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SUMMARY

Tabulated body-surface pressure data for two monoplane-wing missile configurations are presented and analyzed. The body of one configuration had a 3/1 elliptical cross section along its entire length, and the other had a blunted axisymmetric nose which blended into a 3/1 elliptical midbody which blended into an axisymmetric base. Body pressure data are presented for body-alone, body-tail, and body-wing-tail combinations. For the last combination, data are presented for tail-fin deflection angles of 0° and 30° to simulate pitch, yaw, and roll control for both configurations. The data generally cover angles of attack from -5° to 25° and angles of roll from 0° to 90° at a Mach number of 2.50 and a Reynolds number of 6.56×10^6 per meter.

Very consistent, systematic trends with angle of attack and angle of roll were observed in the data, and very good symmetry was found at a roll angle of 0°. Body pressures depended strongly on the local body cross-section shape, with very little dependence on the upstream shape. Undeflected tail fins had only a small influence on the pressures on the aft end of the body; however, deflected tail fins caused large changes in the pressures.

INTRODUCTION

The continuing development of computational methods for predicting the aerodynamics of missiles requires extensive experimental data to evaluate the accuracy and reliability of these methods. Research in advanced missile concepts has shown that missiles with elliptical bodies have definite aerodynamic advantages over the more conventional circular missile shape (ref. 1). For example, reference 1 has shown that elliptical missiles provide a better match between longitudinal and directional stability than exists for circular missiles. This research has led to interest in developing computational methods applicable to noncircular missile shapes (ref. 2).

Recently an extensive wind-tunnel experiment (ref. 3) was conducted to obtain force and moment data on a series of nine elliptical missile configurations to provide a systematic set of data for such configurations. For a more fundamental assessment of the computational methods, however, detailed pressure distributions were needed on missiles with noncircular bodies. Hence, the present study was undertaken to provide these data.

Pressure models of two of the configurations of the reference 3 study were constructed and tested at the same flow conditions of the earlier force test. Of special interest were the pressure distributions on these bodies for roll orientations, since these would provide severe test cases for the computational methods. Data were obtained for body-alone, body-tail, and body-wing-tail combinations.

In order to present these data in a convenient form to permit easy comparison with computational methods, all pressure data in this paper are listed in tabular form. Selected data have been plotted for illustration and discussion purposes.

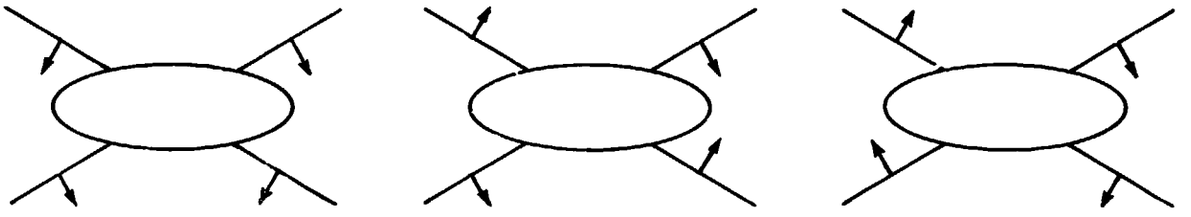
NOMENCLATURE

The measurements and calculations in this investigation were made in U.S. Customary Units. All values were converted to SI Units for presentation in this paper.

a	ellipse semimajor axis
b	ellipse semiminor axis
C_p	pressure coefficient, $\frac{p_l - p_\infty}{q_\infty}$ (CP in computer tables)
L	body length, 71.1 cm
p_l	local surface pressure
p_∞	free-stream static pressure
q_∞	free-stream dynamic pressure
X	axial coordinate from body nose
α	angle of attack, deg (ALPHA in computer tables)
θ	polar coordinate angle, measured counterclockwise from top looking upstream, deg (THETA in computer tables)
ϕ	roll angle, positive for left wing up looking upstream, deg (PHI in computer tables)

Deflections:

The following sketch illustrates the tail deflections used for pitch, yaw, and roll. The arrows indicate the direction of the leading-edge deflection. Deflection angles of 0° and 30° were tested. The sketch is drawn looking upstream.



Pitch Yaw Roll

MODELS

Drawings of the two models tested are shown in figures 1(a) and 1(b). The body of one model had a pointed nose and a 3/1 elliptical cross section along the entire length of the body (the same as body IX of ref. 3). The second body had a blunt nose which blended into a 3/1 elliptical midbody which blended into a circular base (the same as body V of ref. 3). The first body is identified in this paper as the sharp-

nose body, and the second body is called the blunt-nose body. The body cross sections can be represented by an ellipse with the distribution of semimajor and semiminor axes given in the following table:

Sharp-nose body			Blunt-nose body		
X/L	a/L	b/L	X/L	a/L	b/L
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
.0100	.0071	.0024	.0216	.0217	.0217
.0200	.0118	.0039	.0258	.0222	.0219
.0250	.0140	.0047	.0799	.0337	.0257
.0500	.0234	.0078	.1340	.0452	.0287
.0750	.0314	.0105	.1881	.0564	.0311
.1000	.0388	.0129	.2423	.0673	.0332
.1250	.0455	.0152	.2964	.0777	.0349
.1500	.0518	.0173	.3505	.0875	.0365
.2000	.0633	.0211	.4046	.0965	.0378
.2500	.0737	.0246	.4587	.1048	.0389
.3000	.0831	.0277	.5669	.1177	.0405
.3500	.0915	.0305	.6210	.1220	.0410
.4000	.0991	.0330	.6481	.1233	.0412
.4500	.1059	.0353	.6800	.1237	.0412
.5000	.1118	.0373	.7000	.1229	.0413
.5750	.1188	.0396	.7292	.1190	.0418
.6000	.1206	.0402	.7500	.1166	.0421
.6250	.1221	.0407	.7833	.1093	.0431
.6500	.1231	.0410	.8000	.1066	.0435
.6800	.1237	.0412	.8314	.0965	.0452
.7000	.1234	.0411	.8500	.0945	.0458
.7292	.1221	.0407	.8716	.0867	.0476
.7500	.1213	.0404	.9000	.0813	.0492
.7833	.1188	.0396	.9250	.0748	.0514
.8000	.1180	.0393	.9500	.0687	.0540
.8314	.1146	.0382	.9750	.0635	.0567
.8500	.1139	.0380	1.0000	.0595	.0595
.8716	.1113	.0371			
.9000	.1096	.0365			
.9250	.1075	.0358			
.9500	.1056	.0352			
.9750	.1039	.0346			
1.0000	.1030	.0343			

Both configurations had the same basic wing planform shape; however, the exposed planform areas were different because of the differences in body shape. Figure 1(c) shows the basic wing planform shape and the approximate wing-body juncture location of each configuration.

Both configurations used identical tail surfaces whose trailing edges were mounted flush with the base of the model at ±30° from the horizontal plane. The root chords of the tail fins were leveled to match th local slope of the body.

Figure 1(d) shows the geometric characteristics of the tail fins. The tail spans of the two configurations were slightly different because of their being mounted on afterbodies of different shapes.

Both the wings and tails were removable to allow testing of various component combinations. Filler plugs were used to provide a smooth body contour when the wings and/or tails were removed. The tails could be manually deflected through ±30° in 10° increments.

Some general geometric characteristics common to both configurations are listed in the following table:

Body:	
Length, m	0.7112
Fineness ratio	7.00
Maximum cross-section area, m^2	0.008107
Base area, m^2	0.00562
Wing:	
Leading-edge sweep, deg	75.0
Trailing-edge sweep, deg	30.0
Span, m	0.229
Dihedral angle, deg	0
Tail:	
Inboard leading-edge sweep, deg	45.0
Outboard leading-edge sweep, deg	14.0
Trailing-edge sweep, deg	0
Inboard taper ratio	0.44
Outboard taper ratio	0.75
Dihedral angle, deg	±30.0

Both bodies were instrumented with pressure orifices located at nine longitudinal stations. Figure 2 shows the axial locations of these stations. Body cross-section shapes at each station are shown in figure 3. Also shown in this figure is the circumferential distribution of pressure orifices at each station, as indicated by the location of the small tick marks. All orifices were the open ends of thin-wall tubing embedded normal to and flush with the model surface. All tubing had an outside diameter of 0.46 mm. Neither the wing nor tail surfaces were instrumented. Figure 4 shows photographs of both configurations mounted in the wind tunnel.

TEST CONDITIONS AND APPARATUS

The test was conducted in the low Mach number test section of the Langley Unitary Plan Wind Tunnel. This facility is a variable-pressure, continuous-flow tunnel with an asymmetric sliding-block nozzle ahead of the test section that permits continuous variation in Mach number. The test section is approximately 2.1 m long by 1.2 m square. A more complete description of this facility can be found in reference 4.

The test was performed at the following nominal conditions:

Mach number	2.50
Stagnation temperature, K	339
Stagnation pressure, kPa	81.36
Reynolds number, per meter	6.56×10^6

These test conditions were chosen to match those of the test performed on the force models published in reference 3. Also, grit was applied to the models in the same manner as was done in reference 3 to induce boundary-layer transition. Grit consisting of ASTM No. 35 sand particles was affixed to the nose, wing, and tail surfaces of both configurations. These particles were spaced a nominal 0.14 cm apart and were located 3.05 cm aft of the nose and 1.02 cm aft (streamwise) of the leading edges of all wing and tail surfaces.

Model angle of attack was measured with an accelerometer mounted inside the body. The measured angles of attack have been corrected for flow angularity in the test section. Model roll orientations were obtained from a roll coupling attached between the model sting and the angle of attack mechanism.

Body pressures were measured with gages connected to the orifice tubes by a scanning-valve system located outside the tunnel. Approximately 4 m of tubing was required to connect the model orifices to the gages. Because of the scanning nature of the gages and the long lengths of tubing required, care was taken to ensure that sufficient time was allowed for the pressure to settle for each orifice before advancing to the next orifice. Reference pressures connected to the scanning valves were used to provide gage calibrations for each test point. The rated accuracy of the gages was ±0.5 percent of the full-scale range. For the gages and test conditions of this investigation, this range corresponds to an accuracy in pressure coefficient of about ±0.01.

The sharp-nose body contained 176 presssure orifices and the blunt-nose body contained 180. All these orifices except two on the blunt-nose body (at $X/L = 0.30$, $\theta = 255°$ and at $X/L = 0.60$, $\theta = 180°$) performed satisfactorily. The data from these two orifices were obviously incorrect and thus have not been included in this paper.

PRESENTATION OF DATA

Data were taken for body-alone, body-tail, and body-wing-tail configurations on both models at angles of attack from about -5° to 25° and roll angles from 0° to 90°. In addition, data at $\phi = 0°$ were obtained for tail-fin deflections of 0° and 30° to simulate pitch, yaw, and roll control.

All pressure data have been reduced to pressure coefficient form and are listed in tables 1 and 2. It should be noted from these tables that in many cases data for the first six stations are not presented. The reason for this absence is that since these stations were all well upstream of the junction of the wing leading edge with the body (see fig. 2), the pressures at these stations were not affected by the various wing and tail combinations and hence were not recorded for all combinations.

The following table presents a summary of the test conditions for which data were recorded and whether the data were for all nine stations or for only the last three.

Configuration	ϕ, deg	Tail-fin deflection, deg	Data for nominal α, deg, of -5	0	5	10	15	20	25	Table
Sharp-nose model										
Body alone	0		*	*	*	*	*	*	*	1(a)
	22.5				†	†	†	†	†	↓
	45.0				†	†	†	†	†	
	67.5				†	†	†	†	†	
	90.0		*	*	•	*	*	•	•	
Body-tail	0	0	†	†	†	†	†	†	†	1(b)
	22.5	↓	†	†	†	†	†	†	†	↓
	45.0				†	†	†	†	†	
	90.0								†	
Body-wing-tail	0	0	*	*	*	*	*	*	•	1(c)
	22.5	↓			*	*	*	*	*	↓
	45.0				*	*	*	•	•	
	67.5				•	*	*	*	*	
	90.0		*	*	*	*	*	*	*	
	0	b_{30}	†	†	†	†	†	†	†	
	0	c_{30}	†	†	†	†	†	†	†	
	0	d_{30}	†	†	†	†	†	†	†	
Blunt-nose model										
Body alone	0		*	*	*	•	•	•	•	2(a)
	22.5				*	*	*	•	•	↓
	45.0				*	*	•	*	*	
	67.5				•	•	•	*	*	
	90.0		*	*	*	*	•	•	•	
Body-tail	0	0	†	†	†	†	†	†	†	2(b)
	22.5	0			†	†	†	†	†	↓
	45.0	0			†	†	†	†	†	
Body-wing-tail	0	0	†	†	†	†	†	†	†	2(c)
	22.5	↓			†	†	†	†	†	↓
	45.0				†	†	†	†	†	
	67.5				†	†	†	†	†	
	90.0		†	†	†	†	†	†	†	
	0	b_{30}	†	†	†	†	†	†	†	
	0	c_{30}	†	†	†	†	†	†	†	
	0	d_{30}	†	†	†	†	†	†	†	

[a]An asterisk indicates data presented for all nine stations, and a dagger indicates data presented for last three stations only.
[b]Pitch deflection.
[c]Yaw deflection.
[d]Roll deflection.

Selected data from tables 1 and 2 have been plotted in the appendix so that interested readers can more easily inspect the longitudinal and circumferential pressure distributions on the two models.

ANALYSIS OF DATA

Figures 5 to 9 contain summary plots to illustrate the effects of the various test variables on the pressure distributions. This section of the paper contains an analysis of the effects of these variables.

Effect of Body Shape

The differences in body shape between the two test models can be seen by examining the cross sections of these bodies shown in figure 3. The blunt-nose body was almost circular near the front and aft ends, whereas the sharp-nose body was a 3/1 ellipse along its entire length. In the midbody region, however, the two bodies were similar in cross-section shape.

The differences in pressure distributions resulting from these two body shapes are shown in figure 5 for X/L values of 0.10, 0.60, and 0.95 for an angle of attack of 20° and a roll angle of 0°. The different cross-section shapes of these two bodies near the front and aft ends have a strong influence on the pressure distributions in these regions. However, near the midbodies (fig. 5(b)), where the cross sections were similar, the pressure distributions are almost identical. This result indicates that the pressures strongly depend on the local cross-section shape with very little dependence on the upstream body shape.

Since the nose shape had little effect downstream of the nose region, the effects of the remaining test variables will be analyzed from data taken on the sharp-nose body only.

Effect of Angle of Attack

The effect of angle of attack is illustrated in figure 6. This figure contains data for the sharp-nose body at $X/L = 0.60$ and $\phi = 0°$. As would be expected, increasing the angle of attack results in a systematic increase in pressure coefficient on the windward side of the body and a systematic decrease on the leeward side.

Since all data in figure 6 are for a roll angle of 0°, right-left flow symmetry should exist. Examination of this figure reveals that there is extremely good symmetry in the data, which is an indication of the good accuracy of the measurements.

Effect of Roll Angle

The effect of roll angle on the pressure distributions for the sharp-nose body at $X/L = 0.60$ and a 20° angle of attack is shown in figure 7 for roll angles of 0° to 90°. The increasing slope of the pressure distribution curves with increasing roll angle is caused by the more streamlined cross-section profile being exposed to the flow as the body is rolled from 0° to 90°. As can be seen from the peak pres-

sures, the stagnation point on the windward side of the body moves from the minor axis ($\theta = 180°$) to the major axis ($\theta = 270°$) as the roll angle progresses from 0° to 90°.

Effect of Fins

The pressures on the aft end of the bodies can be influenced by the presence of the fins. This effect on the pressure distributions can be observed at the $X/L = 0.95$ station with and without fins. Figure 8 shows these pressures for the sharp-nose model at $\phi = 0°$ and $\alpha = 20°$ for body-alone, body-tail, and body-wing-tail configurations. All fins were undeflected. Adding the tails to the body causes small changes in pressure on the windward surface and on the outboard regions of the leeward surface. Adding the wings to the body-tail combination has little additional effect on either surface except in outboard regions. The leeward pressures in the inboard region and the windward pressures near the stagnation point are virtually identical for all three combinations.

Effect of Tail-Fin Deflections

The effect of several tail-fin deflections on the pressure distributions for the sharp-nose body-wing-tail configuration at $X/L = 0.95$, $\phi = 0°$, and $\alpha = 20°$ is shown in figure 9. Pressure coefficients for pitch, yaw, and roll control deflections are shown along with those for the undeflected fins. Very large tail-fin-deflection effects can be seen for all three control settings. These are in contrast to the small effects found by adding the undeflected tails to the body-alone configuration as described in the previous section. Tail-fin deflections have very little effect, however, on the leeward pressures.

CONCLUSIONS

A wind tunnel investigation has been performed at Mach 2.50 to obtain detailed body pressure data on two monoplane-wing missile configurations. Test variables included angle of attack, angle of roll, body shape, wing and tail fins, and tail-fin deflections. Based on an analysis of selected data, the following conclusions are drawn:

1. Very consistent, systematic trends were observed in the data with changes in angle of attack and in angle of roll, and very good symmetry was found at a roll angle of 0°.

2. Body pressures depended strongly on the local body cross-section shape, with very little dependence on the upstream shape.

3. Undeflected fins had only a small influence on the pressures on the aft end of the body; however, tail-fin deflections caused large changes in the pressures.

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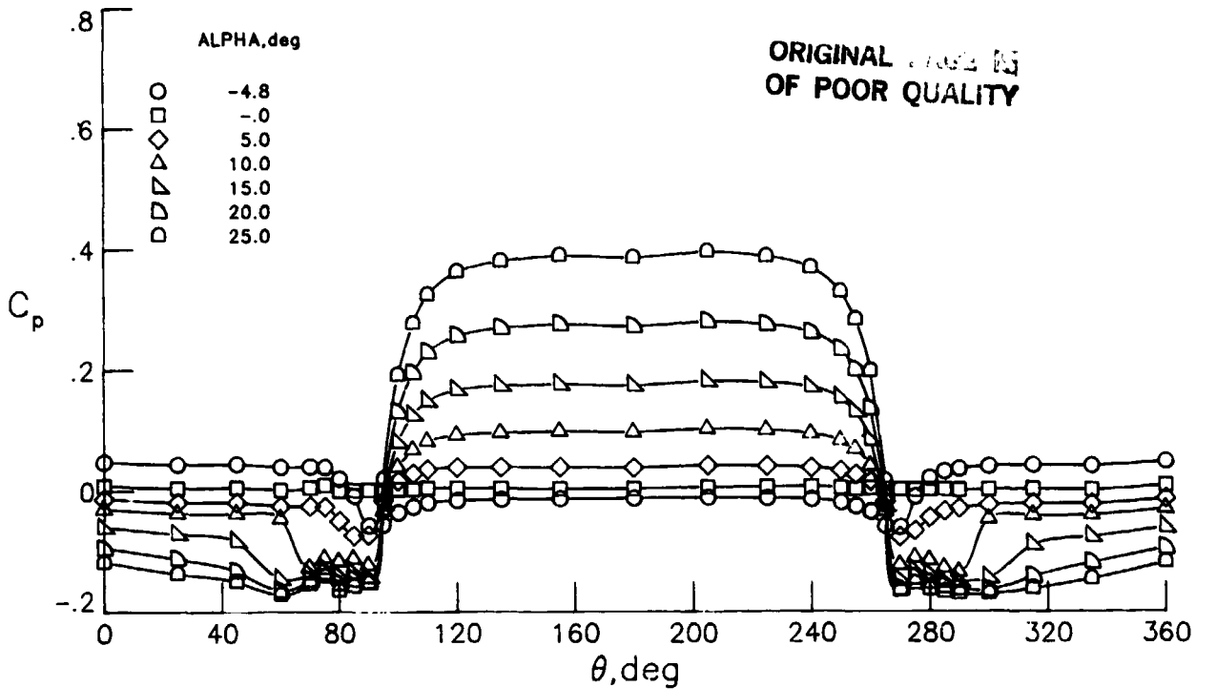
APPENDIX

PLOTS OF SELECTED DATA

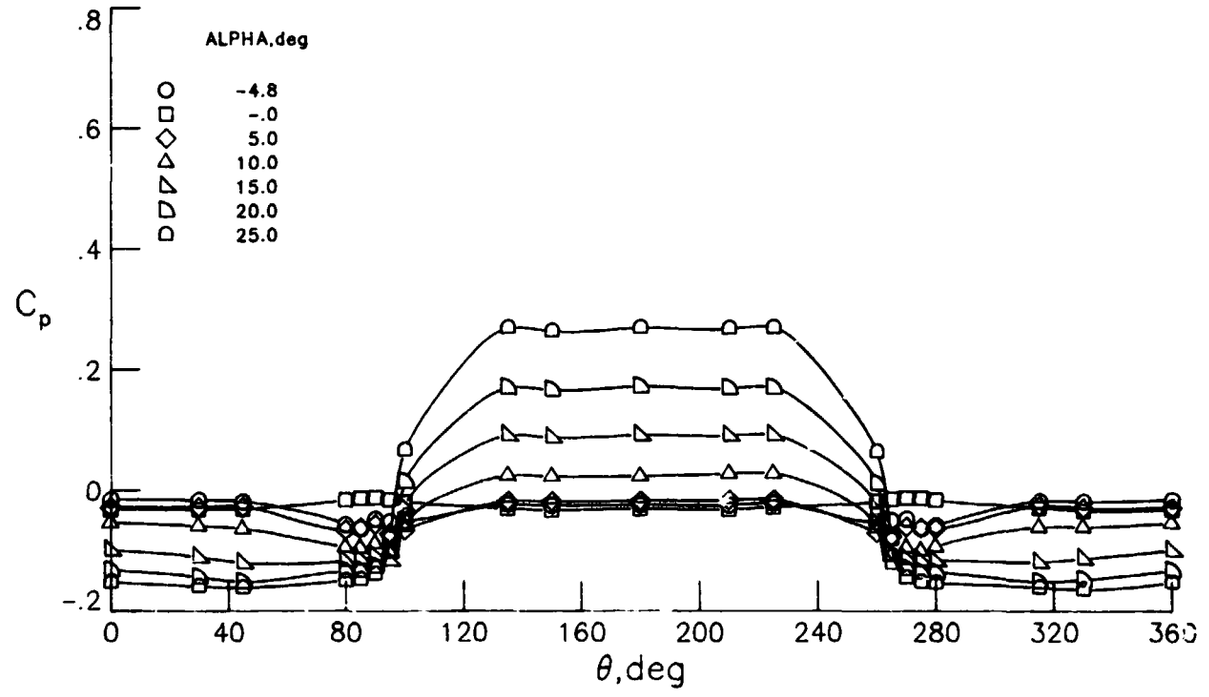
This appendix contains plots of selected data from the tabulated results so that interested readers can more easily inspect the longitudinal and circumferential pressure distributions on the two configurations. Each plot shows the variation of pressure coefficient around the circumference of the body at a specific longitudinal station for several angles of attack. The volume of plotted data represents about 25 percent of the total amount contained in the tables. The following chart summarizes the test conditions of the plotted data.

Figure	Body shape	Configuration	X/L	ϕ, deg	Tail-fin deflection, deg
A1	Sharp nose	Body alone	0.60, 0.95	0	
A2	↓	↓	↓	22.5	
A3				45.0	
A4				67.5	
A5				90.0	
A6		Body-tail	0.95	0, 22.5, 45.0	0
A7		Body-wing-tail	0.10, 0.95	0	↓
A8		↓	↓	22.5	
A9				45.0	
A10				67.5	
A11				90.0	
A12	↓	↓	0.95	0	[a]30
A13	Blunt nose	Body alone	0.10, 0.60, 0.95	0	
A14	↓	↓	↓	22.5	
A15				45.0	
A16				67.5	
A17				90.0	
A18		Body-tail	0.95	0, 22.5, 45.0	0
A19		Body-wing-tail	.95	0, 22.5, 45.0, 67.5, 90.0	0
A20	↓	Body-wing-tail	.95	0	[a]30

[a]Deflections for pitch, yaw, and roll.



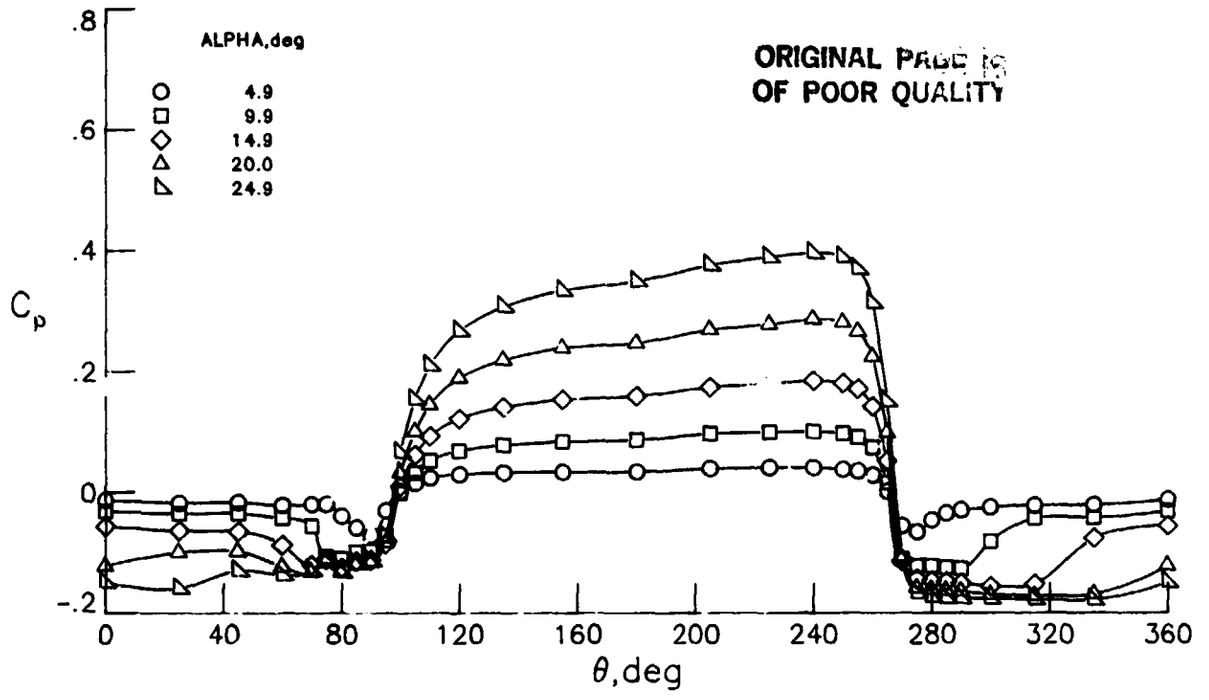
(a) X/L = 0.60.



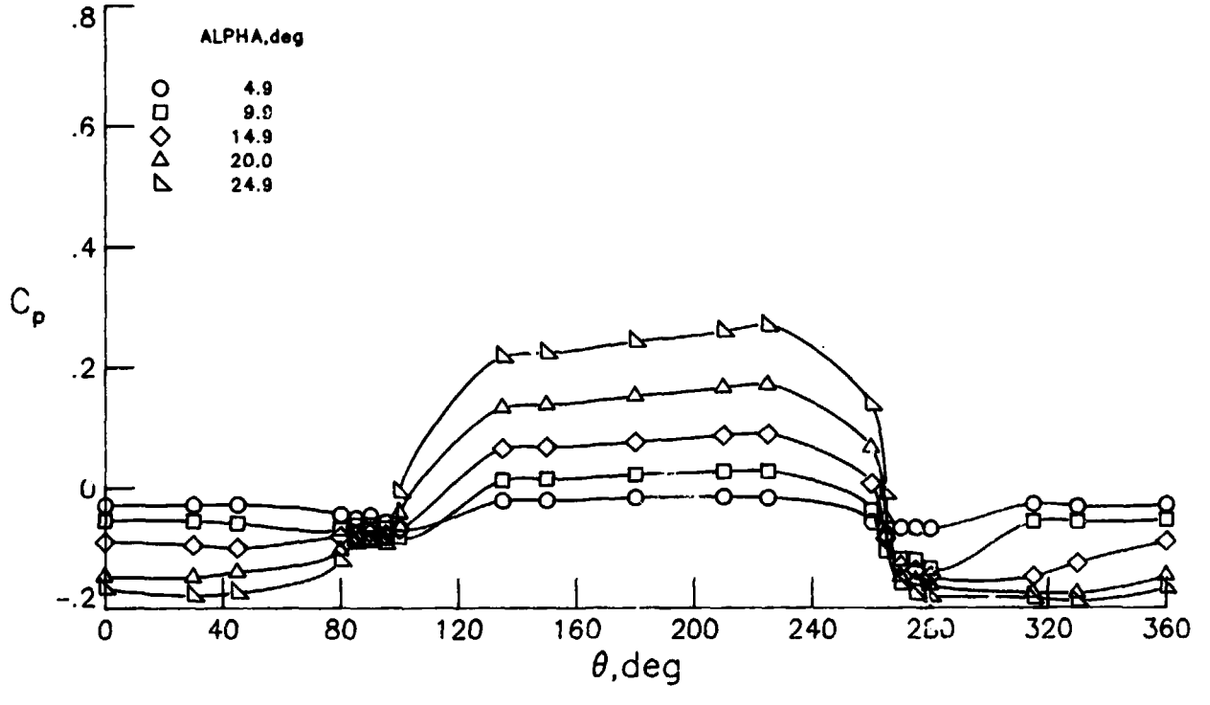
(b) X/L = 0.95.

Figure A1.- Body-alone pressure distributions. Sharp-nose body; ϕ = 0°.

APPENDIX

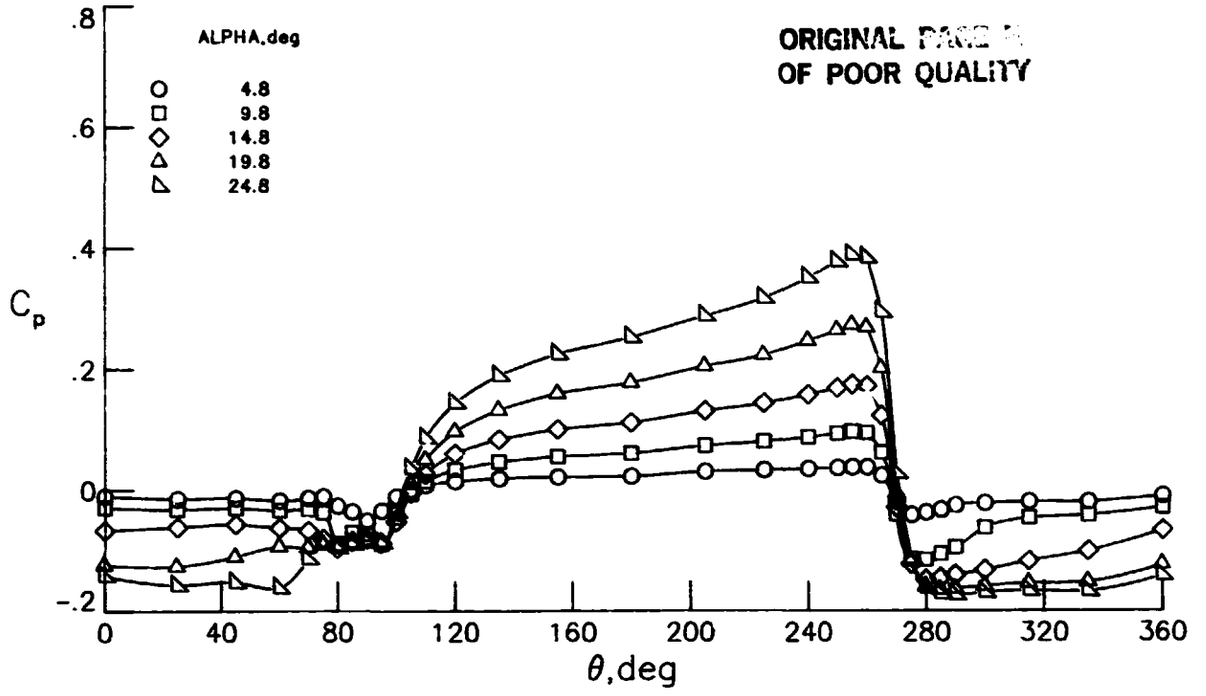


(a) X/L = 0.60.

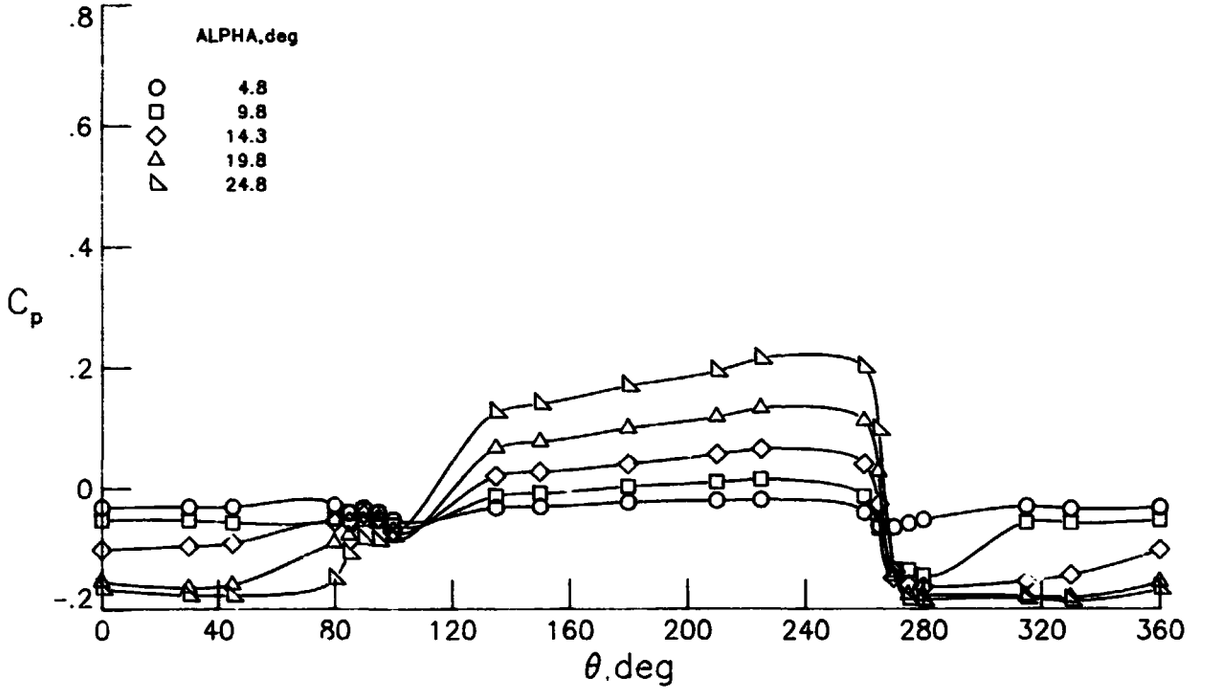


(b) X/L = 0.95.

Figure A2.- Body-alone pressure distributions. Sharp-nose body; $\phi = 22.5°$.



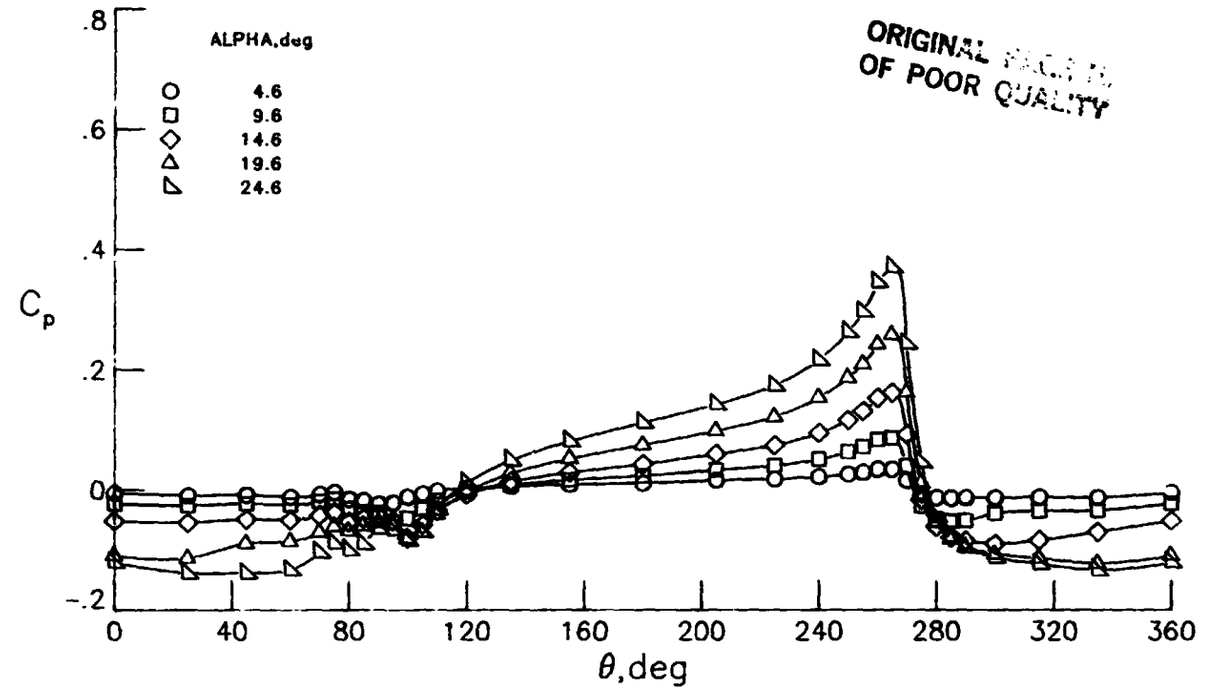
(a) X/L = 0.60.



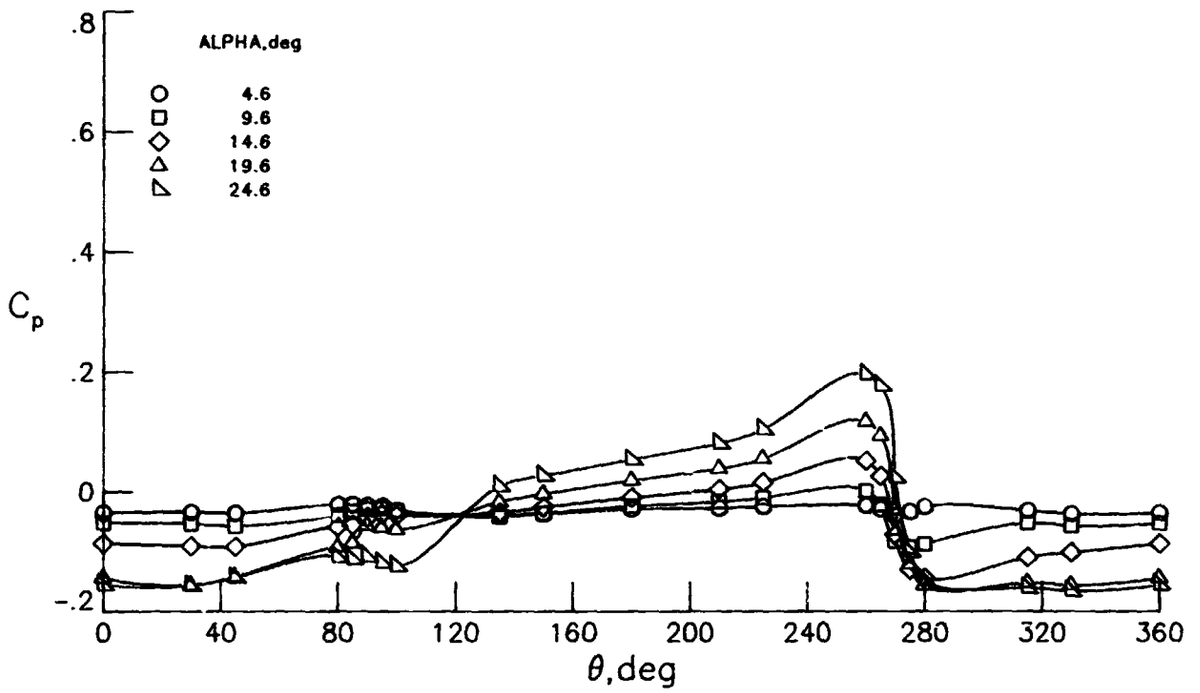
(b) X/L = 0.95.

Figure A3.- Body-alone pressure distributions. Sharp-nose body; ϕ = 45.0°.

APPENDIX

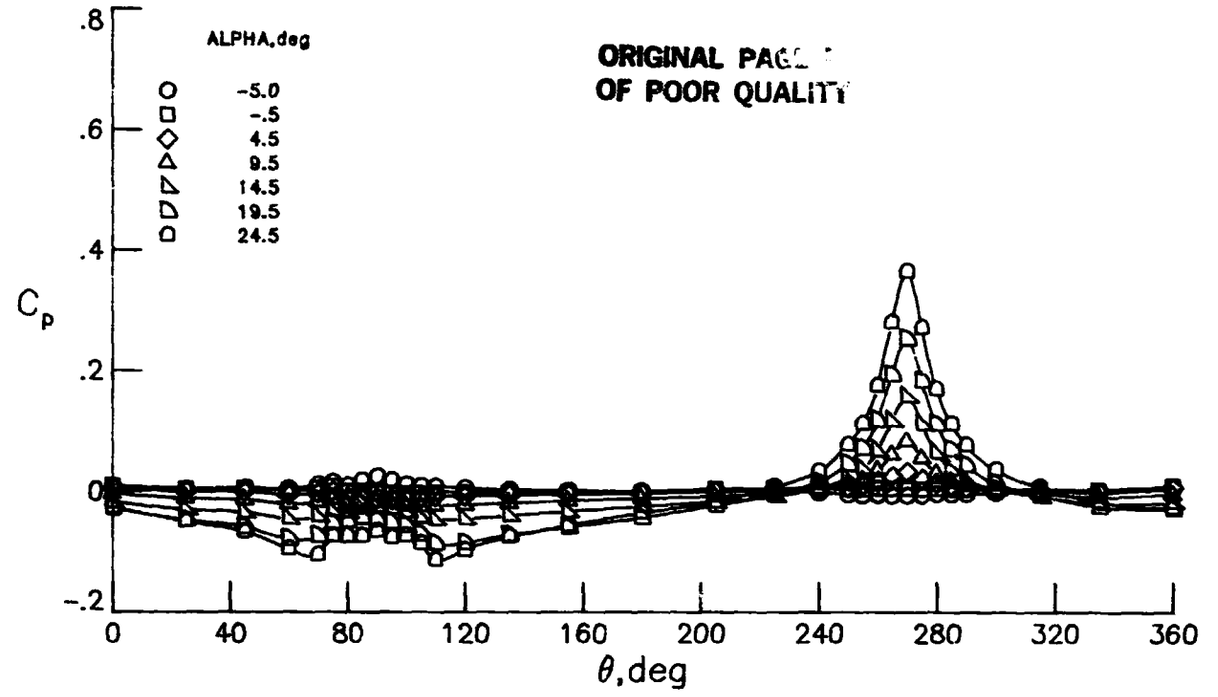


(a) X/L = 0.60.

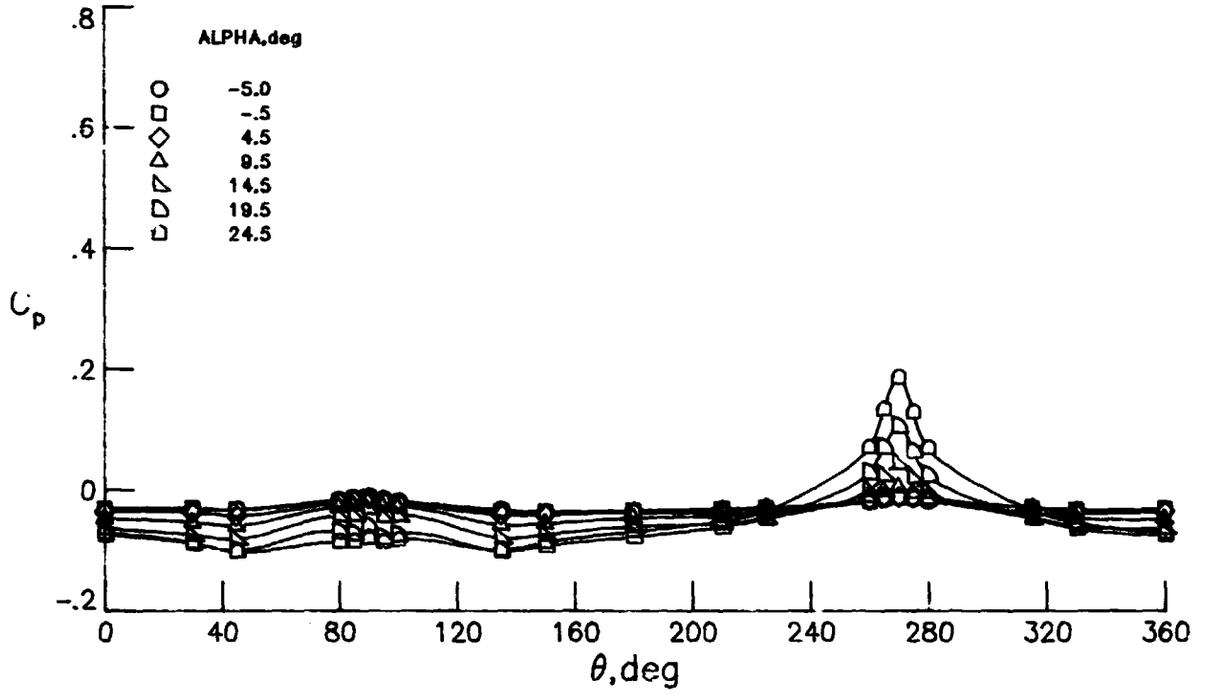


(b) X/L = 0.95.

Figure A4.- Body-alone pressure distributions. Sharp-nose body; $\phi = 67.5°$.

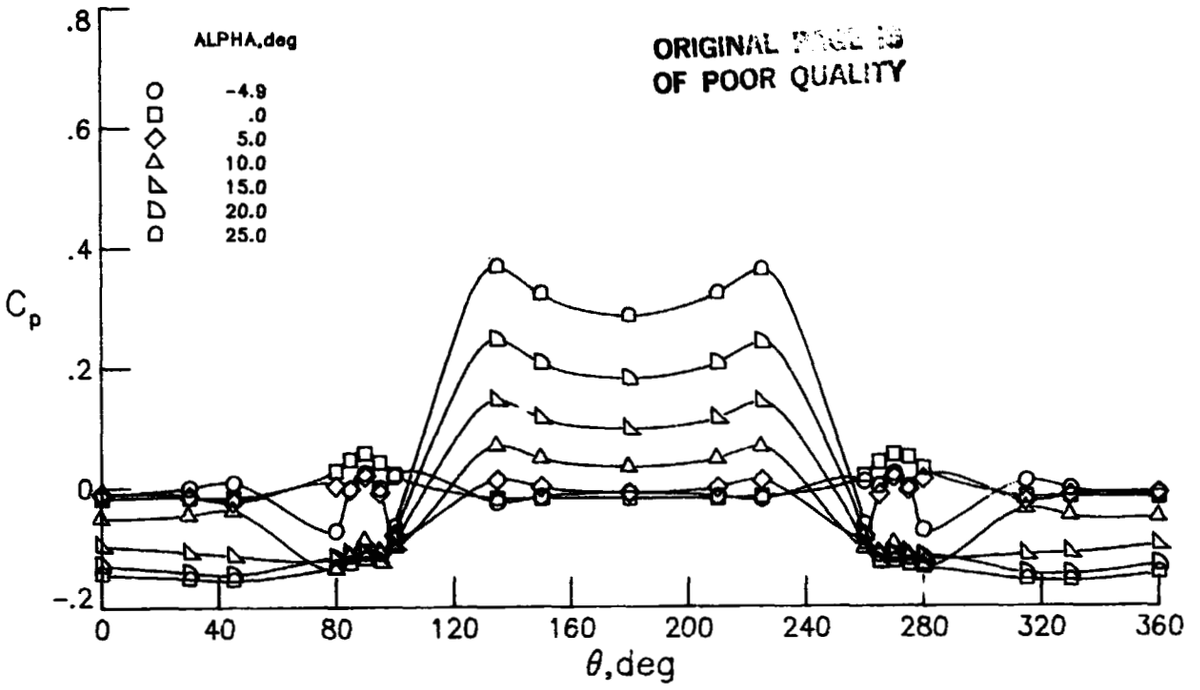


(a) X/L = 0.60.

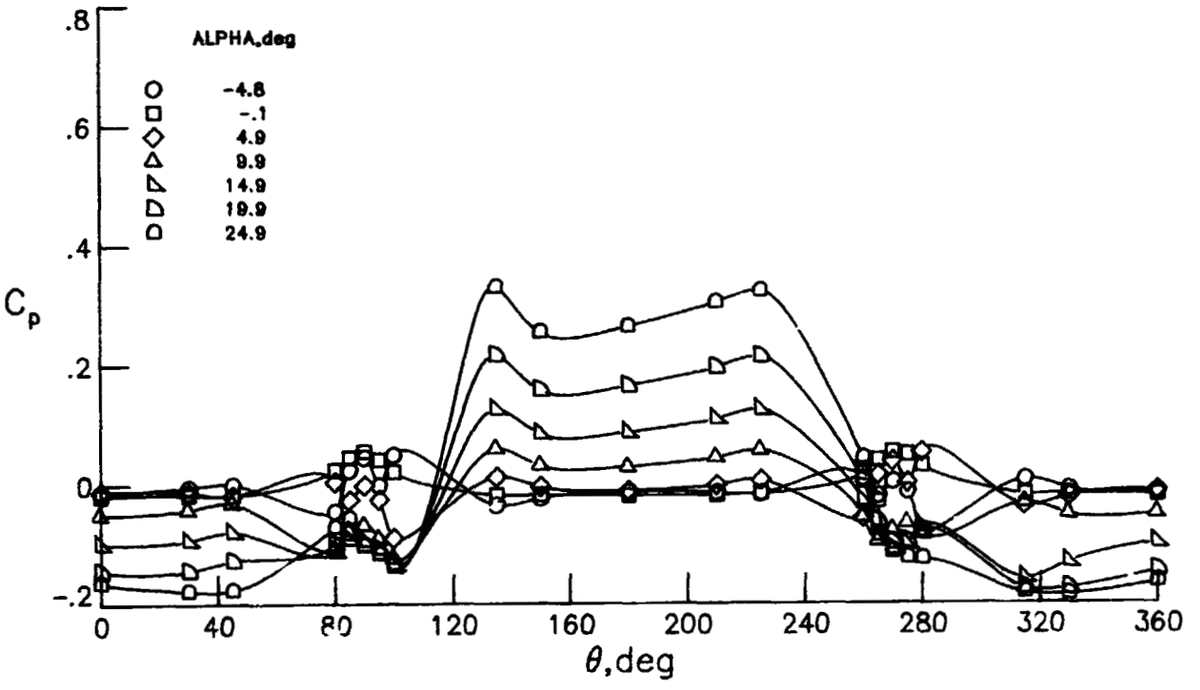


(b) X/L = 0.95.

Figure A5.- Body-alone pressure distributions. Sharp-nose body; ϕ = 90.0°.

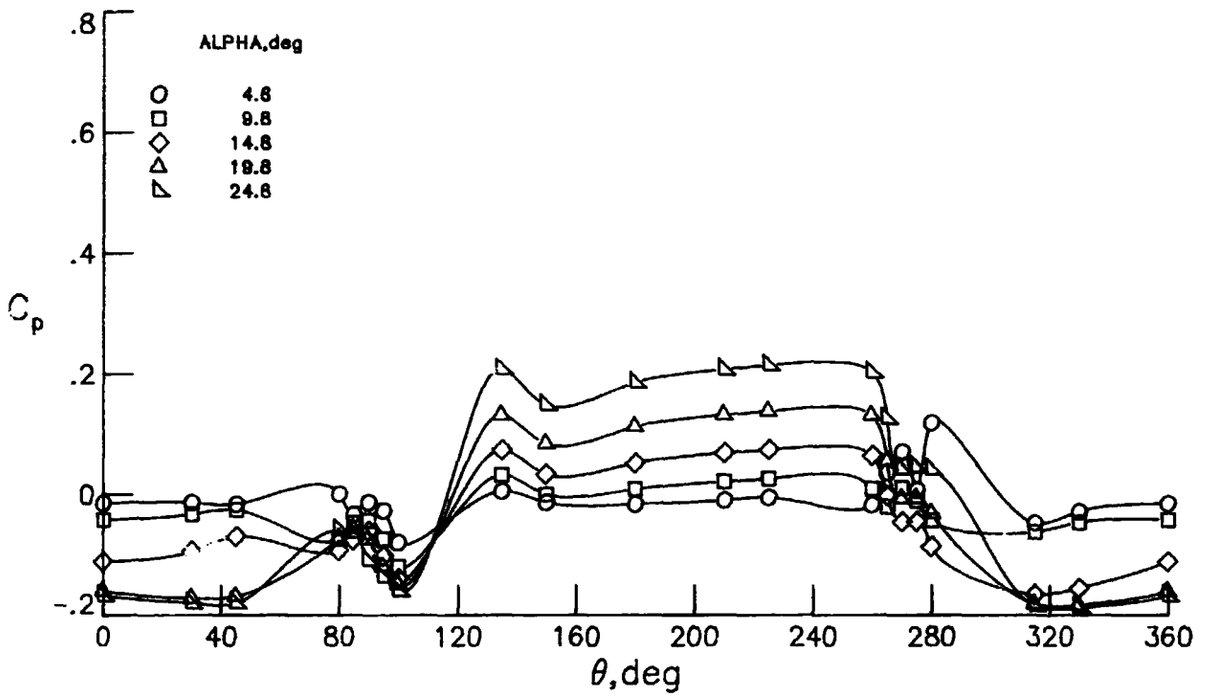


(a) $\phi = 0°$.



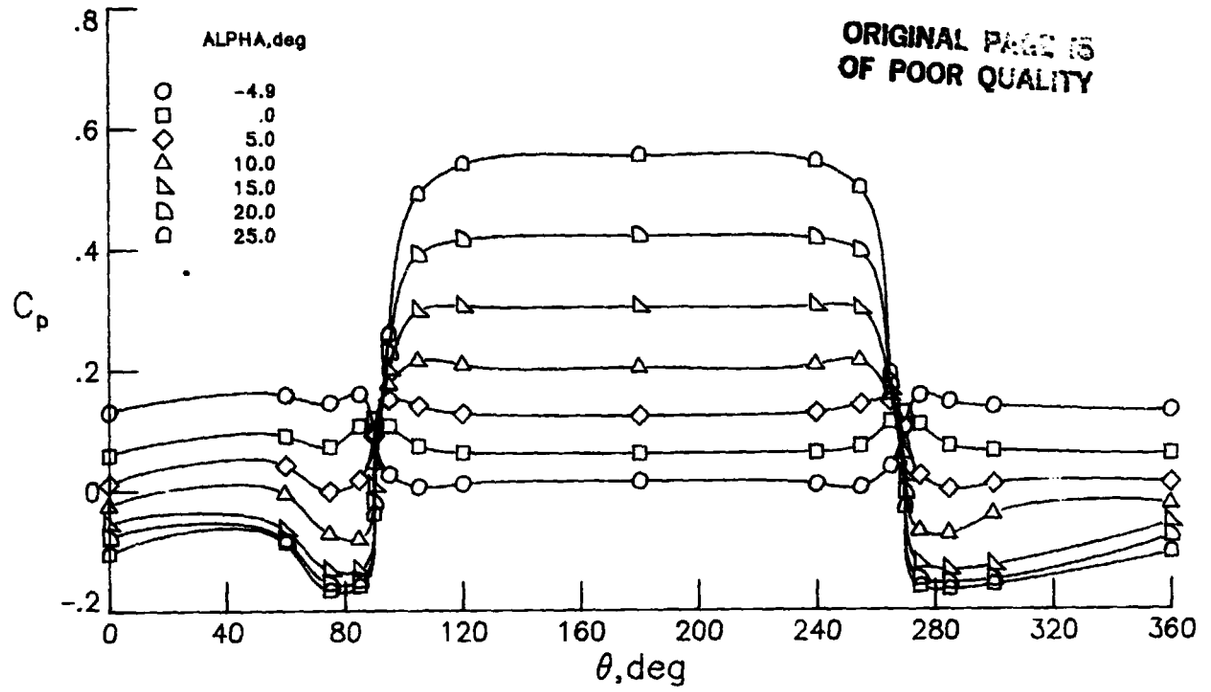
(b) $\phi = 22.5°$.

Figure A6.- Body pressure distributions for body-tail configuration. Sharp-nose body; no tail deflections; X/L = 0.95.

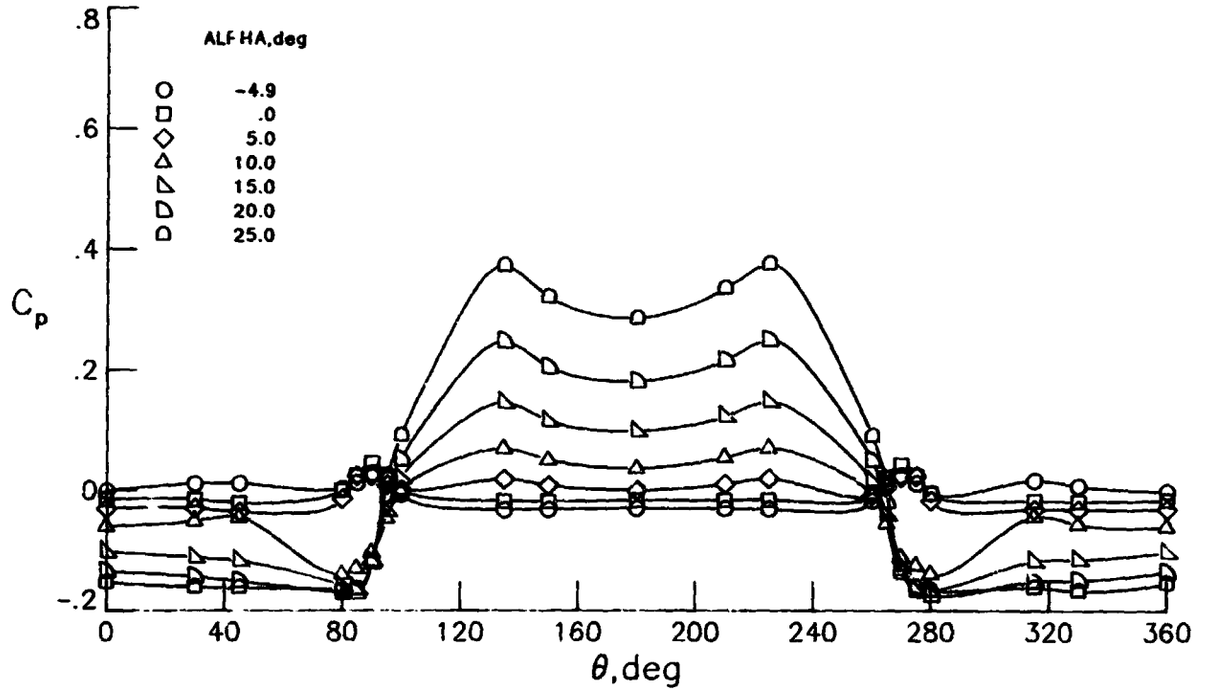


(c) $\phi = 45.0°$.

Figure A6.- Concluded.

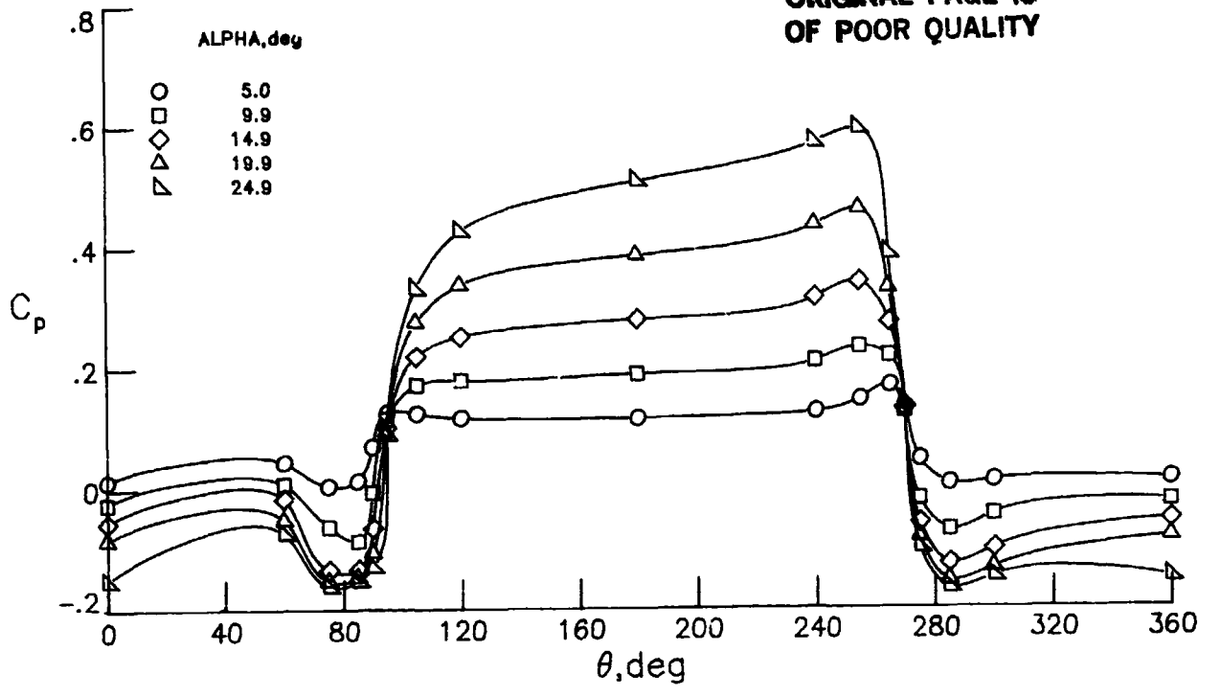


(a) X/L = 0.10.

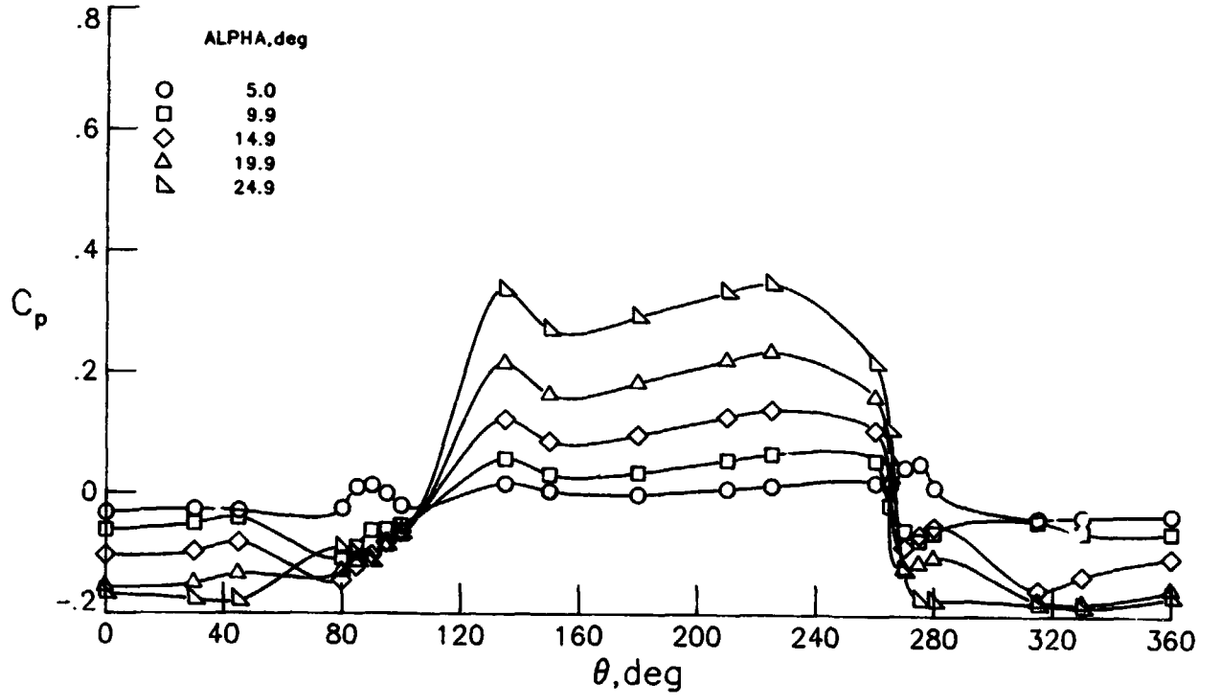


(b) X/L = 0.95.

Figure A7.- Body pressure distributions for body-wing-tail configuration. Sharp-nose body; no tail deflections; ϕ = 0°.

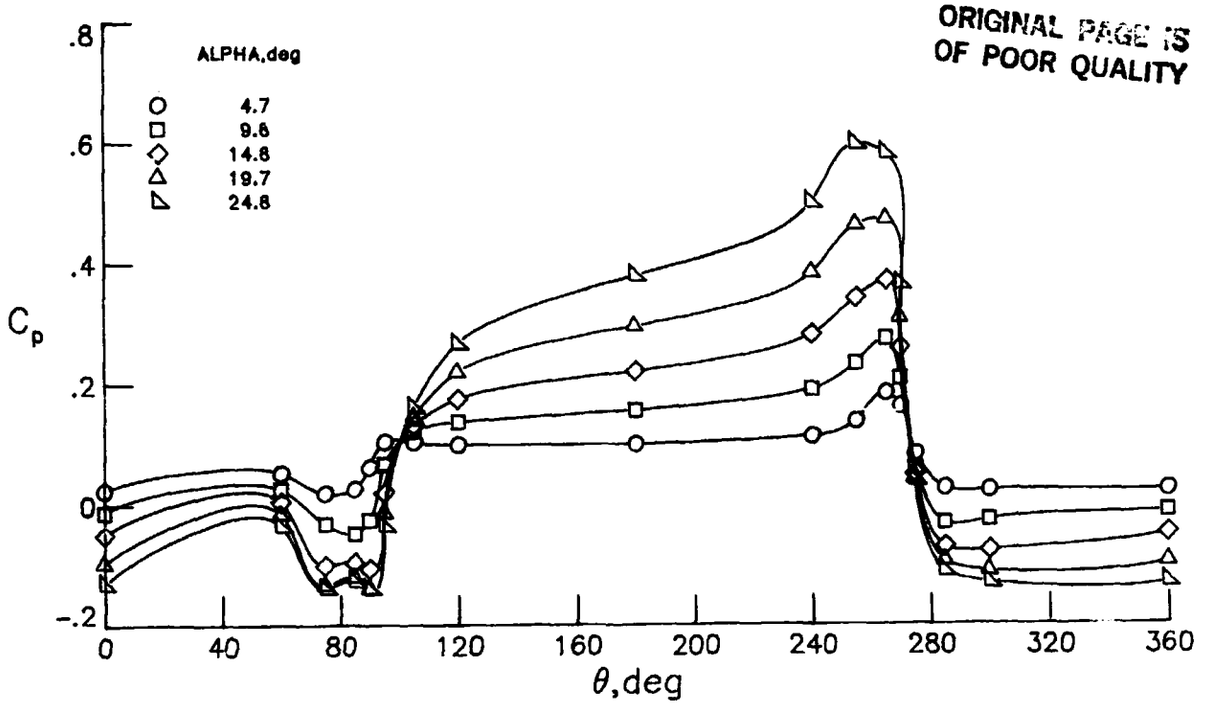


(a) X/L = 0.10.

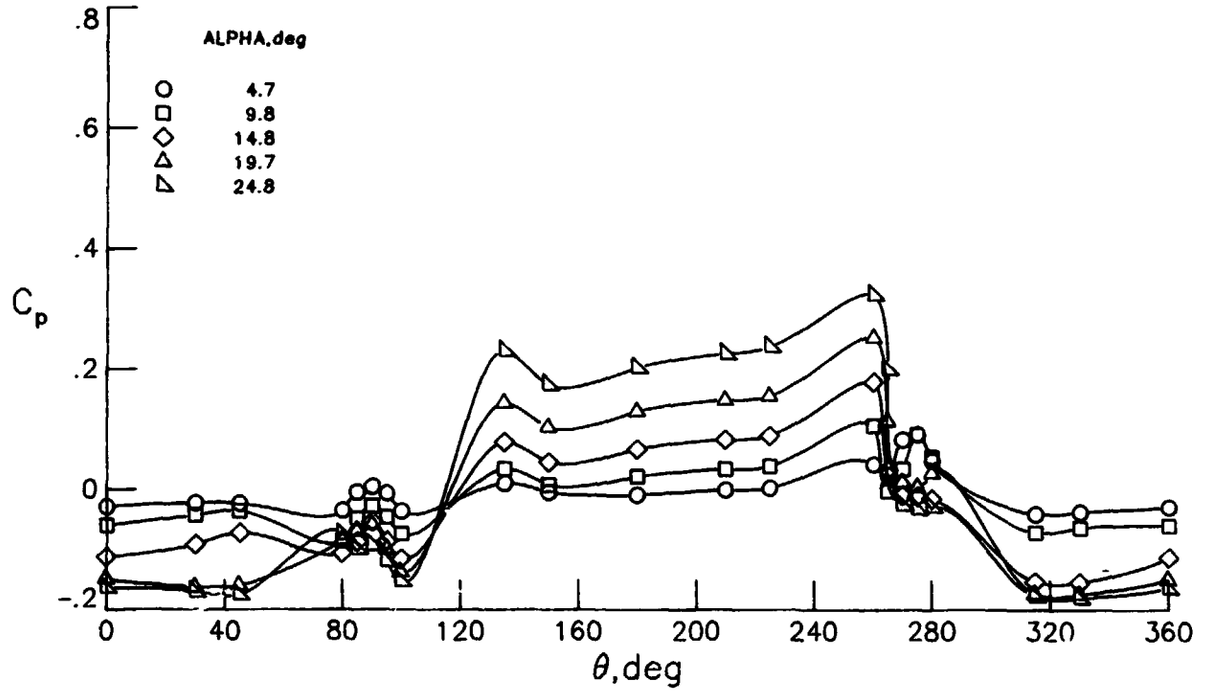


(b) X/L = 0.95.

Figure A8.- Body pressure distributions for body-wing-tail configuration. Sharp-nose body; no tail deflections; ϕ = 22.5°.

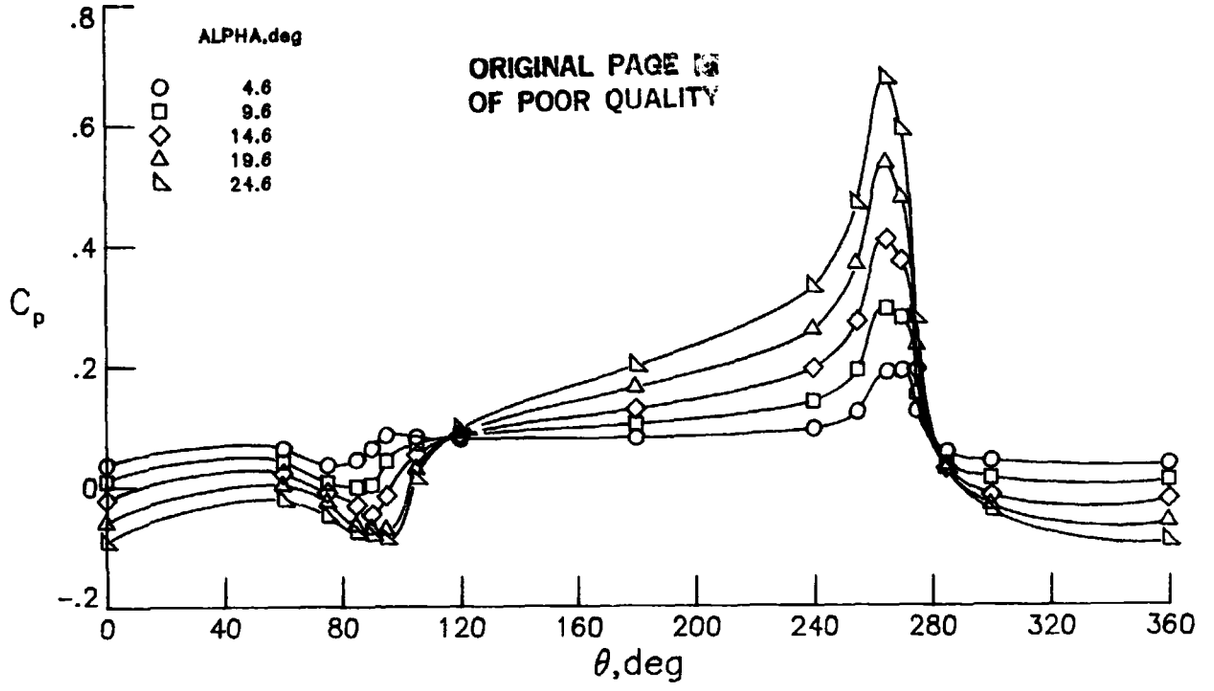


(a) X/L = 0.10.

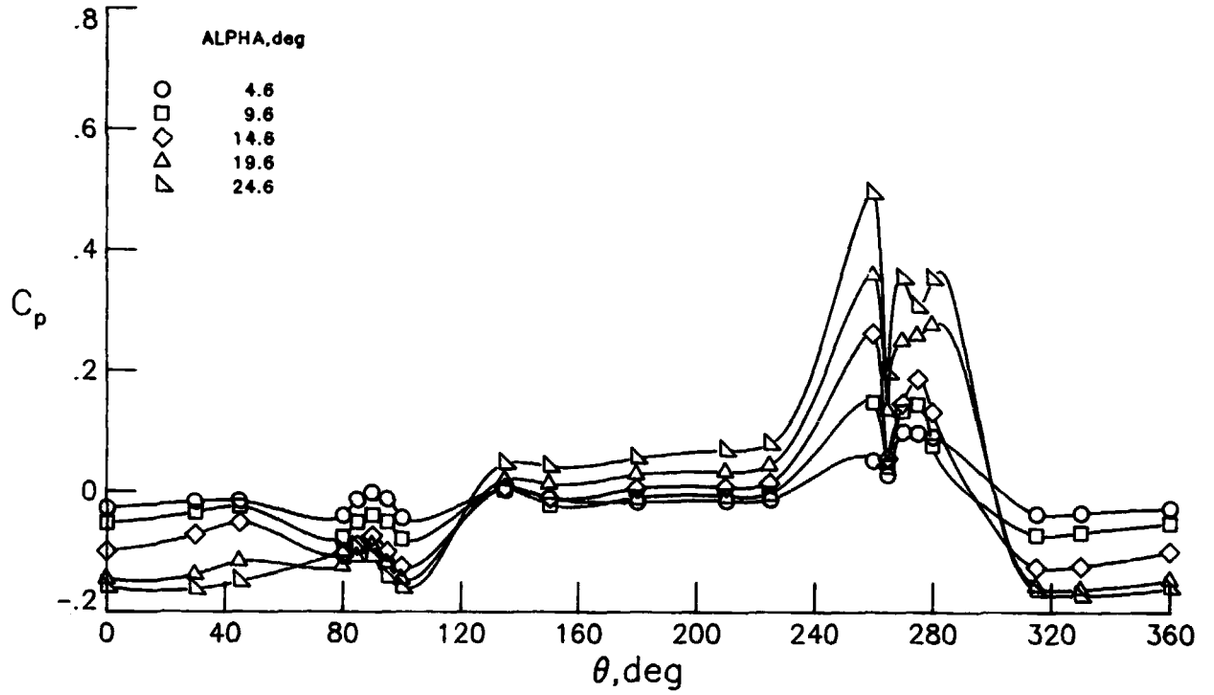


(b) X/L = 0.95.

Figure A9.- Body pressure distributions for body-wing-tail configuration. Sharp-nose body; no tail deflections; ϕ = 45.0°.

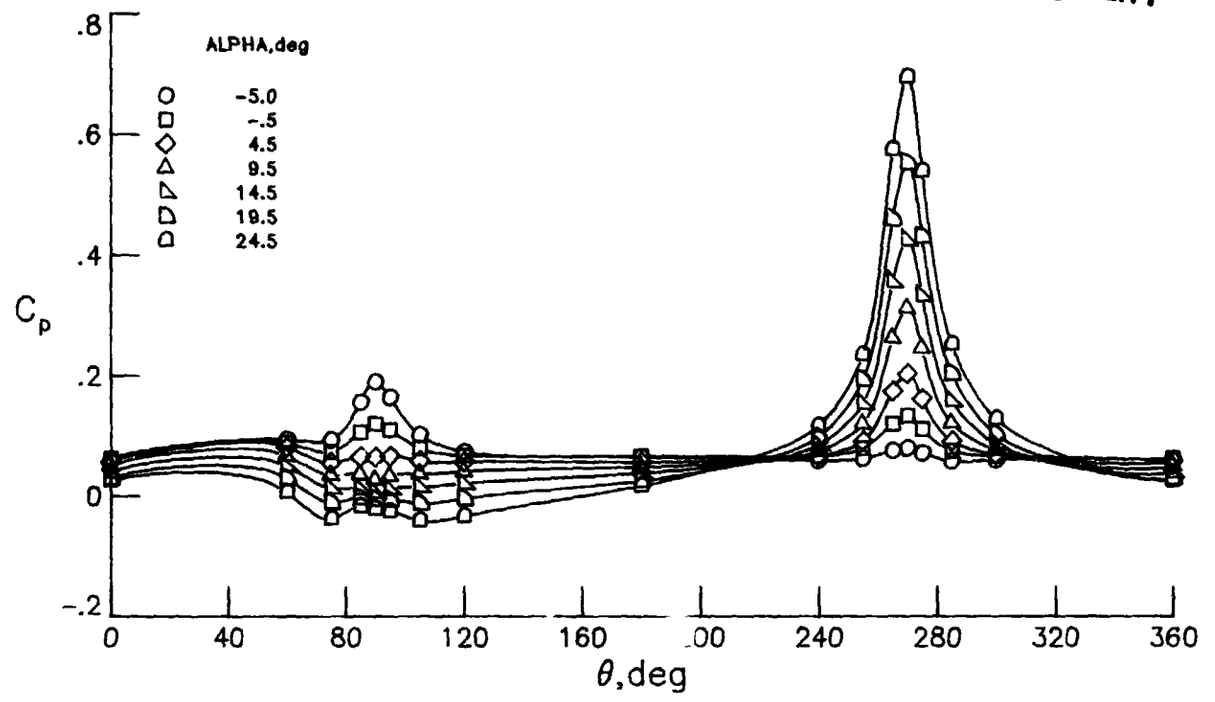


(a) X/L = 0.10.

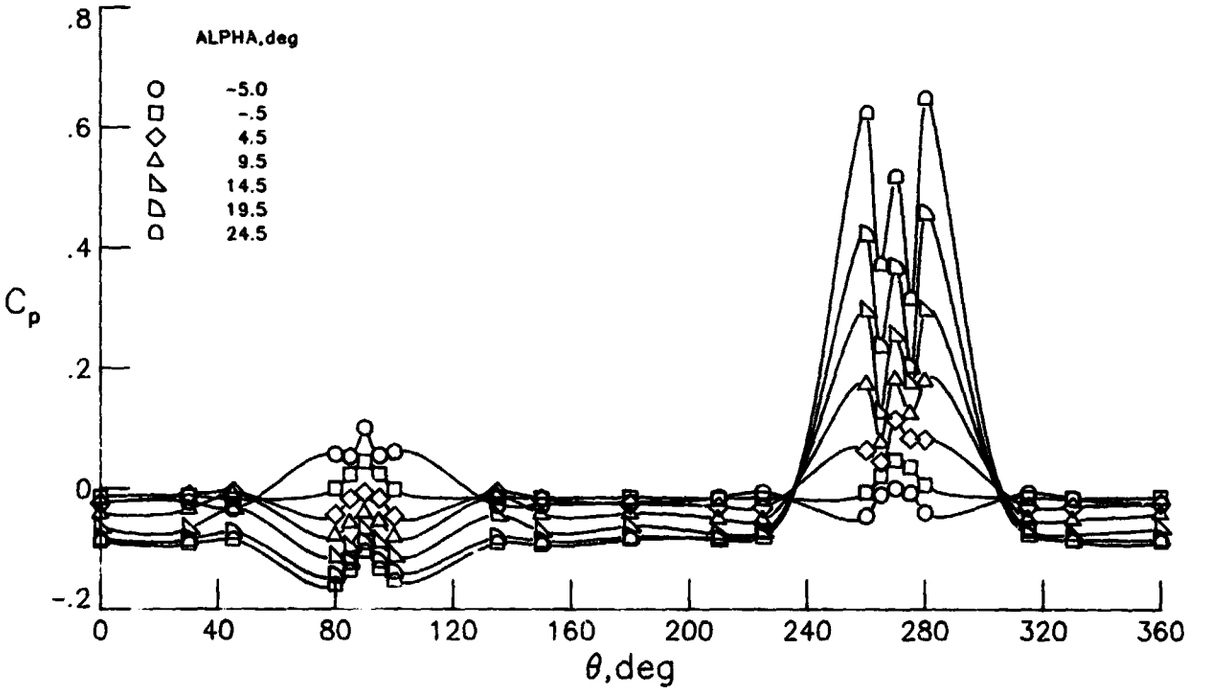


(b) X/L = 0.95.

Figure A10.- Body pressure distributions for body-wing-tail configuration. Sharp-nose body; no tail deflections; ϕ = 67.5°.

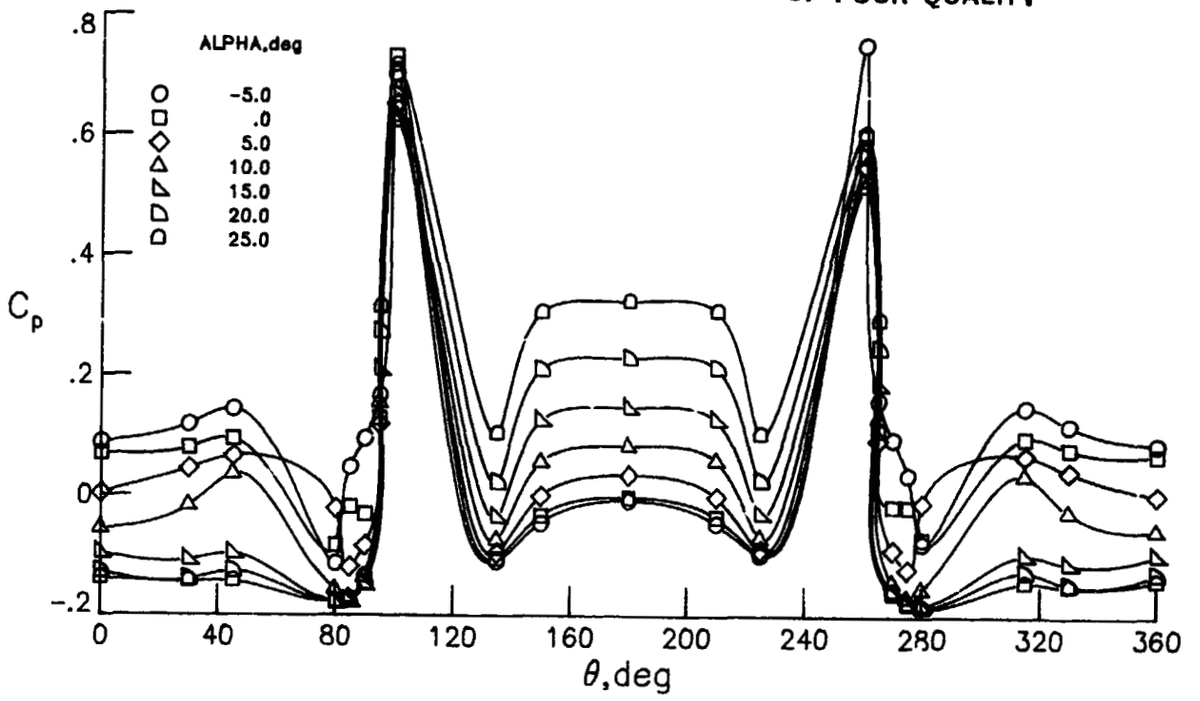


(a) X/L = 0.10.

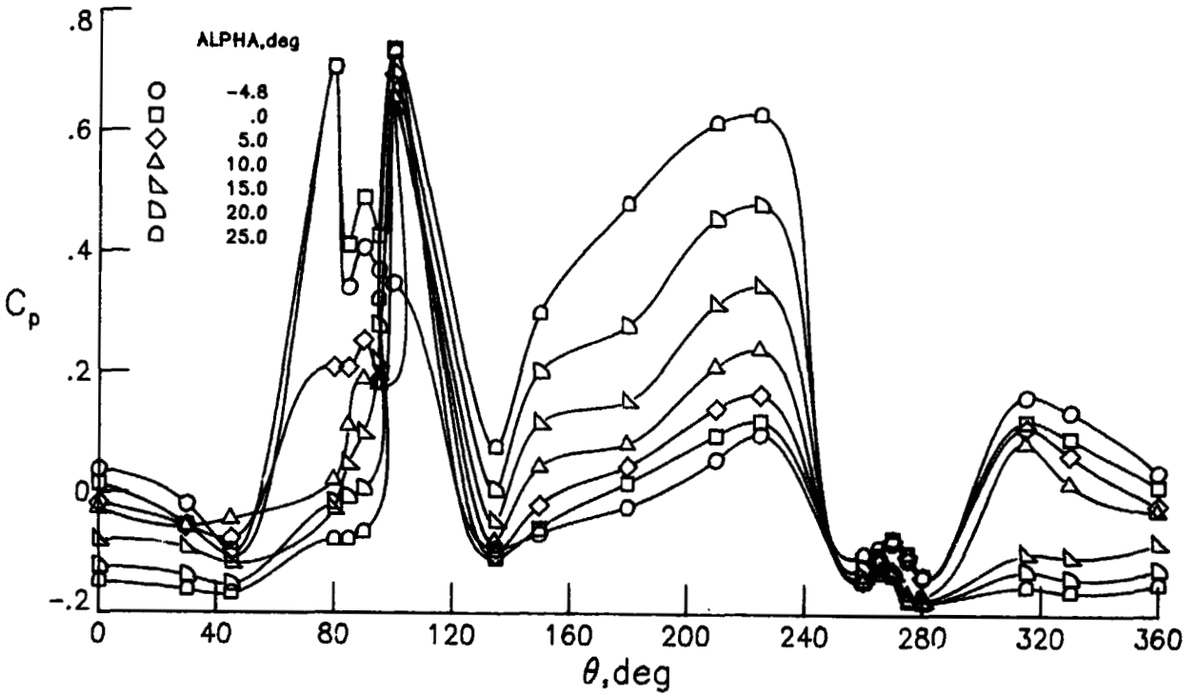


(b) X/L = 0.95.

Figure A11.- Body pressure distributions for body-wing-tail configuration. Sharp-nose body; no tail deflections; ϕ = 90.0°.

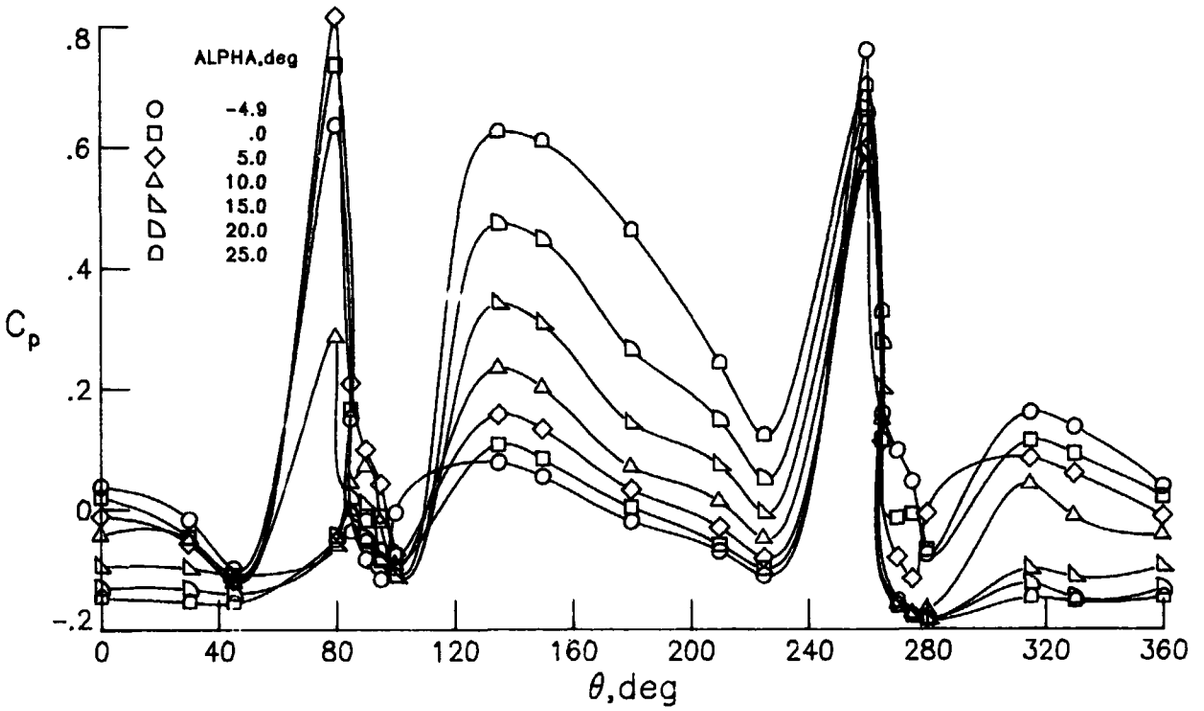


(a) Pitch deflection, 30°.



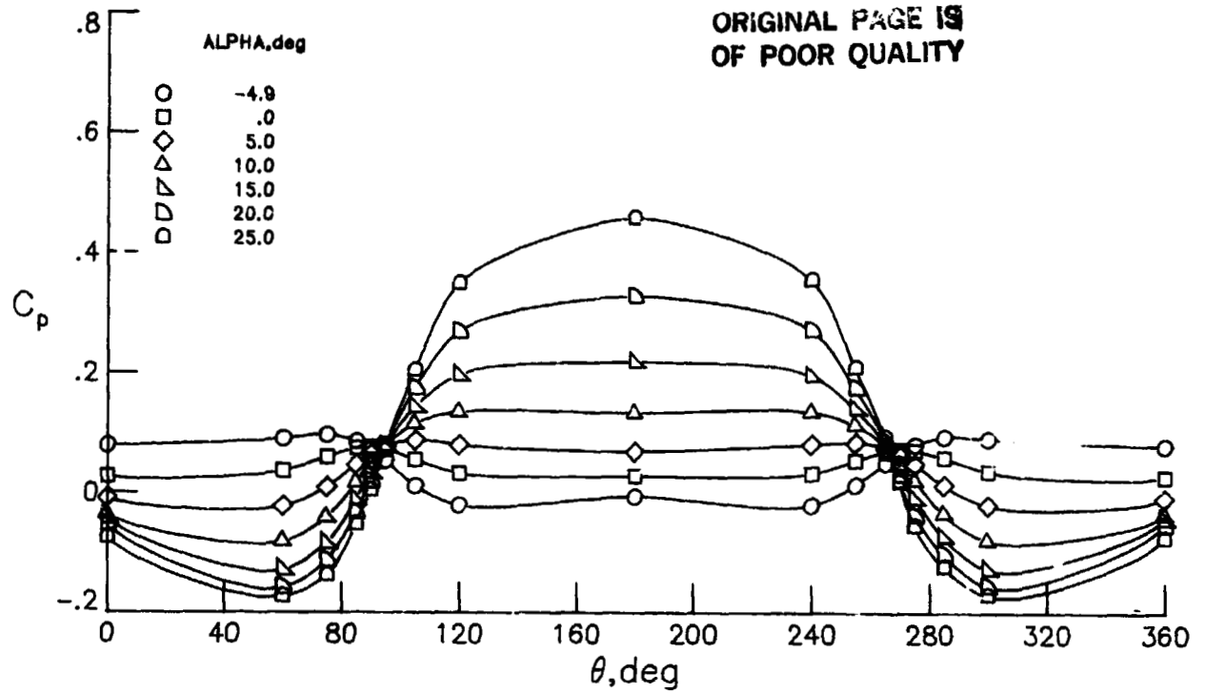
(b) Yaw deflection, 30°.

Figure A12.- Body pressure distributions for body-wing-tail ccnfiguration. Sharp-nose body; ϕ = 0°; X/L = 0.95.

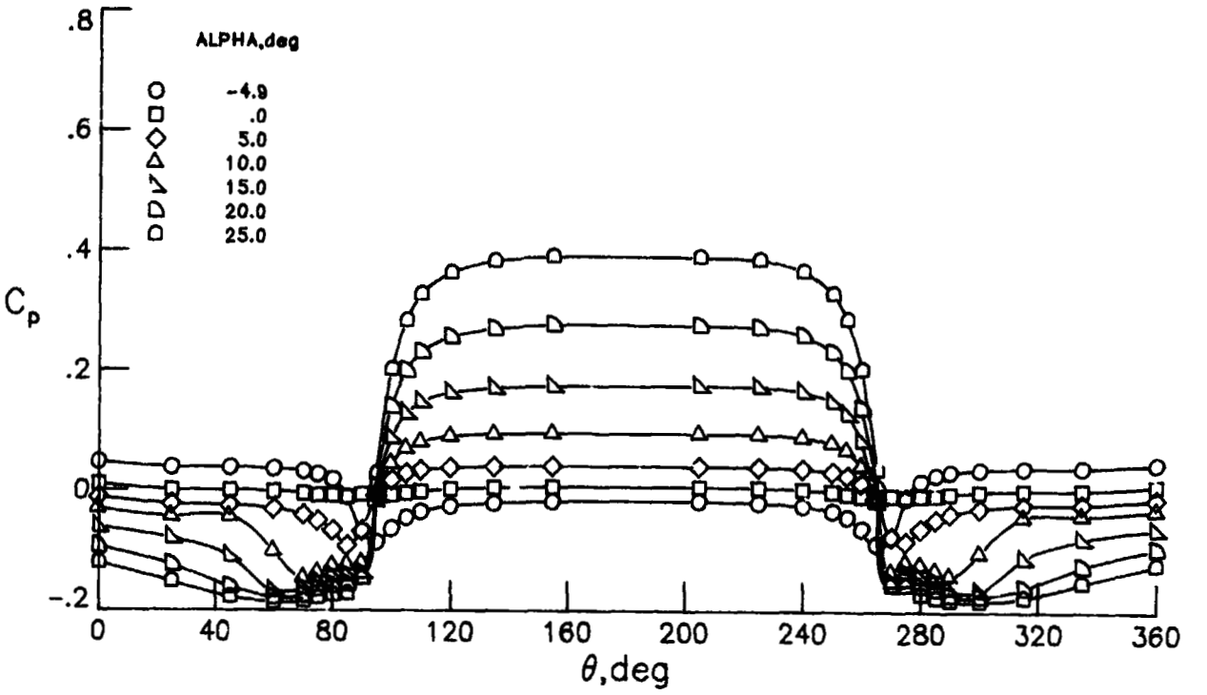


(c) Roll deflection, 30°.

Figure A12.- Concluded.

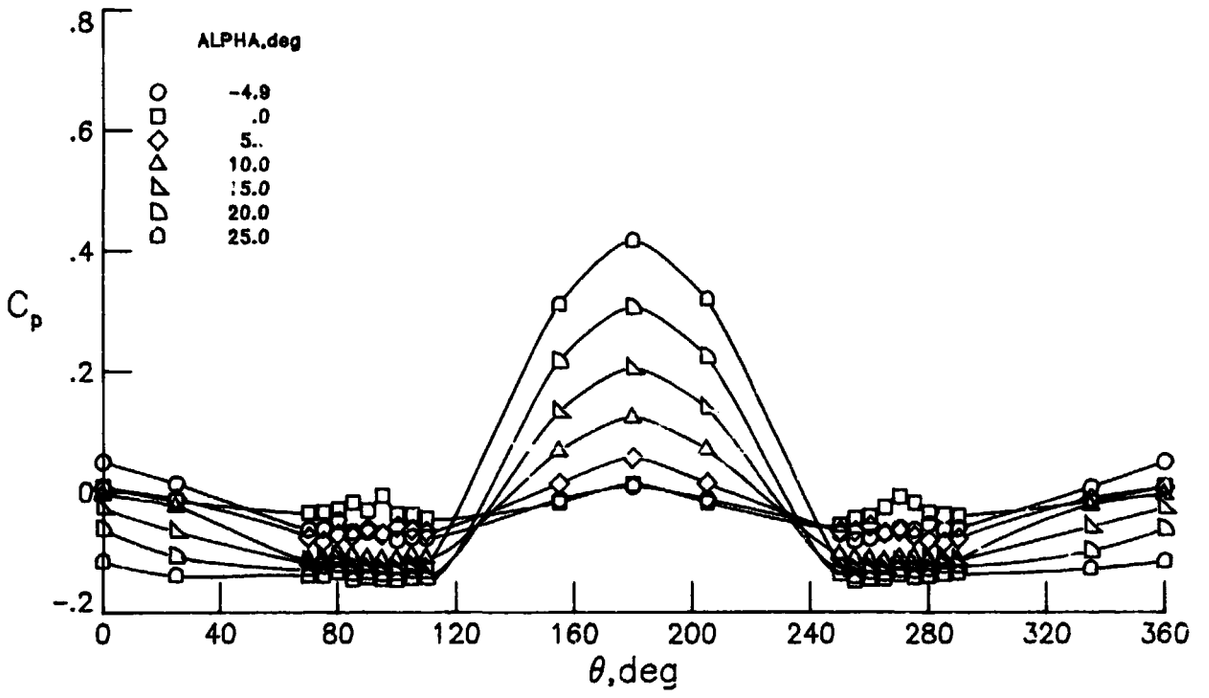


(a) X/L = 0.10.



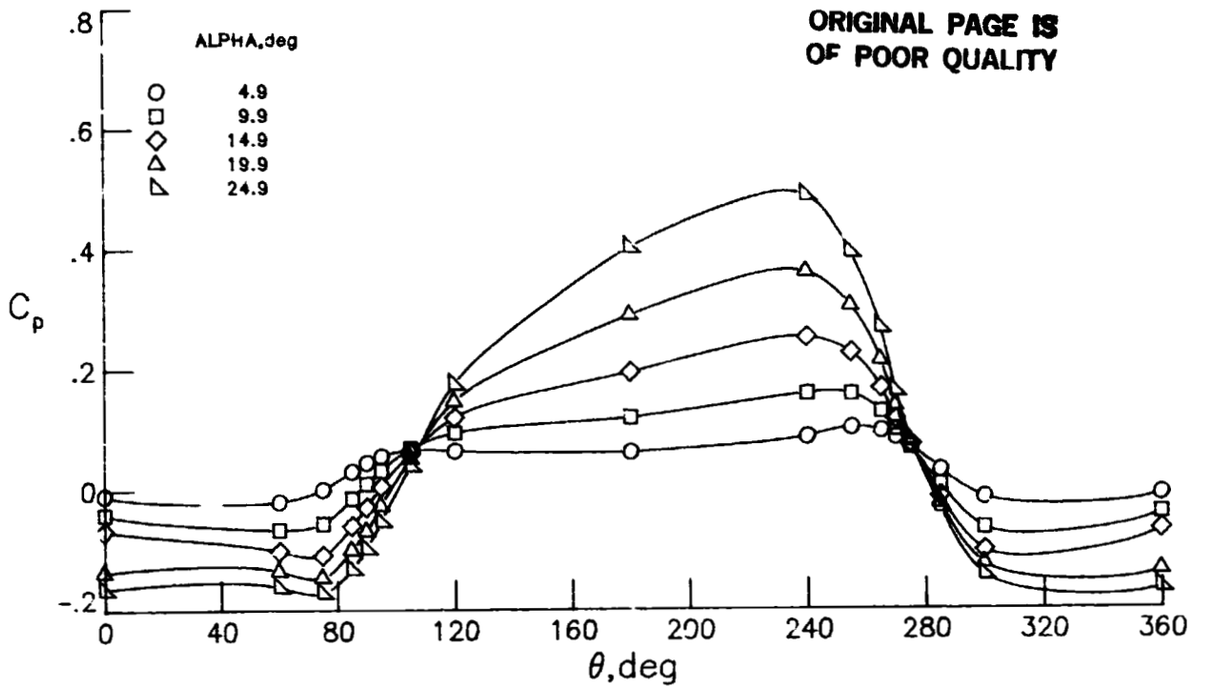
(b) X/L = 0.60.

Figure A13.- Body-alone pressure distributions. Blunt-nose body; ϕ = 0°.

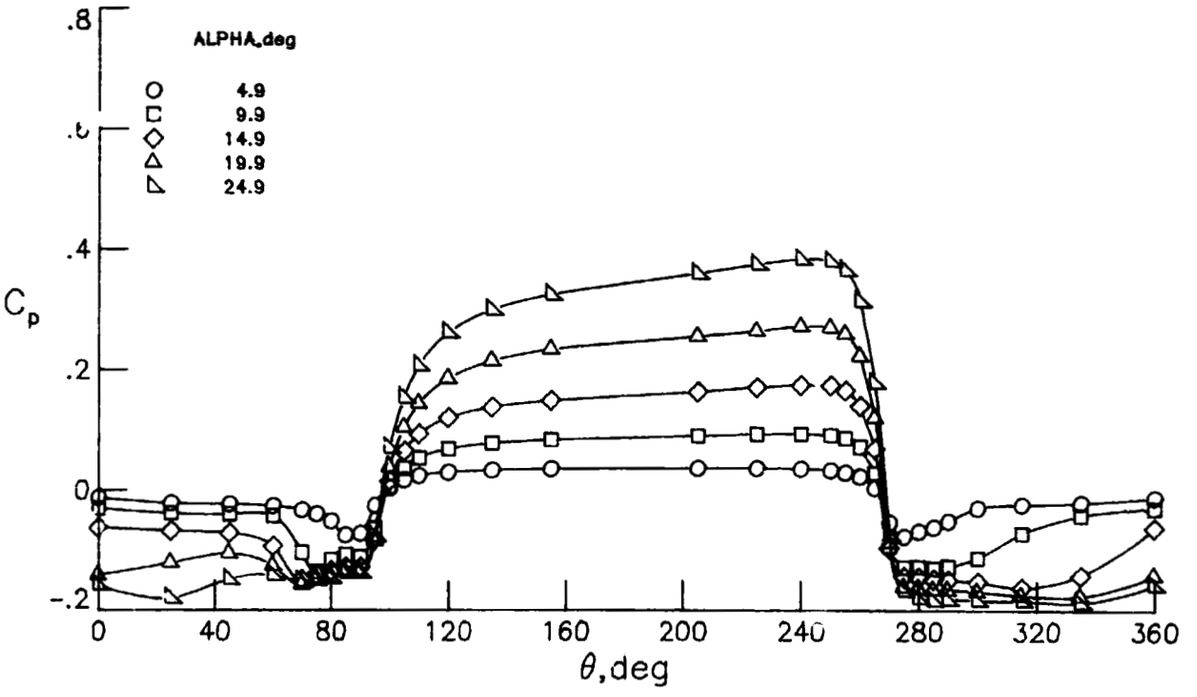


(c) X/L = 0.95.

Figure A13.- Concluded.

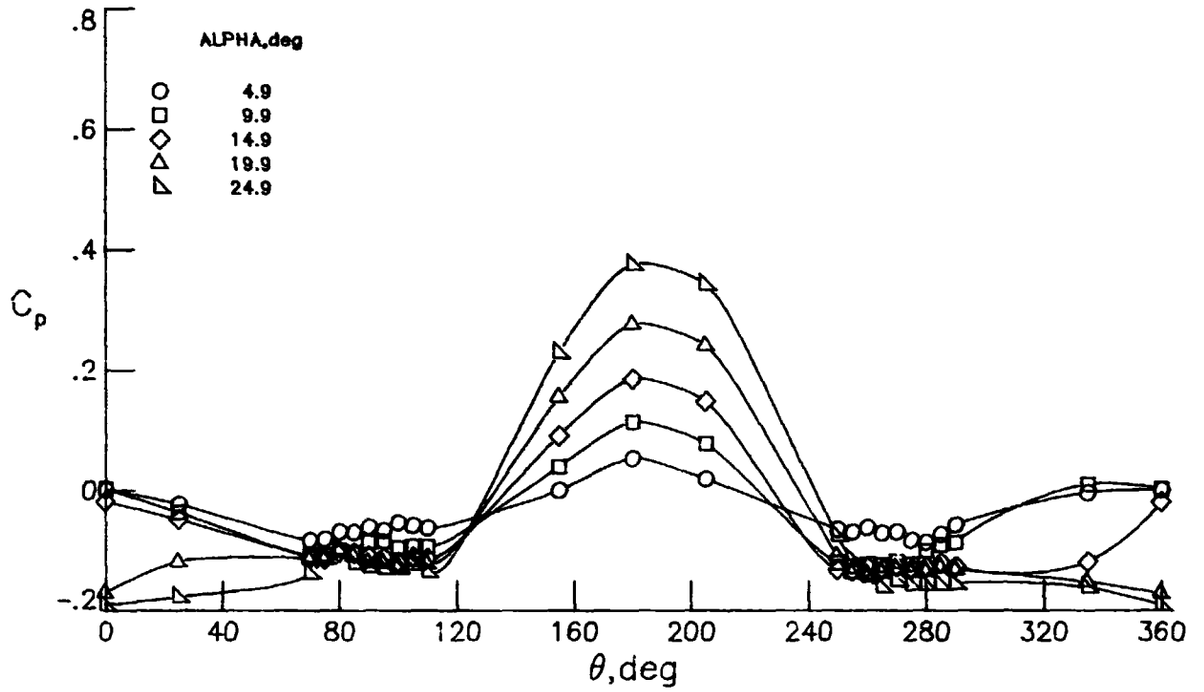


(a) X/L = 0.10.



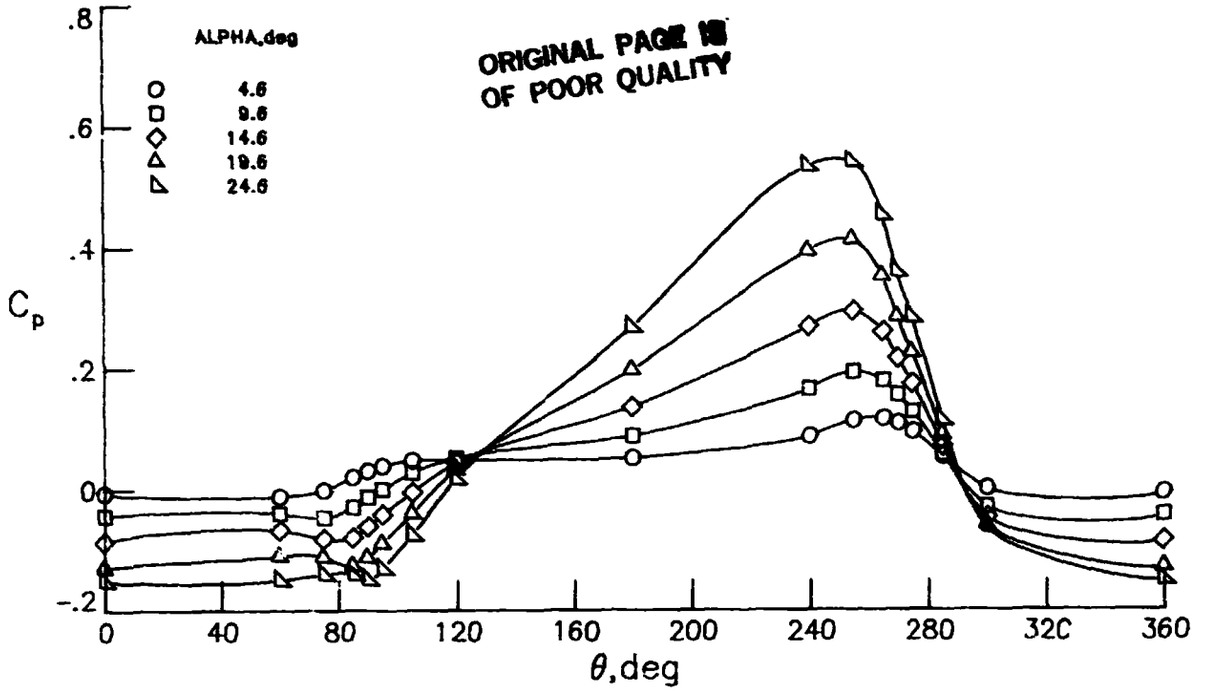
(b) X/L = 0.60.

Figure A14.- Body-alone pressure distribution ... nose body; ϕ = 22.5°.

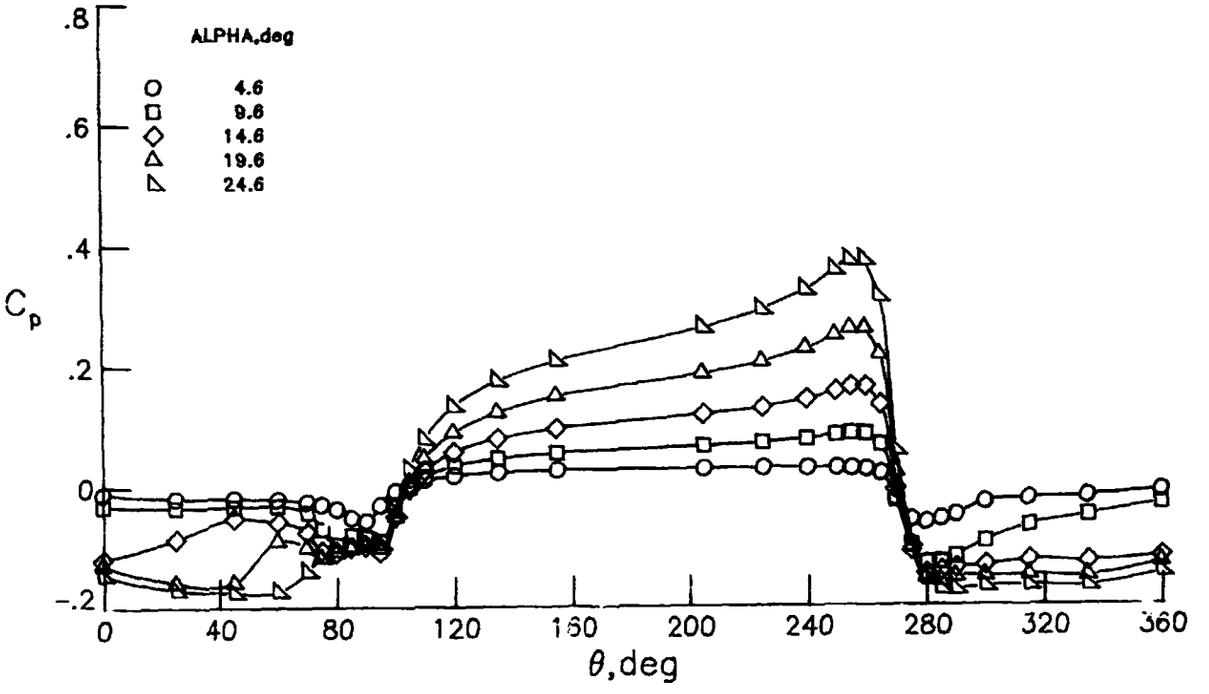


(c) X/L = 0.95.

Figure A14.- Concluded.

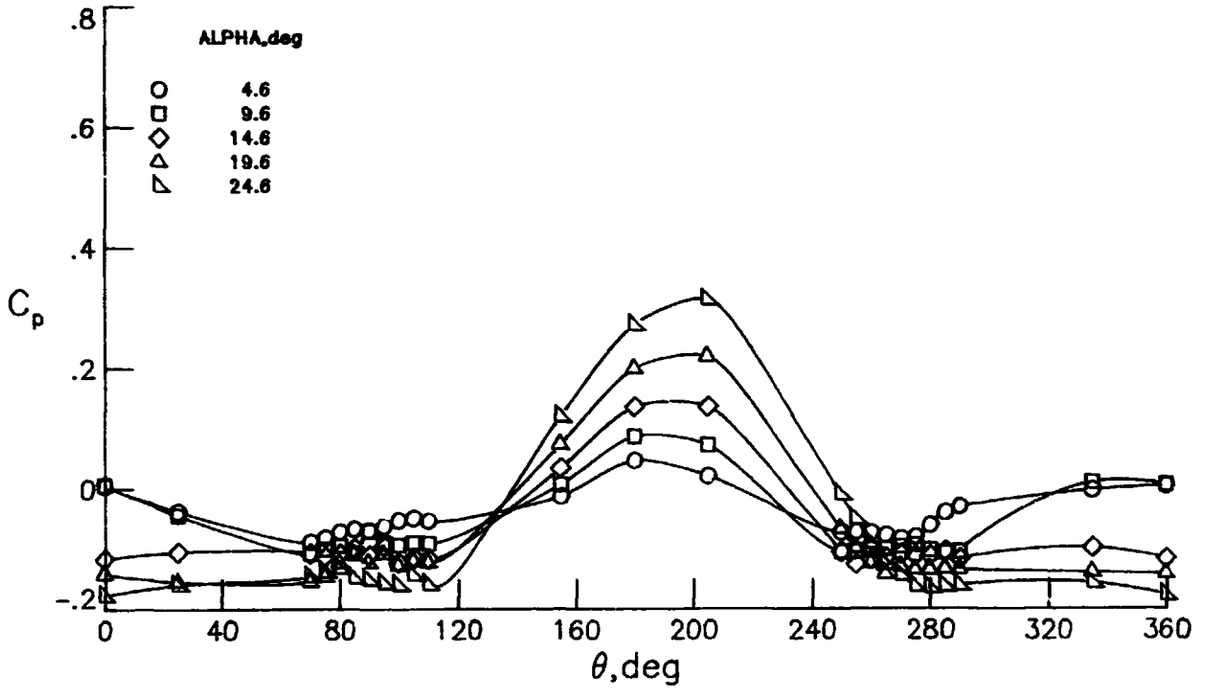


(a) X/L = 0.10.



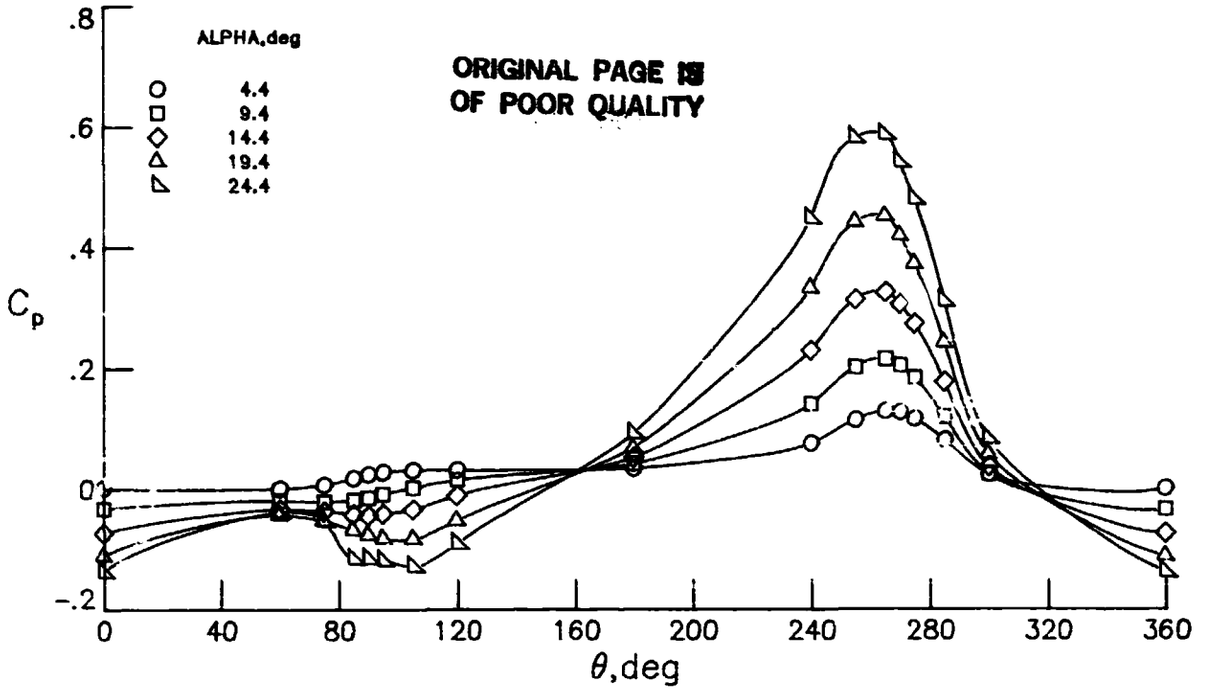
(b) X/L = 0.60.

Figure A15.- Body-alone pressure distributions. Blunt-nose body; ϕ = 45.0°.

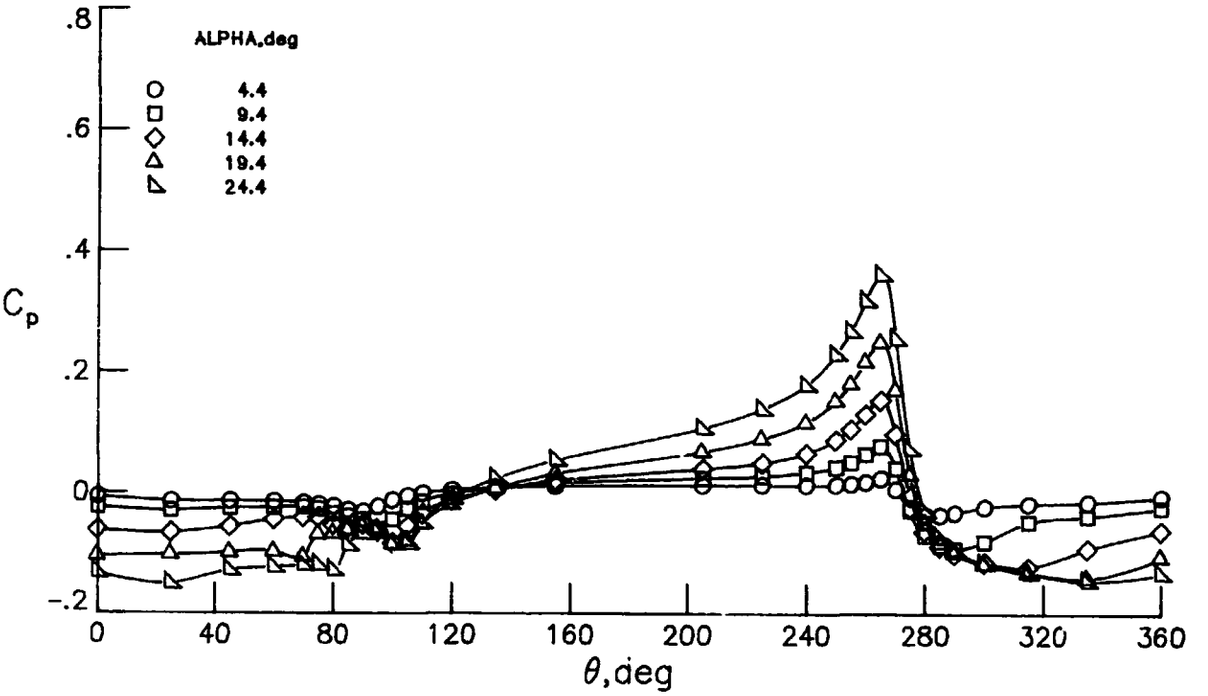


(c) X/L = 0.95.

Figure A15.- Concluded.

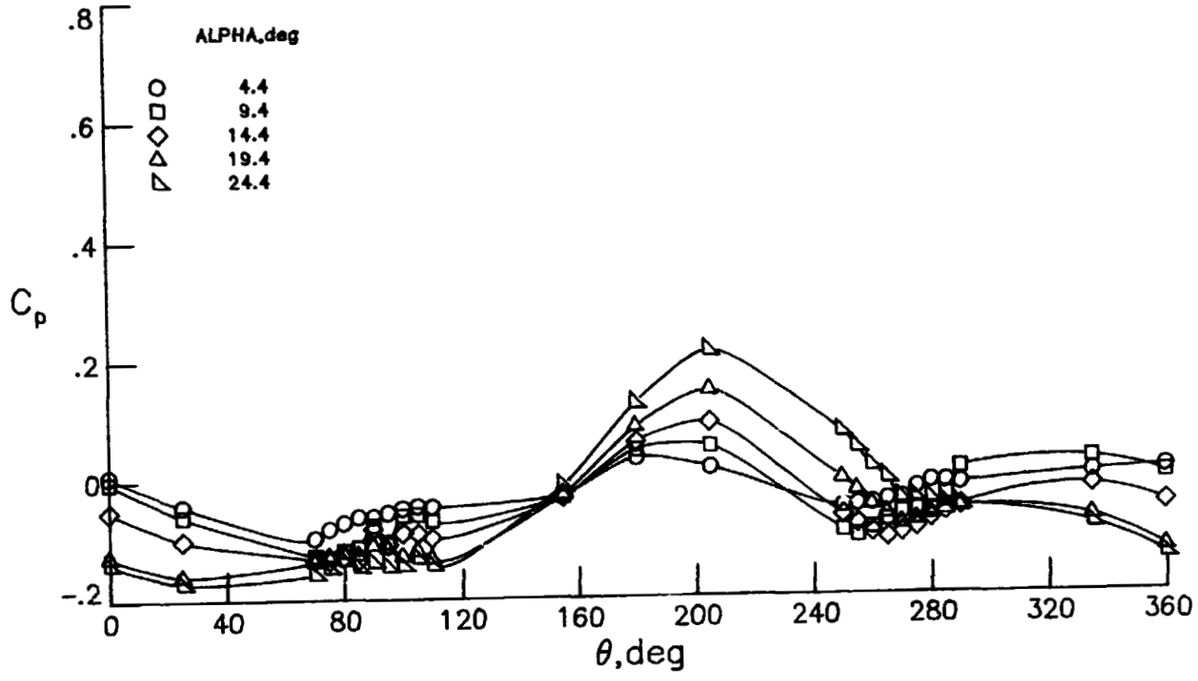


(a) X/L = 0.10.



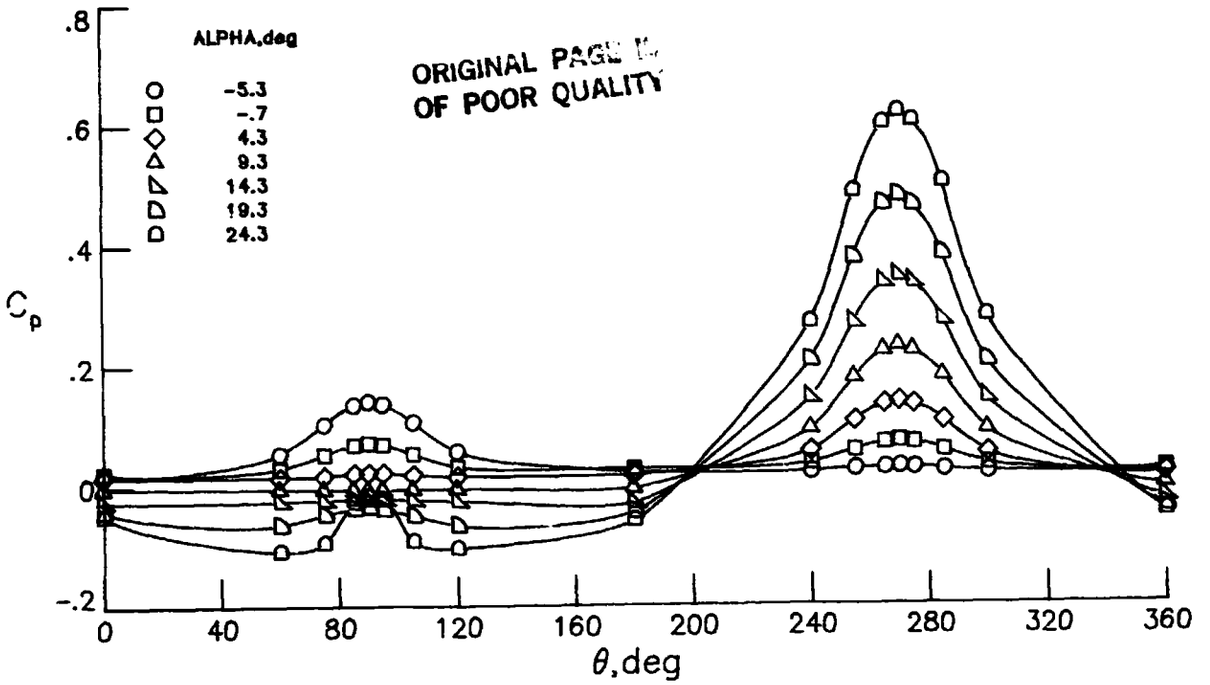
(b) X/L = 0.60.

Figure A16.- Body-alone pressure distributions. Blunt-nose body; ϕ = 67.5°.

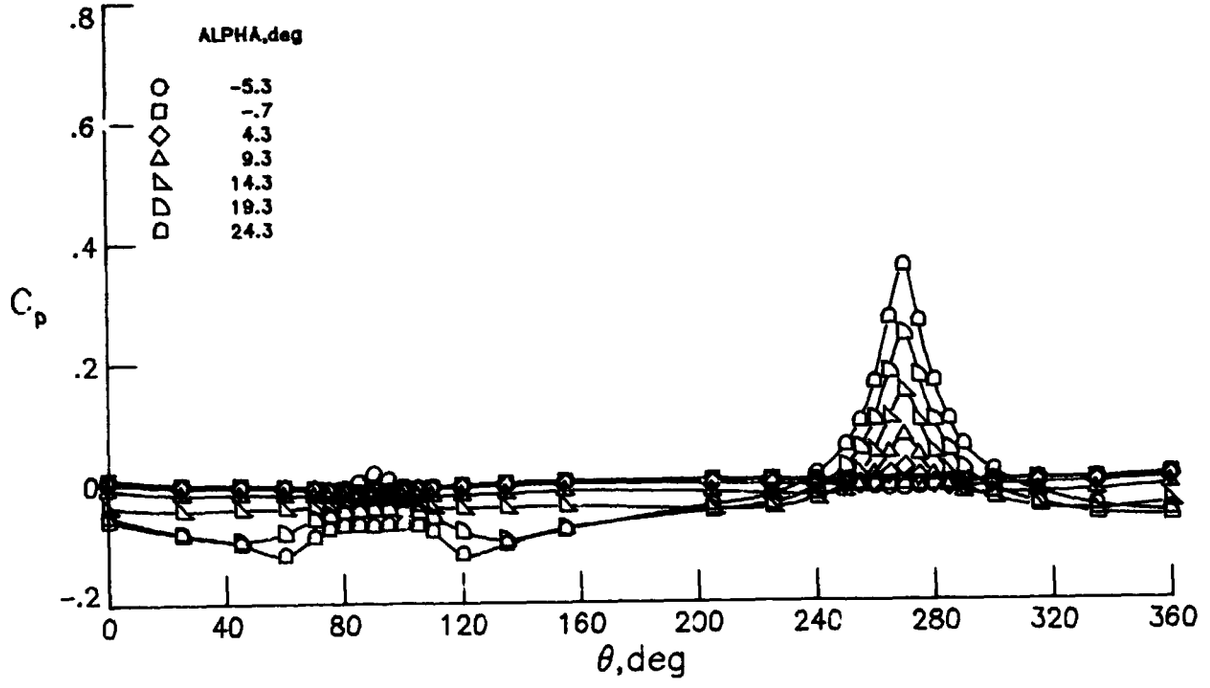


(c) X/L = 0.95.

Figure A16.- Concluded.

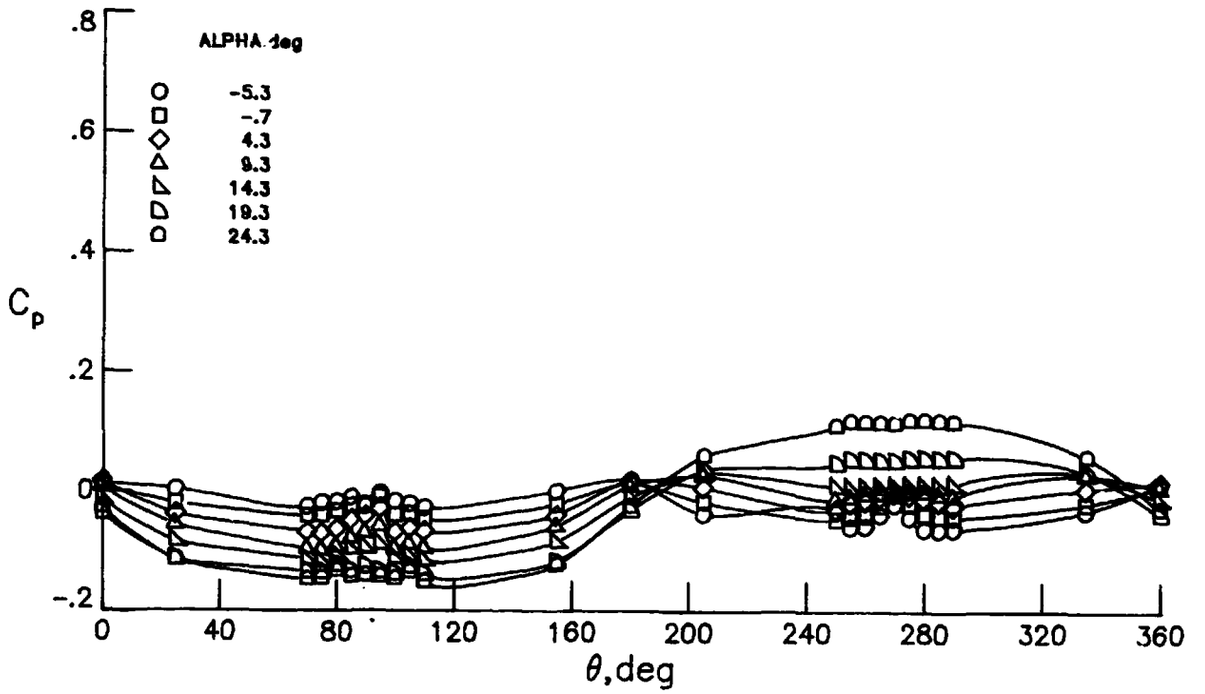


(a) X/L = 0.10.



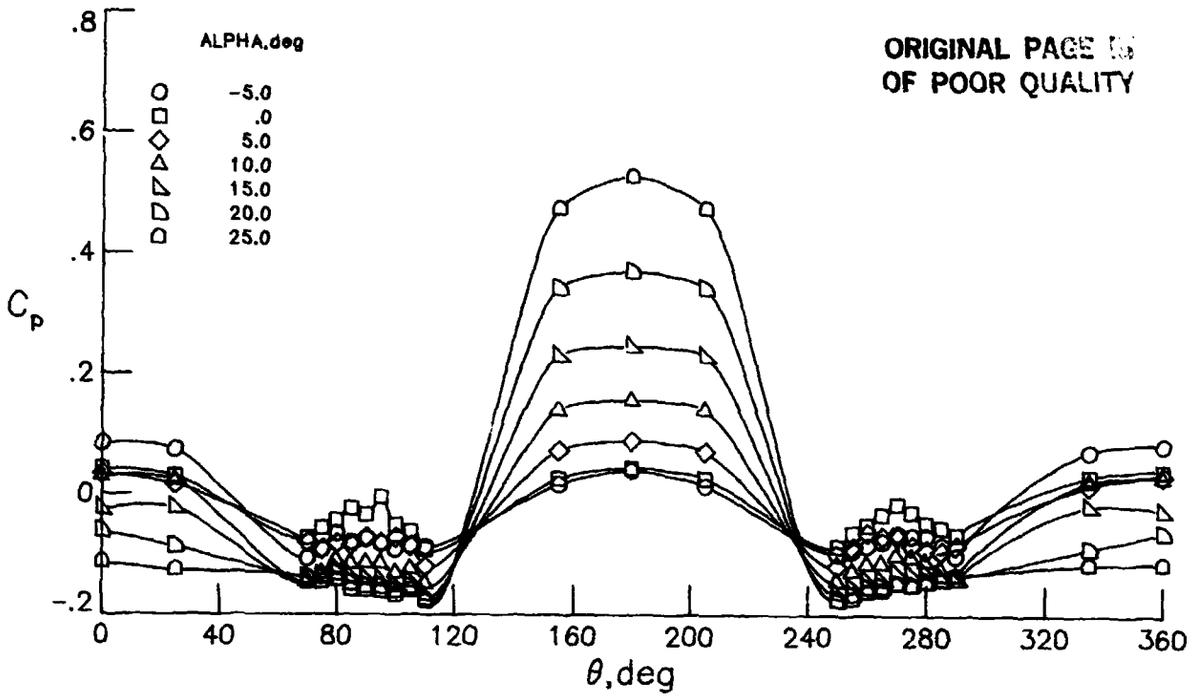
(b) X/L = 0.60.

Figure A17.- Body-alone pressure distributions. Blunt-nose body; ϕ = 90.0°.

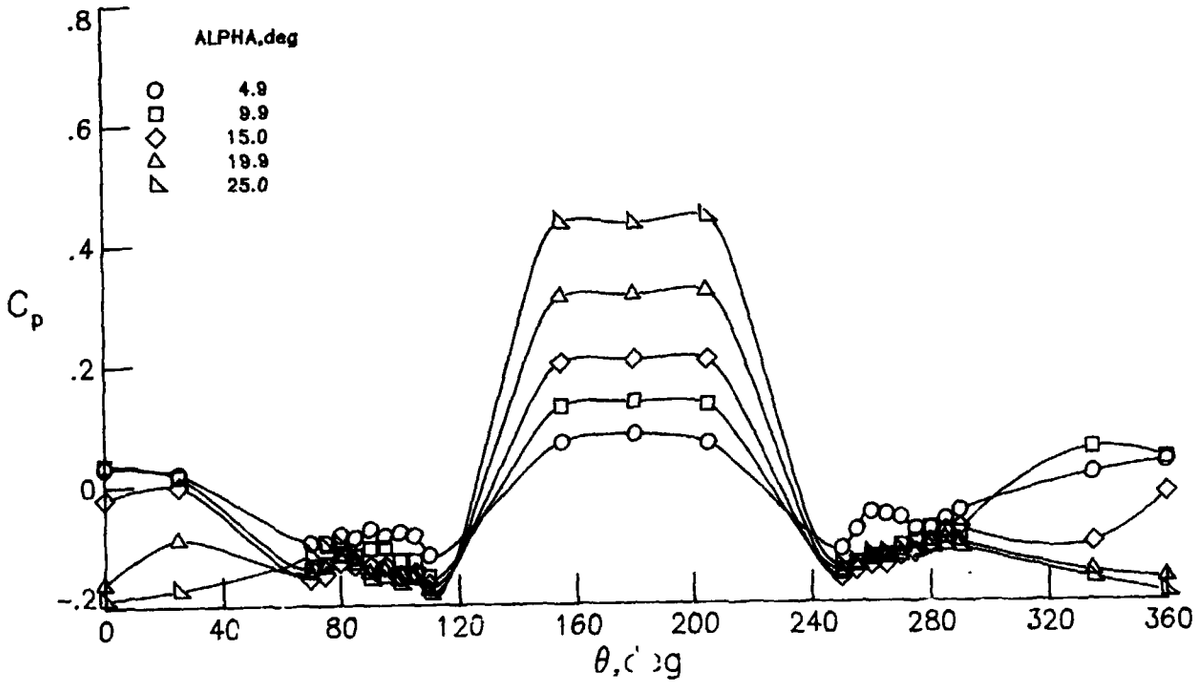


(c) X/L = 0.95.

Figure A17.- Concluded.

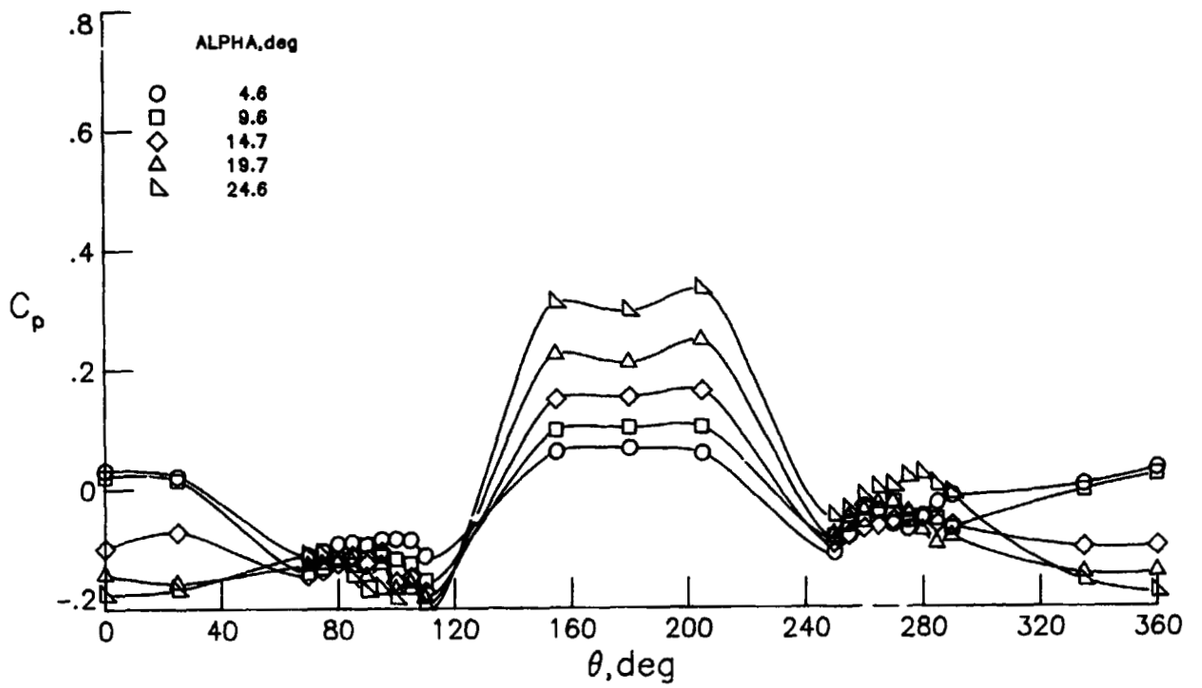


(a) $\phi = 0°$.



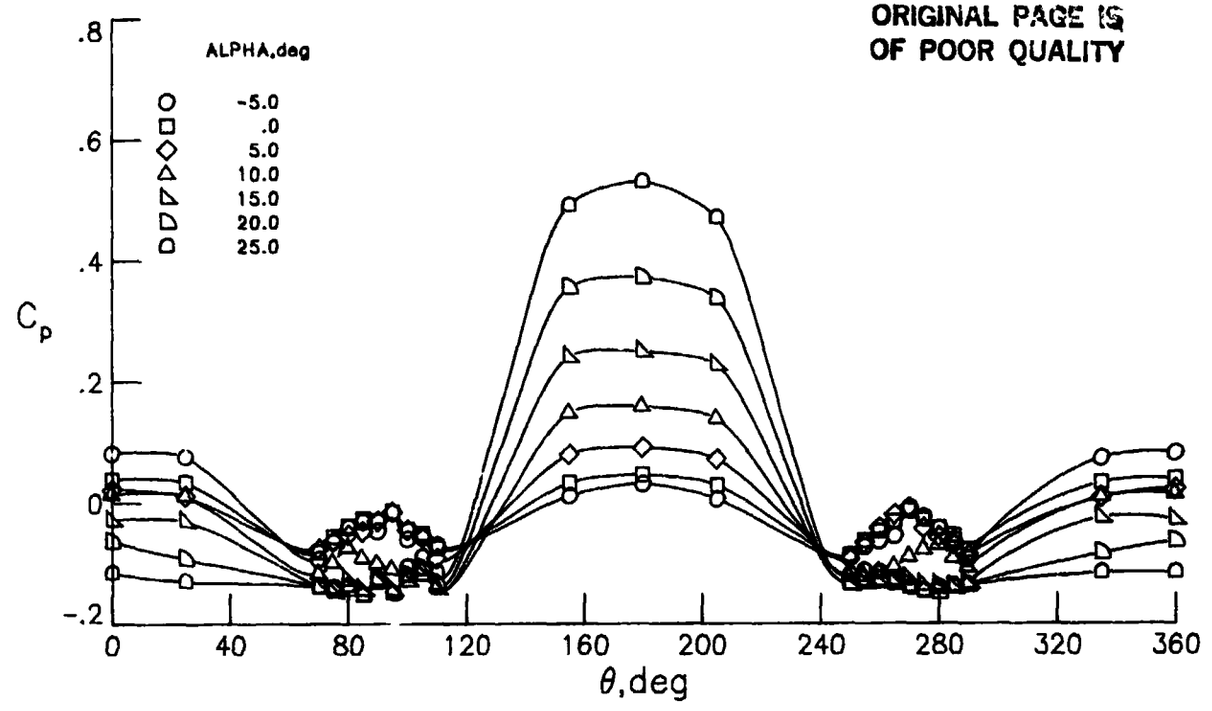
(b) $\phi = 22.5°$.

Figure A18.- Body pressure distributions for body-tail configuration. Blunt-nose body; no tail deflections; X/L = 0.95.

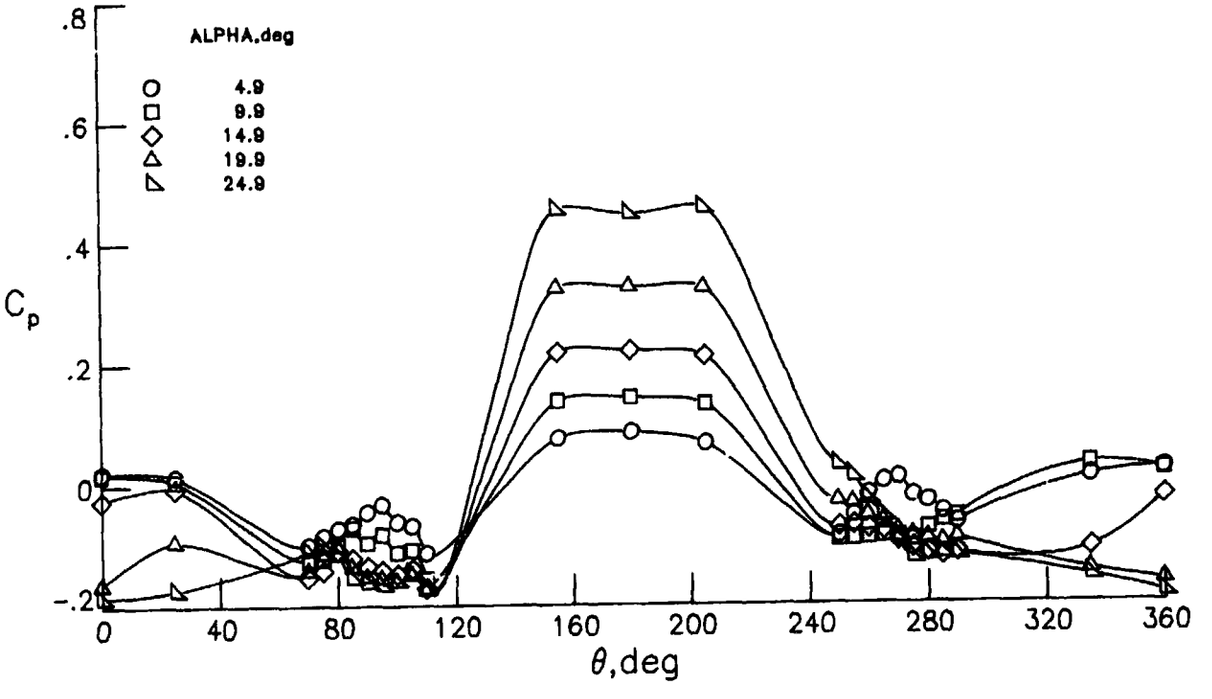


(c) $\phi = 45.0°$.

Figure A18.- Concluded.

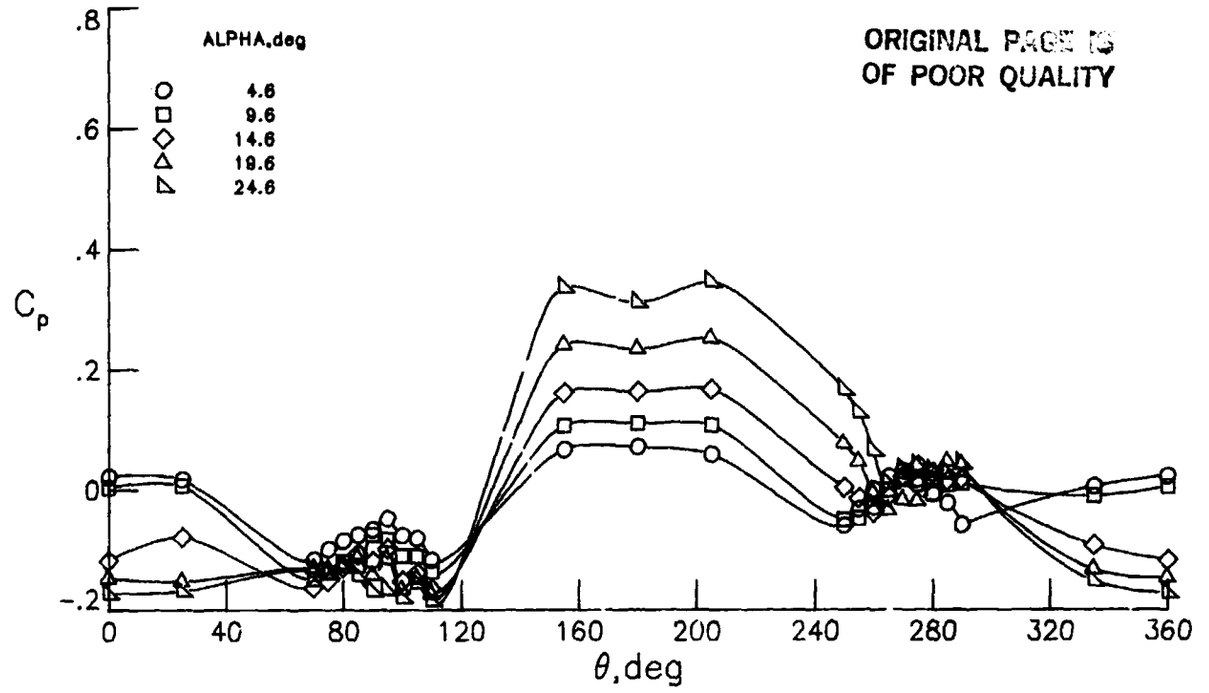


(a) $\phi = 0°$.

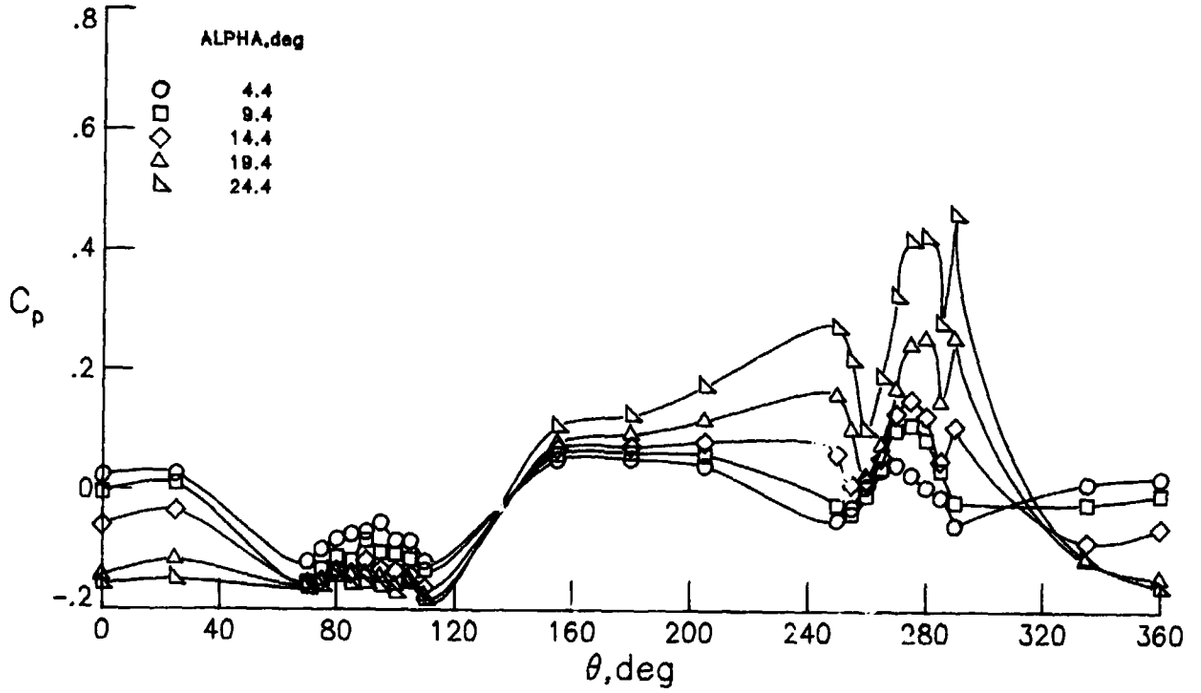


(b) $\phi = 22.5°$.

Figure A19.- Body pressure distributions for body-wing-tail configuration. Blunt-nose body; no tail deflections; X/L = 0.95.

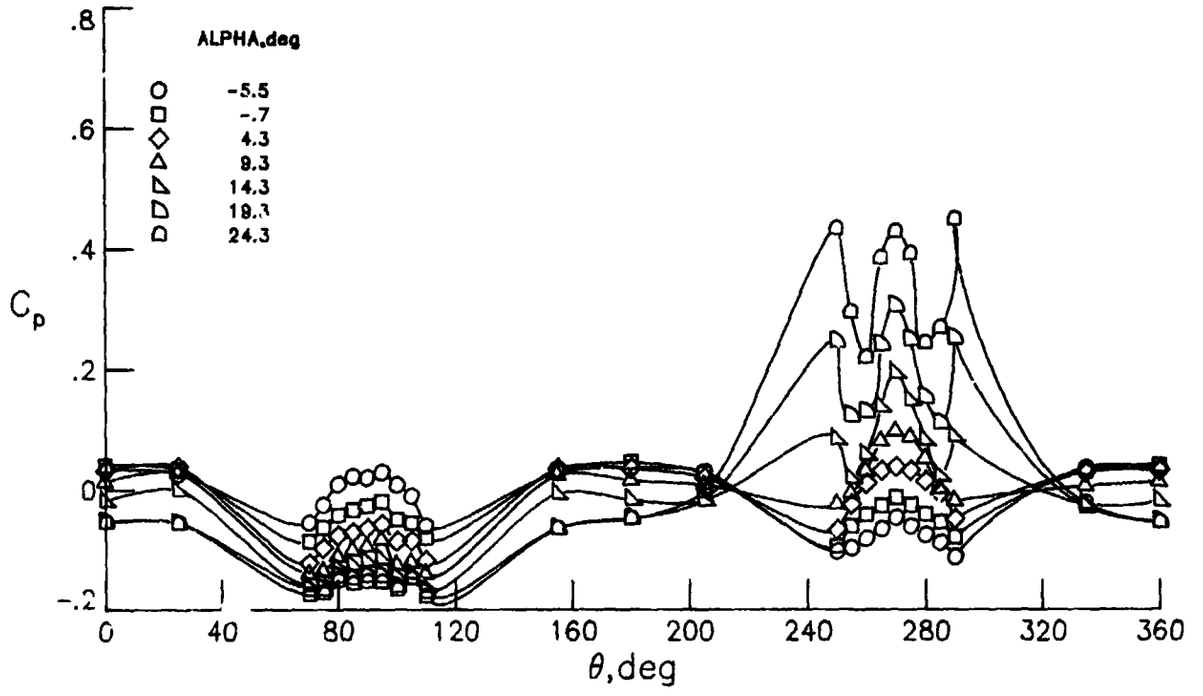


(c) ϕ = 45.0°.



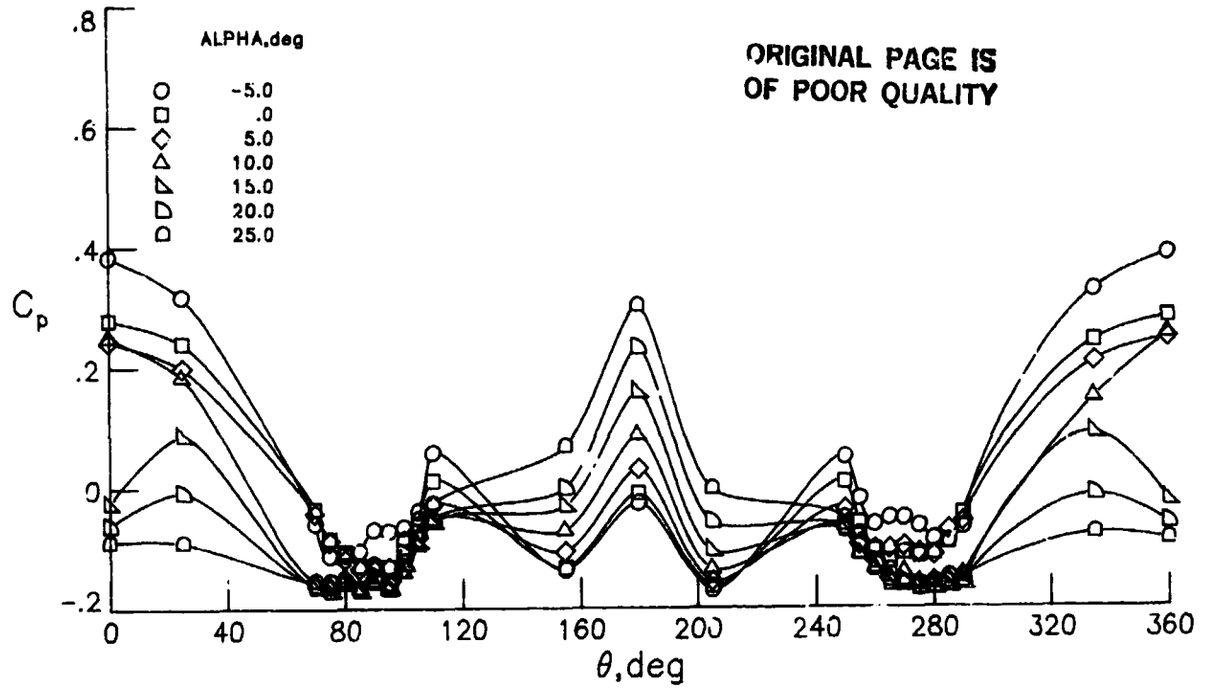
(d) ϕ = 67.5°.

Figure A19.- Continued.

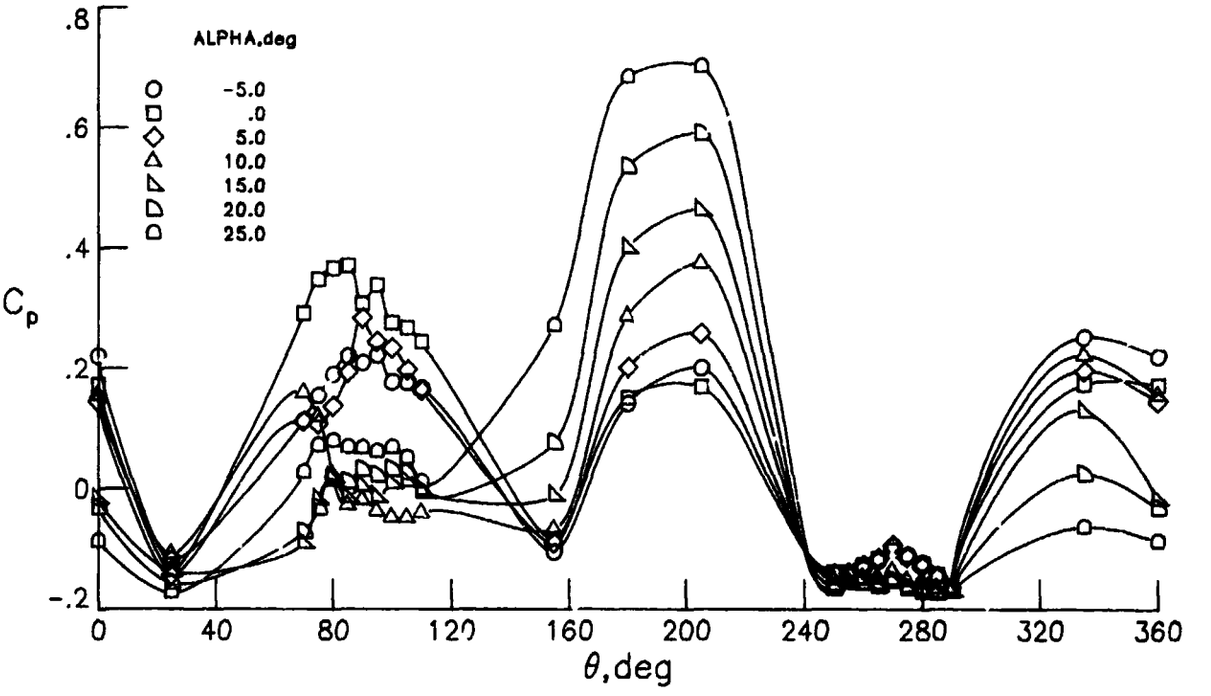


(e) ϕ = 90.0°.

Figure A19.- Concluded.

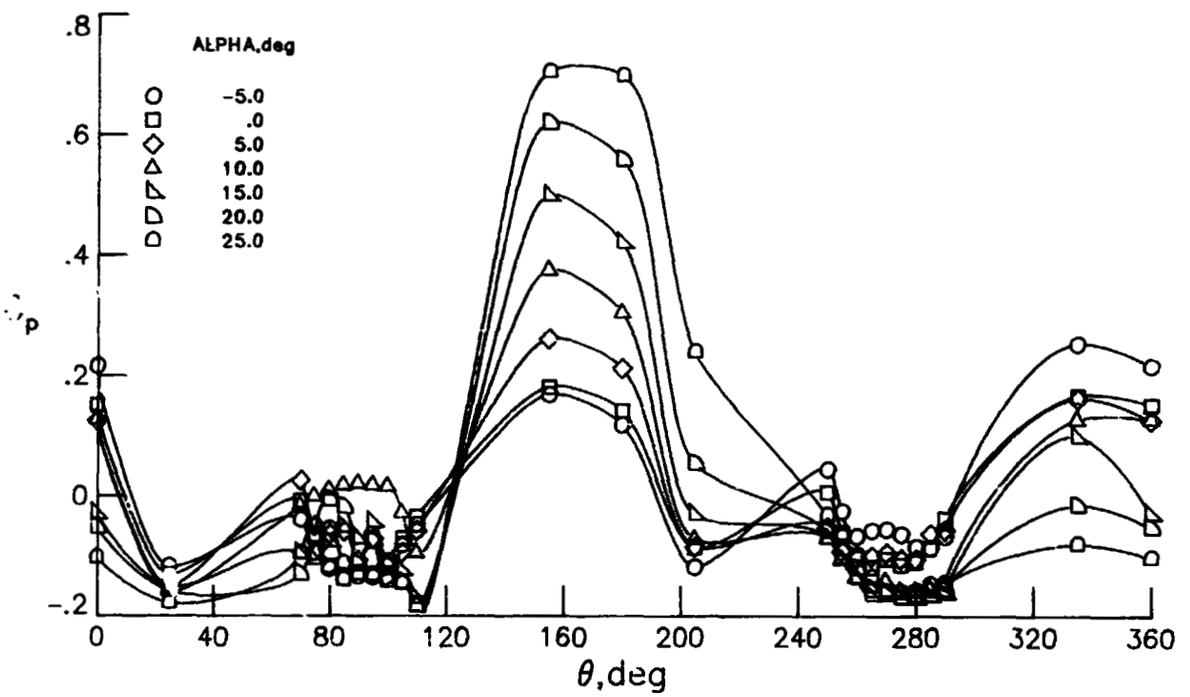


(a) Pitch deflection, 30°.



(b) Yaw deflection, 30°.

Figure A20.- Body pressure distributions for body-wing-tail configuration. Blunt-nose body; ϕ = 0°; X/L = 0.95.



(c) Roll deflection, 30°.

Figure A20.- Concluded.

REFERENCES

1. Graves, Ernald B.: Aerodynamic Characteristics of a Monoplanar Missile Concept With Bodies of Circular and Elliptical Cross Sections. NASA TM-74079, 1977.

2. Dillenius, Marnix F. E.; and Nielsen, Jack N.: Computer Programs for Calculating Pressure Distributions Including Vortex Effects on Supersonic Monoplane or Cruciform Wing-Body-Tail Combinations With Round or Elliptical Bodies. NASA CR-3122, 1979.

3. Graves, Ernald B.; and Fournier, Roger H.: Effect of Nose Bluntness and Afterbody Shape on Aerodynamic Characteristics of a Monoplanar Missile Concept With Bodies of Circular and Elliptical Cross Sections at a Mach Number of 2.50. NASA TM-80055, 1979.

4. Jackson, Charlie M., Jr.; Corlett, William A.; and Monta, William J.: Description and Calibration of the Langley Unitary Plan Wind Tunnel. NASA TP-1905, 1981.

TABLE 1.- PRESSURE COEFFICIENTS FOR SHARP-NOSE MODEL

(a) Body-alone configuration

ALPHA = -4.77, PHI 0.0, BODY ALONE

THETA DEG	CP AT X/L= 0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.85	0.95	THETA DEG
0	.132	.105	.091	.072	.064	.049	.012	-.012	-.015	0
25			.089			.044				25
30									-.015	30
45			.109			.045			-.018	45
60	.153	.110	.094	.071	.060	.040	.008	-.016		60
70			.092			.041				70
75	.149	.116	.100	.072	.050	.040	-.008	-.048		75
80			.091			.021			-.057	80
85	.164	.114	.077	.050	.028	-.007	-.057	-.083	-.063	85
90	.103	.063	.028	-.005	-.028	-.056			-.047	90
95	.032	.000	-.022	-.034	-.046	-.055	-.074	-.074	-.052	95
100			-.015			-.035			-.052	100
105	.010	.006	-.005	-.013	-.009	-.026	-.037	-.040		105
110			.000			-.019				110
120	.014	.008	.007	-.004	-.007	-.015	-.036	-.034		120
135			.009			-.014			-.023	135
150									-.024	150
155			.010			-.012				155
180	.019	.012	.010	.002	-.004	-.012	-.029	-.037	-.024	180
205			.007			-.011				205
210									-.024	210
225			.012			-.012			-.021	225
240	.013	.007	.003	-.001	-.005	-.014	-.033	-.035		240
250			.001			-.019				250
255	.008	-.005	-.008	-.010	-.018	-.025	-.044	-.040		255
260			-.016			-.034			-.052	260
265	.043	-.005	-.026	-.037	-.048	-.058	-.074	-.069	-.050	265
270	.107	.054	.023	-.005	-.034	-.060			-.047	270
275	.158	.109	.082	.054	.026	-.010	-.061	-.084	-.063	275
280			.105			.021			-.058	280
285	.148	.112	.095	.073	.056	.031	-.010	-.042		285
290			.093			.036				290
300	.140	.107	.093	.079	.062	.040	.008	-.018		300
315			.093			.042			-.017	315
330									-.018	330
335			.096			.042				335

ALPHA = -.01, PHI = 0.0, BODY ALONE

THETA DEG	CP AT X/L= 0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.85	0.95	THETA DEG
0	.064	.044	.032	.023	.016	.009	-.021	-.033	-.031	0
25			.031			.005				25
30									-.031	30
45			.055			.006			-.030	45
60	.085	.046	.037	.021	.015	.002	-.024	-.034		60
70			.035			.006				70
75	.077	.053	.046	.025	.021	.010	-.027	-.036		75
80			.042			.000			-.016	80
85	.110	.078	.052	.035	.023	.002	-.031	-.024	-.012	85
90	.122	.090	.069	.040	.022	.002			-.011	90
95	.110	.075	.053	.034	.018	.002	-.030	-.026	-.015	95
100			.044			.003			-.019	100
105	.077	.060	.041	.028	.023	.003	-.018	-.033		105
110			.038			.005				110
120	.064	.045	.038	.024	.014	.005	-.020	-.033		120
135			.037			.004			-.030	135
150									-.033	150
155			.035			.004				155
180	.063	.043	.036	.024	.015	.004	-.015	-.034	-.031	180
205			.033			.006				205
210									-.031	210
225			.038			.007			-.028	225
240	.064	.045	.033	.025	.018	.007	-.019	-.035		240
250			.037			.005				250
255	.075	.052	.036	.028	.017	.004	-.026	-.033		255
260			.042			.005			-.018	260
265	.115	.073	.051	.033	.021	.003	-.032	-.029	-.014	265
270	.131	.086	.063	.039	.024	.002			-.013	270
275	.112	.073	.059	.037	.021	.001	-.030	-.028	-.013	275
280			.059			.002			-.016	280
285	.077	.050	.042	.027	.016	.002	-.028	-.033		285
290			.036			.001				290
300	.068	.046	.035	.030	.015	.002	-.023	-.035		300
315			.033			.003			-.029	315
330									-.034	330
335			.037			.002				335

TABLE 1.- Continued

(a) Continued

ALPHA = 4.99, PHI = 0.0, BODY ALONE

THETA DEG	CP AT X/L= 0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.85	0.95	THETA DEG
0	.011	.002	-.004	-.009	-.013	-.013	-.037	-.041	-.028	0
25			-.004			-.019				25
30									-.027	30
45			.021			-.019			-.027	45
60	.029	-.001	-.003	-.015	-.017	-.025	-.042	-.038		60
70			-.013			-.025				70
75	-.001	-.012	-.007	-.025	-.023	-.026	-.054	-.053		75
80			-.028			-.049			-.065	80
85	.017	-.011	-.036	-.050	-.048	-.073	-.094	-.080	-.061	85
90	.091	.046	.018	-.019	-.043	-.072			-.056	90
95	.150	.104	.070	.041	.017	-.015	-.070	-.097	-.071	95
100			.085			.017			-.066	100
105	.140	.112	.087	.069	.058	.029	-.007	-.043		105
110			.086			.036				110
120	.125	.099	.088	.070	.056	.039	.004	-.017		120
135			.089			.040			-.018	135
150									-.018	150
155			.088			.040				155
180	.120	.096	.088	.070	.058	.038	.014	-.008	-.017	180
205			.087			.042				205
210									-.016	210
225			.092			.041			-.015	225
240	.127	.095	.087	.072	.059	.039	.007	-.020		240
250			.090			.034				250
255	.140	.099	.087	.071	.051	.028	-.012	-.044		255
260			.084			.016			-.070	260
265	.144	.089	.062	.038	.012	-.018	-.074	-.095	-.076	265
270	.100	.040	.012	-.018	-.051	-.076			-.060	270
275	.022	-.017	-.027	-.043	-.060	-.066	-.087	-.084	-.061	275
280			-.010			-.044			-.063	280
285	.001	-.017	-.015	-.023	-.027	-.034	-.053	-.047		285
290			-.012			-.029				290
300	.010	-.002	-.006	-.005	-.017	-.024	-.041	-.039		300
315			-.005			-.021			-.025	315
330									-.024	330
335			.002			-.022				335

ALPHA = 10.02, PHI = 0.0, BODY ALONE

THETA DEG	CP AT X/L= 0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.85	0.95	THETA DEG
0	-.025	-.027	-.029	-.032	-.032	-.030	-.055	-.058	-.053	0
25			-.031			-.037				25
30									-.059	30
45			-.004			-.037			-.063	45
60	-.021	-.037	-.035	-.043	-.039	-.045	-.066	-.071		60
70			-.112			-.126				70
75	-.073	-.094	-.096	-.115	-.114	-.111	-.141	-.110		75
80			-.114			-.116			-.094	80
85	-.083	-.112	-.124	-.115	-.111	-.112	-.120	-.109	-.095	85
90	.044	-.017	-.052	-.093	-.115	-.122			-.088	90
95	.177	.118	.068	.029	.005	-.032	-.091	-.121	-.101	95
100			.121			.040			-.060	100
105	.217	.181	.140	.116	.101	.069	.027	-.019		105
110			.146			.083				110
120	.210	.182	.150	.130	.114	.093	.055	.021		120
135			.150			.097			.025	135
150									.024	150
155			.149			.099				155
180	.205	.183	.150	.136	.123	.097	.067	.036	.024	180
205			.151			.103				205
210									.028	210
225			.155			.101			.028	225
240	.210	.181	.152	.129	.121	.095	.058	.022		240
250			.152			.083				250
255	.215	.174	.143	.113	.099	.070	.023	-.019		255
260			.125			.041			-.062	260
265	.156	.096	.059	.022	-.002	-.034	-.090	-.121	-.108	265
270	.057	-.015	-.059	-.091	-.120	-.123			-.095	270
275	-.071	-.110	-.103	-.108	-.119	-.111	-.118	-.112	-.100	275
280			-.082			-.116			-.094	280
285	-.075	-.093	-.105	-.113	-.122	-.128	-.143	-.117		285
290			-.113			-.135				290
300	-.041	-.025	-.030	-.024	-.039	-.047	-.064	-.070		300
315			-.032			-.041			-.060	315
330									-.060	330
335			-.023			-.040				335

TABLE 1.- Continued

(a) Continued

ALPHA = 15.02, PHI = 0.0, BODY ALONE

THETA DEG	CP AT X/L= 0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.85	0.95	THETA DEG
0	-.055	-.052	-.054	-.057	-.064	-.060	-.091	-.095	-.095	0
25			-.056			-.071				25
30									-.110	30
45			-.027			-.083			-.120	45
60	-.085	-.146	-.147	-.149	-.149	-.146	-.149	-.138		60
70			-.156			-.137				70
75	-.133	-.138	-.124	-.142	-.136	-.128	-.155	-.133		75
80			-.146			-.140			-.117	80
85	-.133	-.148	-.153	-.140	-.133	-.135	-.144	-.124	-.115	85
90	.009	-.055	-.075	-.114	-.135	-.142			-.108	90
95	.202	.133	.085	.039	.014	-.022	-.087	-.116	-.116	95
100			.177			.081			-.028	100
105	.300	.252	.215	.181	.160	.126	.075	.026		105
110			.230			.149				110
120	.306	.267	.245	.211	.193	.168	.120	.083		120
135			.252			.175			.091	135
150									.088	150
155			.255			.177				155
180	.304	.272	.256	.224	.205	.174	.141	.104	.092	180
205			.258			.182				205
210									.091	210
225			.257			.179			.092	225
240	.305	.268	.248	.213	.197	.172	.128	.082		240
250			.237			.154				250
255	.299	.245	.220	.184	.158	.131	.074	.025		255
260			.181			.084			-.031	260
265	.165	.101	.066	.032	.004	-.025	-.082	-.122	-.121	265
270	.022	-.049	-.089	-.115	-.143	-.148			-.112	270
275	-.122	-.150	-.135	-.133	-.142	-.133	-.141	-.128	-.116	275
280			-.112			-.138			-.117	280
285	-.133	-.142	-.143	-.145	-.152	-.151	-.156	-.133		285
290			-.158			-.152				290
300	-.126	-.145	-.157	-.139	-.156	-.145	-.150	-.137		300
315			-.061			-.090			-.119	315
330									-.113	330
335			-.048			-.076				335

ALPHA = 20.00, PHI = 0.0, BODY ALONE

THETA DEG	CP AT X/L= 0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.85	0.95	THETA DEG
0	-.079	-.083	-.089	-.093	-.103	-.095	-.125	-.126	-.132	0
25			-.095			-.112				25
30									-.144	30
45			-.088			-.133			-.152	45
60	-.106	-.161	-.158	-.164	-.164	-.165	-.169	-.156		60
70			-.168			-.147				70
75	-.156	-.155	-.135	-.154	-.143	-.135	-.167	-.149		75
80			-.161			-.153			-.134	80
85	-.153	-.164	-.167	-.154	-.147	-.147	-.156	-.139	-.133	85
90	-.018	-.075	-.089	-.126	-.143	-.151			-.125	90
95	.230	.159	.106	.059	.036	-.004	-.071	-.099	-.101	95
100			.238			.131			.015	100
105	.392	.340	.296	.261	.236	.196	.139	.083		105
110			.320			.230				110
120	.415	.377	.343	.313	.287	.257	.201	.158		120
135			.353			.270			.170	135
150									.167	150
155			.356			.276				155
180	.420	.389	.359	.337	.304	.272	.233	.187	.172	180
205			.359			.280				205
210									.170	210
225			.356			.275			.170	225
240	.416	.375	.345	.324	.292	.262	.213	.158		240
250			.327			.234				250
255	.394	.331	.299	.273	.233	.201	.139	.083		255
260			.240			.136			.011	260
265	.175	.116	.081	.055	.022	-.007	-.065	-.107	-.106	265
270	-.007	-.073	-.108	-.129	-.152	-.163			-.130	270
275	-.149	-.165	-.146	-.146	-.159	-.145	-.153	-.144	-.136	275
280			-.122			-.152			-.137	280
285	-.155	-.160	-.157	-.156	-.159	-.159	-.169	-.148		285
290			-.173			-.163				290
300	-.150	-.161	-.173	-.148	-.172	-.165	-.172	-.156		300
315			-.144			-.142			-.151	315
330									-.148	330
335			-.087			-.119				335

TABLE 1.- Continued

(a) Continued

ALPHA = 24.99, PHI = 0.0, BODY ALONE

THETA DEG	CP AT X/L= 0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.85	0.95	THETA DEG
0	-.105	-.113	-.124	-.124	-.133	-.118	-.149	-.145	-.152	0
25			-.133			-.137				25
30									-.159	30
45			-.104			-.150			-.161	45
60	-.112	-.171	-.163	-.169	-.169	-.172	-.177	-.161		60
70			-.176			-.154				70
75	-.169	-.163	-.140	-.162	-.150	-.141	-.175	-.161		75
80			-.169			-.165			-.150	80
85	-.163	-.171	-.175	-.164	-.158	-.158	-.167	-.151	-.148	85
90	-.040	-.090	-.097	-.131	-.145	-.151			-.139	90
95	.259	.183	.134	.083	.065	.020	-.047	-.075	-.079	95
100			.307			.192			.067	100
105	.490	.430	.389	.352	.326	.278	.216	.154		105
110			.426			.325				110
120	.539	.491	.460	.431	.401	.363	.302	.249		120
135			.474			.381			.269	135
150									.264	150
155			.481			.390				155
180	.552	.512	.484	.469	.426	.386	.343	.285	.269	180
205			.485			.396				205
210									.268	210
225			.479			.388			.270	225
240	.541	.492	.464	.443	.405	.370	.317	.251		240
250			.435			.329				250
255	.498	.426	.395	.368	.326	.284	.219	.155		255
260			.313			.198			.064	260
265	.190	.140	.109	.081	.052	.01[illegible]	-.039	-.085	-.081	265
270	-.032	-.088	-.117	-.133	-.152	-.166			-.145	270
275	-.163	-.174	-.154	-.156	-.172	-.155	-.165	-.157	-.152	275
280			-.129			-.164			-.154	280
285	-.167	-.169	-.166	-.168	-.170	-.169	-.178	-.161		285
290			-.179			-.171				290
300	-.160	-.172	-.180	-.153	-.179	-.172	-.180	-.163		300
315			-.172			-.162			-.161	315
330									-.165	330
335			-.125			-.146				335

ALPHA = 4.94, PHI = 22.5, BODY ALONE

THETA DEG	CP AT X/L= 0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.85	0.95	THETA DEG
0							-.037	-.042	-.028	0
25										25
30									-.028	30
45									-.028	45
60							-.039	-.037		60
70										70
75							-.048	-.046		75
80									-.045	80
85							-.075	-.069	-.050	85
90									-.046	90
95							-.081	-.081	-.057	95
100									-.067	100
105							-.018	-.055		105
110										110
120							-.003	-.026		120
135									-.021	135
150									-.021	150
155										155
180							.011	-.011	-.016	180
205										205
210									-.015	210
225									-.016	225
240							.009	-.016		240
250										250
255							-.004	-.035		255
260									-.057	260
265							-.053	-.094	-.078	265
270									-.067	270
275							-.084	-.088	-.067	275
280									-.068	280
285							-.053	-.047		285
290										290
300							-.041	-.040		300
315									-.027	315
330									-.030	330
335										335

TABLE 1.- Continued

(a) Continued

ALPHA = 9.92, PHI = 22.5, BODY ALONE

THETA DEG	CP AT X/L= 0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.85	0.95	THETA DEG
0							-.055	-.059	-.054	0
25										25
30									-.055	30
45									-.059	45
60							-.061	-.068		60
70										70
75							-.127	-.111		75
80									-.068	80
85							-.110	-.085	-.061	85
90									-.061	90
95							-.120	-.088	-.067	95
100									-.081	100
105							-.007	-.044		105
110										110
120							.032	.002		120
135									.013	135
150									.015	150
155										155
180							.059	.028	.022	180
205										205
210									.027	210
225									.027	225
240							.063	.028		240
250										250
255							.043	-.000		255
260									-.037	260
265							-.05[illegible]	-.102	-.105	265
270									-.118	270
275							-.134	-.126	-.120	275
280									-.134	280
285							-.142	-.148		285
290										290
300							-.092	-.072		300
315									-.056	315
330									-.056	330
335										335

ALPHA = 14.95, PHI = 22.5, BODY ALONE

THETA DEG	CP AT X/L= 0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.85	0.95	THETA DEG
0							-.084	-.086	-.089	0
25										25
30									-.095	30
45									-.100	45
60							-.103	-.107		60
70										70
75							-.135	-.106		75
80									-.081	80
85							-.119	-.094	-.077	85
90									-.074	90
95							-.126	-.096	-.078	95
100									-.069	100
105							.024	-.014		105
110										110
120							.083	.051		120
135									.065	135
150									.068	150
155										155
180							.126	.090	.076	180
205										205
210									.087	210
225									.089	225
240							.138	.093		240
250										250
255							.110	.056		255
260									.007	260
265							-.024	-.083	-.084	265
270									-.130	270
275							-.151	-.138	-.137	275
280									-.147	280
285							-.159	-.163		285
290										290
300							-.164	-.152		300
315									-.147	315
330									-.125	330
335										335

TABLE 1.- Continued

(a) Continued

ALPHA = 19.96, PHI = 22.5, BODY ALONE

THETA DEG	CP AT X/L= 0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.85	0.95	THETA DEG
0							-.148	-.139	-.146	0
25										25
30									-.148	30
45									-.140	45
60							-.137	-.135		60
70										70
75							-.137	-.115		75
80									-.104	80
85							-.123	-.100	-.087	85
90									-.087	90
95							-.123	-.105	-.086	95
100									-.042	100
105							.067	.026		105
110										110
120							.147	.112		120
135									.133	135
150									.138	150
155										155
180							.212	.167	.152	180
205										205
210									.166	210
225									.171	225
240							.232	.173		240
250										250
255							.194	.129		255
260									.067	260
265							.015	-.053	-.051	265
270									-.148	270
275							-.164	-.157	-.155	275
280									-.162	280
285							-.172	-.167		285
290										290
300							-.181	-.173		300
315									-.175	315
330									-.176	330
335										335

ALPHA = 24.94, PHI = 22.5, BODY ALONE

THETA DEG	CP AT X/L= 0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.85	0.95	THETA DEG
0							-.172	-.158	-.167	0
25										25
30									-.179	30
45									-.174	45
60							-.149	-.151		60
70										70
75							-.140	-.125		75
80									-.120	80
85							-.124	-.100	-.090	85
90									-.089	90
95							-.114	-.110	-.092	95
100									-.007	100
105							.119	.074		105
110										110
120							.224	.185		120
135									.218	135
150									.224	150
155										155
180							.311	.259	.243	180
205										205
210									.259	210
225									.269	225
240							.339	.273		240
250										250
255							.292	.216		255
260									.138	260
265							.063	-.015	-.010	265
270									-.161	270
275							-.179	-.173	-.177	275
280									-.181	280
285							-.184	-.178		285
290										290
300							-.187	-.179		300
315									-.184	315
330									-.189	330
335										335

TABLE 1.- Continued

(a) Continued

ALPHA = 4.79, PHI = 45.0, BODY ALONE

THETA DEG	CP AT X/L= 0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.85	0.95	THETA DEG
0							-.036	-.043	-.031	0
25										25
30									-.030	30
45									-.030	45
60							-.035	-.038		60
70										70
75							-.039	-.039		75
80									-.027	80
85							-.054	-.056	-.040	85
90									-.032	90
95							-.076	-.059	-.038	95
100									-.051	100
105							-.029	-.063		105
110										110
120							-.014	-.036		120
135									-.031	135
150									-.030	150
155										155
180							.002	-.019	-.023	180
205										205
210									-.020	210
225									-.019	225
240							.005	-.017		240
250										250
255							-.001	-.028		255
260									-.039	260
265							-.030	-.069	-.061	265
270									-.064	270
275							-.065	-.072	-.057	275
280									-.051	280
285							-.050	-.039		285
290										290
300							-.040	-.039		300
315									-.029	315
330									-.033	330
335										335

ALPHA = 9.78, PHI = 45.0, BODY ALONE

THETA DEG	CP AT X/L= 0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.85	0.95	THETA DEG
0							-.054	-.058	-.052	0
25										25
30									-.053	30
45									-.056	45
60							-.052	-.060		60
70										70
75							-.071	-.081		75
80									-.050	80
85							-.083	-.064	-.039	85
90									-.036	90
95							-.094	-.062	-.040	95
100									-.060	100
105							-.036	-.070		105
110										110
120							.001	-.025		120
135									-.012	135
150									-.008	150
155										155
180							.035	.007	.003	180
205										205
210									.011	210
225									.015	225
240							.050	.019		240
250										250
255							.046	.009		255
260									-.013	260
265							-.008	-.065	-.066	265
270									-.135	270
275							-.140	-.143	-.135	275
280									-.144	280
285							-.131	-.149		285
290										290
300							-.071	-.065		300
315									-.056	315
330									-.057	330
335										335

TABLE 1.- Continued

(a) Continued

ALPHA = 14.80, PHI = 45.0, BODY ALONE

THETA DEG	CP AT X/L= 0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.85	0.95	THETA DEG
0							-.092	-.092	-.101	0
25										25
30									-.095	30
45									-.090	45
60							-.084	-.091		60
70										70
75							-.108	-.093		75
80									-.055	80
85							-.090	-.073	-.055	85
90									-.042	90
95							-.091	-.067	-.049	95
100									-.071	100
105							-.031	-.062		105
110										110
120							.027	.001		120
135									.021	135
150									.028	150
155										155
180							.082	.051	.041	180
205										205
210									.057	210
225									.065	225
240							.115	.075		240
250										250
255							.117	.067		255
260									.041	260
265							.040	-.028	-.026	265
270									-.148	270
275							-.154	-.159	-.159	275
280									-.163	280
285							-.159	-.164		285
290										290
300							-.147	-.148		300
315									-.153	315
330									-.143	330
335										335

ALPHA = 19.76, PHI = 45.0, BODY ALONE

THETA DEG	CP AT X/L= 0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.85	0.95	THETA DEG
0							-.148	-.141	-.154	0
25										25
30									-.165	30
45									-.159	45
60							-.120	-.137		60
70										70
75							-.116	-.102		75
80									-.090	80
85							-.097	-.083	-.077	85
90									-.054	90
95							-.093	-.074	-.056	95
100									-.080	100
105							-.011	-.043		105
110										110
120							.064	.039		120
135									.067	135
150									.078	150
155										155
180							.145	.108	.100	180
205										205
210									.119	210
225									.133	225
240							.196	.147		240
250										250
255							.205	.141		255
260									.112	260
265							.105	.025	.028	265
270									-.145	270
275							-.156	-.177	-.176	275
280									-.178	280
285							-.178	-.176		285
290										290
300							-.173	-.173		300
315									-.179	315
330									-.181	330
335										335

TABLE 1.- Continued

(a) Continued

ALPHA = 24.78, PHI = 45.0, BODY ALONE

THETA DEG	CP AT X/L= 0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.85	0.95	THETA DEG
0							-.166	-.155	-.166	0
25										25
30									-.177	30
45									-.178	45
60							-.170	-.165		60
70										70
75							-.132	-.156		75
80									-.150	80
85							-.101	-.102	-.107	85
90									-.084	90
95							-.092	-.084	-.086	95
100									-.078	100
105							.011	-.017		105
110										110
120							.112	.085		120
135									.126	135
150									.140	150
155										155
180							.219	.177	.170	180
205										205
210									.194	210
225									.215	225
240							.293	.236		240
250										250
255							.307	.235		255
260									.200	260
265							.186	.091	.097	265
270									-.130	270
275							-.155	-.180	-.184	275
280									-.185	280
285							-.183	-.177		285
290										290
300							-.180	-.174		300
315									-.182	315
330									-.186	330
335										335

ALPHA = 4.61, PHI = 67.5, BODY ALONE

THETA DEG	CP AT X/L= 0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.85	0.95	THETA DEG
0							-.033	-.042	-.035	0
25										25
30									-.034	30
45									-.036	45
60							-.033	-.040		60
70										70
75							-.035	-.036		75
80									-.021	80
85							-.038	-.032	-.021	85
90									-.023	90
95							-.054	-.038	-.023	95
100									-.030	100
105							-.033	-.060		105
110										110
120							-.024	-.045		120
135									-.038	135
150									-.037	150
155										155
180							-.010	-.029	-.029	180
205										205
210									-.027	210
225									-.029	225
240							-.005	-.024		240
250										250
255							-.006	-.025		255
260									-.023	260
265							-.015	-.038	-.028	265
270									-.040	270
275							-.039	-.045	-.033	275
280									-.025	280
285							-.037	-.037		285
290										290
300							-.034	-.037		300
315									-.031	315
330									-.037	330
335										335

TABLE 1.- Continued

(a) Continued

ALPHA = 9.62, PHI = 67.5, BODY ALONE

THETA DEG	CP AT X/L= 0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.85	0.95	THETA DEG
0							-.049	-.056	-.052	0
25										25
30									-.053	30
45									-.057	45
60							-.045	-.057		60
70										70
75							-.047	-.057		75
80									-.039	80
85							-.058	-.049	-.033	85
90									-.028	90
95							-.064	-.043	-.028	95
100									-.031	100
105							-.056	-.087		105
110										110
120							-.032	-.053		120
135									-.041	135
150									-.036	150
155										155
180							- .01	-.023	-.024	180
205										205
210									-.017	210
225									-.010	225
240							.019	-.005		240
250										250
255							.027	.002		255
260									.001	260
265							.020	-.024	-.022	265
270									-.082	270
275							-.071	-.092	-.092	275
280									-.087	280
285							-.073	-.079		285
290										290
300							-.057	-.053		300
315									-.052	315
330									-.057	330
335										335

ALPHA = 14.61, PHI = 67.5, BODY ALONE

THETA DEG	CP AT X/L= 0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.85	0.95	THETA DEG
0							-.079	-.083	-.086	0
25										25
30									-.091	30
45									-.091	45
60							-.072	-.085		60
70										70
75							-.072	-.074		75
80									-.058	80
85							-.065	-.061	-.055	85
90									-.043	90
95							-.065	-.055	-.037	95
100									-.039	100
105							-.075	-.098		105
110										110
120							-.035	-.054		120
135									-.035	135
150									-.026	150
155										155
180							.017	-.006	-.010	180
205										205
210									.004	210
225									.016	225
240							.059	.028		240
250										250
255							.083	.045		255
260									.051	260
265							.082	.021	.026	265
270									-.072	270
275							-.066	-.116	-.130	275
280									-.144	280
285							-.105	-.122		285
290										290
300							-.109	-.115		300
315									-.109	315
330									-.101	330
335										335

TABLE 1.- Continued

(a) Continued

ALPHA = 19.63, PHI = 67.5, BODY ALONE

THETA DEG	CP AT X/L= 0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.85	0.95	THETA DEG
0							-.135	-.133	-.144	0
25										25
30									-.156	30
45									-.142	45
60							-.107	-.117		60
70										70
75							-.092	-.094		75
80									-.092	80
85							-.080	-.083	-.085	85
90									-.056	90
95							-.077	-.071	-.059	95
100									-.063	100
105							-.082	-.105		105
110										110
120							-.028	-.044		120
135									-.017	135
150									-.004	150
155										155
180							.046	.022	.019	180
205										205
210									.038	210
225									.055	225
240							.112	.076		240
250										250
255							.153	.107		255
260									.117	260
265							.164	.088	.093	265
270									-.030	270
275							-.046	-.105	-.121	275
280									-.156	280
285							-.110	-.135		285
290										290
300							-.129	-.137		300
315									-.152	315
330									-.156	330
335										335

ALPHA = 24.61, PHI = 67.5, BODY ALONE

THETA DEG	CP AT X/L= 0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.85	0.95	THETA DEG
							-.147	-.144	-.155	0
25										25
30									-.157	30
45									-.143	45
60							-.144	-.131		60
70										70
75							-.124	-.119		75
80									-.108	80
85							-.119	-.115	-.112	85
90									-.108	90
95							-.091	-.112	-.118	95
100									-.124	100
105							-.079	-.101		105
110										110
120							-.012	-.026		120
135									.010	135
150									.027	150
155										155
180							.084	.058	.054	180
205										205
210									.081	210
225									.104	225
240							.173	.133		240
250										250
255							.234	.180		255
260									.196	260
265							.261	.169	.177	265
270									.024	270
275							-.017	-.084	-.100	275
280									-.148	280
285							-.108	-.138		285
290										290
300							-.133	-.142		300
315									-.160	315
330									-.165	330
335										335

TABLE 1.- Continued

(a) Continued

ALPHA = -4.97, PHI = 90.0, BODY ALONE

THETA DEG	CP AT X/L= 0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.85	0.95	THETA DEG
0	.058	.040	.031	.023	.016	.008	-.023	-.036	-.035	0
25			.030			.004				25
30									-.034	30
45			.054			.006			-.033	45
60	.085	.048	.039	.022	.018	.004	-.021	-.033		60
70			.040			.011				70
75	.091	.063	.054	.030	.027	.016	-.021	-.034		75
80			.057			.010			-.017	80
85	.153	.116	.084	.059	.046	.018	-.022	-.028	-.014	85
90	.188	.145	.115	.076	.056	.024			-.011	90
95	.162	.118	.087	.061	.043	.018	-.021	-.027	-.015	95
100			.064			.011			-.019	100
105	.100	.077	.054	.036	.032	.008	-.013	-.031		105
110			.048			.008				110
120	.073	.055	.044	.027	.019	.005	-.020	-.033		120
135			.041			.002			-.034	135
150									-.037	150
155			.038			.001				155
180	.063	.047	.037	.025	.013	.000	-.020	-.038	-.037	180
205			.032			.002				205
210									-.039	210
225			.038			.001			-.038	225
240	.058	.042	.031	.021	.013	-.001	-.026	-.045		240
250			.033			-.005				250
255	.061	.041	.030	.020	.010	-.006	-.033	-.040		255
260			.031			-.006			-.019	260
265	.074	.046	.031	.018	.007	-.007	-.034	-.028	-.015	265
270	.079	.048	.034	.018	.007	-.007			-.012	270
275	.070	.045	.036	.021	.009	-.007	-.030	-.028	-.014	275
280			.043			-.004			-.018	280
285	.057	.037	.032	.019	.010	-.004	-.032	-.038		285
290			.029			-.004				290
300	.058	.037	.030	.026	.012	-.002	-.026	-.042		300
315			.030			-.000			-.039	315
330									-.039	330
335			.035			-.001				335

ALPHA = -.53, PHI = 90.0, BODY ALONE

THETA DEG	CP AT X/L= 0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.85	0.95	THETA DEG
0	.061	.041	.032	.022	.015	.010	-.020	-.034	-.031	0
25			.030			.004				25
30									-.031	30
45			.052			.005			-.033	45
60	.079	.045	.034	.017	.014	.001	-.023	-.034		60
70			.031			.005				70
75	.070	.050	.041	.020	.019	.009	-.028	-.036		75
80			.037			-.000			-.017	80
85	.103	.073	.047	.029	.020	-.000	-.032	-.025	-.014	85
90	.118	.086	.065	.033	.020	-.003			-.012	90
95	.108	.075	.047	.026	.018	-.004	-.033	-.029	-.015	95
100			.040			-.003			-.023	100
105	.077	.060	.037	.024	.023	-.004	-.022	-.036		105
110			.035			-.002				110
120	.065	.046	.035	.021	.015	-.002	-.024	-.036		120
135			.035			-.002			-.035	135
150									-.036	150
155			.034			-.002				155
180	.065	.046	.034	.025	.013	-.001	-.018	-.035	-.034	180
205			.034			.004				205
210									-.032	210
225			.040			.005			030	225
240	.066	.048	.035	.026	.018	.005	-.019	-.036		240
250			.040			.004				250
255	.078	.055	.040	.030	.019	.004	-.025	-.035		255
260			.046			.005			-.019	260
265	.118	.076	.054	.037	.025	.005	-.030	-.029	-.014	265
270	.132	.085	.063	.040	.026	.005			-.013	270
275	.109	.069	.056	.036	.023	.003	-.027	-.027	-.013	275
280			.054			.005			-.015	280
285	.073	.047	.039	.025	.018	.004	-.025	-.032		285
290			.035			.003				290
300	.065	.042	.034	.028	.016	.003	-.020	-.034		300
315			.033			.004			-.029	315
330									-.033	330
335			.037			.002				335

TABLE 1.- Continued

(a) Continued

ALPHA = 4.49, PHI = 90.0, BODY ALONE

THETA DEG	CP AT X/L= 0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.85	0.95	THETA DEG
0	.056	.033	.025	.018	.011	.005	-.025	-.037	-.036	0
25			.021			-.001				25
30									-.037	30
45			.042			-.001			-.043	45
60	.072	.033	.023	.011	.006	-.006	-.030	-.044		60
70			.018			-.003				70
75	.083	.034	.028	.009	.007	-.000	-.036	-.042		75
80			.019			-.012			-.021	80
85	.071	.040	.020	.009	.002	-.012	-.036	-.028	-.017	85
90	.062	.042	.028	.008	-.002	-.012			-.014	90
95	.065	.040	.020	.008	-.002	-.013	-.037	-.029	-.019	95
100			.021			-.012			-.022	100
105	.056	.042	.023	.010	.011	-.011	-.033	-.043		105
110			.023			-.009				110
120	.054	.034	.026	.012	.005	-.008	-.031	-.047		120
135			.027			-.007			-.041	135
150									-.041	150
155			.028			-.005				155
180	.054	.038	.029	.020	.009	-.003	-.024	-.039	-.036	180
205			.031			.000				205
210									-.034	210
225			.040			.001			-.030	225
240	.064	.047	.039	.028	.021	.004	-.021	-.033		240
250			.049			.008				250
255	.089	.062	.053	.039	.027	.010	-.019	-.028		255
260			.066			.016			-.016	260
265	.171	.119	.094	.071	.051	.025	-.016	-.026	-.012	265
270	.200	.144	.119	.087	.063	.032			-.012	270
275	.160	.109	.094	.067	.047	.021	-.016	-.027	-.013	275
280			.075			.013			-.016	280
285	.089	.056	.051	.035	.024	.009	-.020	-.028		285
290			.043			.006				290
300	.067	.040	.037	.031	.018	.001	-.022	-.031		300
315			.031			.001			-.030	315
330									-.036	330
335			.033			-.002				335

ALPHA = 9.48, PHI = 90.0, BODY ALONE

THETA DEG	CP AT X/L= 0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.85	0.95	THETA DEG
0	.046	.029	.017	.007	.000	-.004	-.033	-.047	-.047	0
25			.014			-.012				25
30									-.054	30
45			.035			-.014			-.059	45
60	.057	.019	.013	-.003	-.010	-.021	-.045	-.062		60
70			.007			-.018				70
75	.032	.017	.015	-.004	-.008	-.014	-.049	-.050		75
80			.005			-.023			-.028	80
85	.033	.016	.004	-.002	-.008	-.019	-.039	-.033	-.026	85
90	.024	.015	.012	-.003	-.009	-.018			-.018	90
95	.031	.015	.005	-.005	-.011	-.020	-.040	-.036	-.027	95
100			.007			-.023			-.028	100
105	.035	.024	.009	-.006	-.004	-.026	-.045	-.054		105
110			.010			-.024				110
120	.039	.020	.014	-.005	-.010	-.023	-.046	-.064		120
135			.015			-.020			-.058	135
150									-.056	150
155			.016			-.016				155
180	.046	.035	.017	.006	-.003	-.012	-.033	-.049	-.046	180
205			.019			-.008				205
210									-.044	210
225			.031			-.004			-.038	225
240	.072	.055	.035	.025	.020	.004	-.023	-.037		240
250			.052			.011				250
255	.117	.090	.064	.053	.038	.018	-.013	-.025		255
260			.091			.035			-.013	260
265	.256	.191	.143	.122	.097	.061	.007	-.012	-.002	265
270	.303	.235	.188	.158	.125	.083			.004	270
275	.237	.179	.141	.117	.090	.055	.005	-.014	-.006	275
280			.097			.030			-.016	280
285	.117	.083	.061	.049	.034	.017	-.016	-.026		285
290			.045			.009				290
300	.073	.050	.032	.028	.017	.002	-.025	-.034		300
315			.025			-.004			-.037	315
330									-.047	330
335			.026			-.010				335

TABLE 1.- Continued

(a) Continued

ALPHA = 14.49, PHI = 90.0, BODY ALONE

THETA DEG	CP AT X/L= 0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.85	0.95	THETA DEG
0	.037	.016	.009	-.002	-.016	-.018	-.047	-.060	-.063	0
25			.000			-.031				25
30									-.075	30
45			.019			-.035			-.082	45
60	.040	.000	-.008	-.021	-.031	-.046	-.070	-.087		60
70			-.015			-.042				70
75	.011	-.003	-.004	-.023	-.026	-.033	-.067	-.061		75
80			-.012			-.035			-.043	80
85	.011	.001	-.009	-.014	-.016	-.029	-.048	-.045	-.042	85
90	.003	.002	.001	-.013	-.018	-.027			-.031	90
95	.009	-.001	-.008	-.015	-.021	-.029	-.048	-.048	-.044	95
100			-.011			-.034			-.043	100
105	.014	.005	-.012	-.023	-.024	-.044	-.059	-.065		105
110			-.012			-.048				110
120	.019	-.000	-.007	-.024	-.032	-.047	-.070	-.089		120
135			-.002			-.041			-.080	135
150									-.074	150
155			.003			-.034				155
180	.036	.019	.009	-.004	-.018	-.025	-.047	-.064	-.061	180
205			.014			-.018				205
210									-.056	210
225			.032			-.008			-.047	225
240	.083	.057	.043	.027	.018	.005	-.021	-.038		240
250			.072			.021				250
255	.153	.118	.094	.073	.059	.037	.002	-.017		255
260			.139			.068			-.001	260
265	.355	.276	.223	.183	.159	.117	.050	.016	.023	265
270	.423	.342	.293	.237	.208	.157			.043	270
275	.329	.258	.222	.175	.152	.111	.049	.013	.020	275
280			.149			.064			-.004	280
285	.155	.112	.096	.069	.059	.036	.001	-.019		285
290			.069			.019				290
300	.084	.053	.044	.032	.017	.004	-.022	-.037		300
315			.027			-.009			-.046	315
330									-.060	330
335			.021			-.020				335

ALPHA = 19.50, PHI = 90.0, BODY ALONE

THETA DEG	CP AT X/L= 0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.85	0.95	THETA DEG
0	.027	.008	-.006	-.011	-.025	-.028	-.056	-.070	-.074	0
25			-.019			-.048				25
30									-.089	30
45			-.003			-.060			-.101	45
60	.019	-.025	-.037	-.059	-.063	-.079	-.100	-.112		60
70			-.046			-.075				70
75	-.013	-.027	-.029	-.055	-.049	-.053	-.084	-.084		75
80			-.030			-.050			-.070	80
85	-.005	-.014	-.023	-.036	-.029	-.044	-.064	-.070	-.073	85
90	-.008	-.012	-.010	-.034	-.030	-.048			-.060	90
95	-.009	-.016	-.030	-.037	-.035	-.052	-.065	-.074	-.080	95
100			-.036			-.056			-.075	100
105	-.014	-.020	-.046	-.054	-.046	-.072	-.075	-.086		105
110			-.049			-.087				110
120	-.007	-.028	-.045	-.061	-.065	-.086	-.102	-.115		120
135			-.036			-.073			-.101	135
150									-.092	150
155			-.026			-.060				155
180	.024	.009	-.014	-.016	-.029	-.044	-.058	-.072	-.078	180
205			.006			-.023				205
210									-.061	210
225			.035			-.006			-.047	225
240	.097	.073	.060	.042	.029	.015	-.011	-.028		240
250			.104			.045				250
255	.193	.159	.137	.111	.096	.071	.031	.006		255
260			.203			.118			.028	260
265	.458	.370	.324	.269	.243	.193	.112	.065	.070	265
270	.549	.461	.423	.348	.315	.253			.105	270
275	.427	.350	.322	.261	.237	.183	.111	.060	.063	275
280			.214			.112			.024	280
285	.199	.155	.141	.109	.097	.070	.030	.001		285
290			.103			.043				290
300	.100	.070	.062	.047	.029	.014	-.013	-.028		300
315			.030			-.007			-.047	315
330									-.064	330
335			.014			-.025				335

TABLE 1.- Continued

(a) Concluded

ALPHA = 24.48, PHI = 90.0, BODY ALONE

THETA DEG	CP AT X/L= 0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.85	0.95	THETA DEG
0	.023	.002	-.006	-.011	-.025	-.027	-.052	-.066	-.071	0
25			-.027			-.051				25
30									-.088	30
45			-.016			-.067			-.102	45
60	-.005	-.053	-.063	-.077	-.085	-.096	-.112	-.117		60
70			-.088			-.106				70
75	-.040	-.057	-.058	-.081	-.076	-.075	-.107	-.103		75
80			-.046			-.076			-.087	80
85	-.020	-.028	-.038	-.046	-.057	-.075	-.094	-.092	-.086	85
90	-.023	-.025	-.025	-.040	-.051	-.067			-.080	90
95	-.026	-.032	-.037	-.044	-.065	-.077	-.093	-.094	-.087	95
100			-.047			-.074			-.083	100
105	-.043	-.051	-.072	-.086	-.074	-.088	-.095	-.105		105
110			-.082			-.114				110
120	-.035	-.057	-.063	-.079	-.087	-.098	-.115	-.121		120
135			-.045			-.076			-.099	135
150									-.087	150
155			-.028			-.057				155
180	.016	.002	-.010	-.019	-.030	-.036	-.056	-.069	-.069	180
205			.008			-.018				205
210									-.052	210
225			.044			.007			-.035	225
240	.116	.092	.076	.062	.049	.033	.006	-.012		240
250			.134			.077				250
255	.234	.203	.179	.156	.134	.112	.069	.035		255
260			.266			.175			.070	260
265	.572	.479	.429	.371	.336	.280	.188	.127	.132	265
270	.691	.601	.558	.479	.435	.364			.185	270
275	.535	.455	.424	.361	.325	.271	.187	.123	.127	275
280			.277			.169			.068	280
285	.249	.202	.182	.156	.136	.112	.068	.033		285
290			.134			.076				290
300	.125	.092	.083	.072	.051	.036	.007	-.010		300
315			.041			.007			-.034	315
330									-.054	330
335			.019			-.017				335

TABLE 1.- Continued

(b) Body-tail configuration

ALPHA = -4.85, PHI = 0.0, BODY/TAIL/NO DEFLECTIONS

THETA DEG	CP AT X/L= 0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.85	0.95	THETA DEG
0							.013	-.011	-.012	0
25										25
30									-.000	30
45									.008	45
60							.007	-.017		60
70										70
75							-.009	-.049		75
80									-.072	80
85							-.060	-.086	-.002	85
90									.024	90
95							-.079	-.077	-.001	95
100									.019	100
105							-.040	-.042		105
110										110
120							-.037	-.035		120
135									-.024	135
150									-.016	150
155										155
180							-.027	-.038	-.009	180
205										205
210									-.015	210
225									-.020	225
240							-.036	-.036		240
250										250
255							-.047	-.042		255
260									.009	260
265							-.080	-.073	.002	265
270									.021	270
275							-.064	-.088	-.001	275
280									-.072	280
285							-.012	-.043		285
290										290
300							.007	-.019		300
315									.010	315
330									-.004	330
335										335

ALPHA = .02, PHI = 0.0, BODY/TAIL/NO DEFLECTIONS

THETA DEG	CP AT X/L= 0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.85	0.95	THETA DEG
0							-.018	-.030	-.018	0
25										25
30									-.016	30
45									-.018	45
60							-.021	-.032		60
70										70
75							-.025	-.034		75
80									.028	80
85							-.029	-.023	.047	85
90									.057	90
95							-.029	-.026	.042	95
100									.022	100
105							-.017	-.032		105
110										110
120							-.019	-.032		120
135									-.018	135
150									-.018	150
155										155
180							-.010	-.033	-.019	180
205										205
210									-.018	210
225									-.016	225
240							-.018	-.034		240
250										250
255							-.024	-.032		255
260									.018	260
265							-.031	-.028	.041	265
270									.054	270
275							-.028	-.027	.049	275
280									.031	280
285							-.025	-.031		285
290										290
300							-.020	-.032		300
315									-.017	315
330									-.016	330
335										335

TABLE 1.- Continued

(b) Continued

ALPHA = 5.04, PHI = 0.0, BODY/TAIL/NO DEFLECTIONS

THETA DEG	CP AT X/L= 0.10	0.20	0.30	0.40	0.60	0.70	0.85	0.95	THETA DEG
0						-.034	-.039	-.010	0
25									25
30								-.015	30
45								-.024	45
60						-.040	-.036		60
70									70
75						-.052	-.052		75
80								.003	80
85						-.092	-.079	-.003	85
90								.019	90
95						-.068	-.096	-.009	95
100								-.079	100
105						-.005	-.042		105
110									110
120						.007	-.015		120
135								.012	135
150								.001	150
155									155
180						.022	-.006	-.010	180
205									205
210								-.001	210
225								.011	225
240						.010	-.019		240
250									250
255						-.009	-.043		255
260								-.083	260
265						-.070	-.095	-.013	265
270								.016	270
275						-.085	-.083	-.006	275
280								.012	280
285						-.050	-.045		285
290									290
300						-.038	-.037		300
315								-.024	315
330								-.015	330
335									335

ALPHA = 10.02, PHI = 0.0, BODY/TAIL/NO DEFLECTIONS

THETA DEG	CP AT X/L= 0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.85	0.95	THETA DEG
0							-.054	-.057	-.051	0
25										25
30									-.046	30
45									-.039	45
60							-.065	-.071		60
70										70
75							-.141	-.109		75
80									-.136	80
85							-.119	-.108	-.114	85
90									-.088	90
95							-.090	-.120	-.106	95
100									-.100	100
105							.028	-.017		105
110										110
120							.056	.023		120
135									.070	135
150									.049	150
155										155
180							.078	.038	.034	180
205										205
210										210
225									.066	225
240							.059	.023		240
250										250
255							.024	-.018		255
260									-.104	260
265							-.090	-.121	-.111	265
270									-.095	270
275							-.117	-.111	-.116	275
280									-.132	280
285							-.144	-.117		285
290										290
300							-.064	-.070		300
315									-.037	315
330									-.049	330
335										335

TABLE 1.- Continued

(b) Continued

ALPHA = 15.02, PHI = 0.0, BODY/TAIL/NO DEFLECTIONS

THETA DEG	CP AT X/L= 0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.85	0.95	THETA DEG
0							-.090	-.093	-.097	0
25										25
30									-.108	30
45									-.114	45
60							-.147	-.136		60
70										70
75							-.154	-.132		75
80									-.118	80
85							-.142	-.122	-.110	85
90									-.108	90
95							-.086	-.115	-.124	95
100									-.094	100
105							.077	.027		105
110										110
120							.123	.084		120
135									.146	135
150									.115	150
155										155
180							.154	.105	.097	180
205										205
210									.115	210
225									.142	225
240							.130	.083		240
250										250
255							.076	.027		255
260									-.096	260
265							-.080	-.121	-.127	265
270									-.112	270
275							-.139	-.126	-.112	275
280									-.117	280
285							-.154	-.132		285
290										290
300							-.147	-.135		300
315									-.113	315
330									-.111	330
335										335

ALPHA = 20.03, PHI = 0.0, BODY/TAIL/NO DEFLECTIONS

THETA DEG	CP AT X/L= 0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.85	0.95	THETA DEG
0							-.163	-.122	-.129	0
25										25
30									-.142	30
45									-.145	45
60							-.186	-.153		60
70										70
75							-.165	-.147		75
80									-.117	80
85							-.153	-.137	-.114	85
90									-.111	90
95							-.069	-.097	-.122	95
100									-.081	100
105							.141	.086		105
110										110
120							.206	.162		120
135									.247	135
150									.208	150
155										155
180							.251	.190	.181	180
205										205
210									.207	210
225									.241	225
240							.218	.161		240
250										250
255							.142	.086		255
260									-.081	260
265							-.063	-.106	-.126	265
270									-.116	270
275							-.151	-.142	-.120	275
280									-.118	280
285							-.167	-.146		285
290										290
300							-.169	-.153		300
315									-.145	315
330									-.146	330
335										335

TABLE 1.- Continued

(b) Continued

ALPHA = 25.01, PHI = 0.0, BODY/TAIL/NO DEFLECTIONS

THETA DEG	CP AT X/L= 0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.85	0.95	THETA DEG
0							-.146	-.141	-.145	0
25										25
30									-.152	30
45									-.155	45
60							-.173	-.156		60
70										70
75							-.174	-.160		75
80									-.133	80
85							-.165	-.150	-.128	85
90									-.120	90
95							-.046	-.074	-.112	95
100									-.066	100
105							.218	.157		105
110										110
120							.304	.252		120
135									.369	135
150									.323	150
155										155
180							.364	.288	.285	180
205										205
210									.323	210
225									.362	225
240							.319	.254		240
250										250
255							.222	.157		255
260									-.064	260
265							-.037	-.085	-.116	265
270									-.126	270
275							-.163	-.156	-.132	275
280									-.135	280
285							-.175	-.160		285
290										290
300							-.176	-.158		300
315									-.155	315
330									-.158	330
335										335

ALPHA = -4.80, PHI = 22.5, BODY/TAIL/NO DEFLECTIONS

THETA DEG	CP AT X/L= 0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.85	0.95	THETA DEG
0							.008	-.014	-.015	0
25										25
30									-.004	30
45									.000	45
60							.007	-.017		60
70										70
75							-.004	-.041		75
80									-.044	80
85							-.043	-.080	.025	85
90									.045	90
95							-.074	-.076	-.001	95
100									.049	100
105							-.040	-.043		105
110										110
120							-.037	-.038		120
135									-.035	135
150									-.023	150
155										155
180							-.027	-.040	-.013	180
205										205
210									-.015	210
225									-.016	225
240							-.032	-.036		240
250										250
255							-.041	-.036		255
260									.008	260
265							-.062	-.063	-.020	265
270									.003	270
275							-.070	-.072	-.014	275
280									-.077	280
285							-.022	-.052		285
290										290
300							-.001	-.026		300
315									.008	315
330									-.009	330
335										335

TABLE 1.- Continued

(b) Continued

ALPHA = -.08, PHI = 22.5, BODY/TAIL/NO DEFLECTIONS

THETA DEG	CP AT X/L= 0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.85	0.95	THETA DEG
0							-.019	-.032	-.018	0
25										25
30									-.017	30
45									-.018	45
60							-.022	-.033		60
70										70
75							-.027	-.035		75
80									.025	80
85							-.030	-.024	.046	85
90									.056	90
95							-.031	-.028	.041	95
100									.022	100
105							-.018	-.033		105
110										110
120							-.020	-.033		120
135									-.018	135
150									-.018	150
15.										155
180							-.010	-.032	-.019	180
205										205
210									-.019	210
225									-.016	225
240							-.018	-.034		240
250										250
255							-.025	-.031		255
260									.018	260
265							-.030	-.027	.040	265
270									.053	270
275							-.028	-.027	.049	275
280									.031	280
285							-.025	-.032		285
290										290
300							-.021	-.034		300
315									-.017	315
330									-.017	330
335										335

ALPHA = 4.93, PHI = 22.5, BODY/TAIL/NO DEFLECTIONS

THETA DEG	CP AT X/L= 0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.85	0.95	THETA DEG
0							-.035	-.040	-.012	0
25										25
30									-.013	30
45									-.018	45
60							-.038	-.036		60
70										70
75							-.046	-.045		75
80									.006	80
85							-.073	-.068	-.026	85
90									-.001	90
95							-.079	-.080	-.025	95
100									-.089	100
105							-.017	-.053		105
110										110
120							-.002	-.024		120
135									.012	135
150									-.004	150
155										155
180							.018	-.010	-.011	180
205										205
210									-.002	210
225									.006	225
240							.011	-.015		240
250										250
255							-.002	-.033		255
260									-.057	260
265							-.051	-.092	.015	265
270									.038	270
275							-.081	-.086	.001	275
280									.053	280
285							-.051	-.045		285
290										290
300							-.040	-.039		300
315									-.036	315
330									-.022	330
335										335

TABLE 1.- Continued

(b) Continued

ALPHA = 9.92, PHI = 22.5, BODY/TAIL/NO DEFLECTIONS

THETA DEG	CP AT X/L= 0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.85	0.95	THETA DEG
0							-.055	-.058	-.050	0
25										25
30									-.042	30
45									-.032	45
60							-.062	-.068		60
70										70
75							-.125	-.110		75
80									-.107	80
85							-.109	-.084	-.076	85
90									-.068	90
95							-.119	-.088	-.090	95
100									-.124	100
105							-.005	-.042		105
110										110
120							.033	.004		120
135									.060	135
150									.031	150
155										155
180							.069	.030	.029	180
205										205
210									.044	210
225									.056	225
240							.064	.029		240
250										250
255							.044	.001		255
260									-.056	260
265							-.051	-.101	-.097	265
270									-.078	270
275							-.132	-.125	-.066	275
280									-.084	280
285							-.139	-.144		285
290										290
300							-.093	-.072		300
315									-.032	315
330									-.051	330
335										335

ALPHA = 14.92, PHI = 22.5, BODY/TAIL/NO DEFLECTIONS

THETA DEG	CP AT X/L= 0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.85	0.95	THETA DEG
0							-.086	-.093	-.099	0
25										25
30									-.093	30
45									-.080	45
60							-.104	-.109		60
70										70
75							-.135	-.106		75
80									-.112	80
85							-.118	-.094	-.091	85
90									-.094	90
95							-.126	-.096	-.107	95
100									-.134	100
105							.024	-.013		105
110										110
120							.082	.051		120
135									.126	135
150									.084	150
155										155
180							.137	.090	.087	180
205										205
210									.109	210
225									.124	225
240							.137	.092		240
250										250
255							.109	.056		255
260									-.029	260
265							-.024	-.082	-.087	265
270									-.110	270
275							-.153	-.139	-.101	275
280									-.072	280
285							-.162	-.165		285
290										290
300							-.175	-.164		300
315									-.158	315
330									-.132	330
335										335

TABLE 1.- Continued

(b) Continued

ALPHA = 19.90, PHI = 22.5, BODY/TAIL/NO DEFLECTIONS

THETA DEG	CP AT X/L= 0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.85	0.95	THETA DEG
0							-.145	-.136	-.145	0
25										25
30									-.144	30
45									-.128	45
60							-.135	-.133		60
70										70
75							-.137	-.114		75
80									-.099	80
85							-.123	-.099	-.080	85
90									-.101	90
95							-.122	-.104	-.114	95
100									-.136	100
105							.067	.027		105
110										110
120							.146	.113		120
135									.216	135
150									.157	150
155										155
180							.225	.168	.164	180
205										205
210									.195	210
225									.213	225
240							.230	.174		240
250										250
255							.192	.130		255
260									.004	260
265							.015	-.053	-.063	265
270									-.099	270
275							-.164	-.155	-.097	275
280									-.080	280
285							-.172	-.166		285
290										290
300							-.182	-.172		300
315									-.176	315
330									-.175	330
335										335

ALPHA = 24.89, PHI = 22.5, BODY/TAIL/NO DEFLECTIONS

THETA DEG	CP AT X/L= 0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.85	0.95	THETA DEG
0							-.172	-.156	-.165	0
25										25
30									-.178	30
45									-.177	45
60							-.149	-.151		60
70										70
75							-.140	-.126		75
80									-.071	80
85							-.123	-.100	-.057	85
90									-.102	90
95							-.113	-.110	-.117	95
100									-.133	100
105							.118	.075		105
110										110
120							.223	.184		120
135									.330	135
150									.254	150
155										155
180							.327	.259	.264	180
205										205
210									.304	210
225									.322	225
240							.338	.271		240
250										250
255							.290	.215		255
260									.042	260
265							.063	-.015	-.032	265
270									-.115	270
275							-.180	-.167	-.125	275
280									-.126	280
285							-.185	-.170		285
290										290
300							-.188	-.175		300
315									-.183	315
330									-.186	330
335										335

TABLE 1.- Continued

(b) Continued

ALPHA = 4.77, PHI = 45.0, BODY/TAIL/NO DEFLECTIONS

THETA DEG	CP AT X/L= 0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.85	0.95	THETA DEG
0							-.034	-.042	-.015	0
25										25
30									-.013	30
45									-.016	45
60							-.035	-.037		60
70										70
75							-.039	-.038		75
80									.001	80
85							-.053	-.054	-.033	85
90									-.013	90
95							-.074	-.058	-.026	95
100									-.079	100
105							-.028	-.062		105
110										110
120							-.013	-.035		120
135									.006	135
150									-.013	150
155										155
180							.010	-.017	-.016	180
205										205
210									-.009	210
225									-.005	225
240							.006	-.015		240
250										250
255							.001	-.026		255
260									-.017	260
265							-.029	-.067	.037	265
270									.071	270
275							-.064	-.070	.008	275
280									.119	280
285							-.048	-.037		285
290										290
300							-.039	-.038		300
315									-.047	315
330									-.028	330
335										335

ALPHA = 9.77, PHI = 45.0, BODY/TAIL/NO DEFLECTIONS

THETA DEG	CP AT X/L= 0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.85	0.95	THETA DEG
0							-.052	-.055	-.042	0
25										25
30									-.033	30
45									-.025	45
60							-.052	-.059		60
70										70
75							-.070	-.079		75
80									-.073	80
85							-.082	-.064	-.047	85
90									-.042	90
95							-.093	-.061	-.074	95
100									-.119	100
105							-.036	-.069		105
110										110
120							.001	-.024		120
135									.033	135
150									.001	150
155										155
180							.044	.008	.009	180
205										205
210									.022	210
225									.027	225
240							.051	.020		240
250										250
255							.048	.010		255
260									.010	260
265							-.006	-.064	-.020	265
270									.011	270
275							-.137	-.134	-.010	275
280									-.043	280
285							-.127	-.141		285
290										290
300							-.069	-.064		300
315									-.062	315
330									-.046	330
335										335

TABLE 1.- Continued

(b) Continued

ALPHA = 14.78, PHI = 45.0, BODY/TAIL/NO DEFLECTIONS

THETA DEG	CP AT X/L= 0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.85	0.95	THETA DEG
0							-.094	-.099	-.111	0
25										25
30									-.094	30
45									-.069	45
60							-.084	-.091		60
70										70
75							-.108	-.092		75
80									-.093	80
85							-.090	-.073	-.075	85
90									-.060	90
95							-.090	-.067	-.101	95
100									-.140	100
105							-.028	-.061		105
110										110
120							.029	.003		120
135									.075	135
150									.034	150
155										155
180							.094	.052	.053	180
205										205
210									.069	210
225									.075	225
240							.117	.076		240
250										250
255							.120	.068		255
260									.065	260
265							.043	-.026	-.002	265
270									-.045	270
275							-.153	-.152	-.044	275
280									-.086	280
285							-.158	-.153		285
290										290
300							-.152	-.149		300
315									-.165	315
330									-.155	330
335										335

ALPHA = 19.78, PHI = 45.0, BODY/TAIL/NO DEFLECTIONS

THETA DEG	CP AT X/L= 0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.85	0.95	THETA DEG
0							-.151	-.149	-.160	0
25										25
30									-.172	30
45									-.169	45
60							-.121	-.137		60
70										70
75							-.116	-.101		75
80									-.073	80
85							-.097	-.082	-.056	85
90									-.074	90
95							-.092	-.073	-.120	95
100									-.149	100
105							-.009	-.041		105
110										110
120							.066	.040		120
135									.132	135
150									.084	150
155										155
180							.160	.110	.113	180
205										205
210									.132	210
225									.138	225
240							.199	.148		240
250										250
255							.208	.143		255
260									.132	260
265							.107	.025	.055	265
270									-.006	270
275							-.154	-.173	-.005	275
280									-.031	280
285							-.171	-.171		285
290										290
300							-.171	-.168		300
315									-.181	315
330									-.184	330
335										335

TABLE 1.- Continued

(b) Concluded

ALPHA = 24.77, PHI = 45.0, BODY/TAIL/NO DEFLECTIONS

THETA DEG	CP AT X/L= 0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.85	0.95	THETA DEG
0							-.162	-.157	-.168	0
25										25
30									-.180	30
45									-.180	45
60							-.171	-.162		60
70										70
75							-.131	-.157		75
80									-.058	80
85							-.101	-.101	-.062	85
90									-.109	90
95							-.092	-.082	-.137	95
100									-.159	100
105							.012	-.015		105
110										110
120							.113	.087		120
135									.209	135
150									.149	150
155										155
180							.237	.179	.186	180
205										205
210									.208	210
225									.215	225
240							.295	.227		240
250										250
255							.309	.236		255
260									.203	260
265							.188	.091	.126	265
270									.043	270
275							-.153	-.176	.046	275
280									.042	280
285							-.176	-.173		285
290										290
300							-.175	-.173		300
315									-.184	315
330									-.188	330
335										335

ALPHA = 24.46, PHI = 90.0, BODY/TAIL/NO DEFLECTIONS

THETA DEG	CP AT X/L= 0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.85	0.95	THETA DEG
0							-.049	-.065	-.085	0
25										25
30									-.086	30
45									-.086	45
60							-.111	-.116		60
70										70
75							-.106	-.101		75
80									-.162	80
85							-.093	-.090	-.134	85
90									-.097	90
95							-.093	-.094	-.132	95
100									-.161	100
105							-.092	-.106		105
110										110
120							-.113	-.120		120
135									-.089	135
150									-.091	150
155										155
180							-.050	-.067	-.081	180
205										205
210									-.088	210
225									-.083	225
240							.008	-.011		240
250										250
255							.069	.037		255
260									.844	260
265							.187	.127	.333	265
270									.580	270
275							.188	.123	.390	275
280									.830	280
285							.069	.034		285
290										290
300							.008	-.009		300
315									-.089	315
330									-.104	330
335										335

TABLE 1.- Continued

(c) Body-wing-tail configuration

ALPHA = -4.90, PHI = 0.0, BODY/WING/TAIL/NO DEFLECTIONS

THETA DEG	CP AT X/L= 0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.85	0.95	THETA DEG
0	.130	.103	.089	.069	.062	.047	.011	-.012	-.001	0
25			.085			.042				25
30									.011	30
45			.126			.043			.012	45
60	.158	.109	.092	.070	.057	.038	.005	-.009		60
70			.088			.040				70
75	.146	.113	.098	.069	.059	.038	-.011	.010		75
80			.088			.017			.003	80
85	.160	.107	.073	.045	.025	-.011	.026	.017	.013	85
90	.096	.056	.025	-.013	-.035	-.061			.028	90
95	.026	-.008	-.028	-.041	-.051	-.060	-.093	-.070	.025	95
100			-.009			-.039			-.006	100
105	.006	.011	-.007	-.016	-.006	-.027	-.048	-.062		105
110			-.002			-.022				110
120	.010	.004	.003	-.008	-.008	-.019	-.039	-.049		120
135			.006			-.017			-.032	135
150									-.031	150
155			.006			-.015				155
180	.014	.009	.006	-.003	.005	-.014	-.033	-.042	-.030	180
205			.002			-.014				205
210									-.030	210
225			.006			-.016			-.031	225
240	.009	.003	-.003	-.006	-.008	-.018	-.036	-.050		240
250			-.003			-.023				250
255	.004	-.010	-.012	-.012	-.023	-.029	-.049	-.061		255
260			-.022			-.062			-.017	260
265	.038	-.011	-.032	-.045	-.055	-.061	-.094	-.073	.021	265
270	.103	.049	.018	-.012	-.041	-.066			.026	270
275	.156	.107	.081	.051	.022	-.014	.028	.013	.012	275
280			.106			.010			-.004	280
285	.145	.110	.094	.071	.054	.028	-.011	.010		285
290			.091			.033				290
300	.137	.105	.091	.078	.060	.036	.007	-.012		300
315			.091			.038			.017	315
330									.008	330
335			.095			.039				335

ALPHA = .01, PHI = 0.0, BODY/WING/TAIL/NO DEFLECTIONS

THETA DEG	CP AT X/L= 0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.85	0.95	THETA DEG
0	.059	.041	.029	.019	.014	.008	-.022	-.035	-.016	0
25			.029			.003				25
30									.015	30
45			.075			.004			-.021	45
60	.090	.043	.036	.018	.012	-.001	-.026	-.032		60
70			.032			.005				70
75	.073	.049	.045	.022	.020	.009	-.029	-.032		75
80			.039			-.002			.000	80
85	.107	.074	.049	.031	.023	-.000	-.024	-.027	.024	85
90	.119	.086	.069	.036	.021	.000			.046	90
95	.107	.071	.050	.032	.018	.000	-.020	-.021	.044	95
100			.042			.002			.001	100
105	.074	.064	.038	.025	.029	.002	-.021	-.026		105
110			.036			.004				110
120	.062	.043	.035	.022	.014	.003	-.022	-.031		120
135			.034			.003			-.018	135
150									-.018	150
155			.033			.002				155
180	.060	.043	.033	.022	.013	.003	-.018	-.035	-.016	180
205			.032			.004				205
210									-.016	210
225			.036			.004			-.019	225
240	.062	.043	.032	.023	.016	.004	-.021	-.032		240
250			.037			.002				250
255	.072	.049	.039	.028	.015	.001	-.026	-.027		255
260			.041			.006			-.008	260
265	.112	.070	.050	.032	.019	.002	-.021	-.028	.023	265
270	.127	.082	.061	.037	.020				.044	270
275	.108	.069	.058	.035	.018	-.002	-.019	-.028	.025	275
280			.060			-.001			-.004	280
285	.072	.047	.039	.023	.014	-.001	-.028	-.029		285
290			.033			-.002				290
300	.064	.042	.032	.028	.013	-.001	-.025	-.032		300
315			.030			-.001			-.017	315
330									-.018	330
335			.036			-.001				335

TABLE 1.- Continued

(c) Continued

ALPHA = 5.04, PHI = 0.0, BODY/WING/TAIL/ND DEFLECTIONS

THETA DEG	CP AT X/L= 0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.85	0.95	THETA DEG
0	.010	.003	-.003	-.010	-.012	-.011	-.036	-.042	-.031	0
25			-.005			-.017				25
30									-.030	30
45			.047			-.017			-.036	45
60	.041	.000	-.002	-.014	-.017	-.024	-.041	-.049		60
70			-.013			-.022				70
75	-.001	-.011	-.005	-.023	-.022	-.024	-.056	-.071		75
80			-.028			-.048			-.014	80
85	.018	-.011	-.036	-.048	-.055	-.072	-.102	-.078	.024	85
90	.090	.045	.022	-.019	-.043	-.071			.024	90
95	.150	.100	.071	.042	.018	-.014	.019	.020	.009	95
100			.087			.018			.001	100
105	.140	.114	.088	.071	.064	.030	-.006	.013		105
110			.088			.037				110
120	.127	.095	.089	.073	.058	.040	.006	-.009		120
135			.088			.040			.019	135
150									.008	150
155			.087			.041				155
180	.122	.093	.086	.074	.059	.041	.014	-.008	.000	180
205			.085			.044				205
210									.011	210
225			.089			.043			.020	225
240	.128	.094	.085	.074	.062	.040	.008	-.012		240
250			.089			.035				250
255	.141	.099	.086	.074	.054	.029	-.009	.013		255
260			.084			.113			-.008	260
265	.145	.089	.063	.040	.015	-.016	.022	.014	.007	265
270	.101	.040	.013	-.017	-.049	-.075			.023	270
275	.023	-.017	-.024	-.041	-.059	-.067	-.096	-.079	.024	275
280			-.003			-.044			-.016	280
285	-.000	-.016	-.013	-.022	-.026	-.034	-.054	-.065		285
290			-.012			-.030				290
300	.009	-.002	-.006	-.003	-.016	-.024	-.039	-.050		300
315			-.004			-.022			-.031	315
330									-.032	330
335			.005			-.022				335

ALPHA = 10.01, PHI = 0.0, BODY/WING/TAIL/ND DEFLECTIONS

THETA DEG	CP AT X/L= 0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.85	0.95	THETA DEG
0	-.026	-.028	-.030	-.032	-.032	-.028	-.056	-.060	-.060	0
25			-.030			-.036				25
30									-.051	30
45			.025			-.036			-.045	45
60	-.006	-.036	-.032	-.042	-.039	-.045	-.066	-.076		60
70			-.111			-.125				70
75	-.072	-.093	-.093	-.117	-.112	-.110	-.148	-.154		75
80			-.113			-.118			-.139	80
85	-.082	-.113	-.125	-.116	-.107	-.111	-.142	-.148	-.130	85
90	.044	-.014	-.047	-.093	-.115	-.123			-.104	90
95	.175	.118	.067	.028	.006	-.031	.032	.065	-.047	95
100			.122			.042			.001	100
105	.215	.185	.140	.112	.106	.071	.026	.049		105
110			.146			.086				110
120	.208	.181	.152	.125	.117	.095	.055	.024		120
135			.152			.098			.070	135
150									.051	150
155			.152			.101				155
180	.202	.182	.152	.131	.123	.098	.068	.036	.037	180
205			.152			.104				205
210									.055	210
225			.154			.102			.071	225
240	.206	.180	.152	.126	.122	.097	.058	.023		240
250			.152			.084				250
255	.212	.174	.143	.113	.100	.071	.025	.052		255
260			.125			.140			-.007	260
265	.155	.097	.059	.021	.001	-.032	.035	.058	-.054	265
270	.057	-.014	-.059	-.091	-.122	-.124			-.111	270
275	-.070	-.111	-.100	-.107	-.120	-.113	-.137	-.152	-.125	275
280			-.072			-.118			-.139	280
285	-.075	-.094	-.105	-.111	-.123	-.131	-.148	-.150		285
290			-.115			-.139				290
300	-.042	-.027	-.031	-.022	-.039	-.047	-.064	-.075		300
315			-.032			-.042			-.043	315
330									-.056	330
335			-.021			-.041				335

TABLE 1.- Continued

(c) Continued

ALPHA = 15.01, PHI = 0.0, BODY/WING/TAIL/NO DEFLECTIONS

THETA DEG	CP AT X/L= 0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.85	0.95	THETA DEG
0	-.055	-.052	-.054	-.058	-.063	-.058	-.092	-.098	-.102	0
25			-.056			-.070				25
30									-.111	30
45			.004			-.081			-.117	45
60	-.066	-.145	-.142	-.152	-.148	-.146	-.150	-.136		60
70			-.155			-.132				70
75	-.133	-.136	-.119	-.143	-.133	-.125	-.156	-.163		75
80			-.145			-.139			-.159	80
85	-.132	-.148	-.152	-.140	-.129	-.133	-.169	-.154	-.164	85
90	.007	-.052	-.069	-.113	-.135	-.143			-.117	90
95	.200	.131	.086	.039	.013	-.022	.063	.131	-.034	95
100			.180			.082			.021	100
105	.298	.252	.217	.182	.160	.127	.076	.103		105
110			.233			.152				110
120	.304	.264	.247	.213	.188	.171	.121	.084		120
135			.253			.178			.146	135
150									.116	150
155			.254			.181				155
180	.303	.269	.255	.225	.198	.173	.141	.103	.099	180
205			.255			.185				205
210									.124	210
225			.255			.183			.148	225
240	.304	.265	.246	.216	.193	.174	.128	.083		240
250			.238			.154				250
255	.298	.242	.220	.187	.156	.130	.077	.107		255
260			.182			.104			.016	260
265	.165	.101	.068	.034	.004	-.025	.071	.123	-.040	265
270	.022	-.048	-.087	-.114	-.143	-.149			-.123	270
275	-.122	-.150	-.129	-.131	-.142	-.134	-.165	-.159	-.165	275
280			-.101			-.139			-.166	280
285	-.134	-.141	-.142	-.145	-.151	-.152	-.156	-.159		285
290			-.159			-.153				290
300	-.127	-.148	-.160	-.136	-.159	-.149	-.153	-.138		300
315			-.062			-.090			-.117	315
330									-.114	330
335			-.046			-.076				335

ALPHA = 19.99, PHI = 0.0, BODY/WING/TAIL/NO DEFLECTIONS

THETA DEG	CP AT X/L= 0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.85	0.95	THETA DEG
0	-.078	-.081	-.090	-.095	-.103	-.092	-.127	-.128	-.135	0
25			-.094			-.110				25
30									-.144	30
45			-.046			-.130			-.151	45
60	-.083	-.156	-.151	-.164	-.161	-.164	-.169	-.160		60
70			-.165			-.143				70
75	-.154	-.152	-.129	-.. 3	-.139	-.132	-.167	-.171		75
80			-.159			-.152			-.170	80
85	-.150	-.163	-.166	-.153	-.141	-.144	-.183	-.164	-.169	85
90	-.019	-.074	-.082	-.125	-.143	-.150			-.120	90
95	.229	.156	.104	.059	.035	-.004	.114	.215	-.010	95
100			.235			.133			.052	100
105	.390	.339	.291	.262	.238	.198	.142	.175		105
110			.316			.232				110
120	.415	.372	.339	.315	.287	.259	.205	.161		120
135			.349			.272			.248	135
150									.205	150
155			.352			.279				155
180	.420	.385	.354	.341	.305	.276	.235	.187	.182	180
205			.354			.282				205
210									.217	210
225			.351			.276			.250	225
240	.416	.373	.340	.324	.295	.262	.217	.161		240
250			.323			.231				250
255	.394	.331	.296	.274	.236	.198	.144	.181		255
260			.238			.179			.050	260
265	.176	.118	.081	.057	.025	-.008	.119	.207	-.018	265
270	-.006	-.071	-.106	-.127	-.151	-.162			-.129	270
275	-.149	-.164	-.139	-.143	-.159	-.145	-.178	-.170	-.166	275
280			-.110			-.152			-.174	280
285	-.155	-.157	-.154	-.156	-.157	-.159	-.168	-.167		285
290			-.172			-.163				290
300	-.150	-.161	-.173	-.143	-.171	-.165	-.173	-.160		300
315			-.145			-.143			- 151	315
330									-.149	330
335			-.084			-.119				335

TABLE 1.- Continued

(c) Continued

ALPHA = 24.99, PHI = 0.0, BODY/WING/TAIL/NO DEFLECTIONS

THETA DEG	CP AT X/L= 0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.85	0.95	THETA DEG
0	-.106	-.110	-.125	-.125	-.133	-.114	-.149	-.145	-.154	0
25			-.132			-.134				25
30									-.161	30
45			-.059			-.146			-.162	45
60	-.087	-.186	-.155	-.169	-.165	-.169	-.174	-.165		60
70			-.173			-.149				70
75	-.167	-.159	-.135	-.162	-.146	-.138	-.176	-.179		75
80			-.168			-.164			-.166	80
85	-.160	-.189	-.174	-.164	-.152	-.155	-.189	-.174	-.164	85
90	-.040	-.087	-.090	-.130	-.144	-.151			-.121	90
95	.258	.183	.134	.086	.064	.019	.179	.309	.018	95
100			.306			.190			.092	100
105	.490	.433	.387	.355	.325	.275	.218	.267		105
110			.423			.323				110
120	.539	.491	.457	.434	.399	.302	.304	.253		120
135			.472			.381			.373	135
150									.321	150
155			.479			.387				155
180	.553	.512	.481	.470	.427	.385	.343	.286	.286	180
205			.482			.392				205
210									.336	210
225			.477			.385			.376	225
240	.542	.492	.462	.442	.409	.364	.320	.253		240
250			.434			.324				250
255	.499	.426	.394	.366	.330	.279	.225	.275		255
260			.311			.229			.091	260
265	.191	.142	.108	.083	.054	.016	.186	.303	.012	265
270	-.031	-.085	-.116	-.131	-.152	-.165			-.136	270
275	-.162	-.172	-.148	-.154	-.172	-.155	-.182	-.179	-.161	275
280			-.117			-.164			-.166	280
285	-.167	-.165	-.164	-.167	-.169	-.168	-.177	-.175		285
290			-.178			-.171				290
300	-.159	-.170	-.179	-.147	-.178	-.170	-.178	-.165		300
315			-.173			-.162			-.161	315
330									-.167	330
335			-.122			-.146				335

ALPHA = 4.95, PHI = 22.5, BODY/WING/TAIL/NO DEFLECTIONS

THETA DEG	CP AT X/L= 0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.85	0.95	THETA DEG
0	.013	.004	-.003	-.009	-.011	-.010	-.035	-.043	-.033	0
25			-.003			-.016				25
30									-.027	30
45			.046			-.015			-.030	45
60	.044	.004	.001	-.012	-.014	-.021	-.038	-.046		60
70			-.009			-.017				70
75	.005	-.003	-.001	-.017	-.016	-.018	-.050	-.063		75
80			-.020			-.039			-.026	80
85	.013	-.012	-.032	-.040	-.046	-.056	-.091	-.072	.009	85
90	.070	.027	.007	-.028	-.051	-.071			.012	90
95	.126	.079	.048	.022	.000	-.030	.006	.010	-.001	95
100			.064			.003			-.021	100
105	.125	.099	.070	.055	.050	.017	-.015	.002		105
110			.072			.025				110
120	.117	.085	.077	.061	.048	.031	-.002	-.020		120
135			.079			.034			.016	135
150									.003	150
155			.081			.036				155
180	.116	.088	.081	.067	.055	.036	.010	-.011	-.002	180
205			.082			.041				205
210									.008	210
225			.089			.042			.014	225
240	.125	.093	.089	.074	.063	.042	.010	-.005		240
250			.097			.039				250
255	.146	.105	.096	.080	.061	.036	-.003	.016		255
260			.098			.034			.020	260
265	.1[illegible]	.110	.087	.061	.036	.002	.033	.016	.018	265
270	.13[illegible]	.067	.042	.008	-.024	-.056			.046	270
275	.047	.002	-.009	-.032	-.055	-.065	-.096	-.074	.052	275
280			-.001			-.046			.013	280
285	.007	-.013	-.014	-.023	-.030	-.035	-.055	-.064		285
290			-.014			-.029				290
300	.011	-.004	-.008	-.003	-.016	-.025	-.041	-.051		300
315			-.004			-.022			-.038	315
330									-.036	330
335			.005			-.021				335

TABLE 1.- Continued

(c) Continued

ALPHA = 9.94, PHI = 22.5, BODY/WING/TAIL/NO DEFLECTIONS

THETA DEG	CP AT X/L= 0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.85	0.95	THETA DEG
0	-.024	-.027	-.028	-.031	-.033	-.029	-.055	-.060	-.062	0
25			-.027			-.034				25
30									-.050	30
45			.026			-.033			-.0.1	45
60	.008	-.027	-.022	-.032	-.033	-.042	-.061	-.069		60
70			-.062			-.053				70
75	-.0.3	-.087	-.088	-.115	-.113	-.104	-.127	-.127		75
80			-.101			-.109			-.108	80
85	-.087	-.096	-.102	-.099	-.092	-.097	-.130	-.125	-.090	85
90	-.006	-.062	-.084	-.113	-.105	-.098			-.063	90
95	.116	.059	.014	-.021	-.045	-.072	-.011	.038	-.062	95
100			.075			.001			-.054	100
105	.172	.142	.130	.074	.067	.036	-.004	.013		105
110			.113			.054				110
120	.179	.152	.125	.099	.090	.071	.033	.004		120
135			.131			.080			.057	135
150									.031	150
155			.135			.086				155
180	.189	.168	.138	.120	.113	.089	.059	.028	.034	180
205			.144			.098				205
210									.056	210
225			.151			.101			.067	225
240	.210	.185	.154	.132	.130	.102	.063	.037		240
250			.162			.099				250
255	.233	.197	.161	.136	.127	.092	.044	.071		255
260			.157			.080			.057	260
265	.218	.159	.114	.078	.056	.015	.070	.069	-.017	265
270	.127	.051	.006	-.035	-.074	-.110			-.059	270
275	-.019	-.075	-.093	-.114	-.126	-.122	-.139	-.139	-.075	275
280			-.069			-.122			-.061	280
285	-.071	-.084	-.094	-.109	-.118	-.125	-.143	-.148		285
290			-.099			-.126				290
300	-.046	-.068	-.082	-.063	-.078	-.080	-.091	-.079		300
315			-.032			-.043			-.043	315
330									-.061	330
335			-.021			-.042				335

ALPHA = 14.93, PHI = 22.5, BODY/WING/TAIL/NO DEFLECTIONS

THETA DEG	CP AT X/L= 0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.85	0.95	THETA DEG
0	-.055	-.051	-.053	-.055	-.059	-.053	-.086	-.093	-.103	0
25			-.051			-.062				25
30									-.097	30
45			.007			-.063			-.082	45
60	-.016	-.058	-.056	-.072	-.078	-.087	-.105	-.108		60
70			-.150			-.119				70
75	-.135	-.133	-.118	-.133	-.118	-.109	-.135	-.155		75
80			-.131			-.125			.145	80
85	-.134	-.132	-.132	-.124	-.113	-.113	-.137	-.135	-.122	85
90	-.065	-.112	-.114	-.131	-.123	-.113			-.103	90
95	.101	.039	-.002	-.039	-.058	-.086	-.014	.075	-.082	95
100			.094			.011			-.064	100
105	.220	.180	.142	.114	.100	.064	.027	.017		105
110			.167			.096				110
120	.252	.214	.194	.166	.145	.126	.084	.051		120
135			.212			.144			.123	135
150									.086	150
155			.223			.156				155
180	.279	.248	.232	.206	.180	.162	.127	.089	.097	180
205			.242			.176				205
210									.128	210
225			.251			.182			.139	225
240	.314	.275	.258	.225	.205	.186	.138	.103		240
250			.268			.161				250
255	.341	.285	.265	.224	.199	.171	.112	.147		255
260			.250			.148			.107	260
265	.274	.202	.167	.120	.087	.051	.139	.146	.023	265
270	.130	.048	.000	-.040	-.080	-.114			-.086	270
275	-.060	-.108	-.116	-.138	-.160	-.145	-.161	-.162	-.066	275
280			-.103			-.148			-.052	280
285	-.126	-.133	-.137	-.145	-.150	-.150	-.163	-.165		285
290			-.146			-.153				290
300	-.102	-.128	-.145	-.129	-.164	-.162	-.174	-.161		300
315			-.144			-.159			-.156	315
330									-.134	330
335			-.040			-.07·				335

TABLE 1.- Continued

(c) Continued

ALPHA = 19.95, PHI = 22.5, BODY/WING/TAIL/NO DEFLECTIONS

THETA DEG	CP AT X/L= 0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.85	0.95	THETA DEG
0	-.084	-.082	-.097	-.110	-.130	-.120	-.153	-.145	-.155	0
25			-.080			-.098				25
30									-.150	30
45			-.018			-.096			-.134	45
60	-.052	-.110	-.105	-.116	-.117	-.123	-.137	-.135		60
70			-.156			-.128				70
75	-.153	-.147	-.124	-.142	-.122	-.111	-.137	-.157		75
80			-.145			-.130			-.130	80
85	-.147	-.146	-.146	-.132	-.119	-.117	-.142	-.143	-.114	85
90	-.106	-.136	-.127	-.136	-.129	-.118			-.112	90
95	.094	.031	-.006	-.042	-.058	-.084	.002	.121	-.088	95
100			.120			.034			-.071	100
105	.276	.230	.189	.164	.147	.105	.070	.041		105
110			.226			.150				110
120	.337	.295	.266	.246	.220	.194	.148	.113		120
135			.293			.224			.215	135
150									.164	150
155			.310			.242				155
180	.386	.353	.324	.311	.275	.252	.212	.167	.183	180
205			.339			.270				205
210									.221	210
225			.352			.280			.235	225
240	.434	.392	.361	.343	.311	.286	.233	.192		240
250			.370			.280				250
255	.461	.398	.364	.336	.296	.264	.197	.245		255
260			.336			.231			.161	260
265	.329	.258	.214	.177	.134	.097	.232	.242	.061	265
270	.134	.051	.001	-.033	-.075	-.111			-.122	270
275	-.084	-.127	-.130	-.149	-.174	-.159	-.164	-.168	-.113	275
280			-.116			-.162			-.104	280
285	-.155	-.155	-.156	-.162	-.165	-.164	-.173	-.170		285
290			-.166			-.166				290
300	-.134	-.152	-.165	-.140	-.173	-.171	-.185	-.173		300
315			-.170			-.173			-.174	315
330									-.179	330
335			-.151			-.173				335

ALPHA = 24.94, PHI = 22.5, BODY/WING/TAIL/NO DEFLECTIONS

THETA DEG	CP AT X/L= 0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.85	0.95	THETA DEG
0	-.152	-.155	-.172	-.167	-.179	-.147	-.175	-.159	-.167	0
25			-.131			-.161				25
30									-.176	30
45			-.036			-.128			-.178	45
60	-.075	-.137	-.126	-.137	-.133	-.137	-.150	-.154		60
70			-.157			-.125				70
75	-.162	-.150	-.125	-.143	-.122	-.112	-.140	-.156		75
80			-.150			-.130			-.092	80
85	-.153	-.149	-.150	-.134	-.119	-.115	-.144	-.145	-.101	85
90	-.129	-.146	-.131	-.137	-.128	-.116			-.114	90
95	.090	.033	-.001	-.037	-.048	-.074	.032	.181	-.085	95
100			.154			.069			-.066	100
105	.332	.288	.246	.223	.205	.158	.121	.085		105
110			.298			.214				110
120	.427	.386	.356	.339	.308	.271	.227	.187		120
135			.395			.312			.336	135
150									.271	150
155			.420			.340				155
180	.509	.469	.440	.431	.388	.356	.312	.262	.273	180
205			.461			.380				205
210									.334	210
225			.476			.391			.348	225
240	.571	.523	.490	.475	.434	.396	.341	.309		240
250			.497			.390				250
255	.594	.524	.486	.460	.412	.369	.297	.362		255
260			.443			.323			.218	260
265	.387	.317	.273	.237	.193	.150	.339	.355	.108	265
270	.141	.059	.008	-.023	-.066	-.105			-.125	270
275	-.101	-.138	-.137	-.153	-.179	-.168	-.169	-.175	-.173	275
280			-.125			-.175			-.174	280
285	-.168	-.168	-.169	-.175	-.178	-.177	-.178	-.174		285
290			-.180			-.177				290
300	-.9	-.166	-.179	-.150	-.183	-.177	-.187	-.173		300
315			-.177			-.179			-.180	315
330									-.185	330
335			-.158			-.180				335

TABLE 1.- Continued

(c) Continued

ALPHA = 4.79, PHI = 45.0, BODY/WING/TAIL/NO DEFLECTIONS

THETA DEG	CP AT X/L= 0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.85	0.95	THETA DEG
0	.023	.011	.004	-.003	-.005	-.006	-.033	-.041	-.029	0
25			.003			-.012				25
30									-.022	30
45			.049			-.010			-.022	45
60	.053	.013	.008	-.004	-.006	-.015	-.033	-.043		60
70			.001			-.009				70
75	.019	.011	.011	-.007	-.004	-.007	-.039	-.052		75
80			-.005			-.024			-.035	80
85	.026	.005	-.012	-.020	-.023	-.032	-.068	-.056	-.004	85
90	.062	.028	.013	-.017	-.034	-.047			.005	90
95	.104	.062	.036	.014	-.007	-.032	-.002	-.001	-.006	95
100			.050			-.008			-.035	100
105	.104	.081	.056	.040	.035	.004	-.029	-.009		105
110			.060			.012				110
120	.100	.072	.066	.048	.035	.018	-.013	-.030		120
135			.070			.022			.011	135
150									-.004	150
155			.071			.025				155
180	.101	.080	.073	.057	.044	.027	.002	-.018	-.008	180
205			.074			.031				205
210									-.000	210
225			.082			.033			.003	225
240	.114	.092	.081	.067	.057	.035	.006	-.004		240
250			.093			.037				250
255	.140	.108	.095	.078	.061	.038	.002	.013		255
260			.104			.040			.043	260
265	.186	.132	.107	.079	.057	.024	.020	.014	.025	265
270	.164	.105	.079	.043	.014	-.018			.084	270
275	.084	.037	.024	-.003	-.023	-.041	-.073	-.071	.092	275
280			.020			-.036			.049	280
285	.027	.004	.001	-.013	-.020	-.032	-.050	-.055		285
290			-.002			-.024				290
300	.023	.006	.001	.003	-.009	-.021	-.038	-.046		300
315			.004			-.018			-.040	315
330									-.037	330
335			.012			-.018				335

ALPHA = 9.79, PHI = 45.0, BODY/WING/TAIL/NO DEFLECTIONS

THETA DEG	CP AT X/L= 0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.85	0.95	THETA DEG
0	-.013	-.018	-.021	-.026	-.029	-.025	-.052	-.060	-.060	0
25			-.019			-.029				25
30									-.042	30
45			.033			-.026			-.035	45
60	.025	-.012	-.010	-.020	-.023	-.031	-.050	-.059		60
70			-.018			-.028				70
75	-.031	-.032	-.027	-.038	-.031	-.035	-.069	-.090		75
80			-.070			-.085			-.085	80
85	-.048	-.061	-.070	-.056	-.063	-.067	-.092	-.079	-.048	85
90	-.025	-.070	-.068	-.075	-.076	-.072			-.027	90
95	067	.014	-.022	-.053	-.071	-.089	-.036	.006	-.046	95
100			.032			-.037			-.073	100
105	.123	.095	.059	.033	.029	-.004	-.037	-.022		105
110			.072			.017				110
120	.138	.111	.087	.062	.055	.036	.001	-.023		120
135			.098			.048			.035	135
150									.008	150
155			.104			.057				155
180	.157	.138	.110	.094	.085	.063	.036	.008	.022	180
205			.115			.074				205
210									.034	210
225			.127			.080			.039	225
240	.193	.168	.135	.125	.114	.088	.050	.039		240
250			.152			.094				250
255	.235	.196	.160	.147	.128	.097	.048	.065		255
260			.172			.097			.107	260
265	.276	.212	.161	.134	.106	.062	.089	.069	-.002	265
270	.210	.131	.084	.043	.001	-.041			.035	270
275	.060	-.002	-.027	-.057	-.092	-.114	-.137	-.135	.092	275
280			-.048			-.115			.055	280
285	-.031	-.062	-.071	-.082	-.093	-.106	-.134	-.112		285
290			-.066			-.094				290
300	-.027	-.044	-.054	-.052	-.068	-.062	-.071	-.078		300
315			-.041			-.045			-.071	315
330									-.063	330
335			-.018			-.040				335

TABLE 1.- Continued

(c) Continued

ALPHA = 14.75, PHI = 45.0, BODY/WING/TAIL/NO DEFLECTIONS

THETA DEG	CP AT X/L= 0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.85	0.95	THETA DEG
0	-.050	-.048	-.050	-.053	-.066	-.063	-.094	-.105	-.112	0
25			-.043			-.059				25
30									-.091	30
45			.014			-.054			-.071	45
60	.005	-.034	-.033	-.045	-.049	-.062	-.083	-.091		60
70			-.050			-.064				70
75	-.101	-.102	-.078	-.090	-.081	-.079	-.108	-.103		75
80			-.107			-.094			-.1[illegible]	80
85	-.096	-.100	-.100	-.090	-.082	-.082	-.084	-.085	-.086	85
90	-.106	-.102	-.082	-.092	-.088	-.080			-.053	90
95	.020	-.034	-.064	-.095	-.096	-.088	-.066	.005	-.085	95
100			.019			-.050			-.115	100
105	.132	.099	.067	.040	.032	-.001	-.031	-.049		105
110			.094			.031				110
120	.175	.141	.127	.096	.081	.064	.028	.003		120
135			.150			.087			.079	135
150									.046	150
155			.165			.103				155
180	.222	.194	.179	.151	.134	.115	.084	.052	.067	180
205			.193			.132				205
210									.083	210
225			.211			.144			.090	225
240	.283	.247	.229	.195	.188	.158	.116	.103		240
250			.253			.170				250
255	.343	.291	.267	.225	.213	.175	.119	.137		255
260			.281			.177			.180	260
265	.372	.296	.251	.199	.175	.123	.175	.142	.034	265
270	.260	.166	.124	.063	.018	-.030			-.008	270
275	.050	-.019	-.040	-.072	-.104	-.123	-.141	-.137	-.011	275
280			-.072			-.151			-.015	280
285	-.071	-.104	-.118	-.133	-.143	-.148	-.164	-.136		285
290			-.124			-.144				290
300	-.078	-.096	-.111	-.104	-.132	-.136	-.154	-.132		300
315			-.102			-.119			-.152	315
330									-.154	330
335			-.079			-.101				335

ALPHA = 19.74, PHI = 45.0, BODY/WING/TAIL/NO DEFLECTIONS

THETA DEG	CP AT X/L= 0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.85	0.95	THETA DEG
0	-.098	-.115	-.129	-.126	-.137	-.119	-.147	-.138	-.149	0
25			-.123			-.124				25
30									-.162	30
45			-.005			-.108			-.159	45
60	-.017	-.062	-.064	-.078	-.080	-.091	-.119	-.136		60
70			-.090			-.050				70
75	-.134	-.119	-.095	-.111	-.096	-.087	-.113	-.111		75
80			-.115			-.092			-.084	80
85	-.121	-.115	-.112	-.098	-.087	-.085	-.090	-.095	-.068	85
90	-.140	-.114	-.090	-.095	-.089	-.082			-.058	90
95	-.014	-.063	-.085	-.107	-.094	-.086	-.073	.015	-.099	95
100			.014			-.047			-.137	100
105	.146	.113	.079	.058	.048	.014	-.011	-.039		105
110			.119			.056				110
120	.220	.187	.165	.143	.123	.103	.066	.040		120
135			.199			.138			.144	135
150									.104	150
155			.225			.164				155
180	.296	.273	.248	.228	.201	.182	.148	.111	.130	180
205			.272			.206				205
210									.149	210
225			.300			.226			.156	225
240	.384	.352	.331	.295	.278	.248	.198	.187		240
250			.367			.265				250
255	.463	.411	.386	.338	.316	.273	.209	.230		255
260			.400			.276			.253	260
265	.472	.397	.351	.292	.259	.201	.285	.240	.114	265
270	.310	.212	.166	.102	.045	-.007			.013	270
275	.042	-.025	-.043	-.074	-.104	-.120	-.131	-.146	.005	275
280			-.083			-.159			.028	280
28[illegible]	-.095	-.124	-.135	-.150	-.160	-.165	-.178	-.153		285
290			-.151			-.162				290
300	-.112	-.130	-.143	-.128	-.159	-.157	-.173	-.148		300
315			-.138			-.153			-.173	315
330									-.174	330
335			-.119			-.151				335

TABLE 1.- Continued

(c) Continued

ALPHA = 24.77, PHI = 45.0, BODY/WING/TAIL/NO DEFLECTIONS

THETA DEG	CP AT X/L= 0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.85	0.95	THETA DEG
0	-.131	-.138	-.155	-.152	-.164	-.137	-.167	-.150	-.163	0
25			-.152			-.156				25
30									-.170	30
45			-.063			-.151			-.174	45
60	-.036	-.093	-.084	-.128	-.156	-.165	-.175	-.164		60
70			-.115			-.108				70
75	-.139	-.120	-.100	-.111	-.093	-.084	-.130	-.164		75
80			-.114			-.094			-.075	80
85	-.127	-.116	-.112	-.100	-.088	-.087	-.094	-.122	-.098	85
90	-.140	-.114	-.086	-.095	-.090	-.084			-.092	90
95	-.035	-.075	-.092	-.108	-.095	-.087	-.068	.040	-.119	95
100			.021			-.034			-.152	100
105	.162	.132	.100	.084	.075	.040	.014	-.013		105
110			.152			.093				110
120	.267	.235	.215	.199	.178	.152	.116	.089		120
135			.263			.199			.231	135
150									.175	150
155			.298			.233				155
180	.380	.352	.330	.318	.284	.259	.224	.188	.203	180
205			.361			.294				205
210									.226	210
225			.397			.323			.238	225
240	.500	.460	.434	.415	.383	.356	.297	.290		240
250			.479			.381				250
255	.597	.536	.504	.467	.431	.391	.313	.345		255
260			.520			.388			.324	260
265	.581	.501	.449	.398	.350	.293	.365	.356	.201	265
270	.366	.261	.207	.147	.079	.026			-.025	270
275	.039	-.023	-.041	-.069	-.099	-.114	-.130	-.128	-.031	275
280			-.090			-.161			-.027	280
285	-.112	-.137	-.146	-.159	-.168	-.172	-.184	-.157		285
290			-.164			-.173				290
300	-.131	-.152	-.167	-.142	-.174	-.169	-.161	-.170		300
315			-.160			-.166			-.177	315
330									-.180	330
335			-.139			-.167				335

ALPHA = 4.62, PHI = 67.5, BODY/WING/TAIL/NO DEFLECTIONS

THETA DEG	CP AT X/L= 0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.85	0.95	THETA DEG
0	.036	.019	.013	.005	.002	-.002	-.031	-.041	-.027	0
25			.010			-.008				25
30									-.017	30
45			.053			-.006			-.016	45
60	.063	.021	.015	.003	-.001	-.011	-.032	-.041		60
70			.010			-.005				70
75	.035	.022	.020	.001	.003	-.002	-.034	-.043		75
80			.009			-.013			-.040	80
85	.044	.025	.007	-.002	-.004	-.016	-.043	-.039	-.014	85
90	.063	.037	.023	-.002	-.012	-.022			-.002	90
95	.084	.051	.028	.010	-.005	-.021	-.010	-.012	-.013	95
100			.035			-.011			-.044	100
105	.082	.063	.038	.026	.021	-.005	-.033	-.021		105
110			.039			.000				110
120	.079	.053	.044	.031	.020	.004	-.024	-.039		120
135			.047			.008			.003	135
150									-.012	150
155			.050			.011				155
180	.080	.061	.053	.040	.027	.013	-.010	-.028	-.018	180
205			.055			.017				205
210									-.016	210
225			.065			.019			-.014	225
240	.095	.073	.064	.050	.045	.023	-.003	-.014		240
250			.075			.027				250
255	.122	.091	.079	.065	.052	.030	-.001	-.000		255
260			.092			.036			.051	260
265	.189	.136	.110	.085	.065	.035	.013	.002	.028	265
270	.191	.133	.107	.073	.048	.015			.098	270
275	.124	.076	.061	.034	.014	-.008	-.043	-.055	.096	275
280			.047			-.014			.090	280
285	.055	.027	.023	.007	.001	-.014	-.036	-.045		285
290			.017			-.013				290
300	.040	.020	.015	.014	.002	-.014	-.032	-.039		300
315			.015			-.012			-.037	315
330									-.036	330
335			.020			-.013				335

TABLE 1.- Continued

(c) Continued

ALPHA = 9.58, PHI = 67.5, BODY/WING/TAIL/NO DEFLECTIONS

THETA DEG	CP AT X/L= 0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.85	0.95	THETA DEG
0	.009	-.003	-.009	-.016	-.021	-.019	-.047	-.056	-.052	0
25			-.007			-.024				25
30									-.035	30
45			.040			-.020			-.025	45
60	.041	.002	.002	-.010	-.015	-.023	-.043	-.055		60
70			-.004			-.015				70
75	.006	.002	.007	-.009	-.007	-.012	-.045	-.056		75
80			-.009			-.030			-.077	80
85	-.001	-.011	-.018	-.021	-.023	-.035	-.054	-.045	-.051	85
90	.002	-.019	-.021	-.034	-.033	-.036			-.039	90
95	.042	.007	-.017	-.037	-.047	-.053	-.033	-.020	-.051	95
100			.008			-.046			-.079	100
105	.071	.052	.023	.002		-.029	-.056	-.038		105
110			.032			-.015				110
120	.085	.061	.043	.022	.014	-.001	-.031	-.051		120
135			.051			.010			.003	135
150									-.023	150
155			.057			.018				155
180	.103	.087	.064	.049	.042	.026	.001	-.021	-.011	180
205			.071			.034				205
210									-.007	210
225			.085			.042			-.004	225
240	.140	.119	.093	.084	.077	.053	.021	.012		240
250			.114			.066				250
255	.191	.157	.126	.118	.099	.073	.032	.037		255
260			.151			.086			.147	260
265	.294	.226	.177	.157	.127	.088	.054	.042	.041	265
270	.279	.201	.157	.121	.084	.040			.132	270
275	.153	.091	.062	.030	.001	-.028	-.076	-.077	.144	275
280			.023			-.049			.078	280
285	.037	.004	-.012	-.027	-.037	-.052	-.074	-.074		285
290			-.020			-.052				290
300	.012	-.008	-.020	-.021	-.032	-.039	-.056	-.064		300
315			-.017			-.035			-.072	315
330									-.068	330
335			-.005			-.033				335

ALPHA = 14.60, PHI = 67.5, BODY/WING/TAIL/NO DEFLECTIONS

THETA DEG	CP AT X/L= 0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.85	0.95	THETA DEG
0	-.023	-.037	-.044	-.045	-.053	-.048	-.077	-.088	-.099	0
25			-.032			-.052				25
30									-.072	30
45			.023			-.046			-.052	45
60	.021	-.017	-.016	-.028	-.035	-.049	-.071	-.078		60
70			-.021			-.039				70
75	-.011	-.013	-.009	-.027	-.028	-.036	-.071	-.062		75
80			-.034			-.052			-.105	80
85	-.032	-.042	-.049	-.044	-.041	-.046	-.048	-.056	-.089	85
90	-.047	-.044	-.034	-.043	-.042	-.042			-.074	90
95	-.017	-.050	-.059	-.060	-.056	-.050	-.057	-.042	-.100	95
100			-.032			-.080			-.125	100
105	.082	.029	-.002	-.020	-.025	-.057	-.076	-.076		105
110			.017			-.032				110
120	.085	.057	.044	.022	.010	-.005	-.034	-.053		120
135			.064			.016			.006	135
150									-.012	150
155			.080			.032				155
180	.128	.106	.095	.073	.058	.046	.019	-.002	.005	180
205			.110			.061				205
210									.007	210
225			.131			.076			.014	225
240	.195	.165	.150	.126	.123	.097	.060	.049		240
250			.183			.118				250
255	.272	.231	.206	.176	.168	.133	.088	.084		255
260			.244			.156			.261	260
265	.408	.333	.283	.236	.215	.164	.131	.096	.055	265
270	.373	.287	.243	.182	.149	.092			.146	270
275	.192	.121	.092	.046	.019	-.016	-.068	-.079	.186	275
280			.025			-.061			.131	280
285	.029	-.010	-.027	-.049	-.061	-.079	-.109	-.117		285
290			-.045			-.085				290
300	-.016	-.045	-.057	-.058	-.080	-.091	-.111	-.111		300
315			-.058			-.085			-.125	315
330									-.123	330
335			-.043			-.070				335

TABLE 1.- Continued

(c) Continued

ALPHA = 19.62, PHI = 67.5, BODY/WING/TAIL/NO DEFLECTIONS

THETA DEG	CP AT X/L= 0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.85	0.95	THETA DEG
0	-.061	-.076	-.095	-.104	-.119	-.105	-.131	-.132	-.146	0
25			-.085			-.112				25
30									-.139	30
45			-.008			-.086			-.116	45
60	.001	-.042	-.049	-.062	-.070	-.085	-.106	-.109		60
70			-.050			-.068				70
75	-.027	-.037	-.037	-.058	-.054	-.059	-.090	-.088		75
80			-.059			-.068			-.124	80
85	-.066	-.066	-.061	-.053	-.048	-.058	-.071	-.078	-.109	85
90	-.071	-.060	-.042	-.048	-.051	-.054			-.089	90
95	-.073	-.069	-.057	-.054	-.056	-.057	-.068	-.047	-.120	95
100			-.066			-.081			-.146	100
105	.029	.008	-.023	-.038	-.039	-.070	-.080	-.089		105
110			.007			-.038				110
120	.088	.059	.045	.029	.016	-.001	-.026	-.042		120
135			.076			.031			.019	135
150									.012	150
155			.100			.055				155
180	.163	.139	.126	.109	.089	.079	.049	.029	.028	180
205			.150			.100				205
210									.032	210
225			.183			.123			.043	225
240	.260	.230	.216	.188	.180	.155	.115	.101		240
250			.267			.188				250
255	.366	.322	.302	.261	.251	.211	.161	.148		255
260			.357			.247			.357	260
265	.535	.452	.407	.347	.323	.260	.250	.171	.134	265
270	.476	.381	.344	.267	.227	.162			.249	270
275	.232	.156	.132	.080	.049	.010	-.043	-.050	.258	275
280			.036			-.055			.275	280
285	.027	-.013	-.028	-.051	-.064	-.082	-.114	-.119		285
290			-.054			-.096				290
300	-.034	-.062	-.074	-.073	-.099	-.108	-.128	-.128		300
315			-.089			-.114			-.158	315
330									-.162	330
335			-.087			-.122				335

ALPHA = 24.61, PHI = 67.5, BODY/WING/TAIL/NO DEFLECTIONS

THETA DEG	CP AT X/L= 0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.85	0.95	THETA DEG
0	-.093	-.107	-.124	-.121	-.137	-.116	-.143	-.143	-.159	0
25			-.121			-.137				25
30									-.162	30
45			-.042			-.136			-.149	45
60	-.023	-.096	-.101	-.114	-.122	-.133	-.145	-.136		60
70			-.102			-.100				70
75	-.050	-.067	-.060	-.096	-.086	-.087	-.124	-.124		75
80			-.072			-.104			-.099	80
85	-.077	-.069	-.067	-.061	-.063	-.089	-.119	-.116	-.093	85
90	-.081	-.064	-.048	-.058	-.060	-.063			-.107	90
95	-.088	-.065	-.058	-.061	-.063	-.065	-.079	-.049	-.143	95
100			-.076			-.083			-.160	100
105	.013	.001	-.028	-.041	-.038	-.067	-.077	-.092		105
110			.009			-.030				110
120	.095	.070	.058	.045	.033	.015	-.009	-.023		120
135			.098			.055			.046	135
150									.040	150
155			.131			.086				155
180	.199	.177	.163	.153	.130	.119	.087	.073	.055	180
205			.192			.147				205
210									.068	210
225			.231			.179			.078	225
240	.330	.299	.279	.261	.243	.221	.175	.162		240
250			.346			.267				250
255	.467	.421	.397	.362	.337	.301	.247	.224		255
260			.470			.352			.493	260
265	.675	.585	.537	.477	.438	.373	.373	.259	.196	265
270	.589	.485	.446	.367	.312	.244			.352	270
275	.278	.197	.171	.123	.083	.046	-.005	.022	.305	275
280			.047			-.045			.351	280
285	.028	-.011	-.028	-.046	-.062	-.078	-.114	-.105		285
290			-.060			-.096				290
300	-.043	-.072	-.087	-.080	-.105	-.113	-.136	-.129		300
315			-.104			-.124			-.164	315
330									-.172	330
335			-.103			-.133				335

TABLE 1.- Continued

(c) Continued

ALPHA = -5.01, PHI = 90.0, BODY/WING/TAIL/ND DEFLECTIONS

THETA DEG	CP AT X/L= 0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.85	0.95	THETA DEG
0	.059	.042	.032	.023	.016	.010	-.020	-.035	-.024	0
25			.032			.005				25
30									-.022	30
45			.073			.008			-.033	45
60	.094	.050	.042	.026	.019	.005	-.021	-.028		60
70			.041			.014				70
75	.093	.065	.057	.033	.029	.018	-.020	-.029		75
80			.059			.011			.057	80
85	.156	.117	.086	.062	.047	.020	-.012	-.024	.053	85
90	.189	.147	.117	.079	.057	.028			.102	90
95	.164	.121	.089	.065	.044	.021	-.010	-.022	.055	95
100			.066			.015			.061	100
105	.101	.082	.055	.040	.037	.012	-.011	-.024		105
110			.048			.011				110
120	.073	.057	.044	.030	.021	.009	-.019	-.028		120
135			.041			.006			-.027	135
150									-.027	150
155			.038			.005				155
180	.064	.049	.036	.026	.014	.004	-.020	-.036	-.023	180
205			.033			.003				205
210									-.014	210
225			.041			.002			-.005	225
240	.059	.044	.032	.022	.015	-.000	-.025	-.040		240
250			.035			-.004				250
255	.062	.043	.032	.023	.010	-.005	-.031	-.028		255
260			.032			-.003			-.045	260
265	.075	.047	.032	.019	.008	-.006	-.018	-.025	-.010	265
270	.080	.050	.035	.019	.007	-.006			.001	270
275	.072	.046	.039	.023	.009	-.006	-.017	-.025	-.007	275
280			.048			-.004			-.039	280
285	.058	.038	.033	.020	.011	-.004	-.031	-.029		285
290			.030			-.004				290
300	.060	.039	.031	.028	.013	-.001	-.026	-.036		300
315			.031			.001			-.006	315
330									-.016	330
335			.037			.000				335

ALPHA = -.53, PHI = 90.0, BODY/WING/TAIL/ND DEFLECTIONS

THETA DEG	CP AT X/L= 0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.85	0.95	THETA DEG
0	.062	.043	.034	.023	.017	.012	-.018	-.033	-.014	0
25			.032			.006				25
30									-.012	30
45			.071			.007			-.018	45
60	.088	.047	.038	.022	.016	.002	-.022	-.030		60
70			.033			.008				70
75	.073	.053	.045	.026	.021	.011	-.027	-.029		75
80			.039			.001			-.000	80
85	.106	.075	.049	.035	.023	.002	-.021	-.023	.023	85
90	.120	.088	.068	.039	.022	.002			.045	90
95	.110	.076	.053	.035	.019	.001	-.020	-.022	.024	95
100			.045			.001			-.002	100
105	.079	.064	.042	.029	.028	.001	-.021	-.026		105
110			.040			.003				110
120	.067	.048	.040	.026	.017	.003	-.022	-.030		120
135			.039			.003			-.015	135
150									-.016	150
155			.038			.004				155
180	.066	.048	.037	.026	.015	.005	-.017	-.033	-.014	180
205			.035			.006				205
210									-.016	210
225			.043			.007			-.015	225
240	.066	.050	.037	.027	.020	.007	-.018	-.030		240
250			.043			.005				250
255	.079	.057	.042	.032	.021	.005	-.023	-.024		255
260			.047			.009			-.006	260
265	.120	.077	.056	.038	.027	.006	-.015	-.024	.022	265
270	.134	.087	.066	.042	.028	.006			.048	270
275	.111	.071	.059	.038	.024	.004	-.015	-.026	.036	275
280			.060			.005			.007	280
285	.075	.049	.042	.027	.019	.005	-.024	-.026		285
290			.036			.004				290
300	.067	.044	.036	.031	.017	.004	-.019	-.029		300
315			.035			.005			-.014	315
330									-.016	330
335			.040			.00?				335

TABLE 1.- Continued

(c) Continued

ALPHA = 4.47, PHI = 90.0, BODY/WING/TAIL/NO DEFLECTIONS

THETA DEG	CP AT X/L= 0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.85	0.95	THETA DEG
0	.057	.036	.028	.020	.013	.008	-.022	-.036	-.024	0
25			.025			.001				25
30									-.010	30
45			.063			.002			-.005	45
60	.081	.036	.027	.014	.009	-.004	-.028	-.039		60
70			.020			.000				70
75	.055	.037	.030	.012	.010	.003	-.033	-.032		75
80			.021			-.009			-.044	80
85	.065	.042	.021	.012	.006	-.009	-.021	-.025	-.017	85
90	.064	.044	.032	.010	.001	-.010			-.006	90
95	.066	.042	.023	.010	.000	-.011	-.022	-.024	-.016	95
100			.024			-.010			-.046	100
105	.058	.047	.025	.012	.016	-.009	-.030	-.030		105
110			.026			-.006				110
120	.056	.036	.029	.016	.007	-.006	-.029	-.041		120
135			.030			-.005			-.005	135
150									-.017	150
155			.031			-.003				155
180	.056	.040	.033	.022	.010	-.001	-.023	-.037	-.025	180
205			.033			.001				205
210									-.030	210
225			.044			.003			-.031	225
240	.066	.049	.041	.030	.023	.006	-.019	-.028		240
250			.051			.008				250
255	.091	.066	.054	.042	.029	.011	-.016	-.020		255
260			.068			.018			.064	260
265	.174	.124	.096	.072	.054	.026	-.004	-.024	.045	265
270	.203	.150	.123	.089	.066	.034			.115	270
275	.162	.115	.098	.069	.049	.022	-.004	-.027	.084	275
280			.080			.014			.082	280
285	.091	.060	.053	.037	.026	.010	-.017	-.024		285
290			.044			.007				290
300	.068	.044	.030	.034	.020	.003	-.020	-.027		300
315			.034			.002			-.029	315
330									-.030	330
335			.037			-.001				335

ALPHA = 9.48, PHI = 90.0, BODY/WING/TAIL/NO DEFLECTIONS

THETA DEG	CP AT X/L= 0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.85	0.95	THETA DEG
0	.050	.032	.020	.008	.003	-.000	-.031	-.046	-.041	0
25			.016			-.010				25
30									-.034	30
45			.056			-.011			-.009	45
60	.066	.023	.017	-.001	-.008	-.019	-.044	-.058		60
70			.009			-.015				70
75	.034	.020	.019	-.002	-.005	-.011	-.047	-.036		75
80			.007			-.021			-.079	80
85	.035	.018	.006	.000	-.005	-.017	-.026	-.029	-.057	85
90	.026	.017	.017	-.001	-.008	-.016			-.041	90
95	.033	.017	.008	-.003	-.010	-.018	-.028	-.031	-.055	95
100			.009			-.021			-.080	100
105	.036	.030	.011	-.003	.000	-.023	-.042	-.038		105
110			.012			-.022				110
120	.040	.024	.015	-.003	-.008	-.021	-.045	-.060		120
135			.017			-.018			-.012	135
150									-.042	150
155			.018			-.014				155
180	.048	.036	.020	.007	-.001	-.010	-.031	-.047	-.041	180
205			.021			-.007				205
210									-.050	210
225			.035			-.003			-.052	225
240	.074	.056	.035	.027	.022	.005	-.021	-.032		240
250			.053			.012				250
255	.120	.090	.065	.056	.040	.019	-.010	-.020		255
260			.092			.036			.174	260
265	.262	.192	.145	.123	.099	.061	.017	-.014	.077	265
270	.312	.236	.191	.159	.128	.084			.182	270
275	.245	.179	.146	.119	.092	.057	.019	-.013	.125	275
280			.104			.032			.179	280
285	.121	.084	.069	.051	.038	.019	-.012	-.024		285
290			.048			.010				290
300	.075	.052	.035	.032	.020	.004	-.023	-.030		300
315			.027			-.003			-.050	315
330									-.052	330
335			.029			-.008				335

TABLE 1.- Continued

(c) Continued

ALPHA = 14.47, PHI = 90.0, BODY/WING/TAIL/NO DEFLECTIONS

THETA DEG	CP AT X/L= 0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.85	0.95	THETA DEG
0	.039	.018	.012	-.001	-.013	-.014	-.045	-.059	-.065	0
25			.004			-.028				25
30									-.067	30
45			.041			-.032			-.033	45
60	.050	.003	-.003	-.020	-.030	-.044	-.069	-.085		60
70			-.013			-.038				70
75	.013	.000	-.001	-.021	-.024	-.031	-.064	-.047		75
80			-.010			-.034			-.114	80
85	.012	.003	-.007	-.011	-.013	-.027	-.037	-.040	-.096	85
90	.005	.004	.005	-.010	-.016	-.025			-.067	90
95	.011	.001	-.006	-.012	-.019	-.028	-.038	-.041	-.089	95
100			-.008			-.032			-.112	100
105	.015	.010	-.010	-.021	-.018	-.043	-.056	-.048		105
110			-.010			-.046				110
120	.021	.001	-.005	-.022	-.031	-.045	-.069	-.068		120
135			-.001			-.039			-.044	135
150									-.071	150
155			.004			-.032				155
180	.038	.020	.011	-.003	-.016	-.023	-.046	-.061	-.062	180
205			.015			-.017				205
210									-.075	210
225			.034			-.007			-.071	225
240	.084	.058	.044	.027	.021	.006	-.020	-.034		240
250			.074			.022				250
255	.153	.123	.095	.075	.061	.038	.004	-.014		255
260			.141			.070			.295	260
265	.356	.284	.226	.187	.163	.118	.060	.015	.127	265
270	.424	.352	.298	.242	.214	.159			.255	270
275	.332	.267	.227	.180	.158	.113	.060	.015	.176	275
280			.155			.065			.297	280
285	.158	.118	.099	.071	.063	.037	.003	-.016		285
290			.072			.021				290
300	.086	.055	.046	.034	.021	.006	-.021	-.033		300
315			.029			-.007			-.071	315
330									-.076	330
335			.025			-.019				335

ALPHA = 19.47, PHI = 90.0, BODY/WING/TAIL/NO DEFLECTIONS

THETA DEG	CP AT X/L= 0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.85	0.95	THETA DEG
0	.029	.011	-.003	-.010	-.024	-.024	-.052	-.066	-.083	0
25			-.015			-.045				25
30									-.085	30
45			.021			-.056			-.073	45
60	.029	-.022	-.033	-.050	-.061	-.077	-.098	-.109		60
70			-.044			-.070				70
75	-.011	-.025	-.027	-.045	-.046	-.050	-.081	-.070		75
80			-.028			-.048			-.146	80
85	-.004	-.012	-.021	-.024	-.026	-.041	-.054	-.064	-.123	85
90	-.006	-.009	-.007	-.022	-.028	-.038			-.090	90
95	-.007	-.014	-.020	-.025	-.032	-.042	-.055	-.067	-.121	95
100			-.026			-.047			-.139	100
105	-.013	-.014	-.035	-.044	-.040	-.063	-.072	-.070		105
110			-.039			-.080				110
120	-.005	-.026	-.034	-.052	-.064	-.080	-.100	-.112		120
135			-.026			-.065			-.081	135
150									-.087	150
155			-.016			-.051				155
180	.025	.011	-.003	-.015	-.028	-.033	-.056	-.069	-.081	180
205			.008			-.023				205
210									-.085	210
225			.038			-.006			-.080	225
240	.098	.074	.061	.042	.032	.015	-.012	-.026		240
250			.104			.045				250
255	.193	.160	.138	.113	.098	.071	.031	.007		255
260			.203			.120			.422	260
265	.460	.371	.325	.271	.247	.193	.120	.063	.238	265
270	.552	.462	.427	.349	.319	.253			.368	270
275	.430	.352	.327	.262	.240	.185	.121	.064	.203	275
280			.220			.113			.457	280
285	.202	.157	.144	.111	.100	.072	.033	.004		285
290			.106			.045				290
300	.102	.072	.064	.050	.032	.016	-.013	-.024		300
315			.033			-.005			-.076	315
330									-.084	330
335			.018			-.023				335

TABLE 1.- Continued

(c) Continued

ALPHA = 24.49, PHI = 90.0, BODY/WING/TAIL/NO DEFLECTIONS

THETA DEG	CP AT X/L= 0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.85	0.95	THETA DEG
0	.025	.005	-.006	-.008	-.024	-.023	-.048	-.063	-.089	0
25			-.024			-.047				25
30									-.092	30
45			.008			-.064			-.086	45
60	.006	-.050	-.058	-.075	-.082	-.094	-.110	-.114		60
70			-.085			-.102				70
75	-.039	-.053	-.054	-.080	-.076	-.075	-.104	-.089		75
80			-.044			-.075			-.161	80
85	-.018	-.025	-.036	-.045	-.054	-.074	-.098	-.084	-.138	85
90	-.022	-.023	-.021	-.037	-.049	-.066			-.105	90
95	-.026	-.032	-.036	-.041	-.060	-.075	-.084	-.086	-.134	95
100			-.046			-.071			-.154	100
105	-.041	-.046	-.072	-.084	-.066	-.084	-.[illegible]1	-.089		105
110			-.082			-.112				110
120	-.034	-.055	-.062	-.078	-.085	-.098	-.1	-.118		120
135			-.043			-.075			-.091	135
150									-.094	150
155			-.026			-.056				155
180	.017	.003	-.009	-.018	-.029	-.033	-.055	-.066	-.085	180
205			.009			-.016				205
210									-.081	210
225			.044			.008			-.073	225
240	.116	.093	.078	.064	.049	.034	.006	-.010		240
250			.138			.078				250
255	.234	.203	.184	.158	.137	.112	.071	.037		255
260			.272			.178			.623	260
265	.575	.479	.435	.371	.342	.280	.200	.127	.372	265
270	.694	.600	.566	.479	.440	.364			.517	270
275	.538	.457	.434	.364	.332	.273	.198	.127	.315	275
280			.288			.171			.648	280
285	.251	.204	.190	.158	.140	.114	.072	.036		285
290			.140			.079				290
300	.128	.094	.086	.075	.052	.037	.008	-.006		300
315			.044			.009			-.047	315
330									-.088	330
335			.022			-.015				335

ALPHA = -4.99, PHI = 0.0, BODY/WING/TAIL/PITCH DEFLECTION

THETA DEG	CP AT X/L= 0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.85	0.95	THETA DEG
0							.013	-.018	.088	0
25										25
30									.118	30
45									.144	45
60							.007	-.010		60
70										70
75							-.010	.011		75
80									-.114	80
85							.028	.018	.047	85
90									.095	90
95							-.091	.038	.167	95
100									.702	100
105							-.046	-.003		105
110										110
120							-.038	-.045		120
135									-.109	135
150									-.045	150
155										155
180							-.028	-.040	-.007	180
205										20
210									-.045	210
225									-.098	225
240							-.036	-.049		24[illegible]
250										[illegible]
255							-.050	-.046		[illegible]
260									.751	2[illegible]0
265							-.093	.014	.160	[illegible]
270									.096	[illegible]0
275							.028	.015	.037	27[illegible]
280									-.077	280
285							-	.010		285
290										290
300							.0[illegible]	-.013		300
315									.150	315
330									.120	330
335										335

TABLE 1.- Continued

(c) Continued

ALPHA = .02, PHI = 0.0, BODY/WING/TAIL/PITCH DEFLECTION

THETA DEG	CP AT X/L= 0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.85	0.95	THETA DEG
0							-.020	-.035	.070	0
25										25
30									.079	30
45									.094	45
60							-.022	-.029		60
70										70
75							-.025	-.029		75
80									-.083	80
85							-.019	-.023	-.019	85
90									-.031	90
95							-.017	-.020	.129	95
100									.730	100
105							-.017	-.023		105
110										110
120							-.019	-.028		120
135									-.10.	135
150									-.033	150
155										155
180							-.016	-.032	-.002	180
205										205
210									-.035	210
225									-.095	225
240							-.017	-.030		240
250										250
255							-.023	-.024		255
260									.600	260
265							-.017	-.025	.110	265
270									-.016	270
275							-.015	-.025	-.017	275
280									-.070	280
285							-.024	-.026		285
290										290
300							-.020	-.029		300
315									.098	315
330									.081	330
335										335

ALPHA = 5.00, PHI = 0.0, BODY/WING/TAIL/PITCH DEFLECTION

THETA DEG	CP AT X/L= 0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.85	0.95	THETA DEG
0							-.036	-.040	.003	0
25										25
30									.044	30
45									.066	45
60							-.040	-.048		60
70										70
75							-.055	-.068		75
80									-.022	80
85							-.100	-.075	-.119	85
90									-.083	90
95							.020	.018	.119	95
100									.651	100
105							-.003	.014		105
110										110
120							.007	-.008		120
135									-.095	135
150									-.000	150
155										155
180							.014	-.007	.035	180
205										205
210									-.001	210
225									-.090	225
240							.009	-.011		240
250										250
255							-.010	.014		255
260									.55.	260
265							.022	.015	.094	265
270									-.089	270
275							-.097	-.077	-.120	275
280									-.010	280
285							- 054	-.063		285
290										290
300							-.039	-.049		300
315									.070	315
330									.043	330
335										335

TABLE 1.- Continued

(c) Continued

ALPHA = 10.02, PHI = 0.0, BODY/WING/TAIL/PITCH DEFLECTION

THETA DEG	CP AT X/L= 0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.85	0.95	THETA DEG
0							-.055	-.057	-.056	0
25										25
30									-.018	30
45									.035	45
60							-.066	-.075		60
70										70
75							-.142	-.147		75
80									-.157	80
85							-.139	-.142	-.171	85
90									-.137	90
95							.035	.065	.154	95
100									.629	100
105							.029	.052		105
110										110
120							.057	.025		120
135									-.074	135
150									.057	150
155										155
180							.068	.038	.084	180
205										205
210									.059	210
225									-.070	225
240							.060	.025		240
250										250
255							.026	.053		255
260									.515	260
265							.034	.059	.130	265
270									-.143	270
275							-.136	-.145	-.169	275
280									-.154	280
285							-.144	-.143		285
290										290
300							-.063	-.074		300
315									.036	315
330									-.025	330
335										335

ALPHA = 15.01, PHI = 0.0, BODY/WING/TAIL/PITCH DEFLECTION

THETA DEG	CP AT X/L= 0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.85	0.95	THETA DEG
0							-.090	-.091	-.097	0
25										25
30									-.108	30
45									-.097	45
60							-.146	-.135		60
70										70
75							-.153	-.160		75
80									-.178	80
85							-.165	-.153	-.177	85
90									-.149	90
95							.065	.129	.209	95
100									.623	100
105							.078	.105		105
110										110
120							.122	.085		120
135									-.036	135
150									.126	150
155										155
180							.141	.104	.148	180
205										205
210									.127	210
225									-.031	225
240							.129	.085		240
250										250
255							.077	.107		255
260									.527	260
265							.070	.123	.185	265
270									-.159	270
275							-.162	-.156	-.177	275
280									-.180	280
285							-.153	-.137		285
290										290
300							-.147	-.134		300
315									-.097	315
330									-.111	330
335										335

TABLE 1.- Continued

(c) Continued

ALPHA = 20.02, PHI = 0.0, BODY/WING/TAIL/PITCH DEFLECTION

THETA DEG	CP AT X/L= 0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.85	0.95	THETA DEG
0							-.124	-.121	-.128	0
25										25
30									-.141	30
45									-.127	45
60							-.166	-.158		60
70										70
75							-.165	-.169		75
80									-.179	80
85							-.179	-.161	-.177	85
90									-.146	90
95							.116	.213	.273	95
100									.665	100
105							.143	.177		105
110										110
120							.206	.163		120
135									.022	135
150									.211	150
155										155
180							.235	.190	.230	180
205										205
210									.243	210
225									.025	225
240							.218	.162		240
250										250
255							.144	.182		255
260									.567	260
265							.118	.206	.247	265
270									-.161	270
275							-.176	-.164	-.178	275
280									-.183	280
285							-.166	-.165		285
290										290
300							-.169	-.157		300
315									-.125	315
330									-.145	330
335										335

ALPHA = 25.02, PHI = 0.0, BODY/WING/TAIL/PITCH DEFLECTION

THETA DEG	CP AT X/L= 0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.85	0.95	THETA DEG
0							-.145	-.139	-.139	0
25										25
30									-.144	30
45									-.144	45
60							-.172	-.160		60
70										70
75							-.173	-.172		75
80									-.17	80
85							-.186	-.167	-.173	85
90									-.135	90
95							.180	.310	.314	95
100									.715	100
105							.221	.269		105
110										110
120							.306	.252		120
135									.103	135
150									.306	150
155										155
180							.343	.288	.324	180
205										205
210									.308	210
225									.103	225
240							.320	.255		240
250										250
255							.224	.276		255
260									.603	260
265							.184	.302	.293	265
270									-.157	270
275							-.181	-.171	-.177	275
280									-.184	280
285							-.175	-.169		285
290										290
300							-.176	-.160		300
315									-.143	315
330									-.149	330
335										335

TABLE 1.- Continued

(c) Continued

ALPHA = -4.82, PHI = 0.0, BODY/WING/TAIL/YAW DEFLECTION

THETA DEG	CP AT X/L= 0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.85	0.95	THETA DEG
0							.014	-.012	.038	0
25										25
30									-.019	30
45									-.097	45
60							.006	-.009		60
70										70
75							-.009	.010		75
80									.707	80
85							.024	.017	.340	85
90									.407	90
95							-.082	.084	.370	95
100									.348	100
105							-.041	.068		105
110										110
120							-.039	.067		120
135									-.093	135
150									-.068	150
155										155
180							-.033	-.017	-.022	180
205										205
210									.057	210
225									.099	225
240							-.036	-.050		240
250										250
255							-.043	-.060		255
260									-.143	260
265							-.093	-.073	-.105	265
270									-.080	270
275							.027	.013	-.109	275
280									-.137	280
285							-.012	.009		285
290										290
300							.006	-.013		300
315									.162	315
330									.138	330
335										335

ALPHA = .00, PHI = 0.0, BODY/WING/TAIL/YAW DEFLECTION

THETA DEG	CP AT X/L= 0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.85	0.95	THETA DEG
0							-.016	-.031	.015	0
25										25
30									-.055	30
45									-.105	45
60							-.022	.004		60
70										70
75							-.025	.101		75
80									.707	80
85							-.019	.093	.411	85
90									.489	90
95							-.017	.040	.427	95
100									.737	100
105							-.017	.046		105
110										110
120							-.019	-.011		120
135									-.108	135
150									-.059	150
155										155
180							-.015	-.032	.017	180
205										205
210									.097	210
225									.120	225
240							-.018	-.030		240
250										250
255							-.024	-.024		255
260									-.144	260
265							-.018	-.025	-.101	265
270									-.074	270
275							-.016	-.025	-.097	275
280									-.135	280
285							-.025	-.026		285
290										290
300							-.021	-.030		300
315									.121	315
330									.094	330
335										335

TABLE 1.- Continued

(c) Continued

ALPHA = 5.01, PHI = 0.0, BODY/WING/TAIL/YAW DEFLECTION

THETA DEG	CP AT X/L= 0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.85	0.95	THETA DEG
0							-.033	-.017	-.018	0
25										25
30									-.056	30
45									-.077	45
60							-.039	.027		60
70										70
75							-.019	.021		75
80									.209	80
85							-.015	.023	.208	85
90									.253	90
95							.022	.020	.187	95
100									.694	100
105							-.005	.015		105
110										110
120							.007	-.007		120
135									-.103	135
150									-.020	150
155										155
180							.014	-.007	.045	180
205										205
210									.142	210
225									.164	225
240							.008	-.012		240
250										250
255							-.011	.013		255
260									-.143	260
265							.020	.014	-.113	265
270									-.077	270
275							-.096	-.077	-.102	275
280									-.136	280
285							-.054	-.063		285
290										290
300							-.039	-.048		300
315									.111	315
330									.066	330
335										335

ALPHA = 10.01, PHI = 0.0, BODY/WING/TAIL/YAW DEFLECTION

THETA DEG	CP AT X/L= 0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.85	0.95	THETA DEG
0							-.052	-.049	-.027	0
25										25
30									-.057	30
45									-.045	45
60							-.065	-.049		60
70										70
75							-.105	-.028		75
80									.021	80
85							-.099	-.031	.111	85
90									.188	90
95							.036	.066	.179	95
100									.655	100
105							.028	.053		105
110										110
120							.057	.025		120
135									-.081	135
150									.044	150
155										155
180							.069	.038	.082	180
205										205
210									.211	210
225									.239	225
240							.059	.024		240
250										250
255							.024	.052		255
260									-.145	260
265							.033	.058	-.133	265
270									-.127	270
275							-.137	-.148	-.165	275
280									-.169	280
285							-.146	-.146		285
290										290
300							-.064	-.075		300
315									.084	315
330									.018	330
335										335

TABLE 1.- Continued

(c) Continued

ALPHA = 15.02, PHI = 0.0, BODY/WING/TAIL/YAW DEFLECTION

THETA DEG	CP AT X/L= 0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.85	0.95	THETA DEG
0							-.088	-.093	-.081	0
25										25
30									-.093	30
45									-.117	45
60							-.144	-.080		60
70										70
75							-.127	-.085		75
80									-.027	80
85							-.108	-.080	.047	85
90									.098	90
95							.068	.130	.217	95
100									.637	100
105							.079	.107		105
110										110
120							.123	.085		120
135									-.049	135
150									.116	150
155										155
180							.143	.104	.153	180
205										205
210									.314	210
225									.344	225
240							.128	.083		240
250										250
255							.076	.106		255
260									-.136	260
265							.067	.122	-.125	265
270									-.132	270
275							-.163	-.156	-.175	275
280									-.177	280
285							-.155	-.158		285
290										290
300							-.148	-.135		300
315									-.099	315
330									-.104	330
335										335

ALPHA = 20.01, PHI = 0.0, BODY/WING/TAIL/YAW DEFLECTION

THETA DEG	CP AT X/L= 0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.85	0.95	THETA DEG
0							-.123	-.122	-.124	0
25										25
30									-.139	30
45									-.153	45
60							-.161	-.092		60
70										70
75							-.147	-.101		75
80									-.017	80
85							-.123	-.097	-.008	85
90									.006	90
95							.119	.214	.277	95
100									.676	100
105							.145	.179		105
110										110
120							.206	.163		120
135									.005	135
150									.202	150
155										155
180							.236	.189	.279	180
205										205
210									.456	210
225									.479	225
240							.215	.161		240
250										250
255							.142	.179		255
260									-.122	260
265							.115	.205	-.109	265
270									-.128	270
275							-.177	-.167	-.174	275
280									-.179	280
285							-.167	-.165		285
290										290
300							-.170	-.159		300
315									-.128	315
330									-.139	330
335										335

TABLE 1.- Continued

(c) Continued

ALPHA = 25.03, PHI = 0.0, BODY/WING/TAIL/YAW DEFLECTION

THETA DEG	CP AT X/L= 0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.85	0.95	THETA DEG
0							-.146	-.134	-.149	0
25										25
30									-.162	30
45									-.168	45
60							-.159	-.119		60
70										70
75							-.147	-.126		75
80									-.078	80
85							-.131	-.120	-.078	85
90									-.066	90
95							.184	.312	.321	95
100									.730	100
105							.222	.272		105
110										110
120							.306	.254		120
135									.075	135
150									.298	150
155										155
180							.345	.289	.480	180
205										205
210									.614	210
225									.628	225
240							.319	.254		240
250										250
255							.222	.272		255
260									-.101	260
265							.182	.299	-.090	265
270									-.135	270
275							-.183	-.176	-.178	275
280									-.180	280
285							-.176	-.172		285
290										290
300							-.177	-.165		300
315									-.154	315
330									-.162	330
335										335

ALPHA = -4.88, PHI = 0.0, BODY/WING/TAIL/ROLL DEFLECTION

THETA DEG	CP AT X/L= 0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.85	0.95	THETA DEG
0							.011	-.012	.038	0
25										25
30									-.016	30
45									-.098	45
60							.005	-.010		60
70										70
75							-.010	.010		75
80									.637	80
85							.027	.017	.151	85
90									-.082	90
95							-.094	-.071	-.115	95
100									-.005	100
105							-.043	-.062		105
110										110
120							-.039	-.049		120
135									.078	135
150									.054	150
155										155
180							-.033	-.042	-.020	180
205										205
210									-.069	210
225									-.109	225
240							-.036	-.049		240
250										250
255							-.049	-.049		255
260									.760	260
265							-.093	.015	.159	265
270									.097	270
275							.028	.014	.046	275
280									-.075	280
285							-.012	.010		285
290										290
300							.007	-.013		300
315									.160	315
330									.136	330
335										335

TABLE 1.- Continued

(c) Continued

ALPHA = .01, PHI = 0.0, BODY/WING/TAIL/ROLL DEFLECTION

THETA DEG	CP AT X/L= 0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.85	0.95	THETA DEG
0							-.020	-.031	.021	0
25										25
30									-.046	30
45									-.109	45
60							-.023	-.030		60
70										70
75							-.026	-.030		75
80									.736	80
85							-.020	-.024	.167	85
90									-.018	90
95							-.018	-.020	-.010	95
100									-.075	100
105							-.015	-.023		105
110										110
120							-.019	-.028		120
135									.108	135
150									.083	150
155										155
180							-.015	-.032	.003	180
205										205
210									-.059	210
225									-.098	225
240							-.017	-.030		240
250										250
255							-.023	-.024		255
260									.648	260
265							-.018	-.025	.115	265
270									-.014	270
275							-.016	-.025	-.008	275
280									-.068	280
285							-.025	-.026		285
290										290
300							-.021	-.030		300
315									.113	315
330									.091	330
335										335

ALPHA = 5.02, PHI = 0.0, BODY/WING/TAIL/ROLL DEFLECTION

THETA DEG	CP AT X/L= 0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.85	0.95	THETA DEG
0							-.035	-.041	-.012	0
25										25
30									-.056	30
45									-.117	45
60							-.041	-.049		60
70										70
75							-.056	-.038		75
80									.816	80
85							-.100	.020	.209	85
90									.099	90
95							.019	.019	.043	95
100									-.074	100
105							-.003	.014		105
110										110
120							.006	-.008		120
135									.157	135
150									.133	150
155										155
180							.014	-.007	.032	180
205										205
210									-.031	210
225									-.080	225
240							.008	-.011		240
250										250
255							-.010	.014		255
260									.598	260
265							021	.015	.113	265
270									-.080	270
275							-.096	-.078	-.115	275
280									-.008	280
285							-.055	-.064		285
290										290
300							-.039	-.050		300
315									.084	315
330									.059	330
335										335

TABLE 1.- Continued

(c) Continued

ALPHA = 10.01, PHI = 0.0, BODY/WING/TAIL/ROLL DEFLECTION

THETA DEG	CP AT X/L= 0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.85	0.95	THETA DEG
0							-.054	-.060	-.043	0
25										25
30									-.050	30
45									-.122	45
60							-.066	-.076		60
70										70
75							-.148	-.143		75
80									.286	80
85							-.143	-.135	.044	85
90									.071	90
95							.032	.064	-.021	95
100									-.091	100
105							.028	.051		105
110										110
120							.055	.024		120
135									.234	135
150									.201	150
155										155
180							.069	.037	.070	180
205										205
210									.012	210
225									-.049	225
240							.059	.024		240
250										250
255							.026	.053		255
260									.566	260
265							.035	.059	.148	265
270									-.157	270
275							-.138	-.152	-.174	275
280									-.168	280
285							-.150	-.153		285
290										290
300							-.064	-.075		300
315									.041	315
330									-.013	330
335										335

ALPHA = 15.01, PHI = 0.0, BODY/WING/TAIL/ROLL DEFLECTION

THETA DEG	CP AT X/L= 0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.85	0.95	THETA DEG
0							-.089	-.095	-.095	0
25										25
30									-.098	30
45									-.107	45
60							-.147	-.136		60
70										70
75							-.155	-.129		75
80									-.059	80
85							-.167	-.095	-.000	85
90									.009	90
95							.063	.129	-.083	95
100									-.112	100
105							.076	.105		105
110										110
120							.121	.084		120
135									.341	135
150									.307	150
155										155
180							.141	.103	.142	180
205										205
210									.073	210
225									-.006	225
240							.128	.084		240
250										250
255							.076	.107		255
260									.590	260
265							.070	.123	.200	265
270									-.162	270
275							-.164	-.158	-.178	275
280									-.183	280
285							-.156	-.159		285
290										290
300							-.150	-.137		300
315									-.099	315
330									-.113	330
335										335

TABLE 1.- Concluded

(c) Concluded

ALPHA = 20.03, PHI = 0.0, BODY/WING/TAIL/ROLL DEFLECTION

THETA DEG	CP AT X/L= 0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.85	0.95	THETA DEG
0							-.126	-.127	-.131	0
25										25
30									-.132	30
45									-.140	45
60							-.168	-.140		60
70										70
75							-.167	-.133		75
80									-.045	80
85							-.181	-.114	.020	85
90									-.047	90
95							.113	.210	-.084	95
100									-.109	100
105							.142	.173		105
110										110
120							.205	.161		120
135									.474	135
150									.446	150
155										155
180							.235	.189	.265	180
205										205
210									.148	210
225									.050	225
240							.217	.162		240
250										250
255							.145	.183		255
260									.661	260
265							.121	.207	.276	265
270									-.159	270
275							-.178	-.165	-.177	275
280									-.182	280
285							-.168	-.166		285
290										290
300							-.171	-.161		300
315									-.124	315
330									-.147	330
335										335

ALPHA = 25.02, PHI = 0.0, BODY/WING/TAIL/ROLL DEFLECTION

THETA DEG	CP AT X/L= 0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.85	0.95	THETA DEG
0							-.148	-.142	-.147	0
25										25
30									-.154	30
45									-.156	45
60							-.173	-.148		60
70										70
75							-.175	-.154		75
80									-.053	80
85							-.186	-.139	-.038	85
90									-.054	90
95							.178	.309	-.069	95
100									-.098	100
105							.218	.266		105
110										110
120							.304	.252		120
135									.625	135
150									.608	150
155										155
180							.344	.289	.462	180
205										205
210									.242	210
225									.122	225
240							.319	.255		240
250										250
255							.224	.278		255
260									.700	260
265							.187	.303	.326	265
270									-.153	270
275							-.184	-.174	-.179	275
280									-.184	280
285							-.178	-.171		285
290										290
300							-.178	-.163		300
315									-.147	315
330									-.153	330
335										335

TABLE 2.- PRESSUPE COEFFICIENTS FOR BLUNT-NOSE MODEL

(a) Body-alone configuration

ALPHA = -4.90, PHI = 0.0, BODY ALONE

THETA DEG	CP AT X/L= 0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.85	0.95	THETA DEG
0	.078	.074	.063	.053	.048	.047	.030	.045	.049	0
25			.064			.039			.014	25
45			.064			.038				45
60	.090	.079	.066	.058	.047	.036	.021	-.034		60
70			.071			.032			-.062	70
75	.096	.087	.076	.060	.045	.027	-.011	-.112	-.062	75
80			.074			.018			-.047	80
85	.085	.076	.066	.047	.026	-.011	-.079	-.095	-.067	85
90	.071	.051	.030	.005	-.029	-.068			-.069	90
95	.053	.013	-.019	-.048	-.071	-.087	-.101	-.110	-.066	95
100			-.046			-.063			-.080	100
105	.011	-.034	-.051	-.050	-.047	-.045	-.056	-.065	-.075	105
110			-.044			-.035			-.076	110
120	-.021	-.034	-.026	-.025	-.025	-.026	-.033	-.041		120
135			-.015			-.021				135
155			-.009			-.018			-.013	155
180	-.006	-.002	-.006	-.010	-.013		-.007	.001	.009	180
205			-.007			-.017			-.013	205
225			-.013			-.020				225
240	-.021	-.031	-.024	-.024	-.023	-.025	-.032	-.041		240
250			-.038			-.033			-.069	250
255	.013	-.033		-.047	-.045	-.043	-.054	-.068	-.081	255
260			-.049			-.062			-.077	260
265	.050	.016	-.019	-.048	-.072	-.088	-.102	-.105	-.070	265
270	.066	.047	.026	.001	-.030	-.075			-.061	270
275	.080	.071	.057	.045	.020	-.011	-.085	-.094	-.063	275
280			.070			.017			-.054	280
285	.093	.085	.070	.061	.044	.028	-.014	-.108	-.062	285
290			.069			.032			-.061	290
300	.090	.081	.066	.058	.047	.037	.018	-.032		300
315			.064			.040				315
335			.064			.040			.007	335

ALPHA = .02, PHI = 0.0, BODY ALONE

THETA DEG	CP AT X/L= 0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.85	0.95	THETA DEG
0	.027	.025	.018	.012	.009	.010	-.002	.013	.009	0
25			.017			.001			-.015	25
45			.015			.000				45
60	.036	.021	.014	.010	.004	-.002	-.011	-.048		60
70			.017			-.005			-.035	70
75	.059	.037	.024	.010	.002	-.008	-.031	-.078	-.034	75
80			.031			-.008			-.029	80
85	.074	.058	.046	.027	.011	-.011	-.053	-.049	-.018	85
90	.076	.065	.054	.036	.018	-.007			-.007	90
95	.072	.057	.044	.027	.012	-.007	-.050	-.050	-.031	95
100			.031			-.007			-.037	100
105	.054	.034	.021	.012	.003	-.005	-.029	-.078	-.039	105
110			.015			-.002			-.044	110
120	.032	.019	.015	.011	.005	.002	-.010	-.045		120
135			.017			.005				135
155			.018			.006			-.018	155
180	.027	.022	.019	.013	.010		.011	.013	.012	180
205			.018			.006			-.018	205
225			.016			.005				225
240	.032	.021	.013	.011	.006	.003	-.010	-.047		240
250			.015			-.001			-.055	250
255	.054	.034		.010	.003	-.005	-.031	-.076	-.045	255
260			.026			-.008			-.042	260
265	.069	.056	.041	.026	.009	-.008	-.054	-.049	-.026	265
270	.072	.062	.050	.036	.018	-.007			-.008	27
275	.071	.060	.043	.027	.010	-.008	-.054	-.050	-.018	
280			.031			-.007			-.035	280
285	.059	.036	.022	.011	.002	-.006	-.032	-.080	-.038	285
290			.017			-.004			-.040	290
300	.036	.026	.015	.010	.005	-.000	-.012	-.044		300
315			.016			.002				315
335			.017			.003			-.016	335

TABLE 2.- Continued

(a) Continued

ALPHA = 5.01, PHI = 0.0, BODY ALONE

THETA DEG	CP AT X/L= 0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.85	0.95	THETA DEG
0	-.009	-.005	-.012	-.017	-.018	-.012	-.021	.001	.006	0
25			-.015			-.023			-.012	25
45			-.019			-.025				45
60	-.023	-.035	-.033	-.030	-.031	-.031	-.033	-.041		60
70			-.044			-.041			-.075	70
75	.009	-.034	-.049	-.053	-.052	-.051	-.056	-.069	-.083	75
80			-.047			-.067			-.071	80
85	.047	.009	-.019	-.049	-.073	-.092	-.111	-.112	-.073	85
90	.064	.044	.026	.001	-.028	-.067			-.071	90
95	.077	.068	.063	.043	.024	-.010	-.078	-.097	-.062	95
100			.072			.017			-.058	100
105	.087	.075	.071	.060	.045	.028	-.013	-.113	-.063	105
110			.068			.034			-.067	110
120	.079	.066	.065	.056	.046	.038	.018	-.032		120
135			.064			.040				135
155			.063			.041			.013	155
180	.068	.059	.063	.055	.048		.041	.049	.056	180
205			.061			.041			.014	205
225			.061			.039				225
240	.081	.065	.063	.056	.045	.037	.016	-.035		240
250			.066			.032			-.066	250
255	.084	.073		.058	.042	.026	-.014	-.108	-.066	255
260			.066			.014			-.057	260
265	.075	.061	.053	.041	.019	-.011	-.085	-.097	-.069	265
270	.063	.040	.021	-.002	-.031	-.075			-.065	270
275	.048	.014	-.018	-.048	-.072	-.083	-.105	-.106	-.073	275
280			-.043			-.062			-.081	280
285	.013	-.032	-.047	-.052	-.048	-.046	-.055	-.066	-.084	285
290			-.041			-.037			-.078	290
300	-.020	-.029	-.033	-.032	-.028	-.028	-.032	-.038		300
315			-.018			-.022				315
335			-.015			-.020			-.012	335

ALPHA = 9.99, PHI = 0.0, BODY ALONE

THETA DEG	CP AT X/L= 0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.85	0.95	THETA DEG
0	-.037	-.028	-.036	-.040	-.042	-.030	-.044	-.015	-.005	0
25			-.038			-.043			-.025	25
45			-.050			-.043				45
60	-.082	-.098	-.111	-.112	-.115	-.101	-.064	-.078		60
70			-.113			-.146			-.113	70
75	-.042	-.114	-.115	-.122	-.129	-.137	-.150	-.126	-.111	75
80			-.128			-.126			-.101	80
85	.016	-.047	-.096	-.135	-.126	-.124	-.133	-.132	-.106	85
90	.048	.013	-.024	-.051	-.084	-.122			-.113	90
95	.077	.069	.057	.034	.014	-.020	-.096	-.134	-.110	95
100			.096			.045			-.113	100
105	.114	.119	.113	.104	.085	.070	.018	-.113	-.105	105
110			.119			.081			109	110
120	.134	.131	.122	.114	.097	.090	.068	.001		120
135			.121			.094				135
155			.118			.096			.067	155
180	.133	.129	.119	.111	.104		.094	.109	.123	180
205			.120			.095			.069	205
225			.121			.094				225
240	.135	.129	.123	.108	.097	.090	.063	.000		240
250			.123			.080			-.105	250
255	.113	.116		.098	.081	.068	.018	-.110	-.111	255
260			.096			.043			-.112	260
265	.077	.058	.050	.031	.009	-.019	-.097	-.130	-.115	265
270	.046	.010	-.022	-.060	-.095	-.134			-.110	270
275	.020	-.036	-.090	-.133	-.125	-.117	-.134	-.133	-.109	275
280			-.125			-.123			-.113	280
285	-.035	-.108	-.113	-.121	-.126	-.132	-.153	-.127	-.115	285
290			-.111			-.141			-.115	290
300	-.079	-.090	-.107	-.109	-.112	-.102	-.070	-.073		300
315			-.060			-.042				315
335			-.038			-.039			-.023	335

TABLE 2.- Continued

(a) Continued

ALPHA = 15.00, PHI = 0.0, BODY ALONE

THETA DEG	CP AT X/L= 0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.85	0.95	THETA DEG
0	-.043	-.046	-.056	-.066	-.070	-.063	-.075	-.051	-.028	0
25			-.062			-.080			-.06	25
45			-.149			-.110				45
60	-.129	-.139	-.147	-.158	-.164	-.168	-.162	-.157		60
70			-.144			-.164			-.116	70
75	-.084	-.148	-.145	-.147	-.146	-.151	-.161	-.149	-.115	75
80			-.152			-.143			-.109	80
85	-.012	-.085	-.131	-.156	-.143	-.141	-.149	-.140	-.123	85
90	.032	-.016	-.052	-.077	-.102	-.138			-.127	90
95	.076	.069	.063	.037	.022	-.011	-.089	-.138	-.124	95
100			.130			.087			-.127	100
105	.142	.161	.170	.162	.147	.120	.067	-.090	-.121	105
110			.188			.148			-.134	110
120	.196	.204	.203	.191	.176	.163	.136	.056		120
135			.208			.171				135
155			.208			.174			.132	155
180	.217	.212	.208	.196	.183		.171	.194	.204	180
205			.207			.174			.138	205
225			.204			.173				225
240	.195	.206	.199	.192	.172	.166	.135	.053		240
250			.187			.149			-.127	250
255	.140	.161		.164	.143	.128	.069	-.091	-.126	255
260			.128			.084			-.124	260
265	.079	.058	.052	.043	.020	-.010	-.085	-.137	-.127	265
270	.029	-.013	-.043	-.082	-.110	-.149			-.119	270
275	-.009	-.073	-.126	-.158	-.140	-.133	-.146	-.140	-.119	275
280			-.146			-.142			-.113	280
285	-.073	-.144	-.140	-.148	-.143	-.149	-.163	-.148	-.111	285
290			-.140			-.162			-.114	290
300	-.127	-.128	-.141	-.158	-.158	-.166	-.160	-.152		300
315			-.149			-.111				315
335			-.061			-.079			-.059	335

ALPHA = 20.02, PHI = 0.0, BODY ALONE

THETA DEG	CP AT X/L= 0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.85	0.95	THETA DEG
0	-.053	-.077	-.092	-.105	-.105	-.094	-.106	-.082	-.062	0
25			-.122			-.125			-.107	25
45			-.168			-.161				45
60	-.159	-.158	-.165	-.172	-.175	-.179	-.176	-.164		60
70			-.157			-.176			-.128	70
75	-.114	-.166	-.158	-.162	-.160	-.165	-.172	-.158	-.124	75
80			-.161			-.159			-.121	80
85	-.034	-.111	-.152	-.169	-.158	-.157	-.162	-.151	-.136	85
90	.018	-.033	-.069	-.091	-.112	-.147			-.137	90
95	.076	.082	.081	.051	.041	.006	-.074	-.154	-.134	95
100			.172			.139			-.136	100
105	.173	.216	.237	.236	.224	.199	.133	-.059	-.132	105
110			.269			.230			-.142	110
120	.268	.298	.298	.291	.271	.256	.224	.123		120
135			.308			.269				135
155			.310			.277			.216	155
180	.327	.325	.312	.307	.284		.270	.296	.305	180
205			.312			.275			.223	205
225			.308			.273				225
240	.271	.300	.298	.295	.268	.260	.224	.120		240
250			.272			.232			-.137	250
255	.175	.217		.240	.216	.201	.137	-.062	-.14	255
260			.173			.138			-.135	260
265	.086	.065	.062	.058	.039	.009	-.068	-.150	-.137	265
270	.019	-.017	-.051	-.095	-.120	-.156			-.130	270
275	-.037	-.099	-.142	-.171	-.157	-.146	-.160	-.150	-.132	275
280			-.154			-.157			-.129	280
285	-.102	-.160	-.154	-.183	-.158	-.163	-.173	-.158	-.124	285
290			-.155			-.173			-.123	290
300	-.155	-.148	-.159	-.175	-.168	-.175	-.174	-.161		300
315			-.165			-.160				315
335			-.121			-.124			-.099	335

TABLE 2.- Continued

(a) Continued

ALPHA = 25.00, PHI = 0.0, BODY ALONE

THETA DEG	CP AT X/L= 0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.85	0.95	THETA DEG
0	-.075	-.114	-.122	-.134	-.133	-.121	-.136	-.122	-.116	0
25			-.152			-.153			-.139	25
45			-.178			-.178				45
60	-.173	-.169	-.177	-.182	-.184	-.187	-.183	-.170		60
70			-.170			-.186			-.140	70
75	-.138	-.173	-.170	-.175	-.175	-.180	-.180	-.167	-.141	75
80			-.172			-.175			-.135	80
85	-.054	-.126	-.164	-.183	-.174	-.173	-.176	-.161	-.147	85
90	.00[illegible]	-.039	-.076	-.101	-.117	-.148			-.147	90
95	.075	.094	.101	.067	.003	.027	-.054	-.167	-.[illegible]	95
100			.218			.202			-.[illegible]	100
105	.203	.[illegible]71	.309	.318	.31[illegible]	.283	.210	-.021	-.145	105
110			.357			.327			-.124	110
120	.348	.396	.403	.404	.383	.363	.330	.201		120
135			.425			.383				135
155			.432			.391			.309	155
180	.457	.447	.436	.434	.406		[illegible]	.410	.415	180
205			.435			.390			.318	205
225			.427			.385				225
240	.354	.403	.408	.406	.380	.367	.330	.199		240
250			.365			.329			-.124	250
255	.208	.276		.321	.306	.286	.215	-.027	-.150	255
260			.222			.203			-.147	260
265	.092	.072	.077	.074	.065	.035	-.045	-.165	-.147	265
270	.020	-.017	-.057	-.102	-.120	-.156			-.139	270
275	-.056	-.106	-.150	-.185	-.171	-.157	-.173	-.160	-.143	275
280			-.166			-.172			-.[illegible]2	280
285	-.123	-.167	-.165	-.178	-.172	-.178	-.182	-.167	-.[illegible]9	285
290			-.166			-.182			-.137	290
300	-.171	-.160	-.170	-.183	-.177	-.183	-.181	-.169		300
315			-.173			-.176				315
335			-.152			-.152			-.128	335

ALPHA = 4.94, PHI = 22.5, BODY ALONE

THETA DEG	CP AT X/L= 0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.85	0.95	THETA DEG
0	-.009	-.006	-.013	-.018	-.018	-.013	-.022	-.001	.001	0
25			-.012			-.022			-.022	25
45			-.015			-.023				45
60	-.019	-.024	-.022	-.023	-.026	-.027	-.030	-.047		60
70			-.032			-.033			-.083	70
75	.001	-.028	-.037	-.040	-.041	-.040	-.050	-.072	-.081	75
80			-.040			-.052			-.069	80
85	.030	-.001	-.024	-.046	-.063	-.075	-.093	-.103	-.069	85
90	.045	.028	.009	-.012	-.038	-.073			-.067	90
95	.055	.048	.040	.023	.007	-.025	-.090	-.086	-.061	95
100			.050			.003			-.053	100
105	.066	.058	.061	.044	.032	.017	-.024	-.099	-.058	105
110			.051			.024			-.062	110
120	.064	.055	.052	.048	.037	.029	.010	-.045		120
135			.055			.033				135
155			.055			.035			-.000	155
180	.062	.054	.056	.049	.043		.035	.046	.053	180
205			.056			.036			.019	205
225			.057			.036				225
240	.087	.064	.061	.053	.044	.03[illegible]	.017	-.028		240
250			.068			.033			-.065	250
255	.101	.081		.061	.045	.029	-.010	-.110	-.069	255
260			.078			.022			-.052	260
265	.096	.080	.073	.059	.036	.004	-.072	-.108	-.071	265
270	.085	.061	.044	.020	-.009	-.054			-.069	270
275	.070	.034	.001	-.033	-.058	-.077	-.100	-.114	-.082	275
280			-.034			-.069			-.086	280
285	.031	-.025	-.046	-.052	-.056	-.062	-.071	-.053	-.073	285
290			-.043			-.052			-.058	290
300	-.014	-.035	-.035	-.043	-.032	-.020	-.033	-.032		300
315			-.027			-.02[illegible]				315
335			-.016			-.021			-.004	335

TABLE 2.- Continued

(a) Continued

ALPHA = 9.93, PHI = 22.5, BODY ALONE

THETA DEG	CP AT X/L= 0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.85	0.95	THETA DEG
0	-.040	-.029	-.033	-.038	-.038	-.030	-.040	-.012	.003	0
25			-.031			-.039			-.037	25
45			-.036			-.040				45
60	-.066	-.071	-.055	-.050	-.043	-.043	-.048	-.078		60
70			-.095			-.104			-.108	70
75	-.056	-.093	-.099	-.109	-.121	-.137	-.142	-.122	-.107	75
80			-.103			-.116			-.100	80
85	-.014	-.076	-.115	-.111	-.110	-.108	-.124	-.113	-.103	85
90	.010	-.030	-.065	-.092	-.116	-.112			-.085	90
95	.032	.009	.006	-.018	-.034	-.064	-.121	-.117	-.086	95
100			.046			.005			-.095	100
105	.068		.070	.060	.049	.036	-.011	-.129	-.093	105
110			.082			.053			-.093	110
120	.094	.101	.093	.082	.075	.068	.045	-.024		120
135			.098			.078				135
155			.100			.084			.039	155
180	.119	.120	.104	.093	.094		.085	.093	.113	180
205			.108			.090			.078	205
225			.114			.093				225
240	.158	.148	.124	.108	.104	.093	.069	.013		240
250			.135			.091			-.120	250
255	.157	.158		.116	.107	.086	.035	-.095	-.126	255
260			.126			.072			-.123	260
265	.128	.117	.102	.082	.064	.028	-.063	-.117	-.124	265
270	.098	.070	.036	-.002	-.037	-.093			-.118	270
275	.068	.017	-.039	-.091	-.123	-.128	-.136	-.126	-.123	275
280			-.093			-.127			-.101	280
285	.006	-.079	-.121	-.126	-.122	-.130	-.142	-.146	-.091	285
290			-.116			-.127			-.087	290
300	-.065	-.097	-.106	-.112	-.108	-.113	-.116	-.122		300
315			-.085			-.072				315
335			-.044			-.042			.010	335

ALPHA = 14.93, PHI = 22.5, BODY ALONE

THETA DEG	CP AT X/L= 0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.85	0.95	THETA DEG
0	-.068	-.041	-.050	-.061	-.066	-.062	-.075	-.042	-.019	0
25			-.050			-.068			-.048	25
45			-.054			-.072				45
60	-.102	-.133	-.145	-.112	-.096	-.094	-.095	-.121		60
70			-.141			-.150			-.111	70
75	-.108	-.125	-.132	-.141	-.142	-.140	-.140	-.133	-.114	75
80			-.132			-.135			-.103	80
85	-.060	-.130	-.134	-.133	-.130	-.129	-.134	-.124	-.104	85
90	-.029	-.085	-.116	-.137	-.136	-.129			-.112	90
95	.005	-.012	-.020	-.047	-.055	-.083	-.127	-.121	-.110	95
100			.042			.015			-.119	100
105	.059	.075	.090	.089	.080	.064	.018	-.122	-.111	105
110			.118			.093			-.113	110
120	.119	.137	.148	.141	.126	.120	.098	.012		120
135			.167			.138				135
155			.178			.149			.090	155
180	.194	.189	.190	.173	.157		.153	.172	.105	180
205			.200			.164			.148	205
225			.212			.171				225
240	.251	.239	.226	.200	.174	.175	.143	.073		240
250			.235			.174			-.132	250
255	.225	.236		.205	.177	.156	.098	-.064	-.134	255
260			.214			.140			-.128	260
265	.167	.153	.151	.129	.099	.069	-.037	-.130	-.131	265
270	.115	.079	.046	-.001	-.046	-.096			-.126	270
275	.074	.008	-.055	-.110	-.141	-.143	-.150	-.131	-.131	275
280			-.118			-.145			-.127	280
285	-.013	-.109	-.147	-.147	-.144	-.148	-.154	-.164	-.120	285
290			-.138			-.150			-.126	290
300	-.103	-.127	-.136	-.145	-.143	-.153	-.159	-.171		300
315			-.138			-.162				315
335			-.146			-.142			-.118	335

C-2

TABLE 2.- Continued

(a) Continued

ALPHA = 19.93, PHI = 22.5, BODY ALONE

THETA DEG	CP AT X/L= 0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.85	0.95	THETA DEG
0	-.137	-.117	-.137	-.151	-.153	-.142	-.158	-.145	-.171	0
25			-.089			-.121			-.119	25
45			-.098			-.106				45
60	-.135	-.155	-.160	-.150	-.135	-.126	-.125	-.143		60
70			-.157			-.157			-.115	70
75	-.146	-.149	-.146	-.157	-.150	-.148	-.145	-.139	-.115	75
80			-.147			-.145			-.098	80
85	-.100	-.159	-.147	-.146	-.142	-.136	-.139	-.126	-.109	85
90	-.069	-.115	-.141	-.156	-.144	-.136			-.121	90
95	-.027	-.038	-.036	-.057	-.060	-.085	-.124	-.122	-.120	95
100			.044			.037			-.125	100
105	.051	.082	.114	.126	.123	.104	.058	-.106	-.118	105
110			.156			.144			-.122	110
120	.146	.187	.203	.211	.197	.185	.163	.061		120
135			.235			.215				135
155			.254			.234			.155	155
180	.289	.288	.274	.272	.250		.241	.265	.276	180
205			.292			.255			.240	205
225			.309			.265				225
240	.359	.354	.327	.315	.277	.273	.236	.150		240
250			.336			.270			-.110	250
255	.303	.332		.313	.272	.260	.180	-.023	-.138	255
260			.289			.222			-.140	260
265	.212	.201	.194	.187	.151	.120	.000	-.154	-.137	265
270	.136	.099	.056	.011	-.040	-.088			-.132	270
275	.077	.008	-.067	-.120	-.151	-.162	-.167	-.149	-.136	275
280			-.133			-.163			-.135	280
285	-.025	-.126	-.162	-.153	-.159	-.166	-.171	-.172	-.128	285
290			-.154			-.166			-.132	290
300	-.125	-.150	-.152	-.163	-.162	-.169	-.172	-.184		300
315			-.151			-.175				315
335			-.159			-.177			-.152	335

ALPHA = 24.93, PHI = 22.5, BODY ALONE

THETA DEG	CP AT X/L= 0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.85	0.95	THETA DEG
0	-.165	-.165	-.168	-.179	-.175	-.158	-.178	-.176	-.191	0
25			-.130			-.180			-.177	25
45			-.127			-.149				45
60	-.161	-.165	-.165	-.155	-.142	-.141	-.146	-.154		60
70			-.162			-.152			-.138	70
75	-.171	-.160	-.157	-.160	-.153	-.149	-.145	-.146	-.113	75
80			-.157			-.146			-.099	80
85	-.132	-.166	-.156	-.154	-.146	-.138	-.140	-.126	-.122	85
90	-.098	-.136	-.155	-.165	-.147	-.138			-.130	90
95	-.053	-.056	-.044	-.061	-.054	-.078	-.117	-.127	-.127	95
100			.053			.070			-.129	100
105	.040	.098	.145	.169	.173	.154	.105	-.084	-.123	105
110			.202			.207			-.135	110
120	.175	.246	.273	.291	.280	.262	.241	.116		120
135			.323			.300				135
155			.354			.325			.229	155
180	.401	.395	.384	.385	.357		.344	.369	.375	180
205			.411			.360			.342	205
225			.433			.376				225
240	.486	.481	.453	.443	.396	.385	.345	.241		240
250			.458			.381			-.075	250
255	.392	.433		.432	.386	.366	.278	.031	-.115	255
260			.381			.314			-.143	260
265	.266	.249	.249	.247	.212	.178	.047	-.142	-.161	265
270	.162	.122	.078	.027	-.026	-.075			-.151	270
275	.081	-.000	-.074	-.128	-.156	-.167	-.187	-.172	-.157	275
280			-.142			-.180			-.157	280
285	-.032	-.134	-.171	-.180	-.175	-.183	-.186	-.183	-.156	285
290			-.166			-.182			-.155	290
300	-.144	-.150	-.163	-.178	-.176	-.184	-.185	-.191		300
315			-.164			-.184				315
335			-.171			-.187			-.162	335

TABLE 2.- Continued

(a) Continued

ALPHA = 4.60, PHI = 45.0, BODY ALONE

THETA DEG	CP AT X/L= 0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.85	0.95	THETA DEG
0	-.007	-.006	-.011	-.016	-.016	-.011	-.021	-.004	.005	0
25			-.009			-.019			-.037	25
45			-.010			-.019				45
60	-.011	-.011	-.013	-.016	-.018	-.021	-.025	-.054		60
70			-.019			-.025			-.088	70
75	-.001	-.014	-.022	-.027	-.028	-.030	-.042	-.075	-.081	75
80			-.024			-.037			-.071	80
85	.020	.001	-.016	-.031	-.044	-.052	-.070	-.098	-.067	85
90	.031	.019	.004	-.012	-.034	-.058			-.062	90
95	.039	.033	.026	.012	-.005	-.031	-.089	-.072	-.069	95
100			.033			-.008			-.052	100
105	.048	.042	.035	.030	.019	.004	-.034	-.086	-.048	105
110			.035			.011			-.053	110
120	.049	.042	.037	.035	.025	.018	-.001	-.058		120
135			.040			.022				135
155			.041			.026			-.012	155
180	.052	.043	.044	.038	.032		.027	.039	.047	180
205			.044			.027			.021	205
225			.045			.028				225
240	.087	.057	.053	.043	.035	.028	.013	-.023		240
250			.065			.028			-.072	250
255	.113	.084		.057	.041	.027	-.010	-.101	-.071	255
260			.086			.026			-.073	260
265	.116	.097	.090	.074	.048	.019	-.057	-.109	-.077	265
270	.109	.084	.069	.048	.018	-.023			-.083	270
275	.094	.059	.027	-.005	-.034	-.059	-.092	-.105	-.080	275
280			-.015			-.063			-.060	280
285	.054	-.007	-.035	-.046	-.050	-.057	-.068	-.046	-.039	285
290			-.040			-.050			-.030	290
300	.001	-.032	-.034	-.038	-.035	-.020	-.033	-.028		300
315			-.028			-.024				315
335			-.016			-.020			-.002	335

ALPHA = 9.62, PHI = 45.0, BODY ALONE

THETA DEG	CP AT X/L= 0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.85	0.95	THETA DEG
0	-.043	-.036	-.029	-.033	-.036	-.031	-.040	-.013	.006	0
25			-.026			-.035			-.043	25
45			-.023			-.033				45
60	-.040	-.027	-.028	-.030	-.031	-.032	-.037	-.071		60
70			-.039			-.043			-.107	70
75	-.046	-.054	-.049	-.057	-.068	-.070	-.069	-.120	-.101	75
80			-.067			-.096			-.094	80
85	-.029	-.064	-.081	-.082	-.080	-.081	-.106	-.107	-.107	85
90	-.013	-.045	-.074	-.095	-.088	-.085			-.090	90
95	.001	-.014	-.026	-.051	-.066	-.091	-.105	-.102	-.070	95
100			.006			-.033			-.093	100
105	.027	.027	.028	.020	.010	-.003	-.041	-.108	-.090	105
110			.041			.016			-.091	110
120	.052	.057	.054	.045	.038	.033	.013	-.053		120
135			.063			.045				135
155			.068			.054			.007	155
180	.089	.097	.074	.064	.065		.060	.074	.087	180
205			.061			.065			.072	205
225			.091			.070				225
240	.165	.140	.107	.091	.084	.076	.054	.015		240
250			.129			.082			-.105	250
255	.193	.181		.120	.104	.085	.034	-.081	-.104	255
260			.156			.084			-.100	260
265	.179	.173	.148	.128	.104	.066	-.033	-.131	-.100	265
270	.156	.136	.097	.064	.028	-.026			-.096	270
275	.127	.083	.023	-.029	-.063	-.100	-.148	-.129	-.093	275
280			-.042			-.130			-.101	280
285	.058	-.031	-.080	-.113	-.121	-.129	-.131	-.142	-.107	285
290			-.101			-.119			-.105	290
300	-.029	-.092	-.099	-.107	-.098	-.094	-.088	-.065		300
315			-.087			-.068				315
335			-.080			-.051			.011	335

TABLE 2.- Continued

(a) Continued

ALPHA = 14.61, PHI = 45.0, BODY ALONE

THETA DEG	CP AT X/L= 0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.85	0.95	THETA DEG
0	-.086	-.120	-.127	-.131	-.129	-.120	-.132	-.116	-.115	0
25			-.036			-.087			-.105	25
45			-.036			-.052				45
60	-.067	-.042	-.038	-.046	-.052	-.059	-.069	-.104		60
70			-.105			-.075			-.107	70
75	-.081	-.098	-.114	-.119	-.119	-.107	-.110	-.128	-.113	75
80			-.104			-.109			-.108	80
85	-.079	-.098	-.102	-.106	-.102	-.100	-.109	-.122	-.098	85
90	-.061	-.111	-.103	-.106	-.102	-.100			-.095	90
95	-.041	-.071	-.084	-.104	-.107	-.109	-.104	-.111	-.110	95
100			-.035			-.050			-.122	100
105	-.005	-.002	.008	.013	.010	-.004	-.037	-.114	-.114	105
110			.035			.025			-.116	110
120	.044	.058	.068	.070	.062	.056	.039	-.039		120
135			.093			.078				135
155			.110			.094			.035	155
180	.136	.129	.129	.116	.106		.105	.124	.136	180
205			.147			.117			.136	205
225			.169			.128				225
240	.269	.225	.200	.168	.145	.142	.116	.072		240
250			.235			.154			-.105	250
255	.294	.277		.208	.181	.162	.099	-.044	-.125	255
260			.263			.162			-.117	260
265	.260	.243	.235	.202	.171	.132	.011	-.141	-.115	265
270	.216	.184	.149	.101	.053	-.007			-.109	270
275	.174	.109	.041	-.027	-.070	-.109	-.161	-.134	-.112	275
280			-.045			-.147			-.112	280
285	.071	-.040	-.092	-.131	-.142	-.143	-.148	-.151	-.104	285
290			-.119			-.138			-.117	290
300	-.047	-.119	-.131	-.133	-.130	-.134	-.136	-.137		300
315			-.122			-.126				315
335			-.120			-.128			-.098	335

ALPHA = 19.62, PHI = 45.0, BODY ALONE

THETA DEG	CP AT X/L= 0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.85	0.95	THETA DEG
0	-.130	-.142	-.137	-.142	-.141	-.130	-.144	-.136	-.142	0
25			-.150			-.159			-.154	25
45			-.072			-.159				45
60	-.110	-.064	-.073	-.079	-.081	-.090	-.118	-.165		60
70			-.127			-.101			-.154	70
75	-.111	-.127	-.130	-.129	-.123	-.118	-.124	-.137	-.146	75
80			-.130			-.108			-.124	80
85	-.126	-.125	-.119	-.115	-.109	-.102	-.110	-.129	-.109	85
90	-.112	-.128	-.118	-.114	-.105	-.099			-.109	90
95	-.089	-.120	-.118	-.126	-.113	-.102	-.103	-.114	-.123	95
100			-.061			-.050			-.127	100
105	-.040	-.029	-.002	.015	.019	.008	-.024	-.122	-.120	105
110			.037			.046			-.122	110
120	.033	.064	.088	.102	.097	.089	.073	-.016		120
135			.127			.122				135
155			.154			.148			.074	155
180	.197	.194	.185	.184	.168		.166	.188	.199	180
205			.216			.185			.219	205
225			.251			.203				225
240	.393	.339	.297	.266	.231	.226	.194	.148		240
250			.344			.246			-.067	250
255	.411	.398		.323	.277	.258	.181	.009	-.098	255
260			.373			.258			-.124	260
265	.351	.333	.323	.297	.252	.214	.068	-.121	-.142	265
270	.284	.245	.201	.151	.085	.020			-.130	270
275	.225	.146	.060	-.014	-.070	-.105	-.160	-.153	-.135	275
280			-.045			-.155			-.135	280
285	.090	-.039	-.100	-.138	-.153	-.161	-.163	-.166	-.134	285
290			-.129			-.154			-.135	290
300	-.059	-.131	-.151	-.149	-.146	-.152	-.157	-.170		300
315			-.141			-.151				315
335			-.140			-.152			-.139	335

TABLE 2.- Continued

(a) Continued

ALPHA = 24.61, PHI = 45.0, BODY ALONE

THETA DEG	CP AT X/L= 0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.85	0.95	THETA DEG
0	-.151	-.151	-.148	-.157	-.159	-.146	-.163	-.156	-.177	0
25			-.163			-.171			-.159	25
45			-.150			-.175				45
60	-.150	-.100	-.103	-.123	-.161	-.173	-.173	-.169		60
70			-.129			-.141			-.145	70
75	-.140	-.141	-.131	-.125	-.113	-.117	-.150	-.174	-.138	75
80			-.130			-.105			-.131	80
85	-.141	-.135	-.124	-.116	-.104	-.099	-.116	-.148	-.148	85
90	-.149	-.134	-.124	-.112	-.099	-.094			-.157	90
95	-.131	-.144	-.129	-.124	-.101	-.095	-.101	-.134	-.151	95
100			-.073			-.041			-.159	100
105	-.075	-.046	-.002	.022	.035	.029	-.002	-.137	-.143	105
110			.047			.078			-.159	110
120	.018	.077	.115	.136	.140	.132	.118	.013		120
135			.172			.174				135
155			.213			.207			.121	155
180	.268	.266	.258	.261	.240		.236	.262	.272	180
205			.301			.261			.314	205
225			.348			.290				225
240	.533	.464	.405	.384	.332	.323	.290	.236		240
250			.463			.355			-.010	250
255	.540	.528		.456	.396	.371	.279	.077	-.050	255
260			.490			.370			-.040	260
265	.452	.429	.418	.407	.354	.311	.140	-.087	-.125	265
270	.359	.312	.258	.208	.130	.056			-.144	270
275	.283	.186	.083	.002	-.059	-.094	-.150	-.182	-.162	275
280			-.040			-.157			-.164	280
285	.114	-.033	-.100	-.142	-.156	-.174	-.181	-.181	-.162	285
290			-.133			-.175			-.161	290
300	-.064	-.136	-.159	-.166	-.161	-.170	-.173	-.186		300
315			-.151			-.168				315
335			-.150			-.169			-.156	335

ALPHA = 4.42, PHI = 67.5, BODY ALONE

THETA DEG	CP AT X/L= 0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.85	0.95	THETA DEG
0	.001	-.000	-.005	-.008	-.010	-.007	-.018	.001	.008	0
25			-.002			-.014			-.042	25
45			-.002			-.014				45
60	.001	.002	-.002	-.007	-.011	-.015	-.022	-.063		60
70			-.004			-.017			-.096	70
75	.007	.003	-.004	-.012	-.015	-.020	-.037	-.080	-.081	75
80			-.005			-.023			-.071	80
85	.018	.011	.001	-.012	-.020	-.029	-.053	-.067	-.061	85
90	.024	.021	.011	-.003	-.017	-.032			-.055	90
95	.028	.027	.020	.007	-.006	-.023	-.068	-.067	-.061	95
100			.023			-.013			-.047	100
105	.031	.029	.023	.015	.005	-.006	-.039	-.075	-.043	105
110			.023			-.001			-.045	110
120	.032	.028	.023	.020	.011	.004	-.012	-.069		120
135			.024			.007				135
155			.023			.011			-.027	155
180	.034	.027	.025	.022	.016		.014	.026	.033	180
205			.026			.012			.015	205
225			.026			.012				225
240	.076	.040	.031	.024	.019	.012	.001	-.026		240
250			.046			.013			-.051	250
255	.114	.075		.041	.027	.015	-.018	-.089	-.049	255
260			.079			.018			-.047	260
265	.129	.106	.097	.076	.050	.023	-.046	-.079	-.041	265
270	.128	.104	.093	.071	.042	.006			-.040	270
275	.117	.085	.059	.028	.000	-.025	-.072	-.062	-.022	275
280			.018			-.037			-.012	280
285	.081	.020	-.007	-.025	-.030	-.037	-.051	-.048	-.012	285
290			-.019			-.033			-.016	290
300	.025	-.015	-.023	-.024	-.024	-.024	-.029	-.029		300
315			-.017			-.019				315
335			-.010			-.016			.002	335

TABLE 2.- Continued

(a) Continued

ALPHA = 9.44, PHI = 67.5, BODY ALONE

CP AT X/L=

THETA DEG	0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.85	0.95	THETA DEG
0	-.033	-.033	-.029	-.029	-.032	-.024	-.035	-.012	-.002	0
25			-.020			-.030			-.059	25
45			-.014			-.026				45
60	-.019	-.008	-.010	-.013	-.019	-.024	-.032	-.064		60
70			-.011			-.023			-.127	70
75	-.021	-.010	-.012	-.016	-.020	-.027	-.044	-.118	-.129	75
80			-.017			-.035			-.118	80
85	-.018	-.017	-.022	-.028	-.030	-.039	-.070	-.104	-.113	85
90	-.014	-.015	-.024	-.038	-.044	-.045			-.103	90
95	-.009	-.007	-.013	-.031	-.045	-.061	-.077	-.073	-.078	95
100			-.002			-.045			-.060	100
105	.002	.007	.006	-.004	-.013	-.028	-.061	-.081	-.057	105
110			.012			-.016			-.068	110
120	.015	.020	.019	.010	.004	-.003	-.019	-.081		120
135			.023			.008				135
155			.024			.016			-.030	155
180	.042	.037	.029	.021	.021		.022	.035	.046	180
205			.032			.023			.051	205
225			.040			.027				225
240	.141	.095	.059	.044	.039	.034	.020	.002		240
250			.090			.042			-.092	250
255	.202	.167		.090	.066	.050	.008	-.069	-.101	255
260			.145			.064			-.089	260
265	.215	.205	.167	.147	.112	.077	-.017	-.115	-.076	265
270	.205	.191	.149	.126	.089	.041			-.063	270
275	.184	.151	.091	.049	.010	-.029	-.094	-.107	-.058	275
280			.024			-.070			-.061	280
285	.120	.037	-.019	-.054	-.069	-.086	-.102	-.080	-.034	285
290			-.048			-.092			.010	290
300	.024	-.044	-.073	-.083	-.083	-.081	-.063	-.025		300
315			-.065			-.048				315
335			-.055			-.038			.025	335

ALPHA = 14.42, PHI = 67.5, BODY ALONE

CP AT X/L=

THETA DEG	0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.85	0.95	THETA DEG
0	-.073	-.094	-.085	-.074	-.071	-.062	-.071	-.055	-.051	0
25			-.052			-.066			-.099	25
45			-.030			-.056				45
60	-.033	-.014	-.021	-.027	-.033	-.045	-.059	-.109		60
70			-.017			-.041			-.132	70
75	-.037	-.016	-.022	-.026	-.029	-.041	-.069	-.135	-.134	75
80			-.035			-.053			-.129	80
85	-.042	-.034	-.038	-.045	-.054	-.059	-.083	-.120	-.134	85
90	-.044	-.045	-.047	-.049	-.051	-.052			-.107	90
95	-.041	-.052	-.059	-.068	-.065	-.064	-.076	-.093	-.082	95
100			-.055			-.084			-.089	100
105	-.033	-.039	-.038	-.037	-.042	-.056	-.084	-.100	-.090	105
110			-.024			-.035			-.097	110
120	-.011	-.010	-.005	-.002	-.006	-.013	-.026	-.092		120
135			.012			.004				135
155			.024			.019			-.032	155
180	.052	.042	.042	.032	.027		.031	.048	.059	180
205			.058			.039			.091	205
225			.082			.049				225
240	.230	.158	.121	.090	.074	.065	.050	.038		240
250			.172			.087			-.067	250
255	.314	.257		.160	.130	.105	.055	-.032	-.081	255
260			.251			.130			-.097	260
265	.326	.298	.276	.233	.196	.154	.036	-.099	-.105	265
270	.306	.275	.242	.197	.154	.097			-.097	270
275	.274	.217	.155	.088	.042	-.004	-.079	-.118	-.089	275
280			.060			-.063			-.075	280
285	.177	.062	-.001	-.048	-.068	-.088	-.110	-.100	-.063	285
290			-.041			-.101			-.055	290
300	.037	-.050	-.082	-.102	-.108	-.115	-.118	-.091		300
315			-.107			-.123				315
335			-.115			-.092			-.020	335

TABLE 2.- Continued

(a) Continued

ALPHA = 19.41, PHI = 67.5, BODY ALONE

THETA DEG	CP AT X/L= 0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.85	0.95	THETA DEG
0	-.111	-.116	-.114	-.112	-.114	-.105	-.119	-.118	-.127	0
25			-.105			-.103			-.159	25
45			-.102			-.100				45
60	-.043	-.020	-.055	-.105	-.103	-.098	-.103	-.137		60
70			-.032			-.107			-.135	70
75	-.053	-.023	-.035	-.048	-.049	-.069	-.119	-.134	-.127	75
80			-.063			-.068			-.121	80
85	-.068	-.077	-.074	-.064	-.059	-.063	-.091	-.132	-.125	85
90	-.076	-.079	-.068	-.058	-.054	-.057			-.114	90
95	-.082	-.079	-.070	-.062	-.058	-.060	-.081	-.122	-.109	95
100			-.084			-.086			-.128	100
105	-.083	-.096	-.088	-.077	-.074	-.080	-.099	-.123	-.119	105
110			-.065			-.052			-.132	110
120	-.053	-.046	-.028	-.016	-.015	-.020	-.029	-.095		120
135			.003			.007				135
155			.025			.031			-.027	155
180	.069	.063	.056	.054	.046		.052	.072	.085	180
205			.087			.067			.144	205
225			.128			.088				225
240	.333	.244	.189	.152	.122	.116	.096	.092		240
250			.263			.151			-.006	250
255	.442	.375		.251	.206	.180	.116	.024	-.026	255
260			.366			.217			-.050	260
265	.451	.418	.395	.347	.300	.249	.106	-.057	-.066	265
270	.419	.382	.343	.291	.236	.170			-.084	270
275	.373	.303	.223	.143	.084	.031	-.056	-.108	-.078	275
280			.099			-.050			-.069	280
285	.242	.100	.020	-.033	-.061	-.083	-.108	-.103	-.062	285
290			-.030			-.099			-.057	290
300	.057	-.042	-.081	-.102	-.110	-.118	-.124	-.097		300
315			-.113			-.132				315
335			-.130			-.141			-.073	335

ALPHA = 24.42, PHI = 67.5, BODY ALONE

THETA DEG	CP AT X/L= 0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.85	0.95	THETA DEG
0	-.137	-.125	-.124	-.133	-.145	-.133	-.145	-.135	-.138	0
25			-.123			-.151			-.170	25
45			-.120			-.129				45
60	-.039	-.110	-.127	-.125	-.118	-.124	-.128	-.149		60
70			-.087			-.120			-.156	70
75	-.053	-.055	-.068	-.094	-.130	-.120	-.120	-.135	-.146	75
80			-.085			-.129			-.133	80
85	-.115	-.109	-.089	-.071	-.066	-.088	-.136	-.147	-.144	85
90	-.115	-.106	-.086	-.068	-.061	-.088			-.143	90
95	-.118	-.104	-.075	-.069	-.062	-.087	-.101	-.147	-.136	95
100			-.082			-.085			-.143	100
105	-.128	-.110	-.100	-.094	-.084	-.085	-.100	-.149	-.130	105
110			-.083			-.052			-.142	110
120	-.090	-.066	-.036	-.018	-.009	-.011	-.018	-.090		120
135			.007			.023				135
155			.041			.053			-.013	155
180	.093	.094	.088	.088	.078		.085	.108	.124	180
205			.129			.106			.210	205
225			.183			.138				225
240	.449	.334	.260	.229	.188	.178	.155	.161		240
250			.353			.229			.072	250
255	.582	.497		.360	.297	.267	.193	.096	.046	255
260			.482			.318			.015	260
265	.587	.544	.512	.479	.410	.360	.193	-.004	-.006	265
270	.542	.494	.439	.400	.322	.255			-.040	270
275	.481	.391	.289	.206	.131	.072	-.026	-.083	-.040	275
280			.137			-.031			-.042	280
285	.311	.138	.043	-.014	-.049	-.074	-.101	-.101	-.049	285
290			-.015			-.094			-.054	290
300	.083	-.032	-.075	-.098	-.108	-.117	-.124	-.099		300
315			-.113			-.133				315
335			-.135			-.145			-.085	335

TABLE 2.- Continued

(a) Continued

ALPHA = -5.34, PHI = 90.0, BODY ALONE

THETA DEG	CP AT X/L= 0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.85	0.95	THETA DEG
0	.019	.016	.012	.009	.005	.007	-.006	.010	.014	0
25			.009			-.003			.003	25
45			.005			-.005				45
60	.054	.015	.003	-.000	-.004	-.008	-.013	-.035		60
70			.014			-.010			-.025	70
75	.103	.059	.029	.008	-.001	-.012	-.032	-.071	-.019	75
80			.050			-.009			-.018	80
85	.135	.109	.084	.056	.030	.001	-.052	-.054	-.010	85
90	.141	.124	.103	.078	.050	.016			-.003	90
95	.136	.111	.086	.058	.033	.006	-.051	-.054	-.025	95
100			.058			-.007			-.017	100
105	.106	.064	.033	.014	.001	-.008	-.031	-.070	-.020	105
110			.017			-.007			-.027	110
120	.057	.022	.008	.004	-.001	-.005	-.014	-.035		120
135			.007			-.001				135
155			.010			.001			.000	155
180	.021	.018	.015	.010	.005		.004	.011	.019	180
205			.017			.001			-.037	205
225			.018			.001				225
240	.020	.022	.019	.013	.006	-.001	-.016	-.068		240
250			.020			-.004			-.033	250
255	.025	.024		.012	.004	-.007	-.034	-.068	-.059	255
260			.019			-.011			-.057	260
265	.027	.028	.022	.013	.001	-.013	-.050	-.053	-.038	265
270	.028	.029	.024	.014	.003	-.014			-.021	270
275	.027	.029	.020	.012	.001	-.011	-.048	-.054	-.042	275
280			.018			-.007			-.062	280
285	.023	.023	.016	.010	.003	-.006	-.033	-.072	-.063	285
290			.017			-.004			-.062	290
300	.019	.023	.016	.012	.005	-.001	-.015	-.064		300
315			.016			.001				315
335			.015			.001			-.031	335

ALPHA = -.69, PHI = 90.0, BODY ALONE

THETA DEG	CP AT X/L= 0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.85	0.95	THETA DEG
0	.024	.022	.016	.011	.006	.009	-.003	.011	.010	0
25			.015			-.001			-.020	25
45			.013			-.002				45
60	.030	.018	.010	.008	.002	-.005	-.013	-.050		60
70			.012			-.008			-.041	70
75	.052	.032	.017	.007	-.001	-.011	-.034	-.081	-.040	75
80			.024			-.012			-.033	80
85	.069	.053	.040	.024	.007	-.014	-.056	-.051	-.023	85
90	.072	.062	.049	.033	.01[illegible]	-.011			-.008	90
95	.068	.065	.041	.024	.009	-.012	-.055	-.051	-.022	95
100			.029			-.012			-.039	100
105	.053	.032	.020	.010	.001	-.010	-.034	-.080	-.037	105
110			.015			-.007			-.045	110
120	.031	.017	.015	.010	.003	-.003	-.015	-.050		120
135			.016			.000				135
155			.017			.002			-.022	155
180	.027	.021	.019	.013	.007		.006	.010	.013	180
205			.017			.003			-.017	205
225			.015			.003				225
240	.035	.022	.014	.010	.005	.001	-.011	-.047		240
250			.017			-.002			-.046	250
255	.056	.036		.011	.004	-.005	-.031	-.080	-.042	255
260			.029			-.008			-.039	260
265	.069	.057	.043	.027	.01[illegible]	-.007	-.054	-.051	-.023	265
270	.071	.061	.049	.035	.01[illegible]	-.006			-.004	270
275	.069	.057	.041	.025	.011	-.007	-.054	-.052	-.021	275
280			.027			-.006			-.037	280
285	.055	.032	.018	.008	.002	-.005	-.031	-.082	-.040	285
290			.014			-.003			-.043	290
300	.033	.022	.013	.008	.003	-.000	-.011	-.044		300
315			.014			.002				315
335			.016			.002			-.020	335

TABLE 2.- Continued

(a) Continued

ALPHA = 4.32, PHI = 90.0, BODY ALONE

CP AT X/L=

THETA DEG	0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.85	0.95	THETA DEG
0	.016	.011	.005	.004	-.000	.003	-.010	.011	.017	0
25			.007			-.006			-.038	25
45			.008			-.006				45
60	.015	.015	.007	.004	-.001	-.007	-.018	-.073		60
70			.008			-.010			-.068	70
75	.017	.017	.010	.002	-.005	-.013	-.037	-.075	-.070	75
80			.010			-.015			-.063	80
85	.021	.021	.014	.004	-.007	-.019	-.051	-.057	-.048	85
90	.022	.024	.015	.005	-.007	-.019			-.029	90
95	.021	.022	.015	.003	-.006	-.018	-.050	-.057	-.042	95
100			.013			-.015			-.068	100
105	.018	.018	.012	.003	-.003	-.012	-.038	-.074	-.062	105
110			.011			-.009			-.067	110
120	.016	.015	.012	.006	-.000	-.007	-.020	-.073		120
135			.012			-.005				135
155			.010			-.002			-.040	155
180	.01.	.011	.009	.007	.001		.000	.010	.017	180
205			.006			-.004			.007	205
225			.004			-.006				225
240	.054	.015	.006	.001	-.002	-.008	-.016	-.031		240
250			.018			-.009			-.029	250
255	.105	.057		.014	.002	-.009	-.032	-.066	-.019	255
260			.057			-.005			-.015	260
265	.132	.104	.090	.063	.035	.009	-.050	-.053	-.010	265
270	.137	.114	.103	.082	.054	.019			-.001	270
275	.132	.104	.085	.058	.032	.005	-.051	-.052	-.005	275
280			.051			-.007			-.011	280
285	.104	.050	.026	.008	-.002	-.012	-.035	-.063	-.016	285
290			.011			-.012			-.023	290
300	.051	.012	-.000	-.003	-.006	-.009	-.017	-.028		300
315			-.000			-.006				315
335			.002			-.005			.005	335

ALPHA = 9.32, PHI = 90.0, BODY ALONE

CP AT X/L=

THETA DEG	0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.85	0.95	THETA DEG
0	-.003	-.010	-.013	-.015	-.017	-.009	-.021	.000	.006	0
25			-.007			-.018			-.056	25
45			-.003			-.019				45
60	-.005	.002	.000	-.005	-.013	-.020	-.032	-.093		60
70			.002			-.021			-.096	70
75	-.006	.004	.003	-.003	-.012	-.022	-.048	-.091	-.098	75
80			.002			-.021			-.094	80
85	-.007	.004	.003	-.003	-.010	-.021	-.048	-.075	-.079	85
90	-.007	.004	.002	-.003	-.010	-.019			-.059	90
95	-.007	.003	.003	-.004	-.010	-.020	-.046	-.075	-.070	95
100			.004			-.022			-.097	100
105	-.006	.002	.004	-.004	-.011	-.022	-.048	-.090	-.088	105
110			.004			-.021			-.095	110
120	-.005	.002	.002	-.006	-.013	-.020	-.034	-.093		120
135			-.002			-.018				135
155			-.009			-.015			-.058	155
180	-.005	-.008	-.013	-.017	-.017		-.011	-.001	.008	180
205			-.019			-.018			.027	205
225			-.021			-.023				225
240	.091	.033	-.006	-.020	-.020	-.024	-.029	-.021		240
250			.028			-.020			-.014	250
255	.175	.117		.029	.006	-.012	-.038	-.050	-.010	255
260			.098			.007			-.005	260
265	.220	.197	.150	.122	.080	.044	-.036	-.057	-.001	265
270	.228	.215	.174	.153	.117	.072			.002	270
275	.221	.201	.148	.116	.079	.040	-.038	-.056	.001	275
280			.095			.006			-.001	280
285	.178	.111	.052	.021	.002	-.013	-.041	-.048	-.005	285
290			.021			-.022			-.008	290
300	.089	.025	-.010	-.022	-.023	-.024	-.029	-.019		300
315			-.022			-.022				315
335			-.019			-.019			.028	335

TABLE 2.- Continued

(a) Continued

ALPHA = 14.32, PHI = 90.0, BODY ALONE

THETA DEG	CP AT X/L= 0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.85	0.95	THETA DEG
0	-.025	-.049	-.048	-.047	-.049	-.039	-.047	-.024	-.014	0
25			-.043			-.045			-.084	25
45			-.032			-.043				45
60	-.025	-.021	-.021	-.024	-.032	-.042	-.054	-.117		60
70			-.013			-.040			-.114	70
75	-.023	-.008	-.009	-.015	-.023	-.037	-.062	-.109	-.117	75
80			-.008			-.030			-.106	80
85	-.022	-.002	-.004	-.010	-.015	-.026	-.056	-.091	-.097	85
90	-.022	-.001	-.004	-.009	-.014	-.024			-.088	90
95	-.022	-.002	-.005	-.010	-.016	-.026	-.053	-.092	-.094	95
100			-.007			-.030			-.112	100
105	-.023	-.009	-.010	-.014	-.024	-.037	-.063	-.108	-.108	105
110			-.013			-.040			-.115	110
120	-.026	-.022	-.021	-.024	-.032	-.042	-.055	-.118		120
135			-.031			-.042				135
155			-.044			-.040			-.085	155
180	-.030	-.046	-.046	-.050	-.051		-.036	-.024	-.010	180
205			-.043			-.047			.031	205
225			-.022			-.045				225
240	.142	.059	.017	-.011	-.024	-.031	-.040	-.020		240
250			.071			-.009			.009	250
255	.268	.179		.067	.034	.012	-.023	-.032	.007	255
260			.173			.045			.007	260
265	.333	.289	.246	.195	.148	.102	.002	-.041	.008	265
270	.344	.314	.281	.239	.201	.146			.009	270
275	.333	.294	.245	.188	.148	.097	.001	-.042	.010	275
280			.170			.045			.010	280
285	.271	.171	.108	.057	.032	.010	-.027	-.034	.009	285
290			.062			-.010			.012	290
300	.141	.048	.010	-.014	-.026	-.032	-.042	-.021		300
315			-.024			-.046				315
335			-.043			-.051			.030	335

ALPHA = 19.31, PHI = 90.0, BODY ALONE

THETA DEG	CP AT X/L= 0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.85	0.95	THETA DEG
0	-.041	-.065	-.065	-.063	-.067	-.060	-.067	-.047	-.038	0
25			-.083			-.085			-.114	25
45			-.095			-.096				45
60	-.064	-.064	-.062	-.062	-.068	-.083	-.099	-.150		60
70			-.037			-.061			-.135	70
75	-.047	-.033	-.029	-.034	-.040	-.053	-.074	-.142	-.135	75
80			-.028			-.047			-.124	80
85	-.037	-.010	-.023	-.031	-.034	-.046	-.073	-.106	-.134	85
90	-.035	-.006	-.014	-.023	-.030	-.043			-.135	90
95	-.039	-.008	-.022	-.028	-.033	-.043	-.071	-.105	-.126	95
100			-.024			-.045			-.138	100
105	-.050	-.028	-.028	-.031	-.039	-.049	-.072	-.140	-.126	105
110			-.035			-.057			-.139	110
120	-.066	-.063	-.059	-.059	-.067	-.081	-.098	-.150		120
135			-.096			-.096				135
155			-.086			-.077			-.118	155
180	-.045	-.059	-.062	-.066	-.070		-.058	-.047	-.032	180
205			-.044			-.048			.036	205
225			-.010			-.038				225
240	.204	.102	.049	.015	-.006	-.014	-.024	.006		240
250			.122			.021			.047	250
255	.375	.260		.122	.076	.052	.009	.006	.053	255
260			.260			.100			.053	260
265	.463	.403	.358	.293	.231	.179	.057	.000	.052	265
270	.477	.438	.406	.353	.303	.241			.051	270
275	.463	.414	.358	.287	.234	.172	.056	-.001	.055	275
280			.258			.098			.055	280
285	.380	.254	.176	.110	.074	.049	.004	.003	.055	285
290			.113			.018			.056	290
300	.203	.090	.039	.012	-.006	-.014	-.027	.002		300
315			-.012			-.039				315
335			-.044			-.057			.032	335

TABLE 2.- Continued

(a) Concluded

ALPHA = 24.30, PHI = 90.0, BODY ALONE

THETA DEG	CP AT X/L= 0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.85	0.95	THETA DEG
0	-.049	-.064	-.061	-.056	-.061	-.053	-.058	-.040	-.028	0
25			-.089			-.083			-.115	25
45			-.111			-.101				45
60	-.108	-.099	-.093	-.105	-.114	-.120	-.121	-.157		60
70			-.071			-.090			-.148	70
75	-.094	-.088	-.065	-.068	-.066	-.077	-.096	-.148	-.146	75
80			-.070			-.071			-.133	80
85	-.028	-.034	-.073	-.068	-.067	-.070	-.096	-.136	-.142	85
90	-.017	-.024	-.050	-.054	-.059	-.071			-.143	90
95	-.023	-.036	-.068	-.061	-.061	-.069	-.094	-.139	-.142	95
100			-.065			-.069			-.146	100
105	-.092	-.088	-.062	-.062	-.062	-.071	-.094	-.150	-.135	105
110			-.068			-.081			-.151	110
120	-.104	-.094	-.085	-.092	-.108	-.119	-.122	-.159		120
135			-.115			-.102				135
155			-.095			-.079			-.123	155
180	-.059	-.061	-.063	-.064	-.066		-.053	-.039	-.026	180
205			-.037			-.040			.059	205
225			.007			-.024				225
240	.268	.147	.080	.048	.020	.010	-.002	.040		240
250			.167			.057			.110	250
255	.485	.345		.184	.124	.097	.047	.055	.117	255
260			.339			.162			.116	260
265	.597	.530	.465	.408	.321	.268	.123	.055	.115	265
270	.616	.574	.527	.488	.414	.354			.115	270
275	.601	.543	.469	.403	.326	.263	.125	.054	.119	275
280			.343			.163			.119	280
285	.500	.344	.241	.175	.125	.099	.044	.051	.118	285
290			.163			.057			.116	290
300	.278	.137	.073	.046	.023	.014	-.002	.039		300
315			.011			-.020				315
335			-.031			-.045			.058	335

TABLE 2.- Continued

(b) Body-tail configuration

ALPHA = -5.00, PHI = 0.0, BODY/TAIL/NO DEFLECTIONS

THETA DEG	CP AT X/L= 0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.85	0.95	THETA DEG
0							.029	.045	.083	0
25									.074	25
45										45
60							.020	-.034		60
70									-.107	70
75							-.012	-.110	-.092	75
80									-.064	80
85							-.083	-.098	-.080	85
90									-.082	90
95							-.107	-.107	-.074	95
100									-.091	100
105							-.058	-.069	-.086	105
110									-.088	110
120							-.035	-.042		120
135										135
155									.016	155
180							-.010	.001	.039	180
205									.014	205
225										225
240							-.032	-.041		240
250									-.098	250
255							-.066	-.072	-.093	255
260									-.085	260
265							-.099	-.104	-.076	265
270									-.063	270
275							-.088	-.105	-.068	275
280									-.068	280
285							-.011	-.115	-.083	285
290									-.101	290
300							.018	-.032		300
315										315
335									.072	335

ALPHA = .01, PHI = 0.0, BODY/TAIL/NO DEFLECTIONS

THETA DEG	CP AT X/L= 0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.85	0.95	THETA DEG
0							-.005	.011	.041	0
25									.029	25
45										45
60							-.013	-.048		60
70									-.073	70
75							-.034	-.085	-.056	75
80									-.043	80
85							-.056	-.054	-.024	85
90									-.005	90
95							-.055	-.055	-.034	95
100									-.051	100
105							-.033	-.088	-.062	105
110									-.091	110
120							-.012	-.045		120
135										135
155									.026	155
180							.008	.011	.044	180
205									.026	205
225										225
240							-.013	-.049		240
250									-.086	250
255							-.032	-.076	-.063	255
260									-.051	260
265							-.056	-.050	-.033	265
270									-.015	270
275							-.056	-.052	-.029	275
280									-.047	280
285							-.031	-.080	-.054	285
290									-.065	290
300							-.014	-.047		300
315										315
335									.031	335

TABLE 2.- Continued

(b) Continued

ALPHA = 5.02, PHI = 0.0, BODY/TAIL/NO DEFLECTIONS

THETA DEG	CP AT X/L= 0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.85	0.95	THETA DEG
0							-.024	-.001	.033	0
25									.016	25
45										45
60							-.035	-.043		60
70									-.080	70
75							-.057	-.064	-.092	75
80									-.082	80
85							-.109	-.112	-.085	85
90									-.082	90
95							-.082	-.097	-.072	95
100									-.072	100
105							-.016	-.113	-.087	105
110									-.120	110
120							.015	-.034		120
135										135
155									.072	155
180							.036	.046	.089	180
205									.071	205
225										225
240							.014	-.036		240
250									-.119	250
255							-.016	-.114	-.087	255
260									-.063	260
265							-.086	-.107	-.069	265
270									-.068	270
275							-.098	-.108	-.084	275
280									-.091	280
285							-.054	-.066	-.093	285
290									-.084	290
300							-.032	-.040		300
315										315
335									.016	335

ALPHA = 9.99, PHI = 0.0, BODY/TAIL/NO DEFLECTIONS

THETA DEG	CP AT X/L= 0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.85	0.95	THETA DEG
0							-.041	-.015	.029	0
25									.022	25
45										45
60							-.062	-.077		60
70									-.146	70
75							-.143	-.123	-.133	75
80									-.110	80
85							-.132	-.130	-.116	85
90									-.116	90
95							-.096	-.130	-.115	95
100									-.131	100
105							.016	-.112	-.129	105
110									-.149	110
120							.065	-.001		120
135										135
155									.140	155
180							.091	.104	.155	180
205									.139	205
225										225
240							.063	-.003		240
250									-.144	250
255							.019	-.012	-.127	255
260									-.116	260
265							-.094	-.129	-.114	265
270									-.101	270
275							-.133	-.130	-.104	275
280									-.112	280
285							-.141	-.126	-.124	285
290									-.134	290
300							-.062	-.074		300
315										315
335									.022	335

TABLE 2.- Continued

(b) Continued

ALPHA = 15.01, PHI = 0.0, BODY/TAIL/NO DEFLECTIONS

THETA DEG	CP AT X/L= 0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.85	0.95	THETA DEG
0							-.076	-.051	-.026	0
25									-.024	25
45										45
60							-.160	-.154		60
70									-.148	70
75							-.160	-.147	-.137	75
80									-.124	80
85							-.149	-.139	-.137	85
90									-.144	90
95							-.090	-.138	-.141	95
100									-.152	100
105							.066	-.090	-.146	105
110									-.166	110
120							.134	.052		120
135										135
155									.229	155
180							.166	.187	.245	180
205									.229	205
225										225
240							.131	.049		240
250									-.163	250
255							.067	-.092	-.153	255
260									-.142	260
265							-.086	-.136	-.141	265
270									-.128	270
275							-.147	-.139	-.131	275
280									-.126	280
285							-.160	-.147	-.133	285
290									-.141	290
300							-.157	-.151		300
315										315
335									-.019	335

ALPHA = 20.01, PHI = 0.0, BODY/TAIL/NO DEFLECTIONS

THETA DEG	CP AT X/L= 0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.85	0.95	THETA DEG
0							-.112	-.082	-.062	0
25									-.088	25
45										45
60							-.174	-.162		60
70									-.139	70
75							-.170	-.157	-.138	75
80									-.132	80
85							-.161	-.150	-.149	85
90									-.155	90
95							-.075	-.152	-.154	95
100									-.161	100
105							.130	-.060	-.155	105
110									-.174	110
120							.219	.120		120
135										135
155									.341	155
180							.264	.288	.369	180
205									.341	205
225										225
240							.215	.116		240
250									-.174	250
255							.129	-.065	-.166	255
260									-.154	260
265							-.076	-.150	-.153	265
270									-.147	270
275							-.165	-.150	-.149	275
280									-.143	280
285							-.179	-.158	-.140	285
290									-.138	290
300							-.179	-.160		300
315										315
335									-.089	335

TABLE 2.- Continued

(b) Continued

ALPHA = 25.00, PHI = 0.0, BODY/TAIL/NO DEFLECTIONS

THETA DEG	CP AT X/L= 0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.85	0.95	THETA DEG
0							-.134	-.118	-.114	0
25									-.127	25
45										45
60							-.181	-.166		60
70									-.141	70
75							-.178	-.165	-.147	75
80									-.143	80
85							-.175	-.159	-.160	85
90									-.163	90
95							-.055	-.165	-.161	95
100									-.168	100
105							.205	-.023	-.161	105
110									-.179	110
120							.321	.196		120
135										135
155									.473	155
180							.377	.402	.527	180
205									.473	205
225										225
240							.320	.193		240
250									-.177	250
255							.210	-.030	-.173	255
260									-.162	260
265							-.046	-.163	-.159	265
270									-.147	270
275							-.171	-.159	-.151	275
280									-.146	280
285							-.179	-.165	-.141	285
290									-.134	290
300							-.178	-.166		300
315										315
335									-.116	335

ALPHA = 4.94, PHI = 22.5, BODY/TAIL/NO DEFLECTIONS

THETA DEG	CP AT X/L= 0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.85	0.95	THETA DEG
0							-.023	-.002	.031	0
25									.020	25
45										45
60							-.030	-.048		60
70									-.096	70
75							-.050	-.067	-.096	75
80									-.082	80
85							-.089	-.102	-.087	85
90									-.084	90
95							-.089	-.083	-.073	95
100									-.079	100
105							-.025	-.097	-.084	105
110									-.117	110
120							.008	-.045		120
135										135
155									.068	155
180							.032	.043	.081	180
205									.066	205
225										225
240							.016	-.028		240
250									-.111	250
255							-.012	-.108	-.080	255
260									-.051	260
265							-.072	-.107	-.055	265
270									-.060	270
275							-.095	-.109	-.080	275
280									-.080	280
285							-.069	-.054	-.064	285
290									-.049	290
300							-.033	-.033		300
315										315
335									.012	335

TABLE 2.- Continued

(b) Continued

ALPHA = 9.94, PHI = 22.5, BODY/TAIL/NO DEFLECTIONS

THETA DEG	CP AT X/L= 0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.85	0.95	THETA DEG
0							-.039	-.013	.036	0
25									.017	25
45										45
60							-.048	-.077		60
70									-.140	70
75							-.138	-.121	-.131	75
80									-.114	80
85							-.123	-.113	-.118	85
90									-.104	90
95							-.120	-.116	-.106	95
100									-.126	100
105							-.012	-.128	-.126	105
110									-.153	110
120							.043	-.026		120
135										135
155									.128	155
180							.081	.096	.135	180
205									.130	205
225										225
240							.066	.014		240
250									-.147	250
255							.032	-.094	-.135	255
260									-.125	260
265							-.064	-.120	-.123	265
270									-.108	270
275							-.135	-.132	-.106	275
280									-.079	280
285							-.135	-.147	-.083	285
290									-.086	290
300							-.124	-.129		300
315										315
335									.054	335

ALPHA = 14.96, PHI = 22.5, BODY/TAIL/NO DEFLECTIONS

THETA DEG	CP AT X/L= 0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.85	0.95	THETA DEG
0							-.077	-.042	-.020	0
25									-.000	25
45										45
60							-.098	-.121		60
70									-.155	70
75							-.141	-.134	-.150	75
80									-.128	80
85							-.135	-.125	-.134	85
90									-.134	90
95							-.129	-.123	-.134	95
100									-.150	100
105							.013	-.124	-.146	105
110									-.165	110
120							.090	.007		120
135										135
155									.201	155
180							.144	.163	.205	180
205									.205	205
225										225
240							.133	.066		240
250									-.159	250
255							.090	-.070	-.148	255
260									-.139	260
265							-.042	-.132	-.138	265
270									-.125	270
275							-.151	-.134	-.120	275
280									-.107	280
285							-.153	-.163	-.084	285
290									-.077	290
300							-.158	-.166		300
315										315
335									-.102	335

TABLE 2.- Continued

(b) Continued

ALPHA = 19.94, PHI = 22.5, BODY/TAIL/NO DEFLECTIONS

THETA DEG	CP AT X/L= 0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.85	0.95	THETA DEC
0							-.156	-.136	-.163	0
25									-.089	25
45										45
60							-.125	-.142		60
70									-.146	70
75							-.145	-.139	-.137	75
80									-.118	80
85							-.139	-.126	-.125	85
90									-.142	90
95							-.125	-.122	-.147	95
100									-.158	100
105							.056	-.106	-.152	105
110									-.175	110
120							.159	.058		120
135										135
155									.310	155
180							.235	.259	.313	180
205									.319	205
225										225
240							.230	.145		240
250									-.155	250
255							.175	-.028	-.141	255
260									-.132	260
265							-.005	-.152	-.128	265
270									-.125	270
275							-.170	-.148	-.120	275
280									-.103	280
285							-.172	-.169	-.097	285
290									-.101	290
300							-.174	-.175		300
315										315
335									-.151	335

ALPHA = 24.96, PHI = 22.5, BODY/TAIL/NO DEFLECTIONS

THETA DEG	CP AT X/L= 0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.85	0.95	THETA DEG
0							-.177	-.168	-.187	0
25									-.172	25
45										45
60							-.145	-.151		60
70									-.114	70
75							-.145	-.145	-.101	75
80									-.098	80
85							-.140	-.126	-.131	85
90									-.153	90
95							-.117	-.126	-.156	95
100									-.164	100
105							.104	-.084	-.156	105
110									-.181	110
120							.238	.115		120
135										135
155									.434	155
180							.339	.361	.432	180
205									.442	205
225										225
240							.340	.233		240
250									-.141	250
255							.274	.025	-.137	255
260									-.122	260
265							.042	-.142	-.121	265
270									-.117	270
275							-.186	-.169	-.116	275
280									-.111	280
285							-.185	-.175	-.108	285
290									-.110	290
300							-.184	-.176		300
315										315
335									-.162	335

TABLE 2.- Continued

(b) Continued

ALPHA = 4.65, PHI = 45.0, BODY/TAIL/NO DEFLECTIONS

THETA DEG	CP AT X/L= 0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.85	0.95	THETA DEG
0							-.022	-.003	.031	0
25									.022	25
45										45
60							-.026	-.054		60
70									-.111	70
75							-.042	-.072	-.105	75
80									-.092	80
85							-.069	-.096	-.089	85
90									-.085	90
95							-.089	-.071	-.093	95
100									-.085	100
105							-.035	-.085	-.065	105
110									-.112	110
120							-.002	-.058		120
135										135
155									.061	155
180							.026	.037	.067	180
205									.058	205
225										225
240							.012	-.023		240
250									-.109	250
255							-.011	-.101	-.082	255
260									-.034	260
265							-.057	-.108	-.039	265
270									-.062	270
275							-.092	-.105	-.070	275
280									-.049	280
285							-.066	-.046	-.026	285
290									-.015	290
300							-.033	-.029		300
315										315
335									.004	335

ALPHA = 9.04, PHI = 45.0, BODY/TAIL/NO DEFLECTIONS

THETA DEG	CP AT X/L= 0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.85	0.95	THETA DEG
0							-.036	-.013	.021	0
25									.016	25
45										45
60							-.038	-.072		60
70									-.140	70
75							-.068	-.119	-.132	75
80									-.115	80
85							-.106	-.107	-.126	85
90									-.111	90
95							-.107	-.101	-.093	95
100									-.118	100
105							-.041	-.108	-.125	105
110									-.153	110
120							.012	-.054		120
135										135
155									.098	155
180							.058	.072	.101	180
205									.103	205
225										225
240							.053	.014		240
250									-.082	250
255							.031	-.081	-.063	255
260									-.057	260
265							-.036	-.125	-.041	265
270									-.025	270
275							-.139	-.124	-.056	275
280									-.051	280
285							-.124	-.138	-.053	285
290									-.069	290
300							-.104	-.081		300
315										315
335									-.005	335

TABLE 2.- Continued

(b) Continued

ALPHA = 14.67, PHI = 45.0, BODY/TAIL/NO DEFLECTIONS

THETA DEG	CP AT X/L= 0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.85	0.95	THETA DEG
0							-.132	-.108	-.099	0
25									-.072	25
45										45
60							-.070	-.103		60
70									-.144	70
75							-.110	-.128	-.136	75
80									-.125	80
85							-.109	-.121	-.112	85
90									-.106	90
95							-.105	-.111	-.124	95
100									-.155	100
105							-.038	-.115	-.147	105
110									-.173	110
120							.037	-.040		120
135										135
155									.149	155
180							.102	.122	.153	180
205									.163	205
225										225
240							.112	.070		240
250									-.094	250
255							.094	-.046	-.080	255
260									-.069	260
265							.005	-.136	-.064	265
270									-.055	270
275							-.164	-.130	-.048	275
280									-.052	280
285							-.148	-.144	-.062	285
290									-.065	290
300							-.142	-.140		300
315										315
335									-.100	335

ALPHA = 19.65, PHI = 45.0, BODY/TAIL/NO DEFLECTIONS

THETA DEG	CP AT X/L= 0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.85	0.95	THETA DEG
0							-.144	-.136	-.143	0
25									-.158	25
45										45
60							-.117	-.164		60
70									-.128	70
75							-.124	-.136	-.125	75
80									-.122	80
85							-.111	-.129	-.120	85
90									-.126	90
95							-.104	-.115	-.146	95
100									-.168	100
105							-.025	-.123	-.157	105
110									-.183	110
120							.072	-.017		120
135										135
155									.224	155
180							.162	.184	.209	180
205									.247	205
225										225
240							.192	.141		240
250									-.079	250
255							.178	.005	-.052	255
260									-.040	260
265							.065	-.121	-.028	265
270									-.026	270
275							-.160	-.147	-.043	275
280									-.074	280
285							-.152	-.146	-.095	285
290									-.084	290
300							-.155	-.148		300
315										315
335									-.145	335

TABLE 2.- Continued

(b) Concluded

ALPHA = 24.60, PHI = 45.0, BODY/TAIL/NO DEFLECTIONS

THETA DEG	CP AT X/L= 0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.85	0.95	THETA DEG
0							-.162	-.152	-.176	0
25									-.169	25
45										45
60							-.173	-.170		60
70									-.110	70
75							-.147	-.173	-.109	75
80									-.118	60
85							-.116	-.148	-.146	85
90									-.166	90
95							-.102	-.133	-.171	95
100									-.184	100
105							-.004	-.137	-.166	105
110									-.193	110
120							.115	.012		120
135										135
155									.311	155
180							.234	.257	.296	180
205									.332	205
225										225
240							.287	.230		240
250									-.049	250
255							.277	.071	-.039	255
260									-.017	260
265							.137	-.088	-.002	265
270									.002	270
275							-.152	-.178	.017	275
280									.021	280
285							-.164	-.176	.002	285
290									-.011	290
300							-.163	-.174		300
315										315
335									-.157	335

TABLE 2.- Continued

(c) Body-wing-tail configuration

ALPHA = -5.03, PHI = 0.0, BODY/WING/TAIL/NO DEFLECTIONS

THETA DEG	CP AT X/L= 0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.85	0.95	THETA DEG
0							.031	.047	.081	0
25									.076	25
45										45
60							.022	-.030		60
70									-.093	70
75							-.011	-.022	-.064	75
80									-.040	80
85							.004	-.025	-.031	85
90									-.015	90
95							-.112	-.088	-.047	95
100									-.060	100
105							-.060	-.095	-.055	105
110									-.069	110
120							-.034	-.059		120
135										135
155									.011	155
180							-.009	.000	.031	180
205									.006	205
225										225
240							-.030	-.054		240
250									-.089	250
255							-.066	-.096	-.073	255
260									-.064	260
265							-.113	-.094	-.055	265
270									-.009	270
275							-.004	-.025	-.024	275
280									-.043	280
285							-.014	-.024	-.063	285
290									-.092	290
300							.019	-.029		300
315										315
335									.073	335

ALPHA = .00, PHI = 0.0, BODY/WING/TAIL/NO DEFLECTIONS

THETA DEG	CP AT X/L= 0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.85	0.95	THETA DEG
0							-.004	.011	.039	0
25									.033	25
45										45
60							-.012	-.044		60
70									-.081	70
75							-.031	-.058	-.057	75
80									-.039	80
85							-.040	-.055	-.027	85
90									-.015	90
95							-.039	-.049	-.030	95
100									-.045	100
105							-.029	-.053	-.051	105
110									-.075	110
120							-.010	-.041		120
135										135
155									.033	155
180							.010	.013	.046	180
205									.029	205
225										225
240							-.010	-.043		240
250									-.087	250
255							-.030	-.056	-.063	255
260									-.048	260
265							-.042	-.053	-.032	265
270									-.014	270
275							-.036	-.052	-.027	275
280									-.043	280
285							-.032	-.056	-.055	285
290									-.078	290
300							.013	-.042		300
315										315
335									.032	335

TABLE 2.- Continued

(c) Continued

ALPHA = 5.01, PHI = 0.0, BODY/WING/TAIL/NO DEFLECTIONS

THETA DEG	CP AT X/L= 0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.85	0.95	THETA DEG
0							-.024	-.001	.022	0
25									.011	25
45										45
60							-.034	-.060		60
70									-.076	70
75							-.060	-.099	-.063	75
80									-.053	80
85							-.121	-.089	-.047	85
90									-.015	90
95							-.002	-.023	-.030	95
100									-.045	100
105							-.013	-.020	-.058	105
110									-.092	110
120							.017	-.029		120
135										135
155									.079	155
180							.039	.050	.091	180
205									.072	205
225										225
240							.014	-.030		240
250									-.094	250
255							-.015	-.025	-.067	255
260									-.042	260
265							-.026	-.029	-.020	265
270									-.008	270
275							-.113	-.090	-.043	275
280									-.057	280
285							-.061	-.099	-.070	285
290									-.087	290
300							-.034	-.053		300
315										315
335									.008	335

ALPHA = 10.00, PHI = 0.0, BODY/WING/TAIL/NO DEFLECTIONS

THETA DEG	CP AT X/L= 0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.85	0.95	THETA DEG
0							-.040	-.015	.014	0
25									.011	25
45										45
60							-.063	-.085		60
70									-.117	70
75							-.147	-.163	-.100	75
80									-.074	80
85							-.146	-.163	-.092	85
90									-.111	90
95							.017	.006	-.101	95
100									-.121	100
105							.020	.011	-.112	105
110									-.139	110
120							.067	.001		120
135										135
155									.148	155
180							.093	.106	.158	180
205									.138	205
225										225
240							.065	.001		240
250									-.124	250
255							.021	.007	-.123	255
260									-.115	260
265							.008	-.003	-.107	265
270									-.090	270
275							-.145	-.166	-.078	275
280									-.071	280
285							-.144	-.158	-.093	285
290									-.108	290
300							-.061	-.080		300
315										315
335									.009	335

TABLE 2.- Continued

(c) Continued

ALPHA = 14.99, PHI = 0.0, BODY/WING/TAIL/NO DEFLECTIONS

THETA DEG	CP AT X/L= 0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.85	0.95	THETA DEG
0							-.074	-.050	-.029	0
25									-.031	25
45										45
60							-.159	-.163		60
70									-.140	70
75							-.159	-.181	-.148	75
80									-.127	80
85							-.165	-.176	-.144	85
90									-.144	90
95							.047	.051	-.129	95
100									-.129	100
105							.069	.062	-.120	105
110									-.142	110
120							.134	.055		120
135										135
155									.241	155
180							.169	.190	.249	180
205									.227	205
225										225
240							.132	.053		240
250									-.137	250
255							.070	.057	-.134	255
260									-.132	260
265							.043	.043	-.133	265
270									-.127	270
275							-.164	-.176	-.137	275
280									-.137	280
285							-.159	-.177	-.142	285
290									-.134	290
300							-.155	-.157		300
315										315
335									-.025	335

ALPHA = 20.01, PHI = 0.0, BODY/WING/TAIL/NO DEFLECTIONS

THETA DEG	CP AT X/L= 0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.85	0.95	THETA DEG
0							-.105	-.080	-.064	0
25									-.093	25
45										45
60							-.174	-.186		60
70									-.139	70
75							-.169	-.189	-.145	75
80									-.142	80
85							-.184	-.187	-.152	85
90									-.147	90
95							.090	.108	-.131	95
100									-.120	100
105							.134	.128	-.108	105
110									-.133	110
120							.221	.121		120
135										135
155									.355	155
180							.264	.289	.371	180
205									.337	205
225										225
240							.219	.119		240
250									-.134	250
255							.135	.123	-.127	255
260									-.127	260
265							.086	.101	-.134	265
270									-.137	270
275							-.185	-.185	-.147	275
280									-.149	280
285							-.171	-.186	-.140	285
290									-.136	290
300							-.171	-.180		300
315										315
335									-.084	335

TABLE 2.- Continued

(c) Continued

ALPHA = 25.01, PHI = 0.0, BODY/WING/TAIL/NO DEFLECTIONS

THETA DEG	CP AT X/L= 0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.85	0.95	THETA DEG
0							-.134	-.116	-.116	0
25									-.130	25
45										45
60							-.181	-.191		60
70									-.140	70
75							-.177	-.192	-.141	75
80									-.138	80
85							-.195	-.191	-.153	85
90									-.151	90
95							.150	.184	-.127	95
100									-.106	100
105							.210	.216	-.091	105
110									-.116	110
120							.323	.201		120
135										135
155									.490	155
180							.379	.405	.529	180
205									.470	205
225										225
240							.321	.196		240
250									-.121	250
255							.212	.210	-.114	255
260									-.117	260
265							.144	.176	-.129	265
270									-.142	270
275							-.193	-.188	-.147	275
280									-.142	280
285							-.180	-.188	-.139	285
290									-.137	290
300							-.179	-.185		300
315										315
335									-.117	335

ALPHA = 4.94, PHI = 22.5, BODY/WING/TAIL/NO DEFLECTIONS

THETA DEG	CP AT X/L= 0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.85	0.95	THETA DEG
0							-.022	-.002	.021	0
25									.016	25
45										45
60							-.070	-.062		60
70									-.099	70
75							-.053	-.095	084	75
80									072	80
85							-.109	-.084	-.065	85
90									-.032	90
95							-.009	-.030	-.045	95
100									-.061	100
105							-.022	-.029	-.068	105
110									-.113	110
120							.009	-.042		120
135										135
155									.075	155
180							.035	.046	.085	180
205									.066	205
225										225
240							.017	-.019		240
250									-.088	250
255							-.009	-.022	-.053	255
260									-.019	260
265							-.017	-.030	.002	265
270									.008	270
275							-.110	-.095	-.021	275
280									-.031	280
285							-.075	-.091	-.050	285
290									-.067	290
300							-.033	-.048		300
315										315
335									.009	335

TABLE 2.- Continued

(c) Continued

ALPHA = 9.93, PHI = 22.5, BODY/WING/TAIL/NO DEFLECTIONS

THETA DEG	CP AT X/L= 0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.85	0.95	THETA DEG
0							-.040	-.013	.018	0
25									.008	25
45										45
60							-.048	-.081		60
70									-.126	70
75							-.141	-.150	-.123	75
80									-.098	80
85							-.141	-.142	-.070	85
90									-.082	90
95							-.019	-.024	-.096	95
100									-.112	100
105							-.009	-.020	-.108	105
110									-.157	110
120							.045	-.024		120
135										135
155									.137	155
180							.083	.099	.142	180
205									.130	205
225										225
240							.067	.022		240
250									-.094	250
255							.032	.027	-.093	255
260									-.091	260
265							.011	-.002	-.089	265
270									-.089	270
275							-.148	-.156	-.095	275
280									-.076	280
285							-.141	-.158	-.064	285
290									-.057	290
300							-.126	-.131		300
315										315
335									.029	335

ALPHA = 14.94, PHI = 22.5, BODY/WING/TAIL/NO DEFLECTIONS

THETA DEG	CP AT X/L= 0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.85	0.95	THETA DEG
0							-.076	-.040	-.025	0
25									-.005	25
45										45
60							-.096	-.120		60
70									-.153	70
75							-.141	-.169	-.142	75
80									-.108	80
85							-.154	-.168	-.121	85
90									-.141	90
95							-.021	-.009	-.135	95
100									-.148	100
105							.020	-.001	-.139	105
110									-.171	110
120							.097	.013		120
135										135
155									.217	155
180							.152	.172	.219	180
205									.210	205
225										225
240							.140	.078		240
250									-.074	250
255							.096	.099	-.070	255
260									-.077	260
265							.088	.071	-.081	265
270									-.097	270
275							-.159	-.163	-.109	275
280									-.117	280
285							-.158	-.161	-.122	285
290									-.116	290
300							-.161	-.157		300
315										315
335									-.109	335

TABLE 2.- Continued

(c) Continued

ALPHA = 19.94, PHI = 22.5, BODY/WING/TAIL/NO DEFLECTIONS

THETA DEG	CP AT X/L= 0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.85	0.95	THETA DEG
0							-.152	-.135	-.165	0
25									-.093	25
45										45
60							-.125	-.143		60
70									-.143	70
75							-.145	-.176	-.216	75
80									-.102	80
85							-.159	-.178	-.136	85
90									-.15	90
95							-.009	.022	-.13	95
100									-.16	100
105							.060	.031	-.15	105
110									-.175	110
120							.162	.062		120
135										135
155									.323	155
180							.238	.263	.324	180
205									.322	205
225										225
240							.233	.155		240
250									-.032	250
255							.179	.193	-.035	255
260									-.055	260
265							.180	.155	-.066	265
270									-.081	270
275							-.184	-.170	-.089	275
280									-.095	280
285							-.171	-.173	-.100	285
290									-.093	290
300							-.171	-.169		300
315										315
335									-.146	335

ALPHA = 24.94, PHI = 22.5, BODY/WING/TAIL/NO DEFLECTIONS

THETA DEG	CP AT X/L= 0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.85	0.95	THETA DEG
0							-.176	-.166	-.185	0
25									-.173	25
45										45
60							-.146	-.166		60
70									-.108	70
75							-.147	-.173	-.100	75
80									-.115	80
85							-.161	-.176	-.154	85
90									-.165	90
95							.015	.067	-.162	95
100									-.159	100
105							.108	.077	-.147	105
110									-.171	110
120							.240	.117		120
135										135
155									.453	155
180							.340	.367	.445	180
205									.454	205
225										225
240							.342	.257		240
250									.027	250
255							.276	.306	.010	255
260									-.028	260
265							.279	.254	-.056	265
270									-.097	270
275							-.168	-.174	-.126	275
280									-.121	280
285							-.169	-.176	-.119	285
290									-.120	290
300							-.179	-.174		300
315										315
335									-.157	335

TABLE 2.- Continued

(c) Continued

ALPHA = 4.60, PHI = 45.0, BODY/WING/TAIL/NO DEFLECTIONS

THETA DEG	CP AT X/L= 0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.85	0.95	THETA DEG
0							-.021	-.003	.022	0
25									.018	25
45										45
60							-.026	-.063		60
70									-.116	70
75							-.044	-.087	-.098	75
80									-.084	80
85							-.087	-.074	-.075	85
90									-.047	90
95							-.016	-.039	-.066	95
100									-.075	100
105							-.032	-.039	-.080	105
110									-.116	110
120							-.001	-.055		120
135										135
155									.068	155
180							.028	.039	.072	180
205									.059	205
225										225
240							.013	-.012		240
250									-.059	250
255							-.009	-.021	-.032	255
260									.001	260
265							-.012	-.034	.021	265
270									.031	270
275							-.100	-.094	.009	275
280									-.008	280
285							-.069	-.082	-.022	285
290									-.059	290
300							-.033	-.042		300
315										315
335									.005	335

ALPHA = 9.61, PHI = 45.0, BODY/WING/TAIL/NO DEFLECTIONS

THETA DEG	CP AT X/L= 0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.85	0.95	THETA DEG
0							-.034	-.011	.004	0
25									.007	25
45										45
60							-.037	-.073		60
70									-.149	70
75							-.068	-.122	-.137	75
80									-.120	80
85							-.118	-.115	-.126	85
90									-.083	90
95							-.042	-.054	-.074	95
100									-.109	100
105							-.039	-.051	-.110	105
110									-.136	110
120							.014	-.052		120
135										135
155									.107	155
180							.060	.076	.110	180
205									.107	205
225										225
240							.055	.035		240
250									-.050	250
255							.034	.030	-.048	255
260									-.030	260
265							.037	.000	-.001	265
270									.018	270
275							-.140	-.144	.016	275
280									-.007	280
285							-.130	-.142	.008	285
290									.011	290
300							-.103	-.092		300
315										315
335									-.010	335

TABLE 2.- Continued

(c) Continued

ALPHA = 14.62, PHI = 45.0, BODY/WING/TAIL/NO DEFLECTIONS

THETA DEG	CP AT X/L= 0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.85	0.95	THETA DEG
0							-.134	-.110	-.117	0
25									-.078	25
45										45
60							-.070	-.103		60
70									-.162	70
75							-.110	-.134	-.151	75
80									-.129	80
85							-.107	-.133	-.106	85
90									-.097	90
95							-.073	-.069	-.118	95
100									-.151	100
105							-.035	-.063	-.138	105
110									-.165	110
120							.040	-.038		120
135										135
155									.162	155
180							.106	.126	.163	180
205									.167	205
225										225
240							.116	.103		240
250									.004	250
255							.098	.102	-.014	255
260									-.037	260
265							.103	.056	-.012	265
270									.021	270
275							-.155	-.154	.040	275
280									.028	280
285							-.152	-.136	.015	285
290									.017	290
300							-.142	-.145		300
315										315
335									-.092	335

ALPHA = 19.61, PHI = 45.0, BODY/WING/TAIL/NO DEFLECTIONS

THETA DEG	CP AT X/L= 0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.85	0.95	THETA DEG
0							-.142	-.135	-.147	0
25									-.152	25
45										45
60							-.114	-.159		60
70									-.130	70
75							-.124	-.143	-.132	75
80									-.124	80
85							-.105	-.139	-.112	85
90									-.115	90
95							-.079	-.064	-.142	95
100									-.165	100
105							-.022	-.057	-.148	105
110									-.173	110
120							.075	-.014		120
135										135
155									.241	155
180							.166	.190	.234	180
205									.251	205
225										225
240							.195	.198		240
250									.076	250
255							.182	.193	.046	255
260									-.006	260
265							.220	.143	-.035	265
270									-.018	270
275							-.145	-.132	-.019	275
280									.015	280
285							-.164	-.129	.046	285
290									.041	290
300							.157	-.125		300
315										315
335									-.133	335

TABLE 2.- Continued

(c) Continued

ALPHA = 24.59, PHI = 45.0, BODY/WING/TAIL/ND DEFLECTIONS

THETA DEG	CP AT X/L= 0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.85	0.95	THETA DEG
0							-.161	-.135	-.172	0
25									-.168	25
45										45
60							-.171	-.172		60
70									-.135	70
75							-.145	-.177	-.138	75
80									-.128	80
85							-.109	-.169	-.142	85
90									-.165	90
95							-.075	-.048	-.168	95
100									-.179	100
105							.000	-.041	-.155	105
110									-.184	110
120							.120	.016		120
135										135
155									.337	155
180							.238	.270	.311	180
205									.345	205
225										225
240							.289	.310		240
250									.166	250
255							.281	.305	.128	255
260									.065	260
265							.307	.235	.011	265
270									.033	270
275							-.137	-.141	.040	275
280									.030	280
285							-.177	-.145	.029	285
290									.044	290
300							-.172	-.148		300
315										315
335									-.152	335

ALPHA = 4.43, PHI = 67.5, BODY/WING/TAIL/ND DEFLECTIONS

THETA DEG	CP AT X/L= 0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.85	0.95	THETA DEG
0							-.017	.003	.024	0
25									.026	25
45										45
60							-.022	-.064		60
70									-.120	70
75							-.037	-.071	-.099	75
80									-.083	80
85							-.061	-.062	-.073	85
90									-.054	90
95							-.021	-.047	-.070	95
100									-.084	100
105							-.037	-.049	-.085	105
110									-.119	110
120							-.012	-.066		120
135										135
155									.051	155
180							.015	.026	.053	180
205									.042	205
225										225
240							.001	-.014		240
250									-.047	250
255							-.017	-.033	-.027	255
260									.009	260
265							-.019	-.041	.036	265
270									.045	270
275							-.075	-.086	.029	275
280									.008	280
285							-.052	-.067	-.009	285
290									-.056	290
300							-.029	-.033		300
315										315
335									.014	335

TABLE 2.- Continued

(c) Continued

ALPHA = 9.44, PHI = 67.5, BODY/WING/TAIL/NO DEFLECTIONS

THETA DEG	CP AT X/L= 0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.85	0.95	THETA DEG
0							-.033	-.012	-.005	0
25									.010	25
45										45
60							-.032	-.082		60
70									-.155	70
75							-.043	-.085	-.133	75
80									-.112	80
85							-.072	-.082	-.118	85
90									-.104	90
95							-.038	-.074	-.085	95
100									-.107	100
105							-.060	-.071	-.115	105
110									-.133	110
120							-.019	-.080		120
135										135
155									.060	155
180							.022	.036	.063	180
205									.060	205
225										225
240							.020	.023		240
250									-.023	250
255							.011	.004	-.038	255
260									-.007	260
265							.023	-.020	.039	265
270									.103	270
275							-.099	-.125	.111	275
280									.087	280
285							-.103	-.103	.036	285
290									-.017	290
300							-.063	-.040		300
315										315
335									-.020	335

ALPHA = 14.42, PHI = 67.5, BODY/WING/TAIL/NO DEFLECTIONS

THETA DEG	CP AT X/L= 0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.85	0.95	THETA DEG
0							-.068	-.059	-.060	0
25									-.035	25
45										45
60							-.058	-.106		60
70									-.157	70
75							-.068	-.099	-.152	75
80									-.136	80
85							-.059	-.096	-.139	85
90									-.132	90
95							-.068	-.098	-.118	95
100									-.135	100
105							-.083	-.095	-.142	105
110									-.164	110
120							-.025	-.090		120
135										135
155									.069	155
180							.032	.052	.073	180
205									.082	205
225										225
240							.050	.068		240
250									.063	250
255							.056	.053	.011	255
260									.019	260
265							.094	.019	.057	265
270									.131	270
275							-.085	-.130	.153	275
280									.127	280
285							-.113	-.112	.052	285
290									.108	290
300							-.119	-.104		300
315										315
335									-.084	335

TABLE 2.- Continued

(c) Continued

ALPHA = 19.44, PHI = 67.5, BODY/WING/TAIL/NO DEFLECTIONS

THETA DEG	CP AT X/L= 0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.85	0.95	THETA DEG
0							-.114	-.115	-.144	0
25									- 117	25
45										45
60							-.103	-.130		60
70									-.159	70
75							-.118	-.122	-.152	75
80									-.138	80
85							-.074	-.132	-.142	85
90									-.145	90
95							-.072	-.108	-.140	95
100									-.160	100
105							-.096	-.102	-.152	105
110									-.177	110
120							-.026	-.093		120
135										135
155									.079	155
180							.055	.081	.094	180
205									.117	205
225										225
240							.099	.133		240
250									.161	250
255							.122	.123	.102	255
260									.025	260
265							.183	.077	.077	265
270									.171	270
275							-.060	-.121	.245	275
280									.255	280
285							-.112	-.105	.149	285
290									.256	290
300							-.125	-.109		300
315										315
335									-.115	335

ALPHA = 24.44, PHI = 67.5, BODY/WING/TAIL/NO DEFLECTIONS

THETA DEG	CP AT X/L= 0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.85	0.95	THETA DEG
0							-.139	-.134	-.158	0
25									-.150	25
45										45
60							-.127	-.150		60
70									-.165	70
75							-.119	-.137	-.161	75
80									-.145	80
85							-.133	-.135	-.157	85
90									-.161	90
95							-.088	-.115	-.156	95
100									-.171	100
10'							-.097	-.107	- 155	105
110									-.182	110
120							-.015	-.086		120
135										135
155									.107	155
180							.088	.122	.125	180
205									.174	205
225										225
240							.159	.209		240
250									.274	250
255							.202	.209	.219	255
260									.103	260
265							.286	.150	.191	265
270									.327	270
275							-.024	-.100	.419	275
280									.425	280
285							-.106	-.087	.281	285
290									.462	290
300							-.124	-.093		300
315										315
335									-.110	335

TABLE 2.- Continued

(c) Continued

ALPHA = -5.52, PHI = 90.0, BODY/WING/TAIL/NO DEFLECTIONS

THETA DEG	CP AT X/L= 0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.85	0.95	THETA DEG
0							-.005	.013	.033	0
25									.027	25
45										45
60							-.013	-.028		60
70									-.054	70
75							-.031	-.054	-.025	75
80									.010	80
85							-.041	-.063	.023	85
90									.029	90
95							-.038	-.060	.020	95
100									.008	100
105							-.030	-.049	-.010	105
110									-.060	110
120							-.014	-.033		120
135										135
155									.029	155
180							.004	.012	.037	180
205									.030	205
225										225
240							-.016	-.064		240
250									-.102	250
255							-.033	-.054	-.096	255
260									-.081	260
265							-.035	-.052	-.065	265
270									-.046	270
275							-.033	-.050	-.061	275
280									-.075	280
285							-.033	-.055	-.088	285
290									-.111	290
300							-.015	-.060		300
315										315
335									.036	335

ALPHA = -.71, PHI = 90.0, BODY/WING/TAIL/NO DEFLECTIONS

THETA DEG	CP AT X/L= 0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.85	0.95	THETA DEG
0							-.004	.012	.041	0
25									.034	25
45										45
60							-.013	-.044		60
70									-.086	70
75							-.033	-.059	-.063	75
80									-.042	80
85							-.043	-.054	-.033	85
90									-.019	90
95							-.040	-.052	-.027	95
100									-.050	100
105							-.032	-.055	-.055	105
110									-.080	110
120							-.014	-.045		120
135										135
155									.032	155
180							.007	.011	.046	180
205									.027	205
225										225
240							-.011	-.042		240
250									-.094	250
255							-.030	-.054	-.060	255
260									-.042	260
265							-.040	-.054	-.027	265
270									-.013	270
275							-.039	-.053	-.025	275
280									-.040	280
285							-.031	-.056	-.054	285
290									-.079	290
300							-.012	-.040		300
315										315
335									.031	335

TABLE 2.- Continued

(c) Continued

ALPHA = 4.30, PHI = 90.0, BODY/WING/TAIL/NO DEFLECTIONS

THETA DEG	CP AT X/L= 0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.85	0.95	THETA DEG
0							-.010	.012	.032	0
25									.039	25
45										45
60							-.018	-.067		60
70									-.121	70
75							-.035	-.059	-.096	75
80									-.076	80
85							-.037	-.054	-.071	85
90									-.057	90
95							-.034	-.053	-.064	95
100									-.085	100
105							-.036	-.057	-.084	105
110									-.117	110
120							-.015	-.068		120
135										135
155									.035	155
180							.001	.010	.036	180
205									.020	205
225										225
240							-.017	-.024		240
250									-.067	250
255							-.033	-.048	-.024	255
260									.010	260
265							-.040	-.061	.032	265
270									.038	270
275							-.038	-.061	.032	275
280									.014	280
285							-.034	-.049	-.006	285
290									-.049	290
300							-.017	-.022		300
315										315
335									.029	335

ALPHA = 9.30, PHI = 90.0, BODY/WING/TAIL/NO DEFLECTIONS

THETA DEG	CP AT X/L= 0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.85	0.95	THETA DEG
0							-.021	.002	.013	0
25									.026	25
45										45
60							-.031	-.090		60
70									-.139	70
75							-.045	-.074	-.135	75
80									-.111	80
85							-.036	-.067	-.101	85
90									-.084	90
95							-.033	-.068	-.095	95
100									-.125	100
105							-.046	-.073	-.121	105
110									-.140	110
120							-.033	-.090		120
135										135
155									.025	155
180							-.011	.001	.016	180
205									.008	205
225										225
240							-.028	-.014		240
250									-.024	250
255							-.037	-.041	-.006	255
260									.031	260
265							-.027	-.068	.081	265
270									.097	270
275							-.026	-.069	.087	275
280									.051	280
285							-.041	-.042	.001	285
290									-.019	290
300							-.030	-.014		300
315										315
335									.006	335

TABLE 2.- Continued

(c) Continued

ALPHA = 14.30, PHI = 90.0, BODY/WING/TAIL/ND DEFLECTIONS

THETA DEG	CP AT X/L= 0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.85	0.95	THETA DEG
0							-.045	-.019	-.018	0
25									-.000	25
45										45
60							-.053	-.114		60
70									-.158	70
75							-.059	-.093	-.153	75
80									-.128	80
85							-.045	-.081	-.124	85
90									-.115	90
95							-.042	-.082	-.118	95
100									-.143	100
105							-.060	-.091	-.138	105
110									-.161	110
120							-.054	-.114		120
135										135
155									-.006	155
180							-.035	-.021	-.016	180
205									-.018	205
225										225
240							-.040	-.015		240
250									.083	250
255							-.021	-.027	.019	255
260									.058	260
265							.012	-.056	.138	265
270									.194	270
275							.014	-.057	.149	275
280									.083	280
285							-.026	-.030	.023	285
290									.088	290
300							-.042	-.017		300
315										315
335									-.024	335

ALPHA = 19.30, PHI = 90.0, BODY/WING/TAIL/ND DEFLECTIONS

THETA DEG	CP AT X/L= 0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.85	0.95	THETA DEG
0							-.064	-.043	-.053	0
25									-.055	25
45										45
60							-.098	-.137		60
70									-.165	70
75							-.072	-.128	-.165	75
80									-.143	80
85							-.065	-.103	-.147	85
90									-.143	90
95							-.060	-.099	-.142	95
100									-.160	100
105							-.069	-.119	-.146	105
110									-.170	110
120							-.097	-.135		120
135										135
155									-.064	155
180							-.057	-.044	-.047	180
205									-.016	205
225										225
240							-.025	.009		240
250									.246	250
255							.011	.010	.123	255
260									.129	260
265							.067	-.021	.241	265
270									.305	270
275							.071	-.024	.245	275
280									.154	280
285							.006	.005	.111	285
290									.252	290
300							-.027	.005		300
315										315
335									-.028	335

TABLE 2.- Continued

(c) Continued

ALPHA = 24.31, PHI = 90.0, BODY/WING/TAIL/NO DEFLECTIONS

THETA DEG	CP AT X/L= 0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.85	0.95	THETA DEG
0							-.060	-.036	-.054	0
25									-.055	25
45										45
60							-.120	-.147		60
70									-.175	70
75							-.096	-.139	-.173	75
80									-.151	80
85							-.091	-.135	-.157	85
90									-.154	90
95							-.081	-.126	-.153	95
100									-.167	100
105							-.089	-.133	-.148	105
110									-.179	110
120							-.120	-.144		120
135										135
155									-.065	155
180							-.051	-.036	-.048	180
205									-.003	205
225										225
240							-.005	.043		240
250									.432	250
255							.048	.056	.294	255
260									.219	260
265							.127	.024	.384	265
270									.428	270
275							.136	.023	.390	275
280									.243	280
285							.044	.052	.268	285
290									.449	290
300							-.006	.040		300
315										315
335									-.023	335

ALPHA = -5.01, PHI = 0.0, BODY/WING/TAIL/PITCH DEFLECTION

THETA DEG	CP AT X/L= 0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.85	0.95	THETA DEG
0							.030	.047	.384	0
25									.319	25
45										45
60							.022	-.030		60
70									-.058	70
75							-.011	-.024	-.111	75
80									-.110	80
85							.004	-.025	-.104	85
90									-.071	90
95							-.113	-.072	-.069	95
100									-.065	100
105							-.060	-.091	-.038	105
110									.059	110
120							-.034	-.059		120
135										135
155									-.136	155
180							-.009	.001	-.025	180
205									-.170	205
225										225
240							-.032	-.054		240
250									.049	250
255							-.062	-.096	-.020	255
260									-.062	260
265							-.111	-.088	-.051	265
270									-.052	270
275							-.009	-.025	-.065	275
280									-.087	280
285							-.012	-.024	-.091	285
290									-.067	290
300							.020	-.029		300
315										315
335									.324	335

TABLE 2.- Continued

(c) Continued

ALPHA = .01, PHI = 0.0, BODY/WING/TAIL/PITCH DEFLECTION

THETA DEG	CP AT X/L= 0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.85	0.95	THETA DEG
0							-.006	.010	.279	0
25									.241	25
45										45
60							-.012	-.044		60
70									-.035	70
75							-.032	-.066	-.083	75
80									-.105	80
85							-.042	-.056	-.128	85
90									-.131	90
95							-.040	-.050	-.130	95
100									-.120	100
105							-.031	-.059	-.059	105
110									.012	110
120							-.010	-.040		120
135										135
155									-.133	155
180							.010	.013	-.010	180
205									-.164	205
225										225
240							-.011	-.044		240
250									.008	250
255							-.030	-.056	-.060	255
260									-.106	260
265							-.043	-.054	-.124	265
270									-.109	270
275							-.038	-.053	-.114	275
280									-.111	280
285							-.032	-.056	-.092	285
290									-.045	290
300							-.014	-.042		300
315										315
335									.240	335

ALPHA = 4.98, PHI = 0.0, BODY/WING/TAIL/PITCH DEFLECTION

THETA DEG	CP AT X/L= 0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.85	0.95	THETA DEG
0							-.024	-.002	.244	0
25									.200	25
45										45
60							-.034	-.060		60
70									-.041	70
75							-.060	-.100	-.088	75
80									-.118	80
85							-.121	-.089	-.133	85
90									-.131	90
95							-.002	-.023	-.134	95
100									-.132	100
105							-.013	-.020	-.081	105
110									-.028	110
120							.016	-.029		120
135										135
155									-.106	155
180							.038	.049	.031	180
205									-.156	205
225										225
240							.015	-.030		240
250									-.038	250
255							-.015	-.025	-.095	255
260									-.104	260
265							-.026	-.029	-.103	265
270									-.099	270
275							-.112	-.089	-.109	275
280									-.114	280
285							-.057	-.099	-.072	285
290									-.059	290
300							-.032	-.053		300
315										315
335									.206	335

TABLE 2.- Continued

(c) Continued

ALPHA = 10.02, PHI = 0.0, BODY/WING/TAIL/PITCH DEFLECTION

THETA DEG	CP AT X/L= 0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.85	0.95	THETA DEG
0							-.042	-.015	.250	0
25									.184	25
45										45
60							-.065	-.084		60
70									-.156	70
75							-.147	-.160	-.162	75
80									-.147	80
85							-.146	-.162	-.168	85
90									-.167	90
95							.017	.006	-.155	95
100									-.139	100
105							.020	.011	-.095	105
110									-.054	110
120							.068	.001		120
135										135
155									-.071	155
180							.094	.107	.086	180
205									-.136	205
225										225
240							.065	.002		240
250									-.066	250
255							.020	.008	-.113	255
260									-.137	260
265							.007	-.003	-.151	265
270									-.143	270
275							-.146	-.163	-.160	275
280									-.158	280
285							-.145	-.154	-.155	285
290									-.148	290
300							-.061	-.080		300
315										315
335									.146	335

ALPHA = 14.99, PHI = 0.0, BODY/WING/TAIL/PITCH DEFLECTION

THETA DEG	CP AT X/L= 0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.85	0.95	THETA DEG
0							-.076	-.050	-.026	0
25									.087	25
45										45
60							-.160	-.163		60
70									-.166	70
75							-.160	-.171	-.171	75
80									-.158	80
85							-.166	-.175	-.172	85
90									-.165	90
95							.047	.051	-.157	95
100									-.127	100
105							.070	.061	-.090	105
110									-.057	110
120							.134	.055		120
135										135
155									-.031	155
180							.169	.190	.157	180
205									-.106	205
225										225
240							.132	.053		240
250									-.075	250
255							.069	.055	-.112	255
260									-.139	260
265							.042	.042	-.164	265
270									-.157	270
275							-.164	-.172	-.169	275
280									-.170	280
285							-.160	-.168	-.167	285
290									-.162	290
300							-.156	-.158		300
315										315
335									.087	335

TABLE 2.- Continued

(c) Continued

ALPHA = 19.99, PHI = 0.0, BODY/WING/TAIL/PITCH DEFLECTION

THETA DEG	CP AT X/L= 0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.85	0.95	THETA DEG
0							-.106	-.080	-.063	0
25									-.008	25
45										45
60							-.174	-.179		60
70									-.161	70
75							-.170	-.179	-.164	75
80									-.158	80
85							-.188	-.180	-.170	85
90									-.167	90
95							.091	.108	-.146	95
100									-.108	100
105							.134	.128	-.074	105
110									-.051	110
120							.221	.121		120
135										135
155									-.001	155
180							.266	.289	.231	180
205									-.058	205
225										225
240							.221	.119		240
250									-.070	250
255							.135	.121	-.099	255
260									-.126	260
265							.085	.100	-.156	265
270									-.163	270
275							-.185	-.176	-.169	275
280									-.167	280
285							-.172	-.175	-.160	285
290									-.158	290
300							-.172	-.172		300
315										315
335									-.015	335

ALPHA = 25.00, PHI = 0.0, BODY/WING/TAIL/PITCH DEFLECTION

THETA DEG	CP AT X/L= 0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.85	0.95	THETA DEG
0							-.135	-.116	-.089	0
25									-.090	25
45										45
60							-.180	-.179		60
70									-.154	70
75							-.177	-.178	-.154	75
80									-.154	80
85							-.198	-.177	-.167	85
90									-.160	90
95							.159	.183	-.127	95
100									-.086	100
105							.210	.215	-.052	105
110									-.026	110
120							.322	.200		120
135										135
155									.068	155
180							.380	.405	.301	180
205									-.004	205
225										225
240							.322	.200		240
250									-.053	250
255							.214	.210	-.079	255
260									-.104	260
265							.144	.178	-.140	265
270									-.161	270
275							-.193	-.170	-.163	275
280									-.160	280
285							-.180	-.172	-.151	285
290									-.150	290
300							-.178	-.171		300
315										315
335									-.079	335

TABLE 2.- Continued

(c) Continued

ALPHA = -5.03, PHI = 0.0, BODY/WING/TAIL/YAW DEFLECTION

THETA DEG	CP AT X/L= 0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.85	0.95	THETA DEG
0							.034	.046	.220	0
25									-.118	25
45										45
60							.022	-.027		60
70									.114	70
75							-.009	.007	.155	75
80									.191	80
85							.005	-.006	.221	85
90									.222	90
95							-.010	.010	.209	95
100									.178	100
105							-.009	.011	.177	105
110									.168	110
120							-.032	.029		120
135										135
155									-.105	155
180							-.009	.019	.142	180
205									.202	205
225										225
240							-.030	-.054		240
250									-.142	250
255							-.062	-.097	-.143	255
260									-.132	260
265							-.110	-.094	-.119	265
270									-.095	270
275							-.008	-.025	-.109	275
280									-.123	280
285							-.013	-.024	-.145	285
290									-.165	290
300							.019	-.030		300
315										315
335									.253	335

ALPHA = .03, PHI = 0.0, BODY/WING/TAIL/YAW DEFLECTION

THETA DEG	CP AT X/L= 0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.85	0.95	THETA DEG
0							.001	.011	.172	0
25									-.134	25
45										45
60							-.011	.061		60
70									.291	70
75							-.031	.076	.348	75
80									.367	80
85							-.039	.077	.371	85
90									.339	90
95							-.031	.053	.308	95
100									.276	100
105							-.027	.049	.268	105
110									.245	110
120							-.010	.029		120
135										135
155									-.083	155
180							.009	.013	.152	180
205									.170	205
225										225
240							-.010	-.044		240
250									-.138	250
255							-.030	-.055	-.138	255
260									-.126	260
265							-.041	-.053	-.116	265
270									-.101	270
275							-.037	-.052	-.112	275
280									-.125	280
285							-.032	-.056	-.142	285
290									-.101	290
300							-.013	-.042		300
315										315
335									.174	335

TABLE 2.- Continued

(c) Continued

ALPHA = 9.01, PHI = 0.0, BODY/WING/TAIL/YAW DEFLECTION

THETA DEG	CP AT X/L= 0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.85	0.95	THETA DEG
0							-.020	.018	.146	0
25									-.144	25
45										45
60							-.033	.029		60
70									.112	70
75							-.009	.012	.109	75
80									.138	80
85							-.012	.011	.193	85
90									.245	90
95							.003	.001	.284	95
100									.234	100
105							-.011	.022	.198	105
110									.164	110
120							.018	-.025		120
135										135
155									-.090	155
180							.039	.050	.202	180
205									.259	205
225										225
240							.017	-.030		240
250									-.141	250
255							-.013	-.024	-.139	255
260									-.126	260
265							-.025	-.029	-.116	265
270									-.093	270
275							-.111	-.090	-.112	275
280									-.128	280
285							-.058	-.099	-.147	285
290									-.165	290
300							-.032	-.052		300
315										315
335									.197	335

ALPHA = 10.01, PHI = 0.0, BODY/WING/TAIL/YAW DEFLECTION

THETA DEG	CP AT X/L= 0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.85	0.95	THETA DEG
0							-.039	.012	.156	0
25									-.109	25
45										45
60							-.064	-.053		60
70									.160	70
75							-.061	-.057	.120	75
80									.023	80
85							-.059	-.054	-.027	85
90									-.038	90
95							.023	.010	-.019	95
100									-.047	100
105							.023	.016	-.048	105
110									-.040	110
120							.070	.004		120
135										135
155									-.067	155
180							.095	.109	.287	180
205									.375	205
225										225
240							.066	.001		240
250									-.151	250
255							.020	.008	-.151	255
260									-.148	260
265							.008	-.002	-.148	265
270									-.136	270
275							-.146	-.162	-.152	275
280									-.156	280
285							-.145	-.154	-.166	285
290									-.170	290
300							-.059	-.078		300
315										315
335									.223	335

TABLE 2.- Continued

(c) Continued

ALPHA = 15.02, PHI = 0.0, BODY/WING/TAIL/YAW DEFLECTION

THETA DEG	CP AT X/L= 0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.85	0.95	THETA DEG
0							-.073	-.045	-.017	0
25									-.136	25
45										45
60							-.110	-.104		60
70									-.090	70
75							-.102	-.103	-.017	75
80									.018	80
85							-.084	-.097	-.014	85
90									-.014	90
95							.052	.056	.005	95
100									.010	100
105							.073	.067	.013	105
110									-.002	110
120							.139	.058		120
135										135
155									-.011	155
180							.172	.192	.401	180
205									.464	205
225										225
240							.135	.054		240
250									-.160	250
255							.070	.056	-.154	255
260									-.156	260
265							.041	.043	-.1[illegible]	265
270									-.150	270
275							-.164	-.172	-.162	275
280									-.166	280
285							-.159	-.167	-.172	285
290									-.169	290
300							-.153	-.155		300
315										315
335									.130	335

ALPHA = 20.02, PHI = 0.0, BODY/WING/TAIL/YAW DEFLECTION

THETA DEG	CP AT X/L= 0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.85	0.95	THETA DEG
0							-.102	-.078	-.032	0
25									-.156	25
45										45
60							-.129	-.117		60
70									-.072	70
75							-.123	-.120	-.033	75
80									.016	80
85							-.108	-.111	.011	85
90									.022	90
95							.098	.114	.031	95
100									.032	100
105							.139	.135	.026	105
110									-.005	110
120							.225	.125		120
135										135
155									.076	155
180							.269	.292	.535	180
205									.590	205
225										225
240							.221	.120		240
250									-.166	250
255							.135	.122	-.155	255
260									-.156	260
265							.084	.100	-.161	265
270									-.152	270
275							-.183	-.180	-.163	275
280									-.168	280
285							-.170	-.178	-.173	285
290									-.170	290
300							-.170	-.175		300
315										315
335									.025	335

TABLE 2.- Continued

(c) Continued

ALPHA = 25.02, PHI = 0.0, BODY/WING/TAIL/YAW DEFLECTION

THETA DEG	CP AT X/L= 0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.85	0.95	THETA DEG
0							-.131	-.113	-.087	0
25									-.112	25
45										45
60							-.160	-.136		60
70									.027	70
75							-.148	-.138	.072	75
80									.079	80
85							-.138	-.136	.068	85
90									.061	90
95							.158	.189	.067	95
100									.068	100
105							.216	.224	.051	105
110									.012	110
120							.329	.204		120
135										135
155									.272	155
180							.384	.407	.685	180
205									.702	205
225										225
240							.324	.199		240
250									-.166	250
255							.213	.209	-.145	255
260									-.149	260
265							.142	.176	-.157	265
270									-.153	270
275							-.192	-.184	-.166	275
									-.172	280
285							-.179	-.183	-.175	285
290									-.171	290
300							-.178	-.182		300
315										315
335									-.063	335

ALPHA = -5.02, PHI = 0.0, BODY/WING/TAIL/ROLL DEFLECTION

THETA DEG	CP AT X/L= 0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.85	0.95	THETA DEG
0							.029	.047	.216	0
25									-.117	25
45										45
60							.021	-.030		60
70									-.039	70
75							-.011	-.024	-.094	75
80									-.121	80
85							.004	-.025	-.138	85
90									-.134	90
95							-.112	-.086	-.133	95
100									-.133	100
105							-.060	-.095	-.082	105
110									-.048	110
120							-.034	-.059		120
135										135
155									.169	155
180							-.009	.000	.118	180
205									-.118	205
225										225
240							-.031	-.054		240
250									.045	250
255							-.065	-.095	-.026	255
260									-.067	260
265							-.110	-.089	-.057	265
270									-.055	270
275							-.010	-.025	-.063	275
280									-.084	280
285							-.013	-.024	-.087	285
290									-.067	290
300							.019	-.028		300
315										315
335									.253	335

TABLE 2.- Continued

(c) Continued

ALPHA = .02, PHI = 0.0, BODY/WING/TAIL/ROLL DEFLECTION

THETA DEG	CP AT X/L= 0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.85	0.95	THETA DEG
0							-.006	.012	.151	0
25									-.130	25
45										45
60							-.012	-.043		60
70									-.008	70
75							-.032	-.065	-.064	75
80									-.117	80
85							-.041	-.054	-.138	85
90									-.131	90
95							-.038	-.050	-.127	95
100									-.107	100
105							-.030	-.060	-.071	105
110									-.035	110
120							-.010	-.041		120
135										135
155									.181	155
180							.009	.012	.141	180
205									-.085	205
225										225
240							-.011	-.043		240
250									.006	250
255							-.030	-.056	-.061	255
260									-.103	260
265							-.042	-.054	-.118	265
270									-.104	270
275							-.038	-.052	-.115	275
280									-.110	280
285							-.032	-.055	-.086	285
290									-.038	290
300							-.013	-.041		300
315										315
335									.167	335

ALPHA = 5.02, PHI = 0.0, BODY/WING/TAIL/ROLL DEFLECTION

THETA DEG	CP AT X/L= 0.1[illegible]	0.20	0.30	0.40	0.50	0.60	0.70	0.85	0.95	THETA DEG
0							-.023	-.002	.125	0
25									-.150	25
45										45
60							-.034	-.059		60
70									.026	70
75							-.060	-.096	-.050	75
80									-.064	80
85							-.121	-.074	-.059	85
90									-.071	90
95							-.001	-.022	-.107	95
100									-.115	100
105							-.012	-.019	-.095	105
110									-.058	110
120							.018	-.029		120
135										135
155									.261	155
180							.039	.050	.212	180
205									-.084	205
225										225
240							.017	-.029		240
250									-.052	250
255							-.013	-.024	-.091	255
260									-.102	260
265							-.024	-.029	-.100	265
270									-.095	270
275							-.111	-.089	-.105	275
280									-.105	280
285							-.059	-.098	-.062	285
290									-.057	290
300							-.032	-.053		300
315										315
335									.162	335

TABLE 2.- Contir ...

(c) Continued

ALPHA = 10.01, PHI = 0.0, BODY/WING/TAIL/ROLL DEFLECTION

THETA DEG	CP AT X/L= 0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.85	0.95	THETA DEG
0							-.040	-.015	.127	0
25									-.158	25
45										45
60							-.062	-.083		60
70									-.017	70
75							-.146	-.115	-.001	75
80									.009	80
85							-.145	-.110	.017	85
90									.018	90
95							.017	.007	.020	95
100									.015	100
105							.021	.012	-.029	105
110									-.095	110
120							.068	.002		120
135										135
155									.376	155
180							.093	.107	.304	180
205									-.072	205
225										225
240							.065	.002		240
250									-.070	250
255							.021	.008	-.106	255
260									-.136	260
265							.008	-.002	-.150	265
270									-.141	270
275							-.145	-.163	-.158	275
280									-.158	280
285							-.144	-.154	-.154	285
290									-.147	290
300							-.060	-.079		300
315										315
335									.127	335

ALPHA = 15.00, PHI = 0.0, BODY/WING/TAIL/ROLL DEFLECTION

THETA DEG	CP AT X/L= 0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.85	0.95	THETA DEG
0							-.075	-.051	-.030	0
25									-.151	25
45										45
60							-.161	-.105		60
70									-.096	70
75							-.160	-.104	-.105	75
80									-.076	80
85							-.168	-.101	-.057	85
90									-.044	90
95							.046	.051	-.070	95
100									-.110	100
105							.069	.062	-.123	105
110									-.170	110
120							.135	.055		120
135										135
155									.500	155
180							.170	.190	.421	180
205									-.030	205
225										225
240							.134	.054		240
250									-.068	250
255							.070	.057	-.102	255
260									-.136	260
265							.043	.044	-.165	265
270									-.157	270
275							-.164	-.173	-.169	275
280									-.170	280
285							-.160	-.168	.166	285
290									-.161	290
300							-.158	-.160		300
315										315
335									.099	335

TABLE 2.- Concluded

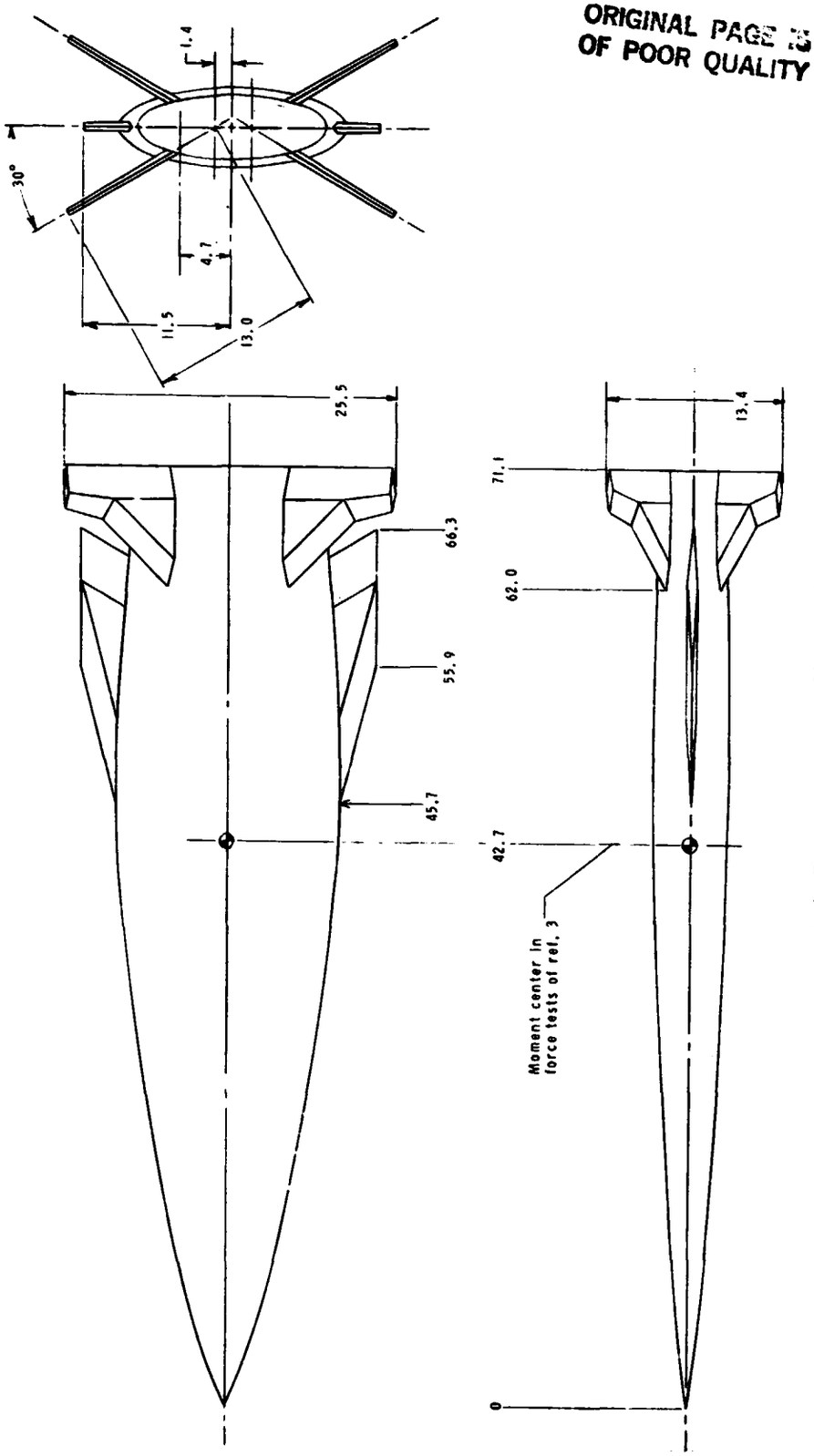
(c) Concluded

ALPHA = 20.02, PHI = 0.0, BODY/WING/TAIL/ROLL DEFLECTION

THETA DEG	CP AT X/L= 0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.85	0.95	THETA DEG
0							-.103	-.080	-.053	0
25									-.158	25
45										45
60							-.174	-.142		60
70									-.130	70
75							-.169	-.144	-.070	75
80									-.006	80
85							-.185	-.136	-.019	85
90									-.075	90
95							.090	.108	-.114	95
100									-.135	100
105							.134	.128	-.143	105
110									-.183	110
120							.221	.121		120
135										135
155									.621	155
180							.267	.290	.559	180
205									.054	205
225										225
240							.221	.121		240
250									-.058	250
255							.136	.125	-.086	255
260									-.120	260
265							.087	.103	-.156	265
270									-.162	270
275							-.184	-.177	-.168	275
280									-.165	280
285							-.171	-.176	-.156	285
290									-.155	290
300							-.171	-.172		300
315										315
335									-.015	335

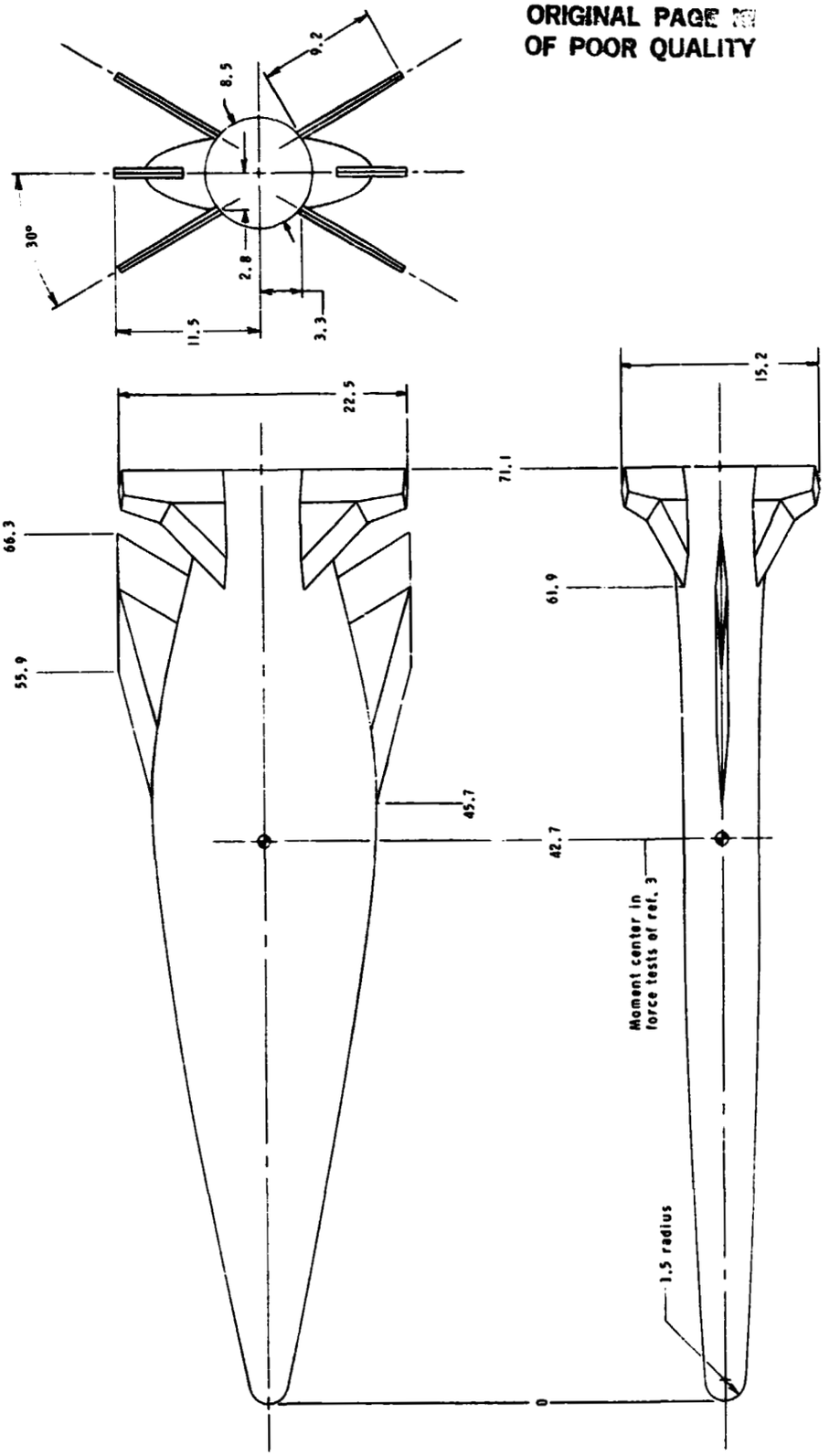
ALPHA = 25.00, PHI = 0.0, BODY/WING/TAIL/ROLL DEFLECTION

THETA DEG	CP AT X/L= 0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.85	0.95	THETA DEG
0							-.132	-.115	-.103	0
25									-.178	25
45										45
60							-.176	-.148		60
70									-.096	70
75							-.173	-.154	-.051	75
80									-.055	80
85							-.189	-.148	-.113	85
90									-.131	90
95							.147	.181	-.130	95
100									-.142	100
105							.209	.214	-.146	105
110									-.184	110
120							.323	.198		120
135										135
155									.705	155
180							.380	.405	.699	180
205									.240	205
225										225
240							.324	.201		240
250									-.031	250
255							.215	.212	-.067	255
260									-.099	260
265							.148	.180	-.135	265
270									-.159	270
275							-.192	-.171	-.160	275
280									-.158	280
285							-.179	-.173	-.147	285
290									-.145	290
300							-.177	-.172		300
315										315
335									-.080	335



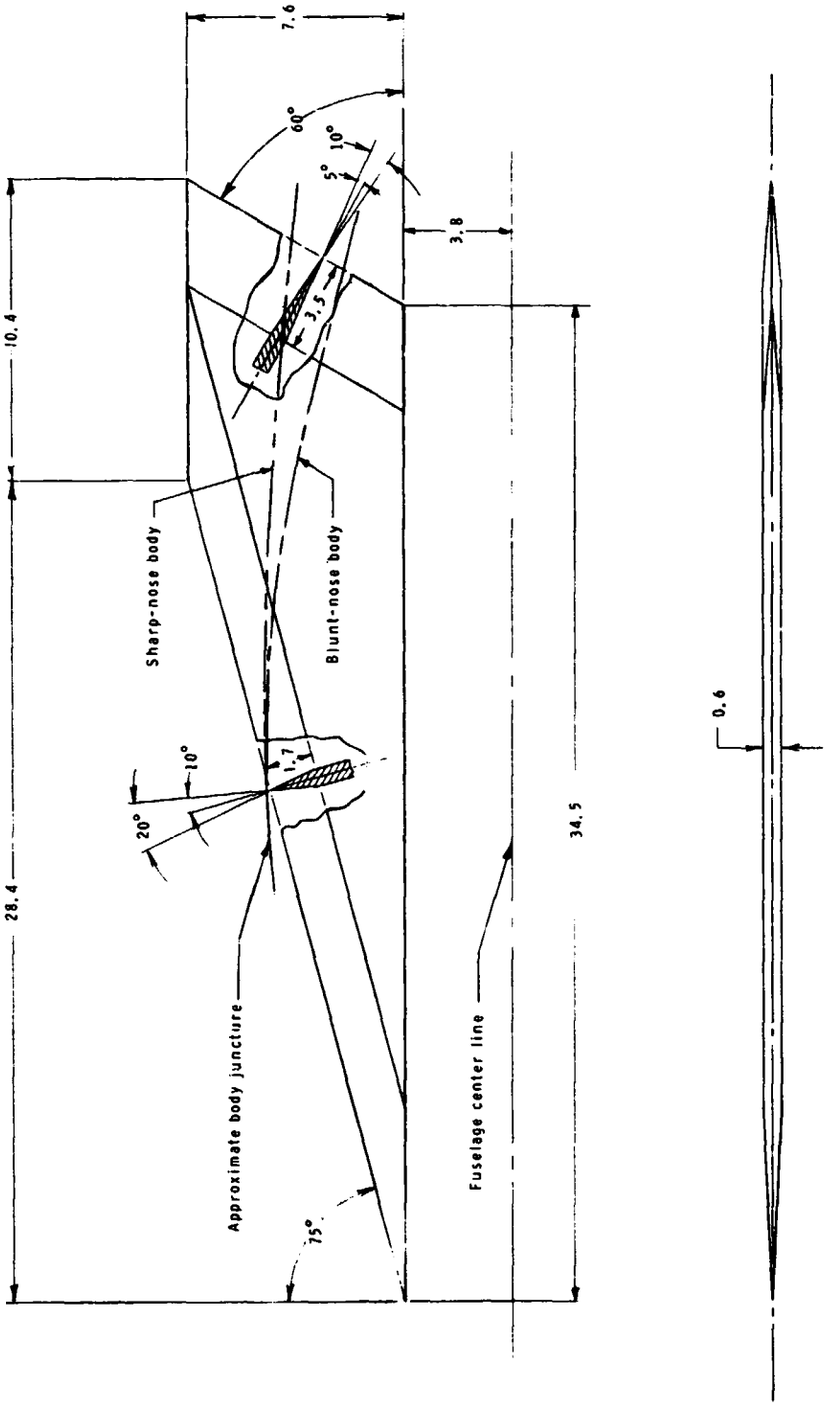
(a) Sharp-nose configuration.

Figure 1.- Model details. All dimensions are in centimeters unless otherwise noted.



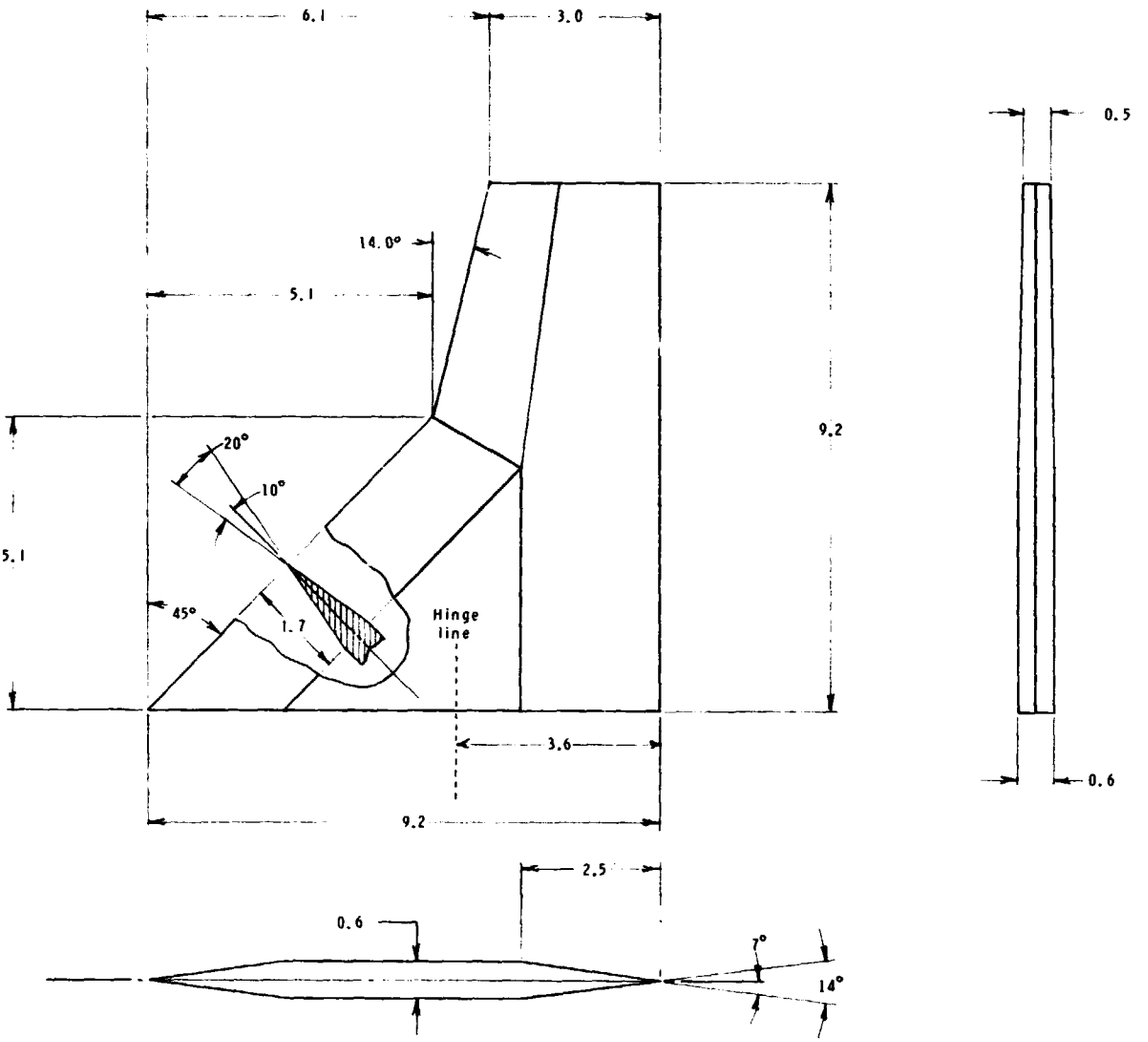
(b) Blunt-nose configuration.

Figure 1.- Continued.



(c) Wing details.

Figure 1.- Continued.



(d) Tail details.

Figure 1.- Concluded.

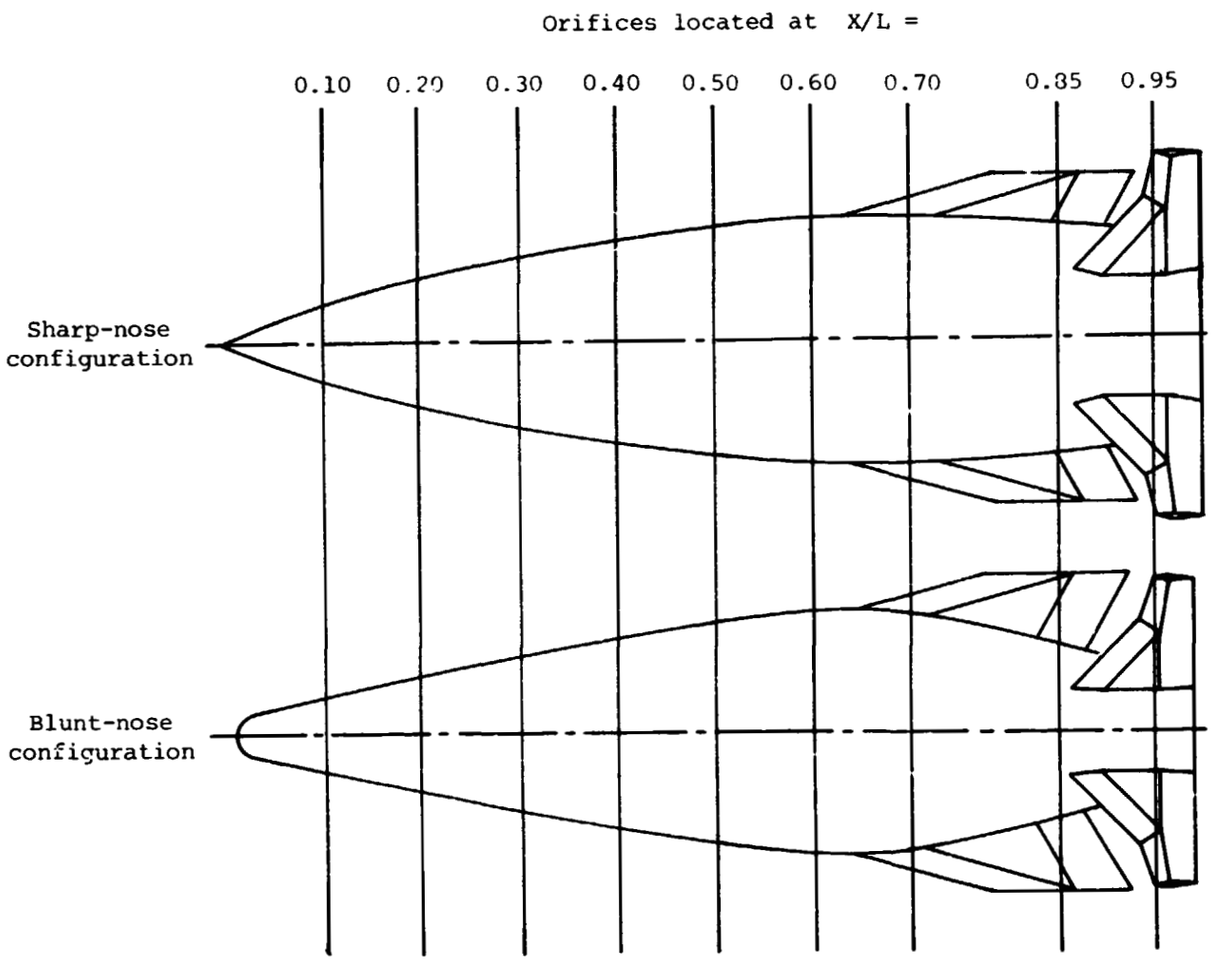
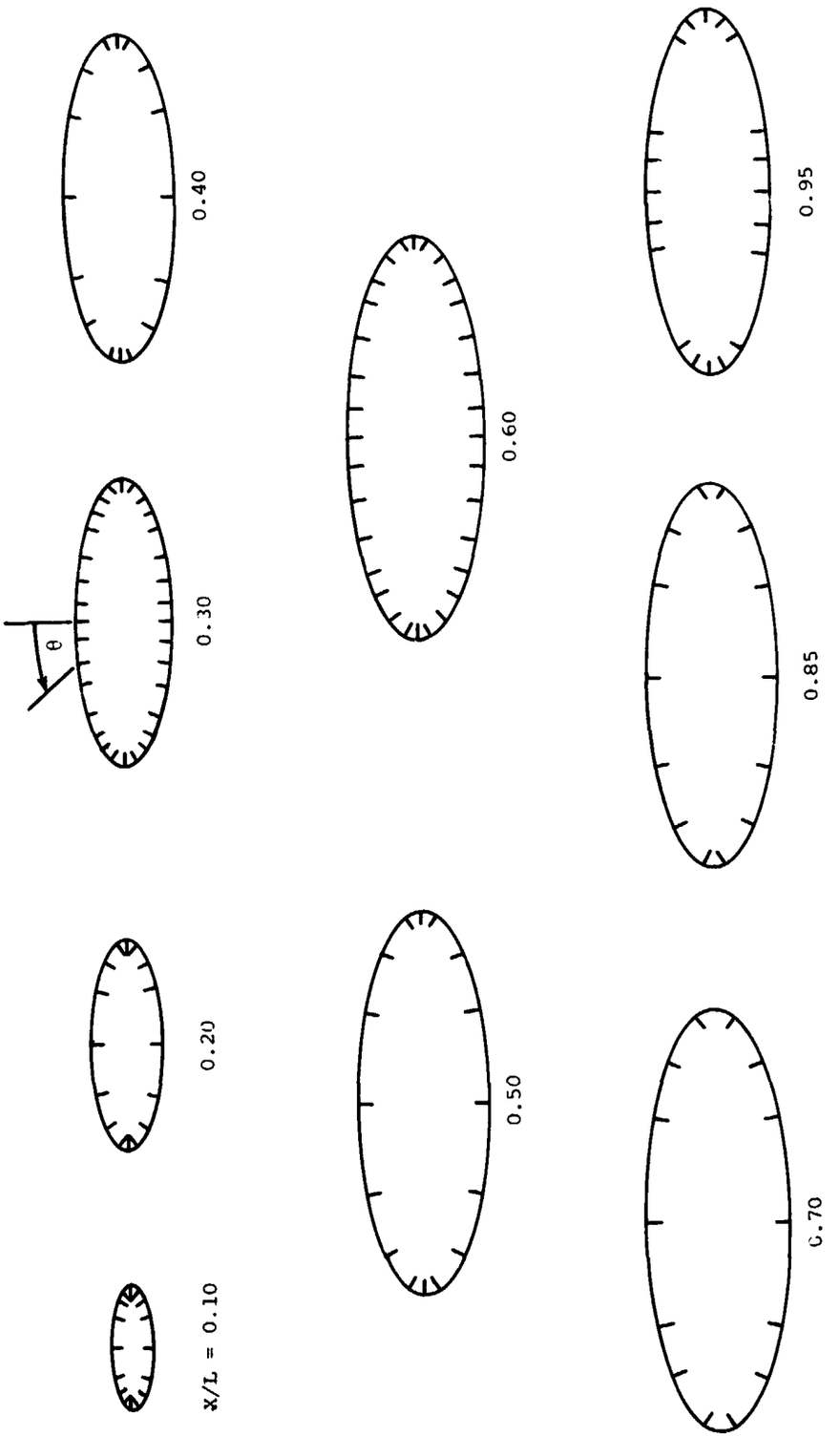
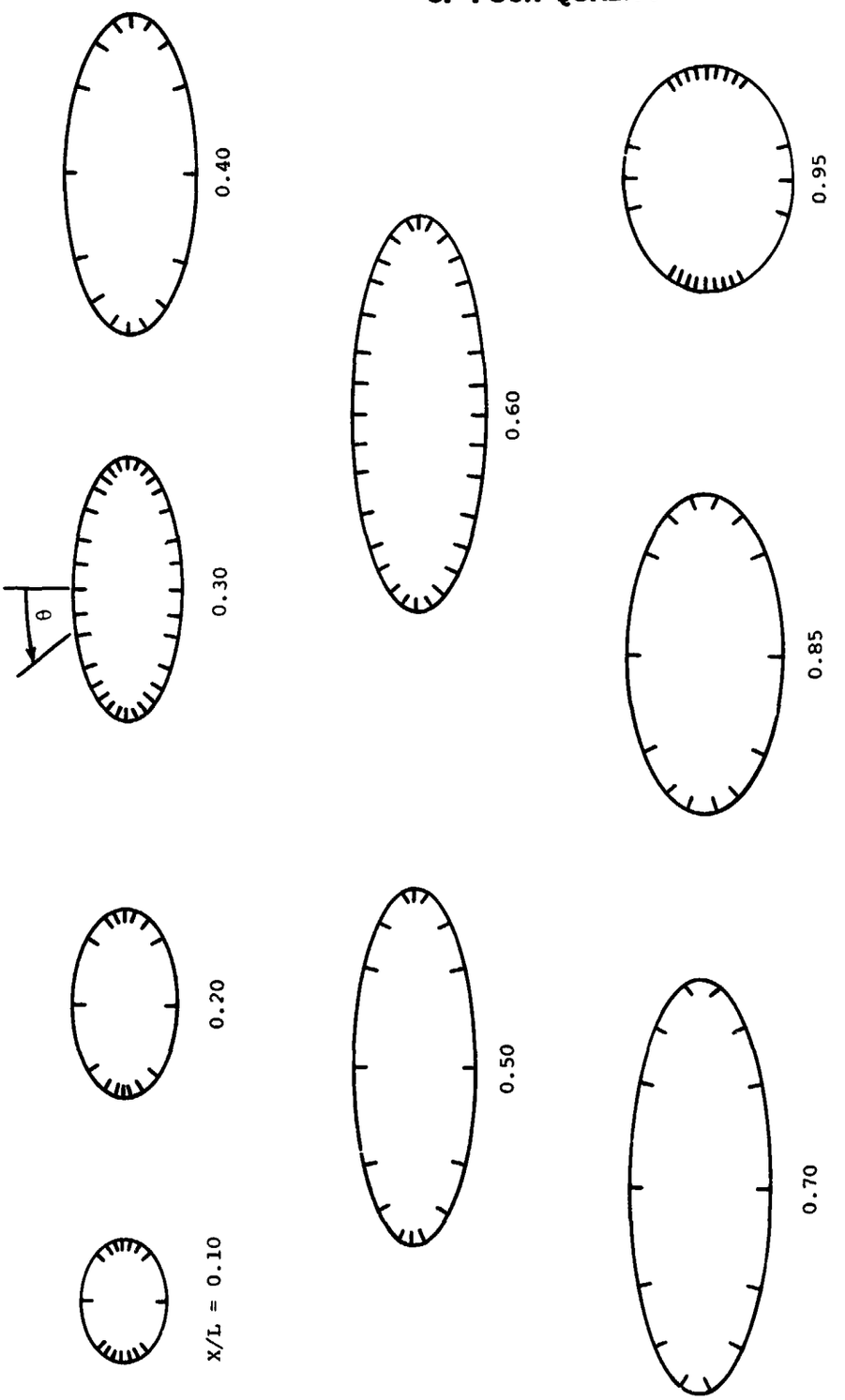


Figure 2.- Longitudinal locations of pressure orifices.



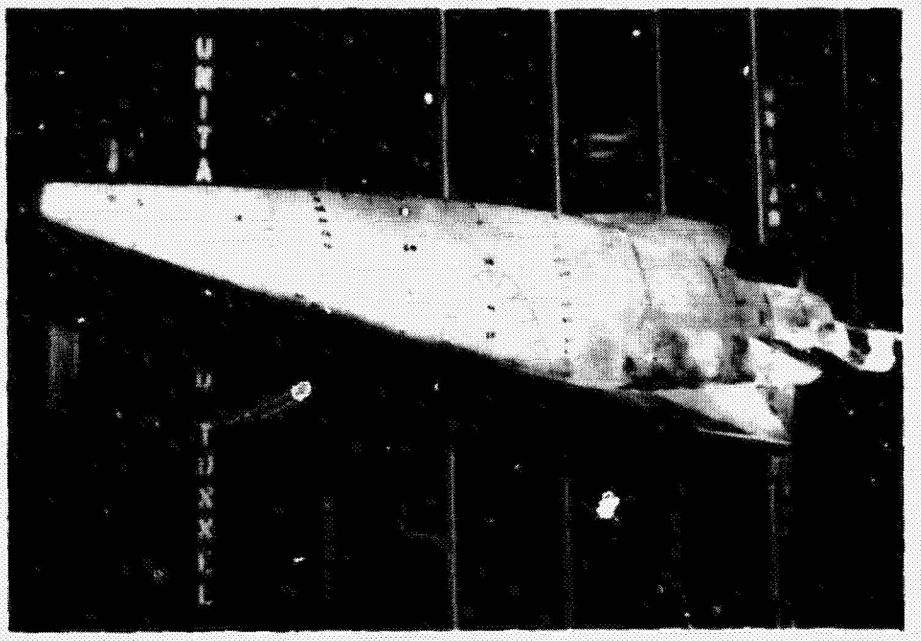
(a) Sharp-nose body.

Figure 3.- Circumferential location of pressure orifices, looking upstream.

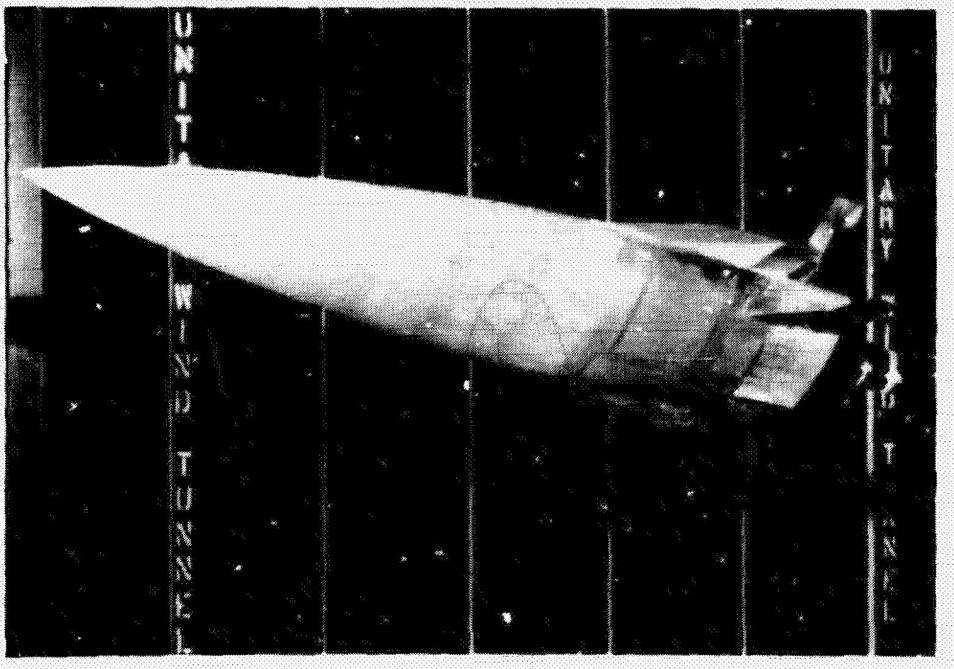


(b) Blunt-nose body.

Figure 3.- Concluded.



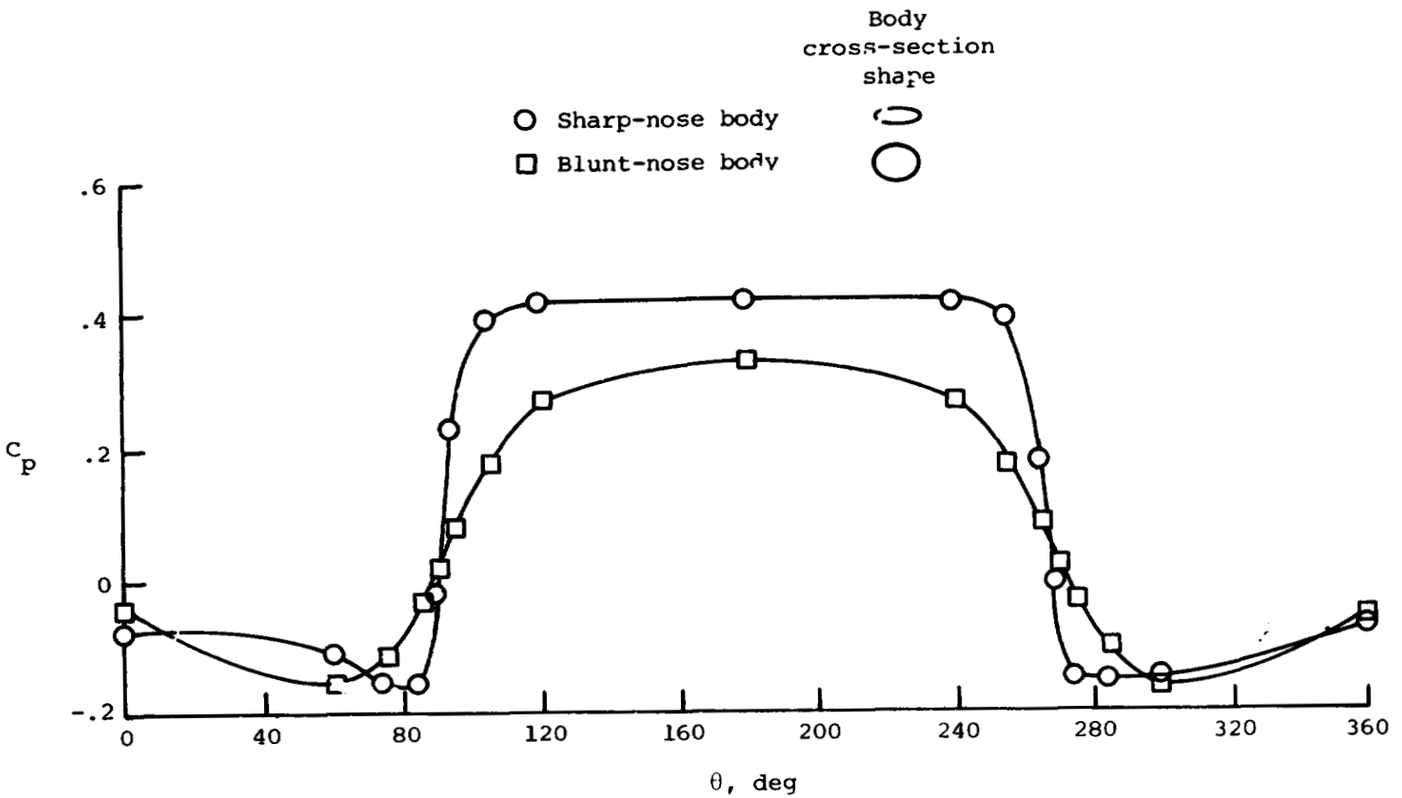
BLUNT-NOSE CONFIGURATION



SHARP-NOSE CONFIGURATION

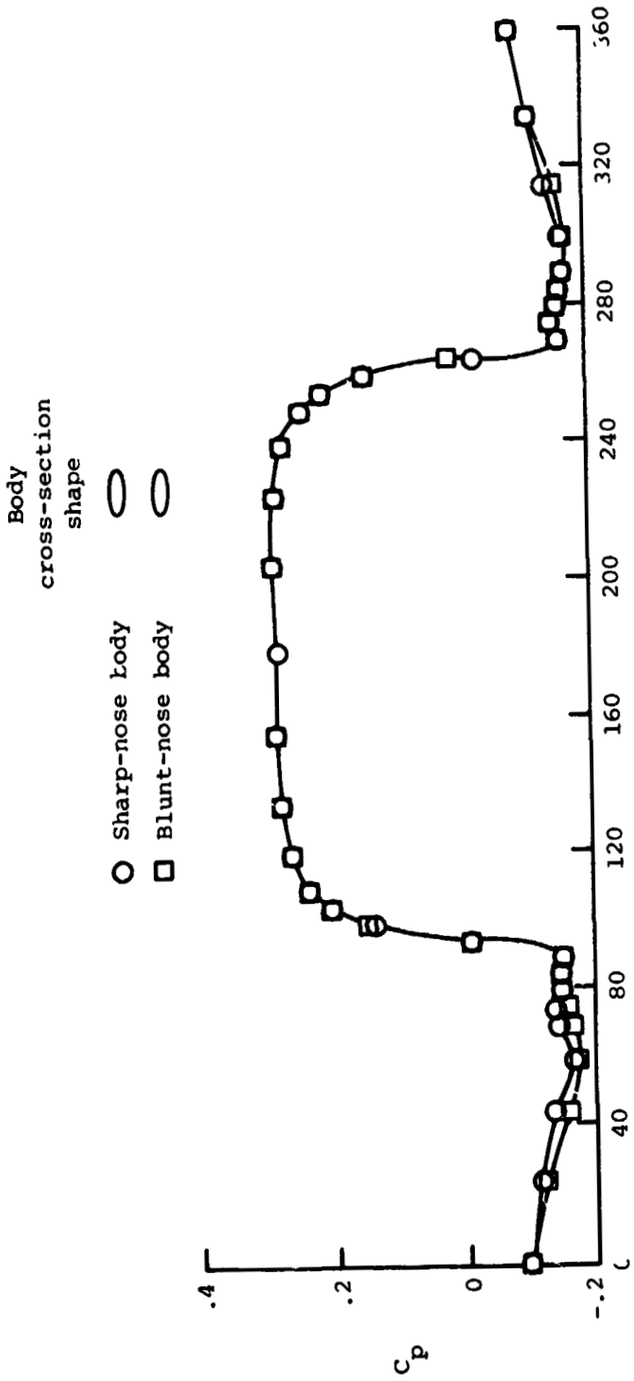
L-83-3375

Figure 4.- Model photographs.



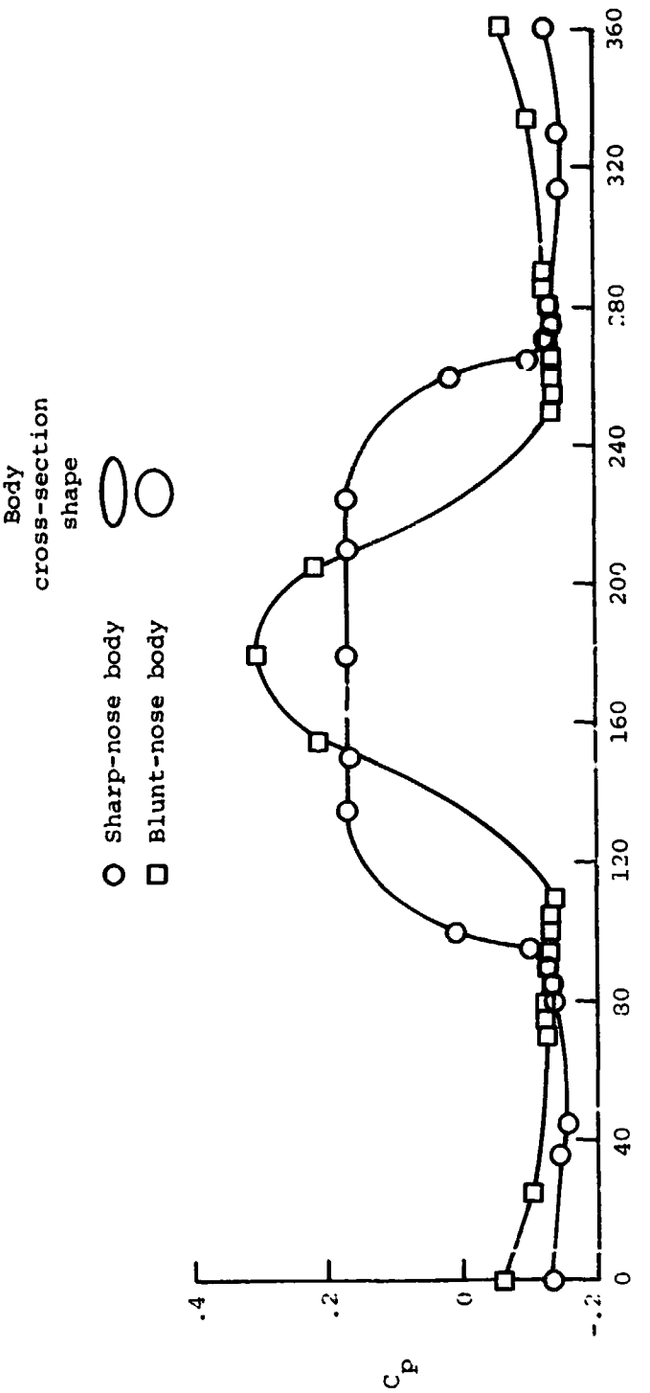
(a) X/L = 0.10.

Figure 5.- Effect of body shape on body-alone pressure distributions.
$\alpha = 20°$; $\phi = 0°$.



(b) X/L = 0.60.

Figure 5.- Continued.



(c) X/L = 0.95.

Figure 5.- Concluded.

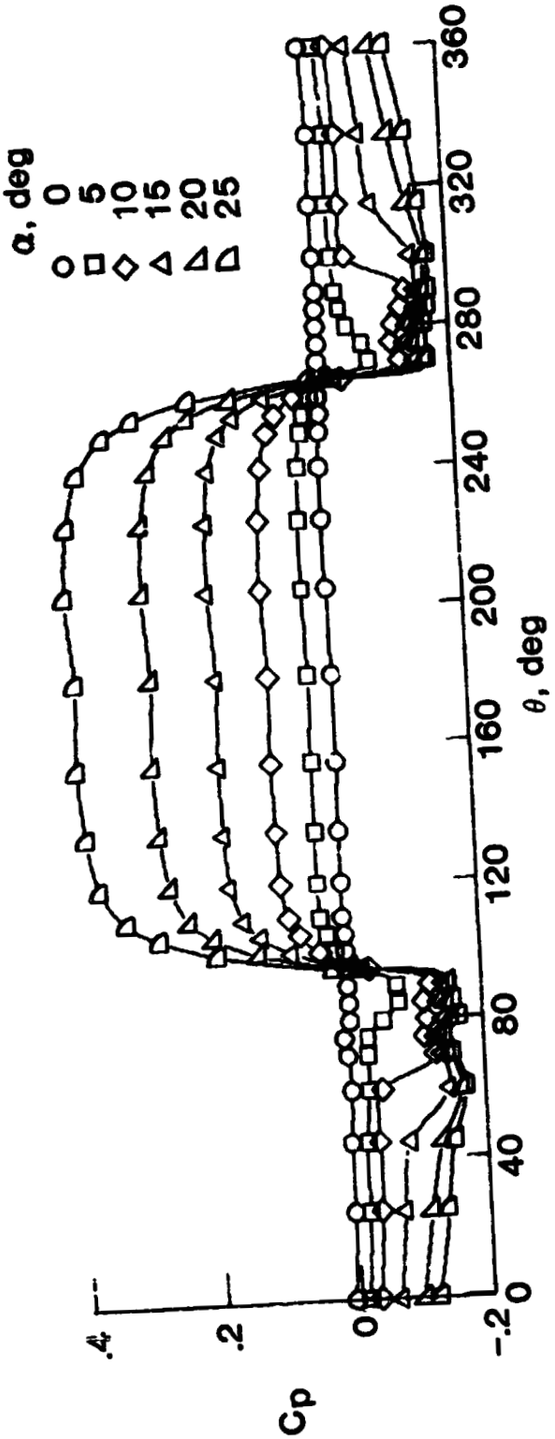


Figure 6.- Effect of angle of attack on body-alone pressure distributions. Sharp-nose body; $\phi = 0°$; X/L = 0.60.

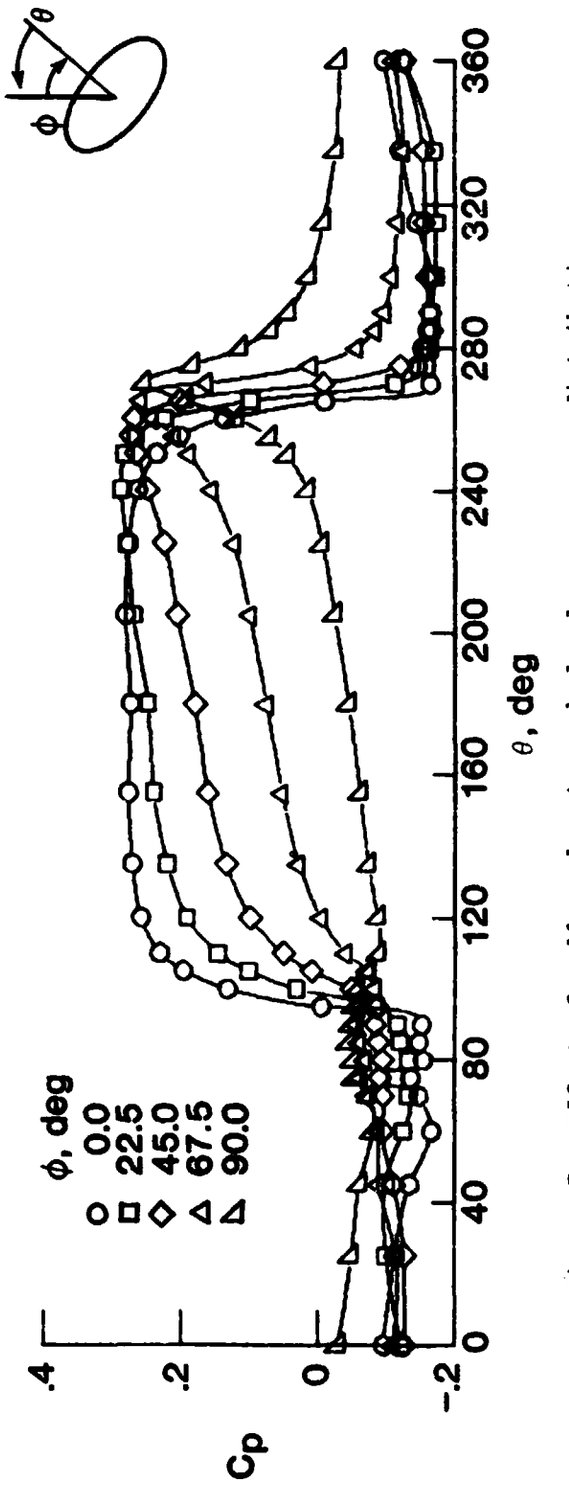


Figure 7.- Effect of roll angle ϕ on body-alone pressure distributions. Sharp-nose model; α = 20°; X/L = 0.60.

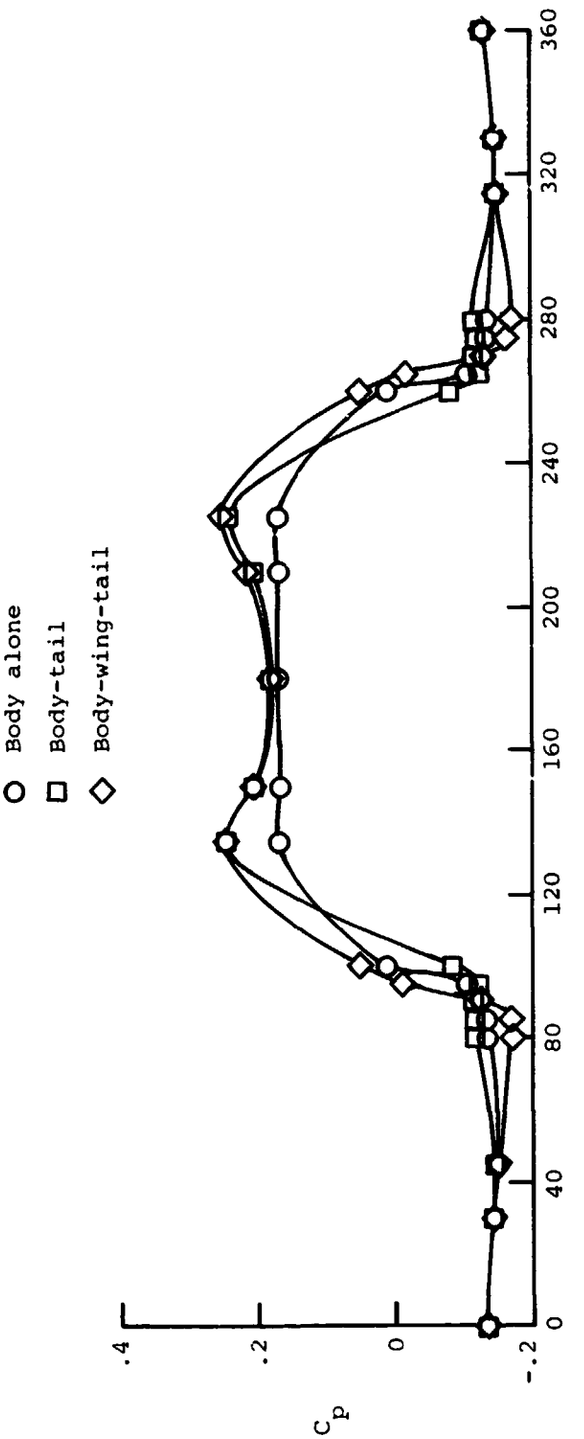


Figure 8.- Effect of fins on pressure distributions. Sharp-nose model; no fin deflections; $\alpha = 20°$; $\phi = 0°$; $X/L = 0.95$.

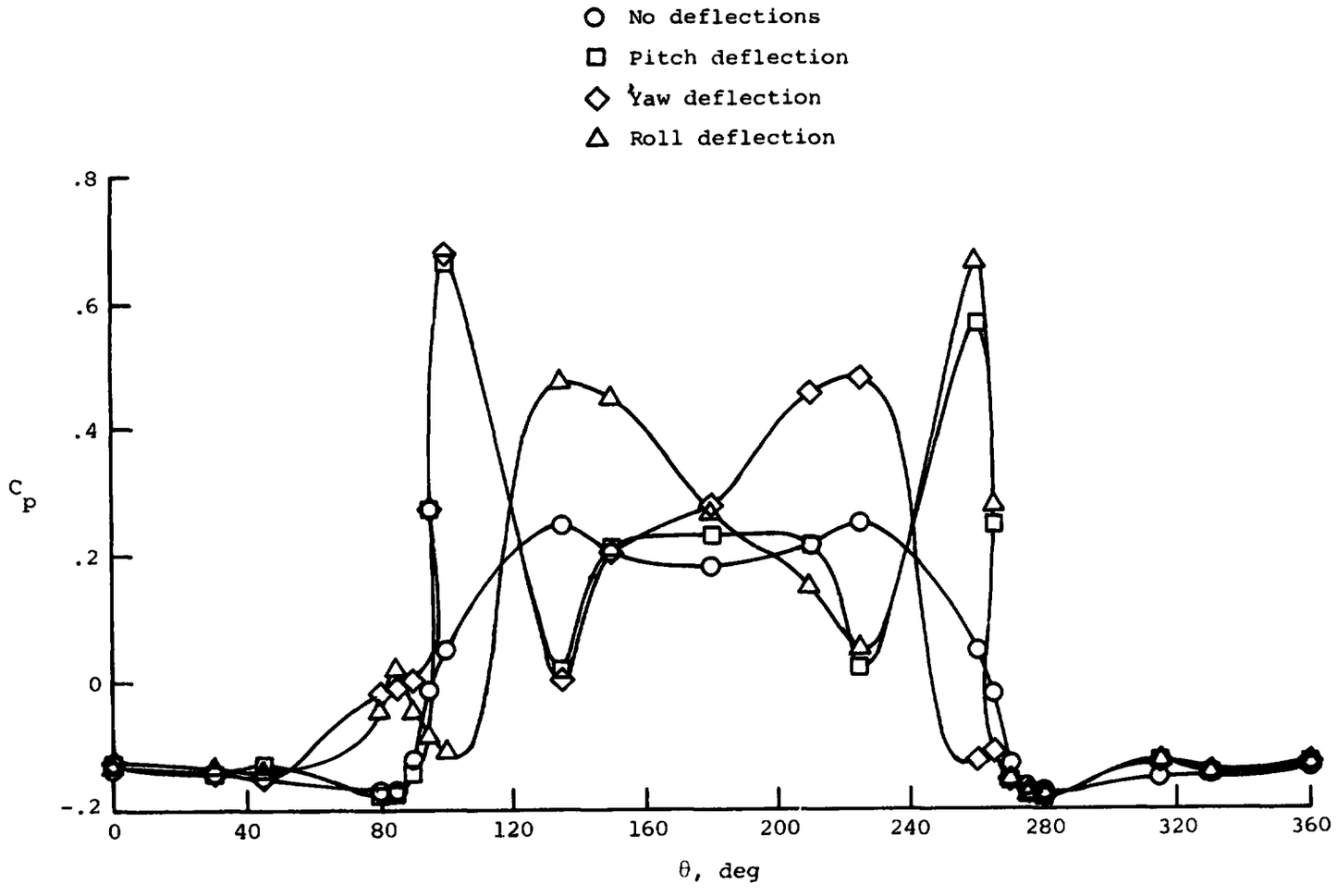


Figure 9.- Effect of tail-fin deflections on body-wing-tail configuration pressure distributions. Sharp-nose model; $\alpha = 20°$; $\phi = 0°$; X/L = 0.95.