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RESEARCH MEMORANDUM

FORCE AND PRESSURE-DISTRIBUTION INVESTIGATION TO HIGH ANGLES OF ATTACK ON ALL-MOVABLE TRIANGULAR AND RECTANGULAR WINGS IN COMBINATION WITH A BODY AT SUPERSONIC SPEEDS

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RESEARCH MEMORANDUM

FORCE AND PRESSURE-DISTRIBUTION INVESTIGATION TO HIGH ANGLES OF ATTACK ON ALL-MOVABLE TRIANGULAR AND RECTANGULAR WINGS IN COMBINATION WITH A BODY AT SUPERSONIC SPEEDS

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SUMMARY

In order to provide high-incidence data for all-movable triangular and rectangular wings and a body in combination, forces, moments, and load distributions were measured to combined body angles of attack and wing deflection of ±45° at a Mach number of 3.36. The ranges of aspect ratios were, for the triangular wings, 3/8 to 4, and, for the rectangular wings, 1 to 3. Additional measurements giving over-all combination aerodynamic coefficients were made on two smaller scale wing-body combinations at Mach numbers of 3.36, 2.44, and 1.98.

The investigation showed that the mutual interference effects of body and wing could be satisfactorily calculated in the body angle-of-attack range from at least 0° to 6° and in the wing deflection range from 0° to 10°. Nonlinear effects precluded the satisfactory application of theoretical methods of predicting force and moment coefficients at higher incidences. These effects were due to a decrease in the effect of body upwash on wing lift with an increase in angle of attack above 10°, and to an increasingly nonplanar geometrical relationship of the wing and body with increasing wing deflection angle, thus departing from the simplified planar model on which the theory was based.

INTRODUCTION

Adequate maneuverability at ever-increasing altitudes requires missiles and interceptor aircraft to operate through large ranges of angles of attack and control deflection. Since supersonic aircraft at high angles of attack can encounter highly nonlinear aerodynamic forces, experimental investigation of body-wing configurations at high incidence and at supersonic speeds is needed in order to provide useful design data and to aid in the development of applicable high-angle theories. Some high-incidence

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data on body-wing combinations at supersonic speeds are available (e.g., refs. 1 to 4), however, detailed data in the form of forces, moments, and load distributions are limited.

A program was undertaken at the Ames 1- by 3-foot wind tunnels to provide some experimental data on the aerodynamic characteristics of wings and of all-movable wing-body combinations at high angles of attack. References 5, 6, and 7 report results of force and pressure-distribution measurements on semispan wings of triangular and rectangular plan form, tested to high angles of attack in the Mach number range 1.45 to 3.36. The investigation reported herein gives the results of tests at a Mach number of 3.36 of configurations using a selection of these wings as all-movable controls in combination with a body. The tests extended over the combined angle-of-attack and wing-deflection range of 0° to $\pm 45^{\circ}$. The data obtained consisted of forces and moments on the body and on all of the wings. Load distributions were obtained on the body and on the wings previously employed in the investigation of reference 7. Smaller scale full-span models of two of the semispan configurations were tested to high incidences at Mach numbers of 1.98, 2.44, and 3.36 in order to indicate the effects of Mach number.

Limited comparisons of experimental force and moment coefficients with calculated values based on linear theory were made to establish the range of angles of attack and wing deflection wherein theoretical values are in satisfactory agreement with those of experiment. Factors contributing to nonlinear force and moment coefficients at higher incidences are indicated.

SYMBOLS

A aspect ratio of the exposed wing panels joined together

c local chord, in.

c_n local normal-force coefficient, $\begin{cases} c_{n_{B(W)}} = \frac{2}{D} \int_0^{\pi} P\, r \cos\theta \, d\theta \\ c_{n_{W(B)}} = \int_0^1 (P_l - P_u) d(x/c) \end{cases}$

c_r root chord at wing-body juncture, in.

$\bar{c}$ mean aerodynamic chord of exposed wing panels, in.

$\frac{cc_n}{\bar{c}}$ span loading coefficient

C_b bending-moment coefficient about wing root chord, $\frac{\text{bending moment}}{q_\infty S_W s_W}$

C_h hinge-moment coefficient, $\frac{\text{hinge moment}}{q_\infty S_W \bar{c}}$

C_m pitching-moment coefficient about wing hinge line, $\frac{\text{pitching moment}}{q_\infty S_W \bar{c}}$

C_D drag coefficient, $\frac{\text{drag}}{q_\infty S_W}$

$C_L{}^*$ component of normal-force coefficient normal to free-stream direction, $C_N \cos(\alpha_B + \delta_W)$

C_N normal-force coefficient, $\frac{\text{normal force}}{q_\infty S_W}$, $C_{N_{W(B)}}$ normal to wing chord; $\Delta C_{N_{B(W)}}$, $C_{N_{BW}}$, and C_{N_B} normal to body axis

D body diameter, in.

$k_{B(W)}$ ratio of interference lift of body in presence of wing to that of wing alone, δ_W variable, $\alpha_B = 0^\circ$

$k_{W(B)}$ ratio of lift of wing in presence of body to that of wing alone, δ_W variable, $\alpha_B = 0^\circ$

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M Mach number

p orifice pressure

p_∞ free-stream static pressure

P pressure coefficient, $\frac{p - p_\infty}{q_\infty}$

q_∞ free-stream dynamic pressure

r body radius, in.

R	Reynolds number
s	combination semispan, measured from axis of body, in.
s_W	wing semispan measured from wing-body juncture, in.
S_B	body frontal area, sq in.
S_W	area of exposed wing panel, sq in.
t	local thickness of wing section
x	chordwise distance from leading edge of wing at spanwise distance y or distance along body from nose tip, in.
$\frac{\bar{x}}{c_r}$	linear-theory distance to center of pressure from leading edge of wing-body juncture, root chords
y	spanwise distance from wing-body juncture, in.
β	$\sqrt{M^2 - 1}$
α_B	angle of attack of body with respect to free stream, deg
α_W	angle of attack of wing with respect to free stream, $\alpha_W = \alpha_B + \delta_W$, deg
δ_W	deflection angle of wing with respect to body, deg
θ	azimuthal location of body pressure orifices measured from meridional plane, deg
$\Delta(\ )_{B(W)}$	body interference coefficient, $(\ )_{B(W)} - (\ )_B$

Subscripts

h	hinge line
l	lower surface
u	upper surface
B	body alone
$B(W)$	body in the presence of a wing
BW	body-wing combination, $B(W) + W(B)$

W wing alone

W(B) wing in the presence of the body

APPARATUS

Tunnel

The investigation was conducted in the Ames 1- by 3-foot supersonic wind tunnel No. 2. This nonreturn, intermittent-operation, variable-pressure wind tunnel has a Mach number range of 1.4 to 3.8. The Mach number can be changed by varying the contour of flexible steel plates which form the upper and lower walls of the nozzle.

Models

Semispan wings.- The semispan wings of the present investigation were selected from models previously employed in the wing-alone tests of references 5, 6, and 7. The geometry of these wings is summarized in figure 1(a). Three of the wings of this figure were fitted with pressure orifices. The wings, in vertical streamwise planes, had modified biconvex sections with trailing edges blunted to a height one-half the maximum thickness. The wings fitted with pressure orifices had maximum thickness ratios of 5 percent at the 50-percent-chord line and the remaining wings had maximum thickness ratios of 4 percent at the 59-percent-chord line. At the root, the wings were provided with an integral shaft, the axis of which was the hinge line. All of the wings, with the exception of the triangular wing of aspect ratio 3/8, had filleted root sections (see sketch in fig. 1(a)). The pressure orifices were made by drilling holes in one surface of the wings at the locations listed in table I. Tubing was soldered into milled grooves in the wing surface opposite the orifice holes, and led from each orifice out through a hole in the hinge shaft.

Half bodies.- Two half bodies of revolution identical in profile were employed. The bodies consisted of a pointed nose 6 inches long on a 2-inch-diameter cylindrical afterportion 20 inches long. The nose profile is defined by the Haack equation

Incorrect

$$r = 0.564\sqrt{\cos^{-1}\left(1 - \frac{x}{3}\right) - \sin\frac{1}{2}\left[\cos^{-1}\left(1 - \frac{x}{3}\right)\right]}$$

$r(6) = .826$

The first body, designated model I, was tested in combination with the pressure-distribution wings, and the other body, designated model II, was tested in combination with the remaining wings. The pressure orifices were

[redacted]

$$r = \frac{1}{\sqrt{\pi}}\sqrt{\cos^{-1}\left(1 - \frac{x}{3}\right) - \frac{1}{2}\sin\left[2\cos^{-1}\left(1 - \frac{x}{3}\right)\right]}$$

A. H. Jr.

made by sweating steel tubing in drilled holes and grinding the ends of the tubes flush with the body surface. The coordinate system by which the orifices are located is presented in the sketch accompanying table II(a). Pressure tubes from the orifices were led out around the wing hinge shaft.

Full-span models.- The full-span models consisted of a body to which was attached an aspect-ratio-1 rectangular wing or an aspect-ratio-2 triangular wing. These models were geometrically the same as two semispan model combinations having $r/s = 0.2$, as denoted in figure 1(a), but were reduced in size by the ratio of 7/16. The wing panels of the full-span models were integral to a common hinge shaft which, when set in place in the body, could be rotated to the desired wing deflection angle and then secured by a friction clamp.

Balance and Supports

The semispan wings were tested in the presence of a half body of revolution which was mounted on a boundary-layer plate. The boundary-layer plate served as a flow reflection plane and as a means of eliminating the effect of tunnel wall boundary layer in much the same way as the boundary-layer plate of reference 5; however, in the present tests the plate extended 11-1/2 inches farther upstream to accommodate the long body (see fig. 1(b)). Since the plate could not be rotated, angle of attack was varied by attaching the body to the plate at the desired angles. For pressure-distribution tests the hinge shafts of the wings were supported by bearings in the body and at the tunnel wall. For balance tests of the wings, the shaft passed through a hole in the body and was supported entirely by a strain-gage balance (see ref. 8). A fairing extended between the wall of the tunnel and the back side of the boundary-layer plate to shield the support shaft from air loads. A 0.005- to 0.010-inch gap was provided between the wing and body in order to prevent mechanical interference. In addition, the operation of the balance in the force tests required an annular gap of 0.10 inch around the wing hinge shaft.

The full-span models were supported from the rear by a 13° bent sting. This bent sting was used to increase the range of positive angles of attack. Lift and drag forces acting on these models were measured by a strain-gage balance which supported the sting. Pitching moment was measured by strain gages mounted on the sting between the model and the balance. The sting was shielded from aerodynamic forces by a shroud that extended to within 0.015 inch of the base of the model. The base pressure of the models was measured by static-pressure orifices in the sting adjacent to the base.

PROCEDURE

Test Conditions

Tests of the semispan models were conducted at a Mach number of 3.36 and a Reynolds number per inch of 0.85 million. The body was set at fixed angles of attack and the wing deflection angle was varied such that the maximum wing deflection angle or the sum of the body angle of attack and wing deflection did not exceed $\pm 45^{\circ}$. The body angle of attack was varied from 0° to 25°. Tests of the aspect ratio 2/3 and 3/8 triangular wings were limited to the cases of zero body angle of attack with varying wing deflection angle, and zero wing deflection angle with varying body angle of attack.

The full-span models were tested at Mach numbers of 1.98, 2.44, and 3.36 and at a Reynolds number per inch of 0.85 million. The body angle of attack was varied through a nominal range of -4° to $+30^{\circ}$ with the wing set at fixed deflection angles ranging from -35° to $+40^{\circ}$.

Reduction of Data

Semispan models.- Comparisons of tunnel stream surveys for the conditions of tunnel empty and with the boundary-layer plate present indicated a plate-induced spanwise Mach number variation in the region occupied by the semispan models. Therefore average Mach numbers were determined according to the spanwise extent of each model:

Model	Average Mach number, $\overline{M}$
Body	3.36 ±0.02
All models having $r/s = 0.4$	3.40 ±0.02
All models having $r/s = 0.2$	3.43 ±0.02

As it was desirable to compare the data for the wing in the presence of the body with the corresponding data for the wing alone, it was necessary to correct the data from the average Mach number, $\overline{M}$, to the Mach number of the wing-alone data, $M = 3.36$. The following approximation was used:

$$(\text{Coefficient at } M = 3.36) \approx \frac{\sqrt{\overline{M}^2 - 1}}{\sqrt{(3.36)^2 - 1}} (\text{Coefficient at } \overline{M})$$

For the pressure-distribution wings tabular integration of the corrected values of measured pressure distribution along the wing chord provided local span loading coefficients and chordwise centers of pressure.

The spanwise load distributions were in turn integrated to obtain normal-force, hinge-moment, and root bending-moment coefficients. For the other wings, normal-force, hinge-moment, bending-moment, and drag coefficients were determined from balance measurements. The normal-force coefficient is presented for these wings in order to be consistent with the pressure-distribution-wing data since in the latter case the distribution of orifices and their limited number precluded an accurate measurement of chord force.

Pressure distributions around the circumference of the body were integrated to give local longitudinal loading coefficients. The difference between the local loading for the body in the presence of a wing and the body alone yielded the interference loading on the body which was then integrated to give interference normal-force and pitching-moment coefficients about the wing hinge-line reference. Reasons for presenting only interference loading on the body are discussed in more detail in a later section.

Full-span models.- Variations of Mach number from free-stream conditions were negligible at the full-span-model locations and required no corrections to the measured data. Normal-force and total drag coefficients were determined from balance measurements. The drag coefficients were corrected to a condition of free-stream pressure on the base of the body. Pitching-moment coefficients, determined from measured pitching moments, were referred to the wing hinge axis. The actual angles of attack of the body were determined by photographs because of small deflections of the sting due to aerodynamic loads on the model.

RELIABILITY OF DATA

Limits of Uncertainty

The uncertainty in the data was assessed on the basis of repeatability, estimated effects of tunnel stream asymmetry, and uncertainty in the average Mach number in the wind tunnel at the model location. The limits of uncertainty for the wings in the presence of the body were:

$C_{N_{W(B)}}$ ±0.015 for all wings

$C_{h_{W(B)}}$ $\begin{cases} \pm 0.010 \text{ for rectangular wings of } A = 3 \text{ and } A = 1,\ r/s = 0.4; \\ \pm 0.005 \text{ for all other wings} \end{cases}$

$C_{b_{W(B)}}$ $\begin{cases} \pm 0.040 \text{ for rectangular wing of } A = 1,\ r/s = 0.4; \\ \pm 0.020 \text{ for all other wings} \end{cases}$

$C_{D_{W(B)}}$	±0.010 for all wings
$P_{W(B)}$	±0.010 } for pressure-distribution wings
$c_{n_{W(B)}}$	±0.010 } for pressure-distribution wings

The limits of uncertainty for the body in the presence of the wings, which apply up to $\alpha_B = 20^\circ$ as discussed later, are given as follows:

$\Delta C_{N_{B(W)}}$	$\pm 0.13/S_W$	(These quantities are inversely proportional to the wing reference area and chord and are approximately equal to two of the smallest grid-line divisions on the graphs.)
$\Delta C_{m_{B(W)}}$	$\pm 0.34/\bar{c}S_W$	
$P_{B(W)}$	±0.010	
$\Delta c_{n_{B(W)}}$	±0.010	

The limits of uncertainty for the full-span models were:

$C_{N_{BW}}$	±0.015
$C_{m_{BW}}$	±0.030
$C_{D_{BW}}$	±0.010
$\frac{S_W}{S_B} C_{N_B}$	±0.08
$\frac{\bar{c}S_W}{DS_B} C_{m_B}$	±0.50
$\frac{S_W}{S_B} C_{D_B}$	±0.05

The uncertainty in Reynolds number per inch was ±0.05 million.

Effects of Wing-Body Gap on Semispan Data

The effect of the annular clearance gap around the supporting shaft of the force test wings was evaluated through limited measurements on the pressure-distribution wings with and without a gap. A comparison of the data showed that the effects of the gap were insignificant. The effect of the gap between the body and the undeflected wing was assumed to be negligible for the gap-span ratios and angles of attack of the present test on the basis of the findings of references 9 and 10.

Effects of Boundary-Layer Plate on Half-Body Data

Evidence of boundary-layer effects on the half-body data was revealed by preliminary comparisons of pressure-test results of the half body alone with those of force tests on the full body alone. This comparison is presented in figure 2(a) in the form of normal-force coefficients plotted against angle of attack. Figure 2(a) shows that good agreement between the test methods occurs up to $\alpha_B = 15^\circ$. Beyond 15° an increasing loss of the normal-force coefficient of the half model is evident with increasing angle of attack. The poor agreement above 15° appears to be coincident with the fact that above $\alpha_B = 17.3^\circ$ the crossflow Mach number exceeds unity and interaction effects of the resulting crossflow shock with the plate boundary layer might be expected. In figure 2(b), which presents longitudinal loading along the cylindrical portion of the half-body model, an additional effect is shown which might be attributed to the boundary-layer plate. This is observed as a high loading near the base of the body which increases with angle of attack.

It is believed that the foregoing effects of boundary-layer interference are, to a large extent, eliminated in the interference data presented herein for the body in the presence of a wing. The procedure for determining interference, as mentioned in the data-reduction section, consisted of subtracting from the load distribution on the body in the presence of a wing, the loading distribution of the body alone at the same angle of attack. The boundary-layer plate effects, being presumably little affected by the presence of a wing, were thus minimized in the resulting interference loading.

In view of the foregoing discussion, the limits of uncertainty presented earlier for the interference force and moment coefficients on the body in the presence of a wing should apply up to $\alpha_B = 20^\circ$. Because of the large boundary-layer effects encountered at higher angles of attack, the reliability limits at $\alpha_B = 25^\circ$ are uncertain but are not expected to be in excess of ±10 percent of the interference force and moment coefficients presented in the basic data.

Comparison of Full-Span and Semispan Data

An additional means of assessing the reliability of measurements was provided by a comparison of the results from the two independent methods employed in the investigation for the $A = 1$ rectangular wing and body combination. The data from both test methods were compared on a basis common to both; that is, the sum of the lift of the wing in the presence of the body and the interference lift on the body due to the wing, obtained from the semispan model tests, was compared with the equivalent total combination lift minus the lift of the body alone, obtained from the

full-span-model tests. A similar comparison of moment about the wing hinge line was also made. These comparisons are presented in figures 3(a) and 3(b), respectively. Figure 3(a) shows that the maximum differences between the two test methods occur at high positive and negative values of the lift component where the deviation is generally no greater than about ±0.02 from a mean curve. This scatter substantially verifies the individual estimations of data reliability for the two test methods. As previously indicated, the degree of precision in measuring moments on the semispan models was considerably greater than that for full-span models. Therefore, the curves of figure 3(b) were drawn to favor the semispan data. The comparison thus reflects primarily the limited reliability of the full-span-model moment measurements. Errors in this quantity are inherently large for the full-span model, due to the remote location of the moment gage from the wing hinge-line reference axis.

RESULTS

All pressure data presented are in tabular form. Because of the large number of individual pressure measurements obtained, it was impractical to present a complete tabulation of all the data obtained. Tabulation of pressure coefficients was therefore restricted to cases of α_B variable, $\delta_W = 0^\circ$, and δ_W variable, $\alpha_B = 0^\circ$. However, complete loading results in terms of wing span loading and loading induced on the body by the wing are tabulated for all conditions investigated. The following index indicates the specific pressure and loading data presented in each table.

Model			Table number	
Plan form	A	r/s	Pressure coefficients	Span loading coefficients
Wing in presence of body				
Triangular	4	0.2	I(a)	III(a)
Triangular	2	.2	I(b)	III(b)
Rectangular	2	.2	I(c)	III(c)
Body in presence of wing			Pressure coefficients	Longitudinal interference loading coefficients
Triangular	4	.2	II(a)	IV(a)
↓	2	.2	II(b)	IV(b)
	1	.2	II(c)	IV(c)
	1	.4	II(d)	IV(d)
	2/3	.4	II(e)	[a]IV(e)
	3/8	.4	II(f)	[a]IV(f)
Rectangular	3	.2	II(g)	IV(g)
↓	2	.2	II(h)	IV(h)
	1	.2	II(i)	IV(i)
	1	.4	II(j)	IV(j)
Body alone			V	---

[a]Only for cases of α_B variable, $\delta_W = 0^\circ$, and δ_W variable, $\alpha_B = 0^\circ$.

Force and moment data obtained from the pressure measurements and from the balance measurements are presented in graphical form. A plan view of the combination tested is shown on each basic data figure, and the shaded area indicates the component of the combination for which the data applies. The following index indicates the specific data presented in each figure.

Mach number	Model			Figure number					
	Plan form	A	r/s	$C_{N_{W(B)}}$	$C_{h_{W(B)}}$	$C_{b_{W(B)}}$	$C_{D_{W(B)}}$	$\Delta C_{N_{B(W)}}$	$\Delta C_{m_{B(W)}}$
3.36	Triangular	4	0.2	4(a)	5(a)	6(a)	(1)	8(a)	9(a)
↓	↓	2	.2	4(b)	5(b)	6(b)	(1)	8(b)	9(b)
		1	.2	4(c)	5(c)	6(c)	7(a)	8(c)	9(c)
		1	.4	4(d)	5(d)	6(d)	7(b)	8(d)	9(d)
		2/3	.4	4(e)	5(e)	6(e)	7(c)	8(e)	9(e)
		3/8	.4	4(f)	5(f)	6(f)	7(d)	8(f)	9(f)
	Rectangular	3	.2	4(g)	5(g)	(1)	7(e)	8(g)	9(g)
	↓	2	.2	4(h)	5(h)	6(g)	(1)	8(h)	9(h)
		1	.2	4(i)	5(i)	6(h)	7(f)	8(i)	9(i)
		1	.4	4(j)	5(j)	6(i)	7(g)	8(j)	9(j)
Mach number	Plan form	A	r/s	$C_{N_{BW}}$	$C_{m_{BW}}$	$C_{D_{BW}}$	$\frac{S_W}{S_B} C_{N_B}$	$\frac{\bar{c}S_W}{DS_B} C_{m_B}$	$\frac{S_W}{S_B} C_{D_B}$
1.98	Triangular	2	.2	10(a)	11(a)	12(a)			
1.98	Rectangular	1	.2	10(b)	11(b)	12(b)			
2.44	Triangular	2	.2	10(c)	11(c)	12(c)			
2.44	Rectangular	1	.2	10(d)	11(d)	12(d)			
3.36	Triangular	2	.2	10(e)	11(e)	12(e)			
3.36	Rectangular	1	.2	10(f)	11(f)	12(f)			
1.98	Body alone						13	13	13
2.44	Body alone						13	13	13
3.36	Body alone						13	13	13

[1]No data

DISCUSSION

In addition to the basic data figures, summary figures are presented to facilitate discussion of the principal effects of high angles of attack and wing deflection on force and moment coefficients. In order to separate the effects of angle of attack and wing deflection, plots were made of experimental data for the cases of variable angle of attack with zero wing deflection angle and variable wing deflection with zero angle of attack (hereinafter designated α_B variable and δ_W variable, respectively). These experimental data are also compared with corresponding values from available theory. The theoretical values were obtained by modifying the experimental wing-alone characteristics by the methods of references 11-14

which involve the use of interference factors to account for the effects of body-wing interaction. The manner in which these interference factors were used in calculating lift and moment in the present report are developed in the appendix. Published experimental results for the wings alone can be found in references 5, 6, and 7. Small corrections to α_B and δ_W were applied, whenever necessary, to the experimental results presented in the summary figures to provide zero values of the force and moment coefficients at zero α_B and δ_W.

Component Characteristics at $M = 3.36$

In the wing-body interference theory utilized herein consideration is not given to the chordwise forces arising either from pressures or viscosity. Accordingly, calculations could only be made of the normal force or the lift component of normal force acting on the model components. Comparisons of theory with experiment for the wings and the body were more conveniently made on the basis of the lift component of normal force. These quantities are defined as follows:

$$C_{L_{W(B)}^*} = C_{N_{W(B)}} \cos \alpha_B; \qquad \Delta C_{L_{B(W)}^*} = \Delta C_{N_{B(W)}} \cos \alpha_B \qquad \alpha_B \text{ variable}$$

$$C_{L_{W(B)}^*} = C_{N_{W(B)}} \cos \delta_W; \qquad \Delta C_{L_{B(W)}^*} = \Delta C_{N_{B(W)}} \qquad \delta_W \text{ variable}$$

Lift of the wings in presence of the body.- Comparisons of theoretical with experimental lift are given in figure 14(a) for triangular wings and in figure 14(b) for rectangular wings. The theoretical values were computed by the following relationships:

$$C_{L_{W(B)}^*} = K_{W(B)} C_{L_W^*} \qquad \alpha_B \text{ variable}$$

$$C_{L_{W(B)}^*} = k_{W(B)} C_{L_W^*} \qquad \delta_W \text{ variable}$$

For triangular wings in the presence of the body, the theory is in good agreement with experiment in the range $\alpha_B = 0^\circ$ to 6° for the variable α_B case at all aspect ratios. For angles of attack greater than about 10°, a decrease of lift below the theoretical curve is indicated, particularly for the models having an r/s of 0.4. A similar result was found in references 3 and 4 for a rectangular wing tested in combination with a body at $M = 1.89$ and 2.93. These decreases in lift result from a decrease in the effect of body upwash on the lift of the wing. The decreased effectiveness of body upwash above 10° angle of attack is believed to be due to the presence of body vortices since it is known that body vortices tend to reduce body upwash in the plane of the wing. An investigation at $M = 2.00$

of a body similar to that of the present tests, reported in reference 15, shows that such body vortices appear at about a body angle of attack of 10°. An approximate estimate was made of the effect of body vortices on the lift of the $A = 1$ triangular wing in presence of the body for an $r/s = 0.4$. The strengths and positions of the body vortices were assumed to be the same as those reported in reference 15 for the similar body alone at $M = 2.00$. The effective induced downwash field of the body vortices in the plane of the wing was evaluated by strip theory. As indicated in figure 14(a) the inclusion of the effects of vortex-induced downwash on the wing accounts for a large portion of the discrepancy between theory and experiment. It is evident that a method of defining the vortex field for a supersonic wing-body combination is needed for inclusion in a theory applicable at large angles of attack. Furthermore, such a method should consider possible effects of crossflow shock waves on the body flow field when the critical crossflow Mach number is exceeded.

In the variable δ_W case of figure 14(a), the theoretical values of lift are in good agreement with experimental in the range of δ_W from 0° to 20° for all aspect ratios except $A = 3/8$. At deflection angles above 20° the $A = 3/8$ wing provided greater lift than that of the wing alone at the same angles. This greater lift can be accounted for to a large extent by the following reasoning: For moderate wing deflections, the resulting breach between the deflected wing and the body is large compared to the wing semispan, due to large ratio of wing root chord to body radius. Under these conditions the wing panel behaves to some extent as an independent wing of reduced aspect ratio (for this case, $A = 3/16$). Wings of such slenderness partake of the characteristics of bodies and experience significant contributions of lift due to crossflow drag. This is apparent by the parabolic shape of the experimental lift curve (see ref. 16) indicated in figure 14(a) for the $A = 3/8$ wing in the presence of the body.

The rectangular wings in the presence of the body show about the same degree of agreement between theory and experiment over substantially the same range of α_B and δ_W as for the triangular wings.

Figure 4 shows that both plan forms exhibit no important adverse effects of combined angles of attack and deflection, and retain their normal-force effectiveness up to at least the maximum angle of the tests (approximately 45°).

Hinge moments of the wings in presence of the body.- Comparisons of theoretical with experimental hinge moments are given in figure 15(a) for triangular wings and in figure 15(b) for rectangular wings. The theoretical values were computed by the following relationships which are developed in the appendix:

Triangular wings

$$C_{h_{W(B)}} = K_{W(B)}\left\{C_{h_W} + \left[1 - \frac{3}{2}\left(\frac{\bar{x}}{c_r}\right)_{W(B)}\right]C_{N_W}\right\} \qquad \alpha_B \text{ variable}$$

$$C_{h_{W(B)}} = k_{W(B)}\left\{C_{h_W} + \left[1 - \frac{3}{2}\left(\frac{\bar{x}}{c_r}\right)_{W(B)}\right]C_{N_W}\right\} \qquad \delta_W \text{ variable}$$

Rectangular wings

$$C_{h_{W(B)}} = K_{W(B)}C_{h_W} \qquad \alpha_B \text{ variable}$$

$$C_{h_{W(B)}} = k_{W(B)}\left\{C_{h_W} + \left[\left(\frac{\bar{x}}{c_r}\right)_W - \left(\frac{\bar{x}}{c_r}\right)_{W(B)}\right]C_{N_W}\right\} \qquad \delta_W \text{ variable}$$

For the triangular wings in the presence of the body, $r/s = 0.2$, the theoretical hinge moments are within ±20 percent of the experimental in the range of α_B from 0° to 6° in the variable α_B case. This 20-percent hinge-moment margin represents an accuracy in prediction of the chordwise center-of-pressure positions to within $\pm 0.01\ \bar{c}$. The shaded areas in figure 15 represent the contribution to $C_{h_{W(B)}}$ by a $0.01\ \bar{c}$ shift in wing center-of-pressure position. For the models having $r/s = 0.4$ in the range α_B from 0° to 6°, the agreement between theoretical and experimental wing hinge moments is not as good as for the models having $r/s = 0.2$. Above $\alpha_B = 6^\circ$, and for both values of r/s, a large discrepancy between theory and experiment occurs emphasizing the need for an accurate definition of the vortex field for wing-body combinations at high angles of attack. As in the case of lift, the effects of body vortices were approximately estimated for the $A = 1$ triangular wing, $r/s = 0.4$, and are indicated in figure 15(a).

In the variable δ_W case, the theoretical hinge moments are, in general, within ±20 percent of the experimental, representing a maximum of $\pm 0.01\ \bar{c}$ error in the chordwise center-of-pressure position in the deflection-angle range of δ_W from 0° to 25°.

For the rectangular wings the theoretical hinge moments are within ±10 percent of the experimental throughout the angle-of-attack range for the $A = 2$ and 3 wings in the variable α_B case. The agreement between the theoretical and experimental hinge moments of the $A = 1$ wings, however, is poor. The experimental values indicate at least an $0.01\ \bar{c}$ shift in the center-of-pressure position forward of that of the wing alone.

In the variable δ_W case, the agreement between theory and experiment for the rectangular plan forms of $A = 2$ and 3 over the wing deflection range of δ_W from 0° to 25° was the same as in the case of the triangular

wings. The wings of $A = 1$ gave similar agreement but over the more restricted range of δ_W from 0° to 15°.

The primary effects of wing plan form at large combined angles of δ_W and α_B can be seen by a comparison of hinge moments of triangular wings (figs. 5(a) to 5(f)) with those of the rectangular wings (figs. 5(g) to 5(j)). This comparison shows that the rectangular wing hinge moments in presence of the body are more linear with δ_W than those of the triangular wings in the higher range of α_B tested. At these high angles, an inboard loading loss occurs in the wing-body juncture due to the combined effects of body vortices and the wing-body breach resulting from wing deflection. The result is an outboard shift in wing loading approximately along the midchord line causing, in the case of triangular wings of sweptback midchord line, a corresponding rearward shift in center of pressure, as pointed out in reference 17. This rearward shift in center of loading on wings with sweptback midchord lines gives a more nonlinear hinge moment than that exhibited by wings with unswept midchord lines.

Bending moments of the wings in presence of the body.- Comparisons of theoretical with experimental bending moments are given in figure 16(a) for triangular wings and figure 16(b) for rectangular wings. The theoretical values were calculated on the assumption that the spanwise center of pressure of a wing in the presence of a body is the same as that of the wing alone. Therefore, the theoretical bending moments are given by:

$$C_{b_{W(B)}} = K_{W(B)} C_{b_W} \qquad \alpha_B \text{ variable}$$

$$C_{b_{W(B)}} = k_{W(B)} C_{b_W} \qquad \delta_W \text{ variable}$$

In general, the wing alone bending moments are in as good agreement with experiment as the theoretical for both plan forms. For the triangular wings, the agreement between theory and experiment is poor for the $A = 1$ wing, $r/s = 0.2$, and for the $A = 3/8$ wing, $r/s = 0.4$. The agreement for the latter is especially poor for low body and wing incidences. The poor agreement for both wings must be the result of an inboard movement of the spanwise center of pressure, inasmuch as the corresponding theoretical and experimental lifts (fig. 14(a)) are in good agreement for α_B from 0° to about 10° and for δ_W from 0° to 20°. The reasons for this inboard movement, however, are not clear. Nevertheless, for the $A = 3/8$ wing a part of the disagreement is probably due to the effect of wing-root geometry, since this wing had a nonfilleted root section and theoretical calculations were based on experimental data for a wing-alone model which had a filleted root section. For both plan forms the $A = 1$ wings, $r/s = 0.4$, show higher bending moments than could be accounted for by theory, particularly in the variable δ_W case. The reasons are not clear for the apparent large outward shift in spanwise center of loading (the outward shift is again obvious since the corresponding theoretical and experimental lifts are in good agreement).

Span load distributions of three wings in the presence of the body are presented in figure 17 and are compared with the corresponding wing-alone span load distributions. For the variable α_B case the expected increased inboard loading due to body upwash is demonstrated, particularly at $\alpha_B = 6^\circ$. For the variable δ_W case the effect of the wing-body breach is noticeable as a loss of inboard loading, particularly at $\delta_W = 20^\circ$ as compared to the wing-alone values.

Drag of the wings in the presence of the body.- In the low-incidence range the predicted drag rise $(C_D - C_{D_{min}})_{W(B)}$ is given by:

$$(C_D - C_{D_{min}})_{W(B)} = K_{W(B)} C_{N_W} \sin \alpha_B \qquad \alpha_B \text{ variable}$$

$$(C_D - C_{D_{min}})_{W(B)} = k_{W(B)} C_{N_W} \sin \delta_W \qquad \delta_W \text{ variable}$$

It was found that, for wings of both plan forms, the theoretical and experimental drag rise coefficients were in good agreement in the identical angle range of α_B from 0° to 6°, and δ_W from 0° to 20°, in which the corresponding lift coefficients were also in good agreement. Therefore, no summary figures for the drag rise coefficients are presented.

At large combined angles a small decrease of drag was effected by increasing r/s from 0.2 to 0.4 for both triangular and rectangular wings of $A = 1$ (figs. 7(a), (b), (f), and (g)). The minimum drag for all wings on which drag was measured showed little change with α_B in the range 0° to 10°; above 10°, there was a slight increase in minimum drag with increasing α_B. This increased drag is not significant for a wing-body combination but it might be an indication that the nature of the boundary layer over the wing was affected by the body at angles greater than about $\alpha_B = 10^\circ$.

Interference lift on the body due to the wings.- Comparisons of theory and experiment are given in figure 18(a) for the body in the presence of the triangular wings and in figure 18(b) for the body in the presence of the rectangular wings. The theoretical interference lifts are given by the following expressions:

$$\Delta C_{L^*_{B(W)}} = K_{B(W)} C_{L^*_W} \qquad \alpha_B \text{ variable}$$

$$\Delta C_{L^*_{B(W)}} = k_{B(W)} C_{L^*_W} \qquad \delta_W \text{ variable}$$

The theoretical values of interference lift on the body in the presence of the triangular wings in the variable α_B case are in fair accord with the experimental over the range of α_B from 0° to 25° when $r/s = 0.2$. For $r/s = 0.4$, theory is in good accord with experiment in the range of

α_B from 0° to 10°; beyond this angle range the interference lifts given by theory are too large. This discrepancy is believed to be a result of body vortices and crossflow shock waves as was pointed out in the discussion of lift on the wings. It should be noted that the lack of agreement between theoretical and experimental wing lift in the presence of the body above $\alpha_B = 10^\circ$ was, in general, also more pronounced for the configurations having an $r/s = 0.4$ than for those with an $r/s = 0.2$.

In the variable δ_W case for triangular wings, the theoretical interference lifts on the body are generally in fair accord with experimental in the range of wing deflection angles from 0° to 10°. The δ_W range wherein theory is in satisfactory agreement with experiment tends to increase with aspect ratio for both values of r/s. At larger wing deflections, the existence of a relatively large wing-body breach violates the geometrical considerations upon which the interference factor $k_{B(W)}$ is based and hence departure of theory from experiment is to be expected. Such a departure is indicated in figure 18(a) where, at large deflection angles, a decrease in interference lift occurs, resulting in negative values for some cases.

In the case of variable α_B for the body in the presence of the rectangular wings, good agreement results over the angle range between the theoretical and experimental interference lifts on the body for all aspect ratios and r/s investigated.

The comparison of the theoretical and experimental interference lift on the body due to the rectangular wings in the variable δ_W case gave essentially the same results as found for the case of the triangular wings. As indicated in figure 18, theoretical values based on a modified theory (see eq. (A1) in appendix) are generally in better agreement with experiment and the range of agreement is extended to higher deflection angles, particularly for the rectangular wings. This modified theory in effect extends slender-body interference factors to the case of a nonslender configuration.

Distributions of interference normal force on the body due to the presence of the wings are presented in figure 19. Three wing-body models are considered, among which are included combinations having the largest and smallest values of the ratio c_r/r. The theoretical loading distribution on the body computed for $\alpha_B = 6^\circ$ demonstrates a fair agreement of total loading and its distribution along the body for all three models. At $\alpha_B = 20^\circ$ the total loading was increased approximately in proportion to the angle-of-attack increase in each case; however, some change in the load distribution is indicated, particularly for the models having small c_r/r values (2.67 and 4).

For $\delta_W = 6^\circ$ the theoretical body load distribution for the long chord triangular wing model ($c_r/r = 16$) is uniformly higher than the experimental. This disagreement is due to the effect of the wing-body

breach evidenced by the small region of negative loading developed on the body near the wing leading edge. For the short chord wings the theoretical loading is in good agreement with the experimental for the triangular wing but is in poor agreement for the rectangular wing. It is notable that the use of the modified theory materially improves the agreement with the experimental load distribution for the rectangular wing case but does not alter the good agreement of slender-body theory with experiment for the triangular wing case. At $\delta_W = 30^\circ$ the distribution of load on the body for models of small c_r/r is not materially altered by the increase in wing deflection. For the model with large c_r/r, however, the large wing-body breach apparently allows a large negative loading to develop on the body forward of the wing hinge axis due to the bleeding of positive pressures on the bottom of the wing to the top of the body.

The effects of high combined angles on normal force are apparent from an examination of figure 8. The general nonlinearity of $\Delta C_{N_{B(W)}}$ with variation in δ_W is evident, and is only slightly affected by body angle of attack up to 25°.

Interference moment on the body due to the wings.- Comparisons of theory and experiment are given in figure 20(a) for the body in the presence of the triangular wings and in figure 20(b) for the body in the presence of the rectangular wings. The theoretical interference moments are given by the following expressions:

Triangular wings

$$\Delta C_{m_{B(W)}} = \left[1 - \frac{3}{2}\left(\frac{\bar{x}}{c_r}\right)_{B(W)}\right] K_{B(W)} C_{N_W} \qquad \alpha_B \text{ variable}$$

$$\Delta C_{m_{B(W)}} = \left[1 - \frac{3}{2}\left(\frac{\bar{x}}{c_r}\right)_{B(W)}\right] k_{B(W)} C_{L_W^*} \qquad \delta_W \text{ variable}$$

Rectangular wings

$$\Delta C_{m_{B(W)}} = \left[\frac{1}{2} - \left(\frac{\bar{x}}{c_r}\right)_{B(W)}\right] K_{B(W)} C_{N_W} \qquad \alpha_B \text{ variable}$$

$$\Delta C_{m_{B(W)}} = \left[\frac{1}{2} - \left(\frac{\bar{x}}{c_r}\right)_{B(W)}\right] k_{B(W)} C_{L_W^*} \qquad \delta_W \text{ variable}$$

In the variable α_B case, good agreement between theoretical and experimental interference moments on the body due to wings of both plan forms is found over the entire range of α_B, except for combinations having wings with the smallest ratio of root chord to body radius.

For both plan forms in the variable δ_W case, interference moments on the body given by theory are in good agreement with those of experiment in the range of wing deflection angles from 0° to 10°. Except for the two models having the smallest c_r/r, the modified theory again provided somewhat better agreement with experiment than did the slender-body theory. At large deflection angles, except for the models having large c_r/r, a decrease in the magnitude of interference moment on the body occurred due to a decrease of body loading. For the models having the largest c_r/r, however, a stabilizing couple, resulting from the large negative loading developed on the body ahead of the wing hinge line (see fig. 19(f)), compensated for the effect of the load loss on the moment. Thus, in the case of the two models of largest c_r/r, the agreement at large deflection angles between experiment and theory is good, though fortuitous.

Complete Configuration at $M = 1.98$, 2.44, and 3.36

Combined lifts of the wing-body configurations.- The configuration lift component of normal force less that of the body alone, $C_{L_{BW}}^* - C_{L_B}^*$, is compared with theory in figure 21. The equivalent theoretical values are given by the quantity $C_{L_{W(B)}}^* + \Delta C_{L_{B(W)}}^*$. The theoretical combined lifts are in good agreement with the experimental in the angle-of-attack range 0° to 6° with zero wing deflection for both plan forms.

In the case of variable wing deflection with zero body incidence, theory and experiment are in satisfactory agreement in the wing deflection range 0° to 10° for both plan forms at all test Mach numbers for which experimental data were available. At large deflection angles the effect of the resulting breach between the wing and body is to reduce the lift of the wing-body combination (excluding the body nose) to values below that of the wing alone.

No comparisons of experimental $C_{m_{BW}} - C_{m_B}$ with theoretical were made since it was found that the resulting small quantities would be of the same order as the accuracy of the experimental values.

Effects of Mach number.- The full-span models tested at the Mach numbers 1.98, 2.44, and 3.36 were not instrumented to give the division of force and moments on the body and wing. Therefore, direct comparisons of Mach number could not be made on the ranges of agreement of theoretical and experimental lifts of the wings in the presence of the body and the body in the presence of the wings. However, an examination of figure 21 shows that for the combined lifts, $C_{L_{W(B)}}^* + \Delta C_{L_{B(W)}}^*$, or the equivalent value, $C_{L_{BW}}^* - C_{L_B}^*$, there is no significant effect of Mach number on the ranges of angles of attack and wing deflection wherein theory and

experiment are in good agreement. Some effects of Mach number might be expected due to the fact that with decreasing Mach number, critical crossflow Mach numbers with their attendant effects on crossflow occur at increasing angles of attack. No direct information is available in regard to the effect of Mach number on the angles of attack at which body vortices become important. Figure 13 shows, however, that the normal-force curves for the body alone are approximately linear to about $\alpha_B = 6^\circ$ at the test Mach numbers. At higher angles, the normal-force curves become approximately parabolic in shape due to the contribution of crossflow drag (see ref. 16), implying the presence of body vortices.

CONCLUSIONS

The following conclusions are based on data from semispan triangular and rectangular wing and body combinations tested at a Mach number of 3.36.

1. The mutual interference effects of wing and body in combination can be estimated with good accuracy by means of theoretical interference factors applied to experimental wing-alone characteristics. The good agreement, however, was limited to ranges of body angles of attack α_B and wing deflections δ_W that varied with wing geometry. The minimum ranges of agreement are given as follows:

Coefficient	α_B variable, $\delta_W = 0$	δ_W variable, $\alpha_B = 0$
Wings in the presence of the body		
Lift coefficient	0° to 6°	0° to 20°
Hinge-moment coefficient Triangular plan form Rectangular plan form	 0° to 6° 0° to 6°	 0° to 25° 0° to 15°
Body in the presence of the wings		
Interference lift coefficient	0° to 10°	0° to 10°
Interference moment coefficient	0° to 15°	0° to 15°

2. A decrease of lift below the theoretical for the undeflected wings in the presence of the body occurred at body angles of attack greater than about 10°. This decrease of lift, particularly affecting the inboard wing sections, resulted from a decrease in the effect of body upwash which is believed to be due to the combined effects of body-nose vortices and transonic crossflow.

3. In combination with a body, the triangular wings of aspect ratios 2/3 and 3/8, which have large root chords compared to the body radius, showed approximately parabolic curves of lift as a function of wing deflection angle. This parabolic shape indicates significant contributions of lift due to crossflow drag of the wing at large deflection angles.

4. At large body angles of attack, the variation of hinge moments of the triangular wings in the presence of the body were more nonlinear with wing deflection than those for the rectangular wings. This was a consequence of a rearward movement of the center of pressure for the triangular wings which accompanied an outward shift occurring at high wing deflections.

5. For the triangular wing and body combinations having a large ratio of wing root chord to body radius, the opening of a relatively large wing-body gap due to wing deflection produced a large negative interference load distribution on the body forward of the wing hinge axis. This resulted in highly nonlinear interference force and moment coefficients.

On the basis of data measured at Mach numbers 1.98, 2.44, and 3.36 on two smaller scale full-span models of two of the semispan configurations, the following conclusion was evident:

1. The ranges of angles of attack and wing deflection wherein the theoretical and experimental values of the lift component of normal force of the configuration less that of the body alone were in good agreement, were insignificantly affected by Mach number.

Ames Aeronautical Laboratory
National Advisory Committee for Aeronautics
Moffett Field, Calif., Mar. 12, 1956

APPENDIX A

INTERFERENCE FACTORS

The interference factors used to compute the theoretical curves of force and moment coefficients presented in the summary figures were obtained either from slender-body theory or linear-theory solutions. In cases where both solutions were available, linear-theory factors were generally used, when applicable. The following table summarizes the particular references from which the interference factors were determined. (The superscripts S and L refer, respectively, to slender-body theory and linear theory.)

Wing in the presence of the body				Body in the presence of the wing			
α_B variable, $\delta_W = 0^\circ$							
$K_{W(B)}$				$K_{B(W)}$			
Triangular		Rectangular		Triangular		Rectangular	
Linear	Slender-body	Linear	Slender-body	Linear	Slender-body	Linear	Slender-body
---	Ref. 14, fig. 2	---	Ref. 14, fig. 2	Ref. 11, fig. 4 or Ref. 12, fig. 4 Ref. 13, fig. 2 Ref. 14, fig. 5(a)	Ref. 14, fig. 2	Ref. 11, fig. 4 or Ref. 12, fig. 4 Ref. 13, fig. 2 Ref. 14, fig. 5(a) for $\beta A \geq 2$ and $[K_{B(W)}]^S > [K_{B(W)}]^L$	Ref. 14, fig. 2
δ_W variable, $\alpha_B = 0^\circ$							
$k_{W(B)}$				$k_{B(W)}$			
---	Ref. 14, fig. 2	Ref. 13, fig. 3 for $\beta A \geq 2$	Ref. 14, fig. 2	Eq.(A1) present report	Ref. 14, fig. 2	Eq.(A1) present report	Ref. 14, fig. 2

An estimate for a linear-theory value of $k_{B(W)}$ for both triangular and rectangular wings was made by the following:

$$[k_{B(W)}]^L = \frac{[K_{B(W)}]^L}{[K_{B(W)}]^S} [k_{B(W)}]^S \tag{A1}$$

In figures which involved the use of $k_{B(W)}$, both the slender-body value and the above modification were used.

HINGE MOMENTS OF THE WINGS IN THE PRESENCE OF THE BODY

The following general equations were used to calculate wing hinge moments:

$$C_{h_{W(B)}} = K_{W(B)}\left\{\frac{C_{h_W}}{C_{N_W}} + \frac{c_r}{\bar{c}}\left[\left(\frac{\bar{x}}{c_r}\right)_W - \left(\frac{\bar{x}}{c_r}\right)_{W(B)}\right]\right\} C_{N_W} \qquad \alpha_B \text{ variable} \tag{A2}$$

$$C_{h_{W(B)}} = k_{W(B)}\left\{\frac{C_{h_W}}{C_{N_W}} + \frac{c_r}{\bar{c}}\left[\left(\frac{\bar{x}}{c_r}\right)_W - \left(\frac{\bar{x}}{c_r}\right)_{W(B)}\right]\right\} C_{N_W} \qquad \delta_W \text{ variable} \tag{A3}$$

The term in the braces represents the center of pressure of the wing in the presence of the body obtained, as suggested in reference 13, by adding to the experimental wing-alone center of pressure, $\frac{C_{h_W}}{C_{N_W}}$, the theoretical shift in center of pressure, $\frac{c_r}{\bar{c}}\left[\left(\frac{\bar{x}}{c_r}\right)_W - \left(\frac{\bar{x}}{c_r}\right)_{W(B)}\right]$. For triangular wings, $\left(\frac{\bar{x}}{c_r}\right)_W = \frac{2}{3}$ and $\left(\frac{\bar{x}}{c_r}\right)_{W(B)}$ for both variable α_B and δ_W are determined from figure 4 of reference 13. For rectangular wings, linear-theory values of $\left(\frac{\bar{x}}{c_r}\right)_W$ are given in figure 6 of reference 12; for variable α_B, $\left(\frac{\bar{x}}{c_r}\right)_{W(B)} = \left(\frac{\bar{x}}{c_r}\right)_W$ (see ref. 13), and for variable δ_W, values of $\left(\frac{\bar{x}}{c_r}\right)_{W(B)}$ based on linear theory for wings with $\beta A \geq 2$ are given in figure 6 of

reference 13. Rewriting equations (A2) and (A3) for specific cases:

Triangular wings

$$C_{h_{W(B)}} = K_{W(B)}\left\{C_{h_W} + \left[1 - \frac{3}{2}\left(\frac{\bar{x}}{c_r}\right)_{W(B)}\right]C_{N_W}\right\} \qquad \alpha_B \text{ variable} \tag{A4}$$

$$C_{h_{W(B)}} = k_{W(B)}\left\{C_{h_W} + \left[1 - \frac{3}{2}\left(\frac{\bar{x}}{c_r}\right)_{W(B)}\right]C_{N_W}\right\} \qquad \delta_W \text{ variable} \tag{A5}$$

Rectangular wings

$$C_{h_{W(B)}} = K_{W(B)}C_{h_W} \qquad \alpha_B \text{ variable} \tag{A6}$$

$$C_{h_{W(B)}} = k_{W(B)}\left\{C_{h_W} + \left[\left(\frac{\bar{x}}{c_r}\right)_W - \left(\frac{\bar{x}}{c_r}\right)_{W(B)}\right]C_{N_W}\right\} \qquad \delta_W \text{ variable} \tag{A7}$$

INTERFERENCE MOMENT ON BODY DUE TO WING

The body interference moment coefficients were calculated by the following equations:

$$\Delta C_{m_{B(W)}} = \frac{c_r}{\bar{c}}\left[\left(\frac{x}{c_r}\right)_h - \left(\frac{\bar{x}}{c_r}\right)_{B(W)}\right]K_{B(W)}C_{N_W} \qquad \alpha_B \text{ variable} \tag{A8}$$

$$\Delta C_{m_{B(W)}} = \frac{c_r}{\bar{c}}\left[\left(\frac{x}{c_r}\right)_h - \left(\frac{\bar{x}}{c_r}\right)_{B(W)}\right]k_{B(W)}C_{L_W}^{*} \qquad \delta_W \text{ variable} \tag{A9}$$

where for both variable α_B and δ_W, values of $\left(\frac{\bar{x}}{c_r}\right)_{B(W)}$ based on linear theory are given in figure 7 of reference 12 or figure 20 of reference 14. For specific cases equations (A8) and (A9) become:

Triangular wings

$$\Delta C_{m_{B(W)}} = \left[1 - \frac{3}{2}\left(\frac{\bar{x}}{c_r}\right)_{B(W)}\right]K_{B(W)}C_{N_W} \qquad \alpha_B \text{ variable} \tag{A10}$$

$$\Delta C_{m_{B(W)}} = \left[1 - \frac{3}{2}\left(\frac{\bar{x}}{c_r}\right)_{B(W)}\right] k_{B(W)} C_{L_W^*} \qquad \delta_W \text{ variable} \tag{A11}$$

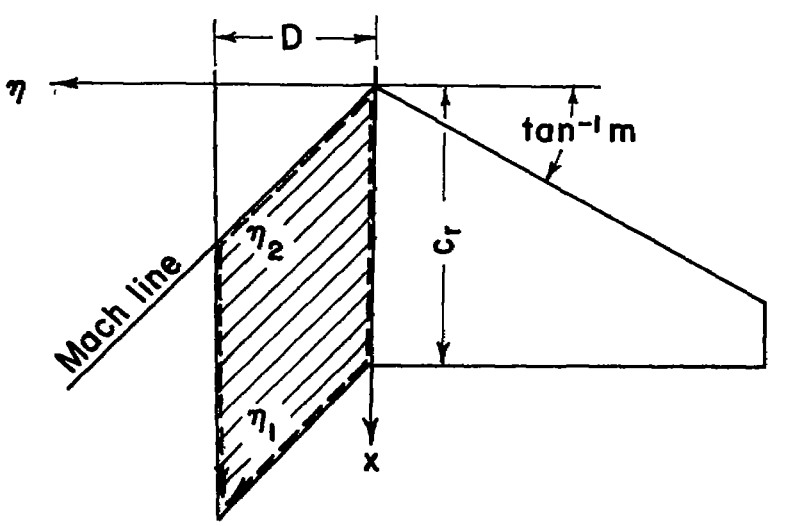
Rectangular wings

$$\Delta C_{m_{B(W)}} = \left[\frac{1}{2} - \left(\frac{\bar{x}}{c_r}\right)_{B(W)}\right] K_{B(W)} C_{N_W} \qquad \alpha_B \text{ variable} \tag{A12}$$

$$\Delta C_{m_{B(W)}} = \left[\frac{1}{2} - \left(\frac{\bar{x}}{c_r}\right)_{B(W)}\right] k_{B(W)} C_{L_W^*} \qquad \delta_W \text{ variable} \tag{A13}$$

DISTRIBUTION OF INTERFERENCE NORMAL FORCE ON THE BODY DUE TO THE WINGS

The theoretical body interference loading coefficient as a function of x, the distance along the body from the juncture of the body and the wing leading edge, calculated for variable α_B by the following integrals from reference 11. The variables of integration are defined in the accompanying sketch.



Supersonic-leading-edge wing

$$\Delta c_{n_{B(W)}} = \frac{8m\alpha_B}{\pi D\sqrt{\beta^2m^2-1}} \int_{\eta_1}^{\eta_2} \cos^{-1} \frac{x/\beta - \beta m\eta}{\eta + mx}\, d\eta$$

$$= \frac{8m\alpha_B}{\pi D\sqrt{\beta^2m^2-1}} \left[\frac{\pi}{2}\,\eta - (\eta + mx)\sin^{-1}\left(\frac{x/\beta + \beta m\eta}{\eta + mx}\right) + \sqrt{\beta^2m^2-1}\,\frac{x}{\beta}\,\sin^{-1}\frac{\eta}{x/\beta}\right]_{\eta_1}^{\eta_2} \tag{A14}$$

Subsonic-leading-edge wing

$$\Delta c_{n_{B(W)}} = \frac{16(\beta m)^{3/2}\alpha_B}{\pi D\beta(\beta m + 1)} \int_{\eta_1}^{\eta_2} \frac{\sqrt{x/\beta - \eta}}{\sqrt{mx + \eta}}\, d\eta$$

$$= \frac{16(\beta m)^{3/2}\alpha_B}{\pi D\beta(\beta m + 1)} \left[\sqrt{(x/\beta - \eta)(mx + \eta)} + \frac{x/\beta(\beta m + 1)}{2}\,\tan^{-1}\sqrt{\frac{mx + \eta}{x/\beta - \eta}}\right]_{\eta_1}^{\eta_2} \tag{A15}$$

The loading for variable δ_W was then obtained by:

$$\left[\Delta c_{n_{B(W)}}\right]_{\delta_W \text{ variable}} = \frac{\delta_W}{\alpha_B}\left[\frac{k_{B(W)}}{K_{B(W)}}\right]\left[\Delta c_{n_{B(W)}}\right]_{\alpha_B \text{ variable}} \tag{A16}$$

wherein both the slender-body value of $k_{B(W)}$ and the linear-theory approximation (modified theory) given by equation (A1) were used.

REFERENCES

1. Krenkel, A. R.: Generalized Missile Study. First Annual Report covering period Mar. 1, 1952 through Feb. 28, 1953. McDonnell Aircraft Corp., St. Louis, May 29, 1953.

2. Wong, Thomas J., and Gloria, Hermilo R.: Aerodynamic Characteristics of Two Rectangular Plan-Form All-Movable Controls in Combination With a Slender Body of Revolution at Mach Number 3.00 to 6.25. NACA RM A55J07, 1955.

3. Winter, K. G., and Brown, C. S.: Supersonic Wind Tunnel Tests on Guided Weapon Control Surfaces Mounted on a Body. 1. Tests at M = 2 of Rectangular Controls of Aspect Ratio 1.89. British R.A.E. TN No. Aero. 2175, July 1952.

4. Winter, K. G., and Brown, C. S.: Supersonic Wind Tunnel Tests on Guided Weapon Control Surfaces mounted on a Body. 2. Tests of a Rectangular Control of Aspect Ratio 2.93 and a Tapered Raked Control of Aspect Ratio 2.82. British R.A.E. TN No. Aero. 2284, Dec. 1953.

5. Kaattari, George E.: Pressure Distributions on Triangular and Rectangular Wings to High Angles of Attack - Mach Numbers 1.45 and 1.97. NACA RM A54D19, 1954.

6. Pitts, William C.: Force, Moment, and Pressure-Distribution Characteristics of Rectangular Wings at High Angles of Attack and Supersonic Speeds. NACA RM A55K09, 1956.

7. Kaattari, George E.: Pressure Distributions on Triangular and Rectangular Wings to High Angles of Attack - Mach Numbers 2.46 and 3.36. NACA RM A54J12, 1955.

8. Katzen, Elliott D., Kuehn, Donald M., and Hill, William A., Jr.: Investigation of the Effects of Profile Shape on the Aerodynamic and Structural Characteristics of Thin, Two-Dimensional Airfoils at Supersonic Speeds. NACA RM A54B08a, 1954.

9. Drake, William C.: Lift, Drag, and Hinge Moments at Supersonic Speeds of an All-Movable Triangular Wing and Body Combination. NACA RM A53F22, 1953.

10. Dugan, Duane W.: Experimental Investigation of Some Aerodynamic Effects of a Gap Between Wing and Body of Moderately Slender Wing-Body Combinations at a Mach Number of 1.4. NACA RM A55D08, 1955.

11. Nielsen, Jack N., and Kaattari, George E.: Method for Estimating Lift Interference of Wing-Body Combinations at Supersonic Speeds. NACA RM A51J04, 1951.

12. Kaattari, George E., Nielsen, Jack N., and Pitts, William C.: Method for Estimating Pitching-Moment Interference of Wing-Body Combinations at Supersonic Speed. NACA RM A52B06, 1952.

13. Nielsen, Jack N., Kaattari, George E., and Drake, William C.: Comparison Between Prediction and Experiment for All-Movable Wing and Body Combinations at Supersonic Speeds - Lift, Pitching Moment, and Hinge Moment. NACA RM A52D29, 1952.

14. Nielsen, Jack N., Kaattari, George E., and Anastasio, Robert F.: A Method for Calculating the Lift and Center of Pressure of Wing-Body-Tail Combinations at Subsonic, Transonic, and Supersonic Speeds. NACA RM A53G08, 1953.

15. Jorgensen, Leland H., and Perkins, Edward W.: Investigation of Some Wake Vortex Characteristics of an Inclined Ogive-Cylinder Body at Mach Number 1.98. NACA RM A55E31, 1955.

16. Allen, H. Julian, and Perkins, Edward W.: Characteristics of Flow Over Inclined Bodies of Revolution. NACA RM A50I07, 1951.

17. Kaattari, George E., Hill, William A., Jr., and Nielsen, Jack N.: Controls for Supersonic Missiles. NACA RM A55D12, 1955.

[redacted]

TABLE I.- PRESSURE COEFFICIENTS OF THE WINGS IN THE PRESENCE OF THE BODY

(a) A = 4 triangular wing, r/s = 0.2

	y/s	x/c	δ_w, α_B=0°										α_B, δ_w=0°						
			45°	40°	35°	30°	25°	20°	15°	10°	6°	3°	0°	3°	6°	10°	15°	20°	25°
Upper surface	.025	.103	-.085	-.076	-.085	-.078	-.070	-.059	-.047	-.014	.150	.105	.070	.022	-.037	-.066	-.074	-.081	-.078
		.231	-.081	-.071	-.079	-.073	-.059	-.049	-.034	-.004	.131	.093	.063	.019	-.016	-.049	-.074	-.083	-.083
		.372	-.083	-.071	-.078	-.074	-.065	-.054	-.038	-.009	.109	.076	.047	.009	-.017	-.054	-.069	-.079	-.088
		.487	-.080	-.069	-.078	-.075	-.067	-.059	-.045	-.019	.081	.050	.028	.000	-.021	-.053	-.065	-.075	-.088
		.792	-.090	-.085	-.092	-.091	-.086	-.080	-.075	-.071	-.035	-.051	-.054	-.051	-.063	-.071	-.081	-.092	-.095
		.872	-.081	-.073	-.087	-.083	-.082	-.074	-.069	-.062	-.025	-.029	-.034	-.038	-.049	-.067	-.071	-.082	-.091
		.975	-.085	-.082	-.090	-.089	-.080	-.073	-.061	-.053	.013	-.005	-.083	-.032	-.042	-.064	-.075	-.075	-.087
	.250	.125	-.087	-.079	-.089	-.087	-.078	-.069	-.062	-.035	.173	.114	.066	.011	-.032	-.062	-.074	-.076	-.076
		.260	-.087	-.078	-.089	-.088	-.081	-.071	-.065	-.044	.149	.091	.047	.000	-.030	-.064	-.076	-.079	.081
		.375	-.085	-.077	-.090	-.088	-.082	-.074	-.068	-.051	.123	.071	.032	-.011	-.044	-.070	-.078	-.082	.087
		.500	-.088	-.080	-.091	-.089	-.085	-.076	-.068	-.056	.097	.049	.017	-.022	-.050	-.068	-.082	-.087	.091
		.625	-.090	-.083	-.093	-.091	-.086	-.077	-.074	-.062	.081	.037	.009	-.031	-.054	-.073	-.083	-.089	.095
		.750	-.087	-.081	-.091	-.089	-.081	-.073	-.067	-.061	.065	.026	.002	-.030	-.052	-.067	-.081	-.087	.091
		.875	-.080	-.070	-.088	-.088	-.078	-.067	-.064	-.061	.053	.015	-.004	-.038	-.054	-.068	-.074	-.080	.089
		.966	-.080	-.077	-.089	-.087	-.079	-.070	-.068	-.066	.032	.000	-.015	-.037	-.057	-.068	-.076	-.082	.088
	.500	.125	-.088	-.081	-.090	-.090	-.079	-.070	-.065	-.040	.150	.097	.055	.010	-.020	-.054	-.067	-.068	-.069
		.250	-.082	-.076	-.089	-.087	-.078	-.071	-.068	-.047	.141	.080	.043	-.002	-.027	-.050	-.068	-.071	-.075
		.500	-.082	-.077	-.088	-.087	-.078	-.068	-.055	-.058	.099	.046	.016	-.018	-.041	-.061	-.075	-.078	-.082
		.750	-.080	-.076	-.088	-.087	-.078	-.068	-.056	-.067	.081	.031	.003	-.030	-.051	-.066	-.077	-.080	-.085
		.950	-.078	-.071	-.087	-.085	-.074	-.065	-.054	-.066	.061	.010	-.009	-.035	-.057	-.061	-.071	-.076	-.080
	.750	.375	-.076	-.074	-.086	-.082	-.075	-.067	-.061	-.050	.099	.083	.022	-.007	-.025	-.049	-.065	-.067	-.066
		.625	-.076	-.071	-.085	-.083	-.076	-.068	-.066	-.063	.076	.027	.005	-.025	-.040	-.059	-.070	-.073	-.075
		.900	-.078	-.077	-.088	-.087	-.076	-.069	-.063	-.063	.041	-.003	-.020	-.038	-.051	-.055	-.068	-.070	.066
Lower surface	.025	.103	1.360	1.171	1.001	.812	.639	.503	.355	.225	.015	.045	.070	.131	.212	.234	.389	.492	.704
		.231	1.261	1.282	.995	.806	.624	.519	.328	.202	.019	.043	.063	.112	.202	.267	.403	.558	.776
		.372	1.164	.997	.864	.667	.501	.441	.287	.166	.010	.027	.047	.094	.174	.232	.372	.527	.760
		.487	1.309	1.181	.995	.761	.527	.360	.227	.130	-.002	.011	.028	.069	.132	.182	.319	.441	.630
		.792	.589	.562	.431	.288	.174	.094	.029	-.015	-.061	-.058	-.054	-.043	-.026	.003	.026	.079	.164
		.872	.806	.650	.498	.329	.194	.105	.039	-.008	-.047	-.042	-.034	-.016	.007	.031	.091	.210	.367
		.975	.555	.537	.441	.286	.174	.092	.025	.004	-.042	-.030	-.023	.000	.035	.078	.179	.277	.450
	.250	.125	1.430	1.297	1.093	.910	.719	.565	.415	.272	-.005	.025	.066	.185	.218	.280	.457	.604	.861
		.260	1.315	1.165	1.112	.874	.638	.495	.355	.233	-.017	.010	.047	.102	.185	.235	.389	.527	.752
		.375	1.246	1.058	.947	.810	.632	.477	.332	.203	-.026	-.001	.032	.063	.158	.206	.342	.476	.683
		.500	1.183	1.038	.819	.682	.530	.401	.279	.171	-.035	-.014	.017	.058	.124	.167	.292	.416	.613
		.625	1.094	.954	.813	.639	.479	.361	.245	.140	-.042	-.019	.009	.045	.105	.144	.265	.384	.572
		.750	1.038	.837	.715	.586	.440	.324	.218	.183	-.040	-.021	.002	.031	.088	.126	.236	.352	.526
		.875	.985	.808	.682	.501	.378	.280	.186	.101	-.040	-.026	-.004	.021	.073	.105	.204	.307	.464
		.966	.905	.757	.597	.433	.321	.232	.149	.076	-.049	-.035	-.015	.006	.050	.080	.165	.261	.408
	.500	.125	1.361	1.220	1.112	.958	.761	.596	.417	.250	-.013	.016	.055	.099	.196	.280	.497	.663	.934
		.250	1.309	1.181	1.058	.941	.723	.552	.393	.232	-.021	.005	.043	.085	.172	.257	.437	.604	.874
		.500	1.195	1.068	.905	.763	.603	.459	.327	.189	-.038	-.015	.016	.055	.135	.206	.350	.509	.712
		.750	1.105	.955	.820	.648	.507	.386	.264	.141	-.045	-.028	.003	.034	.109	.162	.296	.410	.603
		.950	.985	.841	.721	.575	.430	.322	.216	.116	-.052	-.037	-.009	.013	.077	.124	.232	.345	.522
	.750	.375	1.263	1.136	1.008	.863	.681	.523	.340	.187	-.028	-.006	.022	.053	.130	.201	.438	.618	.851
		.625	1.192	1.057	.927	.771	.597	.450	.269	.150	-.042	-.023	.005	.028	.098	.164	.364	.517	.724
		.900	1.030	.900	.773	.618	.465	.333	.224	.101	-.053	-.043	-.020	-.008	.057	.124	.259	.377	.551

TABLE I.- PRESSURE COEFFICIENTS OF THE WINGS IN THE PRESENCE OF THE BODY - Continued

(b) A = 2 triangular wing, r/s = 0.2

	y/s	x/c	$\delta_w, \alpha_B = 0°$										$\alpha_B, \delta_w = 0°$						
			45°	40°	35°	30°	25°	20°	15°	10°	6°	3°	0°	3°	6°	10°	15°	20°	25°
Upper surface	.025	.103	-.090	-.085	-.091	-.080	-.088	-.069	-.041	-.034	-.004	.010	.032	-.008	-.063	-.091	-.050	-.068	-.061
		.231	-.095	-.088	-.088	-.076	-.071	-.064	-.047	-.030	-.010	.001	.017	-.014	-.049	-.073	-.052	-.075	-.074
		.359	-.091	-.085	-.082	-.070	-.069	-.063	-.049	-.037	-.015	-.003	.013	-.009	-.046	-.078	-.043	-.075	-.074
		.487	-.093	-.088	-.086	-.073	-.070	-.065	-.057	-.041	-.017	-.005	.007	-.010	-.044	-.074	-.052	-.076	-.079
		.583	-.092	-.089	-.091	-.079	-.078	-.070	-.058	-.043	-.014	.000	.007	-.003	-.033	-.063	-.054	-.076	-.077
		.744	-.089	-.088	-.097	-.086	-.088	-.082	-.074	-.061	-.048	-.032	-.022	-.030	-.057	-.082	-.053	-.082	-.081
		.872	-.077	-.074	-.086	-.078	-.081	-.074	-.064	-.051	-.032	-.015	.013	-.017	-.050	-.075	-.035	-.076	-.073
		.976	-.067	-.065	-.082	-.074	-.078	-.069	-.058	-.044	-.030	-.019	.000	-.015	-.044	-.073	-.043	-.078	-.074
	.250	.104	-.094	-.089	-.095	-.087	-.091	-.085	-.071	-.052	-.016	.011	.051	.002	-.063	-.090	-.028	-.078	-.081
		.229	-.093	-.090	-.095	-.088	-.092	-.086	-.074	-.056	-.026	-.001	.029	-.009	-.068	-.086	-.058	-.079	-.081
		.354	-.078	-.078	-.082	-.078	-.080	-.076	-.064	-.051	-.023	-.006	.017	-.014	-.067	-.075	-.050	-.074	-.074
		.500	-.086	-.081	-.100	-.093	-.094	-.090	-.076	-.062	-.037	-.025	.011	-.030	-.068	-.087	-.064	-.088	-.087
		.625	-.092	-.091	-.098	-.094	-.093	-.089	-.076	-.061	-.040	-.029	-.010	-.032	-.066	-.085	-.061	-.088	-.085
		.750	-.080	-.076	-.089	-.082	-.088	-.082	-.073	-.055	-.037	-.023	-.021	-.027	-.055	-.081	-.058	-.085	-.082
		.875	-.078	-.077	-.092	-.091	-.093	-.089	-.076	-.055	-.039	-.029	-.015	-.027	-.062	-.085	-.061	-.088	-.083
		.969	-.068	-.066	-.086	-.088	-.091	-.087	-.076	-.056	-.040	-.029	-.017	-.027	-.061	-.082	-.057	-.087	-.082
	.500	.125	-.089	-.090	-.097	-.089	-.091	-.088	-.076	-.056	-.020	.006	.057	.008	-.057	-.082	-.054	-.077	-.081
		.250	-.089	-.088	-.097	-.089	-.092	-.089	-.078	-.062	-.030	-.003	.038	-.004	-.062	-.086	-.057	-.080	-.082
		.375	-.087	-.088	-.097	-.090	-.093	-.090	-.082	-.067	-.038	-.013	.026	-.014	-.068	-.087	-.058	-.082	-.083
		.500	-.086	-.087	-.097	-.090	-.093	-.091	-.083	-.069	-.048	-.019	.013	-.017	-.068	-.085	-.054	-.081	-.081
		.625	-.085	-.088	-.098	-.092	-.095	-.092	-.087	-.075	-.047	-.027	.001	-.025	-.071	-.083	-.058	-.086	-.083
		.750	-.081	-.087	-.098	-.092	-.095	-.092	-.086	-.075	-.051	-.032	.010	-.033	-.069	-.080	-.057	-.086	-.082
		.875	-.073	-.073	-.086	-.076	-.088	-.068	-.074	-.061	-.037	-.008	.006	-.004	-.057	-.069	.007	-.066	-.055
		.985	-.076	-.076	-.087	-.087	-.089	-.088	-.081	-.069	-.054	-.034	-.016	-.034	-.069	-.074	-.043	-.080	-.075
	.750	.156	-.080	-.081	-.095	-.089	-.092	-.089	-.078	-.058	-.018	.010	.057	.014	-.044	-.075	-.063	-.078	-.078
		.250	-.081	-.083	-.098	-.094	-.097	-.095	-.085	-.065	-.029	-.003	.044	.002	-.044	-.077	-.065	-.087	-.087
		.375	-.079	-.081	-.094	-.091	-.092	-.090	-.080	-.064	-.034	-.011	.031	-.005	-.056	-.075	-.049	-.078	-.077
		.500	-.078	-.080	-.093	-.089	-.092	-.089	-.082	-.067	-.041	-.019	.022	-.014	-.057	-.075	-.050	-.079	-.079
		.750	-.075	-.078	-.092	-.090	-.091	-.089	-.083	-.073	-.051	-.031	.008	-.023	-.064	-.077	-.050	-.081	-.077
		.969	-.070	-.075	-.090	-.087	-.090	-.088	-.081	-.070	-.057	-.037	-.003	-.027	-.066	-.073	-.047	-.080	-.077
	.875	.500	-.070	-.076	-.089	-.088	-.092	-.090	-.081	-.066	-.037	-.014	.025	-.007	-.054	-.074	-.049	-.080	-.079
		.688	-.070	-.075	-.090	-.090	-.091	-.090	-.088	-.070	-.046	-.025	.010	-.018	-.059	-.077	-.052	-.082	-.079

TABLE I.- PRESSURE COEFFICIENTS OF THE WINGS IN THE PRESENCE OF THE BODY - Continued

(b) A = 2 triangular wing, r/s = 0.2 - Concluded

		$\delta_W, \alpha_B = 0°$										$\alpha_B, \delta_W = 0°$						
y/s	x/c	45°	40°	35°	30°	25°	20°	15°	10°	6°	3°	0°	3°	6°	10°	15°	20°	25°
.025	.103	1.236	1.074	.897	.785	.545	.408	.284	.152	.095	.059	.038	.083	.138	.209	.311	.494	.695
	.231	1.194	1.004	.833	.667	.499	.350	.231	.125	.073	.040	.017	.057	.109	.184	.289	.457	.645
	.359	1.182	.948	.776	.619	.461	.356	.239	.100	.056	.032	.013	.042	.063	.147	.240	.391	.561
	.487	.930	.833	.664	.746	.551	.331	.185	.079	.046	.026	.007	.035	.073	.128	.221	.358	.514
	.583	1.190	.951	.716	.513	.348	.224	.139	.063	.034	.018	.007	.026	.059	.111	.197	.328	.476
	.744	.740	.644	.485	.346	.228	.137	.071	.007	-.020	-.020	-.022	-.020	-.004	.028	.073	.165	.278
	.878	1.206	1.049	.688	.457	.269	.141	.061	-.004	-.013	-.003	.013	.010	.041	.098	.159	.299	.443
	.976	1.260	1.090	.761	.461	.245	.112	.039	.011	.026	.017	.000	.026	.057	.110	.189	.323	.470
Lower surface .250	.104	1.206	1.047	.888	.741	.583	.439	.324	.203	.144	.094	.051	.118	.165	.235	.338	.499	.673
	.229	1.408	.987	.836	.661	.511	.373	.263	.168	.105	.064	.029	.076	.119	.184	.281	.433	.609
	.354	1.136	1.169	.934	.636	.488	.391	.248	.127	.078	.044	.017	.041	.089	.152	.244	.368	.553
	.500	1.120	.868	.717	.578	.436	.319	.201	.090	.047	.017	.011	.026	.063	.128	.208	.344	.508
	.625	.995	.837	.688	.551	.405	.274	.148	.070	.034	.008	-.010	.015	.051	.103	.186	.319	.476
	.750	1.030	.774	.601	.467	.346	.235	.150	.061	.027	.007	-.021	.016	.045	.099	.176	.311	.479
	.875	1.058	.866	.660	.461	.331	.215	.132	.049	.019	.001	-.015	.011	.048	.102	.179	.305	.444
	.969	1.034	.936	.691	.507	.343	.226	.134	.046	.017	-.001	-.017	.011	.039	.094	.144	.268	.384
.500	.125	1.093	1.093	.836	.681	.573	.449	.338	.228	.164	.110	.057	.189	.182	.256	.349	.491	.661
	.250	1.047	.972	.911	.688	.535	.401	.291	.179	.128	.078	.038	.095	.136	.209	.311	.451	.625
	.375	1.070	.874	.805	.682	.548	.398	.280	.156	.108	.059	.026	.069	.113	.182	.274	.419	.584
	.500	1.081	.976	.807	.651	.507	.370	.258	.136	.085	.043	.013	.043	.093	.164	.240	.404	.576
	.625	1.063	.877	.757	.615	.467	.330	.226	.109	.063	.027	.001	.026	.073	.136	.227	.372	.538
	.750	1.121	.880	.720	.588	.440	.309	.199	.093	.047	.017	.010	.019	.068	.123	.213	.359	.528
	.875	1.100	.926	.709	.561	.417	.292	.185	.066	.031	.017	.006	.010	.040	.131	.174	.316	.501
	.985	1.018	.875	.686	.548	.400	.269	.171	.065	.027	.005	-.016	.007	.042	.105	.189	.334	.510
.750	.156	1.073	.970	.834	.756	.640	.503	.395	.269	.199	.128	.057	.143	.218	.304	.404	.540	.680
	.250	1.153	1.012	.861	.766	.636	.491	.371	.248	.186	.111	.044	.129	.194	.276	.383	.525	.679
	.375	1.166	1.046	.887	.742	.606	.467	.336	.201	.139	.067	.031	.103	.160	.237	.340	.489	.655
	.500	1.164	1.032	.924	.751	.599	.451	.317	.179	.118	.071	.028	.083	.131	.211	.317	.473	.628
	.750	1.107	.959	.808	.684	.541	.407	.286	.147	.088	.041	.008	.050	.094	.178	.279	.432	.588
	.969	1.004	.867	.716	.589	.466	.341	.237	.128	.068	.026	-.003	.028	.075	.143	.239	.386	.551
.875	.500	1.121	.990	.865	.740	.626	.498	.374	.241	.163	.089	.025	.101	.176	.269	.384	.540	.697
	.688	1.139	.985	.837	.709	.574	.449	.331	.198	.134	.070	.010	.088	.149	.289	.348	.501	.660

TABLE I.- PRESSURE COEFFICIENTS OF THE WINGS IN THE PRESENCE OF THE BODY - Concluded

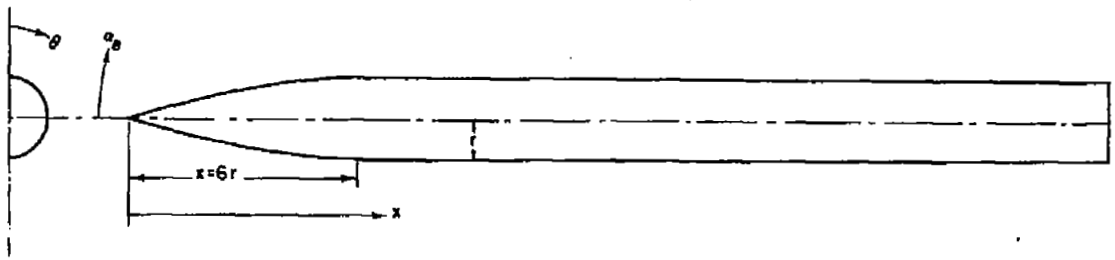
(c) A = 2 rectangular wing, r/s = 0.2

z/s	x/c	δ_w, α_B=0°								α_B, δ_w=0°						
		35°	30°	25°	20°	15°	10°	6°	3°	0°	3°	6°	10°	15°	20°	25°
Upper surface .025	.054	.106	.102	.095	.085	.073	.020	.040	.070	.109	.010	-.086	-.067	-.073		-.069
	.141	.186	.102	.092	.082	.066	.031	.019	.043	.074	.010	-.020	-.083	-.073		-.075
	.248	.106	.102	.092	.080	.067	.034	.015	.034	.054	.003	-.045	-.057	-.073		-.076
	.617	.115	.109	.113	.109	.105	.093	.086	.075	.071	-.049	-.044	-.071	-.073		-.071
	.805	.113	.105	.115	.109	.100	.089	.080	.069	.053	-.049	-.011	-.075	-.073		-.076
	.953	.073	.086	.081	.073	.059	.061	.045	.015	.022	.010	-.020	-.035	-.063		-.042
Upper surface .250	.054	.111	.105	.104	.095	.085	.054	.015	.085	.061	.006	-.032	-.082	-.059		-.064
	.141	.111	.105	.104	.097	.088	.057	.083	.014	.051	.001	-.035	-.053	-.059		-.060
	.248	.111	.105	.104	.100	.093	.066	.035	.083	.032	-.010	-.041	-.068	-.068		-.074
	.367	.111	.105	.109	.105	.098	.074	.046	.034	.017	-.021	-.047	-.067	-.075		-.073
	.492	.118	.113	.113	.109	.103	.081	.056	.318	.016	-.031	-.050	-.071	-.075		-.079
	.617	.118	.113	.112	.109	.103	.083	.061	.045	.020	-.035	-.050	-.078	-.076		-.075
	.805	.118	.113	.112	.109	.105	.086	.065	.051	.028	-.035	-.050	-.073	-.071		-.068
	.953	.112	.109	.112	.109	.105	.087	.070	.057	.042	-.039	-.021	-.068	-.071		-.070
Upper surface .563	.054	.113	.109	.109	.108	.093	.055	.014	.014	.051	.008	-.020	-.044	-.065		-.051
	.141	.117	.113	.109	.104	.098	.057	.020	.018	.041	.001	-.027	-.049	-.074		-.056
	.248	.117	.113	.111	.104	.100	.065	.031	.030	.026	-.009	-.037	-.057	-.064		-.064
	.367	.118	.115	.114	.113	.105	.076	.046	.043	.015	-.026	-.061	-.064	-.069		-.069
	.492	.118	.115	.114	.113	.105	.081	.055	.058	.028	-.030	-.061	-.067	-.074		-.078
	.617	.118	.115	.114	.113	.109	.086	.062	.059	.038	-.039	-.047	-.073	-.075		-.073
	.805	.117	.111	.110	.109	.105	.086	.070	.059	.048	-.038	-.056	-.062	-.070		-.071
	.953	.117	.111	.110	.109	.103	.092	.078	.068	.047	-.044	.019	-.070	-.069		-.070
.875	.054	.111	.109	.098	.089	.078	.043	.014	.045	.086	.037	.008	-.015	-.035		-.043
	.141	.116	.111	.104	.098	.091	.054	.029	.028	.068	.022	-.023	-.029	-.041		-.051
	.248	.115	.109	.104	.098	.091	.062	.038	.015	.044	.005	-.022	-.035	-.066		-.056
	.367	.118	.116	.111	.105	.100	.075	.053	.034	.014	-.009	-.039	-.047	-.058		-.064
	.492	.117	.111	.111	.105	.100	.076	.062	.045	.030	-.021	-.032	-.053	-.061		-.064
	.617	.117	.111	.111	.105	.101	.086	.073	.053	.044	-.031	-.041	-.068	-.073		-.071
	.805	.117	.111	.111	.105	.103	.083	.076	.065	.052	-.035	-.049	-.055	-.061		-.067
	.953	.116	.111	.111	.108	.103	.083	.074	.065	.059	-.034	-.040	-.074	-.081		-.059
Lower surface .025	.054	1.889	1.068	.858	.674	.506	.320	.207	.154	.109	.191	.307	.370	.455		.865
	.141	1.289	1.249	.868	.625	.384	.240	.159	.115	.074	.142	.239	.385	.431		.817
	.248	.955	.744	.559	.428	.322	.197	.129	.092	.054	.117	.202	.295	.419		.796
	.617	.522	.398	.237	.132	.059	.019	.051	.054	.071	-.038	-.005	.038	.065		.255
	.805	.568	.427	.265	.149	.065	.017	.025	.020	.053	-.091	.050	.115	.185		.492
	.953	.489	.386	.199	.103	.065	.098	.038	.045	.022	.083	.105	.152	.208		.555
Lower surface .250	.054	1.476	1.059	.778	.571	.400	.258	.163	.113	.061	.180	.188	.299	.436		.933
	.141	1.319	1.018	.747	.548	.379	.236	.150	.099	.051	.108	.172	.273	.405		.901
	.248	1.177	.999	.708	.505	.343	.211	.126	.080	.032	.086	.154	.249	.371		.832
	.367	1.071	.914	.705	.489	.318	.185	.104	.063	.017	.069	.130	.227	.345		.769
	.492	.948	.822	.681	.463	.300	.170	.091	.049	.016	.058	.127	.228	.319		.696
	.617	.796	.737	.590	.481	.285	.165	.083	.043	.020	.057	.125	.200	.292		.648
	.805	.681	.584	.450	.336	.229	.138	.069	.035	.028	.041	.087	.153	.223		.582
	.953	.630	.499	.373	.265	.172	.094	.038	.015	.042	.013	.063	.107	.172		.458
Lower surface .563	.054	1.426	1.034	.755	.558	.388	.244	.151	.100	.051	.103	.176	.289	.452		.939
	.141	1.258	1.018	.730	.528	.364	.228	.137	.088	.041	.088	.151	.263	.406		.901
	.248	1.139	.953	.677	.488	.329	.200	.113	.069	.026	.071	.132	.235	.376		.852
	.367	1.015	.851	.631	.440	.292	.171	.090	.049	.015	.050	.105	.203	.332		.796
	.492	.917	.793	.584	.404	.258	.146	.071	.037	.028	.033	.087	.179	.300		.741
	.617	.842	.744	.558	.386	.243	.130	.056	.025	.038	.026	.080	.171	.293		.724
	.805	.734	.646	.530	.365	.233	.123	.050	.017	.042	.017	.073	.155	.262		.680
	.953	.646	.574	.463	.352	.213	.115	.046	.028	.047	.013	.064	.148	.249		.567
.875	.054	1.449	1.183	.903	.667	.471	.309	.199	.143	.086	.139	.210	.331	.488		1.097
	.141	1.209	.957	.807	.608	.486	.276	.172	.120	.068	.116	.183	.303	.431		.929
	.248	1.044	.834	.664	.512	.364	.236	.143	.095	.044	.093	.154	.260	.398		.758
	.367	.897	.706	.534	.391	.268	.158	.091	.057	.014	.055	.109	.196	.310		.616
	.492	.810	.634	.457	.330	.211	.126	.083	.088	.030	.025	.075	.150	.255		.540
	.617	.744	.577	.418	.284	.173	.094	.029	.013	.044	.006	.051	.117	.211		.499
	.805	.686	.541	.368	.248	.137	.068	.015	.031	.052	-.014	.026	.091	.172		.464
	.953	.708	.530	.348	.219	.124	.056	.028	.037	.059	-.020	.017	.075	.146		.436

[redacted]

TABLE II.- PRESSURE COEFFICIENTS OF THE BODY IN THE PRESENCE OF THE WINGS

(a) A = 4 triangular wing, r/s = 0.2



θ	x/r	δ_W, α_B=0°										α_B, δ_W=0°					
		40°	35°	30°	25°	20°	15°	10°	6°	3°	0°	3°	6°	10°	15°	20°	25°
6°	1134	-.014	-.015	-.018	-.014	-.014	.014	-.014	-.013	-.014		-.013	-.014	-.018	-.060	-.081	-.089
	1259	-.010	-.012	-.010	-.010	-.011	.010	-.010	-.009	-.010		-.012	-.014	-.019	-.061	-.080	-.085
	1384	-.008	-.008	-.010	-.009	-.007	.008	-.006	-.006	-.006		-.008	-.008	-.020	-.065	-.080	.085
	1509	-.002	-.001	-.003	-.002	-.001	.002	.000	-.001	-.001		-.007	-.007	-.022	-.060	-.079	-.083
	1634	.109	.060	.045	.018	.002	.004	-.004	-.004	-.004		-.000	-.003	-.031	-.059	-.078	.079
	1756	.011	.001	-.011	-.013	-.012	.011	-.006	-.000	-.000		-.004	-.007	-.033	-.071	-.085	-.085
	1884	-.056	-.055	-.043	-.032	-.022	.015	-.007	-.008	-.002		-.018	-.010	-.038	-.073	-.095	.093
	2009	-.070	-.057	-.048	-.037	-.029	.021	-.014	-.009	-.009		-.017	-.023	-.043	-.081	-.079	.077
	2134	-.058	-.050	-.042	-.036	-.031	.026	-.020	-.024	-.014		-.023	-.038	-.048	-.053	-.056	.061
	2259	-.039	-.038	-.036	-.033	-.029	.027	-.024	-.018	-.018		-.014	-.022	-.027	-.036	-.043	.053
	2384	.000	.001	-.019	-.020	-.020	.018	-.014	-.007	-.007		-.005	-.006	-.000	-.012	-.025	-.064
	2509	.013	.017	.007	-.003	-.004	.002	.002	.009	.009		.008	.006	-.003	-.008	-.034	-.073
15°	1134	-.017	-.014	-.018	-.015	-.014	-.016	-.015	-.015	-.015		-.014	-.017	-.045	-.075	-.078	-.086
	1259	-.011	-.010	-.013	-.011	-.011	.011	-.011	-.010	-.010		-.014	-.020	-.042	-.068	-.074	-.082
	1384	-.007	-.006	-.009	-.006	-.007	.007	-.006	-.006	-.006		-.009	-.014	-.037	-.064	-.074	.088
	1509	-.001	-.005	-.008	-.007	-.006	.007	-.008	-.008	-.008		-.010	-.016	-.038	-.057	-.075	.081
	1634	.048	.037	.017	.001	-.006	.009	-.009	-.007	-.007		-.008	-.010	-.041	-.055	-.081	.079
	1756	.007	-.003	-.017	-.020	-.017	-.013	-.008	-.000	-.000		-.003	-.014	-.042	-.064	-.087	.088
	1884	-.038	-.055	-.051	-.038	-.024	.018	-.011	-.005	-.005		-.010	-.015	-.042	-.047	-.085	.093
	2009	-.069	-.061	-.056	-.040	-.031	.024	-.018	-.012	-.012		-.019	-.030	-.053	-.069	-.078	.081
	2134	-.059	-.055	-.047	-.039	-.035	.029	-.023	-.018	-.018		-.022	-.035	-.038	-.064	-.065	-.069
	2259	-.035	-.035	-.043	-.037	-.033	.030	-.026	-.021	-.021		-.013	-.016	-.021	-.043	-.059	-.063
	2384	.000	.001	-.018	-.024	-.024	.022	-.016	.000	-.009		-.004	-.005	-.008	-.020	-.045	.076
	2509	.012	.015	.007	-.004	-.008	.006	.000	.008	.008		.006	.002	-.005	-.009	-.059	.078
30°	1134	-.006	-.005	-.009	-.008	-.007	-.006	-.016	-.016	-.016		-.009	-.012	-.031	-.035	-.036	.038
	1259	-.012	-.011	-.014	-.013	-.012	-.012	-.011	-.012	-.012		-.013	-.021	-.068	-.062	-.074	-.075
	1384	-.006	-.005	-.007	-.007	-.006	.006	-.005	-.006	-.006		-.010	-.020	-.056	-.060	-.071	-.077
	1509	.019	-.010	-.012	-.011	-.011	-.011	-.011	-.012	-.012		-.011	-.025	-.056	-.059	-.070	-.076
	1634	.057	.016	-.011	-.010	-.007	.009	-.004	-.000	-.000		-.005	-.024	-.052	-.067	-.075	-.082
	1756	-.019	-.029	-.035	-.029	-.027	.020	-.018	-.004	-.004		-.008	-.033	-.061	-.077	-.083	-.089
	1884	-.076	-.068	-.058	-.048	-.040	.030	-.021	-.014	-.014		-.016	-.045	-.075	-.088	-.091	.090
	2009	-.072	-.066	-.062	-.058	-.045	.037	-.029	-.022	-.022		-.030	-.054	-.054	-.081	-.079	.080
	2134	-.062	-.057	-.061	-.056	-.045	.040	-.033	-.027	-.027		-.018	-.022	-.053	-.063	-.081	.081
	2259	-.035	-.019	-.047	-.047	-.043	.036	-.028	-.021	-.021		-.011	-.019	-.038	-.058	-.094	-.086
	2384	-.003	.000	-.008	-.030	-.035	.029	-.018	-.009	-.009		-.003	-.006	-.022	-.056	-.092	-.075
	2509	.010	.013	.008	.000	-.002	.004	.000	.006	.006		.008	.001	-.014	-.060	-.083	-.060
60°	1134	-.019	-.018	-.020	-.019	-.017	.018	-.018	-.018	-.018		-.024	-.031	-.051	-.068	-.077	-.081
	1259	-.008	-.008	-.010	-.010	-.010	.008	-.008	-.008	-.008		-.015	-.023	-.043	-.061	-.071	-.077
	1384	-.012	-.012	-.015	-.015	-.016	.012	-.013	-.013	-.013		-.016	-.025	-.042	-.058	-.078	-.077
	1509	.079	.017	.007	.051	.161	.012	-.002	.002	.002		-.004	-.020	-.048	-.070	-.080	-.085
	1634	.008	.053	.081	-.015	-.052	.041	-.017	-.005	-.005		-.010	-.030	-.058	-.061	-.086	-.086
	1756	-.104	-.108	-.104	-.099	-.088	.070	-.060	-.038	-.038		-.037	-.058	-.074	-.089	-.092	-.089
	1884	-.104	-.101	-.093	-.084	-.080	.072	-.064	-.045	-.045		-.047	-.057	-.063	-.073	-.071	-.067
	2009	-.069	-.090	-.090	-.085	-.081	.067	-.049	-.036	-.036		-.011	-.016	-.051	-.078	-.089	-.087
	2134	-.040	-.038	-.058	-.066	-.065	.047	-.027	-.018	-.018		-.007	-.021	-.045	-.059	-.095	.091
	2259	-.019	-.020	-.021	-.023	-.024	.021	-.014	-.009	-.009		-.008	-.023	-.039	-.059	-.096	-.084
	2384	-.011	-.012	-.008	-.006	-.006	-.007	-.003	-.001	-.001		-.004	-.016	-.041	-.067	-.090	.070
	2509	-.001	-.004	-.006	.001	.004	.001	.003	.008	.008		-.001	-.013	-.036	-.077	-.074	-.084

TABLE II.- PRESSURE COEFFICIENTS OF THE BODY IN THE PRESENCE OF THE WINGS - Continued

(a) A = 4 triangular wing, r/s = 0.2 - Concluded

θ	x/r	δ_W, α_B=0°									α_B, δ_W=0°					
		40°	35°	30°	25°	20°	15°	10°	6°	3°	0°	3°	6°	10°	15°	20°	25°
120°	1.134	-.019	-.018	-.020	-.020	-.019	.019	-.018	-.019	-.019		-.019	-.020	-.018	.005	.060	.116
	1.259	-.010	-.007	-.010	-.008	-.008	.005	-.009	-.008	-.008		-.014	-.024	-.022	.007	.053	.129
	1.384	-.013	-.012	-.014	-.013	-.012	.013	-.013	-.013	-.013		-.018	-.020	-.017	.007	.055	.127
	1.509	.028	-.008	-.009	-.009	-.008	.010	-.009	-.007	-.007		-.004	-.024	-.022	.008	.049	.123
	1.634	-.050	-.051	-.056	.007	.022	.028	.030	.025	.025		.029	.046	.069	.141	.236	.360
	1.756	-.065	-.055	.007	.045	.043	.031	.016	.008	.022		.008	.014	.029	.079	.160	.258
	1.884	-.054	-.042	-.070	-.061	-.024	.000	.015	.010	.010		-.006	.014	.027	.102	.195	.341
	2.009	-.046	-.053	-.074	-.037	-.021	.009	.001	.004	.004		-.011	.016	.041	.098	.179	.300
	2.134	-.050	-.059	-.047	-.038	-.018	.001	.004	.002	.002		-.009	.000	.018	.065	.134	.258
	2.259	-.039	-.020	-.021	-.030	-.012	.001	.006	.004	.004		-.006	-.004	.008	.054	.129	.244
	2.384	-.019	-.030	-.025	-.036	-.004	.002	.010	.009	.009		.001	-.002	.003	.048	.159	.343
	2.509	-.016	-.025	-.007	-.007	.000	.011	.015	.010	.010		.006	.000	.013	.103	.218	.336
150°	1.134																
	1.259	-.012	-.010	-.012	-.013	-.012	.012	-.011	-.012	-.012		-.011	.001	.025	.076	.150	.190
	1.384	-.006	-.004	-.007	-.007	-.005	.005	-.005	-.006	-.006		-.005	.001	.021	.075	.147	.163
	1.509	.015	-.011	-.014	-.012	-.011	.012	-.010	-.012	-.012		-.009	.004	.020	.069	.132	.127
	1.634	.104	.095	.093	.080	.066	.046	.031	.017	.017		.004	.002	.020	.064	.133	.112
	1.756	.187	.090	-.008	-.035	-.012	.011	.025	.023	.023		.030	.049	.072	.135	.174	.194
	1.884	.083	.056	.098	.109	.068	.089	.019	.018	.018		.010	.022	.039	.096	.130	.106
	2.009	.008	.056	.077	.075	.049	.024	.017	.010	.010		.007	.027	.051	.110	.139	.118
	2.134	-.028	.010	.038	.047	.043	.031	.010	.004	.004		.003	.026	.051	.110	.164	.125
	2.259	-.012	.003	.025	.036	.026	.021	.014	.006	.006		.002	.027	.052	.109	.157	.127
	2.384	.007	.026	.027	.033	.017	.015	.014	.010	.010		.009	.029	.057	.119	.244	.212
	2.509	.014	.021	.025	.022	.022	.029	.022	.018	.018		.024	.045	.094	.169	.227	.164
165°	1.134	-.016	-.015	-.018	-.016	-.015	-.016	-.015	-.015	-.015		-.007	.013	.033	.087	.134	.106
	1.259	-.011	-.010	-.012	-.012	-.012	.011	-.011	-.011	-.011		-.010	.005	.032	.082	.120	.096
	1.384	-.006	-.006	-.008	-.008	-.006	.007	-.007	-.007	-.007		-.003	.003	.022	.078	.112	.091
	1.509	.011	-.005	-.006	-.006	-.005	-.007	-.005	-.006	-.006		-.003	.012	.025	.075	.101	.088
	1.634	.234	.184	.137	.090	.045	.011	-.001	-.004	-.004		-.005	.007	.025	.076	.087	.075
	1.756	.119	.081	.121	.139	.065	.077	.050	.030	.030		.017	.022	.034	.084	.117	.121
	1.884	.092	.157	.167	.119	.075	.049	.034	.023	.023		.017	.026	.040	.088	.109	.135
	2.009	.020	.065	.103	.092	.079	.059	.034	.015	.018		.015	.028	.045	.099	.136	.170
	2.134	.013	.041	.061	.054	.044	.032	.021	.007	.007		.009	.028	.050	.108	.157	.176
	2.259	.023	.015	.021	.030	.034	.027	.017	.007	.007		.008	.029	.051	.106	.158	.172
	2.384	.024	.020	.025	.026	.024	.022	.016	.009	.009		.019	.036	.068	.120	.209	.227
	2.509	.024	.026	.023	.025	.023	.022	.025	.023	.023		.033	.053	.096	.190	.218	.214
174°	1.134	-.015	-.013	-.015	-.015	-.013	.014	-.015	-.016	-.016		-.004	.017	.038	.087	.140	.147
	1.259	-.010	-.009	-.010	-.010	-.009	.009	-.010	-.011	-.011		-.002	.006	.034	.082	.124	.128
	1.384	-.007	-.006	-.009	-.009	-.007	.008	-.007	-.008	-.008		-.000	.007	.023	.073	.119	.121
	1.509	.026	.006	-.002	-.001	.000	.001	-.001	-.003	-.003		.003	.009	.031	.078	.113	.111
	1.634	.256	.221	.141	.069	.005	.004	-.005	-.006	-.006		-.005	.008	.027	.076	.100	.091
	1.756	.185	.199	.230	.182	.154	.101	.057	.029	.029		.003	.006	.021	.068	.104	.141
	1.884	.161	.187	.142	.083	.064	.062	.047	.022	.022		.023	.034	.048	.094	.139	.158
	2.009	.168	.123	.103	.085	.068	.053	.038	.015	.015		.013	.028	.048	.100	.150	.167
	2.134	.099	.079	.068	.051	.049	.035	.021	.007	.007		.010	.030	.053	.112	.166	.177
	2.259	.027	.031	.025	.033	.033	.028	.017	.006	.008		.009	.031	.055	.111	.171	.170
	2.384	.020	.019	.023	.026	.025	.024	.016	.011	.011		.020	.040	.066	.119	.211	.238
	2.509	.021	.033	.025	.027	.020	.023	.023	.022	.022		.038	.058	.095	.192	.230	.214

TABLE II.- PRESSURE COEFFICIENTS OF THE BODY IN THE PRESENCE OF THE WINGS - Continued

(b) A = 2 triangular wing, r/s = 0.2

θ	x/r	δ_w, α_B = 0°										α_B, δ_w = 0°						
		45°	40°	35°	30°	25°	20°	15°	10°	6°	3°	0°	3°	6°	10°	15°	20°	25°
6°	1.134	-.020	-.020	-.020	-.019	-.020	-.020	-.020	-.020	-.020	-.019	-.019	-.025	-.023	-.016	-.057	-.081	-.093
	1.259	-.020	-.019	-.019	-.017	-.018	-.018	-.018	-.018	-.018	-.018	-.021	-.022	-.016	-.015	-.061	-.083	-.090
	1.384	.045	-.010	-.011	-.012	-.011	.010	.001	-.006	-.009	-.007	-.011	-.008	-.010	-.017	-.062	-.081	-.089
	1.509	.217	.202	.193	.181	.140	.057	-.001	-.000	.001	.004	.005	-.003	-.008	-.018	-.069	-.086	-.094
	1.634	.387	.264	.157	.067	-.002	-.029	-.009	-.006	.000	.005	.007	-.003	-.013	-.030	-.068	-.094	-.096
	1.756	.032	.013	.003	-.011	-.023	.032	-.039	-.016	-.008	.002	.011	-.007	-.016	-.037	-.077	-.093	-.088
	1.884	-.033	-.035	-.051	-.068	-.066	-.045	-.030	-.014	-.005	-.000	.007	-.012	-.004	-.030	-.076	-.090	-.087
	2.009	-.092	-.092	-.096	-.094	-.067	-.045	-.031	-.018	-.011	-.005	.000	-.015	-.023	-.027	-.080	-.088	-.097
	2.134	-.104	-.097	-.078	-.072	-.058	-.042	-.033	-.024	-.018	-.009	-.003	-.019	-.030	-.041	-.074	-.081	-.077
	2.259	-.066	-.040	-.048	-.043	-.035	-.031	-.024	-.019	-.014	-.005	-.000	-.018	-.030	-.042	-.060	-.046	-.042
	2.384	-.019	-.018	-.021	-.012	-.016	-.017	-.015	-.011	-.005	.001	.006	-.005	-.015	-.017	-.033	-.022	-.031
	2.509	.016	.005	.000	.006	-.008	-.004	-.003	.000	.004	.012	.016	.011	.001	-.004	-.002	-.006	-.048
15°	1.134	-.021	-.020	-.022	-.021	-.021	-.021	-.021	-.021	-.021	-.021	-.021	-.025	-.027	-.043	-.075	-.079	-.088
	1.259	-.019	-.018	-.019	-.020	-.021	-.020	-.020	-.020	-.019	-.020	-.020	-.023	-.022	-.036	-.069	-.073	-.085
	1.384	.048	-.011	-.012	-.012	-.012	-.007	.023	-.006	-.006	-.008	-.009	-.006	-.018	-.030	-.067	-.071	-.086
	1.509	.173	.176	.154	.163	.108	.034	-.009	-.004	-.001	.002	.003	-.006	-.019	-.033	-.068	-.079	-.091
	1.634	.363	.191	.114	.045	-.011	-.011	-.015	-.014	-.005	-.000	.005	-.007	-.022	-.041	-.065	-.091	-.098
	1.756	.081	.052	.022	-.013	-.036	-.034	-.031	-.015	-.002	.004	.015	.000	-.014	-.044	-.048	-.094	-.085
	1.884	-.046	-.052	-.061	-.070	-.073	-.058	-.033	-.018	-.010	-.004	.014	-.011	-.018	-.039	-.073	-.092	-.087
	2.009	-.095	-.094	-.098	-.097	-.073	-.049	-.036	-.022	-.014	-.006	-.001	-.018	-.027	-.038	-.077	-.090	-.096
	2.134	-.103	-.094	-.080	-.072	-.064	-.047	-.037	-.027	-.019	-.012	-.005	-.020	-.029	-.049	-.075	-.076	-.081
	2.259	-.072	-.054	-.048	-.054	-.050	-.039	-.030	-.023	-.018	-.009	-.003	-.016	-.030	-.035	-.060	-.053	-.057
	2.384	-.028	-.021	-.029	-.025	-.030	-.026	-.028	-.015	-.007	-.002	.004	-.001	-.038	-.011	-.043	-.038	-.069
	2.509	.011	.002	-.006	-.000	-.018	-.011	-.009	-.004	.003	.010	.017	.011	.002	-.006	-.019	-.033	-.076
30°	1.134	-.020	-.021	-.021	-.020	-.019	-.021	-.020	-.020	-.021	-.021	-.022	-.025	-.033	-.073	-.068	-.074	-.084
	1.259	-.020	-.021	-.020	-.021	-.021	-.021	-.020	-.019	-.019	-.020	-.021	-.021	-.027	-.077	-.069	-.074	-.084
	1.384	.055	-.011	-.012	-.012	-.012	.055	.020	-.011	-.007	-.005	-.005	-.008	-.029	-.075	-.069	-.081	-.087
	1.509	.155	.190	.304	.274	.082	-.016	-.015	-.013	-.007	-.003	.001	-.011	-.037	-.084	-.079	-.086	-.089
	1.634	.213	.115	.037	-.008	.025	.000	-.029	-.022	-.010	-.000	.008	-.009	-.036	-.076	-.064	-.086	-.085
	1.756	.072	.039	.009	-.021	-.058	-.052	-.030	-.015	-.006	.000	.012	-.010	-.030	-.048	-.072	-.083	-.087
	1.884	-.081	-.085	-.092	-.093	-.090	-.063	-.047	-.034	-.023	-.013	-.002	-.024	-.050	-.060	-.083	-.091	-.095
	2.009	-.103	-.102	-.102	-.108	-.082	-.067	-.052	-.037	-.025	-.015	-.005	-.025	-.044	-.075	-.083	-.092	-.096
	2.134	-.098	-.092	-.082	-.074	-.070	-.065	-.046	-.035	-.025	-.016	-.007	-.027	-.042	-.051	-.057	-.074	-.073
	2.259	-.081	-.061	-.051	-.051	-.059	-.053	-.039	-.031	-.023	-.016	-.006	-.012	-.015	-.018	-.043	-.064	-.097
	2.384	-.029	-.028	-.031	-.026	-.047	-.040	-.032	-.024	-.013	-.002	.005	.001	.020	-.003	-.034	-.064	-.095
	2.509	.003	-.001	-.010	.004	-.022	-.030	-.025	-.012	.001	.008	.014	.012	.004	-.002	-.010	-.091	-.077
60°	1.134	-.023	-.023	-.023	-.022	-.023	-.023	-.022	-.023	-.023	-.012	-.016	-.030	-.040	-.056	-.070	-.074	-.083
	1.259	-.019	-.018	-.019	-.019	-.020	-.020	-.020	.000	-.009	-.008	-.009	-.023	-.034	-.054	-.076	-.082	-.088
	1.384	.027	-.015	-.015	-.016	-.015	.047	.185	-.052	-.012	-.005	.001	-.018	-.035	-.061	-.081	-.086	-.094
	1.509	.106	.129	.371	.207	.415	-.024	-.036	-.035	-.018	-.010	-.002	.010	-.034	-.061	-.075	-.084	-.089
	1.634	.174	.125	.053	.003	-.035	-.064	-.059	-.038	.002	.001	.008	.000	-.012	-.045	-.046	-.046	-.054
	1.756	-.096	-.106	-.111	-.108	-.105	-.101	-.082	-.061	-.045	-.032	-.021	-.037	-.048	-.083	-.069	-.090	-.101
	1.884	-.100	-.102	-.108	-.107	-.100	-.091	-.075	-.061	-.044	-.029	-.012	-.035	-.049	-.078	-.085	-.089	-.096
	2.009	-.102	-.095	-.098	-.105	-.095	-.088	-.074	-.055	-.041	-.027	-.010	-.040	-.054	-.076	-.077	-.078	-.078
	2.134	-.053	-.047	-.071	-.067	-.095	-.086	-.069	-.054	-.038	-.025	-.015	-.006	-.014	-.044	-.054	-.080	-.092
	2.259	-.044	-.048	-.056	-.043	-.073	-.072	-.057	-.028	-.010	-.001	.003	.003	-.004	-.038	-.073	-.093	-.100
	2.384	-.045	-.036	-.042	-.021	-.026	-.036	-.037	-.009	.002	.007	.010	.009	.004	-.021	-.066	-.093	-.093
	2.509	-.016	-.014	-.017	.004	.002	-.002	-.012	.000	.007	.012	.014	.009	.004	-.018	-.068	-.077	-.069

TABLE II.- PRESSURE COEFFICIENTS OF THE BODY IN THE PRESENCE OF THE WINGS - Continued

(b) A = 2 triangular wing, r/s = 0.2 - Concluded

θ	x/l	$\delta_w, \alpha_B = 0°$										$\alpha_B, \delta_w = 0°$						
		45°	40°	35°	30°	25°	20°	15°	10°	6°	3°	0°	3°	6°	10°	15°	20°	25°
120°	1.134	-.023	-.024	-.022	-.023	-.023	-.023	-.023	-.023	-.023	-.023	-.025	-.027	-.032	-.026	-.002	.041	.108
	1.259	-.020	-.019	-.019	-.020	-.019	-.019	-.019	-.018	-.018	-.019	-.011	-.015	-.028	-.024	-.018	.042	.112
	1.384	.004	-.015	-.015	-.015	-.016	-.014	-.015	.000	.014	.008	-.000	.020	.034	.065	.120	.213	.343
	1.509	.142	.133	.112	.096	.088	.069	.047	.025	.014	.005	-.004	.014	.022	.062	.184	.319	.362
	1.634	.079	-.004	-.014	-.016	-.013	.000	.013	.017	.013	.008	.005	.024	.028	.057	.108	.201	.351
	1.756	-.028	-.073	-.100	-.100	-.082	-.059	-.028	-.025	-.016	-.020	-.019	-.011	.013	.064	.136	.226	.338
	1.884	-.100	-.098	-.093	-.090	-.088	-.064	-.057	-.018	.029	.009	-.014	.018	.049	.093	.168	.279	.437
	2.009	-.101	-.099	-.088	-.072	-.064	-.068	-.074	-.048	-.014	.008	-.018	.011	.041	.088	.141	.277	.433
	2.134	-.068	-.074	-.068	-.063	-.005	-.021	-.066	.002	.001	-.011	-.016	-.003	.025	.065	.128	.213	.320
	2.259	-.047	-.044	-.036	-.042	-.014	-.058	-.053	.002	.013	.009	.003	-.006	.000	.036	.084	.151	.232
	2.384	-.032	-.022	-.006	-.039	-.070	-.066	.011	.016	.020	.013	.009	.003	-.008	.009	.051	.164	.319
	2.509	-.000	-.002	-.005	-.024	-.022	-.019	-.014	.019	.021	.016	.012	.014	.005	.025	.106	.206	.346
150°	1.134	-.020	-.021	-.021	-.021	-.022	-.021	-.020	-.021	-.020	-.020	-.020	-.021	-.007	.020	.071	.150	.220
	1.259	-.020	-.021	-.020	-.020	-.022	-.021	-.020	-.020	-.021	-.008	-.020	-.019	-.007	.015	.063	.138	.176
	1.384	.066	-.011	-.011	-.011	-.011	-.011	-.011	-.011	-.010	-.006	-.003	-.012	-.006	.015	.062	.137	.150
	1.509	.171	.147	.108	.040	.014	.015	.028	.020	.013	.008	.009	.011	.025	.045	.092	.157	.148
	1.634	.103	.043	.031	.042	.038	.039	.039	.037	.027	.017	.008	.020	.039	.066	.125	.190	.160
	1.756	.176	.163	.135	.098	.048	.019	.021	.033	.036	.029	.013	.039	.067	.096	.160	.196	.172
	1.884	-.050	-.012	.026	.065	.098	.121	.090	.042	.023	.010	-.001	.012	.037	.064	.129	.186	.198
	2.009	-.080	-.086	-.056	-.008	.045	.080	.066	.035	.021	.010	-.004	.016	.045	.081	.146	.229	.266
	2.134	-.038	-.038	-.065	-.046	.014	.050	.051	.018	.013	.006	-.007	.012	.041	.078	.145	.218	.218
	2.259	-.038	-.041	-.032	-.012	.010	.039	.046	.035	.013	-.000	-.004	.007	.038	.071	.134	.199	.213
	2.384	-.021	-.038	-.014	-.010	.011	.032	.033	.026	.017	.011	.004	.009	.037	.072	.141	.276	.261
	2.509	.027	-.010	-.006	-.019	-.007	.021	.040	.026	.020	.017	.013	.022	.049	.120	.204	.266	.283
165°	1.134	-.021	-.020	-.022	-.021	-.022	-.021	-.020	-.022	-.020	-.021	-.025	-.016	-.001	.026	.077	.122	.099
	1.259	-.021	-.019	-.021	-.019	-.021	-.021	-.019	-.020	-.020	-.021	-.024	-.015	-.004	.019	.071	.109	.090
	1.384	.061	-.012	-.013	-.012	-.012	-.011	-.011	-.018	-.011	-.012	-.010	-.011	-.001	.022	.068	.100	.083
	1.509	.189	.159	.088	-.003	-.005	-.004	-.002	.005	.009	.005	-.000	.006	.011	.026	.072	.098	.093
	1.634	.169	.248	.254	.200	.152	.109	.072	.044	.027	.015	.001	.017	.031	.051	.100	.115	.120
	1.756	.231	.161	.050	.032	.049	.075	.070	.059	.050	.032	.011	.059	.059	.089	.148	.181	.216
	1.884	.092	.108	.103	.100	.109	.089	.068	.044	.026	.014	.006	.024	.046	.076	.137	.210	.249
	2.009	.035	.065	.032	.066	.118	.118	.083	.045	.025	.011	-.005	.019	.044	.077	.138	.222	.257
	2.134	.046	.028	.038	.019	.040	.069	.067	.038	.024	.008	-.004	.014	.041	.075	.139	.217	.260
	2.259	.031	.023	.018	.045	.028	.042	.047	.031	.014	.003	.004	.016	.042	.073	.137	.213	.290
	2.384	.013	-.015	-.015	.018	.039	.043	.042	.028	.015	.008	.001	.021	.047	.084	.148	.274	.364
	2.509	.022	-.014	-.009	.001	.028	.038	.037	.026	.022	.015	.006	.031	.061	.119	.212	.283	.286
174°	1.134	-.020	-.019	-.020	-.020	-.020	-.020	-.019	-.016	-.019	-.020	-.020	-.013	.001	.029	.078	.131	.136
	1.259	-.017	-.017	-.017	-.018	-.019	-.019	-.018	-.018	-.020	-.021	-.018	-.015	-.001	.019	.069	.116	.116
	1.384	.033	-.011	-.012	-.011	-.011	-.010	-.011	-.010	-.012	-.011	-.011	-.008	-.019	.023	.070	.113	.108
	1.509	.200	.189	.067	-.000	-.002	-.001	-.002	-.000	.008	.004	.004	.012	.016	.035	.075	.113	.108
	1.634	.284	.304	.277	.259	.193	.137	.083	.048	.026	.014	.008	.018	.031	.048	.096	.139	.164
	1.756	.305	.244	.200	.222	.239	.160	.136	.064	.047	.026	.012	.026	.045	.074	.141	.223	.255
	1.884	.203	.248	.231	.188	.124	.088	.057	.044	.029	.015	.007	.032	.051	.082	.145	.218	.208
	2.009	.017	.228	.248	.190	.149	.114	.079	.045	.024	.010	.001	.019	.043	.076	.140	.228	.267
	2.134	-.005	.017	.099	.112	.080	.077	.071	.036	.024	.009	-.003	.016	.042	.077	.148	.228	.273
	2.259	-.008	.002	.085	.055	.048	.047	.048	.028	.016	.003	.001	.018	.048	.078	.140	.223	.279
	2.384	-.023	-.026	-.016	.020	.045	.045	.044	.033	.014	.009	.006	.026	.050	.089	.150	.201	.350
	2.509	.003	-.028	-.016	.003	.019	.041	.034	.011	.022	.021	.016	.042	.063	.123	.214	.201	.288

TABLE II.- PRESSURE COEFFICIENTS OF THE BODY IN THE PRESENCE OF THE WINGS - Continued

(c) A = 1 triangular wing, $r/s = 0.2$

θ	x/r	$\delta_w, \alpha_B = 0°$										$\alpha_B, \delta_w = 0°$						
		45°	40°	35°	30°	25°	20°	15°	10°	6°	3°	0°	3°	6°	10°	15°	20°	25°
6°	6.94	-.028	-.027	-.026	-.028	-.029	-.027	-.027	-.029	-.028	-.027	-.026	-.037	-.039	-.050	-.047	-.079	-.087
	8.37	-.022	-.022	-.022	-.023	-.028	-.022	-.021	-.022	-.021	-.019	-.019	-.028	-.032	-.041	-.049	-.078	-.086
	9.81	-.016	-.017	-.017	-.018	-.017	-.017	-.017	-.010	-.011	-.015	-.014	-.025	-.030	-.036	-.053	-.077	-.091
	11.25	.005	-.018	-.019	-.019	-.017	-.017	.077	.009	-.018	-.015	-.014	-.023	-.027	-.030	-.058	-.084	-.086
	12.69	.189	.099	.088	.097	.143	.263	.102	-.025	-.018	-.014	-.018	-.021	-.027	-.029	-.058	-.081	-.089
	14.12	.410	.442	.478	.457	.392	.172	-.003	-.026	-.018	-.008	-.002	-.015	-.022	-.034	-.057	-.084	-.092
	15.56	.738	.632	.481	.285	.104	-.011	-.058	-.032	-.017	-.003	.002	-.014	-.018	-.031	-.057	-.087	-.095
	17.00	.163	.100	.042	.016	-.011	-.038	-.054	-.037	-.012	-.001	.003	-.009	-.014	-.034	-.056	-.075	-.086
	18.44	.069	.032	.006	-.023	-.051	-.077	-.059	-.027	-.008	-.001	.004	-.006	-.006	-.030	-.051	-.086	-.095
	19.87	-.068	-.076	-.083	-.083	-.088	-.089	-.058	-.035	-.019	-.009	.001	-.018	-.027	-.032	-.045	-.081	-.088
	21.31	-.095	-.099	-.099	-.096	-.095	-.074	-.051	-.042	-.031	-.019	-.011	-.020	-.030	-.043	-.061	-.078	-.093
	22.75	-.062	-.070	-.062	-.045	-.056	-.025	-.032	-.019	-.013	-.006	.000	-.014	-.024	-.044	-.063	-.089	-.080
	24.19	-.046	-.040	-.010	-.028	-.028	.007	.004	.000	.002	.007	.010	-.004	-.018	-.046	-.065	-.084	-.073
	25.62	.014	.002	-.022	-.023	.062	.024	.013	.006	.007	.010	.007	-.004	-.019	-.045	-.058	-.065	-.078
15°	6.94	-.028	-.028	-.029	-.029	-.028	-.027	-.029	-.028	-.028	-.027	-.028	-.033	-.035	-.047	-.069	-.081	-.082
	8.37	-.023	-.022	-.028	-.022	-.022	-.021	-.022	-.022	-.019	-.019	-.020	-.026	-.032	-.053	-.072	-.083	-.085
	9.81	-.018	-.017	-.018	-.018	-.017	-.017	-.017	.020	-.011	-.015	-.014	-.025	-.031	-.053	-.074	-.086	-.087
	11.25	-.015	-.023	-.023	-.023	-.023	-.022	.082	.005	-.022	-.021	-.018	-.026	-.032	-.052	-.078	-.084	-.089
	12.69	.112	.106	.080	.089	.104	.289	.105	-.026	-.020	-.015	-.007	-.021	-.028	-.039	-.073	-.079	-.088
	14.12	.325	.339	.405	.484	.397	.169	-.005	-.089	-.022	-.009	-.001	-.016	-.023	-.033	-.073	-.081	-.093
	15.56	.754	.561	.490	.263	.092	-.018	-.050	-.036	-.020	-.006	.001	-.015	-.028	-.033	-.068	-.091	-.097
	17.00	.131	.093	.088	.058	-.002	-.050	-.061	-.033	-.007	.001	.005	-.002	-.005	-.035	-.050	-.083	-.093
	18.44	.036	.020	-.006	-.035	-.062	-.084	-.068	-.033	-.011	-.006	.003	-.013	-.020	-.029	-.055	-.091	-.096
	19.87	-.086	-.092	-.099	-.101	-.103	-.107	-.075	-.050	-.035	-.024	-.012	-.022	-.034	-.039	-.052	-.088	-.094
	21.31	-.102	-.101	-.104	-.102	-.101	-.079	-.060	-.046	-.032	-.020	-.009	-.021	-.031	-.050	-.061	-.085	-.096
	22.75	-.063	-.071	-.073	-.072	-.067	-.033	-.039	-.024	-.014	-.007	-.010	-.029	-.027	-.050	-.063	-.080	-.077
	24.19	-.050	-.043	-.003	.008	-.006	-.018	-.007	-.005	.001	.005	.007	-.011	-.023	-.053	-.067	-.085	-.072
	25.62	-.001	-.003	-.005	-.021	.007	.001	.014	.008	.004	.008	.010	-.009	-.021	-.043	-.049	-.066	-.055
30°	6.94	-.032	-.034	-.033	-.034	-.038	-.038	-.033	-.033	-.032	-.031	-.031	-.040	-.043	-.058	-.087	-.087	-.087
	8.37	-.024	-.026	-.025	-.025	-.025	-.026	-.026	-.027	-.009	-.021	-.024	-.029	-.038	-.063	-.093	-.086	-.086
	9.81	-.019	-.020	-.019	-.020	-.020	-.020	.017	.050	-.015	-.017	-.015	-.028	-.038	-.076	-.091	-.085	-.088
	11.25	-.016	-.018	-.017	-.017	-.017	-.017	.104	.011	-.018	-.015	-.011	-.026	-.030	-.077	-.084	-.087	-.094
	12.69	.116	.112	.078	.081	.117	.201	.130	-.037	-.023	-.015	-.009	-.022	-.036	-.082	-.089	-.092	-.096
	14.12	.191	.215	.343	.307	.557	.177	-.019	-.031	-.023	-.009	-.001	-.019	-.038	-.072	-.090	-.096	-.097
	15.56	1.057	.801	.441	.202	.066	-.024	-.043	-.052	-.018	-.004	.001	-.016	-.033	-.065	-.085	-.092	-.094
	17.00	.289	.221	.166	.089	.017	-.053	-.061	-.016	.000	.000	.007	.005	-.011	-.040	-.069	-.087	-.095
	18.44	-.037	-.045	-.066	-.079	-.089	-.096	-.080	-.053	-.032	-.019	-.005	-.025	-.045	-.046	-.086	-.093	-.095
	19.87	-.088	-.090	-.094	-.094	-.096	-.096	-.067	-.046	-.031	-.017	-.003	-.024	-.038	-.054	-.086	-.093	-.095
	21.31	-.094	-.094	-.096	-.095	-.094	-.073	-.062	-.045	-.028	-.017	-.003	-.023	-.036	-.060	-.083	-.095	-.096
	22.75	-.064	-.070	-.072	-.070	-.065	-.031	-.043	-.029	-.019	-.009	-.010	-.018	-.033	-.058	-.078	-.085	-.076
	24.19	-.050	-.049	-.049	-.046	-.032	-.016	-.015	-.018	-.011	-.005	-.002	-.021	-.033	-.064	-.073	-.078	-.070
	25.62	-.009	-.015	-.028	-.023	-.020	-.025	-.015	-.020	-.015	-.011	-.010	-.008	-.018	-.029	-.043	-.038	-.060
60°	6.94	-.026	-.030	-.029	-.031	-.029	-.028	-.028	-.029	-.028	-.018	-.027	-.037	-.051	-.082	-.119	-.086	-.087
	8.37	-.026	-.027	-.028	-.027	-.024	-.027	-.027	-.027	-.008	-.024	-.020	-.038	-.055	-.074	-.083	-.092	-.095
	9.81	-.025	-.026	-.026	-.026	-.027	-.026	-.024	-.022	-.024	-.029	-.018	-.037	-.044	-.065	-.083	-.090	-.094
	11.25	-.023	-.023	-.024	-.023	-.024	-.023	-.015	.079	-.042	-.021	-.017	-.030	-.041	-.069	-.088	-.099	-.093
	12.69	.141	.110	.027	.027	.095	.065	.210	.071	-.046	-.016	-.007	-.027	-.033	-.065	-.084	-.093	-.095
	14.12	.063	.053	.019	.164	.541	.420	.110	-.077	-.030	-.012	-.005	-.023	-.031	-.064	-.084	-.090	-.094
	15.56	1.197	1.088	.845	.488	.042	.033	-.077	-.076	-.029	-.008	-.002	-.013	-.019	-.061	-.078	-.053	-.092
	17.00	.548	.494	.368	.193	-.030	-.033	-.081	-.068	-.030	-.018	-.005	-.022	-.031	-.066	-.084	-.079	-.092
	18.44	-.096	-.102	-.103	-.102	-.100	-.102	-.085	-.061	-.039	-.027	-.008	-.032	-.039	-.070	-.083	-.097	-.097
	19.87	-.093	-.097	-.094	-.097	-.098	-.097	-.074	-.055	-.035	-.023	-.004	-.027	-.040	-.083	-.097	-.095	-.095
	21.31	-.091	-.088	-.090	-.092	-.094	-.082	-.064	-.046	-.032	-.021	-.006	-.025	-.035	-.080	-.096	-.093	-.092
	22.75	-.078	-.081	-.079	-.077	-.068	-.054	-.044	-.041	-.035	-.027	-.003	-.032	-.049	-.075	-.083	-.084	-.081
	24.19	-.038	-.044	-.036	-.043	-.040	-.035	-.026	-.026	-.031	-.027	-.021	-.015	-.033	-.030	-.065	-.072	-.042
	25.62	.006	.002	-.019	-.026	-.016	-.029	-.023	-.024	-.017	.000	.005	.005	-.002	-.035	-.060	-.032	-.063

TABLE II.- PRESSURE COEFFICIENTS OF THE BODY IN THE PRESENCE OF THE WINGS - Continued

(c) A = 1 triangular wing, r/s = 0.2 - Concluded

θ	x/r	δ_w, α_B=0°										α_B, δ_w=0°						
		45°	40°	35°	30°	25°	20°	15°	10°	6°	3°	0°	3°	6°	10°	15°	20°	25°
120°	.694	-.031	-.030	-.030	-.031	-.031	-.030	-.029	-.031	-.030	-.028	-.028	-.021	-.021	-.015	.009	.046	.112
	.837	-.025	-.025	-.025	-.026	-.024	-.025	-.026	-.026	-.024	-.023	-.018	-.008	.006	.015	.038	.077	.131
	.981	-.027	-.027	-.027	-.027	-.028	-.027	-.027	-.027	-.025	-.012	-.017	.000	.025	.056	.120	.214	.344
	1.125	-.022	-.022	-.023	-.023	-.023	-.022	-.022	-.018	.000	-.005	-.013	.008	.033	.068	.135	.240	.386
	1.269	.132	.000	-.016	-.016	-.016	-.016	.029	.019	.006	-.002	-.008	.006	.028	.077	.158	.256	.403
	1.412	.158	.140	.107	.080	.062	.036	-.007	.001	.003	-.002	-.007	.006	.027	.068	.128	.285	.356
	1.556	.065	.055	-.009	-.041	-.043	.008	.028	.016	.004	.002	-.002	.011	.040	.070	.155	.222	.337
	1.700	.084	.038	.001	-.027	-.041	-.011	-.012	-.008	.010	.003	-.011	.011	.037	.074	.143	.247	.376
	1.844	-.015	.019	.007	-.016	-.041	-.030	-.051	-.033	.003	.001	-.023	.007	.035	.079	.151	.270	.407
	1.987	-.100	-.098	-.094	-.090	-.078	-.049	.001	-.004	.010	.003	-.012	.006	.036	.079	.158	.271	.392
	2.131	-.091	-.092	-.090	-.091	-.096	-.094	-.071	-.029	.004	.006	-.010	.007	.034	.080	.148	.266	.374
	2.275	-.069	-.074	-.088	-.080	-.084	-.085	-.067	-.051	-.067	-.041	-.015	.006	.029	.075	.148	.260	.363
	2.419	-.045	-.049	-.058	-.056	-.063	-.071	-.069	-.041	-.001	-.010	-.023	-.024	.004	.031	.088	.156	.361
	2.562	.007	-.012	-.017	-.020	-.024	-.027	-.048	-.049	.003	.011	.008	-.001	-.006	.027	.129	.208	.306
150°	.694	-.029	-.030	-.029	-.030	-.030	-.030	-.030	-.030	-.030	-.029	-.028	-.018	-.004	.020	.087	.161	.305
	.837	-.022	-.021	-.020	-.021	-.020	.020	-.020	-.021	-.021	-.020	-.019	-.014	.000	.025	.087	.178	.274
	.981	-.020	-.020	-.020	-.020	-.021	-.020	-.021	-.021	-.020	-.018	-.015	-.006	.004	.025	.079	.160	.255
	1.125	-.024	-.024	-.024	-.023	-.024	-.024	-.023	-.024	-.019	-.012	-.015	-.001	.020	.054	.113	.198	.269
	1.269	.119	-.008	-.017	-.018	-.018	.017	-.016	.002	.003	-.001	-.008	.002	.025	.068	.129	.209	.264
	1.412	.181	.168	.134	.081	.057	.044	.034	.025	.017	.010	.003	.014	.034	.073	.140	.201	.253
	1.556	.120	.120	.143	.119	.071	.016	.030	.030	.022	.013	.002	.017	.036	.075	.136	.211	.259
	1.700	.198	.174	.158	.138	.108	.076	.073	.045	.028	.017	.008	.021	.040	.092	.161	.235	.282
	1.844	.002	.012	.029	.034	.041	.057	.056	.037	.017	.009	.000	.011	.026	.072	.148	.206	.285
	1.987	-.061	-.067	-.058	-.048	-.025	.011	.040	.038	.019	.008	-.007	.011	.036	.074	.145	.221	.302
	2.131	-.054	-.077	-.084	-.084	-.074	-.031	.014	.034	.023	.008	-.006	.013	.037	.074	.143	.219	.298
	2.275	-.051	-.064	-.075	-.074	-.074	-.066	-.026	.015	.016	.010	-.010	.010	.036	.076	.147	.229	.309
	2.419	-.066	-.059	-.067	-.073	-.071	-.063	-.053	-.036	-.015	.002	-.006	.013	.039	.076	.141	.313	.433
	2.562	-.014	-.005	-.025	-.022	-.037	-.058	-.019	.017	.024	.009	.003	.016	.057	.143	.228	.327	.399
165°	.694	-.030	-.030	-.031	-.030	-.030	-.029	-.030	-.030	-.038	-.029	-.029	-.014	.003	.034	.100	.144	.137
	.837	-.018	-.017	-.017	-.018	-.019	-.017	-.017	-.018	-.017	-.018	-.016	-.007	.010	.035	.104	.148	.114
	.981	-.020	-.020	-.021	-.021	-.021	-.021	-.022	-.021	-.021	-.019	-.019	-.005	.006	.038	.091	.135	.110
	1.125	-.028	-.028	-.028	-.028	-.029	-.028	-.028	-.029	-.027	-.020	-.021	-.005	.013	.038	.089	.131	.108
	1.269	.127	-.002	-.016	-.017	-.017	-.016	-.017	-.011	.000	.001	.006	.003	.020	.055	.113	.149	.125
	1.412	.183	.176	.183	.093	.048	.033	.031	.028	.022	.011	.002	.020	.033	.067	.130	.189	.238
	1.556	.160	.188	.202	.184	.188	.188	.085	.058	.029	.015	.003	.021	.043	.078	.138	.207	.276
	1.700	.197	.165	.117	.077	.051	.004	.069	.068	.033	.019	.006	.027	.052	.089	.158	.253	.344
	1.844	.125	.121	.104	.070	.048	.031	.070	.061	.035	.018	.008	.025	.053	.076	.164	.245	.319
	1.987	.030	.028	.041	.039	.035	.034	.054	.049	.027	.011	-.008	.016	.041	.080	.137	.226	.309
	2.131	-.024	-.021	-.005	.006	.008	.006	.029	.048	.022	.007	-.007	.012	.037	.084	.140	.227	.319
	2.275	-.058	-.052	-.024	-.002	.012	.004	.010	.034	.021	.008	-.011	.019	.039	.089	.153	.237	.340
	2.419	-.065	-.063	-.049	-.035	-.028	-.007	.006	.008	.016	.014	.000	.021	.047	.092	.169	.320	.488
	2.562	-.036	-.042	-.055	-.045	-.034	-.025	-.004	.013	.006	.010	.011	.004	.074	.153	.259	.342	.397
174°	.694	-.031	-.030	-.031	-.032	-.032	-.032	-.030	-.030	-.031	-.029	-.030	-.012	.008	.036	.118	.162	.191
	.837	-.016	-.016	-.016	-.017	-.017	-.016	-.016	-.016	-.016	-.016	-.016	-.007	.009	.038	.104	.164	.168
	.981	-.018	-.018	-.019	-.019	-.019	-.018	-.018	-.018	-.018	-.017	-.016	-.003	.013	.038	.096	.144	.157
	1.125	-.023	-.023	-.024	-.023	-.023	-.023	-.024	-.022	-.022	-.016	-.017	-.004	.014	.037	.087	.137	.150
	1.269	.134	-.006	-.014	-.013	-.014	-.014	-.014	-.018	.000	.002	-.004	.003	.018	.044	.107	.169	.189
	1.412	.188	.181	.184	.090	.026	.011	.027	.032	.024	.014	.001	.018	.035	.063	.129	.210	.262
	1.556	.213	.222	.215	.198	.171	.140	.100	.061	.031	.018	.003	.025	.048	.074	.138	.221	.263
	1.700	.236	.203	.164	.147	.134	.098	.065	.058	.036	.019	.005	.024	.050	.083	.160	.248	.347
	1.844	.189	.178	.158	.127	.096	.072	.066	.062	.033	.019	.005	.025	.051	.085	.159	.248	.303
	1.987	.049	.068	.106	.109	.108	.103	.065	.050	.024	.010	-.004	.015	.036	.074	.140	.228	.301
	2.131	-.048	-.040	.011	.073	.103	.111	.058	.043	.021	.008	-.007	.011	.037	.073	.140	.226	.324
	2.275	-.067	-.065	-.037	.004	.061	.071	.061	.037	.023	.010	-.005	.013	.040	.078	.155	.238	.348
	2.419	-.076	-.075	-.062	-.049	-.027	-.003	.025	.026	.021	.016	.004	.024	.050	.093	.170	.319	.478
	2.562	-.033	-.040	-.056	-.052	-.034	-.026	-.006	.001	.009	.018	.017	.042	.081	.158	.262	.345	.398

TABLE II.- PRESSURE COEFFICIENTS OF THE BODY IN THE PRESENCE OF THE WINGS - Continued

(d) A = 1 triangular wing, r/s = 0.4

θ	x/r	δ_w, α_B=0°										α_B, δ_w=0°						
		45°	40°	35°	30°	25°	20°	15°	10°	6°	3°	0°	3°	6°	10°	15°	20°	25°
6°	.694	-.023	-.028	-.027	-.024	-.029	-.029	-.029	.001	-.028	-.028	-.026	-.031	-.039	-.047	-.047	-.079	-.077
	.837	-.018	-.023	-.020	-.017	-.021	-.022	-.033	-.003	-.021	-.019	-.020	-.022	-.031	-.038	-.045	-.077	-.078
	.981	-.013	-.017	-.017	-.014	-.017	-.018	-.023	-.004	-.018	-.016	-.015	-.018	-.028	-.026	-.049	-.075	-.081
	1.125	-.013	-.019	-.018	-.015	-.019	-.018	-.019	-.004	-.018	-.017	-.016	-.017	-.019	-.016	-.055	-.075	-.076
	1.269	-.012	-.016	-.015	-.012	-.018	-.017	-.021	-.007	-.015	-.014	-.014	-.016	-.018	-.014	-.057	-.071	-.076
	1.412	-.006	-.010	-.010	-.005	-.009	-.011	-.017	-.006	-.009	-.008	-.005	-.008	-.011	-.020	-.061	-.076	-.080
	1.556	.094	.033	.036	.055	.042	.015	-.010	-.007	-.005	-.003	.000	-.006	-.010	-.021	-.057	-.080	-.078
	1.700	.157	.113	.063	.080	-.020	-.023	-.007	-.005	-.005	.002	.008	-.005	-.012	-.031	-.057	-.073	-.080
	1.844	-.027	-.048	-.057	-.053	-.039	-.026	-.010	-.004	.006	.003	.001	-.001	-.003	-.031	-.066	-.074	-.080
	1.987	-.069	-.075	-.056	-.029	-.023	-.018	-.016	-.001	-.002	-.001	-.004	-.006	-.011	-.030	-.067	-.069	-.078
	2.131	-.047	-.044	-.037	-.026	-.032	-.027	-.021	.001	-.016	-.011	-.011	-.009	-.021	-.027	-.067	-.069	-.072
	2.275	-.018	-.020	-.016	-.011	-.014	-.012	-.009	.005	-.008	-.003	-.002	-.005	-.017	-.029	-.043	-.051	-.059
	2.419	.015	.005	.006	.010	.007	.005	.005	.005	.008	.007	.014	.010	.006	-.004	-.008	-.036	-.068
	2.562	.030	.024	.020	.022	.017	.013	.012	.000	.018	.021	.023	.018	.010	-.007	-.025	-.055	-.081
15°	.694	-.025	-.027	-.027	-.025	-.027	-.030	-.029	-.001	-.028	-.027	-.026	-.028	-.037	-.045	-.069	-.054	-.076
	.837	-.018	-.021	-.020	-.018	-.021	-.022	-.021	-.002	-.021	-.019	-.019	-.021	-.033	-.048	-.073	-.083	-.077
	.981	-.015	-.020	-.018	-.015	-.019	-.020	-.020	-.004	-.019	-.017	-.017	-.020	-.030	-.045	-.072	-.083	-.078
	1.125	-.019	-.023	-.023	-.019	-.023	-.022	-.023	-.005	-.023	-.023	-.021	-.019	-.026	-.045	-.073	-.076	-.079
	1.269	-.013	-.017	-.015	-.013	-.017	-.018	-.017	-.004	-.018	-.015	-.015	-.013	-.022	-.039	-.067	-.070	-.068
	1.412	-.006	-.010	-.009	-.006	-.013	-.011	-.011	-.005	-.014	-.009	-.009	-.009	-.017	-.034	-.066	-.070	-.075
	1.556	.115	.087	.089	.085	.056	.010	-.008	-.006	-.006	-.003	-.003	-.007	-.020	-.037	-.056	-.079	-.079
	1.700	.147	.101	.053	.009	-.026	-.023	-.009	-.004	-.003	.000	.005	-.002	-.014	-.041	-.064	-.080	-.080
	1.844	-.027	-.048	-.060	-.061	-.037	-.023	-.016	-.002	-.004	.002	.004	-.003	-.012	-.048	-.065	-.077	-.080
	1.987	-.088	-.088	-.069	-.043	-.037	-.031	-.027	-.001	-.016	-.013	-.012	-.009	-.024	-.047	-.066	-.078	-.081
	2.131	-.050	-.047	-.039	-.034	-.034	-.031	-.025	.002	-.018	-.014	-.011	-.014	-.028	-.044	-.069	-.076	-.071
	2.275	-.016	-.020	-.020	-.014	-.015	-.016	-.011	.008	-.009	-.005	-.003	-.019	-.014	-.028	-.050	-.058	-.058
	2.419	.013	.001	-.001	.006	.003	.003	.001	.008	.006	.009	.012	.009	.003	.003	-.023	-.041	-.068
	2.562	.026	.018	.019	.022	.017	.012	.010	.001	.011	.022	.024	.017	.005	-.015	-.020	-.070	-.088
30°	.694	-.029	-.033	-.032	-.031	-.034	-.034	-.034	-.006	-.038	-.032	-.033	-.035	-.044	-.057	-.083	-.090	-.079
	.837	-.019	-.023	-.024	-.022	-.025	-.027	-.025	-.003	-.026	-.024	-.025	-.026	-.036	-.055	-.083	-.080	-.080
	.981	-.015	-.019	-.018	-.017	-.020	-.019	-.019	-.001	-.018	-.019	-.018	-.023	-.032	-.067	-.080	-.079	-.077
	1.125	-.013	-.018	-.016	-.016	-.018	-.019	-.019	-.002	-.018	-.018	-.016	-.020	-.029	-.067	-.069	-.073	-.075
	1.269	-.014	-.018	-.017	-.016	-.018	-.018	-.018	-.006	-.017	-.015	-.014	-.015	-.027	-.070	-.064	-.072	-.075
	1.412	-.005	-.009	-.007	-.006	-.008	-.009	-.010	-.005	-.007	-.008	-.006	-.010	-.027	-.060	-.056	-.074	-.074
	1.556	.120	.108	.103	.134	.065	-.007	-.017	-.004	-.012	-.005	-.003	-.011	-.035	-.069	-.061	-.071	-.075
	1.700	.057	.013	-.001	-.006	-.030	-.027	-.021	-.004	-.005	.002	.004	-.006	-.028	-.066	-.070	-.063	-.080
	1.844	-.049	-.065	-.071	-.067	-.035	-.025	-.019	-.001	-.008	-.001	.001	-.011	-.037	-.054	-.069	-.076	.085
	1.987	-.076	-.067	-.046	-.041	-.037	-.035	-.024	.002	-.013	-.006	-.003	-.014	-.045	-.066	-.065	-.080	-.084
	2.131	-.054	-.046	-.038	-.031	-.031	-.028	-.022	.002	-.016	-.008	-.005	-.013	-.040	-.058	-.044	-.065	-.073
	2.275	-.012	-.022	-.021	-.016	-.018	-.017	-.013	.005	-.009	-.003	-.003	-.001	-.013	-.015	-.039	-.053	-.060
	2.419	.012	.002	.001	.001	-.001	-.007	-.006	.007	.002	.008	.009	.008	-.012	-.011	-.038	-.057	-.063
	2.562	.021	.013	.012	.014	.010	.006	.007	-.002	.010	.011	.011	.013	-.007	-.025	-.029	-.057	-.056
60°	.694	-.027	-.029	-.029	-.028	-.029	-.030	-.029	-.001	-.029	-.028	-.027	-.033	-.050	-.075	-.086	-.083	-.078
	.837	-.024	-.027	-.027	-.025	-.026	-.029	-.029	-.001	-.028	-.026	-.027	-.032	-.050	-.069	-.074	-.079	-.076
	.981	-.024	-.026	-.026	-.024	-.027	-.025	-.029	.000	-.028	-.026	-.026	-.030	-.048	-.058	-.068	-.072	-.077
	1.125	-.018	-.022	-.022	-.020	-.022	-.022	-.022	-.003	-.023	-.019	-.020	-.023	-.037	-.054	-.068	-.071	-.073
	1.269	-.013	-.016	-.016	-.015	-.016	-.018	-.018	-.003	-.019	-.018	-.016	-.021	-.029	-.044	-.061	-.072	-.073
	1.412	-.013	-.014	-.015	-.013	-.014	-.015	-.013	-.004	-.013	-.007	-.007	-.015	-.029	-.048	-.065	-.073	-.074
	1.556	.133	.129	.111	.385	.382	.011	-.056	-.003	-.015	-.003	.002	-.013	-.032	-.063	-.069	-.080	-.091
	1.700	.225	.019	.011	.126	.164	-.026	-.054	-.003	-.022	-.012	-.007	-.019	-.041	-.066	-.078	-.083	-.087
	1.844	-.083	-.091	-.087	-.073	-.053	-.067	-.051	-.001	-.029	-.021	-.016	-.026	-.047	-.068	-.078	-.091	-.087
	1.987	-.059	-.065	-.060	-.054	-.051	-.058	-.042	.003	-.026	-.019	-.011	-.026	-.034	-.065	-.074	-.081	-.072
	2.131	-.032	-.049	-.050	-.041	-.041	-.037	-.032	.003	-.016	-.005	-.001	-.001	-.009	-.045	-.070	-.081	-.074
	2.275	-.022	-.020	-.018	-.016	-.022	-.022	-.027	.005	-.008	-.002	.003	.003	-.009	-.042	-.064	-.069	-.065
	2.419	.006	.010	.010	.011	.014	.012	.011	.006	.010	.007	.009	.005	-.015	-.043	-.070	-.067	-.048
	2.562	.015	.017	.013	.016	.014	.014	.012	.001	.006	.009	.008	.007	-.011	-.041	-.060	-.042	-.052

TABLE II.- PRESSURE COEFFICIENTS OF THE BODY IN THE PRESENCE OF THE WINGS - Continued

(d) A = 1 triangular wing, r/s = 0.4 - Concluded

θ	x/r	δ_w, α_B=0°										α_B, δ_w=0°						
		45°	40°	35°	30°	25°	20°	15°	10°	6°	3°	0°	3°	6°	10°	15°	20°	25°
	6.94	-.027	-.030	-.029	-.029	-.030	-.031	-.031	.001	-.031	-.027	-.031	-.019	-.028	-.018	.012	.048	.114
	8.37	-.025	-.026	-.027	-.026	-.028	-.029	-.029	.001	-.029	-.027	-.028	-.024	-.018	.008	.046	.103
	9.81	-.024	-.028	-.028	-.026	-.027	-.028	-.029	.000	-.027	-.027	-.027	-.026	-.027	-.021	.003	.048	.106
	11.25	-.016	-.021	-.021	-.020	-.022	-.023	-.024	.003	-.023	-.021	-.022	-.025	-.030	-.022	.002	.042	.107
	12.69	-.013	-.018	-.018	-.017	-.018	-.017	-.019	.003	-.019	-.017	-.015	-.020	-.025	-.021	.005	.039	.119
	14.12	-.012	-.018	-.014	-.012	-.012	-.014	-.016	.004	-.014	-.009	-.009	-.010	-.024	-.019	.005	.051	.125
120°	15.56	.118	.068	.017	.006	.015	.031	.032	.003	.012	.005	.000	.013	.027	.046	.096	.181	.298
	17.00	.016	-.014	-.037	-.041	-.033	-.014	.031	.003	.007	-.001	-.009	.007	.014	.045	.100	.189	.311
	18.44	-.086	-.096	-.094	-.091	-.085	-.062	.028	.001	.000	-.011	-.022	-.002	.003	.044	.104	.196	.319
	19.87	-.057	-.059	-.054	-.047	-.049	-.031	-.033	-.003	-.019	-.012	-.019	.000	.013	.052	.112	.201	.310
	21.31	.008	-.008	.004	.013	-.037	-.044	-.020	-.003	.004	.004	.000	-.004	-.008	.016	.060	.135	.232
	22.75	.012	.004	.012	.006	-.013	-.026	-.001	-.003	.006	.003	.008	.002	-.006	.006	.047	.123	.226
	24.19	.003	.003	.004	-.006	-.007	-.008	-.005	-.006	.001	.004	.004	-.001	-.009	.001	.049	.182	.307
	25.62	.002	.001	.003	.001	-.001	-.001	.004	-.001	.010	.015	.012	.008	-.003	.035	.114	.193	.232
	6.94	-.028	-.031	-.030	-.030	-.029	-.031	-.036	.006	-.034	-.031	-.031	-.018	-.005	.021	.086	.165	.315
	8.37	-.021	-.021	-.022	-.023	-.022	-.022	-.023	.003	-.021	-.022	-.022	-.012	-.001	.025	.087	.178	.265
	9.81	-.020	-.021	-.021	-.020	-.021	-.023	-.025	.001	-.026	-.021	-.021	-.015	-.003	.024	.079	.164	.257
	11.25	-.017	-.021	-.022	-.019	-.021	-.021	-.021	.002	-.024	-.019	-.020	-.016	-.006	.019	.073	.158	.234
	12.69	-.015	-.018	-.019	-.017	-.017	-.019	-.019	.006	-.021	-.018	-.017	-.015	-.007	.022	.066	.140	.200
	14.12	-.008	-.009	-.008	-.008	-.008	-.009	-.009	.005	-.009	-.008	-.008	-.012	-.007	.016	.069	.142	.167
	15.56	.098	-.005	-.011	-.009	-.009	-.012	-.011	.004	-.008	-.005	-.005	-.004	-.007	.021	.071	.136	.187
150°	17.00	.021	.018	.031	.034	.046	.048	.036	.004	.016	.008	.004	.011	.013	.040	.091	.154	.130
	18.44	.009	.046	.073	.064	.051	.015	.013	.001	.011	.006	.003	.011	.017	.052	.106	.157	.181
	19.87	-.052	-.045	-.027	-.008	.043	.085	.021	-.002	.009	.003	-.005	.008	.016	.046	.102	.133	.111
	21.31	.000	-.008	-.008	.016	.037	.037	.017	-.002	.004	.000	-.006	.007	.020	.047	.101	.138	.096
	22.75	-.001	-.010	-.006	-.006	.001	.006	.010	-.005	.005	.003	-.001	.005	.017	.049	.095	.134	.107
	24.19	-.004	-.007	-.004	-.004	-.006	-.002	.002	-.007	.014	.010	.006	.013	.027	.064	.146	.219	.148
	25.62	.005	-.001	-.001	-.007	-.008	-.005	.003	.002	.018	.022	.018	.028	.058	.119	.174	.158	.130
	6.94	-.025	-.031	-.032	-.030	-.030	-.031	-.031	.001	-.034	-.028	-.032	-.014	.001	.033	.099	.143	.145
	8.37	-.022	-.021	-.022	-.023	-.021	-.022	-.025	.002	-.024	-.024	-.022	-.008	.007	.034	.101	.148	.127
	9.81	-.019	-.021	-.022	-.021	-.022	-.022	-.022	.002	-.021	-.020	-.020	-.011	.003	.031	.094	.139	.116
	11.25	-.021	-.027	-.026	-.025	-.026	-.026	-.027	.001	-.026	-.022	-.026	-.012	-.001	.026	.083	.130	.104
	12.69	-.013	-.019	-.018	-.017	-.018	-.017	-.017	.004	-.011	-.017	-.018	-.009	.000	.026	.075	.119	.096
	14.12	-.010	-.011	-.011	-.011	-.011	-.013	-.014	.005	-.013	-.011	-.011	-.005	-.003	.024	.074	.108	.090
	15.56	.098	-.008	-.008	-.006	-.007	-.006	-.007	.006	-.007	-.006	-.006	-.001	.006	.024	.073	.098	.079
165°	17.00	.262	.227	.159	.133	.101	.064	.038	.004	.009	.006	.005	.006	.008	.029	.076	.098	.088
	18.44	.114	.100	.075	.066	.074	.068	.051	.002	.016	.013	.006	.012	.022	.027	.087	.092	.107
	19.87	.016	.017	.031	.076	.106	.078	.049	.001	.015	.005	.001	.011	.023	.049	.090	.119	.139
	21.31	-.008	-.006	-.004	.003	.018	.028	.022	-.002	.006	-.002	-.007	.009	.020	.055	.089	.127	.139
	22.75	-.012	-.020	-.019	-.010	.005	.014	.011	-.008	.004	-.001	-.004	.015	.021	.055	.090	.132	.143
	24.19	.004	-.011	-.009	.000	-.002	.007	.017	-.008	.015	.014	.012	.022	.035	.077	.137	.185	.188
	25.62	.010	.002	.001	-.003	-.008	.001	.010	-.001	.024	.026	.027	.012	.064	.112	.189	.184	.140
	6.94	-.030	-.033	-.032	-.031	-.038	-.033	-.032	-.001	-.032	-.031	-.032	-.011	.001	.036	.110	.165	.200
	8.37	-.021	-.020	-.021	-.021	-.020	-.022	-.023	.003	-.022	-.023	-.021	-.005	.008	.039	.103	.157	.175
	9.81	-.017	-.019	-.017	-.018	-.018	-.019	-.016	.004	-.018	-.018	-.018	-.008	.007	.036	.094	.147	.163
	11.25	-.020	-.020	-.021	-.019	-.021	-.022	-.021	.004	-.021	-.018	-.022	-.006	.005	.033	.086	.139	.149
	12.69	-.013	-.014	-.013	-.013	-.013	-.013	-.014	.007	-.014	-.012	-.014	-.004	.001	.023	.074	.120	.128
	14.12	-.009	-.010	-.011	-.010	-.010	-.011	-.012	.006	-.011	-.010	-.012	-.003	.002	.022	.072	.114	.120
	15.56	.021	-.005	-.006	-.005	-.005	-.007	-.008	.007	-.006	-.004	.000	.001	.003	.025	.072	.105	.090
174°	17.00	.287	.257	.220	.174	.122	.068	.031	.005	.007	.003	.012	.004	.006	.026	.076	.112	.108
	18.44	.235	.179	.152	.169	.131	.099	.069	.004	.017	.013	.017	.016	.023	.040	.084	.116	.142
	19.87	.074	.078	.077	.089	.076	.052	.038	.001	.013	.003	.007	.002	.024	.047	.090	.129	.147
	21.31	.004	.007	.005	.004	.014	.023	.019	-.001	.007	.000	-.001	.008	.021	.047	.094	.143	.147
	22.75	-.010	-.018	-.019	-.007	.004	.016	.010	-.005	.034	.001	-.002	.010	.024	.052	.095	.141	.142
	24.19	-.014	-.019	-.012	-.005	.000	.007	.010	-.005	.015	.018	.011	.027	.042	.080	.139	.206	.188
	25.62	.015	.006	.003	.000	-.001	.003	.013	.000	.028	.032	.030	.047	.066	.114	.189	.195	.145

TABLE II.- PRESSURE COEFFICIENTS OF THE BODY IN THE PRESENCE OF THE WINGS - Continued

(e) A = 2/3 triangular wing, r/s = 0.4

θ	x/r	δ_w, α_B=0°										α_B, δ_w=0°						
		45°	40°	35°	30°	25°	20°	15°	10°	6°	3°	0°	3°	6°	10°	15°	20°	25°
6°	6.94	-.028	-.033	-.030	-.028	-.029	-.030	-.027	-.029	-.030	-.026	-.029	-.042	-.045	-.047	-.046	-.081	-.086
	8.37	-.021	-.024	-.023	-.022	-.022	-.025	-.020	-.021	-.022	-.019	-.022	-.031	-.036	-.038	-.050	-.078	-.083
	9.81	-.015	-.021	-.020	-.017	-.017	-.020	-.017	-.017	-.020	-.014	-.019	-.026	-.034	-.036	-.051	-.076	-.089
	11.25	-.015	-.020	-.020	-.016	-.017	-.019	-.016	-.017	-.019	-.014	-.019	-.021	-.026	-.017	-.057	-.083	-.082
	12.69	-.013	-.019	-.016	-.014	-.015	-.017	-.013	-.016	-.018	-.012	-.016	-.019	-.019	-.013	-.057	-.078	-.079
	14.12	-.008	-.014	-.011	-.010	-.010	-.010	-.015	-.007	-.011	-.007	-.010	-.012	-.016	-.024	-.060	-.088	-.085
	15.56	.203	.198	.207	.194	.124	.013	-.017	-.008	.006	.001	-.001	-.011	-.014	-.023	-.062	-.090	-.084
	17.00	.191	.125	.064	.006	-.038	-.049	-.018	-.013	.006	.002	.000	-.011	-.018	-.028	-.063	-.089	-.086
	18.44	-.027	-.044	-.057	-.066	-.069	-.037	-.020	-.012	-.005	.004	.002	-.003	-.011	-.026	-.068	-.088	-.086
	19.87	-.087	-.093	-.089	-.072	-.034	-.020	-.012	-.008	-.006	.003	.002	-.009	-.013	-.023	-.070	-.080	-.079
	21.31	-.087	-.084	-.054	-.041	-.029	-.030	-.017	-.016	-.014	-.004	-.012	-.012	-.017	-.015	-.065	-.080	-.084
	22.75	-.034	-.037	-.028	-.013	-.013	-.014	-.006	-.006	-.004	.002	.002	-.012	-.025	-.019	-.060	-.076	-.068
	24.19	.010	.011	.014	.010	.008	.009	.010	.007	.006	.013	.018	.000	-.015	-.013	-.042	-.064	-.055
	25.62	.042	.033	.021	.012	.013	.015	.015	.012	.011	.018	.018	.013	.011	.022	-.033	-.039	-.081
15°	6.94	-.027	-.032	-.031	-.030	-.028	-.031	-.027	-.029	-.030	-.026	-.027	-.038	-.041	-.045	-.069	-.083	-.088
	8.37	-.022	-.027	-.027	-.023	-.023	-.026	-.022	-.024	-.024	-.017	-.024	-.030	-.036	-.048	-.070	-.084	-.083
	9.81	-.016	-.023	-.021	-.018	-.017	-.029	-.016	-.018	-.019	-.015	-.019	-.026	-.029	-.043	-.073	-.085	-.084
	11.25	-.020	-.024	-.022	-.021	-.020	-.024	-.020	-.022	-.023	-.019	-.023	-.029	-.027	-.044	-.073	-.078	-.085
	12.69	-.015	-.018	-.017	-.015	-.015	-.017	-.015	-.016	-.017	-.013	-.018	-.019	-.024	-.036	-.067	-.071	-.079
	14.12	-.009	-.013	-.012	-.011	-.010	.027	.009	-.010	-.010	-.005	-.009	-.013	-.021	-.035	-.069	-.074	-.081
	15.56	.194	.185	.188	.202	.109	.005	-.020	-.011	-.009	-.004	-.003	-.011	-.021	-.035	-.066	-.086	-.087
	17.00	.158	.101	.048	.000	-.041	-.041	-.023	-.017	.009	.000	.001	-.011	-.022	-.042	-.062	-.092	-.091
	18.44	-.029	-.046	-.058	-.070	-.076	-.035	-.017	-.009	.004	.003	.002	-.007	-.014	-.041	-.064	-.090	-.092
	19.87	-.097	-.104	-.103	-.087	-.046	-.037	-.024	-.020	-.017	-.010	-.008	-.013	-.021	-.036	-.067	-.084	-.087
	21.31	-.098	-.091	-.059	-.044	-.036	-.036	-.021	-.018	-.017	-.005	-.008	-.015	-.021	-.036	-.070	-.086	-.090
	22.75	-.036	-.038	-.027	-.019	-.018	-.014	-.007	-.007	-.006	.000	-.001	-.009	-.023	-.030	-.075	-.074	-.086
	24.19	.004	-.007	.001	-.002	-.002	.006	.008	.006	.003	.008	.006	-.001	-.015	-.007	-.036	-.068	-.051
	25.62	.036	.027	.014	.013	.014	.012	.015	.013	.014	.020	.019	.012	.007	.016	-.027	-.043	-.058
30°	6.94	-.038	-.037	-.034	-.038	-.032	-.035	-.034	-.033	-.034	-.032	-.033	-.044	-.048	-.066	-.087	-.088	-.087
	8.37	-.023	-.029	-.028	-.027	-.026	-.028	-.026	-.026	-.029	-.024	-.027	-.033	-.040	-.056	-.089	-.084	-.087
	9.81	-.016	-.021	-.021	-.018	-.017	-.020	-.018	-.018	-.020	-.017	-.020	-.028	-.036	-.067	-.088	-.080	-.084
	11.25	-.015	-.020	-.018	-.018	-.016	-.019	-.017	-.017	-.018	-.014	-.018	-.023	-.030	-.070	-.069	-.073	-.079
	12.69	-.016	-.021	-.020	-.019	-.017	-.018	-.016	-.007	-.016	-.013	-.016	-.022	-.031	-.078	-.065	-.074	-.079
	14.12	-.005	-.011	-.010	-.008	-.007	.108	.004	-.011	-.009	-.003	-.004	-.017	-.034	-.071	-.068	-.079	-.081
	15.56	.149	.194	.319	.229	.058	-.024	-.023	-.014	-.010	-.001	-.003	-.016	-.036	-.079	-.078	-.080	-.091
	17.00	.110	.046	.015	.014	-.021	-.052	-.031	-.018	.007	.002	.004	-.012	-.035	-.081	-.084	-.084	-.086
	18.44	-.047	-.059	-.069	-.080	-.078	-.039	-.019	-.008	-.006	.003	.002	-.013	-.034	-.070	-.077	-.088	-.092
	19.87	-.092	-.096	-.094	-.066	-.043	-.041	-.023	-.016	-.014	-.006	.002	-.017	-.039	-.070	-.079	-.088	-.099
	21.31	-.079	-.079	-.054	-.038	-.034	-.031	-.019	-.015	-.013	-.005	-.003	-.019	-.041	-.078	-.081	-.086	-.086
	22.75	-.035	-.038	-.024	-.025	-.023	-.017	-.009	-.009	-.008	-.003	-.002	-.018	-.023	-.019	-.084	-.070	-.070
	24.19	.008	.001	-.002	-.009	-.005	-.001	.001	-.002	-.001	.005	.007	.002	.001	.008	-.040	-.052	-.067
	25.62	.039	.017	.003	.004	.005	.004	-.002	-.001	.005	.011	.008	.010	-.004	-.012	-.029	-.063	-.054
60°	6.94	-.031	-.035	-.034	-.031	-.030	-.033	-.030	-.031	-.032	-.029	-.031	-.043	-.056	-.066	-.079	-.083	-.087
	8.37	-.024	-.029	-.028	-.026	-.026	.028	-.025	-.027	-.028	-.026	-.028	-.040	-.054	-.058	-.076	-.080	-.082
	9.81	-.023	-.027	-.026	-.025	-.025	-.026	-.024	-.027	-.027	-.025	-.026	-.035	-.046	-.051	-.071	-.078	-.079
	11.25	-.022	-.027	-.026	-.025	-.025	-.026	-.025	-.026	-.025	-.021	-.025	-.032	-.040	-.055	-.069	-.074	-.079
	12.69	-.013	-.017	-.017	-.015	-.014	-.016	-.014	.025	-.015	-.007	-.009	-.026	-.036	-.065	-.075	-.077	-.091
	14.12	-.009	-.014	-.013	-.012	-.011	.046	.116	-.052	-.019	-.007	-.006	-.020	-.036	-.070	-.086	-.077	-.095
	15.56	.114	.133	.383	.670	.323	.096	-.060	-.041	-.017	-.008	-.003	-.020	-.033	-.072	-.095	-.087	-.092
	17.00	.008	.018	.137	.282	.120	.044	-.059	-.038	-.020	-.009	-.002	-.022	-.037	-.069	-.079	-.083	-.090
	18.44	-.100	-.105	-.104	-.096	-.086	.068	-.059	-.037	-.025	-.010	-.003	-.026	-.040	-.070	-.074	-.084	-.092
	19.87	-.065	-.083	-.072	-.070	-.073	-.061	-.041	-.033	-.024	-.010	-.004	-.026	-.052	-.088	-.088	-.092	-.090
	21.31	-.042	-.058	-.055	-.055	-.049	-.035	-.026	-.024	-.024	-.017	-.017	-.019	-.028	-.070	-.067	-.074	-.080
	22.75	-.036	-.047	-.038	-.026	-.027	-.033	-.025	-.027	-.016	-.004	.000	.000	-.002	-.061	-.068	-.083	-.070
	24.19	-.008	-.005	.006	.001	.006	.003	-.013	-.004	.008	.010	.011	.004	-.005	-.037	-.081	-.074	-.065
	25.62	.023	.018	.015	.019	.029	.030	.025	.021	.014	.013	.011	.006	-.008	-.027	-.069	-.047	-.049

TABLE II.- PRESSURE COEFFICIENTS OF THE BODY IN THE PRESENCE OF THE WINGS - Continued

(e) A = 2/3 triangular wing, r/s = 0.4 - Concluded

θ	x/r	δ_W, α_B=0°										α_B, δ_W=0°						
		45°	40°	35°	30°	25°	20°	15°	10°	6°	3°	0°	3°	6°	10°	15°	20°	25°
120°	.694	-.026	-.029	-.029	-.029	-.026	-.031	-.026	-.028	-.030	-.029	-.027	-.028	-.023	-.015	.006	.045	.106
	.837	-.026	-.029	-.029	-.029	-.026	.028	-.027	-.029	-.029	-.026	-.028	-.027	-.024	-.017	.004	.043	.097
	.981	-.027	-.031	-.030	-.030	-.029	-.029	-.028	-.029	-.029	-.025	-.029	-.030	-.028	-.021	.004	.045	.107
	1.125	-.020	-.025	-.023	-.022	-.022	-.024	-.022	-.023	-.023	-.020	-.022	-.034	-.033	-.023	.000	.044	.109
	1.269	-.012	-.016	-.015	-.014	-.013	-.017	-.014	-.015	-.018	-.007	-.009	-.012	-.021	-.021	.001	.040	.111
	1.412	-.011	-.016	-.015	-.013	-.012	-.014	-.012	-.002	.002	.000	-.008	.001	.020	.046	.092	.166	.275
	1.556	.137	.112	.101	.088	.074	.055	.038	.020	.008	.002	-.007	.001	.027	.055	.112	.207	.330
	1.700	.022	.007	.000	-.005	-.007	-.010	.018	.020	.009	.003	-.008	.001	.023	.057	.117	.215	.345
	1.844	-.096	-.101	-.099	-.098	-.092	-.078	-.006	.016	.007	.002	-.011	-.002	.019	.059	.123	.223	.345
	1.987	-.067	-.070	-.068	-.071	-.067	-.075	-.074	-.018	.003	.000	-.011	-.004	.015	.033	.117	.211	.331
	2.131	-.015	-.015	-.029	-.023	-.025	-.037	-.002	-.006	.004	.000	-.020	-.019	-.002	.014	.078	.157	.287
	2.275	-.010	-.001	.004	.003	.003	-.015	.008	-.005	.007	.005	.001	-.005	-.014	.001	.055	.135	.231
	2.419	-.015	-.017	-.002	.004	-.005	.003	.039	.006	.009	.014	.008	.001	-.005	.037	.049	.175	.364
	2.562	.000	-.009	.002	.008	-.002	-.004	.002	-.002	.009	.020	.016	.006	.004	-.078	.117	.198	.264
150°	.694	-.027	-.030	-.030	-.029	-.027	-.030	-.028	-.030	-.030	-.030	-.029	-.018	-.007	.029	.080	.158	.301
	.837	-.020	-.024	-.024	-.024	-.021	-.023	-.023	-.023	-.023	-.022	-.022	-.014	.000	.029	.055	.166	.272
	.981	-.028	-.027	-.026	-.026	-.025	-.026	-.026	-.026	-.026	-.020	-.025	-.018	-.002	.029	.058	.161	.245
	1.125	-.021	-.026	-.026	-.025	-.022	-.024	-.023	-.024	-.023	-.018	-.021	-.023	-.010	.022	.075	.154	.227
	1.269	-.012	-.016	-.016	-.015	-.014	-.016	-.018	-.016	-.018	-.018	-.017	-.020	-.011	.013	.063	.142	.192
	1.412	-.004	-.010	-.009	-.009	-.007	-.008	-.005	-.009	-.008	-.002	-.006	-.004	-.004	.016	.068	.142	.149
	1.556	.134	.088	.015	-.005	-.002	.004	.016	.008	.004	.002	.004	.008	.008	.036	.076	.137	.184
	1.700	.025	-.013	-.005	.024	.030	.028	.034	.020	.018	.008	.000	.007	.017	.055	.113	.176	.138
	1.844	-.008	.006	.029	.045	.041	.049	.030	.020	.018	.006	.000	.006	.016	.055	.114	.148	.181
	1.987	-.066	-.068	-.061	-.036	.021	.073	.047	.023	.018	.006	-.005	.005	.026	.056	.115	.152	.183
	2.131	-.009	-.012	-.022	-.028	-.017	.010	.015	.010	.007	.002	-.007	.007	.024	.055	.111	.154	.110
	2.275	.003	.001	.001	.002	-.002	.005	.013	.012	.007	-.001	-.005	.000	.020	.049	.102	.144	.118
	2.419	.005	.000	-.007	-.010	-.008	-.002	.004	.010	.011	.011	.006	.011	.022	.068	.131	.224	.171
	2.562	.009	.007	.008	.007	.003	-.005	.017	.021	.025	.027	.024	.025	.056	.114	.183	.171	.127
165°	.694	-.026	-.031	-.029	-.028	-.028	-.029	-.028	-.030	-.030	-.031	-.030	-.016	.000	.032	.096	.138	.136
	.837	-.022	-.026	-.024	-.024	-.022	-.023	-.022	-.024	-.023	-.021	-.023	-.006	.006	.044	.103	.144	.119
	.981	-.028	-.028	-.028	-.025	-.026	-.027	-.025	-.025	-.025	-.019	-.025	-.012	.010	.038	.095	.138	.112
	1.125	-.029	-.029	-.029	-.028	-.026	-.027	-.027	-.026	-.025	-.024	-.026	-.022	-.005	.029	.084	.119	.108
	1.269	-.013	-.016	-.016	-.015	-.014	-.016	-.015	-.016	-.016	-.017	-.018	-.012	-.011	.021	.072	.111	.096
	1.412	-.008	-.011	-.010	-.009	-.008	-.010	-.009	-.011	-.010	-.006	-.009	-.005	.002	.022	.071	.100	.081
	1.556	.140	.069	-.008	-.007	-.008	-.009	-.005	-.001	-.001	-.001	-.005	.000	.009	.028	.073	.093	.080
	1.700	.247	.236	.196	.158	.121	.080	.049	.026	.014	.006	.000	.006	.018	.036	.088	.101	.103
	1.844	.087	.043	.021	.023	.051	.066	.046	.037	.017	.009	.003	.012	.026	.050	.099	.124	.148
	1.987	.020	.011	.013	.053	.069	.080	.054	.031	.016	.006	-.002	.007	.027	.056	.101	.140	.160
	2.131	-.039	-.035	-.013	.001	.016	.031	.036	.023	.011	.003	-.007	.008	.027	.061	.103	.147	.166
	2.275	-.006	-.011	-.027	-.025	-.015	-.005	.004	.006	.003	-.003	-.007	.015	.028	.060	.101	.156	.174
	2.419	.010	.007	-.006	-.012	-.009	-.009	.003	.010	.010	.008	.005	.017	.038	.076	.127	.198	.215
	2.562	.009	.009	.006	.003	.000	-.002	.019	.024	.026	.028	.026	.004	.063	.107	.191	.195	.163
174°	.694	-.026	-.030	-.030	-.028	-.029	-.031	-.028	-.031	-.030	-.030	-.031	-.015	.001	.038	.105	.188	.188
	.837	-.024	-.025	-.023	-.025	-.024	-.023	-.023	-.024	-.023	-.021	-.022	-.003	.006	.040	.104	.150	.167
	.981	-.024	-.026	-.026	-.025	-.025	-.024	-.023	-.024	-.024	-.018	-.023	-.015	.015	.042	.096	.143	.160
	1.125	-.025	-.026	-.023	-.024	-.023	-.022	-.022	-.022	-.020	-.020	-.020	-.021	.000	.031	.085	.138	.147
	1.269	-.011	-.013	-.011	-.012	-.011	-.012	-.013	-.013	-.012	.039	-.013	-.012	-.006	.014	.071	.119	.129
	1.412	-.010	-.012	-.010	-.011	-.012	-.010	-.010	-.011	-.010	-.009	-.010	-.004	.006	.022	.071	.109	.107
	1.556	.140	.038	-.005	-.006	-.006	-.006	-.008	-.004	.000	.003	-.008	.002	.008	.032	.077	.109	.100
	1.700	.272	.252	.228	.199	.152	.095	.054	.027	.011	.014	-.001	.006	.014	.031	.080	.115	.136
	1.844	.218	.149	.151	.162	.144	.087	.076	.038	.017	.008	.002	.010	.025	.048	.100	.144	.163
	1.987	.109	.130	.135	.115	.073	.045	.040	.031	.014	.007	-.001	.007	.027	.051	.104	.154	.167
	2.131	-.030	-.017	.013	.030	.033	.031	.036	.023	.011	.003	-.004	.008	.026	.051	.103	.159	.168
	2.275	-.012	-.024	-.037	-.030	-.020	-.011	.002	.007	.005	.001	-.001	.010	.033	.057	.106	.167	.171
	2.419	.013	.011	-.002	-.010	-.007	-.007	.001	.010	.014	.010	.006	.020	.043	.080	.125	.209	.209
	2.562	.011	.012	.009	.003	.002	.007	.017	.027	.031	.030	.030	.039	.064	.108	.188	.204	.163

TABLE II.- PRESSURE COEFFICIENTS OF THE BODY IN THE PRESENCE OF THE WINGS - Continued

(f) A = 3/8 triangular wing, r/s = 0.4

θ	x/r	δ_w, α_B = 0°										α_B, δ_w = 0°						
		45°	40°	35°	30°	25°	20°	15°	10°	6°	3°	0°	3°	6°	10°	15°	20°	25°
6°	.694	-.033	-.034	-.033	-.027	-.026	-.025	-.029	-.029	-.029	-.027	-.023	-.041	-.042	-.041	-.050	-.081	-.090
	.837	-.025	-.029	-.024	-.020	-.018	-.018	-.023	-.022	-.020	-.019	-.017	-.029	-.032	-.038	-.050	-.080	-.085
	.981	-.021	-.023	-.020	-.016	-.018	-.016	-.019	-.019	-.015	-.016	-.014	-.024	-.030	-.029	-.054	-.076	-.090
	1.125	-.021	-.021	-.020	-.016	-.016	-.014	-.019	-.010	-.018	-.016	-.011	-.022	-.024	-.021	-.061	-.085	-.082
	1.269	-.020	-.020	-.019	-.014	-.015	.033	.048	-.027	-.018	-.014	-.009	-.021	-.022	-.021	-.062	-.079	-.089
	1.412	.102	.095	.110	.158	.247	.112	-.029	-.023	-.011	-.006	-.002	-.011	-.018	-.022	-.067	-.088	-.095
	1.556	.327	.350	.308	.198	.064	-.030	-.044	-.029	-.007	-.002	.003	-.010	-.012	-.021	-.061	-.096	-.097
	1.700	.161	.090	.029	-.017	-.033	-.044	-.041	-.031	-.007	-.002	.003	-.009	-.013	-.020	-.064	-.092	-.093
	1.844	.008	-.011	-.032	-.047	-.063	-.075	-.037	-.016	-.006	.000	.007	-.005	-.007	-.017	-.066	-.090	-.093
	1.987	-.086	-.086	-.087	-.089	-.085	-.041	-.025	-.006	-.006	-.002	.004	-.009	-.008	-.024	-.071	-.088	-.087
	2.131	-.099	-.091	-.080	-.067	-.041	-.029	-.031	-.012	-.015	-.006	.000	-.009	-.010	-.024	-.075	-.086	.091
	2.275	-.026	-.021	-.022	-.022	-.013	-.011	-.007	.004	-.004	.002	.007	-.007	-.016	-.037	-.069	-.084	-.086
	2.419	-.010	-.007	.003	.025	.015	.007	.016	.015	.008	.012	.015	-.001	-.006	-.033	-.081	-.095	-.089
	2.562	.019	.030	.032	.037	.024	.019	.025	.020	.015	.017	.018	.002	-.003	-.033	-.056	-.057	-.071
15°	.694	-.033	-.034	-.033	-.026	-.029	-.027	-.028	-.029	-.027	-.028	-.024	-.037	-.038	-.043	-.073	-.083	-.086
	.837	-.026	-.027	-.025	-.020	-.022	-.021	-.024	-.023	-.021	-.021	-.017	-.031	-.034	-.048	-.074	-.085	-.087
	.981	-.022	-.022	-.020	-.016	-.019	-.016	-.018	-.016	-.015	-.016	-.013	-.025	-.032	-.046	-.076	-.085	-.086
	1.125	-.024	-.026	-.023	-.020	-.020	-.020	-.022	-.015	-.022	-.020	-.015	-.022	-.028	-.048	-.077	-.082	-.086
	1.269	-.018	-.019	-.018	-.014	-.014	.040	.050	-.028	-.016	-.014	-.008	-.017	-.025	-.033	-.076	-.076	-.098
	1.412	.087	.063	.105	.150	.280	.112	-.032	-.025	-.013	-.006	-.001	-.013	-.020	-.029	-.079	-.080	-.097
	1.556	.313	.347	.318	.201	.058	-.038	-.040	-.029	-.009	-.004	.002	-.011	-.018	-.026	-.069	-.100	-.108
	1.700	.135	.081	.023	.005	-.018	-.055	-.048	-.029	-.008	-.004	.004	-.011	-.016	-.025	-.068	-.092	-.098
	1.844	-.009	-.034	-.049	-.058	-.072	-.081	-.036	-.014	-.004	-.002	.006	-.005	-.009	-.024	-.060	-.098	-.091
	1.987	-.094	-.097	-.099	-.101	-.101	-.040	-.043	-.018	-.017	-.012	-.004	-.009	-.012	-.028	-.067	-.087	-.087
	2.131	-.099	-.096	-.087	-.072	-.044	-.033	-.038	-.018	-.016	-.011	-.003	-.013	-.016	-.038	-.071	-.082	-.100
	2.275	-.033	-.030	-.030	-.029	-.019	-.011	-.010	.000	-.004	.001	.006	-.003	-.017	-.041	-.070	-.091	-.088
	2.419	-.014	-.030	-.027	-.019	.003	.003	.012	.012	.008	.008	.012	-.005	-.011	-.039	-.075	-.097	-.086
	2.562	.008	-.004	.004	.028	.020	.014	.023	.019	.015	.014	.018	-.003	-.008	-.034	-.046	-.068	-.047
30°	.694	-.034	-.037	-.036	-.032	-.033	-.032	-.033	-.035	-.033	-.031	-.028	-.042	-.045	-.054	-.090	-.089	-.091
	.837	-.028	-.030	-.028	-.025	-.025	.025	-.026	-.027	-.020	-.024	-.022	-.032	-.039	-.058	-.094	-.086	-.089
	.981	-.021	-.022	-.021	-.017	-.018	-.017	-.017	.011	-.017	-.016	-.015	-.026	-.030	-.069	-.083	-.080	-.085
	1.125	-.019	-.020	-.019	-.014	-.016	-.015	-.018	-.011	-.018	-.014	-.011	-.025	-.038	-.068	-.080	-.094	-.098
	1.269	-.021	-.028	-.019	-.016	-.017	.037	.064	-.032	-.020	-.013	-.009	-.020	-.032	-.070	-.093	-.101	-.102
	1.412	.104	.093	.113	.142	.310	.115	-.038	-.028	-.010	-.004	.000	-.014	-.030	-.075	-.097	-.099	-.100
	1.556	.606	.785	.473	.187	.035	.041	-.034	-.032	-.011	-.006	.002	-.013	-.032	-.072	-.093	-.098	-.098
	1.700	.074	.106	.098	.048	-.017	-.063	-.066	-.032	-.005	-.001	.008	-.006	-.027	-.061	-.067	-.081	-.082
	1.844	-.048	-.056	-.067	-.077	-.086	-.086	-.041	-.011	-.010	-.003	.005	-.012	-.024	-.051	-.089	-.089	-.098
	1.987	-.090	-.089	-.089	-.091	-.089	-.021	-.046	-.019	-.011	-.004	.001	-.014	-.024	-.038	-.092	-.092	-.096
	2.131	-.084	-.081	-.078	-.070	-.033	-.028	-.033	-.018	-.009	-.004	.005	-.013	-.031	-.057	-.087	-.089	-.098
	2.275	-.032	-.033	-.032	-.026	-.015	-.014	-.013	-.003	-.004	-.002	.007	-.012	-.017	-.053	-.084	-.086	-.087
	2.419	-.006	-.023	-.020	-.011	.002	-.001	.005	.003	.008	.001	.005	-.014	-.020	-.057	-.058	-.086	-.080
	2.562	.011	-.010	-.014	-.005	.008	.006	.008	.003	-.001	-.003	.001	.002	-.016	-.019	-.040	-.051	-.040
60°	.694	-.034	-.034	-.061	-.030	-.031	-.030	-.032	-.032	-.031	-.026	-.027	-.042	-.056	-.079	-.085	-.087	-.090
	.837	-.027	-.030	-.059	-.024	-.027	-.025	-.027	-.028	-.014	-.024	-.020	-.038	-.056	-.069	-.083	-.088	-.095
	.981	-.028	-.029	-.057	-.024	-.023	-.023	-.025	-.026	-.004	-.023	-.018	-.035	-.049	-.061	-.095	-.096	-.099
	1.125	-.027	-.028	-.056	-.023	-.024	-.022	-.024	.024	-.034	-.019	-.015	-.033	-.048	-.090	-.096	-.096	-.097
	1.269	-.018	-.018	-.048	-.014	-.015	-.013	.094	.003	-.023	-.010	-.004	-.024	-.037	-.086	-.093	-.094	-.095
	1.412	.082	.067	.058	.107	.100	.257	.045	-.059	-.015	-.012	-.004	-.021	-.034	-.076	-.090	-.094	-.096
	1.556	.376	.905	.980	.434	.041	.014	-.080	-.066	-.019	-.013	-.001	-.018	-.033	-.079	-.088	-.090	-.098
	1.700	.160	.408	.455	.165	-.026	-.036	-.073	-.059	-.019	-.011	.000	-.017	-.037	-.078	-.088	-.092	-.094
	1.844	-.103	-.103	-.106	-.103	-.108	-.094	-.065	-.053	-.021	-.010	.001	-.019	-.039	-.078	-.089	-.097	-.098
	1.987	-.084	-.081	-.081	-.087	-.081	-.052	-.063	-.039	-.017	-.007	.004	-.016	-.044	-.077	-.091	-.094	-.097
	2.131	-.046	-.057	-.058	-.074	-.052	-.030	-.044	-.028	-.016	-.006	.008	-.014	-.038	-.077	-.091	-.090	-.097
	2.275	-.036	-.047	-.045	-.043	-.025	-.028	-.036	-.023	-.020	-.013	-.007	-.024	-.047	-.075	-.082	-.082	-.077
	2.419	.008	-.017	-.021	-.017	-.005	.002	-.018	-.008	-.013	-.015	-.002	-.005	-.024	-.037	-.066	-.061	-.067
	2.562	.007	.015	.016	.012	.009	.006	-.012	-.006	-.006	.010	.019	.012	.004	-.027	-.069	-.022	.040

TABLE II.- PRESSURE COEFFICIENTS OF THE BODY IN THE PRESENCE OF THE WINGS - Continued

(f) A = 3/8 triangular wing, r/s = 0.4 - Concluded

θ	x/r	δ_W, α_B=0°										α_B, δ_W=0°						
		45°	40°	35°	30°	25°	20°	15°	10°	6°	3°	0°	3°	6°	10°	15°	20°	25°
	.694	-.038	-.033	-.060	-.029	-.029	-.029	-.031	-.032	-.031	-.029	-.027	-.027	-.023	.013	.007	.046	.108
	.837	-.026	-.030	-.057	-.025	-.027	.014	-.027	-.030	-.029	-.027	-.028	-.020	-.020	.013	.005	.044	.098
	.981	-.030	-.030	-.059	-.027	-.027	-.027	-.028	-.029	-.026	-.021	-.016	-.012	.001	.029	.062	.106	.143
	1.125	-.024	-.025	-.052	-.020	-.020	-.020	-.022	-.021	-.013	-.010	-.014	-.007	.010	.045	.095	.176	.280
	1.269	-.015	-.019	-.045	-.013	-.014	-.016	-.015	.006	.003	-.005	-.006	.000	.020	.056	.114	.200	.309
	1.412	-.014	-.016	-.044	-.012	-.011	.036	.026	.009	.001	-.005	-.008	-.001	.028	.058	.116	.206	.329
120°	1.556	.110	.067	.040	.049	.020	-.009	-.008	.000	-.001	-.004	-.006	-.001	.020	.058	.113	.204	.331
	1.700	.019	.006	-.048	-.012	-.030	-.043	-.034	-.004	.003	-.002	-.005	.000	.021	.088	.119	.214	.340
	1.844	-.086	-.085	-.121	-.093	-.086	-.084	-.068	-.012	.005	-.003	-.007	-.002	.022	.063	.125	.222	.345
	1.987	-.065	-.091	-.118	-.084	-.087	-.082	-.043	-.032	.001	-.003	-.004	-.001	.019	.059	.118	.210	.325
	2.131	-.049	-.055	-.090	-.049	-.054	-.054	-.042	-.041	-.005	-.002	-.005	-.002	.016	.055	.112	.204	.314
	2.275	-.030	-.037	-.066	-.016	-.029	-.027	-.030	-.034	-.054	-.030	-.008	-.005	.012	.052	.113	.205	.314
	2.419	-.042	-.034	-.053	-.019	-.022	-.024	-.021	.005	.007	.004	-.005	-.003	.022	.013	.061	.192	.361
	2.562	-.025	-.036	-.056	-.017	-.019	.001	.014	.024	.011	.021	.021	.010	-.015	.036	.183	.203	.310
	.694	-.031	-.033	-.061	-.030	-.038	-.038	-.030	-.032	-.031	-.031	-.035	-.023	-.006	.024	.088	.153	.296
	.837	-.022	-.025	-.051	-.022	-.023	-.023	-.023	-.025	-.023	-.022	-.020	-.015	.007	.030	.086	.168	.269
	.981	-.023	-.026	-.054	-.023	-.024	-.024	-.024	-.024	-.024	-.021	-.018	-.015	-.004	.028	.082	.161	.252
	1.125	-.023	-.025	-.051	-.020	-.022	-.021	-.022	-.022	-.019	-.016	-.014	-.014	-.001	.026	.074	.151	.229
	1.269	-.017	-.019	-.045	-.015	-.017	-.017	-.017	-.016	-.008	-.008	-.010	-.007	.009	.038	.080	.157	.203
	1.412	-.007	-.010	-.038	-.006	-.007	-.007	.006	.009	.003	.000	-.002	.003	.016	.050	.106	.176	.195
150°	1.556	.161	.138	.073	.075	.059	.045	.031	.017	.008	.000	-.008	.003	.014	.048	.109	.166	.175
	1.700	.027	.004	-.043	-.034	-.024	.022	.031	.022	.011	.004	.008	.007	.018	.065	.122	.187	.190
	1.844	-.021	-.020	-.032	.016	.035	.055	.052	.024	.011	.004	.000	.007	.017	.068	.123	.176	.173
	1.987	-.078	-.080	-.104	-.057	-.019	.035	.036	.023	.011	.002	-.008	.004	.026	.060	.122	.177	.166
	2.131	-.039	-.049	-.083	-.061	-.044	-.011	.015	.020	.018	.003	.000	.007	.025	.059	.116	.168	.154
	2.275	-.021	-.029	-.068	-.021	-.038	-.038	-.016	.012	.011	.003	.001	.004	.025	.058	.114	.172	.157
	2.419	-.022	-.026	-.056	-.027	-.025	-.029	-.039	-.028	-.007	-.004	-.001	.010	.036	.072	.147	.262	.234
	2.562	.004	.000	-.029	-.001	-.009	.009	.005	.012	.020	.016	.017	.020	.053	.135	.206	.225	.169
	.694	-.030	-.034	-.061	-.029	-.031	-.030	-.031	-.032	-.031	-.031	-.029	-.015	.002	.036	.099	.142	.138
	.837	-.023	-.025	-.052	-.021	-.023	-.023	-.022	-.025	-.024	-.024	-.021	-.012	.008	.040	.104	.146	.115
	.981	-.025	-.027	-.053	-.024	-.023	-.026	-.023	-.024	-.024	-.023	-.020	-.012	.003	.039	.094	.135	.109
	1.125	-.025	-.027	-.053	-.023	-.023	-.024	-.024	-.025	-.023	-.020	-.019	-.014	.000	.036	.084	.129	.103
	1.269	-.017	-.019	-.045	-.015	-.017	-.022	-.020	-.019	-.013	-.011	-.010	-.005	.005	.032	.075	.114	.098
	1.412	-.009	-.012	-.040	-.009	-.009	-.010	-.008	.003	.002	-.002	-.004	.004	.011	.032	.089	.119	.098
165°	1.556	.176	.158	.097	.085	.060	.047	.035	.021	.008	.000	-.003	.005	.023	.058	.105	.134	.143
	1.700	.149	.170	.158	.180	.122	.082	.064	.033	.013	.004	-.001	.010	.026	.058	.116	.158	.180
	1.844	.085	.046	-.010	.003	.000	.032	.051	.033	.014	.004	.004	.009	.023	.063	.118	.174	.198
	1.987	.011	.011	-.023	.006	.034	.048	.048	.027	.014	.003	.000	.005	.027	.063	.112	.168	.196
	2.131	-.053	-.044	-.060	-.015	.004	.017	.034	.022	.011	.001	-.002	.006	.025	.068	.110	.167	.198
	2.275	-.034	-.044	-.063	-.051	-.037	-.023	.005	.017	.010	.001	-.001	.015	.027	.066	.110	.168	.213
	2.419	-.005	-.020	-.063	-.031	-.047	-.034	-.014	.002	.004	.002	.005	.018	.048	.081	.147	.242	.297
	2.562	.004	.001	-.026	-.009	-.022	-.023	-.015	.001	.016	.013	.019	.007	.066	.134	.222	.250	.230
	.694	-.032	-.034	-.060	-.030	-.030	-.031	-.032	-.033	-.032	-.031	-.032	-.013	.002	.038	.107	.159	.189
	.837	-.023	-.025	-.051	-.025	-.022	-.023	-.024	-.024	-.023	-.023	-.023	-.009	.007	.043	.104	.153	.164
	.981	-.023	-.025	-.050	-.022	-.022	-.023	-.022	-.021	-.021	-.020	-.020	-.011	.008	.042	.097	.141	.139
	1.125	-.019	-.022	-.048	-.019	-.020	-.018	-.020	-.020	-.019	-.017	-.016	-.012	.001	.034	.085	.136	.146
	1.269	-.012	-.015	-.042	-.013	-.015	-.013	-.018	-.013	-.012	-.010	-.010	-.006	.002	.026	.073	.131	.124
	1.412	-.009	-.012	-.038	-.009	-.011	-.012	-.012	-.001	.001	-.001	-.005	.002	.013	.039	.067	.129	.140
174°	1.556	.179	.155	.101	.083	.049	.043	.037	.020	.010	.002	-.001	.009	.024	.057	.105	.154	.163
	1.700	.224	.214	.180	.192	.168	.184	.074	.035	.014	.004	-.008	.007	.024	.055	.118	.168	.196
	1.844	.191	.130	.082	.110	.096	.044	.049	.035	.013	.004	.002	.009	.027	.059	.117	.180	.201
	1.987	.074	.103	.089	.113	.081	.043	.043	.026	.012	.003	-.002	.006	.026	.058	.114	.171	.197
	2.131	-.044	-.027	-.027	.041	.047	.033	.034	.023	.010	.002	-.003	.005	.025	.058	.109	.170	.199
	2.275	-.041	-.054	-.083	-.042	-.019	.001	.013	.021	.011	.006	.001	.009	.029	.057	.111	.176	.213
	2.419	.002	-.014	-.066	-.038	-.048	-.024	-.006	.008	.012	.010	.009	.021	.046	.084	.148	.251	.295
	2.562	.007	.005	-.020	-.009	-.028	-.036	-.013	-.001	.014	.018	.022	.042	.066	.134	.222	.257	.286

TABLE II.- PRESSURE COEFFICIENTS OF THE BODY IN THE PRESENCE OF THE WINGS - Continued

(g) A = 3 rectangular wing, r/s = 0.2

θ	x/r	$\delta_w, \alpha_B = 0°$											$\alpha_B, \delta_w = 0°$					
		45°	40°	35°	30°	25°	20°	15°	10°	6°	3°	0°	3°	6°	10°	15°	20°	25°
6°	6.94	-.028	-.027	-.028	-.026	-.026	-.028	-.025	-.024	-.027	-.021	-.031	-.038	-.037	-.045	-.047	-.081	-.081
	8.37	-.021	-.022	-.028	-.020	-.021	-.022	-.020	-.020	-.022	-.017	-.025	-.030	-.030	-.037	-.048	-.080	-.081
	9.81	-.016	-.017	-.018	-.016	-.019	-.018	-.017	-.015	-.019	-.015	-.021	-.026	-.025	-.025	-.051	-.078	-.088
	11.25	-.020	-.020	-.019	-.020	-.019	-.018	-.020	-.018	-.018	-.019	-.021	-.023	-.020	-.018	-.051	-.084	-.076
	12.69	-.017	-.018	-.014	-.016	-.017	-.016	-.017	-.016	-.015	-.018	-.019	-.020	-.017	-.017	-.051	-.077	-.074
	14.12	-.009	-.012	-.009	-.010	-.012	-.009	-.012	-.010	-.009	-.009	-.012	-.018	-.010	-.021	-.053	-.080	-.075
	15.56	.109	.003	-.004	-.001	-.006	-.002	-.006	-.006	-.004	-.005	-.008	-.011	-.006	-.022	-.053	-.085	-.075
	17.00	.040	.037	.031	.010	-.003	-.003	-.007	-.006	-.004	-.005	-.009	-.009	-.005	-.029	-.054	-.084	-.073
	18.44	-.083	-.015	-.010	-.004	-.005	-.001	-.003	.000	.005	.005	.004	-.001	.006	-.025	-.053	-.077	-.071
	19.87	-.038	-.037	-.027	-.023	-.015	-.008	-.008	-.004	-.001	.003	-.001	-.015	-.015	-.024	-.055	-.080	-.072
	21.31	-.047	-.045	-.037	-.037	-.031	-.021	-.023	-.018	-.014	-.010	-.010	-.017	-.028	-.043	-.060	-.072	-.071
	22.75	-.030	-.025	-.019	-.026	-.024	-.018	-.017	-.014	-.007	.000	.001	-.008	-.019	-.020	-.043	-.057	-.064
	24.19	-.005	.007	.006	-.008	-.014	-.012	-.011	-.004	.004	.011	.013	.002	.000	.005	-.022	-.050	-.068
	25.62	.004	.012	.009	.000	-.007	-.002	-.001	.004	.014	.018	.019	.008	.004	-.001	-.023	-.055	-.065
15°	6.94	-.028	-.030	-.026	-.030	-.030	-.028	-.030	-.029	-.029	-.029	-.016	-.036	-.034	-.042	-.067	-.087	-.079
	8.37	-.022	-.023	-.021	-.022	-.024	-.020	-.024	-.022	-.022	-.022	-.034	-.028	-.031	-.046	-.070	-.085	-.083
	9.81	-.017	-.020	-.017	-.018	-.019	-.016	-.017	-.019	-.019	-.018	-.024	-.026	-.027	-.043	-.070	-.084	-.080
	11.25	-.024	-.026	-.023	-.023	-.024	-.022	-.025	-.023	-.024	-.025	-.023	-.024	-.025	-.044	-.070	-.079	-.080
	12.69	-.017	-.019	-.017	-.018	-.018	-.016	-.018	-.018	-.016	-.016	-.022	-.018	-.020	-.037	-.067	-.078	-.073
	14.12	-.012	-.013	-.010	-.010	-.012	-.010	-.014	-.012	-.012	-.011	-.019	-.012	-.015	-.033	-.063	-.071	-.077
	15.56	.102	.047	-.007	-.006	-.009	-.006	-.008	-.008	-.007	-.007	-.018	-.011	-.016	-.036	-.053	-.077	-.079
	17.00	.024	.030	.019	.012	.000	-.003	-.005	-.005	-.006	-.003	-.007	-.007	-.013	-.038	-.054	-.081	-.076
	18.44	-.026	-.019	-.018	-.012	-.006	-.003	-.003	.001	.004	.007	-.004	-.004	-.010	-.036	-.055	-.080	-.079
	19.87	-.050	-.050	-.045	-.038	-.031	-.023	-.022	-.017	-.013	-.012	-.002	-.018	-.027	-.039	-.062	-.085	-.081
	21.31	-.058	-.058	-.044	-.038	-.035	-.028	-.028	-.024	-.018	-.013	-.005	-.016	-.023	-.043	-.066	-.078	-.075
	22.75	-.031	-.020	-.016	-.029	-.029	-.023	-.023	-.017	-.009	-.003	.000	-.021	-.012	-.017	-.048	-.064	-.062
	24.19	-.009	.003	.007	-.010	-.022	-.015	-.015	-.007	.003	.009	.000	.003	-.003	-.004	-.036	-.053	-.066
	25.62	.004	.010	.009	.000	-.009	-.005	-.004	.002	.012	.018	.017	.007	.003	-.005	-.024	-.060	-.048
30°	6.94	-.034	-.033	-.032	-.033	-.032	-.033	-.034	-.033	-.033	-.032	-.037	-.042	-.040	-.052	-.080	-.091	-.083
	8.37	-.026	-.027	-.025	-.027	-.025	-.026	-.027	-.026	-.027	-.025	-.030	-.032	-.033	-.054	-.082	-.085	-.076
	9.81	-.021	-.021	-.020	-.020	-.018	-.019	-.020	-.019	-.021	-.019	-.023	-.028	-.030	-.063	-.088	-.088	-.077
	11.25	-.018	-.019	-.019	-.019	-.015	-.015	-.017	-.016	-.019	-.016	-.020	-.025	-.026	-.064	-.068	-.075	-.073
	12.69	-.017	-.018	-.018	-.018	-.016	-.016	-.018	-.017	-.017	-.016	-.020	-.019	-.023	-.066	-.063	-.075	-.076
	14.12	-.010	-.009	-.009	-.009	-.007	-.008	-.009	-.007	-.009	-.007	-.012	-.014	-.022	-.057	-.057	-.069	-.073
	15.56	.095	.080	-.009	-.007	-.007	-.007	-.010	-.008	-.009	-.008	-.018	-.013	-.022	-.083	-.055	-.068	-.075
	17.00	.027	.031	.005	.007	.001	.001	.001	.000	.000	.001	.000	-.005	-.007	-.033	-.053	-.064	-.061
	18.44	-.036	-.032	-.029	-.031	-.021	-.014	-.011	-.006	-.003	.003	.002	-.013	-.038	-.054	-.068	-.088	-.078
	19.87	-.047	-.049	-.044	-.043	-.031	-.028	-.022	-.016	-.013	-.005	-.004	-.022	-.047	-.065	-.064	-.075	-.076
	21.31	-.051	-.050	-.047	-.046	-.037	-.033	-.031	-.025	-.019	-.007	-.003	-.014	-.015	-.022	-.049	-.073	-.077
	22.75	-.025	-.011	-.002	-.028	-.039	-.035	-.032	-.021	-.012	-.001	.000	-.008	-.009	-.019	-.041	-.073	-.059
	24.19	-.013	.002	.002	-.009	-.022	-.023	-.018	-.009	.002	.006	.008	.001	.003	-.023	-.036	-.069	-.060
	25.62	-.006	.004	-.004	-.009	-.016	-.014	-.013	-.004	.000	.007	.004	.006	.002	-.024	-.044	-.053	-.047
60°	6.94	-.030	-.027	-.029	-.030	-.028	-.028	-.031	-.031	-.032	-.031	-.038	-.040	-.047	-.068	-.080	-.085	-.080
	8.37	-.029	-.027	-.027	-.026	-.025	-.027	-.029	-.028	-.029	-.028	-.030	-.038	-.049	-.059	-.076	-.082	-.078
	9.81	-.027	-.027	-.026	-.024	-.024	-.025	-.026	-.026	-.027	-.025	-.028	-.035	-.042	-.054	-.067	-.076	-.078
	11.25	-.023	-.022	-.021	-.021	-.020	-.022	-.023	-.022	-.022	-.021	-.026	-.027	-.036	-.052	-.067	-.076	-.072
	12.69	-.017	-.017	-.017	-.016	-.015	-.015	-.018	-.016	-.019	-.017	-.020	-.025	-.026	-.046	-.063	-.074	-.076
	14.12	-.012	-.014	-.014	-.013	-.012	-.013	-.015	-.014	-.015	-.014	-.016	-.018	-.021	-.041	-.056	-.070	-.071
	15.56	.080	.115	.044	-.006	-.006	-.009	-.009	-.010	-.009	-.009	-.011	-.015	-.018	-.041	-.048	-.068	-.072
	17.00	.002	.019	-.024	-.044	-.041	-.043	-.034	-.030	-.023	-.017	-.014	-.028	-.040	-.057	-.064	-.081	-.078
	18.44	-.077	-.084	-.088	-.083	-.072	-.067	-.059	-.049	-.037	-.025	-.018	-.042	-.057	-.074	-.078	-.099	-.092
	19.87	-.076	-.075	-.069	-.073	-.068	-.064	-.060	-.047	-.038	-.011	-.007	-.011	-.018	-.045	-.074	-.078	-.082
	21.31	-.034	-.023	-.018	-.024	-.038	-.037	-.030	-.021	-.010	-.003	-.001	-.005	-.013	-.040	-.065	-.072	-.074
	22.75	-.027	-.022	-.021	-.022	-.027	-.027	-.022	-.016	-.011	-.005	-.008	-.003	-.017	-.037	-.056	-.073	-.065
	24.19	-.019	-.011	-.021	-.011	-.010	-.007	-.006	-.001	.000	.006	.002	-.003	-.015	-.039	-.059	-.068	-.060
	25.62	.003	-.001	-.009	-.010	-.006	-.001	.002	.006	.005	.008	.005	.002	-.010	-.038	-.048	-.047	-.053

TABLE II.- PRESSURE COEFFICIENTS OF THE BODY IN THE PRESENCE OF THE WINGS - Continued

(g) A = 3 rectangular wing, r/s = 0.2 - Concluded

θ	x/r	δ_w, α_B=0°										α_B, δ_w=0°						
		45°	40°	35°	30°	25°	20°	15°	10°	6°	3°	0°	3°	6°	10°	15°	20°	25°
120°	6.94	-.027	-.028	-.026	-.029	-.030	-.029	-.028	-.029	-.029	-.029	-.034	-.022	-.016	-.014	.018	.045	.112
	8.37	-.024	-.025	-.026	-.026	-.027	-.025	-.027	-.025	-.027	-.026	-.031	-.029	-.021	-.017	.009	.041	.102
	9.81	-.027	-.026	-.026	-.026	-.027	-.024	-.025	-.027	-.027	-.025	-.030	-.029	-.025	-.021	.006	.047	.109
	11.25	-.020	-.022	-.021	-.021	-.021	-.019	-.021	-.020	-.022	-.020	-.025	-.025	-.028	-.022	.002	.038	.109
	12.69	-.014	-.015	-.016	-.016	-.017	-.014	-.016	-.017	-.016	-.016	-.018	-.022	-.023	-.022	.006	.043	.118
	14.12	.101	-.012	-.012	-.010	-.011	-.010	-.012	-.012	-.013	-.011	-.015	-.019	-.021	-.020	.007	.049	.127
	15.56	.170	.126	.108	-.005	-.010	-.006	-.009	-.010	-.011	-.009	-.013	-.018	-.026	-.026	.003	.047	.134
	17.00	.049	.032	.017	-.049	-.015	.046	.055	.016	-.002	-.008	-.017	-.009	-.007	.010	.068	.149	.257
	18.44	-.074	-.081	-.086	-.093	-.023	.097	.101	.037	.002	-.009	-.027	-.004	.012	.049	.118	.227	.384
	19.87	-.069	-.057	-.112	-.007	-.020	-.015	-.009	.003	.003	.002	-.009	.000	.026	.064	.131	.235	.360
	21.31	-.058	-.041	.004	.017	.009	.010	.004	.006	.004	.004	-.003	-.005	.002	.035	.094	.165	.278
	22.75	-.041	-.026	-.027	-.043	-.005	.008	.006	.009	.006	.005	.000	-.004	-.003	.016	.071	.146	.280
	24.19	-.035	-.033	-.036	-.033	-.017	-.004	.004	.007	.007	.007	.001	-.001	-.003	.010	.076	.228	.396
	25.62	-.005	-.024	-.023	-.027	-.009	.004	.013	.014	.015	.018	.010	.006	.010	.049	.145	.223	.346
150°	6.94	-.030	-.031	-.029	-.031	-.033	-.030	-.031	-.033	-.033	-.031	-.033	-.019	-.002	.024	.089	.156	.304
	8.37	-.021	-.021	-.023	-.021	-.023	-.021	-.022	-.023	-.024	-.022	-.027	-.016	-.002	.029	.089	.169	.276
	9.81	-.020	-.021	-.022	-.020	-.022	-.020	-.021	-.021	-.023	-.021	-.025	-.015	-.002	.022	.081	.163	.250
	11.25	-.021	-.021	-.021	-.022	-.020	-.019	-.020	-.020	-.020	-.019	-.021	-.017	-.004	.017	.073	.153	.219
	12.69	-.017	-.018	-.017	-.017	-.017	-.015	-.016	-.017	-.016	-.015	-.018	-.019	-.006	.019	.075	.149	.180
	14.12	.111	-.002	-.009	-.005	-.009	-.007	-.007	-.008	-.010	-.007	-.011	-.011	-.003	.016	.072	.144	.157
	15.56	.177	.155	.099	-.008	-.009	-.008	-.009	-.009	-.010	-.009	-.013	-.008	-.005	.020	.072	.134	.119
	17.00	.269	.194	.031	.033	.061	.070	.053	.028	.008	.004	.000	-.006	-.005	.024	.060	.139	.105
	18.44	.038	.181	.223	.170	.017	.014	.000	.018	.010	.006	-.004	.013	.017	.045	.102	.154	.122
	19.87	-.043	.002	.035	.079	.099	.063	.027	.016	.014	.004	-.008	.005	.027	.058	.124	.150	.120
	21.31	-.050	-.047	-.013	.032	.040	.043	.035	.020	.012	.005	-.006	.011	.032	.057	.133	.159	.133
	22.75	.003	-.015	-.004	.036	.037	.031	.028	.016	.011	.006	.004	.002	.030	.061	.122	.182	.216
	24.19	.009	.003	.014	.010	.022	.025	.024	.018	.015	.012	.002	.016	.043	.083	.180	.320	.254
	25.62	.040	.027	.002	.004	.021	.032	.036	.033	.031	.026	.018	.032	.076	.152	.226	.257	.199
165°	6.94	-.031	-.031	-.031	-.031	-.032	-.032	-.035	-.032	-.030	-.030	-.034	-.014	.003	.034	.100	.141	.135
	8.37	-.022	-.021	-.023	-.020	-.023	-.023	-.025	-.024	-.024	-.023	-.026	-.008	.010	.035	.103	.148	.113
	9.81	-.021	-.020	-.021	-.019	-.021	-.020	-.023	-.020	-.021	-.019	-.024	-.011	.003	.031	.098	.126	.108
	11.25	-.027	-.025	-.026	-.024	-.025	-.025	-.026	-.024	-.024	-.022	-.025	-.014	.000	.024	.083	.117	.096
	12.69	-.016	-.016	-.016	-.015	-.016	-.015	-.017	-.016	-.017	-.015	-.017	-.011	.001	.025	.078	.115	.088
	14.12	.110	-.004	-.011	-.005	-.010	-.009	-.011	-.010	-.012	-.011	-.014	-.006	.001	.023	.077	.101	.084
	15.56	.194	.178	.105	.000	-.006	-.006	-.009	-.007	-.008	-.006	-.009	-.005	.007	.024	.073	.093	.079
	17.00	.204	.109	.177	.156	.114	.070	.019	-.002	-.004	-.003	-.006	-.003	.006	.028	.078	.100	.079
	18.44	.104	.222	.258	.165	.108	.091	.053	.036	.021	.014	.007	.011	.017	.019	.078	.086	.084
	19.87	.070	.019	.068	.145	.142	.118	.071	.041	.020	.008	-.002	.011	.022	.045	.006	.108	.148
	21.31	.096	.077	.033	.058	.062	.057	.040	.028	.014	.004	-.009	.012	.030	.063	.105	.160	.192
	22.75	.038	.044	.036	.039	.039	.035	.025	.021	.011	.006	.004	.021	.040	.076	.123	.201	.236
	24.19	.001	.007	.012	.026	.036	.036	.029	.026	.020	.017	.013	.027	.057	.103	.186	.222	.295
	25.62	.035	.023	.015	.013	.030	.036	.033	.034	.030	.029	.023	.014	.078	.142	.232	.256	.229
174°	6.94	-.031	-.032	-.031	-.032	-.033	-.031	-.032	-.034	-.033	-.030	-.036	-.011	.001	.037	.112	.159	.189
	8.37	-.023	-.022	-.021	-.021	-.023	-.022	-.023	-.023	-.023	-.021	-.026	-.005	.011	.040	.105	.151	.163
	9.81	-.018	-.019	-.017	-.016	-.016	-.018	-.018	-.018	-.017	-.017	-.023	-.009	.009	.036	.097	.134	.153
	11.25	-.021	-.021	-.018	-.022	-.020	-.021	-.021	-.019	-.020	-.016	-.011	-.011	.005	.029	.083	.132	.139
	12.69	-.014	-.015	-.012	-.013	-.013	-.013	-.015	-.012	-.013	-.011	-.009	-.007	.003	.019	.076	.124	.120
	14.12	.111	-.008	-.009	-.003	-.010	-.011	-.012	-.011	-.012	-.009	-.009	-.007	.004	.022	.074	.110	.118
	15.56	.198	.188	.094	.011	-.005	-.004	-.007	-.005	-.005	-.003	-.004	-.002	.006	.023	.073	.101	.096
	17.00	.310	.218	.325	.224	.132	.041	-.004	-.004	-.003	-.002	.002	-.001	.008	.024	.077	.108	.105
	18.44	.184	.268	.262	.118	.185	.098	.071	.041	.021	.016	.018	.008	.010	.024	.073	.099	.117
	19.87	.275	.189	.129	.149	.117	.090	.069	.042	.016	.009	.009	.011	.020	.037	.086	.138	.176
	21.31	.200	.181	.187	.070	.088	.058	.040	.026	.013	.006	.003	.013	.032	.055	.115	.164	.201
	22.75	.046	.053	.047	.041	.038	.036	.028	.021	.013	.011	.009	.018	.044	.069	.132	.209	.228
	24.19	-.005	.008	.009	.026	.033	.032	.028	.024	.020	.021	.020	.030	.061	.104	.185	.296	.299
	25.62	.038	.021	.023	.018	.038	.036	.037	.034	.035	.036	.033	.050	.078	.143	.234	.264	.231

TABLE II.- PRESSURE COEFFICIENTS OF THE BODY IN THE PRESENCE OF THE WINGS - Continued

(h) A = 2 rectangular wing, r/s = 0.2

θ	x/r	δ_w, α_B=0°										α_B, δ_w=0°					
		40°	35°	30°	25°	20°	15°	10°	6°	3°	0°	3°	6°	10°	15°	20°	25°
6°	1134	-.013	-.011	-.012	-.010	-.011	-.013		-.011	-.012		-.011	-.015	-.019	-.064	-.083	-.091
	1259	-.008	-.007	-.008	-.009	-.009	-.010		-.010	-.010		-.010	-.013	-.017	-.067	-.082	-.083
	1384	-.008	-.007	-.007	-.005	-.008	-.008		-.008	-.008		-.007	-.010	-.019	-.067	-.081	-.087
	1509	.122	.018	-.001	.004	-.008	-.001		-.001	-.002		-.008	-.010	-.023	-.067	-.082	-.085
	1634	.118	.086	.050	.004	-.002	-.005		-.004	-.005		-.004	-.011	-.032	-.068	-.083	-.081
	1756	.010	.003	-.000	-.012	-.006	-.007		-.008	.000		-.001	-.005	-.033	-.076	-.086	-.081
	1884	-.046	-.038	-.031	-.027	-.016	-.012		-.002	.002		-.002	.001	-.031	-.070	-.083	-.091
	2009	-.059	-.056	-.045	-.037	-.026	-.020		-.008	-.005		-.014	-.019	-.042	-.081	-.095	-.096
	2134	-.065	-.057	-.045	-.037	-.032	-.027		-.015	-.012		-.022	-.029	-.050	-.076	-.073	-.082
	2259	-.063	-.053	-.043	-.030	-.034	.029		-.019	-.013		-.020	-.029	-.040	-.051	-.066	-.070
	2384	-.051	-.030	-.024	-.018	-.024	-.021		-.011	-.004		-.008	-.007	-.026	-.034	-.037	-.063
	2509	-.027	.006	-.000	-.005	-.011	.009		.008	.013		.006	.008	-.005	-.006	-.042	-.068
15°	1134	-.014	-.014	-.015	-.012	-.016	-.015		-.014	-.016		-.012	-.018	-.044	-.076	-.080	-.087
	1259	-.011	-.010	-.011	-.013	-.012	-.013		-.012	-.012		-.010	-.020	-.042	-.069	-.074	-.083
	1384	-.010	-.008	-.009	-.007	-.010	.009		-.009	-.010		-.008	-.018	-.038	-.064	-.072	-.082
	1509	.116	.057	-.006	.002	-.007	.008		-.007	-.008		-.009	-.021	-.040	-.068	-.077	-.081
	1634	.041	.032	.027	.001	-.001	-.007		-.008	-.010		-.005	-.016	-.043	-.061	-.083	-.079
	1756	-.004	-.008	-.005	-.019	-.011	.008		.000	.003		-.002	-.016	-.041	-.067	-.088	-.082
	1884	-.046	-.040	-.037	-.036	-.021	.017		-.004	-.000		-.007	-.018	-.041	-.068	-.086	-.092
	2009	-.060	-.056	-.052	-.042	-.031	.025		-.011	-.009		-.020	-.029	-.049	-.082	-.096	-.096
	2134	-.064	-.059	-.051	-.044	-.037	.038		-.020	-.016		-.027	-.037	-.053	-.073	-.078	-.084
	2259	-.062	-.058	-.050	-.039	-.039	.035		-.024	-.018		-.020	-.019	-.034	-.059	-.064	-.073
	2384	-.048	-.033	-.024	-.025	-.034	.028		-.017	-.007		-.008	-.009	-.023	-.039	-.050	-.066
	2509	-.022	.005	-.003	-.013	-.018	.017		.000	.006		.003	-.000	-.008	-.012	-.060	-.063
30°	1134	-.015	-.015	-.015	-.018	-.015	.016		-.015	-.015		-.009	-.022	-.060	-.072	-.076	-.084
	1259	-.011	-.010	-.011	-.008	-.012	.012		-.011	-.012		-.010	-.020	-.065	-.065	-.073	-.081
	1384	-.008	-.006	-.008	-.011	-.008	.008		-.007	-.007		-.010	-.023	-.063	-.065	-.072	-.081
	1509	.111	.086	-.011	-.007	-.013	-.013		-.013	-.014		-.013	-.027	-.061	-.065	-.071	-.082
	1634	.050	.002	-.004	-.010	-.000	.003		-.001	.000		-.002	-.023	-.045	-.065	-.073	-.081
	1756	-.023	-.020	-.022	-.034	-.023	.018		-.001	.003		-.005	-.025	-.056	-.075	-.080	-.093
	1884	-.060	-.058	-.052	-.053	-.040	.031		-.013	-.007		-.018	-.042	-.076	-.080	-.094	-.101
	2009	-.076	-.062	-.064	-.059	-.049	.040		-.022	-.019		-.030	-.052	-.080	-.079	-.085	-.094
	2134	-.079	-.065	-.081	-.058	-.053	.047		-.031	-.024		-.029	-.037	-.056	-.068	-.081	-.086
	2259	-.072	-.061	-.046	-.048	-.058	.048		-.031	-.019		-.015	-.018	-.029	-.068	-.092	-.078
	2384	-.063	-.024	-.019	-.027	-.047	.044		-.019	-.009		-.006	-.009	-.025	-.080	-.096	-.072
	2509	-.027	.004	-.006	-.016	-.018	.022		.000	.006		.003	-.000	-.025	-.086	-.086	-.060
60°	1134	-.019	-.019	-.017	-.014	-.019	.018		-.019	-.019		-.023	-.034	-.051	-.069	-.078	-.081
	1259	-.011	-.010	-.012	-.010	-.012	.012		-.012	-.011		-.015	-.026	-.044	-.066	-.073	-.079
	1384	-.010	-.011	-.009	-.014	-.013	.013		-.013	-.013		-.016	-.027	-.048	-.063	-.072	-.080
	1509	.106	.136	.003	-.008	-.011	.012		-.010	-.010		-.009	-.021	-.047	-.066	-.072	-.078
	1634	.033	.017	.005	-.059	-.059	.033		.004	.012		-.002	-.018	-.058	-.082	-.087	-.094
	1756	-.113	-.111	-.112	-.096	-.075	.072		-.032	-.018		-.032	-.046	-.083	-.089	-.099	-.100
	1884	-.108	-.106	-.102	-.094	-.084	.072		-.044	-.035		-.048	-.057	-.089	-.095	-.102	-.099
	2009	-.102	-.097	-.100	-.076	-.083	.072		-.053	-.036		-.031	-.019	-.064	-.076	-.088	-.082
	2134	-.096	-.071	-.066	-.048	-.074	.071		-.030	-.017		-.009	-.014	-.055	-.087	-.099	-.082
	2259	-.082	-.042	-.032	-.033	-.038	.037		-.016	-.005		-.008	-.017	-.049	-.088	-.100	-.080
	2384	-.045	-.028	-.026	-.026	-.022	.022		-.006	-.004		-.007	-.017	-.048	-.089	-.095	-.075
	2509	-.039	-.016	-.015	-.020	-.015	.012		.001	.003		-.003	-.018	-.039	-.081	-.078	-.059

TABLE II.- PRESSURE COEFFICIENTS OF THE BODY IN THE PRESENCE OF THE WINGS - Continued

(h) A = 2 rectangular wing, r/s = 0.2 - Concluded

θ	x/r	δ_W, α_B=0°										α_B, δ_W=0°					
		40°	35°	30°	25°	20°	15°	10°	6°	3°	0°	3°	6°	10°	15°	20°	25°
	11.34	-.021	-.019	-.020	-.016	-.020	.020		-.020	-.020		-.019	-.021	-.016	.006	.056	.122
	12.59	-.019	-.010	-.010	-.018	-.011	.018		-.010	-.011		-.014	-.026	-.020	.007	.058	.127
	13.84	.060	-.012	-.013	-.009	-.013	.014		-.018	-.013		-.017	-.023	-.018	.003	.058	.131
	15.09	.147	.135	-.010	-.013	-.011	.011		-.010	-.010		-.020	-.028	-.024	-.001	.053	.127
	16.34	.167	.002	-.055	.008	.031	.049		.041	.032		.048	.047	.088	.151	.273	.410
120°	17.56	-.055	-.039	.031	.003	.068	.055		.013	.004		.023	.019	.041	.068	.179	.363
	18.84	-.109	-.100	-.100	-.078	-.070	.005		.016	-.004		.018	.018	.091	.128	.274	.466
	20.09	-.103	-.096	-.090	-.044	-.045	.025		-.014	-.007		.017	.010	.108	.165	.295	.432
	21.34	-.068	-.075	-.063	-.031	-.018	.008		.007	.001		-.008	.010	.068	.114	.195	.301
	22.59	-.089	-.066	-.050	-.042	-.026	.011		.006	.003		.005	-.006	.038	.082	.169	.288
	23.84	.032	-.035	-.037	-.048	-.035	.011		.006	.003		.006	-.008	.021	.064	.174	.348
	25.09	-.001	.016	-.048	-.031	-.037	.009		.011	.007		.009	.000	.026	.115	.236	.343
	11.34	-.016	-.016	-.016	-.011	-.017	.017		-.018	-.015		-.003	-.000	.030	.090	.188	.256
	12.59	-.018	-.011	-.011	-.011	-.011	.011		-.011	-.011		-.009	-.001	.028	.075	.165	.199
	13.84	.093	-.007	-.007	-.007	-.007	.008		-.008	-.008		-.004	.000	.024	.075	.151	.170
	15.09	.164	.139	-.011	-.018	-.013	.018		-.013	-.011		-.007	.000	.021	.065	.141	.139
	16.34	.218	.054	.074	.101	.080	.053		.007	.005		.006	-.003	.019	.094	.159	.118
150°	17.56	.299	.278	.179	.013	-.038	.000		.028	.018		.038	.045	.088	.146	.204	.137
	18.84	.026	.116	.194	.188	.127	.030		.014	.007		.016	.021	.047	.098	.157	.135
	20.09	-.086	-.047	.081	.061	.058	.060		.017	.007		.016	.021	.071	.124	.171	.187
	21.34	-.039	-.049	-.013	.039	.045	.040		.009	.001		.016	.022	.079	.139	.285	.269
	22.59	-.003	-.010	-.010	.010	.036	.038		.014	.003		.013	.027	.075	.137	.239	.299
	23.84	-.017	-.013	-.008	.018	.025	.029		.014	.008		.016	.032	.060	.150	.323	.481
	25.09	.048	-.021	-.010	-.005	.013	.026		.022	.016		.028	.049	.120	.238	.353	.414
	11.34	-.017	-.017	-.015	-.015	-.016	-.016		-.016	-.018		-.006	.011	.037	.087	.145	.112
	12.59	.034	-.012	-.011	-.012	-.012	.012		-.011	-.018		-.007	.004	.032	.080	.134	.105
	13.84	.143	-.009	-.008	-.009	-.010	.009		-.009	-.009		-.003	.006	.025	.072	.118	.098
	15.09	.209	.152	-.006	-.008	-.008	.007		-.007	-.008		-.004	.007	.027	.069	.107	.092
	16.34	.276	.184	.220	.139	.068	-.000		-.008	-.009		-.006	.007	.038	.070	.099	.082
165°	17.56	.216	.263	.094	.087	.123	.085		.035	.021		.023	.008	.048	.081	.128	.118
	18.84	.084	.206	.257	.196	.112	.079		.033	.019		.024	.022	.054	.091	.127	.178
	20.09	.070	.015	.082	.136	.136	.097		.024	.011		.023	.027	.067	.117	.208	.269
	21.34	.074	.061	.039	.066	.078	.069		.028	.005		.019	.027	.080	.141	.258	.327
	22.59	.038	.031	.045	.048	.048	.044		.017	.004		.019	.030	.085	.151	.267	.385
	23.84	.013	.018	.015	.031	.035	.038		.019	.009		.025	.042	.093	.161	.313	.472
	25.09	.010	-.004	-.004	.015	.026	.033		.026	.017		.037	.062	.129	.247	.369	.405
	11.34	-.015	-.016	-.015	-.013	-.014	.015		-.015	-.014		-.004	.013	.038	.088	.154	.152
	12.59	-.010	-.010	-.009	-.008	-.009	-.010		-.010	-.009		-.006	.006	.034	.078	.140	.137
	13.84	.078	-.009	-.009	-.009	-.009	.010		-.009	-.009		-.001	.006	.026	.068	.126	.127
	15.09	.189	.156	.003	-.001	-.008	.008		-.002	-.002		-.001	.008	.032	.071	.119	.113
	16.34	.266	.262	.258	.136	.024	.005		-.005	-.007		-.002	.006	.029	.070	.107	.133
174°	17.56	.341	.271	.163	.249	.191	.136		.033	.015		.002	-.000	.019	.061	.113	.175
	18.84	.275	.252	.268	.162	.075	.061		.036	.019		.028	.025	.061	.104	.171	.203
	20.09	.174	.246	.214	.181	.149	.095		.025	.010		.021	.026	.069	.127	.229	.235
	21.34	.126	.129	.143	.103	.086	.073		.022	.007		.020	.028	.086	.154	.267	.332
	22.59	.049	.036	.057	.072	.049	.045		.016	.007		.022	.029	.093	.168	.265	.343
	23.84	.000	.001	.011	.026	.038	.037		.021	.018		.027	.043	.099	.163	.303	.448
	25.09	-.001	-.004	-.004	.020	.031	.038		.027	.023		.044	.062	.128	.249	.348	.395

TABLE II.- PRESSURE COEFFICIENTS OF THE BODY IN THE PRESENCE OF THE WINGS - Continued

(i) A = 1 rectangular wing, r/s = 0.2

θ	x/l	δ_w, α_B=0°										α_B, δ_w=0°						
		45°	40°	35°	30°	25°	20°	15°	10°	6°	3°	0°	3°	6°	10°	15°	20°	25°
6°	.694	-.031	-.027	-.029	-.027	-.028	-.027	-.027	-.027	-.028	-.027	.027	-.038	-.040	-.048	-.050	-.078	-.085
	.837	-.027	-.024	-.023	-.022	-.022	-.022	-.021	-.028	-.025	-.020	.020	-.030	-.039	-.037	-.049	-.077	-.085
	.981	-.021	-.025	-.018	-.016	-.018	-.018	-.018	-.018	-.018	-.018	.018	-.023	-.025	-.028	-.051	-.073	-.088
	1.125	.092	-.025	-.019	-.016	-.019	-.018	-.019	-.019	-.016	-.020	.017	-.020	-.018	-.020	-.058	-.076	-.084
	1.269	.142	.115	-.017	-.016	-.016	-.016	-.016	-.016	-.014	-.015	.015	-.016	-.014	-.018	-.057	-.078	-.088
	1.412	.159	.181	.160	-.008	-.009	-.010	-.009	-.009	-.009	-.009	.009	-.009	-.009	-.023	-.060	-.075	-.085
	1.556	.804	.737	.560	.200	.114	.047	.007	-.001	-.001	-.001	.001	-.007	-.007	-.024	-.087	-.080	-.085
	1.700	.153	.099	.060	.037	-.009	.011	-.013	-.011	.004	.008	.015	.013	-.017	-.032	-.055	-.080	-.085
	1.844	-.036	-.044	-.045	-.040	-.046	-.041	-.027	-.013	.001	.010	.017	-.008	-.001	-.040	-.071	-.089	-.095
	1.987	-.096	-.090	-.080	-.081	-.070	-.055	-.038	-.021	-.011	-.006	.009	-.020	-.025	-.034	-.081	-.084	-.089
	2.131	-.066	-.079	-.076	-.090	-.076	-.063	-.049	-.038	-.026	-.018	.002	-.023	-.041	-.054	-.080	-.082	-.084
	2.275	-.057	-.063	-.062	-.072	-.058	-.043	-.037	-.030	-.018	-.008	.007	-.016	-.038	-.055	-.078	-.081	-.078
	2.419	-.039	-.045	-.042	-.053	-.032	-.027	-.023	-.017	-.006	.002	.012	-.009	-.030	-.038	-.065	-.061	-.078
	2.562	-.014	-.026	-.022	-.030	-.028	-.027	-.020	-.012	.000	.007	.016	.002	-.010	-.017	-.058	-.035	-.026
15°	.694	-.032	-.027	-.029	-.026	-.027	-.027	-.029	-.027	-.027	-.028	.027	-.034	-.037	-.046	-.070	-.082	-.084
	.837	-.026	-.026	-.023	-.022	-.021	-.022	-.021	-.022	-.022	-.020	.022	-.027	-.034	-.049	-.071	-.083	-.086
	.981	-.022	-.027	-.019	-.017	-.018	-.018	-.018	-.016	-.018	-.018	.018	-.024	-.028	-.046	-.072	-.084	-.085
	1.125	.088	-.031	-.024	-.021	-.024	-.024	-.024	-.024	-.023	-.023	.023	-.022	-.024	-.046	-.073	-.077	-.086
	1.269	.133	.114	-.017	-.016	-.016	-.016	-.016	-.016	-.016	-.016	.016	-.017	-.020	-.039	-.067	-.068	-.067
	1.412	.143	.152	.151	-.001	-.010	-.011	-.010	-.009	-.010	-.009	.011	-.012	-.015	-.034	-.065	-.068	-.079
	1.556	.789	.724	.463	.173	.080	.027	-.002	-.005	-.004	-.001	.000	-.010	-.019	-.037	-.058	-.077	-.085
	1.700	.131	.078	.040	.037	.006	-.011	-.020	-.017	-.002	.017	.017	.016	-.016	-.034	-.049	-.091	-.093
	1.844	-.052	-.054	-.062	-.059	-.056	-.047	-.035	-.017	-.005	.005	.014	-.010	-.018	-.052	-.071	-.095	-.096
	1.987	-.108	-.101	-.095	-.097	-.086	-.073	-.055	-.036	-.029	-.022	-.004	-.026	-.035	-.052	-.083	-.091	-.092
	2.131	-.068	-.080	-.079	-.094	-.081	-.069	-.054	-.042	-.031	-.020	-.002	-.024	-.045	-.064	-.084	-.089	-.087
	2.275	-.058	-.064	-.061	-.073	-.063	-.049	-.041	-.032	-.020	-.009	.007	-.034	-.039	-.058	-.077	-.088	-.077
	2.419	-.041	-.048	-.047	-.062	-.047	-.036	-.032	-.023	-.011	.000	.008	-.012	-.030	-.037	-.068	-.066	-.080
	2.562	-.015	-.027	-.022	-.037	-.030	-.030	-.024	-.016	-.005	.005	.014	.002	-.009	-.023	-.050	-.043	-.069
30°	.694	-.038	-.032	-.032	-.033	-.033	-.024	-.033	-.032	-.032	-.032	.032	-.040	-.045	-.054	-.087	-.086	-.088
	.837	-.031	-.026	-.026	-.024	-.026	-.028	-.025	-.026	-.024	-.026	.025	-.030	-.036	-.056	-.088	-.083	-.087
	.981	-.026	-.023	-.020	-.019	-.019	-.017	-.020	-.020	-.020	-.020	.021	-.027	-.032	-.067	-.082	-.080	-.085
	1.125	.095	-.024	-.018	-.017	-.017	-.014	-.018	-.019	-.018	-.018	.016	-.023	-.028	-.068	-.070	-.070	-.080
	1.269	.137	.118	-.017	-.016	-.015	-.010	-.016	-.017	-.016	-.016	.017	-.018	-.023	-.069	-.064	-.073	-.080
	1.412	.142	.147	.143	.016	-.008	-.023	.023	.001	-.005	-.007	.009	-.012	-.026	-.058	-.059	-.071	-.080
	1.556	.898	.900	.559	.310	.059	-.015	-.015	-.011	-.007	.000	.007	-.011	-.038	-.078	-.073	-.081	-.091
	1.700	.077	.069	.059	.037	.010	-.079	-.005	-.004	.017	.025	.018	.015	-.007	-.039	-.074	-.089	-.097
	1.844	-.075	-.077	-.081	-.083	-.081	-.074	-.058	-.031	-.019	-.009	.008	-.023	-.046	-.069	-.085	-.089	-.105
	1.987	-.095	-.085	-.081	-.089	-.085	-.073	-.059	-.045	-.030	-.013	.006	-.028	-.063	-.079	-.084	-.091	-.100
	2.131	-.069	-.076	-.073	-.090	-.084	-.062	-.059	-.048	-.032	-.016	.003	-.026	-.052	-.079	-.088	-.094	-.090
	2.275	-.060	-.063	-.062	-.076	-.071	-.058	-.052	-.043	-.022	-.013	.008	-.024	-.044	-.048	-.074	-.077	-.074
	2.419	-.043	-.050	-.050	-.071	-.065	-.047	-.047	-.036	-.021	-.011	.003	-.009	-.017	-.033	-.081	-.052	-.095
	2.562	-.025	-.036	-.031	-.065	-.077	-.006	-.052	-.040	-.020	-.005	.001	.003	-.007	-.027	-.043	-.053	-.067
60°	.694	-.037	-.033	-.031	-.032	-.032	-.031	-.031	-.031	-.030	-.030	.029	-.040	-.053	-.075	-.081	-.082	-.089
	.837	-.031	-.026	-.027	-.026	-.027	-.028	-.028	-.027	-.027	-.028	.027	-.037	-.051	-.069	-.078	-.080	-.085
	.981	-.030	-.024	-.026	-.025	-.026	.025	-.026	-.027	-.026	-.026	.026	-.034	-.045	-.058	-.067	-.071	-.083
	1.125	.086	-.023	-.020	-.021	-.021	-.021	-.021	-.022	-.021	-.020	.019	-.026	-.038	-.054	-.067	-.074	-.080
	1.269	.146	.123	-.018	-.016	-.017	-.017	-.017	-.017	-.017	-.018	.017	-.025	-.031	-.047	-.064	-.073	-.079
	1.412	.304	.307	.144	.310	-.013	-.010	.148	-.015	-.007	.001	.006	-.016	-.036	-.064	-.082	-.092	-.093
	1.556	.961	.963	1.055	.798	.300	.038	-.047	-.050	-.013	.006	.014	-.008	-.037	-.068	-.072	-.080	-.087
	1.700	.428	.430	.482	.347	.101	-.064	-.066	-.061	-.034	-.014	.008	-.023	-.045	-.072	-.079	-.086	-.090
	1.844	-.103	-.100	-.096	-.097	-.103	-.095	-.084	-.072	-.053	-.036	-.006	-.040	-.053	-.074	-.077	-.094	-.096
	1.987	-.093	-.081	-.083	-.090	-.096	-.078	-.084	-.068	-.045	-.022	.001	-.031	-.053	-.078	-.091	-.092	-.095
	2.131	-.071	-.079	-.077	-.091	-.085	-.069	-.072	-.064	-.042	-.021	.002	-.037	-.054	-.075	-.083	-.091	-.087
	2.275	-.069	-.073	-.070	-.086	-.089	-.082	-.068	-.061	-.039	-.029	-.016	-.011	-.023	-.047	-.058	-.079	-.083
	2.419	-.038	-.046	-.046	-.081	-.082	-.046	-.038	-.029	-.010	.000	.007	-.003	-.018	-.047	-.063	-.075	-.092
	2.562	-.010	-.019	-.019	-.035	-.043	-.025	-.033	-.012	.001	.002	.007	.000	-.012	-.046	-.062	-.041	-.067

TABLE II.- PRESSURE COEFFICIENTS OF THE BODY IN THE PRESENCE OF THE WINGS - Continued

(i) A = 1 rectangular wing, r/s = 0.2 - Concluded

θ	x/l	$\delta_w, \alpha_B = 0°$										$\alpha_B, \delta_w = 0°$						
		45°	40°	35°	30°	25°	20°	15°	10°	6°	3°	0°	3°	6°	10°	15°	20°	25°
120°	6.94	-.038	-.033	-.031	-.032	-.032	-.032	-.031	-.030	-.030	-.029	-.030	-.022	-.018	-.013	.013	.049	.111
	8.37	-.032	-.027	-.026	-.026	-.027	.027	-.027	-.027	-.027	-.027	-.027	-.026	-.019	-.015	.007	.048	.101
	9.81	-.038	-.027	-.026	-.026	-.028	-.027	-.027	-.027	-.027	-.025	-.027	-.028	-.023	-.021	.005	.051	.110
	11.25	.097	-.022	-.022	-.020	-.022	-.022	-.021	-.021	-.021	-.020	-.020	-.023	-.022	-.021	.002	.045	.108
	12.69	.147	.104	-.017	-.016	-.017	-.017	-.016	-.017	-.016	-.016	-.016	-.021	-.022	-.020	.004	.053	.113
	14.12	.167	.161	.143	-.013	-.014	-.013	-.014	-.013	-.008	.005	.003	.019	.040	.058	.112	.197	.346
	15.56	.198	.184	.075	-.038	-.013	.001	.011	.017	.019	.017	.006	.024	.028	.087	.174	.295	.460
	17.00	.086	.095	.052	-.021	-.030	-.029	-.017	.007	.019	.013	-.015	.015	.044	.104	.198	.387	.488
	18.44	-.028	.005	.028	-.009	-.049	-.070	-.047	-.004	.018	.005	-.033	.006	.055	.123	.227	.360	.515
	19.87	-.092	-.080	-.080	-.065	-.079	-.094	-.047	-.024	.020	.011	-.018	.016	.068	.115	.211	.322	.507
	21.31	-.080	-.064	-.083	-.094	-.098	-.074	-.085	-.065	-.029	.010	-.011	.013	.053	.110	.200	.321	.425
	22.75	-.068	-.073	-.075	-.084	-.084	-.051	-.067	-.023	.004	-.014	-.017	.000	.030	.078	.144	.217	.297
	24.19	-.044	-.053	-.051	-.068	-.065	-.088	-.052	-.020	.001	.005	.003	-.016	.000	.035	.086	.181	.355
	25.62	-.026	-.031	-.031	-.028	-.046	.004	-.028	-.015	.003	.010	.009	.004	-.007	.040	.144	.209	.286
150°	6.94	-.039	-.031	-.032	-.032	-.032	-.032	-.032	-.032	-.031	-.030	-.030	-.020	-.004	.022	.064	.161	.308
	8.37	-.030	-.024	-.023	-.022	-.023	-.022	-.022	-.023	-.023	-.022	-.022	-.015	.000	.025	.088	.174	.279
	9.81	-.026	-.020	-.021	-.020	-.020	-.021	-.020	-.021	-.020	-.020	-.020	-.013	-.001	.024	.022	.162	.267
	11.25	.102	-.020	-.020	-.020	-.020	-.019	-.021	-.020	-.019	-.018	-.018	-.017	-.002	.022	.076	.150	.332
	12.69	.140	.115	-.017	-.018	-.017	.017	-.017	-.017	-.016	-.016	-.015	-.018	-.006	.020	.076	.150	.192
	14.12	.173	.180	.135	-.006	-.007	-.009	-.007	-.007	-.007	-.006	-.007	-.012	-.004	.017	.072	.143	.163
	15.56	.200	.189	.118	.138	.111	.075	.057	.039	.024	.014	.004	.018	.032	.056	.107	.187	.188
	17.00	.301	.263	.270	.245	.192	.002	-.014	.010	.024	.022	.017	.029	.049	.095	.163	.214	.238
	18.44	.001	.052	.119	.153	.198	.159	.125	.054	.022	.016	.004	.023	.032	.079	.164	.181	.226
	19.87	-.085	-.077	-.083	-.010	.046	.100	.104	.065	.031	.015	-.004	.021	.049	.091	.174	.280	.481
	21.31	-.071	-.050	-.043	-.058	-.043	.003	.063	.085	.035	.016	-.008	.024	.056	.097	.188	.322	.440
	22.75	-.073	-.063	-.048	-.058	-.050	-.041	.005	.016	.021	.013	-.003	.022	.064	.111	.206	.329	.485
	24.19	-.009	-.045	-.063	-.066	-.042	-.023	-.011	.017	.018	.009	-.005	.027	.068	.118	.214	.400	.540
	25.62	.112	.021	-.030	-.057	-.040	-.023	-.014	.018	.027	.022	.015	.030	.090	.184	.282	.366	.450
165°	6.94	-.037	-.031	-.030	-.032	-.030	-.032	-.031	-.030	-.030	-.029	-.030	-.013	.003	.033	.101	.147	.139
	8.37	-.028	-.023	-.022	-.022	-.022	-.023	-.022	-.022	-.022	-.021	-.022	-.009	-.039	.035	.104	.151	.116
	9.81	-.027	-.020	-.020	-.021	-.021	-.020	-.020	-.020	-.020	-.020	-.021	-.009	.005	.032	.094	.135	.110
	11.25	.100	-.024	-.024	-.025	-.026	-.025	-.026	-.024	-.024	-.022	-.023	-.013	.003	.027	.063	.129	.100
	12.69	.135	.115	-.015	-.015	-.016	-.016	-.017	-.017	-.016	-.014	-.015	-.012	.000	.025	.080	.118	.092
	14.12	.165	.161	.147	-.010	-.010	-.010	-.009	-.010	-.010	-.009	-.011	-.005	.001	.023	.077	.105	.086
	15.56	.229	.201	.188	.238	.136	.084	.044	.020	.010	.005	.001	.002	.010	.025	.073	.095	.096
	17.00	.317	.278	.268	.210	.051	.088	.097	.072	.046	.027	.016	.031	.047	.080	.140	.137	.187
	18.44	.143	.152	.181	.185	.190	.120	.087	.082	.048	.031	.016	.036	.063	.084	.170	.256	.349
	19.87	.022	.071	.091	.057	.090	.129	.130	.084	.043	.020	.001	.027	.058	.101	.178	.305	.453
	21.31	-.022	.042	.084	.093	.038	.049	.093	.078	.048	.016	-.006	.026	.061	.118	.200	.352	.535
	22.75	-.066	-.022	.015	.008	.041	.034	.032	.059	.039	.016	-.004	.030	.066	.127	.220	.365	.503
	24.19	.013	-.036	-.038	-.036	-.020	.016	.027	.031	.029	.018	.003	.033	.075	.138	.252	.448	.575
	25.62	.206	-.029	-.032	-.031	-.017	.000	.017	.023	.029	.023	.017	.012	.099	.167	.306	.391	.432
174°	6.94	-.038	-.031	-.032	-.032	-.031	-.031	-.033	-.032	-.031	-.029	-.031	-.012	.002	.035	.110	.165	.194
	8.37	-.029	-.023	-.024	-.023	-.022	-.023	-.022	-.022	-.022	-.021	-.022	-.007	.007	.038	.103	.156	.167
	9.81	-.024	-.019	-.018	-.018	-.017	-.017	-.017	-.017	-.016	-.016	-.017	-.005	.010	.036	.094	.140	.160
	11.25	.103	-.021	-.021	-.021	-.021	-.021	-.021	-.020	-.015	-.018	-.014	-.008	.007	.031	.083	.136	.145
	12.69	.141	.119	-.014	-.013	-.012	-.013	-.013	-.013	-.010	-.012	-.011	-.009	-.002	.020	.075	.125	.124
	14.12	.193	.191	.182	-.010	-.010	-.009	-.010	-.011	-.008	-.009	-.009	-.004	.003	.021	.074	.114	.114
	15.56	.257	.230	.239	.247	.167	.077	.010	.001	.003	.001	.001	.001	.005	.020	.070	.102	.106
	17.00	.353	.307	.283	.234	.173	.235	.149	.095	.061	.028	.014	.028	.044	.068	.136	.209	.245
	18.44	.235	.228	.287	.216	.212	.113	.038	.062	.054	.038	.021	.039	.072	.107	.180	.289	.268
	19.87	.048	.217	.296	.269	.197	.150	.098	.088	.040	.019	.002	.027	.058	.102	.190	.299	.460
	21.31	-.031	.045	.134	.177	.182	.132	.093	.082	.044	.016	-.004	.024	.062	.111	.207	.344	.535
	22.75	-.073	-.039	.011	.023	.079	.114	.088	.069	.043	.018	.000	.000	.069	.122	.221	.377	.490
	24.19	.021	-.054	-.040	-.037	-.014	.019	.040	.030	.030	.019	.007	.033	.074	.140	.253	.445	.567
	25.62	.187	-.026	-.037	-.028	-.010	.004	.027	.029	.032	.027	.024	.051	.099	.194	.313	.402	.462

TABLE II.- PRESSURE COEFFICIENTS OF THE BODY IN THE PRESENCE OF THE WINGS - Continued

(j) A = 1 rectangular wing, r/s = 0.4

θ	x/r	δ_W, α_B=0°								α_B, δ_W=0°						
		35°	30°	25°	20°	15°	10°	6°	3°	0°	3°	6°	10°	15°	20°	25°
6°	.694	-.028	-.027	-.027	-.029	-.028	.001	-.028	-.028	-.026	-.040	-.042	-.044	-.047	-.081	-.093
	.837	-.023	-.021	-.023	-.023	-.023	-.003	-.021	-.021	-.021	-.031	-.032	-.036	-.047	-.079	-.086
	.981	-.020	-.017	-.020	-.019	-.019	-.004	-.018	-.019	-.017	-.024	-.030	-.025	-.050	-.079	-.090
	1.125	-.019	-.018	-.017	-.019	-.019	-.004	-.019	-.019	-.016	-.028	-.021	-.015	-.056	-.085	-.087
	1.269	-.016	-.014	-.014	-.015	-.015	-.007	-.015	-.015	-.012	-.018	-.015	-.015	-.057	-.079	-.082
	1.412	-.008	-.008	-.009	-.009	-.010	-.006	-.009	-.009	-.006	-.010	-.012	-.016	-.058	-.084	-.086
	1.556	-.005	-.004	-.004	-.005	-.007	-.007	-.005	-.005	-.003	-.009	-.008	-.021	-.057	-.075	-.084
	1.700	.029	.013	.000	-.004	-.006	-.005	-.005	-.007	-.004	-.009	-.006	-.027	-.054	-.080	-.081
	1.844	-.015	-.007	-.005	-.006	-.005	-.004	-.001	.001	.004	-.001	-.001	-.020	-.061	-.086	-.080
	1.987	-.034	-.023	-.016	-.011	-.007	-.001	-.002	.003	.007	-.009	-.018	-.020	-.065	-.089	-.086
	2.131	-.044	-.037	-.031	-.027	-.023	.001	-.015	-.010	-.002	-.017	-.030	-.037	-.076	-.073	-.076
	2.275	-.033	-.026	-.021	-.021	-.019	.005	-.009	-.001	.006	-.010	-.020	-.024	-.053	-.042	-.066
	2.419	-.003	.001	-.008	-.014	-.012	.005	.001	.007	.011	.005	.005	-.013	-.033	-.030	-.069
	2.562	.010	.014	.011	.008	.006	.000	.014	.017	.020	.014	.010	-.002	-.040	-.051	-.089
15°	.694	-.030	-.027	-.030	-.028	-.028	-.001	-.030	-.030	-.028	-.038	-.037	-.039	-.068	-.090	-.087
	.837	-.024	-.020	-.023	-.023	-.022	-.002	-.022	-.021	-.024	-.031	-.034	-.044	-.072	-.086	-.087
	.981	-.020	-.018	-.017	-.019	-.019	-.004	-.019	-.018	-.018	-.025	-.029	-.041	-.071	-.087	-.086
	1.125	-.024	-.022	-.022	-.024	-.024	-.005	-.025	-.024	-.023	-.023	-.026	-.042	-.072	-.080	-.088
	1.269	-.016	-.014	-.015	-.015	-.016	-.004	-.016	-.015	-.015	-.019	-.020	-.036	-.068	-.071	-.079
	1.412	-.012	-.010	-.009	-.011	-.010	-.005	-.011	-.012	-.010	-.011	-.017	-.033	-.066	-.071	-.082
	1.556	-.008	-.006	-.007	-.007	-.007	-.006	-.006	-.006	-.007	-.009	-.017	-.036	-.055	-.075	-.082
	1.700	.017	.010	.003	-.001	-.004	-.004	-.003	-.003	-.008	-.007	-.011	-.038	-.055	-.082	-.081
	1.844	-.016	-.014	-.010	-.006	-.004	-.002	.002	.005	.005	-.003	-.010	-.036	-.057	-.086	-.083
	1.987	-.048	-.038	-.032	-.026	-.022	-.001	-.014	-.010	-.004	-.015	-.028	-.041	-.065	-.093	-.091
	2.131	-.047	-.039	-.035	-.031	-.026	.002	-.018	-.012	-.003	-.019	-.036	-.049	-.080	-.077	-.081
	2.275	-.031	-.027	-.026	-.026	-.022	.008	-.011	-.004	.003	-.024	-.016	-.021	-.059	-.056	-.066
	2.419	-.001	.003	-.006	-.017	-.014	.008	.000	.006	.008	.005	.002	-.003	-.043	-.029	-.067
	2.562	.011	.015	.014	.009	.010	.001	.017	.016	.019	.010	.005	-.005	-.039	-.054	-.059
30°	.694	-.026	-.033	-.033	-.033	-.033	-.006	-.035	-.035	-.031	-.042	-.047	-.051	-.085	-.094	-.092
	.837	-.024	-.028	-.027	-.027	-.026	-.003	-.029	-.029	-.027	-.029	-.037	-.051	-.087	-.086	-.085
	.981	-.017	-.021	-.022	-.019	-.020	-.001	-.021	-.021	-.019	-.026	-.033	-.062	-.087	-.083	-.084
	1.125	-.013	-.021	-.019	-.017	-.018	-.002	-.020	-.019	-.018	-.024	-.029	-.062	-.068	-.075	-.080
	1.269	-.010	-.019	-.015	-.016	-.016	-.006	-.017	-.017	-.016	-.017	-.026	-.062	-.063	-.073	-.082
	1.412	-.008	-.010	-.009	-.008	-.009	-.005	-.009	-.010	-.008	-.013	-.026	-.057	-.055	-.070	-.078
	1.556	-.005	-.009	-.008	-.007	-.009	-.004	-.008	-.008	-.007	-.011	-.026	-.048	-.052	-.066	-.079
	1.700	-.005	-.005	-.002	-.003	-.003	-.004	.000	.000	.002	-.003	-.022	-.038	-.059	-.069	-.070
	1.844	-.031	-.034	-.027	-.017	-.011	-.001	-.003	.002	.004	-.012	-.041	-.050	-.069	-.084	-.092
	1.987	-.050	-.044	-.037	-.029	-.024	.002	-.012	-.005	.005	-.021	-.056	-.063	-.076	-.082	-.087
	2.131	-.055	-.048	-.041	-.036	-.032	.002	-.019	-.010	-.001	-.016	-.030	-.027	-.055	-.074	-.076
	2.275	-.014	-.013	-.035	-.038	-.035	.005	-.015	-.007	-.001	-.007	-.010	-.016	-.061	-.062	-.067
	2.419	.001	.005	.005	.001	.000	.007	.002	.005	.008	.003	-.007	-.017	-.032	-.072	-.068
	2.562	.003	.006	.008	.009	.008	-.002	.008	.008	.009	.009	.000	-.015	-.029	-.067	-.081
60°	.694	-.031	-.029	-.032	-.030	-.030	-.001	-.032	-.030	-.029	-.042	-.053	-.065	-.079	-.086	-.089
	.837	-.027	-.027	-.028	-.026	-.027	-.001	-.030	-.028	-.028	-.036	-.051	-.061	-.076	-.082	-.084
	.981	-.026	-.025	-.026	-.025	-.025	.000	-.027	-.026	-.028	-.033	-.045	-.053	-.065	-.075	-.082
	1.125	-.019	-.018	-.018	-.018	-.018	-.003	-.020	-.019	-.019	-.029	-.038	-.051	-.065	-.074	-.078
	1.269	-.017	-.016	-.017	-.017	-.016	-.003	-.017	-.018	-.018	-.021	-.030	-.045	-.061	-.071	-.079
	1.412	-.014	-.012	-.014	-.013	-.013	-.004	-.014	-.015	-.014	-.017	-.024	-.042	-.054	-.069	-.077
	1.556	-.009	-.008	-.010	-.007	-.010	-.003	-.010	-.009	-.010	-.014	-.018	-.038	-.049	-.064	-.076
	1.700	-.093	-.043	-.047	-.038	-.035	-.003	-.019	-.011	-.003	-.023	-.042	-.053	-.067	-.081	-.085
	1.844	-.080	-.080	-.077	-.070	-.061	-.001	-.028	-.013	-.005	-.033	-.059	-.066	-.077	-.103	-.100
	1.987	-.025	-.075	-.077	-.069	-.068	.003	-.034	-.020	-.010	-.015	-.026	-.048	-.053	-.090	-.083
	2.131	-.016	-.021	-.031	-.046	-.042	.003	-.020	-.013	-.006	-.006	-.020	-.023	-.060	-.086	-.077
	2.275	-.020	-.006	-.012	-.011	-.012	.005	-.006	-.005	-.003	-.003	-.017	-.025	-.053	-.084	-.073
	2.419	.003	.003	.005	.005	.007	.006	.007	.007	.009	.000	-.020	-.036	-.048	-.077	-.061
	2.562	-.026	.005	.005	.007	.008	.001	.008	.007	.009	.004	-.011	-.038	-.041	-.048	-.053

TABLE II.- PRESSURE COEFFICIENTS OF THE BODY IN THE PRESENCE OF THE WINGS - Concluded

(j) A = 1 rectangular wing, r/s = 0.4 - Concluded

θ	x/r	δ_w, α_B=0°									α_B, δ_w=0°					
		35°	30°	25°	20°	15°	10°	6°	3°	0°	3°	6°	10°	15°	20°	25°
	.694	-.033	-.032	-.031	-.033	-.032	.001	-.033	-.031	-.031	-.029	-.022	-.009	.011	.048	.109
	.837	-.027	-.027	-.026	-.027	-.027	.001	-.028	-.027	-.027	-.025	-.028	-.013	.006	.045	.101
	.981	-.027	-.026	-.026	-.027	-.027	.000	-.027	-.028	-.026	-.027	-.026	-.018	.004	.049	.107
	1.125	-.022	-.021	-.021	-.022	-.022	.003	-.022	-.022	-.022	-.026	-.025	-.019	.001	.040	.106
	1.269	-.019	-.018	-.018	-.020	-.018	.003	-.018	-.017	-.018	-.022	-.026	-.018	.004	.048	.119
	1.412	-.015	-.014	-.013	-.014	-.014	.004	-.014	-.015	-.014	-.020	-.025	-.018	.006	.051	.125
	1.556	.067	-.012	-.011	-.011	-.011	.003	-.011	-.011	-.010	-.020	-.029	-.022	.000	.048	.128
120°	1.700	-.015	.053	.042	.011	.033	.003	.004	-.002	-.009	.000	.063	.026	.074	.159	.287
	1.844	-.094	-.095	-.077	.030	.073	.001	.018	.004	-.011	.013	.035	.080	.147	.271	.441
	1.987	-.064	-.043	-.028	-.043	-.029	-.003	-.009	-.010	-.011	.008	.024	.058	.114	.213	.383
	2.131	-.018	-.016	-.011	.003	.008	-.003	-.004	-.006	-.007	-.015	-.007	.024	.062	.129	.221
	2.275	-.011	-.007	.000	-.007	.003	-.005	.006	.008	.001	-.011	-.020	.003	.039	.104	.216
	2.419	-.004	-.016	-.008	-.005	-.009	-.006	.004	.004	.004	-.003	-.013	-.004	.043	.173	.315
	2.562	.003	-.013	.003	.001	.000	-.001	.011	.014	.014	.007	-.001	.028	.099	.171	.250
	.694	-.034	-.030	-.030	-.031	-.032	.006	-.031	-.032	-.031	-.022	-.003	.023	.087	.162	.299
	.837	-.023	-.024	-.023	-.022	-.023	.003	-.023	-.024	-.024	-.017	-.001	.026	.087	.174	.274
	.981	-.020	-.020	-.020	-.022	-.022	.001	-.022	-.022	-.022	-.015	-.002	.024	.078	.163	.249
	1.128	-.019	-.020	-.019	-.020	-.021	.002	-.020	-.019	-.020	-.019	-.004	.020	.072	.152	.227
	1.269	-.017	-.015	-.015	-.016	-.018	.006	-.016	-.016	-.017	-.019	-.006	.021	.068	.155	.186
	1.412	-.007	-.007	-.007	-.009	-.010	.005	-.009	-.008	-.009	-.012	-.005	.018	.072	.145	.158
	1.556	.089	-.009	-.010	-.009	-.010	.004	-.009	-.011	-.010	-.008	-.007	.023	.070	.136	.119
150°	1.700	-.009	.038	.066	.065	.044	.004	.005	.001	-.001	-.004	-.003	.024	.080	.139	.106
	1.844	.162	.140	.063	-.014	.007	.001	.015	.007	.002	.014	.020	.049	.104	.167	.142
	1.987	.002	.033	.072	.083	.033	-.002	.018	.007	-.003	.013	.036	.067	.132	.156	.123
	2.131	-.031	.004	.016	.022	.024	-.002	.010	.003	-.005	.013	.032	.058	.112	.148	.140
	2.275	-.014	-.003	.007	.016	.018	-.005	.004	-.001	-.003	.002	.024	.054	.108	.181	.201
	2.419	-.018	-.008	.002	.000	.006	-.007	.009	.007	.005	.006	.029	.068	.160	.258	.168
	2.562	.002	.003	.002	.008	.013	.002	.023	.022	.022	.027	.050	.123	.188	.185	.138
	.694	-.030	-.031	-.030	-.030	-.031	.001	-.032	-.029	-.030	-.017	.003	.032	.099	.142	.137
	.837	-.024	-.024	-.023	-.022	-.023	.002	-.023	-.024	-.023	-.011	.007	.035	.100	.147	.117
	.981	-.021	-.022	-.019	-.021	-.021	.002	-.020	-.021	-.021	-.011	.005	.031	.089	.126	.109
	1.125	-.024	-.023	-.023	-.022	-.023	.001	-.022	-.023	-.019	-.013	.002	.027	.082	.123	.100
	1.269	-.015	-.016	-.014	-.014	-.017	.004	-.016	-.016	-.015	-.011	.000	.031	.077	.115	.093
	1.412	-.010	-.012	-.009	-.010	-.012	.005	-.012	-.012	-.011	-.005	.001	.026	.075	.104	.086
	1.556	.015	-.008	-.005	-.006	-.008	.006	-.009	-.010	-.008	-.003	.007	.026	.072	.092	.078
165°	1.700	.223	.172	.118	.066	.011	.004	-.003	-.006	-.002	-.001	.010	.029	.077	.099	.079
	1.844	.169	.109	.057	.110	.071	.002	.018	.010	.007	.009	.014	.017	.074	.087	.089
	1.987	.039	.093	.117	.104	.081	.001	.027	.011	.004	.015	.030	.055	.095	.112	.160
	2.131	-.004	.010	.026	.027	.032	-.002	.013	.003	-.003	.018	.036	.072	.112	.175	.198
	2.275	-.012	-.003	.005	.010	.006	-.008	.002	-.003	-.002	.022	.036	.071	.113	.181	.188
	2.419	-.010	-.001	.001	.010	.014	-.008	.010	.009	.010	.028	.046	.086	.168	.226	.211
	2.562	-.004	-.001	.002	.007	.012	-.001	.021	.024	.026	.005	.059	.117	.194	.189	.158
	.694	-.033	-.032	-.032	-.033	-.032	-.001	-.032	-.031	-.030	-.015	.002	.035	.111	.162	.189
	.837	-.026	-.025	-.025	-.022	-.024	.003	-.024	-.023	-.024	-.010	.008	.040	.100	.153	.166
	.981	-.017	-.019	-.018	-.018	-.018	.004	-.018	-.017	-.017	-.006	.010	.037	.092	.138	.155
	1.125	-.019	-.021	-.019	-.020	-.019	.004	-.019	-.015	-.010	-.011	.006	.031	.084	.135	.147
	1.269	-.015	-.014	-.014	-.014	-.013	.007	-.013	-.013	-.011	-.012	.003	.023	.074	.123	.125
	1.412	-.009	-.012	-.011	-.011	-.011	.006	-.012	-.010	-.008	-.006	.004	.024	.072	.113	.116
	1.556	.013	-.006	-.006	-.006	-.006	.007	-.006	-.005	-.003	-.001	.005	.022	.071	.102	.094
174°	1.700	.262	.234	.138	.035	-.004	.005	-.005	-.004	-.001	-.003	.022	.025	.075	.108	.102
	1.844	.164	.093	.166	.134	.093	.004	.018	.007	.008	.002	.019	.026	.071	.100	.116
	1.987	.068	.092	.086	.055	.068	.001	.025	.010	.005	.015	.033	.044	.096	.160	.197
	2.131	.035	.017	.022	.031	.032	-.001	.014	.005	.000	.017	.042	.066	.126	.192	.177
	2.275	-.009	.001	.002	.007	.007	-.005	.005	.004	.001	.018	.043	.065	.122	.187	.185
	2.419	-.011	-.004	-.002	.009	.014	-.005	.011	.011	.011	.024	.046	.084	.158	.232	.213
	2.562	-.004	.000	.003	.007	.014	.000	.026	.026	.031	.041	.062	.118	.193	.199	.158

TABLE III.- SPAN LOADING COEFFICIENTS OF THE WINGS IN THE PRESENCE OF THE BODY - UPPER SURFACE, LOWER SURFACE, AND TOTAL

(a) A = 4 triangular wing, r/s = 0.2

α_B		y/s	δ_w 45°	40°	35°	30°	25°	20°	15°	10°	6°	3°	0°
0°	Upper	.025	-.145	-.132	-.144	-.139	-.125	-.111	-.093	-.061	-.030	-.006	.019
		.250	-.111	-.102	-.117	-.114	-.106	-.094	-.087	-.068	-.038	-.007	.033
		.500	-.072	-.067	-.076	-.075	-.067	-.071	-.051	-.048	-.030	-.010	.019
		.750	-.033	-.032	-.037	-.036	-.024	-.030	-.026	-.023	-.015	-.007	.005
	Lower	.025	1.798	1.512	1.244	.947	.687	.516	.321	.175	.102	.052	.019
		.250	1.529	1.325	1.120	.916	.705	.538	.377	.231	.138	.076	.033
		.500	1.027	.910	.795	.667	.523	.401	.281	.162	.093	.046	.019
		.750	.517	.463	.408	.344	.270	.205	.134	.072	.037	.037	.005
	Total	.025	1.943	1.644	1.388	1.086	.812	.627	.414	.236	.132	.058	.000
		.250	1.640	1.427	1.237	1.030	.811	.632	.464	.299	.176	.083	.000
		.500	1.099	.977	.871	.742	.590	.472	.332	.210	.123	.056	.000
		.750	.550	.495	.445	.380	.294	.235	.160	.095	.052	.044	.000
3°	Upper	.025	-.142	-.140	-.149	-.139	-.113	-.121	-.104	-.082	-.061	-.044	-.020
		.250	-.111	-.109	-.121	-.113	-.095	-.107	-.098	-.084	-.067	-.046	-.021
		.500	-.073	-.072	-.079	-.074	-.064	-.070	-.065	-.056	-.044	-.031	-.013
		.750	-.035	-.035	-.039	-.036	-.030	-.034	-.031	-.026	-.020	-.015	-.006
	Lower	.025	1.707	1.663	1.429	1.187	.921	.680	.461	.303	.197	.132	.077
		.250	1.614	1.448	1.248	1.072	.858	.665	.487	.337	.227	.154	.088
		.500	1.089	.979	.865	.750	.625	.490	.360	.241	.153	.099	.051
		.750	.546	.500	.444	.386	.322	.254	.179	.110	.065	.040	.017
	Total	.025	1.849	1.803	1.578	1.326	1.034	.801	.565	.385	.258	.176	.097
		.250	1.725	1.557	1.369	1.185	.953	.772	.585	.421	.294	.200	.109
		.500	1.162	1.051	.944	.824	.689	.560	.425	.297	.197	.130	.064
		.750	.581	.535	.483	.422	.352	.288	.210	.136	.085	.055	.023
6°	Upper	.025			-.151	-.145	-.146	-.133	-.121	-.109	-.089	-.082	-.067
		.250			-.117	-.116	-.119	-.112	-.105	-.106	-.091	-.080	-.060
		.500			-.076	-.075	-.078	-.073	-.069	-.069	-.058	-.049	-.034
		.750			-.037	-.037	-.037	-.034	-.032	-.032	-.026	-.021	-.014
	Lower	.025			1.218	1.290	1.079	.847	.662	.461	.338	.248	.169
		.250			1.339	1.159	.965	.784	.610	.443	.326	.244	.178
		.500			.953	.833	.708	.585	.460	.334	.241	.173	.120
		.750			.486	.427	.365	.306	.238	.167	.108	.073	.049
	Total	.025			1.362	1.435	1.225	.980	.783	.570	.427	.330	.236
		.250			1.456	1.275	1.084	.896	.715	.549	.417	.324	.238
		.500			1.029	.908	.786	.658	.529	.403	.299	.222	.154
		.750			.523	.464	.402	.340	.270	.199	.134	.094	.063
10°	Upper	.025			-.141	-.133	-.150	-.145	-.134	-.132	-.122	-.107	-.106
		.250			-.110	-.105	-.119	-.118	-.110	-.113	-.103	-.090	-.088
		.500			-.074	-.069	-.078	-.077	-.071	-.071	-.041	-.055	-.052
		.750			-.034	-.032	-.038	-.036	-.033	-.033	-.029	-.023	-.022
	Lower	.025			.480	.574	.673	.740	.591	.477	.381	.323	.234
		.250			1.675	1.190	1.008	.839	.674	.501	.372	.313	.237
		.500			.973	.868	.753	.630	.514	.387	.302	.243	.179
		.750			.497	.451	.391	.329	.272	.203	.155	.113	.079
	Total	.025			.621	.707	.823	.885	.725	.609	.503	.430	.340
		.250			1.785	1.295	1.127	.957	.784	.614	.475	.403	.325
		.500			1.047	.937	.831	.707	.585	.458	.343	.298	.231
		.750			.531	.483	.429	.365	.305	.236	.184	.136	.101

TABLE III.- SPAN LOADING COEFFICIENTS OF THE WINGS IN THE PRESENCE OF THE BODY - UPPER SURFACE, LOWER SURFACE, AND TOTAL - Continued

(a) A = 4 triangular wing, r/s = 0.2 - Continued

α_B		y/s	δ_w -3°	-6°	-10°	-15°	-20°	-25°	-30°	-35°	-40°	-45°
0°	Upper	.025										
		.250										
		.500										
		.750										
	Lower	.025										
		.250										
		.500										
		.750										
	Total	.025										
		.250										
		.500										
		.750										
3°	Upper	.025	.004	.019	.077	.178	.324	.498	.723	1.010	1.299	1.545
		.250	.016	.055	.134	.251	.390	.554	.729	.944	1.141	1.342
		.500	.010	.037	.096	.188	.303	.426	.551	.689	.816	.918
		.750	.005	.016	.043	.087	.149	.223	.291	.362	.421	.468
	Lower	.025	.037	-.004	-.039	-.070	-.082	-.114	-.131	-.132	-.121	-.133
		.250	.038	-.006	-.043	-.064	-.069	-.095	-.104	-.109	-.096	-.105
		.500	.017	-.013	-.033	-.041	-.041	-.064	-.084	-.071	-.063	-.069
		.750	.003	-.009	-.016	-.018	-.018	-.031	-.036	-.034	-.030	-.033
	Total	.025	.033	-.023	-.116	-.248	-.406	-.612	-.854	-1.142	-1.420	-1.678
		.250	.022	-.061	-.177	-.315	-.459	-.649	-.833	-1.053	-1.237	-1.447
		.500	.007	-.050	-.129	-.229	-.344	-.490	-.635	-.760	-.879	-.987
		.750	-.002	-.025	-.059	-.105	-.167	-.254	-.327	-.396	-.451	-.501
6°	Upper	.025	-.057	-.037	-.012	.053	.177	.334	.544	.783	1.045	1.375
		.250	-.041	-.010	.037	.130	.257	.399	.569	.751	.950	1.176
		.500	-.020	.005	.038	.110			.452	.580	.717	.853
		.750	-.006	.006	.021	.057	.108	.178	.251	.317	.384	.448
	Lower	.025	.113	.066	.007	-.045	-.071	-.096	-.115	-.127	-.106	-.126
		.250	.119	.073	.010	-.041	-.060	-.079	-.094	-.100	-.082	-.098
		.500	.075	.044	.001	-.031	-.041	-.052	-.062	-.065	-.047	-.029
		.750	.030	.018	-.002	-.016	-.019	-.025	-.029	-.031	-.026	-.029
	Total	.025	.170	.103	.019	-.098	-.248	-.430	-.659	-.910	-1.151	-1.501
		.250	.160	.083	-.027	-.171	-.317	-.478	-.663	-.851	-1.032	-1.274
		.500	.095	.039	-.037	-.141	-.254	-.380	-.514	-.645	-.764	-.911
		.750	.036	.012	-.023	-.073	-.127	-.203	-.280	-.348	-.410	-.477
10°	Upper	.025	-.101	-.101	-.080	-.030	.073	.212	.389		.818	1.064
		.250	-.085	-.078	-.039	.030	.129	.242	.385		.719	.902
		.500	-.044	-.035	-.004	.053	.135	.235	.346		.569	.688
		.750	-.017	-.014	.003	.032	.073	.129	.199		.322	.381
	Lower	.025	.160	.092	.033	-.022	-.081	-.102	-.117		-.142	-.136
		.250	.179	.115	.047	-.008	-.066	-.084	-.097		-.114	-.109
		.500	.132	.082	.032	-.006	-.043	-.054	-.062		-.075	-.072
		.750	.056	.032	.010	-.005	-.020	-.025	-.030		-.035	-.034
	Total	.025	.261	.193	.113	.008	-.154	-.314	-.506		-.960	-1.200
		.250	.264	.193	.086	-.038	-.195	-.326	-.482		-.833	-1.011
		.500	.176	.117	.036	-.059	-.178	-.289	-.408		-.644	-.760
		.750	.073	.046	.007	-.037	-.093	-.154	-.229		-.357	-.415

TABLE III.- SPAN LOADING COEFFICIENTS OF THE WINGS IN THE PRESENCE OF THE BODY - UPPER SURFACE, LOWER SURFACE, AND TOTAL - Continued

(a) A = 4 triangular wing, r/s = 0.2 - Continued

α_B		y/s	δ_w 45°	40°	35°	30°	25°	20°	15°	10°	6°	3°	0°
15°	Upper	.025				-.149	-.148	-.140	-.147	-.143	-.134	-.141	-.127
		.250				-.117	-.116	-.108	-.116	-.110	-.102	-.111	-.101
		.500				-.076	-.075	-.069	-.074	-.069	-.064	-.070	-.063
		.750				-.036	-.035	-.033	-.035	-.033	-.030	-.033	-.029
	Lower	.025				.495	1.753	.474	.733	.667	.580	.502	.391
		.250				1.597	1.346	1.142	.983	.763	.611	.509	.407
		.500				1.094	.960	.829	.730	.573	.464	.391	.315
		.750				.565	.506	.439	.389	.312	.252	.211	.168
	Total	.025				.644	1.901	.614	.880	.810	.714	.643	.518
		.250				1.714	1.462	1.250	1.099	.873	.713	.620	.508
		.500				1.170	1.035	.898	.804	.642	.528	.461	.378
		.750				.601	.541	.472	.424	.345	.282	.244	.197
20°	Upper	.025				-.126	-.141	-.157	-.149	-.157	-.155	-.156	-.141
		.250				-.096	-.105	-.119	-.112	-.117	-.119	-.121	-.107
		.500				-.061	-.067	-.076	-.074	-.076	-.084	-.080	-.065
		.750				-.028	-.031	-.036	-.035	-.036	-.036	-.039	-.029
	Lower	.025				.704	.716	.762	.960	.882	.798	.770	.565
		.250				1.944	1.680	1.460	1.211	.990	.806	.693	.569
		.500				1.314	1.179	1.042	.886	.733	.605	.527	.440
		.750				.653	.605	.537	.462	.388	.327	.304	.240
	Total	.025				.830	.857	.919	1.109	1.039	.953	.926	.706
		.250				2.040	1.785	1.559	1.323	1.107	.925	.814	.676
		.500				1.375	1.246	1.118	.960	.809	.689	.607	.505
		.750				.681	.636	.573	.497	.424	.363	.343	.269
25°	Upper	.025						-.142	-.148	-.168	-.155	-.139	-.149
		.250						-.110	-.114	-.134	-.122	-.113	-.112
		.500						-.071	-.073	-.088	-.078	-.074	-.068
		.750						-.034	-.034	-.041	-.036	-.034	-.029
	Lower	.025						1.240	1.466	1.305	1.257	1.120	.839
		.250						1.849	1.584	1.325	1.125	.976	.830
		.500						1.323	1.141	.967	.831	.728	.629
		.750						.715	.621	.531	.463	.409	.334
	Total	.025						1.382	1.614	1.473	1.412	1.259	.988
		.250						1.959	1.698	1.459	1.247	1.089	.942
		.500						1.394	1.214	1.055	.909	.802	.697
		.750						.749	.655	.572	.499	.443	.363

TABLE III.- SPAN LOADING COEFFICIENTS OF THE WINGS IN THE PRESENCE OF THE BODY - UPPER SURFACE, LOWER SURFACE, AND TOTAL - Continued

(a) A = 4 triangular wing, r/s = 0.2 - Concluded

α_B		y/s	δ_W									
			-3°	-6°	-10°	-15°	-20°	-25°	-30°	-35°	-40°	-45°
15°	Upper	.025	-.129	-.122	.000	-.026		.228	.395	.609	.846	1.082
		.250	-.098	-.087	.000	.007		.203	.339	.496	.668	.846
		.500	-.053	-.043	.000	.027		.191	.296	.412	.517	.637
		.750	-.022	-.017	.000	.018		.101	.168	.236	.295	.352
	Lower	.025	.295	.205	.000	.031		-.061	-.090	-.060	-.122	-.107
		.250	.330	.246	.000	.055		-.063	-.078	-.100	-.103	-.089
		.500	.255	.189	.000	.038		-.034	-.050	-.062	-.065	-.059
		.750	.129	.090	.000	.015		-.017	-.023	-.029	-.033	-.027
	Total	.025	.424	.327	.000	.057		-.289	-.485	-.669	-.968	-1.189
		.250	.428	.333	.000	.048		-.266	-.417	-.596	-.771	-.935
		.500	.308	.232	.000	.011		-.225	-.346	-.474	-.582	-.696
		.750	.151	.107	.000	-.003		-.118	-.191	-.265	-.328	-.379
20°	Upper	.025	-.150	-.142	-.098		.097	.284	.455	.662	.911	1.152
		.250	-.112	-.101	-.063		.088	.215	.356	.520	.712	.914
		.500	-.066	-.054	-.027		.080	.181	.284	.393	.509	.633
		.750	-.030	-.022	-.009		.041	.092	.159	.227	.290	.352
	Lower	.025	.437	.350	.230		.050	-.007	-.061	-.088	.157	.195
		.250	.474	.383	.265		.052	-.011	-.064	-.086	.138	.145
		.500	.371	.298	.203		.040	-.005	-.042	-.054	-.068	.041
		.750	.201	.157	.101		.019	-.001	-.019	-.025	.043	-.034
	Total	.025	.587	.492	.328		-.047	-.291	-.516	-.750	-.754	-.957
		.250	.586	.484	.328		-.036	-.226	-.420	-.606	-.574	-.769
		.500	.437	.352	.230		-.040	-.186	-.326	-.447	-.577	-.592
		.750	.231	.179	.110		-.022	-.093	-.178	-.252	-.247	-.386
25°	Upper	.025	-.132	-.113	-.067	-.006	.163	.344	.631	.736	.846	1.112
		.250	-.096	-.084	-.046	-.001	.108	.230	.523	.566	.767	1.001
		.500	-.055	-.046	-.020	-.006	.080	.173	.353	.406	.531	.670
		.750	-.022	-.017	-.004	.008	.043	.088	.201	.226	.291	.357
	Lower	.025	.651	.535	.390	.260	.236	.188	.147	.106	.134	.167
		.250	.678	.563	.426	.275	.157	.055	.041	.072	.102	.123
		.500	.513	.437	.331	.212	.117	.042	.033	.049	.067	.082
		.750	.281	.235	.174	.106	.060	.021	.013	.024	.033	.041
	Total	.025	.783	.648	.457	.266	.073	-.156	-.484	-.630	-.712	-.945
		.250	.774	.647	.472	.276	.049	-.175	-.482	-.494	-.665	-.878
		.500	.568	.483	.351	.206	.037	-.131	-.320	-.357	-.464	-.588
		.750	.303	.252	.178	.098	.017	-.067	-.188	-.202	-.258	-.316

TABLE III.- SPAN LOADING COEFFICIENTS OF THE WINGS IN THE PRESENCE OF THE BODY - UPPER SURFACE, LOWER SURFACE, AND TOTAL - Continued

(b) A = 2 triangular wing, r/s = 0.2

α_B		y/s	δ_W 45°	40°	35°	30°	25°	20°	15°	10°	6°	3°	0°
0°	Upper	.025	-.130	-.123	-.131	-.115	-.117	-.104	-.082	-.063	-.088	-.009	.017
		.250	-.097	-.094	-.105	-.099	-.102	-.097	-.083	-.063	-.035	-.016	.011
		.500	-.064	-.065	-.072	-.067	-.069	-.066	-.061	-.050	-.028	-.010	.017
		.750	-.029	-.030	-.035	-.034	-.035	-.034	-.031	-.025	-.014	-.006	.010
		.875	-.013	-.014	-.017	-.017	-.018	-.017	-.015	-.013	-.007	-.003	.005
	Lower	.025	1.657	1.410	1.086	.834	.585	.395	.250	.109	.060	.035	.017
		.250	1.255	1.078	.870	.670	.504	.367	.239	.125	.076	.040	.011
		.500	.799	.714	.587	.476	.375	.276	.192	.106	.069	.041	.017
		.750	.413	.366	.313	.268	.218	.167	.123	.073	.050	.029	.010
		.875	.211	.186	.162	.139	.118	.093	.070	.046	.031	.017	.005
	Total	.025	1.787	1.533	1.217	.949	.702	.499	.332	.172	.088	.044	.000
		.250	1.352	1.172	.975	.769	.606	.464	.322	.188	.111	.056	.000
		.500	.863	.779	.659	.543	.444	.342	.253	.156	.097	.051	.000
		.750	.442	.396	.348	.302	.253	.201	.154	.098	.064	.035	.000
		.875	.224	.200	.179	.156	.136	.110	.085	.059	.038	.020	.000
3°	Upper	.025	-.115	-.109	-.095	-.118	-.107	-.118	-.081	-.049	-.044	-.030	-.019
		.250	-.092	-.090	-.083	-.102	-.098	-.099	-.080	-.059	-.052	-.037	-.022
		.500	-.060	-.059	-.053	-.068	-.064	-.064	-.053	-.040	-.036	-.023	-.009
		.750	-.028	-.028	-.026	-.034	-.032	-.031	-.027	-.020	-.017	-.011	-.003
		.875	-.013	-.013	-.012	-.017	-.017	-.015	-.014	-.010	-.009	-.005	-.002
	Lower	.025	1.611	1.597	1.396	1.107	.809	.561	.362	.226	.142	.094	.054
		.250	1.762	1.232	.973	.811	.640	.481	.330	.218	.139	.091	.058
		.500	.833	.755	.637	.551	.440	.351	.247	.167	.109	.075	.045
		.750	.442	.403	.352	.297	.246	.197	.147	.106	.074	.054	.034
		.875	.227	.209	.185	.161	.134	.108	.084	.062	.045	.033	.019
	Total	.025	1.726	1.706	1.491	1.225	.916	.679	.443	.275	.186	.124	.073
		.250	1.854	1.322	1.056	.913	.738	.580	.410	.277	.191	.128	.074
		.500	.893	.814	.690	.619	.504	.415	.300	.207	.145	.098	.054
		.750	.470	.431	.378	.331	.278	.228	.174	.126	.091	.065	.037
		.875	.240	.222	.197	.178	.151	.123	.098	.072	.054	.038	.021
6°	Upper	.025		-.129	-.119	-.109	-.119	-.113	-.100	-.082	-.081		-.072
		.250		-.099	-.098	-.094	-.106	-.105	-.098	-.086	-.086		-.073
		.500		-.064	-.064	-.060	-.071	-.069	-.065	-.057	-.058		-.049
		.750		-.029	-.030	-.029	-.034	-.034	-.032	-.029	-.029		-.021
		.875		-.014	-.015	-.015	-.017	-.017	-.016	-.015	-.015		-.010
	Lower	.025		1.366	1.202	1.065	.902	.668	.497	.335	.229		.109
		.250		1.605	1.352	.895	.721	.559	.421	.291	.199		.096
		.500		.872	.700	.595	.492	.393	.305	.215	.151		.078
		.750		.443	.390	.334	.279	.225	.180	.132	.097		.055
		.875		.257	.203	.177	.151	.124	.101	.076	.057		.033
	Total	.025		1.495	1.321	1.174	1.021	.781	.597	.417	.310		.181
		.250		1.704	1.450	.989	.827	.664	.519	.377	.285		.169
		.500		.936	.764	.655	.563	.462	.370	.272	.209		.127
		.750		.478	.420	.363	.313	.259	.212	.161	.126		.076
		.875		.271	.218	.192	.168	.141	.117	.091	.072		.043
10°	Upper	.025			-.109	-.129	-.128	-.123	-.105	-.113	-.103	-.106	-.114
		.250			-.087	-.106	-.102	-.101	-.094	-.100	-.092	-.092	-.095
		.500			-.054	-.069	-.067	-.065	-.059	-.065	-.059	-.059	-.062
		.750			-.024	-.031	-.032	-.031	-.029	-.032	-.029	-.029	-.029
		.875			-.011	-.015	-.016	-.015	-.016	-.016	-.015	-.014	-.014
	Lower	.025			1.174	1.075	.940	.833	.613	.436	.339	.264	.194
		.250			1.579	1.243	.809	.687	.533	.398	.290	.221	.164
		.500			.832	.719	.575	.489	.381	.284	.217	.167	.132
		.750			.451	.393	.333	.275	.221	.169	.133	.107	.085
		.875			.232	.207	.180	.150	.123	.096	.077	.064	.051
	Total	.025			1.283	1.204	1.068	.956	.718	.549	.442	.370	.308
		.250			1.666	1.349	.911	.788	.627	.488	.382	.313	.259
		.500			.886	.788	.642	.554	.440	.349	.276	.226	.194
		.750			.475	.424	.365	.306	.250	.201	.162	.136	.114
		.875			.243	.222	.196	.165	.139	.112	.092	.078	.065

TABLE III.- SPAN LOADING COEFFICIENTS OF THE WINGS IN THE PRESENCE OF THE BODY - UPPER SURFACE, LOWER SURFACE, AND TOTAL - Continued

(b) A = 2 triangular wing, r/s = 0.2 - Continued

α_B		y/s	δ_W -3°	-6°	-10°	-15°	-20°	-25°	-30°	-35°	-40°	-45°
0°	Upper	.025										
		.250										
		.500										
		.750										
		.875										
	Lower	.025										
		.250										
		.500										
		.750										
		.875										
	Total	.025										
		.250										
		.500										
		.750										
		.875										
3°	Upper	.025	.005	.007	.060	.131	.266	.434	.653	.905	1.191	1.496
		.250	.001	.018	.076	.148	.256	.386	.537	.719	.897	1.142
		.500	.010	.030	.075	.128	.207	.296	.398	.513	.620	.744
		.750	.007	.024	.053	.089	.131	.181	.233	.291	.331	.372
		.875	.004	.015	.033	.054	.077	.100	.127	.152	.171	.191
	Lower	.025	.023	-.005	-.044	-.074	-.084	-.100	-.111	-.126	-.125	.109
		.250	.019	-.006	-.041	-.072	-.084	-.095	-.102	-.101	-.101	.087
		.500	.023	-.002	-.032	-.052	-.056	-.063	-.067	-.063	-.065	.053
		.750	.014	-.001	-.017	-.027	-.029	-.032	-.034	-.030	-.032	.024
		.875	.007	-.001	-.008	-.014	-.014	-.016	-.017	-.014	-.015	.011
	Total	.025	.018	-.012	-.104	-.205	-.350	-.534	-.764	-1.031	-1.316	1.605
		.250	.018	-.024	-.117	-.220	-.340	-.481	-.639	-.820	-.998	1.229
		.500	.013	-.032	-.107	-.180	-.263	-.359	-.465	-.576	-.685	.797
		.750	.007	-.025	-.070	-.116	-.160	-.213	-.267	-.321	-.363	.396
		.875	.003	-.016	-.041	-.068	-.091	-.116	-.144	-.166	-.186	.202
6°	Upper	.025	-.055	-.044	-.003	.052	.147	.297	.489	.686	.972	1.281
		.250	-.053	-.033	.010	.072	.158	.269	.408	.562	.779	.922
		.500	-.037	-.017	.022	.073	.138	.216	.310	.411	.522	.638
		.750	-.014	-.001	.024	.059	.096	.139	.188	.243	.263	.345
		.875	-.006	.000	.015	.038	.059	.080	.105	.130	.160	.176
	Lower	.025	.063	.023	-.015	-.055	-.072	-.087	-.087	-.106	-.115	-.118
		.250	.057	.027	-.007	-.048	-.068	-.085	-.082	-.096	-.099	-.094
		.500	.057	.028	-.003	-.037	-.048	-.058	-.053	-.062	-.064	-.059
		.750	.036	.019	-.001	-.019	-.025	-.029	-.029	-.031	-.032	-.029
		.875	.021	.010	-.001	-.010	-.013	-.015	-.013	-.016	-.016	-.013
	Total	.025	.118	.067	-.012	-.107	-.219	-.384	-.576	-.792	-1.087	-1.399
		.250	.110	.060	-.017	-.120	-.226	-.354	-.490	-.658	-.878	-1.016
		.500	.094	.045	-.025	-.110	-.186	-.274	-.363	-.473	-.586	-.697
		.750	.050	.020	-.025	-.078	-.121	-.168	-.214	-.274	-.295	-.374
		.875	.027	.010	-.016	-.048	-.072	-.095	-.118	-.146	-.176	-.189
10°	Upper	.025	-.082	-.040	-.038	.015	.097	.220				
		.250	-.075	-.037	-.032	.010	.087	.183				
		.500	-.043	-.012	-.006	.030	.082	.142				
		.750	-.019	-.004	.006	.034	.067	.103				
		.875	-.010	-.002	.004	.024	.044	.064				
	Lower	.025	.122	.068	.014	-.027	-.061	-.073				
		.250	.113	.073	.025	-.023	-.058	-.074				
		.500	.098	.065	.025	-.022	-.046	-.055				
		.750	.064	.045	.019	-.009	-.023	-.027				
		.875	.039	.027	.011	-.005	-.011	-.014				
	Total	.025	.204	.108	.052	-.042	-.158	-.293				
		.250	.188	.110	.057	-.033	-.145	-.257				
		.500	.141	.077	.031	-.052	-.128	-.197				
		.750	.083	.049	.013	-.043	-.090	-.130				
		.875	.049	.029	.007	-.029	-.055	-.078				

TABLE III.- SPAN LOADING COEFFICIENTS OF THE WINGS IN THE PRESENCE OF THE BODY - UPPER SURFACE, LOWER SURFACE, AND TOTAL - Continued

(b) A = 2 triangular wing, r/s = 0.2 - Continued

α_B		y/s	δ_w 45°	40°	35°	30°	25°	20°	15°	10°	6°	3°	0°
15°	Upper	.025				-.165	-.150	-.171	-.165	-.153	-.139	-.129	-.068
		.250				-.128	-.120	-.135	-.132	-.126	-.115	-.107	-.059
		.500				-.080	-.075	-.089	-.085	-.080	-.072	-.065	-.035
		.750				-.038	-.037	-.044	-.042	-.039	-.035	-.030	-.019
		.875				-.019	-.018	-.022	-.021	-.020	-.017	-.014	-.009
	Lower	.025				1.127	.842	.938	.731	.569	.456	.409	.317
		.250				1.508	1.228	.890	.718	.551	.423	.341	.262
		.500				.901	.752	.635	.509	.396	.309	.251	.195
		.750				.474	.404	.349	.286	.227	.183	.152	.123
		.875				.245	.214	.185	.155	.126	.103	.087	.072
	Total	.025				1.292	.992	1.109	.896	.722	.595	.538	.385
		.250				1.636	1.348	1.025	.850	.677	.538	.448	.321
		.500				.981	.827	.724	.594	.476	.381	.316	.230
		.750				.512	.441	.393	.328	.266	.218	.182	.142
		.875				.264	.232	.207	.176	.146	.120	.101	.081
20°	Upper	.025					-.133	-.131	-.126	-.120	-.110	-.120	-.109
		.250					-.103	-.103	-.101	-.098	-.092	-.100	-.093
		.500					-.068	-.068	-.066	-.063	-.059	-.065	-.060
		.750					-.033	-.033	-.032	-.031	-.029	-.033	-.030
		.875					-.016	-.016	-.016	-.015	-.015	-.016	-.015
	Lower	.025					.828	.864	.822	.704	.647	.619	.530
		.250					1.683	1.301	.951	.750	.600	.500	.419
		.500					.965	.811	.667	.533	.429	.360	.304
		.750					.503	.430	.360	.294	.243	.208	.178
		.875					.258	.226	.190	.160	.136	.116	.101
	Total	.025					.961	.995	.948	.824	.757	.739	.639
		.250					1.786	1.404	1.052	.848	.692	.600	.512
		.500					1.033	.879	.733	.596	.488	.425	.364
		.750					.536	.463	.392	.325	.272	.241	.208
		.875					.274	.242	.206	.175	.151	.132	.116
25°	Upper	.025						-.122	-.134	-.130	-.118	-.104	-.108
		.250						-.094	-.104	-.101	-.095	-.086	-.093
		.500						-.061	-.068	-.066	-.061	-.055	-.059
		.750						-.029	-.033	-.032	-.029	-.027	-.029
		.875						-.014	-.016	-.016	-.014	-.013	-.015
	Lower	.025						1.255	1.191	.983	.878	.893	.765
		.250						1.556	1.278	1.023	.848	.724	.599
		.500						1.019	.879	.720	.603	.516	.432
		.750						.510	.457	.386	.327	.284	.241
		.875						.232	.212	.184	.165	.152	.131
	Total	.025						1.377	1.325	1.113	.996	.997	.873
		.250						1.650	1.382	1.124	.943	.810	.692
		.500						1.080	.947	.786	.664	.571	.491
		.750						.539	.490	.418	.356	.311	.270
		.875						.246	.228	.200	.179	.165	.146

TABLE III.- SPAN LOADING COEFFICIENTS OF THE WINGS IN THE PRESENCE OF THE BODY - UPPER SURFACE, LOWER SURFACE, AND TOTAL - Continued

(b) A = 2 triangular wing, r/s = 0.2 - Concluded

α_B		y/s	δ_w -3°	-6°	-10°	-15°	-20°	-25°	-30°	-35°	-40°	-45°
15°	Upper	.025	-.093	-.077	-.058	.007	.104	.174	.348	.484	.672	.924
		.250	-.081	-.073	-.058	-.015	.060	.150	.257	.391	.510	.681
		.500	-.050	-.044	-.033	.004	.054	.105	.169	.251	.333	.432
		.750	-.026	-.021	-.014	.014	.044	.074	.107	.148	.187	.238
		.875	-.013	-.011	-.007	.010	.029	.046	.064	.085	.105	.129
	Lower	.025	.226	.155	.087	.022	-.015	-.040	-.038	-.079	-.096	-.115
		.250	.203	.149	.091	.027	-.015	-.046	-.057	-.084	-.094	-.097
		.500	.162	.120	.075	.021	-.018	-.040	-.042	-.059	-.064	-.066
		.750	.100	.079	.052	.017	-.006	-.019	-.021	-.029	-.032	-.032
		.875	.060	.047	.031	.011	-.002	-.009	-.010	-.015	-.016	-.016
	Total	.025	.319	.232	.145	.015	-.119	-.214	-.386	-.563	-.768	-1.039
		.250	.284	.222	.149	.042	-.075	-.196	-.314	-.475	-.604	-.778
		.500	.212	.164	.108	.017	-.072	-.145	-.211	-.310	-.397	-.498
		.750	.126	.100	.066	.003	-.050	-.093	-.128	-.177	-.219	-.270
		.875	.073	.058	.038	.001	-.031	-.055	-.074	-.100	-.121	-.145
20°	Upper	.025	-.092	-.068	-.029	.046	.148	.224		.447		
		.250	-.083	-.066	-.039	.010	.078	.147		.381		
		.500	-.053	-.041	-.023	.016	.059	.096		.236		
		.750	-.026	-.020	-.011	.012	.070	.092		.130		
		.875	-.013	-.011	-.005	.006	.022	.036		.072		
	Lower	.025	.363	.280	.196	.105	.044	-.006		-.055		
		.250	.318	.251	.178	.098	.041	-.004		-.062		
		.500	.239	.191	.134	.071	.018	-.019		-.053		
		.750	.142	.114	.082	.045	.009	-.012		-.027		
		.875	.082	.067	.049	.028	.006	-.005		-.014		
	Total	.025	.455	.348	.225	.059	-.098	-.230		-.502		
		.250	.401	.317	.217	.088	-.037	-.151		-.443		
		.500	.292	.232	.157	.055	-.041	-.115		-.289		
		.750	.168	.134	.093	.033	-.061	-.104		-.157		
		.875	.095	.078	.054	.022	-.016	-.041		-.086		
25°	Upper	.025	-.090	-.055	-.016	.059	.099	.172	.259	.401	.494	.739
		.250	-.083	-.062	-.040	.017	.090	.164	.268	.345	.495	.648
		.500	-.052	-.036	-.032	.008	.060	.100	.160	.241	.334	.446
		.750	-.026	-.019	-.018	.001	.035	.058	.088	.124	.161	.205
		.875	-.013	-.010	-.010	-.001	.018	.032	.047	.064	.084	.104
	Lower	.025	.589	.479	.362	.236	.114	.025	-.013	-.029	-.041	-.068
		.250	.495	.406	.312	.207	.130	.049	.009	-.027	-.041	-.069
		.500	.363	.300	.228	.146	.081	.010	-.018	-.037	-.043	-.058
		.750	.203	.169	.130	.085	.044	-.006	-.017	-.022	-.023	-.030
		.875	.112	.095	.074	.049	.026	-.004	-.009	-.011	-.011	-.015
	Total	.025	.679	.534	.378	.177	.015	-.147	-.272	-.430	-.535	-.807
		.250	.578	.468	.352	.190	.040	-.115	-.259	-.372	-.536	-.717
		.500	.415	.336	.260	.138	.021	-.090	-.178	-.278	-.377	-.504
		.750	.229	.188	.148	.084	.009	-.064	-.105	-.146	-.184	-.235
		.875	.125	.105	.084	.048	.008	-.036	-.056	-.075	-.095	-.119

TABLE III.- SPAN LOADING COEFFICIENTS OF THE WINGS IN THE PRESENCE OF THE BODY - UPPER SURFACE, LOWER SURFACE, AND TOTAL - Continued

(c) A = 2 rectangular wing, r/s = 0.2

α_B		y/s	δ_w 45°	40°	35°	30°	25°	20°	15°	10°	6°	3°	0°
0°	Upper	.025			-.081	-.074	-.076	-.066	-.056	-.034	-.018	.001	.015
		.250			-.089	-.084	-.084	-.079	-.073	-.051	-.033	-.036	.017
		.563			-.092	-.087	-.086	-.083	-.077	-.060		-.020	.006
		.875			-.090	-.085	-.082	-.076	-.071	-.046	-.030	-.010	.010
	Lower	.025			.825	.602	.427	.317	.220	.141	.081	.049	.015
		.250			1.004	.842	.648	.476	.329	.204	.122	.068	.017
		.563			.991	.849	.648	.468	.313	.190	.108	.047	.006
		.875			.948	.765	.574	.419	.280	.176	.098	.046	.010
	Total	.025			.906	.676	.503	.383	.276	.175	.099	.048	.000
		.250			1.093	.926	.732	.555	.402	.255	.155	.124	.000
		.563			1.083	.936	.734	.551	.390	.250	.150	.067	.000
		.875			1.038	.850	.656	.495	.351	.222	.128	.056	.000
3°	Upper	.025			-.087	-.079	-.068	-.062	-.061	-.053	-.044	-.033	-.019
		.250			-.092	-.086	-.080	-.073	-.074	-.067	-.061	-.050	-.034
		.563			-.093	-.087	-.079	-.075	-.076	-.068	-.062	-.051	-.025
		.875			-.090	-.086	-.077	-.072	-.067	-.059	-.050	-.039	-.013
	Lower	.025			.883	.795	.570	.416	.299	.188	.135	.093	.057
		.250			1.114	.936	.770	.571	.411	.269	.177	.112	.066
		.563			1.082	.935	.761	.559	.389	.244	.154	.090	.046
		.875			1.020	.854	.669	.483	.340	.217	.137	.081	.042
	Total	.025			.970	.874	.638	.478	.360	.241	.179	.126	.076
		.250			1.206	1.022	.850	.644	.485	.336	.238	.162	.090
		.563			1.175	1.022	.840	.634	.465	.312	.216	.141	.071
		.875			1.110	.940	.746	.555	.407	.276	.187	.120	.055
6°	Upper	.025				-.087	-.092	-.084	-.073	-.072	-.069	-.049	-.037
		.250				-.094	-.096	-.092	-.088	-.085	-.071	-.065	-.044
		.563				-.096	-.101	-.090	-.088	-.086	-.066	-.062	-.041
		.875				-.092	-.096	-.095	-.084	-.073	-.061	-.045	-.032
	Lower	.025				.754	.730	.562	.412	.299	.224	.172	.125
		.250				.979	.836	.670	.492	.345	.249	.181	.125
		.563				.920	.843	.666	.482	.320	.222	.155	.104
		.875				.930	.764	.578	.416	.280	.193	.137	.093
	Total	.025				.841	.822	.646	.485	.371	.293	.221	.162
		.250				1.073	.932	.762	.580	.430	.320	.246	.169
		.563				1.086	.944	.756	.570	.406	.288	.217	.145
		.875				1.022	.860	.673	.500	.353	.254	.182	.125
10°	Upper	.025						-.088	-.086	-.080	-.076	-.078	-.064
		.250						-.091	-.090	-.084	-.081	-.080	-.068
		.563						-.090	-.087	-.082	-.077	-.074	-.062
		.875						-.087	-.083	-.077	-.074	-.069	-.048
	Lower	.025						.539	.546	.414	.312	.256	.195
		.250						.784	.629	.466	.358	.281	.211
		.563						.831	.659	.476	.357	.271	.199
		.875						.753	.579	.416	.315	.242	.177
	Total	.025						.627	.638	.494	.388	.334	.259
		.250						.875	.719	.550	.439	.361	.279
		.563						.921	.746	.558	.434	.345	.261
		.875						.840	.662	.493	.389	.311	.225

TABLE III.- SPAN LOADING COEFFICIENTS OF THE WINGS IN THE PRESENCE OF THE BODY - UPPER SURFACE, LOWER SURFACE, AND TOTAL - Continued

(c) A = 2 rectangular wing, r/s = 0.2 - Continued

α_B		y/s	δ_W -3°	-6°	-10°	-15°	-20°	-25°	-30°	-35°	-40°	-45°
0°	Upper	.025										
		.250										
		.563										
		.875										
	Lower	.025										
		.250										
		.563										
		.875										
	Total	.025										
		.250										
		.563										
		.875										
3°	Upper	.025	-.001	.016	.044	.108	.200	.307	.474	.628	.741	
		.250	.003	.036	.095	.195	.318	.470	.639	.833	1.001	
		.563	.005	.037	.096	.199	.322	.487	.658	.840	1.014	
		.875	.012	.042	.096	.190	.304	.447	.598	.781	.955	
	Lower	.025	.027	.007	-.018	-.048	-.062	-.076	-.081	-.085	-.089	
		.250	.026	-.004	-.034	-.063	-.073	-.084	-.086	-.090	-.095	
		.563	.008	-.018	-.046	-.070	-.078	-.088	-.088	-.093	-.098	
		.875	.011	-.012	-.036	-.062	-.073	-.083	-.084	-.091	-.095	
	Total	.025	.028	-.009	-.062	-.156	-.262	-.383	-.555	-.713	-.830	
		.250	.023	-.040	-.129	-.258	-.391	-.554	-.725	-.923	-1.096	
		.563	.003	-.055	-.142	-.269	-.400	-.575	-.746	-.933	-1.112	
		.875	-.001	-.054	-.132	-.252	-.377	-.530	-.682	-.872	-1.050	
6°	Upper	.025	-.033	-.026	-.004	.031	.098	.209	.348	.548	.69[illegible]	
		.250	-.043	-.022	.028	.102	.208	.334	.505	.683	.88[illegible]	
		.563	-.046	-.003	.050	.129	.231	.385	.556	.736	.93[illegible]	
		.875	-.020	.020	.061	.140	.227	.375	.533	.696	.89[illegible]	
	Lower	.025	.079	.043	.009	-.027	-.043	-.059	-.069	-.075	-.07	
		.250	.075	.038	.000	-.033	-.049	-.063	-.072	-.077	-.08	
		.563	.056	.024	-.014	-.041	-.052	-.065	-.070	-.076	-.080	
		.875	.051	.030	-.010	-.036	-.048	-.061	-.071	-.076	-.083	
	Total	.025	.112	.069	.013	-.058	-.141	-.268	-.417	-.623	-.770	
		.250	.118	.060	-.028	-.135	-.257	-.397	-.577	-.760	-.969	
		.563	.102	.027	-.064	-.170	-.283	-.450	-.626	-.812	-1.016	
		.875	.071	.010	-.071	-.176	-.275	-.436	-.604	-.772	-.973	
10°	Upper	.025	-.062	-.053	-.051	-.018	.037	.102	.188	.329	.523	
		.250	-.071	-.059	-.040	.013	.097	.203	.325	.507	.683	
		.563	-.059	-.040	-.008	.063	.156	.276	.413	.615	.762	
		.875	-.042	-.017	.015	.082	.179	.291	.422	.591	.755	
	Lower	.025	.140	.087	.039	-.013	-.039	-.061	-.067	-.065	-.078	
		.250	.156	.101	.047	-.009	-.043	-.063	-.067	-.069	-.080	
		.563	.142	.089	.036	-.016	-.049	-.065	-.070	-.070	-.080	
		.875	.129	.081	.037	-.010	-.038	-.059	-.066	-.069	-.080	
	Total	.025	.202	.140	.090	.005	-.076	-.163	-.255	-.394	-.601	
		.250	.227	.160	.087	-.022	-.140	-.266	-.392	-.576	-.763	
		.563	.201	.129	.044	-.079	-.205	-.341	-.483	-.685	-.842	
		.875	.171	.098	.022	-.092	-.217	-.350	-.488	-.660	-.835	

TABLE III.- SPAN LOADING COEFFICIENTS OF THE WINGS IN THE PRESENCE OF THE BODY - UPPER SURFACE, LOWER SURFACE, AND TOTAL - Continued

(c) A = 2 rectangular wing, r/s = 0.2 - Continued

α_B		y/s	δ_w 45°	40°	35°	30°	25°	20°	15°	10°	6°	3°	0°
15°	Upper	.025					-.074	-.092	-.083	-.084	-.076	-.080	-.073
		.250					-.081	-.097	-.085	-.085	-.078	-.080	-.071
		.563					-.083	-.097	-.086	-.083	-.079	-.079	-.071
		.875					-.082	-.091	-.083	-.083	-.074	-.075	-.064
	Lower	.025					.873	.735	.641	.515	.431	.363	.275
		.250					1.121	.964	.813	.632	.486	.398	.310
		.563					1.189	1.034	.879	.677	.522	.421	.325
		.875					1.144	.967	.795	.602	.462	.375	.285
	Total	.025					.947	.827	.724	.599	.507	.443	.348
		.250					1.202	1.061	.898	.717	.564	.478	.381
		.563					1.272	1.131	.965	.760	.601	.500	.396
		.875					1.226	1.058	.878	.685	.536	.450	.349
20°	Upper	.025							-.097	-.093	-.088	-.086	
		.250							-.097	-.092	-.087	-.084	
		.563							-.096	-.091	-.082	-.079	
		.875							-.095	-.088	-.078	-.069	
	Lower	.025							.868	.770	.633	.540	
		.250							1.069	.886	.716	.545	
		.563							1.148	.957	.778	.649	
		.875							1.047	.860	.696	.582	
	Total	.025							.965	.863	.721	.626	
		.250							1.166	.978	.803	.629	
		.563							1.244	1.048	.860	.728	
		.875							1.142	.948	.774	.651	
25°	Upper	.025								-.070	-.071	-.073	-.072
		.250								-.072	-.073	-.072	-.073
		.563								-.066	-.067	-.069	-.068
		.875								-.064	-.064	-.064	-.061
	Lower	.025								1.039	.882	.748	.602
		.250								1.139	.966	.821	.696
		.563								1.199	1.033	.892	.757
		.875								1.017	.863	.740	.626
	Total	.025								1.109	.953	.821	.674
		.250								1.211	1.038	.893	.769
		.563								1.265	1.100	.961	.825
		.875								1.081	.927	.804	.687

TABLE III.- SPAN LOADING COEFFICIENTS OF THE WINGS IN THE PRESENCE OF THE BODY - UPPER SURFACE, LOWER SURFACE, AND TOTAL - Concluded

(c) A = 2 rectangular wing, r/s = 0.2 - Concluded

α_B		y/s	δ_w -3°	-6°	-10°	-15°	-20°	-25°	-30°	-35°	-40°	-45°
15°	Upper	.025	-.064	-.078	-.060	-.028	.037	.098	.193	.294	.456	
		.250	-.066	-.073	-.048	-.003	.071	.172	.302	.455	.636	
		.563	-.056	-.060	-.022	.049	.119	.239	.383	.561	.752	
		.875	-.046	-.033	-.004							
	Lower	.025	.206	.148	.087	.018	-.022	-.051	-.067	-.074	-.083	
		.250	.248	.183	.115	.034	-.015	-.047	-.062	-.072	-.080	
		.563	.251	.182	.105	.028	-.019	-.053	-.067	-.075	-.082	
		.875	.221	.164	.099	.032	-.009	-.025	-.057	-.066	-.077	
	Total	.025	.270	.226	.147	.046	-.059	-.149	-.260	-.368	-.539	
		.250	.314	.256	.163	.037	-.086	-.219	-.364	-.527	-.716	
		.563	.307	.242	.127	-.021	-.138	-.292	-.450	-.636	-.834	
		.875	.267	.197	.103	-.012	-.154	-.290	-.447	-.622	-.808	
20°	Upper	.025	-.075	-.078	-.055	-.023	.042	.131	.208	.325	.485	
		.250	-.074	-.075	-.043	-.009	.065	.167	.295	.445	.618	
		.563	-.065	-.060	-.021	.026	.105	.214	.354	.522	.720	
		.875	-.051	-.046	-.003	.050	.115	.209	.329	.464	.629	
	Lower	.025	.333	.254	.162	.066	.024	-.017	-.040	-.059	-.068	
		.250	.403	.312	.213	.100	.038	-.009	-.038	-.057	-.066	
		.563	.431	.331	.221	.104	.038	-.010	-.040	-.057	-.068	
		.875	.389	.301	.204	.101	.048	.001	-.029	-.048	-.064	
	Total	.025	.408	.332	.217	.089	-.018	-.148	-.248	-.384	-.553	
		.250	.477	.387	.256	.109	-.027	-.176	-.333	-.502	-.684	
		.563	.496	.391	.242	.078	-.067	-.224	-.394	-.579	-.788	
		.875	.440	.347	.207	.051	-.067	-.208	-.358	-.512	-.693	
25°	Upper	.025	-.066	-.069	-.046	.006	.085	.165	.227		.556	
		.250	-.068	-.063	-.043	.015	.089	.181	.302		.634	
		.563	-.065	-.062	-.023	.043	.123	.214	.331		.709	
		.875	-.060	-.045	-.023	.029	.079	.130	.228		.514	
	Lower	.025	.476	.387	.267	.170	.078	.018	-.019		-.054	
		.250	.578	.469	.343	.218	.115	.043	-.016		-.058	
		.563	.631	.507	.366	.228	.118	.042	-.018		-.059	
		.875	.517	.421	.308	.188	.089	.023	-.027		-.064	
	Total	.025	.542	.456	.313	.164	-.007	-.147	-.246		-.610	
		.250	.646	.532	.386	.203	.026	-.138	-.318		-.692	
		.563	.696	.569	.389	.185	-.005	-.172	-.349		-.768	
		.875	.577	.466	.331	.159	.010	-.107	-.255		-.578	

$\Delta C_{n_{B(W)}}$

TABLE IV.- LONGITUDINAL INTERFERENCE LOADING COEFFICIENTS OF THE BODY IN THE PRESENCE OF THE WINGS

(a) A = 4 triangular wing, r/s = 0.2

α_B	x/r	δ_W 45°	40°	35°	30°	25°	20°	15°	10°	6°	3°	0°
	11.34	-.004	.000	.000	-.001	-.001	.001	.001	.001	.000	.000	
	12.59	.001	.001	.001	.002	.001	.001	.001	.001	.001	.001	
	13.84	-.039	.000	.000	.000	.000	.000	.000	.000	.000	.000	
	15.09	.039	.011	-.008	-.005	-.021	.059	.000	-.002	-.003	-.002	
	16.34	.093	.064	.043	.056	.062	.060	.044	.027	.016	.009	
0°	17.56	.167	.110	.097	.116	.121	.100	.084	.061	.034	.018	
	18.84	.060	.111	.148	.131	.104	.086	.068	.057	.037	.018	
	20.09	.048	.081	.107	.104	.102	.087	.068	.050	.033	.016	
	21.34	.027	.045	.055	.071	.072	.069	.060	.039	.025	.014	
	22.59	.013	.022	.030	.044	.046	.049	.046	.036	.024	.012	
	23.84	.016	.010	.008	.021	.027	.033	.033	.027	.017	.008	
	25.09	.014	-.005	-.005	-.005	.009	.012	.016	.014	.005	-.002	
	11.34	-.008	-.002	-.002	-.002	-.002	.001	-.002	-.002	-.002	-.001	-.001
	12.59	-.003	-.003	-.003	-.003	-.003	-.003	-.002	-.002	-.003	-.002	-.001
	13.84	.001	.001	.000	.000	.000	.001	.000	.000	-.001	.000	.001
	15.09	.067	-.029	-.074	-.058	-.053	-.083	.006	-.001	-.001	-.001	-.001
	16.34	.128	.112	.086	.089	.091	.083	.060	.040	.030	.022	.014
3°	17.56	.202	.166	.149	.164	.169	.141	.116	.068	.063	.048	.031
	18.84	.097	.138	.158	.168	.136	.108	.100	.091	.072	.055	.032
	20.09	.095	.109	.128	.138	.133	.113	.093	.063	.047	.038	.022
	21.34	.053	.069	.087	.101	.099	.084	.076	.055	.040	.032	.017
	22.59	.020	.027	.042	.049	.057	.055	.053	.041	.028	.020	.010
	23.84	-.010	.009	.016	.024	.027	.027	.028	.022	.014	.012	.005
	25.09	-.007	.002	.008	.014	.012	.011	.017	.015	.012	.010	.005
	11.34			.000	-.001	.000	-.001	-.001	.001	-.001	.000	-.003
	12.59			-.001	-.002	-.002	.001	-.002	.000	-.001	-.001	.001
	13.84			-.006	.002	.001	.003	.002	.002	.002	.002	.003
	15.09			-.005	-.028	.048	.089	.008	.008	.009	.008	.007
	16.34			.150	.130	.111	.095	.074	.052	.043	.040	.029
6°	17.56			.194	.180	.188	.166	.139	.111	.086	.066	.048
	18.84			.147	.165	.171	.136	.125	.118	.098	.072	.050
	20.09			.137	.156	.160	.126	.101	.068	.062	.059	.044
	21.34			.096	.116	.121	.107	.095	.071	.052	.048	.037
	22.59			.041	.057	.068	.065	.058	.049	.039	.035	.026
	23.84			-.004	.007	.015	.025	.025	.024	.016	.013	.009
	25.09			-.021	-.014	-.013	-.010	.001	.006	.001	.001	-.001
	11.34			-.009	-.011	-.009	-.009	-.012	-.018	-.008	-.015	-.009
	12.59			.000	-.002	.002	.002	.000	-.002	.000	.000	.000
	13.84			-.040	-.010	.000	-.001	-.003	-.004	-.002	-.002	-.002
	15.09			-.028	-.003	-.060	.101	.010	.002	.007	.004	.002
	16.34			.224	.165	.124	.093	.061	.050	.042	.047	.040
10°	17.56			.241	.187	.213	.189	.148	.103	.077	.061	.047
	18.84			.149	.145	.186	.159	.146	.128	.104	.065	.048
	20.09			.113	.135	.146	.135	.101	.088	.084	.067	.053
	21.34			.055	.075	.093	.097	.076	.063	.061	.052	.036
	22.59			.027	.037	.053	.056	.056	.050	.045	.042	.030
	23.84			-.002	.005	.008	.012	.015	.022	.019	.018	.013
	25.09			-.005	-.004	-.003	-.007	.003	.009	.014	.015	.016
	11.34				-.017	-.017	-.017	-.015	-.014	-.014	-.013	-.015
	12.59				.001	.001	.001	.002	.002	.002	.002	.001
	13.84				-.048	-.028	.003	.000	.001	.001	.000	.000
	15.09				-.023	-.074	-.119	.006	.003	.006	.004	.000
	16.34				.279	.240	.198	.144	.097	.089	.118	.126
15°	17.56				.248	.272	.238	.174	.102	.082	.063	.055
	18.84				.214	.214	.193	.178	.129	.104	.074	.061
	20.09				.125	.130	.137	.131	.115	.114	.093	.074
	21.34				.072	.081	.083	.084	.088	.088	.078	.067
	22.59				.048	.057	.054	.068	.071	.075	.065	.059
	23.84				.020	.026	.017	.022	.041	.032	.026	.023
	25.09				.015	.029	.034	.035	.036	.054	.054	.049
	11.34				-.019	-.019	-.019	-.022	-.018	-.020	-.037	-.036
	12.59				-.005	.006	.007	.003	.007	.007	.006	.006
	13.84				-.068	-.039	-.009	.002	.007	.006	.006	.007
	15.09				-.028	-.141	-.118	.002	.009	.004	.002	.002
	16.34				.213	.193	.140	.081	.052	.034	.035	.028
20°	17.56				.243	.323	.324	.207	.120	.070	.067	.064
	18.84				.233	.217	.220	.224	.167	.097	.090	.072
	20.09				.184	.178	.171	.148	.139	.115	.106	.088
	21.34				.119	.137	.145	.139	.124	.114	.106	.090
	22.59				.087	.106	.120	.128	.130	.114	.108	.094
	23.84				.070	.081	.098	.099	.104	.095	.088	.078
	25.09				.083	.100	.123	.120	.124	.111	.107	.093
	11.34						-.035	-.035	-.034	-.038	-.035	-.033
	12.59						.001	.000	-.002	-.004	.002	.000
	13.84						.032	-.002	-.002	-.003	.002	.001
	15.09						.114	-.004	-.001	-.002	.001	-.001
	16.34						.153	.081	.046	.027	.020	.015
25°	17.56						.398	.206	.120	.096	.070	.072
	18.84						.238	.261	.207	.190	.140	.107
	20.09						.238	.217	.166	.156	.139	.118
	21.34						.286	.216	.189	.170	.139	.118
	22.59						.194	.198	.162	.152	.127	.102
	23.84						.207	.189	.173	.162	.143	.126
	25.09						.206	.202	.168	.158	.142	.128

[redacted]

TABLE IV.- LONGITUDINAL INTERFERENCE LOADING COEFFICIENTS OF THE BODY IN THE PRESENCE OF THE WINGS - Continued

(a) A = 4 triangular wing, r/s = 0.2 - Concluded

α_B	x/r	δ_W									
		-3°	-6°	-10°	-15°	-20°	-25°	-30°	-35°	-40°	-45°
0°	11.34										
	12.59										
	13.84										
	15.09										
	16.34										
	17.56										
	18.84										
	20.09										
	21.34										
	22.59										
	23.84										
	25.09										
3°	11.34	-.001	-.001	-.007	-.001	-.007	-.002	.000	-.002	-.001	.000
	12.59	-.003	-.002	-.006	-.002	-.001	-.001	-.003	-.003	.000	.000
	13.84	.001	.001	-.003	.000	.001	.000	.002	-.001	.000	.001
	15.09	.002	.005	.006	.009	.017	-.002	-.002	-.003	-.009	-.021
	16.34	.010	-.001	-.014	-.019	-.011	-.007	.005	-.009	-.023	-.032
	17.56	.010	-.004	-.024	-.042	-.054	-.034	-.047	-.045	-.072	-.082
	18.84	.013	-.004	-.024	.043	-.062	-.013	-.049	-.097	-.072	-.043
	20.09	.011	-.007	-.027	-.037	-.054	-.015	-.048	-.073	-.046	-.031
	21.34	.005	-.007	-.024	-.037	-.038	-.032	-.033	-.024	-.035	-.023
	22.59	-.001	-.010	-.026	-.037	-.037	-.021	-.016	-.014	-.033	-.030
	23.84	-.005	-.012	-.024	-.024	-.024	-.006	-.009	-.006	-.030	-.029
	25.09	-.002	-.007	-.009	-.014	-.011	.007	-.002	.003	-.016	-.016
6°	11.34	-.002	-.004	-.003	-.001	-.002	-.002	-.002	-.002	-.001	.000
	12.59	.001	.000	-.001	-.002	-.001	-.003	.001	-.001	.000	.001
	13.84	.003	.001	.001	.003	.001	.002	.002	.002	.002	.002
	15.09	.007	.007	.012	.019	.007	.003	.003	.003	.003	-.018
	16.34	.023	.023	.027	.008	.005	.013	.052	.045	.034	.067
	17.56	.036	.021	.003	-.007	-.021	-.044	-.054	-.047	-.038	-.059
	18.84	.034	.022	.004	-.021	-.027	-.033	-.049	-.068	-.079	-.063
	20.09	.030	.019	.001	-.011	-.019	-.021	-.023	-.029	-.031	-.031
	21.34	.026	.014	.000	-.008	-.010	-.014	-.016	-.025	-.039	-.028
	22.59	.014	.004	-.005	-.010	-.010	-.006	-.015	-.033	-.038	-.034
	23.84	.002	-.005	-.010	-.012	-.013	-.012	-.016	-.031	-.038	-.044
	25.09	-.004	-.007	-.012	-.015	-.020	-.016	-.018	-.023	-.025	-.034
10°	11.34	-.010	-.017	-.007	-.008	-.008	-.007	-.009	-.010	-.009	-.010
	12.59	-.002	-.021	.001	.001	.002	.001	.000	.000	.001	.001
	13.84	-.003	-.005	.000	-.001	.001	.000	-.001	.000	.000	-.001
	15.09	.002	.004	.015	.024	.004	.002	.002	.003	.002	.003
	16.34	.035	.027	.034	.017	.015	.022	.072	.056	.038	.099
	17.56	.041	.028	.021	.004	-.008	-.036	-.045	-.056	-.053	-.044
	18.84	.039	.028	.009	-.006	-.020	-.030	-.037	-.046	-.065	-.060
	20.09	.042	.023	.011	.001	.010	-.014	-.014	-.020	-.026	-.038
	21.34	.027	.000	.005	-.002	-.003	-.001	.002	-.005	-.015	-.023
	22.59	.017	.011	.003	-.002	-.001	.006	.004	.003	-.009	-.023
	23.84	.006	-.001	-.010	-.012	-.005	-.002	-.003	-.004	-.019	-.040
	25.09	.015	.009	.002	.000	.010	.013	.005	.007	-.004	-.021
15°	11.34	-.015	-.025		-.014		-.016	-.015	-.015	-.014	-.015
	12.59	.004	.004		.003		.003	.004	.003	.003	.002
	13.84	.001	.001		.002		.002	.004	.003	.003	.000
	15.09	.002	.002		.030		.000	.002	.001	-.001	-.001
	16.34	.049	.039		.036		.035	.083	.082	.049	.124
	17.56	.047	.039		.015		-.012	-.039	-.054	-.074	-.064
	18.84	.048	.035		-.003		-.028	-.038	-.045	-.047	-.068
	20.09	.061	.040		.003		-.007	-.005	-.008	-.014	-.028
	21.34	.060	.045		.015		.005	.008	.006	.001	-.014
	22.59	.056	.041		.008		.008	.010	.007	.003	.001
	23.84	.017	.004		-.002		-.018	-.019	-.021	-.025	-.030
	25.09	.049	.038		.004		.002	.002	.000	-.007	-.019
20°	11.34	-.017	-.035	-.021	-.020	-.017	-.021	.030	-.021	-.014	-.020
	12.59	.010	.009	.010	.011	.009	.004	-.004	.003	.011	.005
	13.84	.011	.009	.011	.010	.009	.003	-.004	.004	.010	.004
	15.09	.004	.001	.023	.041	.003	-.003	-.010	-.003	.004	-.002
	16.34	.031	.011	.037	.027	.017	.001	.007	.017	.027	.103
	17.56	.056	.050	.035	.024	.006	-.016	-.066	-.083	-.082	-.086
	18.84	.052	.036	.018	.005	-.016	-.030	-.034	-.037	-.032	-.047
	20.09	.075	.047	.029	.007	.004	-.002	-.010	-.009	-.012	-.030
	21.34	.082	.063	.033	.015	.005	-.003	-.008	-.003	-.003	-.014
	22.59	.084	.062	.029	.011	.000	-.003	-.013	-.002	.004	.000
	23.84	.065	.044	.017	-.003	-.012	-.016	-.027	-.017	-.010	-.021
	25.09	.081	.061	.032	.012	.004	-.005	-.034	-.006	-.002	-.015
25°	11.34		-.030	-.034	-.032	-.032	-.031	-.026	-.030	-.030	-.032
	12.59		.005	.001	.004	.004	.003	.007	.005	.005	.003
	13.84		.005	.003	.005	.005	.004	.010	.008	.008	.005
	15.09		.001	.029	.042	.033	-.001	.002	.001	.001	-.003
	16.34		.017	.022	.016	.002	-.013	.007	.021	-.036	.029
	17.56		.067	.038	.022	.004	-.019	-.025	-.090	-.093	-.093
	18.84		.065	.040	.017	.005	-.008	-.010	-.024	-.027	-.039
	20.09		.086	.038	.018	.004	-.008	-.007	-.014	-.020	-.031
	21.34		.092	.038	.014	.003	-.004	-.006	-.008	-.007	-.012
	22.59		.071	.021	-.003	-.006	-.012	.008	-.007	-.002	-.008
	23.84		.097	.039	.016	.013	.005	.014	.015	.019	.012
	25.09		.099	.050	.031	.026	.019	.026	.029	.030	.020

4 Fn B(ω)

TABLE IV.- LONGITUDINAL INTERFERENCE LOADING COEFFICIENTS OF THE BODY IN THE PRESENCE OF THE WINGS - Continued

(b) A = 2 triangular wing, r/s = 0.2

α_B	x/r	δ_w 45°	40°	35°	30°	25°	20°	15°	10°	6°	3°	0°
0°	11.34	.001	.001	.001	.001	-.001	.001	.001	.001	.001	-.003	-.072
	12.59	.001	.001	.001	.001	.001	.001	.001	-.006	-.002	.000	.000
	13.84	-.003	.000	.000	.000	.000	-.038	-.089	.016	.005	.002	.000
	15.09	.019	-.018	-.017	-.374	-.182	.021	.040	.038	.019	.009	.000
	16.34	-.100	-.039	.004	.071	.083	.088	.079	.056	.027	.013	-.001
	17.56	.126	.101	.007	.074	.089	.088	.082	.057	.042	.023	.001
	18.84	.077	.099	.011	.124	.126	.103	.079	.061	.052	.026	-.002
	20.09	.057	.088	.009	.117	.124	.111	.077	.047	.036	.026	-.001
	21.34	.067	.048	.006	.057	.099	.098	.067	.059	.040	.018	.000
	22.59	.047	.035	.004	.051	.071	.061	.054	.049	.030	.013	.003
	23.84	.019	.004	.003	.015	.027	.035	.060	.040	.023	.010	.000
	25.09	.007	-.011	-.005	-.020	.005	.021	.028	.021	.012	.001	-.004
3°	11.34	-.014	.001	.000	.001	.000	.001	.001	.001	.000	.000	.005
	12.59	-.003	-.003	.000	.001	.001	.001	.001	-.018	.005	.001	.003
	13.84	-.002	-.092	-.091	-.043	-.036	.086	-.122	.029	.024	.015	.009
	15.09	.008	-.082	-.182	-.368	-.183	.042	.072	.062	.040	.026	.020
	16.34	.020	.098	.108	.147	.121	.118	.105	.081	.057	.038	.024
	17.56	.013	.149	.119	.154	.130	.129	.104	.099	.076	.060	.041
	18.84	.006	.142	.147	.189	.164	.146	.121	.081	.097	.068	.042
	20.09	.009	.083	.103	.162	.157	.152	.114	.085	.075	.065	.043
	21.34	.007	.082	.069	.113	.135	.147	.104	.099	.063	.040	.024
	22.59	.000	.059	.047	.099	.109	.100	.085	.067	.044	.029	.010
	23.84	-.010	.026	.017	.072	.061	.045	.066	.047	.028	.012	.000
	25.09	.037	.001	.013	.057	.025	.034	.049	.033	.015	.006	.000
6°	11.34		-.056	-.003	-.001	-.001	.008	-.007	-.002	-.004	-.001	-.001
	12.59		-.071	-.064	-.014	-.004	-.004	-.004	-.027	.005	-.001	.000
	13.84		-.015	-.042	-.072	-.071	.088	-.159	.028	.045	.030	.022
	15.09		-.312	-.388	-.325	-.125	.031	.086	.074	.084	.046	.037
	16.34		.239	.193	.182	.151	.134	.101	.079	.061	.051	.042
	17.56		.272	.214	.178	.150	.140	.253	.130	.099	.080	.064
	18.84		.172	.165	.173	.169	.084	.133	.108	.129	.098	.072
	20.09		.086	.090	.118	.152	.176	.135	.110	.107	.100	.073
	21.34		.114	.095	.086	.135	.179	.138	.114	.075	.066	.055
	22.59		.101	.078	.079	.110	.119	.181	.092	.065	.041	.034
	23.84		.056	.039	.046	.057	.058	.064	.046	.020	.015	.009
	25.09		-.008	.002	.022	.028	.012	.026	.019	.008	.002	-.002
10°	11.34		-.066	-.041	-.013	-.005	-.002	-.002	-.003	-.002	-.003	-.003
	12.59		-.089	-.067	-.048	-.022	-.008	-.008	-.042	.005	-.003	-.004
	13.84		.025	-.064	-.085	-.111	-.157	-.196	.036	.047	.038	.034
	15.09		-.180	-.320	-.266	-.057	.082	.090	.070	.058	.059	.046
	16.34		.442	.288	.239	.184	.165	.125	.098	.085	.075	.058
	17.56		.360	.299	.245	.184	.144	.129	.141	.135	.115	.091
	18.84		.159	.189	.228	.189	.165	.133	.113	.165	.119	.092
	20.09		.036	.068	.107	.119	.167	.158	.127	.137	.129	.097
	21.34		.057	.073	.079	.086	.124	.158	.134	.100	.093	.078
	22.59		.043	.053	.057	.073	.090	.124	.087	.063	.059	.065
	23.84		.026	.024	.013	.019	.019	.040	.044	.024	.021	.019
	25.09		-.017	-.009	-.006	-.004	.005	.019	.034	.026	.026	.027
15°	11.34				-.040	-.004	-.003	-.001	-.002	-.003	-.003	-.005
	12.59				-.090	-.041	-.007	-.007	.004	-.005	-.002	-.010
	13.84				-.101	-.134	-.145	-.241	.025	.050	.047	.044
	15.09				-.110	.025	.105	.096	.091	.078	.073	.058
	16.34				.344	.266	.201	.169	.148	.128	.084	.061
	17.56				.298	.244	.158	.146	.162	.151	.137	.104
	18.84				.241	.282	.228	.185	.154	.220	.151	.120
	20.09				.045	.122	.178	.200	.156	.186	.167	.121
	21.34				.037	.080	.150	.173	.147	.134	.121	.105
	22.59				.038	.048	.072	.079	.079	.081	.094	.088
	23.84				.040	.025	.000	.009	.014	.039	.048	.038
	25.09				-.012	-.002	.004	.011	.025	.049	.054	.049
20°	11.34					-.051	-.006	.000	.000	-.002	-.001	-.001
	12.59					-.090	.059	-.028	-.048	.002	.000	-.001
	13.84					-.162	-.195	-.187	.014	.059	.062	.062
	15.09					.060	.128	.093	.093	.094	.090	.074
	16.34					.339	.269	.233	.185	.136	.093	.077
	17.56					.256	.203	.163	.186	.186	.165	.128
	18.84					.298	.296	.234	.190	.273	.197	.163
	20.09					.096	.177	.234	.207	.232	.220	.182
	21.34					.088	.141	.192	.199	.171	.163	.155
	22.59					.106	.104	.129	.147	.151	.139	.127
	23.84					.071	.094	.084	.103	.123	.119	.111
	25.09					.061	.092	.100	.109	.129	.128	.121
25°	11.34						-.043	-.017	-.006	-.004	-.005	-.004
	12.59						-.078	-.072	-.060	-.003	-.001	-.003
	13.84						-.191	-.201	.007	.064	.078	.080
	15.09						.146	.136	.131	.126	.115	.097
	16.34						.330	.262	.187	.124	.102	.104
	17.56						.200	.172	.242	.247	.198	.155
	18.84						.330	.247	.230	.335	.253	.208
	20.09						.244	.279	.293	.295	.279	.242
	21.34						.237	.308	.280	.243	.221	.202
	22.59						.229	.244	.254	.230	.200	.171
	23.84						.206	.217	.236	.244	.232	.214
	25.09						.189	.213	.219	.218	.208	.197

[redacted]

TABLE IV.- LONGITUDINAL INTERFERENCE LOADING COEFFICIENTS OF THE BODY IN THE PRESENCE OF THE WINGS - Continued

(b) A = 2 triangular wing, r/s = 0.2 - Concluded

α_B	x/r	δ_w -3°	-6°	-10°	-15°	-20°	-25°	-30°	-35°	-40°	-45°
0°	11.34										
	12.59										
	13.84										
	15.09										
	16.34										
	17.56										
	18.84										
	20.09										
	21.34										
	22.59										
	23.84										
	25.09										
3°	11.34	.003	.001	.001	.000	.001	.000	-.001	.000	.000	.000
	12.59	.009	.010	.002	.000	.002	.000	.000	.000	.001	.001
	13.84	.004	.007	.011	.064	-.002	-.003	-.003	-.003	-.003	-.057
	15.09	.009	.004	.001	-.002	-.009	.172	.380	.179	.051	.045
	16.34	.009	-.004	-.025	-.038	-.039	-.044	-.045	.021	.106	.309
	17.56	.010	-.005	-.027	-.055	-.063	-.058	-.043	-.026	-.044	-.066
	18.84	.019	-.006	-.033	-.050	-.074	-.090	-.101	-.090	-.077	-.058
	20.09	.019	.003	-.016	-.048	-.068	-.080	-.096	-.076	-.088	-.063
	21.34	.009	-.009	-.027	-.038	-.047	-.049	-.043	-.028	-.059	-.039
	22.59	-.001	-.013	-.034	-.041	-.034	-.035	-.029	-.010	-.033	-.030
	23.84	-.008	-.014	-.027	-.045	-.034	-.024	-.006	.002	-.019	-.001
	25.09	-.005	-.010	-.018	-.026	-.037	-.015	.000	.010	.004	.005
6°	11.34	.000	.004	-.001	-.001	.000	-.001	-.001	-.002	-.001	-.001
	12.59	.006	.007	-.008	-.002	-.003	-.003	-.002	-.003	-.003	-.004
	13.84	.023	.012	.014	.038	-.001	-.005	-.002	-.003	-.002	-.004
	18.09	.036	.032	.030	.016	-.006	.148	.349	.174	.116	.089
	16.34	.033	.018	.003	.002	.000	.001	-.005	.046	.144	.247
	17.56	.036	.021	.004	-.020	-.038	-.055	-.039	-.022	-.011	-.026
	18.84	.047	.023	-.002	-.021	-.035	-.063	-.078	-.075	-.070	-.072
	20.09	.048	.028	.009	-.010	-.023	-.035	-.046	-.065	-.072	-.077
	21.34	.038	.014	.002	-.004	-.007	-.005	-.018	-.010	-.051	-.052
	22.59	.023	.005	-.007	-.015	-.012	-.007	-.008	.002	-.008	.006
	23.84	-.002	-.011	-.008	-.027	-.022	-.016	-.008	.002	.003	.015
	25.09	-.007	-.013	-.014	-.031	-.034	-.029	-.007	.002	.010	.012
10°	11.34	-.001	-.003	-.004	-.002	-.004	-.002	-.002	-.003	-.001	-.001
	12.59	.000	.009	-.007	-.006	-.006	-.006	-.005	-.007	-.006	-.006
	13.84	.033	.029	.023	.036	.000	-.006	-.005	-.009	-.006	-.006
	15.09	.046	.050	.042	.026	-.004	.130	.335	.152	.086	.087
	16.34	.056	.042	.030	.025	.011	.011	-.010	.051	.210	.269
	17.56	.054	.036	.008	-.020	-.043	-.059	-.064	-.044	.002	.017
	18.84	.071	.046	.019	-.008	-.025	-.053	-.075	-.082	-.079	-.084
	20.09	.167	.041	.015	.007	-.012	-.016	-.040	-.080	-.095	
	21.34	.052	.027	.011	.002	-.001	-.005	-.004	.003		
	23.84	.035	.014	.005	-.006	-.001	.002	.005	.008	-.012	-.025
	23.84	.011	-.001	-.017	-.016	-.009	-.005	-.004	.003	.004	.011
	25.09	.024	.017	.005	-.002	.000	.005	.006	-.001	.009	.015
15°	11.34	-.001	-.017	-.004	-.002	-.003	-.012	-.003	-.005	-.004	-.005
	12.59	-.003	.020	.008	-.005	-.005	-.006	-.005	-.006	-.006	-.006
	13.84	.043	.050	.038	.033	-.007	-.007	-.007			
	15.09	.052	.062	.068	.048	.047	.094	.338	.113	.013	-.013
	16.37	.061	.040	.043	.040	.028	.013	.811	.044	.160	.277
	17.56	.068	.043	.027	-.007	-.037	-.051	-.084	-.081	-.039	.011
	18.84	.099	.069	.036	.005	-.018	-.058	-.088	-.111	-.107	-.087
	20.09	.091	.066	.042	.012	-.004	-.018	-.028	-.068	-.102	-.107
	21.34	.079	.048	.025	.007	.003	-.004	-.003	-.006	-.028	-.054
	22.59	.069	.042	.015	.006	.002	-.001	.001	.009	.015	-.010
	23.87	.029	.007	-.013	-.020	-.022	-.021	-.013	-.008	.004	.022
	25.09	.048	.033	.010	-.005	-.008	-.025	-.010	-.010	-.018	-.037
20°	11.34	-.002	-.003	-.002	-.002	-.002	-.004	-.003	-.003	-.002	-.008
	12.59	.000	.032	.011	-.003	-.005	-.003	-.005	-.008	-.005	-.011
	13.84	.067	.079	.060	.040	.026	-.004	-.005	-.005	-.004	-.009
	15.09	.076	.087	.101	.079	.066	.088	.297	.137	-.004	-.012
	16.34	.085	.068	.069	.077	.067	.039	.016	.043	.105	.195
	17.56	.081	.059	.044	.004	-.032	-.068	-.093	-.105	-.086	-.047
	18.84	.131	.099	.057	.022	-.008	-.031	-.067	-.111	-.135	-.135
	20.09	.132	.099	.069	.030	.010	-.004	-.017	-.042	-.073	-.016
	21.34	.119	.081	.046	.022	.007	-.006	-.009	-.018	-.031	-.055
	22.59	.101	.070	.036	.011	-.006	-.018	-.016	-.011	.003	-.017
	23.84	.095	.070	.034	.007	-.010	-.020	-.026	-.034	-.025	-.005
	25.09	.098	.071	.034	.009	-.002	-.011	-.014	-.013	-.014	-.039
25°	11.34	-.004	-.005	-.005	-.006	-.005	-.006	-.005	-.006	-.005	-.003
	12.59	-.004	.047	.007	-.007	-.007	-.007	-.007	-.007	-.008	-.005
	13.84	.088	.112	.079	.037	.019	-.004	-.002	-.004	-.004	-.001
	15.09	.103	.110	.146	.114	.098	.093	.132	.162	-.005	-.009
	16.34	.120	.100	.093	.121	.122	.104	.080	.093	.134	
	17.56	.109	.086	.061	.015	-.031	-.065	-.088	-.105	-.095	-.039
	18.84	.174	.138	.089	.048	.017	-.008	-.035	-.037	-.100	-.137
	20.09	.181	.127	.086	.034	.020	-.001	-.015	-.026	-.040	-.060
	21.34	.165	.115	.063	.021	.006	-.011	-.022	-.024	-.019	-.037
	22.59	.132	.093	.045	.020	.008	-.007	-.016	-.014	.004	.022
	23.84	.167	.114	.065	.026	.016	.004	-.004	-.004	-.003	-.014
	25.09	.157	.104	.060	.036	.022	.008	-.005	-.006	-.005	.004

TABLE IV.- LONGITUDINAL INTERFERENCE LOADING COEFFICIENTS OF THE BODY IN THE PRESENCE OF THE WINGS - Continued

(c) A = 1 triangular wing, r/s = 0.2

α_B	x/r	δ_w = 45°	40°	35°	30°	25°	20°	15°	10°	6°	3°	0°
0°	6.94	.000	.001	.001	.001	.000	.000	.001	.001	.000	-.002	.001
	8.37	.001	.003	.003	.002	.002	.002	.002	.002	-.008	.000	.002
	9.81	.000	.000	.000	.000	-.001	.000	-.002	-.030	-.021	.005	.000
	11.25	-.009	-.003	-.003	-.003	-.003	-.003	-.077	-.056	.012	.006	.000
	12.69	.002	-.112	-.079	-.083	-.126	-.222	-.148	-.003	.032	.014	.001
	14.12	-.038	-.061	-.132	-.359	-.431	-.224	-.013	.064	.039	.017	.001
	15.56	-.858	-.707	-.483	-.235	.000	.062	.115	.091	.041	.018	.001
	17.00	-.171	-.136	-.105	-.045	.052	.072	.109	.075	.037	.020	-.001
	18.44	.078	.104	.118	.106	.102	.118	.099	.069	.044	.026	-.002
	19.87	.050	.053	.070	.075	.085	.104	.101	.074	.048	.025	-.004
	21.31	.028	.024	.036	.047	.058	.045	.046	.052	.038	.018	-.010
	22.75	.005	.006	.014	.022	.028	.003	.021	.029	.011	.004	.000
	24.19	-.014	-.014	-.029	-.026	-.023	-.023	-.017	-.002	.017	.011	-.004
	25.62	-.020	-.022	-.020	-.011	-.034	-.023	-.021	-.001	.013	.007	.002
3°	6.94		.001	.001	.002	.002	.002	.002	.003	.003	.000	.002
	8.37		.002	.001	.002	.002	.002	.002	.002	-.007	.006	.009
	9.81		.004	.003	.003	.003	.004	.003	-.035	-.038	.023	.016
	11.25		.000	-.001	.000	.000	-.002	-.090	-.083	.021	.029	.028
	12.69		-.030	-.110	-.114	-.125	-.199	-.179	-.014	.061	.040	.030
	14.12		-.036	-.105	-.303	-.437	-.387	-.016	.079	.072	.048	.030
	15.56		-.658	-.480	-.232	.021	.070	.129	.127	.078	.048	.030
	17.00		-.093	-.076	-.018	.073	.094	.119	.110	.072	.046	.027
	18.44		.142	.159	.160	.144	.138	.132	.112	.086	.059	.036
	19.87		.085	.089	.103	.111	.133	.147	.126	.087	.061	.038
	21.31		.062	.057	.065	.077	.090	.081	.102	.081	.061	.033
	22.75		.022	.029	.032	.038	.039	.067	.059	.041	.033	.028
	24.19		-.024	-.015	-.031	-.018	.000	.021	.023	.037	.025	.007
	25.62		-.049	-.034	-.036	-.033	-.018	.014	.003	.012	.011	.000
6°	6.94			.000	-.001	.000	.000	-.001	.000	.000	-.003	-.001
	8.37			-.001	-.001	-.001	-.001	-.001	.000	-.015	.003	.010
	9.81			-.043	.000	.000	.000	-.001	-.057	-.062	.026	.021
	11.25			-.078	.000	.001	-.003	-.104	-.115	.026	.047	.037
	12.69			.021	-.051	-.068	-.189	-.227	-.038	.068	.059	.047
	14.12			-.293	-.369	-.528	-.337	-.050	.094	.074	.058	.049
	15.56			-.320	-.196	.040	.095	.138	.136	.099	.075	.054
	17.00			.026	.047	.130	.130	.155	.139	.104	.076	.051
	18.44			.204	.188	.183	.169	.160	.140	.120	.092	.063
	19.87			.119	.117	.133	.161	.177	.152	.118	.093	.064
	21.31			.092	.080	.090	.105	.125	.138	.114	.094	.063
	22.75			.047	.042	.043	.053	.081	.094	.070	.066	.041
	24.19			-.017	-.010	-.013	.006	.030	.052	.049	.034	.024
	25.62			-.045	-.014	.004	.011	.024	.032	.028	.021	.010
10°	6.94			-.049	-.002	.000	.000	.001	-.001	.000	-.004	.001
	8.37			-.063	-.052	-.020	.001	.001	.000	-.031	-.004	.013
	9.81			-.080	-.065	-.052	.000	.000	-.084	-.106	.015	.033
	11.25			-.076	-.078	-.066	-.083	-.142	-.143	.005	.045	.053
	12.69			-.040	-.104	-.161	-.260	-.259	-.079	.058	.072	.066
	14.12			-.463	-.493	-.445	-.361	-.050	.115	.105	.088	.069
	15.56			-.246	-.050	.117	.185	.163	.157	.107	.084	.073
	17.00			.105	.147	.189	.181	.183	.165	.140	.111	.082
	18.44			.353	.291	.243	.217	.191	.148	.151	.125	.083
	19.87			.155	.163	.162	.183	.195	.166	.150	.127	.091
	21.31			.083	.096	.107	.108	.146	.156	.149	.134	.100
	22.75			.032	.033	.050	.061	.097	.122	.110	.103	.103
	24.19			-.031	-.013	-.011	.007	.043	.070	.063	.056	.056
	25.62			-.044	-.030	.000	.027	.081	.037	.034	.033	.058
15°	6.94					.000	.001	.004	.009	.009	-.001	.012
	8.37					-.002	.001	.001	.000	-.029	-.004	.014
	9.81					-.044	-.014	.000	-.076	-.152	.004	.046
	11.25					-.102	-.099	-.156	-.131	-.002	.060	.070
	12.69					-.313	-.263	-.202	-.076	.075	.094	.093
	14.12					-.389	-.347	-.032	.123	.124	.114	.098
	15.56					.186	.170	.174	.189	.145	.121	.104
	17.00					.248	.218	.205	.194	.171	.153	.109
	18.44					.308	.247	.207	.178	.192	.180	.116
	19.87					.166	.209	.217	.204	.182	.168	.119
	21.31					.050	.112	.158	.196	.174	.175	.124
	22.75					.003	.031	.103	.149	.125	.140	.129
	24.19					-.058	-.023	.009	.031	.067	.066	.068
	25.62					-.063	-.036	-.009	.018	.072	.085	.093
20°	6.94						-.020	.000	.004	.002	-.001	.001
	8.37						-.047	-.004	.000	-.051	-.013	.016
	9.81						-.093	-.010	-.090	-.181	.007	.066
	11.25						-.339	-.161	-.159	-.005	.076	.098
	12.69						-.304	-.226	-.083	.095	.117	.120
	14.12						-.224	-.030	.135	.146	.136	.129
	15.56						.246	.209	.212	.169	.153	.131
	17.00						.383	.252	.231	.240	.212	.159
	18.44						.303	.252	.210	.267	.245	.178
	19.87						.211	.286	.242	.245	.233	.183
	21.31						.068	.196	.252	.252	.239	.190
	22.75						-.001	.096	.204	.185	.197	.191
	24.19						-.092	.008	.107	.145	.148	.138
	25.62						.029	.022	.075	.142	.154	.150
25°	6.94							-.057	-.007	.000	-.009	-.002
	8.37							-.070	-.004	-.061	-.017	.012
	9.81							-.128	-.127	-.216	.000	.085
	11.25							-.277	-.164	-.034	.090	.116
	12.69							-.264	-.107	.114	.136	.147
	14.12							-.087	.140	.173	.166	.179
	15.56							.232	.237	.212	.189	.198
	17.00							.281	.276	.329	.271	.244
	18.44							.260	.230	.375	.306	.255
	19.87							.335	.311	.349	.316	.260
	21.31							.249	.329	.362	.343	.275
	22.75							.114	.253	.247	.264	.259
	24.19							.030	.210	.267	.280	.269
	25.62							.160	.239	.270	.285	.268

TABLE IV.- LONGITUDINAL INTERFERENCE LOADING COEFFICIENTS OF THE BODY IN THE PRESENCE OF THE WINGS - Continued

(c) A = 1 triangular wing, r/s = 0.2 - Concluded

α_B	x/r	δ_w									
		-3°	-6°	-10°	-15°	-20°	-25°	-30°	-35°	-40°	-45°
0°	.694	.002	.001	.001		.001	.001	.001	.001	.001	
	.837	.002	.017	.003		.001	.001	.002	.002	.003	
	.981	-.003	.011	.044		.000	.000	.000	-.001	.000	
	1.125	-.010	-.022	.037		.034	-.003	-.002	-.003	-.002	
	1.269	-.012	-.031	-.027			.130	.113	.088	.113	
	1.412	-.014	-.037	-.064		.153	.418	.404	.135	.059	
	1.556	-.015	-.037	-.078		-.105	.026	.086	.452	.505	
	1.700	-.016	-.035	-.065		-.101	-.031	-.012	.119	.116	
	1.844	-.028	-.049	-.064		-.106	-.114	-.118	-.119	-.116	
	1.987	-.031	-.059	-.086		-.102	-.093	-.091	-.073	-.063	
	2.131	-.035	-.060	-.075		-.067	-.075	-.071	-.048	-.043	
	2.275	-.015	-.021	-.034		-.025	-.022	-.019	-.023	-.022	
	2.419	-.017	-.025	-.011		.011	.014	.014	.031	.021	
	2.562	-.001	-.007	.000		.024	.035	.024	.024	.027	
3°	.694	.004	.002	.003	.002		.002	.002			
	.837	.008	.011	.003	.002		.001	.002			
	.981	.011	.015	.043	.004		.003	.003			
	1.125	.011	.004	.024	.101		-.001	.000			
	1.269	.016	.005	-.008	.092		.100	.032			
	1.412	.014	-.001	-.026	-.038		.386	.436			
	1.556	.018	-.005	-.037	-.077		.038	.149			
	1.700	.011	-.008	-.037	-.088		-.031	-.001			
	1.844	.012	-.010	-.033	-.076		-.063	-.093			
	1.987	.011	-.015	-.044	-.062		-.074	-.069			
	2.131	.008	-.014	-.030	-.038		-.037	-.048			
	2.275	.016	.007	-.010	-.006		.000	-.013			
	2.419	.003	.000	.004	.012		.017	.005			
	2.562	-.005	-.007	-.004	.000		.027	.014			
6°	.694	-.002	-.001	-.001	.000	.000		.000	.000		
	.837	.011	.005	.000	.000	.000		.000	.000		
	.981	.022	.012	.031	.000	.000		.001	.001		
	1.125	.033	.018	.017	.105	.000		.001	.001		
	1.269	.038	.029	.016	.068	.244		.004	.004		
	1.412	.037	.030	.005	-.032	.124		.485	.248		
	1.556	.040	.023	.004	-.032	-.039		.156	.455		
	1.700	.031	.015	-.001	-.043	-.076		-.010	.107		
	1.844	.041	.016	.000	-.036	-.071		-.080	-.075		
	1.987	.041	.018	.000	-.032	-.050		-.072	-.066		
	2.131	.039	.014	.000	-.014	-.012		-.043	-.044		
	2.275	.047	.021	.009	.010	.015		.005	-.012		
	2.419	.018	.008	.012	.022	.035		.016	.008		
	2.562	.010	.004	.004	.016	.038		.040	.014		
10°	.694		.000	-.001	.000	.000		.000	.001		
	.837		.005	-.001	.000	.000		.000	.000		
	.981		.016	.027	.000	.000		-.001	-.001		
	1.125		.042	.021	.089	.004		.002	.004		
	1.269		.061	.032	.046	.200		.000	-.001		
	1.412		.062	.042	.009	.100		.483	.204		
	1.556		.044	.045	-.005	-.027		.151	.503		
	1.700		.027	.030	-.001	-.067		-.021	.113		
	1.844		.035	.018	-.010	-.079		-.074	-.072		
	1.987		.039	.011	-.014	-.020		-.075	-.090		
	2.131		.035	.011	-.006	-.003		-.062	-.074		
	2.275		.047	.004	-.006	-.003		-.004	-.028		
	2.419		.017	.005	.002	.014		.041	.018		
	2.562		.030	.020	.022	.012		.032	.045		
15°	.694	.005	-.002	-.001	.001	.000	.002	.001		.000	.000
	.837	.047	.004	.000	.001	.000	.003	.002		.000	.001
	.981	.064	.026	.024	.000	.000	.001	.001		.000	.000
	1.125	.074	.068	.025	.036	.001	.002	.003		.001	.001
	1.269	.081	.100	.053	.042	.104	.002	.002		.000	.001
	1.412	.079	.089	.085	.045	.054	.241	.395		.119	.106
	1.556	.076	.062	.077	.044	.021	.033	.132		.825	.978
	1.700	.059	.039	.043	.019	-.048	-.069	-.039		.159	.190
	1.844	.080	.045	.024	-.004	-.063	-.126	-.122		-.079	-.058
	1.987	.088	.049	.015	-.021	-.036	-.073	-.102		-.098	-.106
	2.131	.094	.057	.017	-.008	-.017	-.006	-.056		-.111	-.118
	2.275	.101	.058	.011	-.006	-.019	-.008	.010		-.057	-.070
	2.419	.041	.013	.004	-.006	-.008	.004	.042		-.009	-.059
	2.562	.079	.057	.039	.014	-.016	-.021	-.013		-.038	-.099
20°	.694	.002	.005	-.002	.004	.000	.005	.000	.005		.004
	.837	.066	.013	-.003	.003	.000	.003	-.001	.004		.003
	.981	.097	.051	.025	.005	.000	.003	.000	.004		.002
	1.125	.103	.112	.031	.024	.009	.002	.001	.002		.002
	1.269	.115	.144	.084	.059	.062	.036	.000	-.007		.008
	1.412	.127	.132	.144	.088	.089	.146	.279	.161		.046
	1.556	.129	.101	.183	.115	.083	.068	.097	.483		.781
	1.700	.128	.091	.087	.070	.008	-.051	-.067	.049		.279
	1.844	.132	.096	.058	.019	-.027	-.102	-.146	-.136		-.085
	1.987	.136	.098	.049	.011	-.021	-.042	-.106	-.143		-.136
	2.131	.147	.102	.043	.009	-.019	-.026	-.027	-.068		-.135
	2.275	.150	.107	.032	.009	-.017	-.027	-.010	-.005		-.045
	2.419	.127	.082	.039	.013	-.010	-.022	-.045	-.010		-.061
	2.562	.154	.102	.055	.035	.007	-.013	-.013	-.043		-.049
25°	.694	-.002	.000	.002	-.001						
	.837	.099	.008	.008	-.003	.000	.000	.004	-.002	.003	
	.981	.183	.075	.021	-.002	.000	.000	.002	-.003	.002	
	1.125	.138	.177	.051	.010	.001	-.001	.003	-.003	.008	
	1.269	.168	.208	.153	.048	.035	.040	.002	-.002	.000	
	1.412	.197	.199	.250	.161	.094	.083	.171	.193	.003	
	1.556	.204	.166	.193	.242	.166	.145	.077	.373	.513	
	1.700	.215	.160	.155	.157	.082	.022	-.071	.040	.153	
	1.844	.215	.164	.134	.074	.016	-.018	-.103	-.151	-.127	
	1.987	.215	.157	.109	.057	.014	-.012	-.088	-.082	-.151	
	2.131	.224	.157	.079	.027	.007	-.019	-.025	-.034	-.031	
	2.275	.200	.137	.034	.019	.009	-.011	-.021	-.003	.024	
	2.419	.234	.162	.069	.046	.021	.003	-.005	-.026	-.007	
	2.562	.239	.162	.096	.080	.049	.010	-.001	.002	.001	

TABLE IV.- LONGITUDINAL INTERFERENCE LOADING COEFFICIENTS OF THE BODY IN THE PRESENCE OF THE WINGS - Continued

(d) A = 1 triangular wing, r/s = 0.4

α_B	x/r	δ_w = 45°	40°	35°	30°	25°	20°	15°	10°	6°	3°	0°
0°	6.94	.000	.000	.000	.000	.001	.001	.000	.000	-.001	.001	-.001
	8.37	-.003	.000	.000	-.003	.000	.000	.000	.000	.000	-.002	-.001
	9.81	-.001	.000	-.001	-.002	.000	.000	.000	.000	.000	.000	-.001
	11.25	-.002	-.001	-.002	-.002	-.001	-.001	-.002	-.001	-.002	-.001	-.003
	12.69	.000	-.001	-.002	-.002	.000	.000	.000	.000	.000	.000	-.001
	14.12	-.002	.000	.000	-.002	.001	.000	.000	-.004	.000	-.001	-.001
	15.56	-.015	-.079	-.091	-.177	-.168	.000	.035	.020	.011	.004	.000
	17.00	.038	.043	.041	.006	.004	.059	.062	.041	.020	.007	.000
	18.44	.087	.096	.097	.089	.063	.052	.064	.044	.023	.009	.000
	19.87	.051	.054	.050	.056	.070	.066	.039	.038	.015	.007	-.001
	21.31	.036	.033	.034	.036	.029	.028	.023	.023	.013	.000	-.006
	22.75	.015	.010	.012	.010	.014	.019	.022	.020	.016	.003	.000
	24.19	-.011	-.011	-.007	-.011	-.011	-.004	.001	.003	.003	.002	-.002
	25.62	-.018	-.019	-.018	-.024	-.022	-.016	-.007	.001	.005	.003	.001
3°	6.94		.002	.003	.001	-.001	.002	.002	.002	.003	-.001	-.001
	8.37		.000	.001	-.001	-.003	.001	.001	.001	.001	-.003	-.001
	9.81		-.001	.001	-.001	-.005	-.001	.000	.000	.000	-.004	-.002
	11.25		-.001	.000	-.001	-.004	.000	.009	.000	.000	-.003	-.001
	12.69		.006	.006	.005	.003	.007	.014	.006	.007	.005	.006
	14.12		.000	.000	-.002	-.005	-.001	-.002	-.003	.001	-.003	.000
	15.56		-.042	-.086	-.183	-.179	.012	.050	.040	.024	.013	.011
	17.00		.116	.094	.034	.017	.082	.076	.053	.043	.022	.016
	18.44		.141	.143	.123	.084	.063	.075	.069	.049	.039	.019
	19.87		.068	.082	.088	.084	.083	.070	.056	.046	.030	.022
	21.31		.042	.046	.049	.034	.041	.047	.036	.033	.019	.012
	22.75		.001	.000	.003	.006	.001	.015	.015	.015	.006	.004
	24.19		-.029	-.035	-.029	-.027	-.019	-.012	-.005	.000	-.004	-.004
	25.62		-.038	-.044	-.044	-.039	-.033	-.024	-.016	-.009	-.011	-.008
6°	6.94			.000	-.002	-.001	.000	-.001	-.002	-.001	-.002	-.003
	8.37			.000	-.002	-.001	.000	-.001	-.001	-.002	-.002	-.003
	9.81			-.001	-.001	-.002	-.001	-.002	-.001	-.002	-.002	-.002
	11.25			.000	-.001	-.001	-.001	-.002	-.001	-.003	-.002	-.002
	12.69			.006	.005	.005	.005	.005	.005	.005	.005	.006
	14.12			-.018	-.005	-.002	-.006	-.026	-.008	.002	.001	.000
	15.56			-.115	-.248	-.173	.036	.056	.051	.039	.032	.036
	17.00			.121	.030	.035	.105	.118	.087	.053	.039	.027
	18.44			.171	.147	.124	.095	.126	.093	.058	.044	.036
	19.87			.073	.079	.091	.090	.070	.079	.066	.049	.039
	21.31			.034	.038	.043	.057	.052	.046	.037	.030	.026
	22.75			-.010	-.006	.001	.011	.017	.019	.017	.016	.013
	24.19			-.045	-.044	-.027	-.020	-.019	-.013	-.006	.000	.000
	25.62			-.043	-.048	-.033	-.025	-.026	-.022	-.010	-.006	-.002
10°	6.94				.001	.000	-.001	-.002	.001		-.006	-.001
	8.37				.000	.000	.000	-.001	.000		-.002	-.003
	9.81				-.001	.000	.000	-.001	.000		-.004	-.003
	11.25				.000	.000	.002	-.001	.001		-.001	-.002
	12.69				-.016	.000	-.001	.006	.000		-.001	-.002
	14.12				-.016	-.001	-.004	-.041	-.016		.007	.000
	15.56				-.228	-.144	.043	.054	.053		.038	.034
	17.00				.073	.065	.119	.136	.090		.053	.042
	18.44				.183	.118	.089	.137	.102		.066	.053
	19.87				.072	.101	.081	.099	.101		.061	.061
	21.31				.037	.049	.046	.043	.058		.048	.043
	22.75				.004	.017	-.031	-.014	.025		-.006	.028
	24.19				-.035	-.024	-.016	-.013	-.008		.001	.007
	25.62				-.041	-.031	-.016	-.004	.008		.019	.020
15°	6.94				-.002	.001	.002	.001	.002	-.012	.000	.000
	8.37				-.001	.000	.002	-.001	.002	.002	.000	-.002
	9.81				-.003	.000	.002	-.004	.001	-.001	-.001	-.001
	11.25				.000	.000	.000	-.003	.001	.000	-.001	.000
	12.69				.001	-.001	-.002	-.033	.000	-.001	-.002	-.003
	14.12				-.028	-.005	-.012	.010	-.023	.004	.004	.000
	15.56				-.208	-.110	.041	.060	.052	.045	.040	.036
	17.00				.079	.069	.106	.146	.084	.059	.052	.043
	18.44				.168	.142	.123	.188	.116	.083	.071	.056
	19.87				.053	.087	.107	.099	.125	.093	.074	.066
	21.31				.012	.086	.035	.044	.060	.060	.050	.047
	22.75				-.007	.002	.013	.023	.031	.043	.035	.034
	24.19				-.021	-.020	-.014	-.017	-.004	.007	.008	.015
	25.62				-.037	-.016	.002	.024	.022	.022	.025	.027
20°	6.94					.001	.003	.004	.002		.002	.004
	8.37					-.004	.003	.002	.002		.000	.001
	9.81					-.002	.002	.001	.001		.000	.002
	11.25					-.003	.002	.001	.000		.000	.000
	12.69					-.005	-.001	-.002	-.001		-.005	-.004
	14.12					-.045	-.023	-.027	-.033		.003	.003
	15.56					-.005	.058	.070	.062		.057	.052
	17.00					.076	.120	.176	.096		.069	.055
	18.44					-.145	.137	.253	.120		.084	.068
	19.87					-.103	.118	.120	.126		.084	.083
	21.31					-.006	.082	.088	.088		.073	.070
	22.75					.047	.056	.068	.071		.061	.054
	24.19					.028	.045	.045	.054		.051	.047
	25.62					.017	.042	.050	.050		.048	.048
25°	6.94							.006	.002	-.001	.000	-.004
	8.37							.006	.004	-.001	.001	-.001
	9.81							.000	-.002	-.005	-.004	-.007
	11.25							.000	-.001	-.004	-.004	-.006
	12.69							.002	.001	.000	.001	-.002
	14.12							-.041	-.047	.006	.006	.000
	15.56							.066	.049	.064	.065	.059
	17.00							.186	.104	.082	.082	.071
	18.44							.225	.060	-.014	.024	.004
	19.87							.149	.139	.129	.118	.103
	21.31							.142	.128	.108	.094	.082
	22.75							.119	.101	.085	.077	.063
	24.19							.095	.086	.072	.069	.060
	25.62							.101	.100	.088	.080	.070

TABLE IV.- LONGITUDINAL INTERFERENCE LOADING COEFFICIENTS OF THE BODY IN THE PRESENCE OF THE WINGS - Continued

(d) A = 1 triangular wing, r/s = 0.4 - Concluded

α_B	x/r	δ_W -3°	-6°	-10°	-15°	-20°	-25°	-30°	-35°	-40°	-45°
0°	6.94	.002	.000	.000	.001	.000	.001	.002	.001	.001	.001
	8.37	-.003	-.001	-.001	.000	.000	.000	-.001	-.001	.000	-.002
	9.81	.000	-.001	.000	.000	.000	.000	.001	.000	.000	.000
	11.25	-.002	-.001	-.001	.000	.000	.000	.001	.000	.000	.000
	12.69	.000	.000	-.001	.000	.000	.000	.000	.000	.000	.001
	14.12	.000	.000	-.001	.004	.001	.000	.000	.000	.000	.000
	15.56	-.003	-.012	-.020	-.033	-.008	.172	.190	.097	.078	.000
	17.00	-.016	-.027	-.044	-.074	-.066	-.009	-.017	-.092	-.063	-.060
	18.44	-.015	-.032	-.050	-.074	-.054	-.067	-.094	-.097	-.097	-.102
	19.87	-.012	-.026	-.041	-.045	-.068	-.075	-.063	-.053	-.048	-.042
	21.31	-.016	-.028	-.038	-.040	-.040	-.045	-.053	-.049	-.046	-.046
	22.75	-.008	-.016	-.020	-.023	-.020	-.013	-.017	-.013	-.013	-.016
	24.19	.001	-.005	-.004	.002	.002	.012	.006	.008	.008	.015
	25.62	.003	.003	.006	.014	.017	.027	.027	.027	.026	.022
3°	6.94		.000	.001	.001	.000	.000	.001	.000	.002	.001
	8.37		.000	-.001	.000	.000	.000	.000	-.001	.000	.000
	9.81		-.001	-.002	-.001	-.001	.000	.000	-.003	-.001	.000
	11.25		-.001	-.002	-.001	-.001	.000	.000	-.002	-.001	.000
	12.69		.005	.005	.006	.005	.000	.006	.004	.006	.006
	14.12		.001	.001	-.001	-.002	.000	-.001	-.003	.000	-.001
	15.56		.000	-.006	-.007	.003	.000	.157	.066	.042	-.050
	17.00		-.002	-.019	-.031	-.036	.000	-.003	-.026	.116	.008
	18.44		-.003	-.024	-.048	-.041	.000	-.061	-.077	.141	-.070
	19.87		.002	-.022	-.027	-.042	.000	-.054	-.038	.065	-.040
	21.31		-.008	-.017	-.020	-.030	.000	-.030	-.039	.042	-.042
	22.75		-.005	-.017	-.023	-.028	.000	-.011	-.020	.001	-.016
	24.19		-.007	-.010	-.018	-.014	.000	.009	-.009	-.029	.000
	25.62		-.005	-.006	-.004	.002	.000	.012	.003	-.038	.006
6°	6.94	.000	.000	-.001	.000	-.001	.000	.000	.000	.000	.000
	8.37	-.001	-.002	-.002	-.002	-.001	-.001	-.002	-.001	-.001	-.001
	9.81	-.001	-.002	-.001	-.002	-.003	-.002	-.001	-.001	-.002	-.001
	11.25	-.002	-.002	-.001	-.001	-.002	.000	-.002	.000	-.001	-.001
	12.69	.006	.005	.006	.006	.004	.004	.006	.005	.006	.006
	14.12	.001	.004	.006	.000	-.001	.000	.000	.000	-.001	-.001
	15.56	.017	.015	.007	.007	.008	.112	.140	.034	.001	-.020
	17.00	.024	.016	.000	-.008	-.015	.017	.014	-.022	-.019	.008
	18.44	.030	.017	.000	-.014	-.021	-.025	-.030	-.062	-.066	-.083
	19.87	.030	.017	.002	-.005	-.018	-.024	-.023	-.026	-.027	-.030
	21.31	.022	.012	.002	-.004	-.012	-.009	-.006	-.013	-.018	-.025
	22.75	.008	.003	.000	-.008	-.011	-.006	-.010	-.010	-.013	-.014
	24.19	.000	-.003	-.005	-.012	-.009	-.002	-.005	-.008	-.009	-.006
	25.62	.000	.000	-.003	-.005	.002	.009	-.001	-.002	.000	.003
10°	6.94	.000	.000	.000	.000	.000	.000	-.002	.000		.000
	8.37	.000	.000	-.001	.000	.000	-.025	-.003	.000		.000
	9.81	.000	.000	-.001	.000	.000	.000	-.002	-.001		-.001
	11.25	.000	.001	.000	.000	.002	.000	-.001	.001		.001
	12.69	.000	.000	.000	.000	.000	.000	-.001	.000		.000
	14.12	.000	.004	.007	.000	.000	-.001	-.002	.000		-.001
	15.56	.023	.025	.015	.014	.011	.094	.146	.026		-.001
	17.00	.037	.029	.011	.006	-.002	.016	.011	-.034		.025
	18.44	.046	.029	.010	.002	.007	-.018	-.027	-.051		-.074
	19.87	.046	.023	.009	.006	.016	.000	-.004	-.009		-.033
	21.31	.030	.020	.008	.007	.008	.013	.010	.004		-.011
	22.75	.012	.013	.002	.002	.007	.013	.010	.011		-.008
	24.19	-.008	.003	-.004	-.003	.001	.003	.001	.004		-.004
	25.62	.021	.012	.002	.001	.006	.007	-.001	.001		-.002
15°	6.94			.001	.000	.000	.001	.001	.003	.000	.002
	8.37			.000	-.001	-.001	.001	.000	.001	.000	.000
	9.81			-.001	-.001	-.001	-.001	.000	.000	-.001	.001
	11.25			.000	-.001	-.001	.000	.001	.001	-.001	.001
	12.69			-.002	-.003	-.003	-.002	.000	.000	-.002	.001
	14.12			.010	-.001	-.004	-.003	-.003	-.002	-.004	-.002
	15.56			.022	.015	.017	.081	.176	.027	-.004	-.004
	17.00			.018	.004	-.007	.007	.014	-.051	-.043	-.001
	18.44			.016	.001	-.009	-.017	-.024	-.036	-.087	-.107
	19.87			.019	.006	-.002	-.003	-.002	-.007	-.021	-.026
	21.31			.010	.004	.006	.008	.009	.008	.000	-.009
	22.75			.006	.002	.001	.002	.004	.008	.009	.013
	24.19			-.001	-.006	-.005	.000	.008	.009	.003	.004
	25.62			.001	-.005	-.013	-.017	-.014	-.011	-.019	-.015
20°	6.94		-.001	.002	.005	.006	-.002	.002	.004	.000	.000
	8.37		-.006	-.001	.002	.003	-.003	.000	.001	-.001	.001
	9.81		-.003	.000	.003	.003	-.003	.002	.004	.002	.004
	11.25		-.005	-.001	.002	.002	-.002	.001	.007	.000	.006
	12.69		-.007	-.002	.000	.001	-.004	-.002	-.002	-.002	-.002
	14.12		.003	.023	.014	.008	.001	.002	.003	.001	.002
	15.56		.041	.042	.033	.037	.074	.198	.006	.001	.003
	17.00		.040	.034	.022	.017	.020	.046	-.070	-.066	-.059
	18.44		.039	.031	.017	.004	-.020	-.028	-.038	-.040	-.074
	19.87		.037	.026	.016	.006	.000	.002	-.004	-.015	-.022
	21.31		.037	.018	.012	.009	.005	.004	.004	.006	-.004
	22.75		.027	.014	.006	.005	-.007	-.003	-.001	.002	.021
	24.19		.023	.008	.007	.004	-.003	-.004	-.006	-.005	-.002
	25.62		.020	.012	.011	.010	-.004	-.003	-.002	-.001	.000
25°	6.94	-.001	.001	.003	.003	.003	.000	.006	.000	.001	.002
	8.37	.000	.004	.006	.005	.003	.003	.007	.001	.002	.003
	9.81	-.004	-.001	.000	.000	-.001	.000	.000	-.005	-.004	-.002
	11.25	-.004	-.002	.000	.000	-.002	-.001	.002	-.002	-.002	-.001
	12.69	.000	.002	.004	.003	.002	.004	.005	.000	.002	.004
	14.12	-.002	.020	.034	.018	.004	-.021	.007	.004	.004	.006
	15.56	.062	.063	.057	.043	.045	.076	.159	.019	-.001	.000
	17.00	.064	.057	.049	.034	.022	.038	.046	-.043	-.062	-.064
	18.44	-.047	-.046	-.045	-.053	-.092	-.086	-.084	-.124	-.109	-.101
	19.87	.090	.063	.037	.022	.015	.008	.001	-.007	-.009	-.021
	21.31	.076	.053	.028	.014	.008	.004	-.001	-.001	.003	.006
	22.75	.054	.044	.025	.015	.010	.011	.008	.006	.013	.018
	24.19	.049	.034	.012	.005	.004	.002	.001	.004	.010	.011
	25.62	.058	.042	.025	.016	.012	.008	.001	.000	.004	.003

TABLE IV.- LONGITUDINAL INTERFERENCE LOADING COEFFICIENTS OF THE BODY IN THE PRESENCE OF THE WINGS - Continued

(e) A = 2/3 triangular wing, r/s = 0.4

x/r	δ_w, α_B=0°										α_B, δ_w=0°						
	45°	40°	35°	30°	25°	20°	15°	10°	6°	3°	0°	3°	6°	10°	15°	20°	25°
6.94	.005	.006	.004	.003	.004	.003	.004	.003	.003	.000	.003	.004	.000	-.007	-.006	-.003	-.006
8.37	-.001	.000	.000	-.001	.000	.000	-.001	-.001	.000	-.002	.000	.006	.000	-.005	-.002	-.003	-.003
9.81	-.007	-.003	-.004	-.005	-.005	-.001	-.005	-.004	-.003	-.001	-.003	-.001	.001	-.002	.000	.000	-.006
11.25	-.004	-.002	-.003	-.003	-.002	-.001	-.003	-.002	-.001	-.003	.000	-.006	-.004	.000	.000	.002	-.004
12.69	.001	.002	.002	.001	.001	.001	.000	-.016	.000	.004	.000	.011	.007	.006	.004	.005	.009
14.12	.000	.000	.000	.000	.000	-.058	-.056	.017	.007	.002	.000	.011	.024	.032	-.039	.044	.056
15.56	.017	-.083	-.251	-.342	-.150	.030	.051	.032	.016	.007	.000	.016	.032	.047	.053	.068	.079
17.00	.020	.037	.010	-.029	.039	.064	.073	.047	.024	.009	-.003	.019	.039	.057	.065	.080	.102
18.44	.076	.067	.074	.086	.090	.060	.060	.045	.024	.006	-.003	.019	.041	.063	.073	.093	.123
19.87	.068	.070	.068	.068	.061	.057	.031	.031	.025	.008	-.005	.021	.047	.061	.086	.107	.133
21.31	.039	.047	.029	.026	.026	.027	.031	.020	.017	.002	-.009	.015	.036	.054	.069	.096	.117
22.75	.028	.033	.017	.011	.013	.012	.020	.017	.014	.001	-.003	.008	.017	.036	.054	.087	-.089
24.19	.000	.000	-.008	-.005	-.007	-.006	.016	.008	.007	.002	-.001	-.001	.003	.019	-.020	.060	-.087
25.62	-.030	-.023	-.011	-.010	-.020	-.023	-.005	-.002	.006	.006	-.009	-.009	-.003	-.043	.037	.050	-.090

TABLE IV.- LONGITUDINAL INTERFERENCE LOADING COEFFICIENTS OF THE BODY IN THE PRESENCE OF THE WINGS - Continued

(f) A = 3/8 triangular wing, r/s = 0.4

x/r	δ_w, α_B=0°										α_B, δ_w=0°						
	45°	40°	35°	30°	25°	20°	15°	10°	6°	3°	0°	3°	6°	10°	15°	20°	25°
6.94	.004	.002	-.015	.001	.001	.000	.001	.001	.000	.000	-.002	.002	.000	.000	.000	.000	-.003
8.37	.001	.001	-.016	-.001	-.001	.014	.000	-.001	-.008	-.002	-.002	.005	.001	.001	.003	.001	.000
9.81	-.001	-.002	-.020	-.004	-.003	-.005	-.003	-.011	-.012	-.001	-.002	.005	.009	.019	.031	.028	.014
11.25	.000	-.001	-.018	-.001	-.001	-.002	.000	-.022	.006	.002	-.002	.009	.017	.037	.046	.060	.068
12.69	.003	.000	-.015	-.144	.000	-.037	-.066	.009	.013	.004	-.001	.020	.032	.049	.064	.077	.090
14.12	-.102	-.095	-.132	-.206	-.229	-.057	.013	.044	.014	.005	-.003	.015	.031	.053	.075	.086	.104
15.56	-.354	-.504	-.509	-.004	-.001	.046	.074	.056	.020	.008	-.003	.014	.035	.059	.080	.102	.126
17.00	-.048	.055	-.149	.063	.063	.079	.083	.057	.020	.007	-.006	.017	.038	.061	.080	.109	.140
18.44	.060	.055	.028	.063	.075	.084	.059	.042	.021	.006	-.006	.015	.038	.064	.088	.124	.157
19.87	.050	.051	.084	.038	.071	.034	.058	.026	.020	.004	-.006	.016	.039	.062	.095	.127	.159
21.31	.020	.022	-.006	-.006	.013	.009	.032	.010	-.011	-.001	-.012	.015	.040	.072	.095	.128	.172
22.75	.000	-.005	-.038	-.016	-.014	-.010	.007	.005	-.003	-.005	-.005	.014	.038	.076	.094	.132	.156
24.19	-.014	-.004	-.038	-.026	-.035	-.030	-.022	-.007	.004	.003	-.005	-.001	.010	.039	.051	.109	.162
25.62	-.021	-.020	-.048	-.071	-.036	-.023	-.011	.001	.007	.005	-.005	-.001	-.005	.035	.067	.084	.131

[redacted]

TABLE IV.- LONGITUDINAL INTERFERENCE LOADING COEFFICIENTS OF THE BODY IN THE PRESENCE OF THE WINGS - Continued

(g) A = 3 rectangular wing, r/s = 0.2

α_B	x/r	δ_W 45°	40°	35°	30°	25°	20°	15°	10°	6°	3°	0°
	694	.008	.001	.001	.000	.000	.000	.001	.000	.001	.002	-.003
	837	.001	.002	.000	.000	.000	.000	.000	.000	.000	.000	.001
	981	.000	.001	.000	.000	-.001	.000	.000	.000	.000	.000	.000
	1125	.000	.000	.000	-.001	-.001	-.001	.000	.000	.000	.001	.000
	1269	.001	.001	.000	.001	.000	.000	.001	.000	.000	.001	.003
	1412	.119	.008	.000	.004	.000	.001	.002	.001	.000	.001	.008
0°	1556	.090	.085	.095	.006	.001	.002	.001	.002	.000	.002	.001
	1700	.182	.111	.090	.073	.073	.074	.052	.024	.009	.004	.000
	1844	.082	.149	.174	.110	.079	.096	.084	.050	.023	.009	.000
	1987	.075	.064	.088	.124	.111	.087	.063	.045	.026	.010	-.003
	2131	.057	.052	.050	.065	.068	.060	.047	.033	.017	.004	-.009
	2275	.030	.024	.019	.042	.051	.048	.042	.032	.019	.008	.005
	2419	.003	-.006	.000	.012	.030	.033	.031	.023	.014	.006	.003
	2562	.018	-.002	-.003	.000	.021	.026	.028	.021	.015	.010	.005
	694		.002	.003	.003	.004	.002	.004	.003	.003	.002	.004
	837		.001	.001	.003	.002	.001	.003	.001	.002	.002	.002
	981		.000	.001	.002	.008	.001	.001	.000	.000	.000	.001
	1125		.001	.001	.001	.001	.000	.001	.000	.000	.000	.000
	1269		.006	.006	.006	.007	.005	.006	.006	.007	.006	.007
	1412		-.001	.000	.000	.000	.000	.000	.000	.000	-.001	.000
3°	1556		.108	.103	-.013	.000	.000	.000	-.001	.001	.000	.000
	1700		.214	.118	.087	.083	.110	.075	.034	.016	.008	.005
	1844		.195	.218	.194	.119	.156	.137	.079	.053	.036	.023
	1987		.109	.133	.151	.137	.114	.084	.063	.053	.037	.028
	2131		.071	.084	.099	.106	.092	.076	.057	.043	.031	.018
	2275		.016	.035	.051	.065	.062	.056	.042	.032	.020	.009
	2419		.001	.008	.012	.030	.034	.034	.023	.016	.010	.005
	2562		-.004	-.007	-.012	.003	.014	.022	.013	.008	.006	.001
	694			.003	.003	.000	.000	.000	.000	.000	.000	-.003
	837			.000	.000	-.001	.000	.000	-.001	-.001	-.001	-.003
	981			.000	-.001	-.002	-.002	-.001	-.001	-.002	-.002	-.004
	1125			.000	.000	-.001	.000	-.001	-.001	-.001	-.001	-.008
	1269			.006	.006	.006	.005	.006	.005	.005	.005	.005
	1412			-.002	.001	.000	.000	.000	.000	.000	-.001	.000
6°	1556			.061	.067	-.019	-.003	-.001	.000	-.001	.000	.000
	1700			.172	.124	.094	.122	.102	.055	.019	.010	.009
	1844			.256	.244	.182	.206	.189	.121	.068	.047	.037
	1987			.172	.181	.168	.144	.100	.086	.080	.064	.042
	2131			.089	.180	.125	.116	.098	.076	.059	.051	.035
	2275			.044	.058	.072	.079	.068	.053	.042	.037	.026
	2419			.011	.011	.018	.032	.035	.030	.025	.022	.015
	2562			-.005	-.004	.000	.018	.027	.023	.017	.013	.010
	694			.000	-.001	-.001	-.002	-.001	-.002	.000	-.003	-.005
	837			.000	-.001	.000	.000	-.001	-.002	.000	-.002	-.005
	981			-.001	-.003	-.002	-.001	-.001	-.004	-.002	-.002	-.006
	1125			.000	.000	.000	-.001	-.001	-.002	-.001	-.002	-.005
	1269			.000	-.003	-.002	.000	.000	-.002	-.001	-.002	-.004
	1412			-.039	-.008	-.003	.000	-.002	-.003	-.003	-.002	-.004
10°	1556			.062	.006	-.007	-.018	-.002	-.002	-.001	-.002	-.002
	1700			.228	.173	.105	.127	.135	.066	.021	.023	.014
	1844			.217	.220	.233	.259	.234	.134	.070	.070	.047
	1987			.180	.179	.170	.174	.124	.114	.103	.071	.056
	2131			.082	.090	.100	.111	.099	.076	.073	.060	.047
	2275			.052	.057	.064	.075	.076	.062	.056	.048	.039
	2419			.027	.026	.026	.032	.042	.040	.035	.033	.028
	2562			-.001	.000	.012	.026	.040	.041	.044	.038	.040
	694				-.001		.002	.000	.000	.001	-.002	-.002
	837				.000		.002	.000		.001		.000
	981				-.001		.001	-.001	.000	.001	.003	.001
	1125				-.002		.000	.000	.002	.000	.000	-.002
	1269				-.002		.003	.000	.001	.000	.000	.000
	1412				-.022		-.001	-.004	-.003	-.003	-.004	-.002
15°	1556				.009		-.028	-.020	-.007	-.007	-.007	-.006
	1700				.201		.131	.111	.069	.030	.033	.020
	1844				.199		.290	.273	.142	.090	.080	.051
	1987				.177		.169	.134	.136	.104	.082	.074
	2131				.110		.138	.136	.107	.098	.082	.069
	2275				.063		.095	.107	.092	.090	.078	.060
	2419				.059		.071	.087	.076	.069	.064	.055
	2562				-.005		.042	.067	.083	.086	.076	.068
	694					.000	.001	.003	-.003	.000	-.004	.001
	837					-.003	.000	.000	-.005	.002	-.004	.000
	981					.000	-.002	.009	-.001	.000	-.001	-.001
	1125					-.001	-.003	.001	-.003	.000	-.001	-.001
	1269					-.001	.004	.000	-.003	-.001	-.003	.002
	1412					-.008	.000	.001	-.003	-.002	-.003	-.001
20°	1556					-.008	-.018	-.012	-.009	-.002	-.003	-.001
	1700					.148	.158	.143	.080	.044	.041	.039
	1844					.220	.317	.313	.164	.116	.109	.080
	1987					.255	.251	.200	.157	.138	.101	.097
	2131					.182	.198	.205	.172	.143	.116	.100
	2275					.117	.141	.155	.163	.151	.133	.111
	2419					.126	.133	.151	.172	.179	.158	.137
	2562					.064	.097	.111	.132	.145	.133	.110
	694						-.001	-.012	-.001	-.006	-.003	-.008
	837						-.001	-.011	-.000	-.008	-.005	-.007
	981						-.001	-.009	-.000	-.006	-.005	-.009
	1125						-.002	-.012	-.001	-.011	-.009	-.012
	1269						-.005	-.013	-.003	-.007	-.006	-.008
	1412						.001	-.004	-.002	-.005	-.003	-.005
25°	1556						-.020	-.012	-.004	-.006	-.005	-.005
	1700						.179	.179	.118	.060	.051	.034
	1844						.428	.394	.267	.153	.139	.103
	1987						.372	.313	.215	.177	.147	.129
	2131						.313	.300	.288	.216	.162	.131
	2275						.270	.268	.291	.242	.201	.146
	2419						.206	.237	.261	.247	.199	.164
	2562						.196	.218	.218	.216	.188	.155

TABLE IV.- LONGITUDINAL INTERFERENCE LOADING COEFFICIENTS OF THE BODY IN THE PRESENCE OF THE WINGS - Continued

(g) A = 3 rectangular wing, r/s = 0.2 - Concluded

α_B	x/r	δ_W									
		-3°	-6°	-10°	-15°	-20°	-25°	-30°	-35°	-40°	-45°
	6.94	.001	.002	.000	.001	.002	.002	.003	.002	.001	.001
	8.37	.000	.000	.000	.000	.000	.001	.001	.001	.000	.001
	9.81	.000	.001	-.001	.000	.000	.003	.001	.001	.000	.000
	11.25	.001	.000	.000	-.001	.000	.000	.000	.000	.000	.000
	12.69	.003	.002	.003	.000	.000	.000	.002	.001	.001	.002
	14.12	.002	.002	.000	.000	.001	.001	.002	.001	-.001	-.112
0°	15.56	.003	.002	.001	.001	.000	.003	.003	-.089	-.080	-.093
	17.00	-.002	-.010	-.027	-.056	-.080	-.071	-.072	-.077	-.146	-.190
	18.44	-.012	-.027	-.056	-.096	-.102	-.077	-.128	-.188	-.142	-.056
	19.87	-.014	-.032	-.049	-.068	-.091	-.116	-.125	-.095	-.068	-.088
	21.31	-.018	-.033	-.049	-.062	-.075	-.078	-.082	-.065	-.069	-.073
	22.75	-.010	-.020	-.032	-.044	-.050	-.051	-.046	-.027	-.025	-.039
	24.19	-.008	-.015	-.024	-.032	-.034	-.030	-.016	-.004	.001	-.014
	25.62	.001	-.003	-.009	-.016	-.016	-.010	.006	.004	.004	-.016
	6.94	.002	.003	.002	.001	.003	.002	.002	.002	.003	.002
	8.37	.000	.003	.002	.001	.002	.002	.002	.003	.002	.002
	9.81	.001	.001	.001	.000	.001	.001	.001	.001	.000	.002
	11.25	.000	.002	.001	.000	.002	.002	.001	-.001	.000	.001
	12.69	.006	.007	.006	.005	.006	.006	.006	.004	.005	.006
	14.12	.000	.000	.000	.000	.000	.000	.000	-.001	.000	-.109
3°	15.56	.000	.002	.000	.000	.000	.000	.000	-.005	-.096	-.068
	17.00	.002	-.001	-.010	-.029	-.045	-.053	-.061	-.062	-.093	-.139
	18.44	.012	-.001	-.023	-.057	-.059	-.044	-.078	-.141	-.114	-.064
	19.87	.007	-.010	-.024	-.043	-.061	-.073	-.086	-.074	-.033	-.045
	21.31	.003	-.008	-.023	-.032	-.044	-.046	-.049	-.031	-.032	-.052
	22.75	.002	-.009	-.018		-.032	-.032	-.029	-.019	-.014	-.033
	24.19	-.002	-.009	-.017		-.021	-.017	-.013	-.005	.002	-.021
	25.62	-.002	-.008	-.015		-.018	-.016	-.013	-.004	-.001	-.019
	6.94		.000		.000		.000		.000		.001
	8.37		-.001		.000		.000		.000		.000
	9.81		-.002		-.001		.000		.000		-.002
	11.25		-.001		.000		-.001		.000		-.001
	12.69		.005		.005		.005		.006		.006
	14.12		.000		.000		.000		.000		-.068
6°	15.56		.000		.000		.000		.000		-.063
	17.00		.004		-.007		-.014		-.066		-.087
	18.44		.019		-.017		-.035		-.103		-.088
	19.87		.011		-.014		-.033		-.021		-.016
	21.31		.008		-.009		-.015		-.016		-.023
	22.75		.005		-.005		-.003		-.019		-.018
	24.19		.000		-.008		-.008		-.012		-.021
	25.62		-.002		-.010		-.010		-.004		-.024
	6.94	-.001	.000	-.004	-.001	-.006	-.002	.000	.000	.000	-.001
	8.37	.000	.000	-.004	-.002	-.004	-.002	.001	.000	.000	.000
	9.81	-.001	.000	-.003	-.001	-.004	-.001	.000	.000	.000	.000
	11.25	.000	.000	-.002	-.001	-.005	-.002	.000	.000	.000	.000
	12.69	.000	.000	-.002	-.001	-.004	-.002	.000	.000	.000	.000
	14.12	-.002	-.002	-.003	-.002	-.003	-.002	.000	-.001	-.001	.000
10°	15.56	-.001	.000	-.002	-.003	-.003	-.001	.000	.000	.000	-.028
	17.00	.016	.013	.004	.003	.000	-.001	-.011	-.059	-.060	-.081
	18.44	.041	.032	.014	.004	-.006	-.017	-.022	-.042	-.048	-.059
	19.87	.042	.022	.008	.007	-.001	-.007	-.005	-.015	-.021	-.024
	21.31	.037	.024	.009	.008	.002	-.003	.002	-.003	-.011	-.021
	22.75	.032	.024	.004	.003	.008	.011	.012	.003	-.003	-.015
	24.19	.025	.017	.002	.004	.004	.009	.012	.005	.002	-.005
	25.62	.033	.026	.003	.006	.006	.007	.014	.004	.001	-.002
	6.94	.001	.001	.002	.000	.001	.000		.002	.002	
	8.37	.001	.000	.000	.002	.002	.001		.002	.000	
	9.81	.002	.000	.000	.001	.000	-.001		.000	.000	
	11.25	.000	.000	-.001	.000	.000	-.001		.000	.000	
	12.69	.000	.000	.000	.001	.000	.000		.000	.001	
	14.12	-.003	-.005	-.003	-.003	-.003	-.004		-.002	-.002	
15°	15.56	-.006	-.006	-.007	-.005	-.005	-.007		-.005	-.006	
	17.00	.015	.012	.007	.000	-.001	-.006		-.050	-.061	
	18.44	.040	.031	.022	.008	.003	-.005		-.030	-.031	
	19.87	.057	.036	.017	.007	.004	-.003		.001	-.002	
	21.31	.057	.042	.022	.011	.008	.007		.007	.000	
	22.75	.054	.041	.022	.006	.005	.008		.006	.005	
	24.19	.048	.036	.017	.005	.006	.011		.004	.003	
	25.62	.058	.039	.017	-.002	-.009	-.011		-.014	-.021	
	6.94	.003	.003		.003	.003	-.002	.002	-.004	.000	.004
	8.37	.001	.002		.000	.001	-.004	.000	-.006	-.002	.002
	9.81	.004	.003		.001	.004	.000	.002	-.001	.001	.003
	11.25	.004	.003		.000	.000	.000	.002	.000	.002	.001
	12.69	.002	.002		.003	.002	-.001	.002	-.001	.001	.003
	14.12	.000	.001		.000	.001	.001	.001	-.002	.001	.001
20°	15.56	-.003	.000		.001	-.001	-.002	.000	-.002	.000	.000
	17.00	.024	.023		.006	-.002	-.005	-.007	-.021	-.026	-.040
	18.44	.064	.051		.024	.013	.000	-.003	-.018	-.012	-.010
	19.87	.079	.048		.018	.009	.000	.000	-.002	.007	.000
	21.31	.084	.063		.020	.010	.005	.011	.005	.006	.001
	22.75	.090	.068		.023	.011	.000	.007	.000	.006	-.004
	24.19	.104	.076		.027	.009	-.001	.004	-.003	-.001	-.010
	25.62	.088	.068		.021	.004	-.002	.000	-.008	-.008	-.015
	6.94	-.005	.000	-.006	.002	-.003	-.003	-.004	-.008	-.009	-.005
	8.37	-.007	-.001	-.007	.000	-.003	-.002	-.005	-.009	-.008	-.006
	9.81	-.005	-.001	-.006	.001	-.002	-.002	-.005	-.008	-.010	-.006
	11.25	-.008	-.003	-.006	-.001	-.005	-.006	-.006	-.009	-.010	-.009
	12.69	-.008	-.006	-.009	-.003	-.007	-.006	-.007	-.012	-.014	-.009
	14.12	-.003	.000	-.001	.002	.000	.000	-.001	-.004	-.006	-.002
25°	15.56	-.005	-.001	-.004	.001	-.002	.002	-.003	-.008	-.007	-.004
	17.00	.026	.023	.011	.006	-.002	-.009	-.013	-.026	-.038	-.034
	18.44	.071	.065	.040	.032	.013	.004	-.004	-.013	-.011	-.023
	19.87	.107	.076	.039	.025	.012	.004	-.001	-.004	-.004	-.004
	21.31	.107	.085	.045	.022	.012	.001	-.002	-.001	-.002	-.003
	22.75	.110	.087	.044	.025	.014	.007	.000	.001	.000	.000
	24.19	.126	.094	.040	.020	.011	.001	.000	.004	.004	-.011
	25.62	.122	.088	.043	.022	.011	.004	.002	.003	.001	-.003

TABLE IV.- LONGITUDINAL INTERFERENCE LOADING COEFFICIENTS OF THE BODY IN THE PRESENCE OF THE WINGS - Continued

(h) A = 2 rectangular wing, r/s = 0.2

α_B	x/r	δ_w 45°	40°	35°	30°	25°	20°	15°	10°	6°	3°	0°
0°	11.34		.010	-.016	-.013	-.003	.001	.061		.001	.002	
	12.59		.053	.036	.009	.009	.006	.005		.006	.007	
	13.84		.000	.004	.000	.001	.000	.000		.004	.003	
	15.09		.012	.021	-.008	-.006	.009	-.007		-.004	-.004	
	16.34		.055	.060	.014	.008	.011	.009		.009	.009	
	17.56		-.008	.000	.000	.007	.010	.007		.001	.002	
	18.84		-.031	.036	.025	.010	.019	-.007		-.015	-.006	
	20.09		.020	.068	.003	.001	.002	.000		.000	.001	
	21.34		.006	-.014	-.037	-.063	.040	.000		.007	.004	
	22.59		.007	.001	-.008	-.031	.023	.028		.009	.006	
	23.84		.035	.050	.001	-.002	.002	.001		.005	.006	
	25.09		-.044	-.029	-.058	.005	.026	.014		-.003	-.001	
3°	11.34			-.001	-.001	-.003	-.003	.001	-.002	.000	-.001	-.001
	12.59			.000	-.001	-.001	-.004	.000	-.001	-.001	-.001	-.001
	13.84			-.024	.001	.001	.001	.002	.000	.001	.001	.000
	15.09			.105	.065	-.006	-.015	-.005	-.004	-.002	-.001	-.002
	16.34			.232	.147	.125	.102	.047	.046	.032	.025	.018
	17.56			.264	.234	.218	.178	.121	.110	.083	.058	.036
	18.84			.196	.225	.226	.148	.127	.113	.088	.068	.041
	20.09			.089	.112	.135	.150	.145	.098	.073	.063	.045
	21.34			.103	.092	.097	.127	.113	.094	.071	.051	.016
	22.59			.075	.046	.056	.082	.084	.073	.057	.042	.023
	23.84			.029	.018	.021	.045	.053	.051	.039	.027	.014
	25.09			.017	.008	.005	.027	.037	.037	.029	.021	.011
6°	11.34				-.002	-.004	.001	.002	.001	-.031	.002	.003
	12.59				-.001	-.002	-.001	.000	.000	.000	-.001	.000
	13.84				-.026	.004	.005	.004	.004	.004	.005	.004
	15.09				.060	.021	-.021	-.009	.000	.004	.004	.004
	16.34				.238	.161	.109	.074	.061	.040	.039	.031
	17.56				.310	.265	.230	.174	.143	.116	.085	.056
	18.84				.291	.270	.195	.177	.151	.122	.100	.068
	20.09				.151	.195	.199	.163	.117	.091	.087	.067
	21.34				.106	.138	.161	.141	.118	.091	.073	.062
	22.59				.055	.088	.113	.124	.097	.076	.061	.046
	23.84				.018	.046	.059	.067	.061	.049	.040	.029
	25.09				-.008	-.004	.013	.028	.037	.031	.023	.014
10°	11.34						.000	.001	-.005	-.003	.005	.003
	12.59						.001	.001	.001	.000	.001	.001
	13.84						.001	.002	.001	.000	.002	.001
	15.09						-.007	-.015	-.003	.002	.005	.004
	16.34						.182	.107	.059	.053	.053	.048
	17.56						.301	.213	.161	.126	.094	.063
	18.84						.239	.217	.200	.154	.126	.086
	20.09						.228	.196	.148	.118	.115	.100
	21.34						.144	.163	.138	.110	.090	.082
	22.59						.082	.114	.109	.096	.083	.069
	23.84						.037	.056	.065	.057	.054	.047
	25.09						.034	.042	.050	.051	.047	.045
15°	11.34					.003	.009	-.010	-.013	-.014	.010	.008
	12.59					.005	.006	.006	.005	.005	.004	.003
	13.84					-.048	-.006	.002	.001	.001	.001	.000
	15.09					.011	-.032	-.015	-.007	-.002	.001	-.003
	16.34					.283	.236	.173	.074	.064	.071	.081
	17.56					.409	.387	.283	.168	.125	.051	.053
	18.84					.350	.267	.294	.253	.183	.133	.080
	20.09					.234	.259	.242	.173	.155	.150	.116
	21.34					.113	.165	.193	.181	.147	.132	.377
	22.59					.066	.097	.134	.146	.134	.118	.368
	23.84					.028	.040	.064	.084	.088	.076	.331
	25.09					.026	.047	.069	.096	.107	.103	.361
20°	11.34							.017	.020	.021	.015	.024
	12.59							.018	.018	.017	.011	.017
	13.84							.012	.012	.011	.006	.012
	15.09							-.015	.002	.002	.004	.007
	17.56							.225	.158	.148	.051	.094
	17.56							.407	.218	.158	.118	.084
	18.84							.386	.346	.257	.191	.126
	20.09							.321	.263	.203	.195	.176
	21.34							.248	.261	.232	.199	.175
	22.59							.181	.214	.226	.202	.177
	23.84							.115	.143	.143	.161	.148
	25.09							.144	.167	.189	.195	.189
25°	11.34								.004	.008	.011	.015
	12.59								.010	.009	.008	.010
	13.84								.010	.009	.010	.009
	15.09								.000	.001	.000	.002
	16.34								.210	.107	.090	.105
	17.56								.318	.230	.175	.117
	18.84								.447	.329	.252	.189
	20.09								.365	.312	.263	.226
	21.34								.343	.348	.285	.236
	22.59								.270	.310	.299	.235
	23.84								.272	.303	.322	
	25.09								.264	.286	.291	.265

TABLE IV.- LONGITUDINAL INTERFERENCE LOADING COEFFICIENTS OF THE BODY IN THE PRESENCE OF THE WINGS - Continued

(h) A = 2 rectangular wing, r/s = 0.2 - Concluded

α_B	x/r	δ_w									
		-3°	-6°	-10°	-15°	-20°	-25°	-30°	-35°	-40°	-45°
0°	11.34										
	12.59										
	13.84										
	15.09										
	16.34										
	17.56										
	18.84										
	20.09										
	21.34										
	22.59										
	23.84										
	25.09										
3°	11.34	-.002	-.002	-.001	-.001	.001	.000	.001	-.001	-.001	
	12.59	-.001	-.001	-.001	-.001	.002	-.002	.000	-.001	-.002	
	13.84	.000	.001	.001	.000	.001	.001	.001	.000	-.083	
	15.09	-.001	-.001	-.002	-.002	-.002	-.002	-.001	-.098	-.080	
	16.34	.007	-.001	-.010	-.020	-.039	-.043	-.034	-.040	-.088	
	17.56	.011	-.002	-.026	-.042	-.065	-.078	-.072			
	18.84	.015	-.004	-.032	-.045	-.060	-.088	-.072			
	20.09	.017	-.008	-.028	-.044	-.064	-.066	-.112			
	21.34	.009	-.012	-.032	-.045	-.044	-.040	-.039	-.050	-.068	
	22.59	.002	-.016	-.034	-.044	-.038	-.028	-.029	-.039	-.060	
	23.84	-.002	-.016	-.027	-.028	-.019	-.022	-.008	-.010	-.046	
	25.09	.001	-.011	-.018	-.014	-.019	-.022	.006	.007	.024	
6°	11.34	.001	.001	.000	.000	.001	-.002	.003	.003	-.001	
	12.59	.000	-.001	-.001	-.001	.000	-.002	-.001	-.001	.000	
	13.84	.005	.004	.004	.004	.004	.003	.005	.005	-.020	
	15.09	.005	.003	.003	.004	.004	.002	.004	.004	-.084	
	16.34	.025	.018	.011	.003	.004	.002	.004	-.032	.007	
	17.56	.038	.021	.003	-.013	-.031	-.050	-.057	-.088	-.128	
	18.84	.046	.026	.002	-.016	-.023	-.034	-.053	-.063	-.097	
	20.09	.040	.021	.000	-.012	-.024	-.022	-.023	-.026	-.029	
	21.34	.040	.020	.000	-.008	-.015	-.022	-.031	-.038	-.037	
	22.59	.026	.012	-.003	-.007	-.011	-.021	-.027	-.033	-.039	
	23.84	.012	.001	-.010	-.009	-.012	-.021	-.003	-.012	-.038	
	25.09	.007	-.003	-.011	-.014	-.013	-.013	.009	.011	-.031	
10°	11.34	.004	.005	.004	-.010	.001	-.001	-.012	.000	.000	
	12.59	.003	.001	.003	.002	.000	.000	.000	.002	.001	
	13.84	.003	.002	.003	.003	.001	.000	.002	.004	.002	
	15.09	.006	.004	.006	.005	.004	.002	.005	.007	.005	
	16.34	.045	.039	.031	.018	.010	.003	.035	-.032	.001	
	17.56	.051	.031	.021	-.001	-.018	-.022	-.041	-.056	-.065	
	18.84	.060	.046	.020	-.003	-.017	-.024	-.034	-.048	-.065	
	20.09	.071	.044	.017	.007	-.010	-.011	-.022	-.024	-.038	
	21.34	.058	.037	.015	.005	.000	-.004	-.006	-.007	-.024	
	22.59	.051	.033	.011	.007	.004	.001	.005	.002	-.008	
	23.84	.032	.017	-.004	-.005	-.002	.000	.000	-.002	-.007	
	25.09	.040	.031	.010	.008	.012	.012	.012	.010	.014	
15°	11.34	-.028	.010	.008	.008	.007	.009	.008	.010	.009	
	12.59	.005	.006	.004	.005	.004	.005	.005	.008	.006	
	13.84	.002	.003	.001	.004	.003	.003	.002	.005	.005	
	15.09	.002	.004	.002	.003	.004	.002	.002	.003	.005	
	16.34	.061	.057	.047	.027	.021	.040	.060	-.012	.004	
	17.56	.009	-.004	-.016	-.030	-.046	-.053	-.057	-.085	-.074	
	18.84	.063	.047	.026	.003	-.018	-.023	-.031	-.023	-.037	
	20.09	.087	.061	.032	.010	-.001	-.003	-.004	-.003	-.024	
	21.34	.094	.069	.032	.018	.011	.009	.009	.005	-.006	
	22.59	.088	.066	.030	.016	.013	.008	.006	.005	.000	
	23.84	.057	.036	.000	-.020	-.021	-.019	-.021	-.025	-.022	
	25.09	.085	.067	.033	.010	.006	.010	.007	.003	-.001	
20°	11.34	.024	.025	.023	.017	.001	.000	.030	.000	-.015	
	12.59	.017	.018	.016	.014	.013	.014	.015	.015	.013	
	13.84	.012	.012	.012	.009	.008	.009	.009	.010	.008	
	15.09	.005	.006	.005	.005	.004	.006	.006	.006	-.006	
	16.34	.081	.080	.032	.021	.013	.013	.093	.002	.053	
	17.56	.069	.058	.047	.023	.009	-.006	-.028	-.058	-.051	
	18.84	.089	.067	.042	.003	-.016	-.021	-.023	-.019	-.032	
	20.09	.127	.085	.045	.020	.010	.008	.005	.000	-.016	
	21.34	.141	.107	.053	.028	.009	.009	.009	.003	-.008	
	22.59	.145	.110	.056	.024	.006	.006	.006	.003	-.005	
	23.84	.121	.082	.032	.001	-.018	-.020	-.023	-.021	-.031	
	25.09	.165	.121	.163	.033	.005	.004	.003	-.001	-.015	
25°	11.34	.029	.031	.016	.006	.002	.001	-.040	.003	.001	
	12.59	.011	.015	.009	.011	.009	.009	.010	.010	.008	
	13.84	.010	.013	.008	.009	.010	.009	.009	.009	.009	
	15.09	-.002	.001	-.004	.002	.001	.001	.002	.001	.000	
	16.34	.098	.095	.085	.064	.056	.064	.105	-.015	.050	
	17.56	.116	.103	.060	.031	.011	-.009	-.035	-.058	-.077	
	18.84	.160	.105	.064	.027	.002	-.009	.015	-.010	-.030	
	20.09	.188	.127	.070	.029	.014	.001	.000	-.005	-.014	
	21.34	.207	.155	.088	.030	.013	-.002	-.004	.001	-.004	
	22.59	.208	.151	.082	.019	.003	-.009	-.006	.002	-.002	
	23.84					.011	.017	.020	.016		
	25.09	.228	.176	.094	.054	.034	.022	.024	.028	.023	

TABLE IV.- LONGITUDINAL INTERFERENCE LOADING COEFFICIENTS OF THE BODY IN THE PRESENCE OF THE WINGS - Continued

(i) A = 1 rectangular wing, r/s = 0.2

α_B	x/r	δ_w 45°	40°	35°	30°	25°	20°	15°	10°	6°	3°	0°
	6.94	.001	.000	.001	.000	.000	.002	.000	.000	.000	.001	.000
	8.37	.001	.000	.000	.000	.000	.001	.000	.000	.000	.000	.000
	9.81	.001	.003	.000	.000	.000	.000	.000	.000	.000	.001	.000
	11.25	.010	.003	.001	.001	.002	.001	.001	.000	.000	.000	.000
	12.69	.001	.006	.000	.000	.000	.001	.000	.000	.000	.001	.001
	14.12	-.024	-.033	-.004	-.121	-.000	.002	-.063	.001	.000	.001	.000
0°	15.56	-.659	-.652	-.564	-.302	-.066	.057	.053	.045	.025	.011	.001
	17.00	.012	.017	.006	.004	.016	.092	.069	.067	.041	.015	.007
	18.44	.135	.161	.195	.189	.188	.131	.098	.081	.055	.030	.009
	19.87	.055	.088	.107	.107	.119	.117	.119	.087	.062	.031	.010
	21.31	.017	.058	.082	.098	.076	.076	.088	.077	.056	.037	.016
	22.75	-.008	.013	.033	.032	.053	.057	.050	.065	.049	.021	.009
	24.19	.029	.000	.002	.014	.021	.033	.028	.037	.029	.014	.005
	25.62	.109	.000	-.007	.007	.014	.019	.030	.030	.027	.015	.002
	6.94		.001	.004	.004	.002		.003	.003		.002	.003
	8.37		.000	.003	.000	.002		.002	.001		.002	.002
	9.81		.001	.005	.003	.002		.003	.002		.002	.001
	11.25		-.101	.000	.000	-.001		.000	.000		.000	.000
	12.69		.022	-.076	-.017	.005		.004	.004		.006	.006
	14.12		.066	.064	.034	-.104		-.050	-.012		.014	.012
	15.56		-.590	-.532	-.373	-.093		.074	.065		.031	.020
3°	17.00		.072	.032	.016	.045		.104	.101		.053	.023
	18.44		.248	.281	.264	.252		.159	.131		.074	.045
	19.87		.099	.112	.142	.170		.184	.143		.083	.050
	21.31		.042	.090	.122	.103		.142	.119		.087	.049
	22.75		.016	.048	.060	.062		.079	.097		.051	.026
	24.19		.044	.014	.023	.026		.042	.025		.038	.011
	25.62		.028	-.007	-.009	.006		.017	.024		.017	.003
	6.94			.000	-.001	.000	-.001	.000	-.001	.000	.000	.000
	8.37			.000	-.002	.000	-.002	-.012	-.003	.000	-.014	-.013
	9.81			-.082	-.001	-.001	-.001	.000	-.001	.000	-.001	.000
	11.25			-.056	-.073	-.002	.000	.002	.000	.002	.000	.001
	12.69			.008	-.047	-.057	.002	.004	.003	.004	.004	.006
	14.12			.025	.052	-.039	-.081	-.110	-.018	.018	.021	.026
6°	15.56			-.995	-.290	.020	.100	.087	.068	.054	.045	.039
	17.00			.170	.068	-.163	.162	.132	.121	.100	.083	.062
	18.44			.324	.303	-.287	.281	.218	.175	.129	.112	.081
	19.87			.118	.139	-.190	.255	.247	.197	.163	.123	.093
	21.31			.079	.097	-.129	.157	.187	.166	.147	.138	.100
	22.75			.021	.057	-.077	.092	.112	.130	.116	.098	.077
	24.19			.064	.035	-.056	.055	.063	.069	.065	.056	.045
	25.62			.035	.007	-.007	.014	.023	.023	.030	.031	.025
	6.94				.000	.000	.000	-.004	.000	-.002	-.001	-.002
	8.37				-.022	.000	.000	-.004	-.000	-.002	-.002	-.001
	9.81				-.034	-.007	.000	-.006	-.001	-.001	-.003	-.002
	11.25				-.065	-.154	.002	-.003	.001	.001	-.001	.000
	12.69			-.057	-.077	-.067	-.019	-.006	.000	-.001	-.003	-.001
	14.12			.060	-.051	-.174	-.140	-.164	-.035	.013	.025	.032
10°	15.56			-.107	-.152	.048	.158	.106	.088	.070	.070	.061
	17.00			.257	.195	.230	.215	.174	.164	.129	.114	.090
	18.44			.281	.361	.346	.323	.258	.235	.187	.155	.120
	19.87			.095	.137	.234	.301	.290	.252	.209	.159	.126
	21.31			.055	.100	.141	.168	.207	.213	.189	.179	.138
	22.75			.049	.046	.077	.085	.120	.154	.152	.136	.118
	24.19			.076	.072	.017	.034	.048	.061	.079	.084	.080
	25.62			.007	-.002	-.038	.012	.023	.052	.056	.068	.074
	6.94				-.003	-.005	.004	.001	.002	-.001	.001	.000
	8.37				-.007	-.003	.004	.002	.002	.000	.002	.000
	9.81				-.032	-.031	.001	.000	.001	.000	.000	.000
	11.25				-.088	-.060	-.019	.002	.001	.000	.001	.001
	12.69				-.123	-.101	-.083	-.025	.002	.000	.001	.000
	14.12				-.116	-.211	-.146	-.259	-.013	.024	.038	.044
15°	15.56				-.182	.081	.267	.193	.116	.099	.095	.076
	17.00				.225	.251	.326	.264	.215	.181	.157	.120
	18.44				.359	.363	.373	.310	.318	.244	.204	.156
	19.87				.115	.247	.357	.362	.322	.274	.217	.173
	21.31				.069	.121	.205	.258	.262	.250	.241	.183
	22.75				-.002	.023	.043	.108	.180	.191	.189	.166
	24.19				.009	-.019	-.013	.023	.061	.110	.120	.120
	25.62				-.062	-.046	-.029	.010	.063	.087	.112	.128
	6.94					.002	.005	.000	.004	.001	.003	.002
	8.37					-.022	.001	.001	.003	.002	.002	.002
	9.81					-.046	-.015	.000	.001	.000	.000	.000
	11.25					-.071	-.064	-.011	.001	.001	.001	.000
	12.69					-.159	-.074	-.062	-.012	.003	.005	.004
	14.12					.262	-.146	-.375	-.066	.023	.051	.059
20°	15.56					.089	.288	.248	.209	.145	.123	.105
	17.00					.270	.352	.327	.327	.248	.191	.152
	18.44					.453	.360	.421	.400	.316	.265	.211
	19.87					.394	.411	.421	.430	.390	.320	.246
	21.31					.106	.208	.264	.311	.346	.353	.284
	22.75				-.005	.040	.106	.179	.232	.259	.250	.204
	24.19				-.061	.030	.054	.107	.154	.186	.206	.177
	25.62				-.035	.014	.055	.093	.148	.165		
	6.94						-.046	.002	-.001	.000	-.005	.000
	8.37						-.048	.000	-.001	-.001	-.002	.000
	9.81						-.059	.002	-.002	.001	-.005	.001
	11.25						-.058	-.036	-.004	.001	-.003	-.001
	12.69						-.062	-.067	-.045	-.008	-.002	-.004
	14.12						-.433	-.268	-.083	.021	.090	.085
25°	15.56						.326	.291	.228	.198	.159	.148
	17.00						.315	.349	.399	.315	.276	.212
	18.44						.464	.452	.535	.447	.354	.284
	19.87						.475	.537	.563	.538	.476	.391
	21.31						.265	.345	.377	.487	.470	.408
	22.75						.050	.153	.214	.280	.325	.342
	24.19						.049	.136	.206	.271	.299	.357
	25.62						.118	.168	.197	.248	.258	.300

TABLE IV.- LONGITUDINAL INTERFERENCE LOADING COEFFICIENTS OF THE BODY IN THE PRESENCE OF THE WINGS - Continued

(i) A = 1 rectangular wing, r/s = 0.2 - Concluded

α_B	x/r	δ_W -3°	-6°	-10°	-15°	-20°	-25°	-30°	-35°	-40°	-45°
	694	.000	.001	.000	.000	.001	.000	.002			
	837	.000	.000	.001	.000	.000	.000	.000			
	981	.001	.001	.000	.000	.001	.000	.000			
	1125	.000	.000	.000	.000	.000	.001	.000			
	1269	.000	.001	.000	.000	.000	.000	.000			
	1412	-.003	.000	.001	.069	.004	.000	.075			
0°	1556	-.015	-.028	-.046	-.056	-.064	.062	.365			
	1700	-.021	-.049	-.071	-.075	-.071	-.022	.031			
	1844	-.043	-.069	-.083	-.108	-.146	-.203	-.215			
	1987	-.047	-.079	-.106	-.132	-.141	-.133	-.117			
	2131	-.042	-.056	-.079	-.091	-.074	-.075	-.091			
	2275	-.035	-.059	-.074	-.059	-.059	-.061	-.047			
	2419	-.025	-.037	-.045	-.041	-.043	-.028	-.022			
	2562	-.002	-.016	-.014	-.021	-.016	-.006	.002			
	694	.002	.001	.002	.002	.000	.002	.002	.001		
	837	.001	.001	.001	.001	.000	.001	.000	-.001		
	981	.002	.002	.003	.003	.001	.003	.002	.002		
	1125	.000	-.001	-.001	.000	.000	.000	.000	.000		
	1269	.004	.003	.003	.004	.004	.004	.004	.004		
	1412	.007	.007	.009	.042	.000	.001	.000	-.097		
3°	1556	.009	-.004	-.018	-.018	-.033	.060	.381	.386		
	1700	-.001	-.013	-.038	-.050	-.066	-.013	.069	.060		
	1844	.014	-.017	-.039	-.070	-.088	-.115	-.156	-.160		
	1987	.015	-.022	-.050	-.075	-.076	-.078	-.088	-.090		
	2131	.014	-.010	-.038	-.052	-.046	-.059	-.072	-.082		
	2275	.002	-.024	-.041	-.039	-.046	-.037	-.036	-.044		
	2419	-.005	-.020	-.032	-.041	-.032	-.019	-.009	-.017		
	2562	-.006	-.014	-.024	-.029	-.026	-.019	-.010	-.016		
	694	.000	.000	.000	-.001	.000	.000	.000	.000		
	837	.000	.000	.000	-.002	-.001	-.001	-.001	-.001		
	981	.000	.001	.001	-.002	.000	.000	.000	.000		
	1125	.000	.002	.002	.000	.001	.000	.001	.000		
	1269	.003	.005	.004	.002	.003	.003	.003	.003		
	1412	.017	.015	.011	.025	-.001	-.001	-.001	-.047		
6°	1556	.036	.028	.010	.006	.000	.105	.344	.605		
	1700	.037	.014	-.010	-.039	-.066	-.031	.041	.082		
	1844	.053	.023	-.005	-.025	-.047	-.070	-.118	-.139		
	1987	.063	.029	-.007	-.031	-.037	-.041	-.074	-.093		
	2131	.065	.031	.000	-.021	-.018	-.045	-.056	-.075		
	2275	.048	.017	-.004	-.022	-.024	-.024	-.024	-.030		
	2419	.027	.004	-.013	-.027	-.020	-.007	.004	.001		
	2562	.016	.001	-.010	-.020	-.017	-.010	-.003	-.011		
	694	-.002	.000	-.001	.000	.000	.000	-.001	.001	-.001	
	837	-.001	.000	-.001	.000	.000	.000	-.001	.001	-.001	
	981	-.001	.000	-.001	.000	-.001	.000	-.001	.000	-.001	
	1125	.001	.002	.002	.003	.003	.003	.002	.006	.002	
	1269	-.001	-.001	.000	.000	.000	.000	.000	.001	.000	
	1412	.022	.018	.015	.022	-.004	-.004	-.004	-.002	-.012	
10°	1556	.047	.051	.028	.016	.013	.097	.358	.576	.719	
	1700	.066	.054	.016	-.024	-.049	-.044	.030	.094	.100	
	1844	.080	.050	.014	-.016	-.037	-.056	-.067	-.122	-.139	
	1987	.092	.060	.019	-.001	-.011	-.036	-.070	-.099	-.108	
	2131	.105	.070	.024	.003	-.011	-.018	-.039	-.063	-.086	
	2275	.088	.055	.014	-.003	-.001	-.007	-.018	-.020	-.026	
	2419	.067	.033	.001	.000	.003	.000	-.002	.000	.002	
	2562	.069	.041	.008	-.001	-.003	-.004	-.010	-.008	-.022	
	694	.002	.000	.001	-.003	.000	.001	.002	.003	.000	.002
	837	.002	.002	.003	-.002	.002	.002	.002	.003	.000	.002
	981	-.003	.001	.001	-.002	.000	.001	.003	.002	.001	.001
	1125	-.004	.001	.002	-.001	.001	.002	-.001	.002	.001	.000
	1269	-.006	.001	.001	-.001	.001	.002	.003	.003	.001	-.061
	1412	.022	.031	.023	.030	-.004	-.004	-.002	-.002	-.005	-.089
15°	1556	.042	.068	.057	.040	.059	.090	.375	.616	.713	.804
	1700	.082	.076	.047	.003	-.018	-.035	.019	.092	.150	.200
	1844	.113	.072	.034	-.010	-.041	-.062	-.078	-.090	-.102	-.105
	1987	.130	.091	.040	-.008	.000	-.026	-.050	-.088	-.116	-.111
	2131	.137	.096	.046	.001	-.007	-.019	-.036	-.061	-.093	-.101
	2275	.137	.092	.047	.000	-.008	-.009	-.024	-.021	-.029	-.057
	2419	.104	.070	.026	-.008	-.007	-.002	-.004	-.011	-.011	-.028
	2562	.123	.095	.050	-.006	-.025	-.036	-.035	-.040	-.049	-.087
	694	.002	.003	.002	.003	.004	-.001	.003	.006	.004	
	837	.001	.003	.003	.002	.003	-.001	.002	.005	.003	
	981	.000	.000	.001	-.001	.001	-.002	.001	.002	.001	
	1125	.001	.002	.003	.001	.001	-.001	.003	.005	.003	
	1269	.003	.005	.006	.005	.006	.002	.005	.008	.005	
	1412	.053	.052	.045	.042	.003	-.002	.001	.003	.002	
20°	1556	.078	.104	.104	.068	.070	.075	.356	.614	.643	
	1700	.113	.107	.080	.037	.016	-.021	.027	.064	.104	
	1844	.151	.118	.072	.015	-.018	-.050	-.080	-.097	-.111	
	1987	.187	.147	.090	.027	-.001	-.026	-.043	-.068	-.112	
	2131	.202	.158	.077	.026	-.002	-.026	-.031	-.042	-.066	
	2275	.203	.156	.100	.027	-.000	-.026	-.030	-.026	-.020	
	2419	.204	.170	.075	.030	-.004	-.028	-.032	-.029	-.050	
	2562	.164	.172	.048	.038	-.001	-.029	-.023	-.030	-.037	
	694	.000	.001	.000	.001	-.001	.004	.000	.002	.000	.004
	837	.000	.001	.000	.000	-.001	.002	-.001	.001	-.001	.003
	981	.000	.001	.000	.000	-.002	.002	-.002	.020	-.002	.001
	1125	.000	.001	-.002	.001	-.002	.001	-.002	.029	-.001	-.019
	1269	-.003	-.002	-.006	-.002	-.005	-.001	-.006	.006	-.005	-.048
	1412	.081	.087	.057	.036	.001	.004	.000	.002	-.005	-.053
25°	1556	.134	.148	.139	.099	.086	.072	.284	.454	.380	.281
	1700	.177	.158	.136	.068	.029	-.019	.044	.077	.036	.008
	1844	.236	.184	.125	.063	.009	-.016	-.041	-.067	-.096	-.114
	1987	.298	.230	.134	.057	.008	-.013	-.034	-.047	-.072	-.103
	2131	.347	.255	.104	.043	.007	-.018	-.029	-.027	-.037	-.062
	2275	.312	.244	.109	.051	.013	-.002	-.011	-.003	-.004	.007
	2419	.346	.286	.147	.063	.018	-.004	-.006	.006	-.002	-.017
	2562	.298	.269	.163	.083	.035	.000	-.005	.008	-.001	-.002

TABLE IV.--LONGITUDINAL INTERFERENCE LOADING COEFFICIENTS OF THE BODY IN THE PRESENCE OF THE WINGS - Continued

(j) A = 1 rectangular wing, r/s = 0.4

α_B	x/r	δ_w = 45°	40°	35°	30°	25°	20°	15°	10°	6°	3°	0°
	6.94											
	8.37											
	9.81											
	11.25											
	12.69											
	14.12											
0°	15.56											
	17.00											
	18.44											
	19.87											
	21.31											
	22.75											
	24.19											
	25.62											
	6.94			.001								
	8.37			.002								
	9.81			.001								
	11.25			.001								
	12.69			.006								
	14.12			.000								
3°	15.56			.037								
	17.00			.117								
	18.44			.150								
	19.87			.081								
	21.31			.055								
	22.75			.000								
	24.19			-.027								
	25.62			-.030								
	6.94			.001	.001	.001	.001	.001	.000	.001	.000	
	8.37			-.001	.000	-.001	.000	.000	-.001	.000	.000	
	9.81			-.001	.000	-.001	.000	.000	-.002	.000	.000	
	11.25			.001	.001	.001	.001	.001	.000	.002	.001	
	12.69			.005	.006	.006	.004	.005	.005	.005	.005	
	14.12			.000	.000	-.001	-.001	.000	.000	.000	.000	
6°	15.56			.084	.088	-.089	-.017	-.005	.000	.000	.000	
	17.00			.148	.139	.088	.102	.089	.057	.027	.015	
	18.44			.184	.166	.136	.168	.172	.141	.085	.054	
	19.87			.113	.122	.135	.119	.098	.078	.052	.074	
	21.31			.053	.068	.078	.082	.078	.065	.052	.052	
	22.75			-.005	.003	.026	.031	.042	.043	.029	.026	
	24.19			-.041	-.035	-.021	-.011	-.001	.003	.006	.006	
	25.62			-.032	-.036	-.036	-.029	-.022	-.015	-.007	-.003	
	6.94			.004	.023	.000	-.001		-.002	-.004	-.005	-.007
	8.37			-.001	-.003	.000	-.002		-.002	-.004	-.003	-.006
	9.81			-.001	-.004	.000	-.001		-.001	-.002	-.004	-.006
	11.25			.001	.000	.000	-.001		-.001	-.002	-.001	-.004
	12.69			.000	-.002	.000	-.002		-.001	.000	.000	-.002
	14.12			-.028	-.011	-.001	-.002		-.002	-.002	-.001	-.002
10°	15.56			-.002	-.009	.000	.008		-.003	-.002	-.002	-.002
	17.00			.185	.133	.089	.127		.071	.028	.024	.019
	18.44			.166	.186	.169	.197		.158	.093	.046	.054
	19.87			.105	.105	.118	.129		.107	.107	.065	.061
	21.31			.089	.086	.040	.060		.061	.058	.053	.043
	22.75			-.004	-.006	.003	.019		.034	.036	.035	.037
	24.19			-.041	-.047	-.038	-.030		-.007	.003	.008	.008
	25.62			-.046	-.048	-.039	-.031		-.013	-.002	.006	.013
	6.94				-.002	-.003	-.003	-.010	.000	.001	-.003	-.002
	8.37				.000	.002	.001	-.004	.000	.000	-.003	-.002
	9.81				-.001	-.001	-.001	-.005	-.001	-.001	-.003	-.002
	11.25				.002	.001	.002	-.003	-.003	.000	-.004	-.003
	12.69				.003	.002	.001	-.003	-.001	-.001	-.003	-.002
	14.12				-.017	-.002	.000	-.005	-.003	-.002	-.005	-.003
15°	15.56				-.066	-.042	-.033	-.020	-.010	-.006	-.008	-.007
	17.00				.162	.099	.126	.106	.078	.024	.022	.025
	18.44				.199	.163	.245	.224	.170	.097	.072	.063
	19.87				.067	.102	.103	.125	.125	.125	.093	.071
	21.31				.034	.047	.056	.051	.067	.079	.077	.065
	22.75				-.007	.012	.032	.029	.045	.059	.053	.049
	24.19				-.030	-.028	-.018	-.014	.003	.018	.021	.026
	25.62				-.026	-.017	-.001	.007	.010	.019	.020	.028
	6.94					.004	.005	.003	.006	.005	.003	.006
	8.37					.000	.002	.000	.003	.002	.001	.002
	9.81					.000	.002	.000	.004	.003	.002	.000
	11.25					.000	.002	.000	.003	.002	.000	.000
	12.69					.003	.005	.003	.006	.005	.004	.004
	14.12					-.001	.002	.001	.003	.003	.002	.002
20°	15.56					-.048	-.034	-.003	-.004	.000	.000	-.004
	17.00					.083	.150	.135	.093	.042	.039	.043
	18.44					.160	.294	.284	.191	.120	.107	.103
	19.87					.128	.135	.127	.137	.145	.122	.104
	21.31					.083	.105	.119	.113	.116	.108	.094
	22.75					.042	.056	.069	.069	.090	.087	.085
	24.19					.023	.033	.045	.057	.064	.069	.070
	25.62					.038	.038	.043	.051	.052	.052	.049
	6.94							.005	.000	-.005	-.007	
	8.37							.006	-.001	-.004	-.003	
	9.81							.000	-.004	-.005	-.006	
	11.25							-.001	-.004	-.010	-.006	
	12.69							.002	-.002	-.006	-.004	
	14.12							.004	-.002	-.008	-.002	
25°	15.56							-.005	-.002	-.008	-.004	
	17.00							.167	.101	.066	.042	
	18.44							.387	.248	.171	.135	
	19.87							.187	.155	.152	.147	
	21.31							.171	.174	.158	.135	
	22.75							.131	.126	.120	.114	
	24.19							.104	.091	.084	.083	
	25.62							.109	.102	.097	.092	

TABLE IV.- LONGITUDINAL INTERFERENCE LOADING COEFFICIENTS OF THE BODY IN THE PRESENCE OF THE WINGS - Concluded

(j) A = 1 rectangular wing, r/s = 0.4 - Concluded

α_B	x/r	δ_W -3°	-6°	-10°	-15°	-20°	-25°	-30°	-35°	-40°	-45°
	.694	.001	.001	.000	.001	.002	.000	.000	.001	.000	.000
	.837	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
	.981	.001	.001	.000	.001	.001	.000	.000	.000	.000	.000
	1.125	.000	.000	.000	.000	.000	.000	-.001	-.001	-.001	-.002
	1.269	.000	.000	.000	.000	.001	.000	.000	.000	.000	-.001
	1.412	.000	.000	.000	.000	.001	.001	.000	.000	.000	-.003
0°	1.556	.000	.001	.000	.000	.001	.001	.002	-.025	-.072	-.068
	1.700	-.006	-.012	-.025	-.046	-.060	-.073	-.085	-.090	-.082	-.118
	1.844	-.013	-.034	-.065	-.097	-.085	-.068	-.104	-.132	-.115	-.087
	1.987	-.013	-.033	-.053	-.071	-.088	-.104	-.093	-.061	-.040	-.050
	2.131	-.016	-.031	-.047	-.061	-.059	-.051	-.046	-.046	-.042	-.053
	2.275	-.005	-.014	-.030	-.032	-.027	-.028	-.014	-.017	-.012	-.020
	2.419	-.002	-.004	-.010	-.010	-.008	.000	.008	.006	.005	.008
	2.562	.005	.007	.006	.014	.015	.019	.024	.023	.015	.016
	.694	.002	.001	.002	.001	.002	.000	.004	-.001	.002	.002
	.837	.002	.000	.002	.002	.002	.001	.005	.000	.001	.003
	.981	.002	-.001	.001	.000	.001	.000	.002	.000	.000	.000
	1.125	.000	.000	.001	.001	.000	-.001	.004	.000	.000	.001
	1.269	.006	.005	.006	.007	.006	.005	.010	.005	.005	.006
	1.412	.000	-.002	.000	.000	.000	-.001	.002	-.004	.000	-.001
	1.556	.000	-.001	.000	.000	.000	-.001	.003	-.017	-.096	-.082
3°	1.700	.003	-.004	-.009	-.022	-.027	-.050	-.059	-.051	-.057	-.079
	1.844	.011	-.009	-.028	-.056	-.050	-.053	-.059	-.098	-.085	-.063
	1.987	.010	-.010	-.024	-.040	-.052	-.068	-.044	-.041	-.012	-.012
	2.131	.006	-.006	-.022	-.032	-.034	-.028	-.002	-.010	-.012	-.022
	2.275	.001	-.009	-.018	-.025	-.021	-.012	-.003	-.010	-.009	-.021
	2.419	-.004	-.007	-.009	-.009	-.003	-.001	.012	.000	-.003	-.012
	2.562	-.008	-.008	-.007	-.005	.002	.007	.016	.016	.001	-.010
	.694	.000	.000	.001		.002	.000	.001	.000	.001	.000
	.837	-.002	-.002	.000		.000	-.001	-.001	-.001	-.001	-.003
	.981	.000	.000	-.001		.000	.000	.000	-.001	.000	-.001
	1.125	.000	.000	.001		.002	.001	.000	.000	.001	.000
	1.269	.005	.004	.005		.005	.005	.006	.006	.005	.004
	1.412	-.001	-.001	.000		.001	.008	.000	.000	.000	-.001
6°	1.556	.001	-.001	.000		.001	.000	.000	.000	-.019	-.066
	1.700	.015	.005	.000		-.003	-.009	-.041	-.070	-.081	-.053
	1.844	.035	.012	.001		-.029	-.046	-.051	-.054	-.078	-.076
	1.987	.036	.016	.004		-.021	-.020	-.015	-.007	.000	-.003
	2.131	.028	.016	.006		-.004	-.002	.000	-.002	-.013	-.010
	2.275	.012	.006	.004		-.001	.003	.000	.004	-.011	-.007
	2.419	.001	-.001	-.004		.000	.009	.003	.009	-.007	-.008
	2.562	-.005	-.007	-.005		.006	.006	.003	.010	-.001	-.003
	.694	-.003	-.003	-.001	.000	-.001	-.002	.000	.000	-.004	.000
	.837	-.003	-.002	-.002	.000	-.001	-.003	-.001	-.001	-.005	-.002
	.981	-.001	-.001	-.001	.000	-.001	-.002	.000	-.001	-.003	-.001
	1.125	.000	.000	.001	.002	.001	.000	.002	.001	-.001	.002
	1.269	-.001	-.001	-.001	.000	.000	-.002	.000	-.001	-.003	-.001
	1.412	-.002	-.002	-.004	-.002	-.003	-.003	-.001	-.002	-.003	-.004
10°	1.556	.000	.000	-.001	.000	.001	.000	.001	.000	-.001	-.010
	1.700	.022	.016	.008	.005	.004	.001	-.008	-.060	-.060	-.058
	1.844	.051	.036	.016	.003	-.006	-.017	-.033	-.039	-.023	-.028
	1.987	.054	.035	.016	.004	-.003	-.009	-.008	-.004	-.005	-.006
	2.131	.037	.033	.018	.011	.007	.007	.012	.009	-.003	-.009
	2.275	.025	.023	.014	.012	.013	.016	.020	.013	-.003	-.006
	2.419	.011	.012	.007	.006	.006	.008	.010	.005	-.002	-.008
	2.562	.010	.012	.006	.000	-.003	-.006	.000	-.178	-.008	-.013
	.694	-.005	-.003	.000	-.004	.002	.004	-.002	.001	.004	-.001
	.837	-.002	.001	.002	-.002	.004		-.003		.004	
	.981	-.004	-.002	-.001	-.003	.001	.000	-.005	.000	.001	-.001
	1.125	-.001	.001	.004	-.002	.003	.003	-.002	.002	.003	.001
	1.269	.000	.002	.003	.000	.005	.004	.001	.003	.005	.003
	1.412	-.004	-.003	.001	-.003	.002	.000	-.002	.000	.000	-.001
15°	1.556	-.009	-.006	-.006	-.008	-.004	-.001	-.006	-.004	-.003	-.005
	1.700	.020	.017	.006	-.004	-.002	-.004	-.019	-.045	-.059	-.043
	1.844	.054	.042	.024	.003	.001	-.005	-.020	-.032	-.021	-.008
	1.987	.062	.049	.026	.002	.002	-.002	-.007	.001	.002	-.001
	2.131	.056	.047	.029	.006	.010	.010	.006	.013	.011	-.003
	2.275	.044	.041	.025	.004	.010	.014	.008	.012	.011	-.003
	2.419	.023	.021	.014	.005	.008	.008	.001	.003	-.003	-.006
	2.562	.026	.021	.008	-.007	-.007	-.009	-.019	-.021	-.024	-.029
	.694	.001	.008	.004		.007		.004			.005
	.837	-.002	.005	.000		.002		.002			.002
	.981	-.002	.000	-.001		.000		-.001			-.002
	1.125	-.003	.000	.000		.001		.001			-.001
	1.269	.004	.008	.002		.006		.006			.005
	1.412	.000	.002	.000		.002		.000			.000
20°	1.556	-.005	.001	-.001		.001		.000			-.001
	1.700	.035	.027	.017		.003		-.007			-.049
	1.844	.077	.061	.038		.009		-.015			-.014
	1.987	.085	.065	.038		.011		.001			.000
	2.131	.078	.065	.039		.011		.008			.004
	2.275	.065	.059	.037		.015		.006			.002
	2.419	.060	.056	.034		.010		.000			-.013
	2.562	.040	.039	.026		.005		-.004			-.015
	.694	-.014		-.008	-.001	-.004	-.002	.000	.000	.000	.000
	.837	-.009		-.006	-.008	-.004	-.001	.003	.001	-.001	.000
	.981	-.010		-.008	-.003	-.008	-.005	-.001	-.002	-.003	-.003
	1.125	-.010		-.005	-.001	-.007	-.004	.000	-.001	.000	-.001
	1.269	-.009		-.003	.000	-.004	-.001	.002	.001	.001	.000
	1.412	-.006		-.001	.002	-.003	.000	.001	.001	.001	.001
25°	1.556	-.011		-.006	-.003	-.007	-.005	-.004	-.005	-.001	-.005
	1.700	.032		.013	.006	-.003	-.007	-.005	-.019	-.037	-.046
	1.844	.092		.044	.029	.002	.000	-.004	-.007	-.007	-.017
	1.987	.099		.050	.024	.007	.000	.002	.002	.000	-.002
	2.131	.091		.050	.028	.004	.000	-.002	.001	.005	.004
	2.275	.076		.041	.025	.002	.002	.002	.004	.010	.008
	2.419	.068		.032	.019	.002	-.001	.004	.005	.013	.007
	2.562	.068		.028	.014	.003	.001	.005	.005	.004	.000

TABLE V.- PRESSURE COEFFICIENTS OF THE BODY ALONE

(a) Model I

θ	x/r	α_B 0°	3°	6°	10°	15°	20°	25°
6°	.722	-.027	-.034	-.040	-.047	-.058	-.079	-.086
	.856	-.022	-.026	-.033	-.038	-.051	-.079	-.084
	.994	-.018	-.024	-.027	-.038	-.059	-.076	-.083
	1.134	-.020	-.022	-.021	-.033	-.061	-.076	-.086
	1.259	-.015	-.017	-.017	-.021	-.064	-.078	-.081
	1.384	-.011	-.010	-.011	-.022	-.064	-.077	-.081
	1.509	-.003	-.007	-.008	-.023	-.066	-.088	-.083
	1.634	-.006	-.007	-.009	-.030	-.063	-.079	-.080
	1.756	-.007	-.006	-.006	-.031	-.066	-.079	-.074
	1.884	-.002	-.004	-.002	-.027	-.064	-.072	-.069
	2.009	-.001	-.002	-.005	-.029	-.068	-.067	-.068
	2.134	-.002	-.001	-.004	-.031	-.058	-.064	-.065
	2.259	.005	.002	-.003	-.026	-.057	-.061	-.062
	2.384	.004	.008	.000	-.023	-.054	-.058	-.058
	2.509	.019	.011	.002	-.023	-.052	-.055	-.064
15°	.722	-.027	-.033	-.038	-.046	-.070	-.081	-.084
	.856	-.021	-.026	-.034	-.049	-.073	-.083	-.084
	.994	-.019	-.024	-.029	-.048	-.074	-.083	-.085
	1.134	-.020	-.023	-.025	-.047	-.073	-.078	-.086
	1.259	-.015	-.017	-.022	-.041	-.070	-.071	-.081
	1.384	-.013	-.010	-.018	-.037	-.067	-.078	-.079
	1.509	-.008	-.011	-.019	-.038	-.066	-.077	-.082
	1.634	-.006	-.008	-.016	-.042	-.063	-.079	-.080
	1.756	-.003	-.005	-.014	-.041	-.064	-.082	-.077
	1.884	-.003	-.006	-.013	-.037	-.060	-.077	-.072
	2.009	-.001	-.004	-.013	-.040	-.068	-.072	-.070
	2.134	-.001	-.003	-.011	-.039	-.063	-.068	-.067
	2.259	.004	.000	-.009	-.028	-.063	-.064	-.063
	2.384	.018	.005	-.007	-.026	-.062	-.063	-.059
	2.509	.018	.007	-.005	-.025	-.061	-.057	-.047
30°	.722	-.029	-.037	-.044	-.057	-.086	-.086	-.087
	.856	-.024	-.030	-.037	-.057	-.084	-.082	-.086
	.994	-.021	-.027	-.034	-.069	-.078	-.081	-.086
	1.134	-.018	-.022	-.029	-.070	-.070	-.075	-.082
	1.259	-.016	-.019	-.026	-.071	-.068	-.075	-.081
	1.384	-.010	-.013	-.023	-.061	-.068	-.070	-.079
	1.509	-.010	-.018	-.025	-.060	-.065	-.069	-.081
	1.634	-.006	-.008	-.023	-.046	-.061	-.068	-.076
	1.756	-.002	-.006	-.023	-.037	-.055	-.066	-.071
	1.884	-.003	-.007	-.024	-.038	-.051	-.065	-.067
	2.009	-.003	-.006	-.023	-.034	-.037	-.062	-.068
	2.134	.000	-.003	-.019	-.031	-.039	-.061	-.064
	2.259	.003	-.002	-.013	-.027	-.035	-.057	-.059
	2.384	.010	.002	-.013	-.026	-.033	-.054	-.056
	2.509	.014	.006	-.008	-.025	-.033	-.048	-.047
60°	.722	-.031	-.040	-.053	-.076	-.079	-.083	-.087
	.856	-.029	-.037	-.052	-.069	-.077	-.082	-.085
	.994	-.025	-.032	-.045	-.058	-.069	-.076	-.082
	1.134	-.019	-.027	-.037	-.054	-.068	-.076	-.081
	1.259	-.018	-.022	-.030	-.049	-.065	-.073	-.079
	1.384	-.014	-.019	-.026	-.044	-.060	-.069	-.077
	1.509	-.011	-.015	-.021	-.045	-.061	-.071	-.078
	1.634	-.006	-.011	-.023	-.041	-.059	-.067	-.075
	1.756	-.005	-.010	-.018	-.036	-.057	-.063	-.073
	1.884	-.004	-.006	-.016	-.033	-.053	-.063	-.073
	2.009	-.002	-.005	-.013	-.032	-.050	-.061	-.068
	2.134	.001	-.003	-.011	-.029	-.047	-.060	-.065
	2.259	.003	-.002	-.009	-.028	-.042	-.054	-.060
	2.384	.007	.003	-.007	-.025	-.038	-.048	-.053
	2.509	.007	.004	-.003	-.021	-.029	-.043	-.055

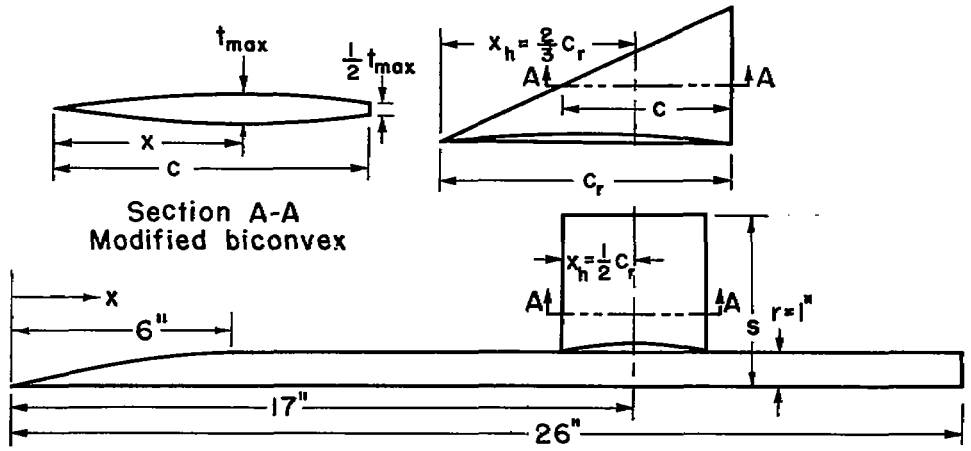
θ	x/r	α_B 0°	3°	6°	10°	15°	20°	25°
120°	.722	-.030	-.026	-.021	-.014	.018	.047	.110
	.856	-.028	-.026	-.023	-.015	.007	.047	.101
	.994	-.028	-.026	-.025	-.021	.004	.047	.112
	1.134	-.023	-.025	-.028	-.022	.002	.043	.109
	1.259	-.018	-.021	-.027	-.021	.003	.048	.118
	1.384	-.015	-.019	-.024	-.019	.004	.050	.125
	1.509	-.012	-.019	-.031	-.025	.000	.049	.128
	1.634	-.009	-.013	-.031	-.026	.002	.055	.140
	1.756	-.005	-.011	-.025	-.020	.009	.057	.156
	1.884	-.003	-.010	-.023	-.019	.012	.074	.161
	2.009	-.002	-.008	-.022	-.019	.013	.078	.159
	2.134	.000	-.006	-.019	-.019	.014	.082	.136
	2.259	.001	-.005	-.014	-.018	.016	.086	.137
	2.384	.004	-.003	-.011	-.015	.035	.166	.191
	2.509	.018	.006	.002	.013	.061	.169	.175
150°	.722	-.031	-.021	-.004	.025	.086	.164	.309
	.856	-.024	-.015	.003	.028	.088	.173	.279
	.994	-.022	-.016	-.001	.025	.080	.161	.262
	1.134	-.019	-.017	-.006	.022	.075	.150	.234
	1.259	-.018	-.017	-.006	.022	.073	.144	.198
	1.384	-.010	-.012	-.005	.020	.070	.144	.171
	1.509	-.010	-.009	-.005	.021	.071	.136	.136
	1.634	-.008	-.009	-.004	.021	.074	.135	.117
	1.756	-.004	-.004	-.006	.026	.083	.137	.106
	1.884	-.003	-.004	-.007	.023	.078	.123	.093
	2.009	-.002	-.004	.002	.020	.072	.101	.075
	2.134	.001	.002	-.003	.019	.068	.085	.068
	2.259	.002	.002	.005	.018	.063	.076	.091
	2.384	.008	.013	.022	.040	.113	.137	.140
	2.509	.019	.027	.043	.073	.139	.137	.116
165°	.722	-.030	-.015	.003	.034	.104	.142	.135
	.856	-.022	-.012	.009	.036	.103	.146	.115
	.994	-.020	-.012	.008	.035	.094	.135	.111
	1.134	-.019	-.014	.002	.027	.083	.128	.103
	1.259	-.017	-.012	.000	.027	.077	.115	.092
	1.384	-.012	-.007	-.001	.026	.075	.106	.088
	1.509	-.008	-.004	.004	.024	.072	.100	.083
	1.634	-.006	-.004	.007	.026	.075	.096	.080
	1.756	-.004	-.004	.006	.028	.077	.094	.080
	1.884	-.003	.000	.005	.027	.072	.077	.070
	2.009	-.001	-.002	.005	.028	.065	.073	.065
	2.134	-.001	.001	.003	.029	.058	.064	.058
	2.259	.002	.014	.010	.029	.053	.059	.066
	2.384	.011	.031	.030	.051	.091	.108	.130
	2.509	.023	.081	.052	.078	.123	.125	.095
174°	.722	-.030	-.013	.004	.038	.113	.163	.188
	.856	-.022	-.011	.009	.040	.103	.153	.167
	.994	-.018	-.009	.011	.039	.095	.143	.162
	1.134	-.017	-.010	.006	.032	.084	.135	.145
	1.259	-.015	-.009	.001	.023	.075	.123	.127
	1.384	-.012	-.006	.001	.023	.074	.116	.117
	1.509	-.006	.000	.003	.023	.070	.108	.106
	1.634	-.004	-.001	.009	.028	.075	.105	.100
	1.756	-.004	-.004	.007	.025	.072	.105	.098
	1.884	.000	-.002	.005	.025	.071	.093	.085
	2.009	.001	.000	.007	.025	.063	.083	.077
	2.134	-.001	.000	.004	.021	.058	.074	.069
	2.259	.005	.008	.013	.020	.054	.068	.074
	2.384	.014	.023	.033	.056	.092	.131	.148
	2.509	.026	.040	.053	.083	.127	.143	.107

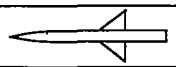
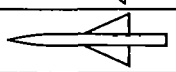
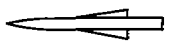
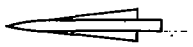
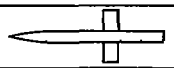
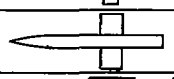
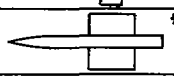
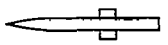
TABLE V.- PRESSURE COEFFICIENTS OF THE BODY ALONE - Concluded

(b) Model II

θ	x/r	α_B 0°	3°	6°	10°	15°	20°	25°
6°	6.94	-.028	-.036	-.042	-.049	-.059	-.069	-.086
	8.37	-.022	-.027	-.034	-.040	-.050	-.069	-.084
	9.81	-.019	-.024	-.027	-.028	-.059	-.066	-.084
	11.25	-.020	-.022	-.021	-.023	-.061	-.066	-.086
	12.69	-.015	-.017	-.016	-.020	-.062	-.065	-.081
	14.12	-.010	-.009	-.010	-.022	-.065	-.069	-.080
	15.56	-.005	-.008	-.008	-.025	-.065	-.071	-.082
	17.00	-.007	-.006	-.009	-.032	-.065	-.070	-.078
	18.44	-.004	-.005	-.003	-.027	-.065	-.064	-.069
	19.87	.000	-.002	-.004	-.027	-.063	-.057	-.069
	21.31	-.002	-.002	-.004	-.032	-.059	-.054	-.068
	22.75	.006	.002	-.002	-.025	-.056	-.051	-.062
	24.19	.015	.008	.000	-.022	-.054	-.048	-.060
	25.62	.022	.012	.004	-.023	-.058	-.043	-.064
15°	6.94	-.029	-.034	-.038	-.047	-.069	-.080	-.083
	8.37	-.022	-.026	-.034	-.049	-.072	-.083	-.083
	9.81	-.019	-.024	-.030	-.046	-.074	-.083	-.084
	11.25	-.020	-.023	-.026	-.046	-.075	-.078	-.086
	12.69	-.016	-.016	-.022	-.040	-.069	-.078	-.080
	14.12	-.010	-.010	-.019	-.016	-.067	-.074	-.078
	15.56	-.007	-.010	-.019	-.020	-.065	-.077	-.081
	17.00	-.004	-.006	-.015	-.024	-.063	-.080	-.078
	18.44	-.002	-.005	-.012	-.037	-.060	-.079	-.073
	19.87	-.001	-.004	-.012	-.040	-.061	-.073	-.070
	21.31	-.001	-.003	-.011	-.039	-.063	-.068	-.067
	22.75	.003	.000	-.008	-.028	-.062	-.064	-.063
	24.19	.014	.005	-.006	-.026	-.061	-.062	-.056
	25.62	.020	.008	-.003	-.023	-.060	-.054	-.042
30°	6.94	-.030	-.033	-.046	-.056	-.086	-.087	-.087
	8.37	-.024	-.031	-.038	-.056	-.084	-.083	-.086
	9.81	-.021	-.027	-.034	-.068	-.079	-.082	-.086
	11.25	-.019	-.022	-.029	-.071	-.061	-.075	-.082
	12.69	-.016	-.018	-.026	-.071	-.066	-.074	-.082
	14.12	-.010	-.012	-.024	-.060	-.065	-.070	-.078
	15.56	-.009	-.012	-.025	-.056	-.064	-.069	-.080
	17.00	-.003	-.006	-.024	-.039	-.057	-.067	-.074
	18.44	-.003	-.007	-.024	-.038	-.052	-.065	-.068
	19.87	-.004	-.006	-.024	-.034	-.048	-.061	-.068
	21.31	.000	-.003	-.019	-.030	-.048	-.060	-.064
	22.75	.004	-.001	-.014	-.027	-.045	-.055	-.059
	24.19	.010	.003	-.012	.026	-.044	-.052	-.053
	25.62	.015	.008	-.006	-.023	-.043	-.046	-.042
60°	6.94	-.031	-.041	-.054	-.078	-.080	-.084	-.087
	8.37	-.029	-.037	-.054	-.070	-.088	-.084	-.086
	9.81	-.026	-.032	-.046	-.059	-.070	-.076	-.082
	11.25	-.019	-.028	-.038	-.055	-.067	-.076	-.080
	12.69	-.018	-.022	-.030	-.048	-.064	-.073	-.079
	14.12	-.013	-.019	-.026	-.044	-.060	-.070	-.078
	15.56	-.009	-.013	-.022	-.044	-.060	-.070	-.077
	17.00	-.006	-.010	-.020	-.039	-.055	-.064	-.074
	18.44	-.004	-.007	-.017	-.033	-.056	-.063	-.074
	19.87	-.002	-.005	-.014	-.032	-.050	-.061	-.069
	21.31	.001	-.003	-.010	-.029	-.047	-.061	-.065
	22.75	.003	-.001	-.010	-.028	-.048	-.054	-.058
	24.19	.006	.002	-.006	-.024	-.036	-.047	-.053
	25.62	.008	.004	-.003	-.020	-.026	-.040	-.056

θ	x/r	α_B 0°	3°	6°	10°	15°	20°	25°
120°	6.94	-.031	-.026	-.021	-.014	.012	.047	.113
	8.37	-.028	-.026	-.022	-.015	.007	.047	.101
	9.81	-.028	-.026	-.025	-.020	.004	.047	.112
	11.25	-.023	-.025	-.028	-.021	.002	.044	.108
	12.69	-.017	-.022	-.026	-.021	.002	.048	.120
	14.12	-.015	-.019	-.024	-.020	.008	.049	.125
	15.56	-.011	-.018	-.032	-.027	.000	.050	.133
	17.00	-.006	-.012	-.028	-.023	.006	.061	.148
	18.44	-.004	-.010	-.024	-.019	.012	.072	.160
	19.87	-.002	-.009	-.022	-.019	.013	.078	.154
	21.31	.000	-.006	-.019	-.020	.014	.082	.136
	22.75	.002	-.004	-.014	-.018	.019	.092	.141
	24.19	.006	-.002	-.009	-.011	.044	.178	.199
	25.62	.025	.011	.008	.022	.100	.162	.159
150°	6.94	-.032	-.022	-.005	.024	.085	.162	.317
	8.37	-.024	-.016	.002	.022	.088	.173	.282
	9.81	-.022	-.016	.000	.025	.080	.161	.264
	11.25	-.019	-.017	-.006	.020	.074	.151	.236
	12.69	-.018	-.016	-.006	.021	.072	.144	.196
	14.12	-.010	-.011	-.006	.020	.070	.144	.164
	15.56	-.010	-.010	-.004	.020	.072	.134	.127
	17.00	-.005	-.006	-.006	.025	.079	.135	.110
	18.44	-.003	-.004	-.007	.024	.079	.130	.099
	19.87	-.002	-.004	.000	.020	.072	.103	.076
	21.31	.000	.001	.004	.019	.069	.085	.048
	22.75	.003	.004	.006	.019	.066	.072	.097
	24.19	.010	.017	.026	.047	.124	.128	.145
	25.62	.023	.034	.052	.088	.148	.152	.099
165°	6.94	-.032	-.016	.003	.033	.102	.142	.139
	8.37	-.023	-.012	.009	.036	.105	.148	.118
	9.81	-.020	-.012	.002	.035	.094	.135	.112
	11.25	-.019	-.013	.002	.028	.084	.126	.104
	12.69	-.017	-.011	.000	.027	.077	.114	.100
	14.12	-.011	-.006	.000	.026	.075	.104	.086
	15.56	-.007	-.004	.005	.026	.072	.096	.081
	17.00	-.004	-.004	.006	.027	.077	.098	.083
	18.44	-.002	.000	.005	.028	.075	.080	.072
	19.87	-.002	-.002	.006	.028	.066	.074	.067
	21.31	-.002	.000	.004	.029	.059	.064	.056
	22.75	.002	.015	.011	.030	.056	.063	.066
	24.19	.015	.029	.036	.059	.102	.068	.138
	25.62	.028	.015	.060	.088	.137	.052	.073
174°	6.94	-.031	-.014	.003	.036	.114	.164	.194
	8.37	-.023	-.011	.009	.040	.104	.156	.170
	9.81	-.018	-.008	.011	.039	.096	.144	.163
	11.25	-.016	-.010	.007	.032	.084	.135	.148
	12.69	-.015	-.009	.000	.022	.076	.122	.125
	14.12	-.010	-.004	.001	.023	.074	.114	.116
	15.56	-.005	.000	.005	.025	.070	.104	.100
	17.00	-.004	-.003	.007	.027	.074	.108	.104
	18.44	-.001	-.002	.006	.025	.072	.095	.087
	19.87	.001	.000	.008	.025	.064	.085	.079
	21.31	-.001	.002	.005	.021	.058	.074	.069
	22.75	.005	.009	.014	.023	.055	.071	.078
	24.19	.017	.028	.038	.064	.092	.143	.181
	25.62	.031	.046	.061	.094	.139	.142	.083

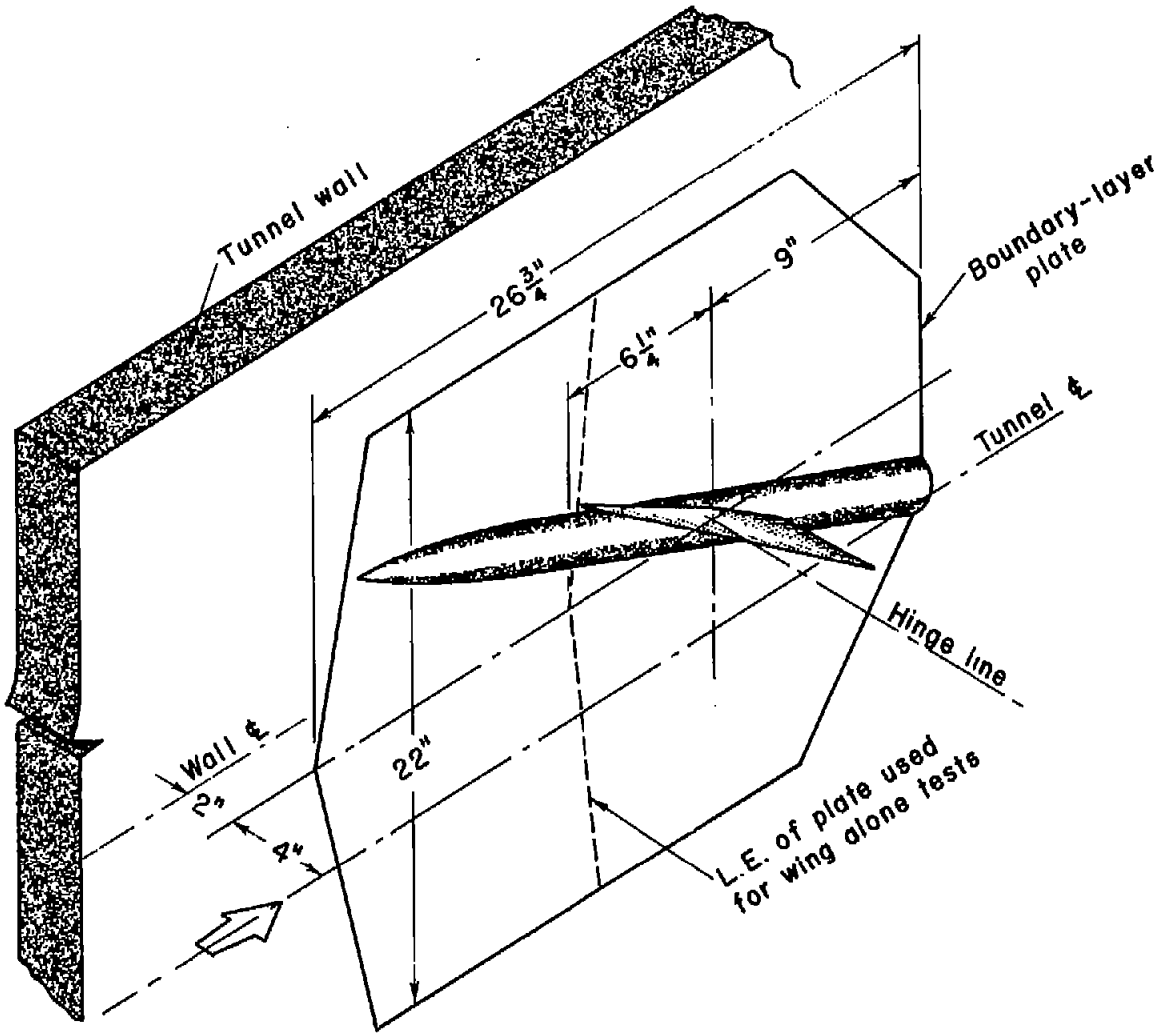


Triangular plan forms								
Model	A	r/s	s in	c_r in	S in^2	t/c_{max}	x/c@t_{max}	Wing test
	4	.2	5	4	8	.05	.50	press.
 *	2	.2	5	8	16	.05	.50	press.
	1	.2	5	16	32	.04	.59	force
	1	.4	2.5	6	4.5	.04	.59	force
	2/3	.4	2.5	9	6.75	.04	.59	force
	3/8	.4	2.5	16	12	.04	.59	force
Rectangular plan forms								
	3	.2	5	2.667	10.667	.04	.59	force
	2	.2	5	4	16	.05	.50	press.
 *	1	.2	5	8	32	.04	.59	force
	1	.4	2.5	3	4.5	.04	.59	force

* Plan form for 7/16 scale full-span models.

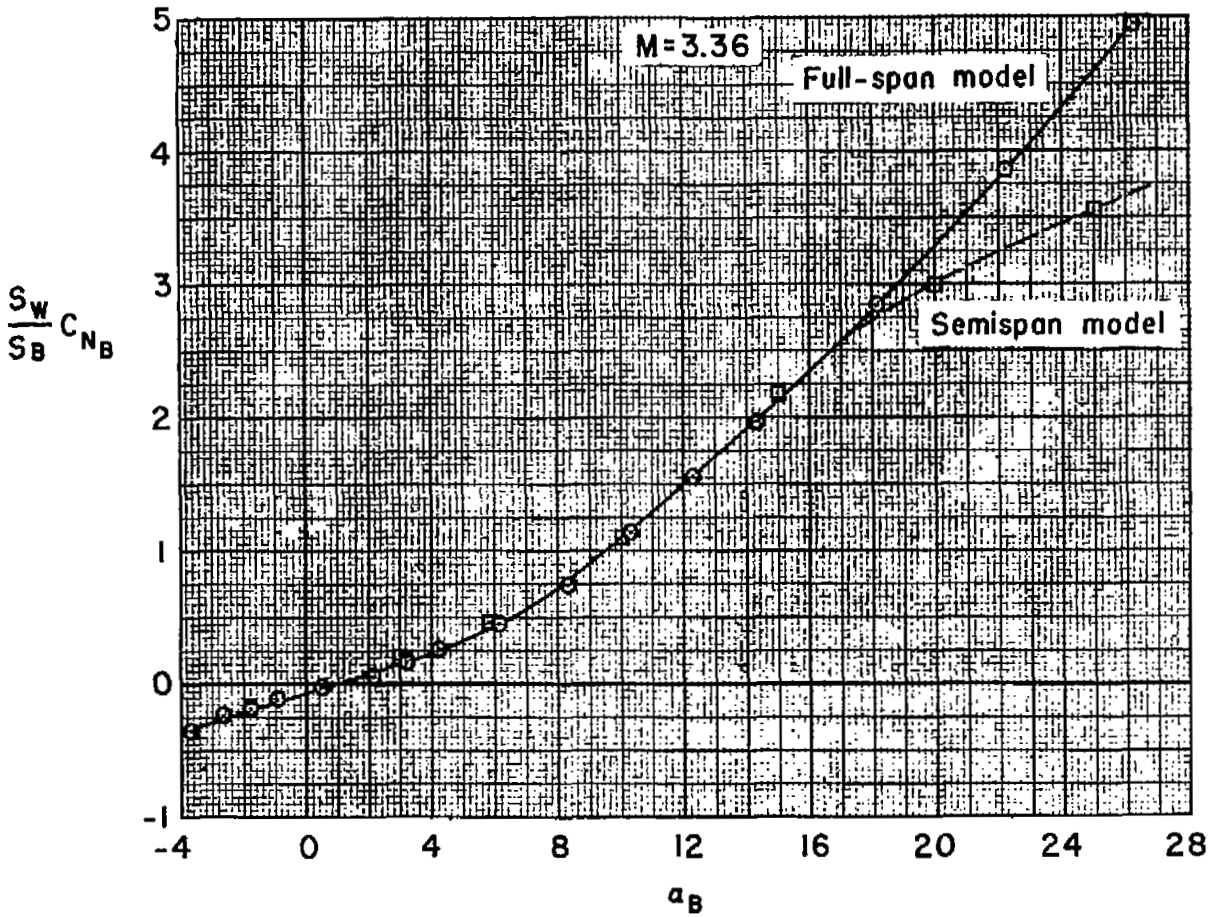
(a) Summary of model geometry and dimensions.

Figure 1.- Models and semispan supports.



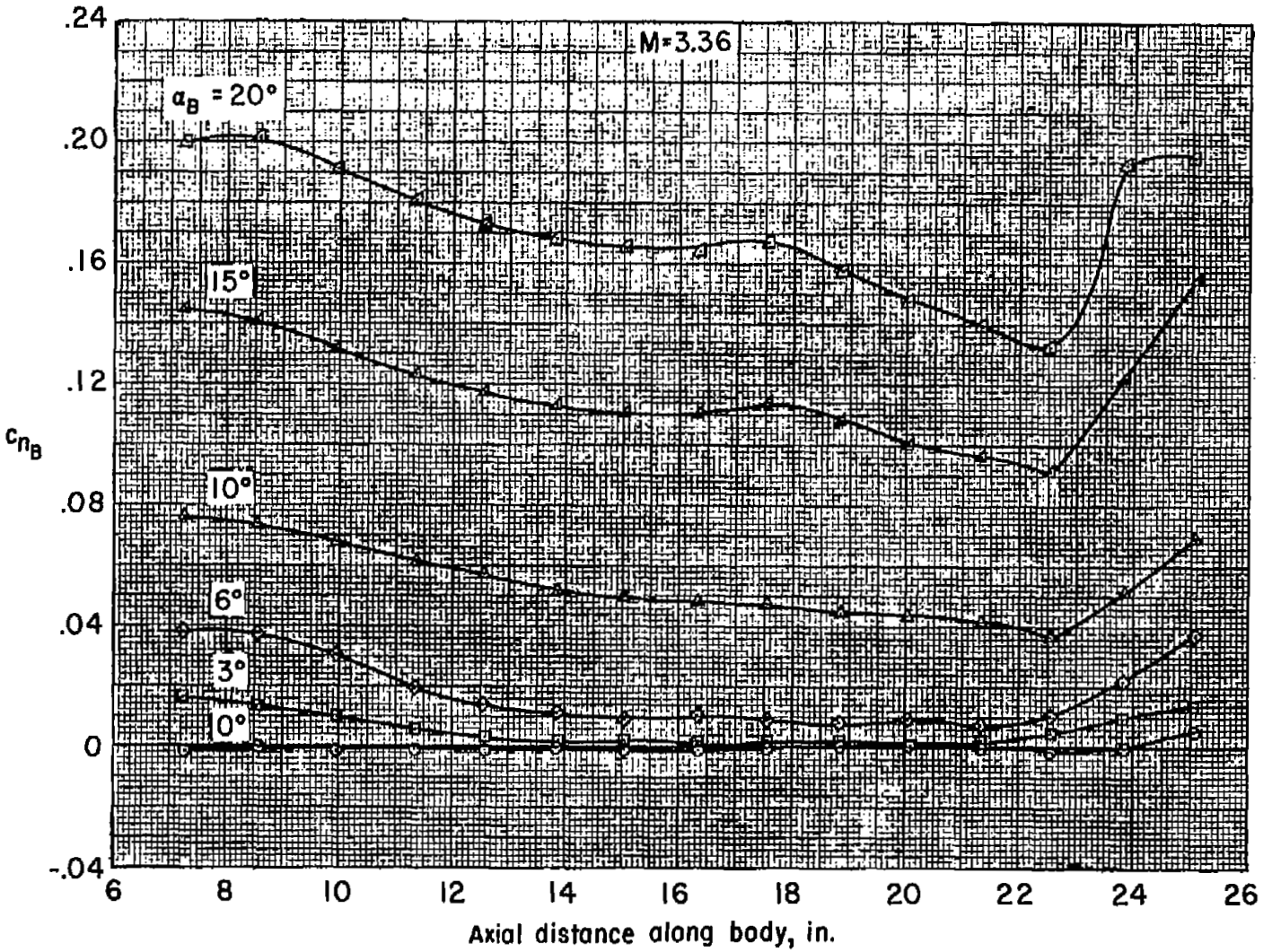
(b) Semispan model installation.

Figure 1.- Concluded.



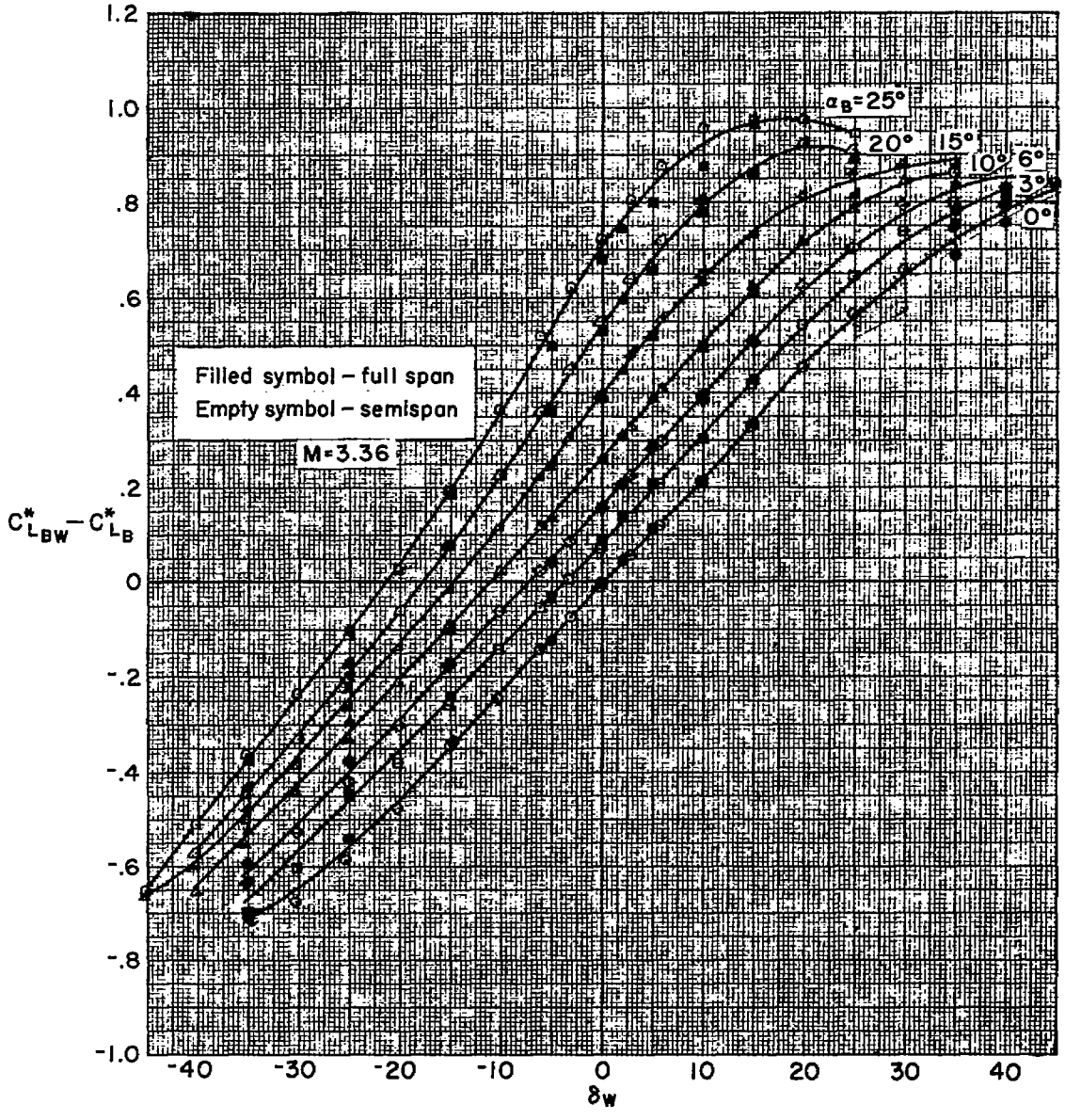
(a) Comparison of the variation of normal-force coefficient with angle of attack for the half body and full body.

Figure 2.- Body alone characteristics.



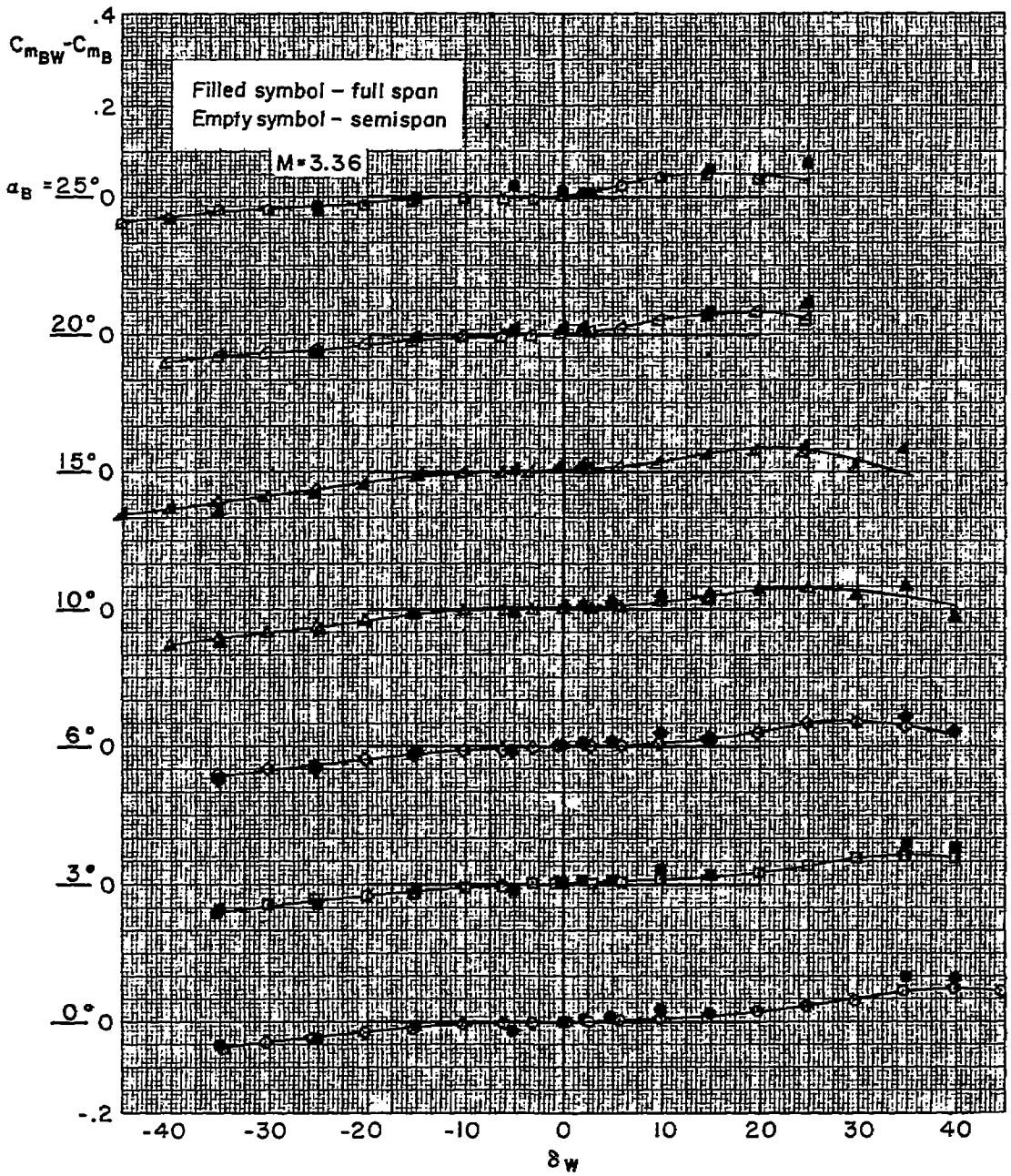
(b) Local normal-force coefficients at several angles of attack for half body.

Figure 2.- Concluded.



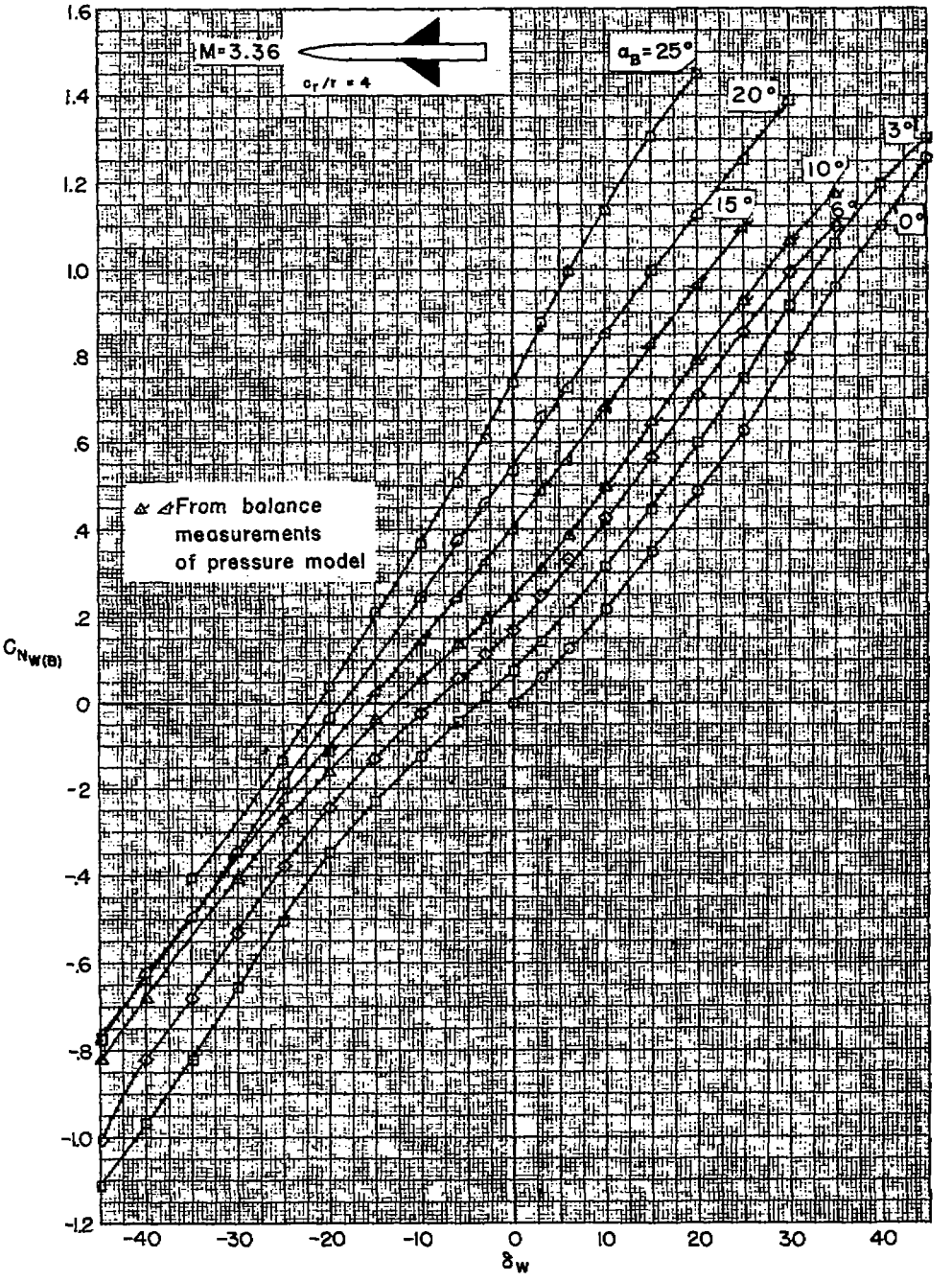
(a) Variation with wing deflection angle of normal-force coefficient for the A = 1 rectangular wing and body combination minus that for body alone.

Figure 3.- Comparison of semispan and full-span model data.



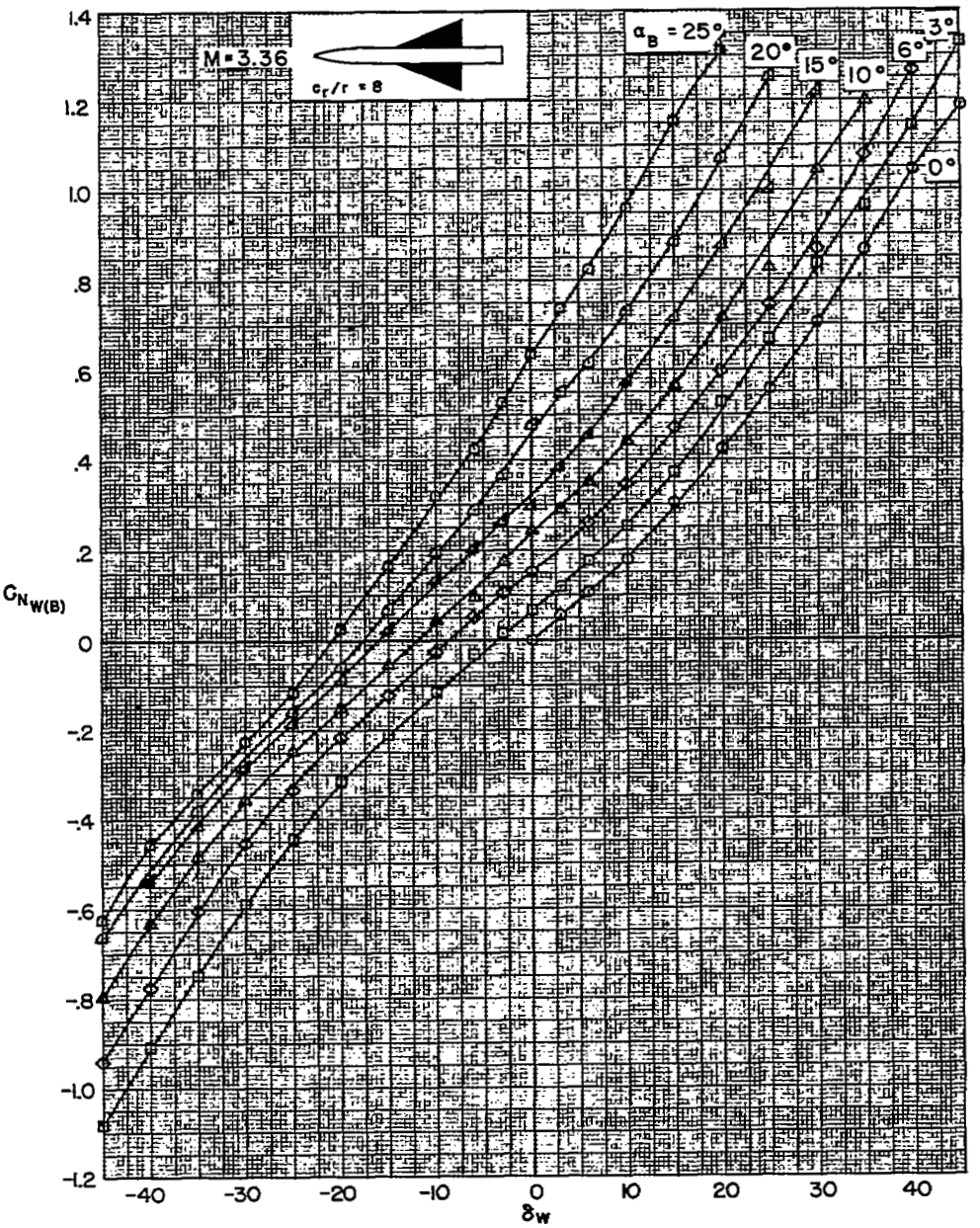
(b) Variation with wing deflection angle of the pitching-moment coefficient for the A = 1 rectangular wing and body combination minus that for the body alone.

Figure 3.- Concluded.



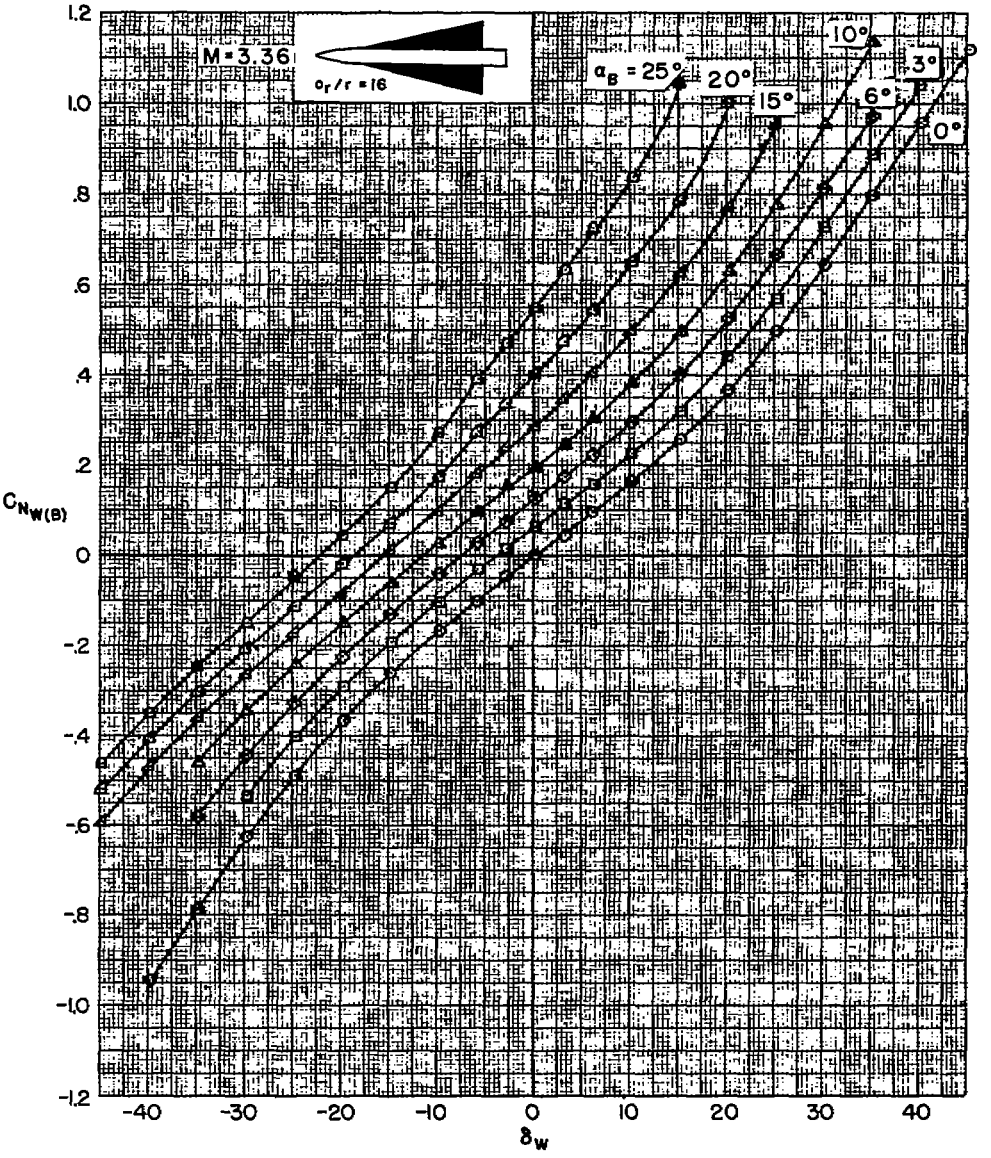
(a) A = 4 triangular wing, r/s = 0.2.

Figure 4.- Variation with deflection angle of normal-force coefficient for the wings in the presence of the body.



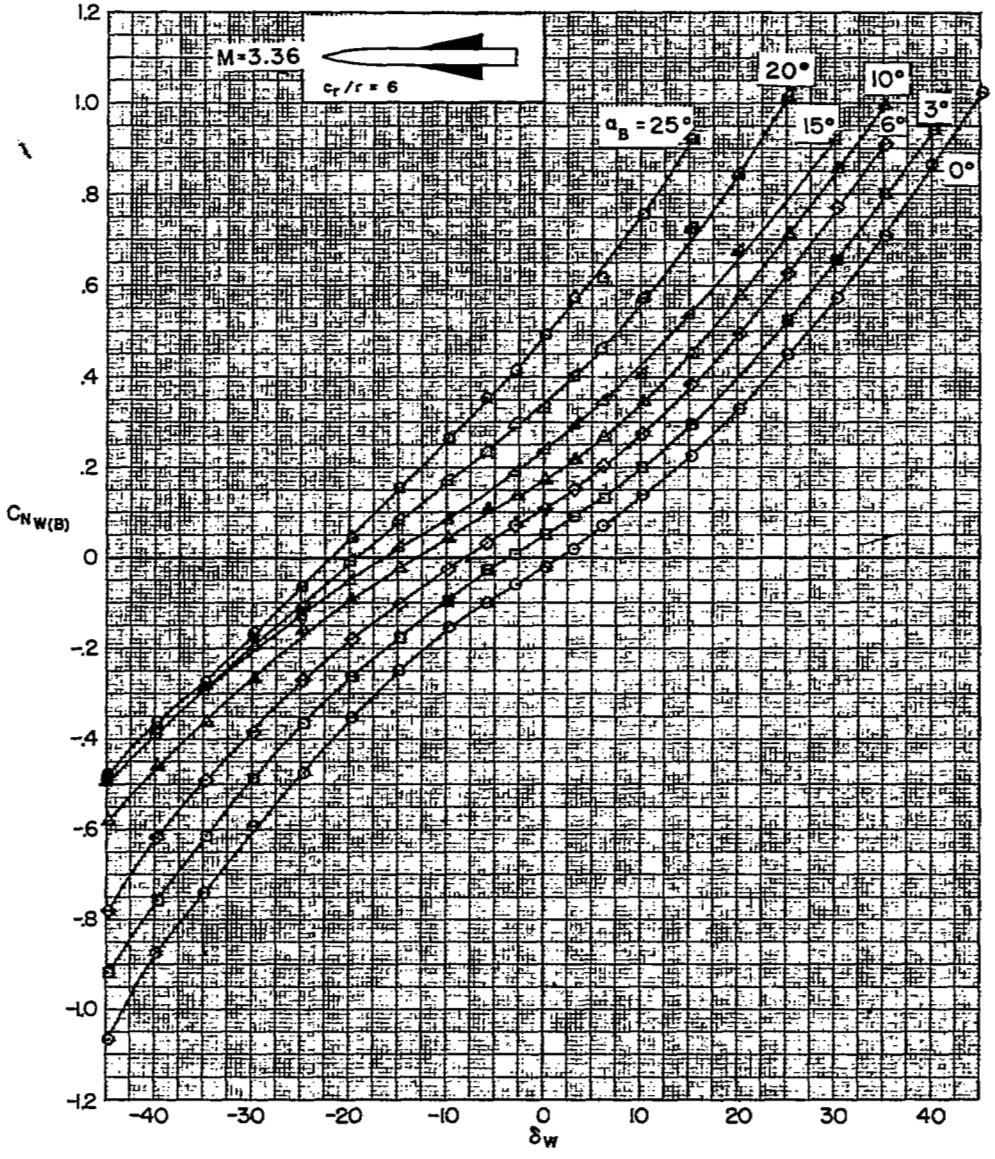
(b) A = 2 triangular wing, r/s = 0.2.

Figure 4.- Continued.



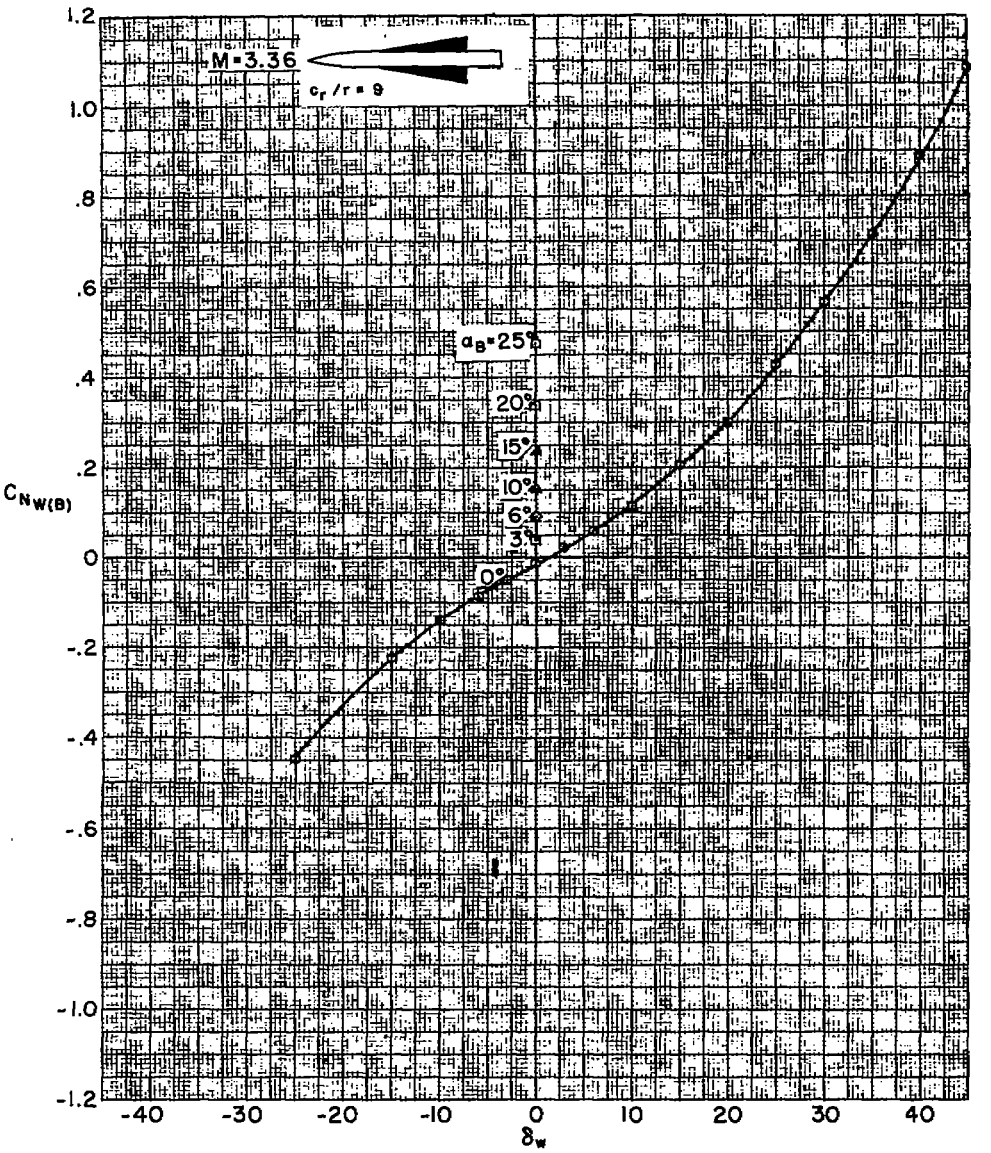
(c) A = 1 triangular wing, r/s = 0.2.

Figure 4.- Continued.



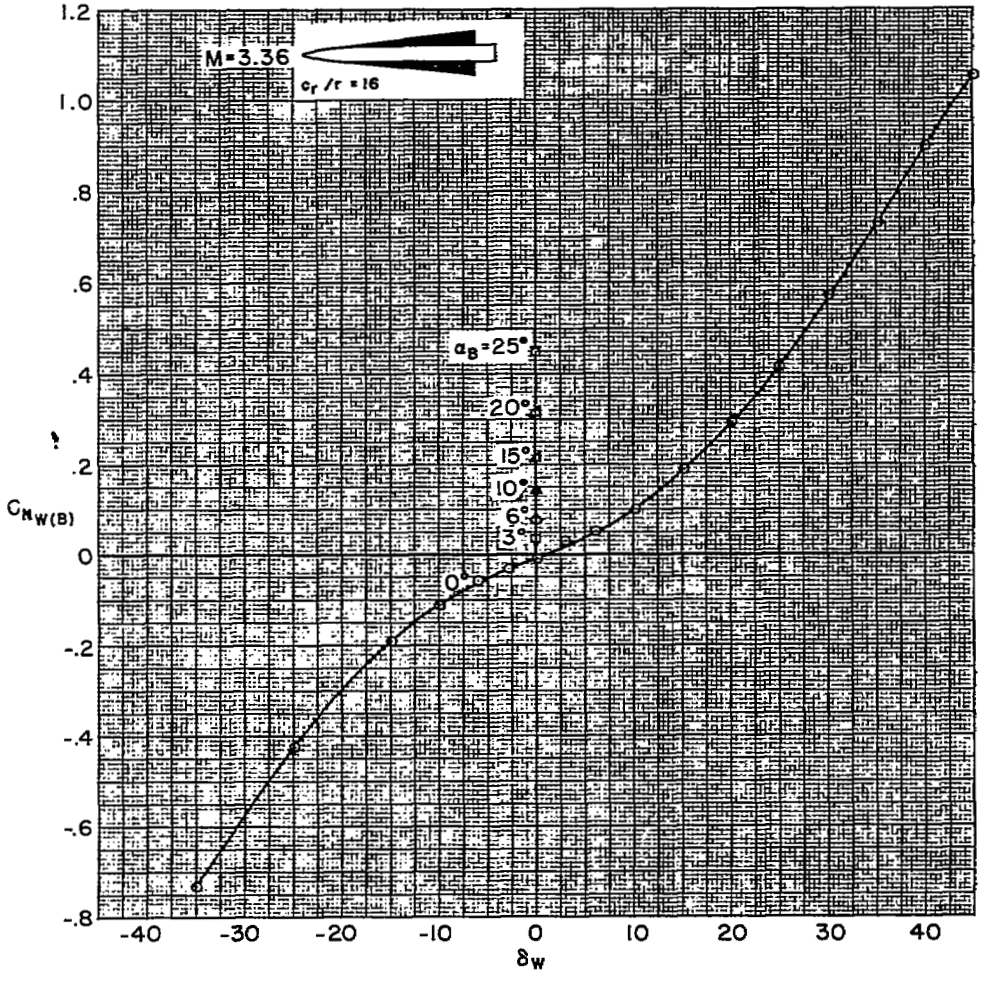
(d) A = 1 triangular wing, r/s = 0.4.

Figure 4.- Continued.



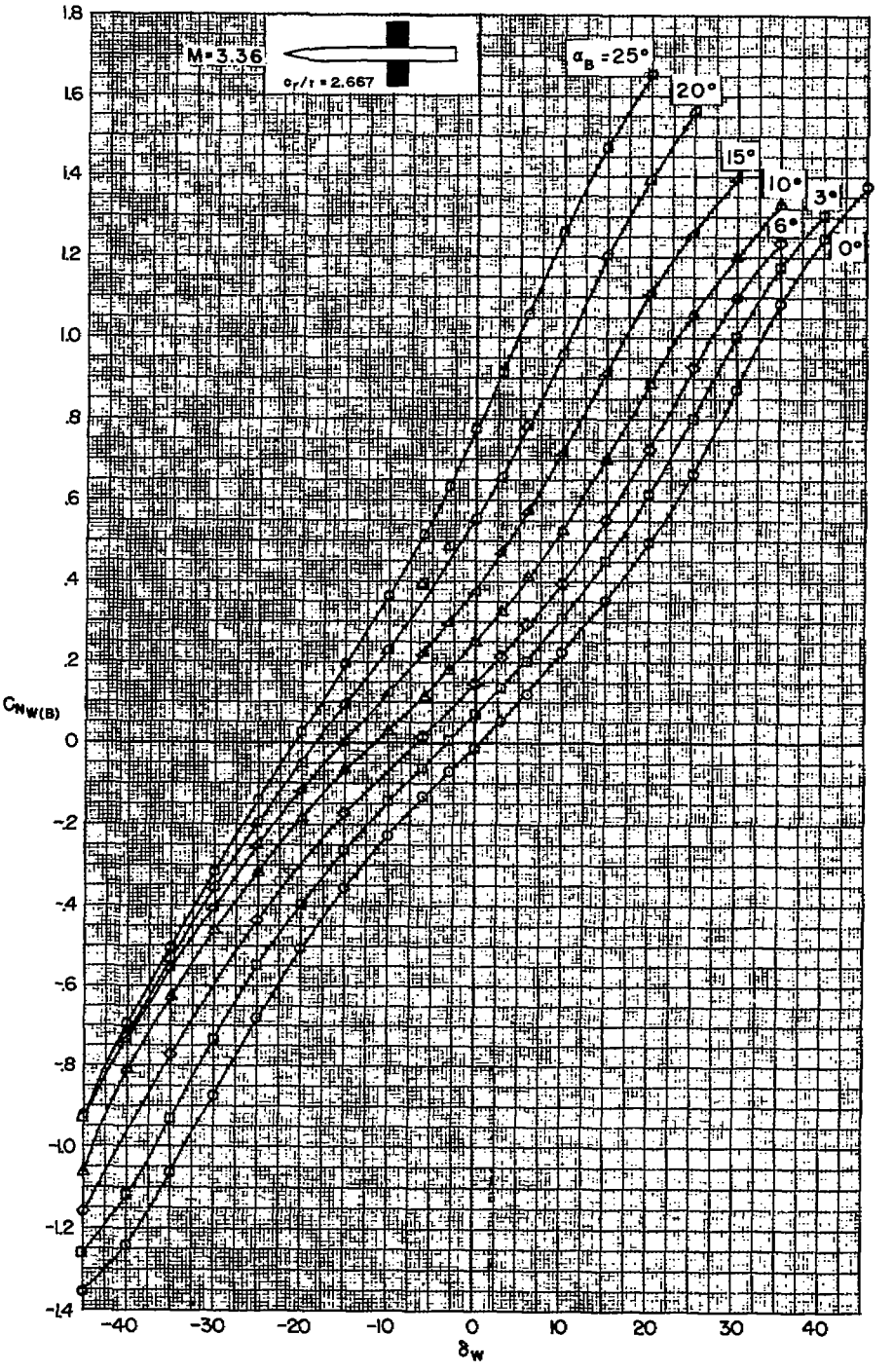
(e) A = 2/3 triangular wing, r/s = 0.4.

Figure 4.- Continued.



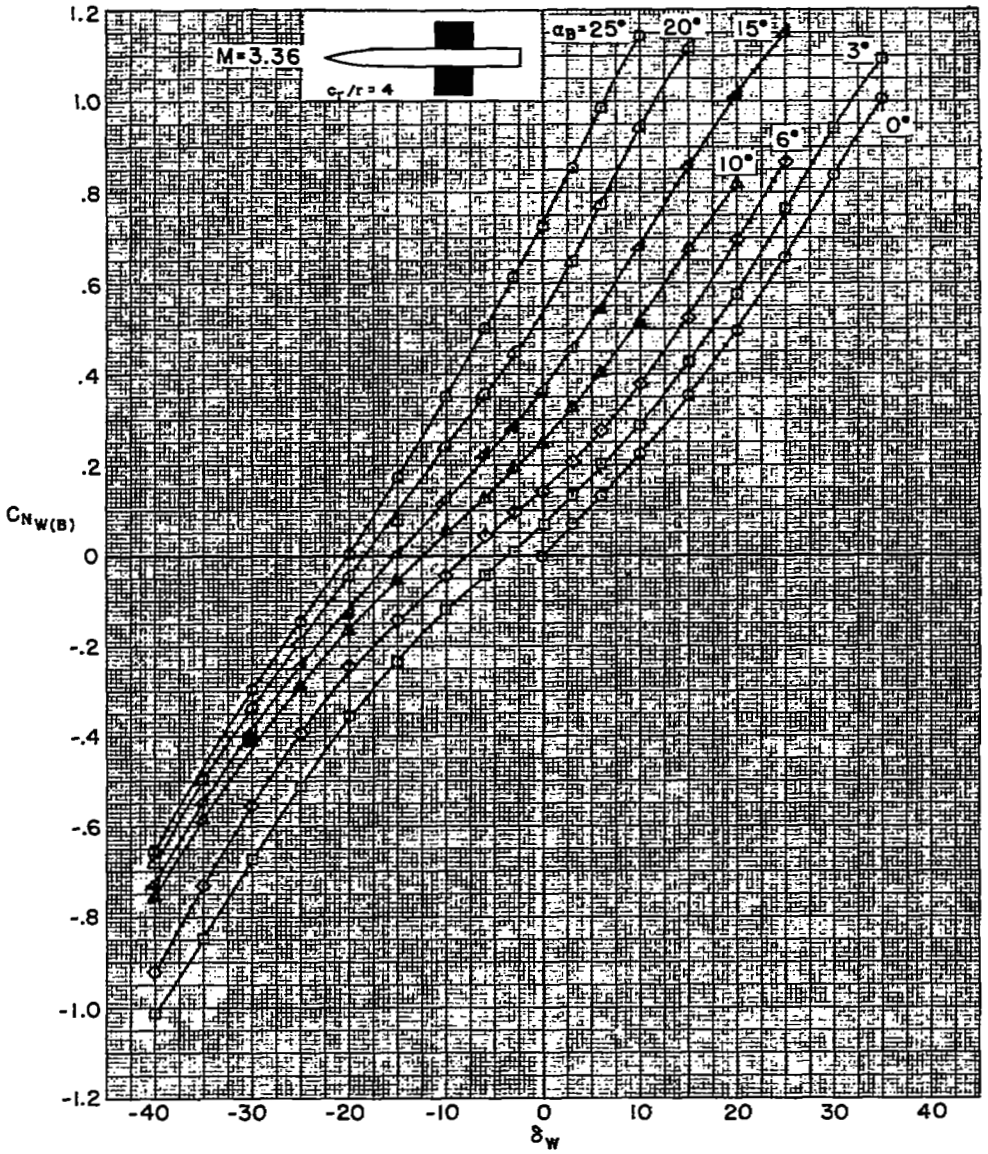
(f) A = 3/8 triangular wing, r/s = 0.4.

Figure 4.- Continued.



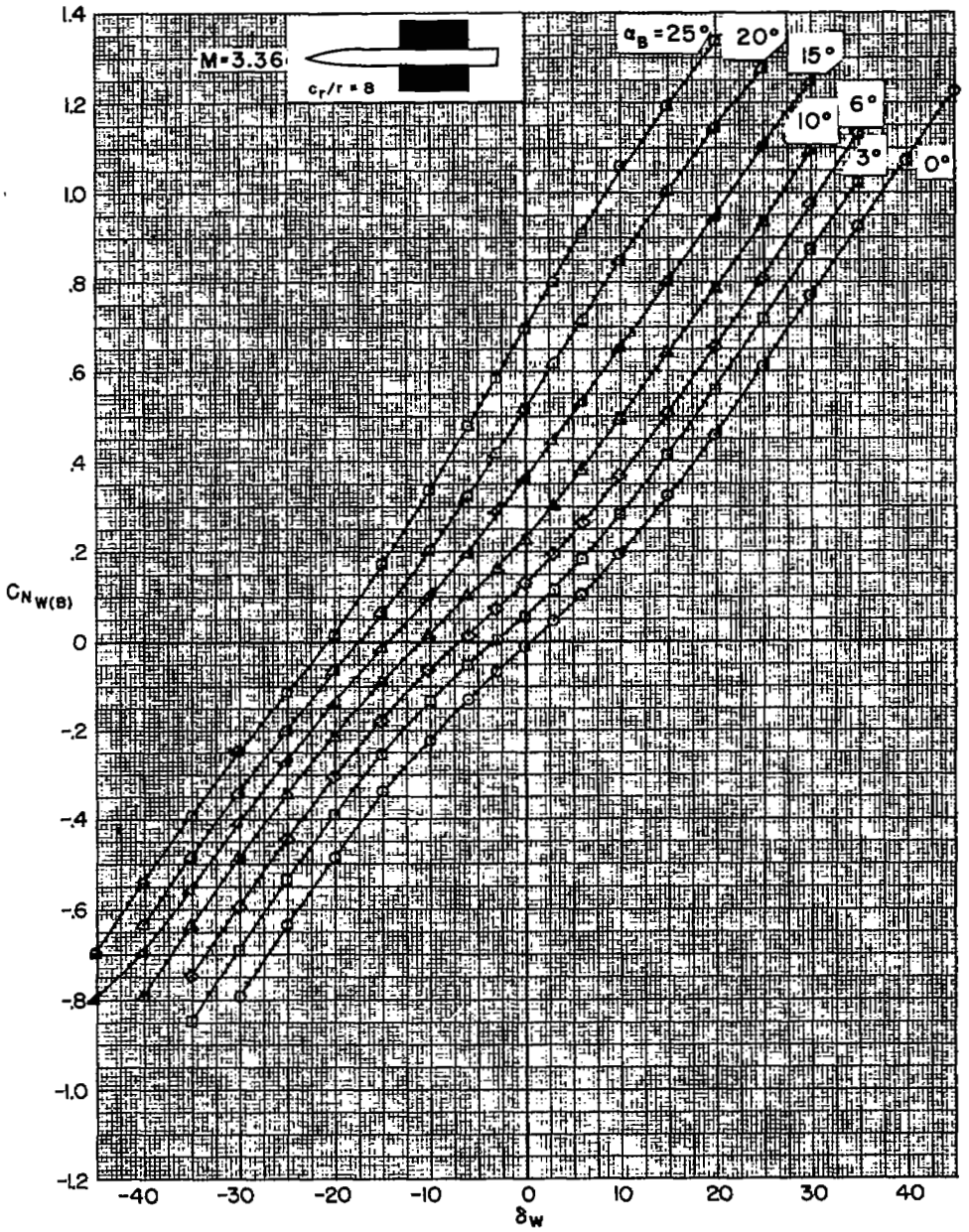
(g) A = 3 rectangular wing, r/s = 0.2.

Figure 4.- Continued.



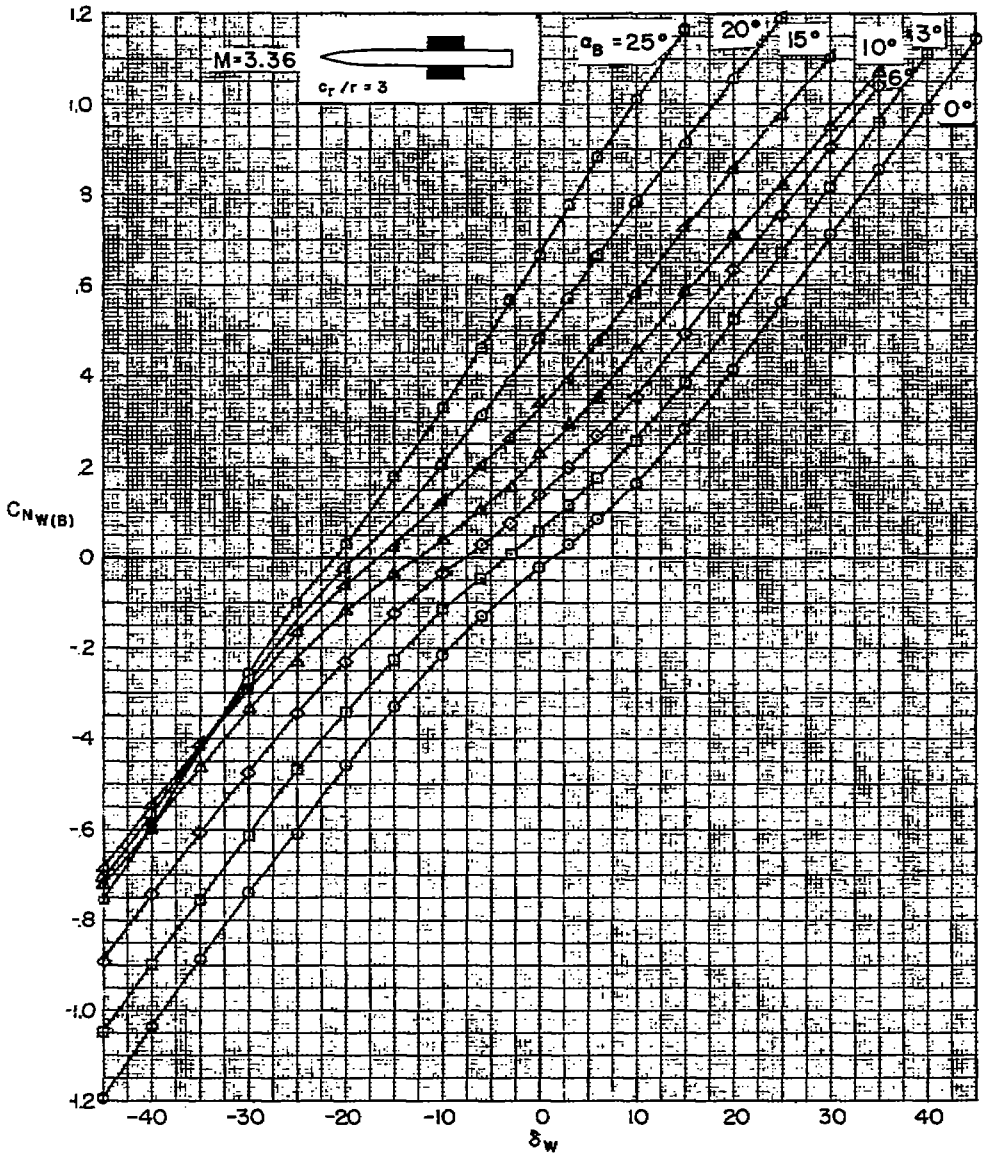
(h) A = 2 rectangular wing, r/s = 0.2.

Figure 4.- Continued.



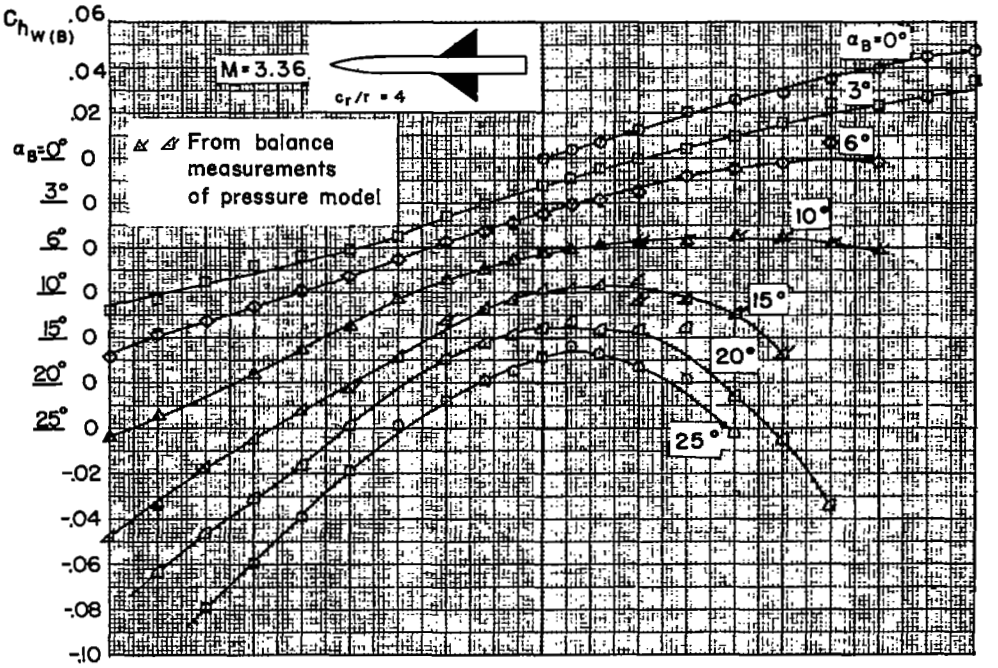
(i) A = 1 rectangular wing, r/s = 0.2.

Figure 4.- Continued.

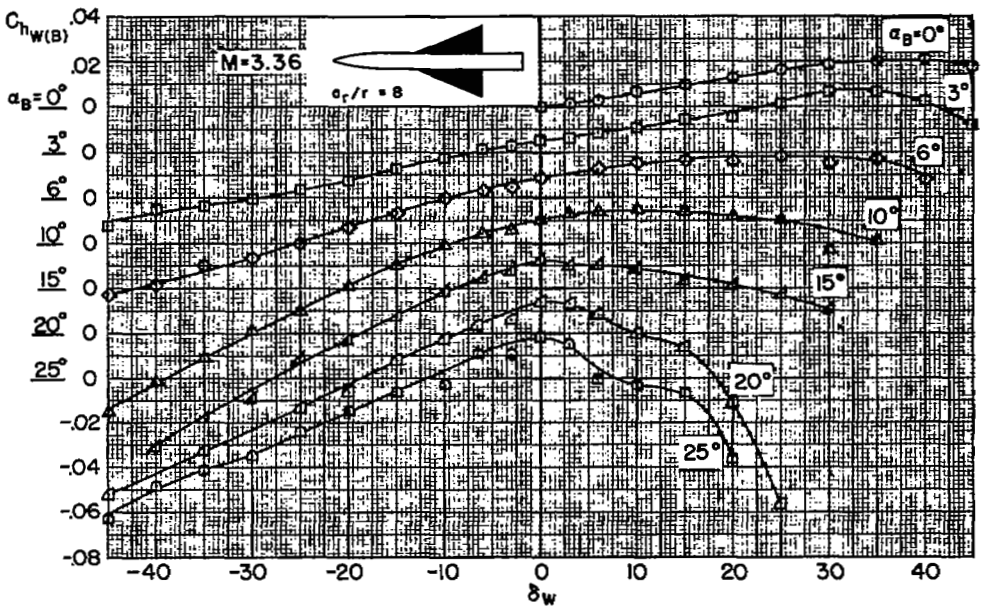


(j) A = 1 rectangular wing, r/s = 0.4.

Figure 4.- Concluded.

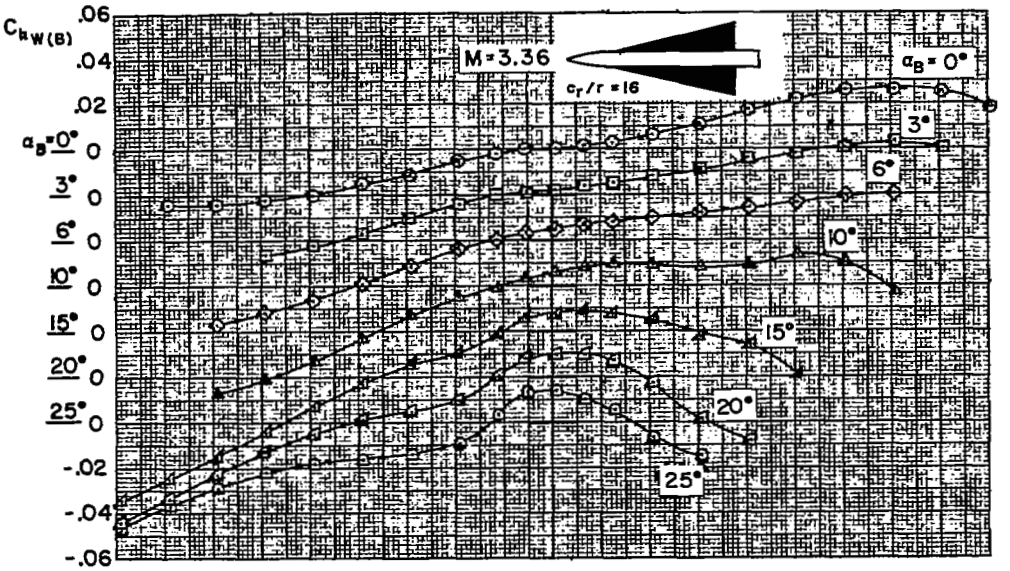


(a) A = 4 triangular wing, r/s = 0.2.

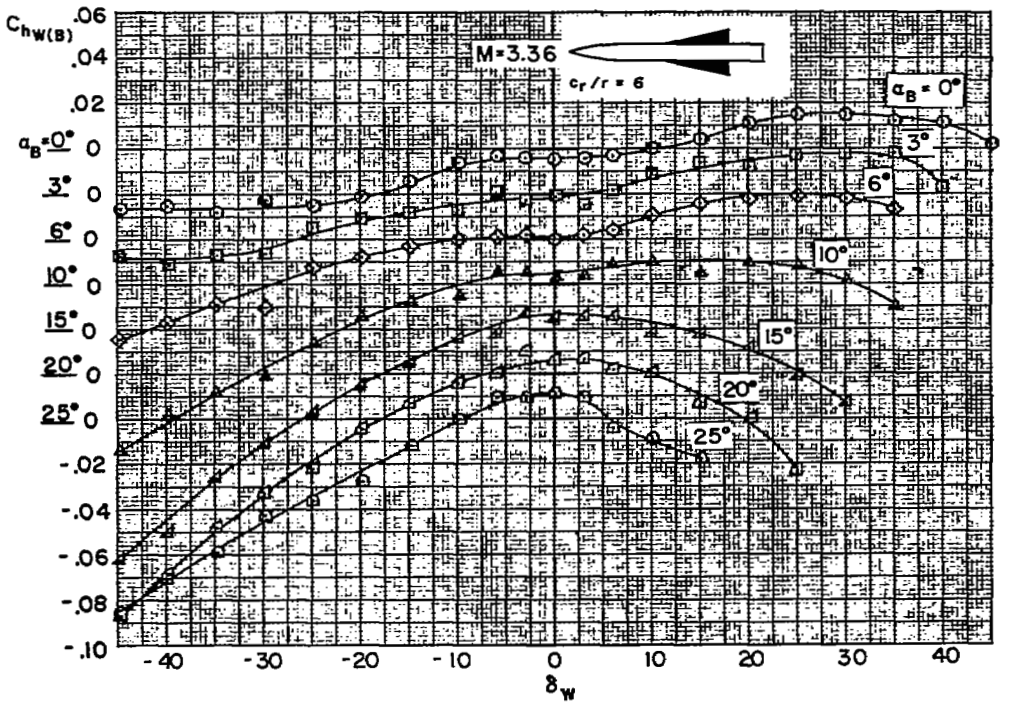


(b) A = 2 triangular wing, r/s = 0.2.

Figure 5.- Variation with deflection angle of hinge-moment coefficient for the wings in the presence of the body.

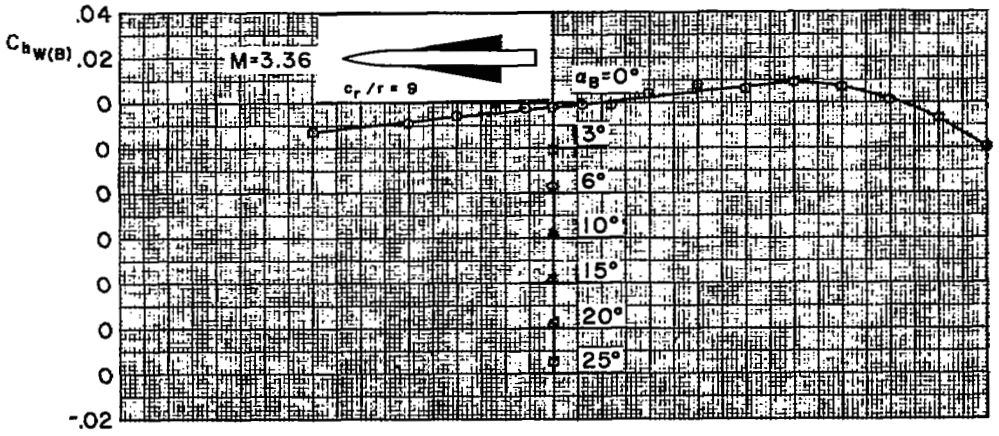


(c) A = 1 triangular wing, r/s = 0.2.

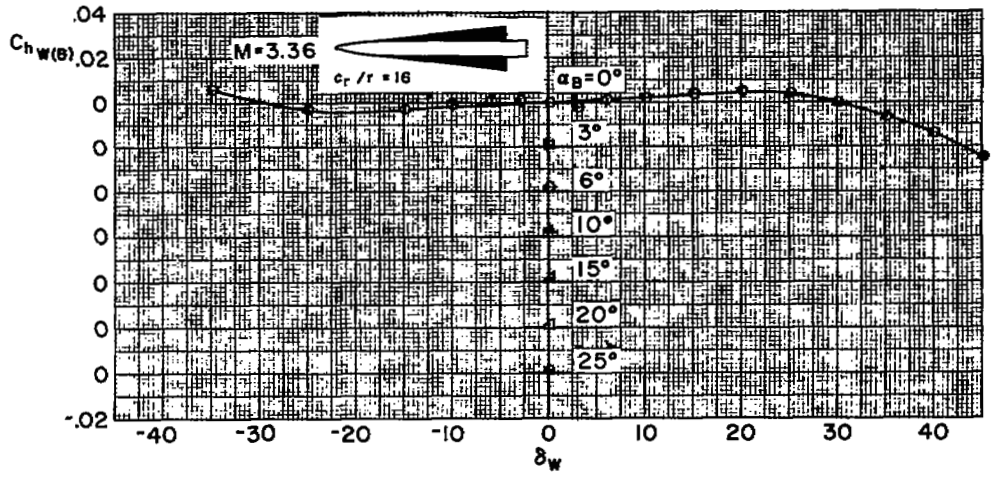


(d) A = 1 triangular wing, r/s = 0.4.

Figure 5.- Continued.

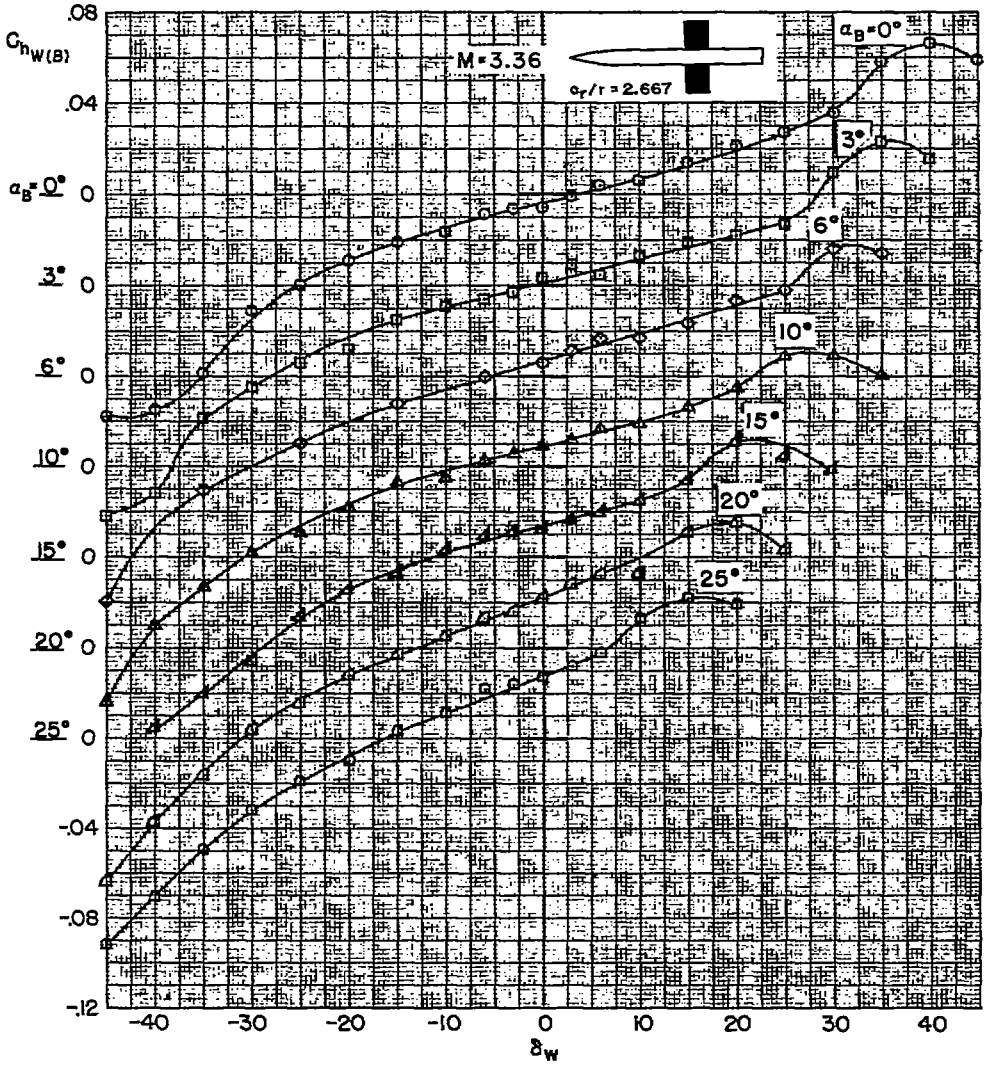


(e) A = 2/3 triangular wing, r/s = 0.4.



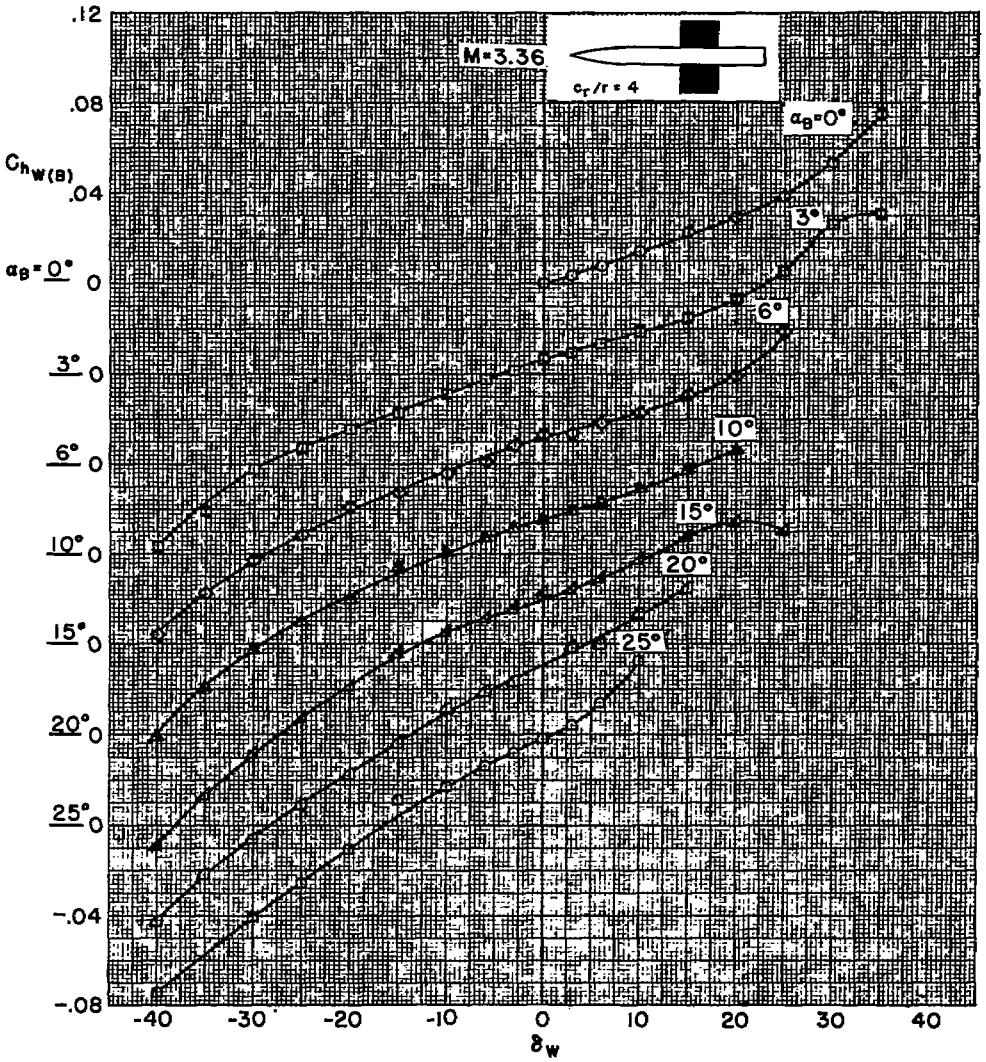
(f) A = 3/8 triangular wing, r/s = 0.4.

Figure 5.- Continued.



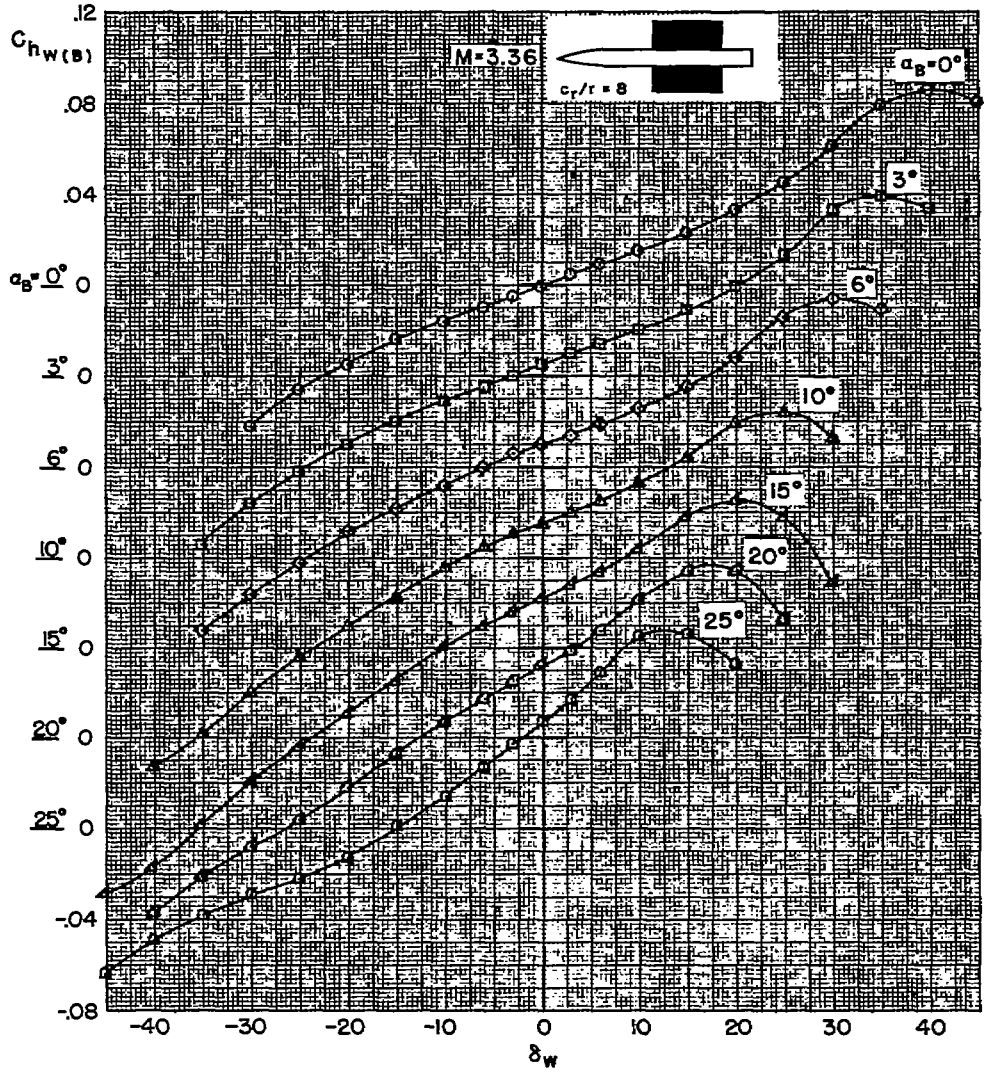
(g) A = 3 rectangular wing, r/s = 0.2.

Figure 5.- Continued.



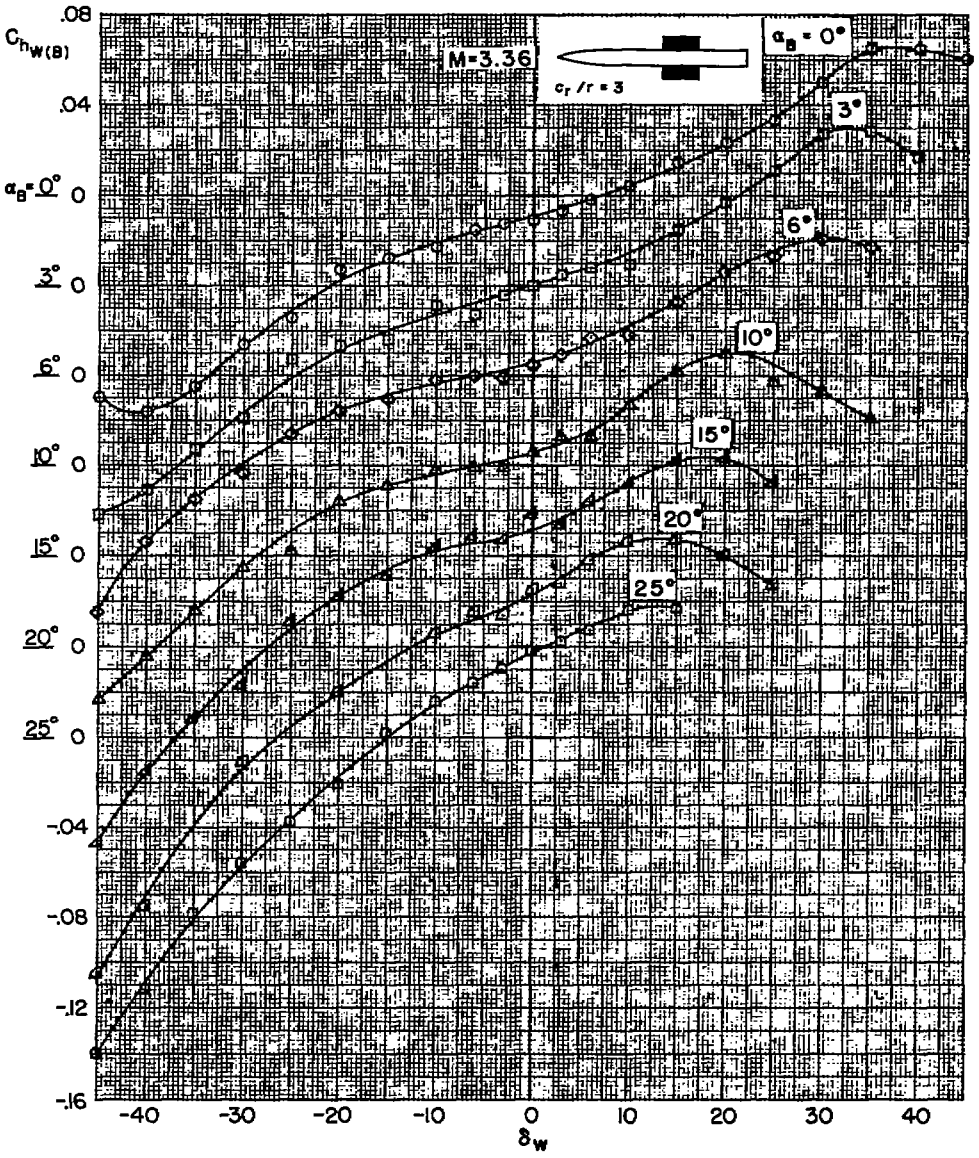
(h) A = 2 rectangular wing, r/s = 0.2.

Figure 5.- Continued.



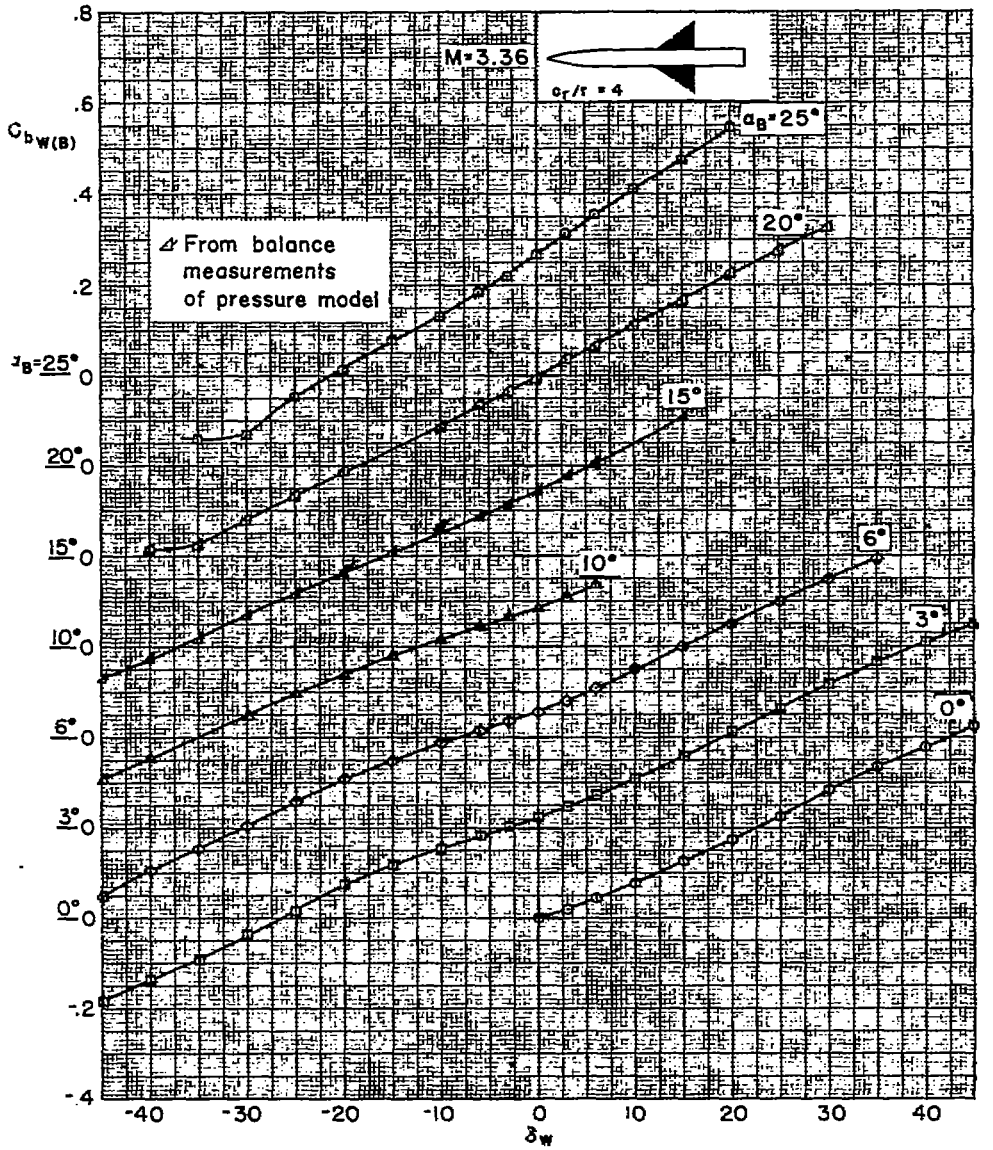
(i) A = 1 rectangular wing, r/s = 0.2.

Figure 5.- Continued.



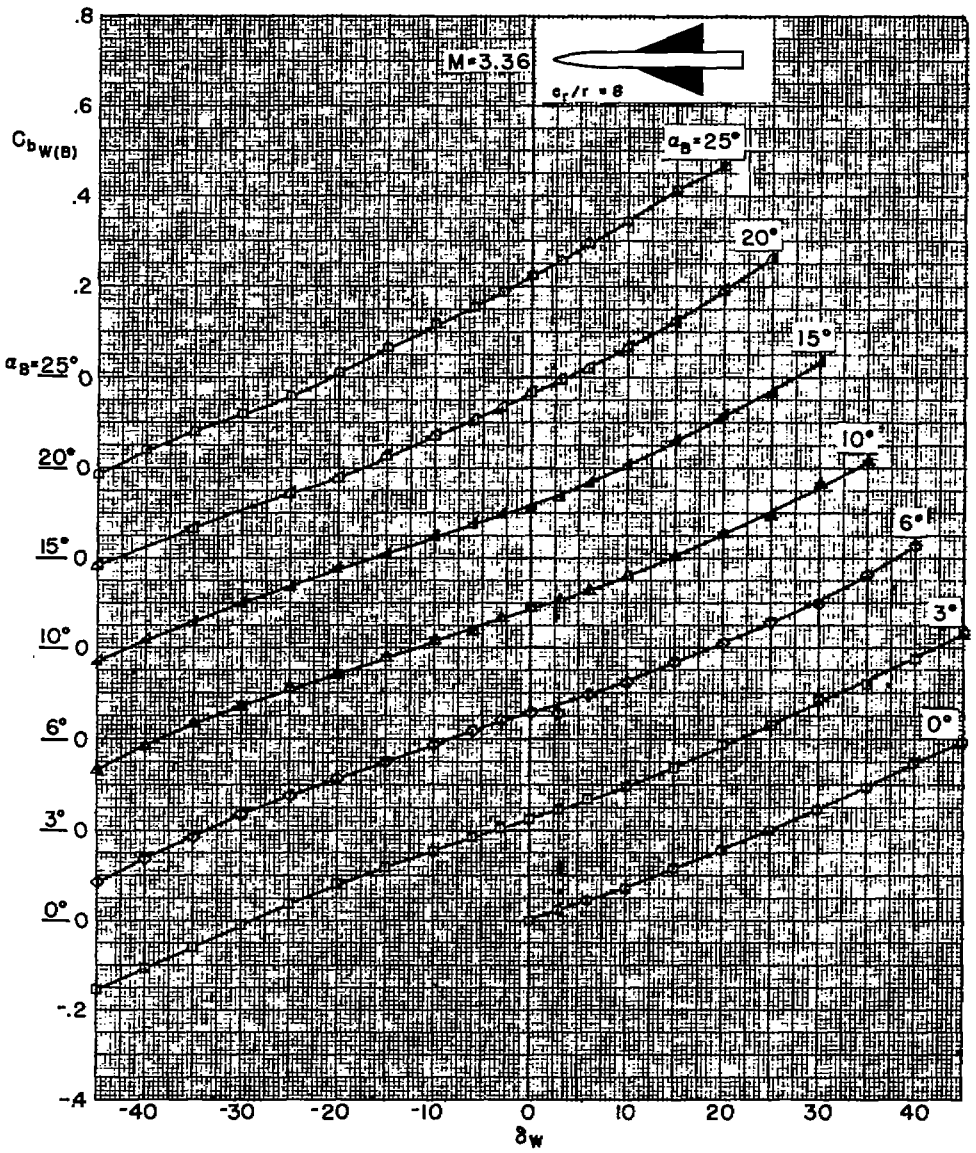
(j) A = 1 rectangular wing, r/s = 0.4.

Figure 5.- Concluded.



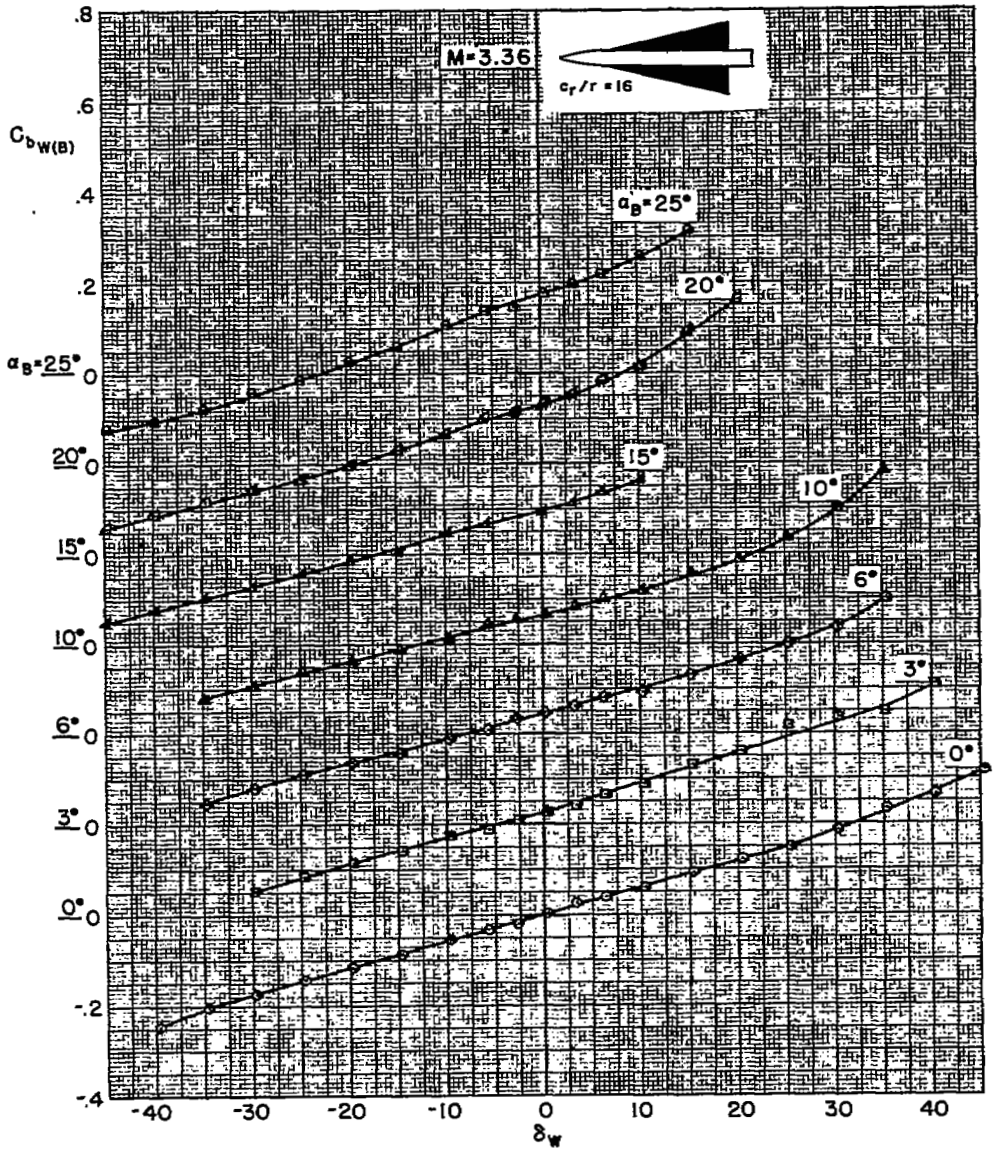
(a) A = 4 triangular wing, r/s 0.2.

Figure 6.- Variation with deflection angle of bending-moment coefficient for the wings in the presence of the body.



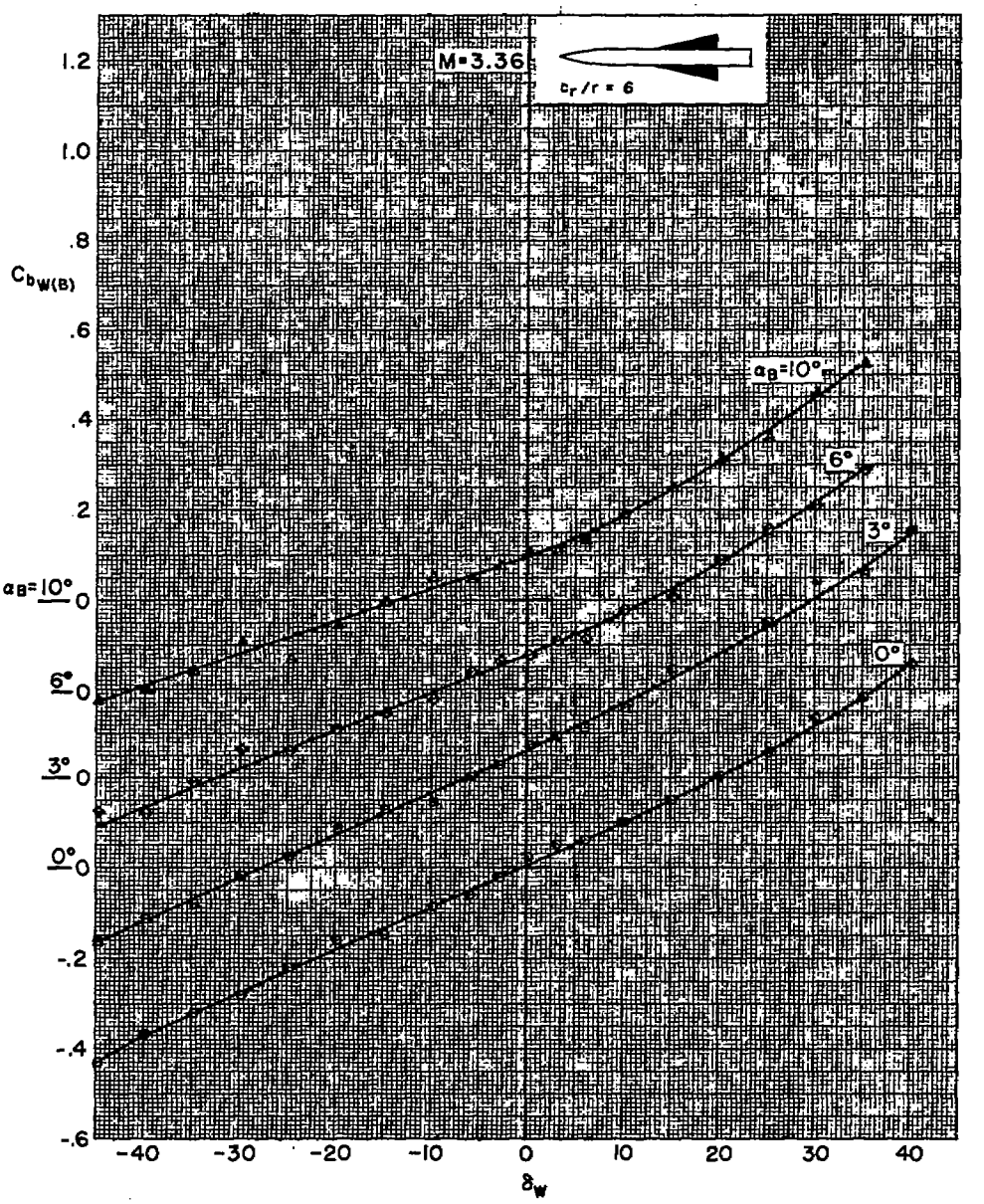
(b) A = 2 triangular wing, r/s = 0.2.

Figure 6.- Continued.



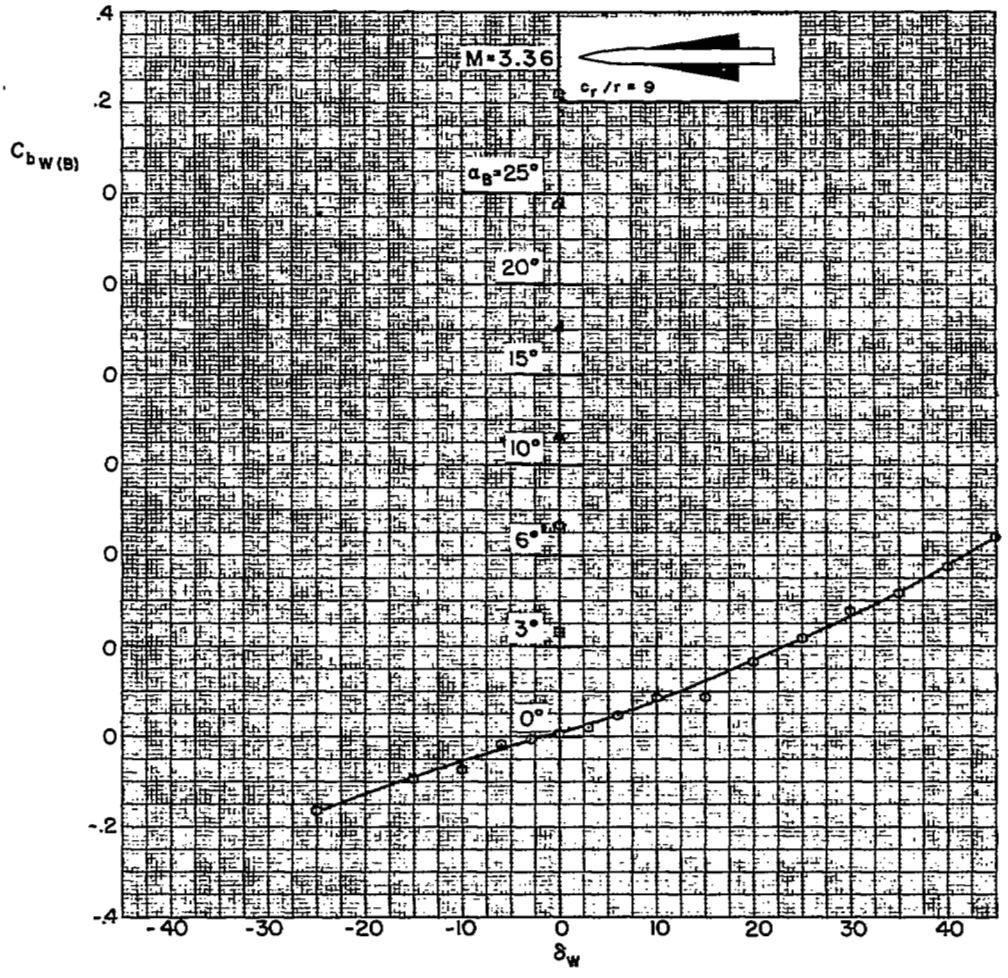
(c) A = 1 triangular wing, r/s = 0.2.

Figure 6.- Continued.



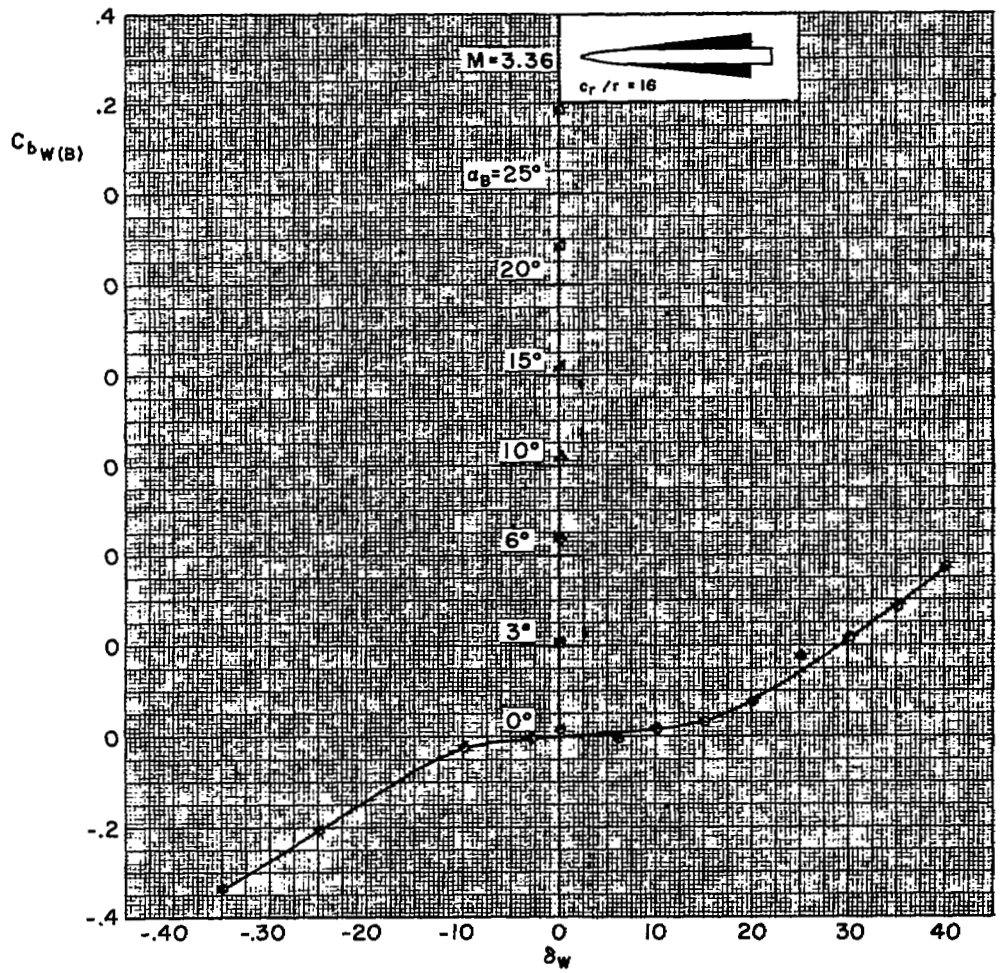
(d) A = 1 triangular wing, r/s = 0.4.

Figure 6.- Continued.



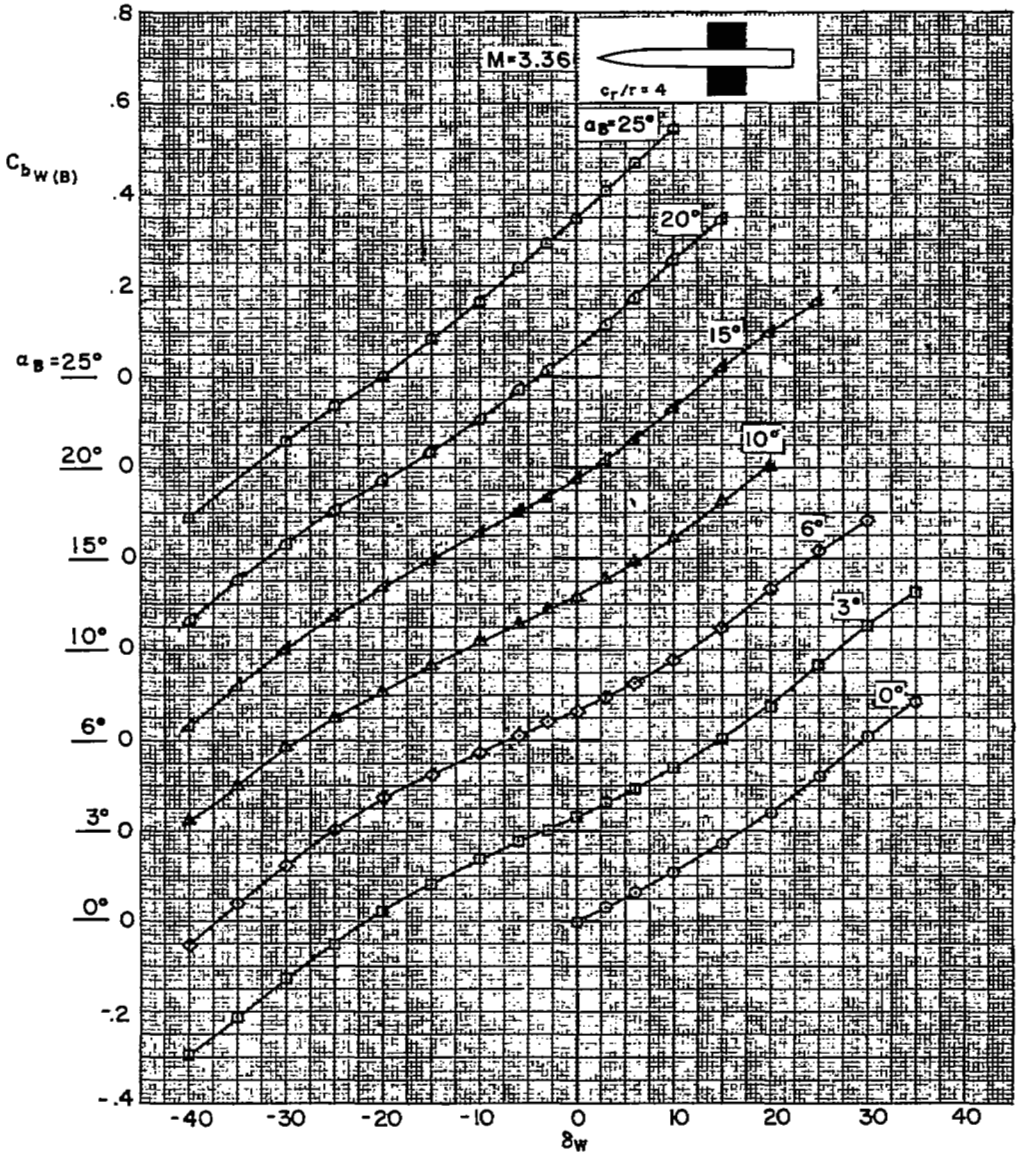
(e) A = 2/3 triangular wing, r/s = 0.4.

Figure 6.- Continued.



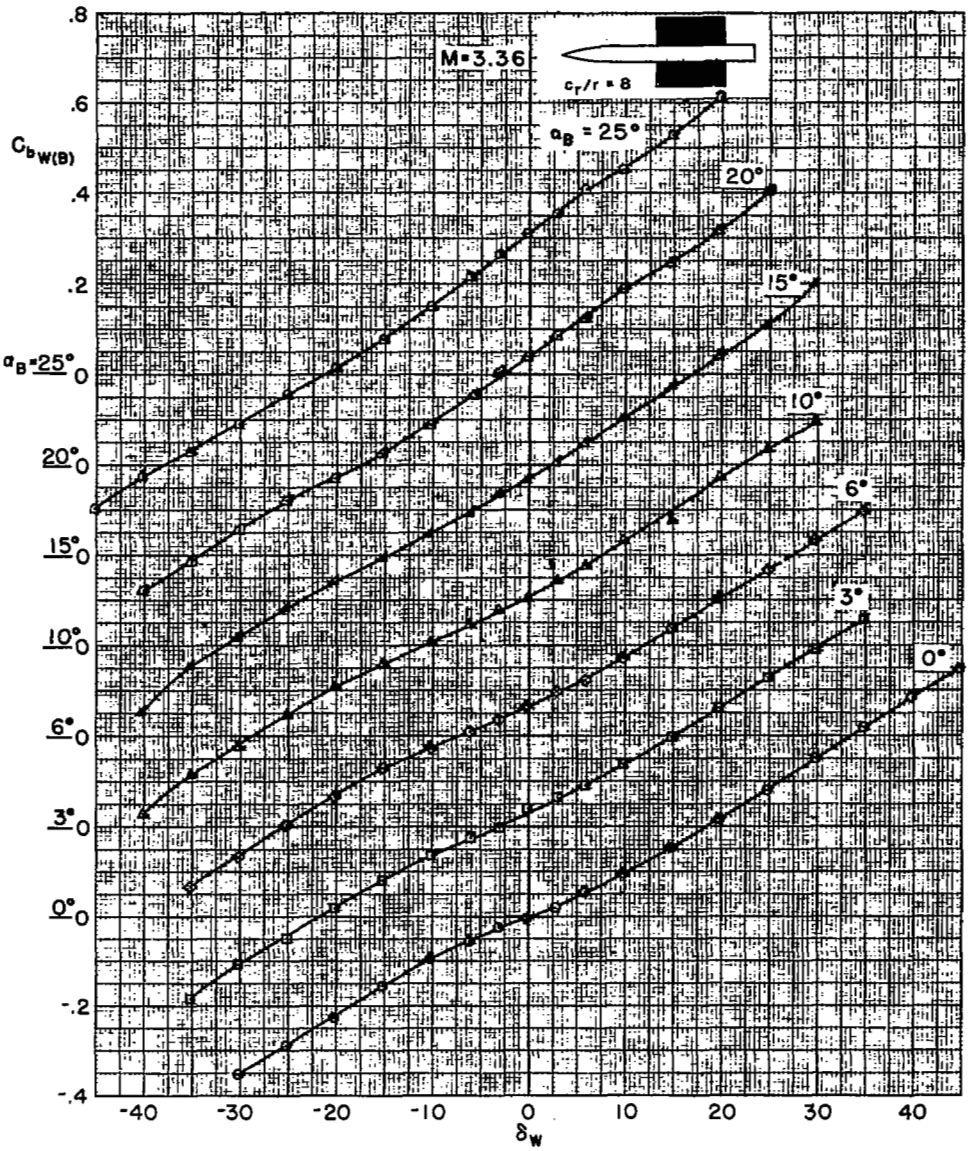
(f) A = 3/8 triangular wing, r/s = 0.4.

Figure 6.- Continued.



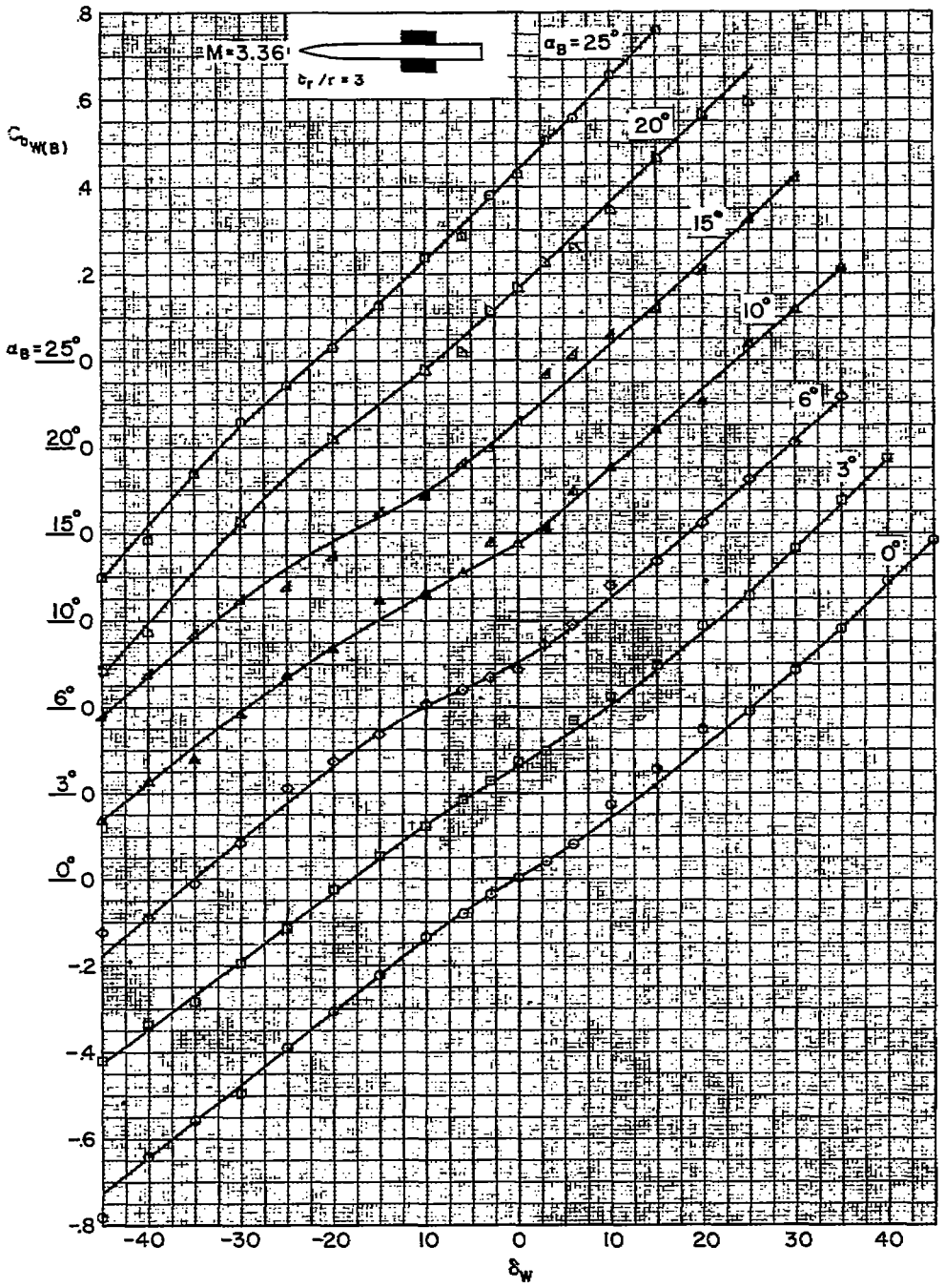
(g) A = 2 rectangular wing, r/s = 0.2.

Figure 6.- Continued.



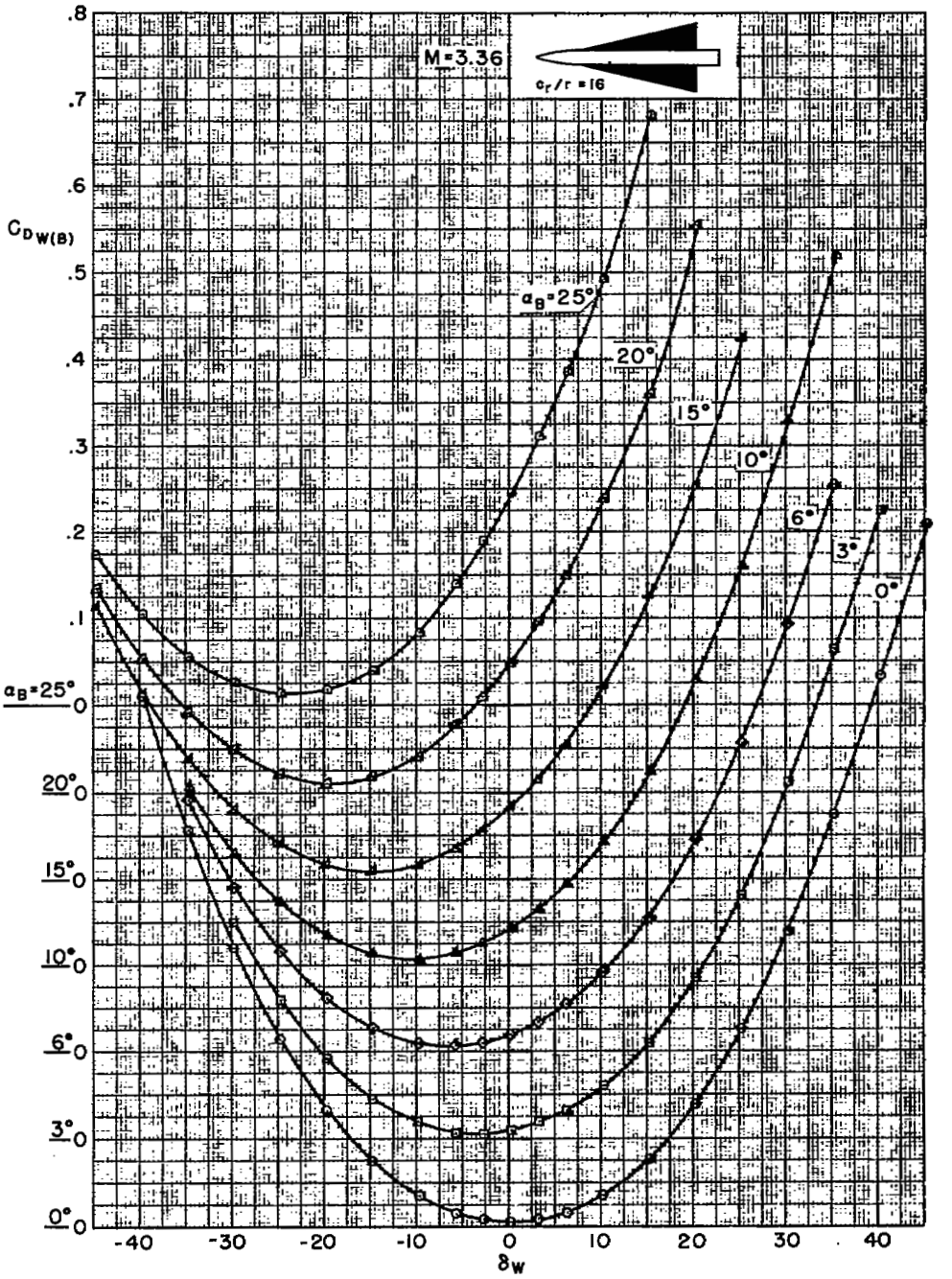
(h) A = 1 rectangular wing, r/s = 0.2.

Figure 6.- Continued.



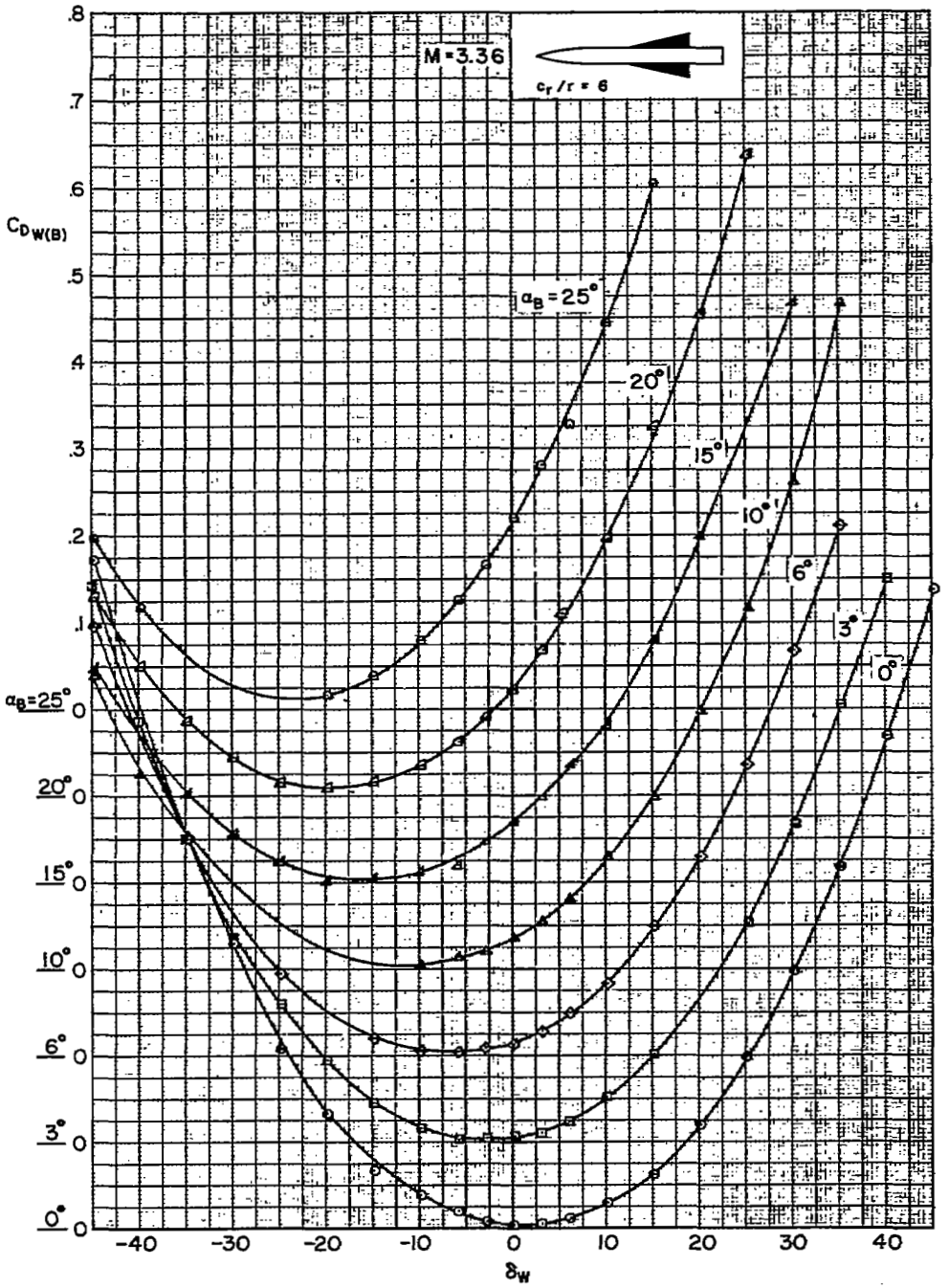
(i) A = 1 rectangular wing, $\bar{r}/s$ = 0.4.

Figure 6.- Concluded.



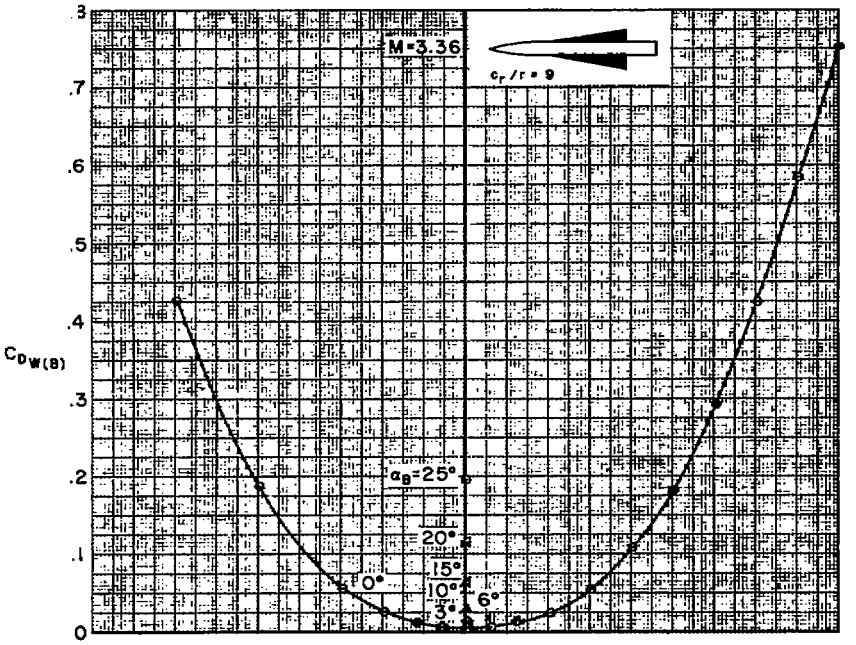
(a) A = 1 triangular wing, r/s = 0.2.

Figure 7.- Variation with deflection angle of drag coefficient for the wings in the presence of the body.

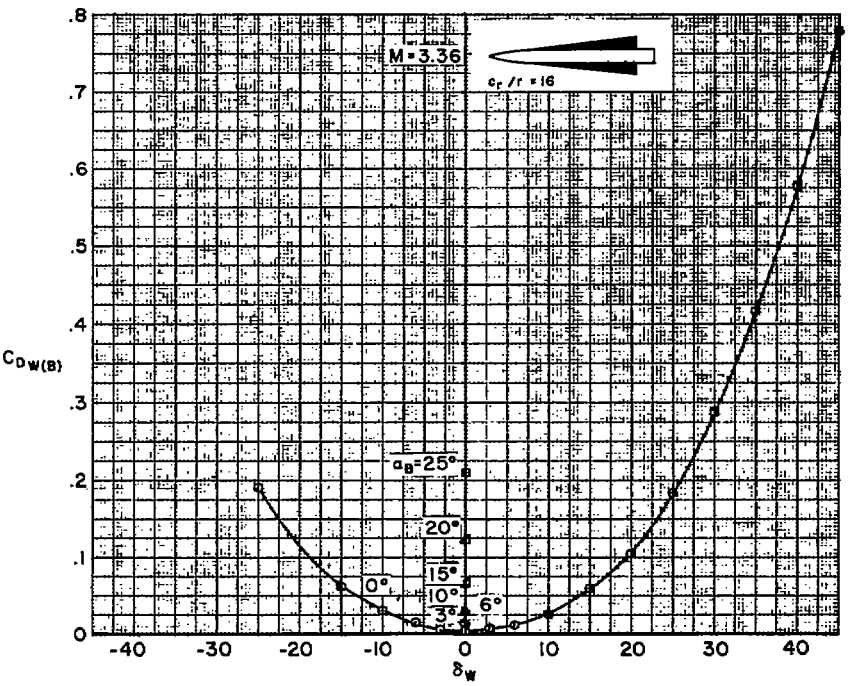


(b) A = 1 triangular wing, r/s = 0.4.

Figure 7.- Continued.

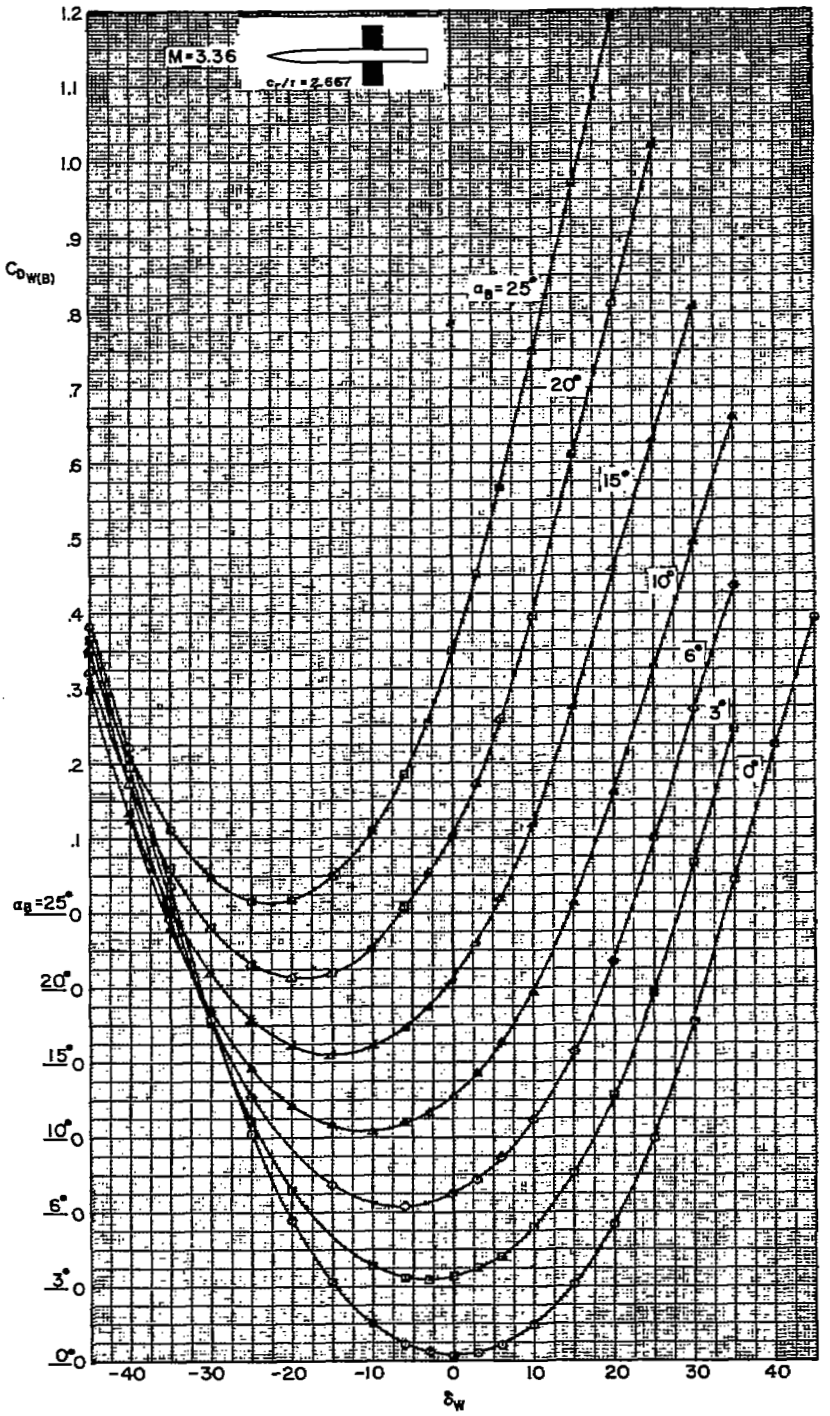


(c) A = 2/3 triangular wing, r/s = 0.4.



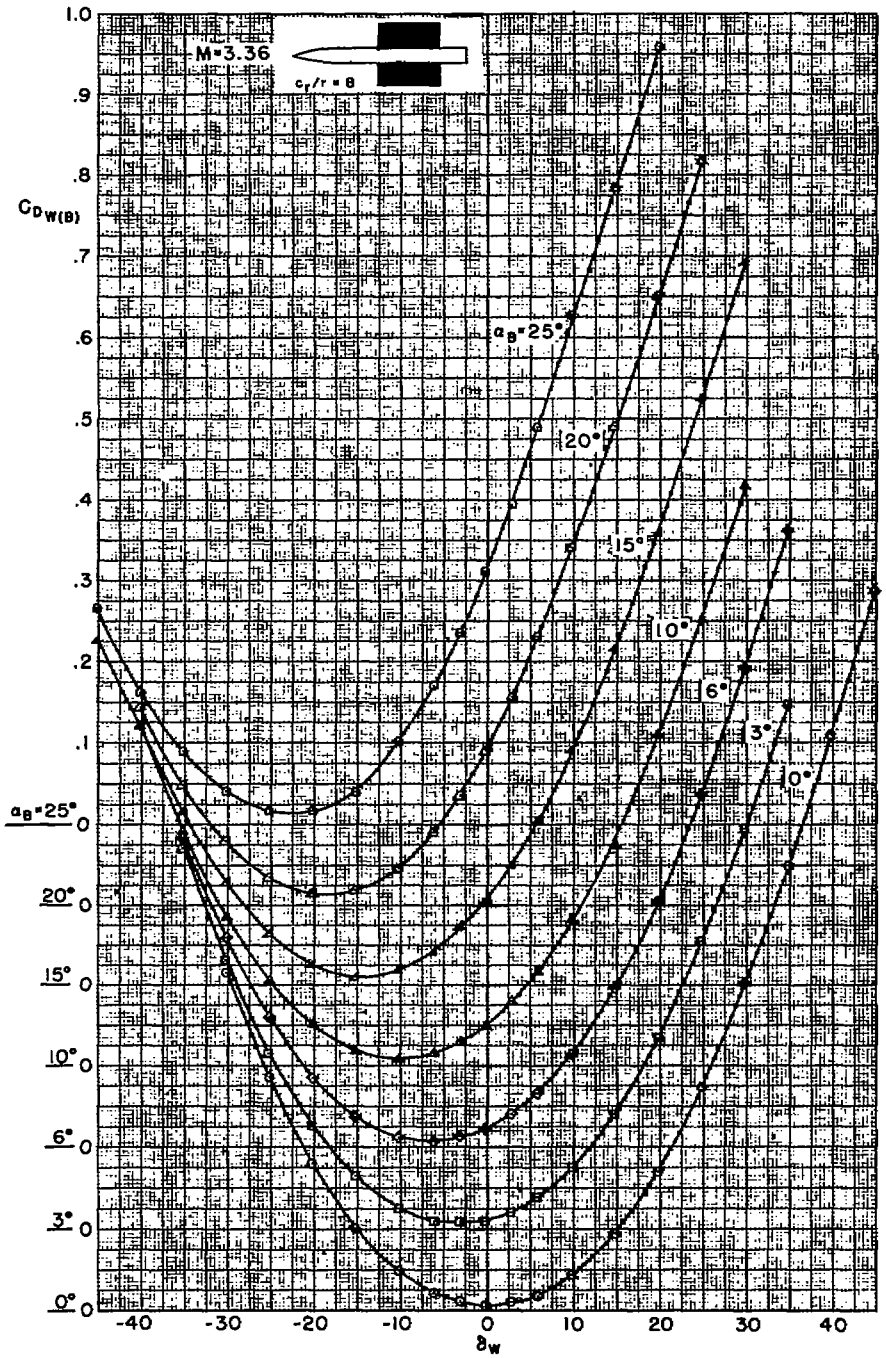
(d) A = 3/8 triangular wing, r/s = 0.4.

Figure 7.- Continued.



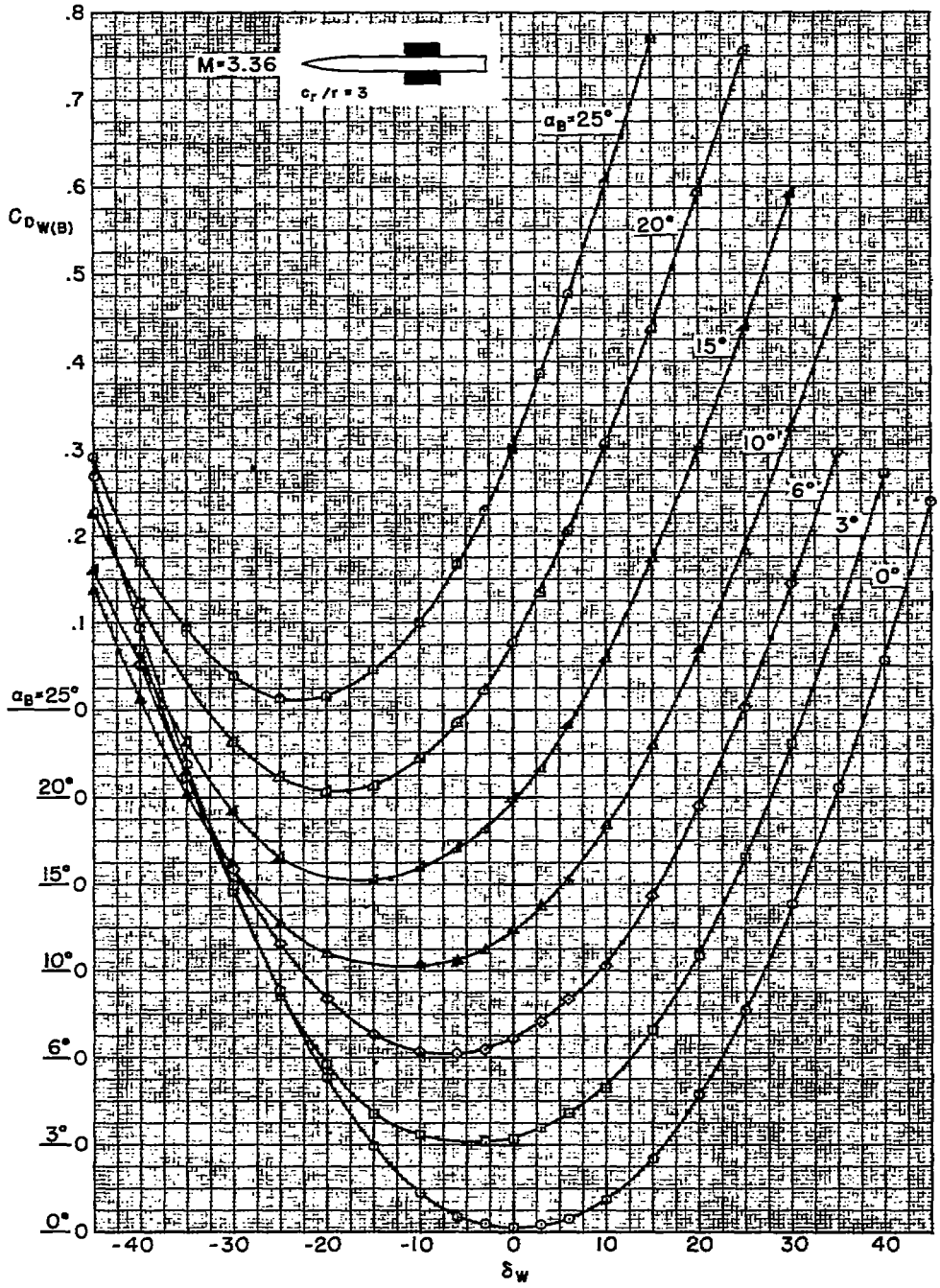
(e) A = 3 rectangular wing, r/s = 0.2.

Figure 7.- Continued.



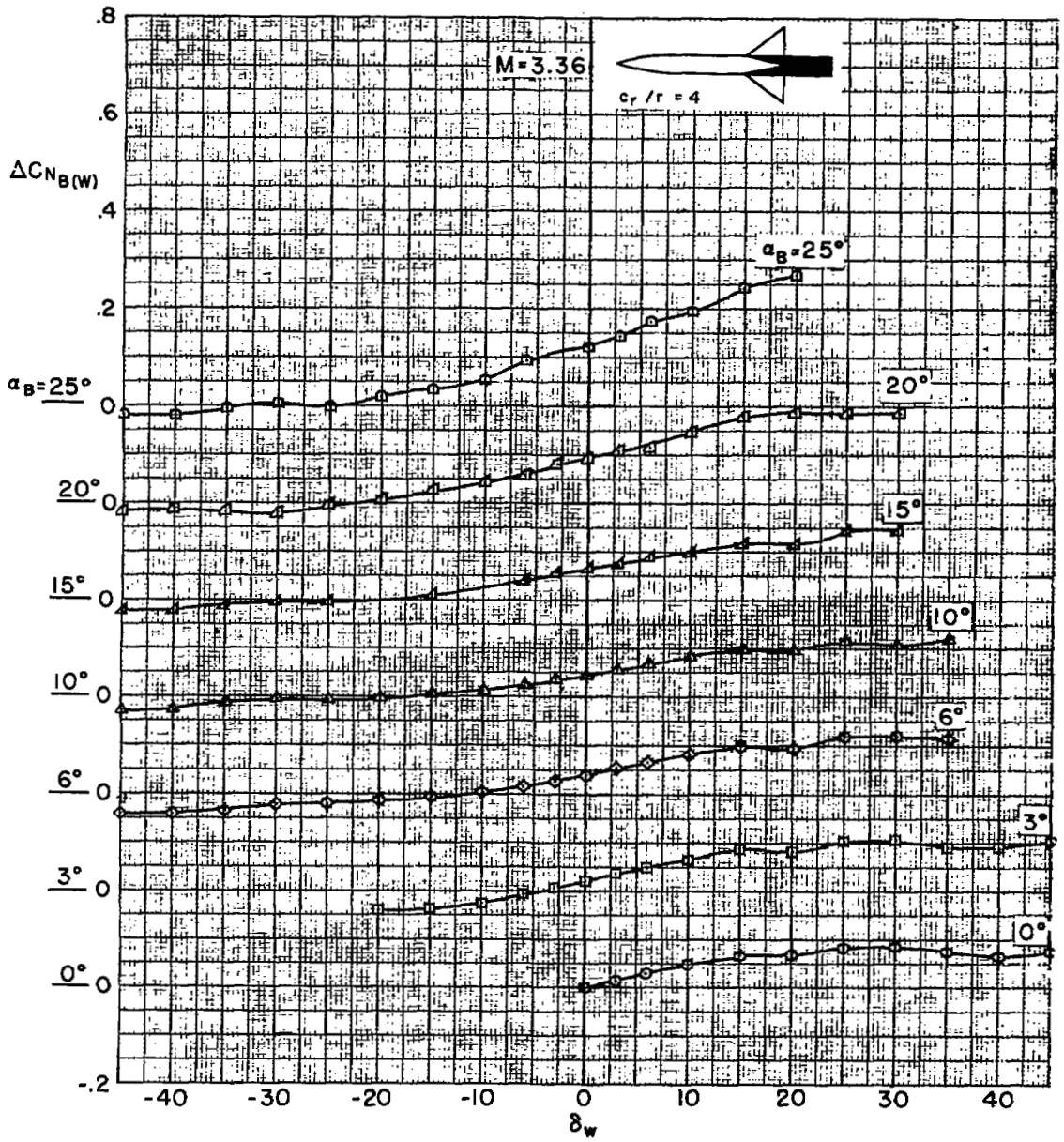
(f) A = 1 rectangular wing, r/s = 0.2.

Figure 7.- Continued.



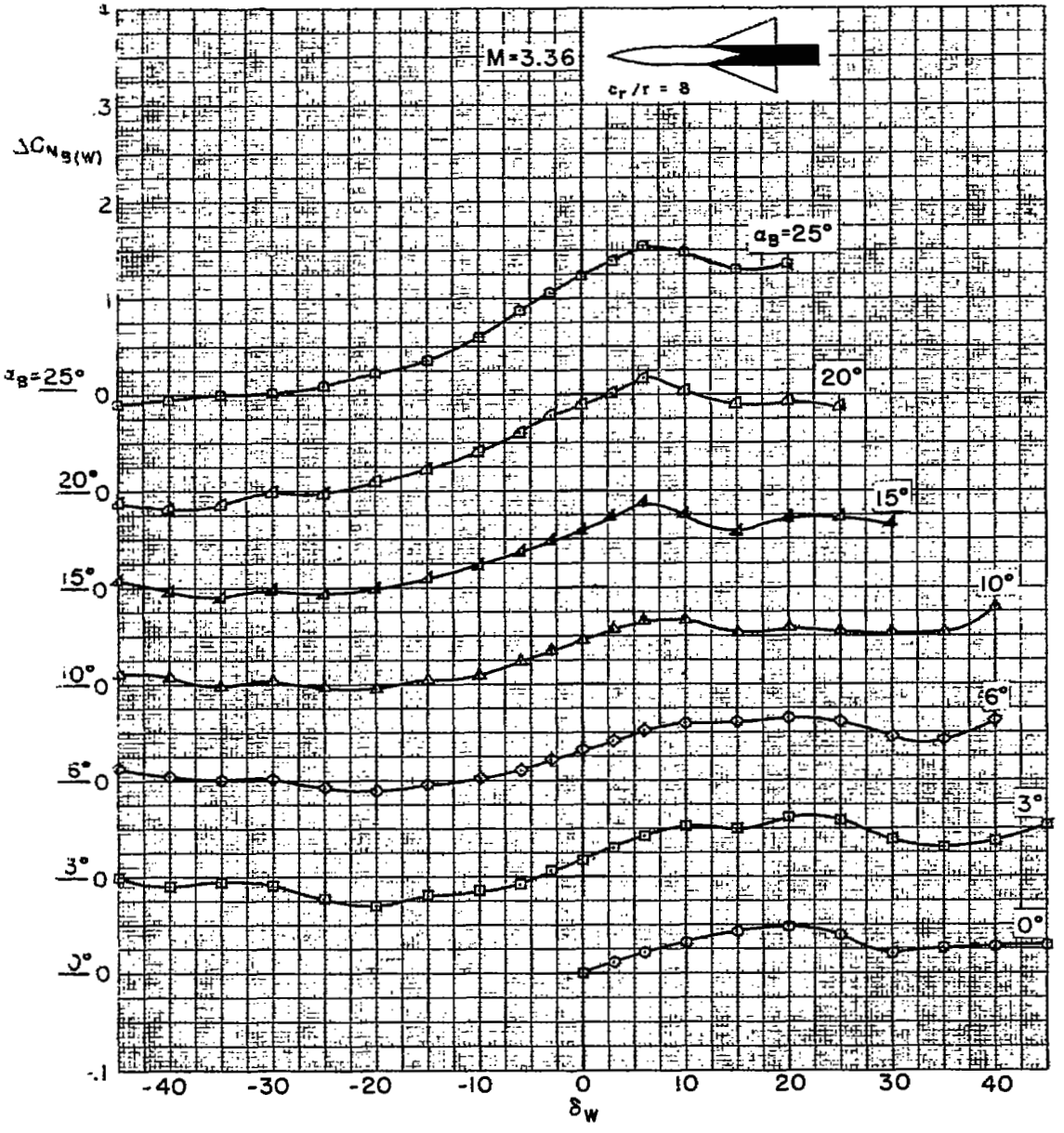
(g) A = 1 rectangular wing, r/s = 0.4.

Figure 7.- Concluded.



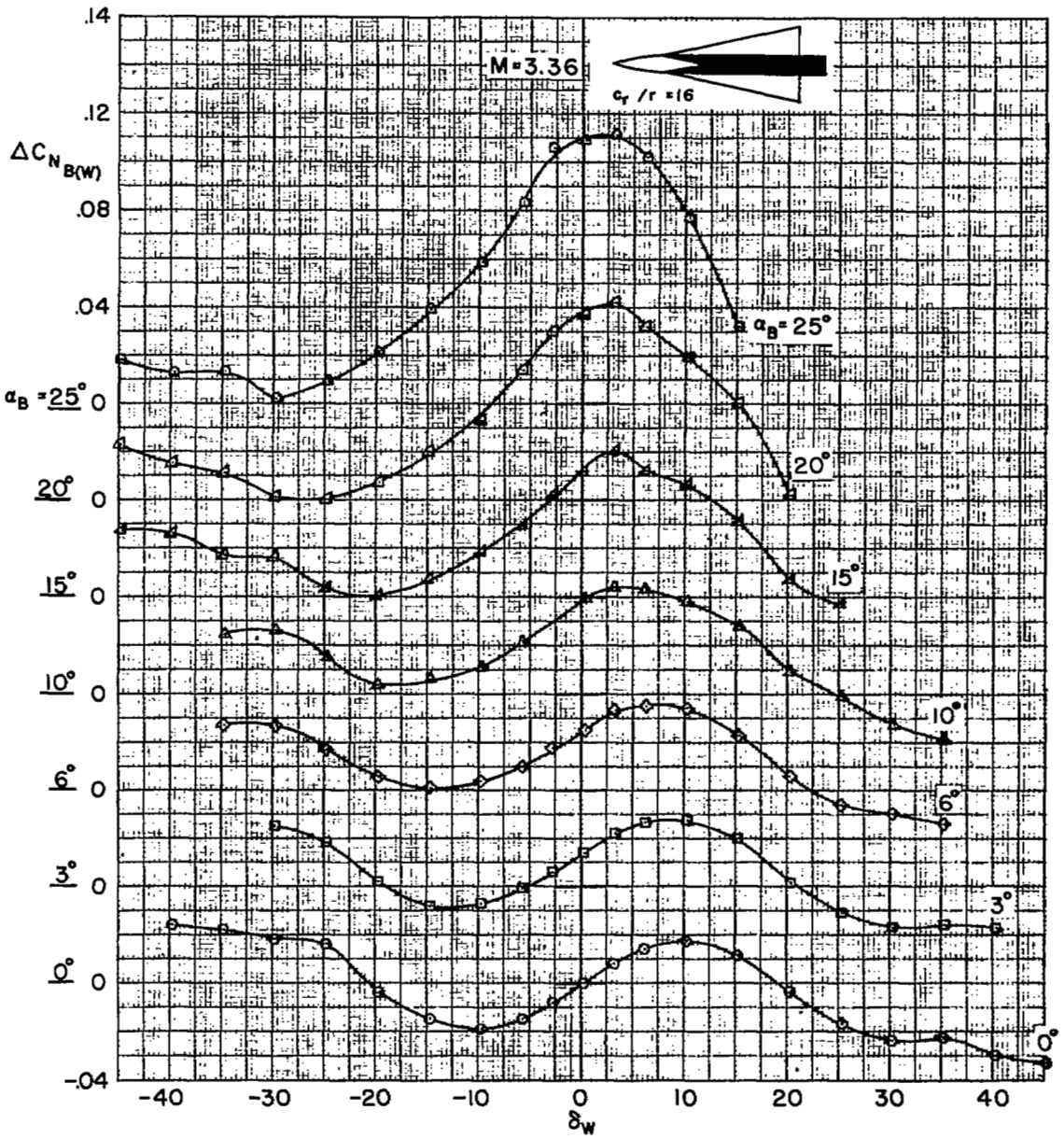
(a) A = 4 triangular wing, r/s = 0.2.

Figure 8.- Variation with deflection angle of interference normal-force coefficient for the body in the presence of the wings.



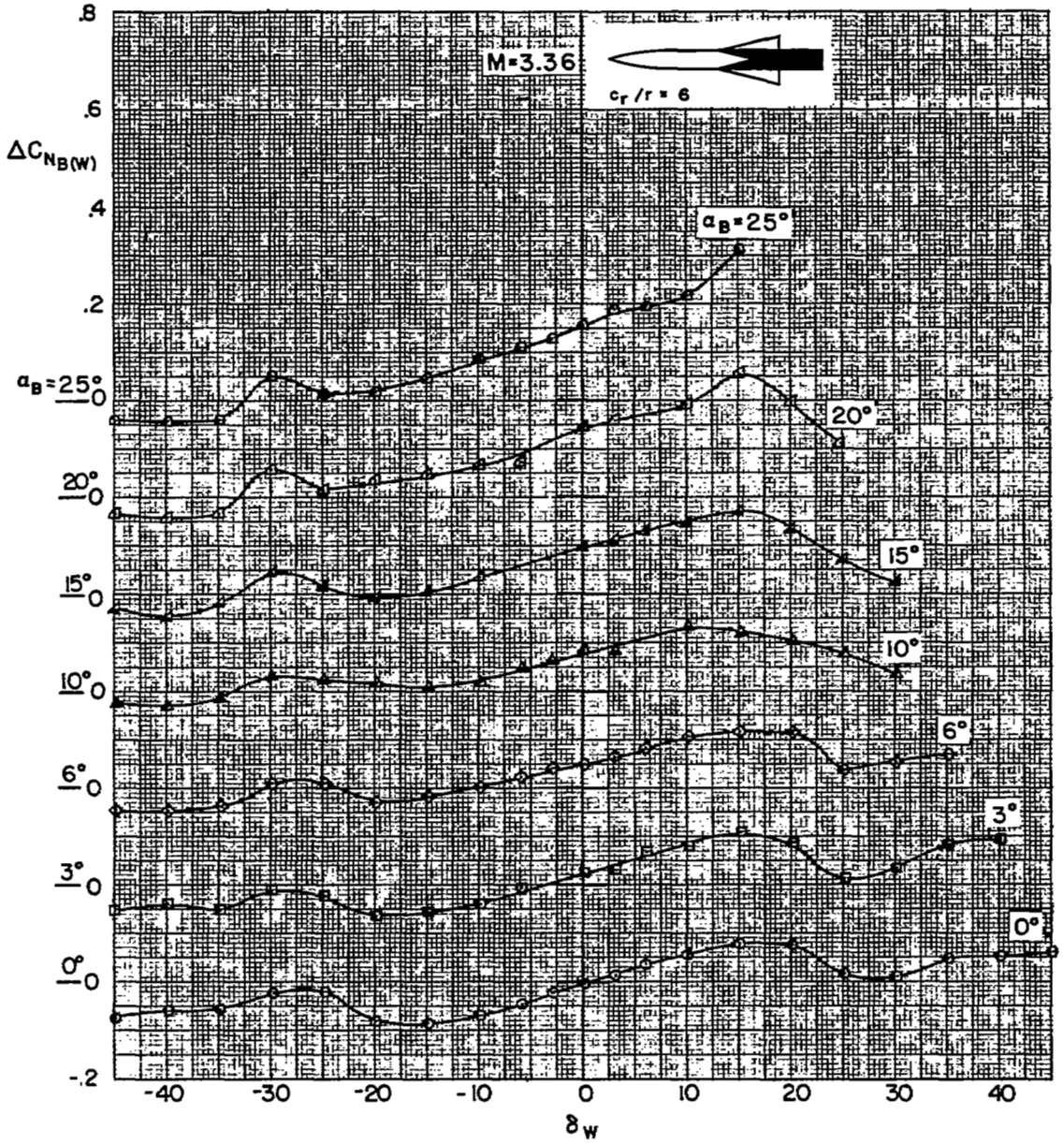
(b) A = 2 triangular wing, r/s = 0.2.

Figure 8.- Continued.



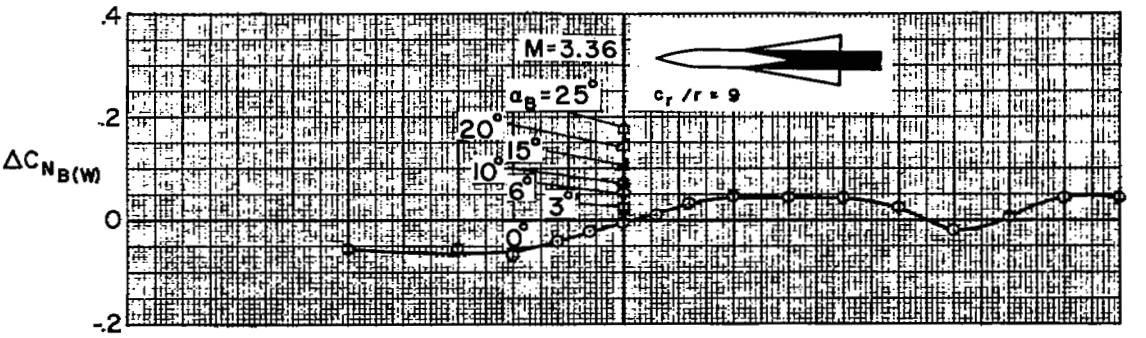
(c) A = 1 triangular wing, r/s = 0.2.

Figure 8.- Continued.

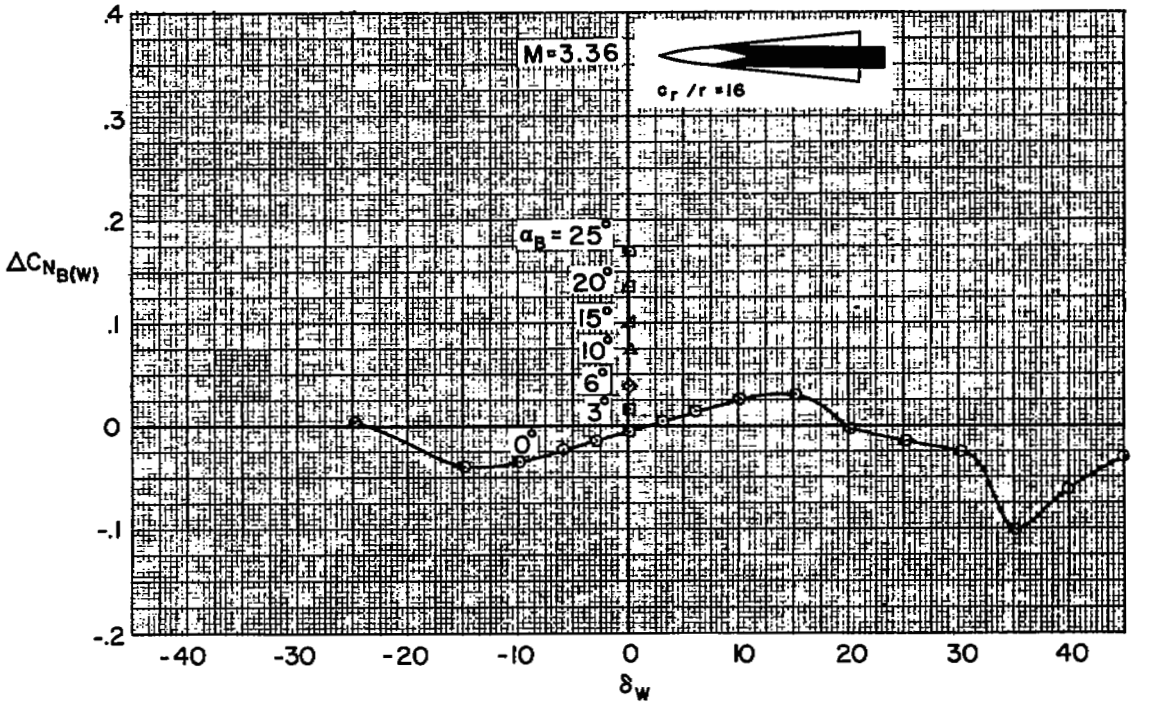


(d) A = 1 triangular wing, r/s = 0.4.

Figure 8.- Continued.

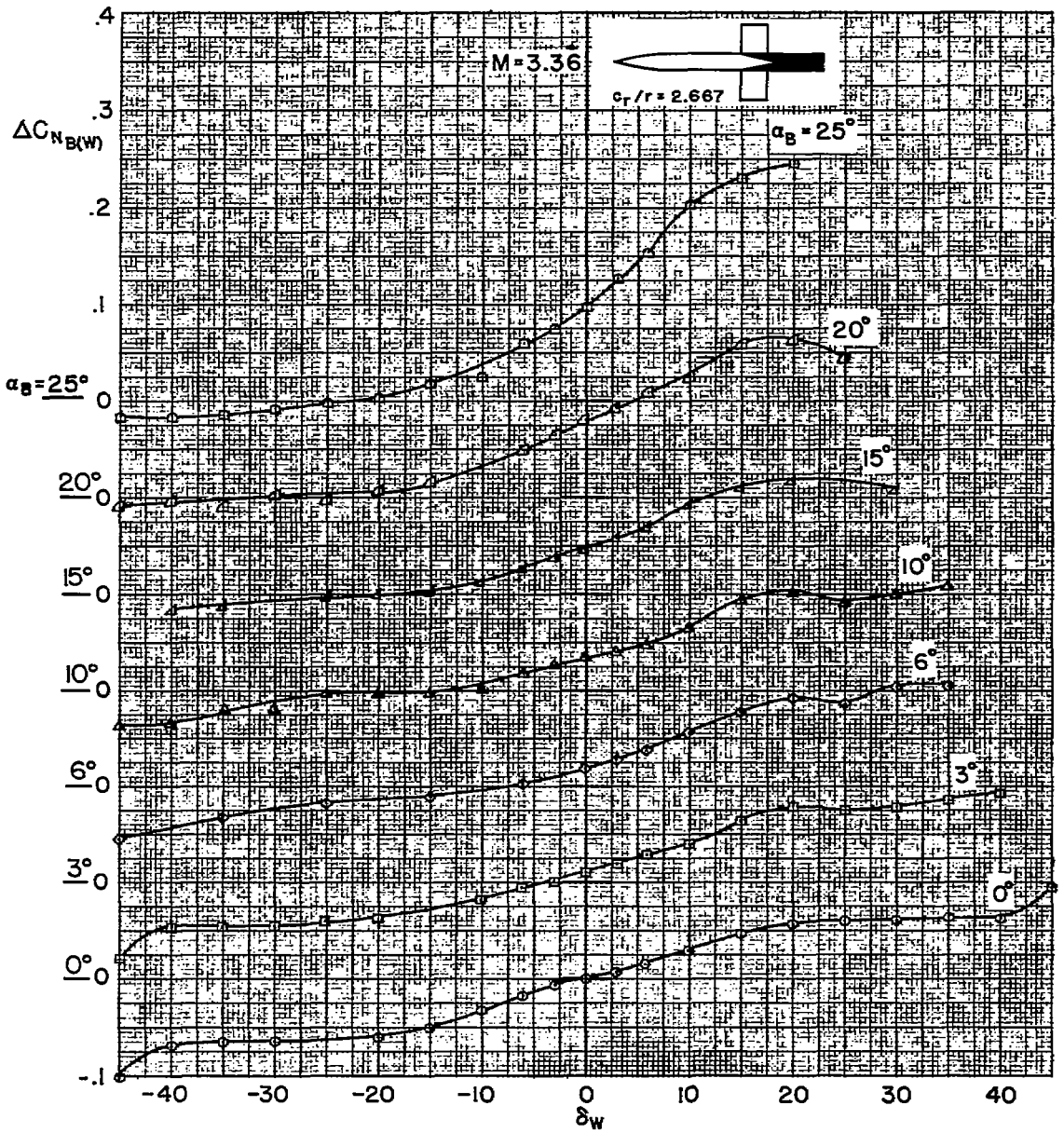


(e) A = 2/3 triangular wing, r/s = 0.4.



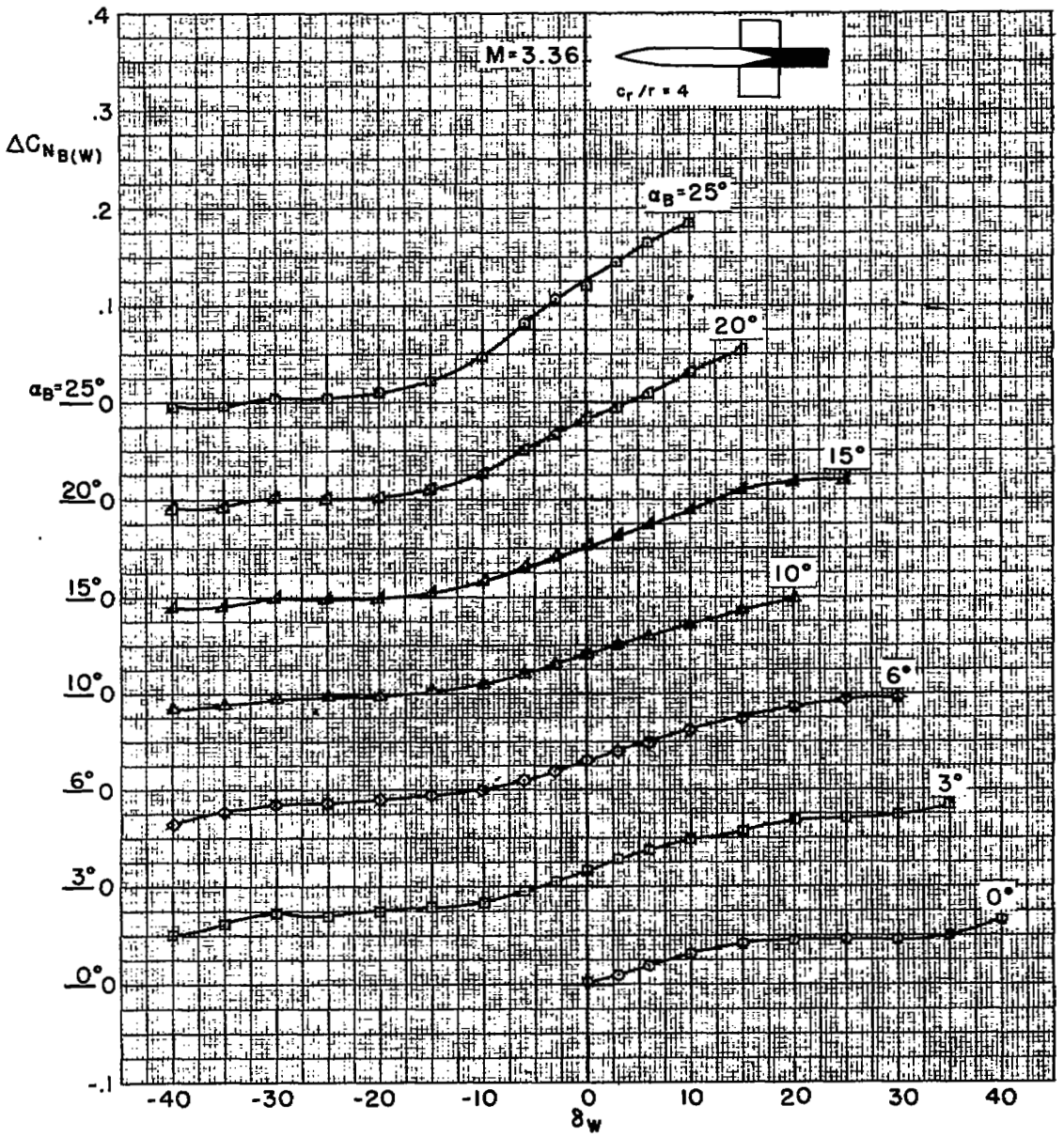
(f) A = 3/8 triangular wing, r/s = 0.4.

Figure 8.- Continued.



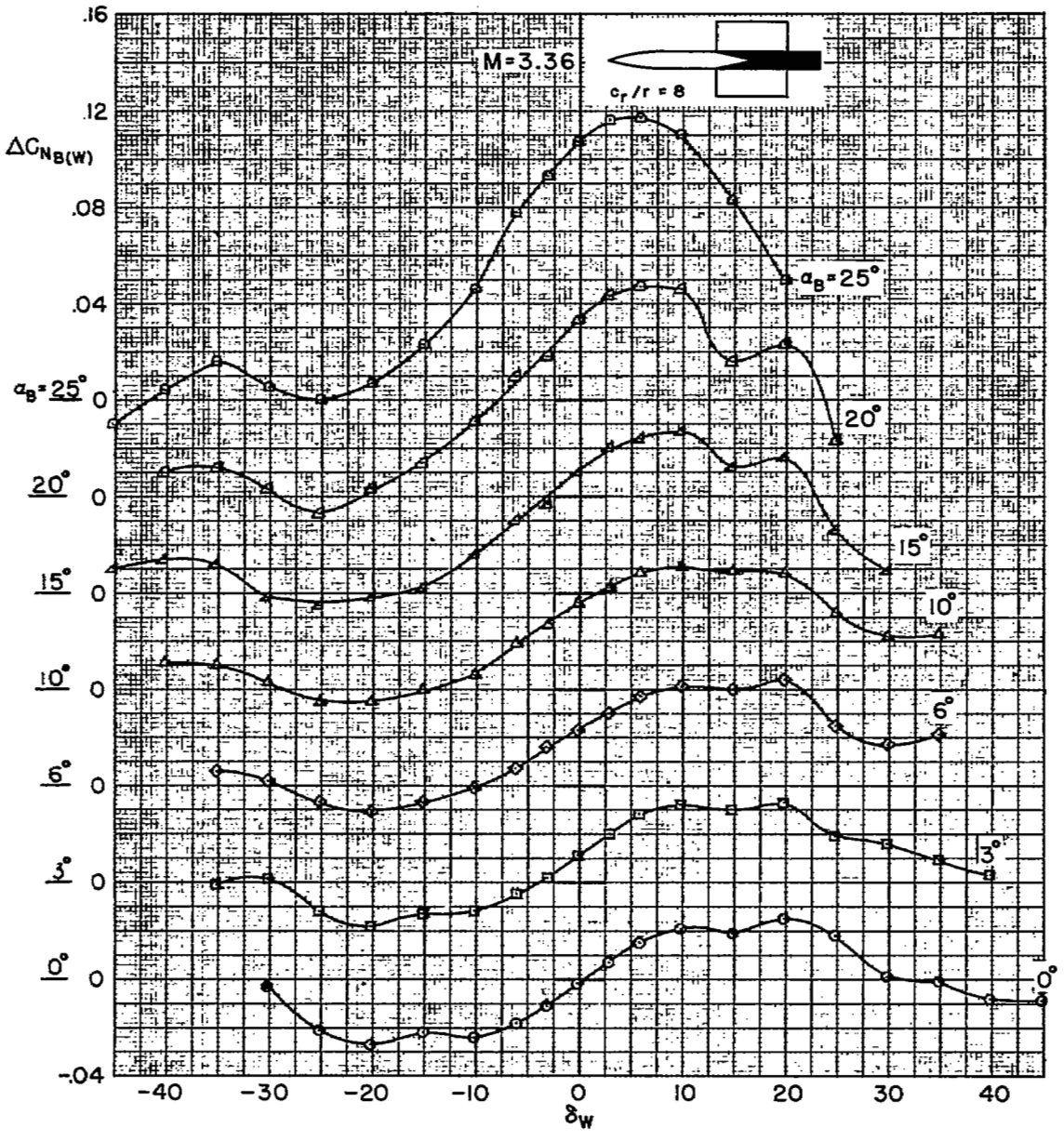
(g) A = 3 rectangular wing, r/s = 0.2.

Figure 8.- Continued.



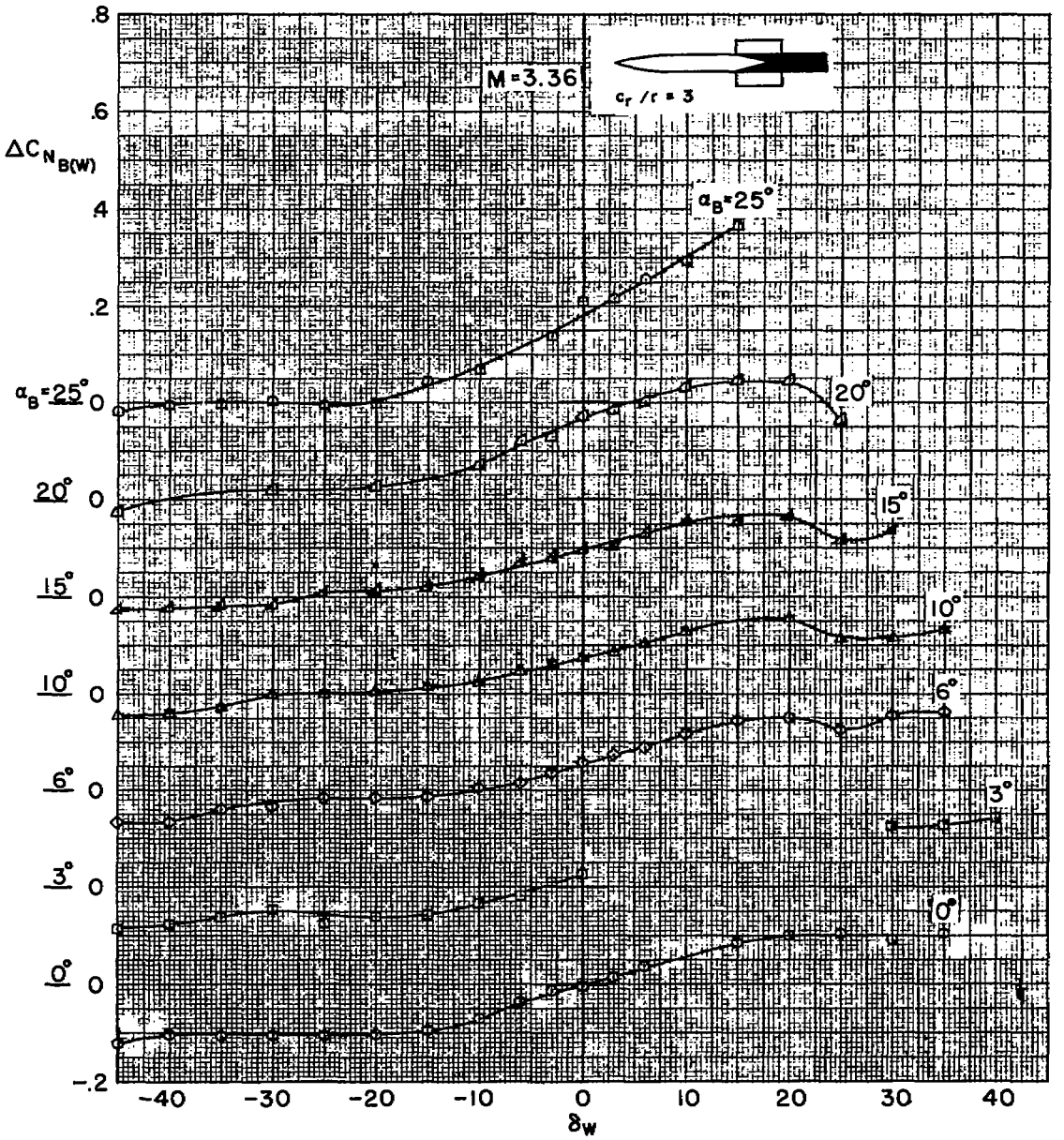
(h) A = 2 rectangular wing, r/s = 0.2.

Figure 8.- Continued.



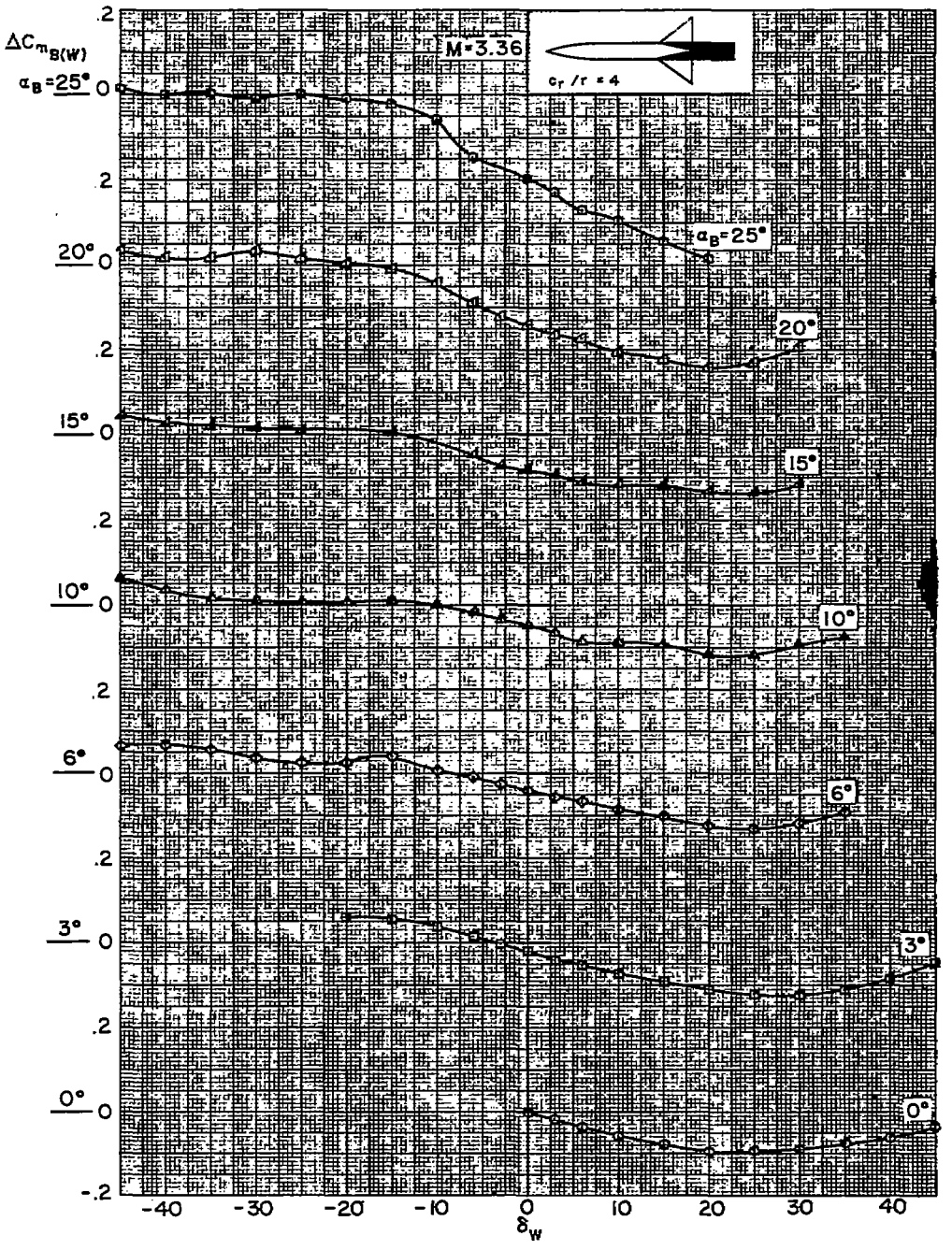
(i) A = 1 rectangular wing, r/s = 0.2.

Figure 8.- Continued.



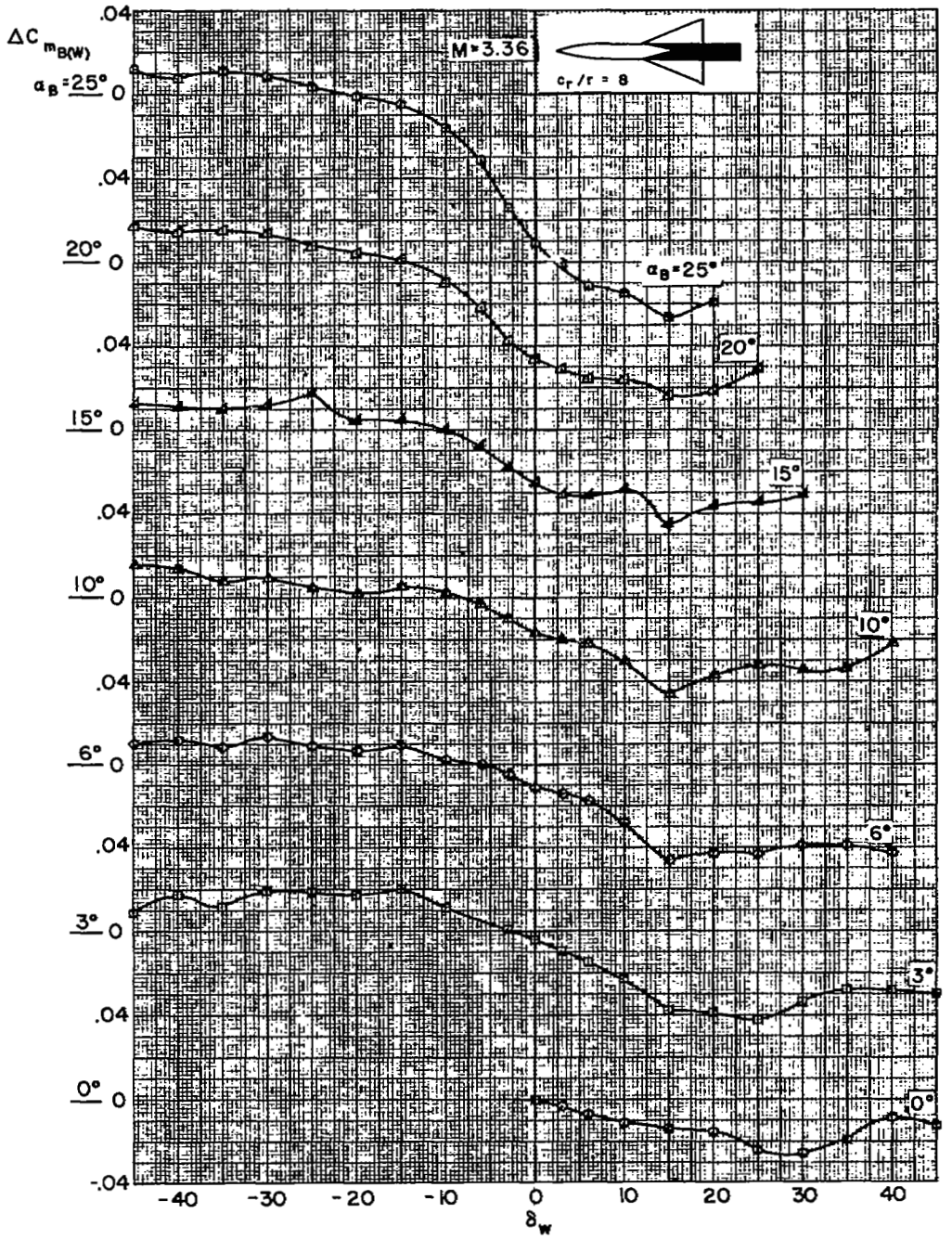
(j) A = 1 rectangular wing, r/s = 0.4.

Figure 8.- Concluded.



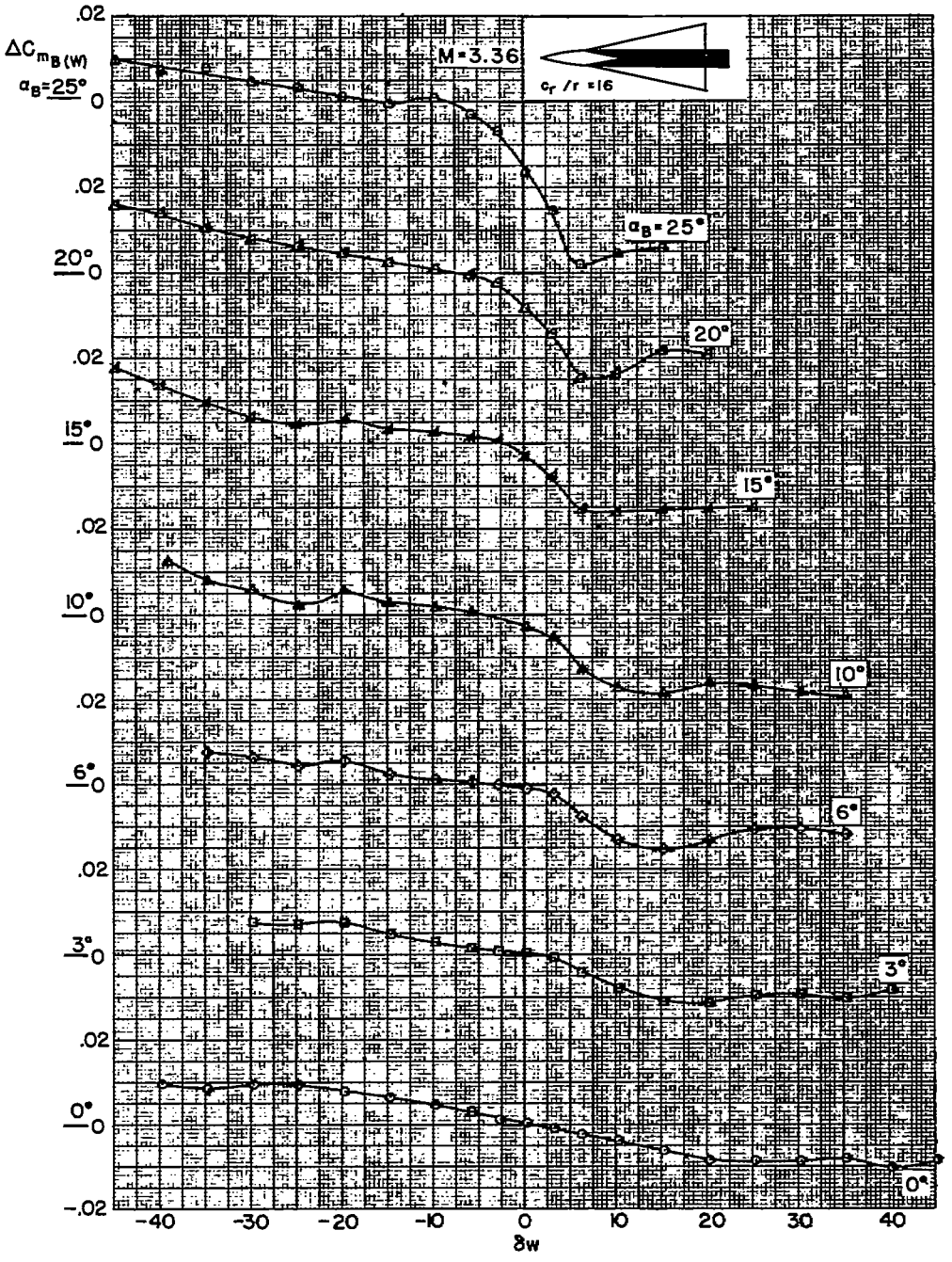
(a) A = 4 triangular wing, r/s = 0.2.

Figure 9.- Variation with deflection angle of interference pitching-moment coefficient for the body in the presence of the wings.



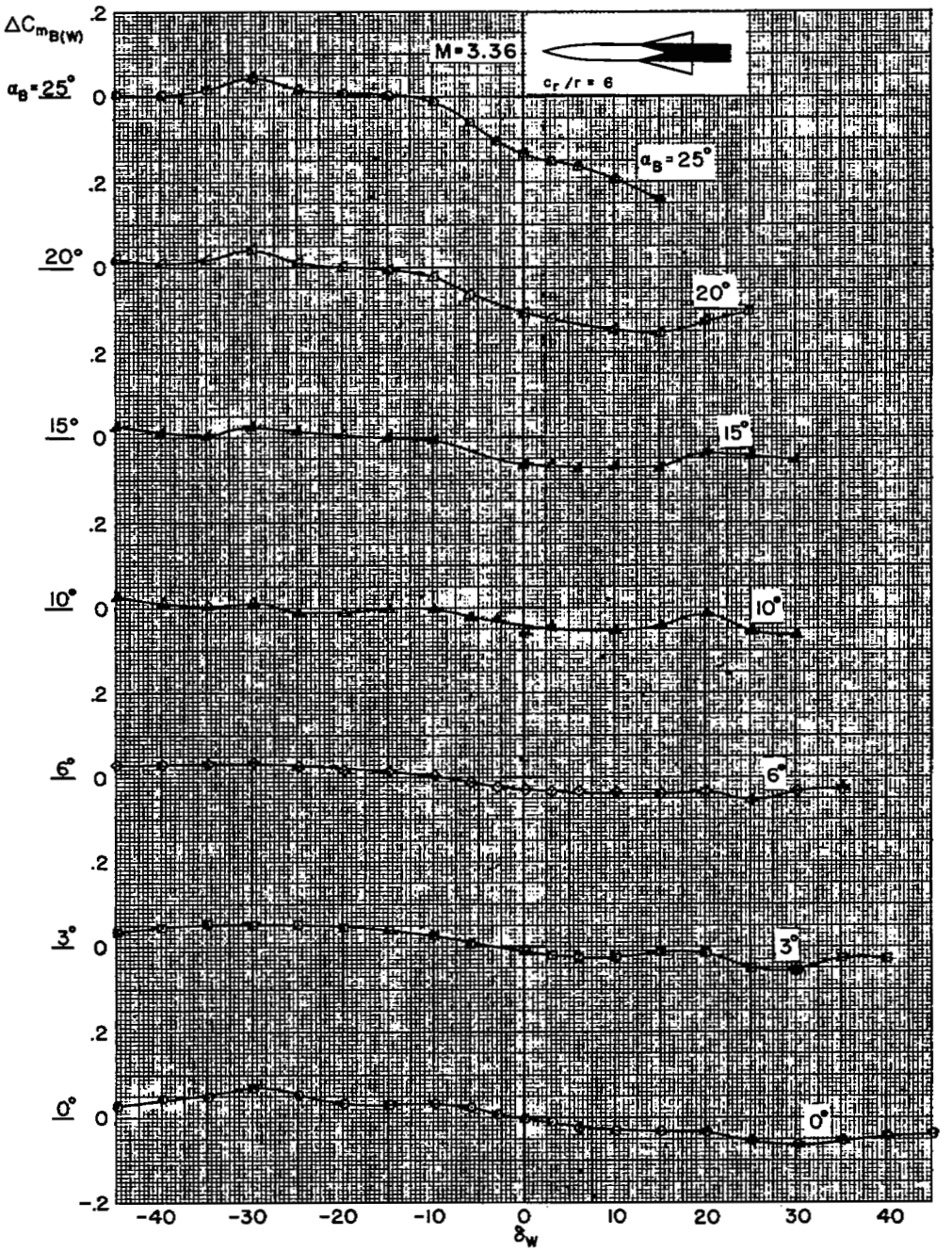
(b) A = 2 triangular wing, r/s = 0.2.

Figure 9.- Continued.



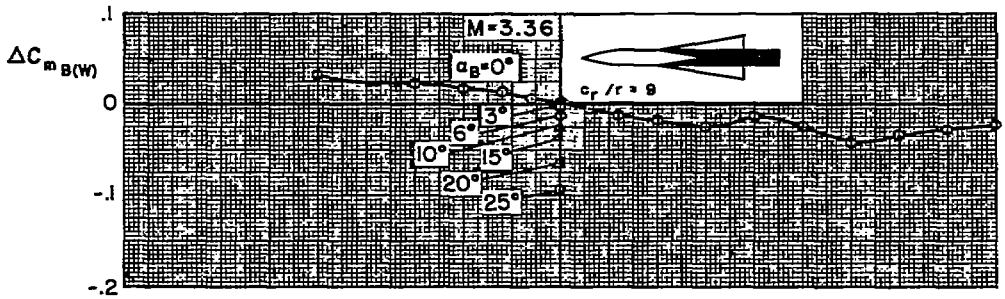
(c) A = 1 triangular wing, r/s = 0.2.

Figure 9.- Continued.

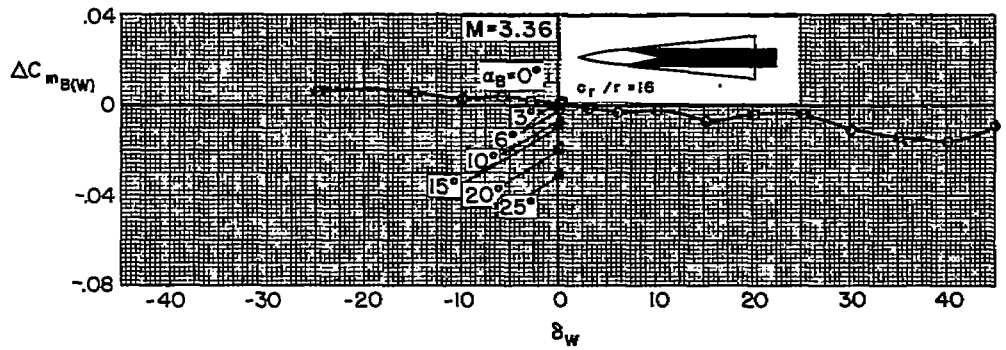


(d) A = 1 triangular wing, r/s = 0.4.

Figure 9.- Continued.

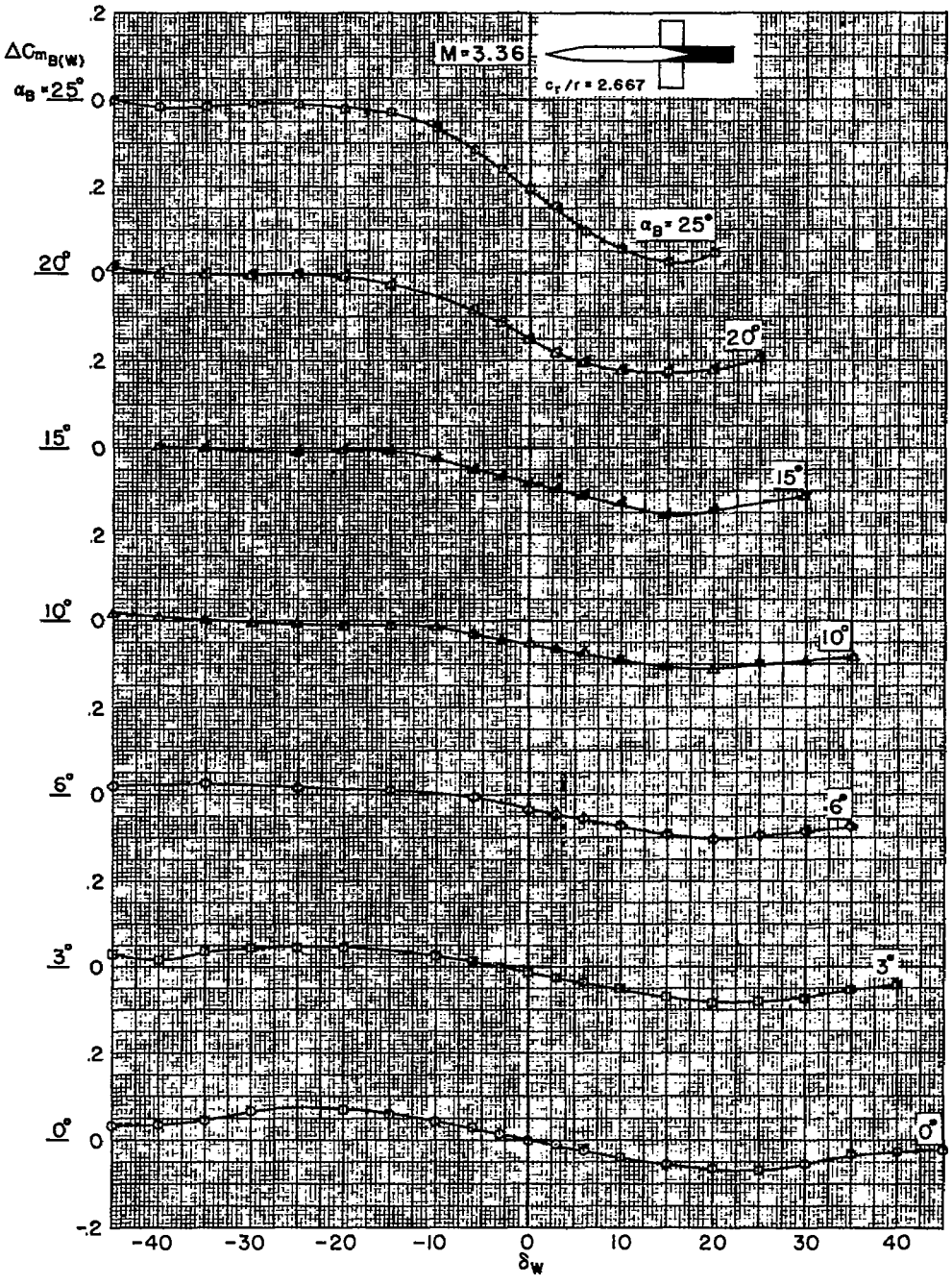


(e) A = 2/3 triangular wing, r/s = 0.4.



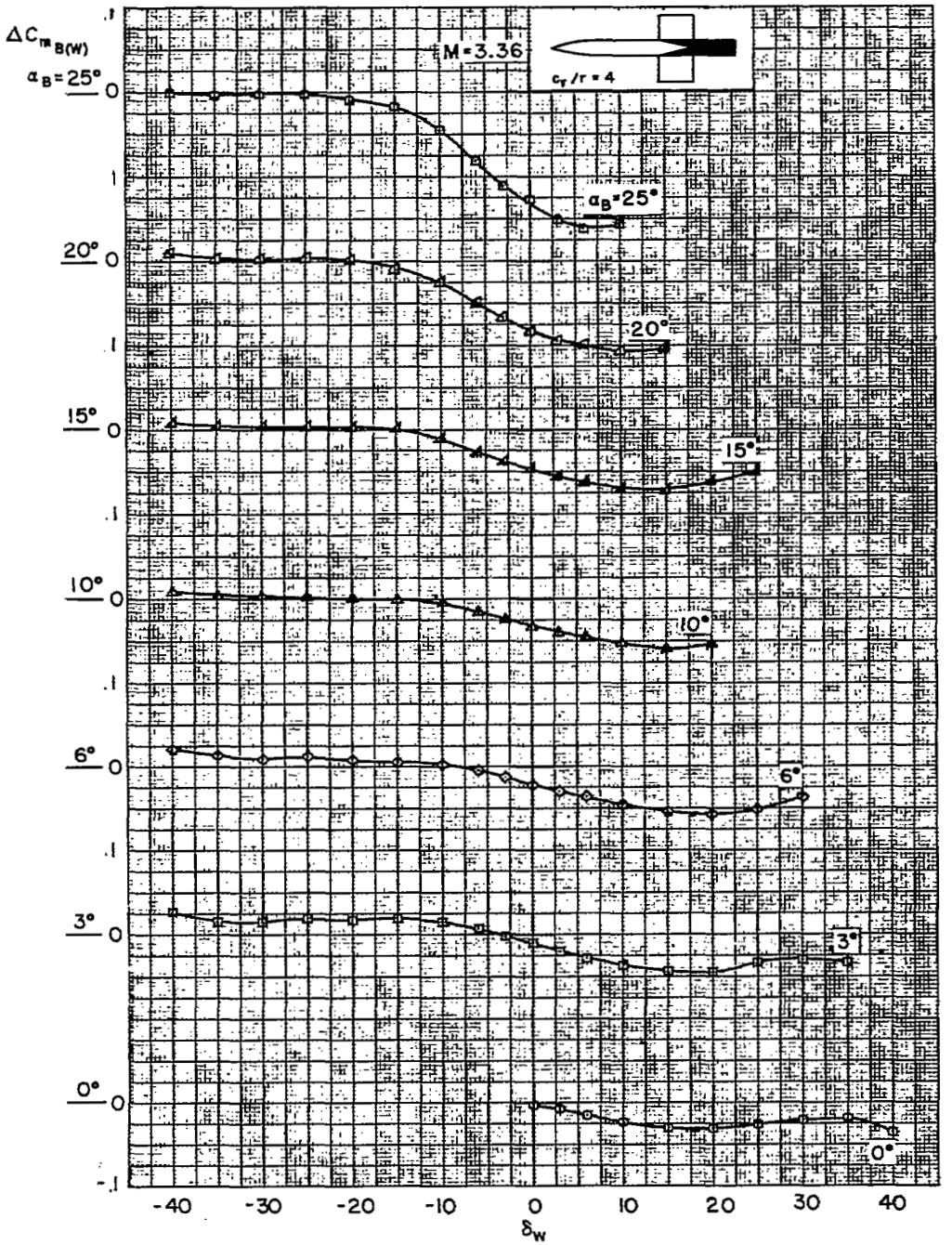
(f) A = 3/8 triangular wing, r/s = 0.4.

Figure 9.- Continued.



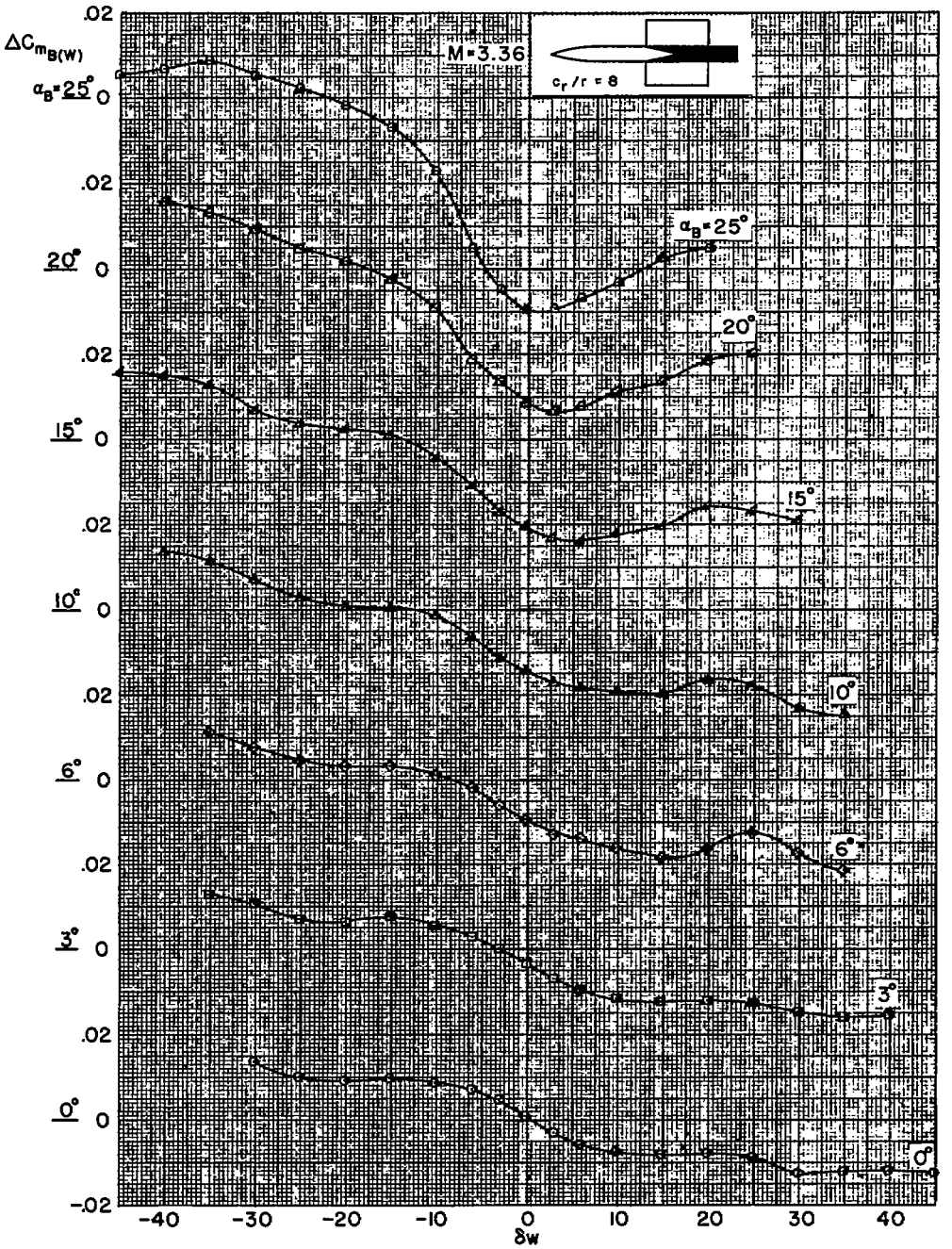
(g) A = 3 rectangular wing, r/s = 0.2.

Figure 9.- Continued.



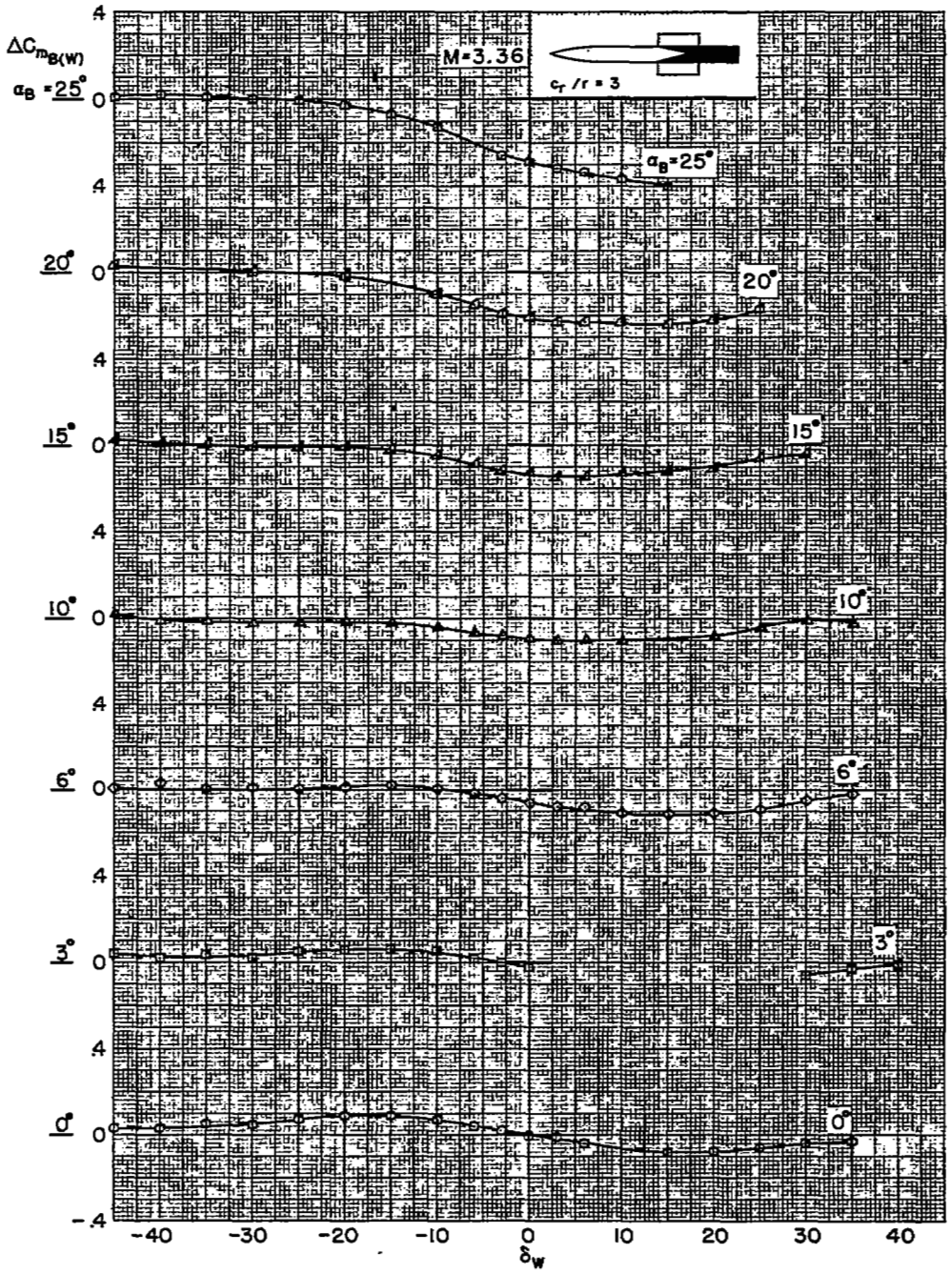
(h) A = 2 rectangular wing, r/s = 0.2.

Figure 9.- Continued.



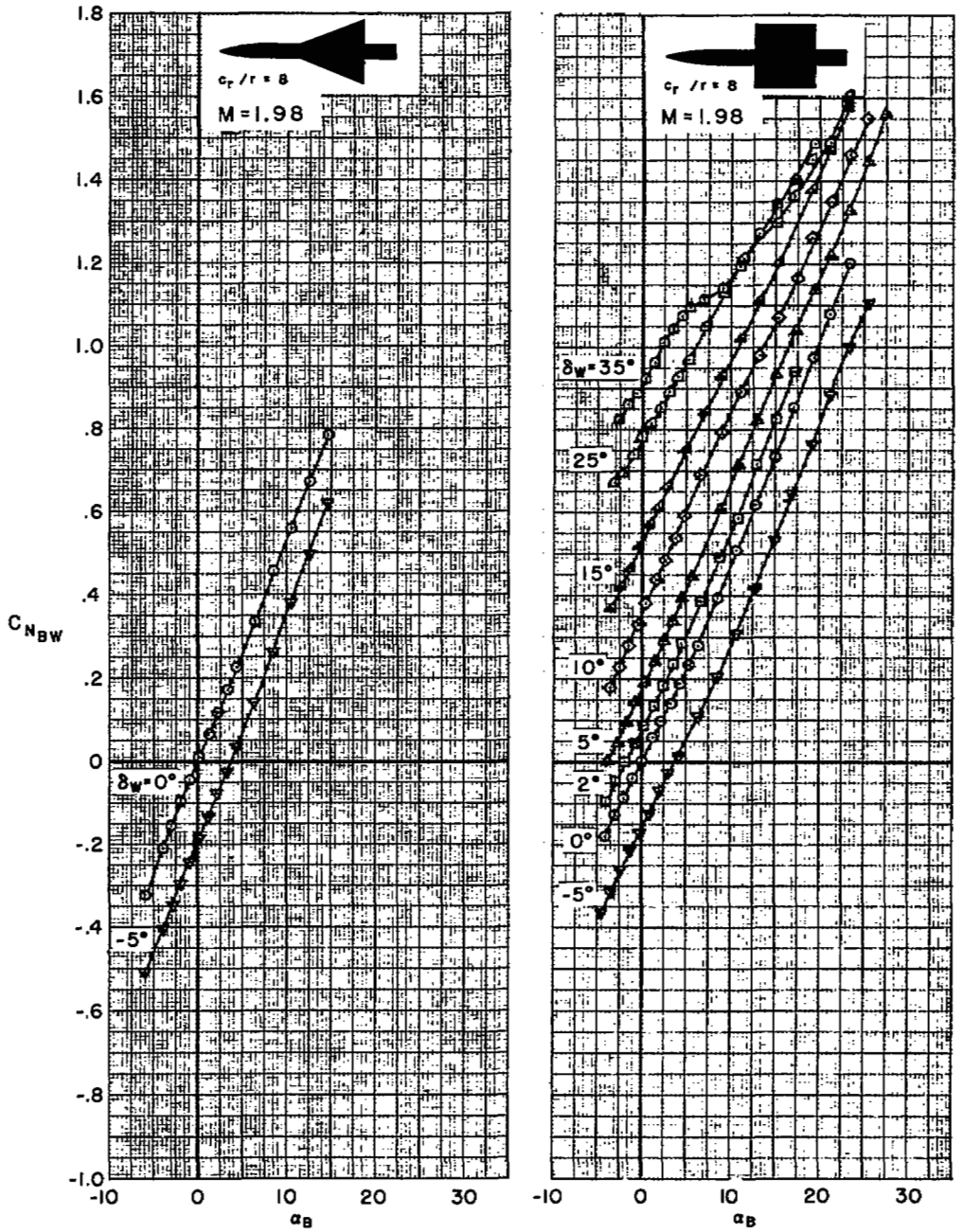
(i) A = 1 rectangular wing, r/s = 0.2.

Figure 9.- Continued.



(j) A = 1 rectangular wing, r/s = 0.4.

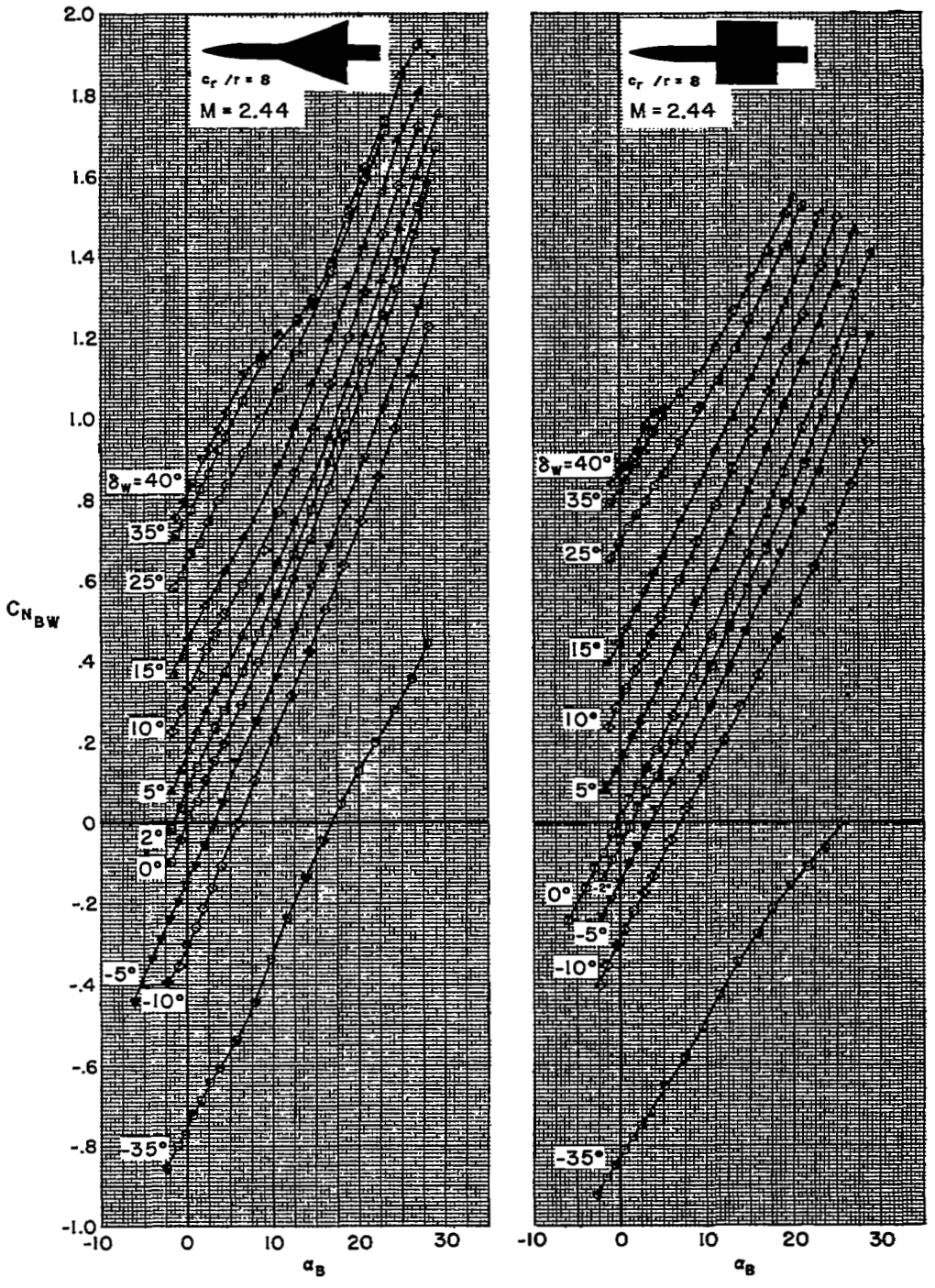
Figure 9.- Concluded.



(a) A = 2 triangular wing and body combination, r/s = 0.2.

(b) A = 1 rectangular wing and body combination, r/s = 0.2.

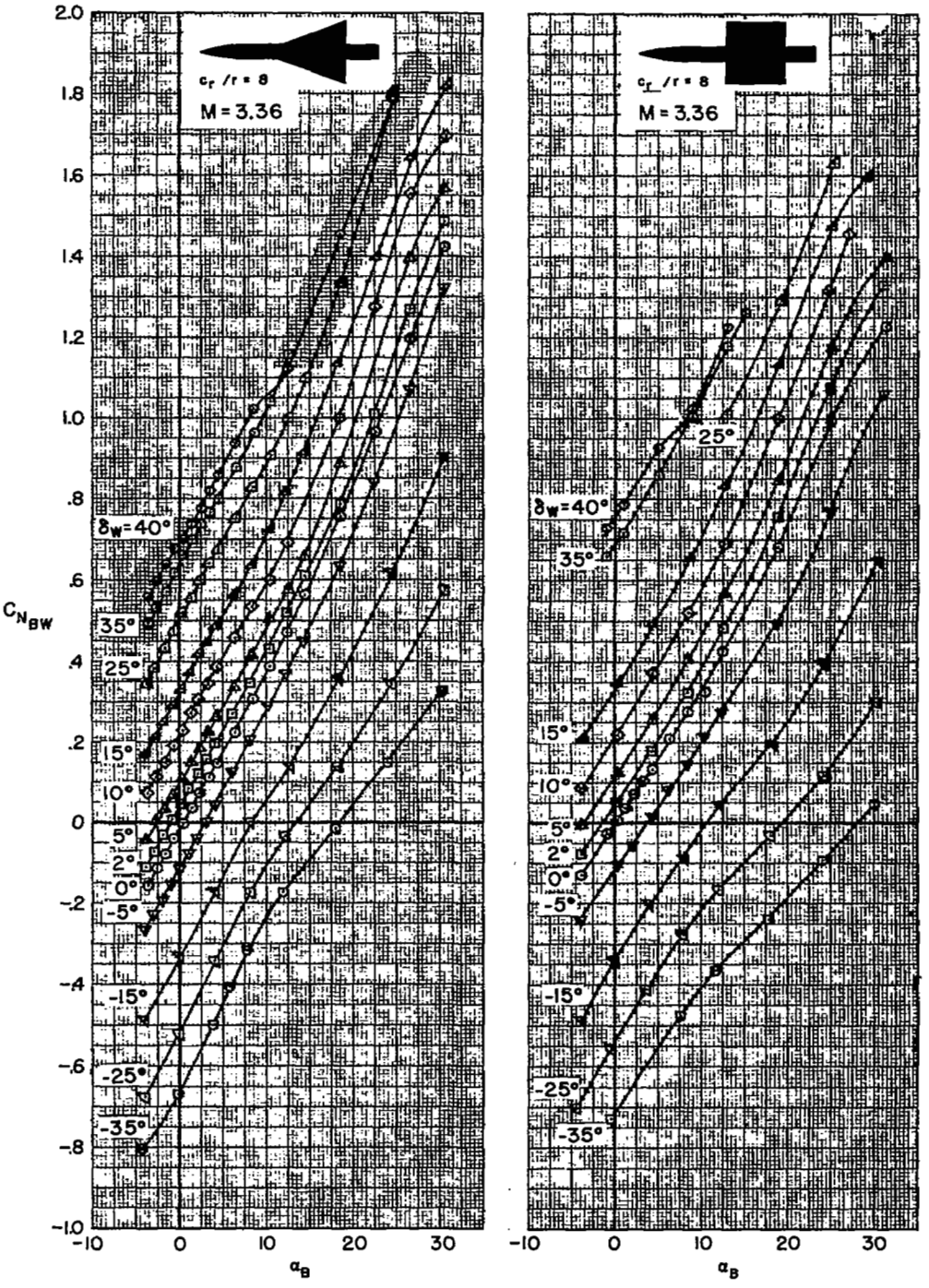
Figure 10.- Variation with angle of attack of normal-force coefficient for the body-wing combinations.



(c) A = 2 triangular wing and body combination, r/s = 0.2.

(d) A = 1 rectangular wing and body combination, r/s = 0.2.

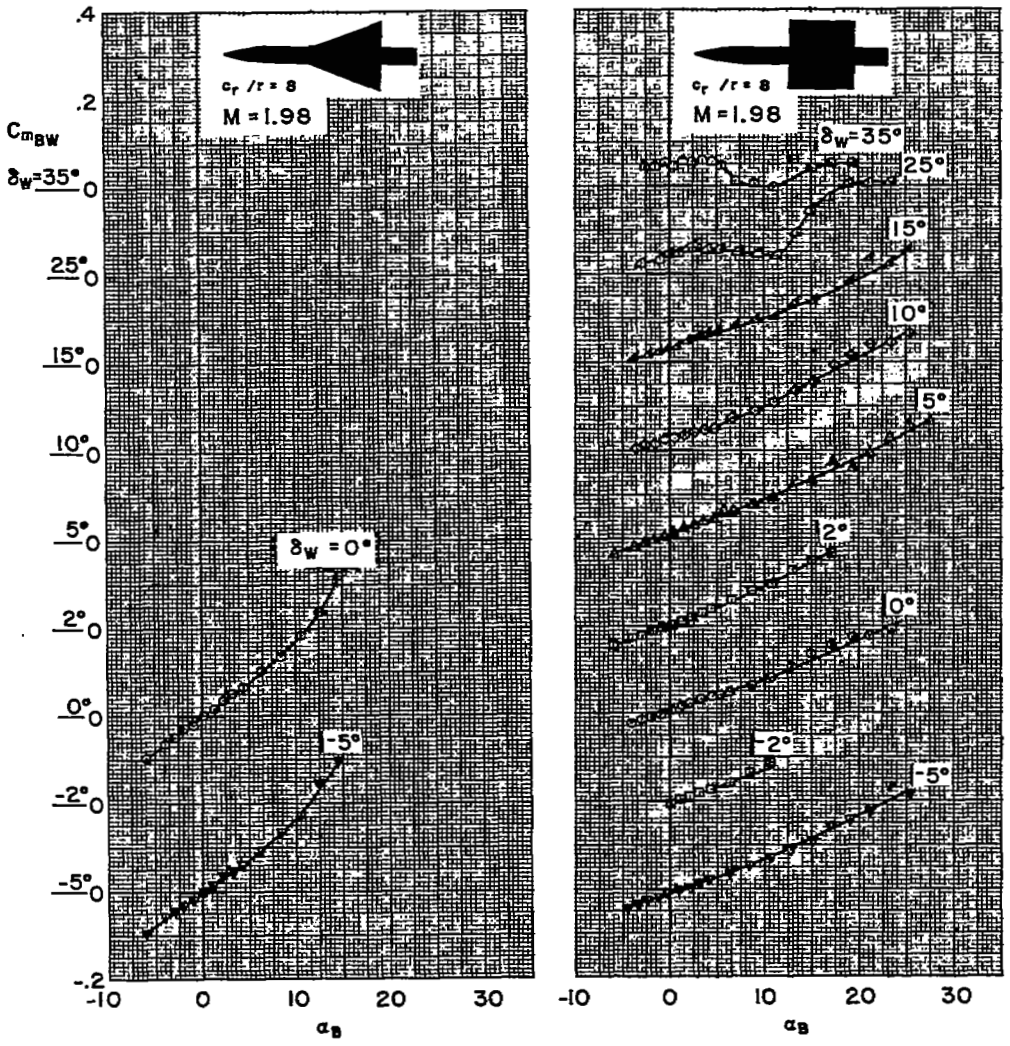
Figure 10.- Continued.



(e) A = 2 triangular wing and body combination, r/s = 0.2.

(f) A = 1 rectangular wing and body combination, r/s = 0.2.

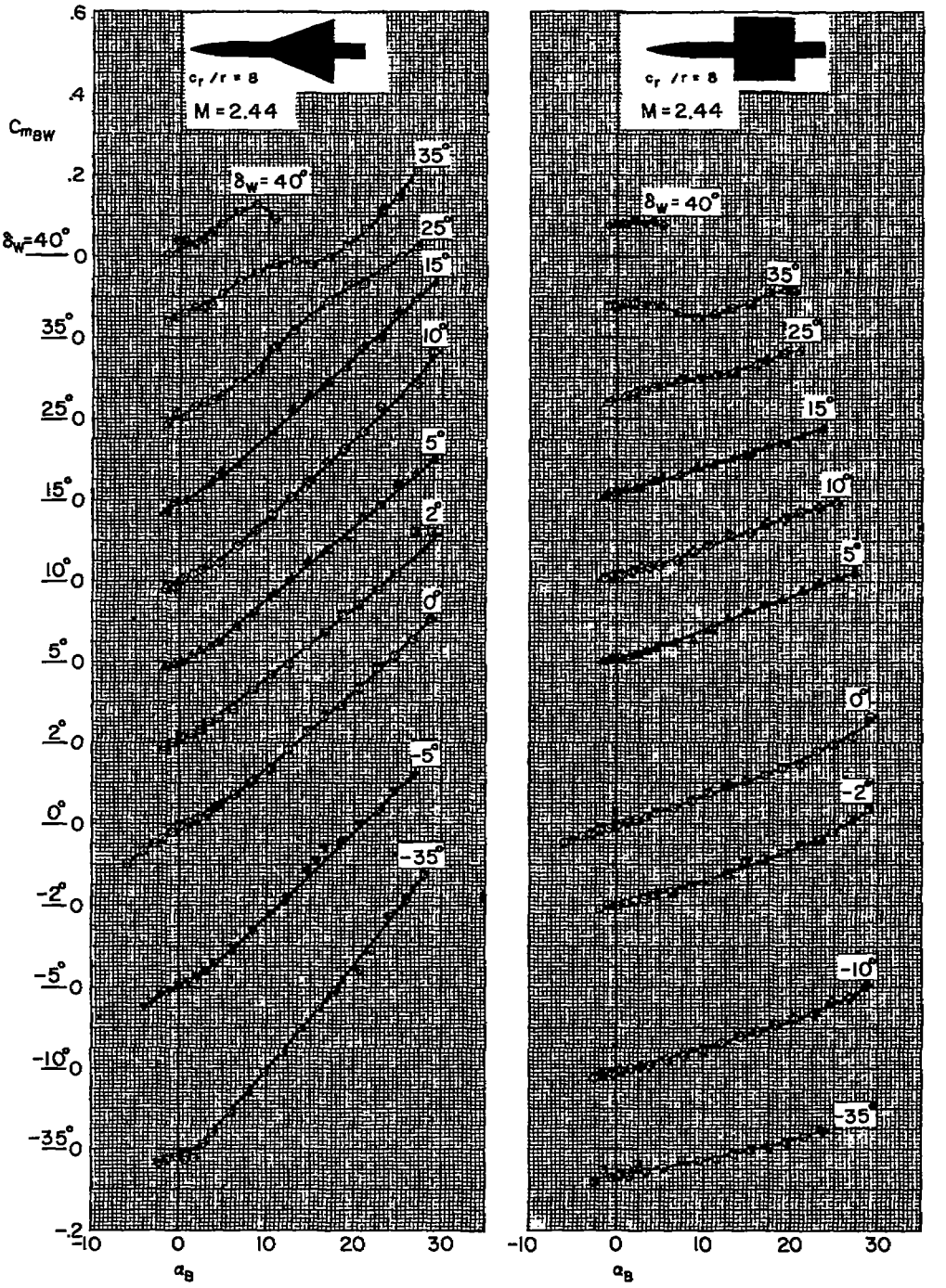
Figure 10.- Concluded.



(a) A = 2 triangular wing and body combination, r/s = 0.2.

(b) A = 1 rectangular wing and body combination, r/s = 0.2.

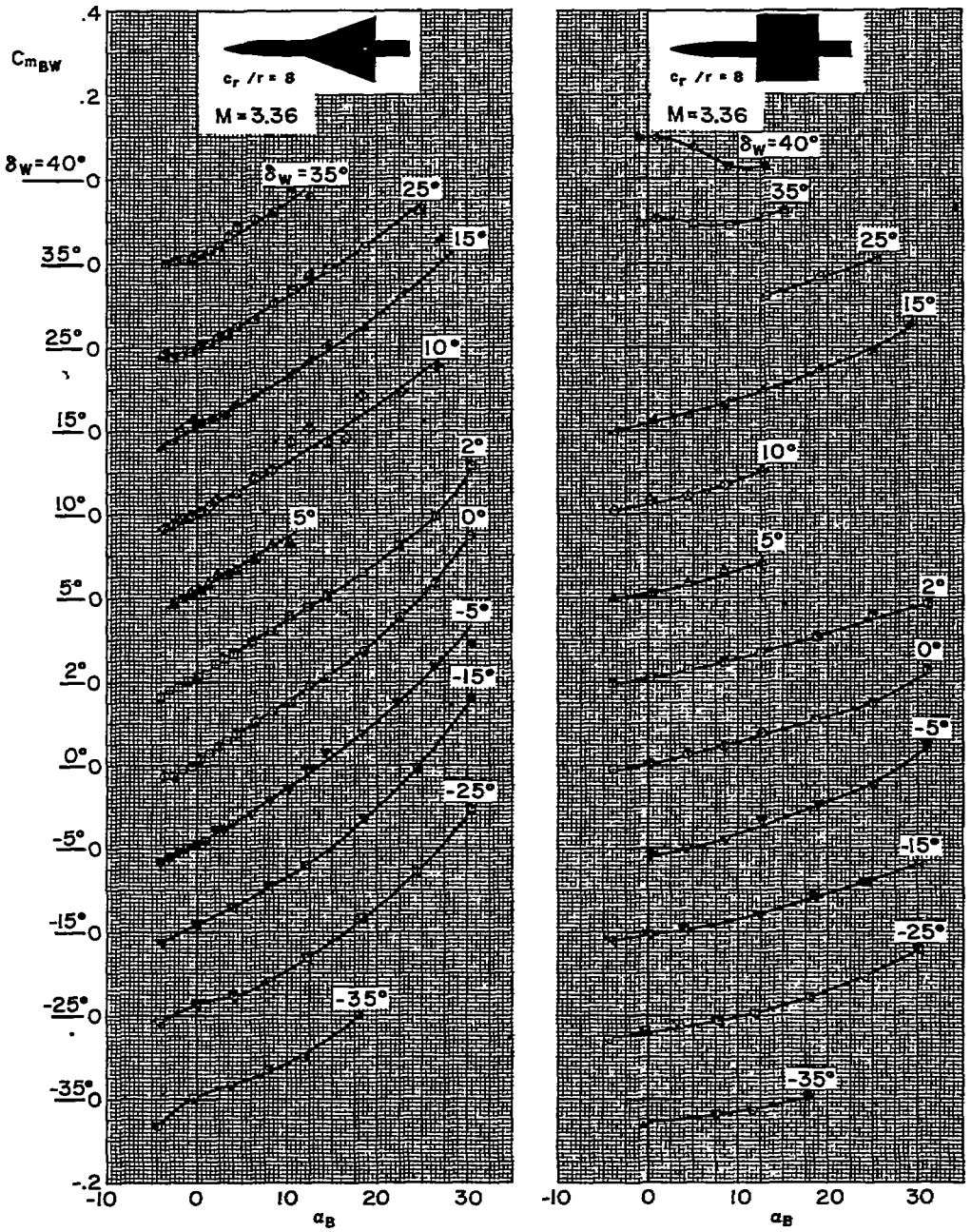
Figure 11.- Variation with angle of attack of pitching-moment coefficient for body-wing combinations.



(c) A = 2 triangular wing and body combination, r/s = 0.2.

(d) A = 1 rectangular wing and body combination, r/s = 0.2.

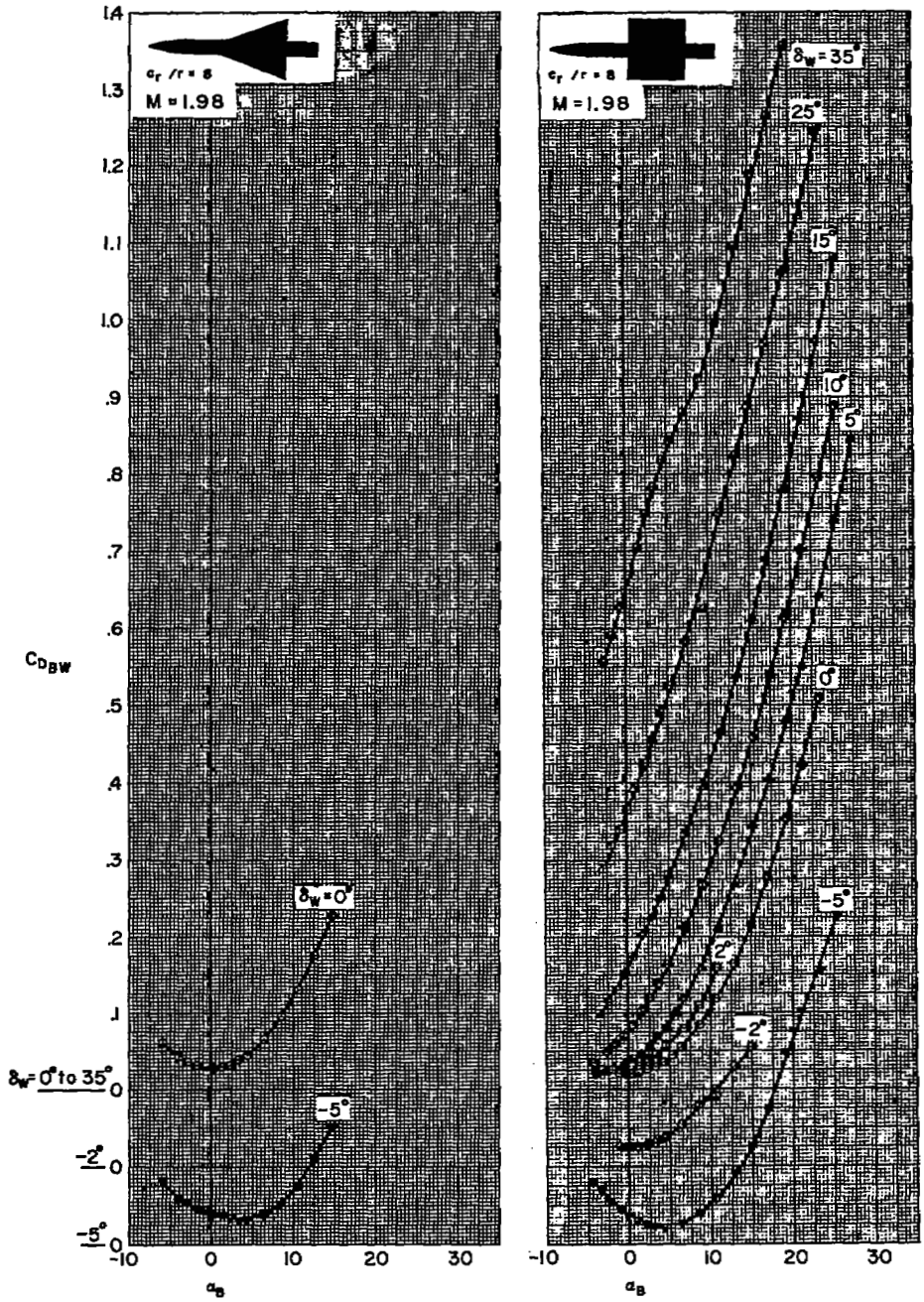
Figure 11.- Continued.



(e) A = 2 triangular wing and body combination, r/s = 0.2.

(f) A = 1 rectangular wing and body combination, r/s = 0.2.

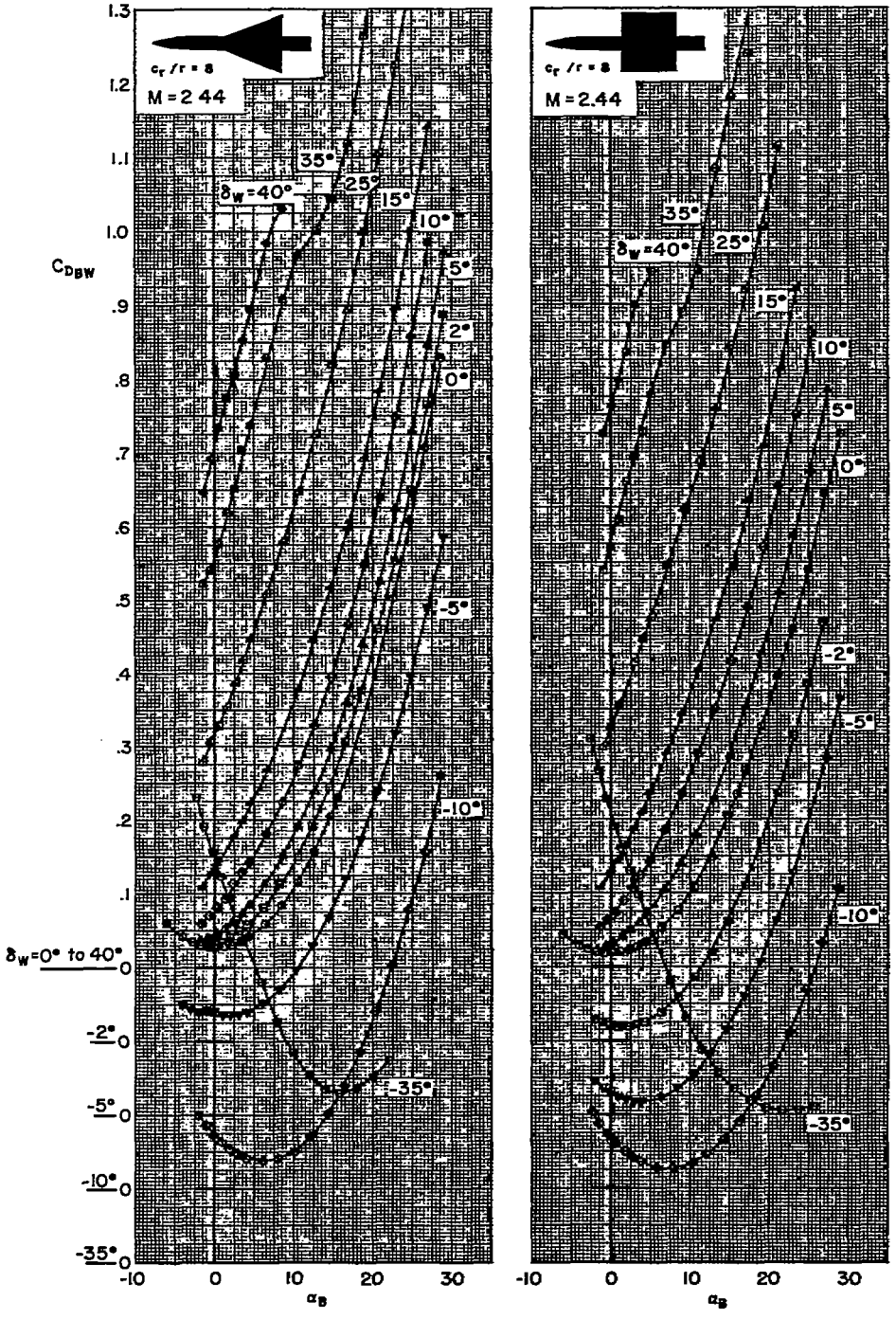
Figure 11.- Concluded.



(a) A = 2 triangular wing and body combination, r/s = 0.2.

(b) A = 1 rectangular wing and body combination, r/s = 0.2.

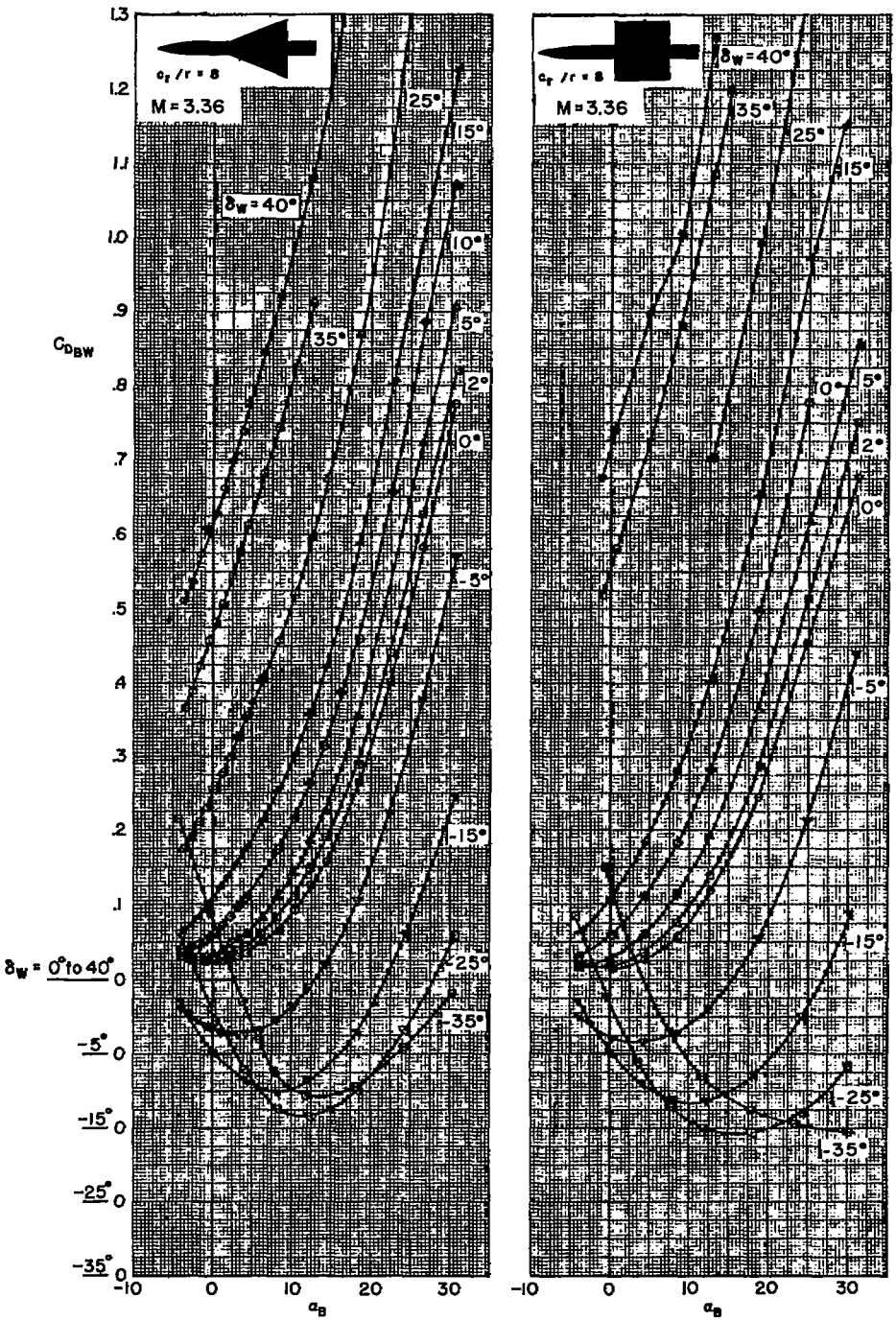
Figure 12.- Variation with angle of attack of drag coefficient for the body-wing combinations.



(c) A = 2 triangular wing and body combination, r/s = 0.2.

(d) A = 1 rectangular wing and body combination, r/s = 0.2.

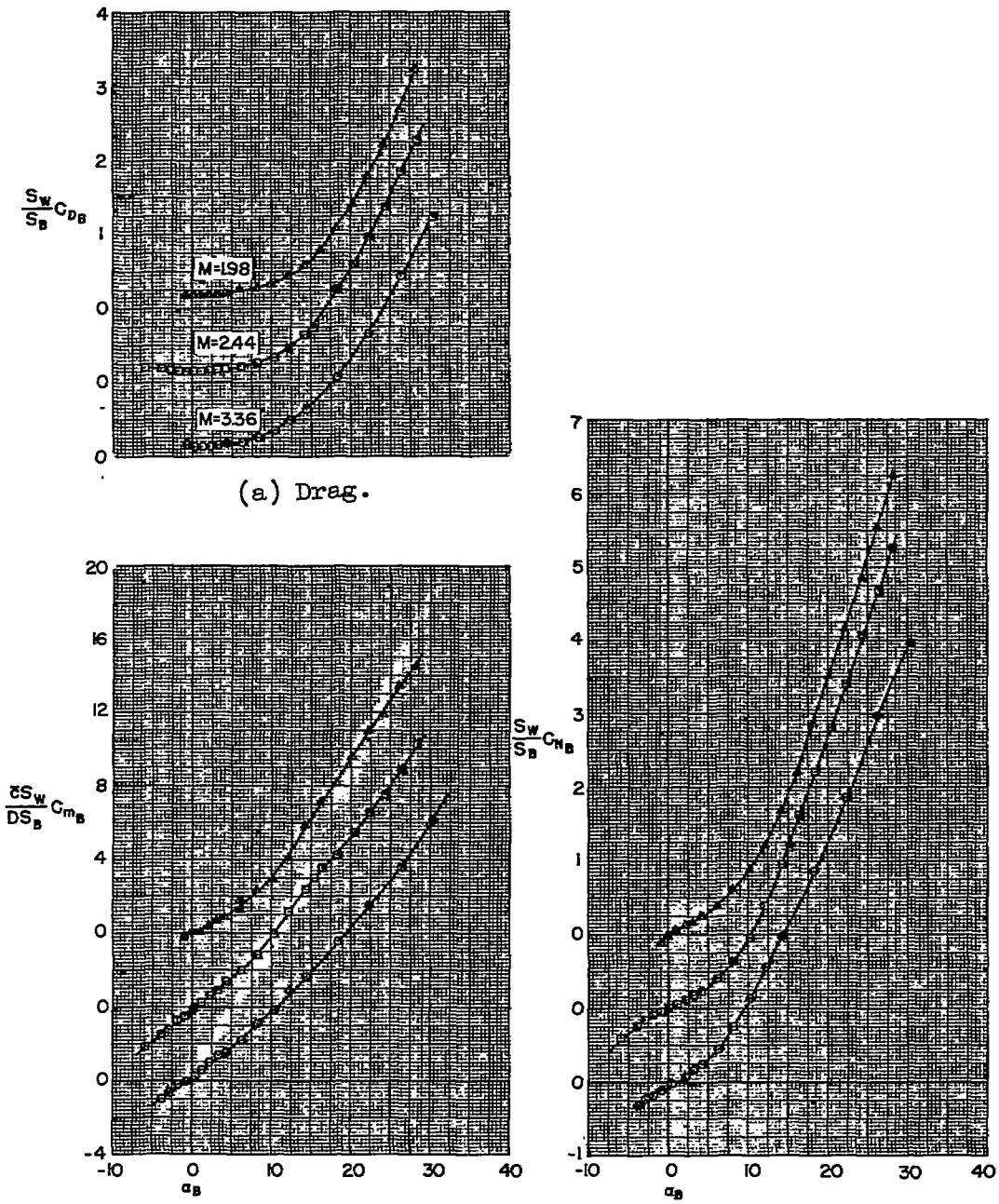
Figure 12.- Continued.



(e) A = 2 triangular wing and body combination, r/s = 0.2.

(f) A = 1 rectangular wing and body combination, r/s = 0.2.

Figure 12.- Concluded.

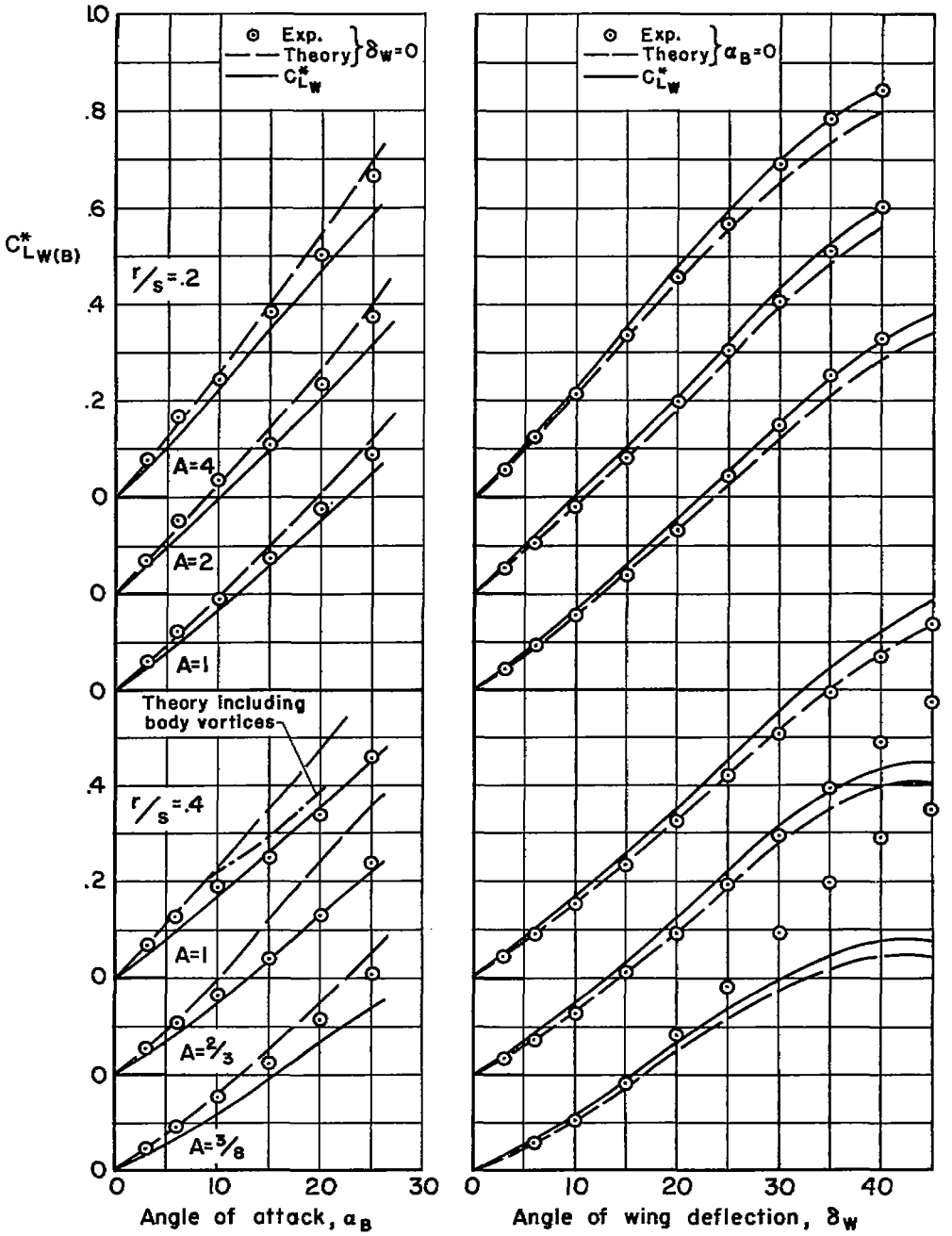


(a) Drag.

(b) Pitching moment.

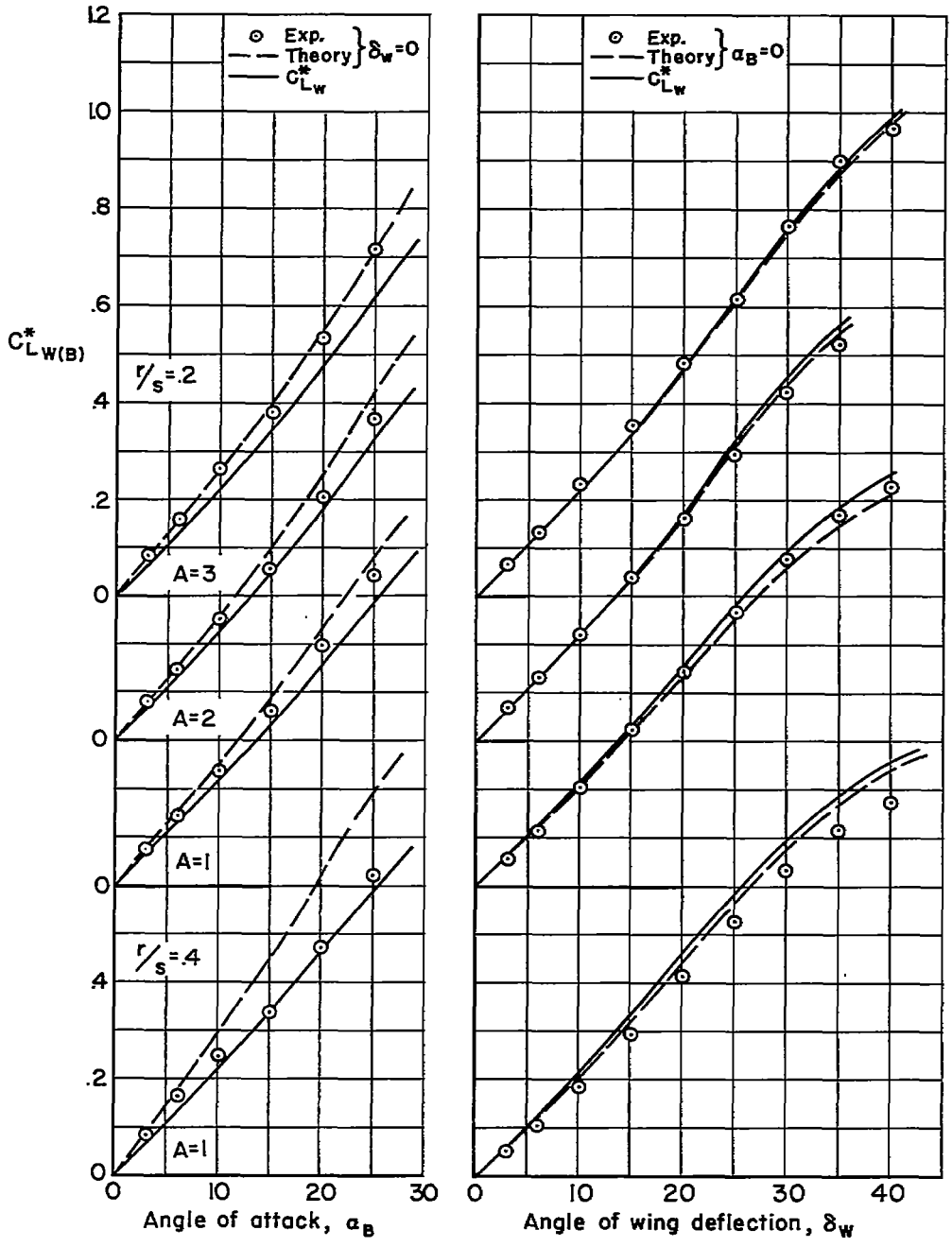
(c) Normal force.

Figure 13.- Variation with angle of attack of drag coefficient, pitching-moment coefficient and normal-force coefficient for the body alone.



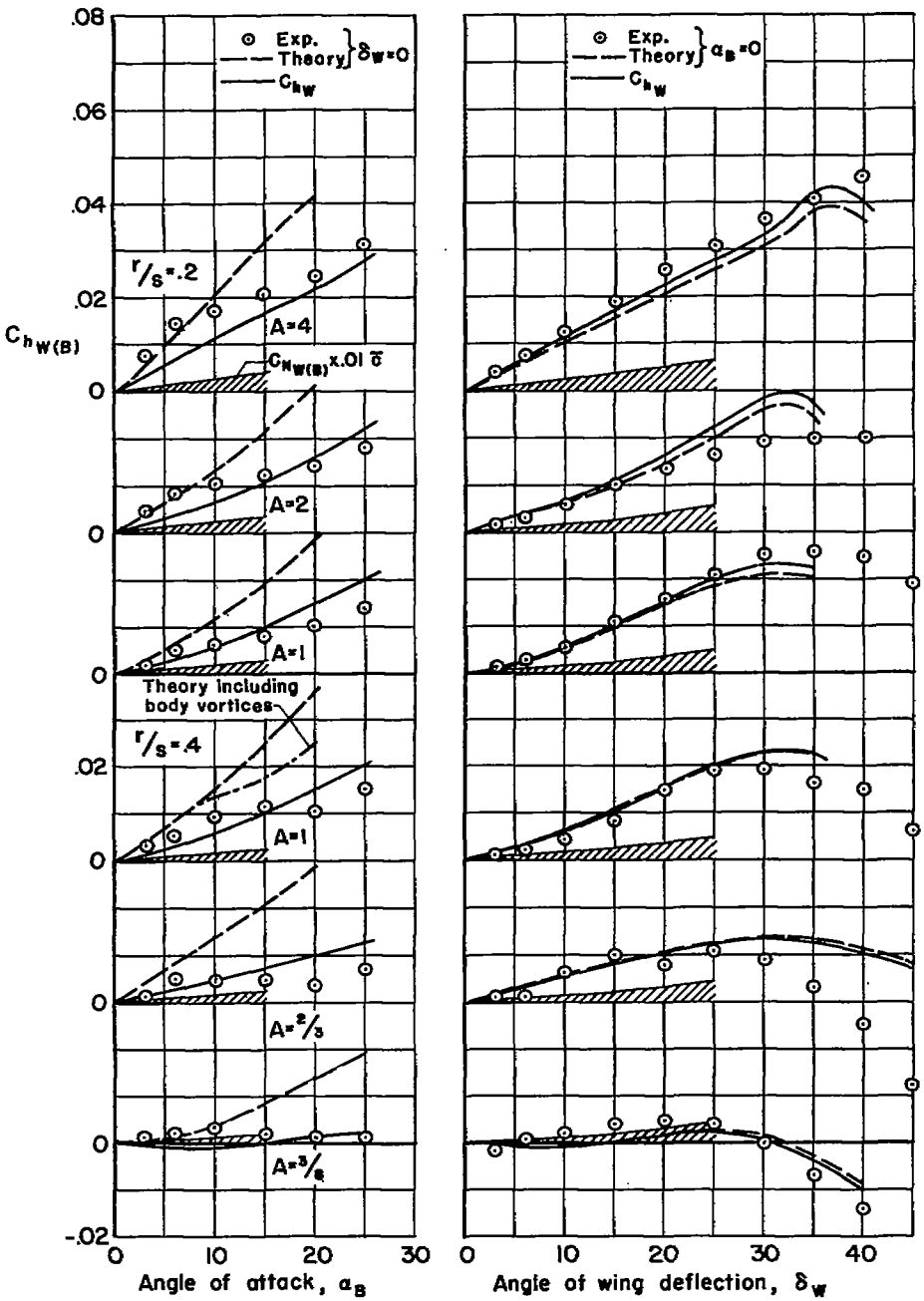
(a) Triangular.

Figure 14.- Comparison of theoretical and experimental lift coefficients for the wings in the presence of the body.



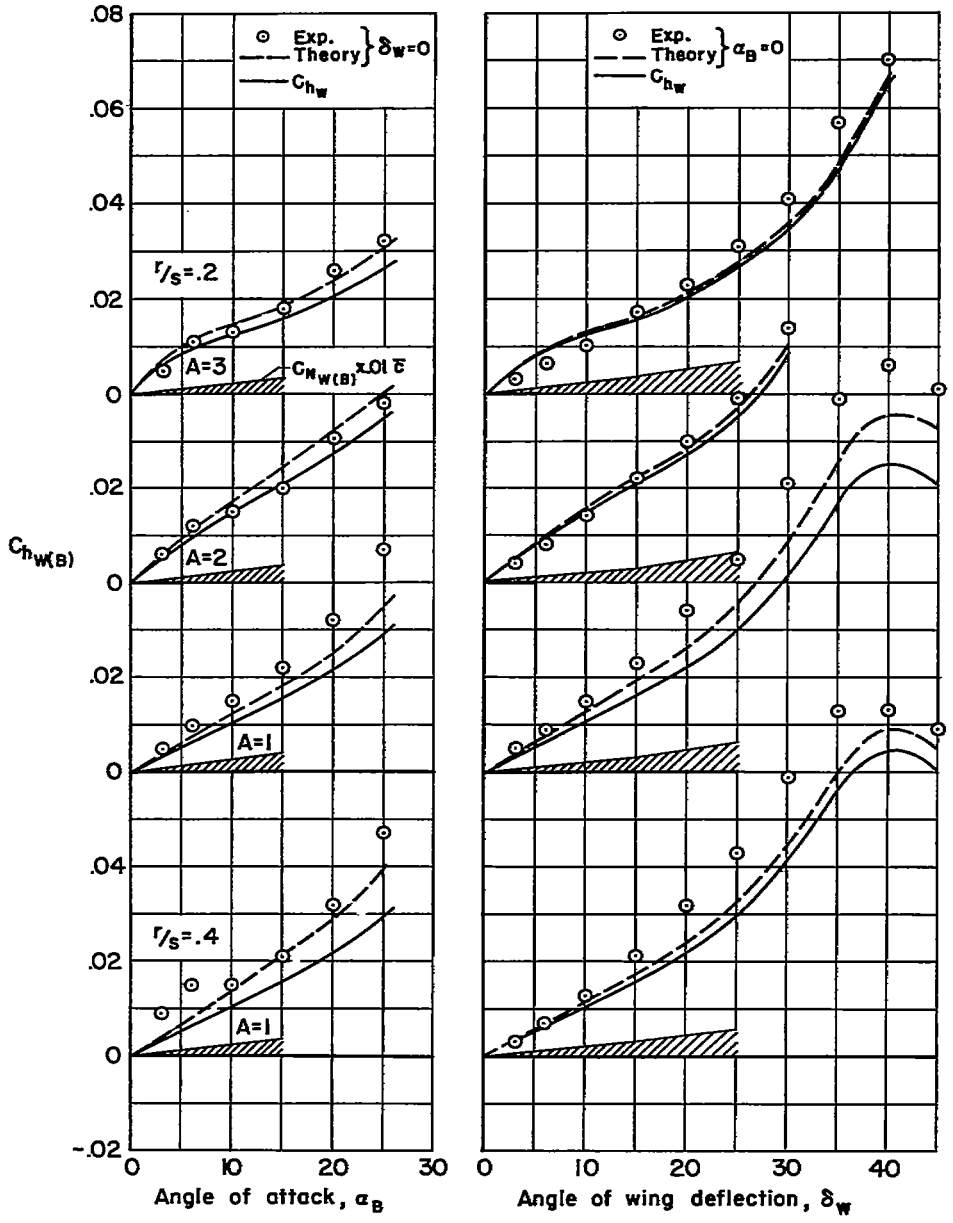
(b) Rectangular.

Figure 14.- Concluded.



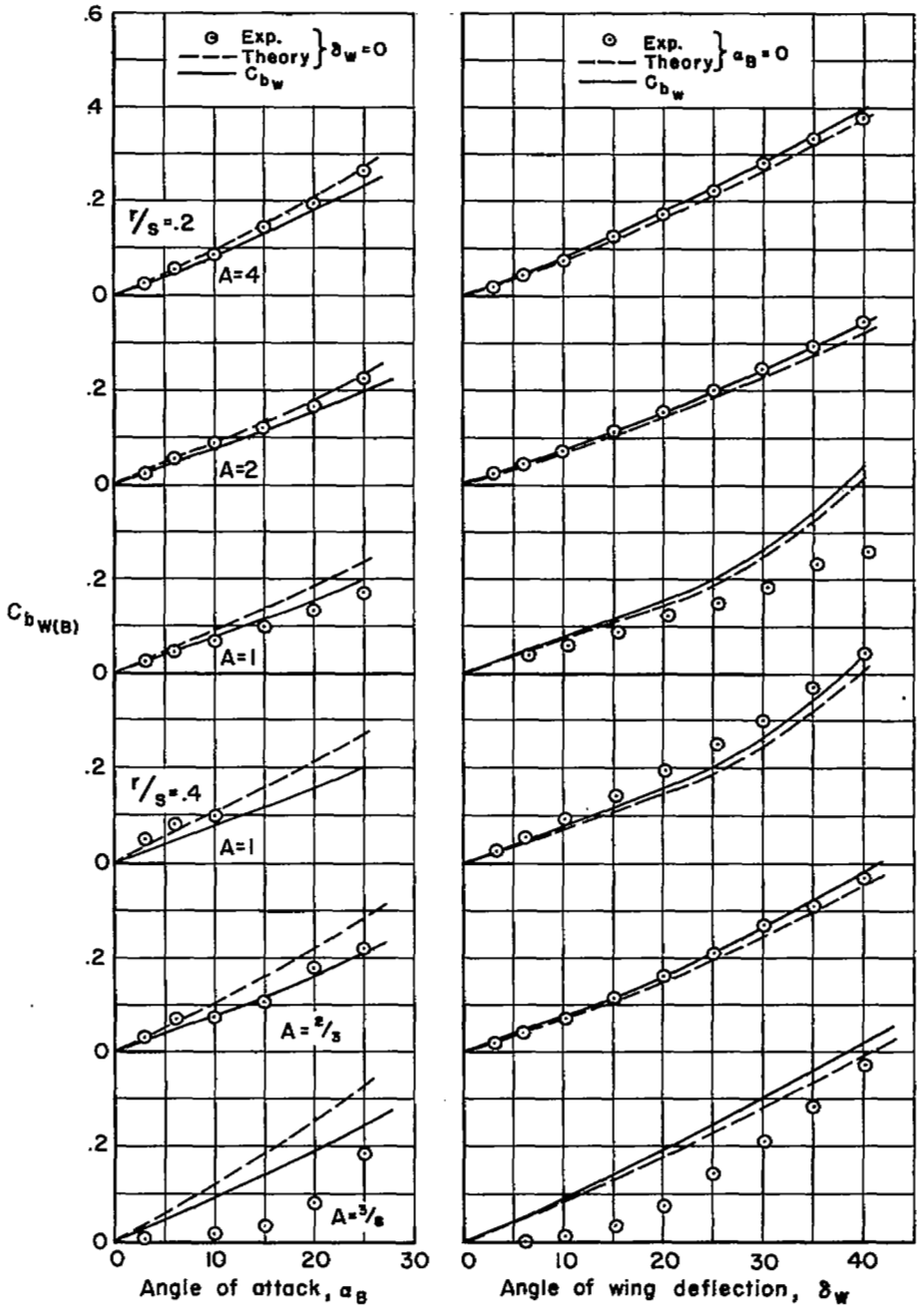
(a) Triangular.

Figure 15.- Comparison of theoretical and experimental hinge-moment coefficients for the wings in the presence of the body.



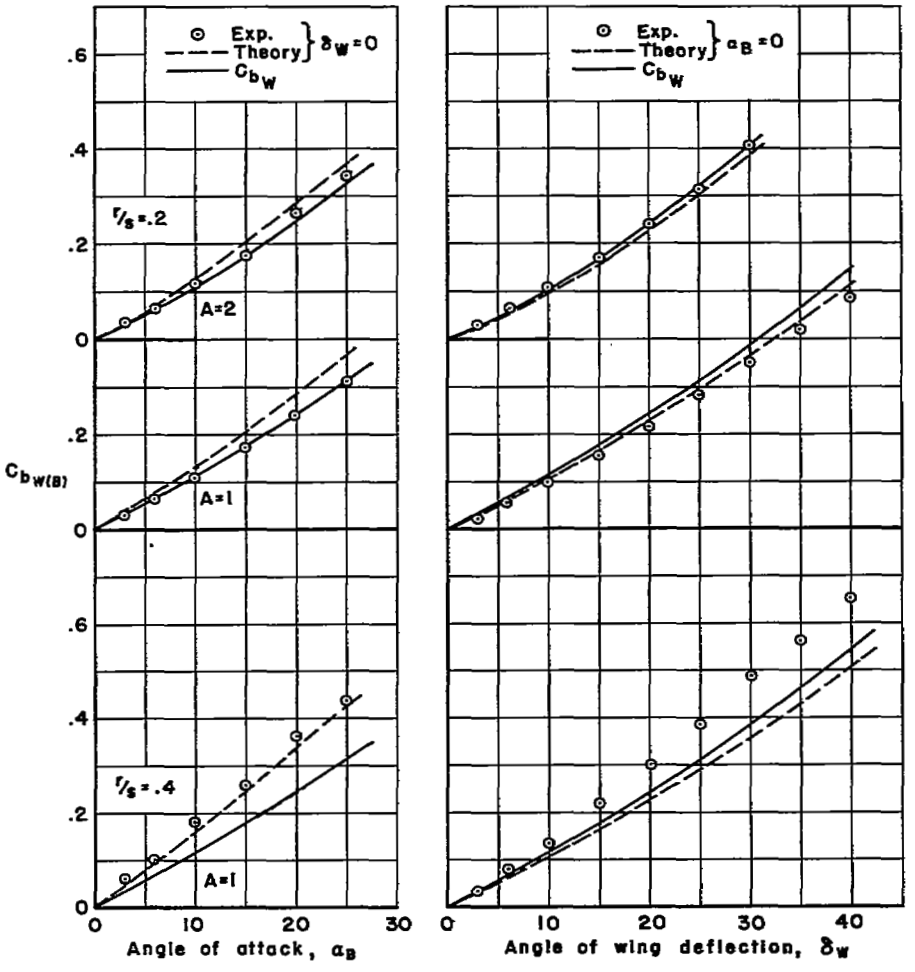
(b) Rectangular.

Figure 15.- Concluded.



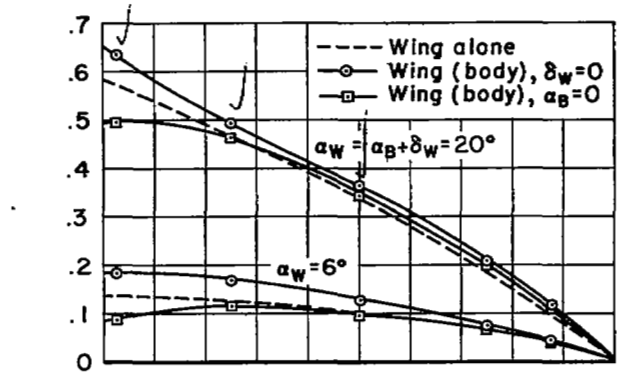
(a) Triangular.

Figure 16.- Comparison of theoretical and experimental bending-moment coefficients for the wings in the presence of the body.

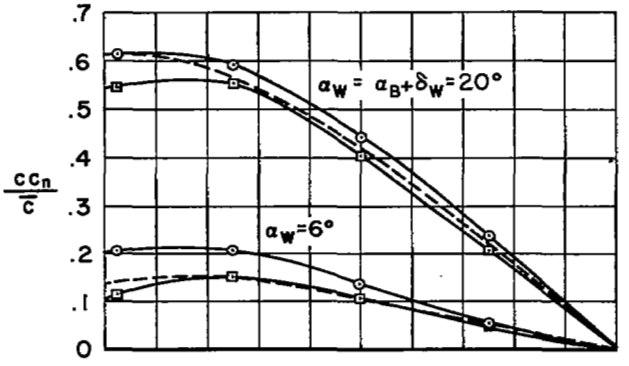


(b) Rectangular.

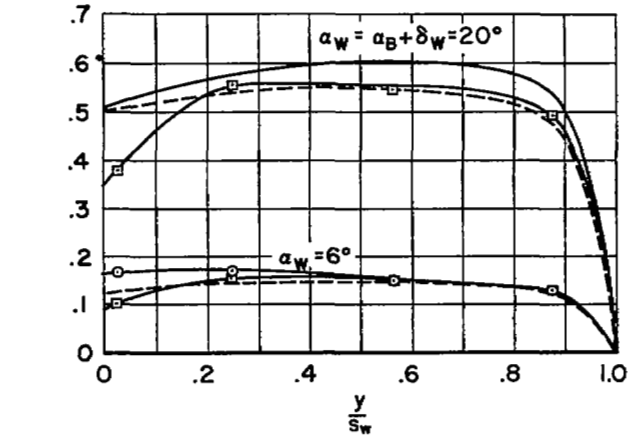
Figure 16.- Concluded.



(a) A = 2 triangular wing, r/s = 0.2.

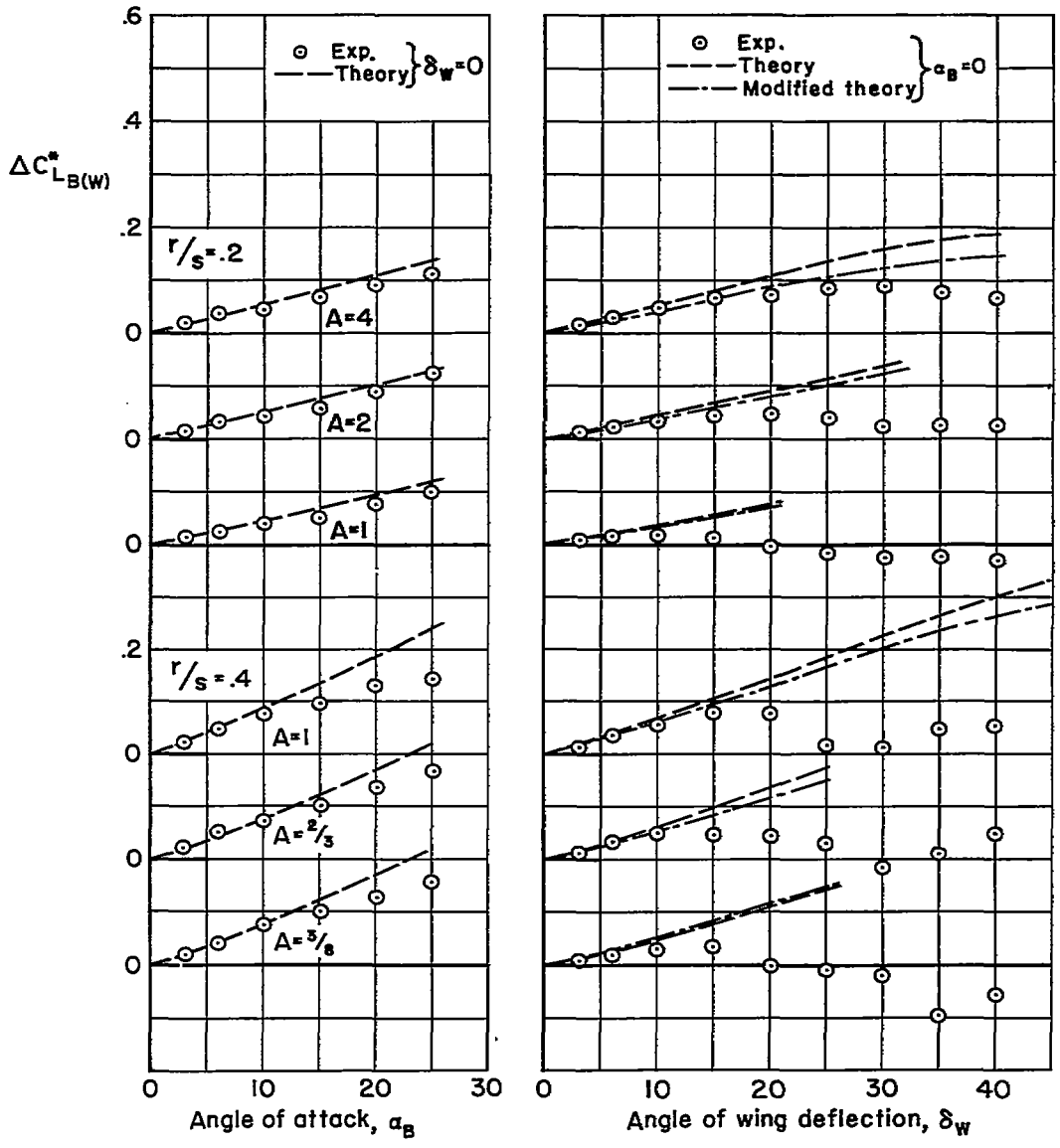


(b) A = 4 triangular wing, r/s = 0.2.



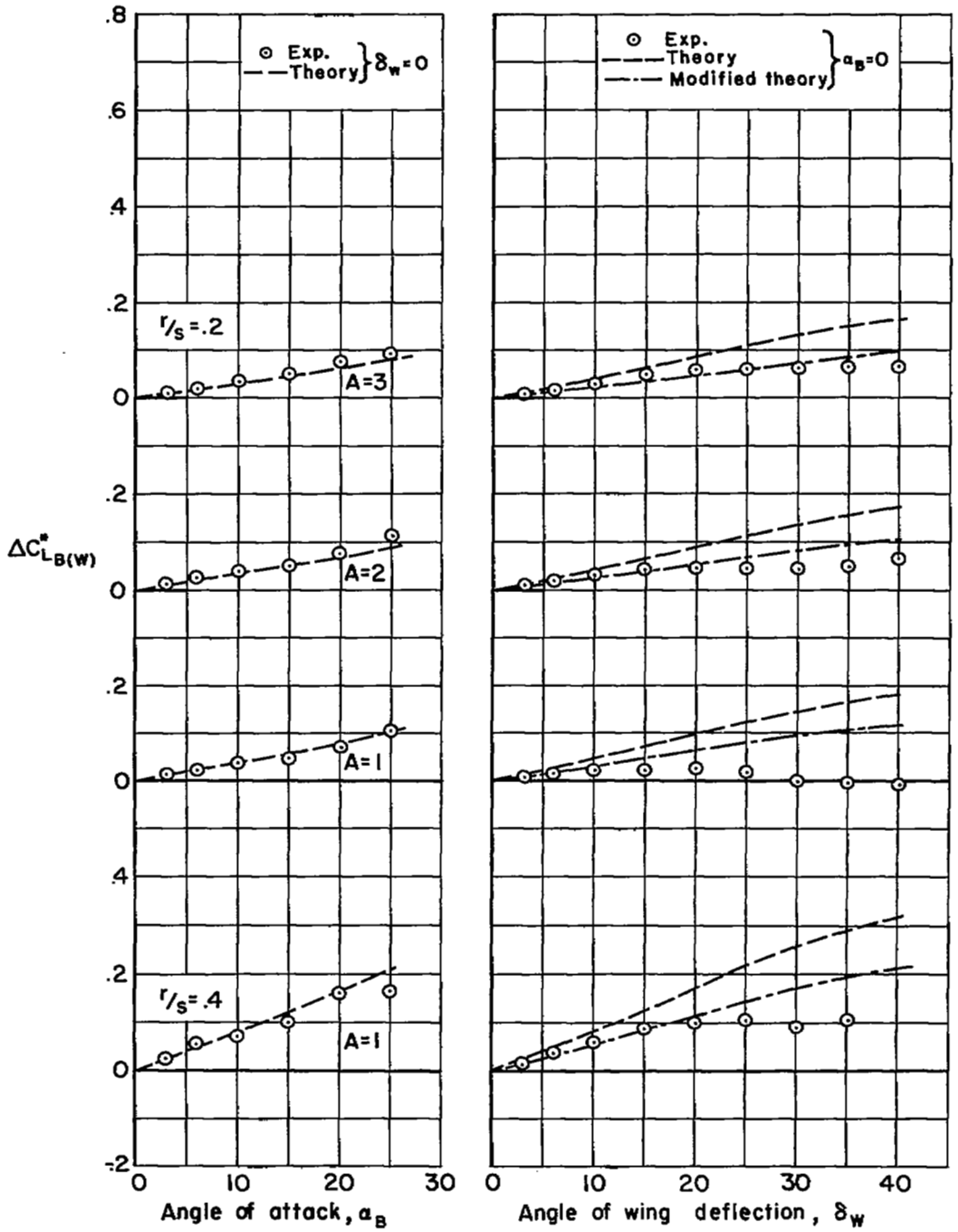
(c) A = 2 rectangular wing, r/s = 0.2.

Figure 17.- Comparison of span-loading coefficients for the wings in the presence of the body and for the wings alone.



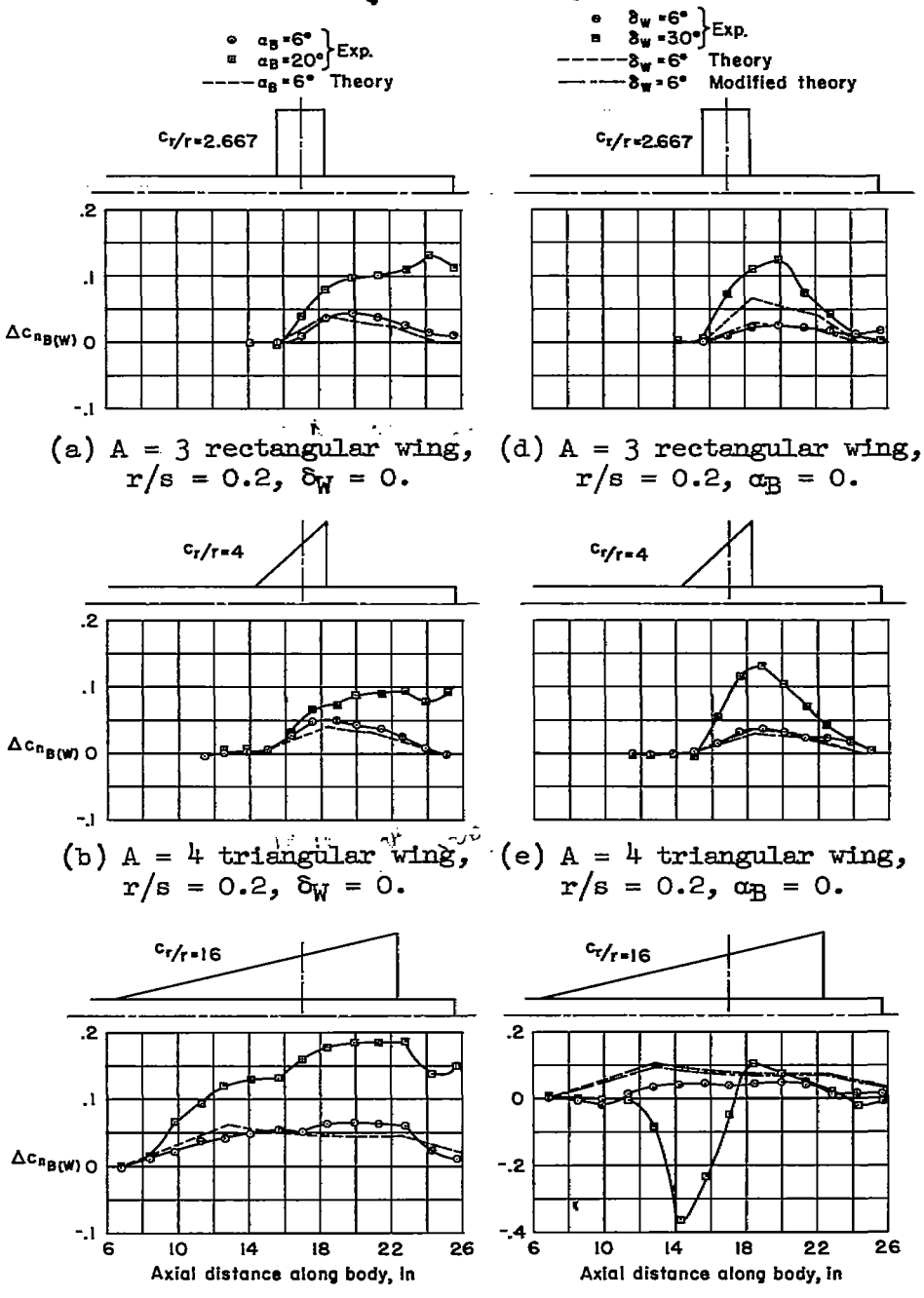
(a) Triangular

Figure 18.- Comparison of theoretical and experimental interference lift coefficients for the body in the presence of the wings.



(b) Rectangular.

Figure 18.- Concluded.



(a) A = 3 rectangular wing, $r/s = 0.2$, $\delta_W = 0$.

(d) A = 3 rectangular wing, $r/s = 0.2$, $\alpha_B = 0$.

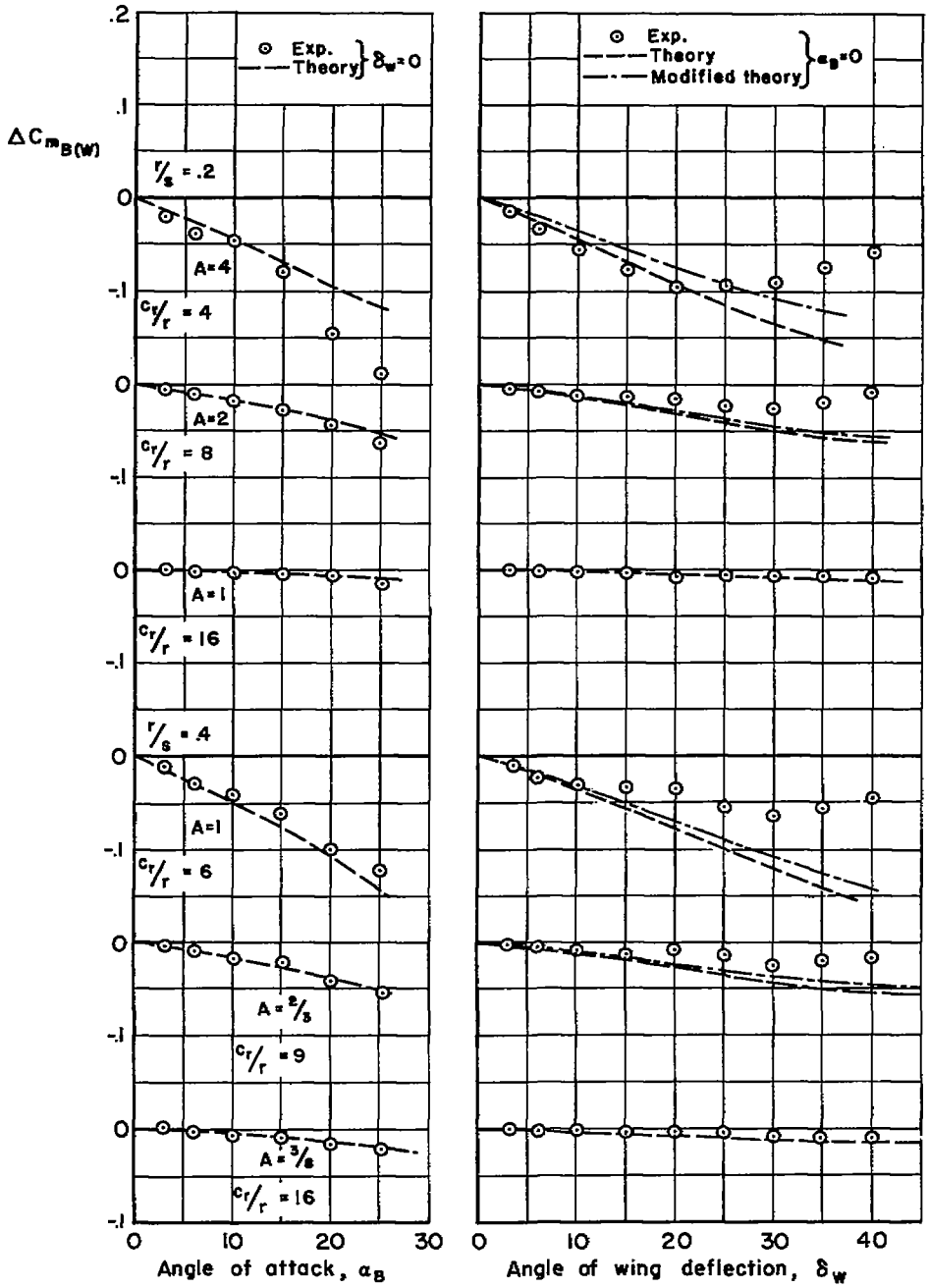
(b) A = 4 triangular wing, $r/s = 0.2$, $\delta_W = 0$.

(e) A = 4 triangular wing, $r/s = 0.2$, $\alpha_B = 0$.

(c) A = 1 triangular wing, $r/s = 0.2$, $\delta_W = 0$.

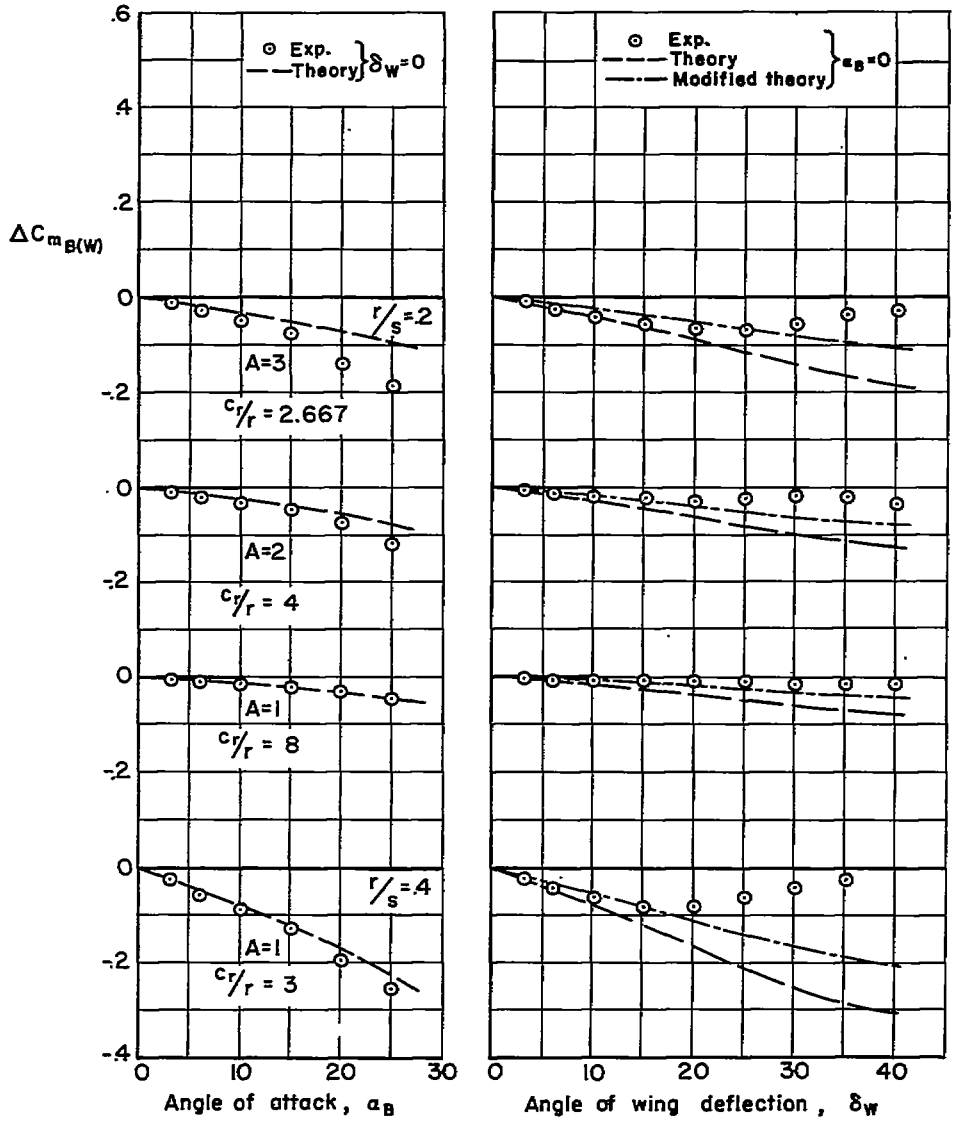
(f) A = 1 triangular wing, $r/s = 0.2$, $\alpha_B = 0$.

Figure 19.- Comparison of theoretical and experimental longitudinal interference loading coefficients of the body in the presence of the wings.



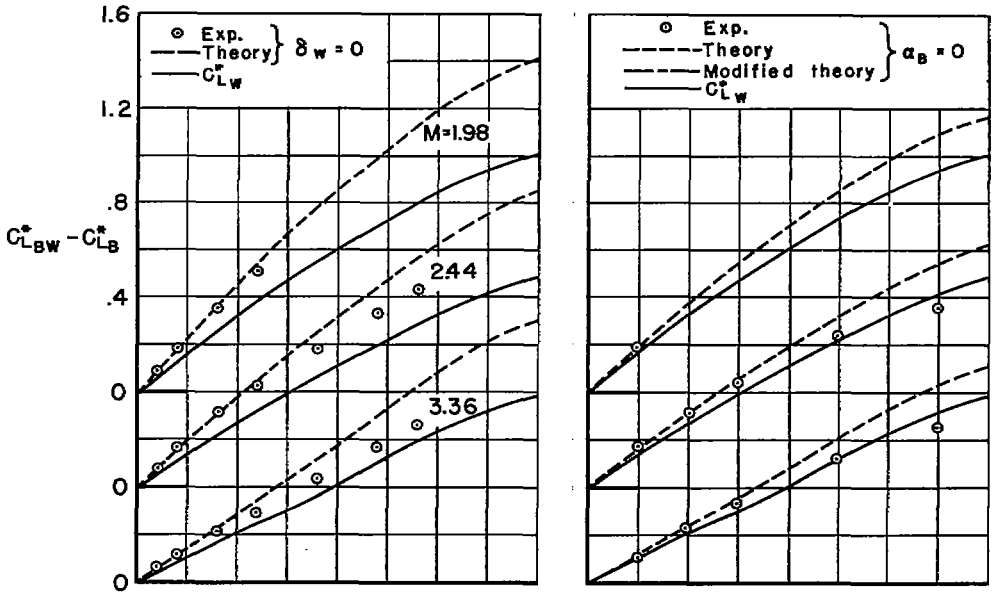
(a) Triangular.

Figure 20.- Comparison of theoretical and experimental interference pitching-moment coefficients for the body in the presence of the wings.

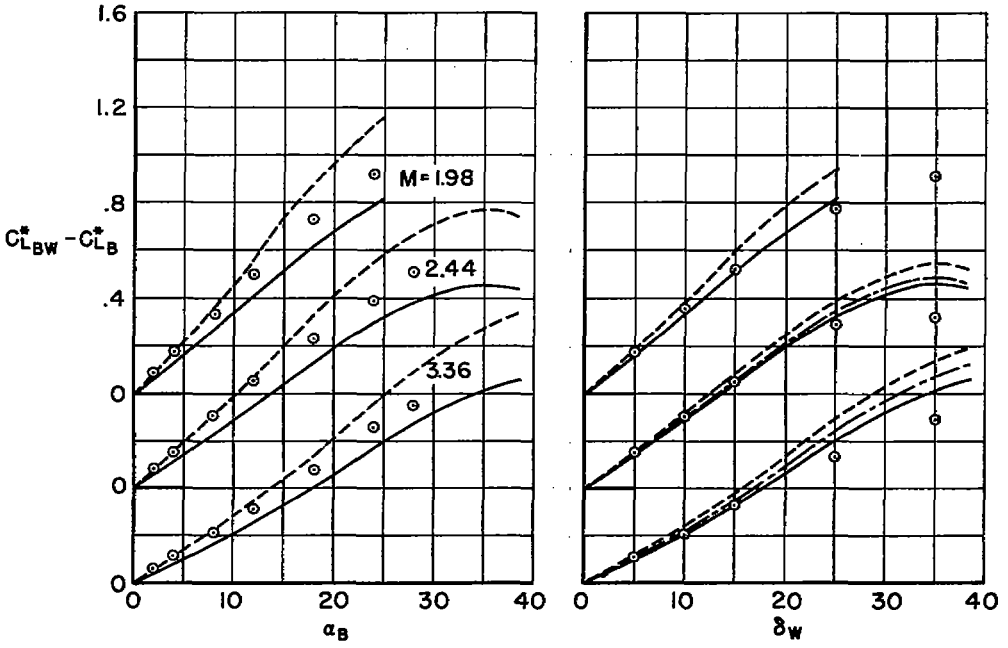


(b) Rectangular.

Figure 20.- Concluded.



(a) A = 2 triangular wing and body combination, r/s = 0.2.



(b) A = 1 rectangular wing and body combination, r/s = 0.2.

Figure 21.- Comparison of theoretical and experimental combined lift coefficients of two body-wing combinations.

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