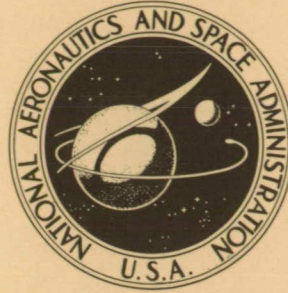


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EFFECT OF CANARD LOCATION AND SIZE
ON CANARD-WING INTERFERENCE AND
AERODYNAMIC-CENTER SHIFT RELATED TO
MANEUVERING AIRCRAFT AT TRANSONIC SPEEDS

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SUMMARY

A generalized wind-tunnel model, typical of highly maneuverable aircraft, was tested in the Langley 8-foot transonic pressure tunnel at Mach numbers from 0.70 to 1.20 to determine the effects of canard location and size on canard-wing interference effects and aerodynamic-center shift at transonic speeds. The canards had exposed areas of 16.0 and 28.0 percent of the wing reference area and were located in the chord plane of the wing or in a position 18.5 percent of the wing mean geometric chord above or below the wing chord plane. Two different wing planforms were tested, one with leading-edge sweep of 60° and the other 44° ; both wings had the same reference area and span.

The results indicated that the largest benefits in lift and drag were obtained with the canard above the wing chord plane for both wings tested. The low canard configuration for the 60° swept wing proved to be more stable and produced a more linear pitching-moment curve than the high and coplanar canard configurations for the subsonic test Mach numbers.

In general, the canard downwash reduced the lift on the wing and was found to be essentially independent of Mach number for the 60° swept wing. There was a favorable effect of the upwash from the wing on the canard lift for the subsonic Mach numbers except for the canard below the wing chord plane (60° swept wing) where the wing upwash had no effect on the canard lift at a Mach number of 0.70 and adversely affected the canard lift at Mach numbers of 0.90 and 0.95.

In the transonic Mach number range, the aerodynamic-center shift with Mach number for the 60° swept-wing configuration with canard on was considerably less than that for the 44° swept-wing configuration with canard on.

INTRODUCTION

Past investigations (refs. 1 to 8) have indicated that the use of a canard surface on maneuvering aircraft configurations can offer several attractive features such as

potentially higher trimmed-lift capability (refs. 1 and 2) and reduced trimmed drag (refs. 3 and 4), the potential for an improved longitudinal progression of cross-sectional area for practical configurations which could result in reduced wave drag at low supersonic speeds, and placement of the horizontal control surfaces out of the high wing downwash and jet exhaust.

In view of these potential benefits in maneuvering aircraft technology offered by canard configurations, the National Aeronautics and Space Administration is conducting a study on canard-wing interference. A generalized wind-tunnel model incorporating two balances to allow separation of the canard contribution from the total forces and moments is being used in the study.

The present investigation was conducted in the Langley 8-foot transonic pressure tunnel to determine the effect of canard location and size on canard-wing interference effects and aerodynamic-center shift at transonic speeds. The tests were made at Mach numbers from 0.70 to 1.20 for Reynolds numbers, based on mean geometric chord, of 1.35×10^6 to 1.61×10^6 and at angles of attack from approximately -4° to 20° at 0° sideslip.

SYMBOLS

The International System of Units (SI), with the U.S. Customary Units presented in parentheses, is used for the physical quantities in this paper. Measurements and calculations were made in U.S. Customary Units. The longitudinal data presented in this report are referred to the stability-axis system with the exception of axial force and normal force which are referred to the body-axis system.

A	aspect ratio
b	wing span
\bar{c}	wing mean geometric chord
C_D	drag coefficient, $\frac{\text{Drag}}{qS}$
C_L	lift coefficient, $\frac{\text{Lift}}{qS}$
C_m	pitching-moment coefficient, $\frac{\text{Pitching moment}}{qS\bar{c}}$
M	free-stream Mach number

q	free-stream dynamic pressure
S	reference area of wing with leading and trailing edges extended to plane of symmetry
S_c	exposed canard area
z	vertical coordinate (positive up)
α	angle of attack, deg
Λ	leading-edge sweep angle, deg

Subscripts:

C	canard balance
M	main balance
p	potential
v	vortex

DESCRIPTION OF MODEL

A three-view drawing of the general research model is presented in figure 1. This model was designed so that various wing and canard planforms could be attached to the common fuselage and the positional relationship of the lifting surfaces (canards and wings) could also be varied. Figure 2 presents a photograph of the four different planform configurations studied in the present investigation. Figure 3 presents a photograph of the model showing the fuselage fairings used to accommodate the high canard configuration. Table I presents the pertinent geometric parameters associated with this model.

Two different untwisted wing planforms were used (wing I had $\Lambda = 60^\circ$, wing II had $\Lambda = 44^\circ$); however, both wings had the same area, mean geometric chord, uncambered circular-arc airfoil sections, and maximum thickness which varied linearly from 6 percent of the chord at the root to 4 percent of the chord at the tip. The two wings were located longitudinally so that the distance between quarter-chord points of the mean geometric chords of the canard and wing was the same for each configuration.

Canard I had a leading-edge sweep angle of 51.7° and an exposed area S_c of 16.0 percent of the wing reference area S . Canard II had the same leading-edge sweep and an exposed area of 28.0 percent of the wing reference area. The large canard was tested in the chord plane of the wing ($z/\bar{c} = 0.0$) and in positions 18.5 percent of the wing geometric chord above and below the wing chord plane ($z/\bar{c} = 0.185$ and -0.185 , respectively). The small canard was tested in the high position and the chord-plane position. To obtain the configuration for canard II in the low position ($z/\bar{c} = -0.185$), the model with canard II in the high position ($z/\bar{c} = 0.185$) was rotated 180° . As can be seen from figure 3, there are two fuselage configurations: one with body fairings on the top side for the canards in the mid and high positions ($z/\bar{c} = 0.0$ and 0.185) and one with the body fairings on the bottom for the canard in the low position ($z/\bar{c} = -0.185$). The canard was untwisted and had uncambered circular-arc airfoil sections. The thickness varied linearly from 6 percent of the chord at the root to 4 percent at the tip.

The moment reference point was taken to be at fuselage station 59.14 cm (23.29 in.). (See fig. 1.)

APPARATUS, TESTS, AND CORRECTIONS

This investigation was conducted in the Langley 8-foot transonic pressure tunnel which is a continuous-flow facility (ref. 9). Forces and moments were measured by two internally mounted, six-component strain-gage balances; the relative locations of these balances are shown in figure 1. There was a small unsealed gap between segments of the fuselage in order to prevent fouling. One balance measured the loads on the forward part of the body (shaded in fig. 1) and is called the canard balance. The second balance, which was housed in the aft section of the model, measured the total loads and is referred to as the main balance.

Tests were made at Mach numbers of 0.70, 0.90, 0.95, 1.03, and 1.20 corresponding to Reynolds numbers, based on wing mean geometric chord, of 1.35×10^6 , 1.52×10^6 , 1.54×10^6 , 1.58×10^6 , and 1.61×10^6 , respectively. Because flow separation is induced at the sharp leading edges of the canard and wing, the Reynolds number effect should be minimal. Tests were made at angles of attack from approximately -4° to 20° at 0° sideslip. Angles of attack have been corrected for the effects of main balance and sting deflection due to aerodynamic load. All axial-force measurements obtained on the main balance were corrected to a condition of free-stream static pressure acting on the base of the model. All tests were made with boundary-layer transition fixed on the model by means of a narrow strip of carborundum grit placed on the body, wings, and canards, using the methods outlined in reference 10.

PRESENTATION OF RESULTS

Table II defines the configurations and the results for each configuration are presented in table III. In addition to the tabulated data, the longitudinal data are presented in plotted form. An outline of the contents of these data plots is as follows:

	Figure
Effect of canard height on longitudinal aerodynamic characteristics for model with -	
Wing I, canard I	4
Wing I, canard II	5
Wing II, canard I	6
Wing II, canard II	7
Effect of fuselage configurations	8
Effect of canard height on canard-wing interference for model with -	
Wing I, canard I	9
Wing I, canard II	10 and 11
Wing II, canard I	12
Wing II, canard II	13
Comparison of theoretical and experimental lift characteristics for model with -	
Wing I, canard II, $z/\bar{c} = 0.0$	14
Wing I, canard II, $z/\bar{c} = 0.185$	15
Wing I, canard II, $z/\bar{c} = -0.185$	16
Wing II, canard II, $z/\bar{c} = 0.0$	17
Wing II, canard II, $z/\bar{c} = 0.185$	18
Variations of aerodynamic-center location with Mach number	19 and 20

RESULTS AND DISCUSSION

Effect of Canard Location on the Total Longitudinal Aerodynamic Characteristics

Wing I.- The effect of varying the canard location on the total longitudinal aerodynamic characteristics at Mach numbers from 0.70 to 1.20 is presented in figures 4 to 7 for the various canard-wing planforms tested. For the wing I configurations (figs. 4 and 5), the largest increases in lift due to adding the canard were obtained with the canard above the wing chord plane ($z/\bar{c} = 0.185$). In figure 5, with the canard below the wing chord plane ($z/\bar{c} = -0.185$), the total lift of the configuration was equal to or less than the lift with the canard off at intermediate angles of attack ($\alpha \approx 8^\circ$ to 14°). How-

ever, at angles of attack above 14° where wing stall (based on nonlinearities in lift and pitching moment) was evident for the canard-off configuration, the canard did improve the total lift of the configuration. There is no indication of stall for the canard-on configurations throughout the test angle-of-attack range.

In general, there were only small differences in pitching moment for the configurations with the canard in the high and coplanar locations (figs. 4 and 5) except for Mach numbers of 0.70 to 0.95 above an angle of attack of 18° where significant differences occur in the pitching-moment curves. For Mach numbers of 0.70 to 0.95 the low canard configuration produced a more stable and more linear pitching moment than the high and coplanar configurations.

The lowest values of drag due to lift were obtained with the high canard configuration, as would be expected. Since this was a symmetrical wing with a sharp leading edge and thus no leading-edge suction is developed, the drag is dependent on the lift and angle of attack. (See ref. 11.) Thus, the configuration with the highest lift at a given angle of attack would produce the lowest drag due to lift.

Wing II.- It should be noted that the canard in the low position ($z/\bar{c} = -0.185$) was not studied with wing II; however, it is believed that the trends found for the low canard with wing I will be true for wing II also. The effect of canard height on lift for the wing II configuration (figs. 6 and 7) was not as pronounced as for the wing I configuration. At Mach numbers below 1.0 the lift curves for the configuration with the canard above and in the wing chord plane were essentially the same; however, at Mach numbers greater than 1.0 the high canard configuration has a slightly higher lift-curve slope. In general, the effect of canard height on pitching moment was small for the wing II configurations at angles of attack less than 10° at subsonic Mach numbers and throughout the angle-of-attack range at the supersonic Mach numbers. In the angle-of-attack range above 10° at subsonic Mach numbers, the pitching-moment curves for the high canard ($z/\bar{c} = 0.185$) and the mid canard ($z/\bar{c} = 0.0$) were significantly different from each other. The same effects on drag noted for the wing I configurations were obtained for the wing II configurations.

Fuselage effects.- In view of the differences in pitching moment between the high and low canard configurations (fig. 5), tests were made to determine the effects of fuselage cross section on the longitudinal aerodynamic characteristics of these two configurations. The low canard configuration, as mentioned previously, was obtained by rotating the high canard configuration 180° . Therefore, the fairings in the vicinity of the canard (fig. 3) produced a different fuselage cross section for the upright and the inverted case (high and low canard configurations). A comparison of the lift and pitching moment for the fuselage alone, upright and inverted, is presented in figure 8. Based on these data,

it is concluded that no significant fuselage-shape effects are present in the data of figure 5. This does not mean that the different fuselage cross sections did not induce different flow fields in the vicinity of the canard which could in turn account for some of the difference in pitching moment between the various canard heights.

Effect of Canard Location on Canard-Wing Interference

In order to better understand the effect of canard height on the total lift ($C_{L,M}$), the lift on the canard-forebody ($C_{L,C}$) and the lift on the wing-afterbody ($C_{L,M} - C_{L,C}$) have been plotted separately in figures 9 to 13. The lift on the total configuration is also shown for reference. In general, there is a favorable effect of the upwash from the wing on the canard lift at angles of attack greater than about 8° at the subsonic Mach numbers for the canard in the high and mid positions (see figs. 9, 10, 12, and 13). When the canard is in the low position (see fig. 11) there is essentially no lift interference of the wing on the canard at a Mach number of 0.70 but there is an adverse wing-on-canard lift interference at a Mach number of 0.90 that becomes larger as the Mach number is increased to 0.95. The interference effects of the wing on the canard diminish as the supersonic Mach numbers are reached; at a Mach number of 1.20 there is no interference of the wing on the canard.

Figures 9 to 13 indicate that the canard downwash on the wing reduces the lift on the wing (ref. 8). A larger loss in lift due to the canard is noted for wing I than for wing II (compare figs. 9, 10, and 11 with 12 and 13). This difference may be in part due to the different locations of wing I and wing II leading edges in relation to the canard trailing edges. There is very little effect of Mach number on this interference effect for wing I, whereas the interference effect is more pronounced for wing II as Mach number is increased.

Comparison of Experimental and Theoretical Lift Characteristics

A comparison of the experimental lift with theory is presented in figures 14 to 18 for the wing alone, for the wing in the presence of the canard, and for the canard alone. The lift curves for the potential case ($C_{L,p}$) were predicted by using the vortex-lattice program of reference 12, and the vortex-lift cases ($C_{L,v+p}$) were predicted by the method of reference 13.

For all subsonic Mach numbers ($M = 0.70, 0.90, \text{ and } 0.95$) the vortex-lift theory gives reasonably good agreement for the wing-body with canard off up to an angle of attack of about 12° for wing I (fig. 14) which closely corresponds to the angle of attack for vortex breakdown on a 60° swept delta wing (ref. 14). For the wing in proximity to the canard, the vortex-lift theory gives fair agreement over the angle-of-attack range for

the canard above and below the wing chord plane ($z/\bar{c} = 0.185$ and -0.185) but overpredicts the interference effect of the canard on the wing for the canard in the mid position ($z/\bar{c} = 0.0$); therefore, the lift on the wing-body in the presence of the canard is under-predicted. The effect of Mach number changes this disagreement only slightly. (See fig. 14.)

In the case of the lift on the canard body, both theories overpredict the lift of the canard alone and the canard in the presence of the wing for all three canard positions. These effects are assumed to be associated with the fuselage interference effects. As is seen in figure 14, the potential theory gives a reasonably good prediction of the lift increment due to the wing upwash up to an angle of attack of about 15° for the canard in the chord plane of the wing ($z/\bar{c} = 0.0$).

The calculated and experimental lift for the wing II configuration is presented in figures 17 and 18. Calculations of both potential and vortex lift are shown although at the sweep angle of wing II ($\Lambda = 44^\circ$) the development of vortex lift would not be expected on the wing-body (ref. 14). It is interesting to note, however, that for wing II in the presence of the canard the calculated lift curve for the full vortex lift on the wing-body agrees well with the experiment for the canard above the plane of the wing ($z/\bar{c} = 0.185$) throughout the angle-of-attack range (fig. 18) and that the theory, as for wing I, under-predicts the experimental lift on the wing-body for the canard located in the wing chord plane ($z/\bar{c} = 0.0$) (fig. 17).

A satisfactory explanation of the effect of the canard on the wing-body lift, for both wing I and wing II, has not been shown in this paper and may be due to some phenomenon other than the development of a full leading-edge vortex throughout the angle-of-attack range.

Stability-Level Variations

The effect of configuration and Mach number on the variation of $(\partial C_m / \partial C_L)_{C_L=0}$ is presented in figures 19 and 20. (The supersonic data for a Mach number above 1.60 were obtained from ref. 4.) For this comparison the stability level of the wing I configuration has been adjusted by adding 0.121 so that the wing I and wing II configurations have the same stability level with the canard off at $M = 0.70$. The typical effect of sweep angle is shown for the canard-off configuration in that the high-sweep wing (wing I) has less aerodynamic-center shift with Mach number than the low-sweep wing (wing II). Adding the canard had a larger effect on the stability level for the wing I configuration than for the wing II configuration. In the transonic Mach number range the aerodynamic-center shift with Mach number for the wing I, canard-on configurations (fig. 20) is considerably less than that for the wing II configuration. A satisfactory explanation of the

rearward shift in aerodynamic center around a Mach number of 0.95 is not available at this time. However, as indicated in figure 20, it occurs for all canard configurations tested with wing I.

The effect of canard height on the variations of $(\partial C_m / \partial C_L)_{C_L=0}$ with Mach number is shown in figure 20. Although the high canard has a greater contribution to lift than the mid and low canards, it does not cause the largest stability-level change, but rather the mid canard does. Further investigations are needed to determine the cause of this effect.

SUMMARY OF RESULTS

A generalized wind-tunnel model, typical of highly maneuverable aircraft, was tested in the Langley 8-foot transonic pressure tunnel at Mach numbers from 0.70 to 1.20 to determine the effects of canard location and size on canard-wing interference effects and aerodynamic-center shift at transonic speeds. The major results of this investigation may be summarized as follows:

1. The largest benefits in lift and drag due to adding the canard were obtained with the canard above the wing chord plane for the two wing planforms tested (wing leading-edge sweep angles of 60° and 44°), although the effect was not as pronounced for the 44° swept wing as for the 60° swept wing.

2. The low canard configuration for the 60° swept wing was more stable and produced a more linear pitching-moment curve than the high and coplanar canard configurations for the Mach number range of 0.70 to 0.95.

3. In general, there is a favorable effect of the upwash from the wing on the canard lift at angles of attack greater than about 8° at the subsonic Mach numbers for the canard in the high and mid positions. When the canard is in the low position, there is essentially no lift interference of the wing on the canard at a Mach number of 0.70, but there is an adverse wing-on-canard lift interference for Mach numbers of 0.90 and 0.95.

4. In general, the canard downwash on the wing reduced the lift on the wing and was essentially independent of Mach number for the 60° swept wing, whereas this interference effect was more pronounced for the 44° swept wing as the Mach number increased.

5. In the transonic Mach number range, the aerodynamic-center shift with Mach number for the 60° swept-wing configuration with canard on was considerably less than that for the 44° swept-wing configuration with the canard on.

Langley Research Center,
National Aeronautics and Space Administration,
Hampton, Va., March 15, 1974.

REFERENCES

1. Behrbohm, Hermann: Basic Low Speed Aerodynamics of the Short-Coupled Canard Configuration of Small Aspect Ratio. SAAB TN 60, Saab Aircraft Co. (Linköping, Sweden), July 1965.
2. Lacey, David W.; and Chorney, Stephen J.: Subsonic Aerodynamic Characteristics of Close-Coupled Canards With Varying Area and Position Relative to a 50° Swept Wing. Tech. Note AL-199, Naval Ship Res. & Develop. Center, Mar. 1971. (Available from DDC as AD 882 702L.)
3. McKinney, Linwood W.; and Dollyhigh, Samuel M.: Some Trim Drag Considerations for Maneuvering Aircraft. J. Aircraft, vol. 8, no. 8, Aug. 1971, pp. 623-629.
4. Dollyhigh, Samuel M.: Static Longitudinal Aerodynamic Characteristics of Close-Coupled Wing-Canard Configurations at Mach Numbers From 1.60 to 2.86. NASA TN D-6597, 1971.
5. Ottensoser, Jonah: Wind Tunnel Data on the Transonic Aerodynamic Characteristics of Close Coupled Canards With Varying Planform, Position and Deflection Relative to a 50° Swept Wing. Test Rep. AL-88, Naval Ship Res. & Develop. Center, May 1972.
6. Krouse, John R.: Effects of Canard Planform on the Subsonic Aerodynamic Characteristics of a 25° and a 50° Swept-Wing Research Aircraft Model. Evaluation Rep. AL-91, Naval Ship Res. & Develop. Center, May 1972.
7. Lacey, David W.: Transonic Characteristics of Close-Coupled Canard and Horizontal Tail Installed on a 50 Degree Sweep Research Aircraft Model. Evaluation Rep. AL-81, Naval Ship Res. & Develop. Center, Aug. 1972.
8. Gloss, Blair B.; and McKinney, Linwood W.: Canard-Wing Lift Interference Related to Maneuvering Aircraft at Subsonic Speeds. NASA TM X-2897, 1973.
9. Schaefer, William T., Jr.: Characteristics of Major Active Wind Tunnels at the Langley Research Center. NASA TM X-1130, 1965.
10. Braslow, Albert L.; Hicks, Raymond M.; and Harris, Roy V., Jr.: Use of Grit-Type Boundary-Layer-Transition Trips on Wind-Tunnel Models. NASA TN D-3579, 1966.
11. Polhamus, Edward C.: Application of the Leading-Edge-Suction Analogy of Vortex Lift to the Drag Due to Lift on Sharp-Edge Delta Wings. NASA TN D-4739, 1968.

12. Margason, Richard J.; and Lamar, John E.: Vortex-Lattice FORTRAN Program for Estimating Subsonic Aerodynamic Characteristics of Complex Planforms. NASA TN D-6142, 1971.
13. Polhamus, Edward C.: A Concept of the Vortex Lift of Sharp-Edge Delta Wings Based on a Leading-Edge-Suction Analogy. NASA TN D-3767, 1966.
14. Polhamus, Edward C.: Predictions of Vortex-Lift Characteristics by a Leading-Edge Suction Analogy. J. Aircraft, vol. 8, no. 4, Apr. 1971, pp. 193-199.

TABLE I.- GEOMETRIC CHARACTERISTICS

Body:

Length, cm (in.) 96.52 (38.000)

Wing (wings I and II except when specified):

A (b^2/S) 2.5

b/2, cm (in.) 25.4 (10.00)

Λ , deg, of -

Wing I 60

Wing II 44

\bar{c} , cm (in.) 23.31 (9.18)

Airfoil section Circular arc

S (area extended to plane of symmetry), cm^2 (in^2) 1032.2 (160.00)

Root chord, cm (in.) 29.80 (11.73)

Tip chord, cm (in.) 6.77 (2.67)

Maximum thickness, percent chord, at -

Root 6

Tip 4

Canard I

Canard II

Canard:

A (b^2/S_c) 4.73 4.12

Λ , deg 51.7 51.7

\bar{c} , cm (in.) 11.99 (4.72) 14.83 (5.84)

Airfoil section Circular arc Circular arc

S_c (exposed area), cm^2 (in^2) 165.16 (25.60) 288.73 (44.75)

b/2, cm (in.) 13.97 (5.50) 17.25 (6.79)

Root chord, cm (in.) 13.54 (5.33) 17.92 (7.05)

Tip chord, cm (in.) 2.71 (1.07) 3.59 (1.41)

Maximum thickness, percent chord, at -

Root 6 6

Tip 4 4

TABLE II.- TEST CONFIGURATIONS

Configuration	Wing	Canard	z/\bar{c}
1	I	Off	Body inverted
2	I	Off	Body upright
3	I	I	0.0
4	I	I	0.185
5	I	II	-0.185
6	I	II	0.0
7	I	II	0.185
8	II	Off	Body upright
9	II	I	0.0
10	II	I	0.185
11	II	II	0.0
12	II	II	0.185
13	Off	I	0.0
14	Off	I	0.185
15	Off	II	-0.185
16	Off	II	0.0
17	Off	II	0.185
18	Off	Off	Body upright
19	Off	Off	Body inverted

TABLE III. - TEST DATA

Symbols used in the tabulated data are defined as follows:

CONFIG.	configuration number (see table II)
MACH NO	Mach number
Q	free-stream dynamic pressure, lb/ft ² (1 lb/ft ² = 47.88 N/m ²)
BETA	angle of sideslip, deg
ALPHA	angle of attack, deg
CN	normal-force coefficient, main balance
CA	axial-force coefficient, main balance
CM	pitching-moment coefficient, main balance
CL	lift coefficient, main balance
CD	drag coefficient, main balance
L/D	lift-drag ratio, main balance
CLC	lift coefficient, canard balance
CMC	pitching-moment coefficient, canard balance
CNC	normal-force coefficient, canard balance

TABLE III.- Continued

MACH NO 1.200 CONFIG. 1											
Q	BETA	ALPHA	CN	CA	CM	CNC	CMC	CLC	CL	CD	L/D
440.24	0.00	-4.22	-.2401	.02817	.0907	-.0123	-.0220	-.0112	-.2374	.04576	-5.19
440.15	0.00	-2.12	-.1173	.03081	.0412	-.0069	-.0113	-.0064	-.1161	.03513	-3.30
440.30	0.00	-.01	-.0090	.03189	.0016	-.0017	-.0007	-.0017	-.0090	.03189	-.28
440.15	0.00	2.09	.0953	.03141	-.0363	.0036	.0100	.0031	.0940	.03485	2.70
440.30	0.00	4.19	.2139	.02904	-.0830	.0094	.0214	.0082	.2112	.04460	4.74
440.15	0.00	6.30	.3433	.02675	-.1364	.0149	.0328	.0132	.3383	.06427	5.26
440.41	0.00	8.42	.4656	.02544	-.1812	.0213	.0451	.0188	.4569	.09330	4.90
440.18	0.00	10.53	.5850	.02437	-.2225	.0290	.0588	.0256	.5707	.13088	4.36
440.34	0.00	12.65	.7020	.02318	-.2596	.0378	.0740	.0333	.6799	.17639	3.85
440.29	0.00	14.78	.8035	.02185	-.2830	.0488	.0917	.0428	.7713	.22616	3.41
440.31	0.00	16.89	.8852	.02022	-.2937	.0614	.1117	.0533	.8411	.27647	3.04
440.23	0.00	18.98	.9754	.01810	-.3207	.0756	.1341	.0660	.9165	.33440	2.74
440.23	0.00	20.13	1.0291	.01797	-.3343	.0842	.1477	.0742	.9600	.37110	2.59
440.10	0.00	-.00	-.0101	.03183	.0020	-.0015	-.0005	-.0015	-.0101	.03183	-.32

MACH NO 1.030 CONFIG. 1											
Q	BETA	ALPHA	CN	CA	CM	CNC	CMC	CLC	CL	CD	L/D
401.30	0.00	-4.20	-.2551	.02244	.0964	-.0117	-.0211	-.0109	-.2528	.04108	-6.15
401.16	0.00	-2.10	-.1248	.02564	.0442	-.0065	-.0108	-.0061	-.1238	.03020	-4.10
400.97	0.00	-.01	-.0112	.02714	.0041	-.0018	-.0008	-.0018	-.0112	.02714	-.41
401.19	0.00	2.09	.1008	.02690	-.0349	.0034	.0098	.0030	.0997	.03055	3.26
400.93	0.00	4.20	.2325	.02248	-.0874	.0087	.0207	.0079	.2302	.03947	5.83
400.95	0.00	6.32	.3712	.02015	-.1417	.0143	.0320	.0131	.3667	.06086	6.03
400.82	0.00	8.42	.5058	.01850	-.1891	.0203	.0437	.0185	.4977	.09241	5.39
400.82	0.00	10.54	.6395	.01779	-.2380	.0266	.0559	.0244	.6255	.13446	4.65
400.99	0.00	12.65	.7604	.01690	-.2769	.0332	.0690	.0310	.7383	.18304	4.03
400.60	0.00	14.78	.8685	.01614	-.3004	.0400	.0833	.0389	.8356	.23717	3.52
400.93	0.00	16.88	.9705	.01389	-.3248	.0473	.0981	.0471	.9247	.29511	3.13
400.77	0.00	19.00	1.0672	.01161	-.3468	.0575	.1158	.0570	1.0053	.35836	2.81
400.99	0.00	20.10	1.1200	.01118	-.3586	.0637	.1259	.0626	1.0479	.39547	2.65
401.09	0.00	-.01	-.0120	.02672	.0046	-.0016	-.0006	-.0016	-.0120	.02672	-.45

MACH NO .950 CONFIG. 1											
Q	BETA	ALPHA	CN	CA	CM	CNC	CMC	CLC	CL	CD	L/D
374.12	0.00	-4.21	-.2690	.01201	.0993	-.0105	-.0192	-.0105	-.2673	.03174	-8.42
374.01	0.00	-2.11	-.1343	.01398	.0472	-.0059	-.0098	-.0059	-.1336	.01892	-7.06
374.01	0.00	-.00	-.0151	.01543	.0069	-.0018	-.0006	-.0018	-.0151	.01543	-.98
373.94	0.00	2.09	.1012	.01440	-.0316	.0025	.0088	.0025	.1006	.01808	5.56
373.84	0.00	4.19	.2389	.01207	-.0851	.0074	.0188	.0074	.2374	.02952	8.04
373.96	0.00	6.30	.3850	.01078	-.1422	.0121	.0286	.0121	.3815	.05299	7.20
374.39	0.00	8.42	.5210	.01038	-.1894	.0172	.0387	.0172	.5139	.08653	5.94
374.89	0.00	10.54	.6691	.00970	-.2439	.0230	.0501	.0231	.6560	.13187	4.97
374.31	0.00	10.53	.6654	.00892	-.2411	.0228	.0497	.0229	.6525	.13041	5.00
374.68	0.00	12.65	.7838	.00833	-.2710	.0291	.0614	.0294	.7629	.17978	4.24
374.42	0.00	14.77	.8786	.00773	-.2833	.0357	.0730	.0360	.8475	.23148	3.66
374.40	0.00	16.88	.9792	.00640	-.3004	.0443	.0878	.0446	.9351	.29051	3.22
374.34	0.00	18.95	1.0022	.00561	-.2755	.0528	.1020	.0528	.9461	.33071	2.86
374.23	0.00	20.39	1.0594	.00565	-.2908	.0602	.1142	.0594	.9910	.37440	2.65
374.48	0.00	-.00	-.0129	.01546	.0062	-.0018	-.0006	-.0018	-.0129	.01546	-.84

MACH NO .900 CONFIG. 1

Q	BETA	ALPHA	CN	CA	CM	CNC	CMC	CLC	CL	CD	L/D
354.66	0.00	-4.20	-.2597	-.01092	.0892	-.0109	-.0195	-.0109	-.2582	.02993	-8.63
354.66	0.00	-2.08	-.1245	-.01346	.0399	-.0060	-.0097	-.0060	-.1239	.01797	-8.89
355.26	0.00	-.01	-.0131	-.01521	.0057	-.0019	-.0008	-.0019	-.0131	.01521	-.86
354.90	0.00	2.08	.0944	.01392	-.0272	.0031	.0089	.0031	.0938	.01734	5.41
354.90	0.00	4.20	.2291	-.01073	-.0754	.0078	.0189	.0078	.2277	.02746	8.29
354.79	0.00	6.31	.3756	.00819	-.1282	.0126	.0286	.0125	.3724	.04941	7.54
354.46	0.00	8.41	.5186	.00690	-.1758	.0180	.0389	.0179	.5120	.08270	6.19
355.38	0.00	10.53	.6578	.00548	-.2218	.0238	.0498	.0238	.6458	.12557	5.14
354.80	0.00	12.64	.7917	.00486	-.2519	.0298	.0610	.0298	.7617	.17582	4.33
354.64	0.00	14.76	.8569	.00314	-.2485	.0365	.0725	.0365	.8278	.22130	3.74
355.16	0.00	16.83	.8965	.00376	-.2273	.0448	.0860	.0447	.8570	.26322	3.26
355.04	0.00	18.92	.9739	.00453	-.2448	.0533	.1000	.0530	.9198	.32003	2.87
355.12	0.00	20.33	1.0169	.00422	-.2540	.0594	.1097	.0588	.9521	.35725	2.66
354.71	0.00	-.01	-.0109	.01519	.0050	-.0017	-.0004	-.0017	-.0109	.01519	-.72

MACH NO .700 CONFIG. 1

Q	BETA	ALPHA	CN	CA	CM	CNC	CMC	CLC	CL	CD	L/D
262.02	0.00	-4.15	-.2331	.01117	.0719	-.0110	-.0190	-.0109	-.2317	.02799	-8.28
262.12	0.00	-2.06	-.1135	.01401	.0330	-.0062	-.0097	-.0062	-.1129	.01808	-6.24
262.18	0.00	-.01	-.0129	.01522	.0047	-.0022	-.0015	-.0022	-.0129	.01522	-.85
262.12	0.00	2.08	.0863	.01451	-.0220	.0029	.0082	.0028	.0857	.01763	4.86
261.96	0.00	4.13	.2041	.01115	-.0595	.0080	.0179	.0079	.2028	.02583	7.85
262.12	0.00	6.21	.3326	.00834	-.1004	.0136	.0282	.0134	.3297	.04426	7.45
262.12	0.00	8.30	.4735	.00599	-.1435	.0192	.0387	.0189	.4677	.07426	6.30
261.73	0.00	10.40	.6041	.00300	-.1774	.0254	.0494	.0250	.5936	.11196	5.30
261.66	0.00	12.47	.7097	.00053	-.1909	.0324	.0610	.0318	.6929	.15380	4.50
261.42	0.00	14.54	.7596	-.00045	-.1721	.0394	.0724	.0386	.7354	.19030	3.86
261.66	0.00	16.63	.8585	-.00129	-.1863	.0461	.0835	.0450	.8229	.24449	3.37
261.74	0.00	18.70	.9649	-.00243	-.2085	.0544	.0966	.0527	.9147	.30706	2.98
261.96	0.00	20.14	1.0274	-.00317	-.2221	.0608	.1060	.0585	.9657	.35073	2.75
262.50	0.00	-.00	-.0087	.01551	.0039	-.0017	-.0006	-.0017	-.0087	.01551	-.56

TABLE III.- Continued

MACH NO 1.200 CONFIG. 2											
Q	BETA	ALPHA	CN	CA	CM	CNC	CMC	CLC	CL	CD	L/D
440.98	0.00	-4.22	-.2471	.02725	.0993	-.0093	-.0222	-.0082	-.2444	.04538	-5.39
440.85	0.00	-2.10	-.1263	.02965	.0490	-.0038	-.0112	-.0033	-.1251	.03426	-3.65
440.97	0.00	-.02	-.0186	.03085	.0089	.0011	-.0008	.0011	-.0186	.03086	-.60
440.92	0.00	2.10	.0901	.03024	-.0302	.0065	.0102	.0060	.0889	.03352	2.65
440.36	0.00	4.23	.2107	.02793	-.0765	.0124	.0216	.0114	.2080	.04338	4.80
440.39	0.00	6.32	.3373	.02616	-.1272	.0180	.0326	.0163	.3324	.06313	5.27
440.32	0.00	8.41	.4628	.02479	-.1743	.0244	.0445	.0220	.4542	.09225	4.92
440.38	0.00	10.53	.5885	.02392	-.2189	.0317	.0576	.0284	.5742	.13111	4.38
440.35	0.00	12.66	.7051	.02309	-.2566	.0395	.0714	.0350	.6829	.17711	3.86
440.20	0.00	14.79	.8094	.02259	-.2827	.0483	.0864	.0424	.7768	.22851	3.40
440.31	0.00	16.90	.8951	.02177	-.2939	.0577	.1023	.0501	.8501	.28109	3.02
440.35	0.00	19.00	.9984	.02076	-.3239	.0676	.1193	.0579	.9372	.34476	2.72
440.30	0.00	20.48	1.0704	.02017	-.3467	.0750	.1319	.0636	.9957	.39337	2.53
440.06	0.00	-.01	-.0179	.03095	.0084	.0011	-.0008	.0011	-.0179	.03095	-.58
MACH NO 1.030 CONFIG. 2											
Q	BETA	ALPHA	CN	CA	CM	CNC	CMC	CLC	CL	CD	L/D
401.51	0.00	-4.25	-.2665	.02056	.1031	-.0087	-.0215	-.0080	-.2643	.04025	-6.57
401.74	0.00	-2.14	-.1355	.02420	.0491	-.0035	-.0110	-.0031	-.1345	.02923	-4.60
401.29	0.00	-.01	-.0189	.02584	.0078	.0012	-.0007	.0012	-.0189	.02585	-.73
401.35	0.00	2.09	.0928	.02481	-.0301	.0065	.0099	.0061	.0919	.02817	3.26
401.37	0.00	4.18	.2234	.02238	-.0817	.0114	.0202	.0106	.2212	.03861	5.73
401.21	0.00	6.33	.3613	.02025	-.1336	.0171	.0314	.0160	.3569	.05994	5.95
401.76	0.00	8.46	.4998	.01913	-.1787	.0234	.0433	.0218	.4915	.09248	5.31
402.28	0.00	10.55	.6324	.01797	-.2279	.0304	.0558	.0282	.6184	.13343	4.63
402.28	0.00	12.69	.7530	.01858	-.2647	.0370	.0682	.0347	.7306	.18340	3.98
402.00	0.00	14.76	.8632	.01707	-.2935	.0407	.0786	.0400	.8304	.23638	3.51
401.73	0.00	16.86	.9768	.01603	-.3248	.0464	.0907	.0466	.9302	.29868	3.11
401.69	0.00	19.00	1.0916	.01535	-.3538	.0541	.1049	.0542	1.0271	.36996	2.78
401.42	0.00	20.42	1.1562	.01261	-.3698	.0587	.1128	.0587	1.0792	.41523	2.60
401.46	0.00	-.01	-.0197	.02541	.0080	.0011	-.0009	.0011	-.0197	.02541	-.78
MACH NO .950 CONFIG. 2											
Q	BETA	ALPHA	CN	CA	CM	CNC	CMC	CLC	CL	CD	L/D
374.99	0.00	-4.25	-.2819	.01028	.1070	-.0070	-.0189	-.0071	-.2803	.03113	-9.00
374.71	0.00	-2.11	-.1413	.01275	.0505	-.0026	-.0095	-.0026	-.1407	.01795	-7.84
374.52	0.00	-.02	-.0228	.01450	.0099	.0015	-.0005	.0015	-.0228	.01450	-1.57
374.52	0.00	2.08	.0945	.01390	-.0290	.0060	.0090	.0060	.0939	.01732	5.42
374.33	0.00	4.19	.2314	.01172	-.0803	.0109	.0191	.0109	.2300	.02861	8.04
374.24	0.00	6.27	.3711	.01109	-.1321	.0161	.0294	.0161	.3677	.05156	7.13
374.19	0.00	8.40	.5078	.01138	-.1770	.0214	.0394	.0214	.5007	.08542	5.86
375.54	0.00	10.51	.6590	.01136	-.2344	.0277	.0509	.0276	.6459	.13135	4.92
375.03	0.00	12.68	.7674	.01142	-.2532	.0339	.0621	.0338	.7462	.17956	4.16
373.94	0.00	14.80	.8862	.01129	-.2825	.0406	.0740	.0403	.8539	.23732	3.60
374.42	0.00	16.99	.9956	.00984	-.3028	.0480	.0868	.0476	.9492	.30037	3.16
374.21	0.00	18.93	1.0234	.00922	-.2776	.0551	.0991	.0543	.9650	.34075	2.83
374.86	0.00	20.41	1.0953	.00960	-.2992	.0610	.1093	.0600	1.0232	.39093	2.62
374.70	0.00	-.02	-.0224	.01446	.0099	.0017	-.0002	.0017	-.0224	.01446	-1.55

MACH NO .900 CONFIG. 2

Q	BETA	ALPHA	CN	CA	CM	CNC	CMC	CLC	CL	CD	L/D
355.22	0.00	-4.23	-.2700	.00889	.0950	-.0070	-.0185	-.0071	-.2687	.02878	-9.33
355.11	0.00	-2.05	-.1310	.01211	.0427	-.0027	-.0094	-.0028	-.1305	.01678	-7.78
355.39	0.00	-.01	-.0196	.01388	.0085	.0016	-.0002	.0016	-.0196	.01388	-1.41
355.39	0.00	2.06	.0892	.01325	-.0242	.0061	.0091	.0061	.0887	.01645	5.39
355.39	0.00	4.18	.2185	.01070	-.0692	.0111	.0190	.0111	.2172	.02661	8.16
355.11	0.00	6.31	.3635	.00896	-.1192	.0162	.0291	.0162	.3603	.04883	7.38
354.92	0.00	8.41	.5078	.00834	-.1663	.0228	.0407	.0228	.5011	.08254	6.07
355.33	0.00	10.60	.6573	.00775	-.2161	.0287	.0515	.0285	.6446	.12858	5.01
354.95	0.00	12.65	.7677	.00759	-.2378	.0352	.0625	.0349	.7474	.17547	4.26
354.90	0.00	14.74	.8622	.00752	-.2486	.0415	.0738	.0410	.8319	.22672	3.67
355.08	0.00	16.86	.9586	.00655	-.2602	.0492	.0866	.0484	.9155	.28436	3.22
354.88	0.00	18.96	1.0080	.00718	-.2500	.0556	.0981	.0544	.9510	.33435	2.84
354.73	0.00	20.30	1.0570	.00743	-.2588	.0616	.1075	.0600	.9888	.37378	2.65
355.26	0.00	-.01	-.0191	.01402	.0082	.0016	-.0001	.0016	-.0191	.01403	-1.36

MACH NO .700 CONFIG. 2

Q	BETA	ALPHA	CN	CA	CM	CNC	CMC	CLC	CL	CD	L/D
261.66	0.00	-4.18	-.2402	.00902	.0758	-.0074	-.0178	-.0074	-.2389	.02650	-9.02
262.01	0.00	-2.11	-.1246	.01239	.0377	-.0029	-.0089	-.0029	-.1241	.01697	-7.31
261.99	0.00	-.02	-.0168	.01405	.0073	.0022	.0009	.0022	-.0168	.01405	-1.20
261.92	0.00	2.08	.0825	.01362	-.0197	.0067	.0100	.0067	.0820	.01660	4.94
261.84	0.00	4.15	.1941	.01087	-.0539	.0121	.0200	.0120	.1928	.02488	7.75
261.92	0.00	6.30	.3310	.00919	-.0959	.0180	.0308	.0178	.3280	.04548	7.21
261.84	0.00	8.30	.4547	.00709	-.1331	.0234	.0402	.0231	.4489	.07266	6.18
262.00	0.00	10.39	.5951	.00546	-.1696	.0303	.0520	.0298	.5844	.11266	5.19
261.92	0.00	12.48	.7052	.00295	-.1853	.0378	.0640	.0369	.6880	.15523	4.43
262.00	0.00	14.54	.7729	.00242	-.1740	.0453	.0761	.0440	.7475	.19644	3.81
261.92	0.00	16.79	.8738	.00189	-.1919	.0534	.0890	.0513	.8417	.25591	3.29
261.69	0.00	18.75	.9931	.00113	-.2116	.0617	.1019	.0589	.9401	.32022	2.94
261.92	0.00	20.15	1.0511	.00105	-.2174	.0678	.1113	.0644	.9864	.36298	2.72
261.91	0.00	-.01	-.0179	.01419	.0077	.0019	.0006	.0019	-.0179	.01420	-1.26

TABLE III.- Continued

MACH NO 1.200 CONFIG. 3											
Q	BETA	ALPHA	CN	CA	CM	CNC	CMC /	CLC	CL	CD	L/D
440.68	0.00	-4.34	-.2540	.03098	.0359	-.0671	-.0668	-.0654	-.2510	.05010	-5.01
440.87	0.00	-2.18	-.1309	.03331	.0168	-.0337	-.0343	-.0329	-.1295	.03827	-3.38
440.85	0.00	-.00	-.0195	.03448	.0049	-.0026	-.0034	-.0026	-.0195	.03448	-.57
440.85	0.00	2.14	.0864	.03396	-.0055	.0278	.0266	.0270	.0851	.03716	2.29
440.75	0.00	4.32	.2108	.03187	-.0228	.0613	.0593	.0596	.2078	.04766	4.36
440.79	0.00	6.50	.3475	.02994	-.0458	.0969	.0935	.0942	.3418	.06909	4.95
440.74	0.00	8.66	.4827	.02815	-.0676	.1310	.1267	.1268	.4730	.10052	4.71
440.68	0.00	10.87	.6140	.02723	-.0856	.1626	.1596	.1565	.5979	.14256	4.19
440.70	0.00	13.01	.7430	.02565	-.1060	.1880	.1877	.1797	.7182	.19231	3.73
440.70	0.00	15.17	.8637	.02451	-.1199	.2122	.2152	.2016	.8272	.24974	3.31
440.70	0.00	17.43	.9872	.02391	-.1258	.2418	.2473	.2275	.9347	.31845	2.94
440.38	0.00	19.59	1.1079	.02239	-.1377	.2702	.2790	.2518	1.0363	.39254	2.64
440.08	0.00	21.06	1.1882	.02155	-.1473	.2858	.2980	.2641	1.1011	.44711	2.46
440.77	0.00	-.03	-.0217	.03448	.0050	-.0037	-.0043	-.0037	-.0217	.03449	-.63
MACH NO 1.030 CONFIG. 3											
Q	BETA	ALPHA	CN	CA	CM	CNC	CMC	CLC	CL	CD	L/D
401.32	0.00	-4.36	-.2739	.02619	.0360	-.0766	-.0747	-.0750	-.2711	.04692	-5.78
401.44	0.00	-2.16	-.1354	.02764	.0132	-.0389	-.0385	-.0382	-.1343	.03273	-4.10
401.44	0.00	.00	-.0211	.02927	.0037	-.0046	-.0050	-.0046	-.0211	.02927	-.72
401.43	0.00	2.16	.0943	.02928	-.0073	.0296	.0284	.0289	.0932	.03281	2.84
401.54	0.00	4.31	.2269	.02685	-.0274	.0663	.0637	.0647	.2242	.04383	5.12
401.69	0.00	6.47	.3724	.02504	-.0529	.1048	.1011	.1022	.3672	.06686	5.49
401.74	0.00	8.71	.5228	.02327	-.0766	.1430	.1383	.1390	.5132	.10214	5.02
401.38	0.00	10.86	.6584	.02182	-.0860	.1792	.1739	.1735	.6425	.14550	4.42
401.38	0.00	13.02	.7874	.02140	-.1028	.2041	.2026	.1965	.7623	.19830	3.84
401.95	0.00	15.17	.9163	.02269	-.1176	.2268	.2281	.2166	.8784	.26172	3.36
401.75	0.00	17.35	1.0435	.02126	-.1301	.2512	.2554	.2378	.9897	.33148	2.99
401.80	0.00	19.51	1.1746	.01935	-.1428	.2754	.2813	.2577	1.1006	.41059	2.68
401.73	0.00	21.01	1.2694	.01888	-.1545	.2922	.2994	.2706	1.1782	.47284	2.49
401.92	0.00	.00	-.0211	.02944	.0035	-.0049	-.0051	-.0049	-.0211	.02944	-.72
MACH NO .950 CONFIG. 3											
Q	BETA	ALPHA	CN	CA	CM	CNC	CMC	CLC	CL	CD	L/D
374.63	0.00	-4.36	-.2938	.01371	.0461	-.0750	-.0747	-.0743	-.2919	.03602	-8.10
374.41	0.00	-2.17	-.1500	.01473	.0203	-.0378	-.0386	-.0375	-.1493	.02038	-7.32
374.06	0.00	-.00	-.0265	.01634	.0077	-.0038	-.0048	-.0038	-.0265	.01635	-1.62
374.06	0.00	2.10	.0889	.01589	-.0045	.0282	.0274	.0280	.0882	.01914	4.61
374.01	0.00	4.30	.2355	.01425	-.0301	.0651	.0637	.0645	.2338	.03186	7.34
373.62	0.00	6.46	.3855	.01416	-.0616	.1008	.0989	.0995	.3815	.05741	6.65
374.65	0.00	8.64	.5376	.01512	-.0938	.1323	.1319	.1299	.5293	.09568	5.53
374.64	0.00	10.75	.6699	.01637	-.1115	.1582	.1598	.1546	.6551	.14105	4.64
375.75	0.00	12.96	.8035	.01783	-.1203	.1877	.1899	.1813	.7790	.19751	3.94
375.62	0.00	15.13	.9304	.01840	-.1264	.2176	.2202	.2084	.8933	.26062	3.43
374.66	0.00	17.24	1.0530	.01838	-.1308	.2444	.2481	.2314	1.0002	.32967	3.03
373.79	0.00	19.42	1.1879	.01818	-.1438	.2721	.2768	.2541	1.1143	.41202	2.70
373.82	0.00	20.92	1.2827	.01746	-.1549	.2894	.2955	.2674	1.1919	.47432	2.51
374.18	0.00	-.00	-.0240	.01647	.0072	-.0032	-.0040	-.0032	-.0240	.01647	-1.45

MACH NO .900 CONFIG. 3

Q	BETA	ALPHA	CN	CA	CM	CNC	CMC	CLC	CL	CD	L/D
354.61	0.00	-4.30	-.2779	.01163	.0334	-.0726	-.0734	-.0723	-.2762	.03245	-8.51
355.69	0.00	-2.15	-.1429	.01396	.0148	-.0364	-.0378	-.0362	-.1423	.01930	-7.37
354.67	0.00	.01	-.0240	.01580	.0063	-.0030	-.0038	-.0030	-.0240	.01580	-1.52
355.09	0.00	2.16	.0896	.01505	-.0023	.0289	.0285	.0288	.0890	.01843	4.83
355.03	0.00	4.29	.2269	.01275	-.0212	.0646	.0640	.0642	.2253	.02967	7.59
354.74	0.00	6.45	.3754	.01158	-.0472	.1000	.0993	.0991	.3717	.05369	6.92
354.44	0.00	8.57	.5273	.01142	-.0792	.1281	.1297	.1263	.5197	.08989	5.78
354.73	0.00	10.78	.6710	.01238	-.0996	.1562	.1589	.1527	.6568	.13766	4.77
355.38	0.00	12.88	.8005	.01366	-.1095	.1864	.1894	.1807	.7773	.19173	4.05
354.12	0.00	15.11	.9251	.01431	-.1087	.2155	.2196	.2068	.8894	.25496	3.49
354.57	0.00	17.22	1.0586	.01548	-.1181	.2438	.2485	.2311	1.0066	.32823	3.07
354.80	0.00	19.36	1.1858	.01514	-.1299	.2666	.2729	.2491	1.1137	.40743	2.73
355.05	0.00	20.86	1.2872	.01538	-.1457	.2819	.2894	.2603	1.1974	.47281	2.53
354.88	0.00	-.00	-.0240	.01586	.0059	-.0036	-.0043	-.0036	-.0240	.01586	-1.51

MACH NO .700 CONFIG. 3

Q	BETA	ALPHA	CN	CA	CM	CNC	CMC	CLC	CL	CD	L/D
262.12	0.00	-4.21	-.2463	.01172	.0195	-.0663	-.0675	-.0660	-.2448	.02976	-8.22
262.12	0.00	-2.07	-.1265	.01413	.0088	-.0325	-.0340	-.0323	-.1259	.01870	-6.73
261.81	0.00	-.02	-.0233	.01601	.0049	-.0032	-.0040	-.0032	-.0233	.01602	-1.45
261.81	0.00	2.11	.0796	.01526	-.0001	.0266	.0269	.0265	.0789	.01818	4.34
261.73	0.00	4.23	.2011	.01287	-.0110	.0594	.0598	.0591	.1996	.02768	7.21
261.12	0.00	6.33	.3348	.01122	-.0268	.0946	.0954	.0939	.3315	.04808	6.89
261.73	0.00	8.42	.4737	.00988	-.0438	.1248	.1275	.1234	.4672	.07915	5.90
261.81	0.00	10.55	.5989	.00900	-.0473	.1560	.1592	.1532	.5871	.11848	4.96
261.74	0.00	12.68	.7303	.00872	-.0466	.1893	.1939	.1846	.7106	.16878	4.21
261.12	0.00	14.79	.8563	.00863	-.0475	.2181	.2240	.2105	.8258	.22689	3.64
261.58	0.00	16.93	.9826	.00881	-.0525	.2424	.2498	.2308	.9374	.29464	3.18
261.43	0.00	19.01	1.1105	.01002	-.0631	.2601	.2689	.2426	1.0467	.37114	2.82
262.91	0.00	20.45	1.2156	.01066	-.0833	.2701	.2809	.2479	1.1352	.43473	2.61
261.74	0.00	-.02	-.0233	.01599	.0051	-.0027	-.0031	-.0027	-.0233	.01600	-1.46

TABLE III.- Continued

MACH NO 1.200 CONFIG. 4											
Q	BETA	ALPHA	CN	CA	CM	CNC	CMC	CLC	CL	CD	L/D
440.50	0.00	-4.36	-.2506	-.03214	.0315	-.0711	-.0698	-.0693	-.2475	.05110	-4.84
440.80	0.00	-2.19	-.1306	-.03461	.0140	-.0366	-.0362	-.0357	-.1292	.03957	-3.27
440.59	0.00	.01	-.0144	.03529	.0020	-.0045	-.0047	-.0045	-.0145	.03528	-.41
440.79	0.00	2.23	.1013	.03406	-.0105	.0262	.0258	.0254	.0999	.03797	2.63
440.69	0.00	4.39	.2388	.03150	-.0318	.0588	.0579	.0573	.2357	.04969	4.74
440.69	0.00	6.63	.3871	.02907	-.0567	.0936	.0918	.0913	.3812	.07353	5.18
440.58	0.00	8.70	.5232	.02689	-.0784	.1245	.1224	.1213	.5132	.10570	4.85
440.75	0.00	10.98	.6640	.02553	-.1006	.1550	.1540	.1505	.6469	.15158	4.27
440.55	0.00	13.13	.7955	.02377	-.1182	.1839	.1841	.1780	.7693	.20380	3.77
440.80	0.00	15.29	.9255	.02180	-.1303	.2148	.2162	.2068	.8870	.26502	3.35
440.64	0.00	17.43	1.0468	.01941	-.1407	.2448	.2475	.2340	.9929	.33216	2.99
440.64	0.00	19.65	1.1739	.01819	-.1557	.2745	.2801	.2601	1.0994	.41196	2.67
440.61	0.00	21.14	1.2563	.01771	-.1643	.2916	.3001	.2745	1.1654	.46966	2.48
440.83	0.00	.01	-.0151	.03516	.0012	-.0060	-.0058	-.0060	-.0151	.03516	-.43
MACH NO 1.030 CONFIG. 4											
Q	BETA	ALPHA	CN	CA	CM	CNC	CMC	CLC	CL	CD	L/D
401.55	0.00	-4.35	-.2642	-.02699	.0290	-.0789	-.0769	-.0771	-.2614	.04696	-5.57
401.70	0.00	-2.11	-.1322	-.02944	.0075	-.0401	-.0395	-.0394	-.1311	.03430	-3.82
401.70	0.00	-.02	-.0175	-.03065	-.0018	-.0067	-.0071	-.0067	-.0175	.03065	-.57
401.70	0.00	2.18	.1083	.02987	-.0138	.0275	.0265	.0267	.1071	.03396	3.15
401.70	0.00	4.35	.2523	.02693	-.0365	.0636	.0616	.0622	.2495	.04600	5.42
401.51	0.00	5.43	.3258	.02502	-.0476	.0824	.0807	.0820	.3220	.05576	5.77
402.33	0.00	6.57	.4075	.02461	-.0588	.1031	.0993	.1010	.4020	.07105	5.66
401.63	0.00	8.74	.5610	.02133	-.0821	.1389	.1344	.1360	.5512	.10636	5.18
401.56	0.00	10.91	.7078	.02017	-.0955	.1750	.1699	.1711	.6912	.15376	4.50
401.55	0.00	13.11	.8446	.01938	-.1055	.2090	.2036	.2037	.8182	.21040	3.89
401.30	0.00	15.30	.9847	.01783	-.1207	.2391	.2355	.2322	.9451	.27700	3.41
401.40	0.00	17.49	1.1249	.01622	-.1318	.2670	.2648	.2576	1.0680	.35349	3.02
401.19	0.00	19.64	1.2669	.01394	-.1475	.2917	.2907	.2793	1.1885	.43895	2.71
401.19	0.00	21.06	1.3593	.01252	-.1537	.3135	.3120	.2982	1.2640	.50010	2.53
401.63	0.00	-.03	-.0160	.03070	-.0036	-.0078	-.0077	-.0077	-.0160	.03071	-.52
MACH NO .950 CONFIG. 4											
Q	BETA	ALPHA	CN	CA	CM	CNC	CMC	CLC	CL	CD	L/D
374.98	0.00	-4.30	-.2812	-.01450	.0406	-.0730	-.0740	-.0723	-.2794	.03552	-7.86
374.71	0.00	-2.15	-.1421	-.01598	.0141	-.0359	-.0379	-.0356	-.1414	.02131	-6.64
374.84	0.00	-.01	-.0192	.01716	-.0001	-.0043	-.0058	-.0043	-.0192	.01716	-1.12
374.76	0.00	2.10	.1058	.01644	-.0118	.0280	.0266	.0277	.1052	.02031	5.18
374.76	0.00	4.32	.2546	.01436	-.0329	.0654	.0633	.0649	.2528	.03350	7.55
374.76	0.00	6.49	.4098	.01364	-.0583	.1028	.0998	.1018	.4056	.05983	6.78
375.85	0.00	8.67	.5659	.01416	-.0834	.1375	.1345	.1358	.5573	.09934	5.61
375.85	0.00	10.82	.7138	.01377	-.1085	.1649	.1635	.1623	.6986	.14753	4.74
374.35	0.00	13.11	.8575	.01375	-.1187	.1949	.1943	.1908	.8321	.20789	4.00
375.76	0.00	15.26	.9932	.01374	-.1242	.2262	.2256	.2200	.9545	.27472	3.47
374.98	0.00	17.40	1.1286	.01275	-.1261	.2603	.2589	.2512	1.0731	.34959	3.07
374.44	0.00	19.66	1.2751	.01109	-.1312	.2954	.2931	.2820	1.1970	.43942	2.72
374.76	0.00	21.27	1.3695	.00931	-.1272	.3186	.3162	.3018	1.2728	.50547	2.52
375.32	0.00	.01	-.0179	.01718	-.0000	-.0038	-.0052	-.0038	-.0179	.01718	-1.04

MACH NO .900 CONFIG. 4

Q	BETA	ALPHA	CN	CA	CM	CNC	CMC	CLC	CL	CD	L/D
354.86	0.00	-4.32	-.2741	.01229	.0306	-.0728	-.0744	-.0723	-.2724	.03292	-8.27
354.79	0.00	-2.15	-.1362	.01484	.0087	-.0353	-.0375	-.0351	-.1355	.01993	-6.80
354.30	0.00	.01	-.0154	.01657	-.0007	-.0032	-.0046	-.0032	-.0154	.01657	-.93
354.61	0.00	2.17	.1059	.01538	-.0086	.0288	.0278	.0286	.1053	.01937	5.43
354.43	0.00	4.32	.2471	.01274	-.0247	.0649	.0634	.0647	.2454	.03130	7.84
354.55	0.00	6.49	.3993	.01097	-.0443	.1027	.1007	.1021	.3955	.05601	7.06
354.60	0.00	8.64	.5552	.01023	-.0694	.1346	.1338	.1335	.5474	.09356	5.85
354.36	0.00	10.82	.7111	.01013	-.0974	.1614	.1621	.1590	.6966	.14340	4.86
354.42	0.00	13.00	.8572	.01044	-.1111	.1935	.1940	.1893	.8329	.20296	4.10
354.67	0.00	15.22	1.0063	.01044	-.1198	.2293	.2289	.2228	.9683	.27428	3.53
354.67	0.00	17.34	1.1450	.00975	-.1255	.2620	.2613	.2527	1.0901	.35048	3.11
354.43	0.00	19.52	1.2823	.00853	-.1225	.2962	.2947	.2830	1.2058	.43650	2.76
354.31	0.00	21.09	1.3522	.00723	-.1036	.3184	.3165	.3018	1.2591	.49334	2.55
355.63	0.00	-.00	-.0135	.01651	-.0018	-.0036	-.0048	-.0036	-.0135	.01651	-.82

MACH NO .700 CONFIG. 4

Q	BETA	ALPHA	CN	CA	CM	CNC	CMC	CLC	CL	CD	L/D
261.89	0.00	-4.22	-.2448	.01283	.0175	-.0666	-.0687	-.0662	-.2432	.03080	-7.90
261.34	0.00	-2.13	-.1215	.01537	.0042	-.0320	-.0341	-.0319	-.1209	.01988	-6.08
262.19	0.00	.01	-.0136	.01672	-.0013	-.0027	-.0038	-.0027	-.0136	.01672	-.81
261.28	0.00	2.12	.0997	.01592	-.0058	.0272	.0270	.0271	.0991	.01960	5.05
261.49	0.00	4.24	.2209	.01288	-.0146	.0589	.0590	.0587	.2193	.02917	7.52
261.81	0.00	6.36	.3629	.01085	-.0269	.0971	.0970	.0966	.3595	.05100	7.05
261.13	0.00	8.44	.5035	.00846	-.0403	.1292	.1301	.1282	.4968	.08230	6.04
261.66	0.00	10.56	.6375	.00683	-.0482	.1590	.1613	.1571	.6254	.12359	5.06
260.72	0.00	12.76	.7790	.00505	-.0499	.1942	.1974	.1906	.7586	.17694	4.29
261.20	0.00	14.85	.9146	.00345	-.0453	.2294	.2331	.2236	.8832	.23766	3.72
261.50	0.00	16.98	1.0484	.00159	-.0390	.2630	.2679	.2541	1.0022	.30774	3.26
260.97	0.00	19.09	1.1823	.00008	-.0273	.3013	.3063	.2888	1.1172	.38685	2.89
261.43	0.00	20.61	1.2757	-.00171	-.0181	.3288	.3335	.3128	1.1947	.44742	2.67
261.20	0.00	-.01	-.0154	.01700	-.0013	-.0032	-.0043	-.0032	-.0154	.01700	-.91

TABLE III.- Continued

MACH NO 1.200 CONFIG. 5											
Q	BETA	ALPHA	CN	CA	CM	CNC	CMC	CLC	CL	CD	L/D
440.51	0.00	-4.43	-.2886	.03434	.0019	-.1006	-.0896	-.0989	-.2851	.05652	-5.04
440.70	0.00	-2.20	-.1412	.03714	-.0033	-.0491	-.0447	-.0483	-.1397	.04253	-3.28
440.88	0.00	.01	-.0081	.03831	-.0024	-.0015	-.0019	-.0015	-.0081	.03831	-.21
440.90	0.00	2.24	.1179	.03774	.0033	.0464	.0409	.0454	.1163	.04232	2.75
440.86	0.00	4.45	.2481	.03473	.0098	.1006	.0888	.0985	.2447	.05390	4.54
440.73	0.00	6.66	.3687	.03145	.0164	.1567	.1380	.1529	.3626	.07403	4.90
440.63	0.00	8.88	.4914	.02934	.0200	.2092	.1856	.2032	.4810	.10487	4.59
440.82	0.00	11.06	.6015	.02619	.0179	.2554	.2299	.2464	.5853	.14108	4.15
440.72	0.00	13.20	.7183	.02344	.0005	.2892	.2665	.2766	.6940	.18680	3.71
440.65	0.00	15.39	.8440	.02119	-.0083	.3281	.3058	.3108	.8081	.24435	3.31
440.66	0.00	17.61	.9700	.01962	-.0086	.3686	.3478	.3455	.9186	.31218	2.94
440.45	0.00	19.78	1.0995	.01850	-.0215	.4008	.3836	.3709	1.0284	.38944	2.64
440.50	0.00	20.94	1.1754	.01874	-.0291	.4169	.4021	.3830	1.0911	.43753	2.49
440.66	0.00	.01	-.0081	.03813	-.0033	-.0026	-.0025	-.0026	-.0081	.03813	-.21
MACH NO 1.030 CONFIG. 5											
Q	BETA	ALPHA	CN	CA	CM	CNC	CMC	CLC	CL	CD	L/D
401.98	0.00	-4.43	-.3051	.02978	-.0018	-.1138	-.1000	-.1122	-.3019	.05326	-5.67
401.80	0.00	-2.20	-.1486	.03249	-.0046	-.0556	-.0495	-.0548	-.1473	.03817	-3.86
401.75	0.00	.01	-.0123	.03413	.0012	-.0029	-.0025	-.0029	-.0123	.03413	-.36
401.75	0.00	2.21	.1169	.03368	.0087	.0478	.0432	.0468	.1155	.03816	3.03
401.80	0.00	4.43	.2543	.02982	.0139	.1069	.0957	.1048	.2513	.04939	5.09
401.15	0.00	6.63	.3829	.02511	.0161	.1653	.1480	.1616	.3774	.06914	5.46
401.43	0.00	8.82	.5196	.02196	.0105	.2229	.1998	.2170	.5101	.10139	5.03
401.60	0.00	11.01	.6357	.01892	.0160	.2760	.2492	.2671	.6204	.13994	4.43
401.43	0.00	13.20	.7710	.01771	.0035	.3134	.2909	.3013	.7466	.19325	3.86
401.60	0.00	15.37	.9112	.01820	-.0168	.3465	.3263	.3308	.8738	.25906	3.37
401.76	0.00	17.55	1.0511	.01648	-.0291	.3828	.3611	.3610	.9972	.33261	3.00
401.81	0.00	19.74	1.1941	.01502	-.0412	.4108	.3908	.3821	1.1189	.41746	2.68
401.10	0.00	20.87	1.2611	.01352	-.0441	.4237	.4048	.3911	1.1735	.46193	2.54
402.44	0.00	.00	-.0106	.03362	-.0005	-.0038	-.0029	-.0038	-.0106	.03362	-.32
MACH NO .950 CONFIG. 5											
Q	BETA	ALPHA	CN	CA	CM	CNC	CMC	CLC	CL	CD	L/D
374.91	0.00	-4.40	-.3136	.01660	-.0040	-.1202	-.1057	-.1192	-.3114	.04063	-7.66
375.11	0.00	-2.18	-.1546	.01808	-.0040	-.0596	-.0524	-.0592	-.1538	.02395	-6.42
374.91	0.00	.01	-.0165	.01916	.0007	-.0084	-.0053	-.0084	-.0165	.01916	-.86
375.04	0.00	2.20	.1180	.01803	.0044	.0411	.0407	.0405	.1172	.02255	5.20
374.91	0.00	4.39	.2611	.01581	.0053	.0996	.0934	.0981	.2592	.03576	7.25
374.66	0.00	6.59	.3978	.01465	.0011	.1555	.1446	.1528	.3935	.06017	6.54
374.26	0.00	8.74	.5320	.01344	-.0160	.2025	.1908	.1983	.5238	.09415	5.56
374.33	0.00	10.89	.6483	.01401	-.0245	.2392	.2283	.2333	.6340	.13625	4.65
375.13	0.00	13.05	.7715	.01473	-.0355	.2723	.2611	.2628	.7482	.18851	3.97
374.71	0.00	15.22	.9009	.01391	-.0410	.3091	.2964	.2957	.8657	.24989	3.46
375.04	0.00	17.39	1.0315	.01335	-.0479	.3406	.3273	.3217	.9803	.32099	3.05
373.97	0.00	19.54	1.1614	.01377	-.0574	.3636	.3487	.3375	1.0899	.40142	2.72
374.53	0.00	20.71	1.2355	.01338	-.0569	.3831	.3679	.3524	1.1509	.44935	2.56
374.72	0.00	.01	-.0152	.01903	-.0011	-.0095	-.0061	-.0095	-.0152	.01903	-.80

MACH NO .900 CONFIG. 5

Q	BETA	ALPHA	CN	CA	CM	CNC	CMC	CLC	CL	CD	L/D
355.43	0.00	-4.39	-.3043	.01413	-.0146	-.1218	-.1088	-.1212	-.3023	.03740	-8.08
355.19	0.00	-2.18	-.1479	.01668	-.0096	-.0596	-.0533	-.0593	-.1472	.02230	-6.60
354.67	0.00	.02	-.0162	.01807	-.0013	-.0098	-.0069	-.0098	-.0162	.01807	-.90
355.25	0.00	2.20	.1146	.01669	.0077	.0394	.0396	.0390	.1139	.02109	5.40
355.32	0.00	4.39	.2525	.01365	.0125	.0961	.0918	.0952	.2507	.03295	7.61
355.79	0.00	6.57	.3900	.01136	.0116	.1531	.1449	.1512	.3861	.05593	6.90
355.37	0.00	8.71	.5212	.00968	-.0062	.1929	.1861	.1898	.5137	.08848	5.81
355.36	0.00	10.86	.6482	.01054	-.0168	.2325	.2242	.2268	.6346	.13247	4.79
355.43	0.00	13.03	.7683	.01089	-.0176	.2731	.2634	.2640	.7461	.18379	4.06
355.55	0.00	15.16	.8896	.01105	-.0273	.3012	.2925	.2882	.8557	.24335	3.52
355.86	0.00	17.31	1.0170	.01152	-.0434	.3233	.3145	.3052	.9675	.31355	3.09
355.23	0.00	19.46	1.1391	.01372	-.0517	.3421	.3310	.3162	1.0694	.39247	2.72
355.23	0.00	20.59	1.2081	.01332	-.0456	.3645	.3523	.3340	1.1263	.43742	2.57
355.65	0.00	.01	-.0134	.01824	-.0007	-.0086	-.0058	-.0086	-.0134	.01823	-.73

MACH NO .700 CONFIG. 5

Q	BETA	ALPHA	CN	CA	CM	CNC	CMC	CLC	CL	CD	L/D
261.76	0.00	-4.26	-.2762	.01401	-.0215	-.1117	-.1024	-.1113	-.2744	.03450	-7.95
261.75	0.00	-2.13	-.1351	.01667	-.0130	-.0558	-.0512	-.0556	-.1344	.02167	-6.20
262.00	0.00	.02	-.0116	.01853	-.0023	-.0098	-.0074	-.0098	-.0117	.01852	-.63
261.45	0.00	2.13	.1027	.01715	.0082	.0341	.0348	.0338	.1020	.02096	4.87
262.38	0.00	4.29	.2314	.01402	.0176	.0875	.0847	.0868	.2297	.03127	7.35
261.91	0.00	6.39	.3577	.01045	.0238	.1425	.1361	.1412	.3543	.05022	7.05
262.15	0.00	8.52	.4849	.00761	.0160	.1854	.1802	.1829	.4784	.07937	6.03
261.75	0.00	10.62	.6051	.00585	.0145	.2264	.2201	.2218	.5936	.11731	5.06
262.15	0.00	12.77	.7269	.00488	.0208	.2690	.2624	.2615	.7078	.16544	4.28
261.68	0.00	14.87	.8444	.00421	.0172	.3012	.2949	.2898	.8151	.22077	3.69
262.07	0.00	16.97	.9679	.00561	.0024	.3218	.3158	.3050	.9241	.28794	3.21
261.84	0.00	19.05	1.0674	.00892	-.0143	.3250	.3195	.3017	1.0061	.35686	2.82
261.76	0.00	20.16	1.1390	.00983	-.0140	.3404	.3346	.3129	1.0658	.40179	2.65
262.23	0.00	.02	-.0105	.01826	-.0025	-.0095	-.0069	-.0095	-.0105	.01826	-.57

TABLE III.- Continued

MACH NO 1.200 CONFIG. 6											
Q	BETA	ALPHA	CN	CA	CM	CNC	CMC	CLC	CL	CD	L/D
441.57	0.00	-4.47	-.2798	.03373	-.0129	-.1113	-.0988	-.1094	-.2763	.05545	-4.98
440.91	0.00	-2.22	-.1410	.03579	-.0102	-.0558	-.0505	-.0549	-.1395	.04122	-3.38
440.93	0.00	-.02	-.0220	.03699	.0001	-.0061	-.0063	-.0061	-.0220	.03700	-.59
440.91	0.00	2.19	.0913	.03632	.0096	.0408	.0355	.0400	.0898	.03978	2.26
440.72	0.00	4.41	.2260	.03404	.0133	.0941	.0821	.0922	.2228	.05131	4.34
440.57	0.00	6.66	.3745	.03156	.0122	.1515	.1320	.1484	.3683	.07475	4.93
440.96	0.00	8.90	.5200	.02969	.0099	.2057	.1801	.2007	.5091	.10978	4.64
441.13	0.00	11.11	.6585	.02763	.0068	.2522	.2240	.2446	.6409	.15403	4.16
441.04	0.00	13.34	.8056	.02512	-.0025	.2938	.2653	.2829	.7781	.21039	3.70
440.94	0.00	15.53	.9377	.02377	-.0065	.3301	.3020	.3149	.8971	.27402	3.27
440.71	0.00	17.78	1.0818	.02293	-.0043	.3766	.3465	.3551	1.0231	.35220	2.90
440.75	0.00	19.99	1.2167	.02155	-.0063	.4181	.3876	.3891	1.1360	.43618	2.60
440.49	0.00	21.58	1.3145	.02046	-.0107	.4436	.4151	.4091	1.2148	.50249	2.42
440.95	0.00	-.02	-.0227	.03707	.0001	-.0066	-.0066	-.0066	-.0227	.03708	-.61

MACH NO 1.030 CONFIG. 6											
Q	BETA	ALPHA	CN	CA	CM	CNC	CMC	CLC	CL	CD	L/D
401.63	0.00	-4.45	-.2844	.02831	-.0214	-.1219	-.1089	-.1200	-.2813	.05030	-5.59
401.61	0.00	-2.22	-.1470	.03130	-.0160	-.0633	-.0576	-.0624	-.1457	.03697	-3.94
401.80	0.00	-.02	-.0235	.03233	-.0026	-.0091	-.0089	-.0091	-.0235	.03233	-.73
401.61	0.00	2.18	.0945	.03128	.0101	.0422	.0376	.0414	.0932	.03485	2.68
401.35	0.00	4.39	.2345	.02853	.0146	.1009	.0894	.0991	.2317	.04642	4.99
401.90	0.00	6.62	.3898	.02648	.0125	.1630	.1439	.1599	.3841	.07126	5.39
401.69	0.00	8.86	.5471	.02305	.0132	.2234	.1977	.2185	.5371	.10704	5.02
401.56	0.00	11.11	.7077	.02252	.0223	.2876	.2531	.2796	.6900	.15851	4.35
401.34	0.00	13.31	.8536	.01980	.0143	.3267	.2950	.3155	.8261	.21574	3.83
401.36	0.00	15.57	1.0136	.01941	.0182	.3786	.3415	.3623	.9712	.29081	3.34
401.42	0.00	17.78	1.1634	.01883	.0074	.4077	.3736	.3856	1.1021	.37313	2.95
400.99	0.00	19.99	1.3117	.01856	.0075	.4487	.4107	.4182	1.2264	.46578	2.63
401.58	0.00	21.47	1.4155	.01783	.0034	.4759	.4372	.4388	1.3108	.53461	2.45
401.57	0.00	-.01	-.0231	.03228	-.0025	-.0088	-.0084	-.0088	-.0231	.03228	-.72

MACH NO .950 CONFIG. 6											
Q	BETA	ALPHA	CN	CA	CM	CNC	CMC	CLC	CL	CD	L/D
374.29	0.00	-4.41	-.3023	.01567	-.0085	-.1204	-.1098	-.1192	-.3002	.03888	-7.72
375.14	0.00	-2.21	-.1567	.01650	-.0062	-.0612	-.0573	-.0607	-.1559	.02253	-6.92
374.88	0.00	-.02	-.0308	.01784	.0025	-.0083	-.0087	-.0083	-.0308	.01785	-1.72
374.88	0.00	2.16	.0906	.01722	.0110	.0409	.0369	.0404	.0899	.02063	4.36
374.44	0.00	4.39	.2429	.01556	.0119	.1019	.0918	.1008	.2410	.03410	7.07
374.73	0.00	6.59	.4028	.01549	.0036	.1627	.1465	.1604	.3984	.06159	6.47
374.54	0.00	8.80	.5590	.01511	-.0027	.2158	.1969	.2117	.5501	.10047	5.47
375.25	0.00	10.99	.7038	.01567	-.0064	.2595	.2399	.2530	.6879	.14955	4.60
373.61	0.00	13.21	.8430	.01665	.0037	.3035	.2810	.2943	.8169	.20880	3.91
373.18	0.00	15.43	.9892	.01768	.0154	.3525	.3251	.3369	.9489	.28016	3.39
373.37	0.00	17.64	1.1334	.01761	.0275	.3996	.3686	.3776	1.0748	.36015	2.98
373.76	0.00	19.86	1.2882	.01726	.0313	.4471	.4114	.4167	1.2058	.45386	2.66
373.63	0.00	21.30	1.3928	.01680	.0291	.4764	.4379	.4391	1.2916	.52158	2.48
374.32	0.00	-.01	-.0296	.01785	.0033	-.0077	-.0080	-.0077	-.0296	.01785	-1.66

MACH NO .900 CONFIG. 6											
Q	BETA	ALPHA	CN	CA	CM	CNC	CMC	CLC	CL	CD	L/D
354.73	0.00	-4.39	-.2897	.01305	-.0175	-.1185	-.1099	-.1177	-.2879	.03518	-8.18
354.91	0.00	-2.19	-.1507	.01508	-.0114	-.0601	-.0570	-.0598	-.1500	.02082	-7.21
354.67	0.00	-.00	-.0258	.01695	.0020	-.0060	-.0065	-.0060	-.0258	.01695	-1.52
354.67	0.00	2.15	.0886	.01616	.0135	.0413	.0380	.0410	.0879	.01946	4.52
354.55	0.00	4.36	.2336	.01344	.0195	.1013	.0927	.1006	.2319	.03115	7.44
354.55	0.00	6.57	.3901	.01174	.0193	.1623	.1487	.1607	.3862	.05631	6.86
355.21	0.00	8.75	.5426	.01132	.0106	.2084	.1944	.2054	.5345	.09374	5.70
354.61	0.00	10.94	.6938	.01235	.0068	.2522	.2366	.2469	.6788	.14384	4.72
354.61	0.00	13.14	.8350	.01409	.0110	.2949	.2764	.2852	.8100	.20350	3.98
354.02	0.00	15.36	.9761	.01464	.0287	.3463	.3237	.3321	.9374	.27264	3.44
354.13	0.00	17.54	1.1153	.01534	.0413	.3911	.3643	.3703	1.0588	.35074	3.02
354.75	0.00	19.75	1.2675	.01532	.0415	.4337	.4027	.4043	1.1878	.44281	2.68
354.61	0.00	21.19	1.3801	.01558	.0355	.4635	.4295	.4273	1.2811	.51341	2.50
355.08	0.00	-.01	-.0249	.01697	.0024	-.0058	-.0061	-.0058	-.0249	.01697	-1.47

MACH NO .700 CONFIG. 6											
Q	BETA	ALPHA	CN	CA	CM	CNC	CMC	CLC	CL	CD	L/D
261.50	0.00	-4.25	-.2646	.01276	-.0245	-.1093	-.1026	-.1087	-.2630	.03236	-8.13
260.73	0.00	-2.12	-.1344	.01517	-.0127	-.0527	-.0505	-.0524	-.1338	.02014	-6.64
262.82	0.00	.01	-.0251	.01706	.0014	-.0051	-.0053	-.0051	-.0251	.01706	-1.47
261.28	0.00	2.11	.0783	.01618	.0136	.0382	.0362	.0380	.0776	.01906	4.07
262.75	0.00	4.26	.2110	.01333	.0232	.0927	.0868	.0922	.2094	.02897	7.23
262.60	0.00	6.40	.3509	.01137	.0317	.1512	.1410	.1501	.3474	.05040	6.89
262.05	0.00	8.54	.4900	.00945	.0356	.1983	.1880	.1960	.4832	.08209	5.89
263.45	0.00	10.69	.6255	.00932	.0417	.2432	.2318	.2388	.6129	.12518	4.90
261.28	0.00	12.83	.7621	.00848	.0583	.2927	.2793	.2852	.7412	.17743	4.18
261.43	0.00	14.98	.8966	.00865	.0756	.3410	.3253	.3290	.8639	.24006	3.60
261.36	0.00	17.13	1.0367	.00978	.0882	.3861	.3672	.3678	.9879	.31464	3.14
262.77	0.00	19.26	1.1668	.01196	.0877	.4162	.3932	.3895	1.0976	.39615	2.77
261.89	0.00	20.65	1.2940	.01512	.0644	.4310	.4053	.3965	1.2055	.47053	2.56
261.65	0.00	-.00	-.0252	.01689	.0018	-.0051	-.0053	-.0051	-.0252	.01689	-1.49

TABLE III.- Continued

MACH NO 1.200 CONFIG. 7											
Q	BETA	ALPHA	CN	CA	CM	CNC	CMC	CLC	CL	CD	L/D
440.29	0.00	-4.45	-.2734	.03491	-.0114	-.1128	-.0992	-.1107	-.2698	.05601	-4.82
440.29	0.00	-2.22	-.1468	.03769	-.0055	-.0579	-.0509	-.0569	-.1452	.04335	-3.35
440.34	0.00	-.01	-.0220	.03823	.0024	-.0077	-.0063	-.0077	-.0220	.03824	-.58
440.31	0.00	2.25	.1107	.03717	.0050	.0403	.0367	.0394	.1092	.04149	2.63
440.34	0.00	4.52	.2609	.03427	.0012	.0923	.0827	.0905	.2574	.05472	4.70
440.34	0.00	6.68	.4154	.03116	-.0069	.1435	.1275	.1407	.4090	.07924	5.16
440.28	0.00	8.95	.5728	.02861	-.0139	.1955	.1737	.1913	.5614	.11738	4.78
440.25	0.00	11.13	.7190	.02593	-.0214	.2408	.2150	.2349	.7004	.16428	4.26
440.30	0.00	13.37	.8717	.02298	-.0281	.2868	.2579	.2785	.8427	.22395	3.76
440.19	0.00	15.61	1.0185	.01966	-.0267	.3370	.3034	.3250	.9756	.29306	3.33
440.21	0.00	17.89	1.1623	.01713	-.0262	.3864	.3485	.3697	1.1008	.37335	2.95
440.35	0.00	20.04	1.3008	.01536	-.0346	.4286	.3902	.4062	1.2167	.46019	2.64
440.30	0.00	21.53	1.3956	.01442	-.0433	.4527	.4152	.4261	1.2930	.52558	2.46
440.28	0.00	-.04	-.0265	.03836	-.0060	-.0157	-.0121	-.0157	-.0265	.03838	-.69
MACH NO 1.030 CONFIG. 7											
Q	BETA	ALPHA	CN	CA	CM	CNC	CMC	CLC	CL	CD	L/D
400.99	0.00	-4.49	-.2841	.02986	-.0250	-.1302	-.1148	-.1280	-.2809	.05199	-5.40
400.98	0.00	-2.28	-.1546	.03316	-.0191	-.0703	-.0621	-.0693	-.1532	.03929	-3.90
401.07	0.00	-.04	-.0229	.03340	-.0071	-.0136	-.0115	-.0135	-.0229	.03342	-.69
400.70	0.00	2.19	.1102	.03219	-.0016	.0369	.0336	.0360	.1089	.03638	2.99
400.72	0.00	4.39	.2652	.02858	-.0049	.0929	.0820	.0914	.2623	.04878	5.38
400.72	0.00	6.66	.4349	.02462	-.0080	.1552	.1370	.1528	.4291	.07492	5.73
401.14	0.00	8.88	.6036	.02172	-.0107	.2146	.1892	.2110	.5930	.11464	5.17
401.66	0.00	11.17	.7707	.01904	-.0054	.2762	.2429	.2708	.7524	.16799	4.48
400.76	0.00	13.42	.9384	.01635	-.0033	.3332	.2940	.3253	.9089	.23370	3.89
401.44	0.00	15.64	1.1080	.01385	-.0050	.3858	.3409	.3743	1.0633	.31211	3.41
400.48	0.00	17.90	1.2637	.01036	-.0088	.4181	.3752	.4022	1.1993	.39836	3.01
401.23	0.00	20.12	1.4237	.00912	-.0141	.4599	.4137	.4379	1.3337	.49824	2.68
400.92	0.00	21.58	1.5316	.00804	-.0178	.4897	.4405	.4626	1.4213	.57079	2.49
400.94	0.00	-.04	-.0225	.03325	-.0098	-.0160	-.0135	-.0160	-.0224	.03327	-.67
MACH NO .950 CONFIG. 7											
Q	BETA	ALPHA	CN	CA	CM	CNC	CMC	CLC	CL	CD	L/D
373.89	0.00	-4.41	-.2959	.01656	-.0123	-.1229	-.1127	-.1214	-.2937	.03926	-7.48
373.96	0.00	-2.24	-.1591	.01773	-.0106	-.0631	-.0599	-.0625	-.1583	.02392	-6.61
374.01	0.00	-.04	-.0242	.01897	-.0036	-.0092	-.0104	-.0092	-.0242	.01899	-1.27
374.11	0.00	2.16	.1112	.01823	.0008	.0395	.0348	.0391	.1104	.02240	4.93
374.16	0.00	4.37	.2695	.01567	.0009	.0982	.0876	.0974	.2675	.03614	7.40
373.84	0.00	6.62	.4413	.01387	-.0040	.1598	.1427	.1583	.4368	.06462	6.76
374.53	0.00	8.87	.6088	.01337	-.0083	.2157	.1939	.2130	.5995	.10713	5.60
374.34	0.00	11.03	.7639	.01181	-.0147	.2600	.2370	.2557	.7475	.15772	4.74
374.46	0.00	13.30	.9289	.01133	-.0076	.3135	.2859	.3066	.9014	.22470	4.01
374.16	0.00	15.50	1.0789	.00942	-.0034	.3612	.3294	.3509	1.0371	.29748	3.49
374.49	0.00	17.80	1.2465	.00797	-.0207	.4190	.3794	.4031	1.1844	.38858	3.05
374.29	0.00	20.02	1.3978	.00449	.0469	.4751	.4285	.4520	1.3119	.48275	2.72
374.30	0.00	21.49	1.4876	.00279	.0588	.5043	.4551	.4759	1.3832	.54765	2.53
374.16	0.00	-.03	-.0237	.01882	-.0054	-.0104	-.0111	-.0104	-.0237	.01883	-1.26

MACH NO .900 CONFIG. 7

Q	BETA	ALPHA	CN	CA	CM	CNC	CMC	CLC	CL	CD	L/D
354.54	0.00	-4.43	-.2881	.01424	-.0201	-.1204	-.1128	-.1195	-.2862	.03646	-7.85
354.61	0.00	-2.16	-.1466	.01652	-.0158	-.0596	-.0576	-.0592	-.1459	.02203	-6.62
354.90	0.00	-.02	-.0210	.01792	-.0045	-.0081	-.0092	-.0081	-.0210	.01793	-1.17
354.36	0.00	2.18	.1082	.01684	.0047	.0403	.0365	.0400	.1075	.02094	5.13
354.55	0.00	4.37	.2613	.01337	.0085	.0981	.0892	.0976	.2595	.03323	7.81
354.78	0.00	6.61	.4307	.01087	.0090	.1596	.1452	.1585	.4266	.06038	7.06
354.99	0.00	8.80	.5964	.00928	-.0042	.2129	.1958	.2108	.5880	.10044	5.85
355.30	0.00	11.00	.7590	.00885	-.0071	.2557	.2369	.2520	.7433	.15351	4.84
354.80	0.00	13.21	.9152	.00880	-.0031	.3007	.2784	.2943	.8889	.21772	4.08
354.80	0.00	15.43	1.0680	.00823	.0117	.3529	.3248	.3427	1.0274	.29201	3.52
354.50	0.00	17.68	1.2300	.00673	-.0266	.4077	.3733	.3920	1.1699	.37998	3.08
354.70	0.00	19.91	1.3914	.00402	.0445	.4630	.4228	.4403	1.3068	.47763	2.74
354.26	0.00	21.38	1.4620	.00153	.0831	.4996	.4554	.4713	1.3608	.53440	2.55
354.55	0.00	-.04	-.0206	.01797	-.0067	-.0101	-.0107	-.0101	-.0206	.01799	-1.14

MACH NO .700 CONFIG. 7

Q	BETA	ALPHA	CN	CA	CM	CNC	CMC	CLC	CL	CD	L/D
261.35	0.00	-4.34	-.2649	.01445	-.0282	-.1121	-.1061	-.1114	-.2630	.03444	-7.64
261.73	0.00	-2.15	-.1368	.01656	-.0177	-.0557	-.0541	-.0554	-.1361	.02169	-6.28
261.04	0.00	-1.09	-.0792	.01797	-.0124	-.0321	-.0317	-.0320	-.0789	.01948	-4.05
261.73	0.00	-.03	-.0207	.01798	-.0054	-.0083	-.0091	-.0083	-.0207	.01799	-1.15
261.27	0.00	2.10	.0962	.01702	.0057	.0364	.0338	.0362	.0955	.02054	4.65
260.88	0.00	4.25	.2360	.01363	.0143	.0891	.0831	.0887	.2343	.03110	7.53
260.96	0.00	5.33	.3120	.01206	.0189	.1185	.1099	.1179	.3096	.04102	7.55
261.35	0.00	6.39	.3865	.01051	.0217	.1466	.1366	.1458	.3829	.05345	7.16
261.50	0.00	8.57	.5372	.00732	.0259	.1979	.1865	.1964	.5301	.08729	6.07
260.66	0.00	10.74	.6866	.00548	.0311	.2434	.2312	.2404	.6735	.13332	5.05
261.12	0.00	12.87	.8569	.00343	.0478	.2967	.2817	.2913	.8151	.18969	4.30
261.12	0.00	15.06	.9786	.00162	.0697	.3484	.3311	.3396	.9446	.25580	3.69
261.04	0.00	17.19	1.1240	-.00068	.0913	.3992	.3790	.3856	1.0740	.33158	3.24
261.27	0.00	19.40	1.2755	-.00250	.1214	.4563	.4330	.4364	1.2040	.42122	2.86
261.35	0.00	20.79	1.3566	-.00397	.1361	.4831	.4589	.4587	1.2697	.47784	2.66
261.35	0.00	-.00	-.0171	.01832	-.0059	-.0078	-.0084	-.0078	-.0171	.01832	-.93

TABLE III.- Continued

MACH NO 1.200 CONFIG. 8											
Q	BETA	ALPHA	CN	CA	CM	CNC	CMC	CLC	CL	CD	L/D
440.42	0.00	-4.31	-.2899	.03272	.0935	-.0102	-.0233	-.0090	-.2867	.05440	-5.27
440.70	0.00	-2.14	-.1473	.03532	.0474	-.0046	-.0121	-.0041	-.1458	.04079	-3.58
440.84	0.00	-.00	-.0153	.03629	.0057	.0001	-.0019	.0002	-.0153	.03629	-.42
440.88	0.00	2.13	.1179	.03552	-.0349	.0060	.0096	.0055	.1165	.03987	2.92
440.88	0.00	4.28	.2628	.03291	-.0791	.0114	.0205	.0104	.2596	.05243	4.95
440.86	0.00	6.44	.4158	.03098	-.1291	.0178	.0328	.0161	.4097	.07746	5.29
440.67	0.00	8.59	.5605	.02936	-.1762	.0245	.0451	.0221	.5498	.11275	4.88
440.56	0.00	10.71	.6935	.02859	-.2174	.0317	.0581	.0283	.6761	.15696	4.31
440.58	0.00	12.86	.8226	.02755	-.2578	.0395	.0717	.0349	.7959	.21001	3.79
440.56	0.00	14.97	.9115	.02671	-.2736	.0483	.0867	.0423	.8737	.26124	3.34
440.49	0.00	17.09	1.0207	.02534	-.3024	.0580	.1031	.0503	.9682	.32422	2.99
440.53	0.00	19.21	1.1428	.02564	-.3470	.0682	.1206	.0583	1.0708	.40018	2.68
440.53	0.00	20.57	1.2131	.02484	-.3679	.0749	.1322	.0634	1.1270	.44954	2.51
440.90	0.00	-.00	-.0128	.03612	.0048	.0006	-.0013	.0006	-.0128	.03612	-.35
MACH NO 1.030 CONFIG. 8											
Q	BETA	ALPHA	CN	CA	CM	CNC	CMC	CLC	CL	CD	L/D
401.32	0.00	-4.30	-.3078	.02832	.0878	-.0096	-.0227	-.0088	-.3048	.05130	-5.94
401.27	0.00	-2.17	-.1558	.03156	.0434	-.0045	-.0122	-.0042	-.1545	.03743	-4.13
401.43	0.00	-.00	-.0153	.03419	.0045	.0003	-.0018	.0003	-.0153	.03419	-.45
401.72	0.00	2.13	.1270	.03321	-.0355	.0056	.0089	.0052	.1256	.03790	3.32
401.32	0.00	4.28	.2793	.03006	-.0753	.0110	.0200	.0103	.2763	.05079	5.44
400.98	0.00	6.44	.4387	.02745	-.1248	.0166	.0311	.0154	.4329	.07646	5.66
401.13	0.00	8.60	.5959	.02581	-.1743	.0236	.0440	.0220	.5853	.11467	5.10
401.64	0.00	10.71	.7321	.02449	-.2158	.0292	.0550	.0279	.7148	.16007	4.47
400.96	0.00	12.85	.8705	.02157	-.2579	.0320	.0642	.0324	.8439	.21460	3.93
401.27	0.00	14.98	.9859	.01959	-.2872	.0388	.0765	.0394	.9474	.27377	3.46
401.41	0.00	17.08	1.0861	.01821	-.3100	.0458	.0890	.0464	1.0328	.33639	3.07
401.26	0.00	19.18	1.1815	.01871	-.3467	.0523	.1002	.0526	1.1098	.40581	2.73
401.06	0.00	20.50	1.2541	.01881	-.3786	.0570	.1080	.0571	1.1681	.45679	2.56
401.74	0.00	-.01	-.0129	.03392	.0036	.0003	-.0017	.0003	-.0129	.03392	-.38
MACH NO .950 CONFIG. 8											
Q	BETA	ALPHA	CN	CA	CM	CNC	CMC	CLC	CL	CD	L/D
374.60	0.00	-4.30	-.2903	.01667	.0668	-.0080	-.0202	-.0080	-.2882	.03836	-7.51
374.60	0.00	-2.16	-.1433	.01961	.0288	-.0037	-.0109	-.0037	-.1424	.02501	-5.70
374.65	0.00	-.03	-.0156	.02108	.0034	.0010	-.0012	.0010	-.0156	.02108	-.74
374.65	0.00	2.13	.1082	.02069	-.0181	.0052	.0082	.0052	.1074	.02470	4.35
374.65	0.00	4.27	.2559	.01848	-.0535	.0097	.0182	.0097	.2538	.03748	6.77
374.17	0.00	6.43	.4024	.01696	-.0867	.0152	.0285	.0152	.3980	.06191	6.43
374.68	0.00	8.55	.5406	.01757	-.1217	.0210	.0394	.0210	.5319	.09778	5.44
374.91	0.00	10.67	.6557	.01683	-.1472	.0268	.0501	.0268	.6412	.13798	4.65
374.97	0.00	12.78	.7647	.01772	-.1766	.0330	.0614	.0330	.7418	.18640	3.98
374.92	0.00	14.87	.8735	.01859	-.2157	.0393	.0725	.0392	.8395	.24207	3.47
374.47	0.00	16.96	.9893	.01810	-.2533	.0468	.0854	.0466	.9410	.30597	3.08
374.50	0.00	19.04	1.0885	.01827	-.2889	.0540	.0979	.0534	1.0229	.37245	2.75
374.61	0.00	20.35	1.1227	.01974	-.3104	.0583	.1053	.0575	1.0457	.40888	2.56
374.89	0.00	-.01	-.0147	.02089	.0033	.0008	-.0013	.0008	-.0147	.02089	-.70

MACH NO .900 CONFIG. 8

Q	BETA	ALPHA	CN	CA	CM	CNC	CMC	CLC	CL	CD	L/D
355.29	0.00	-4.29	-.2906	.00860	.0605	-.0080	-.0198	-.0081	-.2892	.03032	-9.54
355.23	0.00	-2.15	-.1438	.01266	.0275	-.0037	-.0108	-.0037	-.1433	.01804	-7.94
355.48	0.00	-.02	-.0186	.01460	.0041	.0006	-.0015	.0006	-.0186	.01460	-1.27
355.48	0.00	2.11	.1065	.01379	-.0169	.0053	.0082	.0053	.1059	.01771	5.98
355.30	0.00	4.26	.2541	.01054	-.0464	.0103	.0182	.0102	.2526	.02941	8.59
355.36	0.00	6.40	.3859	.01046	-.0698	.0156	.0286	.0155	.3824	.05342	7.16
355.82	0.00	8.53	.5044	.01220	-.0930	.0213	.0391	.0212	.4971	.08692	5.72
355.12	0.00	10.60	.5744	.01636	-.1066	.0271	.0495	.0270	.5616	.12178	4.61
355.24	0.00	12.70	.6980	.01759	-.1445	.0338	.0611	.0336	.6771	.17060	3.97
355.36	0.00	14.77	.7840	.01784	-.1680	.0399	.0717	.0395	.7536	.21708	3.47
355.11	0.00	16.84	.8749	.01909	-.2021	.0469	.0836	.0462	.8318	.27175	3.06
355.23	0.00	18.84	.8884	.02192	-.2207	.0536	.0952	.0528	.8337	.30767	2.71
355.11	0.00	20.16	.9340	.02148	-.2318	.0581	.1030	.0572	.8693	.34213	2.54
354.71	0.00	-.00	-.0142	.01474	.0035	.0000	-.0014	.0006	-.0142	.01474	-.96

MACH NO .700 CONFIG. 8

Q	BETA	ALPHA	CN	CA	CM	CNC	CMC	CLC	CL	CD	L/D
262.84	0.00	-4.21	-.2533	.00866	.0448	-.0082	-.0189	-.0082	-.2520	.02721	-9.26
262.22	0.00	-2.09	-.1249	.01251	.0212	-.0040	-.0102	-.0040	-.1244	.01705	-7.30
262.84	0.00	-.02	-.0166	.01479	.0032	.0016	-.0000	.0016	-.0166	.01479	-1.12
262.84	0.00	2.08	.0936	.01382	-.0138	.0053	.0081	.0053	.0931	.01720	5.41
262.30	0.00	4.18	.2208	.01102	-.0353	.0110	.0186	.0109	.2194	.02711	8.09
262.38	0.00	6.26	.3470	.00876	-.0557	.0166	.0289	.0164	.3440	.04657	7.39
262.61	0.00	8.38	.4605	.00776	-.0734	.0219	.0386	.0216	.4544	.07476	6.08
262.07	0.00	10.45	.5481	.00984	-.0841	.0287	.0500	.0282	.5372	.10906	4.93
262.76	0.00	12.51	.6524	.01101	-.1070	.0364	.0621	.0356	.6345	.15212	4.17
262.22	0.00	14.58	.7382	.01281	-.1288	.0431	.0736	.0421	.7112	.19827	3.59
262.22	0.00	16.60	.7984	.01593	-.1509	.0498	.0845	.0484	.7606	.24332	3.13
262.61	0.00	-.02	-.0143	.01486	.0030	.0000	-.0007	.0008	-.0143	.01486	-.96

TABLE III.- Continued

MACH NO 1.200 CONFIG. 9											
Q	BETA	ALPHA	CN	CA	CM	CNC	CMC	CLC	CL	CD	L/D
440.49	0.00	-4.42	-.3040	.03585	.0380	-.0676	-.0673	-.0659	-.3004	.05920	-5.07
440.72	0.00	-2.23	-.1559	.03847	.0190	-.0339	-.0345	-.0330	-.1543	.04451	-3.47
441.03	0.00	-.02	-.0174	.03960	.0030	-.0024	-.0035	-.0024	-.0174	.03961	-.44
440.98	0.00	2.17	.1174	.03874	-.0121	.0285	.0271	.0277	.1158	.04315	2.68
440.87	0.00	4.37	.2692	.03646	-.0302	.0632	.0610	.0615	.2656	.05688	4.67
440.81	0.00	6.61	.4304	.03452	-.0504	.0998	.0962	.0970	.4236	.08383	5.05
440.51	0.00	8.83	.5909	.03281	-.0725	.1352	.1308	.1310	.5789	.12311	4.70
440.40	0.00	11.03	.7469	.03191	-.0939	.1671	.1637	.1608	.7270	.17425	4.17
440.50	0.00	13.25	.8949	.03046	-.1128	.1966	.1950	.1878	.8641	.23474	3.68
440.60	0.00	15.45	1.0339	.02937	-.1343	.2186	.2217	.2074	.9887	.30365	3.26
440.72	0.00	17.64	1.1654	.02851	-.1459	.2463	.2523	.2317	1.1019	.38029	2.90
440.65	0.00	19.80	1.2954	.02771	-.1638	.2719	.2820	.2532	1.2094	.46479	2.60
440.32	0.00	21.18	1.3544	.02563	-.1692	.2786	.2937	.2570	1.2536	.51328	2.44
440.96	0.00	-.03	-.0174	.03951	.0028	-.0027	-.0036	-.0027	-.0173	.03952	-.44
MACH NO 1.030 CONFIG. 9											
Q	BETA	ALPHA	CN	CA	CM	CNC	CMC	CLC	CL	CD	L/D
401.58	0.00	-4.42	-.3275	.03368	.0309	-.0777	-.0755	-.0760	-.3239	.05884	-5.51
401.78	0.00	-2.22	-.1643	.03601	.0138	-.0396	-.0392	-.0388	-.1628	.04235	-3.84
401.54	0.00	-.04	-.0207	.03733	.0019	-.0044	-.0049	-.0044	-.0207	.03734	-.55
401.41	0.00	2.17	.1250	.03691	-.0109	.0301	.0287	.0294	.1235	.04161	2.97
401.34	0.00	4.39	.2920	.03404	-.0268	.0666	.0680	.0680	.2885	.05629	5.13
401.09	0.00	6.61	.4621	.03223	-.0457	.1095	.1052	.1069	.4553	.08519	5.34
401.21	0.00	8.82	.6298	.03125	-.0678	.1467	.1418	.1427	.6176	.12746	4.85
401.41	0.00	10.99	.7922	.02982	-.1016	.1703	.1700	.1650	.7720	.18036	4.28
401.25	0.00	13.17	.9499	.02899	-.1415	.1861	.1909	.1797	.9183	.24465	3.75
401.41	0.00	15.36	1.1071	.02867	-.1696	.2108	.2176	.2022	1.0600	.32082	3.30
401.50	0.00	17.55	1.2548	.02699	-.1942	.2356	.2439	.2235	1.1882	.40416	2.94
401.42	0.00	19.68	1.3555	.02523	-.1956	.2539	.2642	.2377	1.2679	.48027	2.64
401.13	0.00	21.07	1.4330	.02403	-.2018	.2650	.2773	.2456	1.3286	.53770	2.47
401.28	0.00	-.02	-.0163	.03748	.0012	-.0035	-.0039	-.0035	-.0163	.03749	-.44
MACH NO .950 CONFIG. 9											
Q	BETA	ALPHA	CN	CA	CM	CNC	CMC	CLC	CL	CD	L/D
374.23	0.00	-4.40	-.3048	.01998	.0096	-.0739	-.0737	-.0733	-.3024	.04330	-6.98
374.44	0.00	-2.22	-.1544	.02149	.0009	-.0378	-.0386	-.0375	-.1535	.02746	-5.59
374.87	0.00	-.05	-.0218	.02296	.0021	-.0038	-.0046	-.0038	-.0218	.02297	-.95
374.92	0.00	2.17	.1076	.02256	.0062	.0304	.0294	.0301	.1067	.02662	4.01
374.92	0.00	4.35	.2643	.02119	-.0046	.0680	.0662	.0673	.2619	.04117	6.36
374.11	0.00	6.58	.4315	.02089	-.0190	.1050	.1031	.1036	.4262	.07019	6.07
374.35	0.00	8.74	.5973	.02144	-.0471	.1326	.1330	.1305	.5871	.11199	5.24
374.71	0.00	10.93	.7684	.02122	-.0784	.1567	.1598	.1530	.7504	.16656	4.51
374.77	0.00	13.13	.9450	.02129	-.1152	.1839	.1879	.1780	.9155	.23538	3.89
375.03	0.00	15.30	1.1002	.02132	-.1387	.2104	.2158	.2016	1.0556	.31081	3.40
374.19	0.00	17.45	1.1865	.01948	-.1200	.2337	.2409	.2213	1.1261	.37448	3.01
374.17	0.00	19.58	1.2813	.01938	-.1205	.2512	.2609	.2344	1.2007	.44777	2.68
374.44	0.00	20.96	1.3558	.01965	-.1332	.2608	.2725	.2409	1.2591	.50332	2.50
374.86	0.00	-.01	-.0188	.02247	.0024	-.0030	-.0038	-.0030	-.0188	.02248	-.84

MACH NO .900 CONFIG. 9

Q	BETA	ALPHA	CN	CA	CM	CNC	CMC	CLC	CL	CD	L/D
355.98	0.00	-4.42	-.3123	.01194	.0064	-.0735	-.0740	-.0731	-.3104	.03599	-8.63
355.40	0.00	-2.20	-.1541	.01441	-.0005	-.0358	-.0372	-.0356	-.1534	.02033	-7.55
355.30	0.00	-.04	-.0239	.01623	.0024	-.0036	-.0045	-.0036	-.0239	.01624	-1.47
355.33	0.00	2.15	.1086	.01520	.0061	.0295	.0290	.0293	.1080	.01927	5.61
354.90	0.00	4.36	.2648	.01274	.0004	.0669	.0660	.0664	.2631	.03283	8.01
355.35	0.00	6.54	.4197	.01242	-.0047	.1034	.1026	.1025	.4155	.06011	6.91
355.38	0.00	8.72	.5654	.01307	-.0138	.1302	.1321	.1283	.5568	.09867	5.64
354.90	0.00	10.89	.6975	.01325	-.0183	.1565	.1596	.1530	.6824	.14480	4.71
355.18	0.00	13.05	.8344	.01395	-.0265	.1849	.1894	.1792	.8097	.20201	4.01
355.17	0.00	15.19	.9548	.01599	-.0376	.2095	.2154	.2011	.9172	.26562	3.45
355.10	0.00	17.33	1.0829	.01720	-.0542	.2322	.2397	.2202	1.0286	.33908	3.03
355.21	0.00	19.47	1.2029	.01789	-.0741	.2470	.2572	.2302	1.1281	.41785	2.70
354.93	0.00	20.81	1.2647	.01820	-.0833	.2566	.2690	.2367	1.1757	.46631	2.52
355.68	0.00	-.03	-.3207	.01660	.0026	-.0026	-.0034	-.0026	-.0207	.01661	-1.24

MACH NO .700 CONFIG. 9

Q	BETA	ALPHA	CN	CA	CM	CNC	CMC	CLC	CL	CD	L/D
261.76	0.00	-4.28	-.2731	.01130	-.0064	-.0675	-.0687	-.0671	-.2715	.03166	-8.57
262.92	0.00	-2.14	-.1376	.01436	-.0038	-.0326	-.0343	-.0325	-.1369	.01948	-7.03
261.84	0.00	-.01	-.0215	.01624	.0015	-.0029	-.0037	-.0029	-.0215	.01624	-1.32
262.52	0.00	2.09	.0913	.01541	.0065	.0265	.0269	.0264	.0907	.01873	4.84
261.61	0.00	4.22	.2296	.01271	.0093	.0619	.0622	.0615	.2280	.02958	7.71
262.29	0.00	6.36	.3708	.01062	.0115	.0983	.0987	.0975	.3674	.05166	7.11
262.38	0.00	8.51	.5059	.00869	.0121	.1264	.1292	.1248	.4990	.08343	5.98
261.84	0.00	10.63	.6356	.00926	.0157	.1600	.1636	.1570	.6230	.12630	4.93
261.92	0.00	12.75	.7708	.00910	.0133	.1909	.1957	.1859	.7498	.17905	4.19
262.15	0.00	14.87	.8994	.00796	.0073	.2151	.2217	.2074	.8672	.23856	3.64
262.38	0.00	16.99	1.0250	.00980	-.0032	.2372	.2459	.2254	.9774	.30880	3.17
262.14	0.00	19.08	1.1238	.01191	-.0166	.2471	.2583	.2294	1.0582	.37852	2.80
261.84	0.00	20.41	1.1780	.01315	-.0240	.2557	.2693	.2345	1.0994	.42308	2.60
262.46	0.00	-.02	-.0214	.01635	.0018	-.0027	-.0032	-.0027	-.0214	.01636	-1.31

TABLE III.- Continued

MACH NO 1.200 CONFIG. 10											
Q	BETA	ALPHA	CN	CA	CM	CNC	CMC	CLC	CL	CD	L/D
440.34	0.00	-4.42	-.3040	.03663	.0339	-.0725	-.0712	-.0706	-.3002	.05995	-5.01
439.92	0.00	-2.25	-.1600	.03929	.0175	-.0376	-.0374	-.0368	-.1583	.04553	-3.48
439.51	0.00	-.02	-.0168	.04015	.0024	-.0055	-.0058	-.0055	-.0168	.04016	-.42
440.37	0.00	2.17	.1292	.03916	-.0143	.0254	.0250	.0246	.1276	.04403	2.90
440.80	0.00	4.42	.2896	.03660	-.0327	.0592	.0583	.0577	.2859	.05882	4.86
441.10	0.00	6.64	.4575	.03373	-.0542	.0937	.0918	.0913	.4505	.08637	5.22
441.12	0.00	8.87	.6241	.03136	-.0780	.1272	.1253	.1239	.6118	.12725	4.81
441.12	0.00	11.07	.7797	.02957	-.1013	.1565	.1557	.1520	.7595	.17877	4.25
441.12	0.00	13.28	.9316	.02797	-.1230	.1869	.1872	.1807	.9002	.24123	3.73
441.14	0.00	15.48	1.0678	.02720	-.1338	.2189	.2201	.2104	1.0217	.31125	3.28
440.67	0.00	17.68	1.2136	.02580	-.1561	.2476	.2510	.2362	1.1485	.39313	2.92
440.50	0.00	19.86	1.3447	.02444	-.1737	.2748	.2818	.2598	1.2564	.47976	2.62
440.37	0.00	20.93	1.4044	.02395	-.1863	.2792	.2912	.2628	1.3031	.52406	2.49
440.11	0.00	-.04	-.0171	.04012	.0010	-.0066	-.0064	-.0066	-.0171	.04013	-.43
MACH NO 1.030 CONFIG. 10											
Q	BETA	ALPHA	CN	CA	CM	CNC	CMC	CLC	CL	CD	L/D
401.61	0.00	-4.44	-.3225	.03445	.0253	-.0808	-.0788	-.0790	-.3188	.05929	-5.38
401.92	0.00	-2.24	-.1679	.03754	.0117	-.0421	-.0414	-.0412	-.1663	.04407	-3.77
401.12	0.00	-.05	-.0220	.03928	.0006	-.0074	-.0077	-.0074	-.0220	.03930	-.56
401.28	0.00	2.14	.1342	.03760	-.0146	.0266	.0257	.0259	.1327	.04259	3.11
401.32	0.00	4.39	.3069	.03444	-.0303	.0647	.0627	.0633	.3034	.05786	5.24
401.10	0.00	6.63	.4862	.03156	-.0490	.1034	.0995	.1013	.4793	.08748	5.48
401.10	0.00	8.85	.6559	.02983	-.0695	.1397	.1357	.1368	.6435	.13035	4.94
401.04	0.00	11.04	.8209	.02768	-.0991	.1674	.1661	.1636	.8004	.18437	4.34
401.21	0.00	13.23	.9859	.02600	-.1353	.1884	.1914	.1842	.9537	.25099	3.80
401.12	0.00	15.43	1.1511	.02437	-.1634	.2150	.2196	.2095	1.1031	.32975	3.35
401.04	0.00	17.60	1.2815	.02203	-.1670	.2433	.2477	.2350	1.2149	.40844	2.97
401.25	0.00	19.80	1.3924	.02026	-.1586	.2742	.2779	.2625	1.3032	.49070	2.66
400.95	0.00	20.87	1.4521	.01910	-.1691	.2855	.2894	.2721	1.3501	.53513	2.52
400.84	0.00	-.03	-.0180	.03880	-.0020	-.0079	-.0078	-.0079	-.0180	.03881	-.46
MACH NO .950 CONFIG. 10											
Q	BETA	ALPHA	CN	CA	CM	CNC	CMC	CLC	CL	CD	L/D
374.10	0.00	-4.42	-.3101	.02143	.0130	-.0745	-.0759	-.0738	-.3076	.04527	-6.79
374.23	0.00	-2.21	-.1572	.02298	.0004	-.0377	-.0396	-.0373	-.1562	.02902	-5.38
374.43	0.00	-.04	-.0189	.02347	.0003	-.0034	-.0050	-.0034	-.0189	.02349	-.81
374.43	0.00	2.17	.1180	.02262	.0024	.0295	.0280	.0292	.1170	.02706	4.32
374.34	0.00	4.39	.2785	.02063	-.0050	.0669	.0648	.0664	.2761	.04188	6.59
374.07	0.00	6.59	.4438	.02024	-.0130	.1039	.1013	.1029	.4385	.07101	6.18
374.26	0.00	8.79	.6038	.02009	-.0277	.1349	.1332	.1332	.5936	.11216	5.29
374.54	0.00	10.99	.7547	.01887	-.0451	.1575	.1590	.1550	.7373	.16235	4.54
373.97	0.00	13.17	.9019	.01687	-.0571	.1841	.1866	.1800	.8744	.22193	3.94
374.38	0.00	15.32	1.0195	.01918	-.0601	.2160	.2182	.2099	.9782	.28787	3.40
373.98	0.00	17.49	1.1748	.01906	-.0845	.2479	.2500	.2391	1.1147	.37134	3.00
374.13	0.00	19.67	1.3247	.01842	-.1045	.2785	.2807	.2663	1.2412	.46325	2.68
374.34	0.00	20.72	1.3733	.01813	-.1084	.2900	.2923	.2760	1.2780	.50288	2.54
374.44	0.00	-.02	-.0172	.02314	-.0006	-.0038	-.0051	-.0038	-.0172	.02314	-.74

MACH NO .900 CONFIG. 10

Q	BETA	ALPHA	CN	CA	CM	CNC	CMC	CLC	CL	CD	L/D
355.05	0.00	-4.41	-.3199	.01279	.0097	-.0742	-.0759	-.0736	-.3180	.03734	-8.52
354.66	0.00	-2.20	-.1622	.01521	-.0002	-.0374	-.0395	-.0371	-.1615	.02143	-7.53
354.68	0.00	-.04	-.0208	.01698	.0002	-.0038	-.0052	-.0038	-.0208	.01699	-1.22
355.56	0.00	2.16	.1189	.01595	.0030	.0291	.0282	.0289	.1183	.02043	5.79
355.20	0.00	4.38	.2800	.01256	-.0011	.0658	.0645	.0654	.2782	.03390	8.21
355.32	0.00	6.57	.4290	.01213	.0016	.1026	.1013	.1020	.4248	.06112	6.95
355.28	0.00	8.75	.5716	.01349	-.0007	.1326	.1329	.1313	.5629	.10032	5.61
354.74	0.00	10.91	.6962	.01451	-.0033	.1574	.1595	.1549	.6808	.14603	4.66
354.99	0.00	13.07	.8152	.01699	-.0052	.1890	.1909	.1849	.7903	.20086	3.93
354.71	0.00	15.21	.9452	.01865	-.0177	.2213	.2231	.2150	.9072	.26594	3.41
354.80	0.00	17.41	1.0985	.01779	-.0340	.2528	.2550	.2437	1.0429	.34558	3.02
354.67	0.00	19.54	1.2253	.01725	-.0461	.2801	.2823	.2677	1.1489	.42612	2.70
354.67	0.00	20.60	1.2783	.01677	-.0486	.2935	.2958	.2793	1.1907	.46544	2.56
354.98	0.00	-.02	-.0185	.01698	-.0002	-.0040	-.0052	-.0040	-.0185	.01699	-1.09

MACH NO .700 CONFIG. 10

Q	BETA	ALPHA	CN	CA	CM	CNC	CMC	CLC	CL	CD	L/D
262.19	0.00	-4.27	-.2747	.01193	-.0064	-.0679	-.0700	-.0675	-.2730	.03237	-8.43
261.96	0.00	-2.15	-.1436	.01513	-.0046	-.0339	-.0360	-.0337	-.1430	.02052	-6.97
261.96	0.00	-.02	-.0215	.01689	-.0007	-.0043	-.0055	-.0043	-.0215	.01690	-1.27
261.96	0.00	2.10	.0982	.01602	.0040	.0250	.0247	.0248	.0976	.01961	4.98
261.96	0.00	4.24	.2385	.01280	.0084	.0599	.0599	.0596	.2369	.03040	7.79
262.27	0.00	6.38	.3875	.01050	.0129	.0977	.0979	.0972	.3839	.05351	7.17
261.58	0.00	8.53	.5179	.00847	.0199	.1287	.1305	.1276	.5109	.08515	6.00
262.27	0.00	10.64	.6384	.00992	.0268	.1603	.1632	.1582	.6256	.12766	4.90
262.35	0.00	12.79	.7791	.00963	.0216	.1927	.1967	.1891	.7576	.18191	4.16
261.58	0.00	14.91	.8912	.01025	.0280	.2252	.2302	.2194	.8585	.23916	3.59
261.97	0.00	17.01	1.0147	.01128	.0288	.2582	.2647	.2494	.9670	.30762	3.14
261.96	0.00	19.11	1.1028	.01230	.0290	.2862	.2936	.2739	1.0381	.37259	2.79
262.35	0.00	20.12	1.1050	.01551	.0296	.2965	.3051	.2831	1.0322	.39466	2.62
262.12	0.00	-.02	-.0160	.01709	-.0006	-.0032	-.0043	-.0032	-.0160	.01710	-0.94

TABLE III.- Continued

MACH NO 1.200 CONFIG. 11											
Q	BETA	ALPHA	CN	CA	CM	CNC	CMC	CLC	CL	CD	L/D
441.01	0.00	-4.59	-.3317	.03831	-.0055	-.1123	-.0999	-.1103	-.3275	-.06475	-5.06
440.33	0.00	-2.27	-.1688	.04086	-.0034	-.0562	-.0512	-.0552	-.1671	-.04752	-3.52
440.44	0.00	-.05	-.0236	.04191	-.0011	-.0056	-.0064	-.0056	-.0235	-.04193	-1.56
440.65	0.00	2.21	.1219	.04150	.0052	.0436	.0372	.0427	.1202	.04617	2.60
440.75	0.00	4.48	.2822	.03943	.0075	.0986	.0856	.0966	.2783	.06133	4.54
440.67	0.00	6.72	.4498	.03687	.0083	.1555	.1348	.1522	.4424	.08926	4.96
441.18	0.00	9.05	.6288	.03463	.0010	.2123	.1855	.2070	.6155	.13313	4.62
441.27	0.00	11.26	.7960	.03217	-.0062	.2609	.2302	.2530	.7744	.18701	4.14
440.41	0.00	13.56	.9627	.02993	-.0186	.3016	.2710	.2900	.9289	.25480	3.65
439.99	0.00	15.80	1.1221	.02840	-.0335	.3353	.3069	.3197	1.0719	.33283	3.22
440.52	0.00	17.97	1.2598	.02733	-.0322	.3750	.3465	.3532	1.1899	.41466	2.87
440.62	0.00	20.31	1.4112	.02637	-.0450	.4110	.3850	.3822	1.3142	.51461	2.55
440.42	0.00	21.69	1.4988	.02514	-.0539	.4268	.4040	.3936	1.3834	.57727	2.40
440.78	0.00	-.04	-.0214	.04221	-.0003	-.0066	-.0069	-.0066	-.0214	.04222	-1.51
MACH NO 1.030 CONFIG. 11											
Q	BETA	ALPHA	CN	CA	CM	CNC	CMC	CLC	CL	CD	L/D
401.66	0.00	-4.57	-.3483	.03612	-.0176	-.1271	-.1127	-.1251	-.3444	.06376	-5.40
401.57	0.00	-2.26	-.1729	.03887	-.0130	-.0644	-.0581	-.0635	-.1712	.04566	-3.75
401.30	0.00	-.03	-.0232	.04126	-.0023	-.0072	-.0069	-.0072	-.0232	.04127	-1.56
401.60	0.00	2.23	.1273	.04083	.0060	.0452	.0395	.0443	.1256	.04576	2.75
401.60	0.00	4.47	.2957	.03770	.0104	.1048	.0918	.1030	.2918	.06062	4.81
402.27	0.00	6.76	.4853	.03455	.0126	.1707	.1493	.1675	.4779	.09141	5.23
402.00	0.00	8.98	.6649	.03237	.0094	.2267	.2012	.2216	.6517	.13575	4.80
402.09	0.00	11.25	.8466	.02977	-.0116	.2637	.2428	.2562	.8245	.19442	4.24
401.99	0.00	13.47	1.0222	.02835	-.0299	.3027	.2822	.2924	.9875	.26575	3.72
401.31	0.00	15.67	1.1922	.02754	-.0429	.3425	.3177	.3274	1.1404	.34857	3.27
401.39	0.00	18.02	1.3551	.02647	-.0406	.3868	.3597	.3651	1.2804	.44434	2.88
401.60	0.00	20.16	1.5001	.02506	-.0493	.4220	.3925	.3932	1.3996	.54057	2.59
401.16	0.00	21.66	1.6326	.02406	-.0539	.4462	.4153	.4107	1.4805	.61396	2.41
401.71	0.00	-.03	-.0228	.04133	-.0029	-.0091	-.0089	-.0091	-.0228	.04134	-1.55
MACH NO .950 CONFIG. 11											
Q	BETA	ALPHA	CN	CA	CM	CNC	CMC	CLC	CL	CD	L/D
374.68	0.00	-4.52	-.3278	.02188	-.0343	-.1218	-.1115	-.1206	-.3250	.04766	-6.82
374.64	0.00	-2.24	-.1632	.02270	-.0219	-.0613	-.0574	-.0607	-.1622	.02907	-5.58
374.64	0.00	-.03	-.0240	.02391	-.0023	-.0081	-.0086	-.0081	-.0240	.02392	-1.00
374.69	0.00	2.22	.1147	.02374	.0176	.0434	.0395	.0428	.1137	.02816	4.04
374.69	0.00	4.41	.2734	.02277	.0312	.1030	.0933	.1018	.2709	.04373	6.19
374.69	0.00	6.66	.4421	.02193	.0373	.1605	.1462	.1582	.4366	.07302	5.98
373.99	0.00	8.91	.6255	.02102	.0256	.2073	.1930	.2033	.6147	.11765	5.23
374.63	0.00	11.18	.8201	.02230	.0012	.2497	.2345	.2439	.8002	.18092	4.42
374.86	0.00	13.41	1.0063	.02250	-.0166	.2898	.2725	.2800	.9736	.25532	3.81
374.43	0.00	15.62	1.1441	.02115	-.0016	.3366	.3152	.3220	1.0961	.32848	3.34
374.21	0.00	17.88	1.3036	.02031	.0053	.3818	.3567	.3607	1.2344	.41958	2.94
374.74	0.00	20.00	1.4466	.01885	.0074	.4213	.3928	.3920	1.3528	.51259	2.64
374.77	0.00	21.53	1.5272	.01868	.0157	.4457	.4157	.4102	1.4138	.57786	2.45
374.90	0.00	-.04	-.0219	.02356	-.0018	-.0073	-.0077	-.0073	-.0219	.02357	-1.93

MACH NO .900 CONFIG. 11

Q	BETA	ALPHA	CN	CA	CM	CNC	CMC	CLC	CL	CD	L/D
355.55	0.00	-4.52	-.3323	.01301	-.0396	-.1232	-.1143	-.1223	-.3302	.03915	-8.43
355.66	0.00	-2.20	-.1619	.01540	-.0242	-.0602	-.0570	-.0598	-.1612	.02161	-7.46
355.11	0.00	-.04	-.0267	.01712	-.0019	-.0078	-.0082	-.0077	-.0267	.01714	-1.56
354.56	0.00	2.20	.1100	.01630	.0203	.0433	.0399	.0429	.1093	.02050	5.33
354.65	0.00	4.40	.2731	.01344	.0360	.1026	.0942	.1019	.2712	.03437	7.89
354.28	0.00	6.66	.4383	.01262	.0474	.1594	.1472	.1578	.4339	.06336	6.85
354.22	0.00	8.87	.6027	.01241	.0480	.2030	.1915	.2000	.5935	.10515	5.64
354.78	0.00	11.09	.7819	.01308	.0417	.2465	.2331	.2408	.7647	.16328	4.68
354.35	0.00	13.29	.9248	.01303	.0503	.2887	.2725	.2794	.8970	.22534	3.98
354.86	0.00	15.54	1.0965	.01417	.0515	.3371	.3179	.3229	1.0526	.30749	3.42
354.36	0.00	17.69	1.2213	.01470	.0603	.3765	.3540	.3562	1.1591	.38512	3.01
354.42	0.00	19.90	1.3718	.01581	.0589	.4172	.3913	.3887	1.2845	.48169	2.67
354.47	0.00	21.44	1.4541	.01624	.0583	.4360	.4084	.4010	1.3475	.54670	2.46
353.95	0.00	-.03	-.0227	.01719	-.0013	-.0064	-.0068	-.0064	-.0227	.01720	-1.32

MACH NO .700 CONFIG. 11

Q	BETA	ALPHA	CN	CA	CM	CNC	CMC	CLC	CL	CD	L/D
261.18	0.00	-4.36	-.2831	.01242	-.0481	-.1122	-.1050	-.1115	-.2873	.03438	-8.36
261.72	0.00	-2.16	-.1471	.01509	-.0271	-.0573	-.0548	-.0571	-.1465	.02063	-7.10
261.57	0.00	-.03	-.0234	.01701	-.0027	-.0070	-.0073	-.0070	-.0234	.01702	-1.38
261.41	0.00	2.14	.0981	.01620	.0187	.0393	.0371	.0390	.0974	.01985	4.91
261.34	0.00	4.25	.2343	.01341	.0398	.0921	.0864	.0916	.2326	.03075	7.57
261.34	0.00	6.44	.3916	.01066	.0610	.1517	.1417	.1504	.3880	.05452	7.12
261.27	0.00	8.63	.5388	.00903	.0760	.1989	.1893	.1964	.5314	.08977	5.92
261.49	0.00	10.75	.6836	.00841	.0876	.2432	.2322	.2386	.6700	.13579	4.93
261.41	0.00	12.91	.8328	.00750	.1000	.2906	.2782	.2830	.8100	.19339	4.19
260.80	0.00	15.09	.9864	.00669	.1134	.3402	.3253	.3279	.9506	.26332	3.61
260.88	0.00	17.22	1.1332	.00700	.1195	.3816	.3641	.3631	1.0803	.34220	3.16
261.18	0.00	19.36	1.2582	.00966	.1136	.4065	.3857	.3794	1.1839	.42620	2.78
261.12	0.00	20.76	1.3423	.01144	.1040	.4123	.3916	.3784	1.2511	.48647	2.57
261.11	0.00	-.03	-.0222	.01724	-.0029	-.0070	-.0071	-.0070	-.0222	.01725	-1.29

TABLE III.- Continued

MACH NO 1.200 CONFIG. 12											
Q	BETA	ALPHA	CN	CA	CM	CNC	CMC	CLC	CL	CD	L/D
440.94	0.00	-4.55	-.3252	.03958	-.0126	-.1203	-.1056	-.1182	-.3210	-.06523	-4.92
440.63	0.00	-2.28	-.1733	.04249	-.0060	-.0637	-.0561	-.0627	-.1715	.04937	-3.47
440.50	0.00	-.02	-.0198	.04328	-.0016	-.0119	-.0101	-.0119	-.0198	.04328	-.46
440.70	0.00	2.23	.1357	.04202	-.0025	.0359	.0329	.0350	.1340	.04726	2.83
440.70	0.00	4.51	.3099	.03881	-.0035	.0891	.0801	.0874	.3059	.06307	4.85
440.70	0.00	6.79	.4957	.03484	-.0087	.1443	.1281	.1415	.4881	.09324	5.23
440.92	0.00	9.09	.6763	.03193	-.0165	.1971	.1749	.1930	.6627	.13832	4.79
440.52	0.00	11.33	.8308	.02968	-.0189	.2472	.2201	.2411	.8087	.19235	4.20
440.32	0.00	13.61	1.0221	.02661	-.0336	.2949	.2645	.2861	.9872	.26634	3.71
440.61	0.00	15.87	1.1677	.02439	-.0285	.3421	.3088	.3293	1.1165	.34268	3.26
440.44	0.00	18.11	1.3141	.02233	-.0318	.3870	.3513	.3693	1.2420	.42965	2.89
440.45	0.00	20.28	1.4529	.02024	-.0564	.4063	.3797	.3842	1.3558	.52253	2.59
440.61	0.00	21.40	1.5309	.01968	-.0627	.4252	.3989	.4002	1.4183	.57680	2.46
440.72	0.00	-.04	-.0214	.04344	-.0062	-.0154	-.0121	-.0154	-.0214	.04345	-.49
MACH NO 1.030 CONFIG. 12											
Q	BETA	ALPHA	CN	CA	CM	CNC	CMC	CLC	CL	CD	L/D
401.92	0.00	-4.54	-.3344	.03764	-.0275	-.1324	-.1162	-.1302	-.3304	.06398	-5.16
401.90	0.00	-2.29	-.1824	.04114	-.0160	-.0715	-.0630	-.0706	-.1806	.04839	-3.73
401.48	0.00	-.01	-.0224	.04195	-.0066	-.0143	-.0121	-.0142	-.0224	.04196	-.53
401.52	0.00	2.22	.1411	.04080	-.0025	.0384	.0349	.0375	.1394	.04623	3.02
401.15	0.00	4.51	.3262	.03671	.0012	.0981	.0873	.0965	.3223	.06223	5.18
401.27	0.00	6.78	.5248	.03335	.0012	.1613	.1421	.1587	.5172	.09511	5.44
401.18	0.00	9.07	.7082	.03006	-.0028	.2154	.1922	.2116	.6946	.14133	4.91
401.61	0.00	11.32	.8969	.02618	-.0184	.2599	.2367	.2546	.8744	.20167	4.34
401.03	0.00	13.56	1.0804	.02228	-.0314	.3042	.2802	.2971	1.0450	.27504	3.80
401.70	0.00	15.84	1.2618	.01919	-.0331	.3524	.3246	.3418	1.2086	.36297	3.33
401.49	0.00	18.05	1.3867	.01758	-.0100	.3977	.3642	.3823	1.3130	.44637	2.94
401.30	0.00	20.27	1.5492	.01774	-.0262	.4426	.4040	.4213	1.4471	.55342	2.61
401.38	0.00	21.38	1.6258	.01712	-.0318	.4629	.4227	.4381	1.5077	.60858	2.48
401.64	0.00	-.03	-.0219	.04263	-.0089	-.0163	-.0134	-.0163	-.0219	.04264	-.51
MACH NO .950 CONFIG. 12											
Q	BETA	ALPHA	CN	CA	CM	CNC	CMC	CLC	CL	CD	L/D
374.81	0.00	-4.49	-.3232	.02345	-.0335	-.1243	-.1141	-.1227	-.3204	.04871	-6.58
375.04	0.00	-2.26	-.1685	.02456	-.0242	-.0648	-.0612	-.0642	-.1674	.03120	-5.37
374.81	0.00	-.03	-.0222	.02411	-.0048	-.0100	-.0106	-.0100	-.0222	.02412	-.92
374.68	0.00	2.21	.1216	.02343	.0141	.0402	.0361	.0397	.1206	.02811	4.29
374.48	0.00	4.46	.2942	.02167	.0253	.0987	.0888	.0978	.2917	.04449	6.56
374.59	0.00	6.72	.4728	.02112	.0350	.1576	.1424	.1560	.4671	.07634	6.12
374.43	0.00	8.96	.6477	.01907	.0410	.2094	.1919	.2066	.6368	.11990	5.31
375.81	0.00	11.23	.8361	.01807	.0309	.2551	.2359	.2506	.8166	.18052	4.52
375.41	0.00	13.46	.9862	.01521	.0424	.2960	.2747	.2894	.9555	.24440	3.91
374.79	0.00	15.66	1.1357	.01816	.0451	.3424	.3165	.3320	1.0886	.32412	3.36
375.59	0.00	17.92	1.3189	.01719	.0360	.3938	.3623	.3782	1.2496	.42212	2.96
373.97	0.00	20.11	1.4729	.01636	.0351	.4435	.4074	.4213	1.3775	.52184	2.64
374.96	0.00	21.23	1.5628	.01630	.0260	.4683	.4294	.4423	1.4509	.58107	2.50
374.98	0.00	-.04	-.0218	.02465	-.0068	-.0122	-.0126	-.0122	-.0217	.02467	-.88

MACH NO .900 CONFIG. 12

Q	BETA	ALPHA	CN	CA	CM	CNC	CMC	CLC	CL	CD	L/D
355.87	0.00	-4.49	-.3430	.01485	-.0327	-.1239	-.1154	-.1229	-.3408	.04168	-8.18
355.40	0.00	-2.26	-.1764	.01642	-.0240	-.0636	-.0608	-.0632	-.1756	.02336	-7.52
355.43	0.00	-.02	-.0265	.01810	-.0040	-.0103	-.0108	-.0103	-.0265	.01811	-1.47
355.66	0.00	2.19	.1210	.01705	.0149	.0406	.0372	.0402	.1202	.02167	5.55
354.96	0.00	4.46	.2947	.01285	.0309	.0998	.0912	.0992	.2928	.03571	8.20
355.14	0.00	6.70	.4677	.01180	.0490	.1600	.1468	.1589	.4631	.06630	6.99
355.43	0.00	8.93	.6234	.01160	.0629	.2087	.1941	.2065	.6141	.10823	5.67
355.29	0.00	11.13	.7735	.01264	.0715	.2494	.2336	.2455	.7565	.16172	4.68
355.43	0.00	13.33	.9075	.01504	.0857	.2951	.2751	.2883	.8796	.22386	3.93
355.15	0.00	15.55	1.0681	.01604	.0867	.3460	.3207	.3355	1.0247	.30183	3.40
355.49	0.00	17.79	1.2377	.01549	.0869	.3978	.3675	.3822	1.1738	.39286	2.99
354.84	0.00	19.98	1.3889	.01451	.0904	.4480	.4138	.4262	1.3004	.48820	2.66
354.93	0.00	21.07	1.4580	.01404	.0914	.4697	.4333	.4443	1.3554	.53731	2.52
354.73	0.00	-.03	-.0243	.01802	-.0054	-.0109	-.0110	-.0109	-.0243	.01804	-1.35

MACH NO .700 CONFIG. 12

Q	BETA	ALPHA	CN	CA	CM	CNC	CMC	CLC	CL	CD	L/D
262.78	0.00	-4.33	-.2924	.01361	-.0481	-.1142	-.1078	-.1134	-.2905	.03565	-8.15
262.78	0.00	-2.17	-.1544	.01679	-.0279	-.0590	-.0568	-.0587	-.1537	.02263	-6.79
262.13	0.00	-.02	-.0252	.01808	-.0054	-.0100	-.0101	-.0100	-.0252	.01809	-1.39
262.30	0.00	2.14	.1059	.01699	.0145	.0365	.0343	.0362	.1051	.02093	5.02
262.06	0.00	4.29	.2522	.01332	.0345	.0884	.0831	.0879	.2505	.03216	7.79
262.28	0.00	6.48	.4165	.00997	.0592	.1492	.1393	.1484	.4127	.05693	7.25
262.23	0.00	8.67	.5694	.00745	.0802	.2004	.1895	.1987	.5618	.09316	6.03
262.15	0.00	10.80	.7065	.00788	.0989	.2466	.2343	.2434	.6925	.14012	4.94
261.29	0.00	12.96	.8440	.00782	.1161	.2959	.2817	.2904	.8207	.19691	4.17
262.07	0.00	15.14	1.0078	.00682	.1276	.3474	.3307	.3384	.9710	.26972	3.60
262.15	0.00	17.29	1.1487	.00645	.1456	.3975	.3786	.3836	1.0949	.34764	3.15
261.30	0.00	19.43	1.2711	.00643	.1625	.4433	.4225	.4238	1.1965	.42883	2.79
262.08	0.00	20.52	1.3431	.00711	.1667	.4664	.4446	.4433	1.2554	.47738	2.63
262.07	0.00	-.03	-.0221	.01823	-.0050	-.0086	-.0087	-.0086	-.0221	.01824	-1.21

TABLE III.- Continued

MACH NO 1.200 CONFIG. 13											
Q	BETA	ALPHA	CN	CA	CM	CNC	CMC	CLC	CL	CD	L/D
440.85	0.00	-4.26	-.0753	.02209	-.0696	-.0661	-.0655	-.0645	-.0734	.02761	-2.66
440.82	0.00	-2.14	-.0398	.02258	-.0367	-.0336	-.0339	-.0328	-.0389	.02404	-1.62
440.87	0.00	-.01	-.0072	.02279	-.0053	-.0034	-.0040	-.0034	-.0072	.02280	-.31
440.86	0.00	2.10	.0254	.02250	.0255	.0265	.0254	.0257	.0246	.02342	1.05
440.81	0.00	4.23	.0611	.02218	.0590	.0594	.0576	.0578	.0593	.02663	2.23
440.91	0.00	6.34	.0982	.02156	.0943	.0939	.0907	.0912	.0953	.03228	2.95
440.86	0.00	8.47	.1357	.02097	.1280	.1271	.1233	.1231	.1312	.04073	3.22
440.84	0.00	10.60	.1696	.02065	.1627	.1581	.1548	.1523	.1629	.05150	3.16
440.75	0.00	12.70	.2032	.02018	.1936	.1875	.1853	.1795	.1938	.06438	3.01
440.72	0.00	14.80	.2307	.01979	.2201	.2107	.2120	.2002	.2180	.07805	2.79
440.69	0.00	16.92	.2620	.01928	.2493	.2361	.2403	.2227	.2450	.09470	2.59
440.52	0.00	19.03	.2972	.01875	.2801	.2641	.2712	.2463	.2748	.11462	2.40
440.56	0.00	20.41	.3197	.01818	.2996	.2813	.2908	.2604	.2933	.12857	2.28
440.65	0.00	-.01	-.0082	.02266	-.0049	-.0032	-.0037	-.0032	-.0082	.02267	-.36
MACH NO 1.030 CONFIG. 13											
Q	BETA	ALPHA	CN	CA	CM	CNC	CMC	CLC	CL	CD	L/D
401.54	0.00	-4.25	-.0831	.01793	-.0759	-.0754	-.0730	-.0738	-.0815	.02403	-3.39
401.77	0.00	-2.13	-.0453	.01819	-.0396	-.0391	-.0382	-.0383	-.0446	.01985	-2.24
401.70	0.00	-.00	-.0092	.01855	-.0054	-.0048	-.0050	-.0048	-.0092	.01855	-.50
401.50	0.00	2.10	.0258	.01853	.0279	.0282	.0270	.0274	.0251	.01946	1.29
401.63	0.00	4.22	.0646	.01782	.0637	.0652	.0627	.0636	.0631	.02253	2.80
401.63	0.00	6.33	.1054	.01722	.1012	.1027	.0985	.1002	.1028	.02873	3.58
401.43	0.00	8.47	.1462	.01639	.1383	.1403	.1352	.1365	.1422	.03775	3.77
401.05	0.00	10.59	.1860	.01536	.1756	.1769	.1709	.1714	.1800	.04928	3.65
400.74	0.00	12.71	.2267	.01503	.2097	.2124	.2060	.2043	.2178	.06454	3.37
402.14	0.00	14.81	.2566	.01434	.2377	.2384	.2343	.2276	.2444	.07944	3.08
401.54	0.00	16.86	.2808	.01343	.2622	.2575	.2575	.2441	.2648	.09430	2.81
401.42	0.00	18.98	.3139	.01255	.2940	.2841	.2860	.2662	.2927	.11395	2.57
401.18	0.00	20.37	.3359	.01280	.3146	.3016	.3050	.2800	.3104	.12889	2.41
401.32	0.00	-.00	-.0092	.01868	-.0048	-.0042	-.0044	-.0042	-.0092	.01868	-.49
MACH NO .950 CONFIG. 13											
Q	BETA	ALPHA	CN	CA	CM	CNC	CMC	CLC	CL	CD	L/D
374.23	0.00	-4.21	-.0778	.00974	-.0709	-.0711	-.0706	-.0700	-.0768	.01542	-4.98
374.28	0.00	-2.12	-.0419	.01023	-.0380	-.0372	-.0375	-.0367	-.0415	.01177	-3.52
374.33	0.00	-.00	-.0090	.01052	-.0055	-.0043	-.0046	-.0043	-.0090	.01052	-.86
374.66	0.00	2.08	.0234	.01027	.0256	.0268	.0263	.0263	.0230	.01112	2.07
374.63	0.00	4.19	.0621	.00988	.0607	.0631	.0615	.0621	.0612	.01439	4.25
374.54	0.00	6.32	.1025	.00966	.0979	.1023	.0996	.1003	.1008	.02089	4.82
374.65	0.00	8.42	.1415	.00920	.1325	.1378	.1341	.1345	.1387	.02983	4.65
374.59	0.00	10.52	.1751	.00873	.1635	.1684	.1656	.1636	.1706	.04055	4.21
374.60	0.00	12.61	.2059	.00848	.1908	.1955	.1941	.1891	.1990	.05320	3.74
374.26	0.00	14.69	.2396	.00840	.2199	.2233	.2224	.2141	.2297	.06889	3.33
374.28	0.00	16.81	.2811	.00841	.2548	.2573	.2565	.2435	.2666	.08935	2.98
374.66	0.00	18.89	.3115	.00813	.2824	.2807	.2818	.2623	.2921	.10854	2.69
374.40	0.00	20.26	.3274	.00810	.2980	.2933	.2961	.2716	.3043	.12096	2.52
374.53	0.00	-.02	-.0094	.01041	-.0065	-.0053	-.0055	-.0053	-.0094	.01041	-.91

MACH NO .900 CONFIG. 13

Q	BETA	ALPHA	CN	CA	CM	CNC	CMC	CLC	CL	CD	L/D
355.19	0.00	-4.22	-.0770	.00823	-.0713	-.0701	-.0705	-.0696	-.0762	.01387	-5.49
355.38	0.00	-2.11	-.0401	.00918	-.0366	-.0351	-.0362	-.0348	-.0397	.01065	-3.73
355.37	0.00	-.01	-.0060	.00939	-.0060	-.0038	-.0044	-.0038	-.0060	.00939	-.64
355.31	0.00	2.07	.0224	.00939	.0254	.0263	.0260	.0261	.0220	.01019	2.16
355.28	0.00	4.21	.0596	.00944	.0608	.0618	.0612	.0613	.0588	.01279	4.60
355.03	0.00	6.27	.0974	.00829	.0960	.0978	.0965	.0967	.0959	.01888	5.08
355.23	0.00	8.38	.1319	.00792	.1271	.1290	.1287	.1271	.1293	.02705	4.78
354.95	0.00	10.47	.1604	.00809	.1532	.1531	.1553	.1497	.1562	.03709	4.21
355.06	0.00	12.55	.1914	.00821	.1807	.1804	.1835	.1745	.1850	.04960	3.73
355.05	0.00	14.61	.2251	.00796	.2099	.2092	.2123	.2006	.2158	.06449	3.35
355.26	0.00	15.70	.2534	.00759	.2349	.2318	.2369	.2199	.2406	.08008	3.00
354.70	0.00	18.79	.2791	.00762	.2592	.2518	.2593	.2359	.2618	.09709	2.70
355.37	0.00	20.33	.2875	.00773	.2688	.2567	.2674	.2375	.2669	.10715	2.49
355.74	0.00	.00	-.0086	.00959	-.0051	-.0040	-.0045	-.0040	-.0086	.00959	-.90

MACH NO .700 CONFIG. 13

Q	BETA	ALPHA	CN	CA	CM	CNC	CMC	CLC	CL	CD	L/D
262.06	0.00	-4.14	-.0695	.00857	-.0634	-.0609	-.0624	-.0605	-.0687	.01357	-5.07
262.22	0.00	-2.07	-.0363	.00921	-.0332	-.0309	-.0324	-.0307	-.0360	.01052	-3.42
262.68	0.00	.01	-.0087	.00989	-.0050	-.0035	-.0039	-.0035	-.0087	.00989	-.88
262.46	0.00	2.05	.0189	.00966	.0233	.0233	.0238	.0231	.0185	.01033	1.79
262.98	0.00	4.08	.0518	.00878	.0545	.0546	.0555	.0542	.0510	.01244	4.10
261.84	0.00	6.26	.0900	.00814	.0896	.0898	.0913	.0890	.0886	.01791	4.95
263.06	0.00	8.24	.1193	.00727	.1198	.1178	.1203	.1163	.1170	.02430	4.81
261.84	0.00	10.32	.1488	.00721	.1470	.1444	.1486	.1417	.1451	.03376	4.30
262.76	0.00	12.39	.1831	.00647	.1780	.1734	.1790	.1691	.1774	.04561	3.89
262.83	0.00	14.45	.2118	.00584	.2029	.1974	.2050	.1908	.2036	.05849	3.48
261.91	0.00	16.47	.2347	.00576	.2248	.2161	.2262	.2063	.2234	.07208	3.10
262.15	0.00	18.50	.2510	.00635	.2397	.2274	.2401	.2132	.2360	.09564	2.76
262.01	0.00	19.93	.2517	.00652	.2431	.2275	.2434	.2096	.2344	.09192	2.55
262.99	0.00	-.00	-.0087	.00994	-.0040	-.0030	-.0034	-.0030	-.0087	.00994	-.87

TABLE III.- Continued

MACH NO 1.200 CONFIG. 14											
Q	BETA	ALPHA	CN	CA	CM	CNC	CMC	CLC	CL	CD	L/D
440.53	0.00	-4.28	-.0732	.02230	-.0681	-.0660	-.0646	-.0642	-.0714	-.02770	-2.58
440.70	0.00	-2.12	-.0373	.02320	-.0341	-.0324	-.0321	-.0316	-.0364	-.02456	-1.48
440.61	0.00	-.01	-.0036	.02329	-.0015	-.0008	-.0008	-.0008	-.0036	-.02329	-.16
440.70	0.00	2.10	.0272	.02302	.0280	.0281	.0280	.0273	.0264	.02400	1.10
440.60	0.00	4.21	.0615	.02269	.0599	.0592	.0586	.0578	.0597	.02714	2.20
440.75	0.00	6.33	.0976	.02199	.0934	.0925	.0911	.0903	.0946	.03262	2.90
440.80	0.00	8.51	.1344	.02164	.1270	.1246	.1227	.1214	.1297	.04130	3.14
440.75	0.00	10.57	.1651	.02137	.1572	.1516	.1507	.1473	.1584	.05130	3.09
440.62	0.00	12.70	.1998	.02085	.1882	.1806	.1807	.1748	.1903	.06425	2.96
440.79	0.00	14.77	.2348	.02034	.2178	.2094	.2104	.2017	.2218	.07952	2.79
440.61	0.00	16.90	.2712	.01957	.2484	.2384	.2409	.2281	.2538	.09756	2.60
440.76	0.00	19.09	.3091	.01850	.2786	.2661	.2712	.2524	.2860	.11856	2.41
440.56	0.00	20.55	.3344	.01778	.2986	.2835	.2909	.2670	.3069	.13401	2.29
440.73	0.00	-.02	-.0068	.02321	-.0039	-.0035	-.0030	-.0035	-.0068	.02322	-.29
MACH NO 1.030 CONFIG. 14											
Q	BETA	ALPHA	CN	CA	CM	CNC	CMC	CLC	CL	CD	L/D
401.37	0.00	-4.27	-.0827	.01813	-.0761	-.0756	-.0729	-.0739	-.0812	.02423	-3.35
401.06	0.00	-2.15	-.0450	.01878	-.0399	-.0392	-.0380	-.0384	-.0443	.02045	-2.17
401.15	0.00	-.02	-.0079	.01900	-.0052	-.0042	-.0040	-.0042	-.0079	.01900	-.42
401.13	0.00	2.03	.0247	.01878	.0263	.0273	.0270	.0266	.0240	.01966	1.22
401.13	0.00	4.24	.0628	.01831	.0623	.0640	.0625	.0627	.0613	.02290	2.68
401.13	0.00	6.35	.1029	.01745	.0985	.1011	.0980	.0991	.1003	.02873	3.49
401.13	0.00	8.44	.1426	.01665	.1330	.1366	.1324	.1338	.1386	.03740	3.71
401.21	0.00	10.58	.1809	.01606	.1680	.1710	.1661	.1671	.1749	.04901	3.57
401.21	0.00	12.68	.2202	.01550	.2020	.2052	.1996	.1997	.2115	.06347	3.33
401.46	0.00	14.79	.2590	.01484	.2347	.2380	.2320	.2304	.2467	.08049	3.06
401.29	0.00	16.91	.2946	.01316	.2662	.2674	.2623	.2570	.2780	.09829	2.83
401.48	0.00	19.01	.3247	.01193	.2950	.2911	.2887	.2777	.3031	.11704	2.59
401.40	0.00	20.64	.3463	.01140	.3146	.3071	.3084	.2913	.3200	.13274	2.41
401.43	0.00	-.03	-.0099	.01926	-.0065	-.0060	-.0054	-.0060	-.0099	.01926	-.51
MACH NO .950 CONFIG. 14											
Q	BETA	ALPHA	CN	CA	CM	CNC	CMC	CLC	CL	CD	L/D
374.30	0.00	-4.24	-.0770	.01054	-.0721	-.0705	-.0701	-.0693	-.0760	.01620	-4.69
374.23	0.00	-2.07	-.0393	.01073	-.0365	-.0341	-.0347	-.0336	-.0389	.01214	-3.21
374.22	0.00	-.02	-.0081	.01095	-.0060	-.0036	-.0039	-.0036	-.0081	.01095	-.74
374.29	0.00	2.07	.0235	.01082	.0254	.0280	.0278	.0276	.0231	.01166	1.98
374.29	0.00	4.19	.0601	.01030	.0596	.0634	.0624	.0626	.0592	.01466	4.04
374.29	0.00	6.32	.0993	.00980	.0954	.1004	.0985	.0991	.0976	.02068	4.72
374.29	0.00	8.40	.1363	.00939	.1285	.1340	.1311	.1318	.1335	.02920	4.57
374.22	0.00	10.51	.1691	.00870	.1598	.1645	.1623	.1613	.1647	.03941	4.18
374.17	0.00	12.63	.2024	.00855	.1896	.1933	.1922	.1887	.1956	.05260	3.72
374.17	0.00	14.67	.2353	.00842	.2173	.2204	.2198	.2141	.2255	.06772	3.33
374.68	0.00	16.79	.2737	.00819	.2485	.2503	.2498	.2415	.2597	.08692	2.99
374.88	0.00	18.94	.3113	.00768	.2810	.2800	.2796	.2676	.2920	.10830	2.70
375.53	0.00	20.32	.3343	.00719	.3002	.2970	.2975	.2817	.3110	.12284	2.53
374.65	0.00	-.02	-.0069	.01095	-.0061	-.0032	-.0035	-.0032	-.0069	.01095	-.63

MACH NO .900 CONFIG. 14

Q	BETA	ALPHA	CN	CA	CM	CNC	CMC	CLC	CL	CD	L/D
355.25	0.00	-4.21	-.0757	.00929	-.0718	-.0686	-.0690	-.0679	-.0748	-.01482	-5.05
354.95	0.00	-2.15	-.0393	.00969	-.0365	-.0331	-.0344	-.0329	-.0389	.01115	-3.48
355.37	0.00	-.02	-.0081	.01013	-.0049	-.0026	-.0029	-.0026	-.0081	.01013	-.80
355.06	0.00	2.12	.0243	.00991	.0261	.0287	.0287	.0285	.0239	.01080	2.21
355.02	0.00	4.20	.0589	.00883	.0593	.0621	.0619	.0616	.0581	.01311	4.43
355.27	0.00	6.29	.0979	.00846	.0955	.0991	.0982	.0983	.0964	.01913	5.04
355.03	0.00	8.43	.1303	.00796	.1268	.1299	.1298	.1285	.1277	.02696	4.74
355.18	0.00	10.41	.1577	.00834	.1517	.1524	.1548	.1500	.1536	.03670	4.19
355.67	0.00	12.54	.1891	.00638	.1799	.1790	.1820	.1748	.1818	.04901	3.71
355.33	0.00	14.64	.2234	.00822	.2087	.2081	.2112	.2017	.2140	.06439	3.32
355.60	0.00	16.70	.2560	.00766	.2380	.2362	.2398	.2273	.2430	.08093	3.00
355.02	0.00	18.79	.2891	.00658	.2670	.2637	.2684	.2517	.2716	.09935	2.73
355.60	0.00	20.25	.3095	.00616	.2847	.2793	.2844	.2648	.2883	.11289	2.55
355.65	0.00	-.02	-.0090	.01009	-.0058	-.0034	-.0035	-.0034	-.0090	.01009	-.89

MACH NO .700 CONFIG. 14

Q	BETA	ALPHA	CN	CA	CM	CNC	CMC	CLC	CL	CD	L/D
261.77	0.00	-4.16	-.0703	.00955	-.0666	-.0621	-.0632	-.0616	-.0694	.01463	-4.74
262.84	0.00	-2.07	-.0363	.01000	-.0341	-.0300	-.0310	-.0298	-.0359	.01131	-3.18
261.93	0.00	-.01	-.0082	.01057	-.0046	-.0024	-.0022	-.0024	-.0082	.01057	-.77
262.07	0.00	2.07	.0208	.01026	.0236	.0255	.0265	.0253	.0204	.01100	1.86
262.31	0.00	4.10	.0514	.00949	.0540	.0550	.0567	.0547	.0505	.01314	3.85
252.06	0.00	6.25	.0875	.00839	.0883	.0895	.0913	.0889	.0861	.01786	4.82
262.00	0.00	8.25	.1199	.00763	.1193	.1193	.1225	.1183	.1176	.02476	4.75
262.61	0.00	10.31	.1467	.00754	.1452	.1429	.1482	.1410	.1430	.03366	4.25
261.60	0.00	12.34	.1780	.00673	.1742	.1709	.1774	.1678	.1724	.04461	3.87
262.08	0.00	14.43	.2093	.00641	.2040	.1988	.2070	.1938	.2002	.05814	3.44
262.14	0.00	16.58	.2366	.00537	.2310	.2242	.2352	.2166	.2252	.07268	3.10
261.42	0.00	18.51	.2654	.00453	.2584	.2499	.2622	.2392	.2502	.08854	2.83
262.38	0.00	20.00	.2865	.00387	.2785	.2680	.2816	.2546	.2679	.10160	2.64
251.62	0.00	-.01	-.0075	.01043	-.0044	-.0022	-.0019	-.0022	-.0075	.01043	-.72

TABLE III.- Continued

MACH NO 1.200 CONFIG. 15											
Q	BETA	ALPHA	CN	CA	CM	CNC	CMC	CLC	CL	CD	L/D
440.81	0.00	-4.33	-.0996	.02555	-.0906	-.0953	-.0850	-.0936	-.0974	.03299	-2.95
440.81	0.00	-2.14	-.0461	.02634	-.0446	-.0453	-.0414	-.0444	-.0451	.02805	-1.61
440.53	0.00	-.01	.0023	.02641	-.0034	-.0004	-.0012	-.0004	.0023	.02641	.09
440.35	0.00	2.18	.0549	.02597	.0421	.0486	.0426	.0476	.0539	.02804	1.92
440.22	0.00	4.35	.1108	.02439	.0908	.1005	.0882	.0983	.1087	.03274	3.32
440.37	0.00	6.56	.1712	.02280	.1430	.1571	.1378	.1534	.1675	.04222	3.97
440.35	0.00	8.73	.2264	.02162	.1925	.2088	.1844	.2029	.2205	.05571	3.96
440.35	0.00	10.92	.2800	.02043	.2406	.2579	.2299	.2489	.2711	.07309	3.71
440.32	0.00	13.11	.3345	.01918	.2864	.3063	.2756	.2931	.3214	.09458	3.40
440.50	0.00	15.21	.3678	.01816	.3185	.3365	.3098	.3188	.3502	.11402	3.07
440.54	0.00	17.38	.4112	.01688	.3579	.3743	.3488	.3511	.3874	.13891	2.79
440.41	0.00	.01	.0023	.02639	-.0044	-.0018	-.0019	-.0018	.0023	.02639	.09
MACH NO 1.030 CONFIG. 15											
Q	BETA	ALPHA	CN	CA	CM	CNC	CMC	CLC	CL	CD	L/D
401.48	0.00	-4.33	-.1111	.02139	-.1013	-.1106	-.0970	-.1090	-.1092	.02973	-3.67
401.57	0.00	-2.14	-.0520	.02262	-.0501	-.0538	-.0478	-.0529	-.0511	.02455	-2.08
401.57	0.00	.01	.0019	.02294	-.0032	-.0024	-.0021	-.0024	.0019	.02294	.08
401.51	0.00	2.17	.0553	.02255	.0423	.0477	.0426	.0467	.0544	.02462	2.21
401.26	0.00	4.36	.1187	.02075	.0976	.1079	.0957	.1058	.1167	.02971	3.93
400.91	0.00	6.55	.1825	.01869	.1529	.1684	.1489	.1646	.1792	.03938	4.55
400.87	0.00	8.74	.2458	.01685	.2071	.2276	.2016	.2216	.2404	.05399	4.45
401.16	0.00	10.91	.3090	.01531	.2586	.2840	.2516	.2749	.3005	.07351	4.09
401.29	0.00	13.11	.3691	.01395	.3100	.3396	.3022	.3263	.3563	.09729	3.66
401.71	0.00	15.23	.4118	.01127	.3507	.3783	.3435	.3604	.3944	.11909	3.31
401.17	0.00	17.31	.4386	.01111	.3792	.4020	.3724	.3792	.4154	.14113	2.94
401.64	0.00	-.01	.0008	.02266	-.0041	-.0034	-.0027	-.0034	.0008	.02266	.03
MACH NO .950 CONFIG. 15											
Q	BETA	ALPHA	CN	CA	CM	CNC	CMC	CLC	CL	CD	L/D
374.34	0.00	-4.31	-.1066	.01255	-.0988	-.1083	-.0976	-.1071	-.1053	.02052	-5.13
374.29	0.00	-2.13	-.0481	.01302	-.0480	-.0516	-.0472	-.0510	-.0476	.01480	-3.22
374.23	0.00	-.00	.0003	.01331	-.0032	-.0046	-.0031	-.0046	.0003	.01331	.02
374.29	0.00	2.12	.0471	.01259	.0402	.0413	.0404	.0406	.0466	.01432	3.25
373.71	0.00	4.29	.1045	.01111	.0915	.0971	.0907	.0953	.1033	.01890	5.47
373.93	0.00	6.50	.1715	.01020	.1477	.1594	.1457	.1561	.1693	.02954	5.73
374.09	0.00	8.66	.2341	.00877	.2016	.2177	.1980	.2125	.2301	.04393	5.24
374.09	0.00	10.79	.2758	.00791	.2426	.2584	.2401	.2507	.2695	.05939	4.54
374.09	0.00	12.91	.3215	.00782	.2818	.3002	.2806	.2892	.3117	.07948	3.92
374.48	0.00	15.03	.3665	.00839	.3181	.3394	.3161	.3245	.3518	.10313	3.41
374.71	0.00	17.17	.4150	.00763	.3598	.3838	.3583	.3620	.3943	.12981	3.04
374.60	0.00	19.29	.4516	.00730	.3930	.4158	.3899	.3875	.4239	.15606	2.72
374.86	0.00	20.35	.4645	.00728	.4052	.4265	.4011	.3941	.4330	.16840	2.57
374.00	0.00	-.02	-.0005	.01333	-.0039	-.0050	-.0032	-.0050	-.0005	.01333	-.04

MACH NO .900 CONFIG. 15

Q	BETA	ALPHA	CN	CA	CM	CNC	CMC	CLC	CL	CD	L/D
354.74	0.00	-4.29	-.1079	.01004	-.1006	-.1107	-.1001	-.1099	-.1069	.01808	-5.91
355.06	0.00	-2.13	-.0495	.01109	-.0497	-.0538	-.0492	-.0534	-.0491	.01293	-3.80
354.94	0.00	.01	-.0018	.01137	-.0053	-.0068	-.0050	-.0068	-.0019	.01137	-.16
354.59	0.00	2.13	.0466	.01072	.0391	.0395	.0390	.0390	.0462	.01244	3.71
354.84	0.00	4.29	.1056	.00913	.0930	.0974	.0919	.0963	.1046	.01701	6.15
355.26	0.00	6.47	.1676	.00778	.1476	.1559	.1455	.1537	.1657	.02662	6.22
354.90	0.00	8.58	.2134	.00707	.1914	.1999	.1897	.1964	.2099	.03881	5.41
355.02	0.00	10.70	.2552	.00747	.2293	.2387	.2279	.2330	.2493	.05472	4.56
355.01	0.00	12.79	.2930	.00800	.2606	.2719	.2599	.2623	.2839	.07264	3.91
354.77	0.00	14.90	.3408	.00755	.3024	.3162	.3021	.3025	.3273	.09493	3.45
355.31	0.00	17.01	.3739	.00716	.3321	.3452	.3309	.3265	.3554	.11625	3.06
355.18	0.00	-.01	-.0019	.01152	-.0052	-.0072	-.0053	-.0072	-.0019	.01152	-.16

MACH NO .700 CONFIG. 15

Q	BETA	ALPHA	CN	CA	CM	CNC	CMC	CLC	CL	CD	L/D
261.67	0.00	-4.19	-.0946	.00988	-.0908	-.0975	-.0909	-.0970	-.0937	.01677	-5.58
261.58	0.00	-2.07	-.0432	.01111	-.0448	-.0477	-.0445	-.0475	-.0428	.01267	-3.38
261.42	0.00	.00	.0003	.01153	-.0050	-.0063	-.0049	-.0063	.0003	.01153	.02
261.51	0.00	2.09	.0424	.01119	.0352	.0347	.0346	.0343	.0420	.01273	3.30
261.51	0.00	4.19	.0949	.00915	.0836	.0859	.0830	.0851	.0939	.01606	5.85
261.51	0.00	6.31	.1491	.00755	.1334	.1379	.1313	.1364	.1474	.02389	6.17
261.43	0.00	8.40	.1984	.00607	.1787	.1833	.1770	.1806	.1954	.03497	5.59
261.20	0.00	10.49	.2405	.00577	.2174	.2220	.2161	.2174	.2354	.04945	4.76
261.43	0.00	12.58	.2854	.00459	.2580	.2636	.2565	.2562	.2776	.06665	4.16
261.35	0.00	14.65	.3248	.00411	.2929	.2987	.2918	.2876	.3132	.08612	3.64
261.35	0.00	16.70	.3507	.00460	.3153	.3205	.3143	.3048	.3346	.10516	3.18
261.13	0.00	18.71	.3508	.00747	.3141	.3197	.3141	.2980	.3298	.11957	2.76
261.05	0.00	19.75	.3526	.00804	.3176	.3220	.3190	.2971	.3292	.12673	2.60
261.51	0.00	-.01	-.0003	.01156	-.0051	-.0060	-.0044	-.0060	-.0003	.01156	-.03

TABLE III.- Continued

MACH NO 1.200 CONFIG. 16											
Q	BETA	ALPHA	CN	CA	CM	CNC	CMC	CLC	CL	CD	L/D
440.67	0.00	-4.37	-.1136	.02472	-.0997	-.1059	-.0945	-.1037	-.1113	.03330	-3.34
440.83	0.00	-2.19	-.0584	.02569	-.0523	-.0544	-.0495	-.0533	-.0573	.02789	-2.06
440.69	0.00	-.01	-.0061	.02607	-.0069	-.0058	-.0064	-.0058	-.0061	.02607	-.23
440.84	0.00	2.17	.0455	.02583	.0374	.0418	.0360	.0409	.0445	.02753	1.62
440.74	0.00	4.33	.1028	.02506	.0870	.0953	.0827	.0933	.1006	.03276	3.07
440.84	0.00	6.54	.1628	.02383	.1379	.1511	.1310	.1477	.1590	.04222	3.77
440.84	0.00	8.73	.2215	.02293	.1876	.2045	.1786	.1991	.2154	.05628	3.83
440.64	0.00	10.92	.2759	.02208	.2353	.2538	.2232	.2456	.2668	.07396	3.61
440.67	0.00	13.09	.3296	.02131	.2818	.3026	.2682	.2907	.3162	.09540	3.31
440.61	0.00	15.25	.3802	.02053	.3249	.3474	.3108	.3306	.3614	.11984	3.02
440.73	0.00	17.35	.4094	.02009	.3570	.3727	.3415	.3513	.3848	.14127	2.72
440.82	0.00	-.02	-.0078	.02614	-.0072	-.0056	-.0058	-.0056	-.0078	.02615	-.30
MACH NO 1.030 CONFIG. 16											
Q	BETA	ALPHA	CN	CA	CM	CNC	CMC	CLC	CL	CD	L/D
402.10	0.00	-4.37	-.1276	.02106	-.1095	-.1181	-.1050	-.1159	-.1256	.03072	-4.09
400.88	0.00	-2.19	-.0665	.02200	-.0570	-.0599	-.0541	-.0589	-.0656	.02452	-2.67
401.94	0.00	-.02	-.0117	.02367	-.0083	-.0077	-.0076	-.0077	-.0117	.02368	-.49
401.18	0.00	2.15	.0433	.02220	.0393	.0439	.0384	.0430	.0425	.02382	1.78
401.10	0.00	4.33	.1070	.02114	.0944	.1045	.0914	.1026	.1051	.02917	3.60
401.19	0.00	6.52	.1746	.02029	.1510	.1679	.1461	.1646	.1712	.04000	4.28
401.58	0.00	8.73	.2396	.01850	.2053	.2283	.1994	.2229	.2340	.05467	4.28
401.10	0.00	10.91	.3028	.01733	.2583	.2862	.2507	.2777	.2940	.07433	3.96
402.45	0.00	13.09	.3634	.01657	.3085	.3408	.2997	.3280	.3502	.09843	3.56
401.43	0.00	15.25	.4177	.01449	.3559	.3892	.3450	.3713	.3992	.12388	3.22
400.82	0.00	17.32	.4387	.01385	.3846	.4089	.3720	.3861	.4147	.14385	2.88
401.67	0.00	-.02	-.0118	.02273	-.0081	-.0074	-.0071	-.0074	-.0117	.02274	-.52
MACH NO .950 CONFIG. 16											
Q	BETA	ALPHA	CN	CA	CM	CNC	CMC	CLC	CL	CD	L/D
374.29	0.00	-4.32	-.1188	.01167	-.1041	-.1105	-.1016	-.1088	-.1175	.02059	-5.71
374.22	0.00	-2.16	-.0606	.01240	-.0554	-.0557	-.0526	-.0549	-.0601	.01468	-4.09
374.22	0.00	-.03	-.0104	.01304	-.0084	-.0072	-.0076	-.0072	-.0104	.01305	-.80
374.16	0.00	2.12	.0363	.01298	.0356	.0388	.0359	.0380	.0358	.01432	2.50
374.16	0.00	4.29	.0983	.01202	.0898	.0983	.0889	.0967	.0971	.01934	5.02
374.16	0.00	6.47	.1640	.01128	.1454	.1607	.1443	.1578	.1617	.02970	5.44
375.77	0.00	8.66	.2301	.01102	.2008	.2224	.1983	.2175	.2258	.04553	4.96
375.26	0.00	10.80	.2800	.00990	.2454	.2678	.2430	.2602	.2731	.06218	4.39
374.63	0.00	12.93	.3265	.00951	.2875	.3113	.2857	.3001	.3161	.08234	3.84
374.48	0.00	15.05	.3696	.01044	.3236	.3484	.3204	.3330	.3542	.10604	3.34
375.06	0.00	17.20	.4268	.01042	.3699	.3973	.3644	.3755	.4046	.13612	2.97
374.50	0.00	19.31	.4646	.01025	.4052	.4292	.3966	.3999	.4350	.16332	2.66
374.10	0.00	20.66	.4915	.01047	.4271	.4501	.4165	.4156	.4563	.18318	2.49
374.45	0.00	-.01	-.0096	.01301	-.0082	-.0068	-.0071	-.0068	-.0096	.01301	-.73

MACH NO .900 CONFIG. 16

Q	BETA	ALPHA	CN	CA	CM	CNC	CMC	CLC	CL'	CD	L/D
355.41	0.00	-4.31	-.1188	.00946	-.1063	-.1122	-.1044	-.1112	-.1178	.01837	-6.41
356.12	0.00	-2.15	-.0606	.01060	-.0539	-.0552	-.0528	-.0547	-.0602	.01287	-4.68
354.70	0.00	-.01	-.0097	.01089	-.0073	-.0058	-.0064	-.0058	-.0097	.01090	-.89
355.94	0.00	2.12	.0404	.01078	.0388	.0429	.0392	.0425	.0399	.01226	3.26
355.59	0.00	4.28	.0998	.00965	.0921	.1012	.0921	.1002	.0988	.01708	5.78
355.20	0.00	6.44	.1598	.00868	.1440	.1575	.1441	.1555	.1579	.02656	5.94
355.34	0.00	8.58	.2094	.00802	.1906	.2052	.1908	.2018	.2059	.03918	5.26
355.35	0.00	10.71	.2533	.00860	.2310	.2459	.2308	.2406	.2473	.05553	4.45
355.13	0.00	12.81	.2939	.00975	.2651	.2792	.2636	.2698	.2844	.07464	3.81
355.22	0.00	14.94	.3480	.00945	.3094	.3277	.3079	.3136	.3338	.09882	3.38
355.10	0.00	17.04	.3359	.00982	.3452	.3587	.3390	.3395	.3661	.12245	2.99
355.21	0.00	19.13	.4168	.00995	.3703	.3836	.3636	.3583	.3905	.14599	2.67
355.36	0.00	-.02	-.0080	.01126	-.0054	-.0046	-.0055	-.0046	-.0080	.01126	-.71

MACH NO .700 CONFIG. 16

Q	BETA	ALPHA	CN	CA	CM	CNC	CMC	CLC	CL	CD	L/D
262.22	0.00	-4.20	-.1070	.00928	-.0954	-.0989	-.0940	-.0982	-.1061	.01710	-6.20
262.21	0.00	-2.11	-.0547	.01033	-.0486	-.0492	-.0479	-.0488	-.0543	.01234	-4.40
262.07	0.00	-.02	-.0089	.01118	-.0060	-.0049	-.0055	-.0049	-.0089	.01119	-.80
262.06	0.00	2.08	.0344	.01094	.0358	.0373	.0351	.0370	.0339	.01218	2.79
262.06	0.00	4.19	.0879	.00942	.0811	.0868	.0817	.0861	.0870	.01581	5.50
262.14	0.00	6.29	.1420	.00840	.1325	.1408	.1321	.1395	.1402	.02390	5.86
261.90	0.00	8.40	.1927	.00710	.1783	.1867	.1772	.1843	.1896	.03517	5.39
262.38	0.00	10.48	.2337	.00731	.2183	.2256	.2170	.2213	.2285	.04968	4.60
261.90	0.00	12.57	.2798	.00624	.2592	.2680	.2587	.2610	.2718	.06697	4.06
261.84	0.00	14.65	.3227	.00604	.2959	.3046	.2955	.2941	.3107	.08746	3.55
261.83	0.00	16.74	.3588	.00629	.3273	.3345	.3255	.3191	.3418	.10938	3.13
261.99	0.00	18.77	.3791	.00843	.3449	.3496	.3414	.3281	.3562	.12996	2.74
262.07	0.00	20.36	.3753	.01023	.3415	.3427	.3366	.3152	.3483	.14018	2.48
262.14	0.00	-.02	-.0096	.01138	-.0061	-.0054	-.0060	-.0054	-.0096	.01138	-.84

TABLE III.- Continued

MACH NO 1.200 CONFIG. 17											
Q	BETA	ALPHA	CN	CA	CM	CNC	CMC	CLC	CL	CD	L/D
440.85	0.00	-4.46	-.1207	.02445	-.1011	-.1107	-.0975	-.1086	-.1184	.03376	-3.51
440.65	0.00	-2.15	-.0605	.02564	-.0499	-.0548	-.0484	-.0539	-.0595	.02789	-2.13
440.83	0.00	-.01	-.0092	.02595	-.0049	-.0069	-.0059	-.0069	-.0092	.02595	-.36
440.62	0.00	2.17	.0410	.02582	.0387	.0401	.0364	.0393	.0400	.02736	1.46
440.77	0.00	4.34	.0935	.02496	.0846	.0898	.0802	.0881	.0914	.03197	2.86
440.80	0.00	6.55	.1511	.02348	.1325	.1422	.1261	.1395	.1474	.04057	3.63
440.63	0.00	8.72	.2063	.02265	.1789	.1926	.1708	.1886	.2004	.05365	3.74
440.47	0.00	10.86	.2562	.02105	.2215	.2369	.2107	.2312	.2476	.06894	3.59
440.50	0.00	13.04	.3074	.01947	.2644	.2824	.2526	.2744	.2951	.08833	3.34
440.75	0.00	15.20	.3589	.01794	.3063	.3265	.2932	.3153	.3417	.11144	3.07
440.61	0.00	17.35	.4123	.01706	.3485	.3710	.3347	.3554	.3885	.13924	2.79
440.68	0.00	19.59	.4666	.01564	.3903	.4140	.3766	.3925	.4343	.17116	2.54
440.83	0.00	20.97	.4964	.01480	.4136	.4362	.3998	.4107	.4582	.19148	2.39
440.80	0.00	-.04	-.0190	.02615	-.0121	-.0162	-.0127	-.0162	-.0190	.02616	-.73

MACH NO 1.030 CONFIG. 17											
Q	BETA	ALPHA	CN	CA	CM	CNC	CMC	CLC	CL	CD	L/D
401.19	0.00	-4.50	-.1416	.02098	-.1176	-.1311	-.1147	-.1290	-.1395	.03201	-4.36
401.32	0.00	-2.23	-.0767	.02230	-.0614	-.0691	-.0606	-.0682	-.0757	.02526	-3.00
401.50	0.00	-.33	-.0180	.02307	-.0114	-.0146	-.0122	-.0146	-.0180	.02308	-.78
401.80	0.00	2.12	.0348	.02236	.0345	.0363	.0330	.0354	.0340	.02363	1.44
401.26	0.00	4.30	.0927	.02039	.0846	.0920	.0820	.0904	.0909	.02727	3.33
401.36	0.00	6.55	.1591	.01856	.1394	.1539	.1355	.1515	.1560	.03659	4.26
401.44	0.00	8.67	.2207	.01724	.1903	.2106	.1851	.2070	.2156	.05032	4.29
401.43	0.00	10.87	.2829	.01576	.2411	.2666	.2347	.2611	.2748	.06882	3.99
401.39	0.00	13.04	.3410	.01336	.2895	.3189	.2813	.3108	.3292	.08998	3.66
401.27	0.00	15.19	.3969	.01146	.3366	.3687	.3265	.3572	.3801	.11504	3.30
400.87	0.00	17.25	.4465	.01002	.3779	.4114	.3657	.3955	.4234	.14198	2.98
401.00	0.00	-.03	-.0168	.02231	-.0105	-.0132	-.0111	-.0132	-.0168	.02232	-.75

MACH NO .950 CONFIG. 17											
Q	BETA	ALPHA	CN	CA	CM	CNC	CMC	CLC	CL	CD	L/D
374.39	0.00	-4.37	-.1251	.01225	-.1094	-.1164	-.1071	-.1147	-.1238	.02174	-5.69
374.99	0.00	-2.22	-.0651	.01272	-.0576	-.0595	-.0567	-.0588	-.0646	.01523	-4.24
374.44	0.00	-.01	-.0108	.01248	-.0095	-.0079	-.0088	-.0079	-.0108	.01248	-.86
374.21	0.00	2.14	.0340	.01283	.0333	.0361	.0334	.0355	.0335	.01409	2.38
374.66	0.00	4.32	.0895	.01189	.0838	.0910	.0837	.0898	.0884	.01861	4.75
374.88	0.00	6.45	.1492	.01093	.1345	.1469	.1335	.1450	.1470	.02761	5.33
374.91	0.00	7.53	.1795	.01021	.1611	.1762	.1594	.1738	.1766	.03365	5.25
374.72	0.00	10.75	.2602	.00832	.2313	.2508	.2288	.2461	.2541	.05671	4.48
375.10	0.00	12.92	.3104	.00803	.2762	.2969	.2730	.2898	.3007	.07723	3.89
374.50	0.00	15.01	.3519	.00780	.3122	.3338	.3083	.3238	.3379	.09864	3.43
374.44	0.00	17.12	.4000	.00785	.3492	.3709	.3427	.3570	.3799	.12526	3.03
374.49	0.00	19.33	.4543	.00707	.3930	.4147	.3830	.3950	.4263	.15703	2.71
374.91	0.00	-.03	-.0141	.01280	-.0114	-.0105	-.0108	-.0105	-.0141	.01280	-1.10

MACH NO .900 CONFIG. 17

Q	BETA	ALPHA	CN	CA	CM	CNC	CMC	CLC	CL	CD	L/D
354.85	0.00	-4.34	-.1258	.00983	-.1113	-.1171	-.1085	-.1160	-.1247	.01931	-6.45
354.90	0.00	-2.20	-.0670	.01057	-.0584	-.0597	-.0572	-.0593	-.0665	.01313	-5.07
354.81	0.00	-.01	-.0109	.01103	-.0088	-.0070	-.0078	-.0070	-.0109	.01103	-.99
354.56	0.00	2.12	.0345	.01067	.0341	.0375	.0348	.0372	.0341	.01194	2.85
354.51	0.00	4.25	.0874	.00915	.0828	.0896	.0829	.0889	.0865	.01561	5.54
354.64	0.00	6.37	.1465	.00784	.1343	.1462	.1346	.1449	.1447	.02404	6.02
354.51	0.00	8.56	.1994	.00696	.1833	.1973	.1834	.1950	.1961	.03657	5.36
354.58	0.00	10.72	.2380	.00727	.2204	.2330	.2204	.2292	.2324	.05142	4.52
354.51	0.00	12.79	.2794	.00788	.2554	.2672	.2532	.2610	.2708	.06955	3.89
354.82	0.00	14.89	.3291	.00814	.2955	.3098	.2921	.3004	.3160	.09243	3.42
354.80	0.00	17.09	.3745	.00717	.3340	.3494	.3294	.3358	.3558	.11688	3.04
355.17	0.00	19.14	.4208	.00602	.3722	.3879	.3658	.3695	.3956	.14365	2.75
354.49	0.00	-.01	-.0130	.01104	-.0099	-.0082	-.0087	-.0082	-.0130	.01104	-1.18

MACH NO .700 CONFIG. 17

Q	BETA	ALPHA	CN	CA	CM	CNC	CMC	CLC	CL	CD	L/D
261.61	0.00	-4.31	-.1175	.00990	-.1035	-.1071	-.1011	-.1063	-.1164	.01870	-6.22
262.70	0.00	-2.08	-.0605	.01075	-.0521	-.0528	-.0509	-.0525	-.0600	.01293	-4.64
262.30	0.00	-.01	-.0130	.01130	-.0090	-.0075	-.0077	-.0075	-.0130	.01130	-1.15
262.54	0.00	2.08	.0279	.01130	.0304	.0322	.0309	.0319	.0274	.01230	2.23
261.98	0.00	4.17	.0743	.00931	.0734	.0771	.0738	.0767	.0735	.01469	5.00
262.32	0.00	6.29	.1306	.00784	.1244	.1310	.1241	.1301	.1290	.02210	5.84
261.92	0.00	8.43	.1837	.00588	.1737	.1815	.1723	.1799	.1809	.03274	5.52
262.30	0.00	10.50	.2207	.00573	.2087	.2154	.2086	.2124	.2159	.04585	4.71
261.46	0.00	12.58	.2648	.00472	.2499	.2570	.2494	.2520	.2574	.06228	4.13
262.16	0.00	14.63	.3080	.00442	.2901	.2963	.2888	.2886	.2969	.08207	3.62
261.60	0.00	16.69	.3462	.00373	.3233	.3292	.3221	.3180	.3305	.10301	3.21
262.78	0.00	18.81	.3893	.00299	.3624	.3674	.3603	.3514	.3675	.12836	2.86
262.70	0.00	20.17	.4064	.00289	.3800	.3809	.3760	.3619	.3804	.14282	2.66
261.84	0.00	-.00	-.0124	.01134	-.0085	-.0070	-.0071	-.0070	-.0123	.01134	-1.09

TABLE III.- Continued

MACH NO 1.200. CONFIG. 18											
Q	BETA	ALPHA	CN	CA	CM	CNC	CMC	CLC	CL	CD	L/D
440.15	0.00	-4.05	-.0123	.01982	-.0199	-.0092	-.0215	-.0081	-.0109	.02064	-.53
440.26	0.00	-2.02	-.0080	.01973	-.0106	-.0043	-.0113	-.0038	-.0073	.02000	-.36
440.16	0.00	.00	-.0022	.01971	-.0012	.0009	-.0008	.0009	-.0022	.01971	-.11
440.36	0.00	2.02	.0028	.01961	.0081	.0060	.0095	.0055	.0021	.01970	.11
440.22	0.00	4.06	.0088	.01974	.0181	.0115	.0203	.0104	.0074	.02031	.36
440.37	0.00	6.09	.0166	.01972	.0281	.0171	.0310	.0153	.0144	.02138	.68
440.37	0.00	8.12	.0252	.01966	.0387	.0234	.0427	.0210	.0221	.02302	.96
440.17	0.00	10.15	.0326	.01945	.0520	.0300	.0545	.0267	.0287	.02490	1.15
440.29	0.00	12.20	.0418	.01917	.0661	.0376	.0678	.0332	.0368	.02758	1.34
440.35	0.00	14.24	.0525	.01875	.0791	.0459	.0818	.0402	.0463	.03108	1.49
440.20	0.00	16.29	.0659	.01832	.0915	.0549	.0970	.0475	.0581	.03606	1.61
440.35	0.00	18.33	.0798	.01806	.1040	.0641	.1128	.0549	.0700	.04222	1.66
440.20	0.00	19.65	.0891	.01785	.1127	.0704	.1234	.0598	.0779	.04678	1.67
440.20	0.00	-.01	-.0037	.01965	-.0008	.0008	-.0009	.0008	-.0037	.01965	-.19
MACH NO 1.030 CONFIG. 18											
Q	BETA	ALPHA	CN	CA	CM	CNC	CMC	CLC	CL	CD	L/D
400.98	0.00	-4.04	-.0128	.01508	-.0190	-.0085	-.0207	-.0078	-.0117	.01595	-.73
401.23	0.00	-2.03	-.0081	.01520	-.0105	-.0040	-.0110	-.0036	-.0075	.01548	-.49
401.40	0.00	.00	-.0033	.01541	-.0014	.0009	-.0009	.0009	-.0033	.01541	-.21
401.34	0.00	2.03	.0002	.01535	.0086	.0056	.0089	.0052	-.0004	.01535	-.02
401.20	0.00	4.04	.0072	.01519	.0174	.0105	.0189	.0097	.0062	.01566	.39
400.98	0.00	6.07	.0138	.01485	.0274	.0159	.0294	.0147	.0122	.01623	.75
400.95	0.00	8.10	.0220	.01469	.0380	.0224	.0413	.0207	.0197	.01765	1.12
400.92	0.00	10.13	.0297	.01466	.0516	.0289	.0530	.0266	.0267	.01966	1.36
401.02	0.00	12.17	.0394	.01426	.0642	.0352	.0647	.0321	.0355	.02225	1.60
401.04	0.00	14.21	.0501	.01331	.0765	.0429	.0780	.0387	.0453	.02518	1.80
400.86	0.00	16.25	.0607	.01256	.0903	.0508	.0919	.0454	.0547	.02904	1.89
401.40	0.00	18.31	.0728	.01193	.1044	.0603	.1079	.0534	.0653	.03418	1.91
401.20	0.00	19.60	.0803	.01055	.1122	.0658	.1176	.0578	.0721	.03687	1.95
401.43	0.00	-.02	-.0037	.01520	-.0009	.0003	-.0016	.0004	-.0037	.01520	-.24
MACH NO .950 CONFIG. 18											
Q	BETA	ALPHA	CN	CA	CM	CNC	CMC	CLC	CL	CD	L/D
373.91	0.00	-4.04	-.0133	.00835	-.0166	-.0069	-.0182	-.0067	-.0127	.00927	-1.37
373.77	0.00	-2.03	-.0082	.00856	-.0089	-.0030	-.0095	-.0029	-.0079	.00884	-.89
373.97	0.00	-.01	-.0044	.00864	-.0005	.0009	-.0009	.0009	-.0044	.00864	-.51
374.08	0.00	2.01	.0007	.00863	.0078	.0058	.0090	.0057	.0004	.00865	.04
374.34	0.00	4.04	.0061	.00862	.0155	.0094	.0171	.0092	.0054	.00902	.60
374.23	0.00	6.07	.0136	.00850	.0243	.0145	.0271	.0141	.0126	.00989	1.27
374.08	0.00	8.09	.0215	.00822	.0333	.0199	.0373	.0194	.0202	.01117	1.81
373.85	0.00	10.11	.0303	.00786	.0432	.0257	.0480	.0249	.0285	.01306	2.18
373.71	0.00	12.15	.0391	.00747	.0541	.0318	.0589	.0306	.0367	.01554	2.36
373.85	0.00	14.16	.0488	.00697	.0653	.0383	.0703	.0366	.0456	.01868	2.44
373.65	0.00	16.22	.0593	.00622	.0776	.0455	.0830	.0431	.0552	.02253	2.45
373.52	0.00	18.25	.0706	.00533	.0898	.0532	.0964	.0499	.0654	.02718	2.41
373.46	0.00	19.55	.0778	.00454	.0970	.0577	.1044	.0537	.0718	.03033	2.37
374.34	0.00	-.01	-.0035	.00857	-.0007	.0013	-.0003	.0013	-.0035	.00857	-.41

MACH NO .900 CONFIG. 18											
Q	BETA	ALPHA	CN	CA	CM	CNC	CMC	CLC	CL	CD	L/D
354.49	0.00	-4.03	-.0118	.00817	-.0167	-.0071	-.0178	-.0069	-.0112	.00898	-1.25
354.88	0.00	-2.02	-.0078	.00816	-.0087	-.0031	-.0094	-.0031	-.0075	.00843	-.89
354.76	0.00	-.01	-.0042	.00858	-.0002	.0010	-.0006	.0010	-.0042	.00858	-.49
355.45	0.00	2.02	.0006	.00834	.0077	.0051	.0081	.0051	.0003	.00835	.04
354.49	0.00	4.03	.0073	.00843	.0156	.0095	.0172	.0093	.0067	.00892	.75
355.18	0.00	6.06	.0134	.00812	.0243	.0144	.0268	.0141	.0125	.00949	1.31
355.18	0.00	8.09	.0209	.00782	.0336	.0194	.0363	.0189	.0196	.01068	1.83
354.70	0.00	10.12	.0297	.00763	.0435	.0256	.0472	.0248	.0279	.01273	2.19
354.99	0.00	12.14	.0380	.00703	.0535	.0315	.0576	.0304	.0357	.01488	2.40
354.87	0.00	14.17	.0477	.00662	.0654	.0382	.0694	.0366	.0447	.01811	2.47
355.15	0.00	16.18	.0584	.00567	.0761	.0447	.0805	.0425	.0545	.02172	2.51
355.59	0.00	18.23	.0689	.00472	.0885	.0525	.0938	.0495	.0640	.02604	2.46
354.70	0.00	19.55	.0762	.00375	.0950	.0572	.1017	.0536	.0705	.02901	2.43
354.64	0.00	-.02	-.0033	.00846	-.0007	.0008	-.0009	.0008	-.0033	.00846	-.39

MACH NO .700 CONFIG. 18											
Q	BETA	ALPHA	CN	CA	CM	CNC	CMC	CLC	CL	CD	L/D
261.66	0.00	-4.03	-.0137	.00845	-.0157	-.0064	-.0162	-.0062	-.0131	.00939	-1.39
261.50	0.00	-2.02	-.0095	.00829	-.0081	-.0029	-.0085	-.0028	-.0092	.00862	-1.07
261.35	0.00	-.01	-.0052	.00868	-.0001	.0008	-.0005	.0008	-.0052	.00868	-.60
261.35	0.00	2.02	-.0004	.00876	.0077	.0051	.0083	.0050	-.0007	.00874	-.08
261.34	0.00	4.02	.0050	.00863	.0157	.0094	.0168	.0092	.0044	.00896	.49
261.28	0.00	6.04	.0122	.00872	.0239	.0140	.0259	.0136	.0112	.00995	1.12
261.27	0.00	8.05	.0193	.00841	.0326	.0194	.0353	.0188	.0179	.01102	1.63
261.73	0.00	10.09	.0271	.00786	.0430	.0250	.0453	.0242	.0253	.01248	2.03
261.50	0.00	12.09	.0354	.00750	.0528	.0309	.0557	.0299	.0331	.01476	2.24
261.58	0.00	14.11	.0456	.00707	.0637	.0379	.0673	.0364	.0425	.01798	2.37
261.49	0.00	16.14	.0552	.00598	.0742	.0446	.0781	.0427	.0514	.02110	2.44
261.58	0.00	18.17	.0653	.00418	.0857	.0516	.0896	.0491	.0607	.02433	2.50
261.20	0.00	19.46	.0707	.00289	.0929	.0557	.0966	.0528	.0657	.02630	2.50
261.57	0.00	-.01	-.0052	.00847	-.0002	.0008	-.0005	.0008	-.0052	.00847	-.62

TABLE III.- Concluded

MACH NO 1.200											
											CONFIG. 19
Q	BETA	ALPHA	CN	CA	CM	CNC	CMC	CLC	CL	CD	L/D
440.47	0.00	-4.03	-.0095	.01975	-.0200	-.0116	-.0208	-.0106	-.0081	-.02037	-1.40
440.22	0.00	-2.02	-.0034	.01974	-.0107	-.0066	-.0106	-.0061	-.0027	-.01985	-1.14
440.11	0.00	.02	.0019	.01965	-.0008	-.0015	-.0003	-.0015	.0019	-.01965	-.10
440.26	0.00	2.04	.0070	.01966	.0082	.0034	.0098	.0029	.0063	.01990	.31
440.18	0.00	4.06	.0126	.01975	.0177	.0087	.0205	.0077	.0112	.02060	.54
440.23	0.00	6.10	.0183	.01979	.0280	.0142	.0314	.0125	.0161	.02162	.74
440.33	0.00	8.13	.0246	.01975	.0390	.0202	.0431	.0178	.0216	.02304	.94
440.38	0.00	10.16	.0321	.01966	.0517	.0269	.0555	.0237	.0281	.02501	1.12
440.28	0.00	12.20	.0417	.01936	.0647	.0349	.0693	.0307	.0367	.02774	1.32
440.13	0.00	14.27	.0532	.01922	.0791	.0450	.0858	.0395	.0469	.03174	1.48
440.43	0.00	16.30	.0679	.01893	.0937	.0567	.1044	.0494	.0599	.03723	1.61
440.26	0.00	18.37	.0836	.01871	.1107	.0697	.1248	.0598	.0734	.04409	1.66
440.46	0.00	19.43	.0941	.01837	.1202	.0772	.1366	.0659	.0826	.04863	1.70
440.50	0.00	.02	.0020	.01959	-.0011	-.0015	-.0004	-.0015	.0020	-.01959	-.10
MACH NO 1.030											
											CONFIG. 19
Q	BETA	ALPHA	CN	CA	CM	CNC	CMC	CLC	CL	CD	L/D
401.51	0.00	-4.05	-.0090	.01515	-.0197	-.0112	-.0202	-.0104	-.0079	.01575	-1.50
401.49	0.00	-2.00	-.0039	.01511	-.0099	-.0063	-.0102	-.0060	-.0034	.01524	-1.22
401.62	0.00	.02	.0012	.01537	-.0013	-.0016	-.0006	-.0016	.0012	.01537	-.08
401.42	0.00	2.03	.0059	.01537	.0082	.0033	.0096	.0029	.0053	.01557	.34
401.66	0.00	4.07	.0109	.01522	.0183	.0082	.0198	.0074	.0098	.01595	.61
401.54	0.00	6.09	.0163	.01524	.0284	.0138	.0308	.0125	.0146	.01689	.87
401.48	0.00	8.11	.0226	.01474	.0383	.0190	.0414	.0173	.0202	.01778	1.14
401.14	0.00	10.15	.0304	.01449	.0494	.0250	.0529	.0227	.0273	.01961	1.39
401.27	0.00	12.18	.0390	.01466	.0614	.0322	.0660	.0293	.0350	.02256	1.55
401.61	0.00	14.22	.0489	.01375	.0743	.0398	.0796	.0362	.0440	.02535	1.74
401.07	0.00	16.26	.0610	.01259	.0889	.0495	.0958	.0446	.0550	.02916	1.89
401.08	0.00	18.30	.0747	.01149	.1055	.0609	.1144	.0540	.0673	.03435	1.96
400.95	0.00	19.37	.0826	.01169	.1147	.0676	.1253	.0593	.0741	.03844	1.93
401.27	0.00	.02	.0012	.01520	-.0007	-.0016	-.0006	-.0016	.0012	.01520	.08
MACH NO .950											
											CONFIG. 19
Q	BETA	ALPHA	CN	CA	CM	CNC	CMC	CLC	CL	CD	L/D
373.85	0.00	-4.02	-.0088	.00865	-.0168	-.0105	-.0188	-.0103	-.0082	.00925	-1.89
373.85	0.00	-2.00	-.0025	.00861	-.0089	-.0059	-.0058	-.0058	-.0022	.00870	-1.25
373.85	0.00	.02	.0013	.00860	-.0002	-.0016	-.0002	-.0016	.0013	.00860	-.15
374.11	0.00	2.04	.0059	.00859	.0074	.0024	.0084	.0023	.0056	.00880	.64
374.29	0.00	4.06	.0105	.00849	.0157	.0067	.0176	.0065	.0099	.00921	1.07
374.28	0.00	6.08	.0163	.00826	.0239	.0112	.0270	.0109	.0153	.00994	1.54
374.45	0.00	8.09	.0230	.00780	.0325	.0161	.0369	.0157	.0217	.01097	1.98
374.39	0.00	10.13	.0297	.00748	.0418	.0217	.0474	.0211	.0279	.01259	2.22
374.32	0.00	12.16	.0377	.00706	.0516	.0271	.0580	.0264	.0354	.01485	2.38
373.63	0.00	14.19	.0478	.00641	.0618	.0336	.0697	.0326	.0448	.01794	2.50
373.67	0.00	16.20	.0590	.00573	.0739	.0420	.0844	.0405	.0551	.02197	2.51
374.08	0.00	18.26	.0712	.00477	.0884	.0517	.1008	.0491	.0661	.02684	2.46
374.11	0.00	19.32	.0785	.00429	.0964	.0568	.1093	.0533	.0726	.03001	2.42
374.72	0.00	.03	.0017	.00847	-.0006	-.0018	-.0006	-.0018	.0017	.00847	.20

MACH NO .900 CONFIG. 19

Q	BETA	ALPHA	CN	CA	CM	CNC	CMC	CLC	CL	CD	L/D
355.13	0.00	-4.02	-.0084	.00840	-.0165	-.0105	-.0185	-.0103	-.0078	.00897	-.87
355.10	0.00	-2.00	-.0031	.00838	-.0087	-.0060	-.0095	-.0059	-.0028	.00848	-.33
354.95	0.00	.01	.0013	.00834	-.0005	-.0018	-.0008	-.0018	.0013	.00834	.16
354.72	0.00	2.04	.0062	.00834	.0073	.0025	.0082	.0024	.0059	.00856	.69
354.86	0.00	4.05	.0102	.00819	.0158	.0065	.0169	.0063	.0096	.00889	1.08
354.79	0.00	6.07	.0163	.00804	.0236	.0110	.0262	.0108	.0154	.00972	1.58
354.72	0.00	8.10	.0230	.00763	.0322	.0160	.0360	.0156	.0217	.01080	2.01
354.79	0.00	10.11	.0296	.00730	.0412	.0207	.0453	.0202	.0278	.01237	2.25
354.74	0.00	12.15	.0376	.00678	.0509	.0267	.0562	.0260	.0353	.01453	2.43
354.67	0.00	14.18	.0470	.00586	.0613	.0332	.0678	.0323	.0441	.01720	2.57
354.67	0.00	16.21	.0572	.00505	.0722	.0407	.0803	.0394	.0535	.02081	2.57
354.61	0.00	18.24	.0685	.00394	.0841	.0484	.0933	.0465	.0638	.02517	2.53
354.61	0.00	19.29	.0749	.00342	.0908	.0532	.1011	.0507	.0696	.02798	2.49
354.61	0.00	.02	.0022	.00837	-.0006	-.0015	-.0003	-.0015	.0022	.00837	.27

MACH NO .700 CONFIG. 19

Q	BETA	ALPHA	CN	CA	CM	CNC	CMC	CLC	CL	CD	L/D
260.96	0.00	-4.01	-.0066	.00867	-.0165	-.0105	-.0181	-.0103	-.0060	.00911	-.66
261.66	0.00	-1.99	-.0018	.00863	-.0086	-.0059	-.0092	-.0059	-.0015	.00869	-.18
261.96	0.00	.02	.0031	.00860	-.0007	-.0022	-.0014	-.0022	.0030	.00860	.35
261.59	0.00	2.03	.0072	.00873	.0071	.0023	.0074	.0023	.0069	.00898	.77
261.20	0.00	4.05	.0114	.00850	.0152	.0064	.0160	.0062	.0107	.00928	1.16
261.81	0.00	6.06	.0161	.00850	.0234	.0109	.0250	.0107	.0151	.01016	1.49
261.72	0.00	8.07	.0227	.00796	.0311	.0152	.0335	.0148	.0213	.01106	1.93
261.28	0.00	10.09	.0300	.00762	.0399	.0204	.0430	.0198	.0282	.01276	2.21
261.66	0.00	12.11	.0372	.00696	.0490	.0252	.0523	.0245	.0349	.01461	2.39
261.74	0.00	14.12	.0467	.00634	.0579	.0316	.0623	.0308	.0437	.01754	2.49
261.20	0.00	16.12	.0556	.00551	.0677	.0376	.0731	.0364	.0519	.02075	2.50
261.20	0.00	18.17	.0675	.00452	.0782	.0451	.0856	.0433	.0628	.02536	2.48
261.50	0.00	19.21	.0722	.00360	.0834	.0486	.0911	.0465	.0670	.02715	2.47
261.58	0.00	.00	.0030	.00862	-.0009	-.0017	-.0009	-.0017	.0030	.00862	.35

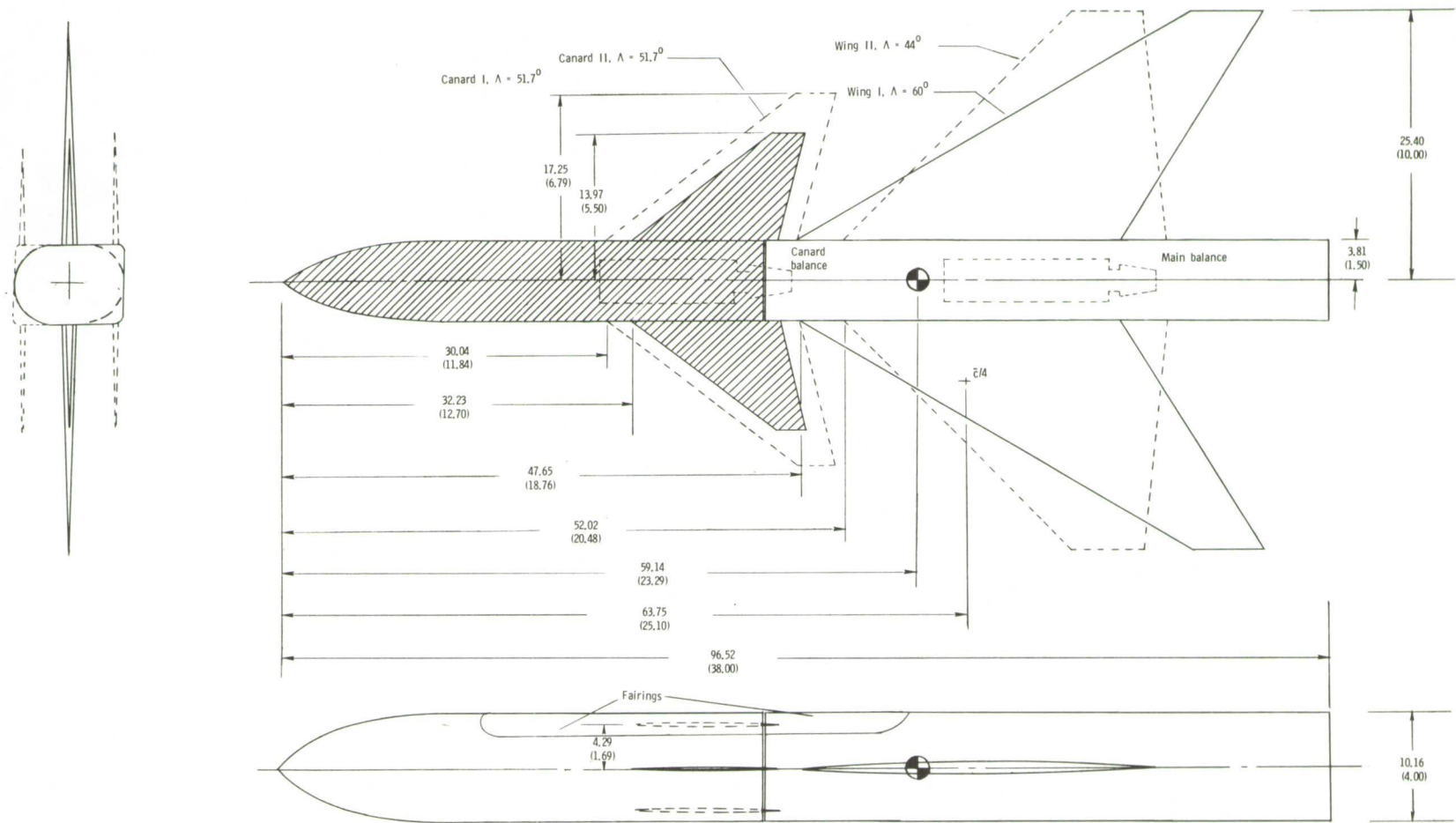
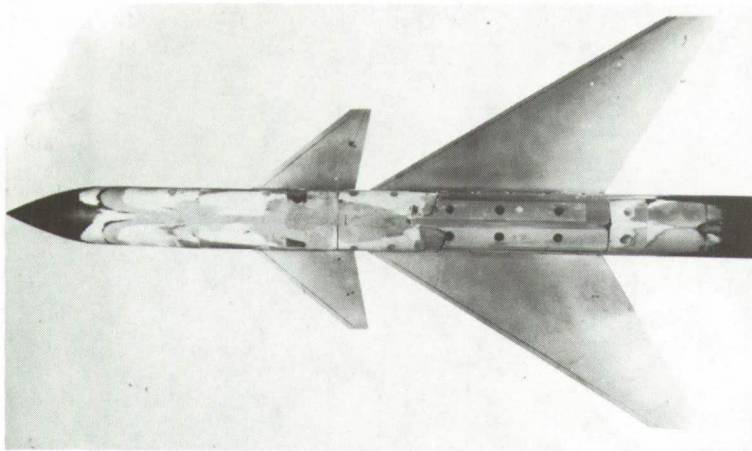
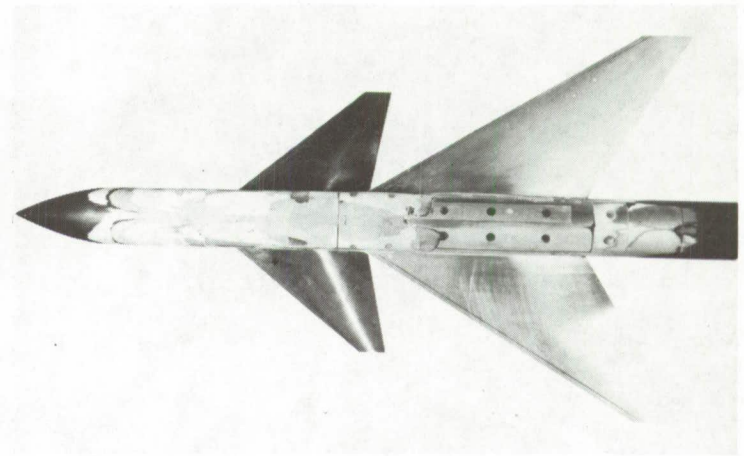


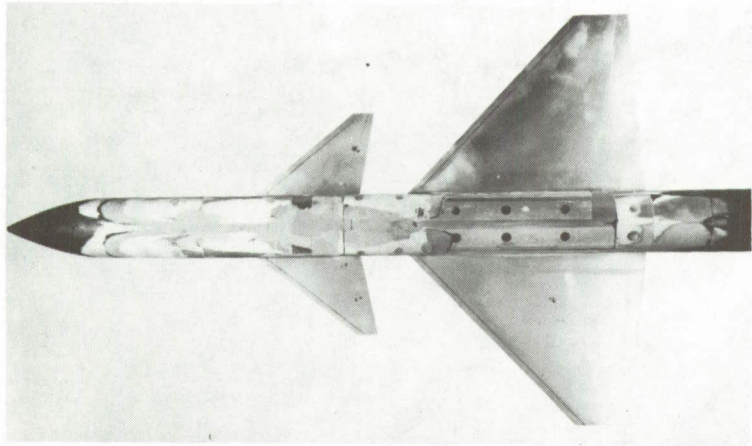
Figure 1.- Three-view drawing of model. All dimensions are in centimeters (inches).



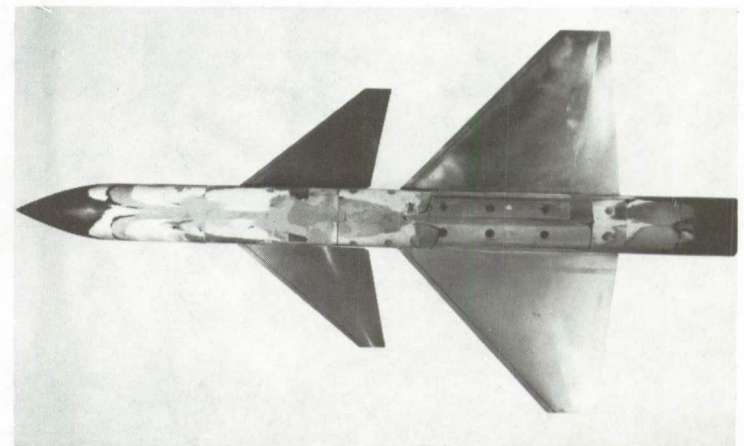
(a) Wing I, canard I.



(b) Wing I, canard II.



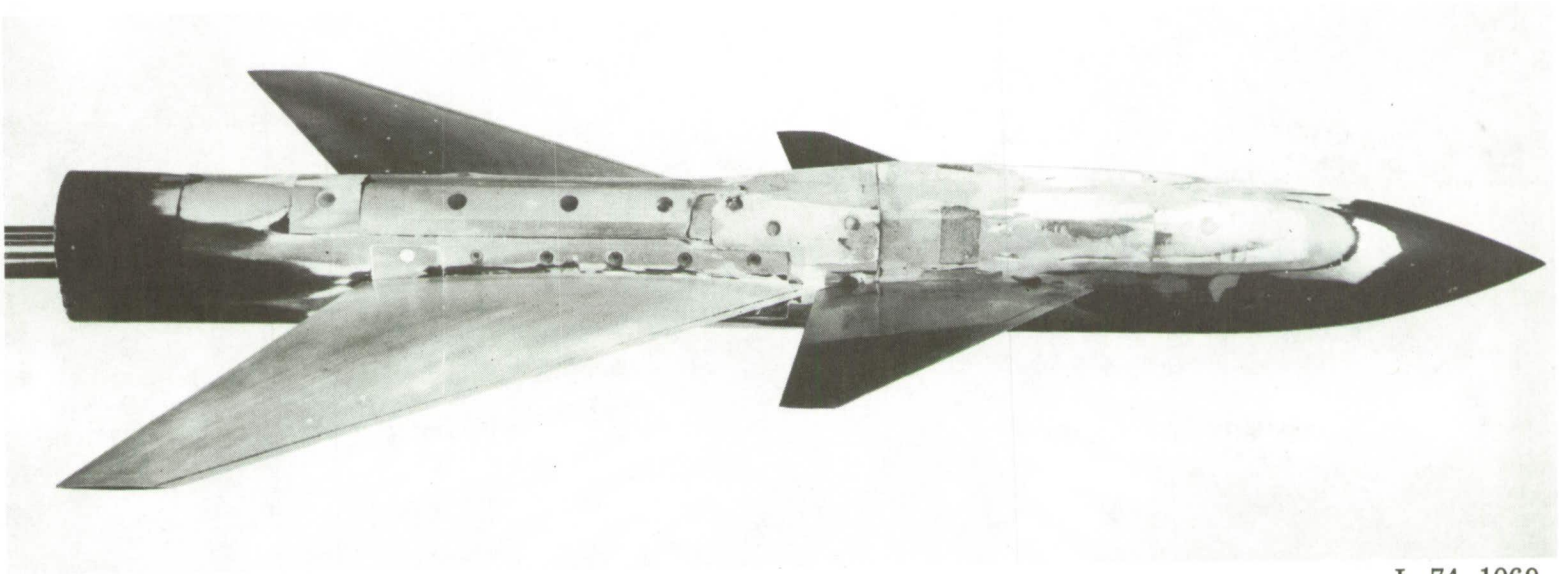
(c) Wing II, canard I.



(d) Wing II, canard II.

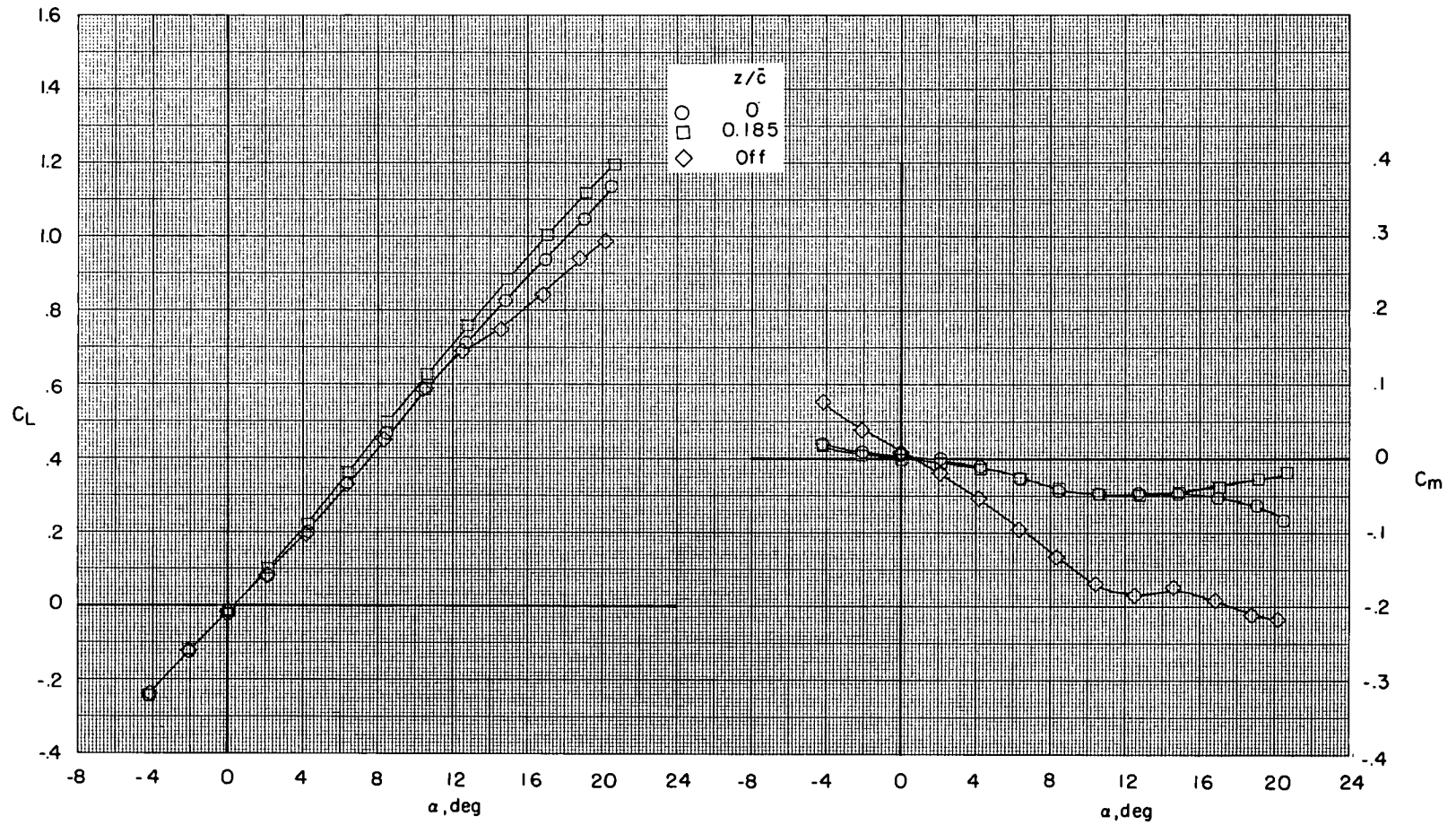
L-74-1068

Figure 2.- Photograph of model configured in four wing-canard planforms.



L-74-1069

Figure 3.- Photograph of model with wing I, canard II, $z/\bar{c} = 0.0$ showing fuselage fairing used to accommodate high-canard configuration.



(a) $M = 0.70$.

Figure 4.- Effect of canard height on longitudinal aerodynamic characteristics for model with wing I and canard I.

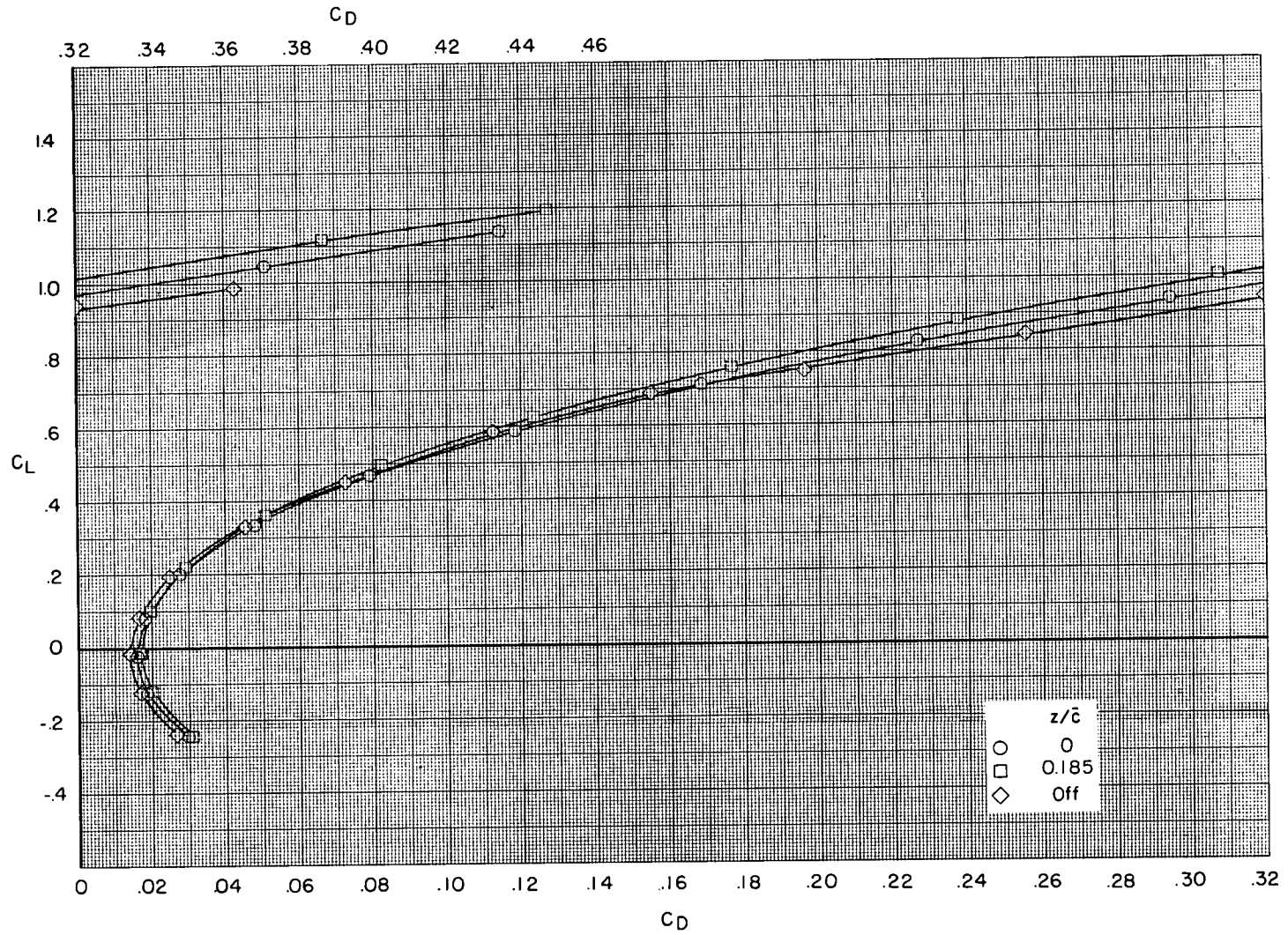
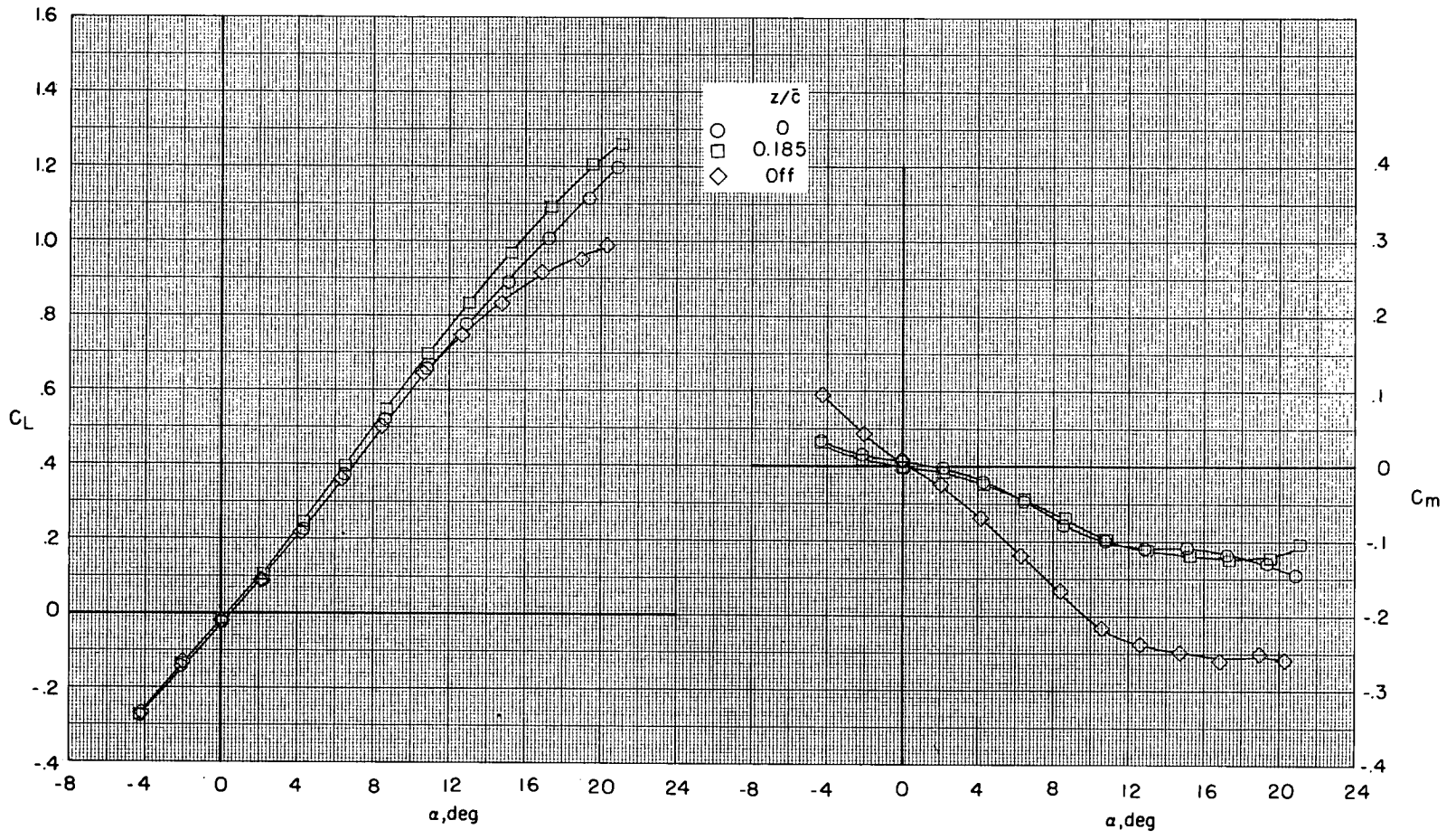
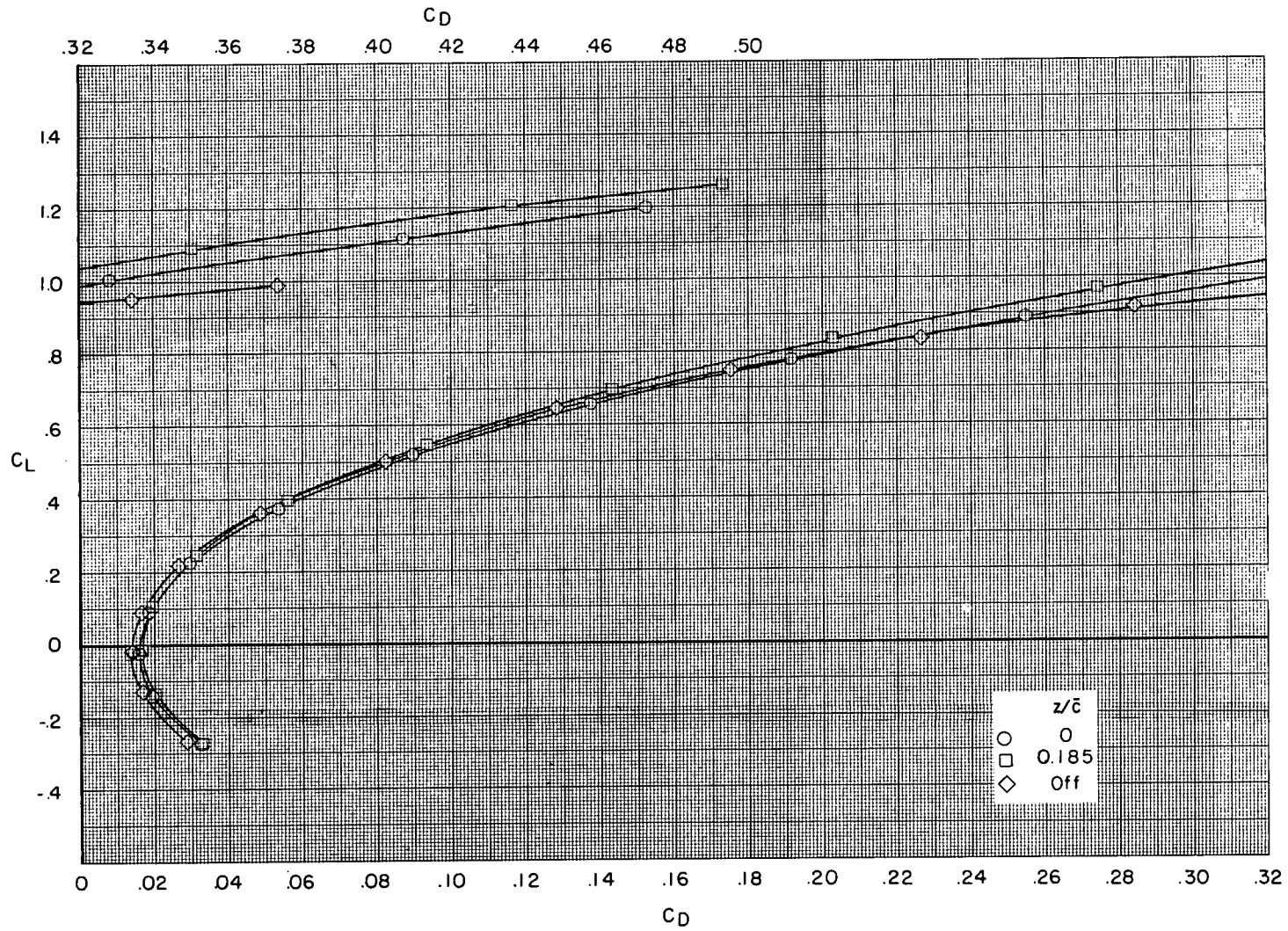
(a) $M = 0.70$. Concluded.

Figure 4.- Continued.



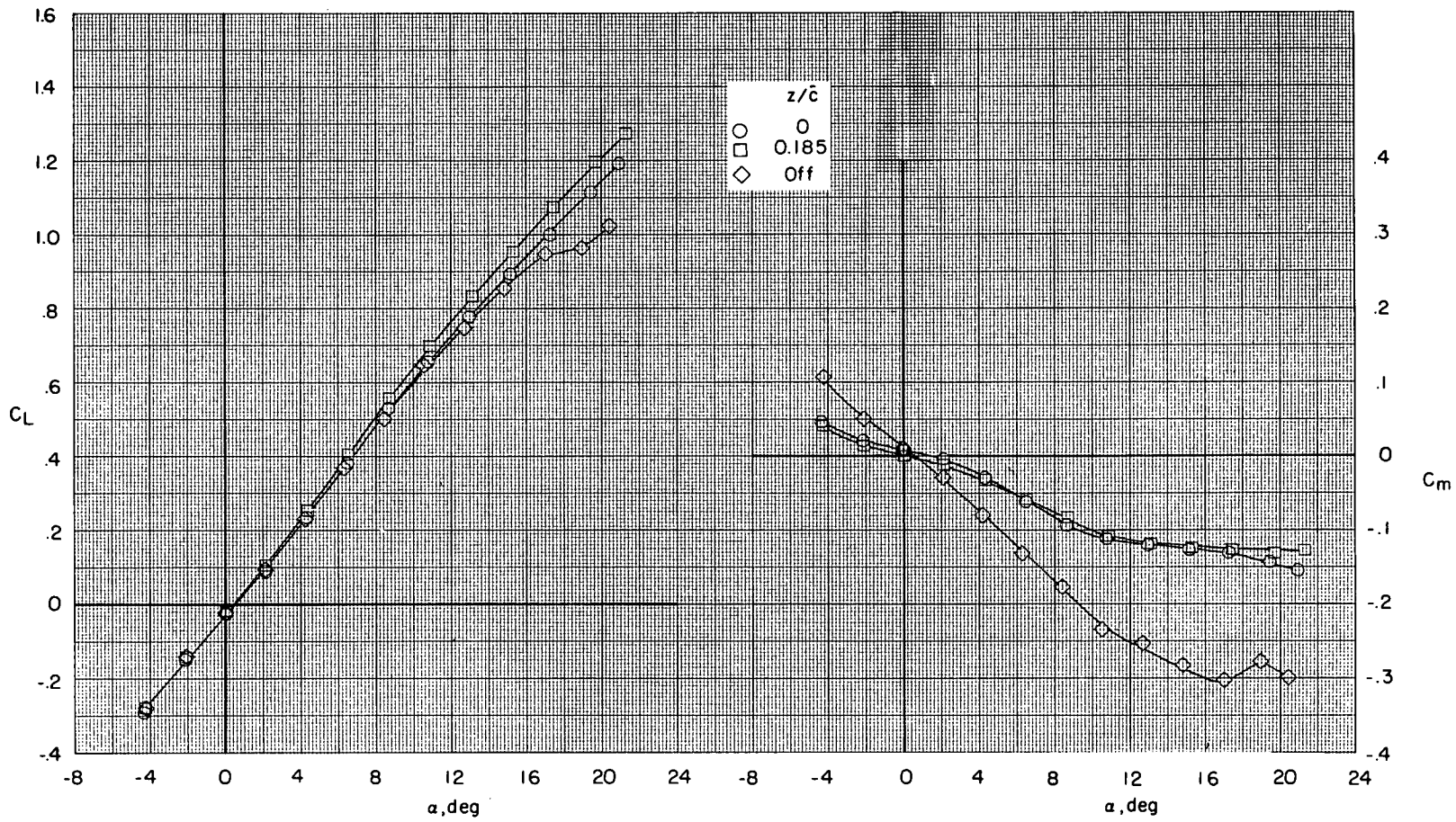
(b) $M = 0.90$.

Figure 4.- Continued.



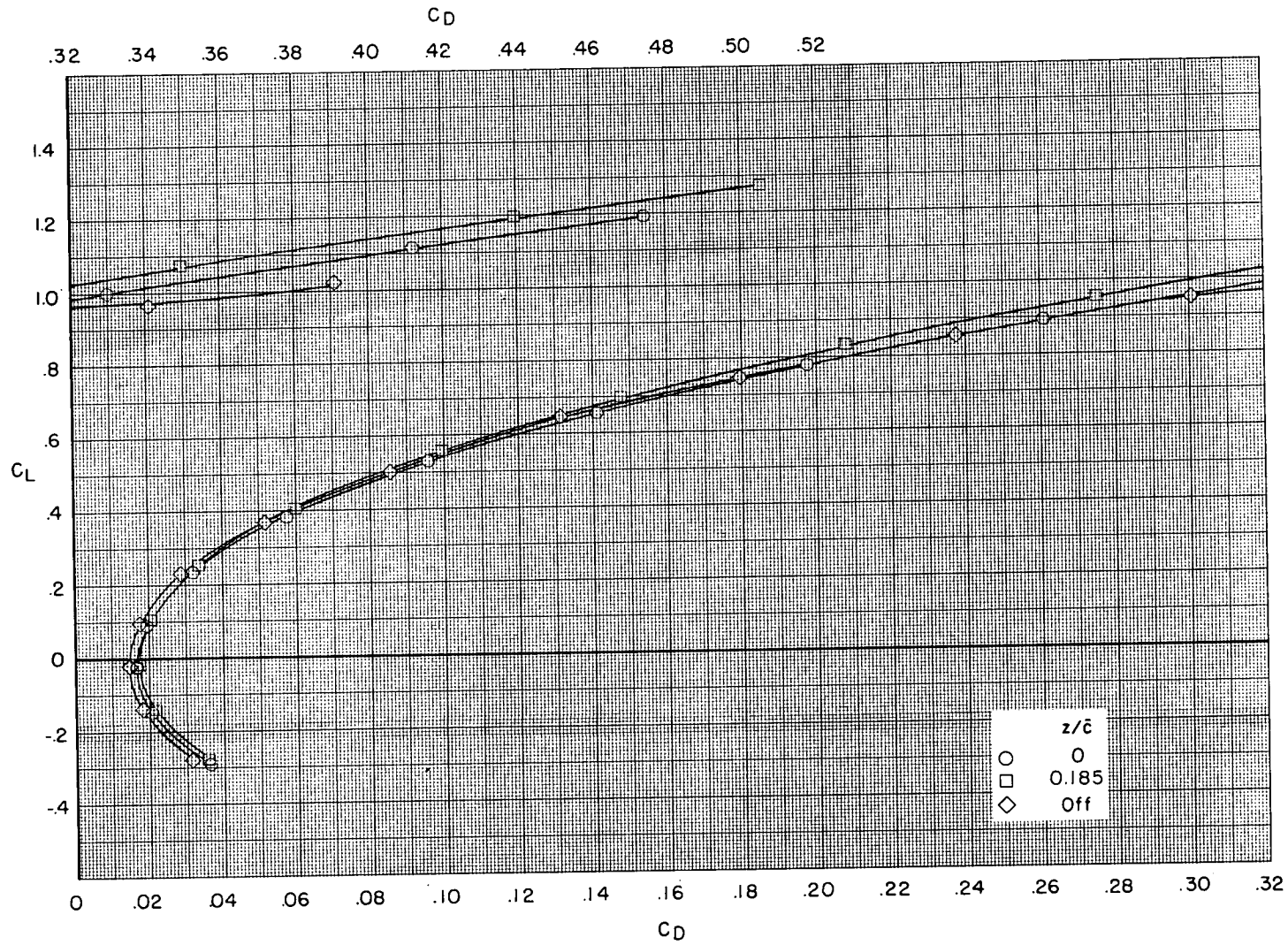
(b) $M = 0.90$. Concluded.

Figure 4.- Continued.



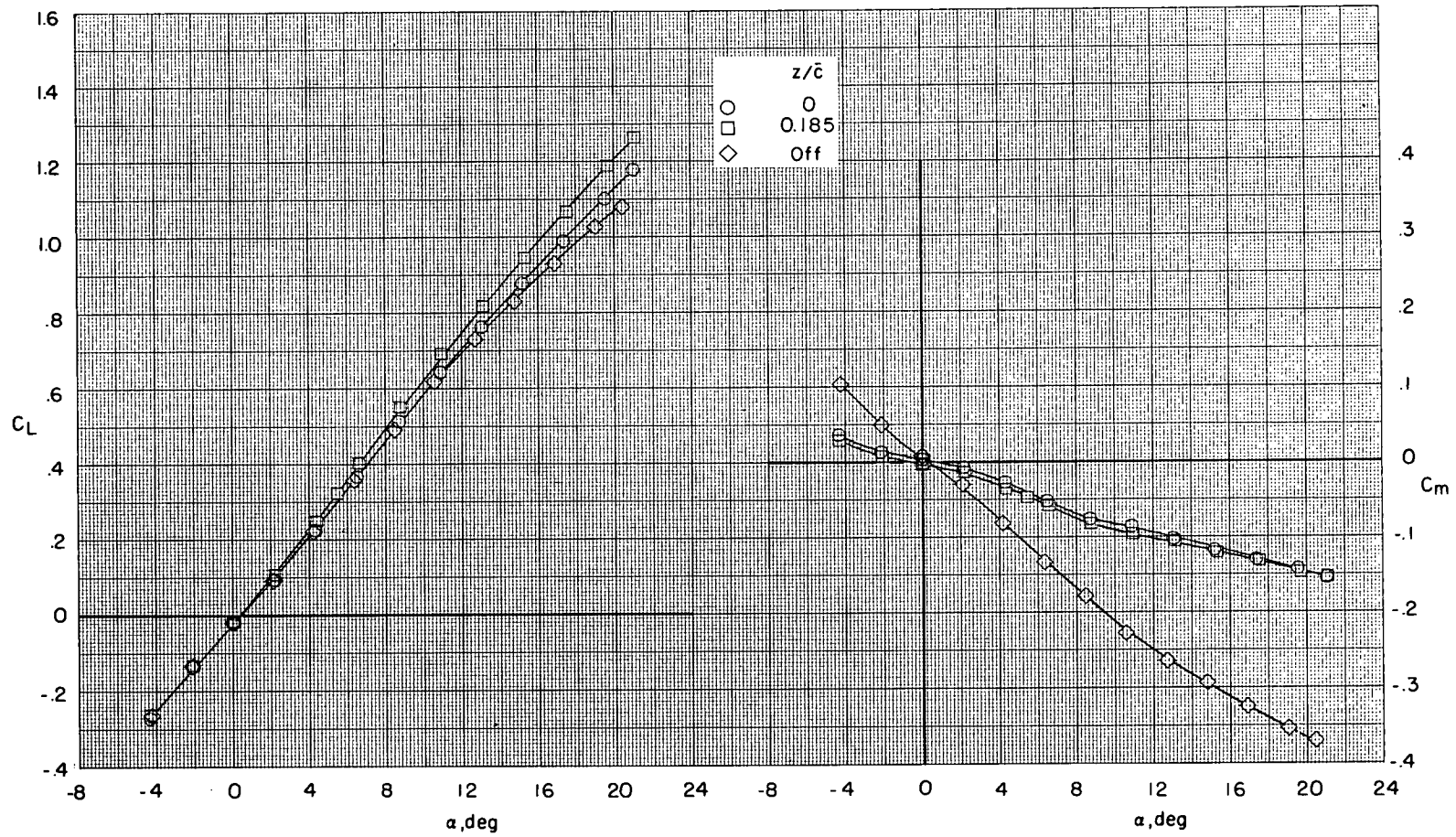
(c) $M = 0.95$.

Figure 4.- Continued.



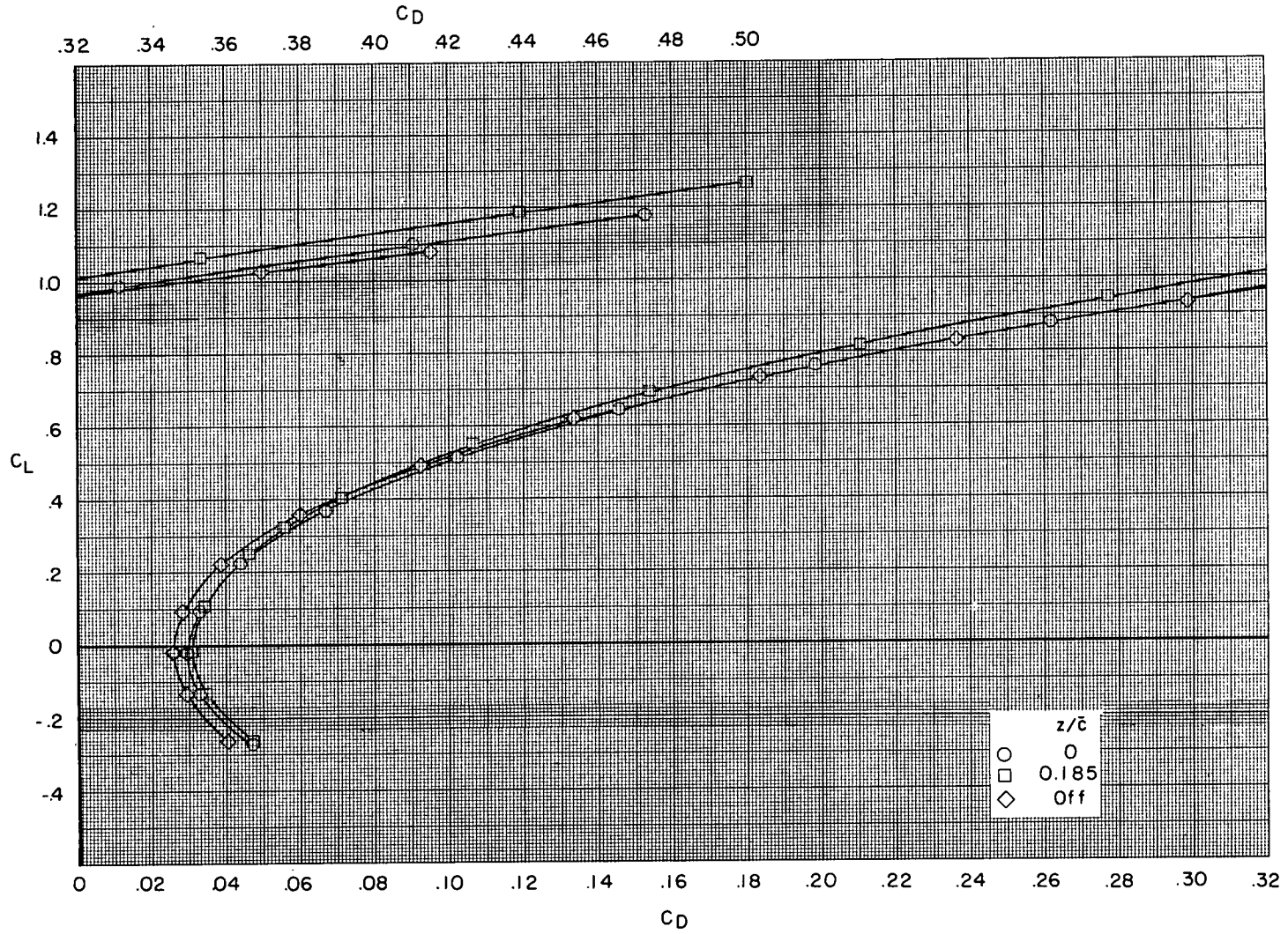
(c) $M = 0.95$. Concluded.

Figure 4.- Continued.



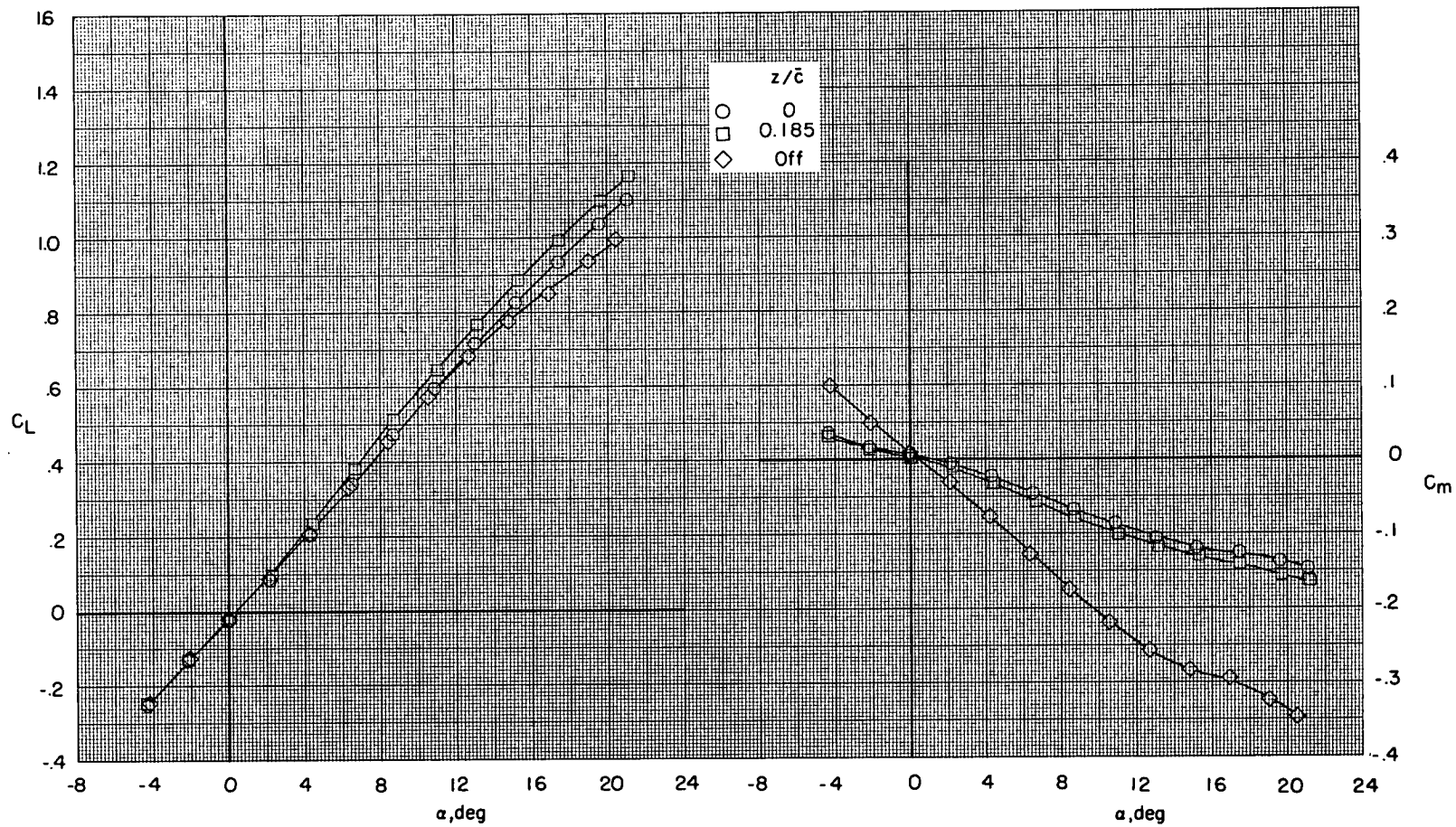
(d) $M = 1.03$.

Figure 4.- Continued.



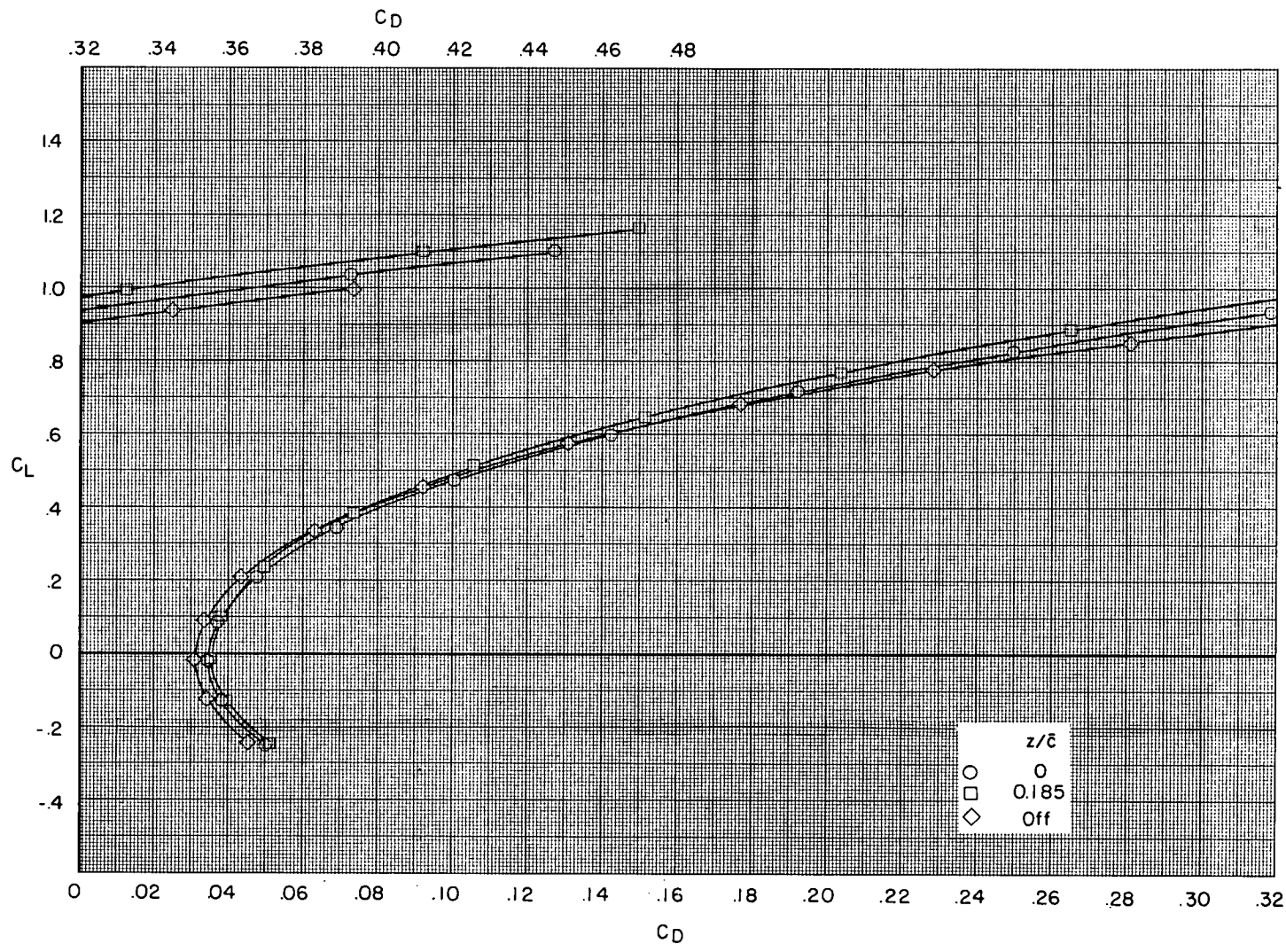
(d) $M = 1.03$. Concluded.

Figure 4.- Continued.



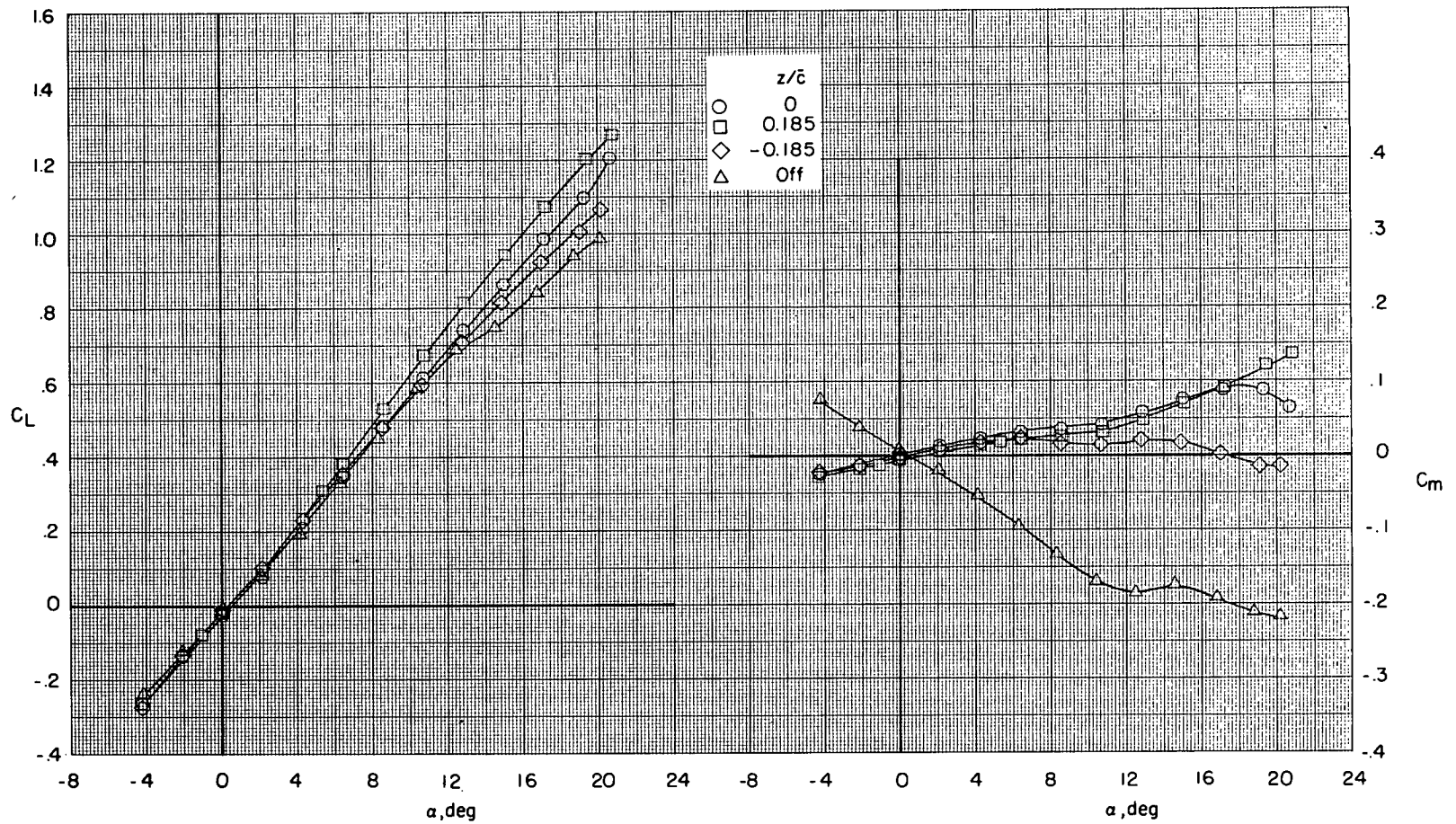
(e) $M = 1.20$.

Figure 4.- Continued.



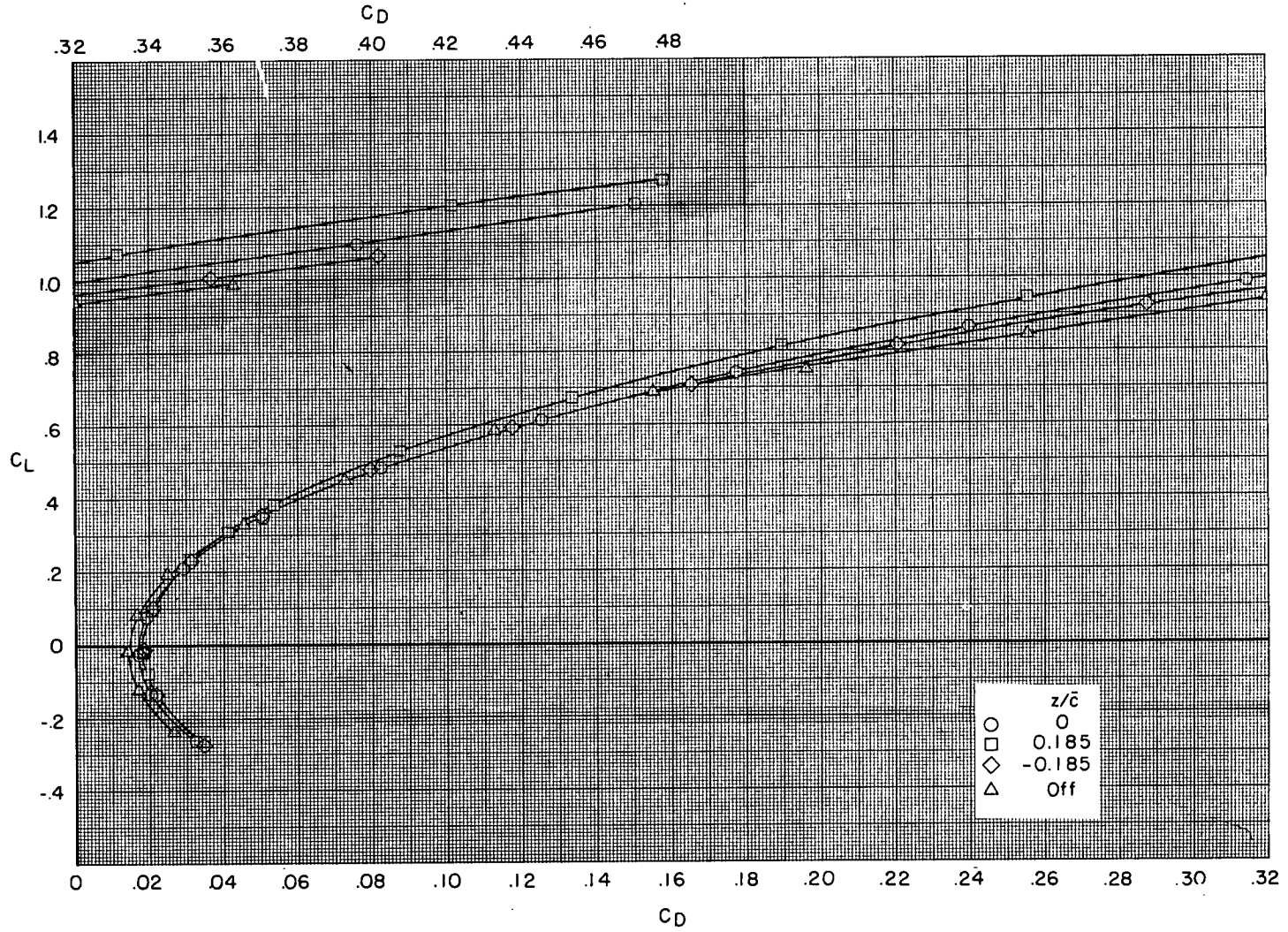
(e) $M = 1.20$. Concluded.

Figure 4.- Concluded.



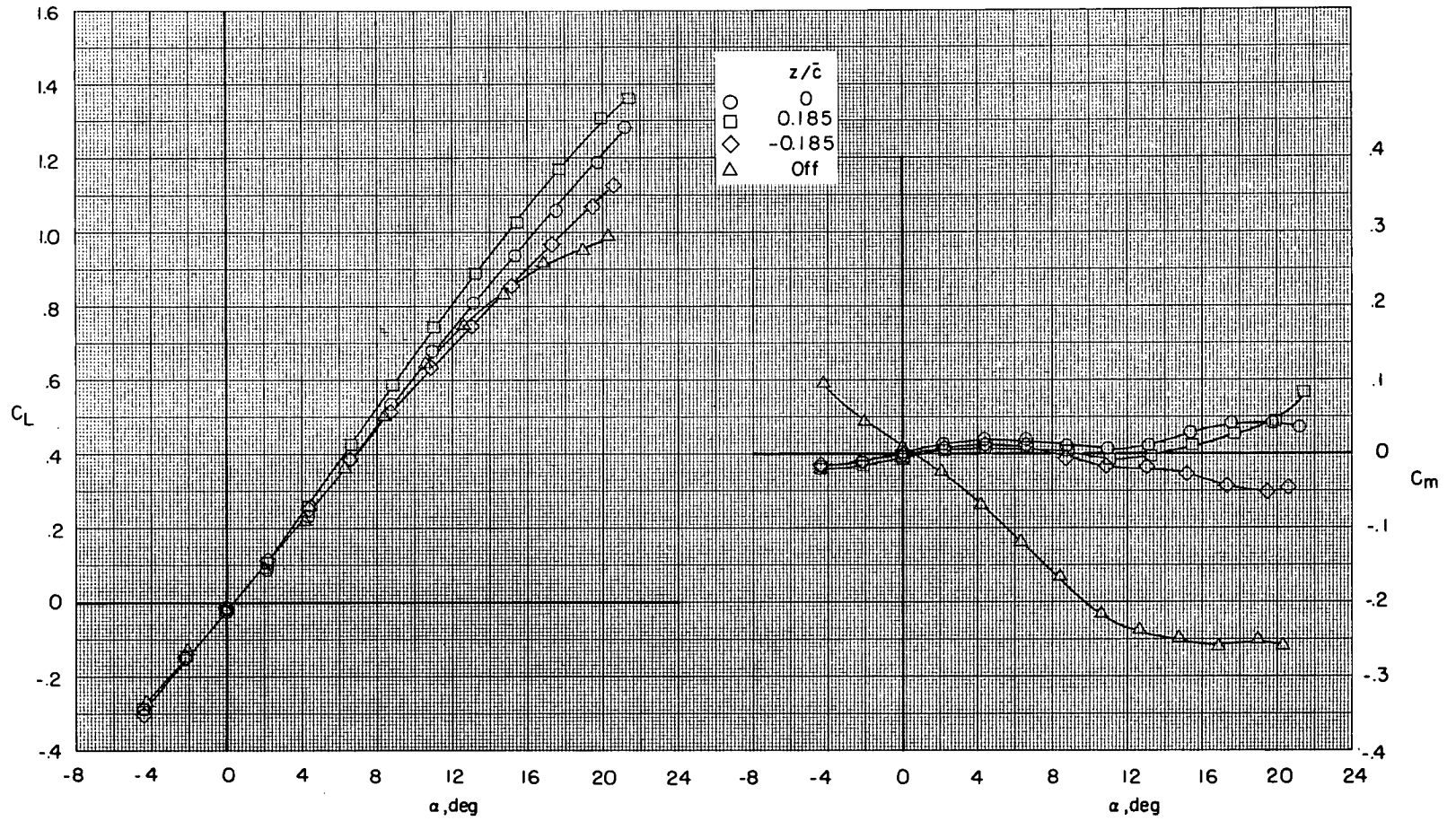
(a) $M = 0.70$.

Figure 5.- Effect of canard height on longitudinal aerodynamic characteristics for model with wing I and canard II.



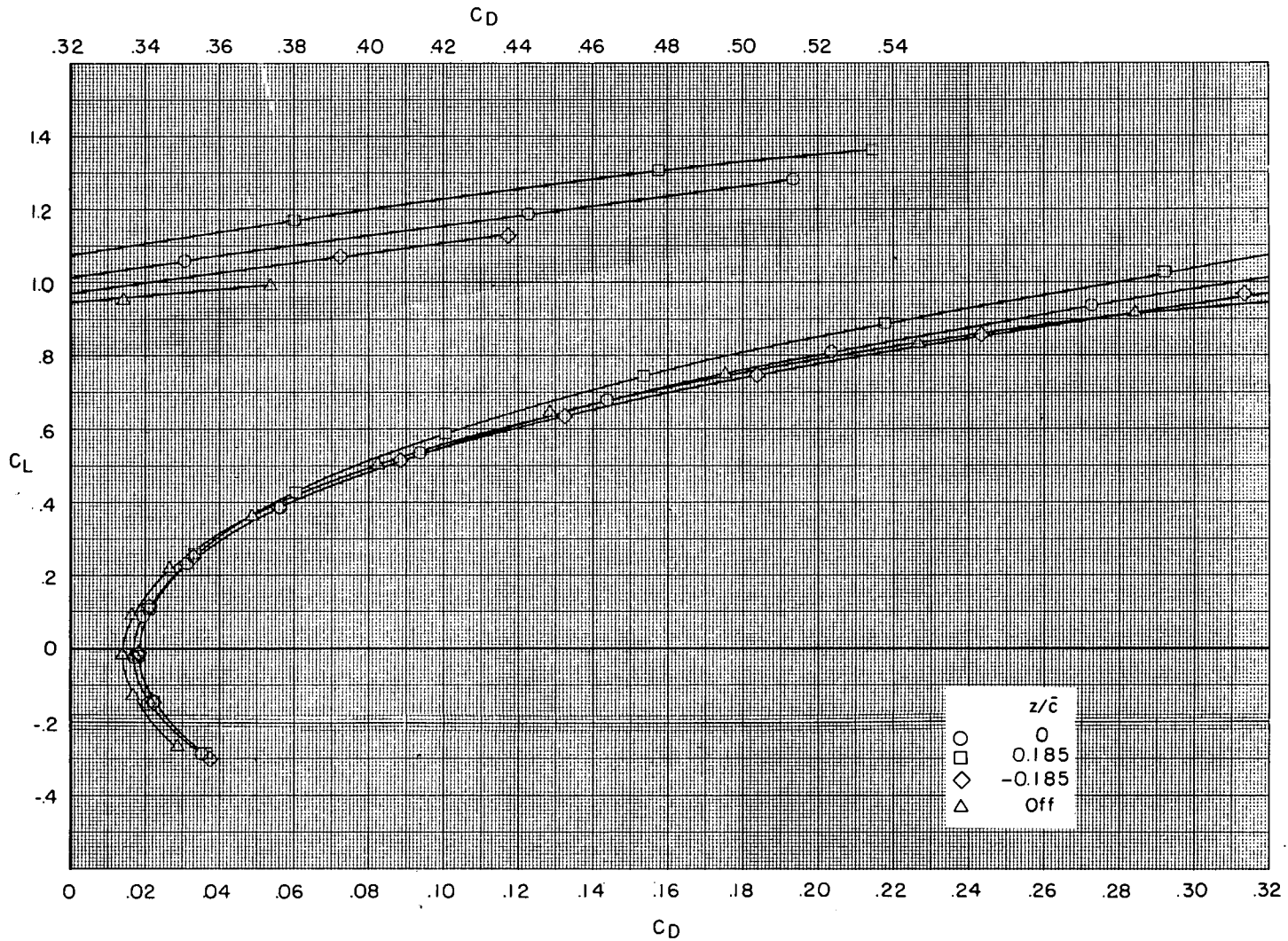
(a) $M = 0.70$. Concluded.

Figure 5.- Continued.



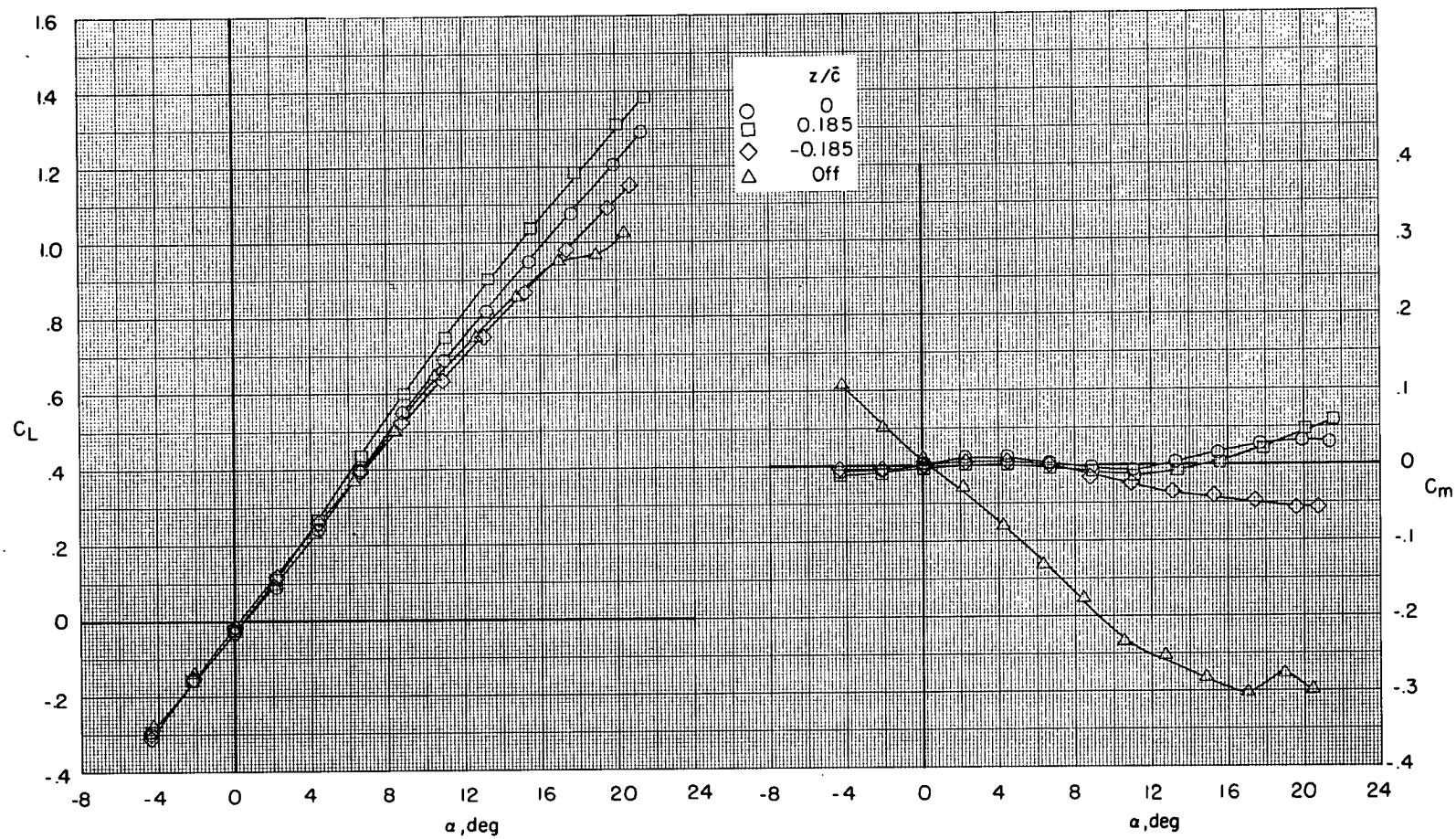
(b) $M = 0.90$.

Figure 5.- Continued.



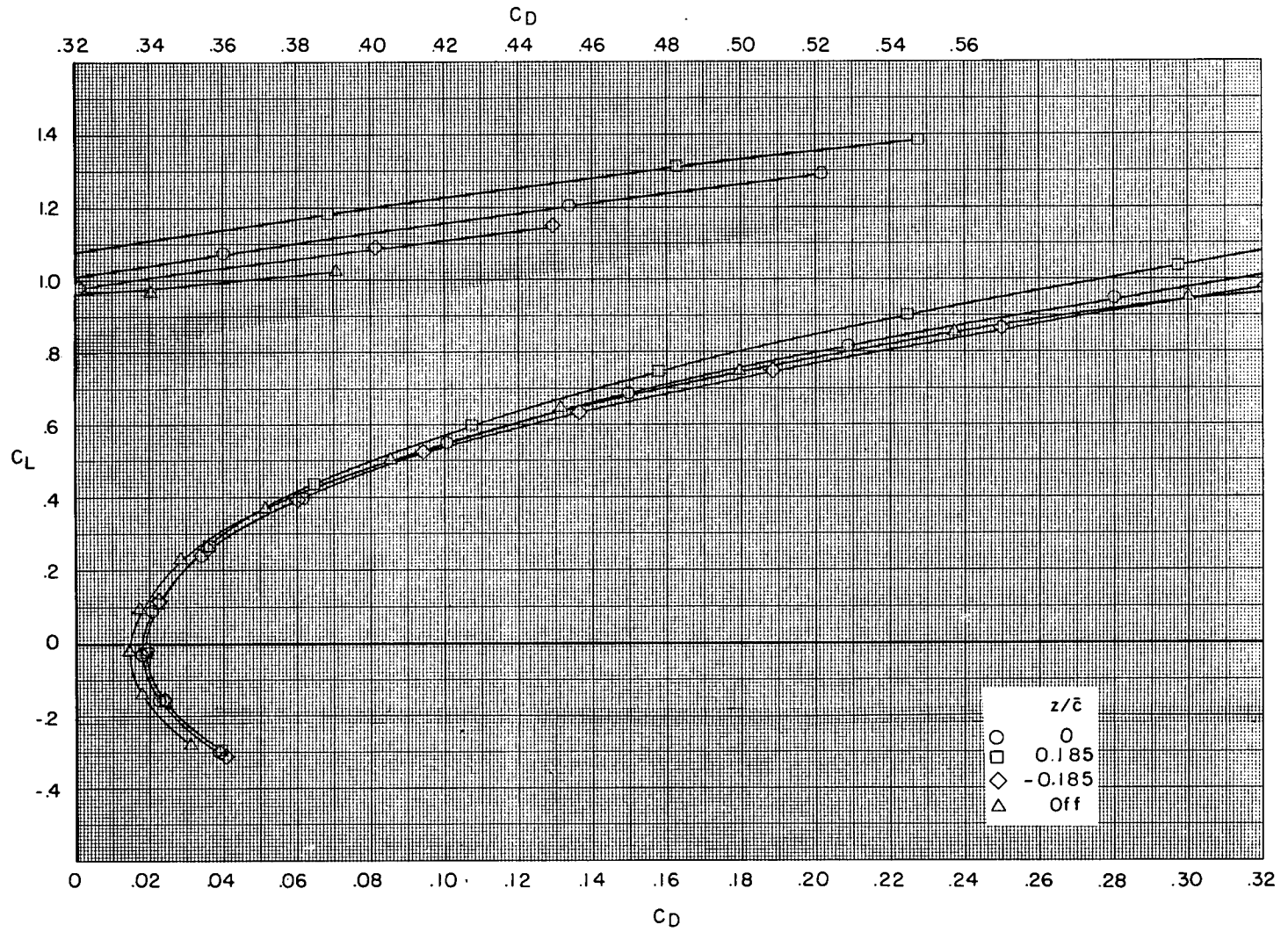
(b) $M = 0.90$. Concluded.

Figure 5.- Continued.



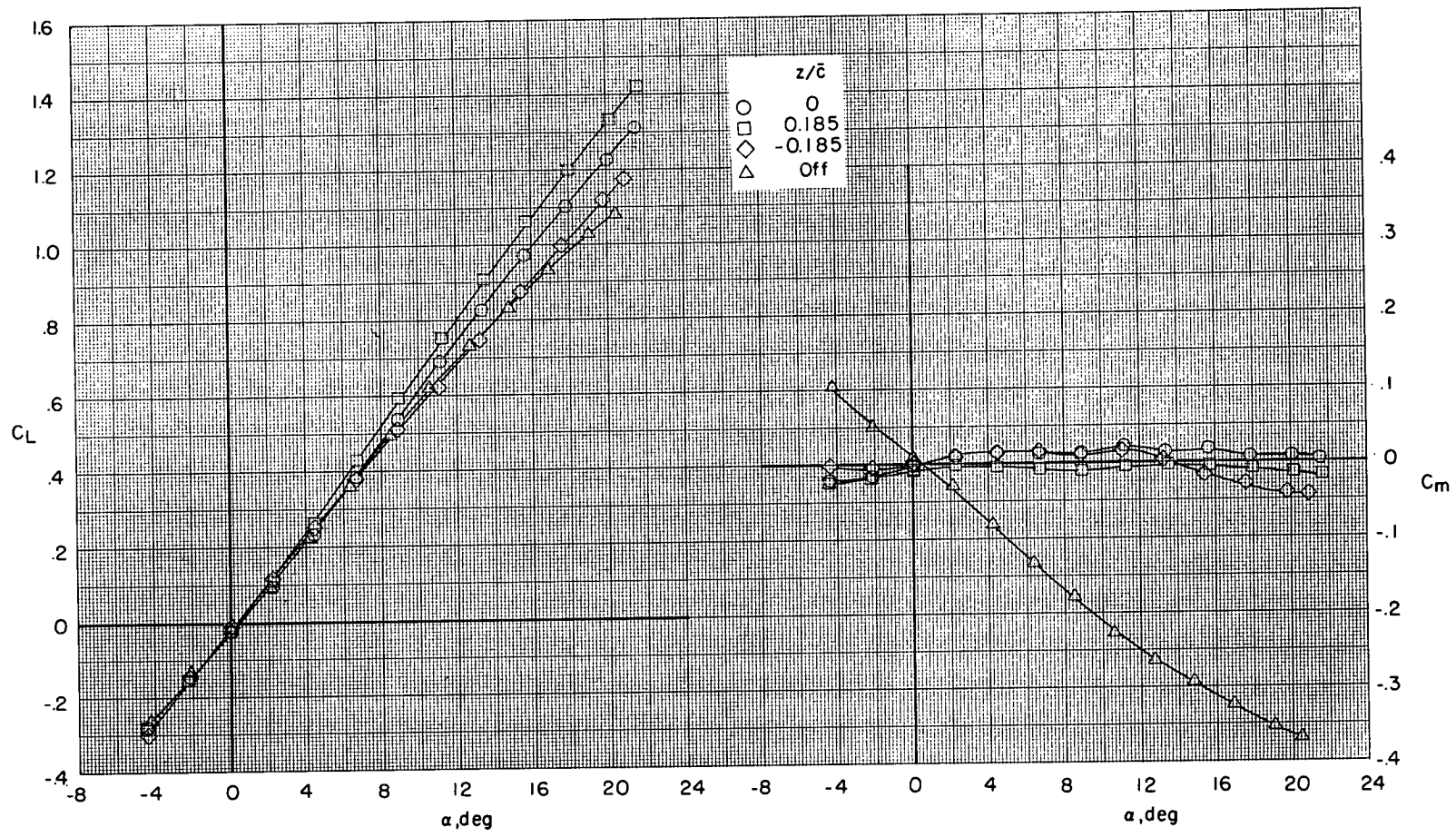
(c) $M = 0.95$.

Figure 5.- Continued.



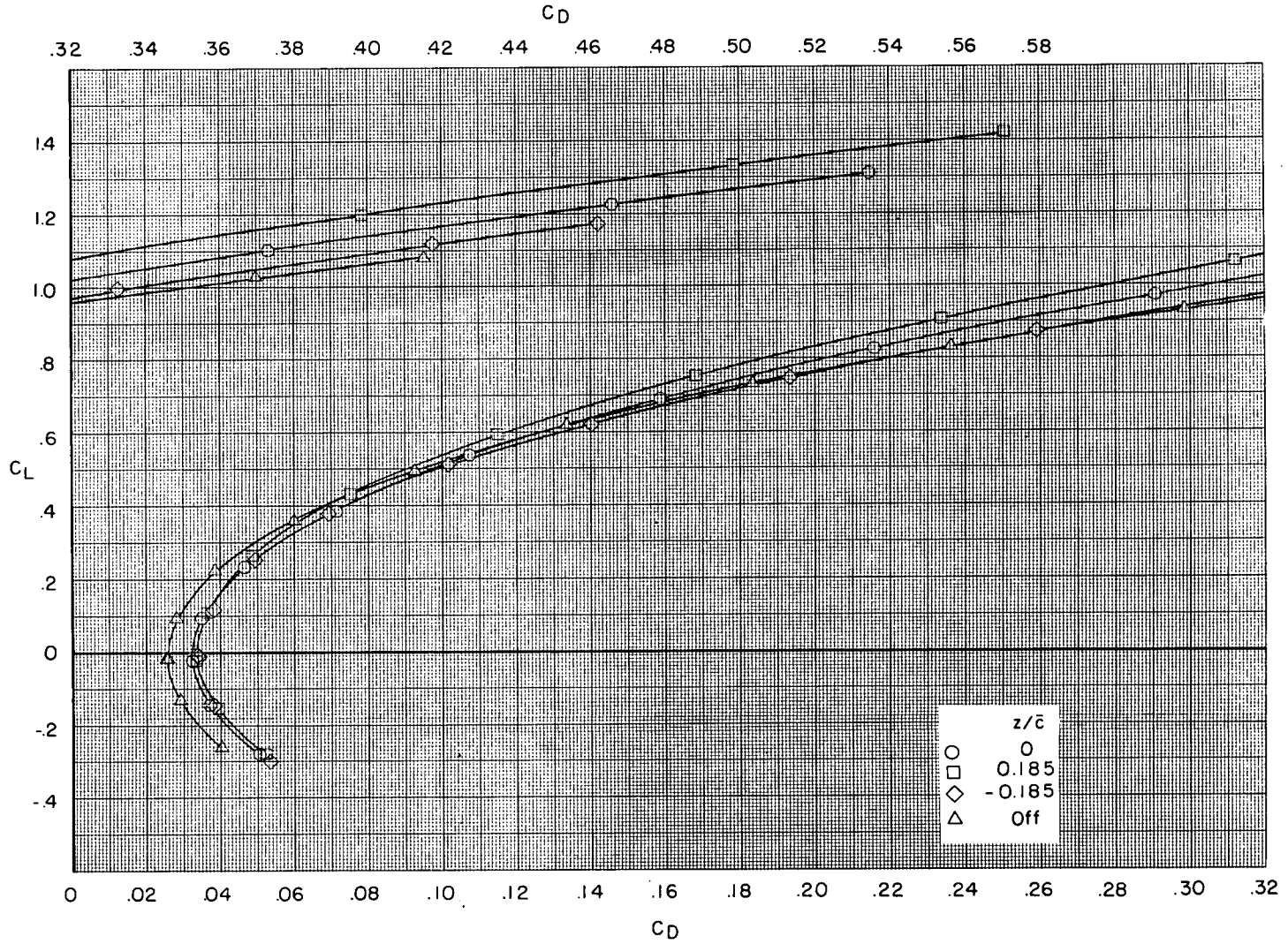
(c) $M = 0.95$. Concluded.

Figure 5.- Continued.



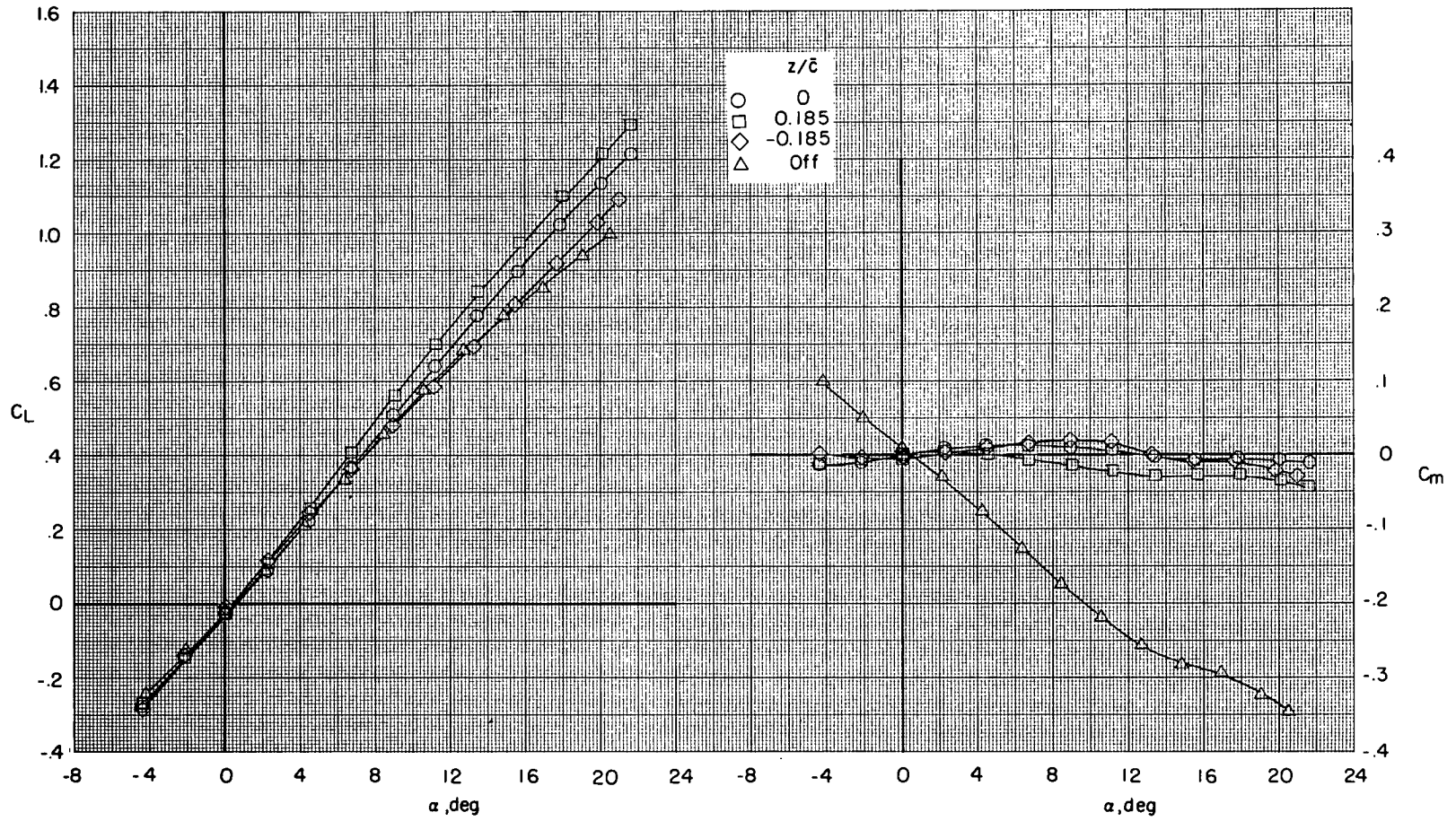
(d) $M = 1.03$.

Figure 5.- Continued.



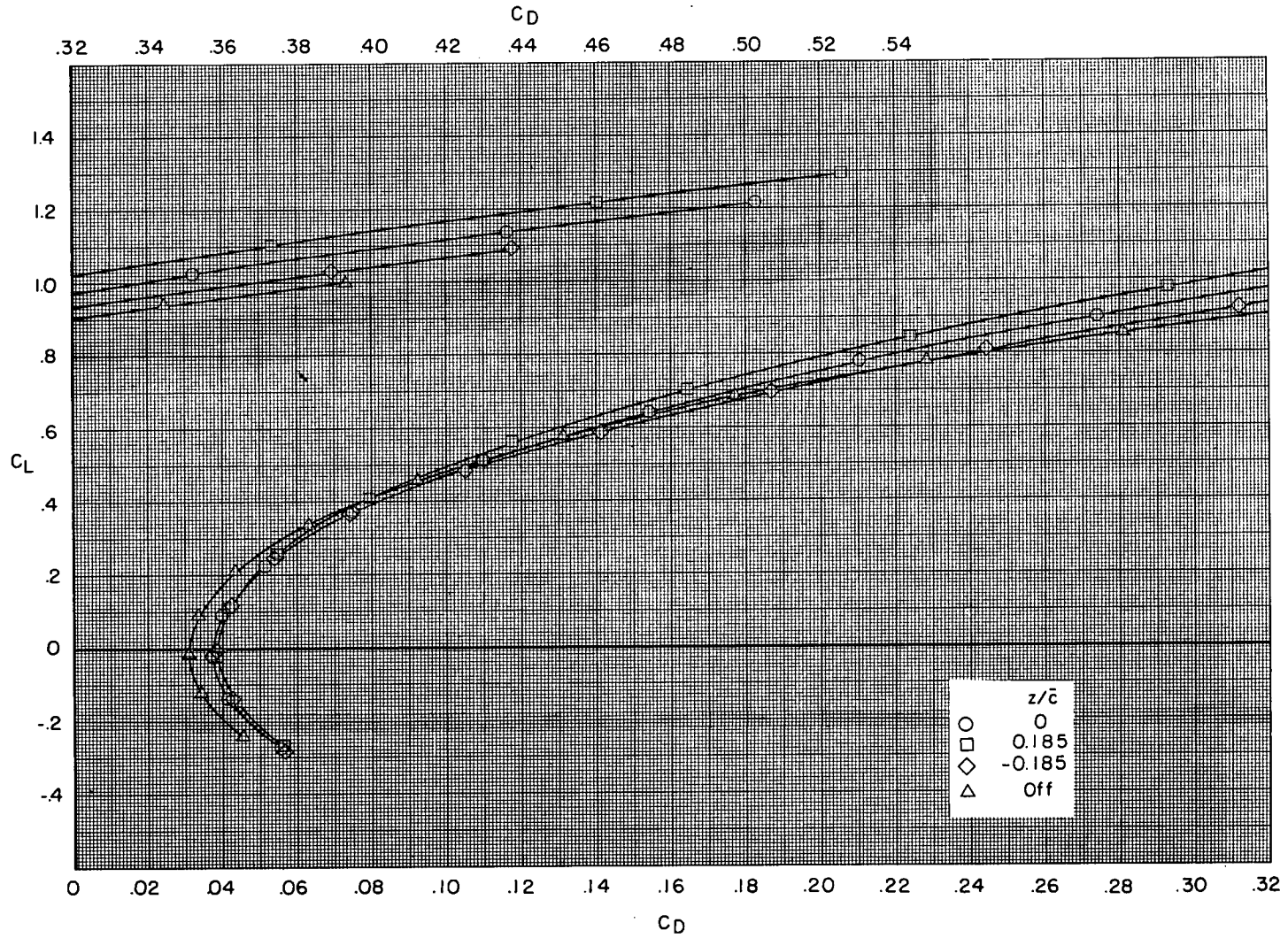
(d) $M = 1.03$. Concluded.

Figure 5.- Continued.



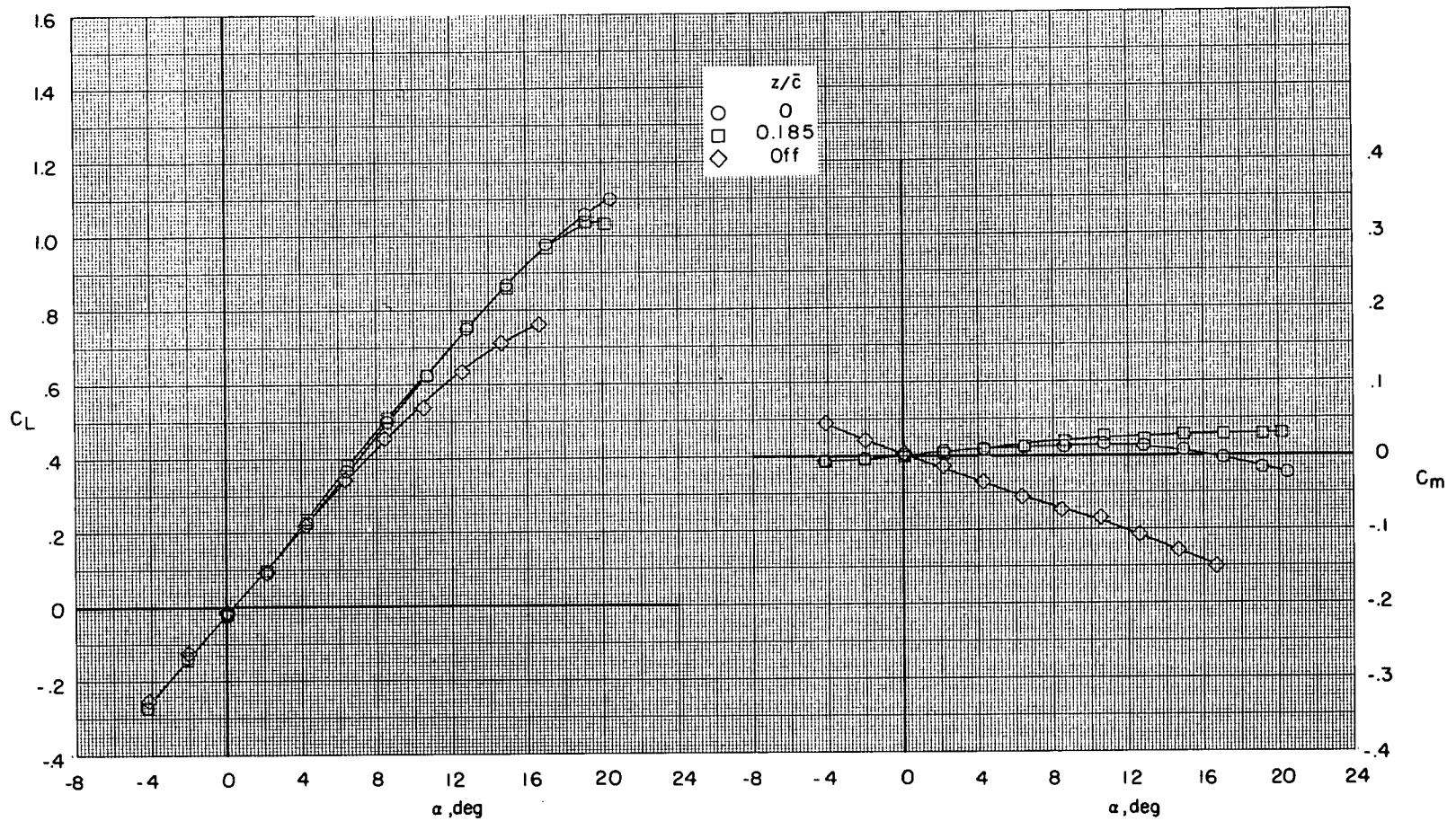
(e) $M = 1.20$.

Figure 5.- Continued.



(e) $M = 1.20$. Concluded.

Figure 5.- Concluded.



(a) $M = 0.70$.

Figure 6.- Effect of canard height on longitudinal aerodynamic characteristics for model with wing II and canard I.

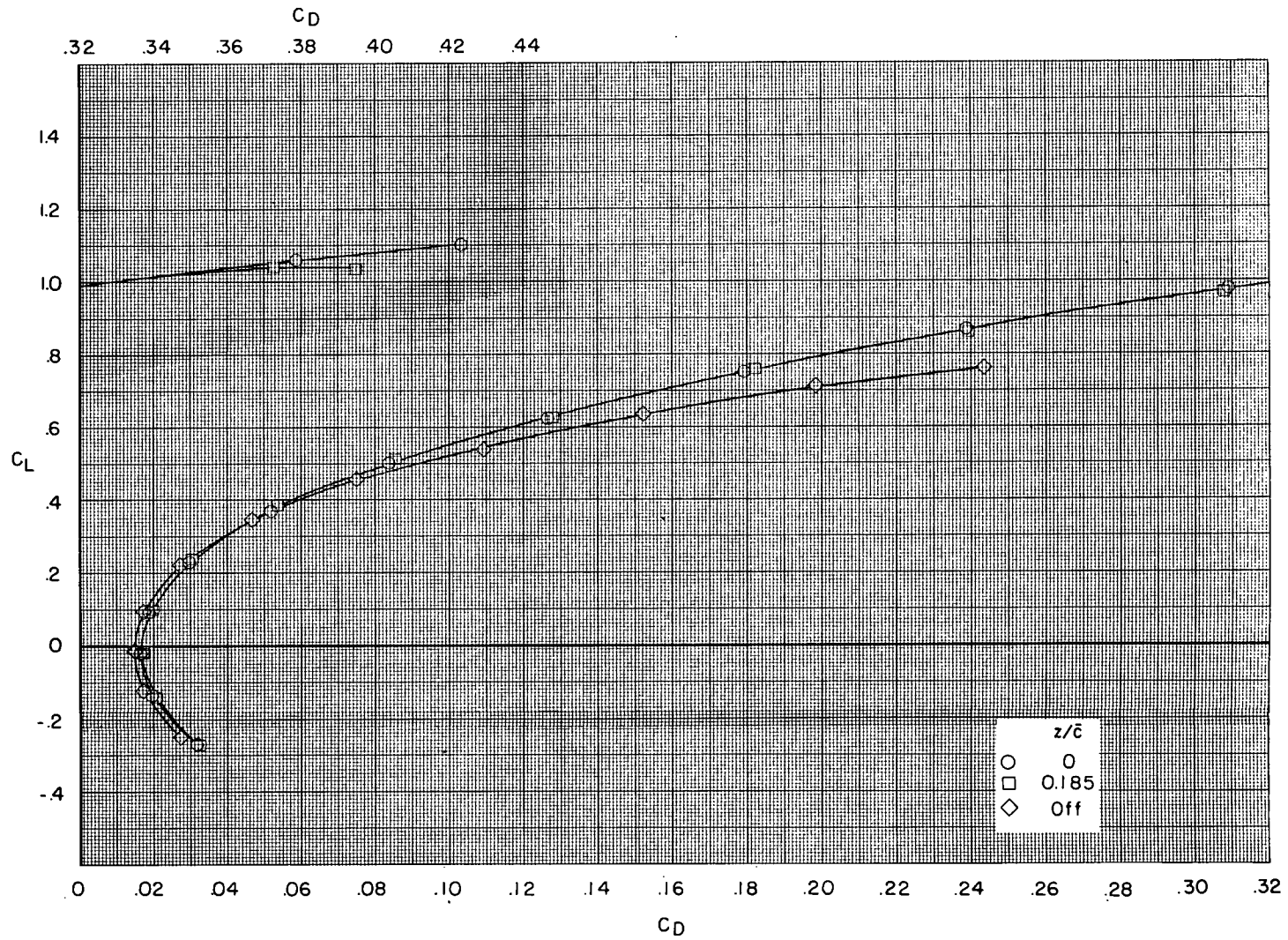
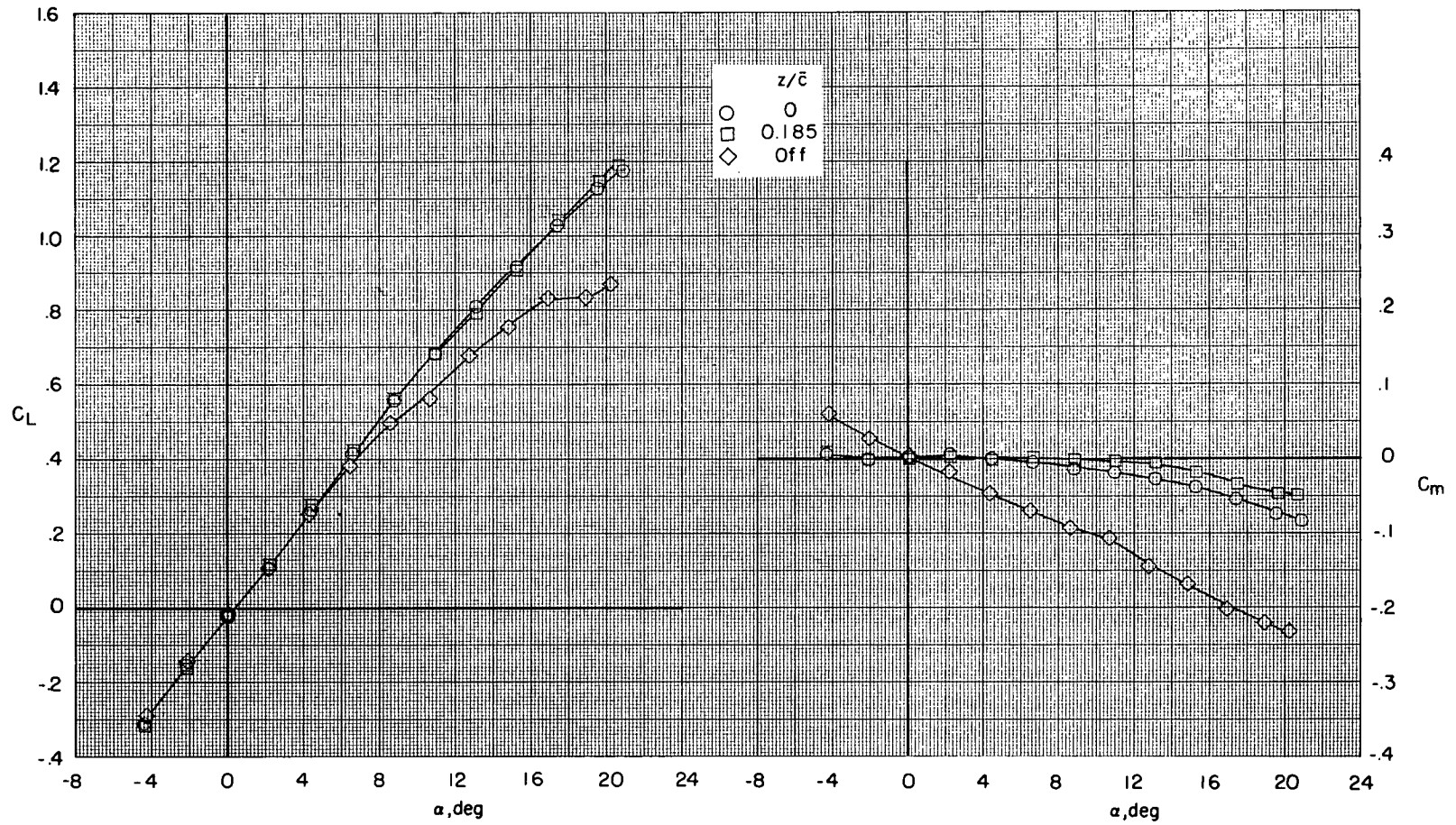
(a) $M = 0.70$. Concluded.

Figure 6.- Continued.



(b) $M = 0.90$.

Figure 6.- Continued.

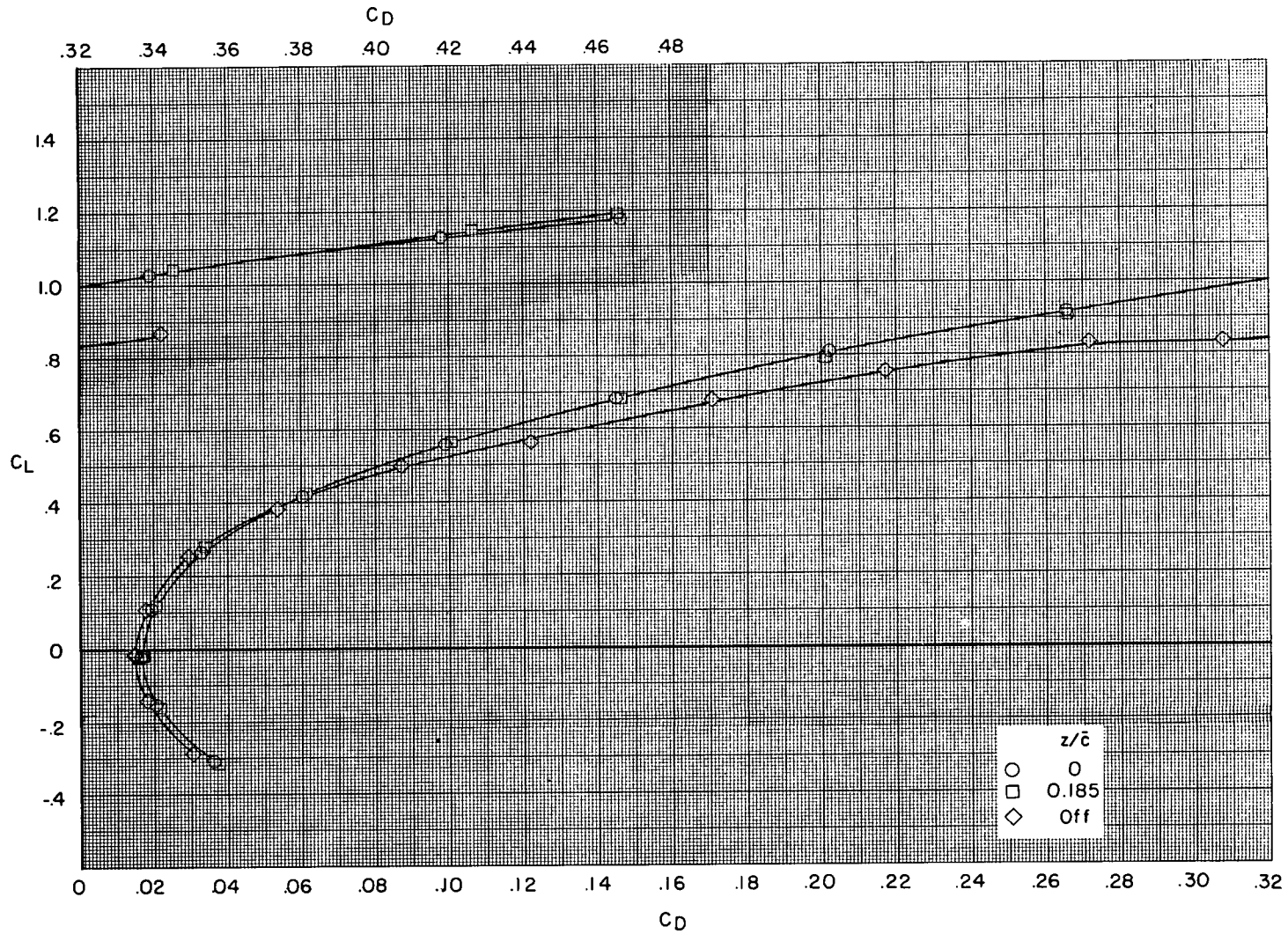
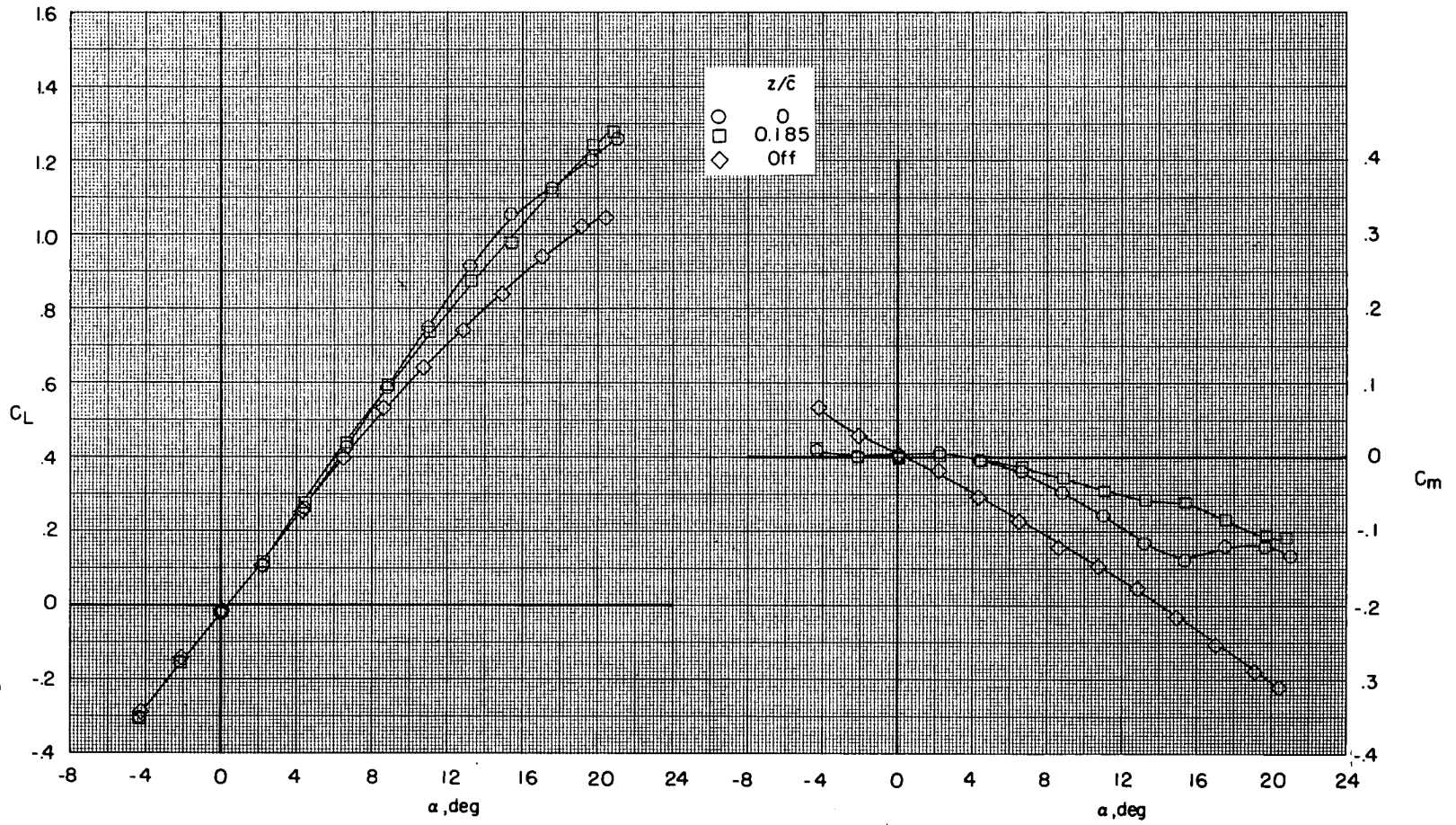
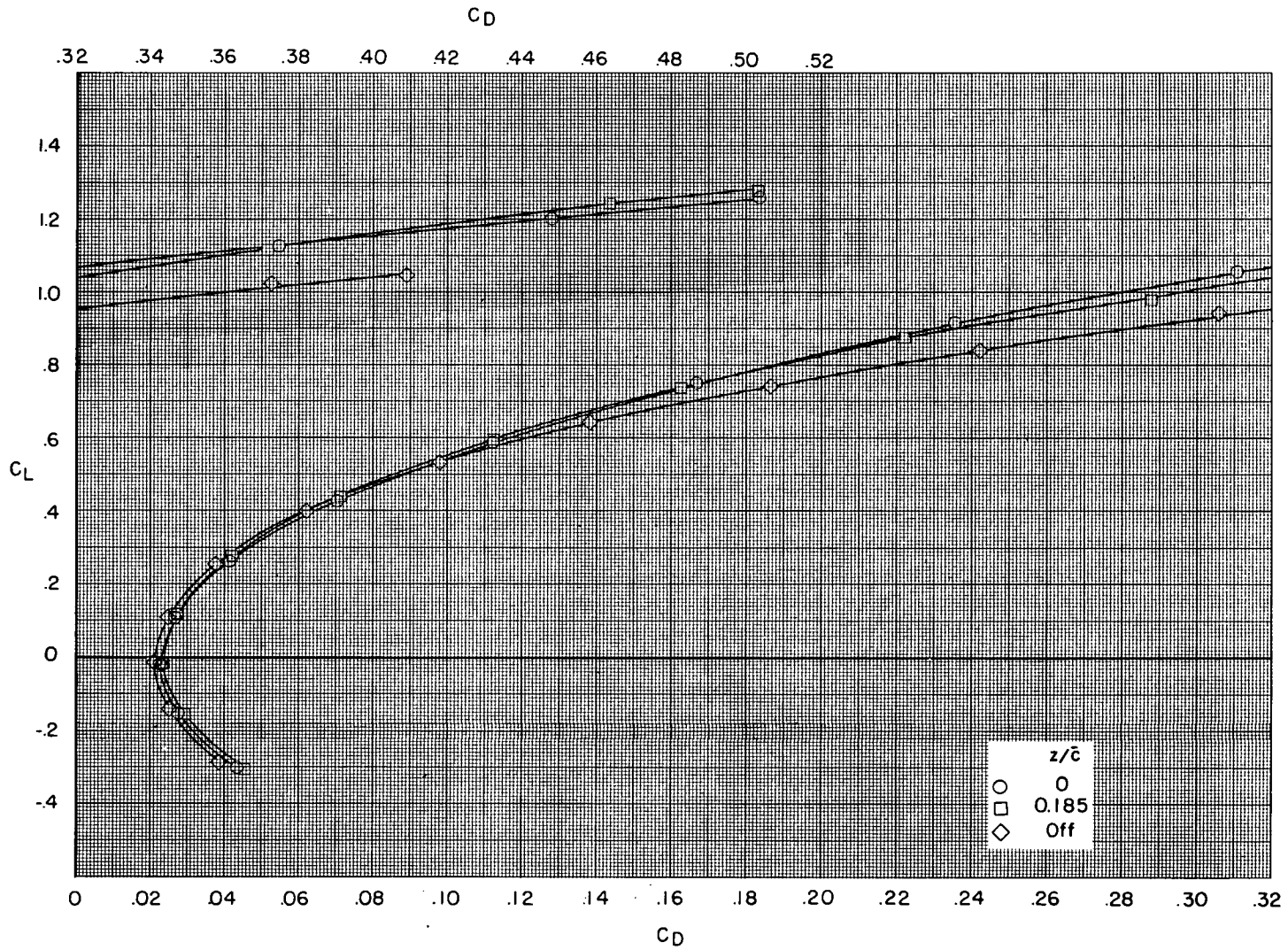
(b) $M = 0.90$. Concluded.

Figure 6.- Continued.



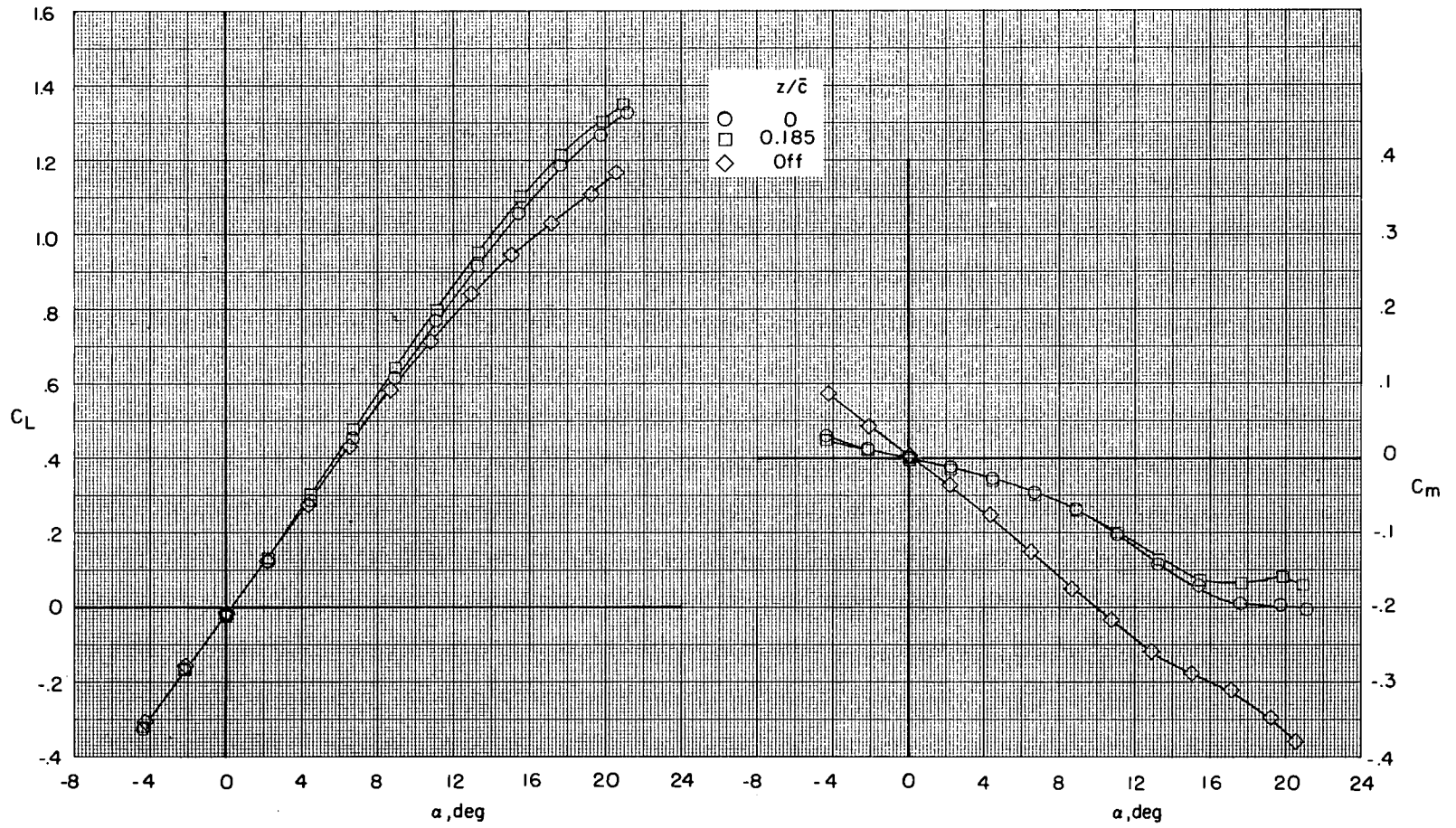
(c) $M = 0.95$.

Figure 6.- Continued.



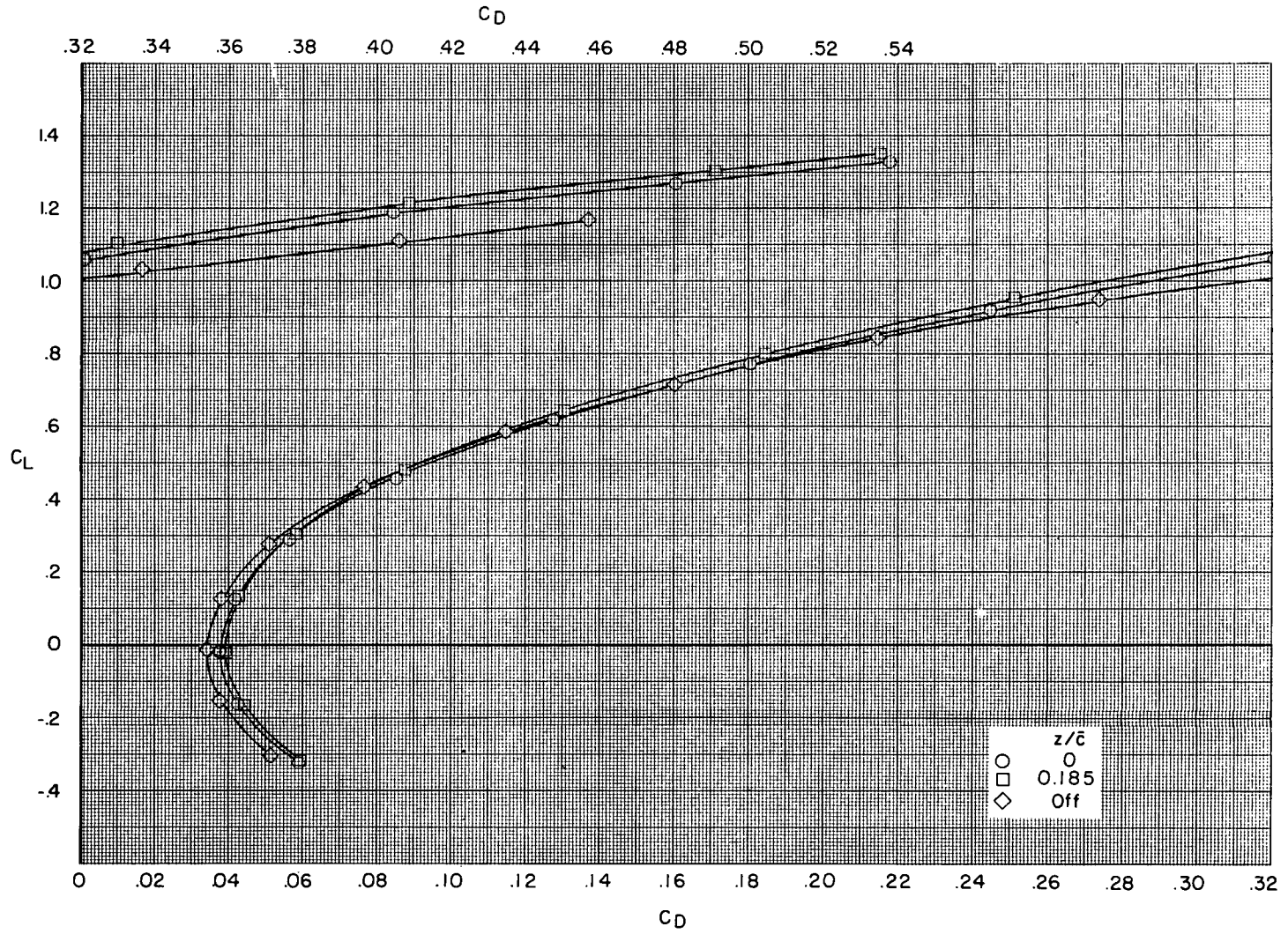
(c) $M = 0.95$. Concluded.

Figure 6.- Continued.



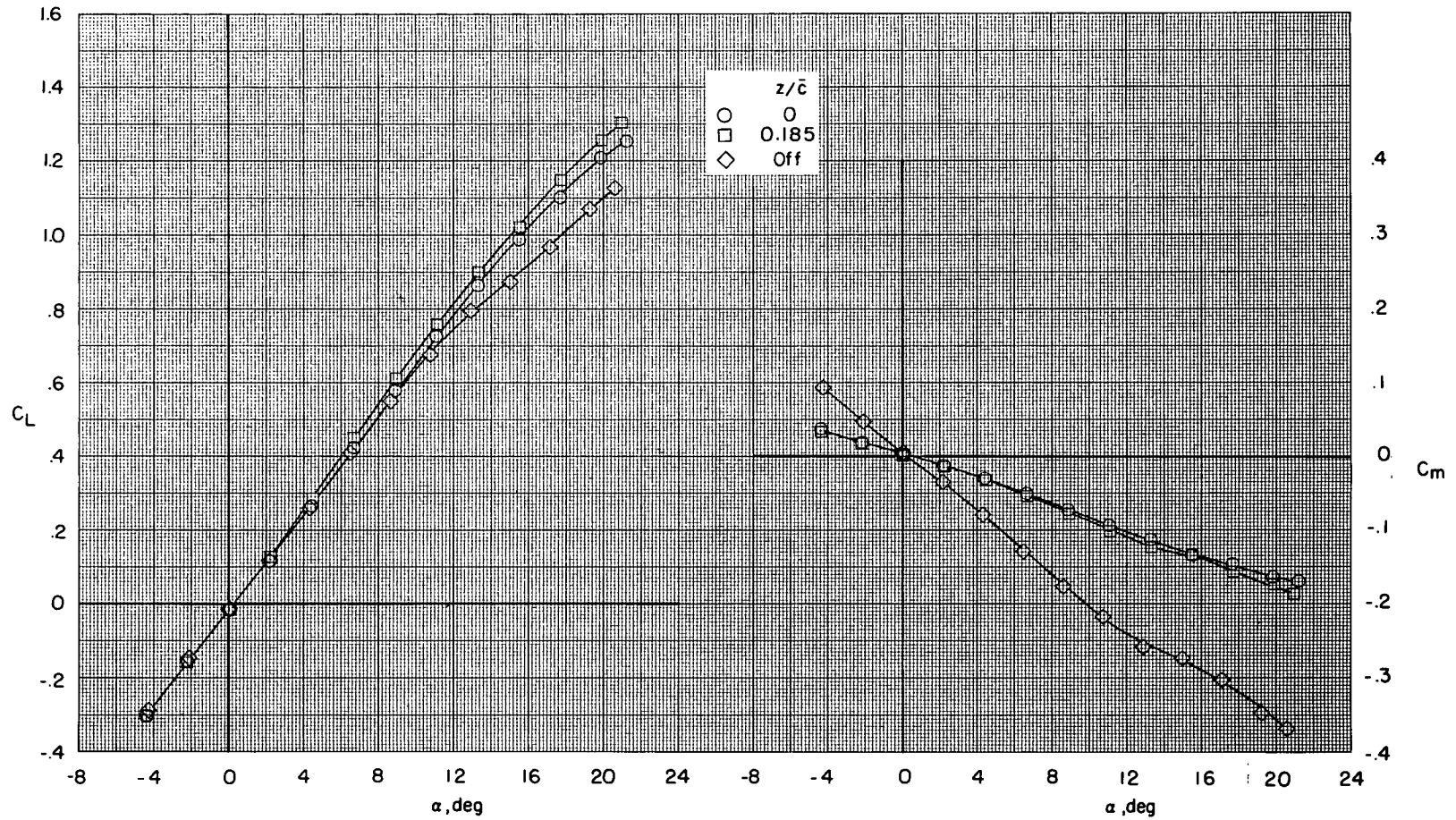
(d) $M = 1.03$.

Figure 6.- Continued.



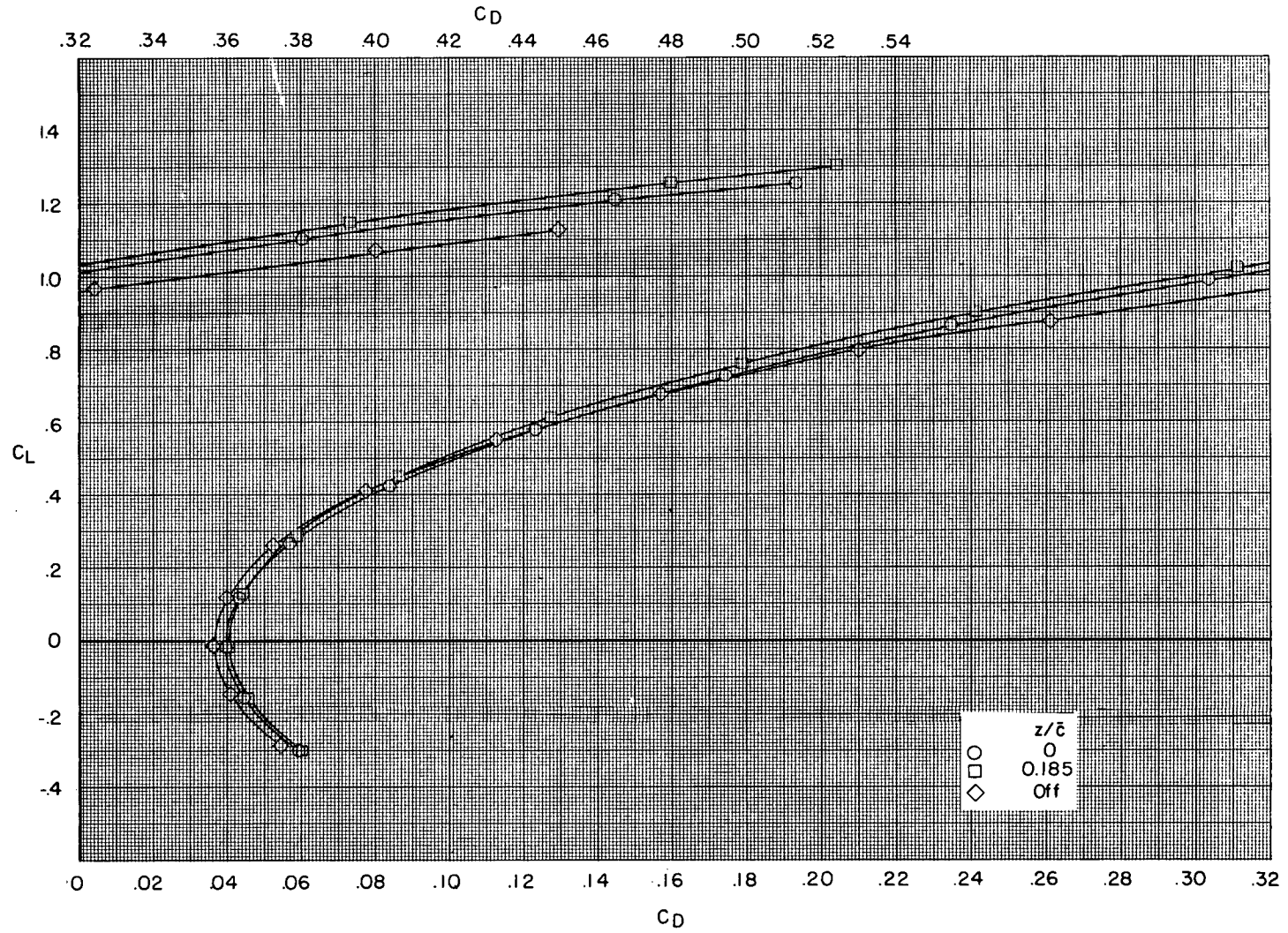
(d) $M = 1.03$. Concluded.

Figure 6.- Continued.



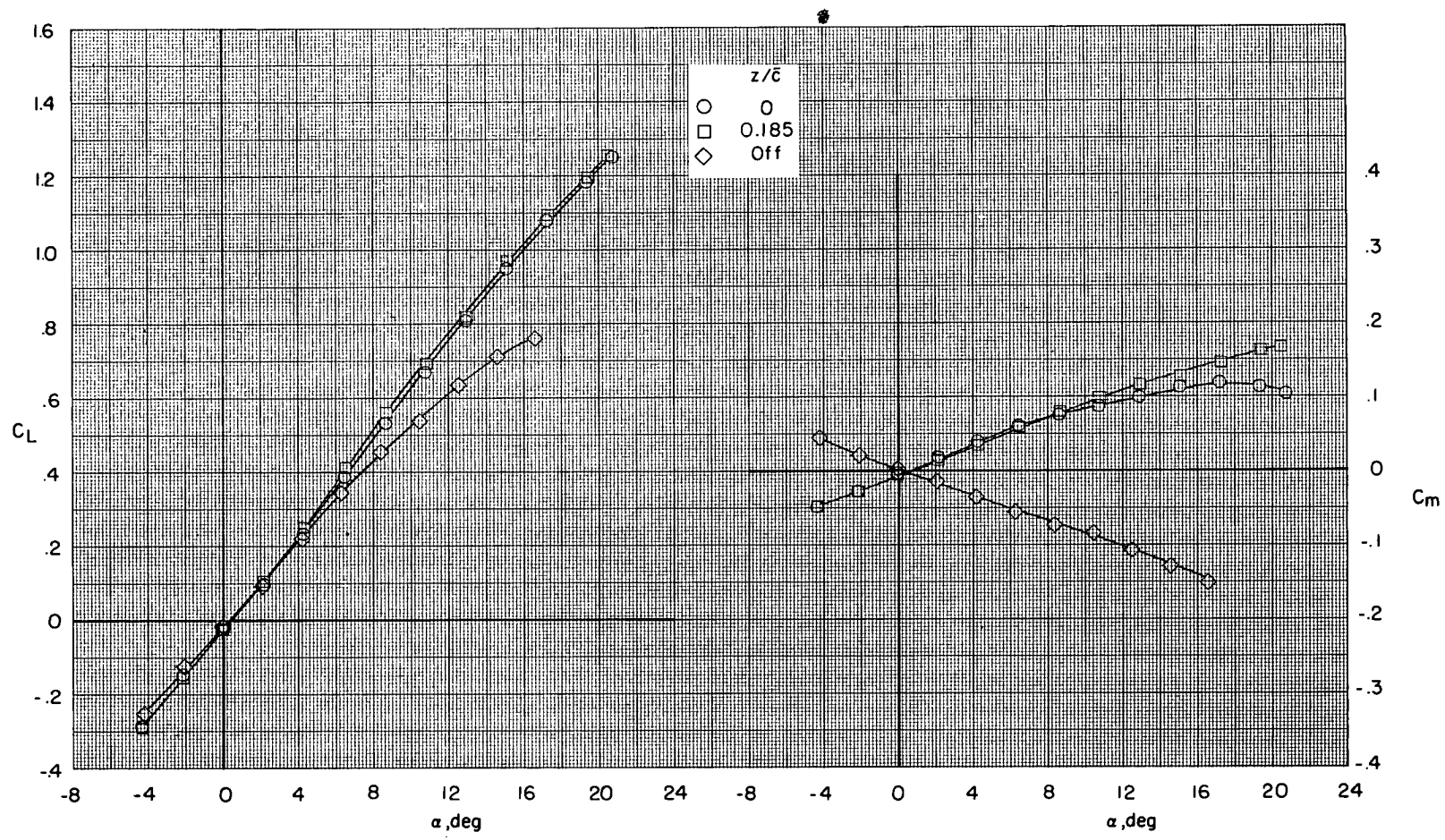
(e) $M = 1.20$.

Figure 6.- Continued.



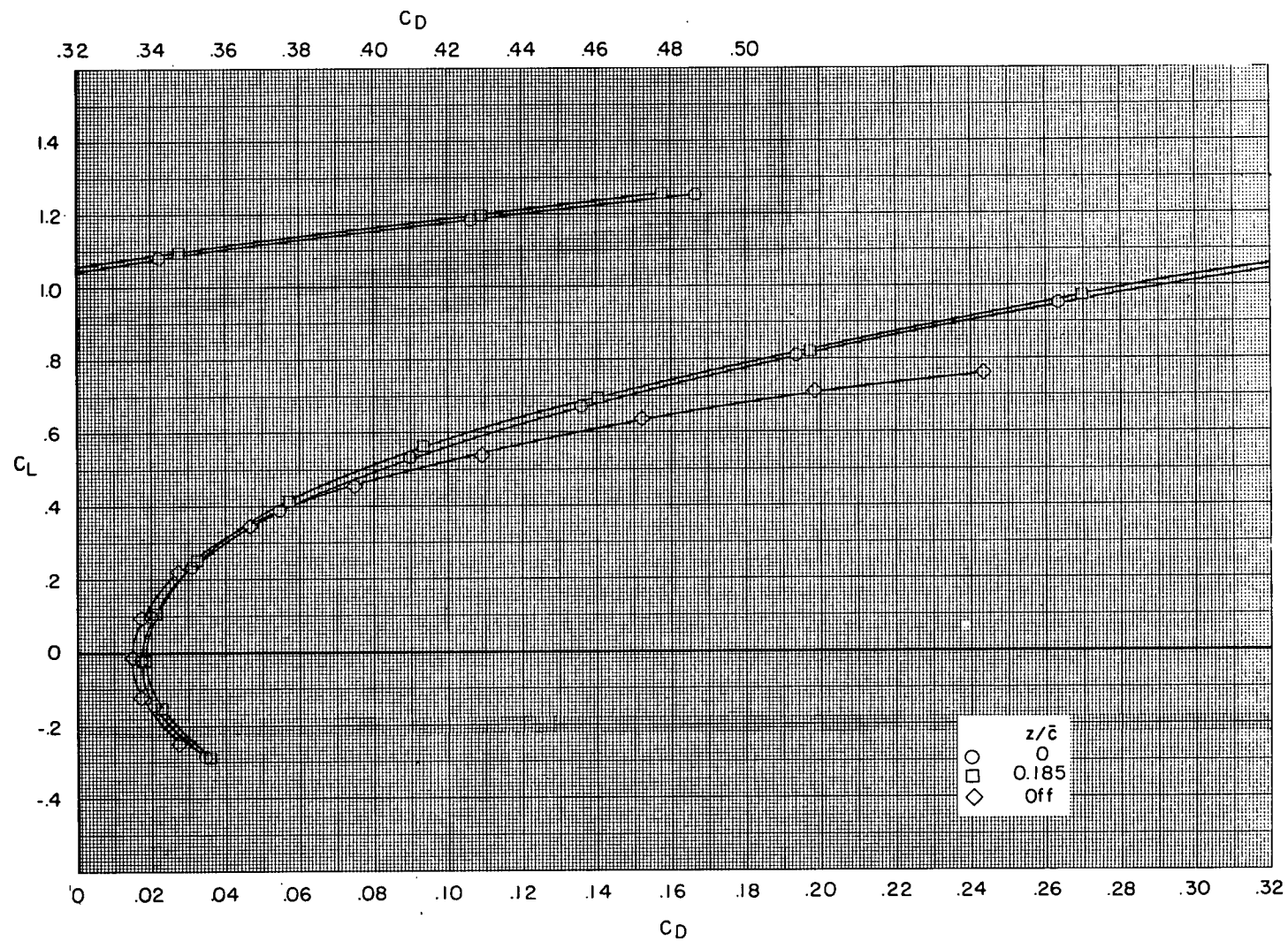
(e) $M = 1.20$. Concluded.

Figure 6.- Concluded.



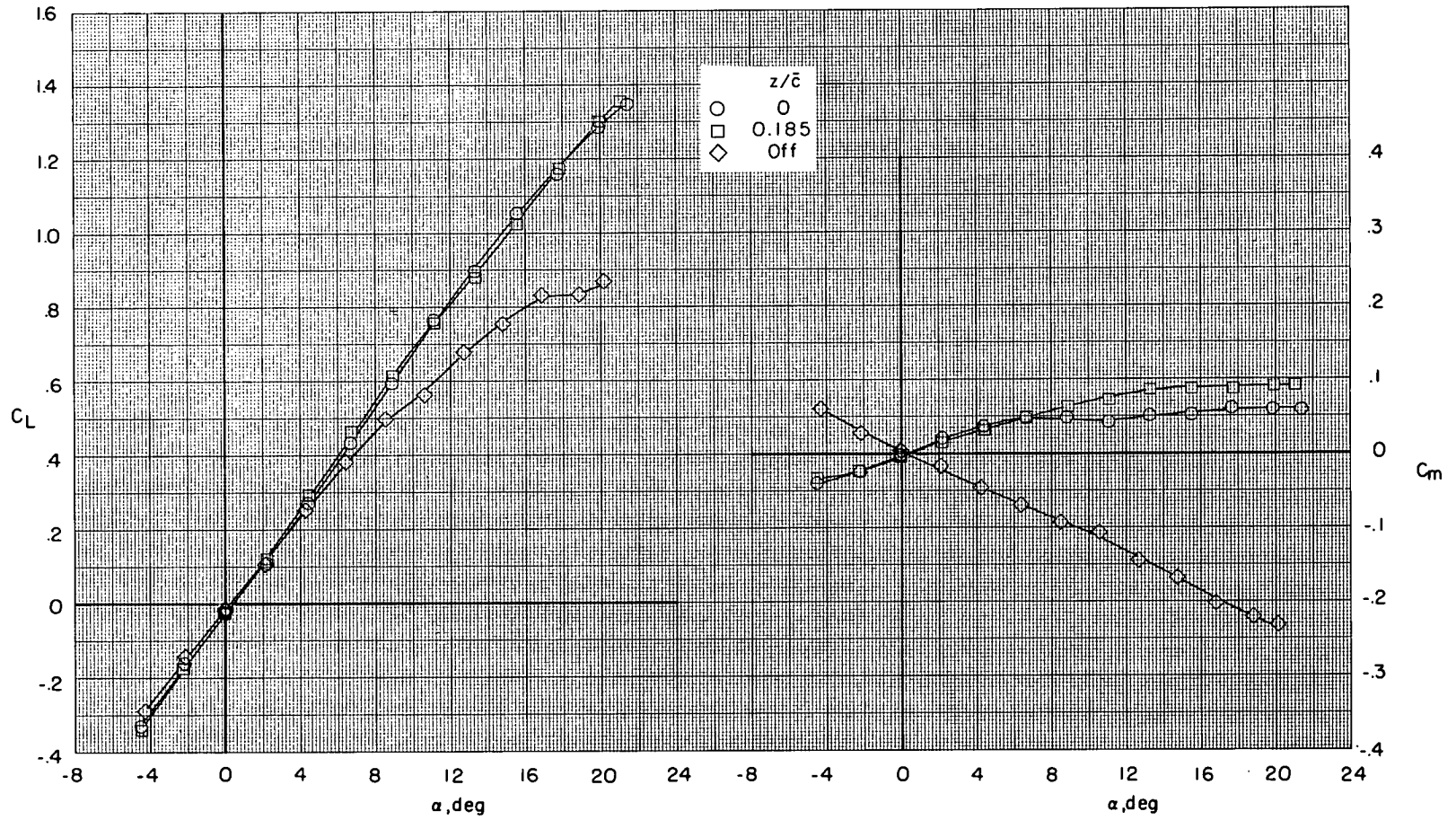
(a) $M = 0.70$.

Figure 7.- Effect of canard height on longitudinal aerodynamic characteristics for model with wing II and canard II.



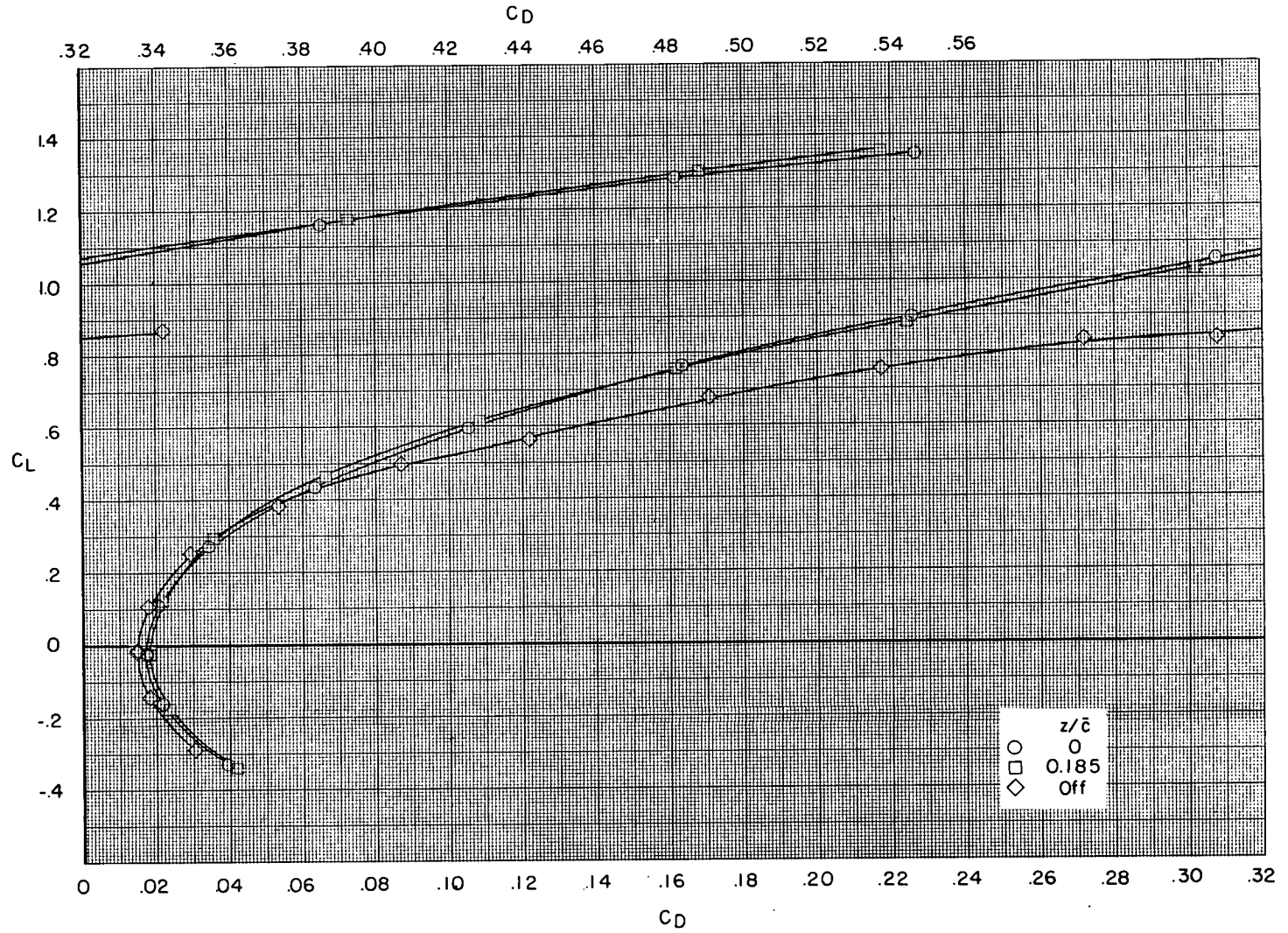
(a) $M = 0.70$. Concluded.

Figure 7.- Continued.



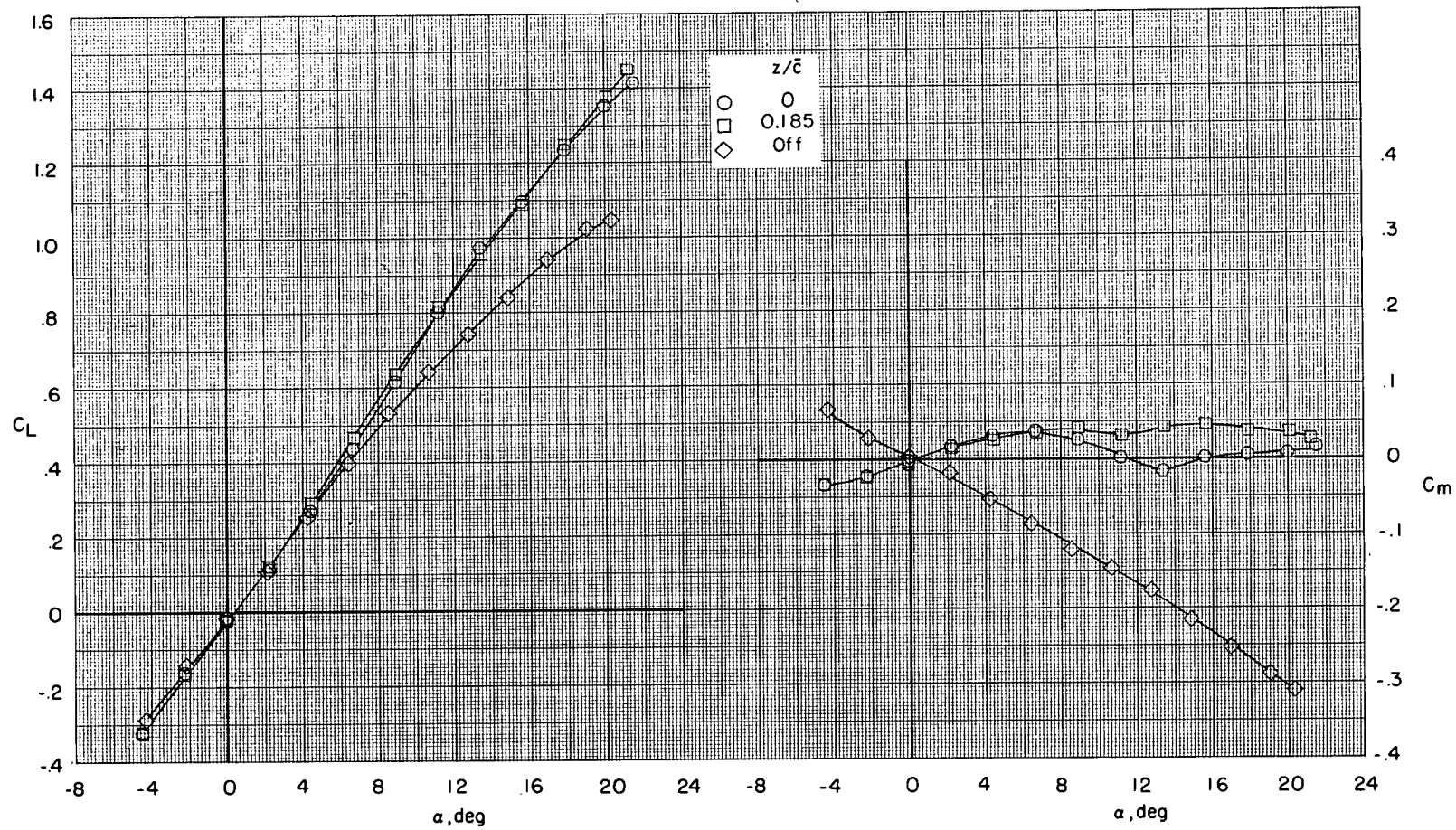
(b) $M = 0.90$.

Figure 7.- Continued.



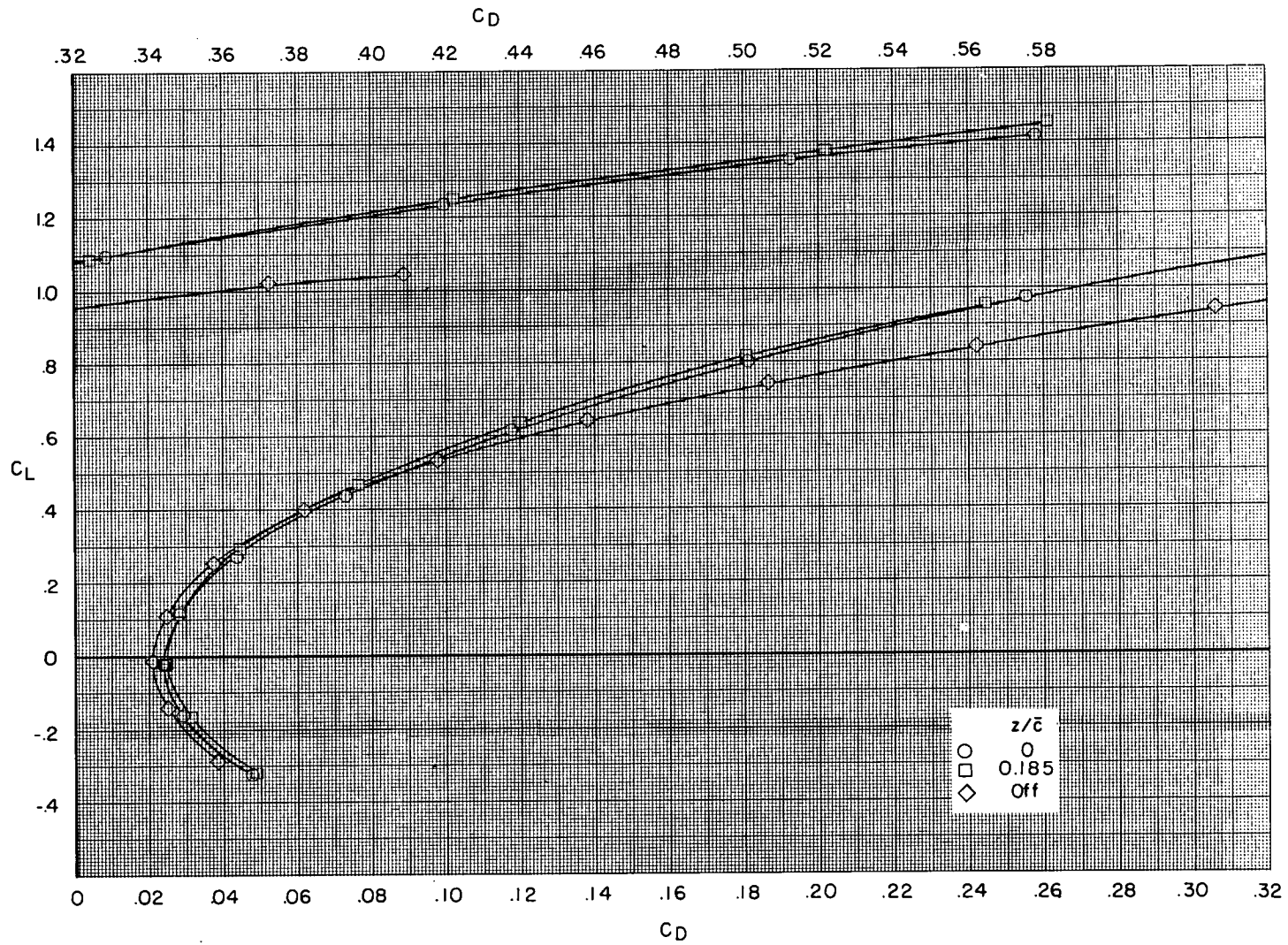
(b) $M = 0.90$. Concluded.

Figure 7.- Continued.



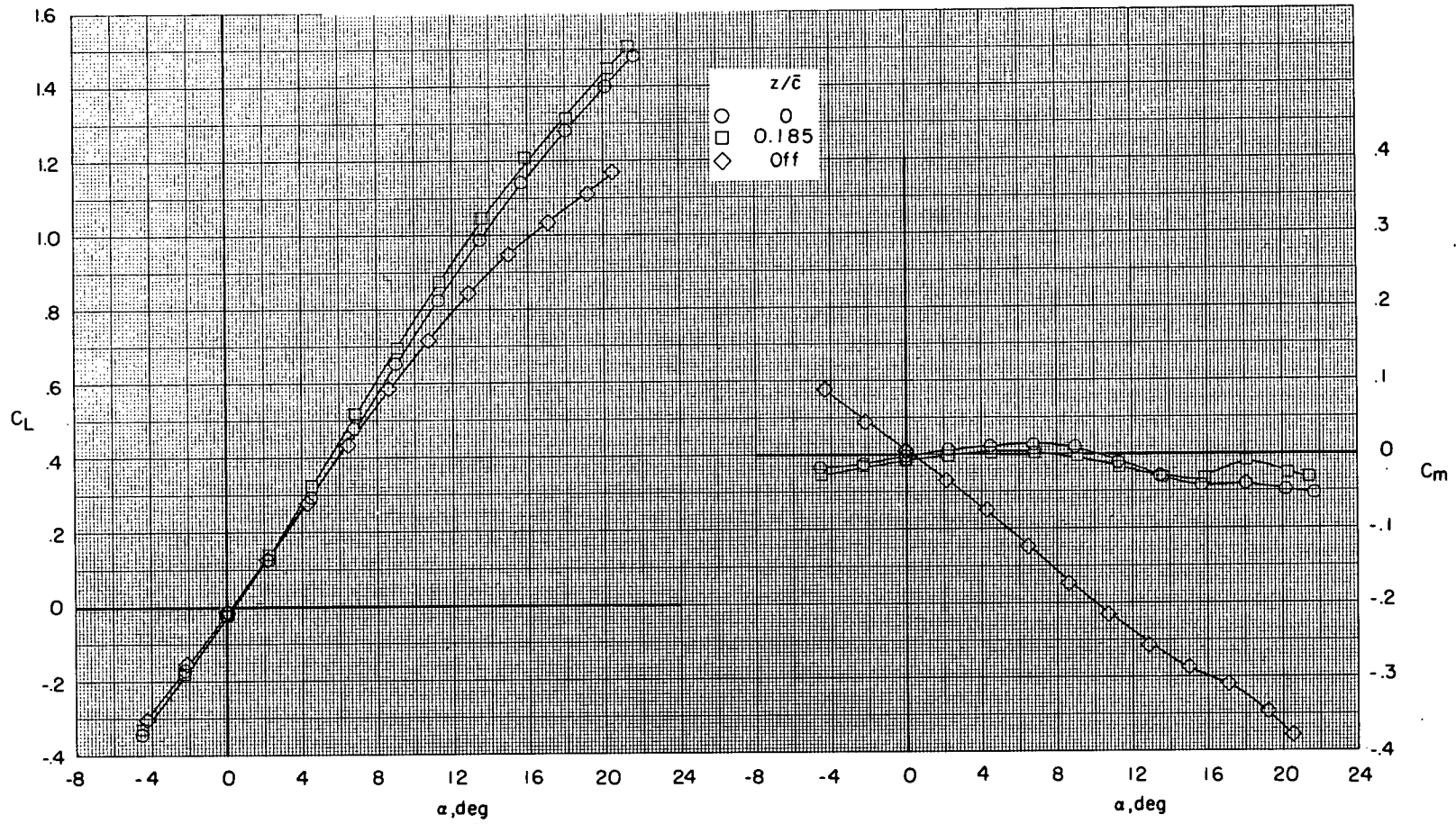
(c) $M = 0.95$.

Figure 7.- Continued.



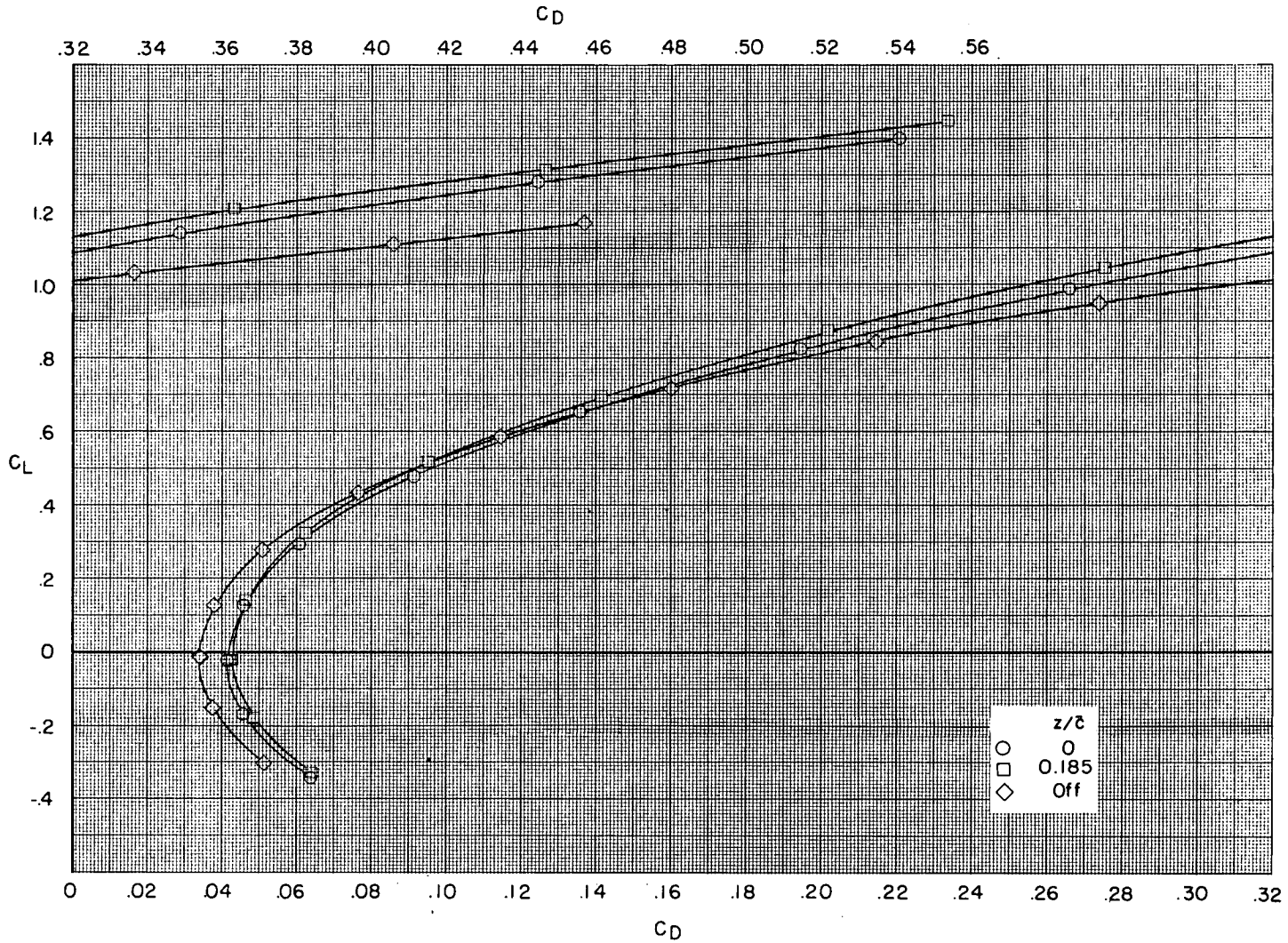
(c) $M = 0.95$. Concluded.

Figure 7.- Concluded.



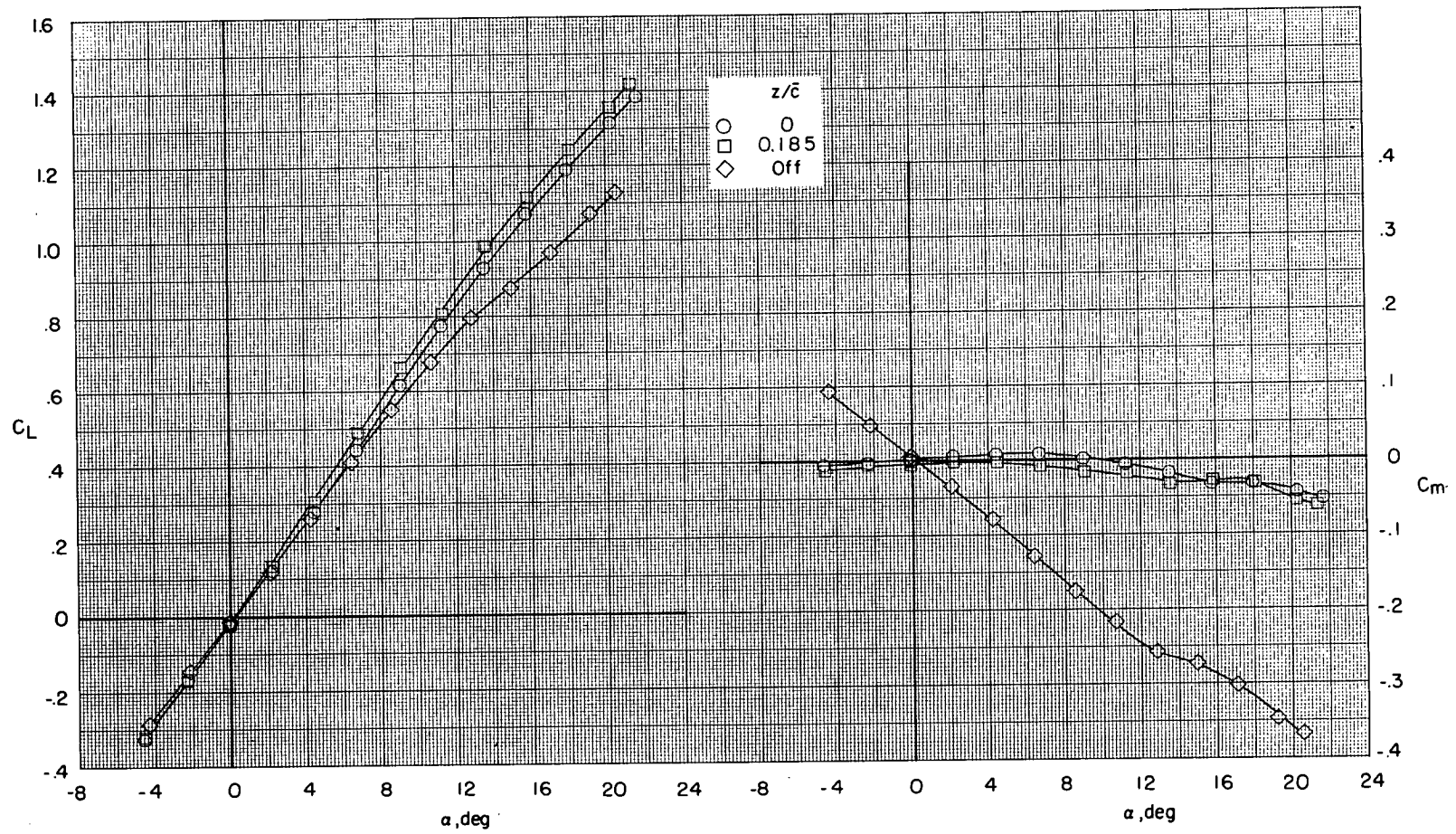
(d) $M = 1.03$.

Figure 7.- Continued.



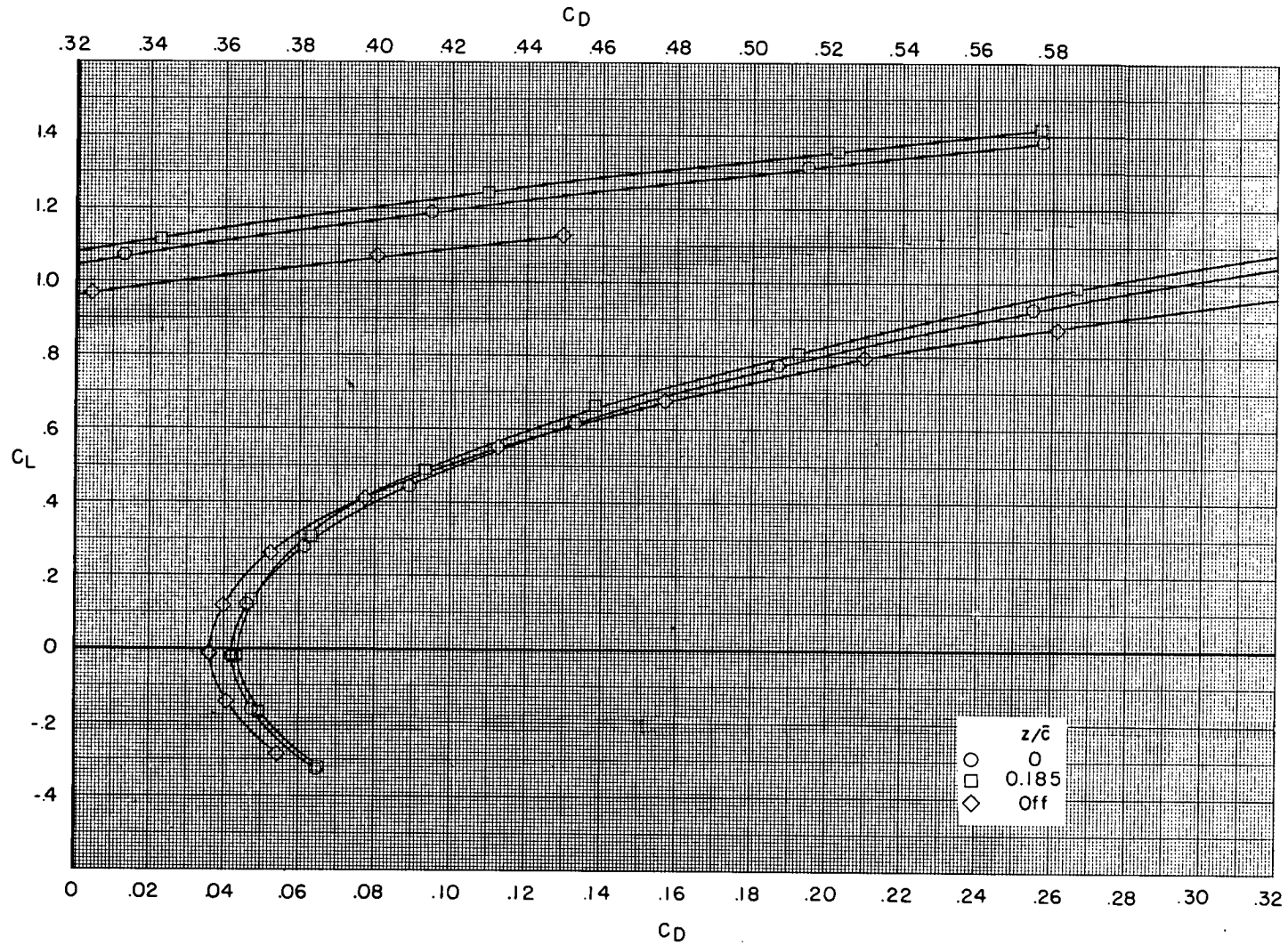
(d) $M = 1.03$. Concluded.

Figure 7.- Continued.



(e) $M = 1.20$.

Figure 7.- Continued.



(e) $M = 1.20$. Concluded.

Figure 7.- Concluded.

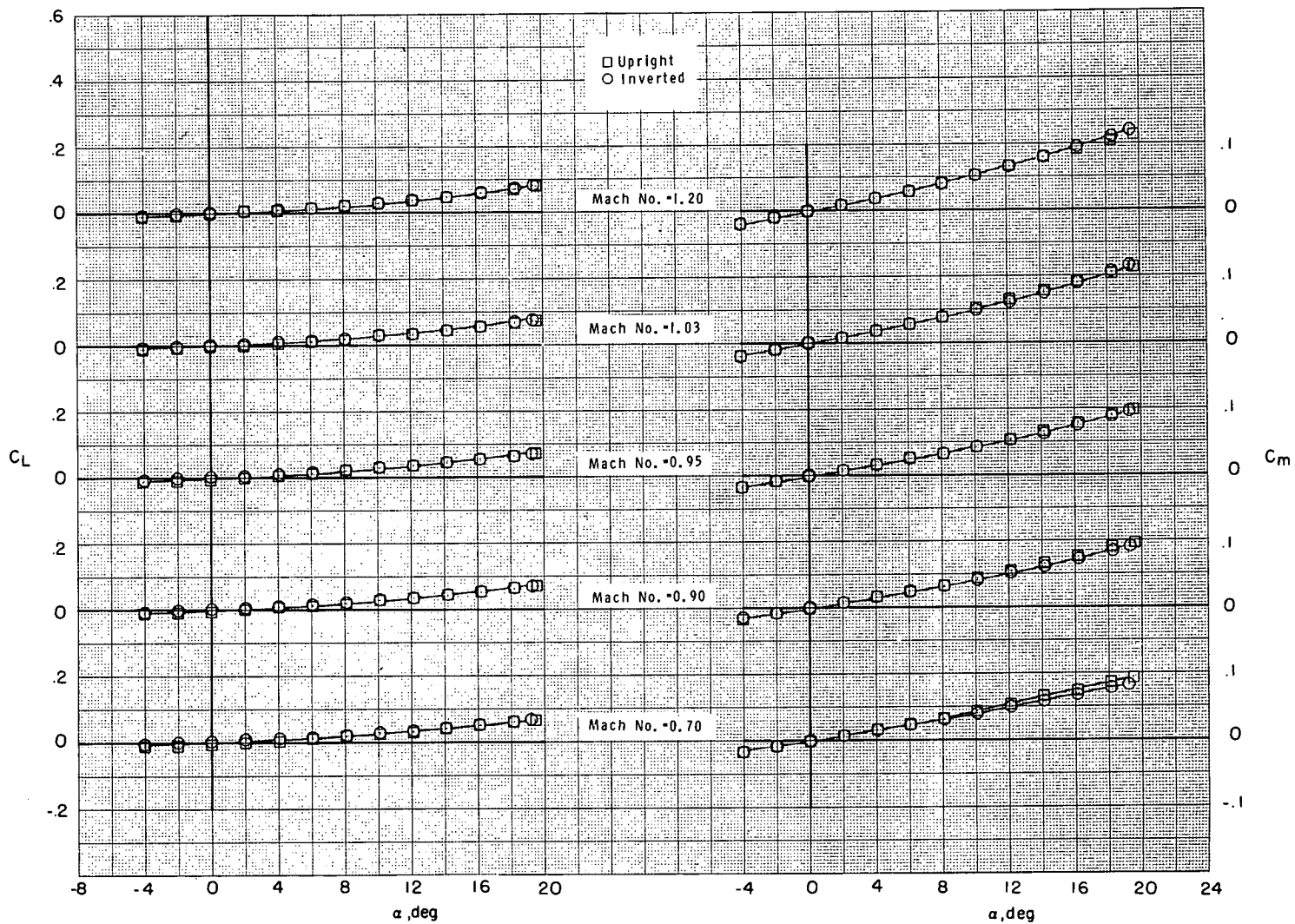
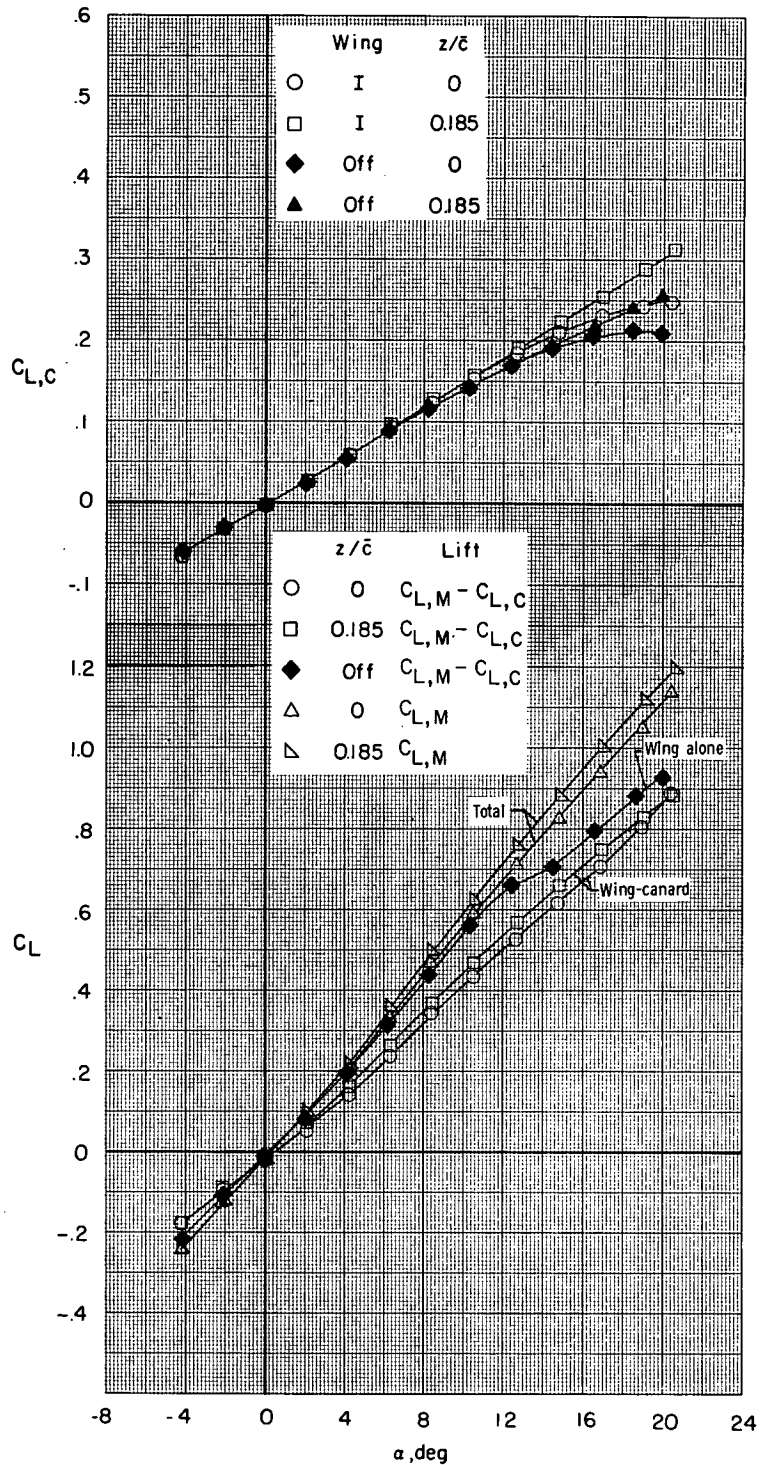
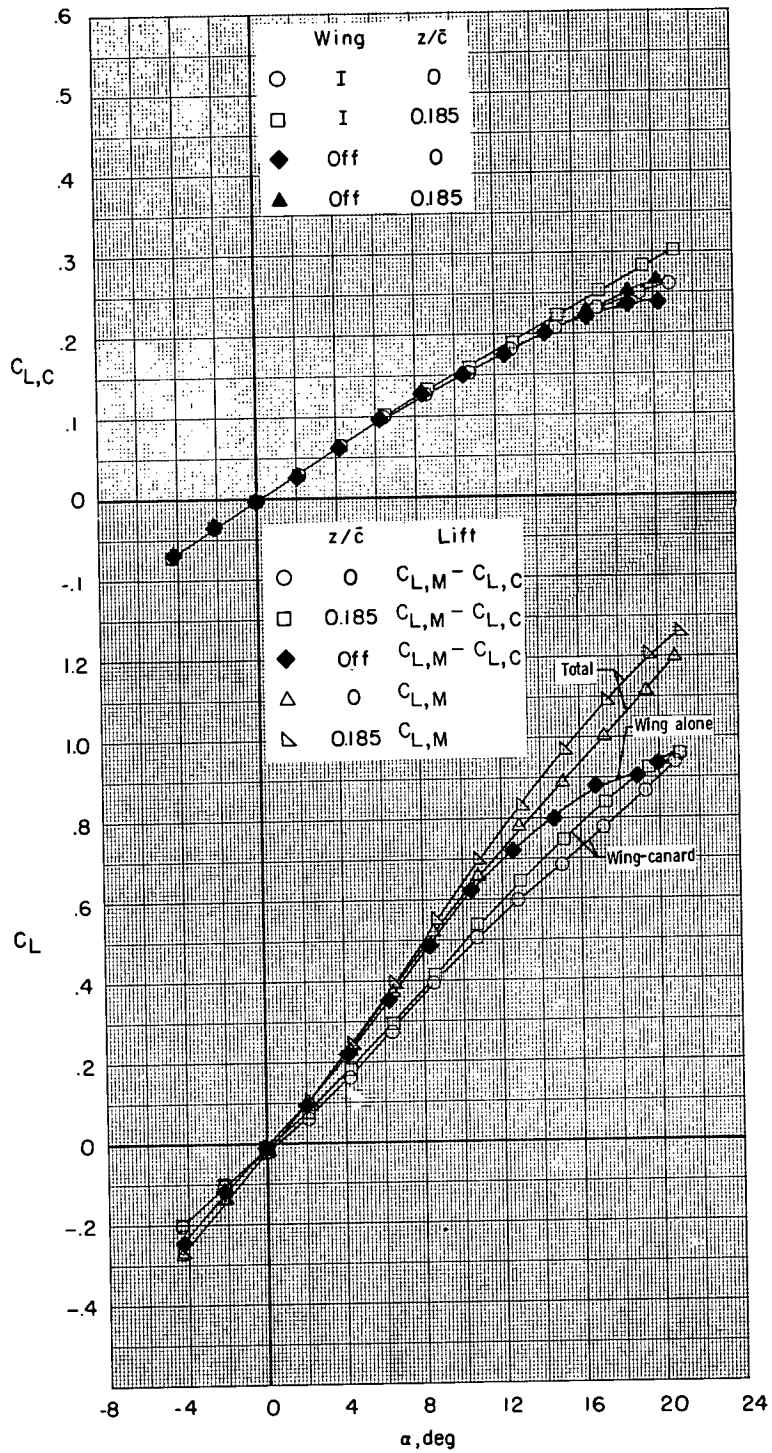


Figure 8.- Comparison of results for body alone in upright and inverted positions.



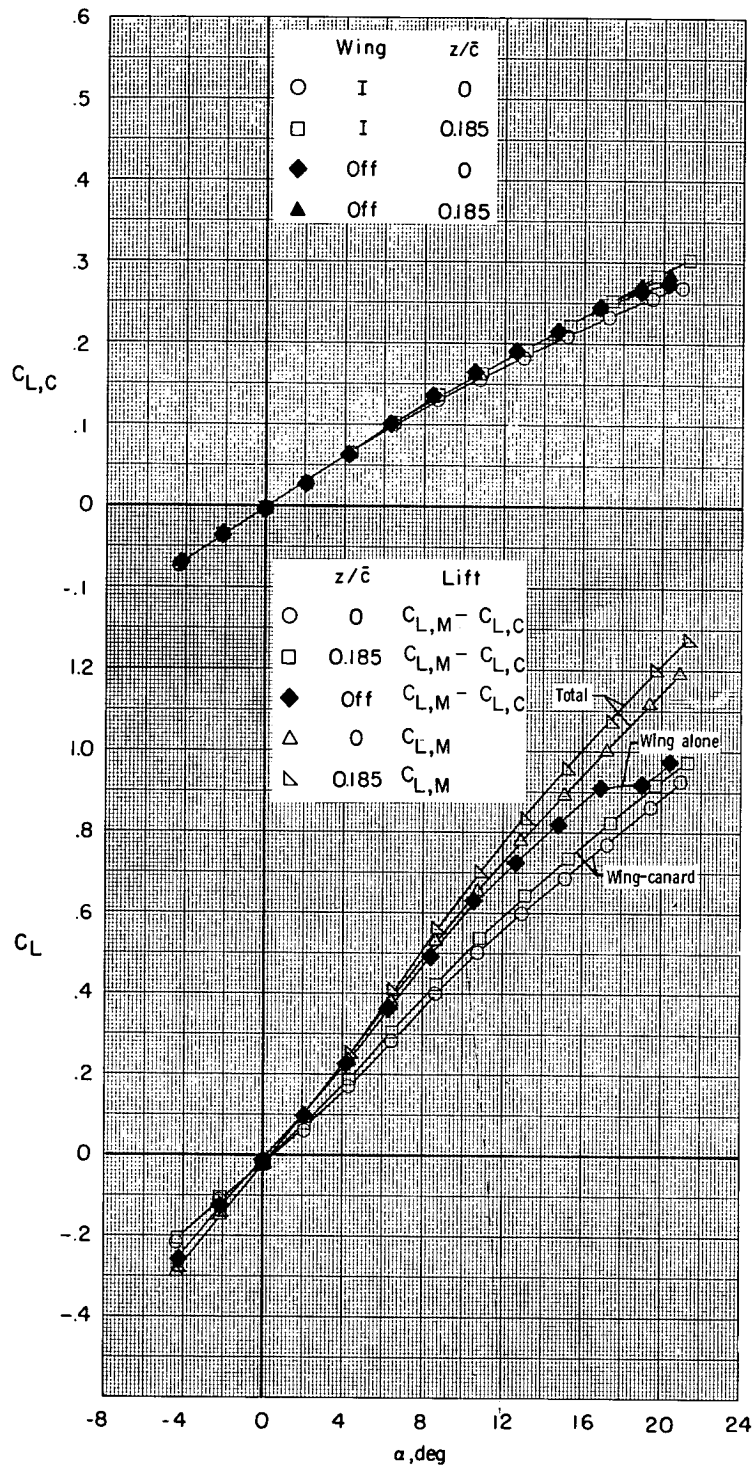
(a) $M = 0.70$.

Figure 9.- Interference effects on lift for model with wing I and canard I.



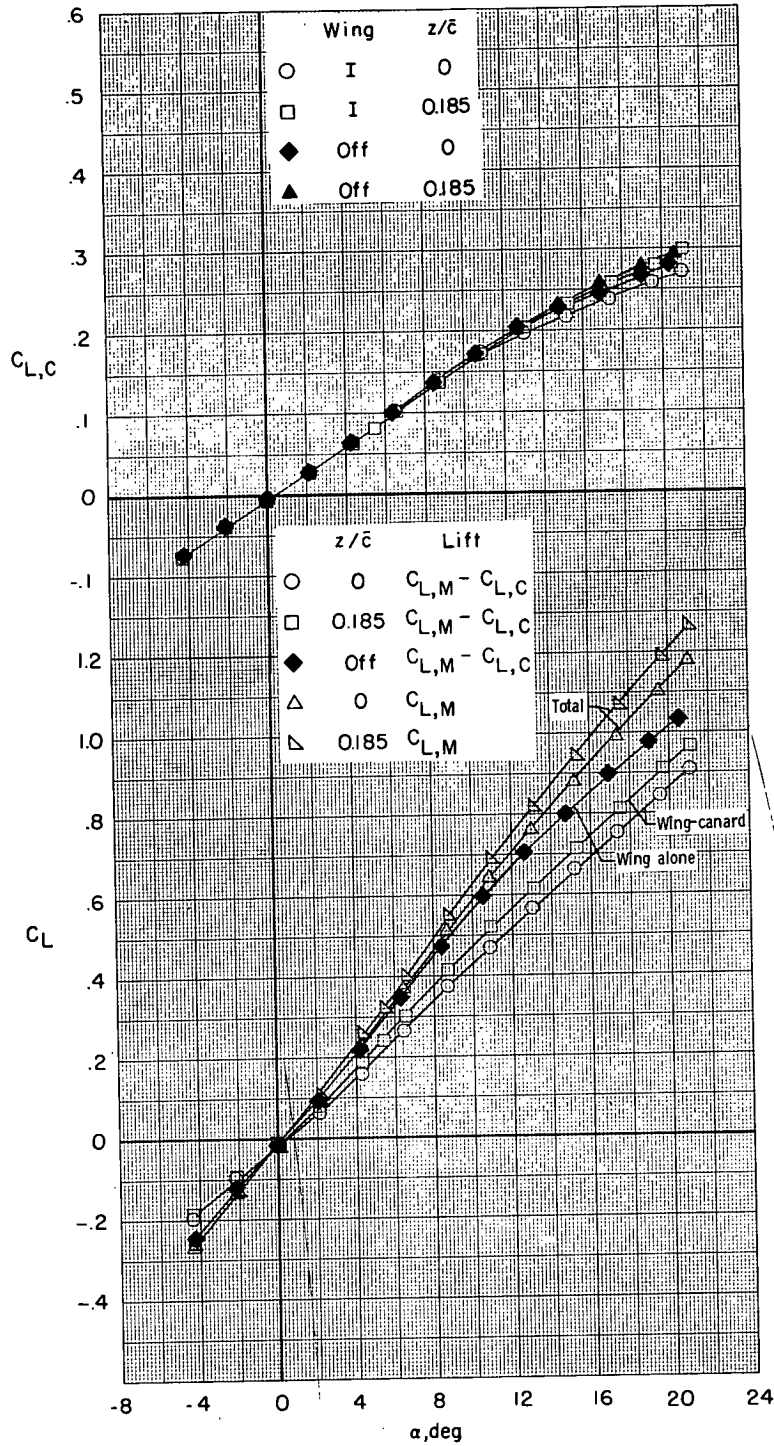
(b) $M = 0.90$.

Figure 9.- Continued.



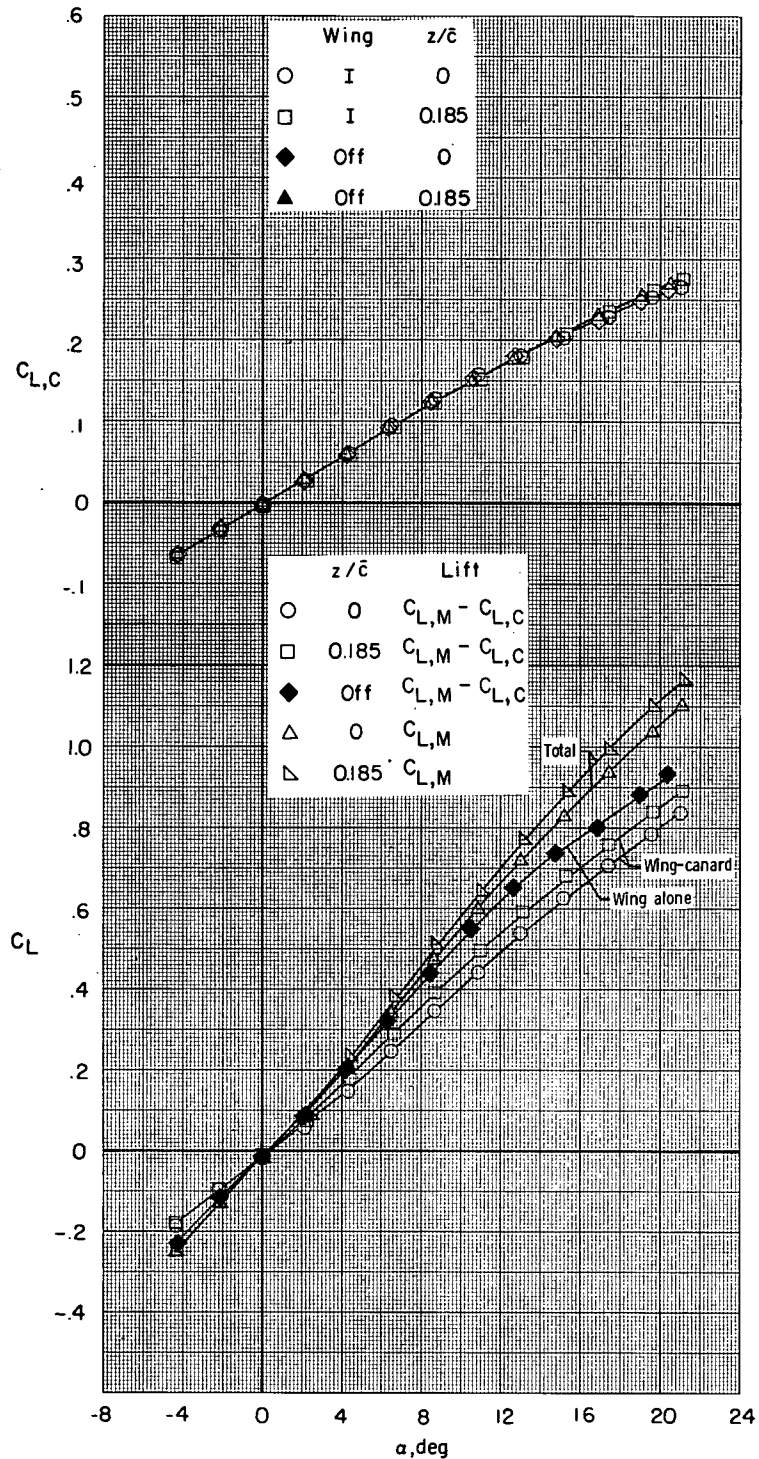
(c) $M = 0.95$.

Figure 9.- Continued.



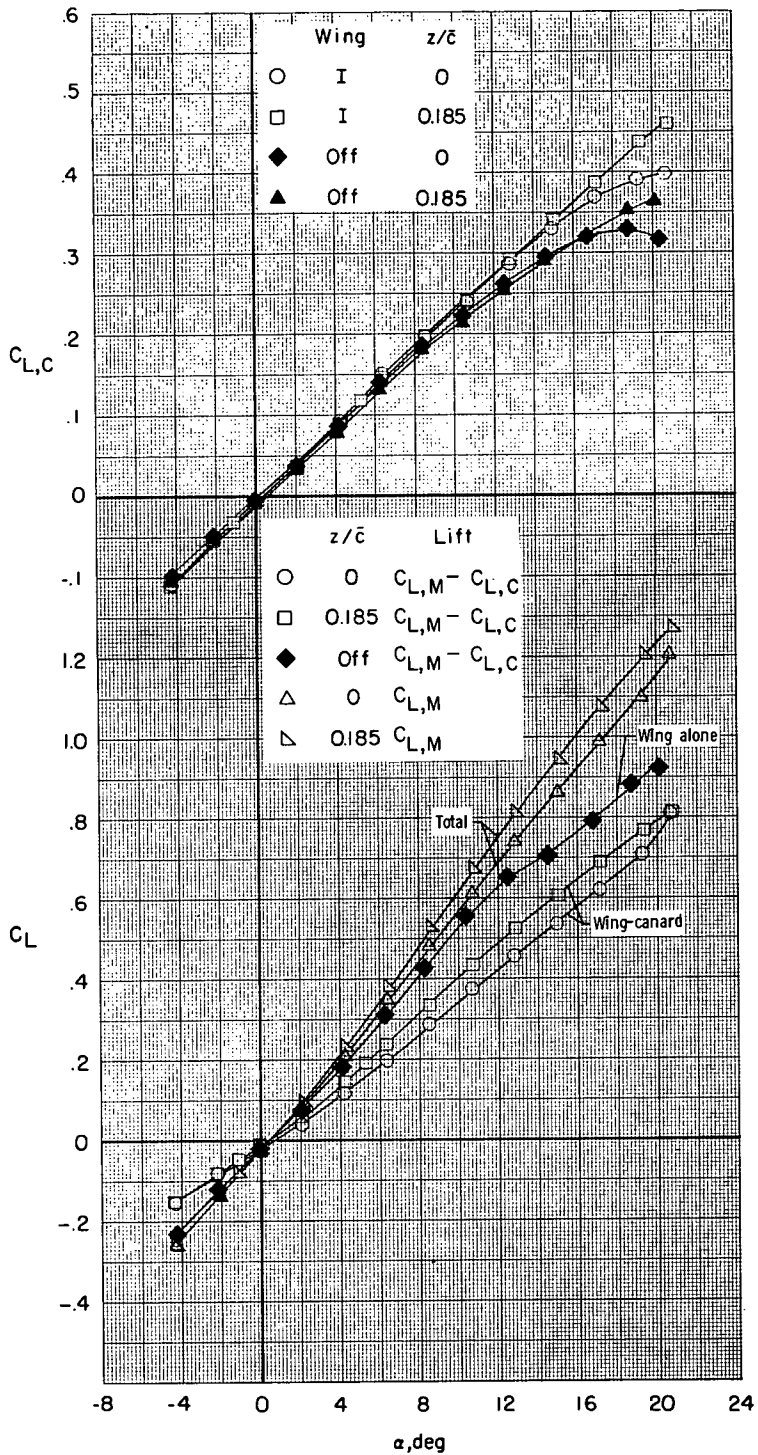
(d) $M = 1.03$.

Figure 9.- Continued.



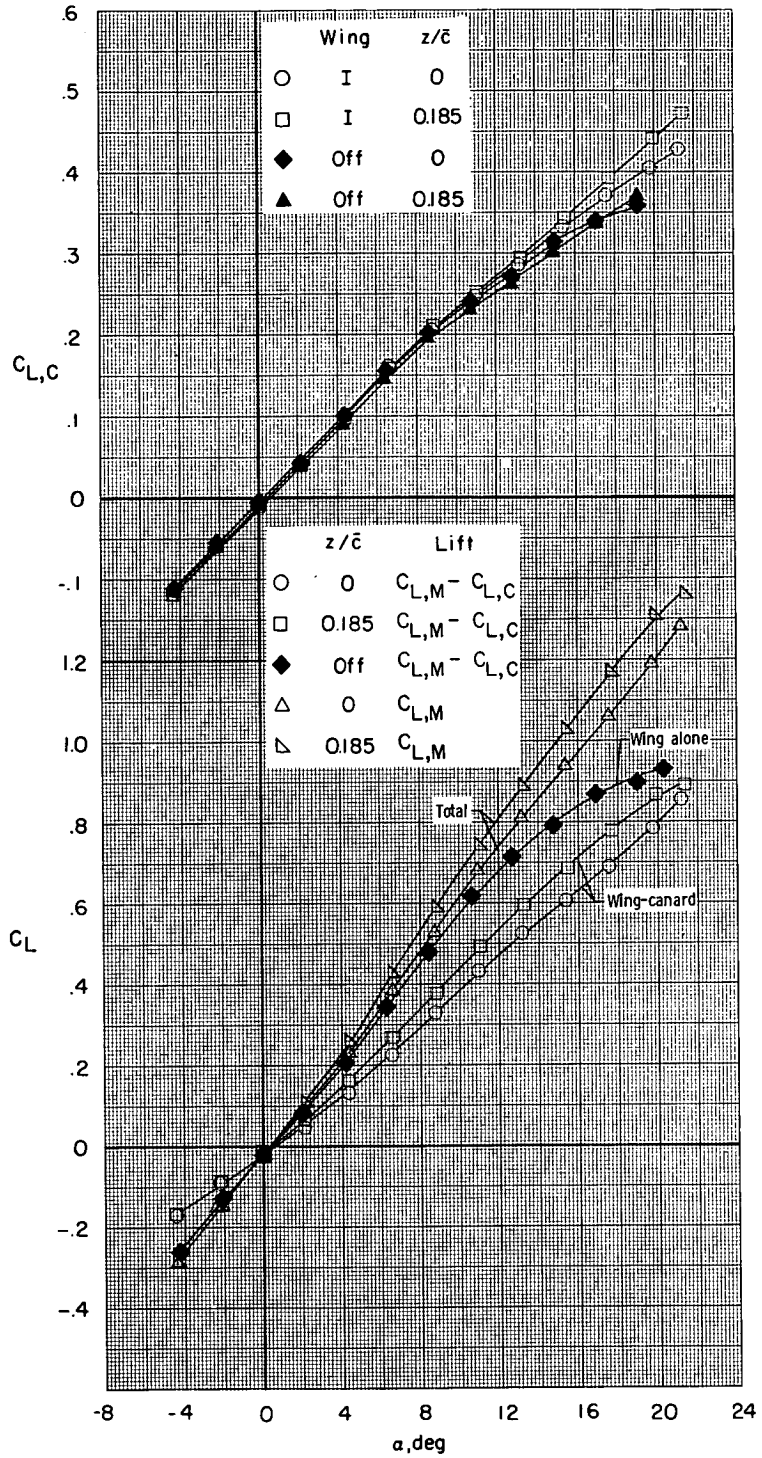
(e) $M = 1.20$.

Figure 9.- Concluded.



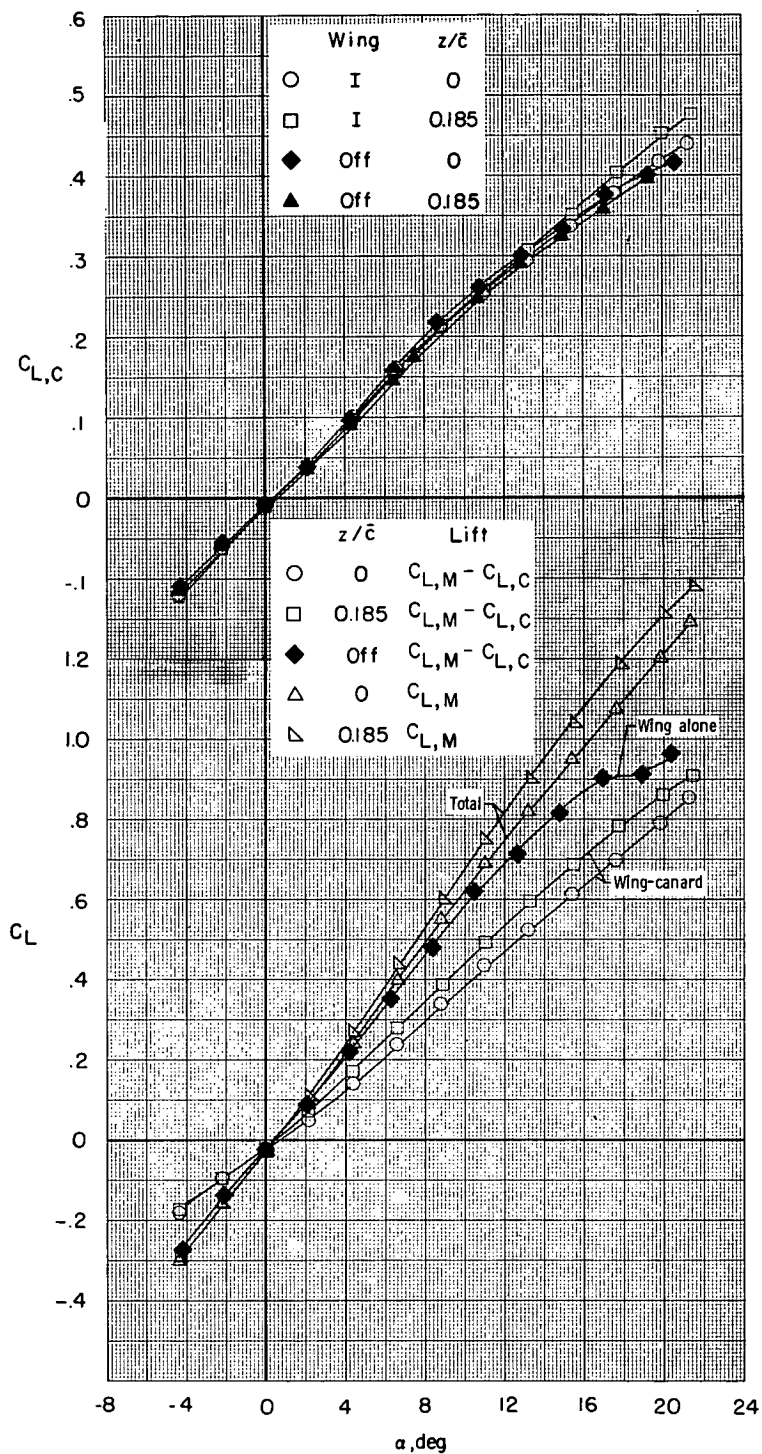
(a) $M = 0.70$.

Figure 10.- Interference effects on lift for model with wing I and canard II above and in the wing chord plane.



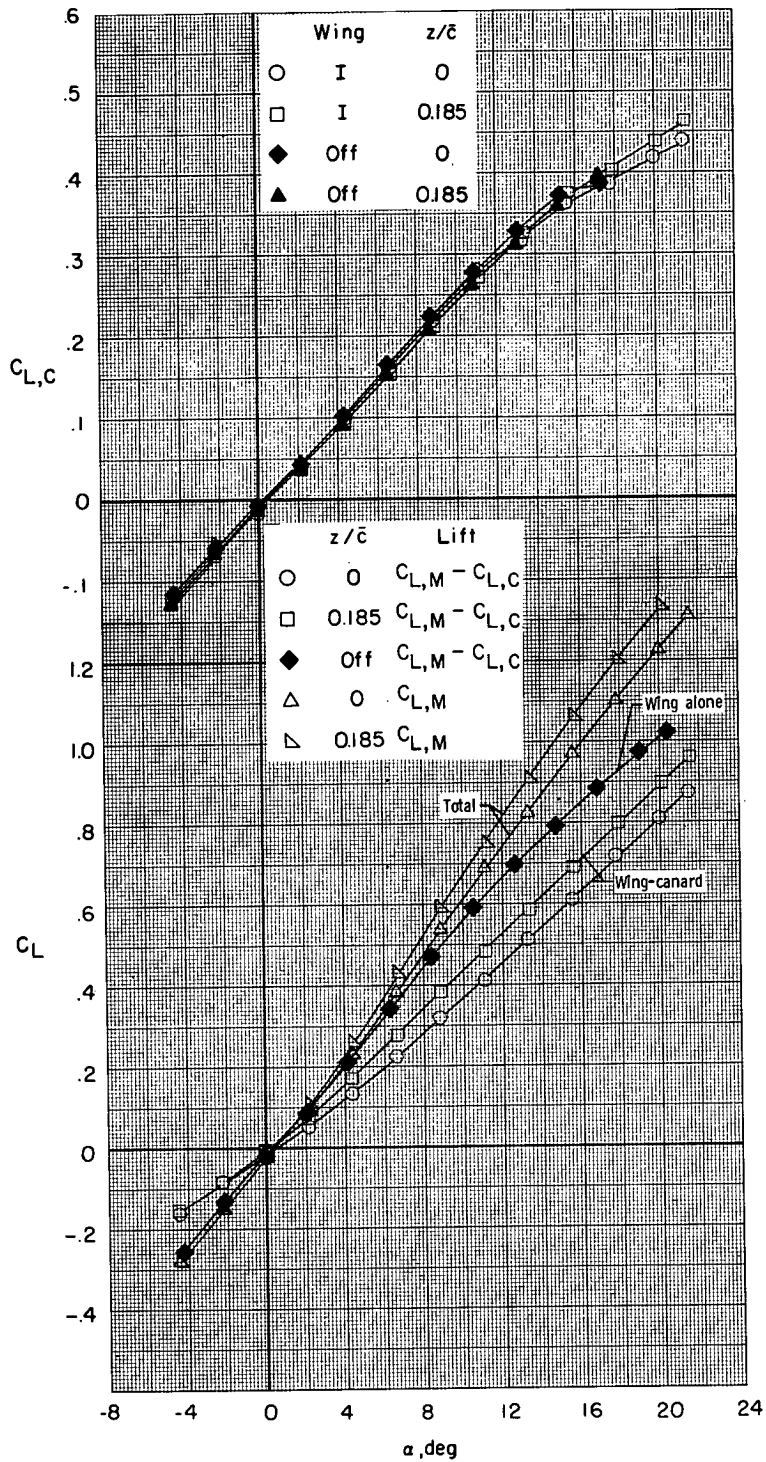
(b) $M = 0.90$.

Figure 10.- Continued.



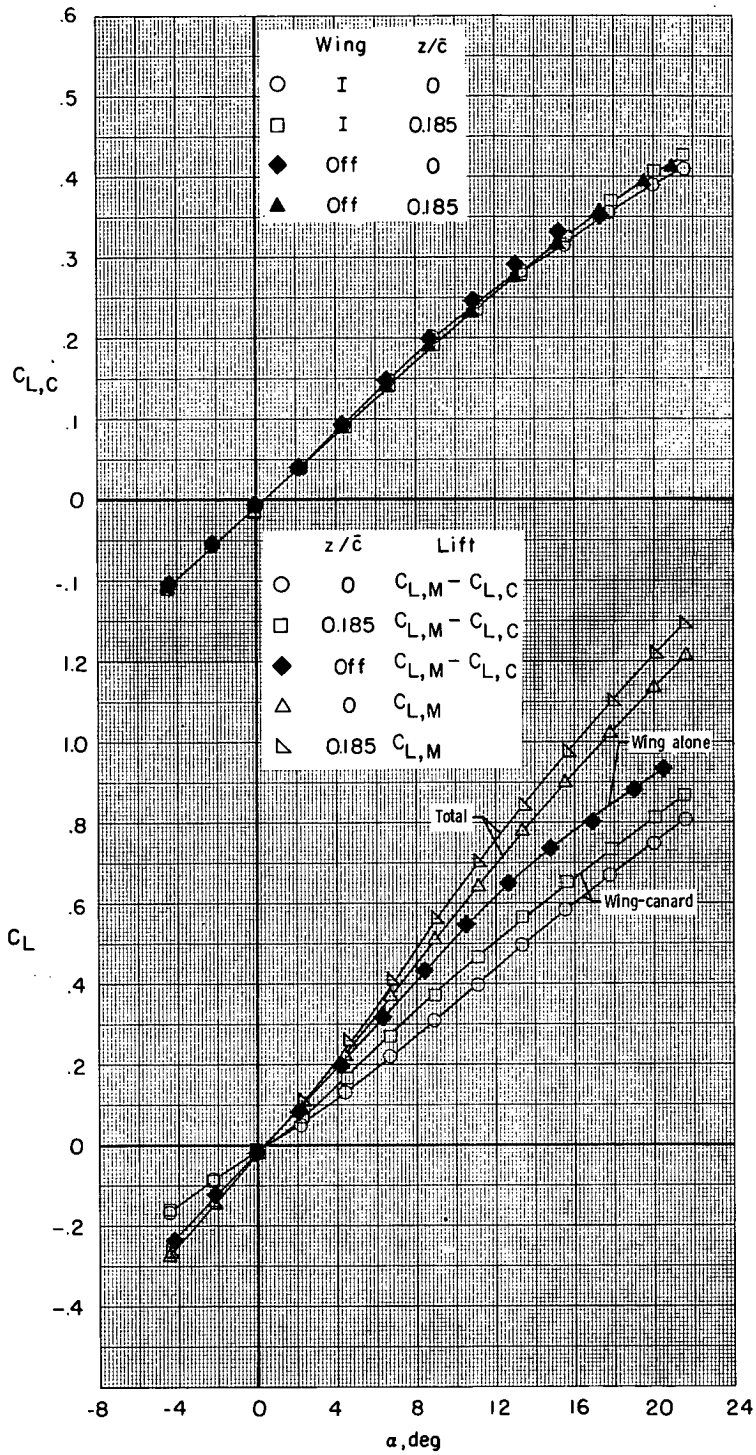
(c) $M = 0.95$.

Figure 10.- Continued.



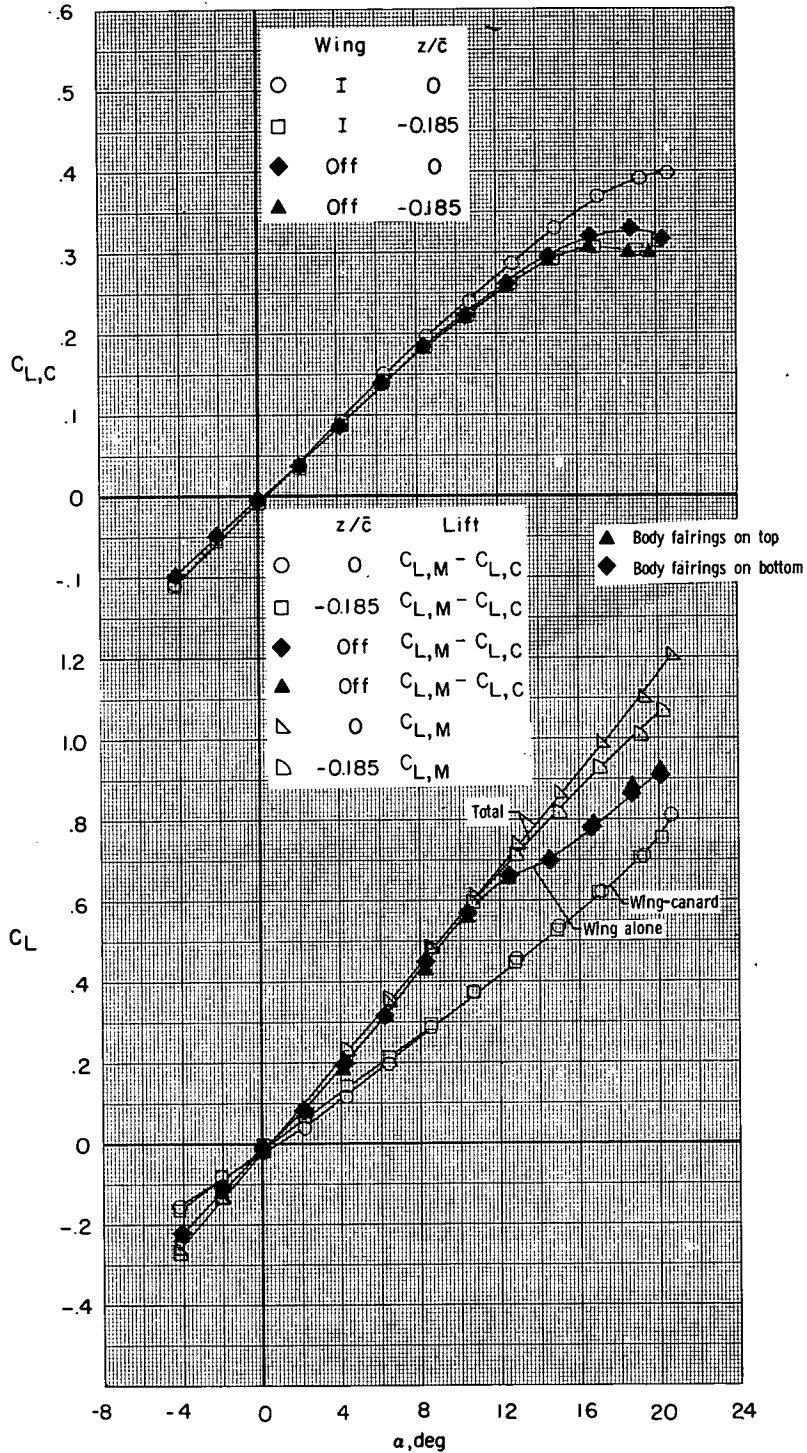
(d) $M = 1.03$.

Figure 10.- Continued.



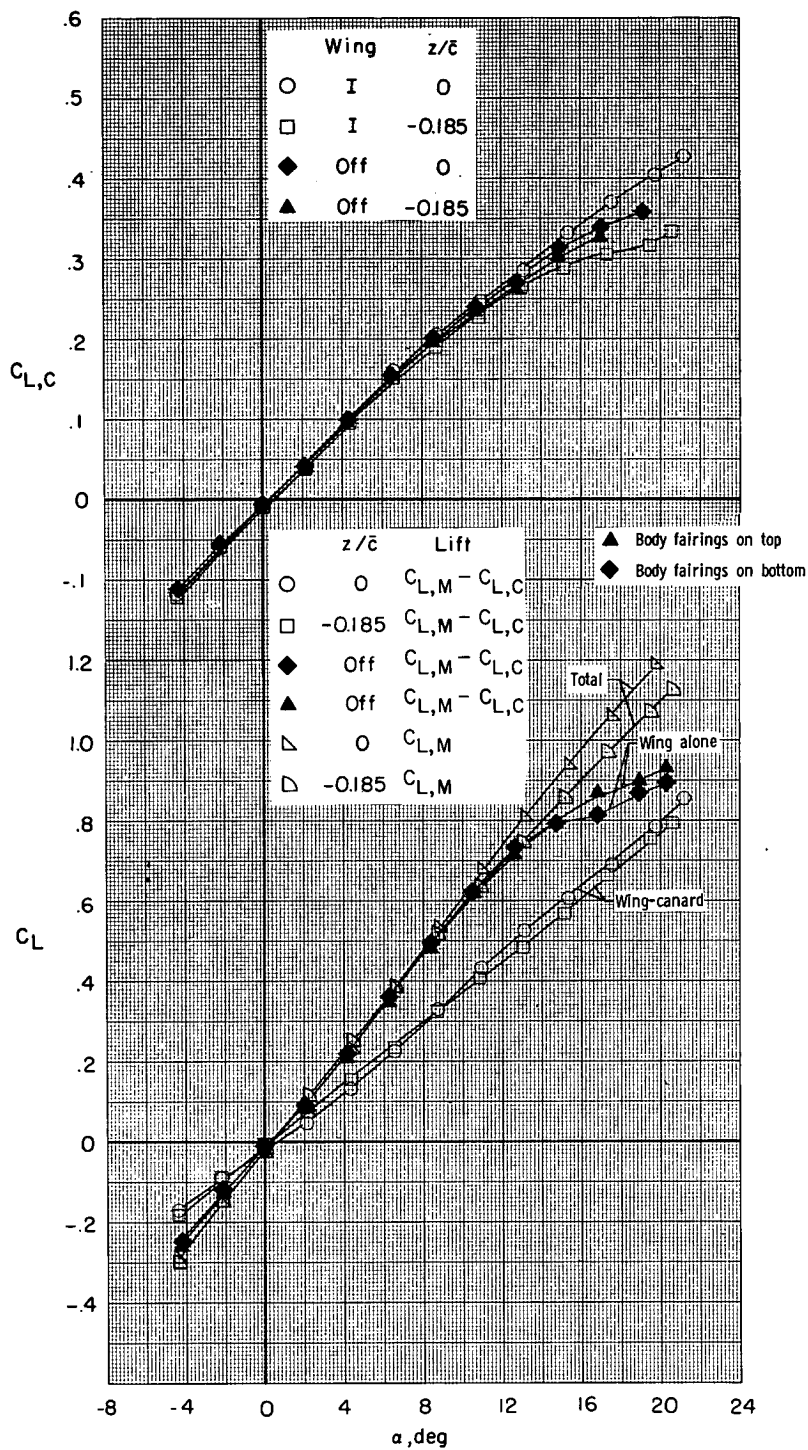
(e) $M = 1.20$.

Figure 10.- Concluded.



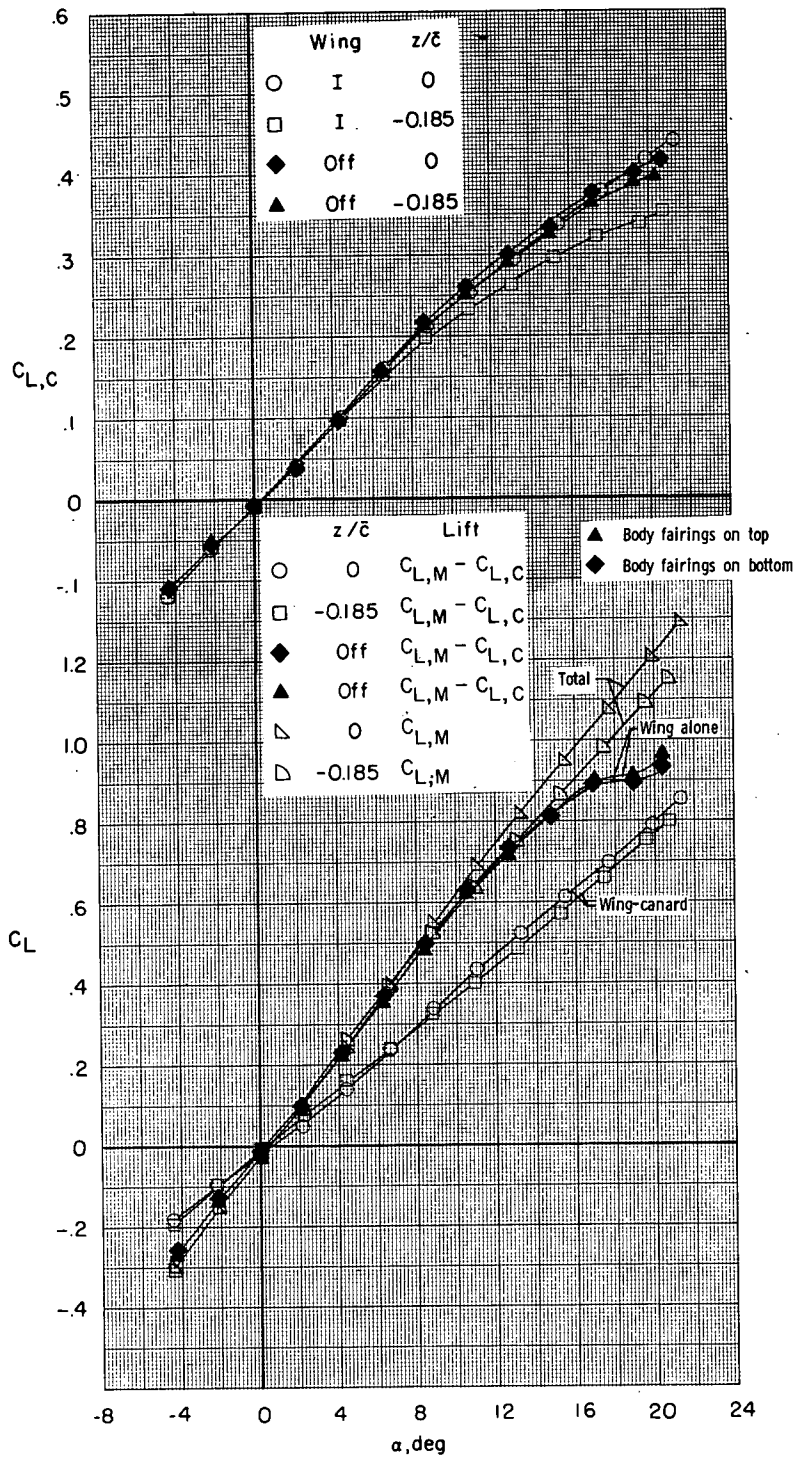
(a) $M = 0.70$.

Figure 11.- Interference effects on lift for model with wing I and canard II below and in the wing chord plane.



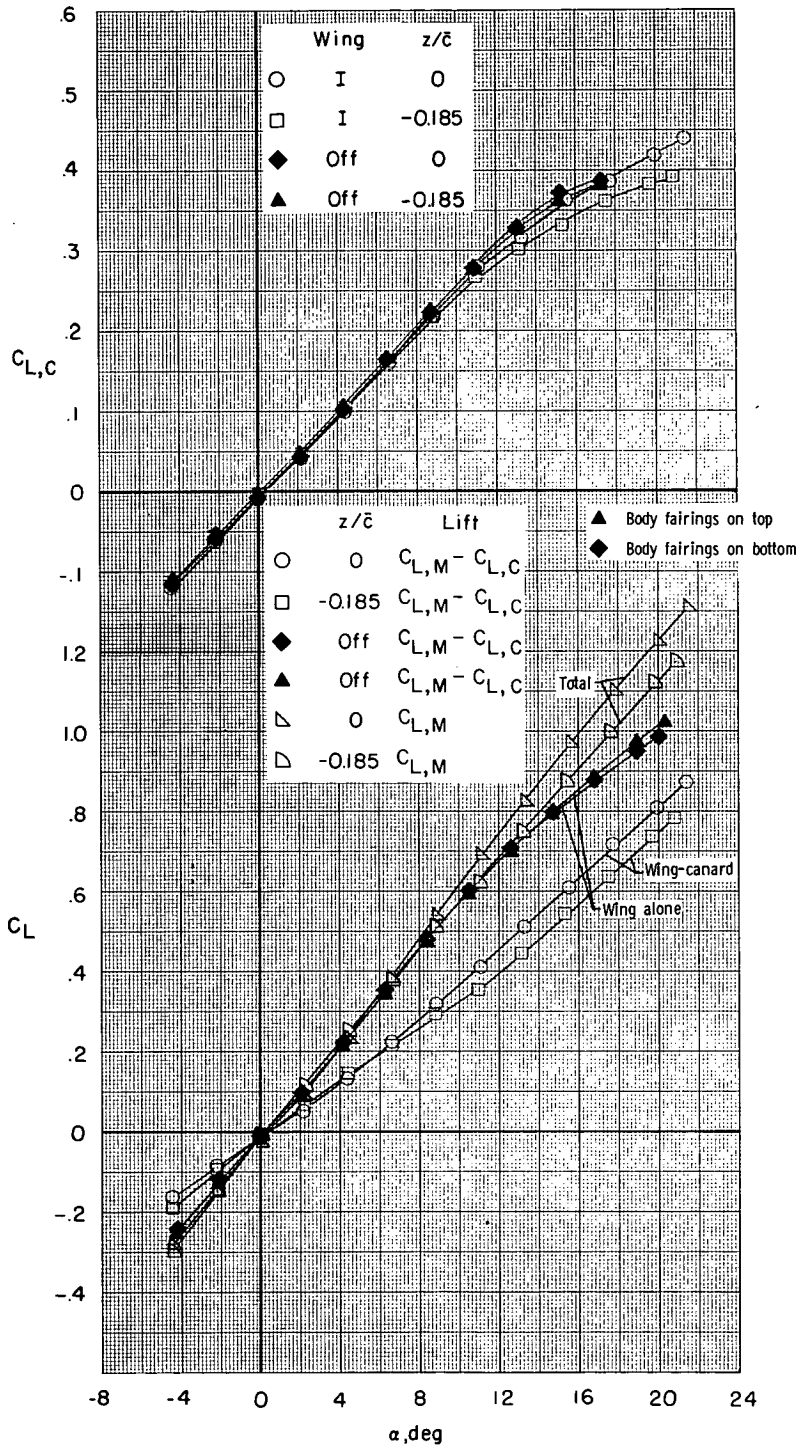
(b) $M = 0.90$.

Figure 11.- Continued.



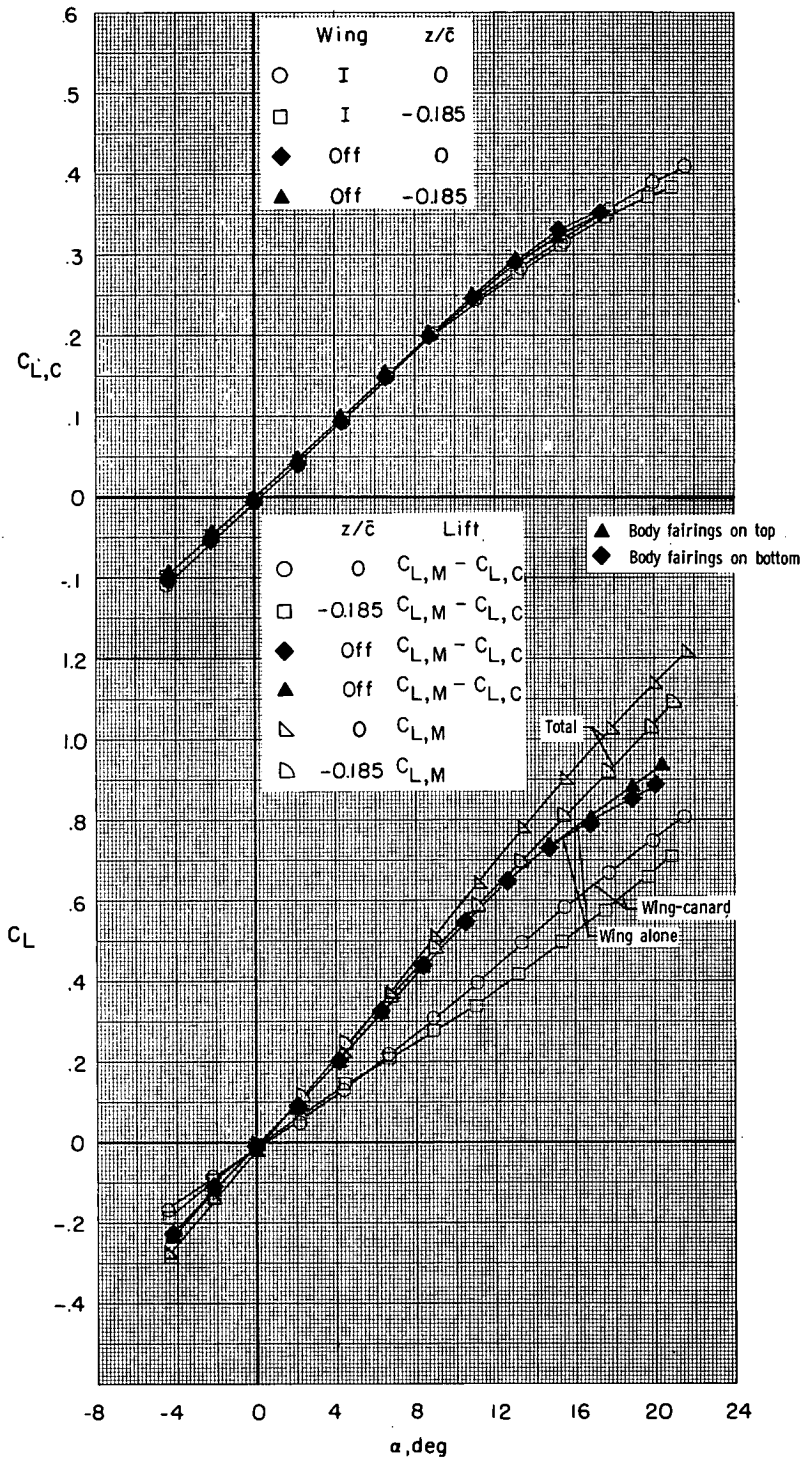
(c) $M = 0.95$.

Figure 11.- Continued.



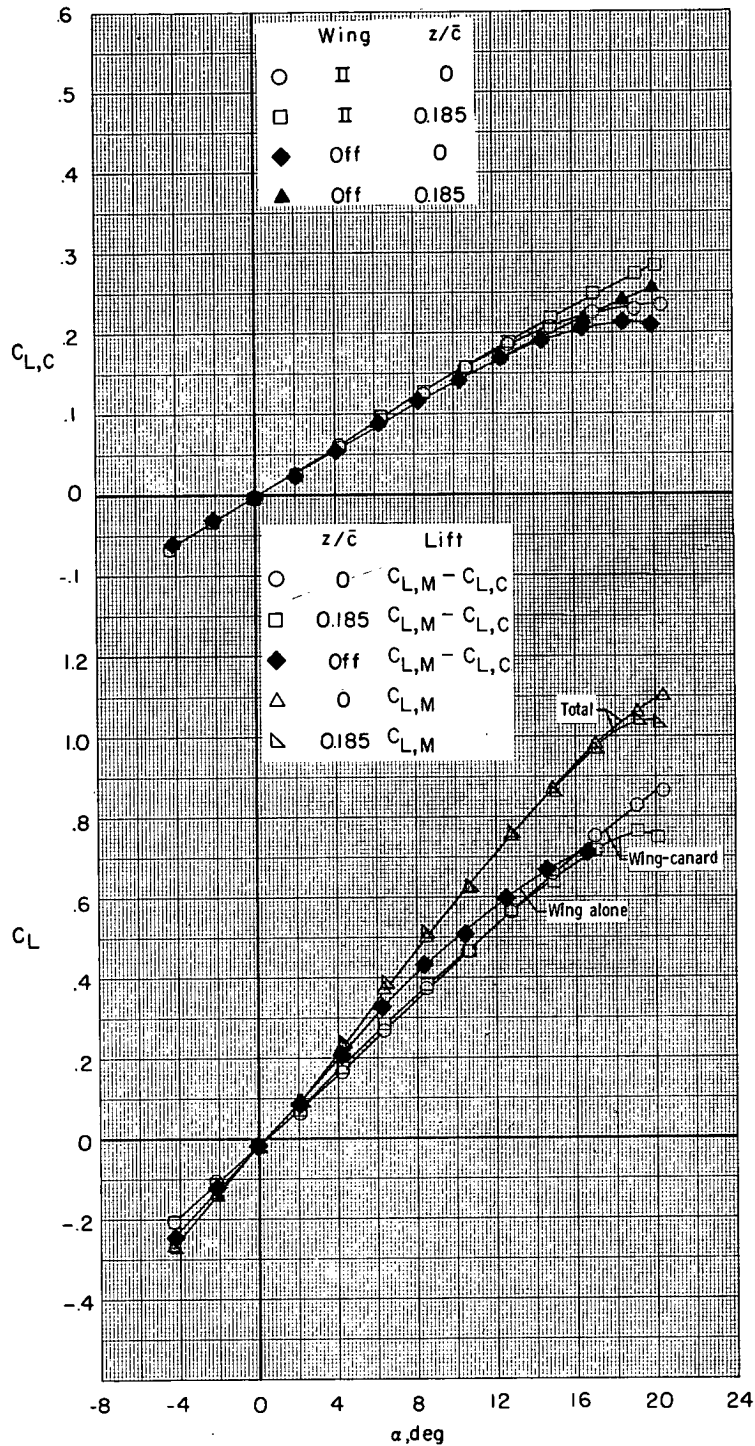
(d) $M = 1.03$.

Figure 11.- Continued.



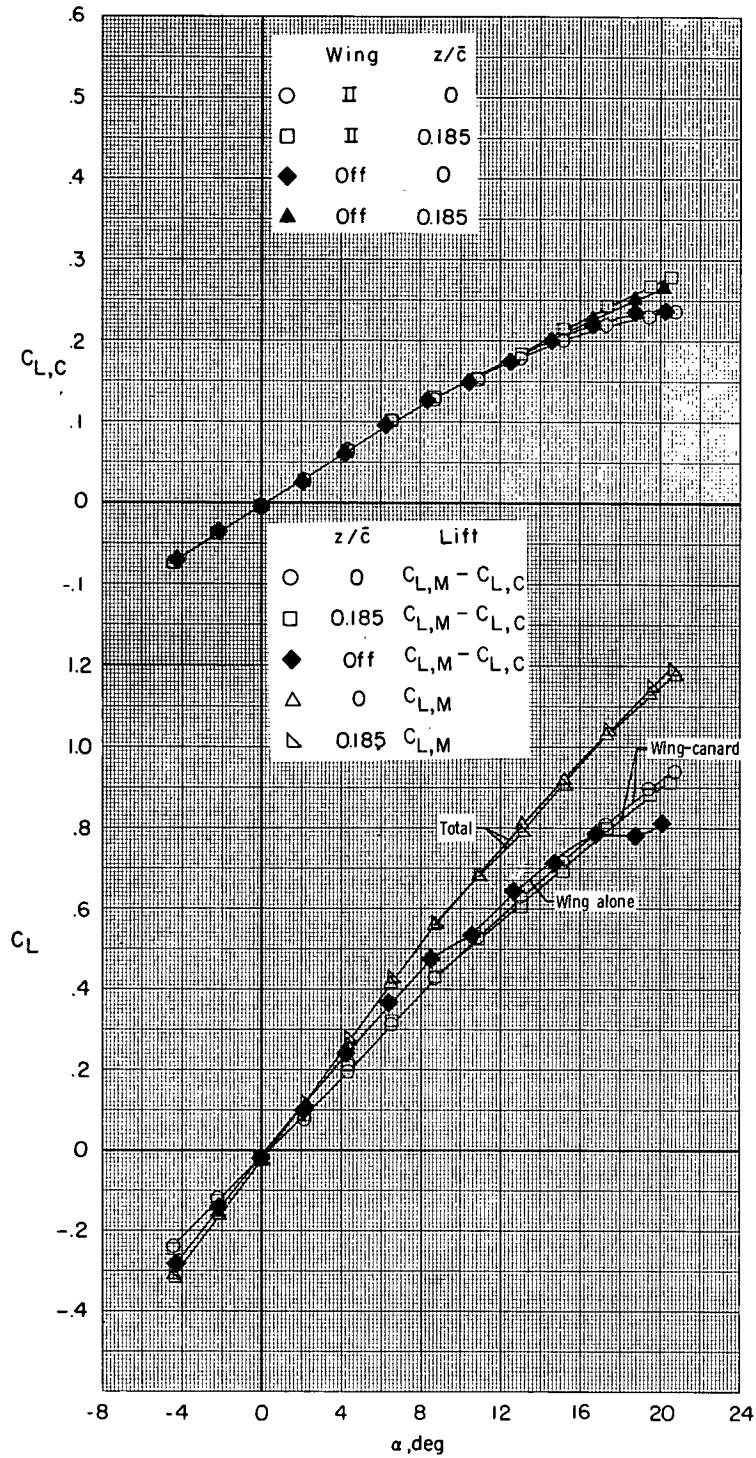
(e) $M = 1.20$.

Figure 11.- Concluded.



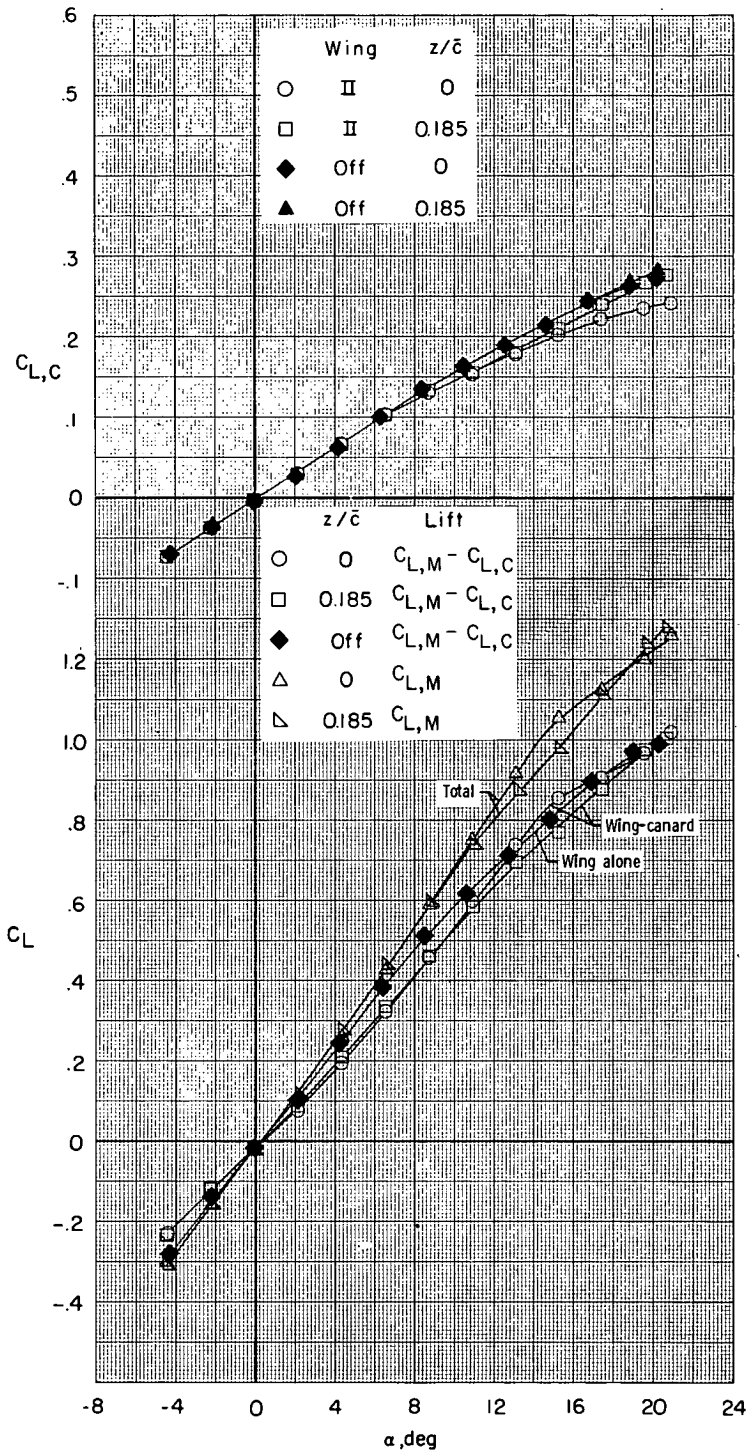
(a) $M = 0.70$.

Figure 12.- Interference effects on lift for model with wing II and canard I.



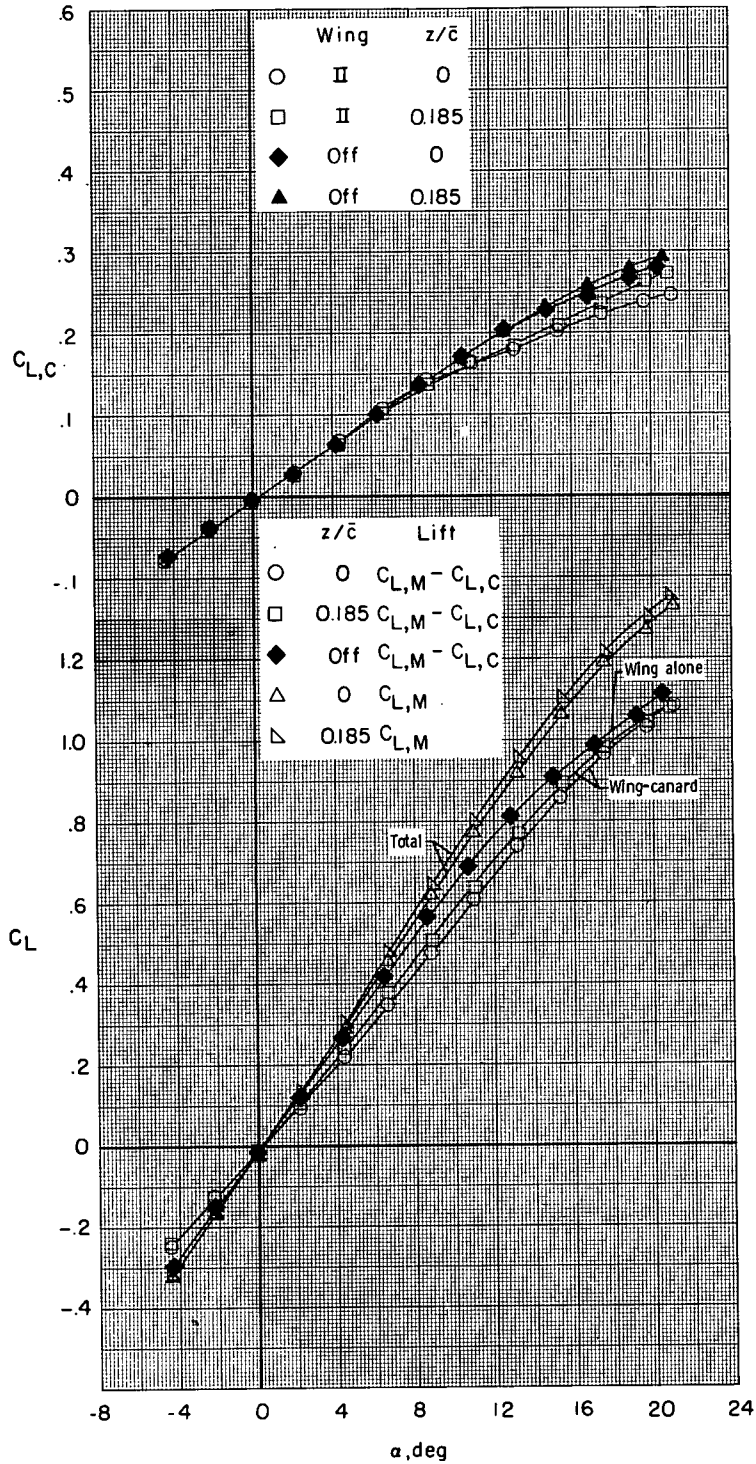
(b) $M = 0.90$.

Figure 12.- Continued.



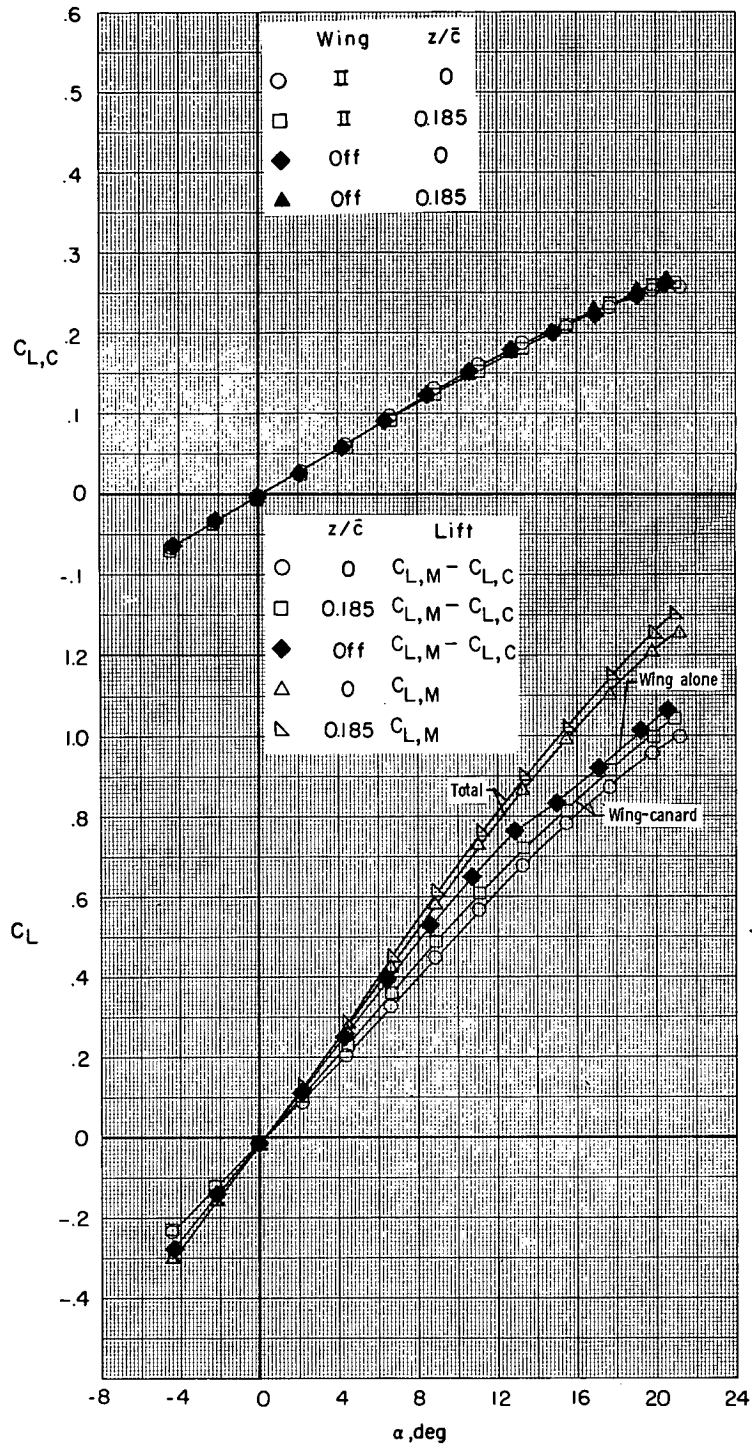
(c) $M = 0.95$.

Figure 12.- Continued.



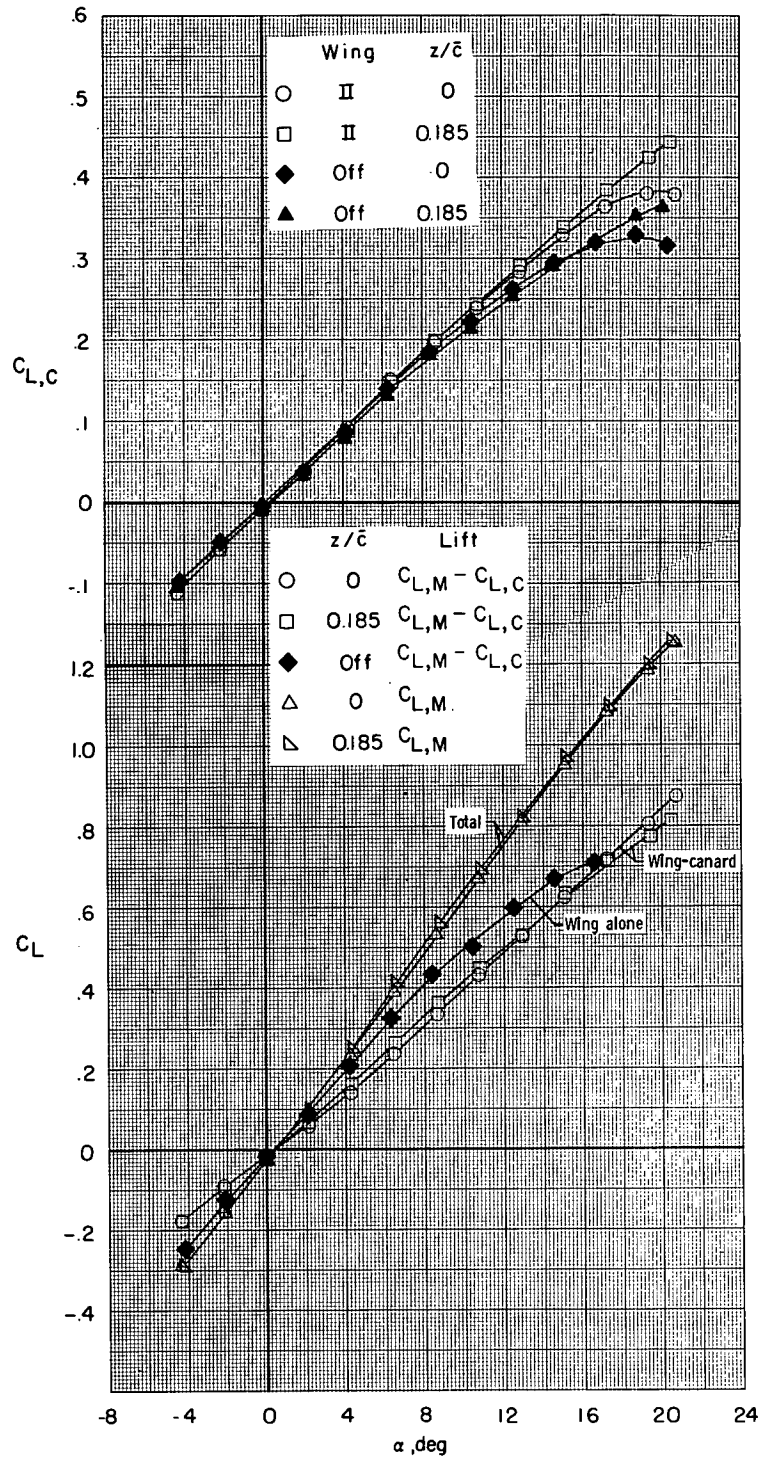
(d) $M = 1.03$.

Figure 12.- Continued.



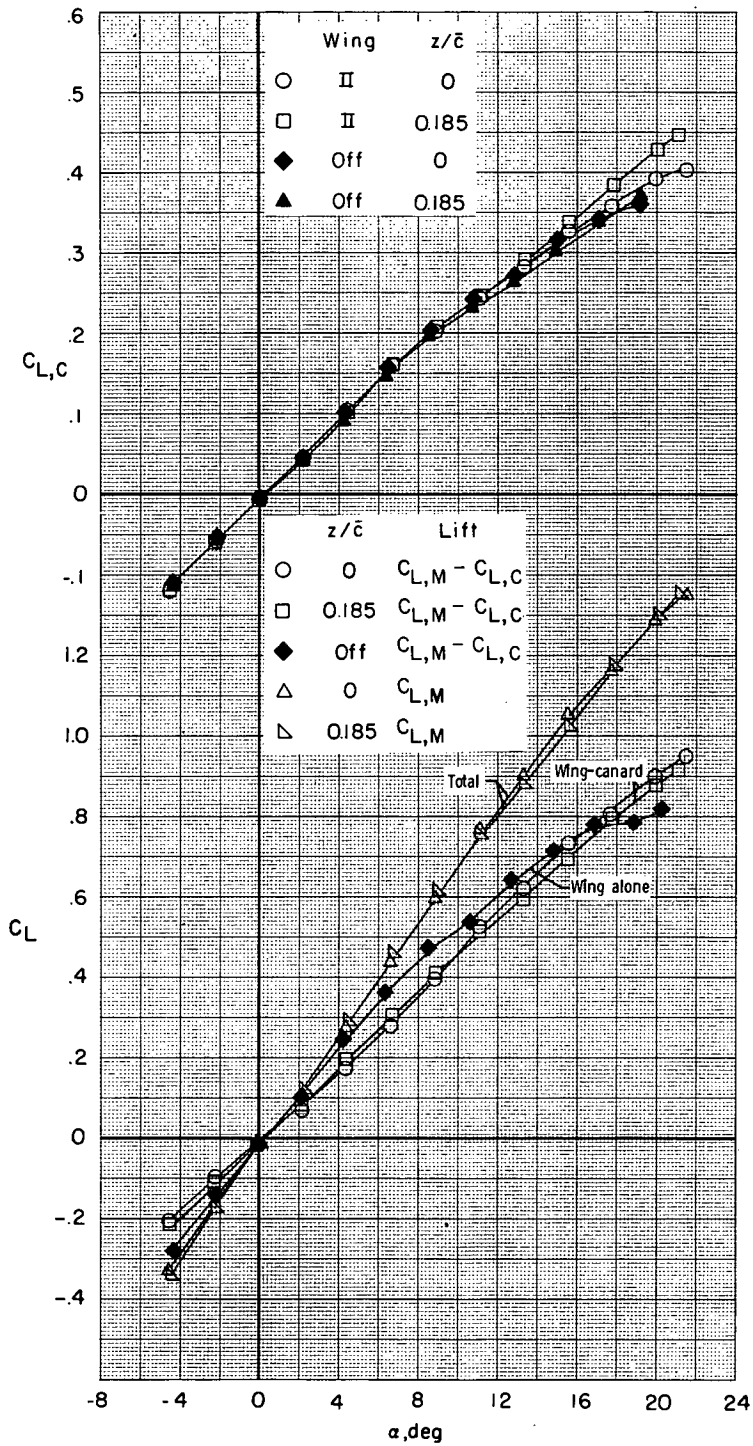
(e) $M = 1.20$.

Figure 12.- Concluded.



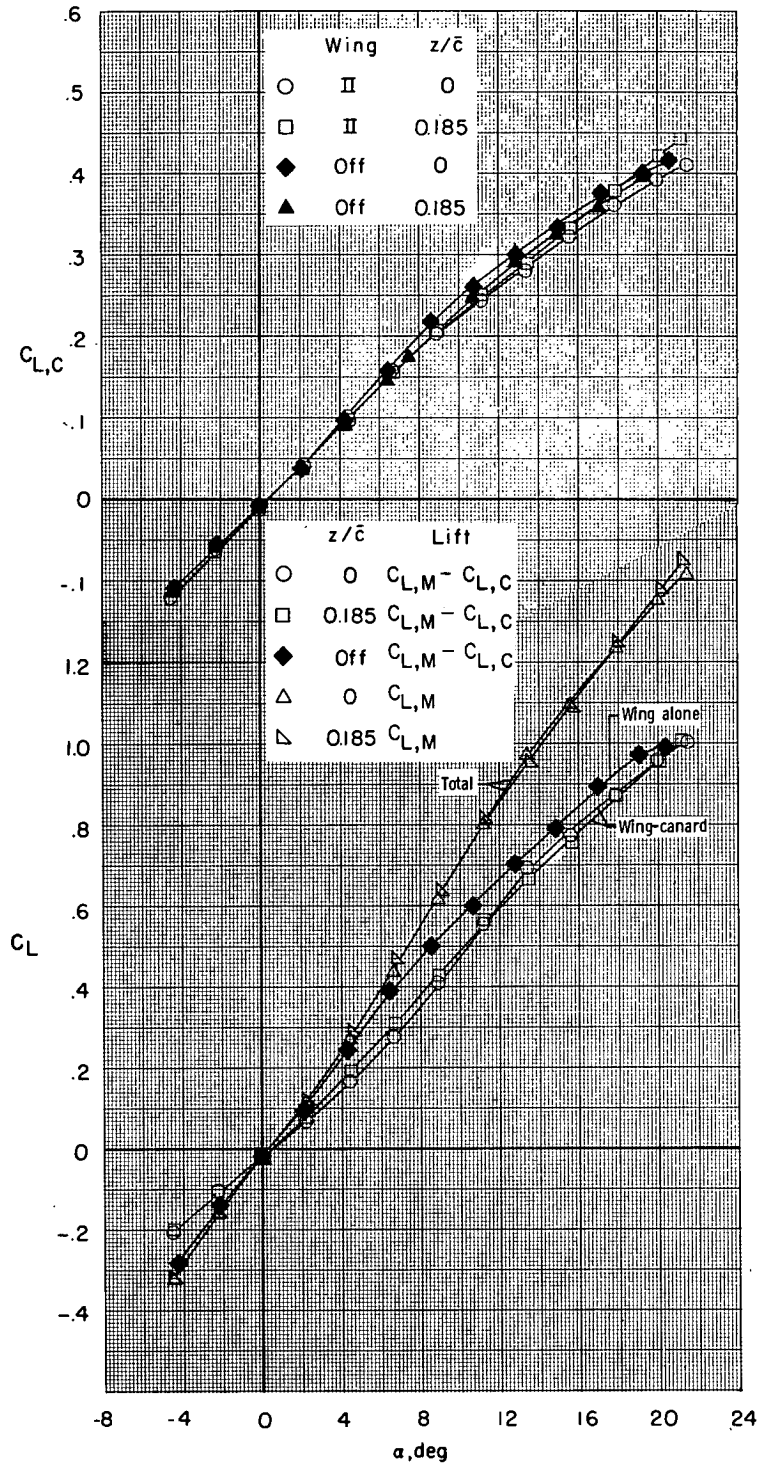
(a) $M = 0.70$.

Figure 13.- Interference effects on lift for model with wing II and canard II.



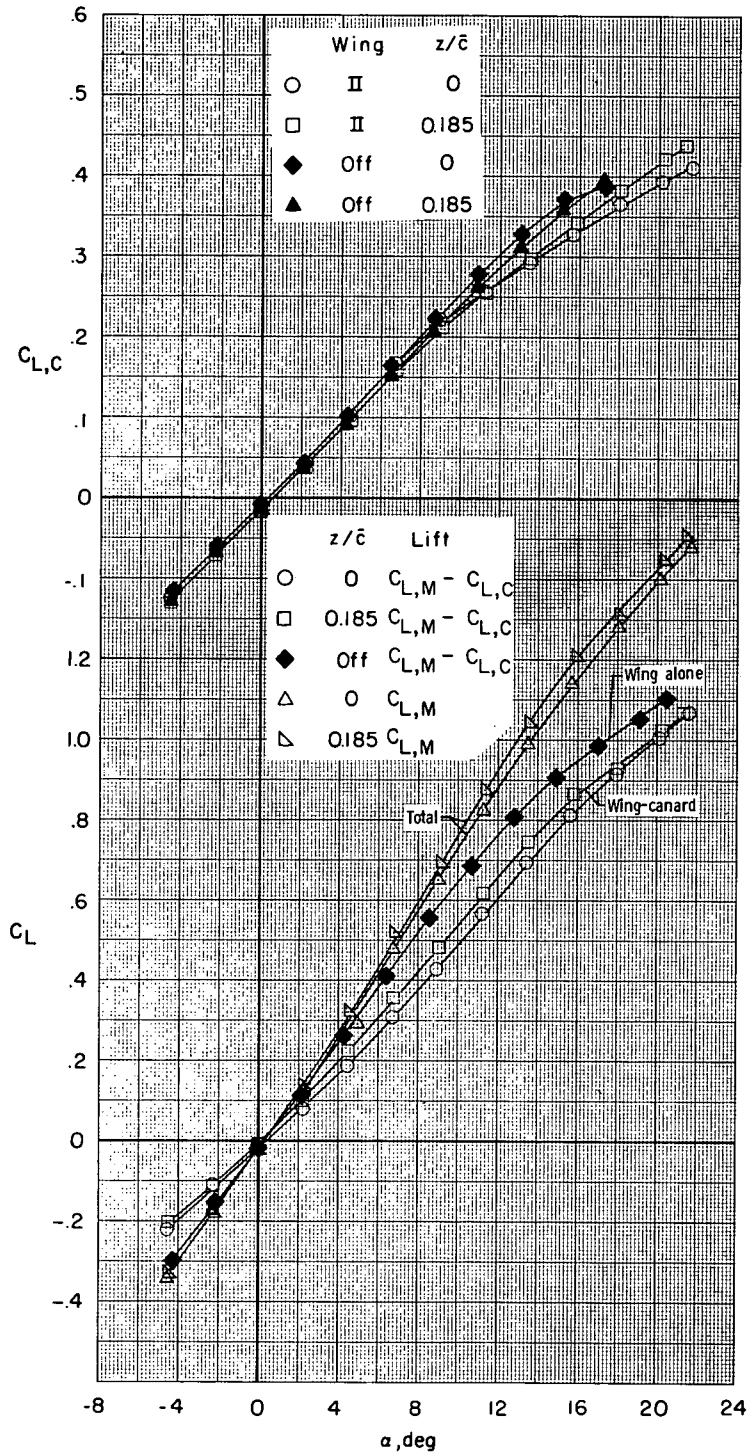
(b) $M = 0.90$.

Figure 13.- Continued.



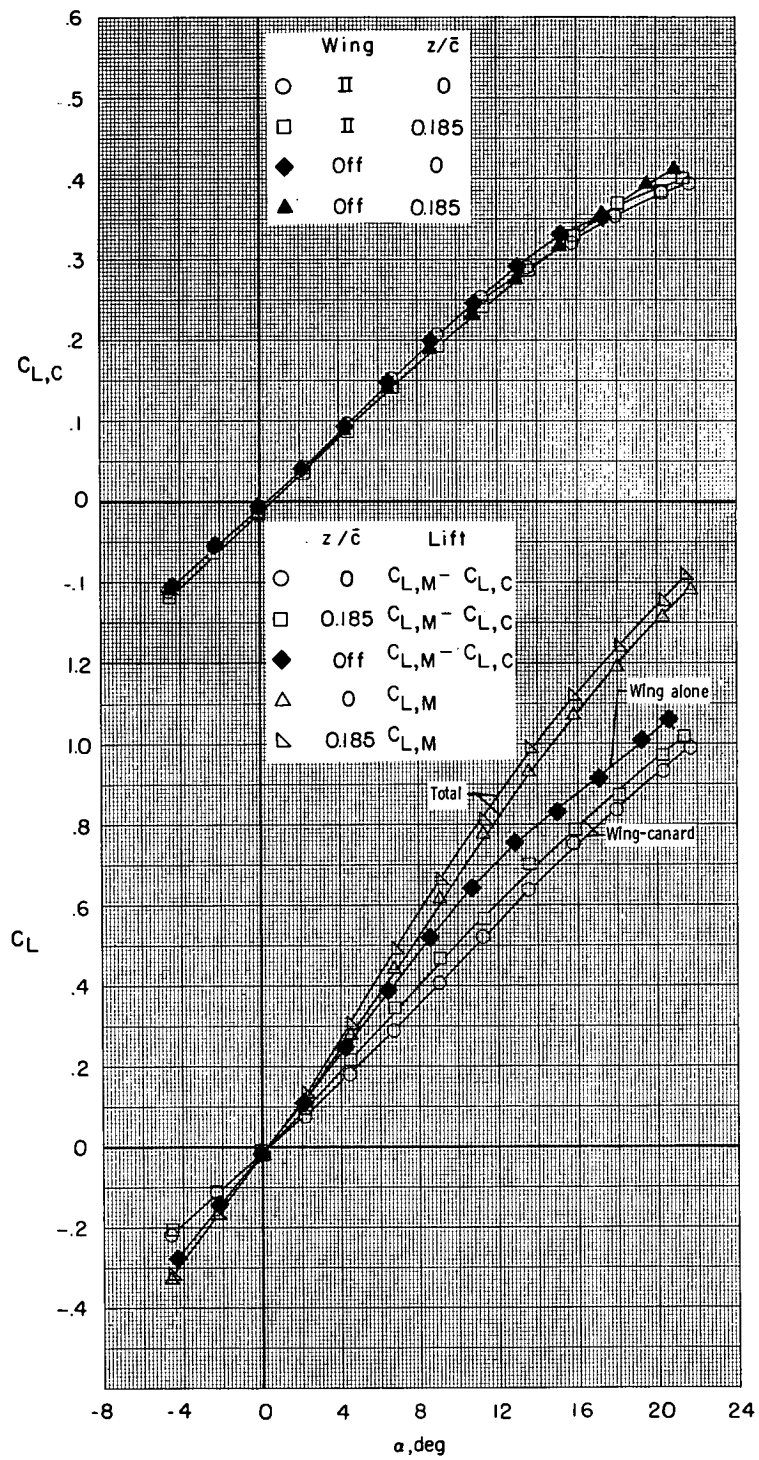
(c) $M = 0.95$.

Figure 13.- Continued.



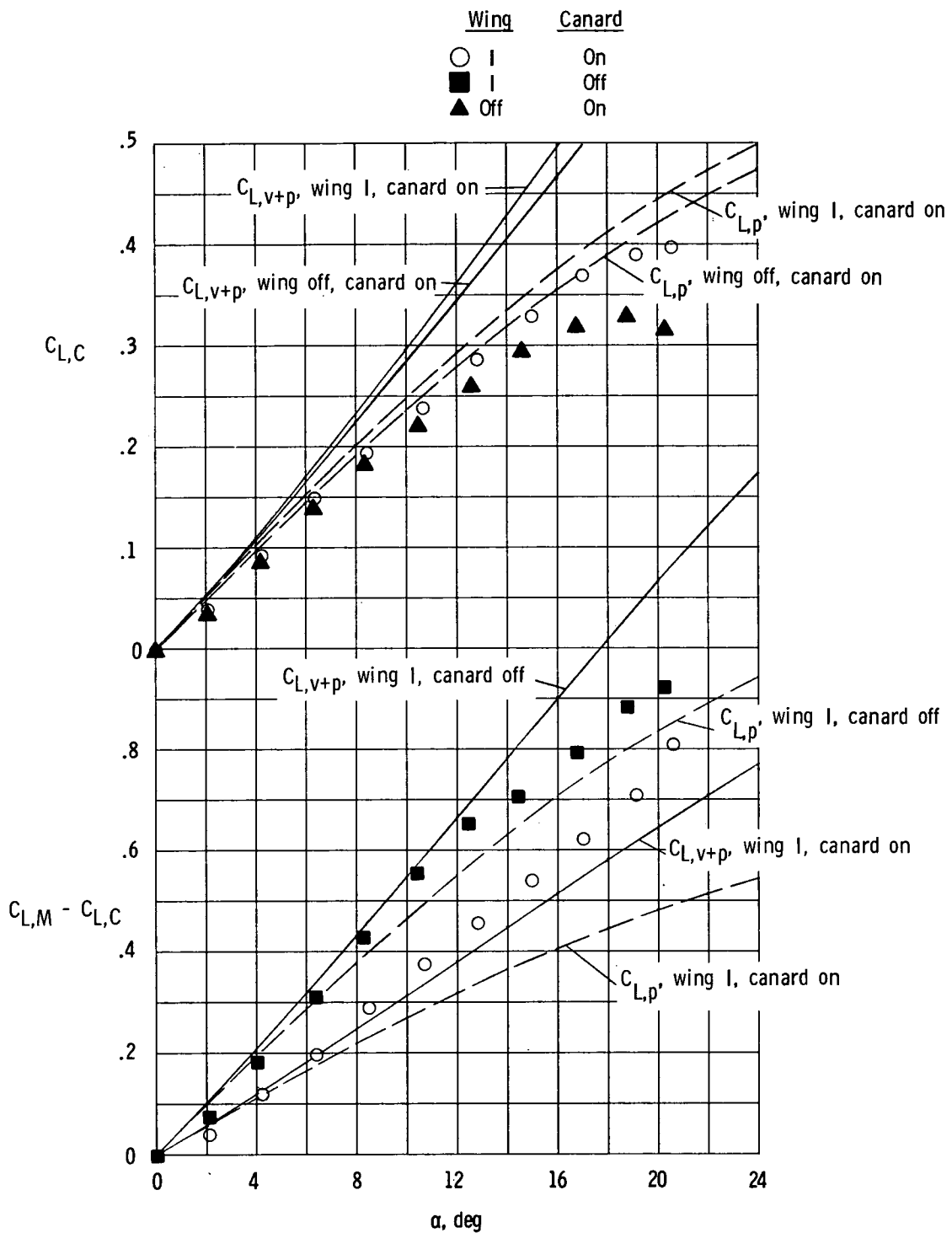
(d) $M = 1.03$.

Figure 13.- Continued.



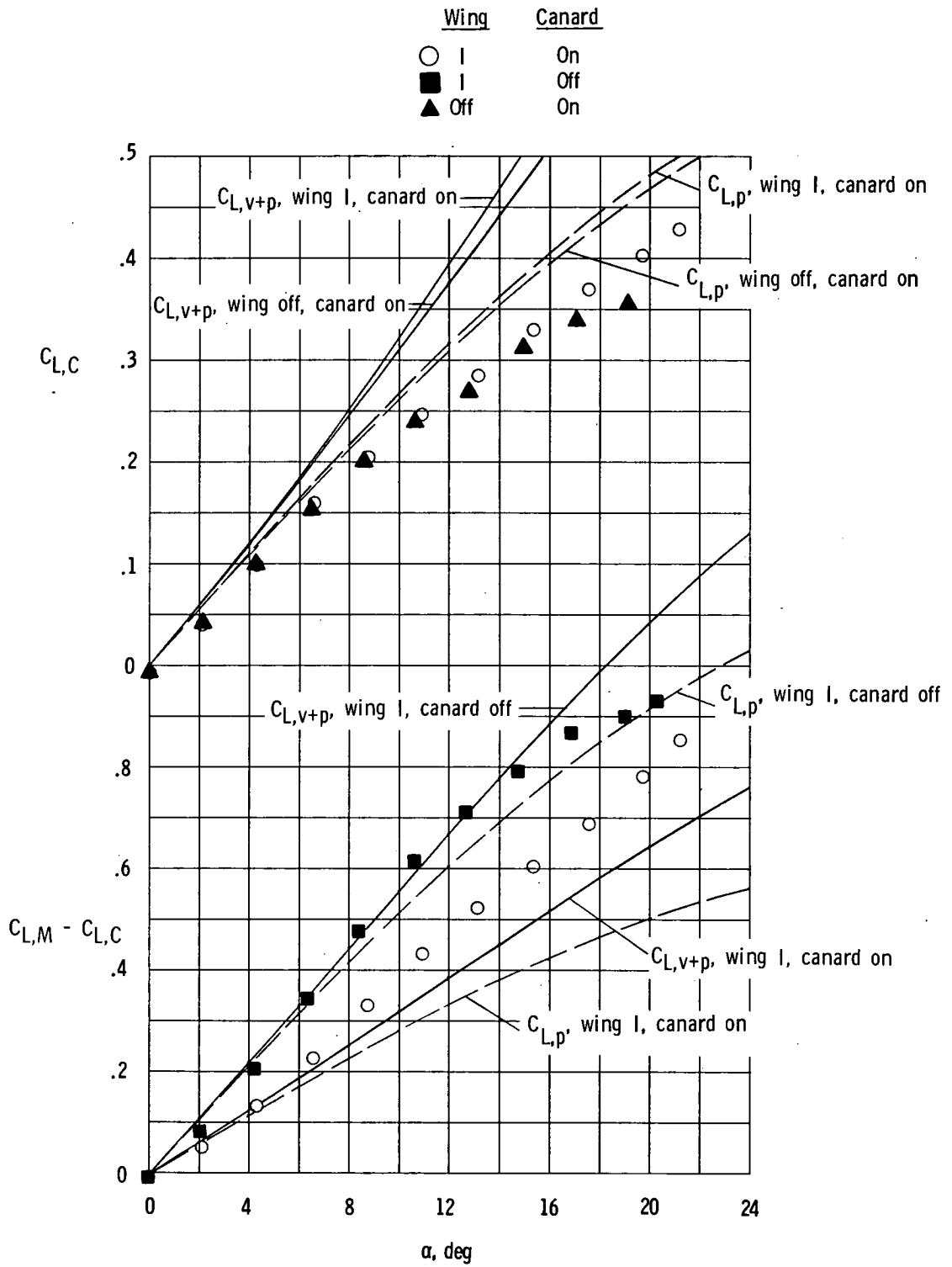
(e) $M = 1.20$.

Figure 13.- Concluded.



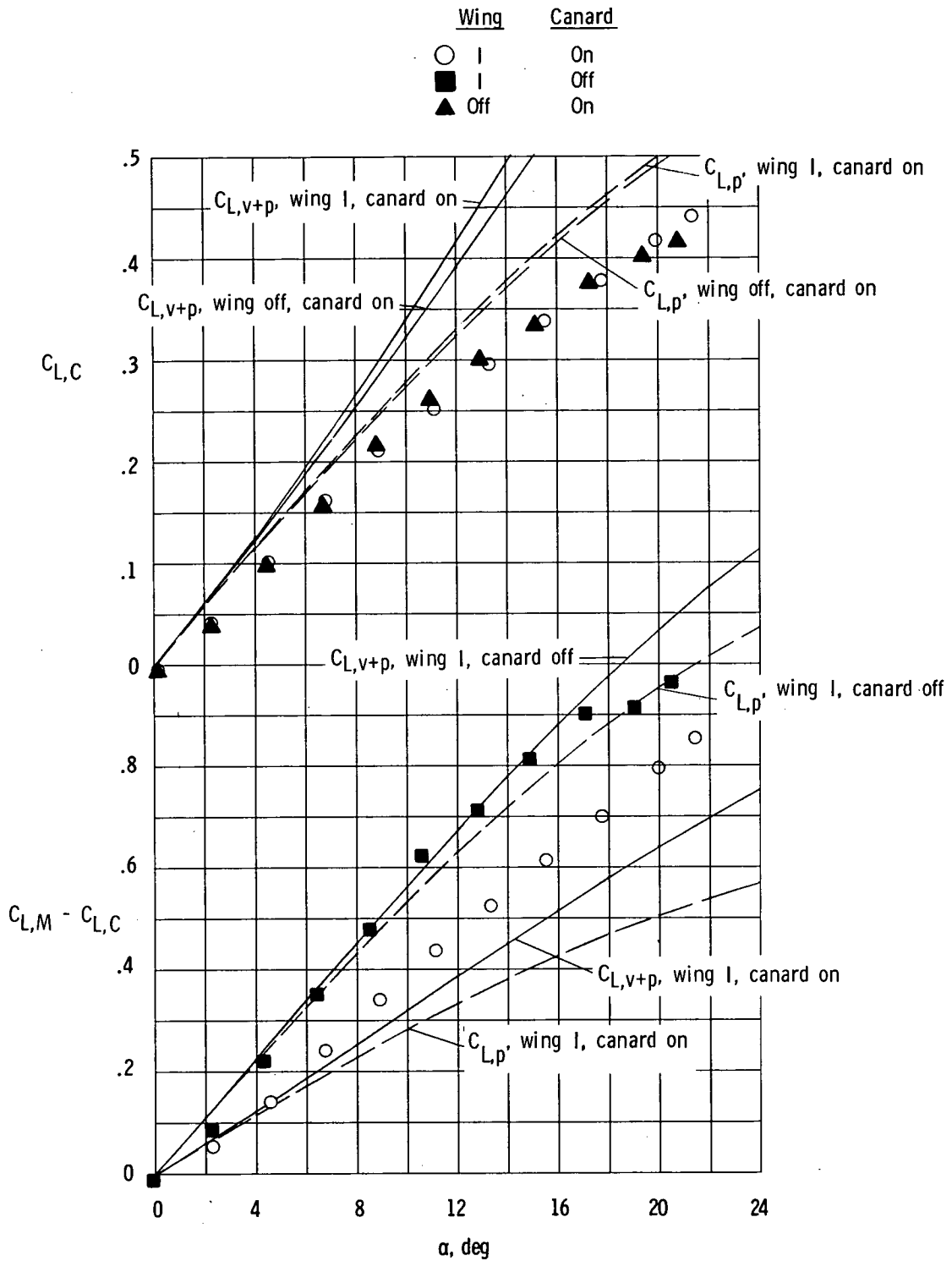
(a) $M = 0.70$.

Figure 14.- Comparison of theoretical and experimental lift characteristics for model with wing I and canard II. $z/\bar{c} = 0.0$.



(b) $M = 0.90$.

Figure 14.- Continued.



(c) $M = 0.95$.

Figure 14.- Concluded.

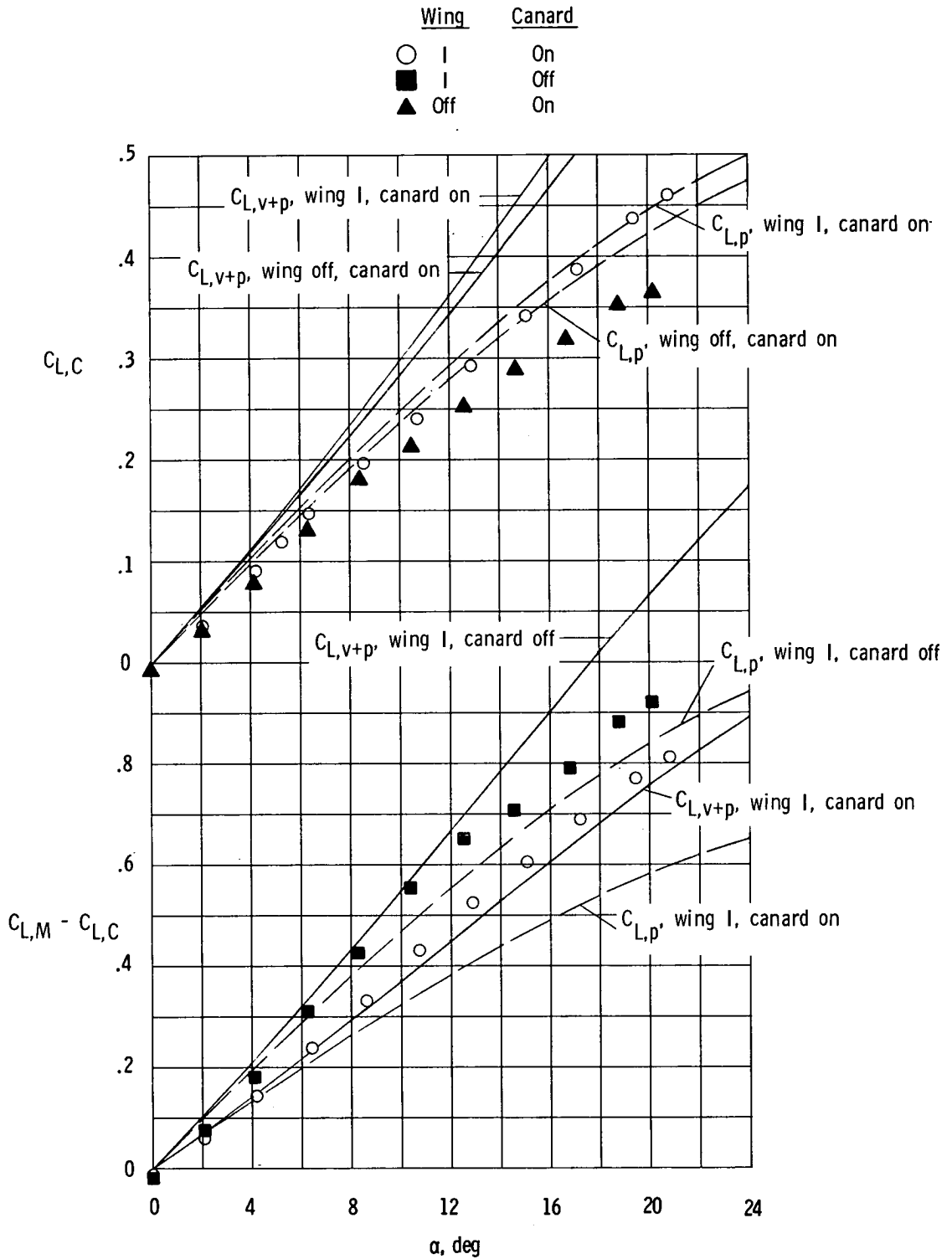


Figure 15.- Comparison of theoretical and experimental lift characteristics for model with wing I and canard II. $z/\bar{c} = 0.185$; $M = 0.70$.

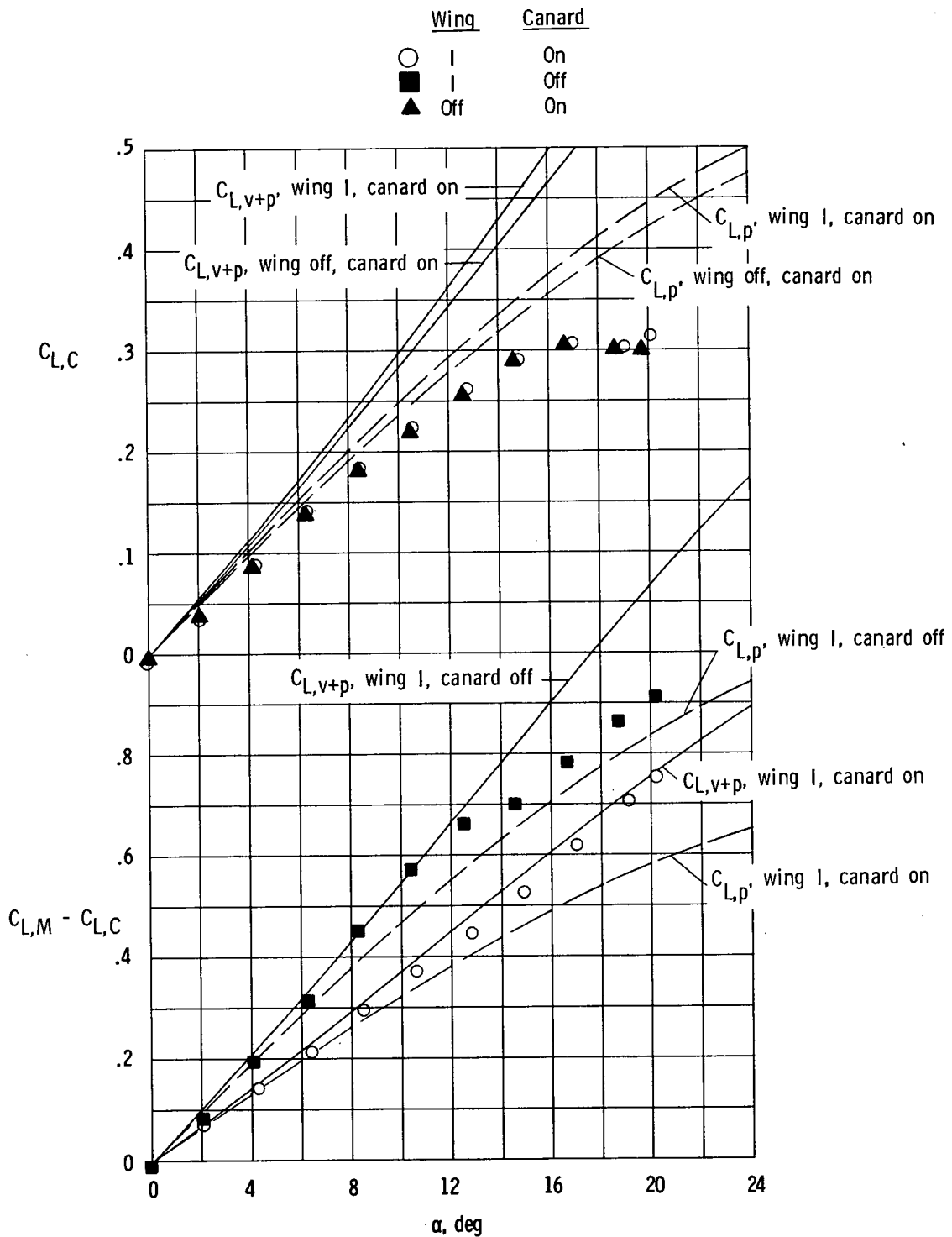
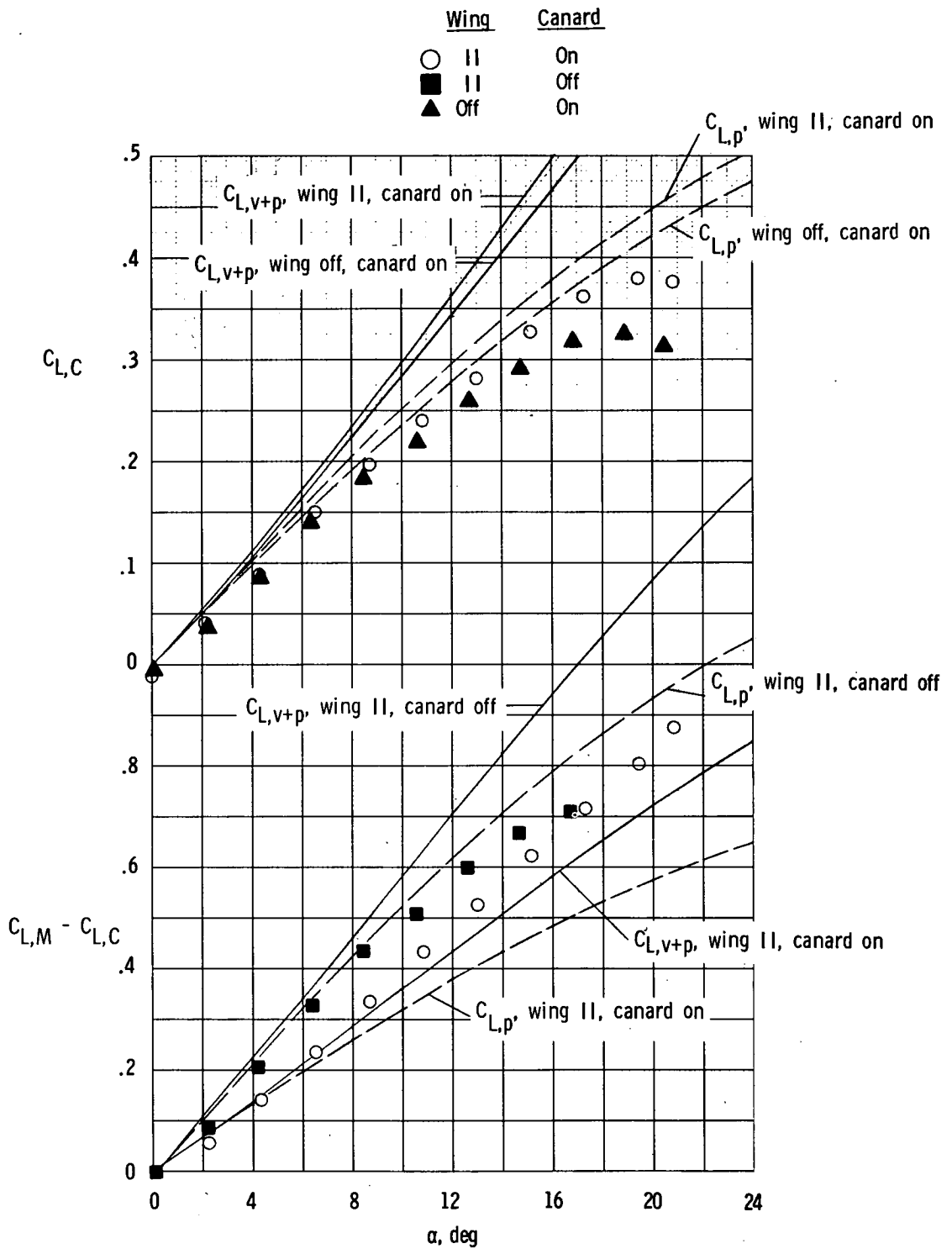
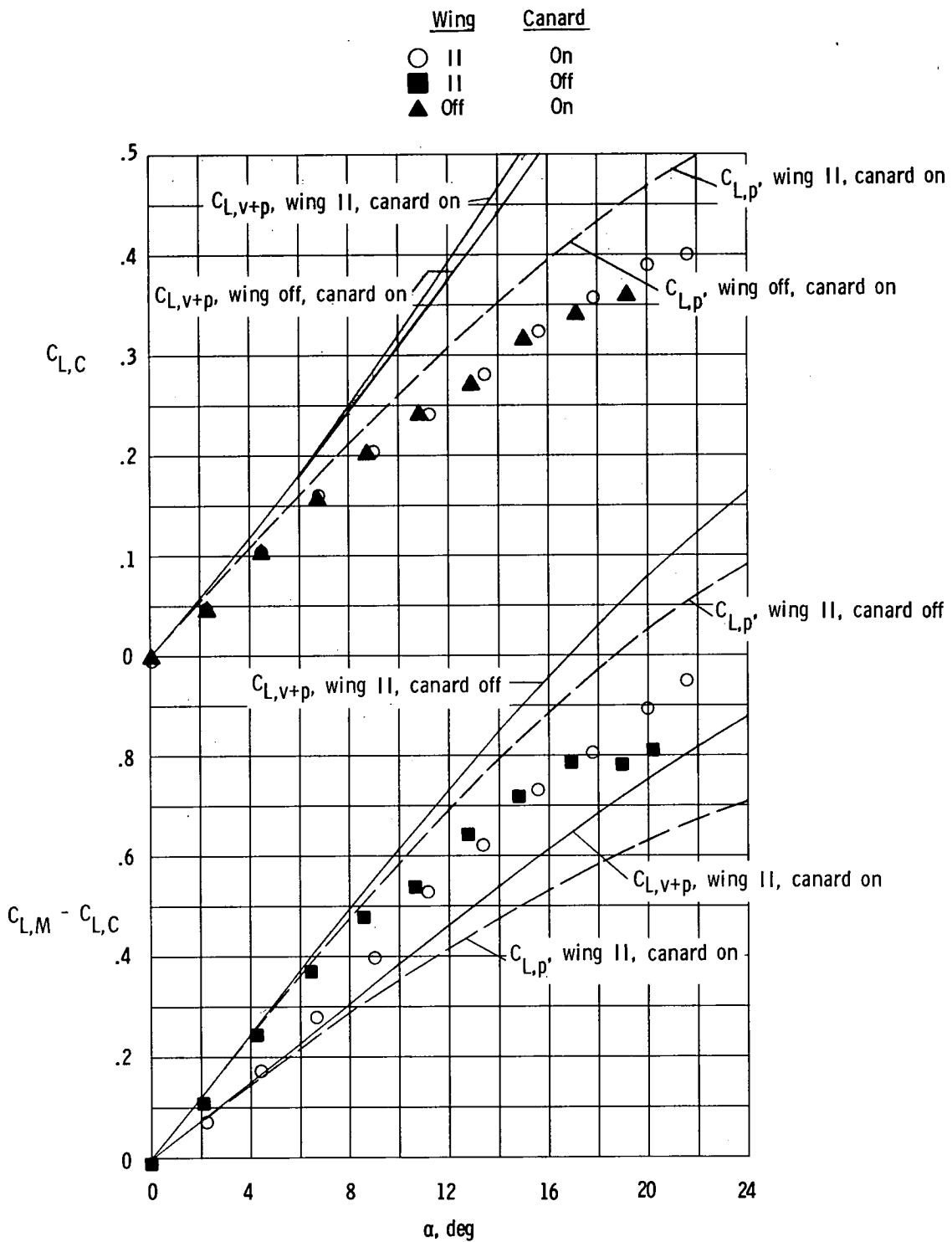


Figure 16.- Comparison of theoretical and experimental lift characteristics for model with wing I and canard II. $z/\bar{c} = -0.185$; $M = 0.70$.



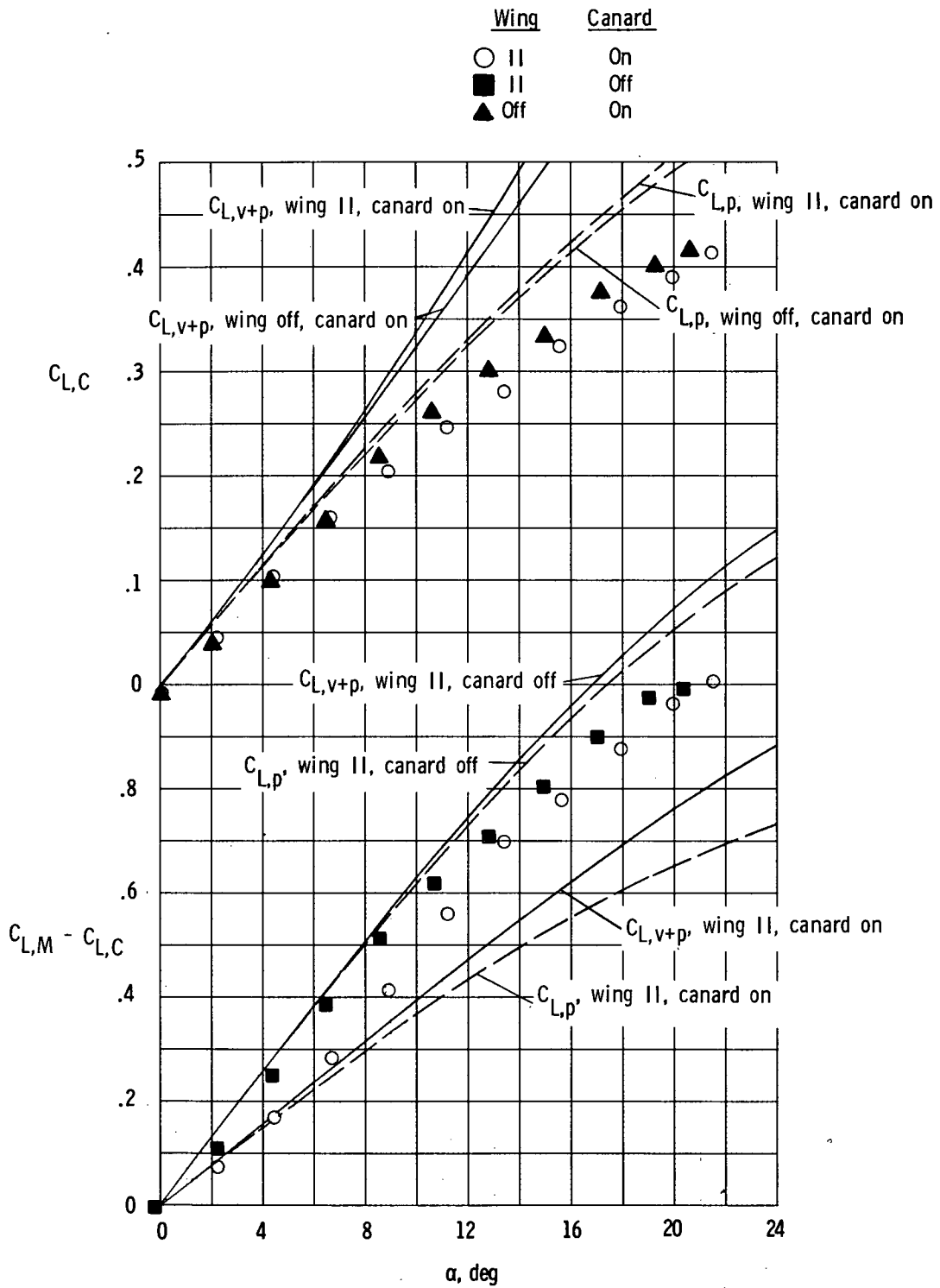
(a) $M = 0.70$.

Figure 17.- Comparison of theoretical and experimental lift characteristics for model with wing II and canard II. $z/\bar{c} = 0.0$.



(b) $M = 0.90$.

Figure 17.- Continued.



(c) $M = 0.95$.

Figure 17.- Concluded.

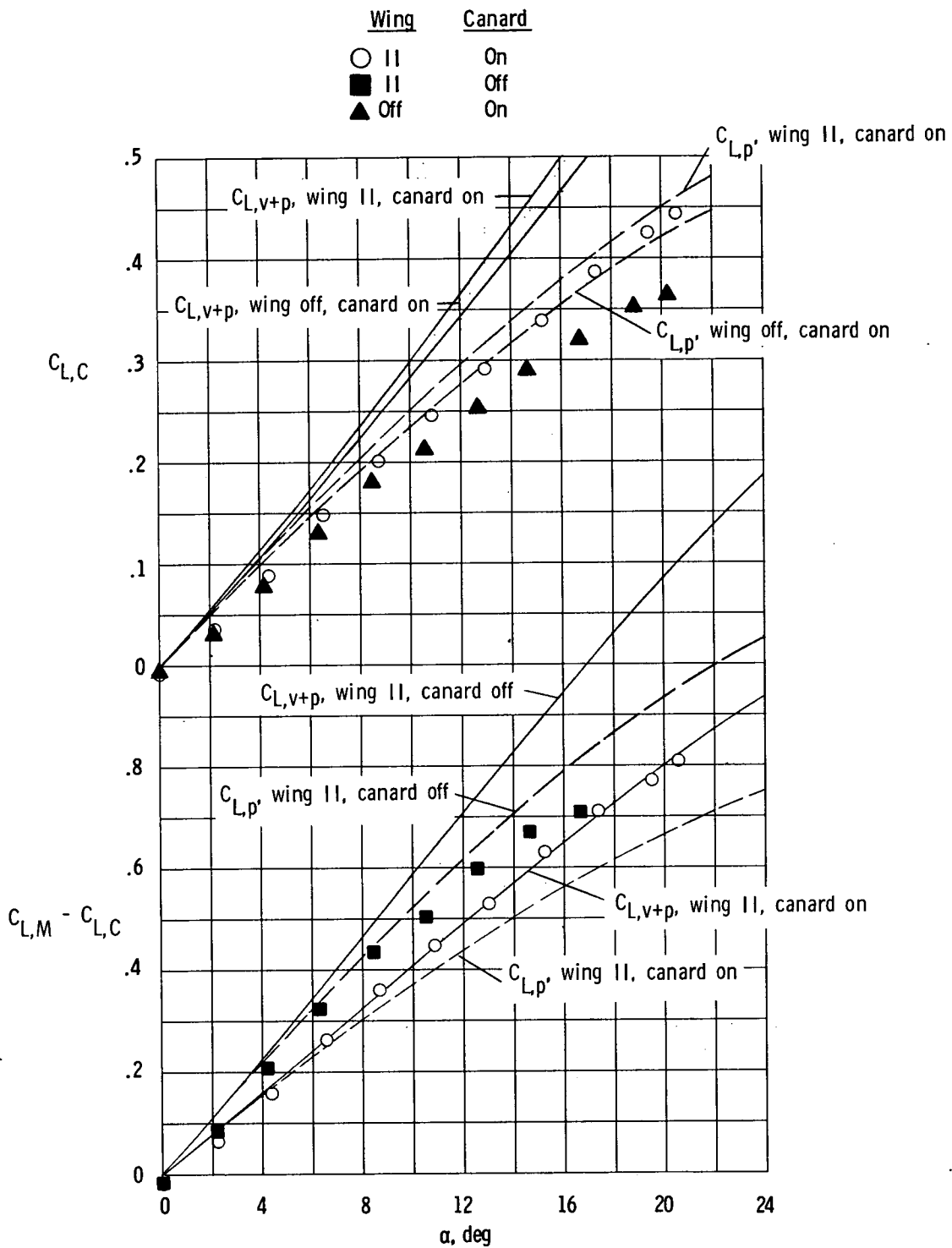


Figure 18.- Comparison of theoretical and experimental lift characteristics for model with wing II and canard II. $z/\bar{c} = 0.185$; $M = 0.70$.

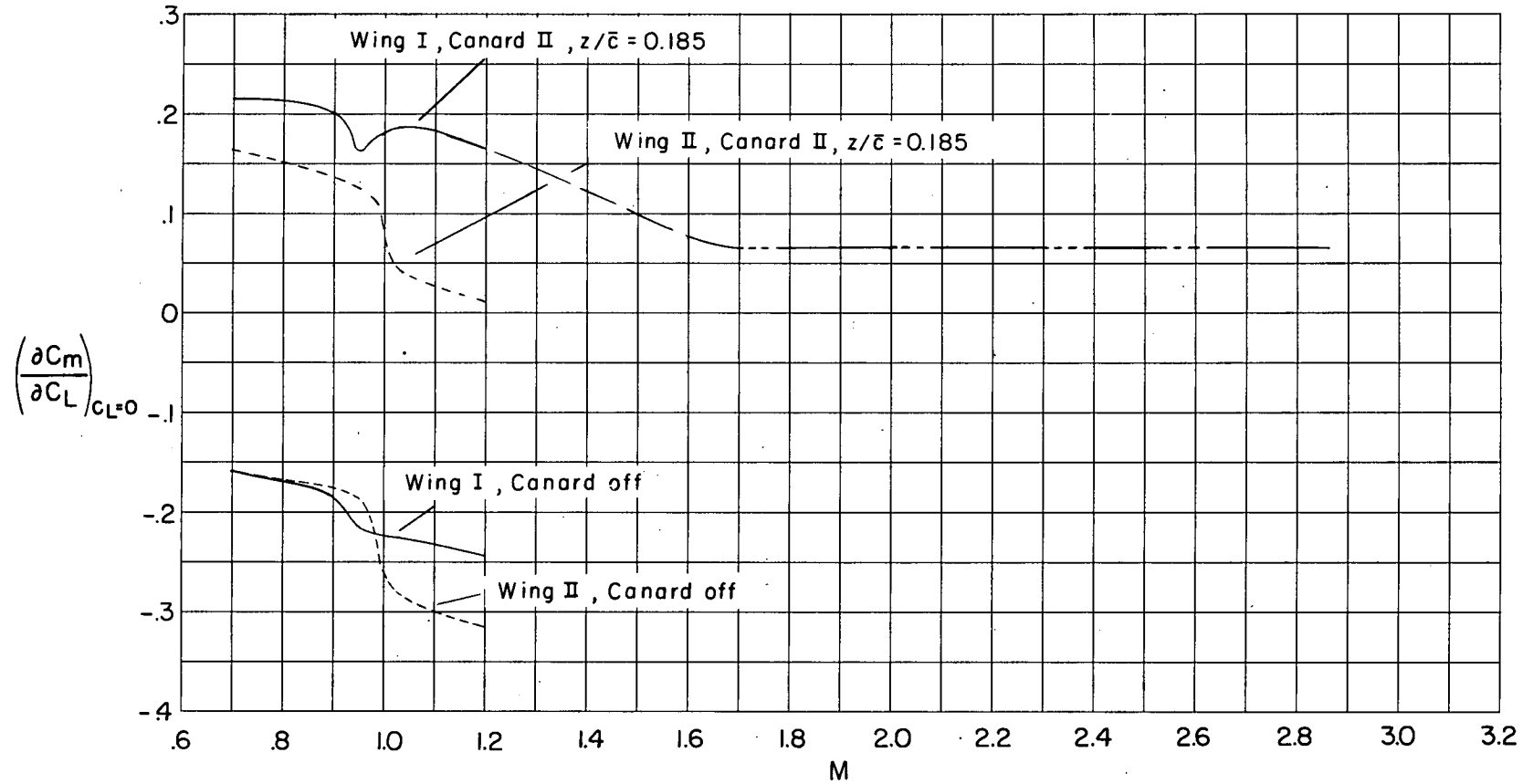


Figure 19.- Effect of wing planform and addition of canard on variation of aerodynamic-center shift with Mach number. Data above $M = 1.60$ obtained from reference 4.

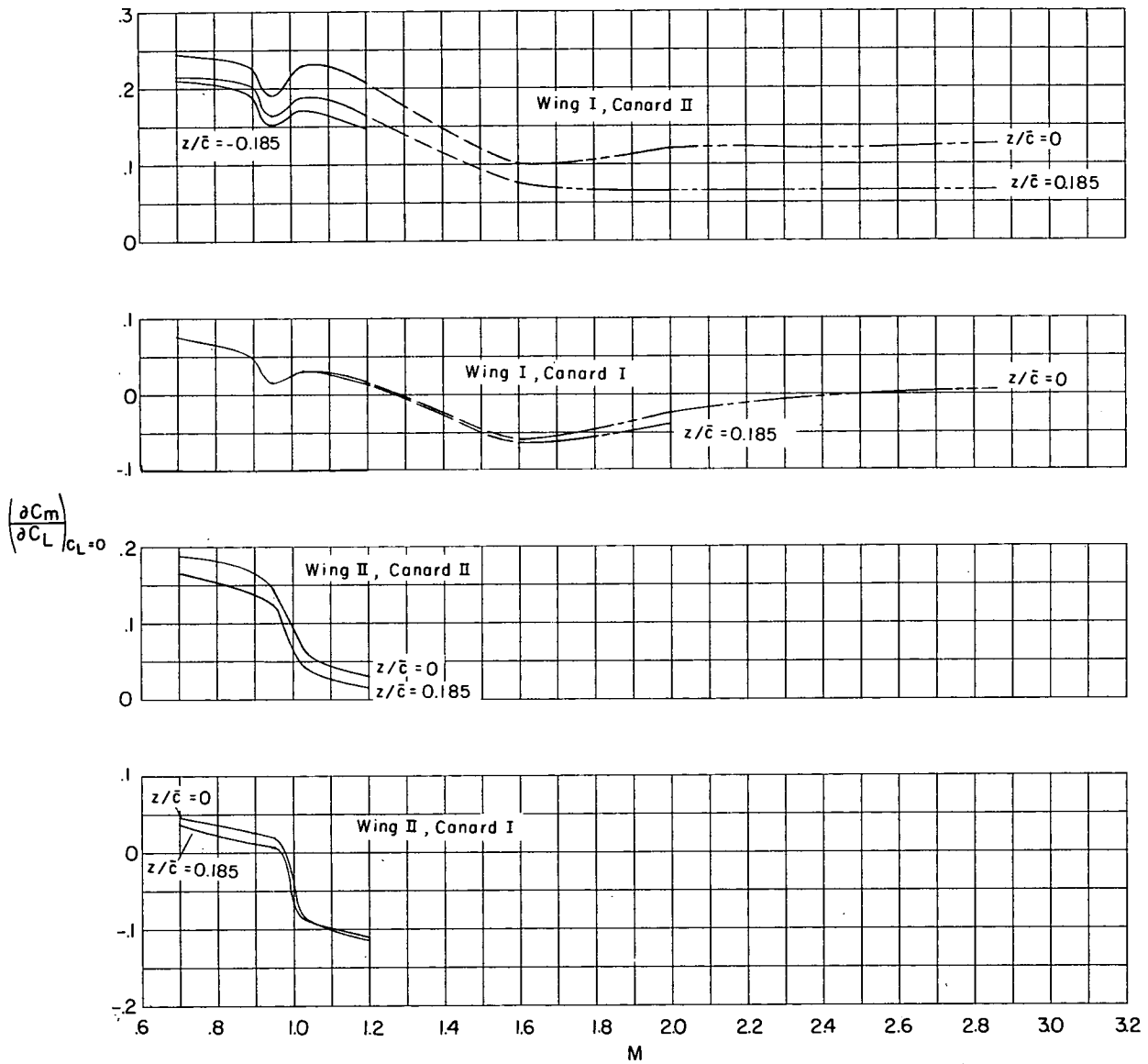


Figure 20.- Effect of canard height on variation of aerodynamic-center shift with Mach number. Data above $M = 1.60$ obtained from reference 4.

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