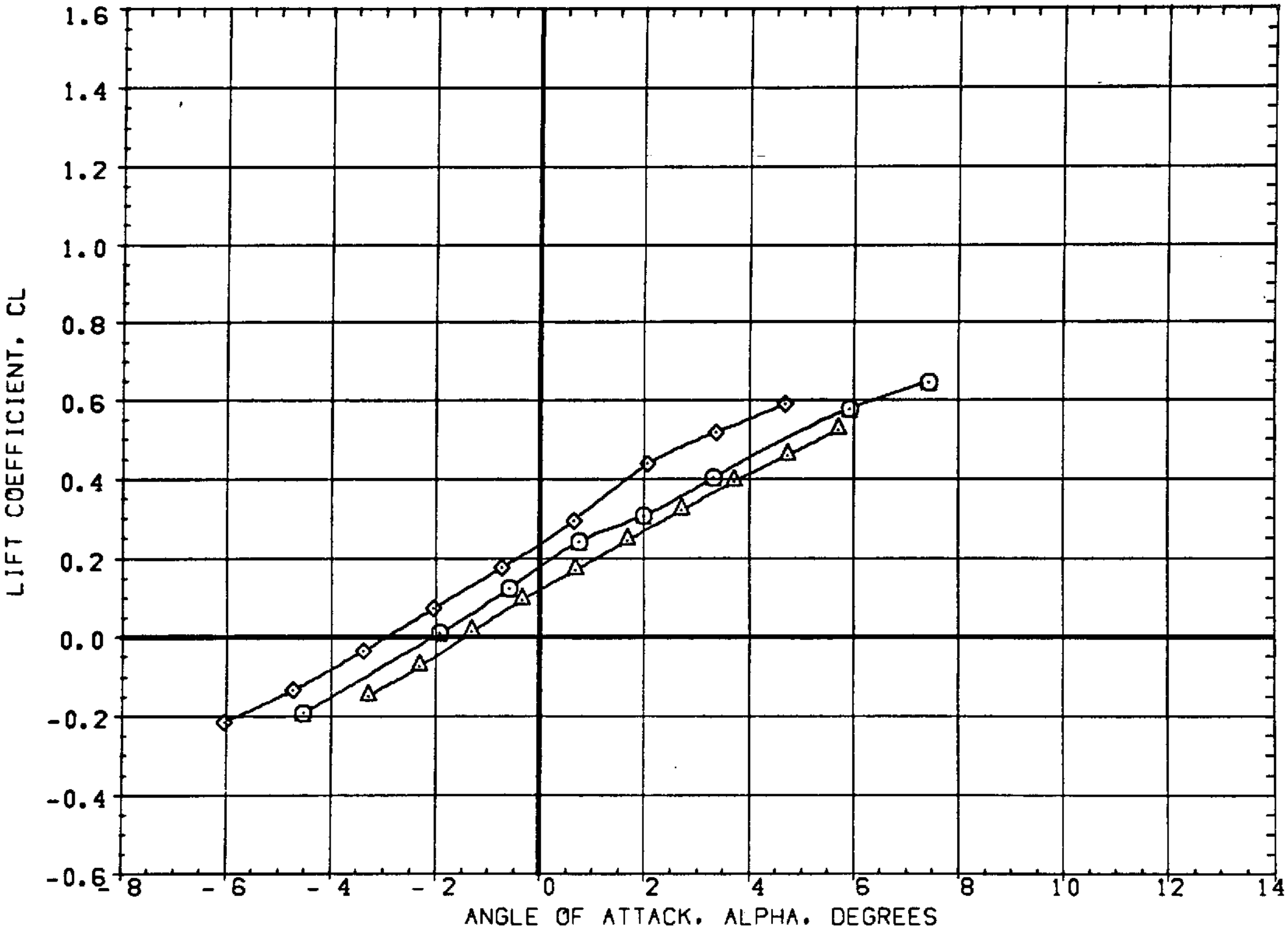


FIGURE 5 EFFECT OF WING AIRFOIL SECTION FOR AN OBLIQUE WING ANGLE OF 45 DEGREES

(A)MACH = .80

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	BETA	LAMBDA	RN/L
(3AE005)	○	W1 F0 B	0.000	45.000	6.000
(3AE041)	△	W2 F0 B	0.000	45.000	4.000
(3AE066)	◇	W4 F0 B	0.000	45.000	6.000

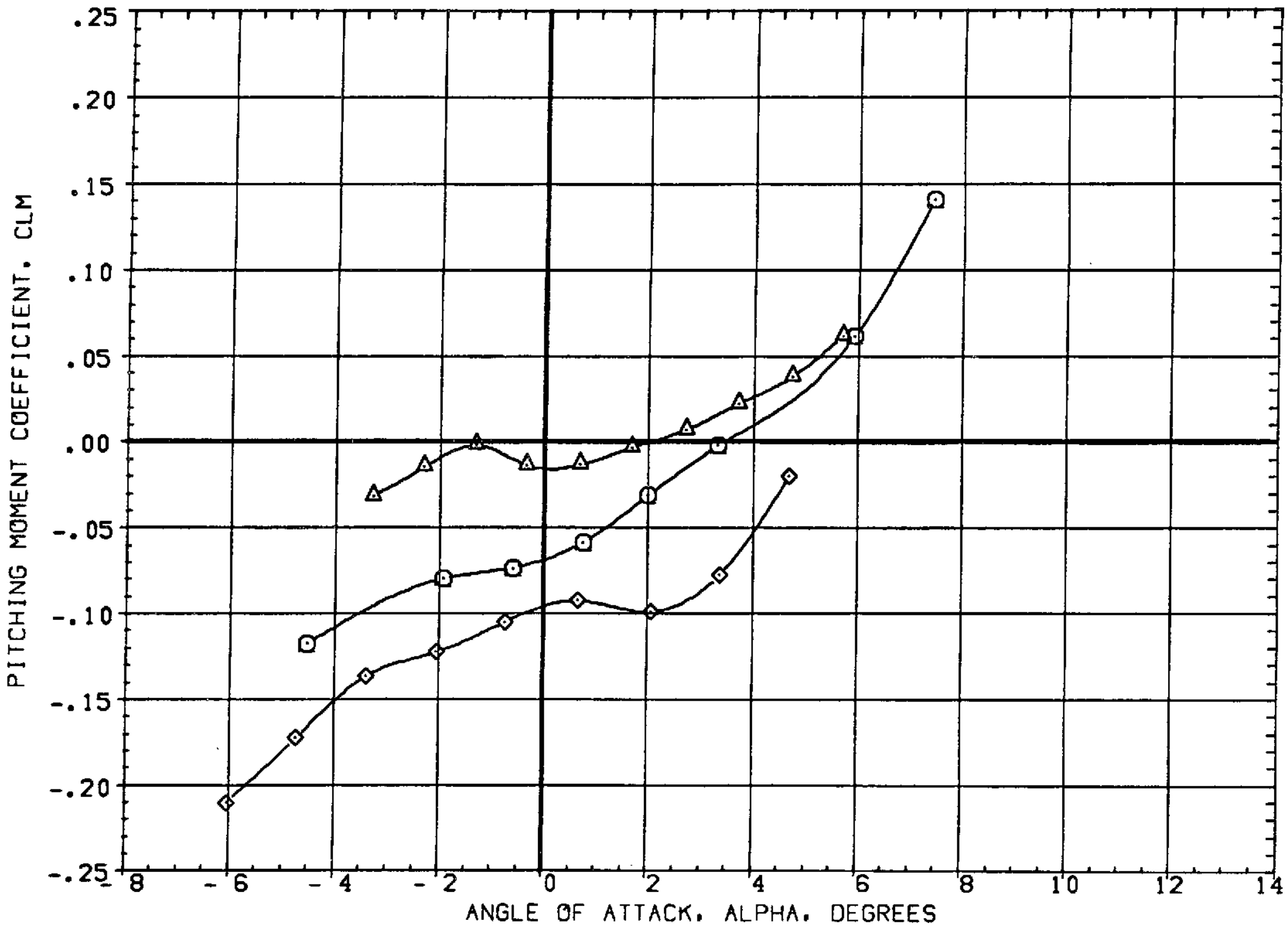


FIGURE 5 EFFECT OF WING AIRFOIL SECTION FOR AN OBLIQUE WING ANGLE OF 45 DEGREES
(A)MACH = .80

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	BETA	LAMBDA	RN/L
(3AE005)	○	W1 F0 B	0.000	45.000	6.000
(3AE041)	△	W2 F0 B	0.000	45.000	4.000
(3AE066)	◇	W4 F0 B	0.000	45.000	6.000

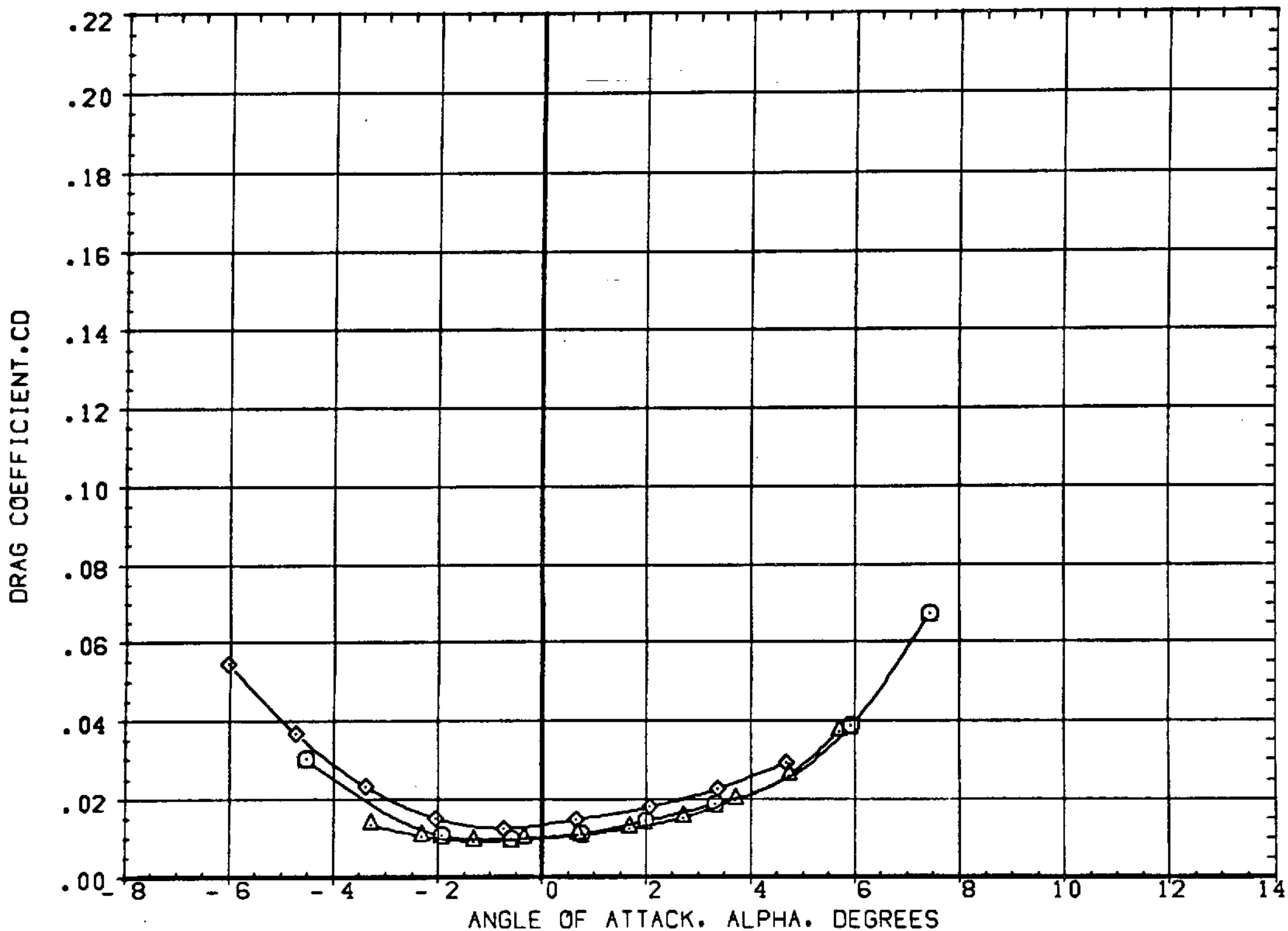
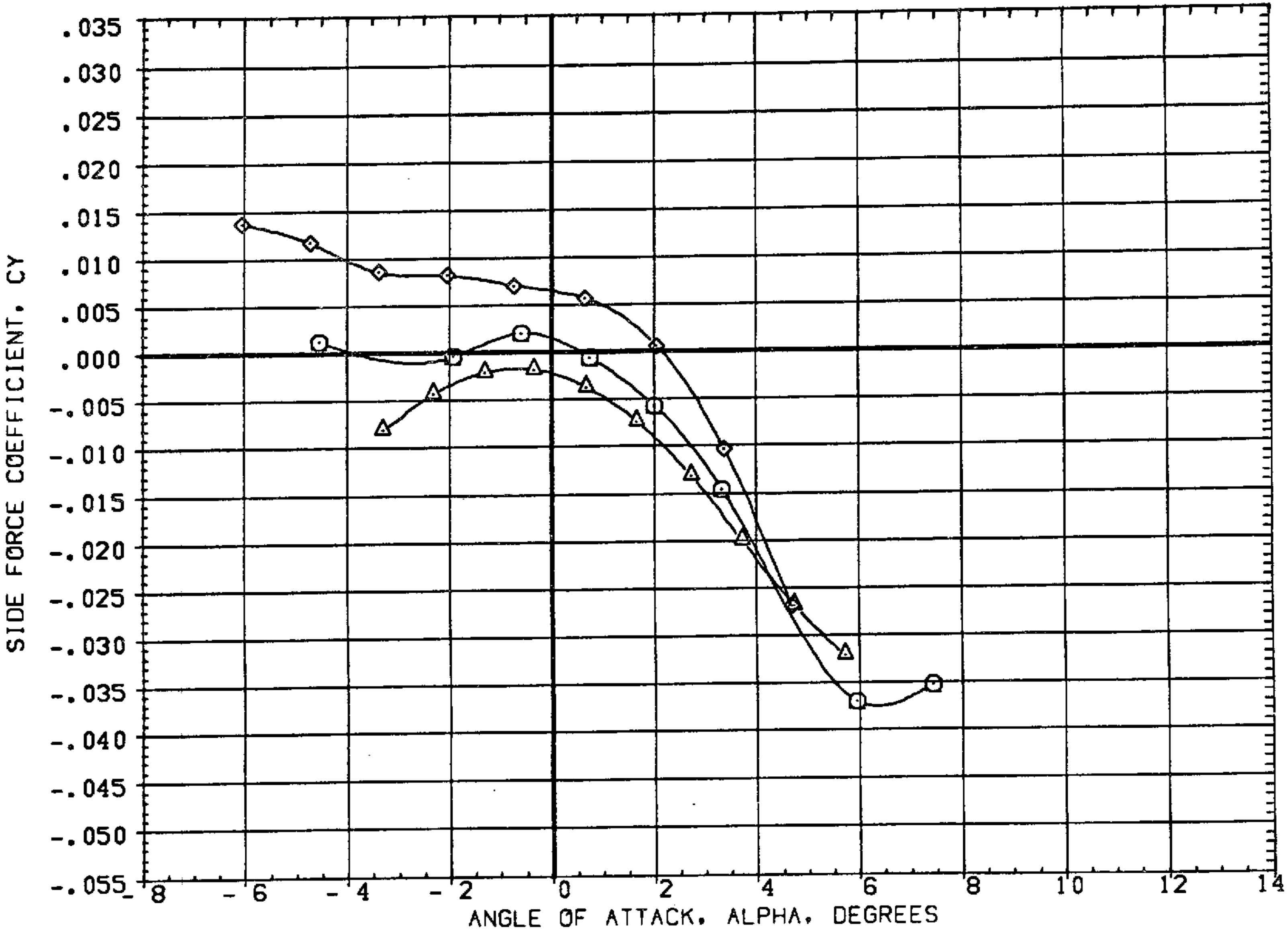


FIGURE 5 EFFECT OF WING AIRFOIL SECTION FOR AN OBLIQUE WING ANGLE OF 45 DEGREES

(A)MACH = .80

62

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	BETA	LAMBDA	RN/L
(3AE005)	○	W1 F0 B	0.000	45.000	6.000
(3AE041)	△	W2 F0 B	0.000	45.000	4.000
(3AE066)	◇	W4 F0 B	0.000	45.000	6.000



63

FIGURE 5 EFFECT OF WING AIRFOIL SECTION FOR AN OBLIQUE WING ANGLE OF 45 DEGREES

(A)MACH = .80

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	BETA	LAMBDA	RN/L
(3AE005)	○	W1 F0 B	0.000	45.000	6.000
(3AE041)	△	W2 F0 B	0.000	45.000	4.000
(3AE066)	◇	W4 F0 B	0.000	45.000	6.000

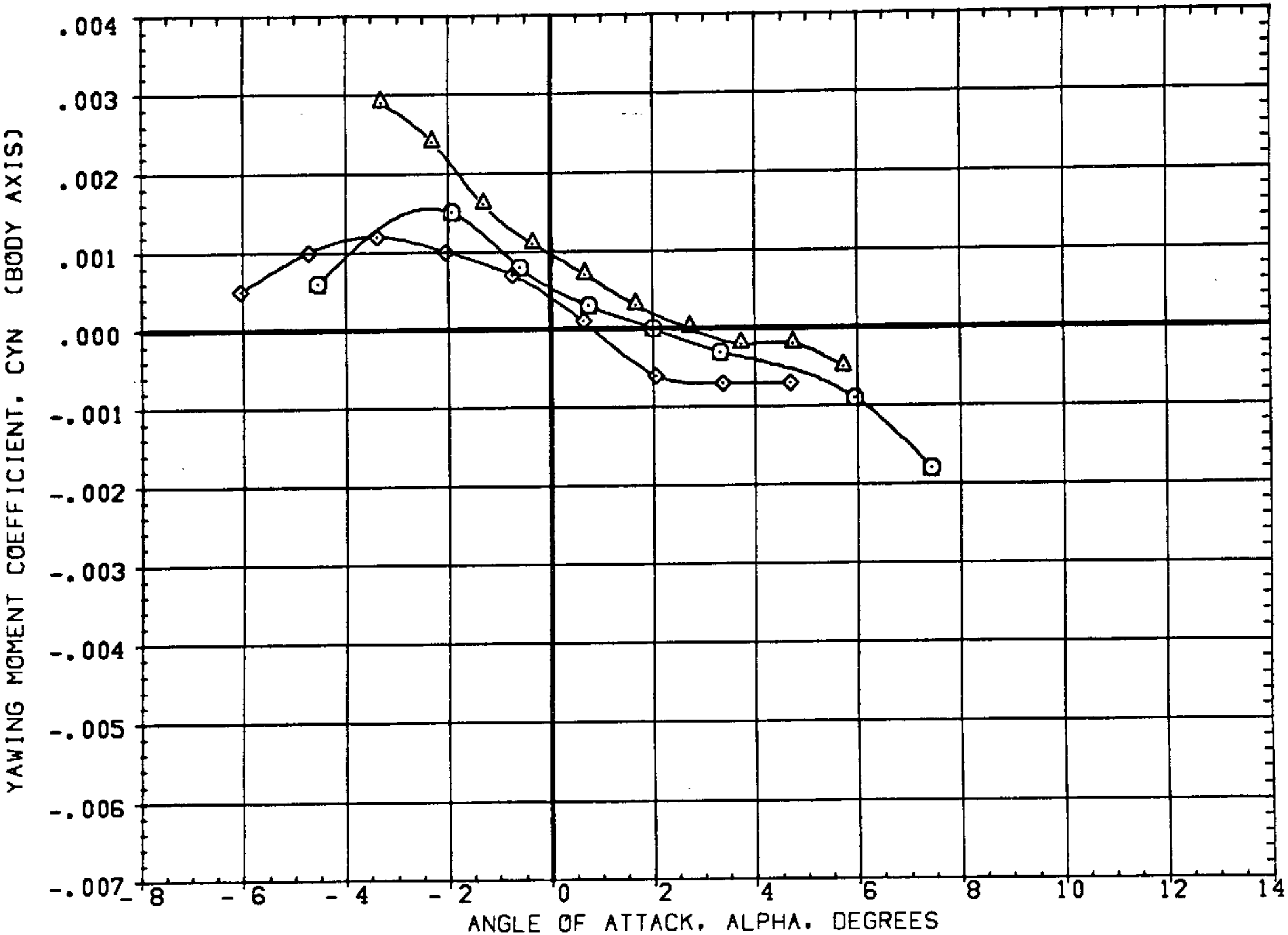


FIGURE 5 EFFECT OF WING AIRFOIL SECTION FOR AN OBLIQUE WING ANGLE OF 45 DEGREES

(A)MACH = .80

64

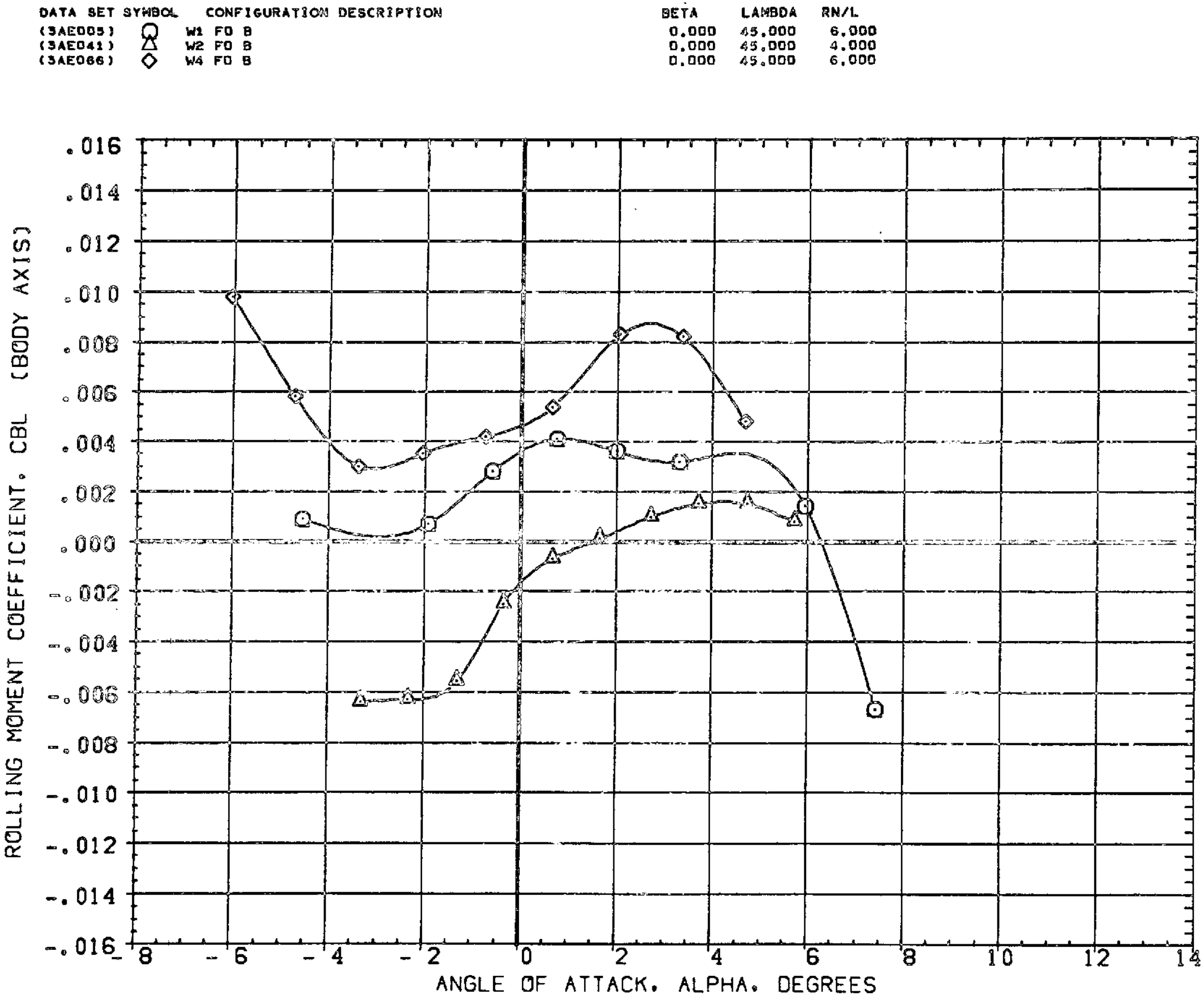


FIGURE 5 EFFECT OF WING AIRFOIL SECTION FOR AN OBLIQUE WING ANGLE OF 45 DEGREES

(A)MACH = .80

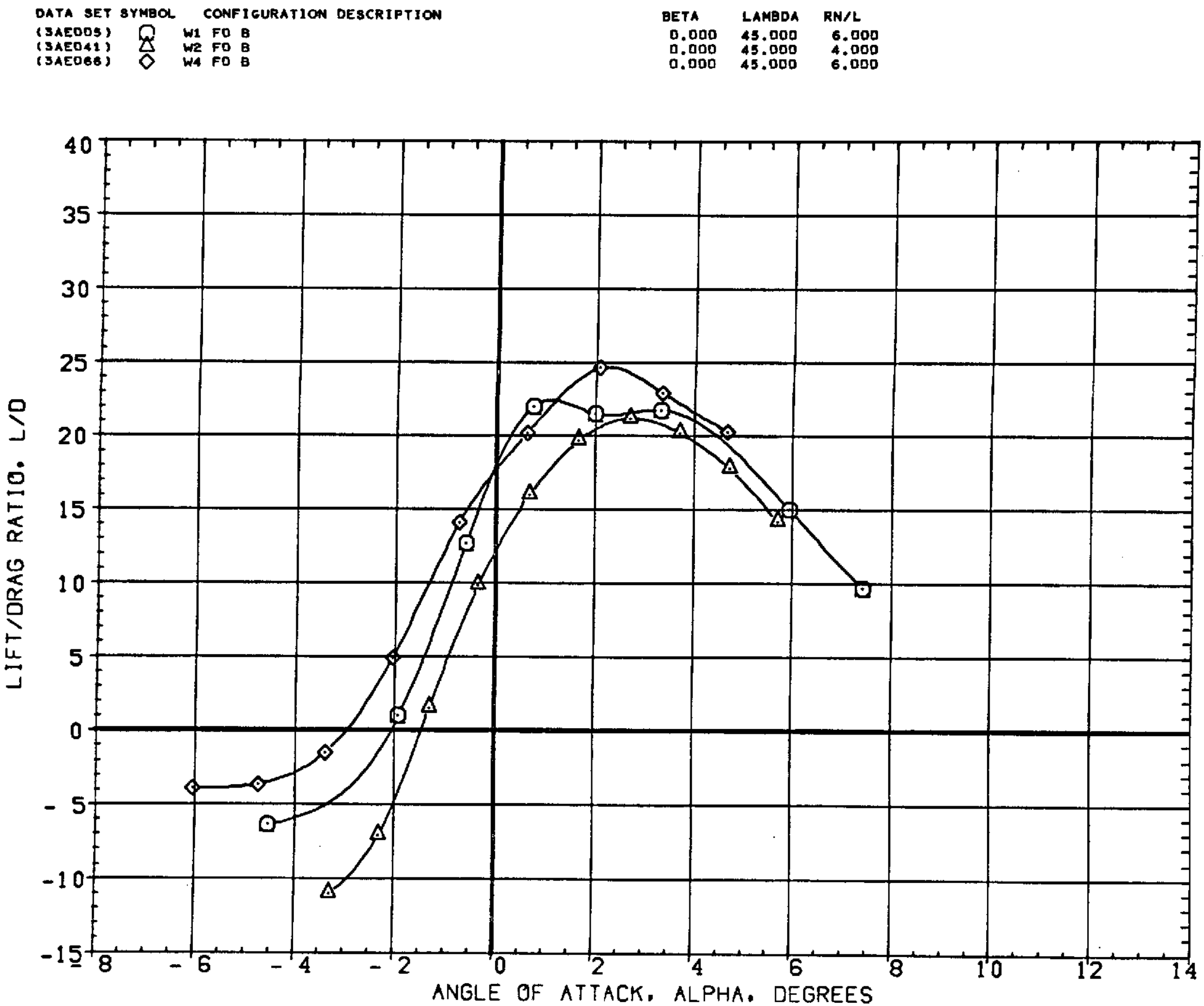


FIGURE 5 EFFECT OF WING AIRFOIL SECTION FOR AN OBLIQUE WING ANGLE OF 45 DEGREES

(A)MACH = .80

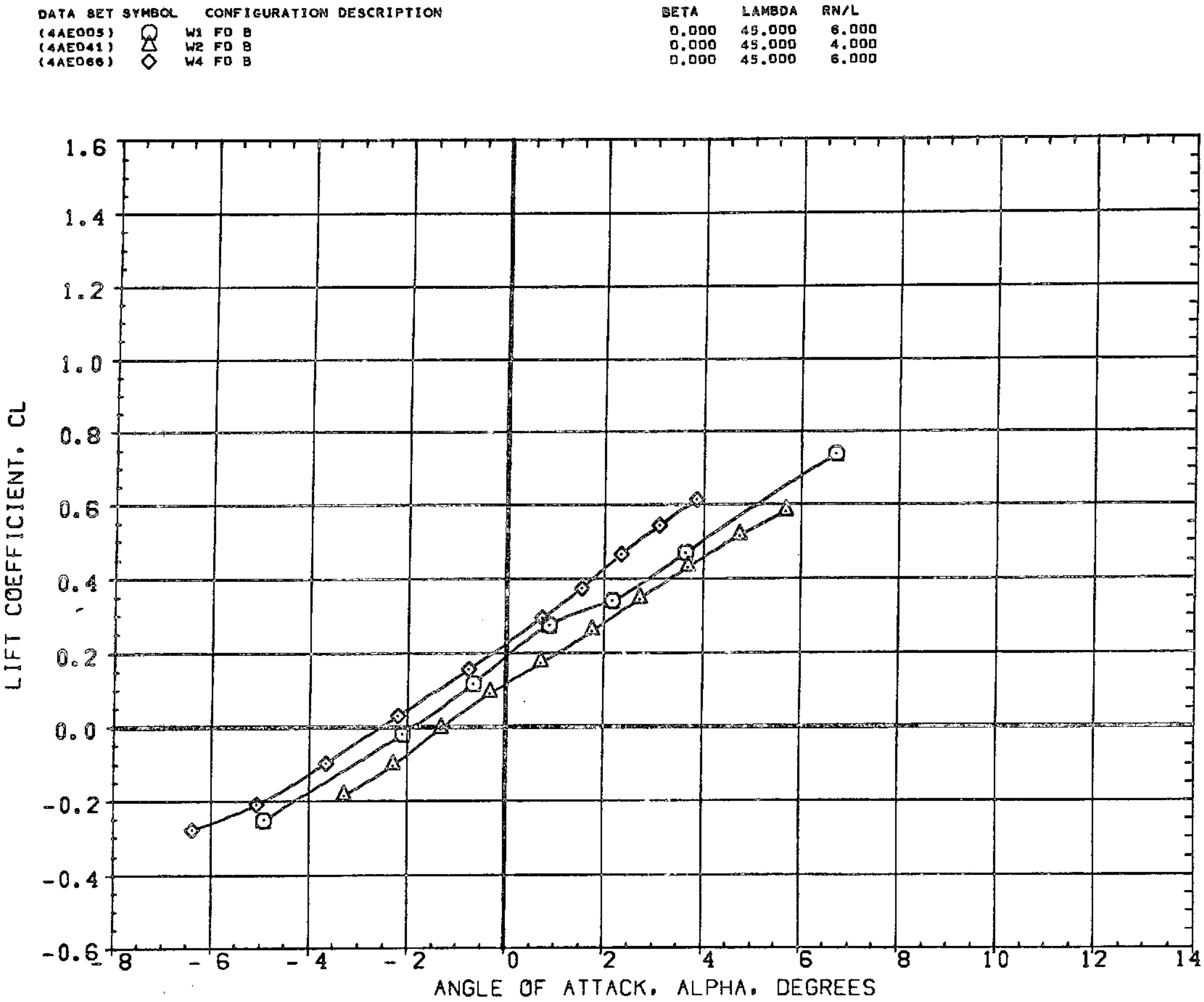
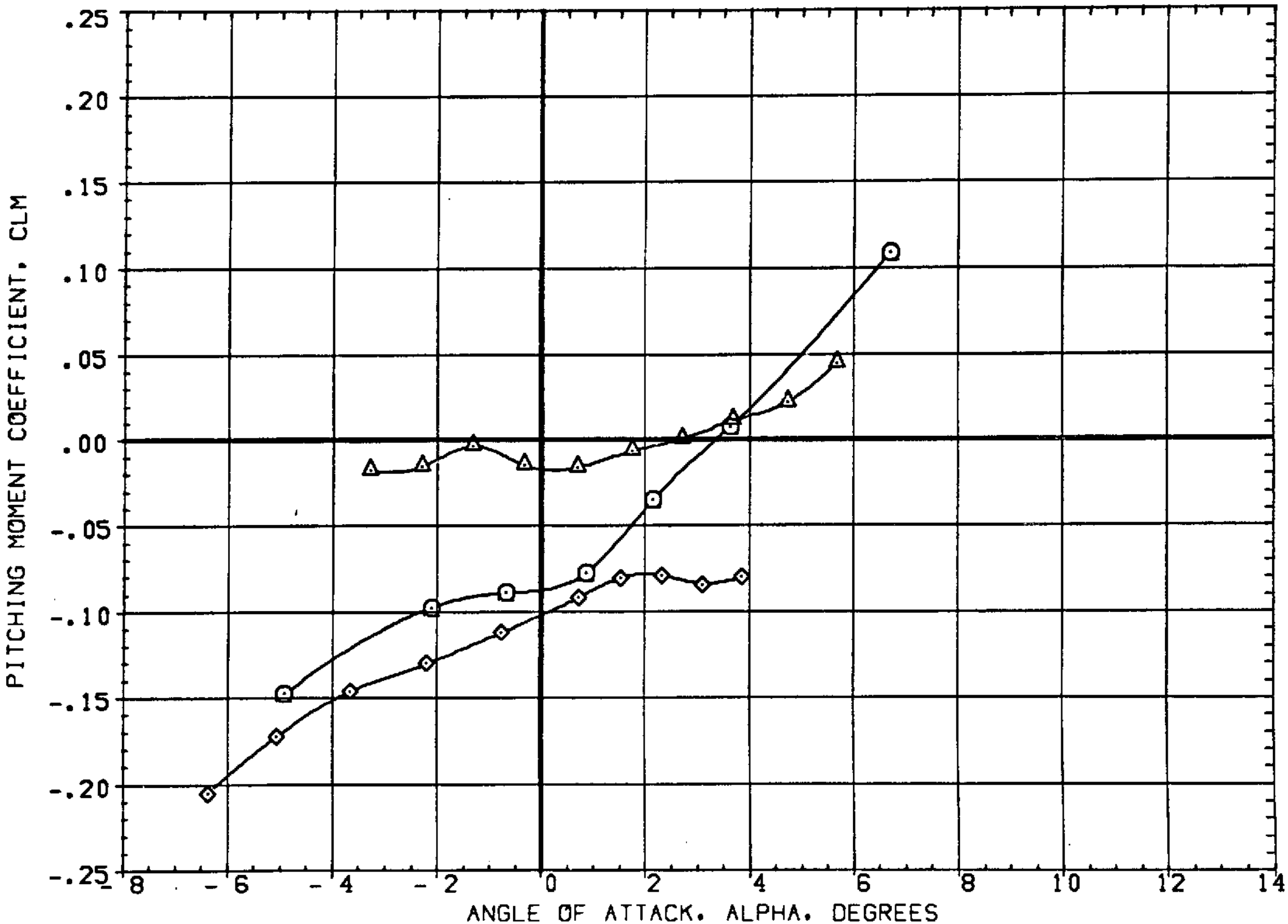


FIGURE 5 EFFECT OF WING AIRFOIL SECTION FOR AN OBLIQUE WING ANGLE OF 45 DEGREES

(A)MACH = .95

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	BETA	LAMBDA	RN/L
(4AE005)	○	W1 F0 B	0.000	45.000	6.000
(4AE041)	△	W2 F0 B	0.000	45.000	4.000
(4AE066)	◇	W4 F0 B	0.000	45.000	6.000



89

FIGURE 5 EFFECT OF WING AIRFOIL SECTION FOR AN OBLIQUE WING ANGLE OF 45 DEGREES

(A)MACH = .95

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	BETA	LAMBDA	RN/L
(4AE005)	○	W1 FO B	0.000	45.000	6.000
(4AE041)	△	W2 FO B	0.000	45.000	4.000
(4AE066)	◇	W4 FO B	0.000	45.000	6.000

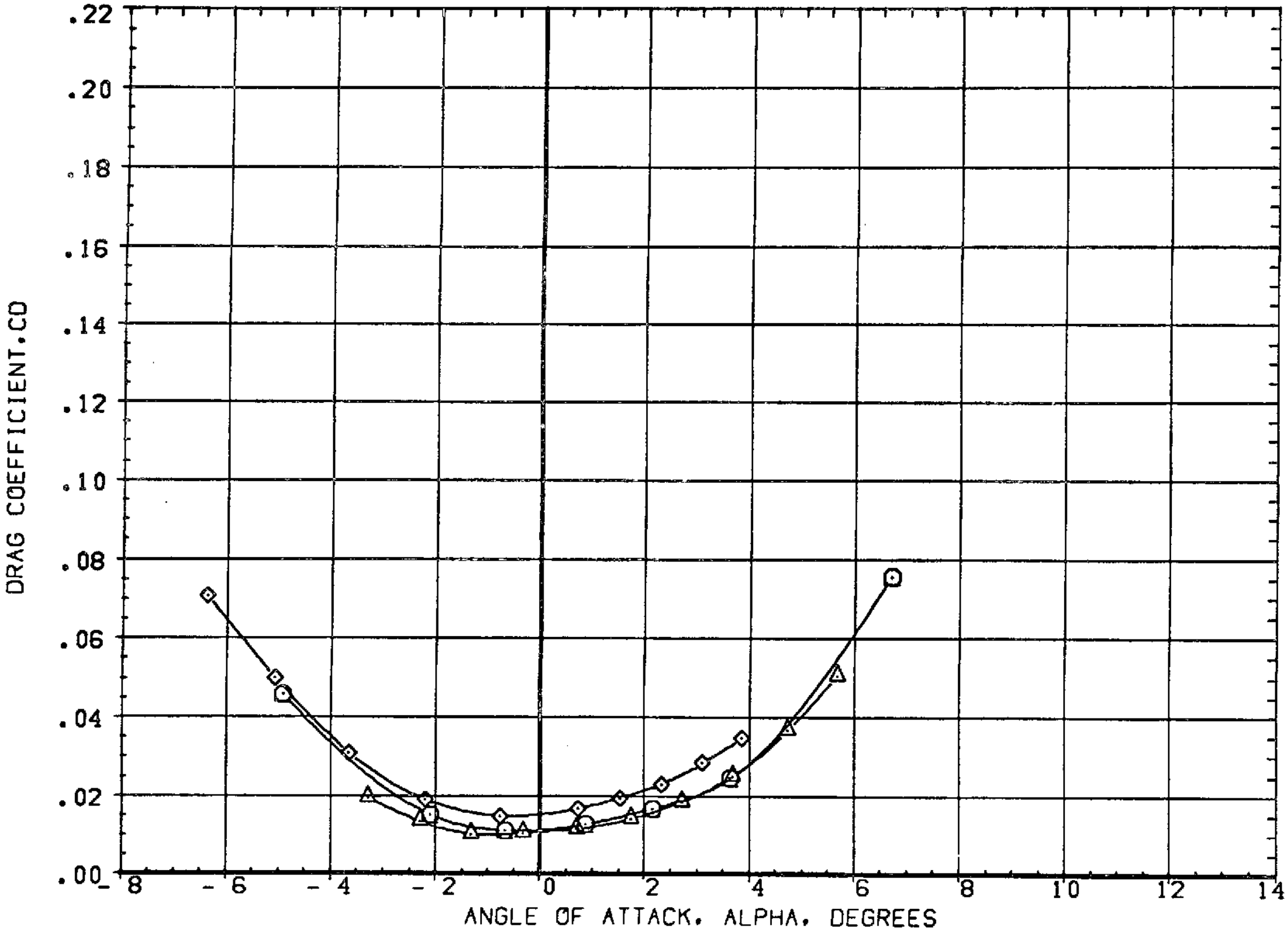


FIGURE 5 EFFECT OF WING AIRFOIL SECTION FOR AN OBLIQUE WING ANGLE OF 45 DEGREES

(A)MACH = .95

69

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	BETA	LAMBDA	RN/L
(4AE005)	○	W1 F0 B	0.000	45.000	6.000
(4AE041)	△	W2 F0 B	0.000	45.000	4.000
(4AE066)	◇	W4 F0 B	0.000	45.000	6.000

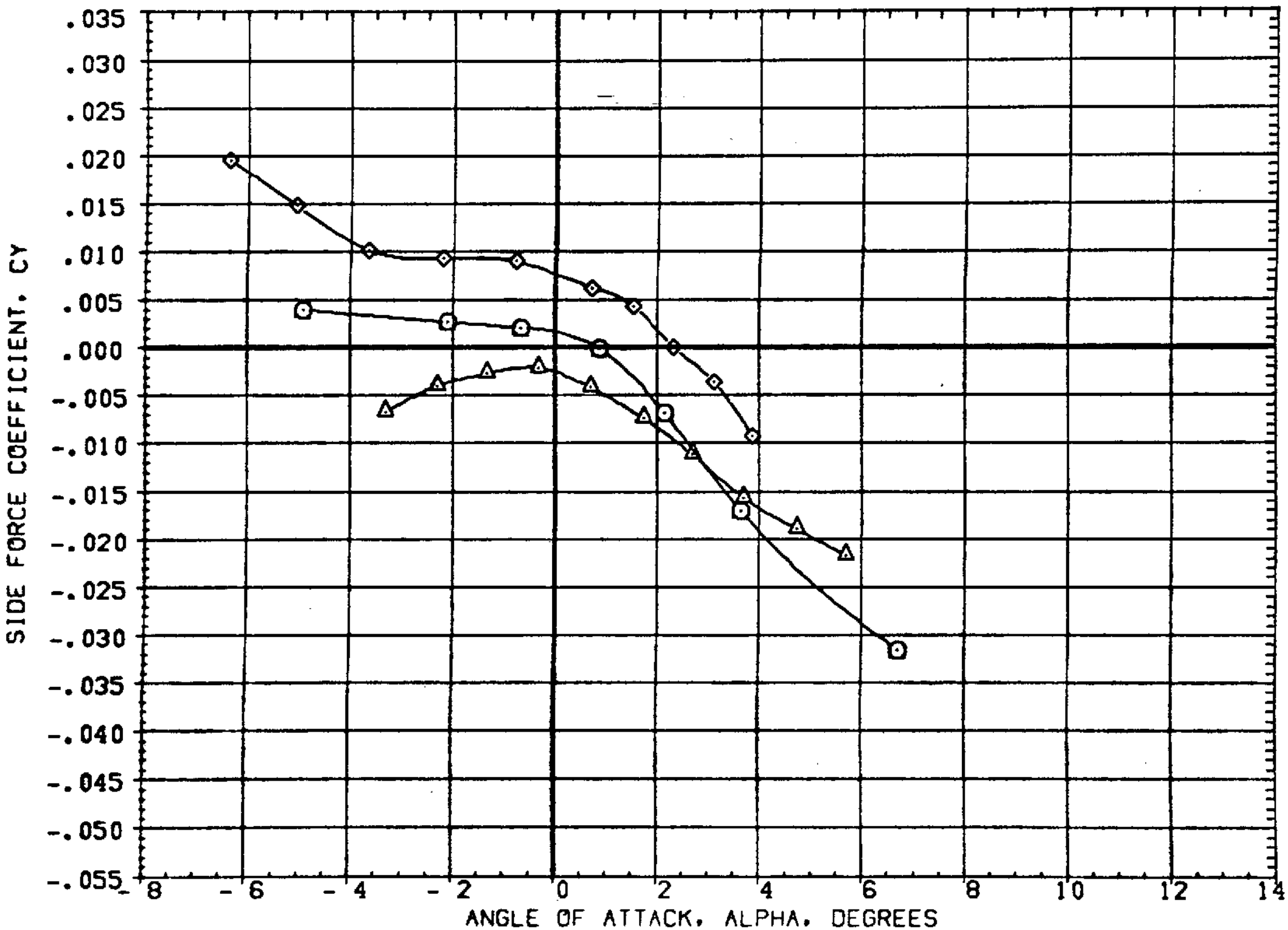


FIGURE 5 EFFECT OF WING AIRFOIL SECTION FOR AN OBLIQUE WING ANGLE OF 45 DEGREES

(A)MACH = .95

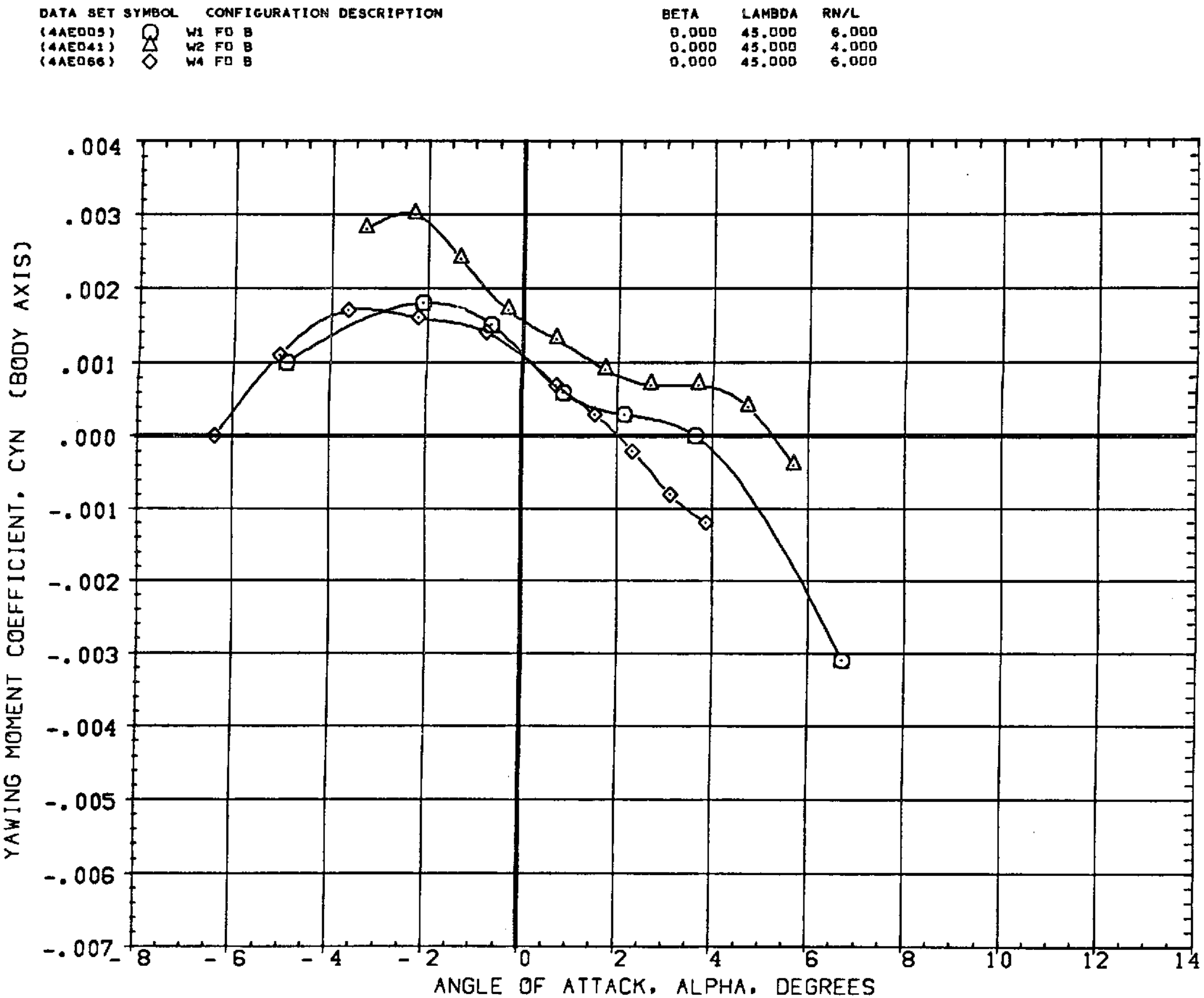


FIGURE 5 EFFECT OF WING AIRFOIL SECTION FOR AN OBLIQUE WING ANGLE OF 45 DEGREES

(A)MACH = .95

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	BETA	LAMBDA	RN/L
(4AE005)	○	W1 F0 B	0.000	45.000	6.000
(4AE041)	△	W2 F0 B	0.000	45.000	4.000
(4AE066)	◇	W4 F0 B	0.000	45.000	6.000

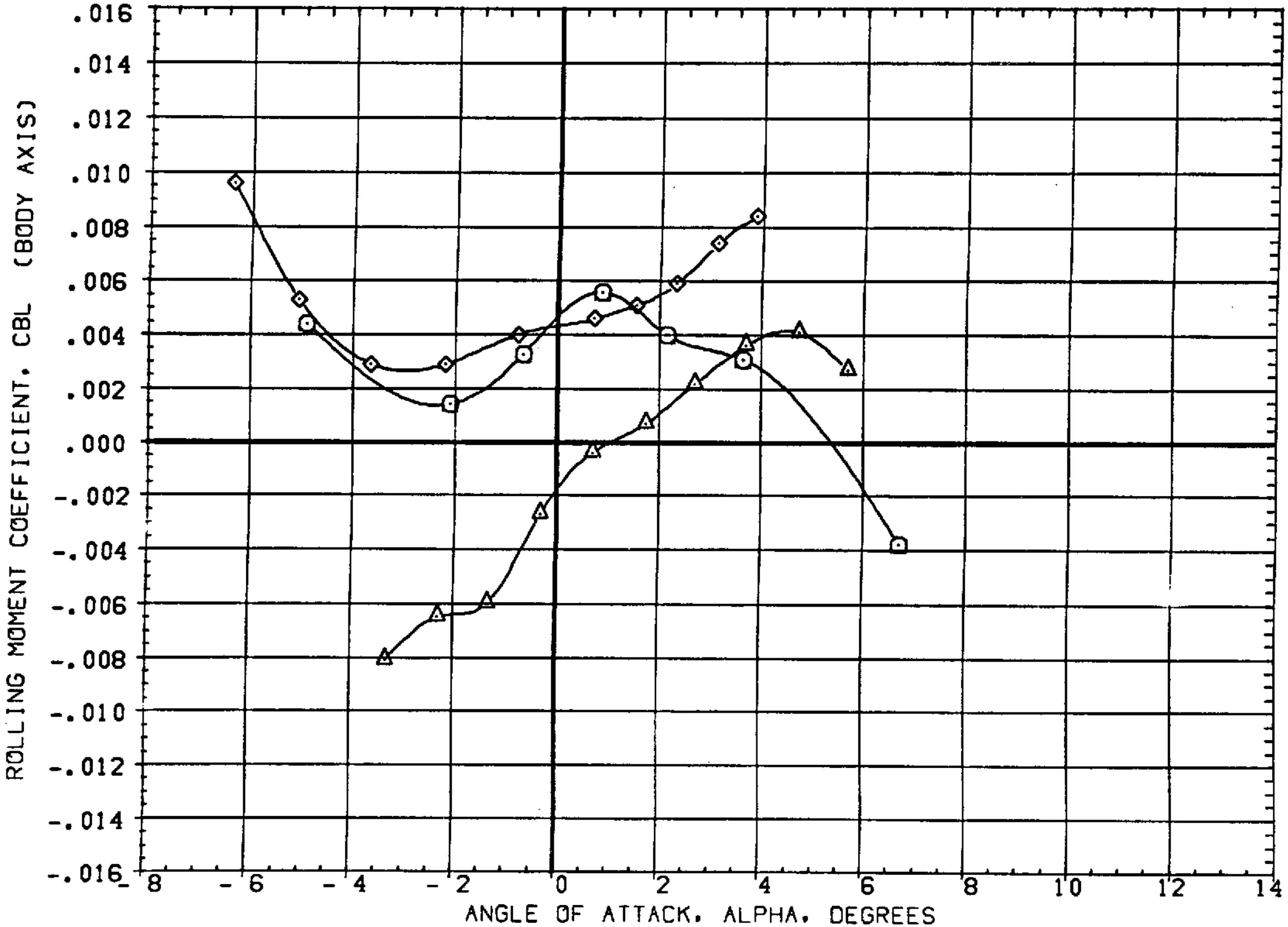


FIGURE 5 EFFECT OF WING AIRFOIL SECTION FOR AN OBLIQUE WING ANGLE OF 45 DEGREES

(A)MACH = .95

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	BETA	LAMBDA	RN/L
(4AE005)	○	W1 F0 B	0.000	45.000	6.000
(4AE041)	△	W2 F0 B	0.000	45.000	4.000
(4AE066)	◇	W4 F0 B	0.000	45.000	6.000

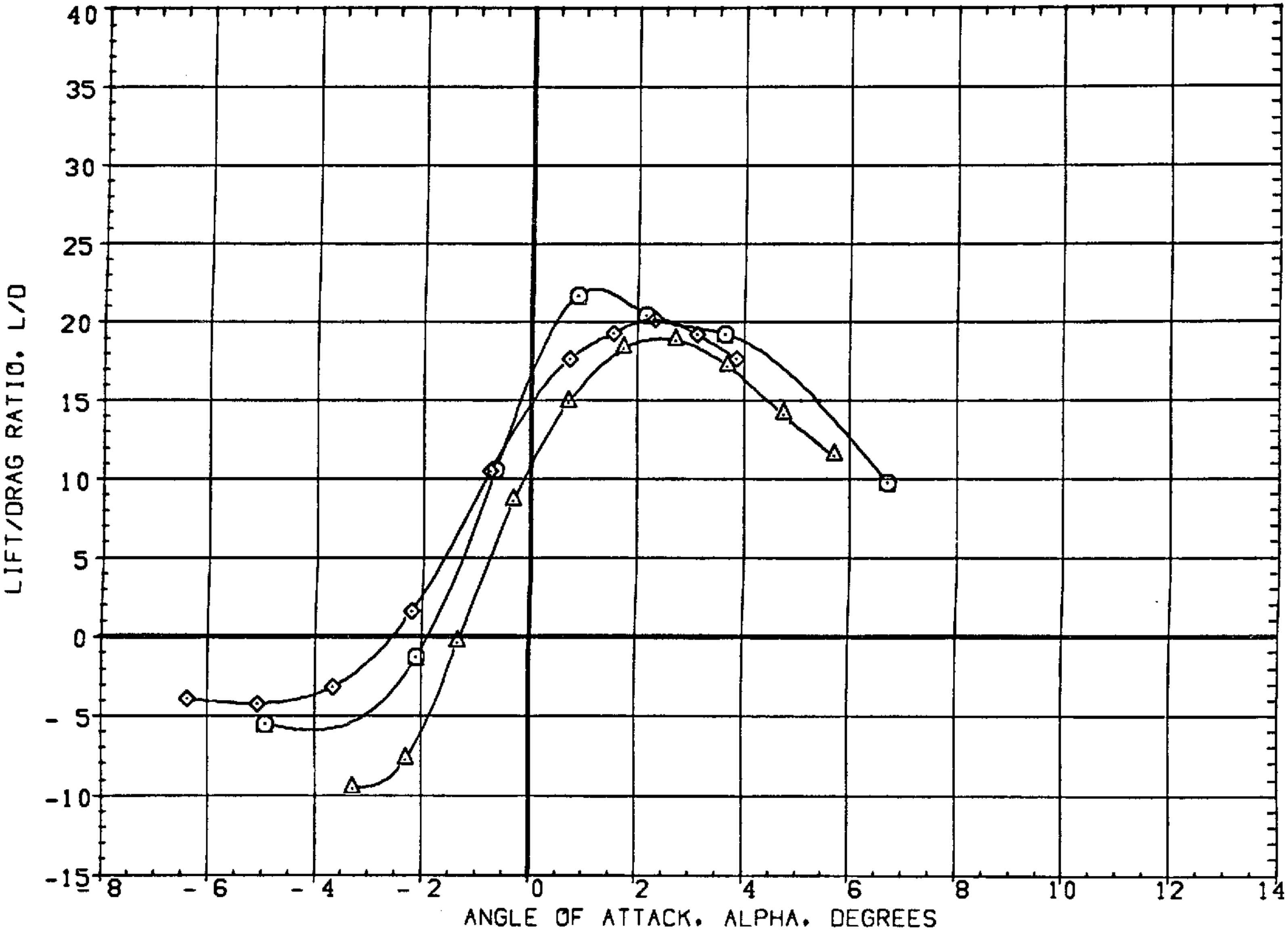


FIGURE 5 EFFECT OF WING AIRFOIL SECTION FOR AN OBLIQUE WING ANGLE OF 45 DEGREES

(A)MACH = .95

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	BETA	LAMBDA	RN/L
(5AE005)	○	W1 F0 B	0.000	45.000	6.000
(5AE041)	△	W2 F0 B	0.000	45.000	4.000
(5AE066)	◇	W4 F0 B	0.000	45.000	6.000

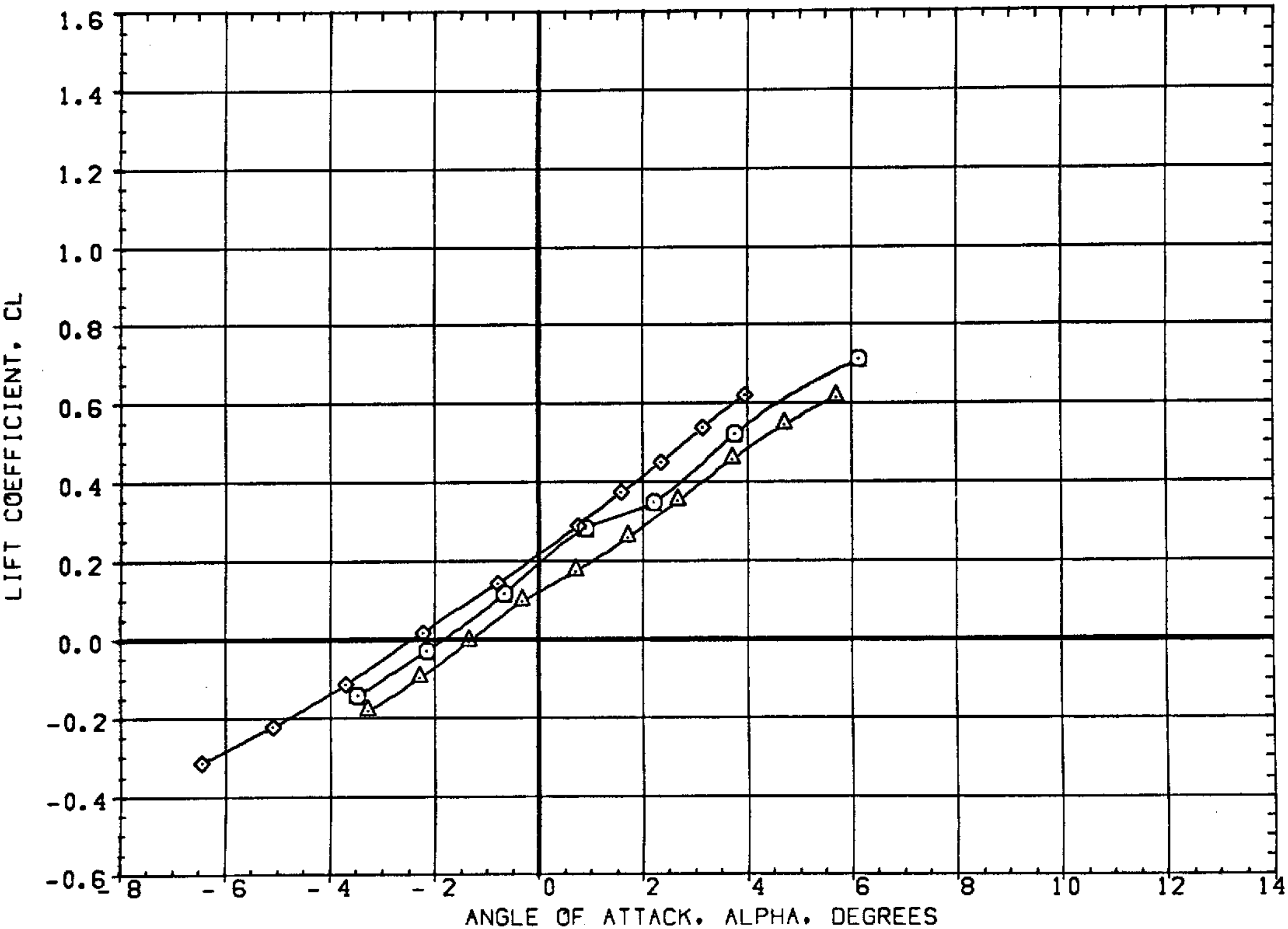


FIGURE 5 EFFECT OF WING AIRFOIL SECTION FOR AN OBLIQUE WING ANGLE OF 45 DEGREES

(A)MACH = .98

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	BETA	LAMBDA	RN/L
(5AE005)	○	W1 F0 B	0.000	45.000	6.000
(5AE041)	△	W2 F0 B	0.000	45.000	4.000
(5AE066)	◇	W4 F0 B	0.000	45.000	6.000

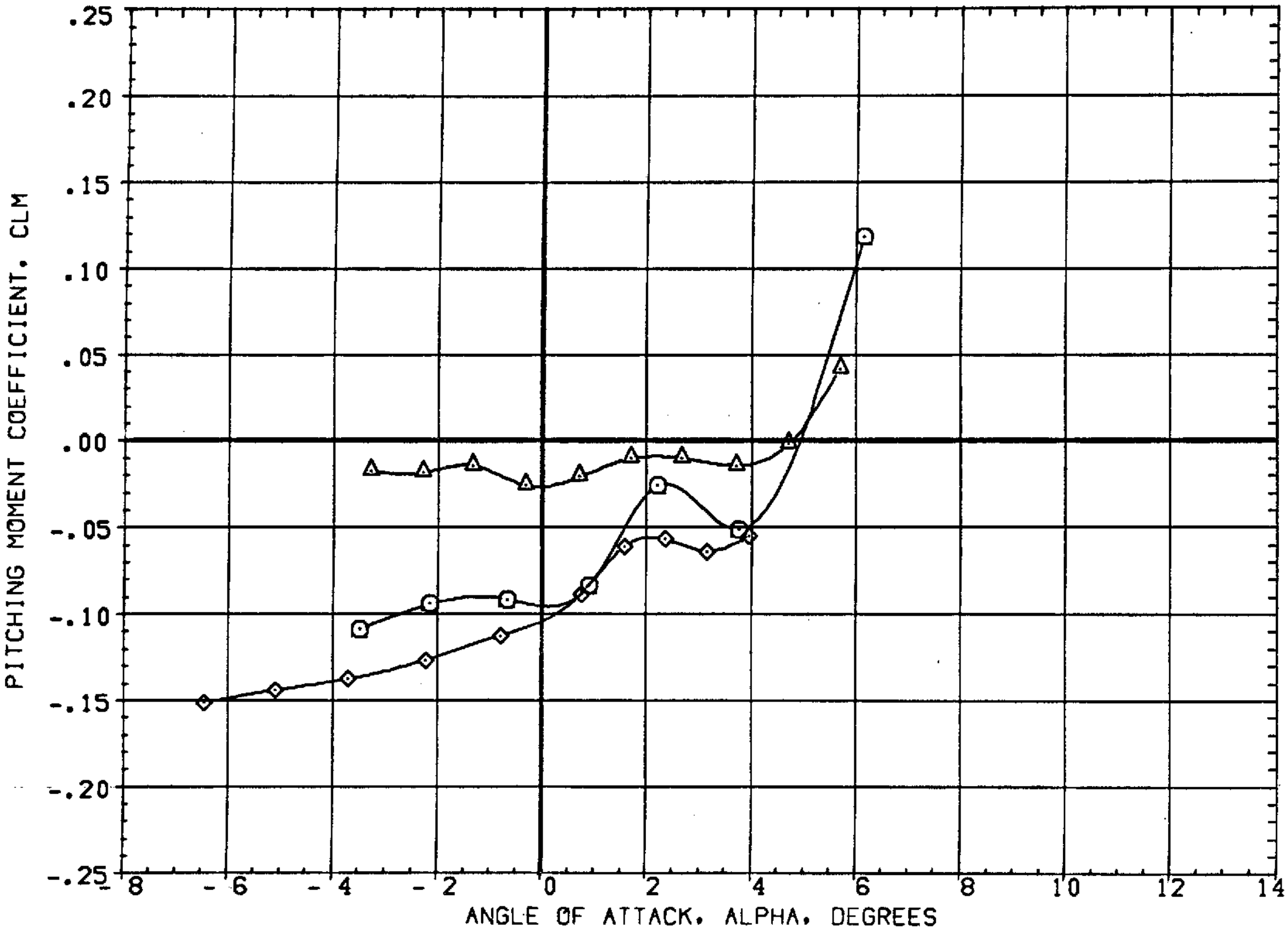


FIGURE 5 EFFECT OF WING AIRFOIL SECTION FOR AN OBLIQUE WING ANGLE OF 45 DEGREES

(A)MACH = .98

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	BETA	LAMBDA	RN/L
(5AE005)	○	W1 F0 B	0.000	45.000	6.000
(5AE041)	△	W2 F0 B	0.000	45.000	4.000
(5AE066)	◇	W4 F0 B	0.000	45.000	6.000

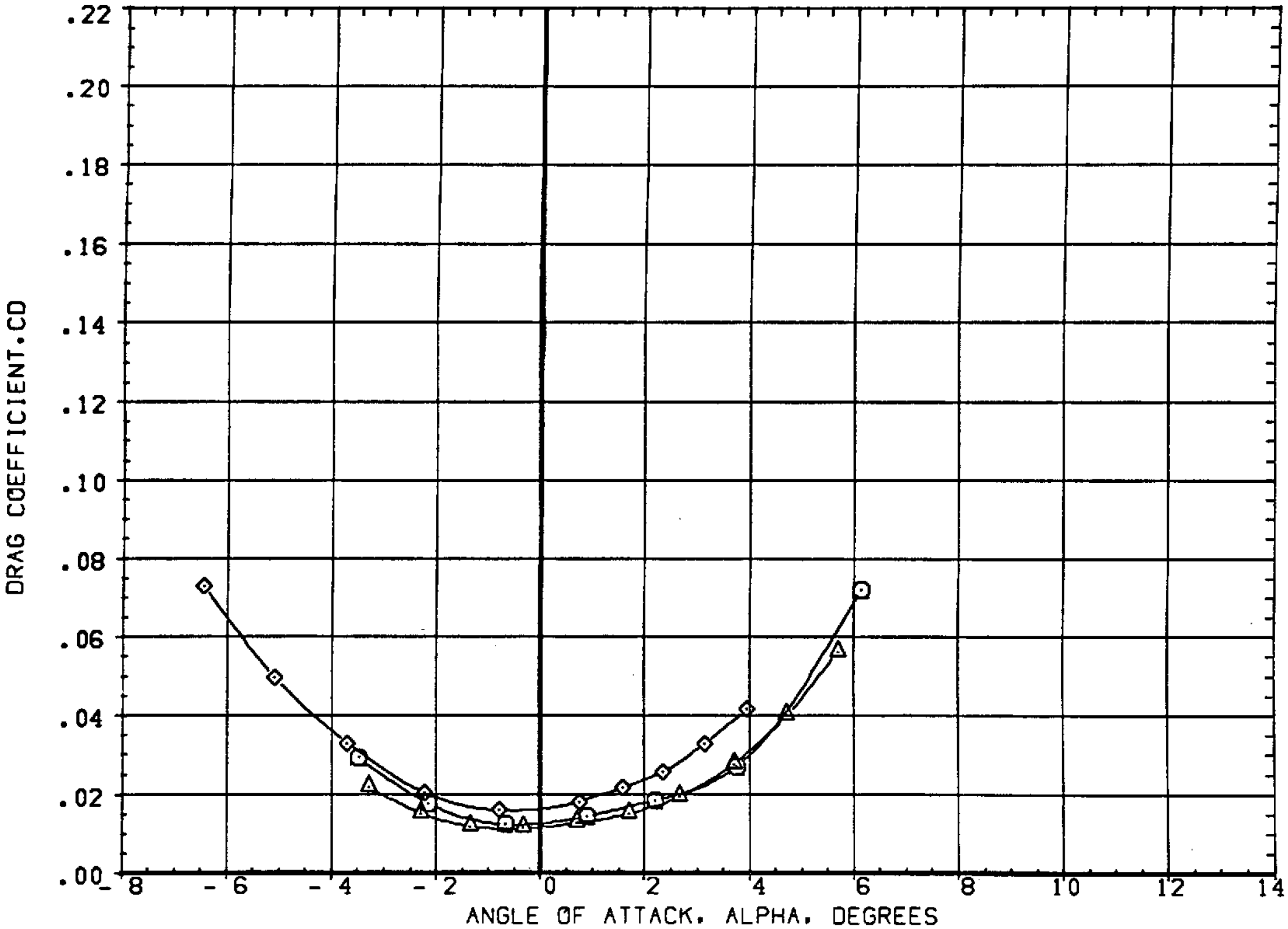


FIGURE 5 EFFECT OF WING AIRFOIL SECTION FOR AN OBLIQUE WING ANGLE OF 45 DEGREES

(A)MACH = .98

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	BETA	LAMBDA	RN/L
(5AE005)	○	W1 F0 B	0.000	45.000	6.000
(5AE041)	△	W2 F0 B	0.000	45.000	4.000
(5AE066)	◇	W4 F0 B	0.000	45.000	6.000

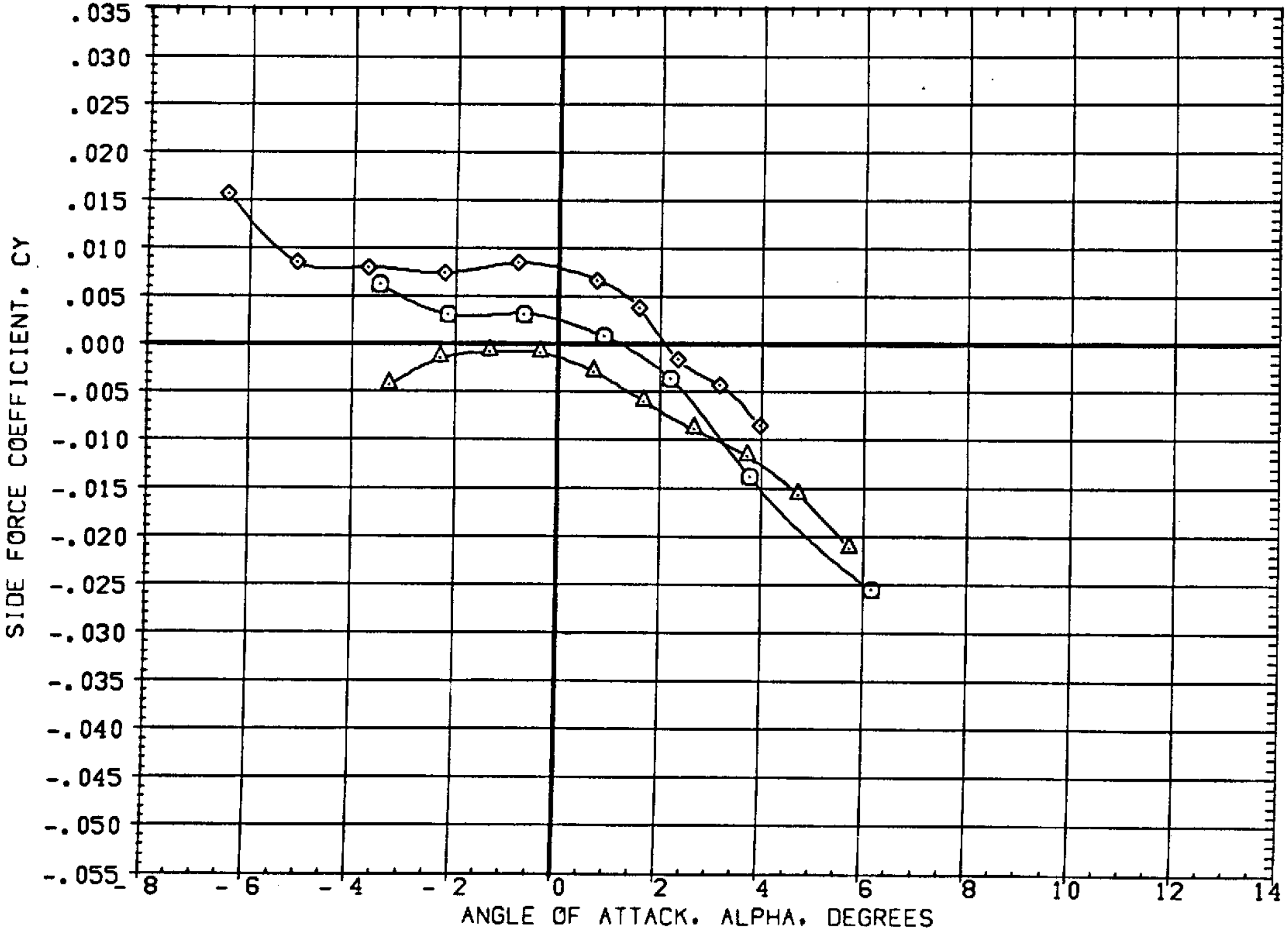


FIGURE 5 EFFECT OF WING AIRFOIL SECTION FOR AN OBLIQUE WING ANGLE OF 45 DEGREES

(A)MACH = .98

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	BETA	LAMBDA	RN/L
(5AE005)	○	W1 F0 B	0.000	45.000	6.000
(5AE041)	△	W2 F0 B	0.000	45.000	4.000
(5AE066)	◇	W4 F0 B	0.000	45.000	6.000

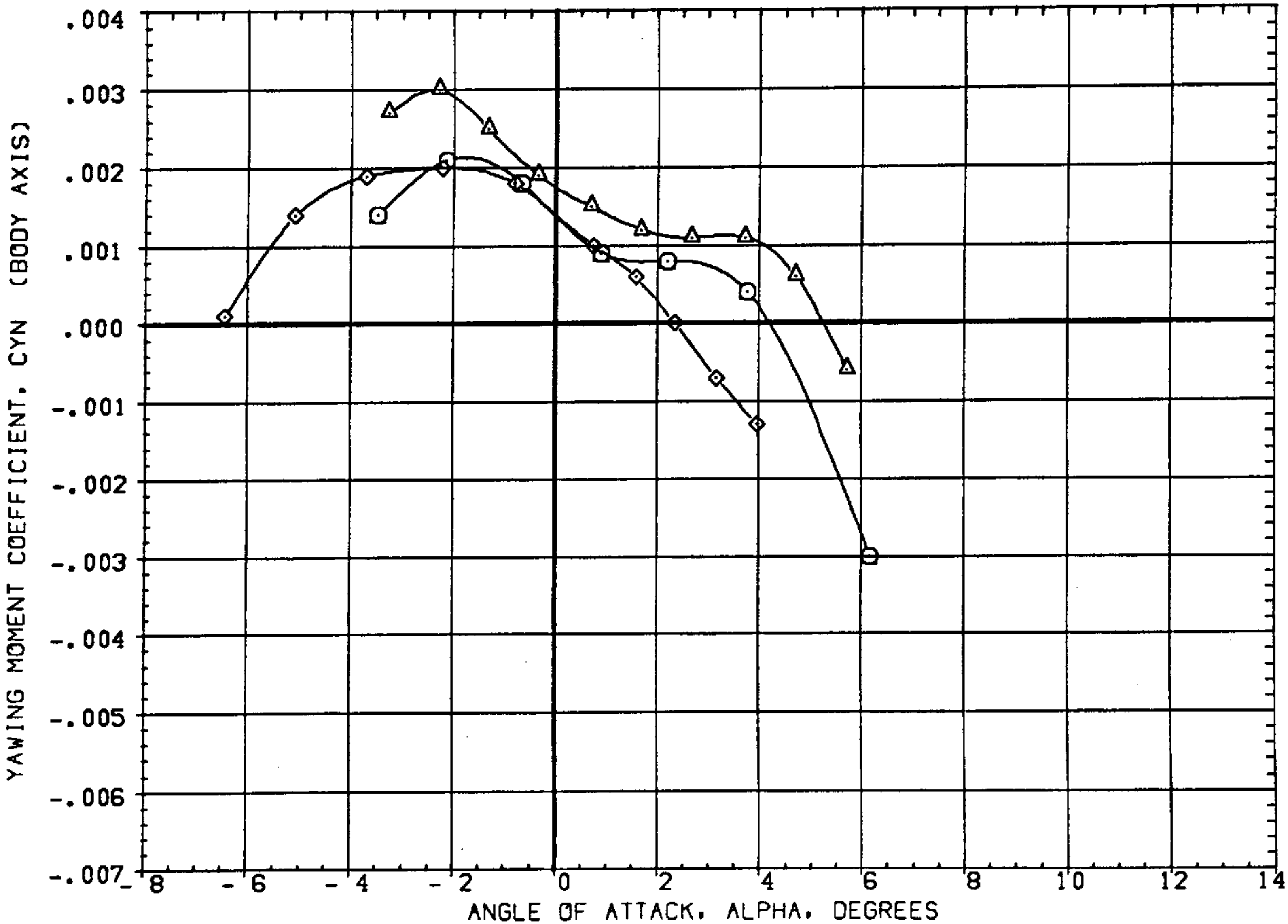


FIGURE 5 EFFECT OF WING AIRFOIL SECTION FOR AN OBLIQUE WING ANGLE OF 45 DEGREES

(A)MACH = .98

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	BETA	LAMBDA	RN/L
(5AE005)	○	W1 F0 B	0.000	45.000	6.000
(5AE041)	△	W2 F0 B	0.000	45.000	4.000
(5AE066)	◇	W4 F0 B	0.000	45.000	6.000

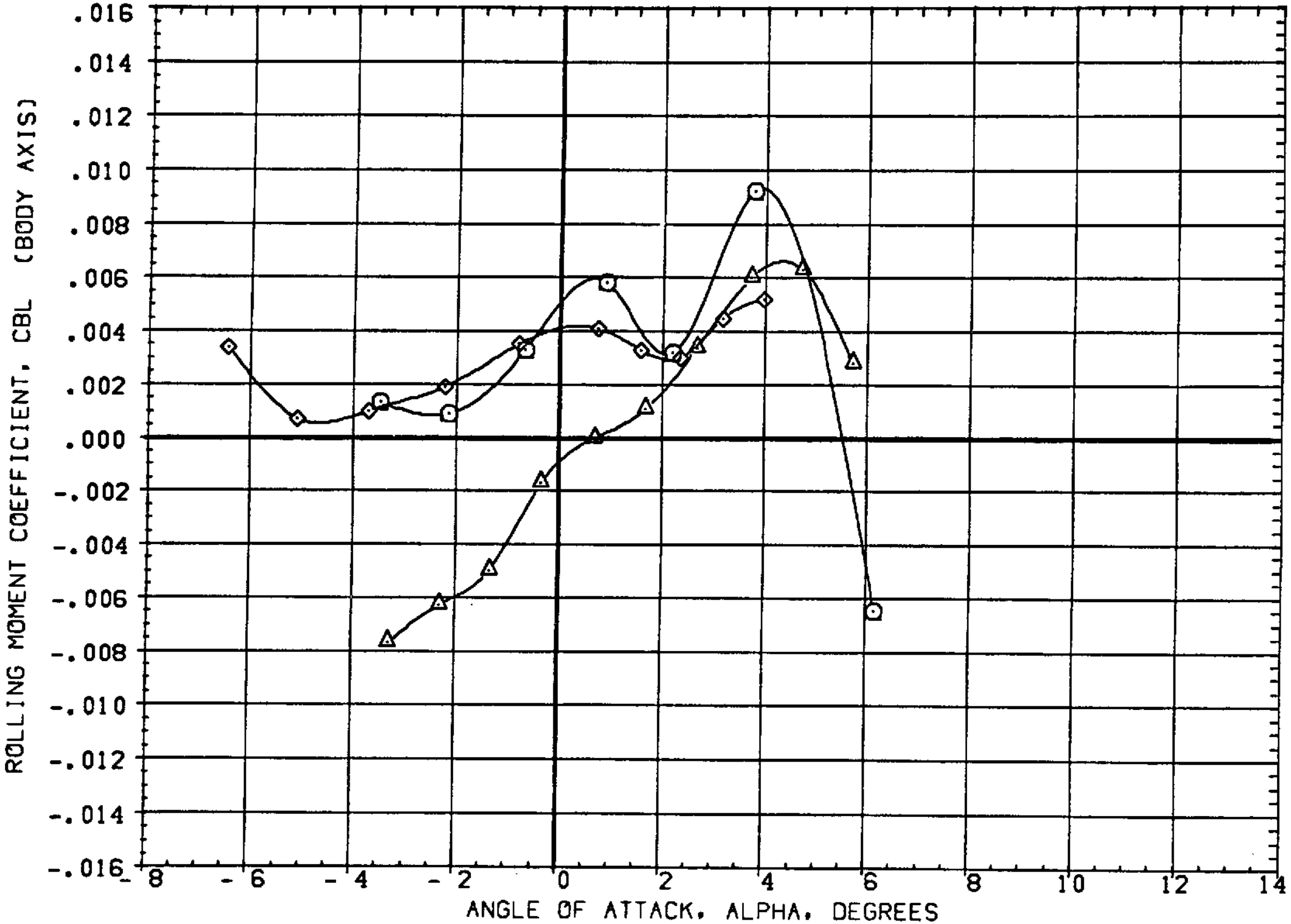


FIGURE 5 EFFECT OF WING AIRFOIL SECTION FOR AN OBLIQUE WING ANGLE OF 45 DEGREES

(A)MACH = .98

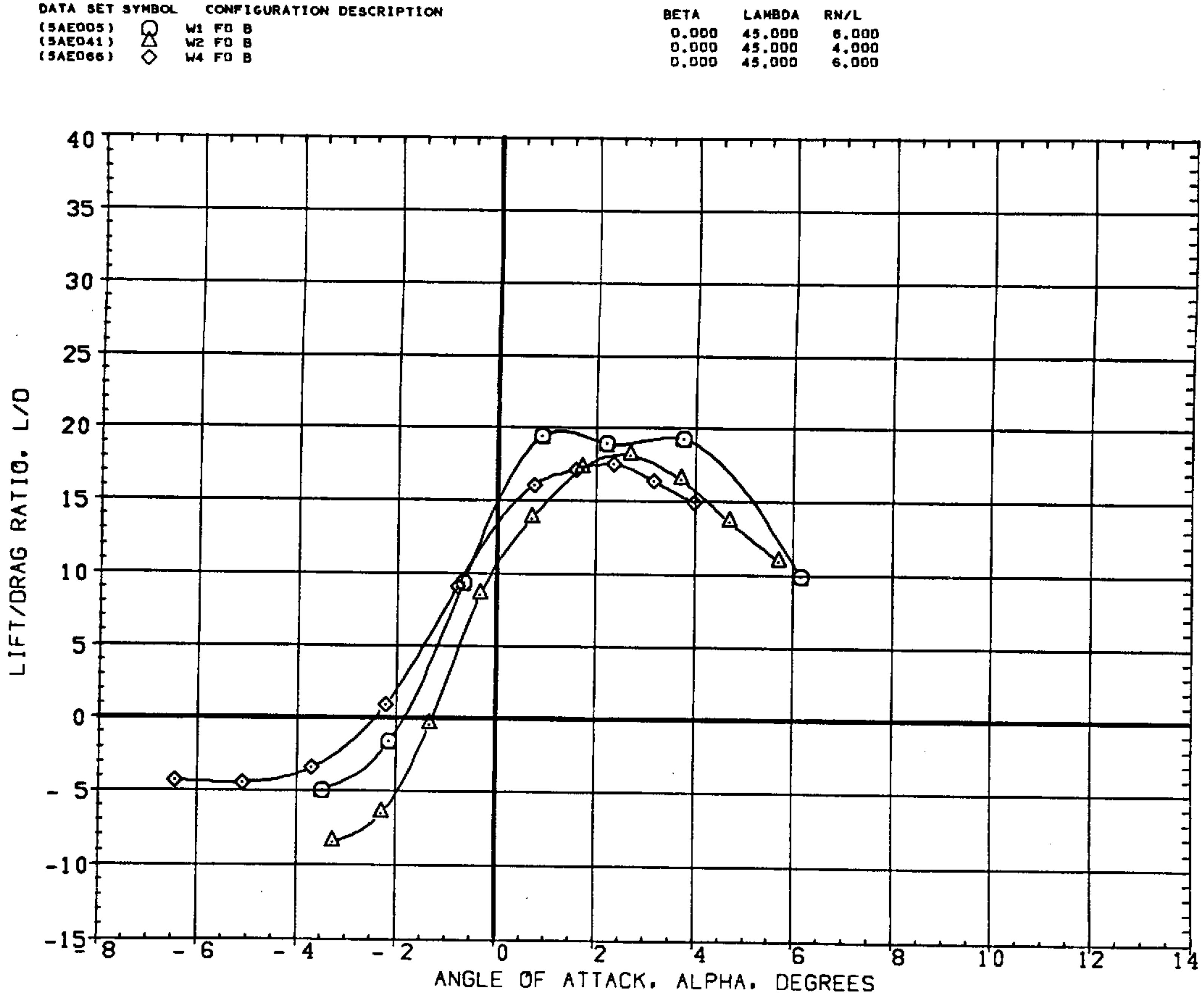


FIGURE 5 EFFECT OF WING AIRFOIL SECTION FOR AN OBLIQUE WING ANGLE OF 45 DEGREES

(A)MACH = .98

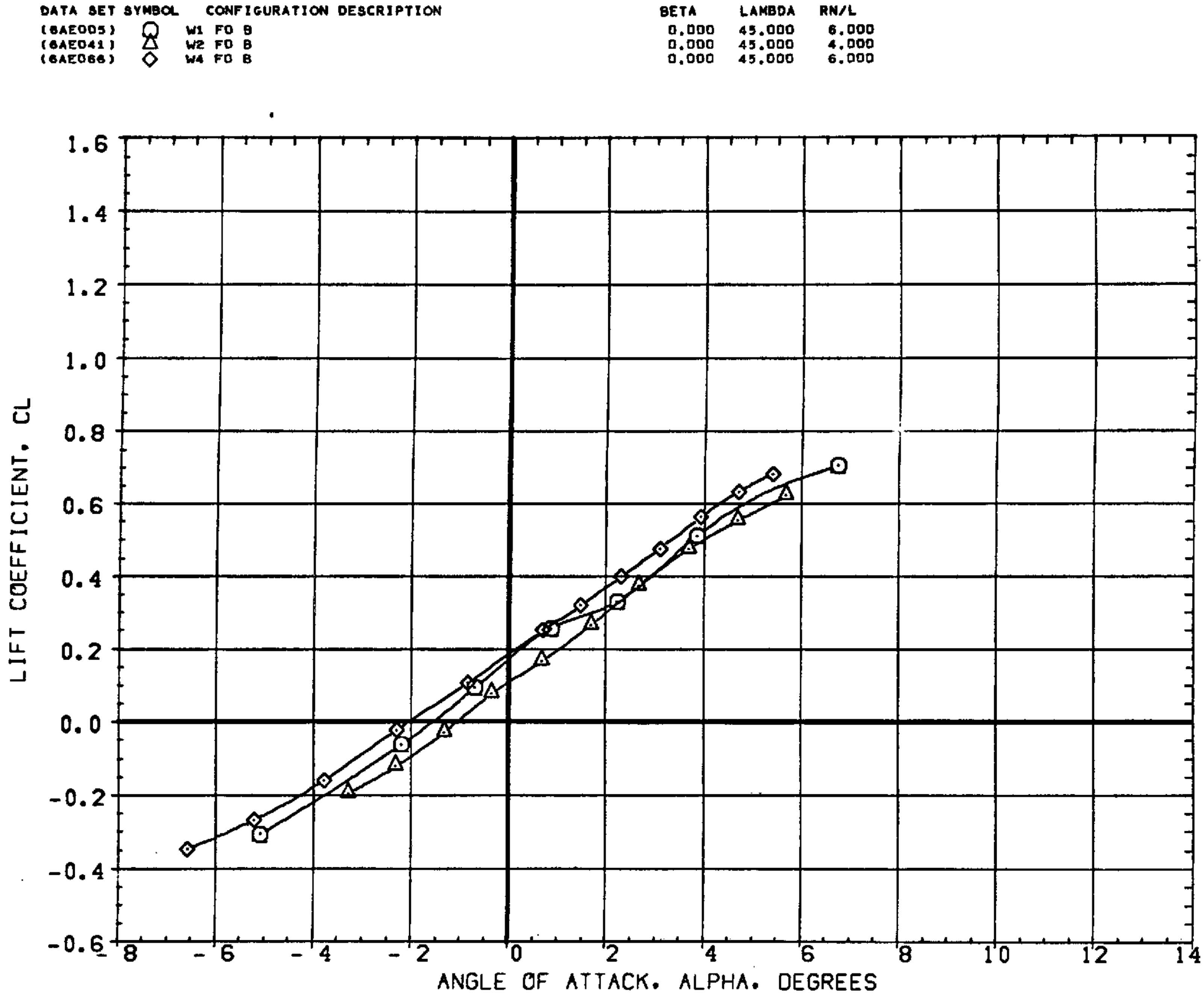


FIGURE 5 EFFECT OF WING AIRFOIL SECTION FOR AN OBLIQUE WING ANGLE OF 45 DEGREES

(A)MACH = 1.05

18

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	BETA	LAMBDA	RN/L
(6AE005)	○	W1 F0 B	0.000	45.000	6.000
(6AE041)	△	W2 F0 B	0.000	45.000	4.000
(6AE066)	◇	W4 F0 B	0.000	45.000	6.000

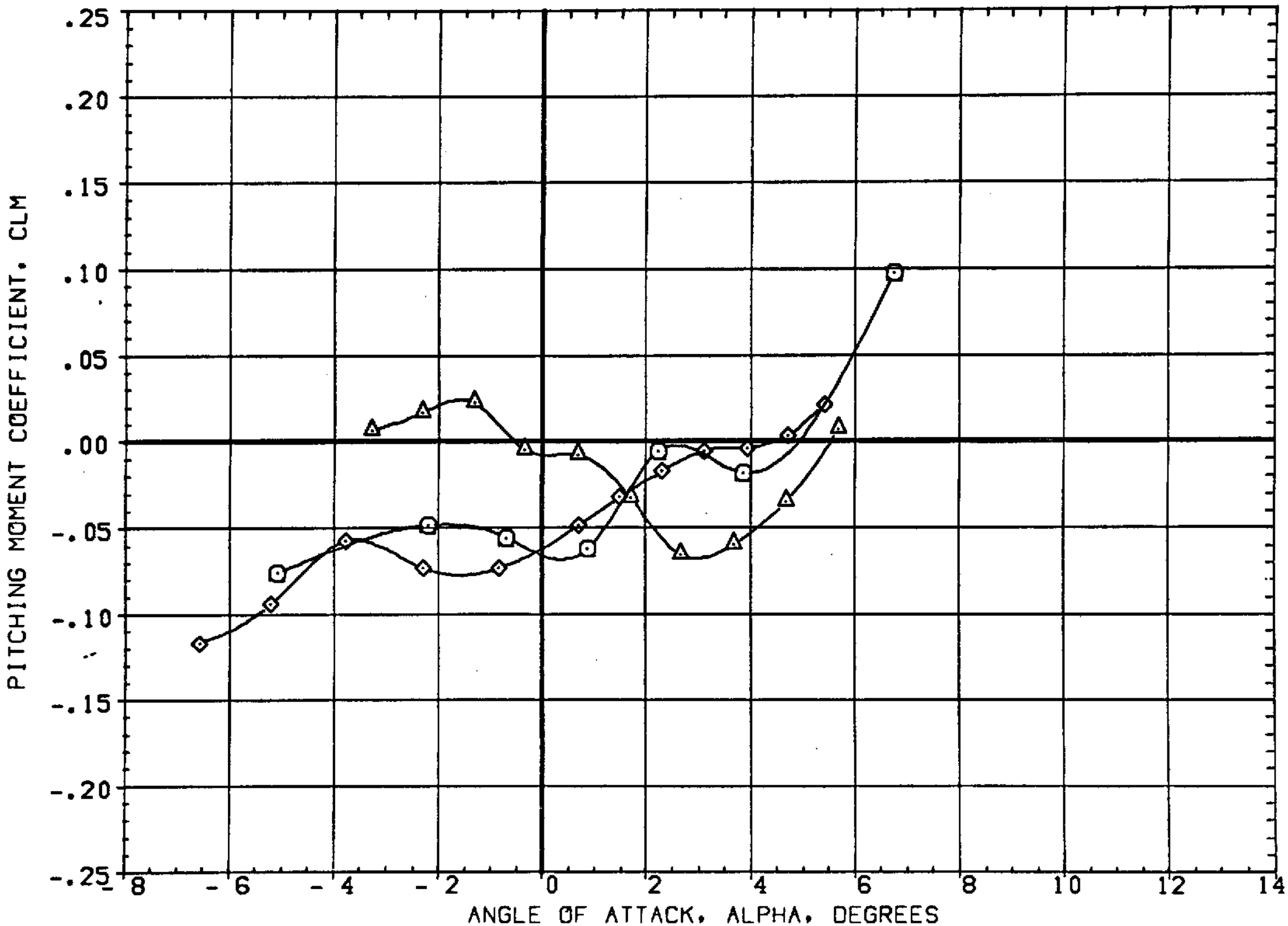


FIGURE 5 EFFECT OF WING AIRFOIL SECTION FOR AN OBLIQUE WING ANGLE OF 45 DEGREES

(A)MACH = 1.05

82

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	BETA	LAMBDA	RN/L
(6AE005)	○	W1 F0 B	0.000	45.000	6.000
(6AE041)	△	W2 F0 B	0.000	45.000	4.000
(6AE066)	◇	W4 F0 B	0.000	45.000	6.000

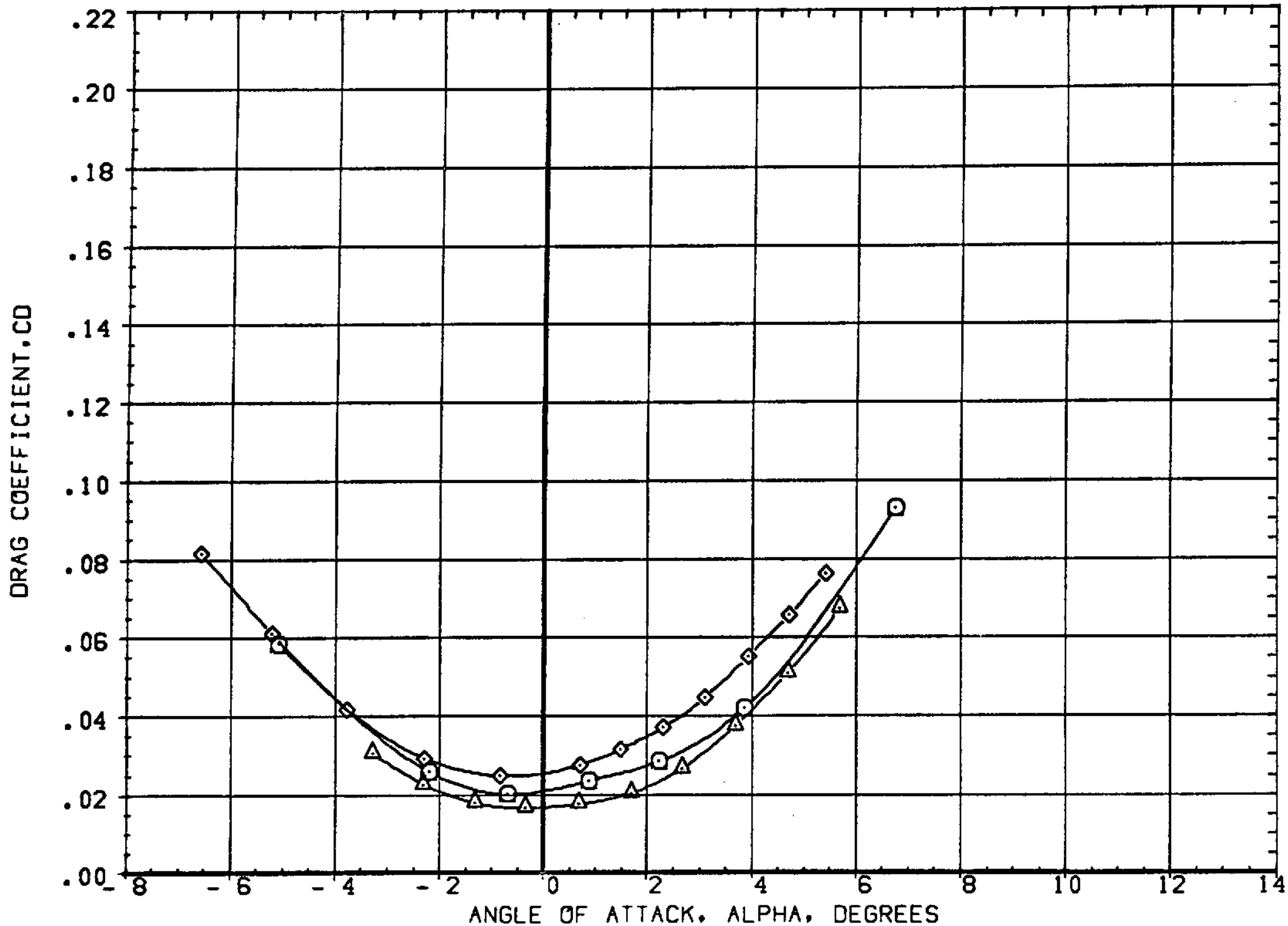


FIGURE 5 EFFECT OF WING AIRFOIL SECTION FOR AN OBLIQUE WING ANGLE OF 45 DEGREES

(A)MACH = 1.05

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	BETA	LAMBDA	RN/L
(6AE005)	○	W1 F0 B	0.000	45.000	6.000
(6AE041)	△	W2 F0 B	0.000	45.000	4.000
(6AE066)	◇	W4 F0 B	0.000	45.000	6.000

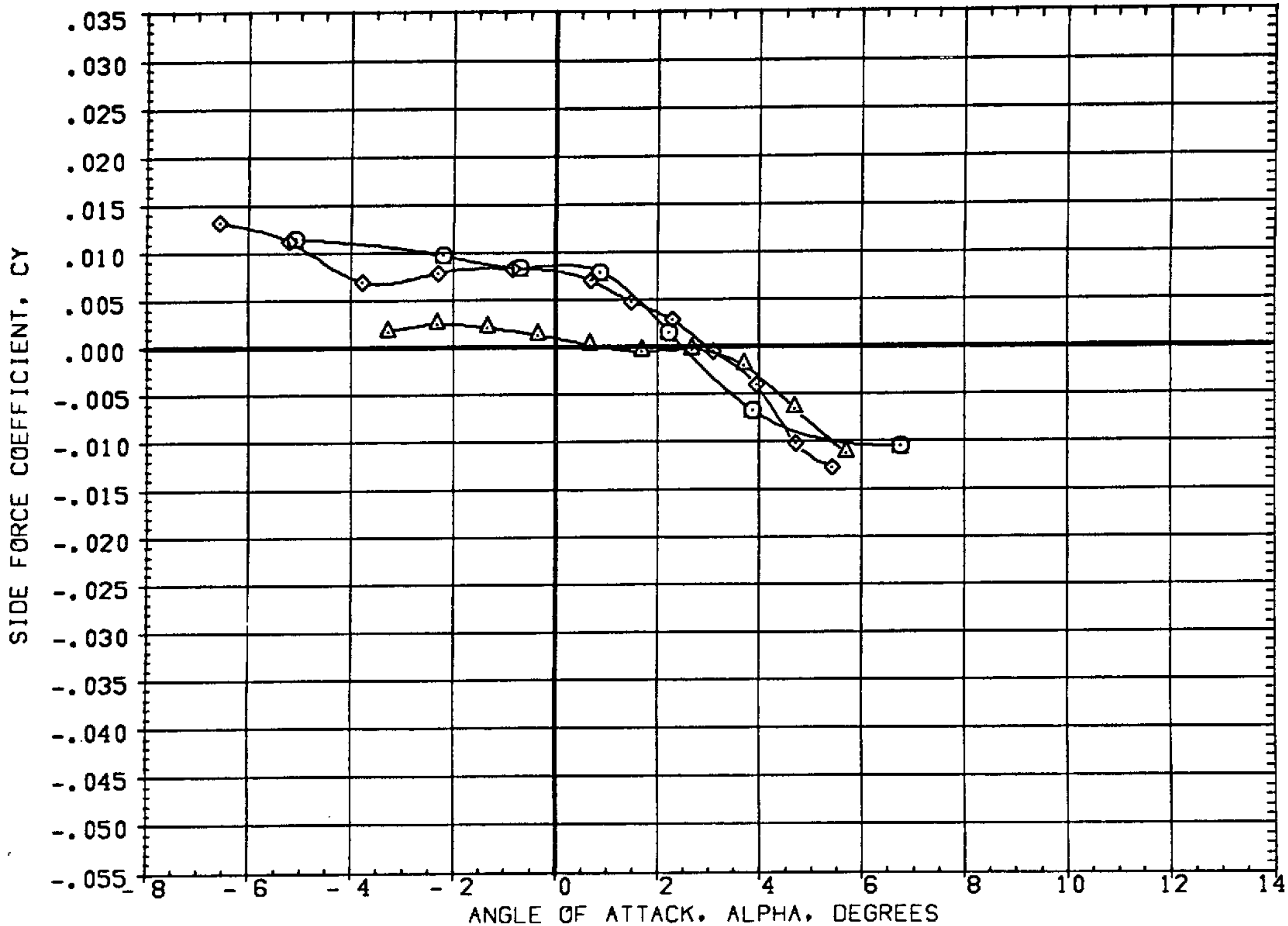


FIGURE 5 EFFECT OF WING AIRFOIL SECTION FOR AN OBLIQUE WING ANGLE OF 45 DEGREES

(A)MACH = 1.05

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	BETA	LAMBDA	RN/L
(6AE005)	○	W1 F0 B	0.000	45.000	6.000
(6AE041)	△	W2 F0 B	0.000	45.000	4.000
(6AE066)	◇	W4 F0 B	0.000	45.000	6.000

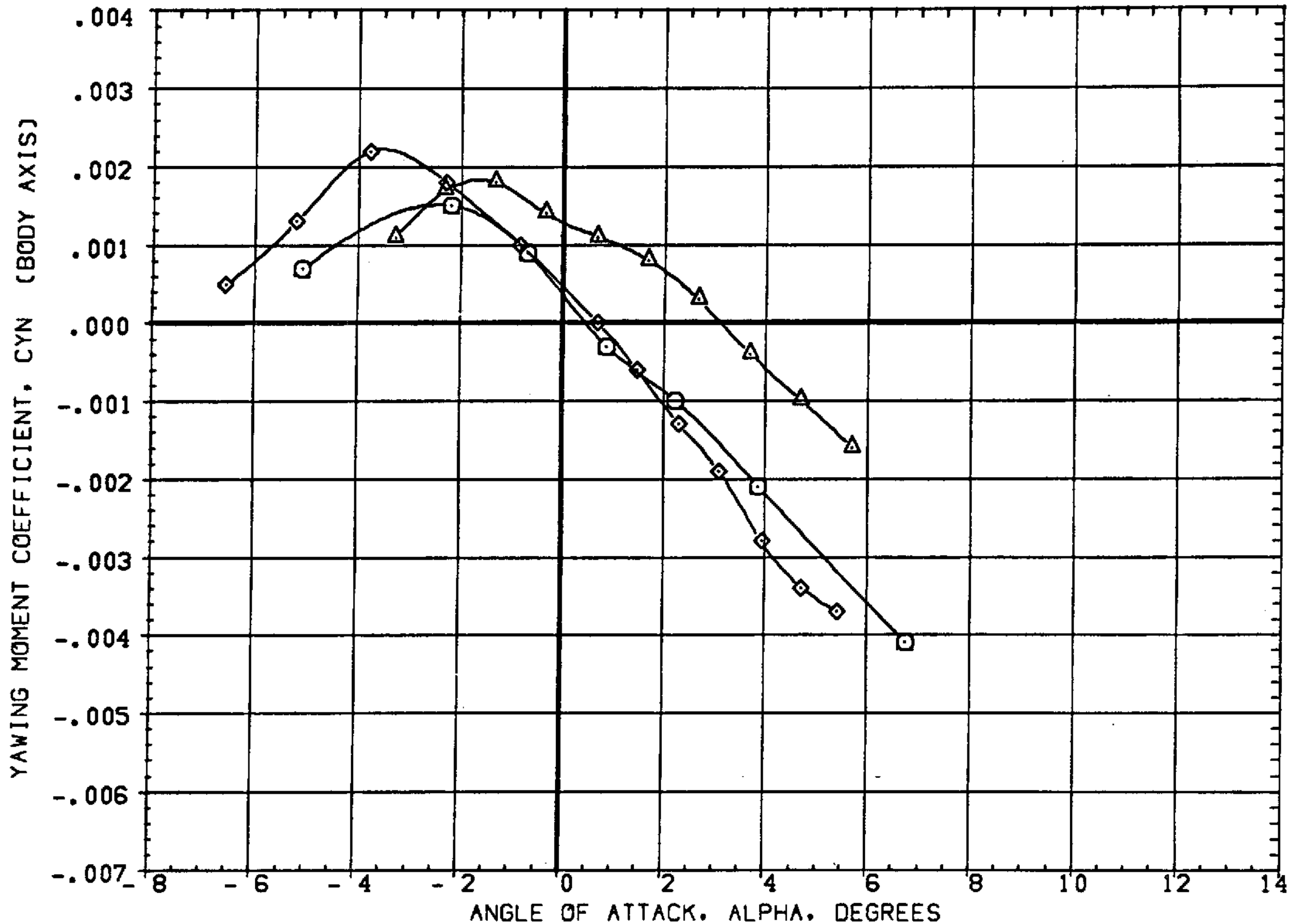


FIGURE 5 EFFECT OF WING AIRFOIL SECTION FOR AN OBLIQUE WING ANGLE OF 45 DEGREES

(A)MACH = 1.05

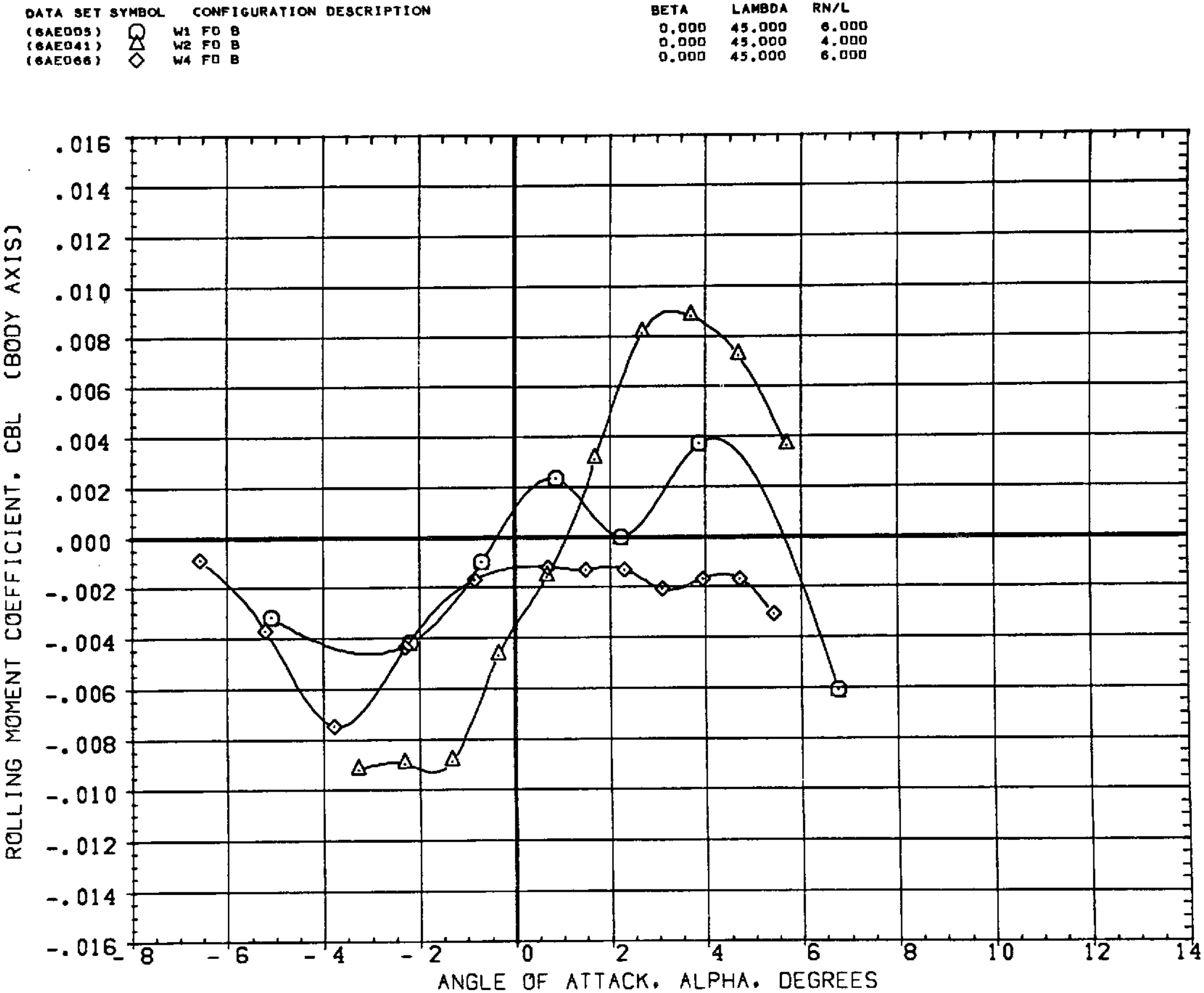


FIGURE 5 EFFECT OF WING AIRFOIL SECTION FOR AN OBLIQUE WING ANGLE OF 45 DEGREES

(A)MACH = 1.05

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	BETA	LAMBDA	RN/L
(6AE005)	○	W1 F0 B	0.000	45.000	6.000
(6AE041)	△	W2 F0 B	0.000	45.000	4.000
(6AE066)	◇	W4 F0 B	0.000	45.000	6.000

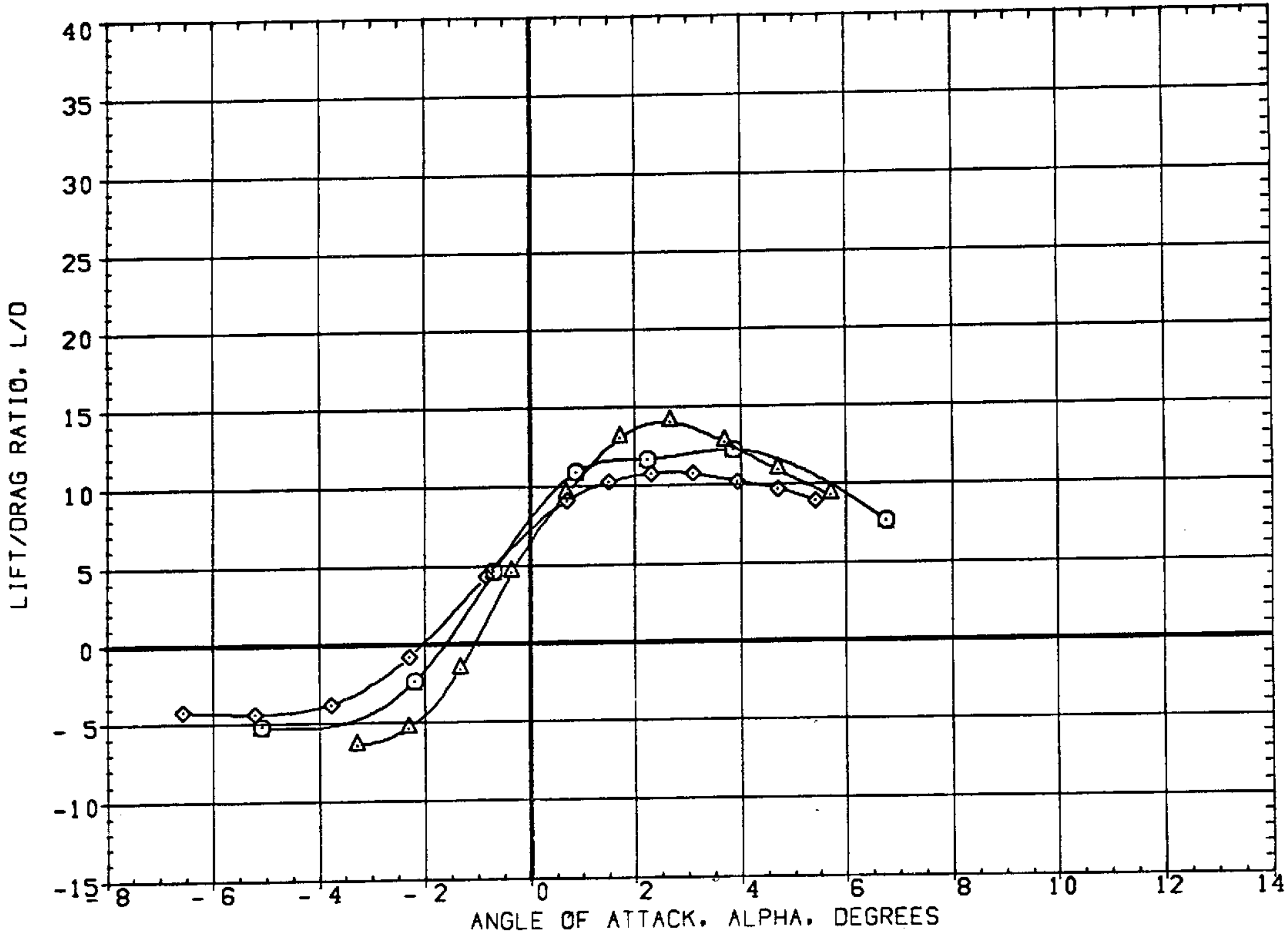


FIGURE 5 EFFECT OF WING AIRFOIL SECTION FOR AN OBLIQUE WING ANGLE OF 45 DEGREES

(A)MACH = 1.05

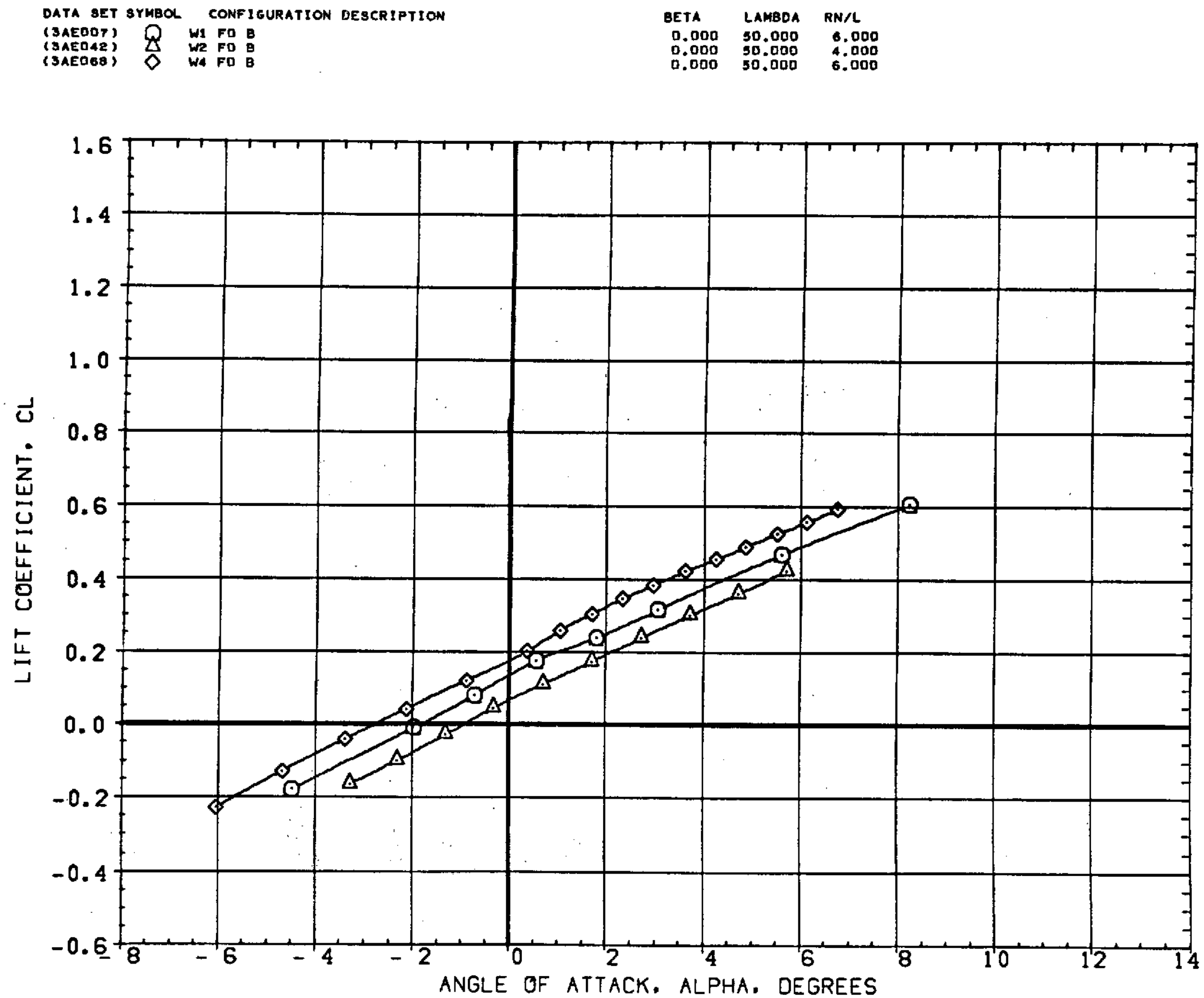


FIGURE 6 EFFECT OF WING AIRFOIL SECTION FOR AN OBLIQUE WING ANGLE OF 50 DEGREES

(A)MACH = .80

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	BETA	LAMBDA	RN/L
(3AE007)	○	W1 F0 B	0.000	50.000	6.000
(3AE042)	△	W2 F0 B	0.000	50.000	4.000
(3AE068)	◇	W4 F0 B	0.000	50.000	6.000

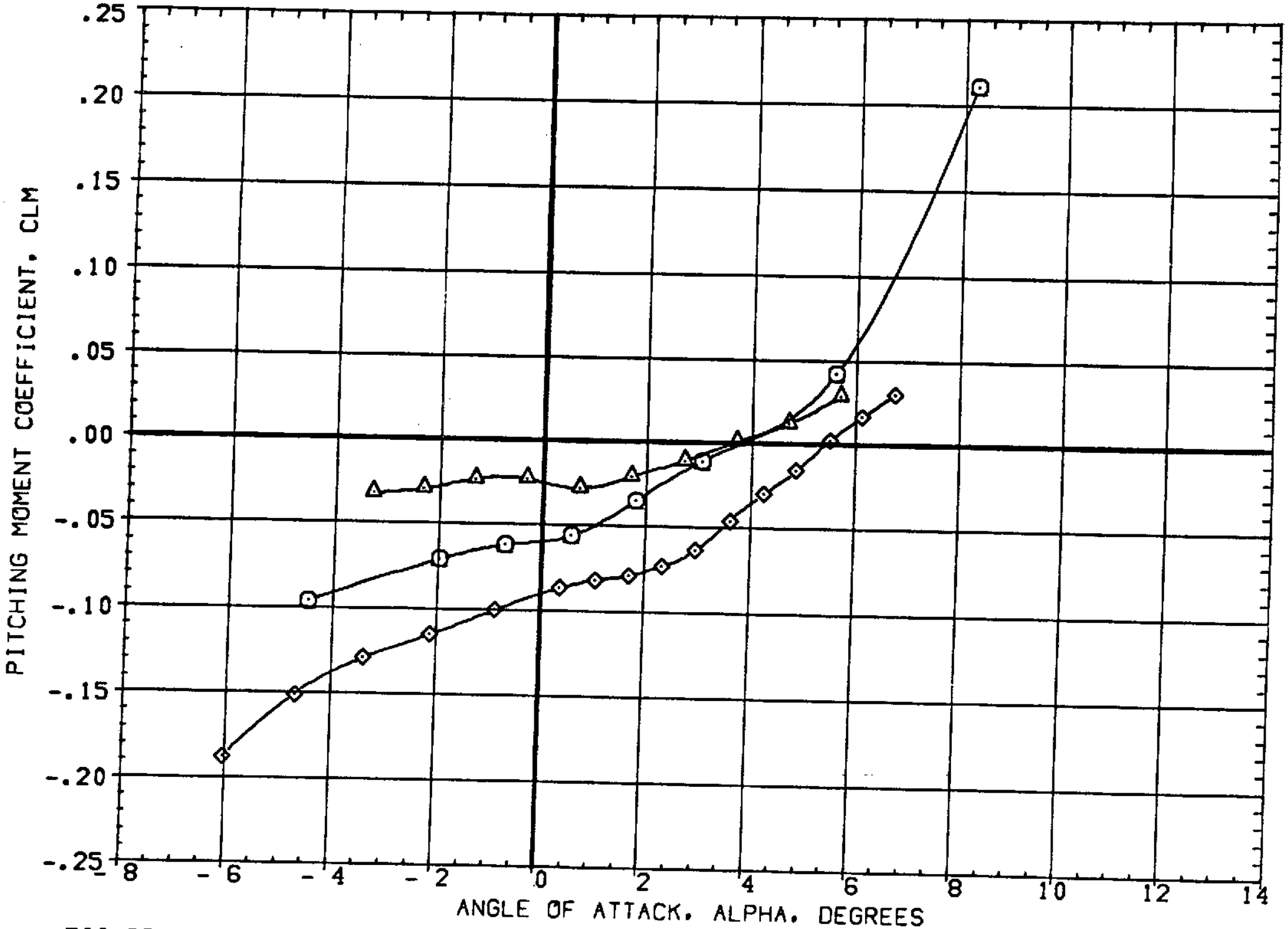


FIGURE 6 EFFECT OF WING AIRFOIL SECTION FOR AN OBLIQUE WING ANGLE OF 50 DEGREES
(A)MACH = .80

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	BETA	LAMBDA	RN/L
(3AE007)	○	W1 F0 B	0.000	50.000	6.000
(3AE042)	△	W2 F0 B	0.000	50.000	4.000
(3AE068)	◇	W4 F0 B	0.000	50.000	6.000

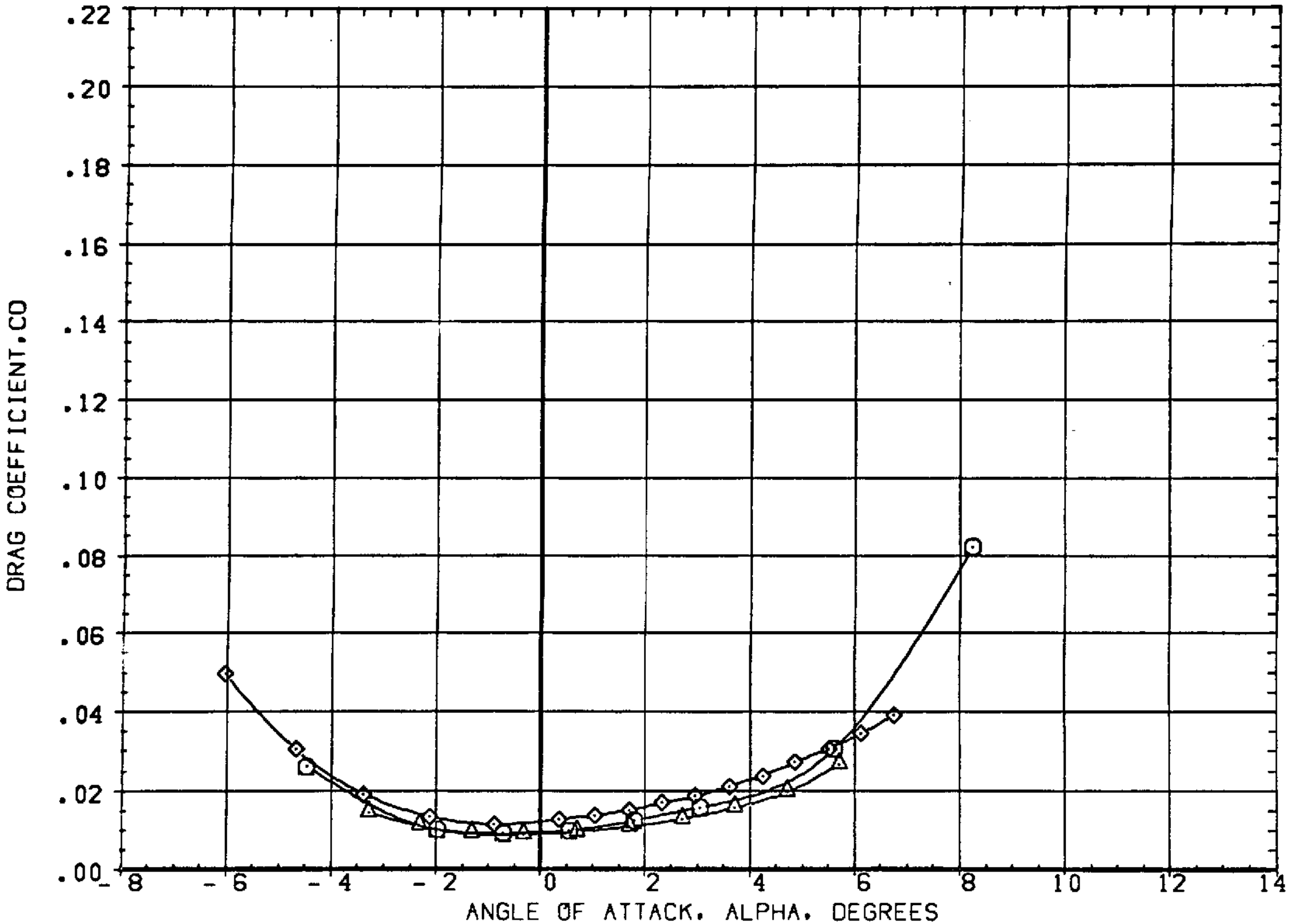


FIGURE 6 EFFECT OF WING AIRFOIL SECTION FOR AN OBLIQUE WING ANGLE OF 50 DEGREES

(A)MACH = .80

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	BETA	LAMBDA	RN/L
(3AE007)	O	W1 F0 B	0.000	50.000	6.000
(3AE042)	Δ	W2 F0 B	0.000	50.000	4.000
(3AE060)	◇	W4 F0 B	0.000	50.000	6.000

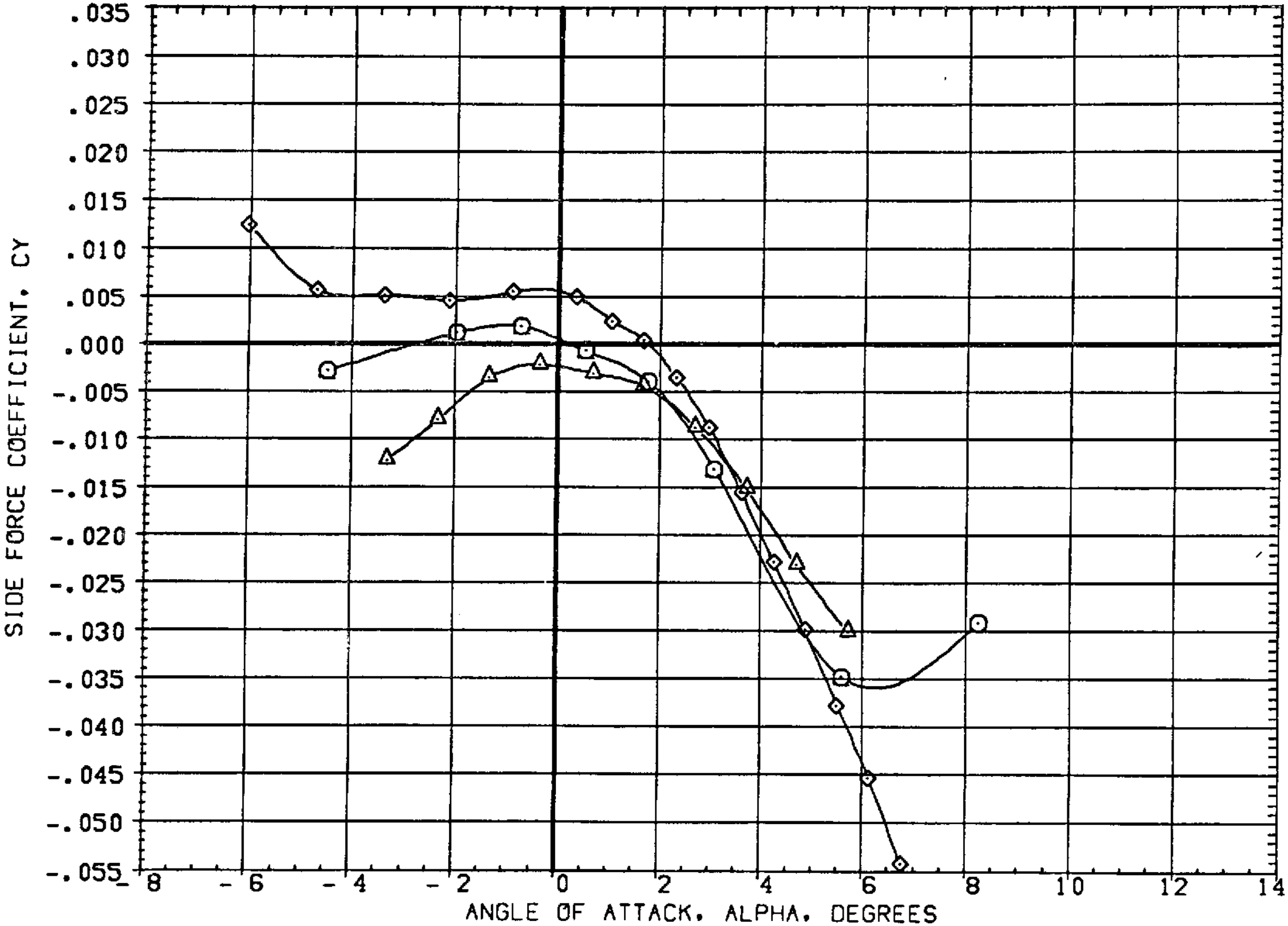


FIGURE 6 EFFECT OF WING AIRFOIL SECTION FOR AN OBLIQUE WING ANGLE OF 50 DEGREES

(A)MACH = .80

91

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	BETA	LAMBDA	RN/L
(3AE007)	○	W1 F0 B	0.000	50.000	6.000
(3AE042)	△	W2 F0 B	0.000	50.000	4.000
(3AE068)	◇	W4 F0 B	0.000	50.000	6.000

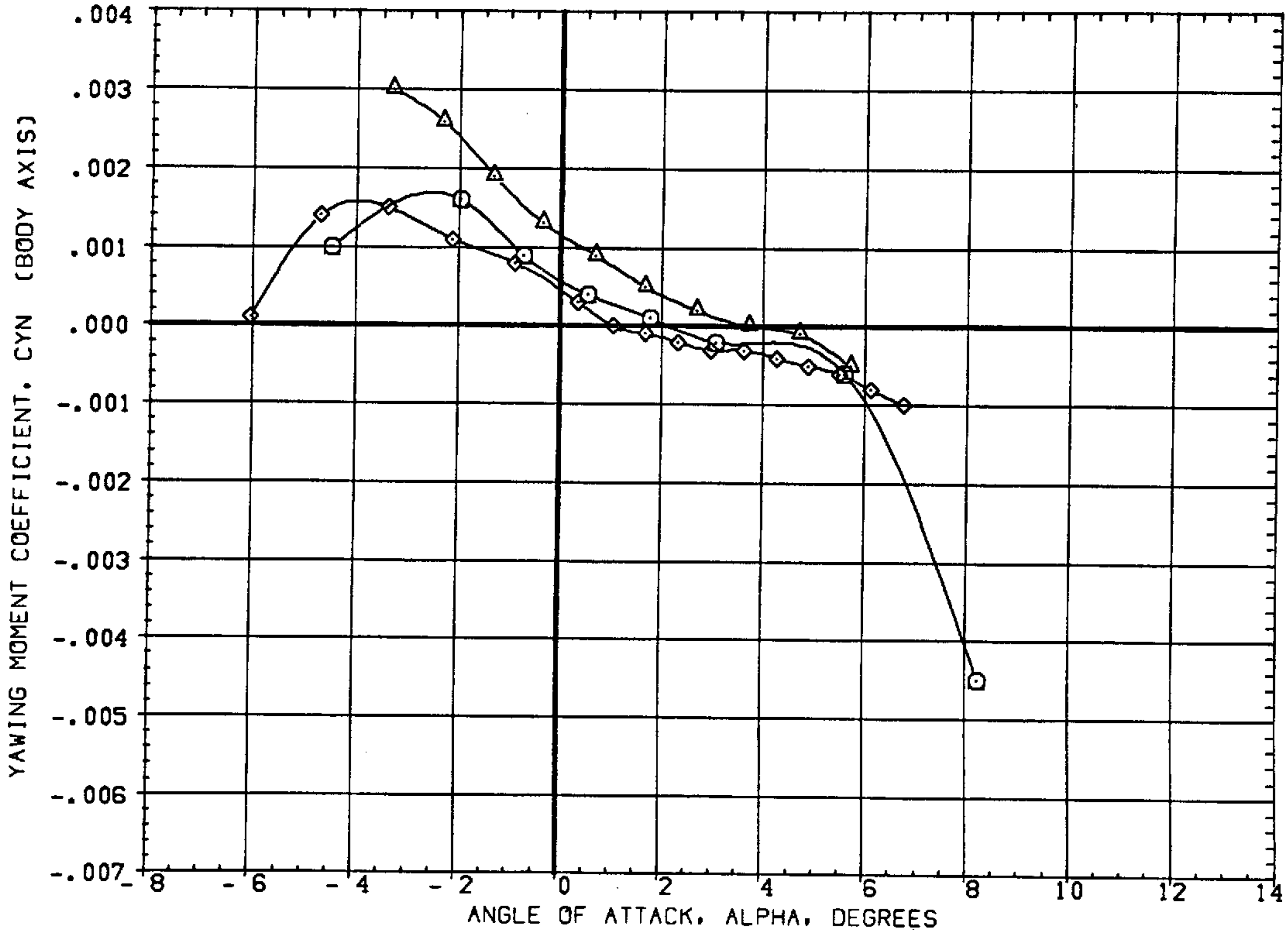


FIGURE 6 EFFECT OF WING AIRFOIL SECTION FOR AN OBLIQUE WING ANGLE OF 50 DEGREES

(A)MACH = .80

92

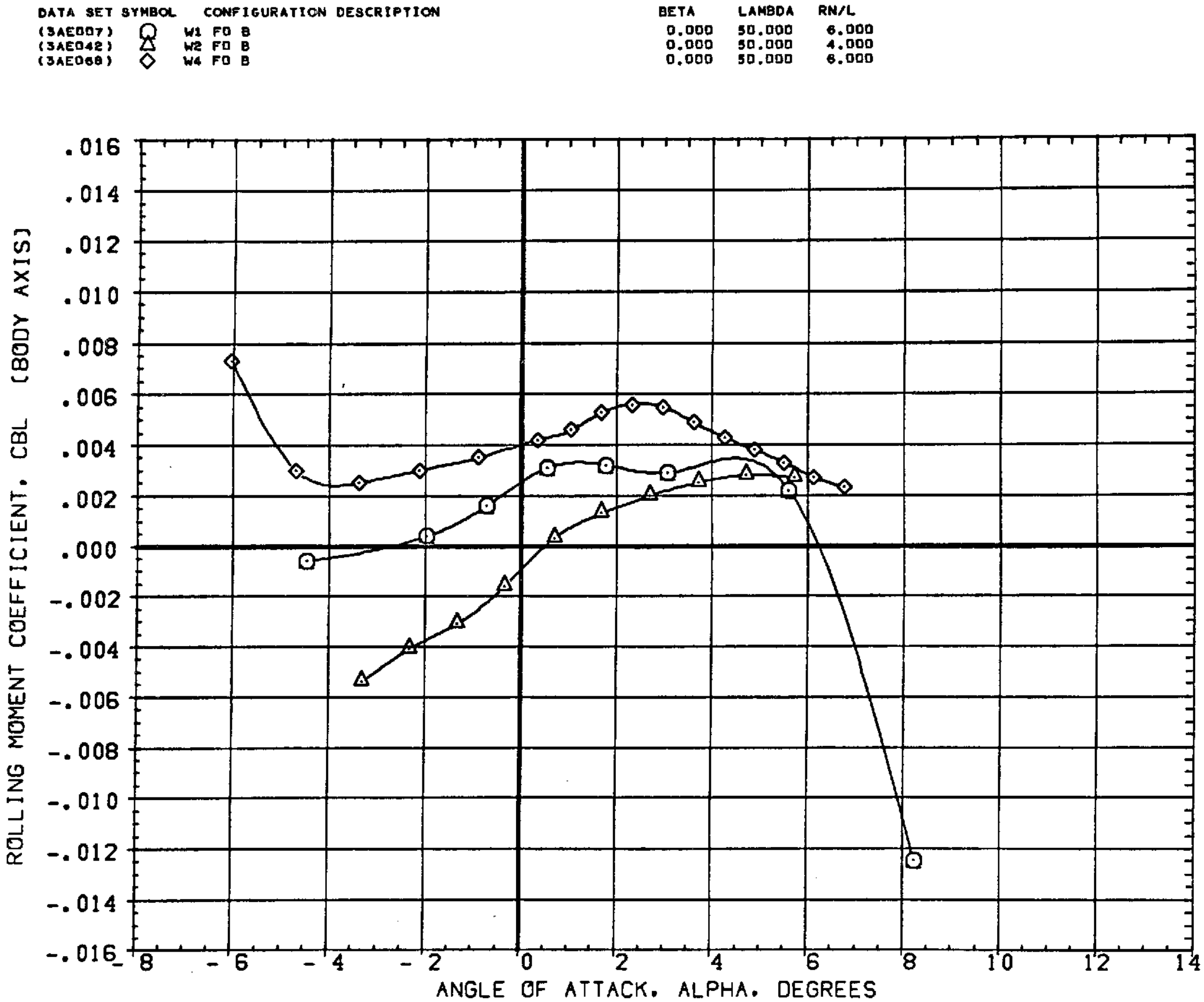


FIGURE 6 EFFECT OF WING AIRFOIL SECTION FOR AN OBLIQUE WING ANGLE OF 50 DEGREES

(A)MACH = .80

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	BETA	LAMBDA	RN/L
(3AE007)	○	W1 FD B	0.000	50.000	6.000
(3AE042)	△	W2 FD B	0.000	50.000	4.000
(3AE068)	◇	W4 FD B	0.000	50.000	6.000

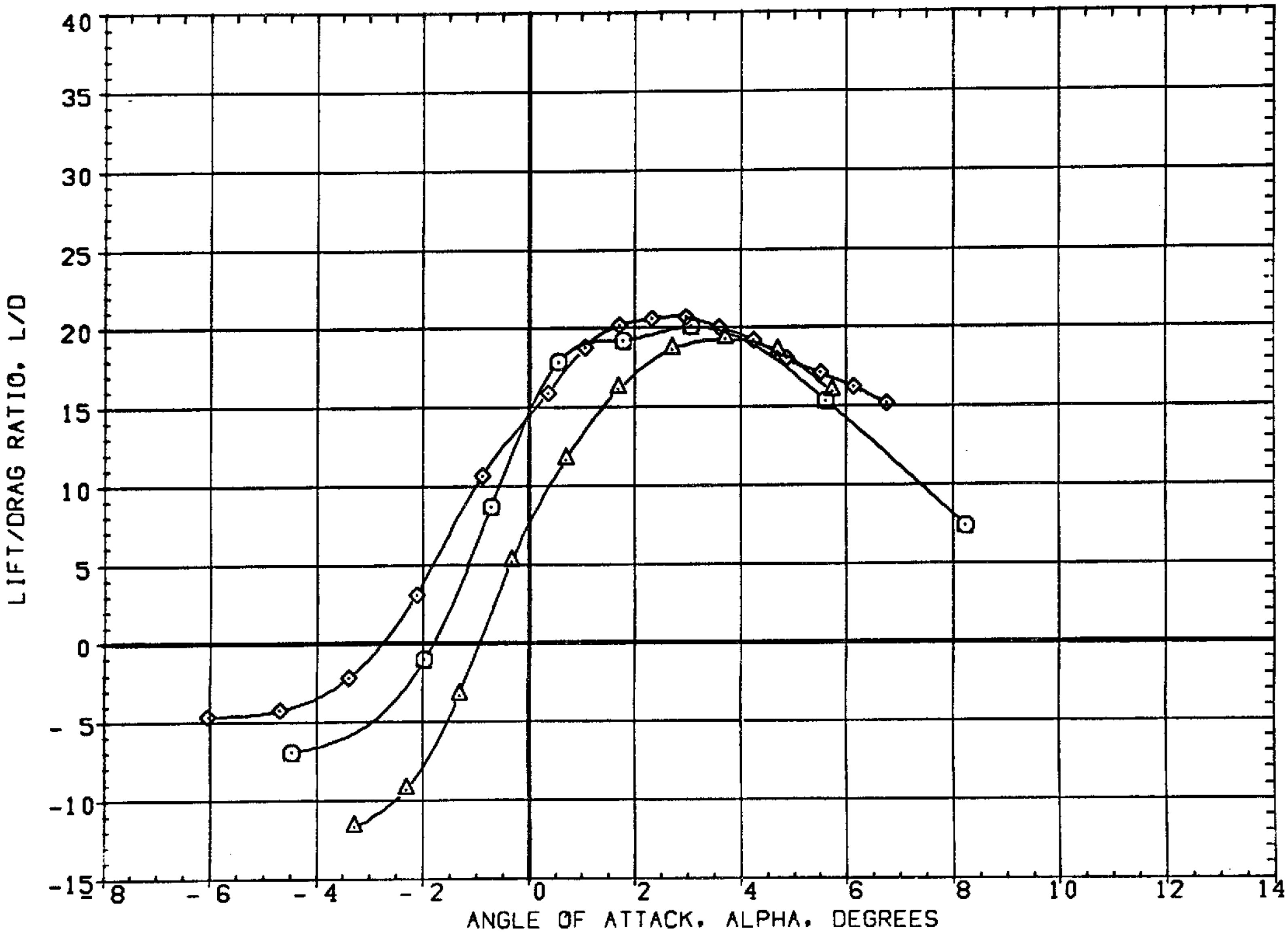


FIGURE 6 EFFECT OF WING AIRFOIL SECTION FOR AN OBLIQUE WING ANGLE OF 50 DEGREES

(A)MACH = .80

C2

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	BETA	LAMBDA	RN/L
(4AE007)	○	W1 F0 B	0.000	50.000	6.000
(4AE042)	△	W2 F0 B	0.000	50.000	4.000
(4AE068)	◇	W4 F0 B	0.000	50.000	6.000

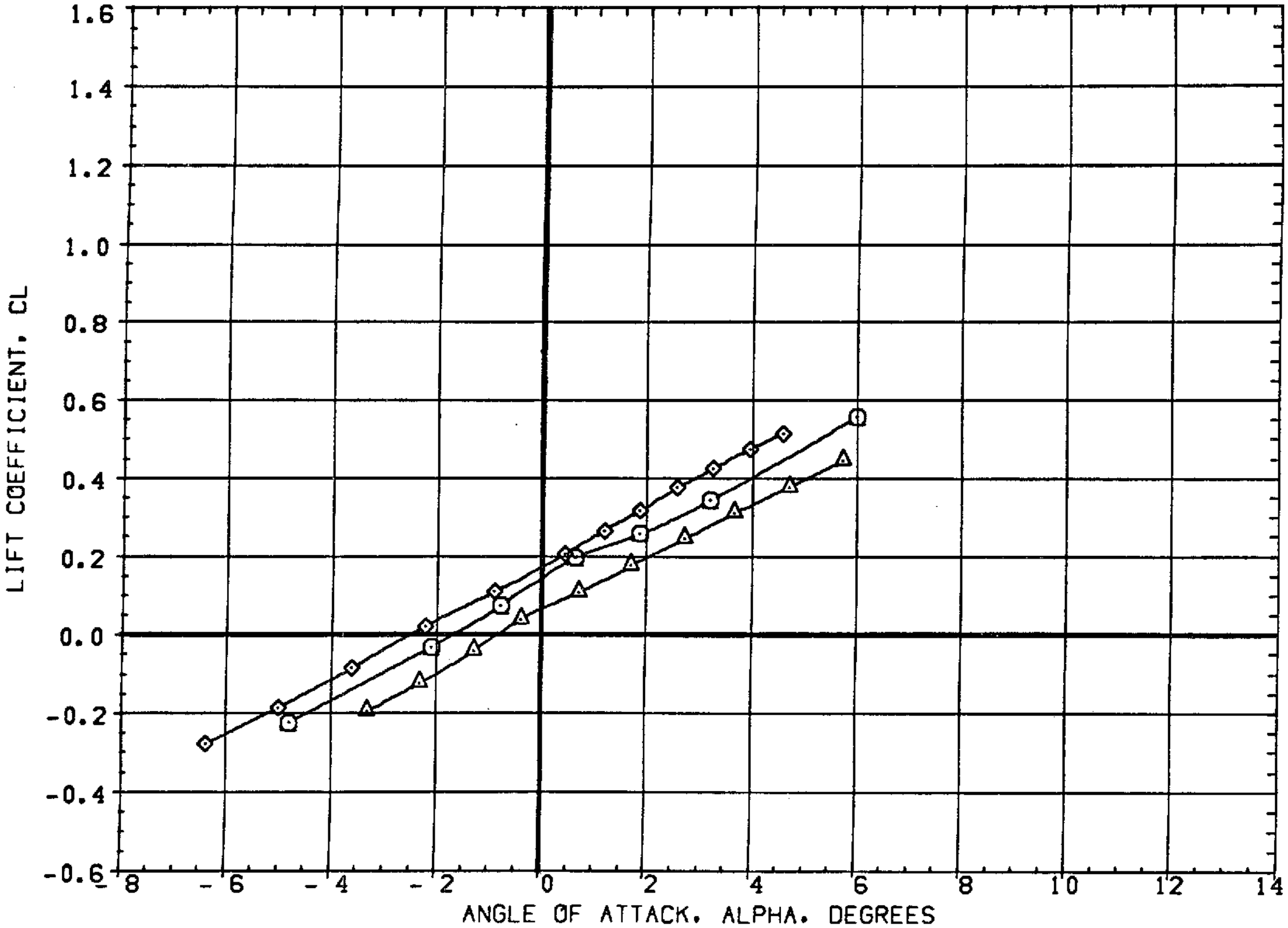


FIGURE 6 EFFECT OF WING AIRFOIL SECTION FOR AN OBLIQUE WING ANGLE OF 50 DEGREES

(A)MACH = .95

95

C2

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	BETA	LAMBDA	RN/L
(4AE007)	○	W1 F0 B	0.000	50.000	6.000
(4AE042)	△	W2 F0 B	0.000	50.000	4.000
(4AE068)	◇	W4 F0 B	0.000	50.000	6.000

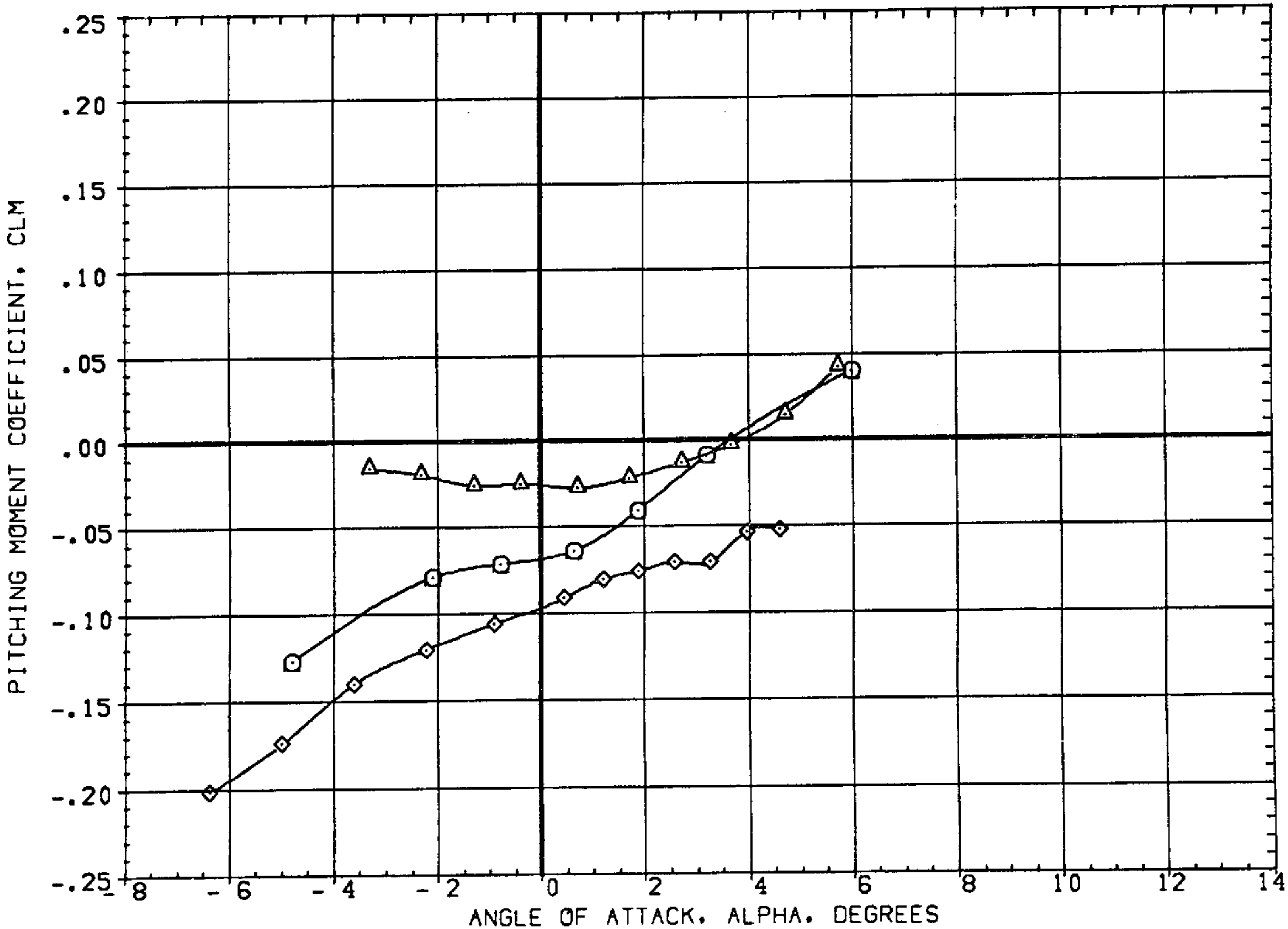


FIGURE 6 EFFECT OF WING AIRFOIL SECTION FOR AN OBLIQUE WING ANGLE OF 50 DEGREES

(A)MACH = .95

96

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	BETA	LAMBDA	RN/L
(4AE007)	○	W1 F0 B	0.000	50.000	6.000
(4AE042)	△	W2 F0 B	0.000	50.000	4.000
(4AE068)	◇	W4 F0 B	0.000	50.000	6.000

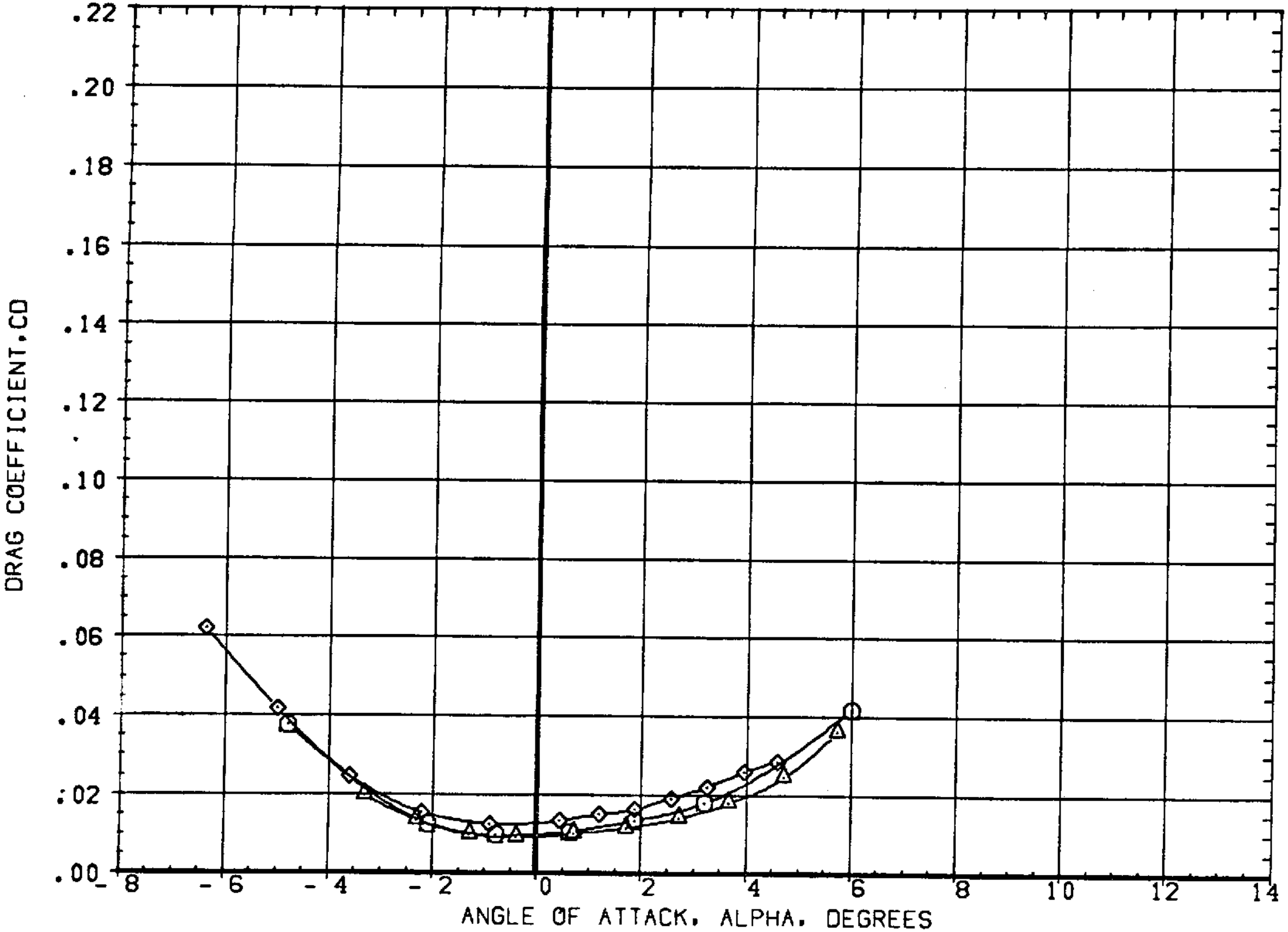


FIGURE 6 EFFECT OF WING AIRFOIL SECTION FOR AN OBLIQUE WING ANGLE OF 50 DEGREES

(A)MACH = .95

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	BETA	LAMBDA	RN/L
(4AE007)	○	W1 F0 B	0.000	50.000	6.000
(4AE042)	△	W2 F0 B	0.000	50.000	4.000
(4AE068)	◇	W4 F0 B	0.000	50.000	6.000

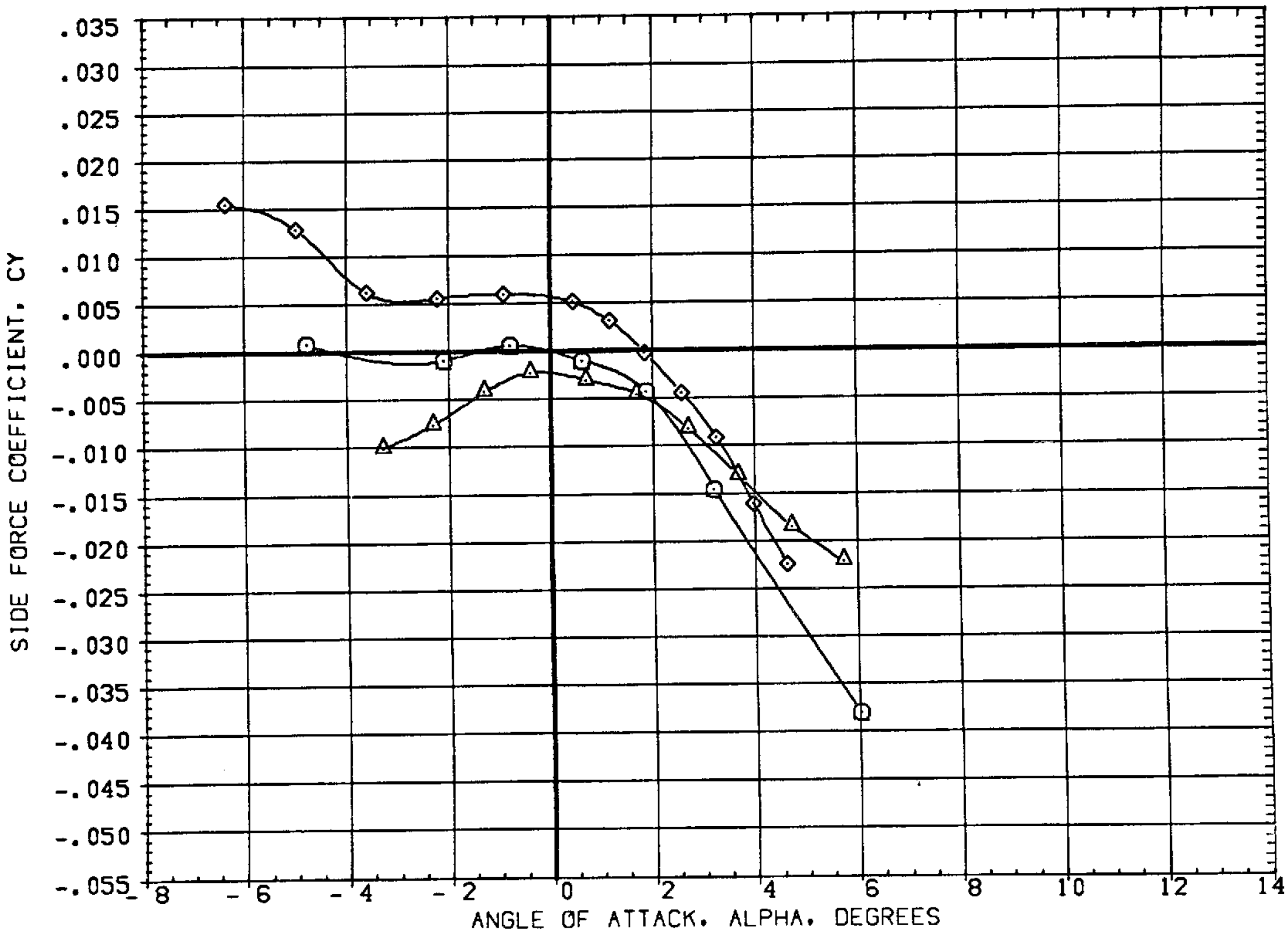


FIGURE 6 EFFECT OF WING AIRFOIL SECTION FOR AN OBLIQUE WING ANGLE OF 50 DEGREES

(A)MACH = .95

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	BETA	LAMBDA	RN/L
(4AE007)	○	W1 FO B	0.000	50.000	6.000
(4AE042)	△	W2 FO B	0.000	50.000	4.000
(4AE068)	◇	W4 FO B	0.000	50.000	6.000

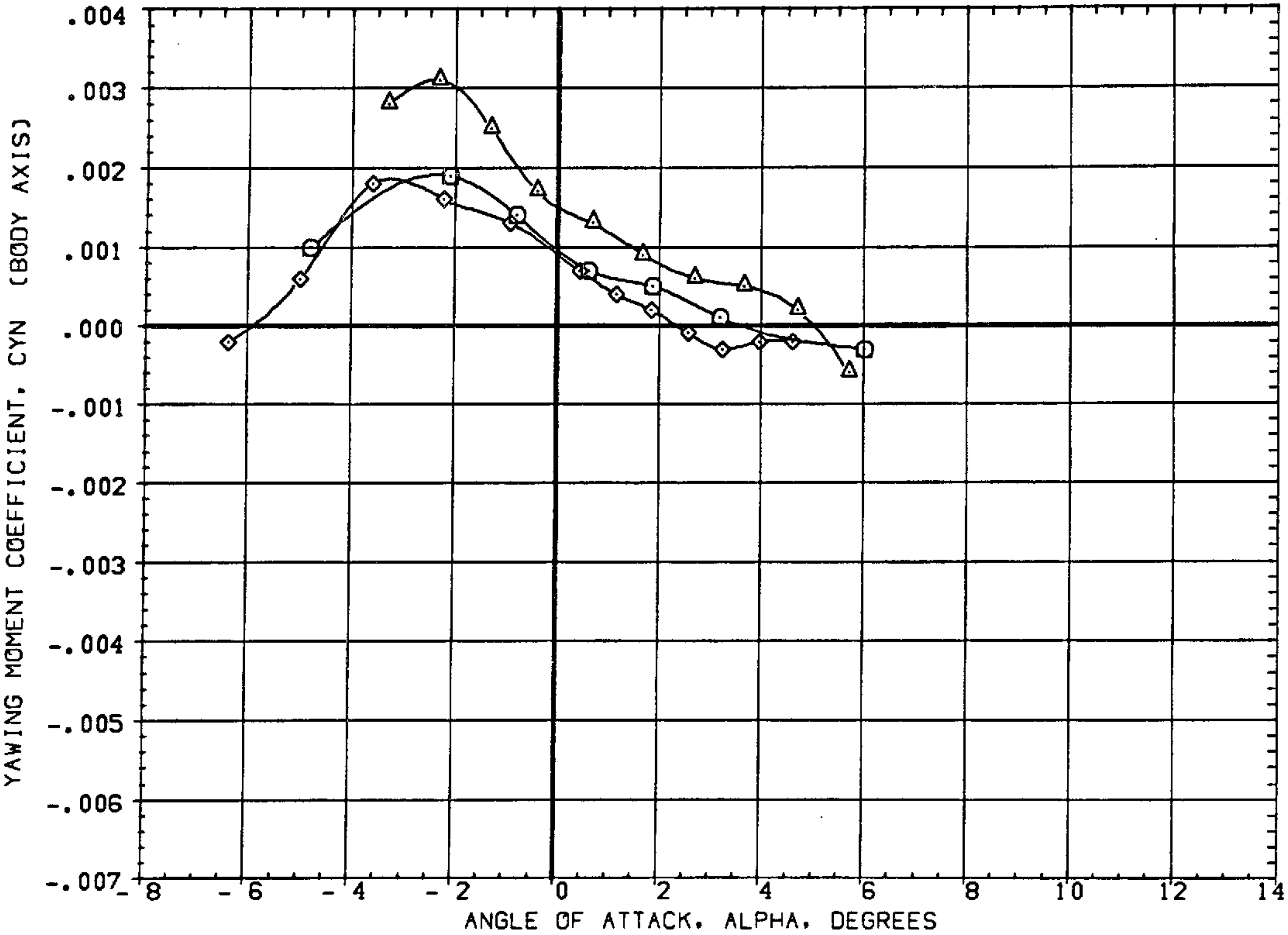


FIGURE 6 EFFECT OF WING AIRFOIL SECTION FOR AN OBLIQUE WING ANGLE OF 50 DEGREES

(A)MACH = .95

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	BETA	LAMBDA	RN/L
(4AE007)	○	W1 F0 B	0.000	50.000	6.000
(4AE042)	△	W2 F0 B	0.000	50.000	4.000
(4AE068)	◇	W4 F0 B	0.000	50.000	6.000

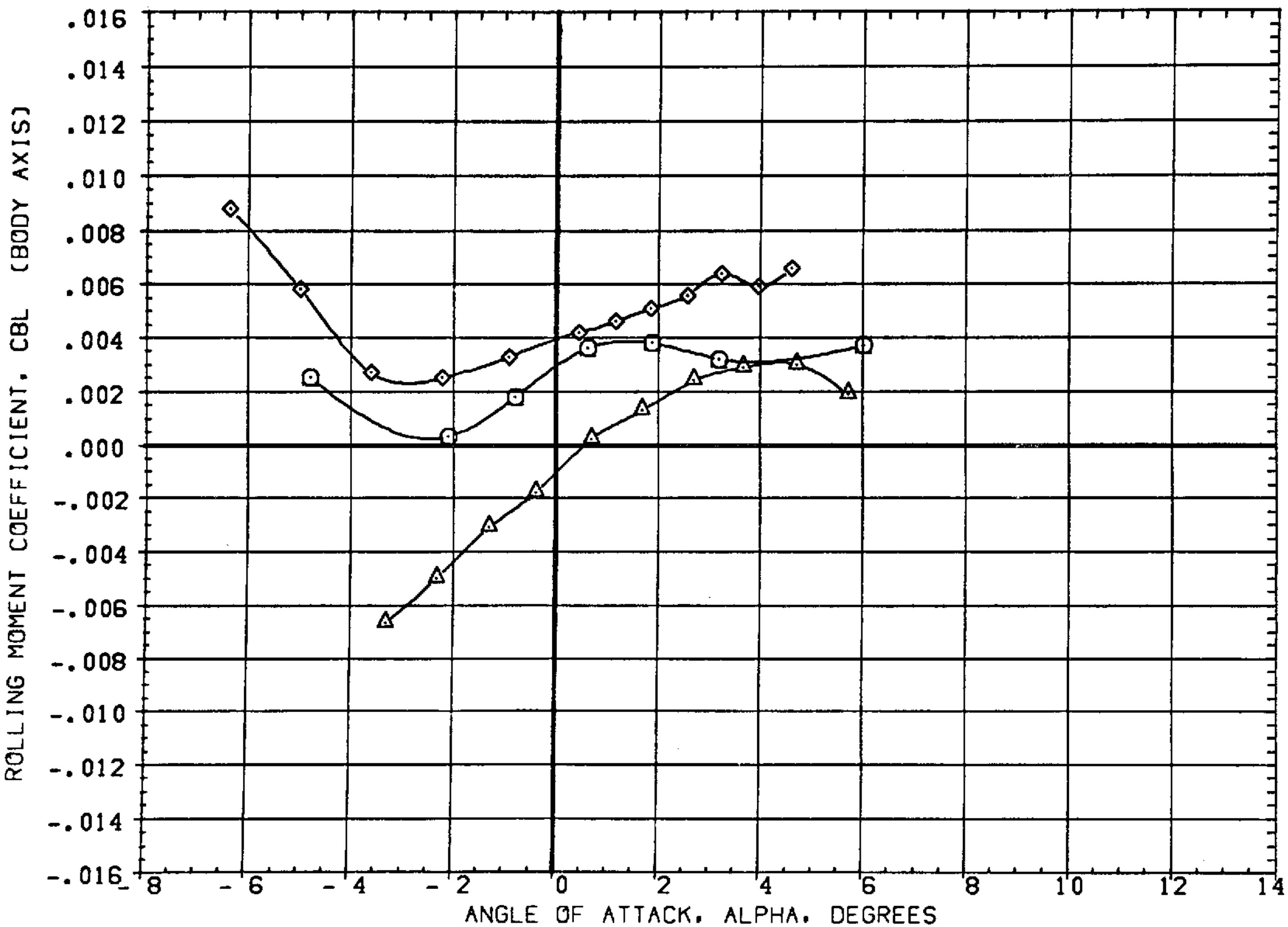


FIGURE 6 EFFECT OF WING AIRFOIL SECTION FOR AN OBLIQUE WING ANGLE OF 50 DEGREES

(A)MACH = .95

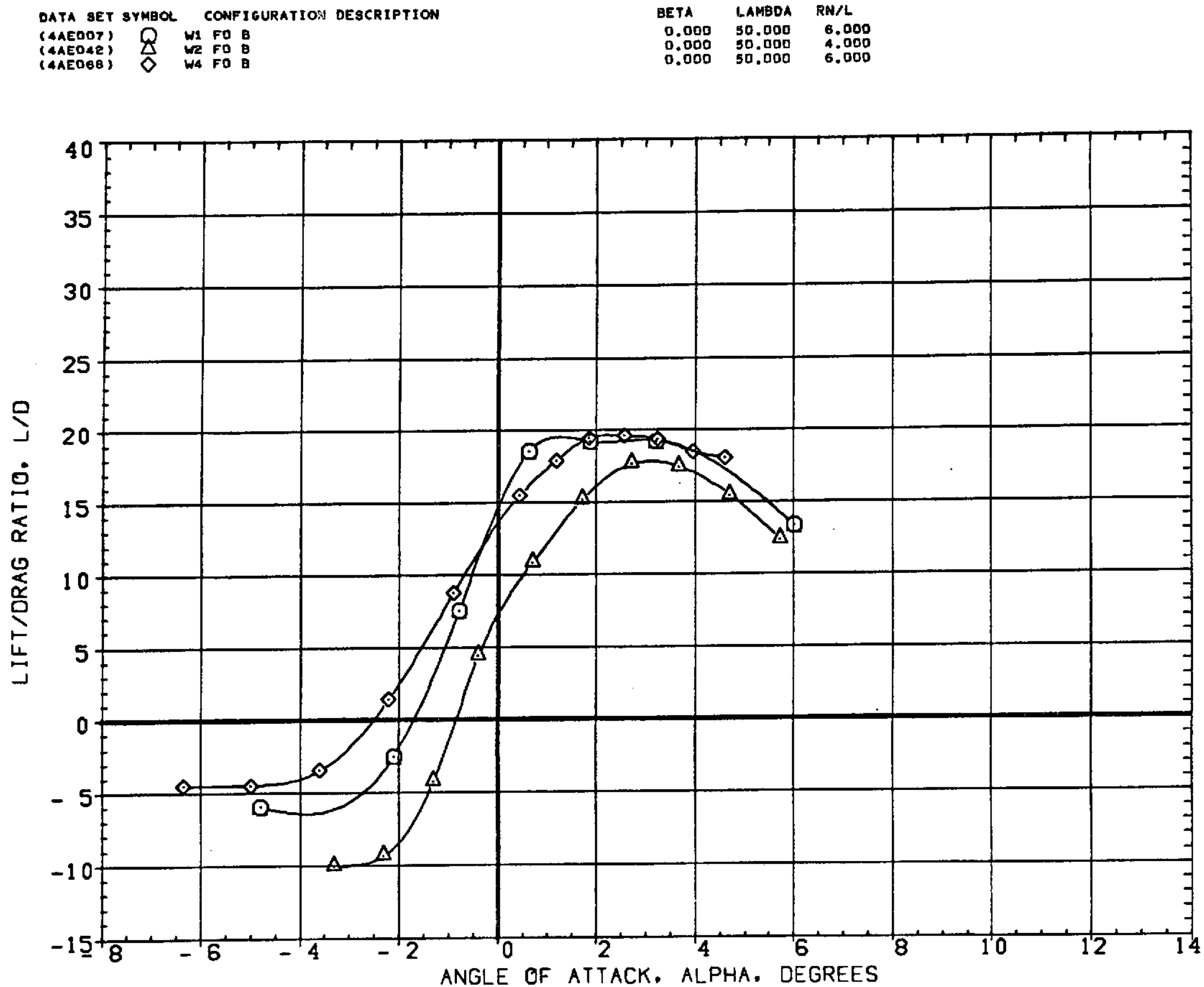


FIGURE 6 EFFECT OF WING AIRFOIL SECTION FOR AN OBLIQUE WING ANGLE OF 50 DEGREES

(A)MACH = .95

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	BETA	LAMBDA	RN/L
(5AE007)	⊙	W1 F0 B	0.000	50.000	6.000
(5AE042)	△	W2 F0 B	0.000	50.000	4.000
(5AE068)	◇	W4 F0 B	0.000	50.000	6.000

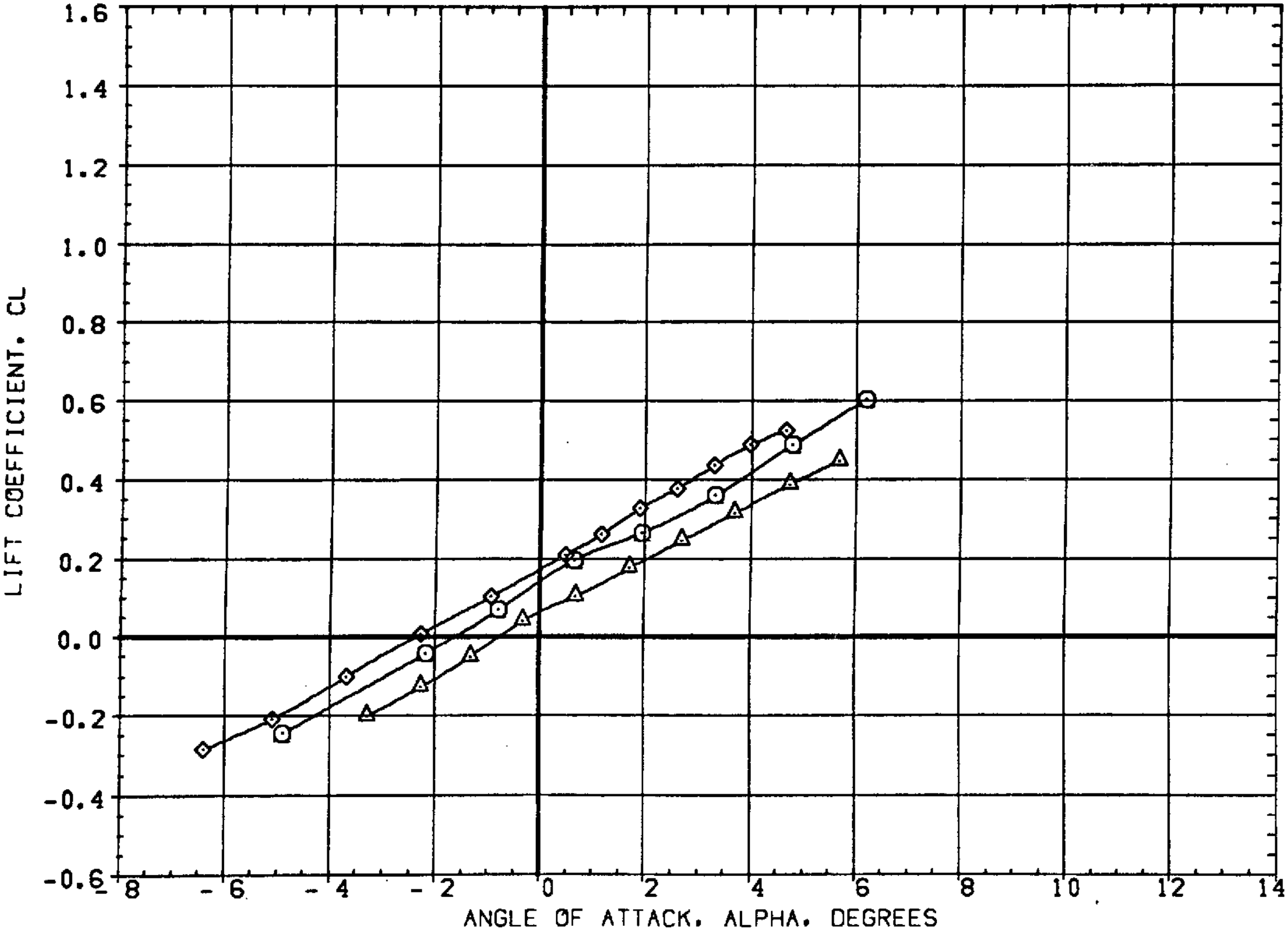


FIGURE 6 EFFECT OF WING AIRFOIL SECTION FOR AN OBLIQUE WING ANGLE OF 50 DEGREES
(A)MACH = .98

102

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	BETA	LAMBDA	RN/L
(5AE007)	○	W1 FO B	0.000	50.000	6.000
(5AE042)	△	W2 FO B	0.000	50.000	4.000
(5AE068)	◇	W4 FO B	0.000	50.000	6.000

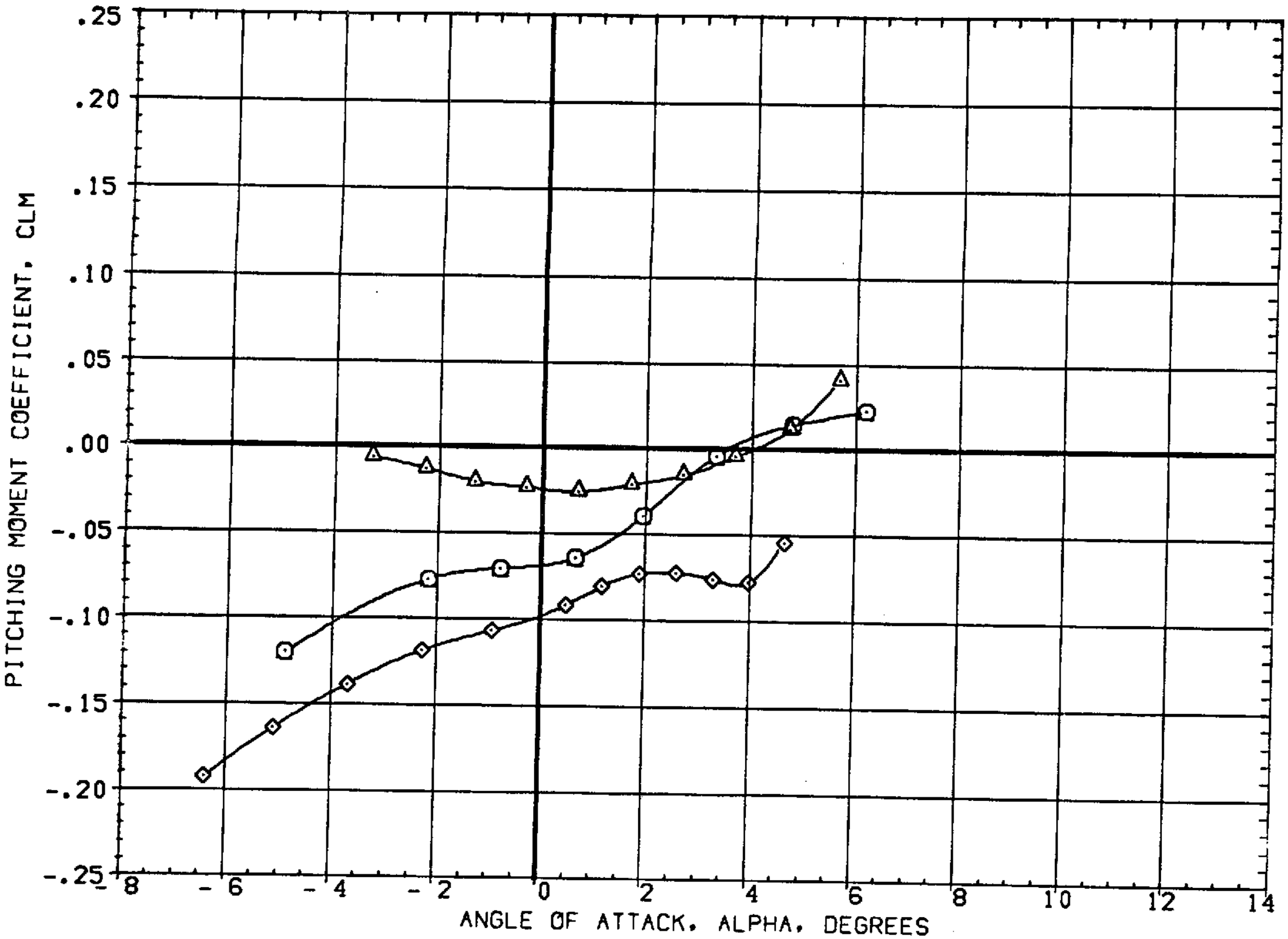


FIGURE 6 EFFECT OF WING AIRFOIL SECTION FOR AN OBLIQUE WING ANGLE OF 50 DEGREES
(A)MACH = .98

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	BETA	LAMBDA	RN/L
(5AE007)	○	W1 F0 B	0.000	50.000	6.000
(5AE042)	△	W2 F0 B	0.000	50.000	4.000
(5AE068)	◇	W4 F0 B	0.000	50.000	6.000

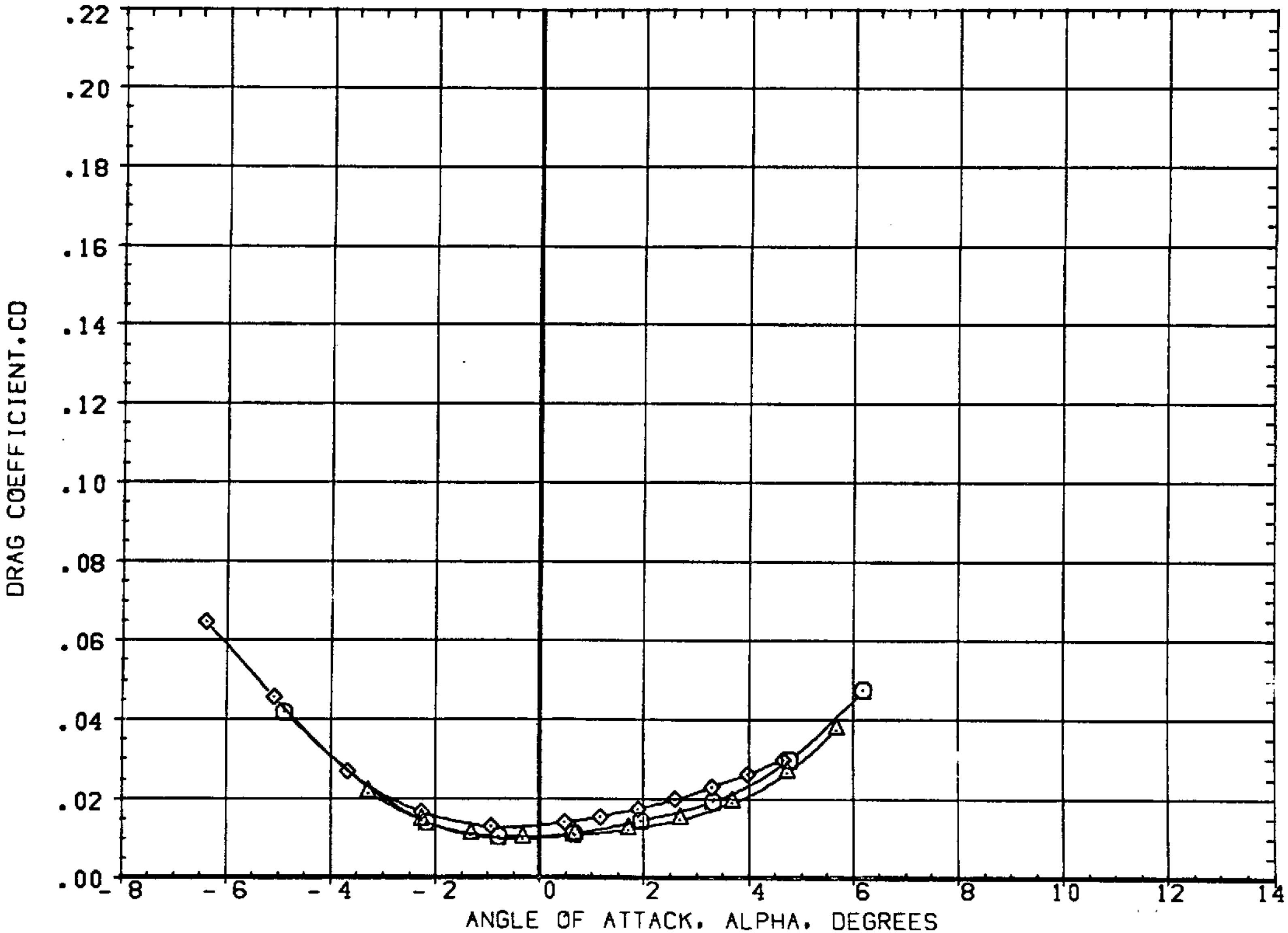


FIGURE 6 EFFECT OF WING AIRFOIL SECTION FOR AN OBLIQUE WING ANGLE OF 50 DEGREES

(A)MACH = .98

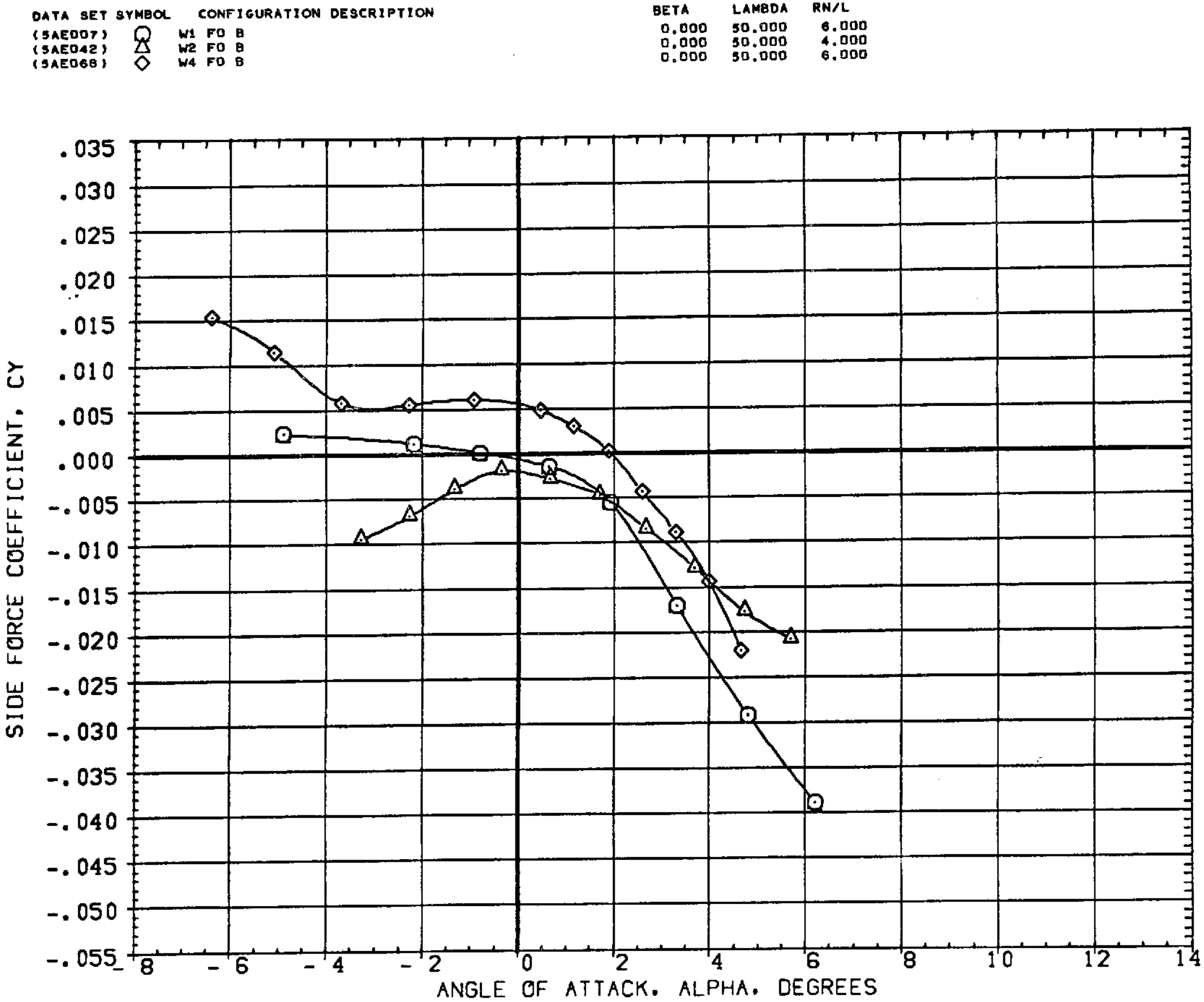


FIGURE 6 EFFECT OF WING AIRFOIL SECTION FOR AN OBLIQUE WING ANGLE OF 50 DEGREES
(A)MACH = .98

105

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	BETA	LAMBDA	RN/L
(5AE007)	○	W1 F0 B	0.000	50.000	6.000
(5AE042)	△	W2 F0 B	0.000	50.000	4.000
(5AE068)	◇	W4 F0 B	0.000	50.000	6.000

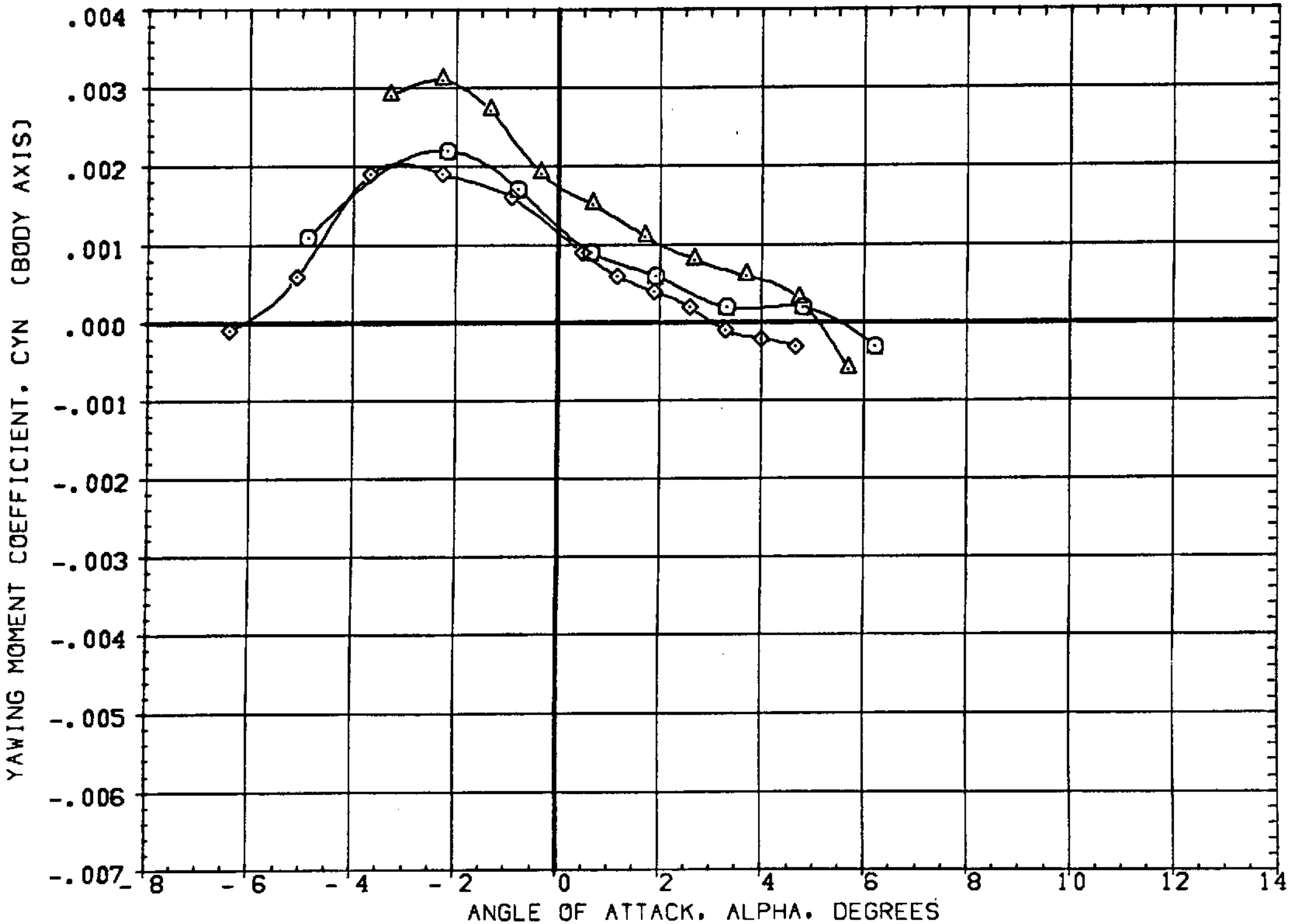


FIGURE 6 EFFECT OF WING AIRFOIL SECTION FOR AN OBLIQUE WING ANGLE OF 50 DEGREES

(A)MACH = .98

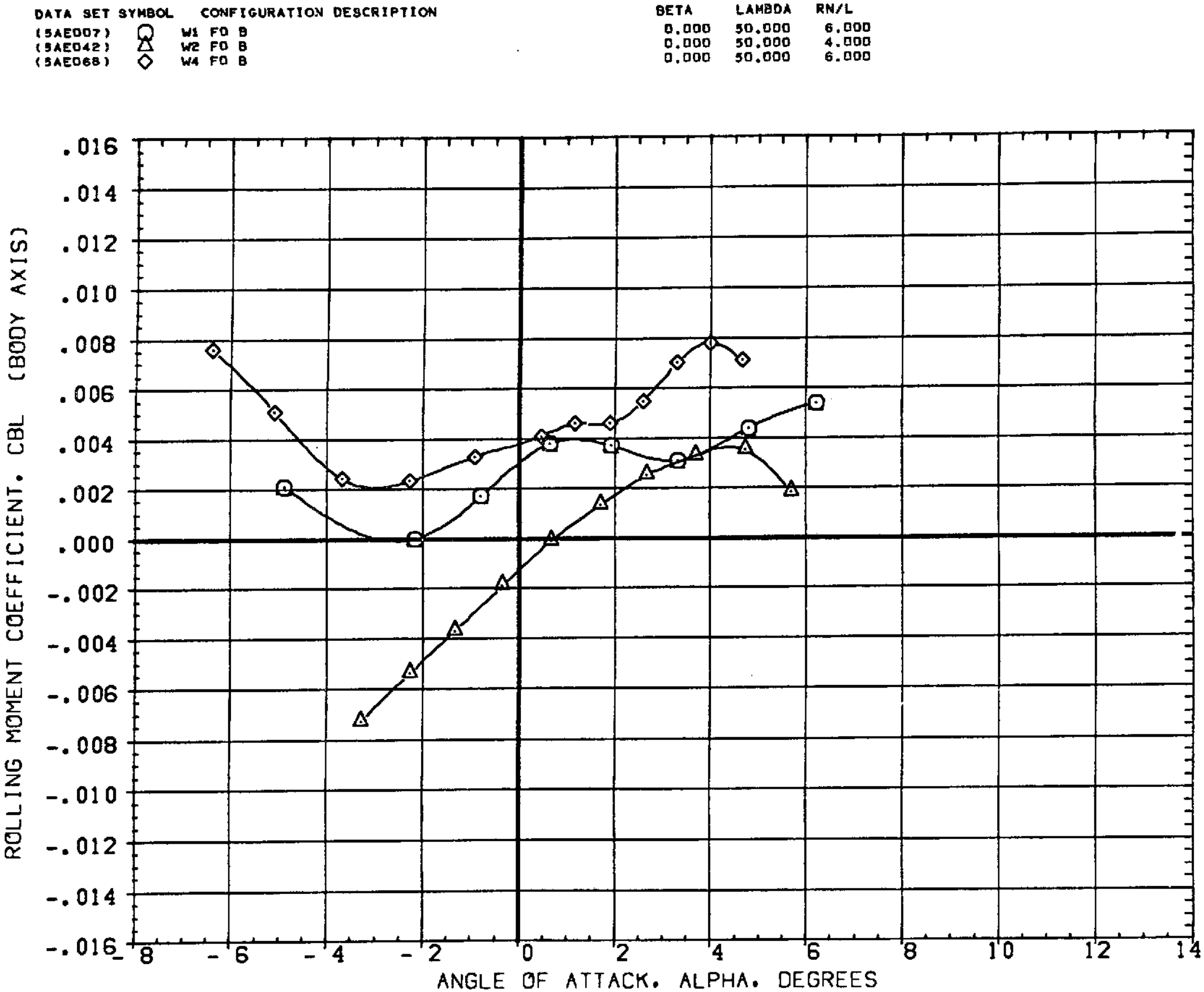


FIGURE 6 EFFECT OF WING AIRFOIL SECTION FOR AN OBLIQUE WING ANGLE OF 50 DEGREES

(A)MACH = .98

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	BETA	LAMBDA	RN/L
(5AE007)	○	W1 F0 B	0.000	50.000	6.000
(5AE042)	△	W2 F0 B	0.000	50.000	4.000
(5AE068)	◇	W4 F0 B	0.000	50.000	6.000

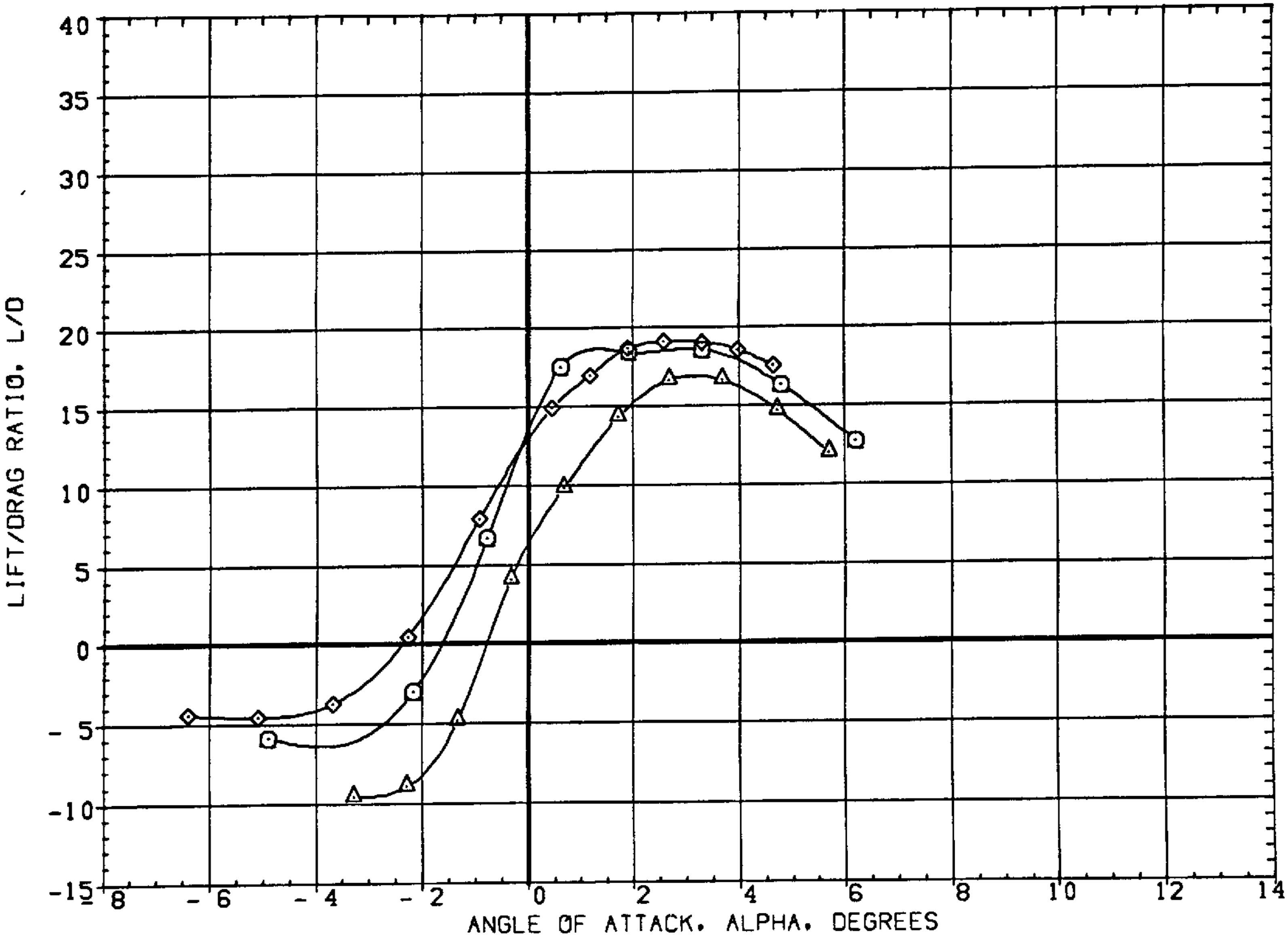


FIGURE 6 EFFECT OF WING AIRFOIL SECTION FOR AN OBLIQUE WING ANGLE OF 50 DEGREES

(A)MACH = .98

108

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	BETA	LAMBDA	RN/L
(7AE007)	⊙	W1 F0 B	0.000	50.000	6.000
(7AE042)	△	W2 F0 B	0.000	50.000	4.000
(7AE068)	◇	W4 F0 B	0.000	50.000	6.000

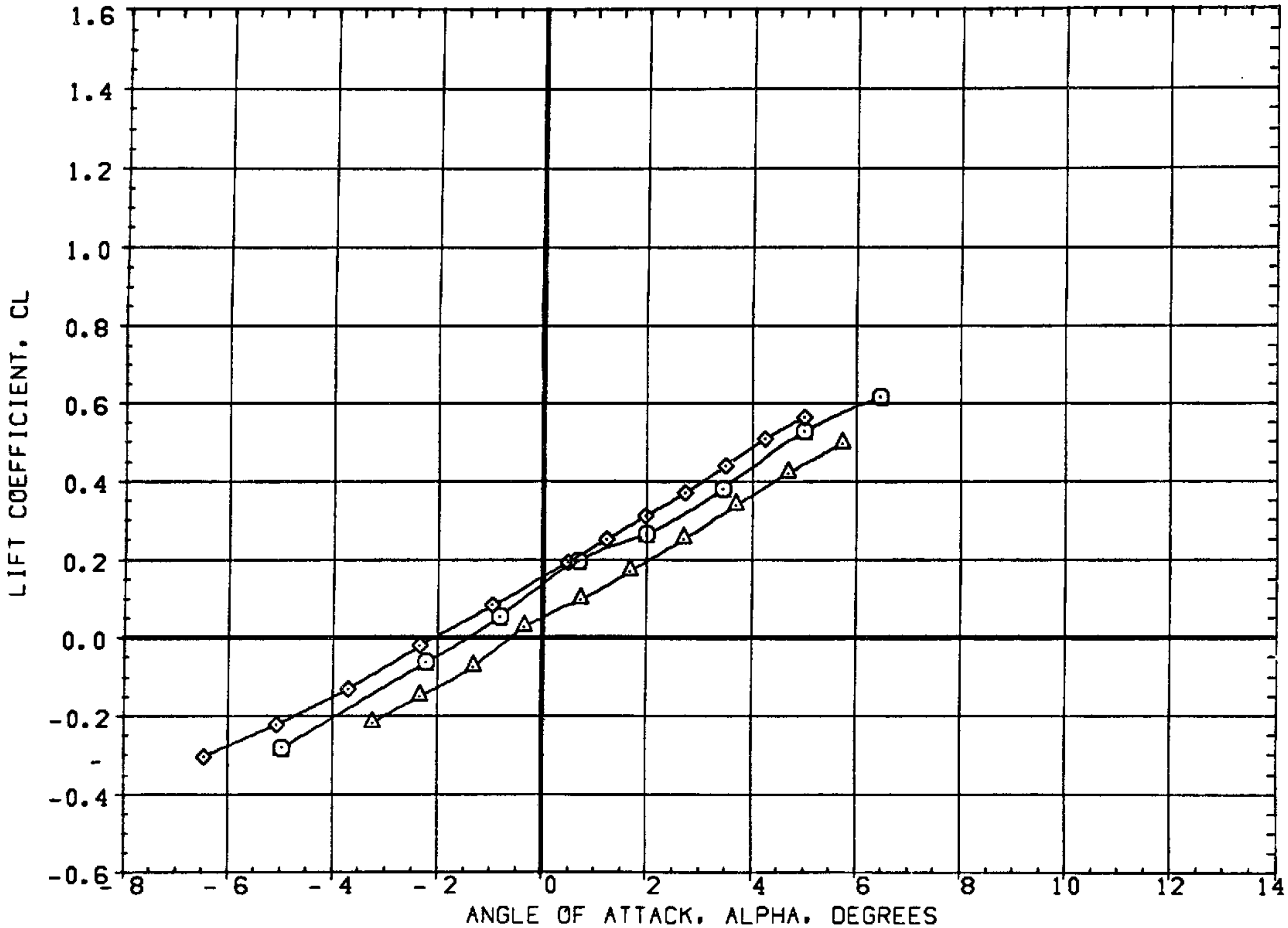


FIGURE 6 EFFECT OF WING AIRFOIL SECTION FOR AN OBLIQUE WING ANGLE OF 50 DEGREES

(A)MACH = 1.10

109

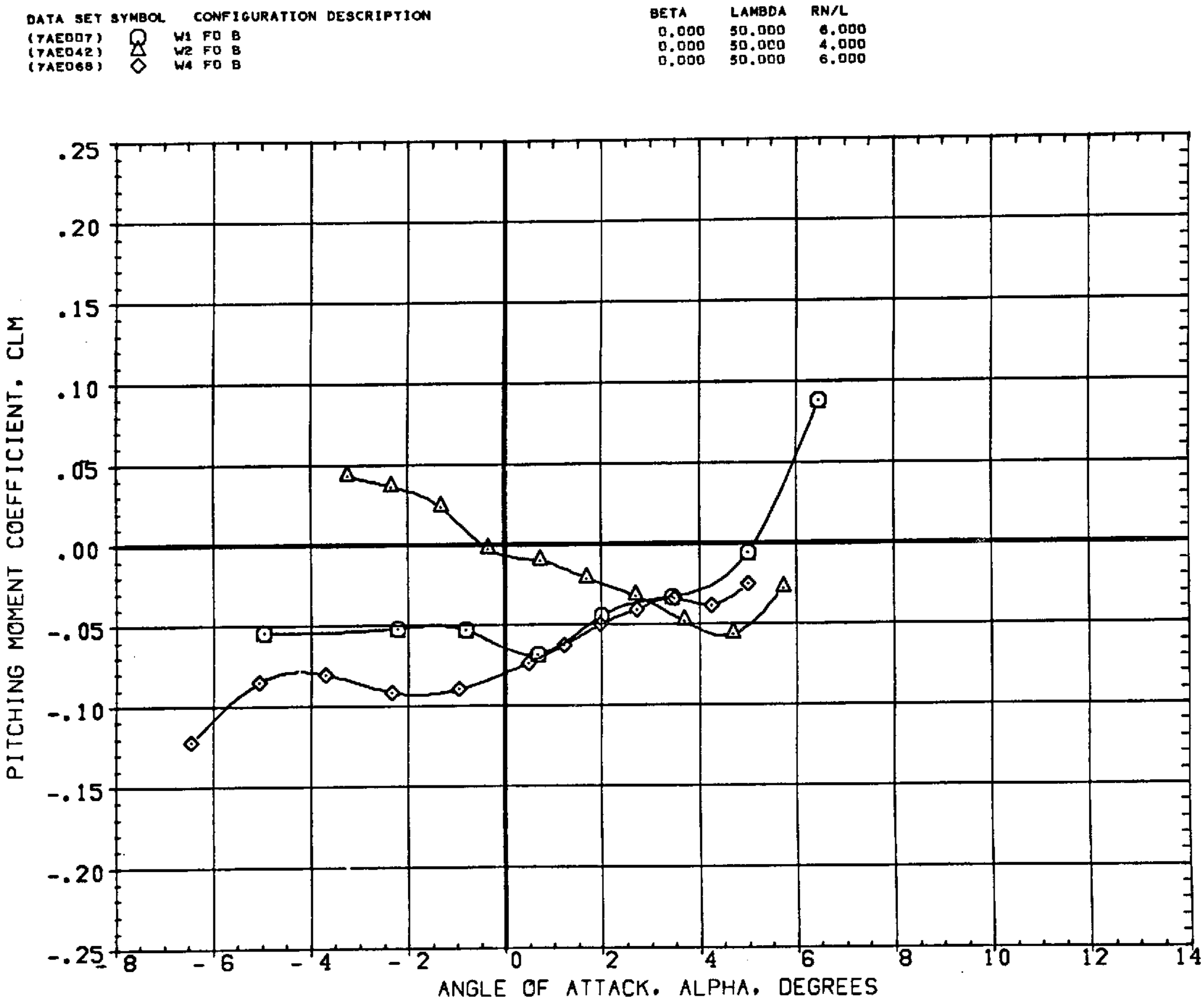


FIGURE 6 EFFECT OF WING AIRFOIL SECTION FOR AN OBLIQUE WING ANGLE OF 50 DEGREES
(A)MACH = 1.10

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	BETA	LAMBDA	RN/L
(7AE007)	○	W1 F0 B	0.000	50.000	6.000
(7AE042)	△	W2 F0 B	0.000	50.000	4.000
(7AE068)	◇	W4 F0 B	0.000	50.000	6.000

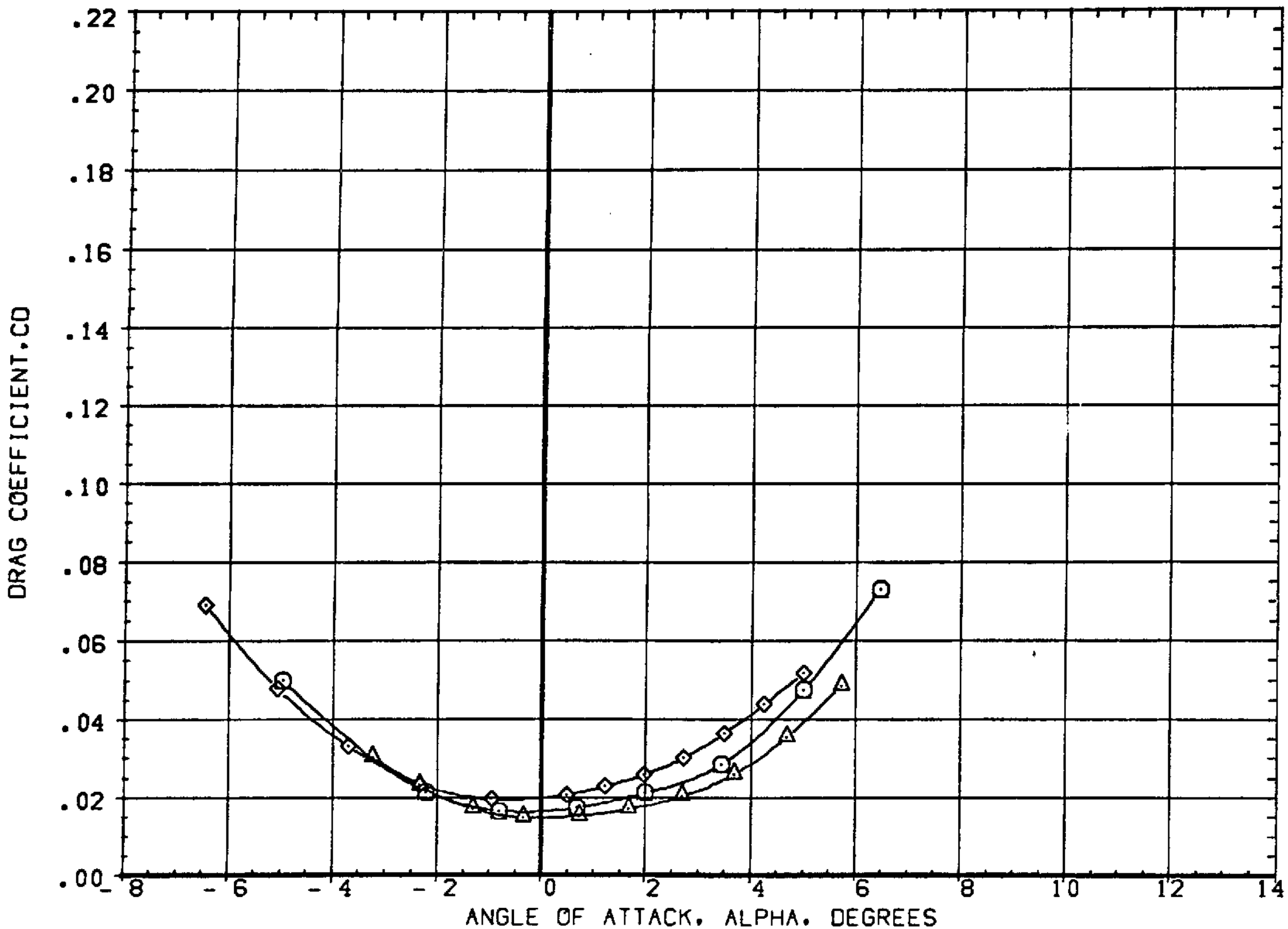


FIGURE 6 EFFECT OF WING AIRFOIL SECTION FOR AN OBLIQUE WING ANGLE OF 50 DEGREES

(A)MACH = 1.10

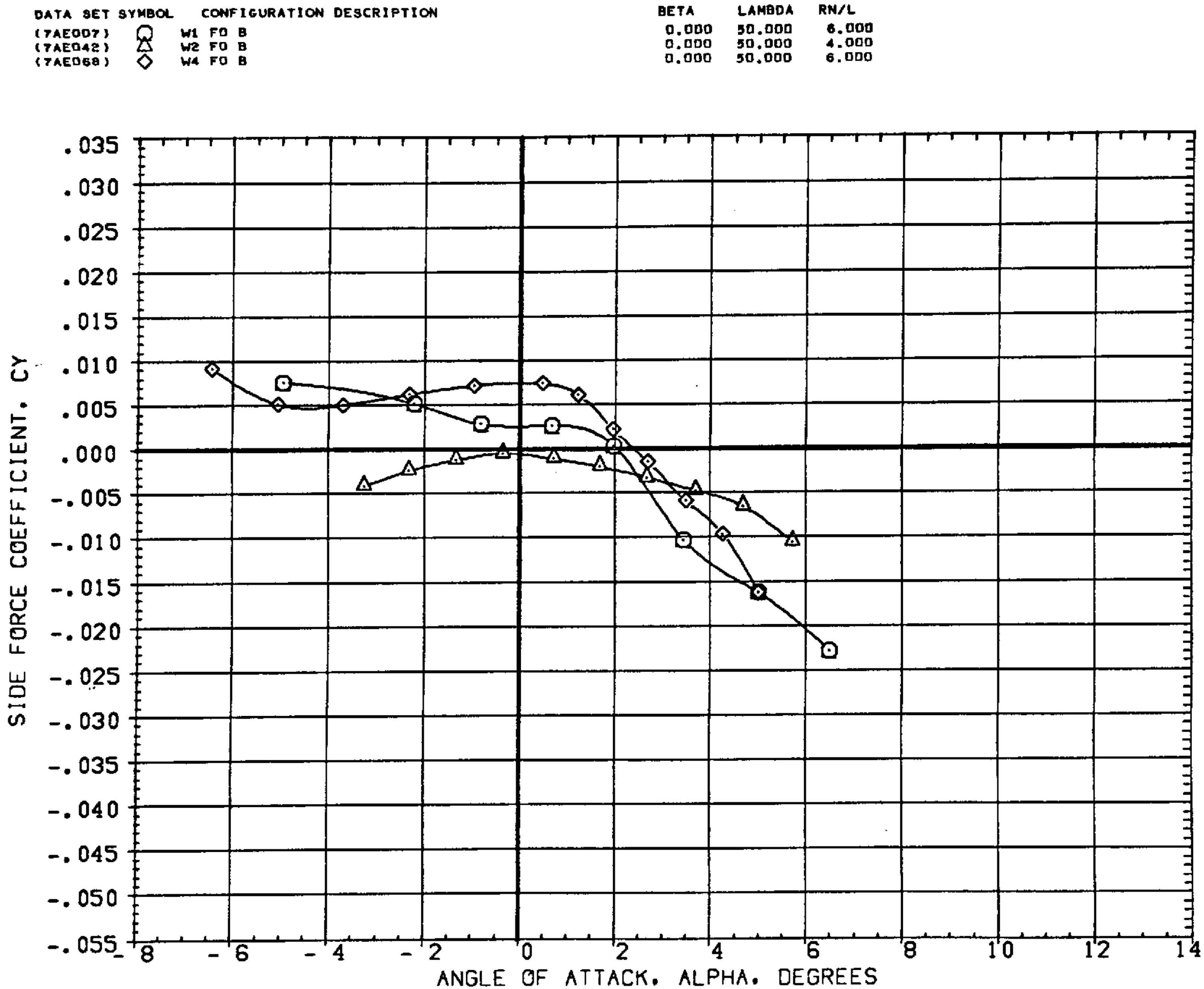


FIGURE 6 EFFECT OF WING AIRFOIL SECTION FOR AN OBLIQUE WING ANGLE OF 50 DEGREES

(A)MACH = 1.10

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	BETA	LAMBDA	RN/L
(7AE007)	○	W1 FO B	0.000	50.000	6.000
(7AE042)	△	W2 FO B	0.000	50.000	4.000
(7AE068)	◇	W4 FO B	0.000	50.000	6.000

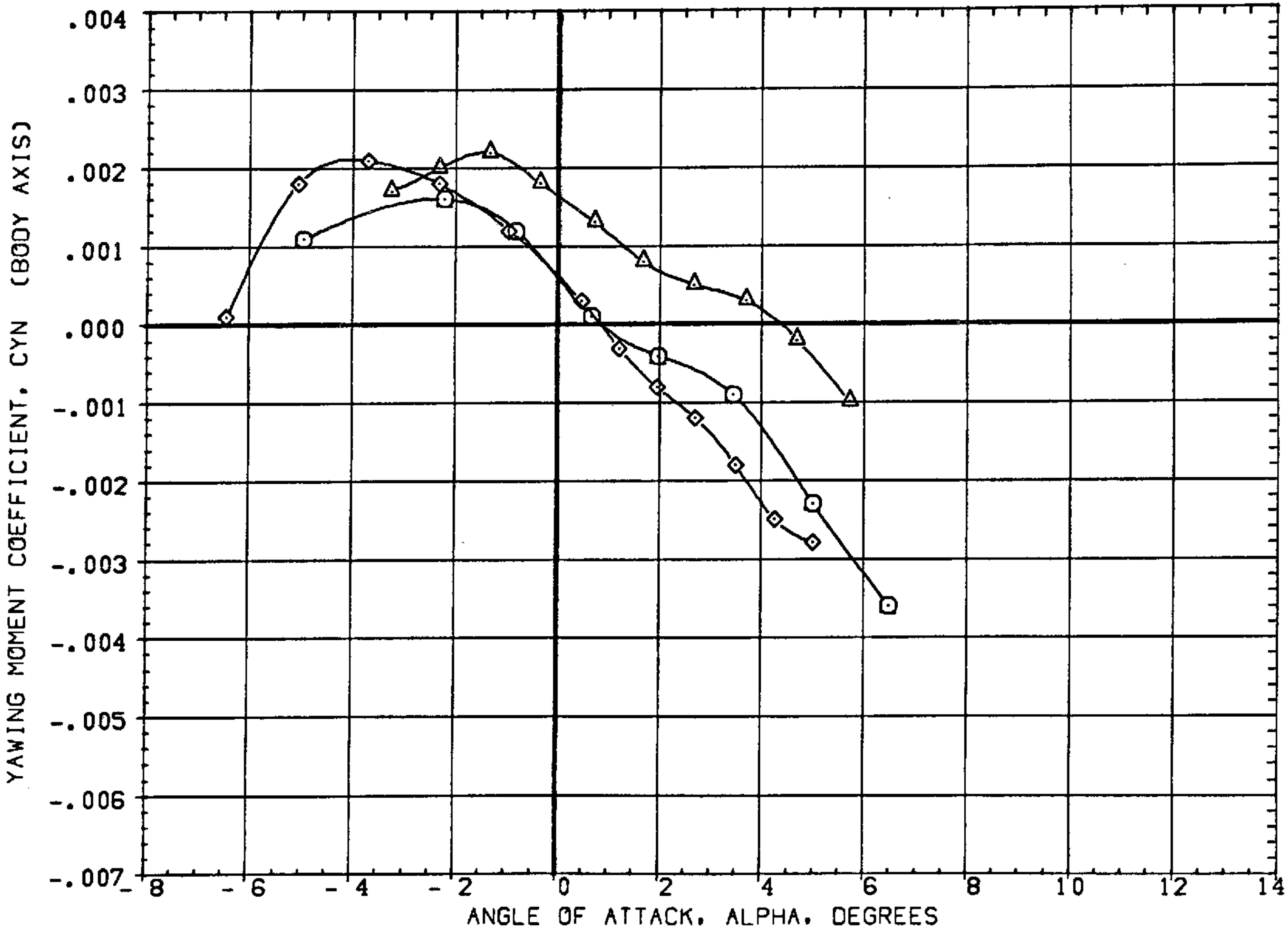


FIGURE 6 EFFECT OF WING AIRFOIL SECTION FOR AN OBLIQUE WING ANGLE OF 50 DEGREES

(A)MACH = 1.10

113

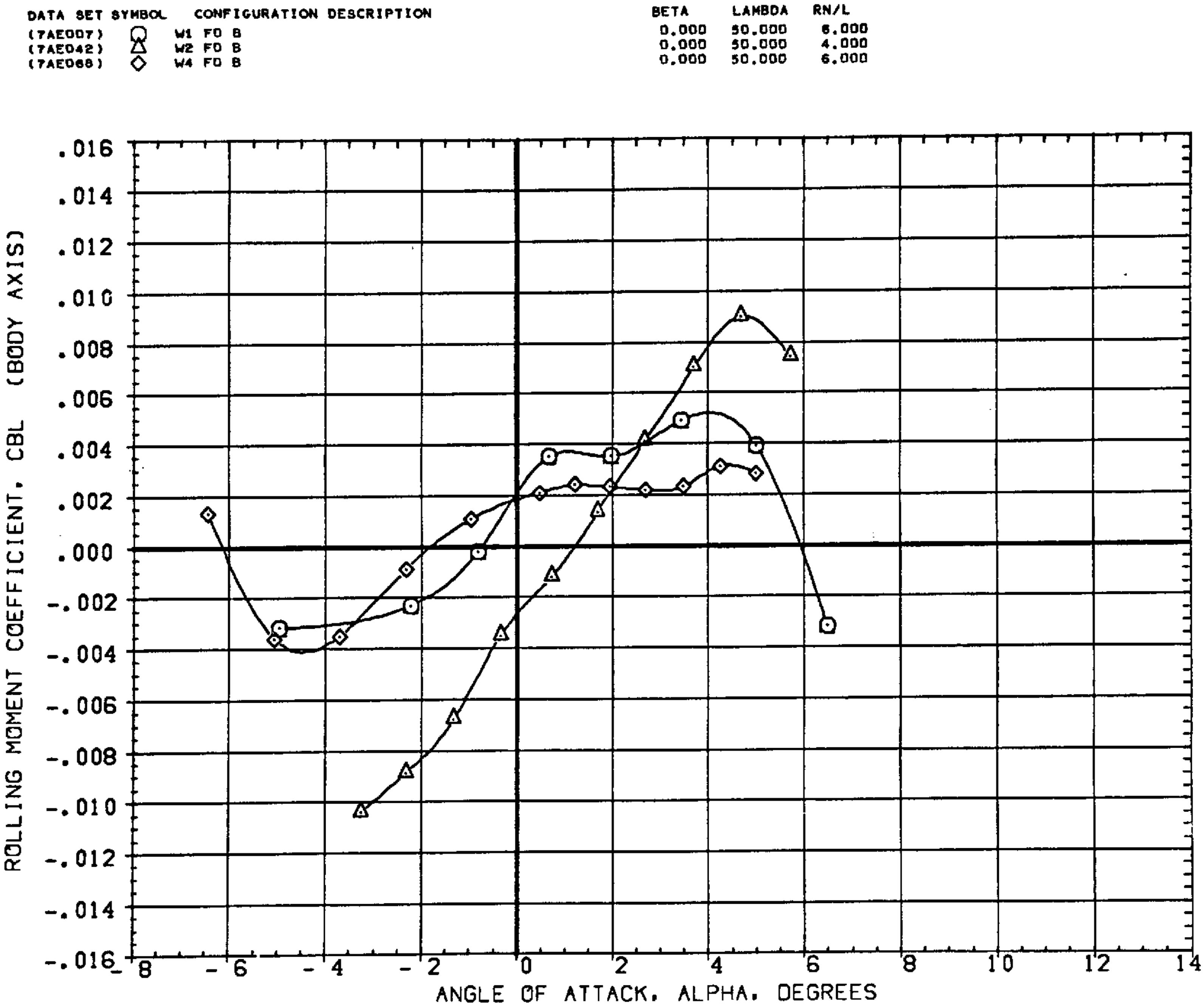


FIGURE 6 EFFECT OF WING AIRFOIL SECTION FOR AN OBLIQUE WING ANGLE OF 50 DEGREES

(A)MACH = 1.10

117

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	BETA	LAMBDA	RN/L
(7AE007)	○	W1 F0 B	0.000	50.000	6.000
(7AE042)	△	W2 F0 B	0.000	50.000	4.000
(7AE068)	◇	W4 F0 B	0.000	50.000	6.000

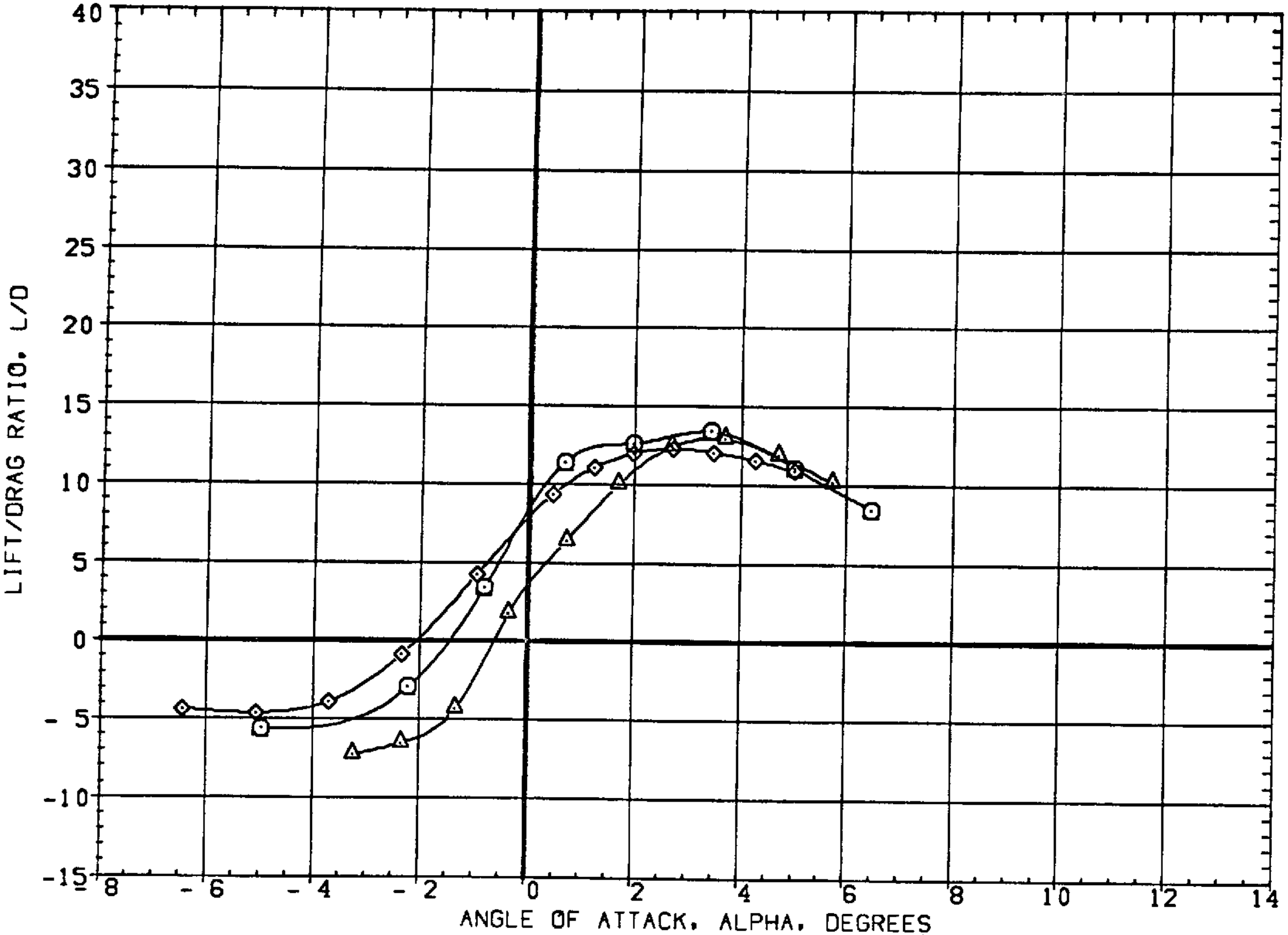


FIGURE 6 EFFECT OF WING AIRFOIL SECTION FOR AN OBLIQUE WING ANGLE OF 50 DEGREES

(A)MACH = 1.10

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	BETA	LAMBDA	RN/L
(8AE007)	○	W1 F0 B	0.000	50.000	6.000
(8AE042)	△	W2 F0 B	0.000	50.000	4.000
(8AE068)	◇	W4 F0 B	0.000	50.000	6.000

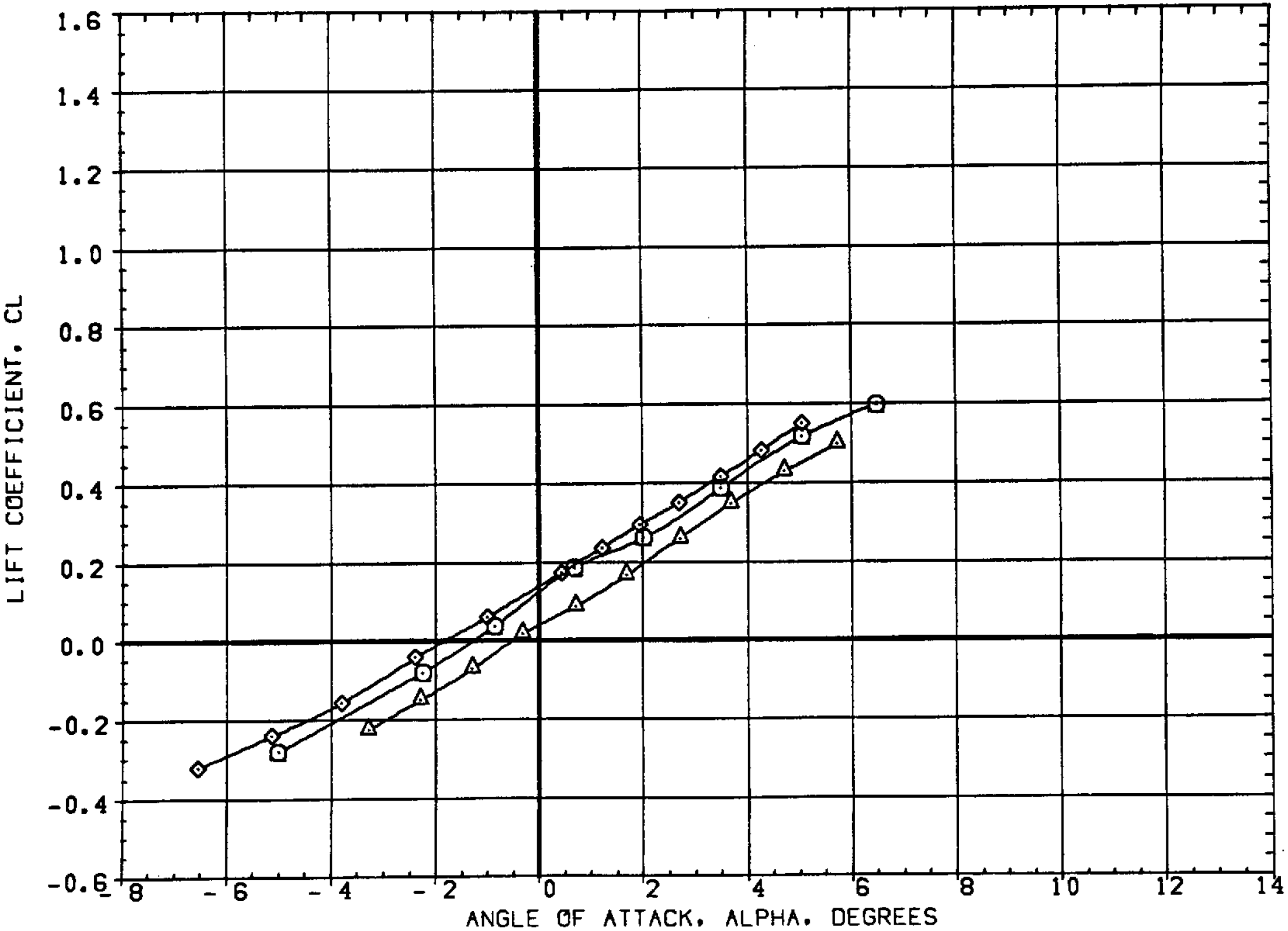


FIGURE 6 EFFECT OF WING AIRFOIL SECTION FOR AN OBLIQUE WING ANGLE OF 50 DEGREES

(A)MACH = 1.15

116

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	BETA	LAMBDA	RN/L
(8AE007)	○	W1 F0 B	0.000	50.000	6.000
(8AE042)	△	W2 F0 B	0.000	50.000	4.000
(8AE068)	◇	W4 F0 B	0.000	50.000	6.000

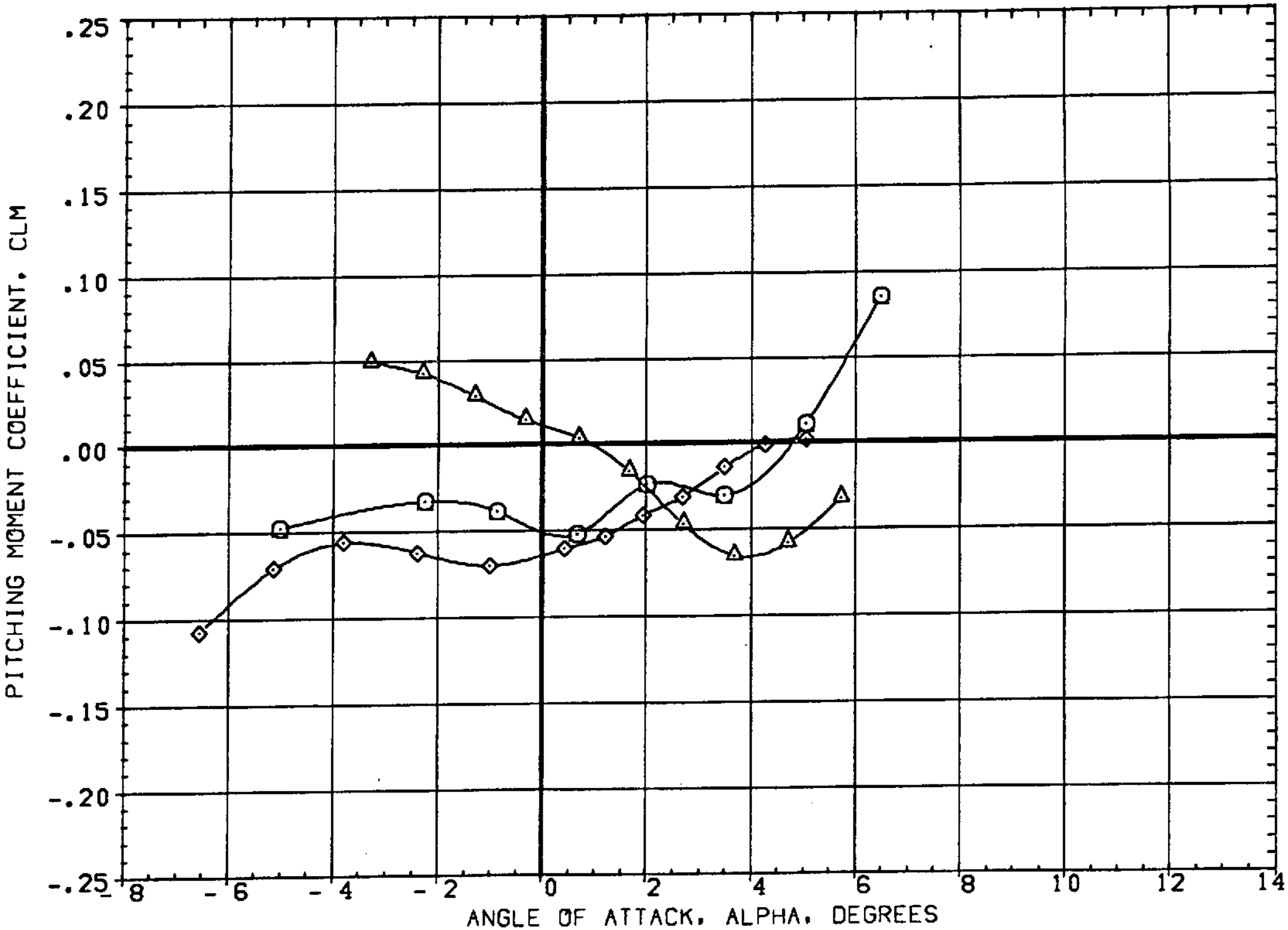


FIGURE 6 EFFECT OF WING AIRFOIL SECTION FOR AN OBLIQUE WING ANGLE OF 50 DEGREES

(A)MACH = 1.15

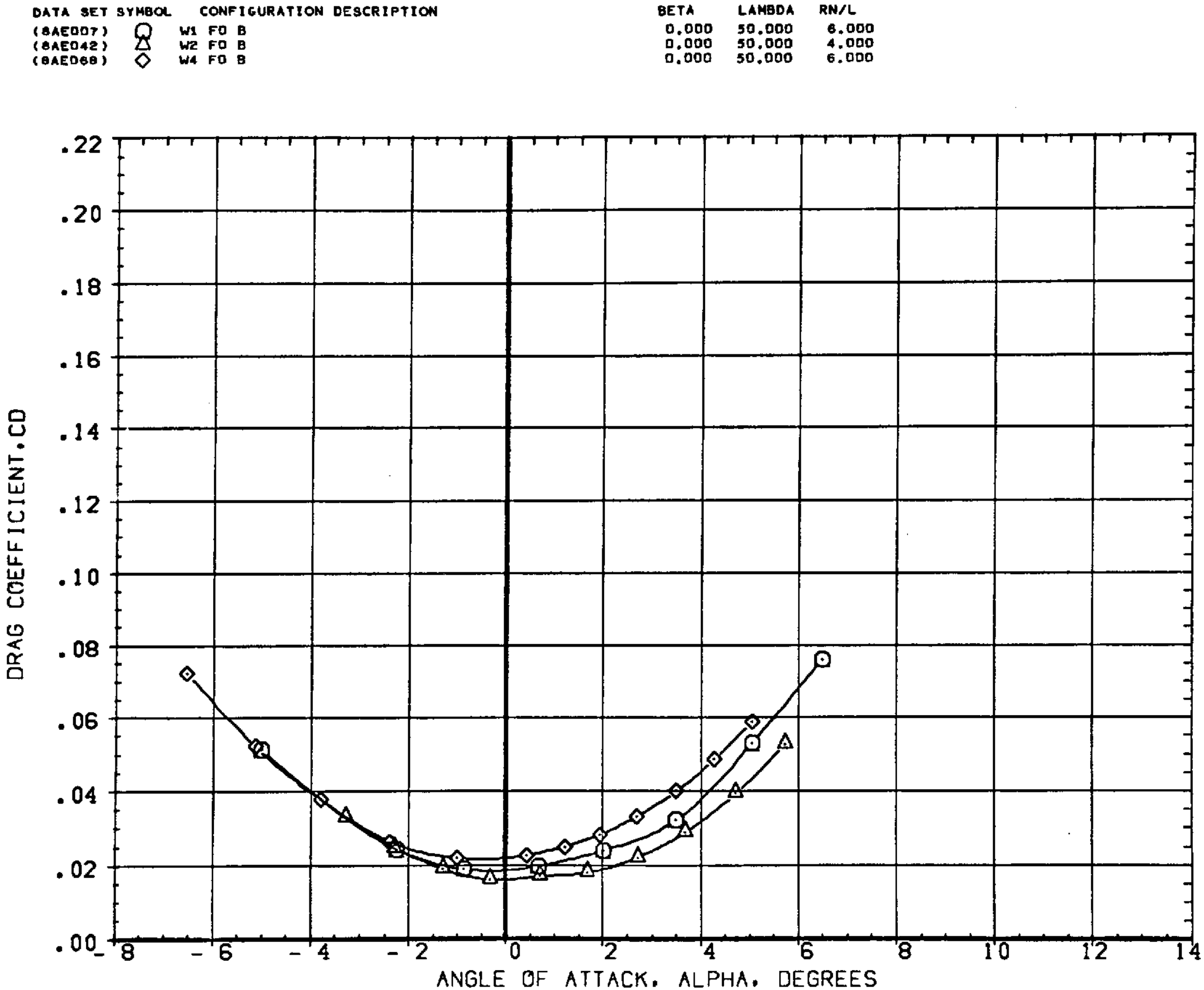


FIGURE 6 EFFECT OF WING AIRFOIL SECTION FOR AN OBLIQUE WING ANGLE OF 50 DEGREES

(A)MACH = 1.15

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	BETA	LAMBDA	RN/L
(8AE007)	○	W1 F0 B	0.000	50.000	6.000
(8AE042)	△	W2 F0 B	0.000	50.000	4.000
(8AE068)	◇	W4 F0 B	0.000	50.000	6.000

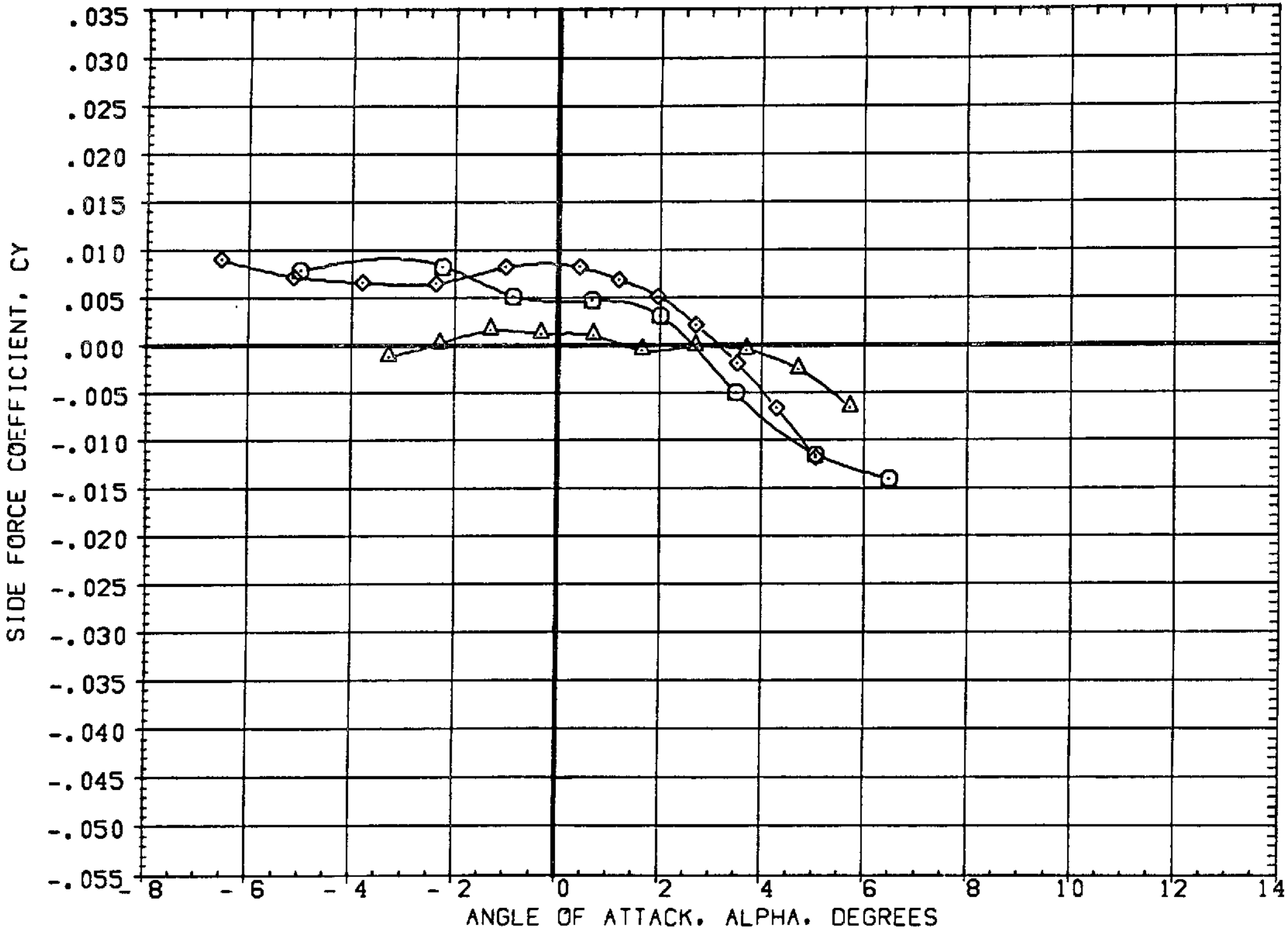


FIGURE 6 EFFECT OF WING AIRFOIL SECTION FOR AN OBLIQUE WING ANGLE OF 50 DEGREES

(A)MACH = 1.15

119

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	BETA	LAMBDA	RN/L
(8AE007)	○	W1 F0 B	0.000	50.000	6.000
(8AE042)	△	W2 F0 B	0.000	50.000	4.000
(8AE066)	◇	W4 F0 B	0.000	50.000	6.000

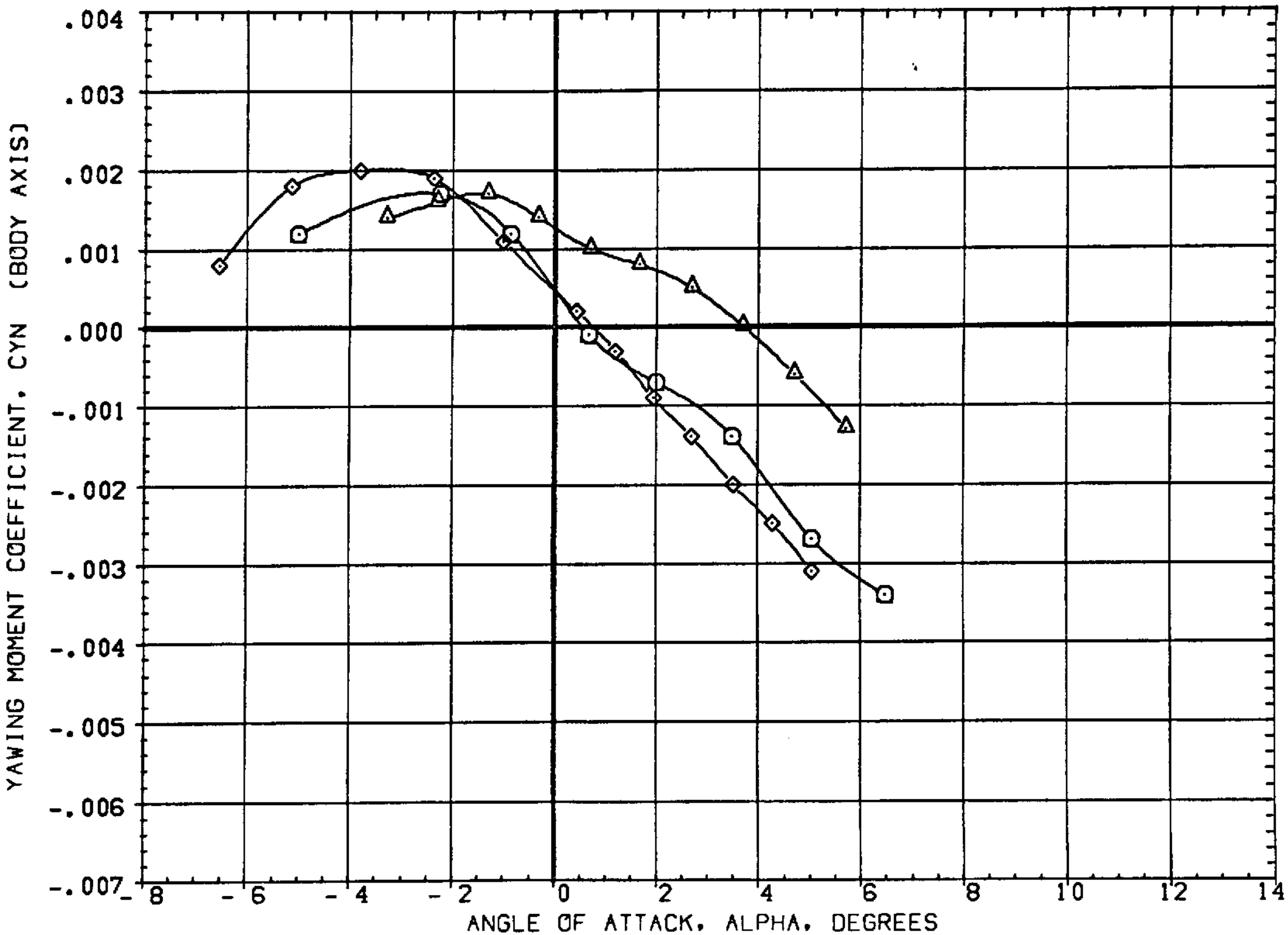


FIGURE 6 EFFECT OF WING AIRFOIL SECTION FOR AN OBLIQUE WING ANGLE OF 50 DEGREES

(A)MACH = 1.15

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	BETA	LAMBDA	RN/L
(8AE007)	○	W1 F0 B	0.000	50.000	6.000
(8AE042)	△	W2 F0 B	0.000	50.000	4.000
(8AE068)	◇	W4 F0 B	0.000	50.000	6.000

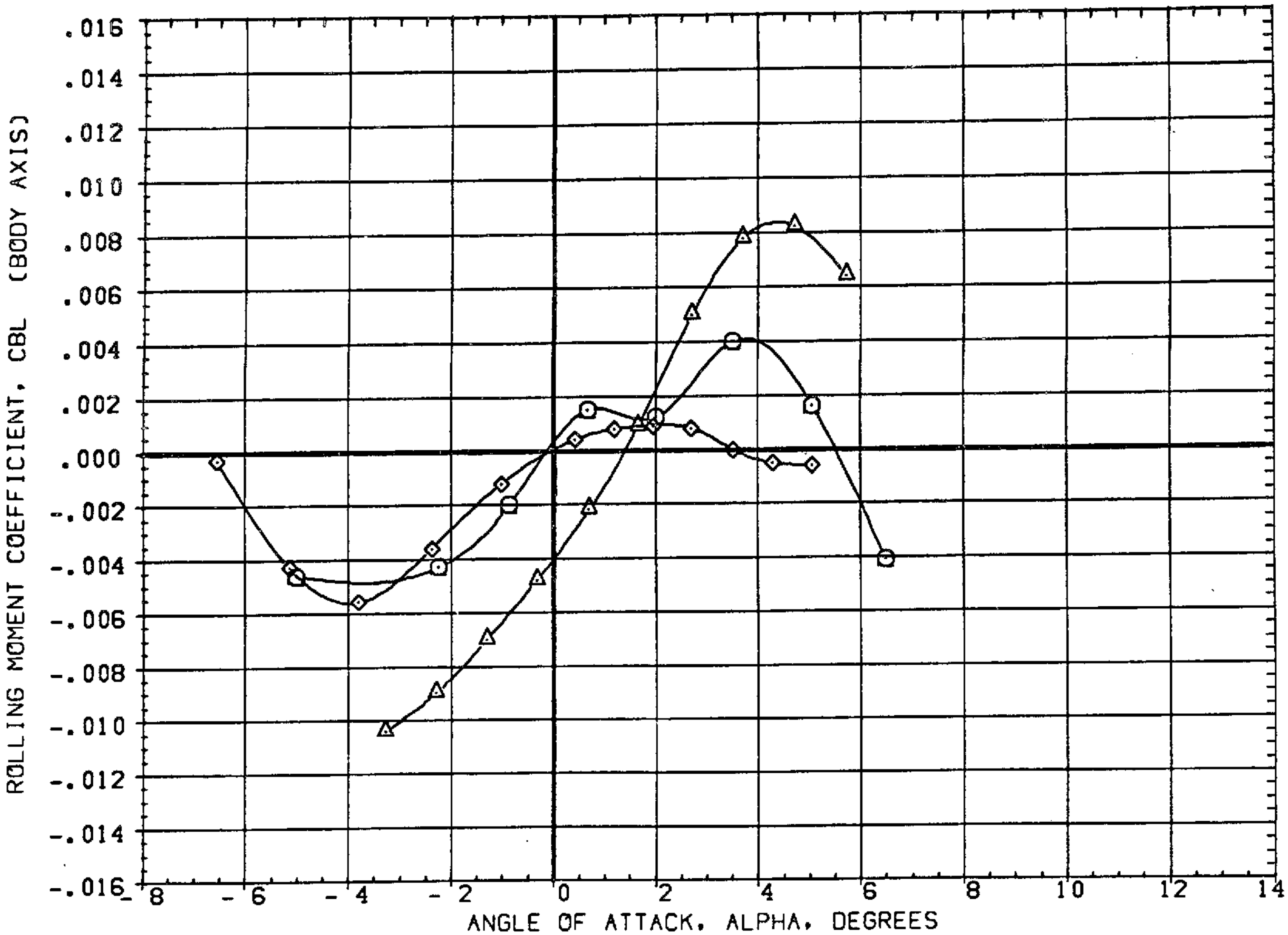


FIGURE 6 EFFECT OF WING AIRFOIL SECTION FOR AN OBLIQUE WING ANGLE OF 50 DEGREES

(A)MACH = 1.15

121

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	BETA	LAMBDA	RN/L
(8AE007)	○	W1 F0 B	0.000	50.000	6.000
(8AE042)	△	W2 F0 B	0.000	50.000	4.000
(8AE068)	◇	W4 F0 B	0.000	50.000	6.000

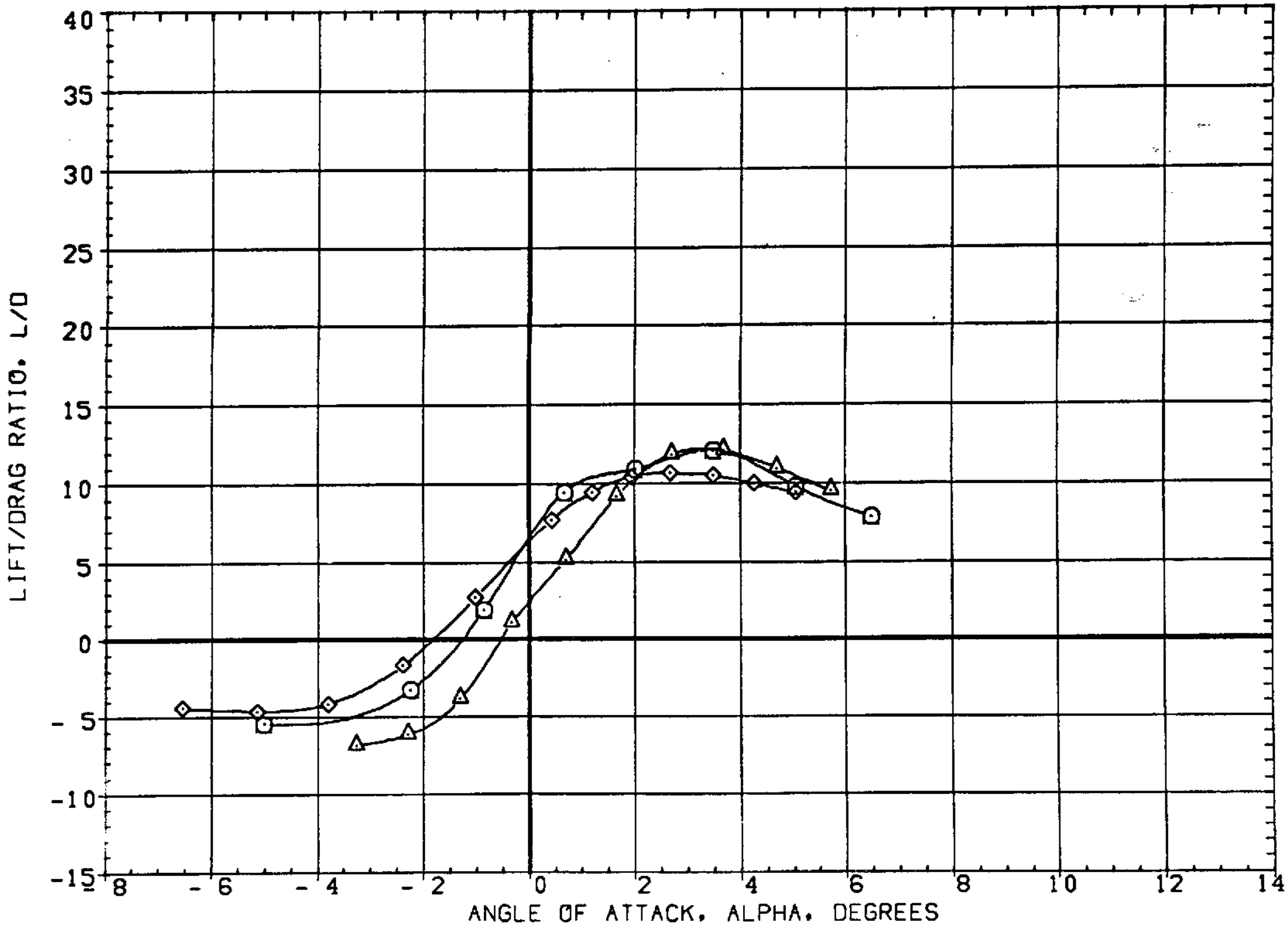


FIGURE 6 EFFECT OF WING AIRFOIL SECTION FOR AN OBLIQUE WING ANGLE OF 50 DEGREES

(A)MACH = 1.15

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	BETA	LAMBDA	RN/L
(9AE007)	○	W1 F0 B	0.000	50.000	6.000
(9AE042)	△	W2 F0 B	0.000	50.000	4.000
(9AE068)	◇	W4 F0 B	0.000	50.000	6.000

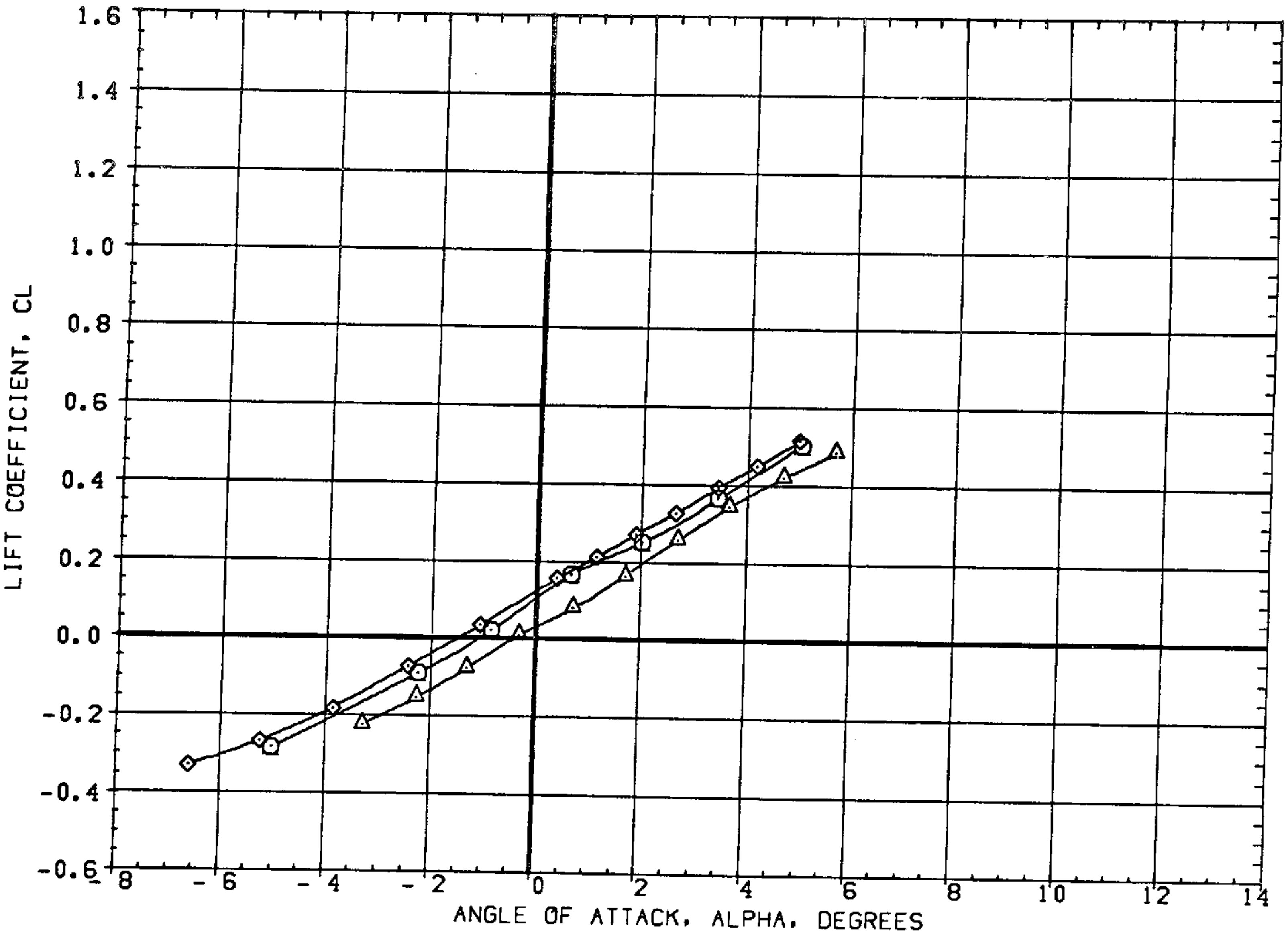


FIGURE 6 EFFECT OF WING AIRFOIL SECTION FOR AN OBLIQUE WING ANGLE OF 50 DEGREES
(A)MACH = 1.20

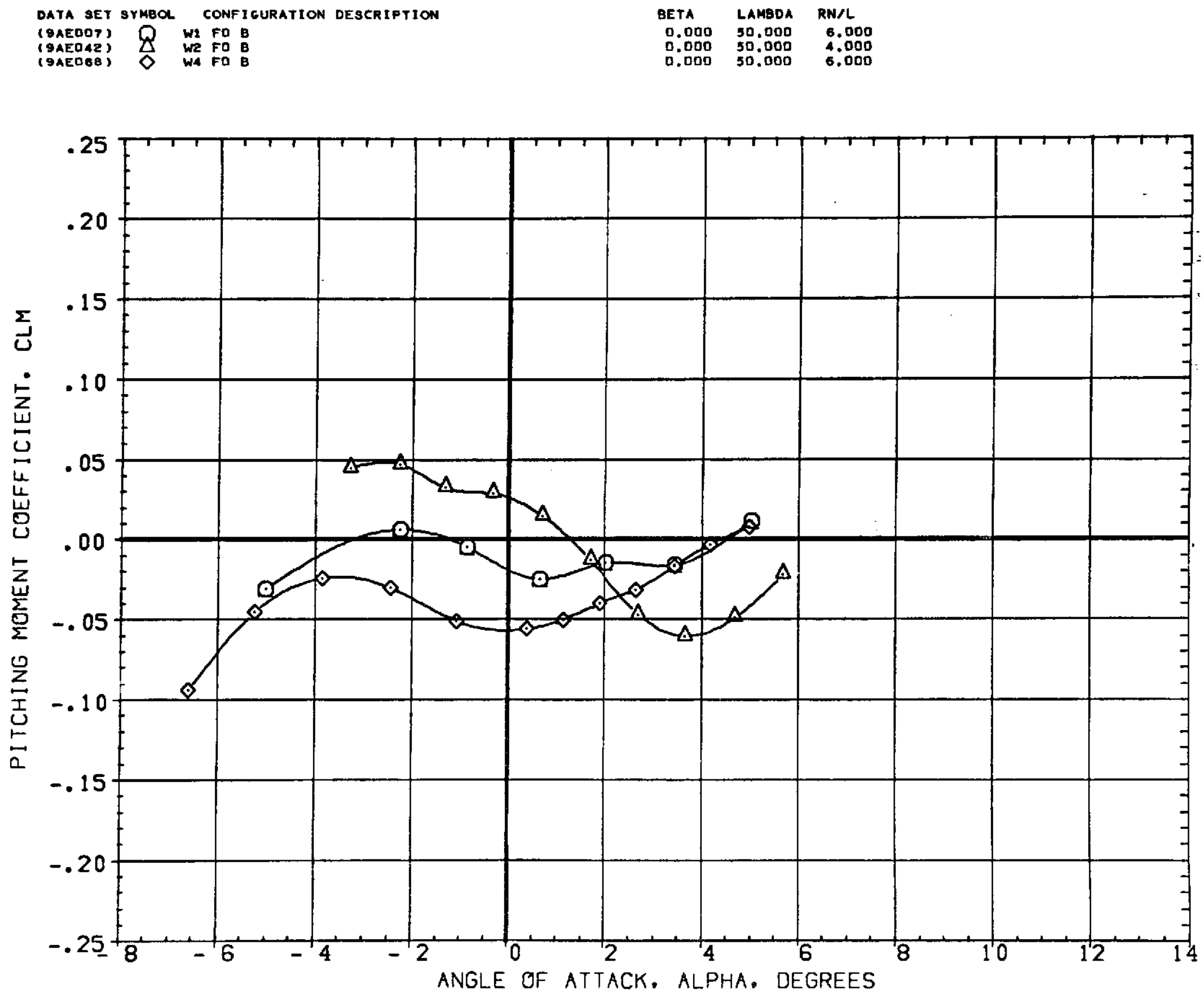


FIGURE 6 EFFECT OF WING AIRFOIL SECTION FOR AN OBLIQUE WING ANGLE OF 50 DEGREES

(A)MACH = 1.20

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	BETA	LAMBDA	RN/L
(9AE007)	○	W1 FO B	0.000	50.000	6.000
(9AE042)	△	W2 FO B	0.000	50.000	4.000
(9AE068)	◇	W4 FO B	0.000	50.000	6.000

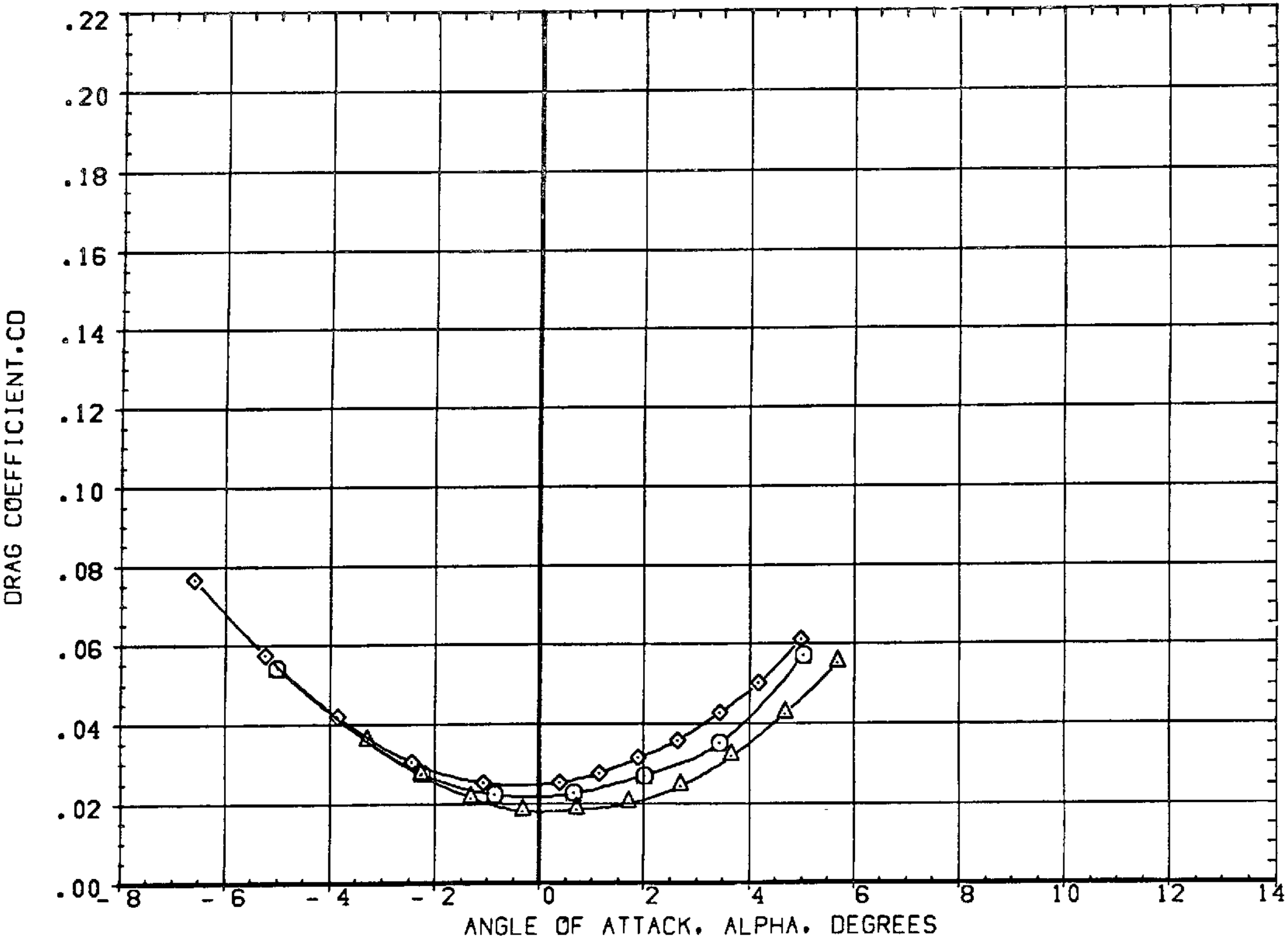


FIGURE 6 EFFECT OF WING AIRFOIL SECTION FOR AN OBLIQUE WING ANGLE OF 50 DEGREES

(A)MACH = 1.20

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	BETA	LAMBDA	RN/L
(9AE007)	○	W1 F0 B	0.000	50.000	6.000
(9AE042)	△	W2 F0 B	0.000	50.000	4.000
(9AE068)	◇	W4 F0 B	0.000	50.000	6.000

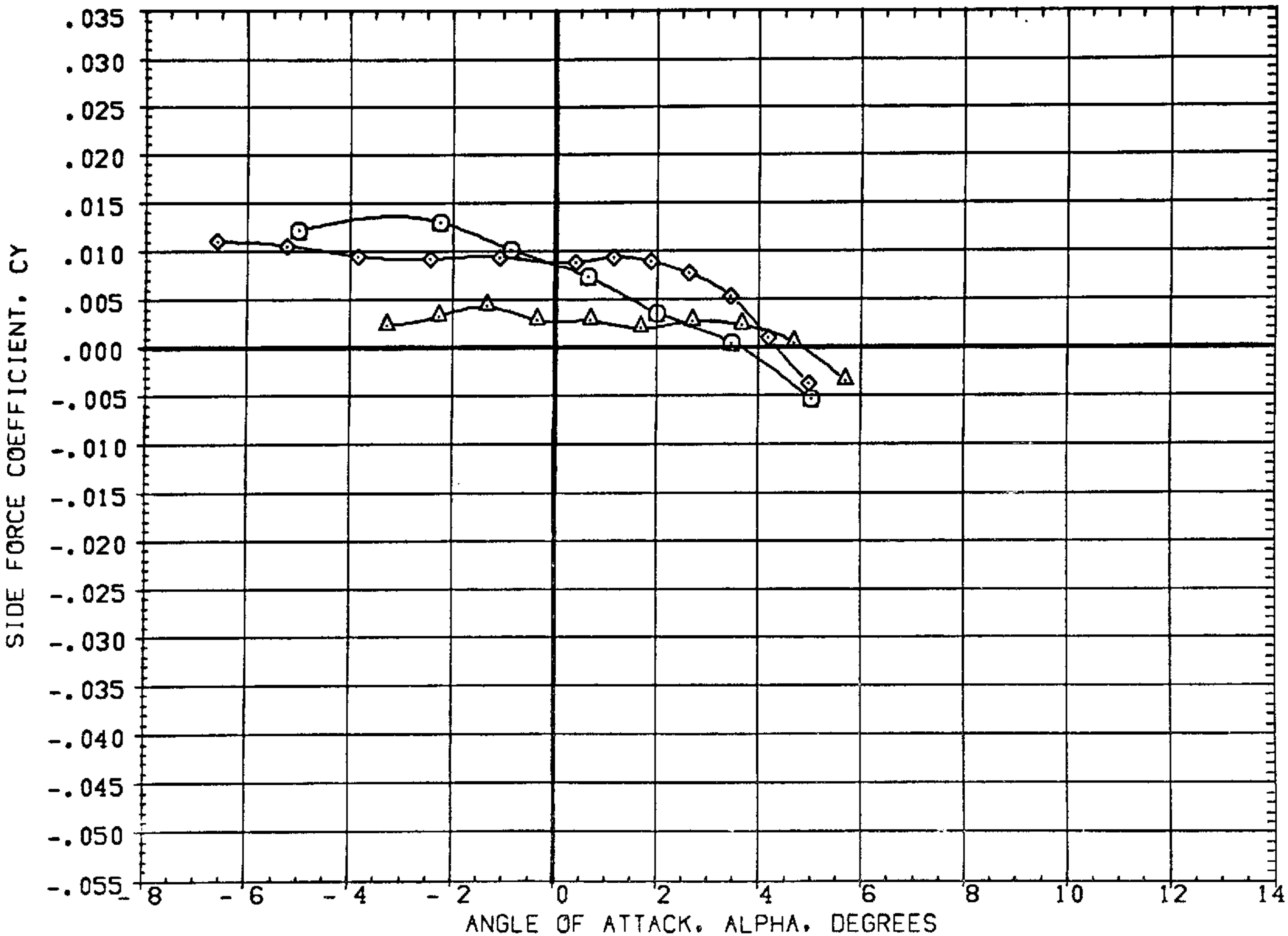


FIGURE 6 EFFECT OF WING AIRFOIL SECTION FOR AN OBLIQUE WING ANGLE OF 50 DEGREES

(A)MACH = 1.20

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	BETA	LAMBDA	RN/L
(9AE007)	○	W1 F0 B	0.000	50.000	6.000
(9AE042)	△	W2 F0 B	0.000	50.000	4.000
(9AE068)	◇	W4 F0 B	0.000	50.000	6.000

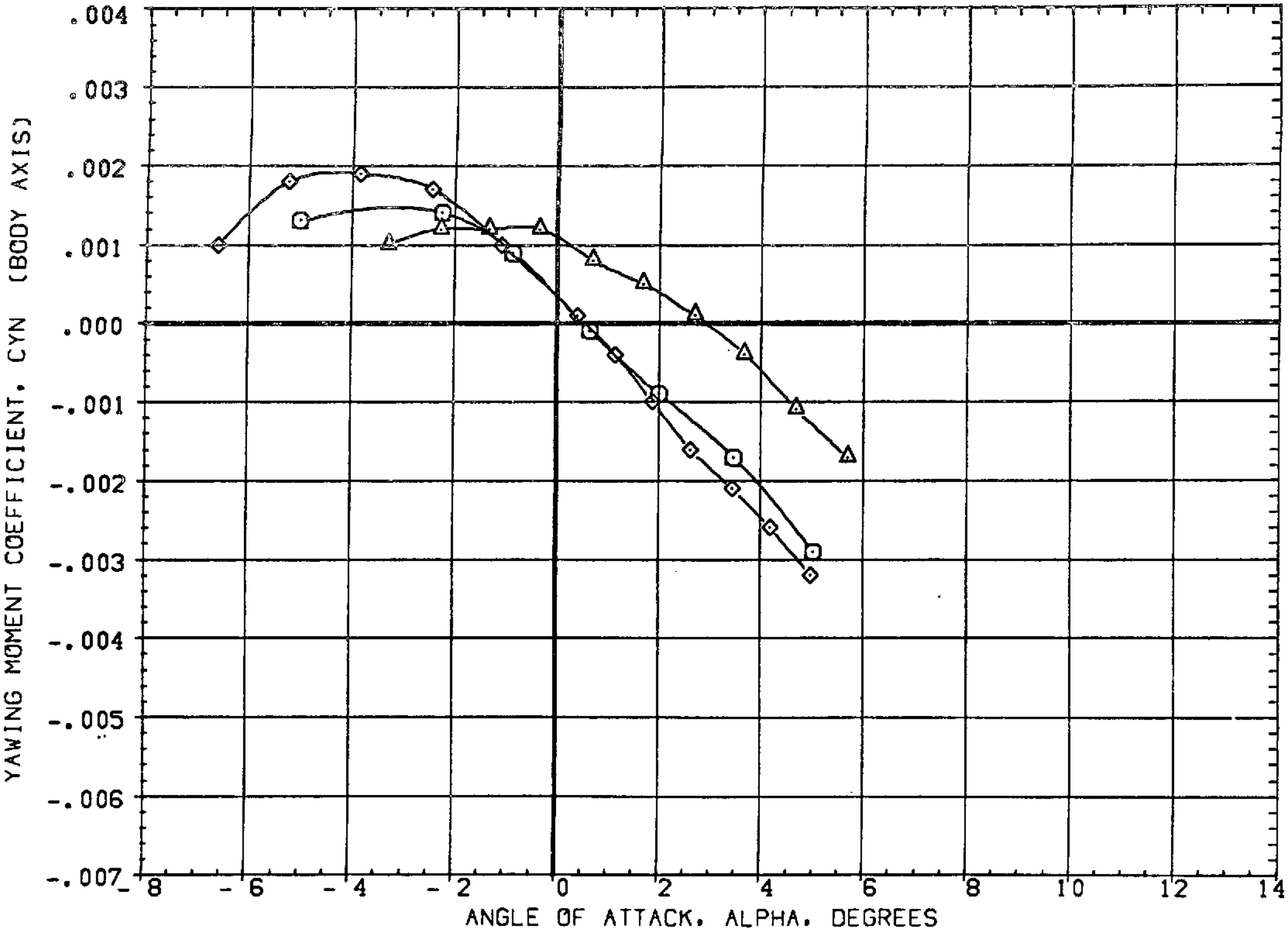


FIGURE 6 EFFECT OF WING AIRFOIL SECTION FOR AN OBLIQUE WING ANGLE OF 50 DEGREES

(A)MACH = 1.20

127

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	BETA	LAMBDA	RN/L
(9AE007)	○	W1 F0 B	0.000	50.000	6.000
(9AE042)	△	W2 F0 B	0.000	50.000	4.000
(9AE068)	◇	W4 F0 B	0.000	50.000	6.000

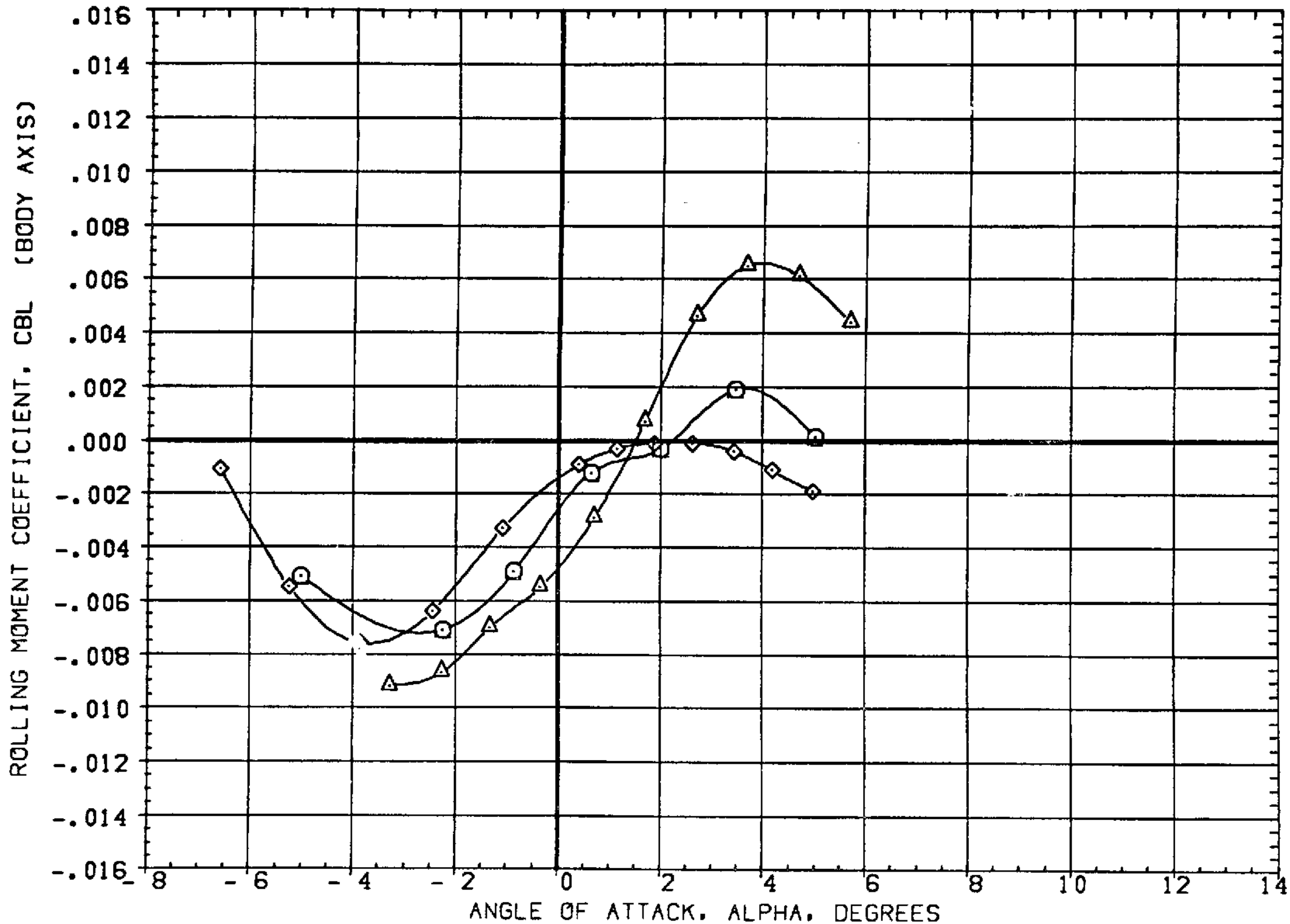


FIGURE 6 EFFECT OF WING AIRFOIL SECTION FOR AN OBLIQUE WING ANGLE OF 50 DEGREES

(A)MACH = 1.20

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	BETA	LAMBDA	RN/L
(9AE007)	○	W1 FO B	0.000	50.000	6.000
(9AE042)	△	W2 FO B	0.000	50.000	4.000
(9AE068)	◇	W4 FO B	0.000	50.000	6.000

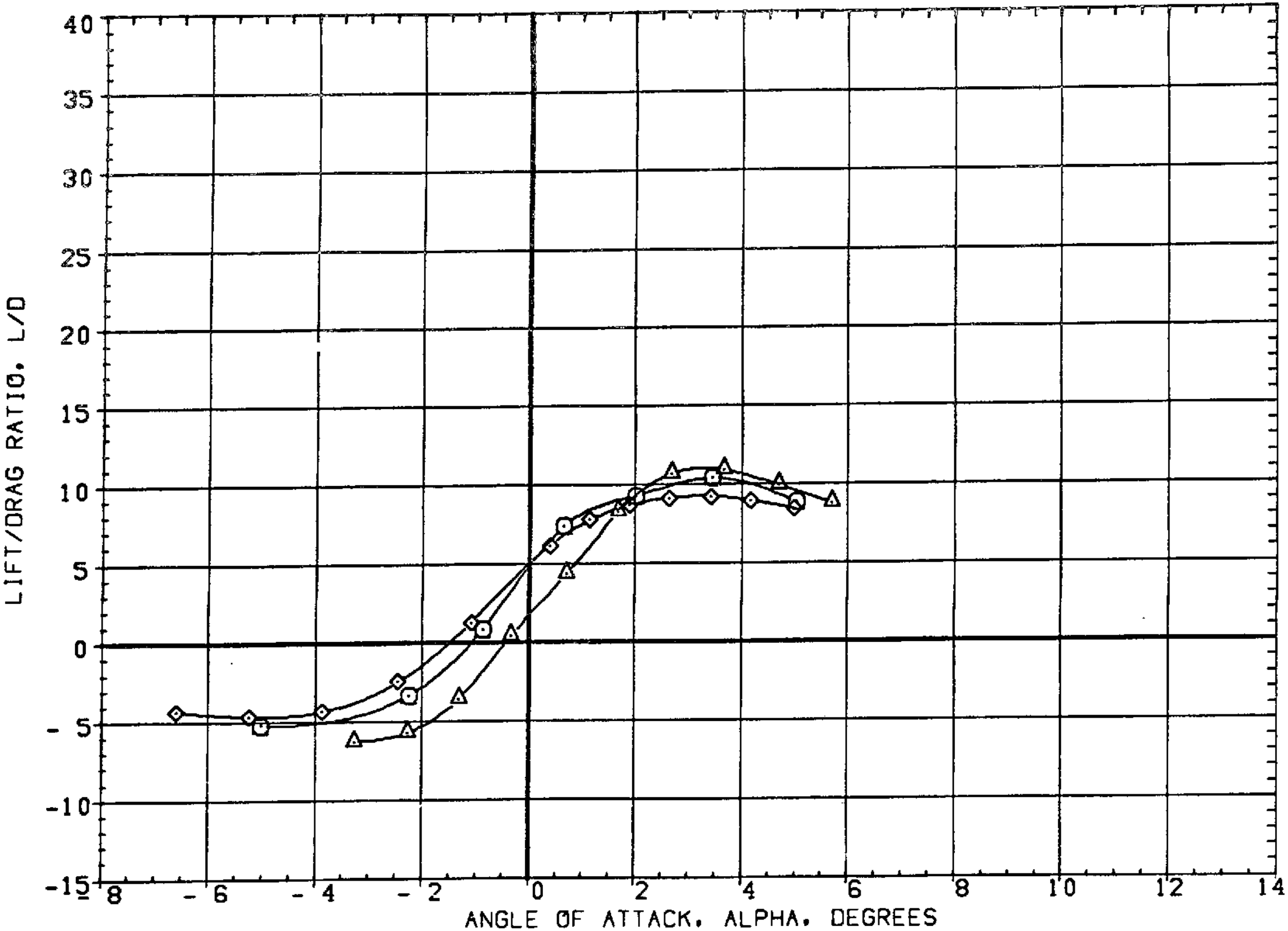


FIGURE 6 EFFECT OF WING AIRFOIL SECTION FOR AN OBLIQUE WING ANGLE OF 50 DEGREES

(A)MACH = 1.20

129

130

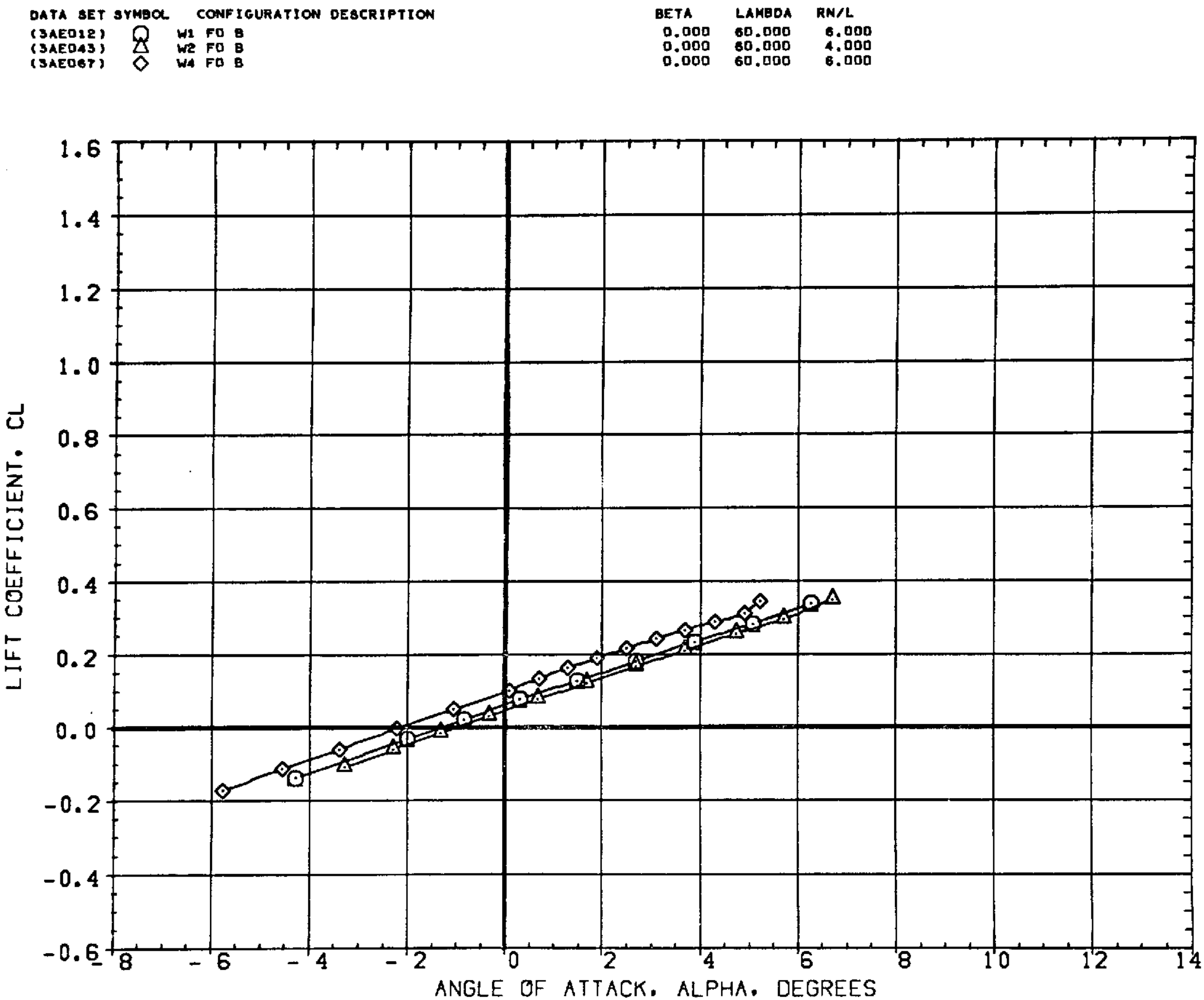


FIGURE 7 EFFECT OF WING AIRFOIL SECTION FOR AN OBLIQUE WING ANGLE OF 60 DEGREES

(A)MACH = .80

DATA SET SYMBOL CONFIGURATION DESCRIPTION

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	BETA	LAMBDA	RN/L
(3AE012)	○	W1 F0 B	0.000	60.000	6.000
(3AE043)	△	W2 F0 B	0.000	60.000	4.000
(3AE067)	◇	W4 F0 B	0.000	60.000	6.000

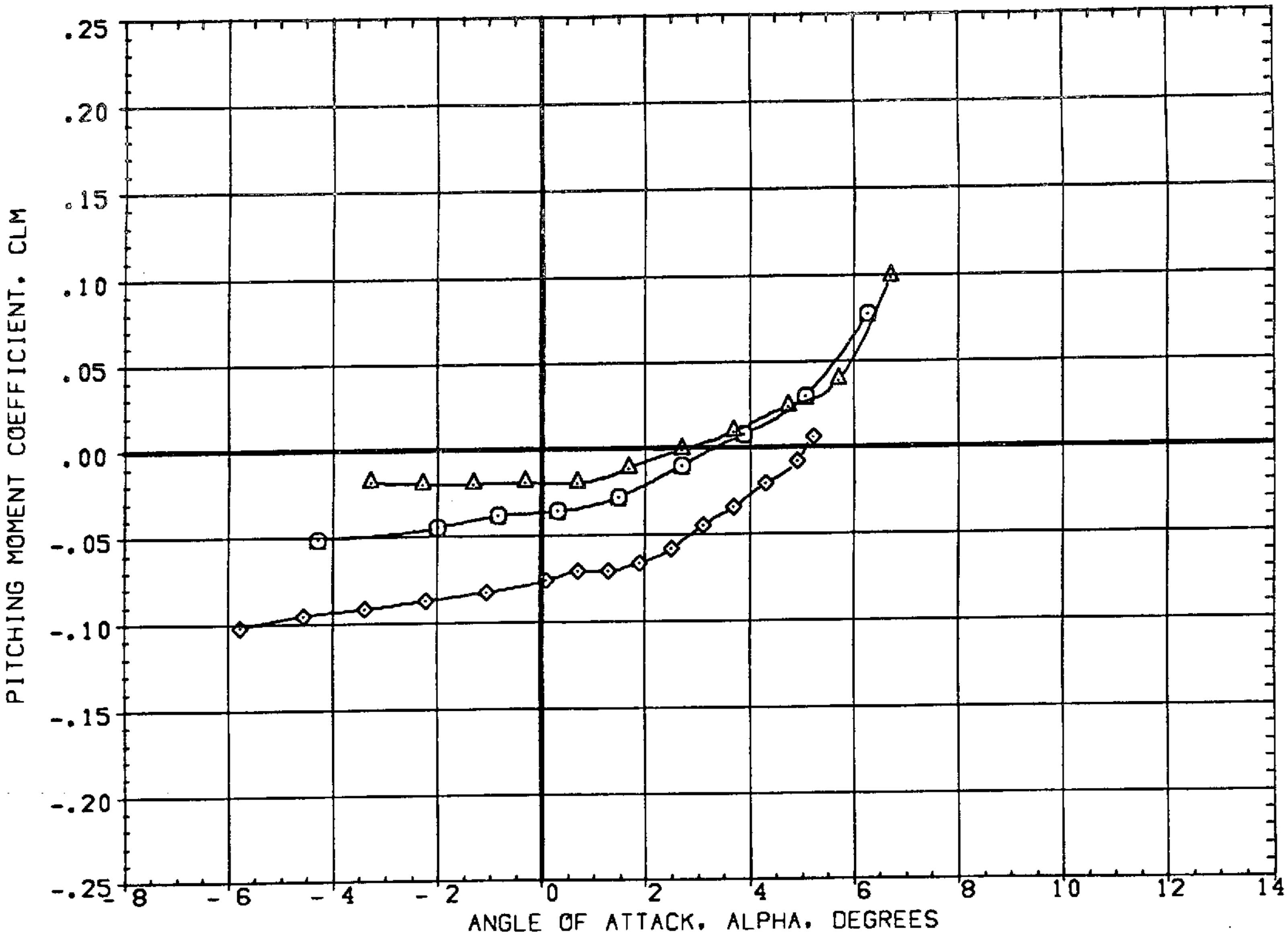
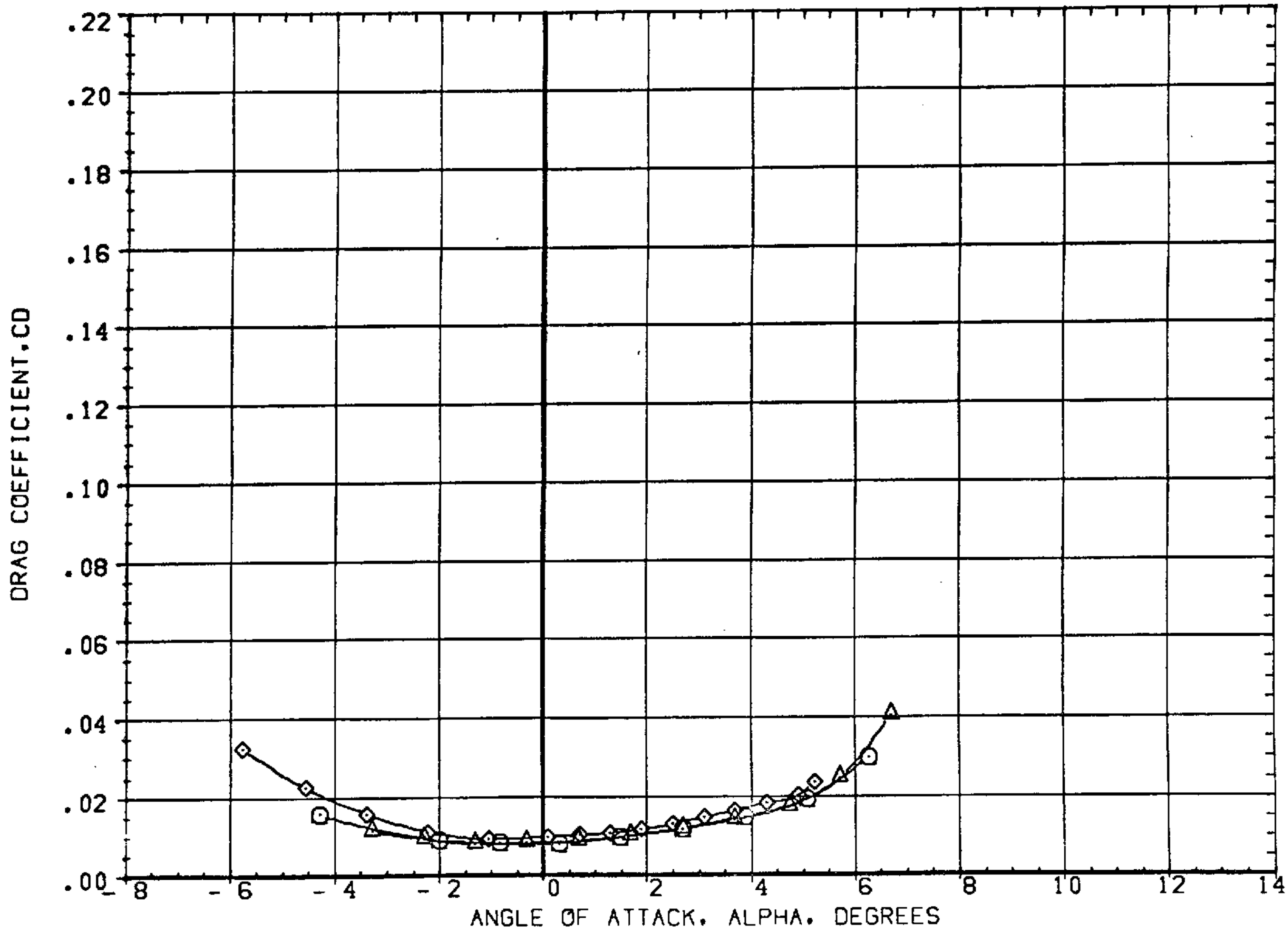


FIGURE 7 EFFECT OF WING AIRFOIL SECTION FOR AN OBLIQUE WING ANGLE OF 60 DEGREES

(A)MACH = .80

131

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	BETA	LAMBDA	RN/L
(3AE012)	○	W1 F0 B	0.000	60.000	6.000
(3AE043)	△	W2 F0 B	0.000	60.000	4.000
(3AE067)	◇	W4 F0 B	0.000	60.000	6.000



132

FIGURE 7 EFFECT OF WING AIRFOIL SECTION FOR AN OBLIQUE WING ANGLE OF 60 DEGREES

(A)MACH = .80

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	BETA	LAMBDA	RN/L
(3AE012)	○	W1 F0 B	0.000	60.000	6.000
(3AE043)	△	W2 F0 B	0.000	60.000	4.000
(3AE067)	◇	W4 F0 B	0.000	60.000	6.000

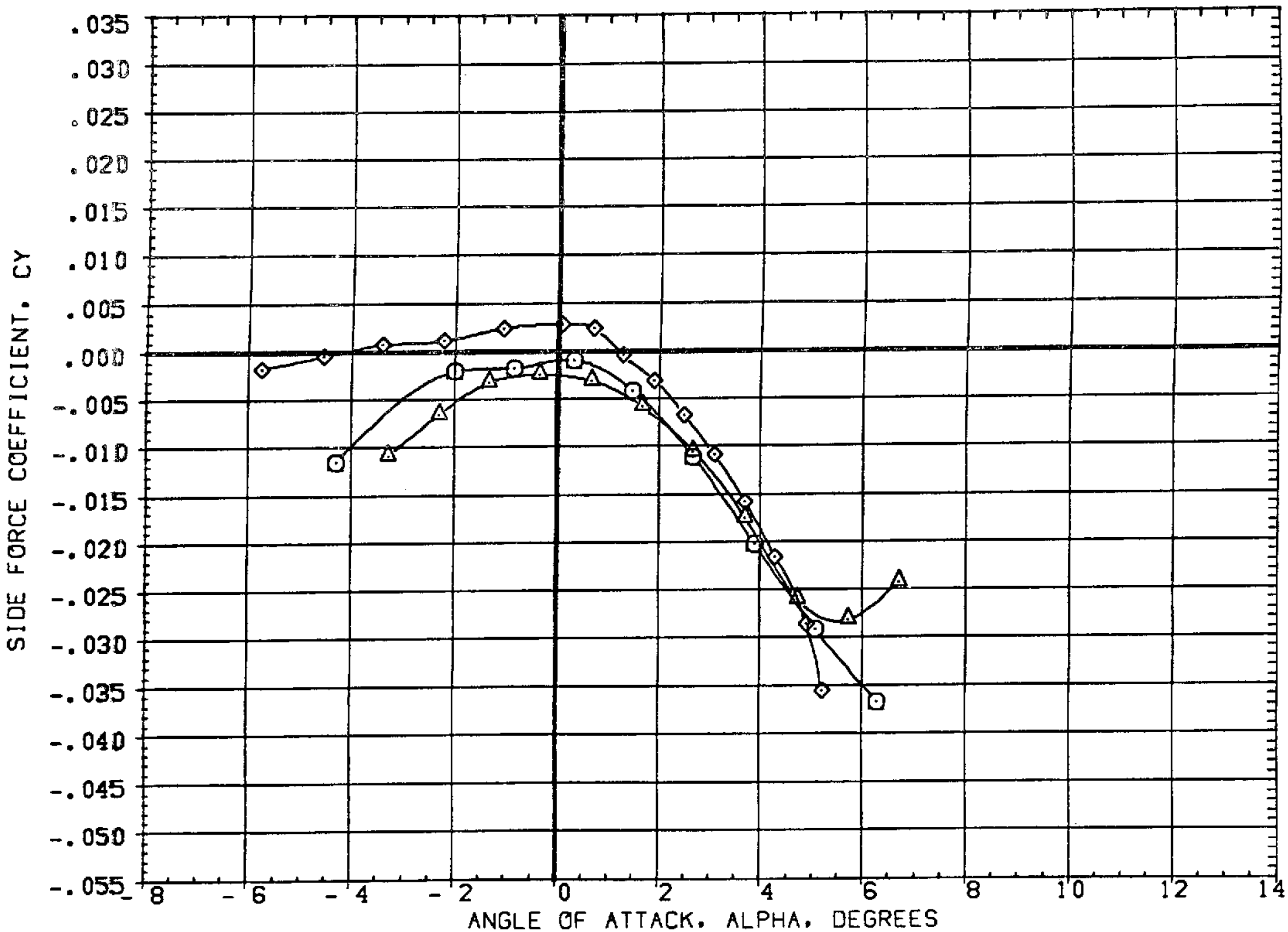


FIGURE 7 EFFECT OF WING AIRFOIL SECTION FOR AN OBLIQUE WING ANGLE OF 60 DEGREES

(A)MACH = .80

133

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	BETA	LAMBDA	RN/L
(3AE012)	○	W1 F0 B	0.000	60.000	6.000
(3AE043)	△	W2 F0 B	0.000	60.000	4.000
(3AE067)	◇	W4 F0 B	0.000	60.000	6.000

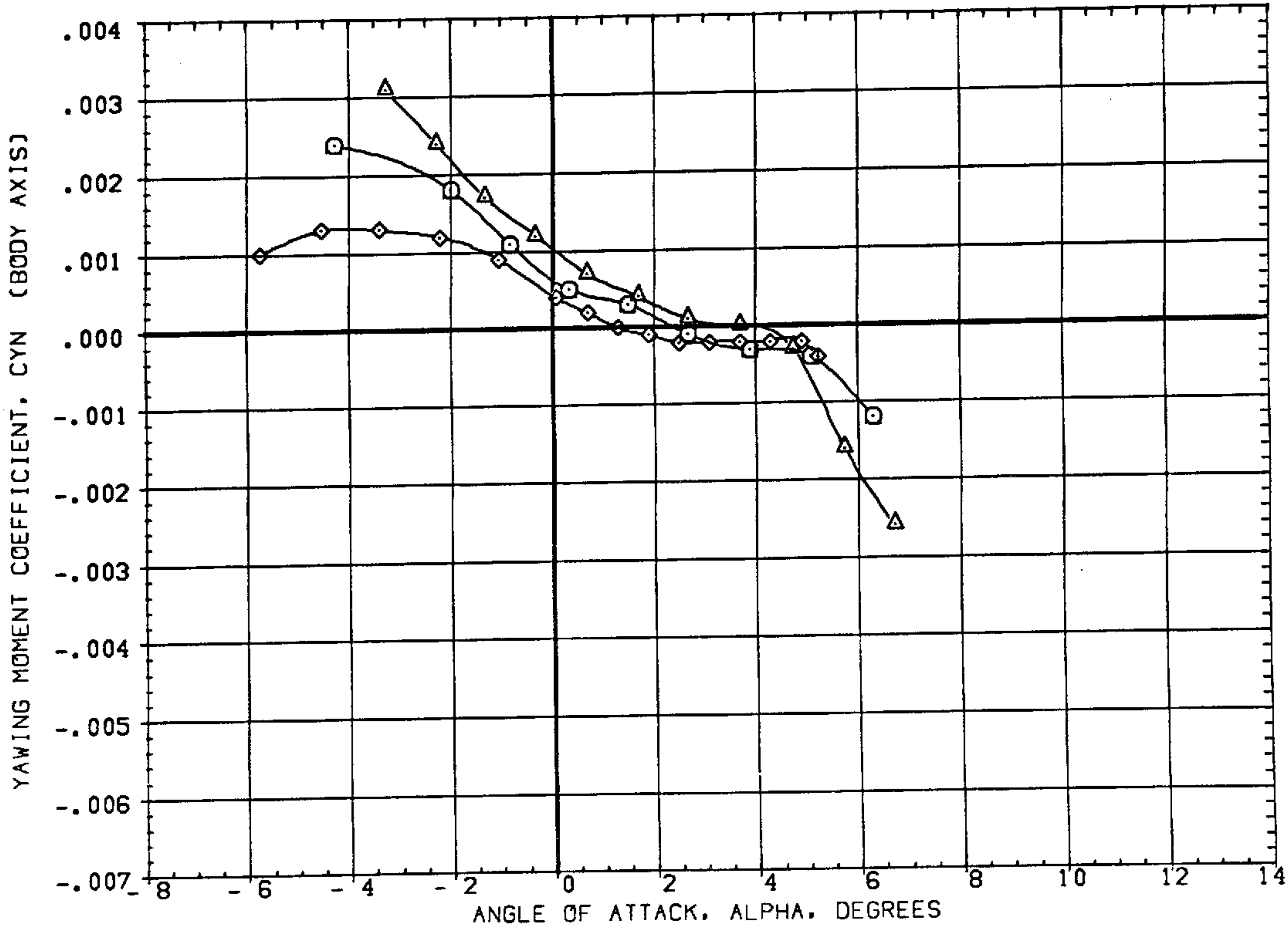


FIGURE 7 EFFECT OF WING AIRFOIL SECTION FOR AN OBLIQUE WING ANGLE OF 60 DEGREES

(A)MACH = .80

134

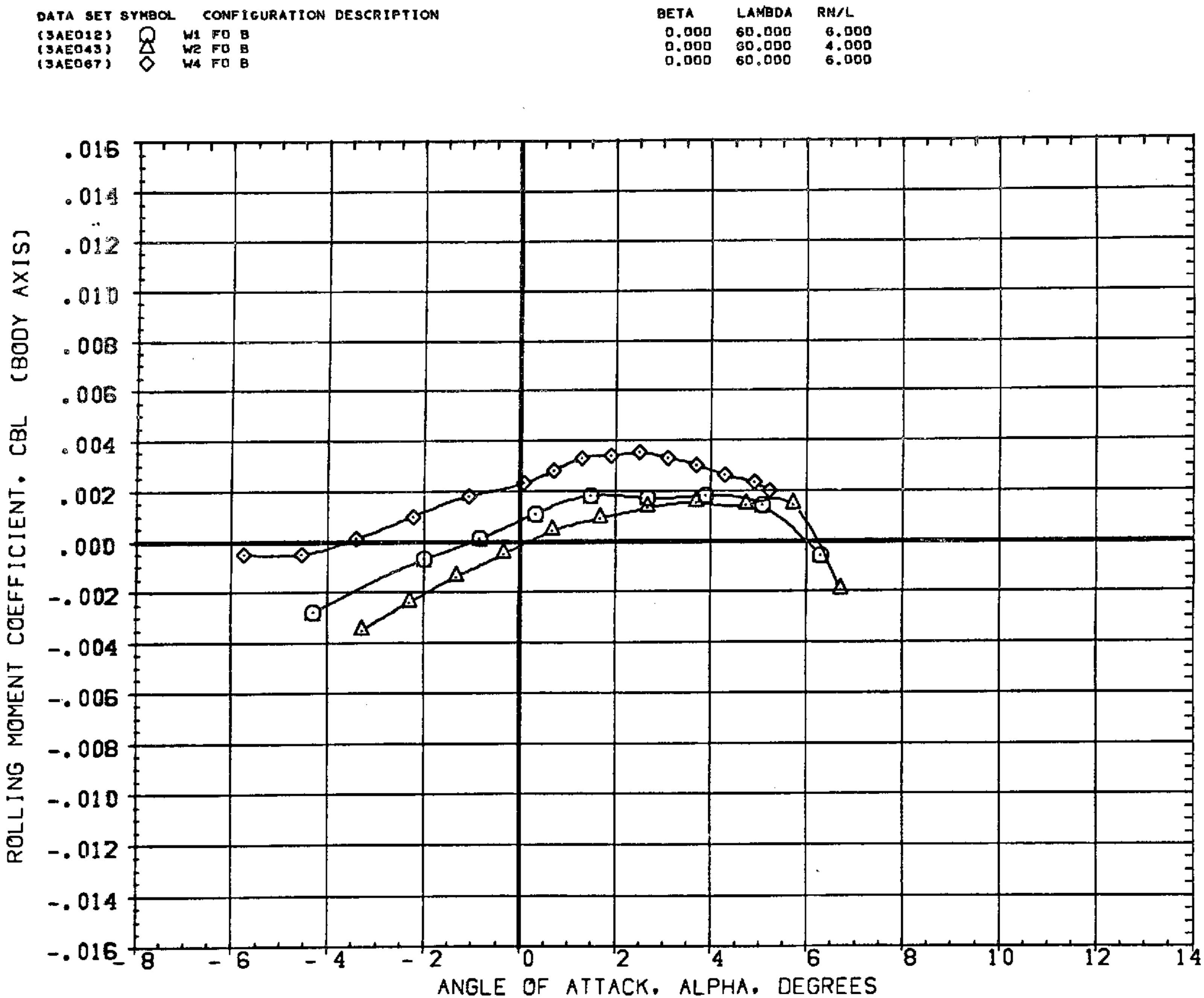


FIGURE 7 EFFECT OF WING AIRFOIL SECTION FOR AN OBLIQUE WING ANGLE OF 60 DEGREES

(A)MACH = .80

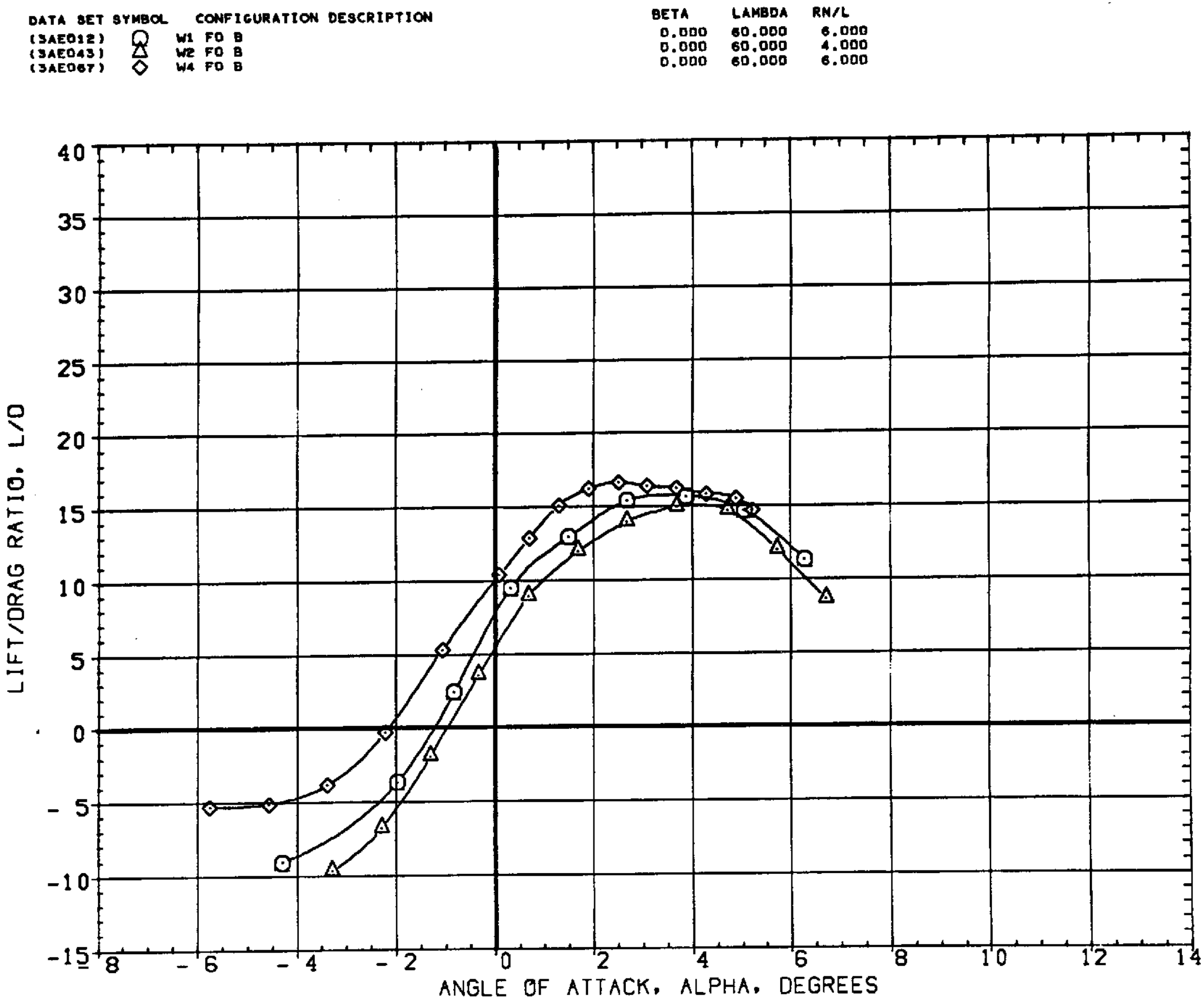


FIGURE 7 EFFECT OF WING AIRFOIL SECTION FOR AN OBLIQUE WING ANGLE OF 60 DEGREES

(A)MACH = .80

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	BETA	LAMBDA	RN/L
(4AE012)	○	W1 F0 B	0.000	60.000	6.000
(4AE043)	△	W2 F0 B	0.000	60.000	4.000
(4AE067)	◇	W4 F0 B	0.000	60.000	6.000

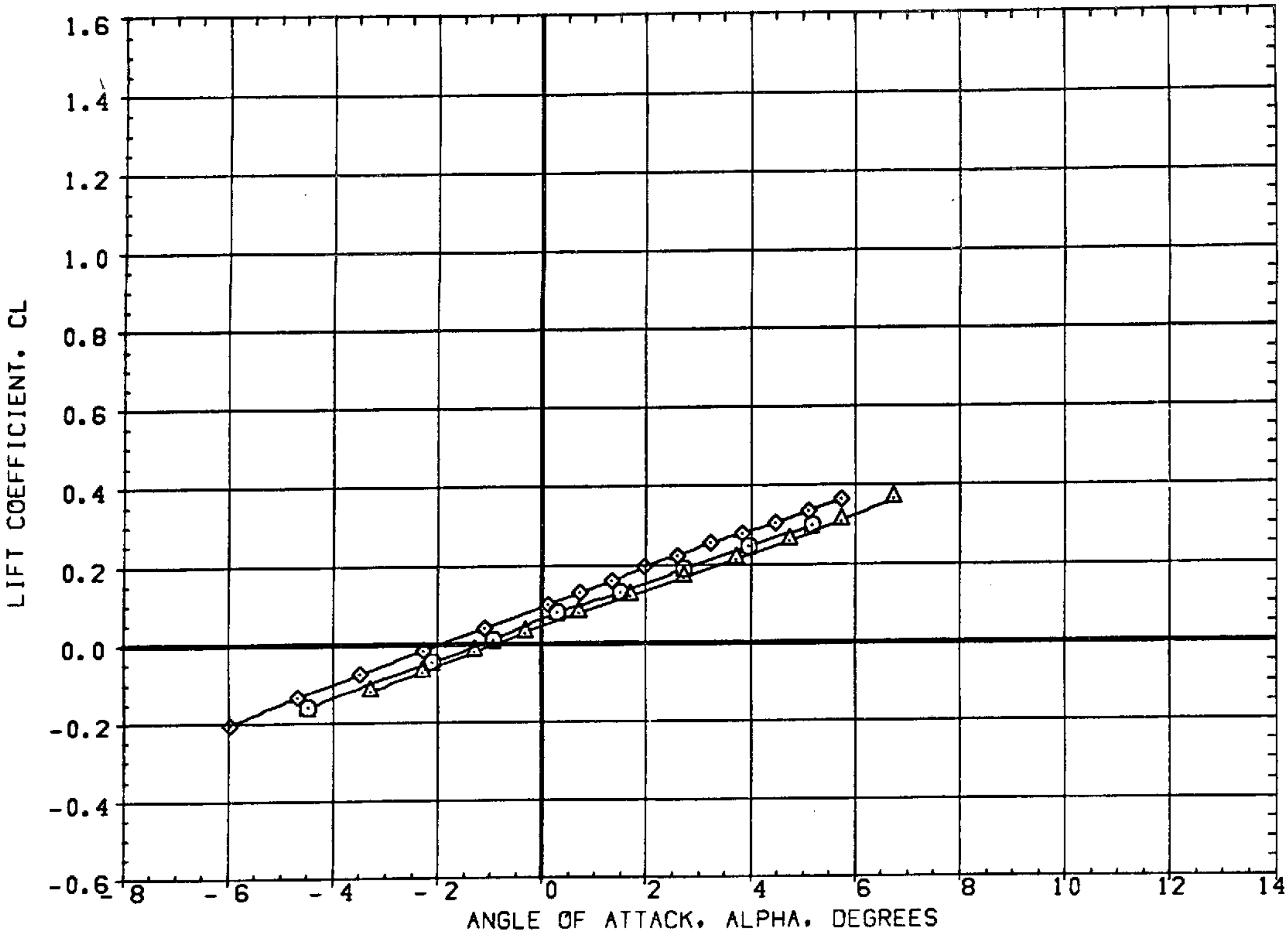


FIGURE 7 EFFECT OF WING AIRFOIL SECTION FOR AN OBLIQUE WING ANGLE OF 60 DEGREES

(A)MACH = .95

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	BETA	LAMBDA	RN/L
(4AE012)	○	W1 FD B	0.000	60.000	6.000
(4AE043)	△	W2 FD B	0.000	60.000	4.000
(4AE067)	◇	W4 FD B	0.000	60.000	6.000

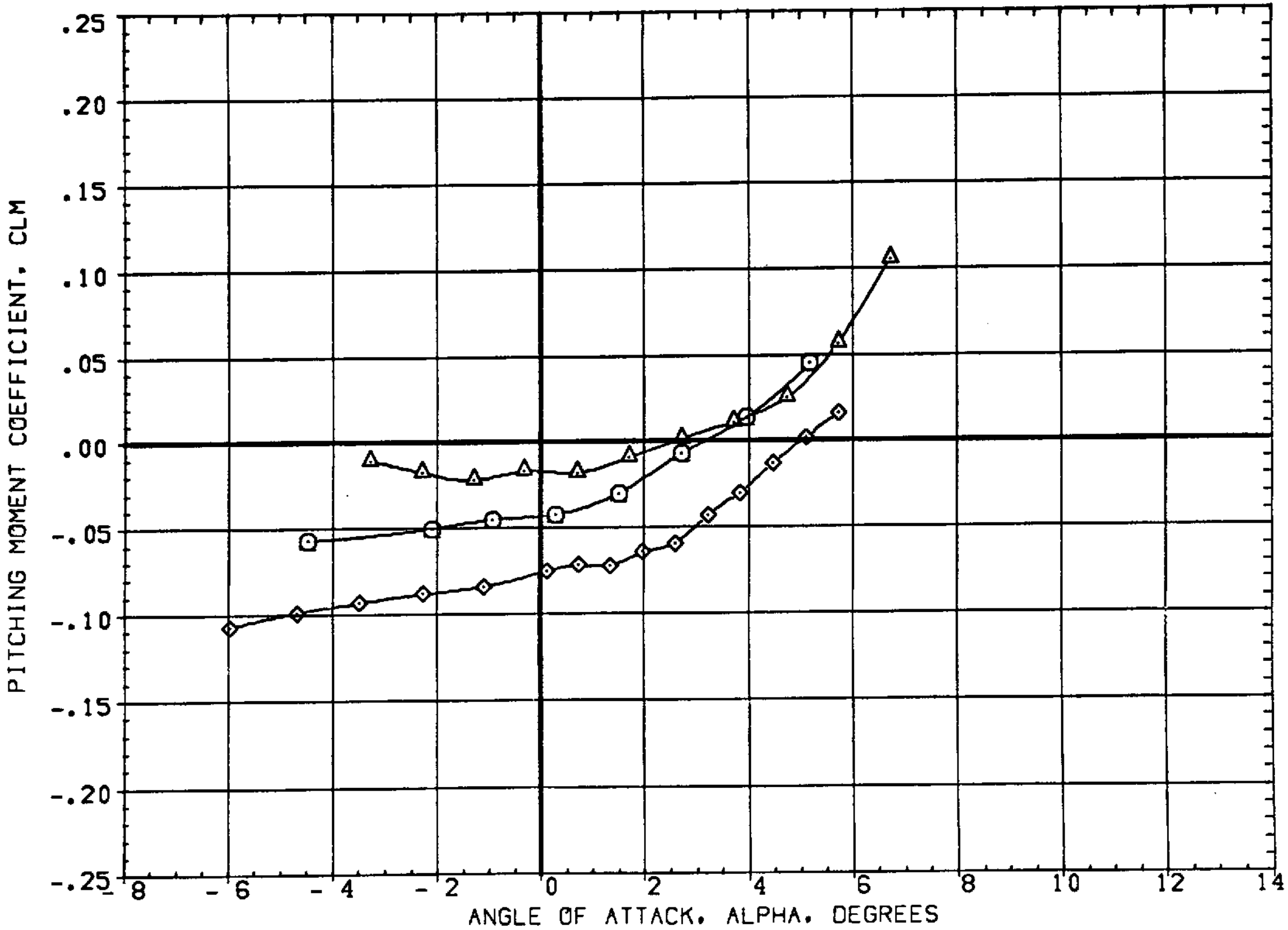


FIGURE 7 EFFECT OF WING AIRFOIL SECTION FOR AN OBLIQUE WING ANGLE OF 60 DEGREES

(A)MACH = .95

138

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	BETA	LAMBDA	RN/L
(4AE012)	○	W1 F0 B	0.000	60.000	6.000
(4AE043)	△	W2 F0 B	0.000	60.000	4.000
(4AE067)	◇	W4 F0 B	0.000	60.000	6.000

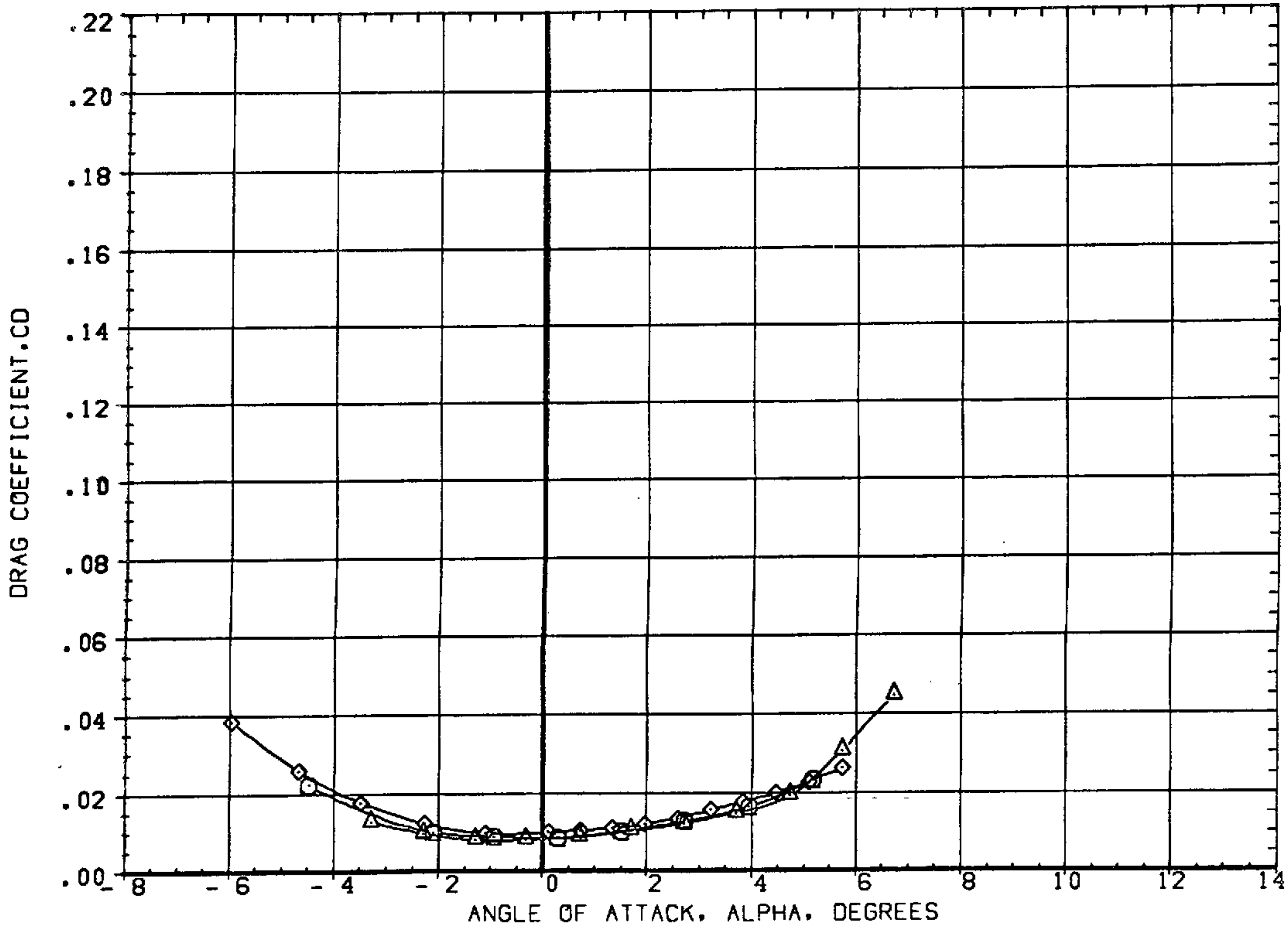


FIGURE 7 EFFECT OF WING AIRFOIL SECTION FOR AN OBLIQUE WING ANGLE OF 60 DEGREES

(A)MACH = .95

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	BETA	LAMBDA	RN/L
(4AE012)	○	W1 FD B	0.000	60.000	6.000
(4AE043)	△	W2 FD B	0.000	60.000	4.000
(4AE067)	◇	W4 FD B	0.000	60.000	6.000

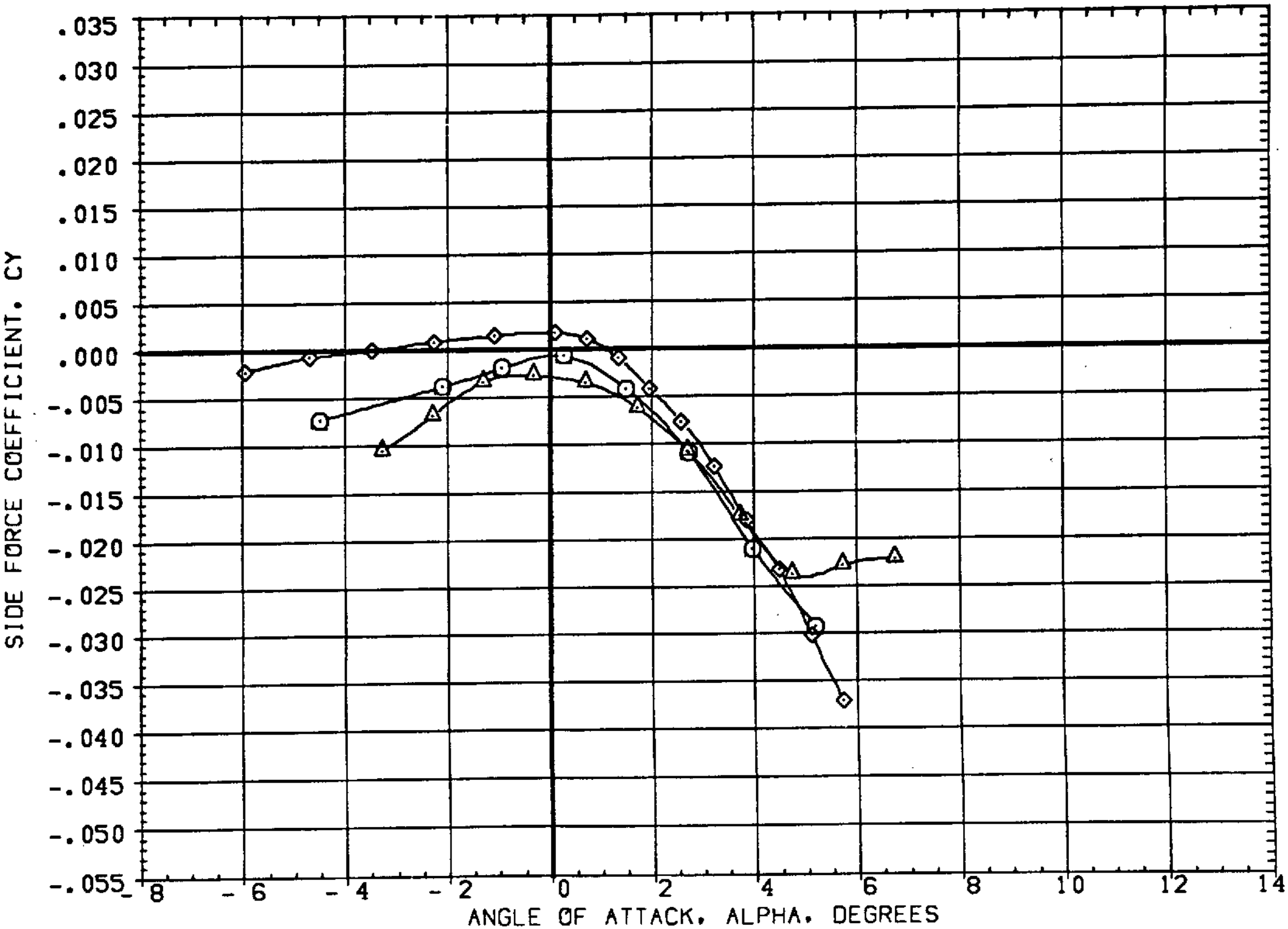


FIGURE 7 EFFECT OF WING AIRFOIL SECTION FOR AN OBLIQUE WING ANGLE OF 60 DEGREES

(A)MACH = .95

140

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	BETA	LAMBDA	RN/L
(4AE012)	○	W1 F0 B	0.000	60.000	6.000
(4AE043)	△	W2 F0 B	0.000	60.000	4.000
(4AE067)	◇	W4 F0 B	0.000	60.000	6.000

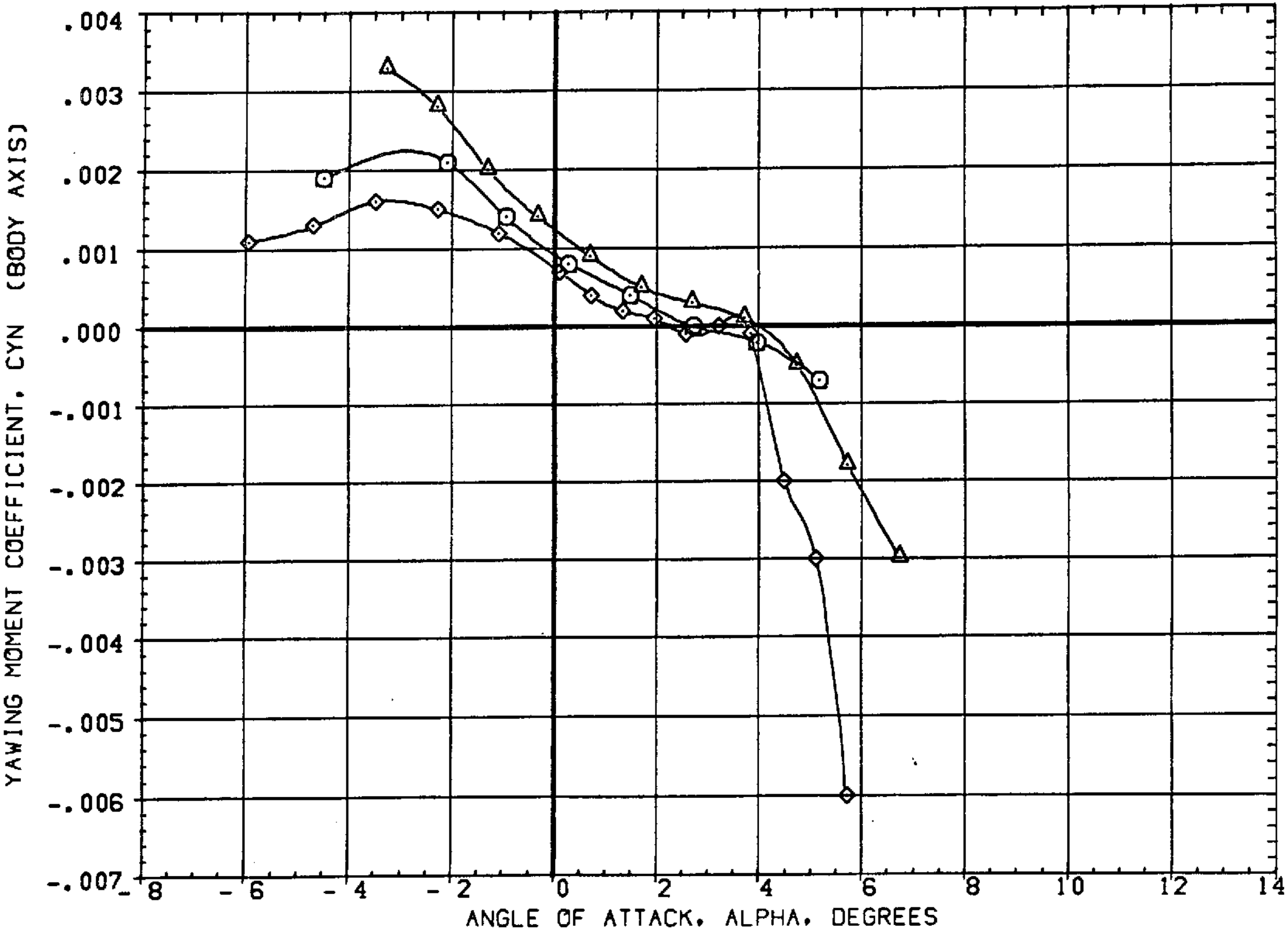


FIGURE 7 EFFECT OF WING AIRFOIL SECTION FOR AN OBLIQUE WING ANGLE OF 60 DEGREES

(A)MACH = .95

141

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	BETA	LAMBDA	RN/L
(4AE012)	○	W1 F0 B	0.000	60.000	6.000
(4AE043)	△	W2 F0 B	0.000	60.000	4.000
(4AE067)	◇	W4 F0 B	0.000	60.000	6.000

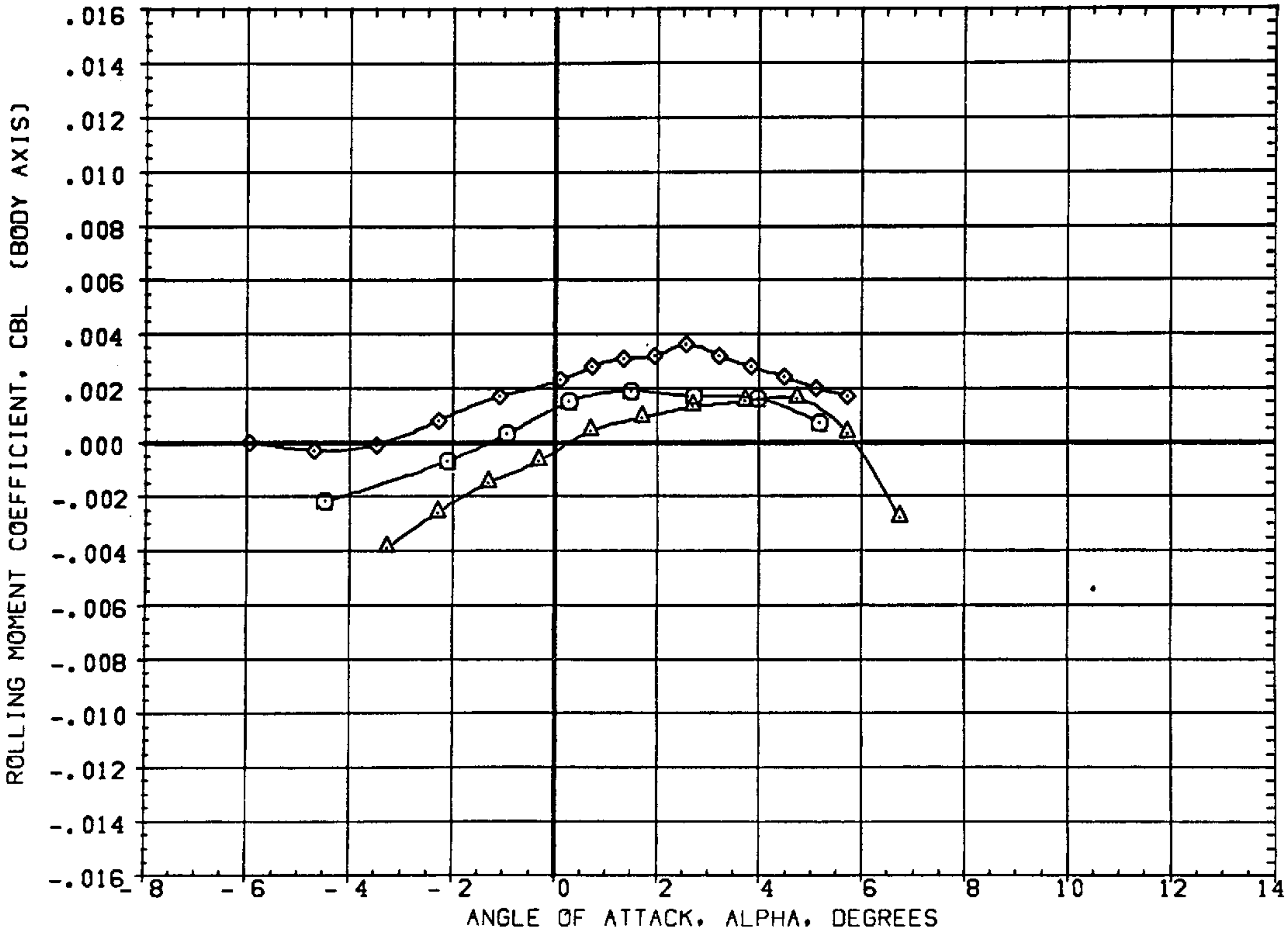


FIGURE 7 EFFECT OF WING AIRFOIL SECTION FOR AN OBLIQUE WING ANGLE OF 60 DEGREES

(A)MACH = .95

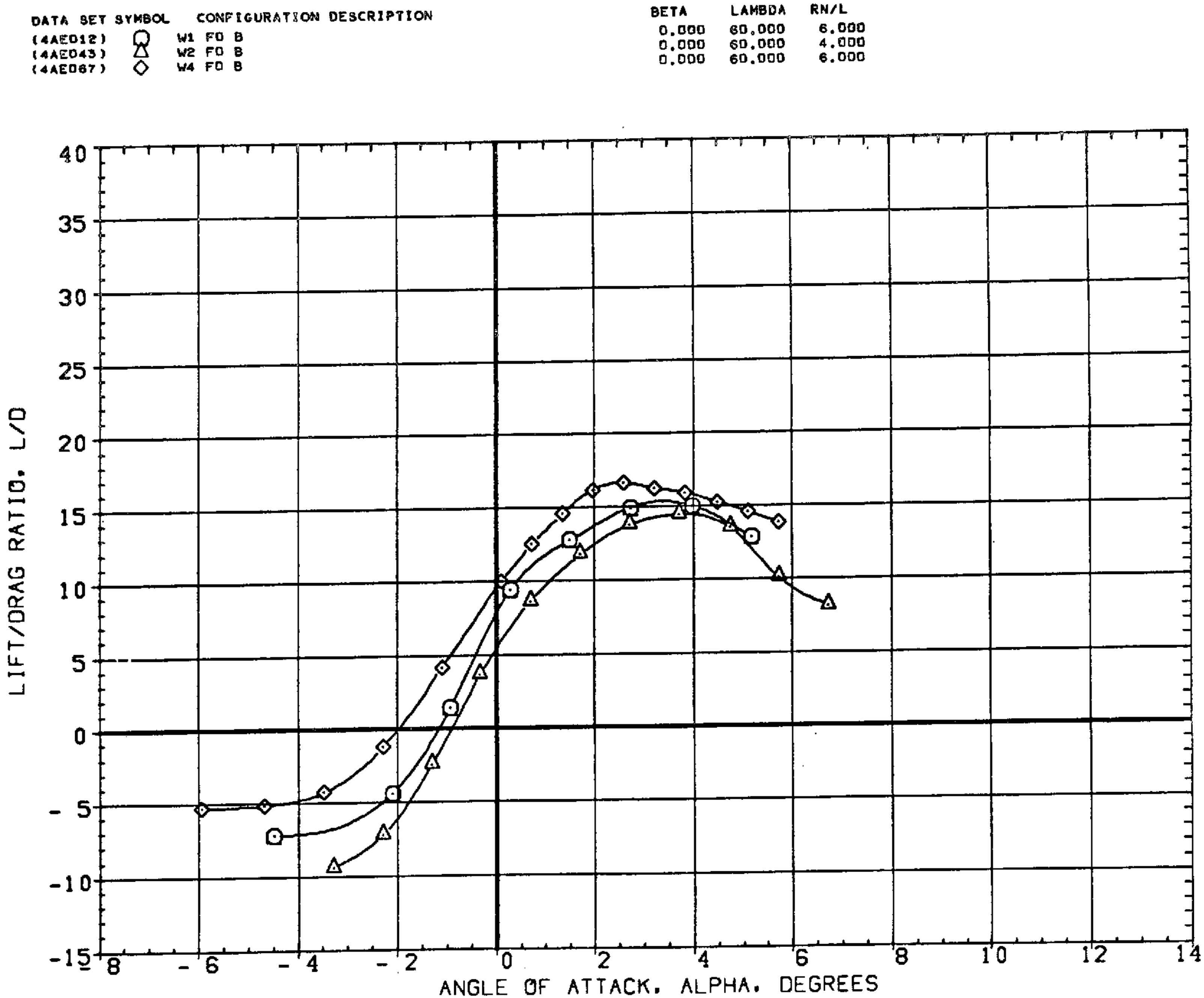


FIGURE 7 EFFECT OF WING AIRFOIL SECTION FOR AN OBLIQUE WING ANGLE OF 60 DEGREES

(A)MACH = .95

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	BETA	LAMBDA	RN/L
(7AE012)	○	W1 F0 B	0.000	60.000	6.000
(7AE043)	△	W2 F0 B	0.000	60.000	4.000
(7AE067)	◇	W4 F0 B	0.000	60.000	6.000

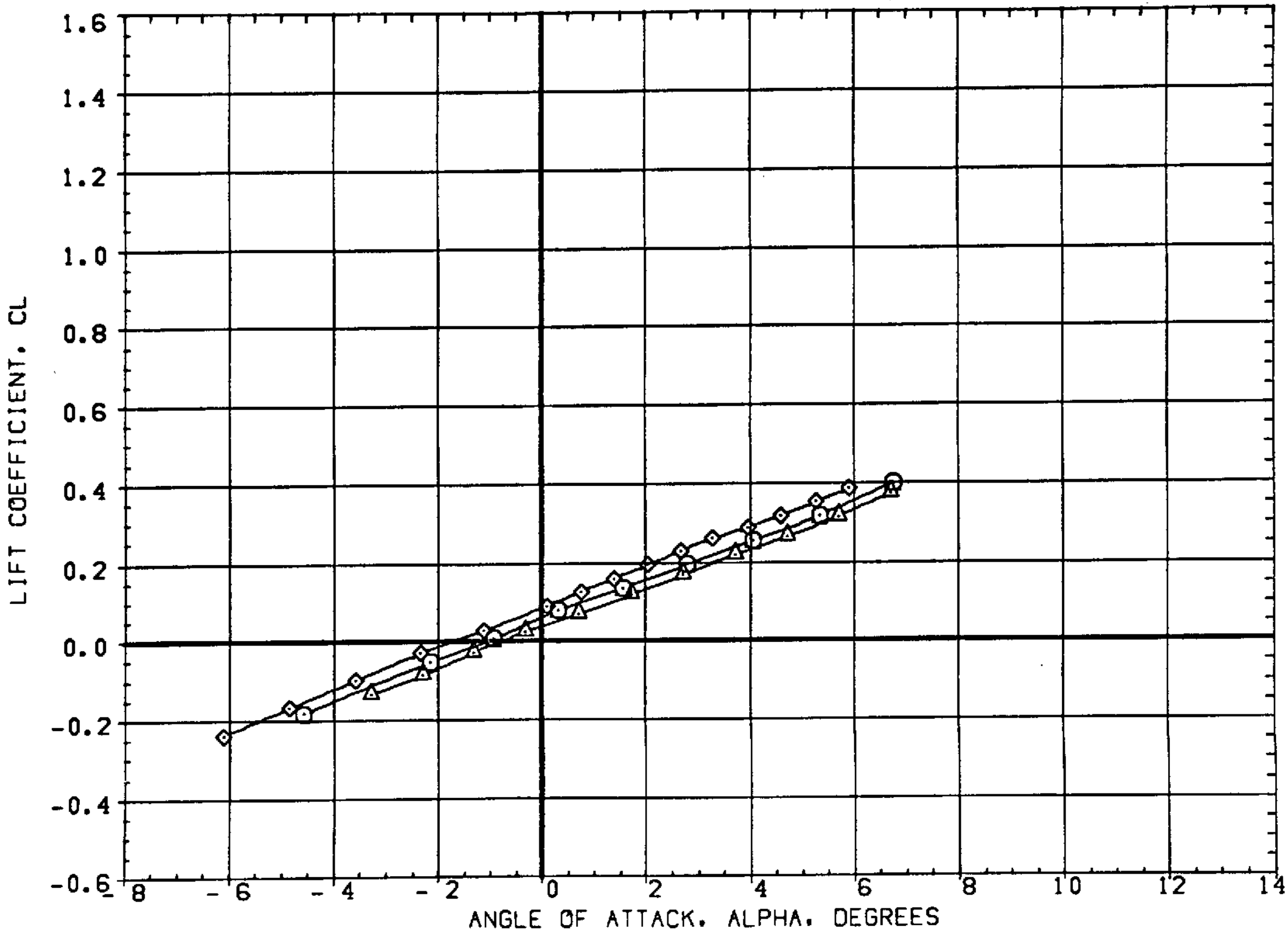


FIGURE 7 EFFECT OF WING AIRFOIL SECTION FOR AN OBLIQUE WING ANGLE OF 60 DEGREES

(A)MACH = 1.10

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	BETA	LAMBDA	RN/L
(7AE012)	○	W1 F0 B	0.000	60.000	6.000
(7AE043)	△	W2 F0 B	0.000	60.000	4.000
(7AE067)	◇	W4 F0 B	0.000	60.000	6.000

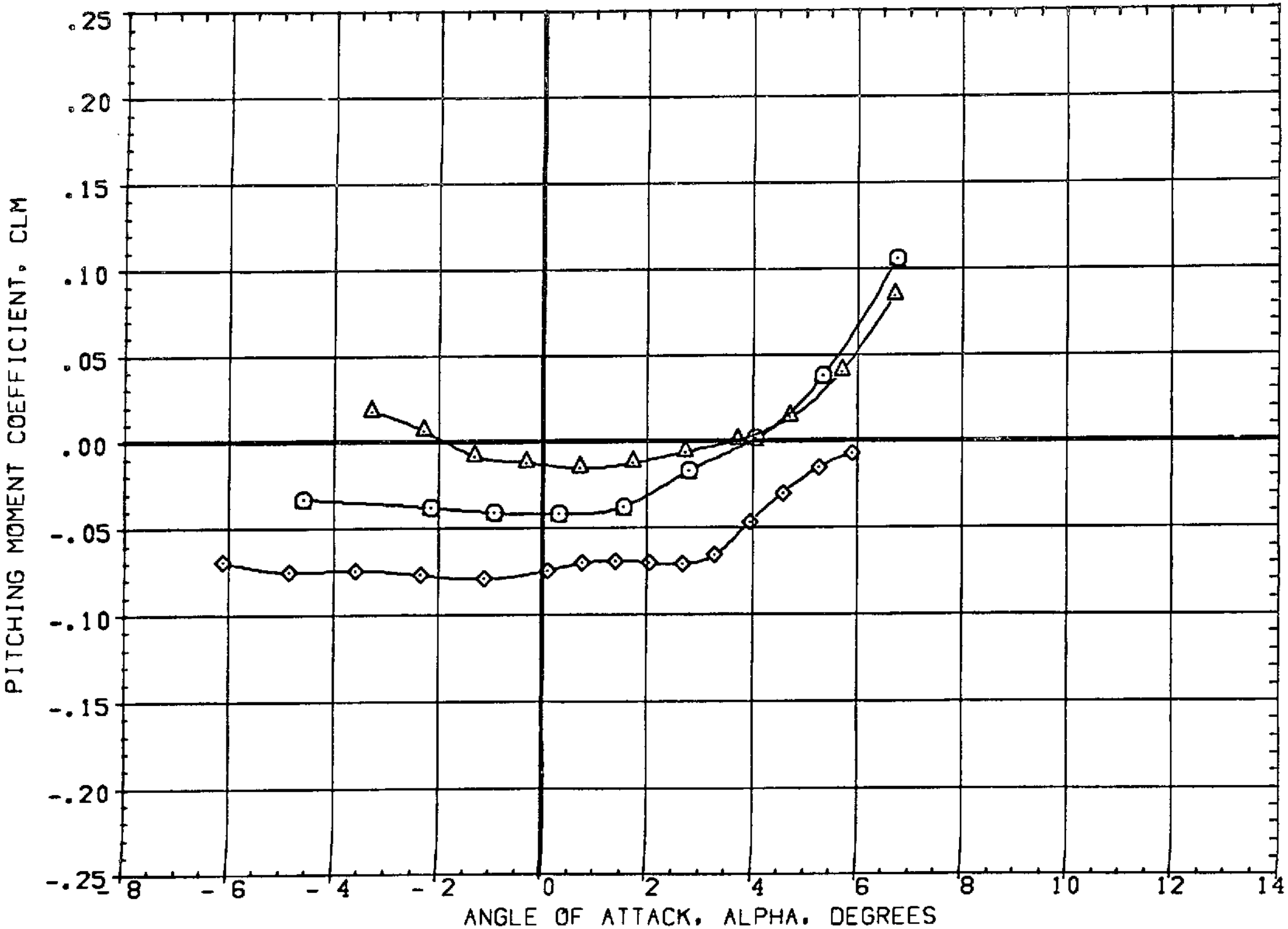


FIGURE 7 EFFECT OF WING AIRFOIL SECTION FOR AN OBLIQUE WING ANGLE OF 60 DEGREES

(A)MACH = 1.10

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	BETA	LAMBDA	RN/L
(7AE012)	○	W1 F0 B	0.000	60.000	6.000
(7AE043)	△	W2 F0 B	0.000	60.000	4.000
(7AE067)	◇	W4 F0 B	0.000	60.000	6.000

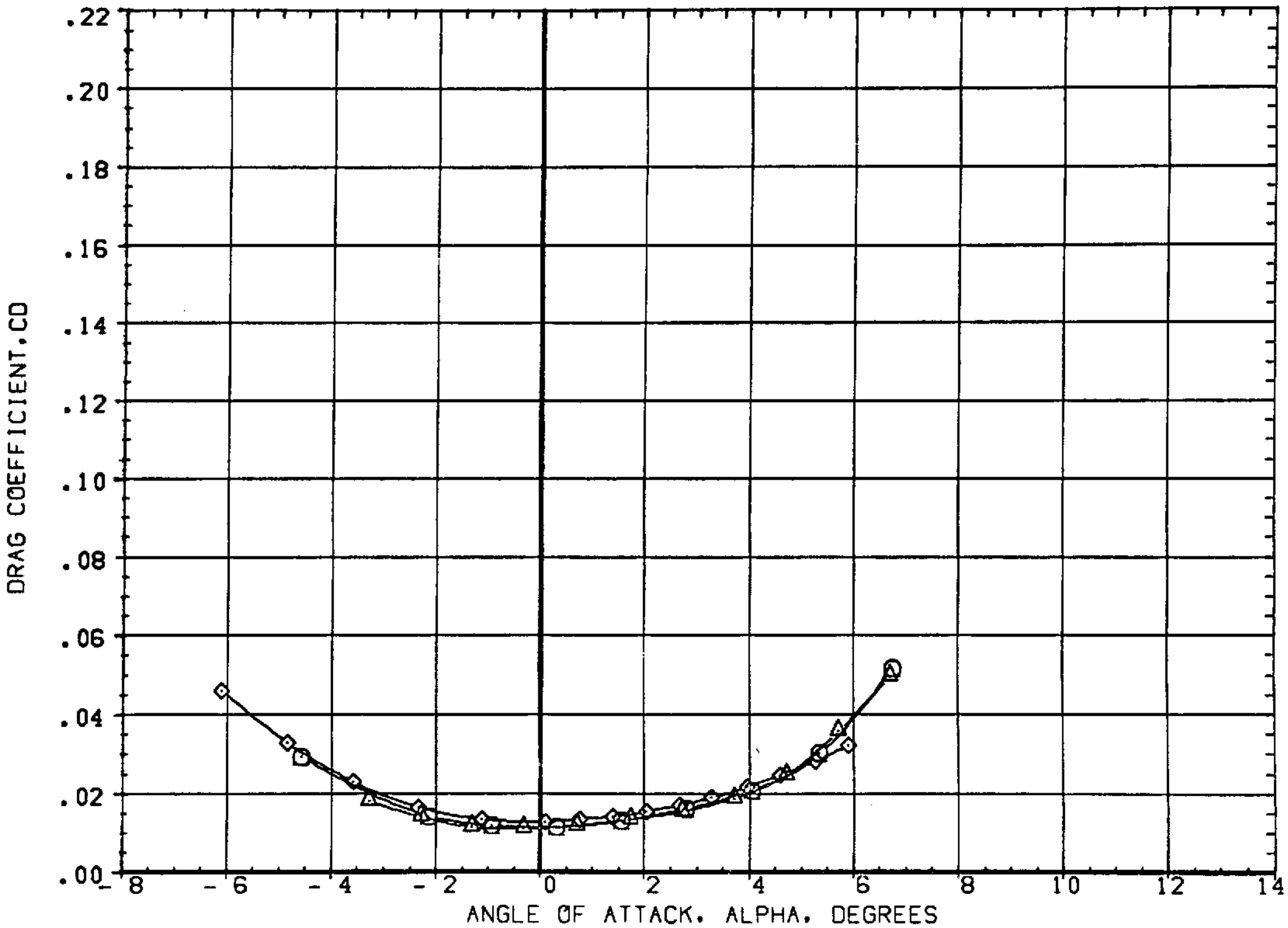


FIGURE 7 EFFECT OF WING AIRFOIL SECTION FOR AN OBLIQUE WING ANGLE OF 60 DEGREES

(A)MACH = 1.10

146

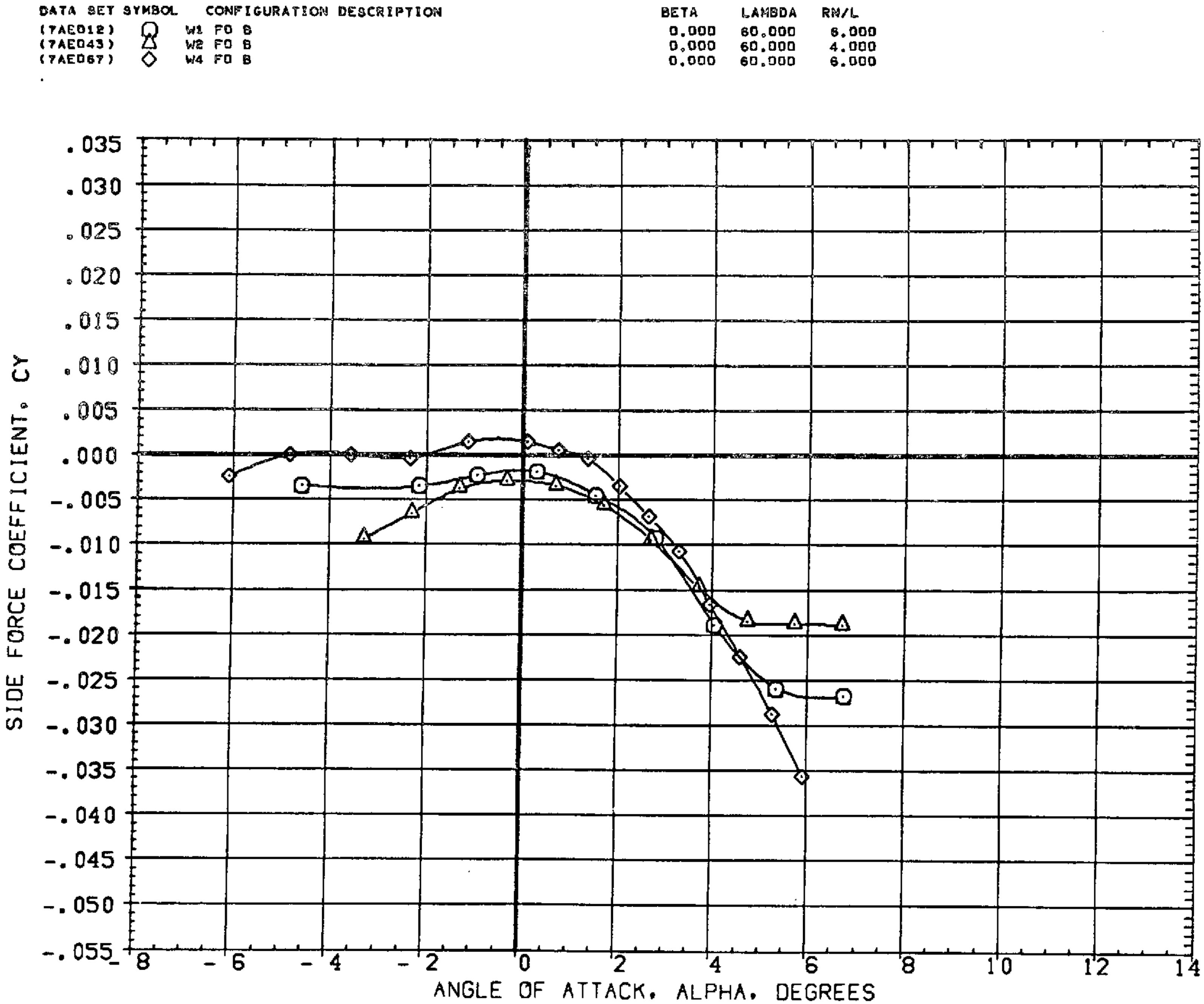


FIGURE 7 EFFECT OF WING AIRFOIL SECTION FOR AN OBLIQUE WING ANGLE OF 60 DEGREES

(A)MACH = 1.10

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	BETA	LAMBDA	RN/L
(7AE012)	○	W1 F0 B	0.000	60.000	6.000
(7AE043)	△	W2 F0 B	0.000	60.000	4.000
(7AE067)	◇	W4 F0 B	0.000	60.000	6.000

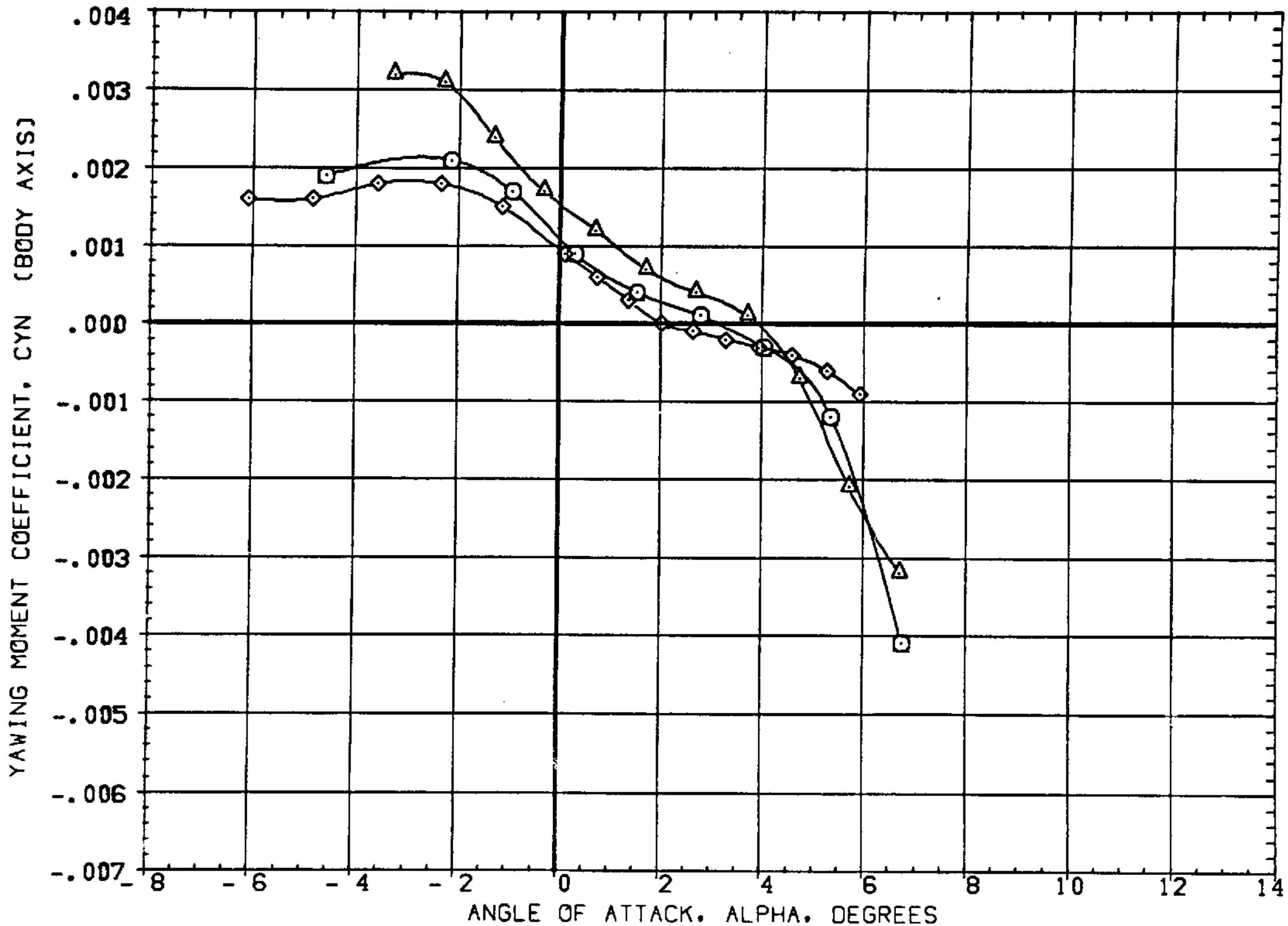


FIGURE 7 EFFECT OF WING AIRFOIL SECTION FOR AN OBLIQUE WING ANGLE OF 60 DEGREES

(A)MACH = 1.10

148

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	BETA	LAMBDA	RN/L
(7AE012)	○	W1 F0 B	0.000	60.000	6.000
(7AE043)	△	W2 F0 B	0.000	60.000	4.000
(7AE067)	◇	W4 F0 B	0.000	60.000	6.000

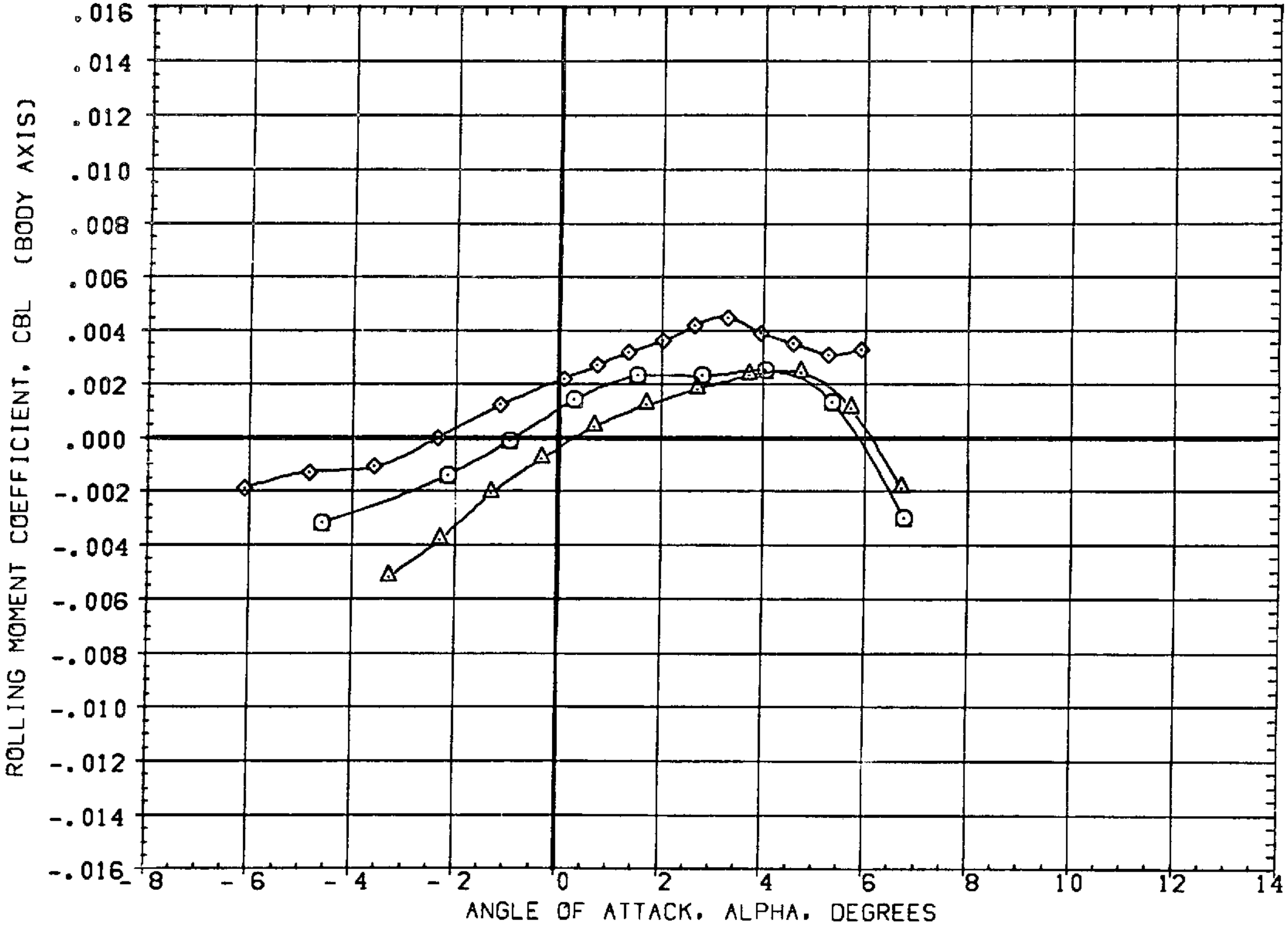


FIGURE 7 EFFECT OF WING AIRFOIL SECTION FOR AN OBLIQUE WING ANGLE OF 60 DEGREES

(A)MACH = 1.10

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	BETA	LAMBDA	RN/L
(7AE012)	○	W1 F0 B	0.000	60.000	6.000
(7AE043)	△	W2 F0 B	0.000	60.000	4.000
(7AE067)	◇	W4 F0 B	0.000	60.000	6.000

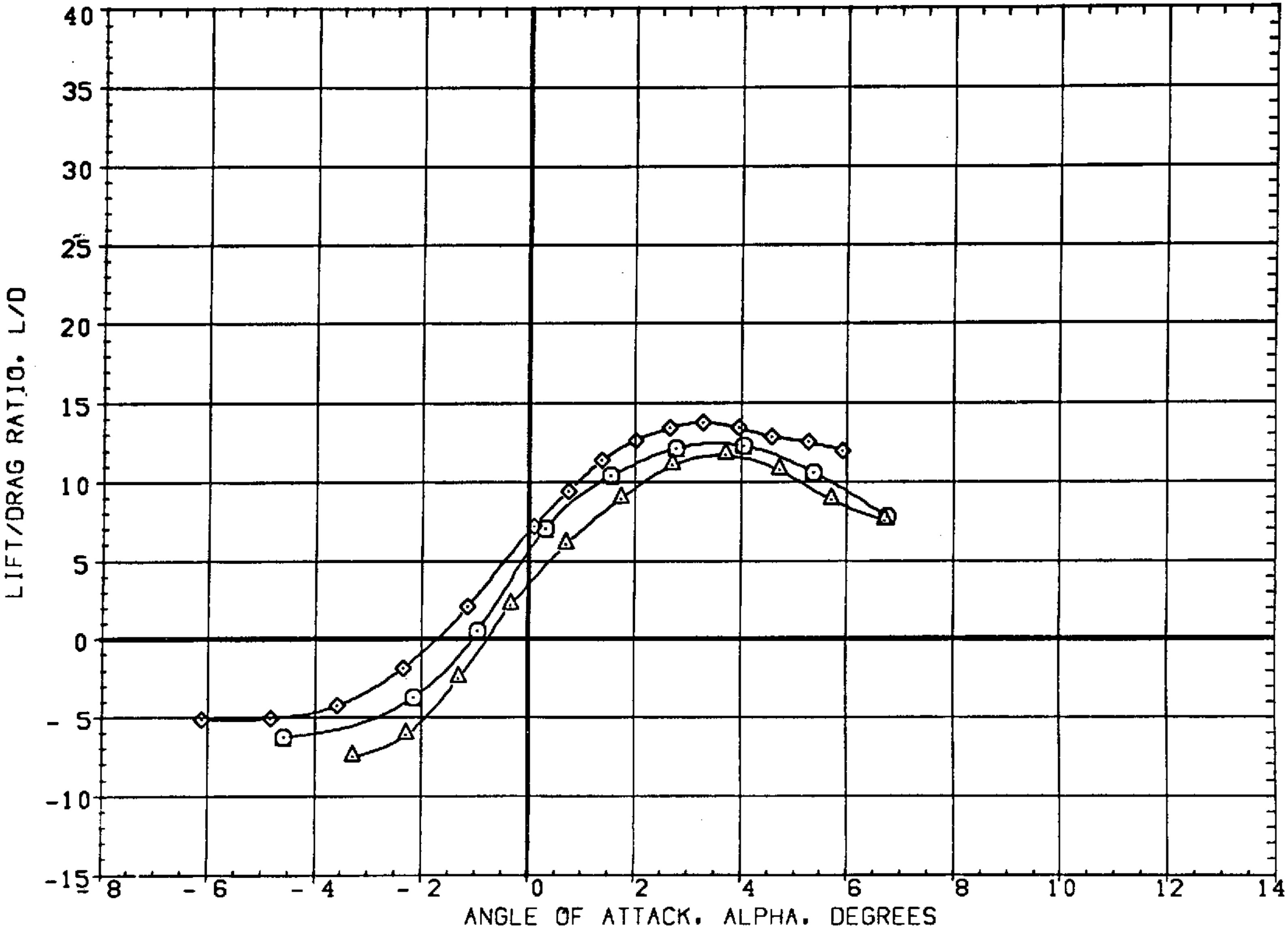


FIGURE 7 EFFECT OF WING AIRFOIL SECTION FOR AN OBLIQUE WING ANGLE OF 60 DEGREES

(A)MACH = 1.10

150

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	BETA	LAMBDA	RN/L
(9AE012)	○	W1 F0 B	0.000	60.000	6.000
(9AE043)	△	W2 F0 B	0.000	60.000	4.000
(9AE067)	◇	W4 F0 B	0.000	60.000	6.000

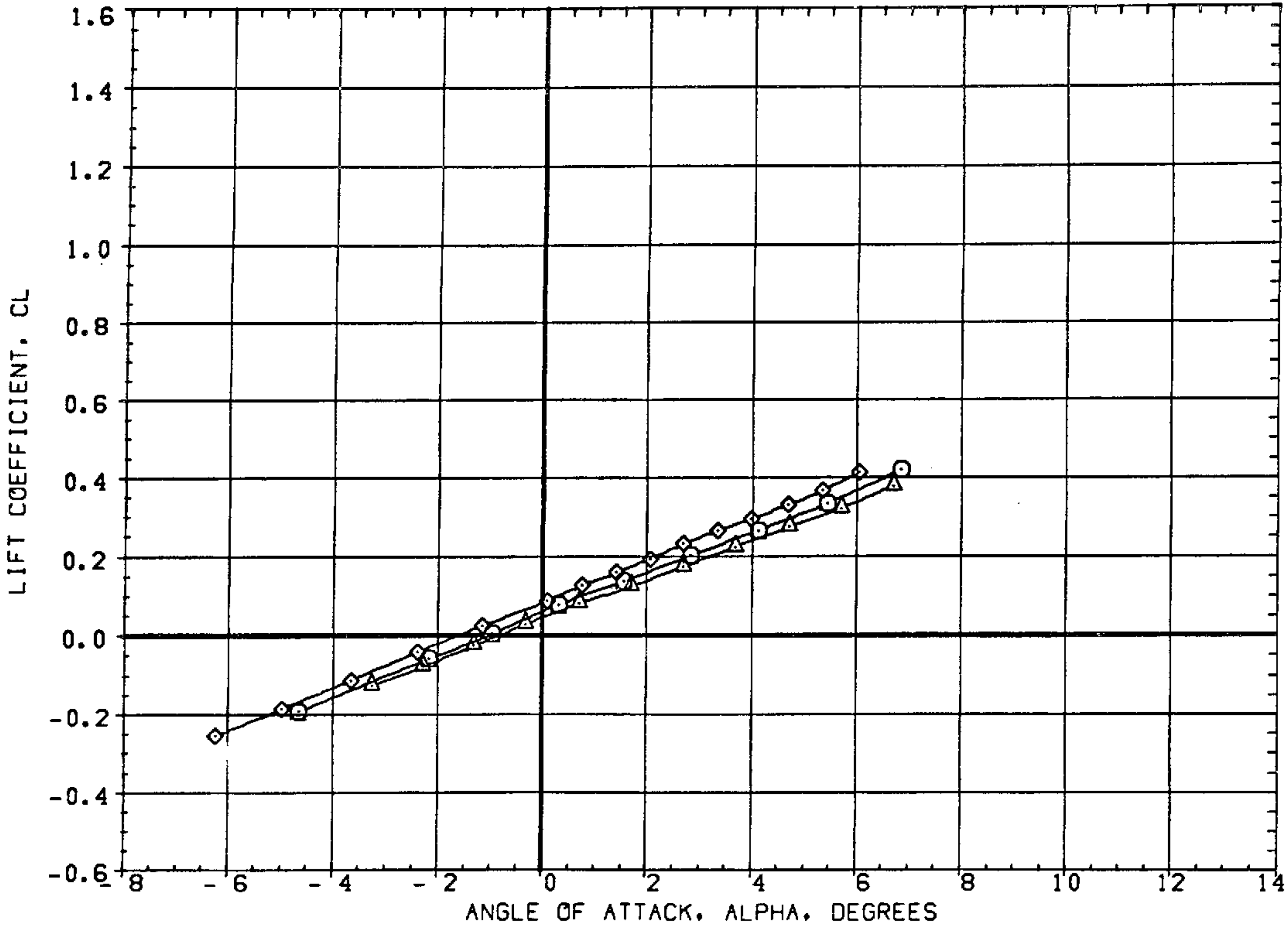


FIGURE 7 EFFECT OF WING AIRFOIL SECTION FOR AN OBLIQUE WING ANGLE OF 60 DEGREES

(A)MACH = 1.20

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	BETA	LAMBDA	RN/L
(9AE012)	○	W1 F0 B	0.000	60.000	6.000
(9AE043)	△	W2 F0 B	0.000	60.000	4.000
(9AE067)	◇	W4 F0 B	0.000	60.000	6.000

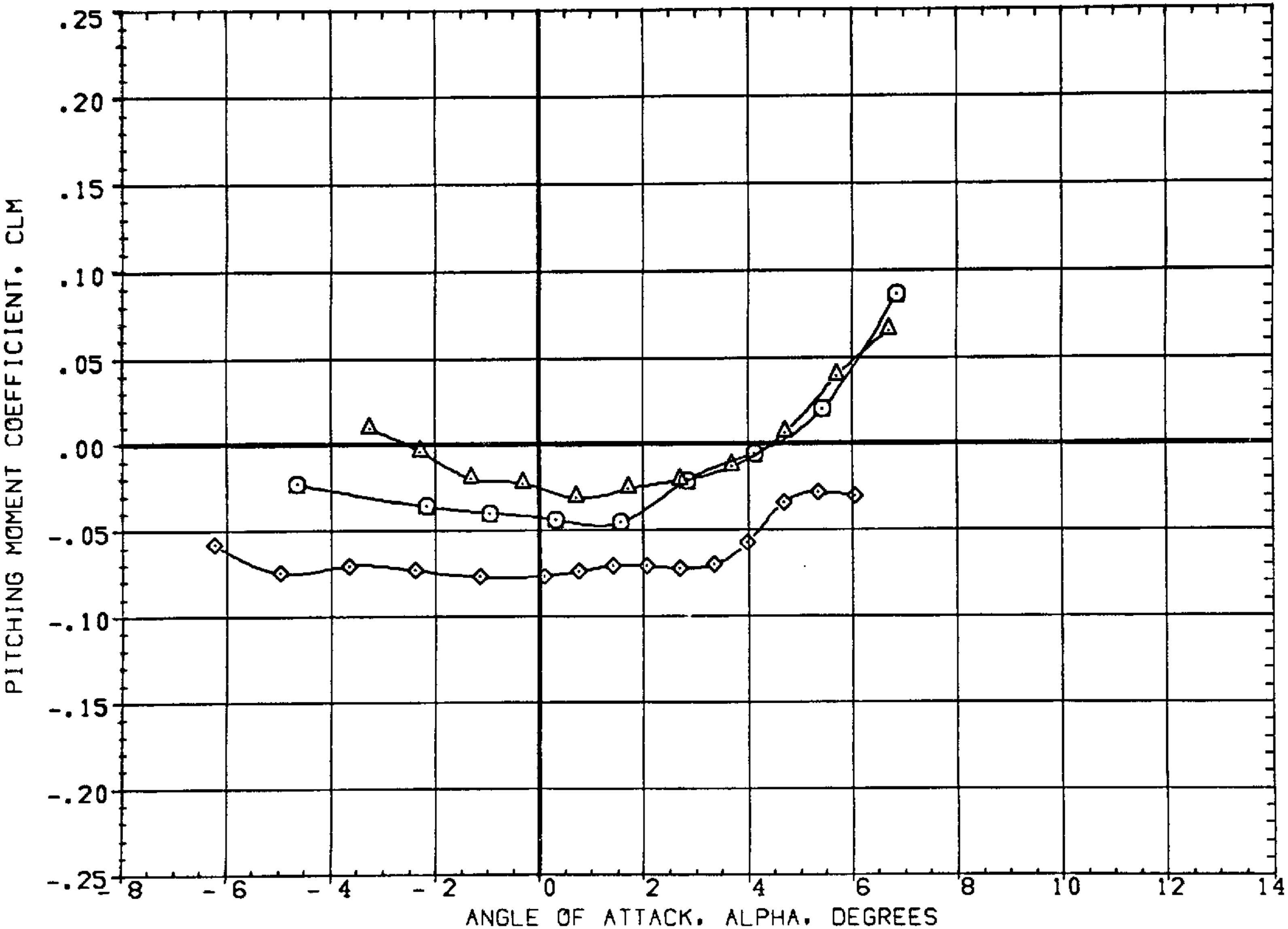


FIGURE 7 EFFECT OF WING AIRFOIL SECTION FOR AN OBLIQUE WING ANGLE OF 60 DEGREES

(A)MACH = 1.20

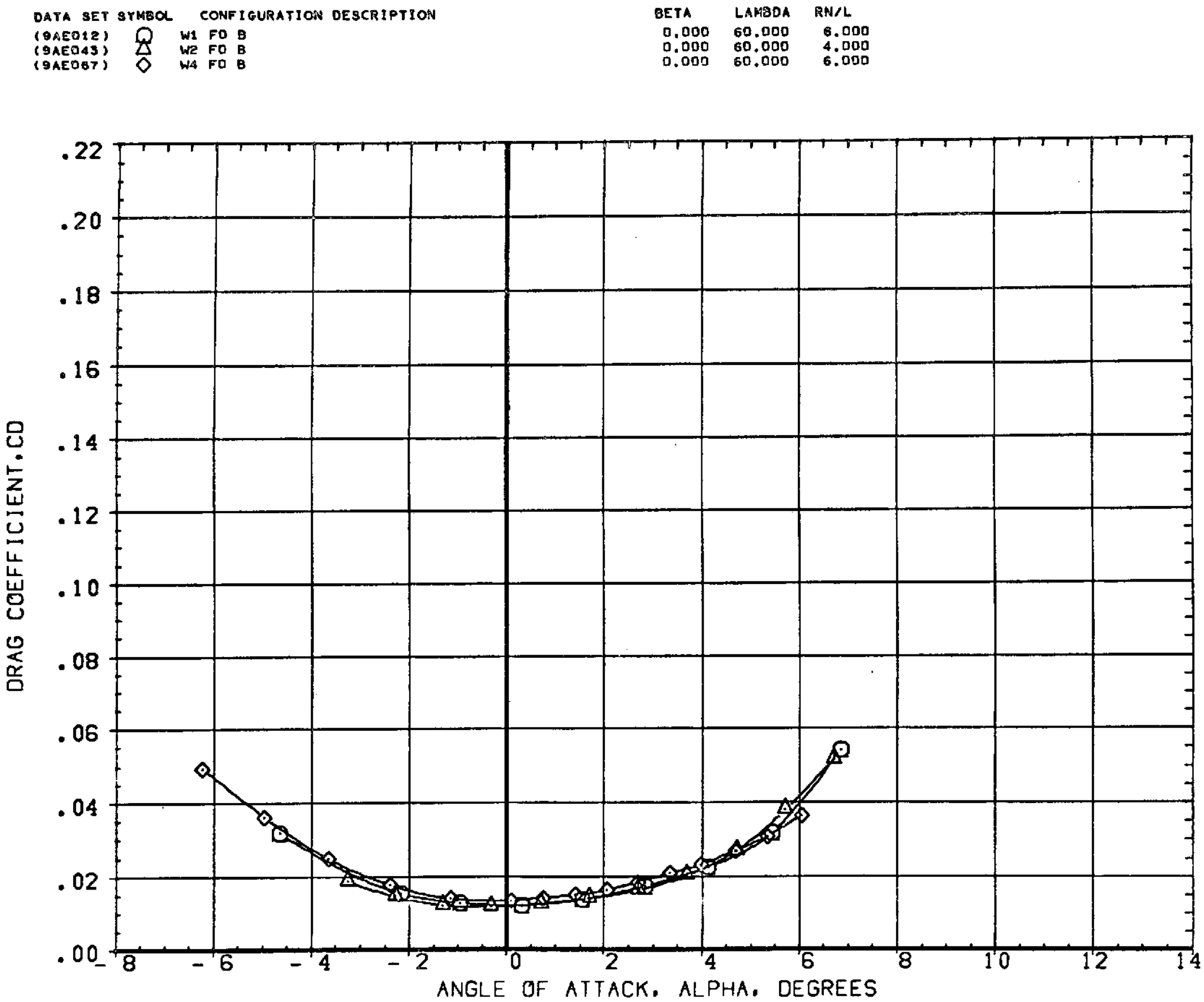


FIGURE 7 EFFECT OF WING AIRFOIL SECTION FOR AN OBLIQUE WING ANGLE OF 60 DEGREES

(A)MACH = 1.20

153

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	BETA	LAMBDA	FN/L
(9AE012)	○	W1 FD B	0.000	60.000	6.000
(9AE043)	△	W2 FD B	0.000	60.000	4.000
(9AE067)	◇	W4 FD B	0.000	60.000	6.000

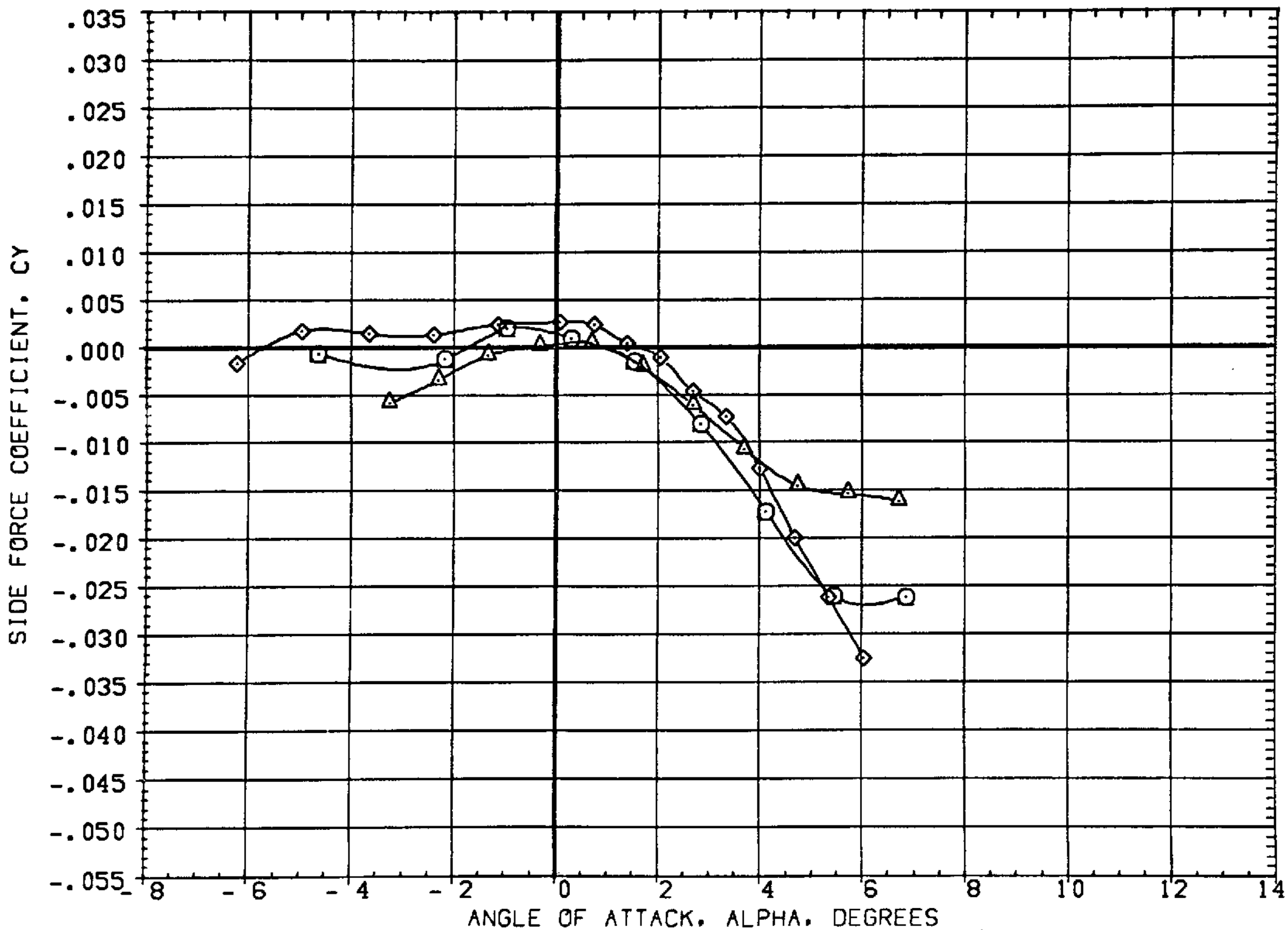


FIGURE 7 EFFECT OF WING AIRFOIL SECTION FOR AN OBLIQUE WING ANGLE OF 60 DEGREES

(A)MACH = 1.20

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	BETA	LAMBDA	RN/L
(9AE012)	○	W1 FO B	0.000	60.000	6.000
(9AE043)	△	W2 FO B	0.000	60.000	4.000
(9AE067)	◇	W4 FO B	0.000	60.000	6.000

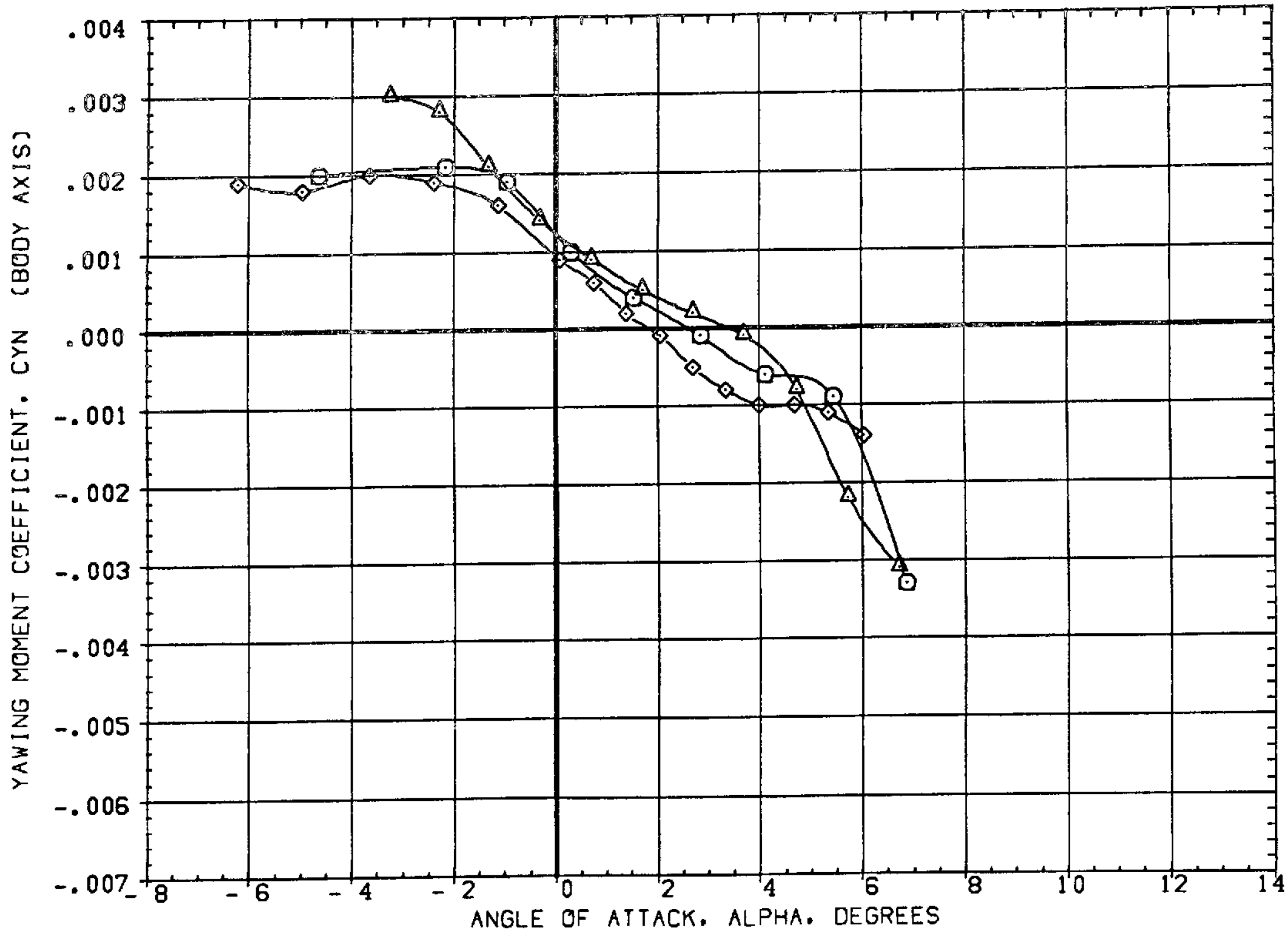


FIGURE 7 EFFECT OF WING AIRFOIL SECTION FOR AN OBLIQUE WING ANGLE OF 60 DEGREES

(A)MACH = 1.20

155

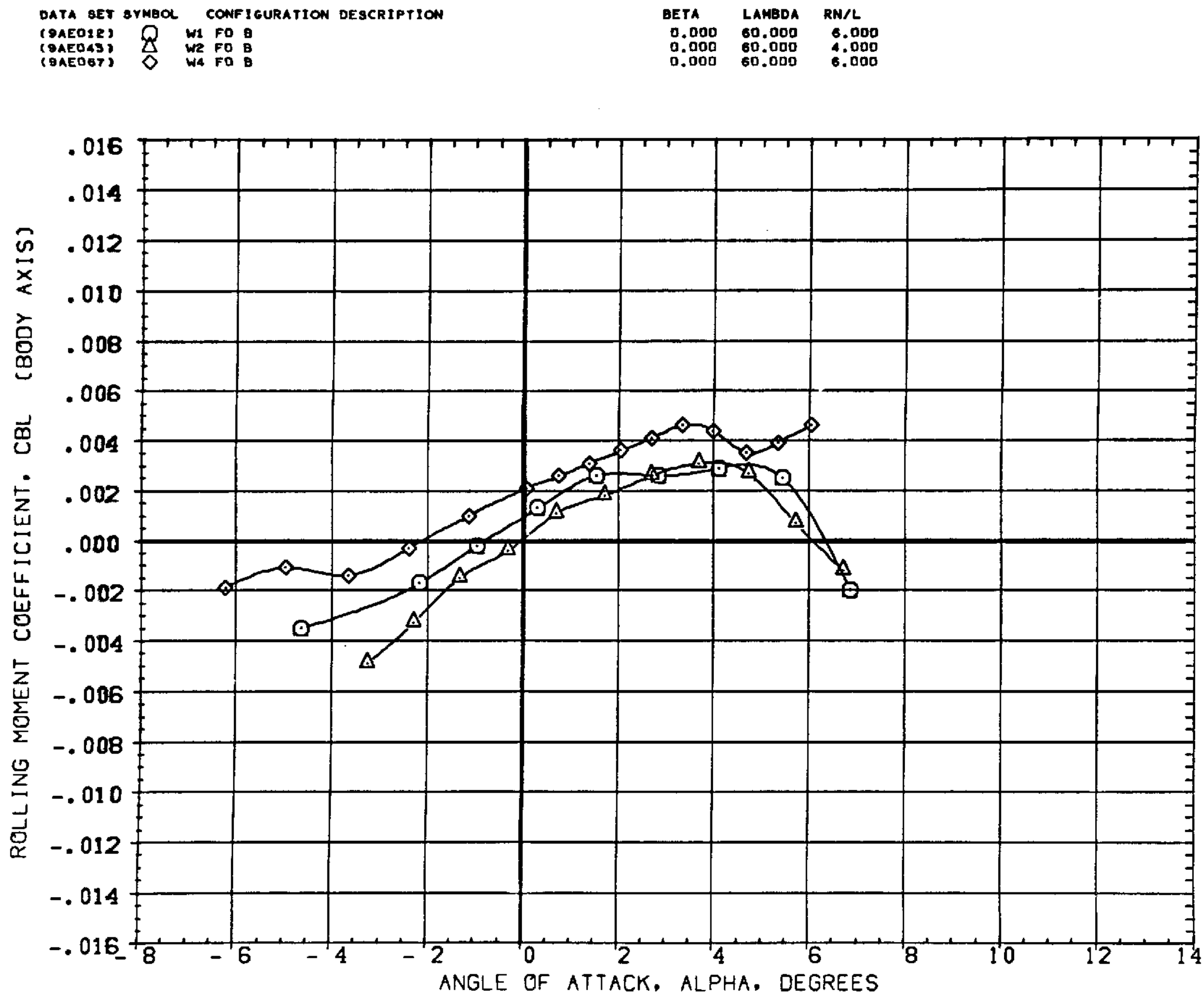


FIGURE 7 EFFECT OF WING AIRFOIL SECTION FOR AN OBLIQUE WING ANGLE OF 60 DEGREES

(A)MACH = 1.20

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	BETA	LAMBDA	RN/L
(9AE012)	○	W1 FO B	0.000	60.000	6.000
(9AE043)	△	W2 FO B	0.000	60.000	4.000
(9AE067)	◇	W4 FO B	0.000	60.000	6.000

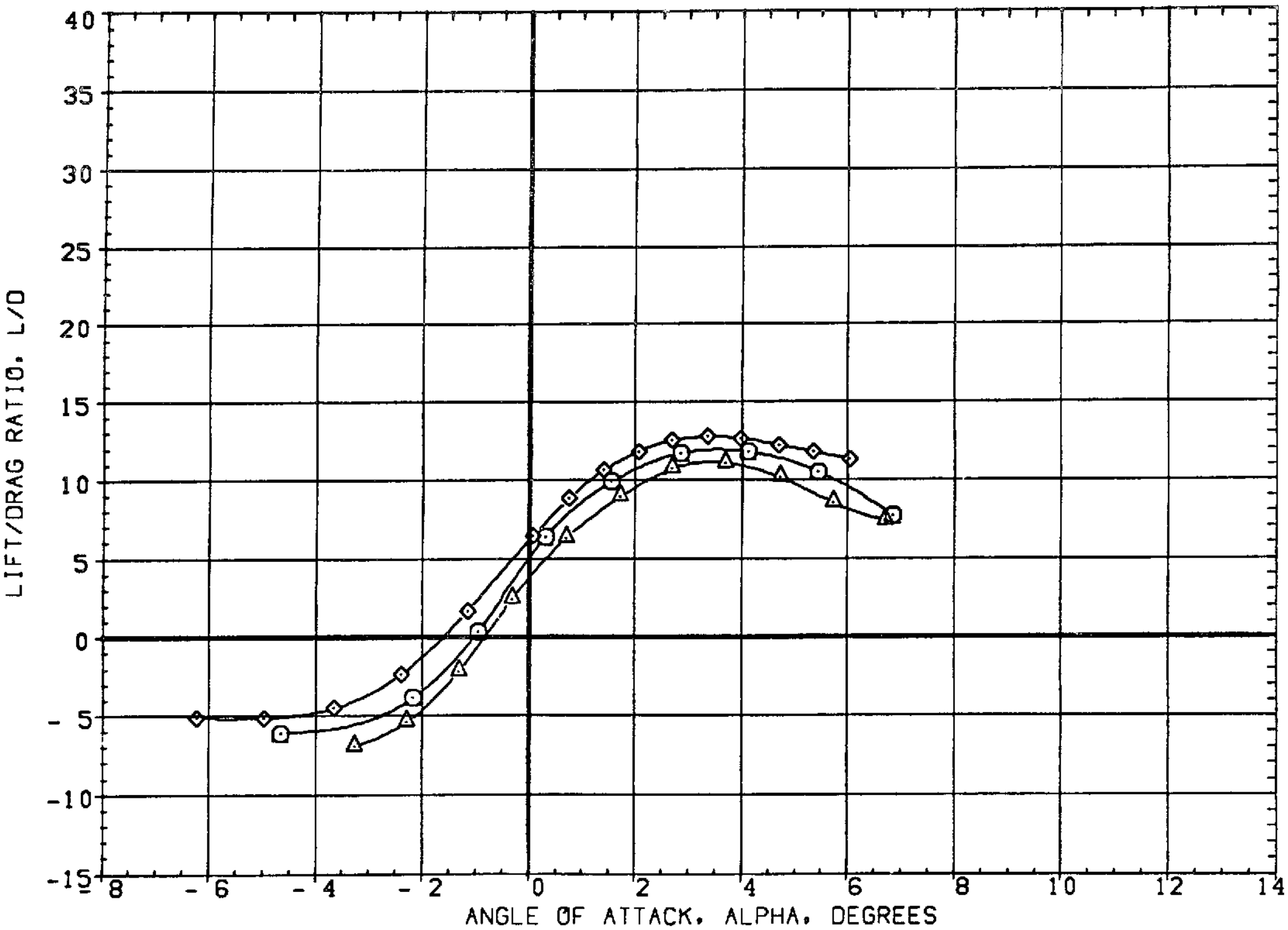


FIGURE 7 EFFECT OF WING AIRFOIL SECTION FOR AN OBLIQUE WING ANGLE OF 60 DEGREES

(A)MACH = 1.20

157

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	BETA	LAMBDA	RN/L
(OAE012)	○	W1 FO B	0.000	60.000	6.000
(OAE043)	△	W2 FO B	0.000	60.000	4.000
(OAE067)	◇	W4 FO B	0.000	60.000	6.000

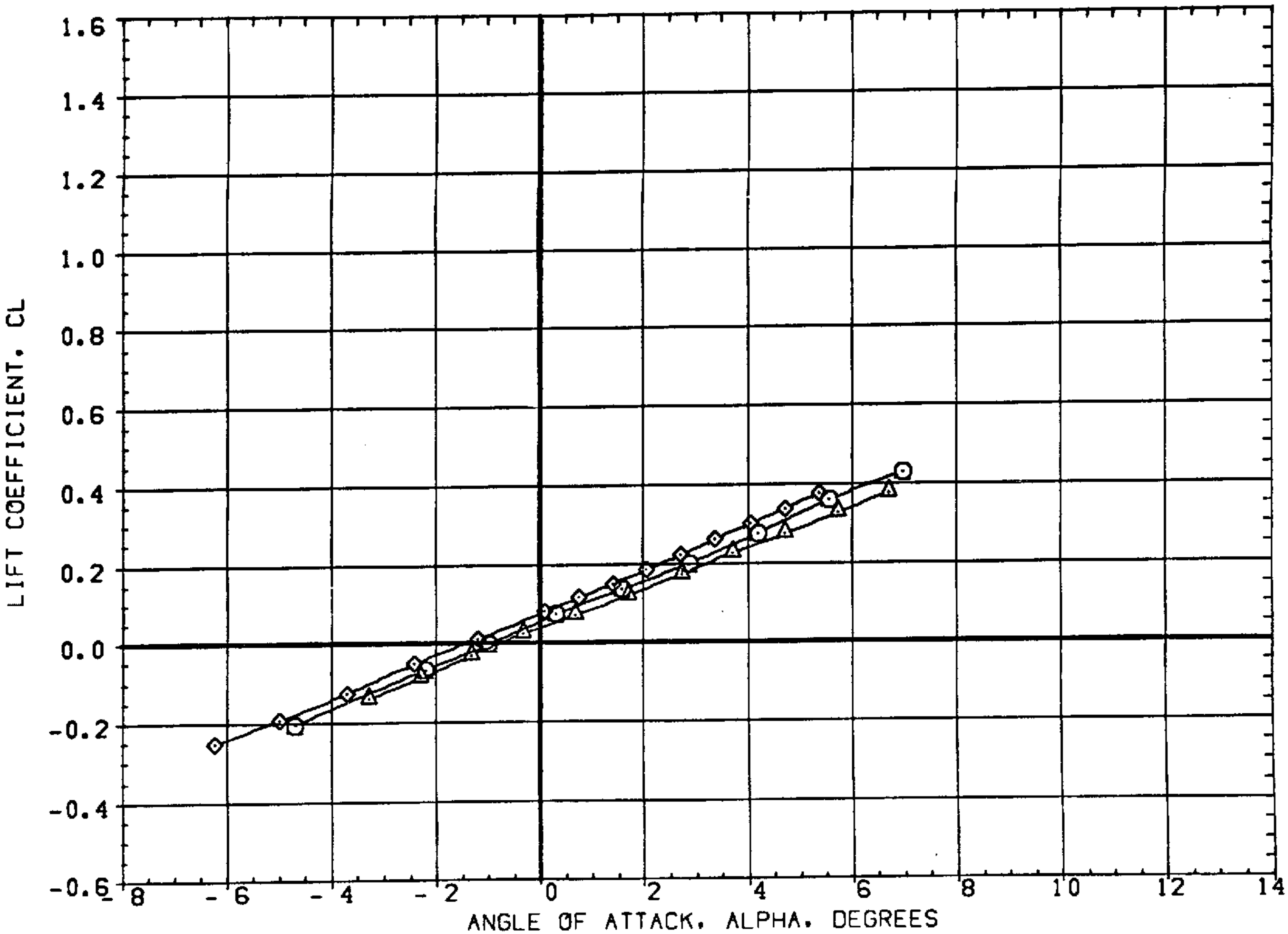


FIGURE 7 EFFECT OF WING AIRFOIL SECTION FOR AN OBLIQUE WING ANGLE OF 60 DEGREES

(A)MACH = 1.30

158

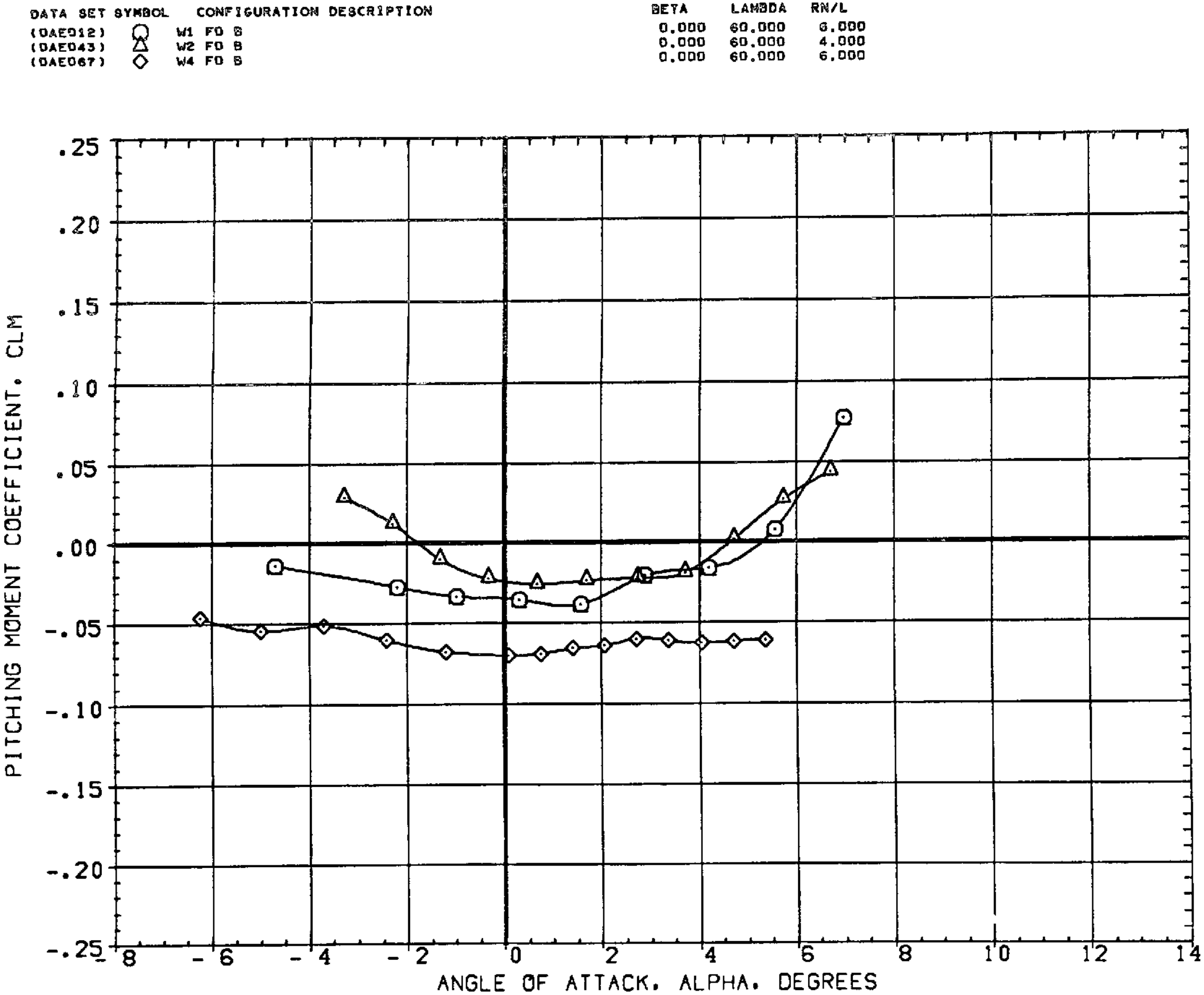


FIGURE 7 EFFECT OF WING AIRFOIL SECTION FOR AN OBLIQUE WING ANGLE OF 60 DEGREES

(A)MACH = 1.30

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	BETA	LAMBDA	RN/L
(OAE012)	○	W1 F0 B	0.000	60.000	6.000
(OAE043)	△	W2 F0 B	0.000	60.000	4.000
(OAE067)	◇	W4 F0 B	0.000	60.000	6.000

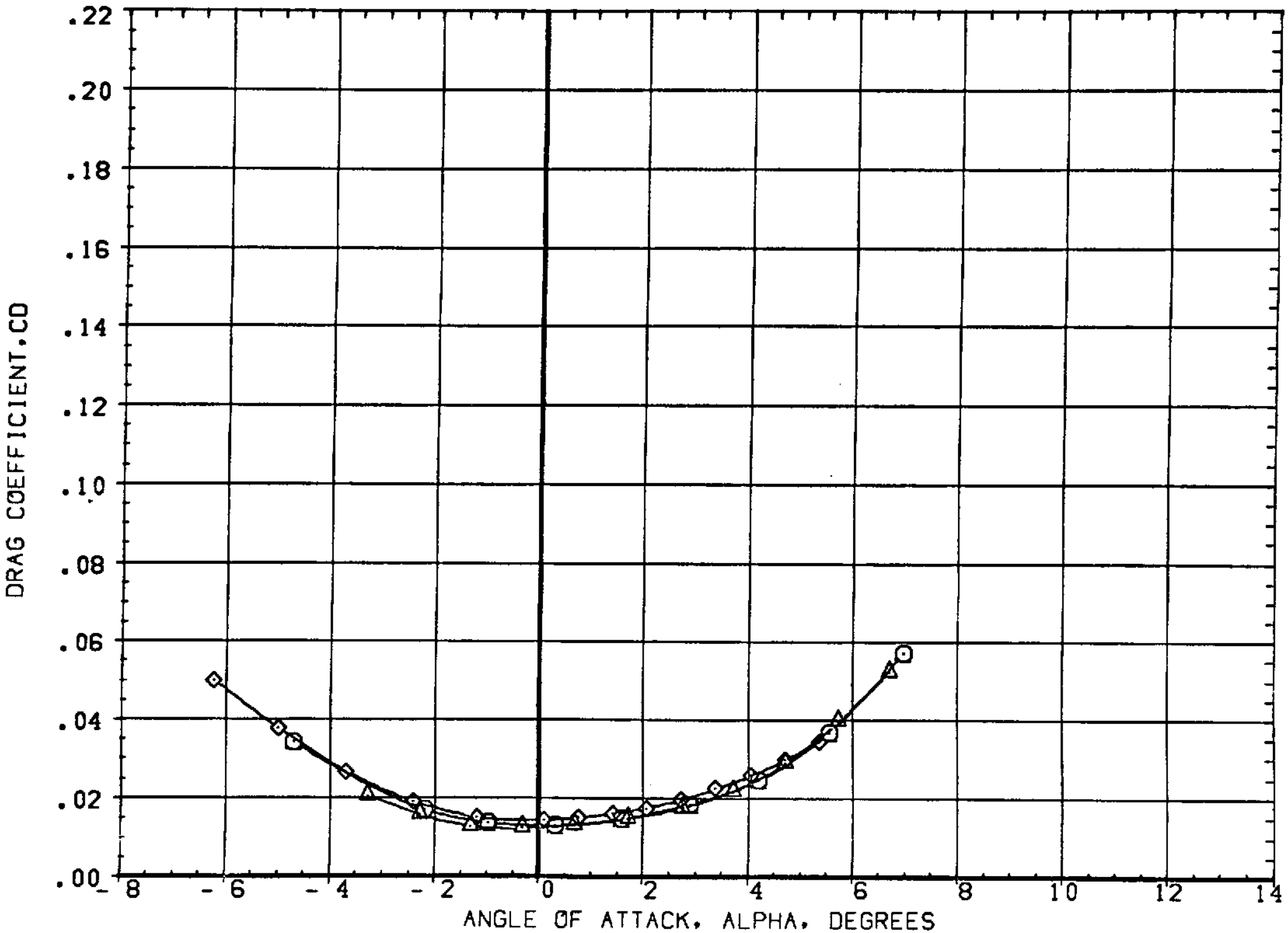


FIGURE 7 EFFECT OF WING AIRFOIL SECTION FOR AN OBLIQUE WING ANGLE OF 60 DEGREES

(A)MACH = 1.30

100

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	BETA	LAMBDA	RN/L
(OAE012)	○	W1 FD B	0.000	60.000	6.000
(OAE043)	△	W2 FD B	0.000	60.000	4.000
(OAE067)	◇	W4 FD B	0.000	60.000	6.000

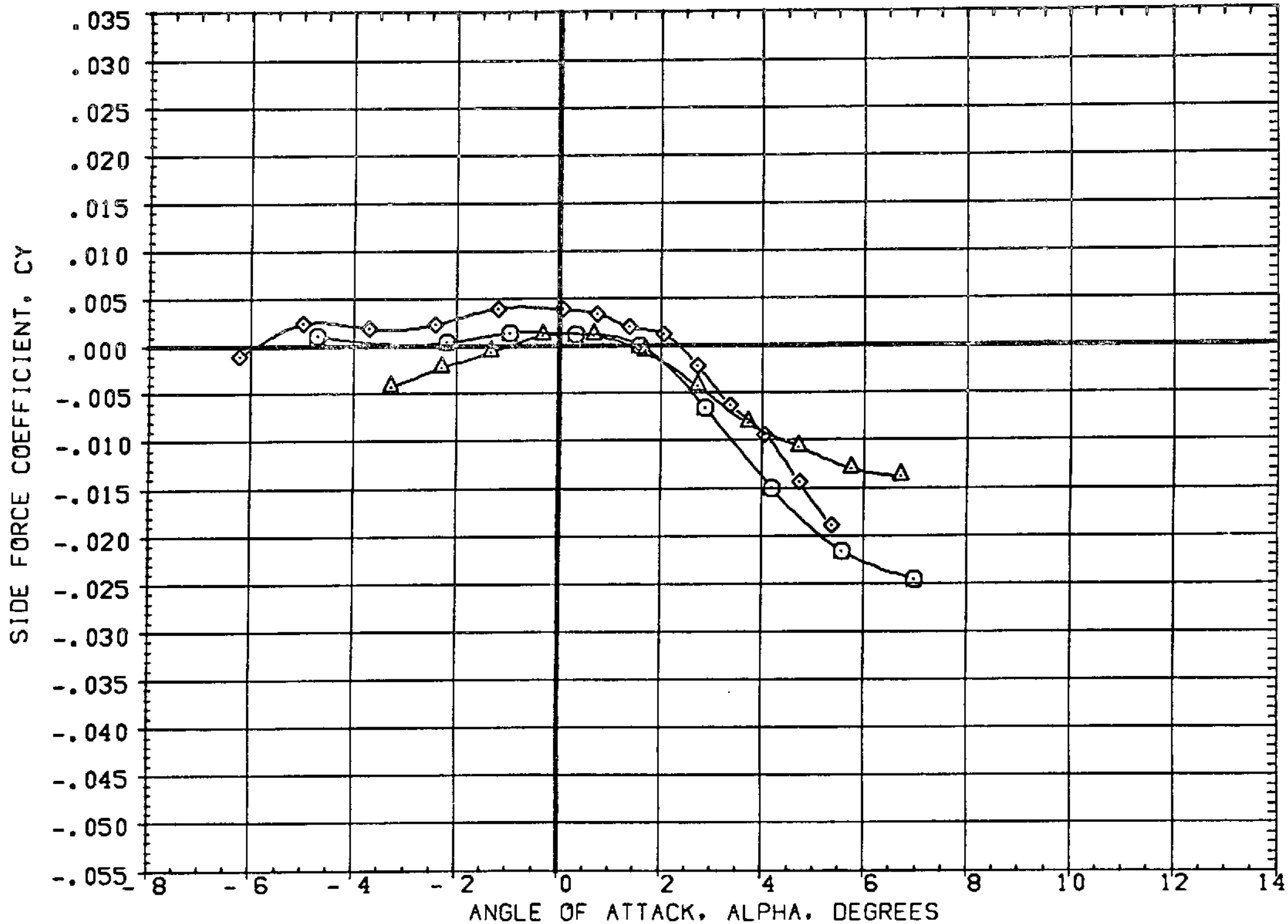


FIGURE 7 EFFECT OF WING AIRFOIL SECTION FOR AN OBLIQUE WING ANGLE OF 60 DEGREES

(A)MACH = 1.30

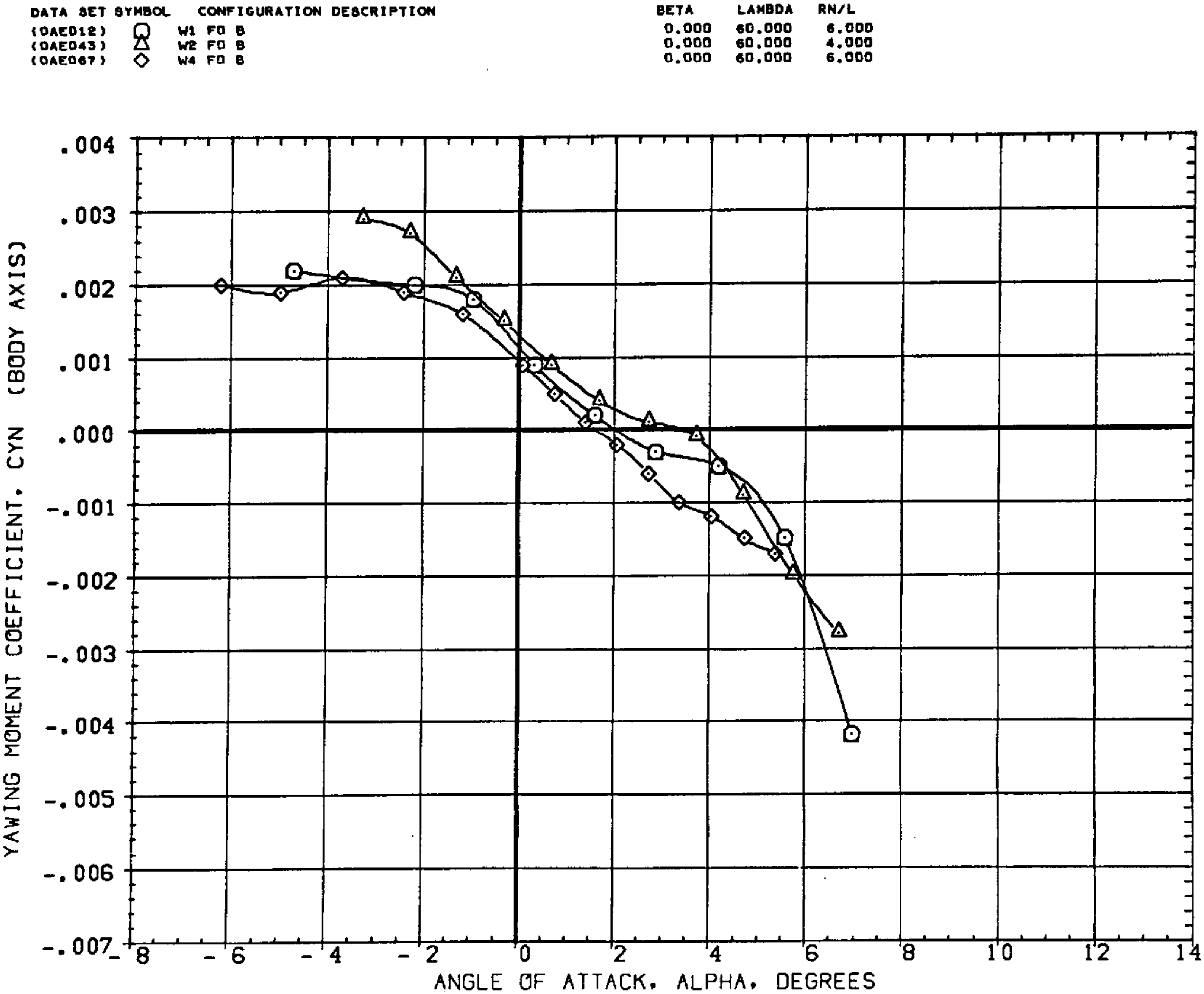


FIGURE 7 EFFECT OF WING AIRFOIL SECTION FOR AN OBLIQUE WING ANGLE OF 60 DEGREES

(A)MACH = 1.30

162

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	BETA	LAMBDA	RN/L
(OAE012)	○	W1 FO B	0.000	60.000	6.000
(OAE043)	△	W2 FO B	0.000	60.000	4.000
(OAE067)	◇	W4 FO B	0.000	60.000	6.000

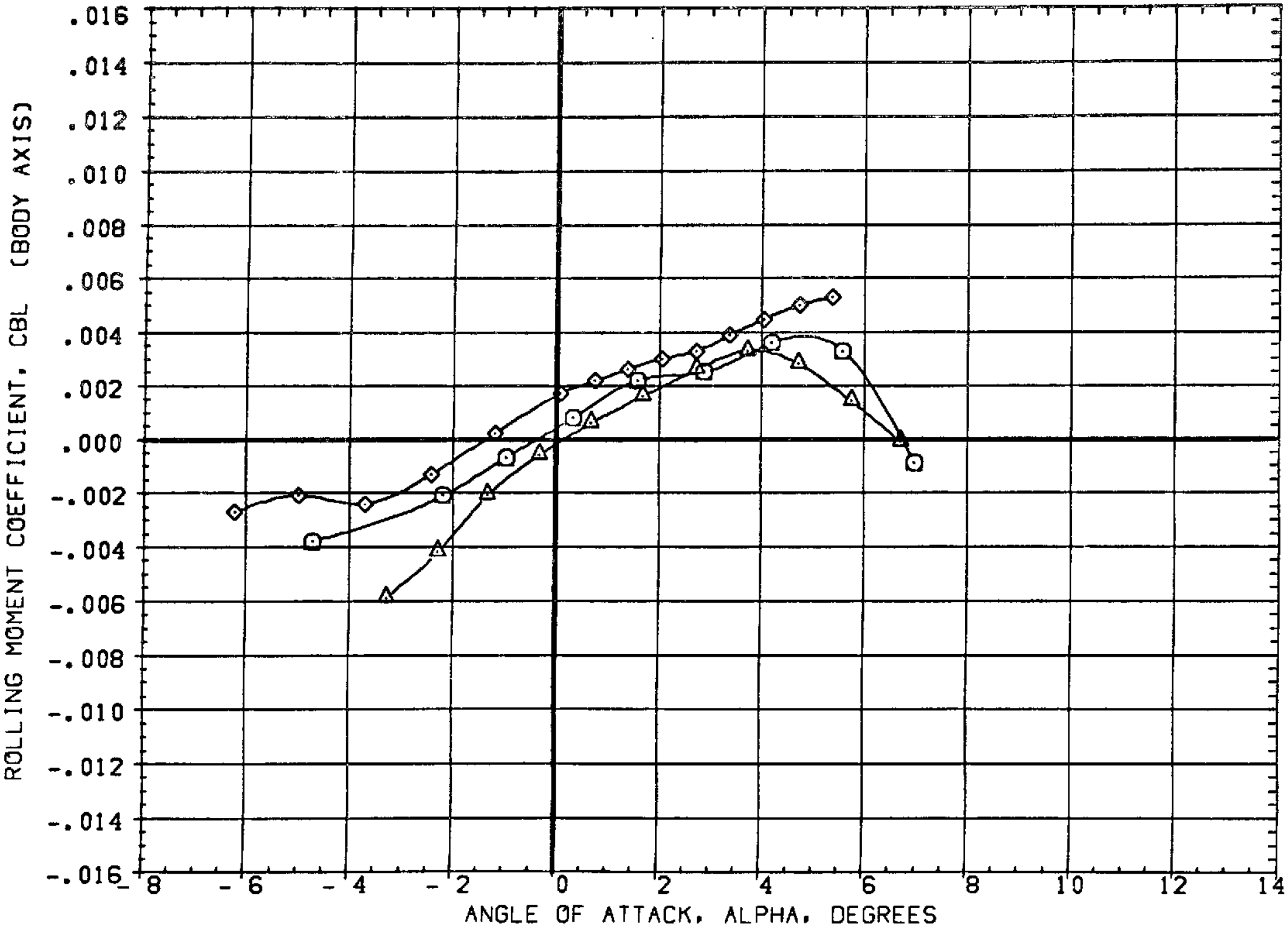


FIGURE 7 EFFECT OF WING AIRFOIL SECTION FOR AN OBLIQUE WING ANGLE OF 60 DEGREES

(A)MACH = 1.30

163

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	BETA	LAMBDA	RN/L
(DAE012)	○	W1 F0 B	0.000	60.000	6.000
(DAE043)	△	W2 F0 B	0.000	60.000	4.000
(DAE067)	◇	W4 F0 B	0.000	60.000	6.000

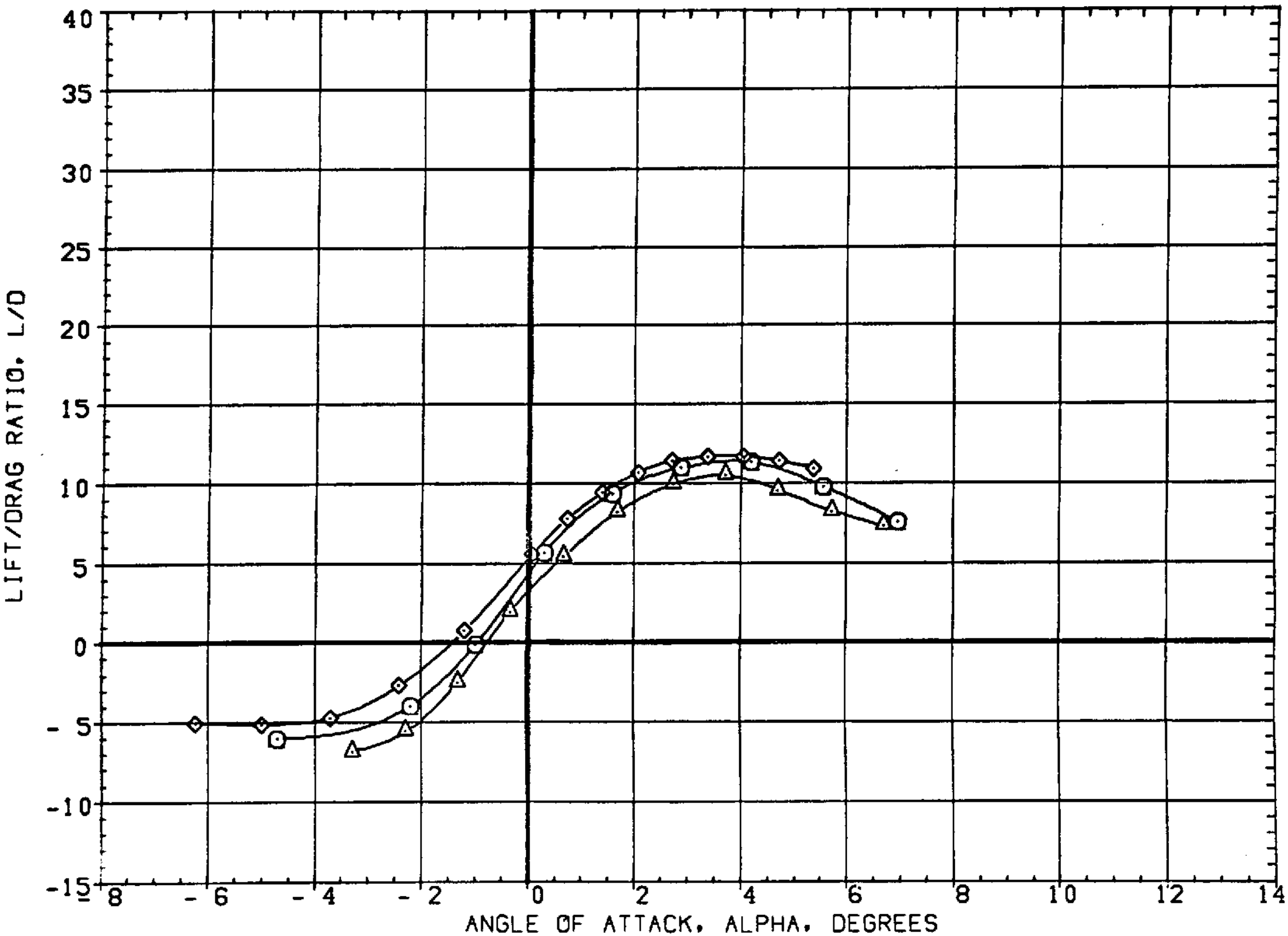


FIGURE 7 EFFECT OF WING AIRFOIL SECTION FOR AN OBLIQUE WING ANGLE OF 60 DEGREES

(A)MACH = 1.30

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	BETA	LAMBDA	RN/L
(ZAE012)	○	W1 F0 B	0.000	60.000	6.000
(ZAE043)	△	W2 F0 B	0.000	60.000	4.000
(ZAE067)	◇	W4 F0 B	0.000	60.000	6.000

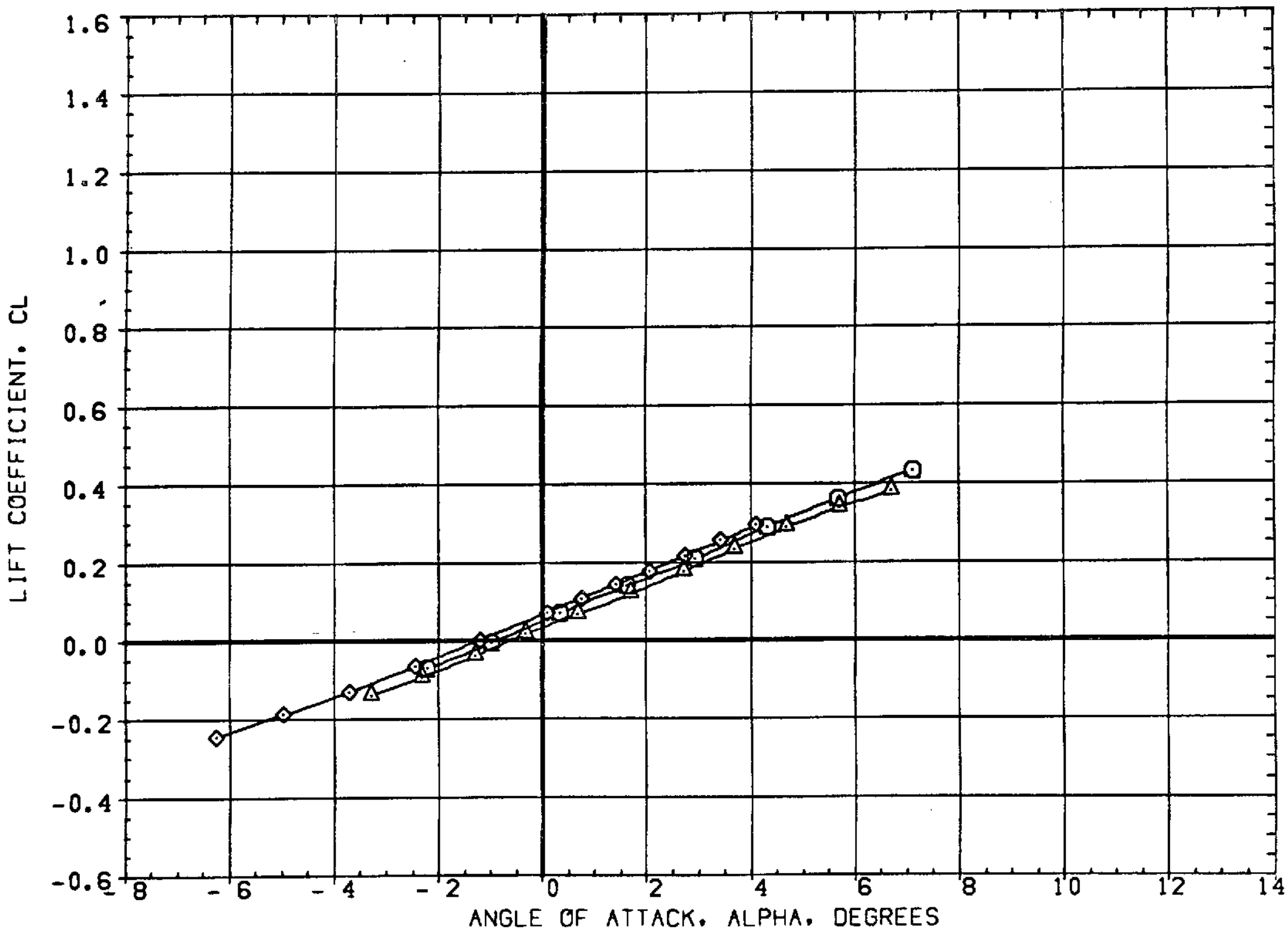


FIGURE 7 EFFECT OF WING AIRFOIL SECTION FOR AN OBLIQUE WING ANGLE OF 60 DEGREES

(A)MACH = 1.40

165

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	BETA	LAMBDA	RN/L
(ZAE012)	○	W1 F0 B	0.000	60.000	6.000
(ZAE043)	△	W2 F0 B	0.000	60.000	4.000
(ZAE067)	◇	W4 F0 B	0.000	60.000	6.000

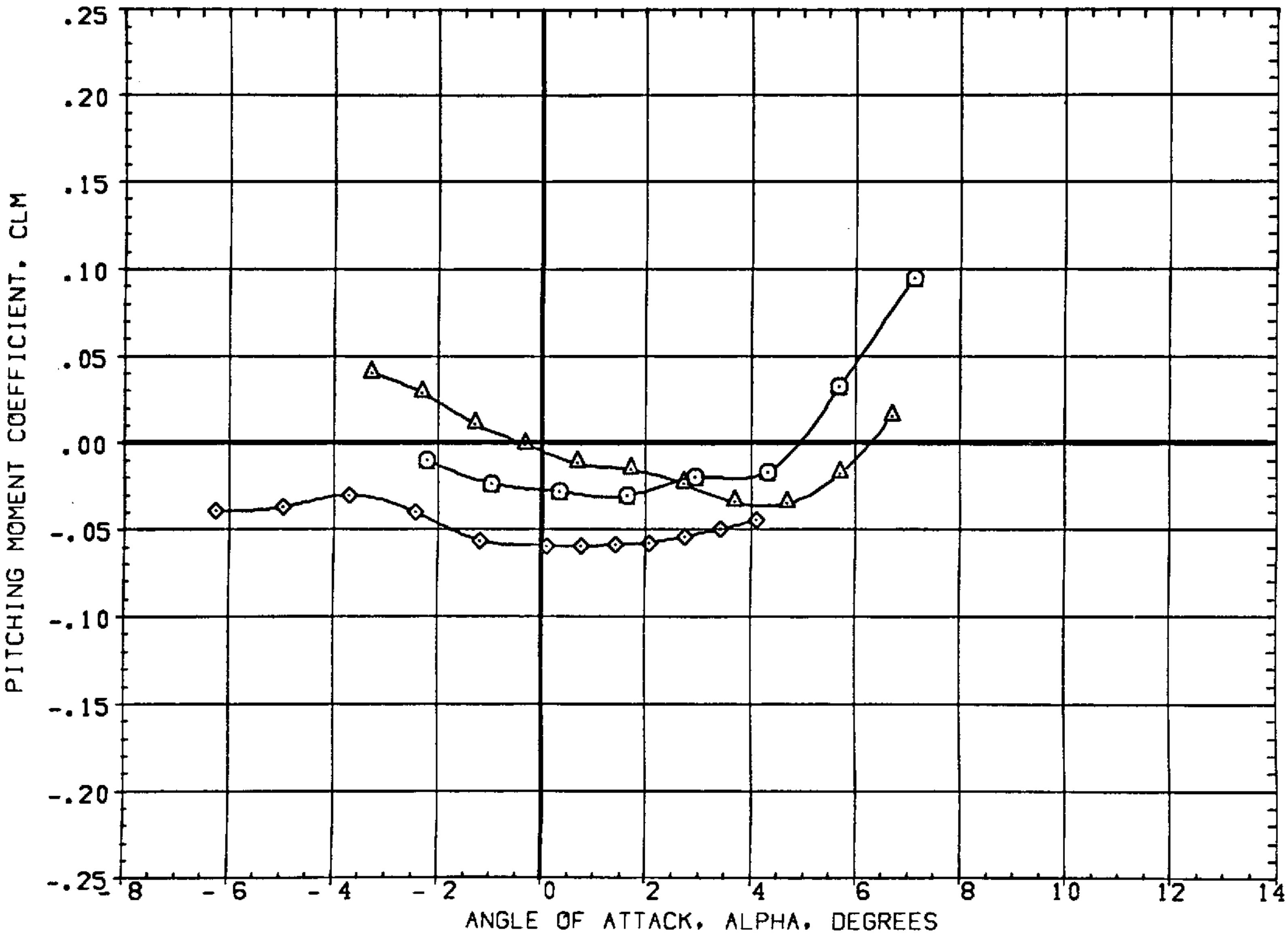


FIGURE 7 EFFECT OF WING AIRFOIL SECTION FOR AN OBLIQUE WING ANGLE OF 60 DEGREES

(A)MACH = 1.40

166

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	BETA	LAMBDA	RN/L
(ZAE012)	○	W1 F0 B	0.000	60.000	6.000
(ZAE043)	△	W2 F0 B	0.000	60.000	4.000
(ZAE067)	◇	W4 F0 B	0.000	60.000	6.000

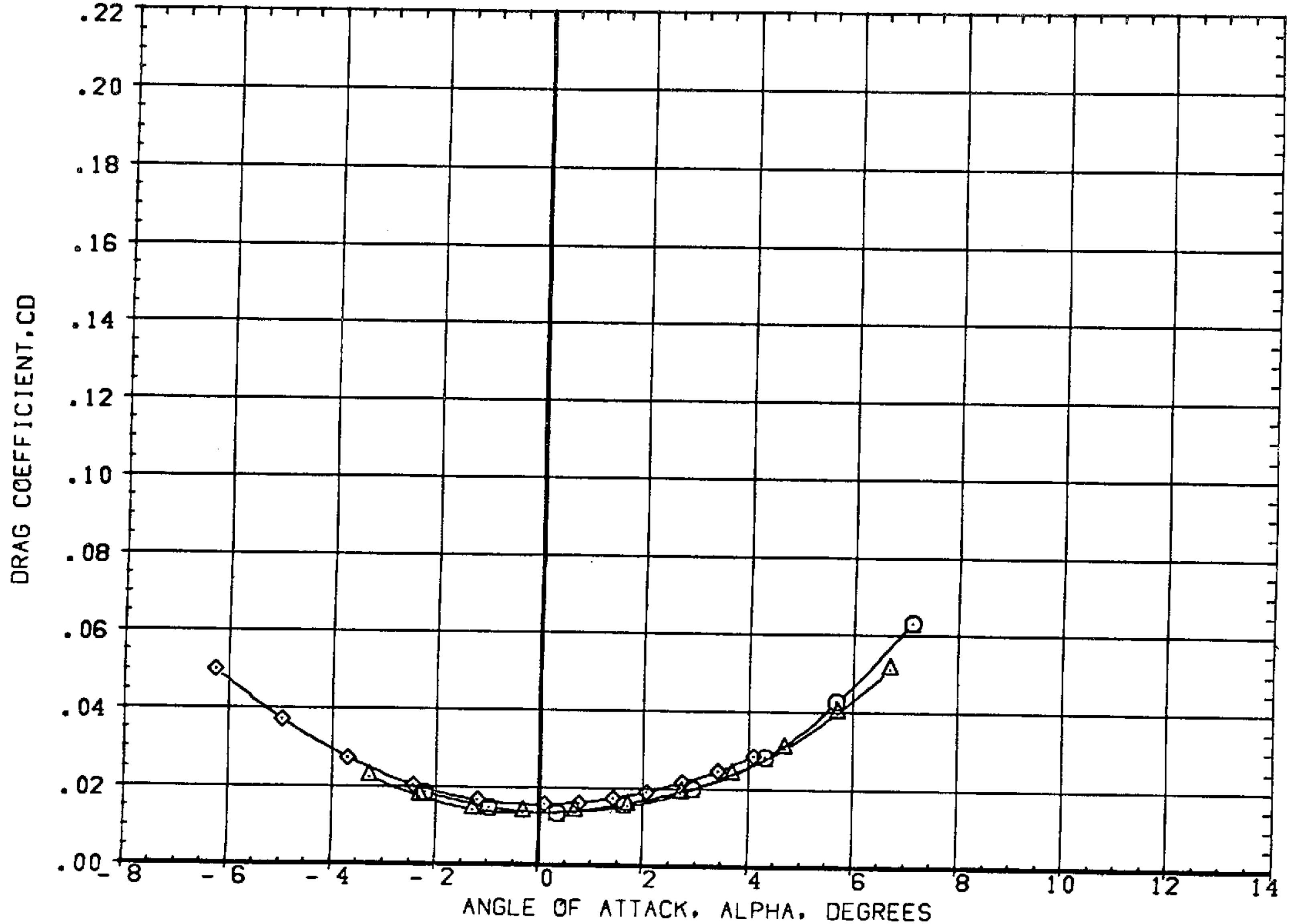


FIGURE 7 EFFECT OF WING AIRFOIL SECTION FOR AN OBLIQUE WING ANGLE OF 60 DEGREES
(A)MACH = 1.40

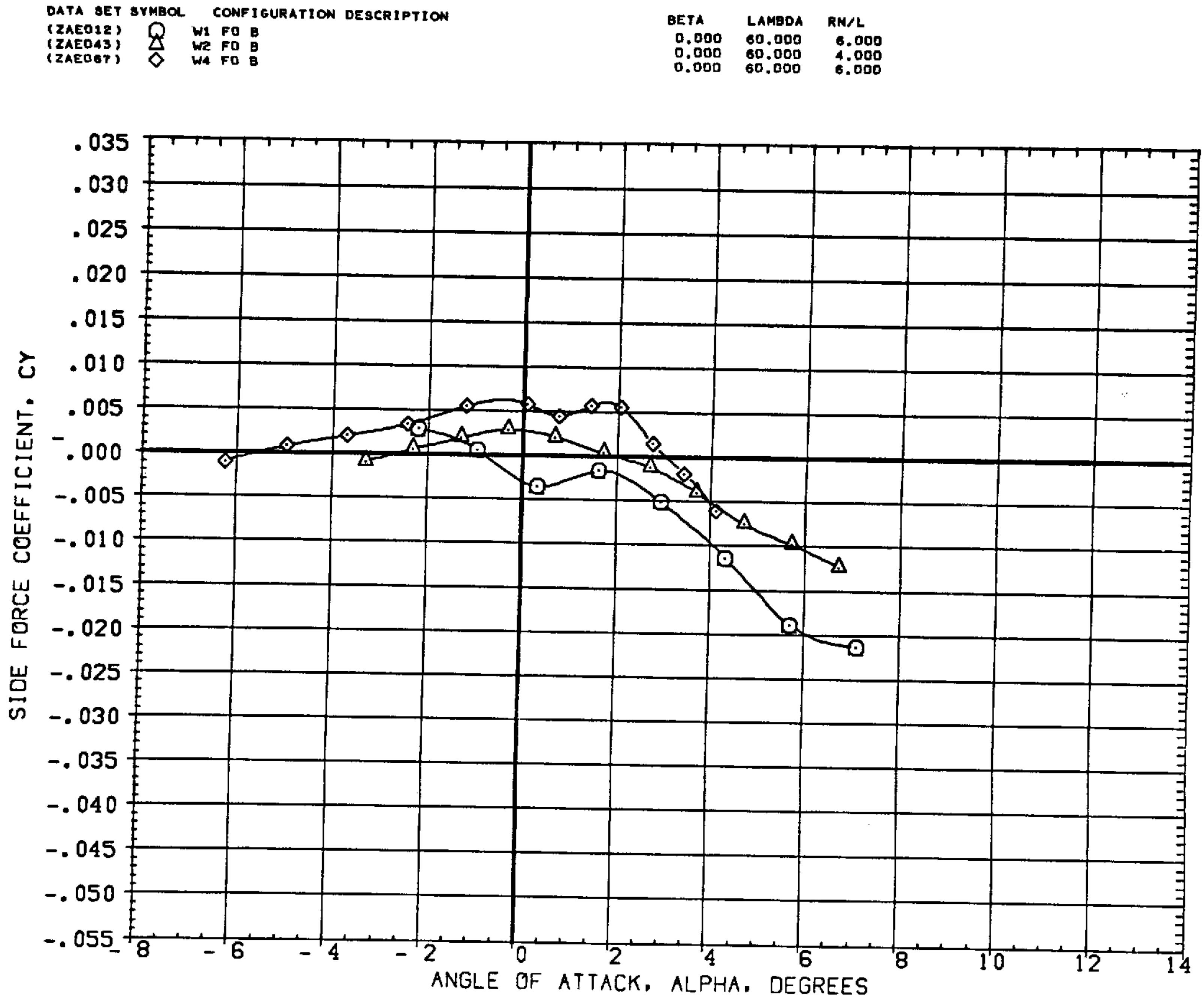


FIGURE 7 EFFECT OF WING AIRFOIL SECTION FOR AN OBLIQUE WING ANGLE OF 60 DEGREES
(A)MACH = 1.40

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	BETA	LAMBDA	RN/L
(ZAE012)	○	W1 F0 B	0.000	60.000	6.000
(ZAE043)	△	W2 F0 B	0.000	60.000	4.000
(ZAE067)	◇	W4 F0 B	0.000	60.000	6.000

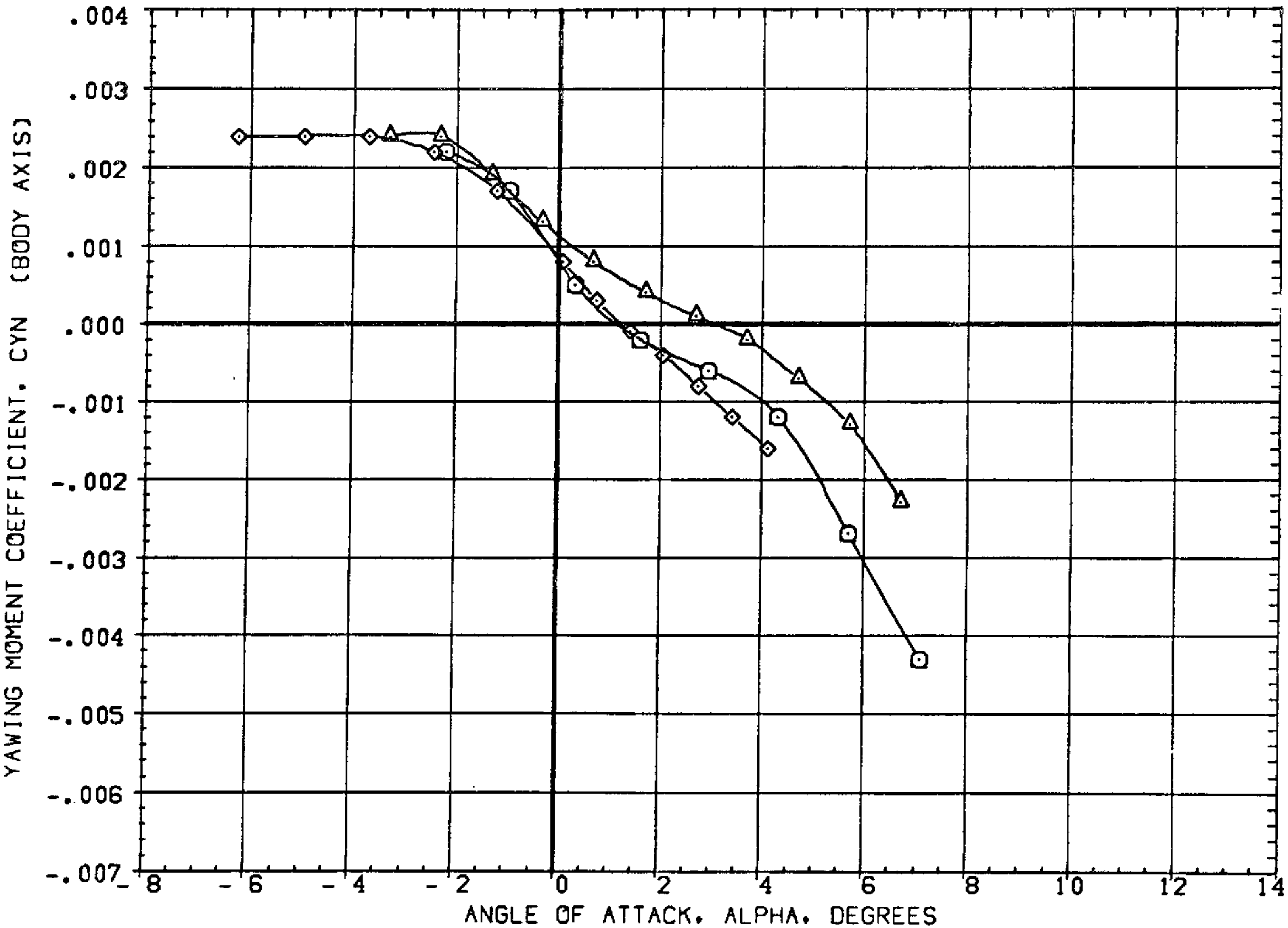


FIGURE 7 EFFECT OF WING AIRFOIL SECTION FOR AN OBLIQUE WING ANGLE OF 60 DEGREES

(A)MACH = 1.40

168

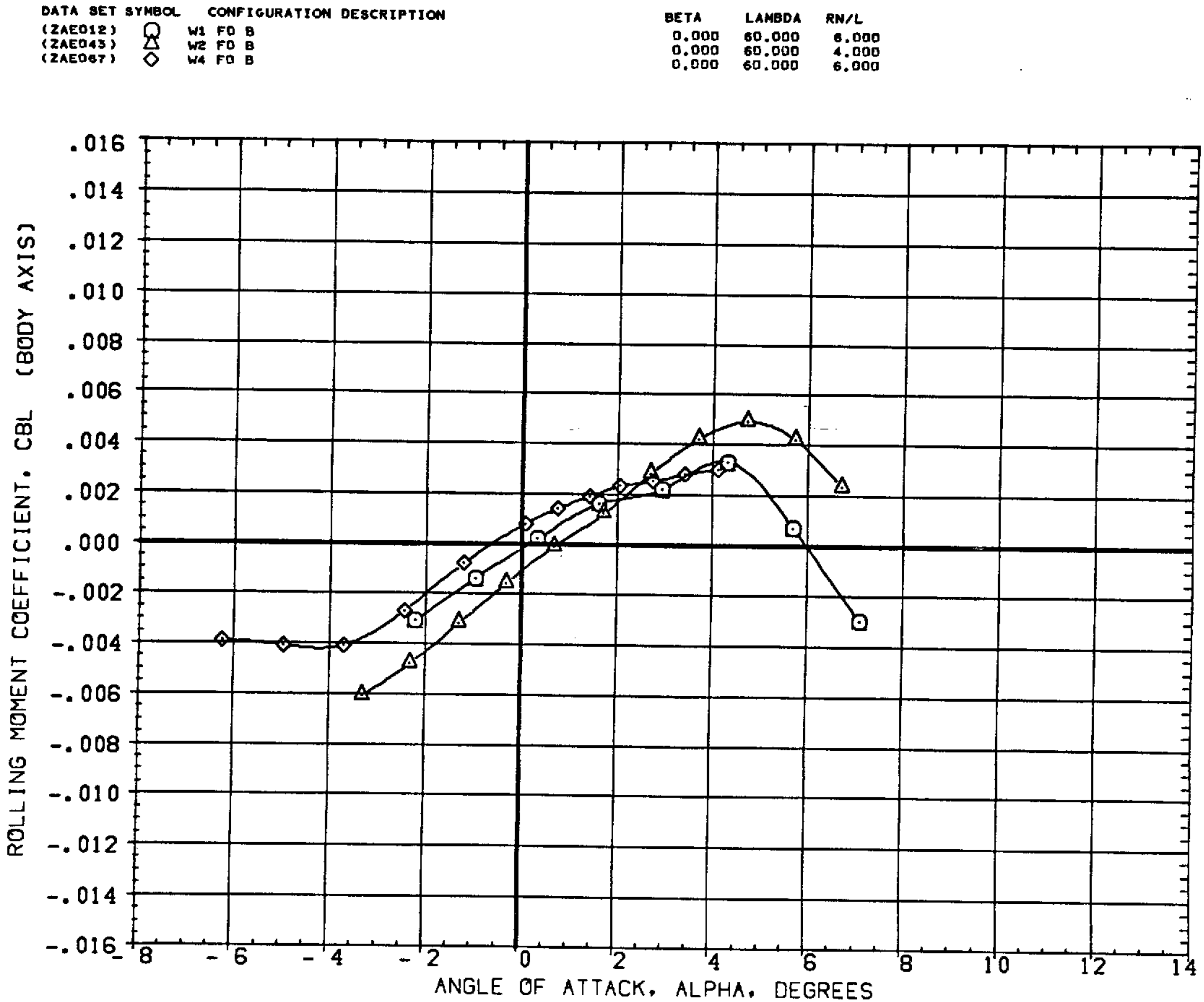


FIGURE 7 EFFECT OF WING AIRFOIL SECTION FOR AN OBLIQUE WING ANGLE OF 60 DEGREES
(A)MACH = 1.40

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	BETA	LAMBDA	RN/L
(ZAE012)	○	W1 F0 B	0.000	60.000	6.000
(ZAE043)	△	W2 F0 B	0.000	60.000	4.000
(ZAE067)	◇	W4 F0 B	0.000	60.000	6.000

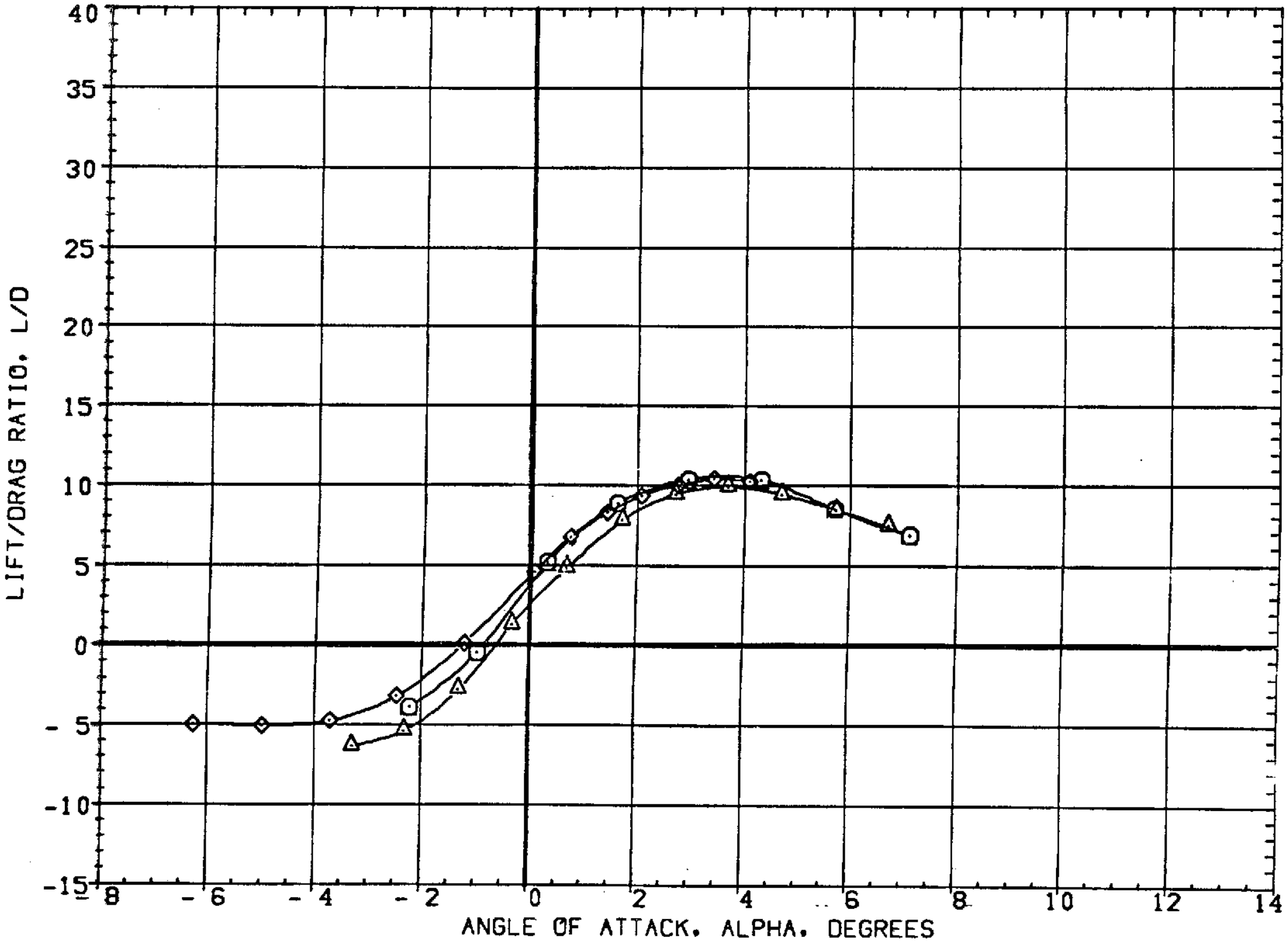


FIGURE 7 EFFECT OF WING AIRFOIL SECTION FOR AN OBLIQUE WING ANGLE OF 60 DEGREES

(A)MACH = 1.40