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16. Abstract

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No significant amount of leading-edge suction was found, but the pressures and integrated normal forces on the upper and lower surfaces indicate the presence of a vortex lift.

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SUMMARY

Detailed pressure measurements were made on a flat semispan swept wing with a rounded leading edge at Mach number 2.2 through a range of Reynolds numbers. Pressure orifices were distributed in the streamwise direction at five spanwise stations on the leading edge and on the upper and lower surfaces.

No significant amount of leading-edge suction was found, but the pressures and integrated normal forces on the upper and lower surfaces indicate the presence of a vortex lift.

INTRODUCTION

The performance benefits of maintaining leading-edge suction at subsonic speeds are substantial (refs. 1 and 2) and various techniques have been used to achieve relatively high values of leading-edge suction (ref. 1). In reference 3, Brown predicts a leading-edge-suction force at supersonic speeds as well for wings with subsonic leading edges. Experimental evidence of the existence of "leading-edge suction" at supersonic speeds can be seen in references 2, 4, and 5. The experimental evidence to date, however, only indicates a gross aerodynamic benefit in the lift-drag characteristics over that predicted by linear theory, that is, any existing leading-edge-suction force has not been distinguishable from the gross aerodynamic forces. Reference 6 postulates an analogy based on the assumption that when leading-edge separation occurs on subsonic leading edges, the leading-edge suction is converted to vortex lift. This analogy was used to develop analytical methods of predicting the lift-drag characteristics of sharp-edge delta and delta-related wing planforms by assuming a complete conversion of leading-edge suction to vortex lift. References 6 and 7 show that experimental lift-drag characteristics are accurately predicted by the analytical methods based on this analogy for both subsonic and supersonic speeds. It is not known, however, whether a complete conversion to vortex lift takes place for rounded leading edges, or whether some degree of leading-edge suction can be maintained. More fundamentally, it is not known whether swept-wing sections behave as similar sections would in two-dimensional flow at the component Mach number and angle of attack which is the basic assumption of reference 3.

The purpose of this investigation was twofold: (1) to determine if leading-edge suction and/or vortex lift can be obtained on a rounded, subsonic leading edge at supersonic speeds; and (2) to provide aerodynamic loading data on rounded leading edges at supersonic speeds. The leading-edge portion of a large flat wing with 70° sweep and a rounded leading edge was tested at Mach number 2.2. In order to attach some meaning to the experimental values obtained for the size of the leading-edge radii tested, the model was related to a theoretical arrow wing for a supersonic transport model which has been tested having a leading-edge radius of 1 percent of the chord length (ref. 8). The leading-edge radius of the present model was equal to that of the theoretical arrow wing at a given span station. Pressure measurements were made over the leading edge and the upper and lower surfaces at angles of attack from 0° to 8° at free-stream Reynolds numbers from 0.163×10^{6} to 0.407×10^{6} based on the average leading-edge radius of 2.26 cm (0.888 in.).

SYMBOLS

Values are given in both SI and U.S. Customary Units. The measurements and calculations were made in U.S. Customary Units.

b	semispan of theoretical arrow wing
c	local chord length on theoretical arrow wing
c_n	local leading-edge force coefficient, $\int_{-\pi\bar{r}/2}^{\pi\bar{r}/2} \frac{c_p \cos\theta \, ds}{\bar{r}}$
c_p	pressure coefficient, $\frac{p - p_2}{q}$
c_s	local leading-edge suction coefficient, $-\left(c_n - c_{n,\alpha=0^{\circ}}\right)$
F_s	suction force on semispan leading edge (acts normal to leading edge and in the wing-chord plane)
l	distance from the wing apex to a given point on the wing leading edge
M	reference Mach number
M_n	Mach number component normal to the leading edge, $M \cos\Lambda(1 + \sin^2\alpha \tan^2\Lambda)^{1/2}$
N	section normal force for upper or lower surface, $\pm q \int_0^c c_p \sin\phi \, du$

p model surface pressure

p_∞ free-stream static pressure

p_2 reference pressure on the reflection plate

q reference dynamic pressure based on reflection-plate pressure measurement, $\frac{1}{2}\rho V^2$

$R_{\bar{r}}$ Reynolds number based on $\bar{r}$

r local leading-edge radius

$\bar{r}$ average local leading-edge radius for a given span station (orifices were assumed to lie in a line perpendicular to the leading edge)

s distance around leading edge measured in a plane perpendicular to leading edge and to wing-chord plane, upper surface positive

u distance along the wing surface in the streamwise direction

V reference velocity

x chordwise distance from leading edge

x_1,y_1 coordinates of a doublet

y spanwise distance measured from root chord

α angle of attack

$\beta = \sqrt{M^2 - 1}$

$\delta = \frac{y_1}{x_1}$

θ angle between a radial drawn to an orifice on the leading-edge radius and the wing-chord plane

Λ leading-edge sweep angle

$$\lambda = \int_{-\tan(90 - \Lambda)}^{\tan(90 - \Lambda)} \frac{\beta^2 \delta^2}{\sqrt{\tan^2(90 - \Lambda) - \delta^2} \sqrt{1 - \beta^2 \delta^2}} \tanh^{-1} \sqrt{1 - \beta^2 \delta^2}\, d\delta$$

ρ reference density

ϕ local angle between a normal to the wing-chord plane and a streamwise tangent to the surface of the wing

APPARATUS AND METHODS

Models and Model Mounting

The model was a large flat semispan wing with relatively large leading-edge radii. The planforms of the wing and the reflection plate are shown in figure 1. The Mach cone traces at $\alpha = 0^{\circ}$ and $\alpha = 8^{\circ}$ on the wing from the tips of the reflection plate are also shown in figure 1. The Mach cone traces indicate that a major portion of the wing was not under the influence of the flow over the plate due to the fact that excessive weight limited the size of the reflection plate. The wing leading edge was round normal to the leading edge and had a radius which varied from 3.091 cm (1.217 in.) at the root to 1.425 cm (0.561 in.) at the tip. Surface pressure orifices with a 0.071-cm (0.028-in.) inside diameter were distributed in the streamwise direction at five spanwise stations on the leading edge and on the lower and upper surfaces of the wing. Figure 2 illustrates the pressure orifice locations. The leading-edge orifices were located at 18 radial positions (θ) and the orifices behind the leading edge were spaced 2.54 cm (1 in.) apart on both the upper and lower surfaces. The average leading-edge radius $\bar{r}$ (see fig. 1) for each station is given in table 1. The model was mounted on the tunnel main support system and was oriented vertically in the test section.

Tests and Procedures

All tests were conducted in the Langley 4- by 4-foot supersonic pressure tunnel at a free-stream Mach number of 2.2 and free-stream Reynolds numbers from 0.163×10^6 to 0.407×10^6 based on the average leading-edge radius. The stagnation temperature was 316 K (570° R).

No attempt was made to induce transition near the leading edge artificially. Since the model was mounted vertically, angle of attack was varied by means of the main-support sideslip mechanism. Data were taken at angles of attack from 0° to 8°. Angle of attack was measured by the main support system and was not corrected for model-support deflection.

Surface pressure and reference pressures on the reflection plate (see fig. 1) were measured by six scanning valves. The pressures measured on the reflection plate were used as reference pressures rather than free-stream static pressure since it was desirable to isolate the effects on the surface pressures of any leading-edge suction that might be found. Using free-stream pressure as a reference would have included an increment in the surface pressure coefficients due to the slight compression which occurred on the reflection plate.

Accuracy

The accuracy of the scanning valve system is better than 1 percent of the gage range, 103 kPa (15 psi), which, when expressed as pressure coefficient, varies from 0.05 for the lowest Reynolds number to 0.02 for the highest Reynolds number. Another possible source of error occurs in establishing the reference pressure. The size of the reflection plate was limited due to weight and consequently stations 4 and 5 were partially under the influence of the free stream (see Mach cone traces in fig. 1). The variation of reference-pressure ratio with angle of attack is shown in figure 3. The variation with angle of attack is believed to be primarily due to interference of the wing apex on the reflection plate. In order to minimize this interference on the reference pressure, reference pressure orifice 1 (see fig. 1) was used for the lower angles of attack and reference pressure orifice 2 was used for the higher angles of attack. It is not believed, however, that any error in reference pressure seriously affected the results. For an error of 0.01 in reference-pressure ratio the resulting error in c_n is -0.006. Applying this error over the entire leading edge of the model and expressing it in terms of axial-force coefficient based on the theoretical arrow-wing area (see fig. 4), this error becomes 0.0001. Furthermore the leading-edge suction values (c_s) should not be affected since c_s is an incremental value between two c_n values.

RESULTS AND DISCUSSION

Pressure Coefficients

The pressure coefficients for the five span stations are listed in tables 2 to 5. The pressure coefficients on the leading edge from $\theta = -90^{\circ}$ to $\theta = 90^{\circ}$ (see fig. 2) are shown in figure 5. In general, it can be seen that the stagnation region moves beneath the wing leading edge as angle of attack increases, and that the stagnation pressure decreases with increasing span station (possibly due to increasing sidewash). An overexpansion is also evident on both the upper and lower surfaces at $\theta = \pm 70^{\circ}$ (next to last data point on each curve).

Leading-Edge Pressure Integrations

The leading-edge pressure coefficients were integrated over the leading edge at each span station to obtain a local leading-edge force coefficient c_n which acts normal to the leading edge (see fig. 6). This coefficient is defined by the expression

$$c_n = \int_{-\pi\bar{r}/2}^{\pi\bar{r}/2} \frac{c_p \cos\theta \, ds}{\bar{r}} \tag{1}$$

The variable s is measured around the leading edge in a plane perpendicular to the wing-chord plane and to the leading edge (see fig. 6). The angle θ is the angle between a radial drawn to an orifice on the leading-edge radius and the wing-chord plane (see fig. 2). The cosine of the thickness taper angle in the spanwise direction is 1.0 and consequently does not appear in equation (1).

Figure 7 presents all the values of c_n for all test angles of attack, Reynolds numbers, and span stations. Considering the bluntness of the leading edge, the values of c_n appear to be relatively small. If one assumes an average c_n value of 0.04 and applies it to the entire leading edge of the theoretical arrow wing, this 0.04 value is equivalent to an axial-force coefficient (based on the theoretical arrow-wing area) of 0.0009. By way of comparison, the wind-tunnel data of reference 9 indicate a minimum drag (zero-lift wave drag plus skin friction) of 0.0080 at Mach 2.05 on the same 70° swept arrow planform with a 3-percent-thick circular-arc airfoil (sharp leading edge). Since the c_n values at $\alpha = 0^\circ$ are approximately the same as those at higher angles of attack, the low c_n values cannot be attributed to leading-edge suction but are apparently due to an overexpansion of the flow around the leading-edge radius. That is, the low c_n values were due to thickness effects and not flow field upwash moving the stagnation region beneath the leading edge as in the classical leading-edge-suction case. These relatively small c_n values indicate that the structural loading is not severe on leading edges with large radii.

The trends of c_n with respect to spanwise station indicate the leading edge of the theoretical arrow wing might possibly be thrusting at the outboard stations. However, as mentioned earlier, stations 4 and 5 are partially under the influence of free-stream pressure and consequently the values shown in figure 7 are somewhat low for stations 4 and 5.

Theoretical Leading-Edge Suction

In reference 3 the relation for the force normal to the leading edge on a small element dl of leading edge due to leading-edge suction was found to be

$$\frac{dF_s}{dl} = \frac{\rho\pi^3 \tan(90^\circ - \Lambda)\, l(V\alpha)^2\sqrt{1 - M_n^2}}{2(\pi + \lambda)^2} \tag{2}$$

Nondimensionalizing and using $\lambda = 1.11$ (specified in ref. 3) reduces equation (2) to

$$c_s = \frac{0.6243 l \alpha^2}{\bar{r}} \sqrt{1 - M_n^2} \tag{3}$$

The following table lists theoretical c_s values from equation (3) for comparison with the experimental c_s values:

α, deg	Span station				
	1	2	3	4	5
1	0.0023	0.0050	0.0084	0.0130	0.0195
2	.0092	.0200	.0337	.0521	.0780
3	.0208	.0449	.0758	.1173	.1755
4	.0347	.0749	.1263	.1955	.2925
5	.0532	.1148	.1936	.2997	.4485
6	.0740	.1597	.2694	.4170	.6240
7	.0948	.2047	.3451	.5343	.7995
8	.1133	.2446	.4125	.6386	.9555

Experimental Leading-Edge Suction

The leading-edge force coefficient c_n of equation (1) includes the thickness effects as well as any leading-edge suction which might be present. Consequently, to remove the thickness effects and obtain a leading-edge-suction coefficient for a given angle of attack, the c_n value for $\alpha = 0^\circ$ was subtracted from the c_n value at the given angle of attack. Therefore, the following equation defines the experimental leading-edge-suction coefficient:

$$c_s = -\left(c_n - c_{n,\alpha=0^\circ}\right) \tag{4}$$

Figure 8 indicates there was no significant amount of leading-edge suction obtained at any of the test conditions. The small positive values of c_s at the higher angles of attack are within the accuracy of the data and are far below the theoretical values predicted by reference 3. Although the pressure distributions of figure 5 indicate that the stagnation region did move slightly beneath the leading edge, the accelerated flow and the accompanying lower pressures have a relatively small area on the leading edge on which to act and consequently could not generate a significant amount of suction force. However, this increment in pressure, once established, has the entire upper surface to act on, thus generating an increase in lift on the upper surface of the wing. The Polhamus analogy (refs. 6 and 7) states that when leading-edge separation occurs, leading-edge suction is lost and a vortex lift is generated. These data indicate however that supersonically there may never exist any significant amount of leading-edge suction, but rather only an increase in lift on the upper surface of the wing due to the stagnation region moving beneath the leading edge, which at higher angles of attack would become a vortex lift.

Vortex Lift

Figure 9 shows the variation in the local normal-force coefficient. Only those data taken forward of the Mach cone traces from the reflection plate tips (see fig. 1) are shown, consequently stations 4 and 5 are not shown. It is assumed that $\sin\theta = 1.0$ from $\theta = 90^{\circ}$ to the trailing edge of the wing.

Evidence of vortex lift was sought by comparing the upper- and lower-surface pressure coefficients with the $\alpha = 0^{\circ}$ pressure coefficients. Vortex lift in both this paper and in reference 6 is taken to be the increment between the total lift and the lift predicted by linear theory. Therefore since linear theory assumes the lift on the upper and lower surfaces are equal but of opposite sign, vortex lift will appear as an asymmetry of the pressures for the upper and lower surfaces in a lifting condition about the pressures at $\alpha = 0^{\circ}$. Figure 9 shows that the lifting pressures aft of the immediate vicinity of the leading edge are greater on the upper surface beginning at about $\alpha = 2^{\circ}$. Since it is not likely that there is a vortex developed at $\alpha = 2^{\circ}$ with a rounded leading edge this increase in lift must be due to the stagnation region moving beneath the leading edge.

Figure 10 illustrates the increased upper-surface lift further by comparing the upper- and lower-surface pressures for an example case with linear lifting theory. The method of reference 10 was used to calculate pressures on the upper and lower surfaces and the experimental $\alpha = 0^{\circ}$ pressures were added to include the thickness effects. The upper-surface pressures shown in figure 10 indicate a vortex lift on the upper surface beginning at about $\frac{x}{c} = 0.05$. The lower-surface pressures also indicate an increased lift (possibly due to compressibility effects) beginning at about $\frac{x}{c} = 0.03$ and extending to about $\frac{x}{c} = 0.12$. The same type of pressure distributions as shown for this rounded-leading-edge wing can be seen in reference 11 for a sharp-leading-edge wing which is known to have a leading-edge vortex. The same phenomenon can also be seen in reference 12 which included pressure data on a flat wing and a cambered and twisted wing, both with a NACA 65A005 thickness distribution. Reference 12 indicates that the flat wing had more vortex lift than the cambered wing which had its leading edge more alined with the flow.

Conclusions regarding the distribution of vortex lift are difficult to draw from figure 9 since compressibility effects appear to be inextricably fused with the vortex lift. However, since the increase in the upper-surface lift shown in figure 9 occurs at low as well as high angles of attack, this increase in lift may be associated primarily with the stagnation region moving beneath the leading edge and consequently does not appear to be necessarily associated with the formation of a vortex and therefore may not be restricted to the area of the vortex.

Further Applications

Since linear theory does not predict the movement of the stagnation region beneath the leading edge and the attendant vortex lift, a much more sophisticated treatment of leading-edge phenomena may be required to resolve the differences between experimental pressures and those predicted by linear theory. As for the prediction of lift-drag characteristics, it appears that since the magnitude of the vortex lift is less for cambered wings than for flat wings, a more accurate theoretical comparison of cambered and flat wings should include the vortex lift-drag increments. Furthermore, since vortex lift appears to exist on rounded as well as sharp leading edges and occurs at low as well as high angles of attack the analytical method of reference 6 may have some application to rounded leading edges at supersonic speeds as well as sharp leading edges.

Lifting Pressure Integrations

The pressure coefficients forward of the Mach cone traces from the reflection plate tips (see fig. 1) were integrated over the upper surface and over the lower surface to obtain values of N/q for the upper and the lower surface. In relation to the theoretical arrow wing, the areas of integration extended for station 1 to $\frac{x}{c} = 0.19$, for station 2 to $\frac{x}{c} = 0.14$, and for station 3 to $\frac{x}{c} = 0.07$. The equation used in the integration is given by:

$$\frac{N}{q} = \pm\int_0^u c_p \sin\phi \, du$$

(see fig. 6) where the negative value of the local c_p was used for the upper surface so that lifting forces would be positive. The results of the integration are shown in figure 11. The trends with angle of attack shown in figure 11 correlate with evidence of a vortex-lift increment shown in figures 9 and 10 in that the upper surface for span stations 1 and 2 are apparently gaining an additional increment in lift. Unfortunately, the integration at station 3 could not be carried sufficiently aft to show this trend.

Effect of Reynolds Number

The accuracy of the data may not be sufficient to make final conclusions regarding the effect of Reynolds number, but figures 5, 7, 8, 9, and 11 indicate the effect is small for the Reynolds number range tested.

Figure 7 indicates that there may be a slight increase in the leading-edge force coefficient with increasing Reynolds number. The results of figure 11 are not consistent but it appears that there is a general trend whereby the lift on the upper surface is increasing slightly with Reynolds number, but there is no general trend for the lower surface.

CONCLUSIONS

Results from pressure measurements on the leading edge of a swept wing at Mach 2.2 indicate the following:

1. No significant amount of supersonic leading-edge suction was found.

2. The structural loading is not severe in the plane of the wing on rounded leading edges of wings swept behind the Mach cone.

3. Detailed pressure measurements and the integrated normal force on the upper and lower surfaces indicate an increase in lift on the upper surface over that for the lower surface and it occurs at low as well as high angles of attack.

4. A more sophisticated treatment of leading-edge phenomena may be required to resolve the differences between experimentally measured pressures and those predicted by linear theory.

5. It appears that a more accurate theoretical comparison of cambered and flat wings should include the vortex lift-drag increments.

6. Within the range of the test conditions the effect of Reynolds number on the leading-edge pressures and the lifting pressures is small.

Langley Research Center,
National Aeronautics and Space Administration,
Hampton, Va., January 11, 1974.

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TABLE 1.- AVERAGE RADIUS AND NUMBER OF PRESSURE ORIFICES

Span station number	y		$\bar{r}$		Number of upper surface orifices	Number of lower surface orifices
	cm	in.	cm	in.		
1	16.49	6.49	2.81	1.12	35	35
2	32.98	12.98	2.50	.98	30	30
3	49.46	19.47	2.19	.86	25	25
4	65.95	25.96	1.87	.74	20	20
5	82.44	32.46	1.56	.61	15	15

TABLE 2.- UPPER- AND LOWER-SURFACE PRESSURE COEFFICIENTS AT $R_{\bar{r}} = 0.41 \times 10^6$

(a) $\alpha = 0^0$

Station 1			Station 2			Station 3			Station 4			Station 5		
$\frac{x}{c}$	Upper surface c_p	Lower surface c_p	$\frac{x}{c}$	Upper surface c_p	Lower surface c_p	$\frac{x}{c}$	Upper surface c_p	Lower surface c_p	$\frac{x}{c}$	Upper surface c_p	Lower surface c_p	$\frac{x}{c}$	Upper surface c_p	Lower surface c_p
0.000	0.151	0.164	0.000	0.143	0.131	0.000	0.128	0.131	0.000	0.107	0.111	0.000	0.106	0.104
.001	.147	.146	.001		.127	.001	.122	.127	.001	.105	.105	.001	.102	.094
.002	.122	.121	.002	.114	.103	.002	.097	.098	.002	.077	.086	.002	.079	.069
.004	.082	.083	.004	.074	.064	.004	.056	.058	.004	.036	.041	.004	.041	.033
.007	.029	.034	.007		.013	.007	.010	.011	.007	-.009	-.004	.007	-.010	-.016
.011	-.022	-.021	.011	-.025	-.036	.011	-.044	-.044	.011	-.060		.011	-.059	-.067
.016	-.079	-.083	.016	-.076	-.091	.016	-.099	-.093	.016	-.115	-.109	.016	-.118	-.118
.021	-.130	-.129	.021	-.127	-.138	.021	-.150		.021	-.158	-.160	.021	-.165	-.164
.031	-.089	-.093	.031	-.086	-.099	.031	-.099	-.071	.031	-.123	-.130	.031	-.146	-.140
.040	-.081	-.081	.042	-.076	-.087	.043	-.086	-.083	.045	-.099	-.101	.048	-.120	-.109
.050	-.077	-.072	.052	-.070	-.078	.055	-.078	-.077	.059	-.084	-.085	.065	-.102	-.097
.060	-.073	-.062	.063	-.066	-.054	.068	-.072	-.071	.074	-.078		.082	-.085	-.083
.069	-.048	-.046	.074	-.058	-.052	.080	-.070	-.058	.088	-.068	-.048	.100	-.073	-.073
.079	-.023	-.028	.085	-.048	-.036	.092	-.064	-.038	.103	-.058	-.042	.117	-.065	-.067
.088	-.017	-.015	.095	-.031		.105	-.056	-.034	.117	-.056	-.038	.134	-.081	-.083
.098	-.005	-.009	.106	-.021	-.014	.117	-.041	-.028	.131	-.045	-.032			
.107	.005	-.005	.117	-.011	-.010	.129	-.033	-.026	.146	-.043	-.034			
.117	.005	-.001	.128	-.007	-.007	.142	-.029	-.024	.160	-.047	-.036			
.127	.007	-.003	.139	-.003	-.005	.154	-.027	-.028	.175	-.053	-.042			
.136	.015	-.005	.149		-.005	.166	-.027	-.030	.189	-.075	-.069			
.146	.005	-.001	.160		-.007	.179	-.029	-.020						
.155	.007	-.001	.171	.009	-.014	.191	-.033	-.022						
.165	.005	-.001	.182	.007	-.020	.203	-.037	-.030						
.175	.005	-.003	.193	.005	-.026	.216	-.044	-.034						
.184	.001	-.003	.203	.005		.228	-.035	-.034						
.194	.005	-.005	.214	-.017										
.203		-.005	.225	-.027	-.018									
.213	.011	-.005	.236	-.037	-.028									
.222	.005	-.009	.246	-.050	-.032									
.232	.005	-.017	.257	-.060	-.050									
.242	.005	-.036												
.251		-.052												
.261		-.060												
.270	-.027	-.032												
.280	-.048	-.052												

TABLE 2.- UPPER- AND LOWER-SURFACE PRESSURE COEFFICIENTS AT $R_{\bar{c}} = 0.41 \times 10^6$ – Continued

(b) $\alpha = 1^\circ$

Station 1

$\frac{x}{c}$	Upper surface c_p	Lower surface c_p
0.000	0.151	0.158
.001	.149	.140
.002	.132	.109
.004	.098	.064
.007	.051	.012
.011	-.001	-.043
.016	-.056	-.102
.021	-.109	-.149
.031	-.070	-.114
.040	-.050	-.106
.050	-.034	-.104
.060	-.022	-.104
.069	-.001	-.098
.079	.019	-.082
.088	.015	-.060
.098	.019	-.037
.107	.019	-.021
.117	.019	-.015
.127	.023	-.015
.136	.031	-.013
.146	.021	-.013
.155	.021	-.013
.165	.021	-.015
.175	.021	-.015
.184	.017	-.017
.194	.019	-.017
.203		-.019
.213	.027	-.019
.222	.021	-.019
.232	.021	-.023
.242	.019	-.037
.251		-.051
.261		-.068
.270	-.021	-.033
.280	-.046	-.058

Station 2

$\frac{x}{c}$	Upper surface c_p	Lower surface c_p
0.000	0.150	0.125
.001		.119
.002	.132	.089
.004	.095	.044
.007		-.007
.011	.003	-.062
.016	-.048	-.114
.021	-.102	-.161
.031	-.066	-.108
.042	-.044	-.104
.052	-.026	-.102
.063	-.009	-.088
.074	.005	-.098
.085	.013	-.096
.095	.019	
.106	.019	-.078
.117	.021	-.070
.128	.023	-.058
.139	.019	-.049
.149		-.041
.160		-.033
.171	.029	-.035
.182	.023	-.037
.193	.021	-.035
.203	.007	
.214	-.013	
.225	-.023	-.031
.236	-.029	-.035
.246	-.035	-.041
.257	-.049	-.060

Station 3

$\frac{x}{c}$	Upper surface c_p	Lower surface c_p
0.000	0.133	0.125
.001	.131	.117
.002	.113	.083
.004	.085	.036
.007	.038	-.015
.011	-.013	-.072
.016	-.068	-.119
.021	-.125	
.031	-.078	-.088
.043	-.043	-.106
.055	-.027	-.104
.068	-.015	-.106
.080	-.005	-.108
.092	.001	-.098
.105	.003	-.098
.117	.007	-.090
.129	.003	-.080
.142	-.001	-.072
.154	-.007	-.068
.166	-.011	-.064
.179	-.015	-.062
.191	-.019	-.051
.203	-.025	-.053
.216	-.029	-.060
.228	-.027	-.051

Station 4

$\frac{x}{c}$	Upper surface c_p	Lower surface c_p
0.000	0.107	0.097
.001	.107	.091
.002	.089	.072
.004	.060	.019
.007	.018	-.028
.011	-.027	
.016	-.080	-.131
.021	-.127	-.180
.031	-.088	-.141
.045	-.035	-.131
.059	-.021	-.125
.074	-.019	
.088	-.017	-.101
.103	-.017	-.097
.117	-.017	-.091
.131	-.016	-.086
.146	-.018	-.086
.160	-.022	-.089
.175	-.026	-.095
.189	-.047	-.111

Station 5

$\frac{x}{c}$	Upper surface c_p	Lower surface c_p
0.000	0.109	0.096
.001	.109	.084
.002	.095	.053
.004	.065	.011
.007	.020	-.040
.011	-.028	-.091
.016	-.085	-.141
.021	-.136	-.186
.031	-.093	-.210
.048	-.045	-.172
.065	-.026	-.151
.082	-.020	-.141
.100	-.020	-.135
.117	-.024	-.131
.134	-.047	-.137

TABLE 2.- UPPER- AND LOWER-SURFACE PRESSURE COEFFICIENTS AT $R_{\bar{c}} = 0.41 \times 10^6$ – Continued

(c) $\alpha = 2^\circ$

Station 1			Station 2			Station 3			Station 4			Station 5		
$\frac{x}{c}$	Upper surface c_p	Lower surface c_p	$\frac{x}{c}$	Upper surface c_p	Lower surface c_p	$\frac{x}{c}$	Upper surface c_p	Lower surface c_p	$\frac{x}{c}$	Upper surface c_p	Lower surface c_p	$\frac{x}{c}$	Upper surface c_p	Lower surface c_p
0.000	0.155	0.152	0.000	0.147	0.121	0.000	0.134	0.119	0.000	0.111	0.087	0.000	0.111	0.084
.001	.155	0.129	.001		.111	.001	.134	.107	.001	.118	.072	.001	.113	.070
.002	.140	.095	.002	.138	.074	.002	.124	.066	.002	.107	.043	.002	.107	.033
.004	.114	.046	.004	.110	.028	.004	.097	.016	.004	.085	-.011	.004	.085	-.016
.007	.070	-.009	.007		-.027	.007	.063	-.037	.007	.055	-.058	.007	.051	-.064
.011	.021	-.066	.011	.026	-.082	.011	.018	-.094	.011	.014		.011	.008	-.117
.016	-.032	-.122	.016	-.023	-.135	.016	-.031	-.143	.016	-.031	-.153	.016	-.040	-.163
.021	-.084	-.167	.021	-.073	-.177	.021	-.084		.021	-.061	-.180	.021	-.073	-.206
.031	-.040	-.135	.031	-.025	-.129	.031	-.025	-.102	.031	-.031	-.149	.031	-.030	-.226
.040	-.007	-.129	.042	.007	-.122	.043	.002	-.122	.045	-.006	-.147	.048	-.006	-.212
.050	.005	-.129	.052	.019	-.122	.055	.016	-.122	.059	-.000	-.145	.065	.002	-.190
.060	.013	-.131	.063	.026	-.108	.068	.020	-.124	.074	-.000		.082	.000	-.178
.069	.025	-.131	.074	.030	-.122	.080	.016	-.127	.088	-.000	-.129	.100	-.002	-.169
.079	.038	-.127	.085	.030	-.124	.092	.016	-.120	.103	-.000	-.133	.117	-.012	-.161
.088	.028	-.114	.095	.034		.105	.020	-.129	.117	-.002	-.133	.134	-.036	-.143
.098	.030	-.096	.106	.034	-.118	.117	.016	-.127	.131	-.004	-.133			
.107	.030	-.070	.117	.034	-.118	.129	.006	-.122	.146	-.004	-.135			
.117	.028	-.049	.128	.036	-.110	.142	.006	-.118	.160	-.008	-.139			
.127	.030	-.035	.139	.030	-.102	.154	-.000	-.116	.175	-.012	-.143			
.136	.038	-.023	.149		-.094	.166	-.002	-.110	.189	-.036	-.139			
.146	.030	-.021	.160		-.084	.179	-.013	-.108						
.155	.030	-.021	.171	.040	-.080	.191	-.013	-.104						
.165	.030	-.023	.182	.032	-.076	.203	-.015	-.096						
.175	.030	-.023	.193	.024	-.070	.216	-.019	-.096						
.184	.026	-.025	.203	.012		.228	-.013	-.088						
.194	.030	-.027	.214	-.010										
.203		-.029	.225	-.017	-.049									
.213	.034	-.029	.236	-.021	-.053									
.222	.030	-.131	.246	-.027	-.055									
.232	.028	-.033	.257	-.043	-.066									
.242	.028	-.041												
.251		-.053												
.261		-.068												
.270	-.025	-.057												
.280	-.051	-.060												

TABLE 2.- UPPER- AND LOWER-SURFACE PRESSURE COEFFICIENTS AT $R_{\bar{c}} = 0.41 \times 10^6$ – Continued

(d) $\alpha = 3^{\circ}$

Station 1			Station 2			Station 3			Station 4			Station 5		
$\frac{x}{c}$	Upper surface c_p	Lower surface c_p	$\frac{x}{c}$	Upper surface c_p	Lower surface c_p	$\frac{x}{c}$	Upper surface c_p	Lower surface c_p	$\frac{x}{c}$	Upper surface c_p	Lower surface c_p	$\frac{x}{c}$	Upper surface c_p	Lower surface c_p
0.000	0.154	0.147	0.000	0.163	0.113	0.000	0.135	0.108	0.000	0.111	0.072	0.000	0.107	0.069
.001	.158	.123	.001		.100	.001	.141	.096	.001	.121	.059	.001	.115	.049
.002	.152	.084	.002	.167	.060	.002	.141	.047	.002	.117	.025	.002	.117	.010
.004	.126	.031	.004	.145	.007	.004	.125	-.005	.004	.106	-.032	.004	.105	-.038
.007	.089	-.025	.007		-.050	.007	.096	-.060	.007	.076	-.083	.007	.079	-.089
.011	.045	-.082	.011	.075	-.102	.011	.062	-.115	.011	.052		.011	.049	-.139
.016	-.002	-.139	.016	.033	-.153	.016	.005	-.161	.016	.013	-.178	.016	.012	-.184
.021	-.056	-.181	.021	-.010	-.190	.021	-.013		.021	-.015	-.176	.021	-.014	-.204
.031	-.006	-.151	.031	.029	-.147	.031	-.001	-.117	.031	.001	-.153	.031	.012	-.190
.040	.019	-.147	.042	.049	-.143	.043	.007	-.141	.045	.015	-.151	.048	.020	-.186
.050	.025	-.145	.052	.059	-.143	.055	.044	-.143	.059	.007	-.153	.065	.022	-.184
.060	.031	-.149	.063	.063	-.127	.068	-.019	-.143	.074	.009		.082	.018	-.182
.069	.043	-.153	.074	.065	-.139	.080	.036	-.145	.088	.011	-.151	.100	.014	-.178
.079	.069	-.151	.085	.065	-.143	.092	.025	-.139	.103	.011	-.162	.117	.000	-.170
.088	.063	-.149	.095	.067		.105	.029	-.147	.117	.005	-.166	.134	-.026	-.159
.098	.063	-.143	.106	.067	-.141	.117	.031	-.151	.131	.014	-.170			
.107	.063	-.129	.117	.065	-.143	.129	.011	-.151	.146	.014	-.172			
.117	.061	-.113	.128	.067	-.141	.142	.015	-.149	.160	.006	-.174			
.127	.063	-.088	.139	.063	-.137	.154	.017	-.147	.175	.000	-.170			
.136	.069	-.062	.149		-.135	.166	.009	-.147	.189	-.026	-.164			
.146	.063	-.040	.160		-.129	.179	.009	-.145						
.155	.063	-.027	.171	.065	-.127	.191	.007	-.143						
.165	.061	-.023	.182	.051	-.123	.203	.003	-.135						
.175	.061	-.027	.193	.043	-.117	.216	-.003	-.125						
.184	.057	-.029	.203	.021		.228	-.003	-.123						
.194	.059	-.033	.214	.003										
.203		-.035	.225	-.001	-.090									
.213	.063	-.038	.236	-.007	-.095									
.222	.057	-.040	.246	-.011	-.095									
.232	.059	-.040	.257	-.031	-.095									
.242	.055	-.046												
.251		-.056												
.261		-.068												
.270	-.004	-.062												
.280	-.034	-.062												

TABLE 2.- UPPER- AND LOWER-SURFACE PRESSURE COEFFICIENTS AT $R_{\bar{l}} = 0.41 \times 10^6$ – Continued

(e) $\alpha = 4^\circ$

Station 1			Station 2			Station 3			Station 4			Station 5		
$\frac{x}{c}$	Upper surface c_p	Lower surface c_p	$\frac{x}{c}$	Upper surface c_p	Lower surface c_p	$\frac{x}{c}$	Upper surface c_p	Lower surface c_p	$\frac{x}{c}$	Upper surface c_p	Lower surface c_p	$\frac{x}{c}$	Upper surface c_p	Lower surface c_p
0.000	0.156	0.141	0.000	0.181	0.102	0.000	0.130	0.096	0.000	0.104	0.058	0.000	0.099	0.051
.001	.162	.114	.001		.088	.001	.139	.080	.001	.112	.041	.001	.111	.031
.002	.160	.068	.002	.198	.041	.002	.149	.029	.002	.122	.007	.002	.123	-.011
.004	.144	.013	.004	.185	-.013	.004	.143	-.027	.004	.118	-.054	.004	.119	-.062
.007	.114	-.043	.007		-.068	.007	.122	-.084	.007	.100	-.104	.007	.105	-.112
.011	.075	-.102	.011	.128	-.122	.011	.094	-.137	.011	.076		.011	.083	-.161
.016	.031	-.157	.016	.097	-.171	.016	.060	-.181	.016	.050	-.193	.016	.052	-.199
.021	-.007	-.199	.021	.063	-.195	.021	.037		.021	.027	-.187	.021	.032	-.185
.031	.019	-.167	.031	.085	-.165	.031	.050	-.137	.031	.031	-.175	.031	.038	-.177
.040	.041	-.165	.042	.099	-.161	.043	.062	-.161	.045	.039	-.165	.048	.042	-.175
.050	.047	-.163	.052	.105	-.161	.055	.066	-.161	.059	.041	-.165	.065	.038	-.171
.060	.049	-.165	.063	.106	-.145	.068	.060	-.163	.074	.037		.082	.034	-.169
.069	.059	-.171	.074	.106	-.159	.080	.039	-.163	.088	.035	-.165	.100	.026	-.167
.079	.110	-.173	.085	.106	-.161	.092	.052	-.157	.103	.031	-.171	.117	.012	-.165
.088	.101	-.173	.095	.108		.105	.050	-.165	.117	.027	-.175	.134	-.022	-.165
.098	.101	-.171	.106	.106	-.161	.117	.031	-.167	.131	.028	-.179			
.107	.101	-.167	.117	.106	-.165	.129	.035	-.169	.146	.024	-.181			
.117	.099	-.163	.128	.106	-.165	.142	.029	-.169	.160	.016	-.183			
.127	.101	-.151	.139	.101	-.165	.154	.025	-.169	.175	.010	-.185			
.136	.106	-.132	.149		-.161	.166	.013	-.169	.189	-.020	-.183			
.146	.099	-.104	.160		-.159	.179	.019	-.169						
.155	.101	-.068	.171	.097	-.159	.191	.009	-.165						
.165	.099	-.035	.182	.083	-.159	.203	.011	-.161						
.175	.099	-.025	.193	.073	-.157	.216	.003	-.155						
.184	.093	-.031	.203	.029		.228	.007	-.153						
.194	.097	-.035	.214	.013										
.203		-.039	.225	.007	-.137									
.213	.099	-.043	.236	.001	-.143									
.222	.095	-.045	.246	-.001	-.143									
.232	.095	-.048	.257	-.023	-.141									
.242	.087	-.050												
.251		-.058												
.261		-.068												
.270	.018	-.060												
.280	-.007	-.066												

TABLE 2.- UPPER- AND LOWER-SURFACE PRESSURE COEFFICIENTS AT $R_{\bar{c}} = 0.41 \times 10^6$ – Continued

(f) $\alpha = 5^{\circ}$

Station 1			Station 2			Station 3			Station 4			Station 5		
$\frac{x}{c}$	Upper surface c_p	Lower surface c_p	$\frac{x}{c}$	Upper surface c_p	Lower surface c_p	$\frac{x}{c}$	Upper surface c_p	Lower surface c_p	$\frac{x}{c}$	Upper surface c_p	Lower surface c_p	$\frac{x}{c}$	Upper surface c_p	Lower surface c_p
0.000	0.144	0.125	0.000	0.140	0.083	0.000	0.113	0.073	0.000	0.087	0.033	0.000	0.081	0.025
.001	.156	.093	.001		.067	.001	.127	.055	.001	.101	.015	.001	.093	.005
.002	.162	.047	.002	.163	.017	.002	.145	.001	.002	.113	-.021	.002	.111	-.041
.004	.150	-.011	.004	.161	-.039	.004	.145	-.055	.004	.119	-.081	.004	.121	-.091
.007	.124	-.069	.007		-.095	.007	.135	-.113	.007	.107	-.131	.007	.111	-.141
.011	.090	-.125	.011	.120	-.146	.011	.115	-.164	.011	.089		.011	.097	-.186
.016	.056	-.178	.016	.090	-.192	.016	.089	-.204	.016	.063	-.212	.016	.074	-.179
.021	.017	-.216	.021	.063	-.204	.021	.067		.021	.047	-.198	.021	.056	-.171
.031	.037	-.186	.031	.074	-.186	.031	.069	-.154	.031	.047	-.192	.031	.054	-.167
.040	.052	-.184	.042	.084	-.182	.043	.079	-.182	.045	.039	-.188	.048	.052	-.167
.050	.058	-.184	.052	.086	-.182	.055	.073	-.184	.059	.043	-.181	.065	.048	-.163
.060	.058	-.184	.063	.086	-.164	.068	.065	-.184	.074	.045		.082	.042	-.167
.069	.068	-.190	.074	.086	-.180	.080	.059	-.184	.088	.043	-.175	.100	.028	-.167
.079	.088	-.194	.085	.086	-.180	.092	.055	-.176	.103	.039	-.183	.117	.012	-.163
.088	.078	-.198	.095	.086		.105	.035	-.186	.117	.035	-.186	.134	-.020	-.159
.098	.080	-.200	.106	.084	-.180	.117	.033	-.188	.131	.032	-.186			
.107	.078	-.202	.117	.084	-.186	.129	.027	-.190	.146	.030	-.183			
.117	.076	-.198	.128	.084	-.186	.142	.035	-.190	.160	.022	-.179			
.127	.076	-.194	.139	.076	-.188	.154	.027	-.190	.175	.010	-.183			
.136	.082	-.186	.149		-.190	.166	.023	-.190	.189	-.018	-.185			
.146	.076	-.172	.160		-.188	.179	.023	-.190						
.155	.076	-.148	.171	.065	-.190	.191	.023	-.188						
.165	.074	-.109	.182	.051	-.188	.203	.015	-.186						
.175	.074	-.065	.193	.045	-.188	.216	.001	-.184						
.184	.069	-.047	.203	.031		.228	.005	-.180						
.194	.071	-.047	.214	.011										
.203		-.049	.225	.005	-.176									
.213	.074	-.053	.236	.003	-.186									
.222	.069	-.057	.246	-.001	-.186									
.232	.069	-.059	.257	-.027	-.180									
.242	.055	-.061												
.251		-.069												
.261		-.077												
.270	-.016	-.065												
.280	-.034	-.075												

TABLE 2.- UPPER- AND LOWER-SURFACE PRESSURE COEFFICIENTS AT $R_{\bar{c}} = 0.41 \times 10^{6}$ – Continued

(g) $\alpha = 6^{\circ}$

Station 1			Station 2			Station 3			Station 4			Station 5		
$\frac{x}{c}$	Upper surface c_p	Lower surface c_p	$\frac{x}{c}$	Upper surface c_p	Lower surface c_p	$\frac{x}{c}$	Upper surface c_p	Lower surface c_p	$\frac{x}{c}$	Upper surface c_p	Lower surface c_p	$\frac{x}{c}$	Upper surface c_p	Lower surface c_p
0.000	0.146	0.123	0.000	0.121	0.077	0.000	0.111	0.059	0.000	0.079	0.017	0.000	0.070	0.010
.001	.160	.089	.001		.057	.001	.129	.041	.001	.091	-.001	.001	.086	-.012
.002	.172	.035	.002	.155	.005	.002	.153	-.015	.002	.117	-.036	.002	.112	-.058
.004	.168	-.021	.004	.159	-.053	.004	.161	-.073	.004	.127	-.098	.004	.126	-.109
.007	.152	-.083	.007		-.111	.007	.157	-.129	.007	.127	-.147	.007	.124	-.157
.011	.124	-.139	.011	.133	-.161	.011	.145	-.179	.011	.117		.011	.118	-.197
.016	.088	-.189	.016	.109	-.205	.016	.125	-.215	.016	.097	-.211	.016	.100	-.181
.021	.052	-.221	.021	.085	-.207	.021	.105		.021	.079	-.201	.021	.084	-.177
.031	.066	-.195	.031	.087	-.195	.031	.099	-.167	.031	.075	-.197	.031	.076	-.175
.040	.078	-.193	.042	.093	-.193	.043	.103	-.193	.045	.073	-.193	.048	.070	-.173
.050	.082	-.193	.052	.093	-.193	.055	.093	-.195	.059	.073	-.191	.065	.066	-.173
.060	.082	-.195	.063	.093	-.175	.068	.085	-.195	.074	.067		.082	.054	-.173
.069	.092	-.201	.074	.093	-.191	.080	.077	-.197	.088	.063	-.177	.100	.042	-.173
.079	.091	-.205	.085	.093	-.193	.092	.075	-.189	.103	.059	-.181	.117	.024	-.169
.088	.083	-.211	.095	.093		.105	.069	-.199	.117	.053	-.183	.134	-.014	-.165
.098	.083	-.215	.106	.089	-.193	.117	.065	-.199	.131	.048	-.179			
.107	.081	-.217	.117	.089	-.199	.129	.057	-.201	.146	.042	-.181			
.117	.079	-.217	.128	.089	-.201	.142	.053	-.201	.160	.030	-.185			
.127	.081	-.215	.139	.077	-.203	.154	.049	-.203	.175	.022	-.191			
.136	.087	-.213	.149		-.205	.166	.047	-.203	.189	-.012	-.193			
.146	.079	-.207	.160		-.207	.179	.045	-.201						
.155	.081	-.199	.171	.061	-.207	.191	.041	-.199						
.165	.079	-.181	.182	.047	-.207	.203	.033	-.199						
.175	.077	-.149	.193	.041	-.207	.216	.019	-.199						
.184	.071	-.103	.203	.045		.228	.021	-.193						
.194	.073	-.071	.214	.029										
.203		-.057	.225	.021	-.203									
.213	.075	-.055	.236	.017	-.207									
.222	.069	-.057	.246	.009	-.207									
.232	.067	-.061	.257	-.009	-.207									
.242	.043	-.063												
.251		-.069												
.261		-.075												
.270	-.023	-.059												
.280	-.043	-.071												

TABLE 2.- UPPER- AND LOWER-SURFACE PRESSURE COEFFICIENTS AT $R_{\bar{c}} = 0.41 \times 10^6$ – Continued

(h) $\alpha = 7^o$

Station 1			Station 2			Station 3			Station 4			Station 5		
$\frac{x}{c}$	Upper surface c_p	Lower surface c_p	$\frac{x}{c}$	Upper surface c_p	Lower surface c_p	$\frac{x}{c}$	Upper surface c_p	Lower surface c_p	$\frac{x}{c}$	Upper surface c_p	Lower surface c_p	$\frac{x}{c}$	Upper surface c_p	Lower surface c_p
0.000	0.156	0.125	0.000	0.129	0.076	0.000	0.112	0.053	0.000	0.080	0.011	0.000	0.069	0.000
.001	.172	.088	.001		.054	.001	.132	.035	.001	.098	-.009	.001	.087	-.024
.002	.192	.031	.002	.178	-.003	.002	.162	-.026	.002	.122	-.046	.002	.117	-.068
.004	.198	-.029	.004	.186	-.064	.004	.177	-.084	.004	.142	-.109	.004	.139	-.121
.007	.182	-.090	.007		-.120	.007	.183	-.139	.007	.146	-.155	.007	.143	-.167
.011	.160	-.147	.011	.174	-.169	.011	.175	-.185	.011	.142		.011	.141	-.204
.016	.128	-.195	.016	.151	-.212	.016	.156	-.218	.016	.128	-.206	.016	.129	-.188
.021	.095	-.214	.021	.133	-.207	.021	.142		.021	.116	-.202	.021	.115	-.185
.031	.101	-.197	.031	.127	-.199	.031	.132	-.165	.031	.104	-.196	.031	.103	-.183
.040	.111	-.197	.042	.133	-.199	.043	.128	-.197	.045	.100	-.194	.048	.097	-.181
.050	.113	-.195	.052	.131	-.199	.055	.118	-.197	.059	.096	-.188	.065	.089	-.181
.060	.111	-.199	.063	.129	-.179	.068	.108	-.200	.074	.088		.082	.077	-.181
.069	.120	-.203	.074	.127	-.197	.080	.104	-.200	.088	.090	-.175	.100	.061	-.179
.079	.125	-.210	.085	.127	-.197	.092	.102	-.187	.103	.084	-.177	.117	.042	-.175
.088	.117	-.218	.095	.125		.105	.094	-.200	.117	.078	-.175	.134	.002	-.171
.098	.115	-.222	.106	.123	-.195	.117	.090	-.200	.131	.071	-.175			
.107	.115	-.226	.117	.123	-.200	.129	.082	-.200	.146	.063	-.177			
.117	.113	-.226	.128	.121	-.204	.142	.078	-.202	.160	.052	-.183			
.127	.115	-.226	.139	.105	-.206	.154	.076	-.202	.175	.040	-.188			
.136	.121	-.226	.149		-.208	.166	.071	-.202	.189	.004	-.192			
.146	.111	-.224	.160		-.208	.179	.069	-.200						
.155	.113	-.222	.171	.083	-.212	.191	.061	-.200						
.165	.111	-.218	.182	.073	-.216	.203	.053	-.200						
.175	.109	-.205	.193	.063	-.218	.216	.039	-.200						
.184	.103	-.183	.203	.067		.228	.041	-.191						
.194	.105	-.149	.214	.047										
.203		-.110	.225	.045	-.206									
.213	.107	-.084	.236	.041	-.216									
.222	.103	-.068	.246	.031	-.218									
.232	.087	-.064	.257	.001	-.218									
.242	.059	-.062												
.251		-.064												
.261		-.058												
.270	-.002	-.052												
.280	-.020	-.064												

TABLE 2.- UPPER- AND LOWER-SURFACE PRESSURE COEFFICIENTS AT $R_{\bar{c}} = 0.41 \times 10^6$ – Concluded

(i) $\alpha = 8^{\circ}$

Station 1		
$\frac{x}{c}$	Upper surface c_p	Lower surface c_p
0.000	0.154	0.121
.001	.175	.080
.002	.201	.019
.004	.213	-.042
.007	.203	-.103
.011	.185	-.157
.016	.158	-.206
.021	.130	-.212
.031	.132	-.206
.040	.136	-.204
.050	.136	-.204
.060	.136	-.206
.069	.144	-.210
.079	.143	-.216
.088	.133	-.222
.098	.135	-.228
.107	.133	-.233
.117	.131	-.235
.127	.131	-.237
.136	.137	-.237
.146	.127	-.233
.155	.131	-.233
.165	.127	-.237
.175	.125	-.237
.184	.121	-.228
.194	.123	-.214
.203		-.190
.213	.123	-.163
.222	.113	-.135
.232	.086	-.107
.242	.064	-.090
.251		-.082
.261		-.062
.270	.005	-.054
.280	-.015	-.076

Station 2		
$\frac{x}{c}$	Upper surface c_p	Lower surface c_p
0.000	0.121	0.066
.001		.042
.002	.176	-.019
.004	.192	-.078
.007		-.135
.011	.192	-.182
.016	.176	-.222
.021	.161	-.212
.031	.153	-.208
.042	.155	-.206
.052	.151	-.206
.063	.149	-.186
.074	.147	-.202
.085	.145	-.204
.095	.143	
.106	.141	-.202
.117	.139	-.206
.128	.135	-.210
.139	.117	-.212
.149		-.214
.160		-.216
.171	.096	-.218
.182	.082	-.225
.193	.078	-.227
.203	.082	
.214	.064	
.225	.062	-.212
.236	.055	-.227
.246	.047	-.229
.257	.015	-.225

Station 3		
$\frac{x}{c}$	Upper surface c_p	Lower surface c_p
0.000	0.100	0.039
.001	.124	.019
.002	.161	-.042
.004	.183	-.103
.007	.195	-.156
.011	.191	-.200
.016	.181	-.212
.021	.165	
.031	.153	-.172
.043	.147	-.202
.055	.137	-.202
.068	.128	-.202
.080	.122	-.202
.092	.120	-.192
.105	.104	-.204
.117	.106	-.204
.129	.100	-.204
.142	.096	-.206
.154	.092	-.206
.166	.090	-.204
.179	.086	-.204
.191	.080	-.204
.203	.070	-.204
.216	.053	-.202
.228	.057	-.196

Station 4		
$\frac{x}{c}$	Upper surface c_p	Lower surface c_p
0.000	0.070	-0.001
.001	.090	-.024
.002	.122	-.062
.004	.147	-.125
.007	.157	-.170
.011	.159	
.016	.149	-.202
.021	.137	-.202
.031	.128	-.200
.045	.122	-.194
.059	.110	-.190
.074	.108	
.088	.106	-.180
.103	.102	-.182
.117	.096	-.178
.131	.085	-.172
.146	.079	-.174
.160	.067	-.178
.175	.053	-.184
.189	.016	-.186

Station 5		
$\frac{x}{c}$	Upper surface c_p	Lower surface c_p
0.000	0.057	-0.012
.001	.077	-.038
.002	.113	-.085
.004	.140	-.133
.007	.152	-.182
.011	.154	-.204
.016	.146	-.192
.021	.136	-.190
.031	.126	-.190
.048	.115	-.192
.065	.103	-.192
.082	.091	-.192
.100	.077	-.190
.117	.055	-.184
.134	.010	-.180

TABLE 3.- UPPER- AND LOWER-SURFACE PRESSURE COEFFICIENTS AT $R_{\bar{T}} = 0.33 \times 10^6$

(a) $\alpha = 0^o$

Station 1			Station 2			Station 3			Station 4			Station 5		
$\frac{x}{c}$	Upper surface c_p	Lower surface c_p	$\frac{x}{c}$	Upper surface c_p	Lower surface c_p	$\frac{x}{c}$	Upper surface c_p	Lower surface c_p	$\frac{x}{c}$	Upper surface c_p	Lower surface c_p	$\frac{x}{c}$	Upper surface c_p	Lower surface c_p
0.000	0.149	0.167	0.000	0.133	0.129	0.000	0.131	0.131	0.000	0.108	0.110	0.000	0.102	0.103
.001	.144	.147	.001		.126	.001	.124	.123	.001	.106	.105	.001	.097	.092
.002	.121	.121	.002	.105	.101	.002	.095	.098	.002	.080	.092	.002	.077	.067
.004	.082	.083	.004	.067	.062	.004	.060	.057	.004	.039	.039	.004	.038	.031
.007	.034	.031	.007		.013	.007	.013	.008	.007	-.007	-.005	.007	-.010	-.015
.011	-.020	-.025	.011	-.030	-.038	.011	-.038	-.043	.011	-.056		.011	-.061	-.066
.016	-.074	-.081	.016	-.084	-.092	.016	-.097	-.094	.016	-.109	-.110	.016	-.118	-.115
.021	-.128	-.130	.021	-.133	-.138	.021	-.145		.021	-.153	-.158	.021	-.164	-.166
.031	-.092	-.102	.031	-.094	-.102	.031	-.097	-.066	.031	-.115	-.133	.031	-.146	-.143
.040	-.082	-.084	.042	-.084	-.086	.043	-.081	-.082	.045	-.094	-.102	.048	-.115	-.115
.050	-.071	-.074	.052	-.076	-.079	.055	-.122	-.076	.059	-.086	-.089	.065	-.097	-.097
.060	-.066	-.063	.063	-.069	-.048	.068	-.079	-.069	.074	-.089		.082	-.082	-.087
.069	-.035	-.045	.074	-.064	-.051	.080	-.076	-.064	.088	-.074	-.056	.100	-.066	-.074
.079	-.018	-.030	.085	-.048	-.041	.092	-.066	-.041	.103	-.051	-.046	.117	-.064	-.069
.088	-.020	-.017	.095	-.038		.105	-.045	-.038	.117	-.045	-.038	.134	-.082	-.087
.098	-.012	-.010	.106	-.025	-.018	.117	-.035	-.030	.131	-.041	-.033			
.107	-.005	-.007	.117	-.018	-.012	.129	-.027	-.028	.146	-.041	-.033			
.117	-.005	-.004	.128	-.012	-.007	.142	-.025	-.025	.160	-.043	-.035			
.127	.000	-.007	.139	-.007	-.007	.154	-.022	-.025	.175	-.049	-.043			
.136	.021	-.007	.149		-.010	.166	-.025	-.028	.189	-.072	-.069			
.146	-.002	-.004	.160		-.010	.179	-.025	-.018						
.155	-.002	-.004	.171	.005	-.015	.191	-.030	-.023						
.165	-.005	-.004	.182	.000	-.020	.203	-.035	-.028						
.175	-.005	-.004	.193	-.005	-.025	.216	-.038	-.033						
.184	-.007	-.007	.203	.016		.228	-.033	-.033						
.194	-.005	-.007	.214	-.012										
.203		-.007	.225	-.022	-.018									
.213	.003	-.010	.236	-.035	-.025									
.222	-.002	-.010	.246	-.045	-.030									
.232	-.002	-.020	.257	-.056	-.048									
.242	-.002	-.035												
.251		-.053												
.261		-.053												
.270	-.035	-.030												
.280	-.056	-.053												

TABLE 3.- UPPER- AND LOWER-SURFACE PRESSURE COEFFICIENTS AT $R_{\bar{l}} = 0.33 \times 10^6$ – Continued

(b) $\alpha = 1^{\circ}$

Station 1			Station 2			Station 3			Station 4			Station 5		
$\frac{x}{c}$	Upper surface c_p	Lower surface c_p	$\frac{x}{c}$	Upper surface c_p	Lower surface c_p	$\frac{x}{c}$	Upper surface c_p	Lower surface c_p	$\frac{x}{c}$	Upper surface c_p	Lower surface c_p	$\frac{x}{c}$	Upper surface c_p	Lower surface c_p
0.000	0.146	0.158	0.000	0.139	0.120	0.000	0.128	0.123	0.000	0.103	0.097	0.000	0.106	0.087
.001	.143	.133	.001		.112	.001	.126	.112	.001	.103	.090	.001	.104	.077
.002	.125	.102	.002	.116	.085	.002	.088	.079	.002	.085	.072	.002	.089	.049
.004	.092	.059	.004	.086	.041	.004	.072	.034	.004	.057	.013	.004	.058	.006
.007	.046	.008	.007		-.012	.007	.034	-.017	.007	.004	-.030	.007	.015	-.045
.011	-.004	-.048	.011	-.008	-.065	.011	-.017	-.073	.011	-.030		.011	-.033	-.096
.016	-.058	-.106	.016	-.059	-.119	.016	-.070	-.121	.016	-.080	-.134	.016	-.089	-.147
.021	-.114	-.149	.021	-.109	-.162	.021	-.126		.021	-.126	-.180	.021	-.137	-.192
.031	-.078	-.121	.031	-.076	-.116	.031	-.091	-.083	.031	-.096	-.149	.031	-.096	-.203
.040	-.053	-.114	.042	-.048	-.109	.043	-.045	-.109	.045	-.040	-.134	.048	-.046	-.180
.050	-.037	-.111	.052	-.033	-.106	.055	-.027	-.106	.059	-.024	-.129	.065	-.030	-.159
.060	-.022	-.106	.063	-.016	-.083	.068	-.017	-.106	.074	-.022		.082	-.028	-.149
.069	.003	-.101	.074	-.005	-.101	.080	-.009	-.106	.088	-.022	-.109	.100	-.023	-.142
.079	.017	-.086	.085	.005	-.098	.092	-.004	-.093	.103	-.022	-.101	.117	-.030	-.137
.088	.007	-.063	.095	.010		.105	-.002	-.098	.117	-.022	-.096	.134	-.051	-.142
.098	.010	-.043	.106	.010	-.081	.117	.004	-.088	.131	-.020	-.091			
.107	.012	-.027	.117	.012	-.073	.129	-.002	-.181	.146	-.020	-.091			
.117	.010	-.020	.128	.012	-.063	.142	-.007	-.076	.160	-.025	-.093			
.127	.012	-.020	.139	.012	-.053	.154	-.012	-.073	.175	-.030	-.098			
.136	.033	-.020	.149		-.048	.166	-.017	-.068	.189	-.051	-.114			
.146	.012	-.017	.160		-.040	.179	-.019	-.063						
.155	.012	-.020	.171	.020	-.040	.191	-.022	-.053						
.165	.010	-.020	.182	.012	-.040	.203	-.027	-.058						
.175	.010	-.020	.193	.010	-.040	.216	-.032	-.060						
.184	.010	-.020	.203	.014		.228	-.027	-.053						
.194	.010	-.022	.214	-.017										
.203		-.022	.225	-.027	-.032									
.213	.012	-.025	.236	-.030	-.037									
.222	.012	-.025	.246	-.037	-.043									
.232	.012	-.030	.257	-.052	-.058									
.242	.012	-.040												
.251		-.055												
.261		-.068												
.270	-.031	-.035												
.280	-.054	-.060												

TABLE 3.- UPPER- AND LOWER-SURFACE PRESSURE COEFFICIENTS AT $R_F = 0.33 \times 10^6$ – Continued

(c) $\alpha = 2^\circ$

Station 1		
$\frac{x}{c}$	Upper surface c_p	Lower surface c_p
0.000	0.152	0.159
.001	.152	.134
.002	.139	.095
.004	.111	.052
.007	.067	-.002
.011	.019	-.061
.016	-.035	-.117
.021	-.089	-.163
.031	-.043	-.135
.040	-.012	-.127
.050	.003	-.125
.060	.011	-.127
.069	.031	-.125
.079	.040	-.120
.088	.025	-.107
.098	.030	-.086
.107	.030	-.063
.117	.030	-.043
.127	.033	-.030
.136	.048	-.022
.146	.030	-.020
.155	.030	-.020
.165	.030	-.020
.175	.030	-.022
.184	.025	-.025
.194	.025	-.027
.203		-.027
.213	.030	-.027
.222	.028	-.027
.232	.028	-.030
.242	.025	-.038
.251		-.051
.261		-.063
.270	-.026	-.043
.280	-.051	-.058

Station 2		
$\frac{x}{c}$	Upper surface c_p	Lower surface c_p
0.000	0.145	0.121
.001		.111
.002	.132	.075
.004	.107	.029
.007		-.025
.011	.023	-.079
.016	-.026	-.130
.021	-.079	-.171
.031	-.031	-.125
.042	.002	-.120
.052	.015	-.120
.063	.023	-.097
.074	.025	-.117
.085	.030	-.117
.095	.033	
.106	.030	-.112
.117	.030	-.110
.128	.033	-.102
.139	.030	-.094
.149		-.087
.160		-.076
.171	.040	-.071
.182	.030	-.069
.193	.020	-.061
.203	.022	
.214	-.007	
.225	-.012	-.043
.236	-.014	-.048
.246	-.022	-.051
.257	-.037	-.061

Station 3		
$\frac{x}{c}$	Upper surface c_p	Lower surface c_p
0.000	0.137	0.121
.001	.139	.110
.002	.127	.072
.004	.104	.021
.007	.065	-.033
.011	.019	-.092
.016	-.032	-.138
.021	-.084	
.031	-.022	-.089
.043	.006	-.117
.055	.014	-.120
.068	.019	-.120
.080	.019	-.120
.092	.022	-.107
.105	.024	-.120
.117	.022	-.120
.129	.014	-.117
.142	.004	-.112
.154	.004	-.112
.166	.001	-.107
.179	-.009	-.102
.191	-.009	-.097
.203	-.022	-.092
.216	-.019	-.092
.228	-.019	-.082

Station 4		
$\frac{x}{c}$	Upper surface c_p	Lower surface c_p
0.000	0.114	0.087
.001	.116	.080
.002	.106	.054
.004	.083	-.010
.007	.055	-.053
.011	.014	
.016	-.030	-.150
.021	-.071	-.168
.031	-.030	-.148
.045	-.007	-.145
.059	.004	-.140
.074	.004	
.088	.001	-.127
.103	.001	-.127
.117	.001	-.127
.131	.000	-.130
.146	.000	-.130
.160	-.003	-.135
.175	-.010	-.140
.189	-.033	-.135

Station 5		
$\frac{x}{c}$	Upper surface c_p	Lower surface c_p
0.000	0.112	0.085
.001	.115	.070
.002	.110	.034
.004	.087	-.012
.007	.051	-.063
.011	.010	-.115
.016	-.038	-.163
.021	-.072	-.204
.031	-.031	-.220
.048	-.005	-.214
.065	.005	-.191
.082	.003	-.179
.100	.000	-.168
.117	-.010	-.161
.134	-.036	-.140

TABLE 3.- UPPER- AND LOWER-SURFACE PRESSURE COEFFICIENTS AT $R_{\bar{c}} = 0.33 \times 10^6$ – Continued

(d) $\alpha = 3^{\circ}$

Station 1			Station 2			Station 3			Station 4			Station 5		
$\frac{x}{c}$	Upper surface c_p	Lower surface c_p	$\frac{x}{c}$	Upper surface c_p	Lower surface c_p	$\frac{x}{c}$	Upper surface c_p	Lower surface c_p	$\frac{x}{c}$	Upper surface c_p	Lower surface c_p	$\frac{x}{c}$	Upper surface c_p	Lower surface c_p
0.000	0.157	0.157	0.000	0.163	0.119	0.000	0.137	0.111	0.000	0.114	0.080	0.000	0.113	0.070
.001	.162	.126	.001		.108	.001	.142	.101	.001	.124	.065	.001	.118	.055
.002	.155	.085	.002	.158	.067	.002	.142	.055	.002	.124	.037	.002	.120	.013
.004	.131	.034	.004	.142	.013	.004	.127	.001	.004	.114	-.028	.004	.113	-.035
.007	.090	-.020	.007		-.040	.007	.096	-.056	.007	.086	-.079	.007	.084	-.087
.011	.049	-.076	.011	.074	-.094	.011	.060	-.110	.011	.055		.011	.051	-.138
.016	-.002	-.135	.016	.028	-.145	.016	.019	-.156	.016	.014	-.176	.016	.013	-.181
.021	-.053	-.179	.021	-.018	-.176	.021	-.014		.021	-.014	-.169	.021	-.010	-.197
.031	-.010	-.148	.031	.026	-.143	.031	.019	-.104	.031	.006	-.151	.031	.013	-.189
.040	.016	-.143	.042	.048	-.138	.043	.037	-.138	.045	.022	-.148	.048	.026	-.186
.050	.029	-.143	.052	.056	-.138	.055	.045	-.140	.059	.027	-.148	.065	.026	-.181
.060	.031	-.143	.063	.061	-.117	.068	.045	-.140	.074	.027		.082	.023	-.179
.069	.049	-.145	.074	.064	-.135	.080	.042	-.140	.088	.024	-.151	.100	.015	-.174
.079	.074	-.145	.085	.064	-.140	.092	.040	-.125	.103	.022	-.156	.117	.005	-.169
.088	.056	-.143	.095	.069		.105	.040	-.143	.117	.019	-.161	.134	-.023	-.156
.098	.056	-.133	.106	.066	-.140	.117	.032	-.143	.131	.015	-.166			
.107	.056	-.117	.117	.066	-.140	.129	.027	-.143	.146	.013	-.169			
.117	.056	-.097	.128	.066	-.138	.142	.024	-.143	.160	.010	-.169			
.127	.059	-.076	.139	.061	-.133	.154	.019	-.140	.175	.003	-.169			
.136	.076	-.053	.149		-.128	.166	.014	-.140	.189	-.023	-.161			
.146	.056	-.033	.160		-.122	.179	.011	-.140						
.155	.059	-.025	.171	.069	-.120	.191	.006	-.138						
.165	.056	-.022	.182	.054	-.115	.203	-.002	-.128						
.175	.056	-.025	.193	.043	-.107	.216	-.007	-.120						
.184	.056	-.028	.203	.029		.228	-.009	-.115						
.194	.056	-.030	.214	.006										
.203		-.030	.225	-.002	-.079									
.213	.061	-.033	.236	-.007	-.084									
.222	.056	-.035	.246	-.012	-.084									
.232	.056	-.038	.257	-.030	-.087									
.242	.056	-.040												
.251		-.051												
.261		-.063												
.270	-.007	-.051												
.280	-.038	-.056												

TABLE 3.- UPPER- AND LOWER-SURFACE PRESSURE COEFFICIENTS AT $R_{\bar{c}} = 0.33 \times 10^6$ – Continued

(e) $\alpha = 4^{\circ}$

Station 1			Station 2			Station 3			Station 4			Station 5		
$\frac{x}{c}$	Upper surface c_p	Lower surface c_p	$\frac{x}{c}$	Upper surface c_p	Lower surface c_p	$\frac{x}{c}$	Upper surface c_p	Lower surface c_p	$\frac{x}{c}$	Upper surface c_p	Lower surface c_p	$\frac{x}{c}$	Upper surface c_p	Lower surface c_p
0.000	0.154	0.154	0.000	0.141	0.108	0.000	0.134	0.103	0.000	0.108	0.062	0.000	0.104	0.054
.001	.161	.118	.001		.092	.001	.144	.087	.001	.121	.047	.001	.112	.034
.002	.161	.072	.002	.148	.047	.002	.152	.036	.002	.126	.021	.002	.125	-.010
.004	.143	.019	.004	.136	-.004	.004	.144	-.020	.004	.121	-.048	.004	.125	-.055
.007	.110	-.038	.007		-.060	.007	.123	-.078	.007	.085	-.099	.007	.109	-.109
.011	.072	-.096	.011	.080	-.114	.011	.095	-.132	.011	.080		.011	.084	-.157
.016	.029	-.150	.016	.044	-.165	.016	.060	-.175	.016	.049	-.190	.016	.056	-.196
.021	-.017	-.190	.021	.008	-.185	.021	.034		.021	.027	-.180	.021	.033	-.180
.031	.016	-.165	.031	.034	-.160	.031	.049	-.124	.031	.029	-.173	.031	.038	-.178
.040	.036	-.160	.042	.049	-.157	.043	.062	-.155	.045	.042	-.162	.048	.046	-.173
.050	.041	-.157	.052	.057	-.157	.055	.065	-.155	.159	.044	-.162	.065	.041	-.170
.060	.047	-.160	.063	.059	-.132	.068	.062	-.157	.074	.039		.082	.036	-.170
.069	.062	-.165	.074	.059	-.152	.080	.057	-.157	.088	.037	-.165	.100	.028	-.168
.079	.069	-.168	.085	.059	-.155	.092	.052	-.142	.103	.034	-.170	.117	.013	-.162
.088	.057	-.165	.095	.059		.105	.052	-.157	.117	.032	-.173	.134	-.018	-.165
.098	.054	-.162	.106	.059	-.155	.117	.044	-.160	.131	.031	-.175			
.107	.054	-.157	.117	.059	-.157	.129	.039	-.162	.146	.028	-.178			
.117	.052	-.150	.128	.059	-.157	.142	.037	-.165	.160	.023	-.178			
.127	.057	-.137	.139	.054	-.157	.154	.029	-.168	.175	.010	-.183			
.136	.072	-.117	.149		-.155	.166	.027	-.165	.189	-.018	-.178			
.146	.054	-.089	.160		-.152	.179	-.009	-.162						
.155	.041	-.058	.171	.052	-.152	.191	.011	-.157						
.165	.052	-.032	.182	.034	-.150	.203	.011	-.155						
.175	.052	-.025	.193	.029	-.147	.216	.001	-.150						
.184	.049	-.027	.203	.042		.228	.004	-.147						
.194	.052	-.032	.214	.009										
.203		-.038	.225	.009	-.124									
.213	.054	-.040	.236	.004	-.129									
.222	.052	-.043	.246	.001	-.132									
.232	.049	-.043	.257	-.022	-.129									
.242	.044	-.048												
.251		-.053												
.261		-.066												
.270	-.027	-.053												
.280	-.053	-.060												

TABLE 3.- UPPER- AND LOWER-SURFACE PRESSURE COEFFICIENTS AT $R_{\bar{c}} = 0.33 \times 10^{6}$ – Continued

(f) $\alpha = 5^{\circ}$

Station 1			Station 2			Station 3			Station 4			Station 5		
$\frac{x}{c}$	Upper surface c_p	Lower surface c_p	$\frac{x}{c}$	Upper surface c_p	Lower surface c_p	$\frac{x}{c}$	Upper surface c_p	Lower surface c_p	$\frac{x}{c}$	Upper surface c_p	Lower surface c_p	$\frac{x}{c}$	Upper surface c_p	Lower surface c_p
0.000	0.149	0.137	0.000	0.127	0.089	0.000	0.120	0.079	0.000	0.092	0.041	0.000	0.086	0.031
.001	.157	.102	.001		.074	.001	.135	.064	.001	.105	.023	.001	.101	.010
.002	.164	.054	.002	.152	.026	.002	.150	.011	.002	.120	-.005	.002	.118	-.032
.004	.154	-.002	.004	.147	-.030	.004	.150	-.047	.004	.122	-.073	.004	.126	-.083
.007	.126	-.060	.007		-.085	.007	.137	-.105	.007	.112	-.123	.007	.116	-.133
.011	.094	-.115	.011	.102	-.138	.011	.107	-.156	.011	.097		.011	.101	-.176
.016	.053	-.171	.016	.071	-.184	.016	.089	-.199	.016	.069	-.201	.016	.076	-.171
.021	.015	-.206	.021	.044	-.194	.021	.067		.021	.052	-.191	.021	.058	-.166
.031	.036	-.181	.031	.056	-.179	.031	.072	-.141	.031	.052	-.186	.031	.055	-.161
.040	.053	-.179	.042	.066	-.176	.043	.079	-.176	.045	.054	-.181	.048	.055	-.161
.050	.058	-.176	.052	.069	-.176	.055	.074	-.176	.159	.052	-.174	.065	.050	-.159
.060	.061	-.179	.063	.071	-.153	.068	.069	-.176	.074	.052		.082	.045	-.159
.069	.076	-.181	.074	.071	-.173	.080	.062	-.181	.088	.047	-.171	.100	.030	-.161
.079	.076	-.186	.085	.071	-.176	.092	.059	-.161	.103	.044	-.176	.117	.018	-.161
.088	.064	-.189	.095	.071		.105	.054	-.181	.117	.041	-.179	.134	-.018	-.156
.098	.064	-.191	.106	.071	-.176	.117	.052	-.184	.131	.038	-.179			
.107	.064	-.194	.117	.071	-.181	.129	.044	-.184	.146	.033	-.176			
.117	.061	-.189	.128	.069	-.181	.142	.039	-.184	.160	.025	-.174			
.127	.064	-.186	.139	.064	-.181	.154	.036	-.184	.175	.015	-.176			
.136	.081	-.176	.149		-.181	.166	.031	-.184	.189	-.018	-.179			
.146	.061	-.158	.160		-.181	.179	.029	-.184						
.155	.064	-.131	.171	.054	-.181	.191	.024	-.181						
.165	.061	-.088	.182	.041	-.181	.203	.021	-.181						
.175	.059	-.050	.193	.034	-.181	.216	.009	-.179						
.184	.056	-.037	.203	.044		.228	.011	-.173						
.194	.056	-.040	.214	.019										
.203		-.045	.225	.011	-.168									
.213	.056	-.050	.236	.009	-.179									
.222	.056	-.052	.246	.004	-.181									
.232	.054	-.055	.257	-.019	-.173									
.242	.041	-.057												
.251		-.065												
.261		-.073												
.270	-.032	-.060												
.280	-.050	-.073												

TABLE 3.- UPPER- AND LOWER-SURFACE PRESSURE COEFFICIENTS AT $R_{\bar{c}} = 0.33 \times 10^6$ – Continued

(g) $\alpha = 6^o$

Station 1			Station 2			Station 3			Station 4			Station 5		
$\frac{x}{c}$	Upper surface c_p	Lower surface c_p	$\frac{x}{c}$	Upper surface c_p	Lower surface c_p	$\frac{x}{c}$	Upper surface c_p	Lower surface c_p	$\frac{x}{c}$	Upper surface c_p	Lower surface c_p	$\frac{x}{c}$	Upper surface c_p	Lower surface c_p
0.000	0.139	0.124	0.000	0.121	0.076	0.000	0.111	0.063	0.000	0.081	0.023	0.000	0.070	0.008
.001	.151	.086	.001		.058	.001	.126	.045	.001	.096	.005	.001	.085	-.012
.002	.166	.036	.002	.151	.006	.002	.149	-.010	.002	.116	-.029	.002	.110	-.060
.004	.161	-.022	.004	.154	-.050	.004	.156	-.067	.004	.126	-.100	.004	.123	-.107
.007	.141	-.080	.007		-.107	.007	.151	-.123	.007	.124	-.147	.007	.123	-.158
.011	.111	-.135	.011	.124	-.158	.011	.139	-.173	.011	.116		.011	.115	-.198
.016	.074	-.185	.016	.096	-.203	.016	.106	-.210	.016	.189	-.208	.016	.095	-.183
.021	.041	-.215	.021	.076	-.205	.021	.096		.021	.076	-.203	.021	.078	-.180
.031	.051	-.195	.031	.076	-.195	.031	.094	-.153	.031	.074	-.200	.031	.073	-.178
.040	.068	-.193	.042	.086	-.193	.043	.094	-.185	.045	.074	-.198	.048	.070	-.178
.050	.071	-.193	.052	.086	-.190	.055	.091	-.188	.059	.071	-.193	.065	.063	-.178
.060	.071	-.193	.063	.086	-.165	.068	.079	-.190	.074	.063		.082	.053	-.178
.069	.089	-.198	.074	.086	-.188	.080	.076	-.190	.088	.061	-.180	.100	.040	-.178
.079	.089	-.203	.085	.086	-.188	.092	.074	-.175	.103	.058	-.185	.117	.020	-.170
.088	.074	-.208	.095	.086		.105	.068	-.193	.117	.051	-.185	.134	-.015	-.168
.098	.076	-.210	.106	.084	-.185	.117	.063	-.195	.131	.045	-.183			
.107	.076	-.215	.117	.084	-.190	.129	.056	-.195	.146	.040	-.183			
.117	.074	-.213	.128	.084	-.193	.142	.051	-.195	.160	.033	-.185			
.127	.074	-.210	.139	.074	-.198	.154	.048	-.198	.175	.020	-.193			
.136	.094	-.208	.149		-.200	.166	.046	-.198	.189	-.013	-.195			
.146	.074	-.203	.160		-.200	.179	.043	-.198						
.155	.071	-.190	.171	.058	-.203	.191	.038	-.193						
.165	.071	-.168	.182	.046	-.203	.203	.031	-.195						
.175	.071	-.127	.193	.038	-.203	.216	.018	-.195						
.184	.066	-.082	.203	.048		.228	.021	-.188						
.194	.068	-.060	.214	.026										
.203		-.055	.225	.021	-.190									
.213	.071	-.055	.236	.018	-.203									
.222	.068	-.060	.246	.011	-.200									
.232	.063	-.062	.257	-.012	-.200									
.242	.043	-.065												
.251		-.070												
.261		-.077												
.270	-.024	-.062												
.280	-.047	-.075												

TABLE 3.- UPPER- AND LOWER-SURFACE PRESSURE COEFFICIENTS AT $R_{\bar{c}} = 0.33 \times 10^6$ – Continued

(h) $\alpha = 7^{\circ}$

Station 1			Station 2			Station 3			Station 4			Station 5		
$\frac{x}{c}$	Upper surface c_p	Lower surface c_p	$\frac{x}{c}$	Upper surface c_p	Lower surface c_p	$\frac{x}{c}$	Upper surface c_p	Lower surface c_p	$\frac{x}{c}$	Upper surface c_p	Lower surface c_p	$\frac{x}{c}$	Upper surface c_p	Lower surface c_p
0.000	0.149	0.127	0.000	0.140	0.074	0.000	0.107	0.051	0.000	0.067	0.011	0.000	0.066	0.000
.001	.167	.084	.001		.051	.001	.128	.034	.001	.087	-.007	.001	.083	-.022
.002	.182	.028	.002	.183	-.002	.002	.155	-.025	.002	.120	-.040	.002	.113	-.070
.004	.182	-.030	.004	.193	-.062	.004	.171	-.083	.004	.135	-.108	.004	.134	-.121
.007	.169	-.090	.007		-.118	.007	.173	-.138	.007	.140	-.154	.007	.136	-.166
.011	.147	-.146	.011	.173	-.169	.011	.163	-.186	.011	.135		.011	.134	-.202
.016	.111	-.194	.016	.153	-.209	.016	.143	-.214	.016	.120	-.202	.016	.121	-.186
.021	.079	-.212	.021	.133	-.204	.021	.122		.021	.095	-.199	.021	.106	-.184
.031	.086	-.201	.031	.128	-.201	.031	.122	-.156	.031	.085	-.199	.031	.098	-.184
.040	.096	-.199	.042	.133	-.199	.043	.112	-.196	.045	.097	-.197	.048	.091	-.181
.050	.101	-.199	.052	.133	-.199	.055	.110	-.199	.059	.090	-.192	.065	.081	-.181
.060	.099	-.199	.063	.133	-.174	.068	.097	-.201	.074	.087		.082	.071	-.179
.069	.116	-.201	.074	.133	-.196	.080	.097	-.201	.088	.079	-.181	.100	.055	-.179
.079	.133	-.209	.085	.130	-.199	.092	.092	-.181	.103	.077	-.179	.117	.035	-.176
.088	.120	-.214	.095	.130		.105	.087	-.201	.117	.069	-.179	.134	-.003	-.174
.098	.120	-.219	.106	.128	-.196	.117	.082	-.201	.131	.066	-.176			
.107	.118	-.222	.117	.125	-.201	.129	.074	-.204	.146	.058	-.179			
.117	.115	-.224	.128	.125	-.204	.142	.069	-.204	.160	.050	-.181			
.127	.118	-.224	.139	.108	-.207	.154	.069	-.204	.175	.035	-.192			
.136	.138	-.224	.149		-.209	.166	.064	-.204	.189	.000	-.197			
.146	.115	-.219	.160		-.209	.179	.062	-.204						
.155	.115	-.217	.171	.095	-.212	.191	.052	-.204						
.165	.115	-.212	.182	.083	-.214	.203	.047	-.204						
.175	.113	-.194	.193	.075	-.217	.216	.031	-.204						
.184	.108	-.164	.203	.067		.228	.036	-.194						
.194	.108	-.123	.214	.042										
.203		-.090	.225	.036	-.207									
.213	.110	-.070	.236	.036	-.214									
.222	.108	-.065	.246	-.090	-.214									
.232	.095	-.062	.257	.001	-.214									
.242	.068	-.065												
.251		-.068												
.261		-.065												
.270	.008	-.055												
.280	-.012	-.070												

TABLE 3.- UPPER- AND LOWER-SURFACE PRESSURE COEFFICIENTS AT $R_{\bar{l}} = 0.33 \times 10^6$ – Concluded

(i) $\alpha = 8^{\circ}$

Station 1

$\frac{x}{c}$	Upper surface c_p	Lower surface c_p
0.000	0.151	0.125
.001	.171	.082
.002	.196	.024
.004	.201	-.040
.007	.191	-.101
.011	.174	-.154
.016	.146	-.200
.021	.113	-.208
.031	.115	-.203
.040	.125	-.203
.050	.128	-.200
.060	.125	-.203
.069	.138	-.208
.079	.140	-.213
.088	.128	-.220
.098	.125	-.226
.107	.125	-.228
.117	.105	-.231
.127	.125	-.233
.136	.146	-.231
.146	.118	-.228
.155	.123	-.228
.165	.120	-.228
.175	.118	-.228
.184	.113	-.215
.194	.113	-.198
.203		-.170
.213	.115	-.137
.222	.107	-.109
.232	.085	-.086
.242	.064	-.076
.251		-.073
.261		-.058
.270	.003	-.053
.280	-.017	-.070

Station 2

$\frac{x}{c}$	Upper surface c_p	Lower surface c_p
0.000	0.123	0.067
.001		.044
.002	.174	-.012
.004	.189	-.073
.007		-.129
.011	.184	-.177
.016	.166	-.215
.021	.151	-.208
.031	.143	-.203
.042	.146	-.203
.052	.146	-.203
.063	.140	-.177
.074	.138	-.200
.085	.138	-.203
.095	.138	
.106	.133	-.203
.117	.133	-.205
.128	.120	-.208
.139	.110	-.210
.149		-.213
.160		-.215
.171	.095	-.220
.182	.079	-.223
.193	.074	-.226
.203	.082	
.214	.062	
.225	.057	-.210
.236	.054	-.226
.246	.042	-.226
.257	.016	-.223

Station 3

$\frac{x}{c}$	Upper surface c_p	Lower surface c_p
0.000	0.103	0.044
.001	.126	.024
.002	.159	-.037
.004	.179	-.098
.007	.187	-.152
.011	.184	-.198
.016	.174	-.210
.021	.156	
.031	.149	-.159
.043	.141	-.200
.055	.131	-.203
.068	.123	-.203
.080	.118	-.203
.092	.108	-.180
.105	.100	-.203
.117	.100	-.203
.129	.095	-.203
.142	.093	-.205
.154	.090	-.205
.166	.085	-.205
.179	.082	-.203
.191	.072	-.205
.203	.067	-.205
.216	.052	-.203
.228	.057	-.195

Station 4

$\frac{x}{c}$	Upper surface c_p	Lower surface c_p
0.000	0.060	0.001
.001	.082	-.022
.002	.118	-.050
.004	.144	-.121
.007	.154	-.170
.011	.156	
.016	.144	-.200
.021	.133	-.200
.031	.100	-.200
.045	.121	-.198
.059	.116	-.193
.074	.100	
.088	.100	-.182
.103	.100	-.182
.117	.088	-.177
.131	.084	-.175
.146	.079	-.177
.160	.066	-.180
.175	.051	-.185
.189	.013	-.190

Station 5

$\frac{x}{c}$	Upper surface c_p	Lower surface c_p
0.000	0.058	-0.015
.001	.079	-.037
.002	.114	-.083
.004	.139	-.134
.007	.150	-.180
.011	.152	-.205
.016	.142	-.195
.021	.132	-.195
.031	.124	-.195
.048	.112	-.195
.065	.104	-.193
.082	.089	-.193
.100	.074	-.193
.117	.053	-.185
.134	.008	-.180

TABLE 4.- UPPER- AND LOWER-SURFACE PRESSURE COEFFICIENTS AT $R_{\bar{r}} = 0.24 \times 10^6$

(a) $\alpha = 0^{\circ}$

Station 1			Station 2			Station 3			Station 4			Station 5		
$\frac{x}{c}$	Upper surface c_p	Lower surface c_p	$\frac{x}{c}$	Upper surface c_p	Lower surface c_p	$\frac{x}{c}$	Upper surface c_p	Lower surface c_p	$\frac{x}{c}$	Upper surface c_p	Lower surface c_p	$\frac{x}{c}$	Upper surface c_p	Lower surface c_p
0.000	0.140	0.174	0.000	0.133	0.123	0.000	0.120	0.126	0.000	0.100	0.102	0.000	0.098	0.096
.001	.136	.140	.001		.120	.001	.113	.119	.001	.096	.095	.001	.094	.086
.002	.109	.113	.002	.106	.096	.002	.086	.095	.002	.069	.096	.002	.078	.065
.004	.076	.076	.004	.065	.059	.004	.045	.051	.004	.032	.031	.004	.040	.025
.007	.025	.028	.007		.011	.007	.008	.004	.007	-.016	-.009	.007	-.010	-.023
.011	-.026	-.026	.011	-.030	-.043	.011	-.043	-.047	.011	-.063		.011	-.061	-.070
.016	-.077	-.087	.016	-.084	-.094	.016	-.097	-.097	.016	-.114	-.114	.016	-.118	-.121
.021	-.131	-.131	.021	-.131	-.141	.021	-.148		.021	-.158	-.162	.021	-.165	-.165
.031	-.101	-.111	.031	-.097	-.111	.031	-.104	-.060	.031	-.127	-.138	.031	-.148	-.148
.040	-.087	-.087	.042	-.087	-.094	.043	-.090	-.087	.045	-.100	-.111	.048	-.118	-.121
.050	-.077	-.073	.052	-.077	-.080	.055	-.080	-.077	.059	-.094	-.094	.065	-.098	-.101
.060	-.067	-.063	.063	-.070	-.043	.068	-.070	-.070	.074	-.073		.082	-.081	-.087
.069	-.023	-.050	.074	-.057	-.057	.080	-.063	-.064	.088	-.066	-.060	.100	-.067	-.077
.079	-.006	-.033	.085	-.047	-.043	.092	-.056	-.033	.103	-.056	-.050	.117	-.064	-.073
.088	-.020	-.023	.095	-.033		.105	-.056	-.040	.117	-.053	-.043	.134	-.084	-.094
.098	-.013	-.016	.106	-.026	-.023	.117	-.060	-.033	.131	-.044	-.040			
.107	-.006	-.013	.117	-.016	-.020	.129	-.094	-.033	.146	-.044	-.040			
.117	-.003	-.009	.128	-.013	-.013	.142	-.033	-.030	.160	-.044	-.040			
.127	.001	-.009	.139	-.009	-.013	.154	-.033	-.030	.175	-.051	-.050			
.136	.014	-.009	.149		-.013	.166	-.033	-.033	.189	-.078	-.077			
.146	-.003	-.006	.160		-.016	.179	-.049	-.026						
.155	-.003	-.006	.171	.011	-.020	.191	-.114	-.030						
.165	-.003	-.006	.182	.001	-.026	.203	-.053	-.033						
.175	-.003	-.009	.193	-.003	-.026	.216	-.053	-.037						
.184	-.003	-.013	.203	.022		.228	-.066	-.033						
.194	-.003	-.009	.214	-.022										
.203		-.009	.225	-.033	-.023									
.213	.007	-.013	.236	-.043	-.030									
.222	-.003	-.016	.246	-.049	-.037									
.232	-.003	-.026	.257	-.060	-.057									
.242	-.003	-.040												
.251		-.057												
.261		-.046												
.270	-.033	-.036												
.280	-.053	-.060												

TABLE 4.- UPPER- AND LOWER-SURFACE PRESSURE COEFFICIENTS AT $R_{\bar{l}} = 0.24 \times 10^6$ – Continued

(b) $\alpha = 1^{o}$

Station 1			Station 2			Station 3			Station 4			Station 5		
$\frac{x}{c}$	Upper surface c_p	Lower surface c_p	$\frac{x}{c}$	Upper surface c_p	Lower surface c_p	$\frac{x}{c}$	Upper surface c_p	Lower surface c_p	$\frac{x}{c}$	Upper surface c_p	Lower surface c_p	$\frac{x}{c}$	Upper surface c_p	Lower surface c_p
0.000	0.143	0.167	0.000	0.136	0.116	0.000	0.126	0.116	0.000	0.106	0.096	0.000	0.105	0.089
.001	.143	.133	.001		.109	.001	.123	.109	.001	.106	.089	.001	.105	.078
.002	.129	.103	.002	.116	.082	.002	.106	.079	.002	.082	.082	.002	.091	.048
.004	.092	.062	.004	.082	.042	.004	.072	.035	.004	.052	.018	.004	.064	.007
.007	.045	.008	.007		-.009	.007	.035	-.019	.007	.015	-.026	.007	.017	-.040
.011	-.003	-.046	.011	-.009	-.063	.011	-.019	-.070	.011	-.029		.011	-.030	-.094
.016	-.057	-.104	.016	-.060	-.114	.016	-.070	-.121	.016	-.080	-.131	.016	-.088	-.141
.021	-.108	-.151	.021	-.114	-.158	.021	-.124		.021	-.124	-.172	.021	-.132	-.189
.031	-.081	-.124	.031	-.084	-.118	.031	-.080	-.067	.031	-.084	-.152	.031	-.098	-.192
.040	-.053	-.111	.042	-.053	-.111	.043	-.046	-.104	.045	-.050	-.135	.048	-.044	-.175
.050	-.033	-.107	.052	-.033	-.104	.055	-.026	-.104	.059	-.087	-.125	.065	-.027	-.158
.060	-.023	-.101	.063	-.020	-.070	.068	-.023	-.104	.074	-.026		.082	-.024	-.148
.069	.018	-.094	.074	-.009	-.094	.080	-.009	-.101	.088	-.026	-.101	.100	-.024	-.138
.079	.024	-.077	.085	.001	-.094	.092	-.023	-.077	.103	-.050	-.094	.117	-.027	-.135
.088	.004	-.060	.095	.007		.105	-.002	-.094	.117	-.033	-.091	.134	-.054	-.135
.098	.007	-.040	.106	.007	-.073	.117	-.002	-.087	.131	-.020	-.084			
.107	.011	-.029	.117	.011	-.067	.129	-.002	-.077	.146	-.020	-.084			
.117	.011	-.023	.128	.011	-.060	.142	-.026	-.070	.160	-.024	-.087			
.127	.014	-.023	.139	.011	-.050	.154	-.013	-.067	.175	-.027	-.094			
.136	.024	-.019	.149		-.043	.166	-.023	-.063	.189	-.054	-.108			
.146	.011	-.016	.160		-.036	.179	-.019	-.057						
.155	.011	-.019	.171	.021	-.036	.191	-.019	-.053						
.165	.011	-.019	.182	.014	-.040	.203	-.026	-.057						
.175	.011	-.023	.193	.007	-.036	.216	-.029	-.060						
.184	.007	-.023	.203	.032		.228	-.023	-.050						
.194	.007	-.023	.214	-.016										
.203		-.023	.225	-.029	-.029									
.213	.018	-.023	.236	-.029	-.036									
.222	.011	-.026	.246	-.036	-.040									
.232	.011	-.029	.257	-.053	-.060									
.242	.011	-.040												
.251		-.057												
.261		-.070												
.270	-.033	-.040												
.280	-.057	-.063												

TABLE 4.- UPPER- AND LOWER-SURFACE PRESSURE COEFFICIENTS AT $R_{\bar{l}} = 0.24 \times 10^6$ – Continued

(c) $\alpha = 2^o$

Station 1			Station 2			Station 3			Station 4			Station 5		
$\frac{x}{c}$	Upper surface c_p	Lower surface c_p	$\frac{x}{c}$	Upper surface c_p	Lower surface c_p	$\frac{x}{c}$	Upper surface c_p	Lower surface c_p	$\frac{x}{c}$	Upper surface c_p	Lower surface c_p	$\frac{x}{c}$	Upper surface c_p	Lower surface c_p
0.000	0.150	0.167	0.000	0.151	0.116	0.000	0.133	0.120	0.000	0.113	0.086	0.000	0.112	0.085
.001	.150	.130	.001		.110	.001	.133	.110	.001	.116	.076	.001	.115	.072
.002	.140	.096	.002	.141	.076	.002	.120	.069	.002	.110	.065	.002	.109	.038
.004	.112	.052	.004	.114	.028	.004	.093	.018	.004	.086	-.003	.004	.088	-.010
.007	.068	-.003	.007		-.023	.007	.062	-.033	.007	.052	-.047	.007	.051	-.061
.011	.017	-.061	.011	.033	-.078	.011	.018	-.091	.011	-.037		.011	.014	-.115
.016	-.034	-.118	.016	-.018	-.129	.016	-.030	-.135	.016	-.027	-.149	.016	-.037	-.159
.021	-.088	-.163	.021	-.072	-.163	.021	-.088		.021	-.061	-.159	.021	-.071	-.200
.031	-.047	-.139	.031	-.021	-.129	.031	-.023	-.071	.031	-.030	-.149	.031	-.031	-.214
.040	-.013	-.129	.042	.013	-.122	.043	.004	-.118	.045	-.006	-.146	.048	-.003	-.214
.050	.004	-.125	.052	.026	-.122	.055	.014	-.118	.059	.004	-.139	.065	.007	-.193
.060	.011	-.125	.063	.029	-.091	.068	.018	-.118	.074	.004		.082	.003	-.180
.069	.041	-.122	.074	.036	-.115	.080	.018	-.122	.088	.004	-.125	.100	.000	-.166
.079	.056	-.115	.085	.036	-.115	.092	.021	-.095	.103	.001	-.125	.117	-.010	-.156
.088	.036	-.101	.095	.040		.105	.021	-.118	.117	-.003	-.125	.134	-.034	-.136
.098	.036	-.084	.106	.040	-.105	.117	.018	-.118	.131	.000	-.125			
.107	.040	-.061	.117	.040	-.105	.129	.014	-.112	.146	.000	-.129			
.117	.036	-.047	.128	.040	-.098	.142	.007	-.108	.160	.000	-.132			
.127	.040	-.033	.139	.040	-.095	.154	.004	-.105	.175	-.010	-.136			
.136	.056	-.023	.149		-.091	.166	.004	-.105	.189	-.034	-.132			
.146	.036	-.023	.160		-.078	.179	-.030	-.101						
.155	.029	-.023	.171	.053	-.071	.191	-.020	-.095						
.165	.036	-.023	.182	.040	-.067	.203	-.023	-.091						
.175	.036	-.023	.193	.029	-.061	.216	-.040	-.091						
.184	.036	-.027	.203	.035		.228	-.047	-.081						
.194	.036	-.027	.214	-.006										
.203		-.030	.225	-.010	-.040									
.213	.046	-.030	.236	-.023	-.047									
.222	.036	-.030	.246	-.020	-.050									
.232	.036	-.033	.257	-.037	-.061									
.242	.036	-.040												
.251		-.054												
.261		-.067												
.270	-.015	-.040												
.280	-.042	-.057												

TABLE 4.- UPPER- AND LOWER-SURFACE PRESSURE COEFFICIENTS AT $R_{\bar{c}} = 0.24 \times 10^6$ – Continued

(d) $\alpha = 3^{\circ}$

Station 1

$\frac{x}{c}$	Upper surface c_p	Lower surface c_p
0.000	0.151	0.168
.001	.157	.130
.002	.151	.089
.004	.127	.041
.007	.089	-.013
.011	.048	-.071
.016	-.003	-.126
.021	-.058	-.170
.031	-.013	-.147
.040	.014	-.140
.050	.021	-.136
.060	.024	-.136
.069	.058	-.140
.079	.059	-.136
.088	.038	-.133
.098	.042	-.123
.107	.042	-.109
.117	.038	-.088
.127	.042	-.068
.136	.055	-.047
.146	.038	-.030
.155	.042	-.024
.165	.038	-.024
.175	.038	-.027
.184	.035	-.027
.194	.038	-.027
.203		-.027
.213	.049	-.027
.222	.035	-.034
.232	.035	-.034
.242	.031	-.037
.251		-.047
.261		-.061
.270	-.027	-.044
.280	-.057	-.058

Station 2

$\frac{x}{c}$	Upper surface c_p	Lower surface c_p
0.000	0.141	0.116
.001		.110
.002	.148	.069
.004	.117	.017
.007		-.037
.011	.049	-.092
.016	.004	-.147
.021	-.040	-.167
.031	.001	-.143
.042	.025	-.136
.052	.035	-.133
.063	.038	-.102
.074	.042	-.129
.085	.045	-.129
.095	.045	
.106	.045	-.129
.117	.045	-.129
.128	.045	-.129
.139	.035	-.126
.149		-.123
.160		-.119
.171	.045	-.116
.182	.028	-.109
.193	.018	-.102
.203	.045	
.214	-.003	
.225	-.003	-.075
.236	-.006	-.082
.246	-.016	-.082
.257	-.027	-.082

Station 3

$\frac{x}{c}$	Upper surface c_p	Lower surface c_p
0.000	0.141	0.113
.001	.144	.103
.002	.141	.052
.004	.120	.000
.007	.093	-.058
.011	.059	-.109
.016	.014	-.157
.021	-.020	
.031	.014	-.085
.043	.035	-.129
.055	.042	-.133
.068	.042	-.133
.080	.042	-.136
.092	.038	-.112
.105	.038	-.133
.117	.028	-.136
.129	.025	-.136
.142	.018	-.136
.154	.014	-.136
.166	.014	-.136
.179	.014	-.133
.191	.011	-.133
.203	.008	-.126
.216	.001	-.126
.228	.001	-.119

Station 4

$\frac{x}{c}$	Upper surface c_p	Lower surface c_p
0.000	0.114	0.075
.001	.120	.062
.002	.110	.048
.004	.107	-.024
.007	.079	-.071
.011	.052	
.016	.018	-.167
.021	-.016	-.157
.031	.004	-.147
.045	.018	-.147
.059	.025	-.143
.074	.018	
.088	.018	-.136
.103	.018	-.153
.117	.018	-.157
.131	.017	-.160
.146	.017	-.160
.160	.010	-.164
.175	.003	-.160
.189	-.024	-.157

Station 5

$\frac{x}{c}$	Upper surface c_p	Lower surface c_p
0.000	0.113	0.075
.001	.119	.058
.002	.119	.017
.004	.109	-.030
.007	.082	-.085
.011	.051	-.133
.016	.014	-.177
.021	-.014	-.198
.031	.014	-.191
.048	.024	-.191
.065	.024	-.184
.082	.020	-.181
.100	.014	-.174
.117	.003	-.164
.134	-.027	-.150

TABLE 4.- UPPER- AND LOWER-SURFACE PRESSURE COEFFICIENTS AT $R_T = 0.24 \times 10^6$ – Continued

(e) $\alpha = 4^{\circ}$

Station 1			Station 2			Station 3			Station 4			Station 5		
$\frac{x}{c}$	Upper surface c_p	Lower surface c_p	$\frac{x}{c}$	Upper surface c_p	Lower surface c_p	$\frac{x}{c}$	Upper surface c_p	Lower surface c_p	$\frac{x}{c}$	Upper surface c_p	Lower surface c_p	$\frac{x}{c}$	Upper surface c_p	Lower surface c_p
0.000	0.150	0.164	0.000	0.189	0.110	0.000	0.134	0.103	0.000	0.103	0.065	0.000	0.102	0.055
.001	.161	.120	.001		.096	.001	.141	.086	.001	.107	.048	.001	.112	.038
.002	.157	.075	.002	.203	.052	.002	.147	.038	.002	.124	.031	.002	.122	-.006
.004	.140	.024	.004	.182	.001	.004	.137	-.020	.004	.117	-.047	.004	.126	-.057
.007	.110	-.030	.007		-.057	.007	.117	-.071	.007	.103	-.095	.007	.105	-.105
.011	.072	-.091	.011	.126	-.112	.011	.090	-.125	.011	.076		.011	.081	-.156
.016	.021	-.146	.016	.089	-.159	.016	.049	-.173	.016	.045	-.186	.016	.051	-.193
.021	-.023	-.186	.021	.055	-.169	.021	.025		.021	.025	-.173	.021	.031	-.176
.031	.011	-.159	.031	.082	-.156	.031	.042	-.101	.031	.032	-.166	.031	.037	-.176
.040	.035	-.156	.042	.096	-.152	.043	.059	-.152	.045	.038	-.159	.048	.044	-.173
.050	.041	-.152	.052	.099	-.152	.055	.055	-.152	.059	.052	-.159	.065	.041	-.169
.060	.045	-.152	.063	.106	-.118	.068	.059	-.156	.074	.035		.082	.037	-.166
.069	.075	-.159	.074	.106	-.152	.080	.052	-.156	.088	.035	-.152	.100	.024	-.166
.079	.126	-.159	.085	.109	-.152	.092	.049	-.129	.103	.035	-.163	.117	.010	-.163
.088	.102	-.159	.095	.112		.105	.045	-.156	.117	.032	-.166	.134	-.024	-.163
.098	.102	-.156	.106	.109	-.149	.117	.035	-.159	.131	.031	-.169			
.107	.102	-.149	.117	.106	-.156	.129	.038	-.159	.146	.027	-.173			
.117	.102	-.142	.128	.109	-.152	.142	.032	-.159	.160	.020	-.176			
.127	.106	-.125	.139	.099	-.156	.154	.025	-.159	.175	.010	-.176			
.136	.119	-.108	.149		-.156	.166	.025	-.159	.189	-.024	-.176			
.146	.099	-.081	.160		-.152	.179	.021	-.159						
.155	.099	-.054	.171	.106	-.149	.191	.018	-.156						
.165	.099	-.030	.182	.089	-.146	.203	.011	-.152						
.175	.099	-.023	.193	.076	-.139	.216	.008	-.142						
.184	.096	-.027	.203	.055		.228	.011	-.139						
.194	.096	-.030	.214	-.002										
.203		-.037	.225	.004	-.118									
.213	.112	-.037	.236	.004	-.125									
.222	.096	-.040	.246	.001	-.125									
.232	.096	-.040	.257	-.023	-.122									
.242	.092	-.044												
.251		-.054												
.261		-.064												
.270	.022	-.050												
.280	-.005	-.061												

TABLE 4.- UPPER- AND LOWER-SURFACE PRESSURE COEFFICIENTS AT $R_{\bar{T}} = 0.24 \times 10^6$ – Continued

(f) $\alpha = 5^o$

Station 1			Station 2			Station 3			Station 4			Station 5		
$\frac{x}{c}$	Upper surface c_p	Lower surface c_p	$\frac{x}{c}$	Upper surface c_p	Lower surface c_p	$\frac{x}{c}$	Upper surface c_p	Lower surface c_p	$\frac{x}{c}$	Upper surface c_p	Lower surface c_p	$\frac{x}{c}$	Upper surface c_p	Lower surface c_p
0.000	0.150	0.149	0.000	0.133	0.095	0.000	0.126	0.085	0.000	0.099	0.048	0.000	0.091	0.038
.001	.160	.109	.001		.078	.001	.140	.072	.001	.099	.031	.001	.108	.018
.002	.167	.061	.002	.157	.034	.002	.150	.018	.002	.126	.007	.002	.122	-.026
.004	.150	.007	.004	.143	-.020	.004	.150	-.037	.004	.123	-.067	.004	.128	-.077
.007	.126	-.050	.007		-.077	.007	.136	-.094	.007	.112	-.118	.007	.118	-.128
.011	.092	-.108	.011	.102	-.128	.011	.112	-.148	.011	.099		.011	.101	-.172
.016	.048	-.162	.016	.072	-.176	.016	.085	-.189	.016	.075	-.196	.016	.078	-.165
.021	.011	-.193	.021	.041	-.179	.021	.065		.021	.055	-.179	.021	.061	-.162
.031	.038	-.172	.031	.058	-.169	.031	.072	-.114	.031	.055	-.179	.031	.061	-.162
.040	.051	-.169	.042	.068	-.165	.043	.079	-.165	.045	.058	-.175	.048	.057	-.159
.050	.058	-.169	.052	.072	-.165	.055	.075	-.169	.059	.058	-.165	.065	.051	-.155
.060	.062	-.169	.063	.072	-.135	.068	.068	-.169	.074	.055		.082	.044	-.159
.069	.082	-.176	.074	.072	-.165	.080	.065	-.169	.088	.048	-.162	.100	.034	-.159
.079	.082	-.176	.085	.072	-.165	.092	.062	-.142	.103	.045	-.172	.117	.020	-.155
.088	.065	-.176	.095	.072		.105	.058	-.172	.117	.045	-.175	.134	-.017	-.152
.098	.065	-.179	.106	.072	-.165	.117	.055	-.175	.131	.041	-.172			
.107	.065	-.179	.117	.072	-.169	.129	.048	-.179	.146	.037	-.169			
.117	.062	-.176	.128	.072	-.169	.142	.041	-.175	.160	.030	-.169			
.127	.068	-.169	.139	.062	-.172	.154	.041	-.175	.175	.017	-.172			
.136	.082	-.162	.149		-.172	.166	.035	-.175	.189	-.014	-.172			
.146	.065	-.142	.160		-.172	.179	.038	-.175						
.155	.065	-.115	.171	.062	-.172	.191	.031	-.175						
.165	.062	-.074	.182	.041	-.172	.203	.024	-.172						
.175	.062	-.040	.193	.035	-.172	.216	.011	-.169						
.184	.058	-.030	.203	.058		.228	.018	-.165						
.194	.058	-.033	.214	.021										
.203		-.037	.225	.014	-.159									
.213	.072	-.044	.236	.011	-.165									
.222	.058	-.047	.246	.007	-.169									
.232	.058	-.047	.257	-.023	-.165									
.242	.041	-.050												
.251		-.061												
.261		-.067												
.270	-.026	-.054												
.280	-.047	-.067												

TABLE 4.- UPPER- AND LOWER-SURFACE PRESSURE COEFFICIENTS AT $R_T = 0.24 \times 10^6$ – Continued

(g) $\alpha = 6^{\circ}$

Station 1			Station 2			Station 3			Station 4			Station 5		
$\frac{x}{c}$	Upper surface c_p	Lower surface c_p	$\frac{x}{c}$	Upper surface c_p	Lower surface c_p	$\frac{x}{c}$	Upper surface c_p	Lower surface c_p	$\frac{x}{c}$	Upper surface c_p	Lower surface c_p	$\frac{x}{c}$	Upper surface c_p	Lower surface c_p
0.000	0.137	0.134	0.000	0.144	0.077	0.000	0.108	0.060	0.000	0.064	0.020	0.000	0.070	0.014
.001	.154	.087	.001		.060	.001	.124	.047	.001	.091	.004	.001	.087	-.010
.002	.164	.040	.002	.174	.010	.002	.144	-.006	.002	.111	-.013	.002	.110	-.053
.004	.157	-.016	.004	.170	-.043	.004	.151	-.070	.004	.124	-.096	.004	.123	-.103
.007	.134	-.073	.007		-.103	.007	.144	-.123	.007	.121	-.140	.007	.120	-.153
.011	.107	-.133	.011	.140	-.150	.011	.131	-.173	.011	.108		.011	.110	-.193
.016	.067	-.183	.016	.114	-.193	.016	.104	-.210	.016	.088	-.203	.016	.090	-.177
.021	.034	-.207	.021	.087	-.193	.021	.084		.021	.068	-.197	.021	.073	-.173
.031	.047	-.190	.031	.094	-.187	.031	.084	-.137	.031	.064	-.197	.031	.070	-.173
.040	.064	-.190	.042	.104	-.187	.043	.088	-.187	.045	.064	-.197	.048	.067	-.173
.050	.064	-.190	.052	.104	-.187	.055	.074	-.187	.059	.058	-.187	.065	.060	-.173
.060	.067	-.190	.063	.104	-.153	.068	.074	-.187	.074	.054		.082	.050	-.170
.069	.094	-.190	.074	.104	-.183	.080	.068	-.190	.088	.024	-.173	.100	.037	-.170
.079	.117	-.190	.085	.104	-.187	.092	.068	-.163	.103	.054	-.180	.117	.020	-.167
.088	.094	-.200	.095	.104		.105	.058	-.197	.117	.041	-.180	.134	-.017	-.163
.098	.094	-.203	.106	.104	-.183	.117	.054	-.193	.131	.043	-.177			
.107	.094	-.207	.117	.104	-.193	.129	.051	-.197	.146	.037	-.180			
.117	.091	-.207	.128	.101	-.197	.142	.044	-.197	.160	.030	-.180			
.127	.094	-.203	.139	.087	-.200	.154	.037	-.197	.175	.017	-.190			
.136	.111	-.200	.149		-.200	.166	.037	-.197	.189	-.017	-.193			
.146	.091	-.190	.160		-.197	.179	.034	-.197						
.155	.091	-.177	.171	.084	-.200	.191	.031	-.197						
.165	.091	-.150	.182	.064	-.200	.203	.024	-.197						
.175	.087	-.110	.193	.058	-.200	.216	.014	-.197						
.184	.087	-.070	.203	.058		.228	.017	-.187						
.194	.087	-.053	.214	.021										
.203		-.053	.225	.017	-.193									
.213	.094	-.053	.236	.017	-.203									
.222	.084	-.056	.246	.004	-.197									
.232	.084	-.056	.257	-.016	-.197									
.242	.061	-.060												
.251		-.070												
.261		-.070												
.270	-.005	-.060												
.280	-.025	-.073												

TABLE 4.- UPPER- AND LOWER-SURFACE PRESSURE COEFFICIENTS AT $R_{\bar{l}} = 0.24 \times 10^{6}$ – Continued

(h) $\alpha = 7^{\circ}$

Station 1			Station 2			Station 3			Station 4			Station 5		
$\frac{x}{c}$	Upper surface c_p	Lower surface c_p	$\frac{x}{c}$	Upper surface c_p	Lower surface c_p	$\frac{x}{c}$	Upper surface c_p	Lower surface c_p	$\frac{x}{c}$	Upper surface c_p	Lower surface c_p	$\frac{x}{c}$	Upper surface c_p	Lower surface c_p
0.000	0.142	0.135	0.000	0.124	0.074	0.000	0.105	0.051	0.000	0.072	0.007	0.000	0.067	0.001
.001	.162	.085	.001		.054	.001	.125	.034	.001	.092	-.006	.001	.080	-.026
.002	.175	.034	.002	.168	.001	.002	.152	-.023	.002	.112	-.030	.002	.110	-.070
.004	.175	-.026	.004	.171	-.056	.004	.166	-.080	.004	.132	-.107	.004	.134	-.117
.007	.158	-.087	.007		-.117	.007	.166	-.133	.007	.135	-.157	.007	.134	-.167
.011	.135	-.140	.011	.148	-.164	.011	.156	-.180	.011	.129		.011	.131	-.201
.016	.101	-.191	.016	.128	-.204	.016	.135	-.207	.016	.122	-.201	.016	.114	-.184
.021	.068	-.201	.021	.104	-.197	.021	.115		.021	.095	-.201	.021	.100	-.184
.031	.074	-.194	.031	.104	-.194	.031	.115	-.137	.031	.092	-.201	.031	.094	-.184
.040	.088	.194	.042	.111	-.194	.043	.098	-.194	.045	.088	-.197	.048	.087	-.180
.050	.091	-.191	.052	.108	-.194	.055	.098	-.194	.059	.058	-.194	.065	.077	-.177
.060	.091	-.194	.063	.108	-.160	.068	.092	-.197	.074	.075		.082	.067	-.177
.069	.111	-.197	.074	.108	-.194	.080	.088	-.201	.088	.075	-.174	.100	.054	-.177
.079	.118	-.204	.085	.108	-.194	.092	.082	-.167	.103	.068	-.180	.117	.033	-.174
.088	.098	-.211	.095	.104		.105	.078	-.201	.117	.061	-.177	.134	-.007	-.170
.098	.098	-.214	.106	.104	-.194	.117	.075	-.201	.131	.060	-.177			
.107	.098	-.217	.117	.104	-.201	.129	.061	-.201	.146	.057	-.177			
.117	.094	-.217	.128	.104	-.201	.142	.065	-.201	.160	.044	-.184			
.127	.098	-.217	.139	.081	-.204	.154	.061	-.201	.175	.033	-.191			
.136	.111	-.217	.149		-.207	.166	.058	-.201	.189	-.003	-.194			
.146	.094	-.214	.160		-.207	.179	.055	-.201						
.155	.094	-.207	.171	.077	-.207	.191	.048	-.201						
.165	.091	-.201	.182	.061	-.211	.203	.041	-.201						
.175	.091	-.180	.193	.054	-.214	.216	.031	-.201						
.184	.087	-.144	.203	.072		.228	.035	-.194						
.194	.087	-.100	.214	.038										
.203		-.073	.225	.025	-.204									
.213	.098	-.063	.236	.031	-.211									
.222	.087	-.060	.246	.025	-.211									
.232	.074	-.060	.257	-.006	-.211									
.242	.047	-.063												
.251		-.070												
.261		-.066												
.270	-.013	-.056												
.280	-.033	-.073												

TABLE 4.- UPPER- AND LOWER-SURFACE PRESSURE COEFFICIENTS AT $R_{\bar{F}} = 0.24 \times 10^6$ – Concluded

(i) $\alpha = 8^o$

Station 1			Station 2			Station 3			Station 4			Station 5		
$\frac{x}{c}$	Upper surface c_p	Lower surface c_p	$\frac{x}{c}$	Upper surface c_p	Lower surface c_p	$\frac{x}{c}$	Upper surface c_p	Lower surface c_p	$\frac{x}{c}$	Upper surface c_p	Lower surface c_p	$\frac{x}{c}$	Upper surface c_p	Lower surface c_p
0.000	0.142	0.129	0.000	0.121	0.062	0.000	0.099	0.038	0.000	0.065	0.001	0.000	0.054	-0.013
.001	.166	.079	.001		.042	.001	.119	.024	.001	.085	-.023	.001	.074	-.036
.002	.186	.021	.002	.175	-.016	.002	.153	-.036	.002	.116	-.036	.002	.108	-.087
.004	.193	-.039	.004	.185	-.073	.004	.173	-.097	.004	.133	-.121	.004	.135	-.134
.007	.179	-.100	.007		-.131	.007	.177	-.144	.007	.139	-.168	.007	.141	-.181
.011	.162	-.158	.011	.178	-.178	.011	.173	-.198	.011	.143		.011	.141	-.205
.016	.132	-.201	.016	.158	-.215	.016	.160	-.208	.016	.136	-.198	.016	.138	-.195
.021	.102	-.208	.021	.141	-.208	.021	.150		.021	.126	-.202	.021	.124	-.195
.031	.105	-.205	.031	.135	-.205	.031	.133	-.141	.031	.119	-.202	.031	.114	-.195
.040	.112	-.205	.042	.138	-.205	.043	.129	-.202	.045	.109	-.198	.048	.108	-.195
.050	.112	-.205	.052	.138	-.205	.055	.106	-.202	.059	.099	-.195	.065	.098	-.195
.060	.112	-.205	.063	.135	-.168	.068	.106	-.205	.074	.102		.082	.081	-.195
.069	.136	-.208	.074	.135	-.198	.080	.089	-.205	.088	.096	-.181	.100	.067	-.191
.079	.145	-.215	.085	.131	-.202	.092	.099	-.168	.103	.092	-.181	.117	.044	-.188
.088	.124	-.222	.095	.131		.105	.096	-.202	.117	.082	-.178	.134	.057	-.181
.098	.124	-.225	.106	.128	-.198	.117	.092	-.202	.131	.077	-.175			
.107	.121	-.228	.117	.128	-.202	.129	.092	-.205	.146	.071	-.178			
.117	.118	-.232	.128	.121	-.208	.142	.072	-.205	.160	.064	-.181			
.127	.121	-.235	.139	.108	-.212	.154	.048	-.205	.175	.044	-.188			
.136	.138	-.235	.149		-.212	.166	.075	-.205	.189	.007	-.191			
.146	.118	-.228	.160		-.215	.179	.069	-.205						
.155	.114	-.228	.171	.098	-.222	.191	.052	-.205						
.165	.111	-.228	.182	.077	-.225	.203	.058	-.205						
.175	.111	-.225	.193	.071	-.225	.216	.042	-.205						
.184	.108	-.208	.203	.089		.228	.048	-.198						
.194	.111	-.181	.214	.055										
.203		-.151	.225	.045	-.212									
.213	.114	-.117	.236	.048	-.225									
.222	.108	-.093	.246	.035	-.225									
.232	.084	-.080	.257	.004	-.225									
.242	.064	-.077												
.251		-.077												
.261		-.060												
.270	.003	-.060												
.280	-.020	-.073												

TABLE 5.- UPPER- AND LOWER-SURFACE PRESSURE COEFFICIENTS AT $R_{\bar{l}} = 0.16 \times 10^6$

(a) $\alpha = 0^\circ$

Station 1			Station 2			Station 3			Station 4			Station 5		
$\frac{x}{c}$	Upper surface c_p	Lower surface c_p	$\frac{x}{c}$	Upper surface c_p	Lower surface c_p	$\frac{x}{c}$	Upper surface c_p	Lower surface c_p	$\frac{x}{c}$	Upper surface c_p	Lower surface c_p	$\frac{x}{c}$	Upper surface c_p	Lower surface c_p
0.000	0.138	0.189	0.000	0.123	0.118	0.000	0.108	0.118	0.000	-0.035	0.097	0.000	0.091	0.092
.001	.138	.138	.001		.118	.001	.103	.112	.001	.052	.092	.001	.086	.087
.002	.112	.112	.002	.107	.092	.002	.062	.087	.002	.067	.118	.002	.066	.062
.004	.072	.072	.004	.062	.057	.004	.047	.051	.004	.032	.036	.004	.035	.021
.007	.026	.026	.007		.011	.007	.006	.001	.007	-.009	-.009	.007	-.015	-.025
.011	-.025	-.030	.011	-.035	-.040	.011	-.045	-.050	.011	-.060		.011	-.061	-.070
.016	-.081	-.086	.016	-.091	-.091	.016	-.096	-.101	.016	-.111	-.111	.016	-.122	-.116
.021	-.131	-.131	.021	-.142	-.136	.021	-.141		.021	-.152	-.157	.021	-.162	-.162
.031	-.106	-.116	.031	-.116	-.116	.031	-.116	-.030	.031	-.136	-.142	.031	-.147	-.147
.040	-.091	-.096	.042	-.096	-.101	.043	-.091	-.091	.045	-.106	-.116	.048	-.127	-.131
.050	-.076	-.081	.052	-.086	-.091	.055	-.085	-.081	.059	-.075	-.091	.065	-.101	-.101
.060	-.065	-.065	.063	-.076	-.020	.068	-.070	-.070	.074	-.070		.082	-.081	-.091
.069	.011	-.050	.074	-.060	-.050	.080	-.060	-.060	.088	-.060	-.055	.100	-.071	-.076
.079	.011	-.040	.085	-.045	-.045	.092	-.055	-.015	.103	-.055	-.050	.117	-.066	-.076
.088	-.030	-.030	.095	-.040		.105	-.045	-.045	.117	-.050	-.045	.134	-.086	-.096
.098	-.020	-.025	.106	-.030	-.020	.117	-.040	-.040	.131	-.041	-.040			
.107	-.015	-.015	.117	-.025	-.015	.129	-.035	-.035	.146	-.041	-.040			
.117	-.015	-.015	.128	-.015	-.015	.142	-.035	-.035	.160	-.046	-.040			
.127	-.004	-.015	.139	-.015	-.015	.154	-.035	-.035	.175	-.051	-.050			
.136	.006	-.015	.149		-.015	.166	-.040	-.035	.189	-.081	-.076			
.146	-.009	-.015	.160		-.015	.179	-.040	-.025						
.155	-.009	-.015	.171	.011	-.025	.191	-.040	-.035						
.165	-.009	-.015	.182	-.009	-.025	.203	-.040	-.040						
.175	-.009	-.015	.193	-.015	-.025	.216	-.050	-.045						
.184	-.009	-.015	.203	.047		.228	-.045	-.040						
.194	-.009	-.015	.214	-.035	-.020									
.203		-.015	.225	-.045	-.030									
.213	.001	-.020	.236	-.055	-.040									
.222	-.009	-.020	.246	-.065	-.055									
.232	-.009	-.030	.257											
.242	-.009	-.045												
.251		-.060												
.261		-.045												
.270	-.045	-.040												
.280	-.065	-.060												

TABLE 5.- UPPER- AND LOWER-SURFACE PRESSURE COEFFICIENTS AT $R_{\bar{c}} = 0.16 \times 10^6$ – Continued

(b) $\alpha = 1^o$

Station 1			Station 2			Station 3			Station 4			Station 5		
$\frac{x}{c}$	Upper surface c_p	Lower surface c_p	$\frac{x}{c}$	Upper surface c_p	Lower surface c_p	$\frac{x}{c}$	Upper surface c_p	Lower surface c_p	$\frac{x}{c}$	Upper surface c_p	Lower surface c_p	$\frac{x}{c}$	Upper surface c_p	Lower surface c_p
0.000	0.143	0.188	0.000	0.122	0.112	0.000	0.092	0.117	0.000	0.097	0.097	0.000	0.101	0.087
.001	.138	.133	.001		.112	.001	.113	.107	.001	.052	.087	.001	.101	.077
.002	.122	.102	.002	.112	.082	.002	.062	.082	.002	.067	.107	.002	.086	.046
.004	.087	.062	.004	.077	.041	.004	.067	.031	.004	.052	.016	.004	.061	.006
.007	.041	.011	.007		-.009	.007	.026	-.015	.007	.016	-.030	.007	.010	-.045
.011	-.004	-.050	.011	-.009	-.060	.011	-.019	-.065	.011	-.035		.011	-.035	-.096
.016	-.060	-.101	.016	-.065	-.111	.016	-.075	-.116	.016	-.085	-.136	.016	-.091	-.141
.021	-.116	-.146	.021	-.116	-.146	.021	-.126		.021	-.126	-.167	.021	-.137	-.187
.031	-.091	-.126	.031	-.096	-.121	.031	-.095	-.040	.031	-.095	-.151	.031	-.106	-.187
.040	-.055	-.111	.042	-.060	-.111	.043	-.055	-.106	.045	-.050	-.141	.048	-.051	-.187
.050	-.040	-.106	.052	-.040	-.106	.055	-.035	-.106	.059	-.024	-.131	.065	-.035	-.167
.060	-.025	-.096	.063	-.030	-.050	.068	-.019	-.101	.074	-.024		.082	-.025	-.146
.069	-.046	-.091	.074	-.015	-.091	.080	-.014	-.101	.088	-.024	-.101	.100	-.030	-.141
.079	.041	-.075	.085	-.004	-.091	.092	-.009	-.050	.103	-.024	-.096	.117	-.035	-.131
.088	.001	-.060	.095	.001		.105	-.004	-.091	.117	-.024	-.091	.134	-.056	-.141
.098	.001	-.045	.106	.001	-.065	.117	-.004	-.086	.131	-.025	-.086			
.107	.001	-.035	.117	.006	-.065	.129	-.004	-.070	.146	-.025	-.086			
.117	.001	-.030	.128	.006	-.055	.142	-.014	-.065	.160	-.030	-.091			
.127	.006	-.025	.139	.001	-.045	.154	-.014	-.065	.175	-.035	-.091			
.136	.011	-.025	.149		-.040	.166	-.019	-.060	.189	-.056	-.111			
.146	.006	-.025	.160		-.035	.179	-.024	-.050						
.155	.006	-.025	.171	.026	-.040	.191	-.024	-.050						
.165	.006	-.025	.182	.006	-.040	.203	-.029	-.060						
.175	.006	-.025	.193	.001	-.040	.216	-.040	-.060						
.184	.001	-.025	.203	.047		.228	-.035	-.050						
.194	.006	-.025	.214	-.019										
.203		-.025	.225	-.035	-.030									
.213	.011	-.030	.236	-.035	-.040									
.222	.006	-.030	.246	-.040	-.045									
.232	.006	-.035	.257	-.055	-.055									
.242	.006	-.045												
.251		-.060												
.261		-.065												
.270	-.040	-.040												
.280	-.065	-.065												

TABLE 5.- UPPER- AND LOWER-SURFACE PRESSURE COEFFICIENTS AT $R_{\bar{c}} = 0.16 \times 10^6$ – Continued

(c) $\alpha = 2^\circ$

Station 1			Station 2			Station 3			Station 4			Station 5		
$\frac{x}{c}$	Upper surface c_p	Lower surface c_p	$\frac{x}{c}$	Upper surface c_p	Lower surface c_p	$\frac{x}{c}$	Upper surface c_p	Lower surface c_p	$\frac{x}{c}$	Upper surface c_p	Lower surface c_p	$\frac{x}{c}$	Upper surface c_p	Lower surface c_p
0.000	0.143	0.183	0.000	0.128	0.112	0.000	0.118	0.107	0.000	0.098	0.082	0.000	0.106	0.077
.001	.148	.122	.001		.102	.001	.118	.102	.001	.092	.072	.001	.106	.062
.002	.138	.087	.002	.112	.072	.002	.103	.067	.002	.098	.087	.002	.101	.031
.004	.102	.041	.004	.092	.026	.004	.082	.016	.004	.077	-.004	.004	.081	-.015
.007	.062	-.009	.007		-.030	.007	.057	-.040	.007	.047	-.050	.007	.046	-.065
.011	.011	-.060	.011	.011	-.081	.011	.011	-.096	.011	.006		.011	.005	-.116
.016	-.040	-.116	.016	-.040	-.126	.016	-.040	-.141	.016	-.035	-.152	.016	-.041	-.162
.021	-.091	-.157	.021	-.091	-.152	.021	-.085		.021	-.070	-.162	.021	-.076	-.202
.031	-.060	-.141	.031	-.050	-.131	.031	-.040	-.045	.031	-.040	-.157	.031	-.046	-.212
.040	-.020	-.131	.042	-.015	-.126	.043	-.004	-.121	.045	-.014	-.152	.048	-.010	-.212
.050	-.004	-.126	.052	.001	-.121	.055	.006	-.121	.059	.001	-.146	.065	-.005	-.212
.060	.006	-.121	.063	.011	-.065	.068	.011	-.121	.074	-.004		.082	-.005	-.192
.069	.062	-.121	.074	.011	-.116	.080	.011	-.121	.088	-.004	-.131	.100	-.010	-.177
.079	.057	-.111	.085	.011	-.116	.092	.011	-.070	.103	-.004	-.131	.117	-.020	-.157
.088	.011	-.101	.095	.016		.105	.011	-.116	.117	-.009	-.131	.134	-.041	-.141
.098	.011	-.086	.106	.016	-.106	.117	.011	-.111	.131	-.005	-.131			
.107	.011	-.065	.117	.016	-.106	.129	.006	-.111	.146	-.010	-.131			
.117	.011	-.055	.128	.016	-.101	.142	-.004	-.111	.160	-.010	-.136			
.127	.021	-.045	.139	.011	-.096	.154	-.004	-.106	.175	-.015	-.141			
.136	.031	-.035	.149		-.086	.166	-.004	-.101	.189	-.041	-.141			
.146	.016	-.035	.160		-.081	.179	-.009	-.106						
.155	.016	-.030	.171	.041	-.070	.191	-.014	-.101						
.165	.011	-.030	.182	.011	-.070	.203	-.019	-.096						
.175	.011	-.030	.193	.006	-.065	.216	-.024	-.096						
.184	.011	-.035	.203	.057		.228	-.019	-.081						
.194	.011	-.035	.214	-.014										
.203		-.035	.225	-.019	-.045									
.213	.021	-.035	.236	-.029	-.050									
.222	.011	-.040	.246	-.040	-.055									
.232	.011	-.040	.257	-.050	-.065									
.242	.011	-.045												
.251		-.060												
.261		-.070												
.270	-.040	-.045												
.280	-.065	-.065												

TABLE 5.- UPPER- AND LOWER-SURFACE PRESSURE COEFFICIENTS AT $R_{\bar{c}} = 0.16 \times 10^6$ – Continued

(d) $\alpha = 3^{\circ}$

Station 1			Station 2			Station 3			Station 4			Station 5		
$\frac{x}{c}$	Upper surface c_p	Lower surface c_p	$\frac{x}{c}$	Upper surface c_p	Lower surface c_p	$\frac{x}{c}$	Upper surface c_p	Lower surface c_p	$\frac{x}{c}$	Upper surface c_p	Lower surface c_p	$\frac{x}{c}$	Upper surface c_p	Lower surface c_p
0.000	0.148	0.178	0.000	0.133	0.107	0.000	0.123	0.107	0.000	-0.040	0.077	0.000	0.101	0.067
.001	.153	.117	.001		.097	.001	.133	.097	.001	.082	.062	.001	.111	.057
.002	.143	.082	.002	.133	.062	.002	.087	.051	.002	.098	.072	.002	.111	.011
.004	.117	.031	.004	.113	.011	.004	.082	.001	.004	.026	-.030	.004	.101	-.035
.007	.087	-.020	.007		-.045	.007	.057	-.050	.007	.067	-.075	.007	.071	-.091
.011	.041	-.075	.011	.042	-.096	.011	.042	-.106	.011	.042		.011	.041	-.136
.016	-.015	-.131	.016	-.004	-.141	.016	.006	-.157	.016	.006	-.167	.016	.005	-.182
.021	-.060	-.172	.021	-.045	-.152	.021	-.029		.021	-.024	-.157	.021	-.025	-.207
.031	-.020	-.152	.031	-.009	-.141	.031	.001	-.050	.031	-.004	-.152	.031	.000	-.197
.040	.006	-.146	.042	.011	-.141	.043	.021	-.136	.045	.011	-.152	.048	.015	-.197
.050	.011	-.141	.052	.021	-.136	.055	.032	-.141	.059	.016	-.152	.065	.015	-.197
.060	.021	-.141	.063	.026	-.086	.068	.032	-.141	.074	.011		.082	.010	-.192
.069	.077	-.141	.074	.032	-.136	.080	.032	-.141	.088	.011	-.146	.100	.005	-.182
.079	.072	-.141	.085	.037	-.136	.092	.032	-.091	.103	.006	-.157	.117	-.005	-.167
.088	.032	-.131	.095	.037		.105	.026	-.141	.117	.011	-.157	.134	-.035	-.152
.098	.032	-.121	.106	.037	-.126	.117	.021	-.141	.131	.010	-.162			
.107	.032	-.111	.117	.037	-.136	.129	.016	-.141	.146	.010	-.167			
.117	.032	-.096	.128	.037	-.136	.142	.011	-.136	.160	.005	-.167			
.127	.037	-.075	.139	.032	-.131	.154	.011	-.136	.175	-.005	-.167			
.136	.047	-.060	.149		-.126	.166	.006	-.136	.189	-.035	-.157			
.146	.026	-.045	.160		-.121	.179	.001	-.136						
.155	.026	-.040	.171	.052	-.116	.191	.001	-.136						
.165	.026	-.040	.182	.021	-.111	.203	-.004	-.121						
.175	.026	-.035	.193	.011	-.106	.216	-.019	-.116						
.184	.026	-.040	.203	.062		.228	-.009	-.111						
.194	.026	-.040	.214	.001										
.203		-.040	.225	-.009	-.081									
.213	.037	-.040	.236	-.014	-.086									
.222	.026	-.040	.246	-.019	-.086									
.232	.026	-.045	.257	-.040	-.086									
.242	.021	-.050												
.251		-.060												
.261		-.070												
.270	-.040	-.055												
.280	-.065	-.065												

TABLE 5.- UPPER- AND LOWER-SURFACE PRESSURE COEFFICIENTS AT $R_{\bar{l}} = 0.16 \times 10^6$ – Continued

(e) $\alpha = 4^o$

Station 1			Station 2			Station 3			Station 4			Station 5		
$\frac{x}{c}$	Upper surface c_p	Lower surface c_p	$\frac{x}{c}$	Upper surface c_p	Lower surface c_p	$\frac{x}{c}$	Upper surface c_p	Lower surface c_p	$\frac{x}{c}$	Upper surface c_p	Lower surface c_p	$\frac{x}{c}$	Upper surface c_p	Lower surface c_p
0.000	0.148	0.174	0.000	0.133	0.103	0.000	0.082	0.097	0.000	0.082	0.056	0.000	0.101	0.056
.001	.158	.113	.001		.087	.001	.103	.087	.001	.113	.046	.001	.111	.036
.002	.153	.072	.002	.143	.047	.002	.103	.036	.002	.113	.056	.002	.121	-.004
.004	.138	.021	.004	.128	-.004	.004	.108	-.015	.004	.113	-.045	.004	.116	-.055
.007	.102	-.035	.007		-.060	.007	.082	-.070	.007	.092	-.096	.007	.101	-.106
.011	.062	-.090	.011	.072	-.111	.011	.062	-.126	.011	.067		.011	.076	-.157
.016	.016	-.141	.016	.031	-.156	.016	.047	-.167	.016	.042	-.182	.016	.046	-.192
.021	-.030	-.177	.021	.001	-.161	.021	.016		.021	.016	-.167	.021	.020	-.182
.031	.006	-.161	.031	.021	-.151	.031	.037	-.060	.031	.021	-.162	.031	.030	-.177
.040	.026	-.156	.042	.042	-.151	.043	.052	-.151	.045	.031	-.157	.048	.035	-.177
.050	.036	-.151	.052	.047	-.151	.055	.052	-.151	.059	.042	-.157	.065	.030	-.177
.060	.041	-.156	.063	.052	-.101	.068	.047	-.151	.074	-.004		.082	.025	-.177
.069	.097	-.156	.074	.052	-.146	.080	.047	-.151	.088	.026	-.157	.100	.015	-.167
.079	.087	-.156	.085	.052	-.151	.092	.047	-.101	.103	.011	-.167	.117	.005	-.167
.088	.047	-.156	.095	.057		.105	.042	-.151	.117	.021	-.167	.134	-.030	-.162
.098	.047	-.151	.106	.052	-.146	.117	.037	-.157	.131	.025	-.172			
.107	.047	-.146	.117	.052	-.151	.129	.031	-.157	.146	.020	-.177			
.117	.047	-.141	.128	.052	-.151	.142	.016	-.157	.160	.015	-.177			
.127	.052	-.121	.139	.047	-.151	.154	.016	-.157	.175	.005	-.182			
.136	.062	-.106	.149		-.151	.166	.016	-.157	.189	-.025	-.177			
.146	.047	-.090	.160		-.146	.179	.016	-.157						
.155	.047	-.065	.171	.057	-.146	.191	.011	-.151						
.165	.047	-.045	.182	.026	-.146	.203	.011	-.151						
.175	.047	-.040	.193	.016	-.136	.216	-.004	-.146						
.184	.042	-.040	.203	.067		.228	-.004	-.141						
.194	.042	-.040	.214	.011										
.203		-.040	.225	.001	-.116									
.213	.052	-.045	.236	-.004	-.121									
.222	.042	-.045	.246	-.004	-.121									
.232	.042	-.045	.257	-.029	-.121									
.242	.031	-.055												
.251		-.060												
.261		-.070												
.270	-.040	-.060												
.280	-.065	-.070												

TABLE 5.- UPPER- AND LOWER-SURFACE PRESSURE COEFFICIENTS AT $R_{\bar{c}} = 0.16 \times 10^6$ – Continued

(f) $\alpha = 5^{\circ}$

Station 1			Station 2			Station 3			Station 4			Station 5		
$\frac{x}{c}$	Upper surface c_p	Lower surface c_p	$\frac{x}{c}$	Upper surface c_p	Lower surface c_p	$\frac{x}{c}$	Upper surface c_p	Lower surface c_p	$\frac{x}{c}$	Upper surface c_p	Lower surface c_p	$\frac{x}{c}$	Upper surface c_p	Lower surface c_p
0.000	0.142	0.167	0.000	0.140	0.086	0.000	0.112	0.081	0.000	0.087	0.046	0.000	0.090	0.036
.001	.152	.101	.001		.076	.001	.097	.066	.001	.102	.031	.001	.101	.016
.002	.157	.056	.002	.165	.031	.002	.097	.021	.002	.112	.036	.002	.116	-.030
.004	.147	.006	.004	.150	-.024	.004	.112	-.040	.004	.107	-.065	.004	.121	-.080
.007	.117	-.055	.007		-.085	.007	.102	-.100	.007	.102	-.115	.007	.111	-.130
.011	.081	-.110	.011	.110	-.130	.011	.102	-.150	.011	.092		.011	.095	-.171
.016	.041	-.160	.016	.070	-.176	.016	.077	-.191	.016	.062	-.191	.016	.070	-.166
.021	.001	-.186	.021	.045	-.176	.021	.051		.021	.041	-.186	.021	.050	-.160
.031	.031	-.176	.031	.060	-.171	.031	.046	-.075	.031	.036	-.181	.031	.050	-.160
.040	.046	-.176	.042	.070	-.171	.043	.067	-.166	.045	.046	-.171	.048	.055	-.160
.050	.051	-.171	.052	.075	-.171	.055	.062	-.166	.059	.041	-.171	.065	.045	-.160
.060	.051	-.171	.063	.075	-.115	.068	.062	-.171	.074	.041		.082	.040	-.160
.069	.106	-.176	.074	.075	-.166	.080	.056	-.176	.088	.041	-.171	.100	.025	-.160
.079	.110	-.176	.085	.075	-.166	.092	.046	-.115	.103	.041	-.171	.117	.010	-.160
.088	.070	-.181	.095	.080		.105	.046	-.171	.117	.036	-.171	.134	-.025	-.155
.098	.070	-.181	.106	.075	-.160	.117	.041	-.176	.131	.030	-.171			
.107	.070	-.176	.117	.075	-.166	.129	.036	-.176	.146	.030	-.171			
.117	.070	-.171	.128	.075	-.171	.142	.031	-.171	.160	.020	-.171			
.127	.070	-.166	.139	.070	-.171	.154	.031	-.176	.175	.010	-.171			
.136	.080	-.155	.149		-.171	.166	.026	-.176	.189	-.020	-.171			
.146	.070	-.145	.160		-.171	.179	.021	-.176						
.155	.070	-.115	.171	.075	-.171	.191	.011	-.171						
.165	.070	-.090	.182	.050	-.171	.203	.006	-.171						
.175	.070	-.055	.193	.035	-.166	.216	.006	-.171						
.184	.065	-.040	.203	.077		.228	.006	-.166						
.194	.065	-.040	.214	.011										
.203		-.045	.225	.006	-.155									
.213	.070	-.050	.236	.006	-.166									
.222	.065	-.055	.246	-.009	-.166									
.232	.065	-.055	.257	-.029	-.166									
.242	.050	-.060												
.251		-.070												
.261		-.075												
.270	-.025	-.065												
.280	-.041	-.075												

TABLE 5.- UPPER- AND LOWER-SURFACE PRESSURE COEFFICIENTS AT $R_{\bar{c}} = 0.16 \times 10^6$ – Continued

(g) $\alpha = 6^\circ$

Station 1			Station 2			Station 3			Station 4			Station 5		
$\frac{x}{c}$	Upper surface c_p	Lower surface c_p	$\frac{x}{c}$	Upper surface c_p	Lower surface c_p	$\frac{x}{c}$	Upper surface c_p	Lower surface c_p	$\frac{x}{c}$	Upper surface c_p	Lower surface c_p	$\frac{x}{c}$	Upper surface c_p	Lower surface c_p
0.000	0.140	0.156	0.000	0.130	0.076	0.000	0.106	0.065	0.000	0.076	0.025	0.000	0.070	0.010
.001	.150	.091	.001		.061	.001	.101	.050	.001	.091	.005	.001	.090	-.005
.002	.160	.041	.002	.160	.011	.002	.141	-.005	.002	.081	.015	.002	.110	-.050
.004	.150	-.014	.004	.160	-.044	.004	.146	-.060	.004	.091	-.090	.004	.120	-.100
.007	.130	-.069	.007		-.099	.007	.116	-.115	.007	.101	-.140	.007	.115	-.150
.011	.100	-.124	.011	.125	-.149	.011	.121	-.165	.011	.106		.011	.105	-.185
.016	.060	-.175	.016	.095	-.190	.016	.086	-.200	.016	.086	-.200	.016	.090	-.170
.021	.030	-.195	.021	.065	-.185	.021	.081		.021	.061	-.195	.021	.070	-.170
.031	.045	-.185	.031	.075	-.185	.031	.081	-.090	.031	.056	-.195	.031	.065	-.170
.040	.055	-.185	.042	.085	-.185	.043	.081	-.180	.045	.061	-.195	.048	.065	-.170
.050	.060	-.185	.052	.085	-.185	.055	.076	-.185	.059	.066	-.190	.065	.055	-.170
.060	.065	-.185	.063	.085	-.125	.068	.071	-.190	.074	.056		.082	.050	-.170
.069	.110	-.190	.074	.085	-.180	.080	.066	-.195	.088	.046	-.175	.100	.035	-.170
.079	.115	-.190	.085	.085	-.180	.092	.056	-.125	.103	.041	-.185	.117	.020	-.165
.088	.075	-.195	.095	.085		.105	.056	-.185	.117	.021	-.185	.134	-.020	-.165
.098	.075	-.200	.106	.085	-.175	.117	.051	-.190	.131	.040	-.175			
.107	.080	-.200	.117	.085	-.185	.129	.041	-.190	.146	.040	-.175			
.117	.075	-.200	.128	.085	-.190	.142	.041	-.190	.160	.030	-.185			
.127	.080	-.200	.139	.075	-.195	.154	.041	-.195	.175	.015	-.190			
.136	.090	-.195	.149		-.195	.166	.036	-.195	.189	-.015	-.190			
.146	.075	-.185	.160		-.195	.179	.036	-.195						
.155	.075	-.170	.171	.075	-.195	.191	.031	-.190						
.165	.070	-.149	.182	.050	-.200	.203	.021	-.190						
.175	.070	-.114	.193	.040	-.200	.216	.006	-.190						
.184	.065	-.074	.203	.081		.228	.006	-.180						
.194	.065	-.054	.214	.016										
.203		-.054	.225	.011	-.185									
.213	.070	-.054	.236	.006	-.200									
.222	.065	-.059	.246	.001	-.195									
.232	.060	-.059	.257	-.024	-.195									
.242	.045	-.069												
.251		-.074												
.261		-.079												
.270	-.025	-.064												
.280	-.040	-.079												

TABLE 5.- UPPER- AND LOWER-SURFACE PRESSURE COEFFICIENTS AT $R_{\bar{c}} = 0.16 \times 10^6$ – Continued

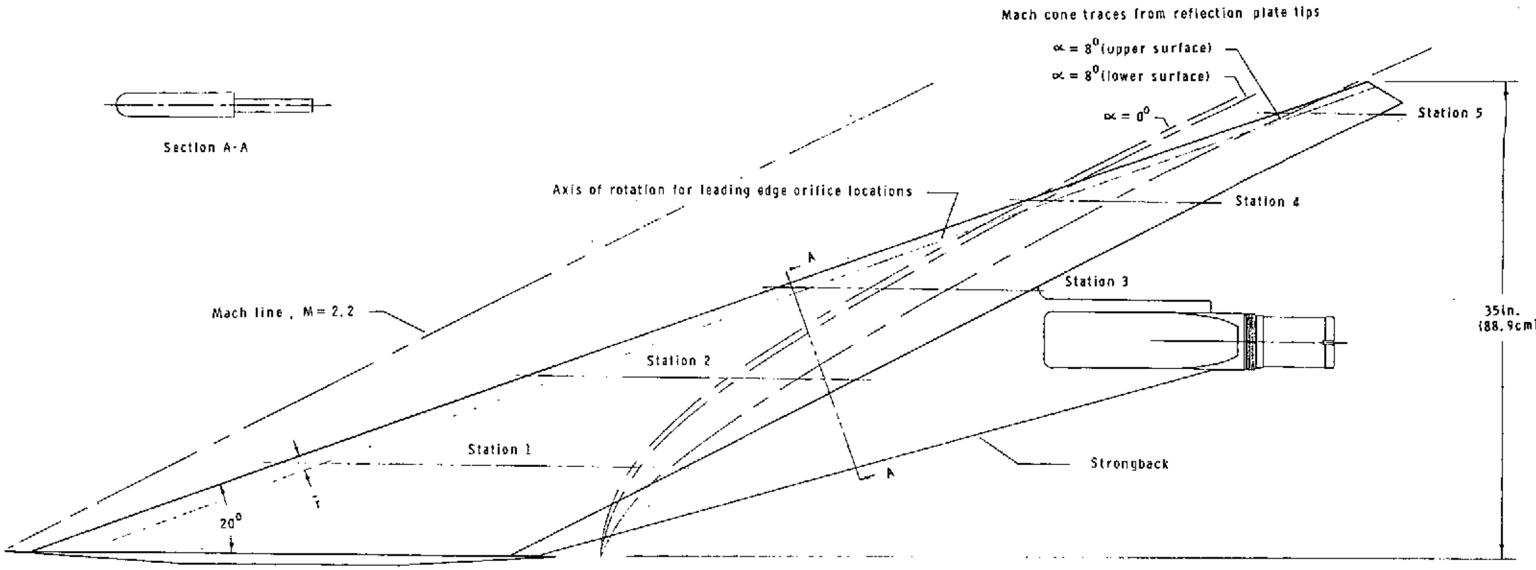
(h) $\alpha = 7^{\circ}$

Station 1			Station 2			Station 3			Station 4			Station 5		
$\frac{x}{c}$	Upper surface c_p	Lower surface c_p	$\frac{x}{c}$	Upper surface c_p	Lower surface c_p	$\frac{x}{c}$	Upper surface c_p	Lower surface c_p	$\frac{x}{c}$	Upper surface c_p	Lower surface c_p	$\frac{x}{c}$	Upper surface c_p	Lower surface c_p
0.000	0.135	0.145	0.000	0.115	0.060	0.000	0.096	0.045	0.000	0.066	0.006	0.000	0.055	-0.004
.001	.150	.075	.001		.045	.001	.106	.031	.001	.081	-.009	.001	.074	-.024
.002	.170	.026	.002	.150	-.004	.002	.135	-.024	.002	.086	-.004	.002	.104	-.074
.004	.160	-.034	.004	.160	-.064	.004	.145	-.079	.004	.111	-.109	.004	.124	-.124
.007	.145	-.089	.007		-.119	.007	.140	-.133	.007	.120	-.158	.007	.124	-.168
.011	.120	-.143	.011	.140	-.163	.011	.140	-.183	.011	.115		.011	.114	-.203
.016	.090	-.188	.016	.110	-.203	.016	.115	-.208	.016	.101	-.203	.016	.104	-.188
.021	.055	-.203	.021	.095	-.198	.021	.101		.021	.086	-.203	.021	.089	-.188
.031	.060	-.198	.031	.095	-.198	.031	.096	-.104	.031	.076	-.203	.031	.084	-.188
.040	.075	-.198	.042	.095	-.193	.043	.096	-.193	.045	.071	-.203	.048	.079	-.188
.050	.080	-.198	.052	.095	-.193	.055	.086	-.198	.059	.081	-.198	.065	.064	-.178
.060	.080	-.198	.063	.095	-.143	.068	.081	-.198	.074	.071		.082	.055	-.178
.069	.125	-.203	.074	.095	-.198	.080	.076	-.203	.088	.051	-.188	.100	.045	-.178
.079	.125	-.203	.085	.095	-.198	.092	.071	-.138	.103	.056	-.188	.117	.015	-.178
.088	.085	-.208	.095	.095		.105	.066	-.198	.117	.051	-.178	.134	.015	-.173
.098	.085	-.213	.106	.095	-.193	.117	.056	-.198	.131	.050	-.178			
.107	.090	-.213	.117	.095	-.198	.129	.051	-.203	.146	.045	-.188			
.117	.085	-.213	.128	.095	-.203	.142	.051	-.203	.160	.035	-.193			
.127	.090	-.218	.139	.075	-.208	.154	.046	-.203	.175	.025	-.198			
.136	.100	-.213	.149		-.208	.166	.046	-.203	.189	-.015	-.203			
.146	.085	-.213	.160		-.213	.179	.046	-.203						
.155	.080	-.208	.171	.075	-.213	.191	.036	-.203						
.165	.080	-.198	.182	.050	-.213	.203	.026	-.203						
.175	.080	-.178	.193	.045	-.213	.216	.016	-.203						
.184	.075	-.143	.203	.086		.228	.021	-.198						
.194	.080	-.104	.214	-.014										
.203		-.079	.225	.021	-.208									
.213	.080	-.069	.236	.016	-.213									
.222	.075	-.069	.246	.011	-.213									
.232	.060	-.069	.257	-.019	-.213									
.242	.040	-.069												
.251		-.079												
.261		-.079												
.270	-.019	-.069												
.280	-.049	-.084												

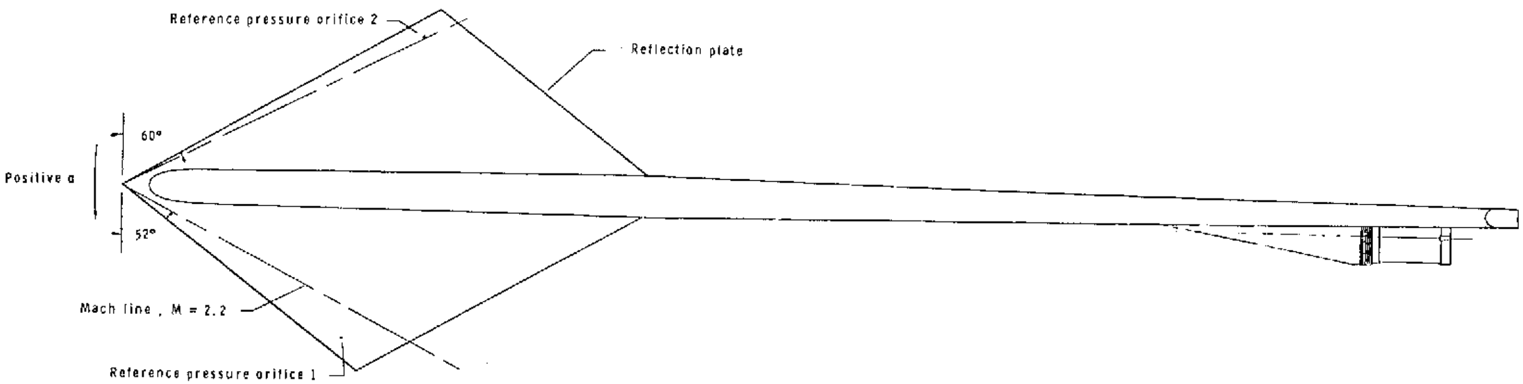
TABLE 5.- UPPER- AND LOWER-SURFACE PRESSURE COEFFICIENTS AT $R_{\bar{c}} = 0.16 \times 10^6$ – Concluded

(i) $\alpha = 8^{o}$

Station 1			Station 2			Station 3			Station 4			Station 5		
$\frac{x}{c}$	Upper surface c_p	Lower surface c_p	$\frac{x}{c}$	Upper surface c_p	Lower surface c_p	$\frac{x}{c}$	Upper surface c_p	Lower surface c_p	$\frac{x}{c}$	Upper surface c_p	Lower surface c_p	$\frac{x}{c}$	Upper surface c_p	Lower surface c_p
0.000	0.107	0.112	0.000	0.078	0.025	0.000	0.059	0.010	0.000	0.025	-0.034	0.000	0.019	-0.043
.001	.121	.044	.001		.006	.001	.083	-.005	.001	.049	-.048	.001	.039	-.067
.002	.141	-.009	.002	.126	-.048	.002	.064	-.063	.002	.064	-.038	.002	.072	-.110
.004	.146	-.072	.004	.131	-.101	.004	.122	-.120	.004	.083	-.144	.004	.096	-.159
.007	.131	-.125	.007		-.154	.007	.127	-.169	.007	.098	-.188	.007	.101	-.197
.011	.117	-.173	.011	.121	-.197	.011	.122	-.217	.011	.098		.011	.101	-.226
.016	.088	-.221	.016	.107	-.231	.016	.112	-.231	.016	.088	-.226	.016	.092	-.217
.021	.059	-.226	.021	.088	-.221	.021	.083		.021	.074	-.226	.021	.082	-.217
.031	.064	-.221	.031	.083	-.221	.031	.088	-.130	.031	.069	-.226	.031	.072	-.217
.040	.068	-.221	.042	.083	-.221	.043	.083	-.222	.045	.069	-.221	.048	.067	-.217
.050	.068	-.221	.052	.083	-.221	.055	.069	-.227	.059	.069	-.221	.065	.053	-.217
.060	.068	-.221	.063	.083	-.169	.068	.069	-.227	.074	.054		.082	.043	-.217
.069	.112	-.226	.074	.083	-.217	.080	.069	-.227	.088	.049	-.212	.100	.024	-.217
.079	.112	-.231	.085	.078	-.222	.092	.059	-.164	.103	.049	-.212	.117	.067	-.212
.088	.068	-.241	.095	.078		.105	.054	-.227	.117	.035	-.207	.134	.014	-.207
.098	.068	-.241	.106	.078	-.217	.117	.049	-.227	.131	.034	-.207			
.107	.068	-.246	.117	.073	-.227	.129	.040	-.227	.146	.029	-.207			
.117	.068	-.250	.128	.068	-.227	.142	.040	-.231	.160	.024	-.207			
.127	.068	-.250	.139	.059	-.231	.154	.035	-.231	.175	.010	-.212			
.136	.083	-.246	.149		-.231	.166	.030	-.231	.189	-.029	-.221			
.146	.068	-.250	.160		-.236	.179	.030	-.227						
.155	.068	-.246	.171	.059	-.236	.191	.025	-.227						
.165	.064	-.246	.182	.030	-.241	.203	.016	-.231						
.175	.064	-.236	.193	.020	-.246	.216	.001	-.227						
.184	.059	-.221	.203	.074		.228	.001	-.217						
.194	.064	-.192	.214	.011										
.203		-.159	.225	.006	-.231									
.213	.064	-.130	.236	.006	-.241									
.222	.054	-.115	.246	-.004	-.246									
.232	.035	-.106	.257	-.033	-.241									
.242	.015	-.106												
.251		-.106												
.261		-.091												
.270	-.043	-.091												
.280	-.067	-.106												



(a) Wing planform.



(b) Reflection plate planform.

Figure 1.- Planform of model and reflection plate.

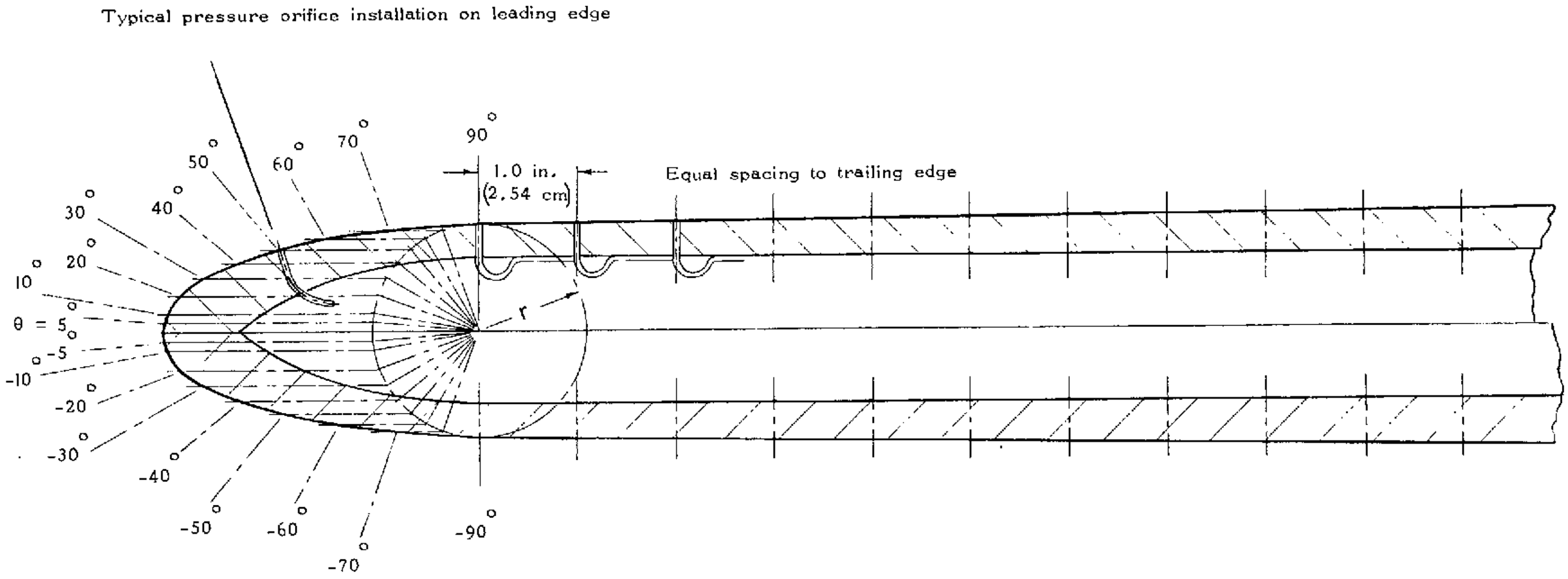


Figure 2.- Pressure orifice location for typical streamwise section through orifice stations.

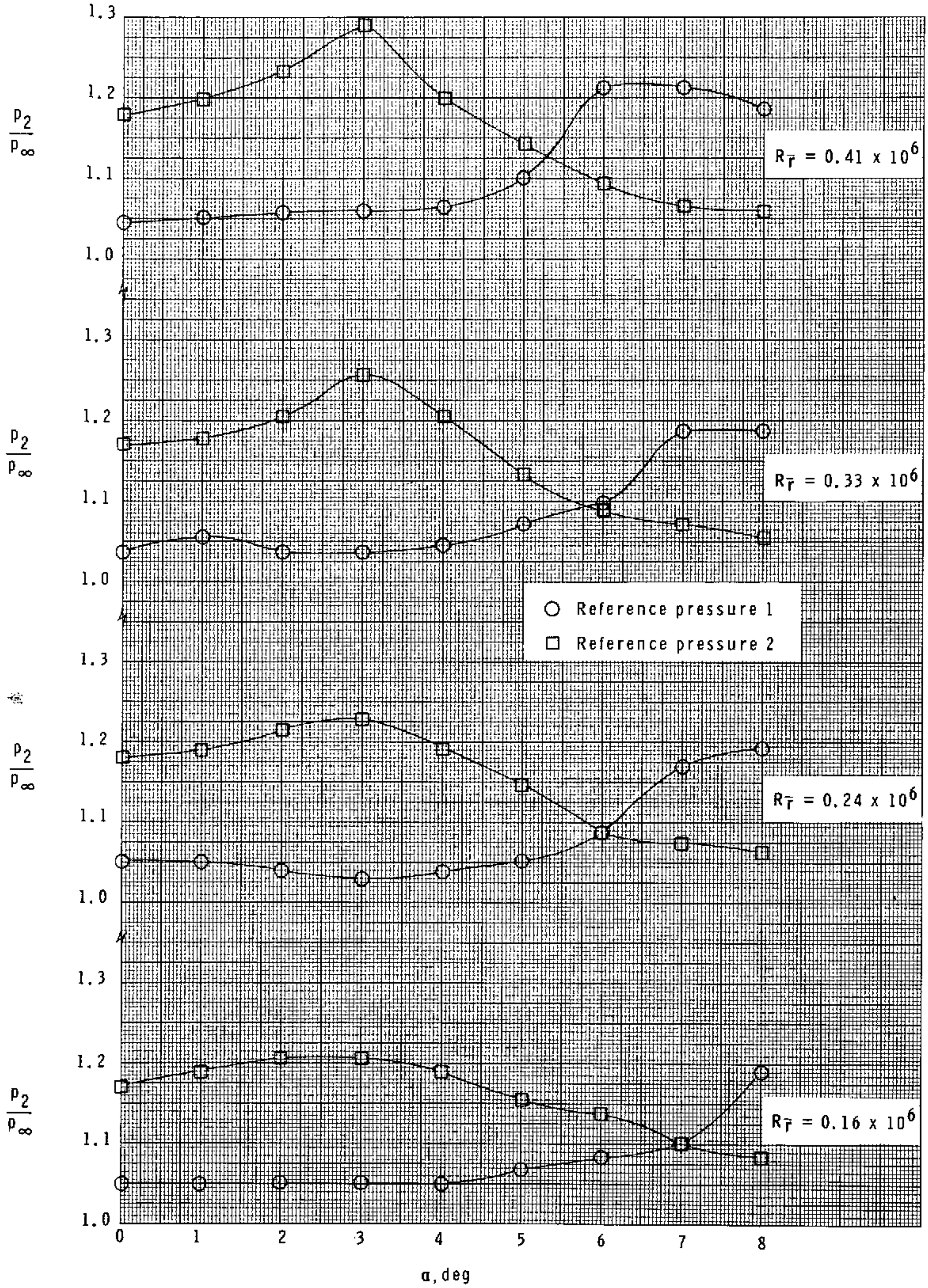


Figure 3.- Variation of reference-pressure ratio with angle of attack.

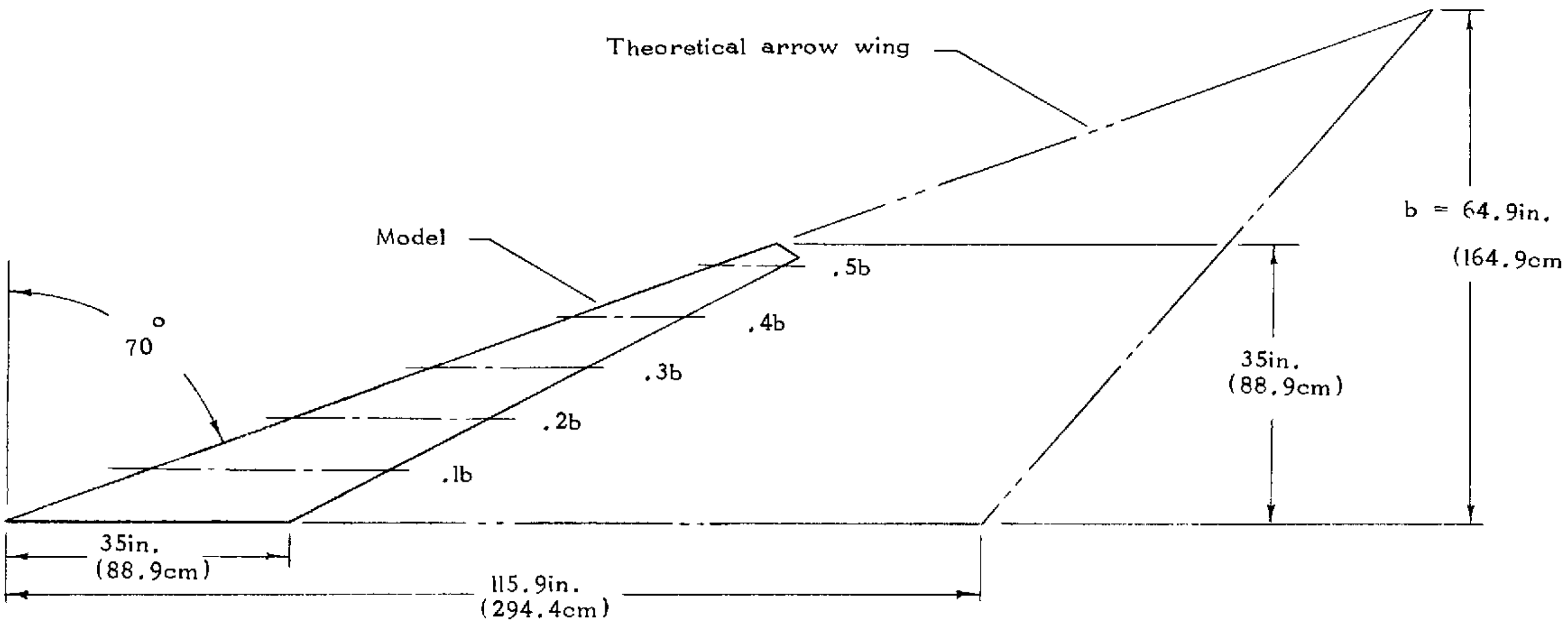
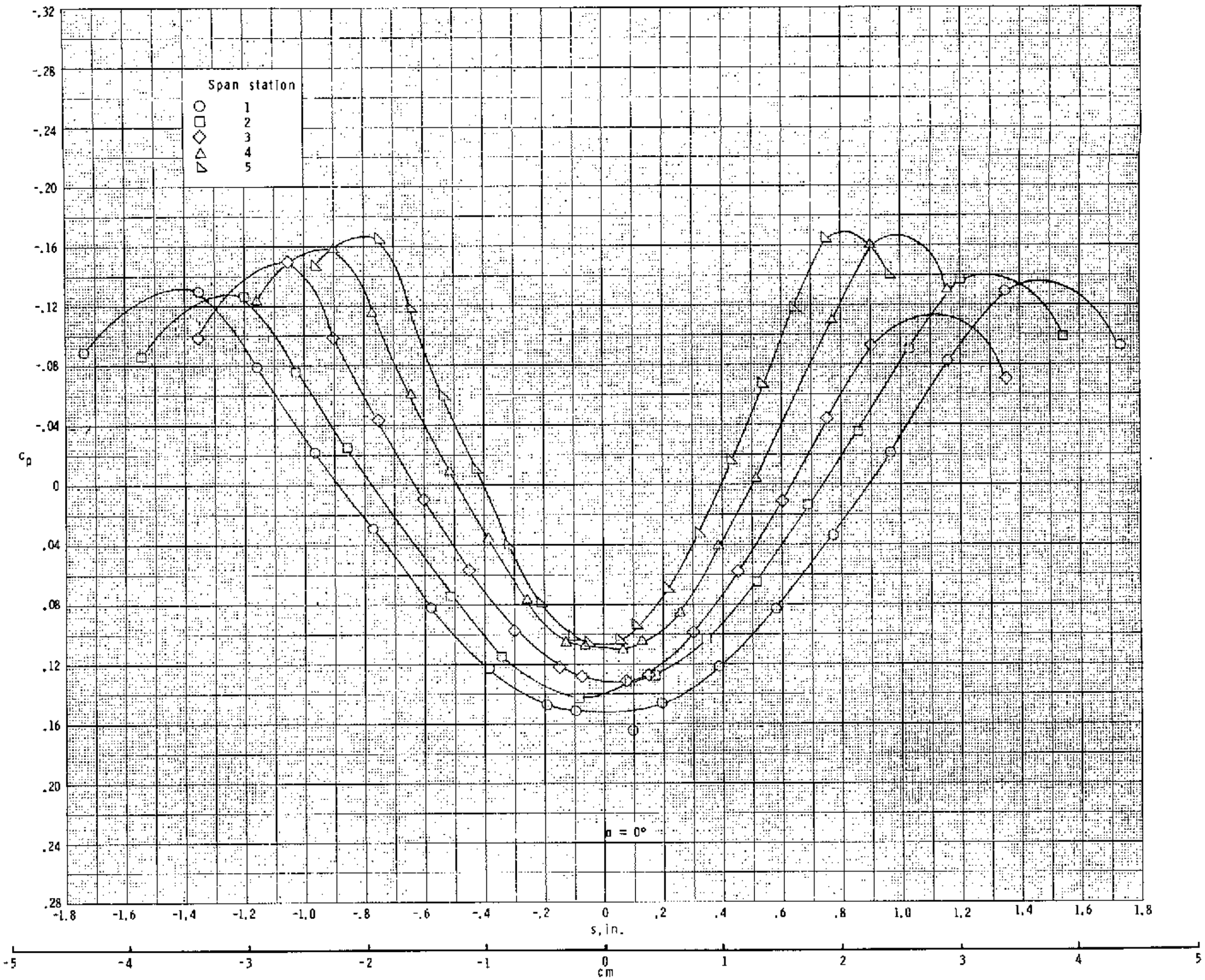
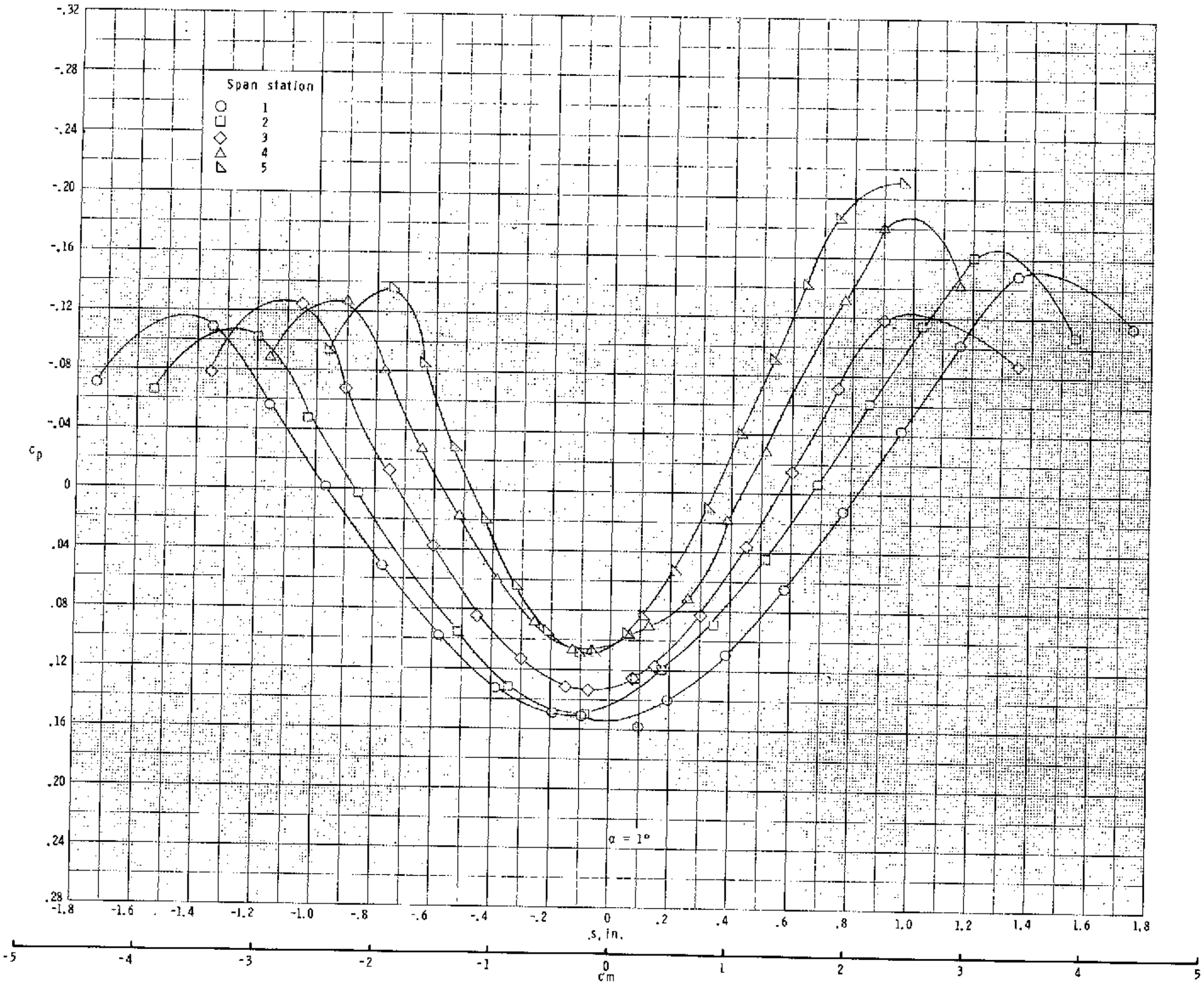


Figure 4.- Model relation to theoretical arrow wing.



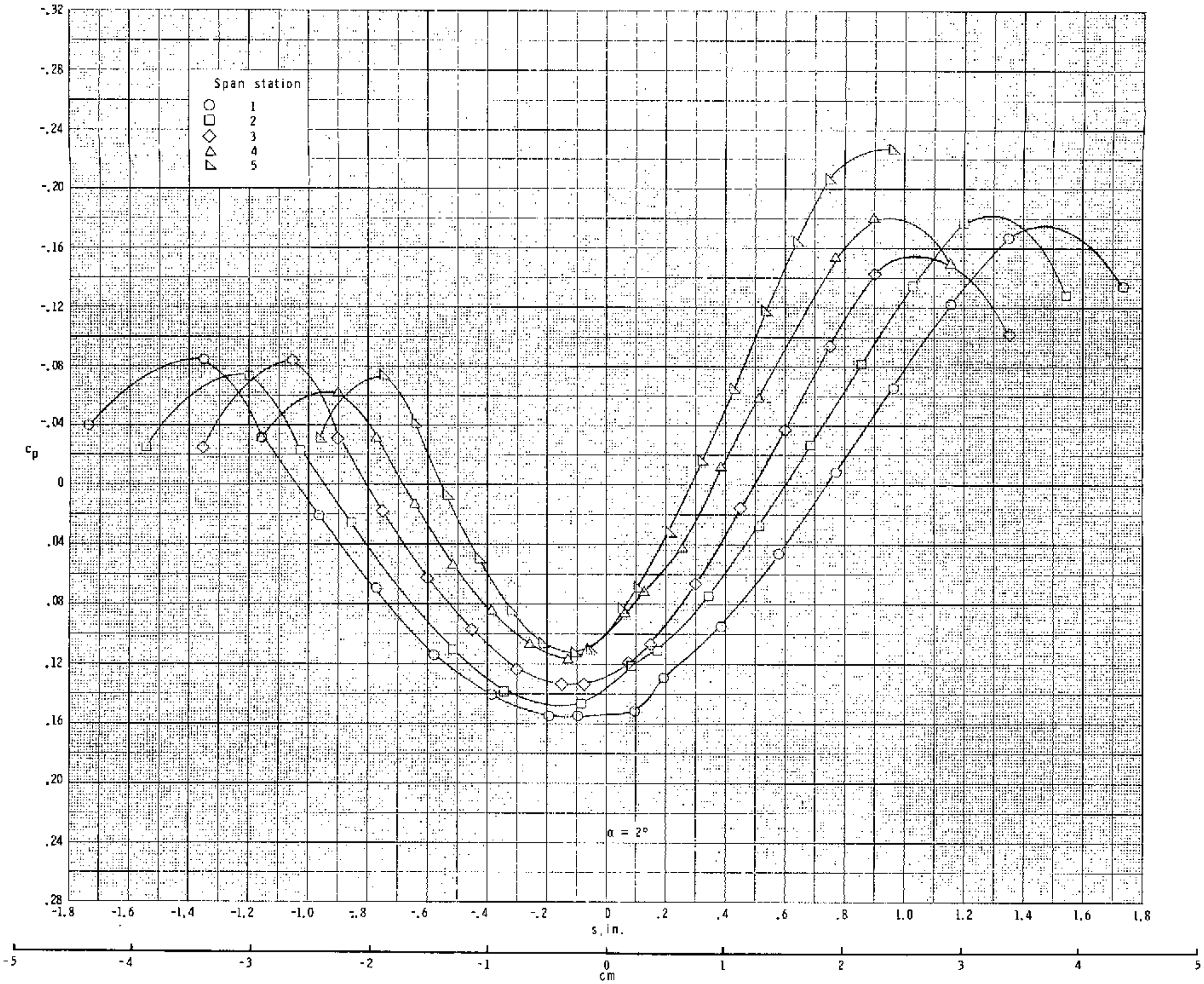
(a) $R_{\bar{r}} = 0.41 \times 10^6$.

Figure 5.- Leading-edge pressure coefficients.



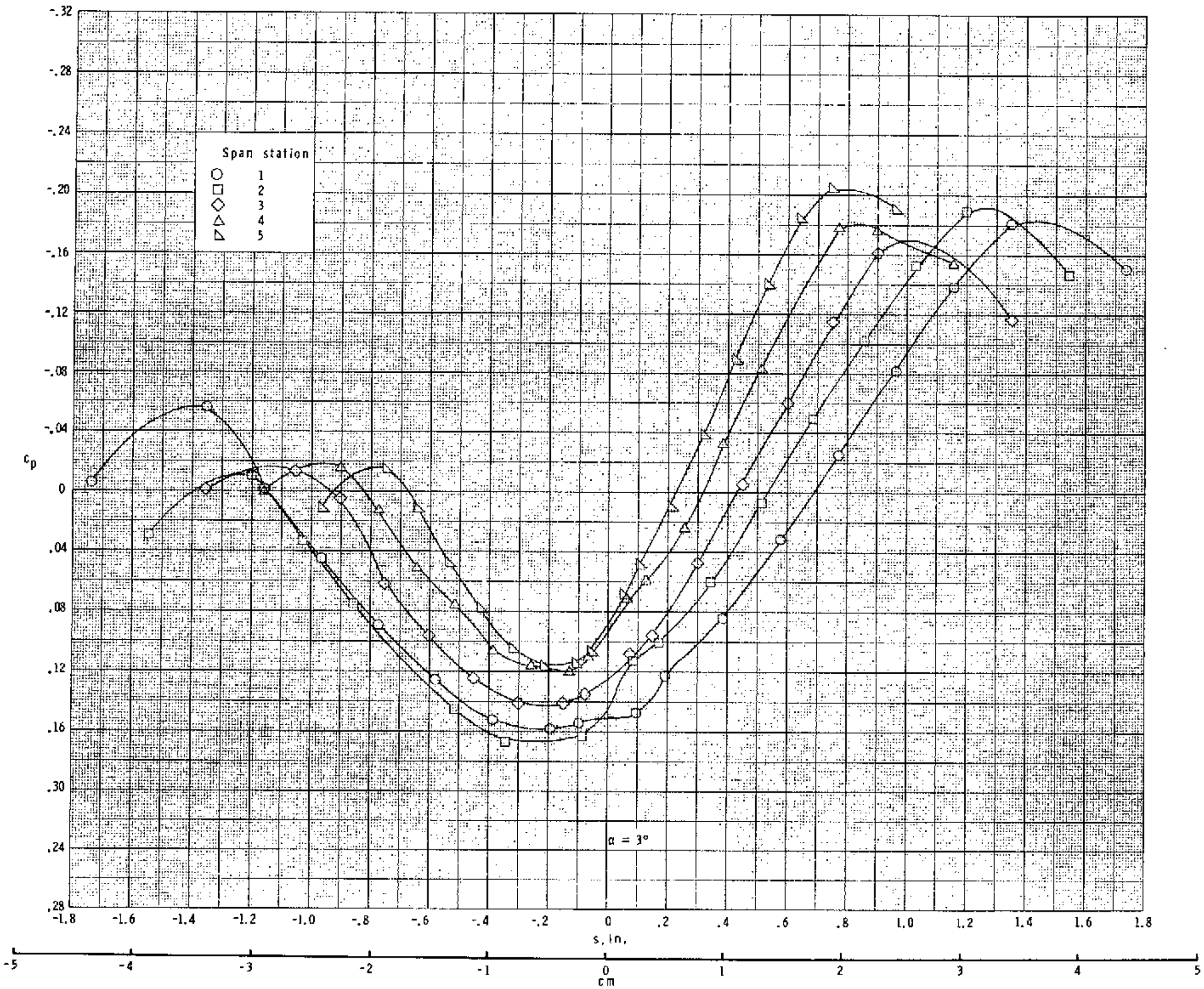
(a) Continued.

Figure 5.- Continued.



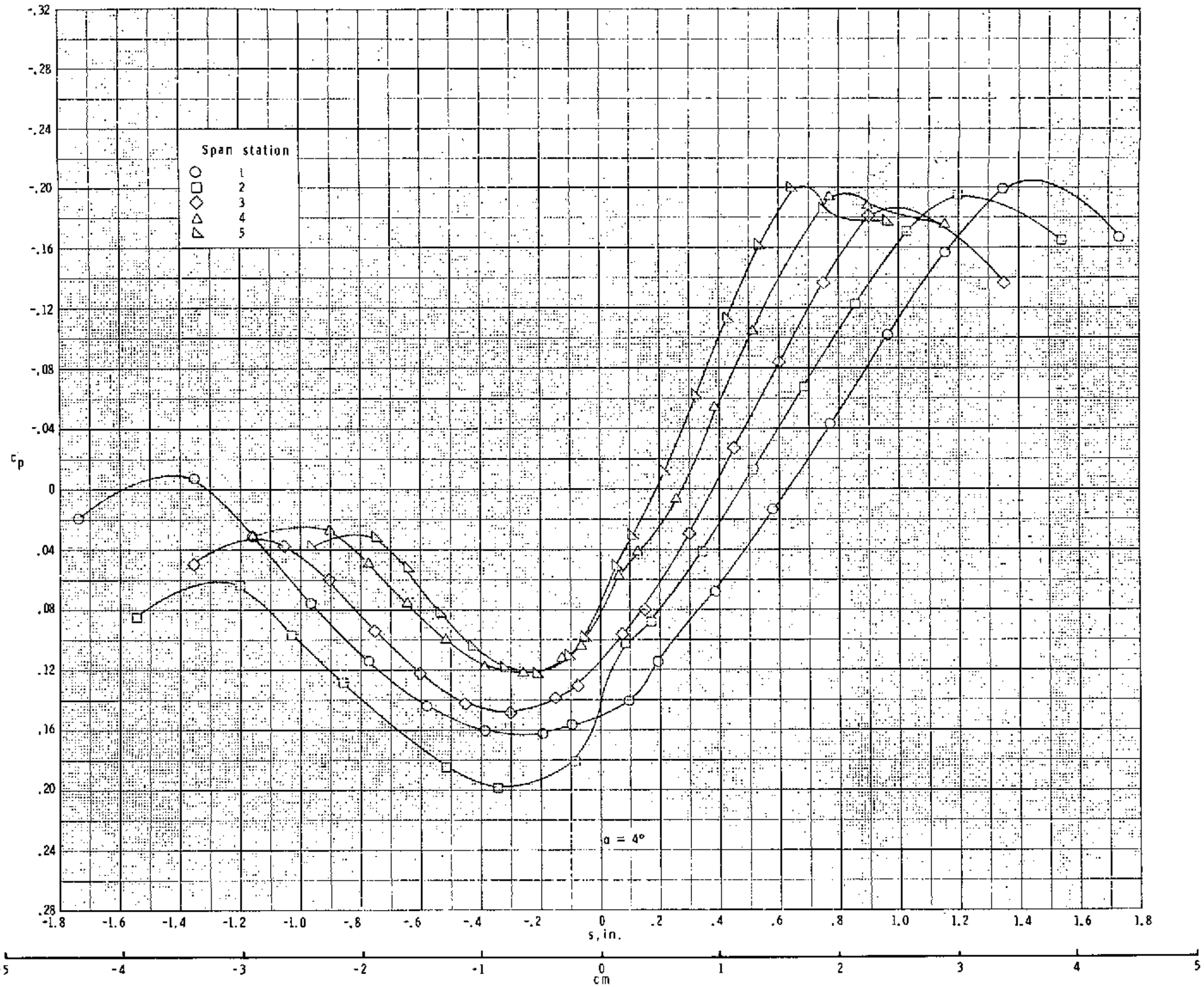
(a) Continued.

Figure 5.- Continued.



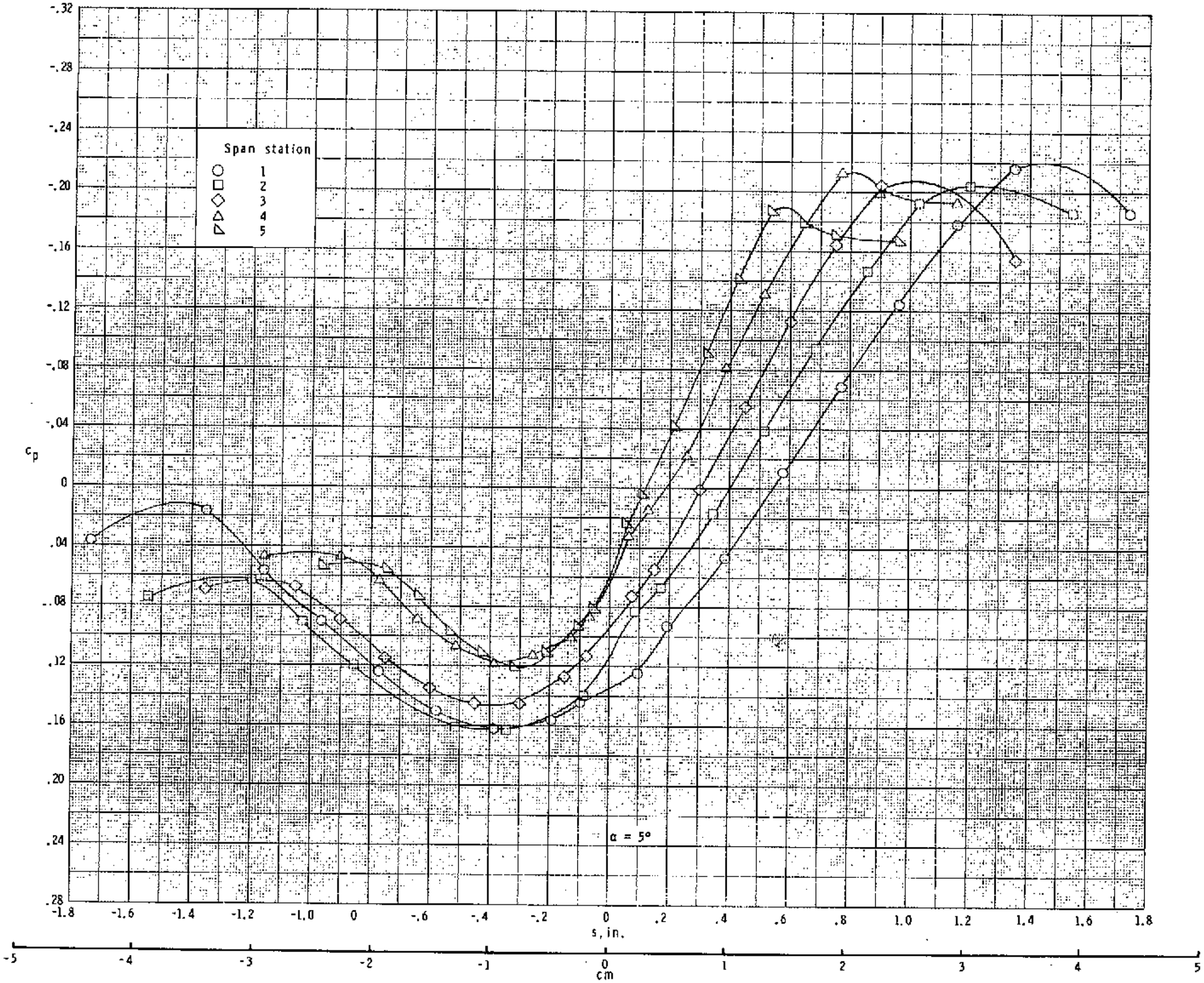
(a) Continued.

Figure 5.- Continued.



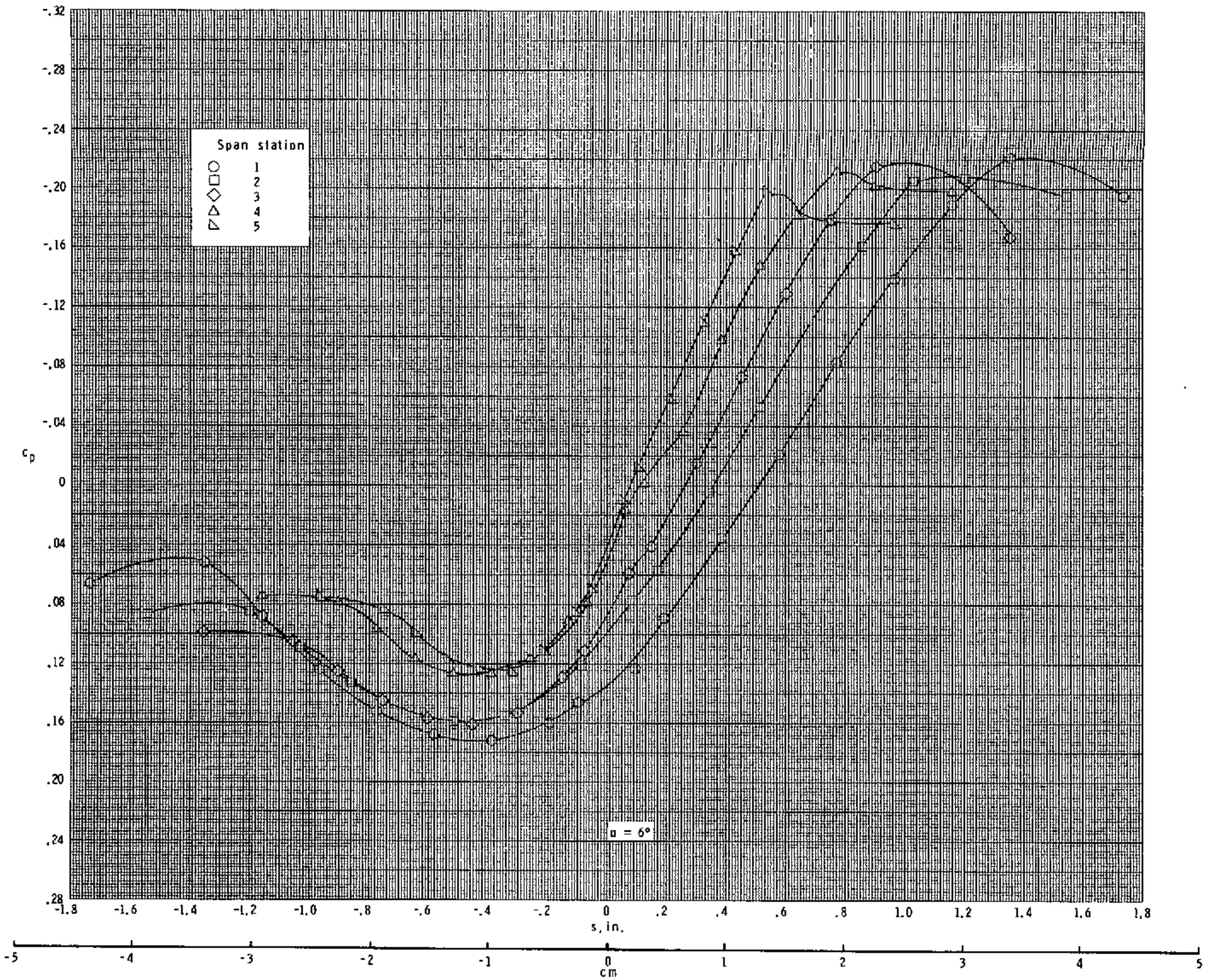
(a) Continued.

Figure 5.- Continued.



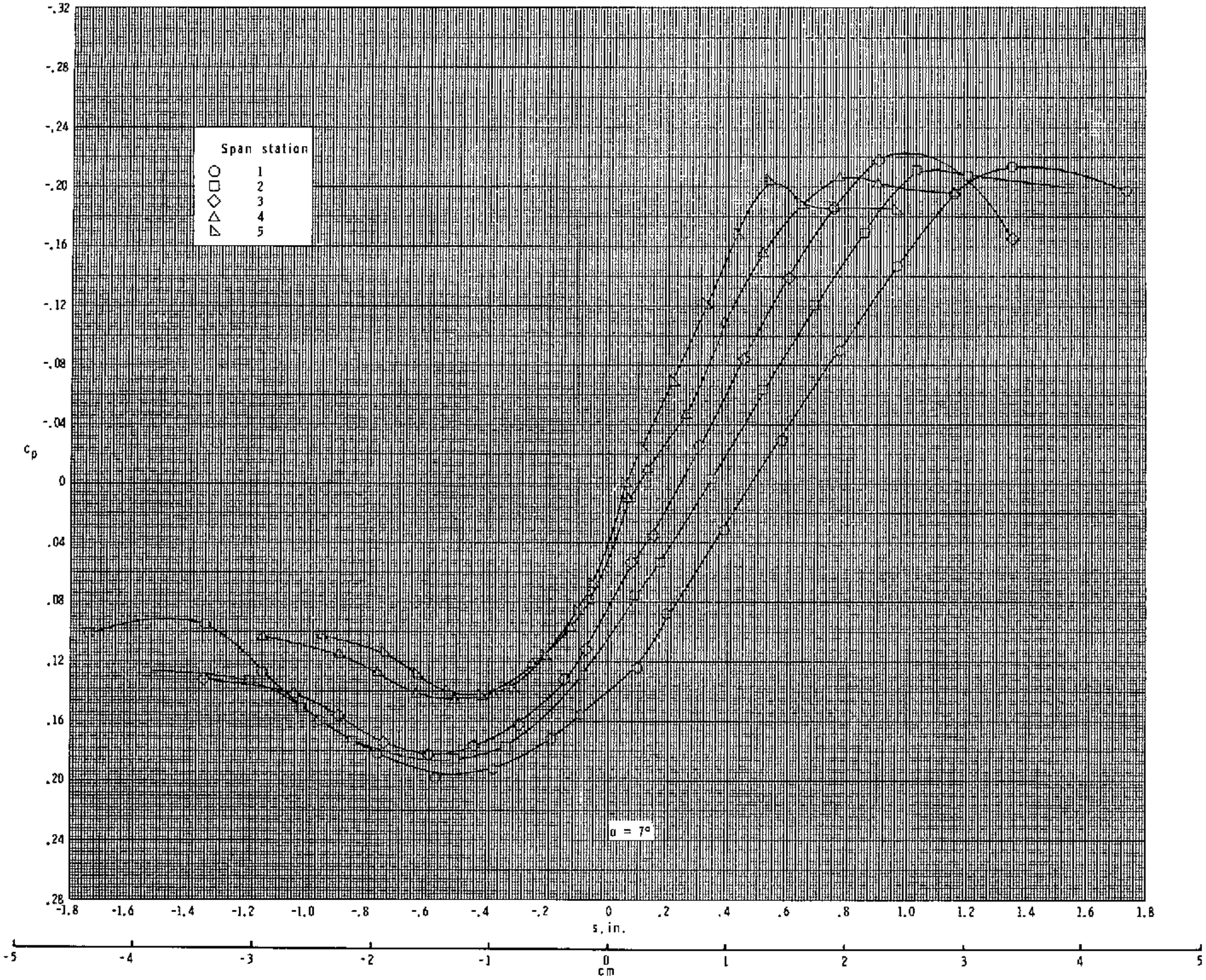
(a) Continued.

Figure 5.- Continued.



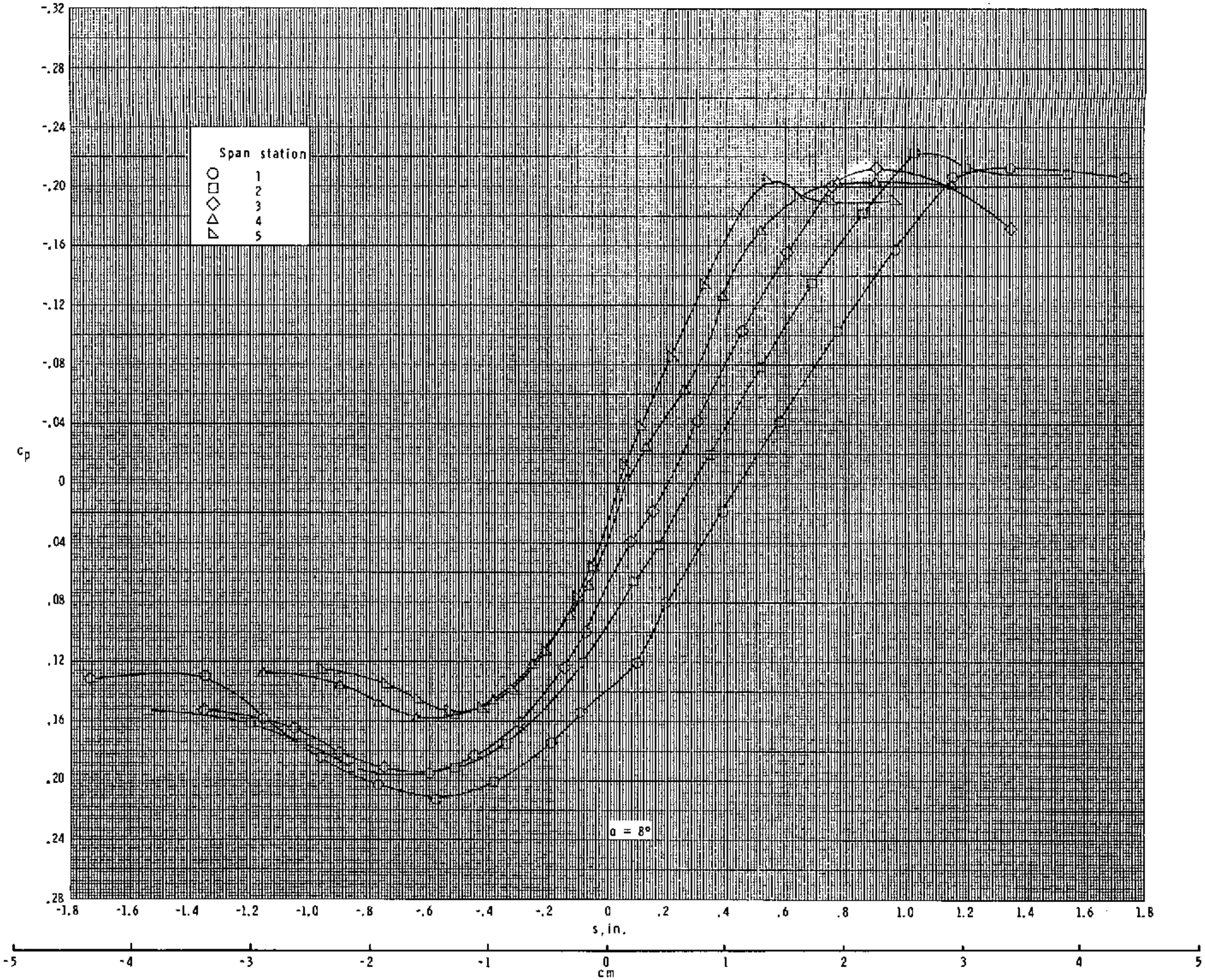
(a) Continued.

Figure 5.- Continued.



(a) Continued.

Figure 5.- Continued.



(a) Concluded.

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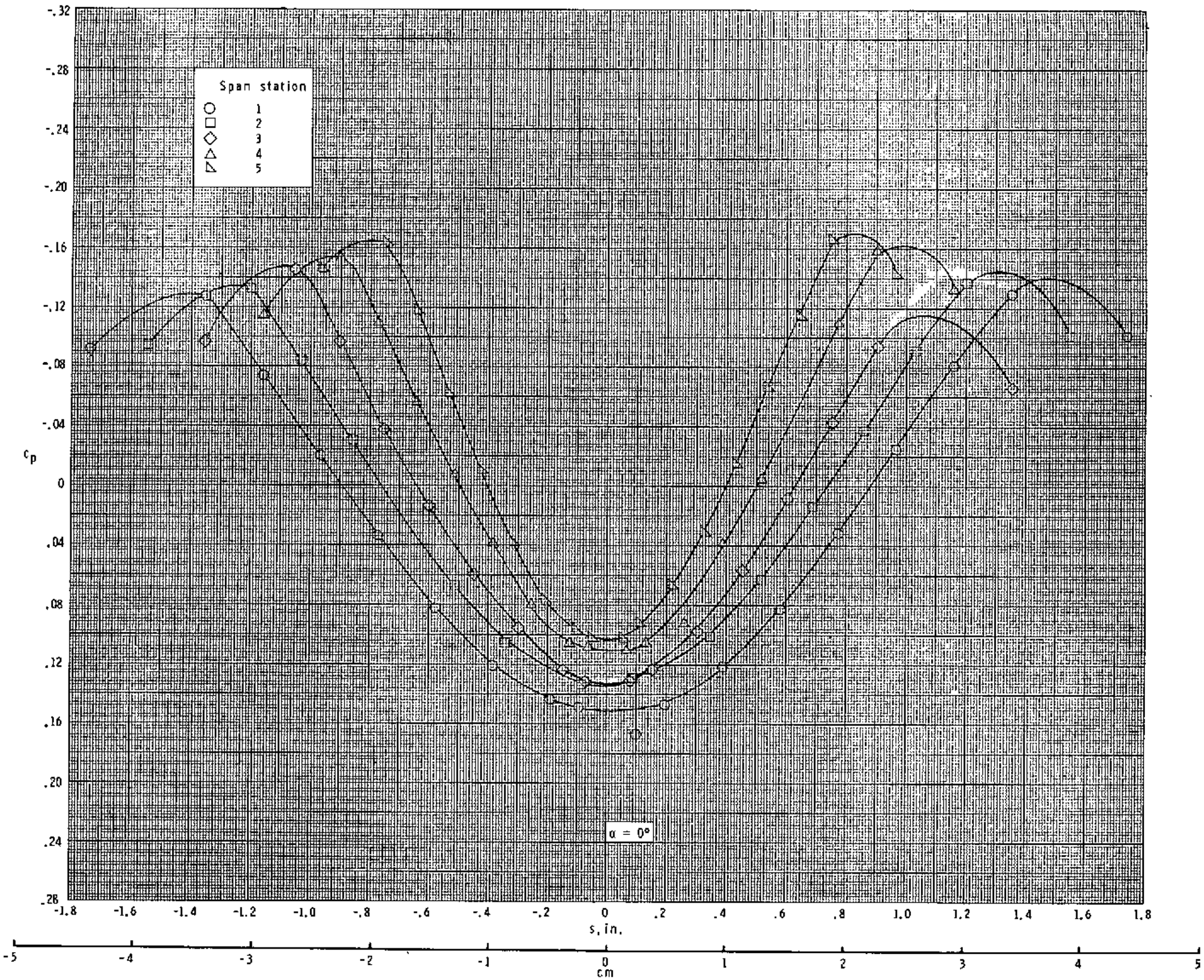
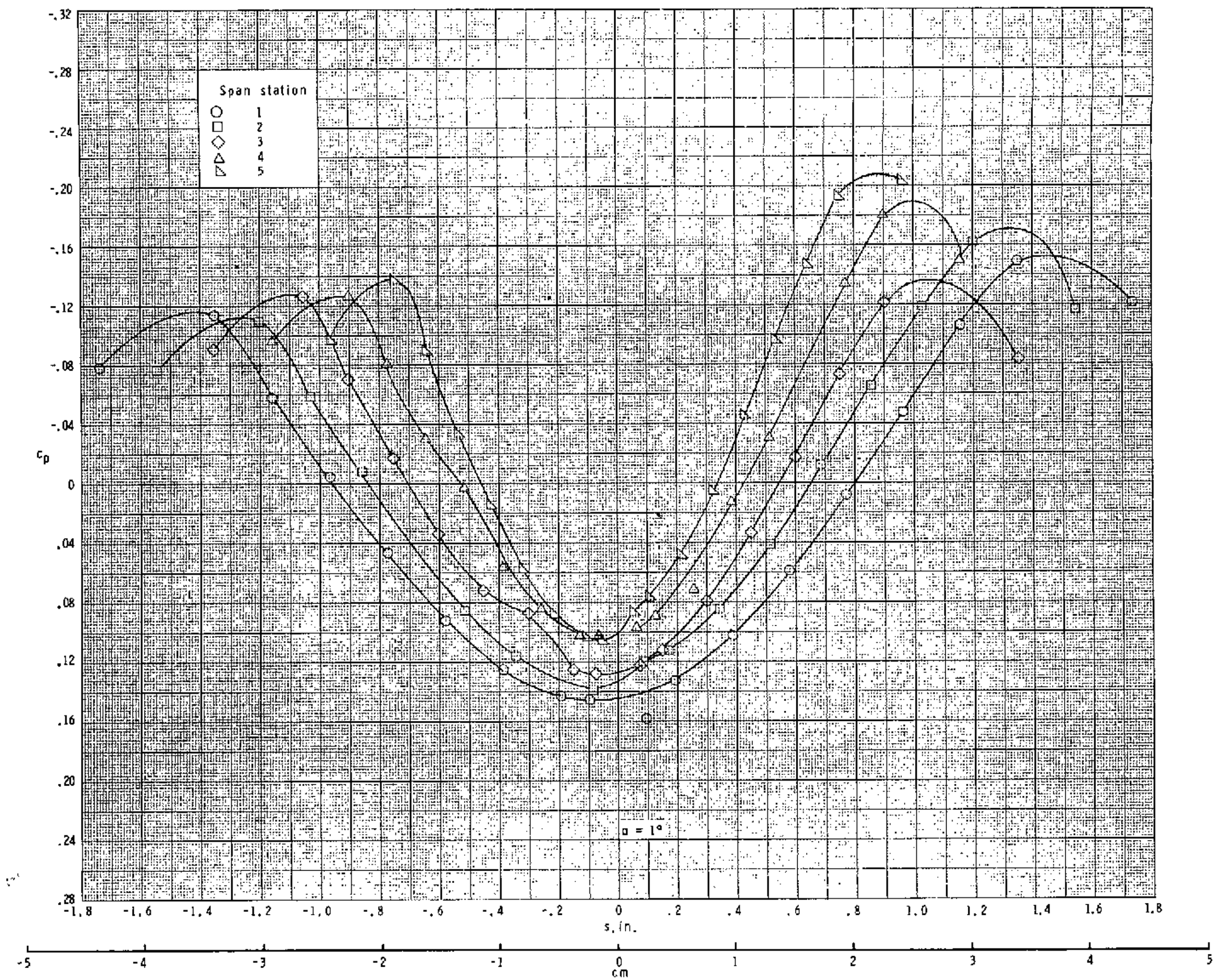


(b) $R_{\bar{r}} = 0.33 \times 10^6$.

Figure 5.- Continued.



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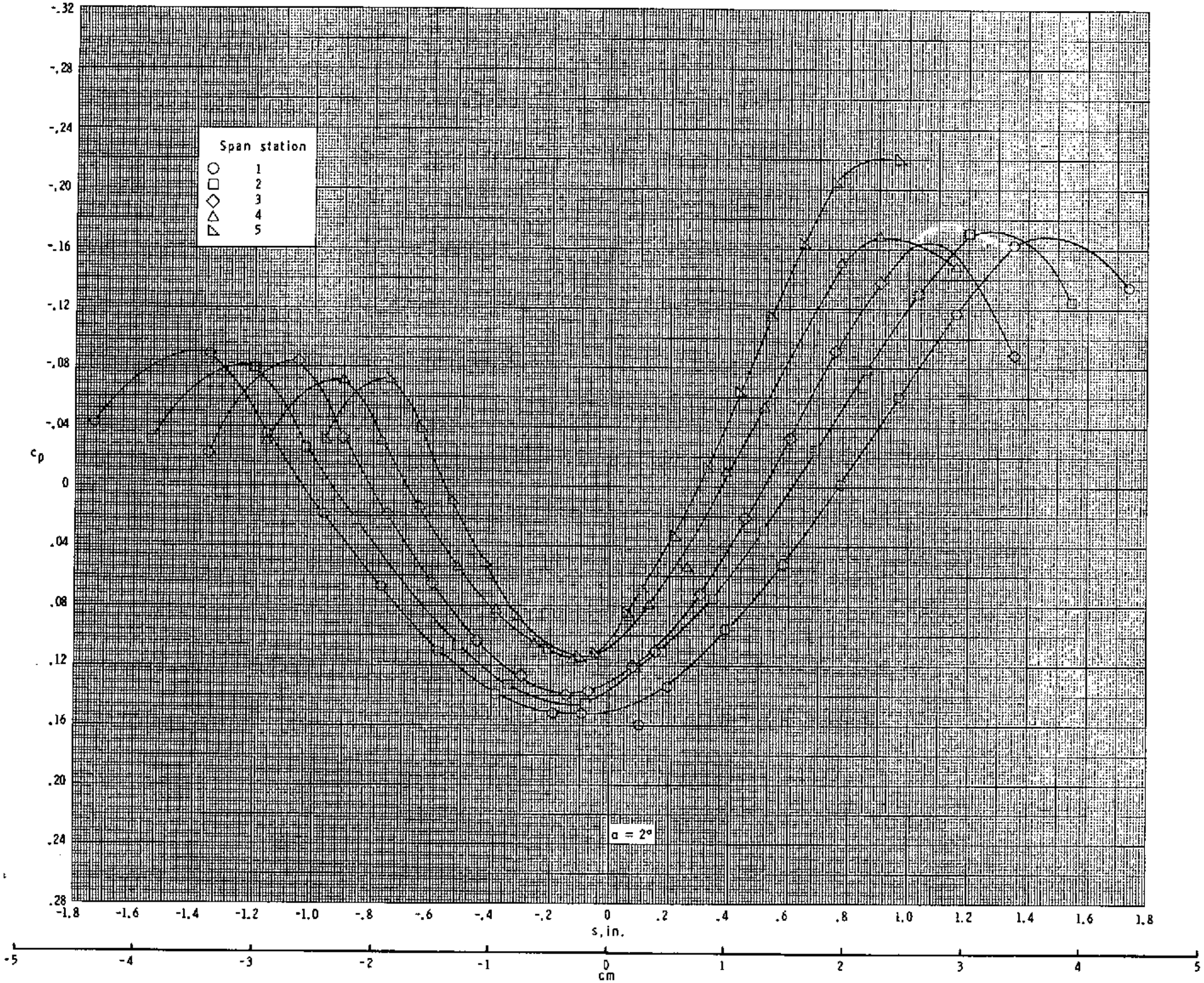

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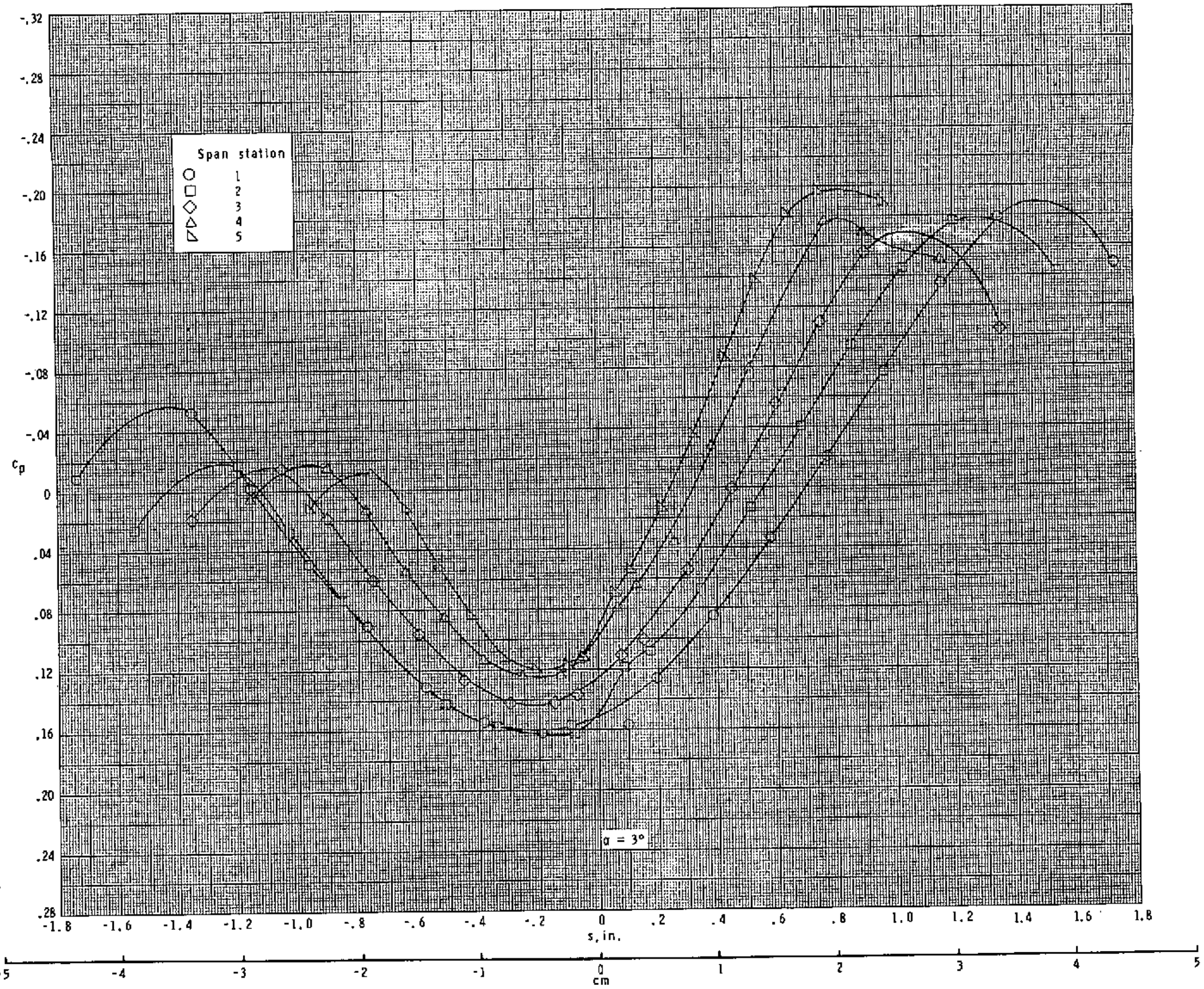

(b) Continued.

Figure 5.- Continued.

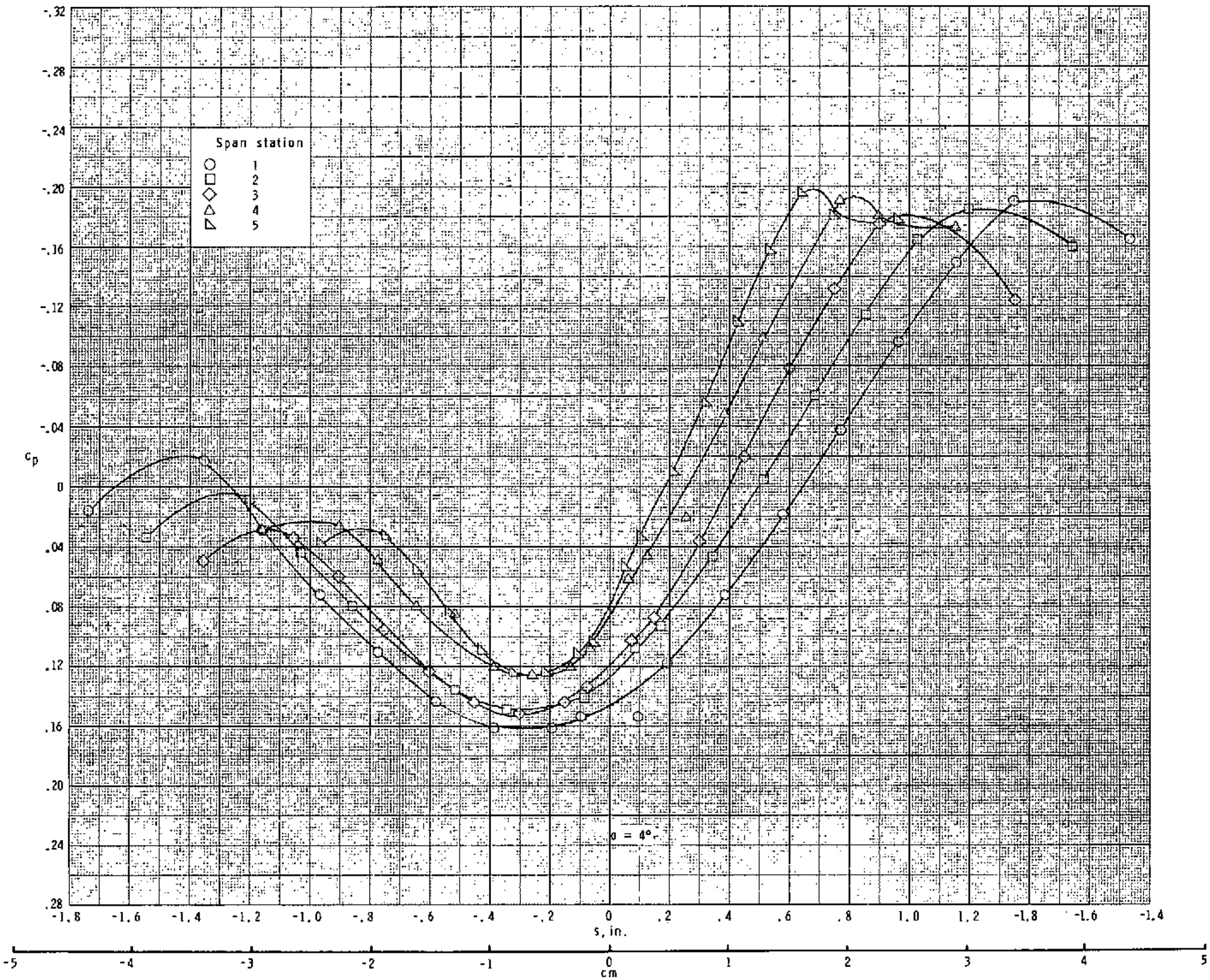

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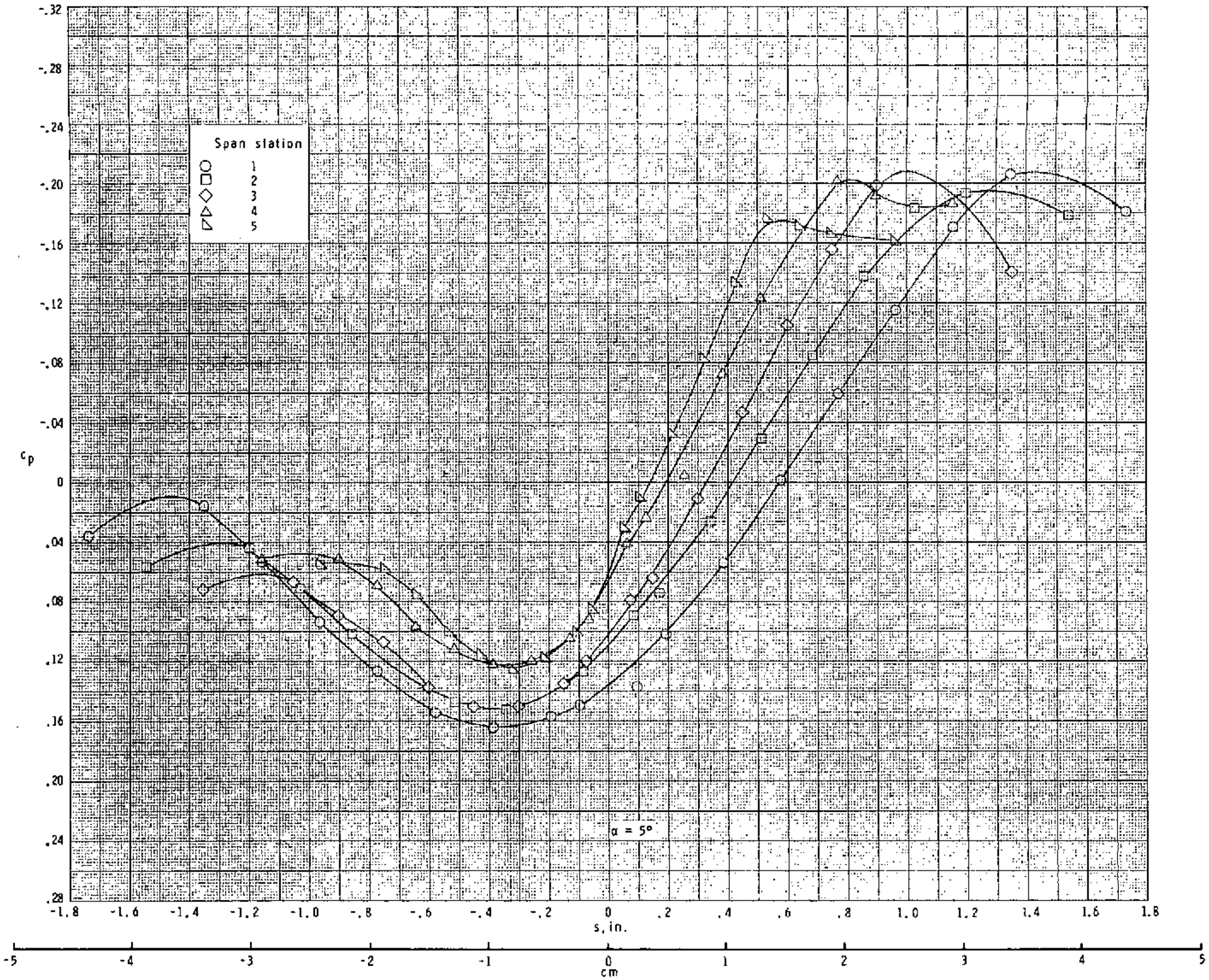
Figure 5.- Continued.



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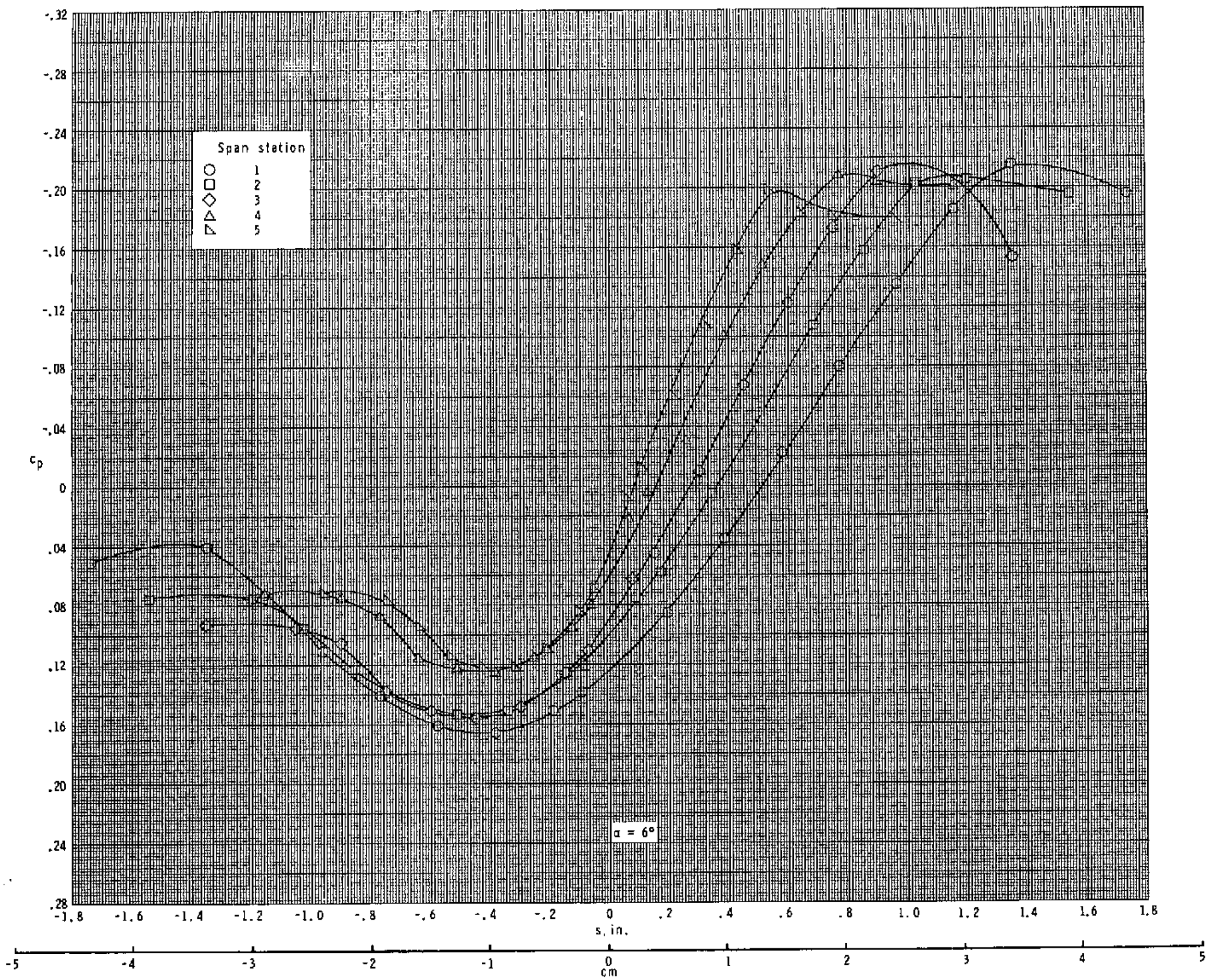
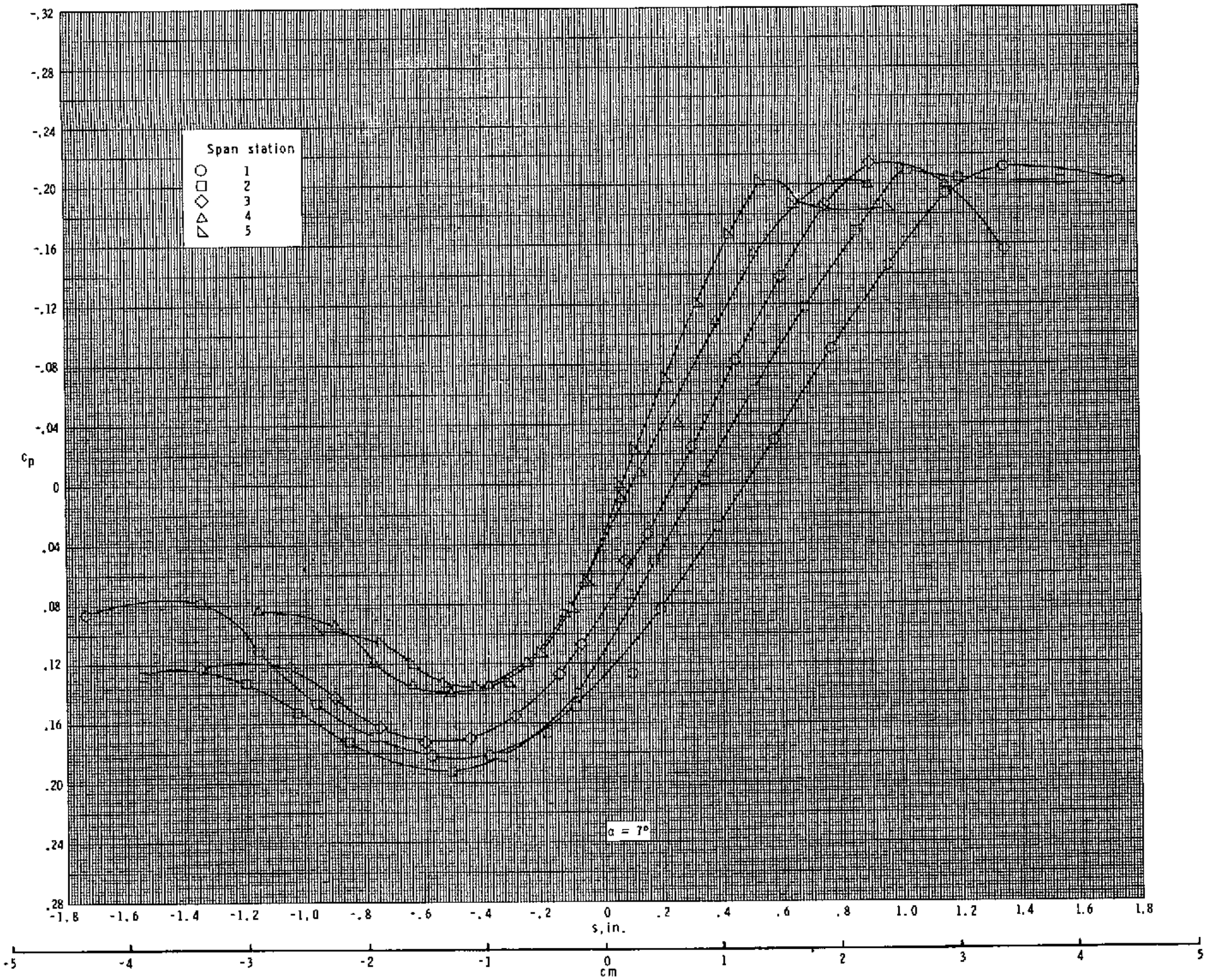


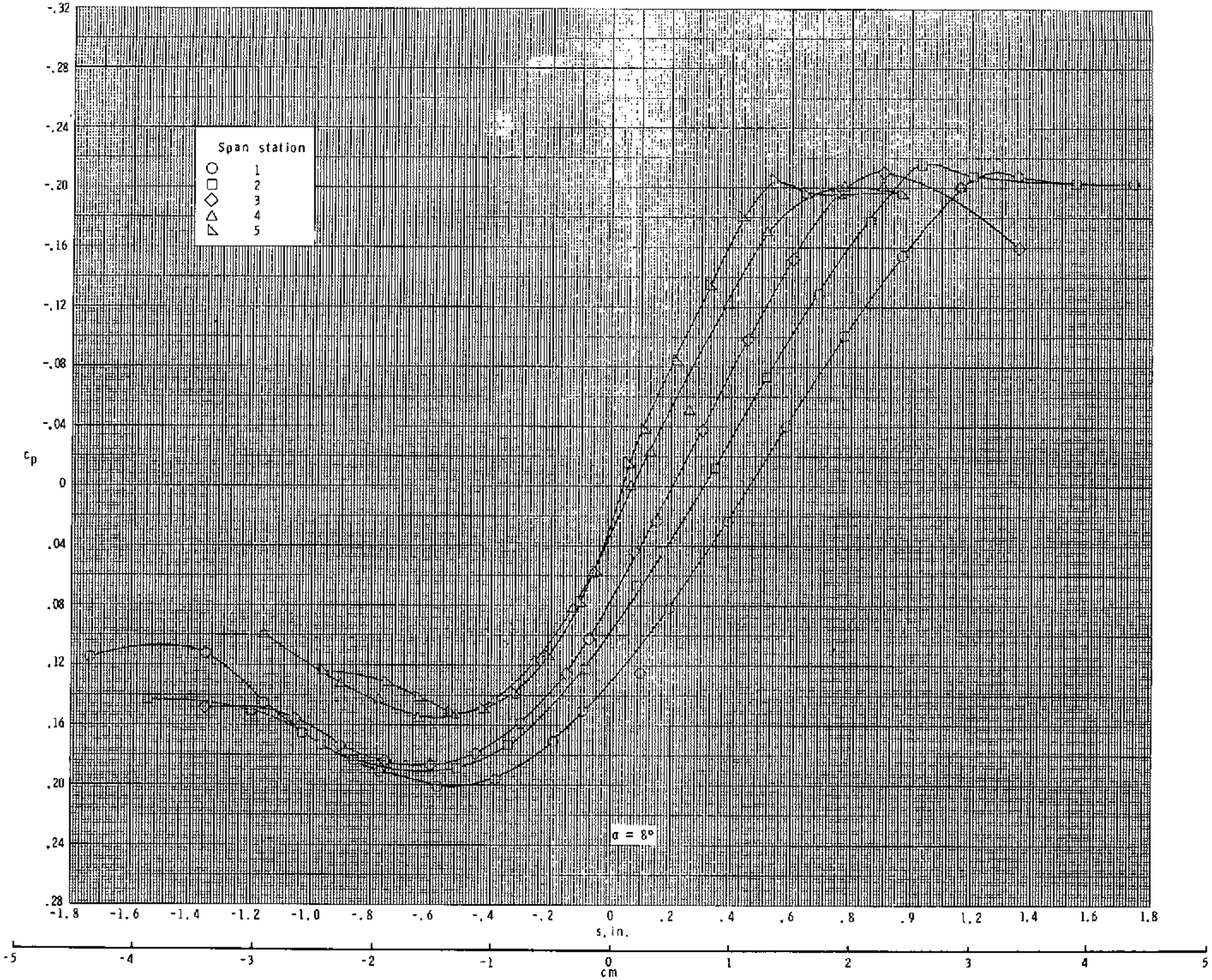
(b) Continued.

Figure 5.- Continued.



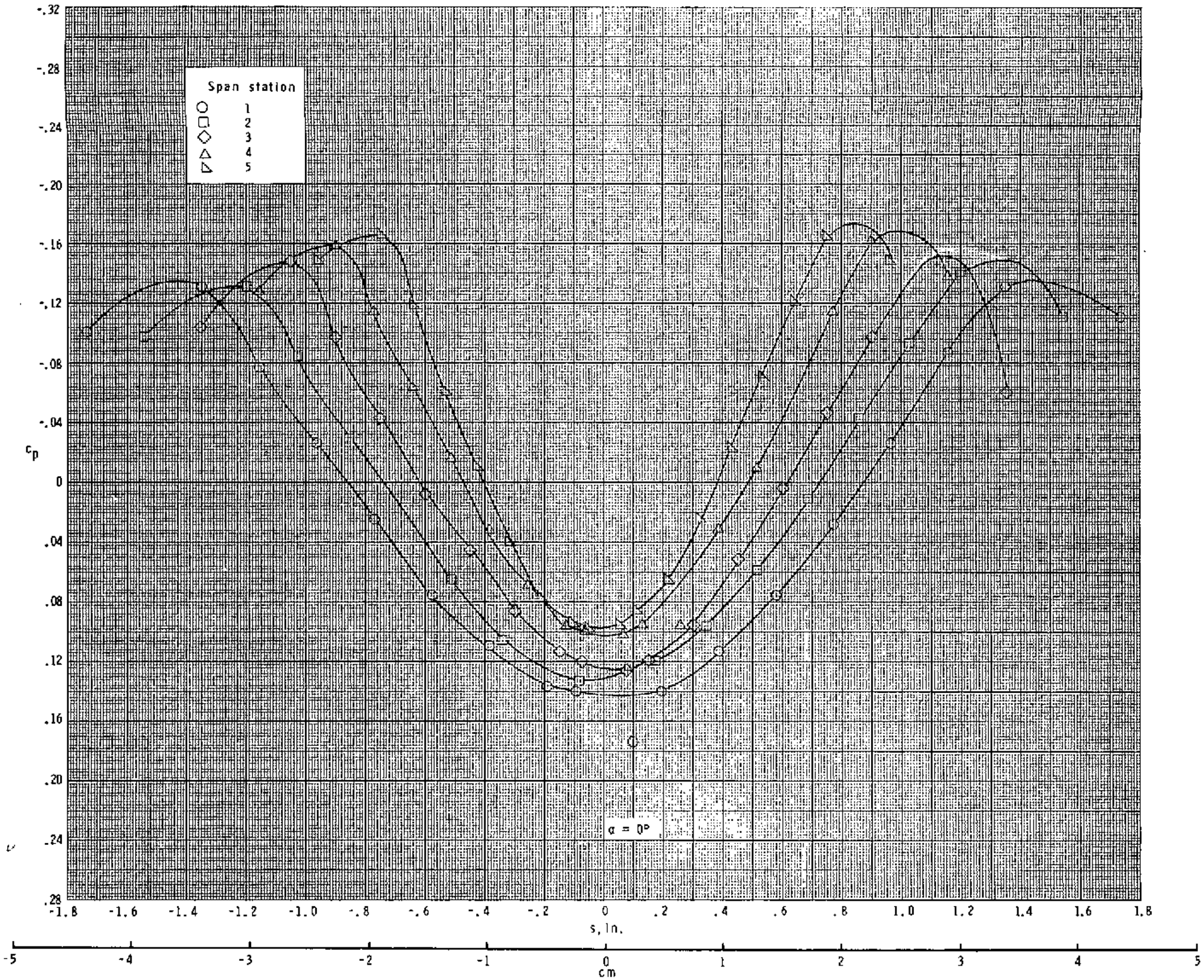
(b) Continued.

Figure 5.- Continued.



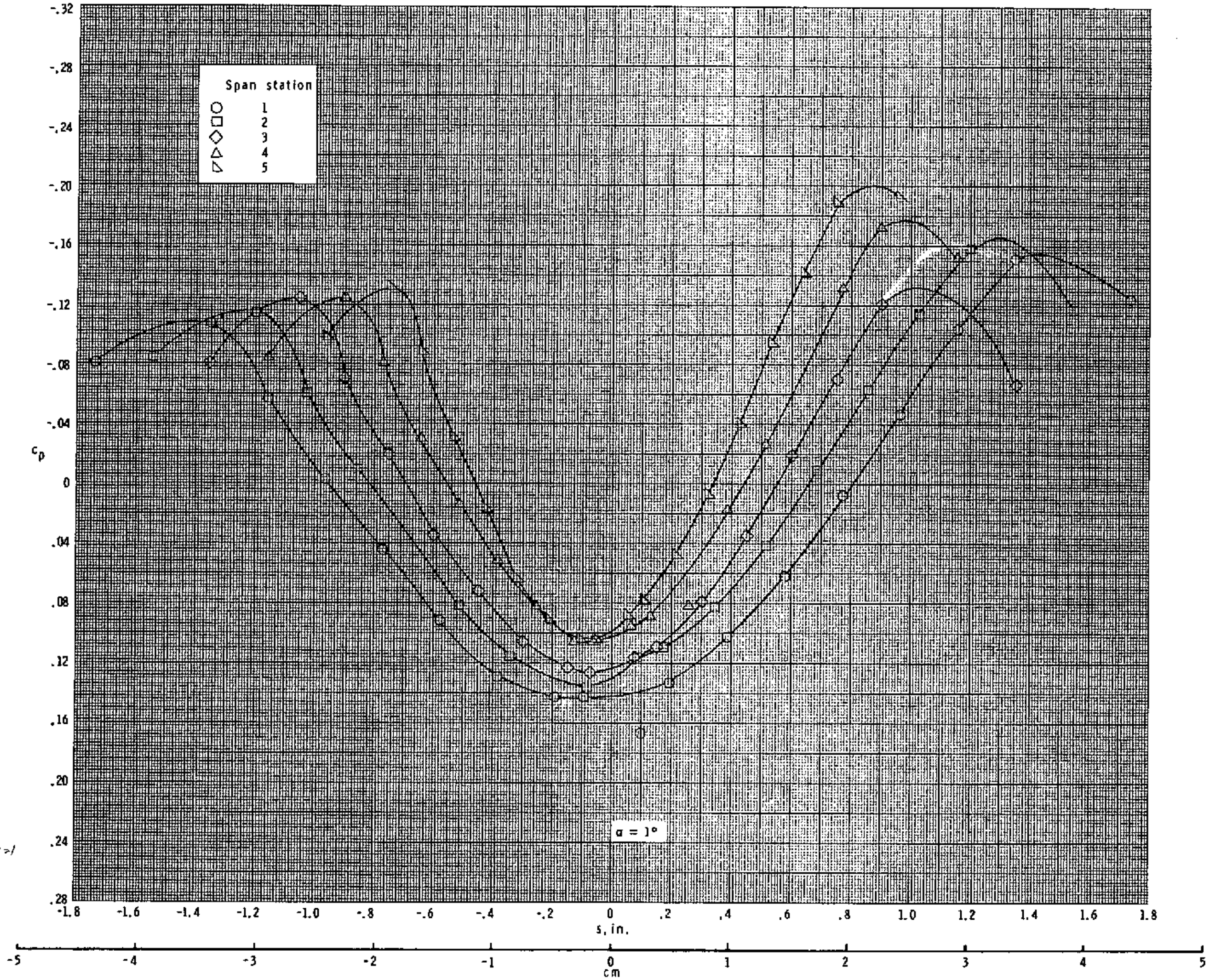
(b) Concluded.

Figure 5.- Continued.



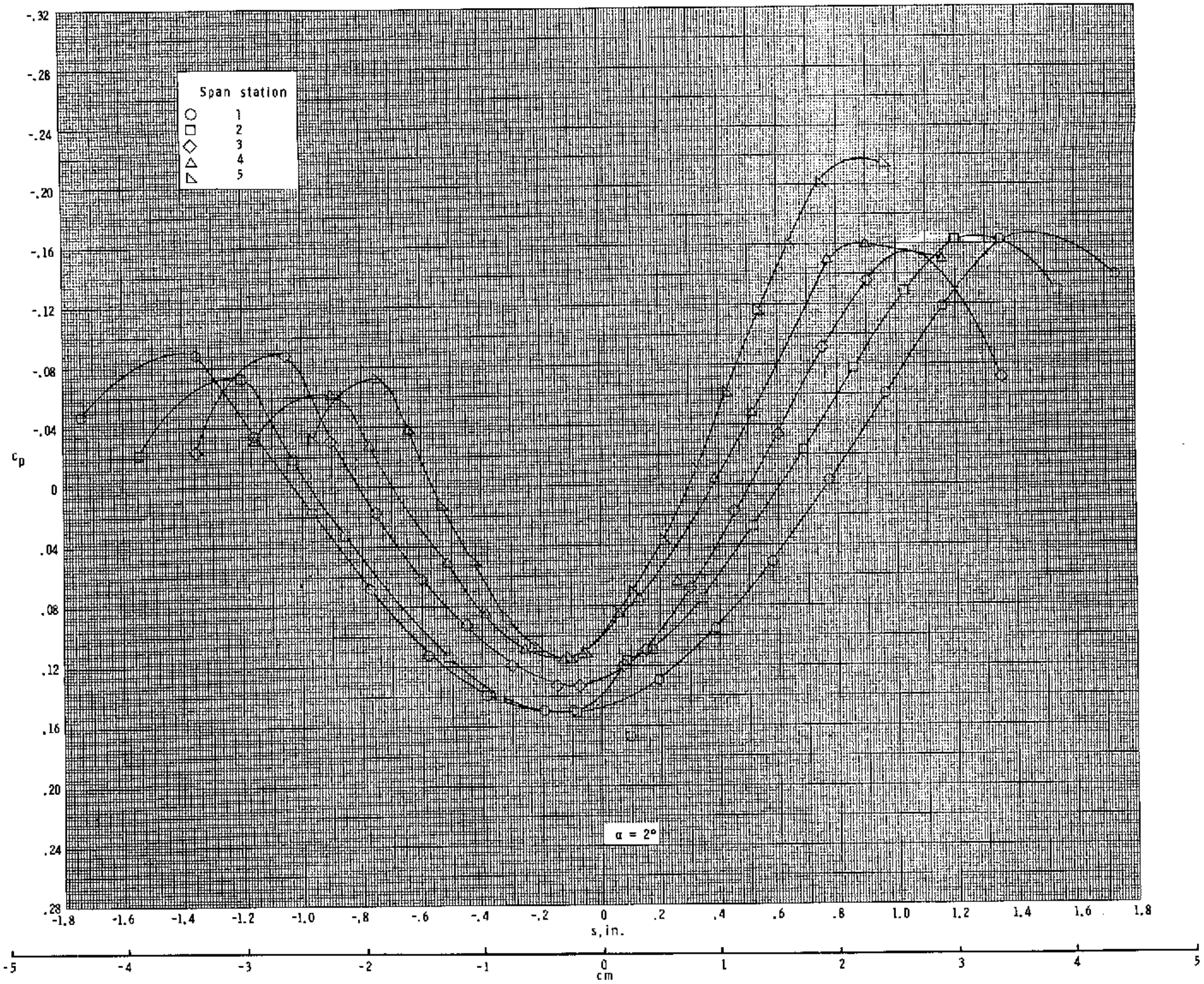
(c) $R_{\bar{r}} = 0.24 \times 10^6$.

Figure 5.- Continued.



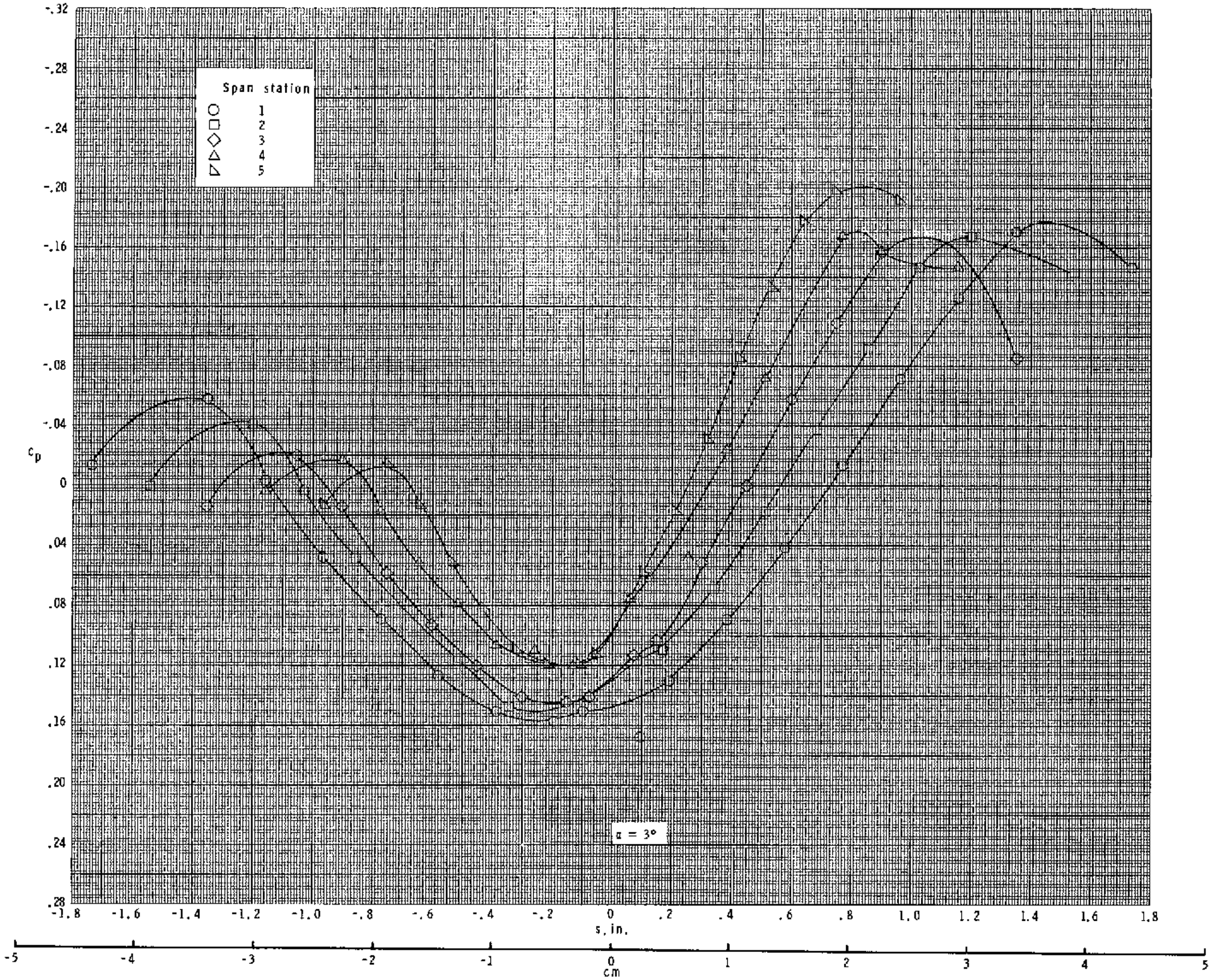
(c) Continued.

Figure 5.- Continued.



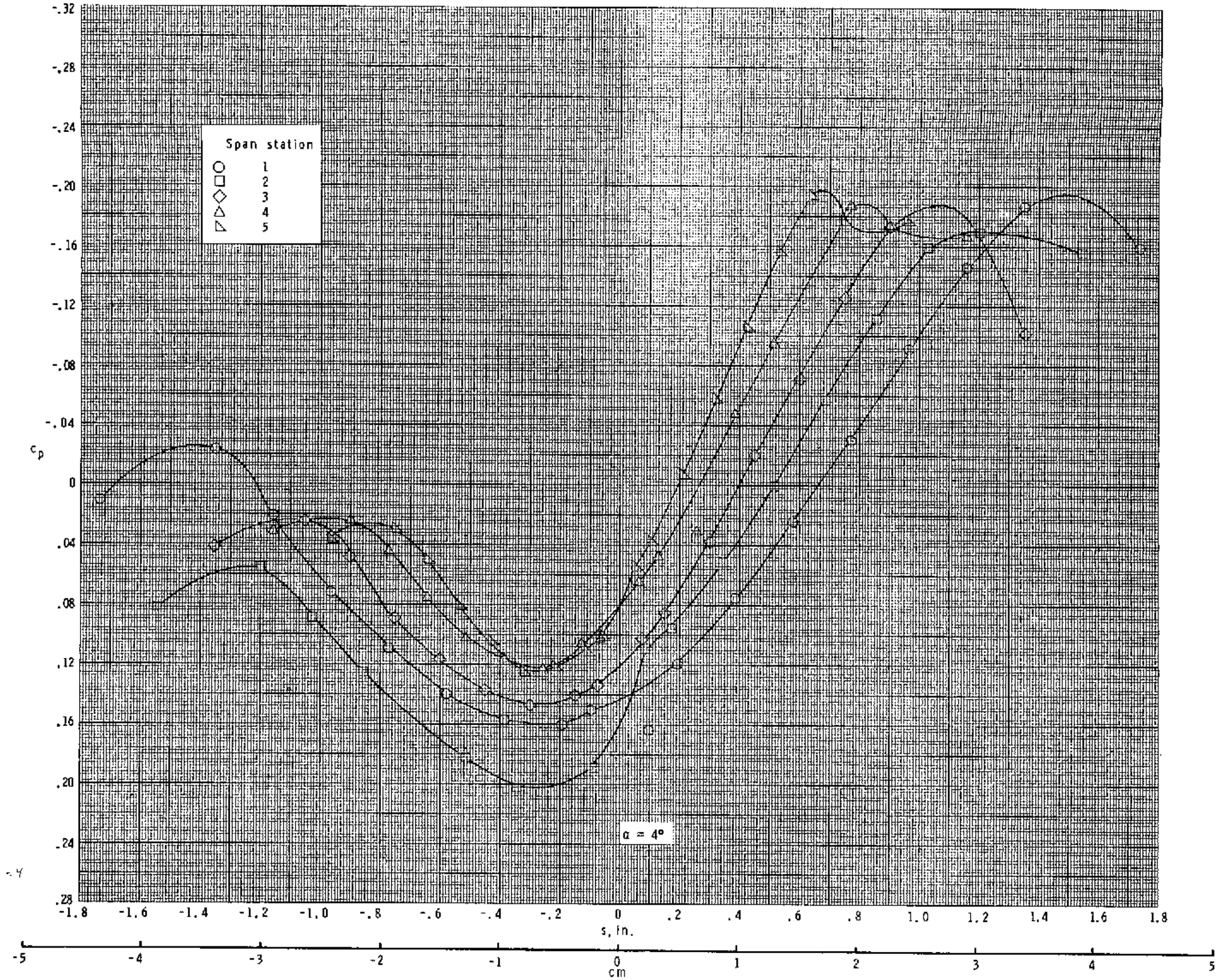
(c) Continued.

Figure 5.- Continued.



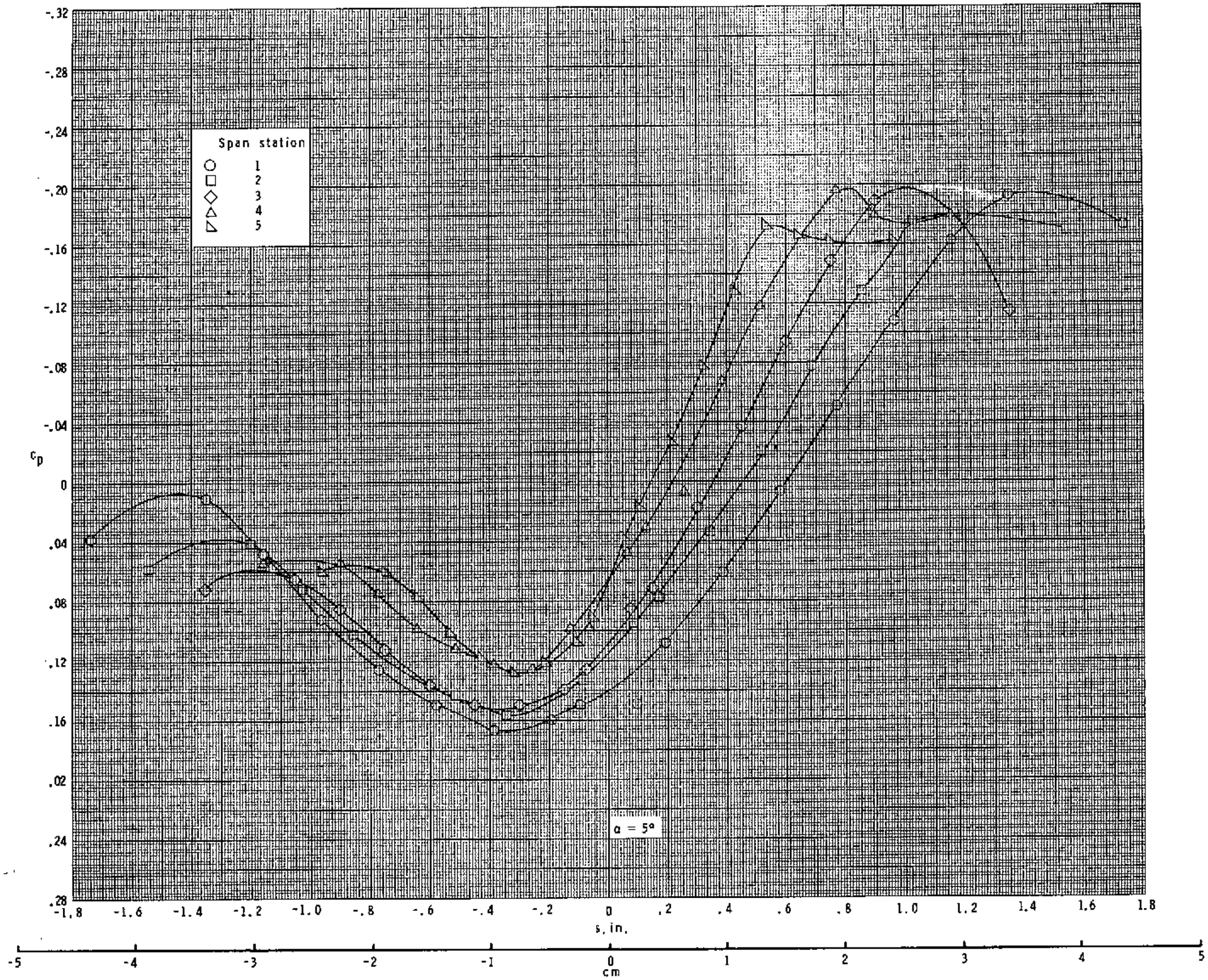
(c) Continued.

Figure 5.- Continued.



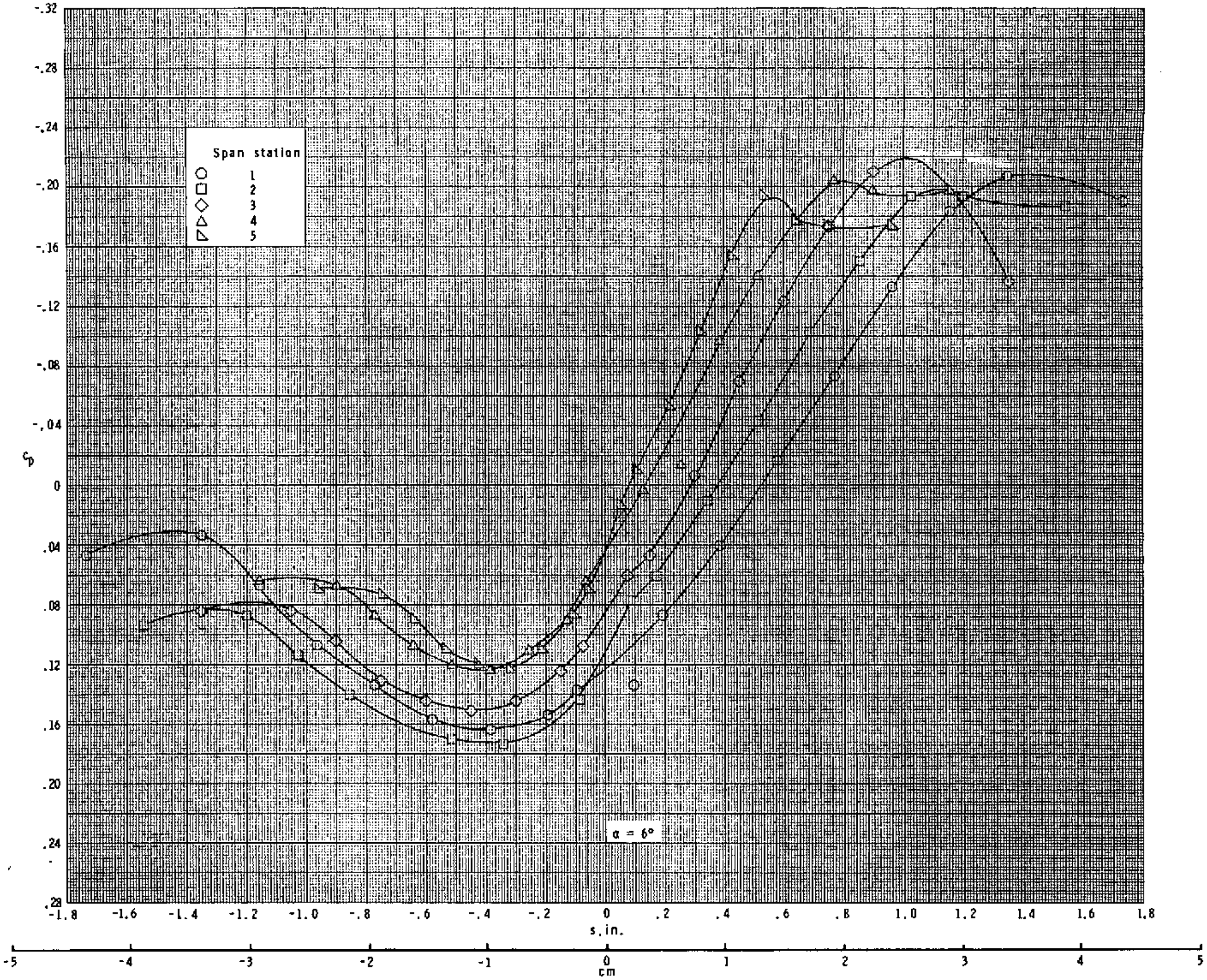
(c) Continued.

Figure 5.- Continued.



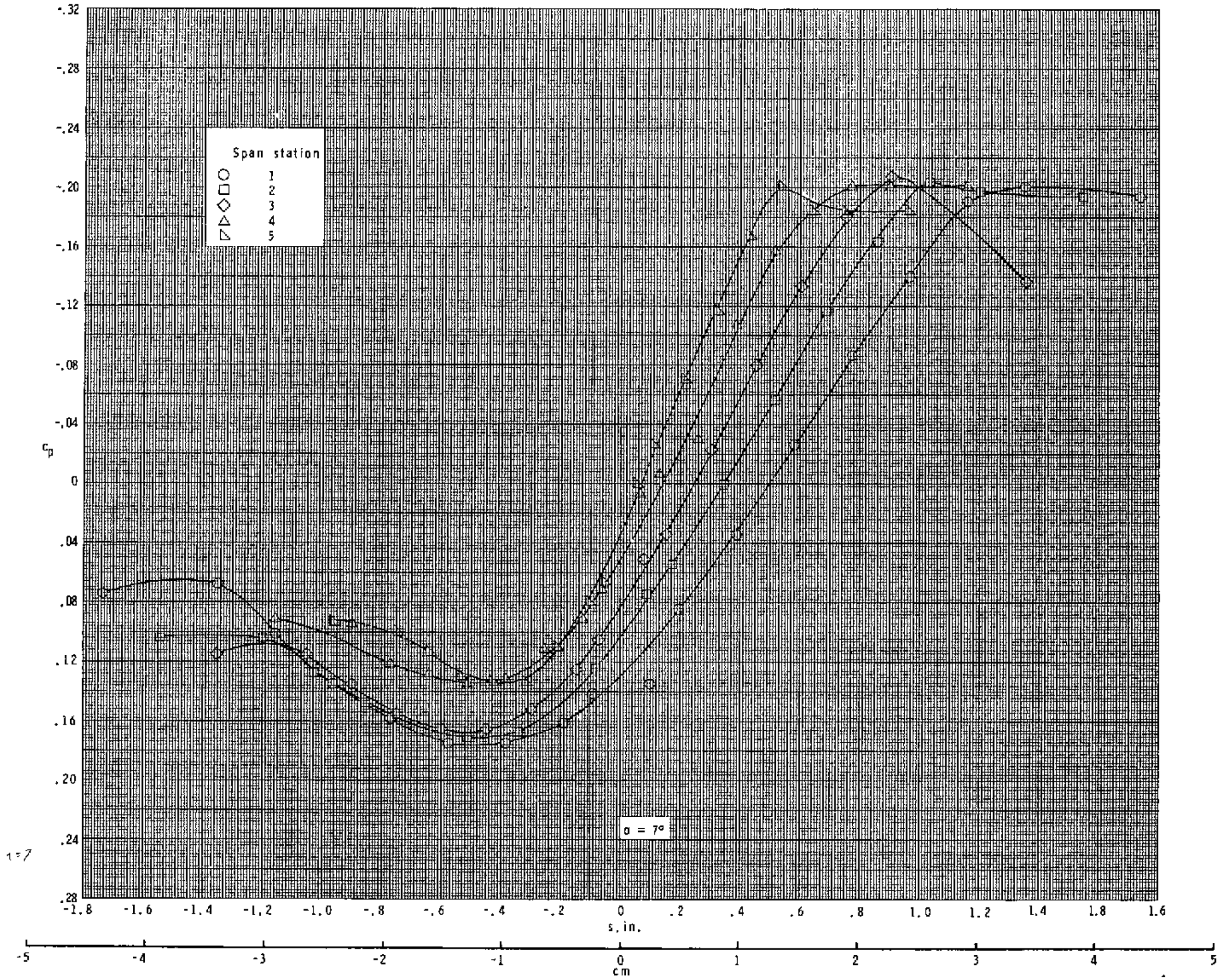
(c) Continued.

Figure 5.- Continued.



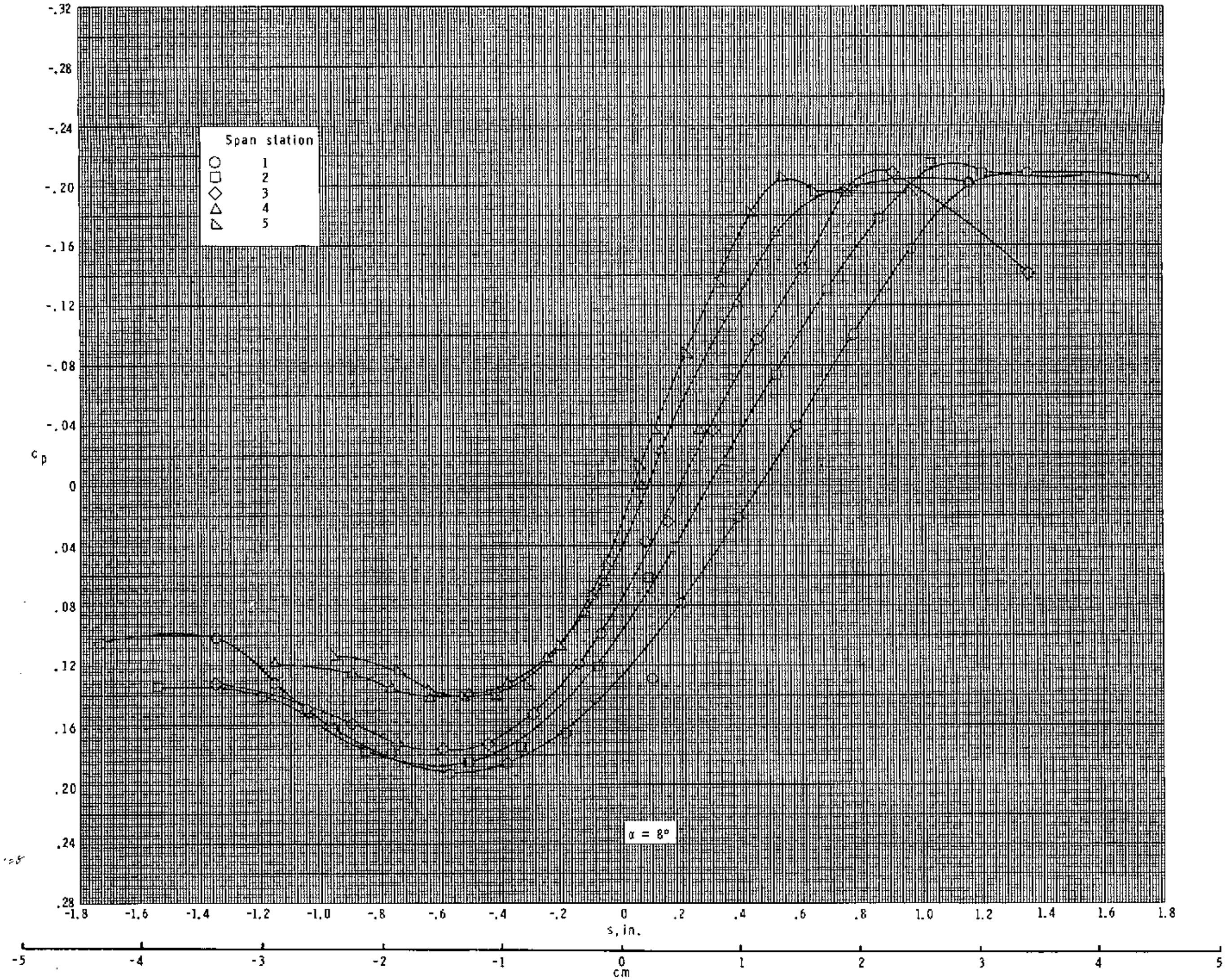
(c) Continued.

Figure 5.- Continued.



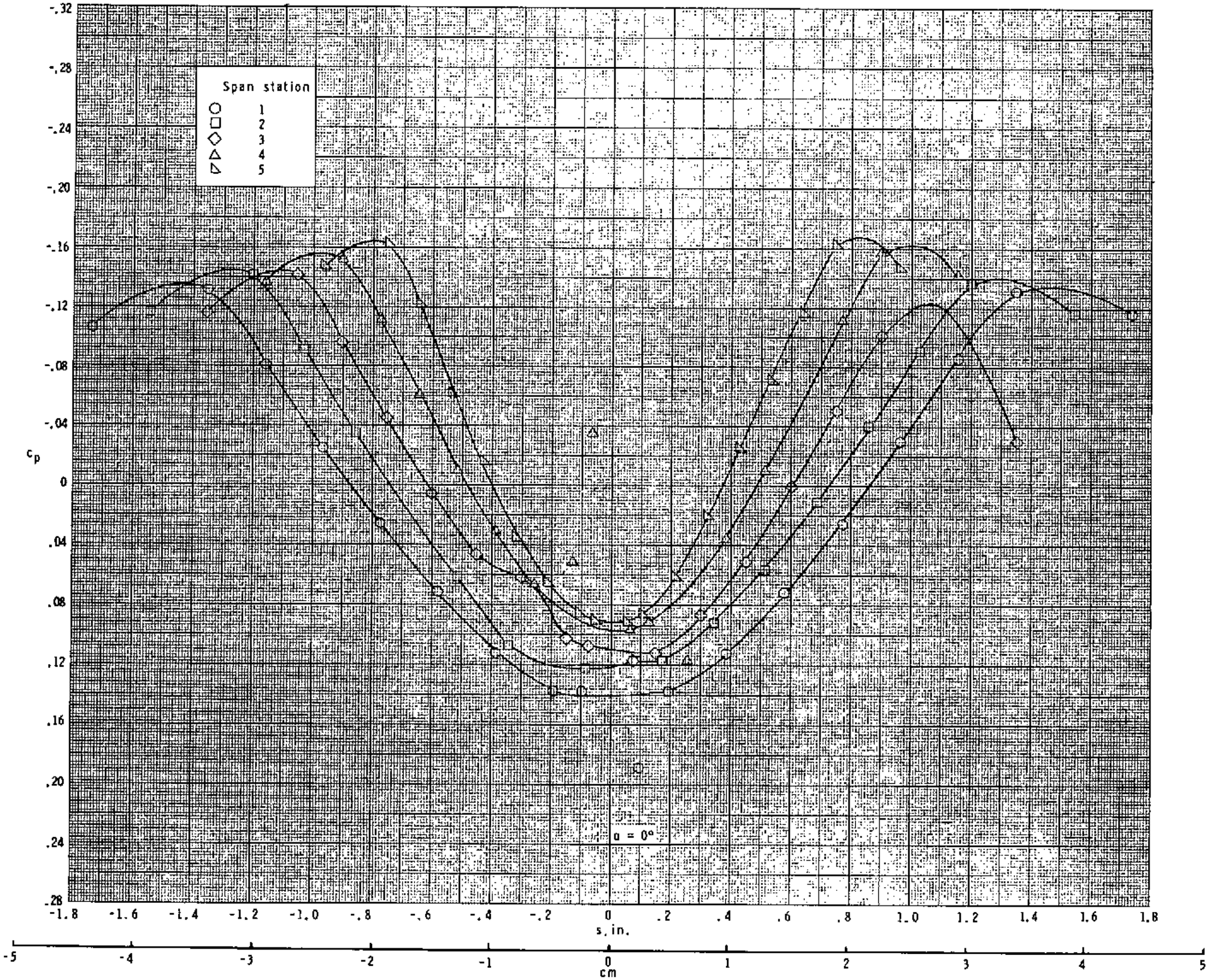
(c) Continued.

Figure 5.- Continued.



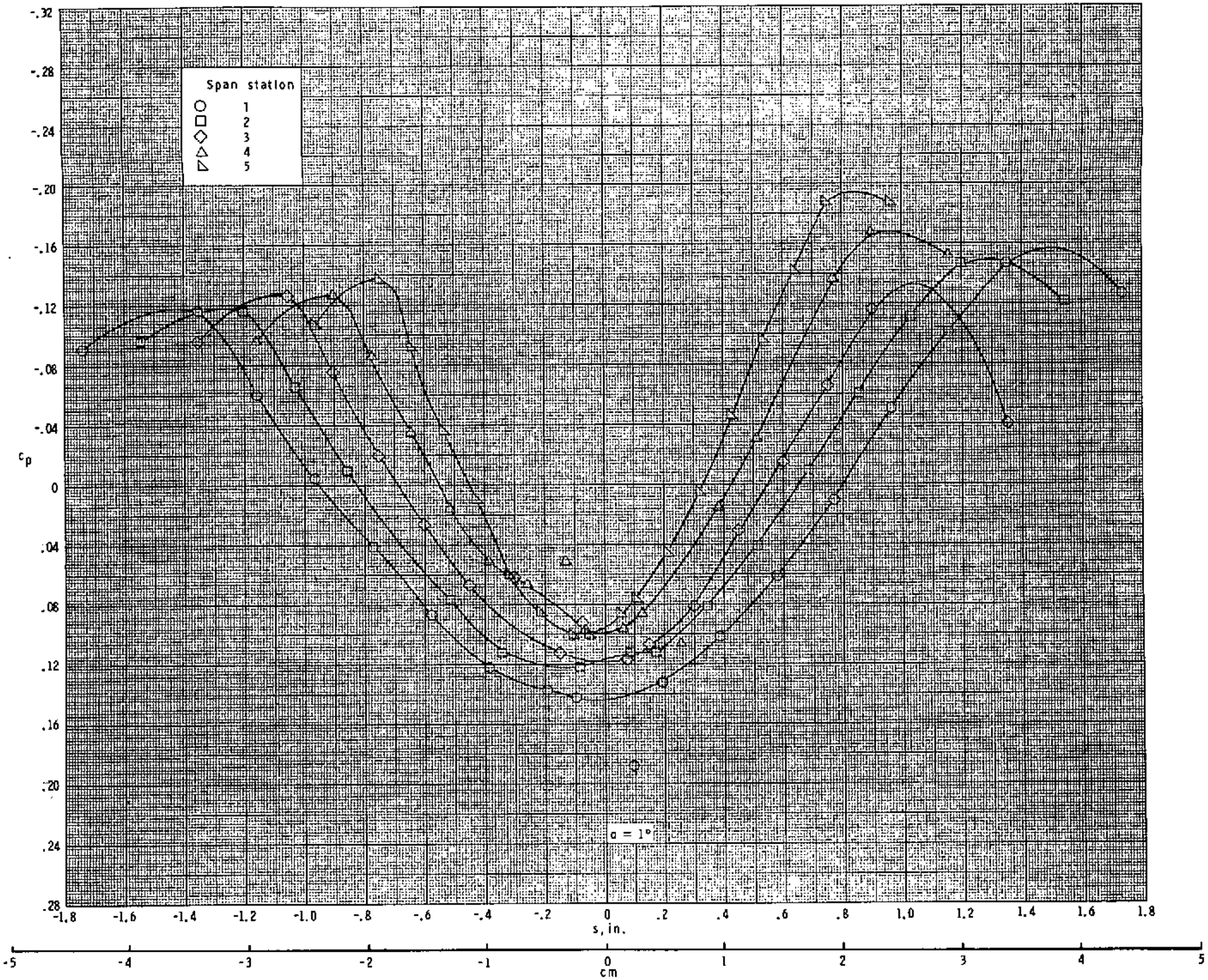
(c) Concluded.

Figure 5.- Continued.



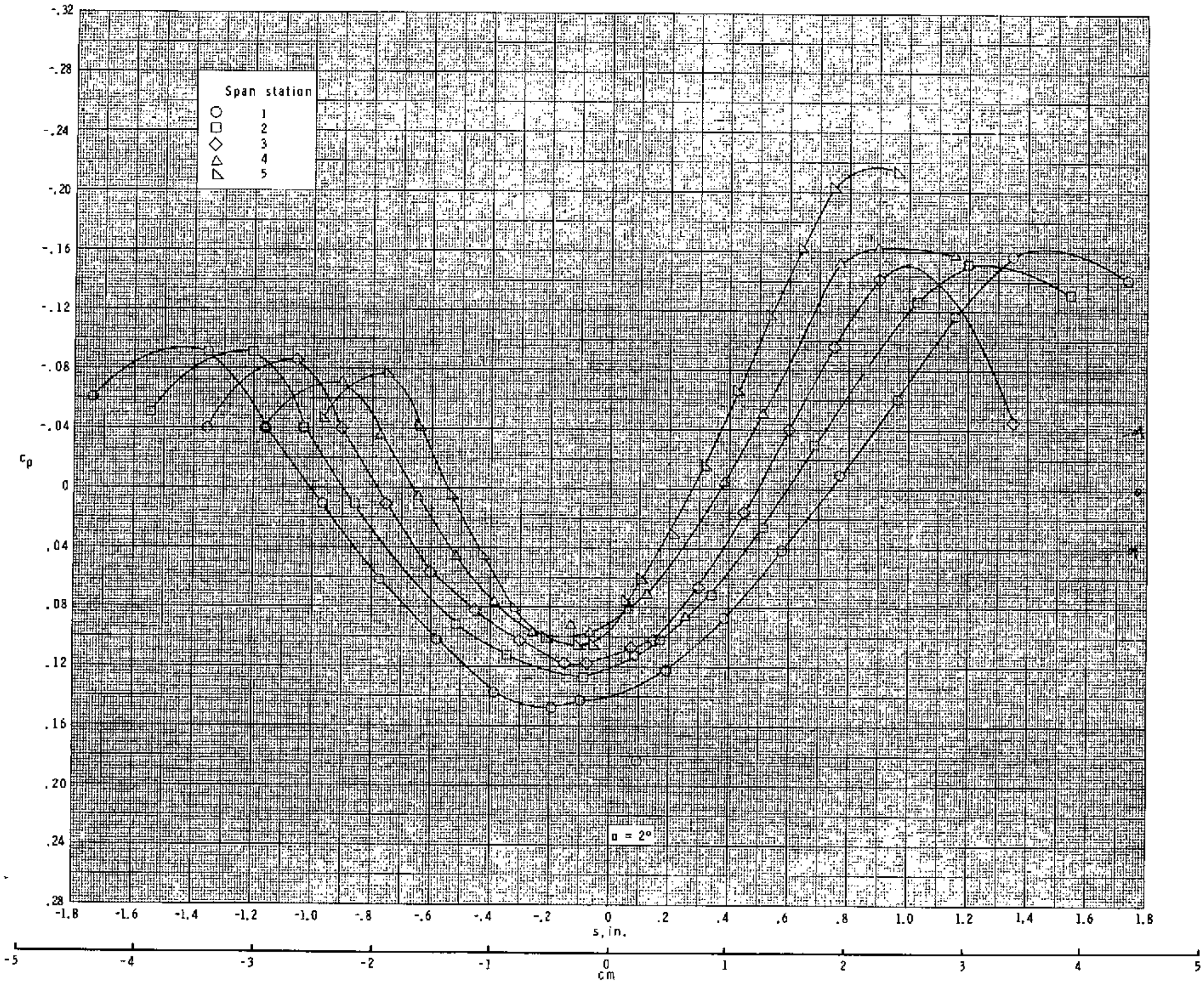
(d) $R_{\bar{r}} = 0.16 \times 10^6$.

Figure 5.- Continued.



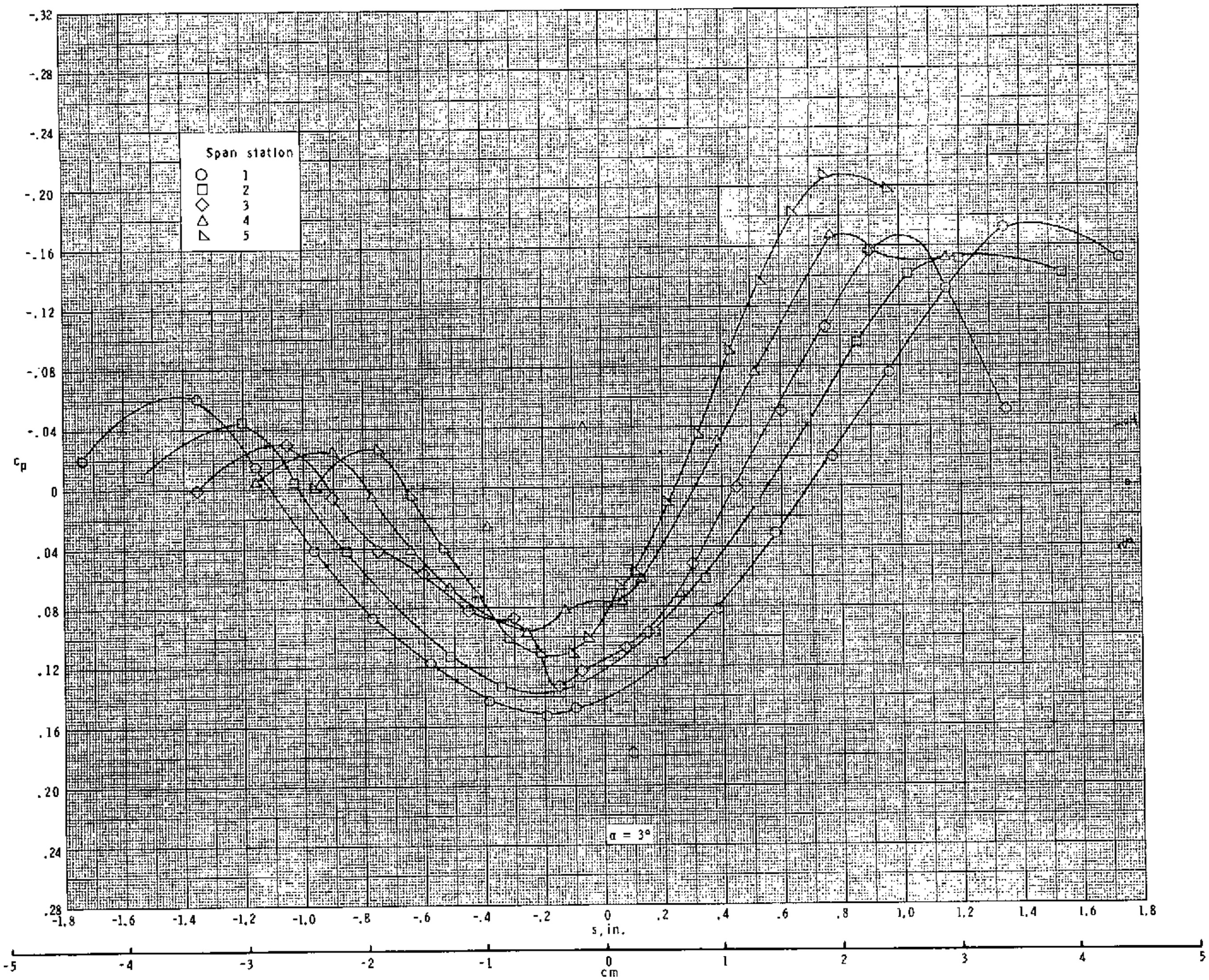
(d) Continued.

Figure 5.- Continued.



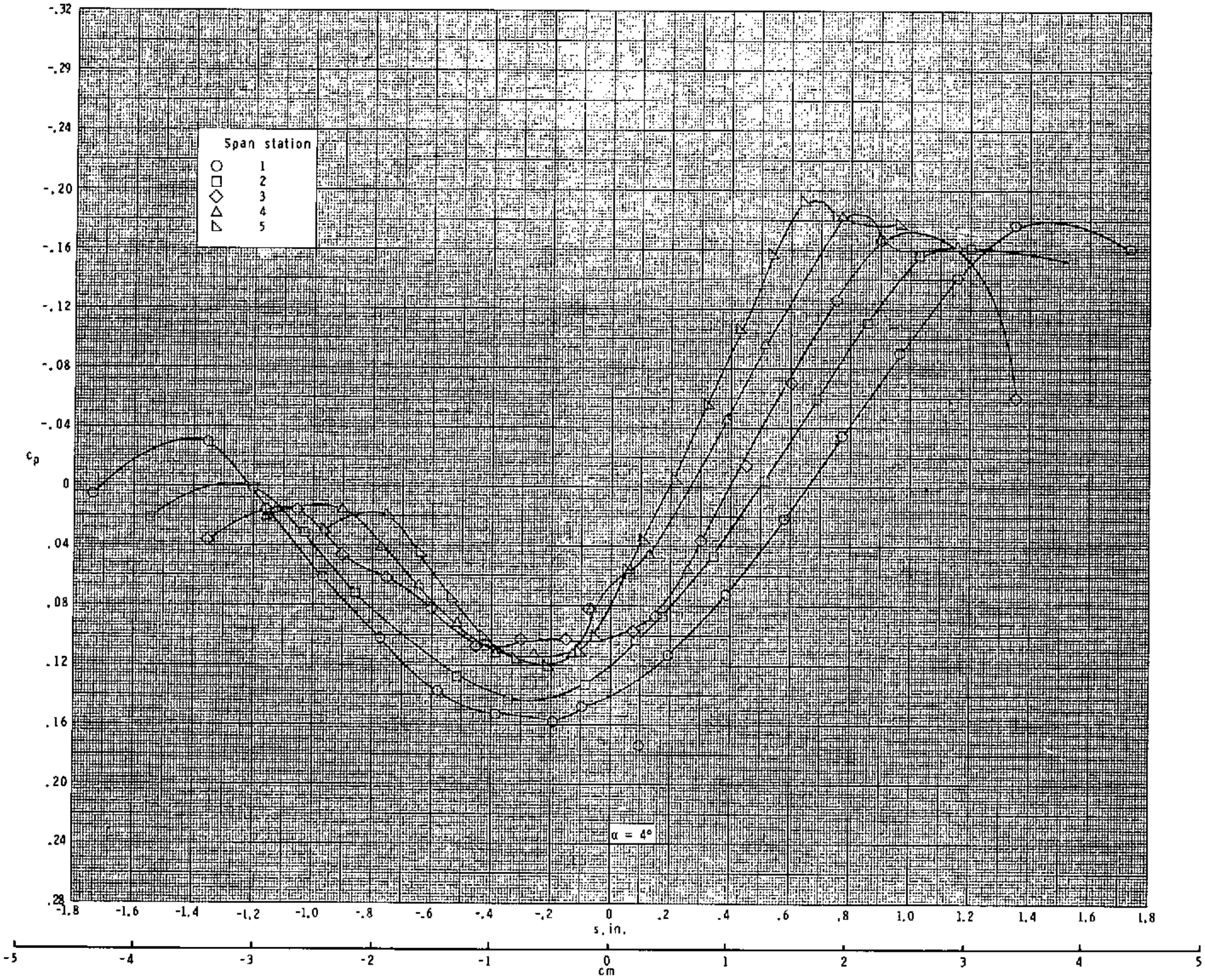
(d) Continued.

Figure 5.- Continued.



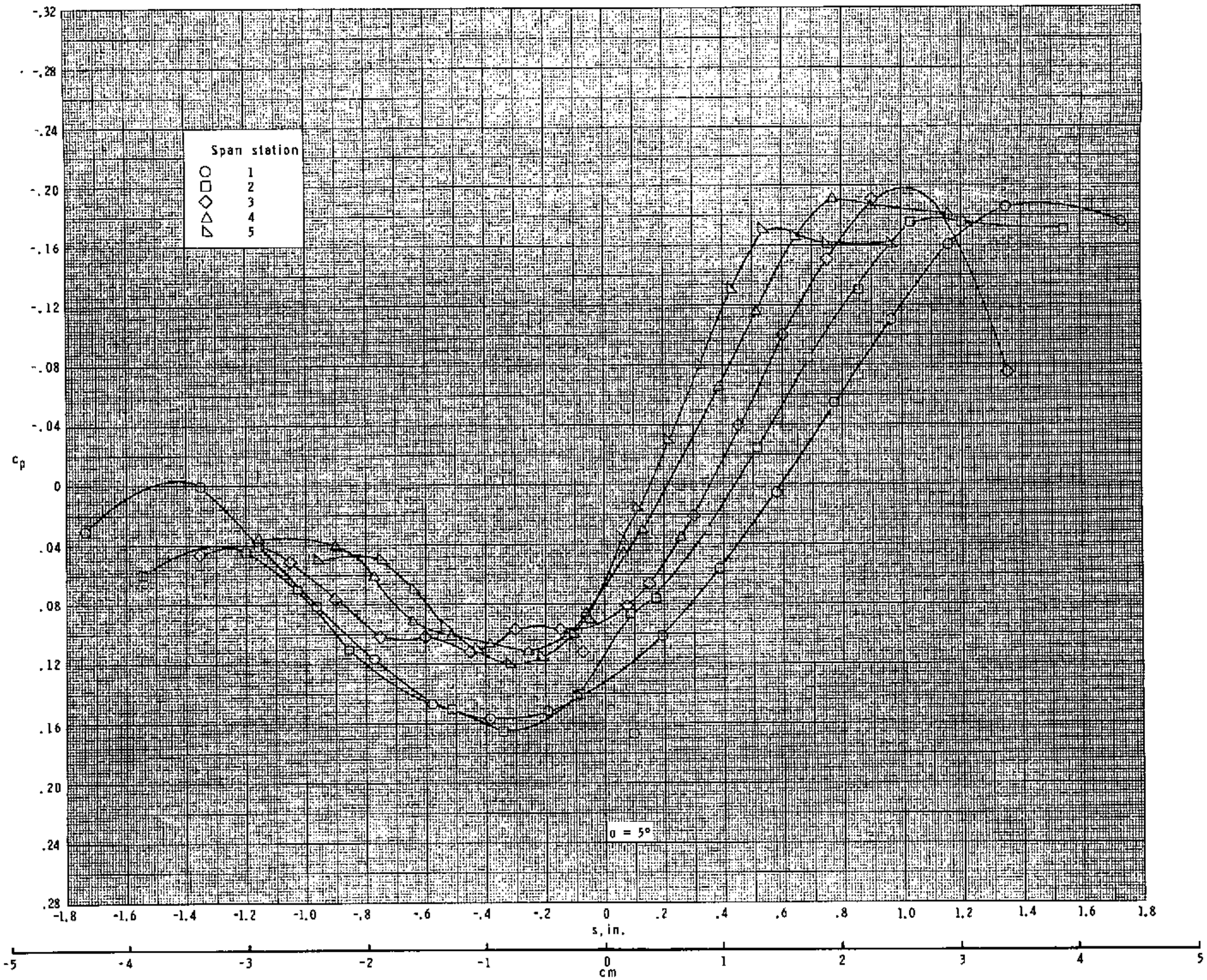
(d) Continued.

Figure 5.- Continued.



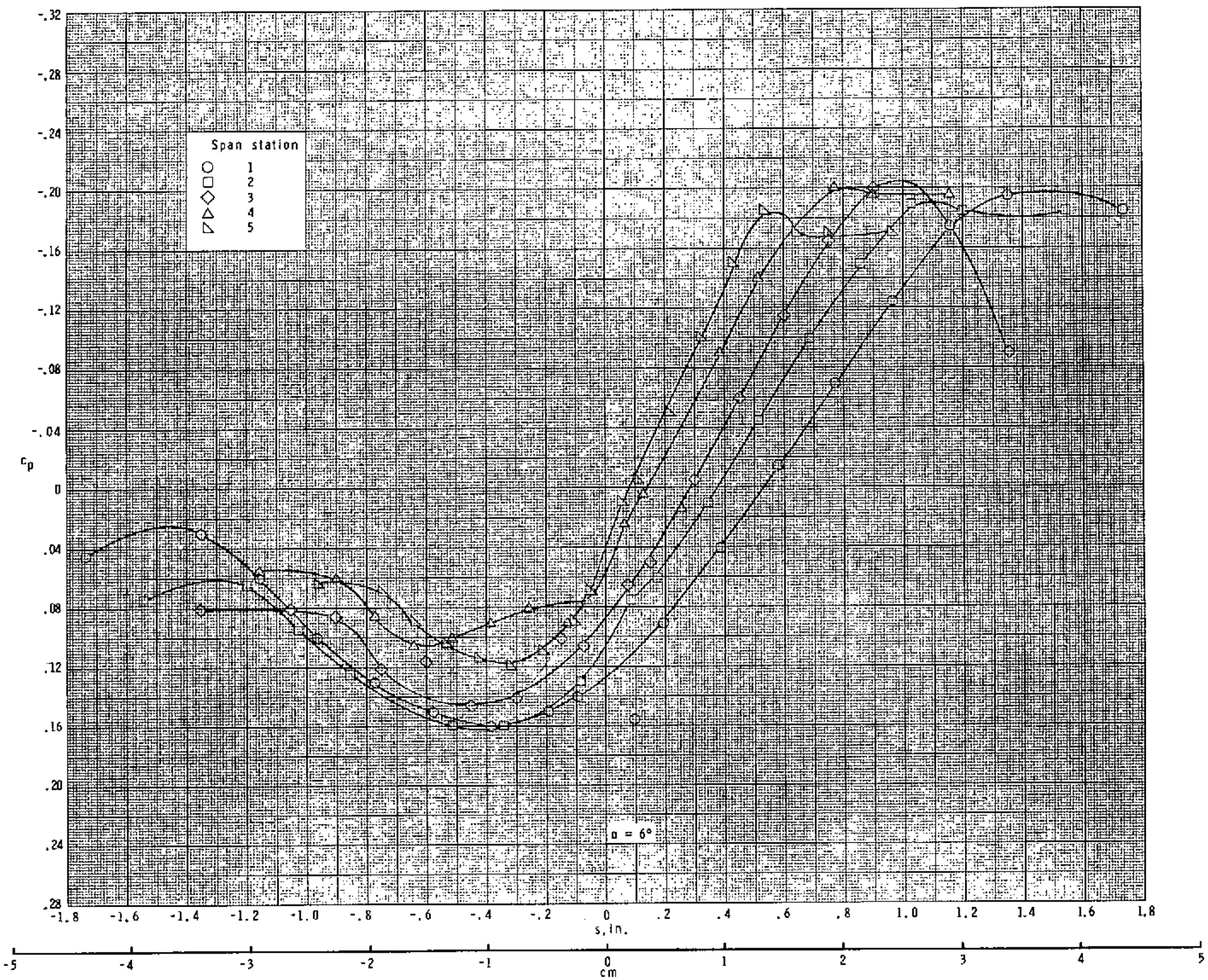
(d) Continued.

Figure 5.- Continued.



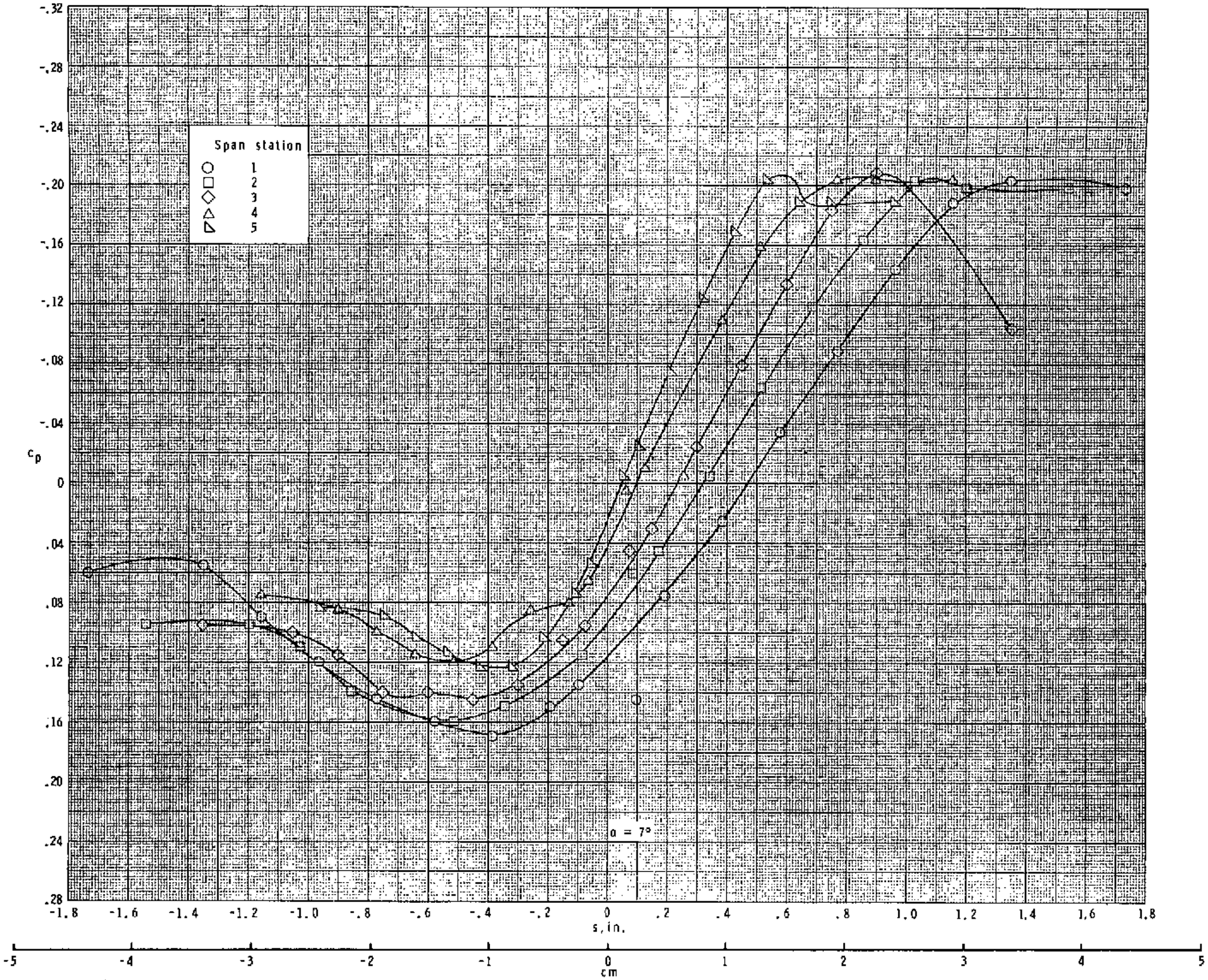
(d) Continued.

Figure 5.- Continued.



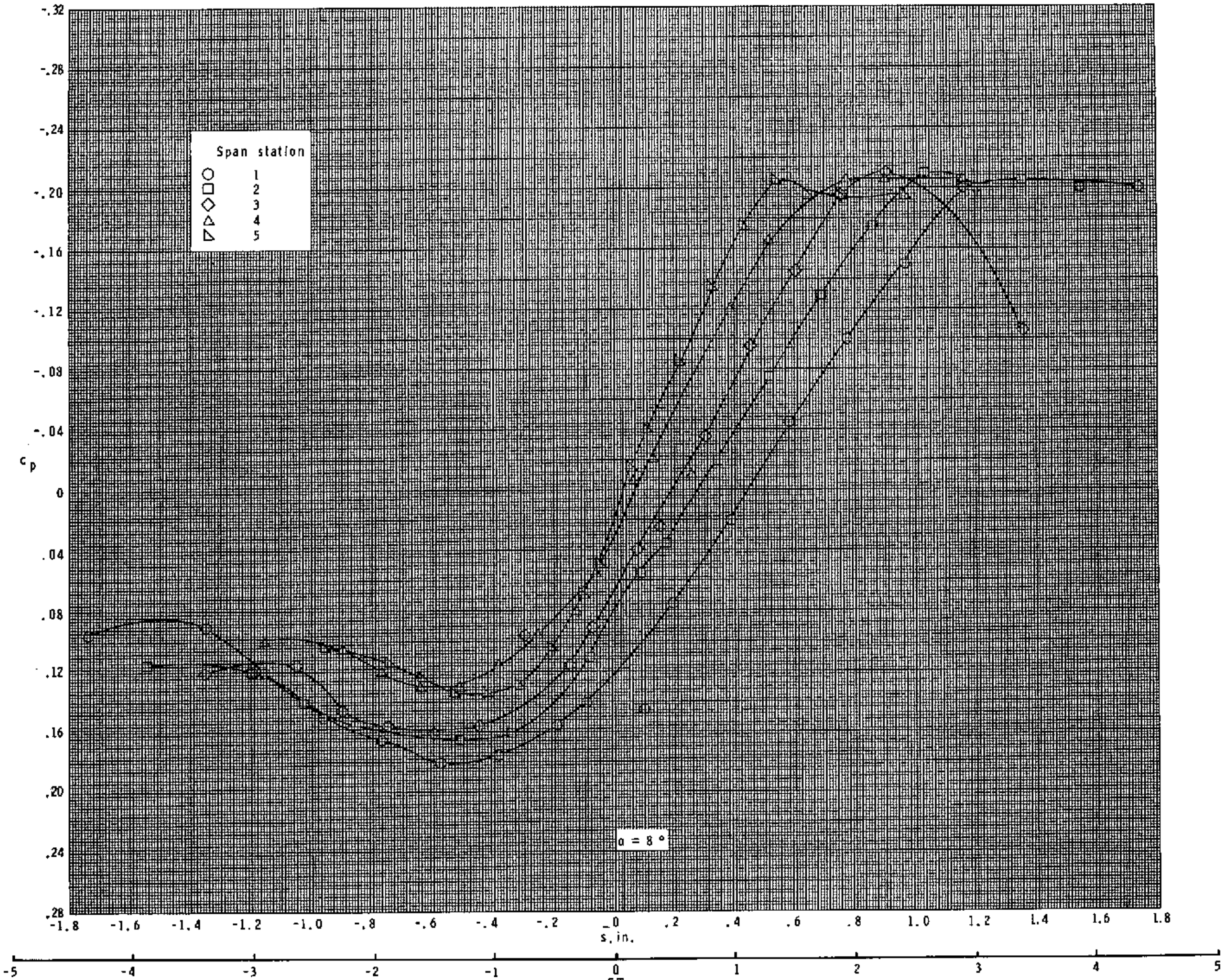
(d) Continued.

Figure 5.- Continued.



(d) Continued.

Figure 5.- Continued.



(d) Concluded.

Figure 5.- Concluded.

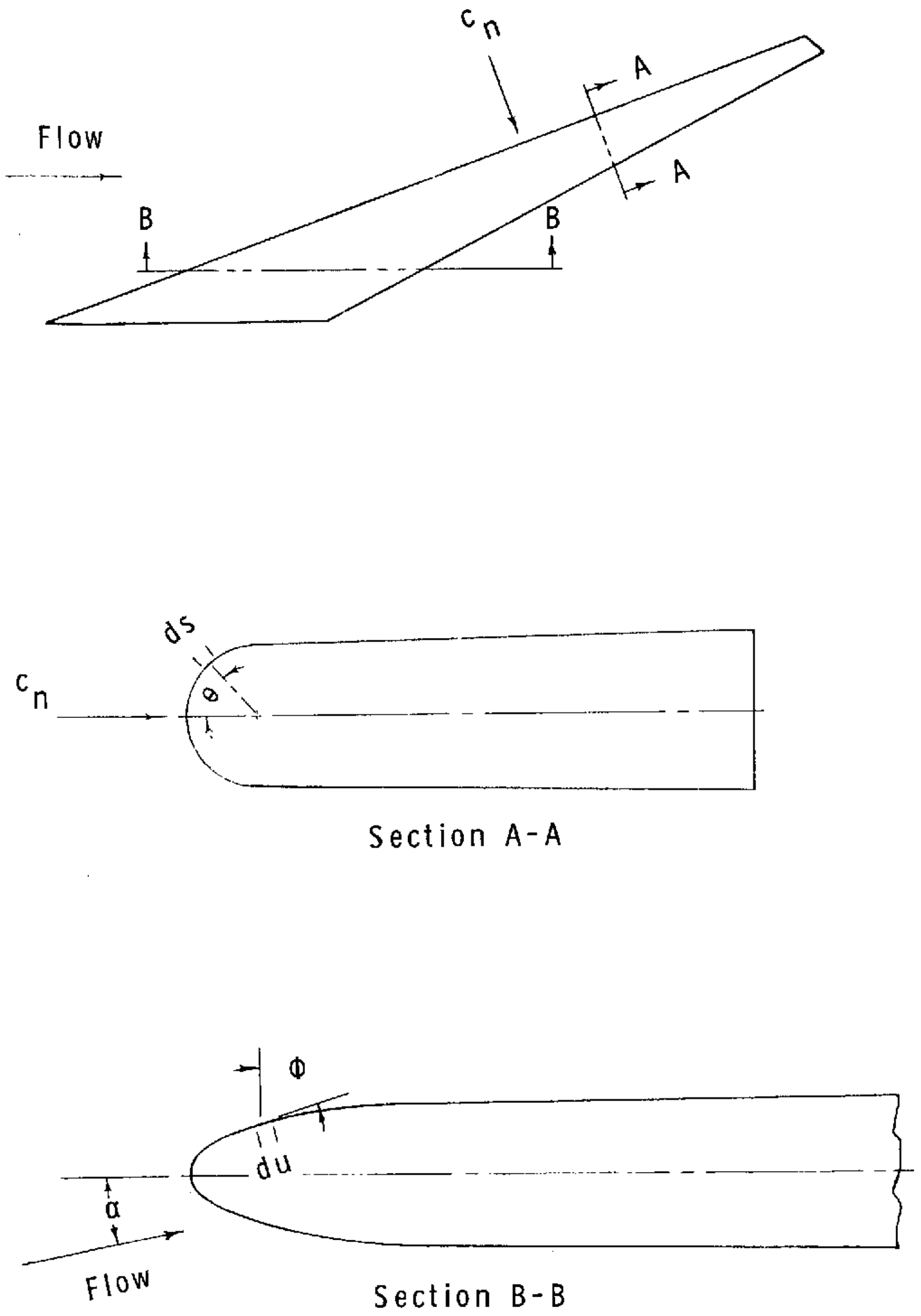


Figure 6.- Definition of parameters used in data reduction.

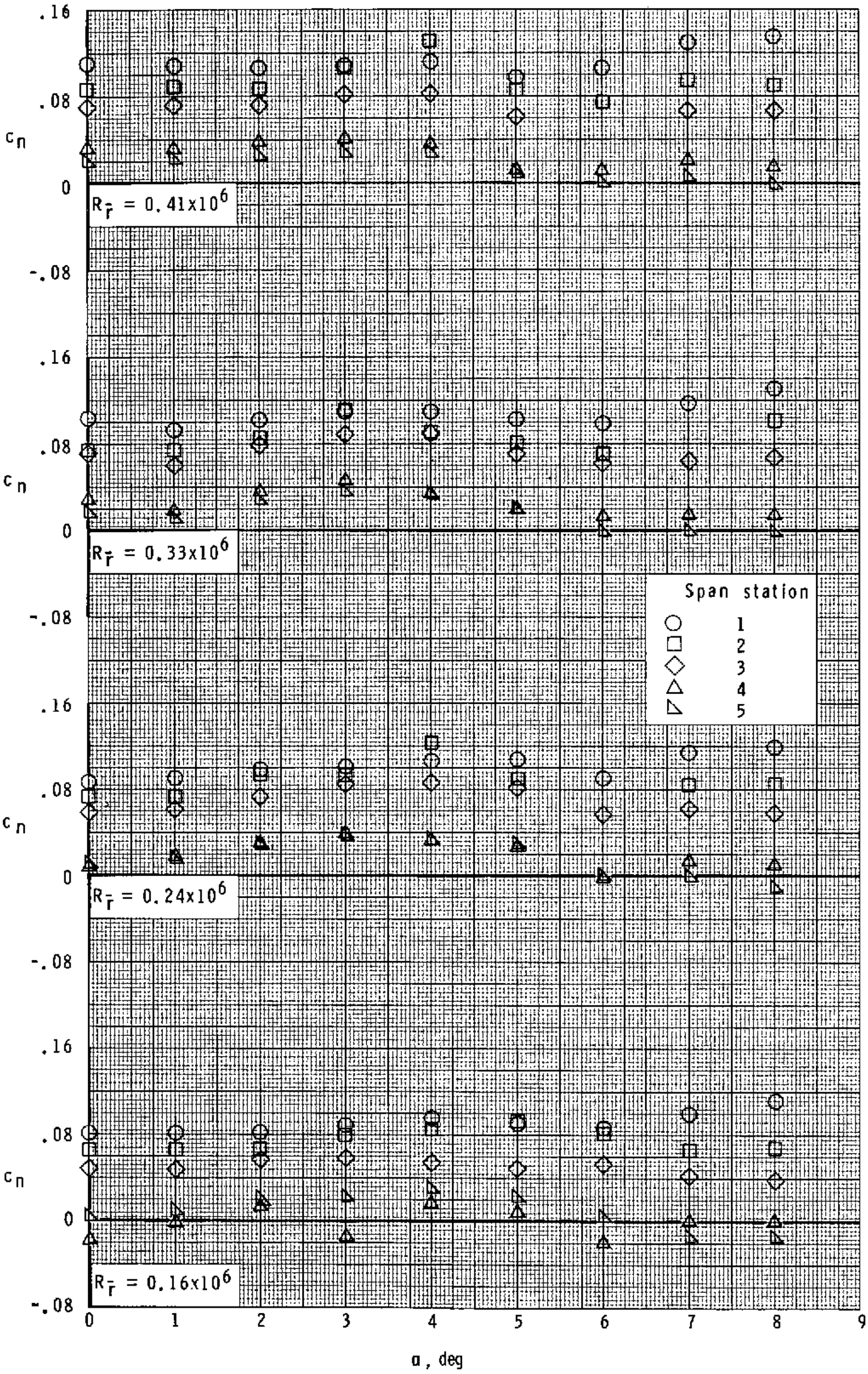


Figure 7.- Variation of local leading-edge coefficient with angle of attack.

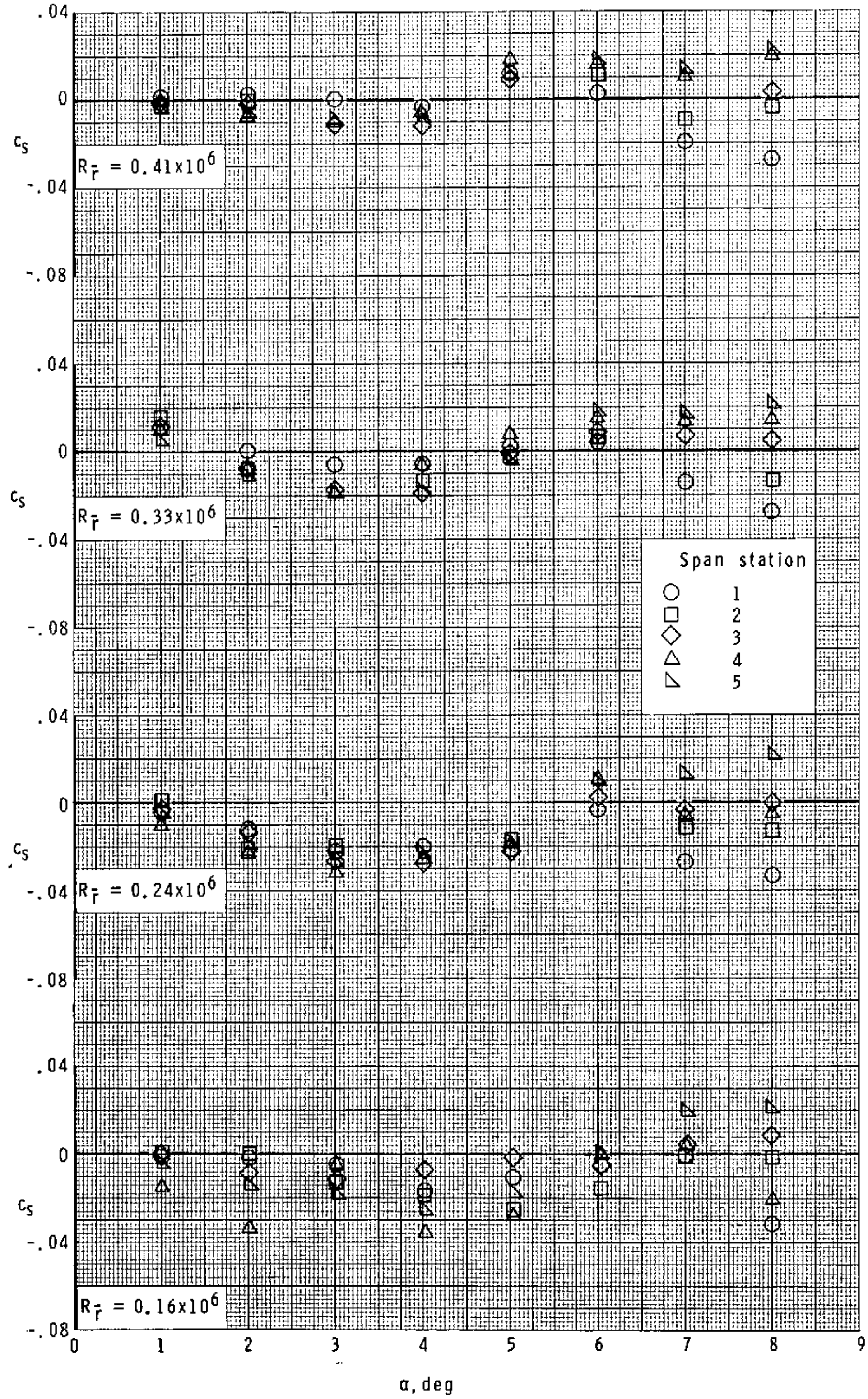
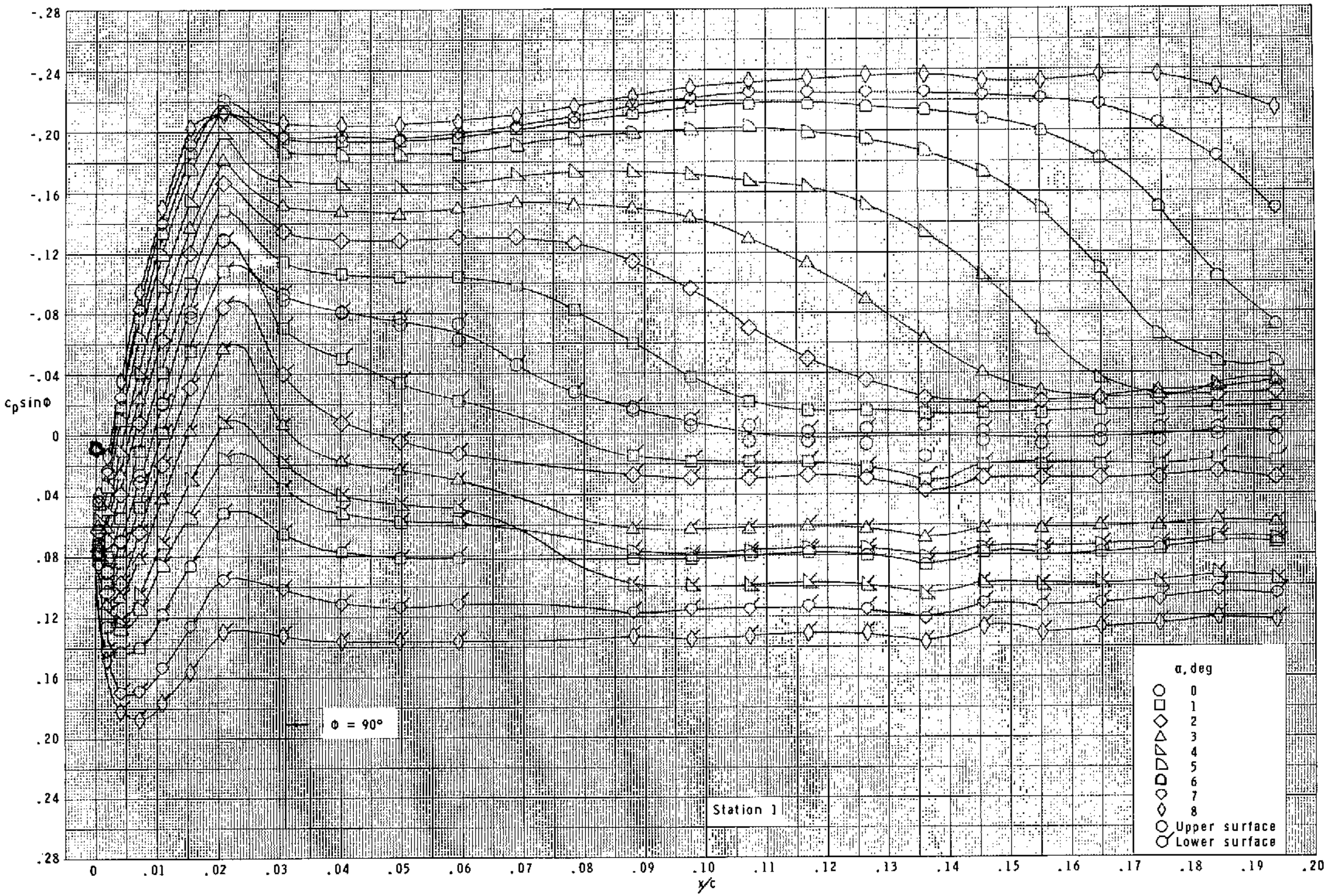
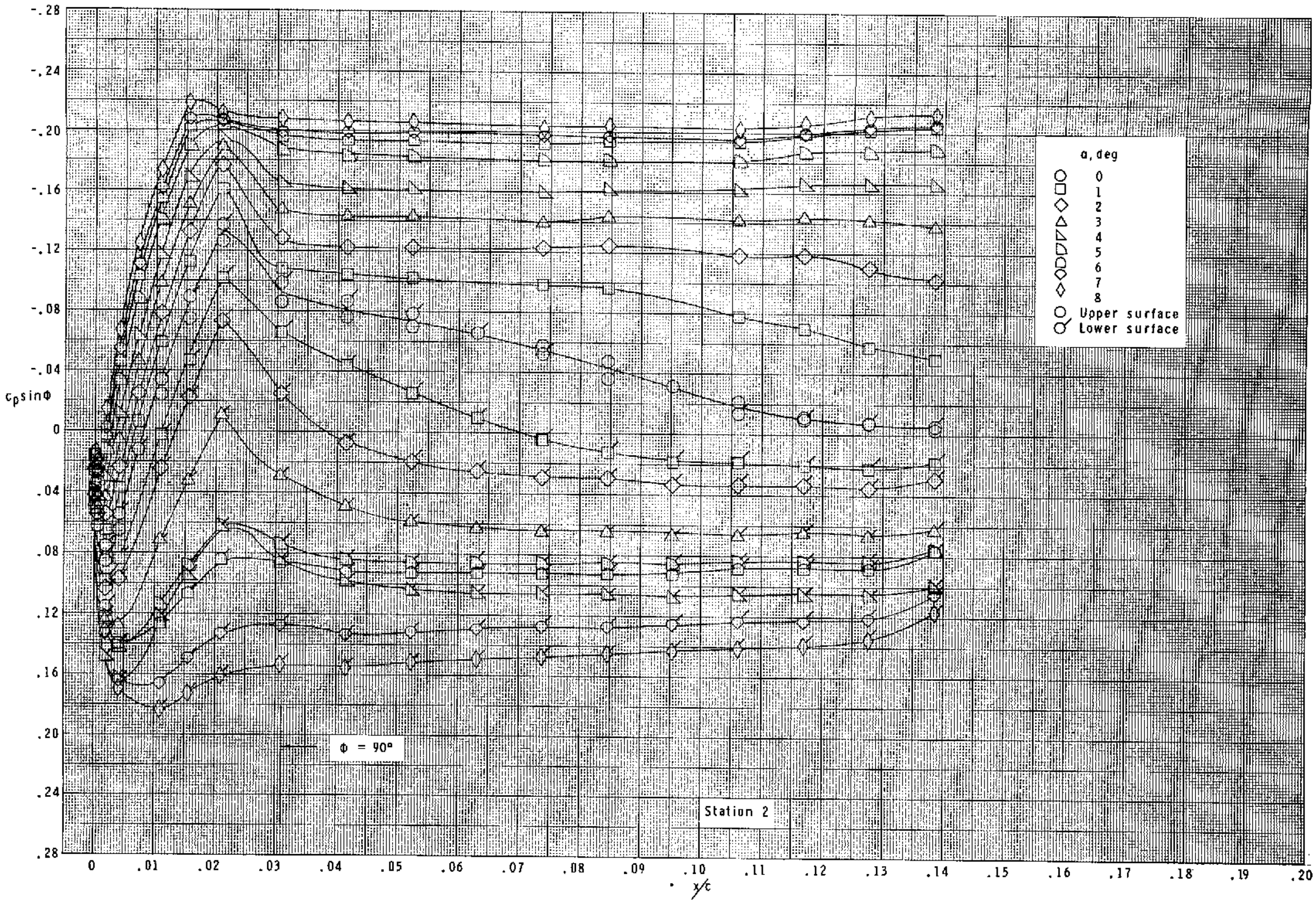


Figure 8.- Variation of leading-edge-suction coefficient with angle of attack.



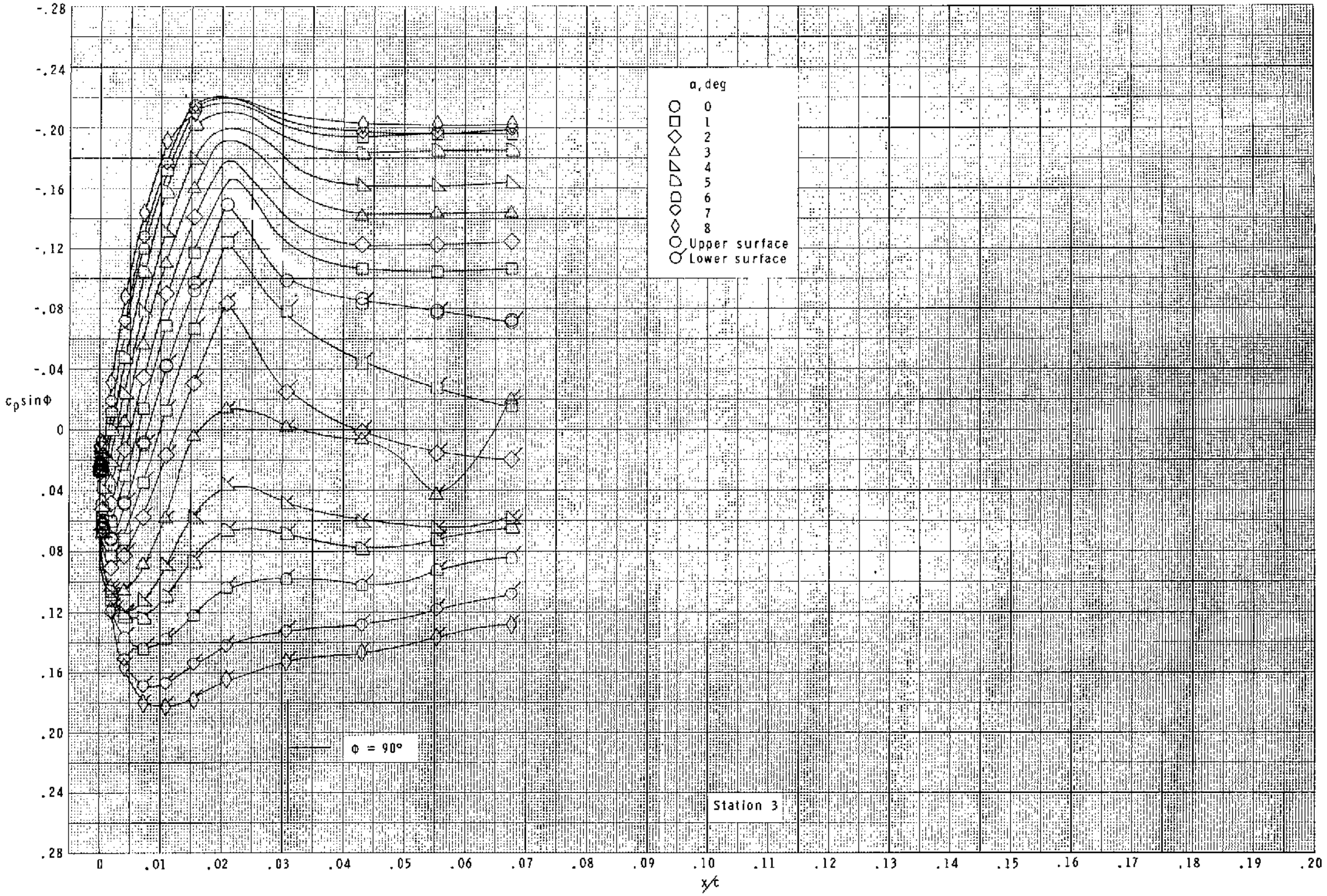
(a) $R_{\bar{r}} = 0.41 \times 10^6$.

Figure 9.- Variation of local normal-force coefficient with chordwise station.



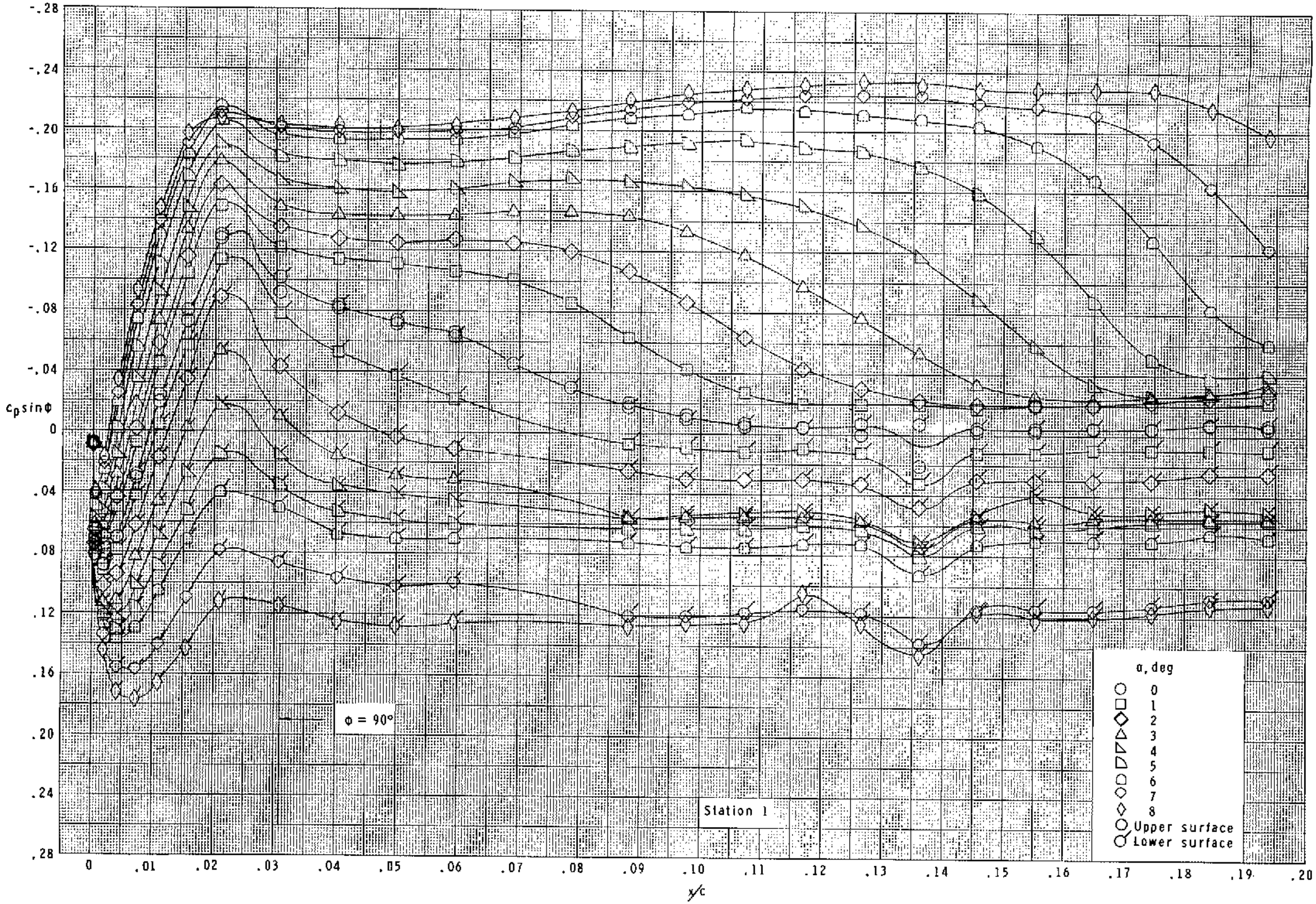
(a) Continued.

Figure 9.- Continued.



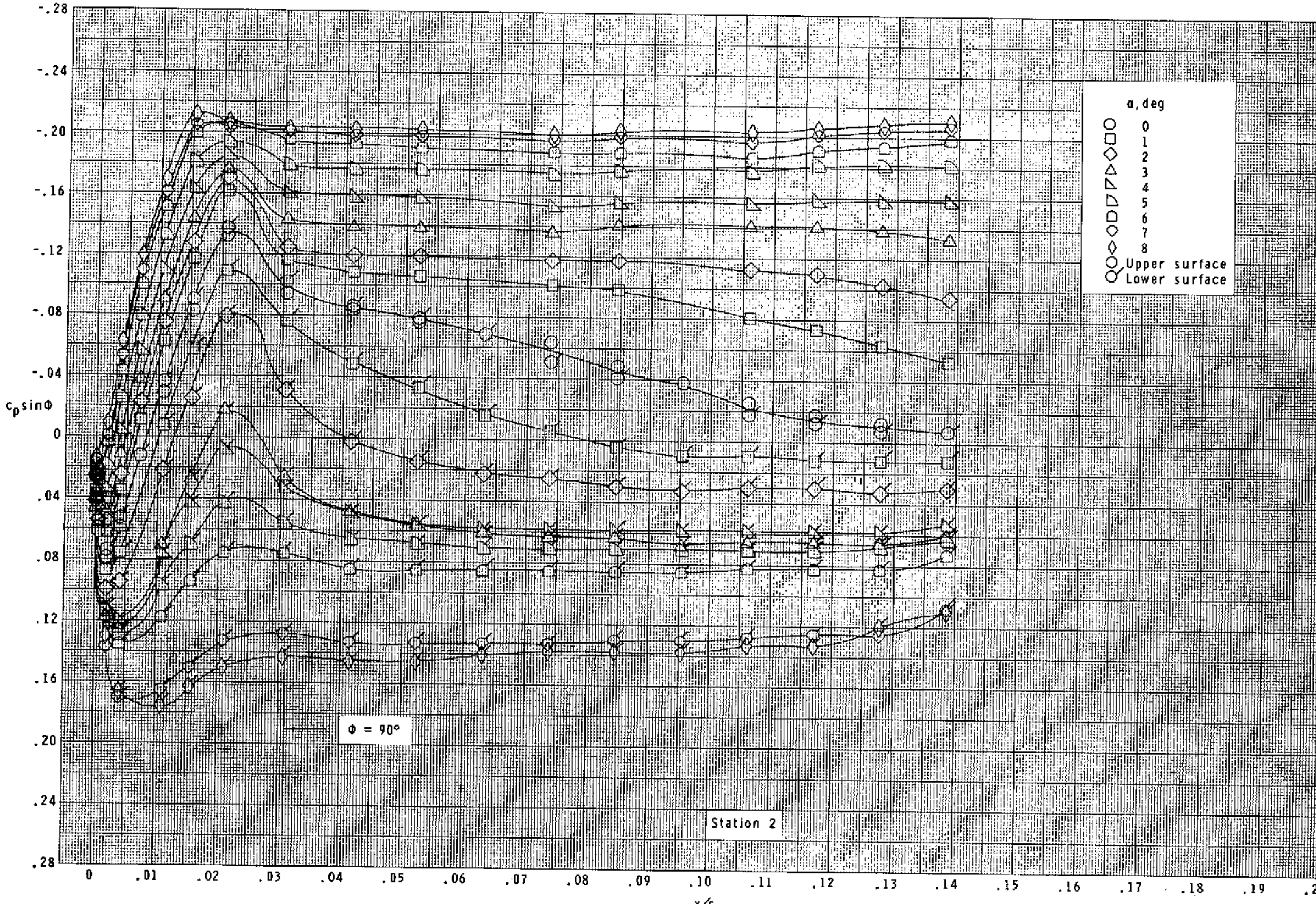
(a) Concluded.

Figure 9 - Continued.



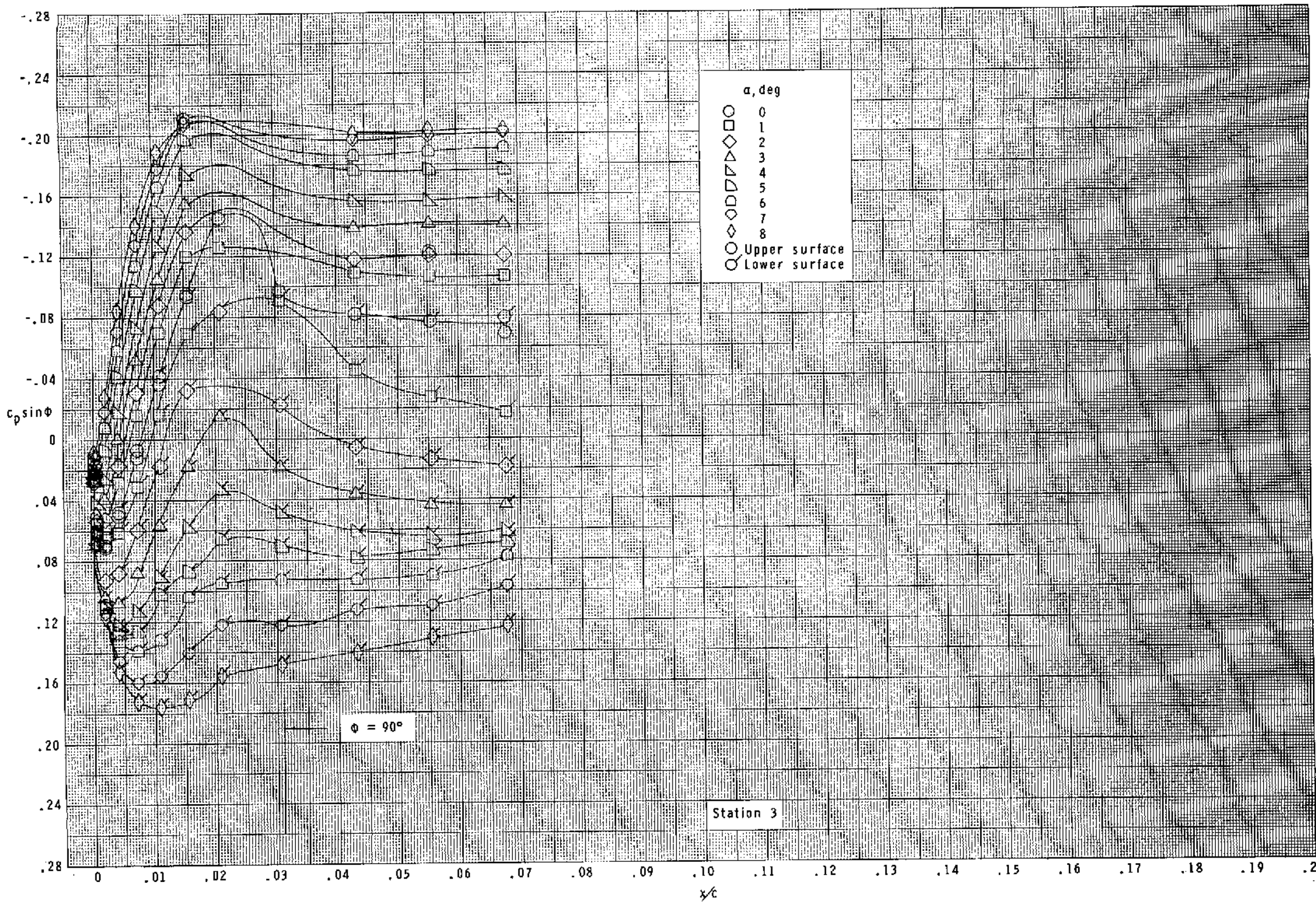
(b) $R_{\bar{r}} = 0.33 \times 10^6$.

Figure 9.- Continued.



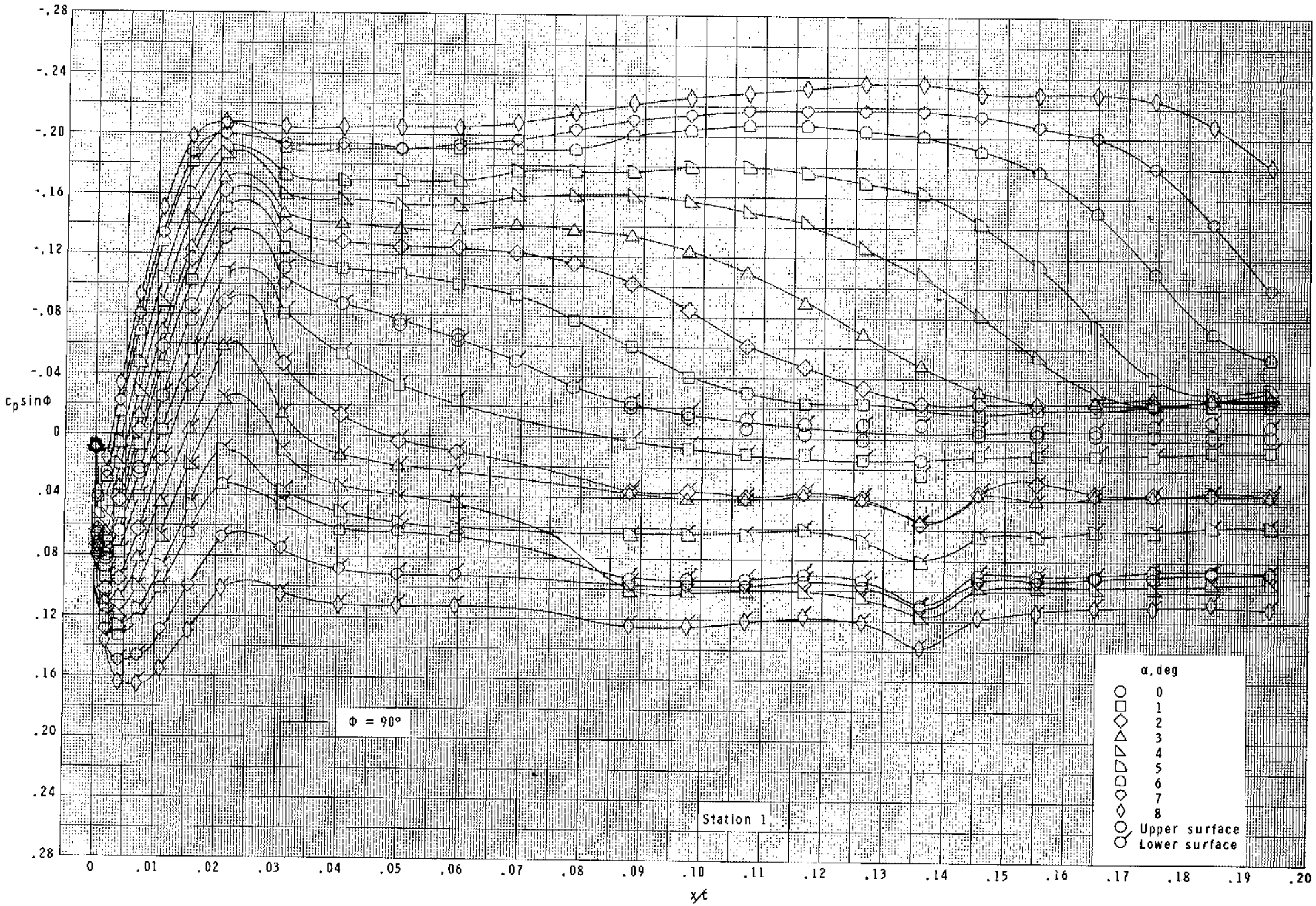
(b) Continued.

Figure 9.- Continued.



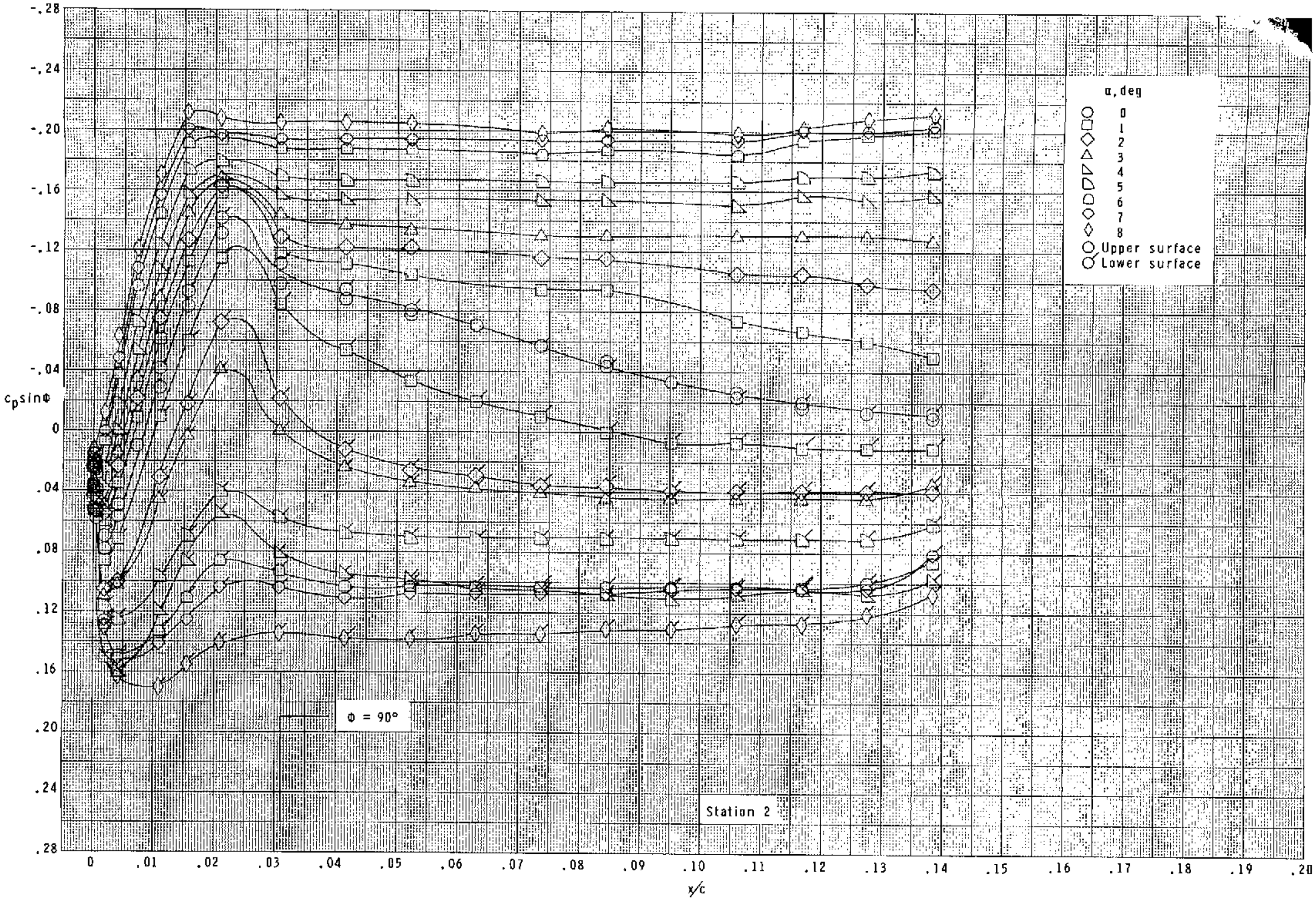
(b) Concluded.

Figure 9.- Continued



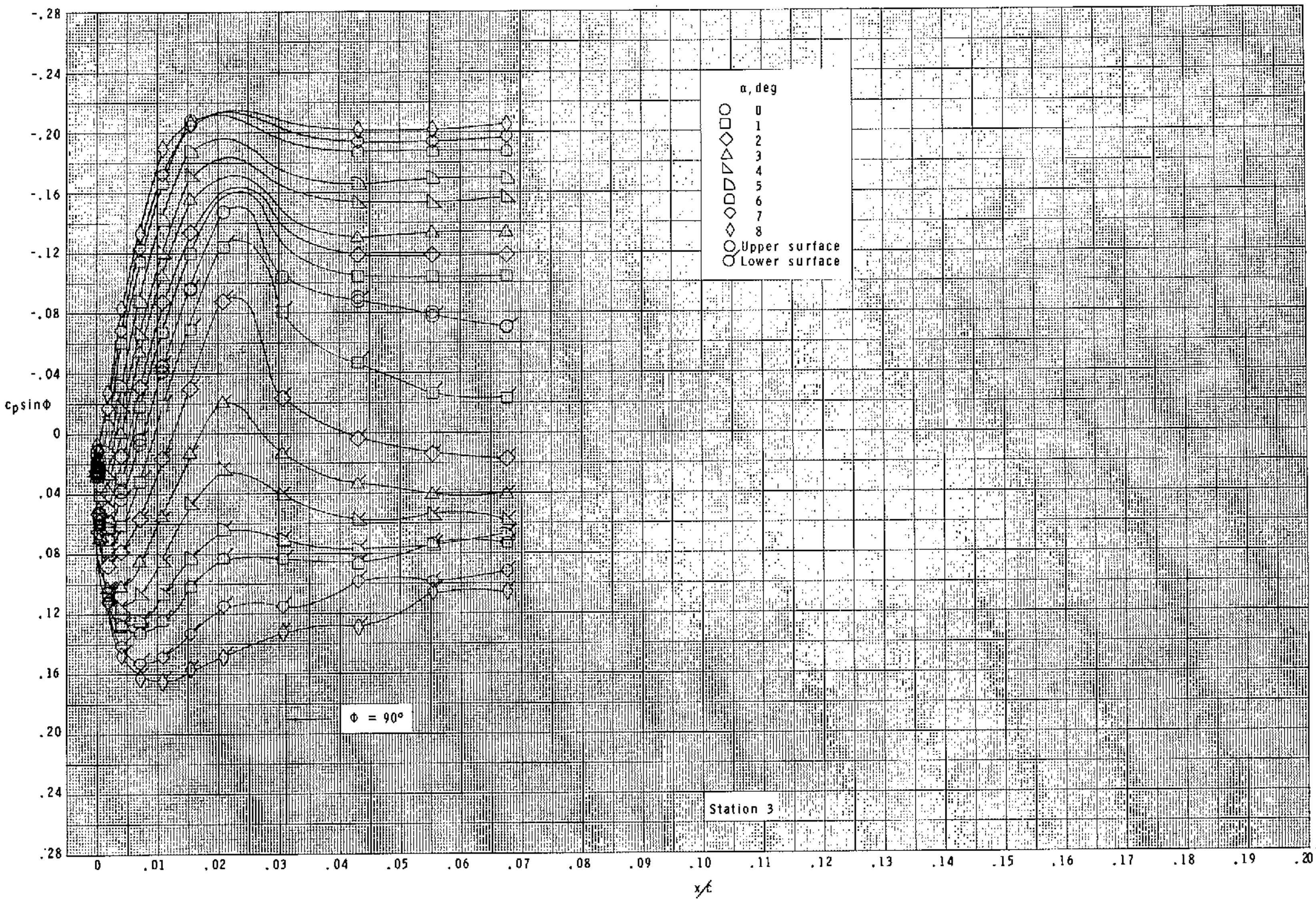
(c) $R_{\bar{r}} = 0.24 \times 10^6$.

Figure 9.- Continued.



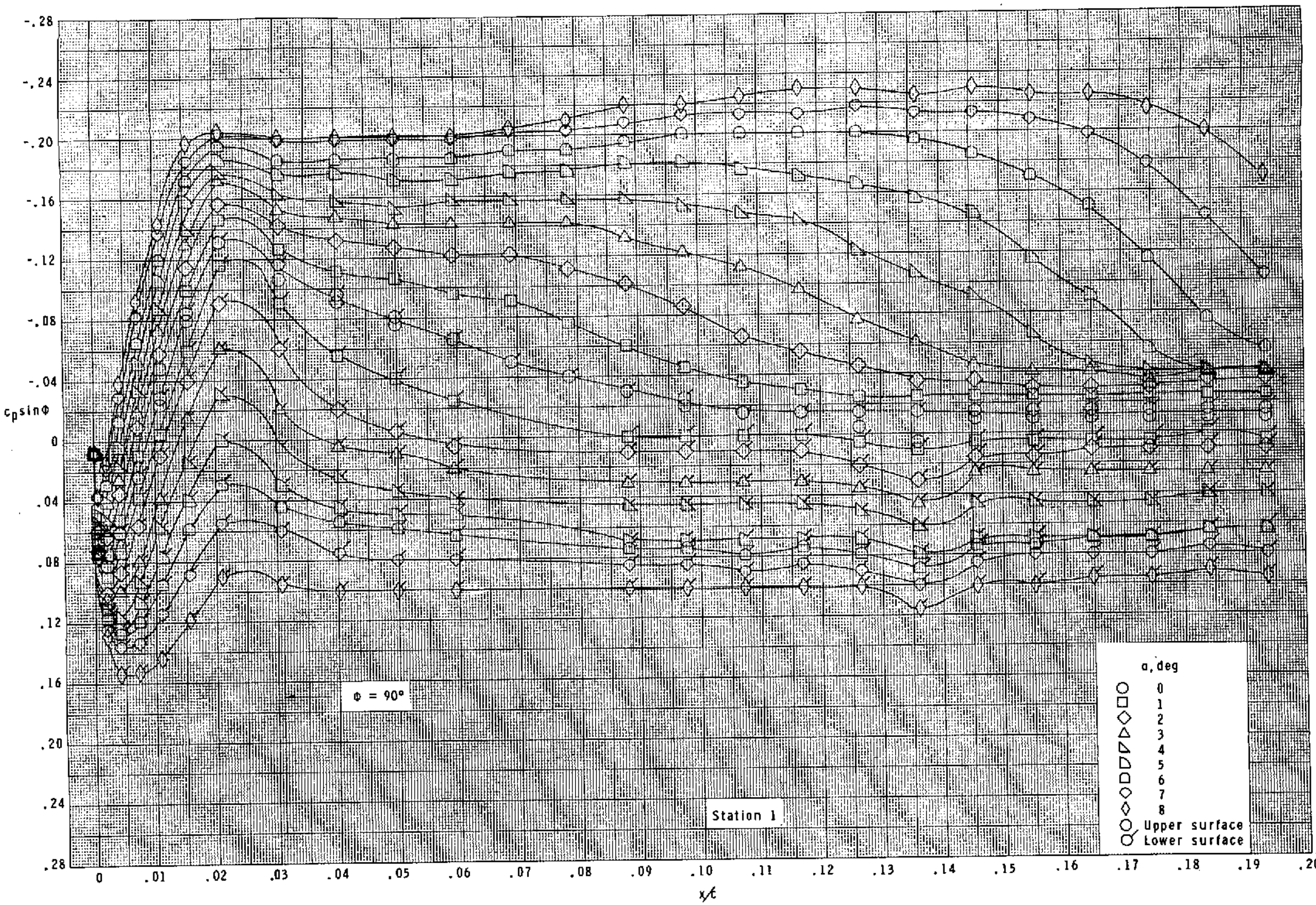
(c) Continued.

Figure 9.- Continued.



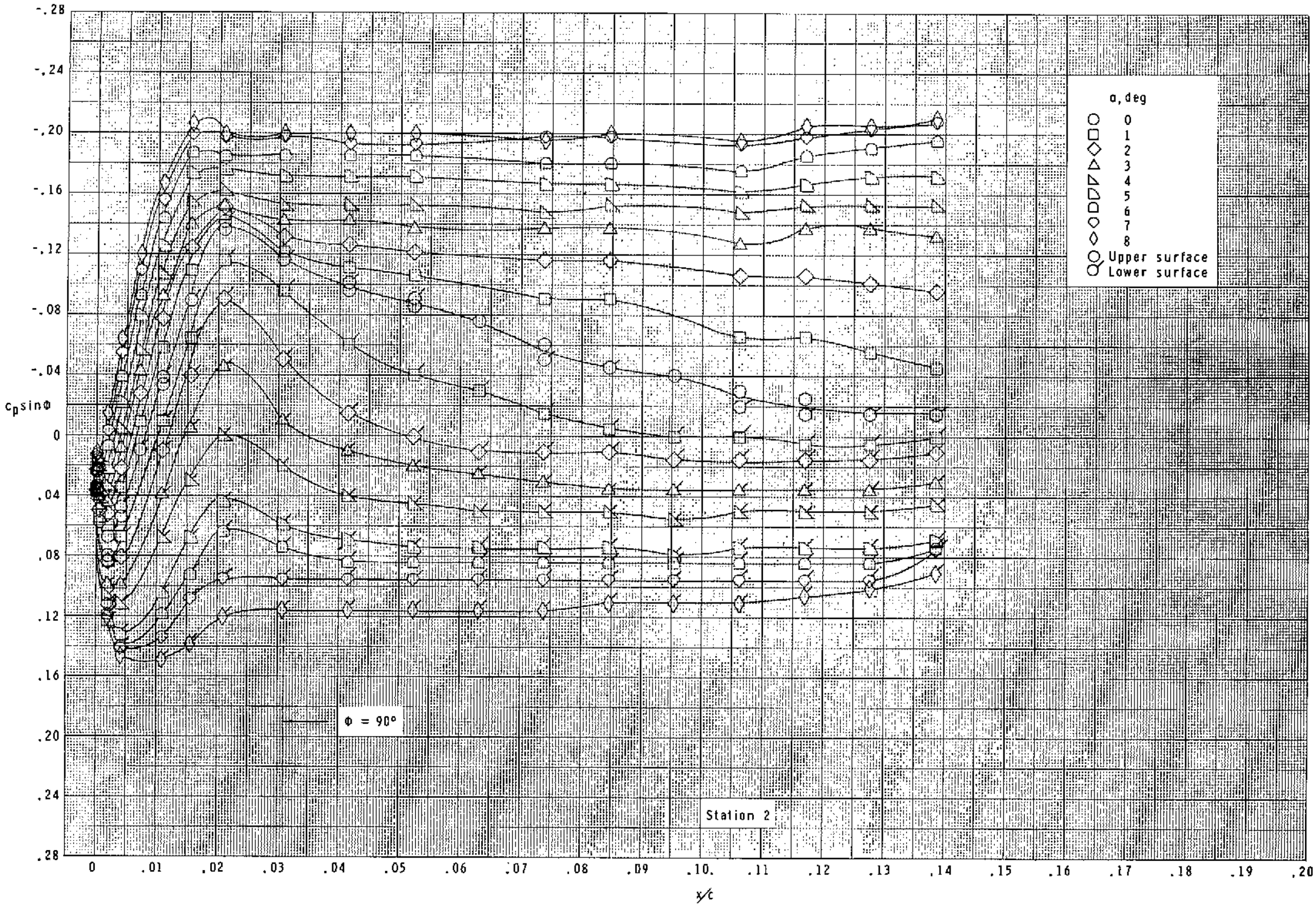
(c) Concluded.

Figure 9.- Continued.



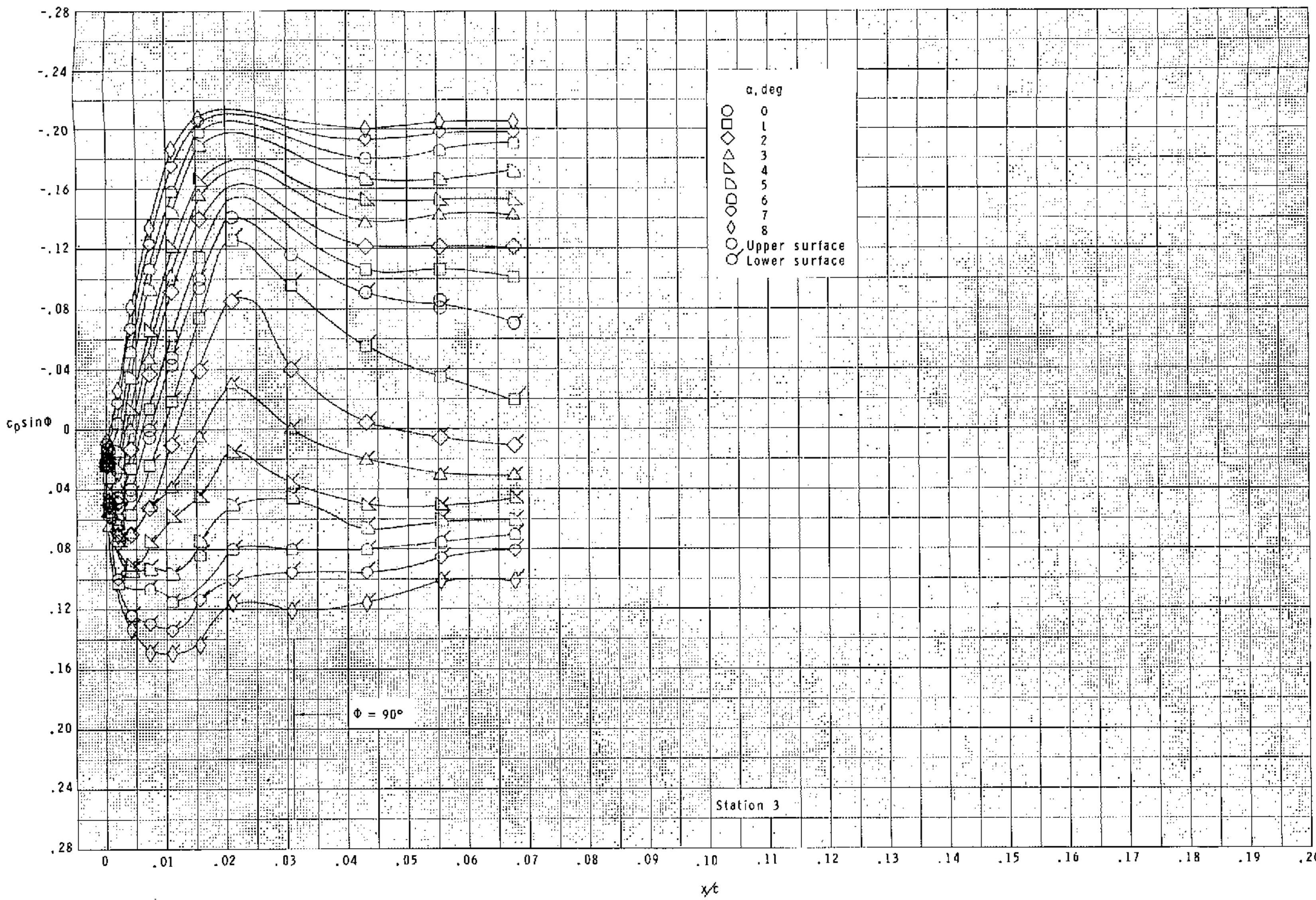
(d) $R_{\bar{r}} = 0.16 \times 10^6$.

Figure 9.- Continued.



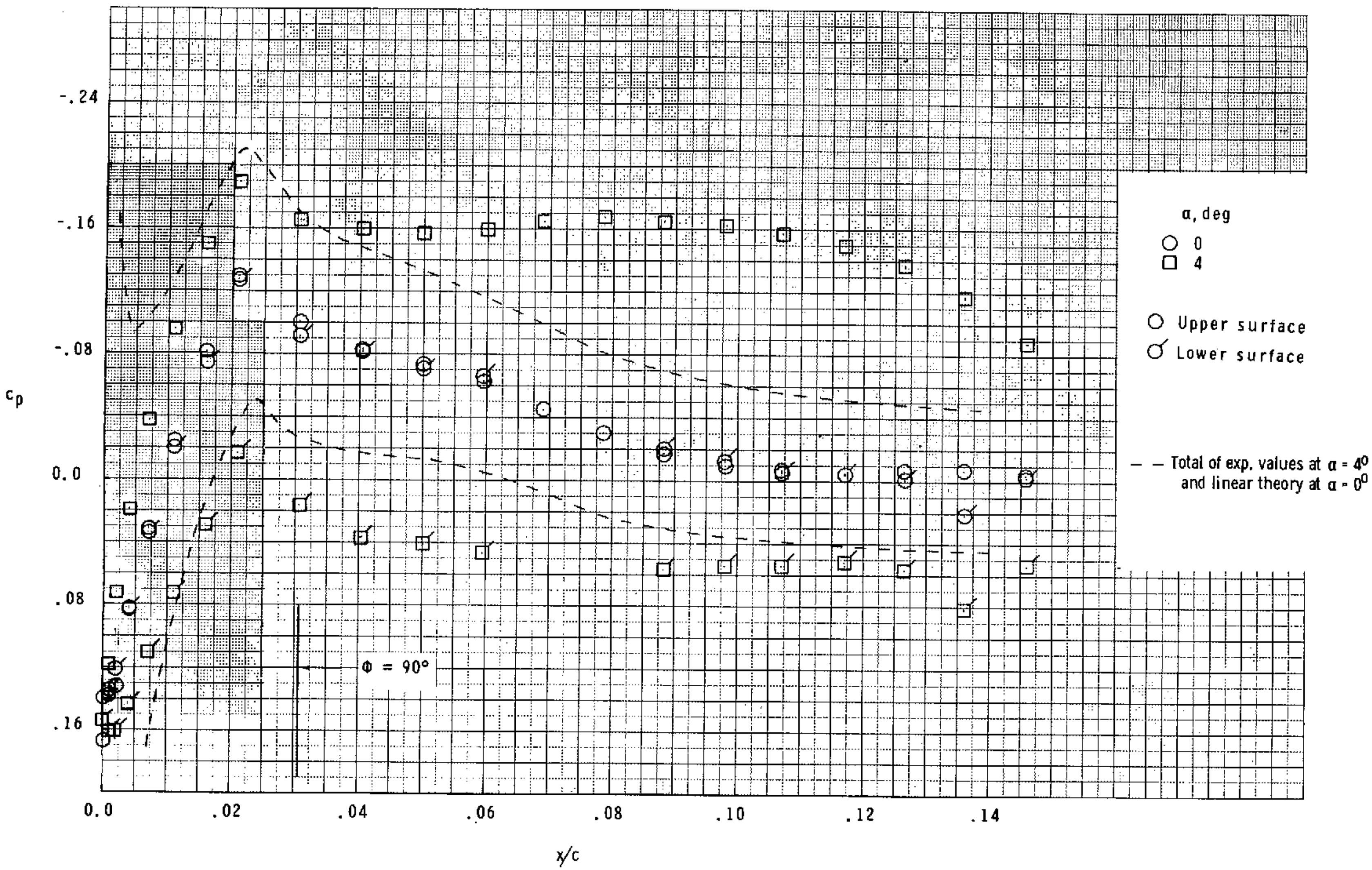
(d) Continued.

Figure 9.- Continued.



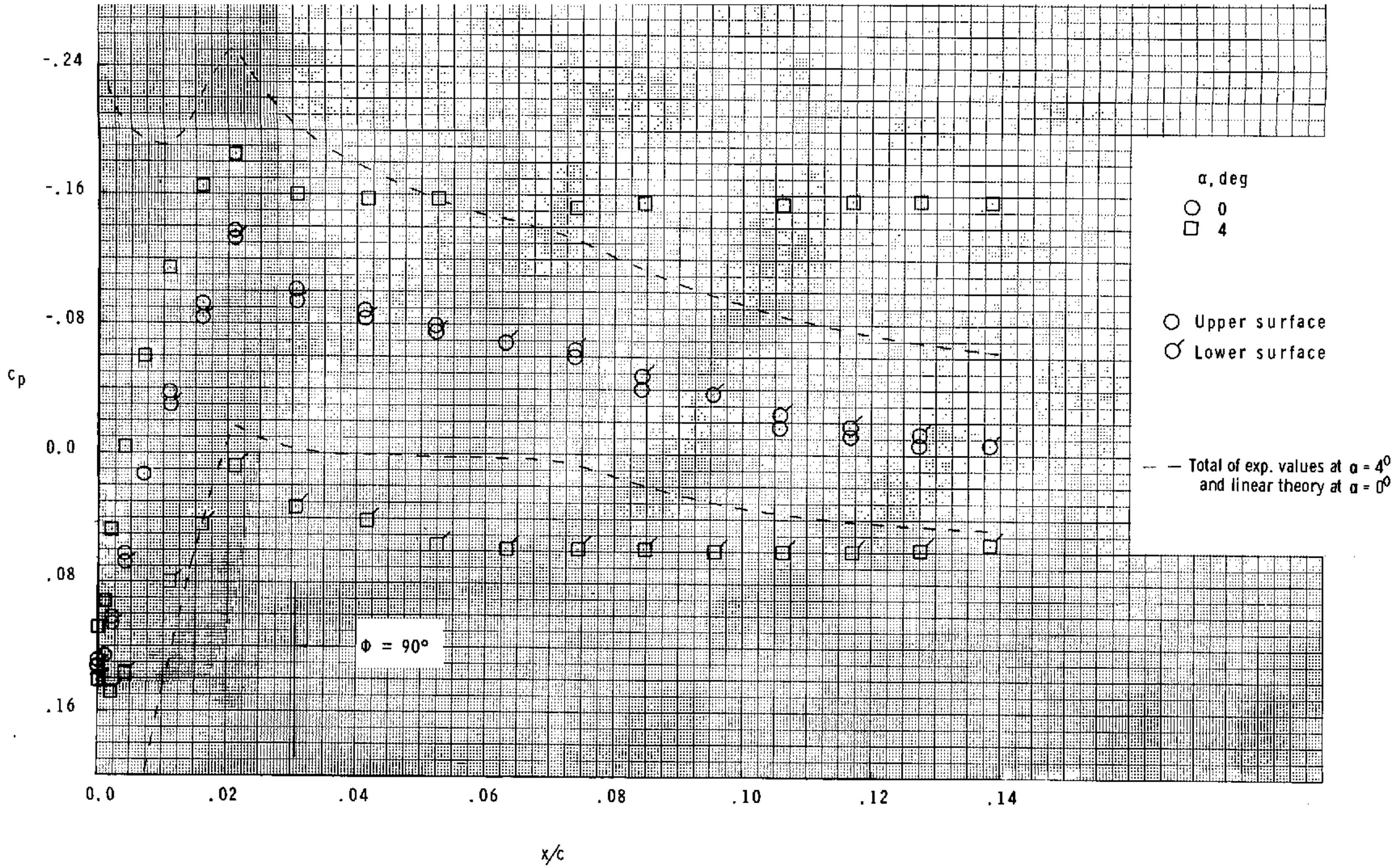
(d) Concluded.

Figure 9.- Concluded.



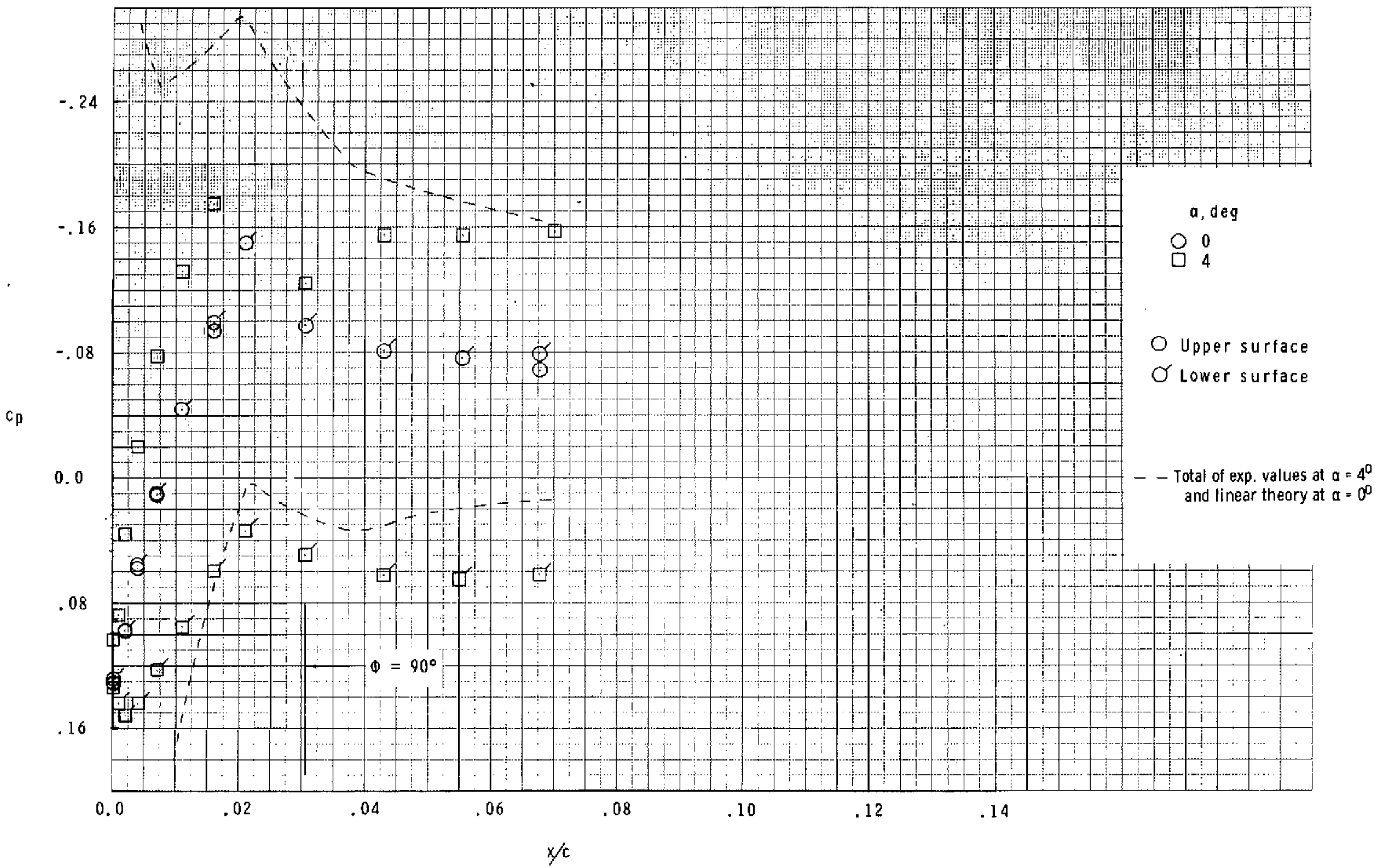
(a) Station 1.

Figure 10.- Comparison of linear theory with experimental pressure coefficient for $\alpha = 4^{o}$ and $R_{\bar{r}} = 0.33 \times 10^{6}$.



(b) Station 2.

Figure 10.- Continued.



(c) Station 3.

Figure 10.- Concluded.

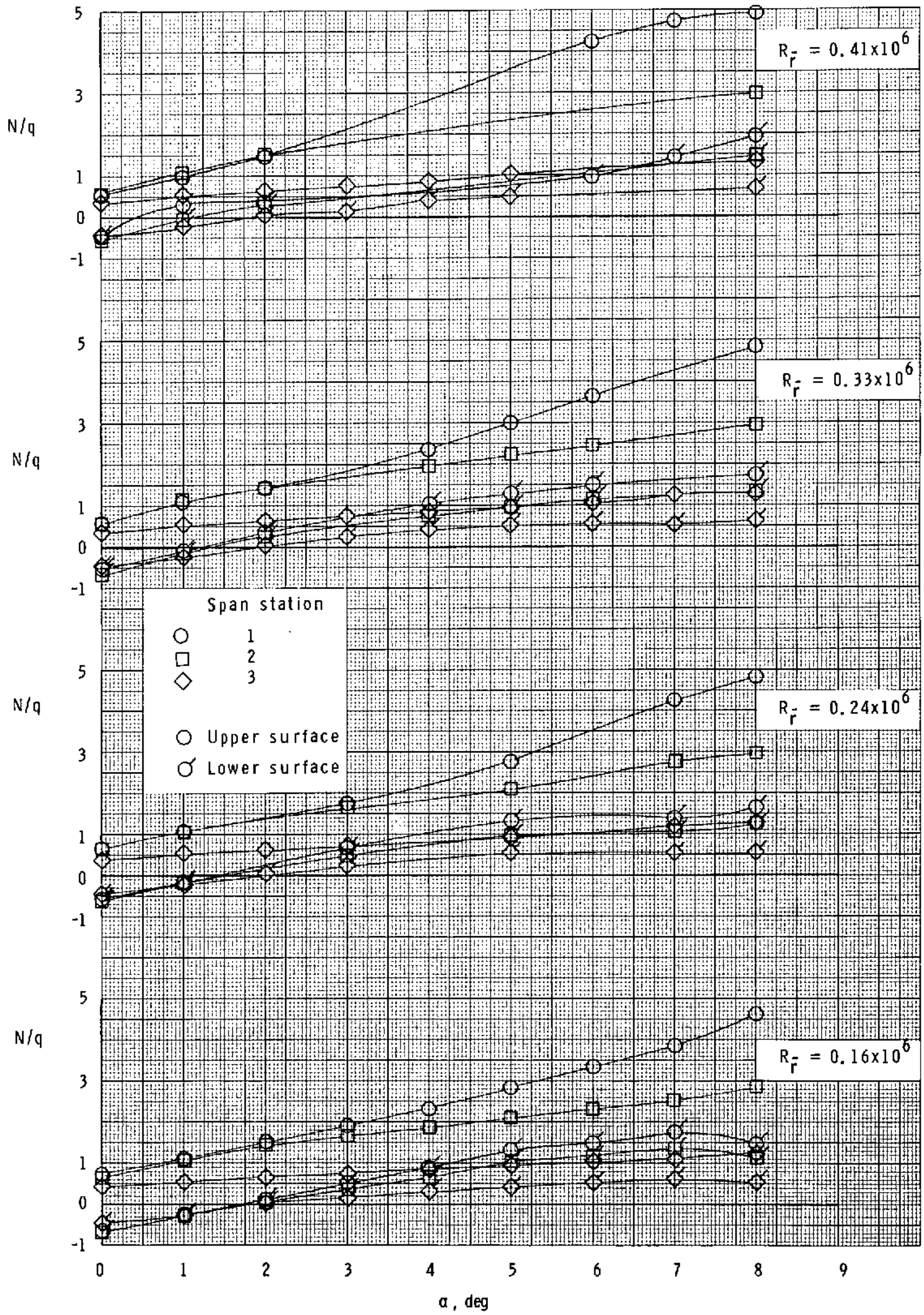


Figure 11.- Variation of section N/q with angle of attack.