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TABLES OF AERODYNAMIC COEFFICIENTS OBTAINED FROM DEVELOPED NEWTONIAN EXPRESSIONS FOR COMPLETE AND PARTIAL CONIC AND SPHERIC BODIES AT COMBINED ANGLES OF ATTACK AND SIDESLIP WITH SOME COMPARISONS WITH HYPERSONIC EXPERIMENTAL DATA

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SUMMARY

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Closed-form expressions and tables composed from these expressions are presented for complete and partial conic and spheric bodies at combined angles of attack and sideslip in Newtonian flow. Aerodynamic coefficients of these bodies are tabulated for various body segments over a range of angles of attack from 1° to 85° and angles of sideslip from 0° to 15°.

Some comparisons between Newtonian predictions and hypersonic experimental aerodynamic characteristics were made for conic bodies having various surface slopes, nose bluntnesses, and body cross sections to indicate the range of validity of the theory. In general, the theory is shown to agree quite well with experimental results for sharp-nose complete cones and for configurations having large blunted noses and steep surface slopes. However, agreement between theory and experiment generally is poor for the more slender, slightly blunted complete or half conic bodies and also for sharp-nose half conic bodies where real-flow phenomena such as forebody interference, viscous forces, leeward surface contributions, or leading-edge pressure reductions may have significant effect. The agreement between theory and experiment for the bodies considered can be improved by using the stagnation pressure coefficient behind a normal shock rather than 2 as the Newtonian coefficient, although for the sharp-nose half conic bodies there is no theoretical justification for this modification.

INTRODUCTION

Current interest in vehicles capable of entry into the earth's atmosphere from both elliptical and parabolic orbits has emphasized a definite need for reliable methods of predicting force and stability characteristics of various body shapes at hypersonic speeds. Many reentry-vehicle designs are composed of complete or partial conic and spheric bodies. Of the various theories available for analyzing the characteristics of these body shapes, Newtonian theory provides one of the simplest yet useful means of estimating the characteristics of these classes of configurations.

Considerable work, both theoretical and experimental, has been performed by a number of people in the application of this theory to a variety of body shapes. A theoretical development with Newtonian theory has been carried out in reference 1 for a series of cone and cone-cylinder configurations over a range of angle of attack. The use of this theory was further extended in reference 2 to cover conic bodies having elliptic cross sections. The application of Newtonian theory for determining the aerodynamic characteristics of any arbitrary body of revolution is presented in reference 3. Additional application of this theory was also made in reference 4 for predicting the force and moment characteristics of arbitrary bodies of revolution undergoing either separate or combined angle of attack and pitching motions. The use of this theory for the calculation of force

*Part of the information presented herein was offered as a thesis entitled "The Prediction of Aerodynamic Force and Moment Coefficients on Elliptic Cone Bodies at Both Angle of Attack and Sideslip by Use of Newtonian Impact Theory" submitted by William R. Wells in partial fulfillment of the requirements for the degree of Master of Science in Aeronautical Engineering, Virginia Polytechnic Institute, Blacksburg, Va., June 1961.

and moment coefficients of blunted conic bodies is discussed in reference 5.

Although rather extensive use has been made of Newtonian theory in providing the aerodynamic characteristics of various configurations, theoretical treatments have been limited to complete bodies of revolution. Application of the theory to more arbitrary body shapes at combined angles of attack and sideslip usually requires a graphical or numerical solution since closed-form expressions are not available. The purpose of this investigation is to develop closed-form expressions for some of the more commonly used body shapes (spheres and circular and elliptic cones and portions of these bodies) operating at combined angles of attack and sideslip. In order to facilitate the application of this theory to these body shapes, tabulations are included of the aerodynamic characteristics of these configurations over a wide range of angles of attack and sideslip. Comparisons are made with experimental results to provide some indication of the ability of Newtonian theory to predict the aerodynamic characteristics. These comparisons include variations in some of the longitudinal characteristics and stability derivatives with change in angle of attack, body surface slope, nose bluntness, and body cross section.

SYMBOLS

a base height of the semivertical body axis, in.

b base width of the semihorizontal body axis, in.

C_A axial-force coefficient, $\frac{-F_X}{q_\infty S}$ (see fig. 1)

C_A' axial-force coefficient in equivalent angle-of-attack plane, $\frac{-F_X'}{q_\infty S}$ (see fig. 2(b))

C_D drag coefficient, $\frac{F_D}{q_\infty S}$ (see fig. 1)

C_L lift coefficient, $\frac{F_L}{q_\infty S}$ (see fig. 1)

C_l rolling-moment coefficient, $\frac{M_X}{q_\infty S\bar{L}}$ (see fig. 1)

C_m pitching-moment coefficient, $\frac{M_Y}{q_\infty S\bar{L}}$ (see fig. 1)

$C_{m,\alpha=0}$ pitching-moment coefficient at $\alpha=0°$

C_N normal-force coefficient, $\frac{-F_Z}{q_\infty S}$ (see fig. 1)

C_N' normal-force coefficient in equivalent angle-of-attack plane, $\frac{-F_Z'}{q_\infty S}$ (see fig. 2(b))

C_n yawing-moment coefficient, $\frac{M_Z}{q_\infty S\bar{L}}$ (see fig. 1)

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

C_Y side-force coefficient, $\frac{F_Y}{q_\infty S}$ (see fig. 1)

$C_{L_\alpha}=\frac{\partial C_L}{\partial \alpha}$ at $\alpha=0°$

$C_{l_\beta}=\frac{\partial C_l}{\partial \beta}$ at $\beta=0°$

$C_{m_\alpha}=\frac{\partial C_m}{\partial \alpha}$ at $\alpha=0°$

$C_{N_\alpha}=\frac{\partial C_N}{\partial \alpha}$ at $\alpha=0°$

$C_{n_\beta}=\frac{\partial C_n}{\partial \beta}$ at $\alpha=0°$

$C_{Y_\beta}=\frac{\partial C_Y}{\partial \beta}$ at $\alpha=0°$

F_D drag force, lb

F_L lift force, lb

F_X force along X-axis, lb (see fig. 1)

F_X' force along X'-axis, lb (see fig. 2)

F_Y force along Y-axis, lb (see fig. 1)

F_Z force along Z-axis, lb (see fig. 1)

F_Z' force along Z'-axis, lb (see fig. 2(b))

h body height at juncture of nose and afterbody, in.

i, j, k unit coordinate vectors

L reference length, in.

L/D lift-drag ratio, C_L/C_D

l length of sharp conic bodies, in.

M Mach number

M_X rolling moment, in-lb (see fig. 1)

M_Y pitching moment, in-lb (see fig. 1)

M_Z yawing moment, in-lb (see fig. 1)

$m=\frac{\tan \theta_{xz}}{\tan \theta_{xy}}$

n unit vector normal to surface

P_1 initial point of shadow on full spheric body

P_2 leeward side intersection of partial spheric body and shadow plane

P_3 windward side intersection of partial spheric body and shadow plane
P_4 final point of shadow on spheric body
p pressure, lb/sq in.
q dynamic pressure, lb/sq in.
S area, sq in.
S_x, S_y, S_z area projection normal to the x-, y-, and z-direction, respectively, sq in.
$s=\frac{\sin \theta_{xz}}{\sin \theta_{xy}}$
$\mathbf{V}$ unit wind vector
X, Y, Z Cartesian body coordinate axes
X', Y', Z' Cartesian coordinate axes in equivalent angle-of-attack plane
x, y, z rectangular Cartesian coordinates
x, ρ, ϕ cylindrical polar coordinates
α angle of attack, deg
β angle of sideslip, deg
γ ratio of specific heats
ϵ angle between X-axis and wind vector measured in the equivalent angle-of-attack plane, deg
η angle between unit normal and wind vectors, deg
θ body half-angle, deg
$\lambda=\cos \alpha \cos \beta=\cos \epsilon$
$\nu=-\sin \beta$
σ longitudinal spheric cut-off angle, deg
σ, ϕ, a spheric-body polar coordinates
$\tau=\sqrt{1-\lambda^2}$
ϕ' angle between Z- and Z'-axes measured in YZ-plane (defines equivalent angle-of-attack plane), deg
ϕ_i initial radial integration limit
ϕ_f final radial integration limit
ϕ_1 initial body radial cut-off angle, deg
ϕ_2 final body radial cut-off angle, deg
$\omega=\sin \alpha \cos \beta$

Subscripts:

b conditions at base of body
c cone
max maximum
s stability
xy measured in horizontal plane
xz measured in vertical plane
∞ free stream

PRESENTATION OF THEORY

Newtonian theory has been found to offer a relatively simple means of determining the pressure distribution and force and moment characteristics of most arbitrary bodies of revolution over the hypersonic speed range. (See ref. 1.) Generalized expressions for applying Newtonian theory to a given body of revolution were also developed in reference 1. These expressions may be applied to a variety of body shapes defined in a suitable coordinate system to develop closed-form expressions for determination of the force and moment characteristics throughout any range of α and β.

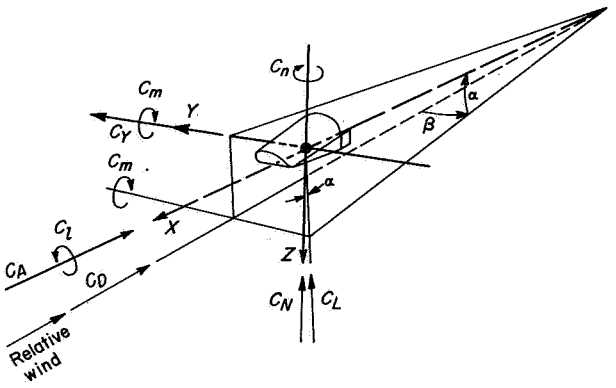


FIGURE 1.—Axis system with positive directions of forces, moments, and angles indicated by arrows.

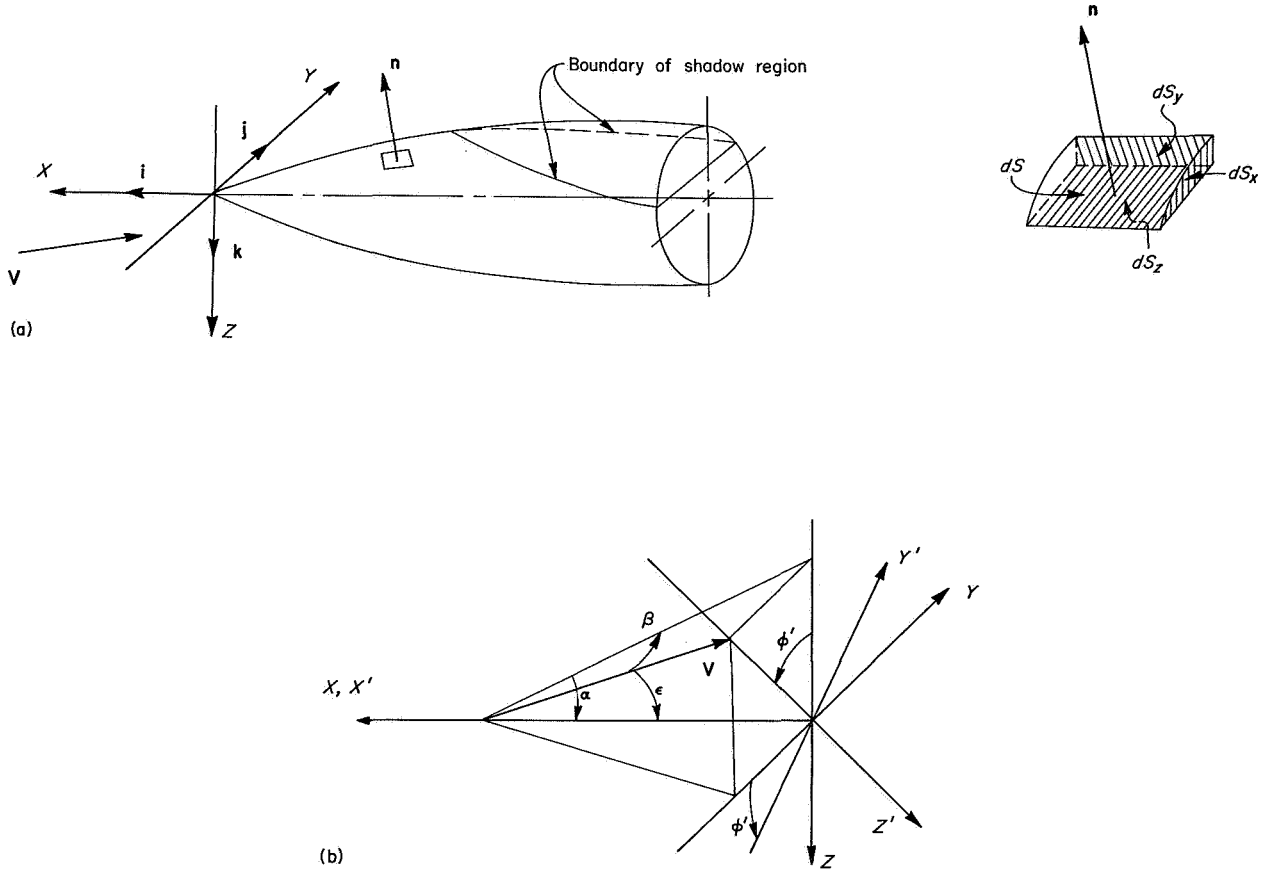
BODY OF REVOLUTION

For any body the Newtonian expression for the pressure coefficient, based on a momentum exchange between air particles and the body as shown in references 1 and 2, gives the relation $C_p=2 \cos^2\eta$. The angle η is defined as the angle between the unit vector normal to the surface and the unit wind vector (fig. 2(a)). In order to determine the unit normal vector, an equation of the body surface must be given in a suitable coordinate system, that is, $f=g(x, y, z)$. The unit normal vector $\mathbf{n}$ can then be expressed as the gradient of the surface divided by its magnitude

$$\mathbf{n}=\frac{\nabla f}{|\nabla f|}=\frac{\frac{\partial f}{\partial x}\mathbf{i}+\frac{\partial f}{\partial y}\mathbf{j}+\frac{\partial f}{\partial z}\mathbf{k}}{\sqrt{\left(\frac{\partial f}{\partial x}\right)^2+\left(\frac{\partial f}{\partial y}\right)^2+\left(\frac{\partial f}{\partial z}\right)^2}} \quad (1)$$

The unit wind vector $\mathbf{V}$ may be expressed in terms of the body axis as follows (see fig. 2(b)):

$$\mathbf{V}=-\cos \alpha \cos \beta\mathbf{i}-\sin \beta\mathbf{j}-\sin \alpha \cos \beta\mathbf{k} \quad (2)$$



(a) General body of revolution and surface area element.
(b) Wind diagram.

FIGURE 2.—Schematic representation of parameters used in application of Newtonian theory to a generalized body of revolution.

It should be noted that for a body operating at combined attitudes of pitch and yaw, the wind vector approaches the body in some equivalent wind plane at an angle ϵ (see fig. 2(b)) defined as $\epsilon=\cos^{-1}(\cos\alpha\cos\beta)$. This wind plane is located at an angle ϕ' determined to be $\phi'=\tan^{-1}\left(\frac{\tan\beta}{\sin\alpha}\right)$. The value of cos η is then determined by taking the dot product of the unit normal and wind vectors. In this analysis, the coordinate axis system was chosen as shown in figure 2 which defines the positive directions of x, y, and z as forward, to the right, and downward, respectively, when viewed from the rear of the body.

The force coefficients can be obtained in closed form by performing the following integration by using the pressure coefficient as determined by Newtonian theory:

$$C_N=\frac{l}{S}\iint_{S_z} C_p dS_z \tag{3}$$

$$C_A=\frac{l}{S}\iint_{S_x} C_p dS_x \tag{4}$$

$$C_Y=\frac{l}{S}\iint_{S_y} C_p dS_y \tag{5}$$

where dS_z, dS_x, and dS_y are the projections of dS (see fig. 2(a)) in the normal, axial, and side directions, respectively. Similarly, the moment coefficients about the base of the vehicle can be

obtained by integration of the following expressions:

$$C_m=\frac{1}{SL}\iint_{S_z}-C_p(l+x)dS_z-\frac{1}{SL}\iint_{S_x}C_pzdS_x \quad (6)$$

$$C_n=\frac{1}{SL}\iint_{S_y}C_p(l+x)dS_y+\frac{1}{SL}\iint_{S_x}C_pydS_x \quad (7)$$

$$C_l=-\frac{1}{SL}\iint_{S_y}C_pzdS_y+\frac{1}{SL}\iint_{S_x}C_pydS_z \quad (8)$$

As pointed out in reference 1, Newtonian theory is restricted to those regions of the body which are inclined toward the free-stream direction or which may be thought of as being exposed to the flow. The flow is tangent to the surface at points on the surface which satisfy the relation that $\cos\eta=0$. The shadow-region boundary determined by this relationship, as illustrated in figure 2(a), forms the boundary behind which the surface is shielded from the flow. Since this shadowed region does not contribute to the forces, the integration must be restricted to the regions which see the flow, that is, regions where $\cos\eta>0$.

ELLIPTIC CONES AND CONE SEGMENTS

Derivation of force and moment expressions.—The first of this series to which the preceding general expressions are to be applied is the elliptic cone series.

The equation for the surface of a generalized conic body whose cross section is an ellipse may be expressed as follows (see fig. 3(a)):

$$f=-x^2+y^2\cot^2\theta_{xy}+z^2\cot^2\theta_{xz} \quad (9)$$

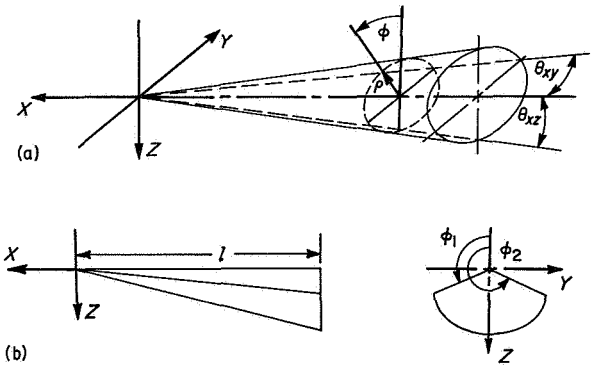
Since this analysis includes any generalized conic body as illustrated in figure 3(b), some convenient means is needed to identify the limits of the body in terms of the variables of the analysis. For this purpose cylindrical polar coordinates defined as follows were used (see fig. 3):

$$x=x$$

$$y=-\rho\sin\phi$$

$$z=-\rho\cos\phi$$

where ϕ is the angle measured from the vertical axis positive in a counterclockwise direction and



(a) Coordinate system.
(b) Typical body shape.

FIGURE 3.—Elliptic cone.

ρ is the distance from the origin to a point on the surface of the ellipse (see fig. 3). The equation of the body written in terms of this new coordinate system is expressed as

$$x=-\rho\sqrt{\sin^2\phi\cot^2\theta_{xy}+\cos^2\phi\cot^2\theta_{xz}} \quad (10)$$

By substituting the preceding identities into equation (9) and taking the dot product of the unit normal vector, determined by equation (1), and the unit wind vector, determined by equation (2), the Newtonian pressure coefficient may be written as

$$C_p=\frac{2}{m^2s^2\sin^2\phi+\cos^2\phi}$$
$$(\cos\alpha\cos\beta\sin\theta_{xz}\sqrt{m^2\sin^2\phi+\cos^2\phi}$$
$$-ms\sin\beta\cos\theta_{xy}\sin\phi-\sin\alpha\cos\beta\cos\theta_{xz}\cos\phi)^2$$

where

$$m=\frac{\tan\theta_{xz}}{\tan\theta_{xy}}$$

and

$$s=\frac{\sin\theta_{xz}}{\sin\theta_{xy}}$$

In order to shorten the expression for ease of handling, the following substitutions are made:

$$\lambda=\cos\alpha\cos\beta$$

$$\tau=\sqrt{1-\cos^2\alpha\cos^2\beta}$$

$$\nu=-\sin\beta$$

$$\omega=\sin\alpha\cos\beta$$

The expression for C_p is then

$$C_p=\frac{2}{m^2s^2\sin^2\phi+\cos^2\phi}(\lambda\sin\theta_{xz}\sqrt{m^2\sin^2\phi+\cos^2\phi}+msv\cos\theta_{xy}\sin\phi-\omega\cos\theta_{xz}\cos\phi)^2 \quad (11)$$

The normal-force coefficient of this elliptic series of bodies can now be determined by substituting this value of C_p into equation (3). The generalized expression for the incremental area dS_z also found in this equation is defined as the projected incremental area in the XY-plane $dxdy$. Transformation of the expression for this incremental area into the polar coordinate system in equation (3) gives the following expression for C_N:

$$C_N=-\frac{1}{S}\int_0^{-l}\int_{\phi_i}^{\phi_f}\frac{C_px\tan\theta_{xz}\cos\phi d\phi dx}{(m^2\sin^2\phi+\cos^2\phi)^{3/2}} \quad (12)$$

In a similar manner, substituting into equations (4) and (5)

$$dS_x=\rho d\rho d\phi$$

and

$$dS_y=\frac{x\tan\theta_{xz}m^2\sin\phi d\phi dx}{(m^2\sin^2\phi+\cos^2\phi)^{3/2}}$$

yields the following expressions for C_A and C_Y:

$$C_A=\frac{1}{S}\int_0^{\rho_b}\int_{\phi_i}^{\phi_f}C_p\rho d\phi d\rho \quad (13)$$

$$C_Y=\frac{1}{S}\int_0^{-l}\int_{\phi_i}^{\phi_f}\frac{C_px\tan\theta_{xz}m^2\sin\phi d\phi dx}{(m^2\sin^2\phi+\cos^2\phi)^{3/2}} \quad (14)$$

where ρ_b is determined from equation (10) to be

$$\rho_b=\frac{l\tan\theta_{xz}}{\sqrt{m^2\sin^2\phi+\cos^2\phi}}$$

Substitution of these incremental areas into equations (6), (7), and (8) yields the following expressions for the moment coefficients of these body shapes:

$$C_m=\frac{1}{SL}\left[\int_0^{-l}\int_{\phi_i}^{\phi_f}-\frac{C_p\tan\theta_{xz}x(l+x)\cos\phi d\phi dx}{(m^2\sin^2\phi+\cos^2\phi)^{3/2}}+\int_0^{\rho_b}\int_{\phi_i}^{\phi_f}C_p\rho^2\cos\phi d\phi d\rho\right] \quad (15)$$

$$C_n=\frac{1}{SL}\left[\int_0^{-l}\int_{\phi_i}^{\phi_f}\frac{C_p\tan\theta_{xz}x(l+x)m^2\sin\phi d\phi dx}{(m^2\sin^2\phi+\cos^2\phi)^{3/2}}-\int_0^{\rho_b}\int_{\phi_i}^{\phi_f}C_p\rho^2\sin\phi d\phi d\rho\right] \quad (16)$$

$$C_l=\frac{1}{SL}\left[\int_0^{-l}\int_{\phi_i}^{\phi_f}\frac{C_pxm^2\tan^2\theta_{xz}\cos\phi\sin\phi d\phi dx}{(m^2\sin^2\phi+\cos^2\phi)^2}-\int_0^{-l}\int_{\phi_i}^{\phi_f}\frac{C_px\tan^2\theta_{xz}\cos\phi\sin\phi d\phi dx}{(m^2\sin^2\phi+\cos^2\phi)^2}\right] \quad (17)$$

Examination of the preceding force and moment expressions with respect to the length variables x and ρ reveals that for conic bodies where the body slope is constant with length, the moment coefficients C_m and C_n, with the moment reference center located at the intersection of the X body axis and the base, can be expressed in terms of some body constant and the pertinent force coefficients as follows:

$$C_m=\frac{l}{3L}(1-2\tan^2\theta_{xz})C_N \quad (18)$$

$$C_n=\frac{l}{3L}(1-2\tan^2\theta_{xy})C_Y \quad (19)$$

The rolling-moment coefficient C_l, however, does not reduce to this simple form and must be integrated in its entirety just as for the force coefficients C_N, C_A, and C_Y.

Closed-form expressions for the force and moment coefficients C_N, C_A, C_Y, and C_l can be obtained by integrating equations (12), (13), (14), and (17). The particular integrations in this analysis were obtained from the tables given in reference 6. These integrations reveal that two equations have to be developed for each coefficient: for the case of $m>1$ and $s>1$, where the major axis lies in the vertical plane; and for the case of $m<1$ and $s<1$, where the major axis lies in the horizontal plane. These integrations which employ the definitions

$$\Omega=1+(m^2-1)\sin^2\phi$$

$$\psi=1+(m^2s^2-1)\sin^2\phi$$

$$\Lambda=m\sqrt{s^2-1}\sin\phi$$

$$\Lambda'=m\sqrt{1-s^2}\sin\phi$$

then yield the following expressions:

For $m<1$ and $s<1$,

$$C_N=-\frac{l^2}{2S}\left\{\left[\frac{\lambda^2\sin^2\theta_{xz}\tan\theta_{xy}}{\sqrt{1-s^2}}+\frac{s^2\nu^2\sin 2\theta_{xy}}{2(1-s^2)^{3/2}}-\frac{s^2\omega^2\sin 2\theta_{xz}}{2m(1-s^2)^{3/2}}\right]\log\left(\frac{\sqrt{\Omega}+\Lambda'}{\sqrt{\Omega}-\Lambda'}\right)\right.$$
$$+\frac{2\lambda\nu\sin^2\theta_{xz}}{s^2-1}\log\left(\frac{\psi}{\Omega}\right)+\left(\frac{\omega^2\sin 2\theta_{xz}}{1-s^2}-\frac{ms^2\nu^2\sin 2\theta_{xy}}{1-s^2}\right)\frac{\sin\phi}{\sqrt{\Omega}}$$
$$+\frac{2\lambda\omega\sin 2\theta_{xz}\tan\theta_{xy}}{1-s^2}\left[\tan^{-1}\left(\frac{\cot\phi}{m}\right)-s\tan^{-1}\left(\frac{\cot\phi}{ms}\right)\right]$$
$$\left.-\frac{4s\nu\omega\sin\theta_{xy}\cos\theta_{xz}}{1-s^2}\left[\frac{s}{\sqrt{1-s^2}}\tan^{-1}\left(\frac{\cos\phi\sqrt{1-s^2}}{s\sqrt{\Omega}}\right)-\frac{\cos\phi}{\sqrt{\Omega}}\right]\right\}_{\phi_i}^{\phi_f} \quad (20a)$$

For $m>1$ and $s>1$,

$$C_N=-\frac{l^2}{2S}\left\{\left[\frac{2\lambda^2\sin^2\theta_{xz}\tan\theta_{xy}}{\sqrt{s^2-1}}-\frac{s^2\nu^2\sin 2\theta_{xy}}{(s^2-1)^{3/2}}+\frac{s^2\omega^2\sin 2\theta_{xz}}{m(s^2-1)^{3/2}}\right]\tan^{-1}\left(\frac{\Lambda}{\sqrt{\Omega}}\right)\right.$$
$$+\frac{2\lambda\nu\sin^2\theta_{xz}}{s^2-1}\log\left(\frac{\psi}{\Omega}\right)+\left(\frac{\omega^2\sin 2\theta_{xz}}{1-s^2}-\frac{ms^2\nu^2\sin 2\theta_{xy}}{1-s^2}\right)\frac{\sin\phi}{\sqrt{\Omega}}$$
$$+\frac{2\lambda\omega\sin 2\theta_{xz}\tan\theta_{xy}}{1-s^2}\left[\tan^{-1}\left(\frac{\cot\phi}{m}\right)-s\tan^{-1}\left(\frac{\cot\phi}{ms}\right)\right]$$
$$\left.-\frac{4s\nu\omega\sin\theta_{xy}\cos\theta_{xz}}{1-s^2}\left[\frac{s}{2\sqrt{s^2-1}}\log\left(\frac{\sqrt{\Omega}+\frac{\cos\phi\sqrt{s^2-1}}{s}}{\sqrt{\Omega}-\frac{\cos\phi\sqrt{s^2-1}}{s}}\right)-\frac{\cos\phi}{\sqrt{\Omega}}\right]\right\}_{\phi_i}^{\phi_f} \quad (20b)$$

For $m<1$ and $s<1$,

$$C_A=\frac{l^2}{S}\left\{\left[\frac{m\nu^2\sin^2\theta_{xz}}{s(s^2-1)}-\frac{s\omega^2\sin^2\theta_{xz}}{m(s^2-1)}-\frac{\lambda^2\sin^2\theta_{xz}\tan^2\theta_{xz}}{ms}\right]\tan^{-1}\left(\frac{\cot\phi}{ms}\right)\right.$$
$$+\frac{(\omega^2-m^2\nu^2)\sin^2\theta_{xz}}{m(s^2-1)}\tan^{-1}\left(\frac{\cot\phi}{m}\right)-\frac{2\lambda\nu s\sin^2\theta_{xy}\tan\theta_{xz}}{\sqrt{1-s^2}}\tan^{-1}\left(\frac{\cos\phi\sqrt{1-s^2}}{s\sqrt{\Omega}}\right)$$
$$\left.-\frac{\lambda\omega\sin^2\theta_{xz}\tan\theta_{xy}}{\sqrt{1-s^2}}\log\left(\frac{\sqrt{\Omega}+\Lambda'}{\sqrt{\Omega}-\Lambda'}\right)-\frac{\nu\omega\sin^2\theta_{xz}}{s^2-1}\log\left(\frac{\psi}{\Omega}\right)\right\}_{\phi_i}^{\phi_f} \quad (21a)$$

For $m>1$ and $s>1$,

$$C_A=\frac{l^2}{S}\left\{\left[\frac{m\nu^2\sin^2\theta_{xz}}{s(s^2-1)}-\frac{s\omega^2\sin^2\theta_{xz}}{m(s^2-1)}-\frac{\lambda^2\sin^2\theta_{xz}\tan^2\theta_{xz}}{ms}\right]\tan^{-1}\left(\frac{\cot\phi}{ms}\right)+\frac{(\omega^2-m^2\nu^2)\sin^2\theta_{xz}}{m(s^2-1)}\tan^{-1}\left(\frac{\cot\phi}{m}\right)\right.$$
$$\left.-\frac{\lambda\nu s\sin^2\theta_{xy}\tan\theta_{xz}}{\sqrt{s^2-1}}\log\left(\frac{\sqrt{\Omega}+\frac{\cos\phi\sqrt{s^2-1}}{s}}{\sqrt{\Omega}-\frac{\cos\phi\sqrt{s^2-1}}{s}}\right)-\frac{2\lambda\omega\sin^2\theta_{xz}\tan\theta_{xy}}{\sqrt{s^2-1}}\tan^{-1}\left(\frac{\Lambda}{\sqrt{\Omega}}\right)-\frac{\nu\omega\sin^2\theta_{xz}}{s^2-1}\log\left(\frac{\psi}{\Omega}\right)\right\}_{\phi_i}^{\phi_f} \quad (21b)$$

For $m<1$ and $s<1$,

$$C_Y=\frac{l^2}{S}\left\{\left[\frac{\omega^2 s\sin 2\theta_{xz}}{2(1-s^2)^{3/2}}-\frac{\lambda^2\tan\theta_{xz}\sin^2\theta_{xz}}{s\sqrt{1-s^2}}-\frac{s\nu^2\cos^2\theta_{xy}\tan\theta_{xz}}{(1-s^2)^{3/2}}\right]\tan^{-1}\left(\frac{\sqrt{1-s^2}\cos\phi}{s\sqrt{\Omega}}\right)\right.$$

$$+\frac{2\lambda\nu m\sin^2\theta_{xz}}{s^2-1}\left[\frac{1}{s}\tan^{-1}\left(\frac{\cot\phi}{ms}\right)-\tan^{-1}\left(\frac{\cot\phi}{m}\right)\right]-\frac{\lambda\omega\sin^2\theta_{xz}}{s^2-1}\log\left(\frac{\psi}{\Omega}\right)$$

$$\left.-\frac{2m\nu\omega\sin^2\theta_{xz}\cot\theta_{xy}}{1-s^2}\left[\frac{1}{2m\sqrt{1-s^2}}\log\left(\frac{\sqrt{\Omega}+\Lambda'}{\sqrt{\Omega}-\Lambda'}\right)-\frac{\sin\phi}{\sqrt{\Omega}}\right]+\left[\frac{s^2\nu^2\cos^2\theta_{xy}\tan\theta_{xz}}{1-s^2}-\frac{\omega^2\sin 2\theta_{xz}}{2(1-s^2)}\right]\frac{\cos\phi}{\sqrt{\Omega}}\right\}_{\phi_i}^{\phi_f} \tag{22a}$$

For $m>1$ and $s>1$,

$$C_Y=\frac{l^2}{S}\left\{\left[-\frac{\omega^2 s\sin 2\theta_{xz}}{4(s^2-1)^{3/2}}-\frac{\lambda^2\tan\theta_{xz}\sin^2\theta_{xz}}{2s\sqrt{1-s^2}}+\frac{s\nu^2\cos^2\theta_{xy}\tan\theta_{xz}}{2(s^2-1)^{3/2}}\right]\log\left(\frac{\sqrt{\Omega}+\frac{\cos\phi\sqrt{s^2-1}}{s}}{\sqrt{\Omega}-\frac{\cos\phi\sqrt{s^2-1}}{s}}\right)\right.$$

$$+\frac{2\lambda\nu m\sin^2\theta_{xz}}{s^2-1}\left[\frac{1}{s}\tan^{-1}\left(\frac{\cot\phi}{ms}\right)-\tan^{-1}\left(\frac{\cot\phi}{m}\right)\right]-\frac{\lambda\omega\sin^2\theta_{xz}}{s^2-1}\log\left(\frac{\psi}{\Omega}\right)$$

$$\left.-\frac{2m\nu\omega\sin^2\theta_{xz}\cot\theta_{xy}}{1-s^2}\left[\frac{1}{m\sqrt{s^2-1}}\tan^{-1}\left(\frac{\Lambda}{\sqrt{\Omega}}\right)-\frac{\sin\phi}{\sqrt{\Omega}}\right]+\left[\frac{\omega^2\sin 2\theta_{xz}}{2(s^2-1)}-\frac{s^2\nu^2\cos^2\theta_{xy}\tan\theta_{xz}}{s^2-1}\right]\frac{\cos\phi}{\sqrt{\Omega}}\right\}_{\phi_i}^{\phi_f} \tag{22b}$$

For $m<1$ and $s<1$,

$$C_l=\frac{(m^2-1)\tan^2\theta_{xz}l^3}{3SL}\left\{\left[\frac{\lambda^2\sin^2\theta_{xz}}{m^2(s^2-1)}-\frac{s^2\nu^2\cos^2\theta_{xy}}{m^2(s^2-1)^2}+\frac{\omega^2 s^2\cos^2\theta_{xz}}{m^2(s^2-1)^2}\right]\log\left(\frac{\psi}{\Omega}\right)\right.$$

$$+\frac{2\lambda s\nu\cos\theta_{xy}\sin\theta_{xz}}{m^2(1-s^2)^{3/2}}\log\left(\frac{\sqrt{\Omega}+\Lambda'}{\sqrt{\Omega}-\Lambda'}\right)+\frac{4\lambda s\nu\cos\theta_{xy}\sin\theta_{xz}}{m(s^2-1)}\frac{\sin\phi}{\sqrt{\Omega}}$$

$$-\frac{4\lambda\omega s\sin\theta_{xz}\cos\theta_{xz}}{m^2(1-s^2)^{3/2}}\tan^{-1}\left(\frac{\cos\phi\sqrt{1-s^2}}{s\sqrt{\Omega}}\right)+\frac{4\lambda\omega\sin\theta_{xz}\cos\theta_{xz}}{m^2(1-s^2)}\frac{\cos\phi}{\sqrt{\Omega}}$$

$$+\frac{2s\nu\omega(1+2s^2)\cos\theta_{xy}\cos\theta_{xz}}{m^2(1-s^2)^2}\tan^{-1}\left(\frac{\cot\phi}{m}\right)-\frac{4s^2\nu\omega\cos\theta_{xy}\cos\theta_{xz}}{m^2(1-s^2)^2}\tan^{-1}\left(\frac{\cot\phi}{ms}\right)$$

$$\left.-\frac{2\nu\omega s\cos\theta_{xy}\cos\theta_{xz}}{m(s^2-1)}\frac{\sin\phi\cos\phi}{\Omega}+\left[\frac{\omega^2\cos^2\theta_{xz}}{(m^2-1)(s^2-1)}-\frac{s^2\nu^2\cos^2\theta_{xy}}{(m^2-1)(s^2-1)}\right]\frac{1}{\Omega}\right\}_{\phi_i}^{\phi_f} \tag{23a}$$

For $m>1$ and $s>1$,

$$C_l=\frac{l^3(m^2-1)\tan^2\theta_{xz}}{3SL}\left\{\left[\frac{\lambda^2\sin^2\theta_{xz}}{m^2(s^2-1)}-\frac{s^2\nu^2\cos^2\theta_{xy}}{m^2(s^2-1)^2}+\frac{s^2\omega^2\cos^2\theta_{xz}}{m^2(s^2-1)^2}\right]\log\left(\frac{\psi}{\Omega}\right)\right.$$

$$-\frac{4\lambda s\nu\cos\theta_{xy}\sin\theta_{xz}}{m^2(s^2-1)^{3/2}}\tan^{-1}\left(\frac{\Lambda}{\sqrt{\Omega}}\right)+\frac{4\lambda s\nu\cos\theta_{xy}\sin\theta_{xz}}{m(s^2-1)}\frac{\sin\phi}{\sqrt{\Omega}}$$

$$+\frac{2\lambda\omega s\sin\theta_{xz}\cos\theta_{xz}}{m^2(s^2-1)^{3/2}}\log\left[\frac{\sqrt{\Omega}+\frac{\cos\phi}{s}\sqrt{s^2-1}}{\sqrt{\Omega}-\frac{\cos\phi}{s}\sqrt{s^2-1}}\right]+\frac{4\lambda\omega\sin\theta_{xz}\cos\theta_{xz}}{m^2(1-s^2)}\frac{\cos\phi}{\sqrt{\Omega}}$$

$$+\frac{2s\nu\omega(1+2s^2)\cos\theta_{xy}\cos\theta_{xz}}{m^2(1-s^2)^2}\tan^{-1}\left(\frac{\cos\phi}{m}\right)-\frac{4s^2\nu\omega\cos\theta_{xy}\cos\theta_{xz}}{m^2(1-s^2)^2}\tan^{-1}\left(\frac{\cot\phi}{ms}\right)$$

$$\left.-\frac{2\nu\omega s\cos\theta_{xy}\cos\theta_{xz}}{m(s^2-1)}\frac{\sin\phi\cos\phi}{\Omega}+\left[\frac{\omega^2\cos^2\theta_{xz}}{(m^2-1)(s^2-1)}-\frac{s^2\nu^2\cos^2\theta_{xy}}{(m^2-1)(s^2-1)}\right]\frac{1}{\Omega}\right\}_{\phi_i}^{\phi_f} \tag{23b}$$

Limits of integration.—As previously mentioned, only that portion of the body exposed to flow contributes to the forces acting on the body. Therefore, the limits of integration ϕ_i and ϕ_f must be determined as the points where shadow begins and are given by setting $C_p=0$. This gives the expression

$$\cot\phi=\frac{-s^2\nu\omega\cos^2\theta_{xy}\pm\lambda m\sin\theta_{xz}\sqrt{s^2\nu^2\cos^2\theta_{xy}-(\lambda^2\sin^2\theta_{xz}-\omega^2\cos^2\theta_{xz})}}{\lambda^2\sin^2\theta_{xz}-\omega^2\cos^2\theta_{xz}}$$

The two values of ϕ obtained from this expression give the points on the base of the body which are used as the values ϕ_i and ϕ_f in the integration provided the body exists at the point determined by this expression. If the body does not exist at this point then the body limit forms the limits of integration. The computed values of the limits ϕ_i and ϕ_f determined from the preceding equation are:

$$\phi_i=\cot^{-1}\left[\frac{-s^2\nu\omega\cos^2\theta_{xy}-\lambda m\sin\theta_{xz}\sqrt{s^2\nu^2\cos^2\theta_{xy}-(\lambda^2\sin^2\theta_{xz}-\omega^2\cos^2\theta_{xz})}}{\lambda^2\sin^2\theta_{xz}-\omega^2\cos^2\theta_{xz}}\right] \tag{24a}$$

and

$$\phi_f=\cot^{-1}\left[\frac{-s^2\nu\omega\cos^2\theta_{xy}+\lambda m\sin\theta_{xz}\sqrt{s^2\nu^2\cos^2\theta_{xy}-(\lambda^2\sin^2\theta_{xz}-\omega^2\cos^2\theta_{xz})}}{\lambda^2\sin^2\theta_{xz}-\omega^2\cos^2\theta_{xz}}\right] \tag{24b}$$

These equations also provide a simple means for determining what combinations of α and β cause shadow to occur. Since the quantity under the radical must be positive for the shadow to exist, the following inequality must be satisfied:

$$\nu^2\cot^2\theta_{xy}+\omega^2\cot^2\theta_{xz}\geqq\lambda^2 \tag{25}$$

It is necessary to point out that some degree of caution should be exercised in using these closed expressions. If the integration is to pass through 0, π, or 2π, then the nature of the discontinuity of

the cotangent function at these points necessitates the integration being stopped short of these points and continued on the other side. For instance the expression $\tan^{-1}\left(\frac{\cot\phi}{m}\right)\Big|_{\phi_i}^{\phi_f}$ should be treated as follows:

$$\tan^{-1}\left(\frac{\cot\phi}{m}\right)\Big|_{\phi_i}^{\phi_f}=\lim_{\delta\to 0}\left[\tan^{-1}\left(\frac{\cot\phi}{m}\right)\Big|_{\phi_i}^{\pi-\delta}+\tan^{-1}\left(\frac{\cot\phi}{m}\right)\Big|_{\pi+\delta}^{\phi_f}\right]$$

where δ is some small positive quantity.

Static stability derivatives.—The values of the static stability derivatives are also of interest in assessing the aerodynamic properties of any given body shape. The Newtonian equation for these derivatives can be fairly easily determined by taking the derivative of the force and moment equations. Equations for the stability derivatives C_{L_α}, C_{Y_β}, C_{m_α}, C_{n_β}, and C_{l_β} for the elliptical-cone bodies at $\alpha=\beta=0°$ may be obtained through use of the following equations:

$$C_{L_\alpha}=\frac{l^2}{S}\left[\sin 2\theta_{xz}\tan\theta_{xy}\tan^{-1}\left(\frac{\cot\phi}{m}\right)+\left(\frac{\sin^2\theta_{xz}\tan^2\theta_{xz}}{ms}-s\sin 2\theta_{xz}\tan\theta_{xy}\right)\tan^{-1}\left(\frac{\cot\phi}{ms}\right)\right]_{\phi_i}^{\phi_f} \quad (26)$$

$$C_{Y_\beta}=-\frac{l^2}{S}\frac{2m\sin^2\theta_{xz}}{s^2-1}\left[\frac{1}{s}\tan^{-1}\left(\frac{\cot\phi}{ms}\right)-\tan^{-1}\left(\frac{\cot\phi}{m}\right)\right]_{\phi_i}^{\phi_f} \quad (27)$$

$$C_{m_\alpha}=\frac{l^3}{3SL}\sin 2\theta_{xz}\tan\theta_{xy}(1-2\tan^2\theta_{xz})\left[\tan^{-1}\left(\frac{\cot\phi}{m}\right)-s\tan^{-1}\left(\frac{\cot\phi}{ms}\right)\right]_{\phi_i}^{\phi_f} \quad (28)$$

$$C_{n_\beta}=\frac{l}{3L}(1-2\tan^2\theta_{xy})C_{Y_\beta} \quad (29)$$

The expression for C_{l_β}, however, depends on whether m and s are less than or greater than 1. For $m<1$ and $s<1$,

$$C_{l_\beta}=\left[\frac{4l^3}{3SL}\tan\theta_{xz}\sin^2\theta_{xz}\frac{(m^2-1)}{(s^2-1)}\right]\left[\frac{1}{2m\sqrt{1-s^2}}\log\left(\frac{\sqrt{\Omega}+\Lambda'}{\sqrt{\Omega}-\Lambda'}\right)-\frac{\sin\phi}{\sqrt{\Omega}}\right]_{\phi_i}^{\phi_f} \quad (30a)$$

and for $m>1$ and $s>1$,

$$C_{l_\beta}=\left[\frac{4l^3}{3LS}\frac{\tan^2\theta_{xz}s\cos\theta_{xy}\sin\theta_{xz}}{m(s^2-1)}(m^2-1)\right]\left[\frac{1}{m\sqrt{s^2-1}}\tan^{-1}\left(\frac{\Lambda}{\sqrt{\Omega}}\right)-\frac{\sin\phi}{\sqrt{\Omega}}\right]_{\phi_i}^{\phi_f} \quad (30b)$$

CIRCULAR CONES AND CONE SEGMENTS

In the general sense the circular-cone series can be thought of as a special case of the elliptic-cone series where $m=1$. However, when applying the general elliptic-cone equations to this special case, a number of indeterminate forms occur which must be evaluated if the equations are to be used. Since the circular cone is a very simple symmetrical body of prime interest, it was found simpler to develop separate expressions for this configuration.

Derivation of force and moment expressions.—The equation of the surface of a circular cone illustrated in figure 4(a) is expressed as follows:

$$f=-x^2\tan^2\theta_c+y^2+z^2 \quad (31)$$

With the same mathematical approach as that for the elliptic-cone series, the pressure coefficient is found to be

$$C_p=2(\sin\theta_c\cos\alpha\cos\beta-\cos\theta_c\sin\phi\sin\beta-\cos\phi\cos\theta_c\sin\alpha\cos\beta)^2$$

If the same substitutions that were used in equation (11) are used in the preceding expression, the pressure coefficient is

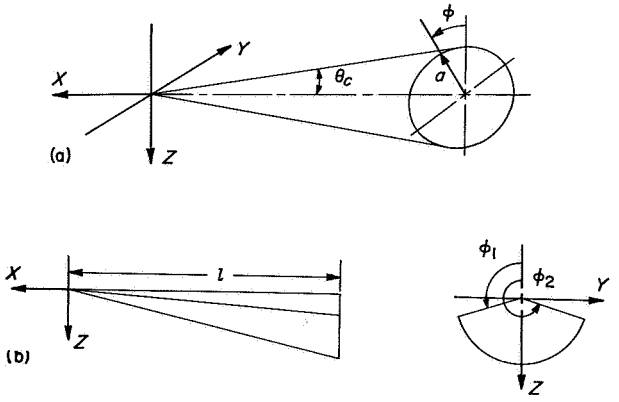
$$C_p=2(\lambda\sin\theta_c+\nu\cos\theta_c\sin\phi-\omega\cos\theta_c\cos\phi)^2 \quad (32)$$

Equations (3) to (8) are then used for the more general conic body (fig. 4(b)) to derive the following expressions for the force and moment coefficients:

$$C_N=-\frac{1}{S}\int_0^{-l}\int_{\phi_i}^{\phi_f}C_p x\tan\theta_c\cos\phi d\phi dx \quad (33)$$

$$C_A=\frac{1}{S}\int_0^{-l}\int_{\phi_i}^{\phi_f}C_p x\tan^2\theta_c d\phi dx \quad (34)$$

$$C_Y=\frac{1}{S}\int_0^{-l}\int_{\phi_i}^{\phi_f}C_p x\tan\theta_c\sin\phi d\phi dx \quad (35)$$



(a) Coordinate system.
(b) Typical body shape.

FIGURE 4.—Circular cone.

$$C_m=-\frac{1}{SL}\left[\int_0^{-l}\int_{\phi_i}^{\phi_f} C_p x(l+x)\tan\theta_c\cos\phi\,d\phi\,dx + \int_0^{-l}\int_{\phi_i}^{\phi_f} C_p x^2\tan^3\theta_c\cos\phi\,d\phi\,dx\right] \quad (36)$$

$$C_n=\frac{1}{SL}\left[\int_0^{-l}\int_{\phi_i}^{\phi_f} C_p x(l+x)\tan\theta_c\sin\phi\,d\phi\,dx + \int_0^{-l}\int_{\phi_i}^{\phi_f} C_p x^2\tan^3\theta_c\sin\phi\,d\phi\,dx\right] \quad (37)$$

$$C_l=\frac{1}{SL}\left(\int_0^{-l}\int_{\phi_i}^{\phi_f} C_p x\tan^2\theta_c\sin\phi\cos\phi\,d\phi\,dx - \int_0^{-l}\int_{\phi_i}^{\phi_f} C_p x\tan^2\theta_c\sin\phi\cos\phi\,d\phi\,dx\right) \quad (38)$$

Equation (38) shows that the rolling moment is zero as would be expected since surface pressure is always directed toward the center of the body.

The integration of expressions (33) to (35) yields

$$C_N=\frac{-a^2}{2S}\left[\lambda^2\sin 2\theta_c\sin\phi+2\lambda\nu\cos^2\theta_c\sin^2\phi - 2\lambda\omega(\phi+\sin\phi\cos\phi)\cos^2\theta_c + \frac{2}{3}\nu^2\cos^2\theta_c\cot\theta_c\sin^3\phi + \frac{4}{3}\nu\omega\cos^2\theta_c\cot\theta_c\cos^3\phi + \frac{2}{3}\omega^2\cos^2\theta_c\cot\theta_c\sin\phi(\cos^2\phi+2)\right]_{\phi_i}^{\phi_f} \quad (39)$$

$$C_A=\frac{a^2}{2S}\left[2\phi\lambda^2\sin^2\theta_c-2\lambda\nu\sin 2\theta_c\cos\phi - 2\lambda\omega\sin 2\theta_c\sin\phi + (\phi-\sin\phi\cos\phi)\nu^2\cos^2\theta_c-2\nu\omega\cos^2\theta_c\sin^2\phi + (\phi+\sin\phi\cos\phi)\omega^2\cos^2\theta_c\right]_{\phi_i}^{\phi_f} \quad (40)$$

$$C_Y=\frac{a^2}{2S}\left[-\lambda^2\sin 2\theta_c\cos\phi+(\phi-\sin\phi\cos\phi)2\lambda\nu\cos^2\theta_c-2\lambda\omega\cos^2\theta_c\sin^2\phi - (\sin^2\phi+2)\left(\frac{2}{3}\nu^2\cos^2\theta_c\cot\theta_c\cos\phi\right) - \frac{4}{3}\nu\omega\cos^2\theta_c\cot\theta_c\sin^3\phi - \frac{2}{3}\omega^2\cos^2\theta_c\cot\theta_c\cos^3\phi\right]_{\phi_i}^{\phi_f} \quad (41)$$

The moment equations for C_m and C_n, with the moment reference at the intersection of the X body axis and the base, as shown for the elliptic cone can be reduced to the following form:

$$C_m=\frac{l}{3L}(1-2\tan^2\theta_c)C_N \quad (42)$$

$$C_n=\frac{l}{3L}(1-2\tan^2\theta_c)C_Y \quad (43)$$

Limits of integration.—The shadowed region is determined by letting $C_p=0$. This operation yields the relation

$$\sin\phi=\frac{-\lambda\nu\tan\theta_c\pm\omega\sqrt{\omega^2+\nu^2-\lambda^2\tan^2\theta_c}}{\omega^2+\nu^2}$$

If the computed values of ϕ_i and ϕ_f rather than body limits are to be used as the limits of integration, they are given as

$$\phi_i=\sin^{-1}\left(\frac{-\lambda\nu\tan\theta_c+\omega\sqrt{\omega^2+\nu^2-\lambda^2\tan^2\theta_c}}{\omega^2+\nu^2}\right) \quad (44a)$$

and

$$\phi_f=\sin^{-1}\left(\frac{-\lambda\nu\tan\theta_c-\omega\sqrt{\omega^2+\nu^2-\lambda^2\tan^2\theta_c}}{\omega^2+\nu^2}\right) \quad (44b)$$

The following inequality must be satisfied if

shadow is to exist:

$$\omega^2+\nu^2 \geqq \lambda^2 \tan^2 \theta_c$$

Static stability derivatives.—The values of the stability derivatives at $\alpha=\beta=0°$ may also be written as

$$C_{L_\alpha}=\frac{a^2}{S}\left[(\phi+\sin\phi\cos\phi)\cos^2\theta_c-\phi\sin^2\theta_c\right]_{\phi_i}^{\phi_f} \quad (45)$$

$$C_{Y_\beta}=-(\phi-\sin\phi\cos\phi)\frac{a^2}{S}\cos^2\theta_c\Big|_{\phi_i}^{\phi_f} \quad (46)$$

$$C_{m_\alpha}=(1-2\tan^2\theta_c)(\phi+\sin\phi\cos\phi)\frac{a^3\cot\theta_c\cos^2\theta_c}{3SL}\Big|_{\phi_i}^{\phi_f} \quad (47)$$

$$C_{n_\beta}=\frac{l}{3L}(1-2\tan^2\theta_c)C_{Y_\beta} \quad (48)$$

SPHERIC BODIES AND BODY SEGMENTS

The next series of bodies to which the general expressions (1) to (5) are to be applied is that of the spheric body shapes. This series of bodies is of particular interest since some form of spheric body shape is used as the nose section of many blunted reentry configurations, one example being the spherically blunted conic body.

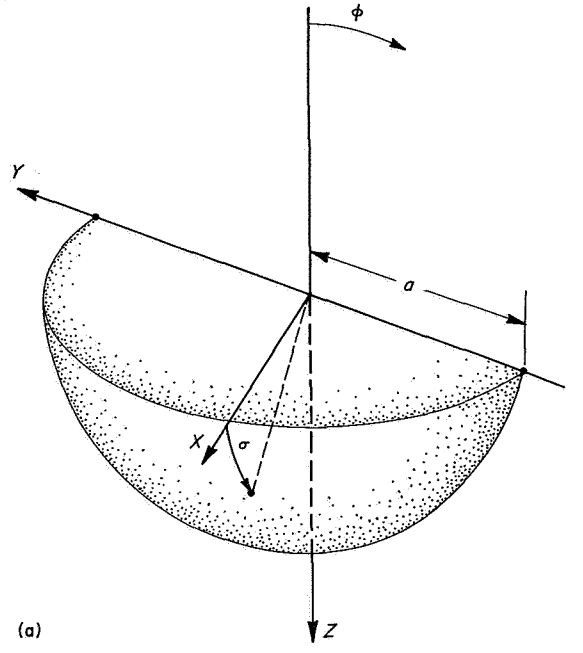
Derivation of force expressions.—The equation of the surface of a sphere is given as (see fig. 5(a))

$$f=-x^2-y^2-z^2+a^2 \quad (49)$$

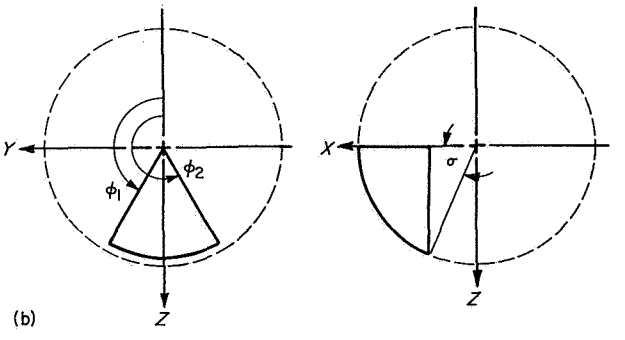
Since this analysis includes any generalized spheric body as illustrated in figure 5(b), some convenient means is needed to identify the limits of the body in terms of the variables of the analysis. For this purpose spherical polar coordinates defined as follows were used (see fig. 5(a)):

$$x=a\cos\sigma$$
$$y=-a\sin\sigma\sin\phi$$
$$z=-a\sin\sigma\cos\phi$$

The angle ϕ was chosen as one of the prime variables in the problem since both sphere cap and cone frustum will be joined together in some instances. Substituting these identities into equation (49) and taking the dot product of the unit normal and the unit wind vectors (eqs. (1) and (2)), the equation for C_p of a spheric body may be written in the following form:



(a) Coordinate system.



(b) Typical spheric body segment.

FIGURE 5.—Spheric body.

$$C_p=2(\cos\alpha\cos\beta\cos\sigma-\sin\beta\sin\sigma\sin\phi-\sin\alpha\cos\beta\sin\sigma\cos\phi)^2$$

By simplifying this expression in terms of the previously defined parameters λ, τ, ν, and ω the equation for C_p may be written as follows:

$$C_p=2(\lambda\cos\sigma+\nu\sin\sigma\sin\phi-\omega\sin\sigma\cos\phi)^2 \quad (50)$$

The force coefficient of this spheric body series can now be determined by substituting this value of C_p into equations (3), (4), and (5). For the

case of the normal-force coefficient, the incremental area is once again defined as $dxdy$, or it may be expressed in the polar coordinates as $a^2\sin^2\sigma\cos\phi d\phi d\sigma$. Substitution of this incremental area into equation (3) gives

$$C_N=-\frac{a^2}{S}\int_0^{\sigma}\int_{\phi_i}^{\phi_f} C_p \sin^2\sigma\cos\phi d\phi d\sigma \qquad (51)$$

Similarly, C_A and C_Y can be written as

$$C_A=\frac{a^2}{S}\int_0^{\sigma}\int_{\phi_i}^{\phi_f} C_p \cos\sigma\sin\sigma d\phi d\sigma \qquad (52)$$

$$C_Y=\frac{a^2}{S}\int_0^{\sigma}\int_{\phi_i}^{\phi_f} C_p \sin^2\sigma\sin\phi d\phi d\sigma \qquad (53)$$

Expressions for the moment coefficients are not needed here since the pressure is always directed toward the center of curvature of the body and is, therefore, always zero about this point. The force coefficients, C_N, C_A, and C_Y of the generalized spheric body can now be determined by performing the integration indicated in equations (51), (52), and (53). The final closed-form expressions for the generalized spheric body are as follows:

$$\begin{aligned}C_N=-\frac{a^2}{S}\Bigg[&\left\{\left(\frac{1}{4}\sin 4\sigma-\sigma\right)\frac{\lambda^2}{2}\sin\phi_1-\frac{\sin\phi_1}{3}\left[3\omega^2+(\nu^2-\omega^2)\sin^2\phi_1\right]\left(\frac{3\sigma}{2}-\sin 2\sigma+\frac{1}{8}\sin 4\sigma\right)\right.\\&\left.-\lambda\omega\left(\pi-\phi_1-\frac{1}{2}\sin 2\phi_1\right)\sin^4\sigma\right\}_0^{\sigma_2}+\left(\left(\frac{1}{4}\sin 4\sigma-\sigma\right)\frac{\lambda^2}{4}\sin\phi_1\right.\\&+\left\{\frac{\nu\omega}{3}\cos^3\phi_1-\left[(\nu^2-\omega^2)\sin^2\phi_1+3\omega^2\right]\frac{\sin\phi_1}{6}\right\}\left(\frac{3\sigma}{2}-\sin 2\sigma+\frac{1}{8}\sin 4\sigma\right)\\&+\left[\frac{\lambda\nu}{2}\sin^2\phi_1-\frac{\lambda\omega}{2}\left(2\pi-\phi_1-\frac{1}{2}\sin 2\phi_1\right)\right]\sin^4\sigma-\frac{\lambda^3\nu}{6\tau^2}\cos^4\sigma\\&-\lambda\omega\phi_1(\sigma)\cos^2\sigma-\frac{\lambda\omega}{2}\phi_1(\sigma)\cos^4\sigma+\frac{\omega}{6\tau^2}(3\tau^2-1)(\tau^2-\cos^2\sigma)^{3/2}\cos\sigma\\&+\frac{\omega}{2}(\lambda^2+1)\sqrt{\tau^2-\cos^2\sigma}\cos\sigma+\frac{\omega}{2}\sin^{-1}\left(\frac{\cos\sigma}{\tau}\right)-\frac{\lambda\omega}{2}\tan^{-1}\left(\frac{\lambda\cos\sigma}{\sqrt{\tau^2-\cos^2\sigma}}\right)\Bigg)_{\sigma_2}^{\sigma_3}\\&+\left\{\frac{\omega}{3\tau^2}(3\tau^2-1)(\tau^2-\cos^2\sigma)^{3/2}\cos\sigma+\omega(\lambda^2+1)\sqrt{\tau^2-\cos^2\sigma}\cos\sigma+\lambda\omega[\phi_2(\sigma)-\phi_1(\sigma)]\cos^2\sigma\right.\\&\left.\left.-\frac{\lambda\omega}{2}[\phi_2(\sigma)-\phi_1(\sigma)]\cos^4\sigma+\omega\sin^{-1}\left(\frac{\cos\sigma}{\tau}\right)-\lambda\omega\tan^{-1}\left(\frac{\lambda\cos\sigma}{\sqrt{\tau^2-\cos^2\sigma}}\right)\right\}_{\sigma_3}^{\sigma_4}\Bigg]\end{aligned} \qquad (54)$$

$$\begin{aligned}C_A=\frac{a^2}{S}\Bigg(&\left\{-\lambda^2(\pi-\phi_1)\cos^4\sigma-\left(\frac{1}{4}\sin 4\sigma-\sigma\right)\lambda\omega\sin\phi_1+\left[\frac{\tau^2}{2}(\pi-\phi_1)+\frac{(\nu^2-\omega^2)}{4}\sin 2\phi_1\right]\sin^4\sigma\right\}_0^{\sigma_2}\\&+\left\{\left[\frac{\nu\omega}{4}\cos 2\phi_1+\frac{\omega^2}{4}(2\pi-\phi_1)+\frac{(\nu^2-\omega^2)}{8}\sin 2\phi_1\right]\sin^4\sigma\right.\\&-\frac{\lambda^2}{2}(2\pi-\phi_1)\cos^4\sigma+\left(\frac{\lambda\nu}{2}\cos\phi_1-\frac{\lambda\omega}{2}\sin\phi_1\right)\left(\frac{1}{4}\sin 4\sigma-\sigma\right)+\frac{3\lambda}{4}(\tau^2-\cos^2\sigma)^{3/2}\cos\sigma\\&+\frac{\lambda}{4}(3\lambda^2-2)\sqrt{\tau^2-\cos^2\sigma}\cos\sigma+\frac{1}{4}(\lambda^2+1)\tan^{-1}\left(\frac{\lambda\cos\sigma}{\sqrt{\tau^2-\cos^2\sigma}}\right)-\frac{\lambda}{2}\sin^{-1}\left(\frac{\cos\sigma}{\tau}\right)+\frac{1}{4}(3\lambda^2-1)\phi_1(\sigma)\cos^4\sigma\\&\left.+\frac{\tau^2}{2}\phi_1(\sigma)\cos^2\sigma\right\}_{\sigma_2}^{\sigma_3}+\left\{\frac{3\lambda}{2}(\tau^2-\cos^2\sigma)^{3/2}\cos\sigma+\frac{\lambda}{2}(3\lambda^2-2)\sqrt{\tau^2-\cos^2\sigma}\cos\sigma-\lambda\sin^{-1}\left(\frac{\cos\sigma}{\tau}\right)\right.\\&\left.\left.+\frac{1}{2}(3\lambda^2-1)[\phi_2(\sigma)-\phi_1(\sigma)]\cos^4\sigma+\tau^2[\phi_2(\sigma)-\phi_1(\sigma)]\cos^2\sigma+\frac{1}{2}(\lambda^2+1)\tan^{-1}\left(\frac{\lambda\cos\sigma}{\sqrt{\tau^2-\cos^2\sigma}}\right)\right\}_{\sigma_3}^{\sigma_4}\Bigg)\end{aligned} \qquad (55)$$

$$C_Y=\frac{a^2}{S}\left[\left[\lambda\nu\left(\pi-\phi_1+\frac{1}{2}\sin 2\phi_1\right)\sin^4\sigma+\frac{2}{3}\nu\omega\left(\frac{3\sigma}{2}-\sin 2\sigma+\frac{1}{8}\sin 4\sigma\right)\right]_0^{\sigma_2}+\left(\left(\frac{1}{4}\sin 4\sigma-\sigma\right)\frac{\lambda^2}{4}\cos\phi_1\right.\right.$$
$$+\left\{\frac{1}{3}\nu\omega\sin^3\phi_1-\frac{1}{6}\cos\phi_1[\cos^2\phi_1(\omega^2-\nu^2)+3\nu^2]\right\}\left(\frac{3\sigma}{2}-\sin 2\sigma+\frac{1}{8}\sin 4\sigma\right)+\left[\frac{\lambda\nu}{2}(2\pi-\phi_1\right.$$
$$\left.+\sin\phi_1\cos\phi_1)+\frac{\lambda\omega}{2}\cos^2\phi_1\right]\sin^4\sigma-\frac{\lambda^3\omega}{6\tau^2}\cos^4\sigma+\frac{\nu}{6\tau^2}(3\lambda^2-2)(\tau^2-\cos^2\sigma)^{3/2}\cos\sigma$$
$$-\frac{\nu}{2}(\lambda^2+1)\sqrt{\tau^2-\cos^2\sigma}\cos\sigma-\frac{\nu}{2}\sin^{-1}\left(\frac{\cos\sigma}{\tau}\right)-\frac{\lambda\nu}{2}\phi_1(\sigma)\cos^4\sigma+\lambda\nu\phi_1(\sigma)\cos^2\sigma$$
$$+\frac{\lambda\nu}{2}\tan^{-1}\left(\frac{\lambda\cos\sigma}{\sqrt{\tau^2-\cos^2\sigma}}\right)\Bigg)_{\sigma_2}^{\sigma_3}+\left\{\frac{\nu}{3\tau^2}(3\lambda^2-2)\cos\sigma(\tau^2-\cos^2\sigma)^{3/2}-\nu(\lambda^2+1)\sqrt{\tau^2-\cos^2\sigma}\cos\sigma\right.$$
$$\left.\left.-\nu\sin^{-1}\left(\frac{\cos\sigma}{\tau}\right)+\frac{\lambda\nu}{2}[\phi_2(\sigma)-\phi_1(\sigma)]\cos^4\sigma-\lambda\nu[\phi_2(\sigma)-\phi_1(\sigma)]\cos^2\sigma+\lambda\nu\tan^{-1}\left(\frac{\lambda\cos\sigma}{\sqrt{\tau^2-\cos^2\sigma}}\right)\right\}_{\sigma_3}^{\sigma_4}\right] \quad (56)$$

The values of σ_2 to σ_4 used as limits in equations (54), (55), and (56) and the values of ϕ_1 and ϕ_2 are defined in the discussion on the limits of the shadow boundary.

For the case of a full body of revolution $\phi_1=0°$, the analysis can be simplified if the forces C_N' and C_A' are computed in the equivalent angle-of-attack plane. The general expressions that have been developed can be used to obtain C_N' and C_A' by letting $\beta=0°$, and replacing α with ϵ. Once the forces C_N' and C_A' have been determined, the force coefficients may be determined in the body-axis system by means of the following expressions:

$$C_N=C_N'\cos\phi' \quad (57)$$

$$C_Y=C_N'\sin\phi' \quad (58)$$

$$C_A=C_A' \quad (59)$$

Limits of integration.—In contrast to the elliptic cone series where for a given attitude the shadow plane intersects the body along a constant body ray, the intersection of the shadow plane with the spheric body surface (indicated in fig. 6 as the shaded region) is shown to occur at differing values of ϕ as the flow progresses rearward over the body (the upper portion of the sphere is outlined on fig. 6 as an unbounded shaded region).

In the case of a given elliptic cone, then, ϕ is found to be a function of α and β only, whereas in the base of the spheric body ϕ becomes a function of σ as well as α and β. The shadow boundary is determined once again by letting the expression for C_p, equation (50), equal zero. By solving equation (50) for $\phi(\sigma)$, the following expressions are obtained:

$$\sin\phi(\sigma)=\frac{1}{\tau^2}(-\lambda\nu\cot\sigma\pm\omega\sqrt{\tau^2-\lambda^2\cot^2\sigma}) \quad (60a)$$

$$\cos\phi(\sigma)=\frac{1}{\tau^2}(-\lambda\omega\cot\sigma\pm\nu\sqrt{\tau^2-\lambda^2\cot^2\sigma}) \quad (60b)$$

which define the shadow plane in terms of α, β, and σ. The value of $\phi_1(\sigma)$ is found by using the positive sign in equation 60(a) and the value of $\phi_2(\sigma)$ is found by using the negative sign.

For the complete spheric body, the shadow contour forms a plane (indicated by the intersection of the shaded region with the body surface on fig. 6) which is perpendicular to the wind vector. For this reason, the first point of shadow

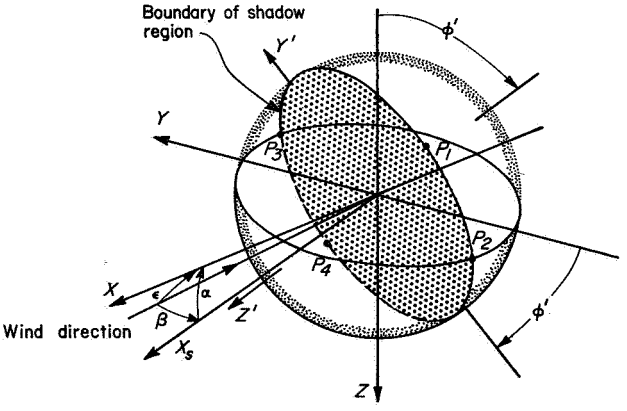


FIGURE 6.—Definition of shadow region for a spheric body segment.

P_1 (corresponding to σ_1) begins with the intersection of the wind plane and the shadow plane. This point, in the wind plane, is displaced from the Z body axis through the angle ϕ' shown in figure 2(b). The last point of shadow P_4 (corresponding to σ_4) is 180° from P_1; that is, P_4 is displaced through an angle $\phi'+180°$ from the Z body axis.

In order to determine the value of σ for σ_1 and σ_4 (at points P_1 and P_4) equation (50) is set equal to zero and solved for σ. This gives:

$$\sigma=\cot^{-1}\left[\frac{1}{\lambda}\left(-\nu\sin\phi+\omega\cos\phi\right)\right] \qquad (61)$$

By substituting the values ϕ' and $\pi+\phi'$ into this equation, the values of σ_1 and σ_4 are

$$\sigma_1=\frac{\pi}{2}-\tan^{-1}\left(\frac{\tau}{\lambda}\right)$$

$$\sigma_4=\frac{\pi}{2}+\tan^{-1}\left(\frac{\tau}{\lambda}\right)$$

For values of $\sigma<\sigma_1$ the integration with respect to ϕ will encompass the entire body in the ϕ-direction. For $\sigma>\sigma_1$ the shadow correction will define the limits of integration up to σ_4, beyond which the remaining body is shadowed.

For the more general case in which a body other than a full sphere is considered where $\phi_1\neq 0°$ (for example, the half spheric body bounded by the solid lines in fig. 6), the first point of shadow no longer occurs at P_1 but occurs where the shadow plane first intersects the body. This point is identified as point P_2 in figure 6. Shadow now begins at a value of ϕ equal to ϕ_1. Thus, by substituting this value of ϕ into equation (61), the value of σ at P_2 (corresponding to σ_2) may be determined. For values of $\sigma<\sigma_2$ the body defines the limits of ϕ. For $\sigma>\sigma_2$, the values of ϕ vary from the value of ϕ at the shadow plane on the leeward side to the body limit on the windward side. This variation of ϕ continues until the value of σ increases to the point where the shadow plane intersects the body on the windward side. This point is defined as P_3 (corresponding to σ_3) in figure 6. The value of σ at this point is determined by substituting the value $\phi=\phi_2$ (see fig. 6) into equation (61). For $\sigma>\sigma_3$ the shadow contour defines the limits of ϕ until $\sigma=\sigma_4$ beyond which the body is shielded. For the generalized spheric segment where $\phi_1>90°$, there are some combinations of α and β which cause P_4 to fall outside the limits of the body. For this case P_3 and not P_4 becomes the last point of shadow. A test is, therefore, needed to determine when this situation exists. If the value of ϕ at P_4 is greater than that at P_3, that is, if $\pi+\phi'>\phi_2$, then P_4 is off the existing body and P_3 becomes the last point to see the flow.

Static stability derivatives.—In the case of the spheric segments, the expressions for C_{L_α} and C_{Y_β} only are presented since as stated previously the moments are zero about the center of the sphere. These expressions are as follows:

$$C_{L_\alpha}=\frac{a^2}{S}\left[\left(\pi-\phi_1-\frac{1}{2}\sin 2\phi_1\right)\sin^4\sigma+(\pi-\phi_1)\cos^4\sigma\right]_0^{\sigma_1} \qquad (62)$$

and

$$C_{Y_\beta}=-\frac{a^2}{S}\left[\left(\pi-\phi_1+\frac{1}{2}\sin 2\phi_1\right)\sin^4\sigma\right]_0^{\sigma_1} \qquad (63)$$

USE OF TABLES AND ILLUSTRATIONS OF THEORY

In order to facilitate the use of Newtonian theory for the body shapes considered in this study, tables have been compiled of the theoretical force and moment coefficients of a number of these conic, elliptic, and spheric body shapes by using the equations derived in the presentation of the theory. The tabulations included in this report were calculated with the classical Newtonian relationship $C_p=2\cos^2\eta$; however, it has been recognized in references 7 to 9 that pressure distributions over many body shapes can be more closely approximated by use of a value other than 2 for the coefficient of $\cos^2\eta$. Reference 7 shows that a modified form of the Newtonian theory, where this coefficient is assumed equal to the stagnation pressure coefficient behind a normal shock $C_{p,max}$, provided a more suitable means of predicting the characteristics of cylindrical bodies at hypersonic speeds. Additional theoretical justification for various modifications of this theory to improve its ability to predict the aerodynamic characteristics of various configurations is included in references 8 and 9. Comparisons of predicted results with the use of various modified forms of this theory with experimental data for a variety of body shapes are presented in references 7 and 10

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to 14. It should be noted that the results presented in the tables of the present paper can be easily altered to account for any desired modification to the coefficient of $\cos^2 \eta$ by multiplying the tabulated values by the ratio of the modified coefficient to 2.

Table I presents the force coefficients of a series of partial spheric caps of varying longitudinal cut-off angles σ and radial cut-off angles ϕ_1 and ϕ_2 for a range of α from 1° to 85° and a range of β from 0° to 15°. Table II presents the force coefficients C_N' and C_A', given in the equivalent angle-of-attack plane, for a series of full spheric caps of varying longitudinal cut-off angles σ for a range of ϵ from 1° to 85°. When the values of α and β which determine a given value of ϵ are known, the force coefficients C_N' and C_A' may be converted to the body axes system by equations (57), (58), and (59) where ϕ' is determined by the relation $\phi'=\sin^{-1}(-\nu/\tau)$.

Tables III, IV, and V present the force and moment coefficients of a series of elliptic and circular conic bodies of varying cone half-angle θ_{xy} and body radial cut-off angles ϕ_1 and ϕ_2 for a range of α from 1° to 85° and a range of β from 0° to 15°.

The values of the coefficients in tables I to V were computed with a characteristic body area used as reference area. The coefficients in table I (partial spheric caps) were based on the reference area $S=(\pi-\phi_1)a^2$. In this formula, a is the radius of the basic sphere and ϕ_1 is the body cut-off limit. In table II (complete spheric caps) the reference area was chosen to be $S=\pi a^2$, where again a is the radius of the sphere from which the segment is obtained. It should be pointed out that for $\sigma<90°$, these areas are outside the physical limits of the bodies and were chosen as reference areas for expediency of calculations.

In tables III and IV the coefficients for the elliptic cones are based on the area at the base of the elliptic cone segment presented. This area is given by $S=l^2 \tan \theta_{xy} \tan \theta_{xz} \left[\frac{\pi}{2} \tan^{-1}\left(\frac{\cot \phi_1}{m}\right)\right]$. The circular cones in table V are similarly based on the base area of the cone segment considered. The area is given as $S=(\pi-\phi_1)a^2$. The values of the rolling moment C_l about the X body axis for the elliptic cone bodies were based on a reference length equal to $2b$, regardless of the size of the elliptic segments considered.

Since Newtonian impact theory predicts forces depending only on the angle between the local body normal and free-stream velocities, a body consisting of several components can be treated by simply adding the contributions of each component. The coefficients for a blunted elliptic cone can be obtained as follows:

$$C_N=C_{N,\,cone}\left[1-\left(\frac{h}{a}\right)^2\right]+C_{N,\,sphere}\left(\frac{h}{a}\right)^2 \sec^2 \theta_{xz} \quad (64)$$

$$C_A=C_{A,\,cone}\left[1-\left(\frac{h}{a}\right)^2\right]+C_{A,\,sphere}\left(\frac{h}{a}\right)^2 \sec^2 \theta_{xz} \quad (65)$$

$$C_Y=C_{Y,\,cone}\left[1-\left(\frac{h}{a}\right)^2\right]+C_{Y,\,sphere}\left(\frac{h}{a}\right)^2 \sec^2 \theta_{xz} \quad (66)$$

$$C_m=C_{m,\,cone}\left[1-\left(\frac{h}{a}\right)^3\right]-C_{N,\,cone}\left(1-\frac{h}{a}\right)\left(\frac{h}{a}\right)^2 \frac{\cot \theta_{xz}}{2} + C_{N,\,sphere}\left(\frac{h}{a}\right)^2 \frac{\sec^2 \theta_{xz}}{2}\left[\left(1-\frac{h}{a}\right)\cot \theta_{xz}-\frac{h}{a}\tan \theta_{xz}\right] \quad (67)$$

$$C_n=C_{n,\,cone}\left[1-\left(\frac{h}{a}\right)^3\right]-C_{Y,\,cone}\left(1-\frac{h}{a}\right)\left(\frac{h}{a}\right)^2 \frac{\cot \theta_{xz}}{2} + C_{Y,\,sphere}\left(\frac{h}{a}\right)^2 \frac{\sec^2 \theta_{xz}}{2}\left[\left(1-\frac{h}{a}\right)\cot \theta_{xz}-\frac{h}{a}\tan \theta_{xz}\right] \quad (68)$$

and

$$C_l=C_{l,\,cone}\left[1-\left(\frac{h}{a}\right)^3\right] \quad (69)$$

The reference area for these expressions is the base area of the resulting body; the moment reference length is $2b$. The moment reference center is again located at the juncture of the X body axis and the base.

The subscript "cone" in the preceding expressions denotes the value for a sharp-nose cone taken from the tables. The subscript "sphere" similarly denotes the value of a segment of a sphere taken from the tables with $\sigma=90-\theta_{xz}$. The preceding expressions were derived by assuming that the sharp nose was replaced by a spheric segment whose maximum cross section is equal to the cross section where the blunting occurs and whose value of σ, in the table, is given by $\sigma=90-\theta_{xz}$. The value h/a is the ratio of the height of the body where blunting occurred to the height at the base of the cone. (See fig. 7.)

If it is desired to compute the pitching moment about the base of a body having a segmented

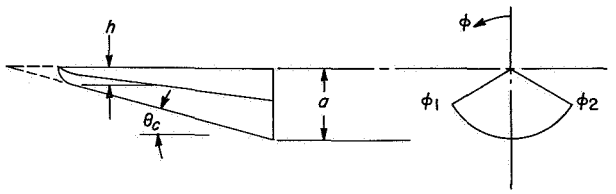


FIGURE 7.—Blunt-nose conic segment.

cone frustum with a semiapex angle of 20°, a spherically blunted nose of bluntness ratio h/a $=0.2$, and body radial cut-off angles ϕ_1 and ϕ_2 of 105° and 255°, the following procedure will illustrate the use of these equations and tables. For a cone half-angle of 20°, a portion of a sphere with $\sigma=70°$ must be used to blunt the nose since $\sigma=90-\theta_c$. A value of $\phi_1=105°$ and $\phi_2=255°$ must also be used for the spherical body. By evaluating the constants involving h/a and θ_c in equation (42), which is the expression for C_m of a cone, and letting $l=2b$ in equation (67), the following expression for C_m for the blunted case is obtained:

$$C_m=0.290C_{N,\ cone}+0.0481C_{N,\ sphere}$$

If the body is assumed to be at a value of $\alpha=20°$ and $\beta=0°$, then the values of $C_{N,\ sphere}$ and $C_{N,\ cone}$ as determined from tables I and V, respectively, are

$$C_{N,\ cone}=0.8941$$
$$C_{N,\ sphere}=0.8401$$

Then,

$$C_m=0.259+0.0404=0.299$$

EXPERIMENTAL PROCEDURE AND MODELS

Test results used for comparisons of experimental data with Newtonian predictions were obtained in the Langley 11-inch hypersonic tunnel at an average test-section Reynolds number of 0.11×10^6 per inch. Most of the test data were obtained at a Mach number of 9.6 but a limited amount of data is also presented for a Mach number 6.7.

Force and moment were measured by means of a six-component internal strain-gage balance mounted through the model base. Angles of attack and sideslip were measured optically by means of a lens prism attached to the model which reflected a point source of light onto a calibrated scale. Base-pressure corrections were neglected for these tests since measurements indicated that such corrections were smaller than the balance-measuring accuracy.

The models used in these tests consisted of a series of complete and partial conic body shapes of varying span-height ratio $\left(\frac{b}{a}=\frac{1}{2}, 1, \text{and } 2\right)$, cone vertical half-angle (θ_{xz} from 10° to 40°), and nose bluntness (h/a from 0 to 1.0). Nose bluntness was obtained by spherically rounding the nose section of the circular cone models and by using an ellipsoidally blunted nose section on the elliptic cone models. Nose-bluntness ratio h/a is defined as the ratio of the height between the nose tangency point and the model axis to the vertical height at the base of the model.

The juncture point of the X body axis with the base was chosen as the moment reference center for all moment comparisons presented. The maximum body span $2b$ was used as the reference length and the model base area was chosen as the reference area.

ANALYSIS OF RESULTS

Since Newtonian theory provides one of the simplest analytical approaches for determining the force and pressure distribution on various body shapes, it is of interest to compare the predicted results of this theory with some experimental data obtained for a variety of bodies of varying geometry and bluntness at hypersonic speeds. Comparisons have, therefore, been made between Newtonian predictions with methods outlined in this paper and available experimental data on a number of conic and elliptic body shapes of varying nose bluntness. All of the theoretical calculations, on which the following comparisons are based, were made with the Newtonian relation $C_p=2\cos^2\eta$.

In order to evaluate the effectiveness of this theory with that of a more exact theory, a comparison is included of some of the characteristics of conic bodies predicted by Newtonian theory with those obtained from the cone theory of references 15 and 16. It may be seen from figure 8 that Newtonian theory agrees reasonably well percentagewise with this exact theory for high values of θ_c especially in the high Mach number regime. A comparison also was made in figure 9 of the pressure coefficients of a spheric body predicted by both Newtonian theory and a more exact analysis treated in reference 17. For this

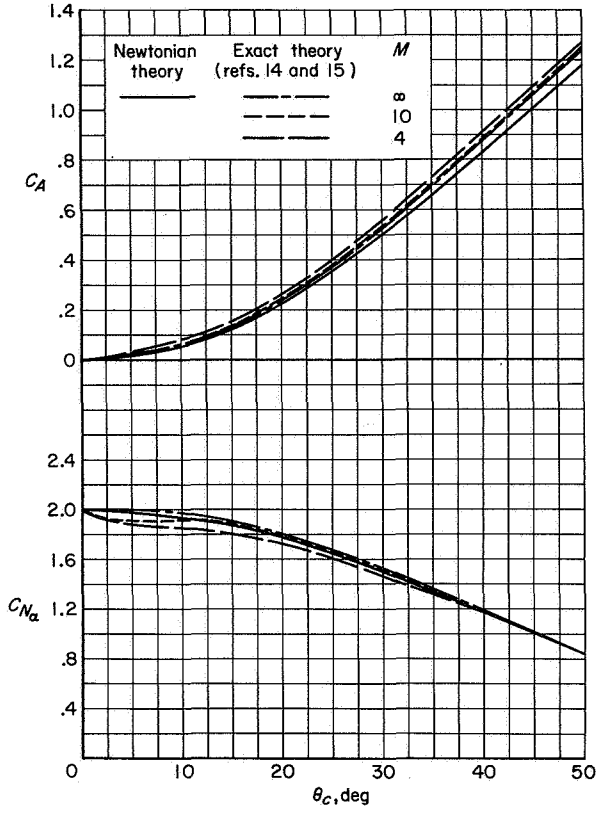


FIGURE 8.—Comparison of predicted values of C_A and C_{N_α} of a series of sharp circular cones with cone half-angle with the use of Newtonian and exact theories.

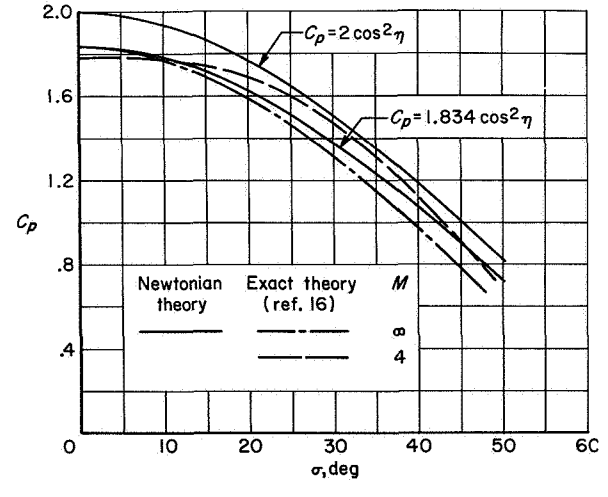


FIGURE 9.—Comparison of predicted variations in the pressure coefficient on a sphere with σ with the use of Newtonian and exact theories.

case Newtonian predictions with a coefficient of 2 appeared to be somewhat higher than those determined by the more exact theory. Modifying Newtonian theory as suggested in references 7 and 8 by using the stagnation pressure behind a normal shock $C_{p,max}$ for the coefficient instead of 2 provides better agreement between this Newtonian theory and the theory suggested in reference 17 (see fig. 9). The equation for $C_{p,max}$ is given by

$$C_{p,max}=\frac{\gamma+3}{\gamma+1}\left(1-\frac{2}{(\gamma+3)M_\infty^2}\right)$$

Comparisons of Newtonian force and moment predictions with experimental data for a number of conic and elliptic bodies are discussed in the following sections. These comparisons show the variations between experiment and theory for some of the longitudinal aerodynamic characteristics and stability derivatives with changes in angle of attack and body geometry (body slope, nose bluntness, and body cross section).

ANGLE-OF-ATTACK EFFECTS

Figures 10 to 15 present Newtonian predictions and experimental data of the hypersonic longitudinal aerodynamic characteristics C_L, C_D, and C_m against angle of attack for several circular and elliptic conic bodies with different values of bluntness ratio h/a. Figure 10 shows that Newtonian theory provides an effective means of predicting the longitudinal aerodynamic characteristics of sharp-nose complete cones except for the C_D of the 40° half-angle cone at high angles of attack and of the more slender cones at low angles of attack where viscous effects are significant. (No skin friction was included in the theoretical computations.) Similar results at $M=6.83$ were also obtained in reference 10. Furthermore, the results of reference 18 for a 20° half-angle cone indicate that the pressure distribution as well as the force and moment coefficients for complete cones are well predicted by Newtonian theory. For sharp-nose, round-bottom half conic bodies (figs. 11 and 12) the theory overpredicts the experimental values for the more slender bodies ($\theta_c<20°$), particularly at the higher angles of attack where edge bleed-off is more predominant. However, for the bodies of lower fineness ratio the theory, in general, gives better agreement with experiment.

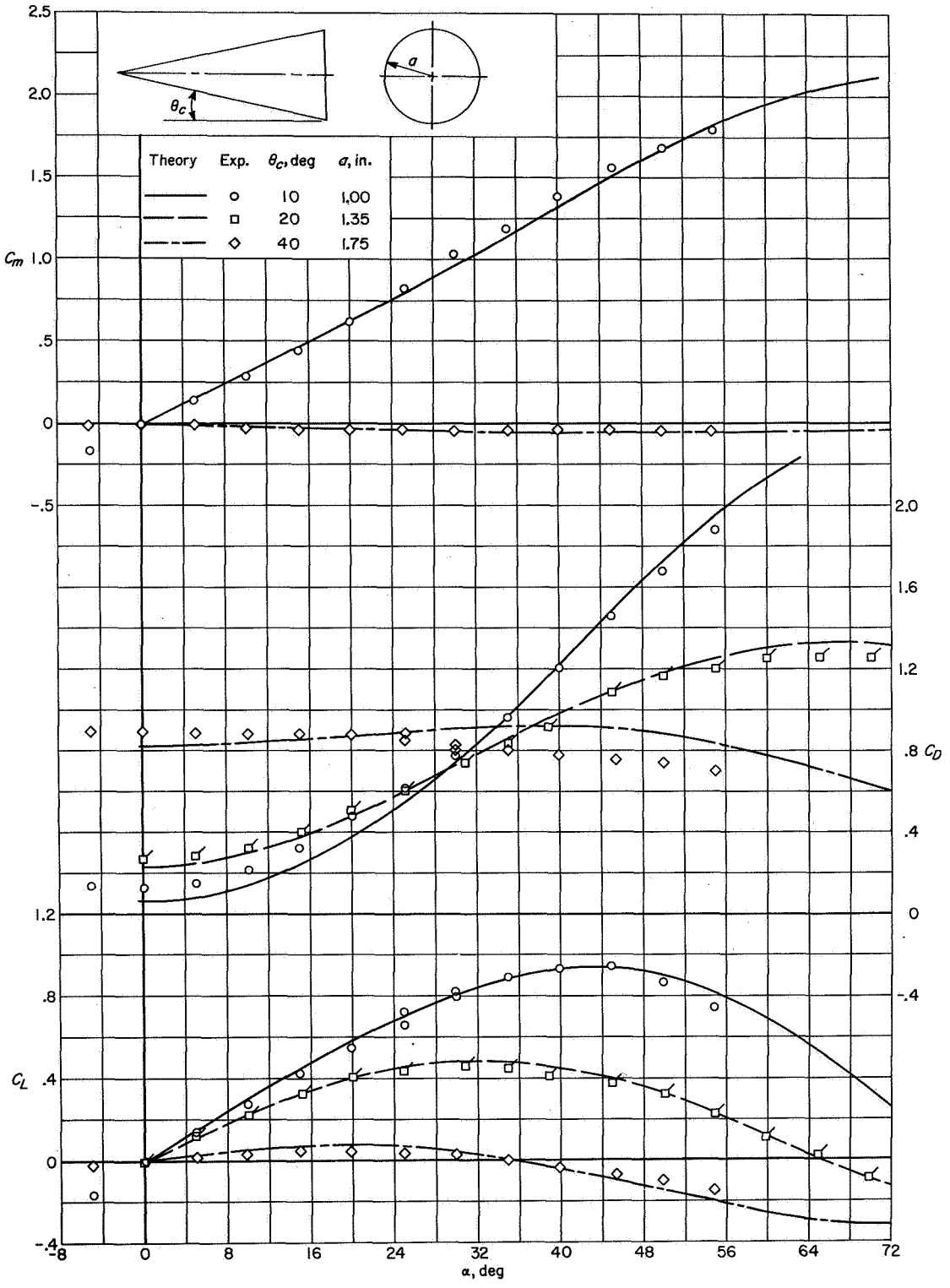


FIGURE 10.—Comparison of experimental results with theoretical results of the variation in the longitudinal characteristics of a series of sharp-nose circular conic bodies with angle of attack at $M=6.7$. Flagged symbols denote data from reference 10 ($M=6.83$).

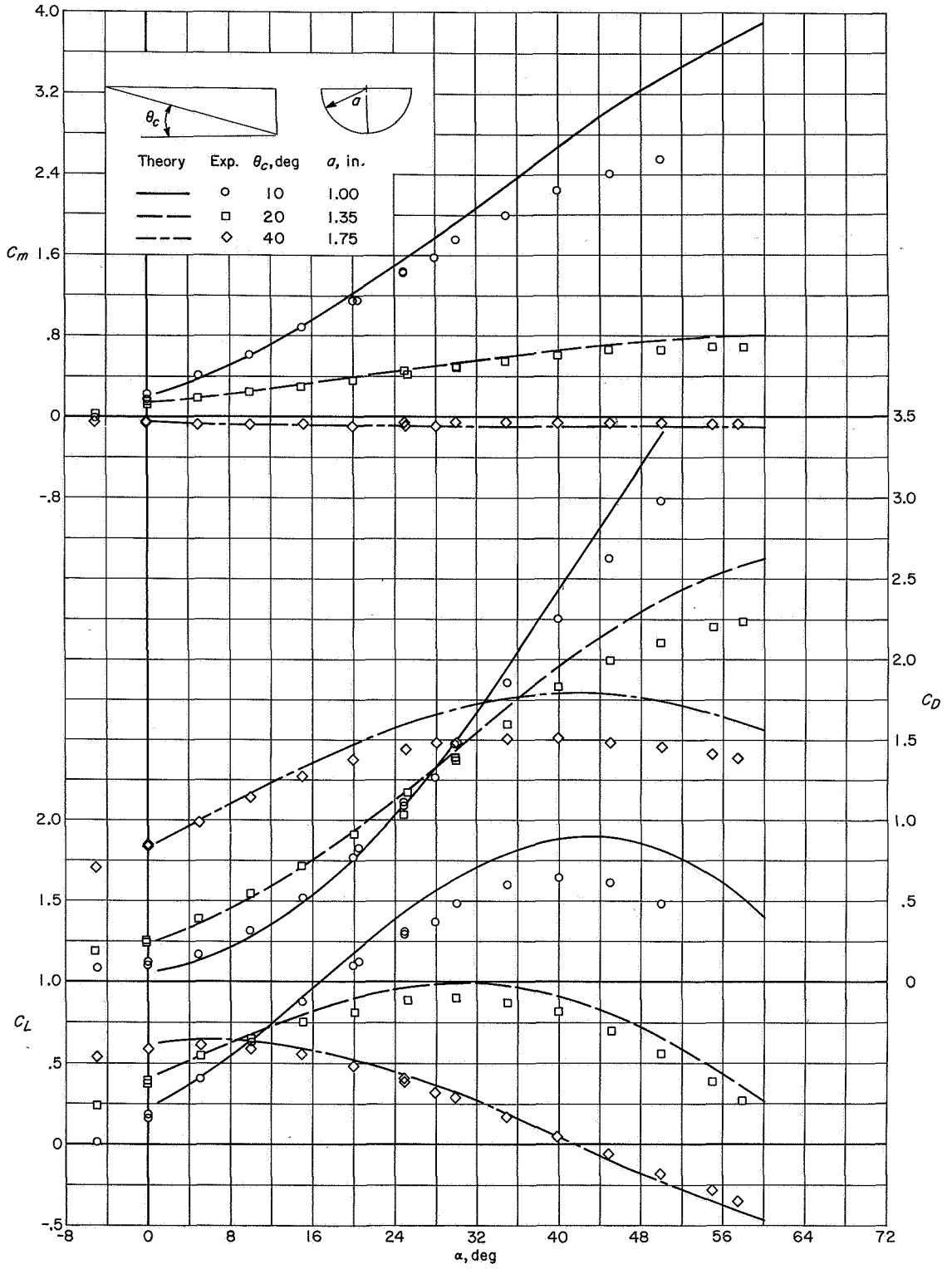


FIGURE 11.—Comparison of experimental results with theoretical results of the variation in the longitudinal characteristics of a series of round-bottom sharp-nose circular half conic bodies with angle of attack at $M=9.6$.

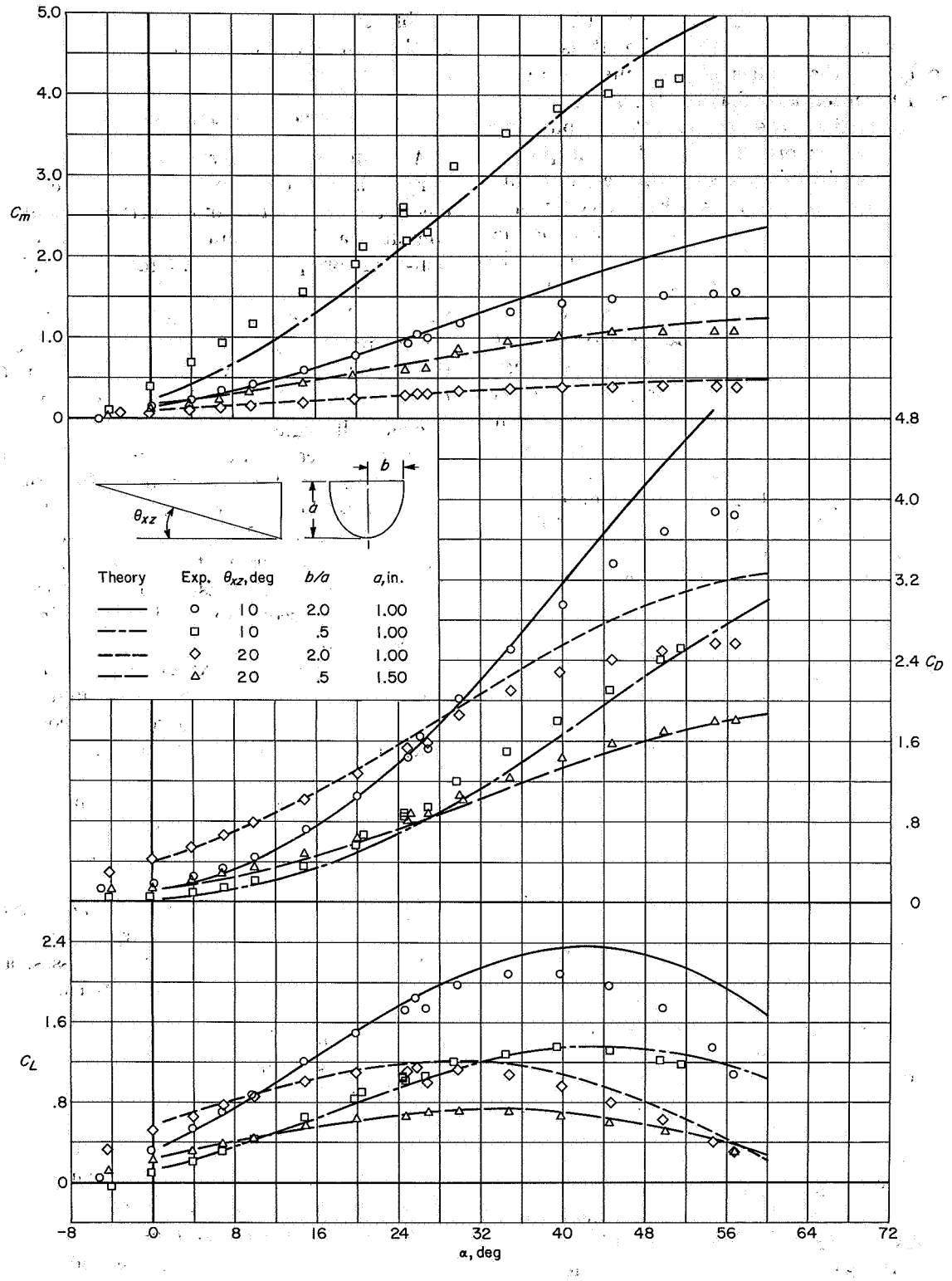


FIGURE 12.—Comparison of experimental results with theoretical results of the variations in the longitudinal characteristics of a series of round-bottom sharp-nose elliptic half conic bodies with angle of attack at $M=9.6$.

With nose bluntness (figs. 13 to 15) the agreement between theory and experiment is again good only for the bodies of low fineness ratio. It should be noted also that for the more slender blunt-nose bodies, the agreement in pitching moment is even poorer than for the sharp-nose bodies. It should be recalled, however, that the Newtonian coefficient of 2 used herein yields predictions of the pressure coefficients over a spheric body which are somewhat high (fig. 9). This overestimation of the force on the nose section of the long, more slender body shapes where the moment arm for the nose is quite large may account for some of the inaccuracy in these pitching-moment predictions. Furthermore, it has been shown in reference 19 that nose bluntness can produce significant changes in the pressure distribution over the afterbody section of the configurations, particularly near the nose-afterbody juncture. Although these nose interference effects do not greatly influence the ability of theory to predict the lift and drag characteristics of the blunt-nose bodies, they can affect the ability to predict moment characteristics of the more slender bodies ($\theta_c<20°$) and, therefore, contribute further to the poorer agreement between experimental and theoretical moment characteristics of the blunt-nose configurations.

It should be pointed out that Newtonian estimates of the blunted nose on the elliptic half conic bodies (fig. 15) were made with the simplifying assumption of a spherically blunted nose rather than with the ellipsoidally blunted nose as tested experimentally. Although some error would probably result in the Newtonian estimates of bluntness effect on these elliptic bodies, this simplifying assumption would not be expected to affect greatly the overall Newtonian estimates of the longitudinal aerodynamic characteristics for small values of nose bluntness.

In addition to these considerations, other factors may have a significant influence on the general agreement between theoretical and experimental results and should be considered when the Newtonian predictions of the various bodies are assessed. Real-flow phenomena, such as viscous effects, boundary-layer displacement effects, leading-edge pressure losses, and leeward-surface contributions, are all neglected by Newtonian theory and may, in many cases, have a sizable effect on the aerodynamic characteristics of the configuration and the adequacy of theoretical prediction.

EFFECT OF VARYING BODY SLOPE

A comparison of the experimental and predicted variations in some of the longitudinal aerodynamic characteristics and stability derivatives of several complete and half conic bodies of varying cone half-angle are presented in figures 16 to 19.

The comparisons presented in these figures again lead to the general conclusion that Newtonian theory provides an effective means of predicting the trends of the various parameters $C_{L,max}$, $(L/D)_{max}$, C_{m_α}, $C_{m,\alpha=0}$, and C_{L_α} due to variations in cone half-angle.

Viscous forces comprise a major portion of the drag for the slender unblunted configurations (ref. 11), and as shown in figures 16 and 18, the predicted values of $(L/D)_{max}$ become substantially greater than experimental values for the more slender shapes. Increasing body slope reduces the ratio of viscous to total drag which, as expected, results in improved agreement between theoretical results and experimental results.

Previous work has shown that configurations at high angles of attack experience a considerable reduction in pressure near the leading edges for the half conic configuration. Results presented in reference 20 as well as data shown in reference 11 show this effect to become significant at high angles of attack ($\alpha>40°$) near $C_{L,max}$ for these configurations. These pressure reductions would be expected to have the greatest influence on long, slender body shapes where a large portion of the lifting surface is affected by these losses, and as shown by the comparisons presented in figure 18, theoretical estimates considerably exceed experimental results for the more slender half-body shapes. It should be noted that better agreement is obtained between experiment and theory for the complete conic bodies since these phenomena would not occur on complete cone bodies (fig. 16). Increasing nose bluntness or cone half-angle for the half conic bodies tends to reduce the ratio of the area influenced by these edge pressure reductions to the total lifting area and results in better agreement between experimental and theoretical results as either θ_c or h/a increases.

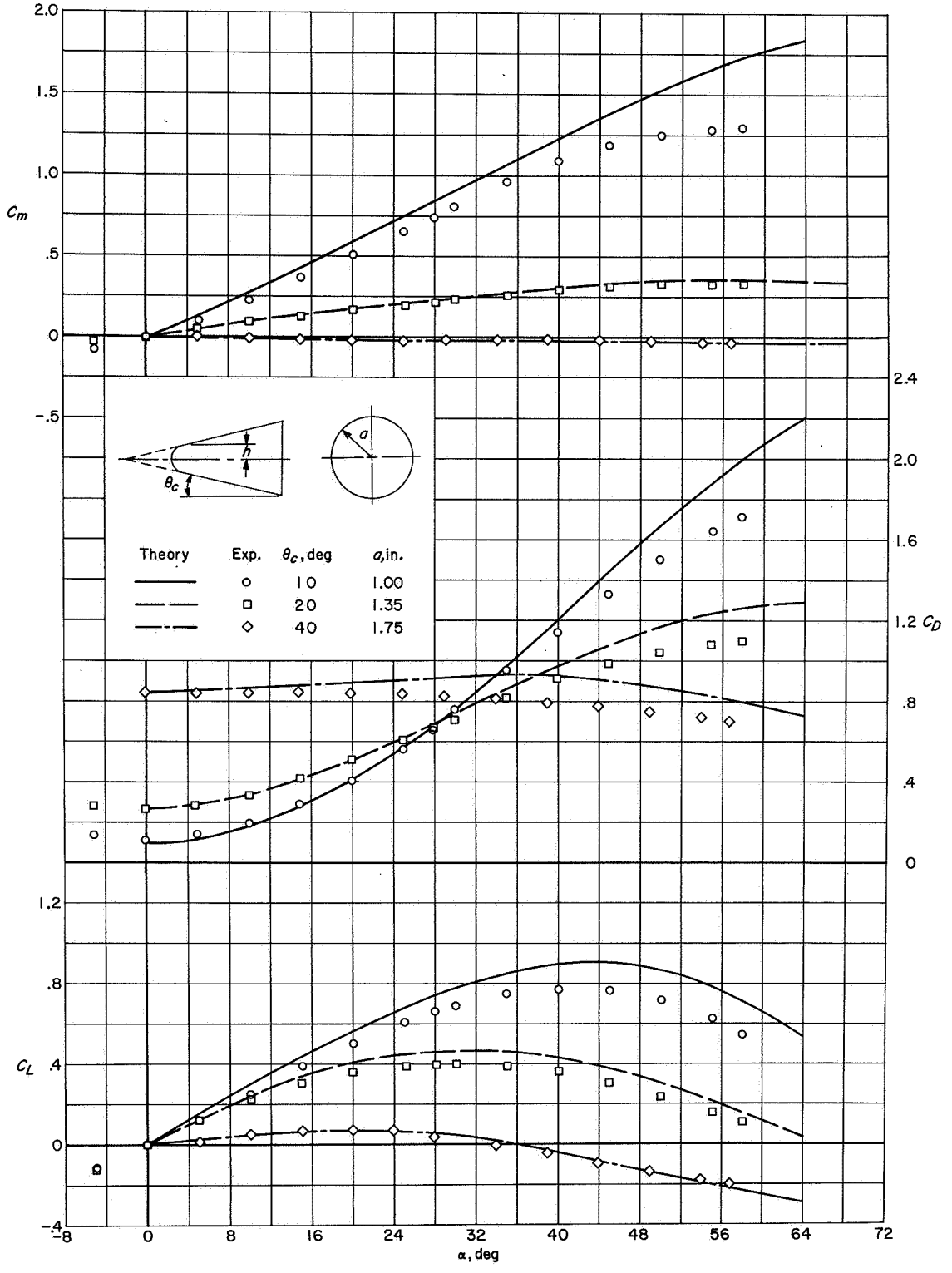


FIGURE 13.—Comparison of experimental results with theoretical results of variations in the longitudinal characteristics of a series of blunt-nose circular conic bodies with angle of attack for $M=9.6$ and $h/a=0.2$.

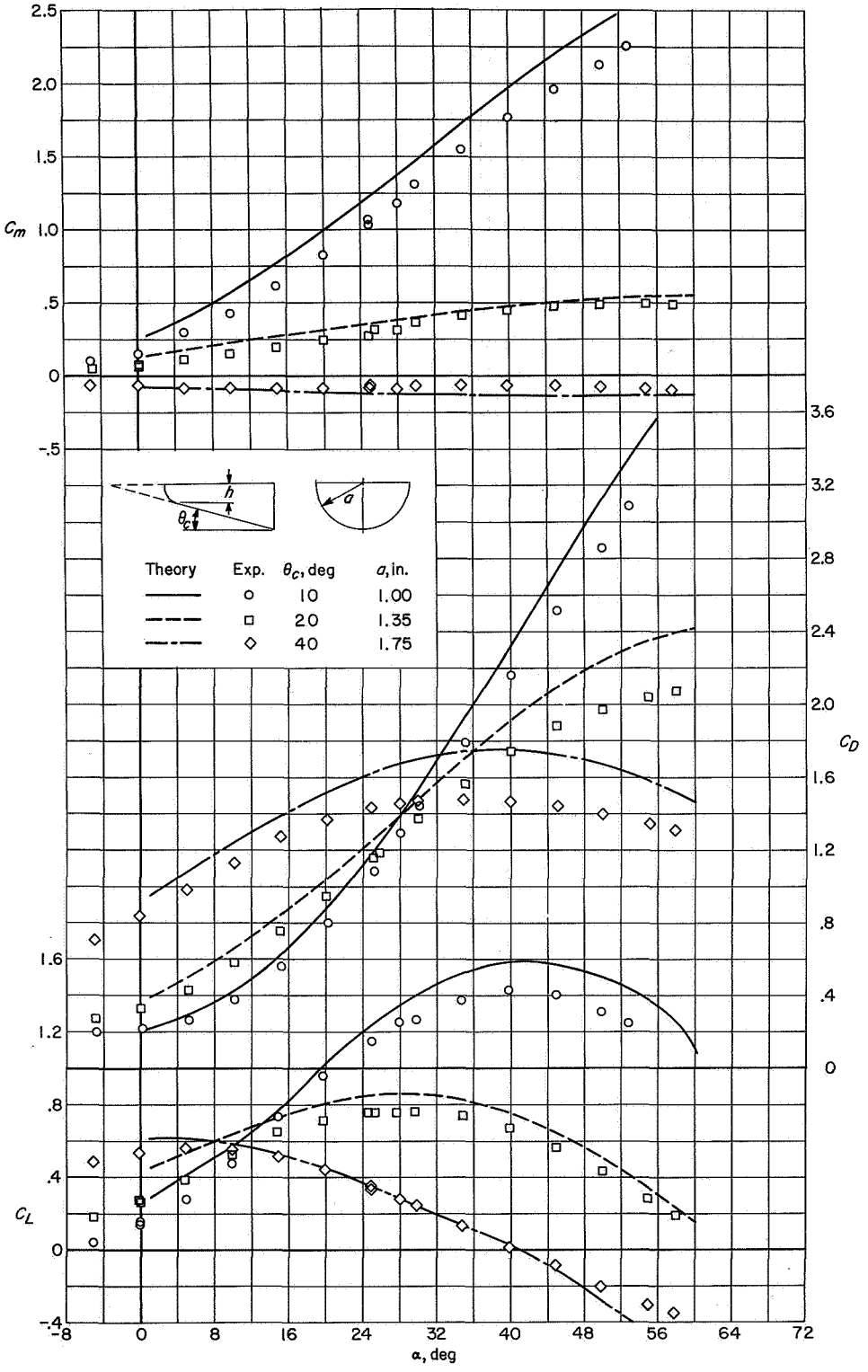


FIGURE 14.—Comparison of experimental results with theoretical results of the variations in the longitudinal characteristics of a series of round-bottom blunt-nose circular half conic bodies with angle of attack for $M=9.6$ and $h/a=0.4$.

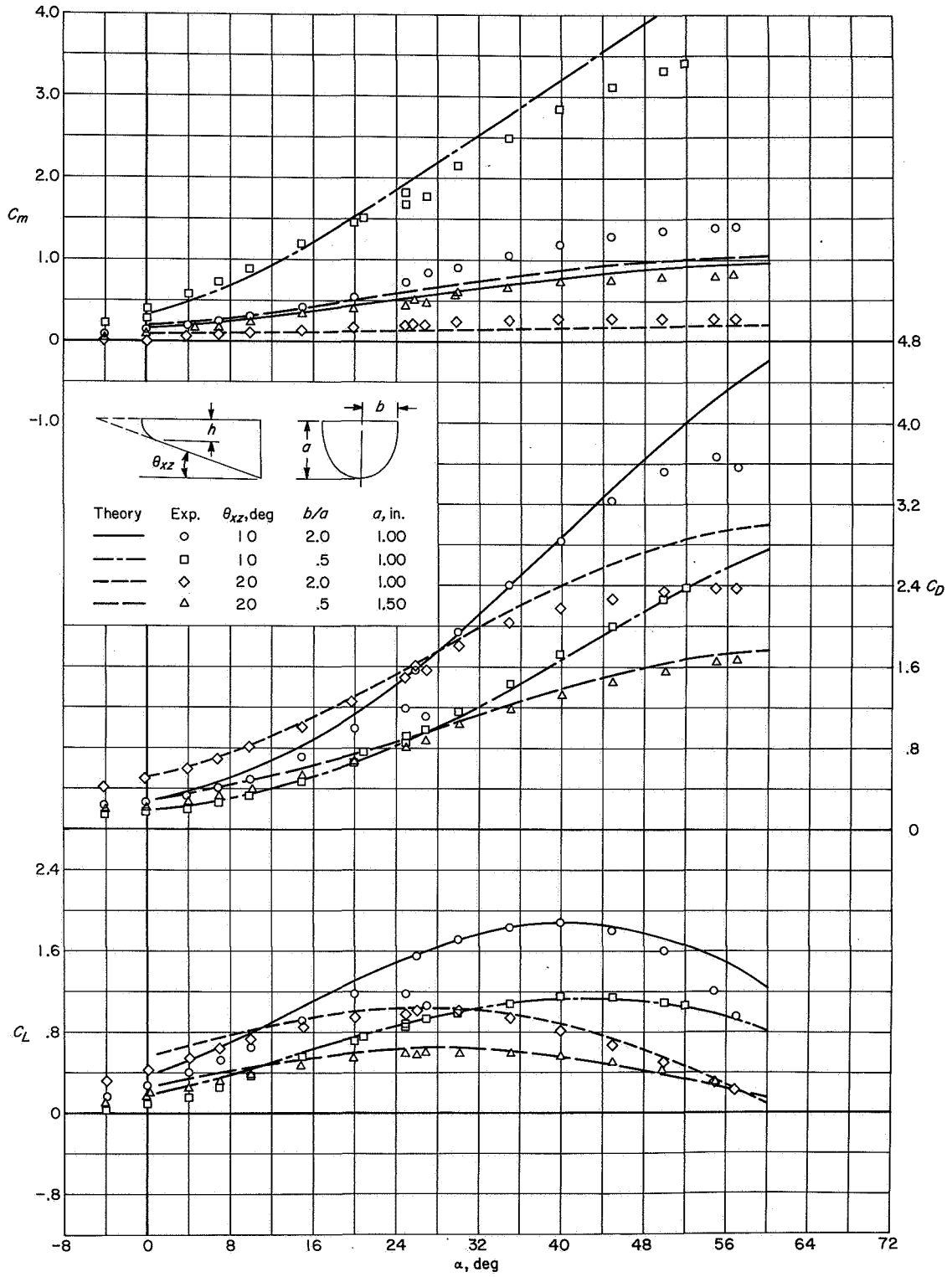


FIGURE 15.—Comparison of experimental results with theoretical results of the variation in the longitudinal characteristics of a series of round-bottom blunt-nose elliptic half conic bodies with angle of attack for $h/a=0.4$ and $M=9.6$.

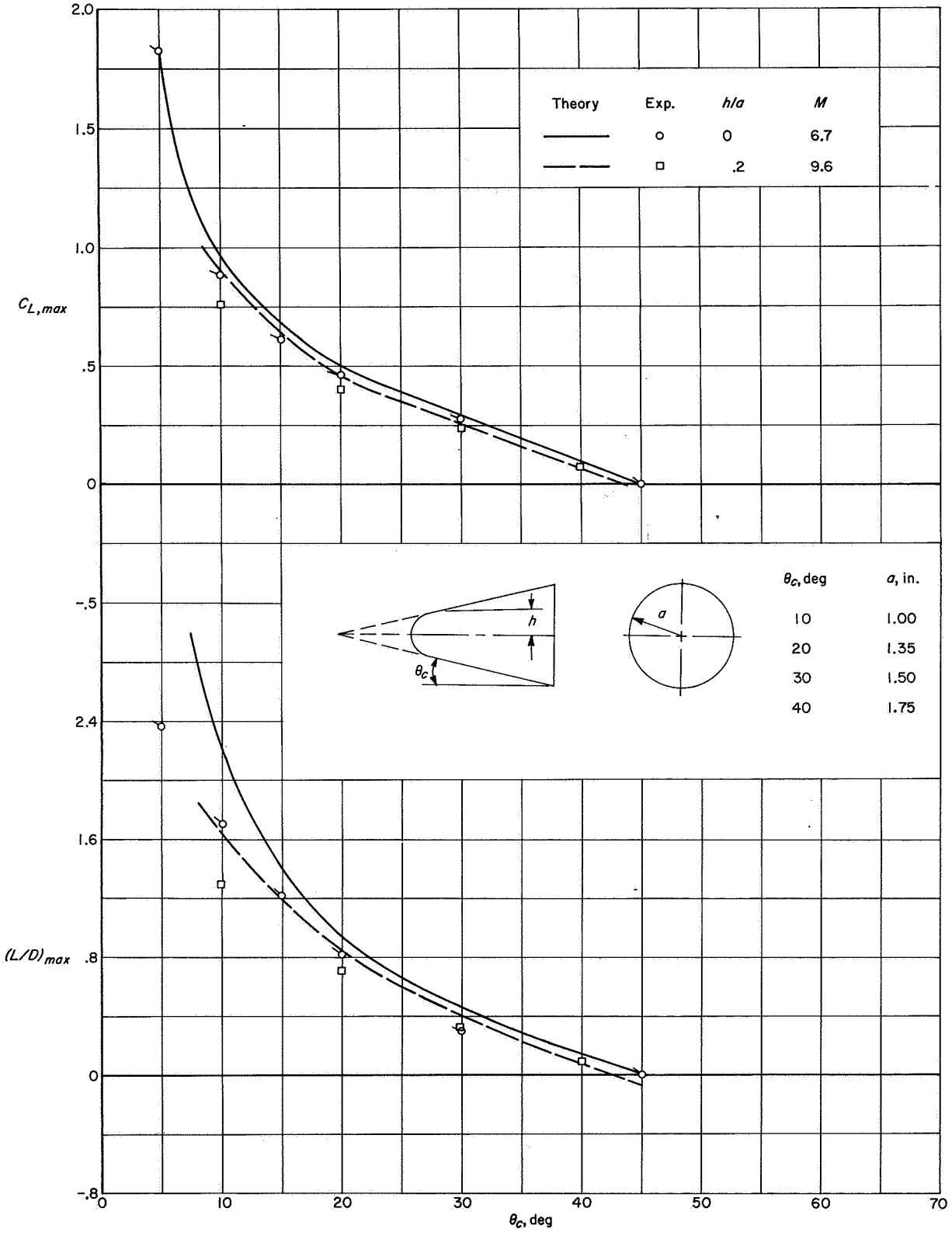


FIGURE 16.—Comparison of experimental results with theoretical results of the variations in $C_{L,max}$ and $(L/D)_{max}$ for a series of circular conic bodies with varying cone half-angle. Flagged symbols denote data from reference 10 (M=6.83).

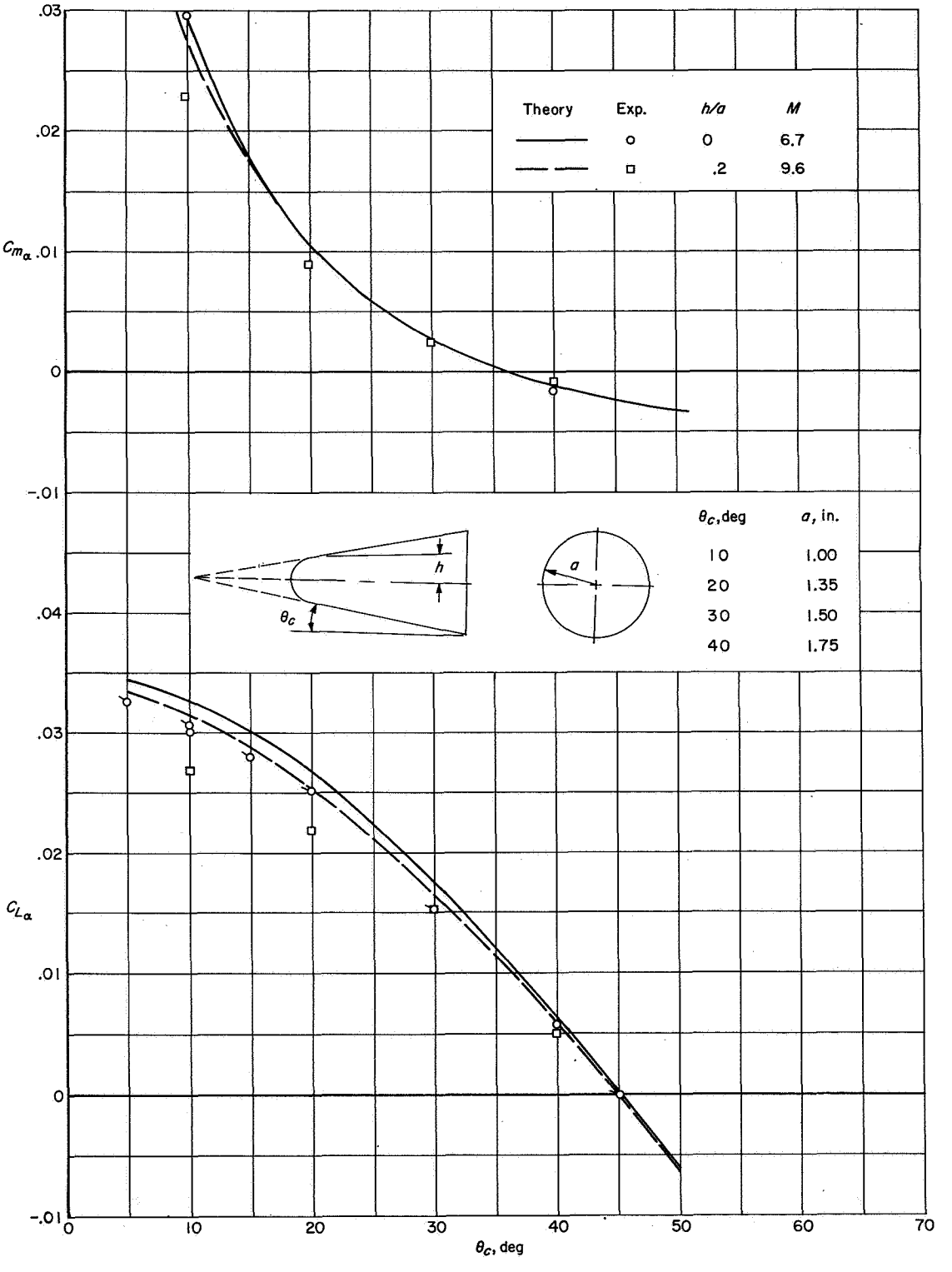


FIGURE 17.—Comparison of experimental results with theoretical results of the variations in the longitudinal stability derivatives of a series of circular conic bodies with varying cone half-angle. Flagged symbols denote data from reference 10 ($M=6.83$).

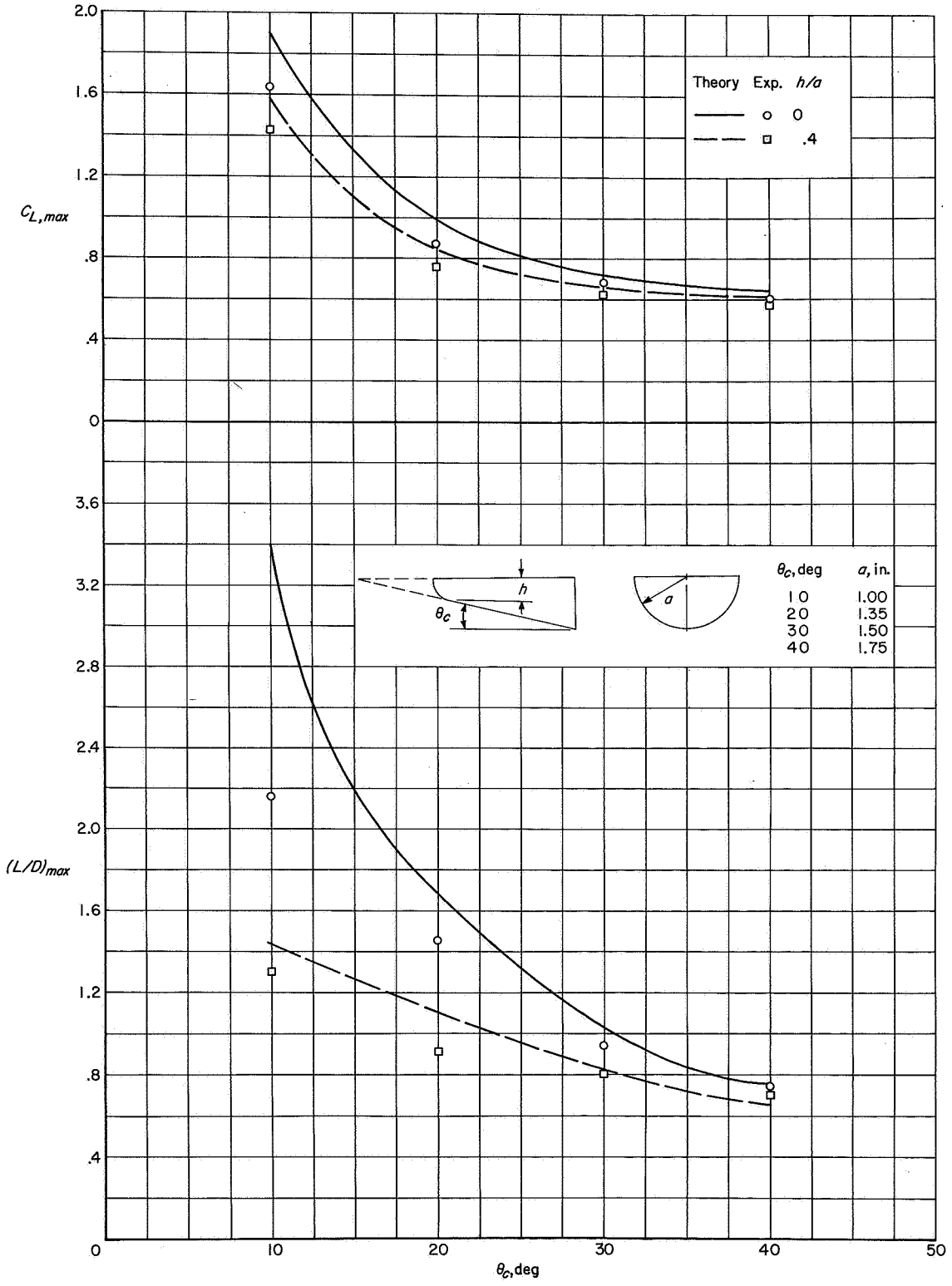


FIGURE 18.—Comparison of experimental results with theoretical results of the variations $C_{L,max}$ and $(L/D)_{max}$ for a series of round-bottom circular half conic bodies with varying cone half-angle at $M=9.6$.

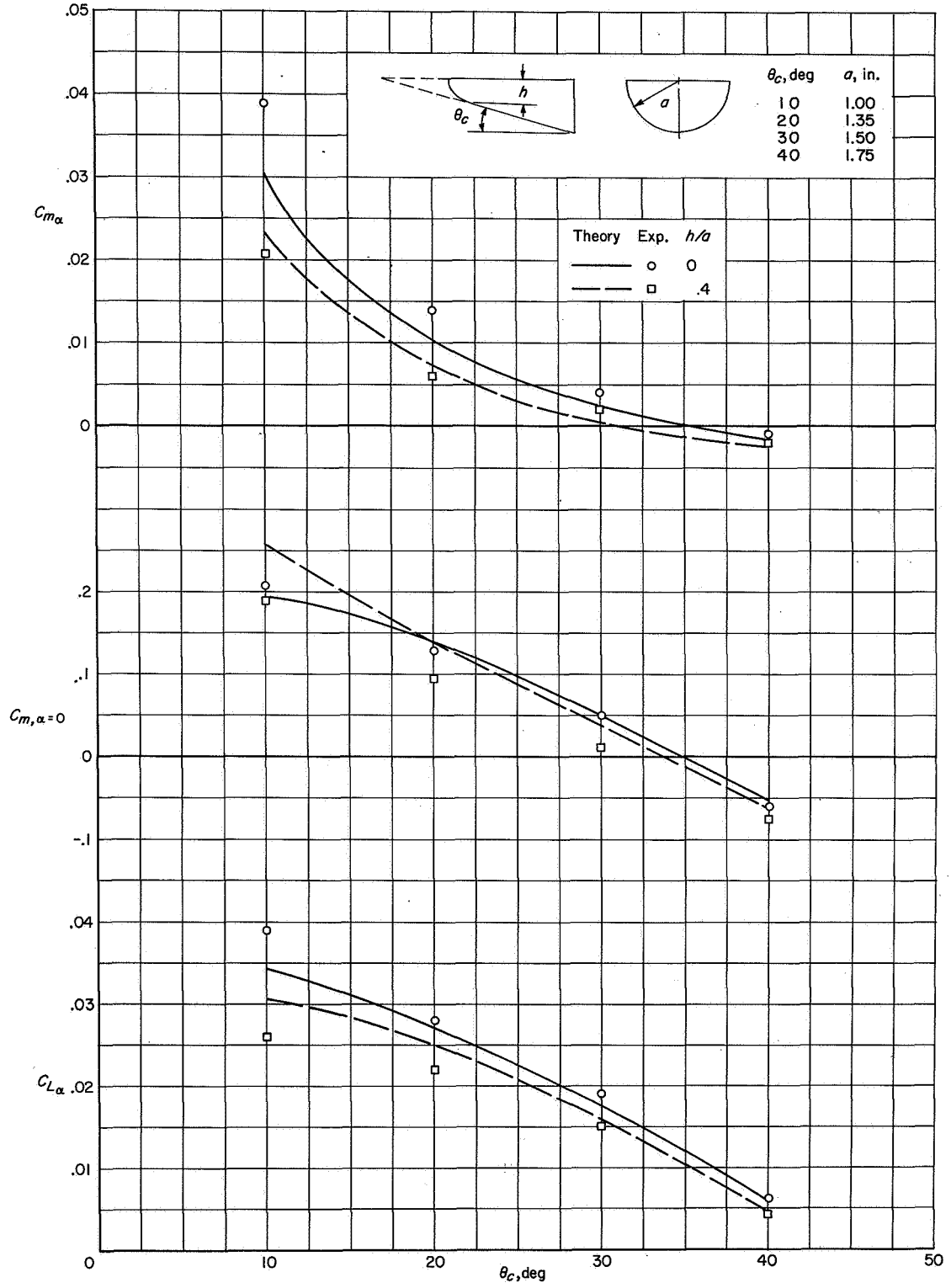


FIGURE 19.—Comparison of experimental results with theoretical results of the variations in the longitudinal stability derivatives for a series of round-bottom circular half conic bodies with varying cone half-angle at $M=9.6$.

The influence of the flat upper, or leeward, surface is clearly illustrated when the predicted values of C_{m_α} and C_{L_α} are compared with experimental results for the complete and half conic bodies shown in figures 17 and 19. Predicted values of these stability derivatives agree rather well with experimental results for the complete cone bodies where no leeward-surface effects are present. (See fig. 17.) However, theory considerably underpredicts these derivatives for the more slender, sharp-nose, half conic bodies ($\theta_c \approx 10°$, fig. 19) which have a flat upper, or leeward, surface which is not considered by Newtonian theory. A rather simple approximation of the influence of the upper surface based on linear theory gives a maximum value of the increment in $C_{L_\alpha}\left(\frac{2}{\sqrt{M^2-1}}\right)$ that could be contributed by the flat surface. If this increment were added directly to the Newtonian value, the result would considerably overpredict the experimental value for the slender body; however, it should be realized that due to leading-edge losses resulting from the three dimensionality of the flow, only a part of this increment would be effective. With increasing cone half-angle the influence of the upper surface is reduced since the ratio of the upper-surface area to base area is also reduced, and as a result the agreement between experiment and theory is greatly improved. (See fig. 19.) Blunting the nose has a similar effect on this area ratio and the agreement for C_{m_α} is improved; however, this may be somewhat fortuitous for the slender bodies since C_{L_α} is overpredicted. It should be noted, however, that the agreement between the predicted and experimental values of $C_{m,\alpha=0}$ is poorer for the blunt-nose configurations.

In addition, a number of studies have shown that boundary-layer displacement can also have effects on the aerodynamic characteristics of many slender configurations. Theoretical treatment and experimental results of these displacement effects on three-dimensional bodies are included in references 21 to 25. These references show that boundary-layer displacement can have some influence on the pressure distribution, and hence the force and moment characteristics, of slender bodies up to relatively high Mach numbers. Some of the disagreement noted between predicted values and experimental values of the stability derivatives C_{L_α} and C_{m_α} for the more slender sharp-nose body shapes ($\theta_c \approx 10°$) may also be due to these displacement effects.

EFFECT OF NOSE BLUNTNESS

The foregoing discussion has shown that in some instances agreement between experiment and theory was improved for the case of the blunt-nose configurations as compared with the sharp-nose configurations. In order to amplify the effects of nose bluntness, predicted and experimental characteristics of several circular and elliptic conic bodies for various amounts of nose bluntness are compared in figures 20 and 21. As previously mentioned, viscous forces have a pronounced effect on the drag of the more slender sharp-nose bodies ($\theta_c \approx 10°$) and result in considerably lower experimental values of $(L/D)_{max}$ than those predicted by theory. Increasing nose bluntness on these bodies reduces this viscous influence, and as expected, theoretical results agree more nearly with experimental results as bluntness increases (fig. 20). For configurations having large surface slopes ($\theta_c \approx 40°$) where viscous effects are small when compared with the pressure drag, theoretical results agree rather well with experimental results regardless of the amount of nose bluntness.

It was previously mentioned that increasing nose bluntness also reduced the influence of leading-edge pressure reduction on the aerodynamic characteristics at high angles of attack, particularly for the more slender half conic bodies. For these configurations ($\theta_c = 10°$) where a large part of the lifting area is influenced by the leading-edge pressure reduction, increasing nose bluntness generally improves the agreement between theory and experiment for $C_{L,max}$. (See fig. 20.) Similar trends in the agreement between experimental values of C_{m_α} and C_{L_α} and Newtonian predictions occur for these slender half-cone bodies as nose bluntness increases (fig. 21). The improved agreement of experimental results with theoretical results in this case may be due in part to the reduced influence of the leeward surface and boundary-layer displacement effects.

EFFECTS OF BODY CROSS SECTION

In an attempt to assess the ability of Newtonian theory to predict the changes in the longitudinal characteristics and stability derivatives of various configurations due to variations in body cross section, tests were made on several elliptic half conic bodies of varying span-height ratio b/a and a series of partial conic bodies of varying body cut-off

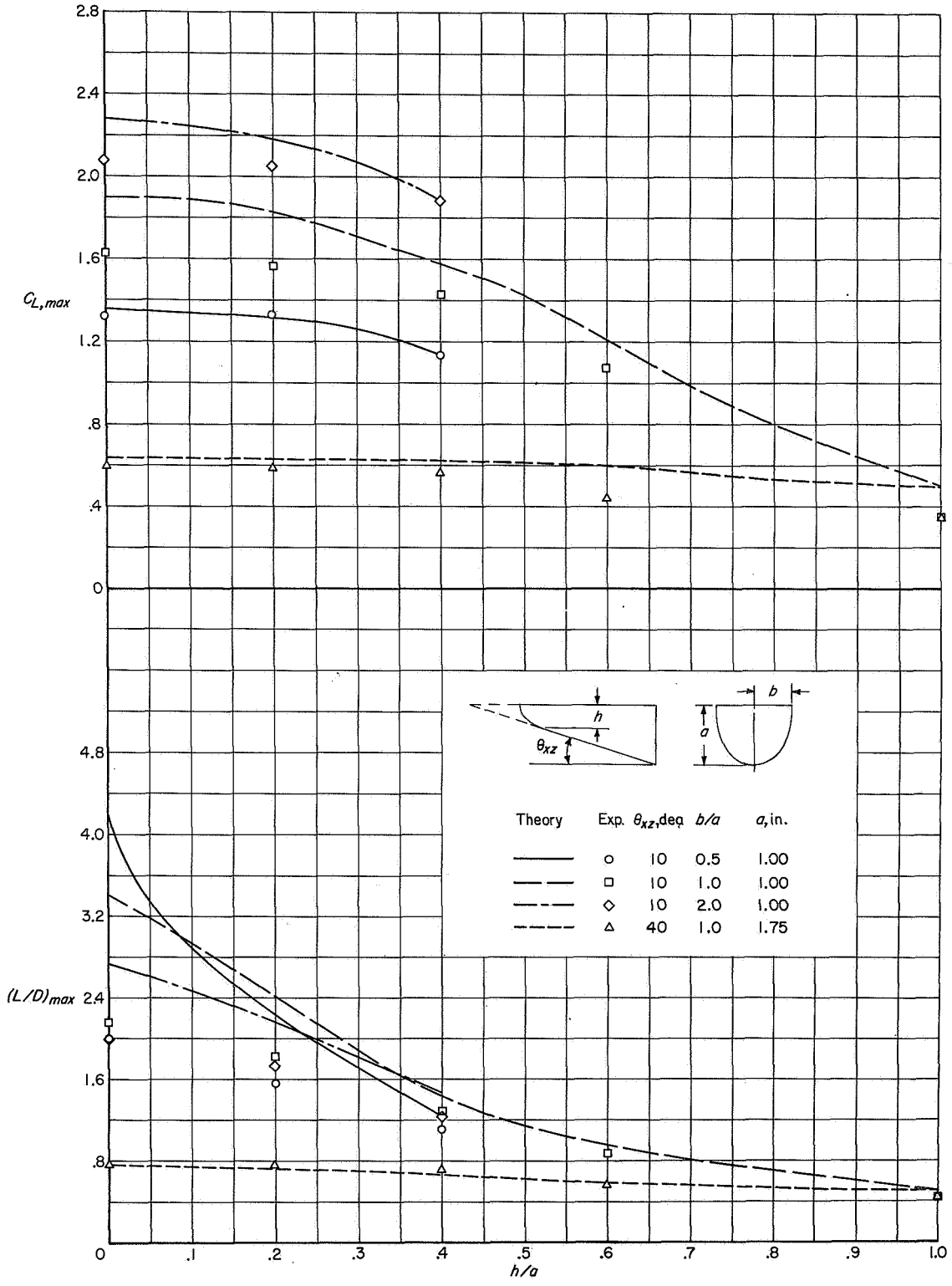


FIGURE 20.—Comparison of experimental results with theoretical results of the variations in $C_{L,max}$ and $(L/D)_{max}$ for a series of round-bottom half conic bodies with varying nose bluntness at $M=9.6$.

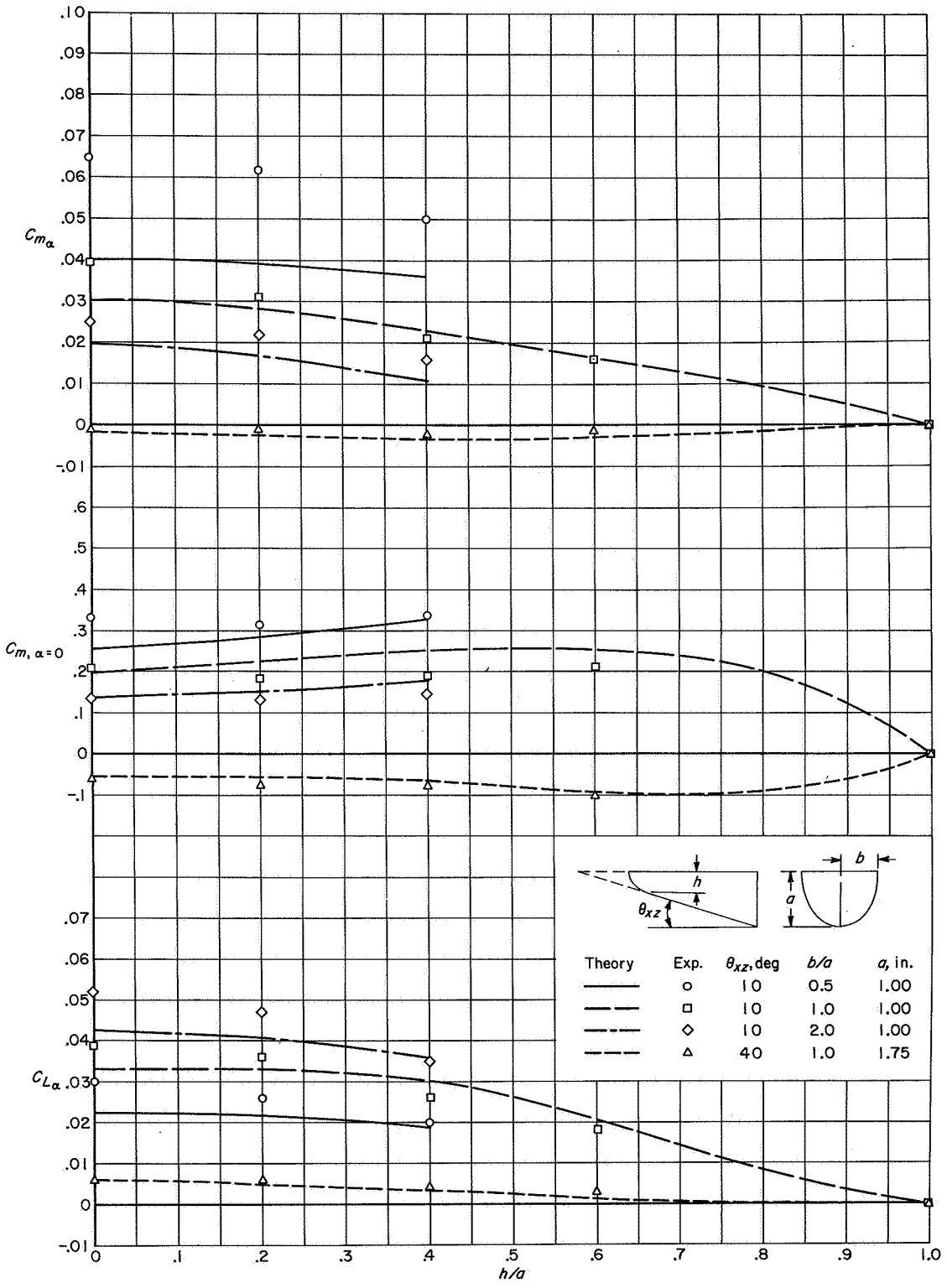


FIGURE 21.—Comparison of experimental results with theoretical results of the variations in the longitudinal stability derivatives of a series of round-bottom half conic bodies with varying body span-height ratio at $M=9.6$.

angles ϕ_1. Figures 22 to 25 present a comparison of the experimental values of $C_{L,max}$, $(L/D)_{max}$, C_{L_α}, $C_{m,\alpha=0}$, and C_{m_α} with theoretical predictions of these body shapes varying body span-height ratio and body radial cut-off angle.

A comparison has been made in figures 22 and 23 of the variations in these aerodynamic characteristics due to varying body cross section. However, agreement of theoretical results with experimental results again follows general patterns as previously noted in this discussion. Wherever viscous effects are pronounced (slender, low-drag bodies), leading-edge bleed-off influences large portions of the vehicle lifting area (bodies having low surface slopes or large relatively flat lifting areas), or where leeward-surface influence may be significant, poorer agreement between theoretical results and experimental results is seen to exist than is true for body shapes where these real-flow phenomena are less pronounced.

For the effect of variations in body geometry due to changing body cut-off angle, the agreement between experimental and theoretical results is generally improved where these real flow phenomena are less significant. (See figs. 24 and 25.) Again theory is shown to provide a very effective means of estimating trends in the aerodynamic characteristics of these body shapes due to varying body cut-off angle.

LATERAL STABILITY DERIVATIVES

Comparisons of C_{Y_β} and C_{n_β} for various half elliptic cones plotted against angle of attack are shown in figure 26. The complete conic case was not considered since the directional and lateral stability derivatives C_{n_β} and C_{Y_β} would show trends similar to the longitudinal derivatives C_{m_α} and C_{L_α} for the complete body of revolution.

In figure 26 Newtonian theory is seen to overpredict the values of C_{Y_β}. Some improvement, however, is noted for the bodies of lower fineness ratio at the lower angles of attack. The better agreement for C_{n_β} is, therefore, apparently fortuitous since the overpredictions of C_{Y_β} indicate that the pressure distribution is predicted rather poorly.

MODIFIED NEWTONIAN THEORY

Throughout the preceding sections, it was shown that real-flow phenomena could affect the ability of Newtonian theory to predict the aerodynamic characteristics of a wide variety of possible body shapes. In the areas where the agreement between theoretical results and experimental results was poor, above an angle of attack of about 10°, these real-flow-phenomena effects in all cases except for C_{L_α} and C_{m_α} tend to reduce the characteristics of the bodies below that predicted by classical Newtonian theory. Since accurate corrections for these effects are either not known as yet (as, for example, in correcting leading-edge pressure losses) or are so complex (as in the case of determining boundary-layer displacement effects) that they detract from the attractive simplicity of the theory, the question arises as to whether some modification to the Newtonian coefficient of 2 can be made which will result in improved agreement between theory and experiment so that a more confident application of the theory for the classes of bodies included herein is justified.

It has previously been shown in other studies that some success has already been achieved for blunt-nose bodies (see refs. 7, 10, 12, 13, 14, and 26) by assigning to this coefficient the value of $C_{p,max}$ (the stagnation-pressure coefficient behind a normal shock). The Newtonian estimates for a large portion of the bodies previously shown were, therefore, modified by this coefficient. Comparisons which indicated the relative agreement between the experimental results and theoretical results with Newtonian coefficients of 2 and $C_{p,max}$ were made and the results for C_L, C_D, and C_m are shown in figures 27 to 29. It should be noted that the sharp-nose complete cones are not included in these figures since, as shown previously, the coefficient of 2 gave very good results for these bodies. However, because of the overprediction by theory for the sharp-nose half cones, these bodies have been included even though there is no theoretical justification in the use of $C_{p,max}$ for this type of body. The results in figures 27 to 29 indicate that the elliptic bodies, denoted by the filled symbols, are generally better predicted with the coefficient of 2 than are the circular bodies; however, considerably more scatter is evident for the elliptic bodies especially for the case of C_m (fig. 29). With $C_{p,max}$ as the coefficient the accuracy of the predictions for the circular bodies is significantly improved; furthermore, the agreement between theoretical results and experimental results for the elliptic bodies except for a few cases (namely, $\theta_{xz}=10$, $h/a=0.4$, $b/a=2$, and $\theta_{xz}=10$, $h/a=0$, and $b/a=0.5$) still appears to be good.

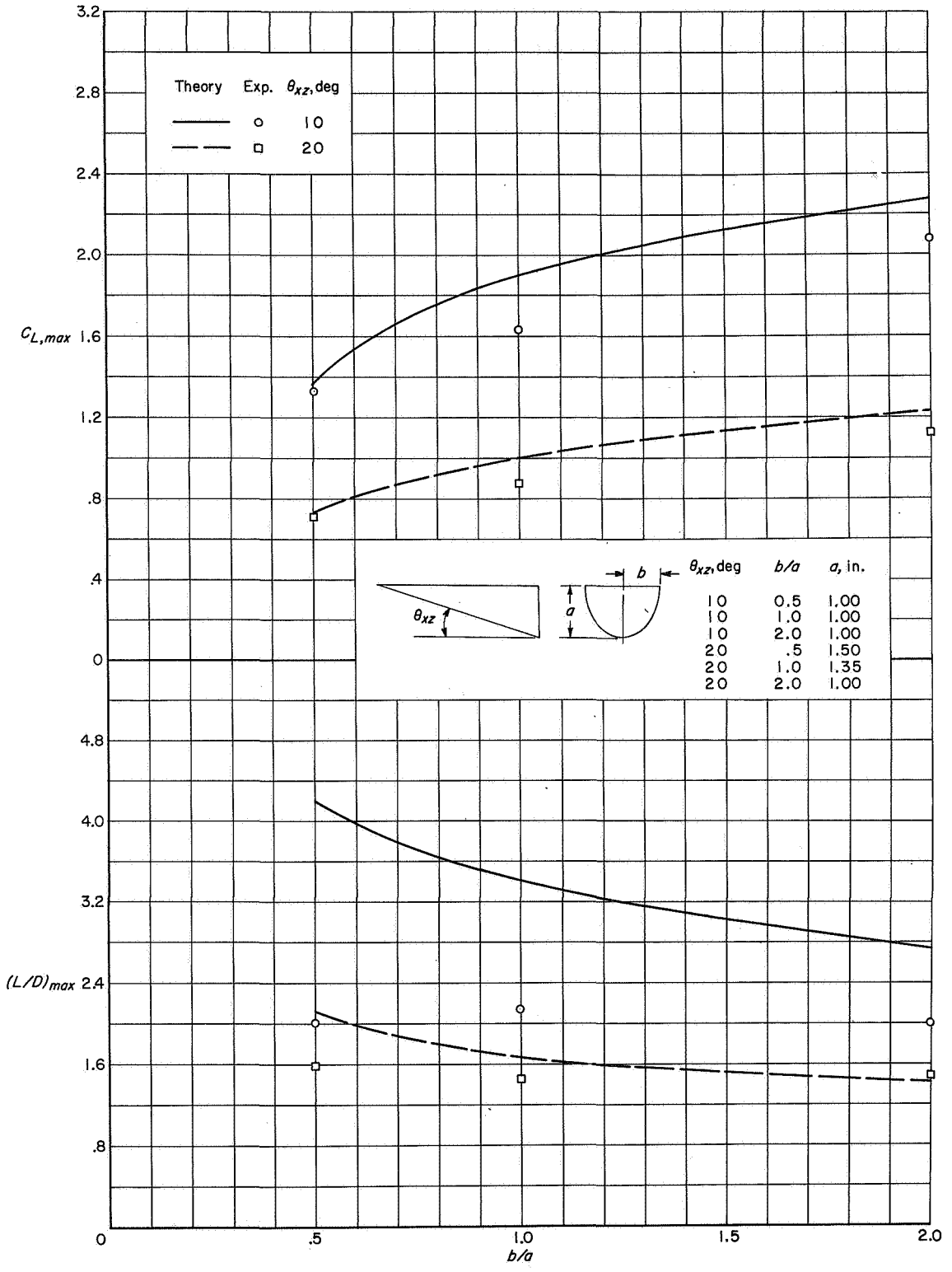


FIGURE 22.—Comparison of experimental results with theoretical results of the variations of $C_{L,max}$ and $(L/D)_{max}$ for a series of round-bottom sharp half conic bodies with varying body span-height ratio at $M=9.6$.

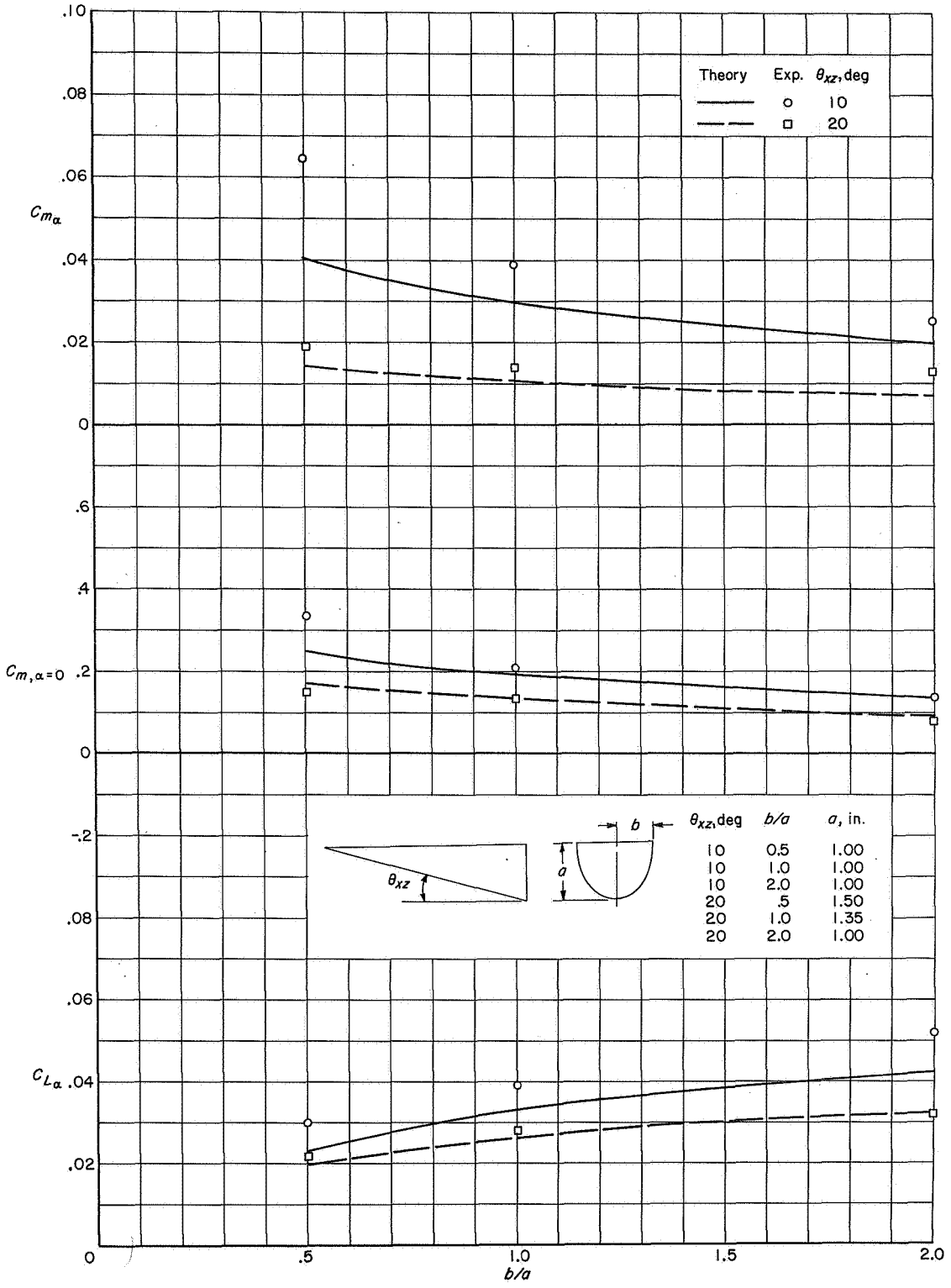
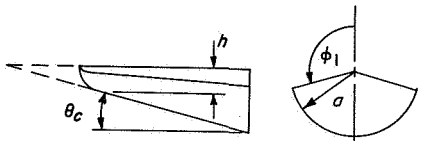


FIGURE 23.—Comparison of experimental results with theoretical results of the variations in the longitudinal stability derivatives of a series of round-bottom sharp-nose half conic bodies with varying body span-height ratio at $M=9.6$.



ϕ_1, deg	a, in.	
	θ_c=10°	θ_c=20°
90	1.00	1.35
105	1.13	-
120	1.13	-
135	1.00	1.50
150	1.25	-

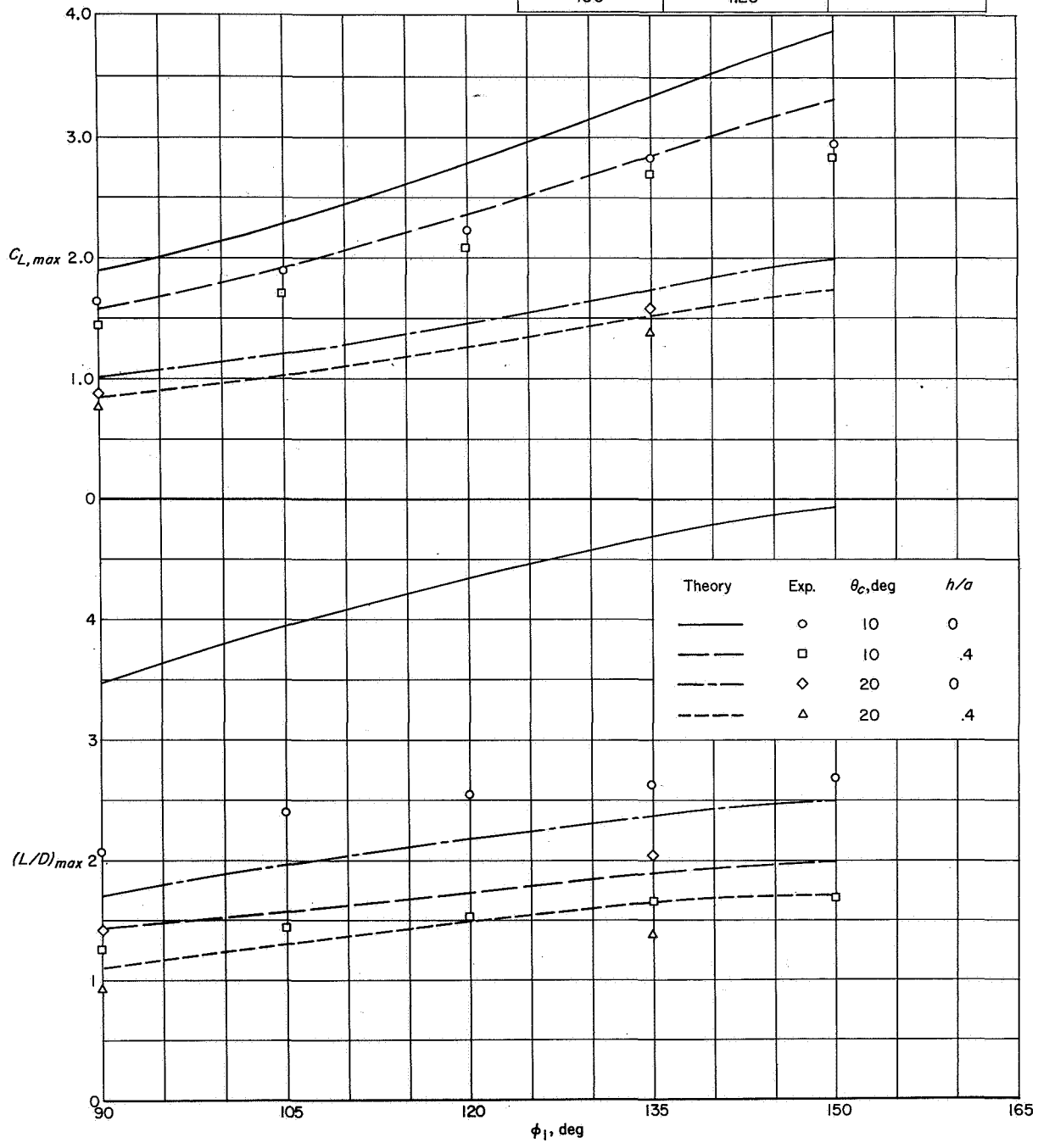
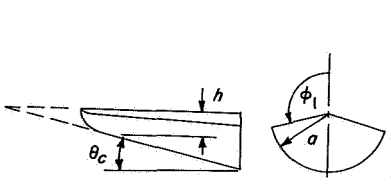


FIGURE 24.—Comparison of experimental results with theoretical results of the variations in $C_{L,max}$ and $(L/D)_{max}$ for a series of round-bottom circular conic segments with varying body cut-off angle at $M=9.6$.



ϕ_1, deg	a, in.	
	θ_c=10°	θ_c=20°
90	1.00	1.35
105	1.13	-
120	1.13	-
135	1.00	1.50
150	1.25	-

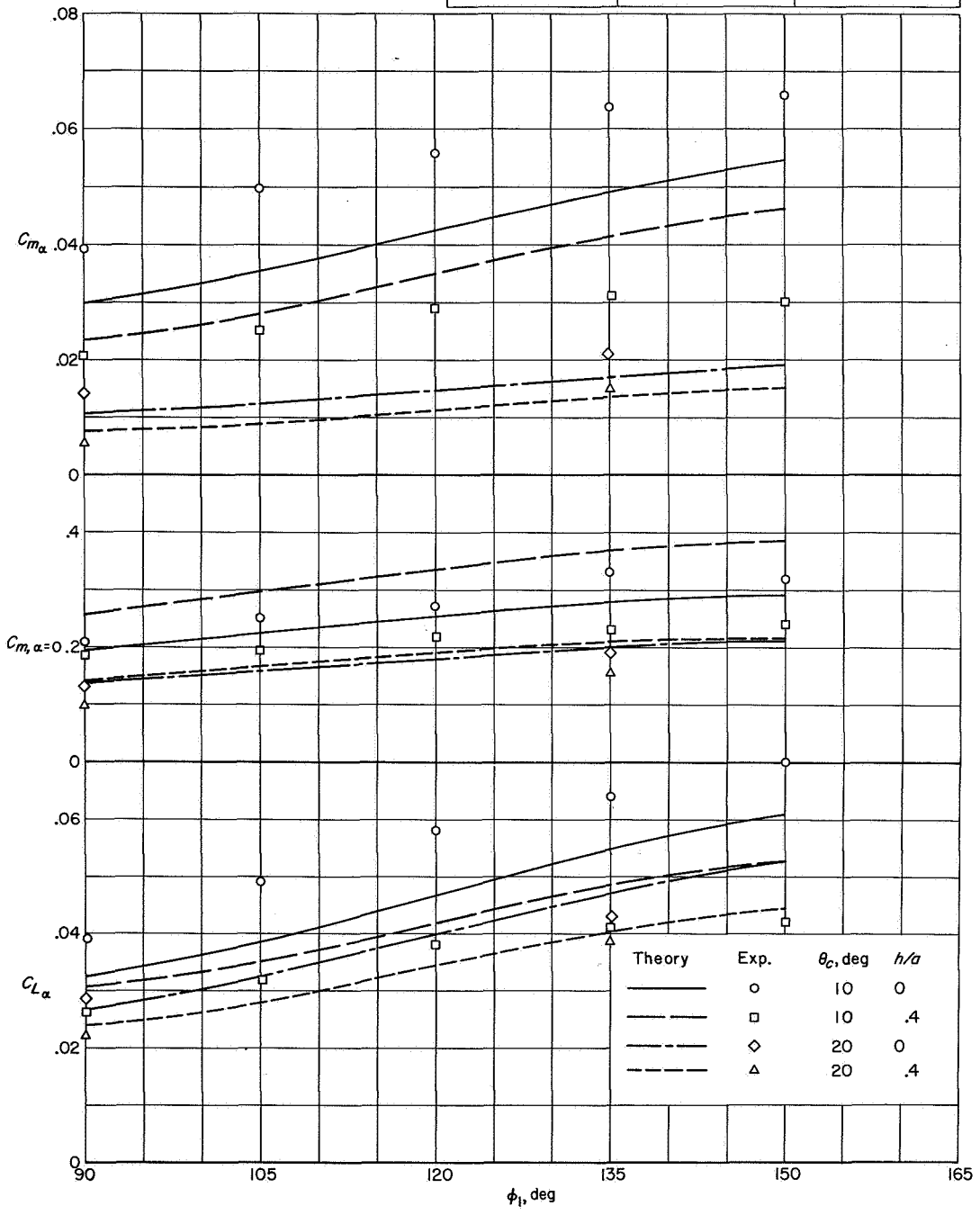


FIGURE 25.—Comparison of experimental results with theoretical results of the variations in the longitudinal stability derivatives for a series of round-bottom circular conic segments with varying body cut-off angles at $M=9.6$.

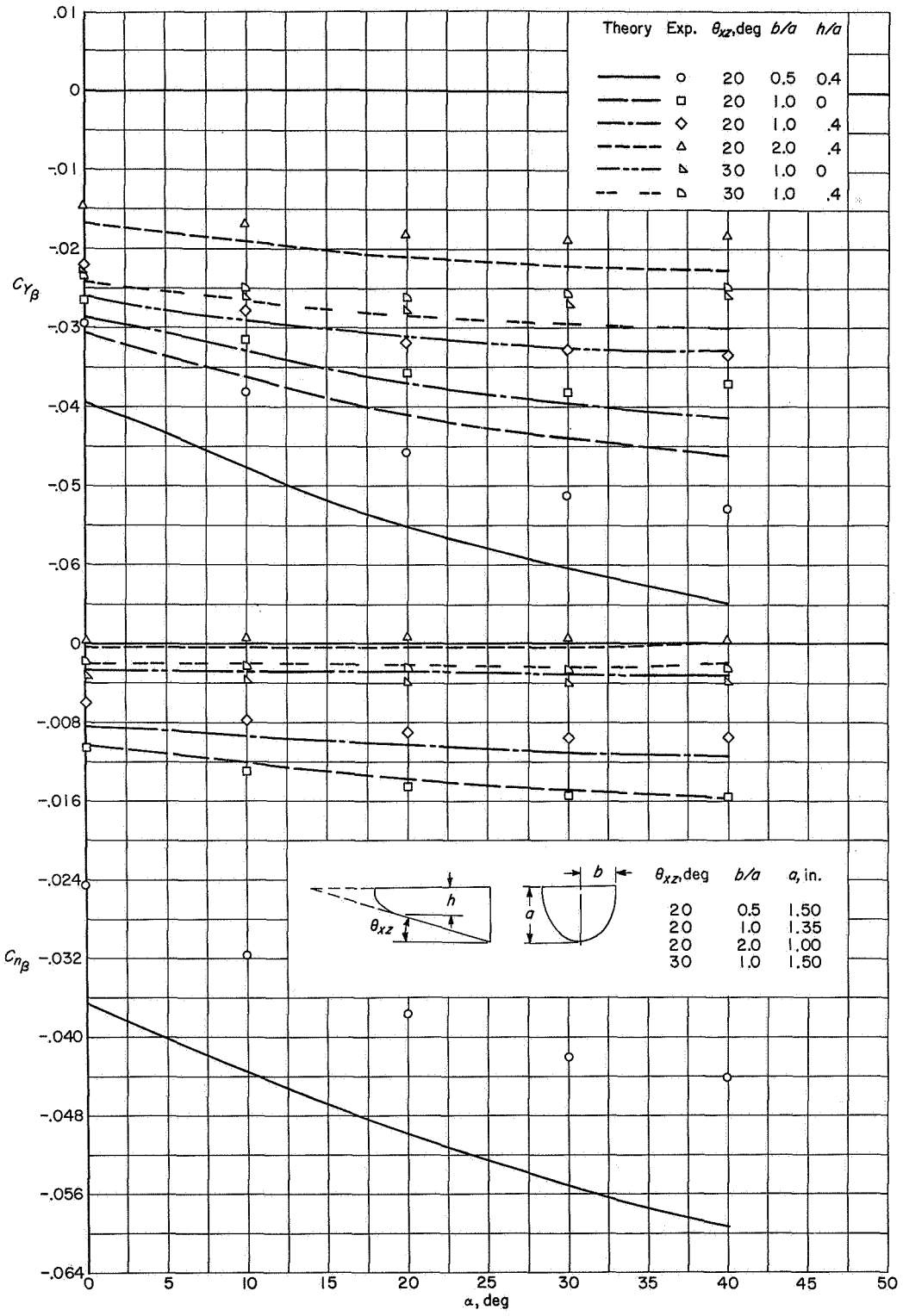


FIGURE 26.—Comparison of experimental results with theoretical results of the variation in the directional stability characteristics of a series of round-bottom half conic bodies with angle of attack at $M=6.7$.

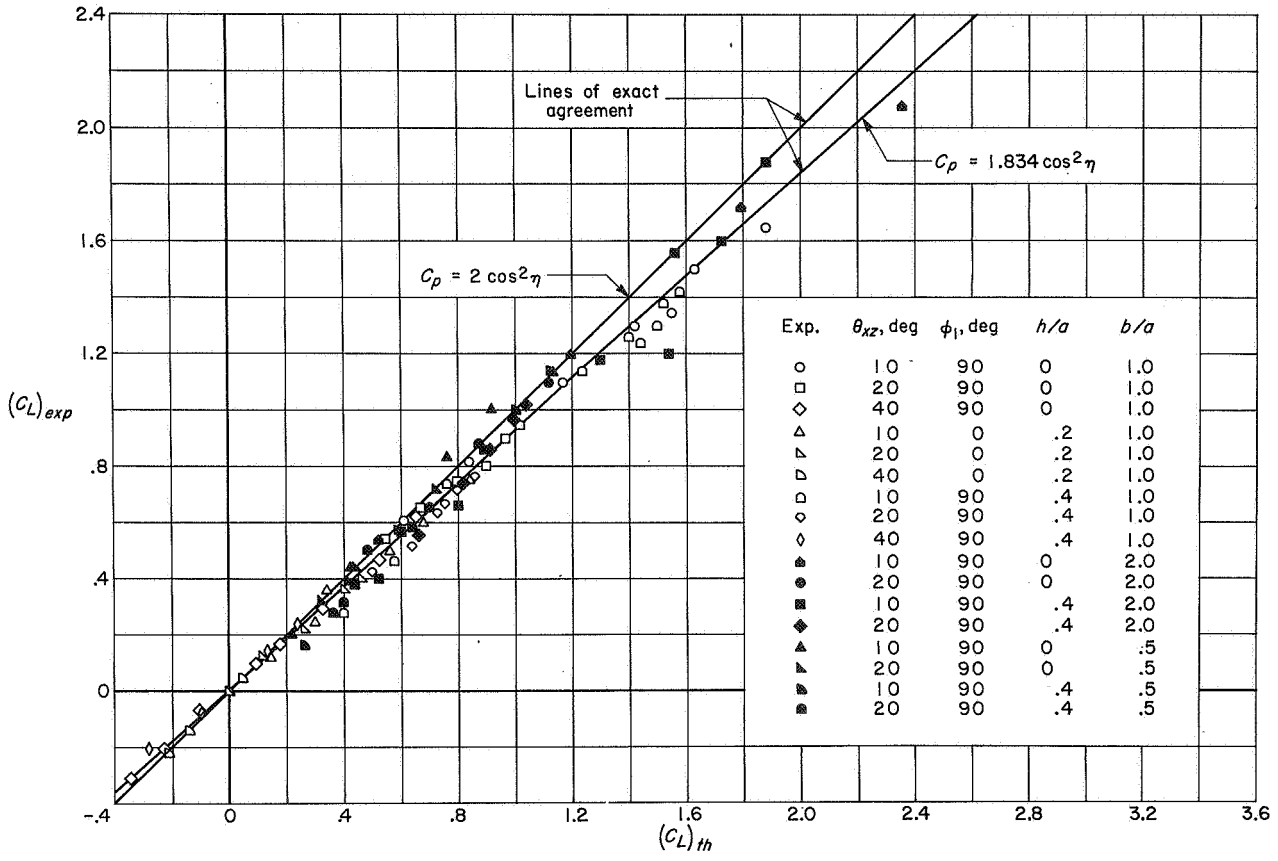


FIGURE 27.—Comparison of experimental results with theoretical results of lift coefficient with the use of $C_p=2\cos^2\eta$ and $C_p=1.834\cos^2\eta$.

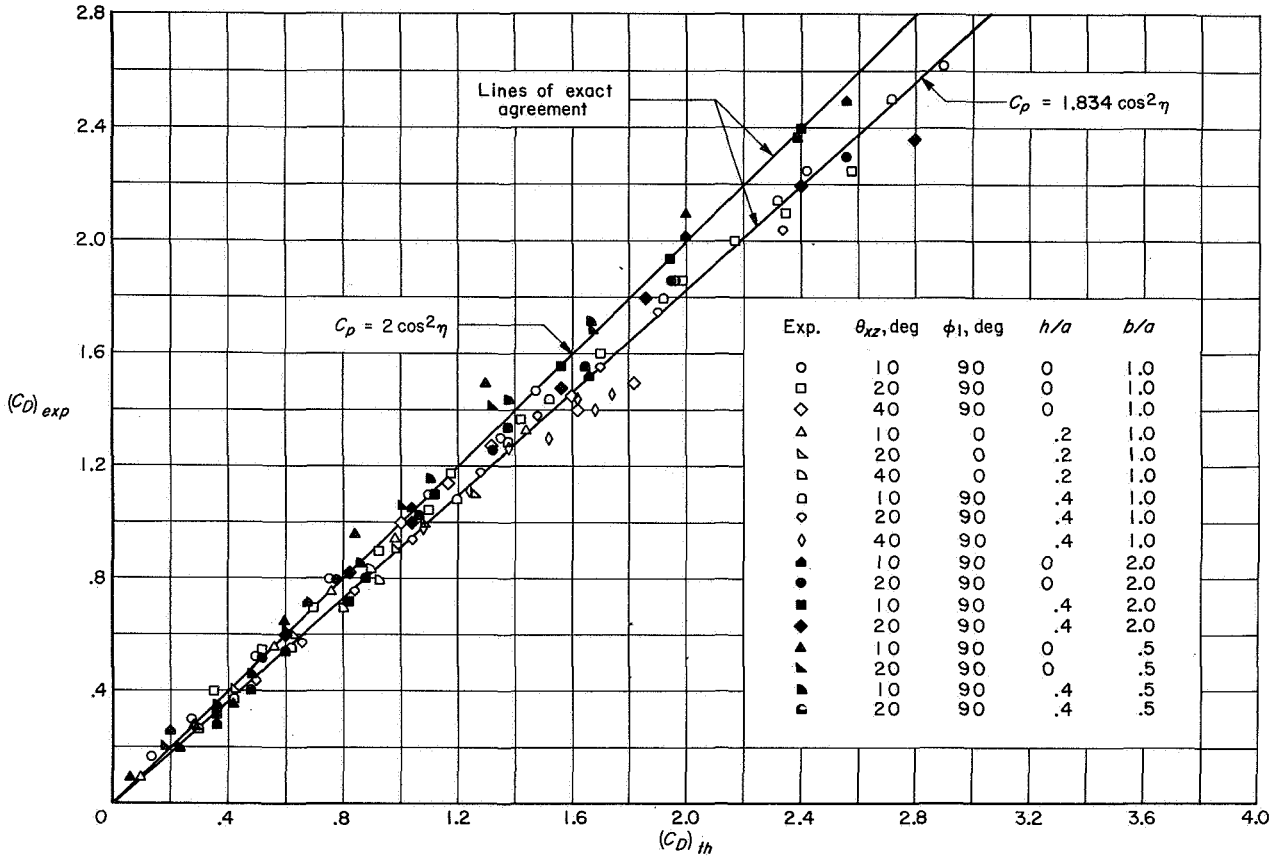


FIGURE 28.—Comparison of experimental results with theoretical results of drag coefficient with the use of $C_p=2\cos^2\eta$ and $C_p=1.834\cos^2\eta$.

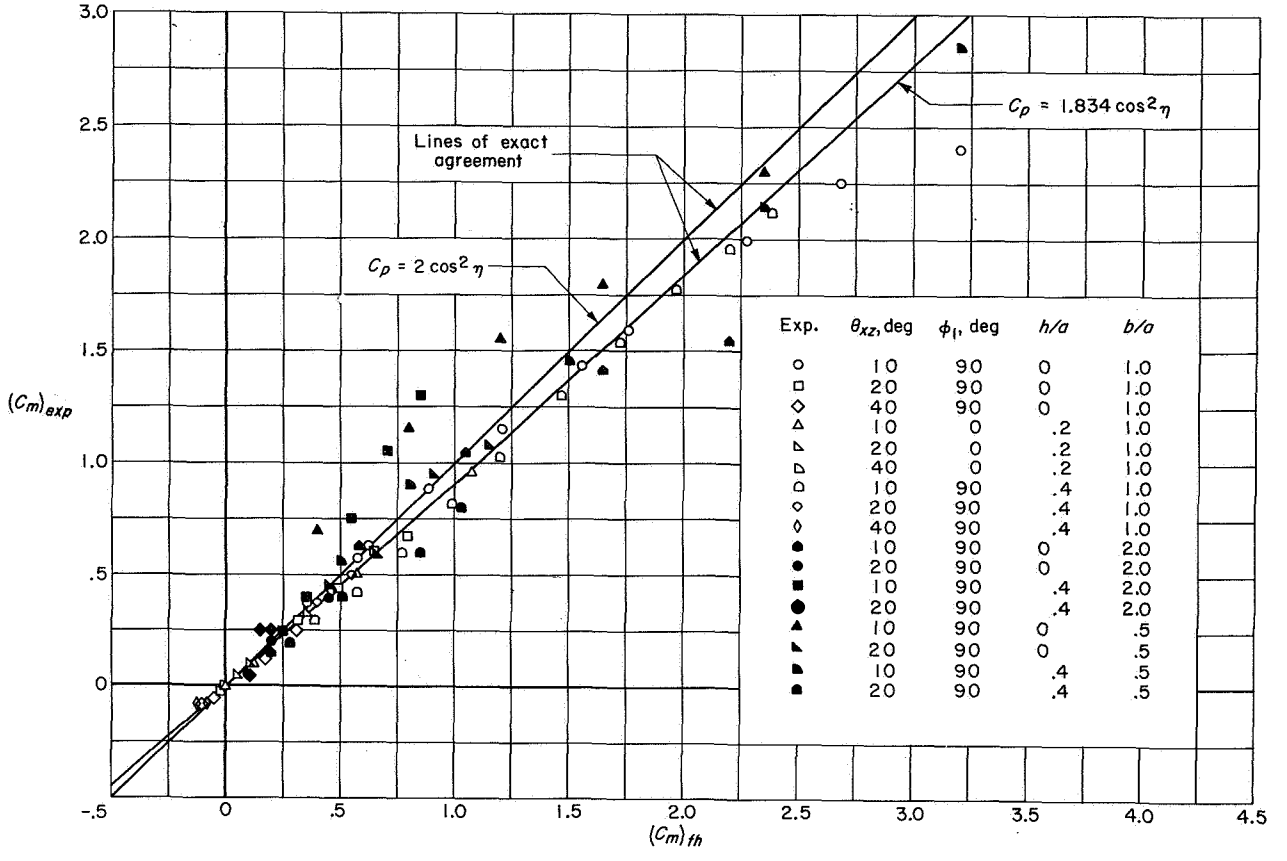


FIGURE 29.—Comparison of experimental results with theoretical results of pitching-moment coefficient with the use of $C_p=2\cos^2\eta$ and $C_p=1.834\cos^2\eta$.

In fact, with this modification, the characteristics of all the bodies considered, except for the bodies previously noted, can be predicted within 10 percent throughout the angle-of-attack range. It should be noted that this modification can be obtained from the tabulated Newtonian values in tables I to IV, which were based on a coefficient of 2, by simply multiplying the tabulated values by the ratio $\frac{C_{p,max}}{2}$.

CONCLUDING REMARKS

Closed-form expressions are presented to determine the Newtonian predictions of the force and moment characteristics at combined angles of attack and sideslip of a large number of spheric and conic bodies. Both the entire bodies and portions of these bodies are included in these calculations. Tabulations of the results of these equations, by using a Newtonian coefficient of 2, are also included for the force and moment coefficients of these various body shapes covering a wide range of angle of attack and sideslip. The use of these tables is explained in some detail, and equations are developed to facilitate the use of Newtonian theory for calculating the aerodynamic characteristics of various full or partial conic body shapes with spherically blunted noses.

Comparisons are made with available experimental results in order to provide some indication of the usefulness of this theory in predicting the aerodynamic characteristics of these bodies. These comparisons include variations in some of the longitudinal aerodynamic characteristics and stability derivatives due to changes in angle of attack, body-surface slope, nose bluntness, and body cross section. Results of these comparisons show that theory provides an adequate means of estimating the trends of many of the characteristics of these body shapes due to varying the aforementioned parameters. As far as predicting actual magnitudes is concerned theoretical results, in general, are shown to agree very well with experimental results for sharp-nose complete cones and for configurations having large blunted noses or steep surface slopes, that is, configurations having relatively low values of maximum lift-drag ratio. However, agreement between theory and experiment generally becomes much poorer for the more slender, slightly blunted, complete or half conic bodies and also for sharp-nose half conic bodies where real-flow phenomena such as forebody interference, viscous forces, leeward-surface contributions, or leading-edge pressure reduction may have significant effects. Corrections for viscous forces can be applied to improve the accuracy of the theory for the more slender bodies; however, more fundamental localized studies into the other effects are necessary before corrections for these effects can be confidently employed. The agreement between experiment and theory for these bodies may be improved by using the stagnation pressure coefficient behind a normal shock as the Newtonian coefficient although for the sharp-nose half conic bodies there is no justification for this modification.

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LANGLEY STATION, HAMPTON, VA., *August 22, 1961.*

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TABLE I. - AERODYNAMIC CHARACTERISTICS OF PARTIAL SPHERICAL CAPS

(a) C_N

$\phi_1 = 90^\circ$; $\phi_2 = 270^\circ$; $\beta = 0^\circ$

α, deg \ σ, deg	5.0	10.0	20.0	30.0	40.0	50.0	60.0	70.0	80.0	90.0
1.0	.0006	.0044	.0330	.0988	.1979	.3109	.4120	.4809	.5121	.5176
2.0	.0006	.0044	.0332	.0998	.2008	.3168	.4217	.4944	.5287	.5355
4.0	.0006	.0044	.0335	.1017	.2062	.3281	.4407	.5214	.5621	.5720
6.0	.0006	.0045	.0338	.1033	.2111	.3388	.4591	.5482	.5957	.6094
8.0	.0006	.0044	.0340	.1047	.2156	.3489	.4769	.5744	.6294	.6475
10.0	.0006	.0044	.0341	.1058	.2197	.3583	.4939	.6002	.6629	.6861
12.0	.0005	.0044	.0342	.1067	.2232	.3670	.5102	.6252	.6961	.7250
15.0	.0005	.0043	.0341	.1076	.2276	.3787	.5329	.6612	.7451	.7835
20.0	.0005	.0042	.0335	.1078	.2323	.3940	.5656	.7162	.8229	.8799
25.0	.0005	.0040	.0324	.1063	.2335	.4038	.5911	.7633	.8941	.9723
30.0	.0004	.0037	.0309	.1033	.2313	.4077	.6085	.8013	.9564	1.0580
35.0	.0004	.0034	.0289	.0988	.2257	.4057	.6175	.8288	1.0079	1.1343
40.0	.0004	.0031	.0266	.0930	.2169	.3979	.6176	.8452	1.0472	1.1990
45.0	.0003	.0027	.0240	.0860	.2052	.3844	.6090	.8499	1.0729	1.2500
50.0	.0003	.0023	.0212	.0780	.1908	.3657	.5917	.8427	1.0844	1.2858
55.0	.0002	.0019	.0183	.0694	.1743	.3423	.5665	.8239	1.0812	1.3054
60.0	.0002	.0015	.0154	.0603	.1561	.3149	.5340	.7940	1.0634	1.3080
65.0	.0001	.0012	.0125	.0510	.1369	.2845	.4952	.7540	1.0317	1.2937
70.0	.0001	.0009	.0097	.0419	.1171	.2518	.4514	.7050	.9869	1.2629
75.0	.0001	.0006	.0072	.0331	.0974	.2180	.4038	.6486	.9304	1.2165
80.0	.0000	.0003	.0049	.0250	.0784	.1839	.3539	.5865	.8640	1.1559
85.0	.0000	.0002	.0031	.0178	.0606	.1508	.3031	.5205	.7897	1.0830

α, deg \ σ, deg	100.0	110.0	120.0	130.0	140.0	150.0	160.0	170.0	180.0
1.0	.5176	.5176	.5176	.5176	.5176	.5176	.5176	.5176	.5176
2.0	.5355	.5355	.5355	.5355	.5355	.5355	.5355	.5355	.5355
4.0	.5721	.5721	.5721	.5721	.5721	.5721	.5721	.5721	.5721
6.0	.6099	.6099	.6099	.6099	.6099	.6099	.6099	.6099	.6099
8.0	.6489	.6489	.6489	.6489	.6489	.6489	.6489	.6489	.6489
10.0	.6886	.6887	.6887	.6887	.6887	.6887	.6887	.6887	.6887
12.0	.7295	.7295	.7295	.7295	.7295	.7295	.7295	.7295	.7295
15.0	.7921	.7922	.7922	.7922	.7922	.7922	.7922	.7922	.7922
20.0	.8986	.9004	.9005	.9005	.9005	.9005	.9005	.9005	.9005
25.0	1.0050	1.0118	1.0119	1.0119	1.0119	1.0119	1.0119	1.0119	1.0119
30.0	1.1082	1.1235	1.1249	1.1249	1.1249	1.1249	1.1249	1.1249	1.1249
35.0	1.2049	1.2326	1.2380	1.2380	1.2380	1.2380	1.2380	1.2380	1.2380
40.0	1.2923	1.3357	1.3482	1.3492	1.3494	1.3494	1.3494	1.3494	1.3494
45.0	1.3677	1.4298	1.4528	1.4570	1.4571	1.4571	1.4571	1.4571	1.4571
50.0	1.4288	1.5120	1.5486	1.5586	1.5594	1.5594	1.5594	1.5594	1.5594
55.0	1.4737	1.5798	1.6328	1.6514	1.6546	1.6546	1.6546	1.6546	1.6546
60.0	1.5012	1.6313	1.7030	1.7328	1.7404	1.7409	1.7410	1.7410	1.7410
65.0	1.5103	1.6647	1.7570	1.8005	1.8147	1.8170	1.8170	1.8170	1.8170
70.0	1.5007	1.6792	1.7932	1.8525	1.8754	1.8808	1.8812	1.8812	1.8812
75.0	1.4729	1.6742	1.8105	1.8872	1.9209	1.9310	1.9324	1.9324	1.9324
80.0	1.4275	1.6500	1.8084	1.9037	1.9499	1.9662	1.9695	1.9697	1.9697
85.0	1.3661	1.6073	1.7869	1.9014	1.9615	1.9855	1.9917	1.9924	1.9924

$\phi_1 = 90^\circ$; $\phi_2 = 270^\circ$; $\beta = 2^\circ$

α, deg \ σ, deg	5.0	10.0	20.0	30.0	40.0	50.0	60.0	70.0	80.0	90.0
1.0	.0006	.0044	.0329	.0987	.1977	.3106	.4117	.4805	.5119	.5176
2.0	.0006	.0044	.0331	.0997	.2006	.3165	.4213	.4941	.5285	.5354
4.0	.0006	.0044	.0335	.1016	.2059	.3277	.4403	.5211	.5618	.5719
6.0	.0006	.0044	.0338	.1032	.2109	.3384	.4587	.5478	.5954	.6093
8.0	.0006	.0044	.0340	.1046	.2154	.3485	.4765	.5740	.6290	.6473
10.0	.0006	.0044	.0341	.1057	.2194	.3579	.4935	.5997	.6625	.6859
12.0	.0005	.0044	.0341	.1066	.2230	.3666	.5097	.6247	.6957	.7247
15.0	.0005	.0043	.0340	.1075	.2274	.3783	.5324	.6607	.7446	.7831
20.0	.0005	.0042	.0335	.1077	.2320	.3936	.5651	.7156	.8224	.8794
25.0	.0005	.0040	.0324	.1062	.2333	.4033	.5905	.7627	.8934	.9717
30.0	.0004	.0037	.0309	.1032	.2311	.4073	.6080	.8006	.9557	1.0573
35.0	.0004	.0034	.0289	.0987	.2255	.4053	.6169	.8281	1.0072	1.1336
40.0	.0004	.0031	.0266	.0929	.2167	.3975	.6170	.8444	1.0463	1.1981
45.0	.0003	.0027	.0240	.0859	.2049	.3840	.6084	.8493	1.0720	1.2491
50.0	.0003	.0023	.0212	.0780	.1906	.3653	.5912	.8419	1.0835	1.2849
55.0	.0002	.0019	.0183	.0693	.1741	.3419	.5660	.8231	1.0803	1.3044
60.0	.0002	.0015	.0153	.0602	.1560	.3146	.5335	.7933	1.0626	1.3070
65.0	.0001	.0012	.0124	.0510	.1367	.2842	.4948	.7533	1.0308	1.2928
70.0	.0001	.0009	.0097	.0418	.1170	.2516	.4510	.7044	.9861	1.2620
75.0	.0001	.0006	.0072	.0331	.0973	.2178	.4034	.6481	.9297	1.2156
80.0	.0000	.0003	.0049	.0250	.0783	.1838	.3536	.5861	.8634	1.1551
85.0	.0000	.0002	.0031	.0178	.0605	.1506	.3029	.5202	.7891	1.0823

α, deg \ σ, deg	100.0	110.0	120.0	130.0	140.0	150.0	160.0	170.0	180.0
1.0	.5176	.5176	.5176	.5176	.5176	.5176	.5176	.5176	.5176
2.0	.5355	.5355	.5355	.5355	.5355	.5355	.5355	.5355	.5355
4.0	.5721	.5721	.5721	.5721	.5721	.5721	.5721	.5721	.5721
6.0	.6099	.6099	.6099	.6099	.6099	.6099	.6099	.6099	.6099
8.0	.6488	.6488	.6488	.6488	.6488	.6488	.6488	.6488	.6488
10.0	.6886	.6886	.6886	.6886	.6886	.6886	.6886	.6886	.6886
12.0	.7294	.7293	.7293	.7293	.7293	.7293	.7293	.7293	.7293
15.0	.7919	.7920	.7920	.7920	.7920	.7920	.7920	.7920	.7920
20.0	.8983	.9002	.9002	.9002	.9002	.9002	.9002	.9002	.9002
25.0	1.0046	1.0114	1.0115	1.0115	1.0115	1.0115	1.0115	1.0115	1.0115
30.0	1.1076	1.1230	1.1245	1.1245	1.1245	1.1245	1.1245	1.1245	1.1245
35.0	1.2042	1.2320	1.2374	1.2375	1.2375	1.2375	1.2375	1.2375	1.2375
40.0	1.2915	1.3350	1.3476	1.3487	1.3487	1.3487	1.3487	1.3487	1.3487
45.0	1.3668	1.4289	1.4520	1.4563	1.4563	1.4563	1.4563	1.4563	1.4563
50.0	1.4278	1.5111	1.5477	1.5578	1.5586	1.5586	1.5586	1.5586	1.5586
55.0	1.4727	1.5788	1.6319	1.6505	1.6537	1.6537	1.6537	1.6537	1.6537
60.0	1.5001	1.6302	1.7020	1.7318	1.7396	1.7400	1.7400	1.7400	1.7400
65.0	1.5092	1.6636	1.7559	1.7994	1.8136	1.8159	1.8159	1.8159	1.8159
70.0	1.4997	1.6781	1.7920	1.8513	1.8743	1.8797	1.8801	1.8801	1.8801
75.0	1.4719	1.6731	1.8093	1.8860	1.9198	1.9298	1.9313	1.9313	1.9313
80.0	1.4266	1.6490	1.8072	1.9025	1.9487	1.9650	1.9683	1.9685	1.9685
85.0	1.3652	1.6063	1.7858	1.9003	1.9603	1.9842	1.9905	1.9912	1.9912

TABLE I.- CONTINUED

(a) C_N. Continued.

$\phi_1 = 105^\circ$; $\phi_2 = 255^\circ$; $\beta = 0^\circ$

α, deg \ σ, deg	5.0	10.0	20.0	30.0	40.0	50.0	60.0	70.0	80.0	90.0
1.0	.0007	.0051	.0382	.1146	.2295	.3606	.4779	.5578	.5941	.6005
2.0	.0007	.0051	.0385	.1158	.2329	.3676	.4894	.5740	.6139	.6218
4.0	.0007	.0052	.0389	.1180	.2393	.3810	.5121	.6062	.6537	.6654
6.0	.0006	.0052	.0393	.1200	.2453	.3939	.5341	.6381	.6939	.7101
8.0	.0006	.0052	.0395	.1216	.2507	.4060	.5554	.6696	.7342	.7557
10.0	.0006	.0051	.0397	.1230	.2556	.4173	.5759	.7004	.7743	.8019
12.0	.0006	.0051	.0397	.1242	.2599	.4278	.5954	.7305	.8142	.8485
15.0	.0006	.0050	.0396	.1253	.2653	.4420	.6228	.7738	.8730	.9187
20.0	.0006	.0049	.0390	.1256	.2712	.4607	.6625	.8401	.9667	1.0347
25.0	.0006	.0046	.0378	.1241	.2731	.4730	.6937	.8974	1.0528	1.1462
30.0	.0005	.0043	.0360	.1207	.2709	.4785	.7156	.9439	1.1284	1.2499
35.0	.0005	.0040	.0338	.1156	.2648	.4770	.7274	.9782	1.1915	1.3426
40.0	.0004	.0036	.0311	.1089	.2548	.4685	.7288	.9992	1.2400	1.4215
45.0	.0004	.0031	.0281	.1009	.2414	.4534	.7197	1.0063	1.2724	1.4842
50.0	.0003	.0027	.0249	.0917	.2249	.4320	.7005	.9993	1.2878	1.5289
55.0	.0002	.0022	.0215	.0817	.2058	.4050	.6717	.9784	1.2857	1.5541
60.0	.0002	.0018	.0180	.0711	.1846	.3733	.6341	.9443	1.2663	1.5591
65.0	.0001	.0014	.0147	.0603	.1622	.3378	.5890	.8979	1.2299	1.5437
70.0	.0001	.0010	.0114	.0496	.1390	.2995	.5377	.8407	1.1779	1.5084
75.0	.0001	.0007	.0085	.0393	.1158	.2597	.4817	.7744	1.1117	1.4543
80.0	.0000	.0004	.0059	.0298	.0934	.2196	.4228	.7011	1.0334	1.3830
85.0	.0000	.0002	.0037	.0213	.0724	.1803	.3627	.6230	.9453	1.2966

α, deg \ σ, deg	100.0	110.0	120.0	130.0	140.0	150.0	160.0	170.0	180.0
1.0	.6005	.6005	.6005	.6005	.6005	.6005	.6005	.6005	.6005
2.0	.6219	.6219	.6219	.6219	.6219	.6219	.6219	.6219	.6219
4.0	.6656	.6656	.6656	.6656	.6656	.6656	.6656	.6656	.6656
6.0	.7107	.7107	.7107	.7107	.7107	.7107	.7107	.7107	.7107
8.0	.7573	.7573	.7573	.7573	.7573	.7573	.7573	.7573	.7573
10.0	.8049	.8050	.8050	.8050	.8050	.8050	.8050	.8050	.8050
12.0	.8539	.8539	.8539	.8539	.8539	.8539	.8539	.8539	.8539
15.0	.9291	.9292	.9292	.9292	.9292	.9292	.9292	.9292	.9292
20.0	1.0571	1.0593	1.0594	1.0594	1.0594	1.0594	1.0594	1.0594	1.0594
25.0	1.1854	1.1935	1.1936	1.1936	1.1936	1.1936	1.1936	1.1936	1.1936
30.0	1.3100	1.3284	1.3301	1.3301	1.3301	1.3301	1.3301	1.3301	1.3301
35.0	1.4272	1.4604	1.4669	1.4669	1.4669	1.4669	1.4669	1.4669	1.4669
40.0	1.5334	1.5855	1.6005	1.6017	1.6019	1.6019	1.6019	1.6019	1.6019
45.0	1.6253	1.6998	1.7275	1.7325	1.7326	1.7326	1.7326	1.7326	1.7326
50.0	1.7003	1.8001	1.8441	1.8561	1.8570	1.8570	1.8570	1.8570	1.8570
55.0	1.7559	1.8832	1.9468	1.9691	1.9729	1.9730	1.9730	1.9730	1.9730
60.0	1.7906	1.9466	2.0327	2.0685	2.0776	2.0782	2.0783	2.0783	2.0783
65.0	1.8032	1.9885	2.0992	2.1514	2.1684	2.1712	2.1712	2.1712	2.1712
70.0	1.7934	2.0074	2.1442	2.2153	2.2429	2.2493	2.2498	2.2498	2.2498
75.0	1.7615	2.0029	2.1663	2.2584	2.2988	2.3109	2.3126	2.3126	2.3126
80.0	1.7084	1.9751	2.1649	2.2793	2.3347	2.3543	2.3583	2.3585	2.3585
85.0	1.6357	1.9248	2.1401	2.2774	2.3494	2.3791	2.3856	2.3865	2.3865

$\phi_1 = 105^\circ$; $\phi_2 = 255^\circ$; $\beta = 2^\circ$

α, deg \ σ, deg	5.0	10.0	20.0	30.0	40.0	50.0	60.0	70.0	80.0	90.0
1.0	.0007	.0051	.0382	.1144	.2293	.3603	.4775	.5574	.5938	.6005
2.0	.0007	.0051	.0384	.1156	.2327	.3672	.4890	.5736	.6136	.6217
4.0	.0007	.0051	.0389	.1179	.2391	.3807	.5116	.6058	.6534	.6653
6.0	.0006	.0052	.0392	.1198	.2450	.3935	.5336	.6377	.6935	.7099
8.0	.0006	.0052	.0395	.1215	.2504	.4056	.5549	.6691	.7338	.7554
10.0	.0006	.0051	.0396	.1229	.2553	.4169	.5754	.6999	.7739	.8016
12.0	.0006	.0051	.0397	.1240	.2596	.4274	.5949	.7299	.8137	.8481
15.0	.0006	.0050	.0396	.1251	.2650	.4415	.6222	.7732	.8724	.9183
20.0	.0006	.0049	.0389	.1255	.2709	.4602	.6619	.8394	.9660	1.0341
25.0	.0006	.0046	.0377	.1239	.2728	.4725	.6931	.8966	1.0519	1.1454
30.0	.0005	.0043	.0360	.1206	.2706	.4780	.7149	.9430	1.1275	1.2490
35.0	.0005	.0040	.0337	.1155	.2645	.4765	.7267	.9773	1.1905	1.3416
40.0	.0004	.0036	.0311	.1088	.2546	.4680	.7281	.9983	1.2389	1.4204
45.0	.0004	.0031	.0281	.1008	.2411	.4529	.7190	1.0054	1.2713	1.4831
50.0	.0003	.0027	.0248	.0916	.2246	.4315	.6998	.9984	1.2867	1.5277
55.0	.0002	.0022	.0215	.0816	.2055	.4046	.6710	.9775	1.2847	1.5528
60.0	.0002	.0018	.0180	.0710	.1844	.3729	.6335	.9434	1.2652	1.5578
65.0	.0001	.0014	.0146	.0602	.1620	.3374	.5884	.8971	1.2289	1.5424
70.0	.0001	.0010	.0114	.0495	.1388	.2992	.5372	.8400	1.1769	1.5072
75.0	.0001	.0007	.0085	.0393	.1157	.2595	.4813	.7738	1.1108	1.4531
80.0	.0000	.0004	.0059	.0297	.0933	.2194	.4224	.7006	1.0326	1.3819
85.0	.0000	.0002	.0037	.0212	.0724	.1802	.3624	.6225	.9446	1.2957

α, deg \ σ, deg	100.0	110.0	120.0	130.0	140.0	150.0	160.0	170.0	180.0
1.0	.6005	.6005	.6005	.6005	.6005	.6005	.6005	.6005	.6005
2.0	.6218	.6218	.6218	.6218	.6218	.6218	.6218	.6218	.6218
4.0	.6655	.6655	.6655	.6655	.6655	.6655	.6655	.6655	.6655
6.0	.7106	.7106	.7106	.7106	.7106	.7106	.7106	.7106	.7106
8.0	.7571	.7571	.7571	.7571	.7571	.7571	.7571	.7571	.7571
10.0	.8048	.8048	.8048	.8048	.8048	.8048	.8048	.8048	.8048
12.0	.8537	.8536	.8536	.8536	.8536	.8536	.8536	.8536	.8536
15.0	.9288	.9289	.9289	.9289	.9289	.9289	.9289	.9289	.9289
20.0	1.0567	1.0590	1.0590	1.0590	1.0590	1.0590	1.0590	1.0590	1.0590
25.0	1.1848	1.1930	1.1931	1.1931	1.1931	1.1931	1.1931	1.1931	1.1931
30.0	1.3093	1.3278	1.3296	1.3295	1.3295	1.3295	1.3295	1.3295	1.3295
35.0	1.4263	1.4596	1.4661	1.4662	1.4662	1.4662	1.4662	1.4662	1.4662
40.0	1.5324	1.5845	1.5997	1.6010	1.6010	1.6010	1.6010	1.6010	1.6010
45.0	1.6242	1.6988	1.7265	1.7316	1.7316	1.7316	1.7316	1.7316	1.7316
50.0	1.6991	1.7989	1.8429	1.8550	1.8560	1.8560	1.8560	1.8560	1.8560
55.0	1.7546	1.8819	1.9456	1.9679	1.9718	1.9718	1.9718	1.9718	1.9718
60.0	1.7892	1.9453	2.0314	2.0672	2.0764	2.0771	2.0771	2.0771	2.0771
65.0	1.8018	1.9871	2.0978	2.1500	2.1671	2.1698	2.1698	2.1698	2.1698
70.0	1.7921	2.0060	2.1427	2.2138	2.2414	2.2479	2.2484	2.2483	2.2483
75.0	1.7602	2.0015	2.1648	2.2569	2.2973	2.3094	2.3111	2.3111	2.3111
80.0	1.7071	1.9737	2.1635	2.2777	2.3331	2.3527	2.3567	2.3570	2.3569
85.0	1.6346	1.9234	2.1387	2.2759	2.3478	2.3765	2.3840	2.3849	2.3848

TABLE I.- CONTINUED

(a) C_N. Continued.

$\beta_1 = 90^\circ$; $\beta_2 = 270^\circ$; $\beta = 5^\circ$

α, deg \ σ, deg	5.0	10.0	20.0	30.0	40.0	50.0	60.0	70.0	80.0	90.0
1.0	.0006	.0044	.0327	.0981	.1966	.3090	.4099	.4789	.5109	.5174
2.0	.0006	.0044	.0329	.0991	.1994	.3148	.4194	.4924	.5273	.5352
4.0	.0006	.0044	.0333	.1010	.2048	.3260	.4383	.5192	.5605	.5715
6.0	.0006	.0044	.0336	.1026	.2097	.3366	.4566	.5457	.5939	.6086
8.0	.0006	.0044	.0338	.1039	.2142	.3467	.4742	.5718	.6273	.6464
10.0	.0005	.0044	.0339	.1051	.2182	.3560	.4912	.5973	.6606	.6847
12.0	.0005	.0044	.0339	.1060	.2217	.3647	.5073	.6222	.6935	.7233
15.0	.0005	.0043	.0338	.1068	.2261	.3762	.5298	.6579	.7421	.7813
20.0	.0005	.0042	.0333	.1070	.2307	.3914	.5623	.7124	.8194	.8770
25.0	.0005	.0039	.0322	.1056	.2319	.4011	.5875	.7592	.8900	.9687
30.0	.0004	.0037	.0307	.1026	.2297	.4051	.6049	.7969	.9518	1.0538
35.0	.0004	.0034	.0287	.0981	.2242	.4031	.6138	.8243	1.0030	1.1295
40.0	.0004	.0030	.0264	.0923	.2155	.3953	.6139	.8405	1.0419	1.1937
45.0	.0003	.0027	.0239	.0854	.2038	.3819	.6053	.8451	1.0675	1.2443
50.0	.0003	.0023	.0211	.0775	.1895	.3634	.5882	.8380	1.0788	1.2798
55.0	.0002	.0019	.0182	.0689	.1732	.3401	.5632	.8193	1.0756	1.2992
60.0	.0002	.0015	.0152	.0599	.1551	.3130	.5309	.7897	1.0580	1.3019
65.0	.0001	.0012	.0124	.0507	.1360	.2828	.4924	.7500	1.0265	1.2877
70.0	.0001	.0008	.0096	.0416	.1164	.2504	.4489	.7014	.9821	1.2571
75.0	.0001	.0006	.0071	.0329	.0968	.2168	.4017	.6454	.9261	1.2111
80.0	.0000	.0003	.0049	.0249	.0779	.1830	.3521	.5838	.8602	1.1509
85.0	.0000	.0002	.0031	.0177	.0603	.1501	.3018	.5183	.7864	1.0786

α, deg \ σ, deg	100.0	110.0	120.0	130.0	140.0	150.0	160.0	170.0	180.0
1.0	.5175	.5175	.5175	.5175	.5175	.5175	.5175	.5175	.5175
2.0	.5353	.5353	.5353	.5353	.5353	.5353	.5353	.5353	.5353
4.0	.5719	.5719	.5719	.5719	.5719	.5719	.5719	.5719	.5719
6.0	.6096	.6096	.6096	.6096	.6096	.6096	.6096	.6096	.6096
8.0	.6483	.6483	.6483	.6483	.6483	.6483	.6483	.6483	.6483
10.0	.6879	.6879	.6879	.6879	.6879	.6879	.6879	.6879	.6879
12.0	.7285	.7285	.7285	.7285	.7285	.7285	.7285	.7285	.7285
15.0	.7908	.7910	.7910	.7910	.7910	.7910	.7910	.7910	.7910
20.0	.8965	.8988	.8988	.8988	.8988	.8988	.8988	.8988	.8988
25.0	1.0022	1.0094	1.0096	1.0096	1.0096	1.0096	1.0096	1.0096	1.0096
30.0	1.1046	1.1205	1.1221	1.1221	1.1221	1.1221	1.1221	1.1221	1.1221
35.0	1.2006	1.2288	1.2345	1.2346	1.2346	1.2346	1.2346	1.2346	1.2346
40.0	1.2874	1.3312	1.3441	1.3454	1.3454	1.3454	1.3454	1.3454	1.3454
45.0	1.3622	1.4247	1.4480	1.4524	1.4525	1.4525	1.4525	1.4525	1.4525
50.0	1.4228	1.5063	1.5432	1.5534	1.5543	1.5543	1.5543	1.5543	1.5543
55.0	1.4674	1.5736	1.6269	1.6456	1.6489	1.6490	1.6490	1.6490	1.6490
60.0	1.4947	1.6247	1.6966	1.7265	1.7343	1.7349	1.7349	1.7349	1.7349
65.0	1.5037	1.6579	1.7502	1.7938	1.8081	1.8104	1.8104	1.8104	1.8104
70.0	1.4942	1.6723	1.7861	1.8454	1.8685	1.8739	1.8743	1.8743	1.8743
75.0	1.4666	1.6674	1.8033	1.8799	1.9137	1.9238	1.9252	1.9252	1.9252
80.0	1.4216	1.6434	1.8013	1.8963	1.9424	1.9587	1.9621	1.9623	1.9623
85.0	1.3606	1.6009	1.7800	1.8941	1.9540	1.9779	1.9841	1.9848	1.9848

$\beta_1 = 90^\circ$; $\beta_2 = 270^\circ$; $\beta = 15^\circ$

α, deg \ σ, deg	5.0	10.0	20.0	30.0	40.0	50.0	60.0	70.0	80.0	90.0
1.0	.0005	.0041	.0308	.0926	.1862	.2941	.3929	.4638	.5015	.5148
2.0	.0005	.0041	.0310	.0935	.1888	.2996	.4019	.4765	.5170	.5317
4.0	.0005	.0042	.0314	.0953	.1938	.3101	.4196	.5017	.5482	.5662
6.0	.0005	.0042	.0316	.0968	.1985	.3201	.4368	.5266	.5796	.6013
8.0	.0005	.0041	.0318	.0981	.2027	.3295	.4534	.5511	.6110	.6370
10.0	.0005	.0041	.0319	.0991	.2064	.3383	.4693	.5751	.6423	.6731
12.0	.0005	.0041	.0319	.1000	.2098	.3464	.4845	.5985	.6733	.7095
15.0	.0005	.0041	.0319	.1008	.2139	.3573	.5057	.6321	.7109	.7642
20.0	.0005	.0039	.0313	.1009	.2182	.3716	.5362	.6833	.7916	.8542
25.0	.0005	.0037	.0303	.0996	.2194	.3807	.5600	.7273	.8580	.9405
30.0	.0004	.0035	.0289	.0968	.2173	.3844	.5763	.7627	.9161	1.0205
35.0	.0004	.0032	.0271	.0926	.2121	.3826	.5846	.7885	.9642	1.0918
40.0	.0003	.0029	.0249	.0871	.2039	.3752	.5847	.8037	1.0008	1.1521
45.0	.0003	.0025	.0225	.0806	.1929	.3627	.5766	.8081	1.0248	1.1997
50.0	.0002	.0021	.0199	.0732	.1795	.3452	.5606	.8014	1.0355	1.2331
55.0	.0002	.0018	.0171	.0651	.1641	.3234	.5370	.7838	1.0325	1.2513
60.0	.0002	.0014	.0144	.0566	.1472	.2978	.5067	.7560	1.0159	1.2538
65.0	.0001	.0011	.0117	.0480	.1292	.2694	.4706	.7186	.9863	1.2405
70.0	.0001	.0008	.0091	.0395	.1107	.2390	.4296	.6730	.9445	1.2117
75.0	.0001	.0005	.0067	.0313	.0923	.2074	.3852	.6203	.8919	1.1684
80.0	.0000	.0003	.0047	.0237	.0746	.1756	.3386	.5624	.8299	1.1119
85.0	.0000	.0002	.0029	.0170	.0580	.1447	.2913	.5008	.7604	1.0438

α, deg \ σ, deg	100.0	110.0	120.0	130.0	140.0	150.0	160.0	170.0	180.0
1.0	.5170	.5170	.5170	.5170	.5170	.5170	.5170	.5170	.5170
2.0	.5342	.5343	.5343	.5343	.5343	.5343	.5343	.5343	.5343
4.0	.5696	.5696	.5696	.5696	.5696	.5696	.5696	.5696	.5696
6.0	.6059	.6060	.6060	.6060	.6060	.6060	.6060	.6060	.6060
8.0	.6432	.6434	.6434	.6434	.6434	.6434	.6434	.6434	.6434
10.0	.6813	.6818	.6818	.6818	.6818	.6818	.6818	.6818	.6818
12.0	.7201	.7210	.7210	.7210	.7210	.7210	.7210	.7210	.7210
15.0	.7794	.7812	.7813	.7813	.7813	.7813	.7813	.7813	.7813
20.0	.8797	.8848	.8849	.8849	.8849	.8849	.8849	.8849	.8849
25.0	.9796	.9907	.9915	.9915	.9915	.9915	.9915	.9915	.9915
30.0	1.0762	1.0964	1.0996	1.0995	1.0995	1.0995	1.0995	1.0995	1.0995
35.0	1.1667	1.1991	1.2071	1.2075	1.2075	1.2075	1.2075	1.2075	1.2075
40.0	1.2484	1.2960	1.3116	1.3136	1.3136	1.3136	1.3136	1.3136	1.3136
45.0	1.3188	1.3842	1.4103	1.4160	1.4162	1.4162	1.4162	1.4162	1.4162
50.0	1.3759	1.4613	1.5006	1.5124	1.5137	1.5137	1.5137	1.5137	1.5137
55.0	1.4179	1.5249	1.5799	1.6002	1.6041	1.6043	1.6043	1.6043	1.6043
60.0	1.4436	1.5730	1.6459	1.6771	1.6856	1.6864	1.6864	1.6864	1.6864
65.0	1.4521	1.6044	1.6966	1.7409	1.7559	1.7585	1.7586	1.7586	1.7586
70.0	1.4432	1.6180	1.7307	1.7900	1.8134	1.8191	1.8196	1.8196	1.8196
75.0	1.4172	1.6135	1.7470	1.8228	1.8565	1.8667	1.8682	1.8683	1.8683
80.0	1.3749	1.5909	1.7452	1.8384	1.8839	1.9001	1.9035	1.9037	1.9037
85.0	1.3175	1.5510	1.7253	1.8365	1.8949	1.9184	1.9245	1.9252	1.9252

TABLE I.- CONTINUED

(a) C_N. Continued.

$\beta_1 = 105^\circ$; $\beta_2 = 255^\circ$; $\beta = 5^\circ$

α, deg \ σ, deg	5.0	10.0	20.0	30.0	40.0	50.0	60.0	70.0	80.0	90.0
1.0	.0006	.0051	.0379	.1136	.2280	.3584	.4753	.5554	.5925	.6003
2.0	.0006	.0051	.0382	.1149	.2313	.3653	.4867	.5715	.6121	.6212
4.0	.0006	.0051	.0386	.1172	.2377	.3786	.5092	.6035	.6517	.6645
6.0	.0006	.0051	.0390	.1191	.2436	.3914	.5311	.6352	.6916	.7038
8.0	.0006	.0051	.0392	.1208	.2490	.4034	.5522	.6664	.7315	.7540
10.0	.0006	.0051	.0394	.1222	.2538	.4146	.5726	.6970	.7714	.7999
12.0	.0006	.0051	.0394	.1233	.2581	.4251	.5920	.7268	.8109	.0462
15.0	.0006	.0050	.0393	.1244	.2635	.4391	.6191	.7698	.8693	.9159
20.0	.0006	.0048	.0387	.1247	.2693	.4577	.6585	.8356	.9623	1.0309
25.0	.0006	.0046	.0375	.1232	.2712	.4699	.6895	.8925	1.0477	1.1416
30.0	.0005	.0043	.0358	.1199	.2691	.4754	.7112	.9386	1.1228	1.2445
35.0	.0005	.0039	.0335	.1148	.2630	.4739	.7229	.9726	1.1853	1.3365
40.0	.0004	.0035	.0309	.1082	.2531	.4655	.7243	.9934	1.2334	1.4148
45.0	.0004	.0031	.0279	.1002	.2398	.4504	.7155	1.0005	1.2656	1.4771
50.0	.0003	.0027	.0247	.0911	.2234	.4292	.6962	.9936	1.2809	1.5214
55.0	.0002	.0022	.0213	.0811	.2044	.4024	.6676	.972°	1.2769	1.5464
60.0	.0002	.0018	.0179	.0706	.1834	.3709	.6303	.939°	1.2596	1.5513
65.0	.0001	.0014	.0145	.0599	.1611	.3357	.5856	.8929	1.2235	1.5360
70.0	.0001	.0010	.0114	.0493	.1381	.2977	.5346	.0362	1.1719	1.5010
75.0	.0001	.0007	.0084	.0391	.1151	.2582	.4791	.7704	1.1062	1.4473
80.0	.0000	.0004	.0058	.0296	.0929	.2184	.4206	.6977	1.0284	1.3766
85.0	.0000	.0002	.0037	.0211	.0721	.1794	.3610	.6201	.9410	1.2909

α, deg \ σ, deg	100.0	110.0	120.0	130.0	140.0	150.0	160.0	170.0	180.0
1.0	.6002	.6002	.6002	.6002	.6002	.6002	.6002	.6002	.6002
2.0	.6214	.6214	.6214	.6214	.6214	.6214	.6214	.6214	.6214
4.0	.6650	.6650	.6650	.6650	.6650	.6650	.6650	.6650	.6650
6.0	.7100	.7100	.7100	.7100	.7100	.7100	.7100	.7100	.7100
8.0	.7563	.7563	.7563	.7563	.7563	.7563	.7563	.7563	.7563
10.0	.8038	.8038	.8038	.8038	.8038	.8038	.8038	.8038	.8038
12.0	.8524	.8524	.8524	.8524	.8524	.8524	.8524	.8524	.8524
15.0	.9271	.9274	.9274	.9274	.9274	.9274	.9274	.9274	.9274
20.0	1.0543	1.0570	1.0570	1.0570	1.0570	1.0570	1.0570	1.0570	1.0570
25.0	1.1817	1.1903	1.1905	1.1905	1.1905	1.1905	1.1905	1.1905	1.1905
30.0	1.3054	1.3244	1.3264	1.3263	1.3263	1.3263	1.3263	1.3263	1.3263
35.0	1.4217	1.4555	1.4623	1.4624	1.4624	1.4624	1.4624	1.4624	1.4624
40.0	1.5270	1.5797	1.5952	1.5966	1.5967	1.5967	1.5967	1.5967	1.5967
45.0	1.6183	1.6932	1.7213	1.7266	1.7266	1.7266	1.7266	1.7266	1.7266
50.0	1.6927	1.7928	1.8371	1.8493	1.8504	1.8504	1.8504	1.8504	1.8504
55.0	1.7479	1.8753	1.9392	1.9617	1.9656	1.9657	1.9657	1.9657	1.9657
60.0	1.7823	1.9382	2.0245	2.0604	2.0697	2.0704	2.0704	2.0724	2.0724
65.0	1.7948	1.9797	2.0904	2.1427	2.1599	2.1627	2.1627	2.1627	2.1627
70.0	1.7851	1.9985	2.1350	2.2062	2.2336	2.2403	2.2400	2.2400	2.2408
75.0	1.7534	1.9940	2.1570	2.2489	2.2894	2.3015	2.3032	2.3033	2.3033
80.0	1.7007	1.9664	2.1557	2.2697	2.3250	2.3445	2.3486	2.3488	2.3488
85.0	1.6286	1.9165	2.1310	2.2678	2.3395	2.3682	2.3757	2.3766	2.3766

$\beta_1 = 105^\circ$; $\beta_2 = 255^\circ$; $\beta = 15^\circ$

α, deg \ σ, deg	5.0	10.0	20.0	30.0	40.0	50.0	60.0	70.0	80.0	90.0
1.0	.0006	.0048	.0357	.1073	.2158	.3408	.4550	.5368	.5800	.5949
2.0	.0006	.0048	.0360	.1084	.2189	.3473	.4658	.5519	.5984	.6150
4.0	.0006	.0048	.0364	.1105	.2249	.3598	.4869	.5820	.6336	.6561
6.0	.0006	.0048	.0367	.1123	.2305	.3718	.5075	.6110	.6731	.6981
8.0	.0006	.0048	.0369	.1139	.2355	.3831	.5274	.6411	.7107	.7408
10.0	.0006	.0048	.0371	.1152	.2401	.3937	.5465	.6699	.7482	.7840
12.0	.0006	.0048	.0371	.1163	.2441	.4035	.5647	.6980	.7854	.8276
15.0	.0006	.0047	.0370	.1173	.2491	.4167	.5903	.7384	.8402	.8932
20.0	.0006	.0045	.0364	.1176	.2546	.4342	.6273	.8003	.9277	1.0015
25.0	.0005	.0043	.0353	.1162	.2564	.4457	.6564	.8537	1.0079	1.1056
30.0	.0005	.0040	.0337	.1131	.2544	.4508	.6748	.8971	1.0786	1.2023
35.0	.0004	.0037	.0316	.1083	.2487	.4494	.6878	.9290	1.1374	1.2889
40.0	.0004	.0033	.0291	.1021	.2394	.4415	.6891	.9486	1.1826	1.3625
45.0	.0003	.0029	.0263	.0946	.2268	.4273	.6807	.9553	1.2129	1.4210
50.0	.0003	.0025	.0233	.0860	.2114	.4074	.6627	.9488	1.2273	1.4627
55.0	.0002	.0021	.0201	.0766	.1936	.3822	.6359	.9293	1.2253	1.4862
60.0	.0002	.0017	.0169	.0668	.1739	.3526	.6008	.8974	1.2071	1.4908
65.0	.0001	.0013	.0137	.0567	.1529	.3195	.5587	.8541	1.1733	1.4765
70.0	.0001	.0009	.0107	.0467	.1313	.2838	.5108	.8008	1.1247	1.4436
75.0	.0001	.0006	.0080	.0371	.1097	.2466	.4586	.7390	1.0629	1.3931
80.0	.0000	.0004	.0055	.0282	.0888	.2092	.4034	.6706	.9898	1.3265
85.0	.0000	.0002	.0035	.0203	.0692	.1725	.3476	.5976	.9076	1.2460

α, deg \ σ, deg	100.0	110.0	120.0	130.0	140.0	150.0	160.0	170.0	180.0
1.0	.5972	.5972	.5972	.5972	.5972	.5972	.5972	.5972	.5972
2.0	.6177	.6178	.6178	.6178	.6178	.6178	.6178	.6178	.6178
4.0	.6599	.6600	.6600	.6600	.6600	.6600	.6600	.6600	.6600
6.0	.7033	.7034	.7034	.7034	.7034	.7034	.7034	.7034	.7034
8.0	.7478	.7481	.7481	.7481	.7481	.7481	.7481	.7481	.7481
10.0	.7934	.7940	.7940	.7940	.7940	.7940	.7940	.7940	.7940
12.0	.8399	.8409	.8409	.8409	.8409	.8409	.8409	.8409	.8409
15.0	.9110	.9132	.9132	.9132	.9132	.9132	.9132	.9132	.9132
20.0	1.0314	1.0376	1.0377	1.0377	1.0377	1.0377	1.0377	1.0377	1.0377
25.0	1.1519	1.1681	1.1760	1.1760	1.1760	1.1760	1.1760	1.1760	1.1760
30.0	1.2685	1.2926	1.2964	1.2964	1.2964	1.2964	1.2964	1.2964	1.2964
35.0	1.3780	1.4167	1.4263	1.4269	1.4269	1.4269	1.4269	1.4269	1.4269
40.0	1.4772	1.5341	1.5528	1.5553	1.5553	1.5553	1.5553	1.5553	1.5553
45.0	1.5631	1.6413	1.6725	1.6794	1.6796	1.6796	1.6796	1.6796	1.6796
50.0	1.6331	1.7351	1.7822	1.7963	1.7979	1.7979	1.7979	1.7979	1.7979
55.0	1.6850	1.8129	1.8787	1.9031	1.9079	1.9080	1.9080	1.9080	1.9080
60.0	1.7174	1.8721	1.9593	1.9967	2.0069	2.0079	2.0079	2.0079	2.0079
65.0	1.7291	1.9112	2.0216	2.0747	2.0927	2.0958	2.0959	2.0959	2.0959
70.0	1.7200	1.9290	2.0637	2.1347	2.1628	2.1697	2.1702	2.1702	2.1702
75.0	1.6902	1.9248	2.0844	2.1751	2.2134	2.2277	2.2295	2.2297	2.2297
80.0	1.6407	1.8988	2.0832	2.1947	2.2491	2.2665	2.2725	2.2728	2.2727
85.0	1.5729	1.8519	2.0600	2.1930	2.2628	2.2908	2.2982	2.2990	2.2990

TABLE I.- CONTINUED

(a) C_N. Continued.

$\phi_1 = 120^o$; $\phi_2 = 240^o$; $\beta = 0^o$

α, deg \ σ, deg	5.0	10.0	20.0	30.0	40.0	50.0	60.0	70.0	80.0	90.0
1.0	.0007	.0057	.0429	.1285	.2575	.4046	.5364	.6262	.6671	.6744
2.0	.0007	.0058	.0432	.1299	.2615	.4129	.5501	.6455	.6906	.6998
4.0	.0007	.0058	.0437	.1326	.2692	.4290	.5771	.6839	.7382	.7518
6.0	.0007	.0058	.0441	.1350	.2763	.4444	.6035	.7222	.7863	.8053
8.0	.0007	.0058	.0444	.1370	.2829	.4590	.6292	.7599	.8347	.8601
10.0	.0007	.0058	.0446	.1388	.2889	.4728	.6539	.7971	.8830	.9157
12.0	.0007	.0057	.0447	.1402	.2943	.4856	.6776	.8335	.9312	.9721
15.0	.0007	.0057	.0447	.1417	.3010	.5030	.7111	.8862	1.0025	1.0573
20.0	.0007	.0055	.0441	.1425	.3089	.5267	.7602	.9676	1.1171	1.1988
25.0	.0006	.0052	.0428	.1412	.3121	.5431	.7998	1.0389	1.2233	1.3359
30.0	.0006	.0049	.0409	.1378	.3108	.5516	.8287	1.0979	1.3178	1.4466
35.0	.0005	.0045	.0384	.1324	.3048	.5520	.8459	1.1428	1.3979	1.5808
40.0	.0005	.0040	.0355	.1251	.2944	.5443	.8510	1.1723	1.4610	1.6810
45.0	.0004	.0035	.0322	.1162	.2799	.5288	.8438	1.1854	1.5052	1.7622
50.0	.0003	.0030	.0285	.1060	.2618	.5058	.8245	1.1817	1.5292	1.8220
55.0	.0003	.0025	.0247	.0948	.2405	.4762	.7937	1.1615	1.5324	1.8584
60.0	.0002	.0020	.0208	.0829	.2167	.4407	.7524	1.1252	1.5145	1.8705
65.0	.0002	.0016	.0170	.0706	.1912	.4006	.7018	1.0740	1.4761	1.8578
70.0	.0001	.0012	.0133	.0584	.1648	.3569	.6434	1.0095	1.4184	1.8207
75.0	.0001	.0008	.0099	.0466	.1381	.3111	.5790	.9335	1.3431	1.7604
80.0	.0000	.0005	.0069	.0356	.1122	.2645	.5106	.8484	1.2526	1.6787
85.0	.0000	.0002	.0044	.0256	.0876	.2185	.4402	.7569	1.1495	1.5780

α, deg \ σ, deg	100.0	110.0	120.0	130.0	140.0	150.0	160.0	170.0	180.0
1.0	.6744	.6744	.6744	.6744	.6744	.6744	.6744	.6744	.6744
2.0	.6998	.6998	.6998	.6998	.6998	.6998	.6998	.6998	.6998
4.0	.7520	.7520	.7520	.7520	.7520	.7520	.7520	.7520	.7520
6.0	.8061	.8061	.8061	.8061	.8061	.8061	.8061	.8061	.8061
8.0	.8621	.8621	.8621	.8621	.8621	.8621	.8621	.8621	.8621
10.0	.9195	.9196	.9196	.9196	.9196	.9196	.9196	.9196	.9196
12.0	.9788	.9787	.9787	.9787	.9787	.9787	.9787	.9787	.9787
15.0	1.0701	1.0702	1.0702	1.0702	1.0702	1.0702	1.0702	1.0702	1.0702
20.0	1.2265	1.2292	1.2293	1.2293	1.2293	1.2293	1.2293	1.2293	1.2293
25.0	1.3843	1.3944	1.3945	1.3945	1.3945	1.3945	1.3945	1.3945	1.3945
30.0	1.5386	1.5616	1.5637	1.5637	1.5637	1.5637	1.5637	1.5637	1.5637
35.0	1.6848	1.7261	1.7342	1.7343	1.7343	1.7343	1.7343	1.7343	1.7343
40.0	1.8183	1.8831	1.9019	1.9034	1.9037	1.9037	1.9037	1.9037	1.9037
45.0	1.9353	2.0277	2.0622	2.0686	2.0686	2.0686	2.0686	2.0686	2.0686
50.0	2.0320	2.1556	2.2104	2.2254	2.2266	2.2266	2.2266	2.2266	2.2266
55.0	2.1056	2.2628	2.3420	2.3698	2.3746	2.3747	2.3747	2.3747	2.3747
60.0	2.1538	2.3462	2.4530	2.4977	2.5091	2.5098	2.5100	2.5100	2.5100
65.0	2.1752	2.4031	2.5401	2.6051	2.6264	2.6298	2.6299	2.6299	2.6299
70.0	2.1691	2.4319	2.6006	2.6888	2.7232	2.7313	2.7318	2.7318	2.7318
75.0	2.1357	2.4316	2.6326	2.7463	2.7966	2.8117	2.8138	2.8138	2.8138
80.0	2.0760	2.4024	2.6353	2.7759	2.8443	2.8685	2.8735	2.8738	2.8738
85.0	1.9919	2.3450	2.6084	2.7765	2.8648	2.9002	2.9094	2.9105	2.9105

$\phi_1 = 120^o$; $\phi_2 = 240^o$; $\beta = 2^o$

α, deg \ σ, deg	5.0	10.0	20.0	30.0	40.0	50.0	60.0	70.0	80.0	90.0
1.0	.0007	.0057	.0428	.1283	.2572	.4042	.5359	.6257	.6667	.6742
2.0	.0007	.0058	.0431	.1298	.2612	.4125	.5496	.6450	.6902	.6995
4.0	.0007	.0058	.0436	.1324	.2689	.4285	.5766	.6834	.7378	.7515
6.0	.0007	.0058	.0441	.1348	.2760	.4439	.6029	.7215	.7858	.8049
8.0	.0007	.0058	.0444	.1369	.2826	.4585	.6285	.7593	.8341	.8596
10.0	.0007	.0058	.0446	.1386	.2886	.4723	.6533	.7964	.8824	.9152
12.0	.0007	.0057	.0447	.1400	.2939	.4851	.6770	.8327	.9305	.9715
15.0	.0007	.0057	.0446	.1415	.3007	.5025	.7104	.8854	1.0017	1.0566
20.0	.0007	.0055	.0440	.1424	.3085	.5261	.7595	.9667	1.1162	1.1979
25.0	.0006	.0052	.0427	.1410	.3118	.5425	.7990	1.0379	1.2222	1.3349
30.0	.0006	.0049	.0408	.1376	.3104	.5510	.8278	1.0968	1.3166	1.4634
35.0	.0005	.0045	.0384	.1322	.3045	.5514	.8450	1.1417	1.3966	1.5794
40.0	.0005	.0040	.0354	.1250	.2941	.5437	.8501	1.1711	1.4596	1.6795
45.0	.0004	.0035	.0321	.1161	.2796	.5282	.8429	1.1842	1.5038	1.7607
50.0	.0003	.0030	.0285	.1059	.2615	.5053	.8237	1.1806	1.5278	1.8203
55.0	.0003	.0025	.0247	.0947	.2402	.4757	.7929	1.1603	1.5309	1.8568
60.0	.0002	.0020	.0208	.0828	.2165	.4403	.7516	1.1241	1.5130	1.8688
65.0	.0002	.0016	.0170	.0705	.1910	.4002	.7011	1.0730	1.4747	1.8561
70.0	.0001	.0012	.0133	.0583	.1646	.3566	.6427	1.0085	1.4171	1.8191
75.0	.0001	.0008	.0099	.0465	.1380	.3108	.5784	.9326	1.3419	1.7589
80.0	.0000	.0005	.0069	.0355	.1120	.2642	.5101	.8477	1.2515	1.6772
85.0	.0000	.0002	.0044	.0256	.0875	.2183	.4398	.7562	1.1485	1.5766

α, deg \ σ, deg	100.0	110.0	120.0	130.0	140.0	150.0	160.0	170.0	180.0
1.0	.6742	.6742	.6742	.6742	.6742	.6754	.6760	.6742	.6742
2.0	.6996	.6996	.6996	.6996	.6996	.6996	.6996	.6996	.6996
4.0	.7517	.7517	.7517	.7517	.7517	.7517	.7517	.7517	.7517
6.0	.8058	.8058	.8058	.8058	.8058	.8058	.8059	.8058	.8058
8.0	.8617	.8617	.8617	.8617	.8617	.8617	.8617	.8617	.8617
10.0	.9192	.9192	.9192	.9192	.9192	.9192	.9192	.9192	.9192
12.0	.9783	.9783	.9783	.9783	.9783	.9783	.9783	.9783	.9783
15.0	1.0695	1.0697	1.0697	1.0697	1.0697	1.0697	1.0697	1.0697	1.0697
20.0	1.2258	1.2287	1.2287	1.2287	1.2287	1.2287	1.2287	1.2287	1.2287
25.0	1.3833	1.3936	1.3937	1.3937	1.3937	1.3937	1.3937	1.3937	1.3937
30.0	1.5375	1.5606	1.5628	1.5627	1.5627	1.5627	1.5627	1.5627	1.5627
35.0	1.6835	1.7249	1.7331	1.7332	1.7332	1.7332	1.7332	1.7332	1.7332
40.0	1.8169	1.8817	1.9006	1.9023	1.9023	1.9023	1.9023	1.9023	1.9023
45.0	1.9337	2.0262	2.0607	2.0671	2.0672	2.0672	2.0672	2.0672	2.0672
50.0	2.0303	2.1539	2.2088	2.2238	2.2251	2.2250	2.2250	2.2250	2.2250
55.0	2.1038	2.2610	2.3402	2.3681	2.3729	2.3729	2.3729	2.3729	2.3729
60.0	2.1520	2.3442	2.4511	2.4958	2.5072	2.5081	2.5081	2.5081	2.5081
65.0	2.1733	2.4011	2.5381	2.6031	2.6244	2.6278	2.6278	2.6278	2.6278
70.0	2.1673	2.4298	2.5985	2.6867	2.7211	2.7291	2.7297	2.7297	2.7297
75.0	2.1339	2.4296	2.6305	2.7441	2.7943	2.8094	2.8115	2.8116	2.8116
80.0	2.0743	2.4004	2.6331	2.7736	2.8419	2.8662	2.8712	2.8715	2.8715
85.0	1.9902	2.3431	2.6062	2.7743	2.8625	2.8978	2.9071	2.9081	2.9081

TABLE I.- CONTINUED

(a) C_N. Continued.

$\phi_1 = 120^\circ$; $\phi_2 = 240^\circ$; $\beta = 5^\circ$

α, deg \ σ, deg	5.0	10.0	20.0	30.0	40.0	50.0	60.0	70.0	80.0	90.0
1.0	.0007	.0057	.0425	.1276	.2557	.4020	.5332	.6232	.6647	.6729
2.0	.0007	.0057	.0428	.1290	.2597	.4102	.5468	.6423	.6880	.6981
4.0	.0007	.0057	.0434	.1316	.2673	.4262	.5737	.6804	.7352	.7490
6.0	.0007	.0057	.0438	.1340	.2744	.4414	.5999	.7183	.7830	.8029
8.0	.0007	.0057	.0441	.1360	.2809	.4559	.6253	.7558	.8309	.8572
10.0	.0007	.0057	.0443	.1378	.2869	.4696	.6499	.7927	.8789	.9125
12.0	.0007	.0057	.0444	.1392	.2922	.4824	.6734	.8288	.9267	.9684
15.0	.0007	.0056	.0443	.1407	.2989	.4997	.7066	.8811	.9975	1.0529
20.0	.0007	.0054	.0437	.1415	.3067	.5232	.7554	.9619	1.1112	1.1934
25.0	.0006	.0052	.0425	.1402	.3099	.5394	.7947	1.0327	1.2166	1.3295
30.0	.0006	.0048	.0406	.1368	.3086	.5478	.8233	1.0912	1.3104	1.4571
35.0	.0005	.0044	.0381	.1314	.3027	.5482	.8404	1.1358	1.3899	1.5724
40.0	.0005	.0040	.0352	.1242	.2923	.5406	.8455	1.1650	1.4525	1.6719
45.0	.0004	.0035	.0319	.1154	.2780	.5252	.8383	1.1780	1.4964	1.7525
50.0	.0003	.0030	.0283	.1053	.2599	.5024	.8192	1.1744	1.5203	1.8118
55.0	.0003	.0025	.0245	.0941	.2388	.4730	.7887	1.1543	1.5233	1.8480
60.0	.0002	.0020	.0207	.0823	.2152	.4378	.7476	1.1183	1.5056	1.8600
65.0	.0002	.0016	.0169	.0701	.1899	.3980	.6974	1.0675	1.4675	1.8474
70.0	.0001	.0011	.0132	.0580	.1637	.3547	.6394	1.0035	1.4102	1.8106
75.0	.0001	.0008	.0099	.0463	.1373	.3092	.5755	.9281	1.3355	1.7507
80.0	.0000	.0005	.0069	.0353	.1115	.2629	.5076	.8437	1.2457	1.6696
85.0	.0000	.0002	.0044	.0255	.0871	.2173	.4378	.7528	1.1434	1.5697

α, deg \ σ, deg	100.0	110.0	120.0	130.0	140.0	150.0	160.0	170.0	180.0
1.0	.6731	.6731	.6731	.6731	.6731	.6731	.6731	.6731	.6731
2.0	.6984	.6984	.6984	.6984	.6984	.6984	.6984	.6984	.6984
4.0	.7503	.7503	.7503	.7503	.7503	.7503	.7503	.7503	.7503
6.0	.8042	.8042	.8042	.8042	.8042	.8042	.8042	.8042	.8042
8.0	.8598	.8598	.8598	.8598	.8598	.8598	.8598	.8598	.8598
10.0	.9171	.9171	.9171	.9171	.9171	.9171	.9171	.9171	.9171
12.0	.9760	.9759	.9759	.9759	.9759	.9759	.9759	.9759	.9759
15.0	1.0666	1.0670	1.0670	1.0670	1.0670	1.0670	1.0670	1.0670	1.0670
20.0	1.2219	1.2253	1.2253	1.2253	1.2253	1.2253	1.2253	1.2253	1.2253
25.0	1.3785	1.3893	1.3895	1.3895	1.3895	1.3895	1.3895	1.3895	1.3895
30.0	1.5317	1.5554	1.5578	1.5577	1.5577	1.5577	1.5577	1.5577	1.5577
35.0	1.6767	1.7187	1.7272	1.7274	1.7274	1.7274	1.7274	1.7274	1.7274
40.0	1.8093	1.8745	1.8938	1.8957	1.8957	1.8957	1.8957	1.8957	1.8957
45.0	1.9253	2.0180	2.0530	2.0596	2.0597	2.0597	2.0597	2.0597	2.0597
50.0	2.0214	2.1449	2.2001	2.2154	2.2167	2.2167	2.2167	2.2167	2.2167
55.0	2.0944	2.2514	2.3307	2.3588	2.3637	2.3638	2.3638	2.3638	2.3638
60.0	2.1423	2.3341	2.4409	2.4857	2.4972	2.4982	2.4981	2.4981	2.4981
65.0	2.1635	2.3906	2.5273	2.5923	2.6137	2.6172	2.6172	2.6172	2.6172
70.0	2.1574	2.4191	2.5873	2.6754	2.7098	2.7179	2.7185	2.7185	2.7185
75.0	2.1243	2.4189	2.6191	2.7324	2.7826	2.7977	2.7998	2.7998	2.7998
80.0	2.0650	2.3899	2.6217	2.7617	2.8299	2.8541	2.8591	2.8594	2.8594
85.0	1.9815	2.3329	2.5950	2.7624	2.8503	2.8855	2.8947	2.8958	2.8958

$\phi_1 = 120^\circ$; $\phi_2 = 240^\circ$; $\beta = 15^\circ$

α, deg \ σ, deg	5.0	10.0	20.0	30.0	40.0	50.0	60.0	70.0	80.0	90.0
1.0	.0007	.0054	.0400	.1203	.2417	.3814	.5087	.5991	.6455	.6606
2.0	.0007	.0054	.0403	.1216	.2454	.3891	.5215	.6170	.6675	.6845
4.0	.0007	.0054	.0408	.1241	.2526	.4042	.5467	.6529	.7119	.7334
6.0	.0007	.0054	.0412	.1263	.2593	.4185	.5714	.6886	.7567	.7836
8.0	.0007	.0054	.0415	.1282	.2654	.4321	.5953	.7238	.8019	.8348
10.0	.0007	.0054	.0417	.1299	.2710	.4450	.6184	.7585	.8470	.8869
12.0	.0007	.0054	.0418	.1312	.2760	.4570	.6405	.7924	.8920	.9395
15.0	.0007	.0053	.0417	.1326	.2823	.4732	.6717	.8416	.9585	1.0191
20.0	.0006	.0051	.0412	.1334	.2896	.4953	.7176	.9176	1.0654	1.1511
25.0	.0006	.0049	.0400	.1321	.2927	.5106	.7545	.9841	1.1645	1.2791
30.0	.0005	.0045	.0382	.1289	.2914	.5185	.7814	1.0391	1.2527	1.3991
35.0	.0005	.0042	.0359	.1239	.2858	.5189	.7975	1.0810	1.3274	1.5075
40.0	.0004	.0038	.0332	.1171	.2762	.5117	.8023	1.1085	1.3862	1.6010
45.0	.0004	.0033	.0301	.1088	.2626	.4972	.7955	1.1207	1.4275	1.6768
50.0	.0003	.0028	.0267	.0993	.2457	.4758	.7776	1.1174	1.4500	1.7326
55.0	.0003	.0024	.0231	.0888	.2258	.4482	.7488	1.0985	1.4529	1.7666
60.0	.0002	.0019	.0195	.0777	.2037	.4151	.7103	1.0646	1.4362	1.7778
65.0	.0002	.0015	.0159	.0662	.1799	.3776	.6630	1.0168	1.4003	1.7660
70.0	.0001	.0011	.0125	.0548	.1552	.3369	.6085	.9566	1.3465	1.7314
75.0	.0001	.0007	.0093	.0438	.1303	.2942	.5485	.8857	1.2763	1.6751
80.0	.0000	.0004	.0065	.0336	.1061	.2507	.4846	.8064	1.1918	1.5980
85.0	.0000	.0002	.0042	.0243	.0832	.2078	.4190	.7210	1.0957	1.5049

α, deg \ σ, deg	100.0	110.0	120.0	130.0	140.0	150.0	160.0	170.0	180.0
1.0	.6626	.6626	.6626	.6626	.6626	.6626	.6626	.6626	.6626
2.0	.6870	.6870	.6870	.6870	.6870	.6870	.6870	.6870	.6870
4.0	.7371	.7371	.7371	.7371	.7371	.7371	.7371	.7371	.7371
6.0	.7888	.7890	.7890	.7890	.7890	.7890	.7890	.7890	.7890
8.0	.8422	.8425	.8425	.8425	.8425	.8425	.8425	.8425	.8425
10.0	.8970	.8975	.8975	.8975	.8975	.8975	.8975	.8975	.8975
12.0	.9531	.9541	.9541	.9541	.9541	.9541	.9541	.9541	.9541
15.0	1.0391	1.0415	1.0415	1.0415	1.0415	1.0415	1.0415	1.0415	1.0415
20.0	1.1859	1.1930	1.1930	1.1930	1.1930	1.1930	1.1930	1.1930	1.1930
25.0	1.3335	1.3491	1.3503	1.3503	1.3503	1.3503	1.3503	1.3503	1.3503
30.0	1.4776	1.5064	1.5111	1.5110	1.5110	1.5110	1.5110	1.5110	1.5110
35.0	1.6140	1.6606	1.6723	1.6730	1.6730	1.6730	1.6730	1.6730	1.6730
40.0	1.7386	1.8073	1.8302	1.8333	1.8333	1.8333	1.8333	1.8333	1.8333
45.0	1.8477	1.9423	1.9805	1.9890	1.9893	1.9893	1.9893	1.9893	1.9893
50.0	1.9380	2.0617	2.1192	2.1366	2.1386	2.1385	2.1385	2.1385	2.1385
55.0	2.0067	2.1617	2.2421	2.2720	2.2780	2.2781	2.2781	2.2781	2.2781
60.0	2.0517	2.2395	2.3457	2.3916	2.4043	2.4055	2.4055	2.4055	2.4055
65.0	2.0716	2.2926	2.4270	2.4919	2.5141	2.5180	2.5181	2.5181	2.5181
70.0	2.0659	2.3195	2.4834	2.5701	2.6046	2.6131	2.6138	2.6138	2.6138
75.0	2.0348	2.3192	2.5133	2.6237	2.6730	2.6882	2.6904	2.6906	2.6906
80.0	1.9791	2.2919	2.5157	2.6513	2.7175	2.7413	2.7463	2.7466	2.7465
85.0	1.9005	2.2384	2.4907	2.6519	2.7367	2.7708	2.7798	2.7808	2.7808

TABLE I.- CONTINUED

(a) C_N. Continued.

$\beta_1 = 135°$; $\beta_2 = 225°$; $\beta = 0°$

α, deg \ σ, deg	5.0	10.0	20.0	30.0	40.0	50.0	60.0	70.0	80.0	90.0
1.0	.0008	.0063	.0467	.1400	.2806	.4411	.5849	.6831	.7279	.7360
2.0	.0008	.0063	.0470	.1417	.2853	.4507	.6008	.7055	.7552	.7655
4.0	.0008	.0063	.0477	.1448	.2943	.4695	.6323	.7503	.8107	.8262
6.0	.0008	.0063	.0482	.1476	.3027	.4875	.6632	.7950	.8670	.8868
8.0	.0008	.0063	.0486	.1501	.3105	.5047	.6934	.8394	.9238	.9532
10.0	.0008	.0063	.0488	.1522	.3176	.5211	.7226	.8832	.9808	1.0190
12.0	.0008	.0063	.0490	.1540	.3241	.5364	.7508	.9264	1.0379	1.0858
15.0	.0008	.0062	.0490	.1559	.3324	.5575	.7909	.9892	1.1228	1.1873
20.0	.0007	.0060	.0484	.1574	.3425	.5867	.8505	1.0873	1.2604	1.3572
25.0	.0007	.0057	.0471	.1564	.3476	.6079	.8998	1.1745	1.3894	1.5234
30.0	.0006	.0053	.0452	.1532	.3475	.6203	.9372	1.2483	1.5059	1.6809
35.0	.0006	.0049	.0426	.1476	.3423	.6237	.9615	1.3063	1.6063	1.8250
40.0	.0005	.0044	.0394	.1401	.3320	.6179	.9720	1.3468	1.6876	1.9512
45.0	.0004	.0039	.0358	.1306	.3170	.6030	.9685	1.3686	1.7474	2.0557
50.0	.0004	.0034	.0319	.1196	.2978	.5796	.9510	1.3710	1.7837	2.1354
55.0	.0003	.0028	.0277	.1074	.2749	.5484	.9200	1.3540	1.7956	2.1878
60.0	.0002	.0023	.0235	.0944	.2491	.5102	.8765	1.3180	1.7826	2.2113
65.0	.0002	.0018	.0193	.0809	.2211	.4663	.8211	1.2642	1.7452	2.2052
70.0	.0001	.0013	.0152	.0673	.1917	.4180	.7576	1.1941	1.6845	2.1697
75.0	.0001	.0009	.0114	.0542	.1619	.3668	.6858	1.1100	1.6022	2.1059
80.0	.0000	.0005	.0081	.0418	.1326	.3142	.6086	1.0143	1.5010	2.0157
85.0	.0000	.0003	.0052	.0305	.1046	.2610	.5284	.9100	1.3839	1.9018

α, deg \ σ, deg	100.0	110.0	120.0	130.0	140.0	150.0	160.0	170.0	180.0
1.0	.7359	.7359	.7359	.7359	.7359	.7359	.7359	.7359	.7359
2.0	.7655	.7655	.7655	.7655	.7655	.7655	.7655	.7655	.7655
4.0	.8264	.8264	.8264	.8264	.8264	.8264	.8264	.8264	.8264
6.0	.8898	.8898	.8898	.8898	.8898	.8898	.8898	.8898	.8898
8.0	.9557	.9557	.9557	.9557	.9557	.9557	.9557	.9557	.9557
10.0	1.0238	1.0238	1.0238	1.0238	1.0238	1.0238	1.0238	1.0238	1.0238
12.0	1.0941	1.0941	1.0941	1.0941	1.0941	1.0941	1.0941	1.0941	1.0941
15.0	1.2032	1.2034	1.2034	1.2034	1.2034	1.2034	1.2034	1.2034	1.2034
20.0	1.3915	1.3950	1.3952	1.3952	1.3952	1.3952	1.3952	1.3952	1.3952
25.0	1.5830	1.5962	1.5964	1.5964	1.5964	1.5964	1.5964	1.5964	1.5964
30.0	1.7719	1.8014	1.8042	1.8042	1.8042	1.8042	1.8042	1.8042	1.8042
35.0	1.9524	2.0050	2.0157	2.0158	2.0158	2.0158	2.0158	2.0158	2.0158
40.0	2.1191	2.2006	2.2253	2.2272	2.2276	2.2276	2.2276	2.2276	2.2276
45.0	2.2669	2.3824	2.4270	2.4354	2.4355	2.4355	2.4355	2.4355	2.4355
50.0	2.3913	2.5448	2.6147	2.6344	2.6361	2.6361	2.6361	2.6361	2.6361
55.0	2.4886	2.6828	2.7827	2.8189	2.8252	2.8253	2.8253	2.8253	2.8253
60.0	2.5557	2.7923	2.9260	2.9830	2.9981	2.9990	2.9992	2.9992	2.9992
65.0	2.5907	2.8700	3.0400	3.1220	3.1496	3.1541	3.1542	3.1542	3.1542
70.0	2.5924	2.9135	3.1215	3.2316	3.2753	3.2858	3.2865	3.2865	3.2865
75.0	2.5609	2.9215	3.1679	3.3084	3.3712	3.3904	3.3932	3.3932	3.3932
80.0	2.4971	2.8957	3.1778	3.3502	3.4345	3.4648	3.4712	3.4715	3.4715
85.0	2.4028	2.8310	3.1509	3.3555	3.4633	3.5067	3.5181	3.5194	3.5194

$\beta_1 = 135°$; $\beta_2 = 225°$; $\beta = 2°$

α, deg \ σ, deg	5.0	10.0	20.0	30.0	40.0	50.0	60.0	70.0	80.0	90.0
1.0	.0008	.0062	.0466	.1398	.2803	.4406	.5843	.6825	.7273	.7355
2.0	.0008	.0063	.0470	.1415	.2850	.4502	.6002	.7048	.7546	.7650
4.0	.0008	.0063	.0476	.1446	.2939	.4690	.6317	.7496	.8100	.8256
6.0	.0008	.0063	.0481	.1474	.3023	.4870	.6625	.7942	.8662	.8862
8.0	.0008	.0063	.0485	.1499	.3101	.5042	.6927	.8383	.9229	.9525
10.0	.0008	.0063	.0488	.1520	.3173	.5205	.7219	.8824	.9799	1.0182
12.0	.0008	.0063	.0489	.1538	.3237	.5358	.7500	.9254	1.0369	1.0849
15.0	.0008	.0062	.0489	.1558	.3321	.5568	.7900	.9882	1.1218	1.1863
20.0	.0007	.0060	.0484	.1572	.3421	.5860	.8496	1.0861	1.2592	1.3560
25.0	.0007	.0057	.0471	.1562	.3472	.6072	.8988	1.1733	1.3880	1.5220
30.0	.0006	.0053	.0451	.1530	.3471	.6196	.9361	1.2469	1.5043	1.6793
35.0	.0006	.0049	.0425	.1475	.3419	.6230	.9604	1.3049	1.6046	1.8232
40.0	.0005	.0044	.0394	.1399	.3316	.6172	.9710	1.3454	1.6859	1.9493
45.0	.0004	.0039	.0358	.1305	.3167	.6024	.9674	1.3671	1.7456	2.0537
50.0	.0004	.0034	.0318	.1195	.2975	.5790	.9499	1.3696	1.7819	2.1332
55.0	.0003	.0028	.0277	.1073	.2746	.5478	.9190	1.3525	1.7937	2.1855
60.0	.0002	.0023	.0234	.0943	.2488	.5097	.8755	1.3166	1.7808	2.2090
65.0	.0002	.0018	.0192	.0808	.2208	.4658	.8209	1.2628	1.7434	2.2029
70.0	.0001	.0013	.0152	.0673	.1915	.4176	.7568	1.1929	1.6827	2.1673
75.0	.0001	.0009	.0114	.0541	.1617	.3664	.6851	1.1088	1.6006	2.1037
80.0	.0000	.0005	.0081	.0417	.1325	.3138	.6080	1.0133	1.4995	2.0136
85.0	.0000	.0003	.0052	.0305	.1045	.2615	.5279	.9091	1.3825	1.8999

α, deg \ σ, deg	100.0	110.0	120.0	130.0	140.0	150.0	160.0	170.0	180.0
1.0	.7355	.7355	.7356	.7355	.7355	.7355	.7358	.7355	.7355
2.0	.7649	.7649	.7650	.7649	.7649	.7649	.7652	.7649	.7649
4.0	.8258	.8258	.8258	.8258	.8258	.8258	.8258	.8258	.8258
6.0	.8892	.8892	.8892	.8892	.8892	.8892	.8892	.8892	.8892
8.0	.9551	.9551	.9551	.9551	.9551	.9551	.9551	.9551	.9551
10.0	1.0231	1.0231	1.0231	1.0231	1.0231	1.0231	1.0231	1.0231	1.0231
12.0	1.0934	1.0933	1.0933	1.0933	1.0933	1.0933	1.0933	1.0933	1.0933
15.0	1.2025	1.2025	1.2025	1.2025	1.2025	1.2025	1.2025	1.2025	1.2025
20.0	1.3903	1.3942	1.3942	1.3942	1.3942	1.3942	1.3942	1.3942	1.3942
25.0	1.5816	1.5949	1.5951	1.5951	1.5951	1.5951	1.5951	1.5951	1.5951
30.0	1.7703	1.7999	1.8029	1.8027	1.8027	1.8027	1.8027	1.8027	1.8027
35.0	1.9506	2.0032	2.0140	2.0141	2.0141	2.0141	2.0141	2.0141	2.0141
40.0	2.1171	2.1986	2.2233	2.2256	2.2256	2.2256	2.2256	2.2256	2.2256
45.0	2.2647	2.3801	2.4246	2.4333	2.4333	2.4333	2.4333	2.4333	2.4333
50.0	2.3890	2.5423	2.6123	2.6320	2.6338	2.6337	2.6337	2.6337	2.6337
55.0	2.4861	2.6802	2.7801	2.8162	2.8226	2.8227	2.8227	2.8227	2.8227
60.0	2.5532	2.7896	2.9231	2.9802	2.9953	2.9965	2.9964	2.9964	2.9964
65.0	2.5881	2.8672	3.0371	3.1191	3.1466	3.1511	3.1512	3.1512	3.1512
70.0	2.5898	2.9106	3.1185	3.2285	3.2721	3.2826	3.2834	3.2834	3.2834
75.0	2.5583	2.9186	3.1648	3.3052	3.3679	3.3871	3.3899	3.3900	3.3900
80.0	2.4946	2.8928	3.1747	3.3469	3.4312	3.4614	3.4678	3.4682	3.4681
85.0	2.4005	2.8282	3.1478	3.3523	3.4599	3.5033	3.5147	3.5160	3.5159

TABLE I.- CONTINUED

(a) C_N. Continued.

$\phi_1 = 150^0$; $\phi_2 = 210^0$; $\beta = 0^0$

α, deg \ σ, deg	5.0	10.0	20.0	30.0	40.0	50.0	60.0	70.0	80.0	90.0
1.0	.0008	.0066	.0495	.1486	.2979	.4684	.6213	.7258	.7736	.7823
2.0	.0008	.0067	.0499	.1505	.3031	.4792	.6391	.7509	.8042	.8153
4.0	.0008	.0067	.0506	.1540	.3132	.5002	.6745	.8011	.8665	.8835
6.0	.0008	.0067	.0512	.1572	.3227	.5206	.7093	.8515	.9299	.9543
8.0	.0008	.0067	.0517	.1600	.3316	.5401	.7434	.9017	.9942	1.0272
10.0	.0008	.0067	.0520	.1625	.3398	.5587	.7767	.9515	1.0590	1.1020
12.0	.0008	.0067	.0522	.1646	.3473	.5763	.8089	1.0007	1.1240	1.1783
15.0	.0008	.0066	.0523	.1670	.3571	.6006	.8549	1.0726	1.2213	1.2947
20.0	.0008	.0064	.0518	.1690	.3693	.6350	.9242	1.1860	1.3799	1.4907
25.0	.0007	.0061	.0505	.1685	.3762	.6608	.9825	1.2881	1.5302	1.6842
30.0	.0007	.0057	.0485	.1655	.3774	.6771	1.0281	1.3760	1.6676	1.8692
35.0	.0006	.0053	.0458	.1600	.3731	.6836	1.0595	1.4468	1.7878	2.0402
40.0	.0005	.0047	.0425	.1523	.3633	.6801	1.0759	1.4986	1.8872	2.1919
45.0	.0005	.0042	.0388	.1425	.3482	.6665	1.0766	1.5296	1.9627	2.3197
50.0	.0004	.0036	.0346	.1310	.3284	.6434	1.0618	1.5390	2.0122	2.4198
55.0	.0003	.0030	.0302	.1181	.3045	.6114	1.0317	1.5265	2.0341	2.4891
60.0	.0003	.0025	.0257	.1042	.2772	.5716	.9875	1.4924	2.0277	2.5255
65.0	.0002	.0019	.0212	.0898	.2473	.5250	.9303	1.4378	1.9932	2.5279
70.0	.0001	.0014	.0168	.0752	.2157	.4733	.8620	1.3643	1.9317	2.4962
75.0	.0001	.0010	.0127	.0609	.1834	.4178	.7845	1.2743	1.8450	2.4313
80.0	.0000	.0006	.0091	.0474	.1514	.3603	.7004	1.1703	1.7358	2.3354
85.0	.0000	.0003	.0059	.0350	.1206	.3026	.6120	1.0557	1.6073	2.2112

α, deg \ σ, deg	100.0	110.0	120.0	130.0	140.0	150.0	160.0	170.0	180.0
1.0	.7822	.7822	.7822	.7822	.7822	.7822	.7822	.7822	.7822
2.0	.8154	.8154	.8154	.8154	.8154	.8154	.8154	.8154	.8154
4.0	.8838	.8838	.8838	.8838	.8838	.8838	.8838	.8838	.8838
6.0	.9554	.9554	.9554	.9554	.9554	.9554	.9554	.9554	.9554
8.0	1.0303	1.0303	1.0303	1.0303	1.0303	1.0303	1.0303	1.0303	1.0303
10.0	1.1076	1.1079	1.1079	1.1079	1.1079	1.1079	1.1079	1.1079	1.1079
12.0	1.1884	1.1883	1.1883	1.1883	1.1883	1.1883	1.1883	1.1883	1.1883
15.0	1.3138	1.3141	1.3141	1.3141	1.3141	1.3141	1.3141	1.3141	1.3141
20.0	1.5517	1.5364	1.5367	1.5367	1.5367	1.5367	1.5367	1.5367	1.5367
25.0	1.7550	1.7720	1.7723	1.7723	1.7723	1.7723	1.7723	1.7723	1.7723
30.0	1.9769	2.0140	2.0179	2.0179	2.0179	2.0179	2.0179	2.0179	2.0179
35.0	2.1907	2.2554	2.2698	2.2700	2.2700	2.2700	2.2700	2.2700	2.2700
40.0	2.3898	2.4889	2.5208	2.5237	2.5242	2.5242	2.5242	2.5242	2.5242
45.0	2.5682	2.7075	2.7636	2.7751	2.7753	2.7753	2.7753	2.7753	2.7753
50.0	2.7206	2.9043	2.9907	3.0166	3.0190	3.0190	3.0190	3.0190	3.0190
55.0	2.8422	3.0736	3.1954	3.2412	3.2500	3.2501	3.2501	3.2501	3.2501
60.0	2.9293	3.2101	3.3713	3.4420	3.4616	3.4630	3.4633	3.4633	3.4633
65.0	2.9794	3.3096	3.5131	3.6131	3.6478	3.6538	3.6539	3.6539	3.6539
70.0	2.9909	3.3693	3.6166	3.7491	3.8027	3.8161	3.8171	3.8171	3.8171
75.0	2.9634	3.3872	3.6785	3.8459	3.9217	3.9453	3.9489	3.9490	3.9490
80.0	2.8978	3.3627	3.6970	3.9007	4.0011	4.0375	4.0453	4.0457	4.0457
85.0	2.7961	3.2968	3.6715	3.9117	4.0386	4.0899	4.1035	4.1050	4.1051

$\phi_1 = 150^0$; $\phi_2 = 210^0$; $\beta = 2^0$

α, deg \ σ, deg	5.0	10.0	20.0	30.0	40.0	50.0	60.0	70.0	80.0	90.0
1.0	.0008	.0066	.0495	.1484	.2975	.4679	.6206	.7250	.7728	.7816
2.0	.0008	.0066	.0499	.1503	.3028	.4786	.6384	.7500	.8034	.8146
4.0	.0008	.0067	.0506	.1538	.3129	.4997	.6737	.8003	.8656	.8827
6.0	.0008	.0067	.0512	.1570	.3224	.5200	.7085	.8506	.9289	.9533
8.0	.0008	.0067	.0516	.1598	.3312	.5395	.7426	.9007	.9931	1.0262
10.0	.0008	.0067	.0519	.1623	.3394	.5581	.7758	.9505	1.0579	1.1009
12.0	.0008	.0067	.0522	.1644	.3469	.5756	.8079	.9995	1.1229	1.1771
15.0	.0008	.0066	.0522	.1668	.3566	.5999	.8539	1.0714	1.2199	1.2933
20.0	.0008	.0064	.0517	.1688	.3689	.6343	.9231	1.1846	1.3784	1.4891
25.0	.0007	.0061	.0505	.1683	.3757	.6600	.9814	1.2866	1.5285	1.6824
30.0	.0007	.0057	.0485	.1653	.3770	.6763	1.0269	1.3744	1.6657	1.8672
35.0	.0006	.0052	.0458	.1598	.3727	.6828	1.0583	1.4452	1.7857	2.0379
40.0	.0005	.0047	.0425	.1521	.3628	.6792	1.0746	1.4968	1.8850	2.1895
45.0	.0005	.0042	.0387	.1423	.3478	.6657	1.0754	1.5278	1.9605	2.3171
50.0	.0004	.0036	.0346	.1308	.3281	.6426	1.0605	1.5372	2.0099	2.4171
55.0	.0003	.0030	.0302	.1180	.3042	.6107	1.0305	1.5247	2.0318	2.4863
60.0	.0003	.0025	.0256	.1041	.2769	.5709	.9863	1.4907	2.0254	2.5226
65.0	.0002	.0019	.0211	.0897	.2470	.5244	.9292	1.4361	1.9909	2.5250
70.0	.0001	.0014	.0168	.0751	.2155	.4727	.8610	1.3628	1.9295	2.4933
75.0	.0001	.0010	.0127	.0609	.1832	.4173	.7836	1.2728	1.8429	2.4286
80.0	.0000	.0006	.0091	.0473	.1512	.3599	.6996	1.1690	1.7338	2.3327
85.0	.0000	.0003	.0059	.0350	.1205	.3022	.6113	1.0545	1.6056	2.2087

α, deg \ σ, deg	100.0	110.0	120.0	130.0	140.0	150.0	160.0	170.0	180.0
1.0	.7816	.7816	.7816	.7816	.7816	.7816	.7816	.7816	.7816
2.0	.8146	.8146	.8146	.8147	.8147	.8147	.8146	.8146	.8146
4.0	.8829	.8829	.8829	.8829	.8829	.8829	.8829	.8829	.8829
6.0	.9545	.9545	.9545	.9545	.9545	.9545	.9545	.9545	.9545
8.0	1.0293	1.0293	1.0293	1.0293	1.0293	1.0293	1.0293	1.0293	1.0293
10.0	1.1069	1.1069	1.1069	1.1069	1.1069	1.1069	1.1069	1.1069	1.1069
12.0	1.1873	1.1871	1.1871	1.1871	1.1871	1.1871	1.1871	1.1871	1.1871
15.0	1.3125	1.3128	1.3128	1.3128	1.3128	1.3128	1.3128	1.3128	1.3128
20.0	1.5502	1.5352	1.5353	1.5353	1.5353	1.5353	1.5353	1.5353	1.5353
25.0	1.7532	1.7702	1.7705	1.7705	1.7705	1.7705	1.7705	1.7705	1.7705
30.0	1.9748	2.0119	2.0161	2.0158	2.0158	2.0158	2.0158	2.0158	2.0158
35.0	2.1883	2.2530	2.2674	2.2676	2.2676	2.2676	2.2676	2.2676	2.2676
40.0	2.3872	2.4863	2.5181	2.5214	2.5214	2.5214	2.5214	2.5214	2.5214
45.0	2.5654	2.7045	2.7606	2.7722	2.7723	2.7723	2.7723	2.7723	2.7723
50.0	2.7175	2.9012	2.9875	3.0134	3.0159	3.0157	3.0157	3.0157	3.0157
55.0	2.8390	3.0702	3.1919	3.2377	3.2464	3.2465	3.2465	3.2465	3.2465
60.0	2.9260	3.2065	3.3676	3.4383	3.4579	3.4596	3.4596	3.4596	3.4596
65.0	2.9761	3.3060	3.5092	3.6091	3.6438	3.6498	3.6499	3.6499	3.6499
70.0	2.9875	3.3655	3.6126	3.7449	3.7985	3.8119	3.8130	3.8129	3.8129
75.0	2.9601	3.3834	3.6744	3.8417	3.9173	3.9410	3.9446	3.9446	3.9446
80.0	2.8946	3.3590	3.6929	3.8964	3.9967	4.0330	4.0408	4.0413	4.0413
85.0	2.7930	3.2931	3.6674	3.9074	4.0341	4.0853	4.0989	4.1005	4.1004

TABLE I.- CONTINUED

(a) C_N. Continued.

$\beta_1 = 135^\circ$; $\beta_2 = 225^\circ$; $\beta = 5^\circ$

α, deg \ σ, deg	5.0	10.0	20.0	30.0	40.0	50.0	60.0	70.0	80.0	90.0
1.0	.0008	.0062	.0463	.1390	.2786	.4381	.5811	.6791	.7243	.7330
2.0	.0008	.0062	.0467	.1406	.2832	.4476	.5969	.7013	.7514	.7623
4.0	.0008	.0063	.0473	.1437	.2921	.4662	.6282	.7458	.8064	.8225
6.0	.0008	.0063	.0478	.1465	.3005	.4841	.6589	.7902	.8623	.8848
8.0	.0008	.0063	.0482	.1490	.3082	.5012	.6888	.8342	.9186	.9487
10.0	.0008	.0063	.0485	.1511	.3153	.5174	.7178	.8777	.9753	1.0139
12.0	.0008	.0062	.0486	.1528	.3217	.5327	.7458	.9205	1.0319	1.0802
15.0	.0008	.0061	.0486	.1548	.3300	.5536	.7886	.9839	1.1162	1.1810
20.0	.0007	.0059	.0481	.1562	.3401	.5824	.8440	1.0602	1.2527	1.3496
25.0	.0007	.0057	.0468	.1553	.3481	.6036	.8837	1.1668	1.3807	1.5148
30.0	.0006	.0053	.0448	.1520	.3480	.6159	.9307	1.2400	1.4963	1.6709
35.0	.0006	.0049	.0422	.1465	.3398	.6193	.9549	1.2976	1.5960	1.8130
40.0	.0005	.0044	.0391	.1390	.3296	.6138	.9693	1.3370	1.6767	1.9391
45.0	.0004	.0039	.0356	.1297	.3147	.5988	.9618	1.3594	1.7360	2.0428
50.0	.0004	.0033	.0316	.1188	.2957	.5756	.9444	1.3618	1.7721	2.1219
55.0	.0003	.0028	.0275	.1067	.2730	.5445	.9137	1.3449	1.7839	2.1738
60.0	.0002	.0023	.0233	.0937	.2473	.5067	.8705	1.3092	1.7710	2.1972
65.0	.0002	.0017	.0191	.0803	.2195	.4631	.8163	1.2558	1.7339	2.1911
70.0	.0001	.0013	.0151	.0669	.1904	.4152	.7525	1.1867	1.6736	2.1559
75.0	.0001	.0009	.0114	.0538	.1608	.3643	.6813	1.1028	1.5920	2.0926
80.0	.0000	.0005	.0080	.0415	.1317	.3121	.6047	1.0078	1.4915	2.0030
85.0	.0000	.0003	.0052	.0303	.1040	.2601	.5251	.9044	1.3755	1.8900

α, deg \ σ, deg	100.0	110.0	120.0	130.0	140.0	150.0	160.0	170.0	180.0
1.0	.7331	.7332	.7332	.7332	.7332	.7332	.7332	.7332	.7332
2.0	.7625	.7625	.7625	.7625	.7625	.7625	.7626	.7625	.7625
4.0	.8231	.8231	.8231	.8231	.8231	.8231	.8232	.8231	.8231
6.0	.8862	.8862	.8862	.8862	.8862	.8862	.8862	.8862	.8862
8.0	.9517	.9517	.9517	.9517	.9517	.9517	.9517	.9517	.9517
10.0	1.0194	1.0193	1.0193	1.0193	1.0193	1.0193	1.0193	1.0193	1.0193
12.0	1.0893	1.0892	1.0892	1.0892	1.0892	1.0892	1.0892	1.0892	1.0892
15.0	1.1975	1.1979	1.1979	1.1979	1.1979	1.1979	1.1979	1.1979	1.1979
20.0	1.3844	1.3886	1.3886	1.3886	1.3886	1.3886	1.3886	1.3886	1.3886
25.0	1.5744	1.5882	1.5884	1.5884	1.5884	1.5884	1.5884	1.5884	1.5884
30.0	1.7619	1.7919	1.7952	1.7950	1.7950	1.7950	1.7950	1.7950	1.7950
35.0	1.9410	1.9939	2.0050	2.0052	2.0052	2.0052	2.0052	2.0052	2.0052
40.0	2.1065	2.1881	2.2130	2.2155	2.2156	2.2156	2.2156	2.2156	2.2156
45.0	2.2532	2.3684	2.4132	2.4219	2.4220	2.4220	2.4220	2.4220	2.4220
50.0	2.3766	2.5296	2.5995	2.6195	2.6213	2.6212	2.6212	2.6212	2.6212
55.0	2.4731	2.6666	2.7663	2.8025	2.8090	2.8091	2.8091	2.8091	2.8091
60.0	2.5398	2.7753	2.9084	2.9654	2.9806	2.9818	2.9818	2.9818	2.9818
65.0	2.5745	2.8524	3.0216	3.1034	3.1309	3.1355	3.1355	3.1355	3.1355
70.0	2.5762	2.8956	3.1025	3.2121	3.2556	3.2662	3.2669	3.2669	3.2669
75.0	2.5449	2.9035	3.1485	3.2883	3.3509	3.3700	3.3728	3.3728	3.3728
80.0	2.4816	2.8759	3.1583	3.3298	3.4137	3.4438	3.4502	3.4505	3.4505
85.0	2.3880	2.8136	3.1316	3.3351	3.4422	3.4854	3.4967	3.4980	3.4981

$\beta_1 = 135^\circ$; $\beta_2 = 225^\circ$; $\beta = 15^\circ$

α, deg \ σ, deg	5.0	10.0	20.0	30.0	40.0	50.0	60.0	70.0	80.0	90.0
1.0	.0007	.0058	.0436	.1309	.2629	.4144	.5517	.6481	.6959	.7096
2.0	.0007	.0059	.0439	.1325	.2672	.4234	.5666	.6689	.7215	.7373
4.0	.0007	.0059	.0445	.1354	.2756	.4409	.5960	.7107	.7732	.7942
6.0	.0007	.0059	.0450	.1380	.2835	.4577	.6248	.7525	.8257	.8528
8.0	.0007	.0059	.0453	.1403	.2907	.4738	.6529	.7939	.8787	.9129
10.0	.0007	.0059	.0456	.1425	.2974	.4890	.6802	.8348	.9319	.9743
12.0	.0007	.0058	.0457	.1439	.3034	.5033	.7065	.8750	.9852	1.0367
15.0	.0007	.0058	.0458	.1458	.3112	.5230	.7439	.9336	1.0644	1.1314
20.0	.0007	.0056	.0452	.1471	.3207	.5502	.7996	1.0251	1.1928	1.2899
25.0	.0006	.0053	.0440	.1462	.3254	.5700	.8455	1.1065	1.3131	1.4450
30.0	.0006	.0050	.0422	.1432	.3253	.5816	.8804	1.1754	1.4216	1.5920
35.0	.0005	.0046	.0397	.1380	.3204	.5847	.9031	1.2295	1.5155	1.7264
40.0	.0005	.0041	.0368	.1309	.3108	.5793	.9129	1.2673	1.5914	1.8442
45.0	.0004	.0036	.0335	.1222	.2968	.5655	.9096	1.2877	1.6471	1.9417
50.0	.0004	.0031	.0298	.1119	.2789	.5436	.8933	1.2899	1.6811	2.0160
55.0	.0003	.0026	.0259	.1005	.2576	.5145	.8644	1.2740	1.6921	2.0649
60.0	.0002	.0021	.0219	.0884	.2335	.4789	.8238	1.2404	1.6800	2.0868
65.0	.0002	.0016	.0180	.0758	.2073	.4379	.7728	1.1902	1.6451	2.0812
70.0	.0001	.0012	.0142	.0631	.1799	.3929	.7129	1.1249	1.5884	2.0480
75.0	.0001	.0008	.0107	.0508	.1521	.3451	.6459	1.0464	1.5117	1.9885
80.0	.0000	.0005	.0076	.0392	.1248	.2960	.5739	.9571	1.4173	1.9043
85.0	.0000	.0003	.0049	.0287	.0987	.2471	.4990	.8598	1.3080	1.7981

α, deg \ σ, deg	100.0	110.0	120.0	130.0	140.0	150.0	160.0	170.0	180.0
1.0	.7109	.7110	.7110	.7110	.7110	.7110	.7110	.7110	.7110
2.0	.7390	.7391	.7391	.7391	.7391	.7391	.7391	.7391	.7391
4.0	.7970	.7971	.7971	.7971	.7971	.7971	.7971	.7971	.7971
6.0	.8573	.8574	.8574	.8574	.8574	.8574	.8574	.8574	.8574
8.0	.9197	.9200	.9200	.9200	.9200	.9200	.9200	.9200	.9200
10.0	.9842	.9847	.9847	.9847	.9847	.9847	.9847	.9847	.9847
12.0	1.0504	1.0514	1.0514	1.0514	1.0514	1.0514	1.0514	1.0514	1.0514
15.0	1.1527	1.1551	1.1551	1.1551	1.1551	1.1551	1.1551	1.1551	1.1551
20.0	1.3288	1.3364	1.3364	1.3364	1.3364	1.3364	1.3364	1.3364	1.3364
25.0	1.5075	1.5253	1.5265	1.5265	1.5265	1.5265	1.5265	1.5265	1.5265
30.0	1.6837	1.7173	1.7228	1.7227	1.7227	1.7227	1.7227	1.7227	1.7227
35.0	1.8522	1.9073	1.9213	1.9222	1.9222	1.9222	1.9222	1.9222	1.9222
40.0	2.0077	2.0898	2.1174	2.1213	2.1213	2.1213	2.1213	2.1213	2.1213
45.0	2.1456	2.2594	2.3057	2.3165	2.3167	2.3167	2.3167	2.3167	2.3167
50.0	2.2617	2.4109	2.4809	2.5024	2.5050	2.5049	2.5049	2.5049	2.5049
55.0	2.3524	2.5397	2.6377	2.6746	2.6820	2.6823	2.6823	2.6823	2.6823
60.0	2.4151	2.6419	2.7713	2.8278	2.8435	2.8451	2.8451	2.8451	2.8451
65.0	2.4477	2.7144	2.8778	2.9574	2.9849	2.9899	2.9899	2.9899	2.9899
70.0	2.4493	2.7550	2.9538	3.0597	3.1022	3.1128	3.1137	3.1136	3.1136
75.0	2.4199	2.7624	2.9971	3.1313	3.1917	3.2104	3.2132	3.2134	3.2134
80.0	2.3603	2.7365	3.0063	3.1703	3.2508	3.2798	3.2860	3.2864	3.2863
85.0	2.2724	2.6780	2.9812	3.1753	3.2776	3.3189	3.3298	3.3310	3.3310

TABLE I.- CONTINUED

(b) C_A

$\beta_1 = 90°$; $\beta_2 = 270°$; $\beta = 0°$

α, deg \ σ, deg	5.0	10.0	20.0	30.0	40.0	50.0	60.0	70.0	80.0	90.0
1.0	.0151	.0595	.2213	.4408	.6625	.8397	.9513	1.0024	1.0162	1.0173
2.0	.0152	.0596	.2223	.4438	.6685	.8498	.9648	1.0182	1.0330	1.0343
4.0	.0151	.0597	.2238	.4491	.6800	.8685	.9903	1.0484	1.0655	1.0672
6.0	.0151	.0597	.2247	.4534	.6900	.8855	1.0140	1.0769	1.0964	1.0985
8.0	.0150	.0595	.2252	.4566	.6983	.9006	1.0357	1.1036	1.1255	1.1281
10.0	.0149	.0591	.2250	.4587	.7051	.9138	1.0553	1.1281	1.1526	1.1559
12.0	.0147	.0586	.2244	.4597	.7103	.9249	1.0727	1.1506	1.1778	1.1818
15.0	.0144	.0577	.2223	.4592	.7149	.9378	1.0947	1.1800	1.2115	1.2165
20.0	.0137	.0553	.2164	.4528	.7143	.9485	1.1193	1.2169	1.2558	1.2629
25.0	.0129	.0522	.2072	.4398	.7032	.9456	1.1284	1.2377	1.2843	1.2937
30.0	.0118	.0485	.1953	.4206	.6819	.9291	1.1218	1.2419	1.2961	1.3080
35.0	.0107	.0441	.1808	.3957	.6513	.8997	1.0996	1.2292	1.2908	1.3054
40.0	.0094	.0394	.1643	.3659	.6121	.8581	1.0625	1.2000	1.2687	1.2858
45.0	.0081	.0343	.1463	.3321	.5655	.8057	1.0116	1.1553	1.2303	1.2500
50.0	.0068	.0291	.1273	.2954	.5130	.7440	.9485	1.0965	1.1769	1.1990
55.0	.0055	.0240	.1078	.2568	.4562	.6750	.8751	1.0252	1.1100	1.1343
60.0	.0043	.0190	.0886	.2175	.3968	.6006	.7937	.9436	1.0317	1.0580
65.0	.0032	.0144	.0700	.1787	.3366	.5232	.7066	.8543	.9444	.9723
70.0	.0022	.0102	.0529	.1416	.2774	.4451	.6166	.7600	.8507	.8799
75.0	.0013	.0066	.0375	.1073	.2211	.3687	.5263	.6634	.7535	.7835
80.0	.0007	.0037	.0245	.0769	.1692	.2963	.4386	.5677	.6557	.6861
85.0	.0002	.0017	.0141	.0513	.1236	.2301	.3561	.4755	.5604	.5908

α, deg \ σ, deg	100.0	110.0	120.0	130.0	140.0	150.0	160.0	170.0	180.0
1.0	1.0159	1.0159	1.0159	1.0159	1.0159	1.0159	1.0159	1.0159	1.0159
2.0	1.0343	1.0343	1.0343	1.0343	1.0343	1.0343	1.0343	1.0343	1.0343
4.0	1.0664	1.0664	1.0664	1.0664	1.0664	1.0664	1.0664	1.0664	1.0664
6.0	1.0979	1.0979	1.0979	1.0979	1.0979	1.0979	1.0979	1.0979	1.0979
8.0	1.1281	1.1281	1.1281	1.1281	1.1281	1.1281	1.1281	1.1281	1.1281
10.0	1.1552	1.1557	1.1557	1.1557	1.1557	1.1557	1.1557	1.1557	1.1557
12.0	1.1815	1.1812	1.1812	1.1812	1.1812	1.1812	1.1812	1.1812	1.1812
15.0	1.2160	1.2155	1.2155	1.2155	1.2155	1.2155	1.2155	1.2155	1.2155
20.0	1.2615	1.2608	1.2610	1.2610	1.2610	1.2610	1.2610	1.2610	1.2610
25.0	1.2911	1.2894	1.2892	1.2892	1.2892	1.2892	1.2892	1.2892	1.2892
30.0	1.3038	1.2997	1.2988	1.2988	1.2988	1.2988	1.2988	1.2988	1.2988
35.0	1.2991	1.2915	1.2891	1.2888	1.2888	1.2888	1.2888	1.2888	1.2888
40.0	1.2774	1.2651	1.2592	1.2582	1.2585	1.2585	1.2585	1.2585	1.2585
45.0	1.2391	1.2212	1.2101	1.2072	1.2070	1.2070	1.2070	1.2070	1.2070
50.0	1.1855	1.1612	1.1431	1.1360	1.1350	1.1350	1.1350	1.1350	1.1350
55.0	1.1183	1.0869	1.0602	1.0467	1.0435	1.0434	1.0434	1.0434	1.0434
60.0	1.0393	1.0005	.9638	.9416	.9338	.9328	.9330	.9330	.9330
65.0	.9511	.9046	.8569	.8238	.8089	.8057	.8056	.8056	.8056
70.0	.8564	.8021	.7425	.6967	.6721	.6642	.6634	.6634	.6634
75.0	.7579	.6962	.6242	.5641	.5271	.5119	.5089	.5088	.5088
80.0	.6588	.5901	.5055	.4298	.3782	.3528	.3453	.3447	.3447
85.0	.5619	.4869	.3900	.2979	.2295	.1911	.1766	.1740	.1740

$\beta_1 = 90°$; $\beta_2 = 270°$; $\beta = 2°$

α, deg \ σ, deg	5.0	10.0	20.0	30.0	40.0	50.0	60.0	70.0	80.0	90.0
1.0	.0151	.0595	.2211	.4403	.6616	.8389	.9505	1.0017	1.0156	1.0167
2.0	.0151	.0596	.2220	.4433	.6678	.8489	.9639	1.0174	1.0323	1.0336
4.0	.0151	.0597	.2235	.4486	.6793	.8677	.9894	1.0476	1.0648	1.0665
6.0	.0151	.0596	.2245	.4529	.6892	.8846	1.0131	1.0761	1.0956	1.0978
8.0	.0150	.0594	.2249	.4561	.6976	.8997	1.0347	1.1027	1.1247	1.1274
10.0	.0149	.0591	.2248	.4582	.7044	.9129	1.0543	1.1272	1.1518	1.1551
12.0	.0147	.0586	.2241	.4592	.7095	.9240	1.0718	1.1497	1.1769	1.1809
15.0	.0144	.0576	.2221	.4586	.7142	.9368	1.0937	1.1790	1.2106	1.2156
20.0	.0137	.0553	.2161	.4523	.7135	.9475	1.1183	1.2159	1.2540	1.2620
25.0	.0129	.0522	.2070	.4393	.7024	.9446	1.1274	1.2367	1.2833	1.2928
30.0	.0118	.0484	.1950	.4201	.6812	.9282	1.1208	1.2408	1.2951	1.3070
35.0	.0107	.0441	.1806	.3953	.6506	.8988	1.0986	1.2281	1.2898	1.3044
40.0	.0094	.0393	.1641	.3655	.6114	.8573	1.0615	1.1990	1.2677	1.2849
45.0	.0081	.0343	.1461	.3318	.5649	.8050	1.0107	1.1544	1.2294	1.2491
50.0	.0068	.0291	.1271	.2950	.5125	.7433	.9477	1.0956	1.1760	1.1981
55.0	.0055	.0240	.1077	.2565	.4558	.6744	.8744	1.0244	1.1092	1.1336
60.0	.0043	.0190	.0885	.2172	.3964	.6001	.7930	.9430	1.0310	1.0573
65.0	.0032	.0143	.0700	.1785	.3363	.5228	.7061	.8538	.9438	.9718
70.0	.0022	.0102	.0528	.1415	.2772	.4448	.6162	.7595	.8503	.8794
75.0	.0013	.0066	.0375	.1072	.2209	.3685	.5260	.6631	.7532	.7831
80.0	.0007	.0037	.0245	.0769	.1691	.2962	.4384	.5674	.6555	.6859
85.0	.0002	.0017	.0141	.0513	.1235	.2301	.3560	.4754	.5603	.5905

α, deg \ σ, deg	100.0	110.0	120.0	130.0	140.0	150.0	160.0	170.0	180.0
1.0	1.0167	1.0167	1.0167	1.0167	1.0167	1.0167	1.0167	1.0167	1.0167
2.0	1.0336	1.0336	1.0336	1.0336	1.0336	1.0336	1.0336	1.0336	1.0336
4.0	1.0657	1.0657	1.0657	1.0657	1.0657	1.0657	1.0657	1.0657	1.0657
6.0	1.0973	1.0973	1.0973	1.0973	1.0973	1.0973	1.0973	1.0973	1.0973
8.0	1.1273	1.1273	1.1273	1.1273	1.1273	1.1273	1.1273	1.1273	1.1273
10.0	1.1550	1.1550	1.1550	1.1550	1.1550	1.1550	1.1550	1.1550	1.1550
12.0	1.1807	1.1803	1.1803	1.1803	1.1803	1.1803	1.1803	1.1803	1.1803
15.0	1.2151	1.2146	1.2146	1.2146	1.2146	1.2146	1.2146	1.2146	1.2146
20.0	1.2606	1.2601	1.2601	1.2601	1.2601	1.2601	1.2601	1.2601	1.2601
25.0	1.2901	1.2884	1.2881	1.2881	1.2881	1.2881	1.2881	1.2881	1.2881
30.0	1.3027	1.2986	1.2980	1.2977	1.2977	1.2977	1.2977	1.2977	1.2977
35.0	1.2981	1.2905	1.2880	1.2878	1.2878	1.2878	1.2878	1.2878	1.2878
40.0	1.2764	1.2641	1.2581	1.2574	1.2573	1.2573	1.2573	1.2573	1.2573
45.0	1.2382	1.2203	1.2091	1.2061	1.2059	1.2059	1.2059	1.2059	1.2059
50.0	1.1847	1.1603	1.1422	1.1350	1.1342	1.1341	1.1341	1.1341	1.1341
55.0	1.1175	1.0861	1.0593	1.0457	1.0426	1.0424	1.0424	1.0424	1.0424
60.0	1.0386	.9997	.9631	.9408	.9330	.9322	.9321	.9321	.9321
65.0	.9506	.9040	.8562	.8231	.8082	.8050	.8049	.8049	.8049
70.0	.8559	.8016	.7420	.6962	.6715	.6636	.6628	.6620	.6628
75.0	.7576	.6958	.6238	.5637	.5267	.5114	.5084	.5084	.5084
80.0	.6585	.5898	.5053	.4295	.3779	.3525	.3450	.3443	.3443
85.0	.5618	.4868	.3899	.2977	.2294	.1909	.1764	.1739	.1738

TABLE I.- CONTINUED

(a) C_N. Concluded.

$\phi_1 = 150^0$; $\phi_2 = 210^0$; $\beta = 5^0$

α, deg \ σ, deg	5.0	10.0	20.0	30.0	40.0	50.0	60.0	70.0	80.0	90.0
1.0	.0008	.0066	.0492	.1475	.2957	.4650	.6169	.7209	.7687	.7777
2.0	.0008	.0066	.0496	.1493	.3009	.4757	.6346	.7458	.7991	.8105
4.0	.0008	.0066	.0502	.1528	.3109	.4966	.6697	.7957	.8609	.8782
6.0	.0008	.0067	.0508	.1560	.3204	.5168	.7043	.8457	.9239	.9484
8.0	.0008	.0067	.0513	.1588	.3292	.5362	.7381	.8955	.9876	1.0200
10.0	.0008	.0066	.0516	.1612	.3373	.5546	.7711	.9449	1.0520	1.0951
12.0	.0008	.0066	.0518	.1633	.3447	.5721	.8031	.9937	1.1165	1.1708
15.0	.0008	.0065	.0519	.1657	.3544	.5962	.8487	1.0651	1.2130	1.2863
20.0	.0008	.0063	.0514	.1677	.3666	.6303	.9175	1.1776	1.3705	1.4508
25.0	.0007	.0060	.0501	.1672	.3734	.6559	.9754	1.2790	1.5196	1.6728
30.0	.0007	.0057	.0482	.1642	.3746	.6722	1.0206	1.3661	1.6559	1.8565
35.0	.0006	.0052	.0455	.1588	.3703	.6786	1.0518	1.4365	1.7752	2.0261
40.0	.0005	.0047	.0422	.1511	.3606	.6751	1.0680	1.4878	1.8738	2.1767
45.0	.0005	.0042	.0385	.1414	.3456	.6616	1.0688	1.5186	1.9488	2.3035
50.0	.0004	.0036	.0344	.1300	.3260	.6387	1.0540	1.5279	1.9979	2.4029
55.0	.0003	.0030	.0300	.1172	.3023	.6069	1.0243	1.5155	2.0196	2.4716
60.0	.0003	.0024	.0255	.1035	.2752	.5674	.9803	1.4817	2.0133	2.5077
65.0	.0002	.0019	.0210	.0891	.2455	.5212	.9236	1.4275	1.9791	2.5101
70.0	.0001	.0014	.0167	.0747	.2142	.4698	.8558	1.3546	1.9180	2.4786
75.0	.0001	.0010	.0126	.0605	.1821	.4148	.7789	1.2653	1.8320	2.4143
80.0	.0000	.0006	.0090	.0471	.1503	.3577	.6954	1.1621	1.7236	2.3190
85.0	.0000	.0003	.0059	.0348	.1198	.3005	.6077	1.0483	1.5961	2.1958

α, deg \ σ, deg	100.0	110.0	120.0	130.0	140.0	150.0	160.0	170.0	180.0
1.0	.7777	.7778	.7778	.7778	.7778	.7778	.7778	.7778	.7778
2.0	.8106	.8107	.8107	.8107	.8107	.8107	.8107	.8107	.8107
4.0	.8787	.8788	.8788	.8788	.8788	.8788	.8788	.8788	.8788
6.0	.9499	.9499	.9499	.9499	.9499	.9499	.9500	.9499	.9499
8.0	1.0241	1.0242	1.0242	1.0242	1.0242	1.0242	1.0242	1.0242	1.0242
10.0	1.1013	1.1012	1.1012	1.1012	1.1012	1.1012	1.1012	1.1012	1.1012
12.0	1.1812	1.1811	1.1811	1.1811	1.1811	1.1811	1.1811	1.1811	1.1811
15.0	1.3057	1.3061	1.3061	1.3061	1.3061	1.3061	1.3061	1.3061	1.3061
20.0	1.5219	1.5273	1.5273	1.5273	1.5273	1.5273	1.5273	1.5273	1.5273
25.0	1.7435	1.7607	1.7611	1.7611	1.7611	1.7611	1.7611	1.7611	1.7611
30.0	1.9637	2.0009	2.0053	2.0050	2.0050	2.0050	2.0050	2.0050	2.0050
35.0	2.1759	2.2405	2.2550	2.2553	2.2553	2.2553	2.2553	2.2553	2.2553
40.0	2.3735	2.4722	2.5041	2.5076	2.5077	2.5077	2.5077	2.5077	2.5077
45.0	2.5506	2.6891	2.7451	2.7567	2.7569	2.7569	2.7569	2.7569	2.7569
50.0	2.7017	2.8845	2.9705	2.9964	2.9989	2.9988	2.9988	2.9988	2.9988
55.0	2.8224	3.0524	3.1736	3.2192	3.2281	3.2282	3.2282	3.2282	3.2282
60.0	2.9089	3.1879	3.3482	3.4186	3.4381	3.4399	3.4398	3.4398	3.4398
65.0	2.9586	3.2867	3.4889	3.5883	3.6229	3.6289	3.6290	3.6290	3.6290
70.0	2.9700	3.3459	3.5916	3.7233	3.7766	3.7900	3.7910	3.7910	3.7910
75.0	2.9427	3.3636	3.6530	3.8194	3.8947	3.9182	3.9218	3.9218	3.9218
80.0	2.8777	3.3394	3.6714	3.8738	3.9735	4.0097	4.0174	4.0179	4.0179
85.0	2.7767	3.2739	3.6461	3.8847	4.0107	4.0616	4.0751	4.0767	4.0767

$\phi_1 = 150^0$; $\phi_2 = 210^0$; $\beta = 15^0$

α, deg \ σ, deg	5.0	10.0	20.0	30.0	40.0	50.0	60.0	70.0	80.0	90.0
1.0	.0008	.0062	.0462	.1388	.2785	.4385	.5828	.6829	.7307	.7421
2.0	.0008	.0062	.0466	.1405	.2834	.4486	.5995	.7062	.7592	.7731
4.0	.0008	.0062	.0473	.1438	.2928	.4682	.6325	.7532	.8174	.8368
6.0	.0008	.0063	.0478	.1468	.3017	.4872	.6650	.8002	.8765	.9028
8.0	.0008	.0063	.0482	.1494	.3100	.5054	.6963	.8470	.9365	.9709
10.0	.0008	.0062	.0485	.1517	.3176	.5228	.7278	.8935	.9970	1.0408
12.0	.0008	.0062	.0487	.1537	.3246	.5392	.7579	.9393	1.0576	1.1119
15.0	.0008	.0061	.0488	.1559	.3337	.5619	.8008	1.0065	1.1484	1.2205
20.0	.0007	.0060	.0484	.1578	.3451	.5940	.8654	1.1122	1.2964	1.4034
25.0	.0007	.0057	.0472	.1574	.3515	.6180	.9199	1.2075	1.4366	1.5839
30.0	.0006	.0053	.0453	.1545	.3527	.6333	.9624	1.2895	1.5648	1.7566
35.0	.0006	.0049	.0428	.1494	.3487	.6393	.9917	1.3556	1.6769	1.9161
40.0	.0005	.0044	.0397	.1422	.3395	.6360	1.0070	1.4039	1.7697	2.0576
45.0	.0004	.0039	.0362	.1331	.3255	.6234	1.0077	1.4328	1.8402	2.1769
50.0	.0004	.0034	.0323	.1224	.3070	.6018	.9938	1.4416	1.8863	2.2703
55.0	.0003	.0028	.0282	.1104	.2847	.5720	.9658	1.4299	1.9067	2.3349
60.0	.0002	.0023	.0240	.0974	.2592	.5348	.9245	1.3981	1.9008	2.3689
65.0	.0002	.0018	.0198	.0839	.2313	.4914	.8712	1.3472	1.8686	2.3711
70.0	.0001	.0013	.0157	.0703	.2018	.4431	.8074	1.2786	1.8112	2.3415
75.0	.0001	.0009	.0119	.0570	.1717	.3913	.7352	1.1946	1.7303	2.2810
80.0	.0000	.0006	.0085	.0444	.1418	.3377	.6566	1.0976	1.6284	2.1915
85.0	.0000	.0003	.0056	.0328	.1131	.2838	.5742	.9906	1.5086	2.0756

α, deg \ σ, deg	100.0	110.0	120.0	130.0	140.0	150.0	160.0	170.0	180.0
1.0	.7427	.7427	.7428	.7428	.7428	.7428	.7428	.7428	.7428
2.0	.7739	.7739	.7740	.7740	.7740	.7740	.7740	.7740	.7740
4.0	.8385	.8385	.8386	.8386	.8386	.8386	.8386	.8386	.8386
6.0	.9060	.9060	.9061	.9061	.9061	.9061	.9061	.9061	.9061
8.0	.9763	.9764	.9765	.9765	.9765	.9765	.9765	.9765	.9765
10.0	1.0493	1.0495	1.0496	1.0496	1.0496	1.0496	1.0496	1.0496	1.0496
12.0	1.1247	1.1253	1.1254	1.1254	1.1254	1.1254	1.1254	1.1254	1.1254
15.0	1.2419	1.2437	1.2438	1.2438	1.2438	1.2438	1.2438	1.2438	1.2438
20.0	1.4452	1.4526	1.4528	1.4528	1.4528	1.4528	1.4528	1.4528	1.4528
25.0	1.6537	1.6726	1.6740	1.6740	1.6740	1.6740	1.6740	1.6740	1.6740
30.0	1.8607	1.8985	1.9044	1.9043	1.9043	1.9043	1.9043	1.9043	1.9043
35.0	2.0601	2.1238	2.1396	2.1406	2.1406	2.1406	2.1406	2.1406	2.1406
40.0	2.2459	2.3417	2.3739	2.3783	2.3783	2.3783	2.3783	2.3783	2.3783
45.0	2.4124	2.5455	2.6004	2.6128	2.6133	2.6133	2.6133	2.6133	2.6133
50.0	2.5545	2.7292	2.8123	2.8382	2.8412	2.8411	2.8411	2.8411	2.8411
55.0	2.6680	2.8871	3.0033	3.0477	3.0568	3.0571	3.0571	3.0571	3.0571
60.0	2.7493	3.0145	3.1674	3.2351	3.2543	3.2563	3.2563	3.2563	3.2563
65.0	2.7960	3.1074	3.2997	3.3947	3.4280	3.4341	3.4342	3.4342	3.4342
70.0	2.8067	3.1630	3.3962	3.5216	3.5725	3.5855	3.5866	3.5865	3.5865
75.0	2.7811	3.1797	3.4560	3.6119	3.6835	3.7060	3.7095	3.7098	3.7098
80.0	2.7199	3.1569	3.4713	3.6630	3.7576	3.7920	3.7994	3.7999	3.7998
85.0	2.6250	3.0954	3.4475	3.6733	3.7926	3.8409	3.8537	3.8552	3.8552

TABLE I.- CONTINUED

(b) C_A. Continued.

$\beta_1 = 90°$; $\beta_2 = 270°$; $\beta = 5°$

α, deg \ σ, deg	5.0	10.0	20.0	30.0	40.0	50.0	60.0	70.0	80.0	90.0
1.0	.0150	.0591	.2197	.4377	.6579	.8347	.9462	.9978	1.0121	1.0134
2.0	.0150	.0592	.2207	.4407	.6641	.8446	.9596	1.0134	1.0287	1.0302
4.0	.0150	.0593	.2221	.4460	.6755	.8632	.9849	1.0434	1.0610	1.0628
6.0	.0150	.0592	.2231	.4502	.6854	.8801	1.0084	1.0717	1.0916	1.0939
8.0	.0149	.0590	.2235	.4533	.6937	.8951	1.0299	1.0981	1.1205	1.1234
10.0	.0148	.0587	.2234	.4554	.7004	.9082	1.0494	1.1225	1.1475	1.1509
12.0	.0146	.0582	.2227	.4564	.7056	.9192	1.0667	1.1448	1.1724	1.1766
15.0	.0143	.0572	.2207	.4559	.7102	.9319	1.0885	1.1740	1.2058	1.2111
20.0	.0136	.0549	.2168	.4496	.7095	.9426	1.1129	1.2104	1.2498	1.2571
25.0	.0128	.0519	.2057	.4367	.6985	.9397	1.1220	1.2313	1.2781	1.2877
30.0	.0118	.0481	.1938	.4176	.6774	.9234	1.1154	1.2354	1.2898	1.3019
35.0	.0106	.0438	.1795	.3929	.6470	.8942	1.0934	1.2228	1.2846	1.2992
40.0	.0094	.0391	.1631	.3634	.6081	.8529	1.0566	1.1939	1.2626	1.2798
45.0	.0081	.0341	.1452	.3298	.5619	.8009	1.0061	1.1495	1.2245	1.2443
50.0	.0068	.0289	.1264	.2934	.5098	.7397	.9435	1.0911	1.1715	1.1937
55.0	.0055	.0238	.1071	.2550	.4534	.6711	.8706	1.0203	1.1051	1.1295
60.0	.0043	.0189	.0879	.2161	.3944	.5973	.7898	.9394	1.0274	1.0538
65.0	.0031	.0143	.0696	.1776	.3347	.5205	.7034	.8508	.9400	.9687
70.0	.0021	.0101	.0525	.1408	.2760	.4430	.6140	.7572	.8478	.8770
75.0	.0013	.0066	.0373	.1068	.2200	.3672	.5245	.6614	.7514	.7813
80.0	.0007	.0037	.0243	.0766	.1686	.2954	.4374	.5663	.6543	.6847
85.0	.0002	.0017	.0141	.0512	.1233	.2297	.3555	.4749	.5597	.5899

α, deg \ σ, deg	100.0	110.0	120.0	130.0	140.0	150.0	160.0	170.0	180.0
1.0	1.0126	1.0126	1.0126	1.0126	1.0126	1.0126	1.0126	1.0126	1.0126
2.0	1.0295	1.0295	1.0295	1.0295	1.0295	1.0295	1.0295	1.0295	1.0295
4.0	1.0624	1.0624	1.0624	1.0624	1.0624	1.0624	1.0624	1.0624	1.0624
6.0	1.0939	1.0939	1.0939	1.0939	1.0939	1.0939	1.0939	1.0939	1.0939
8.0	1.1233	1.1233	1.1233	1.1233	1.1233	1.1233	1.1233	1.1233	1.1233
10.0	1.1506	1.1506	1.1506	1.1506	1.1506	1.1506	1.1506	1.1506	1.1506
12.0	1.1763	1.1758	1.1758	1.1758	1.1758	1.1758	1.1758	1.1758	1.1758
15.0	1.2104	1.2099	1.2099	1.2099	1.2099	1.2099	1.2099	1.2099	1.2099
20.0	1.2556	1.2551	1.2551	1.2551	1.2551	1.2551	1.2551	1.2551	1.2551
25.0	1.2849	1.2831	1.2828	1.2828	1.2828	1.2828	1.2828	1.2828	1.2828
30.0	1.2975	1.2932	1.2925	1.2922	1.2922	1.2922	1.2922	1.2922	1.2922
35.0	1.2929	1.2850	1.2824	1.2821	1.2821	1.2821	1.2821	1.2821	1.2821
40.0	1.2713	1.2588	1.2526	1.2518	1.2518	1.2518	1.2518	1.2518	1.2518
45.0	1.2333	1.2152	1.2038	1.2007	1.2005	1.2005	1.2005	1.2005	1.2005
50.0	1.1801	1.1556	1.1372	1.1299	1.1290	1.1289	1.1289	1.1289	1.1289
55.0	1.1134	1.0818	1.0548	1.0410	1.0378	1.0376	1.0376	1.0376	1.0376
60.0	1.0350	.9960	.9591	.9366	.9287	.9278	.9278	.9278	.9278
65.0	.9475	.9008	.8528	.8195	.8045	.8012	.8011	.8011	.8011
70.0	.8535	.7991	.7393	.6933	.6684	.6605	.6597	.6597	.6597
75.0	.7557	.6939	.6218	.5615	.5244	.5090	.5060	.5059	.5059
80.0	.6573	.5886	.5039	.4281	.3764	.3509	.3434	.3427	.3427
85.0	.5612	.4862	.3893	.2970	.2286	.1901	.1756	.1730	.1730

$\beta_1 = 90°$; $\beta_2 = 270°$; $\beta = 15°$

α, deg \ σ, deg	5.0	10.0	20.0	30.0	40.0	50.0	60.0	70.0	80.0	90.0
1.0	.0141	.0556	.2070	.4134	.6236	.7950	.9065	.9614	.9796	.9824
2.0	.0141	.0557	.2079	.4162	.6295	.8044	.9190	.9761	.9953	.9982
4.0	.0141	.0558	.2093	.4211	.6402	.8219	.9428	1.0043	1.0256	1.0290
6.0	.0141	.0557	.2102	.4251	.6495	.8377	.9649	1.0309	1.0544	1.0582
8.0	.0140	.0555	.2105	.4281	.6573	.8518	.9851	1.0557	1.0816	1.0859
10.0	.0139	.0552	.2104	.4301	.6636	.8641	1.0034	1.0787	1.1069	1.1119
12.0	.0137	.0547	.2098	.4310	.6684	.8745	1.0197	1.0996	1.1304	1.1360
15.0	.0134	.0538	.2079	.4305	.6728	.8865	1.0402	1.1271	1.1618	1.1684
20.0	.0128	.0517	.2023	.4246	.6721	.8965	1.0632	1.1615	1.2032	1.2117
25.0	.0120	.0488	.1938	.4125	.6618	.8938	1.0717	1.1809	1.2298	1.2405
30.0	.0111	.0453	.1826	.3945	.6420	.8784	1.0655	1.1848	1.2408	1.2538
35.0	.0100	.0412	.1692	.3713	.6134	.8510	1.0448	1.1729	1.2359	1.2513
40.0	.0088	.0368	.1538	.3435	.5768	.8122	1.0102	1.1458	1.2152	1.2331
45.0	.0076	.0321	.1370	.3120	.5333	.7633	.9627	1.1041	1.1794	1.1997
50.0	.0064	.0272	.1192	.2777	.4844	.7057	.9038	1.0491	1.1295	1.1521
55.0	.0052	.0224	.1011	.2417	.4314	.6413	.8354	.9826	1.0671	1.0918
60.0	.0040	.0178	.0831	.2050	.3759	.5719	.7593	.9065	.9940	1.0205
65.0	.0029	.0134	.0658	.1688	.3198	.4997	.6781	.8232	.9126	.9405
70.0	.0020	.0095	.0498	.1342	.2645	.4268	.5941	.7352	.8251	.8542
75.0	.0012	.0062	.0355	.1022	.2120	.3555	.5099	.6450	.7343	.7642
80.0	.0006	.0035	.0233	.0739	.1636	.2880	.4280	.5555	.6429	.6731
85.0	.0002	.0016	.0137	.0500	.1210	.2261	.3507	.4692	.5535	.5836

α, deg \ σ, deg	100.0	110.0	120.0	130.0	140.0	150.0	160.0	170.0	180.0
1.0	.9821	.9816	.9816	.9816	.9816	.9816	.9816	.9816	.9816
2.0	.9979	.9975	.9975	.9975	.9975	.9975	.9975	.9975	.9975
4.0	1.0285	1.0281	1.0281	1.0281	1.0281	1.0281	1.0281	1.0281	1.0281
6.0	1.0577	1.0573	1.0573	1.0573	1.0573	1.0573	1.0573	1.0573	1.0573
8.0	1.0852	1.0848	1.0848	1.0848	1.0848	1.0848	1.0848	1.0848	1.0848
10.0	1.1110	1.1106	1.1106	1.1106	1.1106	1.1106	1.1106	1.1106	1.1106
12.0	1.1349	1.1346	1.1346	1.1346	1.1346	1.1346	1.1346	1.1346	1.1346
15.0	1.1669	1.1663	1.1663	1.1663	1.1663	1.1663	1.1663	1.1663	1.1663
20.0	1.2092	1.2076	1.2073	1.2073	1.2073	1.2073	1.2073	1.2073	1.2073
25.0	1.2367	1.2332	1.2325	1.2325	1.2325	1.2325	1.2325	1.2325	1.2325
30.0	1.2484	1.2422	1.2405	1.2403	1.2403	1.2403	1.2403	1.2403	1.2403
35.0	1.2440	1.2340	1.2299	1.2296	1.2296	1.2296	1.2296	1.2296	1.2296
40.0	1.2238	1.2089	1.2009	1.1994	1.1994	1.1994	1.1994	1.1994	1.1994
45.0	1.1879	1.1677	1.1540	1.1497	1.1496	1.1496	1.1496	1.1496	1.1496
50.0	1.1378	1.1113	1.0906	1.0817	1.0803	1.0802	1.0802	1.0802	1.0802
55.0	1.0750	1.0417	1.0124	.9967	.9926	.9923	.9923	.9923	.9923
60.0	1.0013	.9608	.9218	.8973	.8881	.8870	.8869	.8869	.8869
65.0	.9190	.8711	.8213	.7861	.7696	.7657	.7656	.7656	.7656
70.0	.8305	.7752	.7139	.6662	.6400	.6312	.6302	.6302	.6302
75.0	.7385	.6762	.6029	.5413	.5029	.4867	.4833	.4833	.4833
80.0	.6458	.5768	.4915	.4148	.3621	.3359	.3280	.3273	.3273
85.0	.5550	.4800	.3830	.2904	.2216	.1827	.1679	.1652	.1652

TABLE I.- CONTINUED

(b) C_A. Continued.

$\phi_1 = 105^0$; $\phi_2 = 255^0$; $\beta = 0^0$

α, deg \ σ, deg	5.0	10.0	20.0	30.0	40.0	50.0	60.0	70.0	80.0	90.0
1.0	.0152	.0596	.2215	.4413	.6634	.8414	.9536	1.0051	1.0190	1.0201
2.0	.0152	.0597	.2227	.4449	.6707	.8532	.9693	1.0235	1.0386	1.0399
4.0	.0152	.0598	.2245	.4513	.6844	.8754	.9995	1.0592	1.0769	1.0787
6.0	.0151	.0598	.2258	.4567	.6966	.8960	1.0279	1.0932	1.1137	1.1161
8.0	.0150	.0597	.2266	.4610	.7072	.9146	1.0543	1.1255	1.1489	1.1519
10.0	.0149	.0594	.2269	.4642	.7162	.9314	1.0788	1.1558	1.1823	1.1860
12.0	.0147	.0589	.2265	.4663	.7236	.9461	1.1011	1.1840	1.2138	1.2182
15.0	.0144	.0580	.2250	.4673	.7315	.9642	1.1303	1.2222	1.2569	1.2627
20.0	.0138	.0558	.2199	.4635	.7361	.9835	1.1667	1.2734	1.3170	1.3252
25.0	.0129	.0528	.2115	.4528	.7298	.9886	1.1871	1.3080	1.3607	1.3717
30.0	.0119	.0491	.2001	.4356	.7129	.9794	1.1907	1.3249	1.3868	1.4008
35.0	.0108	.0448	.1861	.4123	.6858	.9561	1.1774	1.3235	1.3945	1.4115
40.0	.0095	.0401	.1700	.3837	.6493	.9195	1.1477	1.3040	1.3834	1.4036
45.0	.0082	.0351	.1522	.3507	.6047	.8707	1.1025	1.2669	1.3541	1.3773
50.0	.0069	.0299	.1332	.3142	.5531	.8111	1.0431	1.2134	1.3072	1.3334
55.0	.0056	.0247	.1136	.2754	.4963	.7426	.9713	1.1450	1.2443	1.2732
60.0	.0044	.0197	.0940	.2354	.4359	.6673	.8894	1.0639	1.1674	1.1985
65.0	.0032	.0150	.0751	.1955	.3738	.5874	.7998	.9724	1.0786	1.1117
70.0	.0022	.0107	.0574	.1569	.3118	.5053	.7051	.8735	.9807	1.0153
75.0	.0014	.0070	.0413	.1207	.2518	.4236	.6085	.7701	.8768	.9124
80.0	.0007	.0041	.0275	.0880	.1957	.3448	.5126	.6653	.7698	.8059
85.0	.0003	.0019	.0164	.0599	.1451	.2712	.4205	.5623	.6632	.6992

α, deg \ σ, deg	100.0	110.0	120.0	130.0	140.0	150.0	160.0	170.0	180.0
1.0	1.0185	1.0185	1.0185	1.0185	1.0185	1.0185	1.0185	1.0185	1.0185
2.0	1.0399	1.0399	1.0399	1.0399	1.0399	1.0399	1.0399	1.0399	1.0399
4.0	1.0778	1.0778	1.0778	1.0778	1.0778	1.0778	1.0778	1.0778	1.0778
6.0	1.1154	1.1154	1.1154	1.1154	1.1154	1.1154	1.1154	1.1154	1.1154
8.0	1.1519	1.1519	1.1519	1.1519	1.1519	1.1519	1.1519	1.1519	1.1519
10.0	1.1852	1.1858	1.1858	1.1858	1.1858	1.1858	1.1858	1.1858	1.1858
12.0	1.2180	1.2175	1.2175	1.2175	1.2175	1.2175	1.2175	1.2175	1.2175
15.0	1.2620	1.2615	1.2615	1.2615	1.2615	1.2615	1.2615	1.2615	1.2615
20.0	1.3236	1.3226	1.3229	1.3229	1.3229	1.3229	1.3229	1.3229	1.3229
25.0	1.3686	1.3665	1.3663	1.3663	1.3663	1.3663	1.3663	1.3663	1.3663
30.0	1.3957	1.3908	1.3897	1.3897	1.3897	1.3897	1.3897	1.3897	1.3897
35.0	1.4041	1.3949	1.3920	1.3917	1.3917	1.3917	1.3917	1.3917	1.3917
40.0	1.3935	1.3788	1.3717	1.3705	1.3708	1.3708	1.3708	1.3708	1.3708
45.0	1.3643	1.3428	1.3294	1.3259	1.3257	1.3257	1.3257	1.3257	1.3257
50.0	1.3173	1.2881	1.2664	1.2578	1.2567	1.2567	1.2567	1.2567	1.2567
55.0	1.2539	1.2163	1.1843	1.1680	1.1642	1.1641	1.1641	1.1641	1.1641
60.0	1.1762	1.1296	1.0856	1.0590	1.0496	1.0484	1.0486	1.0486	1.0486
65.0	1.0864	1.0306	.9733	.9337	.9158	.9120	.9119	.9119	.9119
70.0	.9873	.9223	.8508	.7959	.7663	.7568	.7559	.7559	.7559
75.0	.8819	.8080	.7218	.6497	.6053	.5870	.5834	.5833	.5833
80.0	.7733	.6913	.5901	.4994	.4375	.4070	.3980	.3972	.3972
85.0	.6650	.5755	.4599	.3497	.2679	.2219	.2044	.2014	.2013

$\phi_1 = 105^0$; $\phi_2 = 255^0$; $\beta = 2^0$

α, deg \ σ, deg	5.0	10.0	20.0	30.0	40.0	50.0	60.0	70.0	80.0	90.0
1.0	.0151	.0595	.2213	.4408	.6626	.8406	.9527	1.0042	1.0182	1.0194
2.0	.0151	.0596	.2224	.4444	.6700	.8523	.9684	1.0226	1.0378	1.0392
4.0	.0151	.0597	.2243	.4508	.6837	.8746	.9985	1.0582	1.0761	1.0779
6.0	.0151	.0597	.2256	.4562	.6958	.8950	1.0269	1.0923	1.1128	1.1152
8.0	.0150	.0596	.2264	.4604	.7064	.9137	1.0533	1.1245	1.1480	1.1510
10.0	.0149	.0593	.2266	.4636	.7155	.9306	1.0778	1.1546	1.1814	1.1851
12.0	.0147	.0589	.2263	.4657	.7228	.9451	1.1000	1.1830	1.2128	1.2172
15.0	.0144	.0579	.2248	.4668	.7307	.9632	1.1292	1.2210	1.2558	1.2616
20.0	.0138	.0557	.2196	.4630	.7353	.9825	1.1656	1.2722	1.3159	1.3241
25.0	.0129	.0527	.2112	.4523	.7290	.9876	1.1859	1.3068	1.3595	1.3705
30.0	.0119	.0490	.1999	.4351	.7121	.9784	1.1895	1.3236	1.3856	1.3996
35.0	.0108	.0448	.1859	.4118	.6850	.9551	1.1762	1.3223	1.3932	1.4103
40.0	.0095	.0401	.1698	.3833	.6486	.9186	1.1466	1.3028	1.3822	1.4024
45.0	.0082	.0350	.1520	.3503	.6040	.8698	1.1014	1.2658	1.3529	1.3761
50.0	.0069	.0299	.1330	.3138	.5526	.8103	1.0421	1.2123	1.3061	1.3322
55.0	.0056	.0247	.1135	.2751	.4958	.7419	.9706	1.1440	1.2433	1.2721
60.0	.0044	.0197	.0939	.2352	.4355	.6666	.8886	1.0630	1.1664	1.1976
65.0	.0032	.0149	.0750	.1953	.3734	.5868	.7991	.9716	1.0777	1.1108
70.0	.0022	.0107	.0573	.1567	.3115	.5049	.7046	.8728	.9800	1.0146
75.0	.0014	.0070	.0413	.1206	.2516	.4233	.6080	.7695	.8761	.9117
80.0	.0007	.0041	.0275	.0880	.1955	.3445	.5123	.6649	.7694	.8054
85.0	.0003	.0019	.0163	.0599	.1450	.2710	.4203	.5620	.6629	.6988

α, deg \ σ, deg	100.0	110.0	120.0	130.0	140.0	150.0	160.0	170.0	180.0
1.0	1.0194	1.0194	1.0194	1.0194	1.0194	1.0194	1.0194	1.0194	1.0194
2.0	1.0392	1.0392	1.0392	1.0392	1.0392	1.0392	1.0392	1.0392	1.0392
4.0	1.0769	1.0769	1.0769	1.0769	1.0769	1.0769	1.0769	1.0769	1.0769
6.0	1.1146	1.1146	1.1146	1.1146	1.1146	1.1146	1.1146	1.1146	1.1146
8.0	1.1509	1.1509	1.1509	1.1509	1.1509	1.1509	1.1509	1.1509	1.1509
10.0	1.1849	1.1849	1.1849	1.1849	1.1849	1.1849	1.1849	1.1849	1.1849
12.0	1.2170	1.2165	1.2165	1.2165	1.2165	1.2165	1.2165	1.2165	1.2165
15.0	1.2610	1.2605	1.2605	1.2605	1.2605	1.2605	1.2605	1.2605	1.2605
20.0	1.3224	1.3219	1.3219	1.3219	1.3219	1.3219	1.3219	1.3219	1.3219
25.0	1.3674	1.3653	1.3650	1.3650	1.3650	1.3650	1.3650	1.3650	1.3650
30.0	1.3944	1.3895	1.3887	1.3884	1.3884	1.3884	1.3884	1.3884	1.3884
35.0	1.4028	1.3936	1.3907	1.3904	1.3904	1.3904	1.3904	1.3904	1.3904
40.0	1.3923	1.3775	1.3704	1.3695	1.3694	1.3694	1.3694	1.3694	1.3694
45.0	1.3631	1.3416	1.3281	1.3246	1.3244	1.3244	1.3244	1.3244	1.3244
50.0	1.3161	1.2869	1.2651	1.2566	1.2556	1.2554	1.2554	1.2554	1.2554
55.0	1.2529	1.2152	1.1831	1.1668	1.1630	1.1628	1.1628	1.1628	1.1628
60.0	1.1752	1.1286	1.0846	1.0579	1.0485	1.0475	1.0475	1.0475	1.0475
65.0	1.0855	1.0297	.9724	.9327	.9148	.9110	.9108	.9108	.9108
70.0	.9865	.9216	.8501	.7951	.7655	.7560	.7551	.7550	.7550
75.0	.8812	.8074	.7212	.6491	.6047	.5863	.5827	.5827	.5827
80.0	.7728	.6908	.5897	.4990	.4370	.4065	.3976	.3968	.3968
85.0	.6646	.5752	.4596	.3494	.2677	.2216	.2042	.2011	.2011

TABLE I.- CONTINUED

(b) C_A. Continued.

$\beta_1 = 120°$; $\beta_2 = 240°$; $\beta = 0°$

α, deg \ σ, deg	5.0	10.0	20.0	30.0	40.0	50.0	60.0	70.0	80.0	90.0
1.0	.0152	.0596	.2217	.4418	.6643	.8429	.9556	1.0074	1.0215	1.0226
2.0	.0152	.0597	.2230	.4459	.6727	.8562	.9733	1.0281	1.0436	1.0450
4.0	.0152	.0599	.2252	.4533	.6883	.8816	1.0076	1.0687	1.0871	1.0890
6.0	.0151	.0599	.2268	.4596	.7025	.9053	1.0402	1.1078	1.1293	1.1318
8.0	.0150	.0598	.2279	.4649	.7151	.9271	1.0711	1.1452	1.1701	1.1734
10.0	.0149	.0596	.2285	.4691	.7261	.9471	1.0999	1.1808	1.2092	1.2133
12.0	.0148	.0592	.2285	.4721	.7355	.9651	1.1267	1.2144	1.2465	1.2515
15.0	.0145	.0583	.2274	.4746	.7465	.9881	1.1626	1.2607	1.2986	1.3051
20.0	.0138	.0562	.2230	.4731	.7559	1.0154	1.2102	1.3256	1.3736	1.3852
25.0	.0130	.0533	.2152	.4645	.7541	1.0281	1.2413	1.3736	1.4326	1.4452
30.0	.0120	.0497	.2045	.4491	.7413	1.0259	1.2550	1.4032	1.4731	1.4892
35.0	.0109	.0454	.1910	.4274	.7177	1.0088	1.2509	1.4135	1.4941	1.5139
40.0	.0096	.0408	.1751	.4000	.6841	.9774	1.2290	1.4042	1.4950	1.5185
45.0	.0083	.0357	.1575	.3678	.6415	.9325	1.1901	1.3757	1.4757	1.5029
50.0	.0070	.0306	.1386	.3317	.5912	.8756	1.1352	1.3287	1.4369	1.4676
55.0	.0057	.0253	.1189	.2929	.5347	.8084	1.0662	1.2644	1.3797	1.4136
60.0	.0044	.0203	.0992	.2525	.4738	.7330	.9851	1.1855	1.3059	1.3426
65.0	.0033	.0155	.0799	.2117	.4103	.6515	.8943	1.0938	1.2177	1.2567
70.0	.0023	.0112	.0616	.1718	.3461	.5666	.7966	.9921	1.1177	1.1586
75.0	.0014	.0074	.0450	.1340	.2831	.4807	.6950	.8837	1.0091	1.0512
80.0	.0007	.0044	.0306	.0995	.2234	.3966	.5925	.7718	.8950	.9377
85.0	.0003	.0021	.0187	.0692	.1687	.3166	.4924	.6598	.7791	.8218

α, deg \ σ, deg	100.0	110.0	120.0	130.0	140.0	150.0	160.0	170.0	180.0
1.0	1.0205	1.0205	1.0205	1.0205	1.0205	1.0205	1.0205	1.0205	1.0205
2.0	1.0450	1.0450	1.0450	1.0450	1.0450	1.0450	1.0450	1.0450	1.0450
4.0	1.0879	1.0879	1.0879	1.0879	1.0879	1.0879	1.0879	1.0879	1.0879
6.0	1.1310	1.1310	1.1310	1.1310	1.1310	1.1310	1.1310	1.1310	1.1310
8.0	1.1733	1.1733	1.1733	1.1733	1.1733	1.1733	1.1733	1.1733	1.1733
10.0	1.2123	1.2130	1.2130	1.2130	1.2130	1.2130	1.2130	1.2130	1.2130
12.0	1.2512	1.2506	1.2506	1.2506	1.2506	1.2506	1.2506	1.2506	1.2506
15.0	1.3043	1.3036	1.3036	1.3036	1.3036	1.3036	1.3036	1.3036	1.3036
20.0	1.3812	1.3800	1.3803	1.3803	1.3803	1.3803	1.3803	1.3803	1.3803
25.0	1.4413	1.4388	1.4385	1.4385	1.4385	1.4305	1.4305	1.4305	1.4305
30.0	1.4830	1.4768	1.4755	1.4755	1.4755	1.4755	1.4755	1.4755	1.4755
35.0	1.5048	1.4934	1.4898	1.4894	1.4894	1.4894	1.4894	1.4894	1.4894
40.0	1.5062	1.4880	1.4791	1.4777	1.4780	1.4780	1.4780	1.4780	1.4780
45.0	1.4872	1.4607	1.4440	1.4397	1.4393	1.4393	1.4393	1.4393	1.4393
50.0	1.4482	1.4124	1.3853	1.3747	1.3732	1.3732	1.3732	1.3732	1.3732
55.0	1.3905	1.3446	1.3049	1.2845	1.2798	1.2796	1.2796	1.2796	1.2796
60.0	1.3158	1.2592	1.2050	1.1717	1.1601	1.1586	1.1588	1.1588	1.1588
65.0	1.2264	1.1590	1.0888	1.0396	1.0173	1.0125	1.0123	1.0123	1.0123
70.0	1.1251	1.0468	.9598	.8922	.8554	.8436	.8424	.8424	.8424
75.0	1.0148	.9263	.8220	.7340	.6793	.6565	.6521	.6520	.6520
80.0	.8990	.8009	.6794	.5698	.4944	.4569	.4458	.4448	.4448
85.0	.7811	.6746	.5365	.4046	.3063	.2507	.2295	.2257	.2256

$\beta_1 = 120°$; $\beta_2 = 240°$; $\beta = 2°$

α, deg \ σ, deg	5.0	10.0	20.0	30.0	40.0	50.0	60.0	70.0	80.0	90.0
1.0	.0151	.0595	.2214	.4413	.6636	.8420	.9546	1.0064	1.0205	1.0216
2.0	.0151	.0597	.2227	.4454	.6719	.8553	.9723	1.0272	1.0427	1.0440
4.0	.0151	.0598	.2249	.4527	.6875	.8806	1.0066	1.0677	1.0861	1.0880
6.0	.0151	.0599	.2265	.4591	.7017	.9043	1.0392	1.1067	1.1283	1.1308
8.0	.0150	.0598	.2276	.4643	.7143	.9261	1.0700	1.1441	1.1690	1.1723
10.0	.0149	.0595	.2282	.4685	.7253	.9461	1.0988	1.1796	1.2081	1.2122
12.0	.0148	.0591	.2282	.4716	.7347	.9641	1.1255	1.2132	1.2453	1.2503
15.0	.0145	.0583	.2272	.4741	.7456	.9871	1.1614	1.2594	1.2973	1.3039
20.0	.0138	.0561	.2227	.4726	.7550	1.0143	1.2089	1.3242	1.3725	1.3819
25.0	.0130	.0532	.2150	.4640	.7533	1.0270	1.2400	1.3722	1.4311	1.4438
30.0	.0120	.0496	.2042	.4486	.7404	1.0248	1.2537	1.4017	1.4716	1.4877
35.0	.0108	.0454	.1907	.4269	.7169	1.0077	1.2496	1.4121	1.4926	1.5124
40.0	.0096	.0407	.1749	.3996	.6833	.9763	1.2277	1.4028	1.4935	1.5170
45.0	.0083	.0357	.1573	.3674	.6407	.9315	1.1885	1.3743	1.4743	1.5014
50.0	.0070	.0305	.1384	.3314	.5905	.8747	1.1341	1.3273	1.4355	1.4661
55.0	.0057	.0253	.1188	.2926	.5341	.8076	1.0651	1.2634	1.3784	1.4122
60.0	.0044	.0203	.0990	.2522	.4733	.7322	.9841	1.1844	1.3046	1.3413
65.0	.0033	.0155	.0798	.2115	.4098	.6509	.8934	1.0927	1.2165	1.2555
70.0	.0023	.0112	.0616	.1716	.3457	.5660	.7958	.9912	1.1167	1.1575
75.0	.0014	.0074	.0450	.1339	.2829	.4803	.6943	.8829	1.0082	1.0502
80.0	.0007	.0044	.0305	.0994	.2232	.3962	.5920	.7711	.8943	.9370
85.0	.0003	.0021	.0186	.0691	.1686	.3164	.4920	.6593	.7785	.8211

α, deg \ σ, deg	100.0	110.0	120.0	130.0	140.0	150.0	160.0	170.0	180.0
1.0	1.0217	1.0217	1.0217	1.0217	1.0217	1.0203	1.0187	1.0217	1.0217
2.0	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440
4.0	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868
6.0	1.1301	1.1301	1.1301	1.1301	1.1301	1.1301	1.1301	1.1301	1.1301
8.0	1.1722	1.1722	1.1722	1.1722	1.1722	1.1722	1.1722	1.1722	1.1722
10.0	1.2120	1.2120	1.2120	1.2120	1.2120	1.2120	1.2120	1.2120	1.2120
12.0	1.2500	1.2494	1.2494	1.2494	1.2494	1.2494	1.2494	1.2494	1.2494
15.0	1.3031	1.3024	1.3024	1.3024	1.3024	1.3024	1.3024	1.3024	1.3024
20.0	1.3798	1.3791	1.3791	1.3791	1.3791	1.3791	1.3791	1.3791	1.3791
25.0	1.4399	1.4373	1.4370	1.4370	1.4370	1.4370	1.4370	1.4370	1.4370
30.0	1.4815	1.4753	1.4744	1.4740	1.4740	1.4740	1.4740	1.4740	1.4740
35.0	1.5033	1.4919	1.4882	1.4879	1.4879	1.4879	1.4879	1.4879	1.4879
40.0	1.5047	1.4865	1.4776	1.4764	1.4763	1.4763	1.4763	1.4763	1.4763
45.0	1.4857	1.4592	1.4425	1.4381	1.4377	1.4377	1.4377	1.4377	1.4377
50.0	1.4468	1.4110	1.3839	1.3731	1.3719	1.3717	1.3717	1.3717	1.3717
55.0	1.3891	1.3432	1.3035	1.2831	1.2783	1.2781	1.2781	1.2781	1.2781
60.0	1.3145	1.2580	1.2037	1.1704	1.1587	1.1575	1.1575	1.1575	1.1575
65.0	1.2253	1.1578	1.0877	1.0385	1.0161	1.0113	1.0111	1.0111	1.0111
70.0	1.1240	1.0458	.9589	.8913	.8544	.8426	.8414	.8414	.8414
75.0	1.0139	.9254	.8212	.7333	.6786	.6558	.6513	.6512	.6512
80.0	.8982	.8002	.6788	.5693	.4939	.4564	.4453	.4443	.4442
85.0	.7805	.6740	.5360	.4042	.3060	.2504	.2292	.2254	.2253

TABLE I.- CONTINUED

(b) C_A. Continued.

$\beta_1 = 105^\circ$; $\beta_2 = 255^\circ$; $\beta = 5^\circ$

α, deg \ σ, deg	5.0	10.0	20.0	30.0	40.0	50.0	60.0	70.0	80.0	90.0
1.0	.0150	.0591	.2199	.4382	.6588	.8361	.9481	.9998	1.0142	1.0142
2.0	.0150	.0592	.2210	.4417	.6662	.8478	.9637	1.0181	1.0336	1.0351
4.0	.0150	.0594	.2229	.4481	.6797	.8699	.9936	1.0535	1.0716	1.0736
6.0	.0150	.0594	.2242	.4534	.6918	.8902	1.0218	1.0873	1.1082	1.1107
8.0	.0149	.0592	.2249	.4577	.7024	.9087	1.0481	1.1193	1.1431	1.1462
10.0	.0148	.0589	.2252	.4608	.7113	.9254	1.0723	1.1494	1.1762	1.1801
12.0	.0146	.0585	.2249	.4629	.7187	.9400	1.0945	1.1774	1.2074	1.2121
15.0	.0143	.0576	.2234	.4640	.7265	.9580	1.1234	1.2153	1.2503	1.2562
20.0	.0137	.0554	.2182	.4602	.7311	.9771	1.1596	1.2661	1.3099	1.3182
25.0	.0128	.0524	.2099	.4496	.7248	.9822	1.1798	1.3004	1.3533	1.3644
30.0	.0118	.0487	.1986	.4324	.7080	.9730	1.1833	1.3172	1.3792	1.3932
35.0	.0107	.0445	.1848	.4093	.6811	.9499	1.1702	1.3159	1.3868	1.4039
40.0	.0095	.0398	.1688	.3810	.6449	.9136	1.1407	1.2965	1.3758	1.3960
45.0	.0082	.0348	.1510	.3482	.6006	.8651	1.0958	1.2597	1.3467	1.3699
50.0	.0069	.0297	.1322	.3120	.5495	.8060	1.0369	1.2066	1.3002	1.3263
55.0	.0056	.0245	.1128	.2735	.4931	.7380	.9657	1.1387	1.2370	1.2666
60.0	.0043	.0195	.0934	.2338	.4331	.6633	.8844	1.0582	1.1614	1.1925
65.0	.0032	.0149	.0746	.1942	.3714	.5840	.7954	.9675	1.0733	1.1063
70.0	.0022	.0106	.0570	.1559	.3099	.5025	.7015	.8693	.9762	1.0107
75.0	.0014	.0070	.0411	.1200	.2504	.4215	.6056	.7666	.8730	.9035
80.0	.0007	.0040	.0274	.0876	.1947	.3432	.5104	.6626	.7669	.8029
85.0	.0003	.0019	.0163	.0597	.1445	.2702	.4190	.5605	.6611	.6970

α, deg \ σ, deg	100.0	110.0	120.0	130.0	140.0	150.0	160.0	170.0	180.0
1.0	1.0154	1.0154	1.0154	1.0154	1.0154	1.0154	1.0154	1.0154	1.0150
2.0	1.0343	1.0343	1.0343	1.0343	1.0343	1.0343	1.0343	1.0343	1.0343
4.0	1.0730	1.0730	1.0730	1.0730	1.0730	1.0730	1.0730	1.0730	1.0730
6.0	1.1106	1.1106	1.1106	1.1106	1.1106	1.1106	1.1106	1.1106	1.1106
8.0	1.1461	1.1461	1.1461	1.1461	1.1461	1.1461	1.1461	1.1461	1.1461
10.0	1.1799	1.1796	1.1796	1.1796	1.1796	1.1796	1.1796	1.1796	1.1796
12.0	1.2117	1.2112	1.2112	1.2112	1.2112	1.2112	1.2112	1.2112	1.2112
15.0	1.2554	1.2548	1.2548	1.2548	1.2548	1.2548	1.2548	1.2548	1.2548
20.0	1.3164	1.3158	1.3158	1.3158	1.3158	1.3158	1.3159	1.3158	1.3158
25.0	1.3611	1.3588	1.3585	1.3585	1.3585	1.3585	1.3585	1.3585	1.3585
30.0	1.3880	1.3828	1.3819	1.3816	1.3816	1.3816	1.3816	1.3816	1.3816
35.0	1.3963	1.3868	1.3837	1.3834	1.3834	1.3834	1.3834	1.3834	1.3834
40.0	1.3858	1.3708	1.3634	1.3624	1.3624	1.3624	1.3624	1.3624	1.3624
45.0	1.3568	1.3351	1.3213	1.3177	1.3174	1.3174	1.3174	1.3174	1.3174
50.0	1.3102	1.2807	1.2587	1.2499	1.2488	1.2487	1.2487	1.2487	1.2487
55.0	1.2473	1.2095	1.1771	1.1606	1.1567	1.1565	1.1565	1.1565	1.1565
60.0	1.1702	1.1234	1.0792	1.0522	1.0427	1.0417	1.0416	1.0416	1.0416
65.0	1.0810	1.0252	.9677	.9278	.9096	.9057	.9056	.9056	.9056
70.0	.9827	.9177	.8461	.7909	.7611	.7515	.7506	.7506	.7506
75.0	.8780	.8043	.7180	.6458	.6013	.5828	.5792	.5791	.5791
80.0	.7703	.6884	.5874	.4967	.4347	.4041	.3951	.3943	.3943
85.0	.6628	.5735	.4581	.3481	.2664	.2204	.2029	.1999	.1998

$\beta_1 = 105^\circ$; $\beta_2 = 255^\circ$; $\beta = 15^\circ$

α, deg \ σ, deg	5.0	10.0	20.0	30.0	40.0	50.0	60.0	70.0	80.0	90.0
1.0	.0141	.0556	.2071	.4135	.6235	.7944	.9050	.9589	.9761	.9787
2.0	.0141	.0557	.2081	.4168	.6304	.8054	.9196	.9760	.9944	.9972
4.0	.0141	.0558	.2099	.4228	.6432	.8261	.9477	1.0093	1.0302	1.0334
6.0	.0141	.0558	.2111	.4278	.6545	.8453	.9742	1.0411	1.0646	1.0683
8.0	.0140	.0557	.2118	.4318	.6645	.8627	.9990	1.0712	1.0975	1.1018
10.0	.0139	.0554	.2120	.4348	.6729	.8783	1.0218	1.0995	1.1286	1.1336
12.0	.0138	.0550	.2117	.4367	.6798	.8920	1.0426	1.1259	1.1579	1.1637
15.0	.0135	.0541	.2103	.4377	.6872	.9090	1.0698	1.1616	1.1982	1.2052
20.0	.0129	.0521	.2055	.4342	.6914	.9270	1.1038	1.2092	1.2543	1.2635
25.0	.0121	.0493	.1977	.4242	.6856	.9317	1.1228	1.2415	1.2951	1.3069
30.0	.0111	.0458	.1871	.4081	.6698	.9231	1.1261	1.2572	1.3194	1.3340
35.0	.0101	.0419	.1741	.3864	.6445	.9014	1.1138	1.2560	1.3266	1.3441
40.0	.0089	.0374	.1590	.3597	.6105	.8673	1.0861	1.2378	1.3163	1.3367
45.0	.0077	.0327	.1423	.3289	.5688	.8217	1.0439	1.2032	1.2888	1.3121
50.0	.0065	.0279	.1246	.2948	.5207	.7661	.9885	1.1532	1.2451	1.2712
55.0	.0052	.0231	.1064	.2586	.4677	.7022	.9215	1.0894	1.1865	1.2150
60.0	.0041	.0184	.0881	.2213	.4113	.6319	.8450	1.0137	1.1146	1.1453
65.0	.0030	.0140	.0704	.1841	.3533	.5574	.7614	.9284	1.0318	1.0643
70.0	.0021	.0100	.0539	.1481	.2955	.4808	.6732	.8361	.9405	.9744
75.0	.0013	.0066	.0389	.1143	.2395	.4046	.5829	.7396	.8435	.8783
80.0	.0007	.0038	.0261	.0838	.1872	.3310	.4935	.6419	.7438	.7790
85.0	.0002	.0018	.0156	.0576	.1400	.2624	.4076	.5458	.6443	.6795

α, deg \ σ, deg	100.0	110.0	120.0	130.0	140.0	150.0	160.0	170.0	180.0
1.0	.9785	.9785	.9785	.9785	.9785	.9785	.9785	.9785	.9785
2.0	.9970	.9969	.9969	.9969	.9969	.9969	.9969	.9969	.9969
4.0	1.0331	1.0330	1.0330	1.0330	1.0330	1.0330	1.0330	1.0330	1.0330
6.0	1.0678	1.0674	1.0674	1.0674	1.0674	1.0674	1.0674	1.0674	1.0674
8.0	1.1011	1.1006	1.1006	1.1006	1.1006	1.1006	1.1006	1.1006	1.1006
10.0	1.1328	1.1323	1.1323	1.1323	1.1323	1.1323	1.1323	1.1323	1.1323
12.0	1.1626	1.1622	1.1622	1.1622	1.1622	1.1622	1.1622	1.1622	1.1622
15.0	1.2035	1.2029	1.2028	1.2028	1.2028	1.2028	1.2029	1.2028	1.2028
20.0	1.2608	1.2589	1.2586	1.2586	1.2586	1.2586	1.2586	1.2586	1.2586
25.0	1.3026	1.2986	1.2978	1.2978	1.2978	1.2978	1.2978	1.2978	1.2978
30.0	1.3278	1.3205	1.3186	1.3183	1.3183	1.3183	1.3183	1.3183	1.3183
35.0	1.3356	1.3239	1.3190	1.3186	1.3186	1.3186	1.3186	1.3186	1.3186
40.0	1.3257	1.3084	1.2988	1.2970	1.2970	1.2970	1.2970	1.2970	1.2970
45.0	1.2984	1.2746	1.2583	1.2532	1.2528	1.2528	1.2528	1.2528	1.2528
50.0	1.2545	1.2233	1.1986	1.1879	1.1863	1.1861	1.1861	1.1861	1.1861
55.0	1.1954	1.1562	1.1214	1.1026	1.0976	1.0973	1.0973	1.0973	1.0973
60.0	1.1229	1.0752	1.0289	.9996	.9886	.9872	.9872	.9872	.9872
65.0	1.0391	.9827	.9238	.8818	.8620	.8574	.8572	.8572	.8572
70.0	.9466	.8817	.8092	.7526	.7212	.7106	.7095	.7095	.7095
75.0	.8483	.7751	.6887	.6157	.5700	.5507	.5464	.5466	.5466
80.0	.7470	.6661	.5658	.4754	.4130	.3818	.3724	.3715	.3715
85.0	.6459	.5581	.4443	.3356	.2546	.2087	.1912	.1880	.1880

TABLE I.- CONTINUED

(b) C_A. Continued.

$\beta_1 = 135^o$; $\beta_2 = 225^o$; $\beta = 0^o$

α, deg \ σ, deg	5.0	10.0	20.0	30.0	40.0	50.0	60.0	70.0	80.0	90.0
1.0	.0152	.0596	.2218	.4422	.6651	.8442	.9572	1.0093	1.0235	1.0246
2.0	.0152	.0598	.2232	.4467	.6742	.8587	.9766	1.0320	1.0477	1.0491
4.0	.0152	.0600	.2257	.4549	.6915	.8867	1.0143	1.0766	1.0955	1.0975
6.0	.0151	.0601	.2276	.4620	.7073	.9130	1.0506	1.1199	1.1423	1.1450
8.0	.0151	.0600	.2290	.4681	.7217	.9376	1.0851	1.1617	1.1878	1.1914
10.0	.0150	.0598	.2298	.4731	.7344	.9603	1.1177	1.2018	1.2319	1.2364
12.0	.0148	.0594	.2301	.4770	.7455	.9811	1.1483	1.2400	1.2742	1.2798
15.0	.0145	.0586	.2294	.4807	.7590	1.0083	1.1900	1.2934	1.3342	1.3414
20.0	.0139	.0565	.2256	.4812	.7726	1.0425	1.2473	1.3703	1.4228	1.4333
25.0	.0130	.0537	.2184	.4744	.7747	1.0619	1.2880	1.4303	1.4950	1.5092
30.0	.0120	.0501	.2081	.4606	.7655	1.0660	1.3109	1.4715	1.5487	1.5669
35.0	.0109	.0460	.1950	.4403	.7450	1.0545	1.3151	1.4927	1.5822	1.6047
40.0	.0097	.0413	.1795	.4140	.7141	1.0279	1.3006	1.4932	1.5945	1.6213
45.0	.0084	.0363	.1620	.3826	.6734	.9869	1.2678	1.4730	1.5853	1.6163
50.0	.0071	.0311	.1432	.3469	.6245	.9328	1.2177	1.4327	1.5547	1.5897
55.0	.0058	.0259	.1235	.3082	.5686	.8672	1.1519	1.3736	1.5038	1.5425
60.0	.0045	.0208	.1036	.2675	.5075	.7922	1.0723	1.2974	1.4340	1.4761
65.0	.0033	.0160	.0840	.2260	.4431	.7100	.9813	1.2065	1.3476	1.3924
70.0	.0023	.0116	.0654	.1852	.3773	.6231	.8818	1.1036	1.2471	1.2941
75.0	.0015	.0078	.0484	.1461	.3121	.5341	.7767	.9918	1.1355	1.1840
80.0	.0008	.0046	.0333	.1101	.2496	.4458	.6693	.8746	1.0163	1.0656
85.0	.0003	.0023	.0208	.0781	.1915	.3609	.5627	.7555	.8932	.9425

α, deg \ σ, deg	100.0	110.0	120.0	130.0	140.0	150.0	160.0	170.0	180.0
1.0	1.0219	1.0219	1.0219	1.0219	1.0219	1.0219	1.0219	1.0219	1.0219
2.0	1.0491	1.0491	1.0491	1.0491	1.0491	1.0491	1.0491	1.0491	1.0491
4.0	1.0961	1.0961	1.0961	1.0961	1.0961	1.0961	1.0961	1.0961	1.0961
6.0	1.1439	1.1439	1.1439	1.1439	1.1439	1.1439	1.1439	1.1439	1.1439
8.0	1.1913	1.1913	1.1913	1.1913	1.1913	1.1913	1.1913	1.1913	1.1913
10.0	1.2350	1.2359	1.2359	1.2359	1.2359	1.2359	1.2359	1.2359	1.2359
12.0	1.2793	1.2786	1.2786	1.2786	1.2786	1.2786	1.2786	1.2786	1.2786
15.0	1.3404	1.3395	1.3395	1.3395	1.3395	1.3395	1.3395	1.3395	1.3395
20.0	1.4308	1.4293	1.4297	1.4297	1.4297	1.4297	1.4297	1.4297	1.4297
25.0	1.5046	1.5013	1.5009	1.5009	1.5009	1.5009	1.5009	1.5009	1.5009
30.0	1.5595	1.5517	1.5499	1.5499	1.5499	1.5499	1.5499	1.5499	1.5499
35.0	1.5939	1.5797	1.5749	1.5744	1.5744	1.5744	1.5744	1.5744	1.5744
40.0	1.6068	1.5844	1.5728	1.5709	1.5714	1.5714	1.5714	1.5714	1.5714
45.0	1.5977	1.5656	1.5442	1.5384	1.5380	1.5380	1.5380	1.5380	1.5380
50.0	1.5670	1.5239	1.4900	1.4760	1.4741	1.4741	1.4741	1.4741	1.4741
55.0	1.5155	1.4606	1.4117	1.3855	1.3792	1.3790	1.3790	1.3790	1.3790
60.0	1.4448	1.3776	1.3117	1.2699	1.2546	1.2529	1.2529	1.2529	1.2529
65.0	1.3571	1.2774	1.1931	1.1325	1.1039	1.0976	1.0974	1.0974	1.0974
70.0	1.2551	1.1631	1.0595	.9776	.9318	.9165	.9150	.9150	.9150
75.0	1.1417	1.0381	.9149	.8099	.7435	.7150	.7092	.7090	.7090
80.0	1.0206	.9062	.7638	.6345	.5446	.4992	.4854	.4841	.4841
85.0	.8953	.7715	.6107	.4566	.3413	.2756	.2503	.2457	.2456

$\beta_1 = 135^o$; $\beta_2 = 225^o$; $\beta = 2^o$

α, deg \ σ, deg	5.0	10.0	20.0	30.0	40.0	50.0	60.0	70.0	80.0	90.0
1.0	.0151	.0595	.2216	.4417	.6643	.8432	.9562	1.0082	1.0224	1.0236
2.0	.0152	.0597	.2230	.4461	.6735	.8577	.9755	1.0309	1.0466	1.0480
4.0	.0152	.0599	.2254	.4543	.6907	.8856	1.0132	1.0754	1.0944	1.0964
6.0	.0151	.0600	.2273	.4615	.7065	.9117	1.0494	1.1187	1.1411	1.1439
8.0	.0150	.0599	.2287	.4676	.7208	.9365	1.0839	1.1605	1.1866	1.1902
10.0	.0149	.0597	.2295	.4726	.7335	.9592	1.1164	1.2005	1.2306	1.2351
12.0	.0148	.0593	.2298	.4765	.7446	.9799	1.1470	1.2387	1.2729	1.2784
15.0	.0145	.0585	.2291	.4802	.7581	1.0071	1.1886	1.2920	1.3327	1.3400
20.0	.0139	.0565	.2253	.4806	.7716	1.0413	1.2459	1.3688	1.4212	1.4317
25.0	.0130	.0536	.2181	.4738	.7738	1.0607	1.2866	1.4287	1.4934	1.5076
30.0	.0120	.0501	.2079	.4601	.7646	1.0647	1.3094	1.4699	1.5470	1.5653
35.0	.0109	.0459	.1948	.4398	.7442	1.0533	1.3136	1.4910	1.5805	1.6030
40.0	.0097	.0412	.1793	.4135	.7132	1.0267	1.2991	1.4915	1.5928	1.6195
45.0	.0084	.0363	.1618	.3821	.6727	.9857	1.2663	1.4714	1.5836	1.6145
50.0	.0071	.0311	.1430	.3465	.6237	.9317	1.2163	1.4311	1.5530	1.5880
55.0	.0057	.0259	.1233	.3078	.5679	.8662	1.1506	1.3721	1.5022	1.5409
60.0	.0045	.0208	.1034	.2671	.5069	.7913	1.0711	1.2960	1.4325	1.4745
65.0	.0033	.0160	.0839	.2258	.4426	.7092	.9802	1.2052	1.3461	1.3910
70.0	.0023	.0116	.0653	.1850	.3769	.6224	.8808	1.1024	1.2457	1.2927
75.0	.0015	.0078	.0483	.1460	.3118	.5336	.7759	.9908	1.1343	1.1828
80.0	.0008	.0046	.0333	.1100	.2493	.4454	.6686	.8737	1.0153	1.0646
85.0	.0003	.0023	.0208	.0780	.1913	.3605	.5621	.7547	.8923	.9416

α, deg \ σ, deg	100.0	110.0	120.0	130.0	140.0	150.0	160.0	170.0	180.0
1.0	1.0236	1.0236	1.0236	1.0236	1.0236	1.0236	1.0232	1.0236	1.0236
2.0	1.0452	1.0452	1.0452	1.0452	1.0452	1.0452	1.0448	1.0452	1.0452
4.0	1.0948	1.0948	1.0948	1.0948	1.0948	1.0948	1.0948	1.0948	1.0948
6.0	1.1429	1.1429	1.1429	1.1429	1.1429	1.1429	1.1429	1.1429	1.1429
8.0	1.1901	1.1901	1.1901	1.1901	1.1901	1.1901	1.1901	1.1901	1.1901
10.0	1.2349	1.2349	1.2349	1.2349	1.2349	1.2349	1.2349	1.2349	1.2349
12.0	1.2780	1.2773	1.2773	1.2773	1.2773	1.2773	1.2773	1.2773	1.2773
15.0	1.3390	1.3381	1.3381	1.3381	1.3381	1.3381	1.3381	1.3381	1.3381
20.0	1.4292	1.4284	1.4283	1.4283	1.4283	1.4283	1.4283	1.4283	1.4283
25.0	1.5029	1.4996	1.4992	1.4992	1.4992	1.4992	1.4992	1.4992	1.4992
30.0	1.5578	1.5500	1.5487	1.5482	1.5482	1.5482	1.5482	1.5482	1.5482
35.0	1.5922	1.5780	1.5731	1.5726	1.5726	1.5726	1.5726	1.5726	1.5726
40.0	1.6051	1.5826	1.5710	1.5695	1.5694	1.5694	1.5694	1.5694	1.5694
45.0	1.5960	1.5639	1.5425	1.5367	1.5362	1.5362	1.5362	1.5362	1.5362
50.0	1.5653	1.5222	1.4883	1.4742	1.4726	1.4724	1.4724	1.4724	1.4724
55.0	1.5138	1.4590	1.4101	1.3839	1.3776	1.3773	1.3773	1.3773	1.3773
60.0	1.4433	1.3761	1.3102	1.2684	1.2531	1.2515	1.2514	1.2514	1.2514
65.0	1.3557	1.2760	1.1918	1.1312	1.1026	1.0963	1.0961	1.0961	1.0961
70.0	1.2537	1.1618	1.0583	.9765	.9307	.9154	.9139	.9138	.9138
75.0	1.1406	1.0370	.9139	.8090	.7426	.7142	.7083	.7082	.7082
80.0	1.0196	.9053	.7630	.6338	.5440	.4986	.4847	.4835	.4835
85.0	.8944	.7708	.6101	.4562	.3409	.2753	.2500	.2454	.2453

TABLE I.- CONTINUED

(b) C_A. Continued.

$\beta_1 = 120°$; $\beta_2 = 240°$; $\beta = 5°$

α, deg \ σ, deg	5.0	10.0	20.0	30.0	40.0	50.0	60.0	70.0	80.0	90.0
1.0	.00150	.0591	.2200	.4386	.6596	.8373	.9496	1.0015	1.0158	1.0170
2.0	.00151	.0593	.2213	.4426	.6679	.8505	.9672	1.0221	1.0378	1.0392
4.0	.00150	.0595	.2235	.4500	.6834	.8756	1.0012	1.0623	1.0809	1.0829
6.0	.00150	.0595	.2251	.4563	.6975	.8991	1.0336	1.1011	1.1228	1.1255
8.0	.00149	.0594	.2262	.4615	.7100	.9209	1.0642	1.1382	1.1633	1.1667
10.0	.00148	.0591	.2268	.4656	.7210	.9407	1.0928	1.1736	1.2071	1.2063
12.0	.00147	.0587	.2268	.4687	.7303	.9585	1.1194	1.2069	1.2391	1.2442
15.0	.00144	.0579	.2257	.4712	.7418	.9814	1.1550	1.2528	1.2908	1.2974
20.0	.00137	.0558	.2213	.4697	.7505	1.0005	1.2023	1.3172	1.3655	1.3749
25.0	.00129	.0529	.2136	.4611	.7488	1.0211	1.2332	1.3649	1.4238	1.4364
30.0	.00119	.0493	.2029	.4459	.7360	1.0189	1.2468	1.3942	1.4640	1.4801
35.0	.00108	.0451	.1895	.4243	.7126	1.0019	1.2426	1.4045	1.4848	1.5046
40.0	.00095	.0404	.1738	.3971	.6792	.9707	1.2209	1.3953	1.4857	1.5092
45.0	.00083	.0355	.1563	.3652	.6370	.9262	1.1823	1.3670	1.4666	1.4937
50.0	.00069	.0303	.1376	.3294	.5871	.8698	1.1279	1.3203	1.4281	1.4586
55.0	.00056	.0252	.1181	.2908	.5310	.8031	1.0594	1.2566	1.3713	1.4051
60.0	.00044	.0201	.0984	.2507	.4706	.7282	.9788	1.1783	1.2981	1.3346
65.0	.00033	.0154	.0793	.2102	.4075	.6473	.8887	1.0872	1.2105	1.2494
70.0	.00023	.0111	.0612	.1706	.3438	.5631	.7918	.9863	1.1113	1.1520
75.0	.00014	.0074	.0447	.1331	.2814	.4778	.6910	.8787	1.0035	1.0434
80.0	.00007	.0043	.0304	.0988	.2221	.3943	.5893	.7677	.8903	.9320
85.0	.00003	.0021	.0185	.0688	.1678	.3150	.4899	.6565	.7753	.8177

α, deg \ σ, deg	100.0	110.0	120.0	130.0	140.0	150.0	160.0	170.0	180.0
1.0	1.0170	1.0170	1.0170	1.0170	1.0170	1.0170	1.0170	1.0170	1.0170
2.0	1.0392	1.0392	1.0392	1.0392	1.0392	1.0392	1.0392	1.0392	1.0392
4.0	1.0823	1.0823	1.0823	1.0823	1.0823	1.0823	1.0823	1.0823	1.0823
6.0	1.1254	1.1254	1.1254	1.1254	1.1254	1.1254	1.1254	1.1254	1.1254
8.0	1.1665	1.1665	1.1665	1.1665	1.1665	1.1665	1.1665	1.1665	1.1665
10.0	1.2061	1.2057	1.2057	1.2057	1.2057	1.2057	1.2057	1.2057	1.2057
12.0	1.2438	1.2431	1.2431	1.2431	1.2431	1.2431	1.2431	1.2431	1.2431
15.0	1.2965	1.2958	1.2958	1.2958	1.2958	1.2958	1.2958	1.2958	1.2958
20.0	1.3728	1.3720	1.3720	1.3720	1.3720	1.3720	1.3720	1.3720	1.3720
25.0	1.4325	1.4297	1.4292	1.4292	1.4292	1.4292	1.4292	1.4292	1.4292
30.0	1.4738	1.4674	1.4663	1.4659	1.4659	1.4659	1.4659	1.4659	1.4659
35.0	1.4955	1.4838	1.4799	1.4796	1.4796	1.4796	1.4796	1.4796	1.4796
40.0	1.4969	1.4785	1.4693	1.4680	1.4680	1.4680	1.4680	1.4680	1.4680
45.0	1.4780	1.4614	1.4343	1.4298	1.4295	1.4295	1.4295	1.4295	1.4295
50.0	1.4393	1.4035	1.3761	1.3651	1.3638	1.3636	1.3636	1.3636	1.3636
55.0	1.3820	1.3361	1.2962	1.2788	1.2707	1.2704	1.2704	1.2704	1.2704
60.0	1.3079	1.2514	1.1971	1.1636	1.1517	1.1505	1.1504	1.1504	1.1504
65.0	1.2192	1.1519	1.0818	1.0325	1.0099	1.0050	1.0049	1.0049	1.0049
70.0	1.1186	1.0406	.9538	.8862	.8493	.8373	.8362	.8361	.8361
75.0	1.0092	.9210	.8170	.7292	.6746	.6517	.6472	.6471	.6471
80.0	.8942	.7965	.6755	.5663	.4911	.4536	.4424	.4414	.4414
85.0	.7773	.6712	.5337	.4023	.3044	.2489	.2277	.2240	.2239

$\beta_1 = 120°$; $\beta_2 = 240°$; $\beta = 15°$

α, deg \ σ, deg	5.0	10.0	20.0	30.0	40.0	50.0	60.0	70.0	80.0	90.0
1.0	.00141	.0556	.2071	.4134	.6232	.7932	.9026	.9552	.9715	.9736
2.0	.00142	.0557	.2083	.4172	.6310	.8056	.9191	.9746	.9922	.9945
4.0	.00141	.0559	.2104	.4241	.6455	.8293	.9511	1.0124	1.0327	1.0356
6.0	.00141	.0559	.2119	.4300	.6588	.8514	.9816	1.0489	1.0721	1.0756
8.0	.00140	.0558	.2129	.4350	.6706	.8718	1.0104	1.0838	1.1102	1.1144
10.0	.00139	.0556	.2134	.4389	.6809	.8904	1.0373	1.1170	1.1467	1.1517
12.0	.00138	.0552	.2134	.4417	.6896	.9072	1.0623	1.1484	1.1815	1.1873
15.0	.00135	.0544	.2129	.4441	.6998	.9287	1.0958	1.1915	1.2301	1.2373
20.0	.00129	.0528	.2083	.4426	.7086	.9542	1.1402	1.2521	1.3003	1.3102
25.0	.00121	.0497	.2011	.4346	.7070	.9660	1.1692	1.2949	1.3551	1.3680
30.0	.00112	.0464	.1910	.4203	.6950	.9640	1.1820	1.3245	1.3929	1.4091
35.0	.00101	.0424	.1784	.4000	.6730	.9480	1.1781	1.3341	1.4125	1.4321
40.0	.00090	.0380	.1637	.3745	.6416	.9187	1.1577	1.3255	1.4133	1.4364
45.0	.00078	.0334	.1472	.3444	.6018	.8768	1.1214	1.2988	1.3953	1.4219
50.0	.00065	.0285	.1296	.3107	.5549	.8237	1.0702	1.2550	1.3591	1.3889
55.0	.00053	.0237	.1112	.2745	.5022	.7611	1.0058	1.1952	1.3058	1.3385
60.0	.00041	.0189	.0928	.2368	.4454	.6906	.9301	1.1214	1.2369	1.2723
65.0	.00031	.0145	.0748	.1987	.3861	.6147	.8454	1.0358	1.1546	1.1921
70.0	.00021	.00105	.0578	.1615	.3262	.5354	.7543	.9410	1.0613	1.1006
75.0	.00013	.0070	.0423	.1263	.2675	.4553	.6595	.8392	.9599	1.0004
80.0	.00007	.0041	.0288	.0940	.2118	.3768	.5639	.7334	.8536	.8946
85.0	.00003	.0020	.0177	.0658	.1608	.3022	.4705	.6309	.7454	.7864

α, deg \ σ, deg	100.0	110.0	120.0	130.0	140.0	150.0	160.0	170.0	180.0
1.0	.9735	.9735	.9735	.9735	.9735	.9735	.9735	.9735	.9735
2.0	.9944	.9943	.9943	.9943	.9943	.9943	.9943	.9943	.9943
4.0	1.0354	1.0353	1.0353	1.0353	1.0353	1.0353	1.0353	1.0353	1.0353
6.0	1.0752	1.0752	1.0752	1.0752	1.0752	1.0752	1.0752	1.0752	1.0752
8.0	1.1138	1.1137	1.1137	1.1137	1.1137	1.1137	1.1137	1.1137	1.1137
10.0	1.1509	1.1504	1.1504	1.1504	1.1504	1.1504	1.1504	1.1504	1.1504
12.0	1.1862	1.1859	1.1859	1.1859	1.1859	1.1859	1.1859	1.1859	1.1859
15.0	1.2357	1.2350	1.2350	1.2350	1.2350	1.2350	1.2350	1.2350	1.2350
20.0	1.3072	1.3052	1.3048	1.3048	1.3048	1.3048	1.3048	1.3048	1.3048
25.0	1.3633	1.3588	1.3578	1.3578	1.3578	1.3578	1.3578	1.3578	1.3578
30.0	1.4021	1.3938	1.3914	1.3911	1.3911	1.3911	1.3911	1.3911	1.3911
35.0	1.4225	1.4090	1.4031	1.4026	1.4026	1.4026	1.4026	1.4026	1.4026
40.0	1.4238	1.4037	1.3922	1.3900	1.3900	1.3900	1.3900	1.3900	1.3900
45.0	1.4060	1.3782	1.3588	1.3525	1.3520	1.3520	1.3520	1.3520	1.3520
50.0	1.3697	1.3331	1.3038	1.2907	1.2886	1.2884	1.2884	1.2884	1.2884
55.0	1.3138	1.2698	1.2285	1.2058	1.1996	1.1992	1.1992	1.1992	1.1992
60.0	1.2461	1.1902	1.1353	1.1002	1.0867	1.0849	1.0849	1.0849	1.0849
65.0	1.1627	1.0966	1.0269	.9768	.9528	.9470	.9468	.9468	.9468
70.0	1.0682	.9920	.9066	.8392	.8015	.7886	.7872	.7871	.7871
75.0	.9653	.8795	.7780	.6916	.6372	.6138	.6089	.6088	.6088
80.0	.8572	.7626	.6449	.5384	.4647	.4275	.4162	.4151	.4151
85.0	.7472	.6447	.5116	.3843	.2891	.2351	.2144	.2106	.2105

TABLE I.- CONTINUED

(b) C_A. Continued.

$\beta_1 = 135^\circ$; $\beta_2 = 225^\circ$; $\beta = 5^\circ$

α, deg \ σ, deg	5.0	10.0	20.0	30.0	40.0	50.0	60.0	70.0	80.0	90.0
1.0	.0150	.0591	.2202	.4389	.6603	.8382	.9507	1.0027	1.0170	1.0182
2.0	.0151	.0593	.2216	.4434	.6694	.8527	.9700	1.0252	1.0410	1.0425
4.0	.0151	.0595	.2240	.4515	.6865	.8804	1.0074	1.0695	1.0885	1.0906
6.0	.0150	.0596	.2259	.4586	.7022	.9065	1.0434	1.1125	1.1349	1.1377
8.0	.0149	.0595	.2273	.4647	.7164	.9309	1.0776	1.1540	1.1801	1.1837
10.0	.0148	.0593	.2281	.4696	.7291	.9535	1.1100	1.1938	1.2238	1.2284
12.0	.0147	.0589	.2283	.4735	.7401	.9741	1.1403	1.2317	1.2659	1.2714
15.0	.0144	.0581	.2277	.4772	.7534	1.0011	1.1817	1.2846	1.3253	1.3326
20.0	.0138	.0561	.2239	.4776	.7669	1.0350	1.2386	1.3610	1.4133	1.4238
25.0	.0129	.0533	.2168	.4709	.7691	1.0543	1.2790	1.4205	1.4850	1.4991
30.0	.0120	.0497	.2065	.4572	.7599	1.0583	1.3017	1.4614	1.5383	1.5564
35.0	.0108	.0456	.1935	.4370	.7396	1.0469	1.3059	1.4824	1.5715	1.5939
40.0	.0096	.0410	.1781	.4109	.7089	1.0205	1.2915	1.4829	1.5837	1.6104
45.0	.0083	.0360	.1608	.3797	.6686	.9798	1.2589	1.4629	1.5745	1.6054
50.0	.0070	.0309	.1421	.3444	.6200	.9262	1.2092	1.4229	1.5442	1.5790
55.0	.0057	.0257	.1226	.3059	.5645	.8611	1.1439	1.3642	1.4937	1.5322
60.0	.0045	.0206	.1028	.2655	.5039	.7867	1.0649	1.2886	1.4244	1.4663
65.0	.0033	.0159	.0834	.2244	.4400	.7051	.9746	1.1984	1.3386	1.3832
70.0	.0023	.0115	.0649	.1839	.3747	.6188	.8759	1.0962	1.2389	1.2856
75.0	.0014	.0077	.0480	.1451	.3100	.5306	.7716	.9853	1.1282	1.1764
80.0	.0008	.0046	.0331	.1093	.2479	.4429	.6649	.8690	1.0099	1.0589
85.0	.0003	.0023	.0207	.0776	.1903	.3586	.5592	.7508	.8877	.9367

α, deg \ σ, deg	100.0	110.0	120.0	130.0	140.0	150.0	160.0	170.0	180.0
1.0	1.0182	1.0182	1.0182	1.0182	1.0182	1.0182	1.0181	1.0182	1.0182
2.0	1.0425	1.0425	1.0425	1.0425	1.0425	1.0425	1.0424	1.0425	1.0425
4.0	1.0905	1.0906	1.0906	1.0906	1.0906	1.0906	1.0904	1.0906	1.0905
6.0	1.1377	1.1377	1.1377	1.1377	1.1377	1.1377	1.1377	1.1377	1.1377
8.0	1.1836	1.1836	1.1836	1.1836	1.1836	1.1836	1.1836	1.1836	1.1836
10.0	1.2281	1.2276	1.2276	1.2276	1.2276	1.2276	1.2276	1.2276	1.2276
12.0	1.2709	1.2701	1.2701	1.2701	1.2701	1.2701	1.2701	1.2701	1.2701
15.0	1.3315	1.3305	1.3305	1.3305	1.3305	1.3305	1.3305	1.3305	1.3305
20.0	1.4212	1.4202	1.4202	1.4202	1.4202	1.4202	1.4202	1.4202	1.4202
25.0	1.4944	1.4909	1.4904	1.4904	1.4904	1.4904	1.4904	1.4904	1.4904
30.0	1.5490	1.5410	1.5396	1.5391	1.5391	1.5391	1.5391	1.5391	1.5391
35.0	1.5831	1.5688	1.5637	1.5632	1.5632	1.5632	1.5632	1.5632	1.5632
40.0	1.5959	1.5734	1.5617	1.5600	1.5601	1.5601	1.5601	1.5601	1.5601
45.0	1.5869	1.5548	1.5333	1.5273	1.5269	1.5269	1.5269	1.5269	1.5269
50.0	1.5564	1.5134	1.4794	1.4652	1.4635	1.4633	1.4633	1.4633	1.4633
55.0	1.5053	1.4506	1.4017	1.3755	1.3690	1.3687	1.3687	1.3687	1.3687
60.0	1.4351	1.3682	1.3025	1.2607	1.2453	1.2436	1.2435	1.2435	1.2435
65.0	1.3481	1.2688	1.1848	1.1244	1.0958	1.0894	1.0892	1.0892	1.0892
70.0	1.2468	1.1553	1.0522	.9707	.9250	.9096	.9081	.9081	.9081
75.0	1.1344	1.0313	.9088	.8042	.7381	.7097	.7038	.7037	.7037
80.0	1.0141	.9004	.7588	.6301	.5407	.4955	.4817	.4804	.4804
85.0	.8898	.7667	.6069	.4536	.3389	.2736	.2484	.2438	.2437

$\beta_1 = 135^\circ$; $\beta_2 = 225^\circ$; $\beta = 15^\circ$

α, deg \ σ, deg	5.0	10.0	20.0	30.0	40.0	50.0	60.0	70.0	80.0	90.0
1.0	.0141	.0556	.2071	.4133	.6226	.7918	.8999	.9512	.9664	.9681
2.0	.0142	.0558	.2085	.4175	.6312	.8054	.9180	.9723	.9890	.9910
4.0	.0142	.0560	.2107	.4252	.6473	.8314	.9532	1.0140	1.0336	1.0362
6.0	.0141	.0560	.2125	.4318	.6620	.8560	.9870	1.0544	1.0772	1.0805
8.0	.0141	.0560	.2138	.4375	.6754	.8790	1.0192	1.0934	1.1197	1.1237
10.0	.0140	.0558	.2146	.4422	.6873	.9002	1.0497	1.1308	1.1608	1.1657
12.0	.0138	.0554	.2148	.4458	.6976	.9195	1.0782	1.1665	1.2003	1.2062
15.0	.0135	.0547	.2142	.4493	.7102	.9449	1.1171	1.2162	1.2562	1.2637
20.0	.0130	.0528	.2106	.4497	.7229	.9769	1.1706	1.2880	1.3309	1.3494
25.0	.0122	.0501	.2039	.4434	.7249	.9950	1.2086	1.3440	1.4063	1.4203
30.0	.0112	.0468	.1943	.4305	.7163	.9987	1.2299	1.3824	1.4564	1.4742
35.0	.0102	.0429	.1821	.4116	.6972	.9880	1.2338	1.4022	1.4877	1.5094
40.0	.0090	.0385	.1676	.3870	.6683	.9632	1.2203	1.4027	1.4992	1.5249
45.0	.0078	.0339	.1514	.3577	.6304	.9250	1.1897	1.3838	1.4905	1.5202
50.0	.0066	.0290	.1338	.3244	.5847	.8745	1.1430	1.3462	1.4620	1.4954
55.0	.0054	.0242	.1154	.2883	.5326	.8133	1.0815	1.2911	1.4145	1.4514
60.0	.0042	.0194	.0968	.2503	.4756	.7433	1.0073	1.2200	1.3494	1.3894
65.0	.0031	.0149	.0786	.2117	.4155	.6666	.9224	1.1351	1.2688	1.3113
70.0	.0022	.0108	.0612	.1736	.3541	.5855	.8296	1.0391	1.1750	1.2196
75.0	.0014	.0073	.0453	.1371	.2933	.5025	.7315	.9348	1.0709	1.1169
80.0	.0007	.0043	.0313	.1035	.2349	.4202	.6313	.8255	.9597	1.0064
85.0	.0003	.0021	.0196	.0736	.1808	.3409	.5319	.7143	.8448	.8915

α, deg \ σ, deg	100.0	110.0	120.0	130.0	140.0	150.0	160.0	170.0	180.0
1.0	.9681	.9681	.9681	.9681	.9681	.9681	.9681	.9681	.9681
2.0	.9909	.9909	.9909	.9909	.9909	.9909	.9909	.9909	.9909
4.0	1.0360	1.0360	1.0360	1.0360	1.0360	1.0360	1.0360	1.0360	1.0360
6.0	1.0802	1.0802	1.0802	1.0802	1.0802	1.0802	1.0802	1.0802	1.0802
8.0	1.1233	1.1233	1.1233	1.1233	1.1233	1.1233	1.1233	1.1233	1.1233
10.0	1.1650	1.1649	1.1649	1.1649	1.1649	1.1649	1.1649	1.1649	1.1649
12.0	1.2052	1.2050	1.2050	1.2050	1.2050	1.2050	1.2050	1.2050	1.2050
15.0	1.2621	1.2615	1.2615	1.2615	1.2615	1.2615	1.2615	1.2615	1.2615
20.0	1.3464	1.3444	1.3439	1.3439	1.3439	1.3439	1.3439	1.3439	1.3439
25.0	1.4152	1.4104	1.4093	1.4093	1.4093	1.4093	1.4093	1.4093	1.4093
30.0	1.4665	1.4573	1.4547	1.4543	1.4543	1.4543	1.4543	1.4543	1.4543
35.0	1.4986	1.4834	1.4767	1.4761	1.4761	1.4761	1.4761	1.4761	1.4761
40.0	1.5106	1.4877	1.4744	1.4717	1.4717	1.4717	1.4717	1.4717	1.4717
45.0	1.5022	1.4702	1.4477	1.4401	1.4394	1.4394	1.4394	1.4394	1.4394
50.0	1.4735	1.4313	1.3970	1.3814	1.3788	1.3786	1.3786	1.3786	1.3786
55.0	1.4254	1.3723	1.3239	1.2969	1.2893	1.2888	1.2888	1.2888	1.2888
60.0	1.3595	1.2948	1.2307	1.1890	1.1727	1.1704	1.1704	1.1704	1.1704
65.0	1.2777	1.2013	1.1200	1.0608	1.0321	1.0250	1.0247	1.0247	1.0247
70.0	1.1824	1.0947	.9954	.9163	.8715	.8559	.8541	.8540	.8540
75.0	1.0767	.9780	.8605	.7599	.6958	.6679	.6618	.6617	.6617
80.0	.9637	.8550	.7195	.5962	.5102	.4665	.4530	.4517	.4517
85.0	.8468	.7293	.5767	.4302	.3205	.2579	.2337	.2292	.2291

TABLE I.- CONTINUED

(b) C_A. Continued.

$\beta_1 = 150°$; $\beta_2 = 210°$; $\beta = 0°$

α, deg \ σ, deg	5.0	10.0	20.0	30.0	40.0	50.0	60.0	70.0	80.0	90.0
1.0	.0152	.0596	.2219	.4425	.6657	.8451	.9584	1.0107	1.0250	1.0261
2.0	.0152	.0598	.2234	.4473	.6734	.8606	.9791	1.0349	1.0500	1.0522
4.0	.0152	.0600	.2261	.4561	.6939	.8905	1.0194	1.0825	1.1019	1.1040
6.0	.0151	.0601	.2282	.4638	.7110	.9188	1.0583	1.1290	1.1521	1.1550
8.0	.0151	.0601	.2298	.4705	.7266	.9454	1.0956	1.1742	1.2013	1.2051
10.0	.0150	.0599	.2308	.4762	.7406	.9702	1.1311	1.2178	1.2491	1.2539
12.0	.0148	.0596	.2313	.4807	.7530	.9931	1.1646	1.2595	1.2954	1.3013
15.0	.0145	.0588	.2309	.4853	.7684	1.0236	1.2108	1.3184	1.3614	1.3692
20.0	.0139	.0568	.2275	.4873	.7852	1.0631	1.2758	1.4048	1.4606	1.4720
25.0	.0131	.0540	.2208	.4819	.7905	1.0878	1.3240	1.4743	1.5436	1.5591
30.0	.0121	.0505	.2109	.4694	.7840	1.0968	1.3541	1.5248	1.6079	1.6279
35.0	.0110	.0463	.1981	.4501	.7661	1.0899	1.3651	1.5548	1.6518	1.6763
40.0	.0097	.0417	.1826	.4247	.7372	1.0672	1.3567	1.5633	1.6734	1.7039
45.0	.0084	.0367	.1655	.3939	.6985	1.0294	1.3290	1.5502	1.6726	1.7067
50.0	.0071	.0315	.1467	.3587	.6505	.9778	1.2831	1.5157	1.6491	1.6877
55.0	.0058	.0263	.1270	.3200	.5952	.9138	1.2202	1.4611	1.6038	1.6467
60.0	.0046	.0212	.1070	.2792	.5342	.8395	1.1423	1.3878	1.5380	1.5846
65.0	.0034	.0164	.0872	.2374	.4693	.7570	1.0517	1.2981	1.4537	1.5035
70.0	.0024	.0119	.0684	.1958	.4024	.6689	.9512	1.1949	1.3534	1.4057
75.0	.0015	.0081	.0510	.1559	.3357	.5778	.8439	1.0811	1.2403	1.2943
80.0	.0008	.0049	.0356	.1187	.2711	.4866	.7330	.9603	1.1177	1.1726
85.0	.0003	.0024	.0226	.0854	.2105	.3979	.6218	.8361	.9894	1.0444

α, deg \ σ, deg	100.0	110.0	120.0	130.0	140.0	150.0	160.0	170.0	180.0
1.0	1.0221	1.0221	1.0221	1.0221	1.0221	1.0221	1.0221	1.0221	1.0221
2.0	1.0522	1.0522	1.0522	1.0522	1.0522	1.0522	1.0522	1.0522	1.0522
4.0	1.1018	1.1018	1.1018	1.1018	1.1018	1.1018	1.1018	1.1018	1.1018
6.0	1.1532	1.1532	1.1532	1.1532	1.1532	1.1532	1.1532	1.1532	1.1532
8.0	1.2049	1.2049	1.2049	1.2049	1.2049	1.2049	1.2049	1.2049	1.2049
10.0	1.2519	1.2533	1.2533	1.2533	1.2533	1.2533	1.2533	1.2533	1.2533
12.0	1.3008	1.2997	1.2997	1.2997	1.2997	1.2997	1.2997	1.2997	1.2997
15.0	1.3680	1.3667	1.3667	1.3667	1.3667	1.3667	1.3667	1.3667	1.3667
20.0	1.4691	1.4670	1.4676	1.4676	1.4676	1.4676	1.4676	1.4676	1.4676
25.0	1.5537	1.5495	1.5489	1.5489	1.5489	1.5489	1.5489	1.5489	1.5489
30.0	1.6194	1.6099	1.6073	1.6073	1.6073	1.6073	1.6073	1.6073	1.6073
35.0	1.6641	1.6471	1.6407	1.6400	1.6400	1.6400	1.6400	1.6400	1.6400
40.0	1.6864	1.6601	1.6455	1.6426	1.6433	1.6433	1.6433	1.6433	1.6433
45.0	1.6858	1.6484	1.6223	1.6144	1.6138	1.6138	1.6138	1.6138	1.6138
50.0	1.6621	1.6125	1.5719	1.5539	1.5511	1.5511	1.5511	1.5511	1.5511
55.0	1.6162	1.5534	1.4958	1.4635	1.4550	1.4546	1.4546	1.4546	1.4546
60.0	1.5494	1.4728	1.3963	1.3461	1.3266	1.3237	1.3242	1.3242	1.3242
65.0	1.4638	1.3734	1.2764	1.2051	1.1702	1.1618	1.1615	1.1615	1.1615
70.0	1.3619	1.2580	1.1397	1.0449	.9906	.9715	.9694	.9694	.9694
75.0	1.2469	1.1302	.9905	.8703	.7932	.7593	.7519	.7517	.7517
80.0	1.1222	.9939	.8533	.6867	.5840	.5514	.5150	.5133	.5133
85.0	.9917	.8531	.6728	.4995	.3694	.2950	.2660	.2606	.2605

$\beta_1 = 150°$; $\beta_2 = 210°$; $\beta = 2°$

α, deg \ σ, deg	5.0	10.0	20.0	30.0	40.0	50.0	60.0	70.0	80.0	90.0
1.0	.0151	.0595	.2217	.4420	.6649	.8441	.9573	1.0093	1.0238	1.0250
2.0	.0152	.0597	.2232	.4467	.6746	.8596	.9779	1.0337	1.0496	1.0510
4.0	.0152	.0600	.2258	.4555	.6931	.8894	1.0182	1.0813	1.1006	1.1027
6.0	.0151	.0601	.2279	.4633	.7101	.9177	1.0571	1.1278	1.1508	1.1537
8.0	.0151	.0600	.2295	.4700	.7257	.9443	1.0943	1.1729	1.1999	1.2037
10.0	.0149	.0598	.2305	.4756	.7397	.9691	1.1298	1.2164	1.2477	1.2525
12.0	.0148	.0595	.2310	.4801	.7521	.9919	1.1632	1.2581	1.2939	1.2998
15.0	.0145	.0587	.2306	.4847	.7675	1.0223	1.2094	1.3169	1.3599	1.3676
20.0	.0139	.0567	.2273	.4867	.7843	1.0619	1.2743	1.4032	1.4589	1.4703
25.0	.0131	.0539	.2205	.4813	.7895	1.0865	1.3225	1.4726	1.5418	1.5573
30.0	.0121	.0504	.2106	.4688	.7831	1.0955	1.3525	1.5230	1.6061	1.6260
35.0	.0109	.0463	.1978	.4496	.7652	1.0886	1.3635	1.5530	1.6497	1.6744
40.0	.0097	.0417	.1826	.4242	.7364	1.0659	1.3551	1.5615	1.6715	1.7009
45.0	.0084	.0367	.1655	.3934	.6975	1.0282	1.3275	1.5484	1.6706	1.7048
50.0	.0071	.0315	.1465	.3582	.6497	.9766	1.2816	1.5140	1.6472	1.6859
55.0	.0058	.0263	.1269	.3196	.5945	.9127	1.2188	1.4594	1.6020	1.6448
60.0	.0045	.0212	.1068	.2788	.5336	.8385	1.1410	1.3862	1.5362	1.5828
65.0	.0034	.0163	.0871	.2371	.4687	.7561	1.0505	1.2966	1.4520	1.5018
70.0	.0024	.0119	.0683	.1956	.4019	.6681	.9501	1.1935	1.3519	1.4041
75.0	.0015	.0080	.0509	.1557	.3353	.5771	.8429	1.0798	1.2389	1.2928
80.0	.0008	.0049	.0355	.1186	.2707	.4860	.7321	.9592	1.1164	1.1713
85.0	.0003	.0024	.0226	.0853	.2103	.3975	.6211	.8351	.9883	1.0439

α, deg \ σ, deg	100.0	110.0	120.0	130.0	140.0	150.0	160.0	170.0	180.0
1.0	1.0250	1.0250	1.0250	1.0250	1.0250	1.0249	1.0250	1.0250	1.0250
2.0	1.0510	1.0510	1.0510	1.0510	1.0510	1.0510	1.0510	1.0510	1.0510
4.0	1.1003	1.1003	1.1003	1.1003	1.1003	1.1003	1.1003	1.1003	1.1003
6.0	1.1522	1.1522	1.1522	1.1522	1.1522	1.1522	1.1522	1.1522	1.1522
8.0	1.2036	1.2036	1.2036	1.2036	1.2036	1.2036	1.2036	1.2036	1.2036
10.0	1.2522	1.2522	1.2522	1.2522	1.2522	1.2522	1.2522	1.2522	1.2522
12.0	1.2993	1.2982	1.2982	1.2982	1.2982	1.2982	1.2982	1.2982	1.2972
15.0	1.3665	1.3652	1.3652	1.3652	1.3652	1.3652	1.3652	1.3652	1.3652
20.0	1.4674	1.4662	1.4662	1.4662	1.4662	1.4662	1.4662	1.4662	1.4662
25.0	1.5519	1.5477	1.5471	1.5471	1.5471	1.5471	1.5471	1.5471	1.5471
30.0	1.6175	1.6080	1.6062	1.6054	1.6054	1.6054	1.6054	1.6054	1.6054
35.0	1.6621	1.6452	1.6387	1.6381	1.6381	1.6381	1.6381	1.6381	1.6381
40.0	1.6845	1.6581	1.6435	1.6414	1.6411	1.6411	1.6411	1.6411	1.6411
45.0	1.6838	1.6465	1.6204	1.6125	1.6118	1.6118	1.6119	1.6118	1.6110
50.0	1.6602	1.6106	1.5700	1.5521	1.5497	1.5493	1.5493	1.5493	1.5493
55.0	1.6144	1.5515	1.4940	1.4618	1.4533	1.4528	1.4528	1.4528	1.4528
60.0	1.5477	1.4711	1.3946	1.3445	1.3250	1.3227	1.3226	1.3226	1.3226
65.0	1.4631	1.3718	1.2749	1.2037	1.1688	1.1604	1.1601	1.1601	1.1601
70.0	1.3604	1.2565	1.1384	1.0437	.9894	.9703	.9682	.9682	.9682
75.0	1.2455	1.1289	.9894	.8693	.7922	.7583	.7507	.7500	.7500
80.0	1.1210	.9927	.8823	.6859	.5833	.5308	.5144	.5127	.5127
85.0	.9906	.8522	.6720	.4989	.3690	.2946	.2657	.2603	.2602

TABLE I.- CONTINUED

(c) C_Y

$\phi_1 = 90^o$; $\phi_2 = 270^o$; $\beta = 2^o$

α, deg \ σ, deg	5.0	10.0	20.0	30.0	40.0	50.0	60.0	70.0	80.0	90.0
1.0	-.0000	-.0000	-.0005	-.0022	-.0060	-.0121	-.0198	-.0275	-.0332	-.0355
2.0	-.0000	-.0000	-.0005	-.0022	-.0060	-.0121	-.0199	-.0277	-.0337	-.0361
4.0	-.0000	-.0000	-.0005	-.0022	-.0060	-.0123	-.0202	-.0282	-.0345	-.0372
6.0	-.0000	-.0000	-.0005	-.0022	-.0061	-.0124	-.0204	-.0287	-.0352	-.0383
8.0	-.0000	-.0000	-.0005	-.0022	-.0061	-.0125	-.0207	-.0291	-.0359	-.0394
10.0	-.0000	-.0000	-.0005	-.0022	-.0061	-.0126	-.0209	-.0295	-.0366	-.0404
12.0	-.0000	-.0000	-.0005	-.0022	-.0061	-.0126	-.0210	-.0299	-.0372	-.0414
15.0	-.0000	-.0000	-.0005	-.0022	-.0062	-.0127	-.0212	-.0304	-.0381	-.0427
20.0	-.0000	-.0000	-.0005	-.0022	-.0061	-.0127	-.0215	-.0310	-.0393	-.0447
25.0	-.0000	-.0000	-.0005	-.0021	-.0061	-.0126	-.0215	-.0313	-.0402	-.0464
30.0	-.0000	-.0000	-.0004	-.0021	-.0059	-.0125	-.0214	-.0314	-.0408	-.0476
35.0	-.0000	-.0000	-.0004	-.0020	-.0058	-.0122	-.0211	-.0313	-.0411	-.0486
40.0	-.0000	-.0000	-.0004	-.0019	-.0056	-.0119	-.0207	-.0310	-.0410	-.0491
45.0	-.0000	-.0000	-.0004	-.0018	-.0053	-.0114	-.0201	-.0304	-.0407	-.0493
50.0	-.0000	-.0000	-.0004	-.0017	-.0050	-.0109	-.0194	-.0296	-.0400	-.0491
55.0	-.0000	-.0000	-.0003	-.0016	-.0047	-.0103	-.0185	-.0285	-.0391	-.0486
60.0	-.0000	-.0000	-.0003	-.0014	-.0043	-.0096	-.0175	-.0273	-.0378	-.0476
65.0	-.0000	-.0000	-.0003	-.0013	-.0039	-.0089	-.0163	-.0258	-.0363	-.0464
70.0	-.0000	-.0000	-.0002	-.0011	-.0035	-.0080	-.0150	-.0241	-.0345	-.0447
75.0	-.0000	-.0000	-.0002	-.0010	-.0030	-.0071	-.0136	-.0223	-.0324	-.0427
80.0	-.0000	-.0000	-.0001	-.0008	-.0026	-.0062	-.0121	-.0203	-.0301	-.0404
85.0	-.0000	-.0000	-.0001	-.0006	-.0021	-.0052	-.0105	-.0181	-.0275	-.0378

α, deg \ σ, deg	100.0	110.0	120.0	130.0	140.0	150.0	160.0	170.0	180.0
1.0	-.0355	-.0355	-.0355	-.0355	-.0355	-.0355	-.0355	-.0355	-.0355
2.0	-.0361	-.0361	-.0361	-.0361	-.0361	-.0361	-.0361	-.0361	-.0361
4.0	-.0373	-.0373	-.0373	-.0373	-.0373	-.0373	-.0373	-.0373	-.0373
6.0	-.0385	-.0385	-.0385	-.0385	-.0385	-.0385	-.0385	-.0385	-.0385
8.0	-.0398	-.0398	-.0398	-.0398	-.0398	-.0398	-.0398	-.0398	-.0398
10.0	-.0410	-.0410	-.0410	-.0410	-.0410	-.0410	-.0410	-.0410	-.0410
12.0	-.0421	-.0421	-.0421	-.0421	-.0421	-.0421	-.0421	-.0421	-.0421
15.0	-.0439	-.0439	-.0439	-.0439	-.0439	-.0439	-.0439	-.0439	-.0439
20.0	-.0466	-.0468	-.0468	-.0468	-.0468	-.0468	-.0468	-.0468	-.0468
25.0	-.0491	-.0496	-.0496	-.0496	-.0496	-.0496	-.0496	-.0496	-.0496
30.0	-.0512	-.0522	-.0523	-.0523	-.0523	-.0523	-.0523	-.0523	-.0523
35.0	-.0529	-.0546	-.0549	-.0549	-.0549	-.0549	-.0549	-.0549	-.0549
40.0	-.0542	-.0566	-.0573	-.0573	-.0573	-.0573	-.0573	-.0573	-.0573
45.0	-.0551	-.0582	-.0593	-.0596	-.0596	-.0596	-.0596	-.0596	-.0596
50.0	-.0557	-.0594	-.0611	-.0616	-.0616	-.0616	-.0616	-.0616	-.0616
55.0	-.0558	-.0603	-.0625	-.0633	-.0635	-.0635	-.0635	-.0635	-.0635
60.0	-.0554	-.0607	-.0636	-.0648	-.0651	-.0651	-.0651	-.0651	-.0651
65.0	-.0547	-.0606	-.0642	-.0659	-.0664	-.0665	-.0665	-.0665	-.0665
70.0	-.0535	-.0602	-.0644	-.0666	-.0675	-.0677	-.0677	-.0677	-.0677
75.0	-.0520	-.0593	-.0642	-.0670	-.0682	-.0685	-.0686	-.0686	-.0686
80.0	-.0500	-.0579	-.0635	-.0669	-.0685	-.0691	-.0692	-.0692	-.0692
85.0	-.0477	-.0562	-.0624	-.0665	-.0686	-.0694	-.0696	-.0696	-.0696

COEFFICIENTS FROM NEWTONIAN THEORY FOR CONIC AND SPHERIC BODIES

TABLE I.- CONTINUED

(b) C_A. Concluded.

$\beta_1 = 150^\circ$; $\beta_2 = 210^\circ$; $\beta = 5^\circ$

α, deg \ σ, deg	5.0	10.0	20.0	30.0	40.0	50.0	60.0	70.0	80.0	90.0
1.0	.0150	.0592	.2202	.4392	.6607	.8389	.9515	1.0035	1.0178	1.0190
2.0	.0151	.0593	.2218	.4439	.6704	.8543	.9720	1.0275	1.0434	1.0449
4.0	.0151	.0596	.2244	.4526	.6888	.8839	1.0120	1.0748	1.0941	1.0962
6.0	.0150	.0597	.2265	.4603	.7057	.9120	1.0507	1.1210	1.1440	1.1469
8.0	.0150	.0596	.2280	.4670	.7212	.9385	1.0877	1.1658	1.1928	1.1966
10.0	.0149	.0594	.2291	.4726	.7351	.9631	1.1229	1.2090	1.2403	1.2450
12.0	.0147	.0591	.2295	.4771	.7474	.9858	1.1561	1.2505	1.2862	1.2921
15.0	.0144	.0583	.2292	.4817	.7627	1.0160	1.2020	1.3089	1.3517	1.3595
20.0	.0138	.0564	.2258	.4836	.7794	1.0553	1.2665	1.3946	1.4501	1.4614
25.0	.0130	.0536	.2191	.4783	.7846	1.0798	1.3144	1.4636	1.5325	1.5479
30.0	.0120	.0501	.2093	.4659	.7702	1.0887	1.3442	1.5137	1.5963	1.6142
35.0	.0109	.0460	.1966	.4468	.7604	1.0818	1.3551	1.5435	1.6397	1.6642
40.0	.0097	.0414	.1814	.4215	.7318	1.0593	1.3467	1.5520	1.6613	1.6906
45.0	.0084	.0364	.1643	.3910	.6931	1.0218	1.3193	1.5389	1.6605	1.6944
50.0	.0071	.0313	.1456	.3560	.6456	.9706	1.2737	1.5047	1.6372	1.6757
55.0	.0058	.0261	.1261	.3176	.5908	.9071	1.2113	1.4505	1.5922	1.6349
60.0	.0045	.0210	.1062	.2771	.5302	.8333	1.1340	1.3777	1.5269	1.5735
65.0	.0034	.0162	.0866	.2356	.4658	.7514	1.0441	1.2888	1.4433	1.4927
70.0	.0023	.0118	.0679	.1944	.3995	.6640	.9444	1.1863	1.3438	1.3957
75.0	.0015	.0080	.0506	.1547	.3332	.5736	.8379	1.0734	1.2315	1.2851
80.0	.0008	.0048	.0353	.1179	.2691	.4831	.7278	.9535	1.1090	1.1644
85.0	.0003	.0024	.0224	.0848	.2090	.3951	.6175	.8302	.9825	1.0371

α, deg \ σ, deg	100.0	110.0	120.0	130.0	140.0	150.0	160.0	170.0	180.0
1.0	1.0190	1.0190	1.0190	1.0190	1.0190	1.0190	1.0190	1.0190	1.0190
2.0	1.0449	1.0449	1.0449	1.0449	1.0449	1.0449	1.0449	1.0449	1.0449
4.0	1.0962	1.0962	1.0962	1.0962	1.0962	1.0962	1.0962	1.0962	1.0962
6.0	1.1468	1.1468	1.1468	1.1468	1.1468	1.1468	1.1468	1.1468	1.1468
8.0	1.1964	1.1964	1.1964	1.1964	1.1964	1.1964	1.1964	1.1964	1.1964
10.0	1.2447	1.2441	1.2441	1.2441	1.2441	1.2441	1.2441	1.2441	1.2441
12.0	1.2915	1.2903	1.2903	1.2903	1.2903	1.2903	1.2903	1.2903	1.2903
15.0	1.3583	1.3568	1.3568	1.3568	1.3568	1.3568	1.3568	1.3568	1.3568
20.0	1.4588	1.4573	1.4573	1.4573	1.4573	1.4573	1.4573	1.4573	1.4573
25.0	1.5425	1.5383	1.5374	1.5374	1.5374	1.5374	1.5374	1.5374	1.5374
30.0	1.6077	1.5981	1.5963	1.5955	1.5955	1.5955	1.5955	1.5955	1.5955
35.0	1.6520	1.6351	1.6286	1.6278	1.6278	1.6278	1.6278	1.6278	1.6278
40.0	1.6742	1.6480	1.6333	1.6311	1.6311	1.6311	1.6311	1.6311	1.6311
45.0	1.6736	1.6364	1.6103	1.6024	1.6018	1.6018	1.6018	1.6018	1.6018
50.0	1.6501	1.6007	1.5603	1.5423	1.5399	1.5395	1.5395	1.5395	1.5395
55.0	1.6046	1.5421	1.4848	1.4527	1.4441	1.4436	1.4436	1.4436	1.4436
60.0	1.5383	1.4622	1.3860	1.3361	1.3166	1.3143	1.3142	1.3142	1.3142
65.0	1.4533	1.3635	1.2670	1.1962	1.1614	1.1530	1.1527	1.1527	1.1527
70.0	1.3522	1.2490	1.1315	1.0372	.9831	.9642	.9621	.9620	.9620
75.0	1.2381	1.1221	.9834	.8639	.7873	.7535	.7462	.7460	.7460
80.0	1.1143	.9868	.8273	.6817	.5797	.5274	.5111	.5095	.5095
85.0	.9848	.8472	.6880	.4959	.3867	.2928	.2640	.2586	.2585

$\beta_1 = 150^\circ$; $\beta_2 = 210^\circ$; $\beta = 15^\circ$

α, deg \ σ, deg	5.0	10.0	20.0	30.0	40.0	50.0	60.0	70.0	80.0	90.0
1.0	.0141	.0556	.2071	.4132	.6221	.7905	.8975	.9475	.9618	.9632
2.0	.0142	.0558	.2086	.4177	.6312	.8049	.9167	.9701	.9858	.9875
4.0	.0142	.0560	.2110	.4259	.6484	.8328	.9544	1.0145	1.0335	1.0350
6.0	.0141	.0561	.2130	.4331	.6644	.8592	.9907	1.0579	1.0804	1.0834
8.0	.0141	.0561	.2145	.4394	.6789	.8841	1.0255	1.1001	1.1263	1.1301
10.0	.0140	.0559	.2154	.4446	.6920	.9072	1.0586	1.1407	1.1709	1.1757
12.0	.0138	.0556	.2159	.4489	.7036	.9286	1.0899	1.1797	1.2141	1.2199
15.0	.0136	.0548	.2155	.4532	.7179	.9570	1.1330	1.2346	1.2757	1.2838
20.0	.0130	.0530	.2124	.4550	.7336	.9939	1.1936	1.3152	1.3682	1.3792
25.0	.0122	.0504	.2061	.4500	.7385	1.0169	1.2386	1.3800	1.4456	1.4604
30.0	.0113	.0471	.1968	.4383	.7325	1.0253	1.2667	1.4272	1.5057	1.5246
35.0	.0102	.0432	.1849	.4203	.7158	1.0188	1.2769	1.4551	1.5465	1.5698
40.0	.0091	.0389	.1706	.3966	.6888	.9977	1.2690	1.4631	1.5668	1.5946
45.0	.0079	.0343	.1545	.3679	.6525	.9625	1.2433	1.4509	1.5660	1.5982
50.0	.0066	.0294	.1370	.3350	.6079	.9143	1.2004	1.4187	1.5441	1.5806
55.0	.0054	.0245	.1186	.2990	.5563	.8546	1.1417	1.3677	1.5018	1.5422
60.0	.0042	.0198	.0999	.2608	.4994	.7852	1.0690	1.2993	1.4404	1.4843
65.0	.0032	.0153	.0815	.2218	.4388	.7083	.9845	1.2157	1.3618	1.4086
70.0	.0022	.0111	.0639	.1831	.3765	.6260	.8908	1.1193	1.2682	1.3173
75.0	.0014	.0075	.0476	.1458	.3142	.5411	.7906	1.0132	1.1627	1.2134
80.0	.0007	.0045	.0333	.1111	.2539	.4560	.6871	.9005	1.0483	1.0999
85.0	.0003	.0023	.0212	.0801	.1974	.3733	.5834	.7846	.9286	.9802

α, deg \ σ, deg	100.0	110.0	120.0	130.0	140.0	150.0	160.0	170.0	180.0
1.0	.9632	.9632	.9632	.9632	.9632	.9632	.9632	.9632	.9632
2.0	.9875	.9875	.9875	.9875	.9875	.9875	.9875	.9875	.9875
4.0	1.0357	1.0357	1.0357	1.0357	1.0357	1.0357	1.0357	1.0357	1.0357
6.0	1.0832	1.0832	1.0833	1.0833	1.0833	1.0833	1.0833	1.0833	1.0833
8.0	1.1298	1.1298	1.1298	1.1298	1.1298	1.1298	1.1298	1.1298	1.1298
10.0	1.1752	1.1751	1.1752	1.1752	1.1752	1.1752	1.1752	1.1752	1.1752
12.0	1.2191	1.2190	1.2190	1.2190	1.2190	1.2190	1.2190	1.2190	1.2190
15.0	1.2818	1.2814	1.2814	1.2814	1.2814	1.2814	1.2814	1.2814	1.2814
20.0	1.3761	1.3743	1.3743	1.3743	1.3743	1.3743	1.3743	1.3743	1.3743
25.0	1.4551	1.4503	1.4497	1.4497	1.4497	1.4497	1.4497	1.4497	1.4497
30.0	1.5163	1.5065	1.5039	1.5033	1.5033	1.5033	1.5033	1.5033	1.5033
35.0	1.5580	1.5413	1.5341	1.5335	1.5335	1.5335	1.5335	1.5335	1.5335
40.0	1.5789	1.5534	1.5385	1.5355	1.5355	1.5355	1.5355	1.5355	1.5355
45.0	1.5783	1.5425	1.5169	1.5083	1.5074	1.5074	1.5074	1.5074	1.5074
50.0	1.5562	1.5090	1.4699	1.4518	1.4489	1.4485	1.4485	1.4485	1.4485
55.0	1.5134	1.4538	1.3988	1.3675	1.3585	1.3580	1.3580	1.3580	1.3580
60.0	1.4511	1.3787	1.3060	1.2579	1.2387	1.2360	1.2359	1.2359	1.2359
65.0	1.3712	1.2859	1.1941	1.1264	1.0928	1.0843	1.0839	1.0839	1.0839
70.0	1.2762	1.1782	1.0667	.9769	.9252	.9068	.9048	.9045	.9045
75.0	1.1688	1.0590	.9274	.8140	.7410	.7088	.7016	.7014	.7014
80.0	1.0525	.9318	.7807	.6427	.5459	.4962	.4806	.4790	.4790
85.0	.9307	.8005	.6310	.4680	.3457	.2756	.2483	.2431	.2430

TABLE I.- CONTINUED

(c) C_Y. Continued.

$\phi_1 = 90^\circ$; $\phi_2 = 270^\circ$; $\beta = 5^\circ$

α, deg \ σ, deg	5.0	10.0	20.0	30.0	40.0	50.0	60.0	70.0	80.0	90.0
1.0	-.0000	-.0001	-.0012	-.0054	-.0149	-.0301	-.0492	-.0684	-.0827	-.0885
2.0	-.0000	-.0001	-.0012	-.0055	-.0149	-.0302	-.0496	-.0690	-.0838	-.0899
4.0	-.0000	-.0001	-.0012	-.0055	-.0151	-.0305	-.0503	-.0703	-.0858	-.0927
6.0	-.0000	-.0001	-.0012	-.0055	-.0151	-.0308	-.0509	-.0714	-.0877	-.0955
8.0	-.0000	-.0001	-.0012	-.0055	-.0152	-.0311	-.0514	-.0725	-.0894	-.0981
10.0	-.0000	-.0001	-.0012	-.0055	-.0153	-.0312	-.0519	-.0735	-.0911	-.1006
12.0	-.0000	-.0001	-.0012	-.0055	-.0153	-.0314	-.0523	-.0744	-.0927	-.1030
15.0	-.0000	-.0001	-.0012	-.0055	-.0153	-.0316	-.0529	-.0756	-.0948	-.1064
20.0	-.0000	-.0001	-.0012	-.0054	-.0153	-.0316	-.0534	-.0771	-.0978	-.1113
25.0	-.0000	-.0001	-.0011	-.0053	-.0151	-.0315	-.0536	-.0780	-.1001	-.1154
30.0	-.0000	-.0001	-.0011	-.0052	-.0148	-.0311	-.0533	-.0783	-.1015	-.1186
35.0	-.0000	-.0001	-.0011	-.0050	-.0144	-.0304	-.0526	-.0780	-.1022	-.1209
40.0	-.0000	-.0001	-.0010	-.0048	-.0138	-.0296	-.0515	-.0771	-.1022	-.1223
45.0	-.0000	-.0001	-.0009	-.0046	-.0132	-.0285	-.0501	-.0757	-.1013	-.1228
50.0	-.0000	-.0001	-.0009	-.0043	-.0125	-.0272	-.0482	-.0736	-.0997	-.1223
55.0	-.0000	-.0000	-.0008	-.0039	-.0117	-.0256	-.0460	-.0710	-.0973	-.1209
60.0	-.0000	-.0000	-.0007	-.0036	-.0108	-.0239	-.0435	-.0679	-.0942	-.1186
65.0	-.0000	-.0000	-.0006	-.0032	-.0098	-.0220	-.0406	-.0642	-.0904	-.1154
70.0	-.0000	-.0000	-.0005	-.0028	-.0087	-.0200	-.0374	-.0601	-.0858	-.1113
75.0	-.0000	-.0000	-.0004	-.0024	-.0076	-.0178	-.0339	-.0555	-.0807	-.1064
80.0	-.0000	-.0000	-.0003	-.0019	-.0064	-.0154	-.0301	-.0505	-.0749	-.1006
85.0	-.0000	-.0000	-.0002	-.0015	-.0052	-.0129	-.0262	-.0451	-.0685	-.0941

α, deg \ σ, deg	100.0	110.0	120.0	130.0	140.0	150.0	160.0	170.0	180.0
1.0	-.0886	-.0886	-.0886	-.0886	-.0886	-.0886	-.0886	-.0886	-.0886
2.0	-.0901	-.0901	-.0901	-.0901	-.0901	-.0901	-.0901	-.0901	-.0901
4.0	-.0932	-.0932	-.0932	-.0932	-.0932	-.0932	-.0932	-.0932	-.0932
6.0	-.0962	-.0962	-.0962	-.0962	-.0962	-.0962	-.0962	-.0962	-.0962
8.0	-.0992	-.0992	-.0992	-.0992	-.0992	-.0992	-.0992	-.0992	-.0992
10.0	-.1022	-.1022	-.1022	-.1022	-.1022	-.1022	-.1022	-.1022	-.1022
12.0	-.1052	-.1052	-.1052	-.1052	-.1052	-.1052	-.1057	-.1052	-.1052
15.0	-.1095	-.1096	-.1096	-.1096	-.1096	-.1096	-.1096	-.1096	-.1096
20.0	-.1163	-.1169	-.1169	-.1169	-.1169	-.1169	-.1169	-.1169	-.1169
25.0	-.1223	-.1238	-.1238	-.1238	-.1238	-.1238	-.1239	-.1238	-.1238
30.0	-.1275	-.1303	-.1306	-.1306	-.1306	-.1306	-.1306	-.1306	-.1306
35.0	-.1318	-.1361	-.1369	-.1369	-.1369	-.1369	-.1369	-.1369	-.1369
40.0	-.1351	-.1410	-.1428	-.1430	-.1430	-.1430	-.1430	-.1430	-.1430
45.0	-.1374	-.1451	-.1480	-.1485	-.1485	-.1485	-.1485	-.1485	-.1485
50.0	-.1386	-.1482	-.1524	-.1536	-.1537	-.1537	-.1537	-.1537	-.1537
55.0	-.1389	-.1502	-.1559	-.1579	-.1583	-.1583	-.1583	-.1583	-.1583
60.0	-.1381	-.1512	-.1585	-.1615	-.1623	-.1623	-.1623	-.1623	-.1623
65.0	-.1362	-.1511	-.1600	-.1642	-.1656	-.1658	-.1658	-.1658	-.1658
70.0	-.1334	-.1499	-.1605	-.1661	-.1682	-.1687	-.1687	-.1687	-.1687
75.0	-.1295	-.1477	-.1600	-.1669	-.1700	-.1709	-.1710	-.1710	-.1710
80.0	-.1246	-.1443	-.1584	-.1668	-.1709	-.1723	-.1726	-.1727	-.1727
85.0	-.1188	-.1399	-.1557	-.1657	-.1709	-.1730	-.1736	-.1736	-.1736

$\phi_1 = 90^\circ$; $\phi_2 = 270^\circ$; $\beta = 15^\circ$

α, deg \ σ, deg	5.0	10.0	20.0	30.0	40.0	50.0	60.0	70.0	80.0	90.0
1.0	-.0000	-.0002	-.0034	-.0157	-.0429	-.0866	-.1417	-.1969	-.2383	-.2584
2.0	-.0000	-.0002	-.0034	-.0157	-.0430	-.0871	-.1427	-.1988	-.2413	-.2623
4.0	-.0000	-.0002	-.0034	-.0158	-.0434	-.0880	-.1447	-.2024	-.2470	-.2701
6.0	-.0000	-.0002	-.0034	-.0158	-.0436	-.0887	-.1465	-.2057	-.2525	-.2776
8.0	-.0000	-.0002	-.0034	-.0159	-.0438	-.0894	-.1481	-.2088	-.2576	-.2848
10.0	-.0000	-.0002	-.0034	-.0159	-.0440	-.0900	-.1495	-.2116	-.2624	-.2918
12.0	-.0000	-.0002	-.0034	-.0159	-.0441	-.0904	-.1507	-.2142	-.2669	-.2985
15.0	-.0000	-.0002	-.0034	-.0159	-.0441	-.0909	-.1522	-.2176	-.2731	-.3079
20.0	-.0000	-.0002	-.0034	-.0157	-.0439	-.0911	-.1538	-.2219	-.2817	-.3218
25.0	-.0000	-.0002	-.0033	-.0154	-.0434	-.0906	-.1542	-.2245	-.2881	-.3335
30.0	-.0000	-.0002	-.0032	-.0150	-.0425	-.0895	-.1534	-.2254	-.2924	-.3426
35.0	-.0000	-.0002	-.0030	-.0145	-.0414	-.0876	-.1515	-.2246	-.2944	-.3492
40.0	-.0000	-.0002	-.0029	-.0139	-.0399	-.0851	-.1484	-.2221	-.2942	-.3532
45.0	-.0000	-.0002	-.0027	-.0131	-.0381	-.0820	-.1442	-.2179	-.2918	-.3545
50.0	-.0000	-.0002	-.0025	-.0123	-.0360	-.0782	-.1389	-.2120	-.2872	-.3532
55.0	-.0000	-.0001	-.0023	-.0114	-.0336	-.0738	-.1325	-.2045	-.2803	-.3492
60.0	-.0000	-.0001	-.0021	-.0104	-.0310	-.0689	-.1251	-.1955	-.2714	-.3426
65.0	-.0000	-.0001	-.0018	-.0093	-.0281	-.0634	-.1168	-.1850	-.2605	-.3335
70.0	-.0000	-.0001	-.0016	-.0081	-.0251	-.0575	-.1076	-.1731	-.2476	-.3218
75.0	-.0000	-.0001	-.0013	-.0069	-.0218	-.0511	-.0976	-.1600	-.2329	-.3079
80.0	-.0000	-.0001	-.0010	-.0056	-.0184	-.0444	-.0869	-.1457	-.2166	-.2918
85.0	-.0000	-.0000	-.0007	-.0043	-.0149	-.0374	-.0757	-.1307	-.1990	-.2738

α, deg \ σ, deg	100.0	110.0	120.0	130.0	140.0	150.0	160.0	170.0	180.0
1.0	-.2631	-.2631	-.2631	-.2631	-.2631	-.2631	-.2631	-.2631	-.2631
2.0	-.2674	-.2675	-.2675	-.2675	-.2675	-.2675	-.2675	-.2675	-.2675
4.0	-.2760	-.2762	-.2762	-.2762	-.2762	-.2762	-.2762	-.2762	-.2762
6.0	-.2846	-.2849	-.2849	-.2849	-.2849	-.2849	-.2849	-.2849	-.2849
8.0	-.2931	-.2935	-.2935	-.2935	-.2935	-.2935	-.2935	-.2935	-.2935
10.0	-.3015	-.3022	-.3022	-.3022	-.3022	-.3022	-.3022	-.3022	-.3022
12.0	-.3097	-.3108	-.3108	-.3108	-.3108	-.3108	-.3108	-.3108	-.3108
15.0	-.3216	-.3235	-.3235	-.3235	-.3235	-.3235	-.3235	-.3235	-.3235
20.0	-.3403	-.3442	-.3443	-.3443	-.3443	-.3443	-.3443	-.3443	-.3443
25.0	-.3569	-.3639	-.3644	-.3644	-.3644	-.3644	-.3644	-.3644	-.3644
30.0	-.3713	-.3821	-.3838	-.3838	-.3838	-.3838	-.3838	-.3838	-.3838
35.0	-.3832	-.3983	-.4020	-.4022	-.4022	-.4022	-.4022	-.4022	-.4022
40.0	-.3924	-.4121	-.4187	-.4195	-.4195	-.4195	-.4195	-.4195	-.4195
45.0	-.3987	-.4235	-.4333	-.4355	-.4356	-.4356	-.4356	-.4356	-.4356
50.0	-.4022	-.4320	-.4457	-.4499	-.4503	-.4503	-.4503	-.4503	-.4503
55.0	-.4028	-.4376	-.4556	-.4623	-.4636	-.4636	-.4636	-.4636	-.4636
60.0	-.4004	-.4403	-.4628	-.4724	-.4751	-.4753	-.4753	-.4753	-.4753
65.0	-.3951	-.4398	-.4671	-.4802	-.4846	-.4854	-.4854	-.4854	-.4854
70.0	-.3869	-.4363	-.4684	-.4853	-.4920	-.4936	-.4937	-.4937	-.4937
75.0	-.3759	-.4298	-.4667	-.4877	-.4970	-.4999	-.5003	-.5003	-.5003
80.0	-.3622	-.4204	-.4620	-.4873	-.4996	-.5040	-.5050	-.5050	-.5050
85.0	-.3463	-.4082	-.4545	-.4841	-.4997	-.5060	-.5077	-.5079	-.5079

TABLE I.- CONTINUED

(c) C_Y. Continued.

$\beta_1 = 105°$; $\beta_2 = 255°$; $\beta = 2°$

α, deg \ σ_1, deg	5.0	10.0	20.0	30.0	40.0	50.0	60.0	70.0	80.0	90.0
1.0	-.0000	-.0000	-.0004	-.0018	-.0048	-.0098	-.0161	-.0223	-.0271	-.0289
2.0	-.0000	-.0000	-.0004	-.0018	-.0049	-.0099	-.0162	-.0226	-.0276	-.0297
4.0	-.0000	-.0000	-.0004	-.0018	-.0049	-.0100	-.0166	-.0233	-.0285	-.0311
6.0	-.0000	-.0000	-.0004	-.0018	-.0050	-.0102	-.0169	-.0239	-.0295	-.0324
8.0	-.0000	-.0000	-.0004	-.0018	-.0050	-.0103	-.0172	-.0244	-.0304	-.0338
10.0	-.0000	-.0000	-.0004	-.0018	-.0051	-.0104	-.0175	-.0250	-.0313	-.0351
12.0	-.0000	-.0000	-.0004	-.0018	-.0051	-.0105	-.0177	-.0255	-.0321	-.0363
15.0	-.0000	-.0000	-.0004	-.0018	-.0051	-.0107	-.0181	-.0262	-.0333	-.0381
20.0	-.0000	-.0000	-.0004	-.0018	-.0052	-.0108	-.0185	-.0272	-.0351	-.0400
25.0	-.0000	-.0000	-.0004	-.0018	-.0052	-.0109	-.0189	-.0279	-.0366	-.0433
30.0	-.0000	-.0000	-.0004	-.0018	-.0051	-.0109	-.0190	-.0285	-.0378	-.0454
35.0	-.0000	-.0000	-.0004	-.0017	-.0050	-.0108	-.0191	-.0289	-.0388	-.0471
40.0	-.0000	-.0000	-.0003	-.0017	-.0049	-.0107	-.0190	-.0290	-.0394	-.0485
45.0	-.0000	-.0000	-.0003	-.0016	-.0047	-.0104	-.0187	-.0290	-.0398	-.0495
50.0	-.0000	-.0000	-.0003	-.0015	-.0045	-.0101	-.0183	-.0287	-.0398	-.0502
55.0	-.0000	-.0000	-.0003	-.0014	-.0043	-.0097	-.0178	-.0281	-.0396	-.0505
60.0	-.0000	-.0000	-.0003	-.0013	-.0040	-.0092	-.0171	-.0274	-.0390	-.0504
65.0	-.0000	-.0000	-.0002	-.0012	-.0037	-.0086	-.0163	-.0265	-.0381	-.0499
70.0	-.0000	-.0000	-.0002	-.0011	-.0034	-.0080	-.0154	-.0253	-.0370	-.0490
75.0	-.0000	-.0000	-.0002	-.0009	-.0031	-.0073	-.0143	-.0240	-.0356	-.0477
80.0	-.0000	-.0000	-.0001	-.0008	-.0027	-.0066	-.0132	-.0225	-.0339	-.0461
85.0	-.0000	-.0000	-.0001	-.0006	-.0023	-.0058	-.0119	-.0208	-.0319	-.0442

α, deg \ σ_1, deg	100.0	110.0	120.0	130.0	140.0	150.0	160.0	170.0	180.0
1.0	-.0290	-.0290	-.0290	-.0290	-.0290	-.0290	-.0290	-.0290	-.0290
2.0	-.0297	-.0297	-.0297	-.0297	-.0297	-.0297	-.0297	-.0297	-.0297
4.0	-.0311	-.0311	-.0311	-.0311	-.0311	-.0311	-.0311	-.0311	-.0311
6.0	-.0326	-.0326	-.0326	-.0326	-.0326	-.0326	-.0326	-.0326	-.0326
8.0	-.0342	-.0342	-.0342	-.0342	-.0342	-.0342	-.0342	-.0342	-.0342
10.0	-.0357	-.0357	-.0357	-.0357	-.0357	-.0357	-.0357	-.0357	-.0357
12.0	-.0372	-.0372	-.0372	-.0372	-.0372	-.0372	-.0372	-.0372	-.0372
15.0	-.0395	-.0395	-.0395	-.0395	-.0395	-.0395	-.0395	-.0395	-.0395
20.0	-.0432	-.0434	-.0434	-.0434	-.0434	-.0434	-.0434	-.0434	-.0434
25.0	-.0466	-.0473	-.0473	-.0473	-.0473	-.0473	-.0473	-.0473	-.0473
30.0	-.0498	-.0511	-.0512	-.0512	-.0512	-.0512	-.0512	-.0512	-.0512
35.0	-.0526	-.0546	-.0550	-.0550	-.0550	-.0550	-.0550	-.0550	-.0550
40.0	-.0550	-.0579	-.0587	-.0588	-.0588	-.0588	-.0588	-.0588	-.0588
45.0	-.0570	-.0608	-.0621	-.0624	-.0624	-.0624	-.0624	-.0624	-.0624
50.0	-.0584	-.0633	-.0653	-.0659	-.0659	-.0659	-.0659	-.0659	-.0659
55.0	-.0595	-.0654	-.0682	-.0691	-.0693	-.0693	-.0693	-.0693	-.0693
60.0	-.0600	-.0671	-.0706	-.0721	-.0724	-.0725	-.0725	-.0725	-.0725
65.0	-.0602	-.0680	-.0727	-.0747	-.0753	-.0754	-.0754	-.0754	-.0754
70.0	-.0598	-.0684	-.0741	-.0769	-.0779	-.0781	-.0781	-.0781	-.0781
75.0	-.0590	-.0682	-.0747	-.0785	-.0800	-.0804	-.0805	-.0805	-.0805
80.0	-.0578	-.0676	-.0748	-.0792	-.0814	-.0822	-.0823	-.0823	-.0823
85.0	-.0561	-.0664	-.0742	-.0793	-.0819	-.0831	-.0834	-.0834	-.0834

TABLE I.- CONTINUED

(c) C_Y. Continued.

$\beta_1 = 105^\circ$; $\beta_2 = 255^\circ$; $\beta = 5^\circ$

α, deg \ σ, deg	5.0	10.0	20.0	30.0	40.0	50.0	60.0	70.0	80.0	90.0
1.0	-.0000	-.0001	-.0010	-.0044	-.0121	-.0244	-.0400	-.0556	-.0673	-.0721
2.0	-.0000	-.0001	-.0010	-.0044	-.0121	-.0246	-.0404	-.0564	-.0686	-.0738
4.0	-.0000	-.0001	-.0010	-.0045	-.0123	-.0250	-.0413	-.0579	-.0711	-.0773
6.0	-.0000	-.0001	-.0010	-.0045	-.0124	-.0254	-.0421	-.0594	-.0734	-.0807
8.0	-.0000	-.0001	-.0010	-.0045	-.0125	-.0257	-.0428	-.0608	-.0757	-.0839
10.0	-.0000	-.0001	-.0010	-.0045	-.0126	-.0260	-.0435	-.0621	-.0779	-.0871
12.0	-.0000	-.0001	-.0010	-.0045	-.0127	-.0262	-.0441	-.0634	-.0800	-.0903
15.0	-.0000	-.0001	-.0010	-.0046	-.0128	-.0266	-.0450	-.0651	-.0830	-.0947
20.0	-.0000	-.0001	-.0010	-.0045	-.0129	-.0270	-.0461	-.0676	-.0874	-.1016
25.0	-.0000	-.0001	-.0009	-.0045	-.0128	-.0272	-.0470	-.0698	-.0917	-.1077
30.0	-.0000	-.0001	-.0009	-.0044	-.0127	-.0272	-.0474	-.0710	-.0942	-.1129
35.0	-.0000	-.0001	-.0009	-.0043	-.0125	-.0270	-.0475	-.0719	-.0965	-.1173
40.0	-.0000	-.0001	-.0008	-.0041	-.0122	-.0265	-.0472	-.0723	-.0981	-.1208
45.0	-.0000	-.0000	-.0008	-.0040	-.0118	-.0259	-.0466	-.0721	-.0990	-.1233
50.0	-.0000	-.0000	-.0008	-.0038	-.0113	-.0251	-.0456	-.0713	-.0991	-.1250
55.0	-.0000	-.0000	-.0007	-.0035	-.0107	-.0241	-.0443	-.0701	-.0985	-.1256
60.0	-.0000	-.0000	-.0006	-.0033	-.0100	-.0229	-.0426	-.0682	-.0971	-.1254
65.0	-.0000	-.0000	-.0006	-.0030	-.0093	-.0215	-.0406	-.0659	-.0949	-.1241
70.0	-.0000	-.0000	-.0005	-.0026	-.0085	-.0200	-.0383	-.0631	-.0921	-.1219
75.0	-.0000	-.0000	-.0004	-.0023	-.0076	-.0183	-.0357	-.0597	-.0885	-.1188
80.0	-.0000	-.0000	-.0003	-.0020	-.0067	-.0165	-.0328	-.0560	-.0843	-.1148
85.0	-.0000	-.0000	-.0003	-.0016	-.0057	-.0145	-.0297	-.0518	-.0794	-.1099

α, deg \ σ, deg	100.0	110.0	120.0	130.0	140.0	150.0	160.0	170.0	180.0
1.0	-.0723	-.0723	-.0723	-.0723	-.0723	-.0723	-.0723	-.0723	-.0723
2.0	-.0740	-.0740	-.0740	-.0740	-.0740	-.0740	-.0740	-.0740	-.0740
4.0	-.0777	-.0777	-.0777	-.0777	-.0777	-.0777	-.0777	-.0777	-.0777
6.0	-.0814	-.0814	-.0814	-.0814	-.0814	-.0814	-.0814	-.0814	-.0814
8.0	-.0852	-.0852	-.0852	-.0852	-.0852	-.0852	-.0852	-.0852	-.0852
10.0	-.0889	-.0889	-.0889	-.0889	-.0889	-.0889	-.0889	-.0889	-.0889
12.0	-.0927	-.0927	-.0927	-.0927	-.0927	-.0927	-.0927	-.0927	-.0927
15.0	-.0983	-.0984	-.0984	-.0984	-.0984	-.0984	-.0984	-.0984	-.0984
20.0	-.1073	-.1080	-.1080	-.1080	-.1080	-.1080	-.1080	-.1080	-.1080
25.0	-.1157	-.1175	-.1176	-.1176	-.1176	-.1176	-.1176	-.1176	-.1176
30.0	-.1234	-.1268	-.1271	-.1271	-.1271	-.1271	-.1271	-.1271	-.1271
35.0	-.1303	-.1355	-.1365	-.1365	-.1365	-.1365	-.1365	-.1365	-.1365
40.0	-.1363	-.1434	-.1455	-.1457	-.1457	-.1457	-.1457	-.1457	-.1457
45.0	-.1414	-.1505	-.1540	-.1547	-.1547	-.1547	-.1547	-.1547	-.1547
50.0	-.1455	-.1567	-.1618	-.1632	-.1633	-.1633	-.1633	-.1633	-.1633
55.0	-.1480	-.1619	-.1687	-.1711	-.1715	-.1715	-.1715	-.1715	-.1715
60.0	-.1495	-.1660	-.1747	-.1783	-.1793	-.1794	-.1793	-.1793	-.1793
65.0	-.1498	-.1692	-.1797	-.1847	-.1864	-.1867	-.1867	-.1867	-.1867
70.0	-.1489	-.1702	-.1836	-.1902	-.1928	-.1934	-.1934	-.1934	-.1934
75.0	-.1470	-.1699	-.1860	-.1944	-.1982	-.1993	-.1995	-.1995	-.1995
80.0	-.1439	-.1683	-.1861	-.1972	-.2024	-.2041	-.2044	-.2045	-.2045
85.0	-.1397	-.1654	-.1848	-.1973	-.2040	-.2068	-.2074	-.2075	-.2075

$\beta_1 = 105^\circ$; $\beta_2 = 255^\circ$; $\beta = 15^\circ$

α, deg \ σ, deg	5.0	10.0	20.0	30.0	40.0	50.0	60.0	70.0	80.0	90.0
1.0	-.0000	-.0002	-.0028	-.0127	-.0348	-.0703	-.1151	-.1600	-.1959	-.2099
2.0	-.0000	-.0002	-.0028	-.0128	-.0350	-.0709	-.1163	-.1623	-.1975	-.2146
4.0	-.0000	-.0002	-.0028	-.0129	-.0354	-.0720	-.1180	-.1660	-.2044	-.2237
6.0	-.0000	-.0002	-.0028	-.0129	-.0357	-.0730	-.1211	-.1710	-.2112	-.2329
8.0	-.0000	-.0002	-.0028	-.0130	-.0361	-.0740	-.1232	-.1751	-.2177	-.2416
10.0	-.0000	-.0002	-.0028	-.0131	-.0363	-.0748	-.1252	-.1789	-.2240	-.2503
12.0	-.0000	-.0002	-.0028	-.0131	-.0366	-.0756	-.1271	-.1825	-.2300	-.2588
15.0	-.0000	-.0002	-.0028	-.0131	-.0368	-.0765	-.1295	-.1875	-.2386	-.2710
20.0	-.0800	-.0002	-.0028	-.0131	-.0370	-.0777	-.1329	-.1946	-.2515	-.2899
25.0	-.0000	-.0002	-.0027	-.0129	-.0370	-.0783	-.1352	-.2003	-.2624	-.3068
30.0	-.0000	-.0002	-.0026	-.0127	-.0366	-.0782	-.1365	-.2045	-.2712	-.3215
35.0	-.0000	-.0002	-.0026	-.0124	-.0360	-.0776	-.1368	-.2071	-.2779	-.3340
40.0	-.0000	-.0002	-.0024	-.0119	-.0351	-.0764	-.1360	-.2081	-.2826	-.3439
45.0	-.0000	-.0001	-.0023	-.0114	-.0339	-.0746	-.1342	-.2076	-.2851	-.3514
50.0	-.0000	-.0001	-.0022	-.0108	-.0324	-.0722	-.1313	-.2054	-.2854	-.3562
55.0	-.0000	-.0001	-.0020	-.0101	-.0308	-.0693	-.1278	-.2017	-.2835	-.3584
60.0	-.0000	-.0001	-.0018	-.0094	-.0289	-.0659	-.1227	-.1965	-.2795	-.3579
65.0	-.0000	-.0001	-.0016	-.0085	-.0267	-.0619	-.1169	-.1897	-.2733	-.3548
70.0	-.0000	-.0001	-.0014	-.0076	-.0244	-.0575	-.1103	-.1816	-.2651	-.3489
75.0	-.0000	-.0001	-.0012	-.0067	-.0219	-.0526	-.1028	-.1720	-.2549	-.3405
80.0	-.0000	-.0000	-.0010	-.0057	-.0192	-.0474	-.0946	-.1611	-.2427	-.3294
85.0	-.0000	-.0000	-.0007	-.0046	-.0163	-.0418	-.0856	-.1490	-.2287	-.3159

α, deg \ σ, deg	100.0	110.0	120.0	130.0	140.0	150.0	160.0	170.0	180.0
1.0	-.2133	-.2134	-.2134	-.2134	-.2134	-.2134	-.2134	-.2134	-.2134
2.0	-.2184	-.2185	-.2185	-.2185	-.2185	-.2185	-.2185	-.2185	-.2185
4.0	-.2285	-.2287	-.2287	-.2287	-.2287	-.2287	-.2287	-.2287	-.2287
6.0	-.2386	-.2389	-.2389	-.2389	-.2389	-.2389	-.2389	-.2389	-.2389
8.0	-.2490	-.2493	-.2493	-.2493	-.2493	-.2493	-.2493	-.2493	-.2493
10.0	-.2593	-.2599	-.2599	-.2599	-.2599	-.2599	-.2599	-.2599	-.2599
12.0	-.2694	-.2705	-.2705	-.2705	-.2705	-.2705	-.2705	-.2705	-.2705
15.0	-.2844	-.2864	-.2864	-.2864	-.2864	-.2864	-.2864	-.2864	-.2864
20.0	-.3086	-.3130	-.3130	-.3130	-.3130	-.3130	-.3130	-.3130	-.3130
25.0	-.3311	-.3390	-.3396	-.3396	-.3396	-.3396	-.3396	-.3396	-.3396
30.0	-.3517	-.3639	-.3660	-.3659	-.3659	-.3659	-.3659	-.3659	-.3659
35.0	-.3700	-.3871	-.3915	-.3918	-.3918	-.3918	-.3918	-.3918	-.3918
40.0	-.3857	-.4081	-.4158	-.4168	-.4169	-.4169	-.4169	-.4169	-.4169
45.0	-.3987	-.4266	-.4382	-.4408	-.4409	-.4409	-.4409	-.4409	-.4409
50.0	-.4088	-.4422	-.4583	-.4633	-.4638	-.4638	-.4638	-.4638	-.4638
55.0	-.4159	-.4548	-.4757	-.4837	-.4852	-.4853	-.4853	-.4853	-.4853
60.0	-.4200	-.4642	-.4901	-.5016	-.5047	-.5050	-.5050	-.5050	-.5050
65.0	-.4209	-.4703	-.5012	-.5166	-.5219	-.5228	-.5228	-.5228	-.5228
70.0	-.4186	-.4728	-.5088	-.5283	-.5362	-.5382	-.5383	-.5383	-.5383
75.0	-.4132	-.4719	-.5128	-.5365	-.5473	-.5507	-.5512	-.5513	-.5513
80.0	-.4047	-.4674	-.5130	-.5410	-.5549	-.5600	-.5611	-.5612	-.5612
85.0	-.3931	-.4594	-.5094	-.5415	-.5586	-.5656	-.5675	-.5677	-.5677

TABLE I.- CONTINUED

(c) C_Y. Continued.

$\phi_1 = 120^\circ$; $\phi_2 = 240^\circ$; $\beta = 2^\circ$

α, deg \ σ, deg	5.0	10.0	20.0	30.0	40.0	50.0	60.0	70.0	80.0	90.0
1.0	-.0000	-.0000	-.0003	-.0013	-.0035	-.0072	-.0117	-.0164	-.0199	-.0214
2.0	-.0000	-.0000	-.0003	-.0013	-.0036	-.0073	-.0120	-.0168	-.0205	-.0223
4.0	-.0000	-.0000	-.0003	-.0013	-.0036	-.0075	-.0124	-.0176	-.0218	-.0241
6.0	-.0000	-.0000	-.0003	-.0013	-.0037	-.0077	-.0128	-.0183	-.0230	-.0258
8.0	-.0000	-.0000	-.0003	-.0014	-.0038	-.0078	-.0132	-.0191	-.0242	-.0275
10.0	-.0000	-.0000	-.0003	-.0014	-.0038	-.0080	-.0136	-.0198	-.0254	-.0292
12.0	-.0000	-.0000	-.0003	-.0014	-.0039	-.0082	-.0140	-.0205	-.0265	-.0309
15.0	-.0000	-.0000	-.0003	-.0014	-.0040	-.0084	-.0145	-.0215	-.0282	-.0333
20.0	-.0000	-.0000	-.0003	-.0014	-.0041	-.0088	-.0153	-.0231	-.0308	-.0371
25.0	-.0000	-.0000	-.0003	-.0014	-.0042	-.0090	-.0160	-.0245	-.0331	-.0406
30.0	-.0000	-.0000	-.0003	-.0014	-.0042	-.0092	-.0166	-.0257	-.0352	-.0439
35.0	-.0000	-.0000	-.0003	-.0014	-.0042	-.0094	-.0170	-.0267	-.0371	-.0468
40.0	-.0000	-.0000	-.0003	-.0014	-.0042	-.0094	-.0173	-.0274	-.0386	-.0493
45.0	-.0000	-.0000	-.0003	-.0013	-.0041	-.0094	-.0175	-.0280	-.0399	-.0515
50.0	-.0000	-.0000	-.0002	-.0013	-.0040	-.0093	-.0175	-.0284	-.0408	-.0532
55.0	-.0000	-.0000	-.0002	-.0012	-.0039	-.0092	-.0174	-.0286	-.0414	-.0546
60.0	-.0000	-.0000	-.0002	-.0012	-.0038	-.0089	-.0172	-.0285	-.0418	-.0555
65.0	-.0000	-.0000	-.0002	-.0011	-.0036	-.0086	-.0169	-.0282	-.0418	-.0561
70.0	-.0000	-.0000	-.0002	-.0010	-.0034	-.0083	-.0164	-.0277	-.0415	-.0562
75.0	-.0000	-.0000	-.0002	-.0009	-.0032	-.0079	-.0158	-.0270	-.0408	-.0558
80.0	-.0000	-.0000	-.0001	-.0008	-.0029	-.0074	-.0150	-.0261	-.0399	-.0551
85.0	-.0000	-.0000	-.0001	-.0007	-.0026	-.0068	-.0142	-.0250	-.0387	-.0539

α, deg \ σ, deg	100.0	110.0	120.0	130.0	140.0	150.0	160.0	170.0	180.0
1.0	-.0214	-.0214	-.0214	-.0214	-.0214	-.0214	-.0214	-.0214	-.0214
2.0	-.0223	-.0223	-.0223	-.0223	-.0223	-.0223	-.0223	-.0223	-.0223
4.0	-.0241	-.0241	-.0241	-.0241	-.0241	-.0241	-.0241	-.0241	-.0241
6.0	-.0261	-.0261	-.0261	-.0261	-.0261	-.0261	-.0261	-.0261	-.0261
8.0	-.0281	-.0281	-.0281	-.0281	-.0281	-.0281	-.0281	-.0281	-.0281
10.0	-.0302	-.0302	-.0302	-.0302	-.0302	-.0302	-.0302	-.0302	-.0302
12.0	-.0323	-.0323	-.0323	-.0323	-.0323	-.0323	-.0323	-.0323	-.0323
15.0	-.0355	-.0355	-.0355	-.0355	-.0355	-.0355	-.0355	-.0355	-.0355
20.0	-.0409	-.0412	-.0412	-.0412	-.0412	-.0412	-.0412	-.0412	-.0412
25.0	-.0460	-.0471	-.0471	-.0471	-.0471	-.0471	-.0471	-.0471	-.0471
30.0	-.0504	-.0530	-.0532	-.0532	-.0532	-.0532	-.0532	-.0532	-.0532
35.0	-.0545	-.0588	-.0593	-.0593	-.0593	-.0593	-.0593	-.0593	-.0593
40.0	-.0581	-.0643	-.0655	-.0656	-.0656	-.0656	-.0656	-.0656	-.0656
45.0	-.0613	-.0685	-.0715	-.0718	-.0718	-.0718	-.0718	-.0718	-.0718
50.0	-.0641	-.0723	-.0771	-.0778	-.0779	-.0778	-.0778	-.0778	-.0778
55.0	-.0663	-.0755	-.0815	-.0834	-.0836	-.0836	-.0836	-.0836	-.0836
60.0	-.0681	-.0781	-.0849	-.0885	-.0890	-.0890	-.0890	-.0890	-.0890
65.0	-.0693	-.0801	-.0877	-.0921	-.0937	-.0938	-.0938	-.0938	-.0938
70.0	-.0700	-.0815	-.0898	-.0949	-.0973	-.0978	-.0978	-.0978	-.0978
75.0	-.0702	-.0823	-.0913	-.0969	-.0997	-.1008	-.1009	-.1009	-.1009
80.0	-.0698	-.0825	-.0920	-.0981	-.1014	-.1027	-.1030	-.1030	-.1030
85.0	-.0689	-.0820	-.0920	-.0986	-.1022	-.1037	-.1042	-.1042	-.1042

TABLE I.- CONTINUED

(c) C_Y. Continued.

$\phi_1 = 120^\circ$; $\phi_2 = 240^\circ$; $\beta = 5^\circ$

α, deg \ σ, deg	5.0	10.0	20.0	30.0	40.0	50.0	60.0	70.0	80.0	90.0
1.0	-.0000	-.0000	-.0007	-.0032	-.0088	-.0178	-.0292	-.0407	-.0495	-.0531
2.0	-.0000	-.0000	-.0007	-.0032	-.0089	-.0181	-.0298	-.0417	-.0511	-.0553
4.0	-.0000	-.0000	-.0007	-.0033	-.0091	-.0186	-.0309	-.0437	-.0542	-.0597
6.0	-.0000	-.0000	-.0007	-.0033	-.0093	-.0191	-.0319	-.0457	-.0573	-.0641
8.0	-.0000	-.0000	-.0007	-.0034	-.0094	-.0195	-.0330	-.0475	-.0603	-.0685
10.0	-.0000	-.0000	-.0007	-.0034	-.0096	-.0200	-.0339	-.0493	-.0632	-.0728
12.0	-.0000	-.0000	-.0007	-.0034	-.0097	-.0204	-.0349	-.0511	-.0661	-.0769
15.0	-.0000	-.0000	-.0007	-.0035	-.0099	-.0210	-.0362	-.0536	-.0702	-.0829
20.0	-.0000	-.0000	-.0007	-.0035	-.0102	-.0218	-.0382	-.0575	-.0766	-.0924
25.0	-.0000	-.0000	-.0007	-.0035	-.0103	-.0225	-.0399	-.0609	-.0825	-.1012
30.0	-.0000	-.0000	-.0007	-.0035	-.0104	-.0230	-.0413	-.0639	-.0877	-.1092
35.0	-.0000	-.0000	-.0007	-.0035	-.0105	-.0233	-.0424	-.0663	-.0922	-.1164
40.0	-.0000	-.0000	-.0007	-.0034	-.0104	-.0234	-.0431	-.0683	-.0961	-.1227
45.0	-.0000	-.0000	-.0006	-.0033	-.0103	-.0234	-.0436	-.0698	-.0992	-.1281
50.0	-.0000	-.0000	-.0006	-.0032	-.0100	-.0232	-.0437	-.0707	-.1016	-.1325
55.0	-.0000	-.0000	-.0006	-.0031	-.0097	-.0228	-.0434	-.0711	-.1032	-.1359
60.0	-.0000	-.0000	-.0005	-.0029	-.0094	-.0222	-.0429	-.0709	-.1040	-.1382
65.0	-.0000	-.0000	-.0005	-.0027	-.0089	-.0215	-.0420	-.0702	-.1040	-.1396
70.0	-.0000	-.0000	-.0004	-.0025	-.0084	-.0206	-.0408	-.0690	-.1032	-.1398
75.0	-.0000	-.0000	-.0004	-.0023	-.0079	-.0196	-.0393	-.0672	-.1017	-.1390
80.0	-.0000	-.0000	-.0003	-.0021	-.0072	-.0184	-.0374	-.0650	-.0993	-.1371
85.0	-.0000	-.0000	-.0003	-.0018	-.0065	-.0170	-.0353	-.0622	-.0962	-.1342

α, deg \ σ, deg	100.0	110.0	120.0	130.0	140.0	150.0	160.0	170.0	180.0
1.0	-.0532	-.0532	-.0532	-.0532	-.0532	-.0532	-.0532	-.0532	-.0532
2.0	-.0555	-.0556	-.0555	-.0555	-.0555	-.0555	-.0555	-.0555	-.0555
4.0	-.0600	-.0600	-.0600	-.0600	-.0600	-.0600	-.0600	-.0600	-.0600
6.0	-.0648	-.0648	-.0648	-.0648	-.0648	-.0648	-.0648	-.0648	-.0648
8.0	-.0696	-.0696	-.0696	-.0696	-.0696	-.0696	-.0696	-.0696	-.0696
10.0	-.0746	-.0746	-.0746	-.0746	-.0746	-.0746	-.0746	-.0746	-.0746
12.0	-.0797	-.0797	-.0797	-.0797	-.0797	-.0797	-.0797	-.0797	-.0797
15.0	-.0875	-.0876	-.0876	-.0876	-.0876	-.0876	-.0876	-.0876	-.0876
20.0	-.1006	-.1015	-.1015	-.1015	-.1015	-.1015	-.1015	-.1015	-.1015
25.0	-.1136	-.1158	-.1158	-.1158	-.1158	-.1158	-.1158	-.1158	-.1158
30.0	-.1255	-.1302	-.1307	-.1306	-.1306	-.1306	-.1306	-.1306	-.1306
35.0	-.1356	-.1445	-.1458	-.1458	-.1458	-.1458	-.1458	-.1458	-.1458
40.0	-.1447	-.1584	-.1610	-.1612	-.1612	-.1612	-.1612	-.1612	-.1612
45.0	-.1527	-.1706	-.1758	-.1766	-.1766	-.1766	-.1766	-.1766	-.1766
50.0	-.1595	-.1799	-.1899	-.1916	-.1918	-.1918	-.1918	-.1918	-.1918
55.0	-.1651	-.1878	-.2028	-.2058	-.2064	-.2064	-.2064	-.2064	-.2064
60.0	-.1695	-.1944	-.2113	-.2188	-.2200	-.2201	-.2201	-.2201	-.2201
65.0	-.1726	-.1994	-.2183	-.2294	-.2321	-.2324	-.2324	-.2324	-.2324
70.0	-.1743	-.2029	-.2236	-.2361	-.2421	-.2428	-.2429	-.2429	-.2429
75.0	-.1747	-.2049	-.2272	-.2411	-.2482	-.2507	-.2509	-.2509	-.2509
80.0	-.1738	-.2053	-.2290	-.2442	-.2523	-.2556	-.2564	-.2564	-.2564
85.0	-.1716	-.2042	-.2291	-.2455	-.2548	-.2582	-.2593	-.2595	-.2595

$\phi_1 = 120^\circ$; $\phi_2 = 240^\circ$; $\beta = 15^\circ$

α, deg \ σ, deg	5.0	10.0	20.0	30.0	40.0	50.0	60.0	70.0	80.0	90.0
1.0	-.0000	-.0001	-.0020	-.0092	-.0253	-.0513	-.0841	-.1173	-.1424	-.1537
2.0	-.0000	-.0001	-.0020	-.0093	-.0256	-.0520	-.0857	-.1202	-.1468	-.1592
4.0	-.0000	-.0001	-.0020	-.0094	-.0261	-.0535	-.0889	-.1259	-.1558	-.1702
6.0	-.0000	-.0001	-.0021	-.0096	-.0266	-.0549	-.0919	-.1314	-.1649	-.1814
8.0	-.0000	-.0001	-.0021	-.0097	-.0271	-.0562	-.0949	-.1368	-.1736	-.1927
10.0	-.0000	-.0001	-.0021	-.0098	-.0276	-.0575	-.0977	-.1421	-.1820	-.2041
12.0	-.0000	-.0001	-.0021	-.0099	-.0280	-.0587	-.1004	-.1471	-.1902	-.2155
15.0	-.0000	-.0001	-.0021	-.0100	-.0285	-.0604	-.1042	-.1544	-.2021	-.2327
20.0	-.0000	-.0001	-.0021	-.0101	-.0292	-.0628	-.1100	-.1655	-.2206	-.2611
25.0	-.0000	-.0001	-.0021	-.0102	-.0298	-.0647	-.1149	-.1754	-.2375	-.2892
30.0	-.0000	-.0001	-.0020	-.0101	-.0300	-.0661	-.1189	-.1839	-.2525	-.3145
35.0	-.0000	-.0001	-.0020	-.0100	-.0301	-.0671	-.1220	-.1910	-.2656	-.3352
40.0	-.0000	-.0001	-.0019	-.0098	-.0299	-.0675	-.1242	-.1967	-.2767	-.3534
45.0	-.0000	-.0001	-.0019	-.0096	-.0295	-.0674	-.1255	-.2009	-.2857	-.3688
50.0	-.0000	-.0001	-.0018	-.0093	-.0289	-.0668	-.1257	-.2035	-.2925	-.3815
55.0	-.0000	-.0001	-.0017	-.0089	-.0281	-.0657	-.1251	-.2046	-.2971	-.3913
60.0	-.0000	-.0001	-.0015	-.0084	-.0270	-.0640	-.1235	-.2042	-.2994	-.3981
65.0	-.0000	-.0001	-.0014	-.0079	-.0257	-.0619	-.1207	-.2022	-.2995	-.4018
70.0	-.0000	-.0001	-.0013	-.0073	-.0243	-.0594	-.1174	-.1986	-.2972	-.4025
75.0	-.0000	-.0001	-.0011	-.0066	-.0226	-.0563	-.1131	-.1936	-.2927	-.4002
80.0	-.0000	-.0000	-.0010	-.0059	-.0208	-.0529	-.1078	-.1870	-.2860	-.3948
85.0	-.0000	-.0000	-.0008	-.0052	-.0189	-.0490	-.1018	-.1791	-.2771	-.3864

α, deg \ σ, deg	100.0	110.0	120.0	130.0	140.0	150.0	160.0	170.0	180.0
1.0	-.1557	-.1557	-.1557	-.1557	-.1557	-.1557	-.1557	-.1557	-.1557
2.0	-.1615	-.1616	-.1616	-.1616	-.1616	-.1616	-.1616	-.1616	-.1616
4.0	-.1735	-.1736	-.1736	-.1736	-.1736	-.1736	-.1736	-.1736	-.1736
6.0	-.1858	-.1859	-.1859	-.1859	-.1859	-.1859	-.1859	-.1859	-.1859
8.0	-.1984	-.1987	-.1987	-.1987	-.1987	-.1987	-.1987	-.1987	-.1987
10.0	-.2112	-.2117	-.2117	-.2117	-.2117	-.2117	-.2117	-.2117	-.2117
12.0	-.2243	-.2253	-.2253	-.2253	-.2253	-.2253	-.2253	-.2253	-.2253
15.0	-.2442	-.2461	-.2461	-.2461	-.2461	-.2461	-.2461	-.2461	-.2461
20.0	-.2778	-.2821	-.2822	-.2822	-.2822	-.2822	-.2822	-.2822	-.2822
25.0	-.3115	-.3193	-.3200	-.3200	-.3200	-.3200	-.3200	-.3200	-.3200
30.0	-.3447	-.3570	-.3593	-.3593	-.3593	-.3593	-.3593	-.3593	-.3593
35.0	-.3772	-.3944	-.3994	-.3997	-.3997	-.3997	-.3997	-.3997	-.3997
40.0	-.4087	-.4310	-.4396	-.4408	-.4408	-.4408	-.4408	-.4408	-.4408
45.0	-.4390	-.4667	-.4793	-.4824	-.4825	-.4825	-.4825	-.4825	-.4825
50.0	-.4693	-.5009	-.5180	-.5237	-.5244	-.5244	-.5244	-.5244	-.5244
55.0	-.4755	-.5337	-.5553	-.5642	-.5661	-.5661	-.5661	-.5661	-.5661
60.0	-.4880	-.5597	-.5907	-.6031	-.6068	-.6072	-.6072	-.6072	-.6072
65.0	-.4968	-.5742	-.6236	-.6396	-.6456	-.6467	-.6467	-.6467	-.6467
70.0	-.5019	-.5843	-.6438	-.6724	-.6808	-.6831	-.6833	-.6833	-.6833
75.0	-.5031	-.5900	-.6541	-.6942	-.7100	-.7136	-.7142	-.7143	-.7143
80.0	-.5005	-.5913	-.6594	-.7033	-.7265	-.7348	-.7359	-.7360	-.7360
85.0	-.4941	-.5880	-.6598	-.7069	-.7327	-.7436	-.7467	-.7470	-.7470

TABLE I.- CONTINUED

(c) C_Y. Continued.

$\beta_1 = 135^\circ$; $\beta_2 = 225^\circ$; $\beta = 2^\circ$

α, deg \ σ, deg	5.0	10.0	20.0	30.0	40.0	50.0	60.0	70.0	80.0	90.0
1.0	-.0080	-.0000	-.0002	-.0008	-.0022	-.0045	-.0074	-.0104	-.0128	-.0139
2.0	-.0000	-.0000	-.0002	-.0008	-.0023	-.0047	-.0077	-.0110	-.0136	-.0151
4.0	-.0000	-.0000	-.0002	-.0008	-.0024	-.0049	-.0083	-.0121	-.0153	-.0175
6.0	-.0000	-.0000	-.0002	-.0009	-.0025	-.0052	-.0089	-.0131	-.0170	-.0199
8.0	-.0000	-.0000	-.0002	-.0009	-.0026	-.0055	-.0095	-.0142	-.0187	-.0223
10.0	-.0000	-.0000	-.0002	-.0009	-.0027	-.0057	-.0101	-.0152	-.0203	-.0246
12.0	-.0000	-.0000	-.0002	-.0009	-.0028	-.0060	-.0106	-.0162	-.0220	-.0269
15.0	-.0000	-.0000	-.0002	-.0010	-.0029	-.0064	-.0115	-.0177	-.0243	-.0303
20.0	-.0000	-.0000	-.0002	-.0010	-.0031	-.0070	-.0127	-.0201	-.0281	-.0358
25.0	-.0000	-.0000	-.0002	-.0011	-.0033	-.0075	-.0139	-.0223	-.0317	-.0410
30.0	-.0000	-.0000	-.0002	-.0011	-.0034	-.0079	-.0150	-.0243	-.0351	-.0459
35.0	-.0000	-.0000	-.0002	-.0011	-.0036	-.0084	-.0160	-.0262	-.0382	-.0504
40.0	-.0000	-.0000	-.0002	-.0011	-.0037	-.0087	-.0168	-.0279	-.0410	-.0545
45.0	-.0000	-.0000	-.0002	-.0011	-.0037	-.0090	-.0175	-.0293	-.0434	-.0583
50.0	-.0000	-.0000	-.0002	-.0011	-.0038	-.0092	-.0181	-.0305	-.0456	-.0616
55.0	-.0000	-.0000	-.0002	-.0011	-.0038	-.0093	-.0186	-.0315	-.0474	-.0644
60.0	-.0000	-.0000	-.0002	-.0011	-.0038	-.0094	-.0189	-.0323	-.0488	-.0667
65.0	-.0000	-.0000	-.0002	-.0011	-.0037	-.0094	-.0190	-.0328	-.0499	-.0686
70.0	-.0000	-.0000	-.0002	-.0010	-.0037	-.0093	-.0190	-.0331	-.0506	-.0699
75.0	-.0000	-.0000	-.0002	-.0010	-.0036	-.0092	-.0189	-.0331	-.0509	-.0707
80.0	-.0000	-.0000	-.0001	-.0009	-.0034	-.0090	-.0186	-.0328	-.0508	-.0709
85.0	-.0000	-.0000	-.0001	-.0009	-.0033	-.0087	-.0182	-.0323	-.0504	-.0706

α, deg \ σ, deg	100.0	110.0	120.0	130.0	140.0	150.0	160.0	170.0	180.0
1.0	-.0139	-.0139	-.0139	-.0139	-.0139	-.0139	-.0139	-.0139	-.0139
2.0	-.0150	-.0150	-.0150	-.0150	-.0150	-.0150	-.0150	-.0150	-.0150
4.0	-.0177	-.0177	-.0177	-.0177	-.0177	-.0177	-.0177	-.0177	-.0177
6.0	-.0205	-.0205	-.0205	-.0205	-.0205	-.0205	-.0205	-.0205	-.0205
8.0	-.0234	-.0234	-.0234	-.0234	-.0234	-.0234	-.0234	-.0234	-.0234
10.0	-.0264	-.0264	-.0264	-.0264	-.0264	-.0264	-.0264	-.0264	-.0264
12.0	-.0296	-.0296	-.0296	-.0296	-.0296	-.0296	-.0296	-.0296	-.0296
15.0	-.0346	-.0346	-.0346	-.0346	-.0346	-.0346	-.0346	-.0346	-.0346
20.0	-.0420	-.0436	-.0436	-.0436	-.0436	-.0436	-.0436	-.0436	-.0436
25.0	-.0488	-.0531	-.0531	-.0531	-.0531	-.0531	-.0531	-.0531	-.0531
30.0	-.0553	-.0625	-.0631	-.0631	-.0631	-.0631	-.0631	-.0631	-.0631
35.0	-.0614	-.0700	-.0733	-.0733	-.0733	-.0733	-.0733	-.0733	-.0733
40.0	-.0670	-.0769	-.0834	-.0836	-.0836	-.0836	-.0836	-.0836	-.0836
45.0	-.0721	-.0833	-.0912	-.0935	-.0935	-.0935	-.0935	-.0935	-.0935
50.0	-.0766	-.0890	-.0979	-.1029	-.1029	-.1029	-.1029	-.1029	-.1029
55.0	-.0806	-.0941	-.1039	-.1100	-.1116	-.1116	-.1116	-.1116	-.1116
60.0	-.0839	-.0984	-.1091	-.1158	-.1191	-.1192	-.1192	-.1192	-.1192
65.0	-.0866	-.1020	-.1134	-.1207	-.1245	-.1256	-.1256	-.1256	-.1256
70.0	-.0887	-.1048	-.1169	-.1248	-.1289	-.1306	-.1308	-.1308	-.1308
75.0	-.0900	-.1068	-.1195	-.1278	-.1323	-.1342	-.1347	-.1347	-.1347
80.0	-.0907	-.1080	-.1212	-.1299	-.1347	-.1367	-.1373	-.1374	-.1374
85.0	-.0907	-.1084	-.1220	-.1311	-.1361	-.1382	-.1389	-.1390	-.1390

TABLE I.- CONTINUED

(c) C_Y. Continued.

$\beta_1 = 135^\circ$; $\beta_2 = 225^\circ$; $\beta = 5^\circ$

α_1, deg \ σ_1, deg	5.0	10.0	20.0	30.0	40.0	50.0	60.0	70.0	80.0	90.0
1.0	-.0000	-.0000	-.0004	-.0020	-.0055	-.0112	-.0185	-.0260	-.0318	-.0344
2.0	-.0000	-.0000	-.0004	-.0020	-.0057	-.0116	-.0193	-.0273	-.0340	-.0373
4.0	-.0000	-.0000	-.0005	-.0021	-.0059	-.0123	-.0208	-.0300	-.0382	-.0434
6.0	-.0000	-.0000	-.0005	-.0022	-.0062	-.0130	-.0222	-.0327	-.0424	-.0495
8.0	-.0000	-.0000	-.0005	-.0022	-.0064	-.0136	-.0237	-.0353	-.0465	-.0554
10.0	-.0000	-.0000	-.0005	-.0023	-.0066	-.0143	-.0251	-.0379	-.0506	-.0612
12.0	-.0000	-.0000	-.0005	-.0024	-.0069	-.0149	-.0265	-.0404	-.0546	-.0670
15.0	-.0000	-.0000	-.0005	-.0024	-.0072	-.0159	-.0285	-.0441	-.0606	-.0754
20.0	-.0000	-.0000	-.0005	-.0025	-.0077	-.0173	-.0317	-.0500	-.0700	-.0890
25.0	-.0000	-.0000	-.0005	-.0026	-.0082	-.0186	-.0347	-.0555	-.0790	-.1020
30.0	-.0000	-.0000	-.0005	-.0027	-.0085	-.0198	-.0374	-.0606	-.0873	-.1141
35.0	-.0000	-.0000	-.0005	-.0028	-.0089	-.0208	-.0398	-.0652	-.0950	-.1254
40.0	-.0000	-.0000	-.0005	-.0028	-.0091	-.0217	-.0419	-.0694	-.1019	-.1358
45.0	-.0000	-.0000	-.0005	-.0028	-.0093	-.0223	-.0436	-.0730	-.1081	-.1451
50.0	-.0000	-.0000	-.0005	-.0028	-.0094	-.0229	-.0451	-.0760	-.1135	-.1533
55.0	-.0000	-.0000	-.0005	-.0028	-.0094	-.0232	-.0462	-.0785	-.1180	-.1603
60.0	-.0000	-.0000	-.0005	-.0027	-.0094	-.0234	-.0469	-.0804	-.1216	-.1662
65.0	-.0000	-.0000	-.0004	-.0027	-.0093	-.0234	-.0473	-.0816	-.1242	-.1707
70.0	-.0000	-.0000	-.0004	-.0026	-.0091	-.0232	-.0474	-.0823	-.1259	-.1740
75.0	-.0000	-.0000	-.0004	-.0025	-.0089	-.0228	-.0471	-.0823	-.1267	-.1759
80.0	-.0000	-.0000	-.0004	-.0023	-.0086	-.0223	-.0464	-.0817	-.1269	-.1765
85.0	-.0000	-.0000	-.0003	-.0022	-.0082	-.0216	-.0453	-.0805	-.1265	-.1757

α_1, deg \ σ_1, deg	100.0	110.0	120.0	130.0	140.0	150.0	160.0	170.0	180.0
1.0	-.0345	-.0345	-.0345	-.0345	-.0345	-.0345	-.0345	-.0345	-.0345
2.0	-.0374	-.0374	-.0374	-.0374	-.0374	-.0374	-.0375	-.0374	-.0374
4.0	-.0437	-.0437	-.0437	-.0437	-.0437	-.0437	-.0437	-.0437	-.0437
6.0	-.0503	-.0503	-.0503	-.0503	-.0503	-.0503	-.0503	-.0503	-.0503
8.0	-.0573	-.0573	-.0573	-.0573	-.0573	-.0573	-.0573	-.0573	-.0573
10.0	-.0646	-.0646	-.0646	-.0646	-.0646	-.0646	-.0646	-.0646	-.0646
12.0	-.0723	-.0723	-.0723	-.0723	-.0723	-.0723	-.0723	-.0723	-.0723
15.0	-.0843	-.0844	-.0844	-.0844	-.0844	-.0844	-.0844	-.0844	-.0844
20.0	-.1045	-.1063	-.1063	-.1063	-.1063	-.1063	-.1063	-.1063	-.1063
25.0	-.1216	-.1296	-.1297	-.1297	-.1297	-.1297	-.1297	-.1297	-.1297
30.0	-.1377	-.1538	-.1543	-.1543	-.1543	-.1543	-.1543	-.1543	-.1543
35.0	-.1528	-.1743	-.1797	-.1797	-.1797	-.1797	-.1797	-.1797	-.1797
40.0	-.1668	-.1916	-.2049	-.2053	-.2053	-.2053	-.2053	-.2053	-.2053
45.0	-.1794	-.2074	-.2270	-.2303	-.2305	-.2303	-.2303	-.2303	-.2303
50.0	-.1907	-.2216	-.2438	-.2540	-.2542	-.2542	-.2542	-.2542	-.2542
55.0	-.2006	-.2342	-.2587	-.2737	-.2762	-.2762	-.2762	-.2762	-.2762
60.0	-.2089	-.2450	-.2716	-.2882	-.2955	-.2957	-.2957	-.2957	-.2957
65.0	-.2156	-.2539	-.2824	-.3006	-.3100	-.3121	-.3121	-.3121	-.3121
70.0	-.2207	-.2609	-.2911	-.3106	-.3209	-.3251	-.3253	-.3253	-.3253
75.0	-.2241	-.2659	-.2976	-.3182	-.3294	-.3340	-.3351	-.3352	-.3352
80.0	-.2258	-.2689	-.3018	-.3235	-.3353	-.3404	-.3418	-.3420	-.3420
85.0	-.2258	-.2698	-.3037	-.3263	-.3387	-.3441	-.3457	-.3460	-.3460

$\beta_1 = 135^\circ$; $\beta_2 = 225^\circ$; $\beta = 15^\circ$

α_1, deg \ σ_1, deg	5.0	10.0	20.0	30.0	40.0	50.0	60.0	70.0	80.0	90.0
1.0	-.0000	-.0001	-.0013	-.0058	-.0159	-.0323	-.0533	-.0748	-.0916	-.0984
2.0	-.0000	-.0001	-.0013	-.0059	-.0163	-.0333	-.0555	-.0787	-.0978	-.1055
4.0	-.0000	-.0001	-.0013	-.0061	-.0170	-.0354	-.0598	-.0865	-.1100	-.1204
6.0	-.0000	-.0001	-.0013	-.0063	-.0178	-.0374	-.0641	-.0941	-.1221	-.1361
8.0	-.0000	-.0001	-.0013	-.0064	-.0185	-.0393	-.0682	-.1016	-.1340	-.1526
10.0	-.0000	-.0001	-.0014	-.0066	-.0191	-.0412	-.0723	-.1091	-.1458	-.1699
12.0	-.0000	-.0001	-.0014	-.0068	-.0198	-.0430	-.0763	-.1163	-.1574	-.1879
15.0	-.0000	-.0001	-.0014	-.0070	-.0208	-.0457	-.0821	-.1270	-.1744	-.2162
20.0	-.0000	-.0001	-.0015	-.0073	-.0222	-.0498	-.0913	-.1440	-.2016	-.2564
25.0	-.0000	-.0001	-.0015	-.0076	-.0235	-.0536	-.0998	-.1599	-.2274	-.2936
30.0	-.0000	-.0001	-.0015	-.0078	-.0246	-.0570	-.1075	-.1745	-.2514	-.3287
35.0	-.0000	-.0001	-.0015	-.0080	-.0255	-.0599	-.1145	-.1879	-.2735	-.3612
40.0	-.0000	-.0001	-.0015	-.0081	-.0262	-.0624	-.1205	-.1998	-.2935	-.3910
45.0	-.0000	-.0001	-.0015	-.0082	-.0267	-.0644	-.1256	-.2101	-.3113	-.4178
50.0	-.0000	-.0001	-.0014	-.0081	-.0271	-.0659	-.1298	-.2189	-.3267	-.4414
55.0	-.0000	-.0001	-.0014	-.0081	-.0272	-.0669	-.1330	-.2261	-.3397	-.4617
60.0	-.0000	-.0001	-.0013	-.0079	-.0271	-.0674	-.1352	-.2315	-.3500	-.4784
65.0	-.0000	-.0001	-.0013	-.0077	-.0268	-.0673	-.1363	-.2351	-.3577	-.4915
70.0	-.0000	-.0001	-.0012	-.0075	-.0263	-.0668	-.1364	-.2369	-.3626	-.5009
75.0	-.0000	-.0000	-.0011	-.0071	-.0256	-.0658	-.1355	-.2370	-.3648	-.5065
80.0	-.0000	-.0000	-.0010	-.0068	-.0247	-.0642	-.1335	-.2352	-.3643	-.5082
85.0	-.0000	-.0000	-.0009	-.0063	-.0236	-.0622	-.1306	-.2317	-.3609	-.5060

α_1, deg \ σ_1, deg	100.0	110.0	120.0	130.0	140.0	150.0	160.0	170.0	180.0
1.0	-.0993	-.0993	-.0993	-.0993	-.0993	-.0993	-.0993	-.0993	-.0993
2.0	-.1066	-.1067	-.1067	-.1067	-.1067	-.1067	-.1067	-.1067	-.1067
4.0	-.1221	-.1222	-.1222	-.1222	-.1222	-.1222	-.1222	-.1222	-.1222
6.0	-.1347	-.1387	-.1387	-.1387	-.1387	-.1387	-.1387	-.1387	-.1387
8.0	-.1362	-.1563	-.1563	-.1563	-.1563	-.1563	-.1563	-.1563	-.1563
10.0	-.1746	-.1749	-.1749	-.1749	-.1749	-.1749	-.1749	-.1749	-.1749
12.0	-.1940	-.1946	-.1946	-.1946	-.1946	-.1946	-.1946	-.1946	-.1946
15.0	-.2246	-.2259	-.2259	-.2259	-.2259	-.2259	-.2259	-.2259	-.2259
20.0	-.2793	-.2827	-.2827	-.2827	-.2827	-.2827	-.2827	-.2827	-.2827
25.0	-.3380	-.3445	-.3451	-.3451	-.3451	-.3451	-.3451	-.3451	-.3451
30.0	-.3966	-.4100	-.4122	-.4122	-.4122	-.4122	-.4122	-.4122	-.4122
35.0	-.4401	-.4780	-.4827	-.4830	-.4830	-.4830	-.4830	-.4830	-.4830
40.0	-.4802	-.5471	-.5548	-.5561	-.5562	-.5562	-.5562	-.5562	-.5562
45.0	-.5166	-.5971	-.6268	-.6299	-.6301	-.6301	-.6301	-.6301	-.6301
50.0	-.5492	-.6582	-.6965	-.7020	-.7027	-.7027	-.7027	-.7027	-.7027
55.0	-.5775	-.6744	-.7448	-.7697	-.7717	-.7718	-.7718	-.7718	-.7718
60.0	-.6015	-.7034	-.7819	-.8299	-.8342	-.8346	-.8346	-.8346	-.8346
65.0	-.6208	-.7311	-.8132	-.8654	-.8874	-.8886	-.8886	-.8886	-.8886
70.0	-.6355	-.7512	-.8382	-.8943	-.9240	-.9316	-.9318	-.9318	-.9318
75.0	-.6453	-.7656	-.8569	-.9163	-.9484	-.9617	-.9635	-.9635	-.9635
80.0	-.6502	-.7742	-.8690	-.9314	-.9655	-.9800	-.9842	-.9844	-.9844
85.0	-.6502	-.7769	-.8745	-.9394	-.9753	-.9908	-.9955	-.9962	-.9962

TABLE I.- CONTINUED

(c) C_Y. Continued.

$\phi_1 = 150^\circ$; $\phi_2 = 210^\circ$; $\beta = 2^\circ$

α, deg \ σ, deg	5.0	10.0	20.0	30.0	40.0	50.0	60.0	70.0	80.0	90.0
1.0	-.0000	-.0000	-.0001	-.0004	-.0011	-.0023	-.0039	-.0055	-.0070	-.0079
2.0	-.0000	-.0000	-.0001	-.0004	-.0012	-.0025	-.0043	-.0064	-.0083	-.0097
4.0	-.0000	-.0000	-.0001	-.0005	-.0014	-.0029	-.0052	-.0080	-.0108	-.0133
6.0	-.0000	-.0000	-.0001	-.0005	-.0015	-.0034	-.0061	-.0096	-.0134	-.0169
8.0	-.0000	-.0000	-.0001	-.0005	-.0017	-.0038	-.0070	-.0113	-.0160	-.0205
10.0	-.0000	-.0000	-.0001	-.0006	-.0018	-.0042	-.0079	-.0129	-.0185	-.0241
12.0	-.0000	-.0000	-.0001	-.0006	-.0020	-.0046	-.0088	-.0145	-.0210	-.0277
15.0	-.0000	-.0000	-.0001	-.0007	-.0022	-.0052	-.0101	-.0168	-.0247	-.0329
20.0	-.0000	-.0000	-.0001	-.0008	-.0026	-.0062	-.0122	-.0206	-.0307	-.0415
25.0	-.0000	-.0000	-.0001	-.0009	-.0029	-.0072	-.0143	-.0243	-.0365	-.0497
30.0	-.0000	-.0000	-.0002	-.0009	-.0032	-.0080	-.0162	-.0278	-.0420	-.0575
35.0	-.0000	-.0000	-.0002	-.0010	-.0035	-.0089	-.0180	-.0310	-.0472	-.0650
40.0	-.0000	-.0000	-.0002	-.0011	-.0038	-.0096	-.0196	-.0341	-.0521	-.0719
45.0	-.0000	-.0000	-.0002	-.0011	-.0040	-.0103	-.0211	-.0368	-.0565	-.0783
50.0	-.0000	-.0000	-.0002	-.0012	-.0042	-.0109	-.0225	-.0393	-.0605	-.0840
55.0	-.0000	-.0000	-.0002	-.0012	-.0044	-.0114	-.0236	-.0415	-.0641	-.0892
60.0	-.0000	-.0000	-.0002	-.0013	-.0046	-.0119	-.0246	-.0434	-.0671	-.0936
65.0	-.0000	-.0000	-.0002	-.0013	-.0047	-.0122	-.0254	-.0449	-.0697	-.0974
70.0	-.0000	-.0000	-.0002	-.0013	-.0047	-.0125	-.0261	-.0461	-.0717	-.1004
75.0	-.0000	-.0000	-.0002	-.0013	-.0048	-.0126	-.0265	-.0470	-.0732	-.1026
80.0	-.0000	-.0000	-.0002	-.0013	-.0048	-.0127	-.0267	-.0475	-.0741	-.1041
85.0	-.0000	-.0000	-.0002	-.0013	-.0047	-.0126	-.0267	-.0476	-.0745	-.1048

α, deg \ σ, deg	100.0	110.0	120.0	130.0	140.0	150.0	160.0	170.0	180.0
1.0	-.0079	-.0079	-.0079	-.0079	-.0079	-.0079	-.0079	-.0079	-.0079
2.0	-.0098	-.0098	-.0098	-.0098	-.0098	-.0098	-.0098	-.0098	-.0098
4.0	-.0138	-.0138	-.0138	-.0138	-.0138	-.0138	-.0138	-.0138	-.0138
6.0	-.0182	-.0182	-.0182	-.0182	-.0182	-.0182	-.0182	-.0182	-.0182
8.0	-.0230	-.0230	-.0230	-.0230	-.0230	-.0230	-.0230	-.0230	-.0230
10.0	-.0280	-.0280	-.0280	-.0280	-.0280	-.0280	-.0280	-.0280	-.0280
12.0	-.0333	-.0333	-.0333	-.0333	-.0333	-.0333	-.0333	-.0333	-.0333
15.0	-.0404	-.0418	-.0418	-.0418	-.0418	-.0418	-.0418	-.0418	-.0418
20.0	-.0515	-.0572	-.0572	-.0572	-.0572	-.0572	-.0572	-.0572	-.0572
25.0	-.0622	-.0727	-.0736	-.0736	-.0736	-.0736	-.0736	-.0736	-.0736
30.0	-.0724	-.0850	-.0907	-.0907	-.0907	-.0907	-.0907	-.0907	-.0907
35.0	-.0821	-.0967	-.1076	-.1079	-.1079	-.1079	-.1079	-.1079	-.1079
40.0	-.0911	-.1077	-.1201	-.1247	-.1247	-.1247	-.1247	-.1247	-.1247
45.0	-.0995	-.1178	-.1316	-.1406	-.1407	-.1407	-.1407	-.1407	-.1407
50.0	-.1071	-.1270	-.1422	-.1521	-.1553	-.1553	-.1553	-.1553	-.1553
55.0	-.1139	-.1353	-.1517	-.1624	-.1682	-.1683	-.1683	-.1683	-.1683
60.0	-.1198	-.1426	-.1600	-.1714	-.1777	-.1795	-.1795	-.1795	-.1795
65.0	-.1248	-.1487	-.1671	-.1792	-.1859	-.1887	-.1889	-.1889	-.1889
70.0	-.1288	-.1537	-.1729	-.1856	-.1926	-.1956	-.1964	-.1964	-.1964
75.0	-.1319	-.1576	-.1774	-.1906	-.1979	-.2011	-.2020	-.2021	-.2021
80.0	-.1340	-.1603	-.1806	-.1941	-.2017	-.2049	-.2059	-.2061	-.2061
85.0	-.1350	-.1617	-.1824	-.1962	-.2039	-.2073	-.2083	-.2085	-.2085

TABLE I.- CONTINUED

(c) C_Y. Concluded.

$\phi_1 = 150^\circ$; $\phi_2 = 210^\circ$; $\beta = 5^\circ$

α, deg \ σ, deg	5.0	10.0	20.0	30.0	40.0	50.0	60.0	70.0	80.0	90.0
1.0	-.0000	-.0000	-.0002	-.0010	-.0028	-.0057	-.0096	-.0138	-.0174	-.0194
2.0	-.0000	-.0000	-.0002	-.0010	-.0030	-.0063	-.0107	-.0158	-.0206	-.0239
4.0	-.0000	-.0000	-.0002	-.0011	-.0034	-.0073	-.0130	-.0199	-.0270	-.0332
6.0	-.0000	-.0000	-.0002	-.0013	-.0038	-.0084	-.0153	-.0240	-.0334	-.0422
8.0	-.0000	-.0000	-.0003	-.0014	-.0042	-.0095	-.0175	-.0280	-.0397	-.0511
10.0	-.0000	-.0000	-.0003	-.0015	-.0045	-.0105	-.0198	-.0320	-.0460	-.0600
12.0	-.0000	-.0000	-.0003	-.0016	-.0049	-.0115	-.0220	-.0360	-.0523	-.0688
15.0	-.0000	-.0000	-.0003	-.0017	-.0055	-.0130	-.0252	-.0418	-.0615	-.0819
20.0	-.0000	-.0000	-.0003	-.0019	-.0064	-.0155	-.0305	-.0513	-.0765	-.1032
25.0	-.0000	-.0000	-.0004	-.0021	-.0072	-.0178	-.0355	-.0605	-.0909	-.1237
30.0	-.0000	-.0000	-.0004	-.0023	-.0080	-.0200	-.0403	-.0691	-.1047	-.1432
35.0	-.0000	-.0000	-.0004	-.0025	-.0088	-.0221	-.0447	-.0772	-.1176	-.1617
40.0	-.0000	-.0000	-.0004	-.0027	-.0094	-.0240	-.0489	-.0848	-.1296	-.1789
45.0	-.0000	-.0000	-.0005	-.0028	-.0100	-.0257	-.0526	-.0917	-.1407	-.1948
50.0	-.0000	-.0000	-.0005	-.0029	-.0106	-.0272	-.0559	-.0979	-.1507	-.2092
55.0	-.0000	-.0000	-.0005	-.0030	-.0110	-.0285	-.0589	-.1033	-.1595	-.2220
60.0	-.0000	-.0000	-.0005	-.0031	-.0113	-.0295	-.0613	-.1080	-.1671	-.2331
65.0	-.0000	-.0000	-.0005	-.0032	-.0116	-.0304	-.0633	-.1118	-.1735	-.2424
70.0	-.0000	-.0000	-.0005	-.0032	-.0118	-.0310	-.0649	-.1148	-.1785	-.2499
75.0	-.0000	-.0000	-.0005	-.0032	-.0119	-.0314	-.0659	-.1169	-.1822	-.2555
80.0	-.0000	-.0000	-.0005	-.0032	-.0119	-.0315	-.0664	-.1182	-.1845	-.2591
85.0	-.0000	-.0000	-.0004	-.0031	-.0118	-.0314	-.0664	-.1185	-.1854	-.2608

α, deg \ σ, deg	100.0	110.0	120.0	130.0	140.0	150.0	160.0	170.0	180.0
1.0	-.0194	-.0194	-.0194	-.0194	-.0194	-.0194	-.0194	-.0194	-.0194
2.0	-.0240	-.0240	-.0240	-.0240	-.0240	-.0240	-.0240	-.0240	-.0240
4.0	-.0337	-.0337	-.0337	-.0337	-.0337	-.0337	-.0337	-.0337	-.0337
6.0	-.0444	-.0444	-.0444	-.0444	-.0444	-.0444	-.0444	-.0444	-.0444
8.0	-.0558	-.0558	-.0558	-.0558	-.0558	-.0558	-.0558	-.0558	-.0558
10.0	-.0680	-.0679	-.0679	-.0679	-.0679	-.0679	-.0679	-.0679	-.0679
12.0	-.0809	-.0809	-.0809	-.0809	-.0809	-.0809	-.0809	-.0809	-.0809
15.0	-.1006	-.1016	-.1016	-.1016	-.1016	-.1016	-.1016	-.1016	-.1016
20.0	-.1282	-.1394	-.1394	-.1394	-.1394	-.1394	-.1394	-.1394	-.1394
25.0	-.1548	-.1800	-.1800	-.1800	-.1800	-.1800	-.1800	-.1800	-.1800
30.0	-.1803	-.2117	-.2226	-.2225	-.2225	-.2225	-.2225	-.2225	-.2225
35.0	-.2044	-.2408	-.2655	-.2656	-.2656	-.2656	-.2656	-.2656	-.2656
40.0	-.2269	-.2680	-.2989	-.3078	-.3079	-.3079	-.3079	-.3079	-.3079
45.0	-.2477	-.2933	-.3277	-.3480	-.3480	-.3480	-.3480	-.3480	-.3480
50.0	-.2666	-.3163	-.3540	-.3786	-.3850	-.3850	-.3850	-.3850	-.3850
55.0	-.2834	-.3369	-.3776	-.4042	-.4180	-.4180	-.4180	-.4180	-.4180
60.0	-.2981	-.3549	-.3983	-.4268	-.4424	-.4463	-.4463	-.4463	-.4463
65.0	-.3106	-.3702	-.4159	-.4461	-.4627	-.4698	-.4699	-.4699	-.4699
70.0	-.3207	-.3827	-.4305	-.4621	-.4795	-.4870	-.4887	-.4887	-.4887
75.0	-.3283	-.3923	-.4417	-.4745	-.4926	-.5005	-.5028	-.5030	-.5030
80.0	-.3335	-.3989	-.4496	-.4833	-.5020	-.5102	-.5126	-.5130	-.5130
85.0	-.3361	-.4025	-.4540	-.4884	-.5076	-.5160	-.5185	-.5189	-.5190

$\phi_1 = 150^\circ$; $\phi_2 = 210^\circ$; $\beta = 15^\circ$

α, deg \ σ, deg	5.0	10.0	20.0	30.0	40.0	50.0	60.0	70.0	80.0	90.0
1.0	-.0000	-.0000	-.0006	-.0029	-.0080	-.0165	-.0276	-.0396	-.0500	-.0541
2.0	-.0000	-.0000	-.0006	-.0030	-.0085	-.0180	-.0309	-.0456	-.0592	-.0654
4.0	-.0000	-.0000	-.0007	-.0033	-.0097	-.0211	-.0375	-.0573	-.0777	-.0898
6.0	-.0000	-.0000	-.0007	-.0036	-.0108	-.0242	-.0440	-.0690	-.0961	-.1163
8.0	-.0000	-.0000	-.0008	-.0039	-.0120	-.0272	-.0505	-.0807	-.1144	-.1451
10.0	-.0000	-.0000	-.0008	-.0042	-.0131	-.0302	-.0569	-.0922	-.1325	-.1728
12.0	-.0000	-.0000	-.0008	-.0045	-.0142	-.0332	-.0633	-.1036	-.1504	-.1982
15.0	-.0000	-.0000	-.0009	-.0049	-.0158	-.0376	-.0726	-.1205	-.1770	-.2359
20.0	-.0000	-.0001	-.0010	-.0055	-.0184	-.0446	-.0870	-.1478	-.2203	-.2972
25.0	-.0000	-.0001	-.0011	-.0062	-.0208	-.0514	-.1023	-.1741	-.2618	-.3562
30.0	-.0000	-.0001	-.0011	-.0067	-.0231	-.0577	-.1160	-.1990	-.3013	-.4125
35.0	-.0000	-.0001	-.0012	-.0073	-.0252	-.0636	-.1288	-.2224	-.3386	-.4656
40.0	-.0000	-.0001	-.0013	-.0077	-.0272	-.0690	-.1407	-.2441	-.3733	-.5152
45.0	-.0000	-.0001	-.0013	-.0081	-.0289	-.0739	-.1515	-.2639	-.4051	-.5609
50.0	-.0000	-.0001	-.0013	-.0085	-.0304	-.0782	-.1611	-.2818	-.4339	-.6023
55.0	-.0000	-.0001	-.0014	-.0088	-.0317	-.0819	-.1695	-.2975	-.4593	-.6392
60.0	-.0000	-.0001	-.0014	-.0090	-.0327	-.0850	-.1766	-.3109	-.4813	-.6711
65.0	-.0000	-.0001	-.0014	-.0091	-.0335	-.0875	-.1824	-.3220	-.4996	-.6930
70.0	-.0000	-.0001	-.0014	-.0092	-.0340	-.0893	-.1867	-.3306	-.5140	-.7198
75.0	-.0000	-.0000	-.0014	-.0092	-.0342	-.0904	-.1897	-.3367	-.5246	-.7356
80.0	-.0000	-.0000	-.0013	-.0091	-.0342	-.0908	-.1912	-.3402	-.5312	-.7461
85.0	-.0000	-.0000	-.0013	-.0090	-.0340	-.0905	-.1913	-.3412	-.5337	-.7509

α, deg \ σ, deg	100.0	110.0	120.0	130.0	140.0	150.0	160.0	170.0	180.0
1.0	-.0544	-.0544	-.0544	-.0544	-.0544	-.0544	-.0544	-.0544	-.0544
2.0	-.0658	-.0658	-.0658	-.0658	-.0658	-.0658	-.0658	-.0658	-.0658
4.0	-.0904	-.0904	-.0904	-.0904	-.0904	-.0904	-.0904	-.0904	-.0904
6.0	-.1174	-.1174	-.1174	-.1174	-.1174	-.1174	-.1174	-.1174	-.1174
8.0	-.1468	-.1468	-.1468	-.1468	-.1468	-.1468	-.1468	-.1468	-.1468
10.0	-.1785	-.1785	-.1786	-.1786	-.1786	-.1786	-.1786	-.1786	-.1786
12.0	-.2123	-.2126	-.2126	-.2126	-.2126	-.2126	-.2126	-.2126	-.2126
15.0	-.2671	-.2678	-.2678	-.2678	-.2678	-.2678	-.2678	-.2678	-.2678
20.0	-.3679	-.3699	-.3699	-.3699	-.3699	-.3699	-.3699	-.3699	-.3699
25.0	-.4459	-.4824	-.4829	-.4829	-.4829	-.4829	-.4829	-.4829	-.4829
30.0	-.5191	-.6021	-.6036	-.6035	-.6035	-.6035	-.6035	-.6035	-.6035
35.0	-.5884	-.6932	-.7284	-.7287	-.7287	-.7287	-.7287	-.7287	-.7287
40.0	-.6532	-.7718	-.8528	-.8538	-.8538	-.8538	-.8538	-.8538	-.8538
45.0	-.7131	-.8444	-.9436	-.9748	-.9749	-.9749	-.9749	-.9749	-.9749
50.0	-.7675	-.9106	-1.0193	-1.0873	-1.0879	-1.0879	-1.0879	-1.0879	-1.0879
55.0	-.8161	-.9699	-1.0871	-1.1639	-1.1893	-1.1893	-1.1893	-1.1893	-1.1893
60.0	-.8585	-1.0218	-1.1468	-1.2289	-1.2737	-1.2767	-1.2767	-1.2767	-1.2767
65.0	-.8943	-1.0660	-1.1977	-1.2846	-1.3322	-1.3487	-1.3487	-1.3487	-1.3487
70.0	-.9233	-1.1020	-1.2394	-1.3305	-1.3806	-1.4022	-1.4054	-1.4054	-1.4054
75.0	-.9453	-1.1296	-1.2718	-1.3662	-1.4185	-1.4411	-1.4478	-1.4479	-1.4479
80.0	-.9601	-1.1487	-1.2944	-1.3916	-1.4455	-1.4690	-1.4761	-1.4771	-1.4770
85.0	-.9676	-1.1590	-1.3073	-1.4063	-1.4616	-1.4858	-1.4931	-1.4943	-1.4943

TABLE I.- CONTINUED

(d) C_L

$\beta_1 = 90^\circ$; $\beta_2 = 270^\circ$; $\beta = 0^\circ$

α, deg \ σ_1, deg	5.0	10.0	20.0	30.0	40.0	50.0	60.0	70.0	80.0	90.0
1.0	.0003	.0034	.0291	.0911	.1863	.2962	.3954	.4633	.4943	.4998
2.0	.0000	.0023	.0254	.0843	.1773	.2869	.3878	.4586	.4923	.4991
4.0	-.0005	.0003	.0179	.0701	.1582	.2667	.3705	.4470	.4864	.4962
6.0	-.0010	-.0018	.0101	.0554	.1378	.2443	.3506	.4326	.4779	.4913
8.0	-.0015	-.0039	.0024	.0401	.1163	.2201	.3281	.4153	.4666	.4842
10.0	-.0020	-.0059	-.0055	.0246	.0939	.1942	.3032	.3951	.4527	.4749
12.0	-.0025	-.0079	-.0132	.0088	.0707	.1667	.2760	.3723	.4360	.4634
15.0	-.0032	-.0107	-.0246	-.0149	.0348	.1230	.2314	.3333	.4061	.4419
20.0	-.0042	-.0150	-.0425	-.0536	-.0260	.0458	.1487	.2568	.3438	.3949
25.0	-.0050	-.0185	-.0582	-.0895	-.0855	-.0337	.0588	.1687	.2676	.3345
30.0	-.0055	-.0210	-.0709	-.1208	-.1406	-.1115	-.0339	.0730	.1802	.2623
35.0	-.0058	-.0225	-.0800	-.1460	-.1886	-.1837	-.1249	-.0261	.0853	.1805
40.0	-.0058	-.0230	-.0852	-.1640	-.2272	-.2468	-.2098	-.1239	-.0133	.0920
45.0	-.0055	-.0224	-.0864	-.1740	-.2548	-.2979	-.2847	-.2160	-.1113	-.0000
50.0	-.0051	-.0208	-.0838	-.1761	-.2703	-.3349	-.3463	-.2983	-.2045	-.0920
55.0	-.0044	-.0186	-.0778	-.1705	-.2737	-.3566	-.3919	-.3672	-.2891	-.1805
60.0	-.0036	-.0157	-.0690	-.1582	-.2656	-.3627	-.4203	-.4202	-.3618	-.2623
65.0	-.0028	-.0125	-.0582	-.1404	-.2472	-.3539	-.4311	-.4556	-.4199	-.3345
70.0	-.0020	-.0093	-.0464	-.1187	-.2206	-.3321	-.4250	-.4730	-.4619	-.3949
75.0	-.0013	-.0062	-.0344	-.0951	-.1883	-.2997	-.4039	-.4730	-.4870	-.4419
80.0	-.0007	-.0036	-.0232	-.0714	-.1531	-.2599	-.3705	-.4572	-.4958	-.4749
85.0	-.0002	-.0016	-.0138	-.0496	-.1178	-.2161	-.3283	-.4284	-.4894	-.4940

α, deg \ σ_1, deg	100.0	110.0	120.0	130.0	140.0	150.0	160.0	170.0	180.0
1.0	.4998	.4998	.4998	.4998	.4998	.4998	.4998	.4998	.4998
2.0	.4991	.4991	.4991	.4991	.4991	.4991	.4991	.4991	.4991
4.0	.4964	.4964	.4964	.4964	.4964	.4964	.4964	.4964	.4964
6.0	.4918	.4918	.4918	.4918	.4918	.4918	.4918	.4918	.4918
8.0	.4855	.4855	.4855	.4855	.4855	.4855	.4855	.4855	.4855
10.0	.4776	.4776	.4776	.4776	.4776	.4776	.4776	.4776	.4776
12.0	.4679	.4679	.4679	.4679	.4679	.4679	.4679	.4679	.4679
15.0	.4504	.4506	.4506	.4506	.4506	.4506	.4506	.4506	.4506
20.0	.4129	.4149	.4149	.4149	.4149	.4149	.4149	.4149	.4149
25.0	.3652	.3721	.3722	.3722	.3722	.3722	.3722	.3722	.3722
30.0	.3078	.3232	.3248	.3248	.3248	.3248	.3248	.3248	.3248
35.0	.2418	.2689	.2747	.2749	.2749	.2749	.2749	.2749	.2749
40.0	.1689	.2100	.2234	.2248	.2248	.2248	.2248	.2248	.2248
45.0	.0909	.1474	.1716	.1767	.1768	.1768	.1768	.1768	.1768
50.0	.0102	.0823	.1197	.1316	.1329	.1329	.1329	.1329	.1329
55.0	-.0707	.0158	.0681	.0898	.0943	.0944	.0944	.0944	.0944
60.0	-.1495	-.0508	.0168	.0510	.0615	.0626	.0625	.0625	.0625
65.0	-.2238	-.1163	-.0340	.0143	.0338	.0377	.0378	.0378	.0378
70.0	-.2915	-.1794	-.0844	-.0211	.0099	.0192	.0200	.0200	.0200
75.0	-.3509	-.2392	-.1343	-.0564	-.0120	.0053	.0086	.0087	.0087
80.0	-.4009	-.2946	-.1838	-.0927	-.0339	-.0060	.0019	.0026	.0026
85.0	-.4407	-.3450	-.2328	-.1310	-.0577	-.0173	-.0023	.0003	.0003

TABLE I.- CONTINUED

(d) C_L. Continued.

$\beta_1 = 105^\circ$; $\beta_2 = 255^\circ$; $\beta = 0^\circ$

α, deg \ σ, deg	5.0	10.0	20.0	30.0	40.0	50.0	60.0	70.0	80.0	90.0
1.0	.0004	.0041	.0344	.1069	.2179	.3459	.4612	.5402	.5762	.5826
2.0	.0001	.0031	.0307	.1002	.2094	.3376	.4553	.5379	.5772	.5852
4.0	-.0004	.0010	.0232	.0862	.1910	.3190	.4411	.5309	.5770	.5806
6.0	-.0009	-.0011	.0154	.0716	.1711	.2980	.4237	.5204	.5737	.5876
8.0	-.0015	-.0032	.0076	.0563	.1498	.2747	.4033	.5064	.5671	.5880
10.0	-.0020	-.0052	-.0003	.0406	.1273	.2492	.3790	.4891	.5573	.5837
12.0	-.0024	-.0073	-.0083	.0245	.1038	.2218	.3535	.4684	.5440	.5767
15.0	-.0031	-.0101	-.0200	.0000	.0669	.1775	.3091	.4311	.5179	.5606
20.0	-.0042	-.0145	-.0386	-.0405	.0031	.0966	.2235	.3540	.4580	.5190
25.0	-.0050	-.0181	-.0551	-.0789	-.0609	.0109	.1271	.2606	.3790	.4591
30.0	-.0055	-.0208	-.0689	-.1132	-.1218	-.0753	.0244	.1550	.2838	.3820
35.0	-.0058	-.0225	-.0791	-.1418	-.1765	-.1577	-.0795	.0421	.1762	.2902
40.0	-.0058	-.0231	-.0854	-.1632	-.2222	-.2321	-.1795	-.0728	.0606	.1867
45.0	-.0056	-.0226	-.0877	-.1766	-.2569	-.2951	-.2706	-.1843	-.0577	.0756
50.0	-.0051	-.0212	-.0860	-.1817	-.2792	-.3437	-.3488	-.2872	-.1736	-.0307
55.0	-.0045	-.0190	-.0807	-.1787	-.2885	-.3760	-.4104	-.3767	-.2818	-.1515
60.0	-.0037	-.0161	-.0724	-.1683	-.2852	-.3912	-.4532	-.4492	-.3778	-.2504
65.0	-.0029	-.0130	-.0619	-.1517	-.2702	-.3896	-.4759	-.5019	-.4577	-.3552
70.0	-.0021	-.0097	-.0500	-.1305	-.2454	-.3724	-.4787	-.5333	-.5187	-.4382
75.0	-.0013	-.0066	-.0377	-.1064	-.2132	-.3420	-.4631	-.5434	-.5592	-.5049
80.0	-.0007	-.0039	-.0261	-.0815	-.1765	-.3014	-.4314	-.5334	-.5707	-.5535
85.0	-.0003	-.0019	-.0160	-.0579	-.1383	-.2544	-.3873	-.5059	-.5785	-.5935

α, deg \ σ, deg	100.0	110.0	120.0	130.0	140.0	150.0	160.0	170.0	180.0
1.0	.5826	.5826	.5826	.5826	.5826	.5826	.5826	.5826	.5826
2.0	.5852	.5852	.5852	.5852	.5852	.5852	.5852	.5852	.5852
4.0	.5888	.5888	.5888	.5888	.5888	.5888	.5888	.5888	.5888
6.0	.5903	.5903	.5903	.5903	.5903	.5903	.5903	.5903	.5903
8.0	.5896	.5896	.5896	.5896	.5896	.5896	.5896	.5896	.5896
10.0	.5869	.5869	.5869	.5869	.5869	.5869	.5869	.5869	.5869
12.0	.5820	.5821	.5821	.5821	.5821	.5821	.5821	.5821	.5821
15.0	.5708	.5710	.5710	.5710	.5710	.5710	.5710	.5710	.5710
20.0	.5407	.5430	.5430	.5430	.5430	.5430	.5430	.5430	.5430
25.0	.4960	.5042	.5044	.5044	.5044	.5044	.5044	.5044	.5044
30.0	.4367	.4551	.4571	.4571	.4571	.4571	.4571	.4571	.4571
35.0	.3637	.3962	.4032	.4034	.4034	.4034	.4034	.4034	.4034
40.0	.2789	.3283	.3444	.3460	.3460	.3460	.3460	.3460	.3460
45.0	.1846	.2524	.2814	.2875	.2877	.2877	.2877	.2877	.2877
50.0	.0838	.1703	.2152	.2295	.2310	.2310	.2310	.2310	.2310
55.0	-.0200	.0838	.1465	.1726	.1779	.1781	.1781	.1781	.1781
60.0	-.1233	-.0049	.0762	.1172	.1298	.1311	.1310	.1310	.1310
65.0	-.2226	-.0937	.0050	.0630	.0864	.0910	.0912	.0912	.0912
70.0	-.3144	-.1801	-.0662	.0098	.0470	.0581	.0592	.0592	.0592
75.0	-.3959	-.2621	-.1365	-.0430	.0103	.0311	.0350	.0351	.0351
80.0	-.4649	-.3378	-.2052	-.0960	-.0254	.0080	.0175	.0183	.0183
85.0	-.5199	-.4056	-.2716	-.1499	-.0621	-.0137	.0043	.0074	.0074

$\beta_1 = 120^\circ$; $\beta_2 = 240^\circ$; $\beta = 0^\circ$

α, deg \ σ, deg	5.0	10.0	20.0	30.0	40.0	50.0	60.0	70.0	80.0	90.0
1.0	.0005	.0047	.0390	.1208	.2458	.3899	.5196	.6086	.6492	.6565
2.0	.0002	.0037	.0354	.1143	.2379	.3828	.5158	.6092	.6538	.6629
4.0	-.0003	.0016	.0279	.1007	.2205	.3665	.5054	.6077	.6606	.6740
6.0	-.0009	-.0005	.0202	.0862	.2014	.3473	.4915	.6024	.6640	.6826
8.0	-.0014	-.0026	.0123	.0710	.1807	.3255	.4740	.5932	.6637	.6884
10.0	-.0019	-.0047	.0043	.0552	.1584	.3011	.4530	.5800	.6596	.6911
12.0	-.0024	-.0067	-.0037	.0390	.1349	.2743	.4286	.5628	.6517	.6906
15.0	-.0031	-.0096	-.0157	.0140	.0976	.2302	.3860	.5297	.6323	.6835
20.0	-.0041	-.0141	-.0349	-.0279	.0317	.1477	.3005	.4559	.5799	.6534
25.0	-.0049	-.0178	-.0522	-.0683	-.0358	.0577	.2003	.3611	.5032	.6000
30.0	-.0055	-.0206	-.0668	-.1053	-.1015	-.0353	.0901	.2492	.4047	.5237
35.0	-.0058	-.0224	-.0780	-.1367	-.1620	-.1265	-.0245	.1254	.2881	.4266
40.0	-.0058	-.0231	-.0854	-.1613	-.2142	-.2113	-.1381	-.0046	.1582	.3116
45.0	-.0056	-.0228	-.0886	-.1779	-.2557	-.2855	-.2408	-.1346	.0200	.1834
50.0	-.0051	-.0214	-.0878	-.1860	-.2846	-.3456	-.3397	-.2582	-.1178	-.0469
55.0	-.0045	-.0193	-.0832	-.1856	-.3001	-.3891	-.4181	-.3697	-.2513	-.0920
60.0	-.0037	-.0165	-.0755	-.1772	-.3019	-.4144	-.4769	-.4641	-.3737	-.2274
65.0	-.0029	-.0134	-.0652	-.1620	-.2910	-.4212	-.5139	-.5374	-.4798	-.3538
70.0	-.0021	-.0101	-.0534	-.1415	-.2688	-.4103	-.5285	-.5871	-.5652	-.4660
75.0	-.0013	-.0070	-.0409	-.1174	-.2377	-.3838	-.5215	-.6120	-.6271	-.5597
80.0	-.0007	-.0042	-.0289	-.0918	-.2006	-.3446	-.4949	-.6127	-.6639	-.6320
85.0	-.0003	-.0021	-.0182	-.0667	-.1604	-.2964	-.4521	-.5913	-.6760	-.6811

α, deg \ σ, deg	100.0	110.0	120.0	130.0	140.0	150.0	160.0	170.0	180.0
1.0	.6565	.6565	.6565	.6565	.6565	.6565	.6565	.6565	.6565
2.0	.6629	.6629	.6629	.6629	.6629	.6629	.6629	.6629	.6629
4.0	.6743	.6743	.6743	.6743	.6743	.6743	.6743	.6743	.6743
6.0	.6835	.6835	.6835	.6835	.6835	.6835	.6835	.6835	.6835
8.0	.6904	.6904	.6904	.6904	.6904	.6904	.6904	.6904	.6904
10.0	.6950	.6950	.6950	.6950	.6950	.6950	.6950	.6950	.6950
12.0	.6973	.6973	.6973	.6973	.6973	.6973	.6973	.6973	.6973
15.0	.6960	.6963	.6963	.6963	.6963	.6963	.6963	.6963	.6963
20.0	.6801	.6831	.6831	.6831	.6831	.6831	.6831	.6831	.6831
25.0	.6454	.6557	.6560	.6560	.6560	.6560	.6560	.6560	.6560
30.0	.5910	.6139	.6164	.6164	.6164	.6164	.6164	.6164	.6164
35.0	.5169	.5574	.5661	.5663	.5663	.5663	.5663	.5663	.5663
40.0	.4247	.4861	.5062	.5083	.5082	.5082	.5082	.5082	.5082
45.0	.3169	.4009	.4371	.4447	.4450	.4450	.4450	.4450	.4450
50.0	.1968	.3036	.3596	.3774	.3793	.3793	.3793	.3793	.3793
55.0	.0687	.1945	.2745	.3071	.3137	.3139	.3139	.3139	.3139
60.0	-.0625	.0826	.1830	.2341	.2499	.2516	.2514	.2514	.2514
65.0	-.1922	-.0348	.0867	.1587	.1880	.1938	.1939	.1939	.1939
70.0	-.3153	-.1519	-.0125	.0812	.1276	.1415	.1427	.1427	.1427
75.0	-.4274	-.2653	-.1126	.0018	.0676	.0935	.0984	.0985	.0985
80.0	-.5248	-.3716	-.2115	-.0792	.0070	.0482	.0600	.0610	.0610
85.0	-.6045	-.4676	-.3071	-.1611	-.0555	.0030	.0250	.0289	.0289

TABLE I.- CONTINUED

(d) C_L. Concluded.

$\beta_1 = 135^\circ$; $\beta_2 = 225^\circ$; $\beta = 0^\circ$

α, deg \ σ, deg	5.0	10.0	20.0	30.0	40.0	50.0	60.0	70.0	80.0	90.0
1.0	.0005	.0052	.0428	.1323	.2689	.4263	.5681	.6654	.7099	.7180
2.0	.0003	.0042	.0392	.1260	.2616	.4205	.5664	.6690	.7182	.7284
4.0	-.0003	.0021	.0318	.1127	.2453	.4065	.5600	.6734	.7323	.7476
6.0	-.0008	.0000	.0241	.0985	.2271	.3894	.5498	.6736	.7420	.7643
8.0	-.0013	-.0021	.0162	.0835	.2070	.3693	.5356	.6695	.7495	.7781
10.0	-.0018	-.0042	.0082	.0677	.1853	.3464	.5176	.6611	.7520	.7887
12.0	-.0023	-.0062	.0001	.0514	.1620	.3207	.4957	.6483	.7503	.7960
15.0	-.0030	-.0092	-.0120	.0262	.1247	.2775	.4560	.6207	.7392	.7997
20.0	-.0041	-.0137	-.0316	-.0167	.0577	.1948	.3726	.5530	.6978	.7851
25.0	-.0049	-.0175	-.0496	-.0587	-.0124	.1021	.2712	.4600	.6274	.7429
30.0	-.0055	-.0204	-.0649	-.0977	-.0818	.0042	.1562	.3453	.5297	.6723
35.0	-.0058	-.0223	-.0770	-.1316	-.1470	-.0939	.0333	.2139	.4083	.5746
40.0	-.0058	-.0232	-.0852	-.1588	-.2047	-.1874	-.0914	.0719	.2678	.4526
45.0	-.0056	-.0229	-.0893	-.1781	-.2520	-.2714	-.2116	-.0738	.1146	.3108
50.0	-.0052	-.0217	-.0892	-.1888	-.2869	-.3420	-.3215	-.2162	-.0444	.1598
55.0	-.0045	-.0196	-.0853	-.1908	-.3081	-.3959	-.4159	-.3486	-.2019	-.0087
60.0	-.0038	-.0169	-.0780	-.1844	-.3150	-.4310	-.4903	-.4646	-.3506	-.1727
65.0	-.0030	-.0137	-.0680	-.1707	-.3082	-.4464	-.5420	-.5592	-.4838	-.3300
70.0	-.0021	-.0105	-.0563	-.1510	-.2890	-.4425	-.5695	-.6286	-.5957	-.4740
75.0	-.0014	-.0073	-.0437	-.1271	-.2596	-.4210	-.5727	-.6707	-.6821	-.5986
80.0	-.0008	-.0045	-.0314	-.1012	-.2228	-.3845	-.5534	-.6851	-.7402	-.6994
85.0	-.0003	-.0022	-.0203	-.0751	-.1817	-.3367	-.5145	-.6733	-.7691	-.7731

α, deg \ σ, deg	100.0	110.0	120.0	130.0	140.0	150.0	160.0	170.0	180.0
1.0	.7180	.7180	.7180	.7180	.7180	.7180	.7180	.7180	.7180
2.0	.7284	.7284	.7284	.7284	.7284	.7284	.7284	.7284	.7284
4.0	.7479	.7479	.7479	.7479	.7479	.7479	.7479	.7479	.7479
6.0	.7653	.7653	.7653	.7653	.7653	.7653	.7653	.7653	.7653
8.0	.7806	.7806	.7806	.7806	.7806	.7806	.7806	.7806	.7806
10.0	.7936	.7936	.7936	.7936	.7936	.7936	.7936	.7936	.7936
12.0	.8043	.8043	.8043	.8043	.8043	.8043	.8043	.8043	.8043
15.0	.8153	.8157	.8157	.8157	.8157	.8157	.8157	.8157	.8157
20.0	.8182	.8221	.8221	.8221	.8221	.8221	.8221	.8221	.8221
25.0	.7988	.8121	.8125	.8125	.8125	.8125	.8125	.8125	.8125
30.0	.7547	.7842	.7875	.7875	.7875	.7875	.7875	.7875	.7875
35.0	.6851	.7363	.7478	.7482	.7482	.7482	.7482	.7482	.7482
40.0	.5905	.6673	.6936	.6964	.6964	.6964	.6964	.6964	.6964
45.0	.4732	.5775	.6242	.6343	.6346	.6346	.6346	.6346	.6346
50.0	.3367	.4683	.5393	.5627	.5652	.5652	.5652	.5652	.5652
55.0	.1860	.3423	.4397	.4819	.4907	.4910	.4910	.4910	.4910
60.0	.0266	.2031	.3270	.3918	.4125	.4147	.4186	.4186	.4186
65.0	-.1351	.0552	.2035	.2930	.3306	.3382	.3384	.3384	.3384
70.0	-.2927	-.0965	.0720	.1866	.2446	.2626	.2643	.2643	.2643
75.0	-.4400	-.2466	-.0638	.0740	.1544	.1869	.1932	.1934	.1934
80.0	-.5715	-.3900	-.2004	-.0431	.0601	.1100	.1248	.1261	.1261
85.0	-.6825	-.5219	-.3338	-.1624	-.0382	.0310	.0573	.0620	.0621

$\beta_1 = 150^\circ$; $\beta_2 = 210^\circ$; $\beta = 0^\circ$

α, deg \ σ, deg	5.0	10.0	20.0	30.0	40.0	50.0	60.0	70.0	80.0	90.0
1.0	.0006	.0056	.0457	.1408	.2862	.4536	.6045	.7081	.7556	.7643
2.0	.0003	.0046	.0421	.1348	.2794	.4489	.6046	.7143	.7670	.7781
4.0	-.0002	.0025	.0347	.1218	.2641	.4369	.6017	.7237	.7875	.8044
6.0	-.0007	.0004	.0271	.1078	.2467	.4217	.5948	.7288	.8044	.8293
8.0	-.0013	-.0017	.0192	.0929	.2273	.4033	.5837	.7295	.8173	.8495
10.0	-.0018	-.0038	.0111	.0773	.2060	.3817	.5685	.7256	.8260	.8675
12.0	-.0023	-.0059	.0030	.0610	.1831	.3572	.5491	.7169	.8301	.8820
15.0	-.0030	-.0089	-.0092	.0357	.1460	.3153	.5123	.6948	.8273	.8962
20.0	-.0040	-.0134	-.0291	-.0078	.0785	.2331	.4321	.6340	.7972	.8974
25.0	-.0049	-.0173	-.0475	-.0509	.0069	.1391	.3309	.5444	.7345	.8675
30.0	-.0055	-.0203	-.0634	-.0914	-.0651	.0380	.2133	.4292	.6402	.8049
35.0	-.0058	-.0223	-.0761	-.1271	-.1338	-.0651	.0849	.2934	.5171	.7097
40.0	-.0058	-.0232	-.0849	-.1564	-.1956	-.1650	-.0479	.1431	.3700	.5845
45.0	-.0056	-.0230	-.0896	-.1778	-.2475	-.2566	-.1785	-.0146	.2052	.4335
50.0	-.0052	-.0218	-.0901	-.1905	-.2872	-.3355	-.3004	-.1719	.0301	.2625
55.0	-.0046	-.0198	-.0867	-.1944	-.3129	-.3979	-.4078	-.3213	-.1471	.0788
60.0	-.0038	-.0171	-.0798	-.1897	-.3240	-.4412	-.4955	-.4557	-.3181	-.1096
65.0	-.0030	-.0140	-.0701	-.1772	-.3208	-.4641	-.5600	-.5689	-.4751	-.2943
70.0	-.0022	-.0107	-.0585	-.1583	-.3044	-.4667	-.5991	-.6562	-.6111	-.4672
75.0	-.0014	-.0075	-.0459	-.1348	-.2768	-.4500	-.6121	-.7144	-.7205	-.6209
80.0	-.0008	-.0047	-.0334	-.1087	-.2406	-.4166	-.6002	-.7424	-.7993	-.7493
85.0	-.0003	-.0024	-.0220	-.0821	-.1992	-.3700	-.5661	-.7409	-.8455	-.8477

α, deg \ σ, deg	100.0	110.0	120.0	130.0	140.0	150.0	160.0	170.0	180.0
1.0	.7643	.7643	.7643	.7643	.7643	.7643	.7643	.7643	.7643
2.0	.7782	.7782	.7782	.7782	.7782	.7782	.7782	.7782	.7782
4.0	.8047	.8047	.8047	.8047	.8047	.8047	.8047	.8047	.8047
6.0	.8296	.8296	.8296	.8296	.8296	.8296	.8296	.8296	.8296
8.0	.8525	.8525	.8525	.8525	.8525	.8525	.8525	.8525	.8525
10.0	.8734	.8734	.8734	.8734	.8734	.8734	.8734	.8734	.8734
12.0	.8920	.8921	.8921	.8921	.8921	.8921	.8921	.8921	.8921
15.0	.9150	.9156	.9156	.9156	.9156	.9156	.9156	.9156	.9156
20.0	.9369	.9421	.9421	.9421	.9421	.9421	.9421	.9421	.9421
25.0	.9340	.9511	.9516	.9516	.9516	.9516	.9516	.9516	.9516
30.0	.9024	.9392	.9439	.9439	.9439	.9439	.9439	.9439	.9439
35.0	.8400	.9028	.9183	.9188	.9188	.9188	.9188	.9188	.9188
40.0	.7467	.8396	.8734	.8774	.8774	.8774	.8774	.8774	.8774
45.0	.6240	.7489	.8070	.8207	.8213	.8213	.8213	.8213	.8213
50.0	.4755	.6316	.7183	.7487	.7523	.7523	.7523	.7523	.7523
55.0	.3063	.4905	.6075	.6602	.6722	.6726	.6726	.6726	.6726
60.0	.1228	.3295	.4764	.5553	.5820	.5852	.5849	.5849	.5849
65.0	-.0675	.1540	.3279	.4367	.4811	.4912	.4915	.4915	.4915
70.0	-.2569	-.0298	.1659	.3004	.3698	.3923	.3946	.3946	.3946
75.0	-.4374	-.2150	-.0047	.1548	.2489	.2877	.2958	.2960	.2960
80.0	-.6020	-.3948	-.1786	.0011	.1197	.1777	.1953	.1970	.1970
85.0	-.7442	-.5625	-.3502	-.1567	-.0160	.0626	.0926	.0982	.0983

TABLE I.- CONTINUED

(e) C_D. Continued.

$\beta_1 = 105^\circ$; $\beta_2 = 255^\circ$; $\beta = 0^\circ$

α, deg \ σ, deg	5.0	10.0	20.0	30.0	40.0	50.0	60.0	70.0	80.0	90.0
1.0	.0152	.0596	.2222	.4433	.6673	.8476	.9618	1.0146	1.0292	1.0304
2.0	.0152	.0598	.2239	.4487	.6784	.8655	.9858	1.0429	1.0594	1.0610
4.0	.0152	.0600	.2267	.4585	.6994	.8999	1.0327	1.0989	1.1199	1.1225
6.0	.0151	.0600	.2287	.4667	.7184	.9322	1.0781	1.1539	1.1802	1.1842
8.0	.0150	.0598	.2299	.4734	.7352	.9622	1.1214	1.2077	1.2399	1.2459
10.0	.0148	.0594	.2303	.4785	.7497	.9897	1.1624	1.2599	1.2988	1.3072
12.0	.0146	.0587	.2298	.4819	.7619	1.0144	1.2008	1.3100	1.3565	1.3680
15.0	.0141	.0573	.2276	.4838	.7753	1.0458	1.2529	1.3808	1.4400	1.4574
20.0	.0132	.0541	.2199	.4785	.7845	1.0818	1.3229	1.4839	1.5682	1.5992
25.0	.0120	.0498	.2076	.4628	.7769	1.0959	1.3690	1.5647	1.6782	1.7276
30.0	.0106	.0447	.1913	.4376	.7528	1.0874	1.3889	1.6193	1.7653	1.8360
35.0	.0091	.0390	.1719	.4040	.7136	1.0568	1.3817	1.6452	1.8257	1.9263
40.0	.0076	.0330	.1502	.3640	.6612	1.0056	1.3477	1.6412	1.8560	1.9890
45.0	.0061	.0270	.1275	.3193	.5983	.9363	1.2885	1.6074	1.8572	2.0234
50.0	.0047	.0213	.1047	.2722	.5278	.8523	1.2071	1.5484	1.8268	2.0283
55.0	.0034	.0160	.0828	.2249	.4532	.7577	1.1073	1.4682	1.7670	2.0033
60.0	.0024	.0114	.0626	.1793	.3779	.6569	.9935	1.3697	1.6803	1.9494
65.0	.0015	.0076	.0450	.1373	.3049	.5543	.8718	1.2247	1.5705	1.8689
70.0	.0009	.0046	.0304	.1002	.2372	.4543	.7464	1.0808	1.4423	1.7647
75.0	.0004	.0025	.0189	.0692	.1771	.3605	.6227	.9474	1.3007	1.6408
80.0	.0002	.0011	.0106	.0446	.1260	.2761	.5053	.8060	1.1513	1.5019
85.0	.0000	.0004	.0051	.0264	.0848	.2032	.3980	.6696	.9995	1.3526

α, deg \ σ, deg	100.0	110.0	120.0	130.0	140.0	150.0	160.0	170.0	180.0
1.0	1.0288	1.0288	1.0288	1.0288	1.0288	1.0288	1.0288	1.0288	1.0288
2.0	1.0610	1.0610	1.0610	1.0610	1.0610	1.0610	1.0610	1.0610	1.0610
4.0	1.1216	1.1216	1.1216	1.1216	1.1216	1.1216	1.1216	1.1216	1.1216
6.0	1.1836	1.1836	1.1836	1.1836	1.1836	1.1836	1.1836	1.1836	1.1836
8.0	1.2460	1.2460	1.2460	1.2460	1.2460	1.2460	1.2460	1.2460	1.2460
10.0	1.3075	1.3075	1.3075	1.3075	1.3075	1.3075	1.3075	1.3075	1.3075
12.0	1.3685	1.3685	1.3685	1.3685	1.3685	1.3685	1.3685	1.3685	1.3685
15.0	1.4590	1.4590	1.4590	1.4590	1.4590	1.4590	1.4590	1.4590	1.4590
20.0	1.6052	1.6054	1.6054	1.6054	1.6054	1.6054	1.6054	1.6054	1.6054
25.0	1.7429	1.7427	1.7427	1.7427	1.7427	1.7427	1.7427	1.7427	1.7427
30.0	1.8687	1.8686	1.8686	1.8686	1.8686	1.8686	1.8686	1.8686	1.8686
35.0	1.9808	1.9803	1.9814	1.9814	1.9814	1.9814	1.9814	1.9814	1.9814
40.0	2.0831	2.0753	2.0794	2.0794	2.0798	2.0798	2.0798	2.0798	2.0794
45.0	2.1740	2.1515	2.1616	2.1627	2.1625	2.1625	2.1625	2.1625	2.1625
50.0	2.1492	2.2070	2.2266	2.2303	2.2303	2.2303	2.2303	2.2303	2.2303
55.0	2.1576	2.2403	2.2740	2.2829	2.2839	2.2839	2.2839	2.2839	2.2839
60.0	2.1388	2.2506	2.3032	2.3209	2.3241	2.3240	2.3242	2.3242	2.3242
65.0	2.0934	2.2377	2.3139	2.3444	2.3523	2.3532	2.3531	2.3531	2.3531
70.0	2.0229	2.2018	2.3058	2.3539	2.3697	2.3725	2.3726	2.3726	2.3726
75.0	1.9297	2.1438	2.2793	2.3496	2.3772	2.3841	2.3848	2.3848	2.3848
80.0	1.8167	2.0651	2.2345	2.3314	2.3752	2.3892	2.3916	2.3916	2.3916
85.0	1.6875	1.9676	2.1721	2.2992	2.3638	2.3884	2.3944	2.3949	2.3949

$\beta_1 = 120^\circ$; $\beta_2 = 240^\circ$; $\beta = 0^\circ$

α, deg \ σ, deg	5.0	10.0	20.0	30.0	40.0	50.0	60.0	70.0	80.0	90.0
1.0	.0152	.0597	.2224	.4440	.6687	.8499	.9648	1.0181	1.0329	1.0342
2.0	.0152	.0599	.2244	.4501	.6814	.8701	.9919	1.0500	1.0671	1.0687
4.0	.0152	.0602	.2277	.4614	.7054	.9094	1.0454	1.1138	1.1359	1.1388
6.0	.0151	.0602	.2302	.4712	.7275	.9467	1.0976	1.1772	1.2053	1.2098
8.0	.0150	.0601	.2319	.4794	.7475	.9820	1.1482	1.2398	1.2748	1.2816
10.0	.0148	.0597	.2327	.4860	.7653	1.0148	1.1968	1.3013	1.3442	1.3539
12.0	.0146	.0591	.2328	.4910	.7807	1.0450	1.2430	1.3611	1.4129	1.4263
15.0	.0142	.0578	.2312	.4951	.7989	1.0847	1.3070	1.4471	1.5138	1.5343
20.0	.0132	.0547	.2246	.4933	.8159	1.1343	1.3972	1.5766	1.6750	1.7096
25.0	.0120	.0503	.2132	.4807	.8134	1.1613	1.4631	1.6839	1.8183	1.8744
30.0	.0107	.0454	.1975	.4579	.7971	1.1643	1.5012	1.7641	1.9346	2.0220
35.0	.0092	.0398	.1785	.4260	.7627	1.1430	1.5099	1.8134	2.0257	2.1468
40.0	.0077	.0338	.1570	.3869	.7133	1.0986	1.4885	1.8292	2.0843	2.2437
45.0	.0062	.0278	.1341	.3423	.6515	1.0333	1.4382	1.8109	2.1078	2.3088
50.0	.0048	.0220	.1109	.2945	.5805	.9503	1.3613	1.7593	2.0951	2.3390
55.0	.0035	.0166	.0885	.2456	.5037	.8538	1.2618	1.6768	2.0466	2.3331
60.0	.0024	.0119	.0676	.1980	.4246	.7482	1.1441	1.5672	1.9645	2.2912
65.0	.0015	.0080	.0492	.1534	.3467	.6384	1.0140	1.4356	1.8524	2.2148
70.0	.0009	.0049	.0336	.1136	.2732	.5292	.8770	1.2879	1.7151	2.1072
75.0	.0004	.0027	.0213	.0797	.2067	.4249	.7391	1.1304	1.5585	1.9725
80.0	.0002	.0012	.0121	.0523	.1492	.3293	.6057	.9696	1.3890	2.8160
85.0	.0000	.0004	.0060	.0316	.1020	.2453	.4814	.8115	1.2130	1.6436

α, deg \ σ, deg	100.0	110.0	120.0	130.0	140.0	150.0	160.0	170.0	180.0
1.0	1.0322	1.0322	1.0322	1.0322	1.0322	1.0322	1.0322	1.0322	1.0322
2.0	1.0687	1.0687	1.0687	1.0687	1.0687	1.0687	1.0687	1.0687	1.0687
4.0	1.1377	1.1377	1.1377	1.1377	1.1377	1.1377	1.1377	1.1377	1.1377
6.0	1.2090	1.2090	1.2090	1.2090	1.2090	1.2090	1.2090	1.2090	1.2090
8.0	1.2818	1.2818	1.2818	1.2818	1.2818	1.2818	1.2818	1.2818	1.2818
10.0	1.3538	1.3542	1.3542	1.3542	1.3542	1.3542	1.3542	1.3542	1.3542
12.0	1.4273	1.4268	1.4268	1.4268	1.4268	1.4268	1.4268	1.4268	1.4268
15.0	1.5368	1.5362	1.5362	1.5362	1.5362	1.5362	1.5362	1.5362	1.5362
20.0	1.7174	1.7172	1.7175	1.7175	1.7175	1.7175	1.7175	1.7175	1.7175
25.0	1.8913	1.8933	1.8930	1.8930	1.8930	1.8930	1.8930	1.8930	1.8930
30.0	2.0936	2.0998	2.0996	2.0996	2.0996	2.0996	2.0996	2.0996	2.0996
35.0	2.1990	2.2134	2.2151	2.2148	2.2148	2.2148	2.2148	2.2148	2.2148
40.0	2.3227	2.3503	2.3556	2.3555	2.3559	2.3559	2.3559	2.3559	2.3559
45.0	2.4200	2.4667	2.4793	2.4807	2.4805	2.4805	2.4805	2.4805	2.4805
50.0	2.4875	2.5592	2.5838	2.5884	2.5884	2.5884	2.5884	2.5884	2.5884
55.0	2.5224	2.6248	2.6669	2.6780	2.6793	2.6792	2.6792	2.6792	2.6792
60.0	2.5232	2.6614	2.7269	2.7489	2.7530	2.7528	2.7531	2.7531	2.7531
65.0	2.4897	2.6677	2.7623	2.8004	2.8103	2.8113	2.8113	2.8113	2.8113
70.0	2.4231	2.6433	2.7720	2.8319	2.8516	2.8551	2.8552	2.8552	2.8552
75.0	2.3256	2.5883	2.7557	2.8427	2.8771	2.8858	2.8867	2.8867	2.8867
80.0	2.2006	2.5050	2.7132	2.8326	2.8869	2.9043	2.9073	2.9074	2.9074
85.0	2.0524	2.3949	2.6452	2.8012	2.8806	2.9110	2.9184	2.9191	2.9191

TABLE I.- CONTINUED

(e) C_D

$\phi_1 = 90^0$; $\phi_2 = 270^0$; $\beta = 0^0$

α, deg \ σ, deg	5.0	10.0	20.0	30.0	40.0	50.0	60.0	70.0	80.0	90.0
1.0	.0152	.0596	.2219	.4424	.6656	.8450	.9584	1.0107	1.0250	1.0262
2.0	.0152	.0598	.2233	.4470	.6751	.8603	.9789	1.0348	1.0508	1.0523
4.0	.0151	.0599	.2256	.4551	.6927	.8893	1.0186	1.0823	1.1021	1.1045
6.0	.0151	.0598	.2271	.4617	.7082	.9161	1.0564	1.1283	1.1526	1.1562
8.0	.0149	.0595	.2277	.4667	.7216	.9404	1.0920	1.1728	1.2021	1.2073
10.0	.0147	.0590	.2275	.4701	.7326	.9621	1.1250	1.2152	1.2502	1.2575
12.0	.0145	.0583	.2266	.4718	.7412	.9810	1.1554	1.2554	1.2968	1.3067
15.0	.0141	.0568	.2236	.4714	.7495	1.0038	1.1953	1.3109	1.3630	1.3778
20.0	.0131	.0534	.2148	.4624	.7506	1.0260	1.2452	1.3884	1.4615	1.4877
25.0	.0119	.0490	.2015	.4435	.7360	1.0276	1.2725	1.4444	1.5418	1.5834
30.0	.0105	.0438	.1846	.4159	.7062	1.0085	1.2758	1.4761	1.6006	1.6618
35.0	.0090	.0381	.1647	.3808	.6630	.9697	1.2549	1.4823	1.6355	1.7199
40.0	.0075	.0321	.1430	.3401	.6083	.9131	1.2109	1.4626	1.6450	1.7557
45.0	.0060	.0262	.1205	.2957	.5449	.8415	1.1459	1.4179	1.6286	1.7678
50.0	.0046	.0205	.0981	.2496	.4759	.7584	1.0630	1.3503	1.5871	1.7557
55.0	.0033	.0153	.0768	.2041	.4045	.6675	.9660	1.2629	1.5223	1.7199
60.0	.0023	.0108	.0576	.1610	.3336	.5730	.8593	1.1594	1.4368	1.6618
65.0	.0014	.0071	.0409	.1218	.2663	.4789	.7475	1.0444	1.3341	1.5834
70.0	.0008	.0043	.0272	.0878	.2049	.3889	.6351	.9224	1.2183	1.4877
75.0	.0004	.0023	.0166	.0598	.1513	.3060	.5262	.7982	1.0938	1.3778
80.0	.0001	.0010	.0091	.0380	.1066	.2326	.4246	.6762	.9648	1.2575
85.0	.0000	.0003	.0043	.0222	.0711	.1702	.3330	.5600	.8355	1.1304

α, deg \ σ, deg	100.0	110.0	120.0	130.0	140.0	150.0	160.0	170.0	180.0
1.0	1.0248	1.0248	1.0248	1.0248	1.0248	1.0248	1.0248	1.0248	1.0248
2.0	1.0523	1.0523	1.0523	1.0523	1.0523	1.0523	1.0523	1.0523	1.0523
4.0	1.1037	1.1037	1.1037	1.1037	1.1037	1.1037	1.1037	1.1037	1.1037
6.0	1.1556	1.1556	1.1556	1.1556	1.1556	1.1556	1.1556	1.1556	1.1556
8.0	1.2074	1.2074	1.2074	1.2074	1.2074	1.2074	1.2074	1.2074	1.2074
10.0	1.2573	1.2577	1.2577	1.2577	1.2577	1.2577	1.2577	1.2577	1.2577
12.0	1.3074	1.3070	1.3070	1.3070	1.3070	1.3070	1.3070	1.3070	1.3070
15.0	1.3795	1.3791	1.3791	1.3791	1.3791	1.3791	1.3791	1.3791	1.3791
20.0	1.4928	1.4927	1.4929	1.4929	1.4929	1.4929	1.4929	1.4929	1.4929
25.0	1.5949	1.5962	1.5960	1.5960	1.5960	1.5960	1.5960	1.5960	1.5960
30.0	1.6832	1.6873	1.6872	1.6872	1.6872	1.6872	1.6872	1.6872	1.6872
35.0	1.7553	1.7649	1.7660	1.7658	1.7658	1.7658	1.7658	1.7658	1.7658
40.0	1.8092	1.8277	1.8312	1.8311	1.8314	1.8314	1.8314	1.8314	1.8314
45.0	1.8433	1.8746	1.8829	1.8839	1.8837	1.8837	1.8837	1.8837	1.8837
50.0	1.8566	1.9047	1.9211	1.9242	1.9242	1.9242	1.9242	1.9242	1.9242
55.0	1.8486	1.9175	1.9457	1.9531	1.9539	1.9539	1.9539	1.9539	1.9539
60.0	1.8197	1.9129	1.9568	1.9715	1.9742	1.9741	1.9742	1.9742	1.9742
65.0	1.7707	1.8910	1.9545	1.9800	1.9865	1.9872	1.9872	1.9872	1.9872
70.0	1.7031	1.8523	1.9390	1.9790	1.9922	1.9946	1.9946	1.9946	1.9946
75.0	1.6188	1.7974	1.9103	1.9689	1.9919	1.9977	1.9983	1.9983	1.9983
80.0	1.5202	1.7274	1.8687	1.9494	1.9859	1.9976	1.9996	1.9996	1.9996
85.0	1.4098	1.6436	1.8141	1.9202	1.9740	1.9945	1.9995	2.0000	2.0000

TABLE I.- CONTINUED

(e) C_D. Concluded.

$\phi_1 = 135^\circ$; $\phi_2 = 225^\circ$; $\beta = 0^\circ$

α, deg \ σ, deg	5.0	10.0	20.0	30.0	40.0	50.0	60.0	70.0	80.0	90.0
1.0	.0152	.0597	.2226	.4446	.6699	.8517	.9673	1.0210	1.0360	1.0373
2.0	.0152	.0599	.2248	.4513	.6838	.8739	.9970	1.0560	1.0734	1.0752
4.0	.0152	.0603	.2285	.4639	.7104	.9172	1.0560	1.1263	1.1494	1.1525
6.0	.0151	.0604	.2314	.4749	.7351	.9589	1.1141	1.1969	1.2267	1.2317
8.0	.0150	.0603	.2335	.4844	.7578	.9987	1.1710	1.2672	1.3048	1.3125
10.0	.0149	.0599	.2348	.4924	.7784	1.0362	1.2262	1.3369	1.3835	1.3945
12.0	.0146	.0594	.2352	.4986	.7966	1.0711	1.2793	1.4055	1.4622	1.4775
15.0	.0142	.0582	.2343	.5047	.8191	1.1182	1.3541	1.5053	1.5793	1.6030
20.0	.0133	.0552	.2285	.5060	.8431	1.1803	1.4630	1.6596	1.7680	1.8110
25.0	.0121	.0511	.2179	.4961	.8491	1.2193	1.5476	1.7927	1.9421	2.0116
30.0	.0108	.0461	.2028	.4755	.8367	1.2333	1.6038	1.8985	2.0942	2.1975
35.0	.0093	.0405	.1841	.4454	.8066	1.2215	1.6287	1.9720	2.2174	2.3613
40.0	.0077	.0345	.1628	.4072	.7604	1.1845	1.6211	2.0096	2.3063	2.4962
45.0	.0062	.0284	.1399	.3629	.7004	1.1242	1.5813	2.0093	2.3565	2.5965
50.0	.0048	.0226	.1165	.3146	.6295	1.0436	1.5112	1.9712	2.3658	2.6577
55.0	.0036	.0172	.0935	.2648	.5513	.9466	1.4143	1.8970	2.3334	2.6769
60.0	.0025	.0124	.0721	.2155	.4695	.8380	1.2952	1.7901	2.2608	2.6531
65.0	.0016	.0084	.0530	.1688	.3876	.7227	1.1595	1.6556	2.1512	2.5870
70.0	.0009	.0052	.0367	.1266	.3092	.6059	1.0135	1.4996	2.0094	2.4814
75.0	.0005	.0029	.0236	.0902	.2372	.4925	.8635	1.3289	1.8415	2.3406
80.0	.0002	.0013	.0137	.0602	.1739	.3868	.7156	1.1508	1.6547	2.1701
85.0	.0000	.0005	.0070	.0372	.1209	.2922	.5754	.9724	1.4565	1.9767

α, deg \ σ, deg	100.0	110.0	120.0	130.0	140.0	150.0	160.0	170.0	180.0
1.0	1.0346	1.0346	1.0346	1.0346	1.0346	1.0346	1.0346	1.0346	1.0346
2.0	1.0752	1.0752	1.0752	1.0752	1.0752	1.0752	1.0752	1.0752	1.0752
4.0	1.1511	1.1511	1.1511	1.1511	1.1511	1.1511	1.1511	1.1511	1.1511
6.0	1.2306	1.2306	1.2306	1.2306	1.2306	1.2306	1.2306	1.2306	1.2306
8.0	1.3127	1.3127	1.3127	1.3127	1.3127	1.3127	1.3127	1.3127	1.3127
10.0	1.3940	1.3949	1.3949	1.3949	1.3949	1.3949	1.3949	1.3949	1.3949
12.0	1.4788	1.4781	1.4781	1.4781	1.4781	1.4781	1.4781	1.4781	1.4781
15.0	1.6061	1.6053	1.6053	1.6053	1.6053	1.6053	1.6053	1.6053	1.6053
20.0	1.8204	1.8202	1.8207	1.8207	1.8207	1.8207	1.8207	1.8207	1.8207
25.0	2.0326	2.0352	2.0349	2.0349	2.0349	2.0349	2.0349	2.0349	2.0349
30.0	2.2365	2.2446	2.2444	2.2444	2.2444	2.2444	2.2444	2.2444	2.2444
35.0	2.4255	2.4440	2.4462	2.4459	2.4459	2.4459	2.4459	2.4459	2.4459
40.0	2.5930	2.6282	2.6352	2.6350	2.6356	2.6356	2.6356	2.6356	2.6356
45.0	2.7327	2.7916	2.8081	2.8099	2.8097	2.8097	2.8097	2.8097	2.8097
50.0	2.8391	2.9289	2.9607	2.9668	2.9668	2.9668	2.9668	2.9668	2.9668
55.0	2.9078	3.0354	3.0892	3.1038	3.1054	3.1053	3.1053	3.1053	3.1053
60.0	2.9357	3.1070	3.1898	3.2183	3.2237	3.2235	3.2239	3.2239	3.2239
65.0	2.9215	3.1410	3.2594	3.3082	3.3211	3.3225	3.3224	3.3224	3.3224
70.0	2.8654	3.1356	3.2956	3.3711	3.3964	3.4011	3.4013	3.4013	3.4013
75.0	2.7691	3.0906	3.2968	3.4053	3.4488	3.4599	3.4611	3.4611	3.4611
80.0	2.6363	3.0071	3.2622	3.4094	3.4769	3.4988	3.5027	3.5028	3.5028
85.0	2.4717	2.8874	3.1921	3.3826	3.4799	3.5174	3.5265	3.5274	3.5274

$\phi_1 = 150^\circ$; $\phi_2 = 210^\circ$; $\beta = 0^\circ$

α, deg \ σ, deg	5.0	10.0	20.0	30.0	40.0	50.0	60.0	70.0	80.0	90.0
1.0	.0152	.0597	.2228	.4450	.6708	.8531	.9691	1.0232	1.0383	1.0396
2.0	.0152	.0600	.2251	.4522	.6856	.8768	1.0008	1.0604	1.0782	1.0800
4.0	.0152	.0604	.2291	.4657	.7141	.9232	1.0640	1.1358	1.1596	1.1629
6.0	.0151	.0605	.2323	.4777	.7408	.9682	1.1267	1.2119	1.2430	1.2464
8.0	.0150	.0604	.2347	.4882	.7657	1.0114	1.1884	1.2883	1.3280	1.3363
10.0	.0149	.0601	.2363	.4972	.7884	1.0525	1.2488	1.3645	1.4140	1.4262
12.0	.0147	.0596	.2371	.5044	.8088	1.0912	1.3073	1.4401	1.5008	1.5179
15.0	.0143	.0585	.2366	.5120	.8346	1.1411	1.3908	1.5511	1.6311	1.6576
20.0	.0133	.0556	.2315	.5157	.8642	1.2162	1.5149	1.7257	1.8445	1.8931
25.0	.0122	.0515	.2215	.5079	.8754	1.2651	1.6152	1.8805	2.0457	2.1248
30.0	.0108	.0466	.2069	.4892	.8677	1.2884	1.6867	2.0085	2.2263	2.3444
35.0	.0093	.0410	.1885	.4605	.8416	1.2849	1.7259	2.1035	2.3784	2.5434
40.0	.0078	.0350	.1674	.4232	.7983	1.2546	1.7308	2.1608	2.4949	2.7134
45.0	.0063	.0289	.1444	.3793	.7400	1.1992	1.7011	2.1777	2.5705	2.8472
50.0	.0049	.0230	.1208	.3309	.6697	1.1214	1.6381	2.1532	2.6015	2.9386
55.0	.0036	.0176	.0976	.2803	.5909	1.0250	1.5450	2.0884	2.5861	2.9835
60.0	.0025	.0127	.0757	.2299	.5072	.9147	1.4263	1.9863	2.5250	2.9795
65.0	.0016	.0086	.0560	.1817	.4225	.7958	1.2876	1.8517	2.4208	2.9264
70.0	.0009	.0054	.0392	.1377	.3404	.6735	1.1353	1.6907	2.2781	2.8254
75.0	.0005	.0030	.0255	.0992	.2641	.5531	.9762	1.5107	2.1031	2.6835
80.0	.0002	.0014	.0151	.0673	.1962	.4393	.8170	1.3193	1.9035	2.5035
85.0	.0000	.0005	.0079	.0423	.1385	.3361	.6639	1.1245	1.6875	2.2938

α, deg \ σ, deg	100.0	110.0	120.0	130.0	140.0	150.0	160.0	170.0	180.0
1.0	1.0356	1.0356	1.0356	1.0356	1.0356	1.0356	1.0356	1.0356	1.0356
2.0	1.0800	1.0800	1.0800	1.0800	1.0800	1.0800	1.0800	1.0800	1.0800
4.0	1.1608	1.1608	1.1608	1.1608	1.1608	1.1608	1.1608	1.1608	1.1608
6.0	1.2468	1.2468	1.2468	1.2468	1.2468	1.2468	1.2468	1.2468	1.2468
8.0	1.3366	1.3366	1.3366	1.3366	1.3366	1.3366	1.3366	1.3366	1.3366
10.0	1.4253	1.4267	1.4267	1.4267	1.4267	1.4267	1.4267	1.4267	1.4267
12.0	1.5194	1.5184	1.5184	1.5184	1.5184	1.5184	1.5184	1.5184	1.5184
15.0	1.6615	1.6602	1.6602	1.6602	1.6602	1.6602	1.6602	1.6602	1.6602
20.0	1.9044	1.9040	1.9047	1.9047	1.9047	1.9047	1.9047	1.9047	1.9047
25.0	2.1498	2.1532	2.1528	2.1528	2.1528	2.1528	2.1528	2.1528	2.1528
30.0	2.3909	2.4012	2.4009	2.4009	2.4009	2.4009	2.4009	2.4009	2.4009
35.0	2.6196	2.6429	2.6459	2.6454	2.6454	2.6454	2.6454	2.6454	2.6454
40.0	2.8280	2.8715	2.8808	2.8805	2.8814	2.8814	2.8814	2.8814	2.8814
45.0	3.0080	3.0801	3.1013	3.1039	3.1035	3.1035	3.1035	3.1035	3.1035
50.0	3.1525	3.2613	3.3014	3.3097	3.3097	3.3097	3.3097	3.3097	3.3097
55.0	3.2552	3.4087	3.4754	3.4945	3.4968	3.4966	3.4966	3.4966	3.4966
60.0	3.3116	3.5164	3.6177	3.6539	3.6612	3.6609	3.6614	3.6614	3.6614
65.0	3.3189	3.5800	3.7234	3.7839	3.8006	3.8025	3.8024	3.8024	3.8024
70.0	3.2763	3.5963	3.7883	3.8804	3.9121	3.9183	3.9185	3.9185	3.9185
75.0	3.1852	3.5643	3.8095	3.9402	3.9933	4.0074	4.0090	4.0090	4.0090
80.0	3.0487	3.4842	3.7855	3.9607	4.0417	4.0684	4.0733	4.0734	4.0734
85.0	2.8719	3.3586	3.7162	3.9404	4.0554	4.1000	4.1110	4.1121	4.1121

TABLE I.- CONTINUED

(f) L/D

$\beta_1 = 90^\circ$; $\beta_2 = 270^\circ$; $\beta = 0^\circ$

α, deg \ σ, deg	5.0	10.0	20.0	30.0	40.0	50.0	60.0	70.0	80.0	90.0
1.0	.0196	.0567	.1312	.2059	.2800	.3506	.4125	.4584	.4822	.4870
2.0	.0022	.0393	.1138	.1885	.2626	.3335	.3961	.4432	.4685	.4742
4.0	-.0327	.0045	.0791	.1540	.2284	.2999	.3637	.4131	.4413	.4493
6.0	-.0677	-.0303	.0447	.1199	.1946	.2667	.3319	.3834	.4146	.4249
8.0	-.1028	-.0651	.0104	.0860	.1612	.2341	.3005	.3541	.3882	.4011
10.0	-.1382	-.1001	-.0240	.0523	.1282	.2018	.2695	.3252	.3621	.3777
12.0	-.1739	-.1353	-.0583	.0187	.0953	.1699	.2389	.2966	.3362	.3547
15.0	-.2283	-.1889	-.1101	-.0316	.0465	.1226	.1936	.2542	.2980	.3208
20.0	-.3222	-.2806	-.1980	-.1159	-.0347	.0447	.1194	.1849	.2352	.2654
25.0	-.4214	-.3768	-.2887	-.2018	-.1162	-.0328	.0462	.1168	.1735	.2112
30.0	-.5282	-.4796	-.3840	-.2905	-.1991	-.1105	-.0266	.0494	.1126	.1578
35.0	-.6454	-.5913	-.4857	-.3834	-.2845	-.1894	-.0995	-.0176	.0521	.1049
40.0	-.7765	-.7150	-.5959	-.4822	-.3736	-.2703	-.1733	-.0847	-.0081	.0524
45.0	-.9266	-.8550	-.7177	-.5887	-.4676	-.3540	-.2485	-.1523	-.0683	-.0000
50.0	-1.1032	-1.0172	-.8548	-.7054	-.5680	-.4416	-.3257	-.2209	-.1289	-.0524
55.0	-1.3172	-1.2106	-1.0126	-.8354	-.6768	-.5342	-.4057	-.2908	-.1899	-.1049
60.0	-1.5867	-1.4486	-1.1986	-.9828	-.7960	-.6329	-.4892	-.3624	-.2518	-.1578
65.0	-1.9422	-1.7534	-1.4238	-1.1529	-.9283	-.7390	-.5767	-.4363	-.3147	-.2112
70.0	-2.4413	-2.1640	-1.7049	-1.3527	-1.0768	-.8541	-.6692	-.5128	-.3791	-.2654
75.0	-3.2062	-2.7539	-2.0675	-1.5914	-1.2449	-.9796	-.7675	-.5925	-.4453	-.3208
80.0	-4.5450	-3.6781	-2.5510	-1.8802	-1.4366	-1.1173	-.8725	-.6762	-.5139	-.3777
85.0	-7.4877	-5.2961	-3.2109	-2.2317	-1.6562	-1.2695	-.9858	-.7649	-.5858	-.4370

α, deg \ σ, deg	100.0	110.0	120.0	130.0	140.0	150.0	160.0	170.0	180.0
1.0	.4877	.4877	.4877	.4877	.4877	.4877	.4877	.4877	.4877
2.0	.4743	.4743	.4743	.4743	.4743	.4743	.4743	.4743	.4743
4.0	.4497	.4497	.4497	.4497	.4497	.4497	.4497	.4497	.4497
6.0	.4256	.4256	.4256	.4256	.4256	.4256	.4256	.4256	.4256
8.0	.4021	.4021	.4021	.4021	.4021	.4021	.4021	.4021	.4021
10.0	.3798	.3797	.3797	.3797	.3797	.3797	.3797	.3797	.3797
12.0	.3579	.3580	.3580	.3580	.3580	.3580	.3580	.3580	.3580
15.0	.3265	.3267	.3267	.3267	.3267	.3267	.3267	.3267	.3267
20.0	.2766	.2779	.2779	.2779	.2779	.2779	.2779	.2779	.2779
25.0	.2290	.2331	.2332	.2332	.2332	.2332	.2332	.2332	.2332
30.0	.1829	.1915	.1925	.1925	.1925	.1925	.1925	.1925	.1925
35.0	.1378	.1524	.1555	.1557	.1557	.1557	.1557	.1557	.1557
40.0	.0933	.1149	.1220	.1228	.1227	.1227	.1227	.1227	.1227
45.0	.0493	.0787	.0911	.0938	.0939	.0939	.0939	.0939	.0939
50.0	.0055	.0432	.0623	.0684	.0691	.0691	.0691	.0691	.0691
55.0	-.0383	.0082	.0350	.0460	.0482	.0483	.0483	.0483	.0483
60.0	-.0822	-.0266	.0086	.0258	.0312	.0317	.0317	.0317	.0317
65.0	-.1264	-.0615	-.0174	.0072	.0170	.0190	.0190	.0190	.0190
70.0	-.1711	-.0969	-.0435	-.0107	.0050	.0096	.0100	.0100	.0100
75.0	-.2168	-.1331	-.0703	-.0287	-.0060	.0027	.0043	.0043	.0043
80.0	-.2637	-.1705	-.0984	-.0476	-.0170	-.0030	.0010	.0013	.0013
85.0	-.3126	-.2099	-.1283	-.0682	-.0292	-.0087	-.0012	.0001	.0002

TABLE I.- CONCLUDED

(f) L/D. Concluded.

$\phi_1 = 135^\circ$; $\phi_2 = 225^\circ$; $\beta = 0^\circ$

α, deg \ σ, deg	5.0	10.0	20.0	30.0	40.0	50.0	60.0	70.0	80.0	90.0
1.0	.0349	.0873	.1923	.2975	.4015	.5005	.5873	.6517	.6852	.6922
2.0	.0175	.0698	.1745	.2791	.3825	.4811	.5681	.6336	.6691	.6775
4.0	-.0174	.0349	.1392	.2430	.3453	.4432	.5303	.5978	.6371	.6487
6.0	-.0523	.0001	.1042	.2074	.3089	.4061	.4935	.5628	.6055	.6205
8.0	-.0874	-.0347	.0694	.1723	.2732	.3698	.4574	.5283	.5744	.5929
10.0	-.1227	-.0696	.0348	.1375	.2380	.3343	.4221	.4945	.5436	.5656
12.0	-.1582	-.1047	.0003	.1031	.2034	.2994	.3875	.4612	.5131	.5387
15.0	-.2124	-.1578	-.0514	.0519	.1522	.2482	.3367	.4123	.4681	.4989
20.0	-.3055	-.2485	-.1385	-.0330	.0684	.1650	.2547	.3332	.3947	.4335
25.0	-.4036	-.3431	-.2276	-.1184	-.0146	.0838	.1752	.2566	.3230	.3693
30.0	-.5090	-.4436	-.3202	-.2054	-.0977	.0034	.0974	.1819	.2530	.3059
35.0	-.6242	-.5521	-.4181	-.2955	-.1822	-.0769	.0205	.1085	.1841	.2433
40.0	-.7526	-.6715	-.5231	-.3901	-.2691	-.1582	-.0564	.0358	.1161	.1813
45.0	-.8992	-.8057	-.6379	-.4909	-.3598	-.2414	-.1338	-.0367	.0486	.1197
50.0	-1.0706	-.9600	-.7659	-.6002	-.4558	-.3277	-.2128	-.1097	-.0188	.0582
55.0	-1.2774	-1.1423	-.9114	-.7206	-.5588	-.4182	-.2940	-.1837	-.0865	-.0033
60.0	-1.5359	-1.3645	-1.0810	-.8559	-.6709	-.5143	-.3786	-.2595	-.1551	-.0651
65.0	-1.8743	-1.6457	-1.2840	-1.0109	-.7950	-.6177	-.4675	-.3377	-.2249	-.1276
70.0	-2.3444	-2.0191	-1.5348	-1.1924	-.9346	-.7303	-.5619	-.4192	-.2965	-.1910
75.0	-3.0539	-2.5468	-1.8565	-1.4104	-1.0945	-.8547	-.6633	-.5047	-.3704	-.2558
80.0	-4.2694	-3.3596	-2.2877	-1.6791	-1.2808	-.9940	-.7733	-.5954	-.4474	-.3223
85.0	-6.8608	-4.7786	-2.8972	-2.0201	-1.5022	-1.1521	-.8941	-.6924	-.5281	-.3911

α, deg \ σ, deg	100.0	110.0	120.0	130.0	140.0	150.0	160.0	170.0	180.0
1.0	.6940	.6940	.6940	.6940	.6940	.6940	.6940	.6940	.6940
2.0	.6775	.6775	.6775	.6775	.6775	.6775	.6775	.6775	.6775
4.0	.6497	.6497	.6497	.6497	.6497	.6497	.6497	.6497	.6497
6.0	.6219	.6219	.6219	.6219	.6219	.6219	.6219	.6219	.6219
8.0	.5947	.5947	.5947	.5947	.5947	.5947	.5947	.5947	.5947
10.0	.5693	.5689	.5689	.5689	.5689	.5689	.5689	.5689	.5689
12.0	.5439	.5441	.5441	.5441	.5441	.5441	.5441	.5441	.5441
15.0	.5076	.5081	.5081	.5081	.5081	.5081	.5081	.5081	.5081
20.0	.4495	.4516	.4515	.4515	.4515	.4515	.4515	.4515	.4515
25.0	.3930	.3991	.3993	.3993	.3993	.3993	.3993	.3993	.3993
30.0	.3375	.3494	.3509	.3509	.3509	.3509	.3509	.3509	.3509
35.0	.2824	.3013	.3057	.3059	.3059	.3059	.3059	.3059	.3059
40.0	.2277	.2539	.2632	.2643	.2642	.2642	.2642	.2642	.2642
45.0	.1732	.2069	.2223	.2257	.2259	.2259	.2259	.2259	.2259
50.0	.1186	.1599	.1822	.1897	.1905	.1905	.1905	.1905	.1905
55.0	.0640	.1128	.1423	.1553	.1580	.1581	.1581	.1581	.1581
60.0	.0091	.0654	.1025	.1217	.1280	.1287	.1286	.1286	.1286
65.0	-.0462	.0176	.0624	.0886	.0995	.1019	.1019	.1019	.1019
70.0	-.1022	-.0308	.0219	.0554	.0720	.0772	.0777	.0777	.0777
75.0	-.1589	-.0798	-.0194	.0217	.0448	.0540	.0558	.0559	.0559
80.0	-.2168	-.1297	-.0614	-.0126	.0173	.0314	.0356	.0360	.0360
85.0	-.2761	-.1807	-.1046	-.0480	-.0110	.0088	.0162	.0176	.0176

$\phi_1 = 150^\circ$; $\phi_2 = 210^\circ$; $\beta = 0^\circ$

α, deg \ σ, deg	5.0	10.0	20.0	30.0	40.0	50.0	60.0	70.0	80.0	90.0
1.0	.0381	.0936	.2050	.3165	.4267	.5317	.6237	.6920	.7277	.7351
2.0	.0206	.0761	.1871	.2980	.4075	.5119	.6041	.6736	.7114	.7204
4.0	-.0142	.0412	.1516	.2615	.3698	.4733	.5656	.6372	.6791	.6917
6.0	-.0492	.0064	.1166	.2257	.3329	.4356	.5279	.6014	.6471	.6635
8.0	-.0842	-.0284	.0818	.1904	.2968	.3987	.4912	.5663	.6155	.6357
10.0	-.1194	-.0633	.0471	.1555	.2613	.3627	.4552	.5318	.5841	.6083
12.0	-.1550	-.0983	.0126	.1210	.2264	.3274	.4200	.4978	.5531	.5811
15.0	-.2090	-.1513	-.0391	.0697	.1749	.2755	.3684	.4480	.5072	.5406
20.0	-.3020	-.2417	-.1259	-.0152	.0908	.1916	.2852	.3674	.4322	.4740
25.0	-.3999	-.3360	-.2146	-.1003	.0078	.1100	.2049	.2895	.3591	.4083
30.0	-.5050	-.4360	-.3065	-.1868	-.0751	.0295	.1264	.2137	.2876	.3433
35.0	-.6198	-.5438	-.4035	-.2761	-.1590	-.0507	.0492	.1395	.2174	.2791
40.0	-.7476	-.6623	-.5073	-.3695	-.2451	-.1315	-.0277	.0662	.1483	.2154
45.0	-.8934	-.7952	-.6204	-.4687	-.3345	-.2140	-.1049	-.0067	.0798	.1522
50.0	-1.0637	-.9478	-.7461	-.5759	-.4288	-.2992	-.1834	-.0798	.0116	.0893
55.0	-1.2690	-1.1276	-.8886	-.6935	-.5296	-.3882	-.2639	-.1538	-.0569	.0264
60.0	-1.5252	-1.3462	-1.0540	-.8251	-.6389	-.4823	-.3474	-.2294	-.1260	-.0368
65.0	-1.8598	-1.6220	-1.2511	-.9752	-.7593	-.5833	-.4349	-.3072	-.1963	-.1006
70.0	-2.3235	-1.9866	-1.4934	-1.1501	-.8943	-.6929	-.5277	-.3881	-.2683	-.1653
75.0	-3.0206	-2.4989	-1.8020	-1.3589	-1.0481	-.8136	-.6270	-.4729	-.3426	-.2314
80.0	-4.2074	-3.2817	-2.2128	-1.6149	-1.2266	-.9483	-.7347	-.5628	-.4199	-.2993
85.0	-6.7073	-4.6316	-2.7888	-1.9383	-1.4381	-1.1009	-.8528	-.6588	-.5011	-.3696

α, deg \ σ, deg	100.0	110.0	120.0	130.0	140.0	150.0	160.0	170.0	180.0
1.0	.7380	.7380	.7380	.7380	.7380	.7380	.7380	.7380	.7380
2.0	.7205	.7205	.7205	.7205	.7205	.7205	.7205	.7205	.7205
4.0	.6933	.6933	.6933	.6933	.6933	.6933	.6933	.6933	.6933
6.0	.6654	.6654	.6654	.6654	.6654	.6654	.6654	.6654	.6654
8.0	.6378	.6378	.6378	.6378	.6378	.6378	.6378	.6378	.6378
10.0	.6128	.6122	.6122	.6122	.6122	.6122	.6122	.6122	.6122
12.0	.5871	.5875	.5875	.5875	.5875	.5875	.5875	.5875	.5875
15.0	.5507	.5515	.5515	.5515	.5515	.5515	.5515	.5515	.5515
20.0	.4920	.4948	.4946	.4946	.4946	.4946	.4946	.4946	.4946
25.0	.4344	.4417	.4421	.4421	.4421	.4421	.4421	.4421	.4421
30.0	.3774	.3912	.3932	.3932	.3932	.3932	.3932	.3932	.3932
35.0	.3207	.3416	.3471	.3473	.3473	.3473	.3473	.3473	.3473
40.0	.2640	.2924	.3032	.3046	.3045	.3045	.3045	.3045	.3045
45.0	.2074	.2431	.2602	.2644	.2646	.2646	.2646	.2646	.2646
50.0	.1508	.1937	.2176	.2262	.2273	.2273	.2273	.2273	.2273
55.0	.0941	.1439	.1748	.1889	.1922	.1924	.1924	.1924	.1924
60.0	.0371	.0937	.1317	.1520	.1590	.1598	.1597	.1597	.1597
65.0	-.0203	.0430	.0881	.1149	.1266	.1292	.1293	.1293	.1293
70.0	-.0784	-.0083	.0438	.0774	.0945	.1001	.1007	.1007	.1007
75.0	-.1373	-.0603	-.0012	.0393	.0623	.0718	.0738	.0738	.0738
80.0	-.1975	-.1133	-.0472	.0003	.0296	.0437	.0479	.0484	.0484
85.0	-.2591	-.1675	-.0942	-.0398	-.0040	.0153	.0225	.0239	.0239

TABLE I.- CONTINUED

(f) L/D. Continued.

$\phi_1 = 105^\circ$; $\phi_2 = 255^\circ$; $\beta = 0^\circ$

α, deg \ σ, deg	5.0	10.0	20.0	30.0	40.0	50.0	60.0	70.0	80.0	90.0
1.0	.0255	.0684	.1546	.2411	.3266	.4081	.4795	.5324	.5599	.5654
2.0	.0080	.0510	.1371	.2233	.3086	.3900	.4619	.5158	.5449	.5515
4.0	-.0268	.0162	.1021	.1881	.2731	.3545	.4271	.4831	.5153	.5244
6.0	-.0618	-.0186	.0675	.1533	.2382	.3197	.3931	.4510	.4861	.4979
8.0	-.0969	-.0535	.0330	.1189	.2038	.2855	.3596	.4193	.4574	.4720
10.0	-.1322	-.0884	-.0015	.0848	.1698	.2518	.3268	.3882	.4291	.4465
12.0	-.1679	-.1236	-.0359	.0508	.1362	.2186	.2944	.3575	.4011	.4215
15.0	-.2222	-.1770	-.0878	.0001	.0863	.1696	.2467	.3122	.3597	.3847
20.0	-.3158	-.2683	-.1753	-.0846	.0039	.0893	.1689	.2385	.2920	.3246
25.0	-.4146	-.3640	-.2656	-.1705	-.0785	.0099	.0928	.1665	.2259	.2657
30.0	-.5209	-.4659	-.3600	-.2588	-.1618	-.0692	.0176	.0957	.1608	.2078
35.0	-.6373	-.5764	-.4603	-.3509	-.2473	-.1492	-.0575	.0256	.0965	.1506
40.0	-.7674	-.6985	-.5687	-.4483	-.3360	-.2309	-.1332	-.0444	.0326	.0939
45.0	-.9161	-.8363	-.6881	-.5531	-.4294	-.3152	-.2100	-.1147	-.0311	.0374
50.0	-1.0908	-.9956	-.8220	-.6676	-.5289	-.4032	-.2889	-.1858	-.0950	-.0191
55.0	-1.3021	-1.1849	-.9756	-.7949	-.6366	-.4962	-.3706	-.2583	-.1595	-.0756
60.0	-1.5674	-1.4171	-1.1562	-.9389	-.7547	-.5956	-.4560	-.3328	-.2249	-.1326
65.0	-1.9165	-1.7135	-1.3743	-1.1053	-.8862	-.7028	-.5459	-.4098	-.2915	-.1900
70.0	-2.4048	-2.1109	-1.6464	-1.3014	-1.0345	-.8198	-.6414	-.4898	-.3597	-.2483
75.0	-3.1494	-2.6795	-1.9984	-1.5376	-1.2042	-.9486	-.7436	-.5736	-.4299	-.3077
80.0	-4.4441	-3.5689	-2.4727	-1.8280	-1.4007	-1.0917	-.8537	-.6618	-.5026	-.3685
85.0	-7.2728	-5.1422	-3.1382	-2.1910	-1.6305	-1.2519	-.9732	-.7555	-.5786	-.4314

α, deg \ σ, deg	100.0	110.0	120.0	130.0	140.0	150.0	160.0	170.0	180.0
1.0	.5663	.5663	.5663	.5663	.5663	.5663	.5663	.5663	.5663
2.0	.5516	.5516	.5516	.5516	.5516	.5516	.5516	.5516	.5516
4.0	.5249	.5249	.5249	.5249	.5249	.5249	.5249	.5249	.5249
6.0	.4987	.4987	.4987	.4987	.4987	.4987	.4987	.4987	.4987
8.0	.4732	.4732	.4732	.4732	.4732	.4732	.4732	.4732	.4732
10.0	.4490	.4488	.4488	.4488	.4488	.4488	.4488	.4488	.4488
12.0	.4252	.4253	.4253	.4253	.4253	.4253	.4253	.4253	.4253
15.0	.3911	.3914	.3914	.3914	.3914	.3914	.3914	.3914	.3914
20.0	.3368	.3383	.3382	.3382	.3382	.3382	.3382	.3382	.3382
25.0	.2848	.2893	.2894	.2894	.2894	.2894	.2894	.2894	.2894
30.0	.2343	.2435	.2446	.2446	.2446	.2446	.2446	.2446	.2446
35.0	.1848	.2001	.2035	.2036	.2036	.2036	.2036	.2036	.2036
40.0	.1359	.1582	.1656	.1664	.1664	.1664	.1664	.1664	.1664
45.0	.0873	.1173	.1302	.1329	.1330	.1330	.1330	.1330	.1330
50.0	.0390	.0772	.0967	.1029	.1036	.1036	.1036	.1036	.1036
55.0	-.0093	.0374	.0644	.0756	.0779	.0780	.0780	.0780	.0780
60.0	-.0577	-.0022	.0331	.0505	.0559	.0564	.0564	.0564	.0564
65.0	-.1063	-.0419	.0022	.0269	.0367	.0387	.0387	.0387	.0387
70.0	-.1554	-.0818	-.0287	.0042	.0198	.0245	.0249	.0249	.0249
75.0	-.2052	-.1223	-.0599	-.0183	.0043	.0131	.0147	.0147	.0147
80.0	-.2559	-.1636	-.0918	-.0412	-.0107	.0034	.0073	.0077	.0077
85.0	-.3081	-.2061	-.1250	-.0652	-.0263	-.0058	.0018	.0031	.0031

$\phi_1 = 120^\circ$; $\phi_2 = 240^\circ$; $\beta = 0^\circ$

α, deg \ σ, deg	5.0	10.0	20.0	30.0	40.0	50.0	60.0	70.0	80.0	90.0
1.0	.0307	.0788	.1753	.2720	.3676	.4587	.5386	.5977	.6285	.6348
2.0	.0132	.0613	.1576	.2539	.3491	.4399	.5200	.5802	.6127	.6203
4.0	-.0217	.0264	.1224	.2181	.3126	.4030	.4835	.5456	.5816	.5919
6.0	-.0566	-.0084	.0876	.1829	.2768	.3669	.4478	.5117	.5509	.5642
8.0	-.0917	-.0432	.0529	.1481	.2417	.3315	.4128	.4784	.5206	.5371
10.0	-.1270	-.0781	.0184	.1136	.2070	.2967	.3785	.4457	.4907	.5105
12.0	-.1626	-.1133	-.0161	.0794	.1728	.2625	.3448	.4135	.4612	.4842
15.0	-.2168	-.1665	-.0679	.0283	.1221	.2122	.2953	.3661	.4177	.4455
20.0	-.3101	-.2574	-.1552	-.0565	.0389	.1302	.2150	.2892	.3466	.3822
25.0	-.4086	-.3526	-.2449	-.1422	-.0439	.0496	.1369	.2144	.2772	.3201
30.0	-.5144	-.4537	-.3383	-.2299	-.1273	-.0303	.0600	.1413	.2092	.2590
35.0	-.6301	-.5631	-.4373	-.3210	-.2123	-.1107	-.0163	.0691	.1422	.1987
40.0	-.7593	-.6838	-.5440	-.4170	-.3003	-.1923	-.0928	-.0025	.0759	.1309
45.0	-.9069	-.8196	-.6610	-.5198	-.3924	-.2763	-.1702	-.0743	.0099	.0794
50.0	-1.0798	-.9763	-.7917	-.6316	-.4903	-.3637	-.2495	-.1468	-.0562	.0201
55.0	-1.2886	-1.1618	-.9411	-.7554	-.5958	-.4558	-.3314	-.2205	-.1228	-.0394
60.0	-1.5503	-1.3886	-1.1160	-.8951	-.7111	-.5539	-.4168	-.2961	-.1902	-.0993
65.0	-1.8935	-1.6768	-1.3263	-1.0559	-.8393	-.6598	-.5058	-.3743	-.2590	-.1597
70.0	-2.3720	-2.0615	-1.5876	-1.2452	-.9841	-.7754	-.6026	-.4558	-.3295	-.2211
75.0	-3.0977	-2.6086	-1.9247	-1.4733	-1.1501	-.9033	-.7055	-.5414	-.4023	-.2838
80.0	-4.3502	-3.4587	-2.3792	-1.7553	-1.3438	-1.0464	-.8171	-.6320	-.4780	-.3460
85.0	-7.0560	-4.9585	-3.0236	-2.1129	-1.5734	-1.2084	-.9392	-.7286	-.5572	-.4144

α, deg \ σ, deg	100.0	110.0	120.0	130.0	140.0	150.0	160.0	170.0	180.0
1.0	.6360	.6360	.6360	.6360	.6360	.6360	.6360	.6360	.6360
2.0	.6203	.6203	.6203	.6203	.6203	.6203	.6203	.6203	.6203
4.0	.5927	.5927	.5927	.5927	.5927	.5927	.5927	.5927	.5927
6.0	.5653	.5653	.5653	.5653	.5653	.5653	.5653	.5653	.5653
8.0	.5386	.5386	.5386	.5386	.5386	.5386	.5386	.5386	.5386
10.0	.5135	.5132	.5132	.5132	.5132	.5132	.5132	.5132	.5132
12.0	.4885	.4887	.4887	.4887	.4887	.4887	.4887	.4887	.4887
15.0	.4529	.4533	.4533	.4533	.4533	.4533	.4533	.4533	.4533
20.0	.3960	.3978	.3977	.3977	.3977	.3977	.3977	.3977	.3977
25.0	.3413	.3463	.3465	.3465	.3465	.3465	.3465	.3465	.3465
30.0	.2878	.2981	.2993	.2993	.2993	.2993	.2993	.2993	.2993
35.0	.2351	.2518	.2556	.2557	.2557	.2557	.2557	.2557	.2557
40.0	.1829	.2068	.2149	.2158	.2157	.2157	.2157	.2157	.2157
45.0	.1309	.1625	.1763	.1793	.1794	.1794	.1794	.1794	.1794
50.0	.0791	.1186	.1392	.1458	.1465	.1465	.1465	.1465	.1465
55.0	.0272	.0749	.1029	.1147	.1171	.1172	.1172	.1172	.1172
60.0	-.0248	.0310	.0671	.0852	.0908	.0914	.0913	.0913	.0913
65.0	-.0772	-.0130	.0314	.0567	.0669	.0689	.0690	.0690	.0690
70.0	-.1301	-.0575	-.0045	.0287	.0447	.0495	.0500	.0500	.0500
75.0	-.1838	-.1025	-.0409	-.0006	.0235	.0324	.0341	.0341	.0341
80.0	-.2385	-.1483	-.0779	-.0279	.0024	.0166	.0206	.0210	.0210
85.0	-.2945	-.1953	-.1161	-.0575	-.0193	.0010	.0086	.0099	.0099

TABLE II.- CONTINUED

(c) C_L

$\beta_1 = 0^o$; $\beta_2 = 360^o$

ϵ, deg \ σ, deg	5.0	10.0	20.0	30.0	40.0	50.0	60.0	70.0	80.0	90.0
1.0	-.0003	-.0010	-.0036	-.0065	-.0085	-.0085	-.0065	-.0036	-.0010	-.0000
2.0	-.0005	-.0020	-.0072	-.0131	-.0169	-.0169	-.0131	-.0072	-.0021	-.0000
4.0	-.0010	-.0041	-.0143	-.0260	-.0337	-.0337	-.0261	-.0145	-.0042	-.0001
6.0	-.0016	-.0060	-.0214	-.0388	-.0502	-.0503	-.0391	-.0218	-.0066	-.0003
8.0	-.0021	-.0080	-.0282	-.0513	-.0664	-.0666	-.0519	-.0292	-.0093	-.0007
10.0	-.0025	-.0099	-.0348	-.0633	-.0821	-.0826	-.0646	-.0368	-.0123	-.0013
12.0	-.0030	-.0116	-.0412	-.0749	-.0972	-.0980	-.0771	-.0446	-.0159	-.0022
15.0	-.0036	-.0141	-.0500	-.0911	-.1186	-.1201	-.0954	-.0566	-.0222	-.0043
20.0	-.0046	-.0177	-.0627	-.1145	-.1499	-.1533	-.1245	-.0780	-.0355	-.0100
25.0	-.0052	-.0203	-.0722	-.1325	-.1748	-.1813	-.1514	-.1011	-.0523	-.0189
30.0	-.0057	-.0220	-.0783	-.1445	-.1925	-.2034	-.1758	-.1254	-.0723	-.0313
35.0	-.0058	-.0226	-.0808	-.1502	-.2027	-.2191	-.1973	-.1501	-.0948	-.0472
40.0	-.0057	-.0222	-.0797	-.1498	-.2056	-.2286	-.2155	-.1741	-.1190	-.0664
45.0	-.0053	-.0208	-.0755	-.1436	-.2016	-.2323	-.2294	-.1962	-.1440	-.0864
50.0	-.0048	-.0187	-.0685	-.1327	-.1919	-.2303	-.2386	-.2154	-.1687	-.1124
55.0	-.0041	-.0160	-.0594	-.1182	-.1776	-.2231	-.2425	-.2307	-.1917	-.1374
60.0	-.0033	-.0130	-.0492	-.1015	-.1599	-.2111	-.2410	-.2413	-.2121	-.1624
65.0	-.0025	-.0098	-.0385	-.0839	-.1401	-.1949	-.2342	-.2467	-.2288	-.1861
70.0	-.0017	-.0068	-.0284	-.0667	-.1191	-.1756	-.2224	-.2465	-.2409	-.2074
75.0	-.0010	-.0042	-.0195	-.0508	-.0988	-.1540	-.2062	-.2408	-.2478	-.2253
80.0	-.0005	-.0022	-.0123	-.0367	-.0777	-.1312	-.1865	-.2299	-.2492	-.2388
85.0	-.0001	-.0009	-.0070	-.0249	-.0590	-.1082	-.1643	-.2143	-.2449	-.2472

ϵ, deg \ σ, deg	100.0	110.0	120.0	130.0	140.0	150.0	160.0	170.0	180.0
1.0	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000
2.0	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000
4.0	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000
6.0	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000
8.0	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000
10.0	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000
12.0	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000
15.0	-.0001	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000
20.0	-.0010	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000
25.0	-.0035	-.0001	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000
30.0	-.0085	-.0008	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000
35.0	-.0165	-.0030	-.0001	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000
40.0	-.0279	-.0074	-.0007	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000
45.0	-.0429	-.0147	-.0026	-.0001	-.0000	-.0000	-.0000	-.0000	-.0000
50.0	-.0613	-.0252	-.0065	-.0006	-.0000	-.0000	-.0000	-.0000	-.0000
55.0	-.0825	-.0393	-.0131	-.0023	-.0000	-.0000	-.0000	-.0000	-.0000
60.0	-.1060	-.0567	-.0228	-.0058	-.0005	-.0000	-.0000	-.0000	-.0000
65.0	-.1308	-.0770	-.0359	-.0117	-.0020	-.0000	-.0000	-.0000	-.0000
70.0	-.1557	-.0997	-.0522	-.0206	-.0050	-.0004	.0000	.0000	.0000
75.0	-.1798	-.1239	-.0715	-.0326	-.0103	-.0017	-.0000	.0000	.0000
80.0	-.2017	-.1486	-.0932	-.0477	-.0182	-.0043	-.0003	-.0000	-.0000
85.0	-.2205	-.1727	-.1166	-.0657	-.0290	-.0088	-.0013	-.0000	-.0000

(d) C_D

$\beta_1 = 0^o$; $\beta_2 = 360^o$

ϵ, deg \ σ, deg	5.0	10.0	20.0	30.0	40.0	50.0	60.0	70.0	80.0	90.0
1.0	.0151	.0594	.2202	.4373	.6554	.8291	.9373	.9862	.9991	1.0000
2.0	.0151	.0593	.2199	.4368	.6548	.8284	.9368	.9859	.9990	1.0000
4.0	.0150	.0590	.2188	.4348	.6521	.8257	.9348	.9848	.9987	1.0000
6.0	.0149	.0584	.2169	.4314	.6477	.8213	.9313	.9829	.9981	1.0000
8.0	.0147	.0577	.2143	.4266	.6416	.8152	.9266	.9802	.9973	.9999
10.0	.0145	.0568	.2110	.4206	.6338	.8074	.9205	.9768	.9961	.9998
12.0	.0142	.0556	.2070	.4134	.6244	.7979	.9130	.9725	.9947	.9996
15.0	.0136	.0536	.1998	.4004	.6074	.7808	.8995	.9646	.9917	.9992
20.0	.0126	.0494	.1850	.3733	.5722	.7449	.8707	.9470	.9842	.9973
25.0	.0113	.0444	.1673	.3409	.5295	.7010	.8345	.9236	.9728	.9936
30.0	.0098	.0389	.1475	.3045	.4813	.6505	.7916	.8940	.9566	.9871
35.0	.0083	.0330	.1266	.2657	.4294	.5950	.7427	.8579	.9348	.9770
40.0	.0068	.0271	.1055	.2263	.3758	.5363	.6886	.8154	.9068	.9622
45.0	.0054	.0215	.0851	.1878	.3223	.4758	.6302	.7669	.8724	.9419
50.0	.0041	.0163	.0662	.1516	.2707	.4152	.5689	.7129	.8314	.9157
55.0	.0029	.0117	.0495	.1186	.2223	.3557	.5058	.6544	.7842	.8830
60.0	.0019	.0079	.0352	.0898	.1780	.2988	.4423	.5925	.7312	.8437
65.0	.0012	.0050	.0238	.0656	.1387	.2455	.3800	.5286	.6734	.7981
70.0	.0006	.0028	.0150	.0459	.1048	.1970	.3202	.4639	.6118	.7465
75.0	.0003	.0014	.0088	.0305	.0764	.1538	.2640	.4000	.5477	.6898
80.0	.0001	.0005	.0046	.0191	.0534	.1164	.2125	.3382	.4825	.6289
85.0	.0000	.0002	.0022	.0111	.0356	.0851	.1665	.2800	.4178	.5652

ϵ, deg \ σ, deg	100.0	110.0	120.0	130.0	140.0	150.0	160.0	170.0	180.0
1.0	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
2.0	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
4.0	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
6.0	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
8.0	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
10.0	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
12.0	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
15.0	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
20.0	.9999	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
25.0	.9994	1.0000	1.0001	1.0001	1.0001	1.0001	1.0001	1.0001	1.0001
30.0	.9978	.9999	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
35.0	.9946	.9995	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
40.0	.9889	.9982	.9999	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
45.0	.9797	.9953	.9995	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
50.0	.9661	.9902	.9984	.9999	1.0000	1.0000	1.0000	1.0000	1.0000
55.0	.9474	.9818	.9959	.9996	1.0000	1.0000	1.0000	1.0000	1.0000
60.0	.9227	.9693	.9912	.9986	.9999	1.0000	1.0000	1.0000	1.0000
65.0	.8917	.9519	.9836	.9963	.9996	1.0000	1.0000	1.0000	1.0000
70.0	.8542	.9288	.9722	.9922	.9988	.9999	1.0000	1.0000	1.0000
75.0	.8103	.8995	.9560	.9853	.9968	.9997	1.0000	1.0000	1.0000
80.0	.7603	.8639	.9345	.9749	.9931	.9989	.9999	1.0000	1.0000
85.0	.7049	.8218	.9071	.9601	.9870	.9973	.9998	1.0000	1.0000

TABLE II. - AERODYNAMIC CHARACTERISTICS OF FULL SPHERICAL CAPS

(a) C_N'

$\beta_1 = 0^0$; $\beta_2 = 360^0$

ϵ, deg \ σ, deg	5.0	10.0	20.0	30.0	40.0	50.0	60.0	70.0	80.0	90.0
1.0	.0000	.0000	.0002	.0011	.0030	.0060	.0098	.0136	.0164	.0175
2.0	.0000	.0000	.0005	.0022	.0060	.0120	.0196	.0272	.0328	.0349
4.0	.0000	.0001	.0010	.0043	.0119	.0240	.0391	.0543	.0655	.0697
6.0	.0000	.0001	.0014	.0065	.0177	.0358	.0585	.0811	.0978	.1042
8.0	.0000	.0001	.0019	.0086	.0235	.0475	.0775	.1075	.1296	.1385
10.0	.0000	.0002	.0023	.0107	.0292	.0589	.0962	.1333	.1609	.1723
12.0	.0000	.0002	.0028	.0127	.0347	.0700	.1144	.1586	.1913	.2056
15.0	.0000	.0002	.0034	.0156	.0427	.0861	.1406	.1949	.2353	.2544
20.0	.0000	.0003	.0044	.0201	.0549	.1107	.1808	.2506	.3033	.3317
25.0	.0000	.0003	.0052	.0239	.0654	.1319	.2154	.2987	.3637	.4028
30.0	.0000	.0004	.0059	.0271	.0739	.1491	.2436	.3384	.4157	.4665
35.0	.0000	.0004	.0064	.0294	.0802	.1618	.2643	.3691	.4505	.5217
40.0	.0000	.0004	.0067	.0308	.0841	.1696	.2775	.3908	.4917	.5676
45.0	.0000	.0005	.0068	.0312	.0854	.1722	.2834	.4035	.5150	.6035
50.0	.0000	.0004	.0067	.0308	.0841	.1700	.2824	.4077	.5205	.6292
55.0	.0000	.0004	.0064	.0294	.0802	.1634	.2752	.4038	.5324	.6445
60.0	.0000	.0004	.0059	.0271	.0742	.1532	.2626	.3925	.5272	.6495
65.0	.0000	.0003	.0052	.0240	.0665	.1402	.2455	.3748	.5136	.6447
70.0	.0000	.0003	.0044	.0203	.0577	.1250	.2248	.3516	.4925	.6305
75.0	.0000	.0002	.0034	.0163	.0484	.1087	.2016	.3240	.4649	.6079
80.0	.0000	.0002	.0024	.0124	.0391	.0919	.1769	.2932	.4319	.5779
85.0	.0000	.0001	.0015	.0089	.0303	.0754	.1516	.2603	.3946	.5415

ϵ, deg \ σ, deg	100.0	110.0	120.0	130.0	140.0	150.0	160.0	170.0	180.0
1.0	.0175	.0175	.0175	.0175	.0175	.0175	.0175	.0175	.0175
2.0	.0349	.0349	.0349	.0349	.0349	.0349	.0349	.0349	.0349
4.0	.0698	.0698	.0698	.0698	.0698	.0698	.0698	.0698	.0698
6.0	.1045	.1045	.1045	.1045	.1045	.1045	.1045	.1045	.1045
8.0	.1392	.1392	.1392	.1392	.1392	.1392	.1392	.1392	.1392
10.0	.1737	.1737	.1737	.1737	.1737	.1737	.1737	.1737	.1737
12.0	.2079	.2079	.2079	.2079	.2079	.2079	.2079	.2079	.2079
15.0	.2587	.2588	.2588	.2588	.2588	.2588	.2588	.2588	.2588
20.0	.3411	.3420	.3420	.3420	.3420	.3420	.3420	.3420	.3420
25.0	.4192	.4226	.4226	.4226	.4226	.4226	.4226	.4226	.4226
30.0	.4916	.4993	.5000	.5000	.5000	.5000	.5000	.5000	.5000
35.0	.5570	.5708	.5735	.5736	.5736	.5736	.5736	.5736	.5736
40.0	.6142	.6359	.6422	.6428	.6428	.6428	.6428	.6428	.6428
45.0	.6624	.6934	.7049	.7071	.7071	.7071	.7071	.7071	.7071
50.0	.7007	.7423	.7606	.7656	.7660	.7660	.7660	.7660	.7660
55.0	.7287	.7817	.8082	.8175	.8191	.8192	.8192	.8192	.8192
60.0	.7461	.8111	.8470	.8619	.8657	.8660	.8660	.8660	.8660
65.0	.7529	.8302	.8763	.8980	.9052	.9063	.9063	.9063	.9063
70.0	.7494	.8387	.8957	.9253	.9368	.9395	.9397	.9397	.9397
75.0	.7361	.8368	.9049	.9433	.9602	.9652	.9659	.9659	.9659
80.0	.7137	.8249	.9041	.9518	.9749	.9830	.9847	.9848	.9848
85.0	.6830	.8036	.8935	.9507	.9807	.9927	.9958	.9962	.9962

(b) C_A

$\beta_1 = 0^0$; $\beta_2 = 360^0$

ϵ, deg \ σ, deg	5.0	10.0	20.0	30.0	40.0	50.0	60.0	70.0	80.0	90.0
1.0	.0151	.0594	.2202	.4374	.6555	.8291	.9373	.9861	.9989	.9999
2.0	.0151	.0593	.2200	.4370	.6549	.8285	.9367	.9856	.9984	.9994
4.0	.0151	.0591	.2192	.4355	.6529	.8261	.9343	.9834	.9965	.9976
6.0	.0150	.0588	.2179	.4331	.6494	.8221	.9303	.9798	.9933	.9945
8.0	.0148	.0583	.2161	.4296	.6446	.8166	.9248	.9748	.9888	.9903
10.0	.0147	.0576	.2138	.4253	.6384	.8095	.9177	.9683	.9831	.9849
12.0	.0145	.0569	.2110	.4199	.6310	.8009	.9091	.9605	.9762	.9783
15.0	.0141	.0554	.2060	.4103	.6174	.7853	.8935	.9464	.9637	.9662
20.0	.0134	.0525	.1953	.3900	.5889	.7524	.8607	.9165	.9370	.9406
25.0	.0124	.0489	.1822	.3649	.5538	.7119	.8203	.8798	.9038	.9085
30.0	.0114	.0447	.1669	.3359	.5131	.6650	.7734	.8369	.8645	.8705
35.0	.0102	.0400	.1501	.3038	.4680	.6131	.7216	.7888	.8201	.8273
40.0	.0089	.0350	.1321	.2696	.4200	.5578	.6660	.7366	.7712	.7797
45.0	.0076	.0299	.1136	.2344	.3705	.5007	.6079	.6810	.7187	.7286
50.0	.0063	.0248	.0950	.1991	.3210	.4433	.5484	.6233	.6636	.6747
55.0	.0050	.0198	.0771	.1649	.2729	.3867	.4888	.5644	.6068	.6190
60.0	.0038	.0152	.0602	.1328	.2275	.3322	.4299	.5052	.5493	.5625
65.0	.0027	.0110	.0450	.1038	.1856	.2805	.3729	.4469	.4920	.5060
70.0	.0018	.0073	.0318	.0784	.1477	.2324	.3185	.3903	.4357	.4503
75.0	.0010	.0044	.0211	.0569	.1144	.1886	.2675	.3361	.3812	.3962
80.0	.0005	.0022	.0129	.0394	.0858	.1494	.2206	.2851	.3292	.3444
85.0	.0001	.0009	.0072	.0258	.0619	.1152	.1782	.2379	.2804	.2955

ϵ, deg \ σ, deg	100.0	110.0	120.0	130.0	140.0	150.0	160.0	170.0	180.0
1.0	.9999	.9999	.9999	.9999	.9999	.9999	.9999	.9999	.9999
2.0	.9994	.9994	.9994	.9994	.9994	.9994	.9994	.9994	.9994
4.0	.9976	.9976	.9976	.9976	.9976	.9976	.9976	.9976	.9976
6.0	.9945	.9945	.9945	.9945	.9945	.9945	.9945	.9945	.9945
8.0	.9903	.9903	.9903	.9903	.9903	.9903	.9903	.9903	.9903
10.0	.9848	.9848	.9848	.9848	.9848	.9848	.9848	.9848	.9848
12.0	.9782	.9782	.9782	.9782	.9782	.9782	.9782	.9782	.9782
15.0	.9660	.9659	.9659	.9659	.9659	.9659	.9659	.9659	.9659
20.0	.9399	.9397	.9397	.9397	.9397	.9397	.9397	.9397	.9397
25.0	.9072	.9064	.9064	.9064	.9064	.9064	.9064	.9064	.9064
30.0	.8684	.8663	.8660	.8660	.8660	.8660	.8660	.8660	.8660
35.0	.8242	.8204	.8192	.8192	.8192	.8192	.8192	.8192	.8192
40.0	.7755	.7694	.7664	.7660	.7660	.7660	.7660	.7661	.7661
45.0	.7231	.7142	.7086	.7071	.7071	.7071	.7071	.7071	.7071
50.0	.6680	.6558	.6468	.6432	.6428	.6428	.6428	.6428	.6428
55.0	.6110	.5953	.5820	.5752	.5736	.5736	.5736	.5736	.5736
60.0	.5532	.5337	.5154	.5043	.5004	.5000	.5000	.5000	.5000
65.0	.4954	.4721	.4482	.4317	.4242	.4227	.4226	.4226	.4226
70.0	.4385	.4114	.3816	.3587	.3463	.3424	.3420	.3420	.3420
75.0	.3834	.3525	.3165	.2865	.2680	.2603	.2588	.2588	.2588
80.0	.3307	.2963	.2541	.2162	.1904	.1777	.1740	.1736	.1736
85.0	.2811	.2436	.1952	.1491	.1149	.0957	.0885	.0872	.0872

TABLE II.- CONCLUDED

(e) L/D

$\phi_1 = 0^0$; $\phi_2 = 360^0$

ϵ, deg \ σ, deg	5.0	10.0	20.0	30.0	40.0	50.0	60.0	70.0	80.0	90.0
1.0	-.0174	-.0172	-.0164	-.0150	-.0129	-.0102	-.0070	-.0037	-.0010	-.0000
2.0	-.0348	-.0344	-.0327	-.0299	-.0258	-.0204	-.0140	-.0073	-.0021	-.0000
4.0	-.0697	-.0689	-.0656	-.0599	-.0517	-.0408	-.0280	-.0147	-.0042	-.0001
6.0	-.1047	-.1035	-.0985	-.0900	-.0776	-.0613	-.0420	-.0222	-.0066	-.0003
8.0	-.1400	-.1383	-.1317	-.1202	-.1035	-.0818	-.0561	-.0298	-.0093	-.0007
10.0	-.1756	-.1735	-.1651	-.1505	-.1296	-.1023	-.0702	-.0377	-.0124	-.0013
12.0	-.2117	-.2092	-.1988	-.1811	-.1557	-.1228	-.0845	-.0459	-.0159	-.0022
15.0	-.2669	-.2636	-.2502	-.2275	-.1952	-.1538	-.1061	-.0587	-.0224	-.0043
20.0	-.3624	-.3577	-.3387	-.3067	-.2619	-.2059	-.1430	-.0824	-.0361	-.0100
25.0	-.4641	-.4577	-.4317	-.3888	-.3301	-.2587	-.1814	-.1094	-.0538	-.0190
30.0	-.5744	-.5657	-.5310	-.4747	-.4000	-.3126	-.2221	-.1403	-.0755	-.0317
35.0	-.6962	-.6844	-.6382	-.5653	-.4722	-.3683	-.2657	-.1750	-.1014	-.0483
40.0	-.8337	-.8176	-.7557	-.6616	-.5471	-.4263	-.3129	-.2135	-.1313	-.0690
45.0	-.9924	-.9701	-.8863	-.7647	-.6255	-.4881	-.3641	-.2559	-.1651	-.0938
50.0	-1.1808	-1.1490	-1.0335	-.8758	-.7087	-.5547	-.4194	-.3021	-.2029	-.1227
55.0	-1.4118	-1.3647	-1.2015	-.9966	-.7988	-.6271	-.4795	-.3525	-.2445	-.1556
60.0	-1.7061	-1.6328	-1.3957	-1.1296	-.8983	-.7064	-.5449	-.4072	-.2901	-.1925
65.0	-2.0999	-1.9783	-1.6224	-1.2801	-1.0097	-.7939	-.6162	-.4667	-.3398	-.2332
70.0	-2.6616	-2.4411	-1.8909	-1.4551	-1.1364	-.8915	-.6946	-.5314	-.3938	-.2779
75.0	-3.5353	-3.0859	-2.2256	-1.6641	-1.2827	-1.0014	-.7813	-.6021	-.4525	-.3266
80.0	-5.0656	-4.0152	-2.6609	-1.9201	-1.4545	-1.1266	-.8780	-.6797	-.5164	-.3797
85.0	-8.1465	-5.4908	-3.2439	-2.2412	-1.6599	-1.2712	-.9868	-.7655	-.5862	-.4373

ϵ, deg \ σ, deg	100.0	110.0	120.0	130.0	140.0	150.0	160.0	170.0	180.0
1.0	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000
2.0	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000
4.0	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000
6.0	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000
8.0	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000
10.0	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000
12.0	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000
15.0	-.0001	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000
20.0	-.0010	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000
25.0	-.0035	-.0001	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000
30.0	-.0085	-.0008	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000
35.0	-.0166	-.0030	-.0001	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000
40.0	-.0283	-.0074	-.0007	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000
45.0	-.0438	-.0147	-.0026	-.0001	-.0000	-.0000	-.0000	-.0000	-.0000
50.0	-.0634	-.0255	-.0065	-.0006	-.0000	-.0000	-.0000	-.0000	-.0000
55.0	-.0871	-.0400	-.0132	-.0023	-.0000	-.0000	-.0000	-.0000	-.0000
60.0	-.1149	-.0584	-.0231	-.0058	-.0005	-.0000	-.0000	-.0000	-.0000
65.0	-.1466	-.0809	-.0365	-.0118	-.0020	-.0000	-.0000	-.0000	-.0000
70.0	-.1823	-.1074	-.0537	-.0207	-.0051	-.0004	.0000	.0000	.0000
75.0	-.2219	-.1378	-.0748	-.0330	-.0104	-.0017	-.0000	.0000	.0000
80.0	-.2654	-.1720	-.0997	-.0489	-.0184	-.0043	-.0003	-.0000	-.0000
85.0	-.3128	-.2101	-.1285	-.0684	-.0294	-.0089	-.0013	-.0000	-.0000

TABLE III.- AERODYNAMIC CHARACTERISTICS OF ELLIPTICAL CONE BODIES FOR m = 1/2

(a) C_N

$\phi_1 = 0^\circ$; $\phi_2 = 360^\circ$; $\beta = 0^\circ$

θ_{xy}, deg / α, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.0465	.0464	.0462	.0460	.0453	.0443	.0431	.0414	.0395	.0371
2.0	.0953	.0927	.0924	.0919	.0906	.0886	.0861	.0828	.0789	.0741
4.0	.2305	.1898	.1844	.1834	.1807	.1768	.1717	.1653	.1573	.1478
6.0	.4224	.3096	.2825	.2747	.2700	.2642	.2565	.2469	.2350	.2207
8.0	.6707	.4561	.3958	.3725	.3580	.3502	.3401	.3273	.3116	.2926
10.0	.9745	.6295	.5257	.4811	.4472	.4346	.4220	.4061	.3866	.3631
12.0	1.3323	.8290	.6722	.6011	.5413	.5177	.5019	.4830	.4598	.4318
15.0	1.9662	1.1751	.9217	.8019	.6931	.6456	.6178	.5937	.5652	.5308
20.0	3.2643	1.8678	1.4108	1.1879	.9739	.8722	.8115	.7668	.7266	.6824
25.0	4.8294	2.6865	1.9784	1.6283	1.2838	1.1138	1.0098	.9350	.8728	.8138
30.0	6.6141	3.6064	2.6075	2.1101	1.6142	1.3647	1.2101	1.0992	1.0096	.9291
35.0	8.5639	4.5997	3.2791	2.6186	1.9555	1.6180	1.4073	1.2564	1.1361	1.0311
40.0	10.6199	5.6361	3.9727	3.1385	2.2973	1.8663	1.5961	1.4027	1.2500	1.1190
45.0	12.7193	6.6841	4.6672	3.6541	2.6294	2.1023	1.7710	1.5343	1.3485	1.1913
50.0	14.7985	7.7119	5.3416	4.1496	2.9417	2.3188	1.9269	1.6474	1.4292	1.2465
55.0	16.7943	8.6883	5.9754	4.6100	3.2247	2.5094	2.0592	1.7388	1.4899	1.2832
60.0	18.6461	9.5836	6.5493	5.0214	3.4699	2.6683	2.1639	1.8057	1.5289	1.3007
65.0	20.2975	10.3706	7.0459	5.3711	3.6699	2.7906	2.2378	1.8463	1.5450	1.2985
70.0	21.6984	11.0254	7.4501	5.6487	3.8185	2.8727	2.2789	1.8594	1.5380	1.2769
75.0	22.8062	11.5281	7.7496	5.8457	3.9112	2.9121	2.2857	1.8445	1.5081	1.2365
80.0	23.5874	11.8634	7.9354	5.9560	3.9453	2.9076	2.2582	1.8022	1.4562	1.1787
85.0	24.0180	12.0212	8.0017	5.9764	3.9196	2.8593	2.1971	1.7338	1.3839	1.1053

θ_{xy}, deg / α, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	.0342	.0309	.0270	.0227	.0180	.0130	.0081	.0039	.0010
2.0	.0684	.0617	.0541	.0454	.0359	.0260	.0163	.0079	.0021
4.0	.1364	.1231	.1078	.0906	.0717	.0518	.0325	.0157	.0042
6.0	.2038	.1839	.1611	.1353	.1071	.0774	.0485	.0235	.0062
8.0	.2702	.2439	.2136	.1794	.1419	.1026	.0643	.0311	.0082
10.0	.3352	.3026	.2650	.2226	.1761	.1274	.0798	.0386	.0102
12.0	.3987	.3599	.3152	.2647	.2094	.1515	.0949	.0460	.0122
15.0	.4901	.4424	.3874	.3254	.2574	.1862	.1167	.0565	.0149
20.0	.6300	.5687	.4981	.4184	.3310	.2393	.1500	.0726	.0192
25.0	.7508	.6777	.5936	.4986	.3944	.2852	.1787	.0866	.0229
30.0	.8501	.7662	.6711	.5637	.4459	.3225	.2021	.0979	.0259
35.0	.9322	.8331	.7281	.6116	.4838	.3499	.2192	.1062	.0281
40.0	.9990	.8826	.7647	.6410	.5071	.3667	.2298	.1113	.0294
45.0	1.0499	.9161	.7847	.6519	.5149	.3724	.2333	.1130	.0299
50.0	1.0845	.9342	.7899	.6482	.5074	.3667	.2298	.1113	.0294
55.0	1.1022	.9370	.7815	.6323	.4881	.3499	.2192	.1062	.0281
60.0	1.1030	.9251	.7604	.6057	.4598	.3242	.2021	.0979	.0259
65.0	1.0870	.8990	.7278	.5699	.4263	.2928	.1790	.0866	.0229
70.0	1.0549	.8599	.6850	.5264	.3835	.2578	.1529	.0726	.0192
75.0	1.0077	.8091	.6334	.4770	.3390	.2209	.1258	.0570	.0149
80.0	.9471	.7483	.5749	.4232	.2924	.1836	.0993	.0417	.0102
85.0	.8748	.6793	.5112	.3669	.2453	.1473	.0746	.0281	.0056

$\phi_1 = 0^\circ$; $\phi_2 = 360^\circ$; $\beta = 2^\circ$

θ_{xy}, deg / α, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.0465	.0463	.0462	.0459	.0453	.0443	.0430	.0414	.0394	.0370
2.0	.0975	.0926	.0923	.0918	.0905	.0885	.0860	.0827	.0788	.0740
4.0	.2349	.1906	.1842	.1832	.1805	.1766	.1715	.1651	.1571	.1476
6.0	.4272	.3111	.2828	.2745	.2696	.2639	.2562	.2466	.2347	.2205
8.0	.6756	.4579	.3964	.3726	.3575	.3490	.3397	.3269	.3112	.2923
10.0	.9792	.6313	.5265	.4813	.4468	.4341	.4215	.4056	.3861	.3627
12.0	1.3366	.8307	.6729	.6013	.5409	.5171	.5013	.4824	.4592	.4313
15.0	1.9698	1.1765	.9223	.8020	.6928	.6450	.6170	.5930	.5645	.5302
20.0	3.2664	1.8684	1.4109	1.1877	.9734	.8715	.8106	.7660	.7258	.6816
25.0	4.8297	2.6862	1.9779	1.6277	1.2830	1.1129	1.0089	.9340	.8718	.8129
30.0	6.6121	3.6051	2.6063	2.1089	1.6131	1.3636	1.2089	1.0981	1.0085	.9280
35.0	8.5597	4.5971	3.2771	2.6169	1.9540	1.6166	1.4059	1.2551	1.1349	1.0300
40.0	10.6131	5.6323	3.9698	3.1362	2.2954	1.8647	1.5945	1.4013	1.2486	1.1178
45.0	12.7100	6.6790	4.6635	3.6511	2.6271	2.1004	1.7693	1.5327	1.3471	1.1900
50.0	14.7867	7.7056	5.3371	4.1460	2.9390	2.3167	1.9250	1.6457	1.4277	1.2451
55.0	16.7800	8.6808	5.9701	4.6059	3.2217	2.5070	2.0572	1.7370	1.4883	1.2818
60.0	18.6295	9.5750	6.5434	5.0167	3.4667	2.6657	2.1617	1.8039	1.5273	1.2993
65.0	20.2789	10.3611	7.0394	5.3661	3.6664	2.7879	2.2356	1.8446	1.5434	1.2971
70.0	21.6781	11.0151	7.4431	5.6433	3.8148	2.8699	2.2766	1.8575	1.5364	1.2755
75.0	22.7846	11.5171	7.7422	5.8400	3.9074	2.9092	2.2834	1.8426	1.5066	1.2352
80.0	23.5648	11.8520	7.9277	5.9502	3.9414	2.9047	2.2559	1.8004	1.4547	1.1775
85.0	23.9949	12.0096	7.9939	5.9706	3.9158	2.8565	2.1950	1.7320	1.3825	1.1042

θ_{xy}, deg / α, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	.0342	.0308	.0270	.0227	.0179	.0130	.0081	.0039	.0010
2.0	.0683	.0616	.0540	.0453	.0359	.0259	.0163	.0079	.0021
4.0	.1362	.1230	.1077	.0905	.0716	.0518	.0324	.0157	.0042
6.0	.2035	.1837	.1609	.1352	.1069	.0773	.0485	.0235	.0062
8.0	.2698	.2436	.2133	.1792	.1417	.1025	.0642	.0311	.0082
10.0	.3348	.3022	.2647	.2223	.1759	.1272	.0797	.0386	.0102
12.0	.3982	.3594	.3148	.2644	.2092	.1513	.0948	.0459	.0121
15.0	.4895	.4418	.3870	.3250	.2571	.1860	.1165	.0564	.0149
20.0	.6292	.5680	.4975	.4179	.3306	.2391	.1498	.0725	.0192
25.0	.7499	.6769	.5929	.4980	.3939	.2849	.1785	.0865	.0229
30.0	.8491	.7653	.6702	.5630	.4454	.3221	.2018	.0977	.0258
35.0	.9312	.8321	.7273	.6109	.4832	.3495	.2190	.1061	.0280
40.0	.9978	.8815	.7638	.6402	.5064	.3663	.2295	.1112	.0294
45.0	1.0487	.9151	.7838	.6511	.5143	.3719	.2330	.1129	.0298
50.0	1.0833	.9331	.7890	.6475	.5068	.3663	.2295	.1112	.0294
55.0	1.1010	.9360	.7806	.6316	.4876	.3495	.2190	.1061	.0280
60.0	1.1018	.9240	.7596	.6050	.4592	.3238	.2018	.0977	.0258
65.0	1.0858	.8980	.7270	.5692	.4238	.2925	.1788	.0865	.0229
70.0	1.0537	.8590	.6842	.5258	.3830	.2575	.1527	.0725	.0192
75.0	1.0067	.8083	.6327	.4764	.3386	.2206	.1256	.0569	.0149
80.0	.9461	.7475	.5743	.4227	.2920	.1834	.0992	.0417	.0102
85.0	.8739	.6786	.5107	.3665	.2451	.1471	.0745	.0280	.0056

TABLE III.- CONTINUED

(a) C_N. Continued.

$\beta_1 = -90^0$; $\beta_2 = 90^0$; $\beta = 0^0$

α, deg \ θ_{xy}, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	-.0104	-.0453	-.0850	-.1259	-.2082	-.2898	-.3697	-.4466	-.5193	-.5860
2.0	-.0031	-.0208	-.0533	-.0906	-.1697	-.2503	-.3301	-.4078	-.4818	-.5503
4.0	-.0009	-.0062	-.0188	-.0416	-.1066	-.1811	-.2583	-.3355	-.4107	-.4818
6.0	-.0004	-.0029	-.0092	-.0203	-.0624	-.1253	-.1965	-.2708	-.3453	-.4174
8.0	-.0002	-.0017	-.0054	-.0121	-.0370	-.0832	-.1450	-.2140	-.2859	-.3574
10.0	-.0001	-.0011	-.0035	-.0080	-.0247	-.0549	-.1040	-.1653	-.2327	-.3022
12.0	-.0001	-.0007	-.0024	-.0056	-.0175	-.0390	-.0738	-.1250	-.1861	-.2520
15.0	-.0000	-.0005	-.0015	-.0035	-.0112	-.0253	-.0474	-.0807	-.1288	-.1866
20.0	-.0000	-.0002	-.0008	-.0018	-.0060	-.0138	-.0260	-.0438	-.0688	-.1057
25.0	-.0000	-.0001	-.0004	-.0010	-.0035	-.0080	-.0154	-.0260	-.0408	-.0609
30.0	-.0000	-.0001	-.0003	-.0006	-.0021	-.0049	-.0094	-.0160	-.0251	-.0374
35.0	-.0000	-.0000	-.0002	-.0004	-.0013	-.0030	-.0058	-.0099	-.0157	-.0234
40.0	-.0000	-.0000	-.0001	-.0002	-.0008	-.0018	-.0036	-.0061	-.0097	-.0145
45.0	-.0000	-.0000	-.0001	-.0001	-.0005	-.0011	-.0022	-.0037	-.0059	-.0088
50.0	-.0000	-.0000	-.0000	-.0001	-.0003	-.0007	-.0013	-.0022	-.0035	-.0052
55.0	-.0000	-.0000	-.0000	-.0000	-.0002	-.0004	-.0007	-.0012	-.0019	-.0029
60.0	.0000	-.0000	-.0000	-.0000	-.0001	-.0002	-.0004	-.0006	-.0010	-.0015
65.0	.0000	-.0000	-.0000	-.0000	-.0000	-.0001	-.0002	-.0003	-.0005	-.0007
70.0	.0000	-.0000	-.0000	-.0000	-.0000	-.0000	-.0001	-.0001	-.0002	-.0003
75.0	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000	-.0001	-.0001
80.0	-.0000	.0000	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000
85.0	-.0000	.0000	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000

α, deg \ θ_{xy}, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	-.6444	-.6912	-.7221	-.7312	-.7116	-.6552	-.5548	-.4069	-.2167
2.0	-.6111	-.6608	-.6952	-.7084	-.6934	-.6418	-.5462	-.4026	-.2155
4.0	-.5464	-.6012	-.6419	-.6628	-.6564	-.6144	-.5283	-.3934	-.2126
6.0	-.4845	-.5433	-.5895	-.6172	-.6190	-.5861	-.5095	-.3834	-.2093
8.0	-.4258	-.4875	-.5382	-.5720	-.5814	-.5572	-.4899	-.3725	-.2054
10.0	-.3705	-.4340	-.4883	-.5274	-.5436	-.5277	-.4694	-.3609	-.2011
12.0	-.3190	-.3831	-.4399	-.4835	-.5060	-.4978	-.4483	-.3487	-.1964
15.0	-.2491	-.3122	-.3710	-.4196	-.4501	-.4526	-.4157	-.3292	-.1886
20.0	-.1546	-.2102	-.2674	-.3199	-.3600	-.3773	-.3595	-.2942	-.1736
25.0	-.0897	-.1311	-.1805	-.2315	-.2762	-.3042	-.3025	-.2570	-.1568
30.0	-.0540	-.0774	-.1130	-.1568	-.2011	-.2354	-.2465	-.2188	-.1386
35.0	-.0336	-.0473	-.0670	-.0983	-.1370	-.1731	-.1931	-.1807	-.1195
40.0	-.0208	-.0292	-.0406	-.0576	-.0859	-.1191	-.1441	-.1438	-.1002
45.0	-.0127	-.0178	-.0245	-.0340	-.0493	-.0751	-.1008	-.1093	-.0812
50.0	-.0075	-.0105	-.0144	-.0197	-.0277	-.0424	-.0646	-.0783	-.0632
55.0	-.0042	-.0058	-.0080	-.0110	-.0152	-.0220	-.0365	-.0516	-.0466
60.0	-.0022	-.0030	-.0042	-.0057	-.0078	-.0111	-.0176	-.0301	-.0319
65.0	-.0010	-.0014	-.0020	-.0027	-.0036	-.0051	-.0076	-.0145	-.0197
70.0	-.0004	-.0006	-.0008	-.0011	-.0014	-.0020	-.0030	-.0052	-.0102
75.0	-.0001	-.0002	-.0002	-.0003	-.0004	-.0006	-.0009	-.0015	-.0038
80.0	-.0000	-.0000	-.0000	-.0001	-.0001	-.0001	-.0002	-.0003	-.0006
85.0	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000

$\beta_1 = -80^0$; $\beta_2 = 90^0$; $\beta = 2^0$

α, deg \ θ_{xy}, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	-.0226	-.0514	-.0890	-.1287	-.2099	-.2909	-.3702	-.4468	-.5193	-.5858
2.0	-.0109	-.0269	-.0572	-.0935	-.1714	-.2514	-.3307	-.4080	-.4818	-.5501
4.0	-.0039	-.0103	-.0227	-.0445	-.1084	-.1822	-.2590	-.3359	-.4108	-.4817
6.0	-.0019	-.0053	-.0119	-.0230	-.0642	-.1265	-.1973	-.2713	-.3455	-.4173
8.0	-.0011	-.0031	-.0072	-.0141	-.0388	-.0844	-.1458	-.2145	-.2861	-.3574
10.0	-.0007	-.0021	-.0048	-.0095	-.0263	-.0562	-.1049	-.1659	-.2330	-.3023
12.0	-.0005	-.0014	-.0034	-.0067	-.0188	-.0402	-.0748	-.1257	-.1864	-.2521
15.0	-.0003	-.0009	-.0021	-.0043	-.0122	-.0263	-.0483	-.0814	-.1293	-.1868
20.0	-.0002	-.0005	-.0011	-.0023	-.0066	-.0144	-.0267	-.0444	-.0693	-.1060
25.0	-.0001	-.0003	-.0007	-.0013	-.0039	-.0085	-.0158	-.0265	-.0412	-.0612
30.0	-.0001	-.0002	-.0004	-.0008	-.0024	-.0052	-.0097	-.0163	-.0255	-.0378
35.0	-.0000	-.0001	-.0003	-.0005	-.0015	-.0032	-.0061	-.0102	-.0159	-.0236
40.0	-.0000	-.0001	-.0002	-.0003	-.0009	-.0020	-.0038	-.0063	-.0099	-.0147
45.0	-.0000	-.0001	-.0001	-.0002	-.0006	-.0012	-.0023	-.0039	-.0061	-.0090
50.0	-.0000	-.0000	-.0001	-.0001	-.0003	-.0007	-.0014	-.0023	-.0036	-.0053
55.0	-.0000	-.0000	-.0000	-.0001	-.0002	-.0004	-.0008	-.0013	-.0020	-.0030
60.0	-.0000	-.0000	-.0000	-.0000	-.0001	-.0002	-.0004	-.0007	-.0011	-.0016
65.0	-.0000	-.0000	-.0000	-.0000	-.0001	-.0001	-.0002	-.0003	-.0005	-.0007
70.0	-.0000	-.0000	-.0000	-.0000	-.0000	-.0001	-.0001	-.0001	-.0002	-.0003
75.0	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000	-.0001	-.0001
80.0	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000
85.0	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000

α, deg \ θ_{xy}, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	-.6440	-.6906	-.7214	-.7305	-.7108	-.6545	-.5541	-.4064	-.2164
2.0	-.6107	-.6603	-.6945	-.7077	-.6926	-.6411	-.5456	-.4021	-.2152
4.0	-.5460	-.6007	-.6413	-.6621	-.6557	-.6137	-.5277	-.3929	-.2123
6.0	-.4842	-.5429	-.5889	-.6166	-.6184	-.5854	-.5089	-.3829	-.2090
8.0	-.4256	-.4872	-.5377	-.5714	-.5807	-.5565	-.4893	-.3721	-.2052
10.0	-.3704	-.4337	-.4878	-.5268	-.5430	-.5271	-.4689	-.3605	-.2009
12.0	-.3189	-.3829	-.4396	-.4830	-.5054	-.4972	-.4478	-.3483	-.1962
15.0	-.2492	-.3121	-.3707	-.4192	-.4496	-.4521	-.4152	-.3288	-.1883
20.0	-.1547	-.2102	-.2672	-.3197	-.3597	-.3769	-.3591	-.2939	-.1734
25.0	-.0899	-.1312	-.1804	-.2313	-.2759	-.3039	-.3022	-.2567	-.1566
30.0	-.0543	-.0776	-.1130	-.1567	-.2009	-.2352	-.2462	-.2185	-.1384
35.0	-.0338	-.0475	-.0670	-.0983	-.1369	-.1729	-.1929	-.1804	-.1194
40.0	-.0210	-.0294	-.0407	-.0576	-.0859	-.1190	-.1439	-.1436	-.1001
45.0	-.0128	-.0179	-.0246	-.0340	-.0494	-.0751	-.1007	-.1092	-.0811
50.0	-.0076	-.0105	-.0145	-.0198	-.0277	-.0424	-.0645	-.0782	-.0631
55.0	-.0043	-.0059	-.0081	-.0110	-.0152	-.0220	-.0365	-.0516	-.0465
60.0	-.0022	-.0031	-.0042	-.0057	-.0078	-.0111	-.0176	-.0301	-.0319
65.0	-.0011	-.0015	-.0020	-.0027	-.0037	-.0051	-.0076	-.0145	-.0196
70.0	-.0004	-.0006	-.0008	-.0011	-.0015	-.0020	-.0030	-.0052	-.0102
75.0	-.0001	-.0002	-.0003	-.0003	-.0005	-.0006	-.0009	-.0015	-.0038
80.0	-.0000	-.0000	-.0001	-.0001	-.0001	-.0001	-.0002	-.0003	-.0006
85.0	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000

TABLE III.- CONTINUED

(a) C_N. Continued.

$\phi_1 = 0^0$; $\phi_2 = 360^0$; $\beta = 5^0$

α, deg \ θ_{xy}, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.0528	.0461	.0459	.0456	.0450	.0440	.0427	.0411	.0392	.0368
2.0	.1108	.0929	.0917	.0912	.0899	.0880	.0854	.0822	.0783	.0735
4.0	.2563	.1957	.1839	.1820	.1793	.1755	.1704	.1640	.1561	.1466
6.0	.4515	.3191	.2848	.2737	.2679	.2622	.2546	.2450	.2332	.2191
8.0	.7003	.4671	.3998	.3729	.3554	.3476	.3375	.3248	.3092	.2904
10.0	1.0030	.6405	.5303	.4822	.4449	.4313	.4188	.4031	.3837	.3604
12.0	1.3587	.8394	.6767	.6023	.5392	.5142	.4981	.4793	.4563	.4285
15.0	1.9884	1.1837	.9253	.8027	.6909	.6419	.6133	.5892	.5609	.5268
20.0	3.2772	1.8718	1.4115	1.1868	.9706	.8678	.8063	.7614	.7212	.6772
25.0	4.8307	2.6846	1.9753	1.6244	1.2788	1.1062	1.0030	.9288	.8646	.8077
30.0	6.6019	3.5978	2.5999	2.1028	1.6071	1.3576	1.2029	1.0921	1.0026	.9224
35.0	8.5371	4.5836	3.2665	2.6076	1.9460	1.6093	1.3990	1.2484	1.1284	1.0239
40.0	10.5774	5.6122	3.9549	3.1237	2.2854	1.8559	1.5865	1.3939	1.2417	1.1113
45.0	12.6610	6.6523	4.6442	3.6355	2.6151	2.0902	1.7603	1.5246	1.3397	1.1832
50.0	14.7244	7.6724	5.3135	4.1273	2.9251	2.3052	1.9151	1.6370	1.4199	1.2381
55.0	16.7051	8.6414	5.9426	4.5842	3.2061	2.4944	2.0465	1.7277	1.4802	1.2746
60.0	18.5428	9.5299	6.5121	4.9925	3.4495	2.6521	2.1505	1.7943	1.5189	1.2920
65.0	20.1816	10.3109	7.0050	5.3396	3.6479	2.7736	2.2239	1.8346	1.5351	1.2899
70.0	21.5719	10.9608	7.4061	5.6151	3.7954	2.8551	2.2647	1.8476	1.5281	1.2685
75.0	22.6714	11.4594	7.7034	5.8106	3.8875	2.8942	2.2715	1.8329	1.4985	1.2285
80.0	23.4466	11.7924	7.8877	5.9201	3.9213	2.8897	2.2442	1.7909	1.4470	1.1712
85.0	23.8739	11.9489	7.9535	5.9403	3.8959	2.8419	2.1836	1.7230	1.3753	1.0983

α, deg \ θ_{xy}, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	.0339	.0306	.0268	.0225	.0178	.0129	.0081	.0039	.0010
2.0	.0679	.0612	.0536	.0451	.0356	.0258	.0162	.0078	.0021
4.0	.1354	.1222	.1070	.0899	.0711	.0514	.0322	.0156	.0041
6.0	.2022	.1825	.1599	.1343	.1062	.0768	.0481	.0233	.0062
8.0	.2681	.2420	.2120	.1780	.1408	.1019	.0638	.0309	.0082
10.0	.3327	.3003	.2630	.2209	.1748	.1264	.0792	.0384	.0101
12.0	.3956	.3571	.3128	.2627	.2078	.1503	.0942	.0456	.0121
15.0	.4863	.4390	.3845	.3230	.2555	.1848	.1158	.0561	.0148
20.0	.6252	.5644	.4943	.4152	.3284	.2375	.1488	.0721	.0191
25.0	.7451	.6726	.5891	.4948	.3914	.2831	.1774	.0859	.0227
30.0	.8437	.7604	.6660	.5594	.4425	.3200	.2005	.0971	.0257
35.0	.9254	.8268	.7226	.6070	.4802	.3472	.2176	.1054	.0279
40.0	.9918	.8761	.7589	.6361	.5032	.3639	.2280	.1104	.0292
45.0	1.0425	.9095	.7789	.6470	.5110	.3695	.2315	.1121	.0296
50.0	1.0769	.9275	.7842	.6434	.5036	.3639	.2280	.1104	.0292
55.0	1.0947	.9304	.7759	.6277	.4845	.3473	.2176	.1054	.0279
60.0	1.0955	.9186	.7551	.6013	.4564	.3218	.2005	.0971	.0257
65.0	1.0797	.8929	.7227	.5658	.4212	.2907	.1777	.0859	.0227
70.0	1.0479	.8541	.6802	.5227	.3807	.2559	.1517	.0721	.0191
75.0	1.0011	.8037	.6291	.4737	.3366	.2193	.1249	.0566	.0148
80.0	.9409	.7433	.5710	.4203	.2904	.1823	.0986	.0414	.0101
85.0	.8692	.6749	.5079	.3645	.2437	.1463	.0741	.0279	.0056

$\phi_1 = 0^0$; $\phi_2 = 360^0$; $\beta = 15^0$

α, deg \ θ_{xy}, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.0908	.0586	.0489	.0448	.0423	.0414	.0402	.0387	.0368	.0346
2.0	.1835	.1181	.0982	.0899	.0845	.0827	.0803	.0773	.0736	.0691
4.0	.3827	.2433	.2006	.1820	.1690	.1650	.1602	.1542	.1468	.1379
6.0	.6100	.3815	.3105	.2787	.2541	.2465	.2394	.2303	.2193	.2059
8.0	.8738	.5369	.4306	.3818	.3412	.3269	.3173	.3054	.2907	.2730
10.0	1.1790	.7117	.5625	.4927	.4314	.4073	.3933	.3789	.3607	.3388
12.0	1.5280	.9071	.7071	.6119	.5254	.4887	.4685	.4506	.4290	.4029
15.0	2.1347	1.2397	.9683	.8073	.6746	.6142	.5797	.5540	.5273	.4953
20.0	3.3401	1.8952	1.4129	1.1758	.9450	.8335	.7668	.7192	.6785	.6367
25.0	4.8281	2.6642	1.9473	1.5915	1.2393	1.0642	.9569	.8804	.8179	.7602
30.0	6.4976	3.5255	2.5371	2.0439	1.5509	1.3019	1.1473	1.0369	.9484	.8699
35.0	8.3197	4.4542	3.1655	2.5204	1.8715	1.5407	1.3339	1.1861	1.0688	.9672
40.0	10.2398	5.4224	3.8139	3.0068	2.1920	1.7741	1.5119	1.3245	1.1769	1.0509
45.0	12.1999	6.4012	4.4628	3.4887	2.5030	1.9956	1.6765	1.4487	1.2703	1.1197
50.0	14.1408	7.3608	5.0926	3.9517	2.7951	2.1985	1.8230	1.5554	1.3467	1.1723
55.0	16.0035	8.2722	5.6844	4.3818	3.0598	2.3770	1.9472	1.6415	1.4042	1.2074
60.0	17.7317	9.1079	6.2202	4.7659	3.2891	2.5258	2.0455	1.7046	1.4412	1.2244
65.0	19.2729	9.8425	6.6838	5.0926	3.4760	2.6403	2.1150	1.7430	1.4568	1.2229
70.0	20.5803	10.4536	7.0611	5.3517	3.6148	2.7172	2.1536	1.7555	1.4507	1.2031
75.0	21.6141	10.9227	7.3407	5.5356	3.7015	2.7542	2.1602	1.7419	1.4231	1.1658
80.0	22.3430	11.2357	7.5141	5.6387	3.7336	2.7501	2.1347	1.7026	1.3749	1.1121
85.0	22.7449	11.3829	7.5760	5.6578	3.7096	2.7052	2.0778	1.6389	1.3075	1.0437

α, deg \ θ_{xy}, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	.0319	.0288	.0252	.0212	.0168	.0121	.0076	.0037	.0010
2.0	.0638	.0576	.0504	.0424	.0335	.0242	.0152	.0074	.0019
4.0	.1273	.1149	.1006	.0845	.0669	.0484	.0303	.0147	.0039
6.0	.1901	.1716	.1503	.1263	.0999	.0722	.0453	.0219	.0058
8.0	.2521	.2275	.1993	.1674	.1324	.0958	.0600	.0291	.0077
10.0	.3128	.2823	.2473	.2077	.1643	.1188	.0745	.0361	.0095
12.0	.3719	.3357	.2941	.2470	.1954	.1413	.0885	.0429	.0113
15.0	.4572	.4127	.3615	.3036	.2402	.1737	.1088	.0527	.0139
20.0	.5878	.5306	.4647	.3903	.3088	.2233	.1399	.0678	.0179
25.0	.7005	.6323	.5538	.4652	.3680	.2661	.1668	.0808	.0214
30.0	.7941	.7149	.6261	.5259	.4160	.3009	.1885	.0913	.0241
35.0	.8723	.7788	.6794	.5706	.4514	.3265	.2046	.0991	.0262
40.0	.9360	.8254	.7140	.5980	.4731	.3421	.2144	.1038	.0275
45.0	.9848	.8577	.7335	.6086	.4804	.3474	.2177	.1054	.0279
50.0	1.0181	.8755	.7392	.6057	.4736	.3421	.2144	.1038	.0275
55.0	1.0355	.8789	.7320	.5914	.4560	.3265	.2046	.0991	.0262
60.0	1.0369	.8684	.7129	.5670	.4299	.3027	.1885	.0913	.0241
65.0	1.0225	.8446	.6829	.5340	.3971	.2737	.1671	.0808	.0214
70.0	.9929	.8085	.6433	.4938	.3593	.2412	.1428	.0678	.0179
75.0	.9492	.7614	.5955	.4479	.3179	.2069	.1177	.0532	.0139
80.0	.8929	.7048	.5410	.3979	.2746	.1722	.0930	.0390	.0095
85.0	.8256	.6406	.4818	.3455	.2308	.1385	.0700	.0263	.0052

TABLE III.- CONTINUED

(a) C_N. Continued.

$\beta_1 = 90^\circ$; $\beta_2 = 270^\circ$; $\beta = 0^\circ$

θ_{xy}, deg / α, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.1034	.1381	.1775	.2179	.2988	.3785	.4558	.5295	.5982	.6601
2.0	.1938	.2063	.2381	.2745	.3509	.4276	.5023	.5734	.6395	.6984
4.0	.4619	.3858	.3875	.4084	.4681	.5348	.6018	.6660	.7253	.7773
6.0	.8451	.6221	.5742	.5696	.6023	.6537	.7096	.7646	.8153	.8588
8.0	1.3417	.9140	.7970	.7572	.7529	.7837	.8252	.8686	.9090	.9427
10.0	1.9492	1.2601	1.0550	.9702	.9191	.9241	.9481	.9776	1.0059	1.0284
12.0	2.6866	1.6587	1.3468	1.2077	1.1001	1.0744	1.0776	1.0910	1.1056	1.1156
15.0	3.9324	2.3507	1.8450	1.6073	1.3975	1.3166	1.2829	1.2682	1.2592	1.2482
20.0	6.5286	3.7358	2.8223	2.3776	1.9538	1.7582	1.6489	1.5775	1.5221	1.4705
25.0	9.6589	5.3731	3.9573	3.2577	2.5710	2.2356	2.0350	1.8961	1.7864	1.6886
30.0	13.2281	7.2130	5.2154	4.2208	3.2305	2.7343	2.4295	2.2144	2.0443	1.8957
35.0	17.1279	9.1995	6.6584	5.2376	3.9122	3.2390	2.8203	2.5227	2.2878	2.0856
40.0	21.2597	11.2722	7.9454	6.2773	4.5954	3.7345	3.1957	2.8116	2.5096	2.2526
45.0	25.4386	13.3683	9.3345	7.3083	5.2592	4.2057	3.5441	3.0723	2.7030	2.3915
50.0	29.5971	15.4239	10.6833	8.2993	5.8836	4.6383	3.8551	3.2970	2.8619	2.4982
55.0	33.5886	17.3767	11.9508	9.2201	6.4496	5.0192	4.1191	3.4788	2.9817	2.5693
60.0	37.2921	19.1673	13.0987	10.0428	6.9400	5.3367	4.3281	3.6121	3.0587	2.6029
65.0	40.5950	20.7413	14.0918	10.7423	7.3398	5.5813	4.4759	3.6929	3.0906	2.5977
70.0	43.3968	22.0509	14.9002	11.2974	7.6369	5.7454	4.5578	3.7188	3.0763	2.5540
75.0	45.6125	23.0562	15.4993	11.6913	7.8224	5.8242	4.5714	3.6890	3.0163	2.4731
80.0	47.1747	23.7268	15.8707	11.9120	7.8905	5.8151	4.5164	3.6044	2.9124	2.3575
85.0	48.0860	24.0423	16.0033	11.9528	7.8392	5.7186	4.3943	3.4675	2.7679	2.2106

θ_{xy}, deg / α, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	.7128	.7530	.7762	.7767	.7476	.6812	.5710	.4148	.2188
2.0	.7478	.7843	.8033	.7992	.7652	.6938	.5788	.4184	.2196
4.0	.8192	.8474	.8576	.8439	.7998	.7180	.5933	.4249	.2209
6.0	.8921	.9112	.9117	.8879	.8331	.7410	.6065	.4303	.2217
8.0	.9661	.9752	.9654	.9308	.8652	.7624	.6185	.4348	.2219
10.0	1.0410	1.0392	1.0183	.9726	.8958	.7824	.6290	.4382	.2216
12.0	1.1163	1.1028	1.0703	1.0129	.9248	.8007	.6381	.4406	.2207
15.0	1.2292	1.1969	1.1459	1.0704	.9650	.8249	.6490	.4422	.2184
20.0	1.4146	1.3476	1.2635	1.1567	1.0220	.8560	.6594	.4395	.2120
25.0	1.5913	1.4866	1.3676	1.2286	1.0650	.8747	.6600	.4302	.2026
30.0	1.7542	1.6098	1.4651	1.2841	1.0929	.8804	.6506	.4145	.1903
35.0	1.8981	1.7134	1.5232	1.3215	1.1047	.8729	.6316	.3930	.1757
40.0	2.0187	1.7943	1.5700	1.3395	1.1000	.8525	.6036	.3664	.1591
45.0	2.1125	1.8500	1.5939	1.3378	1.0791	.8198	.5674	.3353	.1410
50.0	2.1764	1.8789	1.5943	1.3162	1.0426	.7758	.5241	.3009	.1220
55.0	2.2086	1.8799	1.5711	1.2756	.9915	.7218	.4750	.2640	.1027
60.0	2.2082	1.8532	1.5251	1.2170	.9274	.6595	.4217	.2259	.0836
65.0	2.1750	1.7995	1.4576	1.1424	.8523	.5907	.3657	.1876	.0654
70.0	2.1102	1.7204	1.3707	1.0539	.7684	.5176	.3087	.1505	.0486
75.0	2.0156	1.6184	1.2670	.9542	.6784	.4424	.2525	.1155	.0337
80.0	1.8942	1.4966	1.1498	.8465	.5848	.3673	.1988	.0837	.0211
85.0	1.7497	1.3586	1.0225	.7339	.4907	.2946	.1491	.0562	.0112

$\beta_1 = 90^\circ$; $\beta_2 = 270^\circ$; $\beta = 2^\circ$

θ_{xy}, deg / α, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.1156	.1440	.1813	.2206	.3004	.3794	.4563	.5296	.5981	.6598
2.0	.2059	.2121	.2418	.2771	.3524	.4284	.5027	.5735	.6393	.6980
4.0	.4736	.3914	.3911	.4109	.4694	.5355	.6021	.6660	.7250	.7768
6.0	.8564	.6274	.5775	.5719	.6035	.6542	.7098	.7645	.8149	.8583
8.0	1.3524	.9190	.8001	.7592	.7539	.7841	.8252	.8684	.9085	.9420
10.0	1.9591	1.2647	1.0577	.9720	.9199	.9244	.9480	.9772	1.0053	1.0276
12.0	2.6737	1.6628	1.3492	1.2093	1.1007	1.0745	1.0773	1.0905	1.1049	1.1147
15.0	3.9399	2.3540	1.8468	1.6084	1.3977	1.3164	1.2824	1.2674	1.2583	1.2472
20.0	6.5329	3.7374	2.8229	2.3777	1.9533	1.7575	1.6479	1.5763	1.5208	1.4692
25.0	9.6594	5.3727	3.9565	3.2567	2.5698	2.2343	2.0336	1.8946	1.7849	1.6870
30.0	13.2243	7.2103	5.2131	4.2186	3.2285	2.7323	2.4276	2.2125	2.0424	1.8938
35.0	17.1193	9.1944	6.6544	5.2342	3.9094	3.2364	2.8179	2.5204	2.2856	2.0835
40.0	21.2262	11.2646	7.9398	6.2727	4.5917	3.7313	3.1928	2.8089	2.5072	2.2503
45.0	25.4200	13.3581	9.3272	7.3024	5.2547	4.2020	3.5408	3.0694	2.7003	2.3890
50.0	29.5733	15.4112	10.6743	8.2922	5.8784	4.6341	3.8514	3.2938	2.8591	2.4956
55.0	33.5601	17.3617	11.9403	9.2119	6.4437	5.0145	4.1151	3.4753	2.9787	2.5667
60.0	37.2590	19.1501	13.0868	10.0335	6.9934	5.3316	4.3239	3.6085	3.0556	2.6001
65.0	40.5578	20.7222	14.0787	10.7322	7.3328	5.5758	4.4714	3.6892	3.0874	2.5950
70.0	43.3562	22.0301	14.8861	11.2867	7.6296	5.7398	4.5533	3.7151	3.0731	2.5513
75.0	45.5692	23.0343	15.4844	11.6801	7.8148	5.8185	4.5669	3.6853	3.0132	2.4705
80.0	47.1296	23.7041	15.8554	11.9005	7.8828	5.8094	4.5119	3.6008	2.9095	2.3551
85.0	47.9898	24.0192	15.9879	11.9412	7.8316	5.7130	4.3899	3.4641	2.7651	2.2084

θ_{xy}, deg / α, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	.7123	.7523	.7754	.7759	.7467	.6804	.5704	.4143	.2185
2.0	.7473	.7836	.8025	.7984	.7644	.6930	.5781	.4179	.2194
4.0	.8185	.8467	.8567	.8430	.7989	.7172	.5926	.4244	.2206
6.0	.8913	.9104	.9108	.8869	.8322	.7401	.6058	.4298	.2214
8.0	.9653	.9743	.9644	.9298	.8642	.7616	.6177	.4343	.2216
10.0	1.0400	1.0382	1.0172	.9715	.8948	.7815	.6283	.4377	.2213
12.0	1.1152	1.1017	1.0692	1.0118	.9238	.7998	.6374	.4401	.2205
15.0	1.2281	1.1957	1.1447	1.0693	.9639	.8240	.6483	.4417	.2182
20.0	1.4132	1.3462	1.2622	1.1554	1.0208	.8550	.6587	.4389	.2118
25.0	1.5897	1.4851	1.3662	1.2272	1.0638	.8737	.6592	.4296	.2023
30.0	1.7524	1.6081	1.4535	1.2827	1.0916	.8794	.6499	.4140	.1901
35.0	1.8961	1.7116	1.5216	1.3200	1.1034	.8719	.6309	.3926	.1755
40.0	2.0166	1.7924	1.5682	1.3380	1.0988	.8515	.6029	.3659	.1589
45.0	2.1102	1.8480	1.5921	1.3363	1.0779	.8189	.5667	.3349	.1408
50.0	2.1741	1.8768	1.5925	1.3147	1.0414	.7749	.5235	.3005	.1219
55.0	2.2063	1.8779	1.5694	1.2741	.9903	.7210	.4745	.2637	.1026
60.0	2.2058	1.8512	1.5234	1.2157	.9263	.6587	.4212	.2256	.0835
65.0	2.1727	1.7975	1.4560	1.1411	.8513	.5901	.3652	.1874	.0653
70.0	2.1079	1.7186	1.3692	1.0527	.7676	.5170	.3083	.1503	.0485
75.0	2.0135	1.6167	1.2657	.9532	.6776	.4419	.2522	.1153	.0336
80.0	1.8922	1.4950	1.1486	.8456	.5842	.3669	.1985	.0836	.0211
85.0	1.7479	1.3572	1.0214	.7331	.4901	.2943	.1490	.0561	.0112

TABLE III.- CONTINUED

(a) C_N. Continued.

$\beta_1 = -90^\circ$; $\beta_2 = 90^\circ$; $\beta = 5^\circ$

α, deg \ θ_{xy}, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	-.0713	-.0831	-.1096	-.1436	-.2186	-.2962	-.3732	-.4481	-.5191	-.5844
2.0	-.0463	-.0572	-.0781	-.1086	-.1805	-.2570	-.3340	-.4095	-.4818	-.5490
4.0	-.0221	-.0297	-.0420	-.0599	-.1179	-.1883	-.2627	-.3378	-.4113	-.4810
6.0	-.0123	-.0174	-.0254	-.0365	-.0739	-.1329	-.2014	-.2736	-.3464	-.4171
8.0	-.0077	-.0111	-.0167	-.0243	-.0484	-.0911	-.1503	-.2173	-.2874	-.3576
10.0	-.0052	-.0076	-.0116	-.0171	-.0344	-.0631	-.1096	-.1689	-.2347	-.3028
12.0	-.0037	-.0055	-.0084	-.0126	-.0254	-.0465	-.0797	-.1289	-.1884	-.2529
15.0	-.0024	-.0036	-.0056	-.0084	-.0171	-.0314	-.0529	-.0850	-.1316	-.1830
20.0	-.0014	-.0020	-.0031	-.0047	-.0097	-.0179	-.0301	-.0476	-.0719	-.1077
25.0	-.0009	-.0013	-.0019	-.0029	-.0059	-.0109	-.0184	-.0290	-.0435	-.0631
30.0	-.0006	-.0008	-.0013	-.0019	-.0038	-.0069	-.0116	-.0182	-.0273	-.0394
35.0	-.0004	-.0006	-.0009	-.0012	-.0025	-.0044	-.0074	-.0116	-.0173	-.0249
40.0	-.0003	-.0004	-.0006	-.0008	-.0016	-.0029	-.0047	-.0074	-.0110	-.0157
45.0	-.0002	-.0003	-.0004	-.0006	-.0011	-.0019	-.0030	-.0046	-.0068	-.0098
50.0	-.0002	-.0002	-.0003	-.0004	-.0007	-.0012	-.0019	-.0029	-.0042	-.0059
55.0	-.0001	-.0002	-.0002	-.0003	-.0005	-.0007	-.0011	-.0017	-.0024	-.0034
60.0	-.0001	-.0001	-.0001	-.0002	-.0003	-.0004	-.0007	-.0010	-.0014	-.0019
65.0	-.0001	-.0001	-.0001	-.0001	-.0002	-.0003	-.0004	-.0005	-.0007	-.0010
70.0	-.0001	-.0001	-.0001	-.0001	-.0001	-.0001	-.0002	-.0003	-.0003	-.0004
75.0	-.0001	-.0000	-.0000	-.0000	-.0001	-.0001	-.0001	-.0001	-.0001	-.0002
80.0	-.0001	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000	-.0001
85.0	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000

α, deg \ θ_{xy}, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	-.6417	-.6875	-.7177	-.7264	-.7067	-.6505	-.5506	-.4039	-.2150
2.0	-.6086	-.6574	-.6910	-.7038	-.6886	-.6372	-.5422	-.3996	-.2138
4.0	-.5444	-.5982	-.6381	-.6585	-.6519	-.6100	-.5244	-.3905	-.2110
6.0	-.4830	-.5408	-.5861	-.6133	-.6148	-.5819	-.5058	-.3805	-.2077
8.0	-.4247	-.4854	-.5352	-.5684	-.5774	-.5532	-.4862	-.3697	-.2039
10.0	-.3698	-.4323	-.4857	-.5241	-.5400	-.5239	-.4660	-.3582	-.1996
12.0	-.3187	-.3818	-.4377	-.4805	-.5026	-.4943	-.4450	-.3461	-.1949
15.0	-.2494	-.3114	-.3693	-.4171	-.4471	-.4494	-.4127	-.3267	-.1871
20.0	-.1555	-.2102	-.2664	-.3182	-.3577	-.3747	-.3569	-.2920	-.1723
25.0	-.0912	-.1317	-.1802	-.2304	-.2745	-.3021	-.3003	-.2551	-.1556
30.0	-.0556	-.0784	-.1132	-.1563	-.2000	-.2339	-.2447	-.2172	-.1375
35.0	-.0349	-.0484	-.0675	-.0982	-.1364	-.1720	-.1918	-.1793	-.1186
40.0	-.0219	-.0301	-.0413	-.0579	-.0857	-.1185	-.1431	-.1427	-.0995
45.0	-.0136	-.0185	-.0251	-.0344	-.0494	-.0748	-.1001	-.1085	-.0806
50.0	-.0081	-.0111	-.0149	-.0201	-.0279	-.0423	-.0642	-.0777	-.0627
55.0	-.0047	-.0063	-.0084	-.0113	-.0154	-.0220	-.0364	-.0513	-.0462
60.0	-.0025	-.0034	-.0045	-.0059	-.0080	-.0112	-.0175	-.0299	-.0317
65.0	-.0013	-.0017	-.0022	-.0028	-.0038	-.0052	-.0077	-.0144	-.0195
70.0	-.0006	-.0007	-.0009	-.0012	-.0015	-.0021	-.0030	-.0052	-.0101
75.0	-.0002	-.0003	-.0003	-.0004	-.0005	-.0007	-.0009	-.0015	-.0038
80.0	-.0001	-.0001	-.0001	-.0001	-.0001	-.0001	-.0002	-.0003	-.0006
85.0	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000

$\beta_1 = -90^\circ$; $\beta_2 = 90^\circ$; $\beta = 15^\circ$

α, deg \ θ_{xy}, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	-.4234	-.3033	-.2772	-.2755	-.3003	-.3459	-.4012	-.4596	-.5174	-.5719
2.0	-.3550	-.2578	-.2383	-.2391	-.2643	-.3090	-.3643	-.4234	-.4824	-.5386
4.0	-.2526	-.1880	-.1772	-.1808	-.2048	-.2444	-.2973	-.3560	-.4161	-.4746
6.0	-.1837	-.1394	-.1336	-.1382	-.1598	-.1923	-.2396	-.2956	-.3551	-.4146
8.0	-.1370	-.1056	-.1025	-.1072	-.1261	-.1528	-.1916	-.2426	-.2996	-.3586
10.0	-.1047	-.0816	-.0801	-.0845	-.1008	-.1232	-.1534	-.1972	-.2500	-.3071
12.0	-.0819	-.0644	-.0637	-.0676	-.0816	-.1005	-.1248	-.1596	-.2065	-.2602
15.0	-.0589	-.0467	-.0465	-.0497	-.0607	-.0755	-.0939	-.1181	-.1531	-.1992
20.0	-.0369	-.0294	-.0294	-.0316	-.0390	-.0489	-.0611	-.0763	-.0961	-.1237
25.0	-.0251	-.0198	-.0198	-.0212	-.0262	-.0329	-.0412	-.0513	-.0639	-.0802
30.0	-.0181	-.0141	-.0140	-.0149	-.0183	-.0228	-.0284	-.0352	-.0435	-.0539
35.0	-.0137	-.0105	-.0102	-.0108	-.0130	-.0162	-.0199	-.0245	-.0300	-.0367
40.0	-.0107	-.0080	-.0077	-.0080	-.0095	-.0116	-.0141	-.0171	-.0207	-.0250
45.0	-.0086	-.0063	-.0059	-.0061	-.0070	-.0083	-.0100	-.0120	-.0143	-.0170
50.0	-.0071	-.0051	-.0046	-.0046	-.0052	-.0060	-.0071	-.0083	-.0097	-.0114
55.0	-.0060	-.0041	-.0037	-.0036	-.0039	-.0043	-.0050	-.0057	-.0066	-.0075
60.0	-.0052	-.0034	-.0030	-.0028	-.0029	-.0031	-.0035	-.0039	-.0043	-.0048
65.0	-.0045	-.0029	-.0024	-.0022	-.0021	-.0022	-.0024	-.0026	-.0028	-.0030
70.0	-.0040	-.0024	-.0020	-.0017	-.0016	-.0016	-.0016	-.0016	-.0017	-.0018
75.0	-.0036	-.0021	-.0016	-.0014	-.0012	-.0011	-.0010	-.0010	-.0010	-.0010
80.0	-.0033	-.0018	-.0013	-.0011	-.0008	-.0007	-.0006	-.0006	-.0005	-.0005
85.0	-.0030	-.0016	-.0011	-.0009	-.0006	-.0005	-.0004	-.0003	-.0003	-.0002

α, deg \ θ_{xy}, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	-.6201	-.6587	-.6834	-.6887	-.6679	-.6135	-.5185	-.3800	-.2022
2.0	-.5890	-.6304	-.6583	-.6674	-.6509	-.6010	-.5106	-.3760	-.2011
4.0	-.5286	-.5747	-.6086	-.6248	-.6164	-.5754	-.4939	-.3674	-.1984
6.0	-.4709	-.5207	-.5597	-.5823	-.5815	-.5490	-.4763	-.3580	-.1953
8.0	-.4161	-.4687	-.5119	-.5401	-.5464	-.5220	-.4580	-.3479	-.1917
10.0	-.3646	-.4188	-.4653	-.4985	-.5112	-.4945	-.4389	-.3371	-.1877
12.0	-.3165	-.3713	-.4202	-.4575	-.4760	-.4666	-.4193	-.3256	-.1833
15.0	-.2513	-.3051	-.3559	-.3979	-.4239	-.4244	-.3888	-.3074	-.1760
20.0	-.1631	-.2099	-.2592	-.3050	-.3399	-.3542	-.3364	-.2748	-.1620
25.0	-.1026	-.1362	-.1781	-.2224	-.2616	-.2860	-.2832	-.2401	-.1463
30.0	-.0674	-.0860	-.1151	-.1528	-.1916	-.2218	-.2309	-.2044	-.1293
35.0	-.0452	-.0564	-.0722	-.0981	-.1318	-.1637	-.1812	-.1689	-.1116
40.0	-.0304	-.0372	-.0465	-.0602	-.0841	-.1133	-.1354	-.1345	-.0935
45.0	-.0203	-.0244	-.0299	-.0375	-.0500	-.0722	-.0950	-.1023	-.0758
50.0	-.0133	-.0158	-.0189	-.0231	-.0295	-.0417	-.0612	-.0733	-.0590
55.0	-.0086	-.0099	-.0116	-.0138	-.0171	-.0226	-.0350	-.0485	-.0435
60.0	-.0054	-.0060	-.0069	-.0079	-.0095	-.0120	-.0173	-.0284	-.0298
65.0	-.0032	-.0035	-.0039	-.0043	-.0049	-.0060	-.0080	-.0138	-.0184
70.0	-.0019	-.0019	-.0020	-.0022	-.0024	-.0027	-.0033	-.0051	-.0095
75.0	-.0010	-.0010	-.0010	-.0010	-.0010	-.0010	-.0012	-.0016	-.0036
80.0	-.0005	-.0004	-.0004	-.0004	-.0003	-.0003	-.0003	-.0004	-.0006
85.0	-.0002	-.0002	-.0001	-.0001	-.0001	-.0001	-.0001	-.0000	-.0000

TABLE III.- CONTINUED

(a) C_N. Continued.

$\beta_1 = 90^0$; $\beta_2 = 270^0$; $\beta = 5^0$

θ_{xy}, deg / α, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.1770	.1752	.2014	.2349	.3086	.3842	.4587	.5303	.5974	.6580
2.0	.2660	.2429	.2615	.2911	.3602	.4329	.5048	.5739	.6383	.6960
4.0	.5348	.4210	.4098	.4240	.4766	.5393	.6036	.6659	.7236	.7742
6.0	.9153	.6555	.5950	.5840	.6098	.6573	.7106	.7637	.8129	.8552
8.0	1.4082	.9452	.8162	.7701	.7592	.7863	.8253	.8669	.9058	.9384
10.0	2.0171	1.2887	1.0722	.9816	.9241	.9257	.9473	.9751	1.0020	1.0235
12.0	2.7211	1.6843	1.3618	1.2173	1.1038	1.0748	1.0758	1.0876	1.1009	1.1100
15.0	3.9793	2.3711	1.8562	1.6138	1.3989	1.3152	1.2795	1.2634	1.2534	1.2416
20.0	6.5558	3.7456	2.8261	2.3782	1.9510	1.7534	1.6428	1.5704	1.5142	1.4622
25.0	9.6623	5.3705	3.9525	3.2514	2.5635	2.2272	2.0259	1.8866	1.7766	1.6786
30.0	13.2044	7.1964	5.2010	4.2074	3.2180	2.7221	2.4174	2.2024	2.0325	1.8841
35.0	17.0746	9.1678	6.5338	5.2165	3.8945	3.2230	2.8053	2.5084	2.2742	2.0726
40.0	21.1552	11.2248	7.9103	6.2483	4.5725	3.7147	3.1778	2.7951	2.4943	2.2383
45.0	25.3222	13.3049	9.2888	7.2715	5.2313	4.1823	3.5236	3.0539	2.6862	2.3762
50.0	29.4490	15.3449	10.6274	8.2549	5.8509	4.6117	3.8322	3.2768	2.8439	2.4820
55.0	33.4103	17.2829	11.8853	9.1687	6.4126	4.9896	4.0942	3.4572	2.9628	2.5527
60.0	37.0856	19.0599	13.0244	9.9852	6.8993	5.3047	4.3016	3.5895	3.0392	2.5859
65.0	40.3634	20.6219	14.0100	10.6794	7.2961	5.5474	4.4482	3.6697	3.0708	2.5808
70.0	43.1439	21.9216	14.8123	11.2303	7.5910	5.7103	4.5296	3.6955	3.0566	2.5374
75.0	45.3428	22.9193	15.4068	11.6212	7.7750	5.7885	4.5431	3.6659	2.9971	2.4572
80.0	46.8932	23.5848	15.7754	11.8402	7.8426	5.7795	4.4884	3.5819	2.8940	2.3424
85.0	47.7479	23.8979	15.9070	11.8806	7.7917	5.6837	4.3673	3.4460	2.7506	2.1967

θ_{xy}, deg / α, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	.7096	.7488	.7714	.7715	.7423	.6763	.5668	.4117	.2171
2.0	.7443	.7799	.7983	.7939	.7599	.6888	.5745	.4153	.2180
4.0	.8151	.8626	.8522	.8383	.7941	.7128	.5889	.4217	.2192
6.0	.8874	.9059	.9059	.8818	.8273	.7356	.6020	.4271	.2200
8.0	.9609	.9694	.9591	.9245	.8591	.7569	.6139	.4315	.2202
10.0	1.0352	1.0329	1.0117	.9659	.8895	.7767	.6244	.4350	.2199
12.0	1.1099	1.0960	1.0633	1.0060	.9182	.7949	.6334	.4373	.2191
15.0	1.2220	1.1894	1.1383	1.0630	.9581	.8189	.6442	.4389	.2168
20.0	1.4060	1.3389	1.2550	1.1486	1.0146	.8498	.6545	.4362	.2104
25.0	1.5814	1.4769	1.3584	1.2200	1.0574	.8683	.6551	.4269	.2010
30.0	1.7430	1.5992	1.4452	1.2751	1.0850	.8739	.6458	.4114	.1889
35.0	1.8858	1.7020	1.5128	1.3122	1.0967	.8665	.6270	.3901	.1743
40.0	2.0056	1.7823	1.5592	1.3301	1.0921	.8463	.5991	.3636	.1579
45.0	2.0986	1.8375	1.5829	1.3283	1.0714	.8138	.5632	.3328	.1399
50.0	2.1620	1.8661	1.5833	1.3070	1.0351	.7702	.5202	.2986	.1211
55.0	2.1940	1.8672	1.5603	1.2666	.9844	.7166	.4715	.2620	.1019
60.0	2.1935	1.8407	1.5146	1.2085	.9208	.6547	.4186	.2242	.0830
65.0	2.1606	1.7874	1.4476	1.1344	.8463	.5865	.3630	.1862	.0649
70.0	2.0963	1.7089	1.3614	1.0466	.7630	.5139	.3065	.1493	.0482
75.0	2.0024	1.6077	1.2585	.9477	.6737	.4392	.2507	.1146	.0334
80.0	1.8820	1.4868	1.1422	.8408	.5808	.3647	.1974	.0831	.0209
85.0	1.7385	1.3498	1.0158	.7290	.4874	.2926	.1481	.0558	.0112

$\beta_1 = 90^0$; $\beta_2 = 270^0$; $\beta = 15^0$

θ_{xy}, deg / α, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.6049	.4204	.3749	.3651	.3848	.4286	.4816	.5369	.5911	.6410
2.0	.7221	.4940	.4348	.4188	.4334	.4744	.5249	.5779	.6296	.6768
4.0	1.0180	.6745	.5784	.5448	.5427	.5744	.6178	.6644	.7097	.7504
6.0	1.4036	.9025	.7546	.6956	.6679	.6853	.7184	.7563	.7936	.8264
8.0	1.8846	1.1793	.9637	.8709	.8084	.8066	.8263	.8534	.8811	.9047
10.0	2.4628	1.5050	1.2051	1.0698	.9635	.9377	.9409	.9551	.9715	.9847
12.0	3.1380	1.8787	1.4778	1.2915	1.1324	1.0779	1.0617	1.0609	1.0645	1.0660
15.0	4.3282	2.5261	1.9430	1.6644	1.4099	1.3039	1.2533	1.2261	1.2078	1.1897
20.0	6.7572	3.8198	2.8552	2.3831	1.9289	1.7159	1.5948	1.5147	1.4530	1.3972
25.0	9.6812	5.3682	3.9143	3.2042	2.5048	2.1613	1.9550	1.8120	1.6997	1.6006
30.0	13.0134	7.0652	5.0882	4.1028	3.1201	2.6266	2.3231	2.1090	1.9403	1.7938
35.0	16.6531	8.9189	6.3413	5.0515	3.7561	3.0975	2.6877	2.3966	2.1675	1.9710
40.0	20.4903	10.8529	7.6355	6.0216	4.3935	3.5598	3.0379	2.6662	2.3745	2.1268
45.0	24.4084	12.8086	8.9315	6.9835	5.0129	3.9995	3.3630	2.9095	2.5548	2.2564
50.0	28.2887	14.7266	10.1899	7.9081	5.5955	4.4031	3.6531	3.1191	2.7032	2.3560
55.0	32.0131	16.5486	11.3725	8.7672	6.1235	4.7584	3.8995	3.2887	2.8149	2.4224
60.0	35.4687	18.2193	12.4434	9.5347	6.5810	5.0547	4.0945	3.4130	2.8868	2.4536
65.0	38.5503	19.6878	13.3700	10.1873	6.9540	5.2828	4.2323	3.4885	2.9165	2.4488
70.0	41.1645	20.9096	14.1242	10.7052	7.2313	5.4360	4.3088	3.5127	2.9031	2.4080
75.0	43.2318	21.8476	14.6830	11.0727	7.4043	5.5094	4.3215	3.4948	2.8472	2.3326
80.0	44.6893	22.4732	15.0295	11.2785	7.4677	5.5009	4.2701	3.4059	2.7503	2.2247
85.0	45.4928	22.7674	15.1531	11.3164	7.4198	5.4108	4.1561	3.2781	2.6153	2.0876

θ_{xy}, deg / α, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	.6840	.7163	.7339	.7311	.7015	.6377	.5337	.3873	.2042
2.0	.7166	.7455	.7592	.7522	.7179	.6495	.5409	.3907	.2049
4.0	.7832	.8045	.8099	.7939	.7501	.6721	.5545	.3967	.2062
6.0	.8512	.8640	.8603	.8348	.7813	.6935	.5669	.4018	.2069
8.0	.9203	.9237	.9104	.8749	.8112	.7135	.5780	.4060	.2071
10.0	.9901	.9834	.9598	.9139	.8398	.7321	.5878	.4092	.2068
12.0	1.0604	1.0428	1.0083	.9515	.8668	.7492	.5963	.4114	.2060
15.0	1.1658	1.1306	1.0788	1.0052	.9043	.7718	.6065	.4129	.2038
20.0	1.3387	1.2711	1.1886	1.0856	.9574	.8008	.6162	.4103	.1979
25.0	1.5036	1.4008	1.2857	1.1528	.9976	.8182	.6167	.4016	.1890
30.0	1.6555	1.5158	1.3673	1.2046	1.0236	.8236	.6080	.3870	.1776
35.0	1.7898	1.6125	1.4309	1.2394	1.0346	.8166	.5903	.3670	.1639
40.0	1.9024	1.6879	1.4745	1.2563	1.0303	.7976	.5641	.3421	.1484
45.0	1.9898	1.7399	1.4968	1.2546	1.0108	.7671	.5304	.3132	.1316
50.0	2.0495	1.7668	1.4972	1.2345	.9767	.7260	.4900	.2810	.1139
55.0	2.0796	1.7678	1.4756	1.1966	.9290	.6756	.4442	.2466	.0959
60.0	2.0791	1.7428	1.4326	1.1420	.8692	.6175	.3944	.2110	.0781
65.0	2.0482	1.6927	1.3697	1.0723	.7991	.5533	.3421	.1754	.0611
70.0	1.9877	1.6190	1.2886	.9897	.7209	.4851	.2890	.1407	.0454
75.0	1.8995	1.5238	1.1919	.8968	.6369	.4149	.2365	.1080	.0314
80.0	1.7862	1.4101	1.0825	.7962	.5496	.3448	.1864	.0784	.0197
85.0	1.6513	1.2814	.9637	.6912	.4618	.2770	.1401	.0527	.0105

TABLE III.- CONTINUED

(a) C_N. Continued.

$\phi_1 = 105^o$; $\phi_2 = 255^o$; $\beta = 0^o$

θ_{xy}, deg / α, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.1279	.1644	.2077	.2525	.3433	.4341	.5239	.6116	.6958	.7745
2.0	.2496	.2553	.2880	.3273	.4120	.4989	.5854	.6699	.7507	.8257
4.0	.6142	.4970	.4881	.5060	.5678	.6413	.7177	.7933	.8655	.9315
6.0	1.1390	.8177	.7399	.7227	.7477	.8002	.8619	.9253	.9864	1.0415
8.0	1.8215	1.2159	1.0423	.9763	.9502	.9750	1.0174	1.0654	1.1129	1.1551
10.0	2.6582	1.6896	1.3938	1.2656	1.1750	1.1647	1.1833	1.2128	1.2443	1.2718
12.0	3.6452	2.2365	1.7927	1.5893	1.4208	1.3684	1.3589	1.3668	1.3801	1.3910
15.0	5.3966	3.1883	2.4755	2.1355	1.8260	1.6981	1.6385	1.6086	1.5904	1.5733
20.0	8.9886	5.0982	3.8196	3.1929	2.5879	2.3027	2.1402	2.0336	1.9529	1.8814
25.0	13.3252	7.3611	5.3855	4.4056	3.4376	2.9602	2.6730	2.4748	2.3208	2.1867
30.0	18.2745	9.9084	7.1255	5.7367	4.3492	3.6506	3.2209	2.9190	2.6828	2.4800
35.0	23.6862	12.6627	8.9867	7.1459	5.2950	4.3529	3.7671	3.3525	3.0281	2.7522
40.0	29.3959	15.5401	10.9126	8.5904	6.2463	5.0457	4.2951	3.7622	3.3462	2.9952
45.0	35.2300	18.4534	12.8447	10.0262	7.1742	5.7081	4.7888	4.1357	3.6273	3.2016
50.0	41.0114	21.3140	14.7243	11.4096	8.0506	6.3199	5.2332	4.4616	3.8629	3.3651
55.0	46.5642	24.0350	16.4942	12.6988	8.8487	6.8624	5.6149	4.7300	4.0459	3.4807
60.0	51.7199	26.5337	18.1007	13.8544	9.5443	7.3193	5.9221	4.9328	4.1706	3.5449
65.0	56.3218	28.7342	19.4950	14.8415	10.1163	7.6767	6.1457	5.0637	4.2334	3.5558
70.0	60.2300	30.5696	20.6347	15.6299	10.5473	7.9236	6.2787	5.1189	4.2323	3.5130
75.0	63.3258	31.9842	21.4851	16.1958	10.8242	8.0526	6.3172	5.0966	4.1673	3.4179
80.0	65.5151	32.9349	22.0205	16.5219	10.9386	8.0597	6.2600	4.9975	4.0405	3.2732
85.0	66.7514	33.3929	22.2246	16.5984	10.8871	7.9448	6.1087	4.8247	3.8556	3.0835

θ_{xy}, deg / α, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	.8448	.9022	.9410	.9529	.9280	.8549	.7233	.5293	.2804
2.0	.8917	.9444	.9778	.9837	.9522	.8722	.7340	.5343	.2816
4.0	.9879	1.0300	1.0517	1.0449	.9998	.9058	.7543	.5434	.2835
6.0	1.0866	1.1168	1.1258	1.1054	1.0460	.9378	.7730	.5512	.2847
8.0	1.1874	1.2044	1.1996	1.1648	1.0908	.9680	.7900	.5578	.2852
10.0	1.2897	1.2924	1.2729	1.2230	1.1338	.9964	.8053	.5630	.2850
12.0	1.3932	1.3803	1.3452	1.2796	1.1749	1.0227	.8187	.5669	.2841
15.0	1.5493	1.5111	1.4511	1.3610	1.2324	1.0581	.8353	.5702	.2815
20.0	1.8078	1.7229	1.6180	1.4849	1.3158	1.1053	.8531	.5687	.2737
25.0	2.0573	1.9212	1.7686	1.5911	1.3816	1.1365	.8580	.5586	.2620
30.0	2.2903	2.1000	1.8982	1.6762	1.4277	1.1507	.8500	.5402	.2467
35.0	2.4997	2.2540	2.0029	1.7377	1.4528	1.1477	.8292	.5141	.2282
40.0	2.6791	2.3784	2.0796	1.7737	1.4560	1.1273	.7964	.4811	.2071
45.0	2.8231	2.4694	2.1259	1.7832	1.4373	1.0903	.7524	.4422	.1841
50.0	2.9273	2.5243	2.1403	1.7658	1.3972	1.0378	.6986	.3985	.1597
55.0	2.9885	2.5415	2.1226	1.7221	1.3370	.9714	.6368	.3513	.1349
60.0	3.0049	2.5203	2.0731	1.6534	1.2585	.8930	.5687	.3022	.1103
65.0	2.9759	2.4615	1.9934	1.5617	1.1641	.8052	.4963	.2526	.0867
70.0	2.9025	2.3668	1.8860	1.4500	1.0566	.7105	.4220	.2041	.0648
75.0	2.7869	2.2391	1.7540	1.3215	.9393	.6117	.3480	.1580	.0453
80.0	2.6326	2.0823	1.6015	1.1801	.8158	.5121	.2765	.1158	.0287
85.0	2.4443	1.9011	1.4332	1.0303	.6898	.4144	.2097	.0787	.0156

$\phi_1 = 105^o$; $\phi_2 = 255^o$; $\beta = 2^o$

θ_{xy}, deg / α, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.1373	.1690	.2106	.2545	.3444	.4327	.5241	.6115	.6955	.7740
2.0	.2589	.2597	.2908	.3292	.4130	.4994	.5855	.6697	.7503	.8251
4.0	.6231	.5011	.4906	.5077	.5686	.6416	.7176	.7929	.8649	.9307
6.0	1.1472	.8214	.7422	.7241	.7481	.8003	.8617	.9248	.9857	1.0406
8.0	1.8288	1.2192	1.0442	.9774	.9506	.9749	1.0169	1.0648	1.1120	1.1541
10.0	2.6646	1.6923	1.3953	1.2664	1.1751	1.1643	1.1827	1.2120	1.2433	1.2706
12.0	3.6503	2.2386	1.7936	1.5897	1.4206	1.3678	1.3580	1.3658	1.3789	1.3897
15.0	5.3996	3.1892	2.4756	2.1353	1.8253	1.6971	1.6373	1.6073	1.5890	1.5718
20.0	8.9872	5.0968	3.8181	3.1913	2.5863	2.3010	2.1384	2.0317	1.9510	1.8795
25.0	13.3185	7.3570	5.3821	4.4025	3.4349	2.9577	2.6706	2.4724	2.3184	2.1844
30.0	18.2618	9.9011	7.1199	5.7321	4.3454	3.6472	3.2178	2.9160	2.6801	2.4773
35.0	23.6669	12.6520	8.9789	7.1396	5.2901	4.3486	3.7634	3.3490	3.0250	2.7492
40.0	29.3697	15.5260	10.9025	8.5823	6.2402	5.0407	4.2907	3.7583	3.3426	2.9920
45.0	35.1967	18.4357	12.8322	10.0163	7.1670	5.7022	4.7838	4.1313	3.6233	3.1981
50.0	40.9710	21.2928	14.7095	11.3981	8.0423	6.3133	5.2277	4.4568	3.8587	3.3614
55.0	46.5171	24.0105	16.4773	12.6857	8.8394	6.8552	5.6089	4.7249	4.0414	3.4768
60.0	51.6665	26.5062	18.0818	13.8399	9.5342	7.3115	5.9157	4.9274	4.1660	3.5410
65.0	56.2628	28.7040	19.4744	14.8257	10.1055	7.6684	6.1390	5.0582	4.2288	3.5518
70.0	60.1662	30.5371	20.6127	15.6132	10.5360	7.9150	6.2719	5.1133	4.2276	3.5091
75.0	63.2582	31.9500	21.4621	16.1784	10.8125	8.0439	6.3103	5.0910	4.1628	3.4141
80.0	65.4448	32.8995	21.9968	16.5041	10.9268	8.0510	6.2532	4.9921	4.0360	3.2696
85.0	66.6597	33.3570	22.2007	16.5805	10.8753	7.9362	6.1021	4.8195	3.8514	3.0802

θ_{xy}, deg / α, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	.8440	.9014	.9400	.9519	.9269	.8539	.7225	.5286	.2801
2.0	.8909	.9435	.9767	.9826	.9511	.8712	.7332	.5336	.2812
4.0	.9870	1.0290	1.0506	1.0437	.9986	.9047	.7534	.5427	.2831
6.0	1.0856	1.1157	1.1245	1.1041	1.0448	.9367	.7721	.5506	.2843
8.0	1.1862	1.2032	1.1983	1.1635	1.0895	.9669	.7891	.5571	.2848
10.0	1.2885	1.2910	1.2715	1.2216	1.1325	.9952	.8043	.5623	.2846
12.0	1.3918	1.3788	1.3437	1.2782	1.1735	1.0215	.8177	.5662	.2837
15.0	1.5477	1.5095	1.4495	1.3594	1.2309	1.0568	.8343	.5695	.2811
20.0	1.8059	1.7210	1.6162	1.4832	1.3143	1.1040	.8521	.5680	.2734
25.0	2.0551	1.9191	1.7666	1.5892	1.3800	1.1351	.8570	.5579	.2617
30.0	2.2878	2.0977	1.8961	1.6742	1.4261	1.1494	.8490	.5396	.2464
35.0	2.4970	2.2515	2.0007	1.7357	1.4511	1.1463	.8282	.5135	.2279
40.0	2.6762	2.3757	2.0772	1.7717	1.4543	1.1260	.7954	.4805	.2069
45.0	2.8200	2.4666	2.1234	1.7811	1.4356	1.0890	.7515	.4416	.1838
50.0	2.9240	2.5215	2.1379	1.7638	1.3956	1.0366	.6978	.3980	.1596
55.0	2.9851	2.5386	2.1201	1.7201	1.3355	.9702	.6360	.3509	.1348
60.0	3.0015	2.5175	2.0707	1.6515	1.2570	.8920	.5680	.3019	.1102
65.0	2.9726	2.4587	1.9911	1.5599	1.1627	.8042	.4958	.2523	.0866
70.0	2.8993	2.3641	1.8838	1.4483	1.0553	.7096	.4216	.2038	.0647
75.0	2.7838	2.2366	1.7520	1.3200	.9382	.6110	.3476	.1578	.0452
80.0	2.6297	2.0799	1.5997	1.1788	.8148	.5115	.2762	.1156	.0287
85.0	2.4416	1.8990	1.4316	1.0291	.6890	.4140	.2095	.0786	.0156

TABLE III.- CONTINUED

(a) C_N. Continued.

$\phi_1 = 105^0$; $\phi_2 = 255^0$; $\beta = 5^0$

θ_{xy}, deg / α, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.1864	.1929	.2258	.2652	.3502	.4376	.5250	.6109	.6936	.7711
2.0	.3074	.2831	.3055	.3394	.4183	.5019	.5860	.6687	.7481	.8218
4.0	.6693	.5229	.5040	.5167	.5729	.6432	.7173	.7912	.8620	.9268
6.0	1.1901	.8412	.7540	.7318	.7513	.8009	.8605	.9223	.9820	1.0359
8.0	1.8674	1.2364	1.0541	.9835	.9525	.9744	1.0147	1.0613	1.1075	1.1487
10.0	2.6978	1.7065	1.4029	1.2706	1.1755	1.1626	1.1794	1.2076	1.2380	1.2645
12.0	3.6772	2.2493	1.7987	1.5918	1.4194	1.3648	1.3537	1.3604	1.3727	1.3828
15.0	5.4153	3.1939	2.4763	2.1339	1.8216	1.6920	1.6312	1.6003	1.5814	1.5638
20.0	8.9801	5.0892	3.8103	3.1832	2.5777	2.2920	2.1290	2.0221	1.9411	1.8695
25.0	13.2837	7.3350	5.3643	4.3867	3.4209	2.9445	2.6578	2.4600	2.3062	2.1725
30.0	18.1954	9.8629	7.0910	5.7078	4.3256	3.6296	3.2016	2.9007	2.6655	2.4635
35.0	23.5660	12.5962	8.9381	7.1063	5.2642	4.3266	3.7436	3.3310	3.0082	2.7337
40.0	29.2323	15.4518	10.8494	8.5397	6.2083	5.0142	4.2676	3.7376	3.3238	2.9749
45.0	35.0222	18.3430	12.7668	9.9646	7.1292	5.6715	4.7576	4.1082	3.6028	3.1797
50.0	40.7596	21.1819	14.6321	11.3376	7.9989	6.2787	5.1986	4.4317	3.8366	3.3419
55.0	46.2703	23.8822	16.3886	12.6169	8.7909	6.8171	5.5773	4.6980	4.0182	3.4566
60.0	51.3888	26.3619	17.9829	13.7638	9.4812	7.2705	5.8823	4.8993	4.1420	3.5204
65.0	55.9537	28.5457	19.3666	14.7433	10.0489	7.6251	6.1041	5.0292	4.2043	3.5312
70.0	59.8322	30.3671	20.4976	15.5258	10.4766	7.8702	6.2361	5.0840	4.2032	3.4887
75.0	62.9045	31.7709	21.3416	16.0874	10.7514	7.9982	6.2743	5.0619	4.1388	3.3943
80.0	65.0771	32.7145	21.8729	16.4110	10.8650	8.0053	6.2175	4.9635	4.0129	3.2508
85.0	66.2842	33.1690	22.0754	16.4869	10.8138	7.8912	6.0675	4.7920	3.8294	3.0625

θ_{xy}, deg / α, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	.8402	.8968	.9348	.9463	.9214	.8486	.7180	.5253	.2783
2.0	.8868	.9386	.9713	.9769	.9454	.8658	.7286	.5302	.2795
4.0	.9822	1.0236	1.0447	1.0376	.9926	.8991	.7487	.5393	.2813
6.0	1.0802	1.1097	1.1182	1.0976	1.0385	.9309	.7672	.5471	.2825
8.0	1.1802	1.1966	1.1915	1.1567	1.0829	.9609	.7841	.5536	.2830
10.0	1.2818	1.2839	1.2642	1.2144	1.1256	.9890	.7993	.5588	.2828
12.0	1.3845	1.3712	1.3359	1.2706	1.1663	1.0151	.8126	.5626	.2819
15.0	1.5394	1.5010	1.4411	1.3513	1.2234	1.0503	.8291	.5659	.2793
20.0	1.7959	1.7112	1.6067	1.4743	1.3063	1.0971	.8467	.5644	.2717
25.0	2.0435	1.9080	1.7561	1.5796	1.3715	1.1281	.8516	.5544	.2600
30.0	2.2748	2.0855	1.8848	1.6641	1.4173	1.1422	.8436	.5361	.2448
35.0	2.4826	2.2382	1.9887	1.7252	1.4422	1.1392	.8230	.5103	.2265
40.0	2.6606	2.3617	2.0648	1.7609	1.4454	1.1190	.7904	.4775	.2055
45.0	2.8035	2.4520	2.1107	1.7703	1.4268	1.0823	.7468	.4388	.1827
50.0	2.9069	2.5065	2.1251	1.7531	1.3870	1.0302	.6934	.3955	.1585
55.0	2.9676	2.5235	2.1074	1.7097	1.3273	.9642	.6320	.3487	.1339
60.0	2.9839	2.5025	2.0583	1.6415	1.2494	.8865	.5644	.3000	.1095
65.0	2.9551	2.4442	1.9793	1.5505	1.1556	.7993	.4927	.2508	.0861
70.0	2.8823	2.3502	1.8726	1.4396	1.0490	.7053	.4189	.2025	.0643
75.0	2.7676	2.2234	1.7417	1.3121	.9326	.6073	.3455	.1568	.0449
80.0	2.6144	2.0678	1.5903	1.1719	.8100	.5084	.2745	.1149	.0285
85.0	2.4276	1.8880	1.4233	1.0231	.6849	.4115	.2082	.0782	.0155

$\phi_1 = 105^0$; $\phi_2 = 255^0$; $\beta = 15^0$

θ_{xy}, deg / α, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.5426	.3929	.3626	.3639	.4037	.4649	.5340	.6055	.6764	.7438
2.0	.6898	.4867	.4400	.4341	.4678	.5253	.5913	.6599	.7276	.7915
4.0	1.0710	.7218	.6286	.6009	.6131	.6582	.7148	.7751	.8347	.8902
6.0	1.5797	1.0244	.8639	.8031	.7808	.8065	.8493	.8983	.9475	.9928
8.0	2.2240	1.3967	1.1461	1.0397	.9699	.9695	.9944	1.0290	1.0655	1.0988
10.0	3.0068	1.8387	1.4740	1.3097	1.1797	1.1465	1.1492	1.1665	1.1882	1.2077
12.0	3.9278	2.3490	1.8462	1.6116	1.4089	1.3366	1.3130	1.3102	1.3149	1.3190
15.0	5.5619	3.2370	2.4832	2.1213	1.7871	1.6442	1.5739	1.5358	1.5111	1.4891
20.0	8.9133	5.0189	3.7373	3.1078	2.4979	2.2083	2.0420	1.9323	1.8493	1.7765
25.0	12.9594	7.1303	5.3183	4.3993	3.2907	2.8218	2.5291	2.3440	2.1925	2.0614
30.0	17.5772	9.5870	6.8217	5.4813	4.1412	3.4659	3.0503	2.7583	2.5303	2.3350
35.0	22.6264	12.0767	8.5583	6.7961	5.0237	4.1211	3.5599	3.1628	2.8525	2.5890
40.0	27.9536	14.7614	10.3552	8.1438	5.9113	4.7676	4.0526	3.5451	3.1492	2.8157
45.0	33.3969	17.4796	12.1578	9.4834	6.7770	5.3856	4.5132	3.8936	3.4115	3.0083
50.0	38.7909	20.1485	13.9115	10.7742	7.5946	5.9564	4.9279	4.1976	3.6313	3.1608
55.0	43.9718	22.6872	15.5629	11.9770	8.3393	6.4626	5.2839	4.4481	3.8020	3.2687
60.0	48.7822	25.0186	17.0617	13.0552	8.9883	6.8889	5.5706	4.6373	3.9185	3.3286
65.0	53.0758	27.0716	18.3626	13.9761	9.5220	7.2223	5.7792	4.7594	3.9770	3.3387
70.0	56.7222	28.7841	19.4260	14.7117	9.9241	7.4527	5.9033	4.8109	3.9760	3.2988
75.0	59.6106	30.1039	20.2195	15.2397	10.1825	7.5730	5.9392	4.7901	3.9154	3.2100
80.0	61.6532	30.9909	20.7190	15.5440	10.2892	7.5797	5.8858	4.6977	3.7970	3.0751
85.0	62.7880	31.4183	20.9094	15.6153	10.2411	7.4725	5.7447	4.5364	3.6245	2.8981

θ_{xy}, deg / α, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	.8044	.8539	.8866	.8950	.8695	.7996	.6758	.4941	.2617
2.0	.8482	.8933	.9210	.9237	.8921	.8158	.6858	.4988	.2628
4.0	.9379	.9731	.9899	.9808	.9365	.8471	.7047	.5073	.2645
6.0	1.0300	1.0541	1.0590	1.0372	.9797	.8770	.7221	.5146	.2656
8.0	1.1240	1.1358	1.1279	1.0927	1.0214	.9052	.7380	.5207	.2661
10.0	1.2195	1.2179	1.1963	1.1470	1.0615	.9317	.7522	.5256	.2659
12.0	1.3161	1.2999	1.2638	1.1998	1.0999	.9562	.7648	.5292	.2651
15.0	1.4617	1.4220	1.3626	1.2757	1.1535	.9892	.7803	.5323	.2626
20.0	1.7029	1.6196	1.5183	1.3914	1.2314	1.0333	.7969	.5309	.2554
25.0	1.9357	1.8046	1.6588	1.4904	1.2928	1.0624	.8015	.5215	.2445
30.0	2.1531	1.9715	1.7797	1.5698	1.3358	1.0757	.7940	.5043	.2302
35.0	2.3485	2.1151	1.8775	1.6272	1.3592	1.0728	.7746	.4800	.2129
40.0	2.5158	2.2312	1.9490	1.6608	1.3622	1.0538	.7439	.4492	.1933
45.0	2.6502	2.3161	1.9922	1.6697	1.3447	1.0193	.7029	.4128	.1718
50.0	2.7474	2.3673	2.0057	1.6534	1.3073	.9703	.6528	.3720	.1491
55.0	2.8045	2.3833	1.9891	1.6126	1.2512	.9084	.5950	.3281	.1259
60.0	2.8198	2.3636	1.9429	1.5485	1.1779	.8353	.5315	.2823	.1030
65.0	2.7928	2.3087	1.8686	1.4630	1.0898	.7533	.4640	.2360	.0810
70.0	2.7243	2.2203	1.7683	1.3587	.9895	.6649	.3947	.1907	.0605
75.0	2.6164	2.1012	1.6452	1.2389	.8800	.5728	.3256	.1477	.0423
80.0	2.4724	1.9549	1.5029	1.1070	.7648	.4798	.2589	.1083	.0268
85.0	2.2967	1.7858	1.3459	.9672	.6473	.3887	.1966	.0737	.0146

TABLE III.- CONTINUED

(a) C_N. Continued.

$\beta_1 = 120^o$; $\beta_2 = 240^o$; $\beta = 0^o$

α, deg \ θ_{xy}, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.1362	.1692	.2104	.2536	.3420	.4315	.5212	.6104	.6980	.7825
2.0	.2758	.2719	.3005	.3372	.4185	.5036	.5897	.6755	.7597	.8403
4.0	.7003	.5492	.5281	.5394	.5938	.6634	.7383	.8145	.8894	.9605
6.0	1.3170	.9214	.8180	.7874	.7980	.8435	.9016	.9643	1.0270	1.0862
8.0	2.1229	1.3868	1.1688	1.0800	1.0303	1.0431	1.0790	1.1242	1.1719	1.2169
10.0	3.1139	1.9430	1.5788	1.4157	1.2894	1.2610	1.2694	1.2936	1.3233	1.3520
12.0	4.2853	2.5873	2.0459	1.7931	1.5741	1.4963	1.4720	1.4715	1.4806	1.4907
15.0	6.3680	3.7121	2.8488	2.4329	2.0462	1.8792	1.7966	1.7525	1.7257	1.7042
20.0	10.6481	5.9771	4.4368	3.6782	2.9398	2.5870	2.3839	2.2507	2.1522	2.0687
25.0	15.8243	8.6691	6.2945	5.1139	3.9430	3.3626	3.0131	2.7732	2.5898	2.4343
30.0	21.7393	11.7064	8.3655	6.6963	5.0253	4.1827	3.6653	3.3041	3.0253	2.7899
35.0	28.2133	14.9967	10.5870	8.3773	6.1539	5.0223	4.3207	3.8272	3.4453	3.1248
40.0	35.0497	18.4401	12.8912	10.1060	7.2944	5.8558	4.9593	4.3267	3.8372	3.4287
45.0	42.0406	21.9318	15.2084	11.8296	8.4121	6.6580	5.5618	4.7874	4.1890	3.6924
50.0	48.9739	25.3658	17.4679	13.4960	9.4732	7.4044	6.1099	5.1952	4.4900	3.9079
55.0	55.6385	28.6377	19.6013	15.0544	10.4454	8.0725	6.5868	5.5378	4.7312	4.0687
60.0	61.8523	31.6482	21.5437	16.4575	11.2992	8.6418	6.9781	5.8048	4.9051	4.1699
65.0	67.3669	34.3058	23.2360	17.6627	12.0085	9.0951	7.2719	5.9880	5.0065	4.2083
70.0	72.0741	36.5297	24.6269	18.6333	12.5519	9.4186	7.4593	6.0820	5.0323	4.1829
75.0	75.8111	38.2523	25.6740	19.3398	12.9129	9.6026	7.5346	6.0838	4.9817	4.0944
80.0	78.4641	39.4214	26.3456	19.7609	13.0804	9.6413	7.4955	5.9933	4.8563	3.9455
85.0	79.9526	40.0013	26.6212	19.8836	13.0494	9.5336	7.3432	5.8134	4.6598	3.7407

α, deg \ θ_{xy}, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	.8610	.9292	.9807	1.0064	.9940	.9287	.7961	.5888	.3141
2.0	.9144	.9776	1.0233	1.0424	1.0226	.9494	.8091	.5949	.3156
4.0	1.0243	1.0762	1.1094	1.1144	1.0792	.9898	.8338	.6062	.3180
6.0	1.1379	1.1769	1.1961	1.1859	1.1346	1.0286	.8568	.6160	.3196
8.0	1.2546	1.2791	1.2830	1.2567	1.1885	1.0656	.8780	.6245	.3205
10.0	1.3738	1.3823	1.3698	1.3265	1.2408	1.1006	.8972	.6314	.3205
12.0	1.4949	1.4861	1.4560	1.3948	1.2911	1.1335	.9145	.6369	.3198
15.0	1.6790	1.6417	1.5833	1.4939	1.3623	1.1784	.9366	.6422	.3173
20.0	1.9870	1.8964	1.7867	1.6673	1.4680	1.2403	.9622	.6432	.3093
25.0	2.2885	2.1389	1.9737	1.7821	1.5545	1.2847	.9735	.6345	.2968
30.0	2.5743	2.3617	2.1388	1.8942	1.6194	1.3099	.9699	.6163	.2801
35.0	2.8357	2.5581	2.2768	1.9802	1.6606	1.3154	.9518	.5891	.2598
40.0	3.0648	2.7221	2.3836	2.0375	1.6768	1.3010	.9195	.5539	.2364
45.0	3.2547	2.8487	2.4559	2.0643	1.6676	1.2670	.8740	.5116	.2108
50.0	3.3995	2.9340	2.4916	2.0599	1.6332	1.2146	.8169	.4635	.1836
55.0	3.4948	2.9756	2.4896	2.0242	1.5748	1.1453	.7497	.4112	.1557
60.0	3.5378	2.9720	2.4499	1.9585	1.4940	1.0612	.6746	.3561	.1280
65.0	3.5271	2.9235	2.3737	1.8648	1.3933	.9648	.5937	.3000	.1012
70.0	3.4632	2.8515	2.2633	1.7458	1.2758	.8592	.5097	.2446	.0762
75.0	3.3478	2.6988	2.1222	1.6052	1.1451	.7475	.4249	.1915	.0538
80.0	3.1846	2.5294	1.9545	1.4473	1.0051	.6331	.3421	.1425	.0346
85.0	2.9784	2.3284	1.7654	1.2769	.8600	.5195	.2637	.0988	.0193

$\beta_1 = 120^o$; $\beta_2 = 240^o$; $\beta = 2^o$

α, deg \ θ_{xy}, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.1406	.1713	.2117	.2544	.3423	.4315	.5209	.6099	.6974	.7817
2.0	.2800	.2738	.3016	.3379	.4187	.5035	.5894	.6750	.7590	.8395
4.0	.7040	.5508	.5290	.5398	.5938	.6631	.7378	.8138	.8885	.9595
6.0	1.3200	.9226	.8185	.7875	.7978	.8430	.9010	.9634	1.0260	1.0851
8.0	2.1248	1.3874	1.1689	1.0798	1.0297	1.0423	1.0781	1.1232	1.1707	1.2157
10.0	3.1147	1.9429	1.5784	1.4151	1.2886	1.2600	1.2683	1.2923	1.3220	1.3506
12.0	4.2847	2.5865	2.0449	1.7920	1.5730	1.4950	1.4707	1.4700	1.4790	1.4891
15.0	6.3648	3.7098	2.8468	2.4310	2.0445	1.8775	1.7949	1.7506	1.7239	1.7024
20.0	10.6397	5.9721	4.4329	3.6748	2.9370	2.5843	2.3813	2.2483	2.1498	2.0664
25.0	15.8096	8.6608	6.2884	5.1087	3.9389	3.3591	3.0098	2.7702	2.5869	2.4315
30.0	21.7774	11.6944	8.3569	6.6892	5.0199	4.1781	3.6612	3.3004	3.0218	2.7867
35.0	28.1835	14.9808	10.5766	8.3682	6.1471	5.0167	4.3158	3.8229	3.4413	3.1211
40.0	35.0115	18.4199	12.8770	10.0948	7.2862	5.8492	4.9537	4.3218	3.8327	3.4247
45.0	41.9940	21.9073	15.1913	11.8164	8.4026	6.6504	5.5555	4.7819	4.1841	3.6881
50.0	48.9187	25.3372	17.4482	13.4807	9.4624	7.3959	6.1028	5.1892	4.4848	3.9034
55.0	55.5753	28.6051	19.5790	15.0372	10.4336	8.0642	6.5792	5.5314	4.7257	4.0639
60.0	61.7615	31.6120	21.5190	16.4386	11.2861	8.6318	6.9700	5.7980	4.8994	4.1650
65.0	67.2894	34.2663	23.2092	17.6423	11.9946	9.0846	7.2635	5.9811	5.0006	4.2034
70.0	71.9909	36.4875	24.5984	18.6117	12.5374	9.4077	7.4507	6.0749	5.0264	4.1780
75.0	75.7233	38.2080	25.6442	19.3174	12.8979	9.5914	7.5258	6.0767	4.9759	4.0896
80.0	78.3731	39.3756	26.3150	19.7379	13.0652	9.6301	7.4869	5.9863	4.8506	3.9409
85.0	79.8598	39.9548	26.5903	19.8605	13.0342	9.5226	7.3346	5.8067	4.6544	3.7363

α, deg \ θ_{xy}, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	.8601	.9282	.9796	1.0053	.9928	.9276	.7952	.5881	.3137
2.0	.9134	.9765	1.0222	1.0412	1.0214	.9483	.8081	.5942	.3152
4.0	1.0232	1.0750	1.1081	1.1131	1.0779	.9886	.8328	.6054	.3176
6.0	1.1367	1.1756	1.1947	1.1846	1.1332	1.0274	.8557	.6153	.3192
8.0	1.2532	1.2777	1.2815	1.2553	1.1871	1.0643	.8769	.6237	.3201
10.0	1.3723	1.3808	1.3682	1.3249	1.2393	1.0993	.8962	.6307	.3201
12.0	1.4933	1.4844	1.4543	1.3932	1.2895	1.1321	.9134	.6361	.3194
15.0	1.6771	1.6398	1.5815	1.4921	1.3607	1.1770	.9354	.6414	.3169
20.0	1.9847	1.8942	1.7846	1.6654	1.4662	1.2389	.9611	.6424	.3089
25.0	2.2859	2.1364	1.9714	1.7800	1.5527	1.2831	.9723	.6337	.2964
30.0	2.5713	2.3589	2.1362	1.8920	1.6175	1.3084	.9688	.6155	.2797
35.0	2.8324	2.5551	2.2741	1.9779	1.6586	1.3139	.9506	.5884	.2595
40.0	3.0613	2.7189	2.3808	2.0351	1.6748	1.2994	.9183	.5532	.2361
45.0	3.2509	2.8453	2.4530	2.0619	1.6656	1.2655	.8730	.5110	.2105
50.0	3.3955	2.9306	2.4887	2.0574	1.6313	1.2131	.8159	.4630	.1834
55.0	3.4907	2.9721	2.4886	2.0218	1.5729	1.1439	.7488	.4107	.1555
60.0	3.5336	2.9685	2.4470	1.9562	1.4922	1.0599	.6737	.3557	.1278
65.0	3.5230	2.9201	2.3709	1.8626	1.3917	.9637	.5930	.2997	.1011
70.0	3.4591	2.8281	2.2606	1.7437	1.2743	.8582	.5091	.2443	.0761
75.0	3.3439	2.6956	2.1197	1.6033	1.1437	.7466	.4244	.1913	.0537
80.0	3.1808	2.5264	1.9522	1.4456	1.0039	.6323	.3417	.1423	.0346
85.0	2.9749	2.3257	1.7633	1.2754	.8590	.5188	.2634	.0987	.0192

TABLE III.- CONTINUED

(a) C_N. Continued.

$\beta_1 = 135^0$; $\beta_2 = 225^0$; $\beta = 0^0$

θ_{xy}, deg / α, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.1892	.1703	.2102	.2523	.3389	.4270	.5157	.6046	.6927	.7786
2.0	.2868	.2780	.3043	.3395	.4185	.5019	.5870	.6725	.7571	.8391
4.0	.4990	.5712	.5439	.5516	.6018	.6689	.7422	.8177	.8929	.9653
6.0	1.3990	.9671	.8509	.8135	.8166	.8580	.9136	.9749	1.0375	1.0977
8.0	2.2635	1.4637	1.2239	1.1236	1.0619	1.0683	1.1003	1.1434	1.1903	1.2359
10.0	3.3282	2.0587	1.6609	1.4807	1.3365	1.2987	1.3015	1.3224	1.3505	1.3790
12.0	4.5881	2.7491	2.1600	1.8828	1.6389	1.5482	1.5162	1.5109	1.5173	1.5265
15.0	6.8300	3.9561	3.0194	2.5663	2.1418	1.9554	1.8611	1.8095	1.7781	1.7541
20.0	11.4421	6.3910	4.7232	3.9004	3.0969	2.7108	2.4877	2.3415	2.2361	2.1448
25.0	17.0245	9.2894	6.7207	5.4423	4.1727	3.5421	3.1622	2.9022	2.7046	2.5390
30.0	23.4074	12.5633	8.9510	7.1452	5.3365	4.4240	3.8641	3.4745	3.1753	2.9249
35.0	30.3970	16.1132	11.3464	8.9574	6.5530	5.3296	4.5722	4.0410	3.6318	3.2907
40.0	37.7809	19.8312	13.8362	10.8238	7.7852	6.2315	5.2648	4.5846	4.0604	3.6252
45.0	45.3348	23.6043	16.3387	12.6877	8.9957	7.1022	5.9210	5.0887	4.4479	3.9184
50.0	52.8290	27.3179	18.7839	14.4924	10.1476	7.9154	6.5209	5.5380	4.7826	4.1614
55.0	60.0359	30.8592	21.0954	16.1832	11.2061	8.6462	7.0461	5.9188	5.0544	4.3466
60.0	66.7366	34.1206	23.2030	17.7087	12.1389	9.2725	7.4808	6.2197	5.2550	4.4686
65.0	72.7274	37.0029	25.0428	19.0225	12.9176	9.7752	7.8116	6.4313	5.3782	4.5236
70.0	77.8263	39.4186	26.5587	20.0846	13.5187	10.1392	8.0287	6.5474	5.4204	4.5099
75.0	81.8783	41.2948	27.7047	20.8629	13.9239	10.3532	8.1253	6.5643	5.3803	4.4280
80.0	84.7604	42.5730	28.4461	21.3336	14.1208	10.4109	8.0986	6.4817	5.2590	4.2803
85.0	86.3850	43.2159	28.7602	21.4825	14.1034	10.3104	7.9493	6.3018	5.0603	4.0713

θ_{xy}, deg / α, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	.8598	.9821	.9892	1.0217	1.0165	.9571	.8268	.6155	.3298
2.0	.9159	.9832	1.0344	1.0601	1.0472	.9795	.8409	.6222	.3315
4.0	1.0317	1.0875	1.1258	1.1371	1.1091	1.0233	.8679	.6347	.3342
6.0	1.1517	1.1963	1.2183	1.2138	1.1679	1.0656	.8932	.6456	.3361
8.0	1.2754	1.3030	1.3113	1.2900	1.2264	1.1061	.9166	.6551	.3371
10.0	1.4021	1.4132	1.4044	1.3653	1.2833	1.1445	.9381	.6631	.3374
12.0	1.5312	1.5243	1.4972	1.4393	1.3383	1.1808	.9575	.6694	.3368
15.0	1.7281	1.6914	1.6347	1.5472	1.4165	1.2308	.9826	.6760	.3344
20.0	2.0594	1.9668	1.8559	1.7155	1.5338	1.3009	1.0120	.6787	.3264
25.0	2.3859	2.2309	2.0613	1.8652	1.6317	1.3527	1.0280	.6711	.3136
30.0	2.6977	2.4758	2.2446	1.9918	1.7070	1.3846	1.0275	.6534	.2963
35.0	2.9853	2.6940	2.4003	2.0913	1.7576	1.3956	1.0115	.6262	.2753
40.0	3.2399	2.8788	2.5236	2.1608	1.7819	1.3854	.9804	.5902	.2509
45.0	3.4539	3.0248	2.6108	2.1981	1.7792	1.3543	.9351	.5467	.2241
50.0	3.6207	3.1273	2.6592	2.2022	1.7495	1.3033	.8771	.4968	.1956
55.0	3.7353	3.1834	2.6674	2.1728	1.6938	1.2339	.8081	.4422	.1663
60.0	3.7941	3.1913	2.6350	2.1109	1.6137	1.1482	.7302	.3845	.1370
65.0	3.7955	3.1507	2.5632	2.0184	1.5117	1.0488	.6457	.3253	.1087
70.0	3.7392	3.0630	2.4541	1.8981	1.3909	.9388	.5572	.2667	.0823
75.0	3.6272	2.9307	2.3110	1.7535	1.2549	.8215	.4675	.2102	.0584
80.0	3.4627	2.7579	2.1382	1.5892	1.1079	.7004	.3792	.1577	.0379
85.0	3.2507	2.5499	1.9410	1.4102	.9544	.5792	.2951	.1107	.0214

$\beta_1 = 135^0$; $\beta_2 = 225^0$; $\beta = 2^0$

θ_{xy}, deg / α, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.1911	.1711	.2106	.2525	.3389	.4267	.5153	.6040	.6920	.7778
2.0	.2884	.2786	.3046	.3395	.4183	.5015	.5865	.6718	.7563	.8382
4.0	.4901	.5715	.5439	.5515	.6014	.6683	.7415	.8168	.8919	.9642
6.0	1.3993	.9669	.8505	.8129	.8159	.8572	.9127	.9739	1.0363	1.0965
8.0	2.2627	1.4629	1.2230	1.1227	1.0609	1.0672	1.0992	1.1422	1.1889	1.2344
10.0	3.3262	2.0571	1.6595	1.4794	1.3351	1.2973	1.3001	1.3209	1.3489	1.3774
12.0	4.5845	2.7467	2.1580	1.8810	1.6373	1.5465	1.5145	1.5092	1.5155	1.5247
15.0	6.8237	3.9522	3.0164	2.5637	2.1395	1.9532	1.8590	1.8074	1.7761	1.7521
20.0	11.4302	6.3842	4.7181	3.8961	3.0934	2.7078	2.4848	2.3388	2.2315	2.1422
25.0	17.0057	9.2791	6.7131	5.4361	4.1679	3.5380	3.1585	2.8988	2.7014	2.5360
30.0	23.3809	12.5490	8.9407	7.1370	5.3303	4.4188	3.8596	3.4704	3.1715	2.9214
35.0	30.3620	16.0946	11.3332	8.9470	6.5453	5.3234	4.5668	4.0362	3.6275	3.2867
40.0	37.7369	19.8080	13.8180	10.8111	7.7760	6.2241	5.2586	4.5791	4.0555	3.6209
45.0	45.2815	23.5765	16.3194	12.6727	8.9850	7.0938	5.9140	5.0826	4.4426	3.9138
50.0	52.7666	27.2856	18.7616	14.4753	10.1356	7.9060	6.5131	5.5314	4.7769	4.1564
55.0	59.9648	30.8226	21.0704	16.1640	11.1928	8.6359	7.0377	5.9118	5.0484	4.3414
60.0	66.6573	34.0800	23.1754	17.6876	12.1244	9.2614	7.4718	6.2122	5.2487	4.4633
65.0	72.6408	36.9588	25.0129	18.9998	12.9022	9.7636	7.8023	6.4236	5.3718	4.5182
70.0	77.7335	39.3716	26.5270	20.0606	13.5026	10.1271	8.0191	6.5396	5.4139	4.5045
75.0	81.7806	41.2450	27.6717	20.8379	13.9072	10.3408	8.1156	6.5565	5.3738	4.4227
80.0	84.6592	42.5221	28.4121	21.3081	14.1039	10.3984	8.0889	6.4739	5.2527	4.2752
85.0	86.2818	43.1642	28.7258	21.4568	14.0866	10.2981	7.9398	6.2943	5.0543	4.0665

θ_{xy}, deg / α, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	.8588	.9310	.9881	1.0205	1.0153	.9559	.8258	.6148	.3294
2.0	.9149	.9820	1.0332	1.0589	1.0460	.9783	.8399	.6215	.3311
4.0	1.0305	1.0862	1.1245	1.1357	1.1068	1.0221	.8668	.6339	.3338
6.0	1.1504	1.1929	1.2168	1.2124	1.1665	1.0643	.8921	.6448	.3356
8.0	1.2739	1.3015	1.3097	1.2885	1.2250	1.1047	.9155	.6543	.3367
10.0	1.4004	1.4115	1.4027	1.3637	1.2817	1.1432	.9369	.6623	.3369
12.0	1.5294	1.5225	1.4954	1.4376	1.3366	1.1794	.9563	.6686	.3364
15.0	1.7261	1.6894	1.6328	1.5453	1.4148	1.2293	.9814	.6752	.3340
20.0	2.0570	1.9644	1.8537	1.7134	1.5320	1.2993	1.0116	.6779	.3260
25.0	2.3831	2.2282	2.0588	1.8630	1.6297	1.3510	1.0267	.6702	.3132
30.0	2.6945	2.4728	2.2419	1.9894	1.7050	1.3829	1.0263	.6526	.2960
35.0	2.9817	2.6907	2.3974	2.0888	1.7555	1.3939	1.0103	.6254	.2749
40.0	3.2361	2.8754	2.5206	2.1582	1.7798	1.3837	.9792	.5895	.2506
45.0	3.4498	3.0211	2.6076	2.1955	1.7770	1.3527	.9340	.5460	.2238
50.0	3.6184	3.1236	2.6560	2.1995	1.7474	1.3017	.8760	.4962	.1954
55.0	3.7308	3.1796	2.6641	2.1702	1.6917	1.2324	.8071	.4417	.1661
60.0	3.7896	3.1874	2.6319	2.1084	1.6118	1.1468	.7293	.3840	.1369
65.0	3.7909	3.1469	2.5602	2.0160	1.5099	1.0476	.6449	.3250	.1086
70.0	3.7347	3.0593	2.4512	1.8958	1.3892	.9377	.5566	.2663	.0822
75.0	3.6228	2.9272	2.3082	1.7514	1.2534	.8205	.4670	.2100	.0584
80.0	3.4585	2.7546	2.1356	1.5873	1.1066	.6995	.3788	.1575	.0379
85.0	3.2488	2.5468	1.9386	1.4085	.9533	.5785	.2947	.1105	.0214

TABLE III.- CONTINUED

(a) C_N. Continued.

$\phi_1 = 120^\circ$; $\phi_2 = 240^\circ$; $\beta = 5^\circ$

α, deg \ θ_{xy}, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.1637	.1822	.2182	.2587	.3440	.4315	.5197	.6077	.6943	.7778
2.0	.3022	.2840	.3076	.3416	.4199	.5030	.5877	.6724	.7555	.8351
4.0	.7235	.5592	.5335	.5423	.5938	.6617	.7352	.8102	.8842	.9544
6.0	1.3355	.9287	.8212	.7884	.7965	.8404	.8973	.9589	1.0207	1.0792
8.0	2.1353	1.3905	1.1694	1.0788	1.0270	1.0384	1.0733	1.1177	1.1645	1.2089
10.0	3.1188	1.9424	1.5762	1.4120	1.2842	1.2547	1.2623	1.2857	1.3148	1.3429
12.0	4.2813	2.5819	2.0398	1.7864	1.5667	1.4882	1.4634	1.4623	1.4709	1.4806
15.0	6.3481	3.6981	2.8366	2.4214	2.0352	1.8682	1.7855	1.7611	1.7142	1.6925
20.0	10.5958	5.9459	4.4125	3.6572	2.9220	2.5706	2.3682	2.2356	2.1374	2.0542
25.0	15.7326	8.6175	6.2561	5.0820	3.9176	3.3404	2.9927	2.7541	2.5717	2.4170
30.0	21.6027	11.6317	8.3114	6.6524	4.9917	4.1542	3.6400	3.2810	3.0038	2.7699
35.0	28.0275	14.8970	10.5159	8.3207	6.1117	4.9874	4.2904	3.8001	3.4207	3.1022
40.0	34.8119	18.3142	12.8027	10.0362	7.2435	5.8146	4.9242	4.2958	3.8096	3.4038
45.0	41.7498	21.7794	15.1023	11.7468	8.3528	6.6107	5.5221	4.7530	4.1587	3.6656
50.0	48.6303	25.1873	17.3447	13.4005	9.4058	7.3515	6.0660	5.1577	4.4575	3.8794
55.0	55.2444	28.4344	19.4619	14.9471	10.3706	8.0144	6.5393	5.4977	4.6968	4.0390
60.0	61.3911	31.4221	21.3895	16.3395	11.2179	8.5794	6.9276	5.7626	4.8694	4.1394
65.0	66.8837	34.0594	23.0689	17.5355	11.9218	9.0293	7.2192	5.9445	4.9700	4.1776
70.0	71.5552	36.2644	24.4492	18.4987	12.4611	9.3504	7.4052	6.0377	4.9956	4.1523
75.0	75.2637	37.9760	25.4888	19.1999	12.8193	9.5329	7.4799	6.0395	4.9454	4.0645
80.0	77.8966	39.1361	26.1549	19.6178	12.9856	9.5713	7.4411	5.9497	4.8209	3.9167
85.0	79.3738	39.7116	26.4284	19.7396	12.9548	9.4645	7.2899	5.7712	4.6260	3.7135

α, deg \ θ_{xy}, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	.8554	.9228	.9738	.9992	.9867	.9218	.7902	.5843	.3117
2.0	.9084	.9709	1.0161	1.0349	1.0151	.9423	.8030	.5904	.3132
4.0	1.0175	1.0688	1.1015	1.1063	1.0712	.9824	.8275	.6016	.3156
6.0	1.1302	1.1687	1.1875	1.1773	1.1262	1.0209	.8503	.6114	.3172
8.0	1.2480	1.2701	1.2738	1.2476	1.1797	1.0577	.8713	.6198	.3180
10.0	1.3643	1.3726	1.3599	1.3168	1.2316	1.0924	.8905	.6267	.3181
12.0	1.4845	1.4755	1.4455	1.3846	1.2815	1.1250	.9077	.6321	.3174
15.0	1.6672	1.6299	1.5718	1.4829	1.3522	1.1696	.9295	.6373	.3149
20.0	1.9729	1.8827	1.7736	1.6352	1.4571	1.2311	.9550	.6384	.3069
25.0	2.2721	2.1234	1.9593	1.7690	1.5430	1.2750	.9661	.6297	.2945
30.0	2.5557	2.3445	2.1230	1.8802	1.6073	1.3001	.9626	.6116	.2780
35.0	2.8151	2.5394	2.2600	1.9656	1.6482	1.3056	.9446	.5847	.2578
40.0	3.0425	2.7021	2.3660	2.0224	1.6643	1.2912	.9125	.5497	.2346
45.0	3.2309	2.8277	2.4378	2.0490	1.6552	1.2575	.8675	.5077	.2092
50.0	3.3746	2.9125	2.4732	2.0446	1.6211	1.2055	.8107	.4600	.1822
55.0	3.4692	2.9537	2.4712	2.0092	1.5631	1.1367	.7441	.4081	.1545
60.0	3.5119	2.9502	2.4318	1.9440	1.4829	1.0532	.6695	.3534	.1270
65.0	3.5013	2.9020	2.3562	1.8510	1.3830	.9576	.5893	.2978	.1004
70.0	3.4378	2.8107	2.2467	1.7329	1.2664	.8528	.5059	.2428	.0756
75.0	3.3233	2.6790	2.1066	1.5934	1.1366	.7420	.4218	.1901	.0534
80.0	3.1613	2.5109	1.9402	1.4367	.9977	.6284	.3396	.1414	.0344
85.0	2.9567	2.3115	1.7525	1.2675	.8537	.5156	.2617	.0981	.0191

$\phi_1 = 120^\circ$; $\phi_2 = 240^\circ$; $\beta = 15^\circ$

α, deg \ θ_{xy}, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.3522	.2805	.2793	.2983	.3592	.4316	.5083	.5867	.6649	.7408
2.0	.4984	.3785	.3634	.3763	.4306	.4988	.5722	.6475	.7224	.7947
4.0	.9047	.6377	.5758	.5650	.5941	.6480	.7109	.7771	.8434	.9068
6.0	1.4804	.9850	.8463	.7963	.7847	.8160	.8633	.9169	.9718	1.0242
8.0	2.2322	1.4192	1.1736	1.0693	1.0014	1.0022	1.0288	1.0662	1.1070	1.1461
10.0	3.1569	1.9382	1.5561	1.3826	1.2431	1.2055	1.2064	1.2242	1.2483	1.2722
12.0	4.2499	2.5393	1.9919	1.7347	1.5088	1.4250	1.3955	1.3901	1.3950	1.4016
15.0	6.1930	3.5887	2.7410	2.3316	1.9493	1.7823	1.6983	1.6523	1.6237	1.6008
20.0	10.1864	5.7020	4.2226	3.4935	2.7830	2.4426	2.2462	2.1172	2.0216	1.9408
25.0	15.0159	8.2137	5.9559	4.8330	3.7190	3.1664	2.8333	2.6047	2.4299	2.2819
30.0	20.5346	11.0476	7.8882	6.3094	4.7288	3.9315	3.4418	3.1000	2.8362	2.6137
35.0	26.5750	14.1175	9.9608	7.8779	5.7817	4.7148	4.0533	3.5881	3.2281	2.9262
40.0	32.9534	17.3301	12.1107	9.4907	6.8458	5.4925	4.6492	4.0541	3.5937	3.2097
45.0	39.4760	20.5880	14.2726	11.0989	7.8887	6.2410	5.2113	4.4839	3.9220	3.4558
50.0	45.9448	23.7919	16.3809	12.6537	8.8788	6.9374	5.7227	4.8644	4.2029	3.6569
55.0	52.1630	26.8447	18.3713	14.1077	9.7858	7.5607	6.1676	5.1841	4.4279	3.8069
60.0	57.9419	29.6536	20.1836	15.4168	10.5824	8.0919	6.5327	5.4332	4.5901	3.9013
65.0	63.1057	32.1331	21.7625	16.5412	11.2442	8.5148	6.8069	5.6041	4.6847	3.9371
70.0	67.4977	34.2080	23.0602	17.4468	11.7512	8.8167	6.9817	5.6918	4.7088	3.9134
75.0	70.9843	35.8152	24.0372	18.1060	12.0880	8.9883	7.0520	5.6934	4.6616	3.8308
80.0	73.4596	36.9060	24.6638	18.4989	12.2443	9.0244	7.0155	5.6091	4.5446	3.6919
85.0	74.8848	37.4470	24.9210	18.6134	12.2153	8.9240	6.8733	5.4412	4.3613	3.5008

α, deg \ θ_{xy}, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	.8116	.8733	.9197	.9423	.9295	.8677	.7434	.5495	.2931
2.0	.8615	.9185	.9595	.9759	.9562	.8870	.7554	.5552	.2945
4.0	.9641	1.0105	1.0397	1.0430	1.0090	.9247	.7785	.5657	.2967
6.0	1.0701	1.1044	1.1206	1.1098	1.0607	.9609	.7999	.5749	.2982
8.0	1.1789	1.1998	1.2018	1.1758	1.1110	.9954	.8197	.5828	.2990
10.0	1.2901	1.2961	1.2827	1.2409	1.1597	1.0281	.8377	.5893	.2991
12.0	1.4032	1.3929	1.3632	1.3046	1.2067	1.0587	.8538	.5944	.2984
15.0	1.5749	1.5381	1.4819	1.3971	1.2731	1.1006	.8744	.5993	.2961
20.0	1.8623	1.7758	1.6717	1.5402	1.3717	1.1584	.8983	.6003	.2886
25.0	2.1436	2.0020	1.8462	1.6660	1.4525	1.1998	.9088	.5922	.2769
30.0	2.4102	2.2099	2.0002	1.7706	1.5130	1.2234	.9055	.5752	.2613
35.0	2.6541	2.3931	2.1289	1.8509	1.5514	1.2285	.8885	.5498	.2424
40.0	2.8679	2.5461	2.2286	1.9043	1.5666	1.2150	.8584	.5169	.2206
45.0	3.0450	2.6642	2.2961	1.9293	1.5580	1.1833	.8160	.4775	.1967
50.0	3.1801	2.7438	2.3294	1.9251	1.5259	1.1344	.7627	.4326	.1713
55.0	3.2690	2.7826	2.3275	1.8919	1.4714	1.0697	.7000	.3838	.1453
60.0	3.3092	2.7793	2.2904	1.8306	1.3960	.9913	.6299	.3324	.1194
65.0	3.2992	2.7340	2.2193	1.7431	1.3021	.9014	.5545	.2801	.0944
70.0	3.2395	2.6482	2.1164	1.6321	1.1925	.8028	.4761	.2284	.0711
75.0	3.1319	2.5243	1.9847	1.5010	1.0705	.6986	.3970	.1789	.0502
80.0	2.9796	2.3663	1.8283	1.3536	.9398	.5919	.3197	.1331	.0323
85.0	2.7872	2.1788	1.6518	1.1946	.8045	.4858	.2466	.0924	.0180

TABLE III.- CONTINUED

(a) C_N. Continued.

$\beta_1 = 135^\circ$; $\beta_2 = 225^\circ$; $\beta = 5^\circ$

α, deg \ θ_{xy}, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.1505	.1752	.2127	.2534	.3383	.4252	.5129	.6008	.6881	.7733
2.0	.2969	.2820	.3061	.3399	.4173	.4995	.5836	.6682	.7520	.8333
4.0	.7457	.5730	.5438	.5505	.5992	.6652	.7377	.8123	.8867	.9585
6.0	1.4007	.9659	.8485	.8103	.8124	.8529	.9077	.9684	1.0303	1.0899
8.0	2.2586	1.4587	1.2186	1.1181	1.0558	1.0616	1.0931	1.1356	1.1819	1.2270
10.0	3.3153	2.0492	1.6524	1.4724	1.3283	1.2903	1.2927	1.3132	1.3409	1.3691
12.0	4.5866	2.7343	2.1476	1.8716	1.6285	1.5378	1.5058	1.5002	1.5044	1.5154
15.0	6.7904	3.9322	3.0005	2.5498	2.1275	1.9419	1.8481	1.7966	1.7653	1.7414
20.0	11.3675	6.3486	4.6914	3.8738	3.0753	2.6917	2.4699	2.3246	2.2179	2.1290
25.0	16.9075	9.2250	6.6737	5.4040	4.2429	3.5167	3.1392	2.8810	2.6848	2.5203
30.0	23.2419	12.4740	8.8870	7.0939	5.2979	4.3918	3.8359	3.4489	3.1518	2.9032
35.0	30.1784	15.9969	11.2643	8.8924	6.5052	5.2906	4.5385	4.0112	3.6049	3.2662
40.0	37.5063	19.6867	13.7331	10.7446	7.7280	6.1856	5.2259	4.5506	4.0302	3.5982
45.0	45.0027	23.4311	16.2186	12.5943	8.9293	7.0497	5.8772	5.0509	4.4148	3.8892
50.0	52.4400	27.1165	18.6452	14.3854	10.0725	7.8567	6.4724	5.4968	4.7470	4.1303
55.0	59.5922	30.6309	20.9392	16.0633	11.1229	8.5819	6.9937	5.8747	5.0167	4.3142
60.0	66.2420	33.8675	23.0309	17.5772	12.0486	9.2035	7.4250	6.1733	5.2158	4.4352
65.0	72.1872	36.7279	24.8566	18.8810	12.8215	9.7024	7.7534	6.3833	5.3381	4.4898
70.0	77.2474	39.1253	26.3610	19.9351	13.4180	10.0636	7.9688	6.4985	5.3799	4.4762
75.0	81.2687	40.9868	27.4984	20.7074	13.8201	10.2760	8.0647	6.5153	5.3401	4.3949
80.0	84.1289	42.2558	28.2341	21.1745	14.0155	10.3332	8.0381	6.4333	5.2198	4.2483
85.0	85.7412	42.8937	28.5458	21.3223	13.9983	10.2335	7.8900	6.2548	5.0226	4.0409

α, deg \ θ_{xy}, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	.8537	.9254	.9820	1.0141	1.0089	.9499	.8205	.6108	.3273
2.0	.9094	.9760	1.0268	1.0523	1.0394	.9721	.8345	.6175	.3290
4.0	1.0243	1.0795	1.1175	1.1286	1.0998	1.0156	.8613	.6298	.3316
6.0	1.1434	1.1855	1.2093	1.2048	1.1592	1.0576	.8864	.6407	.3335
8.0	1.2661	1.2935	1.3016	1.2804	1.2172	1.0977	.9097	.6502	.3346
10.0	1.3918	1.4028	1.3940	1.3551	1.2737	1.1359	.9310	.6580	.3348
12.0	1.5200	1.5130	1.4860	1.4286	1.3282	1.1719	.9503	.6644	.3342
15.0	1.7154	1.6789	1.6225	1.5356	1.4059	1.2215	.9751	.6709	.3318
20.0	2.0442	1.9522	1.8421	1.7026	1.5223	1.2911	1.0052	.6735	.3239
25.0	2.3682	2.2143	2.0459	1.8512	1.6194	1.3425	1.0202	.6660	.3112
30.0	2.6776	2.4573	2.2278	1.9768	1.6942	1.3741	1.0197	.6484	.2941
35.0	2.9630	2.6738	2.3823	2.0756	1.7444	1.3850	1.0038	.6214	.2732
40.0	3.2158	2.8573	2.5047	2.1445	1.7685	1.3749	.9730	.5857	.2490
45.0	3.4281	3.0021	2.5912	2.1816	1.7658	1.3441	.9281	.5425	.2224
50.0	3.5936	3.1039	2.6392	2.1856	1.7363	1.2935	.8705	.4931	.1941
55.0	3.7073	3.1595	2.6473	2.1565	1.6810	1.2246	.8020	.4389	.1650
60.0	3.7657	3.1674	2.6153	2.0951	1.6016	1.1396	.7246	.3815	.1360
65.0	3.7670	3.1271	2.5440	2.0032	1.5003	1.0409	.6408	.3229	.1079
70.0	3.7113	3.0400	2.4357	1.8838	1.3804	.9317	.5530	.2647	.0816
75.0	3.6000	2.9088	2.2936	1.7404	1.2455	.8153	.4640	.2086	.0580
80.0	3.4368	2.7373	2.1222	1.5773	1.0996	.6951	.3764	.1565	.0376
85.0	3.2265	2.5308	1.9265	1.3996	.9473	.5748	.2929	.1098	.0213

$\beta_1 = 135^\circ$; $\beta_2 = 225^\circ$; $\beta = 15^\circ$

α, deg \ θ_{xy}, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.2357	.2130	.2320	.2621	.3336	.4109	.4908	.5716	.6523	.7312
2.0	.3760	.3134	.3198	.3434	.4078	.4809	.5573	.6349	.7123	.7877
4.0	.7981	.5870	.5433	.5414	.5788	.6367	.7021	.7704	.8390	.9053
6.0	1.4139	.9564	.8298	.7856	.7793	.8131	.8626	.9171	.9740	1.0289
8.0	2.2204	1.4197	1.1777	1.0750	1.0081	1.0093	1.0362	1.0746	1.1165	1.1578
10.0	3.2139	1.9748	1.5865	1.4082	1.2643	1.2243	1.2239	1.2413	1.2660	1.2914
12.0	4.3893	2.6190	2.0511	1.7834	1.5465	1.4570	1.4242	1.4172	1.4216	1.4289
15.0	6.4810	3.7452	2.8530	2.4211	2.0157	1.8370	1.7460	1.6958	1.6650	1.6414
20.0	10.7842	6.0170	4.4427	3.6658	2.9068	2.5418	2.3306	2.1922	2.0905	2.0058
25.0	15.9926	8.7213	6.3063	5.1044	3.9105	3.3174	2.9599	2.7153	2.5294	2.3737
30.0	21.9480	11.7758	8.3872	6.6932	4.9964	4.1402	3.6149	3.2492	2.9686	2.7337
35.0	28.4694	15.0879	10.6222	8.3840	6.1314	4.9852	4.2755	3.7778	3.3945	3.0750
40.0	35.3587	18.5568	12.9433	10.1254	7.2810	5.8266	4.9218	4.2850	3.7943	3.3871
45.0	42.4065	22.0772	15.2801	11.8644	8.4104	6.6391	5.5340	4.7553	4.1559	3.6607
50.0	49.3987	25.5421	17.5614	13.5483	9.4852	7.3977	6.0937	5.1745	4.4682	3.8873
55.0	56.1228	28.8461	19.7181	15.1254	10.4728	8.0796	6.5837	5.5299	4.7218	4.0602
60.0	62.3747	31.8890	21.6846	16.5491	11.3431	8.6639	6.9892	5.8105	4.9089	4.1740
65.0	67.9641	34.5783	23.4011	17.7749	12.0697	9.1330	7.2979	6.0080	5.0239	4.2253
70.0	72.7215	36.8321	24.8155	18.7658	12.6305	9.4725	7.5005	6.1163	5.0633	4.2126
75.0	76.5021	38.5822	25.8847	19.4920	13.0085	9.6723	7.5906	6.1321	5.0258	4.1361
80.0	79.1911	39.7752	26.5764	19.9312	13.1922	9.7261	7.5657	6.0550	4.9127	3.9983
85.0	80.7069	40.3750	26.8695	20.0701	13.1760	9.6323	7.4264	5.8872	4.7273	3.8033

α, deg \ θ_{xy}, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	.8059	.8725	.9251	.9548	.9494	.8935	.7717	.5744	.3078
2.0	.8583	.9202	.9673	.9906	.9780	.9145	.7848	.5806	.3093
4.0	.9663	1.0175	1.0526	1.0624	1.0349	.9554	.8100	.5922	.3118
6.0	1.0783	1.1171	1.1388	1.1340	1.0907	.9948	.8336	.6025	.3136
8.0	1.1936	1.2186	1.2256	1.2051	1.1453	1.0325	.8555	.6113	.3145
10.0	1.3119	1.3214	1.3124	1.2754	1.1983	1.0684	.8755	.6187	.3148
12.0	1.4324	1.4250	1.3990	1.3444	1.2496	1.1023	.8936	.6247	.3142
15.0	1.6161	1.5810	1.5273	1.4450	1.3226	1.1489	.9170	.6308	.3120
20.0	1.9252	1.8379	1.7337	1.6021	1.4321	1.2143	.9452	.6333	.3045
25.0	2.2298	2.0843	1.9254	1.7418	1.5233	1.2626	.9594	.6262	.2926
30.0	2.5207	2.3128	2.0964	1.8599	1.5936	1.2924	.9589	.6097	.2765
35.0	2.7890	2.5164	2.2416	1.9527	1.6409	1.3027	.9440	.5843	.2568
40.0	3.0268	2.6888	2.3567	2.0175	1.6635	1.2932	.9150	.5508	.2341
45.0	3.2263	2.8250	2.4380	2.0524	1.6610	1.2642	.8728	.5101	.2091
50.0	3.3819	2.9207	2.4832	2.0562	1.6333	1.2166	.8186	.4636	.1825
55.0	3.4888	2.9730	2.4908	2.0288	1.5813	1.1518	.7542	.4127	.1551
60.0	3.5437	2.9804	2.4607	1.9710	1.5066	1.0719	.6815	.3588	.1279
65.0	3.5449	2.9425	2.3937	1.8847	1.4114	.9791	.6027	.3036	.1015
70.0	3.4925	2.8607	2.2918	1.7724	1.2987	.8765	.5202	.2489	.0768
75.0	3.3879	2.7373	2.1583	1.6376	1.1718	.7670	.4365	.1962	.0545
80.0	3.2344	2.5760	1.9971	1.4843	1.0347	.6540	.3541	.1472	.0354
85.0	3.0367	2.3819	1.8131	1.3172	.8914	.5409	.2756	.1033	.0200

TABLE III.- CONTINUED

(a) C_N. Continued.

$\beta_1 = 150^o$; $\beta_2 = 210^o$; $\beta = 0^o$

α, deg \ θ_{xy}, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.1406	.1707	.2099	.2515	.3372	.4245	.5127	.6012	.6894	.7758
2.0	.2917	.2806	.3059	.3402	.4181	.5007	.5852	.6703	.7549	.8375
4.0	.7569	.5811	.5508	.5569	.6050	.6708	.7433	.8183	.8934	.9662
6.0	1.4371	.9879	.8657	.8250	.8246	.8639	.9182	.9788	1.0411	1.1016
8.0	2.3291	1.4991	1.2489	1.1433	1.0758	1.0791	1.1092	1.1511	1.1975	1.2431
10.0	3.4286	2.1123	1.6986	1.5102	1.3575	1.3152	1.3153	1.3344	1.3616	1.3899
12.0	4.7301	2.8242	2.2126	1.9239	1.6681	1.5712	1.5355	1.5278	1.5328	1.5414
15.0	7.0472	4.0699	3.0985	2.6278	2.1853	1.9896	1.8897	1.8345	1.8009	1.7756
20.0	11.8162	6.5849	4.8567	4.0034	3.1690	2.7673	2.5346	2.3821	2.2705	2.1783
25.0	17.5906	9.5808	6.9199	5.5953	4.2788	3.6246	3.2302	2.9606	2.7564	2.5859
30.0	24.1950	12.9664	9.2254	7.3550	5.4810	4.5354	3.9555	3.5523	3.2436	2.9861
35.0	31.4287	16.6391	11.7031	9.2291	6.7390	5.4722	4.6884	4.1394	3.7174	3.3666
40.0	39.0719	20.4871	14.2777	11.1607	8.0146	6.4065	5.4066	4.7039	4.1634	3.7158
45.0	46.8924	24.3935	16.8710	13.0910	9.2691	7.3097	6.0884	5.2287	4.5680	4.0232
50.0	54.6526	28.2397	19.4042	14.9615	10.4642	8.1546	6.7129	5.6979	4.9190	4.2795
55.0	62.1167	31.9088	21.8004	16.7152	11.5638	8.9155	7.2614	6.0972	5.2057	4.4768
60.0	69.0578	35.2894	23.9867	18.2990	12.5344	9.5691	7.7169	6.4145	5.4194	4.6091
65.0	75.2652	38.2786	25.8966	19.6646	13.3464	10.0958	8.0658	6.6401	5.5535	4.6725
70.0	80.5501	40.7856	27.4723	20.7706	13.9754	10.4793	8.2975	6.7672	5.6040	4.6649
75.0	84.7520	42.7344	28.6657	21.5833	14.4020	10.7082	8.4048	6.7920	5.5694	4.5867
80.0	87.7432	44.0656	29.4407	22.0782	14.6134	10.7755	8.3845	6.7136	5.4507	4.4402
85.0	89.4329	44.7389	29.7736	22.2401	14.6032	10.6790	8.2373	6.5344	5.2516	4.2299

α, deg \ θ_{xy}, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	.8580	.9320	.9915	1.0271	1.0253	.9690	.8404	.6278	.3372
2.0	.9153	.9842	1.0378	1.0666	1.0570	.9923	.8550	.6348	.3389
4.0	1.0336	1.0910	1.1317	1.1458	1.1200	1.0378	.8832	.6478	.3418
6.0	1.1565	1.2006	1.2267	1.2250	1.1819	1.0817	.9096	.6593	.3438
8.0	1.2833	1.3123	1.3225	1.3037	1.2425	1.1238	.9341	.6694	.3450
10.0	1.4134	1.4257	1.4186	1.3816	1.3016	1.1640	.9567	.6778	.3453
12.0	1.5462	1.5401	1.5144	1.4583	1.3588	1.2020	.9772	.6847	.3448
15.0	1.7491	1.7126	1.6567	1.5703	1.4405	1.2545	1.0037	.6918	.3425
20.0	2.0912	1.9976	1.8864	1.7458	1.5635	1.3286	1.0364	.6954	.3345
25.0	2.4295	2.2720	2.1005	1.9027	1.6668	1.3841	1.0535	.6884	.3216
30.0	2.7535	2.5274	2.2926	2.0363	1.7474	1.4194	1.0547	.6711	.3041
35.0	3.0536	2.7561	2.4569	2.1425	1.8028	1.4333	1.0399	.6439	.2827
40.0	3.3206	2.9511	2.5884	2.2182	1.8313	1.4254	1.0096	.6078	.2579
45.0	3.5463	3.1066	2.6830	2.2609	1.8320	1.3961	.9646	.5637	.2306
50.0	3.7239	3.2177	2.7378	2.2694	1.8049	1.3460	.9064	.5131	.2014
55.0	3.8480	3.2811	2.7513	2.2435	1.7509	1.2769	.8367	.4575	.1714
60.0	3.9149	3.2950	2.7231	2.1839	1.6716	1.1907	.7576	.3985	.1415
65.0	3.9225	3.2587	2.6539	2.0924	1.5693	1.0901	.6715	.3380	.1125
70.0	3.8705	3.1736	2.5458	1.9719	1.4473	.9782	.5810	.2778	.0853
75.0	3.7606	3.0421	2.4023	1.8259	1.3091	.8584	.4890	.2197	.0607
80.0	3.5961	2.8682	2.2275	1.6590	1.1591	.7342	.3981	.1655	.0396
85.0	3.3820	2.6573	2.0269	1.4761	1.0017	.6095	.3112	.1168	.0225

$\beta_1 = 150^o$; $\beta_2 = 210^o$; $\beta = 2^o$

α, deg \ θ_{xy}, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.1411	.1708	.2099	.2514	.3369	.4241	.5121	.6006	.6886	.7749
2.0	.2921	.2806	.3057	.3400	.4177	.5002	.5845	.6695	.7541	.8365
4.0	.7567	.5807	.5504	.5564	.6044	.6701	.7424	.8173	.8923	.9651
6.0	1.4361	.9871	.8649	.8242	.8237	.8629	.9172	.9777	1.0399	1.1003
8.0	2.3270	1.4977	1.2476	1.1421	1.0746	1.0778	1.1079	1.1498	1.1960	1.2416
10.0	3.4252	2.1100	1.6968	1.5085	1.3559	1.3137	1.3138	1.3329	1.3600	1.3883
12.0	4.7251	2.8212	2.2101	1.9217	1.6662	1.5693	1.5337	1.5259	1.5310	1.5395
15.0	7.0394	4.0654	3.0949	2.6248	2.1827	1.9873	1.8875	1.8323	1.7987	1.7734
20.0	11.8025	6.5773	4.8511	3.9987	3.1653	2.7640	2.5316	2.3793	2.2678	2.1757
25.0	17.5699	9.5695	6.9118	5.5886	4.2737	3.6202	3.2263	2.9570	2.7530	2.5828
30.0	24.1662	12.9510	9.2144	7.3462	5.4745	4.5300	3.9507	3.5481	3.2397	2.9825
35.0	31.3911	16.6192	11.6891	9.2180	6.7309	5.4656	4.6827	4.1344	3.7129	3.3625
40.0	39.0250	20.4625	14.2606	11.1473	8.0050	6.3987	5.4001	4.6982	4.1584	3.7113
45.0	46.8360	24.3642	16.8507	13.0753	9.2579	7.3009	6.0810	5.2224	4.5625	4.0184
50.0	54.5868	28.2057	19.3808	14.9435	10.4516	8.1448	6.7048	5.6910	4.9131	4.2743
55.0	62.0417	31.8703	21.7741	16.6951	11.5498	8.9047	7.2526	6.0899	5.1994	4.4714
60.0	68.9745	35.2467	23.9577	18.2769	12.5192	9.5576	7.7076	6.4068	5.4128	4.6035
65.0	75.1742	38.2323	25.8653	19.6408	13.3303	10.0835	8.0561	6.6321	5.5468	4.6668
70.0	80.4527	40.7363	27.4391	20.7455	13.9585	10.4667	8.2874	6.7591	5.5972	4.6593
75.0	84.6495	42.6827	28.6311	21.5572	14.3846	10.6953	8.3946	6.7838	5.5627	4.5812
80.0	87.6371	44.0123	29.4051	22.0515	14.5957	10.7624	8.3744	6.7054	5.4441	4.4348
85.0	89.3247	44.6848	29.7376	22.2132	14.5855	10.6661	8.2274	6.5265	5.2452	4.2247

α, deg \ θ_{xy}, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	.8569	.9308	.9903	1.0258	1.0241	.9679	.8393	.6270	.3368
2.0	.9142	.9830	1.0366	1.0653	1.0558	.9911	.8540	.6340	.3385
4.0	1.0324	1.0897	1.1303	1.1444	1.1186	1.0365	.8821	.6470	.3414
6.0	1.1551	1.1991	1.2253	1.2235	1.1805	1.0804	.9085	.6585	.3434
8.0	1.2818	1.3107	1.3209	1.3021	1.2410	1.1225	.9330	.6685	.3445
10.0	1.4117	1.4240	1.4169	1.3799	1.3000	1.1626	.9555	.6770	.3449
12.0	1.5444	1.5383	1.5126	1.4565	1.3572	1.2005	.9760	.6838	.3444
15.0	1.7470	1.7106	1.6547	1.5684	1.4387	1.2529	1.0025	.6910	.3420
20.0	2.0887	1.9952	1.8841	1.7436	1.5616	1.3270	1.0351	.6946	.3341
25.0	2.4265	2.2692	2.0980	1.9004	1.6648	1.3825	1.0523	.6876	.3212
30.0	2.7502	2.5243	2.2899	2.0338	1.7453	1.4177	1.0535	.6703	.3038
35.0	3.0499	2.7527	2.4539	2.1399	1.8006	1.4316	1.0387	.6432	.2824
40.0	3.3166	2.9475	2.5852	2.2155	1.8290	1.4237	1.0084	.6070	.2576
45.0	3.5420	3.1028	2.6797	2.2581	1.8298	1.3944	.9635	.5630	.2303
50.0	3.7194	3.2138	2.7345	2.2667	1.8027	1.3444	.9053	.5125	.2012
55.0	3.8434	3.2772	2.7480	2.2408	1.7488	1.2753	.8356	.4569	.1712
60.0	3.9102	3.2910	2.7198	2.1812	1.6695	1.1893	.7566	.3980	.1413
65.0	3.9177	3.2548	2.6506	2.0899	1.5674	1.0888	.6707	.3376	.1123
70.0	3.8658	3.1697	2.5427	1.9695	1.4455	.9770	.5803	.2774	.0852
75.0	3.7560	3.0384	2.3993	1.8237	1.3075	.8573	.4884	.2194	.0607
80.0	3.5917	2.8648	2.2248	1.6569	1.1577	.7333	.3977	.1653	.0396
85.0	3.3779	2.6541	2.0244	1.4743	1.0005	.6088	.3109	.1167	.0225

TABLE III.- CONTINUED

(a) C_N. Concluded.

$\phi_1 = 150^\circ$; $\phi_2 = 210^\circ$; $\beta = 5^\circ$

θ_{xy}, deg / α, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.1440	.1717	.2099	.2507	.3354	.4218	.5092	.5970	.6844	.7701
2.0	.2941	.2807	.3050	.3388	.4157	.4974	.5811	.6655	.7495	.8313
4.0	.7557	.5789	.5482	.5538	.6011	.6662	.7380	.8124	.8869	.9591
6.0	1.4308	.9827	.8606	.8199	.8191	.8579	.9117	.9717	1.0335	1.0935
8.0	2.3160	1.4900	1.2409	1.1357	1.0684	1.0714	1.1012	1.1427	1.1886	1.2339
10.0	3.4071	2.0985	1.6872	1.4998	1.3479	1.3057	1.3057	1.3246	1.3515	1.3796
12.0	4.6988	2.8051	2.1973	1.9104	1.6562	1.5598	1.5242	1.5165	1.5214	1.5299
15.0	6.9982	4.0413	3.0765	2.6089	2.1694	1.9750	1.8758	1.8209	1.7874	1.7623
20.0	11.7310	6.5372	4.8213	3.9741	3.1457	2.7468	2.5157	2.3643	2.2535	2.1620
25.0	17.4615	9.5103	6.8689	5.5539	4.2471	3.5976	3.2061	2.9384	2.7357	2.5665
30.0	24.0157	12.8702	9.1568	7.3002	5.4401	4.5015	3.9258	3.5257	3.2192	2.9636
35.0	31.1945	16.5149	11.6157	9.1601	6.6886	5.4312	4.6532	4.1083	3.6894	3.3412
40.0	38.7797	20.3337	14.1708	11.0770	7.9545	6.3583	5.3659	4.6685	4.1320	3.6878
45.0	46.5408	24.2105	16.7444	12.9927	9.1994	7.2547	6.0425	5.1893	4.5336	3.9929
50.0	54.2420	28.0275	19.2583	14.8490	10.3855	8.0932	6.6624	5.6550	4.8819	4.2472
55.0	61.6494	31.6687	21.6363	16.5894	11.4767	8.8483	7.2066	6.0512	5.1664	4.4430
60.0	68.5378	35.0236	23.8060	18.1611	12.4399	9.4970	7.6587	6.3661	5.3784	4.5743
65.0	74.6980	37.9901	25.7014	19.5163	13.2458	10.0196	8.0050	6.5900	5.5115	4.6372
70.0	79.9428	40.4781	27.2651	20.6139	13.8699	10.4003	8.2348	6.7162	5.5617	4.6297
75.0	84.1128	42.4121	28.4495	21.4205	14.2933	10.6274	8.3413	6.7407	5.5274	4.5521
80.0	87.0813	43.7332	29.2186	21.9116	14.5031	10.6941	8.3212	6.6629	5.4096	4.4067
85.0	88.7581	44.4013	29.5490	22.0723	14.4930	10.5984	8.1752	6.4851	5.2119	4.1979

θ_{xy}, deg / α, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	.8516	.9250	.9841	1.0194	1.0176	.9617	.8340	.6230	.3347
2.0	.9085	.9768	1.0300	1.0586	1.0491	.9848	.8485	.6300	.3364
4.0	1.0259	1.0829	1.1232	1.1372	1.1115	1.0299	.8765	.6429	.3392
6.0	1.1479	1.1916	1.2175	1.2157	1.1730	1.0735	.9027	.6543	.3412
8.0	1.2737	1.3025	1.3126	1.2939	1.2331	1.1153	.9270	.6643	.3423
10.0	1.4029	1.4150	1.4079	1.3712	1.2918	1.1552	.9494	.6727	.3427
12.0	1.5347	1.5286	1.5030	1.4473	1.3485	1.1929	.9697	.6795	.3422
15.0	1.7359	1.6997	1.6442	1.5584	1.4296	1.2450	.9961	.6866	.3399
20.0	2.0755	1.9826	1.8721	1.7326	1.5516	1.3185	1.0285	.6901	.3319
25.0	2.4112	2.2548	2.0847	1.8883	1.6542	1.3736	1.0455	.6832	.3191
30.0	2.7328	2.5083	2.2753	2.0209	1.7342	1.4086	1.0467	.6660	.3018
35.0	3.0306	2.7353	2.4383	2.1263	1.7891	1.4224	1.0321	.6390	.2805
40.0	3.2955	2.9288	2.5688	2.2014	1.8174	1.4146	1.0019	.6032	.2560
45.0	3.5195	3.0831	2.6627	2.2438	1.8181	1.3855	.9573	.5594	.2288
50.0	3.6958	3.1934	2.7171	2.2522	1.7913	1.3358	.8995	.5092	.1999
55.0	3.8190	3.2563	2.7305	2.2265	1.7376	1.2672	.8303	.4540	.1701
60.0	3.8853	3.2700	2.7025	2.1674	1.6589	1.1817	.7518	.3955	.1404
65.0	3.8928	3.2341	2.6338	2.0766	1.5574	1.0819	.6664	.3354	.1116
70.0	3.8413	3.1496	2.5266	1.9570	1.4363	.9708	.5766	.2756	.0846
75.0	3.7322	3.0191	2.3841	1.8121	1.2992	.8519	.4853	.2180	.0603
80.0	3.5689	2.8466	2.2107	1.6464	1.1503	.7287	.3951	.1642	.0393
85.0	3.3564	2.6372	2.0116	1.4650	.9941	.6049	.3089	.1159	.0224

$\phi_1 = 150^\circ$; $\phi_2 = 210^\circ$; $\beta = 15^\circ$

θ_{xy}, deg / α, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.1713	.1793	.2092	.2446	.3211	.4007	.4819	.5638	.6455	.7256
2.0	.3124	.2818	.2986	.3273	.3965	.4718	.5495	.6282	.7066	.7831
4.0	.7464	.5622	.5272	.5295	.5709	.6305	.6970	.7663	.8358	.9033
6.0	1.3811	.9418	.8210	.7796	.7758	.8107	.8603	.9160	.9736	1.0296
8.0	2.2133	1.4188	1.1785	1.0766	1.0102	1.0114	1.0385	1.0768	1.1195	1.1616
10.0	3.2391	1.9908	1.5981	1.4189	1.2730	1.2318	1.2308	1.2478	1.2726	1.2986
12.0	4.4535	2.6551	2.0776	1.8049	1.5628	1.4706	1.4362	1.4282	1.4323	1.4399
15.0	6.6153	3.8173	2.9042	2.4616	2.0453	1.8610	1.7667	1.7144	1.6824	1.6584
20.0	11.0648	6.1638	4.5447	3.7451	2.9632	2.5866	2.3684	2.2254	2.1207	2.0342
25.0	16.4524	8.9590	6.4697	5.2303	3.9986	3.3864	3.0174	2.7651	2.5739	2.4145
30.0	22.6144	12.1179	8.6207	6.8722	5.1203	4.2363	3.6941	3.3172	3.0285	2.7878
35.0	29.3635	15.5445	10.9324	8.6208	6.2940	5.1103	4.3779	3.8649	3.4706	3.1428
40.0	36.4948	19.1347	13.3346	10.4229	7.4842	5.9820	5.0480	4.3916	3.8867	3.4687
45.0	43.7914	22.7795	15.7542	12.2240	8.6546	6.8247	5.6841	4.8813	4.2643	3.7555
50.0	51.0318	26.3681	18.1177	13.9691	9.7697	7.6130	6.2668	5.3190	4.5917	3.9946
55.0	57.9959	29.7914	20.3533	15.6054	10.7956	8.3229	6.7785	5.6916	4.8592	4.1787
60.0	64.4720	32.9455	22.3931	17.0831	11.7012	8.9328	7.2036	5.9876	5.0586	4.3021
65.0	70.2636	35.7344	24.1752	18.3572	12.4588	9.4241	7.5291	6.1981	5.1837	4.3612
70.0	75.1945	38.0736	25.6453	19.3891	13.0456	9.7820	7.7452	6.3167	5.2308	4.3542
75.0	79.1149	39.8918	26.7588	20.1474	13.4437	9.9956	7.8453	6.3398	5.1986	4.2812
80.0	81.9058	41.1338	27.4818	20.6091	13.6409	10.0583	7.8264	6.2666	5.0878	4.1445
85.0	83.4823	41.7620	27.7925	20.7602	13.6314	9.9683	7.6891	6.0995	4.9020	3.9483

θ_{xy}, deg / α, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	.8019	.8706	.9259	.9589	.9570	.9043	.7842	.5857	.3146
2.0	.8553	.9193	.9691	.9957	.9866	.9260	.7979	.5923	.3162
4.0	.9658	1.0190	1.0567	1.0696	1.0453	.9685	.8241	.6044	.3189
6.0	1.0804	1.1212	1.1454	1.1435	1.1031	1.0095	.8487	.6152	.3208
8.0	1.1987	1.2255	1.2347	1.2169	1.1597	1.0488	.8716	.6245	.3219
10.0	1.3202	1.3313	1.3243	1.2896	1.2148	1.0862	.8927	.6324	.3222
12.0	1.4441	1.4380	1.4138	1.3612	1.2682	1.1217	.9118	.6388	.3217
15.0	1.6333	1.5990	1.5466	1.4657	1.3444	1.1707	.9366	.6455	.3195
20.0	1.9525	1.8649	1.7608	1.6294	1.4591	1.2398	.9670	.6489	.3121
25.0	2.2681	2.1209	1.9606	1.7758	1.5555	1.2916	.9831	.6423	.3000
30.0	2.5705	2.3592	2.1399	1.9005	1.6307	1.3245	.9842	.6262	.2838
35.0	2.8505	2.5725	2.2931	1.9996	1.6824	1.3375	.9704	.6008	.2638
40.0	3.0995	2.7545	2.4158	2.0701	1.7090	1.3302	.9423	.5671	.2406
45.0	3.3101	2.8995	2.5040	2.1100	1.7096	1.3028	.9001	.5260	.2151
50.0	3.4759	3.0032	2.5552	2.1180	1.6844	1.2561	.8458	.4788	.1879
55.0	3.5917	3.0624	2.5678	2.0938	1.6340	1.1916	.7807	.4269	.1600
60.0	3.6541	3.0753	2.5415	2.0382	1.5600	1.1112	.7069	.3718	.1320
65.0	3.6611	3.0415	2.4769	1.9528	1.4646	1.0173	.6266	.3154	.1049
70.0	3.6126	2.9621	2.3761	1.8404	1.3507	.9129	.5422	.2592	.0796
75.0	3.5101	2.8394	2.2421	1.7042	1.2218	.8011	.4563	.2050	.0567
80.0	3.3566	2.6772	2.0791	1.5484	1.0818	.6852	.3716	.1544	.0370
85.0	3.1568	2.4804	1.8919	1.3778	.9350	.5689	.2905	.1090	.0210

TABLE III.- CONTINUED

(b) C_A

$\phi_1 = 0^0$; $\phi_2 = 360^0$; $\beta = 0^0$

θ_{xy}, deg / α, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.0023	.0080	.0175	.0309	.0691	.1228	.1922	.2776	.3793	.4975
2.0	.0035	.0092	.0187	.0321	.0702	.1239	.1932	.2785	.3800	.4981
4.0	.0073	.0138	.0235	.0368	.0747	.1281	.1970	.2818	.3827	.5001
6.0	.0127	.0204	.0309	.0445	.0822	.1350	.2033	.2873	.3873	.5035
8.0	.0197	.0287	.0403	.0546	.0926	.1447	.2121	.2950	.3936	.5083
10.0	.0283	.0386	.0512	.0664	.1054	.1571	.2233	.3048	.4017	.5144
12.0	.0383	.0499	.0636	.0798	.1200	.1719	.2370	.3167	.4115	.5218
15.0	.0561	.0694	.0848	.1024	.1447	.1974	.2615	.3383	.4294	.5352
20.0	.0924	.1084	.1263	.1460	.1915	.2458	.3093	.3828	.4669	.5634
25.0	.1360	.1543	.1742	.1957	.2437	.2989	.3616	.4321	.5107	.5979
30.0	.1856	.2057	.2271	.2498	.2993	.3545	.4156	.4825	.5554	.6342
35.0	.2397	.2610	.2833	.3067	.3565	.4107	.4690	.5316	.5980	.6680
40.0	.2966	.3185	.3411	.3645	.4135	.4653	.5200	.5771	.6363	.6969
45.0	.3547	.3765	.3988	.4216	.4684	.5168	.5666	.6173	.6684	.7191
50.0	.4121	.4333	.4546	.4761	.5196	.5635	.6074	.6509	.6932	.7334
55.0	.4672	.4870	.5067	.5264	.5655	.6038	.6410	.6784	.7094	.7389
60.0	.5182	.5361	.5537	.5710	.6046	.6365	.6662	.6931	.7165	.7352
65.0	.5636	.5790	.5941	.6085	.6358	.6606	.6823	.7003	.7139	.7220
70.0	.6019	.6146	.6265	.6378	.6582	.6753	.6887	.6977	.7017	.6995
75.0	.6322	.6416	.6502	.6580	.6709	.6801	.6851	.6853	.6800	.6683
80.0	.6534	.6593	.6643	.6684	.6737	.6749	.6717	.6634	.6494	.6290
85.0	.6648	.6671	.6684	.6687	.6664	.6599	.6487	.6326	.6108	.5828

θ_{xy}, deg / α, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	.6326	.7843	.9520	1.1337	1.3253	1.5191	1.7023	1.8570	1.9620
2.0	.6329	.7844	.9518	1.1333	1.3246	1.5180	1.7010	1.8554	1.9602
4.0	.6341	.7847	.9512	1.1315	1.3217	1.5139	1.6956	1.8490	1.9532
6.0	.6363	.7854	.9501	1.1286	1.3167	1.5069	1.6867	1.8384	1.9415
8.0	.6392	.7862	.9486	1.1245	1.3099	1.4972	1.6743	1.8237	1.9251
10.0	.6429	.7873	.9467	1.1193	1.3012	1.4849	1.6584	1.8049	1.9043
12.0	.6475	.7886	.9444	1.1130	1.2906	1.4699	1.6392	1.7821	1.8790
15.0	.6557	.7910	.9402	1.1015	1.2713	1.4426	1.6043	1.7406	1.8331
20.0	.6731	.7960	.9313	1.0774	1.2308	1.3853	1.5309	1.6534	1.7365
25.0	.6946	.8022	.9204	1.0476	1.1808	1.3146	1.4403	1.5459	1.6174
30.0	.7187	.8094	.9078	1.0131	1.1229	1.2327	1.3354	1.4214	1.4794
35.0	.7410	.8163	.8938	.9750	1.0589	1.1421	1.2193	1.2836	1.3267
40.0	.7581	.8188	.8777	.9343	.9906	1.0455	1.0956	1.1367	1.1640
45.0	.7683	.8145	.8561	.8915	.9202	.9459	.9680	.9852	.9962
50.0	.7704	.8024	.8276	.8439	.8494	.8463	.8405	.8338	.8284
55.0	.7637	.7819	.7917	.7907	.7768	.7497	.7167	.6869	.6657
60.0	.7479	.7530	.7485	.7321	.7017	.6566	.6007	.5491	.5130
65.0	.7232	.7161	.6986	.6688	.6249	.5662	.4952	.4246	.3751
70.0	.6900	.6717	.6429	.6019	.5473	.4791	.3995	.3171	.2560
75.0	.6490	.6208	.5825	.5326	.4704	.3963	.3133	.2284	.1593
80.0	.6011	.5647	.5187	.4624	.3954	.3191	.2371	.1562	.0882
85.0	.5477	.5047	.4532	.3928	.3240	.2487	.1714	.0992	.0420

$\phi_1 = 0^0$; $\phi_2 = 360^0$; $\beta = 2^0$

θ_{xy}, deg / α, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.0031	.0088	.0183	.0316	.0698	.1234	.1927	.2779	.3794	.4975
2.0	.0042	.0100	.0195	.0328	.0709	.1245	.1937	.2788	.3801	.4980
4.0	.0079	.0146	.0243	.0375	.0754	.1286	.1975	.2821	.3828	.5000
6.0	.0132	.0211	.0316	.0452	.0828	.1356	.2038	.2876	.3874	.5035
8.0	.0202	.0293	.0409	.0552	.0932	.1453	.2125	.2953	.3937	.5082
10.0	.0287	.0391	.0518	.0670	.1060	.1576	.2238	.3051	.4018	.5143
12.0	.0388	.0504	.0641	.0803	.1206	.1725	.2374	.3170	.4116	.5217
15.0	.0565	.0699	.0853	.1029	.1452	.1979	.2619	.3386	.4295	.5350
20.0	.0927	.1088	.1266	.1464	.1919	.2461	.3096	.3829	.4670	.5632
25.0	.1362	.1546	.1745	.1960	.2440	.2991	.3617	.4322	.5107	.5977
30.0	.1858	.2059	.2273	.2500	.2995	.3547	.4156	.4825	.5553	.6339
35.0	.2398	.2611	.2834	.3068	.3566	.4107	.4690	.5315	.5978	.6677
40.0	.2967	.3186	.3412	.3645	.4135	.4653	.5199	.5769	.6360	.6965
45.0	.3547	.3765	.3988	.4215	.4683	.5167	.5664	.6171	.6681	.7187
50.0	.4120	.4332	.4545	.4760	.5194	.5633	.6071	.6505	.6928	.7329
55.0	.4670	.4868	.5066	.5262	.5652	.6035	.6406	.6760	.7090	.7384
60.0	.5180	.5359	.5535	.5708	.6043	.6362	.6658	.6927	.7160	.7347
65.0	.5633	.5788	.5938	.6082	.6355	.6602	.6819	.6999	.7134	.7215
70.0	.6016	.6142	.6262	.6375	.6578	.6749	.6882	.6973	.7012	.6990
75.0	.6318	.6412	.6498	.6576	.6705	.6797	.6847	.6849	.6795	.6678
80.0	.6530	.6589	.6639	.6680	.6733	.6745	.6712	.6630	.6490	.6285
85.0	.6644	.6667	.6680	.6683	.6660	.6594	.6483	.6322	.6104	.5823

θ_{xy}, deg / α, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	.6323	.7837	.9512	1.1326	1.3239	1.5174	1.7003	1.8547	1.9596
2.0	.6326	.7838	.9510	1.1322	1.3232	1.5163	1.6990	1.8531	1.9578
4.0	.6338	.7842	.9504	1.1304	1.3202	1.5121	1.6936	1.8468	1.9508
6.0	.6360	.7848	.9493	1.1275	1.3153	1.5052	1.6847	1.8362	1.9391
8.0	.6389	.7857	.9478	1.1234	1.3085	1.4955	1.6723	1.8215	1.9228
10.0	.6426	.7867	.9459	1.1182	1.2998	1.4832	1.6565	1.8027	1.9020
12.0	.6472	.7880	.9436	1.1119	1.2892	1.4682	1.6373	1.7800	1.8767
15.0	.6554	.7904	.9394	1.1005	1.2699	1.4410	1.6024	1.7386	1.8309
20.0	.6728	.7954	.9305	1.0763	1.2295	1.3837	1.5291	1.6515	1.7344
25.0	.6942	.8016	.9196	1.0466	1.1796	1.3131	1.4386	1.5441	1.6154
30.0	.7183	.8088	.9070	1.0122	1.1217	1.2313	1.3338	1.4197	1.4776
35.0	.7405	.8157	.8930	.9741	1.0578	1.1408	1.2179	1.2820	1.3251
40.0	.7576	.8181	.8769	.9334	.9896	1.0444	1.0944	1.1354	1.1626
45.0	.7677	.8139	.8554	.8906	.9193	.9449	.9669	.9841	.9950
50.0	.7698	.8018	.8269	.8431	.8486	.8454	.8395	.8328	.8274
55.0	.7631	.7813	.7910	.7899	.7760	.7489	.7160	.6861	.6649
60.0	.7474	.7524	.7479	.7314	.7011	.6560	.6000	.5485	.5124
65.0	.7227	.7155	.6980	.6682	.6243	.5657	.4947	.4241	.3746
70.0	.6895	.6711	.6423	.6013	.5468	.4786	.3991	.3167	.2557
75.0	.6485	.6203	.5820	.5321	.4699	.3959	.3130	.2282	.1592
80.0	.6006	.5643	.5183	.4620	.3951	.3188	.2368	.1561	.0881
85.0	.5473	.5043	.4528	.3925	.3237	.2485	.1712	.0991	.0420

TABLE III.- CONTINUED

(b) C_A. Continued.

$\beta_1 = -90^\circ$; $\beta_2 = 90^\circ$; $\beta = 0^\circ$

α, deg \ θ_{xy}, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.0008	.0051	.0131	.0250	.0603	.1112	.1779	.2606	.3598	.4758
2.0	.0005	.0033	.0099	.0203	.0527	.1007	.1645	.2445	.3410	.4546
4.0	.0002	.0019	.0059	.0133	.0398	.0818	.1397	.2140	.3050	.4135
6.0	.0002	.0013	.0042	.0095	.0299	.0659	.1177	.1860	.2712	.3741
8.0	.0001	.0010	.0032	.0073	.0233	.0530	.0987	.1607	.2398	.3367
10.0	.0001	.0008	.0025	.0059	.0190	.0433	.0826	.1382	.2108	.3014
12.0	.0001	.0006	.0021	.0049	.0160	.0365	.0696	.1185	.1845	.2685
15.0	.0001	.0005	.0016	.0038	.0126	.0291	.0556	.0947	.1503	.2238
20.0	.0000	.0003	.0011	.0027	.0090	.0209	.0402	.0685	.1082	.1631
25.0	.0000	.0002	.0008	.0020	.0066	.0154	.0298	.0511	.0807	.1207
30.0	.0000	.0002	.0006	.0015	.0049	.0115	.0223	.0383	.0606	.0907
35.0	.0000	.0001	.0005	.0011	.0036	.0085	.0166	.0286	.0453	.0679
40.0	.0000	.0001	.0003	.0008	.0026	.0063	.0122	.0210	.0334	.0500
45.0	.0000	.0001	.0002	.0006	.0019	.0045	.0087	.0151	.0240	.0360
50.0	.0000	.0000	.0002	.0004	.0013	.0031	.0061	.0105	.0167	.0251
55.0	.0000	.0000	.0001	.0003	.0009	.0021	.0041	.0070	.0112	.0168
60.0	.0000	.0000	.0001	.0002	.0005	.0013	.0025	.0044	.0070	.0105
65.0	.0000	.0000	.0000	.0001	.0003	.0008	.0015	.0025	.0041	.0061
70.0	.0000	.0000	.0000	.0000	.0002	.0004	.0008	.0013	.0021	.0031
75.0	.0000	.0000	.0000	.0000	.0001	.0002	.0003	.0005	.0009	.0013
80.0	.0000	.0000	.0000	.0000	.0000	.0000	.0001	.0002	.0003	.0004
85.0	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000

α, deg \ θ_{xy}, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	.6089	.7591	.9259	1.1074	1.2999	1.4958	1.6827	1.8426	1.9544
2.0	.5856	.7340	.8996	1.0807	1.2737	1.4714	1.6617	1.8267	1.9450
4.0	.5397	.6843	.8469	1.0266	1.2201	1.4208	1.6172	1.7918	1.9229
6.0	.4952	.6353	.7944	.9718	1.1650	1.3680	1.5696	1.7530	1.8962
8.0	.4522	.5872	.7422	.9167	1.1088	1.3130	1.5191	1.7104	1.8651
10.0	.4109	.5404	.6905	.8614	1.0516	1.2563	1.4659	1.6643	1.8298
12.0	.3716	.4950	.6397	.8063	.9938	1.1980	1.4102	1.6149	1.7904
15.0	.3166	.4300	.5657	.7245	.9064	1.1084	1.3228	1.5351	1.7242
20.0	.2371	.3320	.4498	.5927	.7617	.9556	1.1690	1.3893	1.5965
25.0	.1749	.2492	.3466	.4700	.6218	.8026	1.0090	1.2311	1.4505
30.0	.1306	.1842	.2591	.3601	.4910	.6539	.8478	1.0655	1.2908
35.0	.0976	.1368	.1899	.2664	.3732	.5140	.6902	.8974	1.1221
40.0	.0720	.1007	.1388	.1918	.2720	.3873	.5411	.7320	.9495
45.0	.0519	.0726	.0997	.1365	.1905	.2775	.4050	.5743	.7784
50.0	.0362	.0506	.0695	.0947	.1304	.1881	.2860	.4291	.6139
55.0	.0242	.0338	.0463	.0631	.0863	.1216	.1877	.3007	.4611
60.0	.0152	.0212	.0291	.0396	.0540	.0753	.1131	.1932	.3244
65.0	.0088	.0123	.0169	.0229	.0311	.0432	.0634	.1098	.2082
70.0	.0045	.0063	.0086	.0117	.0159	.0220	.0320	.0529	.1160
75.0	.0019	.0027	.0036	.0049	.0067	.0093	.0134	.0215	.0504
80.0	.0006	.0008	.0011	.0015	.0020	.0027	.0039	.0063	.0137
85.0	.0001	.0001	.0001	.0002	.0002	.0003	.0005	.0008	.0016

$\beta_1 = -90^\circ$; $\beta_2 = 90^\circ$; $\beta = 2^\circ$

α, deg \ θ_{xy}, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.0016	.0059	.0139	.0258	.0610	.1118	.1784	.2610	.3600	.4758
2.0	.0011	.0041	.0107	.0211	.0534	.1015	.1650	.2448	.3412	.4546
4.0	.0007	.0025	.0067	.0141	.0405	.0824	.1402	.2144	.3053	.4135
6.0	.0005	.0018	.0048	.0102	.0307	.0665	.1183	.1864	.2715	.3742
8.0	.0004	.0014	.0037	.0080	.0240	.0537	.0992	.1611	.2401	.3368
10.0	.0003	.0011	.0030	.0065	.0197	.0440	.0832	.1387	.2112	.3016
12.0	.0002	.0009	.0025	.0054	.0166	.0372	.0702	.1190	.1849	.2687
15.0	.0002	.0007	.0020	.0043	.0132	.0298	.0562	.0953	.1507	.2241
20.0	.0001	.0005	.0014	.0030	.0094	.0215	.0408	.0691	.1086	.1635
25.0	.0001	.0004	.0010	.0022	.0070	.0159	.0303	.0516	.0811	.1211
30.0	.0001	.0003	.0008	.0017	.0052	.0119	.0227	.0387	.0610	.0911
35.0	.0001	.0002	.0006	.0013	.0039	.0089	.0170	.0290	.0457	.0682
40.0	.0001	.0002	.0005	.0009	.0029	.0065	.0125	.0213	.0337	.0504
45.0	.0000	.0001	.0003	.0007	.0021	.0047	.0090	.0154	.0243	.0363
50.0	.0000	.0001	.0002	.0005	.0015	.0033	.0063	.0108	.0170	.0254
55.0	.0000	.0001	.0002	.0004	.0010	.0022	.0042	.0072	.0114	.0170
60.0	.0000	.0001	.0001	.0002	.0007	.0014	.0027	.0046	.0072	.0107
65.0	.0000	.0000	.0001	.0002	.0004	.0009	.0016	.0027	.0042	.0063
70.0	.0000	.0000	.0001	.0001	.0002	.0005	.0009	.0014	.0022	.0033
75.0	.0000	.0000	.0000	.0001	.0001	.0002	.0004	.0006	.0010	.0014
80.0	.0000	.0000	.0000	.0000	.0001	.0001	.0001	.0002	.0003	.0005
85.0	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0001	.0001

α, deg \ θ_{xy}, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	.6086	.7586	.9251	1.1063	1.2985	1.4941	1.6807	1.8404	1.9520
2.0	.5853	.7335	.8988	1.0797	1.2724	1.4698	1.6597	1.8245	1.9427
4.0	.5396	.6838	.8462	1.0256	1.2188	1.4192	1.6154	1.7897	1.9205
6.0	.4951	.6349	.7937	.9709	1.1638	1.3664	1.5678	1.7509	1.8939
8.0	.4521	.5869	.7416	.9159	1.1076	1.3115	1.5173	1.7084	1.8628
10.0	.4109	.5401	.6900	.8607	1.0505	1.2549	1.4642	1.6623	1.8276
12.0	.3716	.4948	.6393	.8056	.9927	1.1967	1.4086	1.6130	1.7883
15.0	.3167	.4299	.5663	.7239	.9055	1.1072	1.3213	1.5333	1.7221
20.0	.2373	.3320	.4496	.5923	.7610	.9546	1.1676	1.3876	1.5946
25.0	.1752	.2493	.3465	.4697	.6212	.8017	1.0078	1.2296	1.4488
30.0	.1309	.1843	.2591	.3600	.4906	.6532	.8468	1.0642	1.2892
35.0	.0979	.1371	.1900	.2664	.3729	.5135	.6895	.8963	1.1207
40.0	.0723	.1010	.1390	.1918	.2719	.3869	.5406	.7311	.9484
45.0	.0522	.0728	.0999	.1366	.1905	.2773	.4046	.5736	.7775
50.0	.0364	.0508	.0697	.0949	.1304	.1880	.2857	.4286	.6132
55.0	.0244	.0340	.0465	.0632	.0863	.1216	.1875	.3004	.4605
60.0	.0154	.0214	.0293	.0397	.0541	.0754	.1130	.1930	.3240
65.0	.0090	.0124	.0170	.0230	.0312	.0433	.0634	.1097	.2080
70.0	.0046	.0064	.0087	.0118	.0160	.0221	.0320	.0529	.1158
75.0	.0020	.0028	.0037	.0050	.0068	.0093	.0134	.0215	.0504
80.0	.0006	.0009	.0011	.0015	.0020	.0028	.0040	.0063	.0137
85.0	.0001	.0001	.0002	.0002	.0003	.0004	.0005	.0008	.0016

TABLE III.- CONTINUED

(b) C_A. Continued.

$\emptyset_1 = 0^o$; $\emptyset_2 = 360^o$; $\beta = 5^o$

α, deg \ θ_{xy}, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.0067	.0130	.0224	.0356	.0734	.1265	.1951	.2796	.3801	.4971
2.0	.0076	.0141	.0236	.0368	.0745	.1275	.1961	.2804	.3808	.4976
4.0	.0109	.0182	.0282	.0414	.0790	.1317	.1999	.2837	.3835	.4997
6.0	.0160	.0244	.0353	.0490	.0864	.1386	.2061	.2892	.3881	.5031
8.0	.0228	.0323	.0442	.0587	.0966	.1482	.2149	.2968	.3944	.5078
10.0	.0312	.0419	.0548	.0702	.1092	.1605	.2260	.3065	.4024	.5138
12.0	.0410	.0529	.0669	.0832	.1236	.1752	.2395	.3184	.4121	.5211
15.0	.0586	.0722	.0877	.1054	.1478	.2003	.2638	.3398	.4299	.5344
20.0	.0945	.1107	.1286	.1484	.1939	.2479	.3110	.3838	.4671	.5624
25.0	.1377	.1561	.1760	.1975	.2455	.3004	.3626	.4325	.5104	.5967
30.0	.1869	.2070	.2284	.2511	.3005	.3554	.4160	.4824	.5546	.6326
35.0	.2405	.2618	.2841	.3074	.3571	.4109	.4688	.5309	.5967	.6659
40.0	.2970	.3189	.3414	.3647	.4134	.4650	.5192	.5759	.6345	.6945
45.0	.3546	.3764	.3986	.4213	.4678	.5160	.5654	.6157	.6663	.7164
50.0	.4116	.4327	.4539	.4753	.5185	.5621	.6057	.6488	.6907	.7304
55.0	.4662	.4860	.5056	.5252	.5640	.6020	.6389	.6740	.7067	.7358
60.0	.5168	.5346	.5522	.5694	.6028	.6344	.6638	.6905	.7135	.7319
65.0	.5618	.5773	.5922	.6066	.6337	.6582	.6797	.6975	.7109	.7187
70.0	.5999	.6125	.6244	.6356	.6558	.6727	.6860	.6948	.6986	.6963
75.0	.6299	.6393	.6478	.6556	.6684	.6775	.6823	.6824	.6770	.6652
80.0	.6509	.6568	.6618	.6658	.6711	.6723	.6689	.6606	.6466	.6261
85.0	.6623	.6645	.6658	.6662	.6638	.6572	.6461	.6299	.6081	.5801

α, deg \ θ_{xy}, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	.6307	.7808	.9468	1.1268	1.3165	1.5084	1.6899	1.8431	1.9471
2.0	.6310	.7809	.9467	1.1263	1.3158	1.5073	1.6885	1.8415	1.9454
4.0	.6323	.7813	.9460	1.1246	1.3128	1.5032	1.6832	1.8352	1.9384
6.0	.6344	.7819	.9450	1.1217	1.3079	1.4963	1.6744	1.8247	1.9268
8.0	.6373	.7827	.9435	1.1176	1.3012	1.4867	1.6621	1.8101	1.9106
10.0	.6410	.7838	.9416	1.1125	1.2925	1.4744	1.6463	1.7914	1.8899
12.0	.6455	.7851	.9393	1.1062	1.2820	1.4595	1.6273	1.7688	1.8648
15.0	.6537	.7875	.9351	1.0948	1.2628	1.4325	1.5926	1.7276	1.8192
20.0	.6710	.7925	.9263	1.0708	1.2226	1.3756	1.5197	1.6411	1.7234
25.0	.6922	.7986	.9155	1.0413	1.1730	1.3054	1.4299	1.5344	1.6052
30.0	.7162	.8057	.9029	1.0071	1.1156	1.2241	1.3257	1.4108	1.4682
35.0	.7381	.8125	.8891	.9692	1.0520	1.1342	1.2106	1.2740	1.3167
40.0	.7550	.8149	.8731	.9289	.9843	1.0384	1.0878	1.1283	1.1552
45.0	.7649	.8106	.8516	.8863	.9145	.9395	.9612	.9780	.9887
50.0	.7669	.7984	.8232	.8390	.8442	.8407	.8346	.8277	.8222
55.0	.7601	.7780	.7874	.7861	.7720	.7448	.7118	.6819	.6607
60.0	.7444	.7492	.7445	.7279	.6975	.6524	.5966	.5452	.5092
65.0	.7198	.7124	.6948	.6650	.6212	.5627	.4919	.4216	.3723
70.0	.6867	.6682	.6394	.5985	.5441	.4761	.3969	.3149	.2541
75.0	.6458	.6177	.5794	.5296	.4677	.3939	.3113	.2269	.1582
80.0	.5982	.5619	.5160	.4599	.3932	.3173	.2356	.1552	.0875
85.0	.5451	.5022	.4509	.3907	.3222	.2473	.1704	.0986	.0417

$\emptyset_1 = 0^o$; $\emptyset_2 = 360^o$; $\beta = 15^o$

α, deg \ θ_{xy}, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.0318	.0429	.0558	.0706	.1069	.1552	.2178	.2949	.3867	.4937
2.0	.0325	.0436	.0566	.0715	.1079	.1562	.2187	.2957	.3874	.4942
4.0	.0350	.0465	.0598	.0750	.1120	.1601	.2223	.2988	.3899	.4961
6.0	.0393	.0512	.0650	.0807	.1185	.1666	.2281	.3039	.3942	.4993
8.0	.0452	.0577	.0721	.0884	.1272	.1756	.2364	.3111	.4001	.5038
10.0	.0526	.0659	.0809	.0978	.1377	.1868	.2468	.3202	.4077	.5095
12.0	.0616	.0756	.0913	.1089	.1499	.1997	.2595	.3313	.4168	.5163
15.0	.0776	.0928	.1097	.1282	.1710	.2217	.2815	.3515	.4335	.5289
20.0	.1108	.1279	.1466	.1667	.2120	.2642	.3238	.3916	.4683	.5552
25.0	.1510	.1699	.1900	.2115	.2586	.3115	.3705	.4358	.5079	.5870
30.0	.1970	.2171	.2384	.2608	.3089	.3616	.4189	.4811	.5480	.6196
35.0	.2472	.2682	.2901	.3129	.3609	.4124	.4672	.5252	.5862	.6498
40.0	.3001	.3215	.3435	.3661	.4130	.4621	.5132	.5661	.6204	.6755
45.0	.3541	.3753	.3968	.4187	.4633	.5090	.5555	.6024	.6491	.6949
50.0	.4076	.4280	.4484	.4690	.5103	.5516	.5924	.6324	.6709	.7070
55.0	.4588	.4778	.4967	.5155	.5524	.5883	.6227	.6552	.6849	.7111
60.0	.5063	.5234	.5402	.5567	.5883	.6180	.6454	.6697	.6904	.7065
65.0	.5485	.5633	.5776	.5913	.6169	.6398	.6595	.6755	.6870	.6931
70.0	.5843	.5963	.6076	.6182	.6372	.6528	.6647	.6722	.6747	.6711
75.0	.6124	.6213	.6294	.6367	.6486	.6567	.6606	.6598	.6535	.6410
80.0	.6320	.6376	.6423	.6461	.6507	.6512	.6473	.6385	.6241	.6035
85.0	.6426	.6447	.6459	.6461	.6434	.6366	.6252	.6089	.5872	.5594

α, deg \ θ_{xy}, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	.6161	.7539	.9065	1.0722	1.2473	1.4246	1.5926	1.7345	1.8311
2.0	.6164	.7540	.9064	1.0718	1.2466	1.4236	1.5913	1.7331	1.8294
4.0	.6176	.7544	.9058	1.0702	1.2438	1.4197	1.5863	1.7271	1.8228
6.0	.6196	.7549	.9048	1.0674	1.2392	1.4132	1.5780	1.7173	1.8119
8.0	.6223	.7557	.9034	1.0636	1.2328	1.4042	1.5664	1.7035	1.7967
10.0	.6258	.7567	.9016	1.0588	1.2247	1.3926	1.5516	1.6860	1.7772
12.0	.6301	.7579	.8994	1.0529	1.2148	1.3786	1.5337	1.6647	1.7537
15.0	.6378	.7602	.8955	1.0422	1.1968	1.3532	1.5011	1.6260	1.7108
20.0	.6540	.7649	.8872	1.0196	1.1590	1.2997	1.4326	1.5446	1.6207
25.0	.6740	.7706	.8770	.9919	1.1124	1.2338	1.3481	1.4443	1.5095
30.0	.6960	.7773	.8652	.9597	1.0584	1.1573	1.2502	1.3281	1.3808
35.0	.7157	.7833	.8522	.9241	.9986	1.0728	1.1419	1.1996	1.2384
40.0	.7305	.7867	.8367	.8861	.9350	.9827	1.0265	1.0625	1.0866
45.0	.7389	.7797	.8159	.8458	.8693	.8898	.9075	.9212	.9300
50.0	.7397	.7674	.7884	.8008	.8030	.7969	.7884	.7799	.7734
55.0	.7323	.7473	.7540	.7505	.7348	.7067	.6730	.6429	.6216
60.0	.7166	.7193	.7128	.6951	.6642	.6196	.5647	.5143	.4792
65.0	.6925	.6838	.6653	.6352	.5919	.5347	.4662	.3981	.3504
70.0	.6605	.6415	.6124	.5720	.5188	.4529	.3766	.2978	.2393
75.0	.6213	.5931	.5552	.5065	.4463	.3752	.2958	.2150	.1492
80.0	.5757	.5398	.4949	.4402	.3757	.3026	.2242	.1474	.0828
85.0	.5249	.4829	.4329	.3745	.3083	.2363	.1625	.0939	.0396

TABLE III.- CONTINUED

(b) C_A. Continued.

$\beta_1 = 90^0$; $\beta_2 = 270^0$; $\beta = 0^0$

α, deg \ θ_{xy}, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.0038	.0110	.0220	.0368	.0779	.1344	.2066	.2946	.3988	.5193
2.0	.0065	.0151	.0276	.0438	.0878	.1471	.2219	.3124	.4189	.5415
4.0	.0143	.0258	.0411	.0602	.1097	.1743	.2543	.3496	.4604	.5868
6.0	.0252	.0396	.0577	.0796	.1344	.2042	.2889	.3886	.5033	.6330
8.0	.0393	.0565	.0773	.1018	.1618	.2364	.3255	.4293	.5475	.6799
10.0	.0565	.0763	.0998	.1269	.1918	.2709	.3641	.4714	.5926	.7273
12.0	.0768	.0991	.1251	.1546	.2241	.3074	.4044	.5148	.6386	.7750
15.0	.1121	.1384	.1680	.2009	.2768	.3657	.4675	.5819	.7085	.8465
20.0	.1847	.2165	.2514	.2893	.3741	.4706	.5784	.6970	.8257	.9636
25.0	.2719	.3084	.3476	.3894	.4809	.5823	.6933	.8131	.9408	1.0751
30.0	.3711	.4112	.4536	.4982	.5938	.6976	.8088	.9268	1.0503	1.1777
35.0	.4793	.5218	.5662	.6123	.7094	.8128	.9215	1.0346	1.1507	1.2681
40.0	.5932	.6369	.6819	.7282	.8243	.9244	1.0278	1.1332	1.2392	1.3437
45.0	.7094	.7530	.7974	.8426	.9349	1.0292	1.1245	1.2196	1.3129	1.4022
50.0	.8243	.8665	.9090	.9518	1.0379	1.1238	1.2087	1.2912	1.3694	1.4417
55.0	.9344	.9739	1.0134	1.0526	1.1301	1.2055	1.2779	1.3458	1.4077	1.4611
60.0	1.0383	1.0721	1.1074	1.1419	1.2087	1.2717	1.3298	1.3818	1.4259	1.4598
65.0	1.1271	1.1581	1.1881	1.2170	1.2714	1.3204	1.3631	1.3981	1.4238	1.4379
70.0	1.2039	1.2291	1.2531	1.2756	1.3162	1.3502	1.3766	1.3942	1.4013	1.3959
75.0	1.2644	1.2832	1.3004	1.3159	1.3418	1.3601	1.3699	1.3701	1.3591	1.3352
80.0	1.3067	1.3185	1.3286	1.3367	1.3474	1.3498	1.3433	1.3266	1.2986	1.2576
85.0	1.3296	1.3341	1.3368	1.3374	1.3328	1.3197	1.2975	1.2652	1.2216	1.1655

α, deg \ θ_{xy}, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	.6562	.8095	.9781	1.1601	1.3508	1.5424	1.7220	1.8713	1.9696
2.0	.6802	.8347	1.0041	1.1859	1.3755	1.5647	1.7402	1.8840	1.9754
4.0	.7286	.8852	1.0554	1.2365	1.4232	1.6069	1.7740	1.9062	1.9835
6.0	.7773	.9355	1.1059	1.2854	1.4685	1.6459	1.8038	1.9239	1.9867
8.0	.8262	.9852	1.1551	1.3324	1.5110	1.6815	1.8295	1.9370	1.9852
10.0	.8749	1.0342	1.2029	1.3772	1.5507	1.7134	1.8510	1.9455	1.9788
12.0	.9234	1.0822	1.2491	1.4197	1.5874	1.7417	1.8682	1.9492	1.9676
15.0	.9949	1.1520	1.3147	1.4785	1.6361	1.7768	1.8858	1.9461	1.9420
20.0	1.1092	1.2601	1.4128	1.5621	1.6998	1.8149	1.8928	1.9176	1.8765
25.0	1.2142	1.3552	1.4942	1.6252	1.7398	1.8266	1.8716	1.8607	1.7842
30.0	1.3068	1.4346	1.5565	1.6661	1.7549	1.8115	1.8230	1.7773	1.6680
35.0	1.3843	1.4957	1.5977	1.6835	1.7446	1.7701	1.7484	1.6698	1.5314
40.0	1.4441	1.5368	1.6165	1.6769	1.7093	1.7037	1.6501	1.5414	1.3785
45.0	1.4846	1.5564	1.6125	1.6464	1.6500	1.6143	1.5311	1.3962	1.2140
50.0	1.5045	1.5542	1.5858	1.5930	1.5685	1.5045	1.3949	1.2385	1.0429
55.0	1.5032	1.5301	1.5371	1.5183	1.4673	1.3778	1.2458	1.0731	.8704
60.0	1.4807	1.4848	1.4679	1.4246	1.3495	1.2379	1.0883	.9050	.7017
65.0	1.4377	1.4198	1.3803	1.3147	1.2187	1.0892	.9271	.7394	.5419
70.0	1.3765	1.3370	1.2771	1.1920	1.0788	.9362	.7671	.5812	.3960
75.0	1.2960	1.2390	1.1613	1.0602	.9340	.7834	.6133	.4353	.2682
80.0	1.2016	1.1286	1.0364	.9233	.7889	.6355	.4702	.3062	.1626
85.0	1.0953	1.0093	.9063	.7855	.6478	.4971	.3423	.1976	.0824

$\beta_1 = 90^0$; $\beta_2 = 270^0$; $\beta = 2^0$

α, deg \ θ_{xy}, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.0046	.0118	.0227	.0375	.0786	.1350	.2071	.2949	.3989	.5192
2.0	.0073	.0159	.0283	.0446	.0884	.1476	.2223	.3127	.4190	.5414
4.0	.0150	.0266	.0419	.0609	.1103	.1749	.2547	.3498	.4604	.5866
6.0	.0260	.0404	.0585	.0803	.1350	.2047	.2889	.3888	.5033	.6328
8.0	.0401	.0572	.0780	.1025	.1624	.2368	.3259	.4294	.5474	.6796
10.0	.0572	.0771	.1005	.1275	.1923	.2713	.3644	.4715	.5925	.7270
12.0	.0773	.0998	.1258	.1552	.2246	.3078	.4046	.5149	.6384	.7746
15.0	.1128	.1390	.1686	.2015	.2772	.3660	.4676	.5818	.7082	.8460
20.0	.1853	.2170	.2519	.2898	.3744	.4707	.5784	.6968	.8253	.9630
25.0	.2724	.3088	.3479	.3897	.4811	.5824	.6932	.8128	.9403	1.0744
30.0	.3715	.4115	.4538	.4983	.5938	.6975	.8086	.9263	1.0496	1.1768
35.0	.4795	.5220	.5663	.6123	.7093	.8125	.9211	1.0340	1.1499	1.2671
40.0	.5933	.6369	.6819	.7281	.8241	.9240	1.0272	1.1324	1.2382	1.3426
45.0	.7093	.7529	.7972	.8423	.9345	1.0287	1.1238	1.2188	1.3119	1.4010
50.0	.8241	.8662	.9087	.9514	1.0374	1.1232	1.2079	1.2903	1.3685	1.4405
55.0	.9340	.9736	1.0130	1.0521	1.1294	1.2048	1.2770	1.3449	1.4066	1.4599
60.0	1.0359	1.0716	1.1068	1.1413	1.2080	1.2709	1.3289	1.3808	1.4248	1.4586
65.0	1.1265	1.1575	1.1874	1.2163	1.2706	1.3195	1.3621	1.3971	1.4226	1.4366
70.0	1.2032	1.2285	1.2523	1.2748	1.3153	1.3493	1.3756	1.3931	1.4002	1.3947
75.0	1.2636	1.2824	1.2996	1.3151	1.3409	1.3592	1.3689	1.3691	1.3581	1.3341
80.0	1.3059	1.3177	1.3277	1.3359	1.3465	1.3489	1.3423	1.3257	1.2977	1.2566
85.0	1.3288	1.3333	1.3359	1.3366	1.3320	1.3189	1.2966	1.2643	1.2207	1.1646

α, deg \ θ_{xy}, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	.6559	.8089	.9773	1.1589	1.3494	1.5407	1.7199	1.8691	1.9672
2.0	.6798	.8341	1.0032	1.1847	1.3740	1.5629	1.7382	1.8818	1.9730
4.0	.7281	.8845	1.0545	1.2352	1.4217	1.6051	1.7719	1.9039	1.9811
6.0	.7768	.9347	1.1048	1.2841	1.4669	1.6440	1.8016	1.9216	1.9843
8.0	.8256	.9844	1.1540	1.3310	1.5094	1.6795	1.8273	1.9347	1.9828
10.0	.8744	1.0334	1.2018	1.3758	1.5490	1.7115	1.8488	1.9431	1.9764
12.0	.9227	1.0813	1.2479	1.4182	1.5856	1.7397	1.8660	1.9469	1.9652
15.0	.9942	1.1510	1.3135	1.4770	1.6343	1.7748	1.8836	1.9438	1.9396
20.0	1.1083	1.2589	1.4114	1.5604	1.6979	1.8128	1.8906	1.9153	1.8742
25.0	1.2132	1.3540	1.4927	1.6235	1.7379	1.8245	1.8694	1.8585	1.7821
30.0	1.3057	1.4333	1.5549	1.6644	1.7529	1.8094	1.8209	1.7752	1.6660
35.0	1.3831	1.4943	1.5960	1.6817	1.7427	1.7681	1.7464	1.6678	1.5295
40.0	1.4429	1.5353	1.6149	1.6751	1.7074	1.7018	1.6482	1.5396	1.3768
45.0	1.4833	1.5550	1.6109	1.6446	1.6481	1.6124	1.5293	1.3946	1.2126
50.0	1.5032	1.5527	1.5842	1.5913	1.5668	1.5028	1.3933	1.2370	1.0416
55.0	1.5018	1.5286	1.5355	1.5167	1.4657	1.3762	1.2444	1.0718	.8693
60.0	1.4793	1.4834	1.4664	1.4231	1.3481	1.2366	1.0870	.9040	.7008
65.0	1.4364	1.4185	1.3790	1.3134	1.2174	1.0880	.9260	.7385	.5413
70.0	1.3743	1.3358	1.2759	1.1908	1.0776	.9351	.7663	.5806	.3955
75.0	1.2949	1.2379	1.1602	1.0592	.9331	.7826	.6126	.4349	.2679
80.0	1.2007	1.1277	1.0355	.9224	.7881	.6349	.4697	.3058	.1625
85.0	1.0944	1.0085	.9055	.7848	.6472	.4967	.3419	.1974	.0823

TABLE III.- CONTINUED

(b) C_A. Continued.

$\beta_1 = -90^\circ$; $\beta_2 = 90^\circ$; $\beta = 5^\circ$

α, deg \ θ_{xy}, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.0050	.0101	.0180	.0298	.0647	.1150	.1809	.2627	.3608	.4755
2.0	.0039	.0082	.0148	.0251	.0571	.1045	.1676	.2467	.3422	.4545
4.0	.0027	.0058	.0107	.0182	.0443	.0858	.1430	.2164	.3065	.4137
6.0	.0020	.0044	.0083	.0141	.0345	.0700	.1212	.1887	.2729	.3746
8.0	.0016	.0035	.0067	.0114	.0279	.0572	.1023	.1635	.2417	.3375
10.0	.0013	.0029	.0055	.0095	.0233	.0476	.0863	.1412	.2129	.3025
12.0	.0011	.0025	.0047	.0081	.0199	.0407	.0734	.1217	.1869	.2698
15.0	.0009	.0020	.0038	.0065	.0161	.0330	.0594	.0981	.1529	.2255
20.0	.0006	.0015	.0028	.0048	.0118	.0242	.0436	.0718	.1110	.1652
25.0	.0005	.0011	.0021	.0037	.0089	.0182	.0329	.0541	.0835	.1231
30.0	.0004	.0009	.0017	.0028	.0068	.0139	.0249	.0410	.0632	.0930
35.0	.0003	.0007	.0013	.0022	.0052	.0105	.0189	.0310	.0477	.0701
40.0	.0003	.0006	.0011	.0018	.0040	.0080	.0141	.0231	.0355	.0521
45.0	.0002	.0005	.0009	.0014	.0031	.0060	.0104	.0169	.0259	.0379
50.0	.0002	.0004	.0007	.0011	.0023	.0044	.0075	.0121	.0184	.0268
55.0	.0002	.0003	.0005	.0008	.0017	.0031	.0053	.0084	.0126	.0182
60.0	.0002	.0003	.0004	.0006	.0012	.0022	.0036	.0055	.0082	.0118
65.0	.0001	.0002	.0003	.0005	.0009	.0015	.0023	.0035	.0051	.0071
70.0	.0001	.0002	.0003	.0004	.0006	.0009	.0014	.0020	.0029	.0040
75.0	.0001	.0001	.0002	.0002	.0004	.0006	.0008	.0011	.0015	.0019
80.0	.0001	.0001	.0001	.0002	.0002	.0003	.0004	.0005	.0007	.0008
85.0	.0001	.0001	.0001	.0001	.0001	.0002	.0002	.0002	.0002	.0003

α, deg \ θ_{xy}, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	.6072	.7558	.9209	1.1007	1.2912	1.4852	1.6704	1.8288	1.9396
2.0	.5841	.7310	.8948	1.0741	1.2652	1.4611	1.6496	1.8131	1.9303
4.0	.5386	.6816	.8426	1.0204	1.2120	1.4109	1.6054	1.7784	1.9083
6.0	.4944	.6329	.7904	.9661	1.1574	1.3584	1.5582	1.7399	1.8818
8.0	.4517	.5853	.7386	.9114	1.1015	1.3038	1.5080	1.6977	1.8510
10.0	.4107	.5388	.6873	.8565	1.0448	1.2475	1.4552	1.6519	1.8160
12.0	.3717	.4937	.6369	.8018	.9874	1.1897	1.4000	1.6029	1.7769
15.0	.3171	.4293	.5634	.7207	.9008	1.1008	1.3132	1.5237	1.7112
20.0	.2382	.3319	.4485	.5899	.7571	.9492	1.1606	1.3789	1.5844
25.0	.1765	.2498	.3460	.4681	.6183	.7973	1.0018	1.2220	1.4396
30.0	.1325	.1853	.2592	.3590	.4885	.6497	.8418	1.0576	1.2810
35.0	.0995	.1382	.1905	.2661	.3716	.5109	.6855	.8908	1.1136
40.0	.0738	.1022	.1398	.1919	.2711	.3852	.5375	.7266	.9424
45.0	.0536	.0740	.1008	.1371	.1903	.2743	.4024	.5701	.7726
50.0	.0377	.0520	.0706	.0954	.1306	.1875	.2843	.4260	.6093
55.0	.0255	.0350	.0474	.0638	.0867	.1215	.1867	.2987	.4576
60.0	.0164	.0224	.0301	.0404	.0545	.0755	.1127	.1920	.3220
65.0	.0098	.0133	.0177	.0236	.0317	.0435	.0634	.1091	.2067
70.0	.0053	.0071	.0094	.0124	.0164	.0224	.0321	.0527	.1151
75.0	.0025	.0033	.0042	.0055	.0071	.0096	.0136	.0216	.0501
80.0	.0010	.0012	.0015	.0018	.0023	.0030	.0041	.0064	.0136
85.0	.0003	.0003	.0003	.0004	.0004	.0005	.0006	.0008	.0016

$\beta_1 = -90^\circ$; $\beta_2 = 90^\circ$; $\beta = 15^\circ$

α, deg \ θ_{xy}, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.0285	.0388	.0508	.0647	.0987	.1444	.2044	.2790	.3686	.4735
2.0	.0258	.0354	.0466	.0597	.0916	.1346	.1919	.2639	.3511	.4537
4.0	.0214	.0297	.0396	.0511	.0793	.1169	.1688	.2355	.3175	.4153
6.0	.0181	.0253	.0340	.0442	.0692	.1021	.1483	.2094	.2859	.3786
8.0	.0155	.0219	.0296	.0386	.0610	.0901	.1305	.1858	.2566	.3437
10.0	.0135	.0191	.0260	.0340	.0541	.0802	.1155	.1648	.2296	.3108
12.0	.0118	.0169	.0230	.0303	.0484	.0719	.1033	.1464	.2050	.2801
15.0	.0100	.0143	.0195	.0257	.0413	.0616	.0884	.1242	.1731	.2384
20.0	.0079	.0112	.0153	.0202	.0326	.0486	.0696	.0971	.1334	.1817
25.0	.0064	.0091	.0124	.0163	.0262	.0390	.0556	.0771	.1051	.1413
30.0	.0054	.0076	.0103	.0134	.0214	.0316	.0447	.0616	.0832	.1110
35.0	.0047	.0065	.0088	.0112	.0176	.0258	.0361	.0492	.0658	.0870
40.0	.0041	.0056	.0073	.0094	.0145	.0211	.0291	.0392	.0518	.0677
45.0	.0037	.0049	.0063	.0080	.0121	.0172	.0234	.0310	.0404	.0520
50.0	.0033	.0043	.0054	.0068	.0100	.0139	.0187	.0243	.0311	.0394
55.0	.0030	.0038	.0047	.0058	.0082	.0112	.0148	.0188	.0236	.0293
60.0	.0027	.0034	.0041	.0049	.0068	.0090	.0115	.0144	.0176	.0213
65.0	.0025	.0030	.0036	.0042	.0055	.0071	.0088	.0107	.0128	.0151
70.0	.0024	.0027	.0031	.0036	.0045	.0055	.0066	.0078	.0091	.0103
75.0	.0022	.0025	.0027	.0030	.0036	.0042	.0049	.0055	.0061	.0068
80.0	.0021	.0022	.0024	.0026	.0029	.0032	.0035	.0037	.0039	.0041
85.0	.0020	.0020	.0021	.0022	.0023	.0023	.0024	.0024	.0024	.0023

α, deg \ θ_{xy}, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	.5941	.7304	.8821	1.0477	1.2235	1.4028	1.5742	1.7212	1.8240
2.0	.5723	.7070	.8576	1.0227	1.1991	1.3801	1.5547	1.7063	1.8152
4.0	.5295	.6606	.8085	.9723	1.1491	1.3329	1.5132	1.6738	1.7946
6.0	.4880	.6149	.7595	.9212	1.0977	1.2836	1.4688	1.6375	1.7697
8.0	.4479	.5700	.7107	.8697	1.0452	1.2323	1.4216	1.5978	1.7407
10.0	.4094	.5263	.6626	.8182	.9918	1.1794	1.3720	1.5548	1.7077
12.0	.3726	.4840	.6152	.7667	.9379	1.1250	1.3200	1.5087	1.6710
15.0	.3213	.4234	.5461	.6904	.8564	1.0414	1.2385	1.4343	1.6092
20.0	.2472	.3319	.4380	.5674	.7214	.8989	1.0949	1.2982	1.4901
25.0	.1891	.2546	.3417	.4530	.5908	.7561	.9457	1.1506	1.3539
30.0	.1468	.1940	.2600	.3504	.4688	.6173	.7953	.9961	1.2048
35.0	.1139	.1488	.1954	.2630	.3589	.4868	.6483	.8392	1.0474
40.0	.0877	.1133	.1469	.1933	.2645	.3686	.5092	.6849	.8864
45.0	.0666	.0850	.1089	.1412	.1885	.2662	.3822	.5378	.7268
50.0	.0497	.0625	.0790	.1009	.1320	.1827	.2711	.4023	.5733
55.0	.0362	.0448	.0556	.0699	.0899	.1207	.1794	.2826	.4307
60.0	.0257	.0311	.0378	.0465	.0586	.0768	.1098	.1822	.3032
65.0	.0177	.0208	.0245	.0294	.0360	.0460	.0632	.1044	.1948
70.0	.0117	.0133	.0151	.0173	.0205	.0252	.0333	.0513	.1087
75.0	.0074	.0080	.0086	.0094	.0105	.0122	.0152	.0218	.0476
80.0	.0043	.0044	.0045	.0046	.0047	.0049	.0055	.0071	.0133
85.0	.0022	.0021	.0020	.0018	.0017	.0015	.0014	.0014	.0018

TABLE III.- CONTINUED

(b) C_A. Continued.

$\beta_1 = 105^o$; $\beta_2 = 255^o$; $\beta = 0^o$

θ_{xy}, deg / α, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.0035	.0091	.0174	.0284	.0590	.1014	.1567	.2262	.3115	.4144
2.0	.0067	.0140	.0239	.0365	.0703	.1158	.1742	.2468	.3350	.4406
4.0	.0163	.0268	.0399	.0557	.0958	.1475	.2120	.2903	.3840	.4946
6.0	.0300	.0437	.0600	.0789	.1251	.1828	.2530	.3367	.4355	.5506
8.0	.0479	.0646	.0840	.1060	.1580	.2214	.2970	.3859	.4892	.6083
10.0	.0697	.0895	.1119	.1367	.1945	.2632	.3439	.4374	.5449	.6675
12.0	.0955	.1182	.1434	.1711	.2342	.3081	.3934	.4912	.6023	.7277
15.0	.1411	.1680	.1973	.2290	.2996	.3804	.4720	.5753	.6909	.8196
20.0	.2346	.2679	.3032	.3407	.4222	.5126	.6126	.7226	.8431	.9743
25.0	.3474	.3860	.4264	.4685	.5584	.6559	.7613	.8749	.9968	1.1266
30.0	.4760	.5188	.5630	.6086	.7043	.8060	.9137	1.0276	1.1473	1.2721
35.0	.6166	.6623	.7090	.7567	.8553	.9581	1.0651	1.1759	1.2900	1.4063
40.0	.7649	.8121	.8598	.9082	1.0068	1.1078	1.2108	1.3155	1.4207	1.5252
45.0	.9164	.9636	1.0110	1.0586	1.1543	1.2505	1.3466	1.4420	1.5354	1.6250
50.0	1.0665	1.1123	1.1580	1.2034	1.2933	1.3818	1.4682	1.5516	1.6305	1.7029
55.0	1.2105	1.2537	1.2962	1.3380	1.4195	1.4977	1.5719	1.6410	1.7033	1.7563
60.0	1.3442	1.3833	1.4214	1.4584	1.5291	1.5948	1.6547	1.7075	1.7513	1.7838
65.0	1.4635	1.4974	1.5299	1.5610	1.6188	1.6701	1.7139	1.7490	1.7733	1.7844
70.0	1.5647	1.5924	1.6184	1.6427	1.6858	1.7212	1.7479	1.7643	1.7686	1.7581
75.0	1.6448	1.6655	1.6841	1.7009	1.7282	1.7467	1.7555	1.7529	1.7372	1.7058
80.0	1.7014	1.7143	1.7252	1.7339	1.7446	1.7458	1.7365	1.7152	1.6802	1.6290
85.0	1.7327	1.7375	1.7402	1.7406	1.7345	1.7185	1.6915	1.6523	1.5992	1.5301

θ_{xy}, deg / α, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	.5369	.6807	.8469	1.0349	1.2411	1.4567	1.6656	1.8439	1.9632
2.0	.5655	.7112	.8786	1.0670	1.2722	1.4850	1.6892	1.8606	1.9711
4.0	.6238	.7729	.9423	1.1305	1.3330	1.5398	1.7338	1.8909	1.9835
6.0	.6836	.8353	1.0058	1.1932	1.3921	1.5918	1.7748	1.9168	1.9911
8.0	.7444	.8981	1.0690	1.2546	1.4490	1.6407	1.8119	1.9382	1.9939
10.0	.8061	.9610	1.1316	1.3146	1.5035	1.6864	1.8449	1.9549	1.9918
12.0	.8682	1.0238	1.1931	1.3727	1.5553	1.7286	1.8738	1.9670	1.9848
15.0	.9617	1.1168	1.2829	1.4559	1.6276	1.7849	1.9089	1.9762	1.9654
20.0	1.1158	1.2666	1.4236	1.5816	1.7313	1.8586	1.9446	1.9675	1.9096
25.0	1.2636	1.4058	1.5494	1.6879	1.8114	1.9053	1.9511	1.9292	1.8262
30.0	1.4007	1.5303	1.6563	1.7716	1.8656	1.9235	1.9281	1.8624	1.7175
35.0	1.5228	1.6362	1.7412	1.8302	1.8921	1.9128	1.8763	1.7691	1.5870
40.0	1.6263	1.7203	1.8015	1.8617	1.8902	1.8734	1.7973	1.6521	1.4386
45.0	1.7080	1.7801	1.8353	1.8654	1.8599	1.8065	1.6936	1.5151	1.2767
50.0	1.7654	1.8137	1.8416	1.8411	1.8022	1.7141	1.5682	1.3621	1.1064
55.0	1.7968	1.8202	1.8203	1.7895	1.7188	1.5992	1.4249	1.1979	.9328
60.0	1.8013	1.7993	1.7720	1.7122	1.6122	1.4651	1.2682	1.0274	.7612
65.0	1.7786	1.7517	1.6981	1.6115	1.4856	1.3159	1.1028	.8558	.5967
70.0	1.7296	1.6788	1.6009	1.4905	1.3430	1.1562	.9337	.6883	.4445
75.0	1.6556	1.5828	1.4833	1.3529	1.1887	.9909	.7660	.5300	.3090
80.0	1.5589	1.4667	1.3490	1.2029	1.0273	.8248	.6048	.3857	.1945
85.0	1.4425	1.3340	1.2019	1.0450	.8637	.6632	.4551	.2598	.1044

$\beta_1 = 105^o$; $\beta_2 = 255^o$; $\beta = 2^o$

θ_{xy}, deg / α, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.0038	.0094	.0177	.0287	.0592	.1015	.1567	.2262	.3113	.4141
2.0	.0070	.0143	.0242	.0368	.0705	.1160	.1743	.2467	.3348	.4403
4.0	.0166	.0271	.0402	.0560	.0960	.1474	.2120	.2902	.3838	.4942
6.0	.0303	.0440	.0602	.0791	.1252	.1829	.2529	.3366	.4352	.5502
8.0	.0481	.0649	.0842	.1062	.1581	.2214	.2969	.3857	.4889	.6078
10.0	.0700	.0897	.1120	.1369	.1945	.2632	.3438	.4372	.5445	.6669
12.0	.0957	.1184	.1435	.1712	.2342	.3080	.3932	.4908	.6018	.7271
15.0	.1412	.1681	.1974	.2290	.2995	.3802	.4718	.5749	.6903	.8189
20.0	.2346	.2678	.3032	.3406	.4220	.5123	.6122	.7220	.8423	.9733
25.0	.3473	.3858	.4262	.4683	.5581	.6554	.7607	.8741	.9958	1.1255
30.0	.4758	.5185	.5626	.6082	.7038	.8053	.9129	1.0266	1.1461	1.2708
35.0	.6162	.6618	.7084	.7561	.8546	.9572	1.0641	1.1748	1.2887	1.4049
40.0	.7643	.8114	.8591	.9074	1.0059	1.1068	1.2097	1.3141	1.4193	1.5236
45.0	.9156	.9628	1.0101	1.0577	1.1532	1.2492	1.3452	1.4405	1.5338	1.6233
50.0	1.0655	1.1113	1.1569	1.2022	1.2920	1.3804	1.4667	1.5500	1.6288	1.7010
55.0	1.2094	1.2525	1.2949	1.3367	1.4181	1.4962	1.5703	1.6393	1.7014	1.7544
60.0	1.3429	1.3820	1.4200	1.4570	1.5276	1.5932	1.6530	1.7057	1.7495	1.7818
65.0	1.4620	1.4959	1.5284	1.5595	1.6171	1.6684	1.7121	1.7471	1.7714	1.7824
70.0	1.5631	1.5908	1.6167	1.6410	1.6841	1.7195	1.7460	1.7624	1.7667	1.7562
75.0	1.6432	1.6637	1.6824	1.6991	1.7264	1.7449	1.7536	1.7511	1.7354	1.7040
80.0	1.6996	1.7126	1.7234	1.7321	1.7428	1.7440	1.7347	1.7134	1.6784	1.6273
85.0	1.7309	1.7357	1.7384	1.7388	1.7327	1.7167	1.6898	1.6506	1.5975	1.5285

θ_{xy}, deg / α, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	.5364	.6801	.8460	1.0338	1.2397	1.4550	1.6636	1.8416	1.9608
2.0	.5650	.7105	.8777	1.0658	1.2707	1.4833	1.6872	1.8584	1.9688
4.0	.6233	.7721	.9413	1.1293	1.3315	1.5380	1.7317	1.8886	1.9811
6.0	.6830	.8345	1.0048	1.1919	1.3905	1.5899	1.7727	1.9145	1.9887
8.0	.7437	.8972	1.0679	1.2533	1.4473	1.6388	1.8097	1.9358	1.9915
10.0	.8053	.9601	1.1303	1.3131	1.5018	1.6844	1.8427	1.9526	1.9894
12.0	.8674	1.0227	1.1918	1.3712	1.5536	1.7266	1.8715	1.9646	1.9824
15.0	.9608	1.1156	1.2815	1.4542	1.6257	1.7828	1.9066	1.9738	1.9630
20.0	1.1147	1.2652	1.4221	1.5798	1.7293	1.8564	1.9423	1.9652	1.9073
25.0	1.2623	1.4043	1.5476	1.6860	1.8093	1.9030	1.9487	1.9269	1.8239
30.0	1.3992	1.5286	1.6544	1.7696	1.8634	1.9213	1.9258	1.8601	1.7154
35.0	1.5212	1.6344	1.7392	1.8281	1.8899	1.9105	1.8740	1.7669	1.5851
40.0	1.6245	1.7184	1.7994	1.8596	1.8880	1.8712	1.7952	1.6501	1.4368
45.0	1.7061	1.7781	1.8332	1.8633	1.8578	1.8043	1.6915	1.5133	1.2752
50.0	1.7635	1.8117	1.8396	1.8390	1.8001	1.7121	1.5663	1.3605	1.1051
55.0	1.7949	1.8182	1.8183	1.7875	1.7168	1.5973	1.4232	1.1965	.9317
60.0	1.7993	1.7973	1.7700	1.7102	1.6103	1.4634	1.2667	1.0262	.7603
65.0	1.7767	1.7498	1.6962	1.6097	1.4839	1.3144	1.1015	.8548	.5960
70.0	1.7277	1.6770	1.5991	1.4889	1.3415	1.1549	.9326	.6875	.4439
75.0	1.6538	1.5811	1.4817	1.3514	1.1873	.9897	.7651	.5294	.3086
80.0	1.5573	1.4651	1.3475	1.2016	1.0261	.8239	.6042	.3853	.1943
85.0	1.4410	1.3325	1.2006	1.0438	.8628	.6624	.4546	.2596	.1042

TABLE III.- CONTINUED

(b) C_A. Continued.

$\beta_1 = 90^0$; $\beta_2 = 270^0$; $\beta = 5^0$

α, deg \ θ_{xy}, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.0085	.0159	.0268	.0414	.0821	.1380	.2094	.2965	.3995	.5187
2.0	.0113	.0200	.0324	.0484	.0919	.1506	.2246	.3141	.4195	.5407
4.0	.0191	.0306	.0458	.0647	.1137	.1776	.2567	.3510	.4606	.5857
6.0	.0300	.0443	.0623	.0839	.1382	.2072	.2910	.3897	.5032	.6315
8.0	.0440	.0611	.0817	.1060	.1654	.2392	.3274	.4301	.5470	.6781
10.0	.0610	.0808	.1041	.1309	.1951	.2734	.3657	.4719	.5918	.7252
12.0	.0810	.1034	.1292	.1584	.2272	.3097	.4057	.5150	.6374	.7725
15.0	.1163	.1424	.1717	.2043	.2795	.3675	.4683	.5816	.7068	.8434
20.0	.1883	.2199	.2565	.2921	.3761	.4716	.5783	.6957	.8232	.9596
25.0	.2749	.3111	.3499	.3914	.4820	.5825	.6924	.8110	.9374	1.0703
30.0	.3733	.4131	.4551	.4993	.5941	.6969	.8071	.9238	1.0460	1.1721
35.0	.4807	.5229	.5669	.6126	.7089	.8112	.9189	1.0308	1.1457	1.2618
40.0	.5937	.6371	.6818	.7277	.8229	.9220	1.0243	1.1286	1.2335	1.3369
45.0	.7090	.7523	.7963	.8411	.9326	1.0260	1.1203	1.2144	1.3066	1.3949
50.0	.8230	.8649	.9071	.9495	1.0348	1.1199	1.2039	1.2955	1.3629	1.4341
55.0	.9323	.9716	1.0107	1.0496	1.1263	1.2009	1.2725	1.3397	1.4007	1.4534
60.0	1.0335	1.0690	1.1039	1.1382	1.2043	1.2666	1.3241	1.3754	1.4188	1.4521
65.0	1.1236	1.1543	1.1840	1.2127	1.2665	1.3150	1.3571	1.3916	1.4167	1.4303
70.0	1.1998	1.2248	1.2485	1.2708	1.3110	1.3445	1.3705	1.3876	1.3944	1.3886
75.0	1.2598	1.2784	1.2955	1.3109	1.3364	1.3544	1.3639	1.3637	1.3525	1.3284
80.0	1.3018	1.3135	1.3234	1.3315	1.3419	1.3442	1.3374	1.3206	1.2925	1.2514
85.0	1.3245	1.3290	1.3316	1.3322	1.3275	1.3143	1.2920	1.2596	1.2161	1.1600

α, deg \ θ_{xy}, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	.6542	.8059	.9728	1.1529	1.3418	1.5315	1.7094	1.8573	1.9547
2.0	.6780	.8309	.9985	1.1785	1.3663	1.5536	1.7275	1.8700	1.9605
4.0	.7260	.8810	1.0495	1.2287	1.4136	1.5955	1.7610	1.8919	1.9685
6.0	.7743	.9309	1.0995	1.2773	1.4585	1.6342	1.7905	1.9095	1.9717
8.0	.8228	.9802	1.1484	1.3239	1.5008	1.6695	1.8161	1.9225	1.9701
10.0	.8712	1.0289	1.1958	1.3684	1.5402	1.7013	1.8374	1.9309	1.9638
12.0	.9193	1.0765	1.2417	1.4105	1.5765	1.7293	1.8545	1.9347	1.9527
15.0	.9903	1.1457	1.3068	1.4689	1.6249	1.7641	1.8720	1.9316	1.9273
20.0	1.1037	1.2530	1.4042	1.5518	1.6881	1.8019	1.8789	1.9033	1.8623
25.0	1.2079	1.3475	1.4850	1.6145	1.7278	1.8135	1.8579	1.8468	1.7707
30.0	1.2999	1.4262	1.5467	1.6551	1.7427	1.7986	1.8096	1.7640	1.6554
35.0	1.3767	1.4869	1.5876	1.6724	1.7325	1.7575	1.7356	1.6573	1.5198
40.0	1.4361	1.5276	1.6063	1.6658	1.6975	1.6916	1.6381	1.5300	1.3681
45.0	1.4763	1.5471	1.6024	1.6355	1.6386	1.6028	1.5199	1.3858	1.2049
50.0	1.4960	1.5449	1.5758	1.5825	1.5578	1.4939	1.3848	1.2293	1.0350
55.0	1.4947	1.5210	1.5275	1.5084	1.4574	1.3681	1.2369	1.0652	.8638
60.0	1.4724	1.4761	1.4588	1.4154	1.3405	1.2294	1.0805	.8984	.6964
65.0	1.4297	1.4116	1.3719	1.3064	1.2106	1.0818	.9205	.7340	.5378
70.0	1.3680	1.3294	1.2695	1.1846	1.0718	.9299	.7618	.5770	.3930
75.0	1.2891	1.2321	1.1545	1.0538	.9282	.7783	.6091	.4323	.2663
80.0	1.1955	1.1226	1.0306	.9179	.7841	.6315	.4671	.3041	.1615
85.0	1.0899	1.0042	.9015	.7811	.6440	.4942	.3401	.1963	.0819

$\beta_1 = 90^0$; $\beta_2 = 270^0$; $\beta = 15^0$

α, deg \ θ_{xy}, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.0351	.0470	.0607	.0765	.1150	.1661	.2312	.3107	.4049	.5140
2.0	.0391	.0518	.0665	.0834	.1243	.1779	.2455	.3274	.4237	.5348
4.0	.0487	.0633	.0800	.0990	.1447	.2033	.2757	.3620	.4624	.5770
6.0	.0606	.0772	.0960	.1172	.1678	.2311	.3080	.3984	.5025	.6201
8.0	.0749	.0936	.1147	.1381	.1934	.2612	.3422	.4364	.5436	.6639
10.0	.0918	.1127	.1359	.1616	.2213	.2934	.3782	.4757	.5858	.7082
12.0	.1113	.1343	.1596	.1875	.2515	.3274	.4157	.5162	.6286	.7526
15.0	.1452	.1713	.1998	.2308	.3006	.3818	.4747	.5788	.6939	.8193
20.0	.2137	.2446	.2778	.3133	.3914	.4797	.5791	.6861	.8033	.9286
25.0	.2956	.3306	.3676	.4067	.4910	.5840	.6853	.7945	.9106	1.0327
30.0	.3885	.4267	.4666	.5081	.5964	.6915	.7931	.9006	1.0128	1.1233
35.0	.4897	.5300	.5716	.6146	.7043	.7990	.8982	1.0011	1.1065	1.2127
40.0	.5961	.6374	.6797	.7228	.8114	.9032	.9974	1.0931	1.1890	1.2832
45.0	.7046	.7457	.7873	.8294	.9146	1.0009	1.0876	1.1737	1.2578	1.3378
50.0	.8119	.8516	.8914	.9312	1.0106	1.0892	1.1662	1.2406	1.3107	1.3747
55.0	.9146	.9519	.9887	1.0252	1.0966	1.1654	1.2307	1.2915	1.3443	1.3928
60.0	1.0098	1.0435	1.0763	1.1084	1.1698	1.2271	1.2792	1.3251	1.3633	1.3916
65.0	1.0945	1.1236	1.1515	1.1784	1.2282	1.2725	1.3102	1.3403	1.3612	1.3711
70.0	1.1662	1.1898	1.2121	1.2329	1.2699	1.3001	1.3227	1.3366	1.3403	1.3319
75.0	1.2226	1.2401	1.2561	1.2703	1.2935	1.3091	1.3163	1.3140	1.3009	1.2753
80.0	1.2620	1.2730	1.2822	1.2896	1.2985	1.2993	1.2912	1.2733	1.2443	1.2028
85.0	1.2833	1.2874	1.2897	1.2900	1.2846	1.2708	1.2481	1.2155	1.1721	1.1165

α, deg \ θ_{xy}, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	.6382	.7774	.9309	1.0968	1.2710	1.4463	1.6109	1.7479	1.8382
2.0	.6606	.8010	.9551	1.1209	1.2941	1.4671	1.6280	1.7598	1.8436
4.0	.7057	.8481	1.0030	1.1681	1.3386	1.5065	1.6594	1.7805	1.8511
6.0	.7512	.8950	1.0501	1.2137	1.3808	1.5429	1.6872	1.7970	1.8542
8.0	.7968	.9414	1.0960	1.2575	1.4205	1.5761	1.7112	1.8092	1.8527
10.0	.8423	.9871	1.1406	1.2994	1.4575	1.6059	1.7313	1.8171	1.8467
12.0	.8875	1.0319	1.1837	1.3390	1.4917	1.6323	1.7474	1.8206	1.8363
15.0	.9542	1.0970	1.2449	1.3939	1.5372	1.6650	1.7638	1.8177	1.8124
20.0	1.0608	1.1978	1.3365	1.4718	1.5966	1.7005	1.7703	1.7911	1.7513
25.0	1.1588	1.2866	1.4124	1.5308	1.6339	1.7115	1.7505	1.7331	1.6652
30.0	1.2453	1.3607	1.4705	1.5689	1.6480	1.6974	1.7052	1.6602	1.5568
35.0	1.3175	1.4177	1.5089	1.5852	1.6384	1.6588	1.6356	1.5599	1.4293
40.0	1.3734	1.4560	1.5265	1.5790	1.6054	1.5968	1.5438	1.4402	1.2867
45.0	1.4111	1.4744	1.5228	1.5505	1.5501	1.5134	1.4328	1.3047	1.1332
50.0	1.4297	1.4723	1.4978	1.5007	1.4741	1.4110	1.3058	1.1575	.9736
55.0	1.4284	1.4498	1.4524	1.4310	1.3797	1.2927	1.1667	1.0032	.8126
60.0	1.4074	1.4075	1.3878	1.3436	1.2698	1.1623	1.0197	.8464	.6552
65.0	1.3673	1.3469	1.3062	1.2411	1.1477	1.0235	.8693	.6919	.5061
70.0	1.3093	1.2697	1.2098	1.1266	1.0172	.8807	.7200	.5443	.3699
75.0	1.2351	1.1782	1.1018	1.0036	.8822	.7382	.5765	.4032	.2508
80.0	1.1471	1.0752	.9853	.8759	.7467	.6002	.4430	.2876	.1523
85.0	1.0476	.9637	.8638	.7472	.6150	.4711	.3236	.1864	.0774

TABLE III.- CONTINUED

(b) C_A. Continued.

$\beta_1 = 120^o$; $\beta_2 = 240^o$; $\beta = 0^o$

θ_{xy}, deg / α, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.0033	.0081	.0152	.0246	.0504	.0863	.1336	.1936	.2685	.3606
2.0	.0066	.0130	.0217	.0326	.0615	.1006	.1510	.2142	.2921	.3870
4.0	.0167	.0262	.0380	.0520	.0872	.1324	.1888	.2579	.3416	.4420
6.0	.0313	.0440	.0588	.0759	.1170	.1681	.2303	.3051	.3941	.4995
8.0	.0504	.0661	.0839	.1040	.1509	.2077	.2756	.3556	.4494	.5593
10.0	.0739	.0926	.1133	.1362	.1887	.2509	.3238	.4087	.5072	.6210
12.0	.1017	.1232	.1467	.1724	.2302	.2975	.3752	.4646	.5671	.6843
15.0	.1511	.1767	.2042	.2337	.2991	.3734	.4576	.5529	.6605	.7818
20.0	.2527	.2844	.3179	.3531	.4293	.5135	.6066	.7094	.8229	.9481
25.0	.3754	.4124	.4508	.4907	.5754	.6670	.7661	.8734	.9894	1.1147
30.0	.5167	.5567	.5989	.6423	.7330	.8292	.9314	1.0399	1.1550	1.2766
35.0	.6692	.7131	.7578	.8033	.8973	.9952	1.0973	1.2038	1.3146	1.4290
40.0	.8313	.8767	.9225	.9689	1.0632	1.1599	1.2590	1.3603	1.4634	1.5671
45.0	.9971	1.0426	1.0882	1.1339	1.2258	1.3184	1.4114	1.5044	1.5968	1.6868
50.0	1.1614	1.2057	1.2497	1.2934	1.3801	1.4457	1.5499	1.6320	1.7108	1.7844
55.0	1.3194	1.3611	1.4022	1.4426	1.5214	1.5975	1.6703	1.7389	1.8019	1.8570
60.0	1.4663	1.5041	1.5409	1.5768	1.6455	1.7098	1.7690	1.8221	1.8674	1.9023
65.0	1.5975	1.6303	1.6618	1.6921	1.7484	1.7990	1.8430	1.8790	1.9053	1.9190
70.0	1.7090	1.7359	1.7611	1.7848	1.8273	1.8626	1.8899	1.9079	1.9144	1.9066
75.0	1.7976	1.8176	1.8359	1.8523	1.8795	1.8986	1.9085	1.9078	1.8944	1.8655
80.0	1.8604	1.8731	1.8837	1.8924	1.9036	1.9058	1.8981	1.8788	1.8460	1.7968
85.0	1.8957	1.9005	1.9033	1.9040	1.8987	1.8841	1.8590	1.8218	1.7706	1.7028

θ_{xy}, deg / α, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	.4726	.6075	.7678	.9548	1.1664	1.3947	1.6225	1.8217	1.9576
2.0	.5017	.6389	.8009	.9887	1.1998	1.4256	1.6486	1.8406	1.9667
4.0	.5616	.7029	.8678	1.0565	1.2657	1.4859	1.6986	1.8751	1.9815
6.0	.6235	.7682	.9352	1.1238	1.3302	1.5437	1.7451	1.9054	1.9915
8.0	.6870	.8345	1.0027	1.1905	1.3930	1.5988	1.7879	1.9312	1.9966
10.0	.7519	.9015	1.0701	1.2561	1.4537	1.6509	1.8268	1.9525	1.9969
12.0	.8178	.9687	1.1370	1.3203	1.5122	1.6998	1.8617	1.9691	1.9923
15.0	.9179	1.0695	1.2357	1.4134	1.5990	1.7665	1.9059	1.9851	1.9764
20.0	1.0853	1.2343	1.3933	1.5574	1.7176	1.8583	1.9573	1.9876	1.9262
25.0	1.2490	1.3911	1.5380	1.6837	1.8177	1.9237	1.9793	1.9600	1.8478
30.0	1.4040	1.5349	1.6655	1.7885	1.8925	1.9605	1.9712	1.9031	1.7436
35.0	1.5456	1.6615	1.7719	1.8686	1.9395	1.9677	1.9334	1.8186	1.6168
40.0	1.6695	1.7670	1.8539	1.9215	1.9573	1.9451	1.8670	1.7092	1.4712
45.0	1.7719	1.8481	1.9091	1.9457	1.9455	1.8933	1.7739	1.5780	1.3113
50.0	1.8498	1.9025	1.9358	1.9404	1.9044	1.8140	1.6570	1.4292	1.1419
55.0	1.9008	1.9284	1.9331	1.9057	1.8351	1.7095	1.5199	1.2671	.9681
60.0	1.9232	1.9251	1.9012	1.8428	1.7400	1.5830	1.3668	1.0969	.7952
65.0	1.9165	1.8927	1.8411	1.7536	1.6217	1.4383	1.2022	.9235	.6286
70.0	1.8809	1.8322	1.7545	1.6407	1.4839	1.2799	1.0312	.7524	.4732
75.0	1.8173	1.7453	1.6440	1.5075	1.3308	1.1126	.8590	.5886	.3337
80.0	1.7278	1.6348	1.5131	1.3582	1.1671	.9414	.6908	.4372	.2145
85.0	1.6151	1.5040	1.3658	1.1973	.9977	.7715	.5317	.3028	.1191

$\beta_1 = 120^o$; $\beta_2 = 240^o$; $\beta = 2^o$

θ_{xy}, deg / α, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.0034	.0082	.0153	.0246	.0504	.0863	.1335	.1935	.2683	.3602
2.0	.0067	.0131	.0218	.0327	.0616	.1006	.1509	.2140	.2918	.3866
4.0	.0168	.0263	.0381	.0521	.0872	.1323	.1887	.2577	.3413	.4416
6.0	.0314	.0440	.0588	.0759	.1170	.1680	.2302	.3048	.3937	.4990
8.0	.0505	.0661	.0839	.1039	.1508	.2076	.2752	.3551	.4490	.5587
10.0	.0740	.0926	.1133	.1361	.1886	.2507	.3235	.4083	.5066	.6203
12.0	.1017	.1232	.1467	.1723	.2301	.2973	.3749	.4642	.5665	.6836
15.0	.1511	.1766	.2041	.2336	.2988	.3730	.4572	.5523	.6598	.7809
20.0	.2525	.2842	.3176	.3528	.4289	.5130	.6059	.7086	.8220	.9470
25.0	.3751	.4120	.4503	.4902	.5748	.6663	.7653	.8724	.9883	1.1134
30.0	.5152	.5562	.5983	.6417	.7322	.8283	.9303	1.0387	1.1537	1.2752
35.0	.6685	.7123	.7570	.8025	.8963	.9941	1.0961	1.2025	1.3131	1.4273
40.0	.8304	.8757	.9215	.9678	1.0621	1.1586	1.2575	1.3587	1.4617	1.5653
45.0	.9960	1.0414	1.0870	1.1327	1.2245	1.3169	1.4097	1.5027	1.5949	1.6848
50.0	1.1601	1.2044	1.2483	1.2920	1.3786	1.4640	1.5481	1.6301	1.7088	1.7823
55.0	1.3180	1.3596	1.4006	1.4409	1.5197	1.5957	1.6684	1.7369	1.7998	1.8548
60.0	1.4646	1.5024	1.5392	1.5750	1.6436	1.7078	1.7670	1.8200	1.8652	1.9001
65.0	1.5956	1.6284	1.6599	1.6901	1.7464	1.7969	1.8408	1.8768	1.9030	1.9168
70.0	1.7071	1.7339	1.7591	1.7828	1.8251	1.8604	1.8879	1.9057	1.9121	1.9044
75.0	1.7955	1.8155	1.8337	1.8502	1.8773	1.8964	1.9063	1.9056	1.8922	1.8633
80.0	1.8583	1.8709	1.8816	1.8902	1.9014	1.9036	1.8959	1.8767	1.8438	1.7947
85.0	1.8935	1.8983	1.9011	1.9018	1.8965	1.8819	1.8568	1.8197	1.7686	1.7008

θ_{xy}, deg / α, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	.4721	.6068	.7669	.9537	1.1650	1.3930	1.6205	1.8195	1.9552
2.0	.5012	.6382	.8000	.9876	1.1984	1.4239	1.6467	1.8383	1.9643
4.0	.5610	.7022	.8668	1.0552	1.2642	1.4841	1.6965	1.8728	1.9791
6.0	.6228	.7674	.9341	1.1225	1.3286	1.5419	1.7430	1.9031	1.9891
8.0	.6863	.8336	1.0015	1.1891	1.3913	1.5969	1.7857	1.9289	1.9942
10.0	.7511	.9004	1.0688	1.2546	1.4520	1.6489	1.8246	1.9501	1.9945
12.0	.8169	.9676	1.1357	1.3188	1.5104	1.6977	1.8594	1.9667	1.9899
15.0	.9169	1.0682	1.2343	1.4117	1.5931	1.7644	1.9036	1.9827	1.9740
20.0	1.0841	1.2329	1.3916	1.5556	1.7155	1.8561	1.9549	1.9852	1.9239
25.0	1.2475	1.3895	1.5362	1.6817	1.8156	1.9214	1.9769	1.9576	1.8456
30.0	1.4023	1.5331	1.6635	1.7864	1.8902	1.9581	1.9689	1.9008	1.7415
35.0	1.5438	1.6596	1.7698	1.8664	1.9371	1.9654	1.9311	1.8164	1.6149
40.0	1.6675	1.7649	1.8517	1.9192	1.9550	1.9428	1.8647	1.7071	1.4695
45.0	1.7699	1.8459	1.9068	1.9434	1.9432	1.8911	1.7717	1.5761	1.3092
50.0	1.8476	1.9002	1.9335	1.9381	1.9021	1.8118	1.6550	1.4274	1.1405
55.0	1.8985	1.9262	1.9308	1.9035	1.8330	1.7074	1.5181	1.2656	.9669
60.0	1.9210	1.9229	1.8990	1.8407	1.7379	1.5811	1.3651	1.0955	.7943
65.0	1.9143	1.8905	1.8389	1.7515	1.6197	1.4366	1.2008	.9224	.6278
70.0	1.8787	1.8300	1.7524	1.6387	1.4821	1.2784	1.0300	.7515	.4726
75.0	1.8152	1.7433	1.6421	1.5057	1.3293	1.1113	.8580	.5879	.3333
80.0	1.7258	1.6329	1.5114	1.3566	1.1658	.9403	.6900	.4367	.2143
85.0	1.6132	1.5023	1.3642	1.1959	.9966	.7706	.5311	.3024	.1190

TABLE III.- CONTINUED

(b) C_A. Continued.

$\beta_1 = 105^0$; $\beta_2 = 255^0$; $\beta = 5^0$

α, deg \ θ_{xy}, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.0054	.0110	.0193	.0302	.0604	.1025	.1573	.2262	.3107	.4127
2.0	.0086	.0158	.0257	.0382	.0716	.1168	.1747	.2466	.3340	.4387
4.0	.0182	.0285	.0416	.0573	.0970	.1483	.2122	.2898	.3827	.4924
6.0	.0318	.0453	.0615	.0803	.1260	.1833	.2528	.3359	.4338	.5479
8.0	.0495	.0661	.0853	.1071	.1587	.2216	.2966	.3847	.4871	.6052
10.0	.0712	.0908	.1130	.1377	.1949	.2631	.3431	.4358	.5424	.6639
12.0	.0967	.1193	.1443	.1718	.2343	.3076	.3922	.4891	.5993	.7237
15.0	.1420	.1687	.1978	.2292	.2992	.3794	.4703	.5726	.6873	.8149
20.0	.2348	.2678	.3029	.3401	.4209	.5106	.6098	.7189	.8383	.9684
25.0	.3467	.3850	.4251	.4669	.5561	.6528	.7574	.8700	.9908	1.1196
30.0	.4744	.5168	.5607	.6060	.7009	.8017	.9086	1.0215	1.1402	1.2640
35.0	.6139	.6592	.7055	.7529	.8507	.9527	1.0588	1.1687	1.2819	1.3972
40.0	.7611	.8079	.8553	.9033	1.0011	1.1013	1.2034	1.3072	1.4116	1.5151
45.0	.9114	.9583	1.0053	1.0526	1.1675	1.2428	1.3382	1.4327	1.5254	1.6142
50.0	1.0603	1.1059	1.1511	1.1962	1.2854	1.3731	1.4588	1.5415	1.6198	1.6914
55.0	1.2033	1.2461	1.2883	1.3298	1.4106	1.4882	1.5618	1.6303	1.6919	1.7445
60.0	1.3360	1.3748	1.4126	1.4493	1.5194	1.5846	1.6439	1.6962	1.7397	1.7717
65.0	1.4544	1.4880	1.5203	1.5511	1.6084	1.6593	1.7027	1.7374	1.7615	1.7723
70.0	1.5548	1.5823	1.6081	1.6322	1.6750	1.7100	1.7364	1.7526	1.7568	1.7463
75.0	1.6343	1.6548	1.6733	1.6899	1.7170	1.7354	1.7439	1.7413	1.7256	1.6944
80.0	1.6904	1.7033	1.7140	1.7227	1.7333	1.7344	1.7251	1.7039	1.6690	1.6182
85.0	1.7215	1.7263	1.7290	1.7294	1.7233	1.7073	1.6805	1.6415	1.5887	1.5200

α, deg \ θ_{xy}, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	.5342	.6768	.8415	1.0279	1.2324	1.4461	1.6532	1.8300	1.9483
2.0	.5625	.7070	.8730	1.0597	1.2632	1.4742	1.6766	1.8466	1.9562
4.0	.6204	.7682	.9362	1.1278	1.3236	1.5286	1.7209	1.8767	1.9685
6.0	.6797	.8302	.9992	1.1850	1.3822	1.5802	1.7616	1.9024	1.9760
8.0	.7401	.8925	1.0620	1.2460	1.4386	1.6287	1.7984	1.9236	1.9788
10.0	.8013	.9550	1.1240	1.3054	1.4927	1.6741	1.8312	1.9402	1.9767
12.0	.8630	1.0172	1.1851	1.3631	1.5442	1.7160	1.8598	1.9522	1.9698
15.0	.9558	1.1095	1.2742	1.4457	1.6159	1.7778	1.8946	1.9613	1.9505
20.0	1.1087	1.2582	1.4139	1.5704	1.7188	1.8650	1.9301	1.9527	1.8952
25.0	1.2554	1.3963	1.5386	1.6760	1.7983	1.8913	1.9365	1.9147	1.8123
30.0	1.3914	1.5199	1.6448	1.7590	1.8520	1.9094	1.9137	1.8484	1.7045
35.0	1.5126	1.6249	1.7290	1.8171	1.8784	1.8987	1.8623	1.7558	1.5750
40.0	1.6153	1.7084	1.7888	1.8485	1.8765	1.8596	1.7840	1.6397	1.4277
45.0	1.6964	1.7678	1.8224	1.8521	1.8464	1.7932	1.6810	1.5037	1.2671
50.0	1.7534	1.8012	1.8287	1.8280	1.7892	1.7016	1.5565	1.3519	1.0981
55.0	1.7846	1.8076	1.8075	1.7768	1.7064	1.5875	1.4144	1.1890	.9258
60.0	1.7890	1.7869	1.7596	1.7000	1.6006	1.4544	1.2589	1.0197	.7554
65.0	1.7665	1.7396	1.6862	1.6001	1.4750	1.3064	1.0947	.8494	.5922
70.0	1.7178	1.6673	1.5898	1.4801	1.3335	1.1479	.9269	.6832	.4411
75.0	1.6444	1.5720	1.4731	1.3435	1.1803	.9838	.7604	.5261	.3067
80.0	1.5485	1.4568	1.3398	1.1946	1.0201	.8190	.6005	.3829	.1930
85.0	1.4330	1.3251	1.1939	1.0379	.8578	.6586	.4520	.2580	.1036

$\beta_1 = 105^0$; $\beta_2 = 255^0$; $\beta = 15^0$

α, deg \ θ_{xy}, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.0171	.0242	.0331	.0437	.0720	.1111	.1621	.2262	.3050	.4000
2.0	.0212	.0294	.0394	.0513	.0825	.1246	.1785	.2455	.3269	.4244
4.0	.0316	.0421	.0546	.0693	.1063	.1542	.2137	.2861	.3726	.4748
6.0	.0451	.0581	.0733	.0909	.1336	.1871	.2520	.3294	.4207	.5271
8.0	.0621	.0778	.0957	.1161	.1644	.2231	.2931	.3752	.4708	.5809
10.0	.0825	.1010	.1217	.1448	.1984	.2621	.3368	.4233	.5228	.6361
12.0	.1065	.1277	.1512	.1769	.2355	.3039	.3830	.4735	.5763	.6923
15.0	.1491	.1742	.2015	.2309	.2965	.3714	.4564	.5520	.6590	.7781
20.0	.2364	.2673	.3003	.3351	.4108	.4948	.5875	.6894	.8010	.9223
25.0	.3416	.3776	.4152	.4544	.5380	.6285	.7263	.8315	.9444	1.0645
30.0	.4616	.5015	.5426	.5851	.6741	.7685	.8685	.9740	1.0848	1.2003
35.0	.5928	.6354	.6788	.7233	.8150	.9105	1.0097	1.1124	1.2100	1.3255
40.0	.7312	.7751	.8196	.8646	.9564	1.0501	1.1457	1.2426	1.3399	1.4543
45.0	.8725	.9165	.9607	1.0050	1.0940	1.1832	1.2723	1.3606	1.4669	1.5795
50.0	1.0125	1.0553	1.0978	1.1400	1.2236	1.3057	1.3858	1.4629	1.5357	1.6021
55.0	1.1469	1.1871	1.2267	1.2656	1.3414	1.4139	1.4826	1.5463	1.6035	1.6520
60.0	1.2717	1.3081	1.3436	1.3780	1.4436	1.5045	1.5598	1.6083	1.6484	1.6776
65.0	1.3829	1.4145	1.4448	1.4737	1.5273	1.5747	1.6151	1.6471	1.6689	1.6782
70.0	1.4774	1.5032	1.5273	1.5499	1.5899	1.6225	1.6467	1.6614	1.6645	1.6537
75.0	1.5521	1.5713	1.5887	1.6042	1.6294	1.6463	1.6538	1.6507	1.6352	1.6049
80.0	1.6049	1.6169	1.6270	1.6350	1.6447	1.6454	1.6361	1.6156	1.5820	1.5332
85.0	1.6341	1.6386	1.6410	1.6413	1.6353	1.6199	1.5942	1.5569	1.5065	1.4409

α, deg \ θ_{xy}, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	.5131	.6459	.7994	.9732	1.1638	1.3632	1.5565	1.7215	1.8320
2.0	.5397	.6743	.8290	1.0031	1.1928	1.3897	1.5785	1.7372	1.8394
4.0	.5942	.7319	.8884	1.0624	1.2496	1.4408	1.6202	1.7654	1.8510
6.0	.6499	.7901	.9477	1.1209	1.3047	1.4893	1.6584	1.7896	1.8581
8.0	.7067	.8487	1.0067	1.1782	1.3578	1.5349	1.6930	1.8095	1.8606
10.0	.7642	.9074	1.0650	1.2341	1.4086	1.5776	1.7239	1.8252	1.8587
12.0	.8222	.9660	1.1224	1.2883	1.4570	1.6169	1.7508	1.8364	1.8522
15.0	.9095	1.0528	1.2062	1.3659	1.5244	1.6695	1.7835	1.8450	1.8341
20.0	1.0532	1.1925	1.3375	1.4832	1.6211	1.7382	1.8168	1.8369	1.7820
25.0	1.1911	1.3224	1.4548	1.5824	1.6959	1.7818	1.8229	1.8012	1.7041
30.0	1.3190	1.4385	1.5546	1.6605	1.7464	1.7988	1.8014	1.7388	1.6028
35.0	1.4329	1.5373	1.6338	1.7151	1.7712	1.7888	1.7531	1.6517	1.4810
40.0	1.5295	1.6158	1.6900	1.7446	1.7694	1.7520	1.6794	1.5426	1.3425
45.0	1.6057	1.6716	1.7216	1.7481	1.7412	1.6896	1.5826	1.4148	1.1915
50.0	1.6593	1.7030	1.7275	1.7254	1.6873	1.6034	1.4656	1.2721	1.0326
55.0	1.6886	1.7090	1.7076	1.6772	1.6095	1.4962	1.3320	1.1189	.8706
60.0	1.6928	1.6896	1.6625	1.6051	1.5100	1.3711	1.1852	.9598	.7105
65.0	1.6716	1.6451	1.5936	1.5111	1.3920	1.2319	1.0314	.7997	.5571
70.0	1.6259	1.5771	1.5029	1.3983	1.2589	1.0829	.8736	.6434	.4150
75.0	1.5568	1.4876	1.3932	1.2699	1.1149	.9286	.7172	.4957	.2886
80.0	1.4667	1.3792	1.2679	1.1299	.9643	.7737	.5668	.3611	.1818
85.0	1.3581	1.2554	1.1307	.9825	.8117	.6229	.4272	.2436	.0977

TABLE III.- CONTINUED

(b) C_A. Continued.

$\beta_1 = 135^0$; $\beta_2 = 225^0$; $\beta = 0^0$

θ_{xy}, deg / α, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.00032	.0077	.0144	.0231	.0471	.0807	.1248	.1812	.2518	.3391
2.0	.00065	.0126	.0208	.0311	.0582	.0948	.1421	.2015	.2751	.3654
4.0	.00167	.0259	.0371	.0505	.0837	.1263	.1796	.2450	.3244	.4203
6.0	.00317	.0439	.0581	.0744	.1135	.1620	.2210	.2920	.3769	.4779
8.0	.00512	.0664	.0835	.1027	.1476	.2017	.2662	.3425	.4324	.5380
10.0	.00753	.0934	.1134	.1354	.1857	.2451	.3148	.3960	.4905	.6003
12.0	.01038	.1246	.1474	.1721	.2277	.2922	.3667	.4524	.5511	.6644
15.0	.01545	.1794	.2060	.2346	.2975	.3690	.4500	.5418	.6457	.7634
20.0	.02588	.2897	.3223	.3565	.4301	.5115	.6014	.7010	.8112	.9332
25.0	.03951	.4211	.4585	.4973	.5795	.6683	.7644	.8687	.9819	1.1046
30.0	.05295	.5595	.6106	.6529	.7411	.8346	.9340	1.0399	1.1526	1.2724
35.0	.06876	.7304	.7740	.8185	.9100	1.0054	1.1051	1.2093	1.3182	1.4313
40.0	.08546	.8990	.9437	.9890	1.0810	1.1754	1.2724	1.3719	1.4736	1.5767
45.0	1.00255	1.10700	1.1145	1.1592	1.2491	1.3396	1.4309	1.5226	1.6142	1.7041
50.0	1.21950	1.2383	1.2813	1.3241	1.4089	1.4929	1.5758	1.6570	1.7355	1.8096
55.0	1.33580	1.3988	1.4390	1.4785	1.5559	1.6307	1.7026	1.7708	1.8340	1.8900
60.0	1.45096	1.5466	1.5827	1.6179	1.6853	1.7487	1.8075	1.8607	1.9067	1.9429
65.0	1.56451	1.6773	1.7082	1.7378	1.7934	1.8435	1.8874	1.9239	1.9513	1.9667
70.0	1.67604	1.7867	1.8115	1.8348	1.8768	1.9120	1.9398	1.9586	1.9665	1.9606
75.0	1.78521	1.8717	1.8897	1.9059	1.9330	1.9523	1.9630	1.9635	1.9518	1.9249
80.0	1.89178	1.9297	1.9402	1.9489	1.9603	1.9631	1.9565	1.9387	1.9077	1.8605
85.0	1.96540	1.9588	1.9616	1.9624	1.9578	1.9441	1.9203	1.8848	1.8355	1.7696

θ_{xy}, deg / α, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	.4482	.5765	.7331	.9181	1.1307	1.3638	1.6000	1.8098	1.9544
2.0	.4755	.6080	.7665	.9526	1.1649	1.3957	1.6273	1.8295	1.9641
4.0	.5353	.6724	.8342	1.0217	1.2326	1.4581	1.6794	1.8660	1.9800
6.0	.5975	.7384	.9026	1.0905	1.2990	1.5102	1.7283	1.8982	1.9911
8.0	.6616	.8056	.9714	1.1589	1.3640	1.5758	1.7736	1.9261	1.9974
10.0	.7278	.8736	1.0403	1.2265	1.4272	1.6305	1.8151	1.9494	1.9988
12.0	.7942	.9422	1.1090	1.2929	1.4882	1.6822	1.8526	1.9681	1.9954
15.0	.8968	1.0454	1.2108	1.3897	1.5752	1.7533	1.9010	1.9873	1.9811
20.0	1.0879	1.2154	1.3744	1.5407	1.7054	1.8529	1.9594	1.9951	1.9335
25.0	1.2371	1.3785	1.5263	1.6749	1.8140	1.9265	1.9885	1.9726	1.8576
30.0	1.3986	1.5296	1.6619	1.7884	1.8976	1.9717	1.9875	1.9205	1.7556
35.0	1.5475	1.6643	1.7769	1.8776	1.9536	1.9872	1.9564	1.8403	1.6306
40.0	1.6794	1.7783	1.8680	1.9398	1.9805	1.9726	1.8961	1.7346	1.4865
45.0	1.7901	1.8683	1.9324	1.9731	1.9772	1.9282	1.8084	1.6065	1.3275
50.0	1.8764	1.9315	1.9680	1.9765	1.9443	1.8554	1.6960	1.4599	1.1586
55.0	1.9356	1.9659	1.9739	1.9500	1.8820	1.7564	1.5624	1.2993	.9848
60.0	1.9660	1.9706	1.9498	1.8943	1.7928	1.6342	1.4116	1.1295	.8115
65.0	1.9665	1.9854	1.8965	1.8111	1.6793	1.4926	1.2482	.9558	.6439
70.0	1.9572	1.8911	1.8156	1.7029	1.5449	1.3359	1.0771	.7833	.4871
75.0	1.8790	1.8092	1.7095	1.5731	1.3937	1.1687	.9035	.6173	.3459
80.0	1.7937	1.7024	1.5815	1.4255	1.2303	.9963	.7327	.4629	.2245
85.0	1.6837	1.5738	1.4355	1.2647	1.0597	.8237	.5700	.3248	.1267

$\beta_1 = 135^0$; $\beta_2 = 225^0$; $\beta = 2^0$

θ_{xy}, deg / α, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.00032	.0078	.0144	.0231	.0471	.0806	.1247	.1810	.2515	.3387
2.0	.00065	.0126	.0208	.0311	.0582	.0947	.1419	.2013	.2748	.3650
4.0	.00188	.0259	.0371	.0504	.0836	.1262	.1794	.2447	.3241	.4198
6.0	.00317	.0439	.0581	.0743	.1134	.1619	.2208	.2917	.3765	.4774
8.0	.00512	.0663	.0835	.1027	.1474	.2015	.2659	.3421	.4319	.5374
10.0	.00753	.0933	.1133	.1352	.1855	.2449	.3145	.3956	.4900	.5996
12.0	.01037	.1245	.1473	.1719	.2275	.2919	.3663	.4519	.5504	.6636
15.0	.01544	.1792	.2058	.2343	.2972	.3686	.4495	.5412	.6450	.7625
20.0	.02586	.2894	.3219	.3561	.4297	.5109	.6008	.7002	.8102	.9321
25.0	.03947	.4207	.4580	.4968	.5788	.6675	.7635	.8677	.9807	1.1033
30.0	.05289	.5589	.6099	.6522	.7402	.8336	.9329	1.0387	1.1513	1.2708
35.0	.06868	.7296	.7731	.8175	.9089	1.0042	1.1038	1.2079	1.3167	1.4296
40.0	.08536	.8979	.9426	.9878	1.0798	1.1741	1.2709	1.3703	1.4719	1.5748
45.0	1.00243	1.0687	1.1132	1.1579	1.2476	1.3380	1.4292	1.5208	1.6122	1.7021
50.0	1.21936	1.2568	1.2798	1.3225	1.4073	1.4911	1.5739	1.6550	1.7334	1.8074
55.0	1.33564	1.3971	1.4373	1.4768	1.5540	1.6287	1.7006	1.7687	1.8318	1.8878
60.0	1.45078	1.5448	1.5808	1.6159	1.6833	1.7466	1.8054	1.8585	1.9044	1.9406
65.0	1.56431	1.6753	1.7061	1.7358	1.7912	1.8413	1.8851	1.9216	1.9489	1.9644
70.0	1.67583	1.7846	1.8094	1.8327	1.8745	1.9098	1.9374	1.9562	1.9681	1.9583
75.0	1.78499	1.8695	1.8874	1.9036	1.9307	1.9500	1.9607	1.9612	1.9494	1.9226
80.0	1.89150	1.9274	1.9379	1.9465	1.9579	1.9608	1.9541	1.9364	1.9054	1.8583
85.0	1.96517	1.9565	1.9593	1.9601	1.9555	1.9418	1.9180	1.8826	1.8333	1.7675

θ_{xy}, deg / α, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	.4457	.5758	.7322	.9170	1.1294	1.3621	1.5981	1.8076	1.9521
2.0	.4748	.6073	.7656	.9515	1.1635	1.3940	1.6253	1.8273	1.9618
4.0	.5347	.6717	.8332	1.0204	1.2311	1.4563	1.6774	1.8637	1.9776
6.0	.5969	.7375	.9015	1.0892	1.2975	1.5164	1.7262	1.8959	1.9887
8.0	.6609	.8046	.9703	1.1575	1.3624	1.5739	1.7714	1.9237	1.9950
10.0	.7265	.8726	1.0391	1.2250	1.4255	1.6286	1.8129	1.9470	1.9964
12.0	.7933	.9411	1.1077	1.2914	1.4864	1.6802	1.8503	1.9657	1.9929
15.0	.8952	1.0442	1.2093	1.3880	1.5733	1.7512	1.8987	1.9849	1.9787
20.0	1.0667	1.2140	1.3728	1.5388	1.7034	1.8507	1.9570	1.9926	1.9312
25.0	1.2356	1.3769	1.5245	1.6729	1.8118	1.9242	1.9861	1.9702	1.8553
30.0	1.3969	1.5278	1.6599	1.7862	1.8953	1.9693	1.9851	1.9181	1.7535
35.0	1.5457	1.6625	1.7748	1.8753	1.9513	1.9848	1.9540	1.8381	1.6286
40.0	1.6774	1.7762	1.8658	1.9374	1.9781	1.9702	1.8938	1.7325	1.4846
45.0	1.7880	1.8660	1.9301	1.9707	1.9749	1.9258	1.8062	1.6046	1.3259
50.0	1.8742	1.9291	1.9657	1.9741	1.9417	1.8531	1.6940	1.4582	1.1572
55.0	1.9333	1.9636	1.9715	1.9476	1.8797	1.7543	1.5605	1.2977	.9836
60.0	1.9636	1.9683	1.9475	1.8920	1.7907	1.6323	1.4099	1.1282	.8105
65.0	1.9641	1.9431	1.8942	1.8089	1.6773	1.4908	1.2467	.9546	.6431
70.0	1.9549	1.8868	1.8134	1.7009	1.5431	1.3343	1.0758	.7823	.4865
75.0	1.8768	1.8071	1.7075	1.5712	1.3921	1.1673	.9024	.6166	.3455
80.0	1.7915	1.7004	1.5796	1.4238	1.2288	.9951	.7319	.4624	.2243
85.0	1.6817	1.5719	1.4338	1.2632	1.0584	.8228	.5693	.3244	.1266

TABLE III.- CONTINUED

(b) C_A. Continued.

$\phi_1 = 120^0$; $\phi_2 = 240^0$; $\beta = 5^0$

θ_{xy}, deg / α, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.0040	.0088	.0158	.0251	.0507	.0864	.1332	.1928	.2671	.3584
2.0	.0073	.0136	.0222	.0331	.0618	.1006	.1505	.2132	.2905	.3847
4.0	.0173	.0268	.0384	.0524	.0872	.1321	.1881	.2566	.3396	.4392
6.0	.0318	.0444	.0591	.0760	.1168	.1675	.2293	.3034	.3918	.4963
8.0	.0508	.0663	.0840	.1039	.1505	.2068	.2740	.3534	.4466	.5556
10.0	.0741	.0926	.1132	.1359	.1880	.2497	.3220	.4062	.5039	.6169
12.0	.1017	.1230	.1464	.1718	.2292	.2960	.3731	.4617	.5634	.6797
15.0	.1507	.1761	.2034	.2327	.2975	.3713	.4548	.5494	.6561	.7765
20.0	.2515	.2830	.3162	.3512	.4268	.5103	.6027	.7047	.8173	.9415
25.0	.3733	.4100	.4481	.4877	.5718	.6626	.7610	.8674	.9826	1.1068
30.0	.5125	.5532	.5951	.6382	.7282	.8236	.9250	1.0326	1.1469	1.2675
35.0	.6649	.7084	.7527	.7980	.8912	.9883	1.0897	1.1954	1.3052	1.4187
40.0	.8257	.8708	.9163	.9623	1.0559	1.1518	1.2501	1.3506	1.4529	1.5558
45.0	.9902	1.0354	1.0806	1.1260	1.2172	1.3090	1.4013	1.4937	1.5853	1.6746
50.0	1.1534	1.1973	1.2409	1.2843	1.3704	1.4553	1.5388	1.6202	1.6984	1.7714
55.0	1.3102	1.3515	1.3922	1.4323	1.5106	1.5861	1.6583	1.7264	1.7888	1.8435
60.0	1.4559	1.4934	1.5300	1.5655	1.6337	1.6975	1.7563	1.8090	1.8538	1.8884
65.0	1.5861	1.6186	1.6499	1.6799	1.7359	1.7861	1.8297	1.8654	1.8914	1.9050
70.0	1.6968	1.7234	1.7485	1.7720	1.8141	1.8492	1.8763	1.8940	1.9005	1.8927
75.0	1.7847	1.8045	1.8226	1.8389	1.8659	1.8848	1.8947	1.8940	1.8806	1.8519
80.0	1.8470	1.8596	1.8702	1.8788	1.8898	1.8920	1.8843	1.8652	1.8326	1.7838
85.0	1.8820	1.8868	1.8896	1.8902	1.8850	1.8705	1.8456	1.8087	1.7578	1.6904

θ_{xy}, deg / α, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	.4695	.6033	.7624	.9479	1.1578	1.3843	1.6103	1.8080	1.9427
2.0	.4985	.6345	.7953	.9816	1.1910	1.4150	1.6363	1.8267	1.9518
4.0	.5579	.6981	.8616	1.0488	1.2563	1.4748	1.6858	1.8609	1.9665
6.0	.6193	.7629	.9285	1.1157	1.3204	1.5322	1.7319	1.8910	1.9764
8.0	.6824	.8287	.9955	1.1818	1.3827	1.5869	1.7744	1.9166	1.9815
10.0	.7468	.8951	1.0624	1.2469	1.4430	1.6386	1.8131	1.9377	1.9818
12.0	.8122	.9619	1.1288	1.3106	1.5010	1.6871	1.8477	1.9542	1.9772
15.0	.9115	1.0618	1.2268	1.4030	1.5832	1.7533	1.8916	1.9701	1.9614
20.0	1.0776	1.2255	1.3831	1.5459	1.7048	1.8644	1.9826	1.9726	1.9116
25.0	1.2400	1.3810	1.5268	1.6713	1.8042	1.9093	1.9644	1.9452	1.8338
30.0	1.3939	1.5238	1.6533	1.7753	1.8784	1.9458	1.9564	1.8887	1.7304
35.0	1.5344	1.6494	1.7588	1.8548	1.9250	1.9530	1.9189	1.8049	1.6046
40.0	1.6573	1.7540	1.8402	1.9073	1.9428	1.9305	1.8529	1.6962	1.4601
45.0	1.7590	1.8346	1.8950	1.9313	1.9310	1.8792	1.7605	1.5661	1.3014
50.0	1.8363	1.8885	1.9215	1.9260	1.8902	1.8004	1.6446	1.4184	1.1332
55.0	1.8869	1.9143	1.9189	1.8916	1.8215	1.6967	1.5085	1.2576	.9608
60.0	1.9092	1.9110	1.8872	1.8292	1.7270	1.5712	1.3565	1.0886	.7892
65.0	1.9025	1.8789	1.8275	1.7406	1.6097	1.4276	1.1932	.9166	.6238
70.0	1.8671	1.8188	1.7416	1.6286	1.4729	1.2704	1.0235	.7467	.4696
75.0	1.8041	1.7326	1.6320	1.4964	1.3210	1.1043	.8526	.5842	.3312
80.0	1.7153	1.6229	1.5021	1.3483	1.1586	.9345	.6857	.4340	.2129
85.0	1.6034	1.4931	1.3558	1.1885	.9905	.7659	.5278	.3005	.1182

$\phi_1 = 120^0$; $\phi_2 = 240^0$; $\beta = 15^0$

θ_{xy}, deg / α, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.0088	.0139	.0206	.0293	.0533	.0867	.1307	.1865	.2561	.3417
2.0	.0123	.0186	.0267	.0368	.0638	.1001	.1469	.2057	.2781	.3664
4.0	.0220	.0309	.0419	.0550	.0877	.1297	.1822	.2465	.3243	.4177
6.0	.0357	.0475	.0613	.0772	.1155	.1631	.2210	.2905	.3733	.4713
8.0	.0535	.0681	.0848	.1034	.1471	.2000	.2630	.3375	.4249	.5271
10.0	.0755	.0928	.1121	.1335	.1824	.2403	.3082	.3872	.4788	.5847
12.0	.1014	.1214	.1434	.1672	.2211	.2838	.3562	.4393	.5347	.6438
15.0	.1475	.1713	.1970	.2245	.2854	.3546	.4330	.5217	.6219	.7347
20.0	.2422	.2718	.3030	.3359	.4069	.4853	.5720	.6677	.7734	.8898
25.0	.3568	.3912	.4270	.4643	.5432	.6285	.7208	.8207	.9288	1.0453
30.0	.4876	.5259	.5652	.6057	.6902	.7799	.8750	.9761	1.0832	1.1964
35.0	.6309	.6718	.7135	.7559	.8435	.9347	1.0299	1.1291	1.2321	1.3386
40.0	.7821	.8244	.8672	.9104	.9983	1.0884	1.1807	1.2750	1.3709	1.4674
45.0	.9367	.9792	1.0217	1.0644	1.1501	1.2363	1.3229	1.4095	1.4954	1.5791
50.0	1.0901	1.1314	1.1732	1.2132	1.2990	1.3738	1.4521	1.5285	1.6018	1.6701
55.0	1.2375	1.2764	1.3147	1.3523	1.4259	1.4967	1.5645	1.6283	1.6868	1.7379
60.0	1.3745	1.4098	1.4442	1.4776	1.5416	1.6014	1.6566	1.7059	1.7479	1.7802
65.0	1.4969	1.5275	1.5569	1.5851	1.6377	1.6847	1.7256	1.7590	1.7832	1.7958
70.0	1.6010	1.6260	1.6496	1.6717	1.7112	1.7440	1.7694	1.7859	1.7917	1.7842
75.0	1.6836	1.7023	1.7193	1.7346	1.7599	1.7776	1.7867	1.7859	1.7731	1.7458
80.0	1.7423	1.7541	1.7640	1.7721	1.7824	1.7844	1.7770	1.7588	1.7279	1.6817
85.0	1.7752	1.7797	1.7822	1.7828	1.7779	1.7641	1.7405	1.7057	1.6576	1.5940

θ_{xy}, deg / α, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	.4858	.5712	.7203	.8941	1.0909	1.3032	1.5150	1.7003	1.8266
2.0	.4730	.6006	.7512	.9258	1.1220	1.3321	1.5394	1.7179	1.8351
4.0	.5289	.6603	.8136	.9890	1.1835	1.3883	1.5860	1.7501	1.8489
6.0	.5867	.7212	.8764	1.0519	1.2437	1.4422	1.6294	1.7783	1.8582
8.0	.6459	.7831	.9395	1.1141	1.3023	1.4936	1.6693	1.8024	1.8630
10.0	.7065	.8455	1.0023	1.1753	1.3590	1.5422	1.7056	1.8223	1.8633
12.0	.7680	.9083	1.0647	1.2352	1.4136	1.5878	1.7381	1.8378	1.8590
15.0	.8613	1.0023	1.1569	1.3220	1.4908	1.6501	1.7895	1.8527	1.8442
20.0	1.0175	1.1561	1.3039	1.4564	1.6051	1.7358	1.8274	1.8551	1.7973
25.0	1.1702	1.3023	1.4389	1.5742	1.6986	1.7967	1.8479	1.8293	1.7242
30.0	1.3148	1.4366	1.5578	1.6720	1.7683	1.8311	1.8404	1.7762	1.6270
35.0	1.4469	1.5547	1.6571	1.7467	1.8122	1.8378	1.8051	1.6974	1.5087
40.0	1.5626	1.6531	1.7336	1.7961	1.8289	1.8167	1.7431	1.5953	1.3728
45.0	1.6581	1.7288	1.7851	1.8187	1.8178	1.7684	1.6563	1.4729	1.2236
50.0	1.7308	1.7795	1.8100	1.8137	1.7794	1.6944	1.5472	1.3340	1.0655
55.0	1.7784	1.8037	1.8076	1.7814	1.7149	1.5969	1.4193	1.1828	.9034
60.0	1.7993	1.8006	1.7778	1.7227	1.6260	1.4788	1.2764	1.0240	.7421
65.0	1.7931	1.7704	1.7217	1.6394	1.5157	1.3439	1.1229	.8622	.5866
70.0	1.7598	1.7139	1.6409	1.5341	1.3871	1.1961	.9633	.7025	.4416
75.0	1.7005	1.6329	1.5378	1.4099	1.2443	1.0400	.8026	.5498	.3115
80.0	1.6170	1.5298	1.4157	1.2705	1.0916	.8802	.6457	.4085	.2003
85.0	1.5118	1.4077	1.2782	1.1204	.9335	.7218	.4973	.2831	.1113

TABLE III.- CONTINUED

(b) C_A. Continued.

$\beta_1 = 150^0$; $\beta_2 = 210^0$; $\beta = 0^0$

θ_{xy}, deg / α, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.0031	.0076	.0140	.0225	.0458	.0783	.1211	.1759	.2446	.3299
2.0	.0065	.0124	.0204	.0304	.0568	.0923	.1383	.1961	.2679	.3561
4.0	.0167	.0258	.0367	.0498	.0821	.1237	.1756	.2394	.3170	.4108
6.0	.0318	.0438	.0577	.0737	.1120	.1593	.2170	.2863	.3694	.4684
8.0	.0515	.0665	.0833	.1021	.1461	.1990	.2621	.3368	.4249	.5285
10.0	.0758	.0936	.1133	.1349	.1843	.2425	.3108	.3904	.4831	.5909
12.0	.1046	.1252	.1476	.1719	.2265	.2897	.3628	.4469	.5438	.6553
15.0	.1559	.1804	.2067	.2348	.2967	.3669	.4465	.5367	.6389	.7549
20.0	.2614	.2919	.3239	.3576	.4302	.5103	.5988	.6968	.8055	.9261
25.0	.3891	.4247	.4615	.4998	.5809	.6684	.7631	.8660	.9779	1.0994
30.0	.5352	.5747	.6153	.6570	.7441	.8363	.9345	1.0391	1.1507	1.2695
35.0	.6952	.7375	.7806	.8244	.9148	1.0091	1.1076	1.2108	1.3188	1.4312
40.0	.8642	.9080	.9523	.9970	1.0880	1.1813	1.2773	1.3759	1.4770	1.5797
45.0	1.0372	1.0812	1.1252	1.1694	1.2583	1.3479	1.4383	1.5294	1.6205	1.7103
50.0	1.2089	1.2517	1.2942	1.3365	1.4205	1.5037	1.5859	1.6666	1.7450	1.8193
55.0	1.3740	1.4143	1.4540	1.4932	1.5698	1.6440	1.7154	1.7834	1.8467	1.9031
60.0	1.5275	1.5641	1.5998	1.6346	1.7015	1.7645	1.8230	1.8762	1.9225	1.9593
65.0	1.6648	1.6966	1.7272	1.7566	1.8117	1.8616	1.9055	1.9422	1.9700	1.9863
70.0	1.7817	1.8077	1.8323	1.8554	1.8971	1.9323	1.9602	1.9794	1.9879	1.9830
75.0	1.8746	1.8941	1.9119	1.9280	1.9550	1.9745	1.9855	1.9866	1.9756	1.9498
80.0	1.9408	1.9531	1.9636	1.9722	1.9837	1.9869	1.9807	1.9636	1.9335	1.8875
85.0	1.9782	1.9829	1.9858	1.9867	1.9823	1.9691	1.9459	1.9112	1.8629	1.7980

θ_{xy}, deg / α, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	.4347	.5628	.7175	.9014	1.1141	1.3490	1.5890	1.8038	1.9528
2.0	.4638	.5943	.7510	.9361	1.1486	1.3814	1.6168	1.8240	1.9628
4.0	.5237	.6588	.8189	1.0056	1.2169	1.4447	1.6700	1.8613	1.9792
6.0	.5860	.7250	.8877	1.0750	1.2842	1.5058	1.7199	1.8945	1.9908
8.0	.6502	.7924	.9570	1.1441	1.3501	1.5645	1.7663	1.9233	1.9976
10.0	.7162	.8609	1.0265	1.2125	1.4143	1.6204	1.8089	1.9476	1.9996
12.0	.7835	.9300	1.0958	1.2798	1.4764	1.6732	1.8477	1.9672	1.9967
15.0	.8862	1.0341	1.1988	1.3780	1.5651	1.7463	1.8979	1.9879	1.9832
20.0	1.0595	1.2062	1.3650	1.5320	1.6987	1.8494	1.9596	1.9981	1.9369
25.0	1.2309	1.3718	1.5199	1.6697	1.8110	1.9267	1.9920	1.9780	1.8621
30.0	1.3951	1.5260	1.6589	1.7869	1.8986	1.9758	1.9943	1.9282	1.7611
35.0	1.5471	1.6641	1.7777	1.8801	1.9587	1.9951	1.9663	1.8502	1.6370
40.0	1.6823	1.7818	1.8728	1.9465	1.9896	1.9841	1.9089	1.7463	1.4936
45.0	1.7967	1.8757	1.9412	1.9839	1.9904	1.9432	1.8238	1.6197	1.3351
50.0	1.8866	1.9428	1.9809	1.9914	1.9610	1.8735	1.7137	1.4742	1.1665
55.0	1.9495	1.9810	1.9907	1.9686	1.9022	1.7773	1.5818	1.3143	.9927
60.0	1.9834	1.9894	1.9702	1.9163	1.8160	1.6573	1.4323	1.1449	.8192
65.0	1.9872	1.9675	1.9201	1.8360	1.7049	1.5173	1.2695	.9710	.6512
70.0	1.9608	1.9160	1.8419	1.7302	1.5723	1.3615	1.0985	.7980	.4938
75.0	1.9051	1.8366	1.7380	1.6021	1.4222	1.1947	.9245	.6311	.3517
80.0	1.8218	1.7316	1.6116	1.4556	1.2591	1.0218	.7527	.4754	.2294
85.0	1.7133	1.6043	1.4664	1.2951	1.0882	.8483	.5884	.3356	.1304

$\beta_1 = 150^0$; $\beta_2 = 210^0$; $\beta = 2^0$

θ_{xy}, deg / α, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.0031	.0076	.0140	.0225	.0457	.0782	.1210	.1757	.2443	.3295
2.0	.0065	.0124	.0204	.0304	.0567	.0922	.1381	.1959	.2675	.3557
4.0	.0167	.0257	.0367	.0497	.0821	.1236	.1754	.2391	.3166	.4103
6.0	.0318	.0438	.0577	.0736	.1118	.1591	.2167	.2860	.3690	.4678
8.0	.0515	.0664	.0832	.1020	.1459	.1988	.2618	.3364	.4243	.5279
10.0	.0758	.0935	.1132	.1348	.1841	.2423	.3104	.3899	.4825	.5902
12.0	.1045	.1250	.1474	.1717	.2262	.2894	.3624	.4464	.5432	.6545
15.0	.1557	.1802	.2064	.2345	.2963	.3665	.4459	.5360	.6381	.7540
20.0	.2611	.2915	.3236	.3572	.4297	.5097	.5981	.6960	.8046	.9250
25.0	.3886	.4242	.4610	.4992	.5802	.6676	.7622	.8650	.9767	1.0981
30.0	.5345	.5740	.6146	.6562	.7432	.8353	.9334	1.0378	1.1493	1.2679
35.0	.6943	.7366	.7796	.8235	.9137	1.0079	1.1063	1.2093	1.3172	1.4295
40.0	.8632	.9070	.9511	.9958	1.0867	1.1799	1.2768	1.3743	1.4752	1.5778
45.0	1.0360	1.0799	1.1239	1.1680	1.2567	1.3463	1.4366	1.5276	1.6185	1.7083
50.0	1.2074	1.2502	1.2926	1.3349	1.4188	1.5019	1.5840	1.6646	1.7429	1.8171
55.0	1.3723	1.4126	1.4523	1.4914	1.5679	1.6420	1.7134	1.7813	1.8444	1.9008
60.0	1.5256	1.5622	1.5979	1.6327	1.6994	1.7624	1.8208	1.8740	1.9201	1.9570
65.0	1.6628	1.6946	1.7251	1.7545	1.8095	1.8593	1.9032	1.9399	1.9676	1.9839
70.0	1.7795	1.8055	1.8301	1.8532	1.8948	1.9300	1.9578	1.9770	1.9855	1.9806
75.0	1.8724	1.8918	1.9096	1.9257	1.9526	1.9721	1.9831	1.9842	1.9732	1.9474
80.0	1.9384	1.9507	1.9612	1.9698	1.9813	1.9845	1.9783	1.9613	1.9312	1.8852
85.0	1.9758	1.9805	1.9834	1.9843	1.9799	1.9667	1.9436	1.9089	1.8606	1.7959

θ_{xy}, deg / α, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	.4342	.5621	.7166	.9003	1.1128	1.3473	1.5871	1.8016	1.9505
2.0	.4632	.5936	.7501	.9349	1.1472	1.3797	1.6148	1.8218	1.9604
4.0	.5231	.6580	.8180	1.0044	1.2155	1.4429	1.6679	1.8591	1.9768
6.0	.5853	.7241	.8866	1.0737	1.2827	1.5040	1.7178	1.8922	1.9884
8.0	.6495	.7915	.9559	1.1427	1.3485	1.5626	1.7641	1.9209	1.9952
10.0	.7153	.8599	1.0253	1.2110	1.4126	1.6184	1.8067	1.9452	1.9971
12.0	.7825	.9289	1.0945	1.2782	1.4746	1.6712	1.8454	1.9648	1.9942
15.0	.8851	1.0329	1.1974	1.3764	1.5632	1.7441	1.8956	1.9854	1.9807
20.0	1.0583	1.2047	1.3633	1.5302	1.6967	1.8472	1.9572	1.9957	1.9345
25.0	1.2294	1.3702	1.5181	1.6677	1.8088	1.9244	1.9896	1.9756	1.8598
30.0	1.3934	1.5242	1.6569	1.7848	1.8962	1.9734	1.9919	1.9259	1.7590
35.0	1.5452	1.6621	1.7756	1.8778	1.9563	1.9927	1.9639	1.8479	1.6350
40.0	1.6803	1.7797	1.8705	1.9441	1.9872	1.9817	1.9066	1.7441	1.4918
45.0	1.7945	1.8734	1.9389	1.9815	1.9880	1.9408	1.8216	1.6177	1.3335
50.0	1.8844	1.9404	1.9785	1.9890	1.9586	1.8713	1.7116	1.4724	1.1650
55.0	1.9471	1.9786	1.9883	1.9662	1.8999	1.7751	1.5799	1.3127	.9915
60.0	1.9810	1.9870	1.9678	1.9140	1.8138	1.6553	1.4305	1.1435	.8182
65.0	1.9848	1.9651	1.9178	1.8338	1.7028	1.5155	1.2680	.9698	.6504
70.0	1.9585	1.9137	1.8397	1.7281	1.5704	1.3599	1.0972	.7970	.4932
75.0	1.9028	1.8344	1.7359	1.6002	1.4204	1.1932	.9233	.6303	.3513
80.0	1.8196	1.7295	1.6096	1.4538	1.2576	1.0206	.7518	.4748	.2291
85.0	1.7112	1.6023	1.4646	1.2936	1.0868	.8473	.5877	.3352	.1303

TABLE III.- CONTINUED

(b) C_A. Continued.

$\beta_1 = 135^0$; $\beta_2 = 225^0$; $\beta = 5^0$

θ_{xy}, deg / α, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.0034	.0080	.0145	.0232	.0471	.0803	.1242	.1801	.2501	.3368
2.0	.0067	.0128	.0209	.0311	.0580	.0944	.1413	.2002	.2733	.3629
4.0	.0169	.0260	.0371	.0504	.0833	.1256	.1785	.2434	.3222	.4173
6.0	.0317	.0438	.0579	.0741	.1129	.1610	.2196	.2901	.3743	.4745
8.0	.0511	.0662	.0832	.1022	.1467	.2004	.2644	.3401	.4293	.5341
10.0	.0750	.0929	.1128	.1346	.1846	.2436	.3127	.3933	.4870	.5959
12.0	.1033	.1240	.1466	.1711	.2263	.2903	.3642	.4493	.5471	.6596
15.0	.1536	.1783	.2048	.2331	.2956	.3665	.4469	.5379	.6411	.7578
20.0	.2572	.2878	.3201	.3540	.4272	.5079	.5972	.6959	.8053	.9264
25.0	.3825	.4182	.4553	.4938	.5754	.6635	.7589	.8624	.9747	1.0965
30.0	.5258	.5655	.6083	.6482	.7357	.8285	.9272	1.0322	1.1441	1.2629
35.0	.6827	.7252	.7684	.8125	.9033	.9980	1.0970	1.2004	1.3085	1.4207
40.0	.8484	.8924	.9368	.9817	1.0731	1.1668	1.2630	1.3617	1.4627	1.5650
45.0	1.0180	1.0621	1.1064	1.1507	1.2398	1.3297	1.4203	1.5113	1.6021	1.6914
50.0	1.1862	1.2292	1.2719	1.3143	1.3985	1.4819	1.5641	1.6447	1.7226	1.7961
55.0	1.3480	1.3885	1.4283	1.4676	1.5443	1.6186	1.6899	1.7576	1.8203	1.8759
60.0	1.4984	1.5352	1.5710	1.6058	1.6728	1.7357	1.7941	1.8468	1.8924	1.9284
65.0	1.6329	1.6648	1.6955	1.7249	1.7800	1.8298	1.8733	1.9096	1.9367	1.9520
70.0	1.7473	1.7734	1.7981	1.8212	1.8628	1.8978	1.9253	1.9439	1.9518	1.9460
75.0	1.8383	1.8578	1.8756	1.8917	1.9186	1.9378	1.9484	1.9489	1.9372	1.9105
80.0	1.9030	1.9153	1.9258	1.9344	1.9456	1.9485	1.9419	1.9262	1.8934	1.8467
85.0	1.9394	1.9442	1.9470	1.9478	1.9432	1.9296	1.9060	1.8708	1.8218	1.7564

θ_{xy}, deg / α, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	.4431	.5725	.7277	.9113	1.1223	1.3535	1.5879	1.7960	1.9396
2.0	.4719	.6036	.7609	.9455	1.1562	1.3852	1.6150	1.8157	1.9492
4.0	.5515	.6875	.8280	1.0141	1.2233	1.4471	1.6667	1.8518	1.9650
6.0	.6532	.7930	.8959	1.0824	1.2893	1.5068	1.7152	1.8838	1.9760
8.0	.7668	.7997	.9642	1.1503	1.3538	1.5639	1.7602	1.9115	1.9822
10.0	.7220	.8872	1.0326	1.2173	1.4165	1.6183	1.8014	1.9346	1.9836
12.0	.7884	.9353	1.1007	1.2832	1.4770	1.6695	1.8386	1.9532	1.9802
15.0	.8897	1.0377	1.2017	1.3793	1.5633	1.7401	1.8866	1.9722	1.9660
20.0	1.0601	1.2064	1.3641	1.5291	1.6926	1.8390	1.9446	1.9799	1.9189
25.0	1.2279	1.3682	1.5149	1.6624	1.8003	1.9120	1.9735	1.9576	1.8435
30.0	1.3882	1.5102	1.6494	1.7750	1.8833	1.9568	1.9725	1.9059	1.7423
35.0	1.5360	1.6518	1.7636	1.8635	1.9389	1.9722	1.9416	1.8264	1.6182
40.0	1.6668	1.7650	1.8540	1.9252	1.9655	1.9577	1.8817	1.7215	1.4752
45.0	1.7767	1.8543	1.9179	1.9583	1.9623	1.9136	1.7947	1.5943	1.3174
50.0	1.8624	1.9170	1.9533	1.9617	1.9294	1.8414	1.6832	1.4489	1.1498
55.0	1.9212	1.9521	1.9591	1.9353	1.8678	1.7431	1.5506	1.2895	.9774
60.0	1.9513	1.9559	1.9352	1.8800	1.7793	1.6219	1.4009	1.1210	.8054
65.0	1.9518	1.9308	1.8823	1.7975	1.6667	1.4814	1.2387	.9485	.6390
70.0	1.9227	1.8769	1.8020	1.6901	1.5333	1.3258	1.0689	.7774	.4834
75.0	1.8650	1.7957	1.6967	1.5613	1.3833	1.1600	.8967	.6127	.3433
80.0	1.7803	1.6897	1.5697	1.4148	1.2211	.9888	.7272	.4595	.2228
85.0	1.6712	1.5621	1.4248	1.2553	1.0517	.8176	.5657	.3224	.1258

$\beta_1 = 135^0$; $\beta_2 = 225^0$; $\beta = 15^0$

θ_{xy}, deg / α, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.0054	.0097	.0159	.0241	.0465	.0777	.1189	.1714	.2371	.3185
2.0	.0086	.0143	.0219	.0315	.0568	.0909	.1349	.1903	.2589	.3431
4.0	.0181	.0267	.0372	.0496	.0805	.1203	.1700	.2309	.3049	.3943
6.0	.0321	.0435	.0567	.0719	.1084	.1536	.2086	.2748	.3539	.4480
8.0	.0503	.0645	.0805	.0984	.1402	.1906	.2507	.3219	.4056	.5041
10.0	.0728	.0896	.1083	.1288	.1757	.2312	.2961	.3718	.4599	.5622
12.0	.0994	.1188	.1400	.1631	.2149	.2751	.3445	.4244	.5164	.6220
15.0	.1467	.1699	.1948	.2214	.2801	.3467	.4223	.5078	.6047	.7144
20.0	.2340	.2729	.3132	.3551	.4438	.4797	.5635	.6563	.7591	.8728
25.0	.3619	.3954	.4303	.4665	.5432	.6260	.7156	.8128	.9183	1.0328
30.0	.4966	.5339	.5723	.6117	.6939	.7811	.8738	.9725	1.0776	1.1892
35.0	.6441	.6840	.7247	.7661	.8515	.9405	1.0334	1.1306	1.2321	1.3376
40.0	.7999	.8413	.8830	.9252	1.0111	1.0991	1.1896	1.2823	1.3772	1.4732
45.0	.9593	1.0008	1.0424	1.0841	1.1679	1.2523	1.3374	1.4230	1.5083	1.5921
50.0	1.1175	1.1579	1.1980	1.2379	1.3171	1.3954	1.4726	1.5483	1.6215	1.6905
55.0	1.2696	1.3076	1.3451	1.3820	1.4541	1.5239	1.5909	1.6545	1.7134	1.7656
60.0	1.4110	1.4455	1.4792	1.5120	1.5749	1.6340	1.6888	1.7384	1.7812	1.8149
65.0	1.5374	1.5674	1.5963	1.6239	1.6757	1.7224	1.7634	1.7974	1.8228	1.8371
70.0	1.6450	1.6696	1.6927	1.7144	1.7535	1.7864	1.8122	1.8297	1.8370	1.8314
75.0	1.7305	1.7489	1.7656	1.7807	1.8060	1.8240	1.8339	1.8343	1.8233	1.7981
80.0	1.7914	1.8029	1.8128	1.8208	1.8314	1.8341	1.8278	1.8111	1.7821	1.7380
85.0	1.8256	1.8301	1.8327	1.8335	1.8291	1.8163	1.7941	1.7609	1.7147	1.6532

θ_{xy}, deg / α, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	.4183	.5397	.6856	.8580	1.0561	1.2732	1.4933	1.6888	1.8236
2.0	.4455	.5691	.7168	.8902	1.0880	1.3030	1.5188	1.7072	1.8326
4.0	.5015	.6292	.7799	.9546	1.1511	1.3612	1.5675	1.7413	1.8475
6.0	.5595	.6908	.8438	1.0189	1.2131	1.4173	1.6130	1.7713	1.8578
8.0	.6193	.7534	.9080	1.0827	1.2738	1.4711	1.6553	1.7973	1.8637
10.0	.6806	.8169	.9723	1.1457	1.3327	1.5221	1.6940	1.8191	1.8650
12.0	.7430	.8809	1.0363	1.2077	1.3896	1.5703	1.7290	1.8365	1.8618
15.0	.8382	.9772	1.1313	1.2980	1.4708	1.6367	1.7742	1.8544	1.8484
20.0	.9984	1.1358	1.2840	1.4389	1.5923	1.7296	1.8287	1.8617	1.8044
25.0	1.1562	1.2880	1.4257	1.5641	1.6936	1.7983	1.8558	1.8407	1.7332
30.0	1.3069	1.4290	1.5522	1.6700	1.7716	1.8405	1.8549	1.7921	1.6381
35.0	1.4458	1.5546	1.6595	1.7532	1.8239	1.8549	1.8258	1.7173	1.5214
40.0	1.5689	1.6610	1.7445	1.8112	1.8489	1.8413	1.7696	1.6187	1.3869
45.0	1.6722	1.7449	1.8046	1.8423	1.8459	1.7998	1.6878	1.4992	1.2386
50.0	1.7527	1.8039	1.8378	1.8455	1.8150	1.7319	1.5830	1.3624	1.0810
55.0	1.8080	1.8360	1.8433	1.8208	1.7570	1.6396	1.4583	1.2125	.9189
60.0	1.8363	1.8404	1.8208	1.7688	1.6738	1.5256	1.3176	1.0541	.7572
65.0	1.8368	1.8169	1.7711	1.6911	1.5680	1.3935	1.1651	.8920	.6009
70.0	1.8094	1.7662	1.6956	1.5902	1.4426	1.2472	1.0054	.7311	.4546
75.0	1.7551	1.6899	1.5966	1.4691	1.3015	1.0913	.8435	.5762	.3228
80.0	1.6755	1.5902	1.4772	1.3314	1.1490	.9304	.6842	.4322	.2096
85.0	1.5729	1.4702	1.3410	1.1814	.9898	.7694	.5323	.3033	.1183

TABLE III.- CONTINUED

(c) C_Y

$\phi_1 = 0^o$; $\phi_2 = 360^o$; $\beta = 2^o$

α, deg \ θ_{xy}, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	-.0465	-.0462	-.0459	-.0454	-.0441	-.0423	-.0400	-.0373	-.0342	-.0308
2.0	-.0479	-.0462	-.0459	-.0454	-.0441	-.0423	-.0400	-.0373	-.0342	-.0307
4.0	-.0553	-.0470	-.0458	-.0453	-.0440	-.0422	-.0400	-.0372	-.0341	-.0307
6.0	-.0652	-.0499	-.0464	-.0453	-.0439	-.0421	-.0398	-.0371	-.0340	-.0306
8.0	-.0761	-.0540	-.0481	-.0457	-.0437	-.0419	-.0397	-.0370	-.0339	-.0305
10.0	-.0873	-.0587	-.0503	-.0468	-.0436	-.0417	-.0394	-.0368	-.0337	-.0303
12.0	-.0987	-.0636	-.0529	-.0482	-.0438	-.0414	-.0392	-.0365	-.0335	-.0301
15.0	-.1158	-.0713	-.0573	-.0507	-.0445	-.0413	-.0387	-.0361	-.0331	-.0297
20.0	-.1440	-.0843	-.0649	-.0555	-.0463	-.0416	-.0382	-.0352	-.0322	-.0289
25.0	-.1713	-.0971	-.0726	-.0605	-.0485	-.0423	-.0380	-.0345	-.0312	-.0279
30.0	-.1974	-.1093	-.0800	-.0655	-.0508	-.0431	-.0379	-.0339	-.0303	-.0268
35.0	-.2220	-.1208	-.0870	-.0701	-.0529	-.0439	-.0380	-.0334	-.0294	-.0258
40.0	-.2451	-.1314	-.0934	-.0743	-.0549	-.0447	-.0379	-.0328	-.0286	-.0248
45.0	-.2663	-.1411	-.0992	-.0781	-.0566	-.0452	-.0378	-.0323	-.0277	-.0238
50.0	-.2855	-.1498	-.1044	-.0814	-.0580	-.0456	-.0376	-.0317	-.0269	-.0227
55.0	-.3025	-.1574	-.1087	-.0841	-.0590	-.0458	-.0372	-.0309	-.0259	-.0217
60.0	-.3173	-.1638	-.1123	-.0863	-.0596	-.0456	-.0366	-.0301	-.0249	-.0206
65.0	-.3296	-.1690	-.1151	-.0878	-.0599	-.0453	-.0359	-.0291	-.0238	-.0194
70.0	-.3395	-.1729	-.1170	-.0887	-.0598	-.0446	-.0349	-.0280	-.0226	-.0182
75.0	-.3468	-.1755	-.1180	-.0890	-.0592	-.0437	-.0338	-.0268	-.0214	-.0170
80.0	-.3515	-.1768	-.1182	-.0886	-.0583	-.0425	-.0325	-.0254	-.0200	-.0157
85.0	-.3535	-.1768	-.1175	-.0875	-.0569	-.0410	-.0310	-.0239	-.0186	-.0144

α, deg \ θ_{xy}, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	-.0270	-.0231	-.0190	-.0150	-.0111	-.0075	-.0045	-.0021	-.0005
2.0	-.0270	-.0231	-.0190	-.0150	-.0111	-.0075	-.0045	-.0021	-.0005
4.0	-.0270	-.0230	-.0190	-.0150	-.0111	-.0075	-.0044	-.0021	-.0005
6.0	-.0269	-.0230	-.0189	-.0149	-.0111	-.0075	-.0044	-.0020	-.0005
8.0	-.0268	-.0229	-.0189	-.0149	-.0110	-.0075	-.0044	-.0020	-.0005
10.0	-.0266	-.0227	-.0188	-.0148	-.0110	-.0074	-.0044	-.0020	-.0005
12.0	-.0264	-.0226	-.0186	-.0147	-.0109	-.0074	-.0044	-.0020	-.0005
15.0	-.0261	-.0223	-.0184	-.0145	-.0107	-.0073	-.0043	-.0020	-.0005
20.0	-.0254	-.0217	-.0179	-.0141	-.0105	-.0071	-.0042	-.0019	-.0005
25.0	-.0245	-.0209	-.0173	-.0136	-.0101	-.0068	-.0040	-.0019	-.0005
30.0	-.0234	-.0200	-.0165	-.0130	-.0096	-.0065	-.0039	-.0018	-.0005
35.0	-.0223	-.0189	-.0156	-.0123	-.0091	-.0062	-.0037	-.0017	-.0004
40.0	-.0212	-.0179	-.0146	-.0115	-.0085	-.0058	-.0034	-.0016	-.0004
45.0	-.0201	-.0168	-.0136	-.0106	-.0079	-.0053	-.0032	-.0015	-.0004
50.0	-.0190	-.0157	-.0126	-.0097	-.0072	-.0049	-.0029	-.0013	-.0003
55.0	-.0179	-.0146	-.0116	-.0089	-.0064	-.0043	-.0026	-.0012	-.0003
60.0	-.0168	-.0135	-.0106	-.0080	-.0057	-.0038	-.0022	-.0010	-.0003
65.0	-.0157	-.0125	-.0096	-.0071	-.0050	-.0033	-.0019	-.0009	-.0002
70.0	-.0145	-.0114	-.0086	-.0063	-.0044	-.0028	-.0016	-.0007	-.0002
75.0	-.0134	-.0103	-.0077	-.0055	-.0037	-.0023	-.0012	-.0005	-.0001
80.0	-.0122	-.0093	-.0068	-.0048	-.0031	-.0019	-.0010	-.0004	-.0001
85.0	-.0110	-.0082	-.0059	-.0040	-.0026	-.0015	-.0007	-.0003	-.0000

TABLE III.- CONTINUED

(b) C_A. Concluded.

$\beta_1 = 150^0$; $\beta_2 = 210^0$; $\beta = 5^0$

θ_{xy}, deg / α, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.0032	.0076	.0140	.0224	.0455	.0778	.1203	.1747	.2428	.3274
2.0	.0065	.0124	.0203	.0303	.0564	.0917	.1373	.1947	.2659	.3535
4.0	.0167	.0257	.0366	.0495	.0816	.1229	.1744	.2377	.3147	.4078
6.0	.0316	.0436	.0574	.0732	.1112	.1582	.2154	.2843	.3667	.4649
8.0	.0512	.0660	.0828	.1015	.1450	.1976	.2602	.3343	.4217	.5246
10.0	.0754	.0930	.1125	.1340	.1830	.2408	.3085	.3875	.4795	.5865
12.0	.1039	.1243	.1466	.1707	.2248	.2876	.3601	.4436	.5398	.6504
15.0	.1548	.1791	.2052	.2331	.2945	.3642	.4432	.5327	.6341	.7492
20.0	.2595	.2898	.3216	.3550	.4270	.5065	.5944	.6916	.7995	.9191
25.0	.3862	.4215	.4581	.4961	.5766	.6634	.7574	.8595	.9705	1.0911
30.0	.5312	.5704	.6107	.6521	.7385	.8301	.9275	1.0313	1.1420	1.2599
35.0	.6900	.7320	.7747	.8183	.9080	1.0015	1.0993	1.2017	1.3088	1.4204
40.0	.8578	.9013	.9452	.9895	1.0798	1.1725	1.2677	1.3656	1.4658	1.5678
45.0	1.0294	1.0731	1.1168	1.1606	1.2488	1.3377	1.4275	1.5179	1.6083	1.6974
50.0	1.1998	1.2423	1.2845	1.3265	1.4098	1.4924	1.5739	1.6541	1.7318	1.8055
55.0	1.3636	1.4036	1.4431	1.4819	1.5579	1.6316	1.7025	1.7700	1.8327	1.8887
60.0	1.5160	1.5523	1.5878	1.6223	1.6887	1.7512	1.8093	1.8621	1.9079	1.9445
65.0	1.6522	1.6838	1.7142	1.7434	1.7981	1.8475	1.8911	1.9275	1.9551	1.9713
70.0	1.7683	1.7941	1.8185	1.8414	1.8828	1.9177	1.9454	1.9644	1.9729	1.9681
75.0	1.8605	1.8798	1.8975	1.9135	1.9403	1.9596	1.9705	1.9716	1.9607	1.9351
80.0	1.9261	1.9384	1.9488	1.9573	1.9687	1.9719	1.9658	1.9488	1.9189	1.8732
85.0	1.9632	1.9680	1.9708	1.9717	1.9673	1.9542	1.9312	1.8968	1.8488	1.7845

θ_{xy}, deg / α, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	.4315	.5586	.7121	.8946	1.1057	1.3388	1.5770	1.7901	1.9380
2.0	.4603	.5899	.7454	.9290	1.1399	1.3709	1.6045	1.8101	1.9479
4.0	.5198	.6539	.8128	.9980	1.2077	1.4337	1.6573	1.8472	1.9642
6.0	.5816	.7196	.8810	1.0669	1.2745	1.4944	1.7068	1.8801	1.9757
8.0	.6454	.7865	.9498	1.1355	1.3399	1.5526	1.7529	1.9087	1.9825
10.0	.7108	.8544	1.0188	1.2033	1.4036	1.6081	1.7952	1.9328	1.9844
12.0	.7776	.9230	1.0876	1.2701	1.4652	1.6605	1.8336	1.9523	1.9815
15.0	.8796	1.0264	1.1898	1.3676	1.5533	1.7330	1.8835	1.9728	1.9681
20.0	1.0516	1.1971	1.3547	1.5204	1.6859	1.8354	1.9447	1.9830	1.9222
25.0	1.2216	1.3615	1.5084	1.6571	1.7973	1.9121	1.9769	1.9630	1.8980
30.0	1.3846	1.5145	1.6464	1.7734	1.8842	1.9608	1.9792	1.9136	1.7478
35.0	1.5354	1.6515	1.7643	1.8659	1.9439	1.9800	1.9514	1.8361	1.6246
40.0	1.6696	1.7684	1.8586	1.9317	1.9746	1.9691	1.8944	1.7330	1.4822
45.0	1.7831	1.8615	1.9266	1.9689	1.9753	1.9285	1.8100	1.6074	1.3250
50.0	1.8724	1.9281	1.9659	1.9763	1.9461	1.8593	1.7007	1.4630	1.1576
55.0	1.9348	1.9661	1.9756	1.9537	1.8878	1.7638	1.5699	1.3044	.9852
60.0	1.9684	1.9743	1.9553	1.9018	1.8023	1.6448	1.4214	1.1362	.8130
65.0	1.9722	1.9526	1.9056	1.8221	1.6920	1.5058	1.2599	.9636	.6463
70.0	1.9460	1.9016	1.8280	1.7171	1.5604	1.3512	1.0902	.7919	.4900
75.0	1.8907	1.8228	1.7249	1.5900	1.4114	1.1856	.9175	.6263	.3491
80.0	1.8080	1.7186	1.5994	1.4446	1.2496	1.0141	.7470	.4718	.2277
85.0	1.7003	1.5922	1.4553	1.2854	1.0799	.8419	.5839	.3330	.1295

$\beta_1 = 150^0$; $\beta_2 = 210^0$; $\beta = 15^0$

θ_{xy}, deg / α, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.0038	.0080	.0140	.0219	.0436	.0739	.1139	.1649	.2290	.3085
2.0	.0069	.0125	.0199	.0293	.0539	.0870	.1299	.1838	.2507	.3330
4.0	.0165	.0249	.0352	.0473	.0775	.1163	.1647	.2242	.2965	.3841
6.0	.0306	.0418	.0548	.0697	.1053	.1495	.2033	.2680	.3454	.4378
8.0	.0490	.0629	.0786	.0962	.1372	.1865	.2454	.3150	.3972	.4939
10.0	.0717	.0883	.1066	.1268	.1728	.2272	.2908	.3650	.4515	.5521
12.0	.0985	.1177	.1386	.1613	.2122	.2712	.3393	.4178	.5082	.6122
15.0	.1463	.1692	.1937	.2199	.2777	.3432	.4174	.5015	.5969	.7051
20.0	.2448	.2732	.3031	.3346	.4023	.4770	.5596	.6510	.7524	.8648
25.0	.3639	.3971	.4315	.4672	.5428	.6245	.7129	.8088	.9132	1.0265
30.0	.5002	.5371	.5750	.6139	.6951	.7812	.8727	.9703	1.0744	1.1852
35.0	.6495	.6890	.7292	.7701	.8544	.9423	1.0343	1.1305	1.2312	1.3361
40.0	.8072	.8481	.8894	.9311	1.0160	1.1031	1.1926	1.2846	1.3788	1.4746
45.0	.9686	1.0097	1.0508	1.0920	1.1749	1.2585	1.3428	1.4278	1.5127	1.5965
50.0	1.1288	1.1687	1.2084	1.2479	1.3262	1.4038	1.4805	1.5558	1.6289	1.6981
55.0	1.2828	1.3204	1.3575	1.3940	1.4655	1.5347	1.6014	1.6648	1.7238	1.7764
60.0	1.4261	1.4602	1.4936	1.5260	1.5884	1.6472	1.7018	1.7514	1.7945	1.8289
65.0	1.5542	1.5838	1.6124	1.6398	1.6913	1.7377	1.7787	1.8129	1.8388	1.8540
70.0	1.6632	1.6875	1.7105	1.7320	1.7709	1.8037	1.8297	1.8476	1.8556	1.8510
75.0	1.7499	1.7681	1.7847	1.7998	1.8249	1.8431	1.8534	1.8543	1.8441	1.8199
80.0	1.8117	1.8232	1.8329	1.8410	1.8517	1.8547	1.8489	1.8329	1.8048	1.7618
85.0	1.8465	1.8510	1.8537	1.8545	1.8504	1.8381	1.8164	1.7840	1.7389	1.6784

θ_{xy}, deg / α, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	.4063	.5257	.6700	.8415	1.0399	1.2589	1.4828	1.6831	1.8220
2.0	.4334	.5552	.7013	.8739	1.0720	1.2891	1.5087	1.7019	1.8313
4.0	.4894	.6154	.7647	.9387	1.1358	1.3482	1.5583	1.7367	1.8466
6.0	.5475	.6771	.8288	1.0035	1.1986	1.4052	1.6049	1.7677	1.8575
8.0	.6074	.7400	.8935	1.0680	1.2601	1.4600	1.6482	1.7945	1.8638
10.0	.6689	.8039	.9583	1.1318	1.3200	1.5121	1.6880	1.8172	1.8657
12.0	.7317	.8684	1.0230	1.1946	1.3779	1.5614	1.7241	1.8356	1.8629
15.0	.8276	.9655	1.1191	1.2862	1.4607	1.6296	1.7710	1.8548	1.8503
20.0	.9893	1.1261	1.2741	1.4299	1.5854	1.7258	1.8285	1.8644	1.8071
25.0	1.1492	1.2806	1.4187	1.5584	1.6901	1.7979	1.8588	1.8456	1.7374
30.0	1.3024	1.4245	1.5484	1.6677	1.7718	1.8437	1.8609	1.7992	1.6432
35.0	1.4442	1.5533	1.6592	1.7547	1.8279	1.8618	1.8348	1.7263	1.5274
40.0	1.5704	1.6631	1.7479	1.8166	1.8568	1.8515	1.7812	1.6294	1.3935
45.0	1.6770	1.7507	1.8118	1.8515	1.8575	1.8133	1.7019	1.5113	1.2457
50.0	1.7610	1.8133	1.8488	1.8585	1.8300	1.7483	1.5991	1.3756	1.0883
55.0	1.8196	1.8490	1.8579	1.8373	1.7752	1.6585	1.4761	1.2264	.9263
60.0	1.8512	1.8568	1.8388	1.7884	1.6948	1.5466	1.3365	1.0683	.7644
65.0	1.8548	1.8363	1.7921	1.7135	1.5911	1.4160	1.1847	.9061	.6076
70.0	1.8302	1.7884	1.7191	1.6148	1.4674	1.2706	1.0251	.7446	.4607
75.0	1.7782	1.7143	1.6222	1.4953	1.3273	1.1150	.8627	.5889	.3282
80.0	1.7004	1.6163	1.5042	1.3586	1.1752	.9537	.7025	.4436	.2140
85.0	1.5992	1.4975	1.3687	1.2089	1.0157	.7918	.5492	.3132	.1217

TABLE III.- CONTINUED

(c) C_Y. Continued.

$\phi_1 = 0^o$; $\phi_2 = 360^o$; $\beta = 5^o$

θ_{xy}, deg / α, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	-.1283	-.1151	-.1143	-.1131	-.1099	-.1054	-.0997	-.0929	-.0852	-.0766
2.0	-.1332	-.1157	-.1142	-.1131	-.1098	-.1053	-.0996	-.0929	-.0851	-.0765
4.0	-.1501	-.1198	-.1143	-.1129	-.1096	-.1051	-.0995	-.0927	-.0850	-.0764
6.0	-.1726	-.1276	-.1167	-.1129	-.1093	-.1048	-.0992	-.0924	-.0847	-.0762
8.0	-.1978	-.1376	-.1210	-.1144	-.1088	-.1044	-.0987	-.0920	-.0844	-.0758
10.0	-.2245	-.1490	-.1267	-.1171	-.1088	-.1038	-.0982	-.0915	-.0839	-.0754
12.0	-.2518	-.1610	-.1332	-.1207	-.1094	-.1032	-.0975	-.0909	-.0833	-.0749
15.0	-.2933	-.1798	-.1439	-.1270	-.1112	-.1029	-.0964	-.0898	-.0823	-.0740
20.0	-.3623	-.2117	-.1628	-.1389	-.1157	-.1037	-.0951	-.0876	-.0800	-.0720
25.0	-.4295	-.2431	-.1817	-.1514	-.1211	-.1054	-.0946	-.0858	-.0776	-.0694
30.0	-.4940	-.2733	-.2001	-.1635	-.1267	-.1074	-.0946	-.0844	-.0754	-.0668
35.0	-.5551	-.3018	-.2173	-.1750	-.1321	-.1095	-.0946	-.0831	-.0733	-.0642
40.0	-.6122	-.3282	-.2333	-.1855	-.1370	-.1114	-.0944	-.0818	-.0712	-.0617
45.0	-.6648	-.3523	-.2477	-.1950	-.1411	-.1128	-.0943	-.0805	-.0691	-.0592
50.0	-.7124	-.3738	-.2603	-.2031	-.1446	-.1137	-.0937	-.0789	-.0669	-.0566
55.0	-.7547	-.3926	-.2712	-.2098	-.1471	-.1141	-.0927	-.0771	-.0646	-.0540
60.0	-.7914	-.4085	-.2801	-.2151	-.1487	-.1138	-.0913	-.0749	-.0620	-.0512
65.0	-.8221	-.4214	-.2869	-.2189	-.1493	-.1128	-.0894	-.0725	-.0593	-.0484
70.0	-.8466	-.4311	-.2917	-.2211	-.1490	-.1112	-.0871	-.0698	-.0564	-.0454
75.0	-.8647	-.4376	-.2943	-.2218	-.1476	-.1089	-.0843	-.0667	-.0532	-.0424
80.0	-.8763	-.4409	-.2947	-.2208	-.1453	-.1059	-.0810	-.0633	-.0499	-.0392
85.0	-.8812	-.4408	-.2929	-.2182	-.1419	-.1022	-.0773	-.0597	-.0464	-.0359

θ_{xy}, deg / α, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	-.0673	-.0575	-.0474	-.0374	-.0277	-.0188	-.0111	-.0051	-.0013
2.0	-.0672	-.0574	-.0474	-.0374	-.0277	-.0188	-.0111	-.0051	-.0013
4.0	-.0671	-.0573	-.0473	-.0373	-.0276	-.0187	-.0111	-.0051	-.0013
6.0	-.0669	-.0572	-.0472	-.0372	-.0275	-.0187	-.0110	-.0051	-.0013
8.0	-.0666	-.0569	-.0470	-.0370	-.0274	-.0186	-.0110	-.0051	-.0013
10.0	-.0663	-.0566	-.0467	-.0368	-.0273	-.0185	-.0109	-.0050	-.0013
12.0	-.0658	-.0562	-.0464	-.0366	-.0271	-.0184	-.0109	-.0050	-.0013
15.0	-.0650	-.0555	-.0458	-.0361	-.0268	-.0181	-.0107	-.0049	-.0013
20.0	-.0632	-.0540	-.0446	-.0351	-.0260	-.0177	-.0104	-.0048	-.0012
25.0	-.0610	-.0521	-.0430	-.0339	-.0251	-.0170	-.0101	-.0046	-.0012
30.0	-.0583	-.0498	-.0411	-.0324	-.0240	-.0163	-.0096	-.0044	-.0011
35.0	-.0556	-.0472	-.0388	-.0306	-.0227	-.0154	-.0091	-.0042	-.0011
40.0	-.0529	-.0445	-.0364	-.0286	-.0212	-.0144	-.0085	-.0039	-.0010
45.0	-.0502	-.0418	-.0339	-.0265	-.0196	-.0133	-.0079	-.0036	-.0009
50.0	-.0474	-.0391	-.0313	-.0242	-.0178	-.0121	-.0071	-.0033	-.0008
55.0	-.0447	-.0364	-.0288	-.0220	-.0160	-.0108	-.0064	-.0029	-.0008
60.0	-.0419	-.0337	-.0264	-.0199	-.0142	-.0094	-.0056	-.0026	-.0007
65.0	-.0391	-.0310	-.0239	-.0178	-.0125	-.0081	-.0047	-.0022	-.0006
70.0	-.0362	-.0283	-.0215	-.0157	-.0108	-.0069	-.0039	-.0018	-.0004
75.0	-.0333	-.0257	-.0192	-.0137	-.0093	-.0057	-.0031	-.0013	-.0003
80.0	-.0304	-.0231	-.0169	-.0119	-.0078	-.0046	-.0024	-.0010	-.0002
85.0	-.0274	-.0205	-.0147	-.0101	-.0064	-.0036	-.0018	-.0006	-.0001

$\phi_1 = 0^o$; $\phi_2 = 360^o$; $\beta = 15^o$

θ_{xy}, deg / α, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	-.6453	-.4269	-.3624	-.3357	-.3163	-.3034	-.2870	-.2676	-.2452	-.2205
2.0	-.6515	-.4297	-.3640	-.3365	-.3162	-.3032	-.2869	-.2674	-.2451	-.2204
4.0	-.6754	-.4405	-.3699	-.3396	-.3160	-.3027	-.2864	-.2669	-.2447	-.2200
6.0	-.7125	-.4573	-.3793	-.3449	-.3163	-.3018	-.2855	-.2661	-.2439	-.2193
8.0	-.7599	-.4790	-.3917	-.3521	-.3176	-.3005	-.2843	-.2650	-.2429	-.2183
10.0	-.8150	-.5044	-.4065	-.3610	-.3199	-.2996	-.2827	-.2635	-.2415	-.2171
12.0	-.8757	-.5325	-.4231	-.3714	-.3233	-.2992	-.2809	-.2617	-.2399	-.2157
15.0	-.9736	-.5781	-.4503	-.3887	-.3298	-.2999	-.2785	-.2585	-.2369	-.2130
20.0	-1.1466	-.6591	-.4993	-.4208	-.3434	-.3035	-.2762	-.2530	-.2306	-.2072
25.0	-1.3230	-.7419	-.5497	-.4542	-.3587	-.3089	-.2755	-.2486	-.2241	-.2001
30.0	-1.4967	-.8232	-.5992	-.4873	-.3742	-.3150	-.2756	-.2449	-.2180	-.1928
35.0	-1.6638	-.9010	-.6465	-.5188	-.3890	-.3208	-.2759	-.2414	-.2122	-.1856
40.0	-1.8215	-.9739	-.6905	-.5478	-.4025	-.3259	-.2757	-.2379	-.2065	-.1785
45.0	-1.9679	-1.0408	-.7304	-.5739	-.4141	-.3298	-.2749	-.2340	-.2005	-.1714
50.0	-2.1011	-1.1009	-.7657	-.5965	-.4234	-.3323	-.2731	-.2294	-.1942	-.1641
55.0	-2.2199	-1.1536	-.7960	-.6153	-.4304	-.3331	-.2702	-.2242	-.1875	-.1565
60.0	-2.3230	-1.1982	-.8208	-.6300	-.4348	-.3321	-.2660	-.2180	-.1802	-.1487
65.0	-2.4095	-1.2343	-.8399	-.6405	-.4364	-.3292	-.2606	-.2110	-.1723	-.1405
70.0	-2.4786	-1.2617	-.8531	-.6466	-.4352	-.3244	-.2538	-.2031	-.1639	-.1320
75.0	-2.5296	-1.2799	-.8603	-.6481	-.4312	-.3177	-.2456	-.1943	-.1549	-.1231
80.0	-2.5622	-1.2888	-.8613	-.6452	-.4243	-.3091	-.2362	-.1845	-.1453	-.1140
85.0	-2.5761	-1.2884	-.8561	-.6377	-.4146	-.2985	-.2254	-.1740	-.1352	-.1046

θ_{xy}, deg / α, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	-.1937	-.1655	-.1365	-.1076	-.0797	-.0541	-.0320	-.0147	-.0038
2.0	-.1936	-.1654	-.1364	-.1076	-.0797	-.0541	-.0319	-.0147	-.0038
4.0	-.1932	-.1651	-.1362	-.1074	-.0796	-.0540	-.0319	-.0147	-.0038
6.0	-.1927	-.1646	-.1358	-.1070	-.0793	-.0538	-.0318	-.0147	-.0038
8.0	-.1918	-.1639	-.1352	-.1066	-.0790	-.0536	-.0317	-.0146	-.0037
10.0	-.1908	-.1630	-.1345	-.1060	-.0785	-.0533	-.0315	-.0145	-.0037
12.0	-.1895	-.1619	-.1335	-.1053	-.0780	-.0529	-.0313	-.0144	-.0037
15.0	-.1871	-.1599	-.1319	-.1040	-.0770	-.0523	-.0309	-.0142	-.0036
20.0	-.1820	-.1555	-.1283	-.1011	-.0750	-.0508	-.0300	-.0139	-.0035
25.0	-.1756	-.1500	-.1237	-.0975	-.0723	-.0490	-.0290	-.0134	-.0034
30.0	-.1681	-.1433	-.1182	-.0932	-.0691	-.0469	-.0277	-.0128	-.0033
35.0	-.1604	-.1359	-.1118	-.0882	-.0653	-.0443	-.0262	-.0121	-.0031
40.0	-.1527	-.1282	-.1048	-.0824	-.0611	-.0414	-.0245	-.0113	-.0029
45.0	-.1450	-.1205	-.0976	-.0762	-.0564	-.0383	-.0226	-.0104	-.0027
50.0	-.1373	-.1129	-.0904	-.0699	-.0513	-.0348	-.0205	-.0095	-.0024
55.0	-.1294	-.1052	-.0833	-.0636	-.0461	-.0310	-.0183	-.0085	-.0022
60.0	-.1215	-.0975	-.0762	-.0574	-.0410	-.0272	-.0160	-.0074	-.0019
65.0	-.1134	-.0898	-.0692	-.0514	-.0361	-.0234	-.0135	-.0062	-.0016
70.0	-.1051	-.0822	-.0624	-.0455	-.0313	-.0199	-.0111	-.0050	-.0013
75.0	-.0968	-.0745	-.0557	-.0398	-.0268	-.0165	-.0089	-.0039	-.0010
80.0	-.0883	-.0670	-.0491	-.0344	-.0225	-.0134	-.0069	-.0028	-.0007
85.0	-.0799	-.0595	-.0428	-.0292	-.0186	-.0106	-.0051	-.0018	-.0004

TABLE III.- CONTINUED

(c) C_Y. Continued.

$\phi_1 = -90^o$; $\phi_2 = 90^o$; $\beta = 2^o$

α, deg \ θ_{xy}, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	-.0342	-.0401	-.0419	-.0424	-.0422	-.0410	-.0390	-.0365	-.0336	-.0303
2.0	-.0248	-.0340	-.0378	-.0394	-.0403	-.0396	-.0380	-.0357	-.0330	-.0298
4.0	-.0151	-.0234	-.0296	-.0334	-.0363	-.0367	-.0359	-.0341	-.0317	-.0289
6.0	-.0106	-.0172	-.0230	-.0274	-.0324	-.0339	-.0337	-.0325	-.0304	-.0279
8.0	-.0081	-.0134	-.0184	-.0226	-.0284	-.0310	-.0315	-.0307	-.0291	-.0268
10.0	-.0065	-.0109	-.0152	-.0189	-.0247	-.0280	-.0293	-.0290	-.0277	-.0258
12.0	-.0054	-.0091	-.0128	-.0162	-.0216	-.0252	-.0270	-.0272	-.0263	-.0246
15.0	-.0042	-.0072	-.0102	-.0131	-.0179	-.0214	-.0236	-.0245	-.0242	-.0229
20.0	-.0031	-.0052	-.0075	-.0096	-.0135	-.0165	-.0187	-.0200	-.0204	-.0200
25.0	-.0024	-.0040	-.0057	-.0073	-.0104	-.0129	-.0149	-.0162	-.0168	-.0168
30.0	-.0019	-.0031	-.0044	-.0057	-.0081	-.0102	-.0119	-.0131	-.0137	-.0139
35.0	-.0015	-.0024	-.0035	-.0045	-.0064	-.0081	-.0095	-.0105	-.0111	-.0114
40.0	-.0012	-.0019	-.0027	-.0035	-.0050	-.0064	-.0075	-.0084	-.0089	-.0092
45.0	-.0010	-.0015	-.0021	-.0027	-.0039	-.0050	-.0059	-.0066	-.0070	-.0073
50.0	-.0008	-.0012	-.0016	-.0021	-.0030	-.0038	-.0045	-.0051	-.0054	-.0056
55.0	-.0006	-.0009	-.0012	-.0016	-.0023	-.0029	-.0034	-.0038	-.0041	-.0043
60.0	-.0005	-.0007	-.0009	-.0012	-.0016	-.0021	-.0025	-.0028	-.0030	-.0031
65.0	-.0004	-.0005	-.0006	-.0008	-.0011	-.0014	-.0017	-.0019	-.0020	-.0021
70.0	-.0003	-.0003	-.0004	-.0005	-.0007	-.0009	-.0011	-.0012	-.0013	-.0014
75.0	-.0002	-.0002	-.0003	-.0003	-.0004	-.0005	-.0006	-.0007	-.0007	-.0008
80.0	-.0002	-.0002	-.0002	-.0002	-.0002	-.0002	-.0003	-.0003	-.0003	-.0003
85.0	-.0001	-.0001	-.0001	-.0001	-.0001	-.0001	-.0001	-.0001	-.0001	-.0001

α, deg \ θ_{xy}, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	-.0267	-.0228	-.0189	-.0149	-.0111	-.0075	-.0044	-.0021	-.0005
2.0	-.0263	-.0226	-.0187	-.0148	-.0110	-.0075	-.0044	-.0020	-.0005
4.0	-.0258	-.0220	-.0183	-.0145	-.0108	-.0074	-.0044	-.0020	-.0005
6.0	-.0248	-.0215	-.0179	-.0142	-.0106	-.0073	-.0043	-.0020	-.0005
8.0	-.0240	-.0209	-.0175	-.0139	-.0104	-.0072	-.0043	-.0020	-.0005
10.0	-.0232	-.0202	-.0170	-.0136	-.0102	-.0070	-.0042	-.0020	-.0005
12.0	-.0223	-.0196	-.0165	-.0133	-.0100	-.0069	-.0042	-.0019	-.0005
15.0	-.0210	-.0186	-.0158	-.0128	-.0097	-.0067	-.0041	-.0019	-.0005
20.0	-.0187	-.0168	-.0144	-.0118	-.0090	-.0063	-.0039	-.0018	-.0005
25.0	-.0162	-.0148	-.0130	-.0108	-.0083	-.0059	-.0036	-.0017	-.0005
30.0	-.0136	-.0128	-.0114	-.0096	-.0076	-.0054	-.0034	-.0016	-.0004
35.0	-.0112	-.0107	-.0098	-.0084	-.0068	-.0049	-.0031	-.0015	-.0004
40.0	-.0091	-.0088	-.0081	-.0072	-.0059	-.0044	-.0028	-.0014	-.0004
45.0	-.0073	-.0070	-.0066	-.0059	-.0050	-.0038	-.0025	-.0012	-.0003
50.0	-.0057	-.0055	-.0052	-.0047	-.0040	-.0031	-.0021	-.0011	-.0003
55.0	-.0043	-.0042	-.0040	-.0036	-.0031	-.0025	-.0017	-.0009	-.0003
60.0	-.0031	-.0031	-.0029	-.0026	-.0023	-.0019	-.0014	-.0008	-.0002
65.0	-.0022	-.0021	-.0020	-.0018	-.0016	-.0013	-.0010	-.0006	-.0002
70.0	-.0014	-.0013	-.0013	-.0012	-.0010	-.0009	-.0007	-.0004	-.0001
75.0	-.0008	-.0008	-.0007	-.0007	-.0006	-.0005	-.0004	-.0002	-.0001
80.0	-.0003	-.0003	-.0003	-.0003	-.0003	-.0002	-.0002	-.0001	-.0001
85.0	-.0001	-.0001	-.0001	-.0001	-.0001	-.0001	-.0000	-.0000	-.0000

TABLE III.- CONTINUED

(c) C_Y. Continued.

$\beta_1 = -90^\circ$; $\beta_2 = 90^\circ$; $\beta = 5^\circ$

θ_{xy}, deg / α, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	-.1036	-.0999	-.1042	-.1057	-.1051	-.1019	-.0971	-.0910	-.0837	-.0754
2.0	-.0850	-.0858	-.0941	-.0981	-.1002	-.0985	-.0945	-.0890	-.0821	-.0743
4.0	-.0597	-.0639	-.0744	-.0830	-.0904	-.0915	-.0893	-.0849	-.0790	-.0718
6.0	-.0448	-.0495	-.0594	-.0687	-.0806	-.0844	-.0839	-.0808	-.0758	-.0693
8.0	-.0354	-.0398	-.0486	-.0573	-.0706	-.0771	-.0784	-.0765	-.0725	-.0668
10.0	-.0290	-.0329	-.0406	-.0486	-.0617	-.0698	-.0728	-.0722	-.0691	-.0641
12.0	-.0245	-.0279	-.0347	-.0418	-.0541	-.0627	-.0672	-.0678	-.0656	-.0614
15.0	-.0197	-.0225	-.0281	-.0341	-.0451	-.0534	-.0587	-.0610	-.0602	-.0571
20.0	-.0147	-.0166	-.0208	-.0254	-.0342	-.0414	-.0467	-.0498	-.0509	-.0497
25.0	-.0116	-.0129	-.0160	-.0196	-.0266	-.0326	-.0372	-.0404	-.0419	-.0419
30.0	-.0094	-.0103	-.0126	-.0154	-.0209	-.0258	-.0298	-.0326	-.0343	-.0347
35.0	-.0078	-.0083	-.0101	-.0122	-.0166	-.0205	-.0238	-.0263	-.0278	-.0284
40.0	-.0066	-.0068	-.0081	-.0097	-.0131	-.0163	-.0189	-.0210	-.0223	-.0229
45.0	-.0056	-.0056	-.0065	-.0077	-.0103	-.0128	-.0149	-.0165	-.0176	-.0182
50.0	-.0048	-.0046	-.0052	-.0061	-.0080	-.0099	-.0115	-.0128	-.0137	-.0141
55.0	-.0042	-.0038	-.0041	-.0047	-.0061	-.0075	-.0087	-.0096	-.0103	-.0107
60.0	-.0036	-.0031	-.0033	-.0036	-.0045	-.0055	-.0063	-.0070	-.0075	-.0078
65.0	-.0032	-.0025	-.0025	-.0027	-.0032	-.0039	-.0044	-.0049	-.0052	-.0054
70.0	-.0027	-.0021	-.0019	-.0020	-.0022	-.0026	-.0029	-.0032	-.0033	-.0035
75.0	-.0024	-.0016	-.0015	-.0014	-.0015	-.0016	-.0017	-.0018	-.0019	-.0020
80.0	-.0021	-.0013	-.0011	-.0010	-.0009	-.0009	-.0009	-.0009	-.0009	-.0009
85.0	-.0018	-.0010	-.0008	-.0006	-.0005	-.0004	-.0004	-.0004	-.0003	-.0003

θ_{xy}, deg / α, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	-.0684	-.0568	-.0470	-.0371	-.0275	-.0187	-.0111	-.0051	-.0013
2.0	-.0655	-.0562	-.0465	-.0368	-.0273	-.0186	-.0110	-.0051	-.0013
4.0	-.0637	-.0548	-.0455	-.0361	-.0269	-.0184	-.0109	-.0051	-.0013
6.0	-.0618	-.0534	-.0445	-.0354	-.0265	-.0181	-.0108	-.0050	-.0013
8.0	-.0598	-.0519	-.0435	-.0347	-.0260	-.0178	-.0107	-.0050	-.0013
10.0	-.0578	-.0504	-.0423	-.0339	-.0255	-.0175	-.0105	-.0049	-.0013
12.0	-.0556	-.0488	-.0411	-.0331	-.0250	-.0172	-.0103	-.0049	-.0013
15.0	-.0523	-.0463	-.0393	-.0318	-.0241	-.0167	-.0101	-.0048	-.0012
20.0	-.0465	-.0418	-.0359	-.0294	-.0225	-.0158	-.0096	-.0046	-.0012
25.0	-.0403	-.0370	-.0323	-.0268	-.0208	-.0147	-.0090	-.0043	-.0011
30.0	-.0339	-.0319	-.0285	-.0240	-.0189	-.0135	-.0084	-.0041	-.0011
35.0	-.0280	-.0267	-.0244	-.0210	-.0168	-.0122	-.0077	-.0038	-.0010
40.0	-.0228	-.0219	-.0203	-.0179	-.0146	-.0108	-.0069	-.0034	-.0009
45.0	-.0182	-.0176	-.0164	-.0147	-.0123	-.0094	-.0061	-.0031	-.0009
50.0	-.0142	-.0138	-.0129	-.0117	-.0100	-.0078	-.0053	-.0027	-.0008
55.0	-.0107	-.0105	-.0099	-.0089	-.0077	-.0062	-.0044	-.0023	-.0007
60.0	-.0078	-.0076	-.0072	-.0066	-.0057	-.0047	-.0034	-.0019	-.0006
65.0	-.0054	-.0053	-.0050	-.0046	-.0040	-.0033	-.0025	-.0015	-.0005
70.0	-.0035	-.0034	-.0032	-.0029	-.0026	-.0021	-.0016	-.0010	-.0004
75.0	-.0020	-.0019	-.0018	-.0017	-.0015	-.0012	-.0009	-.0006	-.0002
80.0	-.0009	-.0009	-.0008	-.0007	-.0007	-.0005	-.0004	-.0003	-.0001
85.0	-.0003	-.0003	-.0002	-.0002	-.0002	-.0001	-.0001	-.0001	-.0000

$\beta_1 = -90^\circ$; $\beta_2 = 90^\circ$; $\beta = 15^\circ$

θ_{xy}, deg / α, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	-.5917	-.3956	-.3389	-.3164	-.3025	-.2935	-.2797	-.2620	-.2409	-.2172
2.0	-.5445	-.3673	-.3171	-.2980	-.2886	-.2836	-.2722	-.2562	-.2365	-.2138
4.0	-.4628	-.3171	-.2774	-.2638	-.2612	-.2634	-.2571	-.2446	-.2275	-.2069
6.0	-.3967	-.2752	-.2433	-.2336	-.2353	-.2429	-.2416	-.2326	-.2182	-.1997
8.0	-.3436	-.2406	-.2145	-.2075	-.2118	-.2222	-.2258	-.2204	-.2087	-.1922
10.0	-.3009	-.2121	-.1903	-.1851	-.1909	-.2025	-.2097	-.2079	-.1989	-.1846
12.0	-.2663	-.1886	-.1699	-.1661	-.1726	-.1846	-.1936	-.1951	-.1888	-.1767
15.0	-.2257	-.1604	-.1452	-.1424	-.1493	-.1610	-.1709	-.1756	-.1733	-.1644
20.0	-.1784	-.1267	-.1148	-.1129	-.1190	-.1293	-.1389	-.1450	-.1466	-.1430
25.0	-.1464	-.1034	-.0933	-.0916	-.0963	-.1049	-.1132	-.1192	-.1220	-.1210
30.0	-.1237	-.0865	-.0775	-.0756	-.0789	-.0856	-.0925	-.0978	-.1007	-.1007
35.0	-.1068	-.0737	-.0653	-.0631	-.0651	-.0701	-.0755	-.0799	-.0825	-.0831
40.0	-.0938	-.0636	-.0556	-.0532	-.0539	-.0574	-.0614	-.0649	-.0670	-.0676
45.0	-.0835	-.0556	-.0478	-.0451	-.0448	-.0469	-.0496	-.0521	-.0538	-.0543
50.0	-.0752	-.0489	-.0413	-.0383	-.0371	-.0381	-.0398	-.0414	-.0425	-.0428
55.0	-.0684	-.0433	-.0358	-.0327	-.0307	-.0308	-.0315	-.0323	-.0329	-.0330
60.0	-.0627	-.0386	-.0312	-.0278	-.0253	-.0246	-.0246	-.0248	-.0249	-.0247
65.0	-.0579	-.0346	-.0272	-.0237	-.0207	-.0194	-.0189	-.0185	-.0182	-.0178
70.0	-.0539	-.0312	-.0238	-.0202	-.0168	-.0152	-.0142	-.0135	-.0129	-.0123
75.0	-.0505	-.0282	-.0208	-.0172	-.0135	-.0116	-.0104	-.0095	-.0087	-.0080
80.0	-.0476	-.0256	-.0183	-.0145	-.0108	-.0087	-.0074	-.0064	-.0056	-.0049
85.0	-.0451	-.0234	-.0160	-.0123	-.0085	-.0064	-.0051	-.0041	-.0034	-.0027

θ_{xy}, deg / α, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	-.1912	-.1637	-.1352	-.1068	-.0792	-.0538	-.0318	-.0147	-.0038
2.0	-.1887	-.1618	-.1339	-.1059	-.0787	-.0535	-.0317	-.0147	-.0038
4.0	-.1834	-.1579	-.1311	-.1040	-.0775	-.0529	-.0314	-.0146	-.0037
6.0	-.1779	-.1538	-.1282	-.1020	-.0762	-.0521	-.0310	-.0144	-.0037
8.0	-.1722	-.1495	-.1251	-.0999	-.0749	-.0514	-.0307	-.0143	-.0037
10.0	-.1663	-.1451	-.1219	-.0976	-.0734	-.0505	-.0302	-.0141	-.0037
12.0	-.1602	-.1405	-.1185	-.0953	-.0719	-.0496	-.0298	-.0140	-.0036
15.0	-.1506	-.1332	-.1131	-.0915	-.0694	-.0481	-.0290	-.0137	-.0036
20.0	-.1338	-.1203	-.1035	-.0847	-.0649	-.0454	-.0276	-.0131	-.0035
25.0	-.1160	-.1064	-.0931	-.0772	-.0598	-.0423	-.0260	-.0124	-.0033
30.0	-.0979	-.0918	-.0820	-.0691	-.0543	-.0389	-.0241	-.0117	-.0031
35.0	-.0813	-.0770	-.0703	-.0605	-.0484	-.0352	-.0221	-.0108	-.0029
40.0	-.0664	-.0634	-.0584	-.0515	-.0421	-.0312	-.0199	-.0099	-.0027
45.0	-.0534	-.0512	-.0474	-.0423	-.0355	-.0270	-.0176	-.0089	-.0025
50.0	-.0421	-.0404	-.0376	-.0337	-.0288	-.0226	-.0151	-.0078	-.0022
55.0	-.0324	-.0310	-.0289	-.0260	-.0224	-.0180	-.0125	-.0067	-.0019
60.0	-.0241	-.0230	-.0214	-.0193	-.0166	-.0135	-.0099	-.0055	-.0016
65.0	-.0172	-.0163	-.0151	-.0136	-.0117	-.0096	-.0071	-.0043	-.0013
70.0	-.0116	-.0109	-.0099	-.0089	-.0076	-.0062	-.0047	-.0030	-.0010
75.0	-.0073	-.0067	-.0060	-.0052	-.0044	-.0036	-.0027	-.0018	-.0007
80.0	-.0043	-.0037	-.0031	-.0026	-.0022	-.0017	-.0013	-.0008	-.0004
85.0	-.0022	-.0018	-.0014	-.0010	-.0008	-.0005	-.0004	-.0002	-.0001

TABLE III.- CONTINUED

(c) C_Y. Continued.

$\phi_1 = 90^\circ$; $\phi_2 = 270^\circ$; $\beta = 2^\circ$

α, deg \ θ_{xy}, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	-.0587	-.0524	-.0499	-.0484	-.0461	-.0437	-.0411	-.0381	-.0348	-.0312
2.0	-.0710	-.0585	-.0540	-.0514	-.0480	-.0450	-.0421	-.0389	-.0354	-.0317
4.0	-.0955	-.0706	-.0620	-.0573	-.0517	-.0477	-.0440	-.0404	-.0365	-.0325
6.0	-.1199	-.0827	-.0699	-.0631	-.0554	-.0503	-.0460	-.0418	-.0376	-.0333
8.0	-.1442	-.0946	-.0777	-.0689	-.0591	-.0529	-.0478	-.0432	-.0387	-.0341
10.0	-.1682	-.1065	-.0855	-.0746	-.0626	-.0553	-.0496	-.0445	-.0397	-.0348
12.0	-.1921	-.1182	-.0931	-.0801	-.0661	-.0577	-.0514	-.0458	-.0406	-.0355
15.0	-.2274	-.1355	-.1043	-.0883	-.0712	-.0612	-.0539	-.0476	-.0419	-.0365
20.0	-.2849	-.1634	-.1224	-.1014	-.0792	-.0666	-.0577	-.0504	-.0439	-.0379
25.0	-.3402	-.1902	-.1396	-.1137	-.0866	-.0716	-.0611	-.0527	-.0455	-.0389
30.0	-.3929	-.2154	-.1557	-.1252	-.0934	-.0759	-.0640	-.0547	-.0468	-.0397
35.0	-.4426	-.2391	-.1706	-.1357	-.0995	-.0797	-.0664	-.0562	-.0477	-.0402
40.0	-.4890	-.2609	-.1842	-.1452	-.1048	-.0829	-.0684	-.0573	-.0483	-.0404
45.0	-.5316	-.2807	-.1964	-.1535	-.1093	-.0855	-.0698	-.0580	-.0484	-.0403
50.0	-.5702	-.2985	-.2071	-.1607	-.1129	-.0874	-.0707	-.0582	-.0483	-.0398
55.0	-.6044	-.3139	-.2162	-.1667	-.1157	-.0886	-.0710	-.0580	-.0477	-.0391
60.0	-.6341	-.3269	-.2237	-.1714	-.1177	-.0892	-.0708	-.0574	-.0468	-.0380
65.0	-.6589	-.3375	-.2295	-.1748	-.1187	-.0891	-.0701	-.0563	-.0455	-.0367
70.0	-.6787	-.3455	-.2335	-.1769	-.1188	-.0883	-.0688	-.0548	-.0439	-.0351
75.0	-.6934	-.3508	-.2358	-.1776	-.1180	-.0868	-.0670	-.0528	-.0420	-.0332
80.0	-.7027	-.3535	-.2362	-.1770	-.1164	-.0847	-.0647	-.0505	-.0397	-.0311
85.0	-.7068	-.3535	-.2349	-.1750	-.1138	-.0820	-.0619	-.0478	-.0371	-.0287

α, deg \ θ_{xy}, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	-.0274	-.0233	-.0192	-.0151	-.0112	-.0076	-.0045	-.0021	-.0005
2.0	-.0277	-.0236	-.0194	-.0152	-.0113	-.0076	-.0045	-.0021	-.0005
4.0	-.0283	-.0240	-.0197	-.0154	-.0114	-.0077	-.0045	-.0021	-.0005
6.0	-.0289	-.0245	-.0200	-.0156	-.0115	-.0077	-.0045	-.0021	-.0005
8.0	-.0295	-.0249	-.0203	-.0158	-.0116	-.0078	-.0046	-.0021	-.0005
10.0	-.0300	-.0252	-.0205	-.0160	-.0117	-.0078	-.0046	-.0021	-.0005
12.0	-.0305	-.0256	-.0207	-.0161	-.0117	-.0078	-.0046	-.0021	-.0005
15.0	-.0312	-.0260	-.0210	-.0162	-.0118	-.0079	-.0046	-.0021	-.0005
20.0	-.0321	-.0266	-.0214	-.0164	-.0119	-.0079	-.0045	-.0020	-.0005
25.0	-.0328	-.0270	-.0215	-.0164	-.0118	-.0078	-.0045	-.0020	-.0005
30.0	-.0332	-.0272	-.0216	-.0164	-.0117	-.0076	-.0044	-.0019	-.0005
35.0	-.0334	-.0272	-.0214	-.0162	-.0115	-.0075	-.0042	-.0019	-.0005
40.0	-.0333	-.0269	-.0211	-.0158	-.0112	-.0072	-.0040	-.0018	-.0004
45.0	-.0330	-.0265	-.0206	-.0154	-.0108	-.0069	-.0039	-.0017	-.0004
50.0	-.0324	-.0259	-.0200	-.0148	-.0103	-.0066	-.0036	-.0016	-.0004
55.0	-.0316	-.0250	-.0192	-.0141	-.0098	-.0062	-.0034	-.0014	-.0003
60.0	-.0305	-.0240	-.0183	-.0133	-.0091	-.0057	-.0031	-.0013	-.0003
65.0	-.0292	-.0228	-.0172	-.0124	-.0084	-.0052	-.0028	-.0011	-.0003
70.0	-.0277	-.0214	-.0160	-.0115	-.0077	-.0047	-.0025	-.0010	-.0002
75.0	-.0260	-.0199	-.0147	-.0104	-.0069	-.0041	-.0021	-.0008	-.0002
80.0	-.0240	-.0182	-.0133	-.0092	-.0060	-.0035	-.0017	-.0007	-.0001
85.0	-.0219	-.0163	-.0117	-.0080	-.0051	-.0029	-.0014	-.0005	-.0001

TABLE III.- CONTINUED

(c) C_Y. Continued.

$\beta_1 = 105^0$; $\beta_2 = 255^0$; $\beta = 2^0$

θ_{xy}, deg / α, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	-.0278	-.0229	-.0212	-.0203	-.0192	-.0183	-.0174	-.0165	-.0155	-.0143
2.0	-.0373	-.0277	-.0244	-.0226	-.0207	-.0194	-.0182	-.0171	-.0159	-.0147
4.0	-.0564	-.0372	-.0306	-.0273	-.0237	-.0215	-.0199	-.0184	-.0169	-.0154
6.0	-.0754	-.0466	-.0369	-.0319	-.0266	-.0236	-.0214	-.0196	-.0178	-.0161
8.0	-.0944	-.0560	-.0431	-.0365	-.0296	-.0257	-.0230	-.0208	-.0188	-.0168
10.0	-.1132	-.0653	-.0492	-.0410	-.0325	-.0278	-.0245	-.0219	-.0197	-.0175
12.0	-.1319	-.0745	-.0553	-.0455	-.0353	-.0298	-.0260	-.0231	-.0205	-.0182
15.0	-.1596	-.0882	-.0642	-.0521	-.0395	-.0328	-.0282	-.0247	-.0218	-.0191
20.0	-.2047	-.1105	-.0788	-.0628	-.0463	-.0375	-.0317	-.0273	-.0238	-.0206
25.0	-.2483	-.1319	-.0928	-.0730	-.0527	-.0419	-.0349	-.0297	-.0255	-.0219
30.0	-.2901	-.1523	-.1060	-.0826	-.0587	-.0461	-.0379	-.0319	-.0271	-.0230
35.0	-.3296	-.1715	-.1185	-.0917	-.0642	-.0498	-.0406	-.0339	-.0285	-.0240
40.0	-.3666	-.1895	-.1300	-.1000	-.0693	-.0532	-.0430	-.0355	-.0297	-.0248
45.0	-.4008	-.2060	-.1406	-.1076	-.0739	-.0562	-.0450	-.0369	-.0306	-.0254
50.0	-.4320	-.2209	-.1501	-.1143	-.0778	-.0588	-.0467	-.0381	-.0313	-.0258
55.0	-.4598	-.2341	-.1584	-.1202	-.0812	-.0609	-.0481	-.0389	-.0318	-.0260
60.0	-.4842	-.2456	-.1656	-.1252	-.0840	-.0626	-.0490	-.0394	-.0320	-.0260
65.0	-.5049	-.2552	-.1715	-.1292	-.0861	-.0638	-.0497	-.0397	-.0320	-.0258
70.0	-.5217	-.2628	-.1760	-.1322	-.0876	-.0645	-.0499	-.0396	-.0317	-.0254
75.0	-.5346	-.2685	-.1793	-.1342	-.0884	-.0647	-.0497	-.0392	-.0312	-.0249
80.0	-.5434	-.2721	-.1811	-.1353	-.0885	-.0644	-.0492	-.0386	-.0305	-.0241
85.0	-.5481	-.2737	-.1816	-.1352	-.0880	-.0636	-.0483	-.0376	-.0295	-.0231

θ_{xy}, deg / α, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	-.0129	-.0114	-.0098	-.0080	-.0062	-.0043	-.0026	-.0012	-.0003
2.0	-.0132	-.0117	-.0099	-.0081	-.0062	-.0044	-.0026	-.0012	-.0003
4.0	-.0138	-.0121	-.0102	-.0083	-.0063	-.0044	-.0027	-.0013	-.0003
6.0	-.0143	-.0125	-.0105	-.0085	-.0065	-.0045	-.0027	-.0013	-.0003
8.0	-.0149	-.0129	-.0108	-.0087	-.0066	-.0045	-.0027	-.0013	-.0003
10.0	-.0154	-.0132	-.0111	-.0089	-.0067	-.0046	-.0027	-.0013	-.0003
12.0	-.0159	-.0136	-.0113	-.0090	-.0068	-.0046	-.0028	-.0013	-.0003
15.0	-.0166	-.0141	-.0116	-.0092	-.0069	-.0047	-.0028	-.0013	-.0003
20.0	-.0176	-.0149	-.0121	-.0095	-.0070	-.0048	-.0028	-.0013	-.0003
25.0	-.0186	-.0155	-.0126	-.0098	-.0071	-.0048	-.0028	-.0012	-.0003
30.0	-.0194	-.0160	-.0129	-.0099	-.0072	-.0048	-.0027	-.0012	-.0003
35.0	-.0200	-.0164	-.0131	-.0100	-.0072	-.0047	-.0027	-.0012	-.0003
40.0	-.0205	-.0167	-.0132	-.0100	-.0071	-.0046	-.0026	-.0011	-.0003
45.0	-.0209	-.0168	-.0132	-.0099	-.0070	-.0045	-.0025	-.0011	-.0003
50.0	-.0210	-.0169	-.0131	-.0098	-.0069	-.0044	-.0024	-.0010	-.0002
55.0	-.0211	-.0168	-.0129	-.0096	-.0066	-.0042	-.0023	-.0010	-.0002
60.0	-.0209	-.0165	-.0127	-.0093	-.0064	-.0040	-.0021	-.0009	-.0002
65.0	-.0206	-.0162	-.0123	-.0089	-.0061	-.0037	-.0020	-.0008	-.0002
70.0	-.0202	-.0157	-.0118	-.0085	-.0057	-.0035	-.0018	-.0007	-.0001
75.0	-.0196	-.0151	-.0112	-.0080	-.0053	-.0032	-.0016	-.0006	-.0001
80.0	-.0188	-.0144	-.0106	-.0074	-.0048	-.0028	-.0014	-.0005	-.0001
85.0	-.0179	-.0135	-.0099	-.0068	-.0044	-.0025	-.0012	-.0004	-.0001

TABLE III.- CONTINUED

(c) C_Y. Continued.

$\beta_1 = 90^\circ$; $\beta_2 = 270^\circ$; $\beta = 5^\circ$

θ_{xy}, deg / α, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	-.21531	-.1303	-.1243	-.1206	-.1147	-.1088	-.1022	-.0949	-.0867	-.0777
2.0	-.21815	-.1455	-.1343	-.1280	-.1194	-.1121	-.1047	-.0968	-.0881	-.0788
4.0	-.22405	-.1757	-.1543	-.1427	-.1288	-.1188	-.1096	-.1005	-.0909	-.0809
6.0	-.23004	-.2058	-.1740	-.1572	-.1380	-.1252	-.1144	-.1041	-.0936	-.0830
8.0	-.23603	-.2355	-.1935	-.1715	-.1470	-.1316	-.1190	-.1075	-.0962	-.0849
10.0	-.24199	-.2650	-.2127	-.1856	-.1559	-.1377	-.1235	-.1108	-.0987	-.0867
12.0	-.24792	-.2942	-.2318	-.1995	-.1646	-.1437	-.1279	-.1140	-.1011	-.0884
15.0	-.25670	-.3372	-.2597	-.2199	-.1772	-.1524	-.1341	-.1186	-.1044	-.0908
20.0	-.27099	-.4068	-.3047	-.2525	-.1972	-.1659	-.1436	-.1254	-.1092	-.0942
25.0	-.28474	-.4734	-.3474	-.2831	-.2157	-.1782	-.1520	-.1313	-.1133	-.0969
30.0	-.29786	-.5363	-.3875	-.3117	-.2325	-.1890	-.1593	-.1361	-.1165	-.0989
35.0	-.31024	-.5952	-.4246	-.3378	-.2476	-.1985	-.1654	-.1400	-.1187	-.1001
40.0	-.32178	-.6495	-.4584	-.3614	-.2608	-.2064	-.1702	-.1427	-.1201	-.1005
45.0	-.33239	-.6989	-.4888	-.3822	-.2720	-.2128	-.1737	-.1444	-.1206	-.1002
50.0	-.34200	-.7430	-.5155	-.4001	-.2811	-.2176	-.1759	-.1450	-.1202	-.0991
55.0	-.35053	-.7814	-.5382	-.4150	-.2881	-.2207	-.1767	-.1445	-.1188	-.0973
60.0	-.35792	-.8139	-.5569	-.4267	-.2929	-.2221	-.1763	-.1428	-.1165	-.0947
65.0	-.36411	-.8403	-.5713	-.4351	-.2954	-.2218	-.1744	-.1401	-.1134	-.0914
70.0	-.36905	-.8602	-.5814	-.4403	-.2958	-.2198	-.1713	-.1364	-.1094	-.0874
75.0	-.37270	-.8736	-.5871	-.4421	-.2938	-.2162	-.1668	-.1316	-.1045	-.0827
80.0	-.37505	-.8804	-.5883	-.4406	-.2897	-.2109	-.1611	-.1257	-.0989	-.0774
85.0	-.37606	-.8806	-.5851	-.4358	-.2834	-.2041	-.1541	-.1190	-.0925	-.0716

θ_{xy}, deg / α, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	-.00681	-.0581	-.0478	-.0377	-.0279	-.0189	-.0111	-.0051	-.0013
2.0	-.00689	-.0587	-.0483	-.0379	-.0280	-.0190	-.0112	-.0051	-.0013
4.0	-.00705	-.0598	-.0491	-.0385	-.0283	-.0191	-.0112	-.0052	-.0013
6.0	-.00720	-.0609	-.0498	-.0389	-.0286	-.0193	-.0113	-.0052	-.0013
8.0	-.00734	-.0619	-.0505	-.0393	-.0289	-.0194	-.0113	-.0052	-.0013
10.0	-.00747	-.0628	-.0511	-.0397	-.0291	-.0195	-.0114	-.0052	-.0013
12.0	-.00760	-.0637	-.0516	-.0400	-.0292	-.0195	-.0114	-.0052	-.0013
15.0	-.00776	-.0648	-.0523	-.0404	-.0294	-.0196	-.0114	-.0051	-.0013
20.0	-.00800	-.0663	-.0532	-.0408	-.0295	-.0195	-.0113	-.0051	-.0013
25.0	-.00817	-.0672	-.0536	-.0409	-.0294	-.0194	-.0111	-.0050	-.0012
30.0	-.00827	-.0677	-.0537	-.0407	-.0291	-.0190	-.0108	-.0048	-.0012
35.0	-.00832	-.0676	-.0533	-.0402	-.0286	-.0186	-.0105	-.0046	-.0011
40.0	-.00830	-.0670	-.0525	-.0394	-.0278	-.0180	-.0101	-.0044	-.0011
45.0	-.00822	-.0660	-.0513	-.0383	-.0268	-.0172	-.0096	-.0042	-.0010
50.0	-.00807	-.0644	-.0498	-.0368	-.0257	-.0163	-.0090	-.0039	-.0009
55.0	-.00787	-.0623	-.0478	-.0351	-.0243	-.0153	-.0084	-.0036	-.0008
60.0	-.00760	-.0597	-.0455	-.0332	-.0227	-.0142	-.0077	-.0032	-.0007
65.0	-.00728	-.0567	-.0429	-.0310	-.0210	-.0130	-.0069	-.0029	-.0006
70.0	-.00690	-.0533	-.0399	-.0285	-.0191	-.0116	-.0061	-.0025	-.0005
75.0	-.00647	-.0495	-.0366	-.0258	-.0171	-.0102	-.0052	-.0021	-.0004
80.0	-.00599	-.0452	-.0330	-.0230	-.0149	-.0087	-.0043	-.0016	-.0003
85.0	-.00546	-.0407	-.0292	-.0199	-.0126	-.0072	-.0034	-.0012	-.0002

$\beta_1 = 90^\circ$; $\beta_2 = 270^\circ$; $\beta = 15^\circ$

θ_{xy}, deg / α, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	-.16989	-.14581	-.13860	-.13550	-.13301	-.13132	-.12944	-.12731	-.12495	-.12237
2.0	-.17585	-.14920	-.14108	-.13749	-.13438	-.13229	-.13016	-.12786	-.12537	-.12269
4.0	-.18880	-.15638	-.14624	-.14154	-.13708	-.13420	-.13157	-.12893	-.12618	-.12330
6.0	-.20284	-.16395	-.15154	-.14561	-.13973	-.13606	-.13294	-.12996	-.12696	-.12389
8.0	-.21763	-.17174	-.15690	-.14967	-.14234	-.13788	-.13428	-.13096	-.12771	-.12444
10.0	-.23292	-.17967	-.16227	-.15369	-.14489	-.13966	-.13557	-.13192	-.12842	-.12497
12.0	-.24850	-.18764	-.16762	-.15767	-.14739	-.14139	-.13682	-.13284	-.12910	-.12547
15.0	-.27214	-.19958	-.17554	-.16350	-.15103	-.14388	-.13861	-.13414	-.13005	-.12615
20.0	-.31198	-.21916	-.18837	-.17287	-.15879	-.14777	-.14135	-.13611	-.13146	-.12713
25.0	-.34996	-.23803	-.20060	-.18169	-.16711	-.15130	-.14378	-.13779	-.13262	-.12791
30.0	-.38697	-.25598	-.21210	-.18990	-.17296	-.15443	-.14588	-.13920	-.13353	-.12847
35.0	-.42208	-.27283	-.22277	-.19744	-.17830	-.15716	-.14762	-.14030	-.13419	-.12882
40.0	-.45493	-.28841	-.23253	-.20425	-.18310	-.15944	-.14901	-.14110	-.13459	-.12895
45.0	-.48523	-.30261	-.24130	-.21027	-.18733	-.16128	-.15002	-.14158	-.13472	-.12885
50.0	-.51271	-.31530	-.24902	-.21547	-.19098	-.16264	-.15065	-.14175	-.13460	-.12854
55.0	-.53714	-.32638	-.25561	-.21979	-.19401	-.16354	-.15089	-.14160	-.13420	-.12801
60.0	-.55833	-.33578	-.26104	-.22322	-.19643	-.16396	-.15075	-.14113	-.13355	-.12727
65.0	-.57611	-.34341	-.26526	-.22573	-.19821	-.16390	-.15023	-.14035	-.13264	-.12632
70.0	-.59033	-.34921	-.26824	-.22729	-.19936	-.16337	-.14933	-.13927	-.13149	-.12516
75.0	-.60088	-.35316	-.26997	-.22791	-.19988	-.16238	-.14808	-.13790	-.13010	-.12382
80.0	-.60769	-.35521	-.27043	-.22758	-.19978	-.16094	-.14649	-.13627	-.12850	-.12231
85.0	-.61070	-.35535	-.26962	-.22630	-.19907	-.15906	-.14457	-.13439	-.12671	-.12066

θ_{xy}, deg / α, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	-.11961	-.11673	-.11378	-.11084	-.10803	-.10544	-.10321	-.10148	-.10038
2.0	-.11985	-.11690	-.11390	-.11092	-.10807	-.10546	-.10322	-.10148	-.10038
4.0	-.12031	-.11723	-.11413	-.11107	-.10816	-.10551	-.10324	-.10149	-.10038
6.0	-.12074	-.11754	-.11434	-.11121	-.10824	-.10555	-.10325	-.10149	-.10038
8.0	-.12114	-.11782	-.11453	-.11133	-.10831	-.10558	-.10326	-.10149	-.10038
10.0	-.12152	-.11809	-.11470	-.11144	-.10837	-.10560	-.10327	-.10149	-.10038
12.0	-.12188	-.11833	-.11486	-.11153	-.10841	-.10562	-.10327	-.10149	-.10038
15.0	-.12236	-.11865	-.11506	-.11164	-.10847	-.10564	-.10327	-.10148	-.10037
20.0	-.12302	-.11908	-.11531	-.11176	-.10850	-.10563	-.10325	-.10146	-.10036
25.0	-.12351	-.11936	-.11544	-.11179	-.10848	-.10558	-.10320	-.10143	-.10035
30.0	-.12382	-.11949	-.11545	-.11173	-.10838	-.10548	-.10312	-.10139	-.10034
35.0	-.12395	-.11947	-.11534	-.11158	-.10823	-.10535	-.10302	-.10133	-.10033
40.0	-.12389	-.11930	-.11512	-.11134	-.10801	-.10517	-.10290	-.10127	-.10031
45.0	-.12366	-.11899	-.11478	-.11102	-.10773	-.10495	-.10276	-.10120	-.10029
50.0	-.12324	-.11853	-.11433	-.11061	-.10739	-.10470	-.10260	-.10112	-.10026
55.0	-.12265	-.11794	-.11377	-.11012	-.10699	-.10441	-.10241	-.10102	-.10024
60.0	-.12189	-.11720	-.11311	-.10955	-.10654	-.10409	-.10221	-.10093	-.10021
65.0	-.12095	-.11634	-.11234	-.10892	-.10604	-.10373	-.10199	-.10082	-.10018
70.0	-.11986	-.11535	-.11148	-.10821	-.10550	-.10335	-.10176	-.10071	-.10016
75.0	-.11862	-.11424	-.11054	-.10744	-.10491	-.10294	-.10151	-.10059	-.10012
80.0	-.11724	-.11303	-.10951	-.10661	-.10429	-.10251	-.10125	-.10047	-.10009
85.0	-.11575	-.11173	-.10842	-.10574	-.10363	-.10206	-.10098	-.10035	-.10006

TABLE III.- CONTINUED

(c) C_Y. Continued.

$\phi_1 = 105^0$; $\phi_2 = 255^0$; $\beta = 5^0$

θ_{xy}, deg / α, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	-.0694	-.0571	-.0529	-.0506	-.0477	-.0455	-.0434	-.0411	-.0385	-.0355
2.0	-.0929	-.0689	-.0607	-.0564	-.0515	-.0482	-.0454	-.0426	-.0397	-.0365
4.0	-.1405	-.0925	-.0763	-.0679	-.0589	-.0535	-.0494	-.0457	-.0421	-.0383
6.0	-.1878	-.1160	-.0918	-.0794	-.0663	-.0588	-.0534	-.0487	-.0444	-.0401
8.0	-.2349	-.1394	-.1072	-.0908	-.0736	-.0640	-.0572	-.0517	-.0467	-.0419
10.0	-.2818	-.1626	-.1225	-.1021	-.0808	-.0691	-.0611	-.0546	-.0489	-.0436
12.0	-.3283	-.1856	-.1376	-.1132	-.0879	-.0742	-.0648	-.0575	-.0511	-.0452
15.0	-.3972	-.2196	-.1599	-.1297	-.0984	-.0815	-.0703	-.0616	-.0542	-.0476
20.0	-.5097	-.2750	-.1962	-.1563	-.1152	-.0933	-.0789	-.0681	-.0591	-.0512
25.0	-.6182	-.3283	-.2309	-.1817	-.1311	-.1044	-.0870	-.0741	-.0636	-.0545
30.0	-.7221	-.3791	-.2639	-.2057	-.1461	-.1147	-.0944	-.0795	-.0675	-.0573
35.0	-.8204	-.4270	-.2949	-.2282	-.1599	-.1241	-.1010	-.0843	-.0710	-.0598
40.0	-.9126	-.4718	-.3237	-.2490	-.1726	-.1326	-.1070	-.0884	-.0739	-.0617
45.0	-.9977	-.5127	-.3500	-.2678	-.1839	-.1400	-.1121	-.0919	-.0762	-.0632
50.0	-1.0753	-.5499	-.3736	-.2846	-.1938	-.1464	-.1163	-.0947	-.0780	-.0642
55.0	-1.1447	-.5828	-.3944	-.2992	-.2022	-.1517	-.1197	-.0968	-.0792	-.0647
60.0	-1.2054	-.6114	-.4122	-.3116	-.2091	-.1558	-.1221	-.0981	-.0797	-.0647
65.0	-1.2569	-.6353	-.4268	-.3216	-.2144	-.1587	-.1236	-.0987	-.0797	-.0643
70.0	-1.2988	-.6543	-.4382	-.3291	-.2181	-.1605	-.1242	-.0986	-.0790	-.0633
75.0	-1.3309	-.6684	-.4463	-.3342	-.2201	-.1610	-.1238	-.0977	-.0778	-.0619
80.0	-1.3528	-.6774	-.4509	-.3367	-.2204	-.1603	-.1225	-.0960	-.0759	-.0600
85.0	-1.3644	-.6812	-.4522	-.3366	-.2191	-.1583	-.1203	-.0936	-.0735	-.0576

θ_{xy}, deg / α, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	-.0322	-.0285	-.0244	-.0199	-.0153	-.0108	-.0065	-.0031	-.0008
2.0	-.0329	-.0290	-.0247	-.0202	-.0155	-.0108	-.0066	-.0031	-.0008
4.0	-.0343	-.0301	-.0255	-.0207	-.0158	-.0110	-.0067	-.0031	-.0008
6.0	-.0357	-.0311	-.0262	-.0212	-.0161	-.0112	-.0067	-.0031	-.0008
8.0	-.0370	-.0320	-.0269	-.0216	-.0163	-.0113	-.0068	-.0032	-.0008
10.0	-.0383	-.0330	-.0275	-.0220	-.0166	-.0114	-.0068	-.0032	-.0008
12.0	-.0395	-.0338	-.0281	-.0224	-.0168	-.0115	-.0069	-.0032	-.0008
15.0	-.0413	-.0351	-.0290	-.0230	-.0171	-.0117	-.0069	-.0032	-.0008
20.0	-.0439	-.0370	-.0302	-.0237	-.0175	-.0118	-.0069	-.0031	-.0008
25.0	-.0463	-.0386	-.0313	-.0243	-.0178	-.0119	-.0069	-.0031	-.0008
30.0	-.0482	-.0399	-.0320	-.0247	-.0179	-.0119	-.0068	-.0030	-.0007
35.0	-.0499	-.0409	-.0326	-.0249	-.0179	-.0118	-.0067	-.0029	-.0007
40.0	-.0511	-.0416	-.0329	-.0249	-.0178	-.0116	-.0065	-.0028	-.0007
45.0	-.0519	-.0419	-.0329	-.0247	-.0175	-.0113	-.0063	-.0027	-.0006
50.0	-.0524	-.0420	-.0327	-.0244	-.0171	-.0109	-.0060	-.0026	-.0006
55.0	-.0524	-.0417	-.0322	-.0238	-.0165	-.0105	-.0057	-.0024	-.0005
60.0	-.0521	-.0411	-.0315	-.0231	-.0159	-.0099	-.0053	-.0022	-.0005
65.0	-.0513	-.0402	-.0306	-.0222	-.0151	-.0093	-.0049	-.0020	-.0004
70.0	-.0502	-.0390	-.0294	-.0211	-.0142	-.0086	-.0045	-.0018	-.0004
75.0	-.0487	-.0375	-.0280	-.0199	-.0132	-.0079	-.0040	-.0015	-.0003
80.0	-.0468	-.0357	-.0264	-.0185	-.0121	-.0071	-.0035	-.0013	-.0002
85.0	-.0446	-.0337	-.0246	-.0170	-.0109	-.0062	-.0029	-.0010	-.0002

$\phi_1 = 105^0$; $\phi_2 = 255^0$; $\beta = 15^0$

θ_{xy}, deg / α, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	-.2640	-.1797	-.1556	-.1459	-.1374	-.1311	-.1249	-.1183	-.1108	-.1023
2.0	-.3141	-.2082	-.1765	-.1624	-.1482	-.1388	-.1308	-.1228	-.1143	-.1050
4.0	-.4257	-.2696	-.2199	-.1956	-.1696	-.1542	-.1423	-.1316	-.1212	-.1103
6.0	-.5486	-.3347	-.2643	-.2286	-.1909	-.1693	-.1537	-.1404	-.1279	-.1155
8.0	-.6785	-.4014	-.3086	-.2614	-.2119	-.1843	-.1648	-.1489	-.1345	-.1206
10.0	-.8115	-.4681	-.3526	-.2938	-.2327	-.1990	-.1758	-.1573	-.1409	-.1255
12.0	-.9452	-.5343	-.3961	-.3259	-.2531	-.2135	-.1866	-.1654	-.1472	-.1302
15.0	-1.1438	-.6324	-.4605	-.3733	-.2833	-.2348	-.2023	-.1773	-.1562	-.1370
20.0	-1.4675	-.7918	-.5849	-.4500	-.3317	-.2687	-.2272	-.1960	-.1703	-.1475
25.0	-1.7801	-.9453	-.7050	-.5232	-.3776	-.3006	-.2504	-.2132	-.1831	-.1569
30.0	-2.0792	-1.0915	-.7600	-.5924	-.4207	-.3302	-.2717	-.2288	-.1945	-.1651
35.0	-2.3624	-1.2294	-.8493	-.6571	-.4605	-.3573	-.2910	-.2427	-.2044	-.1721
40.0	-2.6276	-1.3580	-.9320	-.7168	-.4969	-.3817	-.3080	-.2547	-.2127	-.1777
45.0	-2.8728	-1.4763	-1.0077	-.7711	-.5294	-.4031	-.3226	-.2647	-.2195	-.1820
50.0	-3.0962	-1.5833	-1.0757	-.8195	-.5579	-.4215	-.3349	-.2728	-.2246	-.1849
55.0	-3.2960	-1.6782	-1.1356	-.8616	-.5822	-.4367	-.3445	-.2787	-.2279	-.1863
60.0	-3.4707	-1.7604	-1.1868	-.8973	-.6021	-.4486	-.3516	-.2826	-.2295	-.1864
65.0	-3.6190	-1.8292	-1.2289	-.9260	-.6174	-.4571	-.3559	-.2843	-.2294	-.1851
70.0	-3.7398	-1.8840	-1.2617	-.9477	-.6279	-.4620	-.3576	-.2838	-.2276	-.1823
75.0	-3.8321	-1.9246	-1.2849	-.9623	-.6337	-.4635	-.3565	-.2812	-.2240	-.1782
80.0	-3.8952	-1.9504	-1.2984	-.9694	-.6347	-.4614	-.3528	-.2764	-.2187	-.1727
85.0	-3.9287	-1.9615	-1.3019	-.9693	-.6308	-.4559	-.3463	-.2696	-.2117	-.1658

θ_{xy}, deg / α, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	-.0927	-.0820	-.0702	-.0574	-.0441	-.0310	-.0189	-.0089	-.0023
2.0	-.0948	-.0835	-.0713	-.0581	-.0446	-.0312	-.0190	-.0089	-.0023
4.0	-.0988	-.0865	-.0734	-.0596	-.0455	-.0317	-.0192	-.0090	-.0023
6.0	-.1028	-.0894	-.0754	-.0609	-.0463	-.0321	-.0193	-.0090	-.0023
8.0	-.1066	-.0922	-.0774	-.0622	-.0471	-.0325	-.0195	-.0091	-.0023
10.0	-.1102	-.0949	-.0793	-.0634	-.0478	-.0329	-.0196	-.0091	-.0023
12.0	-.1138	-.0974	-.0810	-.0646	-.0484	-.0332	-.0198	-.0091	-.0023
15.0	-.1188	-.1011	-.0835	-.0661	-.0493	-.0336	-.0199	-.0091	-.0023
20.0	-.1265	-.1065	-.0871	-.0683	-.0505	-.0341	-.0200	-.0091	-.0023
25.0	-.1332	-.1111	-.0900	-.0700	-.0512	-.0343	-.0199	-.0089	-.0022
30.0	-.1389	-.1148	-.0922	-.0711	-.0516	-.0342	-.0197	-.0088	-.0021
35.0	-.1436	-.1177	-.0938	-.0717	-.0516	-.0339	-.0193	-.0085	-.0020
40.0	-.1471	-.1197	-.0946	-.0718	-.0512	-.0333	-.0188	-.0082	-.0019
45.0	-.1495	-.1207	-.0947	-.0713	-.0504	-.0325	-.0181	-.0078	-.0018
50.0	-.1508	-.1209	-.0941	-.0702	-.0492	-.0314	-.0173	-.0073	-.0017
55.0	-.1510	-.1201	-.0928	-.0686	-.0476	-.0301	-.0164	-.0068	-.0016
60.0	-.1500	-.1184	-.0907	-.0665	-.0457	-.0285	-.0153	-.0063	-.0014
65.0	-.1478	-.1158	-.0880	-.0639	-.0435	-.0268	-.0141	-.0057	-.0012
70.0	-.1446	-.1124	-.0846	-.0608	-.0409	-.0248	-.0129	-.0050	-.0010
75.0	-.1402	-.1080	-.0806	-.0573	-.0380	-.0227	-.0115	-.0044	-.0009
80.0	-.1348	-.1029	-.0759	-.0533	-.0348	-.0203	-.0100	-.0037	-.0007
85.0	-.1283	-.0970	-.0707	-.0489	-.0313	-.0178	-.0085	-.0029	-.0005

TABLE III. - CONTINUED

(c) C_Y. Continued.

$\phi_1 = 120^\circ$; $\phi_2 = 240^\circ$; $\beta = 2^\circ$

α, deg \ θ_{xy}, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	-.0113	-.0090	-.0082	-.0078	-.0073	-.0070	-.0067	-.0064	-.0061	-.0057
2.0	-.0159	-.0113	-.0097	-.0089	-.0080	-.0075	-.0071	-.0067	-.0063	-.0059
4.0	-.0250	-.0158	-.0127	-.0111	-.0095	-.0086	-.0079	-.0073	-.0068	-.0063
6.0	-.0341	-.0203	-.0157	-.0134	-.0109	-.0096	-.0087	-.0079	-.0073	-.0066
8.0	-.0431	-.0248	-.0187	-.0156	-.0123	-.0106	-.0094	-.0085	-.0077	-.0070
10.0	-.0521	-.0293	-.0216	-.0177	-.0137	-.0116	-.0102	-.0091	-.0082	-.0074
12.0	-.0611	-.0337	-.0245	-.0199	-.0151	-.0126	-.0109	-.0097	-.0087	-.0077
15.0	-.0743	-.0403	-.0289	-.0231	-.0172	-.0141	-.0120	-.0105	-.0093	-.0082
20.0	-.0959	-.0510	-.0359	-.0283	-.0205	-.0164	-.0138	-.0119	-.0103	-.0090
25.0	-.1168	-.0613	-.0426	-.0332	-.0236	-.0186	-.0154	-.0131	-.0113	-.0097
30.0	-.1368	-.0711	-.0490	-.0379	-.0266	-.0207	-.0169	-.0143	-.0121	-.0104
35.0	-.1558	-.0804	-.0551	-.0423	-.0294	-.0226	-.0183	-.0153	-.0129	-.0109
40.0	-.1736	-.0890	-.0607	-.0464	-.0319	-.0244	-.0196	-.0162	-.0136	-.0114
45.0	-.1900	-.0970	-.0659	-.0502	-.0342	-.0259	-.0207	-.0170	-.0141	-.0118
50.0	-.2050	-.1043	-.0705	-.0535	-.0362	-.0273	-.0216	-.0177	-.0146	-.0121
55.0	-.2185	-.1108	-.0747	-.0565	-.0380	-.0284	-.0224	-.0182	-.0149	-.0123
60.0	-.2303	-.1164	-.0782	-.0590	-.0395	-.0294	-.0230	-.0186	-.0152	-.0124
65.0	-.2403	-.1211	-.0812	-.0611	-.0406	-.0301	-.0235	-.0188	-.0153	-.0124
70.0	-.2485	-.1249	-.0835	-.0627	-.0415	-.0306	-.0237	-.0189	-.0153	-.0124
75.0	-.2548	-.1278	-.0853	-.0638	-.0421	-.0308	-.0238	-.0189	-.0152	-.0122
80.0	-.2592	-.1297	-.0863	-.0645	-.0423	-.0308	-.0237	-.0187	-.0150	-.0119
85.0	-.2616	-.1306	-.0867	-.0646	-.0422	-.0306	-.0234	-.0184	-.0146	-.0116

α, deg \ θ_{xy}, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	-.0053	-.0048	-.0042	-.0035	-.0028	-.0020	-.0013	-.0006	-.0002
2.0	-.0054	-.0049	-.0043	-.0036	-.0028	-.0020	-.0013	-.0006	-.0002
4.0	-.0057	-.0051	-.0044	-.0037	-.0029	-.0021	-.0013	-.0006	-.0002
6.0	-.0060	-.0053	-.0046	-.0038	-.0030	-.0021	-.0013	-.0006	-.0002
8.0	-.0063	-.0055	-.0047	-.0039	-.0030	-.0021	-.0013	-.0006	-.0002
10.0	-.0066	-.0057	-.0049	-.0040	-.0031	-.0022	-.0013	-.0006	-.0002
12.0	-.0068	-.0059	-.0050	-.0041	-.0031	-.0022	-.0013	-.0006	-.0002
15.0	-.0072	-.0062	-.0052	-.0042	-.0032	-.0022	-.0014	-.0006	-.0002
20.0	-.0078	-.0066	-.0055	-.0044	-.0033	-.0023	-.0014	-.0006	-.0002
25.0	-.0083	-.0070	-.0058	-.0046	-.0034	-.0023	-.0014	-.0006	-.0002
30.0	-.0088	-.0073	-.0060	-.0047	-.0035	-.0023	-.0014	-.0006	-.0002
35.0	-.0092	-.0076	-.0062	-.0048	-.0035	-.0023	-.0014	-.0006	-.0001
40.0	-.0095	-.0078	-.0063	-.0048	-.0035	-.0023	-.0013	-.0006	-.0001
45.0	-.0098	-.0080	-.0063	-.0048	-.0035	-.0023	-.0013	-.0006	-.0001
50.0	-.0100	-.0081	-.0064	-.0048	-.0034	-.0022	-.0012	-.0005	-.0001
55.0	-.0101	-.0081	-.0063	-.0048	-.0034	-.0022	-.0012	-.0005	-.0001
60.0	-.0101	-.0081	-.0063	-.0047	-.0033	-.0021	-.0011	-.0005	-.0001
65.0	-.0100	-.0080	-.0062	-.0045	-.0031	-.0020	-.0010	-.0004	-.0001
70.0	-.0099	-.0078	-.0060	-.0044	-.0030	-.0018	-.0010	-.0004	-.0001
75.0	-.0097	-.0076	-.0058	-.0042	-.0028	-.0017	-.0009	-.0003	-.0001
80.0	-.0095	-.0073	-.0055	-.0039	-.0026	-.0016	-.0003	-.0003	-.0001
85.0	-.0091	-.0070	-.0052	-.0037	-.0024	-.0014	-.0007	-.0002	-.0000

TABLE III.- CONTINUED

(c) C_Y. Continued.

$\beta_1 = 120^0$; $\beta_2 = 240^0$; $\beta = 5^0$

θ_{xy}, deg / α, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	-.0282	-.0224	-.0205	-.0194	-.0182	-.0174	-.0167	-.0160	-.0151	-.0142
2.0	-.0395	-.0281	-.0242	-.0222	-.0200	-.0187	-.0177	-.0167	-.0157	-.0147
4.0	-.0622	-.0394	-.0317	-.0278	-.0236	-.0213	-.0197	-.0183	-.0170	-.0156
6.0	-.0849	-.0506	-.0391	-.0333	-.0272	-.0239	-.0216	-.0198	-.0181	-.0166
8.0	-.1074	-.0618	-.0465	-.0387	-.0307	-.0264	-.0235	-.0213	-.0193	-.0175
10.0	-.1298	-.0729	-.0538	-.0442	-.0342	-.0289	-.0254	-.0227	-.0204	-.0183
12.0	-.1520	-.0839	-.0611	-.0495	-.0377	-.0314	-.0273	-.0241	-.0215	-.0192
15.0	-.1850	-.1003	-.0718	-.0575	-.0428	-.0350	-.0300	-.0262	-.0232	-.0204
20.0	-.2388	-.1269	-.0893	-.0704	-.0510	-.0408	-.0343	-.0295	-.0257	-.0224
25.0	-.2908	-.1525	-.1061	-.0827	-.0588	-.0464	-.0384	-.0326	-.0281	-.0242
30.0	-.3408	-.1770	-.1221	-.0944	-.0662	-.0515	-.0422	-.0355	-.0302	-.0258
35.0	-.3878	-.2001	-.1371	-.1054	-.0731	-.0563	-.0457	-.0380	-.0321	-.0272
40.0	-.4321	-.2217	-.1512	-.1156	-.0794	-.0606	-.0488	-.0403	-.0338	-.0284
45.0	-.4730	-.2416	-.1640	-.1249	-.0851	-.0645	-.0515	-.0423	-.0352	-.0293
50.0	-.5104	-.2596	-.1756	-.1333	-.0902	-.0679	-.0539	-.0440	-.0363	-.0301
55.0	-.5439	-.2757	-.1859	-.1406	-.0946	-.0708	-.0558	-.0453	-.0372	-.0306
60.0	-.5732	-.2897	-.1948	-.1469	-.0983	-.0731	-.0574	-.0463	-.0378	-.0309
65.0	-.5982	-.3015	-.2021	-.1521	-.1012	-.0749	-.0585	-.0469	-.0381	-.0310
70.0	-.6186	-.3110	-.2080	-.1561	-.1033	-.0761	-.0591	-.0471	-.0381	-.0308
75.0	-.6343	-.3182	-.2122	-.1589	-.1047	-.0767	-.0593	-.0471	-.0378	-.0304
80.0	-.6452	-.3229	-.2149	-.1605	-.1052	-.0768	-.0590	-.0466	-.0372	-.0297
85.0	-.6512	-.3251	-.2159	-.1609	-.1050	-.0763	-.0583	-.0458	-.0364	-.0289

θ_{xy}, deg / α, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	-.0131	-.0119	-.0104	-.0088	-.0069	-.0050	-.0031	-.0015	-.0004
2.0	-.0135	-.0121	-.0106	-.0089	-.0070	-.0051	-.0032	-.0015	-.0004
4.0	-.0142	-.0127	-.0110	-.0092	-.0072	-.0052	-.0032	-.0015	-.0004
6.0	-.0149	-.0132	-.0114	-.0094	-.0074	-.0053	-.0032	-.0015	-.0004
8.0	-.0156	-.0138	-.0118	-.0097	-.0075	-.0053	-.0033	-.0016	-.0004
10.0	-.0163	-.0143	-.0121	-.0099	-.0077	-.0054	-.0033	-.0016	-.0004
12.0	-.0170	-.0148	-.0125	-.0102	-.0078	-.0055	-.0033	-.0016	-.0004
15.0	-.0179	-.0155	-.0130	-.0106	-.0080	-.0056	-.0034	-.0016	-.0004
20.0	-.0194	-.0165	-.0137	-.0110	-.0083	-.0057	-.0034	-.0016	-.0004
25.0	-.0207	-.0175	-.0144	-.0114	-.0085	-.0058	-.0034	-.0016	-.0004
30.0	-.0219	-.0183	-.0149	-.0117	-.0086	-.0058	-.0034	-.0015	-.0004
35.0	-.0229	-.0190	-.0153	-.0119	-.0087	-.0058	-.0034	-.0015	-.0004
40.0	-.0237	-.0195	-.0156	-.0120	-.0087	-.0058	-.0033	-.0014	-.0003
45.0	-.0243	-.0199	-.0158	-.0121	-.0087	-.0057	-.0032	-.0014	-.0003
50.0	-.0248	-.0201	-.0159	-.0120	-.0086	-.0055	-.0031	-.0013	-.0003
55.0	-.0251	-.0202	-.0158	-.0119	-.0084	-.0054	-.0029	-.0012	-.0003
60.0	-.0251	-.0201	-.0156	-.0116	-.0081	-.0051	-.0028	-.0011	-.0003
65.0	-.0250	-.0199	-.0153	-.0113	-.0078	-.0049	-.0026	-.0010	-.0002
70.0	-.0247	-.0195	-.0149	-.0109	-.0074	-.0046	-.0024	-.0009	-.0002
75.0	-.0242	-.0189	-.0144	-.0104	-.0070	-.0043	-.0022	-.0008	-.0002
80.0	-.0235	-.0183	-.0137	-.0098	-.0065	-.0039	-.0019	-.0007	-.0001
85.0	-.0227	-.0175	-.0130	-.0092	-.0060	-.0035	-.0017	-.0006	-.0001

$\beta_1 = 120^0$; $\beta_2 = 240^0$; $\beta = 15^0$

θ_{xy}, deg / α, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	-.0904	-.0656	-.0589	-.0559	-.0525	-.0502	-.0481	-.0460	-.0436	-.0409
2.0	-.1178	-.0811	-.0697	-.0639	-.0577	-.0539	-.0509	-.0482	-.0453	-.0423
4.0	-.1794	-.1134	-.0912	-.0799	-.0680	-.0614	-.0566	-.0526	-.0488	-.0450
6.0	-.2444	-.1458	-.1126	-.0958	-.0783	-.0688	-.0622	-.0569	-.0522	-.0477
8.0	-.3092	-.1780	-.1339	-.1115	-.0885	-.0761	-.0677	-.0612	-.0555	-.0503
10.0	-.3737	-.2100	-.1550	-.1272	-.0985	-.0833	-.0731	-.0654	-.0588	-.0528
12.0	-.4377	-.2417	-.1759	-.1426	-.1085	-.0904	-.0785	-.0695	-.0620	-.0553
15.0	-.5827	-.2887	-.2069	-.1655	-.1232	-.1008	-.0863	-.0755	-.0667	-.0589
20.0	-.6877	-.3653	-.2572	-.2026	-.1468	-.1176	-.0988	-.0851	-.0740	-.0645
25.0	-.8374	-.4391	-.3055	-.2381	-.1694	-.1335	-.1106	-.0940	-.0808	-.0696
30.0	-.9808	-.5095	-.3515	-.2718	-.1906	-.1484	-.1215	-.1021	-.0870	-.0742
35.0	-1.1167	-.5761	-.3949	-.3035	-.2104	-.1621	-.1315	-.1096	-.0925	-.0782
40.0	-1.2441	-.6383	-.4352	-.3328	-.2287	-.1746	-.1405	-.1161	-.0973	-.0817
45.0	-1.3621	-.6956	-.4723	-.3597	-.2451	-.1858	-.1484	-.1218	-.1013	-.0845
50.0	-1.4698	-.7476	-.5067	-.3837	-.2597	-.1956	-.1552	-.1266	-.1046	-.0867
55.0	-1.5660	-.7940	-.5353	-.4049	-.2724	-.2038	-.1608	-.1304	-.1071	-.0882
60.0	-1.6505	-.8343	-.5608	-.4230	-.2829	-.2106	-.1652	-.1332	-.1088	-.0890
65.0	-1.7224	-.8682	-.5820	-.4378	-.2913	-.2157	-.1683	-.1350	-.1096	-.0892
70.0	-1.7812	-.8956	-.5988	-.4493	-.2975	-.2192	-.1702	-.1358	-.1096	-.0887
75.0	-1.8264	-.9161	-.6111	-.4574	-.3014	-.2210	-.1707	-.1355	-.1088	-.0875
80.0	-1.8578	-.9296	-.6187	-.4621	-.3030	-.2211	-.1700	-.1342	-.1072	-.0856
85.0	-1.8750	-.9361	-.6216	-.4632	-.3024	-.2196	-.1679	-.1319	-.1047	-.0831

θ_{xy}, deg / α, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	-.0378	-.0342	-.0300	-.0252	-.0200	-.0144	-.0090	-.0044	-.0011
2.0	-.0389	-.0350	-.0306	-.0256	-.0202	-.0146	-.0091	-.0044	-.0012
4.0	-.0410	-.0366	-.0317	-.0264	-.0207	-.0149	-.0092	-.0044	-.0012
6.0	-.0430	-.0381	-.0329	-.0272	-.0212	-.0151	-.0093	-.0044	-.0012
8.0	-.0450	-.0396	-.0339	-.0279	-.0217	-.0154	-.0094	-.0045	-.0012
10.0	-.0470	-.0411	-.0350	-.0286	-.0221	-.0156	-.0095	-.0045	-.0012
12.0	-.0489	-.0425	-.0360	-.0293	-.0225	-.0158	-.0096	-.0045	-.0012
15.0	-.0516	-.0445	-.0374	-.0302	-.0231	-.0161	-.0097	-.0045	-.0012
20.0	-.0558	-.0476	-.0395	-.0316	-.0238	-.0164	-.0098	-.0045	-.0011
25.0	-.0596	-.0503	-.0414	-.0328	-.0245	-.0167	-.0098	-.0045	-.0011
30.0	-.0630	-.0526	-.0429	-.0336	-.0249	-.0168	-.0098	-.0044	-.0011
35.0	-.0658	-.0546	-.0441	-.0343	-.0251	-.0168	-.0097	-.0043	-.0010
40.0	-.0682	-.0561	-.0450	-.0346	-.0251	-.0166	-.0095	-.0042	-.0010
45.0	-.0700	-.0572	-.0455	-.0348	-.0250	-.0164	-.0092	-.0040	-.0009
50.0	-.0714	-.0578	-.0457	-.0346	-.0246	-.0160	-.0089	-.0038	-.0009
55.0	-.0721	-.0581	-.0455	-.0342	-.0241	-.0154	-.0085	-.0036	-.0008
60.0	-.0724	-.0578	-.0450	-.0335	-.0234	-.0148	-.0080	-.0033	-.0007
65.0	-.0720	-.0572	-.0441	-.0326	-.0225	-.0141	-.0075	-.0030	-.0006
70.0	-.0712	-.0561	-.0429	-.0314	-.0214	-.0132	-.0069	-.0027	-.0006
75.0	-.0697	-.0546	-.0414	-.0299	-.0202	-.0123	-.0063	-.0024	-.0005
80.0	-.0678	-.0526	-.0395	-.0283	-.0188	-.0112	-.0056	-.0020	-.0004
85.0	-.0653	-.0503	-.0374	-.0264	-.0173	-.0101	-.0049	-.0017	-.0003

TABLE III.- CONTINUED

(c) C_Y. Continued.

$\phi_1 = 135^o$; $\phi_2 = 225^o$; $\beta = 2^o$

α, deg \ θ_{xy}, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	-.0046	-.0036	-.0033	-.0031	-.0029	-.0028	-.0027	-.0026	-.0024	-.0023
2.0	-.0066	-.0046	-.0039	-.0036	-.0032	-.0030	-.0028	-.0027	-.0025	-.0024
4.0	-.0105	-.0066	-.0052	-.0045	-.0038	-.0035	-.0032	-.0030	-.0028	-.0025
6.0	-.0144	-.0085	-.0065	-.0055	-.0045	-.0039	-.0035	-.0032	-.0030	-.0027
8.0	-.0183	-.0104	-.0078	-.0065	-.0051	-.0043	-.0039	-.0035	-.0032	-.0029
10.0	-.0222	-.0124	-.0091	-.0074	-.0057	-.0048	-.0042	-.0037	-.0034	-.0030
12.0	-.0261	-.0143	-.0103	-.0083	-.0063	-.0052	-.0045	-.0040	-.0036	-.0032
15.0	-.0318	-.0171	-.0122	-.0097	-.0072	-.0058	-.0050	-.0044	-.0039	-.0034
20.0	-.0411	-.0217	-.0152	-.0120	-.0086	-.0069	-.0058	-.0050	-.0043	-.0038
25.0	-.0502	-.0262	-.0182	-.0141	-.0100	-.0078	-.0065	-.0055	-.0047	-.0041
30.0	-.0588	-.0304	-.0209	-.0162	-.0113	-.0087	-.0072	-.0060	-.0051	-.0044
35.0	-.0670	-.0345	-.0236	-.0181	-.0125	-.0096	-.0078	-.0065	-.0055	-.0046
40.0	-.0747	-.0382	-.0260	-.0199	-.0136	-.0104	-.0083	-.0069	-.0058	-.0049
45.0	-.0818	-.0417	-.0283	-.0215	-.0146	-.0111	-.0088	-.0072	-.0060	-.0050
50.0	-.0883	-.0448	-.0303	-.0230	-.0155	-.0117	-.0093	-.0076	-.0063	-.0052
55.0	-.0941	-.0477	-.0321	-.0242	-.0163	-.0122	-.0096	-.0078	-.0064	-.0053
60.0	-.0992	-.0501	-.0336	-.0254	-.0169	-.0126	-.0099	-.0080	-.0065	-.0054
65.0	-.1036	-.0522	-.0349	-.0263	-.0175	-.0129	-.0101	-.0081	-.0066	-.0054
70.0	-.1071	-.0538	-.0360	-.0270	-.0179	-.0132	-.0102	-.0082	-.0066	-.0054
75.0	-.1099	-.0551	-.0367	-.0275	-.0181	-.0133	-.0103	-.0082	-.0066	-.0053
80.0	-.1118	-.0559	-.0372	-.0278	-.0182	-.0133	-.0103	-.0081	-.0065	-.0052
85.0	-.1128	-.0563	-.0374	-.0279	-.0182	-.0133	-.0102	-.0080	-.0064	-.0051

α, deg \ θ_{xy}, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	-.0021	-.0019	-.0017	-.0015	-.0012	-.0009	-.0005	-.0003	-.0001
2.0	-.0022	-.0020	-.0018	-.0015	-.0012	-.0009	-.0006	-.0003	-.0001
4.0	-.0023	-.0021	-.0018	-.0015	-.0012	-.0009	-.0006	-.0003	-.0001
6.0	-.0025	-.0022	-.0019	-.0016	-.0013	-.0009	-.0006	-.0003	-.0001
8.0	-.0026	-.0023	-.0020	-.0016	-.0013	-.0009	-.0006	-.0003	-.0001
10.0	-.0027	-.0024	-.0020	-.0017	-.0013	-.0009	-.0006	-.0003	-.0001
12.0	-.0028	-.0025	-.0021	-.0017	-.0013	-.0010	-.0006	-.0003	-.0001
15.0	-.0030	-.0026	-.0022	-.0018	-.0014	-.0010	-.0006	-.0003	-.0001
20.0	-.0033	-.0028	-.0023	-.0019	-.0014	-.0010	-.0006	-.0003	-.0001
25.0	-.0035	-.0030	-.0025	-.0020	-.0015	-.0010	-.0006	-.0003	-.0001
30.0	-.0037	-.0031	-.0026	-.0020	-.0015	-.0010	-.0006	-.0003	-.0001
35.0	-.0039	-.0033	-.0027	-.0021	-.0015	-.0010	-.0006	-.0003	-.0001
40.0	-.0041	-.0034	-.0027	-.0021	-.0015	-.0010	-.0006	-.0003	-.0001
45.0	-.0042	-.0034	-.0028	-.0021	-.0015	-.0010	-.0006	-.0003	-.0001
50.0	-.0043	-.0035	-.0028	-.0021	-.0015	-.0010	-.0006	-.0002	-.0001
55.0	-.0044	-.0035	-.0028	-.0021	-.0015	-.0010	-.0005	-.0002	-.0001
60.0	-.0044	-.0035	-.0028	-.0021	-.0015	-.0009	-.0005	-.0002	-.0000
65.0	-.0044	-.0035	-.0027	-.0020	-.0014	-.0009	-.0005	-.0002	-.0000
70.0	-.0043	-.0034	-.0027	-.0020	-.0014	-.0008	-.0004	-.0002	-.0000
75.0	-.0043	-.0034	-.0026	-.0019	-.0013	-.0008	-.0004	-.0002	-.0000
80.0	-.0042	-.0033	-.0025	-.0018	-.0012	-.0007	-.0004	-.0001	-.0000
85.0	-.0040	-.0031	-.0024	-.0017	-.0011	-.0007	-.0003	-.0001	-.0000

TABLE III. - CONTINUED

(c) C_Y. Continued.

$\phi_1 = 150^\circ$; $\phi_2 = 210^\circ$; $\beta = 2^\circ$

α, deg \ θ_{xy}, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	-.0017	-.0013	-.0012	-.0011	-.0010	-.0010	-.0010	-.0009	-.0009	-.0008
2.0	-.0024	-.0017	-.0014	-.0013	-.0012	-.0011	-.0010	-.0010	-.0009	-.0009
4.0	-.0039	-.0024	-.0019	-.0016	-.0014	-.0012	-.0011	-.0011	-.0010	-.0009
6.0	-.0053	-.0031	-.0024	-.0020	-.0016	-.0014	-.0013	-.0012	-.0011	-.0010
8.0	-.0068	-.0038	-.0028	-.0024	-.0018	-.0016	-.0014	-.0013	-.0011	-.0010
10.0	-.0082	-.0045	-.0033	-.0027	-.0021	-.0017	-.0015	-.0014	-.0012	-.0011
12.0	-.0096	-.0053	-.0038	-.0030	-.0023	-.0019	-.0016	-.0014	-.0013	-.0012
15.0	-.0117	-.0063	-.0045	-.0036	-.0026	-.0021	-.0018	-.0016	-.0014	-.0012
20.0	-.0152	-.0080	-.0056	-.0044	-.0032	-.0025	-.0021	-.0018	-.0016	-.0014
25.0	-.0185	-.0097	-.0067	-.0052	-.0037	-.0029	-.0024	-.0020	-.0017	-.0015
30.0	-.0217	-.0112	-.0077	-.0059	-.0041	-.0032	-.0026	-.0022	-.0019	-.0016
35.0	-.0248	-.0127	-.0087	-.0067	-.0046	-.0035	-.0029	-.0024	-.0020	-.0017
40.0	-.0276	-.0141	-.0096	-.0073	-.0050	-.0038	-.0031	-.0025	-.0021	-.0018
45.0	-.0303	-.0154	-.0104	-.0079	-.0054	-.0041	-.0033	-.0027	-.0022	-.0019
50.0	-.0327	-.0166	-.0112	-.0085	-.0057	-.0043	-.0034	-.0028	-.0023	-.0019
55.0	-.0348	-.0176	-.0119	-.0090	-.0060	-.0045	-.0036	-.0029	-.0024	-.0020
60.0	-.0367	-.0185	-.0124	-.0094	-.0063	-.0047	-.0037	-.0030	-.0024	-.0020
65.0	-.0383	-.0193	-.0129	-.0097	-.0065	-.0048	-.0037	-.0030	-.0025	-.0020
70.0	-.0397	-.0199	-.0133	-.0100	-.0066	-.0049	-.0038	-.0030	-.0025	-.0020
75.0	-.0407	-.0204	-.0136	-.0102	-.0067	-.0049	-.0038	-.0030	-.0025	-.0020
80.0	-.0414	-.0207	-.0138	-.0103	-.0068	-.0049	-.0038	-.0030	-.0024	-.0020
85.0	-.0418	-.0209	-.0139	-.0103	-.0068	-.0049	-.0038	-.0030	-.0024	-.0019

α, deg \ θ_{xy}, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	-.0008	-.0007	-.0006	-.0005	-.0004	-.0003	-.0002	-.0001	-.0000
2.0	-.0008	-.0007	-.0006	-.0005	-.0004	-.0003	-.0002	-.0001	-.0000
4.0	-.0008	-.0008	-.0007	-.0006	-.0005	-.0003	-.0002	-.0001	-.0000
6.0	-.0009	-.0008	-.0007	-.0006	-.0005	-.0003	-.0002	-.0001	-.0000
8.0	-.0009	-.0008	-.0007	-.0006	-.0005	-.0003	-.0002	-.0001	-.0000
10.0	-.0010	-.0009	-.0007	-.0006	-.0005	-.0004	-.0002	-.0001	-.0000
12.0	-.0010	-.0009	-.0008	-.0006	-.0005	-.0004	-.0002	-.0001	-.0000
15.0	-.0011	-.0010	-.0008	-.0007	-.0005	-.0004	-.0002	-.0001	-.0000
20.0	-.0012	-.0010	-.0009	-.0007	-.0005	-.0004	-.0002	-.0001	-.0000
25.0	-.0013	-.0011	-.0009	-.0007	-.0006	-.0004	-.0002	-.0001	-.0000
30.0	-.0014	-.0012	-.0009	-.0008	-.0006	-.0004	-.0002	-.0001	-.0000
35.0	-.0014	-.0012	-.0010	-.0008	-.0006	-.0004	-.0002	-.0001	-.0000
40.0	-.0015	-.0012	-.0010	-.0008	-.0006	-.0004	-.0002	-.0001	-.0000
45.0	-.0016	-.0013	-.0010	-.0008	-.0006	-.0004	-.0002	-.0001	-.0000
50.0	-.0016	-.0013	-.0010	-.0008	-.0006	-.0004	-.0002	-.0001	-.0000
55.0	-.0016	-.0013	-.0010	-.0008	-.0006	-.0004	-.0002	-.0001	-.0000
60.0	-.0016	-.0013	-.0010	-.0008	-.0006	-.0004	-.0002	-.0001	-.0000
65.0	-.0016	-.0013	-.0010	-.0008	-.0005	-.0003	-.0002	-.0001	-.0000
70.0	-.0016	-.0013	-.0010	-.0007	-.0005	-.0003	-.0002	-.0001	-.0000
75.0	-.0016	-.0013	-.0010	-.0007	-.0005	-.0003	-.0002	-.0001	-.0000
80.0	-.0016	-.0012	-.0009	-.0007	-.0005	-.0003	-.0001	-.0001	-.0000
85.0	-.0015	-.0012	-.0009	-.0006	-.0004	-.0003	-.0001	-.0000	-.0000

TABLE III.- CONTINUED

(c) C_Y. Continued.

$\phi_1 = 135^\circ$; $\phi_2 = 225^\circ$; $\beta = 5^\circ$

α, deg \ θ_{xy}, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	+.0115	-.0090	-.0082	-.0077	-.0072	-.0069	-.0066	-.0064	-.0061	-.0057
2.0	+.0164	-.0114	-.0098	-.0089	-.0080	-.0075	-.0071	-.0067	-.0063	-.0059
4.0	+.0262	-.0163	-.0130	-.0113	-.0096	-.0086	-.0079	-.0074	-.0069	-.0063
6.0	+.0359	-.0212	-.0162	-.0137	-.0111	-.0097	-.0088	-.0080	-.0074	-.0068
8.0	+.0457	-.0260	-.0194	-.0161	-.0126	-.0108	-.0096	-.0087	-.0079	-.0072
10.0	+.0553	-.0308	-.0226	-.0184	-.0142	-.0119	-.0104	-.0093	-.0084	-.0075
12.0	+.0649	-.0356	-.0257	-.0207	-.0157	-.0130	-.0112	-.0099	-.0089	-.0079
15.0	+.0792	-.0426	-.0304	-.0242	-.0179	-.0146	-.0124	-.0109	-.0096	-.0085
20.0	+.1024	-.0541	-.0379	-.0298	-.0214	-.0171	-.0143	-.0123	-.0107	-.0094
25.0	+.1249	-.0652	-.0452	-.0351	-.0249	-.0195	-.0161	-.0137	-.0118	-.0102
30.0	+.1464	-.0758	-.0521	-.0402	-.0281	-.0218	-.0178	-.0150	-.0127	-.0109
35.0	+.1668	-.0858	-.0587	-.0450	-.0311	-.0239	-.0193	-.0161	-.0136	-.0115
40.0	+.1859	-.0952	-.0647	-.0494	-.0339	-.0258	-.0207	-.0171	-.0144	-.0121
45.0	+.2036	-.1038	-.0703	-.0535	-.0364	-.0275	-.0220	-.0180	-.0150	-.0126
50.0	+.2198	-.1116	-.0754	-.0571	-.0386	-.0290	-.0230	-.0188	-.0156	-.0129
55.0	+.2343	-.1186	-.0799	-.0604	-.0405	-.0303	-.0239	-.0194	-.0160	-.0132
60.0	+.2470	-.1247	-.0838	-.0631	-.0422	-.0314	-.0246	-.0199	-.0163	-.0134
65.0	+.2578	-.1298	-.0870	-.0654	-.0435	-.0322	-.0252	-.0202	-.0165	-.0134
70.0	+.2667	-.1340	-.0896	-.0672	-.0445	-.0328	-.0255	-.0204	-.0165	-.0134
75.0	+.2735	-.1371	-.0915	-.0685	-.0451	-.0331	-.0256	-.0204	-.0164	-.0133
80.0	+.2783	-.1392	-.0927	-.0692	-.0454	-.0332	-.0256	-.0202	-.0162	-.0130
85.0	+.2809	-.1403	-.0931	-.0694	-.0454	-.0330	-.0253	-.0200	-.0159	-.0127

α, deg \ θ_{xy}, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	+.0053	-.0048	-.0043	-.0037	-.0029	-.0022	-.0014	-.0007	-.0002
2.0	+.0055	-.0050	-.0044	-.0037	-.0030	-.0022	-.0014	-.0007	-.0002
4.0	+.0058	-.0052	-.0046	-.0039	-.0031	-.0022	-.0014	-.0007	-.0002
6.0	+.0061	-.0055	-.0048	-.0040	-.0031	-.0023	-.0014	-.0007	-.0002
8.0	+.0064	-.0057	-.0049	-.0041	-.0032	-.0023	-.0014	-.0007	-.0002
10.0	+.0067	-.0059	-.0051	-.0042	-.0033	-.0024	-.0015	-.0007	-.0002
12.0	+.0070	-.0062	-.0053	-.0043	-.0034	-.0024	-.0015	-.0007	-.0002
15.0	+.0075	-.0065	-.0055	-.0045	-.0035	-.0024	-.0015	-.0007	-.0002
20.0	+.0081	-.0070	-.0058	-.0047	-.0036	-.0025	-.0015	-.0007	-.0002
25.0	+.0087	-.0074	-.0061	-.0049	-.0037	-.0025	-.0015	-.0007	-.0002
30.0	+.0093	-.0078	-.0064	-.0051	-.0038	-.0026	-.0015	-.0007	-.0002
35.0	+.0097	-.0081	-.0066	-.0052	-.0038	-.0026	-.0015	-.0007	-.0002
40.0	+.0101	-.0084	-.0068	-.0053	-.0038	-.0026	-.0015	-.0007	-.0002
45.0	+.0105	-.0086	-.0069	-.0053	-.0038	-.0025	-.0014	-.0006	-.0001
50.0	+.0107	-.0087	-.0069	-.0053	-.0038	-.0025	-.0014	-.0006	-.0001
55.0	+.0108	-.0088	-.0069	-.0052	-.0037	-.0024	-.0013	-.0006	-.0001
60.0	+.0109	-.0088	-.0069	-.0052	-.0036	-.0023	-.0013	-.0005	-.0001
65.0	+.0109	-.0087	-.0068	-.0050	-.0035	-.0022	-.0012	-.0005	-.0001
70.0	+.0108	-.0086	-.0066	-.0049	-.0034	-.0021	-.0011	-.0004	-.0001
75.0	+.0106	-.0084	-.0064	-.0047	-.0032	-.0020	-.0010	-.0004	-.0001
80.0	+.0104	-.0081	-.0062	-.0045	-.0030	-.0018	-.0009	-.0003	-.0001
85.0	+.0100	-.0078	-.0059	-.0042	-.0028	-.0016	-.0008	-.0003	-.0000

$\phi_1 = 135^\circ$; $\phi_2 = 225^\circ$; $\beta = 15^\circ$

α, deg \ θ_{xy}, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	+.0337	-.0259	-.0235	-.0222	-.0208	-.0199	-.0191	-.0183	-.0174	-.0165
2.0	+.0472	-.0330	-.0282	-.0257	-.0231	-.0215	-.0203	-.0193	-.0182	-.0171
4.0	+.0754	-.0470	-.0374	-.0326	-.0275	-.0247	-.0228	-.0212	-.0197	-.0183
6.0	+.1035	-.0610	-.0467	-.0395	-.0320	-.0280	-.0252	-.0231	-.0212	-.0194
8.0	+.1315	-.0749	-.0559	-.0463	-.0364	-.0311	-.0276	-.0250	-.0227	-.0206
10.0	+.1593	-.0887	-.0650	-.0530	-.0408	-.0343	-.0300	-.0268	-.0241	-.0217
12.0	+.1870	-.1024	-.0740	-.0597	-.0451	-.0374	-.0323	-.0286	-.0256	-.0228
15.0	+.2280	-.1227	-.0874	-.0696	-.0514	-.0419	-.0358	-.0313	-.0276	-.0244
20.0	+.2949	-.1558	-.1092	-.0857	-.0617	-.0492	-.0413	-.0355	-.0309	-.0270
25.0	+.3596	-.1877	-.1301	-.1011	-.0716	-.0562	-.0464	-.0394	-.0339	-.0293
30.0	+.4215	-.2182	-.1501	-.1158	-.0808	-.0627	-.0513	-.0431	-.0367	-.0314
35.0	+.4803	-.2470	-.1689	-.1295	-.0895	-.0688	-.0557	-.0464	-.0392	-.0332
40.0	+.5353	-.2740	-.1864	-.1423	-.0975	-.0743	-.0597	-.0494	-.0414	-.0348
45.0	+.5863	-.2988	-.2025	-.1540	-.1047	-.0792	-.0633	-.0520	-.0433	-.0362
50.0	+.6329	-.3214	-.2171	-.1645	-.1112	-.0836	-.0663	-.0541	-.0448	-.0372
55.0	+.6748	-.3415	-.2300	-.1738	-.1167	-.0873	-.0689	-.0559	-.0460	-.0380
60.0	+.7112	-.3591	-.2411	-.1817	-.1215	-.0904	-.0709	-.0573	-.0469	-.0385
65.0	+.7424	-.3739	-.2505	-.1883	-.1252	-.0927	-.0724	-.0582	-.0474	-.0387
70.0	+.7679	-.3858	-.2579	-.1934	-.1281	-.0944	-.0734	-.0587	-.0475	-.0386
75.0	+.7876	-.3949	-.2633	-.1971	-.1299	-.0954	-.0738	-.0587	-.0473	-.0382
80.0	+.8013	-.4009	-.2668	-.1993	-.1308	-.0956	-.0736	-.0583	-.0467	-.0375
85.0	+.8089	-.4038	-.2682	-.1999	-.1307	-.0951	-.0729	-.0574	-.0458	-.0366

α, deg \ θ_{xy}, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	+.0153	-.0140	-.0124	-.0105	-.0085	-.0062	-.0039	-.0019	-.0005
2.0	+.0158	-.0143	-.0127	-.0107	-.0086	-.0063	-.0040	-.0019	-.0005
4.0	+.0167	-.0150	-.0132	-.0111	-.0088	-.0064	-.0040	-.0020	-.0005
6.0	+.0176	-.0157	-.0137	-.0115	-.0091	-.0065	-.0041	-.0020	-.0005
8.0	+.0185	-.0164	-.0142	-.0118	-.0093	-.0067	-.0041	-.0020	-.0005
10.0	+.0194	-.0171	-.0147	-.0121	-.0095	-.0068	-.0042	-.0020	-.0005
12.0	+.0203	-.0177	-.0151	-.0125	-.0097	-.0069	-.0042	-.0020	-.0005
15.0	+.0215	-.0187	-.0158	-.0129	-.0099	-.0070	-.0043	-.0020	-.0005
20.0	+.0234	-.0201	-.0168	-.0136	-.0103	-.0072	-.0043	-.0020	-.0005
25.0	+.0252	-.0213	-.0177	-.0141	-.0106	-.0073	-.0044	-.0020	-.0005
30.0	+.0267	-.0224	-.0184	-.0146	-.0109	-.0074	-.0044	-.0020	-.0005
35.0	+.0281	-.0234	-.0190	-.0149	-.0110	-.0074	-.0043	-.0019	-.0005
40.0	+.0292	-.0241	-.0195	-.0151	-.0111	-.0074	-.0043	-.0019	-.0004
45.0	+.0301	-.0247	-.0198	-.0152	-.0110	-.0073	-.0042	-.0018	-.0004
50.0	+.0308	-.0251	-.0199	-.0152	-.0109	-.0072	-.0040	-.0017	-.0004
55.0	+.0312	-.0253	-.0199	-.0151	-.0107	-.0069	-.0038	-.0016	-.0004
60.0	+.0314	-.0253	-.0198	-.0149	-.0105	-.0067	-.0037	-.0015	-.0003
65.0	+.0314	-.0251	-.0195	-.0145	-.0101	-.0064	-.0034	-.0014	-.0003
70.0	+.0311	-.0247	-.0191	-.0141	-.0097	-.0060	-.0032	-.0013	-.0003
75.0	+.0306	-.0241	-.0185	-.0135	-.0092	-.0056	-.0029	-.0011	-.0002
80.0	+.0299	-.0234	-.0177	-.0128	-.0086	-.0052	-.0026	-.0010	-.0002
85.0	+.0289	-.0224	-.0169	-.0120	-.0080	-.0047	-.0023	-.0008	-.0001

TABLE III.- CONTINUED

(c) C_Y. Concluded.

$\phi_1 = 150^0$; $\phi_2 = 210^0$; $\beta = 5^0$

α, deg \ θ_{xy}, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	-.0041	-.0032	-.0029	-.0028	-.0026	-.0025	-.0024	-.0023	-.0022	-.0021
2.0	-.0060	-.0041	-.0035	-.0032	-.0029	-.0027	-.0025	-.0024	-.0023	-.0021
4.0	-.0096	-.0059	-.0047	-.0041	-.0034	-.0031	-.0028	-.0026	-.0025	-.0023
6.0	-.0132	-.0077	-.0059	-.0050	-.0040	-.0035	-.0032	-.0029	-.0027	-.0024
8.0	-.0168	-.0095	-.0071	-.0059	-.0046	-.0039	-.0035	-.0031	-.0029	-.0026
10.0	-.0204	-.0113	-.0083	-.0067	-.0052	-.0043	-.0038	-.0034	-.0030	-.0027
12.0	-.0239	-.0131	-.0094	-.0076	-.0057	-.0047	-.0041	-.0036	-.0032	-.0029
15.0	-.0292	-.0157	-.0112	-.0089	-.0065	-.0053	-.0045	-.0040	-.0035	-.0031
20.0	-.0378	-.0199	-.0140	-.0109	-.0079	-.0063	-.0052	-.0045	-.0039	-.0034
25.0	-.0462	-.0241	-.0167	-.0129	-.0091	-.0072	-.0059	-.0050	-.0043	-.0037
30.0	-.0541	-.0280	-.0192	-.0148	-.0103	-.0080	-.0065	-.0055	-.0047	-.0040
35.0	-.0617	-.0317	-.0216	-.0166	-.0114	-.0088	-.0071	-.0059	-.0050	-.0042
40.0	-.0688	-.0352	-.0239	-.0182	-.0125	-.0095	-.0076	-.0063	-.0053	-.0045
45.0	-.0753	-.0384	-.0260	-.0197	-.0134	-.0101	-.0081	-.0067	-.0055	-.0046
50.0	-.0813	-.0413	-.0279	-.0211	-.0142	-.0107	-.0085	-.0069	-.0057	-.0048
55.0	-.0867	-.0439	-.0295	-.0223	-.0150	-.0112	-.0088	-.0072	-.0059	-.0049
60.0	-.0914	-.0461	-.0310	-.0233	-.0156	-.0116	-.0091	-.0074	-.0060	-.0050
65.0	-.0954	-.0481	-.0322	-.0242	-.0161	-.0119	-.0093	-.0075	-.0061	-.0050
70.0	-.0987	-.0496	-.0331	-.0249	-.0165	-.0121	-.0094	-.0076	-.0061	-.0050
75.0	-.1013	-.0508	-.0339	-.0253	-.0167	-.0123	-.0095	-.0076	-.0061	-.0049
80.0	-.1030	-.0516	-.0343	-.0256	-.0168	-.0123	-.0095	-.0075	-.0060	-.0049
85.0	-.1040	-.0519	-.0345	-.0257	-.0168	-.0122	-.0094	-.0074	-.0059	-.0047

α, deg \ θ_{xy}, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	-.0019	-.0018	-.0016	-.0013	-.0011	-.0008	-.0005	-.0003	-.0001
2.0	-.0020	-.0018	-.0016	-.0014	-.0011	-.0008	-.0005	-.0003	-.0001
4.0	-.0021	-.0019	-.0017	-.0014	-.0011	-.0008	-.0005	-.0003	-.0001
6.0	-.0022	-.0020	-.0017	-.0015	-.0012	-.0008	-.0005	-.0003	-.0001
8.0	-.0023	-.0021	-.0018	-.0015	-.0012	-.0009	-.0005	-.0003	-.0001
10.0	-.0025	-.0022	-.0019	-.0015	-.0012	-.0009	-.0005	-.0003	-.0001
12.0	-.0026	-.0022	-.0019	-.0016	-.0012	-.0009	-.0005	-.0003	-.0001
15.0	-.0027	-.0024	-.0020	-.0016	-.0013	-.0009	-.0006	-.0003	-.0001
20.0	-.0030	-.0026	-.0021	-.0017	-.0013	-.0009	-.0006	-.0003	-.0001
25.0	-.0032	-.0027	-.0023	-.0018	-.0014	-.0010	-.0006	-.0003	-.0001
30.0	-.0034	-.0029	-.0024	-.0019	-.0014	-.0010	-.0006	-.0003	-.0001
35.0	-.0036	-.0030	-.0024	-.0019	-.0014	-.0010	-.0006	-.0003	-.0001
40.0	-.0037	-.0031	-.0025	-.0020	-.0014	-.0010	-.0006	-.0002	-.0001
45.0	-.0039	-.0032	-.0026	-.0020	-.0014	-.0010	-.0005	-.0002	-.0001
50.0	-.0040	-.0032	-.0026	-.0020	-.0014	-.0009	-.0005	-.0002	-.0001
55.0	-.0040	-.0033	-.0026	-.0020	-.0014	-.0009	-.0005	-.0002	-.0000
60.0	-.0041	-.0033	-.0026	-.0019	-.0014	-.0009	-.0005	-.0002	-.0000
65.0	-.0041	-.0033	-.0025	-.0019	-.0013	-.0008	-.0005	-.0002	-.0000
70.0	-.0040	-.0032	-.0025	-.0018	-.0013	-.0008	-.0004	-.0002	-.0000
75.0	-.0040	-.0031	-.0024	-.0018	-.0012	-.0007	-.0004	-.0001	-.0000
80.0	-.0039	-.0030	-.0023	-.0017	-.0011	-.0007	-.0003	-.0001	-.0000
85.0	-.0038	-.0029	-.0022	-.0016	-.0011	-.0006	-.0003	-.0001	-.0000

$\phi_1 = 150^0$; $\phi_2 = 210^0$; $\beta = 15^0$

α, deg \ θ_{xy}, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	-.0119	-.0093	-.0084	-.0079	-.0074	-.0071	-.0068	-.0065	-.0062	-.0059
2.0	-.0172	-.0119	-.0101	-.0092	-.0083	-.0077	-.0073	-.0069	-.0065	-.0061
4.0	-.0276	-.0171	-.0136	-.0118	-.0099	-.0089	-.0082	-.0076	-.0071	-.0066
6.0	-.0380	-.0223	-.0170	-.0143	-.0116	-.0101	-.0091	-.0083	-.0077	-.0070
8.0	-.0484	-.0274	-.0204	-.0169	-.0132	-.0113	-.0100	-.0090	-.0082	-.0075
10.0	-.0587	-.0326	-.0238	-.0194	-.0148	-.0124	-.0109	-.0097	-.0088	-.0079
12.0	-.0690	-.0376	-.0271	-.0218	-.0164	-.0136	-.0117	-.0104	-.0093	-.0083
15.0	-.0842	-.0452	-.0321	-.0255	-.0188	-.0153	-.0130	-.0114	-.0101	-.0089
20.0	-.1089	-.0574	-.0402	-.0315	-.0226	-.0180	-.0151	-.0130	-.0113	-.0099
25.0	-.1329	-.0693	-.0480	-.0372	-.0263	-.0206	-.0170	-.0144	-.0124	-.0107
30.0	-.1559	-.0806	-.0554	-.0426	-.0297	-.0230	-.0188	-.0158	-.0135	-.0115
35.0	-.1776	-.0913	-.0623	-.0478	-.0329	-.0253	-.0205	-.0171	-.0144	-.0122
40.0	-.1980	-.1013	-.0688	-.0525	-.0359	-.0274	-.0220	-.0182	-.0152	-.0128
45.0	-.2169	-.1105	-.0748	-.0569	-.0386	-.0292	-.0233	-.0191	-.0160	-.0134
50.0	-.2342	-.1189	-.0802	-.0608	-.0410	-.0308	-.0245	-.0200	-.0166	-.0138
55.0	-.2497	-.1263	-.0850	-.0642	-.0431	-.0322	-.0254	-.0207	-.0170	-.0141
60.0	-.2633	-.1329	-.0892	-.0672	-.0449	-.0334	-.0262	-.0212	-.0174	-.0143
65.0	-.2748	-.1384	-.0927	-.0697	-.0463	-.0343	-.0268	-.0216	-.0176	-.0144
70.0	-.2843	-.1428	-.0954	-.0716	-.0474	-.0349	-.0272	-.0218	-.0176	-.0144
75.0	-.2916	-.1462	-.0975	-.0730	-.0481	-.0353	-.0274	-.0218	-.0176	-.0142
80.0	-.2967	-.1484	-.0988	-.0738	-.0484	-.0354	-.0273	-.0217	-.0174	-.0140
85.0	-.2995	-.1496	-.0993	-.0741	-.0484	-.0353	-.0271	-.0214	-.0171	-.0137

α, deg \ θ_{xy}, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	-.0055	-.0050	-.0045	-.0039	-.0031	-.0023	-.0015	-.0007	-.0002
2.0	-.0057	-.0052	-.0046	-.0039	-.0032	-.0023	-.0015	-.0007	-.0002
4.0	-.0060	-.0055	-.0048	-.0041	-.0033	-.0024	-.0015	-.0007	-.0002
6.0	-.0064	-.0057	-.0050	-.0042	-.0033	-.0024	-.0015	-.0007	-.0002
8.0	-.0067	-.0060	-.0052	-.0043	-.0034	-.0025	-.0015	-.0007	-.0002
10.0	-.0071	-.0062	-.0054	-.0045	-.0035	-.0025	-.0016	-.0008	-.0002
12.0	-.0074	-.0065	-.0055	-.0046	-.0036	-.0026	-.0016	-.0008	-.0002
15.0	-.0078	-.0068	-.0058	-.0048	-.0037	-.0026	-.0016	-.0008	-.0002
20.0	-.0086	-.0074	-.0062	-.0050	-.0038	-.0027	-.0016	-.0008	-.0002
25.0	-.0092	-.0078	-.0065	-.0052	-.0040	-.0027	-.0016	-.0008	-.0002
30.0	-.0098	-.0083	-.0068	-.0054	-.0040	-.0028	-.0016	-.0007	-.0002
35.0	-.0103	-.0086	-.0070	-.0055	-.0041	-.0028	-.0016	-.0007	-.0002
40.0	-.0108	-.0089	-.0072	-.0056	-.0041	-.0028	-.0016	-.0007	-.0002
45.0	-.0111	-.0092	-.0074	-.0057	-.0041	-.0027	-.0016	-.0007	-.0002
50.0	-.0114	-.0093	-.0074	-.0057	-.0041	-.0027	-.0015	-.0007	-.0001
55.0	-.0116	-.0094	-.0074	-.0057	-.0040	-.0026	-.0015	-.0006	-.0001
60.0	-.0117	-.0094	-.0074	-.0056	-.0039	-.0025	-.0014	-.0006	-.0001
65.0	-.0117	-.0094	-.0073	-.0055	-.0038	-.0024	-.0013	-.0005	-.0001
70.0	-.0116	-.0092	-.0071	-.0053	-.0037	-.0023	-.0012	-.0005	-.0001
75.0	-.0114	-.0090	-.0069	-.0051	-.0035	-.0021	-.0011	-.0004	-.0001
80.0	-.0112	-.0088	-.0067	-.0049	-.0033	-.0020	-.0010	-.0004	-.0001
85.0	-.0108	-.0084	-.0064	-.0046	-.0030	-.0018	-.0009	-.0003	-.0000

TABLE III.- CONTINUED

(d) C_L

$\phi_1 = 0^o$; $\phi_2 = 360^o$; $\beta = 0^o$

α, deg \ θ_{xy}, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.0465	.0463	.0459	.0455	.0441	.0422	.0397	.0366	.0328	.0284
2.0	.0952	.0924	.0917	.0908	.0881	.0843	.0793	.0731	.0655	.0566
4.0	.2294	.1884	.1823	.1804	.1751	.1675	.1576	.1452	.1302	.1125
6.0	.4187	.3057	.2777	.2685	.2599	.2486	.2339	.2155	.1933	.1669
8.0	.6615	.4477	.3863	.3613	.3416	.3267	.3073	.2831	.2538	.2190
10.0	.9548	.6132	.5089	.4623	.4221	.4007	.3768	.3470	.3110	.2683
12.0	1.2952	.8005	.6443	.5714	.5045	.4707	.4416	.4066	.3642	.3139
15.0	1.8846	1.1171	.8684	.7481	.6321	.5725	.5290	.4859	.4348	.3742
20.0	3.0358	1.7181	1.2825	1.0663	.8496	.7356	.6567	.5897	.5231	.4486
25.0	4.3195	2.3696	1.7194	1.3930	1.0605	.8831	.7624	.6648	.5752	.4849
30.0	5.6352	3.0204	2.1447	1.7025	1.2483	1.0046	.8401	.7107	.5966	.4875
35.0	6.8777	3.6182	2.5236	1.9691	1.3973	1.0899	.8837	.7243	.5876	.4615
40.0	7.9446	4.1128	2.8240	2.1700	1.4940	1.1306	.8884	.7036	.5485	.4093
45.0	8.7431	4.4601	3.0182	2.2857	1.5280	1.1211	.8516	.6484	.4809	.3339
50.0	9.1966	4.6252	3.0853	2.3026	1.4928	1.0589	.7733	.5603	.3877	.2394
55.0	9.2501	4.5845	3.0123	2.2130	1.3864	.9448	.6561	.4432	.2734	.1307
60.0	8.8743	4.3276	2.7951	2.0162	1.2114	.7829	.5050	.3026	.1439	.0136
65.0	8.0673	3.8580	2.4393	1.7184	.9747	.5807	.3274	.1456	.0059	-.1056
70.0	6.8556	3.1934	1.9593	1.3326	.6875	.3480	.1323	-.0197	-.1333	-.2206
75.0	5.2920	2.3640	1.3777	.8774	.3642	.0968	-.0702	-.1846	-.2665	-.3255
80.0	3.4525	1.4108	.7238	.3760	.0216	-.1598	-.2693	-.3404	-.3867	-.4148
85.0	1.4310	.3832	.0316	-.1453	-.3223	-.4081	-.4548	-.4791	-.4879	-.4842

α, deg \ θ_{xy}, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	.0232	.0172	.0104	.0029	-.0052	-.0135	-.0216	-.0285	-.0332
2.0	.0462	.0343	.0208	.0058	-.0103	-.0270	-.0431	-.0569	-.0663
4.0	.0918	.0681	.0412	.0114	-.0207	-.0539	-.0859	-.1133	-.1321
6.0	.1362	.1008	.0609	.0166	-.0312	-.0805	-.1281	-.1688	-.1968
8.0	.1786	.1321	.0795	.0211	-.0418	-.1067	-.1693	-.2230	-.2598
10.0	.2185	.1613	.0966	.0249	-.0525	-.1324	-.2094	-.2754	-.3206
12.0	.2553	.1880	.1119	.0275	-.0635	-.1575	-.2480	-.3256	-.3788
15.0	.3036	.2226	.1309	.0292	-.0804	-.1935	-.3025	-.3959	-.4600
20.0	.3618	.2621	.1495	.0246	-.1099	-.2489	-.3827	-.4972	-.5759
25.0	.3869	.2752	.1490	.0091	-.1416	-.2970	-.4467	-.5749	-.6628
30.0	.3768	.2589	.1273	-.0184	-.1753	-.3371	-.4927	-.6259	-.7173
35.0	.3387	.2142	.0838	-.0582	-.2110	-.3684	-.5198	-.6492	-.7380
40.0	.2780	.1498	.0216	-.1096	-.2483	-.3911	-.5282	-.6454	-.7257
45.0	.1991	.0719	-.0505	-.1694	-.2866	-.4056	-.5195	-.6168	-.6833
50.0	.1070	-.0142	-.1262	-.2298	-.3245	-.4126	-.4961	-.5672	-.6157
55.0	.0067	-.1031	-.2003	-.2850	-.3563	-.4134	-.4614	-.5018	-.5292
60.0	-.0962	-.1896	-.2680	-.3312	-.3778	-.4066	-.4192	-.4266	-.4314
65.0	-.1961	-.2690	-.3256	-.3653	-.3870	-.3894	-.3732	-.3482	-.3303
70.0	-.2876	-.3371	-.3698	-.3855	-.3832	-.3620	-.3232	-.2731	-.2340
75.0	-.3660	-.3903	-.3987	-.3910	-.3666	-.3257	-.2701	-.2059	-.1500
80.0	-.4275	-.4262	-.4110	-.3819	-.3387	-.2824	-.2162	-.1466	-.0850
85.0	-.4693	-.4436	-.4069	-.3593	-.3014	-.2350	-.1642	-.0964	-.0413

TABLE III.- CONTINUED

(d) C_L. Continued.

$\phi_1 = -90^\circ$; $\phi_2 = 90^\circ$; $\beta = 0^\circ$

α, deg \ θ_{xy}, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	-.00104	-.0454	-.0852	-.1263	-.2092	-.2917	-.3727	-.4511	-.5255	-.5943
2.0	-.00031	-.0209	-.0536	-.0912	-.1715	-.2537	-.3357	-.4160	-.4934	-.5659
4.0	-.00009	-.0063	-.0191	-.0424	-.1092	-.1863	-.2674	-.3496	-.4310	-.5095
6.0	-.00004	-.0030	-.0096	-.0212	-.0651	-.1315	-.2077	-.2888	-.3717	-.4542
8.0	-.00002	-.0018	-.0058	-.0130	-.0399	-.0897	-.1573	-.2343	-.3164	-.4008
10.0	-.00002	-.0012	-.0039	-.0089	-.0276	-.0616	-.1168	-.1868	-.2658	-.3499
12.0	-.00001	-.0008	-.0028	-.0065	-.0205	-.0457	-.0867	-.1469	-.2204	-.3023
15.0	-.00001	-.0006	-.0019	-.0044	-.0141	-.0320	-.0601	-.1025	-.1634	-.2382
20.0	-.00000	-.0003	-.0011	-.0026	-.0087	-.0201	-.0382	-.0646	-.1016	-.1551
25.0	-.00000	-.0002	-.0008	-.0018	-.0059	-.0138	-.0265	-.0452	-.0710	-.1062
30.0	-.00000	-.0002	-.0005	-.0013	-.0043	-.0100	-.0193	-.0330	-.0521	-.0778
35.0	-.00000	-.0001	-.0004	-.0009	-.0031	-.0074	-.0143	-.0245	-.0388	-.0581
40.0	-.00000	-.0001	-.0003	-.0007	-.0023	-.0054	-.0106	-.0182	-.0289	-.0433
45.0	-.00000	-.0001	-.0002	-.0005	-.0017	-.0040	-.0077	-.0133	-.0212	-.0317
50.0	-.00000	-.0000	-.0001	-.0004	-.0012	-.0028	-.0055	-.0095	-.0151	-.0226
55.0	-.00000	-.0000	-.0001	-.0002	-.0008	-.0019	-.0037	-.0064	-.0103	-.0154
60.0	-.00000	-.0000	-.0001	-.0002	-.0005	-.0012	-.0024	-.0041	-.0066	-.0099
65.0	-.00000	-.0000	-.0000	-.0001	-.0003	-.0007	-.0014	-.0024	-.0039	-.0058
70.0	-.00000	-.0000	-.0000	-.0000	-.0002	-.0004	-.0007	-.0013	-.0020	-.0030
75.0	-.00000	-.0000	-.0000	-.0000	-.0001	-.0002	-.0003	-.0005	-.0009	-.0013
80.0	-.00000	-.0000	-.0000	-.0000	-.0000	-.0000	-.0001	-.0002	-.0003	-.0004
85.0	-.00000	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000

α, deg \ θ_{xy}, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	-.6550	-.7044	-.7381	-.7505	-.7342	-.6812	-.5840	-.4390	-.2508
2.0	-.6312	-.6860	-.7262	-.7457	-.7374	-.6928	-.6039	-.4661	-.2832
4.0	-.5827	-.6475	-.6994	-.7328	-.7400	-.7120	-.6399	-.5174	-.3162
6.0	-.5336	-.6067	-.6693	-.7154	-.7374	-.7259	-.6709	-.5645	-.4063
8.0	-.4846	-.5645	-.6362	-.6940	-.7300	-.7345	-.6965	-.6069	-.4630
10.0	-.4362	-.5213	-.6008	-.6689	-.7180	-.7378	-.7168	-.6445	-.5158
12.0	-.3892	-.4777	-.5633	-.6406	-.7015	-.7360	-.7317	-.6768	-.5644
15.0	-.3226	-.4128	-.5048	-.5928	-.6694	-.7240	-.7439	-.7153	-.6284
20.0	-.2263	-.3110	-.4051	-.5034	-.5988	-.6814	-.7376	-.7516	-.7092
25.0	-.1552	-.2241	-.3100	-.4084	-.5131	-.6149	-.7006	-.7532	-.7551
30.0	-.1121	-.1591	-.2274	-.3159	-.4196	-.5308	-.6374	-.7222	-.7654
35.0	-.0835	-.1172	-.1638	-.2333	-.3263	-.4366	-.5541	-.6627	-.7415
40.0	-.0622	-.0871	-.1204	-.1674	-.2406	-.3402	-.4582	-.5807	-.6871
45.0	-.0457	-.0639	-.0879	-.1206	-.1696	-.2494	-.3574	-.4834	-.6079
50.0	-.0325	-.0455	-.0625	-.0853	-.1177	-.1714	-.2606	-.3790	-.5109
55.0	-.0222	-.0310	-.0426	-.0579	-.0794	-.1122	-.1747	-.2760	-.4044
60.0	-.0142	-.0199	-.0273	-.0371	-.0506	-.0708	-.1067	-.1824	-.2969
65.0	-.0084	-.0117	-.0161	-.0219	-.0297	-.0413	-.0607	-.1056	-.1970
70.0	-.0044	-.0061	-.0084	-.0114	-.0154	-.0214	-.0311	-.0515	-.1125
75.0	-.0019	-.0026	-.0036	-.0049	-.0066	-.0091	-.0131	-.0212	-.0497
80.0	-.0006	-.0008	-.0011	-.0015	-.0020	-.0027	-.0039	-.0062	-.0136
85.0	-.0001	-.0001	-.0001	-.0002	-.0002	-.0003	-.0005	-.0008	-.0016

$\phi_1 = 90^\circ$; $\phi_2 = 270^\circ$; $\beta = 0^\circ$

α, deg \ θ_{xy}, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.01033	.1379	.1771	.2172	.2974	.3761	.4521	.5243	.5912	.6510
2.0	.01934	.2056	.2370	.2728	.3476	.4222	.4942	.5622	.6244	.6791
4.0	.04597	.3830	.3837	.4032	.4593	.5213	.5826	.6400	.6914	.7345
6.0	.08378	.6145	.5650	.5581	.5850	.6287	.6755	.7198	.7582	.7880
8.0	.12832	.8072	.7785	.7356	.7230	.7431	.7719	.8004	.8240	.8389
10.0	.17898	1.0277	1.0216	.9334	.8718	.8631	.8705	.8809	.8877	.8865
12.0	.23505	1.1601	1.2914	1.1492	1.0295	.9870	.9700	.9601	.9487	.9301
15.0	.32694	1.2548	1.7386	1.5006	1.2783	1.1771	1.1182	1.0743	1.0330	.9866
20.0	.60717	3.4564	2.5661	2.1353	1.7080	1.4913	1.3517	1.2440	1.1479	1.0523
25.0	.86890	4.7394	3.4396	2.7879	2.1269	1.7801	1.5514	1.3748	1.2215	1.0760
30.0	1.1227	6.0410	4.2899	3.4062	2.5008	2.0192	1.6996	1.4543	1.2453	1.0529
35.0	1.3277	7.2864	5.0475	3.9392	2.7978	2.1871	1.7817	1.4731	1.2141	.9811
40.0	1.5289	8.2256	5.6482	4.3406	2.9904	2.2666	1.7874	1.4254	1.1260	.8618
45.0	1.7248	8.9203	6.0366	4.5720	3.0578	2.2462	1.7109	1.3101	.9829	.6996
50.0	1.8239	9.2505	6.1707	4.6055	2.9869	2.1206	1.5521	1.1301	.7904	.5014
55.0	1.8250	9.1691	6.0246	4.4262	2.7737	1.8914	1.3158	.8929	.5571	.2768
60.0	1.7278	8.6551	5.5903	4.0325	2.4232	1.5671	1.0124	.6093	.2945	.0372
65.0	1.6215	7.7161	4.8787	3.4369	1.9497	1.1621	.6562	.2936	.0158	-.2053
70.0	1.3271	6.8868	3.9187	2.6653	1.3752	.6963	.2653	-.0382	-.2646	-.4382
75.0	1.0258	4.7279	2.7554	1.7549	.7285	.1937	-.1401	-.3686	-.5322	-.6496
80.0	.62904	2.8216	1.4475	.7521	.0433	-.3195	-.5386	-.6806	-.7732	-.8291
85.0	.28621	.7664	.0631	-.2906	-.6445	-.8163	-.9096	-.9581	-.9757	-.9684

α, deg \ θ_{xy}, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	.7013	.7387	.7590	.7563	.7239	.6542	.5409	.3821	.1844
2.0	.7236	.7646	.7678	.7574	.7168	.6388	.5177	.3524	.1505
4.0	.7684	.7836	.7819	.7556	.6985	.6042	.4681	.2909	.0820
6.0	.8059	.8084	.7911	.7486	.6751	.5649	.4147	.2269	.0128
8.0	.8417	.8286	.7952	.7363	.6465	.5210	.3578	.1610	-.0565
10.0	.8732	.8438	.7940	.7186	.6129	.4730	.2980	.0938	-.1254
12.0	.8999	.8537	.7872	.6956	.5746	.4211	.2358	.0257	-.1932
15.0	.9298	.8580	.7665	.6513	.5086	.3370	.1388	-.0766	-.2916
20.0	.9639	.8553	.7041	.5527	.3790	.1837	-.0277	-.2429	-.4425
25.0	.9291	.8746	.6080	.4267	.2300	.0208	-.1928	-.3965	-.5705
30.0	.8657	.8688	.4819	.2790	.0690	-.1433	-.3480	-.5297	-.6692
35.0	.7608	.8457	.3814	.1169	-.0958	-.3002	-.4854	-.6358	-.7345
40.0	.6182	.8867	.1636	-.0517	-.2560	-.4420	-.5983	-.7102	-.7642
45.0	.4439	.2076	-.0132	-.2182	-.4036	-.5617	-.6814	-.7502	-.7587
50.0	.2484	.1071	-.1900	-.3742	-.5314	-.6538	-.7317	-.7554	-.7205
55.0	.0855	-.1751	-.3579	-.5121	-.6333	-.7146	-.7481	-.7276	-.6541
60.0	-.1782	-.3593	-.5087	-.6252	-.7050	-.7423	-.7316	-.6709	-.5658
65.0	-.3838	-.5263	-.6350	-.7088	-.7443	-.7375	-.6857	-.5908	-.4635
70.0	-.5708	-.6880	-.7313	-.7597	-.7509	-.7027	-.6153	-.4947	-.3555
75.0	-.7302	-.7779	-.7938	-.7771	-.7266	-.6422	-.5270	-.3906	-.2504
80.0	-.8545	-.8516	-.8210	-.7623	-.6754	-.5621	-.4285	-.2870	-.1565
85.0	-.9386	-.8871	-.8137	-.7185	-.6025	-.4696	-.3279	-.1920	-.0811

TABLE III.- CONTINUED

(d) C_L. Continued.

$\beta_1 = 105^0$; $\beta_2 = 255^0$; $\beta = 0^0$

θ_{xy}, deg / α, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.1278	.1642	.2073	.2519	.3422	.4323	.5211	.6076	.6903	.7672
2.0	.2492	.2546	.2870	.3258	.4093	.4945	.5789	.6608	.7386	.8098
4.0	.6116	.4939	.4841	.5008	.5597	.6294	.7011	.7711	.8366	.8947
6.0	1.1297	.8086	.7296	.7105	.7303	.7767	.8307	.8851	.9355	.9782
8.0	1.7971	1.1950	1.0205	.9520	.9190	.9347	.9661	1.0013	1.0340	1.0592
10.0	2.6057	1.6484	1.3532	1.2227	1.1234	1.1013	1.1056	1.1184	1.1308	1.1366
12.0	3.5457	2.1631	1.7237	1.5190	1.3410	1.2744	1.2474	1.2348	1.2247	1.2093
15.0	5.1762	3.0362	2.3400	2.0035	1.6863	1.5418	1.4605	1.4049	1.3574	1.3076
20.0	8.3863	4.6991	3.4856	2.8838	2.2875	1.9885	1.8016	1.6638	1.5468	1.4347
25.0	11.9299	6.5083	4.7007	3.7948	2.8795	2.4056	2.1008	1.8732	1.6821	1.5057
30.0	15.5882	8.3216	5.8993	4.6658	3.4143	2.7585	2.3325	2.0141	1.7498	1.5116
35.0	19.0889	9.9928	6.9548	5.4196	3.8468	3.0161	2.4749	2.0717	1.7406	1.4478
40.0	22.0269	11.3824	7.8068	5.9968	4.1378	3.1532	2.5119	2.0365	1.6501	1.3141
45.0	24.2634	12.3672	8.3677	6.3410	4.2567	3.1520	2.4340	1.9048	1.4792	1.1148
50.0	25.5446	12.8483	8.5775	6.4121	4.1841	3.0038	2.2392	1.6793	1.2339	.8586
55.0	25.7785	12.7590	8.3989	6.1877	3.9126	2.7093	1.9329	1.3688	.9254	.5577
60.0	24.6958	12.0689	7.8194	5.6642	3.4479	2.2785	1.5281	.9877	.5686	.2277
65.0	22.3762	10.7865	6.8523	4.8575	2.8082	1.7307	1.0439	.5549	.1819	-.1144
70.0	19.1295	8.9590	5.5367	3.8021	2.0232	1.0926	.5050	.0929	-.2144	-.4506
75.0	14.8011	6.6694	3.9340	2.5489	1.1322	.3969	-.0606	-.3741	-.5994	-.7631
80.0	9.7810	4.0308	2.1249	1.1615	.1814	-.3197	-.6231	-.8214	-.9530	-1.0359
85.0	4.0900	1.1795	-.2034	-.2874	-.7790	-1.0195	-1.1527	-1.2256	-1.2571	-1.2555

θ_{xy}, deg / α, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	.8353	.8902	.9260	.9347	.9062	.8293	.6942	.4970	.2461
2.0	.8715	.9190	.9465	.9458	.9072	.8198	.6746	.4690	.2126
4.0	.9420	.9736	.9834	.9635	.9043	.7962	.6315	.4101	.1444
6.0	1.0092	1.0234	1.0195	.9746	.8948	.7662	.5832	.3478	.0750
8.0	1.0722	1.0677	1.0391	.9789	.8785	.7302	.5301	.2826	.0049
10.0	1.1302	1.1059	1.0570	.9762	.8555	.6884	.4727	.2150	-.0652
12.0	1.1822	1.1373	1.0677	.9663	.8258	.6409	.4112	.1456	-.1348
15.0	1.2476	1.1706	1.0696	.9378	.7691	.5601	.3128	.0393	-.2368
20.0	1.3171	1.1858	1.0335	.8544	.6443	.4029	.1366	-.1386	-.3959
25.0	1.3305	1.1471	.9481	.7286	.4866	.2248	-.0469	-.3091	-.5343
30.0	1.2831	1.0536	.8157	.5658	.3037	.0348	-.2279	-.4633	-.6451
35.0	1.1742	.9079	.6420	.3737	.1048	-.1570	-.3969	-.5935	-.7233
40.0	1.0070	.7162	.4351	.1620	-.0996	-.3406	-.5453	-.6934	-.7660
45.0	.7885	.4874	.2055	-.0582	-.2988	-.5064	-.6655	-.7587	-.7726
50.0	.5292	.2332	-.0350	-.2753	-.4824	-.6440	-.7522	-.7873	-.7449
55.0	.2422	-.0033	-.2737	-.4781	-.6410	-.7528	-.8020	-.7798	-.6867
60.0	-.0575	-.2981	-.4980	-.6561	-.7669	-.8223	-.8140	-.7387	-.6040
65.0	-.3543	-.5473	-.6965	-.8005	-.8545	-.8523	-.7897	-.6689	-.5042
70.0	-.6326	-.7681	-.8593	-.9047	-.9007	-.8435	-.7330	-.5770	-.3955
75.0	-.8779	-.9494	-.9788	-.9648	-.9051	-.7988	-.6498	-.4711	-.2868
80.0	-1.0781	-1.0829	-1.0504	-.9797	-.8700	-.7234	-.5476	-.3598	-.1865
85.0	-1.2240	-1.1632	-1.0725	-.9512	-.8003	-.6245	-.4351	-.2520	-.1026

$\beta_1 = 120^0$; $\beta_2 = 240^0$; $\beta = 0^0$

θ_{xy}, deg / α, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.1861	.1691	.2101	.2531	.3411	.4299	.5188	.6069	.6932	.7761
2.0	.2754	.2712	.2996	.3358	.4161	.4997	.5841	.6676	.7490	.8263
4.0	.5975	.5460	.5242	.5344	.5862	.6526	.7233	.7945	.8634	.9273
6.0	1.3065	1.0118	.8074	.7751	.7814	.8213	.8726	.9271	.9802	1.0281
8.0	2.0952	1.5841	1.1468	1.0550	.9992	1.0040	1.0302	1.0638	1.0979	1.1273
10.0	3.0538	2.1897	1.5351	1.3706	1.2370	1.1983	1.1939	1.2030	1.2152	1.2236
12.0	4.1705	2.8052	1.9707	1.7180	1.4919	1.4017	1.3619	1.3427	1.3303	1.3159
15.0	6.1719	3.8399	2.6989	2.2895	1.8991	1.7186	1.6170	1.5496	1.4960	1.4438
20.0	9.9795	5.5193	4.0605	3.3356	2.6157	2.2553	2.0326	1.8724	1.7409	1.6197
25.0	14.1830	7.4826	5.5143	4.4273	3.3304	2.7657	2.4077	2.1443	1.9290	1.7351
30.0	18.5689	9.8597	6.9453	5.4780	3.9855	3.2077	2.7086	2.3415	2.0424	1.7778
35.0	22.7271	11.8756	8.2377	6.4015	4.5263	3.5432	2.9099	2.4446	2.0682	1.7400
40.0	26.3152	13.5624	9.2823	7.1188	4.9044	3.7402	2.9898	2.4401	1.9988	1.6192
45.0	29.0222	14.7709	9.9845	7.5630	5.0815	3.7757	2.9348	2.3214	1.8330	1.4182
50.0	30.5900	15.3812	10.2709	7.6842	5.0320	3.6367	2.7401	2.0893	1.5756	1.1450
55.0	30.8321	15.3110	10.0943	7.4532	4.7450	3.3216	2.4098	1.7519	1.2377	.8126
60.0	29.6463	14.5215	9.4374	6.8632	4.2246	2.8402	1.9570	1.3244	.8353	.4375
65.0	27.0227	13.1207	8.3138	5.9310	3.4904	2.2133	1.4030	.8277	.3891	.0393
70.0	23.0448	10.8627	6.7680	4.6958	2.5760	1.4711	.7753	.2873	-.0778	-.3610
75.0	17.8850	8.1447	4.8716	3.2163	1.5267	.6515	.1066	-.2682	-.5405	-.7422
80.0	11.7930	5.0008	2.7198	1.5678	.3967	-.2027	-.5677	-.8096	-.9747	-1.0844
85.0	5.0799	1.5931	.4242	-.1637	-.7542	-1.0460	-1.2119	-1.3082	-1.3577	-1.3703

θ_{xy}, deg / α, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	.8526	.9184	.9672	.9896	.9735	.9042	.7677	.5569	.2799
2.0	.8963	.9547	.9948	1.0073	.9801	.8991	.7511	.5303	.2468
4.0	.9827	1.0246	1.0461	1.0380	.9883	.8838	.7132	.4739	.1790
6.0	1.0865	1.0901	1.0918	1.0620	.9893	.8646	.6697	.4135	.1097
8.0	1.1868	1.1505	1.1310	1.0788	.9831	.8327	.6206	.3496	.0395
10.0	1.2824	1.2048	1.1632	1.0882	.9695	.7972	.5664	.2828	-.0311
12.0	1.2922	1.2522	1.1878	1.0898	.9484	.7553	.5075	.2136	-.1014
15.0	1.3842	1.3089	1.2095	1.0772	.9031	.6810	.4113	.1065	-.2050
20.0	1.4960	1.3599	1.2024	1.0153	.7920	.5300	.2348	-.0754	-.3682
25.0	1.5463	1.3506	1.1388	.9036	.6407	.3513	.0458	-.2533	-.5120
30.0	1.5274	1.2778	1.0195	.7462	.4562	.1542	-.1456	-.4178	-.6293
35.0	1.4364	1.1425	.8487	.5504	.2478	-.0511	-.3293	-.5605	-.7146
40.0	1.2747	.9494	.6343	.3257	.0264	-.2537	-.4957	-.6743	-.7646
45.0	1.0485	.7075	.3867	.0839	-.1965	-.4429	-.6363	-.7541	-.7782
50.0	.7681	.4286	.1187	-.1624	-.4090	-.6089	-.7443	-.7969	-.7567
55.0	.4475	.1270	-.1555	-.4000	-.6000	-.7434	-.8151	-.8021	-.7037
60.0	.1033	-.1812	-.4216	-.6167	-.7598	-.8403	-.8464	-.7719	-.6247
65.0	-.2463	-.4799	-.6654	-.8012	-.8809	-.8958	-.8386	-.7102	-.5269
70.0	-.5830	-.7533	-.8745	-.9446	-.9581	-.9089	-.7947	-.6233	-.4186
75.0	-.8889	-.9874	-1.0388	-1.0407	-.9891	-.8812	-.7197	-.5190	-.3084
80.0	-1.1486	-1.1708	-1.1508	-1.0862	-.9749	-.8172	-.6209	-.4058	-.2052
85.0	-1.3494	-1.2954	-1.2067	-1.0814	-.9190	-.7233	-.5067	-.2930	-.1170

TABLE III.- CONTINUED

(d) C_L. Concluded.

$\beta_1 = 135^0$; $\beta_2 = 225^0$; $\beta = 0^0$

α, deg \ θ_{xy}, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.1392	.1702	.2099	.2519	.3381	.4255	.5135	.6013	.6882	.7726
2.0	.2864	.2774	.3034	.3382	.4162	.4983	.5817	.6650	.7470	.8259
4.0	.7361	.5680	.5400	.5468	.5945	.6585	.7279	.7986	.8680	.9336
6.0	1.3880	.9572	.8402	.8012	.8003	.8364	.8855	.9391	.9924	1.0418
8.0	2.2343	1.4402	1.2003	1.0984	1.0310	1.0298	1.0526	1.0846	1.1185	1.1490
10.0	3.2646	2.0112	1.6160	1.4347	1.2839	1.2364	1.2271	1.2335	1.2448	1.2538
12.0	4.4463	2.6631	2.0821	1.8059	1.5558	1.4536	1.4068	1.3838	1.3695	1.3550
15.0	6.5573	3.7749	2.8632	2.4182	1.9918	1.7932	1.6812	1.6076	1.5504	1.4968
20.0	10.3636	5.9065	4.3282	3.5432	2.7630	2.3724	2.1319	1.9605	1.8220	1.6962
25.0	15.2667	8.2411	5.8972	4.7222	3.5368	2.9278	2.5428	2.2631	2.0363	1.8343
30.0	20.0067	10.5954	7.4464	5.8615	4.2510	3.4140	2.8798	2.4890	2.1736	1.8968
35.0	24.5064	12.7802	8.8505	6.8680	4.8460	3.7891	3.1115	2.6165	2.2189	1.8746
40.0	28.3925	14.6137	9.9910	7.6558	5.2689	4.0181	3.2152	2.6302	2.1632	1.7636
45.0	31.5334	15.9342	10.7651	8.1519	5.4777	4.0748	3.1750	2.5216	2.0038	1.5658
50.0	33.8042	16.6110	11.0925	8.3013	5.4435	3.9443	2.9844	2.2904	1.7447	1.2886
55.0	33.3228	16.5543	10.9211	8.0712	5.1531	3.6235	2.6468	1.9443	1.3968	.9449
60.0	32.0809	15.7209	10.2309	7.4532	4.6099	3.1218	2.1750	1.4984	.9763	.5517
65.0	29.2450	14.1180	9.0354	6.4642	3.8339	2.4604	1.5908	.9743	.5045	.1293
70.0	24.9839	11.8030	7.3813	5.1451	2.8601	1.6711	.9232	.3989	.0060	-.2999
75.0	19.4027	8.8798	5.3452	3.5587	1.7367	.7938	.2069	-.1976	-.4927	-.7132
80.0	12.8804	5.4924	3.0289	1.7853	.5216	-.1255	-.5205	-.7837	-.9655	-1.0890
85.0	5.5824	1.8152	.5525	-.0827	-.7212	-1.0381	-1.2202	-1.3284	-1.3875	-1.4080

α, deg \ θ_{xy}, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	.8519	.9219	.9763	1.0056	.9966	.9331	.7987	.5838	.2957
2.0	.8988	.9614	1.0070	1.0263	1.0059	.9302	.7836	.5580	.2627
4.0	.9918	1.0379	1.0649	1.0630	1.0194	.9191	.7486	.5029	.1952
6.0	1.0829	1.1105	1.1173	1.0932	1.0258	.9011	.7076	.4437	.1261
8.0	1.1709	1.1782	1.1633	1.1162	1.0247	.8760	.6608	.3807	.0558
10.0	1.2545	1.2400	1.2024	1.1316	1.0160	.8440	.6086	.3145	-.0149
12.0	1.3826	1.2951	1.2339	1.1391	.9996	.8053	.5514	.2456	-.0854
15.0	1.4373	1.3632	1.2656	1.1348	.9606	.7351	.4571	.1386	-.1898
20.0	1.5700	1.4325	1.2739	1.0851	.8581	.5887	.2816	-.0446	-.3546
25.0	1.6396	1.4393	1.2231	.9826	.7122	.4118	.0913	-.2255	-.5009
30.0	1.6870	1.3793	1.1130	.8307	.5295	.2132	-.1039	-.3944	-.6212
35.0	1.5578	1.2522	.9470	.6362	.3192	.0034	-.2936	-.5427	-.7098
40.0	1.4025	1.0622	.7324	.4084	.0920	-.2067	-.4677	-.6629	-.7632
45.0	1.1765	.8178	.4797	.1591	-.1400	-.4058	-.6175	-.7494	-.7802
50.0	.8899	.5306	.2017	-.0986	-.3647	-.5835	-.7354	-.7990	-.7618
55.0	.5569	.2155	-.0870	-.3511	-.5701	-.7310	-.8164	-.8107	-.7114
60.0	.1945	-.1110	-.3711	-.5850	-.7458	-.8412	-.8574	-.7860	-.6343
65.0	-.1782	-.4316	-.6355	-.7884	-.8831	-.9095	-.8583	-.7287	-.5376
70.0	-.5415	-.7294	-.8667	-.9510	-.9761	-.9342	-.8215	-.6448	-.4296
75.0	-.8762	-.9891	-1.0531	-1.0656	-1.0214	-.9163	-.7517	-.5419	-.3190
80.0	-1.1651	-1.1976	-1.1862	-1.1279	-1.0192	-.8595	-.6558	-.4285	-.2145
85.0	-1.3940	-1.3456	-1.2609	-1.1370	-.9724	-.7701	-.5421	-.3139	-.1244

$\beta_1 = 150^0$; $\beta_2 = 210^0$; $\beta = 0^0$

α, deg \ θ_{xy}, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.1405	.1705	.2097	.2511	.3364	.4231	.5105	.5981	.6850	.7699
2.0	.2913	.2800	.3050	.3390	.4159	.4972	.5800	.6630	.7451	.8245
4.0	.7539	.5779	.5469	.5521	.5978	.6605	.7292	.7996	.8691	.9352
6.0	1.4259	.9779	.8549	.8128	.8084	.8425	.8905	.9435	.9968	1.0467
8.0	2.2993	1.4753	1.2252	1.1180	1.0450	1.0409	1.0619	1.0931	1.1267	1.1575
10.0	3.3633	2.0639	1.6531	1.4638	1.3048	1.2531	1.2414	1.2464	1.2570	1.2662
12.0	4.6050	2.7365	2.1335	1.8461	1.5846	1.4766	1.4265	1.4015	1.3862	1.3714
15.0	6.7667	3.8846	2.9394	2.4775	2.0340	1.8268	1.7098	1.6331	1.5741	1.5197
20.0	11.0142	6.0880	4.4530	3.6396	2.8308	2.4258	2.1769	2.0001	1.8581	1.7302
25.0	15.7780	8.5036	6.0765	4.8598	3.6325	3.0025	2.6050	2.3172	2.0848	1.8790
30.0	20.6859	10.9419	7.6818	6.0411	4.3747	3.5096	2.9583	2.5569	2.2337	1.9513
35.0	25.3461	13.2069	9.1389	7.0872	4.9956	3.9038	3.2052	2.6963	2.2887	1.9368
40.0	29.3753	15.1103	10.3252	7.9087	5.4402	4.1483	3.3207	2.7190	2.2400	1.8311
45.0	32.4245	16.4843	11.1339	8.4299	5.6645	4.2157	3.2881	2.6158	2.0842	1.6355
50.0	34.2040	17.1933	11.4814	8.5932	5.6381	4.0898	3.1001	2.3858	1.8251	1.3572
55.0	34.5032	17.1436	11.3131	8.3643	5.3468	3.7671	2.7597	2.0363	1.4732	1.0088
60.0	33.2061	16.2901	10.6078	7.7339	4.7936	3.2565	2.2797	1.5824	1.0448	.6077
65.0	30.2996	14.6396	9.3790	6.7186	3.9985	2.5795	1.6818	1.0460	.5616	.1745
70.0	25.8755	12.2508	7.6743	5.3604	2.9972	1.7684	.9959	.4545	.0486	-.2679
75.0	20.1247	9.2309	5.5725	3.7239	1.8391	.8643	.2575	-.1610	-.4668	-.6962
80.0	13.3252	5.7285	3.1786	1.8916	.5840	-.0856	-.4947	-.7680	-.9576	-1.0878
85.0	5.8240	1.9239	.6167	-.0408	-.7020	-1.0309	-1.2206	-1.3344	-1.3981	-1.4225

α, deg \ θ_{xy}, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	.8502	.9220	.9788	1.0112	1.0057	.9454	.8125	.5962	.3031
2.0	.8985	.9629	1.0110	1.0333	1.0163	.9435	.7981	.5707	.2702
4.0	.9946	1.0424	1.0718	1.0729	1.0323	.9345	.7645	.5164	.2029
6.0	1.0889	1.1182	1.1272	1.1059	1.0412	.9184	.7248	.4577	.1338
8.0	1.1803	1.1893	1.1765	1.1318	1.0426	.8952	.6792	.3952	.0636
10.0	1.2676	1.2545	1.2188	1.1501	1.0362	.8650	.6280	.3293	-.0072
12.0	1.3496	1.3131	1.2535	1.1603	1.0221	.8278	.5717	.2607	-.0779
15.0	1.4601	1.3866	1.2900	1.1601	.9863	.7598	.4783	.1538	-.1825
20.0	1.6027	1.4646	1.3058	1.1165	.8882	.6159	.3036	-.0299	-.3482
25.0	1.6816	1.4793	1.2614	1.0188	.7453	.4402	.1130	-.2120	-.4955
30.0	1.6871	1.4258	1.1560	.8700	.5640	.2414	-.0837	-.3829	-.6172
35.0	1.6140	1.3032	.9929	.6767	.3533	.0298	-.2759	-.5337	-.7074
40.0	1.4623	1.1153	.7790	.4480	.1239	-.1834	-.4536	-.6569	-.7625
45.0	1.2372	.8704	.5245	.1958	-.1120	-.3869	-.6076	-.7467	-.7810
50.0	.9484	.5801	.2424	-.0667	-.3420	-.5700	-.7302	-.7995	-.7641
55.0	.6102	.2592	-.0526	-.3258	-.5539	-.7235	-.8159	-.8143	-.7149
60.0	.2398	-.0754	-.3447	-.5676	-.7369	-.8399	-.8616	-.7923	-.6387
65.0	-.1433	-.4059	-.6186	-.7797	-.8819	-.9144	-.8668	-.7372	-.5427
70.0	-.5188	-.7151	-.8601	-.9515	-.9825	-.9448	-.8335	-.6549	-.4348
75.0	-.8669	-.9867	-1.0570	-1.0749	-1.0349	-.9318	-.7664	-.5527	-.3240
80.0	-1.1696	-1.2073	-1.2003	-1.1454	-1.0387	-.8788	-.6721	-.4394	-.2190
85.0	-1.4120	-1.3666	-1.2841	-1.1616	-.9967	-.7919	-.5590	-.3241	-.1280

TABLE III. - CONTINUED

(e) C_D

$\phi_1 = 0^o$; $\phi_2 = 360^o$; $\beta = 0^o$

α, deg \ θ_{xy}, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.0031	.0088	.0183	.0317	.0699	.1236	.1930	.2783	.3799	.4981
2.0	.0068	.0125	.0220	.0353	.0734	.1269	.1961	.2812	.3825	.5003
4.0	.0233	.0270	.0363	.0495	.0871	.1401	.2085	.2926	.3928	.5092
6.0	.0568	.0527	.0603	.0730	.1099	.1619	.2290	.3115	.4097	.5238
8.0	.1129	.0919	.0949	.1059	.1415	.1921	.2574	.3377	.4331	.5441
10.0	.1971	.1473	.1417	.1489	.1814	.2302	.2932	.3707	.4628	.5696
12.0	.3145	.2211	.2020	.2030	.2299	.2758	.3361	.4102	.4981	.6001
15.0	.5631	.3712	.3205	.3064	.3192	.3578	.4125	.4805	.5610	.6543
20.0	1.2032	.7407	.6012	.5435	.5131	.5293	.5682	.6219	.6873	.7628
25.0	2.1642	1.2752	.9940	.8655	.7634	.7416	.7545	.7868	.8318	.8858
30.0	3.4677	1.9814	1.5004	1.2714	1.0663	.9894	.9649	.9675	.9858	1.0138
35.0	5.1084	2.8521	2.1129	1.7532	1.4137	1.2644	1.1914	1.1561	1.1415	1.1386
40.0	7.0535	3.8668	2.8149	2.2967	1.7934	1.5561	1.4242	1.3437	1.2909	1.2531
45.0	9.2447	4.9926	3.5822	2.8819	2.1905	1.8520	1.6529	1.5214	1.4262	1.3509
50.0	11.6012	6.1862	4.3841	3.4848	2.5874	2.1385	1.8665	1.6804	1.5404	1.4263
55.0	14.0251	7.3964	5.1854	4.0783	2.9659	2.4019	2.0544	1.8123	1.6274	1.4750
60.0	16.4070	8.5677	5.9487	4.6341	3.3074	2.6290	2.2071	1.9104	1.6823	1.4940
65.0	18.6339	9.6437	6.6368	5.1251	3.5948	2.8083	2.3165	1.9693	1.7020	1.4820
70.0	20.5957	10.5707	7.2151	5.5262	3.8133	2.9304	2.3770	1.9859	1.6853	1.4391
75.0	22.1928	11.3014	7.6538	5.8168	3.9516	2.9889	2.3851	1.9590	1.6327	1.3673
80.0	23.3425	11.7977	7.9302	5.9816	4.0023	2.9806	2.3405	1.8900	1.5469	1.2700
85.0	23.9846	12.0336	8.0295	6.0119	3.9628	2.9059	2.2453	1.7823	1.4319	1.1519

α, deg \ θ_{xy}, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	.6331	.7847	.9523	1.1340	1.3255	1.5191	1.7022	1.8568	1.9617
2.0	.6349	.7861	.9531	1.1342	1.3251	1.5180	1.7005	1.8545	1.9591
4.0	.6421	.7914	.9564	1.1351	1.3234	1.5138	1.6937	1.8456	1.9487
6.0	.6541	.8003	.9618	1.1366	1.3207	1.5067	1.6825	1.8308	1.9315
8.0	.6706	.8125	.9691	1.1386	1.3169	1.4969	1.6670	1.8103	1.9075
10.0	.6914	.8279	.9784	1.1410	1.3120	1.4844	1.6471	1.7842	1.8771
12.0	.7162	.8462	.9893	1.1437	1.3059	1.4692	1.6231	1.7527	1.8405
15.0	.7602	.8785	1.0084	1.1482	1.2946	1.4416	1.5799	1.6959	1.7745
20.0	.8480	.9425	1.0455	1.1555	1.2697	1.3836	1.4898	1.5786	1.6383
25.0	.9468	1.0135	1.0850	1.1602	1.2369	1.3120	1.3809	1.4377	1.4755
30.0	1.0475	1.0840	1.1217	1.1592	1.1954	1.2288	1.2575	1.2799	1.2941
35.0	1.1417	1.1465	1.1498	1.1495	1.1449	1.1362	1.1246	1.1124	1.1029
40.0	1.2228	1.1945	1.1639	1.1277	1.0848	1.0366	.9870	.9423	.9106
45.0	1.2856	1.2237	1.1602	1.0913	1.0148	.9322	.8495	.7766	.7256
50.0	1.3259	1.2314	1.1371	1.0390	.9347	.8249	.7163	.6212	.5550
55.0	1.3409	1.2161	1.0943	.9715	.8454	.7167	.5907	.4810	.4048
60.0	1.3292	1.1777	1.0328	.8906	.7491	.6091	.4753	.3593	.2789
65.0	1.2908	1.1174	.9549	.7991	.6487	.5047	.3715	.2579	.1793
70.0	1.2272	1.0378	.8635	.7005	.5476	.4061	.2803	.1767	.1056
75.0	1.1414	.9422	.7626	.5985	.4491	.3159	.2026	.1142	.0557
80.0	1.0371	.8350	.6562	.4971	.3566	.2362	.1390	.0682	.0254
85.0	.9192	.7207	.5488	.3998	.2726	.1684	.0892	.0365	.0092

TABLE III. - CONTINUED

(e) C_D. Continued.

$\phi_1 = -90^\circ$; $\phi_2 = 90^\circ$; $\beta = 0^\circ$

θ_{xy}, deg / α, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.0007	.0043	.0116	.0228	.0567	.1061	.1714	.2528	.3507	.4655
2.0	.0004	.0026	.0081	.0172	.0468	.0919	.1529	.2301	.3240	.4351
4.0	.0002	.0014	.0046	.0104	.0322	.0689	.1214	.1901	.2756	.3788
6.0	.0001	.0010	.0032	.0073	.0232	.0524	.0966	.1567	.2337	.3284
8.0	.0001	.0007	.0024	.0055	.0179	.0409	.0775	.1293	.1977	.2836
10.0	.0001	.0006	.0019	.0044	.0144	.0331	.0633	.1074	.1672	.2444
12.0	.0001	.0005	.0015	.0036	.0120	.0276	.0527	.0900	.1418	.2102
15.0	.0000	.0004	.0012	.0028	.0093	.0216	.0414	.0706	.1119	.1679
20.0	.0000	.0002	.0008	.0019	.0064	.0150	.0289	.0494	.0781	.1171
25.0	.0000	.0002	.0006	.0013	.0045	.0106	.0206	.0353	.0559	.0837
30.0	.0000	.0001	.0004	.0009	.0032	.0075	.0146	.0252	.0399	.0598
35.0	.0000	.0001	.0003	.0007	.0022	.0053	.0103	.0177	.0281	.0422
40.0	.0000	.0001	.0002	.0005	.0015	.0036	.0070	.0121	.0193	.0290
45.0	.0000	.0000	.0001	.0003	.0010	.0024	.0047	.0080	.0128	.0192
50.0	.0000	.0000	.0001	.0002	.0006	.0015	.0029	.0051	.0081	.0122
55.0	.0000	.0000	.0000	.0001	.0004	.0009	.0017	.0030	.0048	.0072
60.0	.0000	.0000	.0000	.0001	.0002	.0005	.0010	.0017	.0026	.0040
65.0	.0000	.0000	.0000	.0000	.0001	.0002	.0005	.0008	.0013	.0019
70.0	.0000	.0000	.0000	.0000	.0000	.0001	.0002	.0003	.0005	.0008
75.0	-.0000	.0000	.0000	.0000	.0000	.0000	.0001	.0001	.0002	.0003
80.0	-.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0001
85.0	-.0000	.0000	-.0000	-.0000	.0000	.0000	.0000	.0000	.0000	.0000

θ_{xy}, deg / α, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	.5975	.7469	.9131	1.0945	1.2873	1.4841	1.6727	1.8352	1.9503
2.0	.5639	.7105	.8748	1.0553	1.2487	1.4481	1.6416	1.8115	1.9363
4.0	.5003	.6407	.8001	.9779	1.1713	1.3745	1.5765	1.7600	1.9033
6.0	.4419	.5750	.7284	.9020	1.0939	1.2992	1.5078	1.7033	1.8639
8.0	.3886	.5136	.6600	.8282	1.0171	1.2227	1.4361	1.6419	1.8184
10.0	.3403	.4568	.5952	.7568	.9412	1.1455	1.3621	1.5764	1.7671
12.0	.2971	.4045	.5343	.6882	.8668	1.0683	1.2862	1.5071	1.7105
15.0	.2413	.3346	.4504	.5912	.7591	.9535	1.1701	1.3976	1.6167
20.0	.1699	.2400	.3313	.4475	.5926	.7690	.9755	1.2049	1.4408
25.0	.1206	.1704	.2379	.3282	.4468	.5988	.7866	1.0071	1.2484
30.0	.0861	.1208	.1679	.2335	.3247	.4485	.6110	.8133	1.0486
35.0	.0607	.0850	.1171	.1619	.2271	.3218	.4546	.6315	.8506
40.0	.0417	.0584	.0803	.1099	.1531	.2201	.3219	.4683	.6630
45.0	.0277	.0387	.0532	.0725	.0998	.1431	.2151	.3288	.4930
50.0	.0175	.0245	.0336	.0458	.0626	.0884	.1344	.2158	.3462
55.0	.0104	.0146	.0200	.0272	.0371	.0518	.0777	.1302	.2263
60.0	.0057	.0080	.0110	.0149	.0202	.0281	.0413	.0705	.1346
65.0	.0028	.0039	.0053	.0073	.0099	.0137	.0199	.0332	.0702
70.0	.0012	.0016	.0022	.0030	.0041	.0056	.0082	.0132	.0301
75.0	.0004	.0005	.0007	.0010	.0013	.0018	.0026	.0041	.0094
80.0	.0001	.0001	.0001	.0002	.0003	.0004	.0005	.0008	.0017
85.0	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0001	.0001

$\phi_1 = 90^\circ$; $\phi_2 = 270^\circ$; $\beta = 0^\circ$

θ_{xy}, deg / α, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.0058	.0234	.0251	.0406	.0831	.1410	.2145	.3038	.4091	.5307
2.0	.0132	.0223	.0359	.0534	.1000	.1619	.2393	.3323	.4410	.5655
4.0	.0464	.0526	.0880	.0885	.1421	.2112	.2956	.3952	.5099	.6396
6.0	.1134	.1044	.1174	.1387	.1966	.2714	.3615	.4664	.5858	.7193
8.0	.2257	.1831	.1875	.2062	.2650	.3432	.4372	.5460	.6686	.8045
10.0	.3941	.2940	.2815	.2934	.3484	.4272	.5232	.6340	.7583	.8949
12.0	.6289	.4478	.4024	.4023	.4479	.5241	.6196	.7304	.8545	.9900
15.0	1.1361	.7421	.6398	.6101	.6290	.6940	.7836	.8903	1.0102	1.1407
20.0	2.4085	1.4812	1.2015	1.0851	1.0198	1.0436	1.1074	1.1945	1.2965	1.4084
25.0	4.2384	2.5503	1.9874	1.7297	1.5224	1.4726	1.4884	1.5382	1.6076	1.6880
30.0	6.9354	3.9628	3.0005	2.5418	2.1295	1.9712	1.9152	1.9098	1.9317	1.9677
35.0	10.2188	5.7040	4.2255	3.5057	2.8251	2.5236	2.3725	2.2944	2.2549	2.2350
40.0	14.1071	7.7535	5.6296	4.5929	3.5853	3.1087	2.8415	2.6753	2.5624	2.4773
45.0	18.4894	9.9852	7.1843	5.7636	4.3799	3.7016	3.3012	3.0348	2.8396	2.6825
50.0	23.2025	12.3723	8.7682	6.9694	5.1742	4.2756	3.7301	3.3556	3.0727	2.8404
55.0	28.0501	14.7928	10.3708	8.1564	5.9314	4.8029	4.1071	3.6216	3.2999	2.9827
60.0	32.8714	17.1554	11.8974	9.2682	6.6145	5.2576	4.4132	3.8191	3.3619	2.9840
65.0	37.2679	19.2874	13.2736	10.2501	7.1894	5.6164	4.6326	3.9378	3.4027	2.9620
70.0	41.1914	21.1414	14.4302	11.0524	7.6265	5.8607	4.7537	3.9714	3.3700	2.8774
75.0	44.3855	22.6027	15.3077	11.6335	7.9031	5.9777	4.7702	3.9179	3.2653	2.7344
80.0	46.6849	23.5953	15.8603	11.9632	8.0046	5.9612	4.6810	3.7800	3.0937	2.5400
85.0	47.9691	24.0671	16.0589	12.0238	7.9256	5.8119	4.4906	3.5646	2.8638	2.3038

θ_{xy}, deg / α, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	.6886	.8225	.9915	1.1734	1.3637	1.5541	1.7317	1.8783	1.9731
2.0	.7059	.8616	1.0315	1.2131	1.4014	1.5879	1.7594	1.8975	1.9819
4.0	.7839	.9422	1.1127	1.2923	1.4755	1.6531	1.8110	1.9312	1.9941
6.0	.8863	1.0256	1.1951	1.3711	1.5475	1.7143	1.8573	1.9583	1.9990
8.0	.9526	1.1113	1.2782	1.4489	1.6167	1.7712	1.8978	1.9787	1.9967
10.0	1.0424	1.1990	1.3615	1.5252	1.6827	1.8233	1.9321	1.9920	1.9872
12.0	1.1353	1.2879	1.4443	1.5993	1.7449	1.8701	1.9601	1.9983	1.9705
15.0	1.2792	1.4325	1.5865	1.7052	1.8302	1.9298	1.9896	1.9943	1.9324
20.0	1.5261	1.6850	1.7598	1.8635	1.9468	1.9982	2.0042	1.9523	1.8358
25.0	1.7730	1.8586	1.9322	1.9922	2.0269	2.0251	1.9752	1.8682	1.7027
30.0	2.0088	2.0473	2.0755	2.0850	2.0662	2.0090	1.9041	1.7464	1.5397
35.0	2.2226	2.2080	2.1824	2.1370	2.0627	1.9507	1.7945	1.5932	1.3552
40.0	2.4089	2.3306	2.2475	2.1456	2.0164	1.8531	1.6521	1.4163	1.1582
45.0	2.5485	2.4087	2.2673	2.1101	1.9297	1.7212	1.4839	1.2244	.9581
50.0	2.6343	2.4383	2.2406	2.0322	1.8068	1.5614	1.2981	1.0266	.7638
55.0	2.6714	2.4176	2.1686	1.9158	1.6538	1.3816	1.1037	.8318	.5834
60.0	2.6527	2.3473	2.0547	1.7663	1.4779	1.1901	.9093	.6481	.4233
65.0	2.5788	2.2309	1.9044	1.5910	1.2875	.9957	.7232	.4825	.2883
70.0	2.4533	2.0740	1.7248	1.3980	1.0910	.8066	.5524	.3402	.1811
75.0	2.2823	1.8839	1.5244	1.1961	.8970	.6300	.4026	.2242	.1019
80.0	2.0741	1.6698	1.3123	.9939	.7129	.4720	.2774	.1356	.0490
85.0	1.8385	1.4414	1.0976	.7995	.5453	.3368	.1784	.0732	.0184

TABLE III.- CONTINUED

(e) C_D. Continued.

$\beta_1 = 105^\circ$; $\beta_2 = 255^\circ$; $\beta = 0^\circ$

α, deg \ θ_{xy}, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.0057	.0120	.0210	.0328	.0649	.1089	.1658	.2368	.3235	.4278
2.0	.0154	.0229	.0339	.0479	.0846	.1332	.1946	.2700	.3610	.4691
4.0	.0591	.0614	.0739	.0909	.1351	.1919	.2615	.3449	.4434	.5584
6.0	.1489	.1289	.1370	.1540	.2025	.2654	.3417	.4316	.5362	.6565
8.0	.3009	.2832	.2282	.2408	.2887	.3550	.4357	.5304	.6393	.7632
10.0	.5303	.3816	.3522	.3544	.3955	.4615	.5441	.6414	.7527	.8782
12.0	.8512	.5806	.5130	.4978	.5245	.5858	.6673	.7646	.8761	1.0010
15.0	1.5330	.9875	.8313	.7739	.7620	.8069	.8800	.9720	1.0790	1.1989
20.0	3.2947	1.9954	1.5913	1.4122	1.2818	1.2693	1.3077	1.3746	1.4602	1.5590
25.0	5.9463	3.4608	2.6624	2.2865	1.9589	1.8455	1.8197	1.8388	1.8842	1.9452
30.0	9.5495	5.4035	4.0503	3.3955	2.7845	2.5233	2.4017	2.3494	2.3350	2.3417
35.0	14.0910	7.8055	5.7353	4.7186	3.7377	3.2815	3.0332	2.8861	2.7936	2.7306
40.0	19.4813	10.6111	7.6732	6.2175	4.7864	4.0919	3.6884	3.4260	3.2392	3.0936
45.0	25.6594	13.7299	9.7975	7.8381	5.8892	4.9204	4.3384	3.9440	3.6506	3.4129
50.0	32.1020	17.0425	12.0238	9.5138	6.9984	5.7295	4.9526	4.4151	4.0072	3.6724
55.0	38.8375	20.4074	14.2547	11.1697	8.0626	6.4804	5.5011	4.8158	4.2911	3.8586
60.0	45.4629	23.6705	16.3864	12.7275	9.0301	7.1361	5.9561	5.1256	4.4875	3.9619
65.0	51.8634	26.6748	18.3150	14.1107	9.8526	7.6632	6.2942	5.3285	4.5862	3.9767
70.0	57.1328	29.2707	19.9438	15.2491	10.4878	8.0344	6.4979	5.4136	4.5820	3.9025
75.0	61.5937	31.3254	21.1889	16.0841	10.9027	8.2303	6.5563	5.3766	4.4750	3.7429
80.0	64.8152	32.7322	21.9855	16.5720	11.0754	8.2404	6.4664	5.2195	4.2708	3.5064
85.0	66.8285	33.4173	22.2917	16.6869	10.9968	8.0643	6.2329	4.9503	3.9803	3.2051

α, deg \ θ_{xy}, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	.5515	.6963	.8632	1.0514	1.2571	1.4714	1.6779	1.8528	1.9678
2.0	.5962	.7437	.9122	1.1006	1.3046	1.5146	1.7138	1.8781	1.9798
4.0	.6912	.8429	1.0133	1.2007	1.3995	1.5992	1.7822	1.9242	1.9985
6.0	.7934	.9475	1.1180	1.3022	1.4938	1.6811	1.8459	1.9639	2.0100
8.0	.9024	1.0570	1.2256	1.4045	1.5867	1.7595	1.9042	1.9969	2.0142
10.0	1.0178	1.1709	1.3354	1.5070	1.6775	1.8338	1.9567	2.0230	2.0110
12.0	1.1389	1.2884	1.4467	1.6087	1.7656	1.9035	2.0031	2.0419	2.0005
15.0	1.3300	1.4699	1.6148	1.7585	1.8911	1.9979	2.0600	2.0564	1.9713
20.0	1.6668	1.7794	1.8912	1.9941	2.0769	2.1245	2.1191	2.0434	1.8881
25.0	2.0147	2.0860	2.1516	2.2022	2.2256	2.2071	2.1309	1.9845	1.7658
30.0	2.3582	2.3753	2.3835	2.3724	2.3295	2.2412	2.0947	1.8830	1.6107
35.0	2.6812	2.6331	2.5751	2.4959	2.3832	2.2251	2.0126	1.7440	1.4309
40.0	2.9679	2.8466	2.7167	2.5663	2.3839	2.1597	1.8887	1.5748	1.2351
45.0	3.2040	3.0048	2.8010	2.5800	2.3315	2.0484	1.7296	1.3840	1.0329
50.0	3.3772	3.0996	2.8234	2.5361	2.2288	1.8969	1.5432	1.1808	.8336
55.0	3.4786	3.1259	2.7828	2.4371	2.0811	1.7130	1.3389	.9749	.6456
60.0	3.5029	3.0823	2.6813	2.2879	1.8960	1.5059	1.1266	.7755	.4761
65.0	3.4488	2.9712	2.5243	2.0965	1.6829	1.2859	.9159	.5906	.3308
70.0	3.3190	2.7982	2.3198	1.8723	1.4522	1.0631	.7159	.4272	.2129
75.0	3.1205	2.5725	2.0781	1.6266	1.2149	.8474	.5344	.2898	.1237
80.0	2.8633	2.3053	1.8114	1.3711	.9817	.6475	.3773	.1810	.0620
85.0	2.5607	2.0101	1.5325	1.1174	.7624	.4706	.2486	.1011	.0246

$\beta_1 = 120^\circ$; $\beta_2 = 240^\circ$; $\beta = 0^\circ$

α, deg \ θ_{xy}, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.0056	.0111	.0189	.0290	.0563	.0938	.1426	.2043	.2806	.3742
2.0	.0162	.0225	.0321	.0443	.0761	.1181	.1715	.2376	.3184	.4161
4.0	.0655	.0645	.0748	.0895	.1284	.1783	.2398	.3141	.4028	.5079
6.0	.1688	.1400	.1440	.1577	.1998	.2554	.3233	.4042	.4993	.6103
8.0	.3454	.2585	.2458	.2532	.2928	.3508	.4229	.5084	.6081	.7232
10.0	.6135	.4286	.3857	.3799	.4097	.4661	.5393	.6271	.7292	.8463
12.0	.9905	.6585	.5689	.5414	.5525	.6021	.6731	.7604	.8626	.9793
15.0	1.7941	1.1514	.9346	.8554	.8185	.8470	.9070	.9876	1.0847	1.1963
20.0	3.8793	2.3115	1.8162	1.5898	1.4089	1.3673	1.3853	1.4364	1.5094	1.5984
25.0	7.0279	4.0574	3.0687	2.6060	2.1879	2.0256	1.9677	1.9636	1.9912	2.0390
30.0	11.3162	6.3353	4.7014	3.9044	3.1475	2.8095	2.6922	2.5526	2.5129	2.5006
35.0	16.7307	9.1859	6.6932	5.4631	4.2647	3.6959	3.3771	3.1813	3.0530	2.9628
40.0	23.1663	12.5286	8.9930	7.2382	5.5032	4.6526	4.1522	3.8232	3.5875	3.4044
45.0	30.4322	16.2453	11.5234	9.1666	6.8151	5.6401	4.9308	4.4490	4.0911	3.8036
50.0	38.2627	20.2063	14.1845	11.1699	8.1440	6.6143	5.6767	5.0287	4.5392	4.1406
55.0	46.3832	24.2394	16.8607	13.1593	9.4291	7.5289	6.3536	5.5337	4.9091	4.3980
60.0	54.2815	28.1602	19.4279	15.0410	10.6081	8.3389	6.9277	5.9382	5.1816	4.5624
65.0	61.7302	31.7806	21.7613	16.7229	11.6223	9.0033	7.3695	6.2211	5.3426	4.6250
70.0	68.3121	34.9204	23.7440	18.1200	12.4199	9.4877	7.6559	6.3677	5.3836	4.5827
75.0	73.6931	37.4193	25.2743	19.1603	12.9593	9.7668	7.7718	6.3702	5.3023	4.4377
80.0	77.5951	39.1477	26.2725	19.7893	13.2122	9.8258	7.7112	6.2285	5.1031	4.1975
85.0	79.8136	40.0147	26.6858	19.9739	13.1652	9.6616	7.4772	5.9501	4.7964	3.8748

α, deg \ θ_{xy}, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	.4875	.6236	.7848	.9722	1.1836	1.4107	1.6361	1.8317	1.9628
2.0	.5333	.6726	.8362	1.0245	1.2347	1.4579	1.6759	1.8602	1.9766
4.0	.6317	.7763	.9431	1.1316	1.3379	1.5513	1.7526	1.9128	1.9989
6.0	.7390	.8871	1.0551	1.2416	1.4415	1.6428	1.8251	1.9593	2.0140
8.0	.8550	1.0044	1.1715	1.3538	1.5448	1.7315	1.8927	1.9993	2.0218
10.0	.9791	1.1278	1.2917	1.4673	1.6471	1.8169	1.9549	2.0325	2.0222
12.0	1.1108	1.2565	1.4148	1.5814	1.7476	1.8983	2.0111	2.0585	2.0153
15.0	1.3212	1.4579	1.6034	1.7519	1.8932	2.0113	2.0834	2.0836	1.9912
20.0	1.6994	1.8085	1.9203	2.0269	2.1160	2.1705	2.1683	2.0877	1.9158
25.0	2.0991	2.1647	2.2280	2.2791	2.3044	2.2863	2.2052	2.0445	1.8001
30.0	2.5030	2.5101	2.5117	2.4960	2.4486	2.3528	2.1921	1.9563	1.6501
35.0	2.8926	2.8283	2.7573	2.6665	2.5412	2.3664	2.1297	1.8277	1.4734
40.0	3.2489	3.1033	2.9523	2.7817	2.5772	2.3263	2.0212	1.6653	1.2790
45.0	3.5543	3.3211	3.0865	2.8355	2.5549	2.2347	1.8724	1.4776	1.0763
50.0	3.7932	3.4705	3.1530	2.8252	2.4752	2.0964	1.6909	1.2737	.8746
55.0	3.9530	3.5435	3.1481	2.7512	2.3426	1.9187	1.4859	1.0636	.6828
60.0	4.0254	3.5364	3.0723	2.6176	2.1638	1.7105	1.2676	.8568	.5084
65.0	4.0066	3.4495	2.9293	2.4312	1.9481	1.4823	1.0462	.6622	.3574
70.0	3.8976	3.2874	2.7269	2.2017	1.7064	1.2452	.8316	.4872	.2335
75.0	3.7041	3.0585	2.4754	1.9407	1.4505	1.0100	.6328	.3374	.1384
80.0	3.4362	2.7748	2.1876	1.6612	1.1925	.7869	.4569	.2162	.0714
85.0	3.1078	2.4506	1.8777	1.3764	.9437	.5847	.3090	.1248	.0296

TABLE III.- CONTINUED

(e) C_D. Concluded.

$\beta_1 = 135^\circ$; $\beta_2 = 225^\circ$; $\beta = 0^\circ$

θ_{xy}, deg / α, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.00056	.00107	.00180	.00275	.00531	.00881	.01338	.01917	.02638	.03526
2.0	.00165	.00223	.00314	.00429	.00728	.01123	.01625	.02249	.03014	.03945
4.0	.00682	.00657	.00750	.00888	.01254	.01727	.02309	.03014	.03859	.04866
6.0	.01777	.01447	.01467	.01590	.01982	.02508	.03153	.03924	.04833	.05900
8.0	.03657	.02694	.02530	.02581	.02939	.03484	.04167	.04983	.05938	.07048
10.0	.06521	.04494	.04000	.03904	.04149	.04669	.05360	.06196	.07176	.08306
12.0	.10555	.06935	.05933	.05598	.05635	.06077	.06739	.07567	.08545	.09672
15.0	.19170	.11972	.09605	.08908	.08417	.08625	.09164	.09917	.10839	.11914
20.0	.41567	.24581	.19183	.16690	.14634	.14078	.14160	.14595	.15264	.16105
25.0	.75439	.43076	.33558	.27507	.23887	.21827	.20992	.20938	.21329	.22042
30.0	1.21628	.67749	.52043	.41380	.33100	.29348	.27409	.26378	.25858	.25643
35.0	1.79983	.98405	.74121	.58082	.45040	.38805	.35277	.33085	.31630	.30599
40.0	2.49398	1.34359	.96154	.74150	.58323	.49060	.43589	.39979	.37388	.35381
45.0	3.27817	1.74473	1.23413	.97912	.72441	.59693	.51986	.46749	.42865	.39757
50.0	4.12375	2.17227	1.52129	1.19530	.86792	.70232	.60082	.53074	.47793	.43510
55.0	4.99575	2.60807	1.81057	1.41046	1.00719	.80179	.67484	.58641	.51923	.46446
60.0	5.85504	3.03226	2.08858	1.61451	1.13552	.89046	.73823	.63167	.55043	.48414
65.0	6.66086	3.42448	2.34184	1.79746	1.24653	.96385	.78774	.66418	.56990	.49310
70.0	7.37349	3.76625	2.55766	1.95009	1.33454	1.01817	.82079	.68224	.57661	.49085
75.0	7.95678	4.03717	2.72498	2.06453	1.39497	1.05057	.83565	.68489	.57021	.48753
80.0	8.38057	4.22613	2.83508	2.13479	1.42466	1.05936	.83153	.67198	.55104	.47384
85.0	8.62266	4.32221	2.88217	2.15718	1.42204	1.04406	.80864	.64421	.52010	.44101

θ_{xy}, deg / α, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	.04612	.05927	.07502	.09358	1.11483	1.13802	1.16142	1.18202	1.19599
2.0	.05070	.06420	.08022	.09890	1.12007	1.14290	1.16556	1.18501	1.19745
4.0	.06060	.07447	.09107	1.10985	1.13068	1.15259	1.17359	1.19057	1.19985
6.0	.07147	.08592	1.00250	1.12114	1.14140	1.16213	1.18122	1.19553	2.00153
8.0	.08327	.09791	1.11445	1.13272	1.15214	1.17144	1.18839	1.19985	2.00249
10.0	.09597	1.11058	1.12684	1.14449	1.16283	1.18045	1.19504	2.00349	2.00270
12.0	1.10952	1.12386	1.13960	1.15639	1.17339	1.18909	2.00112	2.00643	2.00218
15.0	1.13130	1.14476	1.15926	1.17427	1.18881	2.00121	2.00905	2.00945	2.00001
20.0	1.17079	1.18148	1.19263	2.00345	2.01272	2.01861	2.01876	2.01069	1.99285
25.0	2.21295	2.21922	2.22545	2.23063	2.23336	2.23177	2.22367	2.20714	1.18161
30.0	2.25601	2.25826	2.25615	2.25447	2.24969	2.23999	2.22350	1.99899	1.16686
35.0	2.29799	2.29085	2.28328	2.27375	2.26084	2.24283	2.21827	1.18667	1.14936
40.0	2.33691	2.32127	2.30531	2.28749	2.26625	2.24016	2.20826	1.17082	1.13000
45.0	2.37081	2.34599	2.32125	2.29495	2.26562	2.23211	1.19400	1.15225	1.00972
50.0	2.39798	2.36372	2.33021	2.29575	2.25898	2.21910	1.17621	1.13190	.89946
55.0	2.41700	2.37353	2.33172	2.28983	2.24669	2.20182	1.15581	1.10750	.77011
60.0	2.42688	2.37490	2.32569	2.27753	2.22939	1.18115	1.13381	.88977	.65244
65.0	2.42709	2.36777	2.31246	2.25947	2.20798	1.15814	1.11127	.86988	.53707
70.0	2.41763	2.35251	2.29271	2.23660	1.18354	1.13391	.88920	.85185	.42439
75.0	2.39899	2.32991	2.26747	2.20091	1.15729	1.10960	.86854	.83628	.31460
80.0	2.37215	2.30116	2.23803	1.88126	1.13048	.88627	.85007	.82357	.20763
85.0	2.33851	2.26773	2.20587	1.85150	1.10431	.86488	.83436	.81385	.10324

$\beta_1 = 150^\circ$; $\beta_2 = 210^\circ$; $\beta = 0^\circ$

θ_{xy}, deg / α, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.0056	.0105	.0177	.0269	.0517	.0857	.1301	.1864	.2566	.3433
2.0	.0166	.0222	.0311	.0423	.0713	.1098	.1586	.2194	.2940	.3851
4.0	.0695	.0662	.0751	.0885	.1241	.1702	.2270	.2959	.3785	.4772
6.0	.1818	.1468	.1479	.1595	.1975	.2488	.3118	.3871	.4762	.5810
8.0	.3752	.2744	.2563	.2603	.2944	.3472	.4139	.4937	.5874	.6964
10.0	.6701	.4590	.4065	.3951	.4172	.4672	.5344	.6162	.7122	.8233
12.0	1.0858	.7096	.6044	.5681	.5683	.6101	.6741	.7548	.8506	.9615
15.0	1.9745	1.2276	1.0016	.9069	.8521	.8693	.9204	.9932	1.0832	1.1887
20.0	4.2870	2.5264	1.9655	1.7053	1.4881	1.4260	1.4296	1.4695	1.5335	1.6153
25.0	7.7867	4.4339	3.3428	2.8177	2.3348	2.1376	2.0568	2.0361	2.0511	2.0892
30.0	12.5609	6.9809	5.1456	4.2465	3.3849	2.9920	2.7870	2.6761	2.6183	2.5924
35.0	18.5962	10.1479	7.3520	5.9689	4.6147	3.9653	3.5964	3.3661	3.2125	3.1034
40.0	25.7770	13.8644	9.9070	7.9377	5.9851	5.0229	4.4538	4.0776	3.8076	3.5986
45.0	33.8914	18.0133	12.7253	10.0837	7.4439	6.1219	5.3222	4.7787	4.3760	4.0542
50.0	42.6434	22.4374	15.6964	12.3203	8.9291	7.2134	6.1618	5.4362	4.8899	4.4477
55.0	51.6711	26.9494	18.6918	14.5488	10.3729	8.2461	6.9321	6.0175	5.3235	4.7587
60.0	60.5696	31.3435	21.5730	16.6647	11.7058	9.1694	7.5946	6.4932	5.6545	4.9713
65.0	68.9170	35.4092	24.2003	18.5646	12.8617	9.9366	8.1154	6.8388	5.8657	5.0741
70.0	76.3017	38.9442	26.4422	20.1526	13.7814	10.5082	8.4675	7.0361	5.9460	5.0618
75.0	82.3493	41.7685	28.1838	21.3469	14.4173	10.8544	8.6323	7.0747	5.8910	4.9351
80.0	86.7472	43.7353	29.3344	22.0852	14.7359	10.9568	8.6011	6.9526	5.7037	4.7005
85.0	89.2650	44.7415	29.8334	22.3286	14.7204	10.8100	8.3756	6.6761	5.3940	4.3705

θ_{xy}, deg / α, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	.4497	.5790	.7347	.9192	1.1318	1.3657	1.6035	1.8145	1.9584
2.0	.4954	.6283	.7868	.9727	1.1848	1.4152	1.6456	1.8450	1.9734
4.0	.5946	.7333	.8959	1.0831	1.2921	1.5135	1.7275	1.9020	1.9982
6.0	.7037	.8465	1.0111	1.1972	1.4007	1.6106	1.8055	1.9530	2.0159
8.0	.8225	.9674	1.1318	1.3144	1.5099	1.7056	1.8791	1.9977	2.0262
10.0	.9507	1.0954	1.2572	1.4340	1.6188	1.7979	1.9476	2.0357	2.0292
12.0	1.0878	1.2299	1.3868	1.5550	1.7267	1.8866	2.0104	2.0666	2.0247
15.0	1.3087	1.4422	1.5868	1.7375	1.8846	2.0114	2.0930	2.0992	2.0042
20.0	1.7109	1.8167	1.9278	2.0367	2.1310	2.1923	2.1959	2.1155	1.9345
25.0	2.1423	2.2035	2.2652	2.3174	2.3458	2.3311	2.2506	2.0837	1.8235
30.0	2.5850	2.5853	2.5830	2.5657	2.5179	2.4208	2.2545	2.0054	1.6772
35.0	3.0188	2.9440	2.8655	2.7690	2.6385	2.4544	2.2072	1.8849	1.5031
40.0	3.4232	3.2619	3.0984	2.9169	2.7013	2.4362	2.1113	1.7284	1.3099
45.0	3.7781	3.5230	3.2698	3.0015	2.7028	2.3612	1.9717	1.5439	1.1071
50.0	4.0654	3.7137	3.3706	3.0185	2.6431	2.2354	1.7959	1.3407	.9041
55.0	4.2703	3.8240	3.3956	2.9669	2.5253	2.0653	1.5927	1.1286	.7098
60.0	4.3821	3.8482	3.3433	2.8494	2.3556	1.8598	1.3722	.9175	.5321
65.0	4.3948	3.7849	3.2167	2.6723	2.1428	1.6292	1.1451	.7167	.3771
70.0	4.3077	3.6375	3.0223	2.4447	1.8977	1.3849	.9217	.5339	.2490
75.0	4.1255	3.4138	2.7702	2.1783	1.6326	1.1383	.7116	.3755	.1497
80.0	3.8578	3.1254	2.4735	1.8865	1.3601	.9005	.5228	.2455	.0788
85.0	3.5184	2.7870	2.1470	1.5834	1.0927	.6811	.3613	.1456	.0338

TABLE III.- CONTINUED

(f) L/D

$\phi_1 = 0^\circ$; $\phi_2 = 360^\circ$; $\beta = 0^\circ$

α, deg \ θ_{xy}, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	14.8864	5.2387	2.5025	1.4342	.6310	.3415	.2057	.1315	.0864	.0569
2.0	14.0068	7.4135	4.1770	2.5743	1.2007	.6641	.4043	.2599	.1714	.1132
4.0	9.8420	6.9678	5.0204	3.6469	2.0089	1.1956	.7558	.4962	.3316	.2210
6.0	7.3755	5.8025	4.6055	3.6792	2.3640	1.5358	1.0213	.6918	.4717	.3186
8.0	5.8601	4.8702	4.0692	3.4122	2.4146	1.7011	1.1939	.8383	.5859	.4026
10.0	4.8449	4.1637	3.5912	3.1040	2.3263	1.7409	1.2851	.9362	.6720	.4710
12.0	4.1183	3.6201	3.1900	2.8148	2.1941	1.7063	1.3139	.9912	.7310	.5231
15.0	3.3471	3.0094	2.7097	2.4413	1.9804	1.6002	1.2825	1.0114	.7750	.5719
20.0	2.5230	2.3195	2.1334	1.9620	1.6560	1.3898	1.1559	.9481	.7611	.5881
25.0	1.9959	1.8582	1.7298	1.6095	1.3891	1.1908	1.0105	.8450	.6916	.5474
30.0	1.6250	1.5244	1.4294	1.3391	1.1706	1.0154	.8707	.7345	.6052	.4809
35.0	1.3464	1.2686	1.1944	1.1232	.9884	.8619	.7418	.6265	.5148	.4053
40.0	1.1263	1.0636	1.0032	.9448	.8331	.7265	.6238	.5236	.4249	.3266
45.0	.9457	.8933	.8426	.7931	.6976	.6053	.5152	.4262	.3372	.2472
50.0	.7927	.7477	.7037	.6608	.5770	.4951	.4143	.3335	.2517	.1678
55.0	.6595	.6198	.5809	.5426	.4675	.3933	.3193	.2446	.1680	.0886
60.0	.5409	.5051	.4699	.4351	.3663	.2978	.2288	.1584	.0856	.0091
65.0	.4329	.4001	.3675	.3353	.2711	.2068	.1413	.0739	.0035	-.0712
70.0	.3329	.3021	.2716	.2411	.1803	.1187	.0557	-.0099	-.0791	-.1533
75.0	.2385	.2092	.1800	.1508	.0922	.0324	-.0294	-.0942	-.1632	-.2380
80.0	.1479	.1196	.0913	.0629	.0054	-.0536	-.1151	-.1801	-.2500	-.3266
85.0	.0597	.0318	.0039	-.0242	-.0813	-.1405	-.2025	-.2688	-.3407	-.4204

α, deg \ θ_{xy}, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	.0366	.0219	.0109	.0026	-.0039	-.0089	-.0127	-.0153	-.0169
2.0	.0728	.0436	.0218	.0051	-.0078	-.0178	-.0253	-.0307	-.0339
4.0	.1430	.0860	.0431	.0101	-.0156	-.0356	-.0507	-.0614	-.0678
6.0	.2082	.1260	.0633	.0146	-.0236	-.0534	-.0761	-.0922	-.1019
8.0	.2663	.1626	.0820	.0186	-.0317	-.0713	-.1016	-.1232	-.1362
10.0	.3160	.1948	.0987	.0218	-.0400	-.0892	-.1271	-.1543	-.1708
12.0	.3565	.2222	.1131	.0241	-.0486	-.1072	-.1528	-.1857	-.2058
15.0	.3994	.2533	.1298	.0255	-.0621	-.1342	-.1915	-.2335	-.2592
20.0	.4266	.2781	.1430	.0213	-.0866	-.1799	-.2568	-.3150	-.3515
25.0	.4087	.2716	.1373	.0079	-.1145	-.2264	-.3235	-.3999	-.4492
30.0	.3598	.2388	.1135	-.0159	-.1466	-.2743	-.3918	-.4891	-.5543
35.0	.2966	.1868	.0729	-.0507	-.1843	-.3243	-.4622	-.5837	-.6691
40.0	.2273	.1254	.0186	-.0971	-.2289	-.3773	-.5352	-.6849	-.7969
45.0	.1549	.0587	-.0435	-.1552	-.2825	-.4351	-.6116	-.7942	-.9418
50.0	.0807	-.0115	-.1110	-.2211	-.3472	-.5002	-.6927	-.9130	-1.1093
55.0	.0050	-.0848	-.1830	-.2934	-.4215	-.5769	-.7810	-1.0432	-1.3072
60.0	-.0724	-.1610	-.2595	-.3719	-.5044	-.6675	-.8819	-1.1873	-1.5465
65.0	-.1519	-.2408	-.3409	-.4571	-.5966	-.7716	-1.0044	-1.3502	-1.8424
70.0	-.2343	-.3248	-.4283	-.5503	-.6998	-.8914	-1.1529	-1.5456	-2.2157
75.0	-.3207	-.4142	-.5228	-.6532	-.8163	-1.0308	-1.3331	-1.8035	-2.6953
80.0	-.4122	-.5104	-.6264	-.7682	-.9497	-1.1957	-1.5561	-2.1494	-3.3519
85.0	-.5106	-.6155	-.7415	-.8989	-1.1054	-1.3951	-1.8406	-2.6321	-4.4744

TABLE III.- CONTINUED

(f) L/D. Continued.

$\beta_1 = -90^\circ$; $\beta_2 = 90^\circ$; $\beta = 0^\circ$

θ_{xy}, deg / α, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	-15.9113	-10.5913	-7.3198	-5.5354	-3.6903	-2.7486	-2.1745	-1.7844	-1.4985	-1.2766
2.0	-8.7288	-7.9940	-6.6515	-5.3188	-3.6675	-2.7610	-2.1958	-1.8081	-1.5226	-1.3004
4.0	-4.7206	-4.4295	-4.1716	-4.0740	-3.3887	-2.7029	-2.2037	-1.8397	-1.5634	-1.3448
6.0	-3.2677	-3.1584	-3.0256	-2.9044	-2.8017	-2.5085	-2.1515	-1.8433	-1.5910	-1.3831
8.0	-2.5402	-2.4896	-2.4202	-2.3458	-2.2251	-2.1916	-2.0293	-1.8114	-1.6010	-1.4130
10.0	-2.1155	-2.0886	-2.0489	-2.0030	-1.9126	-1.8598	-1.8464	-1.7401	-1.5894	-1.4321
12.0	-1.8461	-1.8298	-1.8054	-1.7757	-1.7116	-1.6574	-1.6449	-1.6336	-1.5539	-1.4379
15.0	-1.5970	-1.5899	-1.5767	-1.5600	-1.5208	-1.4819	-1.4521	-1.4512	-1.4604	-1.4183
20.0	-1.4033	-1.3964	-1.3904	-1.3828	-1.3636	-1.3421	-1.3218	-1.3061	-1.3009	-1.3240
25.0	-1.3413	-1.3347	-1.3311	-1.3269	-1.3164	-1.3038	-1.2909	-1.2792	-1.2709	-1.2693
30.0	-1.3340	-1.3344	-1.3340	-1.3416	-1.3352	-1.3273	-1.3188	-1.3107	-1.3040	-1.3001
35.0	-1.4302	-1.4098	-1.4079	-1.4060	-1.4020	-1.3968	-1.3911	-1.3854	-1.3803	-1.3766
40.0	-1.5254	-1.5200	-1.5160	-1.5137	-1.5109	-1.5074	-1.5033	-1.4992	-1.4954	-1.4924
45.0	-1.8833	-1.6569	-1.6656	-1.6647	-1.6632	-1.6606	-1.6577	-1.6546	-1.6518	-1.6494
50.0	-1.6923	-1.8687	-1.8745	-1.8669	-1.8662	-1.8643	-1.8622	-1.8599	-1.8577	-1.8559
55.0	-2.8333	-2.1008	-2.1372	-2.1343	-2.1352	-2.1343	-2.1328	-2.1311	-2.1294	-2.1280
60.0	-1.5000	-2.5556	-2.5327	-2.5064	-2.5013	-2.4992	-2.4982	-2.4970	-2.4957	-2.4946
65.0	-3.0000	-2.8485	-3.0286	-3.0200	-3.0187	-3.0126	-3.0120	-3.0112	-3.0101	-3.0093
70.0	.0000	-4.1667	-3.8663	-3.8058	-3.7953	-3.7825	-3.7831	-3.7823	-3.7813	-3.7805
75.0	1.0000	-5.3125	-5.0714	-5.0833	-5.0572	-5.0653	-5.0651	-5.0674	-5.0628	-5.0633
80.0	.2500	-3.5000	-21.8750	-7.1786	-7.5056	-7.5912	-7.6156	-7.6212	-7.6164	-7.6130
85.0	.1563	-.5000	1.2083	2.6500	-43.1250	-14.4643	-17.1957	-15.5625	-15.3521	-15.0321

θ_{xy}, deg / α, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	-1.0961	-.9430	-.8083	-.6857	-.5704	-.4590	-.3492	-.2392	-.1286
2.0	-1.1193	-.9656	-.8301	-.7066	-.5905	-.4784	-.3678	-.2573	-.1463
4.0	-1.1646	-1.0106	-.8742	-.7494	-.6317	-.5180	-.4059	-.2940	-.1819
6.0	-1.2076	-1.0552	-.9188	-.7931	-.6741	-.5587	-.4449	-.3314	-.2180
8.0	-1.2471	-1.0990	-.9640	-.8380	-.7178	-.6007	-.4850	-.3696	-.2546
10.0	-1.2818	-1.1411	-1.0093	-.8839	-.7628	-.6441	-.5263	-.4088	-.2919
12.0	-1.3100	-1.1809	-1.0544	-.9308	-.8093	-.6889	-.5689	-.4491	-.3300
15.0	-1.3368	-1.2340	-1.1208	-1.0027	-.8818	-.7593	-.6357	-.5118	-.3887
20.0	-1.3319	-1.2957	-1.2228	-1.1247	-1.0105	-.8862	-.7561	-.6238	-.4922
25.0	-1.2871	-1.3154	-1.3035	-1.2445	-1.1483	-1.0269	-.8907	-.7479	-.6049
30.0	-1.3016	-1.3175	-1.3546	-1.3528	-1.2925	-1.1835	-1.0432	-.8880	-.7300
35.0	-1.3757	-1.3800	-1.3980	-1.4411	-1.4366	-1.3570	-1.2189	-1.0495	-.8718
40.0	-1.4910	-1.4924	-1.4995	-1.5234	-1.5713	-1.5456	-1.4233	-1.2399	-1.0364
45.0	-1.6480	-1.6484	-1.6520	-1.6626	-1.6991	-1.7422	-1.6625	-1.4703	-1.2330
50.0	-1.8547	-1.8547	-1.8567	-1.8628	-1.8788	-1.9381	-1.9394	-1.7560	-1.4756
55.0	-2.1270	-2.1268	-2.1280	-2.1319	-2.1415	-2.1685	-2.2481	-2.1193	-1.7868
60.0	-2.4938	-2.4936	-2.4944	-2.4969	-2.5032	-2.5187	-2.5822	-2.5870	-2.2061
65.0	-3.0087	-3.0085	-3.0090	-3.0108	-3.0150	-3.0250	-3.0539	-3.1768	-2.8071
70.0	-3.7803	-3.7800	-3.7803	-3.7815	-3.7844	-3.7911	-3.8084	-3.8920	-3.7375
75.0	-5.0626	-5.0620	-5.0623	-5.0630	-5.0650	-5.0695	-5.0803	-5.1181	-5.2893
80.0	-7.6191	-7.6171	-7.6183	-7.6186	-7.6196	-7.6231	-7.6294	-7.6495	-7.8236
85.0	-15.2658	-15.2189	-15.2532	-15.2707	-15.2671	-15.2713	-15.2776	-15.2858	-15.3363

$\beta_1 = 90^\circ$; $\beta_2 = 270^\circ$; $\beta = 0^\circ$

θ_{xy}, deg / α, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	18.4910	10.5088	7.0684	5.3545	3.5800	2.6673	2.1075	1.7255	1.4448	1.2266
2.0	9.8222	7.2183	6.6094	5.1114	3.4777	2.6076	2.0653	1.6919	1.4161	1.2009
4.0	4.8999	4.2759	5.6396	4.5544	3.2328	2.4680	1.9706	1.6196	1.3561	1.1484
6.0	3.3870	3.8852	4.8113	4.0250	2.9748	2.3168	1.8688	1.5434	1.2944	1.0955
8.0	2.8635	3.8991	4.1519	3.5671	2.7282	2.1656	1.7654	1.4661	1.2323	1.0427
10.0	2.8461	3.1758	3.6291	3.1810	2.5021	2.0202	1.6637	1.3894	1.1707	.9906
12.0	2.1789	2.8258	3.2093	2.8562	2.2983	1.8835	1.5656	1.3145	1.1103	.9395
15.0	1.5473	2.0318	2.7176	2.4596	2.0321	1.6961	1.4270	1.2067	1.0225	.8649
20.0	1.5231	1.3201	2.1357	1.9679	1.6749	1.4290	1.2205	1.0414	.8854	.7471
25.0	1.2959	1.1884	1.7307	1.6118	1.3971	1.2088	1.0423	.8938	.7598	.6374
30.0	1.1250	1.0245	1.4297	1.3401	1.1744	1.0243	.8874	.7615	.6447	.5351
35.0	1.0364	1.2687	1.2145	1.1237	.9903	.8666	.7510	.6420	.5384	.4389
40.0	1.1263	1.0636	1.0033	.9451	.8341	.7291	.6290	.5328	.4394	.3479
45.0	.9457	.8934	.8426	.7933	.6981	.6088	.5183	.4317	.3462	.2608
50.0	.7927	.7477	.7038	.6608	.5773	.4960	.4161	.3368	.2572	.1765
55.0	.8595	.6198	.5809	.5427	.4676	.3938	.3204	.2465	.1714	.0941
60.0	.5409	.5051	.4699	.4351	.3664	.2981	.2294	.1595	.0876	.0125
65.0	.4529	.4001	.3675	.3353	.2712	.2069	.1516	.0746	.0046	-.0693
70.0	.3329	.3021	.2716	.2412	.1803	.1188	.0558	-.0096	-.0785	-.1523
75.0	.2385	.2092	.1800	.1508	.0922	.0324	-.0294	-.0941	-.1630	-.2376
80.0	.1479	.1196	.0913	.0629	.0054	-.0536	-.1151	-.1801	-.2499	-.3264
85.0	.0597	.0318	.0039	-.0242	-.0813	-.1405	-.2025	-.2688	-.3407	-.4203

θ_{xy}, deg / α, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	.0989	.0981	.0765	.0445	.0308	.0210	.0124	.0034	-.0056
2.0	.0257	.0759	.0743	.0243	.0115	.0023	-.0062	-.0157	-.0240
4.0	-.0776	-.0517	-.0727	-.0847	-.0734	-.0655	-.0585	-.0506	-.0411
6.0	-.0303	-.0783	-.0620	-.0460	-.0362	-.0295	-.0233	-.0159	-.0064
8.0	-.0836	-.0756	-.0621	-.0508	-.0399	-.0242	-.0186	-.0114	-.0283
10.0	-.0577	-.0738	-.0532	-.0412	-.0343	-.0294	-.0243	-.0171	-.0631
12.0	-.0926	-.0629	-.0450	-.0350	-.0293	-.0252	-.0203	-.0129	-.0980
15.0	-.0269	-.0632	-.0493	-.0319	-.0279	-.0246	-.0198	-.0084	-.1509
20.0	-.0225	-.0578	-.0401	-.0266	-.0247	-.0219	-.0138	-.0244	-.2411
25.0	-.0240	-.0172	-.0347	-.0242	-.0135	-.0103	-.0076	-.0123	-.3350
30.0	-.0310	-.0306	-.0322	-.0338	-.0334	-.0713	-.1828	-.3033	-.4346
35.0	-.0428	-.0471	-.0518	-.0547	-.0644	-.1539	-.2705	-.3991	-.5420
40.0	-.0572	-.1659	-.0728	-.0241	-.1270	-.2385	-.3621	-.5014	-.6598
45.0	-.1745	-.0862	-.0058	-.1034	-.2092	-.3264	-.4592	-.6127	-.7919
50.0	-.0936	-.0070	-.0848	-.1842	-.2941	-.4188	-.5636	-.7358	-.9433
55.0	-.0135	-.0724	-.1651	-.2673	-.3829	-.5172	-.6778	-.8748	-1.1212
60.0	-.0672	-.1531	-.2476	-.3540	-.4770	-.6238	-.8046	-1.0351	-1.3368
65.0	-.1488	-.2359	-.3335	-.4455	-.5781	-.7407	-.9481	-1.2244	-1.6076
70.0	-.2827	-.3221	-.4240	-.5434	-.6882	-.8712	-1.1137	-1.4543	-1.9629
75.0	-.3199	-.4329	-.5207	-.6497	-.8101	-1.0193	-1.3090	-1.7424	-2.4562
80.0	-.4120	-.5100	-.6256	-.7669	-.9473	-1.1908	-1.5449	-2.1164	-3.1937
85.0	-.5105	-.6154	-.7614	-.8987	-1.1050	-1.3942	-1.8382	-2.6233	-4.4121

TABLE III.- CONTINUED

(f) L/D. Continued.

$\phi_1 = 105^o$; $\phi_2 = 255^o$; $\beta = 0^o$

α, deg \ θ_{xy}, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	22.3370	13.7114	9.8556	7.6695	5.2699	3.9690	3.1434	2.5658	2.1335	1.7932
2.0	16.1629	11.1888	8.4598	6.7972	4.8385	3.7137	2.9756	2.4477	2.0462	1.7262
4.0	10.3471	8.0467	6.5542	5.5097	4.1417	3.2799	2.6811	2.2355	1.8867	1.6023
6.0	7.5844	6.2718	5.3257	4.6122	3.6061	2.9264	2.4314	2.0506	1.7446	1.4901
8.0	5.9720	5.1237	4.4710	3.9534	3.1828	2.6333	2.2174	1.8880	1.6173	1.3879
10.0	4.9141	4.3201	3.8423	3.4495	2.8401	2.3864	2.0318	1.7438	1.5024	1.2942
12.0	4.1653	3.7255	3.3601	3.0514	2.5569	2.1754	1.8692	1.6150	1.3980	1.2080
15.0	3.3765	3.0746	2.8150	2.5889	2.2130	1.9106	1.6596	1.4453	1.2580	1.0906
20.0	2.5393	2.3550	2.1904	2.0421	1.7845	1.5666	1.3777	1.2104	1.0593	.9203
25.0	2.0063	1.8806	1.7656	1.6596	1.4699	1.3035	1.1545	1.0187	.8927	.7741
30.0	1.6324	1.5400	1.4541	1.3736	1.2262	1.0932	.9712	.8573	.7494	.6455
35.0	1.3519	1.2802	1.2126	1.1486	1.0292	.9191	.8160	.7178	.6231	.5302
40.0	1.1307	1.0727	1.0174	.9645	.8645	.7706	.6810	.5944	.5094	.4248
45.0	.9493	.9007	.8541	.8090	.7228	.6406	.5610	.4829	.4052	.3266
50.0	.7957	.7539	.7134	.6740	.5979	.5243	.4521	.3803	.3079	.2338
55.0	.6622	.6252	.5892	.5540	.4853	.4181	.3514	.2842	.2157	.1445
60.0	.5432	.5099	.4772	.4450	.3818	.3193	.2566	.1927	.1267	.0575
65.0	.4351	.4044	.3741	.3442	.2850	.2258	.1659	.1041	.0397	-.0288
70.0	.3348	.3061	.2776	.2493	.1929	.1360	.0777	.0172	-.0468	-.1155
75.0	.2403	.2129	.1857	.1585	.1038	.0482	-.0093	-.0696	-.1340	-.2039
80.0	.1497	.1231	.0966	.0701	.0164	-.0388	-.0964	-.1574	-.2231	-.2954
85.0	.0614	.0353	.0091	-.0172	-.0708	-.1264	-.1849	-.2476	-.3158	-.3917

α, deg \ θ_{xy}, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	1.5144	1.2784	1.0728	.8890	.7208	.5636	.4137	.2682	.1251
2.0	1.4616	1.2357	1.0376	.8594	.6954	.5413	.3937	.2497	.1074
4.0	1.3628	1.1551	.9705	.8024	.6462	.4978	.3543	.2132	.0723
6.0	1.2720	1.0801	.9074	.7484	.5990	.4558	.3160	.1771	.0373
8.0	1.1882	1.0101	.8479	.6969	.5537	.4150	.2784	.1415	.0024
10.0	1.1104	.9445	.7915	.6478	.5100	.3754	.2416	.1063	-.0324
12.0	1.0380	.8827	.7380	.6006	.4677	.3367	.2053	.0713	-.0674
15.0	.9381	.7964	.6624	.5333	.4067	.2803	.1519	.0191	-.1201
20.0	.7902	.6664	.5465	.4285	.3102	.1897	.0644	-.0678	-.2097
25.0	.6604	.5499	.4406	.3309	.2187	.1018	-.0220	-.1557	-.3026
30.0	.5441	.4436	.3422	.2385	.1304	.0155	-.1088	-.2461	-.4005
35.0	.4379	.3448	.2493	.1497	.0440	-.0706	-.1972	-.3403	-.5055
40.0	.3393	.2516	.1602	.0631	-.0418	-.1577	-.2887	-.4403	-.6202
45.0	.2461	.1622	.0734	-.0225	-.1282	-.2472	-.3848	-.5482	-.7480
50.0	.1567	.0752	-.0124	-.1086	-.2165	-.3406	-.4874	-.6668	-.8936
55.0	.0696	-.0106	-.0983	-.1962	-.3080	-.4395	-.5990	-.7998	-1.0638
60.0	-.0164	-.0967	-.1857	-.2868	-.4045	-.5460	-.7225	-.9525	-1.2686
65.0	-.1027	-.1842	-.2759	-.3818	-.5078	-.6629	-.8622	-1.1324	-1.5242
70.0	-.1906	-.2745	-.3704	-.4832	-.6202	-.7935	-1.0239	-1.3508	-1.8574
75.0	-.2813	-.3691	-.4710	-.5931	-.7450	-.9426	-1.2159	-1.6258	-2.3180
80.0	-.3765	-.4697	-.5799	-.7145	-.8862	-1.1172	-1.4513	-1.9879	-3.0073
85.0	-.4780	-.5787	-.6998	-.8512	-1.0497	-1.3270	-1.7505	-2.4933	-4.1687

$\phi_1 = 120^o$; $\phi_2 = 240^o$; $\beta = 0^o$

α, deg \ θ_{xy}, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	24.1758	15.2709	11.1324	8.7351	6.0568	4.5822	3.6371	2.9712	2.4702	2.0741
2.0	17.0050	12.0579	9.3178	7.5729	5.4671	4.2301	3.4059	2.8098	2.3525	1.9857
4.0	10.6529	8.4685	7.0119	5.9688	4.5669	3.6594	3.0158	2.5293	2.1435	1.8256
6.0	7.7403	6.5113	5.6078	4.9136	3.9116	3.2163	2.6989	2.2936	1.9630	1.6845
8.0	6.0663	5.2777	4.6617	4.1659	3.4126	2.8617	2.4360	2.0924	1.8054	1.5587
10.0	4.9772	4.4274	3.9798	3.6073	3.0191	2.5711	2.2138	1.9183	1.6663	1.4458
12.0	4.2106	3.8046	3.4640	3.1733	2.7003	2.3280	2.0233	1.7658	1.5423	1.3437
15.0	3.4066	3.1286	2.8878	2.6763	2.3203	2.0289	1.7827	1.5690	1.3792	1.2070
20.0	2.5570	2.3878	2.2358	2.0981	1.8566	1.6494	1.4672	1.3035	1.1534	1.0133
25.0	2.0181	1.9028	1.7969	1.6989	1.5222	1.3654	1.2233	1.0920	.9687	.8510
30.0	1.6409	1.5563	1.4773	1.4030	1.2663	1.1418	1.0263	.9173	.8128	.7110
35.0	1.3584	1.2928	1.2308	1.1718	1.0613	.9587	.8617	.7684	.6774	.5873
40.0	1.1359	1.0829	1.0322	.9835	.8912	.8039	.7201	.6382	.5572	.4756
45.0	.9537	.9092	.8665	.8251	.7456	.6694	.5952	.5218	.4480	.3728
50.0	.7995	.7612	.7241	.6879	.6179	.5498	.4827	.4155	.3471	.2765
55.0	.6685	.6317	.5987	.5664	.5032	.4412	.3793	.3166	.2521	.1848
60.0	.5562	.5157	.4858	.4563	.3982	.3406	.2825	.2230	.1612	.0959
65.0	.4578	.4097	.3820	.3547	.3003	.2458	.1904	.1330	.0728	.0085
70.0	.3673	.3111	.2850	.2591	.2074	.1551	.1013	.0451	-.0144	-.0788
75.0	.2827	.2177	.1927	.1679	.1178	.0667	.0137	-.0421	-.1019	-.1672
80.0	.1520	.1277	.1035	.0792	.0300	-.0206	-.0736	-.1300	-.1910	-.2583
85.0	.0636	.0398	.0159	-.0082	-.0573	-.1083	-.1621	-.2199	-.2831	-.3536

α, deg \ θ_{xy}, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	1.7488	1.4728	1.2324	1.0179	.8225	.6410	.4692	.3040	.1426
2.0	1.6807	1.4194	1.1897	.9832	.7938	.6167	.4482	.2851	.1248
4.0	1.5555	1.3198	1.1093	.9172	.7387	.5697	.4070	.2477	.0895
6.0	1.4431	1.2289	1.0348	.8553	.6863	.5245	.3669	.2110	.0545
8.0	1.3413	1.1454	.9654	.7969	.6364	.4809	.3279	.1749	.0195
10.0	1.2485	1.0683	.9005	.7416	.5886	.4388	.2897	.1391	-.0154
12.0	1.1634	.9966	.8395	.6891	.5427	.3979	.2523	.1038	-.0503
15.0	1.0477	.8978	.7544	.6149	.4770	.3386	.1974	.0511	-.1030
20.0	.8803	.7519	.6261	.5009	.3743	.2442	.1083	-.0361	-.1922
25.0	.7366	.6239	.5111	.3965	.2780	.1537	.0208	-.1239	-.2844
30.0	.6102	.5091	.4059	.2990	.1863	.0655	-.0664	-.2136	-.3814
35.0	.4966	.4039	.3078	.2064	.0975	-.0216	-.1546	-.3067	-.4850
40.0	.3923	.3059	.2148	.1171	.0102	-.1090	-.2453	-.4049	-.5978
45.0	.2950	.2130	.1253	.0296	-.0769	-.1982	-.3398	-.5104	-.7230
50.0	.2025	.1235	.0377	-.0575	-.1652	-.2904	-.4402	-.6256	-.8652
55.0	.1132	.0359	-.0494	-.1454	-.2561	-.3875	-.5485	-.7542	-1.0306
60.0	.0257	-.0512	-.1372	-.2356	-.3512	-.4913	-.6677	-.9008	-1.2287
65.0	-.0615	-.1391	-.2272	-.3295	-.4522	-.6043	-.8016	-1.0725	-1.4745
70.0	-.1496	-.2291	-.3207	-.4290	-.5614	-.7299	-.9556	-1.2795	-1.7929
75.0	-.2400	-.3228	-.4196	-.5362	-.6819	-.8725	-1.1374	-1.5383	-2.2294
80.0	-.3343	-.4219	-.5260	-.6539	-.8175	-1.0384	-1.3590	-1.8770	-2.8765
85.0	-.4342	-.5286	-.6426	-.7857	-.9738	-1.2370	-1.6397	-2.3473	-3.9553

TABLE III.- CONTINUED

(f) L/D. Concluded.

$\beta_1 = 135^\circ$; $\beta_2 = 225^\circ$; $\beta = 0^\circ$

θ_{xy}, deg / α, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	24.9263	15.8978	11.6440	9.1620	6.3727	4.8293	3.8372	3.1366	2.6087	2.1909
2.0	17.3595	12.4332	9.6645	7.8852	5.7200	4.4384	3.5803	2.9576	2.4786	2.0935
4.0	10.7869	8.6482	7.2011	6.1566	4.7395	3.8133	3.1519	2.6495	2.2493	1.9186
6.0	7.8102	6.6146	5.7267	5.0390	4.0370	3.3347	2.8083	2.3934	2.0534	1.7656
8.0	6.1092	5.3652	4.7435	4.2555	3.5079	2.9559	2.5259	2.1768	1.8836	1.6303
10.0	5.0063	4.4751	4.0395	3.6747	3.0941	2.6479	2.2893	1.9907	1.7347	1.5095
12.0	4.2316	3.8401	3.5096	3.2259	2.7610	2.3919	2.0876	1.8288	1.6028	1.4009
15.0	3.4206	3.1532	2.9202	2.7147	2.3663	2.0790	1.8346	1.6211	1.4304	1.2563
20.0	2.5654	2.4028	2.2563	2.1230	1.8881	1.6852	1.5056	1.3433	1.1936	1.0532
25.0	2.0237	1.9132	1.8113	1.7167	1.5454	1.3924	1.2531	1.1238	1.0016	.8844
30.0	1.6450	1.5639	1.4880	1.4165	1.2843	1.1633	1.0505	.9436	.8406	.7397
35.0	1.3615	1.2987	1.2392	1.1825	1.0759	.9764	.8820	.7909	.7015	.6126
40.0	1.1384	1.0877	1.0391	.9923	.9034	.8190	.7376	.6579	.5786	.4935
45.0	.9558	.9133	.8723	.8336	.7562	.6826	.6107	.5394	.4675	.3938
50.0	.8013	.7647	.7292	.6945	.6272	.5616	.4967	.4316	.3651	.2962
55.0	.6670	.6347	.6032	.5722	.5116	.4519	.3922	.3316	.2690	.2034
60.0	.5476	.5185	.4898	.4616	.4060	.3506	.2946	.2372	.1774	.1139
65.0	.4391	.4123	.3858	.3596	.3076	.2553	.2019	.1467	.0885	.0262
70.0	.3386	.3135	.2886	.2638	.2143	.1641	.1125	.0585	.0010	-.0611
75.0	.2439	.2200	.1962	.1724	.1245	.0756	.0248	-.0289	-.0864	-.1494
80.0	.1531	.1300	.1068	.0836	.0366	-.0118	-.0626	-.1166	-.1752	-.2400
85.0	.0647	.0420	.0192	-.0038	-.0507	-.0994	-.1509	-.2062	-.2668	-.3344

θ_{xy}, deg / α, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	1.8472	1.5556	1.3013	1.0745	.8679	.6761	.4948	.3207	.1509
2.0	1.7727	1.4975	1.2554	1.0376	.8378	.6509	.4733	.3016	.1331
4.0	1.6567	1.3901	1.1693	.9677	.7801	.6024	.4313	.2639	.0977
6.0	1.5153	1.2925	1.0900	.9024	.7254	.5558	.3905	.2269	.0626
8.0	1.4061	1.2034	1.0165	.8410	.6735	.5110	.3508	.1905	.0276
10.0	1.3071	1.1214	.9480	.7831	.6239	.4677	.3121	.1545	-.0073
12.0	1.2167	1.0456	.8839	.7283	.5765	.4259	.2742	.1190	-.0423
15.0	1.0946	.9417	.7947	.6511	.5088	.3653	.2186	.0662	-.0949
20.0	.9192	.7893	.6673	.5334	.4034	.2693	.1287	-.0212	-.1839
25.0	.7699	.6566	.5425	.4261	.3052	.1777	.0408	-.1088	-.2758
30.0	.6394	.5382	.4345	.3265	.2121	.0888	-.0465	-.1982	-.3723
35.0	.5228	.4305	.3344	.2324	.1224	.0014	-.1345	-.2907	-.4752
40.0	.4163	.3306	.2399	.1421	.0346	-.0861	-.2246	-.3880	-.5871
45.0	.3173	.2364	.1493	.0540	-.0527	-.1748	-.3183	-.4922	-.7111
50.0	.2236	.1459	.0611	-.0333	-.1408	-.2663	-.4174	-.6058	-.8516
55.0	.1335	.0577	-.0262	-.1211	-.2311	-.3622	-.5239	-.7320	-1.0147
60.0	.0456	-.0296	-.1139	-.2108	-.3251	-.4644	-.6407	-.8755	-1.2095
65.0	-.0417	-.1174	-.2034	-.3038	-.4246	-.5751	-.7714	-1.0428	-1.4504
70.0	-.1297	-.2069	-.2961	-.4020	-.5318	-.6977	-.9210	-1.2437	-1.7613
75.0	-.2196	-.2998	-.3937	-.5072	-.6494	-.8361	-1.0967	-1.4936	-2.1855
80.0	-.3131	-.3977	-.4983	-.6222	-.7812	-.9963	-1.3097	-1.8184	-2.8100
85.0	-.4118	-.5026	-.6125	-.7505	-.9322	-1.1871	-1.5776	-2.2659	-3.8411

$\beta_1 = 150^\circ$; $\beta_2 = 210^\circ$; $\beta = 0^\circ$

θ_{xy}, deg / α, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	25.2571	16.1723	11.8674	9.3483	6.5105	4.9372	3.9246	3.2091	2.6696	2.2424
2.0	17.5174	12.5988	9.8168	8.0221	5.8306	4.5295	3.6567	3.0224	2.5341	2.1411
4.0	10.8472	8.7253	7.2848	6.2395	4.8154	3.8808	3.2118	2.7023	2.2960	1.9597
6.0	7.8419	6.6609	5.7797	5.0946	4.0924	3.3870	2.8565	2.4375	2.0933	1.8015
8.0	6.1287	5.3756	4.7800	4.2955	3.5501	2.9976	2.5657	2.2141	1.9182	1.6621
10.0	5.0195	4.4966	4.0664	3.7049	3.1275	2.6819	2.3227	2.0228	1.7650	1.5379
12.0	4.2412	3.8562	3.5302	3.2495	2.7881	2.4203	2.1162	1.8567	1.6297	1.4264
15.0	3.4270	3.1643	2.9348	2.7319	2.3869	2.1014	1.8577	1.6443	1.4532	1.2784
20.0	2.5692	2.4097	2.2656	2.1343	1.9022	1.7012	1.5228	1.3611	1.2117	1.0712
25.0	2.0263	1.9179	1.8178	1.7248	1.5558	1.4046	1.2666	1.1381	1.0164	.8994
30.0	1.6468	1.5674	1.4929	1.4224	1.2924	1.1730	1.0615	.9555	.8531	.7527
35.0	1.3630	1.3014	1.2430	1.1873	1.0825	.9845	.8912	.8010	.7124	.6241
40.0	1.1396	1.0899	1.0422	.9964	.9090	.8259	.7456	.6668	.5883	.5088
45.0	.9567	.9151	.8749	.8360	.7610	.6886	.6178	.5474	.4763	.4034
50.0	.8021	.7663	.7315	.6975	.6314	.5670	.5031	.4389	.3733	.3051
55.0	.6677	.6361	.6052	.5749	.5155	.4568	.3981	.3384	.2767	.2120
60.0	.5482	.5197	.4917	.4641	.4095	.3551	.3002	.2437	.1848	.1222
65.0	.4397	.4134	.3876	.3619	.3109	.2596	.2072	.1530	.0957	.0344
70.0	.3391	.3146	.2902	.2660	.2175	.1683	.1176	.0646	.0082	-.0529
75.0	.2444	.2210	.1977	.1744	.1276	.0796	.0298	-.0228	-.0792	-.1411
80.0	.1536	.1310	.1084	.0856	.0396	-.0078	-.0575	-.1105	-.1679	-.2314
85.0	.0652	.0430	.0207	-.0018	-.0477	-.0954	-.1457	-.1999	-.2592	-.3255

θ_{xy}, deg / α, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	1.8909	1.5925	1.3323	1.1001	.8886	.6922	.5067	.3286	.1548
2.0	1.8136	1.5324	1.2850	1.0622	.8578	.6667	.4850	.3093	.1369
4.0	1.6727	1.4215	1.1964	.9906	.7990	.6174	.4426	.2715	.1015
6.0	1.5475	1.3210	1.1149	.9237	.7433	.5702	.4014	.2343	.0664
8.0	1.4350	1.2294	1.0395	.8610	.6905	.5248	.3615	.1978	.0314
10.0	1.3333	1.1453	.9694	.8020	.6401	.4811	.3225	.1618	-.0035
12.0	1.2406	1.0677	.9039	.7462	.5920	.4388	.2843	.1261	-.0385
15.0	1.1157	.9615	.8130	.6677	.5233	.3777	.2285	.0733	-.0911
20.0	.9368	.8062	.6773	.5482	.4168	.2810	.1383	-.0141	-.1800
25.0	.7850	.6714	.5568	.4396	.3177	.1888	.0502	-.1018	-.2717
30.0	.6527	.5515	.4476	.3391	.2240	.0997	-.0371	-.1909	-.3680
35.0	.5346	.4427	.3465	.2444	.1339	.0121	-.1250	-.2832	-.4706
40.0	.4272	.3419	.2514	.1536	.0459	-.0753	-.2149	-.3801	-.5821
45.0	.3275	.2471	.1604	.0652	-.0414	-.1639	-.3081	-.4836	-.7055
50.0	.2333	.1562	.0719	-.0221	-.1294	-.2550	-.4066	-.5963	-.8451
55.0	.1429	.0678	-.0155	-.1098	-.2194	-.3503	-.5123	-.7215	-1.0071
60.0	.0547	-.0196	-.1031	-.1992	-.3128	-.4516	-.6279	-.8635	-1.2003
65.0	-.0326	-.1073	-.1923	-.2918	-.4116	-.5613	-.7570	-1.0286	-1.4309
70.0	-.1204	-.1966	-.2846	-.3892	-.5177	-.6822	-.9043	-1.2265	-1.7462
75.0	-.2101	-.2890	-.3816	-.4935	-.6339	-.8186	-1.0770	-1.4719	-2.1644
80.0	-.3032	-.3863	-.4853	-.6072	-.7637	-.9759	-1.2856	-1.7899	-2.7778
85.0	-.4013	-.4903	-.5981	-.7336	-.9121	-1.1627	-1.5471	-2.2258	-3.7851

TABLE III. - CONTINUED

(g) C_l

$\phi_1 = 0^o$; $\phi_2 = 360^o$; $\beta = 2^o$

α, deg \ θ_{xy}, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	-.0031	-.0015	-.0010	-.0008	-.0005	-.0003	-.0003	-.0002	-.0002	-.0001
2.0	-.0057	-.0031	-.0020	-.0015	-.0010	-.0007	-.0005	-.0004	-.0003	-.0002
4.0	-.0096	-.0058	-.0041	-.0030	-.0019	-.0014	-.0010	-.0008	-.0006	-.0005
6.0	-.0129	-.0078	-.0058	-.0045	-.0029	-.0021	-.0016	-.0012	-.0009	-.0007
8.0	-.0160	-.0096	-.0072	-.0057	-.0039	-.0028	-.0021	-.0016	-.0012	-.0010
10.0	-.0191	-.0112	-.0084	-.0068	-.0048	-.0035	-.0026	-.0020	-.0016	-.0012
12.0	-.0221	-.0128	-.0095	-.0077	-.0055	-.0041	-.0031	-.0024	-.0019	-.0014
15.0	-.0266	-.0150	-.0110	-.0089	-.0065	-.0050	-.0039	-.0030	-.0023	-.0018
20.0	-.0339	-.0186	-.0134	-.0108	-.0079	-.0061	-.0049	-.0039	-.0031	-.0024
25.0	-.0410	-.0221	-.0157	-.0125	-.0090	-.0071	-.0057	-.0046	-.0037	-.0029
30.0	-.0477	-.0254	-.0179	-.0140	-.0100	-.0078	-.0063	-.0052	-.0042	-.0034
35.0	-.0540	-.0284	-.0198	-.0155	-.0109	-.0085	-.0069	-.0056	-.0046	-.0037
40.0	-.0599	-.0313	-.0217	-.0168	-.0117	-.0090	-.0073	-.0059	-.0049	-.0040
45.0	-.0654	-.0339	-.0233	-.0180	-.0124	-.0095	-.0076	-.0062	-.0051	-.0041
50.0	-.0704	-.0363	-.0248	-.0190	-.0130	-.0099	-.0079	-.0064	-.0052	-.0042
55.0	-.0748	-.0383	-.0261	-.0199	-.0135	-.0102	-.0081	-.0065	-.0053	-.0043
60.0	-.0787	-.0401	-.0272	-.0206	-.0139	-.0104	-.0082	-.0066	-.0053	-.0043
65.0	-.0820	-.0416	-.0281	-.0212	-.0142	-.0106	-.0082	-.0066	-.0053	-.0042
70.0	-.0846	-.0428	-.0287	-.0216	-.0144	-.0106	-.0082	-.0065	-.0052	-.0042
75.0	-.0867	-.0436	-.0292	-.0219	-.0144	-.0106	-.0081	-.0064	-.0051	-.0040
80.0	-.0880	-.0441	-.0294	-.0220	-.0144	-.0105	-.0080	-.0062	-.0049	-.0039
85.0	-.0887	-.0443	-.0294	-.0219	-.0142	-.0103	-.0078	-.0060	-.0047	-.0037

α, deg \ θ_{xy}, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	-.0001	-.0001	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000
2.0	-.0002	-.0001	-.0001	-.0001	-.0000	-.0000	-.0000	-.0000	-.0000
4.0	-.0004	-.0003	-.0002	-.0001	-.0001	-.0000	-.0000	-.0000	-.0000
6.0	-.0005	-.0004	-.0003	-.0002	-.0001	-.0001	-.0000	-.0000	-.0000
8.0	-.0007	-.0005	-.0004	-.0003	-.0002	-.0001	-.0000	-.0000	-.0000
10.0	-.0009	-.0007	-.0005	-.0003	-.0002	-.0001	-.0000	-.0000	-.0000
12.0	-.0011	-.0008	-.0006	-.0004	-.0002	-.0001	-.0001	-.0000	-.0000
15.0	-.0014	-.0010	-.0007	-.0005	-.0003	-.0002	-.0001	-.0000	-.0000
20.0	-.0018	-.0013	-.0009	-.0006	-.0004	-.0002	-.0001	-.0000	-.0000
25.0	-.0022	-.0016	-.0012	-.0008	-.0005	-.0003	-.0001	-.0000	-.0000
30.0	-.0026	-.0019	-.0014	-.0009	-.0006	-.0003	-.0001	-.0000	-.0000
35.0	-.0029	-.0022	-.0016	-.0011	-.0007	-.0004	-.0002	-.0001	-.0000
40.0	-.0031	-.0024	-.0018	-.0012	-.0007	-.0004	-.0002	-.0001	-.0000
45.0	-.0033	-.0026	-.0019	-.0013	-.0008	-.0004	-.0002	-.0001	-.0000
50.0	-.0034	-.0026	-.0020	-.0014	-.0009	-.0005	-.0002	-.0001	-.0000
55.0	-.0034	-.0027	-.0020	-.0014	-.0009	-.0005	-.0002	-.0001	-.0000
60.0	-.0034	-.0027	-.0020	-.0014	-.0009	-.0005	-.0002	-.0001	-.0000
65.0	-.0034	-.0026	-.0020	-.0014	-.0009	-.0005	-.0003	-.0001	-.0000
70.0	-.0033	-.0025	-.0019	-.0013	-.0009	-.0005	-.0003	-.0001	-.0000
75.0	-.0032	-.0024	-.0018	-.0013	-.0008	-.0005	-.0002	-.0001	-.0000
80.0	-.0030	-.0023	-.0017	-.0012	-.0008	-.0004	-.0002	-.0001	-.0000
85.0	-.0028	-.0021	-.0015	-.0011	-.0007	-.0004	-.0002	-.0001	-.0000

TABLE III.- CONTINUED

(g) C_l. Continued.

$\beta_1 = 0^0$; $\beta_2 = 360^0$; $\beta = 5^0$

θ_{xy}, deg / α, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	-.0064	-.0038	-.0025	-.0019	-.0012	-.0009	-.0007	-.0005	-.0004	-.0003
2.0	-.0123	-.0075	-.0051	-.0038	-.0024	-.0017	-.0013	-.0010	-.0008	-.0006
4.0	-.0224	-.0138	-.0100	-.0075	-.0048	-.0035	-.0026	-.0020	-.0016	-.0012
6.0	-.0311	-.0189	-.0141	-.0111	-.0073	-.0052	-.0039	-.0030	-.0023	-.0018
8.0	-.0393	-.0234	-.0175	-.0141	-.0097	-.0069	-.0052	-.0040	-.0031	-.0024
10.0	-.0471	-.0275	-.0206	-.0167	-.0118	-.0086	-.0065	-.0050	-.0039	-.0030
12.0	-.0548	-.0315	-.0234	-.0189	-.0137	-.0103	-.0078	-.0060	-.0046	-.0036
15.0	-.0661	-.0372	-.0273	-.0220	-.0161	-.0124	-.0096	-.0074	-.0058	-.0044
20.0	-.0843	-.0463	-.0334	-.0267	-.0195	-.0153	-.0122	-.0097	-.0076	-.0059
25.0	-.1019	-.0549	-.0391	-.0310	-.0224	-.0175	-.0142	-.0115	-.0092	-.0072
30.0	-.1186	-.0631	-.0444	-.0349	-.0249	-.0195	-.0157	-.0129	-.0105	-.0084
35.0	-.1344	-.0708	-.0493	-.0385	-.0272	-.0211	-.0170	-.0139	-.0114	-.0092
40.0	-.1492	-.0779	-.0539	-.0417	-.0292	-.0225	-.0181	-.0148	-.0121	-.0098
45.0	-.1628	-.0844	-.0580	-.0447	-.0310	-.0237	-.0189	-.0154	-.0126	-.0103
50.0	-.1752	-.0903	-.0617	-.0473	-.0325	-.0246	-.0196	-.0159	-.0130	-.0106
55.0	-.1863	-.0954	-.0649	-.0495	-.0337	-.0254	-.0201	-.0162	-.0132	-.0107
60.0	-.1959	-.0999	-.0676	-.0513	-.0347	-.0259	-.0204	-.0163	-.0132	-.0107
65.0	-.2041	-.1036	-.0698	-.0528	-.0354	-.0263	-.0205	-.0163	-.0132	-.0106
70.0	-.2107	-.1065	-.0715	-.0538	-.0358	-.0264	-.0204	-.0162	-.0130	-.0103
75.0	-.2157	-.1086	-.0726	-.0545	-.0360	-.0263	-.0202	-.0159	-.0127	-.0100
80.0	-.2191	-.1098	-.0732	-.0547	-.0358	-.0260	-.0199	-.0155	-.0122	-.0096
85.0	-.2207	-.1103	-.0732	-.0545	-.0354	-.0255	-.0194	-.0150	-.0117	-.0091

θ_{xy}, deg / α, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	-.0002	-.0002	-.0001	-.0001	-.0001	-.0000	-.0000	-.0000	-.0000
2.0	-.0005	-.0003	-.0002	-.0002	-.0001	-.0001	-.0000	-.0000	-.0000
4.0	-.0009	-.0007	-.0005	-.0003	-.0002	-.0001	-.0000	-.0000	-.0000
6.0	-.0014	-.0010	-.0007	-.0005	-.0003	-.0002	-.0001	-.0000	-.0000
8.0	-.0018	-.0013	-.0010	-.0006	-.0004	-.0002	-.0001	-.0000	-.0000
10.0	-.0023	-.0017	-.0012	-.0008	-.0005	-.0003	-.0001	-.0000	-.0000
12.0	-.0027	-.0020	-.0014	-.0010	-.0006	-.0003	-.0001	-.0000	-.0000
15.0	-.0034	-.0025	-.0018	-.0012	-.0007	-.0004	-.0002	-.0001	-.0000
20.0	-.0045	-.0033	-.0024	-.0016	-.0010	-.0005	-.0002	-.0001	-.0000
25.0	-.0055	-.0041	-.0029	-.0020	-.0012	-.0007	-.0003	-.0001	-.0000
30.0	-.0065	-.0048	-.0034	-.0023	-.0014	-.0008	-.0004	-.0001	-.0000
35.0	-.0073	-.0055	-.0040	-.0027	-.0017	-.0009	-.0004	-.0001	-.0000
40.0	-.0078	-.0060	-.0044	-.0030	-.0019	-.0010	-.0005	-.0001	-.0000
45.0	-.0082	-.0064	-.0047	-.0033	-.0020	-.0011	-.0005	-.0002	-.0000
50.0	-.0084	-.0066	-.0049	-.0035	-.0022	-.0012	-.0005	-.0002	-.0000
55.0	-.0085	-.0067	-.0050	-.0036	-.0023	-.0013	-.0006	-.0002	-.0000
60.0	-.0085	-.0066	-.0050	-.0036	-.0023	-.0013	-.0006	-.0002	-.0000
65.0	-.0084	-.0065	-.0049	-.0035	-.0023	-.0014	-.0006	-.0002	-.0000
70.0	-.0082	-.0063	-.0047	-.0033	-.0022	-.0013	-.0006	-.0002	-.0000
75.0	-.0079	-.0060	-.0045	-.0031	-.0021	-.0012	-.0006	-.0002	-.0000
80.0	-.0075	-.0057	-.0042	-.0029	-.0019	-.0011	-.0005	-.0002	-.0000
85.0	-.0070	-.0053	-.0038	-.0026	-.0017	-.0010	-.0005	-.0002	-.0000

$\beta_1 = 0^0$; $\beta_2 = 360^0$; $\beta = 15^0$

θ_{xy}, deg / α, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	-.0138	-.0081	-.0061	-.0050	-.0035	-.0025	-.0019	-.0014	-.0011	-.0009
2.0	-.0275	-.0162	-.0122	-.0100	-.0070	-.0050	-.0038	-.0029	-.0022	-.0017
4.0	-.0543	-.0318	-.0239	-.0195	-.0139	-.0100	-.0075	-.0058	-.0045	-.0034
6.0	-.0802	-.0465	-.0348	-.0284	-.0205	-.0150	-.0112	-.0086	-.0067	-.0052
8.0	-.1051	-.0603	-.0448	-.0365	-.0267	-.0199	-.0150	-.0115	-.0089	-.0069
10.0	-.1291	-.0733	-.0542	-.0440	-.0323	-.0246	-.0187	-.0144	-.0111	-.0086
12.0	-.1524	-.0857	-.0629	-.0509	-.0375	-.0289	-.0223	-.0172	-.0133	-.0103
15.0	-.1862	-.1033	-.0751	-.0605	-.0444	-.0347	-.0274	-.0214	-.0166	-.0128
20.0	-.2402	-.1308	-.0937	-.0747	-.0545	-.0428	-.0344	-.0277	-.0218	-.0169
25.0	-.2915	-.1564	-.1108	-.0876	-.0631	-.0495	-.0401	-.0326	-.0263	-.0208
30.0	-.3402	-.1804	-.1266	-.0992	-.0708	-.0552	-.0447	-.0366	-.0298	-.0239
35.0	-.3861	-.2028	-.1412	-.1099	-.0775	-.0601	-.0485	-.0397	-.0326	-.0264
40.0	-.4289	-.2235	-.1545	-.1195	-.0835	-.0642	-.0516	-.0422	-.0346	-.0281
45.0	-.4683	-.2424	-.1666	-.1281	-.0886	-.0677	-.0541	-.0441	-.0361	-.0294
50.0	-.5041	-.2595	-.1773	-.1357	-.0931	-.0706	-.0561	-.0455	-.0372	-.0302
55.0	-.5361	-.2745	-.1866	-.1422	-.0967	-.0728	-.0575	-.0464	-.0378	-.0306
60.0	-.5639	-.2874	-.1945	-.1476	-.0996	-.0744	-.0584	-.0469	-.0379	-.0306
65.0	-.5875	-.2980	-.2009	-.1518	-.1017	-.0755	-.0588	-.0469	-.0378	-.0303
70.0	-.6065	-.3064	-.2057	-.1549	-.1029	-.0759	-.0587	-.0466	-.0372	-.0297
75.0	-.6210	-.3125	-.2090	-.1567	-.1034	-.0757	-.0582	-.0458	-.0364	-.0288
80.0	-.6307	-.3162	-.2107	-.1574	-.1031	-.0749	-.0572	-.0447	-.0352	-.0277
85.0	-.6356	-.3174	-.2107	-.1569	-.1020	-.0735	-.0557	-.0432	-.0337	-.0263

θ_{xy}, deg / α, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	-.0007	-.0005	-.0003	-.0002	-.0001	-.0001	-.0000	-.0000	-.0000
2.0	-.0013	-.0010	-.0007	-.0005	-.0003	-.0002	-.0001	-.0000	-.0000
4.0	-.0026	-.0019	-.0014	-.0009	-.0006	-.0003	-.0001	-.0000	-.0000
6.0	-.0039	-.0029	-.0021	-.0014	-.0009	-.0005	-.0002	-.0001	-.0000
8.0	-.0052	-.0039	-.0028	-.0019	-.0012	-.0006	-.0003	-.0001	-.0000
10.0	-.0065	-.0048	-.0034	-.0023	-.0014	-.0008	-.0004	-.0001	-.0000
12.0	-.0078	-.0058	-.0041	-.0028	-.0017	-.0009	-.0004	-.0001	-.0000
15.0	-.0097	-.0072	-.0051	-.0035	-.0021	-.0012	-.0005	-.0002	-.0000
20.0	-.0128	-.0095	-.0068	-.0046	-.0028	-.0016	-.0007	-.0002	-.0000
25.0	-.0159	-.0118	-.0084	-.0057	-.0035	-.0019	-.0009	-.0003	-.0000
30.0	-.0186	-.0139	-.0099	-.0067	-.0042	-.0023	-.0010	-.0003	-.0000
35.0	-.0208	-.0158	-.0114	-.0077	-.0048	-.0026	-.0012	-.0004	-.0000
40.0	-.0224	-.0173	-.0127	-.0086	-.0053	-.0029	-.0013	-.0004	-.0001
45.0	-.0235	-.0183	-.0136	-.0094	-.0059	-.0032	-.0014	-.0004	-.0001
50.0	-.0242	-.0189	-.0141	-.0099	-.0063	-.0035	-.0016	-.0005	-.0001
55.0	-.0245	-.0191	-.0144	-.0102	-.0066	-.0037	-.0017	-.0005	-.0001
60.0	-.0244	-.0190	-.0143	-.0102	-.0067	-.0039	-.0019	-.0006	-.0001
65.0	-.0240	-.0187	-.0140	-.0100	-.0066	-.0039	-.0018	-.0006	-.0001
70.0	-.0234	-.0181	-.0135	-.0096	-.0063	-.0038	-.0018	-.0006	-.0001
75.0	-.0226	-.0173	-.0128	-.0090	-.0059	-.0035	-.0017	-.0006	-.0001
80.0	-.0215	-.0163	-.0120	-.0084	-.0054	-.0032	-.0015	-.0005	-.0001
85.0	-.0202	-.0152	-.0110	-.0076	-.0048	-.0027	-.0013	-.0004	-.0001

TABLE III.- CONTINUED

(g) C_l: Continued.

$\phi_1 = -90^o$; $\phi_2 = 90^o$; $\beta = 2^o$

α, deg \ θ_{xy}, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.0046	.0061	.0066	.0068	.0069	.0068	.0066	.0063	.0058	.0054
2.0	.0025	.0046	.0056	.0061	.0064	.0064	.0063	.0060	.0057	.0052
4.0	.0009	.0022	.0035	.0045	.0054	.0057	.0058	.0056	.0054	.0050
6.0	.0005	.0012	.0021	.0031	.0044	.0050	.0052	.0052	.0050	.0047
8.0	.0003	.0007	.0013	.0021	.0034	.0043	.0047	.0048	.0047	.0045
10.0	.0002	.0005	.0009	.0015	.0026	.0036	.0041	.0044	.0044	.0042
12.0	.0001	.0003	.0007	.0011	.0020	.0029	.0036	.0039	.0040	.0039
15.0	.0001	.0002	.0004	.0007	.0014	.0021	.0027	.0032	.0035	.0035
20.0	.0000	.0001	.0002	.0004	.0008	.0013	.0018	.0022	.0026	.0028
25.0	.0000	.0001	.0001	.0002	.0005	.0008	.0011	.0015	.0018	.0021
30.0	.0000	.0000	.0001	.0001	.0003	.0005	.0008	.0010	.0013	.0015
35.0	.0000	.0000	.0001	.0001	.0002	.0003	.0005	.0007	.0009	.0010
40.0	.0000	.0000	.0000	.0001	.0001	.0002	.0003	.0005	.0006	.0007
45.0	.0000	.0000	.0000	.0000	.0001	.0002	.0002	.0003	.0004	.0005
50.0	.0000	.0000	.0000	.0000	.0001	.0001	.0001	.0002	.0003	.0003
55.0	.0000	.0000	.0000	.0000	.0000	.0001	.0001	.0001	.0002	.0002
60.0	.0000	.0000	.0000	.0000	.0000	.0000	.0001	.0001	.0001	.0001
65.0	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0001	.0001
70.0	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000
75.0	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000
80.0	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000
85.0	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000

α, deg \ θ_{xy}, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	.0048	.0042	.0036	.0029	.0022	.0015	.0009	.0004	.0001
2.0	.0047	.0041	.0035	.0028	.0022	.0015	.0009	.0004	.0001
4.0	.0045	.0040	.0034	.0028	.0021	.0015	.0009	.0004	.0001
6.0	.0043	.0039	.0033	.0027	.0021	.0015	.0009	.0004	.0001
8.0	.0041	.0037	.0032	.0026	.0020	.0014	.0009	.0004	.0001
10.0	.0039	.0035	.0031	.0025	.0020	.0014	.0009	.0004	.0001
12.0	.0037	.0034	.0030	.0025	.0019	.0014	.0008	.0004	.0001
15.0	.0034	.0031	.0028	.0023	.0018	.0013	.0008	.0004	.0001
20.0	.0028	.0027	.0024	.0021	.0017	.0012	.0008	.0004	.0001
25.0	.0022	.0022	.0021	.0018	.0015	.0011	.0007	.0004	.0001
30.0	.0017	.0018	.0017	.0016	.0013	.0010	.0007	.0003	.0001
35.0	.0012	.0013	.0014	.0013	.0011	.0009	.0006	.0003	.0001
40.0	.0008	.0009	.0010	.0010	.0009	.0008	.0005	.0003	.0001
45.0	.0006	.0006	.0007	.0008	.0007	.0006	.0004	.0002	.0001
50.0	.0004	.0004	.0005	.0005	.0005	.0005	.0004	.0002	.0001
55.0	.0002	.0003	.0003	.0003	.0004	.0004	.0003	.0002	.0001
60.0	.0001	.0002	.0002	.0002	.0002	.0002	.0002	.0001	.0000
65.0	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0000
70.0	.0000	.0000	.0001	.0001	.0001	.0001	.0001	.0001	.0000
75.0	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000
80.0	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000
85.0	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000

TABLE III.- CONTINUED

(g) C_l. Continued.

$\beta_1 = -90^\circ$; $\beta_2 = 90^\circ$; $\beta = 5^\circ$

α, deg \ θ_{xy}, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.0146	.0153	.0165	.0170	.0172	.0169	.0164	.0156	.0146	.0134
2.0	.0102	.0117	.0139	.0151	.0160	.0160	.0157	.0151	.0142	.0131
4.0	.0052	.0068	.0091	.0113	.0135	.0143	.0144	.0140	.0134	.0124
6.0	.0030	.0041	.0059	.0078	.0110	.0125	.0130	.0130	.0125	.0118
8.0	.0019	.0027	.0040	.0055	.0086	.0107	.0116	.0119	.0117	.0111
10.0	.0013	.0019	.0028	.0040	.0066	.0089	.0103	.0108	.0109	.0105
12.0	.0009	.0014	.0021	.0030	.0051	.0072	.0089	.0097	.0100	.0098
15.0	.0006	.0009	.0014	.0020	.0035	.0052	.0069	.0081	.0087	.0088
20.0	.0003	.0005	.0008	.0011	.0021	.0032	.0044	.0055	.0064	.0070
25.0	.0002	.0003	.0005	.0007	.0013	.0021	.0029	.0037	.0045	.0052
30.0	.0001	.0002	.0003	.0005	.0009	.0014	.0019	.0025	.0031	.0037
35.0	.0001	.0001	.0002	.0003	.0006	.0009	.0013	.0017	.0022	.0026
40.0	.0001	.0001	.0001	.0002	.0004	.0006	.0009	.0012	.0015	.0018
45.0	.0001	.0001	.0001	.0001	.0003	.0004	.0006	.0008	.0010	.0012
50.0	.0000	.0001	.0001	.0001	.0002	.0003	.0004	.0005	.0007	.0008
55.0	.0000	.0000	.0001	.0001	.0001	.0002	.0002	.0003	.0004	.0005
60.0	.0000	.0000	.0000	.0000	.0001	.0001	.0002	.0002	.0003	.0003
65.0	.0000	.0000	.0000	.0000	.0000	.0001	.0001	.0001	.0001	.0002
70.0	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0001	.0001	.0001
75.0	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000
80.0	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000
85.0	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000

α, deg \ θ_{xy}, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	.0120	.0105	.0089	.0072	.0054	.0038	.0023	.0011	.0003
2.0	.0118	.0103	.0087	.0071	.0054	.0037	.0023	.0011	.0003
4.0	.0113	.0100	.0085	.0069	.0053	.0037	.0022	.0011	.0003
6.0	.0108	.0096	.0082	.0067	.0052	.0036	.0022	.0010	.0003
8.0	.0103	.0092	.0079	.0065	.0050	.0035	.0022	.0010	.0003
10.0	.0098	.0088	.0077	.0063	.0049	.0035	.0021	.0010	.0003
12.0	.0093	.0084	.0074	.0061	.0048	.0034	.0021	.0010	.0003
15.0	.0084	.0078	.0069	.0058	.0046	.0033	.0020	.0010	.0003
20.0	.0070	.0067	.0061	.0052	.0042	.0030	.0019	.0009	.0003
25.0	.0056	.0056	.0052	.0046	.0038	.0028	.0018	.0009	.0002
30.0	.0041	.0044	.0043	.0040	.0033	.0025	.0016	.0008	.0002
35.0	.0030	.0033	.0034	.0033	.0028	.0022	.0015	.0008	.0002
40.0	.0021	.0023	.0025	.0026	.0024	.0019	.0013	.0007	.0002
45.0	.0014	.0016	.0018	.0019	.0018	.0016	.0011	.0006	.0002
50.0	.0010	.0011	.0012	.0013	.0013	.0012	.0009	.0005	.0002
55.0	.0006	.0007	.0008	.0009	.0009	.0009	.0007	.0004	.0001
60.0	.0004	.0004	.0005	.0005	.0006	.0006	.0005	.0003	.0001
65.0	.0002	.0002	.0003	.0003	.0003	.0003	.0003	.0003	.0001
70.0	.0001	.0001	.0001	.0002	.0002	.0002	.0002	.0002	.0001
75.0	.0000	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0000
80.0	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000
85.0	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000

$\beta_1 = -90^\circ$; $\beta_2 = 90^\circ$; $\beta = 15^\circ$

α, deg \ θ_{xy}, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.0865	.0599	.0528	.0504	.0495	.0487	.0471	.0448	.0419	.0385
2.0	.0749	.0527	.0472	.0456	.0460	.0462	.0452	.0433	.0408	.0376
4.0	.0580	.0407	.0373	.0370	.0390	.0411	.0414	.0404	.0385	.0358
6.0	.0471	.0313	.0294	.0298	.0326	.0360	.0375	.0374	.0361	.0340
8.0	.0321	.0244	.0233	.0239	.0270	.0309	.0335	.0343	.0337	.0321
10.0	.0249	.0192	.0186	.0194	.0223	.0261	.0296	.0312	.0313	.0302
12.0	.0197	.0154	.0150	.0158	.0185	.0221	.0256	.0281	.0288	.0282
15.0	.0143	.0113	.0111	.0118	.0142	.0172	.0204	.0233	.0250	.0252
20.0	.0091	.0072	.0071	.0076	.0093	.0115	.0140	.0164	.0186	.0201
25.0	.0062	.0049	.0049	.0052	.0064	.0079	.0097	.0116	.0134	.0150
30.0	.0045	.0035	.0034	.0037	.0045	.0055	.0068	.0082	.0096	.0109
35.0	.0034	.0026	.0025	.0027	.0032	.0040	.0048	.0058	.0068	.0078
40.0	.0027	.0020	.0019	.0020	.0023	.0028	.0035	.0041	.0049	.0056
45.0	.0021	.0016	.0015	.0015	.0017	.0021	.0025	.0029	.0034	.0039
50.0	.0018	.0013	.0012	.0012	.0013	.0015	.0017	.0020	.0024	.0027
55.0	.0015	.0010	.0009	.0009	.0010	.0011	.0012	.0014	.0016	.0018
60.0	.0013	.0009	.0007	.0007	.0007	.0008	.0009	.0010	.0011	.0012
65.0	.0011	.0007	.0006	.0005	.0005	.0006	.0006	.0006	.0007	.0007
70.0	.0010	.0006	.0005	.0004	.0004	.0004	.0004	.0004	.0004	.0004
75.0	.0009	.0005	.0004	.0003	.0003	.0003	.0003	.0003	.0002	.0002
80.0	.0008	.0005	.0003	.0003	.0002	.0002	.0002	.0001	.0001	.0001
85.0	.0008	.0004	.0003	.0002	.0002	.0001	.0001	.0001	.0001	.0001

α, deg \ θ_{xy}, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	.0346	.0302	.0255	.0206	.0157	.0109	.0066	.0031	.0008
2.0	.0339	.0297	.0252	.0204	.0155	.0108	.0065	.0031	.0008
4.0	.0325	.0287	.0244	.0199	.0152	.0106	.0064	.0030	.0008
6.0	.0311	.0276	.0237	.0194	.0149	.0104	.0063	.0030	.0008
8.0	.0297	.0265	.0229	.0188	.0145	.0102	.0062	.0030	.0008
10.0	.0282	.0254	.0220	.0182	.0141	.0100	.0061	.0029	.0008
12.0	.0266	.0243	.0212	.0176	.0137	.0098	.0060	.0029	.0008
15.0	.0243	.0225	.0199	.0167	.0131	.0094	.0058	.0028	.0008
20.0	.0203	.0193	.0175	.0150	.0120	.0087	.0055	.0027	.0007
25.0	.0161	.0161	.0151	.0133	.0108	.0080	.0051	.0025	.0007
30.0	.0120	.0127	.0125	.0114	.0095	.0072	.0047	.0024	.0007
35.0	.0087	.0095	.0098	.0094	.0082	.0064	.0042	.0022	.0006
40.0	.0063	.0069	.0073	.0074	.0068	.0055	.0037	.0020	.0006
45.0	.0044	.0048	.0052	.0054	.0053	.0045	.0032	.0017	.0005
50.0	.0030	.0033	.0036	.0038	.0038	.0036	.0027	.0015	.0005
55.0	.0020	.0022	.0024	.0025	.0026	.0026	.0021	.0013	.0004
60.0	.0013	.0014	.0015	.0016	.0017	.0017	.0015	.0010	.0003
65.0	.0008	.0008	.0009	.0009	.0010	.0010	.0010	.0007	.0003
70.0	.0005	.0005	.0005	.0005	.0005	.0005	.0005	.0005	.0002
75.0	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0001
80.0	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001
85.0	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000

TABLE III.- CONTINUED

(g) C_l. Continued.

$\phi_1 = 90^o$; $\phi_2 = 270^o$; $\beta = 2^o$

α, deg \ θ_{xy}, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	-.0108	-.0092	-.0086	-.0083	-.0079	-.0075	-.0071	-.0067	-.0062	-.0056
2.0	-.0139	-.0107	-.0097	-.0091	-.0084	-.0078	-.0074	-.0069	-.0063	-.0057
4.0	-.0201	-.0138	-.0117	-.0106	-.0093	-.0085	-.0079	-.0072	-.0066	-.0060
6.0	-.0262	-.0169	-.0137	-.0121	-.0103	-.0092	-.0084	-.0076	-.0069	-.0062
8.0	-.0323	-.0199	-.0157	-.0135	-.0112	-.0099	-.0089	-.0080	-.0072	-.0064
10.0	-.0384	-.0229	-.0176	-.0150	-.0121	-.0105	-.0093	-.0084	-.0075	-.0066
12.0	-.0444	-.0259	-.0196	-.0164	-.0130	-.0111	-.0098	-.0087	-.0077	-.0068
15.0	-.0533	-.0303	-.0225	-.0185	-.0144	-.0121	-.0105	-.0092	-.0081	-.0071
20.0	-.0679	-.0374	-.0271	-.0219	-.0165	-.0136	-.0116	-.0100	-.0087	-.0075
25.0	-.0819	-.0443	-.0316	-.0252	-.0185	-.0149	-.0125	-.0107	-.0092	-.0079
30.0	-.0953	-.0508	-.0358	-.0282	-.0204	-.0162	-.0134	-.0114	-.0097	-.0082
35.0	-.1080	-.0569	-.0397	-.0310	-.0221	-.0173	-.0142	-.0119	-.0100	-.0084
40.0	-.1199	-.0626	-.0434	-.0336	-.0236	-.0183	-.0149	-.0124	-.0103	-.0086
45.0	-.1309	-.0678	-.0467	-.0360	-.0250	-.0192	-.0154	-.0127	-.0106	-.0088
50.0	-.1408	-.0725	-.0496	-.0380	-.0261	-.0199	-.0159	-.0130	-.0107	-.0088
55.0	-.1497	-.0767	-.0522	-.0398	-.0271	-.0205	-.0162	-.0132	-.0108	-.0088
60.0	-.1574	-.0803	-.0544	-.0413	-.0279	-.0209	-.0164	-.0132	-.0107	-.0087
65.0	-.1640	-.0832	-.0561	-.0424	-.0284	-.0211	-.0165	-.0132	-.0106	-.0086
70.0	-.1693	-.0856	-.0575	-.0433	-.0288	-.0212	-.0164	-.0130	-.0104	-.0083
75.0	-.1733	-.0872	-.0584	-.0438	-.0289	-.0212	-.0163	-.0128	-.0102	-.0081
80.0	-.1760	-.0882	-.0588	-.0439	-.0288	-.0209	-.0160	-.0125	-.0099	-.0077
85.0	-.1773	-.0886	-.0588	-.0438	-.0285	-.0205	-.0155	-.0121	-.0094	-.0073

α, deg \ θ_{xy}, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	-.0050	-.0044	-.0037	-.0029	-.0022	-.0015	-.0009	-.0004	-.0001
2.0	-.0051	-.0044	-.0037	-.0030	-.0022	-.0015	-.0009	-.0004	-.0001
4.0	-.0053	-.0045	-.0038	-.0030	-.0023	-.0016	-.0009	-.0004	-.0001
6.0	-.0054	-.0047	-.0039	-.0031	-.0023	-.0016	-.0009	-.0004	-.0001
8.0	-.0056	-.0048	-.0040	-.0031	-.0023	-.0016	-.0010	-.0004	-.0001
10.0	-.0057	-.0049	-.0040	-.0032	-.0024	-.0016	-.0010	-.0004	-.0001
12.0	-.0059	-.0050	-.0041	-.0032	-.0024	-.0016	-.0010	-.0004	-.0001
15.0	-.0061	-.0051	-.0042	-.0033	-.0024	-.0016	-.0010	-.0004	-.0001
20.0	-.0064	-.0054	-.0043	-.0034	-.0025	-.0017	-.0010	-.0004	-.0001
25.0	-.0067	-.0055	-.0044	-.0034	-.0025	-.0017	-.0010	-.0004	-.0001
30.0	-.0069	-.0057	-.0045	-.0035	-.0025	-.0016	-.0009	-.0004	-.0001
35.0	-.0070	-.0057	-.0045	-.0035	-.0025	-.0016	-.0009	-.0004	-.0001
40.0	-.0071	-.0058	-.0045	-.0034	-.0024	-.0016	-.0009	-.0004	-.0001
45.0	-.0072	-.0058	-.0045	-.0034	-.0024	-.0015	-.0009	-.0004	-.0001
50.0	-.0072	-.0057	-.0044	-.0033	-.0023	-.0015	-.0008	-.0003	-.0001
55.0	-.0071	-.0056	-.0043	-.0032	-.0022	-.0014	-.0008	-.0003	-.0001
60.0	-.0070	-.0055	-.0042	-.0031	-.0021	-.0013	-.0007	-.0003	-.0001
65.0	-.0068	-.0053	-.0040	-.0029	-.0020	-.0012	-.0006	-.0003	-.0001
70.0	-.0066	-.0051	-.0038	-.0027	-.0018	-.0011	-.0006	-.0002	-.0000
75.0	-.0063	-.0049	-.0036	-.0026	-.0017	-.0010	-.0005	-.0002	-.0000
80.0	-.0060	-.0046	-.0034	-.0023	-.0015	-.0009	-.0004	-.0002	-.0000
85.0	-.0056	-.0042	-.0031	-.0021	-.0013	-.0008	-.0004	-.0001	-.0000

TABLE III.- CONTINUED

(g) C_l. Continued.

$\phi_1 = 90^0$; $\phi_2 = 270^0$; $\beta = 5^0$

θ_{xy}, deg / α, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	-.0274	-.0229	-.0215	-.0207	-.0196	-.0187	-.0177	-.0166	-.0153	-.0140
2.0	-.0348	-.0268	-.0241	-.0226	-.0208	-.0195	-.0183	-.0171	-.0157	-.0143
4.0	-.0500	-.0344	-.0291	-.0263	-.0232	-.0212	-.0196	-.0180	-.0165	-.0148
6.0	-.0653	-.0420	-.0341	-.0300	-.0256	-.0229	-.0208	-.0190	-.0172	-.0154
8.0	-.0805	-.0495	-.0390	-.0337	-.0279	-.0245	-.0220	-.0199	-.0179	-.0159
10.0	-.0956	-.0570	-.0439	-.0373	-.0302	-.0262	-.0232	-.0208	-.0186	-.0164
12.0	-.1106	-.0644	-.0488	-.0408	-.0325	-.0277	-.0244	-.0217	-.0192	-.0169
15.0	-.1328	-.0753	-.0559	-.0461	-.0358	-.0301	-.0261	-.0229	-.0202	-.0176
20.0	-.1690	-.0931	-.0675	-.0546	-.0411	-.0337	-.0288	-.0249	-.0216	-.0187
25.0	-.2040	-.1102	-.0786	-.0626	-.0461	-.0372	-.0312	-.0267	-.0229	-.0196
30.0	-.2373	-.1264	-.0891	-.0702	-.0507	-.0403	-.0334	-.0283	-.0241	-.0204
35.0	-.2689	-.1417	-.0989	-.0772	-.0550	-.0431	-.0354	-.0296	-.0250	-.0210
40.0	-.2985	-.1558	-.1079	-.0837	-.0588	-.0456	-.0371	-.0308	-.0257	-.0215
45.0	-.3257	-.1689	-.1162	-.0895	-.0622	-.0478	-.0385	-.0317	-.0263	-.0218
50.0	-.3505	-.1806	-.1235	-.0947	-.0651	-.0495	-.0396	-.0323	-.0266	-.0219
55.0	-.3726	-.1909	-.1299	-.0991	-.0675	-.0510	-.0404	-.0327	-.0268	-.0219
60.0	-.3919	-.1998	-.1353	-.1027	-.0694	-.0520	-.0409	-.0329	-.0267	-.0217
65.0	-.4082	-.2072	-.1397	-.1056	-.0708	-.0526	-.0411	-.0328	-.0265	-.0213
70.0	-.4214	-.2130	-.1430	-.1077	-.0716	-.0528	-.0409	-.0325	-.0260	-.0208
75.0	-.4314	-.2172	-.1453	-.1090	-.0719	-.0527	-.0405	-.0319	-.0253	-.0201
80.0	-.4381	-.2197	-.1464	-.1094	-.0717	-.0521	-.0398	-.0311	-.0245	-.0193
85.0	-.4415	-.2205	-.1464	-.1090	-.0709	-.0511	-.0387	-.0300	-.0235	-.0183

θ_{xy}, deg / α, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	-.0125	-.0108	-.0091	-.0073	-.0055	-.0038	-.0023	-.0011	-.0003
2.0	-.0127	-.0110	-.0092	-.0074	-.0056	-.0039	-.0023	-.0011	-.0003
4.0	-.0131	-.0113	-.0094	-.0076	-.0057	-.0039	-.0023	-.0011	-.0003
6.0	-.0135	-.0116	-.0097	-.0077	-.0058	-.0039	-.0024	-.0011	-.0003
8.0	-.0139	-.0119	-.0099	-.0078	-.0058	-.0040	-.0024	-.0011	-.0003
10.0	-.0143	-.0122	-.0101	-.0079	-.0059	-.0040	-.0024	-.0011	-.0003
12.0	-.0147	-.0124	-.0102	-.0081	-.0060	-.0040	-.0024	-.0011	-.0003
15.0	-.0152	-.0128	-.0105	-.0082	-.0061	-.0041	-.0024	-.0011	-.0003
20.0	-.0160	-.0133	-.0108	-.0084	-.0061	-.0041	-.0024	-.0011	-.0003
25.0	-.0166	-.0137	-.0111	-.0085	-.0062	-.0041	-.0024	-.0011	-.0003
30.0	-.0171	-.0141	-.0112	-.0086	-.0062	-.0041	-.0023	-.0010	-.0003
35.0	-.0175	-.0143	-.0113	-.0086	-.0062	-.0040	-.0023	-.0010	-.0002
40.0	-.0177	-.0144	-.0113	-.0085	-.0061	-.0039	-.0022	-.0010	-.0002
45.0	-.0179	-.0144	-.0112	-.0084	-.0059	-.0038	-.0021	-.0009	-.0002
50.0	-.0178	-.0143	-.0111	-.0082	-.0057	-.0037	-.0020	-.0009	-.0002
55.0	-.0177	-.0140	-.0108	-.0080	-.0055	-.0035	-.0019	-.0008	-.0002
60.0	-.0174	-.0137	-.0105	-.0076	-.0052	-.0033	-.0018	-.0007	-.0002
65.0	-.0170	-.0133	-.0100	-.0073	-.0049	-.0030	-.0016	-.0007	-.0001
70.0	-.0164	-.0127	-.0095	-.0068	-.0046	-.0028	-.0015	-.0006	-.0001
75.0	-.0158	-.0121	-.0090	-.0064	-.0042	-.0025	-.0013	-.0005	-.0001
80.0	-.0150	-.0114	-.0083	-.0058	-.0038	-.0022	-.0011	-.0004	-.0001
85.0	-.0140	-.0106	-.0076	-.0053	-.0034	-.0019	-.0009	-.0003	-.0001

$\phi_1 = 90^0$; $\phi_2 = 270^0$; $\beta = 15^0$

θ_{xy}, deg / α, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	-.1140	-.0762	-.0650	-.0604	-.0565	-.0537	-.0509	-.0477	-.0441	-.0402
2.0	-.1298	-.0851	-.0716	-.0655	-.0599	-.0562	-.0527	-.0491	-.0452	-.0410
4.0	-.1646	-.1043	-.0851	-.0760	-.0668	-.0611	-.0564	-.0519	-.0474	-.0427
6.0	-.2025	-.1244	-.0990	-.0865	-.0736	-.0659	-.0600	-.0546	-.0495	-.0443
8.0	-.2428	-.1450	-.1130	-.0970	-.0803	-.0707	-.0635	-.0573	-.0515	-.0458
10.0	-.2831	-.1659	-.1269	-.1074	-.0869	-.0753	-.0669	-.0599	-.0535	-.0473
12.0	-.3245	-.1867	-.1408	-.1176	-.0935	-.0799	-.0703	-.0624	-.0554	-.0487
15.0	-.3868	-.2179	-.1613	-.1327	-.1030	-.0866	-.0752	-.0661	-.0581	-.0508
20.0	-.4895	-.2687	-.1946	-.1571	-.1183	-.0971	-.0828	-.0717	-.0623	-.0539
25.0	-.5892	-.3177	-.2265	-.1803	-.1326	-.1070	-.0899	-.0769	-.0661	-.0565
30.0	-.6849	-.3643	-.2566	-.2021	-.1460	-.1160	-.0962	-.0814	-.0693	-.0588
35.0	-.7755	-.4082	-.2848	-.2224	-.1582	-.1241	-.1018	-.0853	-.0720	-.0605
40.0	-.8604	-.4490	-.3109	-.2410	-.1693	-.1313	-.1067	-.0886	-.0741	-.0619
45.0	-.9388	-.4864	-.3346	-.2578	-.1790	-.1375	-.1107	-.0912	-.0757	-.0627
50.0	-1.0101	-.5202	-.3557	-.2726	-.1874	-.1427	-.1139	-.0931	-.0767	-.0631
55.0	-1.0737	-.5500	-.3742	-.2853	-.1944	-.1467	-.1162	-.0943	-.0771	-.0630
60.0	-1.1292	-.5756	-.3898	-.2959	-.1999	-.1497	-.1177	-.0947	-.0770	-.0624
65.0	-1.1761	-.5968	-.4024	-.3042	-.2038	-.1515	-.1182	-.0945	-.0762	-.0614
70.0	-1.2141	-.6135	-.4120	-.3102	-.2063	-.1521	-.1179	-.0935	-.0749	-.0599
75.0	-1.2428	-.6255	-.4184	-.3138	-.2071	-.1516	-.1166	-.0918	-.0730	-.0579
80.0	-1.2621	-.6328	-.4217	-.3151	-.2064	-.1500	-.1145	-.0895	-.0705	-.0554
85.0	-1.2719	-.6353	-.4217	-.3139	-.2041	-.1472	-.1115	-.0864	-.0675	-.0526

θ_{xy}, deg / α, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	-.0359	-.0312	-.0262	-.0211	-.0160	-.0110	-.0066	-.0031	-.0008
2.0	-.0365	-.0317	-.0266	-.0213	-.0161	-.0111	-.0067	-.0031	-.0008
4.0	-.0378	-.0326	-.0272	-.0217	-.0164	-.0112	-.0067	-.0031	-.0008
6.0	-.0389	-.0334	-.0278	-.0222	-.0166	-.0114	-.0068	-.0031	-.0008
8.0	-.0401	-.0343	-.0284	-.0225	-.0168	-.0115	-.0068	-.0031	-.0008
10.0	-.0412	-.0351	-.0289	-.0229	-.0170	-.0116	-.0068	-.0032	-.0008
12.0	-.0423	-.0358	-.0294	-.0232	-.0172	-.0117	-.0069	-.0032	-.0008
15.0	-.0437	-.0369	-.0301	-.0236	-.0174	-.0118	-.0069	-.0031	-.0008
20.0	-.0459	-.0384	-.0311	-.0242	-.0177	-.0119	-.0069	-.0031	-.0008
25.0	-.0478	-.0396	-.0318	-.0246	-.0178	-.0119	-.0068	-.0031	-.0008
30.0	-.0493	-.0405	-.0323	-.0248	-.0178	-.0118	-.0067	-.0030	-.0007
35.0	-.0504	-.0411	-.0326	-.0248	-.0177	-.0116	-.0066	-.0029	-.0007
40.0	-.0511	-.0414	-.0326	-.0246	-.0175	-.0113	-.0064	-.0028	-.0007
45.0	-.0514	-.0414	-.0323	-.0242	-.0171	-.0110	-.0061	-.0026	-.0006
50.0	-.0514	-.0410	-.0318	-.0237	-.0165	-.0105	-.0058	-.0025	-.0006
55.0	-.0509	-.0404	-.0311	-.0229	-.0159	-.0100	-.0055	-.0023	-.0005
60.0	-.0501	-.0394	-.0301	-.0220	-.0151	-.0094	-.0051	-.0021	-.0005
65.0	-.0489	-.0382	-.0289	-.0209	-.0142	-.0088	-.0046	-.0019	-.0004
70.0	-.0473	-.0366	-.0275	-.0197	-.0132	-.0080	-.0042	-.0017	-.0004
75.0	-.0454	-.0348	-.0259	-.0183	-.0121	-.0072	-.0037	-.0014	-.0003
80.0	-.0431	-.0327	-.0240	-.0168	-.0109	-.0064	-.0032	-.0012	-.0002
85.0	-.0405	-.0304	-.0220	-.0151	-.0097	-.0055	-.0026	-.0009	-.0002

TABLE III.- CONTINUED

(g) C_l. Continued.

$\phi_1 = 105^o$; $\phi_2 = 255^o$; $\beta = 2^o$

α, deg \ θ_{xy}, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	-.0093	-.0076	-.0070	-.0067	-.0063	-.0060	-.0058	-.0055	-.0051	-.0047
2.0	-.0125	-.0092	-.0081	-.0075	-.0068	-.0064	-.0060	-.0057	-.0053	-.0049
4.0	-.0191	-.0125	-.0103	-.0091	-.0079	-.0072	-.0066	-.0061	-.0056	-.0051
6.0	-.0256	-.0157	-.0124	-.0107	-.0089	-.0079	-.0071	-.0065	-.0060	-.0054
8.0	-.0321	-.0189	-.0145	-.0123	-.0099	-.0086	-.0077	-.0069	-.0063	-.0056
10.0	-.0385	-.0221	-.0166	-.0138	-.0109	-.0093	-.0082	-.0073	-.0066	-.0059
12.0	-.0449	-.0253	-.0187	-.0153	-.0119	-.0100	-.0087	-.0077	-.0069	-.0061
15.0	-.0544	-.0300	-.0218	-.0176	-.0133	-.0110	-.0095	-.0083	-.0073	-.0064
20.0	-.0699	-.0376	-.0268	-.0213	-.0156	-.0126	-.0107	-.0092	-.0080	-.0069
25.0	-.0848	-.0449	-.0315	-.0248	-.0178	-.0142	-.0118	-.0100	-.0086	-.0074
30.0	-.0991	-.0519	-.0361	-.0281	-.0199	-.0156	-.0128	-.0108	-.0092	-.0078
35.0	-.1126	-.0586	-.0404	-.0312	-.0218	-.0169	-.0138	-.0115	-.0097	-.0081
40.0	-.1253	-.0647	-.0443	-.0341	-.0236	-.0181	-.0146	-.0121	-.0101	-.0084
45.0	-.1370	-.0703	-.0480	-.0367	-.0251	-.0191	-.0153	-.0126	-.0104	-.0086
50.0	-.1477	-.0755	-.0512	-.0390	-.0265	-.0200	-.0159	-.0130	-.0107	-.0088
55.0	-.1573	-.0800	-.0541	-.0410	-.0277	-.0208	-.0164	-.0133	-.0109	-.0089
60.0	-.1656	-.0840	-.0566	-.0428	-.0287	-.0214	-.0167	-.0135	-.0109	-.0089
65.0	-.1727	-.0873	-.0586	-.0441	-.0294	-.0218	-.0170	-.0136	-.0110	-.0089
70.0	-.1785	-.0899	-.0602	-.0452	-.0299	-.0220	-.0171	-.0136	-.0109	-.0087
75.0	-.1829	-.0919	-.0613	-.0459	-.0302	-.0221	-.0170	-.0134	-.0107	-.0085
80.0	-.1860	-.0931	-.0620	-.0463	-.0303	-.0220	-.0169	-.0132	-.0105	-.0083
85.0	-.1876	-.0937	-.0622	-.0463	-.0301	-.0218	-.0166	-.0129	-.0102	-.0080

α, deg \ θ_{xy}, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	-.0043	-.0038	-.0033	-.0027	-.0021	-.0015	-.0009	-.0004	-.0001
2.0	-.0044	-.0039	-.0033	-.0027	-.0021	-.0015	-.0009	-.0004	-.0001
4.0	-.0046	-.0041	-.0034	-.0028	-.0022	-.0015	-.0009	-.0004	-.0001
6.0	-.0048	-.0042	-.0035	-.0029	-.0022	-.0015	-.0009	-.0004	-.0001
8.0	-.0050	-.0043	-.0036	-.0029	-.0022	-.0015	-.0009	-.0004	-.0001
10.0	-.0052	-.0045	-.0037	-.0030	-.0023	-.0016	-.0009	-.0004	-.0001
12.0	-.0053	-.0046	-.0038	-.0031	-.0023	-.0016	-.0009	-.0004	-.0001
15.0	-.0056	-.0048	-.0039	-.0031	-.0023	-.0016	-.0010	-.0004	-.0001
20.0	-.0060	-.0050	-.0041	-.0032	-.0024	-.0016	-.0010	-.0004	-.0001
25.0	-.0063	-.0053	-.0043	-.0033	-.0024	-.0016	-.0010	-.0004	-.0001
30.0	-.0066	-.0054	-.0044	-.0034	-.0025	-.0016	-.0009	-.0004	-.0001
35.0	-.0068	-.0056	-.0045	-.0034	-.0025	-.0016	-.0009	-.0004	-.0001
40.0	-.0070	-.0057	-.0045	-.0034	-.0025	-.0016	-.0009	-.0004	-.0001
45.0	-.0071	-.0058	-.0045	-.0034	-.0024	-.0016	-.0009	-.0004	-.0001
50.0	-.0072	-.0058	-.0045	-.0034	-.0024	-.0015	-.0008	-.0004	-.0001
55.0	-.0072	-.0057	-.0044	-.0033	-.0023	-.0015	-.0008	-.0003	-.0001
60.0	-.0072	-.0057	-.0044	-.0032	-.0022	-.0014	-.0007	-.0003	-.0001
65.0	-.0071	-.0056	-.0042	-.0031	-.0021	-.0013	-.0007	-.0003	-.0001
70.0	-.0069	-.0054	-.0041	-.0029	-.0020	-.0012	-.0006	-.0002	-.0001
75.0	-.0067	-.0052	-.0039	-.0028	-.0018	-.0011	-.0006	-.0002	-.0000
80.0	-.0065	-.0050	-.0037	-.0026	-.0017	-.0010	-.0005	-.0002	-.0000
85.0	-.0062	-.0047	-.0034	-.0024	-.0015	-.0009	-.0004	-.0001	-.0000

TABLE III.- CONTINUED

(g) C_l. Continued.

$\beta_1 = 105^0$; $\beta_2 = 255^0$; $\beta = 5^0$

θ_{xy}, α, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	-.0231	-.0189	-.0175	-.0167	-.0158	-.0150	-.0144	-.0136	-.0128	-.0118
2.0	-.0312	-.0230	-.0202	-.0187	-.0171	-.0160	-.0150	-.0141	-.0132	-.0121
4.0	-.0475	-.0311	-.0255	-.0227	-.0196	-.0178	-.0164	-.0152	-.0140	-.0128
6.0	-.0637	-.0391	-.0308	-.0266	-.0221	-.0196	-.0178	-.0163	-.0148	-.0134
8.0	-.0798	-.0471	-.0361	-.0305	-.0246	-.0214	-.0191	-.0173	-.0156	-.0140
10.0	-.0959	-.0551	-.0413	-.0344	-.0271	-.0232	-.0204	-.0183	-.0164	-.0146
12.0	-.1118	-.0629	-.0465	-.0382	-.0296	-.0249	-.0217	-.0193	-.0171	-.0152
15.0	-.1354	-.0746	-.0542	-.0438	-.0332	-.0274	-.0236	-.0207	-.0182	-.0160
20.0	-.1739	-.0936	-.0666	-.0530	-.0389	-.0315	-.0266	-.0229	-.0199	-.0173
25.0	-.2111	-.1118	-.0785	-.0617	-.0444	-.0353	-.0294	-.0250	-.0215	-.0184
30.0	-.2467	-.1293	-.0899	-.0699	-.0496	-.0389	-.0319	-.0269	-.0229	-.0194
35.0	-.2804	-.1457	-.1005	-.0777	-.0543	-.0421	-.0343	-.0286	-.0241	-.0203
40.0	-.3119	-.1610	-.1104	-.0848	-.0587	-.0450	-.0363	-.0300	-.0251	-.0210
45.0	-.3411	-.1751	-.1194	-.0913	-.0626	-.0476	-.0381	-.0313	-.0259	-.0215
50.0	-.3677	-.1879	-.1275	-.0971	-.0660	-.0499	-.0396	-.0323	-.0266	-.0219
55.0	-.3915	-.1992	-.1347	-.1022	-.0690	-.0517	-.0408	-.0330	-.0270	-.0221
60.0	-.4123	-.2090	-.1408	-.1064	-.0714	-.0532	-.0417	-.0335	-.0272	-.0222
65.0	-.4300	-.2172	-.1459	-.1099	-.0732	-.0542	-.0422	-.0338	-.0273	-.0220
70.0	-.4444	-.2238	-.1498	-.1125	-.0745	-.0549	-.0425	-.0337	-.0271	-.0217
75.0	-.4554	-.2287	-.1527	-.1143	-.0753	-.0551	-.0424	-.0335	-.0267	-.0213
80.0	-.4630	-.2318	-.1543	-.1152	-.0755	-.0549	-.0420	-.0330	-.0261	-.0207
85.0	-.4670	-.2332	-.1548	-.1152	-.0750	-.0543	-.0413	-.0322	-.0253	-.0199

θ_{xy}, α, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	-.0107	-.0095	-.0082	-.0067	-.0052	-.0037	-.0022	-.0011	-.0003
2.0	-.0110	-.0097	-.0083	-.0068	-.0053	-.0037	-.0023	-.0011	-.0003
4.0	-.0115	-.0101	-.0086	-.0070	-.0054	-.0038	-.0023	-.0011	-.0003
6.0	-.0120	-.0104	-.0088	-.0072	-.0055	-.0038	-.0023	-.0011	-.0003
8.0	-.0124	-.0108	-.0091	-.0073	-.0056	-.0039	-.0023	-.0011	-.0003
10.0	-.0129	-.0111	-.0093	-.0075	-.0056	-.0039	-.0023	-.0011	-.0003
12.0	-.0133	-.0114	-.0095	-.0076	-.0057	-.0039	-.0024	-.0011	-.0003
15.0	-.0139	-.0119	-.0098	-.0078	-.0058	-.0040	-.0024	-.0011	-.0003
20.0	-.0148	-.0125	-.0103	-.0081	-.0060	-.0041	-.0024	-.0011	-.0003
25.0	-.0157	-.0131	-.0106	-.0083	-.0061	-.0041	-.0024	-.0011	-.0003
30.0	-.0164	-.0136	-.0109	-.0084	-.0061	-.0041	-.0024	-.0010	-.0003
35.0	-.0169	-.0139	-.0111	-.0085	-.0061	-.0041	-.0023	-.0010	-.0002
40.0	-.0174	-.0142	-.0112	-.0085	-.0061	-.0040	-.0023	-.0010	-.0002
45.0	-.0177	-.0143	-.0113	-.0085	-.0060	-.0039	-.0022	-.0009	-.0002
50.0	-.0179	-.0144	-.0112	-.0084	-.0059	-.0038	-.0021	-.0009	-.0002
55.0	-.0179	-.0143	-.0111	-.0082	-.0057	-.0036	-.0020	-.0008	-.0002
60.0	-.0179	-.0141	-.0109	-.0080	-.0055	-.0034	-.0018	-.0008	-.0002
65.0	-.0176	-.0138	-.0105	-.0077	-.0052	-.0032	-.0017	-.0007	-.0001
70.0	-.0173	-.0135	-.0102	-.0073	-.0049	-.0030	-.0016	-.0006	-.0001
75.0	-.0168	-.0130	-.0097	-.0069	-.0046	-.0028	-.0014	-.0005	-.0001
80.0	-.0162	-.0124	-.0092	-.0065	-.0042	-.0025	-.0012	-.0004	-.0001
85.0	-.0156	-.0117	-.0086	-.0059	-.0038	-.0022	-.0010	-.0004	-.0001

$\beta_1 = 105^0$; $\beta_2 = 255^0$; $\beta = 15^0$

θ_{xy}, α, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	-.0860	-.0590	-.0513	-.0482	-.0454	-.0433	-.0413	-.0392	-.0368	-.0340
2.0	-.1035	-.0690	-.0586	-.0539	-.0491	-.0460	-.0433	-.0407	-.0380	-.0350
4.0	-.1426	-.0903	-.0735	-.0653	-.0565	-.0513	-.0473	-.0438	-.0404	-.0368
6.0	-.1855	-.1128	-.0888	-.0766	-.0637	-.0565	-.0512	-.0468	-.0427	-.0386
8.0	-.2303	-.1357	-.1040	-.0878	-.0710	-.0616	-.0551	-.0497	-.0450	-.0404
10.0	-.2761	-.1585	-.1190	-.0989	-.0781	-.0667	-.0588	-.0526	-.0472	-.0421
12.0	-.3219	-.1812	-.1339	-.1099	-.0851	-.0716	-.0625	-.0555	-.0493	-.0437
15.0	-.3899	-.2148	-.1560	-.1262	-.0955	-.0790	-.0680	-.0596	-.0525	-.0461
20.0	-.5007	-.2695	-.1918	-.1525	-.1121	-.0906	-.0766	-.0660	-.0574	-.0498
25.0	-.6078	-.3220	-.2261	-.1776	-.1279	-.1016	-.0846	-.0720	-.0618	-.0531
30.0	-.7102	-.3722	-.2587	-.2014	-.1427	-.1119	-.0920	-.0774	-.0658	-.0559
35.0	-.8072	-.4195	-.2894	-.2237	-.1565	-.1212	-.0987	-.0823	-.0693	-.0584
40.0	-.8981	-.4636	-.3178	-.2442	-.1690	-.1297	-.1046	-.0865	-.0723	-.0604
45.0	-.9822	-.5042	-.3438	-.2629	-.1803	-.1372	-.1097	-.0900	-.0747	-.0620
50.0	-1.0588	-.5409	-.3672	-.2796	-.1902	-.1436	-.1140	-.0929	-.0765	-.0631
55.0	-1.1273	-.5735	-.3878	-.2941	-.1986	-.1489	-.1175	-.0951	-.0778	-.0637
60.0	-1.1872	-.6018	-.4055	-.3065	-.2055	-.1531	-.1200	-.0965	-.0785	-.0638
65.0	-1.2381	-.6255	-.4201	-.3164	-.2109	-.1561	-.1216	-.0972	-.0785	-.0634
70.0	-1.2796	-.6444	-.4314	-.3240	-.2146	-.1580	-.1223	-.0972	-.0780	-.0626
75.0	-1.3113	-.6584	-.4395	-.3291	-.2168	-.1586	-.1221	-.0964	-.0769	-.0613
80.0	-1.3333	-.6674	-.4443	-.3317	-.2173	-.1580	-.1209	-.0949	-.0752	-.0595
85.0	-1.3447	-.6714	-.4456	-.3318	-.2161	-.1563	-.1189	-.0927	-.0729	-.0572

θ_{xy}, α, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	-.0309	-.0274	-.0236	-.0194	-.0150	-.0106	-.0065	-.0031	-.0008
2.0	-.0317	-.0280	-.0240	-.0196	-.0151	-.0106	-.0065	-.0031	-.0008
4.0	-.0331	-.0290	-.0247	-.0201	-.0154	-.0108	-.0066	-.0031	-.0008
6.0	-.0344	-.0300	-.0254	-.0206	-.0157	-.0110	-.0066	-.0031	-.0008
8.0	-.0358	-.0310	-.0261	-.0211	-.0160	-.0111	-.0067	-.0031	-.0008
10.0	-.0370	-.0320	-.0268	-.0215	-.0163	-.0112	-.0067	-.0031	-.0008
12.0	-.0383	-.0329	-.0274	-.0219	-.0165	-.0114	-.0068	-.0031	-.0008
15.0	-.0400	-.0341	-.0283	-.0225	-.0168	-.0115	-.0068	-.0031	-.0008
20.0	-.0427	-.0360	-.0295	-.0233	-.0172	-.0117	-.0069	-.0031	-.0008
25.0	-.0451	-.0377	-.0306	-.0239	-.0175	-.0118	-.0068	-.0031	-.0008
30.0	-.0471	-.0390	-.0314	-.0243	-.0177	-.0118	-.0068	-.0030	-.0007
35.0	-.0488	-.0401	-.0320	-.0245	-.0177	-.0117	-.0067	-.0029	-.0007
40.0	-.0501	-.0408	-.0323	-.0246	-.0176	-.0115	-.0065	-.0028	-.0007
45.0	-.0510	-.0413	-.0324	-.0245	-.0173	-.0112	-.0063	-.0027	-.0006
50.0	-.0515	-.0414	-.0323	-.0241	-.0170	-.0109	-.0060	-.0025	-.0006
55.0	-.0517	-.0412	-.0319	-.0236	-.0165	-.0104	-.0057	-.0024	-.0005
60.0	-.0514	-.0407	-.0312	-.0230	-.0158	-.0099	-.0053	-.0022	-.0005
65.0	-.0508	-.0399	-.0304	-.0221	-.0151	-.0093	-.0049	-.0020	-.0004
70.0	-.0497	-.0387	-.0293	-.0211	-.0142	-.0086	-.0045	-.0018	-.0004
75.0	-.0483	-.0373	-.0279	-.0199	-.0132	-.0079	-.0040	-.0015	-.0003
80.0	-.0465	-.0356	-.0264	-.0186	-.0122	-.0071	-.0035	-.0013	-.0002
85.0	-.0444	-.0337	-.0246	-.0171	-.0110	-.0063	-.0030	-.0010	-.0002

TABLE III.- CONTINUED

(g) C_l. Continued.

$\phi_1 = 120^o$; $\phi_2 = 240^o$; $\beta = 2^o$

θ_{xy}, deg / α, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	-.0048	-.0038	-.0035	-.0033	-.0031	-.0030	-.0028	-.0027	-.0026	-.0024
2.0	-.0068	-.0048	-.0041	-.0038	-.0034	-.0032	-.0030	-.0029	-.0027	-.0025
4.0	-.0106	-.0067	-.0054	-.0047	-.0040	-.0036	-.0034	-.0031	-.0029	-.0027
6.0	-.0145	-.0087	-.0067	-.0057	-.0046	-.0041	-.0037	-.0034	-.0031	-.0028
8.0	-.0184	-.0106	-.0079	-.0066	-.0052	-.0045	-.0040	-.0036	-.0033	-.0030
10.0	-.0222	-.0125	-.0092	-.0076	-.0058	-.0049	-.0043	-.0039	-.0035	-.0031
12.0	-.0260	-.0144	-.0105	-.0085	-.0064	-.0054	-.0047	-.0041	-.0037	-.0033
15.0	-.0317	-.0172	-.0123	-.0098	-.0073	-.0060	-.0051	-.0045	-.0040	-.0035
20.0	-.0409	-.0217	-.0153	-.0120	-.0087	-.0070	-.0059	-.0051	-.0044	-.0038
25.0	-.0498	-.0261	-.0182	-.0142	-.0101	-.0079	-.0066	-.0056	-.0048	-.0041
30.0	-.0583	-.0303	-.0209	-.0162	-.0113	-.0088	-.0072	-.0061	-.0052	-.0044
35.0	-.0664	-.0343	-.0235	-.0180	-.0125	-.0096	-.0078	-.0065	-.0055	-.0047
40.0	-.0740	-.0380	-.0259	-.0198	-.0136	-.0104	-.0083	-.0069	-.0058	-.0049
45.0	-.0810	-.0414	-.0281	-.0214	-.0146	-.0110	-.0088	-.0072	-.0060	-.0050
50.0	-.0874	-.0445	-.0301	-.0228	-.0154	-.0116	-.0092	-.0075	-.0062	-.0052
55.0	-.0932	-.0472	-.0318	-.0241	-.0162	-.0121	-.0096	-.0078	-.0064	-.0052
60.0	-.0982	-.0496	-.0334	-.0252	-.0168	-.0125	-.0098	-.0079	-.0065	-.0053
65.0	-.1025	-.0516	-.0346	-.0260	-.0173	-.0128	-.0100	-.0080	-.0065	-.0053
70.0	-.1060	-.0533	-.0356	-.0267	-.0177	-.0130	-.0101	-.0081	-.0065	-.0053
75.0	-.1087	-.0545	-.0364	-.0272	-.0179	-.0131	-.0102	-.0081	-.0065	-.0052
80.0	-.1105	-.0553	-.0368	-.0275	-.0180	-.0132	-.0101	-.0080	-.0064	-.0051
85.0	-.1115	-.0557	-.0370	-.0276	-.0180	-.0131	-.0100	-.0079	-.0062	-.0050

θ_{xy}, deg / α, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	-.0022	-.0020	-.0018	-.0015	-.0012	-.0009	-.0005	-.0003	-.0001
2.0	-.0023	-.0021	-.0018	-.0015	-.0012	-.0009	-.0005	-.0003	-.0001
4.0	-.0024	-.0022	-.0019	-.0016	-.0012	-.0009	-.0005	-.0003	-.0001
6.0	-.0026	-.0023	-.0020	-.0016	-.0013	-.0009	-.0006	-.0003	-.0001
8.0	-.0027	-.0024	-.0020	-.0017	-.0013	-.0009	-.0006	-.0003	-.0001
10.0	-.0028	-.0024	-.0021	-.0017	-.0013	-.0009	-.0006	-.0003	-.0001
12.0	-.0029	-.0025	-.0021	-.0017	-.0013	-.0009	-.0006	-.0003	-.0001
15.0	-.0031	-.0026	-.0022	-.0018	-.0014	-.0010	-.0006	-.0003	-.0001
20.0	-.0033	-.0028	-.0024	-.0019	-.0014	-.0010	-.0006	-.0003	-.0001
25.0	-.0035	-.0030	-.0025	-.0019	-.0015	-.0010	-.0006	-.0003	-.0001
30.0	-.0037	-.0031	-.0026	-.0020	-.0015	-.0010	-.0006	-.0003	-.0001
35.0	-.0039	-.0032	-.0026	-.0020	-.0015	-.0010	-.0006	-.0003	-.0001
40.0	-.0041	-.0033	-.0027	-.0021	-.0015	-.0010	-.0006	-.0002	-.0001
45.0	-.0042	-.0034	-.0027	-.0021	-.0015	-.0010	-.0006	-.0002	-.0001
50.0	-.0042	-.0034	-.0027	-.0021	-.0015	-.0010	-.0005	-.0002	-.0001
55.0	-.0043	-.0035	-.0027	-.0020	-.0014	-.0009	-.0005	-.0002	-.0000
60.0	-.0043	-.0034	-.0027	-.0020	-.0014	-.0009	-.0005	-.0002	-.0000
65.0	-.0043	-.0034	-.0026	-.0019	-.0013	-.0008	-.0004	-.0002	-.0000
70.0	-.0042	-.0033	-.0026	-.0019	-.0013	-.0008	-.0004	-.0002	-.0000
75.0	-.0042	-.0033	-.0025	-.0018	-.0012	-.0007	-.0004	-.0001	-.0000
80.0	-.0040	-.0031	-.0024	-.0017	-.0011	-.0007	-.0003	-.0001	-.0000
85.0	-.0039	-.0030	-.0022	-.0016	-.0010	-.0006	-.0003	-.0001	-.0000

TABLE III.- CONTINUED

(g) C_l. Continued.

$\beta_1 = 135^0$; $\beta_2 = 225^0$; $\beta = 2^0$

θ_{xy}, deg / α, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	-.0022	-.0017	-.0015	-.0015	-.0014	-.0013	-.0012	-.0012	-.0011	-.0011
2.0	-.0031	-.0022	-.0018	-.0017	-.0015	-.0014	-.0013	-.0013	-.0012	-.0011
4.0	-.0049	-.0031	-.0024	-.0021	-.0018	-.0016	-.0015	-.0014	-.0013	-.0012
6.0	-.0068	-.0040	-.0030	-.0026	-.0021	-.0018	-.0016	-.0015	-.0014	-.0013
8.0	-.0086	-.0049	-.0036	-.0030	-.0024	-.0020	-.0018	-.0016	-.0015	-.0013
10.0	-.0104	-.0058	-.0042	-.0035	-.0027	-.0022	-.0020	-.0018	-.0016	-.0014
12.0	-.0122	-.0067	-.0048	-.0039	-.0029	-.0024	-.0021	-.0019	-.0017	-.0015
15.0	-.0149	-.0080	-.0057	-.0045	-.0034	-.0027	-.0023	-.0020	-.0018	-.0016
20.0	-.0193	-.0102	-.0071	-.0056	-.0040	-.0032	-.0027	-.0023	-.0020	-.0018
25.0	-.0235	-.0123	-.0085	-.0066	-.0047	-.0037	-.0030	-.0026	-.0022	-.0019
30.0	-.0275	-.0143	-.0098	-.0076	-.0053	-.0041	-.0033	-.0028	-.0024	-.0020
35.0	-.0314	-.0161	-.0110	-.0085	-.0058	-.0045	-.0036	-.0030	-.0026	-.0022
40.0	-.0350	-.0179	-.0122	-.0093	-.0064	-.0049	-.0039	-.0032	-.0027	-.0023
45.0	-.0383	-.0195	-.0132	-.0101	-.0068	-.0052	-.0041	-.0034	-.0028	-.0024
50.0	-.0413	-.0210	-.0142	-.0107	-.0073	-.0055	-.0043	-.0035	-.0029	-.0024
55.0	-.0441	-.0223	-.0150	-.0114	-.0076	-.0057	-.0045	-.0037	-.0030	-.0025
60.0	-.0465	-.0235	-.0158	-.0119	-.0079	-.0059	-.0046	-.0037	-.0031	-.0025
65.0	-.0485	-.0244	-.0164	-.0123	-.0082	-.0061	-.0047	-.0038	-.0031	-.0025
70.0	-.0502	-.0252	-.0168	-.0126	-.0084	-.0062	-.0048	-.0038	-.0031	-.0025
75.0	-.0514	-.0258	-.0172	-.0129	-.0085	-.0062	-.0048	-.0038	-.0031	-.0025
80.0	-.0523	-.0262	-.0174	-.0130	-.0085	-.0062	-.0048	-.0038	-.0031	-.0025
85.0	-.0528	-.0264	-.0175	-.0131	-.0085	-.0062	-.0048	-.0038	-.0030	-.0024

θ_{xy}, deg / α, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	-.0010	-.0009	-.0008	-.0007	-.0006	-.0004	-.0003	-.0001	-.0000
2.0	-.0010	-.0009	-.0008	-.0007	-.0006	-.0004	-.0003	-.0001	-.0000
4.0	-.0011	-.0010	-.0009	-.0007	-.0006	-.0004	-.0003	-.0001	-.0000
6.0	-.0012	-.0010	-.0009	-.0007	-.0006	-.0004	-.0003	-.0001	-.0000
8.0	-.0012	-.0011	-.0009	-.0008	-.0006	-.0004	-.0003	-.0001	-.0000
10.0	-.0013	-.0011	-.0010	-.0008	-.0006	-.0004	-.0003	-.0001	-.0000
12.0	-.0013	-.0012	-.0010	-.0008	-.0006	-.0004	-.0003	-.0001	-.0000
15.0	-.0014	-.0012	-.0010	-.0008	-.0006	-.0005	-.0003	-.0001	-.0000
20.0	-.0015	-.0013	-.0011	-.0009	-.0007	-.0005	-.0003	-.0001	-.0000
25.0	-.0016	-.0014	-.0012	-.0009	-.0007	-.0005	-.0003	-.0001	-.0000
30.0	-.0017	-.0015	-.0012	-.0010	-.0007	-.0005	-.0003	-.0001	-.0000
35.0	-.0018	-.0015	-.0012	-.0010	-.0007	-.0005	-.0003	-.0001	-.0000
40.0	-.0019	-.0016	-.0013	-.0010	-.0007	-.0005	-.0003	-.0001	-.0000
45.0	-.0020	-.0016	-.0013	-.0010	-.0007	-.0005	-.0003	-.0001	-.0000
50.0	-.0020	-.0016	-.0013	-.0010	-.0007	-.0005	-.0003	-.0001	-.0000
55.0	-.0020	-.0017	-.0013	-.0010	-.0007	-.0005	-.0003	-.0001	-.0000
60.0	-.0021	-.0017	-.0013	-.0010	-.0007	-.0004	-.0002	-.0001	-.0000
65.0	-.0021	-.0016	-.0013	-.0009	-.0007	-.0004	-.0002	-.0001	-.0000
70.0	-.0020	-.0016	-.0012	-.0009	-.0006	-.0004	-.0002	-.0001	-.0000
75.0	-.0020	-.0016	-.0012	-.0009	-.0006	-.0004	-.0002	-.0001	-.0000
80.0	-.0020	-.0015	-.0012	-.0008	-.0006	-.0003	-.0002	-.0001	-.0000
85.0	-.0019	-.0015	-.0011	-.0008	-.0005	-.0003	-.0002	-.0001	-.0000

TABLE III. - CONTINUED

(g) C_l. Continued.

$\beta_1 = 120^0$; $\beta_2 = 240^0$; $\beta = 5^0$

θ_{xy}, deg / α, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	-.0120	-.0095	-.0087	-.0082	-.0077	-.0074	-.0071	-.0068	-.0064	-.0060
2.0	-.0168	-.0119	-.0103	-.0094	-.0085	-.0080	-.0075	-.0071	-.0067	-.0062
4.0	-.0265	-.0168	-.0135	-.0118	-.0100	-.0091	-.0084	-.0078	-.0072	-.0066
6.0	-.0362	-.0215	-.0166	-.0141	-.0116	-.0101	-.0092	-.0084	-.0077	-.0070
8.0	-.0458	-.0263	-.0198	-.0165	-.0131	-.0112	-.0100	-.0090	-.0082	-.0074
10.0	-.0553	-.0311	-.0229	-.0188	-.0146	-.0123	-.0108	-.0097	-.0087	-.0078
12.0	-.0648	-.0358	-.0260	-.0211	-.0160	-.0134	-.0116	-.0103	-.0092	-.0082
15.0	-.0789	-.0427	-.0306	-.0245	-.0182	-.0149	-.0128	-.0112	-.0099	-.0087
20.0	-.1018	-.0541	-.0381	-.0300	-.0217	-.0174	-.0146	-.0126	-.0109	-.0095
25.0	-.1240	-.0650	-.0452	-.0352	-.0251	-.0197	-.0163	-.0139	-.0119	-.0103
30.0	-.1452	-.0754	-.0520	-.0402	-.0282	-.0219	-.0180	-.0151	-.0129	-.0110
35.0	-.1654	-.0853	-.0585	-.0449	-.0311	-.0240	-.0195	-.0162	-.0137	-.0116
40.0	-.1842	-.0945	-.0644	-.0493	-.0338	-.0258	-.0208	-.0172	-.0144	-.0121
45.0	-.2017	-.1030	-.0699	-.0532	-.0363	-.0275	-.0220	-.0180	-.0150	-.0125
50.0	-.2176	-.1107	-.0749	-.0568	-.0384	-.0289	-.0230	-.0187	-.0155	-.0128
55.0	-.2319	-.1176	-.0793	-.0599	-.0403	-.0302	-.0238	-.0193	-.0159	-.0131
60.0	-.2444	-.1235	-.0830	-.0626	-.0419	-.0312	-.0245	-.0197	-.0161	-.0132
65.0	-.2551	-.1286	-.0862	-.0648	-.0431	-.0319	-.0249	-.0200	-.0162	-.0132
70.0	-.2638	-.1326	-.0887	-.0665	-.0441	-.0325	-.0252	-.0201	-.0162	-.0131
75.0	-.2705	-.1357	-.0905	-.0677	-.0446	-.0327	-.0253	-.0201	-.0161	-.0130
80.0	-.2751	-.1377	-.0916	-.0684	-.0449	-.0328	-.0252	-.0199	-.0159	-.0127
85.0	-.2777	-.1386	-.0921	-.0686	-.0448	-.0325	-.0249	-.0195	-.0155	-.0123

θ_{xy}, deg / α, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	-.0058	-.0050	-.0044	-.0037	-.0030	-.0021	-.0013	-.0006	-.0002
2.0	-.0057	-.0052	-.0045	-.0038	-.0030	-.0022	-.0013	-.0006	-.0002
4.0	-.0060	-.0054	-.0047	-.0039	-.0031	-.0022	-.0014	-.0007	-.0002
6.0	-.0064	-.0056	-.0049	-.0040	-.0031	-.0022	-.0014	-.0007	-.0002
8.0	-.0066	-.0059	-.0050	-.0041	-.0032	-.0023	-.0014	-.0007	-.0002
10.0	-.0069	-.0061	-.0052	-.0042	-.0033	-.0023	-.0014	-.0007	-.0002
12.0	-.0072	-.0063	-.0053	-.0043	-.0033	-.0023	-.0014	-.0007	-.0002
15.0	-.0076	-.0066	-.0055	-.0045	-.0034	-.0024	-.0014	-.0007	-.0002
20.0	-.0083	-.0070	-.0059	-.0047	-.0035	-.0024	-.0015	-.0007	-.0002
25.0	-.0088	-.0074	-.0061	-.0049	-.0036	-.0025	-.0015	-.0007	-.0002
30.0	-.0093	-.0078	-.0064	-.0050	-.0037	-.0025	-.0015	-.0007	-.0002
35.0	-.0097	-.0081	-.0065	-.0051	-.0037	-.0025	-.0014	-.0006	-.0002
40.0	-.0101	-.0083	-.0067	-.0051	-.0037	-.0025	-.0014	-.0006	-.0001
45.0	-.0104	-.0085	-.0067	-.0052	-.0037	-.0024	-.0014	-.0006	-.0001
50.0	-.0106	-.0086	-.0068	-.0051	-.0037	-.0024	-.0013	-.0006	-.0001
55.0	-.0107	-.0086	-.0067	-.0051	-.0036	-.0023	-.0013	-.0005	-.0001
60.0	-.0107	-.0086	-.0067	-.0050	-.0035	-.0022	-.0012	-.0005	-.0001
65.0	-.0107	-.0085	-.0065	-.0048	-.0033	-.0021	-.0011	-.0004	-.0001
70.0	-.0105	-.0083	-.0064	-.0047	-.0032	-.0020	-.0010	-.0004	-.0001
75.0	-.0103	-.0081	-.0061	-.0044	-.0030	-.0018	-.0009	-.0004	-.0001
80.0	-.0101	-.0078	-.0059	-.0042	-.0028	-.0017	-.0008	-.0003	-.0001
85.0	-.0097	-.0075	-.0056	-.0039	-.0026	-.0015	-.0007	-.0003	-.0000

$\beta_1 = 120^0$; $\beta_2 = 240^0$; $\beta = 15^0$

θ_{xy}, deg / α, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	-.0382	-.0278	-.0250	-.0237	-.0223	-.0213	-.0204	-.0195	-.0185	-.0174
2.0	-.0500	-.0344	-.0296	-.0272	-.0245	-.0229	-.0216	-.0205	-.0193	-.0180
4.0	-.0764	-.0482	-.0388	-.0340	-.0289	-.0261	-.0240	-.0223	-.0207	-.0191
6.0	-.1041	-.0620	-.0479	-.0407	-.0333	-.0292	-.0264	-.0242	-.0222	-.0203
8.0	-.1318	-.0758	-.0570	-.0475	-.0376	-.0323	-.0288	-.0260	-.0236	-.0214
10.0	-.1592	-.0894	-.0660	-.0541	-.0419	-.0354	-.0311	-.0278	-.0250	-.0225
12.0	-.1865	-.1030	-.0749	-.0607	-.0462	-.0384	-.0334	-.0296	-.0264	-.0235
15.0	-.2271	-.1230	-.0881	-.0705	-.0524	-.0429	-.0367	-.0321	-.0284	-.0250
20.0	-.2932	-.1557	-.1096	-.0863	-.0625	-.0501	-.0421	-.0362	-.0315	-.0275
25.0	-.3570	-.1871	-.1302	-.1014	-.0721	-.0568	-.0471	-.0400	-.0344	-.0296
30.0	-.4182	-.2172	-.1498	-.1158	-.0812	-.0632	-.0517	-.0435	-.0370	-.0316
35.0	-.4761	-.2456	-.1683	-.1293	-.0897	-.0691	-.0560	-.0467	-.0394	-.0333
40.0	-.5305	-.2721	-.1855	-.1419	-.0974	-.0744	-.0598	-.0495	-.0414	-.0348
45.0	-.5808	-.2965	-.2013	-.1533	-.1045	-.0792	-.0632	-.0519	-.0432	-.0360
50.0	-.6268	-.3187	-.2156	-.1636	-.1107	-.0833	-.0661	-.0540	-.0446	-.0370
55.0	-.6677	-.3385	-.2282	-.1726	-.1161	-.0869	-.0685	-.0556	-.0457	-.0376
60.0	-.7038	-.3557	-.2391	-.1803	-.1206	-.0898	-.0704	-.0568	-.0464	-.0380
65.0	-.7344	-.3702	-.2482	-.1867	-.1242	-.0920	-.0718	-.0576	-.0468	-.0380
70.0	-.7595	-.3819	-.2553	-.1916	-.1268	-.0935	-.0726	-.0579	-.0468	-.0378
75.0	-.7788	-.3906	-.2606	-.1951	-.1285	-.0942	-.0728	-.0578	-.0464	-.0373
80.0	-.7922	-.3964	-.2638	-.1970	-.1292	-.0943	-.0725	-.0572	-.0457	-.0366
85.0	-.7996	-.3992	-.2651	-.1975	-.1290	-.0936	-.0716	-.0563	-.0447	-.0355

θ_{xy}, deg / α, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	-.0161	-.0145	-.0127	-.0107	-.0085	-.0062	-.0039	-.0019	-.0005
2.0	-.0165	-.0149	-.0130	-.0109	-.0086	-.0062	-.0039	-.0019	-.0005
4.0	-.0174	-.0155	-.0135	-.0113	-.0088	-.0063	-.0039	-.0019	-.0005
6.0	-.0183	-.0162	-.0140	-.0116	-.0090	-.0064	-.0040	-.0019	-.0005
8.0	-.0191	-.0169	-.0144	-.0119	-.0092	-.0066	-.0040	-.0019	-.0005
10.0	-.0200	-.0175	-.0149	-.0122	-.0094	-.0067	-.0041	-.0019	-.0005
12.0	-.0208	-.0181	-.0153	-.0125	-.0096	-.0067	-.0041	-.0019	-.0005
15.0	-.0220	-.0189	-.0159	-.0129	-.0098	-.0069	-.0041	-.0019	-.0005
20.0	-.0238	-.0203	-.0168	-.0135	-.0102	-.0070	-.0042	-.0019	-.0005
25.0	-.0254	-.0214	-.0176	-.0140	-.0104	-.0071	-.0042	-.0019	-.0005
30.0	-.0268	-.0224	-.0183	-.0143	-.0106	-.0072	-.0042	-.0019	-.0005
35.0	-.0281	-.0233	-.0188	-.0146	-.0107	-.0072	-.0041	-.0018	-.0004
40.0	-.0291	-.0239	-.0192	-.0148	-.0107	-.0071	-.0041	-.0018	-.0004
45.0	-.0299	-.0244	-.0194	-.0148	-.0107	-.0070	-.0039	-.0017	-.0004
50.0	-.0304	-.0247	-.0195	-.0148	-.0105	-.0068	-.0038	-.0016	-.0004
55.0	-.0308	-.0248	-.0194	-.0146	-.0103	-.0066	-.0036	-.0015	-.0003
60.0	-.0309	-.0247	-.0192	-.0143	-.0100	-.0063	-.0034	-.0014	-.0003
65.0	-.0307	-.0244	-.0188	-.0139	-.0096	-.0060	-.0032	-.0013	-.0003
70.0	-.0304	-.0239	-.0183	-.0134	-.0092	-.0057	-.0030	-.0012	-.0002
75.0	-.0298	-.0233	-.0177	-.0128	-.0086	-.0052	-.0027	-.0010	-.0002
80.0	-.0289	-.0225	-.0169	-.0121	-.0081	-.0048	-.0024	-.0009	-.0002
85.0	-.0279	-.0215	-.0160	-.0113	-.0074	-.0043	-.0021	-.0007	-.0001

TABLE III.- CONTINUED

(g) C_l. Continued.

$\beta_1 = 135^0$; $\beta_2 = 225^0$; $\beta = 5^0$

α, deg \ θ_{xy}, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	-.0054	-.0042	-.0038	-.0036	-.0034	-.0032	-.0031	-.0030	-.0028	-.0027
2.0	-.0077	-.0054	-.0046	-.0042	-.0037	-.0035	-.0033	-.0031	-.0030	-.0028
4.0	-.0123	-.0076	-.0061	-.0053	-.0045	-.0040	-.0037	-.0034	-.0032	-.0030
6.0	-.0168	-.0099	-.0076	-.0064	-.0052	-.0045	-.0041	-.0038	-.0034	-.0032
8.0	-.0214	-.0122	-.0091	-.0075	-.0059	-.0051	-.0045	-.0041	-.0037	-.0033
10.0	-.0259	-.0144	-.0106	-.0086	-.0066	-.0056	-.0049	-.0044	-.0039	-.0035
12.0	-.0304	-.0167	-.0120	-.0097	-.0073	-.0061	-.0053	-.0047	-.0042	-.0037
15.0	-.0371	-.0200	-.0142	-.0113	-.0084	-.0068	-.0058	-.0051	-.0045	-.0040
20.0	-.0480	-.0253	-.0178	-.0139	-.0100	-.0080	-.0067	-.0058	-.0050	-.0044
25.0	-.0585	-.0305	-.0212	-.0164	-.0116	-.0091	-.0075	-.0064	-.0055	-.0048
30.0	-.0685	-.0355	-.0244	-.0188	-.0131	-.0102	-.0083	-.0070	-.0060	-.0051
35.0	-.0781	-.0402	-.0275	-.0211	-.0146	-.0112	-.0091	-.0075	-.0064	-.0054
40.0	-.0871	-.0446	-.0303	-.0231	-.0158	-.0121	-.0097	-.0080	-.0067	-.0057
45.0	-.0953	-.0486	-.0329	-.0250	-.0170	-.0129	-.0103	-.0084	-.0070	-.0059
50.0	-.1029	-.0523	-.0353	-.0268	-.0181	-.0136	-.0108	-.0088	-.0073	-.0061
55.0	-.1097	-.0555	-.0374	-.0283	-.0190	-.0142	-.0112	-.0091	-.0075	-.0062
60.0	-.1157	-.0584	-.0392	-.0296	-.0198	-.0147	-.0115	-.0093	-.0076	-.0063
65.0	-.1207	-.0608	-.0407	-.0306	-.0204	-.0151	-.0118	-.0095	-.0077	-.0063
70.0	-.1249	-.0627	-.0419	-.0315	-.0208	-.0154	-.0119	-.0095	-.0077	-.0063
75.0	-.1281	-.0642	-.0428	-.0321	-.0211	-.0155	-.0120	-.0095	-.0077	-.0062
80.0	-.1303	-.0652	-.0434	-.0324	-.0213	-.0155	-.0120	-.0095	-.0076	-.0061
85.0	-.1315	-.0657	-.0436	-.0325	-.0212	-.0155	-.0119	-.0093	-.0075	-.0059

α, deg \ θ_{xy}, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	-.0025	-.0023	-.0020	-.0017	-.0014	-.0010	-.0006	-.0003	-.0001
2.0	-.0026	-.0023	-.0021	-.0017	-.0014	-.0010	-.0006	-.0003	-.0001
4.0	-.0027	-.0024	-.0021	-.0018	-.0014	-.0010	-.0007	-.0003	-.0001
6.0	-.0029	-.0026	-.0022	-.0019	-.0015	-.0011	-.0007	-.0003	-.0001
8.0	-.0030	-.0027	-.0023	-.0019	-.0015	-.0011	-.0007	-.0003	-.0001
10.0	-.0032	-.0028	-.0024	-.0020	-.0015	-.0011	-.0007	-.0003	-.0001
12.0	-.0033	-.0029	-.0025	-.0020	-.0016	-.0011	-.0007	-.0003	-.0001
15.0	-.0035	-.0030	-.0026	-.0021	-.0016	-.0011	-.0007	-.0003	-.0001
20.0	-.0038	-.0033	-.0027	-.0022	-.0017	-.0012	-.0007	-.0003	-.0001
25.0	-.0041	-.0035	-.0029	-.0023	-.0017	-.0012	-.0007	-.0003	-.0001
30.0	-.0043	-.0036	-.0030	-.0024	-.0018	-.0012	-.0007	-.0003	-.0001
35.0	-.0046	-.0038	-.0031	-.0024	-.0018	-.0012	-.0007	-.0003	-.0001
40.0	-.0047	-.0039	-.0032	-.0025	-.0018	-.0012	-.0007	-.0003	-.0001
45.0	-.0049	-.0040	-.0032	-.0025	-.0018	-.0012	-.0007	-.0003	-.0001
50.0	-.0050	-.0041	-.0032	-.0025	-.0018	-.0012	-.0007	-.0003	-.0001
55.0	-.0051	-.0041	-.0032	-.0025	-.0017	-.0011	-.0006	-.0003	-.0001
60.0	-.0051	-.0041	-.0032	-.0024	-.0017	-.0011	-.0006	-.0002	-.0001
65.0	-.0051	-.0041	-.0032	-.0024	-.0016	-.0010	-.0006	-.0002	-.0000
70.0	-.0051	-.0040	-.0031	-.0023	-.0016	-.0010	-.0005	-.0002	-.0000
75.0	-.0050	-.0039	-.0030	-.0022	-.0015	-.0009	-.0005	-.0002	-.0000
80.0	-.0049	-.0038	-.0029	-.0021	-.0014	-.0008	-.0004	-.0002	-.0000
85.0	-.0047	-.0037	-.0027	-.0020	-.0013	-.0008	-.0004	-.0001	-.0000

$\beta_1 = 135^0$; $\beta_2 = 225^0$; $\beta = 15^0$

α, deg \ θ_{xy}, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	-.0158	-.0121	-.0110	-.0104	-.0097	-.0093	-.0089	-.0086	-.0082	-.0077
2.0	-.0221	-.0154	-.0132	-.0120	-.0108	-.0101	-.0095	-.0090	-.0085	-.0080
4.0	-.0353	-.0220	-.0175	-.0153	-.0129	-.0116	-.0107	-.0099	-.0092	-.0085
6.0	-.0485	-.0285	-.0219	-.0185	-.0150	-.0131	-.0119	-.0108	-.0099	-.0091
8.0	-.0616	-.0351	-.0262	-.0217	-.0170	-.0146	-.0129	-.0117	-.0106	-.0096
10.0	-.0746	-.0415	-.0304	-.0248	-.0191	-.0160	-.0140	-.0125	-.0113	-.0102
12.0	-.0875	-.0479	-.0347	-.0280	-.0211	-.0175	-.0151	-.0134	-.0120	-.0107
15.0	-.1067	-.0575	-.0409	-.0326	-.0241	-.0196	-.0167	-.0146	-.0129	-.0114
20.0	-.1381	-.0730	-.0511	-.0401	-.0289	-.0230	-.0193	-.0166	-.0145	-.0126
25.0	-.1684	-.0879	-.0609	-.0473	-.0335	-.0263	-.0217	-.0185	-.0159	-.0137
30.0	-.1974	-.1022	-.0703	-.0542	-.0378	-.0294	-.0240	-.0202	-.0172	-.0147
35.0	-.2249	-.1157	-.0791	-.0606	-.0419	-.0322	-.0261	-.0217	-.0183	-.0156
40.0	-.2507	-.1283	-.0873	-.0666	-.0456	-.0348	-.0280	-.0231	-.0194	-.0163
45.0	-.2745	-.1399	-.0948	-.0721	-.0490	-.0371	-.0296	-.0243	-.0203	-.0169
50.0	-.2963	-.1505	-.1016	-.0770	-.0520	-.0391	-.0311	-.0254	-.0210	-.0174
55.0	-.3159	-.1599	-.1077	-.0814	-.0547	-.0409	-.0323	-.0262	-.0216	-.0178
60.0	-.3330	-.1681	-.1129	-.0851	-.0569	-.0423	-.0332	-.0268	-.0220	-.0180
65.0	-.3476	-.1751	-.1173	-.0882	-.0586	-.0434	-.0339	-.0273	-.0222	-.0181
70.0	-.3596	-.1807	-.1208	-.0906	-.0600	-.0442	-.0344	-.0275	-.0223	-.0181
75.0	-.3688	-.1849	-.1233	-.0923	-.0608	-.0446	-.0346	-.0275	-.0222	-.0179
80.0	-.3752	-.1877	-.1249	-.0933	-.0612	-.0447	-.0345	-.0273	-.0219	-.0176
85.0	-.3787	-.1891	-.1256	-.0936	-.0612	-.0445	-.0341	-.0269	-.0215	-.0171

α, deg \ θ_{xy}, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	-.0072	-.0065	-.0058	-.0049	-.0040	-.0029	-.0019	-.0009	-.0002
2.0	-.0074	-.0067	-.0059	-.0050	-.0040	-.0029	-.0019	-.0009	-.0002
4.0	-.0078	-.0070	-.0062	-.0052	-.0041	-.0030	-.0019	-.0009	-.0002
6.0	-.0083	-.0074	-.0064	-.0054	-.0042	-.0031	-.0019	-.0009	-.0002
8.0	-.0087	-.0077	-.0066	-.0055	-.0043	-.0031	-.0019	-.0009	-.0002
10.0	-.0091	-.0080	-.0069	-.0057	-.0044	-.0032	-.0020	-.0009	-.0002
12.0	-.0095	-.0083	-.0071	-.0058	-.0045	-.0032	-.0020	-.0009	-.0002
15.0	-.0101	-.0087	-.0074	-.0060	-.0047	-.0033	-.0020	-.0009	-.0002
20.0	-.0110	-.0094	-.0079	-.0063	-.0048	-.0034	-.0020	-.0009	-.0002
25.0	-.0118	-.0100	-.0083	-.0066	-.0050	-.0034	-.0020	-.0009	-.0002
30.0	-.0125	-.0105	-.0086	-.0068	-.0051	-.0035	-.0020	-.0009	-.0002
35.0	-.0131	-.0109	-.0089	-.0070	-.0052	-.0035	-.0020	-.0009	-.0002
40.0	-.0137	-.0113	-.0091	-.0071	-.0052	-.0035	-.0020	-.0009	-.0002
45.0	-.0141	-.0116	-.0093	-.0071	-.0052	-.0034	-.0019	-.0008	-.0002
50.0	-.0144	-.0117	-.0093	-.0071	-.0051	-.0033	-.0019	-.0008	-.0002
55.0	-.0146	-.0118	-.0093	-.0071	-.0050	-.0033	-.0018	-.0008	-.0002
60.0	-.0147	-.0118	-.0093	-.0070	-.0049	-.0031	-.0017	-.0007	-.0002
65.0	-.0147	-.0117	-.0091	-.0068	-.0047	-.0030	-.0016	-.0006	-.0001
70.0	-.0146	-.0116	-.0089	-.0066	-.0045	-.0028	-.0015	-.0006	-.0001
75.0	-.0145	-.0113	-.0086	-.0063	-.0043	-.0026	-.0014	-.0005	-.0001
80.0	-.0140	-.0110	-.0083	-.0060	-.0040	-.0024	-.0012	-.0004	-.0001
85.0	-.0136	-.0105	-.0079	-.0056	-.0037	-.0022	-.0011	-.0004	-.0001

TABLE III.- CONTINUED

(g) C_l. Continued.

$\phi_1 = 150^o$; $\phi_2 = 210^o$; $\beta = 2^o$

α, deg \ θ_{xy}, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	-.0008	-.0006	-.0006	-.0005	-.0005	-.0005	-.0005	-.0004	-.0004	-.0004
2.0	-.0012	-.0008	-.0007	-.0006	-.0006	-.0005	-.0005	-.0005	-.0004	-.0004
4.0	-.0019	-.0012	-.0009	-.0008	-.0007	-.0006	-.0006	-.0005	-.0005	-.0004
6.0	-.0026	-.0015	-.0012	-.0010	-.0008	-.0007	-.0006	-.0006	-.0005	-.0005
8.0	-.0033	-.0019	-.0014	-.0011	-.0009	-.0008	-.0007	-.0006	-.0006	-.0005
10.0	-.0040	-.0022	-.0016	-.0013	-.0010	-.0008	-.0007	-.0007	-.0006	-.0005
12.0	-.0047	-.0026	-.0018	-.0015	-.0011	-.0009	-.0008	-.0007	-.0006	-.0006
15.0	-.0057	-.0031	-.0022	-.0017	-.0013	-.0010	-.0009	-.0008	-.0007	-.0006
20.0	-.0074	-.0039	-.0027	-.0021	-.0015	-.0012	-.0010	-.0009	-.0008	-.0007
25.0	-.0091	-.0047	-.0033	-.0025	-.0018	-.0014	-.0012	-.0010	-.0008	-.0007
30.0	-.0106	-.0055	-.0038	-.0029	-.0020	-.0016	-.0013	-.0011	-.0009	-.0008
35.0	-.0121	-.0062	-.0042	-.0033	-.0022	-.0017	-.0014	-.0012	-.0010	-.0008
40.0	-.0135	-.0069	-.0047	-.0036	-.0024	-.0019	-.0015	-.0012	-.0010	-.0009
45.0	-.0148	-.0075	-.0051	-.0039	-.0026	-.0020	-.0016	-.0013	-.0011	-.0009
50.0	-.0160	-.0081	-.0055	-.0041	-.0028	-.0021	-.0017	-.0014	-.0011	-.0009
55.0	-.0170	-.0086	-.0058	-.0044	-.0029	-.0022	-.0017	-.0014	-.0012	-.0010
60.0	-.0179	-.0090	-.0061	-.0046	-.0031	-.0023	-.0018	-.0014	-.0012	-.0010
65.0	-.0187	-.0094	-.0063	-.0047	-.0032	-.0023	-.0018	-.0015	-.0012	-.0010
70.0	-.0194	-.0097	-.0065	-.0049	-.0032	-.0024	-.0019	-.0015	-.0012	-.0010
75.0	-.0199	-.0100	-.0066	-.0050	-.0033	-.0024	-.0019	-.0015	-.0012	-.0010
80.0	-.0202	-.0101	-.0067	-.0050	-.0033	-.0024	-.0019	-.0015	-.0012	-.0010
85.0	-.0204	-.0102	-.0068	-.0050	-.0033	-.0024	-.0018	-.0015	-.0012	-.0009

α, deg \ θ_{xy}, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	-.0004	-.0003	-.0003	-.0003	-.0002	-.0002	-.0001	-.0000	-.0000
2.0	-.0004	-.0004	-.0003	-.0003	-.0002	-.0002	-.0001	-.0000	-.0000
4.0	-.0004	-.0004	-.0003	-.0003	-.0002	-.0002	-.0001	-.0001	-.0000
6.0	-.0004	-.0004	-.0003	-.0003	-.0002	-.0002	-.0001	-.0001	-.0000
8.0	-.0005	-.0004	-.0004	-.0003	-.0002	-.0002	-.0001	-.0001	-.0000
10.0	-.0005	-.0004	-.0004	-.0003	-.0002	-.0002	-.0001	-.0001	-.0000
12.0	-.0005	-.0004	-.0004	-.0003	-.0002	-.0002	-.0001	-.0001	-.0000
15.0	-.0005	-.0005	-.0004	-.0003	-.0003	-.0002	-.0001	-.0001	-.0000
20.0	-.0006	-.0005	-.0004	-.0003	-.0003	-.0002	-.0001	-.0001	-.0000
25.0	-.0006	-.0005	-.0004	-.0004	-.0003	-.0002	-.0001	-.0001	-.0000
30.0	-.0007	-.0006	-.0005	-.0004	-.0003	-.0002	-.0001	-.0001	-.0000
35.0	-.0007	-.0006	-.0005	-.0004	-.0003	-.0002	-.0001	-.0000	-.0000
40.0	-.0007	-.0006	-.0005	-.0004	-.0003	-.0002	-.0001	-.0000	-.0000
45.0	-.0008	-.0006	-.0005	-.0004	-.0003	-.0002	-.0001	-.0000	-.0000
50.0	-.0008	-.0006	-.0005	-.0004	-.0003	-.0002	-.0001	-.0000	-.0000
55.0	-.0008	-.0006	-.0005	-.0004	-.0003	-.0002	-.0001	-.0000	-.0000
60.0	-.0008	-.0006	-.0005	-.0004	-.0003	-.0002	-.0001	-.0000	-.0000
65.0	-.0008	-.0006	-.0005	-.0004	-.0003	-.0002	-.0001	-.0000	-.0000
70.0	-.0008	-.0006	-.0005	-.0004	-.0002	-.0002	-.0001	-.0000	-.0000
75.0	-.0008	-.0006	-.0005	-.0003	-.0002	-.0001	-.0001	-.0000	-.0000
80.0	-.0008	-.0006	-.0005	-.0003	-.0002	-.0001	-.0001	-.0000	-.0000
85.0	-.0007	-.0006	-.0004	-.0003	-.0002	-.0001	-.0001	-.0000	-.0000

TABLE III.- CONCLUDED

(g) C_l. Concluded.

$\phi_1 = 150^\circ$; $\phi_2 = 210^\circ$; $\beta = 5^\circ$

θ_{xy}, deg / α, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	-.0020	-.0016	-.0014	-.0013	-.0013	-.0012	-.0012	-.0011	-.0011	-.0010
2.0	-.0029	-.0020	-.0017	-.0016	-.0014	-.0013	-.0012	-.0012	-.0011	-.0010
4.0	-.0047	-.0029	-.0023	-.0020	-.0017	-.0015	-.0014	-.0013	-.0012	-.0011
6.0	-.0065	-.0038	-.0029	-.0024	-.0020	-.0017	-.0015	-.0014	-.0013	-.0012
8.0	-.0082	-.0047	-.0035	-.0029	-.0022	-.0019	-.0017	-.0015	-.0014	-.0013
10.0	-.0100	-.0055	-.0040	-.0033	-.0025	-.0021	-.0018	-.0016	-.0015	-.0013
12.0	-.0117	-.0064	-.0046	-.0037	-.0028	-.0023	-.0020	-.0018	-.0016	-.0014
15.0	-.0143	-.0077	-.0054	-.0043	-.0032	-.0026	-.0022	-.0019	-.0017	-.0015
20.0	-.0185	-.0097	-.0068	-.0053	-.0038	-.0031	-.0026	-.0022	-.0019	-.0017
25.0	-.0225	-.0117	-.0081	-.0063	-.0045	-.0035	-.0029	-.0024	-.0021	-.0018
30.0	-.0264	-.0137	-.0094	-.0072	-.0050	-.0039	-.0032	-.0027	-.0023	-.0020
35.0	-.0301	-.0155	-.0106	-.0081	-.0056	-.0043	-.0035	-.0029	-.0024	-.0021
40.0	-.0336	-.0172	-.0117	-.0089	-.0061	-.0046	-.0037	-.0031	-.0026	-.0022
45.0	-.0368	-.0187	-.0127	-.0096	-.0065	-.0050	-.0040	-.0032	-.0027	-.0023
50.0	-.0397	-.0202	-.0136	-.0103	-.0070	-.0052	-.0041	-.0034	-.0028	-.0023
55.0	-.0423	-.0214	-.0144	-.0109	-.0073	-.0055	-.0043	-.0035	-.0029	-.0024
60.0	-.0446	-.0225	-.0151	-.0114	-.0076	-.0057	-.0044	-.0036	-.0029	-.0024
65.0	-.0466	-.0235	-.0157	-.0118	-.0079	-.0058	-.0045	-.0037	-.0030	-.0024
70.0	-.0482	-.0242	-.0162	-.0121	-.0080	-.0059	-.0046	-.0037	-.0030	-.0024
75.0	-.0494	-.0248	-.0165	-.0124	-.0082	-.0060	-.0046	-.0037	-.0030	-.0024
80.0	-.0503	-.0252	-.0167	-.0125	-.0082	-.0060	-.0046	-.0037	-.0029	-.0024
85.0	-.0508	-.0254	-.0168	-.0126	-.0082	-.0060	-.0046	-.0036	-.0029	-.0023

θ_{xy}, deg / α, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	-.0009	-.0009	-.0008	-.0007	-.0005	-.0004	-.0002	-.0001	-.0000
2.0	-.0010	-.0009	-.0008	-.0007	-.0005	-.0004	-.0003	-.0001	-.0000
4.0	-.0010	-.0009	-.0008	-.0007	-.0006	-.0004	-.0003	-.0001	-.0000
6.0	-.0011	-.0010	-.0008	-.0007	-.0006	-.0004	-.0003	-.0001	-.0000
8.0	-.0011	-.0010	-.0009	-.0007	-.0006	-.0004	-.0003	-.0001	-.0000
10.0	-.0012	-.0011	-.0009	-.0008	-.0006	-.0004	-.0003	-.0001	-.0000
12.0	-.0013	-.0011	-.0009	-.0008	-.0006	-.0004	-.0003	-.0001	-.0000
15.0	-.0013	-.0012	-.0010	-.0008	-.0006	-.0004	-.0003	-.0001	-.0000
20.0	-.0015	-.0012	-.0010	-.0008	-.0006	-.0005	-.0003	-.0001	-.0000
25.0	-.0016	-.0013	-.0011	-.0009	-.0007	-.0005	-.0003	-.0001	-.0000
30.0	-.0017	-.0014	-.0012	-.0009	-.0007	-.0005	-.0003	-.0001	-.0000
35.0	-.0018	-.0015	-.0012	-.0009	-.0007	-.0005	-.0003	-.0001	-.0000
40.0	-.0018	-.0015	-.0012	-.0010	-.0007	-.0005	-.0003	-.0001	-.0000
45.0	-.0019	-.0016	-.0012	-.0010	-.0007	-.0005	-.0003	-.0001	-.0000
50.0	-.0019	-.0016	-.0013	-.0010	-.0007	-.0005	-.0003	-.0001	-.0000
55.0	-.0020	-.0016	-.0013	-.0010	-.0007	-.0004	-.0002	-.0001	-.0000
60.0	-.0020	-.0016	-.0013	-.0009	-.0007	-.0004	-.0002	-.0001	-.0000
65.0	-.0020	-.0016	-.0012	-.0009	-.0006	-.0004	-.0002	-.0001	-.0000
70.0	-.0020	-.0016	-.0012	-.0009	-.0006	-.0004	-.0002	-.0001	-.0000
75.0	-.0019	-.0015	-.0012	-.0009	-.0006	-.0004	-.0002	-.0001	-.0000
80.0	-.0019	-.0015	-.0011	-.0008	-.0006	-.0003	-.0002	-.0001	-.0000
85.0	-.0018	-.0014	-.0011	-.0008	-.0005	-.0003	-.0002	-.0001	-.0000

$\phi_1 = 150^\circ$; $\phi_2 = 210^\circ$; $\beta = 15^\circ$

θ_{xy}, deg / α, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	-.0058	-.0045	-.0041	-.0039	-.0036	-.0035	-.0033	-.0032	-.0030	-.0029
2.0	-.0084	-.0058	-.0049	-.0045	-.0040	-.0038	-.0036	-.0034	-.0032	-.0030
4.0	-.0135	-.0084	-.0066	-.0058	-.0048	-.0043	-.0040	-.0037	-.0035	-.0032
6.0	-.0186	-.0109	-.0083	-.0070	-.0057	-.0049	-.0044	-.0041	-.0037	-.0034
8.0	-.0236	-.0134	-.0100	-.0082	-.0064	-.0055	-.0049	-.0044	-.0040	-.0036
10.0	-.0287	-.0159	-.0116	-.0095	-.0072	-.0061	-.0053	-.0047	-.0043	-.0038
12.0	-.0337	-.0184	-.0133	-.0107	-.0080	-.0066	-.0057	-.0051	-.0045	-.0041
15.0	-.0411	-.0221	-.0157	-.0125	-.0092	-.0075	-.0064	-.0056	-.0049	-.0043
20.0	-.0532	-.0280	-.0196	-.0154	-.0110	-.0088	-.0074	-.0063	-.0055	-.0048
25.0	-.0649	-.0338	-.0234	-.0182	-.0128	-.0101	-.0083	-.0070	-.0061	-.0052
30.0	-.0761	-.0393	-.0270	-.0208	-.0145	-.0112	-.0092	-.0077	-.0066	-.0056
35.0	-.0867	-.0446	-.0304	-.0233	-.0161	-.0123	-.0100	-.0083	-.0070	-.0060
40.0	-.0967	-.0494	-.0336	-.0256	-.0175	-.0134	-.0107	-.0089	-.0074	-.0063
45.0	-.1059	-.0539	-.0365	-.0278	-.0189	-.0143	-.0114	-.0093	-.0078	-.0065
50.0	-.1143	-.0580	-.0392	-.0297	-.0200	-.0151	-.0119	-.0098	-.0081	-.0067
55.0	-.1219	-.0617	-.0415	-.0314	-.0211	-.0157	-.0124	-.0101	-.0083	-.0069
60.0	-.1285	-.0649	-.0435	-.0328	-.0219	-.0163	-.0128	-.0103	-.0085	-.0070
65.0	-.1342	-.0676	-.0452	-.0340	-.0226	-.0167	-.0131	-.0105	-.0086	-.0070
70.0	-.1388	-.0697	-.0466	-.0349	-.0231	-.0171	-.0133	-.0106	-.0086	-.0070
75.0	-.1424	-.0714	-.0476	-.0356	-.0235	-.0172	-.0134	-.0106	-.0086	-.0069
80.0	-.1449	-.0725	-.0482	-.0360	-.0237	-.0173	-.0133	-.0106	-.0085	-.0068
85.0	-.1462	-.0730	-.0485	-.0362	-.0236	-.0172	-.0132	-.0104	-.0083	-.0067

θ_{xy}, deg / α, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	-.0027	-.0025	-.0022	-.0019	-.0015	-.0011	-.0007	-.0004	-.0001
2.0	-.0028	-.0025	-.0022	-.0019	-.0015	-.0011	-.0007	-.0004	-.0001
4.0	-.0030	-.0027	-.0023	-.0020	-.0016	-.0012	-.0007	-.0004	-.0001
6.0	-.0031	-.0028	-.0024	-.0021	-.0016	-.0012	-.0007	-.0004	-.0001
8.0	-.0033	-.0029	-.0025	-.0021	-.0017	-.0012	-.0008	-.0004	-.0001
10.0	-.0034	-.0030	-.0026	-.0022	-.0017	-.0012	-.0008	-.0004	-.0001
12.0	-.0036	-.0032	-.0027	-.0022	-.0017	-.0012	-.0008	-.0004	-.0001
15.0	-.0038	-.0033	-.0028	-.0023	-.0018	-.0013	-.0008	-.0004	-.0001
20.0	-.0042	-.0036	-.0030	-.0024	-.0019	-.0013	-.0008	-.0004	-.0001
25.0	-.0045	-.0038	-.0032	-.0026	-.0019	-.0013	-.0008	-.0004	-.0001
30.0	-.0048	-.0040	-.0033	-.0026	-.0020	-.0014	-.0008	-.0004	-.0001
35.0	-.0050	-.0042	-.0034	-.0027	-.0020	-.0014	-.0008	-.0004	-.0001
40.0	-.0053	-.0044	-.0035	-.0027	-.0020	-.0014	-.0008	-.0003	-.0001
45.0	-.0054	-.0045	-.0036	-.0028	-.0020	-.0013	-.0008	-.0003	-.0001
50.0	-.0056	-.0045	-.0036	-.0028	-.0020	-.0013	-.0007	-.0003	-.0001
55.0	-.0057	-.0046	-.0036	-.0028	-.0020	-.0013	-.0007	-.0003	-.0001
60.0	-.0057	-.0046	-.0036	-.0027	-.0019	-.0012	-.0007	-.0003	-.0001
65.0	-.0057	-.0046	-.0036	-.0027	-.0019	-.0012	-.0006	-.0003	-.0001
70.0	-.0057	-.0045	-.0035	-.0026	-.0018	-.0011	-.0006	-.0002	-.0000
75.0	-.0056	-.0044	-.0034	-.0025	-.0017	-.0010	-.0005	-.0002	-.0000
80.0	-.0055	-.0043	-.0033	-.0024	-.0016	-.0010	-.0005	-.0002	-.0000
85.0	-.0053	-.0041	-.0031	-.0022	-.0015	-.0009	-.0004	-.0002	-.0000

TABLE IV.- AERODYNAMIC CHARACTERISTICS OF ELLIPTICAL CONE BODIES FOR m = 2

(a) C_N

$\phi_1 = 0^o$; $\phi_2 = 360^o$; $\beta = 0^o$

θ_{xy}, deg / α, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.0231	.0227	.0221	.0213	.0192	.0168	.0143	.0119	.0097	.0078
2.0	.0462	.0455	.0442	.0426	.0384	.0335	.0285	.0238	.0195	.0156
4.0	.0923	.0907	.0882	.0849	.0765	.0669	.0570	.0475	.0389	.0312
6.0	.1384	.1355	.1318	.1269	.1144	.0999	.0851	.0709	.0581	.0466
8.0	.1900	.1796	.1747	.1682	.1516	.1324	.1128	.0941	.0770	.0618
10.0	.2488	.2229	.2168	.2087	.1881	.1643	.1400	.1167	.0955	.0767
12.0	.3147	.2664	.2578	.2482	.2237	.1954	.1664	.1388	.1136	.0912
15.0	.4263	.3360	.3169	.3051	.2750	.2402	.2046	.1706	.1396	.1121
20.0	.6433	.4637	.4141	.3922	.3535	.3089	.2630	.2193	.1795	.1442
25.0	.8933	.6036	.5149	.4728	.4213	.3681	.3135	.2614	.2139	.1718
30.0	1.1687	.7515	.6176	.5511	.4765	.4161	.3544	.2955	.2418	.1942
35.0	1.4612	.9031	.7192	.6258	.5221	.4515	.3845	.3207	.2624	.2108
40.0	1.7618	1.0538	.8168	.6949	.5601	.4742	.4030	.3361	.2750	.2209
45.0	2.0615	1.1989	.9075	.7565	.5900	.4877	.4094	.3412	.2792	.2243
50.0	2.3510	1.3341	.9885	.8087	.6113	.4929	.4062	.3361	.2750	.2209
55.0	2.6217	1.4553	1.0575	.8501	.6234	.4902	.3958	.3224	.2624	.2108
60.0	2.8653	1.5588	1.1122	.8793	.6260	.4799	.3790	.3030	.2431	.1943
65.0	3.0745	1.6415	1.1510	.8955	.6192	.4625	.3567	.2793	.2199	.1731
70.0	3.2427	1.7008	1.1729	.8982	.6031	.4384	.3298	.2521	.1962	.1498
75.0	3.3650	1.7350	1.1770	.8873	.5783	.4086	.2991	.2227	.1671	.1257
80.0	3.4376	1.7430	1.1634	.8632	.5454	.3740	.2656	.1919	.1397	.1018
85.0	3.4584	1.7245	1.1323	.8266	.5056	.3355	.2305	.1608	.1129	.0791

θ_{xy}, deg / α, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	.0062	.0047	.0035	.0025	.0017	.0011	.0006	.0003	.0001
2.0	.0123	.0095	.0071	.0051	.0035	.0022	.0012	.0005	.0001
4.0	.0246	.0189	.0141	.0102	.0069	.0044	.0024	.0011	.0003
6.0	.0367	.0282	.0211	.0152	.0103	.0065	.0036	.0016	.0004
8.0	.0487	.0374	.0280	.0201	.0137	.0086	.0048	.0021	.0005
10.0	.0604	.0465	.0347	.0249	.0170	.0107	.0060	.0026	.0007
12.0	.0718	.0552	.0413	.0297	.0202	.0127	.0071	.0031	.0008
15.0	.0883	.0679	.0507	.0365	.0249	.0157	.0087	.0038	.0010
20.0	.1135	.0873	.0652	.0469	.0319	.0201	.0112	.0049	.0012
25.0	.1353	.1041	.0777	.0559	.0381	.0240	.0133	.0059	.0015
30.0	.1529	.1176	.0879	.0632	.0430	.0271	.0151	.0066	.0017
35.0	.1660	.1276	.0953	.0685	.0467	.0294	.0164	.0072	.0018
40.0	.1739	.1338	.0999	.0718	.0489	.0308	.0171	.0076	.0019
45.0	.1766	.1358	.1015	.0729	.0497	.0313	.0174	.0077	.0019
50.0	.1739	.1338	.0999	.0718	.0489	.0308	.0171	.0076	.0019
55.0	.1660	.1276	.0953	.0685	.0467	.0294	.0164	.0072	.0018
60.0	.1529	.1176	.0879	.0632	.0430	.0271	.0151	.0066	.0017
65.0	.1353	.1041	.0777	.0559	.0381	.0240	.0133	.0059	.0015
70.0	.1150	.0875	.0652	.0469	.0319	.0201	.0112	.0049	.0012
75.0	.0942	.0700	.0512	.0365	.0249	.0157	.0087	.0038	.0010
80.0	.0739	.0531	.0375	.0259	.0172	.0107	.0060	.0026	.0007
85.0	.0550	.0378	.0253	.0165	.0102	.0059	.0031	.0013	.0003

$\phi_1 = 0^o$; $\phi_2 = 360^o$; $\beta = 2^o$

θ_{xy}, deg / α, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.0231	.0227	.0221	.0213	.0192	.0167	.0143	.0119	.0097	.0078
2.0	.0462	.0454	.0442	.0425	.0383	.0335	.0285	.0238	.0195	.0156
4.0	.0922	.0906	.0881	.0848	.0765	.0668	.0569	.0474	.0388	.0312
6.0	.1399	.1353	.1316	.1267	.1142	.0998	.0850	.0709	.0580	.0466
8.0	.1927	.1794	.1745	.1680	.1514	.1323	.1127	.0939	.0769	.0617
10.0	.2520	.2227	.2165	.2084	.1879	.1641	.1398	.1166	.0954	.0766
12.0	.3182	.2668	.2575	.2479	.2234	.1952	.1662	.1386	.1134	.0911
15.0	.4300	.3369	.3166	.3047	.2747	.2400	.2044	.1704	.1394	.1120
20.0	.6469	.4649	.4143	.3918	.3531	.3085	.2627	.2191	.1793	.1440
25.0	.8967	.6048	.5153	.4727	.4208	.3676	.3131	.2611	.2136	.1716
30.0	1.1719	.7527	.6180	.5511	.4760	.4156	.3540	.2952	.2415	.1940
35.0	1.4640	.9042	.7196	.6258	.5218	.4510	.3841	.3203	.2621	.2105
40.0	1.7643	1.0547	.8172	.6950	.5598	.4738	.4025	.3356	.2747	.2206
45.0	2.0636	1.1997	.9078	.7565	.5898	.4873	.4089	.3408	.2789	.2240
50.0	2.3528	1.3347	.9888	.8088	.6111	.4926	.4058	.3357	.2747	.2206
55.0	2.6232	1.4558	1.0576	.8501	.6232	.4900	.3955	.3221	.2621	.2105
60.0	2.8665	1.5592	1.1123	.8793	.6259	.4797	.3788	.3028	.2429	.1940
65.0	3.0754	1.6418	1.1511	.8955	.6191	.4623	.3565	.2791	.2197	.1729
70.0	3.2434	1.7010	1.1730	.8982	.6030	.4383	.3297	.2520	.1941	.1496
75.0	3.3656	1.7352	1.1771	.8873	.5782	.4086	.2990	.2226	.1670	.1256
80.0	3.4381	1.7431	1.1635	.8632	.5454	.3739	.2656	.1919	.1397	.1018
85.0	3.4588	1.7247	1.1324	.8267	.5057	.3356	.2305	.1608	.1129	.0791

θ_{xy}, deg / α, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	.0062	.0047	.0035	.0025	.0017	.0011	.0006	.0003	.0001
2.0	.0123	.0095	.0071	.0051	.0035	.0022	.0012	.0005	.0001
4.0	.0245	.0189	.0141	.0101	.0069	.0044	.0024	.0011	.0003
6.0	.0367	.0282	.0211	.0151	.0103	.0065	.0036	.0016	.0004
8.0	.0486	.0374	.0279	.0201	.0137	.0086	.0048	.0021	.0005
10.0	.0603	.0464	.0347	.0249	.0170	.0107	.0059	.0026	.0007
12.0	.0717	.0552	.0412	.0296	.0202	.0127	.0071	.0031	.0008
15.0	.0882	.0678	.0507	.0364	.0248	.0156	.0087	.0038	.0010
20.0	.1134	.0872	.0651	.0468	.0319	.0201	.0112	.0049	.0012
25.0	.1351	.1039	.0776	.0558	.0380	.0240	.0133	.0059	.0015
30.0	.1528	.1175	.0878	.0631	.0430	.0271	.0151	.0066	.0016
35.0	.1658	.1275	.0952	.0685	.0467	.0294	.0163	.0072	.0018
40.0	.1737	.1336	.0998	.0717	.0489	.0308	.0171	.0075	.0019
45.0	.1764	.1357	.1013	.0728	.0496	.0313	.0174	.0077	.0019
50.0	.1737	.1336	.0998	.0717	.0489	.0308	.0171	.0075	.0019
55.0	.1658	.1275	.0952	.0685	.0467	.0294	.0163	.0072	.0018
60.0	.1528	.1175	.0878	.0631	.0430	.0271	.0151	.0066	.0016
65.0	.1352	.1039	.0776	.0558	.0380	.0240	.0133	.0059	.0015
70.0	.1149	.0874	.0651	.0468	.0319	.0201	.0112	.0049	.0012
75.0	.0941	.0699	.0511	.0364	.0248	.0156	.0087	.0038	.0010
80.0	.0738	.0531	.0375	.0258	.0171	.0107	.0059	.0026	.0007
85.0	.0550	.0378	.0253	.0165	.0102	.0059	.0031	.0013	.0003

TABLE IV.- CONTINUED

(a) C_N. Continued.

$\beta_1 = 0^0$; $\beta_2 = 360^0$; $\beta = 5^0$

θ_{xy}, deg / α, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.0240	.0226	.0220	.0211	.0190	.0166	.0142	.0118	.0097	.0078
2.0	.0481	.0451	.0439	.0422	.0381	.0333	.0283	.0236	.0193	.0155
4.0	.0974	.0900	.0875	.0843	.0760	.0664	.0565	.0471	.0386	.0310
6.0	.1495	.1346	.1308	.1259	.1135	.0991	.0844	.0704	.0576	.0463
8.0	.2057	.1791	.1734	.1669	.1505	.1314	.1119	.0933	.0764	.0614
10.0	.2674	.2239	.2151	.2071	.1867	.1631	.1389	.1158	.0948	.0761
12.0	.3350	.2698	.2559	.2463	.2220	.1939	.1652	.1377	.1127	.0905
15.0	.4478	.3417	.3157	.3028	.2729	.2384	.2031	.1693	.1386	.1113
20.0	.6650	.4711	.4155	.3900	.3509	.3065	.2610	.2177	.1781	.1431
25.0	.9140	.6112	.5174	.4721	.4181	.3653	.3111	.2594	.2123	.1705
30.0	1.1878	.7587	.6203	.5512	.4735	.4130	.3517	.2933	.2400	.1928
35.0	1.4784	.9096	.7217	.6261	.5198	.4481	.3816	.3182	.2604	.2092
40.0	1.7769	1.0594	.8190	.6952	.5583	.4712	.3999	.3335	.2729	.2192
45.0	2.0744	1.2036	.9093	.7567	.5885	.4852	.4065	.3386	.2771	.2226
50.0	2.3619	1.3379	.9899	.8088	.6100	.4909	.4038	.3336	.2729	.2192
55.0	2.6306	1.4583	1.0584	.8500	.6223	.4886	.3938	.3204	.2604	.2092
60.0	2.8724	1.5611	1.1129	.8791	.6251	.4786	.3775	.3015	.2415	.1928
65.0	3.0800	1.6432	1.1515	.8953	.6184	.4614	.3556	.2781	.2187	.1720
70.0	3.2470	1.7021	1.1732	.8981	.6026	.4377	.3290	.2513	.1934	.1490
75.0	3.3684	1.7361	1.1774	.8873	.5780	.4082	.2987	.2222	.1667	.1252
80.0	3.4405	1.7440	1.1639	.8634	.5454	.3739	.2655	.1918	.1395	.1016
85.0	3.4611	1.7257	1.1330	.8271	.5060	.3358	.2307	.1610	.1130	.0792

θ_{xy}, deg / α, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	.0061	.0047	.0035	.0025	.0017	.0011	.0006	.0003	.0001
2.0	.0122	.0094	.0070	.0050	.0034	.0022	.0012	.0005	.0001
4.0	.0244	.0188	.0140	.0101	.0069	.0043	.0024	.0011	.0003
6.0	.0364	.0280	.0209	.0150	.0103	.0065	.0036	.0016	.0004
8.0	.0483	.0372	.0278	.0200	.0136	.0086	.0048	.0021	.0005
10.0	.0599	.0461	.0344	.0248	.0169	.0106	.0059	.0026	.0006
12.0	.0713	.0548	.0410	.0294	.0201	.0126	.0070	.0031	.0008
15.0	.0876	.0674	.0503	.0362	.0247	.0155	.0086	.0038	.0009
20.0	.1127	.0867	.0647	.0465	.0317	.0200	.0111	.0049	.0012
25.0	.1343	.1033	.0771	.0554	.0378	.0238	.0132	.0058	.0014
30.0	.1518	.1167	.0872	.0627	.0427	.0269	.0150	.0066	.0016
35.0	.1647	.1267	.0946	.0680	.0464	.0292	.0162	.0072	.0018
40.0	.1726	.1328	.0992	.0713	.0486	.0306	.0170	.0075	.0019
45.0	.1753	.1348	.1007	.0724	.0493	.0311	.0173	.0076	.0019
50.0	.1726	.1328	.0992	.0713	.0486	.0306	.0170	.0075	.0019
55.0	.1647	.1267	.0946	.0680	.0464	.0292	.0162	.0072	.0018
60.0	.1518	.1167	.0872	.0627	.0427	.0269	.0150	.0066	.0016
65.0	.1343	.1033	.0771	.0554	.0378	.0238	.0132	.0058	.0014
70.0	.1144	.0869	.0647	.0465	.0317	.0200	.0111	.0049	.0012
75.0	.0938	.0696	.0508	.0362	.0247	.0155	.0086	.0038	.0009
80.0	.0737	.0529	.0374	.0257	.0170	.0106	.0059	.0026	.0006
85.0	.0551	.0378	.0253	.0165	.0102	.0059	.0031	.0013	.0003

$\beta_1 = 0^0$; $\beta_2 = 360^0$; $\beta = 15^0$

θ_{xy}, deg / α, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.0344	.0245	.0216	.0201	.0179	.0156	.0133	.0111	.0091	.0073
2.0	.0690	.0491	.0432	.0402	.0358	.0313	.0266	.0222	.0182	.0146
4.0	.1387	.0984	.0864	.0803	.0714	.0624	.0531	.0443	.0363	.0291
6.0	.2100	.1480	.1295	.1201	.1067	.0932	.0794	.0662	.0542	.0435
8.0	.2833	.1980	.1724	.1595	.1415	.1236	.1052	.0878	.0718	.0577
10.0	.3594	.2487	.2152	.1984	.1755	.1533	.1306	.1089	.0891	.0716
12.0	.4386	.3002	.2579	.2367	.2088	.1823	.1553	.1295	.1060	.0851
15.0	.5639	.3790	.3217	.2931	.2568	.2242	.1909	.1592	.1303	.1046
20.0	.7913	.5152	.4275	.3835	.3310	.2882	.2454	.2047	.1675	.1345
25.0	1.0409	.6572	.5325	.4695	.3971	.3434	.2925	.2439	.1996	.1603
30.0	1.3088	.8030	.6359	.5562	.4646	.3988	.3397	.2757	.2256	.1812
35.0	1.5893	.9498	.7362	.6262	.5037	.4242	.3588	.2992	.2448	.1967
40.0	1.8753	1.0943	.8311	.6949	.5442	.4500	.3767	.3135	.2566	.2061
45.0	2.1588	1.2325	.9185	.7555	.5759	.4668	.3854	.3185	.2605	.2093
50.0	2.4319	1.3608	.9962	.8065	.5986	.4750	.3858	.3152	.2566	.2061
55.0	2.6867	1.4755	1.0621	.8468	.6120	.4751	.3788	.3050	.2457	.1967
60.0	2.9157	1.5732	1.1144	.8754	.6161	.4674	.3654	.2892	.2297	.1819
65.0	3.1120	1.6513	1.1516	.8915	.6110	.4526	.3463	.2688	.2098	.1636
70.0	3.2700	1.7073	1.1726	.8947	.5969	.4313	.3224	.2449	.1872	.1432
75.0	3.3848	1.7397	1.1770	.8851	.5744	.4043	.2947	.2184	.1630	.1218
80.0	3.4538	1.7474	1.1645	.8629	.5442	.3724	.2641	.1903	.1381	.1002
85.0	3.4726	1.7304	1.1357	.8290	.5073	.3369	.2316	.1617	.1135	.0795

θ_{xy}, deg / α, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	.0058	.0044	.0033	.0024	.0016	.0010	.0006	.0002	.0001
2.0	.0115	.0088	.0066	.0047	.0032	.0020	.0011	.0005	.0001
4.0	.0229	.0176	.0132	.0095	.0065	.0041	.0023	.0010	.0002
6.0	.0343	.0264	.0197	.0141	.0096	.0061	.0034	.0015	.0004
8.0	.0454	.0349	.0261	.0188	.0128	.0081	.0045	.0020	.0005
10.0	.0564	.0433	.0324	.0233	.0159	.0100	.0056	.0024	.0006
12.0	.0670	.0515	.0385	.0277	.0189	.0119	.0066	.0029	.0007
15.0	.0824	.0634	.0473	.0340	.0232	.0146	.0081	.0036	.0009
20.0	.1059	.0815	.0609	.0437	.0298	.0188	.0104	.0046	.0011
25.0	.1262	.0971	.0725	.0521	.0355	.0224	.0124	.0055	.0014
30.0	.1427	.1098	.0820	.0589	.0402	.0253	.0141	.0062	.0015
35.0	.1548	.1191	.0890	.0639	.0436	.0275	.0153	.0067	.0017
40.0	.1623	.1248	.0932	.0670	.0457	.0288	.0160	.0070	.0018
45.0	.1648	.1267	.0947	.0680	.0464	.0292	.0162	.0072	.0018
50.0	.1623	.1248	.0932	.0670	.0457	.0288	.0160	.0070	.0018
55.0	.1548	.1191	.0890	.0639	.0436	.0275	.0153	.0067	.0017
60.0	.1427	.1098	.0820	.0589	.0402	.0253	.0141	.0062	.0015
65.0	.1269	.0971	.0725	.0521	.0355	.0224	.0124	.0055	.0014
70.0	.1091	.0822	.0609	.0437	.0298	.0188	.0104	.0046	.0011
75.0	.0906	.0667	.0484	.0342	.0232	.0146	.0081	.0036	.0009
80.0	.0724	.0517	.0362	.0247	.0162	.0100	.0056	.0024	.0006
85.0	.0552	.0378	.0252	.0163	.0100	.0058	.0030	.0012	.0003

TABLE IV.- CONTINUED

(a) C_N. Continued.

$\phi_1 = -90^\circ$; $\phi_2 = 90^\circ$; $\beta = 0^\circ$

α, deg \ θ_{xy}, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	-.0458	-.1101	-.1718	-.2288	-.3250	-.3946	-.4382	-.4593	-.4620	-.4501
2.0	-.0289	-.0903	-.1515	-.2088	-.3064	-.3780	-.4239	-.4472	-.4520	-.4420
4.0	-.0076	-.0569	-.1147	-.1712	-.2703	-.3453	-.3952	-.4227	-.4315	-.4252
6.0	-.0020	-.0316	-.0831	-.1372	-.2360	-.3133	-.3667	-.3980	-.4105	-.4077
8.0	-.0010	-.0147	-.0568	-.1069	-.2036	-.2823	-.3385	-.3731	-.3891	-.3896
10.0	-.0006	-.0063	-.0361	-.0805	-.1733	-.2523	-.3106	-.3482	-.3674	-.3711
12.0	-.0004	-.0037	-.0209	-.0581	-.1453	-.2235	-.2833	-.3234	-.3454	-.3521
15.0	-.0002	-.0021	-.0087	-.0322	-.1076	-.1829	-.2437	-.2865	-.3123	-.3230
20.0	-.0001	-.0010	-.0037	-.0104	-.0579	-.1232	-.1821	-.2273	-.2576	-.2740
25.0	-.0001	-.0006	-.0020	-.0050	-.0256	-.0749	-.1277	-.1723	-.2049	-.2253
30.0	-.0000	-.0003	-.0011	-.0028	-.0113	-.0396	-.0823	-.1231	-.1558	-.1785
35.0	-.0000	-.0002	-.0007	-.0017	-.0062	-.0182	-.0472	-.0814	-.1118	-.1350
40.0	-.0000	-.0001	-.0004	-.0010	-.0035	-.0094	-.0234	-.0482	-.0742	-.0961
45.0	-.0000	-.0001	-.0002	-.0006	-.0021	-.0052	-.0114	-.0248	-.0442	-.0631
50.0	-.0000	-.0000	-.0001	-.0003	-.0012	-.0029	-.0060	-.0117	-.0226	-.0368
55.0	-.0000	-.0000	-.0001	-.0002	-.0006	-.0016	-.0032	-.0058	-.0102	-.0182
60.0	-.0000	-.0000	-.0000	-.0001	-.0003	-.0008	-.0016	-.0028	-.0048	-.0077
65.0	-.0000	-.0000	-.0000	-.0000	-.0002	-.0004	-.0007	-.0013	-.0021	-.0033
70.0	-.0000	-.0000	-.0000	-.0000	-.0001	-.0001	-.0003	-.0005	-.0008	-.0012
75.0	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000	-.0001	-.0002	-.0002	-.0004
80.0	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000	-.0001
85.0	-.0000	.0000	.0000	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000

α, deg \ θ_{xy}, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	-.4271	-.3953	-.3570	-.3137	-.2664	-.2163	-.1641	-.1102	-.0554
2.0	-.4206	-.3903	-.3532	-.3108	-.2645	-.2150	-.1633	-.1099	-.0553
4.0	-.4070	-.3796	-.3449	-.3047	-.2601	-.2121	-.1615	-.1089	-.0549
6.0	-.3927	-.3681	-.3360	-.2979	-.2551	-.2086	-.1593	-.1077	-.0545
8.0	-.3777	-.3560	-.3263	-.2904	-.2495	-.2047	-.1568	-.1063	-.0539
10.0	-.3622	-.3432	-.3160	-.2824	-.2435	-.2004	-.1538	-.1046	-.0532
12.0	-.3461	-.3298	-.3051	-.2737	-.2369	-.1956	-.1506	-.1027	-.0523
15.0	-.3211	-.3088	-.2878	-.2598	-.2261	-.1876	-.1451	-.0993	-.0508
20.0	-.2781	-.2718	-.2568	-.2345	-.2061	-.1725	-.1345	-.0927	-.0478
25.0	-.2343	-.2335	-.2240	-.2072	-.1840	-.1555	-.1223	-.0850	-.0441
30.0	-.1912	-.1948	-.1903	-.1786	-.1606	-.1372	-.1090	-.0764	-.0400
35.0	-.1500	-.1571	-.1567	-.1496	-.1366	-.1181	-.0948	-.0672	-.0355
40.0	-.1120	-.1214	-.1244	-.1212	-.1126	-.0988	-.0803	-.0576	-.0307
45.0	-.0784	-.0889	-.0942	-.0942	-.0894	-.0798	-.0659	-.0479	-.0259
50.0	-.0501	-.0605	-.0670	-.0695	-.0677	-.0619	-.0521	-.0385	-.0211
55.0	-.0281	-.0371	-.0438	-.0476	-.0482	-.0454	-.0392	-.0295	-.0165
60.0	-.0129	-.0194	-.0252	-.0295	-.0314	-.0309	-.0276	-.0214	-.0123
65.0	-.0050	-.0079	-.0118	-.0155	-.0180	-.0188	-.0177	-.0143	-.0085
70.0	-.0018	-.0027	-.0040	-.0061	-.0082	-.0096	-.0098	-.0085	-.0053
75.0	-.0005	-.0008	-.0011	-.0015	-.0024	-.0034	-.0042	-.0041	-.0028
80.0	-.0001	-.0001	-.0002	-.0003	-.0004	-.0006	-.0009	-.0013	-.0011
85.0	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000	-.0001	-.0002

$\phi_1 = -90^\circ$; $\phi_2 = 90^\circ$; $\beta = 2^\circ$

α, deg \ θ_{xy}, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	-.0551	-.1146	-.1746	-.2307	-.3260	-.3950	-.4383	-.4592	-.4617	-.4498
2.0	-.0382	-.0948	-.1543	-.2107	-.3074	-.3784	-.4240	-.4471	-.4517	-.4417
4.0	-.0168	-.0614	-.1175	-.1732	-.2713	-.3458	-.3954	-.4227	-.4313	-.4249
6.0	-.0080	-.0362	-.0860	-.1392	-.2371	-.3139	-.3669	-.3980	-.4103	-.4074
8.0	-.0046	-.0193	-.0598	-.1089	-.2047	-.2828	-.3387	-.3731	-.3889	-.3894
10.0	-.0029	-.0107	-.0390	-.0826	-.1745	-.2529	-.3109	-.3482	-.3672	-.3708
12.0	-.0020	-.0068	-.0239	-.0602	-.1464	-.2242	-.2836	-.3234	-.3453	-.3519
15.0	-.0013	-.0040	-.0116	-.0344	-.1089	-.1836	-.2440	-.2866	-.3122	-.3229
20.0	-.0007	-.0021	-.0053	-.0125	-.0592	-.1240	-.1825	-.2275	-.2576	-.2738
25.0	-.0004	-.0012	-.0029	-.0063	-.0269	-.0758	-.1282	-.1725	-.2050	-.2252
30.0	-.0003	-.0007	-.0018	-.0036	-.0125	-.0404	-.0829	-.1234	-.1559	-.1785
35.0	-.0002	-.0005	-.0011	-.0022	-.0070	-.0191	-.0478	-.0817	-.1119	-.1350
40.0	-.0001	-.0003	-.0007	-.0014	-.0041	-.0101	-.0240	-.0486	-.0744	-.0962
45.0	-.0001	-.0002	-.0004	-.0009	-.0024	-.0057	-.0120	-.0252	-.0444	-.0632
50.0	-.0001	-.0001	-.0003	-.0005	-.0014	-.0032	-.0065	-.0121	-.0229	-.0370
55.0	-.0000	-.0001	-.0002	-.0003	-.0008	-.0018	-.0035	-.0062	-.0105	-.0184
60.0	-.0000	-.0001	-.0001	-.0002	-.0005	-.0010	-.0018	-.0031	-.0050	-.0079
65.0	-.0000	-.0000	-.0001	-.0001	-.0002	-.0005	-.0008	-.0014	-.0022	-.0034
70.0	-.0000	-.0000	-.0000	-.0001	-.0001	-.0002	-.0004	-.0006	-.0009	-.0013
75.0	-.0000	-.0000	-.0000	-.0000	-.0000	-.0001	-.0001	-.0002	-.0003	-.0004
80.0	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000	-.0001	-.0001	-.0001
85.0	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000

α, deg \ θ_{xy}, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	-.4267	-.3950	-.3567	-.3133	-.2661	-.2161	-.1639	-.1101	-.0553
2.0	-.4202	-.3899	-.3528	-.3105	-.2642	-.2148	-.1631	-.1097	-.0552
4.0	-.4067	-.3792	-.3446	-.3044	-.2598	-.2118	-.1613	-.1088	-.0549
6.0	-.3924	-.3678	-.3356	-.2975	-.2548	-.2084	-.1591	-.1076	-.0544
8.0	-.3774	-.3556	-.3260	-.2901	-.2493	-.2045	-.1566	-.1062	-.0538
10.0	-.3619	-.3428	-.3157	-.2820	-.2432	-.2001	-.1537	-.1045	-.0531
12.0	-.3458	-.3295	-.3048	-.2734	-.2366	-.1953	-.1504	-.1025	-.0523
15.0	-.3209	-.3085	-.2875	-.2596	-.2258	-.1874	-.1449	-.0992	-.0508
20.0	-.2779	-.2716	-.2566	-.2343	-.2059	-.1723	-.1343	-.0926	-.0477
25.0	-.2342	-.2333	-.2238	-.2069	-.1838	-.1553	-.1222	-.0849	-.0441
30.0	-.1911	-.1947	-.1901	-.1784	-.1604	-.1370	-.1088	-.0763	-.0399
35.0	-.1500	-.1570	-.1566	-.1495	-.1364	-.1180	-.0947	-.0671	-.0354
40.0	-.1121	-.1214	-.1243	-.1211	-.1124	-.0987	-.0802	-.0575	-.0307
45.0	-.0785	-.0889	-.0941	-.0942	-.0893	-.0798	-.0659	-.0478	-.0258
50.0	-.0502	-.0605	-.0670	-.0694	-.0676	-.0618	-.0520	-.0384	-.0211
55.0	-.0282	-.0371	-.0438	-.0476	-.0482	-.0453	-.0391	-.0295	-.0165
60.0	-.0130	-.0194	-.0253	-.0295	-.0314	-.0309	-.0276	-.0214	-.0123
65.0	-.0051	-.0080	-.0119	-.0155	-.0180	-.0188	-.0177	-.0143	-.0085
70.0	-.0019	-.0027	-.0040	-.0061	-.0082	-.0096	-.0098	-.0085	-.0053
75.0	-.0006	-.0008	-.0011	-.0016	-.0024	-.0034	-.0042	-.0041	-.0028
80.0	-.0001	-.0002	-.0002	-.0003	-.0004	-.0006	-.0009	-.0013	-.0011
85.0	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000	-.0001	-.0002

TABLE IV.- CONTINUED

(a) C_N. Continued.

$\beta_1 = -90^\circ$; $\beta_2 = 90^\circ$; $\beta = 5^\circ$

α, deg \ θ_{xy}, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	-.0996	-.1380	-.1892	-.2408	-.3310	-.3973	-.4388	-.4586	-.4605	-.4481
2.0	-.0809	-.1184	-.1691	-.2209	-.3125	-.3808	-.4246	-.4466	-.4505	-.4400
4.0	-.0532	-.0851	-.1326	-.1836	-.2767	-.3483	-.3962	-.4223	-.4302	-.4234
6.0	-.0355	-.0598	-.1012	-.1498	-.2427	-.3166	-.3679	-.3978	-.4094	-.4060
8.0	-.0245	-.0417	-.0752	-.1198	-.2105	-.2858	-.3399	-.3731	-.3881	-.3881
10.0	-.0176	-.0296	-.0546	-.0935	-.1804	-.2561	-.3122	-.3484	-.3666	-.3696
12.0	-.0130	-.0216	-.0395	-.0713	-.1526	-.2275	-.2851	-.3237	-.3448	-.3508
15.0	-.0088	-.0142	-.0251	-.0457	-.1153	-.1872	-.2458	-.2872	-.3119	-.3220
20.0	-.0052	-.0080	-.0134	-.0226	-.0659	-.1280	-.1847	-.2284	-.2576	-.2733
25.0	-.0033	-.0050	-.0080	-.0129	-.0339	-.0801	-.1307	-.1738	-.2053	-.2250
30.0	-.0023	-.0033	-.0051	-.0080	-.0186	-.0450	-.0857	-.1250	-.1566	-.1785
35.0	-.0016	-.0023	-.0034	-.0052	-.0112	-.0238	-.0508	-.0836	-.1129	-.1353
40.0	-.0012	-.0016	-.0024	-.0035	-.0071	-.0138	-.0272	-.0507	-.0756	-.0968
45.0	-.0009	-.0012	-.0017	-.0023	-.0045	-.0084	-.0149	-.0274	-.0458	-.0640
50.0	-.0007	-.0009	-.0012	-.0016	-.0029	-.0051	-.0086	-.0143	-.0245	-.0379
55.0	-.0006	-.0006	-.0008	-.0011	-.0019	-.0031	-.0050	-.0078	-.0121	-.0195
60.0	-.0005	-.0005	-.0006	-.0007	-.0012	-.0019	-.0028	-.0042	-.0062	-.0090
65.0	-.0004	-.0003	-.0004	-.0005	-.0007	-.0011	-.0015	-.0022	-.0030	-.0042
70.0	-.0003	-.0003	-.0003	-.0003	-.0004	-.0006	-.0008	-.0011	-.0014	-.0018
75.0	-.0002	-.0002	-.0002	-.0002	-.0002	-.0003	-.0004	-.0005	-.0006	-.0007
80.0	-.0002	-.0001	-.0001	-.0001	-.0001	-.0001	-.0002	-.0002	-.0002	-.0002
85.0	-.0002	-.0001	-.0001	-.0001	-.0001	-.0001	-.0000	-.0000	-.0000	-.0000

α, deg \ θ_{xy}, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	-.4248	-.3930	-.3547	-.3115	-.2646	-.2148	-.1628	-.1094	-.0550
2.0	-.4183	-.3880	-.3509	-.3087	-.2626	-.2135	-.1621	-.1090	-.0549
4.0	-.4049	-.3773	-.3427	-.3026	-.2582	-.2105	-.1603	-.1081	-.0545
6.0	-.3907	-.3660	-.3338	-.2959	-.2533	-.2071	-.1581	-.1069	-.0541
8.0	-.3758	-.3539	-.3242	-.2885	-.2478	-.2032	-.1556	-.1055	-.0535
10.0	-.3604	-.3412	-.3140	-.2805	-.2418	-.1989	-.1527	-.1038	-.0528
12.0	-.3444	-.3279	-.3032	-.2719	-.2352	-.1941	-.1495	-.1019	-.0519
15.0	-.3197	-.3071	-.2860	-.2581	-.2245	-.1862	-.1440	-.0986	-.0504
20.0	-.2769	-.2704	-.2553	-.2330	-.2047	-.1712	-.1335	-.0921	-.0474
25.0	-.2335	-.2323	-.2227	-.2058	-.1828	-.1544	-.1214	-.0844	-.0438
30.0	-.1907	-.1940	-.1892	-.1775	-.1595	-.1362	-.1082	-.0758	-.0397
35.0	-.1499	-.1565	-.1559	-.1488	-.1357	-.1173	-.0941	-.0667	-.0352
40.0	-.1122	-.1211	-.1238	-.1206	-.1118	-.0981	-.0798	-.0571	-.0305
45.0	-.0788	-.0889	-.0939	-.0938	-.0888	-.0793	-.0655	-.0475	-.0257
50.0	-.0507	-.0607	-.0669	-.0692	-.0673	-.0615	-.0517	-.0382	-.0209
55.0	-.0288	-.0374	-.0439	-.0475	-.0480	-.0451	-.0389	-.0293	-.0164
60.0	-.0138	-.0198	-.0254	-.0295	-.0314	-.0307	-.0274	-.0213	-.0122
65.0	-.0059	-.0085	-.0121	-.0156	-.0180	-.0188	-.0176	-.0142	-.0084
70.0	-.0024	-.0032	-.0044	-.0063	-.0083	-.0096	-.0098	-.0085	-.0053
75.0	-.0009	-.0011	-.0014	-.0018	-.0025	-.0035	-.0042	-.0041	-.0028
80.0	-.0003	-.0003	-.0003	-.0004	-.0005	-.0006	-.0010	-.0013	-.0011
85.0	-.0000	-.0000	-.0000	-.0000	-.0001	-.0001	-.0001	-.0001	-.0002

$\beta_1 = -90^\circ$; $\beta_2 = 90^\circ$; $\beta = 15^\circ$

α, deg \ θ_{xy}, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	-.4039	-.3198	-.3162	-.3323	-.3777	-.4183	-.4439	-.4533	-.4486	-.4323
2.0	-.3731	-.2974	-.2961	-.3132	-.3603	-.4028	-.4305	-.4421	-.4393	-.4247
4.0	-.3194	-.2567	-.2589	-.2774	-.3267	-.3723	-.4038	-.4192	-.4202	-.4090
6.0	-.2721	-.2213	-.2255	-.2445	-.2947	-.3425	-.3772	-.3962	-.4006	-.3927
8.0	-.2330	-.1907	-.1960	-.2147	-.2644	-.3135	-.3509	-.3730	-.3806	-.3759
10.0	-.2002	-.1645	-.1701	-.1879	-.2361	-.2856	-.3249	-.3497	-.3603	-.3585
12.0	-.1728	-.1422	-.1476	-.1641	-.2099	-.2587	-.2994	-.3265	-.3398	-.3408
15.0	-.1398	-.1149	-.1195	-.1336	-.1745	-.2208	-.2624	-.2922	-.3090	-.3137
20.0	-.1008	-.0822	-.0851	-.0950	-.1262	-.1651	-.2049	-.2369	-.2579	-.2679
25.0	-.0750	-.0604	-.0618	-.0684	-.0904	-.1201	-.1542	-.1855	-.2087	-.2225
30.0	-.0576	-.0456	-.0459	-.0501	-.0650	-.0860	-.1119	-.1397	-.1629	-.1788
35.0	-.0454	-.0352	-.0348	-.0374	-.0471	-.0613	-.0791	-.1007	-.1219	-.1383
40.0	-.0367	-.0277	-.0268	-.0283	-.0346	-.0438	-.0555	-.0698	-.0868	-.1020
45.0	-.0302	-.0222	-.0210	-.0217	-.0256	-.0314	-.0388	-.0477	-.0588	-.0712
50.0	-.0254	-.0181	-.0167	-.0168	-.0190	-.0226	-.0271	-.0324	-.0387	-.0467
55.0	-.0217	-.0149	-.0133	-.0131	-.0142	-.0162	-.0188	-.0219	-.0253	-.0293
60.0	-.0188	-.0125	-.0108	-.0103	-.0106	-.0116	-.0130	-.0146	-.0163	-.0182
65.0	-.0166	-.0105	-.0088	-.0081	-.0079	-.0082	-.0088	-.0095	-.0103	-.0111
70.0	-.0148	-.0090	-.0072	-.0064	-.0058	-.0058	-.0059	-.0061	-.0063	-.0065
75.0	-.0133	-.0078	-.0060	-.0051	-.0043	-.0040	-.0038	-.0037	-.0036	-.0036
80.0	-.0122	-.0068	-.0049	-.0040	-.0031	-.0027	-.0024	-.0022	-.0020	-.0018
85.0	-.0113	-.0059	-.0041	-.0032	-.0023	-.0018	-.0014	-.0012	-.0010	-.0008

α, deg \ θ_{xy}, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	-.4069	-.3745	-.3368	-.2949	-.2498	-.2025	-.1533	-.1029	-.0517
2.0	-.4009	-.3698	-.3332	-.2922	-.2480	-.2013	-.1526	-.1026	-.0516
4.0	-.3882	-.3598	-.3255	-.2865	-.2439	-.1985	-.1509	-.1017	-.0513
6.0	-.3749	-.3491	-.3171	-.2801	-.2393	-.1953	-.1489	-.1006	-.0508
8.0	-.3609	-.3378	-.3081	-.2732	-.2341	-.1916	-.1465	-.0993	-.0503
10.0	-.3464	-.3258	-.2985	-.2657	-.2284	-.1876	-.1438	-.0977	-.0496
12.0	-.3314	-.3134	-.2883	-.2576	-.2223	-.1831	-.1408	-.0959	-.0488
15.0	-.3081	-.2938	-.2722	-.2447	-.2122	-.1756	-.1356	-.0928	-.0474
20.0	-.2679	-.2593	-.2433	-.2210	-.1935	-.1616	-.1257	-.0866	-.0446
25.0	-.2271	-.2235	-.2126	-.1955	-.1730	-.1457	-.1144	-.0794	-.0412
30.0	-.1869	-.1874	-.1812	-.1688	-.1511	-.1286	-.1019	-.0714	-.0373
35.0	-.1485	-.1522	-.1499	-.1418	-.1287	-.1108	-.0887	-.0627	-.0331
40.0	-.1130	-.1190	-.1197	-.1153	-.1063	-.0928	-.0752	-.0538	-.0287
45.0	-.0816	-.0886	-.0915	-.0902	-.0846	-.0751	-.0618	-.0448	-.0241
50.0	-.0552	-.0621	-.0662	-.0670	-.0644	-.0583	-.0488	-.0360	-.0197
55.0	-.0347	-.0403	-.0445	-.0467	-.0462	-.0430	-.0368	-.0276	-.0154
60.0	-.0205	-.0237	-.0272	-.0297	-.0306	-.0294	-.0260	-.0201	-.0115
65.0	-.0120	-.0130	-.0147	-.0166	-.0180	-.0182	-.0168	-.0135	-.0079
70.0	-.0067	-.0070	-.0073	-.0079	-.0089	-.0096	-.0094	-.0080	-.0050
75.0	-.0035	-.0035	-.0034	-.0034	-.0035	-.0038	-.0042	-.0039	-.0026
80.0	-.0017	-.0015	-.0014	-.0013	-.0012	-.0011	-.0011	-.0013	-.0010
85.0	-.0007	-.0006	-.0005	-.0004	-.0003	-.0002	-.0002	-.0001	-.0002

TABLE IV.- CONTINUED

(a) C_N. Continued.

$\beta_1 = 90^\circ$; $\beta_2 = 270^\circ$; $\beta = 0^\circ$

α, deg \ θ_{xy}, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.0921	.1556	.2160	.2714	.3634	.4281	.4668	.4831	.4815	.4658
2.0	.1214	.1812	.2399	.2939	.3831	.4450	.4810	.4948	.4909	.4733
4.0	.1921	.2383	.2911	.3410	.4234	.4790	.5091	.5177	.5092	.4876
6.0	.2788	.3026	.3466	.3909	.4647	.5131	.5369	.5399	.5266	.5010
8.0	.3810	.3740	.4063	.4432	.5068	.5472	.5641	.5612	.5430	.5133
10.0	.4982	.4521	.4697	.4978	.5495	.5810	.5906	.5816	.5584	.5245
12.0	.6298	.5365	.5365	.5544	.5927	.6144	.6162	.6010	.5725	.5345
15.0	.8529	.6740	.6426	.6424	.6577	.6634	.6529	.6278	.5915	.5473
20.0	1.2868	.9284	.8319	.7949	.7650	.7409	.7082	.6660	.6166	.5623
25.0	1.7867	1.2077	1.0318	.9506	.8683	.8111	.7547	.6951	.6327	.5689
30.0	2.3375	1.5034	1.2363	1.1050	.9644	.8718	.7911	.7142	.6394	.5670
35.0	2.9224	1.8064	1.4391	1.2532	1.0504	.9212	.8163	.7227	.6365	.5565
40.0	3.5236	2.1076	1.6340	1.3908	1.1237	.9579	.8294	.7204	.6241	.5379
45.0	4.1229	2.3978	1.8153	1.5136	1.1821	.9806	.8302	.7073	.6026	.5117
50.0	4.7021	2.6683	1.9772	1.6178	1.2238	.9887	.8185	.6838	.5726	.4786
55.0	5.2435	2.9106	2.1150	1.7004	1.2474	.9820	.7947	.6507	.5350	.4397
60.0	5.7307	3.1177	2.2244	1.7587	1.2524	.9606	.7596	.6089	.4910	.3963
65.0	6.1489	3.2830	2.3021	1.7910	1.2386	.9253	.7142	.5598	.4419	.3495
70.0	6.4854	3.4016	2.3458	1.7964	1.2063	.8770	.6598	.5048	.3892	.3008
75.0	6.7300	3.4700	2.3541	1.7746	1.1565	.8173	.5982	.4455	.3345	.2517
80.0	6.8753	3.4859	2.3267	1.7264	1.0909	.7479	.5313	.3838	.2794	.2037
85.0	6.9168	3.4490	2.2646	1.6531	1.0112	.6710	.4609	.3216	.2257	.1582

α, deg \ θ_{xy}, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	.4394	.4048	.3641	.3187	.2699	.2185	.1653	.1108	.0555
2.0	.4452	.4092	.3673	.3210	.2714	.2194	.1657	.1109	.0556
4.0	.4562	.4174	.3732	.3250	.2739	.2208	.1663	.1111	.0555
6.0	.4662	.4246	.3782	.3282	.2758	.2217	.1666	.1109	.0553
8.0	.4751	.4308	.3822	.3306	.2769	.2220	.1664	.1105	.0549
10.0	.4830	.4361	.3854	.3322	.2775	.2218	.1658	.1098	.0545
12.0	.4897	.4403	.3877	.3331	.2773	.2210	.1648	.1089	.0539
15.0	.4977	.4446	.3893	.3328	.2758	.2189	.1625	.1070	.0527
20.0	.5051	.4465	.3873	.3283	.2700	.2127	.1569	.1026	.0502
25.0	.5049	.4416	.3794	.3189	.2602	.2035	.1490	.0968	.0470
30.0	.4971	.4301	.3660	.3049	.2467	.1915	.1391	.0897	.0433
35.0	.4820	.4124	.3474	.2867	.2300	.1770	.1275	.0816	.0390
40.0	.4599	.3890	.3242	.2649	.2105	.1605	.1146	.0727	.0345
45.0	.4316	.3606	.2971	.2401	.1888	.1425	.1008	.0632	.0297
50.0	.3980	.3280	.2669	.2131	.1656	.1236	.0864	.0536	.0248
55.0	.3600	.2924	.2345	.1847	.1416	.1042	.0719	.0440	.0201
60.0	.3188	.2546	.2010	.1558	.1175	.0851	.0577	.0347	.0156
65.0	.2757	.2160	.1673	.1272	.0941	.0668	.0444	.0261	.0114
70.0	.2319	.1776	.1344	.0998	.0721	.0499	.0322	.0184	.0078
75.0	.1889	.1407	.1034	.0745	.0521	.0348	.0216	.0118	.0047
80.0	.1478	.1063	.0752	.0520	.0347	.0220	.0128	.0065	.0024
85.0	.1101	.0755	.0507	.0330	.0205	.0119	.0062	.0027	.0008

$\beta_1 = 90^\circ$; $\beta_2 = 270^\circ$; $\beta = 2^\circ$

α, deg \ θ_{xy}, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.1013	.1600	.2187	.2733	.3643	.4285	.4668	.4830	.4812	.4654
2.0	.1305	.1856	.2426	.2957	.3840	.4454	.4810	.4947	.4906	.4729
4.0	.2012	.2426	.2938	.3428	.4243	.4793	.5092	.5175	.5089	.4873
6.0	.2878	.3069	.3492	.3926	.4655	.5134	.5369	.5397	.5263	.5006
8.0	.3899	.3782	.4088	.4449	.5076	.5474	.5640	.5610	.5427	.5129
10.0	.5069	.4562	.4721	.4994	.5502	.5812	.5905	.5814	.5580	.5241
12.0	.6384	.5404	.5389	.5559	.5933	.6146	.6161	.6007	.5722	.5341
15.0	.8612	.6778	.6448	.6438	.6582	.6635	.6527	.6275	.5911	.5469
20.0	1.2946	.9319	.8339	.7961	.7654	.7409	.7079	.6656	.6161	.5618
25.0	1.7939	1.2109	1.0336	.9517	.8786	.8110	.7544	.6947	.6322	.5684
30.0	2.3440	1.5062	1.2378	1.1058	.9646	.8717	.7908	.7137	.6390	.5665
35.0	2.9282	1.8088	1.4403	1.2539	1.0505	.9210	.8159	.7222	.6361	.5561
40.0	3.5287	2.1097	1.6351	1.3913	1.1237	.9576	.8291	.7199	.6237	.5375
45.0	4.1272	2.3995	1.8161	1.5139	1.1820	.9803	.8298	.7069	.6022	.5113
50.0	4.7057	2.6696	1.9778	1.6181	1.2236	.9884	.8181	.6834	.5722	.4782
55.0	5.2644	2.9117	2.1154	1.7005	1.2473	.9817	.7944	.6504	.5347	.4394
60.0	5.7330	3.1185	2.2247	1.7587	1.2523	.9604	.7593	.6086	.4907	.3960
65.0	6.1508	3.2836	2.3023	1.7910	1.2384	.9251	.7139	.5596	.4417	.3493
70.0	6.4869	3.4021	2.3459	1.7964	1.2062	.8768	.6597	.5046	.3890	.3006
75.0	6.7312	3.4704	2.3542	1.7746	1.1565	.8172	.5982	.4454	.3344	.2516
80.0	6.8762	3.4863	2.3269	1.7265	1.0909	.7479	.5313	.3838	.2794	.2036
85.0	6.9177	3.4494	2.2648	1.6533	1.0114	.6711	.4610	.3217	.2258	.1582

α, deg \ θ_{xy}, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	.4390	.4044	.3637	.3184	.2696	.2183	.1651	.1106	.0555
2.0	.4448	.4088	.3670	.3207	.2711	.2192	.1655	.1108	.0555
4.0	.4558	.4170	.3728	.3246	.2736	.2205	.1661	.1109	.0554
6.0	.4657	.4242	.3778	.3278	.2755	.2214	.1664	.1108	.0552
8.0	.4747	.4304	.3818	.3303	.2766	.2217	.1662	.1104	.0549
10.0	.4825	.4356	.3850	.3319	.2771	.2215	.1656	.1097	.0544
12.0	.4893	.4398	.3873	.3327	.2770	.2208	.1646	.1088	.0538
15.0	.4973	.4442	.3889	.3324	.2755	.2186	.1623	.1069	.0527
20.0	.5047	.4460	.3869	.3279	.2697	.2125	.1567	.1025	.0502
25.0	.5045	.4411	.3790	.3185	.2599	.2033	.1488	.0967	.0470
30.0	.4967	.4297	.3656	.3046	.2468	.1912	.1389	.0896	.0432
35.0	.4815	.4120	.3471	.2864	.2297	.1768	.1274	.0815	.0390
40.0	.4595	.3886	.3239	.2646	.2102	.1603	.1145	.0726	.0344
45.0	.4312	.3602	.2968	.2399	.1886	.1423	.1006	.0632	.0296
50.0	.3976	.3277	.2666	.2129	.1654	.1234	.0863	.0535	.0248
55.0	.3597	.2921	.2343	.1845	.1415	.1041	.0718	.0439	.0201
60.0	.3186	.2544	.2008	.1556	.1174	.0850	.0577	.0347	.0156
65.0	.2755	.2158	.1671	.1271	.0940	.0668	.0443	.0261	.0114
70.0	.2318	.1775	.1343	.0997	.0720	.0498	.0322	.0183	.0078
75.0	.1888	.1406	.1034	.0744	.0520	.0347	.0216	.0118	.0047
80.0	.1478	.1063	.0752	.0520	.0347	.0220	.0128	.0065	.0024
85.0	.1101	.0755	.0507	.0330	.0205	.0119	.0062	.0027	.0008

TABLE IV.- CONTINUED

(a) C_N. Continued.

$\beta_1 = 90^0$; $\beta_2 = 270^0$; $\beta = 5^0$

θ_{xy}, deg / α, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.1475	.1831	.2331	.2831	.3691	.4305	.4672	.4822	.4798	.4637
2.0	.1772	.2086	.2569	.3053	.3887	.4473	.4813	.4939	.4892	.4711
4.0	.2480	.2652	.3077	.3521	.4286	.4811	.5092	.5166	.5073	.4853
6.0	.3344	.3291	.3628	.4016	.4696	.5149	.5368	.5386	.5246	.4986
8.0	.4360	.3999	.4220	.4536	.5114	.5487	.5638	.5598	.5409	.5108
10.0	.5524	.4774	.4849	.5078	.5538	.5822	.5900	.5800	.5561	.5219
12.0	.6830	.5612	.5512	.5639	.5966	.6154	.6155	.5992	.5702	.5319
15.0	.9045	.6976	.6565	.6512	.6611	.6641	.6519	.6258	.5890	.5446
20.0	1.3351	.9501	.8443	.8025	.7676	.7410	.7068	.6637	.6139	.5594
25.0	1.8313	1.2273	1.0427	.9571	.8701	.8106	.7530	.6926	.6299	.5660
30.0	2.3779	1.5207	1.2457	1.1103	.9655	.8709	.7891	.7116	.6366	.5641
35.0	2.9583	1.8215	1.4469	1.2574	1.0509	.9199	.8141	.7200	.6337	.5537
40.0	3.5550	2.1204	1.6404	1.3939	1.1236	.9563	.8271	.7177	.6214	.5352
45.0	4.1497	2.4084	1.8202	1.5158	1.1816	.9788	.8278	.7047	.6000	.5092
50.0	4.7245	2.6767	1.9810	1.6192	1.2229	.9869	.8162	.6814	.5702	.4764
55.0	5.2618	2.9173	2.1177	1.7011	1.2464	.9802	.7926	.6486	.5329	.4378
60.0	5.7453	3.1227	2.2263	1.7590	1.2514	.9590	.7578	.6071	.4893	.3946
65.0	6.1603	3.2868	2.3034	1.7911	1.2376	.9239	.7127	.5583	.4405	.3482
70.0	6.4943	3.4045	2.3467	1.7964	1.2056	.8760	.6588	.5037	.3882	.2999
75.0	6.7370	3.4723	2.3550	1.7748	1.1562	.8168	.5977	.4449	.3339	.2512
80.0	6.8812	3.4882	2.3278	1.7270	1.0910	.7479	.5312	.3837	.2793	.2035
85.0	6.9223	3.4515	2.2661	1.6543	1.0120	.6716	.4614	.3220	.2260	.1584

θ_{xy}, deg / α, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	.4370	.4024	.3618	.3166	.2680	.2169	.1640	.1099	.0551
2.0	.4428	.4068	.3650	.3188	.2695	.2178	.1645	.1101	.0551
4.0	.4537	.4149	.3708	.3228	.2720	.2192	.1651	.1102	.0551
6.0	.4636	.4220	.3757	.3260	.2738	.2201	.1653	.1101	.0549
8.0	.4725	.4282	.3797	.3284	.2750	.2204	.1651	.1097	.0545
10.0	.4803	.4334	.3829	.3300	.2755	.2202	.1645	.1090	.0541
12.0	.4870	.4376	.3851	.3308	.2753	.2194	.1635	.1081	.0535
15.0	.4949	.4419	.3867	.3305	.2738	.2173	.1613	.1062	.0523
20.0	.5023	.4437	.3847	.3260	.2681	.2112	.1557	.1018	.0498
25.0	.5020	.4389	.3770	.3167	.2584	.2020	.1479	.0960	.0467
30.0	.4943	.4275	.3636	.3028	.2450	.1901	.1381	.0890	.0430
35.0	.4793	.4099	.3452	.2848	.2284	.1757	.1266	.0810	.0388
40.0	.4574	.3867	.3222	.2631	.2090	.1593	.1138	.0721	.0342
45.0	.4293	.3585	.2952	.2385	.1875	.1415	.1000	.0628	.0295
50.0	.3959	.3262	.2653	.2117	.1645	.1227	.0857	.0532	.0247
55.0	.3582	.2908	.2332	.1836	.1407	.1035	.0714	.0436	.0199
60.0	.3173	.2533	.1999	.1548	.1168	.0846	.0573	.0345	.0155
65.0	.2745	.2150	.1664	.1265	.0936	.0664	.0441	.0259	.0113
70.0	.2311	.1769	.1338	.0993	.0717	.0496	.0320	.0182	.0077
75.0	.1884	.1403	.1031	.0742	.0518	.0346	.0215	.0117	.0047
80.0	.1477	.1061	.0751	.0519	.0346	.0219	.0128	.0065	.0024
85.0	.1102	.0756	.0507	.0330	.0205	.0119	.0062	.0027	.0008

$\beta_1 = 90^0$; $\beta_2 = 270^0$; $\beta = 15^0$

θ_{xy}, deg / α, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.4728	.3689	.3595	.3725	.4136	.4496	.4705	.4756	.4668	.4469
2.0	.5111	.3956	.3826	.3936	.4319	.4654	.4838	.4865	.4756	.4539
4.0	.5959	.4535	.4316	.4379	.4695	.4971	.5101	.5079	.4927	.4673
6.0	.6920	.5172	.4844	.4846	.5081	.5289	.5360	.5286	.5089	.4797
8.0	.7997	.5867	.5408	.5336	.5473	.5607	.5613	.5485	.5242	.4912
10.0	.9190	.6619	.6006	.5847	.5872	.5922	.5861	.5675	.5385	.5017
12.0	1.0500	.7425	.6634	.6376	.6278	.6234	.6100	.5855	.5518	.5111
15.0	1.2676	.8729	.7629	.7197	.6881	.6691	.6442	.6106	.5695	.5230
20.0	1.6834	1.1127	.9900	.8621	.7882	.7414	.6958	.6462	.5928	.5370
25.0	2.1568	1.3748	1.1269	1.0075	.8846	.8069	.7392	.6733	.6079	.5431
30.0	2.6752	1.6515	1.3178	1.1515	.9743	.8636	.7732	.6911	.6142	.5413
35.0	3.2241	1.9349	1.5071	1.2898	1.0545	.9097	.7967	.6991	.6115	.5316
40.0	3.7872	2.2163	1.6890	1.4181	1.1229	.9439	.8089	.6969	.5999	.5142
45.0	4.3478	2.4873	1.8581	1.5326	1.1774	.9651	.8096	.6847	.5798	.4897
50.0	4.8892	2.7397	2.0092	1.6298	1.2162	.9727	.7987	.6628	.5518	.4589
55.0	5.3951	2.9659	2.1376	1.7067	1.2383	.9664	.7765	.6319	.5168	.4226
60.0	5.8502	3.1589	2.2396	1.7610	1.2429	.9464	.7438	.5930	.4757	.3820
65.0	6.2406	3.3131	2.3119	1.7910	1.2298	.9134	.7014	.5471	.4299	.3384
70.0	6.5547	3.4236	2.3524	1.7958	1.1996	.8683	.6507	.4958	.3807	.2929
75.0	6.7829	3.4871	2.3599	1.7753	1.1530	.8125	.5931	.4405	.3296	.2471
80.0	6.9182	3.5016	2.3340	1.7299	1.0915	.7476	.5305	.3829	.2782	.2023
85.0	6.9565	3.4668	2.2756	1.6612	1.0168	.6755	.4647	.3247	.2280	.1598

θ_{xy}, deg / α, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	.4184	.3834	.3434	.2996	.2531	.2045	.1545	.1034	.0518
2.0	.4239	.3875	.3464	.3017	.2545	.2053	.1549	.1036	.0518
4.0	.4341	.3951	.3518	.3054	.2568	.2066	.1555	.1037	.0518
6.0	.4434	.4018	.3565	.3084	.2585	.2074	.1557	.1036	.0516
8.0	.4518	.4077	.3603	.3107	.2597	.2078	.1555	.1032	.0513
10.0	.4591	.4125	.3632	.3122	.2601	.2076	.1549	.1026	.0508
12.0	.4654	.4165	.3653	.3130	.2600	.2069	.1540	.1017	.0503
15.0	.4729	.4205	.3669	.3127	.2586	.2049	.1519	.0999	.0492
20.0	.4798	.4222	.3650	.3085	.2531	.1991	.1466	.0958	.0469
25.0	.4798	.4177	.3577	.2998	.2440	.1905	.1383	.0908	.0439
30.0	.4723	.4070	.3451	.2867	.2314	.1793	.1300	.0838	.0404
35.0	.4581	.3904	.3278	.2697	.2158	.1657	.1192	.0762	.0364
40.0	.4376	.3686	.3061	.2494	.1976	.1504	.1072	.0679	.0322
45.0	.4112	.3421	.2808	.2262	.1774	.1336	.0943	.0591	.0277
50.0	.3798	.3117	.2527	.2011	.1558	.1159	.0808	.0501	.0232
55.0	.3443	.2784	.2225	.1746	.1334	.0979	.0673	.0411	.0188
60.0	.3059	.2432	.1912	.1476	.1109	.0801	.0541	.0325	.0145
65.0	.2657	.2072	.1597	.1209	.0891	.0630	.0417	.0244	.0107
70.0	.2249	.1714	.1291	.0954	.0685	.0472	.0303	.0172	.0073
75.0	.1847	.1369	.1001	.0717	.0498	.0331	.0204	.0111	.0044
80.0	.1464	.1049	.0738	.0507	.0336	.0211	.0122	.0062	.0022
85.0	.1111	.0761	.0510	.0330	.0204	.0117	.0061	.0026	.0008

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TABLE IV.- CONTINUED

(a) C_N. Continued.

$\beta_1 = 105^0$; $\beta_2 = 255^0$; $\beta = 0^0$

α, deg \ θ_{xy}, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.1003	.1694	.2352	.2955	.3955	.4658	.5076	.5252	.5231	.5059
2.0	.1323	.1975	.2613	.3200	.4171	.4842	.5231	.5380	.5335	.5141
4.0	.2096	.2598	.3172	.3715	.4611	.5214	.5539	.5630	.5535	.5297
6.0	.3043	.3301	.3779	.4260	.5062	.5586	.5842	.5872	.5725	.5443
8.0	.4160	.4081	.4430	.4832	.5522	.5958	.6139	.6105	.5904	.5578
10.0	.5440	.4934	.5123	.5428	.5989	.6328	.6429	.6328	.6072	.5701
12.0	.6878	.5856	.5853	.6047	.6460	.6693	.6709	.6540	.6227	.5811
15.0	.9315	.7358	.7012	.7008	.7170	.7229	.7110	.6833	.6435	.5951
20.0	1.4056	1.0138	.9081	.8674	.8343	.8076	.7715	.7252	.6710	.6116
25.0	1.9518	1.3189	1.1265	1.0376	.9472	.8844	.8225	.7571	.6888	.6190
30.0	2.5535	1.6420	1.3499	1.2063	1.0523	.9509	.8624	.7781	.6963	.6171
35.0	3.1926	1.9731	1.5716	1.3683	1.1644	1.0050	.8901	.7876	.6934	.6059
40.0	3.8495	2.3022	1.7846	1.5187	1.2266	1.0452	.9047	.7853	.6801	.5858
45.0	4.5043	2.6194	1.9827	1.6530	1.2906	1.0702	.9057	.7712	.6568	.5574
50.0	5.1371	2.9149	2.1597	1.7670	1.3362	1.0792	.8931	.7458	.6243	.5215
55.0	5.7287	3.1798	2.3103	1.8572	1.3622	1.0721	.8673	.7099	.5834	.4793
60.0	6.2610	3.4060	2.4300	1.9211	1.3678	1.0489	.8291	.6645	.5356	.4321
65.0	6.7180	3.5867	2.5150	1.9565	1.3528	1.0104	.7797	.6110	.4822	.3812
70.0	7.0858	3.7164	2.5627	1.9624	1.3176	.9578	.7205	.5511	.4248	.3282
75.0	7.3531	3.7911	2.5719	1.9387	1.2634	.8927	.6534	.4865	.3652	.2747
80.0	7.5118	3.8086	2.5421	1.8861	1.1917	.8170	.5803	.4192	.3051	.2224
85.0	7.5572	3.7683	2.4742	1.8061	1.1048	.7331	.5036	.3514	.2466	.1728

α, deg \ θ_{xy}, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	.4770	.4393	.3949	.3456	.2926	.2368	.1790	.1200	.0601
2.0	.4834	.4441	.3985	.3481	.2942	.2378	.1795	.1202	.0602
4.0	.4953	.4530	.4049	.3524	.2969	.2393	.1802	.1203	.0601
6.0	.5063	.4609	.4103	.3559	.2990	.2402	.1805	.1202	.0599
8.0	.5160	.4677	.4148	.3586	.3003	.2406	.1803	.1197	.0595
10.0	.5247	.4735	.4183	.3604	.3009	.2404	.1796	.1190	.0590
12.0	.5321	.4781	.4208	.3613	.3007	.2396	.1785	.1180	.0583
15.0	.5409	.4829	.4226	.3611	.2991	.2373	.1761	.1159	.0571
20.0	.5491	.4851	.4205	.3563	.2929	.2307	.1700	.1112	.0544
25.0	.5491	.4799	.4121	.3462	.2823	.2207	.1615	.1049	.0510
30.0	.5407	.4676	.3977	.3311	.2678	.2077	.1508	.0972	.0469
35.0	.5244	.4484	.3776	.3114	.2496	.1920	.1383	.0884	.0423
40.0	.5005	.4231	.3524	.2878	.2285	.1741	.1243	.0788	.0373
45.0	.4699	.3923	.3231	.2609	.2050	.1547	.1093	.0685	.0322
50.0	.4334	.3570	.2903	.2317	.1799	.1342	.0937	.0581	.0269
55.0	.3922	.3183	.2552	.2009	.1539	.1132	.0780	.0477	.0218
60.0	.3474	.2774	.2188	.1695	.1278	.0925	.0627	.0377	.0169
65.0	.3005	.2354	.1822	.1384	.1024	.0726	.0482	.0283	.0124
70.0	.2530	.1936	.1465	.1087	.0784	.0542	.0350	.0199	.0084
75.0	.2061	.1535	.1128	.0812	.0567	.0378	.0235	.0128	.0051
80.0	.1614	.1160	.0821	.0567	.0378	.0239	.0140	.0071	.0026
85.0	.1202	.0825	.0554	.0360	.0224	.0130	.0068	.0030	.0009

$\beta_1 = 105^0$; $\beta_2 = 255^0$; $\beta = 2^0$

α, deg \ θ_{xy}, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.1102	.1742	.2381	.2975	.3965	.4662	.5077	.5250	.5229	.5055
2.0	.1422	.2022	.2642	.3220	.4180	.4846	.5232	.5378	.5332	.5137
4.0	.2194	.2644	.3201	.3734	.4620	.5217	.5539	.5628	.5531	.5293
6.0	.3140	.3346	.3807	.4278	.5070	.5589	.5842	.5870	.5721	.5439
8.0	.4255	.4125	.4457	.4850	.5530	.5961	.6139	.6103	.5900	.5574
10.0	.5534	.4977	.5149	.5445	.5996	.6330	.6428	.6325	.6068	.5696
12.0	.6970	.5898	.5879	.6063	.6467	.6695	.6708	.6537	.6223	.5806
15.0	.9404	.7398	.7036	.7023	.7176	.7230	.7109	.6830	.6431	.5946
20.0	1.4139	1.0175	.9102	.8687	.8348	.8076	.7713	.7248	.6705	.6111
25.0	1.9594	1.3223	1.1284	1.0387	.9475	.8843	.8222	.7567	.6883	.6185
30.0	2.5605	1.6449	1.3515	1.2072	1.0525	.9507	.8621	.7777	.6958	.6165
35.0	3.1987	1.9757	1.5729	1.3690	1.1465	1.0048	.8897	.7872	.6929	.6054
40.0	3.8548	2.3044	1.7857	1.5192	1.2266	1.0449	.9042	.7848	.6796	.5853
45.0	4.5088	2.6211	1.9835	1.6533	1.2904	1.0699	.9052	.7708	.6563	.5569
50.0	5.1409	2.9163	2.1603	1.7672	1.3360	1.0789	.8927	.7454	.6238	.5211
55.0	5.7317	3.1808	2.3108	1.8573	1.3620	1.0717	.8669	.7095	.5831	.4790
60.0	6.2634	3.4068	2.4302	1.9211	1.3676	1.0486	.8288	.6642	.5353	.4318
65.0	6.7199	3.5873	2.5151	1.9565	1.3526	1.0102	.7794	.6107	.4819	.3809
70.0	7.0872	3.7168	2.5629	1.9624	1.3175	.9576	.7203	.5509	.4246	.3280
75.0	7.3541	3.7914	2.5720	1.9387	1.2633	.8926	.6533	.4864	.3651	.2746
80.0	7.5127	3.8089	2.5422	1.8862	1.1917	.8170	.5803	.4192	.3051	.2223
85.0	7.5580	3.7687	2.4745	1.8063	1.1049	.7332	.5036	.3514	.2466	.1728

α, deg \ θ_{xy}, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	.4766	.4389	.3945	.3452	.2922	.2365	.1788	.1198	.0601
2.0	.4829	.4437	.3981	.3477	.2939	.2375	.1793	.1200	.0601
4.0	.4949	.4526	.4044	.3520	.2966	.2390	.1800	.1202	.0600
6.0	.5058	.4605	.4099	.3556	.2986	.2400	.1802	.1200	.0598
8.0	.5156	.4673	.4143	.3582	.2999	.2403	.1800	.1196	.0594
10.0	.5242	.4730	.4178	.3600	.3005	.2401	.1794	.1189	.0589
12.0	.5316	.4776	.4203	.3609	.3004	.2393	.1783	.1178	.0583
15.0	.5404	.4824	.4222	.3607	.2988	.2370	.1759	.1158	.0570
20.0	.5486	.4846	.4201	.3559	.2925	.2304	.1698	.1110	.0548
25.0	.5485	.4794	.4117	.3458	.2820	.2204	.1613	.1047	.0509
30.0	.5402	.4671	.3973	.3307	.2675	.2074	.1506	.0971	.0468
35.0	.5239	.4480	.3772	.3111	.2494	.1918	.1381	.0883	.0423
40.0	.5001	.4227	.3521	.2875	.2283	.1739	.1242	.0787	.0373
45.0	.4695	.3920	.3227	.2607	.2048	.1545	.1092	.0685	.0321
50.0	.4331	.3567	.2900	.2314	.1797	.1340	.0936	.0580	.0269
55.0	.3919	.3181	.2550	.2007	.1537	.1131	.0779	.0476	.0218
60.0	.3472	.2771	.2186	.1693	.1277	.0924	.0626	.0376	.0169
65.0	.3003	.2352	.1820	.1383	.1023	.0726	.0482	.0283	.0124
70.0	.2528	.1935	.1464	.1086	.0784	.0542	.0350	.0199	.0084
75.0	.2060	.1534	.1127	.0811	.0567	.0378	.0235	.0128	.0051
80.0	.1614	.1160	.0821	.0567	.0378	.0239	.0140	.0071	.0026
85.0	.1202	.0825	.0554	.0360	.0224	.0130	.0068	.0030	.0009

TABLE IV.- CONTINUED

(a) C_N. Continued.

$\beta_1 = 120^\circ$; $\beta_2 = 240^\circ$; $\beta = 0^\circ$

θ_{xy}, deg / α, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.1107	.1867	.2589	.3251	.4347	.5113	.5564	.5748	.5717	.5520
2.0	.1462	.2178	.2879	.3524	.4586	.5318	.5737	.5890	.5832	.5611
4.0	.2322	.2871	.3501	.4096	.5075	.5730	.6079	.6168	.6054	.5785
6.0	.3376	.3652	.4176	.4701	.5577	.6145	.6416	.6438	.6265	.5947
8.0	.4618	.4520	.4900	.5337	.6088	.6558	.6746	.6697	.6465	.6097
10.0	.6042	.5469	.5670	.6001	.6607	.6969	.7068	.6945	.6652	.6234
12.0	.7643	.6495	.6483	.6689	.7132	.7376	.7381	.7181	.6826	.6357
15.0	1.0355	.8166	.7772	.7758	.7922	.7973	.7828	.7509	.7058	.6515
20.0	1.5633	1.1261	1.0074	.9613	.9229	.8918	.8503	.7978	.7368	.6703
25.0	2.1715	1.4658	1.2507	1.1509	1.0088	.9775	.9074	.8337	.7570	.6790
30.0	2.8415	1.8256	1.4995	1.3389	1.1660	1.0518	.9523	.8577	.7661	.6776
35.0	3.5532	2.1943	1.7465	1.5195	1.2711	1.1126	.9837	.8689	.7635	.6659
40.0	4.2848	2.5610	1.9839	1.6872	1.3609	1.1579	1.0006	.8671	.7496	.6444
45.0	5.0142	2.9143	2.2047	1.8370	1.4325	1.1863	1.0024	.8523	.7246	.6137
50.0	5.7191	3.2436	2.4022	1.9644	1.4839	1.1970	.9892	.8249	.6893	.5748
55.0	6.3781	3.5389	2.5703	2.0653	1.5134	1.1898	.9613	.7857	.6448	.5288
60.0	6.9713	3.7912	2.7039	2.1368	1.5202	1.1647	.9196	.7361	.5924	.4772
65.0	7.4805	3.9928	2.7989	2.1768	1.5041	1.1225	.8654	.6774	.5338	.4214
70.0	7.8904	4.1376	2.8526	2.1839	1.4655	1.0646	.8002	.6114	.4708	.3632
75.0	8.1884	4.2212	2.8632	2.1579	1.4057	.9927	.7261	.5402	.4051	.3044
80.0	8.3656	4.2411	2.8304	2.0998	1.3264	.9090	.6453	.4660	.3389	.2468
85.0	8.4164	4.1966	2.7552	2.0111	1.2300	.8160	.5604	.3909	.2742	.1920

θ_{xy}, deg / α, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	.5196	.4778	.4290	.3749	.3170	.2563	.1937	.1297	.0650
2.0	.5267	.4832	.4329	.3777	.3188	.2574	.1942	.1299	.0650
4.0	.5400	.4931	.4400	.3825	.3219	.2591	.1950	.1301	.0649
6.0	.5522	.5019	.4461	.3864	.3242	.2602	.1953	.1299	.0647
8.0	.5631	.5095	.4511	.3894	.3257	.2607	.1951	.1295	.0643
10.0	.5728	.5160	.4551	.3915	.3264	.2605	.1944	.1287	.0638
12.0	.5811	.5212	.4579	.3926	.3263	.2597	.1933	.1276	.0631
15.0	.5911	.5267	.4602	.3926	.3247	.2573	.1907	.1254	.0617
20.0	.6006	.5296	.4583	.3876	.3181	.2502	.1842	.1203	.0588
25.0	.6011	.5244	.4495	.3769	.3069	.2395	.1750	.1135	.0551
30.0	.5926	.5114	.4341	.3607	.2912	.2255	.1635	.1053	.0507
35.0	.5752	.4909	.4125	.3396	.2717	.2086	.1500	.0958	.0458
40.0	.5496	.4636	.3854	.3141	.2489	.1894	.1349	.0853	.0404
45.0	.5164	.4303	.3536	.2851	.2235	.1683	.1187	.0743	.0348
50.0	.4768	.3920	.3181	.2533	.1963	.1461	.1018	.0630	.0291
55.0	.4319	.3499	.2799	.2199	.1681	.1234	.0848	.0517	.0236
60.0	.3830	.3052	.2403	.1858	.1398	.1009	.0682	.0409	.0183
65.0	.3318	.2594	.2004	.1520	.1121	.0794	.0525	.0308	.0134
70.0	.2796	.2137	.1613	.1195	.0861	.0594	.0382	.0217	.0092
75.0	.2281	.1696	.1245	.0894	.0623	.0415	.0257	.0139	.0056
80.0	.1789	.1285	.0908	.0626	.0417	.0264	.0153	.0077	.0028
85.0	.1335	.0915	.0614	.0399	.0248	.0144	.0075	.0033	.0010

$\beta_1 = 120^\circ$; $\beta_2 = 240^\circ$; $\beta = 2^\circ$

θ_{xy}, deg / α, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.1210	.1916	.2620	.3272	.4357	.5117	.5565	.5746	.5714	.5516
2.0	.1566	.2227	.2910	.3544	.4596	.5322	.5737	.5888	.5828	.5607
4.0	.2424	.2918	.3531	.4116	.5084	.5734	.6078	.6166	.6050	.5780
6.0	.3477	.3700	.4204	.4720	.5585	.6247	.6615	.6635	.6261	.5942
8.0	.4717	.4566	.4928	.5356	.6096	.6560	.6745	.6694	.6461	.6092
10.0	.6140	.5514	.5697	.6018	.6615	.6971	.7067	.6942	.6648	.6229
12.0	.7739	.6539	.6509	.6705	.7138	.7377	.7379	.7177	.6821	.6352
15.0	1.0448	.8208	.7797	.7774	.7928	.7973	.7825	.7505	.7053	.6510
20.0	1.5719	1.1299	1.0096	.9626	.9233	.8917	.8500	.7973	.7362	.6697
25.0	2.1793	1.4692	1.2526	1.1520	1.0490	.9773	.9070	.8332	.7565	.6784
30.0	2.8486	1.8285	1.5011	1.3397	1.1661	1.0516	.9519	.8572	.7655	.6770
35.0	3.5594	2.1969	1.7477	1.5201	1.2711	1.1122	.9832	.8684	.7630	.6653
40.0	4.2901	2.5631	1.9849	1.6876	1.3607	1.1575	1.0001	.8666	.7490	.6439
45.0	5.0186	2.9160	2.2055	1.8373	1.4323	1.1859	1.0019	.8517	.7240	.6132
50.0	5.7226	3.2449	2.4027	1.9644	1.4836	1.1966	.9887	.8244	.6888	.5744
55.0	6.3809	3.5398	2.5705	2.0653	1.5131	1.1893	.9609	.7853	.6444	.5284
60.0	6.9733	3.7918	2.7040	2.1367	1.5199	1.1643	.9192	.7357	.5921	.4768
65.0	7.4819	3.9931	2.7989	2.1766	1.5038	1.1222	.8650	.6770	.5336	.4211
70.0	7.8913	4.1377	2.8525	2.1837	1.4652	1.0643	.7999	.6112	.4706	.3631
75.0	8.1890	4.2212	2.8631	2.1578	1.4055	.9925	.7259	.5401	.4050	.3043
80.0	8.3659	4.2411	2.8303	2.0997	1.3263	.9089	.6453	.4659	.3389	.2467
85.0	8.4167	4.1967	2.7553	2.0112	1.2300	.8160	.5604	.3909	.2742	.1921

θ_{xy}, deg / α, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	.5192	.4774	.4285	.3745	.3166	.2560	.1934	.1295	.0649
2.0	.5262	.4827	.4324	.3772	.3184	.2571	.1940	.1298	.0649
4.0	.5395	.4926	.4395	.3821	.3215	.2588	.1947	.1299	.0649
6.0	.5517	.5014	.4456	.3860	.3238	.2599	.1950	.1298	.0646
8.0	.5626	.5090	.4506	.3890	.3253	.2604	.1948	.1293	.0642
10.0	.5722	.5155	.4546	.3911	.3260	.2602	.1942	.1285	.0637
12.0	.5806	.5207	.4575	.3922	.3259	.2594	.1931	.1275	.0630
15.0	.5905	.5262	.4597	.3921	.3243	.2570	.1905	.1253	.0617
20.0	.6001	.5290	.4578	.3872	.3178	.2499	.1840	.1202	.0588
25.0	.6006	.5239	.4491	.3765	.3065	.2392	.1748	.1134	.0550
30.0	.5920	.5109	.4337	.3604	.2909	.2253	.1633	.1051	.0507
35.0	.5747	.4904	.4121	.3392	.2714	.2084	.1498	.0957	.0457
40.0	.5491	.4632	.3850	.3138	.2487	.1891	.1348	.0852	.0404
45.0	.5160	.4299	.3533	.2848	.2233	.1681	.1186	.0742	.0348
50.0	.4764	.3917	.3178	.2531	.1961	.1459	.1017	.0629	.0291
55.0	.4315	.3496	.2797	.2197	.1679	.1233	.0848	.0517	.0236
60.0	.3827	.3050	.2401	.1856	.1396	.1008	.0682	.0408	.0183
65.0	.3315	.2592	.2002	.1518	.1120	.0793	.0525	.0307	.0134
70.0	.2794	.2136	.1612	.1194	.0860	.0593	.0382	.0217	.0091
75.0	.2280	.1695	.1244	.0894	.0623	.0415	.0257	.0139	.0056
80.0	.1789	.1285	.0908	.0626	.0417	.0263	.0153	.0077	.0028
85.0	.1335	.0915	.0614	.0399	.0248	.0144	.0075	.0033	.0010

TABLE IV.- CONTINUED

(a) C_N. Continued.

$\phi_1 = 105^0$; $\phi_2 = 255^0$; $\beta = 5^0$

θ_{xy}, deg / α, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.1600	.1990	.2536	.3080	.4016	.4683	.5080	.5242	.5213	.5035
2.0	.1923	.2269	.2795	.3323	.4230	.4867	.5234	.5369	.5316	.5117
4.0	.2697	.2887	.3350	.3834	.4666	.5235	.5540	.5617	.5514	.5272
6.0	.3641	.3584	.3952	.4375	.5114	.5605	.5841	.5858	.5703	.5417
8.0	.4750	.4359	.4598	.4942	.5571	.5974	.6135	.6089	.5881	.5551
10.0	.6022	.5205	.5286	.5534	.6034	.6341	.6423	.6310	.6047	.5672
12.0	.7450	.6120	.6011	.6148	.6501	.6703	.6701	.6520	.6201	.5782
15.0	.9869	.7611	.7161	.7102	.7206	.7235	.7099	.6812	.6408	.5921
20.0	1.4574	1.0370	.9213	.8755	.8370	.8076	.7699	.7227	.6680	.6085
25.0	1.9995	1.3398	1.1381	1.0445	.9491	.8838	.8205	.7544	.6857	.6158
30.0	2.5967	1.6604	1.3599	1.2119	1.0534	.9497	.8601	.7752	.6932	.6139
35.0	3.2309	1.9890	1.5798	1.3726	1.1468	1.0035	.8876	.7847	.6902	.6028
40.0	3.8828	2.3156	1.7913	1.5219	1.2264	1.0433	.9020	.7824	.6770	.5828
45.0	4.5326	2.6303	1.9878	1.6551	1.2898	1.0682	.9030	.7684	.6539	.5546
50.0	5.1606	2.9236	2.1635	1.7682	1.3351	1.0771	.8906	.7432	.6216	.5191
55.0	5.7477	3.1865	2.3130	1.8578	1.3609	1.0700	.8650	.7075	.5811	.4772
60.0	6.2760	3.4110	2.4317	1.9212	1.3665	1.0470	.8271	.6624	.5337	.4303
65.0	6.7295	3.5903	2.5160	1.9563	1.3516	1.0089	.7780	.6094	.4806	.3798
70.0	7.0945	3.7190	2.5635	1.9622	1.3167	.9567	.7193	.5499	.4237	.3272
75.0	7.3597	3.7932	2.5725	1.9387	1.2629	.8920	.6527	.4858	.3645	.2741
80.0	7.5173	3.8106	2.5429	1.8865	1.1917	.8169	.5802	.4191	.3050	.2222
85.0	7.5623	3.7706	2.4756	1.8071	1.1055	.7336	.5040	.3517	.2468	.1730

θ_{xy}, deg / α, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	.4744	.4366	.3924	.3432	.2905	.2350	.1777	.1191	.0597
2.0	.4807	.4414	.3959	.3457	.2921	.2360	.1782	.1193	.0597
4.0	.4926	.4503	.4022	.3500	.2948	.2375	.1789	.1194	.0596
6.0	.5034	.4581	.4076	.3535	.2968	.2385	.1791	.1193	.0594
8.0	.5132	.4649	.4121	.3562	.2981	.2389	.1789	.1188	.0591
10.0	.5217	.4706	.4155	.3579	.2987	.2386	.1783	.1181	.0585
12.0	.5291	.4752	.4180	.3589	.2986	.2379	.1772	.1171	.0579
15.0	.5378	.4799	.4198	.3586	.2970	.2356	.1748	.1151	.0567
20.0	.5460	.4821	.4178	.3539	.2908	.2290	.1688	.1103	.0540
25.0	.5459	.4769	.4094	.3438	.2805	.2191	.1603	.1041	.0506
30.0	.5376	.4647	.3951	.3288	.2659	.2062	.1497	.0965	.0465
35.0	.5214	.4457	.3751	.3093	.2479	.1906	.1373	.0877	.0420
40.0	.4978	.4206	.3502	.2859	.2269	.1729	.1234	.0782	.0371
45.0	.4674	.3900	.3211	.2592	.2036	.1536	.1085	.0680	.0319
50.0	.4312	.3550	.2886	.2302	.1787	.1332	.0930	.0576	.0267
55.0	.3902	.3166	.2537	.1996	.1529	.1124	.0774	.0473	.0216
60.0	.3458	.2759	.2176	.1685	.1270	.0919	.0622	.0374	.0168
65.0	.2993	.2343	.1812	.1377	.1018	.0722	.0479	.0281	.0123
70.0	.2521	.1929	.1458	.1082	.0780	.0539	.0348	.0198	.0084
75.0	.2056	.1530	.1123	.0808	.0564	.0374	.0233	.0127	.0051
80.0	.1612	.1158	.0819	.0565	.0377	.0238	.0139	.0070	.0026
85.0	.1203	.0825	.0554	.0360	.0224	.0130	.0068	.0030	.0009

$\phi_1 = 105^0$; $\phi_2 = 255^0$; $\beta = 15^0$

θ_{xy}, deg / α, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.5101	.3989	.3893	.4039	.4490	.4884	.5112	.5166	.5069	.4852
2.0	.5520	.4281	.4145	.4270	.4691	.5056	.5257	.5285	.5166	.4928
4.0	.6446	.4913	.4681	.4753	.5101	.5403	.5544	.5519	.5352	.5074
6.0	.7496	.5609	.5258	.5263	.5522	.5750	.5827	.5745	.5530	.5211
8.0	.8671	.6369	.5874	.5799	.5951	.6097	.6104	.5962	.5697	.5336
10.0	.9975	.7190	.6527	.6357	.6387	.6442	.6374	.6170	.5853	.5451
12.0	1.1405	.8070	.7213	.6934	.6827	.6783	.6636	.6368	.5998	.5553
15.0	1.3783	.9495	.8300	.7832	.7489	.7283	.7010	.6641	.6192	.5684
20.0	1.8324	1.2114	1.0235	.9388	.8584	.8073	.7574	.7032	.6449	.5838
25.0	2.3496	1.4978	1.2277	1.0976	.9637	.8790	.8050	.7330	.6614	.5907
30.0	2.9160	1.8002	1.4364	1.2550	1.0618	.9410	.8422	.7526	.6685	.5889
35.0	3.5156	2.1098	1.6433	1.4062	1.1496	.9915	.8680	.7615	.6657	.5785
40.0	4.1309	2.4173	1.8421	1.5465	1.2244	1.0290	.8816	.7593	.6533	.5597
45.0	4.7434	2.7134	2.0269	1.6717	1.2840	1.0523	.8826	.7462	.6316	.5332
50.0	5.3350	2.9893	2.1921	1.7781	1.3266	1.0608	.8708	.7225	.6013	.4998
55.0	5.8878	3.2365	2.3325	1.8622	1.3509	1.0541	.8468	.6889	.5632	.4604
60.0	6.3850	3.4476	2.4441	1.9217	1.3561	1.0324	.8112	.6466	.5185	.4163
65.0	6.8118	3.6161	2.5232	1.9546	1.3420	.9965	.7651	.5967	.4687	.3688
70.0	7.1550	3.7370	2.5676	1.9600	1.3091	.9474	.7098	.5407	.4151	.3194
75.0	7.4044	3.8065	2.5759	1.9377	1.2584	.8866	.6472	.4805	.3595	.2695
80.0	7.5524	3.8225	2.5478	1.8883	1.1913	.8159	.5789	.4177	.3035	.2207
85.0	7.5944	3.7846	2.4842	1.8134	1.1099	.7373	.5071	.3542	.2488	.1743

θ_{xy}, deg / α, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	.4541	.4159	.3724	.3248	.2743	.2216	.1673	.1120	.0561
2.0	.4600	.4204	.3757	.3271	.2758	.2225	.1678	.1122	.0561
4.0	.4712	.4287	.3816	.3312	.2784	.2239	.1684	.1123	.0561
6.0	.4814	.4361	.3867	.3345	.2803	.2248	.1686	.1122	.0559
8.0	.4905	.4425	.3909	.3370	.2815	.2252	.1685	.1118	.0555
10.0	.4986	.4478	.3942	.3386	.2820	.2250	.1679	.1111	.0551
12.0	.5055	.4521	.3965	.3395	.2819	.2242	.1669	.1102	.0544
15.0	.5137	.4566	.3982	.3393	.2804	.2221	.1646	.1082	.0533
20.0	.5214	.4586	.3963	.3348	.2746	.2159	.1589	.1038	.0508
25.0	.5213	.4538	.3884	.3254	.2647	.2066	.1510	.0979	.0476
30.0	.5136	.4423	.3749	.3113	.2512	.1944	.1410	.0908	.0438
35.0	.4983	.4245	.3562	.2929	.2343	.1798	.1293	.0826	.0395
40.0	.4761	.4008	.3327	.2709	.2145	.1632	.1163	.0736	.0349
45.0	.4475	.3721	.3053	.2458	.1926	.1450	.1023	.0640	.0300
50.0	.4134	.3392	.2748	.2185	.1692	.1258	.0877	.0543	.0251
55.0	.3750	.3031	.2420	.1898	.1449	.1063	.0731	.0446	.0203
60.0	.3332	.2648	.2080	.1605	.1206	.0870	.0588	.0352	.0158
65.0	.2895	.2257	.1739	.1315	.0969	.0684	.0453	.0265	.0116
70.0	.2451	.1867	.1405	.1038	.0745	.0513	.0329	.0187	.0079
75.0	.2013	.1492	.1091	.0781	.0542	.0360	.0222	.0120	.0048
80.0	.1596	.1143	.0805	.0553	.0366	.0230	.0133	.0067	.0024
85.0	.1212	.0830	.0555	.0360	.0222	.0128	.0066	.0029	.0008

TABLE IV. - CONTINUED

(a) C_N. Continued.

$\beta_1 = 120^0$; $\beta_2 = 240^0$; $\beta = 5^0$

α, deg \ θ_{xy}, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.1736	.2177	.2781	.3381	.4409	.5138	.5567	.5736	.5696	.5493
2.0	.2095	.2486	.3069	.3651	.4646	.5341	.5738	.5877	.5810	.5584
4.0	.2955	.3173	.3686	.4219	.5131	.5751	.6077	.6153	.6030	.5756
6.0	.4004	.3949	.4355	.4820	.5629	.6162	.6411	.6420	.6240	.5917
8.0	.5238	.4810	.5074	.5451	.6137	.6572	.6739	.6678	.6438	.6066
10.0	.6652	.5751	.5839	.6110	.6652	.6980	.7059	.6924	.6624	.6202
12.0	.8241	.6769	.6645	.6792	.7173	.7384	.7369	.7158	.6796	.6325
15.0	1.0933	.8428	.7925	.7854	.7957	.7976	.7813	.7483	.7027	.6481
20.0	1.6171	1.1499	1.0210	.9694	.9254	.8914	.8483	.7948	.7334	.6667
25.0	2.2206	1.4871	1.2624	1.1576	1.0503	.9764	.9050	.8305	.7535	.6754
30.0	2.8856	1.8441	1.5093	1.3441	1.1667	1.0502	.9496	.8543	.7624	.6740
35.0	3.5919	2.2101	1.7744	1.5234	1.2710	1.1105	.9807	.8655	.7599	.6624
40.0	4.3179	2.5739	1.9900	1.6898	1.3600	1.1554	.9974	.8637	.7461	.6411
45.0	5.0417	2.9246	2.2092	1.8385	1.4313	1.1837	.9993	.8489	.7213	.6106
50.0	5.7413	3.2514	2.4051	1.9649	1.4821	1.1943	.9862	.8217	.6862	.5720
55.0	6.3953	3.5444	2.5719	2.0650	1.5114	1.1871	.9585	.7829	.6421	.5263
60.0	6.9840	3.7948	2.7045	2.1360	1.5182	1.1622	.9171	.7336	.5902	.4751
65.0	7.4893	3.9949	2.7988	2.1757	1.5021	1.1204	.8632	.6754	.5320	.4198
70.0	7.8961	4.1386	2.8521	2.1827	1.4639	1.0629	.7986	.6099	.4694	.3620
75.0	8.1919	4.2215	2.8626	2.1570	1.4045	.9915	.7250	.5393	.4043	.3037
80.0	8.3677	4.2413	2.8301	2.0993	1.3258	.9084	.6449	.4655	.3386	.2465
85.0	8.4182	4.1971	2.7555	2.0113	1.2302	.8161	.5605	.3910	.2743	.1921

α, deg \ θ_{xy}, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	.5168	.4749	.4262	.3723	.3147	.2544	.1922	.1287	.0645
2.0	.5238	.4802	.4301	.3751	.3165	.2555	.1928	.1289	.0645
4.0	.5370	.4900	.4371	.3799	.3196	.2572	.1935	.1291	.0644
6.0	.5490	.4988	.4431	.3838	.3219	.2583	.1938	.1290	.0642
8.0	.5599	.5064	.4481	.3868	.3234	.2588	.1936	.1285	.0638
10.0	.5695	.5128	.4521	.3888	.3241	.2586	.1930	.1277	.0633
12.0	.5777	.5180	.4549	.3899	.3240	.2578	.1919	.1267	.0626
15.0	.5876	.5234	.4571	.3898	.3224	.2554	.1893	.1245	.0613
20.0	.5971	.5263	.4553	.3850	.3159	.2484	.1828	.1194	.0584
25.0	.5976	.5211	.4466	.3743	.3047	.2378	.1737	.1127	.0547
30.0	.5891	.5082	.4313	.3583	.2892	.2239	.1623	.1045	.0503
35.0	.5719	.4879	.4098	.3373	.2698	.2071	.1489	.0951	.0454
40.0	.5465	.4608	.3830	.3120	.2472	.1880	.1339	.0847	.0401
45.0	.5136	.4277	.3514	.2832	.2220	.1671	.1178	.0738	.0345
50.0	.4742	.3897	.3161	.2517	.1950	.1451	.1011	.0625	.0289
55.0	.4297	.3479	.2783	.2185	.1670	.1225	.0842	.0514	.0234
60.0	.3812	.3036	.2389	.1846	.1389	.1003	.0678	.0406	.0182
65.0	.3303	.2581	.1993	.1511	.1114	.0788	.0522	.0306	.0133
70.0	.2785	.2128	.1606	.1189	.0856	.0590	.0379	.0215	.0091
75.0	.2275	.1691	.1240	.0890	.0620	.0413	.0255	.0139	.0055
80.0	.1786	.1282	.0906	.0624	.0415	.0262	.0153	.0077	.0028
85.0	.1336	.0916	.0614	.0399	.0247	.0143	.0075	.0033	.0010

$\beta_1 = 120^0$; $\beta_2 = 240^0$; $\beta = 15^0$

α, deg \ θ_{xy}, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.5441	.4288	.4207	.4381	.4893	.5332	.5583	.5640	.5529	.5286
2.0	.5904	.4611	.4487	.4637	.5116	.5524	.5744	.5772	.5636	.5371
4.0	.6931	.5312	.5082	.5174	.5572	.5909	.6063	.6031	.5843	.5533
6.0	.8095	.6085	.5723	.5741	.6040	.6295	.6377	.6283	.6041	.5685
8.0	.9399	.6928	.6407	.6336	.6517	.6681	.6686	.6525	.6227	.5825
10.0	1.0846	.7841	.7132	.6956	.7002	.7065	.5986	.6756	.6401	.5953
12.0	1.2435	.8819	.7895	.7599	.7491	.7444	.7278	.6976	.6563	.6068
15.0	1.5077	1.0403	.9104	.8598	.8228	.8001	.7695	.7282	.6781	.6215
20.0	2.0125	1.3316	1.1258	1.0329	.9448	.8882	.8325	.7720	.7069	.6390
25.0	2.5877	1.6502	1.3530	1.2098	1.0622	.9682	.8858	.8055	.7258	.6472
30.0	3.2178	1.9868	1.5854	1.3852	1.1716	1.0376	.9277	.8279	.7342	.6458
35.0	3.8851	2.3315	1.8159	1.5537	1.2697	1.0943	.9570	.8384	.7319	.6349
40.0	4.5699	2.6740	2.0375	1.7102	1.3534	1.1365	.9727	.8367	.7188	.6149
45.0	5.2519	3.0039	2.2435	1.8500	1.4202	1.1631	.9745	.8228	.6955	.5862
50.0	5.9106	3.3113	2.4278	1.9688	1.4682	1.1731	.9621	.7972	.6626	.5499
55.0	6.5262	3.5869	2.5846	2.0630	1.4957	1.1663	.9361	.7607	.6211	.5070
60.0	7.0801	3.8223	2.7092	2.1297	1.5021	1.1429	.8972	.7144	.5723	.4588
65.0	7.5555	4.0104	2.7979	2.1669	1.4870	1.1035	.8466	.6596	.5176	.4068
70.0	7.9381	4.1455	2.8479	2.1735	1.4510	1.0495	.7858	.5981	.4587	.3525
75.0	8.2162	4.2234	2.8577	2.1493	1.3951	.9824	.7166	.5317	.3975	.2977
80.0	8.3815	4.2418	2.8270	2.0949	1.3211	.9043	.6413	.4624	.3357	.2439
85.0	8.4288	4.2001	2.7567	2.0120	1.2311	.8174	.5619	.3923	.2753	.1928

α, deg \ θ_{xy}, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	.4942	.4521	.4042	.3522	.2971	.2398	.1810	.1211	.0607
2.0	.5008	.4570	.4079	.3548	.2988	.2408	.1815	.1213	.0607
4.0	.5132	.4663	.4145	.3593	.3017	.2424	.1822	.1215	.0606
6.0	.5245	.4745	.4202	.3630	.3038	.2435	.1825	.1213	.0604
8.0	.5347	.4816	.4249	.3658	.3052	.2439	.1823	.1209	.0600
10.0	.5437	.4876	.4286	.3677	.3059	.2437	.1817	.1202	.0595
12.0	.5515	.4925	.4313	.3688	.3058	.2430	.1806	.1192	.0589
15.0	.5608	.4977	.4333	.3687	.3043	.2407	.1782	.1171	.0576
20.0	.5697	.5003	.4316	.3641	.2982	.2341	.1721	.1123	.0549
25.0	.5702	.4955	.4236	.3541	.2877	.2242	.1636	.1060	.0514
30.0	.5622	.4834	.4090	.3390	.2731	.2111	.1529	.0983	.0473
35.0	.5460	.4643	.3889	.3193	.2549	.1953	.1403	.0894	.0427
40.0	.5221	.4388	.3636	.2955	.2336	.1774	.1262	.0797	.0377
45.0	.4912	.4077	.3339	.2684	.2099	.1577	.1110	.0694	.0325
50.0	.4542	.3720	.3008	.2388	.1845	.1370	.0953	.0589	.0272
55.0	.4123	.3327	.2652	.2076	.1582	.1158	.0794	.0484	.0220
60.0	.3667	.2910	.2282	.1757	.1318	.0949	.0640	.0382	.0171
65.0	.3189	.2482	.1909	.1442	.1060	.0747	.0493	.0288	.0125
70.0	.2702	.2056	.1545	.1139	.0817	.0561	.0359	.0203	.0085
75.0	.2222	.1645	.1201	.0859	.0595	.0394	.0242	.0131	.0052
80.0	.1763	.1261	.0887	.0609	.0403	.0253	.0146	.0073	.0026
85.0	.1339	.0916	.0613	.0397	.0245	.0141	.0073	.0031	.0009

TABLE IV.- CONTINUED

(a) C_N. Continued.

$\phi_1 = 135^o$; $\phi_2 = 225^o$; $\beta = 0^o$

α, deg \ θ_{xy}, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.1255	.2112	.2925	.3669	.4894	.5740	.6228	.6412	.6355	.6114
2.0	.1665	.2470	.3259	.3982	.5169	.5975	.6425	.6574	.6486	.6217
4.0	.2656	.3268	.3974	.4640	.5730	.6449	.6817	.6893	.6740	.6414
6.0	.3872	.4169	.4751	.5338	.6307	.6925	.7204	.7202	.6982	.6602
8.0	.5306	.5169	.5586	.6070	.6896	.7401	.7584	.7500	.7212	.6775
10.0	.6952	.6264	.6474	.6835	.7494	.7874	.7955	.7786	.7427	.6933
12.0	.8802	.7449	.7412	.7628	.8099	.8343	.8315	.8058	.7628	.7076
15.0	1.1938	.9380	.8901	.8863	.9011	.9032	.8832	.8437	.7898	.7261
20.0	1.8043	1.2956	1.1561	1.1006	1.0521	1.0125	.9615	.8983	.8261	.7484
25.0	2.5081	1.6886	1.4374	1.3199	1.1979	1.1120	1.0281	.9406	.8505	.7596
30.0	3.2839	2.1050	1.7255	1.5375	1.3339	1.1986	1.0809	.9695	.8622	.7593
35.0	4.1080	2.5320	2.0115	1.7469	1.4562	1.2698	1.1184	.9839	.8609	.7476
40.0	4.9555	2.9568	2.2868	1.9417	1.5609	1.3234	1.1394	.9835	.8466	.7248
45.0	5.8005	3.3665	2.5431	2.1159	1.6449	1.3577	1.1432	.9682	.8198	.6915
50.0	6.6175	3.7485	2.7726	2.2643	1.7057	1.3718	1.1298	.9386	.7813	.6489
55.0	7.3815	4.0913	2.9682	2.3823	1.7413	1.3651	1.0995	.8956	.7322	.5981
60.0	8.0694	4.3844	3.1240	2.4664	1.7508	1.3379	1.0534	.8404	.6740	.5408
65.0	8.6602	4.6190	3.2353	2.5140	1.7337	1.2910	.9926	.7747	.6086	.4787
70.0	9.1361	4.7879	3.2988	2.5237	1.6907	1.2258	.9193	.7005	.5378	.4136
75.0	9.4825	4.8861	3.3124	2.4951	1.6231	1.1444	.8354	.6202	.4639	.3476
80.0	9.6890	4.9104	3.2758	2.4292	1.5328	1.0491	.7437	.5360	.3891	.2827
85.0	9.7492	4.8602	3.1901	2.3279	1.4227	.9429	.6468	.4506	.3156	.2207

α, deg \ θ_{xy}, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	.5735	.5257	.4705	.4100	.3458	.2790	.2105	.1408	.0705
2.0	.5816	.5317	.4749	.4131	.3479	.2803	.2111	.1410	.0705
4.0	.5968	.5431	.4830	.4187	.3514	.2823	.2120	.1413	.0705
6.0	.6107	.5531	.4900	.4232	.3541	.2836	.2124	.1411	.0702
8.0	.6233	.5620	.4959	.4268	.3559	.2842	.2123	.1407	.0698
10.0	.6345	.5695	.5006	.4293	.3568	.2841	.2116	.1398	.0692
12.0	.6443	.5757	.5040	.4307	.3569	.2833	.2104	.1387	.0685
15.0	.6561	.5824	.5069	.4310	.3554	.2809	.2077	.1364	.0670
20.0	.6679	.5865	.5057	.4262	.3486	.2734	.2008	.1309	.0639
25.0	.6696	.5818	.4967	.4150	.3367	.2620	.1909	.1235	.0599
30.0	.6613	.5683	.4805	.3977	.3199	.2469	.1785	.1146	.0551
35.0	.6430	.5464	.4573	.3750	.2989	.2287	.1639	.1043	.0497
40.0	.6154	.5170	.4280	.3473	.2742	.2078	.1476	.0931	.0439
45.0	.5794	.4807	.3934	.3157	.2466	.1850	.1300	.0811	.0379
50.0	.5360	.4388	.3545	.2811	.2170	.1608	.1116	.0688	.0317
55.0	.4865	.3924	.3126	.2445	.1861	.1361	.0932	.0566	.0257
60.0	.4324	.3431	.2690	.2070	.1551	.1115	.0751	.0448	.0199
65.0	.3754	.2923	.2249	.1698	.1248	.0879	.0579	.0338	.0147
70.0	.3173	.2416	.1817	.1340	.0961	.0659	.0422	.0239	.0100
75.0	.2597	.1924	.1407	.1007	.0699	.0463	.0285	.0154	.0061
80.0	.2044	.1464	.1031	.0709	.0470	.0296	.0171	.0086	.0031
85.0	.1532	.1048	.0702	.0455	.0281	.0163	.0085	.0037	.0011

$\phi_1 = 135^o$; $\phi_2 = 225^o$; $\beta = 2^o$

α, deg \ θ_{xy}, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.1360	.2162	.2956	.3690	.4903	.5743	.6227	.6409	.6350	.6109
2.0	.1770	.2520	.3289	.4003	.5178	.5978	.6424	.6571	.6481	.6212
4.0	.2759	.3316	.4004	.4660	.5739	.6451	.6816	.6889	.6735	.6411
6.0	.3974	.4216	.4780	.5356	.6315	.6927	.7202	.7198	.6977	.6597
8.0	.5406	.5216	.5614	.6088	.6903	.7402	.7582	.7496	.7207	.6769
10.0	.7050	.6309	.6501	.6852	.7501	.7875	.7952	.7781	.7422	.6927
12.0	.8898	.7492	.7437	.7644	.8104	.8343	.8312	.8053	.7622	.7070
15.0	1.2030	.9421	.8924	.8877	.9015	.9031	.8828	.8432	.7892	.7254
20.0	1.8128	1.2993	1.1581	1.1017	1.0524	1.0123	.9610	.8977	.8255	.7477
25.0	2.5157	1.6918	1.4391	1.3208	1.1979	1.1116	1.0275	.9400	.8498	.7589
30.0	3.2905	2.1077	1.7268	1.5382	1.3338	1.1982	1.0803	.9688	.8615	.7586
35.0	4.1137	2.5342	2.0125	1.7473	1.4559	1.2693	1.1177	.9832	.8602	.7469
40.0	4.9601	2.9585	2.2875	1.9418	1.5605	1.3228	1.1387	.9828	.8459	.7241
45.0	5.8041	3.3676	2.5435	2.1158	1.6444	1.3571	1.1425	.9675	.8192	.6909
50.0	6.6201	3.7492	2.7726	2.2640	1.7051	1.3711	1.1291	.9380	.7807	.6483
55.0	7.3832	4.0915	2.9680	2.3819	1.7407	1.3644	1.0989	.8950	.7316	.5976
60.0	8.0702	4.3843	3.1236	2.4659	1.7502	1.3373	1.0528	.8399	.6736	.5404
65.0	8.6604	4.6186	3.2348	2.5134	1.7331	1.2904	.9921	.7743	.6082	.4784
70.0	9.1356	4.7874	3.2982	2.5231	1.6902	1.2253	.9188	.7002	.5375	.4134
75.0	9.4817	4.8854	3.3118	2.4946	1.6226	1.1440	.8351	.6199	.4637	.3474
80.0	9.6879	4.9097	3.2753	2.4287	1.5325	1.0489	.7435	.5358	.3890	.2826
85.0	9.7480	4.8595	3.1897	2.3276	1.4225	.9428	.6468	.4506	.3156	.2207

α, deg \ θ_{xy}, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	.5730	.5251	.4700	.4096	.3454	.2787	.2102	.1406	.0704
2.0	.5811	.5312	.4744	.4127	.3475	.2800	.2109	.1409	.0704
4.0	.5962	.5425	.4825	.4182	.3510	.2819	.2118	.1411	.0704
6.0	.6102	.5526	.4895	.4228	.3537	.2832	.2121	.1410	.0701
8.0	.6227	.5614	.4953	.4263	.3555	.2838	.2120	.1405	.0697
10.0	.6339	.5689	.5000	.4288	.3564	.2837	.2113	.1397	.0691
12.0	.6436	.5751	.5035	.4303	.3565	.2830	.2102	.1385	.0684
15.0	.6554	.5818	.5064	.4305	.3550	.2805	.2075	.1362	.0669
20.0	.6672	.5859	.5051	.4257	.3482	.2731	.2005	.1307	.0638
25.0	.6690	.5812	.4962	.4145	.3363	.2617	.1907	.1234	.0598
30.0	.6606	.5677	.4799	.3973	.3196	.2466	.1783	.1145	.0550
35.0	.6424	.5459	.4568	.3745	.2986	.2284	.1637	.1042	.0497
40.0	.6149	.5164	.4275	.3470	.2739	.2076	.1474	.0929	.0439
45.0	.5788	.4802	.3929	.3154	.2463	.1847	.1298	.0810	.0378
50.0	.5355	.4383	.3542	.2808	.2167	.1606	.1115	.0687	.0317
55.0	.4860	.3921	.3123	.2443	.1859	.1359	.0930	.0565	.0256
60.0	.4320	.3428	.2687	.2068	.1549	.1114	.0750	.0447	.0199
65.0	.3751	.2921	.2247	.1697	.1246	.0878	.0578	.0337	.0146
70.0	.3170	.2414	.1815	.1339	.0960	.0659	.0422	.0238	.0100
75.0	.2595	.1923	.1406	.1006	.0698	.0463	.0285	.0154	.0061
80.0	.2044	.1463	.1031	.0708	.0470	.0296	.0171	.0086	.0031
85.0	.1532	.1048	.0702	.0455	.0281	.0163	.0085	.0037	.0011

TABLE IV. - CONTINUED

(a) C_N. Continued.

$\beta_1 = 135^\circ$; $\beta_2 = 225^\circ$; $\beta = 5^\circ$

θ_{xy}, deg / α, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.1897	.2424	.3117	.3797	.4952	.5760	.6224	.6394	.6328	.6082
2.0	.2310	.2780	.3448	.4108	.5225	.5994	.6420	.6555	.6458	.6185
4.0	.3299	.3571	.4158	.4761	.5782	.6464	.6810	.6871	.6710	.6383
6.0	.4507	.4465	.4929	.5453	.6355	.6936	.7194	.7178	.6951	.6567
8.0	.5931	.5458	.5758	.6180	.6939	.7408	.7571	.7474	.7179	.6739
10.0	.7564	.6545	.6639	.6939	.7533	.7878	.7939	.7758	.7393	.6896
12.0	.9400	.7720	.7570	.7726	.8133	.8343	.8296	.8028	.7592	.7038
15.0	1.2512	.9636	.9047	.8951	.9038	.9027	.8809	.8404	.7860	.7221
20.0	1.8571	1.3186	1.1687	1.1078	1.0537	1.0112	.9586	.8946	.8220	.7442
25.0	2.5556	1.7086	1.4479	1.3254	1.1983	1.1099	1.0247	.9366	.8462	.7553
30.0	3.3254	2.1218	1.7338	1.5414	1.3333	1.1959	1.0771	.9652	.8578	.7551
35.0	4.1433	2.5456	2.0176	1.7492	1.4547	1.2666	1.1143	.9795	.8565	.7434
40.0	4.9843	2.9672	2.2909	1.9425	1.5586	1.3197	1.1351	.9791	.8424	.7208
45.0	5.8229	3.3737	2.5452	2.1154	1.6420	1.3538	1.1389	.9640	.8158	.6878
50.0	6.6337	3.7528	2.7729	2.2626	1.7023	1.3677	1.1256	.9346	.7775	.6454
55.0	7.3919	4.0930	2.9670	2.3798	1.7376	1.3611	1.0956	.8919	.7288	.5951
60.0	8.0746	4.3839	3.1217	2.4632	1.7470	1.3341	1.0498	.8371	.6711	.5382
65.0	8.6609	4.6167	3.2322	2.5105	1.7301	1.2875	.9895	.7719	.6061	.4766
70.0	9.1332	4.7844	3.2951	2.5201	1.6874	1.2229	.9167	.6983	.5359	.4120
75.0	9.4770	4.8817	3.3087	2.4917	1.6203	1.1421	.8335	.6185	.4625	.3465
80.0	9.6819	4.9059	3.2724	2.4263	1.5307	1.0475	.7425	.5350	.3883	.2820
85.0	9.7416	4.8561	3.1873	2.3258	1.4215	.9422	.6463	.4503	.3154	.2206

θ_{xy}, deg / α, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	.5702	.5223	.4673	.4072	.3433	.2770	.2089	.1397	.0700
2.0	.5782	.5284	.4717	.4103	.3454	.2782	.2096	.1400	.0700
4.0	.5933	.5396	.4798	.4158	.3489	.2802	.2104	.1402	.0699
6.0	.6071	.5496	.4867	.4203	.3515	.2815	.2108	.1401	.0697
8.0	.6196	.5584	.4925	.4238	.3533	.2821	.2107	.1396	.0693
10.0	.6307	.5659	.4972	.4263	.3543	.2820	.2100	.1388	.0687
12.0	.6404	.5720	.5006	.4277	.3544	.2812	.2089	.1377	.0679
15.0	.6521	.5787	.5035	.4280	.3529	.2788	.2062	.1353	.0665
20.0	.6638	.5827	.5023	.4232	.3461	.2714	.1993	.1299	.0634
25.0	.6656	.5780	.4934	.4121	.3343	.2601	.1895	.1226	.0594
30.0	.6573	.5646	.4772	.3950	.3177	.2451	.1772	.1138	.0547
35.0	.6391	.5430	.4543	.3724	.2968	.2270	.1627	.1036	.0494
40.0	.6118	.5137	.4251	.3450	.2723	.2063	.1465	.0924	.0436
45.0	.5760	.4777	.3908	.3136	.2449	.1836	.1290	.0805	.0376
50.0	.5329	.4361	.3523	.2792	.2155	.1596	.1108	.0683	.0315
55.0	.4838	.3901	.3107	.2429	.1849	.1351	.0925	.0562	.0255
60.0	.4302	.3412	.2674	.2057	.1541	.1107	.0745	.0444	.0198
65.0	.3736	.2908	.2236	.1688	.1240	.0873	.0575	.0335	.0145
70.0	.3159	.2404	.1807	.1333	.0955	.0655	.0419	.0237	.0099
75.0	.2587	.1917	.1400	.1002	.0695	.0460	.0283	.0153	.0061
80.0	.2039	.1460	.1028	.0706	.0468	.0294	.0170	.0085	.0031
85.0	.1531	.1047	.0701	.0454	.0281	.0162	.0084	.0037	.0011

$\beta_1 = 135^\circ$; $\beta_2 = 225^\circ$; $\beta = 15^\circ$

θ_{xy}, deg / α, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.5715	.4588	.4559	.4790	.5408	.5918	.6200	.6255	.6121	.5837
2.0	.6242	.4957	.4879	.5084	.5664	.6138	.6384	.6407	.6243	.5934
4.0	.7410	.5758	.5561	.5700	.6188	.6580	.6750	.6704	.6480	.6119
6.0	.8738	.6643	.6296	.6352	.6726	.7024	.7111	.6993	.6706	.6293
8.0	1.0230	.7610	.7082	.7036	.7276	.7468	.7466	.7271	.6920	.6454
10.0	1.1888	.8657	.7917	.7751	.7834	.7909	.7812	.7538	.7121	.6602
12.0	1.3710	.9782	.8795	.8491	.8398	.8347	.8148	.7792	.7309	.6735
15.0	1.6745	1.1605	1.0188	.9643	.9249	.8990	.8630	.8145	.7561	.6907
20.0	2.2555	1.4963	1.2673	1.1642	1.0658	1.0009	.9361	.8655	.7899	.7116
25.0	2.9186	1.8640	1.5298	1.3688	1.2018	1.0937	.9982	.9050	.8127	.7220
30.0	3.6460	2.2529	1.7986	1.5719	1.3287	1.1746	1.0475	.9318	.8236	.7217
35.0	4.4169	2.6516	2.0655	1.7673	1.4428	1.2410	1.0824	.9453	.8224	.7108
40.0	5.2086	3.0480	2.3224	1.9490	1.5405	1.2910	1.1020	.9449	.8091	.6895
45.0	5.9976	3.4303	2.5615	2.1115	1.6189	1.3230	1.1056	.9307	.7840	.6585
50.0	6.7602	3.7867	2.7756	2.2499	1.6756	1.3361	1.0931	.9031	.7481	.6187
55.0	7.4731	4.1065	2.9581	2.3601	1.7088	1.3299	1.0648	.8629	.7023	.5713
60.0	8.1150	4.3800	3.1035	2.4385	1.7176	1.3045	1.0218	.8114	.6480	.5179
65.0	8.6663	4.5989	3.2074	2.4829	1.7018	1.2608	.9651	.7501	.5870	.4599
70.0	9.1103	4.7565	3.2666	2.4920	1.6616	1.2000	.8966	.6809	.5209	.3992
75.0	9.4336	4.8481	3.2793	2.4653	1.5985	1.1240	.8184	.6059	.4520	.3376
80.0	9.6262	4.8708	3.2451	2.4038	1.5143	1.0351	.7328	.5274	.3822	.2770
85.0	9.6824	4.8239	3.1652	2.3093	1.4116	.9360	.6425	.4477	.3136	.2192

θ_{xy}, deg / α, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	.5442	.4964	.4428	.3849	.3240	.2610	.1967	.1315	.0658
2.0	.5517	.5021	.4469	.3878	.3259	.2622	.1973	.1317	.0658
4.0	.5659	.5127	.4545	.3929	.3292	.2640	.1981	.1319	.0657
6.0	.5789	.5221	.4610	.3972	.3317	.2652	.1984	.1318	.0655
8.0	.5906	.5303	.4665	.4005	.3333	.2658	.1983	.1313	.0651
10.0	.6011	.5374	.4708	.4028	.3342	.2657	.1977	.1306	.0646
12.0	.6102	.5431	.4741	.4042	.3343	.2650	.1966	.1295	.0639
15.0	.6212	.5494	.4768	.4044	.3329	.2627	.1941	.1273	.0625
20.0	.6322	.5532	.4756	.3999	.3266	.2558	.1876	.1222	.0596
25.0	.6338	.5488	.4673	.3895	.3154	.2451	.1784	.1153	.0559
30.0	.6260	.5362	.4521	.3734	.2998	.2310	.1668	.1070	.0514
35.0	.6090	.5158	.4305	.3521	.2802	.2140	.1532	.0974	.0464
40.0	.5833	.4883	.4031	.3264	.2571	.1945	.1380	.0869	.0410
45.0	.5496	.4545	.3708	.2969	.2314	.1732	.1215	.0757	.0353
50.0	.5091	.4154	.3346	.2646	.2037	.1507	.1044	.0643	.0296
55.0	.4629	.3722	.2955	.2304	.1750	.1276	.0872	.0529	.0240
60.0	.4125	.3261	.2548	.1955	.1460	.1047	.0703	.0418	.0186
65.0	.3593	.2788	.2136	.1608	.1177	.0827	.0543	.0316	.0137
70.0	.3051	.2314	.1733	.1274	.0909	.0622	.0397	.0223	.0093
75.0	.2513	.1856	.1351	.0963	.0665	.0438	.0269	.0144	.0057
80.0	.1998	.1426	.1000	.0685	.0452	.0282	.0162	.0081	.0029
85.0	.1520	.1038	.0693	.0447	.0276	.0158	.0082	.0035	.0010

TABLE IV. - CONTINUED

(a) C_N. Continued.

$\phi_1 = 150^0$; $\phi_2 = 210^0$; $\beta = 0^0$

α, deg \ θ_{xy}, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.1507	.2522	.3484	.4359	.5782	.6737	.7257	.7415	.7291	.6961
2.0	.2012	.2963	.3894	.4743	.6117	.7024	.7496	.7610	.7449	.7085
4.0	.3236	.3945	.4773	.5551	.6805	.7601	.7972	.7995	.7755	.7323
6.0	.4742	.5058	.5731	.6408	.7512	.8183	.8443	.8370	.8047	.7547
8.0	.6522	.6295	.6761	.7311	.8235	.8765	.8907	.8733	.8326	.7756
10.0	.8568	.7651	.7858	.8254	.8970	.9345	.9360	.9081	.8588	.7949
12.0	1.0868	.9120	.9019	.9234	.9715	.9921	.9802	.9414	.8834	.8124
15.0	1.4773	1.1517	1.0863	1.0761	1.0841	1.0770	1.0437	.9881	.9167	.8353
20.0	2.2383	1.5965	1.4166	1.3419	1.2710	1.2121	1.1407	1.0559	.9622	.8638
25.0	3.1165	2.0860	1.7666	1.6145	1.4521	1.3360	1.2239	1.1095	.9938	.8795
30.0	4.0853	2.6054	2.1257	1.8858	1.6220	1.4447	1.2910	1.1471	1.0107	.8819
35.0	5.1153	3.1388	2.4830	2.1475	1.7754	1.5349	1.3398	1.1678	1.0123	.8710
40.0	6.1752	3.6701	2.8276	2.3917	1.9077	1.6040	1.3689	1.1709	.9986	.8470
45.0	7.2327	4.1831	3.1491	2.6109	2.0148	1.6498	1.3774	1.1562	.9700	.8107
50.0	8.2558	4.6623	3.4377	2.7985	2.0936	1.6710	1.3650	1.1242	.9274	.7632
55.0	9.2132	5.0930	3.6847	2.9487	2.1416	1.6669	1.3321	1.0759	.8720	.7060
60.0	10.0761	5.4622	3.8824	3.0571	2.1573	1.6375	1.2797	1.0128	.8055	.6407
65.0	10.8180	5.7587	4.0250	3.1203	2.1404	1.5839	1.2094	.9368	.7300	.5694
70.0	11.4166	5.9734	4.1081	3.1363	2.0912	1.5076	1.1234	.8501	.6477	.4943
75.0	11.8536	6.0999	4.1291	3.1048	2.0113	1.4110	1.0242	.7554	.5612	.4175
80.0	12.1157	6.1342	4.0874	3.0267	1.9032	1.2970	.9148	.6557	.4731	.3415
85.0	12.1949	6.0754	3.9843	2.9043	1.7700	1.1690	.7987	.5539	.3860	.2686

α, deg \ θ_{xy}, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	.6482	.5900	.5248	.4548	.3818	.3069	.2308	.1540	.0770
2.0	.6578	.5973	.5301	.4585	.3842	.3083	.2315	.1543	.0770
4.0	.6760	.6107	.5397	.4651	.3884	.3107	.2326	.1546	.0770
6.0	.6927	.6228	.5481	.4706	.3917	.3123	.2331	.1545	.0767
8.0	.7079	.6335	.5552	.4750	.3940	.3132	.2331	.1540	.0763
10.0	.7216	.6428	.5610	.4782	.3953	.3133	.2325	.1532	.0756
12.0	.7336	.6505	.5655	.4802	.3957	.3126	.2313	.1520	.0748
15.0	.7485	.6592	.5697	.4812	.3945	.3102	.2285	.1495	.0733
20.0	.7643	.6657	.5697	.4768	.3877	.3025	.2211	.1436	.0699
25.0	.7686	.6622	.5610	.4653	.3752	.2903	.2105	.1357	.0655
30.0	.7612	.6486	.5440	.4470	.3572	.2741	.1971	.1260	.0603
35.0	.7424	.6255	.5191	.4224	.3344	.2543	.1812	.1148	.0545
40.0	.7127	.5934	.4872	.3923	.3075	.2315	.1634	.1025	.0482
45.0	.6731	.5535	.4491	.3576	.2772	.2065	.1442	.0894	.0415
50.0	.6247	.5069	.4061	.3194	.2446	.1799	.1241	.0760	.0348
55.0	.5691	.4550	.3594	.2787	.2105	.1527	.1038	.0626	.0282
60.0	.5078	.3994	.3104	.2369	.1760	.1256	.0838	.0496	.0219
65.0	.4428	.3419	.2607	.1952	.1422	.0994	.0649	.0375	.0161
70.0	.3761	.2840	.2118	.1549	.1101	.0749	.0476	.0266	.0110
75.0	.3096	.2277	.1651	.1172	.0807	.0530	.0323	.0173	.0068
80.0	.2454	.1745	.1221	.0833	.0548	.0342	.0196	.0097	.0035
85.0	.1854	.1262	.0840	.0541	.0333	.0191	.0099	.0042	.0012

$\phi_1 = 150^0$; $\phi_2 = 210^0$; $\beta = 2^0$

α, deg \ θ_{xy}, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.1602	.2567	.3511	.4376	.5788	.6738	.7255	.7410	.7285	.6954
2.0	.2107	.3008	.3920	.4760	.6123	.7024	.7493	.7605	.7443	.7078
4.0	.3330	.3989	.4799	.5567	.6810	.7601	.7969	.7990	.7748	.7316
6.0	.4834	.5100	.5755	.6423	.7516	.8182	.8439	.8364	.8040	.7540
8.0	.6612	.6336	.6784	.7324	.8239	.8763	.8902	.8726	.8318	.7749
10.0	.8655	.7690	.7880	.8267	.8973	.9343	.9355	.9075	.8581	.7941
12.0	1.0952	.9157	.9039	.9246	.9717	.9918	.9796	.9407	.8826	.8116
15.0	1.4853	1.1551	1.0881	1.0771	1.0841	1.0766	1.0430	.9873	.9159	.8345
20.0	2.2453	1.5993	1.4180	1.3425	1.2708	1.2116	1.1399	1.0550	.9613	.8630
25.0	3.1225	2.0883	1.7676	1.6148	1.4517	1.3353	1.2231	1.1085	.9929	.8787
30.0	4.0901	2.6070	2.1262	1.8858	1.6214	1.4438	1.2900	1.1642	1.0098	.8811
35.0	5.1189	3.1398	2.4831	2.1472	1.7746	1.5340	1.3388	1.1668	1.0114	.8701
40.0	6.1774	3.6704	2.8273	2.3910	1.9067	1.6030	1.3679	1.1699	.9977	.8462
45.0	7.2336	4.1828	3.1484	2.6100	2.0137	1.6487	1.3763	1.1552	.9691	.8099
50.0	8.2554	4.6614	3.4367	2.7973	2.0924	1.6699	1.3640	1.1233	.9265	.7625
55.0	9.2118	5.0916	3.6833	2.9474	2.1403	1.6657	1.3311	1.0751	.8712	.7053
60.0	10.0736	5.4603	3.8808	3.0556	2.1561	1.6364	1.2788	1.0120	.8048	.6401
65.0	10.8146	5.7565	4.0232	3.1187	2.1391	1.5829	1.2086	.9361	.7294	.5689
70.0	11.4125	5.9709	4.1062	3.1348	2.0900	1.5067	1.1226	.8495	.6472	.4939
75.0	11.8489	6.0972	4.1272	3.1033	2.0103	1.4102	1.0235	.7550	.5608	.4172
80.0	12.1107	6.1316	4.0856	3.0253	1.9022	1.2963	.9143	.6553	.4728	.3413
85.0	12.1898	6.0728	3.9826	2.9030	1.7693	1.1685	.7983	.5536	.3859	.2685

α, deg \ θ_{xy}, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	.6476	.5894	.5242	.4543	.3814	.3065	.2305	.1538	.0769
2.0	.6571	.5966	.5295	.4580	.3838	.3080	.2312	.1541	.0770
4.0	.6753	.6101	.5391	.4646	.3880	.3103	.2323	.1544	.0769
6.0	.6920	.6222	.5475	.4700	.3912	.3119	.2328	.1543	.0766
8.0	.7072	.6329	.5546	.4744	.3935	.3128	.2328	.1538	.0762
10.0	.7209	.6421	.5604	.4776	.3949	.3129	.2322	.1530	.0756
12.0	.7329	.6498	.5649	.4797	.3953	.3122	.2310	.1518	.0747
15.0	.7477	.6585	.5690	.4806	.3941	.3098	.2282	.1493	.0732
20.0	.7635	.6650	.5690	.4763	.3873	.3021	.2208	.1434	.0698
25.0	.7678	.6614	.5604	.4648	.3747	.2899	.2103	.1355	.0654
30.0	.7604	.6479	.5434	.4465	.3568	.2737	.1969	.1258	.0603
35.0	.7416	.6248	.5186	.4220	.3340	.2540	.1810	.1147	.0544
40.0	.7120	.5928	.4867	.3919	.3071	.2312	.1632	.1024	.0481
45.0	.6724	.5529	.4486	.3572	.2769	.2062	.1440	.0893	.0415
50.0	.6241	.5064	.4056	.3190	.2443	.1797	.1239	.0759	.0348
55.0	.5685	.4546	.3590	.2784	.2102	.1525	.1036	.0625	.0282
60.0	.5073	.3990	.3101	.2367	.1758	.1254	.0837	.0496	.0219
65.0	.4424	.3415	.2605	.1950	.1421	.0993	.0648	.0375	.0161
70.0	.3757	.2837	.2116	.1548	.1100	.0749	.0475	.0266	.0110
75.0	.3093	.2275	.1650	.1171	.0806	.0529	.0323	.0172	.0068
80.0	.2452	.1744	.1220	.0832	.0548	.0342	.0196	.0097	.0035
85.0	.1854	.1261	.0840	.0541	.0333	.0191	.0098	.0042	.0012

TABLE IV. - CONTINUED

(a) C_N. Concluded.

$\beta_1 = 150^0$; $\beta_2 = 210^0$; $\beta = 5^0$

α, deg \ θ_{xy}, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.2100	.2803	.3652	.4467	.5824	.6743	.7241	.7385	.7255	.6921
2.0	.2604	.3240	.4059	.4848	.6157	.7027	.7478	.7579	.7411	.7044
4.0	.3820	.4215	.4932	.5650	.6839	.7600	.7951	.7962	.7714	.7280
6.0	.5314	.5319	.5882	.6501	.7541	.8177	.8418	.8333	.8005	.7503
8.0	.7081	.6547	.6904	.7397	.8258	.8755	.8878	.8693	.8281	.7710
10.0	.9111	.7893	.7994	.8333	.8988	.9331	.9328	.9039	.8541	.7901
12.0	1.1394	.9350	.9165	.9305	.9727	.9902	.9746	.9370	.8785	.8075
15.0	1.5269	1.1729	1.0976	1.0821	1.0844	1.0745	1.0396	.9833	.9116	.8303
20.0	2.2821	1.6143	1.4253	1.3458	1.2699	1.2086	1.1359	1.0506	.9567	.8585
25.0	3.1536	2.1001	1.7727	1.6164	1.4497	1.3315	1.2185	1.1037	.9881	.8741
30.0	4.1151	2.6155	2.1290	1.8856	1.6182	1.4394	1.2851	1.1411	1.0049	.8765
35.0	5.1373	3.1449	2.4836	2.1453	1.7705	1.5289	1.3335	1.1616	1.0065	.8656
40.0	6.1891	3.6722	2.8257	2.3877	1.9018	1.5975	1.3624	1.1647	.9929	.8418
45.0	7.2386	4.1813	3.1447	2.6052	2.0081	1.6430	1.3708	1.1501	.9645	.8058
50.0	8.2538	4.6568	3.4311	2.7913	2.0863	1.6640	1.3585	1.1184	.9222	.7587
55.0	9.2041	5.0843	3.6762	2.9405	2.1339	1.6599	1.3259	1.0704	.8672	.7019
60.0	10.0603	5.4507	3.8724	3.0480	2.1495	1.6308	1.2739	1.0078	.8012	.6371
65.0	10.7967	5.7449	4.0139	3.1107	2.1327	1.5776	1.2041	.9323	.7263	.5664
70.0	11.3907	5.9580	4.0963	3.1267	2.0839	1.5019	1.1187	.8463	.6447	.4918
75.0	11.8243	6.0835	4.1172	3.0954	2.0046	1.4060	1.0203	.7524	.5588	.4156
80.0	12.0844	6.1176	4.0759	3.0178	1.8973	1.2928	.9117	.6534	.4714	.3402
85.0	12.1631	6.0592	3.9736	2.8964	1.7652	1.1658	.7965	.5523	.3850	.2678

α, deg \ θ_{xy}, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	.6442	.5861	.5212	.4516	.3790	.3046	.2290	.1529	.0764
2.0	.6537	.5933	.5264	.4552	.3814	.3060	.2298	.1531	.0765
4.0	.6717	.6066	.5360	.4618	.3856	.3084	.2309	.1534	.0764
6.0	.6883	.6187	.5443	.4672	.3888	.3100	.2314	.1533	.0761
8.0	.7034	.6293	.5514	.4716	.3911	.3109	.2313	.1529	.0757
10.0	.7170	.6385	.5571	.4748	.3925	.3110	.2307	.1520	.0751
12.0	.7289	.6461	.5616	.4768	.3928	.3103	.2296	.1508	.0743
15.0	.7436	.6548	.5657	.4777	.3916	.3079	.2268	.1483	.0727
20.0	.7593	.6612	.5657	.4734	.3849	.3002	.2194	.1425	.0694
25.0	.7636	.6577	.5571	.4620	.3724	.2881	.2089	.1346	.0650
30.0	.7563	.6442	.5402	.4438	.3546	.2720	.1956	.1250	.0599
35.0	.7376	.6213	.5156	.4194	.3320	.2524	.1799	.1139	.0541
40.0	.7082	.5895	.4838	.3896	.3053	.2298	.1622	.1017	.0478
45.0	.6688	.5499	.4461	.3551	.2752	.2050	.1431	.0888	.0412
50.0	.6208	.5036	.4033	.3172	.2428	.1786	.1232	.0754	.0346
55.0	.5656	.4521	.3570	.2768	.2090	.1516	.1030	.0621	.0280
60.0	.5048	.3970	.3084	.2353	.1748	.1247	.0832	.0493	.0218
65.0	.4403	.3398	.2591	.1940	.1413	.0987	.0645	.0372	.0160
70.0	.3741	.2824	.2105	.1540	.1094	.0744	.0472	.0264	.0110
75.0	.3081	.2265	.1642	.1166	.0802	.0526	.0321	.0171	.0067
80.0	.2444	.1737	.1215	.0829	.0545	.0340	.0195	.0096	.0034
85.0	.1849	.1258	.0837	.0539	.0332	.0190	.0098	.0042	.0012

$\beta_1 = 150^0$; $\beta_2 = 210^0$; $\beta = 15^0$

α, deg \ θ_{xy}, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.5738	.4825	.4948	.5313	.6152	.6786	.7113	.7154	.6966	.6606
2.0	.6358	.5267	.5336	.5672	.6465	.7054	.7336	.7337	.7113	.6722
4.0	.7744	.6232	.6165	.6426	.7206	.7592	.7780	.7696	.7398	.6944
6.0	.9333	.7304	.7063	.7226	.7766	.8135	.8220	.8046	.7672	.7153
8.0	1.1131	.8482	.8026	.8068	.8440	.8678	.8652	.8384	.7931	.7348
10.0	1.3140	.9762	.9051	.8949	.9127	.9220	.9075	.8709	.8176	.7528
12.0	1.5359	1.1141	1.0134	.9863	.9822	.9757	.9487	.9020	.8405	.7692
15.0	1.9073	1.3385	1.1855	1.1288	1.0872	1.0549	1.0080	.9456	.87-16	.7905
20.0	2.6228	1.7538	1.4936	1.3767	1.2616	1.1810	1.0984	1.0088	.9140	.8171
25.0	3.4438	2.2105	1.8202	1.6311	1.4306	1.2965	1.1761	1.0588	.9436	.8318
30.0	4.3479	2.6951	2.1552	1.8842	1.5891	1.3979	1.2387	1.0939	.9594	.8340
35.0	5.3089	3.1928	2.4886	2.1284	1.7322	1.4821	1.2843	1.1132	.9609	.8238
40.0	6.2977	3.6885	2.8102	2.3562	1.8556	1.5466	1.3114	1.1161	.9481	.8014
45.0	7.2844	4.1671	3.1101	2.5607	1.9556	1.5894	1.3193	1.1024	.9214	.7676
50.0	8.2389	4.6142	3.3794	2.7357	2.0291	1.6091	1.3078	1.0726	.8816	.7233
55.0	9.1323	5.0160	3.6098	2.8759	2.0738	1.6052	1.2771	1.0275	.8299	.6699
60.0	9.9373	5.3605	3.7943	2.9770	2.0885	1.5779	1.2282	.9686	.7679	.6090
65.0	10.6296	5.6371	3.9273	3.0360	2.0727	1.5278	1.1626	.8977	.6974	.5425
70.0	11.1880	5.8375	4.0048	3.0510	2.0268	1.4567	1.0823	.8168	.6207	.4723
75.0	11.5957	5.9555	4.0244	3.0216	1.9523	1.3665	.9898	.7285	.5400	.4007
80.0	11.8403	5.9875	3.9856	2.9487	1.8514	1.2602	.8877	.6354	.4577	.3298
85.0	11.9142	5.9327	3.8894	2.8345	1.7272	1.1408	.7794	.5404	.3765	.2618

α, deg \ θ_{xy}, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	.6123	.5554	.4927	.4262	.3573	.2868	.2155	.1438	.0719
2.0	.6213	.5622	.4977	.4297	.3595	.2882	.2162	.1440	.0719
4.0	.6382	.5747	.5066	.4358	.3634	.2904	.2172	.1443	.0718
6.0	.6538	.5860	.5145	.4409	.3665	.2919	.2177	.1442	.0716
8.0	.6680	.5960	.5211	.4450	.3686	.2927	.2177	.1438	.0712
10.0	.6808	.6046	.5266	.4480	.3699	.2928	.2171	.1430	.0706
12.0	.6920	.6119	.5307	.4499	.3703	.2922	.2160	.1419	.0698
15.0	.7058	.6200	.5346	.4508	.3691	.2899	.2134	.1395	.0684
20.0	.7206	.6261	.5346	.4468	.3628	.2827	.2065	.1340	.0652
25.0	.7246	.6227	.5265	.4360	.3511	.2713	.1966	.1266	.0611
30.0	.7177	.6101	.5107	.4189	.3343	.2562	.1841	.1176	.0563
35.0	.7002	.5885	.4875	.3960	.3131	.2377	.1693	.1072	.0508
40.0	.6725	.5586	.4577	.3679	.2879	.2165	.1527	.0957	.0449
45.0	.6355	.5214	.4221	.3355	.2597	.1931	.1347	.0835	.0388
50.0	.5904	.4779	.3820	.2998	.2292	.1684	.1160	.0710	.0325
55.0	.5384	.4295	.3384	.2619	.1974	.1430	.0970	.0585	.0263
60.0	.4813	.3776	.2927	.2229	.1653	.1177	.0784	.0464	.0205
65.0	.4207	.3239	.2464	.1840	.1337	.0932	.0608	.0351	.0151
70.0	.3584	.2699	.2007	.1464	.1038	.0704	.0446	.0249	.0103
75.0	.2964	.2173	.1571	.1112	.0763	.0499	.0303	.0162	.0063
80.0	.2365	.1677	.1170	.0796	.0522	.0324	.0185	.0091	.0032
85.0	.1805	.1227	.0815	.0524	.0321	.0183	.0094	.0040	.0012

TABLE IV.- CONTINUED

(b) C_A

$\phi_1 = 0^0$; $\phi_2 = 360^0$; $\beta = 0^0$

θ_{xy}, deg / α, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.0078	.0302	.0666	.1157	.2446	.4026	.5764	.7558	.9334	1.1041
2.0	.0084	.0308	.0672	.1161	.2449	.4027	.5763	.7554	.9328	1.1033
4.0	.0108	.0331	.0692	.1179	.2460	.4030	.5757	.7539	.9304	1.1001
6.0	.0147	.0368	.0727	.1209	.2478	.4034	.5747	.7514	.9264	1.0948
8.0	.0196	.0421	.0775	.1251	.2504	.4041	.5732	.7479	.9209	1.0873
10.0	.0253	.0488	.0836	.1304	.2537	.4049	.5714	.7434	.9138	1.0778
12.0	.0317	.0567	.0910	.1369	.2577	.4059	.5693	.7380	.9053	1.0663
15.0	.0426	.0698	.1045	.1486	.2650	.4078	.5653	.7281	.8897	1.0454
20.0	.0637	.0945	.1310	.1734	.2802	.4117	.5569	.7074	.8570	1.0014
25.0	.0880	.1215	.1597	.2019	.2991	.4165	.5466	.6819	.8167	.9472
30.0	.1147	.1502	.1891	.2308	.3208	.4221	.5347	.6523	.7700	.8844
35.0	.1430	.1795	.2183	.2587	.3421	.4282	.5215	.6195	.7183	.8148
40.0	.1721	.2086	.2463	.2845	.3604	.4340	.5074	.5846	.6632	.7407
45.0	.2011	.2365	.2722	.3074	.3746	.4361	.4927	.5486	.6064	.6643
50.0	.2290	.2625	.2952	.3266	.3840	.4332	.4753	.5126	.5496	.5879
55.0	.2551	.2856	.3146	.3416	.3882	.4250	.4533	.4756	.4945	.5138
60.0	.2785	.3053	.3298	.3517	.3869	.4113	.4267	.4358	.4409	.4443
65.0	.2985	.3209	.3404	.3567	.3801	.3923	.3959	.3934	.3873	.3793
70.0	.3146	.3319	.3459	.3565	.3680	.3686	.3613	.3490	.3338	.3174
75.0	.3262	.3380	.3463	.3510	.3509	.3408	.3240	.3034	.2813	.2588
80.0	.3330	.3390	.3414	.3403	.3293	.3095	.2847	.2578	.2307	.2045
85.0	.3348	.3350	.3315	.3249	.3037	.2757	.2446	.2132	.1831	.1554

θ_{xy}, deg / α, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	1.2646	1.4124	1.5458	1.6636	1.7647	1.8485	1.9142	1.9614	1.9899
2.0	1.2636	1.4112	1.5445	1.6622	1.7632	1.8468	1.9124	1.9596	1.9881
4.0	1.2596	1.4066	1.5392	1.6564	1.7569	1.8402	1.9055	1.9525	1.9808
6.0	1.2530	1.3988	1.5305	1.6467	1.7465	1.8292	1.8940	1.9407	1.9688
8.0	1.2438	1.3881	1.5183	1.6333	1.7320	1.8138	1.8780	1.9242	1.9520
10.0	1.2321	1.3743	1.5027	1.6161	1.7135	1.7942	1.8575	1.9031	1.9305
12.0	1.2179	1.3576	1.4838	1.5953	1.6911	1.7704	1.8327	1.8775	1.9045
15.0	1.1920	1.3272	1.4495	1.5575	1.6503	1.7273	1.7876	1.8311	1.8573
20.0	1.1376	1.2634	1.3773	1.4780	1.5646	1.6364	1.6928	1.7334	1.7579
25.0	1.0705	1.1847	1.2882	1.3799	1.4589	1.5244	1.5759	1.6129	1.6353
30.0	.9928	1.0935	1.1851	1.2663	1.3364	1.3946	1.4404	1.4734	1.4933
35.0	.9069	.9927	1.0709	1.1406	1.2009	1.2510	1.2905	1.3190	1.3363
40.0	.8153	.8852	.9493	1.0067	1.0564	1.0980	1.1308	1.1545	1.1689
45.0	.7208	.7743	.8239	.8685	.9075	.9402	.9661	.9848	.9962
50.0	.6263	.6634	.6984	.7304	.7585	.7823	.8013	.8152	.8235
55.0	.5346	.5559	.5768	.5964	.6141	.6293	.6416	.6506	.6561
60.0	.4487	.4551	.4627	.4707	.4786	.4857	.4917	.4963	.4991
65.0	.3709	.3639	.3595	.3571	.3561	.3560	.3563	.3567	.3571
70.0	.3007	.2848	.2705	.2591	.2504	.2440	.2394	.2363	.2345
75.0	.2370	.2163	.1970	.1795	.1646	.1531	.1445	.1386	.1351
80.0	.1800	.1572	.1364	.1176	.1007	.0861	.0746	.0666	.0619
85.0	.1302	.1077	.0878	.0703	.0552	.0421	.0312	.0225	.0170

$\phi_1 = 0^0$; $\phi_2 = 360^0$; $\beta = 2^0$

θ_{xy}, deg / α, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.0094	.0318	.0681	.1171	.2458	.4035	.5770	.7560	.9332	1.1036
2.0	.0100	.0324	.0687	.1175	.2460	.4035	.5768	.7556	.9326	1.1028
4.0	.0124	.0346	.0707	.1193	.2472	.4038	.5762	.7541	.9302	1.0996
6.0	.0161	.0384	.0742	.1223	.2490	.4043	.5752	.7516	.9263	1.0942
8.0	.0209	.0436	.0789	.1265	.2516	.4050	.5738	.7481	.9207	1.0868
10.0	.0265	.0503	.0851	.1318	.2549	.4058	.5720	.7436	.9137	1.0773
12.0	.0328	.0581	.0925	.1383	.2589	.4068	.5698	.7382	.9051	1.0659
15.0	.0436	.0711	.1059	.1500	.2661	.4087	.5658	.7284	.8896	1.0450
20.0	.0646	.0955	.1322	.1747	.2814	.4125	.5575	.7077	.8569	1.0010
25.0	.0888	.1225	.1607	.2030	.3002	.4173	.5472	.6821	.8167	.9469
30.0	.1155	.1511	.1900	.2318	.3218	.4229	.5353	.6526	.7700	.8841
35.0	.1438	.1803	.2191	.2595	.3430	.4290	.5221	.6198	.7184	.8147
40.0	.1728	.2093	.2470	.2853	.3612	.4347	.5080	.5850	.6634	.7407
45.0	.2017	.2372	.2729	.3081	.3753	.4368	.4933	.5490	.6066	.6643
50.0	.2296	.2631	.2958	.3273	.3846	.4338	.4758	.5130	.5499	.5880
55.0	.2556	.2862	.3152	.3421	.3887	.4255	.4538	.4760	.4948	.5140
60.0	.2790	.3058	.3303	.3522	.3874	.4117	.4272	.4362	.4413	.4446
65.0	.2990	.3213	.3408	.3572	.3806	.3928	.3963	.3938	.3876	.3796
70.0	.3151	.3323	.3463	.3569	.3685	.3691	.3617	.3494	.3341	.3176
75.0	.3266	.3384	.3467	.3514	.3513	.3412	.3244	.3038	.2816	.2591
80.0	.3334	.3395	.3418	.3408	.3297	.3099	.2851	.2581	.2310	.2048
85.0	.3352	.3354	.3320	.3253	.3041	.2761	.2449	.2135	.1834	.1556

θ_{xy}, deg / α, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	1.2637	1.4112	1.5444	1.6619	1.7628	1.8464	1.9119	1.9591	1.9875
2.0	1.2627	1.4101	1.5431	1.6605	1.7613	1.8447	1.9102	1.9573	1.9857
4.0	1.2588	1.4054	1.5378	1.6547	1.7550	1.8381	1.9033	1.9502	1.9784
6.0	1.2522	1.3977	1.5291	1.6450	1.7446	1.8271	1.8919	1.9383	1.9664
8.0	1.2430	1.3869	1.5169	1.6316	1.7302	1.8117	1.8758	1.9218	1.9496
10.0	1.2313	1.3732	1.5013	1.6145	1.7117	1.7922	1.8554	1.9008	1.9282
12.0	1.2171	1.3565	1.4824	1.5937	1.6893	1.7684	1.8306	1.8753	1.9022
15.0	1.1912	1.3262	1.4482	1.5559	1.6486	1.7253	1.7856	1.8289	1.8550
20.0	1.1369	1.2624	1.3760	1.4765	1.5629	1.6545	1.6908	1.7313	1.7557
25.0	1.0699	1.1838	1.2871	1.3785	1.4573	1.5227	1.5740	1.6110	1.6333
30.0	.9923	1.0928	1.1841	1.2651	1.3350	1.3930	1.4387	1.4717	1.4915
35.0	.9064	.9920	1.0701	1.1396	1.1996	1.2496	1.2890	1.3175	1.3346
40.0	.8149	.8847	.9486	1.0058	1.0554	1.0968	1.1295	1.1532	1.1674
45.0	.7206	.7739	.8233	.8678	.9066	.9392	.9650	.9837	.9950
50.0	.6262	.6632	.6980	.7298	.7578	.7815	.8004	.8142	.8225
55.0	.5347	.5558	.5765	.5960	.6136	.6287	.6409	.6499	.6553
60.0	.4488	.4551	.4625	.4705	.4782	.4853	.4912	.4957	.4985
65.0	.3711	.3640	.3595	.3570	.3559	.3557	.3559	.3563	.3567
70.0	.3010	.2850	.2706	.2591	.2503	.2438	.2391	.2360	.2343
75.0	.2373	.2165	.1971	.1796	.1647	.1530	.1444	.1385	.1350
80.0	.1802	.1574	.1366	.1177	.1008	.0862	.0746	.0666	.0618
85.0	.1305	.1079	.0880	.0705	.0553	.0422	.0313	.0225	.0170

TABLE IV.- CONTINUED

(b) C_A. Continued.

$\beta_1 = 0^\circ$; $\beta_2 = 360^\circ$; $\beta = 5^\circ$

θ_{xy}, deg / α, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.0171	.0400	.0760	.1245	.2519	.4080	.5798	.7569	.9323	1.1008
2.0	.0176	.0406	.0765	.1249	.2522	.4081	.5796	.7565	.9317	1.1000
4.0	.0196	.0428	.0786	.1267	.2533	.4084	.5790	.7550	.9293	1.0968
6.0	.0228	.0465	.0820	.1297	.2551	.4088	.5780	.7525	.9254	1.0915
8.0	.0271	.0516	.0867	.1338	.2577	.4095	.5766	.7491	.9199	1.0842
10.0	.0323	.0578	.0928	.1391	.2609	.4103	.5748	.7446	.9129	1.0747
12.0	.0384	.0650	.1002	.1455	.2649	.4113	.5726	.7393	.9044	1.0633
15.0	.0488	.0774	.1132	.1572	.2721	.4132	.5687	.7295	.8890	1.0426
20.0	.0694	.1010	.1384	.1814	.2873	.4170	.5604	.7089	.8565	.9989
25.0	.0933	.1274	.1661	.2088	.3060	.4218	.5502	.6835	.8165	.9451
30.0	.1196	.1555	.1948	.2368	.3272	.4273	.5383	.6542	.7701	.8827
35.0	.1476	.1843	.2234	.2639	.3476	.4334	.5252	.6217	.7188	.8137
40.0	.1764	.2130	.2508	.2892	.3652	.4387	.5112	.5870	.6642	.7402
45.0	.2050	.2406	.2763	.3116	.3788	.4402	.4965	.5513	.6078	.6644
50.0	.2327	.2662	.2990	.3304	.3877	.4368	.4786	.5155	.5514	.5886
55.0	.2585	.2890	.3180	.3450	.3915	.4282	.4563	.4783	.4967	.5150
60.0	.2817	.3085	.3330	.3548	.3899	.4142	.4295	.4384	.4431	.4460
65.0	.3015	.3238	.3433	.3596	.3830	.3951	.3984	.3958	.3894	.3811
70.0	.3174	.3347	.3487	.3592	.3707	.3712	.3638	.3513	.3359	.3192
75.0	.3289	.3407	.3489	.3536	.3535	.3433	.3264	.3057	.2833	.2607
80.0	.3356	.3416	.3440	.3429	.3318	.3119	.2870	.2600	.2327	.2064
85.0	.3373	.3375	.3341	.3274	.3062	.2781	.2469	.2153	.1851	.1571

θ_{xy}, deg / α, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	1.2592	1.4051	1.5368	1.6530	1.7527	1.8353	1.9001	1.9467	1.9748
2.0	1.2582	1.4039	1.5355	1.6515	1.7512	1.8337	1.8984	1.9450	1.9730
4.0	1.2543	1.3993	1.5302	1.6458	1.7450	1.8271	1.8916	1.9379	1.9658
6.0	1.2477	1.3916	1.5215	1.6362	1.7347	1.8162	1.8801	1.9261	1.9539
8.0	1.2386	1.3809	1.5094	1.6229	1.7203	1.8009	1.8642	1.9098	1.9372
10.0	1.2270	1.3673	1.4940	1.6058	1.7019	1.7815	1.8439	1.8888	1.9159
12.0	1.2129	1.3507	1.4752	1.5852	1.6797	1.7579	1.8193	1.8635	1.8901
15.0	1.1872	1.3206	1.4412	1.5477	1.6392	1.7150	1.7746	1.8174	1.8432
20.0	1.1332	1.2572	1.3695	1.4687	1.5541	1.6249	1.6805	1.7205	1.7446
25.0	1.0666	1.1791	1.2811	1.3714	1.4492	1.5137	1.5644	1.6009	1.6229
30.0	.9895	1.0887	1.1787	1.2587	1.3276	1.3849	1.4300	1.4625	1.4821
35.0	.9042	.9886	1.0655	1.1340	1.1931	1.2424	1.2813	1.3093	1.3262
40.0	.8133	.8819	.9448	1.0010	1.0498	1.0906	1.1227	1.1460	1.1600
45.0	.7195	.7719	.8203	.8639	.9020	.9339	.9593	.9776	.9887
50.0	.6258	.6618	.6958	.7268	.7542	.7773	.7958	.8092	.8173
55.0	.5348	.5551	.5751	.5939	.6108	.6255	.6373	.6459	.6512
60.0	.4495	.4550	.4618	.4691	.4764	.4830	.4885	.4927	.4953
65.0	.3722	.3646	.3595	.3564	.3548	.3542	.3541	.3542	.3544
70.0	.3023	.2859	.2711	.2591	.2499	.2430	.2380	.2347	.2328
75.0	.2386	.2176	.1979	.1801	.1648	.1528	.1439	.1378	.1341
80.0	.1816	.1586	.1375	.1184	.1013	.0864	.0746	.0663	.0615
85.0	.1318	.1090	.0889	.0712	.0558	.0425	.0314	.0226	.0169

$\beta_1 = 0^\circ$; $\beta_2 = 360^\circ$; $\beta = 15^\circ$

θ_{xy}, deg / α, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.0695	.1019	.1425	.1909	.3090	.4504	.6058	.7657	.9236	1.0751
2.0	.0698	.1023	.1429	.1913	.3092	.4505	.6056	.7653	.9230	1.0744
4.0	.0713	.1039	.1445	.1928	.3103	.4508	.6051	.7639	.9208	1.0714
6.0	.0736	.1065	.1472	.1954	.3120	.4512	.6041	.7615	.9171	1.0664
8.0	.0768	.1101	.1509	.1989	.3144	.4518	.6028	.7583	.9119	1.0595
10.0	.0809	.1146	.1555	.2033	.3174	.4526	.6011	.7541	.9054	1.0506
12.0	.0857	.1200	.1610	.2085	.3211	.4536	.5991	.7490	.8974	1.0399
15.0	.0944	.1296	.1708	.2179	.3277	.4553	.5954	.7399	.8829	1.0204
20.0	.1122	.1488	.1904	.2367	.3411	.4589	.5876	.7205	.8523	.9793
25.0	.1335	.1712	.2130	.2581	.3565	.4634	.5779	.6967	.8147	.9287
30.0	.1573	.1957	.2371	.2807	.3725	.4680	.5668	.6690	.7711	.8701
35.0	.1828	.2213	.2617	.3032	.3876	.4715	.5545	.6385	.7229	.8052
40.0	.2092	.2470	.2856	.3244	.4004	.4725	.5405	.6059	.6715	.7361
45.0	.2356	.2718	.3079	.3433	.4100	.4701	.5236	.5721	.6185	.6648
50.0	.2611	.2949	.3277	.3591	.4157	.4635	.5031	.5364	.5655	.5935
55.0	.2850	.3156	.3444	.3711	.4168	.4522	.4786	.4980	.5126	.5244
60.0	.3064	.3331	.3574	.3789	.4132	.4363	.4501	.4570	.4591	.4582
65.0	.3247	.3468	.3660	.3821	.4046	.4157	.4179	.4137	.4053	.3943
70.0	.3394	.3564	.3701	.3804	.3912	.3910	.3825	.3687	.3516	.3329
75.0	.3498	.3614	.3694	.3739	.3733	.3624	.3447	.3228	.2990	.2746
80.0	.3559	.3617	.3640	.3627	.3512	.3308	.3051	.2770	.2483	.2204
85.0	.3572	.3573	.3538	.3470	.3256	.2969	.2649	.2322	.2006	.1709

θ_{xy}, deg / α, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	1.2173	1.3480	1.4659	1.5698	1.6589	1.7327	1.7905	1.8321	1.8571
2.0	1.2164	1.3469	1.4647	1.5684	1.6575	1.7311	1.7889	1.8304	1.8554
4.0	1.2126	1.3426	1.4597	1.5630	1.6516	1.7249	1.7824	1.8237	1.8486
6.0	1.2065	1.3354	1.4516	1.5540	1.6419	1.7146	1.7717	1.8127	1.8374
8.0	1.1979	1.3253	1.4402	1.5415	1.6284	1.7003	1.7567	1.7973	1.8217
10.0	1.1870	1.3125	1.4256	1.5255	1.6111	1.6820	1.7376	1.7776	1.8017
12.0	1.1737	1.2969	1.4080	1.5061	1.5902	1.6599	1.7145	1.7538	1.7775
15.0	1.1496	1.2686	1.3760	1.4708	1.5522	1.6196	1.6724	1.7105	1.7334
20.0	1.0988	1.2090	1.3086	1.3966	1.4722	1.5348	1.5839	1.6193	1.6406
25.0	1.0362	1.1356	1.2255	1.3051	1.3735	1.4303	1.4748	1.5069	1.5263
30.0	.9637	1.0505	1.1293	1.1991	1.2593	1.3092	1.3485	1.3768	1.3938
35.0	.8835	.9564	1.0228	1.0818	1.1328	1.1752	1.2086	1.2327	1.2473
40.0	.7980	.8561	.9093	.9568	.9981	1.0325	1.0596	1.0792	1.0911
45.0	.7099	.7527	.7923	.8280	.8591	.8852	.9059	.9209	.9300
50.0	.6217	.6492	.6752	.6991	.7201	.7380	.7522	.7626	.7689
55.0	.5362	.5489	.5618	.5741	.5854	.5952	.6032	.6091	.6127
60.0	.4560	.4598	.4653	.4568	.4589	.4612	.4633	.4650	.4661
65.0	.3821	.3697	.3590	.3508	.3447	.3401	.3370	.3349	.3337
70.0	.3135	.2942	.2758	.2593	.2460	.2356	.2279	.2225	.2193
75.0	.2505	.2272	.2051	.1845	.1660	.1508	.1394	.1313	.1266
80.0	.1937	.1687	.1456	.1244	.1052	.0882	.0742	.0642	.0582
85.0	.1437	.1191	.0970	.0775	.0603	.0455	.0330	.0230	.0164

TABLE IV.- CONTINUED

(b) C_A. Continued.

$\phi_1 = -90^\circ$; $\phi_2 = 90^\circ$; $\beta = 0^\circ$

θ_{xy}, deg / α, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.0055	.0256	.0599	.1069	.2326	.3882	.5606	.7394	.9169	1.0881
2.0	.0037	.0216	.0537	.0987	.2209	.3740	.5447	.7226	.8999	1.0714
4.0	.0015	.0147	.0423	.0832	.1981	.3457	.5127	.6883	.8647	1.0363
6.0	.0007	.0094	.0325	.0690	.1763	.3179	.4806	.6534	.8283	.9995
8.0	.0005	.0057	.0242	.0563	.1556	.2907	.4485	.6180	.7908	.9611
10.0	.0004	.0037	.0175	.0450	.1360	.2643	.4167	.5822	.7525	.9212
12.0	.0003	.0028	.0124	.0353	.1178	.2387	.3852	.5463	.7134	.8800
15.0	.0002	.0021	.0078	.0238	.0929	.2022	.3390	.4925	.6538	.8164
20.0	.0002	.0014	.0050	.0128	.0591	.1473	.2661	.4045	.5538	.7070
25.0	.0001	.0010	.0035	.0086	.0355	.1014	.2000	.3209	.4553	.5963
30.0	.0001	.0007	.0025	.0062	.0227	.0659	.1428	.2441	.3614	.4877
35.0	.0001	.0005	.0019	.0045	.0159	.0417	.0963	.1767	.2749	.3844
40.0	.0000	.0004	.0013	.0032	.0113	.0282	.0618	.1205	.1986	.2896
45.0	.0000	.0003	.0010	.0023	.0079	.0194	.0401	.0773	.1346	.2063
50.0	.0000	.0002	.0007	.0016	.0054	.0133	.0266	.0484	.0849	.1368
55.0	.0000	.0001	.0004	.0010	.0036	.0086	.0172	.0306	.0511	.0834
60.0	.0000	.0001	.0003	.0007	.0022	.0053	.0106	.0186	.0305	.0476
65.0	.0000	.0000	.0002	.0004	.0013	.0031	.0060	.0105	.0171	.0262
70.0	.0000	.0000	.0001	.0002	.0007	.0016	.0030	.0053	.0086	.0130
75.0	.0000	.0000	.0000	.0001	.0003	.0007	.0013	.0022	.0036	.0054
80.0	.0000	.0000	.0000	.0000	.0001	.0002	.0004	.0007	.0010	.0016
85.0	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0001	.0001	.0002

θ_{xy}, deg / α, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	1.2495	1.3984	1.5332	1.6526	1.7554	1.8409	1.9084	1.9576	1.9879
2.0	1.2334	1.3833	1.5194	1.6401	1.7445	1.8316	1.9009	1.9519	1.9842
4.0	1.1993	1.3509	1.4891	1.6123	1.7196	1.8099	1.8826	1.9371	1.9731
6.0	1.1629	1.3156	1.4555	1.5810	1.6908	1.7839	1.8598	1.9177	1.9572
8.0	1.1244	1.2777	1.4189	1.5461	1.6581	1.7539	1.8326	1.8937	1.9367
10.0	1.0839	1.2374	1.3794	1.5079	1.6218	1.7198	1.8012	1.8653	1.9115
12.0	1.0416	1.1948	1.3371	1.4667	1.5820	1.6820	1.7657	1.8326	1.8820
15.0	.9753	1.1272	1.2692	1.3994	1.5162	1.6185	1.7053	1.7758	1.8295
20.0	.8591	1.0062	1.1456	1.2747	1.3922	1.4956	1.5869	1.6623	1.7222
25.0	.7386	.8782	1.0119	1.1376	1.2534	1.3578	1.4497	1.5283	1.5928
30.0	.6176	.7470	.8727	.9924	1.1041	1.2062	1.2978	1.3777	1.4453
35.0	.4997	.6166	.7320	.8434	.9488	1.0466	1.1358	1.2152	1.2841
40.0	.3885	.4911	.5941	.6952	.7923	.8838	.9686	1.0457	1.1142
45.0	.2874	.3741	.4632	.5522	.6392	.7227	.8014	.8743	.9407
50.0	.1995	.2693	.3432	.4189	.4944	.5682	.6391	.7063	.7689
55.0	.1275	.1799	.2379	.2992	.3620	.4250	.4868	.5468	.6040
60.0	.0734	.1085	.1503	.1968	.2463	.2974	.3491	.4005	.4510
65.0	.0389	.0573	.0832	.1148	.1506	.1894	.2301	.2720	.3146
70.0	.0190	.0272	.0386	.0558	.0780	.1042	.1335	.1652	.1989
75.0	.0078	.0110	.0153	.0213	.0305	.0443	.0621	.0833	.1074
80.0	.0023	.0032	.0044	.0060	.0083	.0117	.0163	.0288	.0429
85.0	.0003	.0004	.0005	.0007	.0010	.0014	.0020	.0033	.0074

$\phi_1 = -90^\circ$; $\phi_2 = 90^\circ$; $\beta = 2^\circ$

θ_{xy}, deg / α, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.0071	.0272	.0614	.1084	.2338	.3891	.5612	.7396	.9167	1.0876
2.0	.0053	.0232	.0552	.1001	.2221	.3749	.5453	.7228	.8997	1.0709
4.0	.0031	.0163	.0439	.0846	.1993	.3467	.5133	.6886	.8646	1.0359
6.0	.0020	.0110	.0340	.0705	.1776	.3189	.4812	.6537	.8283	.9991
8.0	.0015	.0073	.0257	.0577	.1569	.2917	.4492	.6183	.7908	.9607
10.0	.0012	.0053	.0190	.0465	.1373	.2653	.4174	.5826	.7525	.9209
12.0	.0010	.0041	.0140	.0368	.1191	.2397	.3860	.5468	.7135	.8798
15.0	.0008	.0031	.0094	.0253	.0943	.2033	.3399	.4930	.6540	.8162
20.0	.0005	.0022	.0061	.0143	.0605	.1485	.2670	.4051	.5540	.7069
25.0	.0004	.0016	.0044	.0098	.0369	.1027	.2010	.3216	.4557	.5964
30.0	.0003	.0012	.0032	.0071	.0240	.0672	.1439	.2449	.3619	.4879
35.0	.0003	.0009	.0024	.0052	.0170	.0430	.0974	.1775	.2756	.3847
40.0	.0002	.0007	.0018	.0039	.0122	.0294	.0629	.1214	.1993	.2901
45.0	.0002	.0006	.0014	.0028	.0087	.0204	.0412	.0783	.1354	.2068
50.0	.0001	.0004	.0010	.0020	.0061	.0140	.0275	.0495	.0858	.1375
55.0	.0001	.0003	.0007	.0014	.0041	.0093	.0180	.0315	.0520	.0841
60.0	.0001	.0002	.0005	.0010	.0027	.0059	.0112	.0194	.0313	.0483
65.0	.0001	.0002	.0003	.0006	.0016	.0035	.0066	.0112	.0177	.0268
70.0	.0001	.0001	.0002	.0004	.0009	.0019	.0035	.0058	.0091	.0135
75.0	.0000	.0001	.0001	.0002	.0005	.0009	.0016	.0026	.0039	.0058
80.0	.0000	.0001	.0001	.0001	.0002	.0004	.0006	.0009	.0013	.0018
85.0	.0000	.0000	.0000	.0001	.0001	.0001	.0002	.0002	.0003	.0003

θ_{xy}, deg / α, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	1.2486	1.3973	1.5318	1.6509	1.7535	1.8388	1.9062	1.9552	1.9855
2.0	1.2325	1.3822	1.5179	1.6384	1.7426	1.8295	1.8987	1.9496	1.9818
4.0	1.1985	1.3498	1.4877	1.6107	1.7177	1.8078	1.8804	1.9348	1.9707
6.0	1.1622	1.3146	1.4542	1.5793	1.6889	1.7819	1.8576	1.9154	1.9548
8.0	1.1237	1.2767	1.4176	1.5445	1.6563	1.7519	1.8304	1.8914	1.9343
10.0	1.0832	1.2364	1.3781	1.5064	1.6200	1.7179	1.7991	1.8630	1.9092
12.0	1.0410	1.1939	1.3359	1.4652	1.5803	1.6801	1.7637	1.8304	1.8797
15.0	.9748	1.1263	1.2680	1.3980	1.5146	1.6167	1.7033	1.7737	1.8273
20.0	.8587	1.0055	1.1445	1.2734	1.3907	1.4949	1.5851	1.6603	1.7201
25.0	.7384	.8776	1.0111	1.1366	1.2521	1.3563	1.4480	1.5264	1.5909
30.0	.6175	.7466	.8721	.9915	1.1029	1.2049	1.2963	1.3760	1.4435
35.0	.4997	.6164	.7316	.8427	.9479	1.0455	1.1345	1.2137	1.2826
40.0	.3887	.4910	.5938	.6947	.7915	.8829	.9675	1.0444	1.1129
45.0	.2878	.3742	.4631	.5519	.6387	.7228	.8005	.8733	.9396
50.0	.2000	.2696	.3433	.4187	.4940	.5676	.6384	.7055	.7680
55.0	.1280	.1802	.2380	.2992	.3618	.4246	.4863	.5461	.6033
60.0	.0740	.1089	.1506	.1969	.2462	.2972	.3488	.4001	.4505
65.0	.0395	.0578	.0836	.1150	.1507	.1893	.2299	.2718	.3142
70.0	.0196	.0276	.0390	.0560	.0781	.1042	.1334	.1651	.1986
75.0	.0082	.0114	.0157	.0216	.0307	.0444	.0622	.0832	.1073
80.0	.0026	.0035	.0047	.0062	.0085	.0119	.0183	.0288	.0429
85.0	.0004	.0005	.0007	.0009	.0011	.0015	.0021	.0034	.0074

TABLE IV.- CONTINUED

(b) C_A. Continued.

$\phi_1 = 90^\circ$; $\phi_2 = 270^\circ$; $\beta = 0^\circ$

α, deg \ θ_{xy}, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.0101	.0348	.0734	.1244	.2566	.4170	.5922	.7722	.9498	1.1201
2.0	.0131	.0400	.0806	.1335	.2689	.4314	.6078	.7883	.9657	1.1353
4.0	.0201	.0514	.0961	.1527	.2939	.4602	.6386	.8195	.9960	1.1638
6.0	.0286	.0643	.1129	.1728	.3194	.4889	.6687	.8494	1.0245	1.1900
8.0	.0387	.0784	.1307	.1939	.3453	.5174	.6980	.8778	1.0509	1.2136
10.0	.0502	.0939	.1497	.2158	.3714	.5456	.7262	.9046	1.0752	1.2345
12.0	.0631	.1105	.1696	.2385	.3977	.5732	.7533	.9297	1.0972	1.2526
15.0	.0849	.1376	.2011	.2735	.4370	.6134	.7915	.9638	1.1256	1.2745
20.0	.1272	.1875	.2571	.3339	.5014	.6761	.8478	1.0103	1.1603	1.2959
25.0	.1758	.2421	.3159	.3952	.5626	.7315	.8932	1.0429	1.1781	1.2981
30.0	.2293	.2997	.3757	.4554	.6188	.7782	.9265	1.0604	1.1786	1.2811
35.0	.2860	.3585	.4347	.5129	.6683	.8147	.9467	1.0623	1.1617	1.2453
40.0	.3442	.4168	.4912	.5658	.7096	.8398	.9530	1.0487	1.1278	1.1919
45.0	.4021	.4727	.5434	.6126	.7413	.8528	.9453	1.0198	1.0782	1.1224
50.0	.4580	.5247	.5898	.6517	.7626	.8533	.9239	.9767	1.0142	1.0390
55.0	.5101	.5711	.6288	.6821	.7728	.8413	.8895	.9205	.9379	.9443
60.0	.5570	.6105	.6594	.7028	.7716	.8172	.8429	.8530	.8514	.8410
65.0	.5971	.6417	.6806	.7131	.7590	.7816	.7857	.7763	.7575	.7324
70.0	.6292	.6638	.6917	.7128	.7354	.7357	.7196	.6927	.6590	.6217
75.0	.6524	.6760	.6925	.7019	.7016	.6809	.6467	.6046	.5590	.5123
80.0	.6660	.6781	.6828	.6807	.6585	.6188	.5690	.5149	.4603	.4075
85.0	.6695	.6699	.6631	.6498	.6074	.5513	.4891	.4262	.3661	.3105

α, deg \ θ_{xy}, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	1.2797	1.4264	1.5584	1.6747	1.7741	1.8561	1.9199	1.9653	1.9918
2.0	1.2938	1.4391	1.5697	1.6842	1.7819	1.8620	1.9239	1.9673	1.9919
4.0	1.3199	1.4623	1.5894	1.7004	1.7943	1.8704	1.9284	1.9679	1.9885
6.0	1.3431	1.4820	1.6055	1.7125	1.8023	1.8744	1.9283	1.9636	1.9803
8.0	1.3633	1.4984	1.6177	1.7205	1.8060	1.8738	1.9234	1.9546	1.9673
10.0	1.3803	1.5112	1.6261	1.7243	1.8053	1.8686	1.9139	1.9409	1.9495
12.0	1.3941	1.5204	1.6305	1.7240	1.8002	1.8589	1.8997	1.9225	1.9271
15.0	1.4087	1.5273	1.6298	1.7157	1.7845	1.8360	1.8700	1.8864	1.8850
20.0	1.4161	1.5206	1.6091	1.6813	1.7370	1.7762	1.7987	1.8044	1.7935
25.0	1.4025	1.4913	1.5645	1.6222	1.6644	1.6910	1.7020	1.6976	1.6778
30.0	1.3681	1.4401	1.4974	1.5402	1.5687	1.5829	1.5831	1.5692	1.5414
35.0	1.3141	1.3687	1.4099	1.4378	1.4529	1.4554	1.4453	1.4229	1.3884
40.0	1.2420	1.2793	1.3045	1.3182	1.3206	1.3122	1.2930	1.2634	1.2235
45.0	1.1541	1.1745	1.1845	1.1848	1.1757	1.1576	1.1308	1.0954	1.0517
50.0	1.0530	1.0576	1.0536	1.0418	1.0227	.9965	.9635	.9240	.8782
55.0	.9418	.9320	.9157	.8936	.8662	.8337	.7964	.7545	.7083
60.0	.8240	.8016	.7750	.7446	.7109	.6741	.6344	.5920	.5471
65.0	.7029	.6705	.6358	.5994	.5616	.5226	.4825	.4414	.3996
70.0	.5825	.5424	.5023	.4624	.4228	.3837	.3452	.3073	.2702
75.0	.4662	.4215	.3786	.3377	.2988	.2618	.2269	.1939	.1629
80.0	.3576	.3112	.2684	.2291	.1932	.1605	.1310	.1044	.0808
85.0	.2601	.2150	.1751	.1399	.1093	.0829	.0604	.0417	.0266

$\phi_1 = 90^\circ$; $\phi_2 = 270^\circ$; $\beta = 2^\circ$

α, deg \ θ_{xy}, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.0117	.0364	.0749	.1258	.2578	.4178	.5927	.7724	.9496	1.1195
2.0	.0147	.0416	.0821	.1349	.2700	.4322	.6083	.7884	.9655	1.1347
4.0	.0217	.0530	.0976	.1540	.2950	.4610	.6391	.8196	.9958	1.1632
6.0	.0302	.0658	.1143	.1742	.3205	.4897	.6692	.8494	1.0242	1.1894
8.0	.0403	.0799	.1322	.1952	.3463	.5182	.6984	.8778	1.0506	1.2129
10.0	.0518	.0954	.1511	.2171	.3724	.5463	.7266	.9046	1.0749	1.2336
12.0	.0647	.1120	.1710	.2397	.3986	.5739	.7536	.9296	1.0968	1.2519
15.0	.0864	.1391	.2025	.2747	.4379	.6140	.7918	.9637	1.1252	1.2737
20.0	.1287	.1889	.2583	.3350	.5023	.6766	.8480	1.0102	1.1598	1.2951
25.0	.1773	.2434	.3171	.3962	.5634	.7320	.8934	1.0427	1.1776	1.2973
30.0	.2307	.3009	.3768	.4564	.6196	.7786	.9266	1.0602	1.1781	1.2803
35.0	.2873	.3596	.4358	.5138	.6690	.8151	.9467	1.0621	1.1612	1.2446
40.0	.3454	.4179	.4922	.5667	.7102	.8401	.9531	1.0485	1.1274	1.1912
45.0	.4032	.4738	.5444	.6134	.7419	.8531	.9454	1.0197	1.0778	1.1219
50.0	.4590	.5257	.5906	.6525	.7632	.8536	.9241	.9766	1.0139	1.0386
55.0	.5111	.5720	.6296	.6828	.7733	.8417	.8896	.9205	.9377	.9439
60.0	.5579	.6114	.6602	.7035	.7721	.8176	.8431	.8531	.8513	.8408
65.0	.5979	.6425	.6813	.7138	.7596	.7820	.7860	.7765	.7576	.7323
70.0	.6300	.6646	.6924	.7135	.7360	.7362	.7200	.6929	.6592	.6217
75.0	.6532	.6768	.6932	.7026	.7022	.6814	.6471	.6050	.5592	.5125
80.0	.6668	.6789	.6836	.6814	.6591	.6194	.5696	.5154	.4607	.4078
85.0	.6703	.6707	.6639	.6505	.6082	.5520	.4897	.4268	.3666	.3110

α, deg \ θ_{xy}, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	1.2788	1.4252	1.5570	1.6729	1.7722	1.8539	1.9177	1.9629	1.9894
2.0	1.2929	1.4379	1.5682	1.6825	1.7799	1.8599	1.9217	1.9650	1.9895
4.0	1.3190	1.4610	1.5879	1.6986	1.7923	1.8683	1.9262	1.9655	1.9861
6.0	1.3422	1.4808	1.6040	1.7107	1.8003	1.8722	1.9260	1.9613	1.9779
8.0	1.3623	1.4971	1.6162	1.7187	1.8040	1.8716	1.9211	1.9523	1.9649
10.0	1.3793	1.5099	1.6245	1.7225	1.8033	1.8665	1.9116	1.9386	1.9471
12.0	1.3931	1.5191	1.6290	1.7222	1.7983	1.8568	1.8975	1.9202	1.9248
15.0	1.4076	1.5260	1.6283	1.7139	1.7825	1.8339	1.8678	1.8841	1.8827
20.0	1.4151	1.5193	1.6076	1.6795	1.7351	1.7742	1.7966	1.8023	1.7914
25.0	1.4015	1.4900	1.5630	1.6205	1.6626	1.6891	1.7001	1.6956	1.6758
30.0	1.3671	1.4389	1.4960	1.5387	1.5670	1.5812	1.5812	1.5673	1.5395
35.0	1.3131	1.3676	1.4086	1.4364	1.4514	1.4538	1.4436	1.4212	1.3867
40.0	1.2412	1.2783	1.3033	1.3169	1.3192	1.3107	1.2915	1.2619	1.2220
45.0	1.1534	1.1736	1.1835	1.1837	1.1745	1.1564	1.1295	1.0941	1.0504
50.0	1.0524	1.0568	1.0528	1.0409	1.0217	.9955	.9625	.9229	.8771
55.0	.9414	.9314	.9150	.8929	.8654	.8328	.7955	.7536	.7074
60.0	.8236	.8012	.7745	.7441	.7103	.6734	.6337	.5913	.5464
65.0	.7028	.6702	.6355	.5990	.5612	.5221	.4820	.4409	.3991
70.0	.5824	.5423	.5021	.4621	.4225	.3834	.3449	.3070	.2699
75.0	.4663	.4215	.3786	.3376	.2986	.2617	.2267	.1937	.1627
80.0	.3579	.3114	.2685	.2291	.1932	.1605	.1309	.1043	.0808
85.0	.2605	.2153	.1753	.1401	.1094	.0829	.0604	.0417	.0266

TABLE IV.- CONTINUED

(b) C_A. Continued.

$\beta_1 = -90^\circ$; $\beta_2 = 90^\circ$; $\beta = 5^\circ$

α, deg \ θ_{xy}, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.0146	.0355	.0693	.1158	.2400	.3938	.5641	.7406	.9159	1.0850
2.0	.0126	.0315	.0631	.1076	.2284	.3796	.5483	.7239	.8990	1.0683
4.0	.0095	.0246	.0519	.0922	.2058	.3516	.5165	.6900	.8641	1.0336
6.0	.0074	.0193	.0421	.0781	.1841	.3240	.4846	.6553	.8280	.9970
8.0	.0060	.0153	.0339	.0655	.1636	.2970	.4528	.6202	.7908	.9589
10.0	.0049	.0124	.0272	.0543	.1442	.2707	.4212	.5847	.7527	.9193
12.0	.0042	.0103	.0221	.0447	.1260	.2453	.3900	.5490	.7139	.8784
15.0	.0034	.0082	.0169	.0333	.1014	.2091	.3442	.4956	.6548	.8153
20.0	.0025	.0059	.0118	.0218	.0678	.1547	.2717	.4083	.5555	.7067
25.0	.0020	.0046	.0089	.0158	.0444	.1091	.2062	.3253	.4578	.5969
30.0	.0016	.0036	.0069	.0119	.0310	.0739	.1494	.2491	.3646	.4891
35.0	.0014	.0029	.0054	.0092	.0228	.0499	.1032	.1822	.2788	.3866
40.0	.0011	.0024	.0043	.0072	.0170	.0355	.0690	.1264	.2030	.2925
45.0	.0010	.0020	.0035	.0056	.0127	.0256	.0471	.0836	.1396	.2098
50.0	.0008	.0016	.0028	.0043	.0095	.0183	.0326	.0548	.0903	.1409
55.0	.0007	.0013	.0022	.0034	.0069	.0129	.0223	.0362	.0567	.0879
60.0	.0006	.0011	.0017	.0026	.0050	.0089	.0148	.0233	.0354	.0523
65.0	.0005	.0009	.0013	.0019	.0035	.0059	.0094	.0144	.0211	.0303
70.0	.0005	.0007	.0010	.0014	.0024	.0038	.0057	.0083	.0118	.0163
75.0	.0004	.0006	.0008	.0010	.0016	.0023	.0032	.0044	.0060	.0079
80.0	.0004	.0005	.0006	.0007	.0010	.0013	.0017	.0021	.0026	.0032
85.0	.0003	.0004	.0004	.0004	.0005	.0006	.0007	.0008	.0009	.0010

α, deg \ θ_{xy}, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	1.2442	1.3912	1.5243	1.6420	1.7435	1.8278	1.8944	1.9429	1.9729
2.0	1.2282	1.3762	1.5105	1.6296	1.7326	1.8186	1.8870	1.9373	1.9692
4.0	1.1944	1.3440	1.4804	1.6021	1.7079	1.7971	1.8688	1.9226	1.9582
6.0	1.1583	1.3091	1.4471	1.5709	1.6793	1.7713	1.8462	1.9033	1.9424
8.0	1.1201	1.2715	1.4108	1.5364	1.6469	1.7414	1.8192	1.8795	1.9220
10.0	1.0799	1.2314	1.3716	1.4985	1.6109	1.7077	1.7880	1.8513	1.8971
12.0	1.0379	1.1892	1.3296	1.4575	1.5714	1.6701	1.7528	1.8189	1.8677
15.0	.9722	1.1220	1.2622	1.3907	1.5061	1.6071	1.6929	1.7626	1.8157
20.0	.8568	1.0020	1.1394	1.2670	1.3830	1.4861	1.5754	1.6499	1.7092
25.0	.7372	.8749	1.0069	1.1310	1.2453	1.3484	1.4392	1.5169	1.5808
30.0	.6171	.7447	.8688	.9869	1.0971	1.1980	1.2884	1.3675	1.4344
35.0	.5001	.6154	.7292	.8390	.9430	1.0396	1.1277	1.2062	1.2744
40.0	.3898	.4908	.5923	.6919	.7876	.8780	.9618	1.0379	1.1058
45.0	.2895	.3747	.4624	.5500	.6358	.7181	.7958	.8679	.9336
50.0	.2022	.2707	.3433	.4177	.4920	.5648	.6348	.7012	.7631
55.0	.1307	.1819	.2388	.2989	.3607	.4226	.4837	.5428	.5995
60.0	.0771	.1111	.1519	.1973	.2458	.2961	.3470	.3977	.4476
65.0	.0427	.0603	.0853	.1160	.1509	.1888	.2289	.2702	.3122
70.0	.0223	.0301	.0410	.0573	.0788	.1043	.1330	.1642	.1974
75.0	.0103	.0134	.0175	.0231	.0317	.0449	.0622	.0829	.1066
80.0	.0040	.0048	.0059	.0074	.0094	.0126	.0187	.0288	.0426
85.0	.0011	.0012	.0013	.0015	.0016	.0019	.0024	.0035	.0074

$\beta_1 = -90^\circ$; $\beta_2 = 90^\circ$; $\beta = 15^\circ$

α, deg \ θ_{xy}, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.0657	.0967	.1357	.1826	.2978	.4371	.5910	.7503	.9082	1.0602
2.0	.0623	.0919	.1294	.1747	.2868	.4237	.5762	.7346	.8923	1.0446
4.0	.0560	.0830	.1175	.1596	.2656	.3974	.5463	.7027	.8595	1.0119
6.0	.0506	.0751	.1067	.1457	.2452	.3714	.5163	.6701	.8256	.9775
8.0	.0458	.0681	.0969	.1328	.2259	.3461	.4864	.6371	.7906	.9417
10.0	.0417	.0619	.0881	.1211	.2076	.3214	.4567	.6037	.7548	.9044
12.0	.0381	.0564	.0803	.1104	.1905	.2975	.4273	.5702	.7183	.8660
15.0	.0335	.0495	.0702	.0963	.1669	.2634	.3843	.5200	.6628	.8067
20.0	.0277	.0404	.0568	.0775	.1336	.2123	.3162	.4379	.5694	.7046
25.0	.0234	.0337	.0468	.0632	.1073	.1694	.2545	.3598	.4775	.6013
30.0	.0202	.0286	.0392	.0522	.0869	.1351	.2012	.2883	.3899	.5000
35.0	.0176	.0246	.0332	.0436	.0709	.1080	.1577	.2253	.3093	.4036
40.0	.0156	.0214	.0284	.0368	.0582	.0867	.1239	.1729	.2380	.3152
45.0	.0140	.0188	.0244	.0311	.0479	.0697	.0973	.1323	.1783	.2374
50.0	.0127	.0166	.0212	.0265	.0395	.0560	.0763	.1010	.1319	.1726
55.0	.0116	.0147	.0184	.0226	.0325	.0448	.0594	.0767	.0974	.1228
60.0	.0106	.0132	.0160	.0192	.0267	.0355	.0459	.0577	.0711	.0868
65.0	.0098	.0118	.0140	.0164	.0218	.0279	.0349	.0426	.0510	.0603
70.0	.0092	.0106	.0122	.0139	.0176	.0217	.0261	.0307	.0356	.0407
75.0	.0086	.0096	.0107	.0118	.0142	.0166	.0190	.0215	.0239	.0263
80.0	.0081	.0087	.0094	.0100	.0113	.0124	.0135	.0145	.0153	.0160
85.0	.0077	.0080	.0082	.0085	.0088	.0091	.0092	.0092	.0091	.0089

α, deg \ θ_{xy}, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	1.2032	1.3350	1.4541	1.5595	1.6502	1.7256	1.7851	1.8285	1.8553
2.0	1.1881	1.3209	1.4412	1.5478	1.6400	1.7170	1.7781	1.8232	1.8518
4.0	1.1564	1.2906	1.4129	1.5219	1.6168	1.6967	1.7610	1.8094	1.8414
6.0	1.1224	1.2577	1.3816	1.4927	1.5899	1.6725	1.7397	1.7912	1.8266
8.0	1.0865	1.2224	1.3474	1.4601	1.5594	1.6444	1.7144	1.7689	1.8075
10.0	1.0487	1.1848	1.3106	1.4245	1.5255	1.6126	1.6851	1.7423	1.7840
12.0	1.0093	1.1450	1.2712	1.3860	1.4884	1.5773	1.6520	1.7118	1.7564
15.0	.9474	1.0819	1.2077	1.3232	1.4270	1.5181	1.5956	1.6589	1.7075
20.0	.8389	.9690	1.0923	1.2069	1.3113	1.4044	1.4852	1.5530	1.6073
25.0	.7265	.8496	.9677	1.0790	1.1818	1.2748	1.3571	1.4279	1.4866
30.0	.6136	.7272	.8379	.9435	1.0425	1.1335	1.2154	1.2874	1.3490
35.0	.5036	.6056	.7066	.8045	.8976	.9846	1.0642	1.1358	1.1986
40.0	.3999	.4884	.5779	.6662	.7516	.8326	.9083	.9776	1.0401
45.0	.3056	.3793	.4558	.5329	.6088	.6823	.7522	.8178	.8782
50.0	.2236	.2815	.3438	.4084	.4736	.5381	.6009	.6610	.7179
55.0	.1563	.1981	.2455	.2968	.3502	.4045	.4588	.5122	.5640
60.0	.1059	.1315	.1639	.2012	.2422	.2855	.3303	.3757	.4213
65.0	.0709	.0837	.1013	.1248	.1529	.1847	.2192	.2559	.2940
70.0	.0461	.0521	.0593	.0696	.0851	.1052	.1291	.1562	.1860
75.0	.0286	.0309	.0333	.0363	.0409	.0494	.0625	.0798	.1007
80.0	.0165	.0169	.0172	.0174	.0177	.0187	.0216	.0289	.0405
85.0	.0085	.0080	.0075	.0069	.0063	.0057	.0052	.0051	.0074

TABLE IV.- CONTINUED

(b) C_A. Continued.

$\phi_1 = 105^o$; $\phi_2 = 255^o$; $\beta = 0^o$

θ_{xy}, deg / α, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.0107	.0366	.0770	.1302	.2679	.4338	.6138	.7972	.9766	1.1470
2.0	.0139	.0423	.0849	.1402	.2812	.4494	.6308	.8147	.9939	1.1636
4.0	.0216	.0547	.1018	.1611	.3085	.4809	.6644	.8488	1.0271	1.1949
6.0	.0309	.0687	.1200	.1831	.3363	.5123	.6973	.8815	1.0584	1.2237
8.0	.0419	.0842	.1395	.2061	.3646	.5435	.7294	.9128	1.0875	1.2499
10.0	.0544	.1010	.1602	.2300	.3932	.5743	.7604	.9424	1.1145	1.2734
12.0	.0685	.1192	.1819	.2547	.4219	.6047	.7903	.9702	1.1391	1.2940
15.0	.0923	.1488	.2164	.2931	.4651	.6489	.8327	1.0083	1.1714	1.3194
20.0	.1385	.2033	.2775	.3592	.5358	.7182	.8954	1.0612	1.2119	1.3462
25.0	.1916	.2629	.3419	.4263	.6033	.7799	.9468	1.0992	1.2348	1.3529
30.0	.2500	.3258	.4074	.4934	.6655	.8322	.9854	1.1214	1.2393	1.3395
35.0	.3119	.3901	.4721	.5556	.7203	.8736	1.0098	1.1270	1.2254	1.3062
40.0	.3755	.4539	.5340	.6138	.7664	.9028	1.0194	1.1158	1.1935	1.2542
45.0	.4388	.5152	.5913	.6653	.8021	.9188	1.0138	1.0883	1.1445	1.1849
50.0	.4998	.5720	.6421	.7086	.8264	.9213	.9934	1.0452	1.0800	1.1005
55.0	.5568	.6229	.6851	.7423	.8387	.9101	.9585	.9878	1.0018	1.0035
60.0	.6080	.6660	.7188	.7654	.8384	.8855	.9105	.9180	.9123	.8970
65.0	.6519	.7003	.7422	.7771	.8257	.8484	.8506	.8377	.8144	.7841
70.0	.6870	.7245	.7547	.7773	.8009	.7999	.7807	.7495	.7109	.6682
75.0	.7124	.7380	.7658	.7658	.7647	.7413	.7030	.6560	.6050	.5529
80.0	.7273	.7404	.7655	.7429	.7183	.6746	.6197	.5601	.5000	.4417
85.0	.7312	.7316	.7241	.7095	.6631	.6016	.5335	.4647	.3989	.3380

θ_{xy}, deg / α, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	1.3053	1.4495	1.5782	1.6906	1.7861	1.8643	1.9249	1.9676	1.9925
2.0	1.3207	1.4635	1.5905	1.7011	1.7947	1.8708	1.9293	1.9700	1.9928
4.0	1.3494	1.4889	1.6124	1.7191	1.8086	1.8805	1.9348	1.9712	1.9897
6.0	1.3751	1.5110	1.6305	1.7330	1.8181	1.8857	1.9355	1.9676	1.9818
8.0	1.3977	1.5295	1.6447	1.7427	1.8233	1.8843	1.9316	1.9592	1.9690
10.0	1.4171	1.5445	1.6550	1.7482	1.8240	1.8823	1.9229	1.9460	1.9516
12.0	1.4332	1.5557	1.6613	1.7495	1.8203	1.8737	1.9096	1.9282	1.9295
15.0	1.4510	1.5657	1.6632	1.7435	1.8065	1.8524	1.8811	1.8929	1.8878
20.0	1.4633	1.5634	1.6463	1.7125	1.7619	1.7949	1.8116	1.8122	1.7970
25.0	1.4538	1.5376	1.6049	1.6562	1.6916	1.7116	1.7165	1.7065	1.6818
30.0	1.4225	1.4892	1.5402	1.5762	1.5977	1.6051	1.5987	1.5788	1.5458
35.0	1.3706	1.4196	1.4542	1.4752	1.4831	1.4785	1.4617	1.4332	1.3931
40.0	1.2995	1.3308	1.3494	1.3560	1.3512	1.3357	1.3098	1.2739	1.2284
45.0	1.2114	1.2257	1.2291	1.2223	1.2061	1.1811	1.1475	1.1059	1.0566
50.0	1.1091	1.1075	1.0969	1.0782	1.0522	1.0192	.9798	.9343	.8830
55.0	.9956	.9796	.9568	.9281	.8941	.8552	.8118	.7643	.7129
60.0	.8743	.8460	.8131	.7765	.7366	.6939	.6486	.6010	.5514
65.0	.7490	.7107	.6702	.6280	.5846	.5402	.4951	.4494	.4033
70.0	.6234	.5779	.5323	.4872	.4426	.3988	.3560	.3141	.2734
75.0	.5015	.4516	.4038	.3582	.3150	.2741	.2355	.1992	.1654
80.0	.3868	.3356	.2884	.2451	.2056	.1697	.1373	.1083	.0826
85.0	.2828	.2335	.1898	.1513	.1178	.0890	.0644	.0440	.0276

$\phi_1 = 105^o$; $\phi_2 = 255^o$; $\beta = 2^o$

θ_{xy}, deg / α, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.0122	.0381	.0784	.1316	.2689	.4345	.6142	.7973	.9763	1.1464
2.0	.0154	.0437	.0863	.1415	.2823	.4502	.6312	.8148	.9936	1.1629
4.0	.0231	.0562	.1032	.1624	.3095	.4816	.6648	.8488	1.0267	1.1942
6.0	.0324	.0701	.1214	.1843	.3373	.5130	.6977	.8815	1.0580	1.2230
8.0	.0434	.0856	.1408	.2073	.3655	.5441	.7297	.9127	1.0871	1.2491
10.0	.0559	.1024	.1615	.2312	.3941	.5749	.7607	.9423	1.1141	1.2726
12.0	.0700	.1206	.1832	.2559	.4228	.6052	.7905	.9701	1.1387	1.2932
15.0	.0937	.1501	.2176	.2942	.4659	.6494	.8328	1.0082	1.1709	1.3185
20.0	.1399	.2045	.2787	.3602	.5366	.7186	.8925	1.0609	1.2113	1.3453
25.0	.1929	.2641	.3429	.4273	.6039	.7802	.9469	1.0989	1.2342	1.3521
30.0	.2512	.3270	.4084	.4933	.6660	.8325	.9853	1.1210	1.2387	1.3386
35.0	.3131	.3912	.4730	.5564	.7209	.8738	1.0097	1.1266	1.2249	1.3054
40.0	.3766	.4549	.5348	.6145	.7668	.9030	1.0193	1.1155	1.1930	1.2534
45.0	.4398	.5161	.5920	.6660	.8025	.9190	1.0138	1.0880	1.1440	1.1842
50.0	.5008	.5729	.6429	.7092	.8268	.9215	.9933	1.0450	1.0795	1.0999
55.0	.5577	.6236	.6857	.7428	.8391	.9103	.9585	.9877	1.0014	1.0031
60.0	.6088	.6667	.7194	.7659	.8388	.8858	.9105	.9179	.9121	.8967
65.0	.6526	.7009	.7428	.7777	.8261	.8487	.8507	.8377	.8143	.7839
70.0	.6877	.7251	.7553	.7778	.8013	.8002	.7809	.7496	.7109	.6682
75.0	.7131	.7386	.7563	.7663	.7652	.7417	.7033	.6562	.6052	.5530
80.0	.7280	.7410	.7461	.7435	.7188	.6750	.6201	.5605	.5002	.4420
85.0	.7319	.7322	.7247	.7101	.6637	.6022	.5340	.4652	.3993	.3384

θ_{xy}, deg / α, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	1.3044	1.4482	1.5767	1.6889	1.7841	1.8621	1.9226	1.9653	1.9901
2.0	1.3197	1.4622	1.5890	1.6993	1.7927	1.8687	1.9271	1.9677	1.9904
4.0	1.3484	1.4876	1.6108	1.7173	1.8066	1.8784	1.9325	1.9688	1.9873
6.0	1.3740	1.5096	1.6289	1.7312	1.8161	1.8835	1.9333	1.9652	1.9794
8.0	1.3966	1.5282	1.6431	1.7409	1.8213	1.8841	1.9293	1.9568	1.9667
10.0	1.4160	1.5431	1.6533	1.7464	1.8220	1.8801	1.9207	1.9437	1.9492
12.0	1.4321	1.5544	1.6596	1.7476	1.8183	1.8715	1.9074	1.9259	1.9271
15.0	1.4499	1.5643	1.6616	1.7416	1.8045	1.8502	1.8789	1.8906	1.8855
20.0	1.4622	1.5620	1.6447	1.7107	1.7600	1.7929	1.8095	1.8101	1.7948
25.0	1.4526	1.5362	1.6034	1.6544	1.6898	1.7097	1.7145	1.7044	1.6798
30.0	1.4214	1.4879	1.5387	1.5746	1.5960	1.6033	1.5968	1.5769	1.5439
35.0	1.3695	1.4183	1.4528	1.4737	1.4815	1.4768	1.4600	1.4314	1.3914
40.0	1.2985	1.3297	1.3481	1.3546	1.3498	1.3342	1.3083	1.2724	1.2269
45.0	1.2106	1.2248	1.2280	1.2211	1.2049	1.1797	1.1462	1.1046	1.0554
50.0	1.1084	1.1066	1.0959	1.0772	1.0511	1.0181	.9787	.9332	.8820
55.0	.9950	.9789	.9560	.9273	.8932	.8543	.8109	.7634	.7120
60.0	.8739	.8454	.8125	.7758	.7359	.6932	.6479	.6003	.5507
65.0	.7487	.7103	.6698	.6275	.5841	.5397	.4945	.4489	.4029
70.0	.6233	.5777	.5321	.4869	.4423	.3985	.3556	.3138	.2730
75.0	.5015	.4516	.4037	.3581	.3148	.2739	.2353	.1990	.1652
80.0	.3869	.3357	.2885	.2451	.2056	.1697	.1372	.1082	.0825
85.0	.2831	.2337	.1899	.1514	.1179	.0890	.0644	.0440	.0276

TABLE IV.- CONTINUED

(b) C_A. Continued.

$\beta_1 = 90^\circ$; $\beta_2 = 270^\circ$; $\beta = 5^\circ$

θ_{xy}, deg / α, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.0195	.0446	.0827	.1331	.2638	.4223	.5954	.7732	.9486	1.1167
2.0	.0225	.0497	.0899	.1422	.2760	.4366	.6109	.7892	.9643	1.1317
4.0	.0297	.0610	.1053	.1612	.3008	.4652	.6415	.8201	.9945	1.1601
6.0	.0382	.0738	.1219	.1812	.3261	.4937	.6714	.8498	1.0227	1.1861
8.0	.0483	.0878	.1396	.2021	.3518	.5220	.7004	.8780	1.0489	1.2095
10.0	.0597	.1032	.1584	.2239	.3777	.5499	.7284	.9046	1.0730	1.2302
12.0	.0726	.1197	.1782	.2463	.4038	.5774	.7553	.9295	1.0948	1.2482
15.0	.0942	.1466	.2095	.2811	.4428	.6173	.7932	.9633	1.1231	1.2699
20.0	.1362	.1961	.2650	.3410	.5067	.6794	.8490	1.0095	1.1575	1.2911
25.0	.1845	.2503	.3233	.4018	.5675	.7345	.8942	1.0418	1.1752	1.2933
30.0	.2376	.3074	.3827	.4617	.6233	.7808	.9272	1.0592	1.1756	1.2764
35.0	.2938	.3658	.4413	.5187	.6724	.8170	.9472	1.0611	1.1588	1.2409
40.0	.3516	.4236	.4974	.5712	.7133	.8419	.9535	1.0476	1.1253	1.1879
45.0	.4090	.4792	.5492	.6176	.7448	.8548	.9459	1.0190	1.0760	1.1190
50.0	.4645	.5307	.5951	.6564	.7660	.8553	.9246	.9761	1.0125	1.0362
55.0	.5162	.5767	.6339	.6866	.7761	.8434	.8904	.9204	.9367	.9422
60.0	.5627	.6158	.6642	.7071	.7749	.8195	.8442	.8534	.8509	.8397
65.0	.6025	.6468	.6853	.7174	.7624	.7842	.7875	.7773	.7577	.7319
70.0	.6343	.6686	.6963	.7171	.7390	.7386	.7219	.6943	.6600	.6221
75.0	.6574	.6808	.6970	.7062	.7054	.6842	.6495	.6069	.5607	.5135
80.0	.6708	.6828	.6874	.6851	.6626	.6226	.5724	.5179	.4628	.4095
85.0	.6743	.6746	.6678	.6544	.6119	.5555	.4930	.4298	.3693	.3133

θ_{xy}, deg / α, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	1.2742	1.4190	1.5493	1.6639	1.7620	1.8429	1.9058	1.9506	1.9767
2.0	1.2882	1.4316	1.5604	1.6734	1.7698	1.8487	1.9098	1.9526	1.9769
4.0	1.3141	1.4546	1.5800	1.6895	1.7820	1.8571	1.9143	1.9532	1.9735
6.0	1.3372	1.4742	1.5960	1.7015	1.7900	1.8610	1.9141	1.9489	1.9653
8.0	1.3572	1.4904	1.6081	1.7094	1.7937	1.8604	1.9093	1.9400	1.9524
10.0	1.3741	1.5031	1.6164	1.7132	1.7930	1.8553	1.8998	1.9264	1.9347
12.0	1.3878	1.5122	1.6208	1.7129	1.7879	1.8457	1.8858	1.9081	1.9125
15.0	1.4022	1.5192	1.6201	1.7046	1.7723	1.8230	1.8563	1.8723	1.8708
20.0	1.4096	1.5125	1.5995	1.6705	1.7252	1.7636	1.7855	1.7910	1.7800
25.0	1.3961	1.4834	1.5553	1.6119	1.6531	1.6790	1.6896	1.6850	1.6651
30.0	1.3620	1.4326	1.4887	1.5305	1.5582	1.5718	1.5715	1.5575	1.5297
35.0	1.3083	1.3618	1.4018	1.4289	1.4433	1.4452	1.4349	1.4123	1.3779
40.0	1.2368	1.2730	1.2973	1.3101	1.3120	1.3031	1.2837	1.2540	1.2143
45.0	1.1496	1.1690	1.1782	1.1778	1.1682	1.1498	1.1227	1.0873	1.0437
50.0	1.0493	1.0529	1.0483	1.0359	1.0163	.9899	.9567	.9172	.8716
55.0	.9389	.9283	.9114	.8888	.8610	.8283	.7909	.7490	.7029
60.0	.8219	.7990	.7718	.7410	.7069	.6699	.6301	.5877	.5430
65.0	.7018	.6688	.6336	.5969	.5587	.5195	.4793	.4383	.3966
70.0	.5823	.5418	.5012	.4609	.4210	.3817	.3431	.3052	.2682
75.0	.4669	.4217	.3784	.3371	.2979	.2607	.2256	.1926	.1617
80.0	.3592	.3123	.2690	.2293	.1931	.1602	.1305	.1038	.0803
85.0	.2624	.2168	.1764	.1409	.1099	.0832	.0605	.0416	.0265

$\beta_1 = 90^\circ$; $\beta_2 - 270^\circ$; $\beta = 15^\circ$

θ_{xy}, deg / α, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.0733	.1072	.1492	.1992	.3202	.4638	.6205	.7810	.9389	1.0900
2.0	.0774	.1128	.1569	.2079	.3316	.4773	.6351	.7960	.9537	1.1042
4.0	.0865	.1248	.1715	.2261	.3549	.5042	.6638	.8251	.9821	1.1309
6.0	.0966	.1380	.1877	.2451	.3787	.5310	.6919	.8530	1.0086	1.1553
8.0	.1078	.1522	.2048	.2649	.4029	.5576	.7192	.8795	1.0333	1.1773
10.0	.1200	.1674	.2229	.2854	.4273	.5839	.7455	.9045	1.0559	1.1968
12.0	.1334	.1836	.2417	.3066	.4518	.6096	.7708	.9279	1.0764	1.2137
15.0	.1553	.2097	.2715	.3394	.4885	.6472	.8064	.9597	1.1030	1.2341
20.0	.1968	.2572	.3241	.3958	.5486	.7056	.8589	1.0031	1.1353	1.2540
25.0	.2435	.3088	.3791	.4530	.6057	.7574	.9013	1.0335	1.1519	1.2561
30.0	.2944	.3629	.4350	.5092	.6581	.8009	.9324	1.0498	1.1524	1.2402
35.0	.3480	.4180	.4901	.5627	.7042	.8349	.9512	1.0517	1.1366	1.2068
40.0	.4028	.4725	.5427	.6120	.7427	.8584	.9571	1.0389	1.1050	1.1570
45.0	.4572	.5248	.5913	.6554	.7722	.8705	.9500	1.0120	1.0587	1.0922
50.0	.5096	.5733	.6343	.6917	.7919	.8710	.9300	.9717	.9990	1.0144
55.0	.5584	.6164	.6705	.7197	.8011	.8597	.8978	.9193	.9278	.9260
60.0	.6022	.6530	.6987	.7386	.7997	.8370	.8544	.8564	.8471	.8296
65.0	.6396	.6819	.7181	.7478	.7875	.8035	.8009	.7848	.7595	.7283
70.0	.6696	.7022	.7280	.7469	.7648	.7602	.7390	.7066	.6676	.6250
75.0	.6911	.7132	.7282	.7360	.7324	.7083	.6703	.6241	.5741	.5229
80.0	.7036	.7147	.7185	.7154	.6912	.6492	.5968	.5395	.4814	.4248
85.0	.7067	.7066	.6994	.6856	.6423	.5847	.5206	.4552	.3921	.3330

θ_{xy}, deg / α, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	1.2314	1.3611	1.4776	1.5801	1.6677	1.7397	1.7958	1.8357	1.8589
2.0	1.2446	1.3730	1.4881	1.5890	1.6749	1.7453	1.7996	1.8376	1.8590
4.0	1.2689	1.3946	1.5066	1.6041	1.6865	1.7532	1.8038	1.8381	1.8558
6.0	1.2906	1.4130	1.5215	1.6154	1.6940	1.7568	1.8036	1.8341	1.8481
8.0	1.3094	1.4282	1.5329	1.6228	1.6974	1.7563	1.7991	1.8257	1.8360
10.0	1.3253	1.4402	1.5407	1.6264	1.6967	1.7514	1.7902	1.8129	1.8194
12.0	1.3381	1.4488	1.5449	1.6261	1.6920	1.7424	1.7770	1.7957	1.7985
15.0	1.3517	1.4553	1.5442	1.6183	1.6773	1.7210	1.7493	1.7620	1.7593
20.0	1.3587	1.4490	1.5249	1.5863	1.6331	1.6652	1.6827	1.6856	1.6739
25.0	1.3459	1.4216	1.4833	1.5311	1.5653	1.5857	1.5926	1.5859	1.5659
30.0	1.3139	1.3739	1.4207	1.4547	1.4760	1.4849	1.4816	1.4661	1.4386
35.0	1.2635	1.3073	1.3390	1.3591	1.3680	1.3659	1.3530	1.3296	1.2959
40.0	1.1962	1.2238	1.2407	1.2475	1.2445	1.2323	1.2109	1.1808	1.1420
45.0	1.1142	1.1261	1.1288	1.1231	1.1094	1.0881	1.0596	1.0240	.9817
50.0	1.0199	1.0169	1.0066	.9897	.9666	.9378	.9035	.8641	.8199
55.0	.9162	.8998	.8780	.8514	.8206	.7859	.7476	.7060	.6613
60.0	.8062	.7782	.7467	.7124	.6757	.6369	.5964	.5544	.5110
65.0	.6933	.6558	.6168	.5769	.5366	.4956	.4547	.4139	.3733
70.0	.5808	.5363	.4923	.4490	.4069	.3661	.3266	.2888	.2526
75.0	.4724	.4235	.3768	.3327	.2911	.2523	.2162	.1829	.1525
80.0	.3709	.3206	.2740	.2314	.1926	.1578	.1267	.0994	.0759
85.0	.2790	.2302	.1866	.1480	.1144	.0854	.0609	.0409	.0254

TABLE IV.- CONTINUED

(b) C_A. Continued.

$\beta_1 = 105^0$; $\beta_2 = 255^0$; $\beta = 5^0$

θ_{xy}, deg / α, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.0198	.0459	.0858	.1385	.2745	.4385	.6164	.7976	.9748	1.1431
2.0	.0230	.0515	.0937	.1484	.2878	.4541	.6333	.8150	.9919	1.1595
4.0	.0308	.0638	.1104	.1691	.3148	.4853	.6666	.8488	1.0249	1.1905
6.0	.0401	.0777	.1285	.1909	.3425	.5164	.6993	.8813	1.0559	1.2191
8.0	.0511	.0931	.1479	.2137	.3705	.5474	.7311	.9123	1.0849	1.2452
10.0	.0636	.1098	.1684	.2375	.3989	.5780	.7619	.9417	1.1116	1.2685
12.0	.0776	.1278	.1900	.2620	.4274	.6081	.7916	.9693	1.1361	1.2889
15.0	.1012	.1572	.2241	.3000	.4702	.6521	.8336	1.0071	1.1681	1.3141
20.0	.1471	.2113	.2848	.3656	.5404	.7207	.8959	1.0595	1.2083	1.3407
25.0	.1998	.2704	.3487	.4323	.6074	.7820	.9469	1.0973	1.2310	1.3474
30.0	.2577	.3329	.4137	.4979	.6691	.8339	.9851	1.1193	1.2355	1.3341
35.0	.3192	.3967	.4779	.5606	.7236	.8750	1.0094	1.1249	1.2217	1.3011
40.0	.3823	.4600	.5393	.6183	.7692	.9039	1.0189	1.1138	1.1900	1.2494
45.0	.4451	.5208	.5962	.6695	.8047	.9199	1.0134	1.0865	1.1414	1.1806
50.0	.5057	.5772	.6467	.7124	.8289	.9223	.9931	1.0437	1.0773	1.0969
55.0	.5622	.6277	.6893	.7458	.8410	.9112	.9585	.9868	.9997	1.0007
60.0	.6130	.6705	.7227	.7688	.8408	.8869	.9108	.9174	.9110	.8949
65.0	.6566	.7045	.7460	.7805	.8281	.8500	.8614	.8378	.8138	.7829
70.0	.6914	.7285	.7583	.7806	.8035	.8018	.7820	.7502	.7111	.6679
75.0	.7167	.7420	.7594	.7692	.7676	.7437	.7049	.6575	.6060	.5535
80.0	.7314	.7443	.7492	.7465	.7216	.6775	.6223	.5623	.5017	.4431
85.0	.7353	.7356	.7280	.7133	.6667	.6051	.5367	.4676	.4015	.3402

θ_{xy}, deg / α, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	1.2993	1.4417	1.5687	1.6796	1.7738	1.8510	1.9107	1.9529	1.9774
2.0	1.3146	1.4555	1.5809	1.6900	1.7823	1.8575	1.9152	1.9553	1.9777
4.0	1.3431	1.4808	1.6026	1.7079	1.7961	1.8671	1.9206	1.9564	1.9746
6.0	1.3686	1.5027	1.6205	1.7216	1.8056	1.8722	1.9213	1.9528	1.9668
8.0	1.3910	1.5211	1.6346	1.7313	1.8107	1.8728	1.9174	1.9445	1.9541
10.0	1.4102	1.5359	1.6448	1.7368	1.8114	1.8688	1.9088	1.9315	1.9368
12.0	1.4262	1.5471	1.6511	1.7380	1.8078	1.8603	1.8956	1.9138	1.9149
15.0	1.4439	1.5570	1.6530	1.7320	1.7941	1.8391	1.8673	1.8787	1.8735
20.0	1.4562	1.5547	1.6363	1.7013	1.7498	1.7821	1.7983	1.7987	1.7834
25.0	1.4466	1.5291	1.5952	1.6454	1.6801	1.6995	1.7039	1.6937	1.6691
30.0	1.4156	1.4810	1.5310	1.5661	1.5869	1.5937	1.5870	1.5670	1.5341
35.0	1.3641	1.4119	1.4456	1.4658	1.4731	1.4681	1.4511	1.4225	1.3826
40.0	1.2935	1.3239	1.3416	1.3475	1.3423	1.3264	1.3003	1.2644	1.2191
45.0	1.2062	1.2196	1.2222	1.2149	1.1982	1.1729	1.1393	1.0977	1.0487
50.0	1.1046	1.1022	1.0910	1.0719	1.0455	1.0123	.9729	.9274	.8764
55.0	.9919	.9753	.9520	.9229	.8886	.8495	.8061	.7587	.7075
60.0	.8716	.8427	.8094	.7724	.7323	.6894	.6441	.5966	.5472
65.0	.7472	.7085	.6675	.6251	.5814	.5369	.4918	.4462	.4003
70.0	.6226	.5767	.5308	.4853	.4405	.3966	.3537	.3119	.2713
75.0	.5016	.4513	.4032	.3573	.3139	.2728	.2342	.1979	.1642
80.0	.3878	.3362	.2887	.2451	.2054	.1693	.1367	.1077	.0820
85.0	.2846	.2349	.1908	.1520	.1182	.0891	.0644	.0439	.0275

$\beta_1 = 105^0$; $\beta_2 = 255^0$; $\beta = 15^0$

θ_{xy}, deg / α, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.0717	.1062	.1495	.2011	.3266	.4755	.6368	.8006	.9605	1.1121
2.0	.0762	.1123	.1573	.2106	.3391	.4902	.6526	.8169	.9766	1.1275
4.0	.0860	.1254	.1737	.2303	.3645	.5195	.6840	.8487	1.0076	1.1567
6.0	.0970	.1397	.1913	.2510	.3905	.5488	.7147	.8793	1.0368	1.1836
8.0	.1092	.1552	.2100	.2726	.4168	.5779	.7446	.9084	1.0640	1.2081
10.0	.1225	.1718	.2297	.2951	.4435	.6067	.7736	.9361	1.0892	1.2300
12.0	.1370	.1895	.2503	.3183	.4703	.6350	.8015	.9620	1.1121	1.2492
15.0	.1609	.2179	.2828	.3541	.5106	.6763	.8410	.9976	1.1423	1.2729
20.0	.2061	.2698	.3403	.4159	.5766	.7409	.8995	1.0469	1.1800	1.2979
25.0	.2572	.3262	.4005	.4786	.6396	.7985	.9475	1.0824	1.2014	1.3042
30.0	.3127	.3853	.4618	.5403	.6975	.8473	.9834	1.1031	1.2056	1.2916
35.0	.3713	.4457	.5223	.5992	.7488	.8859	1.0062	1.1083	1.1927	1.2606
40.0	.4312	.5054	.5801	.6535	.7917	.9131	1.0151	1.0979	1.1629	1.2120
45.0	.4906	.5627	.6335	.7015	.8250	.9281	1.0100	1.0722	1.1172	1.1474
50.0	.5479	.6159	.6809	.7418	.8477	.9304	.9909	1.0320	1.0569	1.0686
55.0	.6013	.6633	.7209	.7732	.8591	.9199	.9584	.9785	.9840	.9782
60.0	.6492	.7035	.7522	.7946	.8588	.8970	.9135	.9133	.9005	.8788
65.0	.6902	.7354	.7740	.8054	.8467	.8624	.8577	.8384	.8092	.7734
70.0	.7230	.7579	.7854	.8052	.8233	.8169	.7924	.7561	.7126	.6653
75.0	.7467	.7704	.7861	.7942	.7893	.7620	.7198	.6688	.6138	.5578
80.0	.7605	.7724	.7762	.7724	.7455	.6992	.6417	.5791	.5156	.4540
85.0	.7641	.7639	.7558	.7407	.6932	.6304	.5605	.4893	.4208	.3568

θ_{xy}, deg / α, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	1.2526	1.3803	1.4942	1.5935	1.6778	1.7467	1.8001	1.8377	1.8595
2.0	1.2669	1.3934	1.5057	1.6033	1.6858	1.7528	1.8042	1.8399	1.8597
4.0	1.2937	1.4171	1.5261	1.6201	1.6988	1.7619	1.8093	1.8410	1.8569
6.0	1.3176	1.4377	1.5430	1.6330	1.7077	1.7667	1.8100	1.8376	1.8495
8.0	1.3387	1.4550	1.5562	1.6421	1.7125	1.7672	1.8063	1.8298	1.8376
10.0	1.3568	1.4689	1.5658	1.6473	1.7132	1.7635	1.7983	1.8175	1.8213
12.0	1.3719	1.4795	1.5717	1.6484	1.7097	1.7555	1.7859	1.8009	1.8007
15.0	1.3885	1.4887	1.5735	1.6428	1.6968	1.7356	1.7593	1.7680	1.7618
20.0	1.4000	1.4866	1.5578	1.6139	1.6552	1.6820	1.6944	1.6927	1.6771
25.0	1.3911	1.4625	1.5191	1.5614	1.5896	1.6043	1.6057	1.5940	1.5696
30.0	1.3619	1.4174	1.4588	1.4868	1.5020	1.5049	1.4957	1.4749	1.4427
35.0	1.3134	1.3524	1.3785	1.3925	1.3951	1.3868	1.3679	1.3390	1.3003
40.0	1.2471	1.2696	1.2807	1.2813	1.2721	1.2535	1.2262	1.1904	1.1468
45.0	1.1650	1.1716	1.1685	1.1566	1.1367	1.1093	1.0748	1.0337	.9863
50.0	1.0695	1.0612	1.0451	1.0221	.9930	.9583	.9183	.8736	.8243
55.0	.9636	.9419	.9144	.8821	.8455	.8052	.7616	.7149	.6656
60.0	.8504	.8172	.7804	.7406	.6986	.6547	.6093	.5626	.5149
65.0	.7335	.6910	.6470	.6021	.5568	.5113	.4660	.4211	.3768
70.0	.6164	.5671	.5184	.4707	.4243	.3794	.3363	.2949	.2555
75.0	.5026	.4493	.3985	.3504	.3052	.2630	.2239	.1877	.1547
80.0	.3956	.3411	.2908	.2449	.2032	.1657	.1323	.1029	.0775
85.0	.2983	.2456	.1987	.1573	.1213	.0903	.0642	.0429	.0262

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TABLE IV.- CONTINUED

(b) C_A. Continued.

$\beta_1 = 120^\circ$; $\beta_2 = 240^\circ$; $\beta = 0^\circ$

α, deg \ θ_{xy}, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.0114	.0390	.0817	.1379	.2825	.4556	.6418	.8295	1.0111	1.1815
2.0	.0150	.0451	.0904	.1489	.2972	.4728	.6604	.8487	1.0300	1.1996
4.0	.0234	.0589	.1090	.1718	.3272	.5074	.6974	.8861	1.0665	1.2340
6.0	.0337	.0743	.1291	.1961	.3579	.5420	.7337	.9223	1.1010	1.2659
8.0	.0459	.0914	.1506	.2215	.3891	.5765	.7691	.9569	1.1334	1.2952
10.0	.0598	.1101	.1735	.2479	.4207	.6106	.8036	.9898	1.1635	1.3216
12.0	.0754	.1302	.1975	.2753	.4525	.6443	.8368	1.0209	1.1912	1.3450
15.0	.1018	.1629	.2357	.3177	.5004	.6935	.8841	1.0637	1.2279	1.3745
20.0	.1530	.2233	.3035	.3910	.5791	.7708	.9547	1.1239	1.2752	1.4074
25.0	.2119	.2895	.3749	.4656	.6543	.8402	1.0133	1.1686	1.3040	1.4193
30.0	.2767	.3593	.4476	.5393	.7239	.8996	1.0582	1.1963	1.3133	1.4100
35.0	.3455	.4308	.5196	.6097	.7858	.9471	1.0878	1.2062	1.3029	1.3795
40.0	.4161	.5017	.5886	.6748	.8379	.9814	1.1015	1.1981	1.2732	1.3290
45.0	.4865	.5699	.6526	.7326	.8788	1.0014	1.0986	1.1722	1.2250	1.2598
50.0	.5544	.6333	.7095	.7813	.9072	1.0064	1.0794	1.1293	1.1597	1.1742
55.0	.6178	.6899	.7576	.8194	.9222	.9964	1.0444	1.0706	1.0794	1.0747
60.0	.6747	.7381	.7955	.8458	.9235	.9717	.9947	.9980	.9865	.9643
65.0	.7236	.7764	.8220	.8597	.9109	.9329	.9317	.9136	.8839	.8464
70.0	.7627	.8037	.8364	.8606	.8848	.8813	.8574	.8201	.7746	.7246
75.0	.7911	.8190	.8381	.8486	.8460	.8184	.7741	.7202	.6619	.6025
80.0	.8078	.8220	.8272	.8240	.7957	.7461	.6842	.6171	.5494	.4840
85.0	.8123	.8125	.8040	.7875	.7355	.6668	.5906	.5138	.4403	.3725

α, deg \ θ_{xy}, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	1.3380	1.4789	1.6033	1.7107	1.8012	1.8746	1.9310	1.9705	1.9933
2.0	1.3549	1.4942	1.6167	1.7222	1.8106	1.8818	1.9360	1.9733	1.9938
4.0	1.3864	1.5222	1.6409	1.7422	1.8261	1.8928	1.9424	1.9751	1.9910
6.0	1.4149	1.5468	1.6612	1.7580	1.8373	1.8993	1.9442	1.9721	1.9834
8.0	1.4403	1.5678	1.6776	1.7696	1.8440	1.9011	1.9411	1.9644	1.9710
10.0	1.4623	1.5852	1.6900	1.7769	1.8463	1.8983	1.9334	1.9519	1.9539
12.0	1.4810	1.5987	1.6983	1.7799	1.8440	1.8909	1.9210	1.9346	1.9321
15.0	1.5025	1.6119	1.7031	1.7764	1.8323	1.8713	1.8938	1.9002	1.8909
20.0	1.5203	1.6145	1.6904	1.7490	1.7907	1.8163	1.8262	1.8208	1.8007
25.0	1.5153	1.5926	1.6524	1.6956	1.7229	1.7350	1.7326	1.7162	1.6861
30.0	1.4875	1.5471	1.5902	1.6178	1.6308	1.6300	1.6160	1.5894	1.5506
35.0	1.4378	1.4793	1.5057	1.5180	1.5173	1.5044	1.4798	1.4443	1.3982
40.0	1.3677	1.3913	1.4014	1.3993	1.3858	1.3620	1.3283	1.2853	1.2337
45.0	1.2794	1.2858	1.2806	1.2651	1.2404	1.2071	1.1659	1.1174	1.0619
50.0	1.1755	1.1658	1.1468	1.1197	1.0853	1.0445	.9977	.9454	.8882
55.0	1.0592	1.0352	1.0042	.9673	.9254	.8790	.8287	.7748	.7178
60.0	.9340	.8979	.8571	.8128	.7655	.7158	.6641	.6107	.5559
65.0	.8038	.7579	.7100	.6606	.6104	.5598	.5089	.4580	.4074
70.0	.6724	.6197	.5672	.5155	.4650	.4156	.3678	.3214	.2768
75.0	.5440	.4874	.4333	.3819	.3335	.2878	.2450	.2051	.1680
80.0	.4223	.3649	.3121	.2639	.2199	.1802	.1444	.1125	.0845
85.0	.3110	.2561	.2075	.1649	.1279	.0960	.0690	.0466	.0287

$\beta_1 = 120^\circ$; $\beta_2 = 240^\circ$; $\beta = 2^\circ$

α, deg \ θ_{xy}, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.0129	.0403	.0830	.1391	.2835	.4562	.6421	.8294	1.0106	1.1808
2.0	.0164	.0465	.0917	.1501	.2981	.4734	.6607	.8486	1.0295	1.1989
4.0	.0248	.0602	.1102	.1730	.3281	.5080	.6976	.8860	1.0660	1.2332
6.0	.0351	.0757	.1303	.1972	.3588	.5426	.7339	.9221	1.1005	1.2651
8.0	.0473	.0927	.1518	.2226	.3899	.5770	.7693	.9566	1.1328	1.2943
10.0	.0612	.1113	.1747	.2490	.4215	.6111	.8036	.9895	1.1629	1.3207
12.0	.0767	.1314	.1987	.2763	.4533	.6447	.8368	1.0206	1.1906	1.3441
15.0	.1031	.1641	.2368	.3187	.5011	.6939	.8840	1.0634	1.2273	1.3735
20.0	.1542	.2245	.3045	.3919	.5796	.7711	.9546	1.1235	1.2745	1.4084
25.0	.2131	.2905	.3758	.4665	.6548	.8404	1.0132	1.1681	1.3032	1.4183
30.0	.2778	.3603	.4485	.5400	.7244	.8997	1.0579	1.1958	1.3125	1.4089
35.0	.3465	.4317	.5204	.6104	.7861	.9472	1.0876	1.2057	1.3022	1.3785
40.0	.4171	.5025	.5893	.6754	.8382	.9814	1.1012	1.1976	1.2725	1.3280
45.0	.4873	.5706	.6532	.7331	.8790	1.0013	1.0984	1.1717	1.2243	1.2590
50.0	.5551	.6339	.7100	.7817	.9074	1.0064	1.0792	1.1288	1.1591	1.1734
55.0	.6184	.6905	.7581	.8198	.9224	.9964	1.0442	1.0702	1.0789	1.0740
60.0	.6754	.7387	.7959	.8461	.9237	.9717	.9945	.9977	.9861	.9638
65.0	.7241	.7769	.8224	.8600	.9110	.9329	.9316	.9134	.8836	.8460
70.0	.7633	.8041	.8368	.8610	.8850	.8814	.8574	.8200	.7744	.7244
75.0	.7916	.8195	.8385	.8490	.8463	.8186	.7742	.7203	.6619	.6025
80.0	.8082	.8224	.8276	.8244	.7961	.7464	.6845	.6173	.5495	.4841
85.0	.8127	.8129	.8044	.7879	.7359	.6671	.5909	.5141	.4406	.3727

α, deg \ θ_{xy}, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	1.3370	1.4775	1.6017	1.7089	1.7992	1.8724	1.9287	1.9682	1.9909
2.0	1.3538	1.4928	1.6151	1.7204	1.8085	1.8796	1.9337	1.9709	1.9913
4.0	1.3853	1.5208	1.6392	1.7403	1.8241	1.8906	1.9401	1.9727	1.9886
6.0	1.4137	1.5454	1.6595	1.7561	1.8352	1.8971	1.9418	1.9698	1.9810
8.0	1.4391	1.5664	1.6759	1.7677	1.8419	1.8989	1.9388	1.9620	1.9686
10.0	1.4611	1.5837	1.6883	1.7750	1.8442	1.8961	1.9311	1.9495	1.9515
12.0	1.4798	1.5973	1.6966	1.7780	1.8420	1.8887	1.9187	1.9323	1.9297
15.0	1.5012	1.6104	1.7014	1.7745	1.8302	1.8691	1.8915	1.8979	1.8886
20.0	1.5190	1.6129	1.6887	1.7471	1.7887	1.8142	1.8240	1.8187	1.7985
25.0	1.5140	1.5911	1.6508	1.6938	1.7210	1.7330	1.7306	1.7141	1.6840
30.0	1.4862	1.5457	1.5886	1.6161	1.6290	1.6281	1.6141	1.5875	1.5487
35.0	1.4366	1.4780	1.5042	1.5165	1.5157	1.5027	1.4781	1.4426	1.3965
40.0	1.3666	1.3901	1.4001	1.3978	1.3843	1.3604	1.3267	1.2838	1.2322
45.0	1.2784	1.2847	1.2794	1.2638	1.2390	1.2057	1.1645	1.1160	1.0606
50.0	1.1746	1.1649	1.1458	1.1186	1.0842	1.0433	.9965	.9443	.8871
55.0	1.0585	1.0344	1.0034	.9664	.9245	.8781	.8277	.7739	.7169
60.0	.9335	.8972	.8564	.8120	.7647	.7150	.6633	.6100	.5552
65.0	.8034	.7575	.7094	.6601	.6099	.5592	.5083	.4575	.4069
70.0	.6722	.6194	.5669	.5152	.4646	.4153	.3674	.3211	.2764
75.0	.5439	.4872	.4331	.3817	.3332	.2876	.2448	.2049	.1678
80.0	.4225	.3649	.3121	.2638	.2199	.1801	.1443	.1124	.0844
85.0	.3112	.2563	.2076	.1650	.1279	.0960	.0690	.0466	.0287

TABLE IV.- CONTINUED

(b) C_A. Continued.

$\beta_1 = 120^\circ$; $\beta_2 = 240^\circ$; $\beta = 5^\circ$

θ_{xy}, deg / α, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.0200	.0476	.0898	.1454	.2885	.4596	.6436	.8291	1.0085	1.1768
2.0	.0236	.0537	.0985	.1563	.3030	.4767	.6621	.8481	1.0272	1.1948
4.0	.0321	.0674	.1169	.1791	.3328	.5110	.6988	.8853	1.0635	1.2290
6.0	.0424	.0827	.1369	.2032	.3633	.5454	.7348	.9212	1.0977	1.2606
8.0	.0545	.0996	.1583	.2284	.3943	.5796	.7700	.9555	1.1299	1.2896
10.0	.0683	.1181	.1810	.2547	.4256	.6134	.8041	.9882	1.1598	1.3158
12.0	.0838	.1381	.2048	.2818	.4572	.6468	.8371	1.0190	1.1873	1.3391
15.0	.1100	.1706	.2427	.3239	.5047	.6957	.8840	1.0616	1.2237	1.3683
20.0	.1608	.2305	.3100	.3967	.5827	.7724	.9541	1.1213	1.2706	1.4010
25.0	.2193	.2962	.3808	.4707	.6574	.8412	1.0123	1.1656	1.2992	1.4129
30.0	.2836	.3655	.4530	.5438	.7265	.9002	1.0568	1.1931	1.3084	1.4035
35.0	.3519	.4365	.5245	.6137	.7879	.9474	1.0863	1.2030	1.2981	1.3733
40.0	.4220	.5068	.5930	.6783	.8396	.9814	1.0998	1.1949	1.2686	1.3232
45.0	.4918	.5745	.6564	.7356	.8802	1.0012	1.0970	1.1692	1.2207	1.2545
50.0	.5592	.6374	.7129	.7839	.9084	1.0062	1.0779	1.1266	1.1560	1.1696
55.0	.6221	.6936	.7606	.8218	.9233	.9963	1.0432	1.0684	1.0763	1.0708
60.0	.6786	.7415	.7982	.8480	.9246	.9717	.9938	.9963	.9841	.9612
65.0	.7271	.7795	.8246	.8618	.9120	.9332	.9313	.9126	.8823	.8442
70.0	.7660	.8065	.8388	.8627	.8861	.8820	.8576	.8198	.7738	.7233
75.0	.7941	.8217	.8406	.8508	.8477	.8196	.7749	.7207	.6620	.6022
80.0	.8107	.8247	.8297	.8263	.7978	.7479	.6857	.6183	.5503	.4846
85.0	.8151	.8153	.8067	.7901	.7360	.6691	.5928	.5158	.4421	.3739

θ_{xy}, deg / α, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	1.3314	1.4705	1.5933	1.6994	1.7886	1.8611	1.9167	1.9558	1.9782
2.0	1.3481	1.4857	1.6067	1.7108	1.7980	1.8682	1.9217	1.9585	1.9787
4.0	1.3794	1.5135	1.6306	1.7306	1.8134	1.8792	1.9281	1.9603	1.9759
6.0	1.4077	1.5379	1.6508	1.7463	1.8245	1.8856	1.9298	1.9573	1.9684
8.0	1.4329	1.5587	1.6670	1.7578	1.8311	1.8874	1.9268	1.9496	1.9561
10.0	1.4548	1.5760	1.6793	1.7650	1.8334	1.8846	1.9191	1.9372	1.9391
12.0	1.4733	1.5894	1.6876	1.7680	1.8311	1.8773	1.9068	1.9201	1.9174
15.0	1.4946	1.6025	1.6923	1.7645	1.8195	1.8578	1.8798	1.8860	1.8765
20.0	1.5123	1.6050	1.6798	1.7373	1.7783	1.8032	1.8127	1.8072	1.7871
25.0	1.5073	1.5834	1.6421	1.6843	1.7109	1.7226	1.7199	1.7033	1.6733
30.0	1.4797	1.5382	1.5803	1.6072	1.6196	1.6184	1.6041	1.5775	1.5388
35.0	1.4304	1.4709	1.4965	1.5081	1.5069	1.4937	1.4690	1.4335	1.3876
40.0	1.3608	1.3836	1.3930	1.3903	1.3764	1.3523	1.3186	1.2758	1.2243
45.0	1.2732	1.2788	1.2731	1.2571	1.2321	1.1986	1.1575	1.1091	1.0539
50.0	1.1701	1.1598	1.1403	1.1128	1.0782	1.0372	.9905	.9384	.8815
55.0	1.0547	1.0302	.9988	.9616	.9195	.8731	.8228	.7691	.7124
60.0	.9305	.8939	.8528	.8082	.7608	.7111	.6595	.6062	.5517
65.0	.8012	.7550	.7068	.6572	.6069	.5562	.5054	.4547	.4043
70.0	.6709	.6178	.5651	.5132	.4626	.4132	.3654	.3192	.2747
75.0	.5434	.4865	.4322	.3807	.3321	.2864	.2436	.2037	.1668
80.0	.4226	.3650	.3120	.2635	.2194	.1795	.1437	.1119	.0839
85.0	.3122	.2570	.2082	.1653	.1280	.0960	.0689	.0464	.0285

$\beta_1 = 120^\circ$; $\beta_2 = 240^\circ$; $\beta = 15^\circ$

θ_{xy}, deg / α, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.0695	.1049	.1496	.2034	.3349	.4906	.6578	.8260	.9882	1.1403
2.0	.0744	.1115	.1581	.2138	.3486	.5067	.6752	.8438	1.0059	1.1572
4.0	.0851	.1259	.1762	.2355	.3766	.5390	.7097	.8788	1.0399	1.1893
6.0	.0971	.1415	.1955	.2583	.4053	.5713	.7436	.9125	1.0721	1.2190
8.0	.1104	.1585	.2161	.2821	.4344	.6035	.7766	.9448	1.1024	1.2463
10.0	.1251	.1768	.2378	.3069	.4639	.6353	.8087	.9755	1.1305	1.2709
12.0	.1410	.1962	.2605	.3325	.4936	.6667	.8397	1.0045	1.1563	1.2928
15.0	.1673	.2276	.2964	.3721	.5382	.7126	.8838	1.0445	1.1906	1.3203
20.0	.2172	.2849	.3600	.4406	.6116	.7847	.9498	1.1007	1.2347	1.3510
25.0	.2735	.3473	.4268	.5103	.6818	.8495	1.0045	1.1423	1.2615	1.3622
30.0	.3349	.4129	.4949	.5790	.7468	.9049	1.0463	1.1682	1.2702	1.3534
35.0	.3998	.4798	.5621	.6447	.8044	.9492	1.0740	1.1775	1.2606	1.3250
40.0	.4661	.5462	.6266	.7054	.8531	.9812	1.0867	1.1699	1.2328	1.2778
45.0	.5321	.6099	.6862	.7593	.8913	.9999	1.0841	1.1457	1.1878	1.2133
50.0	.5957	.6691	.7393	.8047	.9178	1.0046	1.0661	1.1056	1.1269	1.1334
55.0	.6550	.7220	.7842	.8403	.9318	.9953	1.0335	1.0509	1.0520	1.0406
60.0	.7082	.7670	.8196	.8649	.9329	.9722	.9871	.9831	.9653	.9376
65.0	.7539	.8028	.8443	.8779	.9212	.9360	.9283	.9044	.8696	.8276
70.0	.7905	.8282	.8576	.8787	.8968	.8878	.8590	.8172	.7676	.7139
75.0	.8170	.8424	.8592	.8674	.8606	.8291	.7813	.7240	.6625	.6000
80.0	.8325	.8451	.8489	.8443	.8136	.7617	.6974	.6278	.5575	.4894
85.0	.8366	.8362	.8271	.8101	.7572	.6874	.6099	.5312	.4557	.3854

θ_{xy}, deg / α, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	1.2796	1.4048	1.5152	1.6105	1.6905	1.7554	1.8053	1.8402	1.8602
2.0	1.2953	1.4191	1.5278	1.6212	1.6993	1.7622	1.8099	1.8427	1.8606
4.0	1.3247	1.4452	1.5503	1.6398	1.7138	1.7725	1.8159	1.8444	1.8580
6.0	1.3513	1.4682	1.5692	1.6545	1.7242	1.7785	1.8175	1.8416	1.8510
8.0	1.3750	1.4878	1.5845	1.6654	1.7305	1.7802	1.8147	1.8344	1.8394
10.0	1.3956	1.5040	1.5961	1.6722	1.7326	1.7776	1.8075	1.8227	1.8234
12.0	1.4130	1.5166	1.6039	1.6750	1.7305	1.7707	1.7960	1.8067	1.8031
15.0	1.4331	1.5289	1.6083	1.6717	1.7195	1.7523	1.7706	1.7745	1.7646
20.0	1.4497	1.5313	1.5965	1.6461	1.6808	1.7010	1.7075	1.7005	1.6805
25.0	1.4450	1.5109	1.5611	1.5963	1.6175	1.6252	1.6202	1.6028	1.5735
30.0	1.4190	1.4685	1.5030	1.5238	1.5316	1.5272	1.5114	1.4885	1.4471
35.0	1.3727	1.4052	1.4242	1.4307	1.4257	1.4100	1.3843	1.3491	1.3049
40.0	1.3073	1.3231	1.3269	1.3198	1.3030	1.2771	1.2429	1.2009	1.1514
45.0	1.2249	1.2246	1.2141	1.1947	1.1673	1.1326	1.0914	1.0441	.9912
50.0	1.1280	1.1127	1.0893	1.0590	1.0226	.9809	.9345	.8837	.8291
55.0	1.0195	.9909	.9563	.9169	.8734	.8266	.7768	.7245	.6701
60.0	.9027	.8627	.8190	.7726	.7242	.6743	.6232	.5714	.5190
65.0	.7812	.7321	.6817	.6307	.5795	.5287	.4784	.4289	.3805
70.0	.6586	.6032	.5486	.4953	.4438	.3942	.3468	.3015	.2586
75.0	.5387	.4797	.4236	.3707	.3211	.2750	.2322	.1930	.1572
80.0	.4252	.3655	.3106	.2605	.2152	.1745	.1384	.1066	.0792
85.0	.3214	.2639	.2130	.1682	.1293	.0960	.0680	.0451	.0272

TABLE IV. - CONTINUED

(b) C_A. Continued.

$\phi_1 = 135^0$; $\phi_2 = 225^0$; $\beta = 0^0$

α, deg \ θ_{xy}, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.0125	.0424	.0886	.1492	.3041	.4876	.6825	.8761	1.0603	1.2304
2.0	.0165	.0494	.0984	.1616	.3207	.5070	.7034	.8975	1.0814	1.2506
4.0	.0261	.0649	.1195	.1876	.3545	.5459	.7449	.9395	1.1222	1.2890
6.0	.0379	.0825	.1423	.2150	.3892	.5850	.7858	.9801	1.1610	1.3248
8.0	.0517	.1019	.1667	.2438	.4246	.6240	.8258	1.0192	1.1977	1.3579
10.0	.0676	.1231	.1927	.2739	.4604	.6627	.8649	1.0566	1.2319	1.3881
12.0	.0854	.1461	.2201	.3050	.4966	.7009	.9027	1.0920	1.2636	1.4152
15.0	.1156	.1834	.2636	.3533	.5511	.7570	.9567	1.1412	1.3062	1.4498
20.0	.1743	.2525	.3410	.4371	.6410	.8456	1.0381	1.2113	1.3623	1.4905
25.0	.2418	.3283	.4227	.5225	.7274	.9258	1.1066	1.2648	1.3988	1.5091
30.0	.3162	.4084	.5063	.6071	.8078	.9951	1.1602	1.3000	1.4144	1.5049
35.0	.3952	.4905	.5890	.6882	.8796	1.0514	1.1973	1.3159	1.4086	1.4780
40.0	.4764	.5720	.6685	.7634	.9407	1.0930	1.2166	1.3119	1.3817	1.4293
45.0	.5572	.6505	.7423	.8305	.9892	1.1187	1.2176	1.2882	1.3345	1.3602
50.0	.6353	.7236	.8082	.8873	1.0236	1.1277	1.2003	1.2456	1.2683	1.2729
55.0	.7084	.7891	.8642	.9321	1.0430	1.1196	1.1652	1.1853	1.1853	1.1700
60.0	.7740	.8449	.9085	.9636	1.0467	1.0948	1.1134	1.1091	1.0879	1.0546
65.0	.8304	.8894	.9399	.9809	1.0346	1.0540	1.0464	1.0194	.9791	.9303
70.0	.8756	.9213	.9573	.9833	1.0070	.9985	.9664	.9188	.8622	.8008
75.0	.9085	.9395	.9603	.9709	.9649	.9298	.8756	.8105	.7407	.6700
80.0	.9280	.9435	.9487	.9440	.9094	.8502	.7769	.6978	.6183	.5419
85.0	.9334	.9332	.9229	.9034	.8423	.7620	.6732	.5839	.4989	.4205

α, deg \ θ_{xy}, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	1.3839	1.5198	1.6378	1.7382	1.8216	1.8884	1.9392	1.9744	1.9944
2.0	1.4026	1.5367	1.6527	1.7509	1.8320	1.8964	1.9447	1.9775	1.9950
4.0	1.4378	1.5679	1.6796	1.7732	1.8495	1.9090	1.9523	1.9801	1.9927
6.0	1.4698	1.5957	1.7026	1.7913	1.8625	1.9169	1.9552	1.9779	1.9854
8.0	1.4986	1.6197	1.7217	1.8052	1.8711	1.9202	1.9533	1.9709	1.9734
10.0	1.5240	1.6400	1.7366	1.8146	1.8751	1.9188	1.9466	1.9590	1.9566
12.0	1.5460	1.6564	1.7473	1.8197	1.8746	1.9128	1.9352	1.9425	1.9352
15.0	1.5720	1.6736	1.7555	1.8190	1.8652	1.8951	1.9094	1.9091	1.8945
20.0	1.5967	1.6820	1.7479	1.7959	1.8272	1.8429	1.8440	1.8312	1.8050
25.0	1.5972	1.6649	1.7139	1.7459	1.7621	1.7639	1.7522	1.7277	1.6911
30.0	1.5737	1.6229	1.6546	1.6705	1.6721	1.6606	1.6369	1.6018	1.5561
35.0	1.5267	1.5572	1.5718	1.5721	1.5598	1.5360	1.5016	1.4574	1.4041
40.0	1.4578	1.4699	1.4680	1.4537	1.4286	1.3939	1.3503	1.2988	1.2397
45.0	1.3690	1.3636	1.3463	1.3188	1.2826	1.2386	1.1878	1.1308	1.0680
50.0	1.2630	1.2415	1.2104	1.1716	1.1261	1.0750	1.0189	.9585	.8942
55.0	1.1431	1.1073	1.0646	1.0164	.9639	.9078	.8487	.7872	.7235
60.0	1.0129	.9651	.9132	.8582	.8010	.7423	.6825	.6220	.5611
65.0	.8763	.8193	.7607	.7015	.6423	.5834	.5253	.4681	.4120
70.0	.7375	.6742	.6119	.5512	.4925	.4360	.3818	.3300	.2807
75.0	.6008	.5343	.4713	.4120	.3564	.3046	.2564	.2120	.1711
80.0	.4702	.4038	.3431	.2879	.2379	.1931	.1530	.1176	.0867
85.0	.3497	.2867	.2312	.1828	.1408	.1049	.0746	.0497	.0299

$\phi_1 = 135^0$; $\phi_2 = 225^0$; $\beta = 2^0$

α, deg \ θ_{xy}, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.0138	.0436	.0897	.1503	.3049	.4881	.6826	.8759	1.0598	1.2295
2.0	.0178	.0506	.0996	.1626	.3214	.5074	.7035	.8973	1.0808	1.2496
4.0	.0274	.0661	.1206	.1886	.3552	.5463	.7450	.9392	1.1216	1.2880
6.0	.0391	.0837	.1434	.2160	.3899	.5853	.7858	.9798	1.1603	1.3238
8.0	.0530	.1031	.1678	.2448	.4252	.6243	.8258	1.0188	1.1969	1.3568
10.0	.0688	.1243	.1937	.2748	.4610	.6629	.8647	1.0561	1.2311	1.3870
12.0	.0866	.1472	.2211	.3059	.4971	.7011	.9025	1.0915	1.2628	1.4140
15.0	.1167	.1845	.2645	.3541	.5515	.7571	.9564	1.1406	1.3053	1.4486
20.0	.1753	.2535	.3419	.4378	.6414	.8456	1.0378	1.2107	1.3614	1.4893
25.0	.2428	.3291	.4235	.5231	.7277	.9257	1.1062	1.2641	1.3978	1.5078
30.0	.3171	.4092	.5069	.6076	.8079	.9949	1.1598	1.2992	1.4133	1.5036
35.0	.3960	.4912	.5896	.6886	.8797	1.0511	1.1967	1.3151	1.4076	1.4768
40.0	.4771	.5726	.6690	.7637	.9407	1.0927	1.2160	1.3111	1.3807	1.4281
45.0	.5578	.6510	.7427	.8307	.9891	1.1184	1.2171	1.2875	1.3336	1.3592
50.0	.6359	.7240	.8085	.8874	1.0235	1.1273	1.1998	1.2449	1.2675	1.2720
55.0	.7088	.7894	.8644	.9322	1.0429	1.1193	1.1647	1.1846	1.1846	1.1692
60.0	.7744	.8452	.9087	.9637	1.0466	1.0945	1.1130	1.1085	1.0873	1.0539
65.0	.8306	.8896	.9400	.9809	1.0345	1.0538	1.0461	1.0189	.9786	.9298
70.0	.8759	.9215	.9574	.9834	1.0069	.9983	.9661	.9185	.8618	.8004
75.0	.9087	.9397	.9604	.9710	.9648	.9297	.8754	.8104	.7405	.6698
80.0	.9281	.9437	.9488	.9441	.9095	.8502	.7769	.6977	.6183	.5418
85.0	.9336	.9334	.9231	.9035	.8425	.7621	.6734	.5841	.4990	.4205

α, deg \ θ_{xy}, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	1.3827	1.5183	1.6361	1.7363	1.8195	1.8862	1.9369	1.9720	1.9920
2.0	1.4014	1.5352	1.6510	1.7490	1.8299	1.8942	1.9424	1.9751	1.9926
4.0	1.4365	1.5664	1.6778	1.7713	1.8474	1.9067	1.9500	1.9777	1.9902
6.0	1.4685	1.5941	1.7008	1.7894	1.8604	1.9147	1.9529	1.9755	1.9830
8.0	1.4973	1.6181	1.7198	1.8032	1.8690	1.9180	1.9509	1.9685	1.9710
10.0	1.5227	1.6384	1.7348	1.8126	1.8730	1.9166	1.9443	1.9567	1.9542
12.0	1.5446	1.6548	1.7455	1.8177	1.8724	1.9106	1.9329	1.9402	1.9328
15.0	1.5706	1.6719	1.7537	1.8170	1.8631	1.8928	1.9072	1.9068	1.8922
20.0	1.5952	1.6803	1.7461	1.7939	1.8251	1.8407	1.8418	1.8289	1.8028
25.0	1.5957	1.6632	1.7121	1.7440	1.7601	1.7619	1.7501	1.7256	1.6890
30.0	1.5722	1.6213	1.6529	1.6687	1.6702	1.6586	1.6349	1.5999	1.5542
35.0	1.5253	1.5557	1.5702	1.5704	1.5580	1.5342	1.4998	1.4556	1.4024
40.0	1.4565	1.4685	1.4665	1.4522	1.4270	1.3923	1.3487	1.2972	1.2382
45.0	1.3678	1.3623	1.3449	1.3174	1.2812	1.2372	1.1864	1.1294	1.0667
50.0	1.2620	1.2403	1.2093	1.1704	1.1249	1.0737	1.0177	.9573	.8931
55.0	1.1422	1.1063	1.0636	1.0154	.9629	.9068	.8478	.7862	.7226
60.0	1.0121	.9643	.9123	.8573	.8002	.7415	.6818	.6213	.5604
65.0	.8757	.8187	.7601	.7009	.6416	.5828	.5247	.4675	.4115
70.0	.7371	.6738	.6115	.5508	.4921	.4356	.3814	.3296	.2803
75.0	.6005	.5340	.4710	.4117	.3561	.3043	.2562	.2117	.1709
80.0	.4701	.4037	.3430	.2877	.2378	.1929	.1529	.1175	.0866
85.0	.3498	.2867	.2312	.1827	.1408	.1049	.0746	.0497	.0299

TABLE IV. - CONTINUED

(b) C_A. Continued.

$\phi_1 = 150^0$; $\phi_2 = 210^0$; $\beta = 0^0$

α, deg \ θ_{xy}, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.0144	.0483	.1005	.1686	.3409	.5414	.7498	.9517	1.1388	1.3067
2.0	.0191	.0567	.1122	.1834	.3605	.5642	.7742	.9765	1.1630	1.3297
4.0	.0307	.0753	.1373	.2143	.4006	.6100	.8228	1.0253	1.2101	1.3738
6.0	.0449	.0963	.1646	.2471	.4418	.6562	.8708	1.0728	1.2552	1.4153
8.0	.0617	.1197	.1940	.2816	.4839	.7023	.9180	1.1186	1.2980	1.4538
10.0	.0809	.1454	.2252	.3176	.5267	.7483	.9641	1.1627	1.3383	1.4893
12.0	.1026	.1731	.2583	.3550	.5700	.7939	1.0090	1.2047	1.3759	1.5216
15.0	.1393	.2183	.3107	.4132	.6354	.8611	1.0736	1.2635	1.4270	1.5636
20.0	.2109	.3023	.4046	.5145	.7438	.9678	1.1719	1.3487	1.4962	1.6154
25.0	.2934	.3945	.5040	.6183	.8488	1.0654	1.2560	1.4156	1.5439	1.6433
30.0	.3844	.4924	.6058	.7214	.9470	1.1509	1.3234	1.4622	1.5687	1.6463
35.0	.4811	.5928	.7071	.8208	1.0356	1.2215	1.3721	1.4871	1.5697	1.6244
40.0	.5806	.6928	.8047	.9134	1.1117	1.2753	1.4005	1.4895	1.5470	1.5783
45.0	.6798	.7892	.8957	.9964	1.1732	1.3105	1.4078	1.4694	1.5012	1.5092
50.0	.7758	.8793	.9772	1.0673	1.2181	1.3262	1.3939	1.4274	1.4338	1.4194
55.0	.8656	.9602	1.0469	1.1240	1.2451	1.3217	1.3590	1.3647	1.3467	1.3116
60.0	.9465	1.0294	1.1026	1.1646	1.2533	1.2973	1.3042	1.2833	1.2427	1.1890
65.0	1.0160	1.0849	1.1426	1.1880	1.2425	1.2537	1.2313	1.1856	1.1249	1.0554
70.0	1.0721	1.1251	1.1656	1.1935	1.2130	1.1922	1.1425	1.0746	.9968	.9148
75.0	1.1129	1.1485	1.1711	1.1808	1.1658	1.1147	1.0404	.9536	.8624	.7715
80.0	1.1374	1.1547	1.1588	1.1505	1.1022	1.0236	.9281	.8264	.7257	.6298
85.0	1.1447	1.1433	1.1291	1.1033	1.0243	.9215	.8091	.6969	.5909	.4942

α, deg \ θ_{xy}, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	1.4542	1.5812	1.6888	1.7782	1.8508	1.9079	1.9506	1.9797	1.9958
2.0	1.4754	1.6003	1.7055	1.7924	1.8624	1.9169	1.9569	1.9833	1.9967
4.0	1.5155	1.6358	1.7360	1.8177	1.8823	1.9313	1.9659	1.9868	1.9948
6.0	1.5524	1.6677	1.7626	1.8387	1.8977	1.9411	1.9700	1.9854	1.9880
8.0	1.5860	1.6958	1.7850	1.8553	1.9086	1.9462	1.9694	1.9793	1.9764
10.0	1.6161	1.7200	1.8032	1.8675	1.9148	1.9465	1.9640	1.9683	1.9601
12.0	1.6424	1.7402	1.8171	1.8752	1.9163	1.9423	1.9539	1.9526	1.9390
15.0	1.6748	1.7627	1.8297	1.8781	1.9099	1.9267	1.9298	1.9203	1.8989
20.0	1.7087	1.7788	1.8285	1.8602	1.8761	1.8779	1.8669	1.8441	1.8103
25.0	1.7169	1.7680	1.7996	1.8143	1.8144	1.8016	1.7771	1.7421	1.6971
30.0	1.6990	1.7304	1.7438	1.7419	1.7268	1.7002	1.6633	1.6173	1.5627
35.0	1.6557	1.6674	1.6630	1.6451	1.6158	1.5767	1.5290	1.4736	1.4111
40.0	1.5882	1.5808	1.5595	1.5269	1.4848	1.4348	1.3781	1.3153	1.2470
45.0	1.4985	1.4732	1.4365	1.3908	1.3379	1.2790	1.2152	1.1472	1.0753
50.0	1.3895	1.3479	1.2977	1.2410	1.1794	1.1139	1.0454	.9744	.9013
55.0	1.2644	1.2087	1.1474	1.0821	1.0142	.9446	.8738	.8022	.7302
60.0	1.1270	1.0599	.9900	.9189	.8473	.7761	.7055	.6359	.5673
65.0	.9815	.9059	.8305	.7563	.6839	.6136	.5458	.4804	.4175
70.0	.8323	.7515	.6736	.5992	.5287	.4621	.3994	.3405	.2853
75.0	.6840	.6013	.5241	.4526	.3867	.3262	.2708	.2204	.1748
80.0	.5410	.4598	.3865	.3207	.2620	.2099	.1639	.1239	.0894
85.0	.4077	.3315	.2651	.2077	.1585	.1168	.0820	.0537	.0315

$\phi_1 = 150^0$; $\phi_2 = 210^0$; $\beta = 2^0$

α, deg \ θ_{xy}, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.0154	.0493	.1014	.1694	.3414	.5416	.7496	.9512	1.1379	1.3056
2.0	.0202	.0576	.1131	.1841	.3610	.5643	.7739	.9760	1.1621	1.3285
4.0	.0317	.0762	.1382	.2150	.4010	.6101	.8225	1.0247	1.2092	1.3726
6.0	.0459	.0972	.1654	.2477	.4421	.6562	.8704	1.0721	1.2542	1.4140
8.0	.0626	.1206	.1948	.2822	.4842	.7023	.9176	1.1179	1.2969	1.4525
10.0	.0819	.1462	.2260	.3182	.5269	.7482	.9637	1.1619	1.3372	1.4879
12.0	.1035	.1739	.2590	.3555	.5702	.7938	1.0085	1.2038	1.3748	1.5202
15.0	.1402	.2191	.3114	.4137	.6355	.8609	1.0730	1.2626	1.4257	1.5621
20.0	.2116	.3029	.4051	.5148	.7438	.9675	1.1711	1.3476	1.4949	1.6139
25.0	.2941	.3951	.5044	.6185	.8487	1.0649	1.2552	1.4145	1.5426	1.6417
30.0	.3850	.4928	.6061	.7215	.9468	1.1503	1.3225	1.4610	1.5673	1.6447
35.0	.4816	.5931	.7073	.8208	1.0352	1.2209	1.3711	1.4859	1.5683	1.6229
40.0	.5809	.6930	.8048	.9133	1.1113	1.2746	1.3995	1.4883	1.5456	1.5768
45.0	.6801	.7893	.8956	.9962	1.1727	1.3097	1.4068	1.4682	1.4999	1.5078
50.0	.7759	.8792	.9771	1.0670	1.2175	1.3254	1.3929	1.4263	1.4326	1.4181
55.0	.8656	.9600	1.0466	1.1236	1.2445	1.3209	1.3580	1.3637	1.3456	1.3104
60.0	.9464	1.0292	1.1022	1.1642	1.2527	1.2965	1.3034	1.2823	1.2417	1.1880
65.0	1.0158	1.0847	1.1422	1.1875	1.2419	1.2530	1.2306	1.1847	1.1240	1.0545
70.0	1.0718	1.1247	1.1652	1.1930	1.2125	1.1916	1.1418	1.0739	.9961	.9141
75.0	1.1126	1.1482	1.1707	1.1804	1.1653	1.1142	1.0398	.9531	.8618	.7710
80.0	1.1370	1.1543	1.1584	1.1501	1.1018	1.0231	.9277	.8261	.7253	.6295
85.0	1.1443	1.1429	1.1287	1.1030	1.0239	.9212	.8088	.6966	.5907	.4940

α, deg \ θ_{xy}, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	1.4527	1.5795	1.6869	1.7762	1.8487	1.9057	1.9483	1.9773	1.9934
2.0	1.4739	1.5986	1.7036	1.7904	1.8603	1.9146	1.9545	1.9809	1.9943
4.0	1.5140	1.6341	1.7341	1.8156	1.8801	1.9291	1.9635	1.9844	1.9924
6.0	1.5509	1.6660	1.7606	1.8366	1.8955	1.9388	1.9677	1.9830	1.9856
8.0	1.5844	1.6940	1.7830	1.8532	1.9063	1.9439	1.9671	1.9769	1.9740
10.0	1.6144	1.7182	1.8012	1.8654	1.9125	1.9442	1.9617	1.9659	1.9577
12.0	1.6407	1.7384	1.8151	1.8730	1.9141	1.9398	1.9515	1.9502	1.9366
15.0	1.6731	1.7608	1.8277	1.8760	1.9077	1.9244	1.9275	1.9180	1.8966
20.0	1.7070	1.7769	1.8265	1.8581	1.8739	1.8756	1.8646	1.8419	1.8081
25.0	1.7151	1.7661	1.7976	1.8123	1.8123	1.7995	1.7750	1.7400	1.6951
30.0	1.6973	1.7286	1.7419	1.7399	1.7248	1.6981	1.6614	1.6153	1.5608
35.0	1.6540	1.6657	1.6612	1.6432	1.6139	1.5748	1.5271	1.4718	1.4094
40.0	1.5866	1.5791	1.5578	1.5251	1.4831	1.4332	1.3764	1.3137	1.2455
45.0	1.4970	1.4717	1.4350	1.3892	1.3363	1.2775	1.2138	1.1458	1.0740
50.0	1.3881	1.3466	1.2963	1.2397	1.1780	1.1126	1.0442	.9733	.9002
55.0	1.2632	1.2075	1.1462	1.0809	1.0131	.9435	.8728	.8013	.7294
60.0	1.1259	1.0589	.9890	.9179	.8464	.7752	.7047	.6351	.5666
65.0	.9806	.9051	.8297	.7555	.6831	.6130	.5452	.4798	.4170
70.0	.8316	.7508	.6730	.5987	.5282	.4616	.3990	.3401	.2850
75.0	.6835	.6008	.5236	.4522	.3863	.3258	.2705	.2202	.1746
80.0	.5407	.4595	.3862	.3205	.2618	.2097	.1638	.1237	.0892
85.0	.4075	.3314	.2650	.2076	.1584	.1167	.0820	.0537	.0315

TABLE IV. - CONTINUED

(b) C_A. Continued.

$\phi_1 = 135^\circ$; $\phi_2 = 225^\circ$; $\beta = 5^\circ$

α, deg \ θ_{xy}, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.0203	.0501	.0958	.1558	.3090	.4905	.6831	.8746	1.0567	1.2248
2.0	.0244	.0570	.1055	.1680	.3254	.5097	.7039	.8958	1.0776	1.2447
4.0	.0340	.0725	.1264	.1938	.3590	.5484	.7451	.9375	1.1181	1.2828
6.0	.0457	.0899	.1491	.2211	.3934	.5871	.7857	.9778	1.1566	1.3184
8.0	.0594	.1091	.1733	.2497	.4285	.6258	.8254	1.0166	1.1929	1.3512
10.0	.0752	.1302	.1991	.2795	.4641	.6642	.8641	1.0537	1.2269	1.3812
12.0	.0929	.1530	.2263	.3104	.5000	.7021	.9017	1.0888	1.2584	1.4081
15.0	.1228	.1901	.2694	.3583	.5541	.7578	.9553	1.1377	1.3006	1.4424
20.0	.1810	.2586	.3463	.4414	.6433	.8457	1.0361	1.2072	1.3564	1.4829
25.0	.2481	.3338	.4274	.5262	.7291	.9253	1.1041	1.2603	1.3925	1.5013
30.0	.3219	.4133	.5103	.6102	.8088	.9941	1.1573	1.2952	1.4080	1.4971
35.0	.4003	.4948	.5924	.6907	.8801	1.0500	1.1940	1.3110	1.4023	1.4704
40.0	.4808	.5757	.6713	.7653	.9407	1.0913	1.2132	1.3071	1.3756	1.4221
45.0	.5611	.6536	.7446	.8318	.9880	1.1168	1.2142	1.2836	1.3287	1.3536
50.0	.6386	.7261	.8100	.8882	1.0231	1.1257	1.1970	1.2413	1.2631	1.2669
55.0	.7111	.7911	.8655	.9327	1.0423	1.1177	1.1622	1.1814	1.1807	1.1648
60.0	.7762	.8465	.9095	.9640	1.0459	1.0931	1.1108	1.1058	1.0840	1.0503
65.0	.8321	.8907	.9406	.9811	1.0339	1.0526	1.0443	1.0167	.9760	.9269
70.0	.8771	.9223	.9579	.9836	1.0066	.9974	.9649	.9169	.8600	.7983
75.0	.9097	.9404	.9609	.9712	.9647	.9293	.8748	.8095	.7394	.6685
80.0	.9290	.9444	.9494	.9445	.9097	.8503	.7768	.6976	.6180	.5415
85.0	.9344	.9342	.9238	.9042	.8431	.7628	.6740	.5846	.4995	.4209

α, deg \ θ_{xy}, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	1.3764	1.5106	1.6272	1.7264	1.8087	1.8746	1.9248	1.9595	1.9793
2.0	1.3949	1.5274	1.6419	1.7390	1.8190	1.8826	1.9303	1.9626	1.9799
4.0	1.4298	1.5584	1.6687	1.7611	1.8363	1.8951	1.9378	1.9652	1.9776
6.0	1.4616	1.5859	1.6915	1.7791	1.8493	1.9029	1.9407	1.9630	1.9704
8.0	1.4902	1.6098	1.7104	1.7928	1.8578	1.9062	1.9388	1.9560	1.9585
10.0	1.5154	1.6299	1.7252	1.8022	1.8618	1.9049	1.9322	1.9443	1.9418
12.0	1.5372	1.6462	1.7359	1.8072	1.8612	1.8989	1.9209	1.9279	1.9205
15.0	1.5631	1.6632	1.7440	1.8085	1.8520	1.8813	1.8953	1.8947	1.8801
20.0	1.5875	1.6716	1.7364	1.7836	1.8142	1.8295	1.8303	1.8174	1.7914
25.0	1.5881	1.6546	1.7027	1.7339	1.7497	1.7511	1.7392	1.7147	1.6783
30.0	1.5647	1.6129	1.6439	1.6592	1.6603	1.6485	1.6248	1.5898	1.5443
35.0	1.5181	1.5478	1.5617	1.5615	1.5489	1.5249	1.4905	1.4465	1.3934
40.0	1.4497	1.4611	1.4586	1.4440	1.4187	1.3839	1.3404	1.2890	1.2303
45.0	1.3616	1.3556	1.3379	1.3101	1.2738	1.2298	1.1791	1.1223	1.0599
50.0	1.2564	1.2344	1.2031	1.1640	1.1185	1.0674	1.0115	.9513	.8874
55.0	1.1374	1.1013	1.0583	1.0101	.9575	.9015	.8426	.7813	.7180
60.0	1.0082	.9602	.9080	.8530	.7958	.7373	.6777	.6174	.5569
65.0	.8726	.8154	.7568	.6975	.6383	.5796	.5216	.4647	.4089
70.0	.7349	.6715	.6091	.5484	.4897	.4333	.3792	.3276	.2786
75.0	.5992	.5326	.4695	.4102	.3546	.3029	.2548	.2105	.1699
80.0	.4696	.4031	.3423	.2870	.2371	.1922	.1522	.1168	.0861
85.0	.3500	.2869	.2313	.1827	.1407	.1047	.0744	.0495	.0298

$\phi_1 = 135^\circ$; $\phi_2 = 225^\circ$; $\beta = 15^\circ$

α, deg \ θ_{xy}, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.0659	.1025	.1495	.2065	.3472	.5128	.6884	.8625	1.0279	1.1802
2.0	.0713	.1100	.1591	.2182	.3626	.5309	.7079	.8825	1.0475	1.1990
4.0	.0832	.1259	.1793	.2426	.3942	.5672	.7467	.9217	1.0856	1.2348
6.0	.0965	.1435	.2010	.2683	.4265	.6037	.7848	.9596	1.1218	1.2683
8.0	.1114	.1625	.2242	.2953	.4595	.6400	.8222	.9960	1.1560	1.2991
10.0	.1278	.1831	.2487	.3233	.4930	.6761	.8586	1.0309	1.1879	1.3273
12.0	.1457	.2050	.2744	.3524	.5267	.7118	.8938	1.0640	1.2175	1.3526
15.0	.1753	.2405	.3151	.3975	.5776	.7642	.9442	1.1099	1.2572	1.3849
20.0	.2317	.3056	.3876	.4756	.6614	.8468	1.0202	1.1753	1.3096	1.4229
25.0	.2957	.3766	.4639	.5553	.7421	.9216	1.0841	1.2252	1.3436	1.4402
30.0	.3657	.4516	.5418	.6342	.8171	.9863	1.1341	1.2580	1.3582	1.4363
35.0	.4398	.5282	.6190	.7099	.8841	1.0388	1.1687	1.2728	1.3528	1.4112
40.0	.5157	.6044	.6932	.7801	.9411	1.0777	1.1867	1.2691	1.3277	1.3658
45.0	.5912	.6776	.7621	.8426	.9863	1.1016	1.1877	1.2470	1.2836	1.3013
50.0	.6642	.7458	.8235	.8956	1.0185	1.1100	1.1715	1.2072	1.2219	1.2199
55.0	.7323	.8069	.8758	.9375	1.0365	1.1025	1.1388	1.1510	1.1444	1.1239
60.0	.7936	.8590	.9171	.9669	1.0400	1.0793	1.0905	1.0799	1.0536	1.0162
65.0	.8461	.9005	.9464	.9830	1.0287	1.0413	1.0280	.9962	.9520	.9002
70.0	.8884	.9303	.9626	.9853	1.0030	.9894	.9532	.9023	.8429	.7793
75.0	.9191	.9473	.9654	.9737	.9636	.9254	.8686	.8013	.7296	.6573
80.0	.9372	.9510	.9546	.9486	.9119	.8511	.7765	.6961	.6155	.5378
85.0	.9423	.9414	.9306	.9107	.8493	.7688	.6798	.5899	.5040	.4245

α, deg \ θ_{xy}, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	1.3175	1.4388	1.5441	1.6336	1.7077	1.7671	1.8122	1.8434	1.8611
2.0	1.3349	1.4546	1.5580	1.6454	1.7174	1.7746	1.8174	1.8463	1.8617
4.0	1.3677	1.4838	1.5831	1.6662	1.7337	1.7863	1.8245	1.8488	1.8595
6.0	1.3976	1.5096	1.6046	1.6851	1.7459	1.7937	1.8271	1.8467	1.8528
8.0	1.4245	1.5321	1.6223	1.6960	1.7539	1.7968	1.8254	1.8401	1.8415
10.0	1.4482	1.5510	1.6363	1.7048	1.7577	1.7955	1.8191	1.8291	1.8259
12.0	1.4687	1.5663	1.6463	1.7096	1.7572	1.7899	1.8085	1.8137	1.8059
15.0	1.4930	1.5823	1.6539	1.7089	1.7484	1.7733	1.7845	1.7825	1.7679
20.0	1.5160	1.5902	1.6468	1.6873	1.7129	1.7247	1.7234	1.7098	1.6844
25.0	1.5165	1.5742	1.6151	1.6407	1.6523	1.6510	1.6377	1.6133	1.5781
30.0	1.4945	1.5350	1.5598	1.5704	1.5683	1.5546	1.5302	1.4958	1.4521
35.0	1.4507	1.4738	1.4825	1.4786	1.4635	1.4383	1.4039	1.3611	1.3103
40.0	1.3864	1.3923	1.3856	1.3681	1.3411	1.3057	1.2628	1.2133	1.1570
45.0	1.3036	1.2931	1.2721	1.2422	1.2048	1.1609	1.1112	1.0563	.9968
50.0	1.2047	1.1792	1.1454	1.1049	1.0588	1.0082	.9536	.8956	.8346
55.0	1.0928	1.0540	1.0093	.9601	.9075	.8522	.7948	.7357	.6753
60.0	.9713	.9213	.8680	.8124	.7555	.6978	.6397	.5817	.5238
65.0	.8439	.7853	.7258	.6663	.6074	.5496	.4930	.4380	.3847
70.0	.7144	.6499	.5869	.5261	.4677	.4120	.3592	.3092	.2622
75.0	.5868	.5194	.4557	.3961	.3407	.2894	.2422	.1991	.1600
80.0	.4650	.3976	.3361	.2804	.2302	.1854	.1457	.1110	.0812
85.0	.3526	.2884	.2317	.1823	.1395	.1031	.0726	.0477	.0283

TABLE IV.- CONTINUED

(b) C_A. Concluded.

$\beta_1 = 150^0$; $\beta_2 = 210^0$; $\beta = 5^0$

θ_{xy}, deg / α, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.0207	.0544	.1061	.1735	.3440	.5424	.7485	.9483	1.1333	1.2995
2.0	.0255	.0626	.1177	.1881	.3634	.5650	.7728	.9729	1.1574	1.3223
4.0	.0370	.0811	.1426	.2188	.4032	.6105	.8210	1.0214	1.2042	1.3660
6.0	.0511	.1020	.1697	.2513	.4441	.6563	.8686	1.0684	1.2489	1.4071
8.0	.0677	.1252	.1988	.2855	.4858	.7021	.9154	1.1139	1.2914	1.4454
10.0	.0868	.1507	.2298	.3213	.5283	.7477	.9613	1.1577	1.3314	1.4806
12.0	.1083	.1782	.2626	.3584	.5713	.7930	1.0058	1.1994	1.3687	1.5127
15.0	.1447	.2231	.3147	.4162	.6362	.8596	1.0699	1.2577	1.4193	1.5544
20.0	.2157	.3064	.4078	.5167	.7438	.9656	1.1674	1.3522	1.4881	1.6058
25.0	.2976	.3980	.5064	.6197	.8480	1.0624	1.2509	1.4086	1.5354	1.6335
30.0	.3880	.4950	.6075	.7221	.9455	1.1472	1.3178	1.4549	1.5600	1.6365
35.0	.4839	.5947	.7080	.8207	1.0334	1.2173	1.3661	1.4796	1.5610	1.6147
40.0	.5827	.6939	.8049	.9126	1.1090	1.2707	1.3943	1.4820	1.5385	1.5689
45.0	.6812	.7897	.8952	.9950	1.1700	1.3057	1.4016	1.4621	1.4930	1.5004
50.0	.7764	.8790	.9761	1.0653	1.2145	1.3212	1.3877	1.4204	1.4261	1.4113
55.0	.8655	.9593	1.0452	1.1215	1.2413	1.3167	1.3531	1.3582	1.3397	1.3043
60.0	.9458	1.0280	1.1005	1.1619	1.2494	1.2925	1.2988	1.2774	1.2365	1.1826
65.0	1.0148	1.0831	1.1402	1.1851	1.2387	1.2493	1.2264	1.1804	1.1195	1.0500
70.0	1.0704	1.1229	1.1631	1.1905	1.2095	1.1882	1.1383	1.0702	.9924	.9105
75.0	1.1110	1.1462	1.1685	1.1780	1.1626	1.1113	1.0369	.9502	.8590	.7683
80.0	1.1352	1.1523	1.1563	1.1479	1.0995	1.0209	.9255	.8240	.7234	.6277
85.0	1.1425	1.1410	1.1268	1.1011	1.0221	.9196	.8074	.6954	.5896	.4930

θ_{xy}, deg / α, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	1.4452	1.5708	1.6772	1.7656	1.8374	1.8938	1.9360	1.9648	1.9807
2.0	1.4663	1.5898	1.6938	1.7797	1.8489	1.9027	1.9422	1.9683	1.9816
4.0	1.5061	1.6250	1.7241	1.8048	1.8687	1.9171	1.9511	1.9718	1.9797
6.0	1.5428	1.6567	1.7504	1.8257	1.8840	1.9268	1.9553	1.9705	1.9729
8.0	1.5761	1.6846	1.7727	1.8422	1.8947	1.9318	1.9547	1.9643	1.9614
10.0	1.6059	1.7086	1.7908	1.8542	1.9009	1.9321	1.9493	1.9535	1.9452
12.0	1.6321	1.7287	1.8046	1.8619	1.9024	1.9278	1.9392	1.9379	1.9243
15.0	1.6642	1.7509	1.8171	1.8648	1.8960	1.9124	1.9154	1.9058	1.8845
20.0	1.6979	1.7670	1.8159	1.8470	1.8625	1.8640	1.8529	1.8302	1.7966
25.0	1.7060	1.7562	1.7872	1.8015	1.8013	1.7883	1.7638	1.7289	1.6843
30.0	1.6882	1.7190	1.7319	1.7296	1.7143	1.6876	1.6509	1.6051	1.5509
35.0	1.6452	1.6564	1.6516	1.6335	1.6041	1.5651	1.5176	1.4625	1.4004
40.0	1.5782	1.5705	1.5489	1.5162	1.4742	1.4243	1.3678	1.3054	1.2376
45.0	1.4893	1.4637	1.4268	1.3811	1.3283	1.2697	1.2062	1.1386	1.0672
50.0	1.3811	1.3394	1.2891	1.2325	1.1711	1.1059	1.0377	.9671	.8945
55.0	1.2569	1.2012	1.1399	1.0748	1.0071	.9378	.8674	.7963	.7247
60.0	1.1205	1.0535	.9838	.9128	.8415	.7706	.7004	.6312	.5630
65.0	.9761	.9007	.8254	.7514	.6793	.6094	.5419	.4768	.4144
70.0	.8281	.7474	.6697	.5956	.5253	.4590	.3966	.3380	.2832
75.0	.6809	.5984	.5213	.4500	.3844	.3241	.2690	.2188	.1735
80.0	.5390	.4580	.3848	.3192	.2606	.2087	.1629	.1230	.0887
85.0	.4067	.3307	.2643	.2070	.1579	.1163	.0816	.0534	.0313

$\beta_1 = 150^0$; $\beta_2 = 210^0$; $\beta = 15^0$

θ_{xy}, deg / α, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.0592	.0977	.1484	.2112	.3679	.5500	.7389	.9217	1.0909	1.2425
2.0	.0652	.1062	.1596	.2250	.3862	.5712	.7617	.9449	1.1135	1.2640
4.0	.0786	.1246	.1833	.2538	.4236	.6140	.8070	.9904	1.1575	1.3051
6.0	.0939	.1451	.2089	.2844	.4620	.6571	.8518	1.0347	1.1995	1.3438
8.0	.1111	.1674	.2364	.3166	.5013	.7001	.8958	1.0775	1.2395	1.3798
10.0	.1302	.1917	.2656	.3502	.5412	.7431	.9389	1.1186	1.2771	1.4129
12.0	.1513	.2178	.2964	.3851	.5816	.7856	.9808	1.1578	1.3122	1.4430
15.0	.1864	.2602	.3454	.4395	.6426	.8482	1.0410	1.2127	1.3598	1.4822
20.0	.2538	.3386	.4329	.5339	.7439	.9479	1.1327	1.2921	1.4244	1.5306
25.0	.3310	.4247	.5257	.6308	.8418	1.0389	1.2112	1.3545	1.4689	1.5566
30.0	.4159	.5160	.6207	.7270	.9334	1.1186	1.2741	1.3980	1.4920	1.5594
35.0	.5062	.6097	.7152	.8197	1.0161	1.1846	1.3195	1.4213	1.4930	1.5389
40.0	.5990	.7030	.8063	.9061	1.0871	1.2347	1.3461	1.4235	1.4718	1.4959
45.0	.6916	.7930	.8911	.9836	1.1445	1.2676	1.3529	1.4048	1.4291	1.4315
50.0	.7811	.8770	.9672	1.0498	1.1864	1.2822	1.3399	1.3656	1.3661	1.3477
55.0	.8649	.9524	1.0322	1.1026	1.2115	1.2780	1.3073	1.3071	1.2849	1.2471
60.0	.9404	1.0170	1.0842	1.1405	1.2192	1.2552	1.2562	1.2311	1.1878	1.1327
65.0	1.0053	1.0689	1.1215	1.1623	1.2091	1.2146	1.1882	1.1400	1.0779	1.0080
70.0	1.0576	1.1063	1.1430	1.1674	1.1816	1.1572	1.1053	1.0364	.9584	.8768
75.0	1.0957	1.1282	1.1481	1.1556	1.1376	1.0849	1.0100	.9236	.8330	.7431
80.0	1.1185	1.1339	1.1366	1.1273	1.0782	.9998	.9053	.8049	.7055	.6110
85.0	1.1253	1.1233	1.1089	1.0833	1.0055	.9046	.7942	.6840	.5797	.4844

θ_{xy}, deg / α, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	1.3755	1.4899	1.5867	1.6671	1.7324	1.7836	1.8219	1.8480	1.8624
2.0	1.3953	1.5077	1.6023	1.6804	1.7432	1.7920	1.8278	1.8513	1.8632
4.0	1.4327	1.5409	1.6308	1.7040	1.7618	1.8055	1.8361	1.8546	1.8614
6.0	1.4672	1.5706	1.6556	1.7236	1.7761	1.8146	1.8400	1.8533	1.8551
8.0	1.4985	1.5969	1.6765	1.7391	1.7863	1.8193	1.8395	1.8476	1.8442
10.0	1.5265	1.6195	1.6935	1.7505	1.7920	1.8196	1.8344	1.8373	1.8290
12.0	1.5511	1.6383	1.7065	1.7576	1.7935	1.8155	1.8249	1.8227	1.8093
15.0	1.5813	1.6592	1.7182	1.7604	1.7875	1.8011	1.8025	1.7925	1.7719
20.0	1.6130	1.6743	1.7171	1.7437	1.7560	1.7556	1.7438	1.7214	1.6893
25.0	1.6206	1.6642	1.6901	1.7009	1.6984	1.6844	1.6600	1.6262	1.5837
30.0	1.6039	1.6292	1.6381	1.6333	1.6166	1.5898	1.5539	1.5098	1.4582
35.0	1.5635	1.5704	1.5627	1.5429	1.5131	1.4746	1.4285	1.3757	1.3168
40.0	1.5005	1.4896	1.4661	1.4326	1.3909	1.3422	1.2877	1.2280	1.1637
45.0	1.4169	1.3892	1.3514	1.3057	1.2538	1.1969	1.1358	1.0712	1.0035
50.0	1.3151	1.2723	1.2219	1.1659	1.1059	1.0428	.9774	.9100	.8411
55.0	1.1984	1.1424	1.0816	1.0177	.9518	.8848	.8172	.7494	.6815
60.0	1.0702	1.0035	.9348	.8654	.7961	.7276	.6602	.5942	.5295
65.0	.9345	.8599	.7859	.7137	.6436	.5761	.5112	.4491	.3898
70.0	.7953	.7158	.6395	.5672	.4988	.4347	.3746	.3185	.2664
75.0	.6569	.5756	.5000	.4303	.3663	.3078	.2546	.2065	.1633
80.0	.5235	.4437	.3717	.3073	.2500	.1993	.1549	.1164	.0836
85.0	.3991	.3239	.2584	.2018	.1534	.1125	.0785	.0510	.0296

TABLE IV. - CONTINUED

(c) C_Y

$\phi_1 = 0^o$; $\phi_2 = 360^o$; $\beta = 2^o$

α, deg \ θ_{xy}, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	-.0927	-.0919	-.0906	-.0889	-.0841	-.0779	-.0707	-.0630	-.0549	-.0468
2.0	-.0927	-.0919	-.0906	-.0888	-.0840	-.0779	-.0707	-.0629	-.0549	-.0468
4.0	-.0927	-.0917	-.0904	-.0887	-.0839	-.0777	-.0706	-.0628	-.0548	-.0467
6.0	-.0946	-.0915	-.0902	-.0884	-.0836	-.0775	-.0704	-.0626	-.0546	-.0466
8.0	-.0990	-.0911	-.0898	-.0880	-.0833	-.0772	-.0701	-.0624	-.0544	-.0464
10.0	-.1049	-.0906	-.0893	-.0875	-.0828	-.0767	-.0697	-.0620	-.0541	-.0461
12.0	-.1116	-.0910	-.0887	-.0870	-.0823	-.0762	-.0692	-.0616	-.0537	-.0458
15.0	-.1224	-.0932	-.0876	-.0859	-.0812	-.0753	-.0683	-.0608	-.0530	-.0452
20.0	-.1411	-.0989	-.0875	-.0836	-.0790	-.0732	-.0665	-.0592	-.0516	-.0440
25.0	-.1597	-.1054	-.0891	-.0821	-.0762	-.0706	-.0641	-.0571	-.0498	-.0424
30.0	-.1775	-.1120	-.0913	-.0816	-.0729	-.0675	-.0613	-.0545	-.0476	-.0406
35.0	-.1942	-.1182	-.0936	-.0816	-.0700	-.0638	-.0580	-.0516	-.0450	-.0384
40.0	-.2097	-.1239	-.0956	-.0816	-.0675	-.0599	-.0542	-.0482	-.0421	-.0359
45.0	-.2237	-.1289	-.0973	-.0814	-.0651	-.0563	-.0501	-.0445	-.0388	-.0331
50.0	-.2361	-.1330	-.0985	-.0810	-.0628	-.0529	-.0460	-.0405	-.0353	-.0301
55.0	-.2468	-.1363	-.0991	-.0802	-.0604	-.0496	-.0421	-.0364	-.0315	-.0269
60.0	-.2556	-.1386	-.0992	-.0790	-.0579	-.0463	-.0385	-.0325	-.0277	-.0234
65.0	-.2626	-.1400	-.0986	-.0774	-.0552	-.0430	-.0349	-.0288	-.0240	-.0200
70.0	-.2676	-.1405	-.0974	-.0754	-.0523	-.0397	-.0314	-.0253	-.0206	-.0168
75.0	-.2707	-.1399	-.0956	-.0729	-.0492	-.0363	-.0280	-.0220	-.0174	-.0138
80.0	-.2717	-.1383	-.0931	-.0700	-.0459	-.0330	-.0247	-.0188	-.0144	-.0111
85.0	-.2707	-.1357	-.0900	-.0667	-.0424	-.0296	-.0214	-.0158	-.0117	-.0086

α, deg \ θ_{xy}, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	-.0390	-.0315	-.0246	-.0183	-.0129	-.0083	-.0047	-.0021	-.0005
2.0	-.0389	-.0315	-.0246	-.0183	-.0129	-.0083	-.0047	-.0021	-.0005
4.0	-.0389	-.0314	-.0245	-.0183	-.0129	-.0083	-.0047	-.0021	-.0005
6.0	-.0387	-.0313	-.0244	-.0182	-.0128	-.0083	-.0047	-.0021	-.0005
8.0	-.0386	-.0312	-.0243	-.0182	-.0128	-.0083	-.0047	-.0021	-.0005
10.0	-.0384	-.0310	-.0242	-.0181	-.0127	-.0082	-.0047	-.0021	-.0005
12.0	-.0381	-.0308	-.0240	-.0179	-.0126	-.0082	-.0046	-.0021	-.0005
15.0	-.0376	-.0304	-.0237	-.0177	-.0125	-.0081	-.0046	-.0020	-.0005
20.0	-.0366	-.0296	-.0231	-.0172	-.0121	-.0078	-.0044	-.0020	-.0005
25.0	-.0353	-.0285	-.0223	-.0166	-.0117	-.0076	-.0043	-.0019	-.0005
30.0	-.0337	-.0273	-.0213	-.0159	-.0112	-.0072	-.0041	-.0018	-.0005
35.0	-.0319	-.0258	-.0201	-.0150	-.0106	-.0068	-.0039	-.0017	-.0004
40.0	-.0298	-.0241	-.0188	-.0141	-.0099	-.0064	-.0036	-.0016	-.0004
45.0	-.0275	-.0223	-.0174	-.0130	-.0091	-.0059	-.0033	-.0015	-.0004
50.0	-.0250	-.0202	-.0158	-.0118	-.0083	-.0054	-.0030	-.0014	-.0003
55.0	-.0223	-.0181	-.0141	-.0105	-.0074	-.0048	-.0027	-.0012	-.0003
60.0	-.0195	-.0157	-.0123	-.0092	-.0065	-.0042	-.0024	-.0011	-.0003
65.0	-.0165	-.0133	-.0104	-.0078	-.0055	-.0035	-.0020	-.0009	-.0002
70.0	-.0135	-.0108	-.0084	-.0063	-.0044	-.0029	-.0016	-.0007	-.0002
75.0	-.0108	-.0084	-.0064	-.0047	-.0033	-.0022	-.0012	-.0005	-.0001
80.0	-.0084	-.0063	-.0046	-.0033	-.0023	-.0014	-.0009	-.0004	-.0001
85.0	-.0063	-.0045	-.0031	-.0021	-.0013	-.0008	-.0004	-.0002	-.0000

TABLE IV.- CONTINUED

(c) C_Y. Continued.

$\beta_1 = 0^0$; $\beta_2 = 360^0$; $\beta = 5^0$

θ_{xy}, deg / α, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	-.2468	-.2289	-.2257	-.2213	-.2093	-.1939	-.1761	-.1568	-.1367	-.1166
2.0	-.2479	-.2288	-.2256	-.2212	-.2092	-.1938	-.1760	-.1567	-.1366	-.1165
4.0	-.2523	-.2284	-.2251	-.2207	-.2088	-.1935	-.1757	-.1564	-.1364	-.1163
6.0	-.2599	-.2281	-.2245	-.2201	-.2082	-.1929	-.1752	-.1559	-.1359	-.1159
8.0	-.2705	-.2285	-.2235	-.2191	-.2073	-.1921	-.1744	-.1552	-.1354	-.1154
10.0	-.2836	-.2299	-.2223	-.2179	-.2062	-.1910	-.1735	-.1544	-.1346	-.1148
12.0	-.2983	-.2325	-.2208	-.2164	-.2048	-.1897	-.1723	-.1533	-.1337	-.1140
15.0	-.3226	-.2387	-.2194	-.2137	-.2022	-.1873	-.1701	-.1514	-.1320	-.1126
20.0	-.3658	-.2524	-.2206	-.2086	-.1967	-.1823	-.1655	-.1473	-.1285	-.1095
25.0	-.4096	-.2679	-.2248	-.2058	-.1897	-.1758	-.1596	-.1421	-.1239	-.1057
30.0	-.4522	-.2837	-.2302	-.2050	-.1818	-.1680	-.1525	-.1358	-.1184	-.1010
35.0	-.4927	-.2987	-.2356	-.2049	-.1748	-.1589	-.1443	-.1284	-.1120	-.0955
40.0	-.5302	-.3124	-.2406	-.2048	-.1688	-.1494	-.1349	-.1201	-.1047	-.0893
45.0	-.5643	-.3244	-.2445	-.2044	-.1630	-.1405	-.1247	-.1109	-.0967	-.0824
50.0	-.5946	-.3345	-.2474	-.2032	-.1573	-.1321	-.1147	-.1008	-.0879	-.0749
55.0	-.6208	-.3425	-.2488	-.2011	-.1513	-.1239	-.1052	-.0907	-.0784	-.0669
60.0	-.6425	-.3482	-.2489	-.1981	-.1450	-.1158	-.0961	-.0812	-.0689	-.0583
65.0	-.6596	-.3515	-.2474	-.1941	-.1382	-.1076	-.0872	-.0720	-.0599	-.0498
70.0	-.6719	-.3525	-.2443	-.1890	-.1310	-.0994	-.0786	-.0633	-.0515	-.0418
75.0	-.6793	-.3510	-.2397	-.1828	-.1232	-.0911	-.0701	-.0550	-.0435	-.0344
80.0	-.6818	-.3470	-.2336	-.1756	-.1151	-.0826	-.0618	-.0471	-.0362	-.0277
85.0	-.6792	-.3406	-.2259	-.1673	-.1065	-.0742	-.0538	-.0396	-.0293	-.0216

θ_{xy}, deg / α, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	-.0970	-.0784	-.0612	-.0457	-.0321	-.0208	-.0118	-.0053	-.0013
2.0	-.0969	-.0783	-.0611	-.0456	-.0321	-.0208	-.0118	-.0053	-.0013
4.0	-.0967	-.0782	-.0610	-.0456	-.0321	-.0207	-.0118	-.0053	-.0013
6.0	-.0964	-.0780	-.0608	-.0454	-.0320	-.0207	-.0117	-.0052	-.0013
8.0	-.0960	-.0776	-.0606	-.0452	-.0318	-.0206	-.0117	-.0052	-.0013
10.0	-.0955	-.0772	-.0602	-.0450	-.0316	-.0205	-.0116	-.0052	-.0013
12.0	-.0949	-.0767	-.0598	-.0447	-.0314	-.0203	-.0115	-.0052	-.0013
15.0	-.0937	-.0757	-.0591	-.0441	-.0310	-.0201	-.0114	-.0051	-.0013
20.0	-.0911	-.0737	-.0575	-.0429	-.0302	-.0195	-.0111	-.0049	-.0012
25.0	-.0879	-.0710	-.0554	-.0414	-.0291	-.0188	-.0107	-.0048	-.0012
30.0	-.0840	-.0679	-.0530	-.0395	-.0278	-.0180	-.0102	-.0046	-.0011
35.0	-.0794	-.0642	-.0501	-.0374	-.0263	-.0170	-.0097	-.0043	-.0011
40.0	-.0743	-.0600	-.0469	-.0350	-.0246	-.0159	-.0090	-.0040	-.0010
45.0	-.0686	-.0554	-.0433	-.0323	-.0227	-.0147	-.0083	-.0037	-.0009
50.0	-.0623	-.0504	-.0393	-.0294	-.0207	-.0134	-.0076	-.0034	-.0008
55.0	-.0556	-.0450	-.0351	-.0262	-.0184	-.0119	-.0068	-.0030	-.0008
60.0	-.0485	-.0392	-.0306	-.0228	-.0161	-.0104	-.0059	-.0026	-.0007
65.0	-.0410	-.0331	-.0259	-.0193	-.0136	-.0088	-.0050	-.0022	-.0006
70.0	-.0338	-.0269	-.0209	-.0156	-.0110	-.0071	-.0040	-.0018	-.0005
75.0	-.0271	-.0210	-.0160	-.0118	-.0083	-.0054	-.0030	-.0014	-.0003
80.0	-.0211	-.0158	-.0116	-.0083	-.0056	-.0036	-.0020	-.0009	-.0002
85.0	-.0157	-.0113	-.0078	-.0053	-.0034	-.0020	-.0011	-.0005	-.0001

$\beta_1 = 0^0$; $\beta_2 = 360^0$; $\beta = 15^0$

θ_{xy}, deg / α, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	-1.1772	-.8047	-.6966	-.6496	-.6027	-.5584	-.5071	-.4513	-.3935	-.3356
2.0	-1.1790	-.8053	-.6967	-.6495	-.6024	-.5581	-.5068	-.4511	-.3934	-.3355
4.0	-1.1862	-.8076	-.6971	-.6491	-.6013	-.5571	-.5059	-.4503	-.3926	-.3348
6.0	-1.1979	-.8113	-.6979	-.6483	-.5995	-.5554	-.5044	-.4489	-.3914	-.3338
8.0	-1.2139	-.8165	-.6990	-.6474	-.5969	-.5530	-.5022	-.4470	-.3898	-.3324
10.0	-1.2339	-.8232	-.7005	-.6463	-.5937	-.5500	-.4994	-.4446	-.3876	-.3306
12.0	-1.2575	-.8311	-.7025	-.6451	-.5899	-.5463	-.4961	-.4416	-.3850	-.3283
15.0	-1.2985	-.8453	-.7064	-.6433	-.5831	-.5394	-.4899	-.4360	-.3802	-.3242
20.0	-1.3785	-.8737	-.7150	-.6408	-.5697	-.5248	-.4766	-.4242	-.3699	-.3154
25.0	-1.4675	-.9059	-.7257	-.6392	-.5548	-.5062	-.4596	-.4091	-.3567	-.3042
30.0	-1.5602	-.9396	-.7373	-.6383	-.5396	-.4848	-.4392	-.3909	-.3409	-.2907
35.0	-1.6525	-.9727	-.7486	-.6373	-.5244	-.4623	-.4154	-.3698	-.3224	-.2750
40.0	-1.7411	-1.0037	-.7586	-.6356	-.5091	-.4395	-.3896	-.3458	-.3015	-.2571
45.0	-1.8237	-1.0313	-.7663	-.6324	-.4935	-.4169	-.3633	-.3194	-.2783	-.2373
50.0	-1.8983	-1.0545	-.7712	-.6272	-.4771	-.3943	-.3373	-.2923	-.2530	-.2158
55.0	-1.9634	-1.0727	-.7727	-.6197	-.4597	-.3716	-.3117	-.2655	-.2269	-.1925
60.0	-2.0177	-1.0853	-.7705	-.6097	-.4412	-.3487	-.2865	-.2395	-.2012	-.1686
65.0	-2.0605	-1.0919	-.7644	-.5969	-.4213	-.3254	-.2616	-.2142	-.1766	-.1454
70.0	-2.0909	-1.0922	-.7542	-.5812	-.4002	-.3018	-.2371	-.1899	-.1531	-.1234
75.0	-2.1084	-1.0861	-.7399	-.5628	-.3777	-.2778	-.2130	-.1664	-.1309	-.1029
80.0	-2.1128	-1.0734	-.7214	-.5415	-.3539	-.2536	-.1893	-.1438	-.1100	-.0839
85.0	-2.1038	-1.0542	-.6989	-.5175	-.3291	-.2292	-.1661	-.1224	-.0905	-.0666

θ_{xy}, deg / α, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	-.2792	-.2257	-.1761	-.1315	-.0925	-.0598	-.0339	-.0152	-.0038
2.0	-.2791	-.2256	-.1760	-.1314	-.0925	-.0598	-.0339	-.0152	-.0038
4.0	-.2786	-.2251	-.1757	-.1312	-.0923	-.0597	-.0338	-.0151	-.0038
6.0	-.2777	-.2245	-.1752	-.1308	-.0920	-.0595	-.0337	-.0151	-.0038
8.0	-.2765	-.2235	-.1744	-.1302	-.0916	-.0592	-.0336	-.0150	-.0038
10.0	-.2750	-.2223	-.1735	-.1295	-.0911	-.0589	-.0334	-.0149	-.0037
12.0	-.2731	-.2208	-.1723	-.1286	-.0905	-.0585	-.0332	-.0148	-.0037
15.0	-.2697	-.2180	-.1701	-.1270	-.0894	-.0578	-.0328	-.0146	-.0037
20.0	-.2624	-.2121	-.1655	-.1236	-.0869	-.0562	-.0319	-.0142	-.0036
25.0	-.2531	-.2045	-.1596	-.1192	-.0838	-.0542	-.0307	-.0137	-.0034
30.0	-.2418	-.1955	-.1525	-.1139	-.0801	-.0518	-.0294	-.0131	-.0033
35.0	-.2287	-.1849	-.1443	-.1077	-.0758	-.0490	-.0278	-.0124	-.0031
40.0	-.2139	-.1729	-.1349	-.1007	-.0709	-.0458	-.0260	-.0116	-.0029
45.0	-.1975	-.1596	-.1245	-.0930	-.0654	-.0423	-.0240	-.0107	-.0027
50.0	-.1795	-.1451	-.1132	-.0845	-.0595	-.0385	-.0218	-.0097	-.0024
55.0	-.1602	-.1294	-.1010	-.0754	-.0531	-.0343	-.0195	-.0087	-.0022
60.0	-.1396	-.1128	-.0881	-.0657	-.0463	-.0299	-.0170	-.0076	-.0019
65.0	-.1187	-.0954	-.0744	-.0556	-.0391	-.0253	-.0143	-.0064	-.0016
70.0	-.0988	-.0780	-.0603	-.0450	-.0316	-.0205	-.0116	-.0052	-.0013
75.0	-.0803	-.0618	-.0467	-.0342	-.0239	-.0155	-.0088	-.0039	-.0010
80.0	-.0635	-.0473	-.0345	-.0243	-.0164	-.0104	-.0059	-.0026	-.0007
85.0	-.0484	-.0345	-.0239	-.0160	-.0101	-.0059	-.0031	-.0013	-.0003

TABLE IV. - CONTINUED

(c) C_Y. Continued.

$\phi_1 = -90^o$; $\phi_2 = 90^o$; $\beta = 2^o$

α, deg \ θ_{xy}, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	-.0834	-.0873	-.0876	-.0867	-.0827	-.0770	-.0701	-.0625	-.0546	-.0466
2.0	-.0740	-.0827	-.0846	-.0844	-.0813	-.0760	-.0694	-.0620	-.0542	-.0464
4.0	-.0555	-.0733	-.0784	-.0799	-.0785	-.0741	-.0680	-.0610	-.0535	-.0458
6.0	-.0410	-.0639	-.0721	-.0753	-.0755	-.0720	-.0665	-.0599	-.0527	-.0452
8.0	-.0317	-.0543	-.0658	-.0705	-.0725	-.0699	-.0650	-.0588	-.0518	-.0446
10.0	-.0256	-.0449	-.0593	-.0657	-.0693	-.0677	-.0633	-.0575	-.0509	-.0439
12.0	-.0213	-.0373	-.0528	-.0608	-.0661	-.0653	-.0616	-.0562	-.0499	-.0431
15.0	-.0169	-.0293	-.0430	-.0533	-.0612	-.0617	-.0589	-.0541	-.0483	-.0419
20.0	-.0123	-.0211	-.0307	-.0406	-.0525	-.0553	-.0540	-.0503	-.0453	-.0396
25.0	-.0094	-.0159	-.0231	-.0304	-.0434	-.0485	-.0487	-.0462	-.0420	-.0370
30.0	-.0074	-.0124	-.0178	-.0234	-.0342	-.0414	-.0430	-.0416	-.0384	-.0341
35.0	-.0059	-.0097	-.0139	-.0182	-.0266	-.0339	-.0370	-.0368	-.0345	-.0310
40.0	-.0048	-.0077	-.0109	-.0142	-.0207	-.0265	-.0307	-.0316	-.0303	-.0276
45.0	-.0039	-.0060	-.0085	-.0110	-.0160	-.0205	-.0243	-.0263	-.0259	-.0240
50.0	-.0032	-.0047	-.0065	-.0085	-.0122	-.0156	-.0186	-.0207	-.0213	-.0203
55.0	-.0025	-.0036	-.0049	-.0063	-.0091	-.0116	-.0138	-.0155	-.0165	-.0163
60.0	-.0020	-.0027	-.0036	-.0046	-.0066	-.0084	-.0099	-.0112	-.0120	-.0123
65.0	-.0016	-.0020	-.0026	-.0032	-.0045	-.0057	-.0068	-.0076	-.0082	-.0085
70.0	-.0013	-.0014	-.0017	-.0021	-.0029	-.0036	-.0043	-.0048	-.0052	-.0054
75.0	-.0010	-.0009	-.0011	-.0013	-.0017	-.0021	-.0024	-.0027	-.0029	-.0030
80.0	-.0008	-.0006	-.0006	-.0007	-.0008	-.0010	-.0011	-.0012	-.0013	-.0014
85.0	-.0006	-.0004	-.0003	-.0003	-.0003	-.0003	-.0003	-.0003	-.0004	-.0004

α, deg \ θ_{xy}, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	-.0388	-.0314	-.0245	-.0183	-.0129	-.0083	-.0047	-.0021	-.0005
2.0	-.0386	-.0313	-.0244	-.0183	-.0129	-.0083	-.0047	-.0021	-.0005
4.0	-.0382	-.0310	-.0242	-.0181	-.0128	-.0083	-.0047	-.0021	-.0005
6.0	-.0378	-.0307	-.0240	-.0180	-.0127	-.0082	-.0047	-.0021	-.0005
8.0	-.0373	-.0304	-.0238	-.0178	-.0126	-.0082	-.0046	-.0021	-.0005
10.0	-.0368	-.0300	-.0235	-.0177	-.0125	-.0081	-.0046	-.0021	-.0005
12.0	-.0363	-.0296	-.0232	-.0175	-.0124	-.0080	-.0046	-.0021	-.0005
15.0	-.0353	-.0289	-.0228	-.0171	-.0121	-.0079	-.0045	-.0020	-.0005
20.0	-.0336	-.0276	-.0218	-.0164	-.0117	-.0076	-.0044	-.0020	-.0005
25.0	-.0316	-.0260	-.0207	-.0156	-.0111	-.0073	-.0042	-.0019	-.0005
30.0	-.0293	-.0243	-.0194	-.0147	-.0105	-.0069	-.0040	-.0018	-.0005
35.0	-.0268	-.0224	-.0179	-.0137	-.0098	-.0065	-.0037	-.0017	-.0004
40.0	-.0242	-.0203	-.0164	-.0126	-.0090	-.0060	-.0035	-.0016	-.0004
45.0	-.0213	-.0181	-.0147	-.0113	-.0082	-.0054	-.0032	-.0014	-.0004
50.0	-.0183	-.0157	-.0129	-.0100	-.0073	-.0049	-.0028	-.0013	-.0003
55.0	-.0151	-.0132	-.0110	-.0086	-.0063	-.0043	-.0025	-.0011	-.0003
60.0	-.0118	-.0106	-.0090	-.0072	-.0053	-.0036	-.0021	-.0010	-.0003
65.0	-.0085	-.0079	-.0069	-.0057	-.0043	-.0029	-.0018	-.0008	-.0002
70.0	-.0055	-.0053	-.0048	-.0041	-.0032	-.0022	-.0014	-.0006	-.0002
75.0	-.0031	-.0030	-.0028	-.0025	-.0021	-.0015	-.0010	-.0005	-.0001
80.0	-.0014	-.0013	-.0013	-.0012	-.0010	-.0008	-.0006	-.0003	-.0001
85.0	-.0004	-.0003	-.0003	-.0003	-.0003	-.0002	-.0002	-.0001	-.0000

TABLE IV.- CONTINUED

(c) C_Y. Continued.

$\phi_1 = 90^o$; $\phi_2 = 270^o$; $\beta = 2^o$

α, deg \ θ_{xy}, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	-.1021	-.0965	-.0937	-.0911	-.0854	-.0788	-.0714	-.0634	-.0552	-.0470
2.0	-.1113	-.1011	-.0966	-.0932	-.0867	-.0797	-.0720	-.0638	-.0555	-.0472
4.0	-.1298	-.1101	-.1025	-.0975	-.0893	-.0814	-.0731	-.0646	-.0561	-.0476
6.0	-.1481	-.1190	-.1082	-.1016	-.0917	-.0829	-.0742	-.0653	-.0565	-.0479
8.0	-.1662	-.1278	-.1138	-.1055	-.0941	-.0844	-.0751	-.0660	-.0569	-.0482
10.0	-.1841	-.1364	-.1192	-.1094	-.0963	-.0858	-.0760	-.0665	-.0573	-.0483
12.0	-.2018	-.1448	-.1245	-.1131	-.0984	-.0871	-.0768	-.0670	-.0575	-.0485
15.0	-.2279	-.1571	-.1322	-.1184	-.1013	-.0888	-.0778	-.0675	-.0578	-.0486
20.0	-.2699	-.1767	-.1442	-.1266	-.1055	-.0911	-.0790	-.0680	-.0579	-.0484
25.0	-.3099	-.1949	-.1551	-.1337	-.1090	-.0927	-.0796	-.0680	-.0575	-.0479
30.0	-.3475	-.2116	-.1648	-.1399	-.1116	-.0936	-.0795	-.0675	-.0567	-.0470
35.0	-.3825	-.2267	-.1732	-.1450	-.1134	-.0938	-.0789	-.0664	-.0555	-.0457
40.0	-.4146	-.2401	-.1803	-.1490	-.1143	-.0933	-.0777	-.0649	-.0538	-.0441
45.0	-.4435	-.2517	-.1861	-.1518	-.1143	-.0920	-.0758	-.0628	-.0518	-.0422
50.0	-.4690	-.2613	-.1904	-.1535	-.1135	-.0901	-.0734	-.0603	-.0493	-.0399
55.0	-.4910	-.2690	-.1933	-.1540	-.1118	-.0875	-.0705	-.0573	-.0465	-.0374
60.0	-.5092	-.2746	-.1947	-.1534	-.1092	-.0842	-.0670	-.0539	-.0433	-.0345
65.0	-.5236	-.2781	-.1946	-.1516	-.1058	-.0803	-.0630	-.0500	-.0398	-.0314
70.0	-.5340	-.2795	-.1931	-.1486	-.1016	-.0757	-.0585	-.0458	-.0360	-.0281
75.0	-.5403	-.2788	-.1901	-.1445	-.0967	-.0706	-.0536	-.0413	-.0319	-.0245
80.0	-.5426	-.2760	-.1856	-.1393	-.0910	-.0650	-.0482	-.0364	-.0276	-.0208
85.0	-.5407	-.2711	-.1798	-.1331	-.0846	-.0588	-.0425	-.0312	-.0230	-.0169

α, deg \ θ_{xy}, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	-.0391	-.0316	-.0246	-.0184	-.0129	-.0084	-.0047	-.0021	-.0005
2.0	-.0392	-.0317	-.0247	-.0184	-.0129	-.0084	-.0047	-.0021	-.0005
4.0	-.0395	-.0318	-.0248	-.0185	-.0130	-.0084	-.0047	-.0021	-.0005
6.0	-.0397	-.0319	-.0248	-.0185	-.0130	-.0084	-.0047	-.0021	-.0005
8.0	-.0398	-.0320	-.0249	-.0185	-.0130	-.0084	-.0047	-.0021	-.0005
10.0	-.0399	-.0320	-.0249	-.0185	-.0129	-.0083	-.0047	-.0021	-.0005
12.0	-.0399	-.0320	-.0248	-.0184	-.0129	-.0083	-.0047	-.0021	-.0005
15.0	-.0399	-.0319	-.0247	-.0183	-.0128	-.0082	-.0046	-.0021	-.0005
20.0	-.0396	-.0316	-.0244	-.0180	-.0126	-.0081	-.0045	-.0020	-.0005
25.0	-.0390	-.0310	-.0239	-.0176	-.0122	-.0078	-.0044	-.0020	-.0005
30.0	-.0382	-.0302	-.0232	-.0170	-.0118	-.0076	-.0042	-.0019	-.0005
35.0	-.0370	-.0292	-.0223	-.0164	-.0113	-.0072	-.0040	-.0018	-.0004
40.0	-.0355	-.0279	-.0213	-.0155	-.0107	-.0068	-.0038	-.0017	-.0004
45.0	-.0338	-.0264	-.0201	-.0146	-.0100	-.0064	-.0035	-.0016	-.0004
50.0	-.0318	-.0248	-.0187	-.0136	-.0093	-.0059	-.0033	-.0014	-.0003
55.0	-.0296	-.0229	-.0172	-.0124	-.0085	-.0053	-.0029	-.0013	-.0003
60.0	-.0271	-.0209	-.0156	-.0112	-.0076	-.0047	-.0026	-.0011	-.0003
65.0	-.0245	-.0187	-.0138	-.0099	-.0066	-.0041	-.0022	-.0010	-.0002
70.0	-.0216	-.0163	-.0120	-.0085	-.0056	-.0035	-.0019	-.0008	-.0002
75.0	-.0186	-.0139	-.0100	-.0070	-.0046	-.0028	-.0015	-.0006	-.0001
80.0	-.0155	-.0113	-.0080	-.0055	-.0035	-.0021	-.0011	-.0004	-.0001
85.0	-.0122	-.0086	-.0059	-.0039	-.0024	-.0014	-.0007	-.0003	-.0001

TABLE IV.- CONTINUED

(c) C_Y. Continued.

$\phi_1 = -90^\circ$; $\phi_2 = 90^\circ$; $\beta = 5^\circ$

θ_{xy}, deg / α, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	-.2266	-.2174	-.2182	-.2158	-.2059	-.1917	-.1745	-.1556	-.1359	-.1160
2.0	-.2077	-.2058	-.2106	-.2102	-.2025	-.1893	-.1729	-.1544	-.1350	-.1154
4.0	-.1734	-.1827	-.1952	-.1989	-.1954	-.1844	-.1694	-.1519	-.1332	-.1141
6.0	-.1448	-.1600	-.1796	-.1873	-.1880	-.1793	-.1657	-.1492	-.1312	-.1126
8.0	-.1221	-.1388	-.1637	-.1755	-.1804	-.1740	-.1618	-.1463	-.1290	-.1110
10.0	-.1043	-.1202	-.1477	-.1635	-.1726	-.1684	-.1577	-.1432	-.1267	-.1093
12.0	-.0904	-.1045	-.1316	-.1513	-.1646	-.1627	-.1534	-.1400	-.1242	-.1074
15.0	-.0746	-.0861	-.1096	-.1327	-.1522	-.1537	-.1466	-.1348	-.1202	-.1043
20.0	-.0568	-.0649	-.0822	-.1021	-.1307	-.1378	-.1344	-.1253	-.1129	-.0986
25.0	-.0452	-.0507	-.0636	-.0787	-.1081	-.1208	-.1212	-.1149	-.1046	-.0922
30.0	-.0370	-.0406	-.0502	-.0617	-.0857	-.1029	-.1071	-.1036	-.0956	-.0850
35.0	-.0309	-.0329	-.0401	-.0489	-.0675	-.0843	-.0922	-.0915	-.0858	-.0772
40.0	-.0261	-.0270	-.0322	-.0389	-.0531	-.0666	-.0765	-.0787	-.0754	-.0688
45.0	-.0223	-.0222	-.0259	-.0308	-.0415	-.0519	-.0606	-.0654	-.0644	-.0598
50.0	-.0192	-.0183	-.0207	-.0242	-.0321	-.0399	-.0466	-.0515	-.0530	-.0505
55.0	-.0166	-.0151	-.0165	-.0188	-.0244	-.0300	-.0350	-.0388	-.0411	-.0407
60.0	-.0144	-.0124	-.0130	-.0144	-.0181	-.0219	-.0254	-.0282	-.0300	-.0306
65.0	-.0125	-.0101	-.0101	-.0108	-.0130	-.0154	-.0176	-.0195	-.0208	-.0214
70.0	-.0109	-.0082	-.0077	-.0079	-.0089	-.0102	-.0115	-.0126	-.0133	-.0137
75.0	-.0096	-.0066	-.0058	-.0056	-.0058	-.0063	-.0068	-.0073	-.0077	-.0078
80.0	-.0084	-.0052	-.0043	-.0039	-.0036	-.0035	-.0036	-.0036	-.0037	-.0037
85.0	-.0073	-.0041	-.0030	-.0025	-.0020	-.0017	-.0016	-.0014	-.0013	-.0012

θ_{xy}, deg / α, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	-.0966	-.0781	-.0610	-.0456	-.0321	-.0207	-.0118	-.0053	-.0013
2.0	-.0962	-.0778	-.0608	-.0454	-.0320	-.0207	-.0118	-.0053	-.0013
4.0	-.0952	-.0772	-.0604	-.0452	-.0318	-.0206	-.0117	-.0052	-.0013
6.0	-.0941	-.0764	-.0598	-.0448	-.0316	-.0205	-.0116	-.0052	-.0013
8.0	-.0930	-.0756	-.0593	-.0444	-.0314	-.0204	-.0116	-.0052	-.0013
10.0	-.0917	-.0746	-.0586	-.0440	-.0311	-.0202	-.0115	-.0052	-.0013
12.0	-.0903	-.0736	-.0579	-.0435	-.0308	-.0200	-.0114	-.0051	-.0013
15.0	-.0880	-.0719	-.0566	-.0426	-.0302	-.0197	-.0112	-.0050	-.0013
20.0	-.0836	-.0686	-.0542	-.0409	-.0291	-.0190	-.0108	-.0049	-.0012
25.0	-.0786	-.0648	-.0514	-.0389	-.0277	-.0181	-.0104	-.0047	-.0012
30.0	-.0730	-.0605	-.0482	-.0367	-.0262	-.0172	-.0099	-.0045	-.0011
35.0	-.0668	-.0558	-.0447	-.0341	-.0245	-.0161	-.0093	-.0042	-.0011
40.0	-.0602	-.0506	-.0408	-.0313	-.0225	-.0149	-.0086	-.0039	-.0010
45.0	-.0530	-.0450	-.0366	-.0282	-.0204	-.0135	-.0079	-.0036	-.0009
50.0	-.0455	-.0391	-.0321	-.0249	-.0182	-.0121	-.0071	-.0032	-.0008
55.0	-.0376	-.0329	-.0273	-.0215	-.0158	-.0106	-.0062	-.0029	-.0007
60.0	-.0294	-.0264	-.0224	-.0178	-.0133	-.0090	-.0053	-.0025	-.0006
65.0	-.0211	-.0198	-.0173	-.0141	-.0106	-.0073	-.0044	-.0020	-.0005
70.0	-.0137	-.0131	-.0120	-.0102	-.0079	-.0056	-.0034	-.0016	-.0004
75.0	-.0078	-.0075	-.0070	-.0063	-.0052	-.0038	-.0024	-.0012	-.0003
80.0	-.0036	-.0035	-.0032	-.0029	-.0025	-.0020	-.0014	-.0007	-.0002
85.0	-.0011	-.0010	-.0009	-.0008	-.0007	-.0005	-.0004	-.0003	-.0001

$\phi_1 = -90^\circ$; $\phi_2 = 90^\circ$; $\beta = 15^\circ$

θ_{xy}, deg / α, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	-1.1344	-.7795	-.6778	-.6348	-.5930	-.5518	-.5025	-.4481	-.3913	-.3340
2.0	-1.0935	-.7548	-.6593	-.6199	-.5830	-.5451	-.4977	-.4447	-.3888	-.3322
4.0	-1.0156	-.7069	-.6226	-.5900	-.5625	-.5310	-.4877	-.4374	-.3835	-.3284
6.0	-.9432	-.6612	-.5867	-.5602	-.5414	-.5163	-.4770	-.4296	-.3777	-.3242
8.0	-.8765	-.6179	-.5518	-.5305	-.5196	-.5009	-.4658	-.4212	-.3715	-.3196
10.0	-.8152	-.5772	-.5182	-.5013	-.4973	-.4850	-.4540	-.4124	-.3648	-.3146
12.0	-.7593	-.5392	-.4861	-.4727	-.4746	-.4684	-.4417	-.4030	-.3577	-.3092
15.0	-.6848	-.4873	-.4412	-.4315	-.4401	-.4425	-.4221	-.3881	-.3462	-.3004
20.0	-.5824	-.4139	-.3752	-.3686	-.3828	-.3967	-.3871	-.3608	-.3250	-.2840
25.0	-.5020	-.3544	-.3201	-.3141	-.3285	-.3480	-.3490	-.3308	-.3013	-.2653
30.0	-.4384	-.3063	-.2764	-.2678	-.2792	-.2986	-.3038	-.2983	-.2753	-.2447
35.0	-.3873	-.2669	-.2365	-.2288	-.2360	-.2523	-.2654	-.2635	-.2472	-.2222
40.0	-.3458	-.2342	-.2048	-.1959	-.1987	-.2106	-.2225	-.2267	-.2172	-.1980
45.0	-.3115	-.2069	-.1780	-.1680	-.1668	-.1742	-.1830	-.1885	-.1855	-.1723
50.0	-.2830	-.1838	-.1551	-.1441	-.1394	-.1428	-.1482	-.1524	-.1525	-.1453
55.0	-.2591	-.1641	-.1355	-.1236	-.1159	-.1159	-.1182	-.1203	-.1205	-.1172
60.0	-.2388	-.1471	-.1186	-.1059	-.0959	-.0932	-.0927	-.0927	-.0921	-.0897
65.0	-.2215	-.1324	-.1039	-.0906	-.0787	-.0739	-.0715	-.0697	-.0680	-.0656
70.0	-.2066	-.1195	-.0911	-.0773	-.0641	-.0578	-.0539	-.0510	-.0483	-.0456
75.0	-.1940	-.1083	-.0800	-.0658	-.0517	-.0444	-.0397	-.0361	-.0329	-.0300
80.0	-.1831	-.0985	-.0702	-.0559	-.0413	-.0335	-.0283	-.0244	-.0212	-.0185
85.0	-.1739	-.0900	-.0617	-.0473	-.0325	-.0246	-.0195	-.0157	-.0128	-.0103

θ_{xy}, deg / α, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	-.2781	-.2249	-.1756	-.1312	-.0923	-.0597	-.0339	-.0152	-.0038
2.0	-.2769	-.2241	-.1751	-.1308	-.0921	-.0596	-.0338	-.0151	-.0038
4.0	-.2741	-.2222	-.1738	-.1300	-.0916	-.0594	-.0337	-.0151	-.0038
6.0	-.2711	-.2200	-.1723	-.1290	-.0910	-.0590	-.0335	-.0150	-.0038
8.0	-.2677	-.2176	-.1706	-.1279	-.0903	-.0586	-.0333	-.0149	-.0038
10.0	-.2640	-.2149	-.1687	-.1266	-.0895	-.0581	-.0331	-.0148	-.0037
12.0	-.2600	-.2119	-.1666	-.1252	-.0885	-.0575	-.0328	-.0147	-.0037
15.0	-.2533	-.2070	-.1631	-.1227	-.0869	-.0566	-.0323	-.0145	-.0037
20.0	-.2407	-.1976	-.1562	-.1179	-.0837	-.0546	-.0312	-.0141	-.0035
25.0	-.2263	-.1866	-.1481	-.1121	-.0799	-.0522	-.0299	-.0135	-.0034
30.0	-.2102	-.1743	-.1389	-.1056	-.0754	-.0495	-.0284	-.0128	-.0033
35.0	-.1924	-.1606	-.1286	-.0982	-.0704	-.0463	-.0267	-.0121	-.0031
40.0	-.1732	-.1457	-.1174	-.0900	-.0649	-.0428	-.0247	-.0112	-.0029
45.0	-.1527	-.1296	-.1053	-.0812	-.0588	-.0390	-.0226	-.0103	-.0026
50.0	-.1310	-.1126	-.0923	-.0718	-.0523	-.0349	-.0203	-.0093	-.0024
55.0	-.1083	-.0947	-.0787	-.0618	-.0454	-.0305	-.0179	-.0082	-.0021
60.0	-.0848	-.0762	-.0645	-.0514	-.0382	-.0259	-.0153	-.0071	-.0018
65.0	-.0621	-.0570	-.0497	-.0405	-.0306	-.0210	-.0126	-.0059	-.0015
70.0	-.0426	-.0390	-.0347	-.0294	-.0229	-.0161	-.0098	-.0047	-.0012
75.0	-.0272	-.0243	-.0214	-.0183	-.0149	-.0110	-.0069	-.0034	-.0009
80.0	-.0159	-.0136	-.0115	-.0095	-.0076	-.0058	-.0040	-.0021	-.0006
85.0	-.0083	-.0066	-.0051	-.0039	-.0028	-.0020	-.0013	-.0008	-.0003

TABLE IV.- CONTINUED

(c) C_Y. Continued.

$\beta_1 = 90^0$; $\beta_2 = 270^0$; $\beta = 5^0$

θ_{xy}, deg / α, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	-.2671	-.2403	-.2331	-.2267	-.2127	-.1962	-.1777	-.1579	-.1375	-.1171
2.0	-.2881	-.2517	-.2405	-.2321	-.2159	-.1984	-.1792	-.1589	-.1382	-.1176
4.0	-.3313	-.2742	-.2551	-.2426	-.2223	-.2026	-.1820	-.1609	-.1395	-.1185
6.0	-.3751	-.2963	-.2693	-.2528	-.2284	-.2065	-.1847	-.1626	-.1407	-.1193
8.0	-.4190	-.3181	-.2833	-.2627	-.2342	-.2102	-.1871	-.1642	-.1417	-.1199
10.0	-.4628	-.3395	-.2968	-.2723	-.2397	-.2136	-.1892	-.1656	-.1425	-.1204
12.0	-.5063	-.3605	-.3100	-.2816	-.2449	-.2168	-.1912	-.1667	-.1432	-.1207
15.0	-.5706	-.3912	-.3291	-.2948	-.2522	-.2210	-.1936	-.1681	-.1438	-.1209
20.0	-.6747	-.4399	-.3589	-.3151	-.2627	-.2267	-.1966	-.1693	-.1440	-.1205
25.0	-.7739	-.4852	-.3860	-.3329	-.2713	-.2307	-.1980	-.1693	-.1431	-.1192
30.0	-.8674	-.5268	-.4101	-.3482	-.2778	-.2330	-.1980	-.1679	-.1412	-.1169
35.0	-.9544	-.5645	-.4312	-.3609	-.2822	-.2335	-.1964	-.1653	-.1381	-.1138
40.0	-1.0343	-.5978	-.4489	-.3708	-.2844	-.2322	-.1933	-.1615	-.1340	-.1098
45.0	-1.1064	-.6267	-.4632	-.3779	-.2845	-.2291	-.1888	-.1564	-.1289	-.1050
50.0	-1.1701	-.6507	-.4740	-.3822	-.2824	-.2243	-.1828	-.1501	-.1228	-.0994
55.0	-1.2250	-.6699	-.4812	-.3835	-.2782	-.2178	-.1755	-.1426	-.1157	-.0930
60.0	-1.2706	-.6840	-.4847	-.3819	-.2718	-.2096	-.1668	-.1341	-.1078	-.0860
65.0	-1.3067	-.6930	-.4847	-.3774	-.2634	-.1998	-.1568	-.1246	-.0991	-.0782
70.0	-1.3329	-.6968	-.4809	-.3700	-.2530	-.1885	-.1456	-.1141	-.0896	-.0699
75.0	-1.3491	-.6953	-.4737	-.3600	-.2407	-.1758	-.1334	-.1027	-.0794	-.0610
80.0	-1.3551	-.6887	-.4629	-.3473	-.2266	-.1618	-.1201	-.0906	-.0686	-.0517
85.0	-1.3510	-.6770	-.4488	-.3322	-.2109	-.1466	-.1060	-.0778	-.0573	-.0420

θ_{xy}, deg / α, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	-.0973	-.0786	-.0613	-.0458	-.0322	-.0208	-.0118	-.0053	-.0013
2.0	-.0977	-.0788	-.0615	-.0458	-.0322	-.0208	-.0118	-.0053	-.0013
4.0	-.0983	-.0792	-.0617	-.0460	-.0323	-.0208	-.0118	-.0053	-.0013
6.0	-.0987	-.0795	-.0618	-.0460	-.0323	-.0208	-.0118	-.0053	-.0013
8.0	-.0991	-.0797	-.0619	-.0460	-.0323	-.0208	-.0118	-.0052	-.0013
10.0	-.0993	-.0797	-.0619	-.0460	-.0322	-.0207	-.0117	-.0052	-.0013
12.0	-.0994	-.0797	-.0618	-.0459	-.0321	-.0207	-.0117	-.0052	-.0013
15.0	-.0994	-.0795	-.0615	-.0456	-.0319	-.0205	-.0116	-.0051	-.0013
20.0	-.0987	-.0787	-.0607	-.0449	-.0313	-.0201	-.0113	-.0050	-.0012
25.0	-.0972	-.0773	-.0594	-.0438	-.0305	-.0195	-.0110	-.0049	-.0012
30.0	-.0950	-.0752	-.0577	-.0424	-.0294	-.0188	-.0105	-.0047	-.0012
35.0	-.0921	-.0726	-.0555	-.0407	-.0282	-.0180	-.0100	-.0044	-.0011
40.0	-.0884	-.0695	-.0529	-.0387	-.0267	-.0170	-.0095	-.0042	-.0010
45.0	-.0841	-.0658	-.0499	-.0364	-.0250	-.0158	-.0088	-.0039	-.0010
50.0	-.0792	-.0617	-.0466	-.0338	-.0231	-.0146	-.0081	-.0035	-.0009
55.0	-.0736	-.0570	-.0428	-.0309	-.0211	-.0133	-.0073	-.0032	-.0008
60.0	-.0675	-.0519	-.0388	-.0278	-.0189	-.0118	-.0065	-.0028	-.0007
65.0	-.0609	-.0465	-.0344	-.0245	-.0165	-.0103	-.0056	-.0024	-.0006
70.0	-.0538	-.0406	-.0298	-.0210	-.0140	-.0086	-.0047	-.0020	-.0005
75.0	-.0463	-.0345	-.0250	-.0174	-.0115	-.0069	-.0037	-.0016	-.0004
80.0	-.0385	-.0281	-.0199	-.0136	-.0088	-.0052	-.0027	-.0011	-.0003
85.0	-.0304	-.0215	-.0148	-.0097	-.0060	-.0034	-.0017	-.0007	-.0001

$\beta_1 = 90^0$; $\beta_2 = 270^0$; $\beta = 15^0$

θ_{xy}, deg / α, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	-1.2200	-.8300	-.7153	-.6644	-.6124	-.5649	-.5116	-.4546	-.3958	-.3372
2.0	-1.2645	-.8558	-.7340	-.6791	-.6218	-.5712	-.5160	-.4576	-.3979	-.3387
4.0	-1.3567	-.9082	-.7716	-.7081	-.6401	-.5852	-.5242	-.4632	-.4018	-.3413
6.0	-1.4525	-.9615	-.8091	-.7365	-.6575	-.5945	-.5317	-.4683	-.4052	-.3434
8.0	-1.5514	-1.0152	-.8462	-.7642	-.6742	-.6051	-.5386	-.4728	-.4080	-.3452
10.0	-1.6526	-1.0691	-.8829	-.7912	-.6901	-.6150	-.5449	-.4767	-.4104	-.3465
12.0	-1.7557	-1.1230	-.9189	-.8174	-.7051	-.6241	-.5505	-.4801	-.4123	-.3475
15.0	-1.9123	-1.2032	-.9716	-.8551	-.7261	-.6364	-.5576	-.4840	-.4141	-.3480
20.0	-2.1747	-1.3335	-1.0548	-.9130	-.7565	-.6529	-.5661	-.4876	-.4147	-.3469
25.0	-2.4330	-1.4574	-1.1314	-.9644	-.7812	-.6644	-.5702	-.4874	-.4122	-.3431
30.0	-2.6820	-1.5729	-1.2003	-1.0088	-.8000	-.6709	-.5700	-.4836	-.4065	-.3367
35.0	-2.9176	-1.6786	-1.2608	-1.0458	-.8128	-.6722	-.5655	-.4761	-.3977	-.3277
40.0	-3.1365	-1.7731	-1.3124	-1.0752	-.8195	-.6685	-.5567	-.4649	-.3859	-.3163
45.0	-3.3358	-1.8556	-1.3547	-1.0968	-.8202	-.6597	-.5436	-.4502	-.3711	-.3024
50.0	-3.5135	-1.9253	-1.3872	-1.1103	-.8148	-.6459	-.5264	-.4321	-.3535	-.2862
55.0	-3.6677	-1.9814	-1.4099	-1.1159	-.8035	-.6273	-.5052	-.4107	-.3332	-.2679
60.0	-3.7967	-2.0236	-1.4225	-1.1135	-.7864	-.6042	-.4802	-.3862	-.3104	-.2475
65.0	-3.8995	-2.0515	-1.4249	-1.1032	-.7639	-.5769	-.4517	-.3587	-.2853	-.2252
70.0	-3.9752	-2.0649	-1.4173	-1.0852	-.7362	-.5458	-.4203	-.3287	-.2579	-.2012
75.0	-4.0229	-2.0638	-1.3999	-1.0597	-.7036	-.5112	-.3862	-.2967	-.2289	-.1758
80.0	-4.0425	-2.0482	-1.3727	-1.0270	-.6666	-.4738	-.3502	-.2633	-.1987	-.1494
85.0	-4.0337	-2.0184	-1.3361	-.9876	-.6256	-.4338	-.3127	-.2290	-.1682	-.1229

θ_{xy}, deg / α, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	-.2803	-.2264	-.1766	-.1318	-.0927	-.0599	-.0340	-.0152	-.0038
2.0	-.2813	-.2270	-.1770	-.1320	-.0928	-.0600	-.0340	-.0152	-.0038
4.0	-.2830	-.2281	-.1776	-.1323	-.0929	-.0600	-.0340	-.0152	-.0038
6.0	-.2843	-.2289	-.1780	-.1325	-.0930	-.0600	-.0339	-.0151	-.0038
8.0	-.2853	-.2294	-.1782	-.1325	-.0929	-.0599	-.0339	-.0151	-.0038
10.0	-.2860	-.2296	-.1782	-.1324	-.0927	-.0597	-.0337	-.0150	-.0038
12.0	-.2863	-.2296	-.1779	-.1321	-.0924	-.0595	-.0336	-.0150	-.0037
15.0	-.2861	-.2290	-.1772	-.1313	-.0918	-.0590	-.0333	-.0148	-.0037
20.0	-.2841	-.2266	-.1748	-.1292	-.0901	-.0578	-.0325	-.0144	-.0036
25.0	-.2798	-.2224	-.1711	-.1262	-.0878	-.0562	-.0316	-.0140	-.0035
30.0	-.2735	-.2166	-.1662	-.1222	-.0848	-.0542	-.0304	-.0134	-.0033
35.0	-.2651	-.2092	-.1599	-.1172	-.0811	-.0517	-.0289	-.0127	-.0032
40.0	-.2546	-.2001	-.1524	-.1114	-.0769	-.0488	-.0272	-.0120	-.0030
45.0	-.2422	-.1895	-.1438	-.1047	-.0720	-.0456	-.0254	-.0111	-.0027
50.0	-.2280	-.1775	-.1341	-.0972	-.0666	-.0420	-.0233	-.0102	-.0025
55.0	-.2120	-.1642	-.1234	-.0890	-.0607	-.0382	-.0211	-.0092	-.0022
60.0	-.1944	-.1495	-.1117	-.0801	-.0544	-.0340	-.0186	-.0081	-.0020
65.0	-.1754	-.1338	-.0991	-.0706	-.0476	-.0295	-.0161	-.0069	-.0017
70.0	-.1550	-.1170	-.0859	-.0606	-.0404	-.0249	-.0134	-.0057	-.0014
75.0	-.1334	-.0993	-.0719	-.0501	-.0330	-.0200	-.0107	-.0045	-.0011
80.0	-.1110	-.0809	-.0574	-.0392	-.0253	-.0150	-.0078	-.0032	-.0007
85.0	-.0885	-.0625	-.0428	-.0281	-.0174	-.0099	-.0049	-.0019	-.0004

TABLE IV.- CONTINUED

(c) C_Y. Continued.

$\phi_1 = 105^\circ$; $\phi_2 = 255^\circ$; $\beta = 2^\circ$

α, deg \ θ_{xy}, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	-.0985	-.0926	-.0896	-.0870	-.0813	-.0747	-.0674	-.0596	-.0517	-.0438
2.0	-.1084	-.0975	-.0928	-.0893	-.0827	-.0757	-.0680	-.0601	-.0520	-.0441
4.0	-.1283	-.1072	-.0991	-.0938	-.0855	-.0775	-.0693	-.0609	-.0526	-.0445
6.0	-.1480	-.1168	-.1053	-.0983	-.0881	-.0792	-.0704	-.0617	-.0531	-.0448
8.0	-.1675	-.1263	-.1113	-.1026	-.0907	-.0808	-.0715	-.0624	-.0536	-.0451
10.0	-.1868	-.1356	-.1172	-.1068	-.0931	-.0824	-.0725	-.0631	-.0540	-.0453
12.0	-.2059	-.1447	-.1230	-.1109	-.0954	-.0838	-.0734	-.0636	-.0543	-.0455
15.0	-.2340	-.1581	-.1314	-.1167	-.0987	-.0857	-.0746	-.0643	-.0547	-.0457
20.0	-.2795	-.1794	-.1445	-.1257	-.1035	-.0885	-.0761	-.0650	-.0550	-.0457
25.0	-.3228	-.1993	-.1566	-.1338	-.1075	-.0905	-.0770	-.0653	-.0548	-.0453
30.0	-.3637	-.2177	-.1674	-.1408	-.1108	-.0919	-.0773	-.0651	-.0543	-.0446
35.0	-.4018	-.2345	-.1770	-.1468	-.1131	-.0925	-.0771	-.0643	-.0533	-.0436
40.0	-.4368	-.2494	-.1853	-.1517	-.1147	-.0925	-.0763	-.0631	-.0519	-.0422
45.0	-.4685	-.2625	-.1921	-.1554	-.1153	-.0918	-.0748	-.0614	-.0502	-.0405
50.0	-.4966	-.2736	-.1974	-.1579	-.1151	-.0903	-.0729	-.0592	-.0480	-.0385
55.0	-.5210	-.2826	-.2013	-.1592	-.1140	-.0882	-.0703	-.0566	-.0455	-.0363
60.0	-.5414	-.2894	-.2036	-.1593	-.1120	-.0854	-.0672	-.0536	-.0426	-.0337
65.0	-.5577	-.2941	-.2044	-.1582	-.1092	-.0820	-.0637	-.0501	-.0395	-.0309
70.0	-.5697	-.2965	-.2036	-.1559	-.1055	-.0779	-.0596	-.0463	-.0360	-.0278
75.0	-.5774	-.2966	-.2013	-.1524	-.1011	-.0732	-.0551	-.0421	-.0322	-.0245
80.0	-.5807	-.2945	-.1975	-.1478	-.0958	-.0680	-.0501	-.0375	-.0282	-.0211
85.0	-.5796	-.2901	-.1921	-.1420	-.0899	-.0623	-.0448	-.0327	-.0240	-.0175

α, deg \ θ_{xy}, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	-.0363	-.0292	-.0227	-.0169	-.0118	-.0076	-.0043	-.0019	-.0005
2.0	-.0364	-.0293	-.0227	-.0169	-.0118	-.0076	-.0043	-.0019	-.0005
4.0	-.0367	-.0295	-.0228	-.0170	-.0119	-.0076	-.0043	-.0019	-.0005
6.0	-.0369	-.0296	-.0229	-.0170	-.0119	-.0076	-.0043	-.0019	-.0005
8.0	-.0371	-.0297	-.0230	-.0170	-.0119	-.0076	-.0043	-.0019	-.0005
10.0	-.0372	-.0297	-.0230	-.0170	-.0119	-.0076	-.0043	-.0019	-.0005
12.0	-.0373	-.0298	-.0230	-.0170	-.0118	-.0076	-.0043	-.0019	-.0005
15.0	-.0373	-.0297	-.0229	-.0169	-.0118	-.0075	-.0042	-.0019	-.0005
20.0	-.0372	-.0295	-.0226	-.0167	-.0116	-.0074	-.0041	-.0018	-.0005
25.0	-.0367	-.0290	-.0222	-.0163	-.0113	-.0072	-.0040	-.0018	-.0004
30.0	-.0360	-.0283	-.0216	-.0158	-.0109	-.0069	-.0039	-.0017	-.0004
35.0	-.0350	-.0274	-.0209	-.0152	-.0105	-.0066	-.0037	-.0016	-.0004
40.0	-.0337	-.0263	-.0199	-.0145	-.0099	-.0063	-.0035	-.0015	-.0004
45.0	-.0322	-.0250	-.0189	-.0136	-.0093	-.0059	-.0033	-.0014	-.0003
50.0	-.0305	-.0235	-.0176	-.0127	-.0087	-.0054	-.0030	-.0013	-.0003
55.0	-.0285	-.0219	-.0163	-.0117	-.0079	-.0049	-.0027	-.0012	-.0003
60.0	-.0262	-.0200	-.0148	-.0106	-.0071	-.0044	-.0024	-.0010	-.0003
65.0	-.0238	-.0180	-.0132	-.0093	-.0062	-.0038	-.0021	-.0009	-.0002
70.0	-.0212	-.0159	-.0115	-.0081	-.0053	-.0033	-.0017	-.0007	-.0002
75.0	-.0185	-.0136	-.0098	-.0067	-.0044	-.0026	-.0014	-.0006	-.0001
80.0	-.0156	-.0113	-.0079	-.0054	-.0034	-.0020	-.0010	-.0004	-.0001
85.0	-.0125	-.0088	-.0060	-.0039	-.0024	-.0014	-.0007	-.0003	-.0001

TABLE IV.- CONTINUED

(c) C_Y. Continued.

$\phi_1 = 105^\circ$; $\phi_2 = 255^\circ$; $\beta = 5^\circ$

α, deg \ θ_{xy}, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	-.2554	-.2305	-.2230	-.2165	-.2023	-.1860	-.1678	-.1484	-.1287	-.1091
2.0	-.2781	-.2427	-.2310	-.2222	-.2059	-.1883	-.1694	-.1495	-.1295	-.1097
4.0	-.3247	-.2669	-.2467	-.2336	-.2127	-.1929	-.1725	-.1517	-.1309	-.1107
6.0	-.3719	-.2908	-.2621	-.2446	-.2193	-.1971	-.1754	-.1536	-.1322	-.1115
8.0	-.4194	-.3144	-.2771	-.2554	-.2257	-.2012	-.1780	-.1554	-.1334	-.1123
10.0	-.4667	-.3375	-.2918	-.2658	-.2317	-.2050	-.1805	-.1570	-.1344	-.1128
12.0	-.5138	-.3602	-.3062	-.2760	-.2375	-.2086	-.1827	-.1583	-.1352	-.1133
15.0	-.5833	-.3935	-.3271	-.2905	-.2456	-.2134	-.1856	-.1601	-.1361	-.1137
20.0	-.6961	-.4465	-.3598	-.3130	-.2576	-.2202	-.1894	-.1619	-.1368	-.1137
25.0	-.8037	-.4961	-.3898	-.3330	-.2677	-.2253	-.1917	-.1626	-.1365	-.1128
30.0	-.9053	-.5420	-.4168	-.3506	-.2757	-.2287	-.1925	-.1620	-.1351	-.1111
35.0	-1.0001	-.5837	-.4407	-.3655	-.2817	-.2304	-.1919	-.1601	-.1327	-.1085
40.0	-1.0873	-.6209	-.4612	-.3775	-.2855	-.2303	-.1898	-.1571	-.1293	-.1051
45.0	-1.1663	-.6535	-.4782	-.3868	-.2871	-.2284	-.1863	-.1529	-.1249	-.1009
50.0	-1.2363	-.6810	-.4915	-.3930	-.2865	-.2249	-.1814	-.1474	-.1195	-.0959
55.0	-1.2970	-.7034	-.5011	-.3963	-.2837	-.2196	-.1751	-.1409	-.1133	-.0902
60.0	-1.3478	-.7205	-.5069	-.3966	-.2788	-.2126	-.1674	-.1333	-.1062	-.0839
65.0	-1.3883	-.7320	-.5089	-.3938	-.2718	-.2040	-.1585	-.1247	-.0982	-.0768
70.0	-1.4183	-.7380	-.5069	-.3881	-.2627	-.1939	-.1483	-.1151	-.0895	-.0692
75.0	-1.4375	-.7384	-.5011	-.3794	-.2516	-.1823	-.1371	-.1047	-.0802	-.0611
80.0	-1.4457	-.7331	-.4915	-.3678	-.2386	-.1693	-.1248	-.0935	-.0702	-.0525
85.0	-1.4429	-.7223	-.4782	-.3534	-.2238	-.1550	-.1115	-.0815	-.0597	-.0435

α, deg \ θ_{xy}, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	-.0903	-.0727	-.0565	-.0420	-.0294	-.0190	-.0107	-.0048	-.0012
2.0	-.0907	-.0729	-.0566	-.0421	-.0295	-.0190	-.0107	-.0048	-.0012
4.0	-.0914	-.0733	-.0569	-.0422	-.0296	-.0190	-.0108	-.0048	-.0012
6.0	-.0919	-.0736	-.0570	-.0423	-.0296	-.0190	-.0107	-.0048	-.0012
8.0	-.0923	-.0739	-.0572	-.0423	-.0296	-.0190	-.0107	-.0048	-.0012
10.0	-.0926	-.0740	-.0572	-.0423	-.0295	-.0190	-.0107	-.0048	-.0012
12.0	-.0929	-.0741	-.0572	-.0423	-.0295	-.0189	-.0106	-.0047	-.0012
15.0	-.0930	-.0740	-.0570	-.0421	-.0293	-.0188	-.0106	-.0047	-.0012
20.0	-.0925	-.0734	-.0564	-.0415	-.0288	-.0184	-.0103	-.0046	-.0011
25.0	-.0914	-.0723	-.0553	-.0406	-.0281	-.0179	-.0100	-.0044	-.0011
30.0	-.0896	-.0706	-.0538	-.0394	-.0272	-.0173	-.0097	-.0043	-.0011
35.0	-.0871	-.0683	-.0519	-.0378	-.0261	-.0165	-.0092	-.0040	-.0010
40.0	-.0840	-.0656	-.0496	-.0360	-.0247	-.0156	-.0087	-.0038	-.0009
45.0	-.0802	-.0623	-.0470	-.0340	-.0232	-.0146	-.0081	-.0035	-.0009
50.0	-.0758	-.0586	-.0439	-.0316	-.0215	-.0135	-.0074	-.0032	-.0008
55.0	-.0708	-.0544	-.0406	-.0291	-.0197	-.0123	-.0067	-.0029	-.0007
60.0	-.0653	-.0498	-.0369	-.0263	-.0177	-.0110	-.0060	-.0026	-.0006
65.0	-.0593	-.0448	-.0329	-.0233	-.0156	-.0096	-.0052	-.0022	-.0005
70.0	-.0528	-.0395	-.0287	-.0201	-.0133	-.0081	-.0043	-.0018	-.0004
75.0	-.0460	-.0339	-.0243	-.0168	-.0109	-.0066	-.0035	-.0014	-.0003
80.0	-.0388	-.0280	-.0197	-.0133	-.0085	-.0050	-.0026	-.0010	-.0002
85.0	-.0312	-.0220	-.0150	-.0098	-.0060	-.0034	-.0017	-.0006	-.0001

$\phi_1 = 105^\circ$; $\phi_2 = 255^\circ$; $\beta = 15^\circ$

α, deg \ θ_{xy}, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	-1.1411	-.7830	-.6784	-.6321	-.5826	-.5355	-.4830	-.4273	-.3705	-.3142
2.0	-1.1891	-.8108	-.6987	-.6479	-.5928	-.5423	-.4877	-.4306	-.3728	-.3158
4.0	-1.2885	-.8674	-.7393	-.6792	-.6125	-.5553	-.4966	-.4367	-.3770	-.3187
6.0	-1.3919	-.9249	-.7798	-.7100	-.6315	-.5677	-.5049	-.4424	-.3807	-.3211
8.0	-1.4987	-.9831	-.8201	-.7402	-.6498	-.5793	-.5126	-.4474	-.3840	-.3232
10.0	-1.6082	-1.0416	-.8599	-.7696	-.6672	-.5903	-.5197	-.4520	-.3869	-.3249
12.0	-1.7197	-1.1001	-.8992	-.7982	-.6838	-.6005	-.5261	-.4559	-.3892	-.3262
15.0	-1.8894	-1.1872	-.9567	-.8395	-.7072	-.6145	-.5345	-.4609	-.3919	-.3274
20.0	-2.1740	-1.3292	-1.0480	-.9036	-.7479	-.6341	-.5453	-.4663	-.3939	-.3274
25.0	-2.4546	-1.4847	-1.1325	-.9611	-.7798	-.6488	-.5519	-.4681	-.3929	-.3249
30.0	-2.7257	-1.5916	-1.2091	-1.0115	-.7940	-.6586	-.5544	-.4664	-.3890	-.3199
35.0	-2.9825	-1.7082	-1.2772	-1.0544	-.8110	-.6634	-.5526	-.4611	-.3821	-.3125
40.0	-3.2216	-1.8131	-1.3359	-1.0893	-.8219	-.6631	-.5466	-.4523	-.3722	-.3027
45.0	-3.4399	-1.9053	-1.3849	-1.1162	-.8266	-.6578	-.5365	-.4401	-.3596	-.2906
50.0	-3.6351	-1.9839	-1.4236	-1.1347	-.8251	-.6475	-.5223	-.4245	-.3442	-.2763
55.0	-3.8050	-2.0481	-1.4519	-1.1447	-.8173	-.6322	-.5041	-.4057	-.3262	-.2599
60.0	-3.9481	-2.0975	-1.4695	-1.1463	-.8035	-.6122	-.4820	-.3839	-.3057	-.2415
65.0	-4.0629	-2.1315	-1.4762	-1.1395	-.7838	-.5876	-.4563	-.3591	-.2828	-.2212
70.0	-4.1485	-2.1500	-1.4722	-1.1243	-.7585	-.5587	-.4272	-.3315	-.2578	-.1993
75.0	-4.2041	-2.1529	-1.4575	-1.1011	-.7278	-.5260	-.3951	-.3015	-.2309	-.1759
80.0	-4.2292	-2.1401	-1.4323	-1.0700	-.6921	-.4899	-.3605	-.2696	-.2024	-.1512
85.0	-4.2237	-2.1119	-1.3969	-1.0315	-.6519	-.4508	-.3239	-.2364	-.1730	-.1258

α, deg \ θ_{xy}, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	-.2601	-.2092	-.1626	-.1209	-.0848	-.0547	-.0309	-.0138	-.0035
2.0	-.2612	-.2099	-.1630	-.1212	-.0849	-.0547	-.0310	-.0138	-.0035
4.0	-.2630	-.2111	-.1637	-.1216	-.0851	-.0548	-.0310	-.0138	-.0035
6.0	-.2646	-.2121	-.1643	-.1218	-.0852	-.0548	-.0309	-.0138	-.0034
8.0	-.2659	-.2127	-.1646	-.1219	-.0852	-.0548	-.0309	-.0137	-.0034
10.0	-.2668	-.2132	-.1647	-.1219	-.0851	-.0546	-.0308	-.0137	-.0034
12.0	-.2674	-.2133	-.1646	-.1217	-.0848	-.0544	-.0307	-.0136	-.0034
15.0	-.2676	-.2131	-.1641	-.1211	-.0843	-.0540	-.0304	-.0135	-.0034
20.0	-.2665	-.2114	-.1623	-.1194	-.0829	-.0530	-.0297	-.0132	-.0033
25.0	-.2633	-.2081	-.1592	-.1168	-.0809	-.0516	-.0289	-.0128	-.0032
30.0	-.2581	-.2032	-.1549	-.1133	-.0783	-.0498	-.0278	-.0122	-.0030
35.0	-.2509	-.1967	-.1495	-.1090	-.0750	-.0476	-.0265	-.0116	-.0029
40.0	-.2419	-.1888	-.1429	-.1038	-.0712	-.0450	-.0250	-.0110	-.0027
45.0	-.2309	-.1794	-.1352	-.0978	-.0669	-.0421	-.0233	-.0102	-.0025
50.0	-.2183	-.1687	-.1265	-.0911	-.0620	-.0389	-.0214	-.0093	-.0023
55.0	-.2039	-.1566	-.1168	-.0837	-.0567	-.0354	-.0194	-.0084	-.0020
60.0	-.1881	-.1434	-.1062	-.0756	-.0509	-.0316	-.0172	-.0074	-.0018
65.0	-.1707	-.1291	-.0949	-.0670	-.0448	-.0276	-.0149	-.0064	-.0015
70.0	-.1521	-.1138	-.0828	-.0579	-.0383	-.0234	-.0125	-.0053	-.0013
75.0	-.1324	-.0976	-.0700	-.0483	-.0315	-.0189	-.0100	-.0042	-.0010
80.0	-.1116	-.0807	-.0568	-.0384	-.0245	-.0144	-.0074	-.0030	-.0007
85.0	-.0902	-.0634	-.0431	-.0282	-.0173	-.0097	-.0048	-.0018	-.0004

TABLE IV.- CONTINUED

(c) C_Y. Continued.

$\phi_1 = 120^\circ$; $\phi_2 = 240^\circ$; $\beta = 2^\circ$

α, deg \ θ_{xy}, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	-.0933	-.0872	-.0841	-.0815	-.0758	-.0693	-.0622	-.0547	-.0471	-.0397
2.0	-.1038	-.0924	-.0875	-.0839	-.0773	-.0703	-.0628	-.0551	-.0474	-.0399
4.0	-.1247	-.1026	-.0941	-.0887	-.0802	-.0722	-.0642	-.0560	-.0481	-.0404
6.0	-.1454	-.1127	-.1006	-.0934	-.0830	-.0740	-.0654	-.0569	-.0486	-.0407
8.0	-.1659	-.1227	-.1070	-.0979	-.0857	-.0758	-.0665	-.0576	-.0491	-.0410
10.0	-.1862	-.1325	-.1133	-.1024	-.0883	-.0774	-.0676	-.0583	-.0496	-.0413
12.0	-.2063	-.1421	-.1194	-.1067	-.0908	-.0790	-.0686	-.0590	-.0499	-.0415
15.0	-.2360	-.1563	-.1283	-.1130	-.0943	-.0811	-.0699	-.0598	-.0504	-.0418
20.0	-.2840	-.1789	-.1424	-.1227	-.0996	-.0842	-.0717	-.0607	-.0509	-.0419
25.0	-.3298	-.2002	-.1553	-.1315	-.1041	-.0866	-.0729	-.0613	-.0509	-.0418
30.0	-.3731	-.2199	-.1671	-.1393	-.1079	-.0884	-.0736	-.0613	-.0506	-.0413
35.0	-.4136	-.2379	-.1776	-.1460	-.1108	-.0895	-.0737	-.0609	-.0499	-.0405
40.0	-.4509	-.2542	-.1868	-.1516	-.1129	-.0899	-.0733	-.0600	-.0489	-.0393
45.0	-.4848	-.2685	-.1946	-.1560	-.1141	-.0897	-.0723	-.0587	-.0474	-.0379
50.0	-.5150	-.2808	-.2008	-.1593	-.1145	-.0887	-.0707	-.0569	-.0456	-.0362
55.0	-.5413	-.2909	-.2056	-.1614	-.1140	-.0871	-.0687	-.0546	-.0434	-.0342
60.0	-.5635	-.2988	-.2087	-.1622	-.1126	-.0848	-.0660	-.0520	-.0410	-.0320
65.0	-.5813	-.3045	-.2103	-.1618	-.1104	-.0819	-.0629	-.0490	-.0382	-.0295
70.0	-.5948	-.3078	-.2103	-.1602	-.1073	-.0784	-.0593	-.0456	-.0351	-.0268
75.0	-.6037	-.3088	-.2087	-.1573	-.1034	-.0742	-.0553	-.0418	-.0317	-.0239
80.0	-.6081	-.3074	-.2055	-.1533	-.0987	-.0695	-.0508	-.0377	-.0281	-.0208
85.0	-.6078	-.3037	-.2007	-.1480	-.0933	-.0643	-.0460	-.0334	-.0243	-.0176

α, deg \ θ_{xy}, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	-.0327	-.0261	-.0202	-.0149	-.0104	-.0067	-.0038	-.0017	-.0004
2.0	-.0328	-.0262	-.0203	-.0150	-.0105	-.0067	-.0038	-.0017	-.0004
4.0	-.0331	-.0264	-.0204	-.0150	-.0105	-.0067	-.0038	-.0017	-.0004
6.0	-.0333	-.0266	-.0204	-.0151	-.0105	-.0067	-.0038	-.0017	-.0004
8.0	-.0335	-.0267	-.0205	-.0151	-.0105	-.0067	-.0038	-.0017	-.0004
10.0	-.0337	-.0267	-.0205	-.0151	-.0105	-.0067	-.0038	-.0017	-.0004
12.0	-.0338	-.0268	-.0205	-.0151	-.0105	-.0067	-.0038	-.0017	-.0004
15.0	-.0339	-.0268	-.0205	-.0150	-.0104	-.0066	-.0037	-.0016	-.0004
20.0	-.0339	-.0267	-.0203	-.0149	-.0103	-.0065	-.0037	-.0016	-.0004
25.0	-.0336	-.0263	-.0200	-.0146	-.0100	-.0064	-.0035	-.0016	-.0004
30.0	-.0330	-.0258	-.0195	-.0142	-.0097	-.0062	-.0034	-.0015	-.0004
35.0	-.0322	-.0250	-.0189	-.0137	-.0093	-.0059	-.0033	-.0014	-.0004
40.0	-.0311	-.0241	-.0181	-.0130	-.0089	-.0056	-.0031	-.0013	-.0003
45.0	-.0299	-.0230	-.0172	-.0123	-.0084	-.0052	-.0029	-.0013	-.0003
50.0	-.0283	-.0217	-.0161	-.0115	-.0078	-.0048	-.0027	-.0011	-.0003
55.0	-.0266	-.0202	-.0149	-.0106	-.0071	-.0044	-.0024	-.0010	-.0003
60.0	-.0247	-.0186	-.0137	-.0096	-.0064	-.0040	-.0021	-.0009	-.0002
65.0	-.0225	-.0169	-.0123	-.0086	-.0057	-.0035	-.0019	-.0008	-.0002
70.0	-.0203	-.0150	-.0108	-.0075	-.0049	-.0030	-.0016	-.0007	-.0002
75.0	-.0178	-.0130	-.0092	-.0063	-.0041	-.0024	-.0013	-.0005	-.0001
80.0	-.0152	-.0109	-.0076	-.0051	-.0032	-.0019	-.0009	-.0004	-.0001
85.0	-.0125	-.0087	-.0059	-.0038	-.0023	-.0013	-.0006	-.0002	-.0000

TABLE IV.- CONTINUED

(c) C_Y. Continued.

$\phi_1 = 120^0$; $\phi_2 = 240^0$; $\beta = 5^0$

θ_{xy}, α, deg / deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	-.2396	-.2171	-.2094	-.2028	-.1887	-.1725	-.1547	-.1361	-.1172	-.0988
2.0	-.2637	-.2299	-.2178	-.2088	-.1924	-.1750	-.1564	-.1373	-.1181	-.0994
4.0	-.3131	-.2554	-.2343	-.2208	-.1996	-.1797	-.1597	-.1395	-.1196	-.1004
6.0	-.3632	-.2805	-.2505	-.2324	-.2066	-.1843	-.1628	-.1416	-.1210	-.1014
8.0	-.4136	-.3053	-.2664	-.2438	-.2133	-.1886	-.1656	-.1435	-.1223	-.1022
10.0	-.4639	-.3298	-.2820	-.2549	-.2198	-.1927	-.1683	-.1452	-.1234	-.1029
12.0	-.5137	-.3538	-.2972	-.2657	-.2260	-.1966	-.1707	-.1468	-.1243	-.1034
15.0	-.5875	-.3890	-.3194	-.2812	-.2348	-.2019	-.1740	-.1488	-.1255	-.1040
20.0	-.7070	-.4453	-.3544	-.3054	-.2480	-.2096	-.1785	-.1512	-.1266	-.1044
25.0	-.8210	-.4982	-.3867	-.3273	-.2593	-.2157	-.1816	-.1525	-.1268	-.1039
30.0	-.9289	-.5474	-.4160	-.3467	-.2686	-.2201	-.1832	-.1526	-.1260	-.1027
35.0	-1.0296	-.5923	-.4422	-.3634	-.2759	-.2228	-.1835	-.1515	-.1243	-.1007
40.0	-1.1225	-.6328	-.4650	-.3774	-.2811	-.2239	-.1824	-.1493	-.1216	-.0979
45.0	-1.2069	-.6684	-.4843	-.3885	-.2841	-.2233	-.1800	-.1460	-.1180	-.0944
50.0	-1.2821	-.6989	-.4999	-.3966	-.2850	-.2209	-.1761	-.1416	-.1135	-.0902
55.0	-1.3475	-.7242	-.5117	-.4017	-.2838	-.2169	-.1709	-.1360	-.1081	-.0853
60.0	-1.4027	-.7439	-.5196	-.4038	-.2803	-.2112	-.1644	-.1295	-.1020	-.0797
65.0	-1.4472	-.7579	-.5235	-.4028	-.2748	-.2039	-.1567	-.1219	-.0950	-.0735
70.0	-1.4807	-.7662	-.5235	-.3987	-.2671	-.1951	-.1477	-.1134	-.0873	-.0668
75.0	-1.5029	-.7686	-.5195	-.3916	-.2574	-.1848	-.1377	-.1041	-.0789	-.0595
80.0	-1.5137	-.7652	-.5115	-.3815	-.2458	-.1730	-.1265	-.0940	-.0700	-.0518
85.0	-1.5129	-.7560	-.4996	-.3685	-.2322	-.1600	-.1145	-.0831	-.0605	-.0437

θ_{xy}, α, deg / deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	-.0813	-.0650	-.0503	-.0372	-.0260	-.0167	-.0094	-.0042	-.0010
2.0	-.0817	-.0653	-.0504	-.0373	-.0260	-.0167	-.0094	-.0042	-.0010
4.0	-.0824	-.0657	-.0507	-.0374	-.0261	-.0167	-.0094	-.0042	-.0010
6.0	-.0830	-.0661	-.0509	-.0376	-.0261	-.0168	-.0094	-.0042	-.0010
8.0	-.0835	-.0664	-.0510	-.0376	-.0262	-.0167	-.0094	-.0042	-.0010
10.0	-.0839	-.0666	-.0511	-.0376	-.0261	-.0167	-.0094	-.0042	-.0010
12.0	-.0842	-.0667	-.0511	-.0376	-.0261	-.0167	-.0094	-.0041	-.0010
15.0	-.0844	-.0667	-.0511	-.0375	-.0259	-.0166	-.0093	-.0041	-.0010
20.0	-.0843	-.0664	-.0506	-.0370	-.0256	-.0163	-.0091	-.0040	-.0010
25.0	-.0835	-.0655	-.0498	-.0363	-.0250	-.0158	-.0088	-.0039	-.0010
30.0	-.0822	-.0642	-.0486	-.0353	-.0242	-.0153	-.0085	-.0037	-.0009
35.0	-.0801	-.0623	-.0470	-.0340	-.0233	-.0147	-.0081	-.0036	-.0009
40.0	-.0775	-.0600	-.0450	-.0325	-.0221	-.0139	-.0077	-.0033	-.0008
45.0	-.0743	-.0572	-.0427	-.0307	-.0208	-.0130	-.0072	-.0031	-.0008
50.0	-.0705	-.0540	-.0401	-.0287	-.0194	-.0121	-.0066	-.0029	-.0007
55.0	-.0662	-.0504	-.0372	-.0264	-.0178	-.0110	-.0060	-.0026	-.0006
60.0	-.0614	-.0464	-.0340	-.0240	-.0160	-.0099	-.0053	-.0023	-.0005
65.0	-.0561	-.0420	-.0306	-.0214	-.0142	-.0086	-.0046	-.0020	-.0005
70.0	-.0504	-.0373	-.0269	-.0186	-.0122	-.0074	-.0039	-.0016	-.0004
75.0	-.0443	-.0324	-.0230	-.0157	-.0101	-.0060	-.0031	-.0013	-.0003
80.0	-.0379	-.0271	-.0189	-.0126	-.0080	-.0046	-.0024	-.0009	-.0002
85.0	-.0312	-.0217	-.0147	-.0095	-.0058	-.0032	-.0015	-.0006	-.0001

$\phi_1 = 120^0$; $\phi_2 = 240^0$; $\beta = 15^0$

θ_{xy}, α, deg / deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	-1.0383	-.7215	-.6300	-.5895	-.5432	-.4967	-.4455	-.3918	-.3376	-.2846
2.0	-1.0891	-.7509	-.6515	-.6062	-.5539	-.5038	-.4504	-.3952	-.3400	-.2862
4.0	-1.1944	-.8110	-.6946	-.6394	-.5747	-.5176	-.4598	-.4017	-.3444	-.2892
6.0	-1.3044	-.8723	-.7377	-.6721	-.5948	-.5307	-.4686	-.4077	-.3485	-.2919
8.0	-1.4181	-.9343	-.7806	-.7042	-.6142	-.5431	-.4769	-.4132	-.3521	-.2942
10.0	-1.5349	-.9967	-.8232	-.7356	-.6328	-.5549	-.4846	-.4182	-.3553	-.2962
12.0	-1.6540	-1.0592	-.8652	-.7663	-.6507	-.5660	-.4917	-.4227	-.3580	-.2978
15.0	-1.8355	-1.1526	-.9268	-.8106	-.6759	-.5814	-.5012	-.4284	-.3613	-.2995
20.0	-2.1404	-1.3051	-1.0251	-.8799	-.7180	-.6035	-.5139	-.4354	-.3646	-.3005
25.0	-2.4417	-1.4511	-1.1167	-.9427	-.7465	-.6210	-.5228	-.4391	-.3652	-.2993
30.0	-2.7331	-1.5883	-1.2003	-.9983	-.7734	-.6337	-.5276	-.4394	-.3629	-.2958
35.0	-3.0097	-1.7149	-1.2751	-1.0465	-.7944	-.6417	-.5285	-.4364	-.3579	-.2900
40.0	-3.2675	-1.8294	-1.3405	-1.0867	-.8094	-.6447	-.5253	-.4300	-.3502	-.2820
45.0	-3.5036	-1.9307	-1.3958	-1.1186	-.8182	-.6428	-.5182	-.4204	-.3398	-.2719
50.0	-3.7151	-2.0178	-1.4407	-1.1421	-.8207	-.6361	-.5071	-.4076	-.3269	-.2597
55.0	-3.9000	-2.0900	-1.4747	-1.1569	-.8171	-.6245	-.4921	-.3917	-.3114	-.2455
60.0	-4.0564	-2.1465	-1.4975	-1.1630	-.8072	-.6082	-.4734	-.3728	-.2936	-.2294
65.0	-4.1830	-2.1870	-1.5091	-1.1602	-.7912	-.5872	-.4511	-.3510	-.2735	-.2116
70.0	-4.2785	-2.2110	-1.5093	-1.1488	-.7692	-.5617	-.4253	-.3266	-.2513	-.1922
75.0	-4.3421	-2.2185	-1.4982	-1.1287	-.7414	-.5321	-.3964	-.2997	-.2273	-.1714
80.0	-4.3733	-2.2094	-1.4759	-1.1003	-.7083	-.4985	-.3644	-.2706	-.2015	-.1492
85.0	-4.3719	-2.1839	-1.4427	-1.0638	-.6700	-.4614	-.3300	-.2395	-.1742	-.1259

θ_{xy}, α, deg / deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	-.2341	-.1873	-.1447	-.1071	-.0748	-.0481	-.0271	-.0121	-.0030
2.0	-.2352	-.1880	-.1452	-.1074	-.0749	-.0481	-.0271	-.0121	-.0030
4.0	-.2372	-.1893	-.1460	-.1078	-.0752	-.0482	-.0272	-.0121	-.0030
6.0	-.2389	-.1903	-.1466	-.1081	-.0753	-.0483	-.0272	-.0121	-.0030
8.0	-.2404	-.1911	-.1470	-.1083	-.0753	-.0482	-.0271	-.0120	-.0030
10.0	-.2415	-.1917	-.1472	-.1083	-.0753	-.0481	-.0270	-.0120	-.0030
12.0	-.2423	-.1921	-.1473	-.1082	-.0751	-.0480	-.0269	-.0119	-.0030
15.0	-.2430	-.1921	-.1470	-.1079	-.0747	-.0477	-.0267	-.0118	-.0029
20.0	-.2427	-.1911	-.1457	-.1066	-.0736	-.0468	-.0262	-.0115	-.0029
25.0	-.2406	-.1886	-.1433	-.1045	-.0719	-.0456	-.0254	-.0112	-.0028
30.0	-.2366	-.1847	-.1398	-.1016	-.0697	-.0441	-.0245	-.0108	-.0027
35.0	-.2308	-.1794	-.1352	-.0979	-.0670	-.0422	-.0234	-.0102	-.0025
40.0	-.2232	-.1727	-.1296	-.0935	-.0637	-.0400	-.0221	-.0096	-.0024
45.0	-.2140	-.1647	-.1231	-.0883	-.0600	-.0375	-.0206	-.0090	-.0022
50.0	-.2031	-.1555	-.1155	-.0825	-.0558	-.0347	-.0190	-.0082	-.0020
55.0	-.1907	-.1450	-.1071	-.0761	-.0511	-.0317	-.0173	-.0074	-.0018
60.0	-.1768	-.1335	-.0979	-.0691	-.0461	-.0284	-.0154	-.0066	-.0016
65.0	-.1616	-.1209	-.0880	-.0615	-.0408	-.0249	-.0134	-.0057	-.0013
70.0	-.1451	-.1074	-.0773	-.0535	-.0351	-.0212	-.0112	-.0047	-.0011
75.0	-.1276	-.0931	-.0661	-.0451	-.0291	-.0173	-.0090	-.0037	-.0009
80.0	-.1091	-.0781	-.0544	-.0364	-.0230	-.0133	-.0068	-.0027	-.0006
85.0	-.0897	-.0625	-.0423	-.0273	-.0166	-.0092	-.0045	-.0017	-.0003

TABLE IV.- CONTINUED

(c) C_Y. Continued.

$\phi_1 = 135^o$; $\phi_2 = 225^o$; $\beta = 2^o$

θ_{xy}, deg / α, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	-.0850	-.0788	-.0758	-.0731	-.0675	-.0613	-.0545	-.0474	-.0405	-.0338
2.0	-.0956	-.0841	-.0792	-.0756	-.0690	-.0623	-.0551	-.0479	-.0408	-.0340
4.0	-.1168	-.0944	-.0859	-.0804	-.0720	-.0642	-.0565	-.0488	-.0414	-.0344
6.0	-.1378	-.1047	-.0925	-.0852	-.0748	-.0660	-.0577	-.0497	-.0420	-.0348
8.0	-.1586	-.1148	-.0990	-.0898	-.0776	-.0678	-.0589	-.0505	-.0425	-.0351
10.0	-.1793	-.1248	-.1054	-.0944	-.0802	-.0695	-.0600	-.0512	-.0430	-.0354
12.0	-.1997	-.1346	-.1116	-.0988	-.0828	-.0711	-.0610	-.0518	-.0434	-.0357
15.0	-.2298	-.1491	-.1207	-.1052	-.0865	-.0734	-.0624	-.0527	-.0439	-.0360
20.0	-.2787	-.1722	-.1352	-.1153	-.0920	-.0767	-.0644	-.0538	-.0445	-.0363
25.0	-.3254	-.1940	-.1486	-.1245	-.0969	-.0794	-.0659	-.0546	-.0448	-.0363
30.0	-.3696	-.2144	-.1609	-.1327	-.1010	-.0815	-.0668	-.0549	-.0447	-.0360
35.0	-.4111	-.2331	-.1720	-.1399	-.1044	-.0830	-.0673	-.0548	-.0443	-.0354
40.0	-.4494	-.2500	-.1818	-.1460	-.1069	-.0838	-.0673	-.0543	-.0436	-.0346
45.0	-.4843	-.2651	-.1901	-.1511	-.1087	-.0840	-.0667	-.0533	-.0425	-.0335
50.0	-.5155	-.2781	-.1971	-.1550	-.1096	-.0836	-.0656	-.0520	-.0411	-.0322
55.0	-.5427	-.2890	-.2025	-.1577	-.1097	-.0826	-.0641	-.0502	-.0394	-.0306
60.0	-.5659	-.2977	-.2064	-.1592	-.1089	-.0809	-.0620	-.0481	-.0373	-.0288
65.0	-.5847	-.3041	-.2087	-.1595	-.1073	-.0786	-.0595	-.0456	-.0350	-.0267
70.0	-.5991	-.3083	-.2094	-.1586	-.1049	-.0757	-.0565	-.0428	-.0325	-.0245
75.0	-.6089	-.3101	-.2086	-.1564	-.1017	-.0722	-.0531	-.0396	-.0296	-.0220
80.0	-.6141	-.3095	-.2061	-.1531	-.0978	-.0682	-.0493	-.0362	-.0266	-.0195
85.0	-.6146	-.3065	-.2021	-.1487	-.0931	-.0636	-.0451	-.0324	-.0234	-.0167

θ_{xy}, deg / α, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	-.0275	-.0218	-.0167	-.0123	-.0085	-.0055	-.0031	-.0014	-.0003
2.0	-.0277	-.0219	-.0168	-.0123	-.0085	-.0055	-.0031	-.0014	-.0003
4.0	-.0280	-.0221	-.0169	-.0124	-.0086	-.0055	-.0031	-.0014	-.0003
6.0	-.0282	-.0223	-.0170	-.0124	-.0086	-.0055	-.0031	-.0014	-.0003
8.0	-.0284	-.0224	-.0171	-.0125	-.0086	-.0055	-.0031	-.0014	-.0003
10.0	-.0286	-.0225	-.0171	-.0125	-.0086	-.0055	-.0031	-.0014	-.0003
12.0	-.0287	-.0225	-.0171	-.0125	-.0086	-.0055	-.0030	-.0013	-.0003
15.0	-.0289	-.0226	-.0171	-.0125	-.0086	-.0054	-.0030	-.0013	-.0003
20.0	-.0289	-.0225	-.0170	-.0123	-.0085	-.0053	-.0030	-.0013	-.0003
25.0	-.0288	-.0223	-.0168	-.0121	-.0083	-.0052	-.0029	-.0013	-.0003
30.0	-.0284	-.0219	-.0164	-.0118	-.0080	-.0050	-.0028	-.0012	-.0003
35.0	-.0278	-.0214	-.0159	-.0114	-.0077	-.0048	-.0027	-.0012	-.0003
40.0	-.0270	-.0207	-.0153	-.0109	-.0074	-.0046	-.0025	-.0011	-.0003
45.0	-.0260	-.0198	-.0146	-.0104	-.0070	-.0043	-.0024	-.0010	-.0002
50.0	-.0248	-.0187	-.0138	-.0097	-.0065	-.0040	-.0022	-.0009	-.0002
55.0	-.0234	-.0176	-.0128	-.0090	-.0060	-.0037	-.0020	-.0008	-.0002
60.0	-.0219	-.0163	-.0118	-.0082	-.0054	-.0033	-.0018	-.0007	-.0002
65.0	-.0201	-.0148	-.0107	-.0074	-.0048	-.0029	-.0015	-.0006	-.0002
70.0	-.0182	-.0133	-.0094	-.0065	-.0042	-.0025	-.0013	-.0005	-.0001
75.0	-.0162	-.0117	-.0082	-.0055	-.0035	-.0021	-.0011	-.0004	-.0001
80.0	-.0140	-.0099	-.0068	-.0045	-.0028	-.0016	-.0008	-.0003	-.0001
85.0	-.0118	-.0081	-.0054	-.0035	-.0021	-.0011	-.0005	-.0002	-.0000

TABLE IV.- CONTINUED

(c) C_Y. Continued.

$\beta_1 = 135^\circ$; $\beta_2 = 225^\circ$; $\beta = 5^\circ$

α, deg \ θ_{xy}, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	-.2155	-.1963	-.1886	-.1820	-.1681	-.1525	-.1356	-.1181	-.1007	-.0841
2.0	-.2404	-.2093	-.1970	-.1881	-.1719	-.1550	-.1373	-.1193	-.1016	-.0847
4.0	-.2914	-.2351	-.2138	-.2002	-.1792	-.1598	-.1406	-.1215	-.1031	-.0857
6.0	-.3431	-.2606	-.2302	-.2121	-.1863	-.1644	-.1437	-.1236	-.1045	-.0867
8.0	-.3949	-.2858	-.2464	-.2236	-.1931	-.1688	-.1466	-.1256	-.1058	-.0875
10.0	-.4462	-.3107	-.2623	-.2350	-.1997	-.1730	-.1493	-.1274	-.1070	-.0882
12.0	-.4971	-.3351	-.2779	-.2460	-.2061	-.1770	-.1519	-.1290	-.1080	-.0889
15.0	-.5722	-.3711	-.3006	-.2620	-.2152	-.1826	-.1554	-.1312	-.1093	-.0896
20.0	-.6937	-.4287	-.3366	-.2870	-.2291	-.1908	-.1603	-.1340	-.1109	-.0903
25.0	-.8100	-.4830	-.3700	-.3098	-.2412	-.1976	-.1640	-.1359	-.1115	-.0902
30.0	-.9202	-.5337	-.4006	-.3303	-.2514	-.2028	-.1664	-.1366	-.1113	-.0895
35.0	-1.0233	-.5803	-.4281	-.3482	-.2598	-.2065	-.1676	-.1364	-.1103	-.0882
40.0	-1.1187	-.6224	-.4524	-.3636	-.2662	-.2087	-.1675	-.1351	-.1084	-.0861
45.0	-1.2055	-.6599	-.4733	-.3761	-.2705	-.2092	-.1661	-.1327	-.1057	-.0834
50.0	-1.2832	-.6923	-.4906	-.3858	-.2728	-.2081	-.1634	-.1294	-.1022	-.0801
55.0	-1.3510	-.7194	-.5041	-.3925	-.2730	-.2055	-.1595	-.1251	-.0980	-.0761
60.0	-1.4087	-.7411	-.5138	-.3963	-.2711	-.2013	-.1544	-.1198	-.0929	-.0716
65.0	-1.4555	-.7571	-.5195	-.3970	-.2672	-.1956	-.1481	-.1136	-.0872	-.0665
70.0	-1.4914	-.7674	-.5213	-.3947	-.2612	-.1884	-.1407	-.1065	-.0808	-.0609
75.0	-1.5158	-.7718	-.5192	-.3895	-.2533	-.1797	-.1322	-.0987	-.0738	-.0549
80.0	-1.5287	-.7704	-.5131	-.3812	-.2434	-.1697	-.1227	-.0901	-.0662	-.0484
85.0	-1.5300	-.7631	-.5031	-.3701	-.2317	-.1584	-.1123	-.0808	-.0582	-.0416

α, deg \ θ_{xy}, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	-.0685	-.0543	-.0417	-.0306	-.0212	-.0136	-.0076	-.0034	-.0008
2.0	-.0689	-.0546	-.0418	-.0307	-.0213	-.0136	-.0076	-.0034	-.0008
4.0	-.0696	-.0550	-.0421	-.0308	-.0214	-.0136	-.0076	-.0034	-.0008
6.0	-.0702	-.0554	-.0423	-.0310	-.0214	-.0136	-.0076	-.0034	-.0008
8.0	-.0707	-.0557	-.0425	-.0310	-.0214	-.0136	-.0076	-.0034	-.0008
10.0	-.0712	-.0560	-.0426	-.0311	-.0214	-.0136	-.0076	-.0034	-.0008
12.0	-.0715	-.0561	-.0426	-.0311	-.0214	-.0136	-.0076	-.0033	-.0008
15.0	-.0719	-.0563	-.0426	-.0310	-.0213	-.0135	-.0075	-.0033	-.0008
20.0	-.0721	-.0561	-.0424	-.0307	-.0210	-.0133	-.0074	-.0032	-.0008
25.0	-.0717	-.0556	-.0418	-.0302	-.0206	-.0130	-.0072	-.0031	-.0008
30.0	-.0707	-.0546	-.0409	-.0294	-.0200	-.0126	-.0069	-.0030	-.0007
35.0	-.0693	-.0532	-.0397	-.0284	-.0193	-.0121	-.0066	-.0029	-.0007
40.0	-.0673	-.0514	-.0382	-.0272	-.0184	-.0114	-.0063	-.0027	-.0007
45.0	-.0648	-.0492	-.0364	-.0258	-.0173	-.0108	-.0059	-.0025	-.0006
50.0	-.0618	-.0467	-.0343	-.0242	-.0162	-.0100	-.0054	-.0023	-.0006
55.0	-.0583	-.0438	-.0319	-.0224	-.0149	-.0091	-.0049	-.0021	-.0005
60.0	-.0544	-.0405	-.0293	-.0204	-.0135	-.0082	-.0044	-.0019	-.0004
65.0	-.0501	-.0370	-.0265	-.0183	-.0120	-.0072	-.0038	-.0016	-.0004
70.0	-.0454	-.0331	-.0235	-.0161	-.0104	-.0062	-.0033	-.0013	-.0003
75.0	-.0403	-.0290	-.0203	-.0137	-.0087	-.0051	-.0026	-.0011	-.0002
80.0	-.0349	-.0247	-.0170	-.0112	-.0070	-.0040	-.0020	-.0008	-.0002
85.0	-.0293	-.0202	-.0135	-.0086	-.0052	-.0028	-.0014	-.0005	-.0001

$\beta_1 = 135^\circ$; $\beta_2 = 225^\circ$; $\beta = 15^\circ$

α, deg \ θ_{xy}, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	-.8906	-.6320	-.5590	-.5263	-.4841	-.4392	-.3904	-.3400	-.2901	-.2422
2.0	-.9429	-.6625	-.5811	-.5435	-.4949	-.4463	-.3953	-.3434	-.2925	-.2438
4.0	-1.0519	-.7248	-.6257	-.5776	-.5159	-.4601	-.4047	-.3499	-.2969	-.2468
6.0	-1.1661	-.7884	-.6704	-.6112	-.5363	-.4734	-.4136	-.3560	-.3010	-.2495
8.0	-1.2846	-.8530	-.7149	-.6443	-.5561	-.4861	-.4221	-.3616	-.3047	-.2519
10.0	-1.4066	-.9181	-.7591	-.6767	-.5752	-.4983	-.4300	-.3668	-.3081	-.2540
12.0	-1.5312	-.9834	-.8027	-.7084	-.5935	-.5098	-.4374	-.3716	-.3111	-.2558
15.0	-1.7214	-1.0810	-.8669	-.7543	-.6197	-.5259	-.4475	-.3778	-.3148	-.2579
20.0	-2.0414	-1.2407	-.9696	-.8263	-.6596	-.5495	-.4616	-.3860	-.3192	-.2599
25.0	-2.3578	-1.3938	-1.0654	-.8921	-.6944	-.5689	-.4722	-.3912	-.3211	-.2599
30.0	-2.6638	-1.5380	-1.1535	-.9510	-.7240	-.5840	-.4792	-.3934	-.3206	-.2578
35.0	-2.9543	-1.6713	-1.2328	-1.0027	-.7480	-.5947	-.4825	-.3926	-.3176	-.2539
40.0	-3.2251	-1.7924	-1.3028	-1.0468	-.7664	-.6008	-.4822	-.3889	-.3122	-.2480
45.0	-3.4731	-1.9001	-1.3628	-1.0829	-.7789	-.6023	-.4781	-.3822	-.3045	-.2402
50.0	-3.6956	-1.9934	-1.4125	-1.1108	-.7855	-.5993	-.4705	-.3725	-.2944	-.2306
55.0	-3.8906	-2.0715	-1.4514	-1.1302	-.7861	-.5917	-.4593	-.3601	-.2821	-.2192
60.0	-4.0562	-2.1339	-1.4793	-1.1410	-.7807	-.5796	-.4446	-.3449	-.2676	-.2061
65.0	-4.1911	-2.1801	-1.4959	-1.1432	-.7694	-.5631	-.4265	-.3271	-.2511	-.1915
70.0	-4.2942	-2.2097	-1.5012	-1.1366	-.7522	-.5423	-.4051	-.3068	-.2327	-.1755
75.0	-4.3646	-2.2224	-1.4950	-1.1214	-.7293	-.5174	-.3807	-.2841	-.2125	-.1580
80.0	-4.4018	-2.2183	-1.4774	-1.0976	-.7009	-.4886	-.3533	-.2593	-.1907	-.1394
85.0	-4.4056	-2.1972	-1.4486	-1.0655	-.6671	-.4560	-.3233	-.2325	-.1675	-.1198

α, deg \ θ_{xy}, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	-.1974	-.1565	-.1199	-.0881	-.0611	-.0391	-.0220	-.0097	-.0024
2.0	-.1984	-.1572	-.1204	-.0884	-.0613	-.0391	-.0220	-.0097	-.0024
4.0	-.2004	-.1584	-.1212	-.0888	-.0615	-.0392	-.0220	-.0098	-.0024
6.0	-.2022	-.1595	-.1218	-.0891	-.0617	-.0393	-.0220	-.0097	-.0024
8.0	-.2037	-.1604	-.1223	-.0894	-.0617	-.0393	-.0220	-.0097	-.0024
10.0	-.2050	-.1611	-.1226	-.0895	-.0617	-.0392	-.0219	-.0097	-.0024
12.0	-.2060	-.1616	-.1228	-.0895	-.0617	-.0391	-.0219	-.0096	-.0024
15.0	-.2070	-.1620	-.1228	-.0893	-.0614	-.0389	-.0217	-.0096	-.0024
20.0	-.2075	-.1616	-.1220	-.0884	-.0606	-.0383	-.0213	-.0093	-.0023
25.0	-.2064	-.1600	-.1203	-.0869	-.0593	-.0374	-.0207	-.0091	-.0022
30.0	-.2037	-.1572	-.1177	-.0847	-.0576	-.0362	-.0200	-.0087	-.0021
35.0	-.1995	-.1532	-.1142	-.0818	-.0555	-.0347	-.0191	-.0083	-.0020
40.0	-.1937	-.1481	-.1099	-.0784	-.0529	-.0330	-.0181	-.0078	-.0019
45.0	-.1865	-.1418	-.1047	-.0743	-.0499	-.0310	-.0169	-.0073	-.0018
50.0	-.1779	-.1344	-.0987	-.0697	-.0466	-.0288	-.0156	-.0067	-.0016
55.0	-.1679	-.1260	-.0919	-.0645	-.0429	-.0263	-.0142	-.0061	-.0015
60.0	-.1566	-.1166	-.0845	-.0589	-.0388	-.0237	-.0127	-.0054	-.0013
65.0	-.1442	-.1064	-.0764	-.0528	-.0345	-.0208	-.0111	-.0046	-.0011
70.0	-.1306	-.0953	-.0677	-.0463	-.0299	-.0179	-.0094	-.0039	-.0009
75.0	-.1161	-.0836	-.0585	-.0394	-.0251	-.0147	-.0076	-.0031	-.0007
80.0	-.1006	-.0712	-.0489	-.0322	-.0201	-.0115	-.0058	-.0023	-.0005
85.0	-.0844	-.0582	-.0389	-.0248	-.0149	-.0082	-.0039	-.0014	-.0003

TABLE IV.- CONTINUED

(c) C_Y. Continued.

$\phi_1 = 150^\circ$; $\phi_2 = 210^\circ$; $\beta = 2^\circ$

θ_{xy}, deg / α, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	-.0694	-.0637	-.0609	-.0584	-.0533	-.0476	-.0416	-.0356	-.0299	-.0245
2.0	-.0791	-.0685	-.0640	-.0606	-.0546	-.0485	-.0422	-.0360	-.0301	-.0247
4.0	-.0985	-.0780	-.0701	-.0651	-.0573	-.0502	-.0434	-.0368	-.0307	-.0250
6.0	-.1177	-.0874	-.0761	-.0694	-.0599	-.0519	-.0445	-.0376	-.0312	-.0254
8.0	-.1368	-.0966	-.0821	-.0737	-.0624	-.0535	-.0456	-.0383	-.0316	-.0257
10.0	-.1557	-.1058	-.0880	-.0778	-.0648	-.0550	-.0466	-.0389	-.0321	-.0259
12.0	-.1744	-.1148	-.0937	-.0819	-.0672	-.0565	-.0475	-.0395	-.0325	-.0262
15.0	-.2021	-.1281	-.1021	-.0878	-.0705	-.0586	-.0488	-.0404	-.0330	-.0265
20.0	-.2470	-.1495	-.1155	-.0972	-.0757	-.0617	-.0507	-.0415	-.0336	-.0268
25.0	-.2900	-.1697	-.1280	-.1058	-.0804	-.0643	-.0522	-.0423	-.0340	-.0269
30.0	-.3308	-.1886	-.1395	-.1136	-.0844	-.0665	-.0533	-.0428	-.0341	-.0269
35.0	-.3691	-.2061	-.1500	-.1205	-.0877	-.0681	-.0540	-.0430	-.0340	-.0266
40.0	-.4046	-.2220	-.1593	-.1265	-.0904	-.0693	-.0543	-.0428	-.0336	-.0261
45.0	-.4370	-.2362	-.1674	-.1315	-.0925	-.0699	-.0542	-.0423	-.0329	-.0254
50.0	-.4661	-.2486	-.1743	-.1356	-.0938	-.0699	-.0536	-.0415	-.0320	-.0245
55.0	-.4916	-.2592	-.1798	-.1386	-.0944	-.0695	-.0527	-.0404	-.0309	-.0235
60.0	-.5134	-.2677	-.1839	-.1405	-.0942	-.0685	-.0513	-.0389	-.0295	-.0222
65.0	-.5313	-.2743	-.1867	-.1414	-.0934	-.0670	-.0496	-.0372	-.0279	-.0208
70.0	-.5451	-.2787	-.1880	-.1412	-.0919	-.0649	-.0475	-.0352	-.0261	-.0192
75.0	-.5548	-.2810	-.1879	-.1400	-.0896	-.0624	-.0450	-.0329	-.0241	-.0175
80.0	-.5602	-.2812	-.1864	-.1377	-.0867	-.0594	-.0422	-.0304	-.0219	-.0157
85.0	-.5614	-.2792	-.1834	-.1343	-.0831	-.0560	-.0390	-.0276	-.0195	-.0137

θ_{xy}, deg / α, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	-.0196	-.0153	-.0116	-.0084	-.0058	-.0037	-.0020	-.0009	-.0002
2.0	-.0198	-.0154	-.0116	-.0084	-.0058	-.0037	-.0020	-.0009	-.0002
4.0	-.0200	-.0156	-.0117	-.0085	-.0058	-.0037	-.0021	-.0009	-.0002
6.0	-.0202	-.0157	-.0118	-.0085	-.0058	-.0037	-.0021	-.0009	-.0002
8.0	-.0204	-.0158	-.0119	-.0086	-.0059	-.0037	-.0021	-.0009	-.0002
10.0	-.0206	-.0159	-.0119	-.0086	-.0059	-.0037	-.0020	-.0009	-.0002
12.0	-.0207	-.0160	-.0120	-.0086	-.0059	-.0037	-.0020	-.0009	-.0002
15.0	-.0209	-.0161	-.0120	-.0086	-.0058	-.0037	-.0020	-.0009	-.0002
20.0	-.0210	-.0161	-.0119	-.0085	-.0058	-.0036	-.0020	-.0009	-.0002
25.0	-.0210	-.0160	-.0118	-.0084	-.0057	-.0035	-.0019	-.0008	-.0002
30.0	-.0208	-.0158	-.0116	-.0082	-.0055	-.0034	-.0019	-.0008	-.0002
35.0	-.0205	-.0154	-.0113	-.0080	-.0053	-.0033	-.0018	-.0008	-.0002
40.0	-.0200	-.0150	-.0109	-.0077	-.0051	-.0031	-.0017	-.0007	-.0002
45.0	-.0193	-.0144	-.0104	-.0073	-.0048	-.0030	-.0016	-.0007	-.0002
50.0	-.0185	-.0137	-.0099	-.0069	-.0045	-.0028	-.0015	-.0006	-.0002
55.0	-.0176	-.0129	-.0093	-.0064	-.0042	-.0025	-.0013	-.0006	-.0001
60.0	-.0165	-.0121	-.0086	-.0059	-.0038	-.0023	-.0012	-.0005	-.0001
65.0	-.0153	-.0111	-.0078	-.0053	-.0034	-.0020	-.0011	-.0004	-.0001
70.0	-.0140	-.0100	-.0070	-.0047	-.0030	-.0017	-.0009	-.0004	-.0001
75.0	-.0126	-.0089	-.0061	-.0040	-.0025	-.0015	-.0007	-.0003	-.0001
80.0	-.0111	-.0077	-.0052	-.0034	-.0021	-.0012	-.0006	-.0002	-.0000
85.0	-.0095	-.0064	-.0042	-.0027	-.0016	-.0008	-.0004	-.0001	-.0000

TABLE IV.- CONTINUED

(c) C_Y. Concluded.

$\beta_1 = 150^0$; $\beta_2 = 210^0$; $\beta = 5^0$

θ_{xy}, deg / α, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	-.1734	-.1586	-.1515	-.1454	-.1326	-.1185	-.1036	-.0887	-.0743	-.0610
2.0	-.1971	-.1705	-.1592	-.1509	-.1360	-.1207	-.1051	-.0897	-.0750	-.0615
4.0	-.2451	-.1941	-.1745	-.1620	-.1426	-.1250	-.1080	-.0917	-.0764	-.0624
6.0	-.2930	-.2175	-.1895	-.1728	-.1490	-.1292	-.1108	-.0935	-.0776	-.0632
8.0	-.3405	-.2406	-.2044	-.1834	-.1553	-.1332	-.1134	-.0953	-.0788	-.0639
10.0	-.3876	-.2634	-.2189	-.1938	-.1613	-.1370	-.1159	-.0969	-.0798	-.0646
12.0	-.4342	-.2859	-.2333	-.2039	-.1672	-.1407	-.1183	-.0984	-.0808	-.0652
15.0	-.5032	-.3190	-.2542	-.2187	-.1756	-.1459	-.1215	-.1005	-.0820	-.0659
20.0	-.6149	-.3721	-.2875	-.2419	-.1886	-.1536	-.1262	-.1033	-.0836	-.0667
25.0	-.7220	-.4224	-.3186	-.2633	-.2001	-.1602	-.1300	-.1053	-.0846	-.0671
30.0	-.8236	-.4695	-.3473	-.2827	-.2100	-.1655	-.1327	-.1065	-.0849	-.0669
35.0	-.9189	-.5130	-.3734	-.2999	-.2184	-.1696	-.1345	-.1069	-.0846	-.0662
40.0	-1.0072	-.5526	-.3966	-.3149	-.2252	-.1724	-.1352	-.1065	-.0836	-.0649
45.0	-1.0879	-.5880	-.4168	-.3274	-.2302	-.1739	-.1349	-.1053	-.0820	-.0632
50.0	-1.1602	-.6190	-.4338	-.3375	-.2334	-.1741	-.1335	-.1033	-.0797	-.0611
55.0	-1.2238	-.6452	-.4476	-.3450	-.2349	-.1729	-.1312	-.1005	-.0769	-.0584
60.0	-1.2780	-.6665	-.4579	-.3499	-.2346	-.1705	-.1278	-.0969	-.0735	-.0553
65.0	-1.3225	-.6827	-.4647	-.3521	-.2325	-.1667	-.1235	-.0926	-.0695	-.0518
70.0	-1.3569	-.6938	-.4680	-.3516	-.2287	-.1616	-.1182	-.0876	-.0650	-.0479
75.0	-1.3810	-.6996	-.4677	-.3485	-.2231	-.1554	-.1120	-.0819	-.0599	-.0436
80.0	-1.3946	-.7000	-.4639	-.3427	-.2158	-.1479	-.1050	-.0756	-.0545	-.0390
85.0	-1.3976	-.6951	-.4566	-.3343	-.2068	-.1393	-.0972	-.0687	-.0486	-.0341

θ_{xy}, deg / α, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	-.0489	-.0382	-.0289	-.0210	-.0144	-.0091	-.0051	-.0022	-.0006
2.0	-.0492	-.0384	-.0290	-.0210	-.0144	-.0091	-.0051	-.0022	-.0006
4.0	-.0498	-.0387	-.0292	-.0212	-.0145	-.0092	-.0051	-.0023	-.0006
6.0	-.0503	-.0391	-.0294	-.0213	-.0145	-.0092	-.0051	-.0022	-.0006
8.0	-.0508	-.0394	-.0296	-.0213	-.0146	-.0092	-.0051	-.0022	-.0006
10.0	-.0512	-.0396	-.0297	-.0214	-.0146	-.0092	-.0051	-.0022	-.0006
12.0	-.0515	-.0398	-.0298	-.0214	-.0146	-.0092	-.0051	-.0022	-.0006
15.0	-.0519	-.0400	-.0298	-.0214	-.0145	-.0091	-.0050	-.0022	-.0005
20.0	-.0523	-.0400	-.0297	-.0213	-.0144	-.0090	-.0050	-.0022	-.0005
25.0	-.0522	-.0398	-.0294	-.0209	-.0141	-.0088	-.0048	-.0021	-.0005
30.0	-.0518	-.0392	-.0289	-.0205	-.0138	-.0085	-.0047	-.0020	-.0005
35.0	-.0509	-.0384	-.0281	-.0199	-.0133	-.0082	-.0045	-.0019	-.0005
40.0	-.0497	-.0373	-.0272	-.0191	-.0127	-.0078	-.0042	-.0018	-.0004
45.0	-.0481	-.0358	-.0260	-.0182	-.0120	-.0074	-.0040	-.0017	-.0004
50.0	-.0461	-.0342	-.0246	-.0171	-.0113	-.0069	-.0037	-.0016	-.0004
55.0	-.0438	-.0322	-.0231	-.0159	-.0104	-.0063	-.0034	-.0014	-.0003
60.0	-.0411	-.0300	-.0213	-.0146	-.0095	-.0057	-.0030	-.0013	-.0003
65.0	-.0382	-.0276	-.0194	-.0132	-.0085	-.0050	-.0026	-.0011	-.0003
70.0	-.0349	-.0250	-.0174	-.0117	-.0074	-.0044	-.0022	-.0009	-.0002
75.0	-.0314	-.0221	-.0152	-.0100	-.0063	-.0036	-.0018	-.0007	-.0002
80.0	-.0276	-.0191	-.0129	-.0084	-.0051	-.0029	-.0014	-.0005	-.0001
85.0	-.0236	-.0160	-.0105	-.0066	-.0039	-.0021	-.0010	-.0004	-.0001

$\beta_1 = 150^0$; $\beta_2 = 210^0$; $\beta = 15^0$

θ_{xy}, deg / α, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	-.6569	-.4864	-.4405	-.4187	-.3818	-.3412	-.2983	-.2553	-.2140	-.1756
2.0	-.7068	-.5157	-.4616	-.4347	-.3915	-.3476	-.3026	-.2583	-.2160	-.1770
4.0	-.8116	-.5757	-.5040	-.4663	-.4106	-.3600	-.3110	-.2640	-.2199	-.1795
6.0	-.9221	-.6371	-.5465	-.4975	-.4291	-.3720	-.3190	-.2693	-.2235	-.1819
8.0	-1.0373	-.6995	-.5887	-.5280	-.4471	-.3835	-.3266	-.2744	-.2268	-.1841
10.0	-1.1562	-.7623	-.6305	-.5579	-.4645	-.3945	-.3338	-.2791	-.2299	-.1860
12.0	-1.2779	-.8252	-.6717	-.5871	-.4814	-.4051	-.3406	-.2835	-.2326	-.1877
15.0	-1.4634	-.9190	-.7319	-.6296	-.5056	-.4200	-.3500	-.2894	-.2362	-.1898
20.0	-1.7743	-1.0714	-.8279	-.6965	-.5429	-.4423	-.3635	-.2974	-.2408	-.1922
25.0	-2.0794	-1.2163	-.9175	-.7581	-.5760	-.4612	-.3742	-.3032	-.2436	-.1931
30.0	-2.3714	-1.3519	-1.0001	-.8139	-.6048	-.4766	-.3822	-.3067	-.2445	-.1925
35.0	-2.6459	-1.4772	-1.0752	-.8636	-.6289	-.4884	-.3872	-.3079	-.2435	-.1905
40.0	-2.9002	-1.5912	-1.1420	-.9066	-.6483	-.4965	-.3892	-.3067	-.2407	-.1870
45.0	-3.1324	-1.6932	-1.2002	-.9428	-.6627	-.5008	-.3883	-.3032	-.2360	-.1821
50.0	-3.3408	-1.7823	-1.2492	-.9718	-.6721	-.5013	-.3844	-.2973	-.2296	-.1758
55.0	-3.5237	-1.8578	-1.2887	-.9934	-.6764	-.4979	-.3777	-.2893	-.2214	-.1682
60.0	-3.6799	-1.9191	-1.3184	-1.0074	-.6755	-.4908	-.3680	-.2790	-.2115	-.1593
65.0	-3.8080	-1.9659	-1.3381	-1.0138	-.6695	-.4800	-.3555	-.2665	-.2000	-.1492
70.0	-3.9071	-1.9977	-1.3476	-1.0124	-.6584	-.4654	-.3404	-.2521	-.1870	-.1379
75.0	-3.9766	-2.0143	-1.3468	-1.0033	-.6423	-.4474	-.3226	-.2357	-.1726	-.1256
80.0	-4.0157	-2.0155	-1.3358	-.9867	-.6212	-.4259	-.3024	-.2176	-.1568	-.1124
85.0	-4.0243	-2.0015	-1.3146	-.9625	-.5955	-.4012	-.2799	-.1978	-.1399	-.0983

θ_{xy}, deg / α, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	-.1408	-.1099	-.0831	-.0603	-.0414	-.0263	-.0147	-.0065	-.0016
2.0	-.1417	-.1105	-.0835	-.0605	-.0415	-.0263	-.0147	-.0065	-.0016
4.0	-.1434	-.1116	-.0841	-.0609	-.0417	-.0264	-.0147	-.0065	-.0016
6.0	-.1449	-.1125	-.0847	-.0612	-.0419	-.0264	-.0147	-.0065	-.0016
8.0	-.1462	-.1133	-.0851	-.0614	-.0420	-.0265	-.0147	-.0065	-.0016
10.0	-.1474	-.1140	-.0855	-.0616	-.0420	-.0265	-.0147	-.0064	-.0016
12.0	-.1484	-.1145	-.0857	-.0617	-.0420	-.0264	-.0146	-.0064	-.0016
15.0	-.1496	-.1151	-.0859	-.0616	-.0419	-.0263	-.0145	-.0064	-.0016
20.0	-.1505	-.1152	-.0856	-.0612	-.0414	-.0259	-.0143	-.0062	-.0015
25.0	-.1504	-.1146	-.0847	-.0603	-.0407	-.0253	-.0139	-.0061	-.0015
30.0	-.1491	-.1130	-.0832	-.0590	-.0396	-.0246	-.0134	-.0058	-.0014
35.0	-.1467	-.1106	-.0810	-.0572	-.0382	-.0236	-.0129	-.0056	-.0014
40.0	-.1431	-.1073	-.0782	-.0549	-.0366	-.0225	-.0122	-.0052	-.0013
45.0	-.1385	-.1032	-.0749	-.0523	-.0346	-.0212	-.0114	-.0049	-.0012
50.0	-.1328	-.0984	-.0709	-.0492	-.0324	-.0197	-.0106	-.0045	-.0011
55.0	-.1261	-.0927	-.0664	-.0458	-.0300	-.0181	-.0097	-.0041	-.0010
60.0	-.1184	-.0864	-.0614	-.0420	-.0273	-.0164	-.0087	-.0036	-.0009
65.0	-.1099	-.0794	-.0559	-.0379	-.0244	-.0145	-.0076	-.0031	-.0007
70.0	-.1005	-.0719	-.0500	-.0336	-.0213	-.0125	-.0065	-.0026	-.0006
75.0	-.0903	-.0637	-.0438	-.0289	-.0181	-.0104	-.0053	-.0021	-.0005
80.0	-.0795	-.0551	-.0372	-.0241	-.0147	-.0083	-.0041	-.0016	-.0003
85.0	-.0680	-.0461	-.0303	-.0190	-.0112	-.0061	-.0028	-.0010	-.0002

TABLE IV. - CONTINUED

(d) C_L

$\phi_1 = 0^0$; $\phi_2 = 360^0$; $\beta = 0^0$

α, deg \ θ_{xy}, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.0230	.0222	.0210	.0193	.0149	.0097	.0042	-.0013	-.0065	-.0114
2.0	.0459	.0444	.0418	.0385	.0298	.0194	.0084	-.0026	-.0131	-.0229
4.0	.0913	.0882	.0832	.0765	.0592	.0386	.0167	-.0052	-.0261	-.0456
6.0	.1361	.1309	.1235	.1135	.0878	.0572	.0245	-.0080	-.0391	-.0681
8.0	.1854	.1720	.1622	.1491	.1153	.0749	.0319	-.0109	-.0519	-.0901
10.0	.2406	.2110	.1990	.1829	.1412	.0915	.0386	-.0142	-.0646	-.1116
12.0	.3012	.2488	.2333	.2143	.1652	.1068	.0445	-.0177	-.0771	-.1325
15.0	.4008	.3064	.2791	.2562	.1971	.1265	.0513	-.0237	-.0954	-.1622
20.0	.5828	.4034	.3443	.3093	.2364	.1494	.0567	-.0358	-.1245	-.2070
25.0	.7725	.4957	.3992	.3432	.2555	.1576	.0531	-.0513	-.1513	-.2446
30.0	.9548	.5758	.4403	.3619	.2523	.1493	.0396	-.0702	-.1756	-.2740
35.0	1.1149	.6368	.4639	.3642	.2315	.1242	.0159	-.0927	-.1971	-.2947
40.0	1.2390	.6732	.4674	.3494	.1974	.0843	-.0174	-.1183	-.2157	-.3069
45.0	1.3155	.6805	.4492	.3175	.1523	.0365	-.0589	-.1466	-.2313	-.3112
50.0	1.3358	.6565	.4093	.2696	.0988	-.0150	-.1030	-.1766	-.2442	-.3084
55.0	1.2948	.6008	.3488	.2078	.0396	-.0669	-.1443	-.2046	-.2546	-.3000
60.0	1.1915	.5150	.2704	.1351	-.0221	-.1162	-.1801	-.2259	-.2603	-.2876
65.0	1.0288	.4029	.1780	.0551	-.0828	-.1601	-.2080	-.2385	-.2581	-.2706
70.0	.8134	.2698	.0761	-.0278	-.1396	-.1965	-.2268	-.2417	-.2473	-.2470
75.0	.5558	.1226	-.0298	-.1094	-.1893	-.2234	-.2355	-.2355	-.2284	-.2175
80.0	.2690	-.0312	-.1342	-.1853	-.2296	-.2399	-.2343	-.2205	-.2029	-.1838
85.0	-.0321	-.1834	-.2316	-.2516	-.2585	-.2454	-.2235	-.1983	-.1726	-.1479

α, deg \ θ_{xy}, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	-.0159	-.0199	-.0234	-.0265	-.0291	-.0312	-.0328	-.0340	-.0347
2.0	-.0318	-.0398	-.0468	-.0529	-.0581	-.0623	-.0655	-.0679	-.0692
4.0	-.0633	-.0793	-.0933	-.1054	-.1157	-.1240	-.1305	-.1351	-.1379
6.0	-.0945	-.1181	-.1390	-.1570	-.1723	-.1847	-.1944	-.2013	-.2054
8.0	-.1249	-.1561	-.1836	-.2074	-.2275	-.2439	-.2566	-.2657	-.2711
10.0	-.1545	-.1929	-.2268	-.2561	-.2808	-.3010	-.3167	-.3279	-.3346
12.0	-.1829	-.2282	-.2681	-.3027	-.3318	-.3556	-.3741	-.3873	-.3952
15.0	-.2232	-.2779	-.3262	-.3679	-.4031	-.4319	-.4543	-.4702	-.4798
20.0	-.2824	-.3501	-.4098	-.4614	-.5051	-.5408	-.5685	-.5882	-.6001
25.0	-.3298	-.4064	-.4740	-.5325	-.5820	-.6225	-.6539	-.6763	-.6898
30.0	-.3640	-.4449	-.5164	-.5785	-.6309	-.6738	-.7072	-.7310	-.7452
35.0	-.3842	-.4648	-.5362	-.5981	-.6505	-.6934	-.7268	-.7507	-.7650
40.0	-.3908	-.4665	-.5337	-.5921	-.6416	-.6821	-.7137	-.7363	-.7499
45.0	-.3848	-.4515	-.5108	-.5626	-.6065	-.6427	-.6708	-.6910	-.7031
50.0	-.3680	-.4222	-.4708	-.5133	-.5496	-.5795	-.6025	-.6196	-.6297
55.0	-.3428	-.3822	-.4178	-.4492	-.4763	-.4986	-.5162	-.5288	-.5364
60.0	-.3121	-.3353	-.3567	-.3761	-.3930	-.4071	-.4183	-.4264	-.4314
65.0	-.2789	-.2858	-.2930	-.3001	-.3067	-.3125	-.3173	-.3208	-.3230
70.0	-.2433	-.2377	-.2319	-.2274	-.2244	-.2224	-.2211	-.2203	-.2200
75.0	-.2046	-.1908	-.1770	-.1639	-.1526	-.1438	-.1373	-.1329	-.1303
80.0	-.1644	-.1456	-.1278	-.1113	-.0962	-.0830	-.0724	-.0651	-.0608
85.0	-.1249	-.1040	-.0853	-.0686	-.0541	-.0415	-.0308	-.0223	-.0169

TABLE IV.- CONTINUED

(d) C_L. Continued.

$\beta_1 = 105^0$; $\beta_2 = 255^0$; $\beta = 0^0$

α, deg \ θ_{xy}, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.1001	.1688	.2338	.2932	.3908	.4581	.4968	.5112	.5060	.4858
2.0	.1318	.1959	.2582	.3149	.4070	.4683	.5008	.5092	.4985	.4732
4.0	.2076	.2553	.3094	.3594	.4384	.4866	.5062	.5024	.4805	.4451
6.0	.2994	.3211	.3633	.4045	.4682	.5020	.5081	.4919	.4587	.4134
8.0	.4061	.3924	.4193	.4498	.4961	.5144	.5044	.4776	.4333	.3784
10.0	.5263	.4683	.4767	.4946	.5215	.5234	.5011	.4596	.4044	.3403
12.0	.6585	.5480	.5347	.5385	.5441	.5290	.4920	.4380	.3723	.2993
15.0	.8759	.6722	.6213	.6010	.5722	.5303	.4713	.3991	.3184	.2334
20.0	1.2734	.8831	.7584	.6922	.6007	.5133	.4187	.3185	.2160	.1143
25.0	1.6879	1.0843	.8765	.7602	.6035	.4719	.3453	.2216	.1024	-.0108
30.0	2.0864	1.2591	.9654	.7985	.5786	.4074	.2542	.1132	-.0167	-.1354
35.0	2.4363	1.3925	1.0166	.8022	.5259	.3222	.1499	-.0012	-.1349	-.2529
40.0	2.7075	1.4719	1.0239	.7689	.4471	.2204	.0378	-.1157	-.2462	-.3574
45.0	2.8748	1.4879	.9839	.6984	.3454	.1070	-.0765	-.2242	-.3449	-.4437
50.0	2.9192	1.4354	.8963	.5930	.2258	-.0120	-.1849	-.3213	-.4240	-.5078
55.0	2.8297	1.3136	.7640	.4572	.0943	-.1306	-.2877	-.4020	-.4860	-.5471
60.0	2.6040	1.1262	.5925	.2977	-.0422	-.2425	-.3739	-.4627	-.5223	-.5608
65.0	2.2484	.8812	.3902	.1225	-.1766	-.3419	-.4434	-.5010	-.5343	-.5495
70.0	1.7779	.5903	.1674	-.0592	-.3019	-.4240	-.4872	-.5158	-.5228	-.5157
75.0	1.2150	.2683	-.0644	-.2379	-.4117	-.4850	-.5099	-.5078	-.4899	-.4630
80.0	.5881	-.0678	-.2927	-.4041	-.5005	-.5224	-.5095	-.4788	-.4394	-.3964
85.0	-.0698	-.4004	-.5057	-.5494	-.5643	-.5355	-.4876	-.4323	-.3759	-.3217

α, deg \ θ_{xy}, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	.4541	.4139	.3673	.3160	.2613	.2042	.1454	.0856	.0254
2.0	.4370	.3928	.3427	.2885	.2314	.1723	.1121	.0513	-.0094
4.0	.4000	.3480	.2914	.2317	.1700	.1075	.0448	-.0175	-.0789
6.0	.3597	.3004	.2376	.1728	.1073	.0418	-.0229	-.0862	-.1476
8.0	.3165	.2503	.1818	.1126	.0436	-.0242	-.0903	-.1541	-.2151
10.0	.2706	.1981	.1245	.0514	-.0204	-.0901	-.1570	-.2207	-.2808
12.0	.2225	.1442	.0662	-.0103	-.0843	-.1552	-.2224	-.2855	-.3441
15.0	.1469	.0612	-.0223	-.1025	-.1786	-.2502	-.3168	-.3779	-.4334
20.0	.0155	-.0789	-.1679	-.2599	-.3274	-.3971	-.4598	-.5154	-.5635
25.0	-.1168	-.2149	-.3048	-.3862	-.4590	-.5233	-.5791	-.6261	-.6646
30.0	-.2430	-.3397	-.4257	-.5014	-.5670	-.6227	-.6687	-.7052	-.7323
35.0	-.3566	-.4469	-.5248	-.5910	-.6462	-.6908	-.7251	-.7496	-.7644
40.0	-.4518	-.5313	-.5974	-.6511	-.6935	-.7252	-.7467	-.7585	-.7610
45.0	-.5243	-.5893	-.6406	-.6798	-.7079	-.7258	-.7341	-.7335	-.7244
50.0	-.5710	-.6189	-.6536	-.6770	-.6904	-.6946	-.6904	-.6784	-.6591
55.0	-.5906	-.6198	-.6374	-.6450	-.6441	-.6356	-.6203	-.5987	-.5715
60.0	-.5835	-.5939	-.5948	-.5877	-.5740	-.5547	-.5303	-.5016	-.4690
65.0	-.5518	-.5446	-.5304	-.5107	-.4865	-.4589	-.4283	-.3953	-.3603
70.0	-.4993	-.4768	-.4501	-.4206	-.3891	-.3562	-.3225	-.2883	-.2540
75.0	-.4310	-.3965	-.3608	-.3250	-.2896	-.2550	-.2214	-.1891	-.1584
80.0	-.3529	-.3104	-.2698	-.2316	-.1959	-.1630	-.1328	-.1054	-.0809
85.0	-.2713	-.2254	-.1842	-.1476	-.1154	-.0875	-.0636	-.0436	-.0274

$\beta_1 = 120^0$; $\beta_2 = 240^0$; $\beta = 0^0$

α, deg \ θ_{xy}, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.1104	.1860	.2574	.3227	.4297	.5032	.5452	.5603	.5540	.5313
2.0	.1456	.2161	.2846	.3470	.4480	.5150	.5503	.5590	.5469	.5189
4.0	.2300	.2822	.3416	.3966	.4834	.5363	.5577	.5535	.5295	.4910
6.0	.3322	.3555	.4018	.4471	.5172	.5544	.5614	.5438	.5080	.4591
8.0	.4509	.4349	.4642	.4977	.5487	.5692	.5610	.5300	.4825	.4235
10.0	.5847	.5195	.5283	.5479	.5777	.5803	.5565	.5121	.4531	.3844
12.0	.7319	.6082	.5930	.5970	.6035	.5875	.5480	.4902	.4200	.3422
15.0	.9739	.7466	.6897	.6672	.6357	.5906	.5273	.4500	.3640	.2736
20.0	1.4167	.9818	.8429	.7696	.6692	.5743	.4725	.3652	.2562	.1485
25.0	1.8785	1.2062	.9751	.8463	.6740	.5308	.3942	.2618	.1350	.0156
30.0	2.3225	1.4013	1.0748	.8899	.6479	.4611	.2957	.1446	.0068	-.1182
35.0	2.7125	1.5504	1.1326	.8950	.5906	.3681	.1819	.0199	-.1219	-.2458
40.0	3.0149	1.6393	1.1414	.8587	.5039	.2561	.0585	-.1059	-.2482	-.3606
45.0	3.2016	1.6578	1.0976	.7810	.3915	.1308	-.0680	-.2262	-.3538	-.4568
50.0	3.2515	1.5999	1.0006	.6642	.2589	-.0015	-.1910	-.3349	-.4453	-.5300
55.0	3.1523	1.4647	.8537	.5134	.1126	-.1338	-.3041	-.4263	-.5144	-.5770
60.0	2.9013	1.2563	.6630	.3359	-.0397	-.2592	-.4016	-.4962	-.5581	-.5965
65.0	2.5056	.9837	.4379	.1408	-.1899	-.3711	-.4787	-.5417	-.5754	-.5890
70.0	1.9819	.6599	.1897	-.0618	-.3302	-.4640	-.5320	-.5615	-.5668	-.5566
75.0	1.3552	.3014	-.0685	-.2612	-.4534	-.5336	-.5598	-.5559	-.5345	-.5032
80.0	.6572	-.0730	-.3232	-.4468	-.5533	-.5770	-.5618	-.5268	-.4822	-.4337
85.0	-.0756	-.4436	-.5608	-.6092	-.6255	-.5931	-.5395	-.4777	-.4148	-.3543

α, deg \ θ_{xy}, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	.4962	.4520	.4009	.3450	.2855	.2235	.1599	.0953	.0302
2.0	.4791	.4307	.3762	.3173	.2554	.1916	.1265	.0610	-.0046
4.0	.4420	.3857	.3245	.2600	.1937	.1264	.0590	-.0080	-.0741
6.0	.4012	.3378	.2700	.2006	.1303	.0602	-.0090	-.0769	-.1430
8.0	.3572	.2864	.2133	.1394	.0659	-.0065	-.0770	-.1452	-.2106
10.0	.3101	.2329	.1547	.0770	.0008	-.0731	-.1443	-.2122	-.2765
12.0	.2605	.1774	.0948	.0140	-.0642	-.1391	-.2103	-.2774	-.3400
15.0	.1821	.0916	.0037	-.0806	-.1606	-.2358	-.3059	-.3707	-.4298
20.0	.0444	-.0545	-.1475	-.2339	-.3135	-.3861	-.4515	-.5097	-.5606
25.0	-.0956	-.1978	-.2909	-.3750	-.4500	-.5162	-.5736	-.6224	-.6626
30.0	-.2305	-.3307	-.4192	-.4965	-.5632	-.6197	-.6664	-.7035	-.7314
35.0	-.3535	-.4464	-.5257	-.5925	-.6477	-.6920	-.7259	-.7500	-.7645
40.0	-.4581	-.5392	-.6056	-.6588	-.7001	-.7304	-.7504	-.7608	-.7620
45.0	-.5395	-.6049	-.6555	-.6930	-.7190	-.7345	-.7405	-.7375	-.7263
50.0	-.5940	-.6411	-.6740	-.6949	-.7052	-.7062	-.6988	-.6838	-.6617
55.0	-.6199	-.6473	-.6620	-.6663	-.6616	-.6493	-.6302	-.6050	-.5745
60.0	-.6174	-.6250	-.6221	-.6110	-.5931	-.5694	-.5410	-.5084	-.4723
65.0	-.5883	-.5773	-.5588	-.5345	-.5059	-.4738	-.4390	-.4021	-.3635
70.0	-.5363	-.5092	-.4778	-.4436	-.4075	-.3703	-.3325	-.2946	-.2569
75.0	-.4664	-.4268	-.3863	-.3458	-.3060	-.2673	-.2300	-.1945	-.1609
80.0	-.3848	-.3371	-.2916	-.2490	-.2094	-.1729	-.1396	-.1095	-.0827
85.0	-.2982	-.2472	-.2014	-.1608	-.1252	-.0944	-.0681	-.0461	-.0285

TABLE IV.- CONTINUED

(d) C_L. Continued.

$\beta_1 = -90^\circ$; $\beta_2 = 90^\circ$; $\beta = 0^\circ$

θ_{xy}, deg / α, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	-.0459	-.1105	-.1728	-.2307	-.3291	-.4013	-.4479	-.4721	-.4779	-.4691
2.0	-.0290	-.0910	-.1532	-.2121	-.3139	-.3908	-.4426	-.4721	-.4831	-.4791
4.0	-.0077	-.0577	-.1173	-.1766	-.2835	-.3685	-.4300	-.4697	-.4908	-.4964
6.0	-.0020	-.0324	-.0860	-.1436	-.2531	-.3448	-.4149	-.4641	-.4948	-.5099
8.0	-.0010	-.0154	-.0597	-.1137	-.2233	-.3200	-.3976	-.4555	-.4954	-.5196
10.0	-.0006	-.0068	-.0386	-.0871	-.1943	-.2944	-.3783	-.4440	-.4924	-.5254
12.0	-.0004	-.0042	-.0230	-.0641	-.1666	-.2683	-.3572	-.4299	-.4862	-.5274
15.0	-.0003	-.0025	-.0105	-.0373	-.1280	-.2290	-.3231	-.4042	-.4709	-.5233
20.0	-.0002	-.0014	-.0052	-.0142	-.0746	-.1662	-.2621	-.3519	-.4315	-.4992
25.0	-.0001	-.0009	-.0033	-.0082	-.0382	-.1108	-.2003	-.2917	-.3781	-.4562
30.0	-.0001	-.0007	-.0022	-.0055	-.0211	-.0672	-.1427	-.2287	-.3156	-.3984
35.0	-.0001	-.0005	-.0016	-.0039	-.0141	-.0389	-.0939	-.1680	-.2493	-.3310
40.0	-.0000	-.0003	-.0012	-.0028	-.0099	-.0253	-.0576	-.1144	-.1845	-.2598
45.0	-.0000	-.0003	-.0009	-.0020	-.0070	-.0174	-.0364	-.0722	-.1264	-.1904
50.0	-.0000	-.0002	-.0006	-.0014	-.0049	-.0119	-.0242	-.0446	-.0796	-.1285
55.0	-.0000	-.0001	-.0004	-.0010	-.0033	-.0079	-.0159	-.0284	-.0478	-.0788
60.0	-.0000	-.0001	-.0003	-.0006	-.0021	-.0050	-.0099	-.0176	-.0288	-.0451
65.0	-.0000	-.0000	-.0002	-.0004	-.0012	-.0029	-.0058	-.0101	-.0164	-.0251
70.0	-.0000	-.0000	-.0001	-.0002	-.0006	-.0015	-.0030	-.0052	-.0083	-.0127
75.0	-.0000	-.0000	-.0000	-.0001	-.0003	-.0006	-.0013	-.0022	-.0035	-.0053
80.0	-.0000	-.0000	-.0000	-.0000	-.0001	-.0002	-.0004	-.0006	-.0010	-.0016
85.0	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000	-.0001	-.0001	-.0002

θ_{xy}, deg / α, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	-.4488	-.4197	-.3837	-.3424	-.2970	-.2484	-.1973	-.1444	-.0901
2.0	-.4634	-.4383	-.4060	-.3679	-.3252	-.2788	-.2295	-.1779	-.1245
4.0	-.4897	-.4729	-.4480	-.4164	-.3794	-.3378	-.2924	-.2438	-.1925
6.0	-.5121	-.5036	-.4863	-.4615	-.4304	-.3940	-.3528	-.3076	-.2588
8.0	-.5306	-.5303	-.5206	-.5028	-.4779	-.4468	-.4103	-.3688	-.3229
10.0	-.5449	-.5528	-.5507	-.5399	-.5214	-.4960	-.4643	-.4269	-.3843
12.0	-.5551	-.5710	-.5765	-.5727	-.5606	-.5410	-.5144	-.4814	-.4425
15.0	-.5626	-.5900	-.6065	-.6132	-.6108	-.6001	-.5815	-.5556	-.5226
20.0	-.5551	-.5996	-.6331	-.6563	-.6698	-.6739	-.6691	-.6557	-.6339
25.0	-.5245	-.5827	-.6307	-.6685	-.6965	-.7148	-.7235	-.7229	-.7131
30.0	-.4744	-.5422	-.6011	-.6508	-.6911	-.7219	-.7432	-.7550	-.7573
35.0	-.4095	-.4824	-.5483	-.6063	-.6561	-.6971	-.7291	-.7520	-.7656
40.0	-.3356	-.4087	-.4772	-.5397	-.5955	-.6438	-.6841	-.7162	-.7397
45.0	-.2587	-.3274	-.3941	-.4571	-.5152	-.5675	-.6133	-.6521	-.6835
50.0	-.1851	-.2452	-.3060	-.3655	-.4222	-.4750	-.5231	-.5658	-.6026
55.0	-.1205	-.1686	-.2200	-.2724	-.3242	-.3741	-.4213	-.4648	-.5042
60.0	-.0700	-.1036	-.1428	-.1852	-.2290	-.2730	-.3161	-.3576	-.3967
65.0	-.0373	-.0553	-.0804	-.1106	-.1441	-.1796	-.2160	-.2526	-.2887
70.0	-.0185	-.0264	-.0377	-.0545	-.0761	-.1012	-.1288	-.1582	-.1887
75.0	-.0077	-.0109	-.0151	-.0210	-.0301	-.0437	-.0611	-.0815	-.1044
80.0	-.0023	-.0032	-.0044	-.0060	-.0082	-.0117	-.0182	-.0286	-.0424
85.0	-.0003	-.0004	-.0005	-.0007	-.0010	-.0014	-.0020	-.0033	-.0074

$\beta_1 = 90^\circ$; $\beta_2 = 270^\circ$; $\beta = 0^\circ$

θ_{xy}, deg / α, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.0919	.1549	.2147	.2692	.3589	.4208	.4563	.4696	.4648	.4462
2.0	.1208	.1797	.2369	.2890	.3735	.4297	.4595	.4670	.4569	.4334
4.0	.1903	.2341	.2837	.3295	.4019	.4457	.4633	.4593	.4385	.4052
6.0	.2743	.2943	.3330	.3707	.4288	.4592	.4640	.4482	.4166	.3738
8.0	.3719	.3595	.3841	.4119	.4538	.4698	.4614	.4336	.3915	.3394
10.0	.4819	.4289	.4365	.4528	.4767	.4774	.4555	.4157	.3632	.3021
12.0	.6029	.5018	.4895	.4927	.4970	.4818	.4461	.3945	.3319	.2624
15.0	.8019	.6154	.5686	.5497	.5221	.4821	.4258	.3569	.2800	.1988
20.0	1.1657	.8083	.6938	.6327	.5474	.4650	.3755	.2803	.1825	.0852
25.0	1.5450	.9923	.8016	.6946	.5491	.4259	.3065	.1892	.0755	-.0330
30.0	1.9097	1.1522	.8828	.7292	.5258	.3659	.2219	.0883	-.0355	-.1495
35.0	2.2298	1.2741	.9295	.7324	.4771	.2873	.1257	-.0174	-.1449	-.2584
40.0	2.4780	1.3466	.9360	.7017	.4047	.1940	.0228	-.1223	-.2468	-.3541
45.0	2.6310	1.3613	.8993	.6371	.3117	.0904	-.0814	-.2210	-.3363	-.4319
50.0	2.6716	1.3132	.8191	.5407	.2024	-.0182	-.1817	-.3086	-.4089	-.4883
55.0	2.5897	1.2017	.6980	.4165	.0824	-.1259	-.2728	-.3808	-.4614	-.5213
60.0	2.3830	1.0301	.5412	.2707	-.0420	-.2274	-.3502	-.4343	-.4918	-.5302
65.0	2.0575	.8059	.3561	.1106	-.1645	-.3174	-.4103	-.4670	-.4998	-.5161
70.0	1.6269	.5397	.1523	-.0554	-.2785	-.3914	-.4506	-.4783	-.4862	-.4813
75.0	1.1117	.2451	-.0596	-.2187	-.3783	-.4462	-.4698	-.4687	-.4534	-.4297
80.0	.5380	-.0625	-.2684	-.3705	-.4590	-.4795	-.4681	-.4404	-.4048	-.3659
85.0	-.0641	-.3668	-.4632	-.5032	-.5170	-.4907	-.4470	-.3966	-.3451	-.2956

θ_{xy}, deg / α, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	.4170	.3799	.3369	.2895	.2389	.1861	.1317	.0765	.0208
2.0	.3998	.3588	.3123	.2620	.2091	.1543	.0985	.0422	-.0140
4.0	.3630	.3144	.2614	.2056	.1481	.0898	.0314	-.0265	-.0834
6.0	.3232	.2674	.2083	.1474	.0859	.0245	-.0359	-.0949	-.1520
8.0	.2807	.2181	.1534	.0880	.0229	-.0409	-.1029	-.1626	-.2194
10.0	.2360	.1670	.0972	.0278	-.0402	-.1061	-.1691	-.2289	-.2849
12.0	.1892	.1146	.0402	-.0326	-.1030	-.1703	-.2338	-.2932	-.3480
15.0	.1162	.0341	-.0458	-.1226	-.1955	-.2638	-.3270	-.3849	-.4369
20.0	-.0097	-.1006	-.1864	-.2665	-.3404	-.4076	-.4678	-.5207	-.5662
25.0	-.1351	-.2300	-.3173	-.3966	-.4676	-.5302	-.5843	-.6297	-.6664
30.0	-.2535	-.3476	-.4317	-.5061	-.5707	-.6257	-.6711	-.7069	-.7332
35.0	-.3589	-.4473	-.5241	-.5899	-.6450	-.6898	-.7245	-.7493	-.7644
40.0	-.4460	-.5243	-.5902	-.6444	-.6877	-.7205	-.7433	-.7564	-.7600
45.0	-.5109	-.5755	-.6275	-.6680	-.6979	-.7178	-.7283	-.7298	-.7227
50.0	-.5509	-.5993	-.6356	-.6611	-.6770	-.6840	-.6826	-.6734	-.6568
55.0	-.5650	-.5958	-.6156	-.6261	-.6283	-.6231	-.6111	-.5928	-.5687
60.0	-.5542	-.5669	-.5707	-.5670	-.5569	-.5412	-.5205	-.4953	-.4660
65.0	-.5206	-.5164	-.5055	-.4895	-.4692	-.4454	-.4185	-.3890	-.3573
70.0	-.4680	-.4490	-.4260	-.4003	-.3727	-.3435	-.3134	-.2825	-.2512
75.0	-.4014	-.3707	-.3389	-.3069	-.2751	-.2439	-.2135	-.1842	-.1561
80.0	-.3265	-.2880	-.2512	-.2166	-.1842	-.1543	-.1267	-.1017	-.0792
85.0	-.2495	-.2076	-.1700	-.1365	-.1071	-.0815	-.0596	-.0413	-.0265

TABLE IV. - CONTINUED

(d) C_L. Concluded.

$\phi_1 = 135^0$; $\phi_2 = 225^0$; $\beta = 0^0$

θ_{xy}, deg / α, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.1253	.2104	.2909	.3642	.4840	.5654	.6108	.6258	.6169	.5898
2.0	.1658	.2452	.3223	.3924	.5054	.5795	.6176	.6257	.6104	.5777
4.0	.2631	.3214	.3881	.4498	.5469	.6052	.6281	.6221	.5941	.5501
6.0	.3811	.4060	.4577	.5084	.5866	.6276	.6343	.6138	.5730	.5181
8.0	.5182	.4977	.5300	.5672	.6238	.6460	.6361	.6009	.5475	.4819
10.0	.6729	.5955	.6041	.6256	.6581	.6604	.6332	.5833	.5175	.4418
12.0	.8432	.6982	.6792	.6828	.6889	.6703	.6257	.5612	.4834	.3979
15.0	1.1232	.8585	.7915	.7646	.7278	.6765	.6055	.5196	.4249	.3261
20.0	1.6359	1.1311	.9697	.8847	.7694	.6622	.5485	.4298	.3104	.1935
25.0	2.1709	1.3917	1.1241	.9754	.7782	.6165	.4641	.3180	.1797	.0507
30.0	2.6858	1.6188	1.2412	1.0280	.7513	.5405	.3560	.1896	.0395	-.0948
35.0	3.1384	1.7928	1.3099	1.0362	.6883	.4371	.2294	.0512	-.1027	-.2354
40.0	3.4899	1.8974	1.3221	.9967	.5911	.3112	.0908	-.0899	-.2396	-.3635
45.0	3.7076	1.9205	1.2734	.9089	.4637	.1690	-.0526	-.2263	-.3639	-.4729
50.0	3.7669	1.8552	1.1630	.7758	.3122	.0179	-.1933	-.3508	-.4694	-.5580
55.0	3.6536	1.7003	.9946	.6029	.1444	-.1342	-.3238	-.4572	-.5510	-.6154
60.0	3.3644	1.4605	.7752	.3987	-.0311	-.2792	-.4376	-.5403	-.6051	-.6429
65.0	2.9074	1.1460	.5155	.1735	-.2049	-.4097	-.5289	-.5964	-.6301	-.6408
70.0	2.3019	.7718	.2287	-.0609	-.3680	-.5190	-.5937	-.6238	-.6262	-.6110
75.0	1.5767	.3571	-.0702	-.2921	-.5119	-.6019	-.6295	-.6224	-.5954	-.5572
80.0	.7686	-.0765	-.3654	-.5078	-.6294	-.6551	-.6359	-.5941	-.5414	-.4846
85.0	-.0801	-.5061	-.6414	-.6971	-.7151	-.6769	-.6143	-.5425	-.4695	-.3996

θ_{xy}, deg / α, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	.5493	.4991	.4418	.3796	.3140	.2460	.1766	.1063	.0357
2.0	.5323	.4778	.4170	.3518	.2837	.2139	.1431	.0719	.0009
4.0	.4951	.4324	.3647	.2940	.2215	.1484	.0753	.0028	-.0687
6.0	.4537	.3833	.3094	.2337	.1575	.0816	.0069	-.0664	-.1377
8.0	.4087	.3311	.2514	.1714	.0920	.0142	-.0617	-.1350	-.2055
10.0	.3602	.2761	.1914	.1076	.0258	-.0534	-.1296	-.2025	-.2716
12.0	.3088	.2187	.1297	.0430	-.0406	-.1206	-.1965	-.2682	-.3354
15.0	.2268	.1294	.0353	-.0545	-.1394	-.2192	-.2936	-.3624	-.4256
20.0	.0815	-.0241	-.1227	-.2137	-.2973	-.3734	-.4420	-.5033	-.5573
25.0	-.0681	-.1764	-.2741	-.3617	-.4396	-.5080	-.5675	-.6182	-.6604
30.0	-.2142	-.3193	-.4112	-.4908	-.5590	-.6164	-.6638	-.7017	-.7303
35.0	-.3490	-.4456	-.5269	-.5946	-.6698	-.6937	-.7270	-.7505	-.7646
40.0	-.4656	-.5488	-.6157	-.6683	-.7082	-.7368	-.7549	-.7635	-.7632
45.0	-.5583	-.6243	-.6738	-.7093	-.7325	-.7451	-.7480	-.7422	-.7284
50.0	-.6230	-.6690	-.6994	-.7168	-.7232	-.7201	-.7088	-.6900	-.6646
55.0	-.6574	-.6820	-.6927	-.6924	-.6828	-.6656	-.6418	-.6124	-.5779
60.0	-.6610	-.6643	-.6563	-.6397	-.6161	-.5871	-.5536	-.5163	-.4759
65.0	-.6355	-.6190	-.5944	-.5640	-.5294	-.4916	-.4516	-.4099	-.3672
70.0	-.5845	-.5509	-.5129	-.4722	-.4300	-.3872	-.3443	-.3019	-.2603
75.0	-.5131	-.4663	-.4188	-.3719	-.3262	-.2822	-.2403	-.2008	-.1637
80.0	-.4275	-.3723	-.3200	-.2712	-.2262	-.1850	-.1477	-.1143	-.0848
85.0	-.3350	-.2765	-.2242	-.1781	-.1378	-.1031	-.0736	-.0492	-.0297

$\phi_1 = 150^0$; $\phi_2 = 210^0$; $\beta = 0^0$

θ_{xy}, deg / α, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.1504	.2514	.3466	.4328	.5721	.6642	.7125	.7247	.7092	.6732
2.0	.2004	.2942	.3852	.4676	.5988	.6823	.7222	.7265	.7038	.6617
4.0	.3207	.3883	.4666	.5388	.6509	.7157	.7379	.7261	.6891	.6347
6.0	.4669	.4930	.5527	.6115	.7009	.7452	.7487	.7203	.6691	.6027
8.0	.6373	.6067	.6425	.6848	.7481	.7702	.7542	.7091	.6438	.5657
10.0	.8297	.7283	.7348	.7577	.7920	.7904	.7544	.6924	.6134	.5242
12.0	1.0417	.8561	.8285	.8294	.8318	.8054	.7490	.6704	.5780	.4783
15.0	1.3909	1.0559	.9689	.9325	.8827	.8174	.7303	.6274	.5161	.4022
20.0	2.0312	1.3968	1.1928	1.0850	.9399	.8080	.6711	.5310	.3924	.2592
25.0	2.7005	1.7238	1.3881	1.2019	.9574	.7605	.5784	.4073	.2482	.1026
30.0	3.3458	2.0101	1.5380	1.2724	.9312	.6757	.4563	.2624	.0910	-.0594
35.0	3.9143	2.2311	1.6284	1.2883	.8603	.5567	.3105	.1037	-.0711	-.2183
40.0	4.3573	2.3662	1.6488	1.2450	.7467	.4090	.1484	-.0605	-.2294	-.3657
45.0	4.6336	2.3998	1.5934	1.1416	.5951	.2399	-.0215	-.2215	-.3756	-.4939
50.0	4.7124	2.3233	1.4611	.9812	.4126	.0582	-.1904	-.3708	-.5022	-.5968
55.0	4.5754	2.1347	1.2559	.7706	.2085	-.1266	-.3491	-.5008	-.6030	-.6695
60.0	4.2183	1.8396	.9864	.5200	-.0067	-.3047	-.4896	-.6049	-.6735	-.7094
65.0	3.6511	1.4504	.6655	.2420	-.2215	-.4668	-.6048	-.6786	-.7110	-.7159
70.0	2.8973	.9858	.3097	-.0488	-.4247	-.6047	-.6894	-.7190	-.7151	-.6906
75.0	1.9929	.4694	-.0625	-.3370	-.6055	-.7115	-.7398	-.7256	-.6877	-.6371
80.0	.9838	-.0719	-.4314	-.6074	-.7550	-.7828	-.7551	-.7000	-.6325	-.5610
85.0	-.0774	-.6094	-.7775	-.8460	-.8661	-.8161	-.7364	-.6459	-.5550	-.4689

θ_{xy}, deg / α, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	.6228	.5623	.4952	.4237	.3495	.2735	.1967	.1194	.0422
2.0	.6059	.5410	.4702	.3957	.3190	.2412	.1631	.0850	.0073
4.0	.5686	.4951	.4173	.3372	.2562	.1752	.0949	.0156	-.0624
6.0	.5266	.4451	.3609	.2758	.1912	.1077	.0259	-.0539	-.1315
8.0	.4803	.3914	.3014	.2121	.1245	.0393	-.0433	-.1229	-.1995
10.0	.4300	.3343	.2394	.1466	.0568	-.0295	-.1121	-.1909	-.2659
12.0	.3761	.2745	.1754	.0799	-.0113	-.0980	-.1800	-.2573	-.3299
15.0	.2895	.1805	.0767	-.0213	-.1132	-.1990	-.2788	-.3526	-.4207
20.0	.1338	.0172	-.0901	-.1881	-.2773	-.3580	-.4307	-.4958	-.5535
25.0	-.0290	-.1470	-.2521	-.3450	-.4268	-.4983	-.5602	-.6133	-.6579
30.0	-.1903	-.3035	-.4008	-.4838	-.5540	-.6127	-.6610	-.6996	-.7291
35.0	-.3415	-.4441	-.5286	-.5975	-.6528	-.6961	-.7285	-.7512	-.7648
40.0	-.4749	-.5615	-.6292	-.6809	-.7189	-.7450	-.7606	-.7669	-.7647
45.0	-.5837	-.6503	-.6982	-.7306	-.7500	-.7584	-.7574	-.7479	-.7310
50.0	-.6628	-.7067	-.7331	-.7454	-.7463	-.7377	-.7211	-.6976	-.6681
55.0	-.7093	-.7292	-.7337	-.7245	-.7101	-.6862	-.6562	-.6213	-.5820
60.0	-.7221	-.7182	-.7022	-.6773	-.6458	-.6094	-.5691	-.5259	-.4804
65.0	-.7024	-.6766	-.6425	-.6029	-.5597	-.5142	-.4672	-.4195	-.3716
70.0	-.6535	-.6090	-.5605	-.5101	-.4592	-.4086	-.3590	-.3108	-.2644
75.0	-.5805	-.5219	-.4635	-.4068	-.3526	-.3013	-.2532	-.2084	-.1671
80.0	-.4901	-.4226	-.3594	-.3014	-.2485	-.2007	-.1581	-.1203	-.0874
85.0	-.3900	-.3193	-.2568	-.2022	-.1550	-.1147	-.0809	-.0531	-.0313

TABLE IV. - CONTINUED

(e) C_D

$\phi_1 = 0^0$; $\phi_2 = 360^0$; $\beta = 0^0$

α, deg \ θ_{xy}, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.0082	.0306	.0670	.1160	.2449	.4028	.5766	.7559	.9334	1.1041
2.0	.0100	.0324	.0687	.1175	.2461	.4036	.5769	.7558	.9329	1.1032
4.0	.0172	.0393	.0752	.1235	.2507	.4066	.5782	.7554	.9308	1.0996
6.0	.0291	.0508	.0860	.1335	.2584	.4117	.5804	.7547	.9274	1.0936
8.0	.0459	.0667	.1010	.1473	.2691	.4186	.5834	.7537	.9226	1.0854
10.0	.0681	.0868	.1200	.1647	.2825	.4273	.5871	.7524	.9165	1.0748
12.0	.0965	.1108	.1426	.1855	.2986	.4377	.5914	.7507	.9091	1.0620
15.0	.1515	.1544	.1829	.2225	.3271	.4561	.5990	.7475	.8956	1.0388
20.0	.2799	.2474	.2648	.2971	.3843	.4925	.6133	.7398	.8667	.9903
25.0	.4573	.3652	.3623	.3828	.4491	.5330	.6279	.7285	.8306	.9311
30.0	.6837	.5058	.4726	.4754	.5161	.5736	.6402	.7126	.7877	.8630
35.0	.9553	.6651	.5913	.5708	.5797	.6097	.6477	.6914	.7389	.7884
40.0	1.2643	.8371	.7137	.6646	.6361	.6373	.6477	.6638	.6848	.7094
45.0	1.5998	1.0150	.8342	.7523	.6821	.6532	.6379	.6292	.6262	.6284
50.0	1.9482	1.1907	.9470	.8295	.7151	.6561	.6167	.5869	.5639	.5471
55.0	2.2939	1.3559	1.0467	.8923	.7333	.6453	.5842	.5369	.4986	.4674
60.0	2.6207	1.5026	1.1281	.9378	.7356	.6213	.5416	.4804	.4310	.3904
65.0	2.9126	1.6233	1.1870	.9624	.7218	.5849	.4906	.4194	.3630	.3172
70.0	3.1548	1.7118	1.2205	.9659	.6926	.5381	.4335	.3563	.2966	.2493
75.0	3.3348	1.7633	1.2265	.9479	.6494	.4829	.3727	.2936	.2342	.1884
80.0	3.4432	1.7754	1.2050	.9092	.5943	.4220	.3110	.2338	.1776	.1358
85.0	3.4744	1.7471	1.1569	.8517	.5302	.3583	.2509	.1788	.1284	.0923

α, deg \ θ_{xy}, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	1.2645	1.4123	1.5457	1.6634	1.7645	1.8482	1.9139	1.9611	1.9896
2.0	1.2632	1.4107	1.5438	1.6613	1.7622	1.8458	1.9113	1.9584	1.9869
4.0	1.2583	1.4045	1.5365	1.6530	1.7531	1.8360	1.9010	1.9478	1.9760
6.0	1.2500	1.3941	1.5243	1.6393	1.7380	1.8199	1.8840	1.9302	1.9580
8.0	1.2385	1.3798	1.5074	1.6202	1.7171	1.7974	1.8604	1.9057	1.9330
10.0	1.2239	1.3615	1.4859	1.5959	1.6905	1.7688	1.8303	1.8746	1.9013
12.0	1.2062	1.3394	1.4600	1.5666	1.6584	1.7344	1.7941	1.8371	1.8631
15.0	1.1742	1.2996	1.4132	1.5139	1.6005	1.6725	1.7290	1.7697	1.7942
20.0	1.1078	1.2171	1.3165	1.4049	1.4812	1.5446	1.5945	1.6305	1.6523
25.0	1.0274	1.1177	1.2004	1.2742	1.3383	1.3917	1.4339	1.4643	1.4827
30.0	.9363	1.0059	1.0702	1.1282	1.1789	1.2213	1.2550	1.2793	1.2941
35.0	.8381	.8864	.9320	.9737	1.0105	1.0417	1.0665	1.0846	1.0956
40.0	.7363	.7641	.7914	.8173	.8407	.8609	.8773	.8893	.8966
45.0	.6345	.6436	.6543	.6657	.6768	.6869	.6954	.7018	.7058
50.0	.5358	.5289	.5255	.5245	.5251	.5265	.5282	.5298	.5308
55.0	.4426	.4234	.4089	.3992	.3905	.3851	.3814	.3791	.3778
60.0	.3568	.3294	.3074	.2901	.2766	.2664	.2589	.2539	.2510
65.0	.2794	.2481	.2224	.2016	.1850	.1722	.1627	.1561	.1522
70.0	.2110	.1796	.1538	.1327	.1157	.1024	.0924	.0854	.0814
75.0	.1523	.1235	.1004	.0817	.0666	.0547	.0458	.0396	.0359
80.0	.1040	.0796	.0606	.0459	.0344	.0255	.0188	.0141	.0114
85.0	.0662	.0470	.0329	.0226	.0150	.0096	.0058	.0033	.0018

TABLE IV.- CONTINUED

(e) C_D. Continued.

$\phi_1 = 105^\circ$; $\phi_2 = 255^\circ$; $\beta = 0^\circ$

θ_{xy}, deg / α, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.0124	.0396	.0811	.1354	.2747	.4418	.6226	.8063	.9856	1.1557
2.0	.0185	.0491	.0940	.1513	.2956	.4661	.6487	.8330	1.0119	1.1808
4.0	.0361	.0727	.1236	.1866	.3399	.5161	.7014	.8860	1.0632	1.2289
6.0	.0625	.1028	.1588	.2266	.3874	.5679	.7546	.9381	1.1124	1.2739
8.0	.0994	.1401	.1998	.2713	.4379	.6211	.8077	.9889	1.1591	1.3154
10.0	.1481	.1852	.2467	.3208	.4912	.6755	.8605	1.0380	1.2030	1.3530
12.0	.2100	.2383	.2997	.3749	.5470	.7306	.9126	1.0850	1.2437	1.3865
15.0	.3302	.3341	.3905	.4644	.6348	.8139	.9883	1.1508	1.2981	1.4285
20.0	.6109	.5377	.5714	.6342	.7889	.9511	1.1053	1.2452	1.3683	1.4742
25.0	.9985	.7957	.7859	.8249	.9471	1.0806	1.2057	1.3162	1.4102	1.4878
30.0	1.4933	1.1032	1.0277	1.0296	1.1024	1.1962	1.2846	1.3602	1.4215	1.4686
35.0	2.0867	1.4513	1.2881	1.2399	1.2476	1.2921	1.3377	1.3749	1.4015	1.4175
40.0	2.7620	1.8275	1.5562	1.4464	1.3755	1.3634	1.3624	1.3596	1.3514	1.3373
45.0	3.4953	2.2164	1.8201	1.6393	1.4797	1.4064	1.3573	1.3149	1.2737	1.2320
50.0	4.2565	2.6006	2.0672	1.8090	1.5548	1.4189	1.3227	1.2432	1.1724	1.1069
55.0	5.0120	2.9620	2.2855	1.9471	1.5969	1.4002	1.2603	1.1481	1.0525	.9682
60.0	5.7262	3.2827	2.4638	2.0464	1.6038	1.3511	1.1733	1.0344	.9200	.8227
65.0	6.3641	3.5466	2.5930	2.1016	1.5750	1.2743	1.0661	.9078	.7812	.6768
70.0	6.8934	3.7401	2.6663	2.1099	1.5121	1.1736	.9441	.7742	.6423	.5369
75.0	7.2849	3.8529	2.6798	2.0709	1.4183	1.0541	.8131	.6397	.5093	.4084
80.0	7.5240	3.8793	2.6329	1.9865	1.2984	.9217	.6791	.5101	.3873	.2957
85.0	7.5921	3.8178	2.5279	1.8611	1.1584	.7827	.5482	.3905	.2804	.2016

θ_{xy}, deg / α, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	1.3135	1.4569	1.5849	1.6964	1.7910	1.8681	1.9277	1.9694	1.9932
2.0	1.3368	1.4781	1.6035	1.7122	1.8039	1.8780	1.9344	1.9730	1.9937
4.0	1.3806	1.5169	1.6367	1.7395	1.8249	1.8927	1.9426	1.9748	1.9890
6.0	1.4205	1.5509	1.6644	1.7607	1.8394	1.9005	1.9438	1.9694	1.9772
8.0	1.4559	1.5797	1.6864	1.7756	1.8473	1.9014	1.9379	1.9568	1.9582
10.0	1.4866	1.6032	1.7024	1.7842	1.8485	1.8954	1.9249	1.9371	1.9322
12.0	1.5125	1.6212	1.7124	1.7864	1.8430	1.8826	1.9050	1.9106	1.8994
15.0	1.5415	1.6373	1.7159	1.7775	1.8224	1.8507	1.8626	1.8584	1.8383
20.0	1.5629	1.6350	1.6909	1.7310	1.7558	1.7656	1.7605	1.7410	1.7072
25.0	1.5496	1.5964	1.6287	1.6473	1.6524	1.6445	1.6239	1.5909	1.5458
30.0	1.5023	1.5234	1.5327	1.5306	1.5175	1.4939	1.4599	1.4159	1.3622
35.0	1.4235	1.4200	1.4078	1.3870	1.3581	1.3212	1.2767	1.2247	1.1655
40.0	1.3172	1.2915	1.2602	1.2237	1.1820	1.1351	1.0833	1.0265	.9650
45.0	1.1889	1.1442	1.0975	1.0488	.9978	.9445	.8887	.8305	.7699
50.0	1.0449	.9854	.9275	.8705	.8141	.7579	.7016	.6451	.5882
55.0	.8923	.8226	.7578	.6969	.6389	.5833	.5295	.4774	.4267
60.0	.7380	.6632	.5960	.5350	.4790	.4270	.3786	.3331	.2903
65.0	.5889	.5137	.4483	.3909	.3398	.2941	.2529	.2156	.1817
70.0	.4509	.3796	.3197	.2688	.2251	.1874	.1546	.1262	.1014
75.0	.3289	.2651	.2134	.1711	.1363	.1075	.0836	.0639	.0478
80.0	.2261	.1725	.1309	.0984	.0730	.0531	.0376	.0258	.0169
85.0	.1444	.1025	.0717	.0491	.0326	.0207	.0124	.0068	.0033

$\phi_1 = 120^\circ$; $\phi_2 = 240^\circ$; $\beta = 0^\circ$

θ_{xy}, deg / α, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.0134	.0422	.0862	.1435	.2901	.4644	.6514	.8394	1.0209	1.1910
2.0	.0200	.0527	.1004	.1611	.3130	.4913	.6801	.8687	1.0497	1.2185
4.0	.0396	.0788	.1331	.2000	.3618	.5462	.7381	.9270	1.1061	1.2714
6.0	.0688	.1121	.1720	.2442	.4142	.6033	.7967	.9845	1.1605	1.3212
8.0	.1097	.1534	.2173	.2936	.4701	.6622	.8555	1.0408	1.2124	1.3674
10.0	.1638	.2033	.2693	.3484	.5291	.7224	.9141	1.0954	1.2614	1.4098
12.0	.2326	.2624	.3280	.4084	.5909	.7836	.9720	1.1479	1.3071	1.4478
15.0	.3663	.3687	.4288	.5077	.6884	.8762	1.0565	1.2218	1.3688	1.4963
20.0	.6784	.5950	.6297	.6962	.8598	1.0293	1.1879	1.3290	1.4503	1.5518
25.0	1.1097	.8818	.8683	.9084	1.0363	1.1746	1.3019	1.4114	1.5017	1.5733
30.0	1.6604	1.2240	1.1374	1.1365	1.2100	1.3050	1.3926	1.4649	1.5204	1.5598
35.0	2.3211	1.6115	1.4274	1.3710	1.3727	1.4140	1.4553	1.4865	1.5053	1.5120
40.0	3.0730	2.0305	1.7262	1.6015	1.5166	1.4960	1.4869	1.4752	1.4571	1.4323
45.0	3.8895	2.4637	2.0204	1.8170	1.6343	1.5469	1.4857	1.4315	1.3785	1.3248
50.0	4.7374	2.8918	2.2962	2.0070	1.7199	1.5639	1.4516	1.3578	1.2734	1.1951
55.0	5.5790	3.2946	2.5400	2.1618	1.7687	1.5461	1.3865	1.2577	1.1473	1.0496
60.0	6.3747	3.6523	2.7394	2.2734	1.7783	1.4945	1.2938	1.1364	1.0063	.8954
65.0	7.0854	3.9468	2.8841	2.3361	1.7481	1.4116	1.1780	1.0000	.8574	.7396
70.0	7.6754	4.1629	2.9666	2.3465	1.6797	1.3018	1.0452	.8550	.7073	.5892
75.0	8.1142	4.2893	2.9825	2.3041	1.5767	1.1707	.9017	.7082	.5626	.4500
80.0	8.3787	4.3194	2.9310	2.2110	1.4444	1.0247	.7544	.5660	.4292	.3271
85.0	8.4552	4.2514	2.8148	2.0721	1.2894	.8710	.6097	.4341	.3115	.2238

θ_{xy}, deg / α, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	1.3469	1.4870	1.6105	1.7170	1.8064	1.8787	1.9341	1.9725	1.9941
2.0	1.3724	1.5101	1.6309	1.7344	1.8206	1.8896	1.9416	1.9766	1.9948
4.0	1.4207	1.5529	1.6676	1.7646	1.8441	1.9063	1.9513	1.9794	1.9907
6.0	1.4649	1.5908	1.6987	1.7888	1.8611	1.9161	1.9539	1.9749	1.9793
8.0	1.5046	1.6235	1.7240	1.8066	1.8714	1.9189	1.9494	1.9633	1.9608
10.0	1.5396	1.6507	1.7433	1.8179	1.8749	1.9147	1.9378	1.9446	1.9353
12.0	1.5695	1.6722	1.7564	1.8227	1.8716	1.9036	1.9192	1.9189	1.9030
15.0	1.6043	1.6933	1.7642	1.8174	1.8539	1.8741	1.8786	1.8679	1.8424
20.0	1.6341	1.6982	1.7452	1.7761	1.7915	1.7923	1.7790	1.7522	1.7122
25.0	1.6273	1.6650	1.6876	1.6960	1.6912	1.6737	1.6443	1.6033	1.5514
30.0	1.5845	1.5956	1.5962	1.5815	1.5580	1.5244	1.4813	1.4291	1.3682
35.0	1.5077	1.4934	1.4700	1.4383	1.3988	1.3520	1.2983	1.2380	1.1716
40.0	1.4010	1.3638	1.3213	1.2738	1.2216	1.1650	1.1042	1.0395	.9710
45.0	1.2698	1.2134	1.1556	1.0961	1.0351	.9725	.9084	.8426	.7755
50.0	1.1208	1.0497	.9809	.9138	.8480	.7833	.7193	.6560	.5933
55.0	.9613	.8804	.8053	.7350	.6685	.6053	.5448	.4868	.4310
60.0	.7987	.7133	.6367	.5672	.5038	.4453	.3911	.3408	.2938
65.0	.6404	.5554	.4816	.4169	.3596	.3085	.2627	.2215	.1843
70.0	.4927	.4128	.3456	.2886	.2399	.1979	.1617	.1303	.1033
75.0	.3611	.2900	.2324	.1853	.1465	.1146	.0882	.0666	.0489
80.0	.2496	.1899	.1436	.1075	.0793	.0572	.0402	.0272	.0175
85.0	.1601	.1135	.0793	.0541	.0358	.0227	.0135	.0073	.0035

TABLE IV.- CONTINUED

(e) C_D. Continued.

$\beta_1 = -90^\circ$; $\beta_2 = 90^\circ$; $\beta = 0^\circ$

θ_{xy}, deg / α, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.0047	.0237	.0569	.1029	.2269	.3813	.5529	.7312	.9087	1.0801
2.0	.0027	.0184	.0484	.0913	.2100	.3606	.5296	.7065	.8835	1.0553
4.0	.0009	.0107	.0342	.0710	.1788	.3208	.4839	.6572	.8325	1.0042
6.0	.0005	.0061	.0236	.0543	.1507	.2834	.4396	.6082	.7809	.9514
8.0	.0004	.0036	.0160	.0408	.1257	.2486	.3970	.5601	.7290	.8975
10.0	.0003	.0025	.0109	.0304	.1039	.2164	.3564	.5129	.6773	.8427
12.0	.0002	.0020	.0078	.0225	.0850	.1870	.3179	.4672	.6260	.7876
15.0	.0002	.0015	.0053	.0146	.0619	.1479	.2644	.4016	.5507	.7050
20.0	.0001	.0010	.0034	.0085	.0357	.0963	.1877	.3024	.4323	.5707
25.0	.0001	.0007	.0023	.0057	.0213	.0603	.1273	.2180	.3260	.4452
30.0	.0001	.0005	.0016	.0039	.0140	.0373	.0825	.1499	.2351	.3331
35.0	.0000	.0003	.0011	.0027	.0095	.0237	.0518	.0980	.1611	.2375
40.0	.0000	.0002	.0008	.0018	.0063	.0155	.0323	.0613	.1044	.1601
45.0	.0000	.0002	.0005	.0012	.0041	.0100	.0203	.0372	.0639	.1013
50.0	.0000	.0001	.0003	.0008	.0026	.0062	.0124	.0222	.0373	.0597
55.0	.0000	.0001	.0002	.0004	.0015	.0037	.0073	.0128	.0210	.0329
60.0	.0000	.0000	.0001	.0002	.0008	.0020	.0039	.0069	.0111	.0171
65.0	.0000	.0000	.0001	.0001	.0004	.0010	.0019	.0033	.0053	.0081
70.0	.0000	.0000	.0000	.0000	.0002	.0004	.0008	.0014	.0022	.0033
75.0	.0000	.0000	.0000	.0000	.0001	.0001	.0002	.0004	.0007	.0010
80.0	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0001	.0001	.0002
85.0	-.0000	.0000	-.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000

θ_{xy}, deg / α, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	1.2418	1.3913	1.5268	1.6469	1.7505	1.8368	1.9053	1.9553	1.9867
2.0	1.2179	1.3689	1.5061	1.6283	1.7342	1.8230	1.8941	1.9469	1.9811
4.0	1.1680	1.3211	1.4614	1.5872	1.6973	1.7907	1.8667	1.9248	1.9644
6.0	1.1155	1.2699	1.4124	1.5412	1.6548	1.7524	1.8329	1.8959	1.9408
8.0	1.0609	1.2158	1.3597	1.4906	1.6072	1.7083	1.7929	1.8605	1.9103
10.0	1.0045	1.1590	1.3035	1.4360	1.5549	1.6589	1.7471	1.8188	1.8733
12.0	.9469	1.1001	1.2445	1.3777	1.4982	1.6046	1.6958	1.7712	1.8300
15.0	.8590	1.0088	1.1514	1.2844	1.4060	1.5148	1.6096	1.6896	1.7540
20.0	.7121	.8525	.9885	1.1176	1.2377	1.3473	1.4452	1.5304	1.6020
25.0	.5703	.6972	.8225	.9435	1.0582	1.1648	1.2622	1.3491	1.4249
30.0	.4392	.5495	.6607	.7702	.8758	.9760	1.0694	1.1549	1.2317
35.0	.3233	.4150	.5098	.6051	.6989	.7896	.8760	.9569	1.0316
40.0	.2256	.2981	.3752	.4546	.5346	.6135	.6904	.7640	.8338
45.0	.1478	.2017	.2610	.3238	.3888	.4546	.5200	.5844	.6469
50.0	.0899	.1268	.1693	.2160	.2659	.3178	.3709	.4245	.4781
55.0	.0501	.0728	.1005	.1326	.1682	.2066	.2472	.2894	.3329
60.0	.0255	.0375	.0533	.0729	.0959	.1219	.1507	.1817	.2149
65.0	.0119	.0171	.0245	.0345	.0474	.0630	.0812	.1020	.1252
70.0	.0048	.0068	.0095	.0134	.0190	.0266	.0364	.0485	.0630
75.0	.0015	.0021	.0029	.0040	.0056	.0082	.0120	.0176	.0251
80.0	.0003	.0004	.0006	.0008	.0011	.0015	.0023	.0038	.0064
85.0	.0000	.0000	.0000	.0000	.0001	.0001	.0001	.0002	.0005

$\beta_1 = 90^\circ$; $\beta_2 = 270^\circ$; $\beta = 0^\circ$

θ_{xy}, deg / α, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.0117	.0375	.0771	.1291	.2629	.4244	.6003	.7806	.9581	1.1281
2.0	.0173	.0463	.0890	.1437	.2821	.4466	.6243	.8051	.9822	1.1511
4.0	.0334	.0679	.1162	.1761	.3227	.4925	.6726	.8536	1.0291	1.1950
6.0	.0576	.0955	.1485	.2127	.3662	.5399	.7212	.9012	1.0739	1.2358
8.0	.0914	.1297	.1860	.2537	.4124	.5886	.7697	.9478	1.1163	1.2732
10.0	.1360	.1710	.2290	.2990	.4612	.6382	.8177	.9919	1.1558	1.3068
12.0	.1927	.2197	.2774	.3485	.5122	.6884	.8650	1.0343	1.1922	1.3364
15.0	.3028	.3074	.3606	.4304	.5923	.7642	.9335	1.0934	1.2404	1.3727
20.0	.5597	.4938	.5261	.5856	.7328	.8887	1.0389	1.1772	1.3012	1.4100
25.0	.9145	.7298	.7223	.7599	.8769	1.0058	1.1285	1.2389	1.3351	1.4169
30.0	1.3673	1.0112	.9435	.9469	1.0181	1.1099	1.1980	1.2754	1.3604	1.3929
35.0	1.9105	1.3298	1.1815	1.1390	1.1500	1.1957	1.2437	1.2847	1.3167	1.3393
40.0	2.5286	1.6740	1.4266	1.3274	1.2659	1.2590	1.2632	1.2664	1.2652	1.2588
45.0	3.1997	2.0298	1.6678	1.5034	1.3601	1.2964	1.2555	1.2212	1.1885	1.1555
50.0	3.8964	2.3813	1.8937	1.6582	1.4277	1.3059	1.2209	1.1516	1.0906	1.0345
55.0	4.5878	2.7118	2.0932	1.7841	1.4651	1.2870	1.1612	1.0610	.9762	.9018
60.0	5.2414	3.0052	2.2561	1.8744	1.4704	1.2405	1.0793	.9539	.8509	.7637
65.0	5.8251	3.2466	2.3740	1.9246	1.4433	1.1689	.9793	.8354	.7206	.6262
70.0	6.3095	3.4235	2.4409	1.9318	1.3851	1.0757	.8662	.7112	.5911	.4953
75.0	6.6696	3.5267	2.4531	1.8958	1.2987	.9657	.7452	.5868	.4677	.3757
80.0	6.8865	3.5507	2.4100	1.8183	1.1886	.8440	.6220	.4674	.3551	.2713
85.0	6.9488	3.4943	2.3138	1.7035	1.0603	.7165	.5018	.3576	.2568	.1847

θ_{xy}, deg / α, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	1.2872	1.4332	1.5645	1.6800	1.7785	1.8596	1.9225	1.9669	1.9925
2.0	1.3086	1.4526	1.5815	1.6944	1.7903	1.8685	1.9285	1.9700	1.9927
4.0	1.3485	1.4878	1.6116	1.7189	1.8090	1.8813	1.9353	1.9708	1.9876
6.0	1.3845	1.5183	1.6362	1.7374	1.8212	1.8873	1.9351	1.9645	1.9752
8.0	1.4161	1.5437	1.6552	1.7497	1.8269	1.8864	1.9278	1.9510	1.9558
10.0	1.4432	1.5639	1.6683	1.7558	1.8260	1.8787	1.9136	1.9305	1.9293
12.0	1.4655	1.5787	1.6755	1.7555	1.8185	1.8642	1.8925	1.9031	1.8962
15.0	1.4895	1.5904	1.6750	1.7433	1.7951	1.8301	1.8483	1.8498	1.8344
20.0	1.5035	1.5816	1.6445	1.6922	1.7246	1.7418	1.7438	1.7307	1.7025
25.0	1.4845	1.5382	1.5783	1.6050	1.6184	1.6185	1.6055	1.5795	1.5405
30.0	1.4334	1.4622	1.4798	1.4863	1.4819	1.4666	1.4405	1.4038	1.3565
35.0	1.3529	1.3577	1.3542	1.3423	1.3221	1.2937	1.2571	1.2124	1.1597
40.0	1.2470	1.2300	1.2077	1.1800	1.1469	1.1083	1.0642	1.0145	.9594
45.0	1.1213	1.0855	1.0477	1.0076	.9649	.9193	.8708	.8193	.7646
50.0	.9817	.9311	.8817	.8329	.7842	.7352	.6855	.6350	.5835
55.0	.8351	.7741	.7173	.6639	.6128	.5636	.5157	.4688	.4227
60.0	.6881	.6213	.5616	.5072	.4572	.4108	.3672	.3260	.2870
65.0	.5469	.4791	.4203	.3686	.3227	.2814	.2441	.2102	.1792
70.0	.4171	.3524	.2981	.2519	.2123	.1781	.1483	.1224	.0997
75.0	.3031	.2450	.1979	.1594	.1276	.1013	.0796	.0615	.0467
80.0	.2077	.1587	.1207	.0910	.0677	.0495	.0354	.0245	.0164
85.0	.1323	.0940	.0658	.0451	.0300	.0191	.0115	.0068	.0031

TABLE IV.- CONTINUED

(e) C_D. Concluded.

$\phi_1 = 135^o$; $\phi_2 = 225^o$; $\beta = 0^o$

θ_{xy}, deg / α, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.0147	.0461	.0937	.1556	.3126	.4976	.6932	.8872	1.0713	1.2409
2.0	.0223	.0580	.1097	.1754	.3385	.5275	.7254	.9199	1.1034	1.2735
4.0	.0446	.0876	.1469	.2195	.3936	.5896	.7907	.9853	1.1665	1.3306
6.0	.0781	.1256	.1912	.2696	.4530	.6542	.8568	1.0501	1.2277	1.3866
8.0	.1251	.1729	.2428	.3260	.5164	.7209	.9234	1.1137	1.2864	1.4390
10.0	.1873	.2301	.3022	.3884	.5836	.7893	.9899	1.1757	1.3422	1.4874
12.0	.2665	.2978	.3694	.4569	.6541	.8591	1.0558	1.2357	1.3946	1.5314
15.0	.4206	.4199	.4849	.5707	.7655	.9650	1.1527	1.3207	1.4661	1.5883
20.0	.7809	.6804	.7159	.7871	.9622	1.1409	1.3043	1.4455	1.5627	1.6566
25.0	1.2791	1.0112	.9906	1.0313	1.1655	1.3090	1.4374	1.5438	1.6272	1.6887
30.0	1.9158	1.4062	1.3012	1.2945	1.3665	1.4611	1.5453	1.6106	1.6560	1.6829
35.0	2.6800	1.8541	1.6362	1.5657	1.5557	1.5896	1.6222	1.6422	1.6477	1.6395
40.0	3.5502	2.3388	1.9821	1.8329	1.7239	1.6880	1.6643	1.6371	1.6027	1.5608
45.0	4.4956	2.8404	2.3232	2.0834	1.8626	1.7511	1.6693	1.5956	1.5233	1.4508
50.0	5.4777	3.3366	2.6434	2.3048	1.9646	1.7757	1.6370	1.5197	1.4138	1.3153
55.0	6.4529	3.8040	2.9270	2.4861	2.0246	1.7604	1.5690	1.4135	1.2796	1.1611
60.0	7.3753	4.2195	3.1597	2.6178	2.0395	1.7060	1.4689	1.2823	1.1277	.9957
65.0	8.1998	4.5621	3.3294	2.6930	2.0085	1.6155	1.3419	1.1329	.9653	.8270
70.0	8.8846	4.8143	3.4273	2.7078	1.9332	1.4934	1.1943	.9725	.8003	.6626
75.0	9.3946	4.9627	3.4481	2.6614	1.8175	1.3460	1.0336	.8088	.6398	.5092
80.0	9.7029	4.9996	3.3908	2.5562	1.6675	1.1808	.8673	.6490	.4905	.3725
85.0	9.7935	4.9230	3.2584	2.3978	1.4907	1.0058	.7030	.4998	.3579	.2565

θ_{xy}, deg / α, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	1.3937	1.5287	1.6458	1.7451	1.8273	1.8930	1.9426	1.9765	1.9953
2.0	1.4221	1.5543	1.6683	1.7643	1.8430	1.9050	1.9509	1.9812	1.9963
4.0	1.4759	1.6020	1.7092	1.7981	1.8695	1.9240	1.9624	1.9851	1.9927
6.0	1.5256	1.6447	1.7445	1.8258	1.8893	1.9361	1.9667	1.9818	1.9819
8.0	1.5708	1.6822	1.7739	1.8470	1.9024	1.9411	1.9638	1.9712	1.9639
10.0	1.6111	1.7140	1.7971	1.8616	1.9086	1.9390	1.9538	1.9536	1.9389
12.0	1.6461	1.7399	1.8139	1.8695	1.9078	1.9299	1.9367	1.9289	1.9071
15.0	1.6883	1.7673	1.8269	1.8686	1.8936	1.9032	1.8981	1.8793	1.8472
20.0	1.7288	1.7811	1.8154	1.8333	1.8362	1.8253	1.8014	1.7655	1.7180
25.0	1.7306	1.7548	1.7633	1.7577	1.7393	1.7094	1.6687	1.6180	1.5579
30.0	1.6934	1.6896	1.6732	1.6456	1.6081	1.5616	1.5068	1.4445	1.3751
35.0	1.6194	1.5890	1.5498	1.5029	1.4492	1.3894	1.3240	1.2537	1.1787
40.0	1.5123	1.4583	1.3996	1.3369	1.2707	1.2013	1.1293	1.0547	.9779
45.0	1.3777	1.3041	1.2301	1.1558	1.0813	1.0066	.9318	.8569	.7820
50.0	1.2224	1.1361	1.0496	.9684	.8900	.8141	.7405	.6688	.5991
55.0	1.0542	.9566	.8667	.7833	.7054	.6322	.5631	.4978	.4360
60.0	.8809	.7797	.6895	.6084	.5348	.4677	.4063	.3498	.2978
65.0	.7106	.6112	.5253	.4504	.3845	.3262	.2745	.2284	.1874
70.0	.5504	.4576	.3800	.3145	.2587	.2111	.1703	.1353	.1054
75.0	.4063	.3242	.2579	.2039	.1598	.1236	.0939	.0697	.0502
80.0	.2830	.2143	.1611	.1198	.0876	.0627	.0434	.0289	.0181
85.0	.1831	.1294	.0901	.0612	.0403	.0254	.0149	.0080	.0037

$\phi_1 = 150^o$; $\phi_2 = 210^o$; $\beta = 0^o$

θ_{xy}, deg / α, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.0170	.0527	.1066	.1762	.3510	.5531	.7623	.9645	1.1513	1.3187
2.0	.0242	.0670	.1257	.1998	.3816	.5883	.7999	1.0025	1.1883	1.3536
4.0	.0532	.1026	.1703	.2525	.4471	.6616	.8744	1.0786	1.2613	1.4216
6.0	.0942	.1487	.2236	.3127	.5179	.7381	.9542	1.1544	1.3325	1.4864
8.0	.1518	.2062	.2862	.3806	.5938	.8175	1.0330	1.2293	1.4012	1.5476
10.0	.2285	.2760	.3583	.4561	.6744	.8992	1.1120	1.3027	1.4671	1.6047
12.0	.3263	.3589	.4401	.5392	.7595	.9828	1.1908	1.3741	1.5295	1.6572
15.0	.5169	.5090	.5813	.6777	.8943	1.1105	1.3071	1.4762	1.6156	1.7265
20.0	.9637	.8301	.8647	.9424	1.1337	1.3241	1.4913	1.6285	1.7351	1.8135
25.0	1.5830	1.2391	1.2033	1.2427	1.3830	1.5302	1.6556	1.7518	1.8193	1.8610
30.0	2.3756	1.7291	1.5875	1.5677	1.6311	1.7190	1.7916	1.8398	1.8639	1.8667
35.0	3.3281	2.2859	2.0034	1.9041	1.8666	1.8810	1.8924	1.8880	1.8665	1.8302
40.0	4.4141	2.8898	2.4340	2.2371	2.0779	2.0080	1.9528	1.8937	1.8270	1.7534
45.0	5.5950	3.5160	2.8601	2.5508	2.2563	2.0933	1.9695	1.8566	1.7474	1.6404
50.0	6.8230	4.1367	3.2616	2.8298	2.3868	2.1325	1.9416	1.7787	1.6320	1.4971
55.0	8.0435	4.7227	3.6188	3.0607	2.4684	2.1235	1.8707	1.6641	1.4867	1.3306
60.0	9.1994	5.2451	3.9136	3.2298	2.4949	2.0668	1.7604	1.5188	1.3189	1.1494
65.0	10.2339	5.6776	4.1307	3.3300	2.4649	1.9653	1.6165	1.3500	1.1370	.9621
70.0	11.0948	5.9980	4.2590	3.3554	2.3800	1.8245	1.4464	1.1664	.9496	.7773
75.0	11.7377	6.1893	4.2915	3.3047	2.2445	1.6515	1.2585	.9765	.7653	.6030
80.0	12.1291	6.2415	4.2265	3.1805	2.0657	1.4550	1.0621	.7892	.5919	.4457
85.0	12.2483	6.1520	4.0676	2.9894	1.8526	1.2449	.8661	.6125	.4361	.3107

θ_{xy}, deg / α, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	1.4653	1.5912	1.6977	1.7858	1.8572	1.9130	1.9544	1.9821	1.9969
2.0	1.4974	1.6201	1.7229	1.8073	1.8747	1.9265	1.9638	1.9875	1.9982
4.0	1.5590	1.6744	1.7694	1.8457	1.9048	1.9483	1.9773	1.9927	1.9953
6.0	1.6163	1.7237	1.8102	1.8778	1.9283	1.9631	1.9836	1.9907	1.9851
8.0	1.6691	1.7675	1.8449	1.9034	1.9448	1.9708	1.9827	1.9815	1.9678
10.0	1.7168	1.8055	1.8732	1.9222	1.9543	1.9713	1.9746	1.9650	1.9434
12.0	1.7590	1.8374	1.8950	1.9361	1.9567	1.9647	1.9593	1.9415	1.9122
15.0	1.8114	1.8732	1.9198	1.9387	1.9469	1.9413	1.9232	1.8935	1.8531
20.0	1.8671	1.8992	1.9130	1.9111	1.8956	1.8681	1.8299	1.7820	1.7251
25.0	1.8808	1.8822	1.8681	1.8410	1.8030	1.7555	1.6996	1.6362	1.5658
30.0	1.8520	1.8229	1.7822	1.7320	1.6740	1.6094	1.5391	1.4636	1.3835
35.0	1.7821	1.7246	1.6600	1.5899	1.5154	1.4374	1.3564	1.2729	1.1872
40.0	1.6747	1.5924	1.5078	1.4218	1.3351	1.2480	1.1607	1.0734	.9862
45.0	1.5356	1.4331	1.3333	1.2363	1.1420	1.0504	.9612	.8744	.7897
50.0	1.3717	1.2547	1.1452	1.0424	.9454	.8538	.7670	.6846	.6060
55.0	1.1914	1.0660	.9525	.8490	.7541	.6669	.5862	.5114	.4420
60.0	1.0033	.8759	.7639	.6646	.5761	.4968	.4254	.3609	.3027
65.0	.8161	.6927	.5873	.4965	.4179	.3494	.2895	.2370	.1911
70.0	.6380	.5239	.4294	.3505	.2843	.2285	.1813	.1415	.1080
75.0	.4761	.3755	.2951	.2304	.1780	.1356	.1013	.0737	.0518
80.0	.3356	.2517	.1873	.1377	.0995	.0701	.0478	.0311	.0189
85.0	.2203	.1546	.1068	.0720	.0470	.0292	.0170	.0089	.0040

TABLE IV.- CONTINUED

(f) L/D

$\phi_1 = 0^o$; $\phi_2 = 360^o$; $\beta = 0^o$

α, deg \ θ_{xy}, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	2.8073	.7253	.3127	.1661	.0609	.0242	.0073	-.0017	-.0070	-.0104
2.0	4.5939	1.3704	.6094	.3275	.1211	.0482	.0146	-.0034	-.0140	-.0207
4.0	5.3110	2.2427	1.1057	.6191	.2361	.0949	.0288	-.0069	-.0281	-.0415
6.0	4.6810	2.5770	1.4349	.8503	.3398	.1389	.0423	-.0106	-.0422	-.0622
8.0	4.0428	2.5801	1.6059	1.0127	.4284	.1790	.0547	-.0145	-.0563	-.0830
10.0	3.5321	2.4326	1.6588	1.1105	.4998	.2142	.0658	-.0188	-.0705	-.1038
12.0	3.1231	2.2449	1.6356	1.1553	.5534	.2439	.0752	-.0235	-.0848	-.1247
15.0	2.6459	1.9844	1.5255	1.1513	.6024	.2774	.0857	-.0316	-.1066	-.1562
20.0	2.0821	1.6309	1.3005	1.0412	.6151	.3034	.0925	-.0484	-.1436	-.2090
25.0	1.6892	1.3571	1.1017	.8965	.5688	.2956	.0846	-.0704	-.1822	-.2627
30.0	1.3965	1.1382	.9317	.7611	.4889	.2604	.0618	-.0985	-.2229	-.3174
35.0	1.1671	.9576	.7845	.6381	.3993	.2038	.0246	-.1340	-.2667	-.3738
40.0	.9800	.8041	.6549	.5258	.3103	.1323	-.0269	-.1783	-.3149	-.4326
45.0	.8223	.6705	.5385	.4221	.2233	.0558	-.0924	-.2330	-.3694	-.4952
50.0	.6857	.5514	.4322	.3250	.1381	-.0229	-.1670	-.3009	-.4331	-.5637
55.0	.5645	.4431	.3333	.2329	.0540	-.1037	-.2470	-.3811	-.5106	-.6419
60.0	.4546	.3427	.2397	.1441	-.0300	-.1870	-.3325	-.4703	-.6039	-.7368
65.0	.3532	.2482	.1499	.0573	-.1148	-.2738	-.4240	-.5688	-.7110	-.8532
70.0	.2578	.1576	.0624	-.0288	-.2015	-.3651	-.5231	-.6784	-.8335	-.9908
75.0	.1667	.0695	-.0243	-.1154	-.2915	-.4627	-.6319	-.8019	-.9753	-1.1547
80.0	.0781	-.0176	-.1114	-.2038	-.3863	-.5684	-.7531	-.9435	-1.1424	-1.3535
85.0	-.0092	-.1050	-.2002	-.2954	-.4876	-.6849	-.8909	-1.1093	-1.3443	-1.6015

α, deg \ θ_{xy}, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	-.0126	-.0141	-.0152	-.0159	-.0165	-.0169	-.0171	-.0173	-.0174
2.0	-.0252	-.0282	-.0303	-.0319	-.0330	-.0337	-.0343	-.0346	-.0349
4.0	-.0503	-.0564	-.0607	-.0638	-.0660	-.0675	-.0686	-.0694	-.0698
6.0	-.0756	-.0847	-.0912	-.0958	-.0991	-.1015	-.1032	-.1043	-.1049
8.0	-.1008	-.1131	-.1218	-.1280	-.1325	-.1357	-.1379	-.1394	-.1403
10.0	-.1262	-.1417	-.1526	-.1605	-.1661	-.1702	-.1730	-.1749	-.1760
12.0	-.1517	-.1704	-.1837	-.1932	-.2001	-.2050	-.2085	-.2108	-.2121
15.0	-.1901	-.2138	-.2308	-.2430	-.2519	-.2583	-.2627	-.2657	-.2674
20.0	-.2549	-.2876	-.3112	-.3285	-.3410	-.3501	-.3565	-.3608	-.3632
25.0	-.3210	-.3636	-.3949	-.4179	-.4349	-.4473	-.4560	-.4619	-.4652
30.0	-.3887	-.4423	-.4825	-.5127	-.5352	-.5517	-.5635	-.5714	-.5759
35.0	-.4585	-.5244	-.5753	-.6143	-.6438	-.6657	-.6815	-.6921	-.6982
40.0	-.5308	-.6106	-.6743	-.7244	-.7631	-.7923	-.8136	-.8280	-.8364
45.0	-.6064	-.7015	-.7807	-.8451	-.8961	-.9355	-.9646	-.9845	-.9962
50.0	-.6867	-.7983	-.8959	-.9787	-1.0467	-1.1006	-1.1413	-1.1696	-1.1862
55.0	-.7744	-.9026	-1.0216	-1.1281	-1.2196	-1.2949	-1.3534	-1.3950	-1.4199
60.0	-.8747	-1.0178	-1.1604	-1.2965	-1.4208	-1.5294	-1.6156	-1.6797	-1.7189
65.0	-.9984	-1.1521	-1.3175	-1.4886	-1.6575	-1.8148	-1.9505	-2.0554	-2.1218
70.0	-1.1530	-1.3235	-1.5076	-1.7142	-1.9398	-2.1724	-2.3934	-2.5788	-2.7034
75.0	-1.3431	-1.5442	-1.7629	-2.0066	-2.2906	-2.6268	-2.9980	-3.3577	-3.6294
80.0	-1.5808	-1.8299	-2.1080	-2.4255	-2.7980	-3.2525	-3.8497	-4.6037	-5.3414
85.0	-1.8879	-2.2132	-2.5914	-3.0434	-3.6020	-4.3226	-5.3081	-6.7843	-9.3338

TABLE IV.- CONTINUED

(f) L/D. Continued.

$\phi_1 = 105^0$; $\phi_2 = 255^0$; $\beta = 0^0$

α, deg \ θ_{xy}, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	8.0439	4.2641	2.8836	2.1655	1.4225	1.0369	.7980	.6340	.5134	.4204
2.0	7.1231	3.9878	2.7477	2.0816	1.3768	1.0047	.7720	.6113	.4926	.4007
4.0	5.7475	3.5125	2.5019	1.9259	1.2899	.9428	.7217	.5671	.4519	.3622
6.0	4.7882	3.1229	2.2871	1.7852	1.2088	.8840	.6734	.5243	.4124	.3246
8.0	4.0874	2.8002	2.0985	1.6578	1.1329	.8282	.6270	.4829	.3738	.2877
10.0	3.5545	2.5294	1.9321	1.5420	1.0617	.7749	.5823	.4428	.3362	.2515
12.0	3.1358	2.2991	1.7843	1.4364	.9948	.7240	.5391	.4036	.2993	.2159
15.0	2.6522	2.0119	1.5912	1.2941	.9014	.6515	.4769	.3468	.2453	.1634
20.0	2.0846	1.6423	1.3273	1.0916	.7615	.5397	.3788	.2558	.1579	.0775
25.0	1.6905	1.3627	1.1152	.9217	.6372	.4368	.2864	.1684	.0726	-.0072
30.0	1.3972	1.1414	.9393	.7755	.5249	.3406	.1979	.0832	-.0117	-.0922
35.0	1.1675	.9595	.7892	.6470	.4215	.2493	.1121	-.0009	-.0963	-.1784
40.0	.9803	.8054	.6579	.5316	.3250	.1616	.0277	-.0851	-.1822	-.2673
45.0	.8225	.6713	.5406	.4260	.2334	.0761	-.0564	-.1705	-.2708	-.3602
50.0	.6858	.5520	.4336	.3278	.1452	-.0085	-.1413	-.2584	-.3634	-.4588
55.0	.5646	.4435	.3343	.2348	.0591	-.0933	-.2283	-.3502	-.4617	-.5651
60.0	.4547	.3431	.2405	.1455	-.0263	-.1794	-.3187	-.4473	-.5677	-.6817
65.0	.3533	.2485	.1505	.0583	-.1121	-.2683	-.4140	-.5519	-.6840	-.8119
70.0	.2579	.1578	.0628	-.0281	-.1997	-.3613	-.5160	-.6663	-.8139	-.9604
75.0	.1667	.0696	-.0240	-.1149	-.2903	-.4601	-.6271	-.7937	-.9619	-1.1336
80.0	.0782	-.0175	-.1112	-.2034	-.3855	-.5668	-.7503	-.9386	-1.1344	-1.3406
85.0	-.0092	-.1049	-.2000	-.2952	-.4871	-.6841	-.8895	-1.1069	-1.3406	-1.5957

α, deg \ θ_{xy}, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	.3458	.2841	.2318	.1863	.1459	.1093	.0754	.0435	.0127
2.0	.3269	.2657	.2137	.1685	.1283	.0918	.0579	.0260	-.0047
4.0	.2897	.2294	.1780	.1332	.0932	.0568	.0231	-.0089	-.0396
6.0	.2533	.1937	.1428	.0982	.0583	.0220	-.0118	-.0438	-.0747
8.0	.2174	.1585	.1078	.0634	.0236	-.0128	-.0466	-.0788	-.1099
10.0	.1820	.1236	.0732	.0288	-.0111	-.0475	-.0816	-.1139	-.1453
12.0	.1471	.0889	.0386	-.0058	-.0458	-.0824	-.1167	-.1494	-.1812
15.0	.0953	.0374	-.0130	-.0576	-.0980	-.1352	-.1701	-.2034	-.2358
20.0	.0099	-.0483	-.0993	-.1449	-.1865	-.2249	-.2612	-.2960	-.3301
25.0	-.0754	-.1346	-.1871	-.2344	-.2778	-.3182	-.3566	-.3936	-.4299
30.0	-.1617	-.2230	-.2778	-.3276	-.3736	-.4168	-.4581	-.4981	-.5376
35.0	-.2505	-.3147	-.3728	-.4261	-.4758	-.5228	-.5680	-.6121	-.6559
40.0	-.3430	-.4114	-.4740	-.5321	-.5867	-.6388	-.6893	-.7389	-.7886
45.0	-.4410	-.5151	-.5837	-.6481	-.7094	-.7684	-.8261	-.8833	-.9409
50.0	-.5465	-.6280	-.7048	-.7777	-.8480	-.9164	-.9840	-1.0517	-1.1205
55.0	-.6619	-.7535	-.8410	-.9256	-1.0082	-1.0897	-1.1713	-1.2540	-1.3392
60.0	-.7906	-.8956	-.9979	-1.0985	-1.1984	-1.2988	-1.4009	-1.5060	-1.6157
65.0	-.9370	-1.0603	-1.1831	-1.3064	-1.4316	-1.5601	-1.6935	-1.8337	-1.9831
70.0	-1.1073	-1.2560	-1.4080	-1.5649	-1.7285	-1.9012	-2.0857	-2.2854	-2.5043
75.0	-1.3107	-1.4956	-1.6907	-1.8991	-2.1246	-2.3720	-2.6475	-2.9589	-3.3164
80.0	-1.5607	-1.7989	-2.0607	-2.3531	-2.6857	-3.0720	-3.5308	-4.0892	-4.7859
85.0	-1.8788	-2.1992	-2.5696	-3.0088	-3.5455	-4.2261	-5.1296	-6.3999	-8.3181

$\phi_1 = 120^0$; $\phi_2 = 240^0$; $\beta = 0^0$

α, deg \ θ_{xy}, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	8.2644	4.4058	2.9875	2.2478	1.4815	1.0835	.8369	.6675	.5427	.4461
2.0	7.2646	4.0989	2.8356	2.1541	1.4310	1.0486	.8092	.6435	.5210	.4258
4.0	5.8150	3.5840	2.5664	1.9831	1.3362	.9818	.7556	.5971	.4787	.3862
6.0	4.8254	3.1715	2.3356	1.8310	1.2486	.9190	.7046	.5524	.4378	.3475
8.0	4.1101	2.8346	2.1360	1.6951	1.1674	.8596	.6557	.5093	.3980	.3097
10.0	3.5695	2.5546	1.9616	1.5727	1.0918	.8033	.6089	.4675	.3592	.2727
12.0	3.1463	2.3182	1.8079	1.4620	1.0213	.7498	.5638	.4270	.3213	.2364
15.0	2.6588	2.0250	1.6086	1.3141	.9235	.6741	.4991	.3683	.2659	.1829
20.0	2.0882	1.6501	1.3385	1.1054	.7783	.5580	.3978	.2748	.1766	.0957
25.0	1.6927	1.3678	1.1230	.9316	.6504	.4519	.3028	.1855	.0899	.0099
30.0	1.3987	1.1449	.9449	.7830	.5354	.3534	.2123	.0987	.0045	-.0758
35.0	1.1686	.9621	.7934	.6528	.4302	.2603	.1250	.0134	-.0810	-.1626
40.0	.9811	.8074	.6612	.5362	.3322	.1712	.0393	-.0718	-.1676	-.2518
45.0	.8231	.6729	.5432	.4298	.2396	.0845	-.0458	-.1580	-.2567	-.3448
50.0	.6863	.5532	.4358	.3309	.1505	-.0010	-.1316	-.2466	-.3497	-.4435
55.0	.5650	.4446	.3361	.2375	.0637	-.0865	-.2193	-.3389	-.4483	-.5497
60.0	.4551	.3440	.2420	.1478	-.0223	-.1734	-.3104	-.4367	-.5586	-.6662
65.0	.3536	.2492	.1518	.0603	-.1086	-.2629	-.4063	-.5417	-.6712	-.7963
70.0	.2582	.1585	.0639	-.0263	-.1966	-.3564	-.5090	-.6567	-.8014	-.9448
75.0	.1670	.0703	-.0230	-.1134	-.2875	-.4558	-.6208	-.7849	-.9500	-1.1182
80.0	.0784	-.0169	-.1103	-.2021	-.3831	-.5630	-.7447	-.9307	-1.1235	-1.3261
85.0	-.0089	-.1044	-.1992	-.2940	-.4851	-.6810	-.8849	-1.1004	-1.3316	-1.5834

α, deg \ θ_{xy}, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	.3684	.3039	.2489	.2009	.1581	.1190	.0827	.0483	.0151
2.0	.3491	.2852	.2307	.1830	.1403	.1014	.0652	.0308	-.0023
4.0	.3111	.2484	.1946	.1474	.1050	.0663	.0302	-.0040	-.0372
6.0	.2739	.2121	.1589	.1121	.0700	.0314	-.0046	-.0389	-.0722
8.0	.2374	.1764	.1237	.0772	.0352	-.0034	-.0395	-.0739	-.1074
10.0	.2014	.1411	.0887	.0424	.0004	-.0382	-.0745	-.1091	-.1429
12.0	.1660	.1061	.0540	.0077	-.0343	-.0731	-.1096	-.1446	-.1787
15.0	.1135	.0541	.0021	-.0443	-.0866	-.1258	-.1628	-.1984	-.2333
20.0	.0272	-.0321	-.0845	-.1317	-.1750	-.2154	-.2538	-.2909	-.3274
25.0	-.0587	-.1188	-.1724	-.2211	-.2661	-.3084	-.3488	-.3882	-.4271
30.0	-.1455	-.2073	-.2629	-.3139	-.3615	-.4065	-.4499	-.4923	-.5345
35.0	-.2345	-.2989	-.3576	-.4120	-.4631	-.5118	-.5591	-.6058	-.6525
40.0	-.3270	-.3953	-.4583	-.5172	-.5731	-.6269	-.6796	-.7319	-.7848
45.0	-.4249	-.4985	-.5672	-.6322	-.6946	-.7553	-.8152	-.8753	-.9365
50.0	-.5300	-.6108	-.6872	-.7605	-.8316	-.9016	-.9715	-1.0423	-1.1153
55.0	-.6449	-.7353	-.8221	-.9065	-.9897	-1.0727	-1.1566	-1.2428	-1.3328
60.0	-.7729	-.8762	-.9772	-1.0771	-1.1772	-1.2787	-1.3831	-1.4920	-1.6075
65.0	-.9187	-1.0395	-1.1602	-1.2821	-1.4067	-1.5357	-1.6712	-1.8156	-1.9721
70.0	-1.0884	-1.2337	-1.3825	-1.5367	-1.6985	-1.8707	-2.0565	-2.2605	-2.4884
75.0	-1.2914	-1.4719	-1.6625	-1.8665	-2.0880	-2.3326	-2.6074	-2.9223	-3.2909
80.0	-1.5418	-1.7748	-2.0305	-2.3160	-2.6412	-3.0200	-3.4727	-4.0297	-4.7383
85.0	-1.8624	-2.1774	-2.5409	-2.9712	-3.4963	-4.1617	-5.0452	-6.2923	-8.1999

TABLE IV.- CONTINUED

(f) L/D. Continued.

$\beta_1 = -90^\circ$; $\beta_2 = 90^\circ$; $\beta = 0^\circ$

θ_{xy}, deg / α, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	-9.8561	-4.6620	-3.0369	-2.2410	-1.4503	-1.0524	-.8101	-.6457	-.5259	-.4343
2.0	-10.6895	-4.9364	-3.1688	-2.3218	-1.4945	-1.0839	-.8358	-.6683	-.5468	-.4540
4.0	-8.2325	-5.3883	-3.4281	-2.4862	-1.5857	-1.1489	-.8887	-.7148	-.5895	-.4944
6.0	-3.8231	-5.3473	-3.6413	-2.6461	-1.6801	-1.2167	-.9439	-.7631	-.6337	-.5360
8.0	-2.7417	-4.2371	-3.7187	-2.7835	-1.7759	-1.2872	-1.0014	-.8133	-.6795	-.5789
10.0	-2.2132	-2.6896	-3.5230	-2.8680	-1.8706	-1.3600	-1.0613	-.8656	-.7271	-.6234
12.0	-1.9007	-2.1051	-2.9611	-2.8544	-1.9598	-1.4348	-1.1237	-.9202	-.7767	-.6696
15.0	-1.6257	-1.7141	-1.9680	-2.5486	-2.0681	-1.5483	-1.2219	-1.0067	-.8550	-.7424
20.0	-1.4109	-1.4446	-1.5136	-1.6673	-2.0896	-1.7256	-1.3960	-1.1639	-.9982	-.8749
25.0	-1.3419	-1.3579	-1.3886	-1.4414	-1.7905	-1.8384	-1.5738	-1.3382	-1.1597	-1.0246
30.0	-1.3489	-1.3591	-1.3758	-1.4018	-1.5107	-1.8039	-1.7294	-1.5260	-1.3425	-1.1960
35.0	-1.4134	-1.4170	-1.4271	-1.4422	-1.4954	-1.6370	-1.8128	-1.7131	-1.5470	-1.3961
40.0	-1.5214	-1.5206	-1.5273	-1.5369	-1.5681	-1.6273	-1.7868	-1.8666	-1.7662	-1.6228
45.0	-1.6729	-1.6690	-1.6744	-1.6808	-1.7009	-1.7347	-1.7964	-1.9435	-1.9766	-1.8807
50.0	-1.8759	-1.8689	-1.8738	-1.8786	-1.8923	-1.9139	-1.9480	-2.0088	-2.1364	-2.1509
55.0	-2.1319	-2.1386	-2.1409	-2.1448	-2.1544	-2.1691	-2.1906	-2.2230	-2.2794	-2.3922
60.0	-2.5156	-2.4961	-2.5024	-2.5067	-2.5140	-2.5243	-2.5387	-2.5589	-2.5884	-2.6377
65.0	-3.0403	-3.0281	-3.0145	-3.0180	-3.0235	-3.0309	-3.0409	-3.0543	-3.0724	-3.0981
70.0	-3.8077	-3.7476	-3.7821	-3.7871	-3.7906	-3.7959	-3.8031	-3.8121	-3.8239	-3.8395
75.0	-5.3750	-4.9412	-5.0758	-5.0754	-5.0706	-5.0727	-5.0775	-5.0838	-5.0916	-5.1014
80.0	.0000	-8.0800	-7.5306	-7.5806	-7.6113	-7.6236	-7.6283	-7.6310	-7.6359	-7.6421
85.0	.5833	-4.5833	-9.6667	-21.4737	-14.9615	-15.1682	-15.1855	-15.2533	-15.2736	-15.2842

θ_{xy}, deg / α, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	-.3614	-.3016	-.2513	-.2079	-.1697	-.1352	-.1036	-.0738	-.0453
2.0	-.3805	-.3202	-.2696	-.2259	-.1875	-.1529	-.1212	-.0914	-.0628
4.0	-.4193	-.3579	-.3065	-.2624	-.2235	-.1887	-.1567	-.1267	-.0980
6.0	-.4591	-.3966	-.3443	-.2994	-.2601	-.2248	-.1925	-.1622	-.1333
8.0	-.5001	-.4362	-.3829	-.3373	-.2973	-.2616	-.2288	-.1982	-.1690
10.0	-.5424	-.4770	-.4225	-.3760	-.3353	-.2990	-.2657	-.2347	-.2051
12.0	-.5862	-.5190	-.4632	-.4157	-.3742	-.3372	-.3033	-.2718	-.2418
15.0	-.6550	-.5848	-.5267	-.4774	-.4344	-.3961	-.3613	-.3288	-.2979
20.0	-.7795	-.7033	-.6405	-.5873	-.5412	-.5002	-.4630	-.4285	-.3957
25.0	-.9197	-.8358	-.7668	-.7086	-.6582	-.6136	-.5732	-.5358	-.5005
30.0	-1.0801	-.9867	-.9099	-.8451	-.7891	-.7397	-.6950	-.6537	-.6148
35.0	-1.2668	-1.1623	-1.0755	-1.0021	-.9387	-.8828	-.8323	-.7859	-.7422
40.0	-1.4875	-1.3708	-1.2718	-1.1872	-1.1140	-1.0493	-.9910	-.9374	-.8872
45.0	-1.7501	-1.6233	-1.5102	-1.4115	-1.3251	-1.2484	-1.1795	-1.1159	-1.0566
50.0	-2.0594	-1.9339	-1.8078	-1.6919	-1.5878	-1.4946	-1.4102	-1.3327	-1.2604
55.0	-2.4081	-2.3157	-2.1880	-2.0545	-1.9278	-1.8111	-1.7044	-1.6061	-1.5146
60.0	-2.7420	-2.7685	-2.6783	-2.5400	-2.3879	-2.2387	-2.0984	-1.9679	-1.8463
65.0	-3.1395	-3.2353	-3.2854	-3.2034	-3.0424	-2.8527	-2.6608	-2.4773	-2.3052
70.0	-3.8613	-3.8952	-3.9696	-4.0725	-4.0074	-3.8025	-3.5369	-3.2603	-2.9947
75.0	-5.1142	-5.1321	-5.1596	-5.2109	-5.3568	-5.3639	-5.0735	-4.6337	-4.1683
80.0	-7.6497	-7.6596	-7.6735	-7.6950	-7.7340	-7.8302	-8.0716	-7.6171	-6.6554
85.0	-15.2802	-15.2886	-15.2924	-15.3028	-15.3165	-15.3433	-15.4067	-15.6746	-15.2445

$\beta_1 = 90^\circ$; $\beta_2 = 270^\circ$; $\beta = 0^\circ$

θ_{xy}, deg / α, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	7.8340	4.1270	2.7828	2.0855	1.3651	.9915	.7602	.6016	.4851	.3955
2.0	8.9934	3.8821	2.6632	2.0114	1.3241	.9621	.7360	.5801	.4652	.3765
4.0	5.6904	3.4469	2.4413	1.8714	1.2454	.9051	.6889	.5381	.4261	.3391
6.0	4.7591	3.0802	2.2426	1.7423	1.1709	.8505	.6434	.4973	.3880	.3025
8.0	4.0709	2.7711	2.0651	1.6236	1.1004	.7983	.5995	.4577	.3507	.2666
10.0	3.5444	2.5089	1.9065	1.5144	1.0337	.7481	.5570	.4191	.3142	.2312
12.0	3.1293	2.2862	1.7644	1.4138	.9704	.6998	.5158	.3814	.2784	.1964
15.0	2.6484	2.0022	1.5770	1.2771	.8815	.6308	.4561	.3264	.2258	.1449
20.0	2.0828	1.6371	1.3188	1.0805	.7469	.5232	.3615	.2381	.1403	.0604
25.0	1.6895	1.3596	1.1098	.9140	.6263	.4235	.2716	.1527	.0566	-.0233
30.0	1.3966	1.1394	.9357	.7701	.5164	.3297	.1852	.0692	-.0265	-.1073
35.0	1.1672	.9582	.7866	.6430	.4149	.2403	.1011	-.0135	-.1100	-.1929
40.0	.9800	.8044	.6561	.5286	.3197	.1541	.0181	-.0965	-.1951	-.2813
45.0	.8223	.6706	.5392	.4238	.2292	.0697	-.0649	-.1810	-.2829	-.3738
50.0	.6857	.5515	.4326	.3261	.1418	-.0139	-.1488	-.2680	-.3749	-.4720
55.0	.5645	.4431	.3335	.2335	.0563	-.0978	-.2349	-.3589	-.4726	-.5780
60.0	.4567	.3428	.2399	.1444	-.0286	-.1833	-.3245	-.4553	-.5780	-.6943
65.0	.3532	.2482	.1500	.0575	-.1139	-.2715	-.4190	-.5590	-.6936	-.8241
70.0	.2578	.1576	.0624	-.0287	-.2011	-.3639	-.5202	-.6724	-.8225	-.9719
75.0	.1667	.0695	-.0243	-.1153	-.2913	-.4620	-.6304	-.7988	-.9692	-1.1438
80.0	.0781	-.0176	-.1114	-.2038	-.3862	-.5682	-.7526	-.9423	-1.1399	-1.3487
85.0	-.0092	-.1050	-.2002	-.2954	-.4876	-.6849	-.8908	-1.1091	-1.3439	-1.6006

θ_{xy}, deg / α, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	.3240	.2650	.2153	.1723	.1343	.1001	.0685	.0389	.0104
2.0	.3055	.2470	.1975	.1546	.1168	.0826	.0511	.0214	-.0070
4.0	.2692	.2113	.1622	.1196	.0819	.0477	.0162	-.0134	-.0419
6.0	.2334	.1761	.1273	.0848	.0471	.0130	-.0186	-.0483	-.0770
8.0	.1982	.1413	.0927	.0503	.0125	-.0217	-.0534	-.0833	-.1122
10.0	.1635	.1068	.0583	.0158	-.0220	-.0565	-.0884	-.1185	-.1477
12.0	.1291	.0726	.0240	-.0186	-.0567	-.0913	-.1236	-.1541	-.1835
15.0	.0780	.0215	-.0273	-.0703	-.1089	-.1441	-.1769	-.2081	-.2382
20.0	-.0064	-.0636	-.1134	-.1575	-.1974	-.2340	-.2682	-.3009	-.3326
25.0	-.0910	-.1496	-.2010	-.2471	-.2889	-.3276	-.3639	-.3987	-.4326
30.0	-.1769	-.2377	-.2917	-.3405	-.3851	-.4266	-.4658	-.5036	-.5405
35.0	-.2653	-.3294	-.3870	-.4394	-.4879	-.5332	-.5764	-.6181	-.6591
40.0	-.3577	-.4263	-.4887	-.5461	-.5996	-.6501	-.6985	-.7456	-.7922
45.0	-.4556	-.5302	-.5990	-.6630	-.7233	-.7808	-.8364	-.8909	-.9451
50.0	-.5611	-.6436	-.7208	-.7937	-.8632	-.9303	-.9958	-1.0605	-1.1255
55.0	-.6766	-.7697	-.8582	-.9431	-1.0253	-1.1057	-1.1851	-1.2647	-1.3453
60.0	-.8054	-.9124	-1.0163	-1.1178	-1.2179	-1.3175	-1.4176	-1.5192	-1.6235
65.0	-.9518	-1.0778	-1.2028	-1.3280	-1.4542	-1.5826	-1.7143	-1.8508	-1.9936
70.0	-1.1219	-1.2739	-1.4292	-1.5890	-1.7550	-1.9289	-2.1127	-2.3086	-2.5194
75.0	-1.3244	-1.5132	-1.7127	-1.9257	-2.1557	-2.4067	-2.6838	-2.9928	-3.3404
80.0	-1.5722	-1.8146	-2.0817	-2.3804	-2.7205	-3.1149	-3.5811	-4.1431	-4.8304
85.0	-1.8860	-2.2096	-2.5846	-3.0303	-3.5764	-4.2705	-5.1933	-6.4891	-8.4252

TABLE IV.- CONTINUED

(f) L/D. Concluded.

$\beta_1 = 135^0$; $\beta_2 = 225^0$; $\beta = 0^0$

α, deg \ θ_{xy}, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	8.5212	4.5679	3.1056	2.3412	1.5483	1.1363	.8810	.7054	.5758	.4753
2.0	7.4358	4.2283	2.9368	2.2371	1.4928	1.0984	.8513	.6801	.5532	.4544
4.0	5.9031	3.6705	2.6423	2.0496	1.3894	1.0266	.7944	.6313	.5093	.4135
6.0	4.8774	3.2324	2.3943	1.8854	1.2949	.9593	.7403	.5845	.4668	.3737
8.0	4.1438	2.8794	2.1823	1.7401	1.2080	.8962	.6889	.5395	.4256	.3349
10.0	3.5929	2.5887	1.9990	1.6106	1.1277	.8366	.6397	.4961	.3856	.2970
12.0	3.1634	2.3449	1.8387	1.4942	1.0532	.7803	.5926	.4541	.3466	.2599
15.0	2.6703	2.0444	1.6322	1.3399	.9507	.7010	.5253	.3934	.2898	.2053
20.0	2.0950	1.6624	1.3547	1.1240	.7997	.5804	.4205	.2974	.1986	.1168
25.0	1.6972	1.3763	1.1347	.9457	.6677	.4710	.3229	.2060	.1104	.0300
30.0	1.4019	1.1512	.9539	.7941	.5498	.3699	.2304	.1177	.0239	-.0564
35.0	1.1711	.9669	.8005	.6618	.4424	.2750	.1414	.0312	-.0624	-.1436
40.0	.9830	.8113	.6670	.5438	.3429	.1844	.0546	-.0549	-.1495	-.2329
45.0	.8247	.6761	.5481	.4363	.2489	.0965	-.0315	-.1418	-.2389	-.3259
50.0	.6877	.5560	.4400	.3366	.1589	.0101	-.1181	-.2309	-.3320	-.4243
55.0	.5662	.4470	.3398	.2425	.0713	-.0762	-.2064	-.3235	-.4306	-.5300
60.0	.4562	.3461	.2453	.1523	-.0152	-.1637	-.2979	-.4213	-.5366	-.6457
65.0	.3546	.2512	.1548	.0644	-.1020	-.2536	-.3941	-.5265	-.6528	-.7749
70.0	.2591	.1603	.0667	-.0225	-.1904	-.3475	-.4971	-.6414	-.7825	-.9222
75.0	.1678	.0720	-.0204	-.1097	-.2817	-.4472	-.6091	-.7695	-.9306	-1.0943
80.0	.0792	-.0153	-.1078	-.1987	-.3775	-.5548	-.7332	-.9153	-1.1037	-1.3010
85.0	-.0082	-.1028	-.1968	-.2907	-.4797	-.6730	-.8738	-1.0854	-1.3118	-1.5578

α, deg \ θ_{xy}, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	.3941	.3264	.2684	.2175	.1718	.1300	.0909	.0538	.0179
2.0	.3743	.3074	.2499	.1994	.1540	.1123	.0734	.0363	.0004
4.0	.3354	.2699	.2134	.1635	.1185	.0771	.0384	.0014	-.0345
6.0	.2974	.2331	.1773	.1280	.0833	.0422	.0035	-.0335	-.0695
8.0	.2602	.1968	.1417	.0928	.0484	.0073	-.0314	-.0685	-.1047
10.0	.2236	.1611	.1065	.0578	.0135	-.0276	-.0664	-.1036	-.1401
12.0	.1876	.1257	.0715	.0230	-.0213	-.0625	-.1015	-.1390	-.1759
15.0	.1344	.0732	.0193	-.0292	-.0736	-.1152	-.1547	-.1928	-.2304
20.0	.0471	-.0135	-.0676	-.1166	-.1619	-.2046	-.2454	-.2851	-.3244
25.0	-.0394	-.1005	-.1555	-.2058	-.2527	-.2972	-.3401	-.3821	-.4239
30.0	-.1265	-.1890	-.2458	-.2983	-.3476	-.3948	-.4405	-.4857	-.5311
35.0	-.2155	-.2804	-.3400	-.3956	-.4484	-.4993	-.5491	-.5986	-.6487
40.0	-.3079	-.3763	-.4399	-.4999	-.5574	-.6133	-.6685	-.7239	-.7805
45.0	-.4053	-.4787	-.5478	-.6137	-.6775	-.7402	-.8027	-.8662	-.9315
50.0	-.5097	-.5899	-.6663	-.7401	-.8125	-.8845	-.9572	-1.0317	-1.1094
55.0	-.6236	-.7129	-.7993	-.8839	-.9681	-1.0529	-1.1397	-1.2300	-1.3255
60.0	-.7503	-.8519	-.9518	-1.0514	-1.1521	-1.2552	-1.3626	-1.4761	-1.5982
65.0	-.8944	-1.0128	-1.1315	-1.2523	-1.3767	-1.5069	-1.6453	-1.7948	-1.9595
70.0	-1.0621	-1.2039	-1.3496	-1.5014	-1.6619	-1.8341	-2.0223	-2.2319	-2.4701
75.0	-1.2627	-1.4334	-1.6242	-1.8238	-2.0417	-2.2841	-2.5595	-2.8796	-3.2618
80.0	-1.5108	-1.7372	-1.9857	-2.2636	-2.5811	-2.9528	-3.4006	-3.9587	-4.6832
85.0	-1.8298	-2.1365	-2.4900	-2.9082	-3.4187	-4.0662	-4.9288	-6.1543	-8.0590

$\beta_1 = 150^0$; $\beta_2 = 210^0$; $\beta = 0^0$

α, deg \ θ_{xy}, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	8.8472	4.7696	3.2516	2.4561	1.6301	1.2009	.9347	.7514	.6160	.5105
2.0	7.6616	4.3924	3.0634	2.3403	1.5690	1.1596	.9029	.7247	.5923	.4888
4.0	6.0277	3.7846	2.7399	2.1339	1.4558	1.0818	.8420	.6732	.5464	.4465
6.0	4.9555	3.3158	2.4716	1.9555	1.3534	1.0096	.7846	.6240	.5022	.4055
8.0	4.1971	2.9429	2.2450	1.7994	1.2600	.9422	.7302	.5768	.4595	.3656
10.0	3.6315	2.6386	2.0509	1.6613	1.1743	.8789	.6784	.5315	.4181	.3267
12.0	3.1926	2.3851	1.8823	1.5382	1.0952	.8194	.6290	.4879	.3779	.2886
15.0	2.6908	2.0746	1.6667	1.3760	.9870	.7361	.5587	.4250	.3195	.2329
20.0	2.1077	1.6828	1.3794	1.1513	.8291	.6103	.4500	.3260	.2262	.1429
25.0	1.7060	1.3911	1.1535	.9672	.6923	.4970	.3494	.2325	.1364	.0551
30.0	1.4084	1.1625	.9688	.8117	.5709	.3931	.2547	.1426	.0488	-.0318
35.0	1.1761	.9760	.8128	.6766	.4609	.2960	.1641	.0549	-.0381	-.1193
40.0	.9871	.8188	.6774	.5565	.3594	.2037	.0760	-.0319	-.1256	-.2085
45.0	.8282	.6825	.5571	.4475	.2640	.1146	-.0109	-.1193	-.2150	-.3011
50.0	.6907	.5616	.4480	.3467	.1729	.0273	-.0980	-.2085	-.3077	-.3986
55.0	.5688	.4520	.3470	.2518	.0844	-.0596	-.1866	-.3009	-.4056	-.5031
60.0	.4585	.3507	.2520	.1610	-.0027	-.1474	-.2781	-.3983	-.5106	-.6172
65.0	.3568	.2555	.1611	.0727	-.0899	-.2375	-.3742	-.5027	-.6253	-.7461
70.0	.2611	.1644	.0727	-.0145	-.1784	-.3314	-.4766	-.6165	-.7531	-.8884
75.0	.1698	.0758	-.0146	-.1020	-.2698	-.4309	-.5879	-.7431	-.8986	-1.0566
80.0	.0811	-.0115	-.1021	-.1910	-.3655	-.5380	-.7110	-.8870	-1.0685	-1.2585
85.0	-.0063	-.0991	-.1912	-.2830	-.4675	-.6556	-.8502	-1.0546	-1.2727	-1.5093

α, deg \ θ_{xy}, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	.4250	.3534	.2917	.2373	.1882	.1450	.1006	.0603	.0211
2.0	.4046	.3339	.2729	.2189	.1702	.1252	.0830	.0428	.0037
4.0	.3647	.2957	.2358	.1827	.1345	.0899	.0480	.0078	-.0313
6.0	.3258	.2582	.1993	.1469	.0991	.0549	.0131	-.0271	-.0662
8.0	.2878	.2214	.1634	.1114	.0640	.0199	-.0218	-.0620	-.1014
10.0	.2505	.1852	.1278	.0763	.0291	-.0150	-.0568	-.0972	-.1368
12.0	.2138	.1494	.0925	.0413	-.0058	-.0499	-.0919	-.1325	-.1725
15.0	.1598	.0964	.0401	-.0110	-.0582	-.1025	-.1450	-.1862	-.2270
20.0	.0716	.0091	-.0471	-.0984	-.1463	-.1917	-.2354	-.2782	-.3209
25.0	-.0154	-.0781	-.1349	-.1874	-.2367	-.2839	-.3296	-.3748	-.4201
30.0	-.1028	-.1665	-.2249	-.2793	-.3310	-.3807	-.4295	-.4780	-.5270
35.0	-.1917	-.2575	-.3184	-.3758	-.4308	-.4843	-.5371	-.5901	-.6442
40.0	-.2836	-.3526	-.4173	-.4789	-.5384	-.5969	-.6553	-.7145	-.7754
45.0	-.3801	-.4538	-.5236	-.5909	-.6567	-.7220	-.7879	-.8554	-.9256
50.0	-.4832	-.5633	-.6401	-.7151	-.7893	-.8639	-.9401	-1.0191	-1.1024
55.0	-.5954	-.6840	-.7703	-.8558	-.9415	-1.0290	-1.1195	-1.2148	-1.3168
60.0	-.7198	-.8200	-.9193	-1.0191	-1.1210	-1.2266	-1.3378	-1.4570	-1.5871
65.0	-.8606	-.9767	-1.0940	-1.2142	-1.3392	-1.4715	-1.6139	-1.7700	-1.9446
70.0	-1.0242	-1.1625	-1.3054	-1.4552	-1.6151	-1.7885	-1.9804	-2.1974	-2.4485
75.0	-1.2195	-1.3897	-1.5705	-1.7659	-1.9808	-2.2223	-2.4999	-2.8277	-3.2270
80.0	-1.4605	-1.6787	-1.9188	-2.1883	-2.4980	-2.8634	-3.3082	-3.8708	-4.6171
85.0	-1.7705	-2.0648	-2.4043	-2.8065	-3.2988	-3.9258	-4.7662	-5.9726	-7.8845

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TABLE IV. - CONTINUED

(g) C_l

$\beta_1 = 0^o$; $\beta_2 = 360^o$; $\beta = 2^o$

θ_{xy}, deg / α, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.0031	.0015	.0010	.0007	.0004	.0003	.0002	.0001	.0001	.0001
2.0	.0062	.0030	.0020	.0014	.0009	.0006	.0004	.0003	.0002	.0001
4.0	.0123	.0061	.0040	.0029	.0018	.0012	.0008	.0006	.0004	.0003
6.0	.0176	.0091	.0059	.0043	.0026	.0018	.0012	.0009	.0006	.0004
8.0	.0218	.0121	.0079	.0058	.0035	.0024	.0016	.0011	.0008	.0006
10.0	.0255	.0151	.0099	.0072	.0044	.0029	.0020	.0014	.0010	.0007
12.0	.0288	.0177	.0118	.0086	.0053	.0035	.0024	.0017	.0012	.0008
15.0	.0335	.0207	.0147	.0107	.0066	.0044	.0030	.0021	.0015	.0010
20.0	.0409	.0248	.0185	.0141	.0087	.0058	.0040	.0028	.0020	.0014
25.0	.0477	.0284	.0212	.0168	.0107	.0072	.0049	.0035	.0024	.0017
30.0	.0542	.0315	.0233	.0187	.0126	.0085	.0059	.0041	.0029	.0020
35.0	.0602	.0343	.0252	.0202	.0140	.0097	.0067	.0047	.0033	.0023
40.0	.0657	.0367	.0267	.0213	.0150	.0108	.0075	.0053	.0037	.0026
45.0	.0707	.0389	.0279	.0221	.0156	.0114	.0083	.0058	.0041	.0028
50.0	.0752	.0408	.0290	.0228	.0159	.0118	.0087	.0063	.0044	.0031
55.0	.0791	.0423	.0297	.0232	.0160	.0119	.0089	.0066	.0047	.0033
60.0	.0824	.0435	.0303	.0234	.0160	.0118	.0089	.0067	.0049	.0035
65.0	.0851	.0444	.0306	.0234	.0158	.0115	.0087	.0065	.0049	.0035
70.0	.0871	.0449	.0306	.0232	.0154	.0111	.0083	.0062	.0047	.0034
75.0	.0884	.0451	.0304	.0229	.0149	.0106	.0078	.0058	.0043	.0032
80.0	.0891	.0450	.0300	.0223	.0143	.0100	.0072	.0053	.0039	.0029
85.0	.0891	.0445	.0293	.0216	.0135	.0093	.0066	.0047	.0034	.0025

θ_{xy}, deg / α, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000
2.0	.0001	.0001	.0000	.0000	.0000	.0000	.0000	.0000	.0000
4.0	.0002	.0001	.0001	.0000	.0000	.0000	.0000	.0000	.0000
6.0	.0003	.0002	.0001	.0001	.0000	.0000	.0000	.0000	.0000
8.0	.0004	.0003	.0002	.0001	.0001	.0000	.0000	.0000	.0000
10.0	.0005	.0003	.0002	.0001	.0001	.0000	.0000	.0000	.0000
12.0	.0006	.0004	.0002	.0001	.0001	.0000	.0000	.0000	.0000
15.0	.0007	.0005	.0003	.0002	.0001	.0001	.0000	.0000	.0000
20.0	.0009	.0006	.0004	.0002	.0001	.0001	.0000	.0000	.0000
25.0	.0011	.0008	.0005	.0003	.0002	.0001	.0000	.0000	.0000
30.0	.0014	.0009	.0006	.0003	.0002	.0001	.0000	.0000	.0000
35.0	.0016	.0010	.0007	.0004	.0002	.0001	.0000	.0000	.0000
40.0	.0017	.0012	.0007	.0004	.0003	.0001	.0001	.0000	.0000
45.0	.0019	.0013	.0008	.0005	.0003	.0001	.0001	.0000	.0000
50.0	.0021	.0014	.0009	.0005	.0003	.0001	.0001	.0000	.0000
55.0	.0022	.0015	.0009	.0006	.0003	.0002	.0001	.0000	.0000
60.0	.0024	.0016	.0010	.0006	.0003	.0002	.0001	.0000	.0000
65.0	.0025	.0016	.0010	.0006	.0004	.0002	.0001	.0000	.0000
70.0	.0025	.0017	.0011	.0007	.0004	.0002	.0001	.0000	.0000
75.0	.0023	.0016	.0011	.0007	.0004	.0002	.0001	.0000	.0000
80.0	.0021	.0015	.0010	.0006	.0004	.0002	.0001	.0000	.0000
85.0	.0017	.0012	.0008	.0005	.0003	.0002	.0001	.0000	.0000

TABLE IV. - CONTINUED

(g) C_1. Continued.

$\phi_1 = 0^0$; $\phi_2 = 360^0$; $\beta = 5^0$

θ_{xy}, deg / α, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.0069	.0038	.0025	.0018	.0011	.0007	.0005	.0004	.0002	.0002
2.0	.0137	.0076	.0049	.0036	.0022	.0015	.0010	.0007	.0005	.0003
4.0	.0268	.0151	.0099	.0072	.0044	.0029	.0020	.0014	.0010	.0007
6.0	.0388	.0226	.0148	.0108	.0066	.0044	.0030	.0021	.0015	.0010
8.0	.0496	.0297	.0197	.0143	.0088	.0059	.0041	.0028	.0020	.0014
10.0	.0594	.0362	.0246	.0179	.0110	.0073	.0051	.0035	.0025	.0017
12.0	.0685	.0421	.0294	.0214	.0131	.0088	.0061	.0042	.0030	.0021
15.0	.0810	.0498	.0361	.0267	.0163	.0109	.0075	.0053	.0037	.0026
20.0	.1002	.0605	.0450	.0350	.0216	.0144	.0100	.0070	.0049	.0034
25.0	.1178	.0696	.0519	.0413	.0267	.0178	.0123	.0086	.0060	.0042
30.0	.1341	.0776	.0575	.0461	.0313	.0211	.0146	.0102	.0072	.0050
35.0	.1493	.0847	.0621	.0498	.0347	.0242	.0167	.0117	.0082	.0057
40.0	.1632	.0910	.0660	.0526	.0370	.0267	.0187	.0131	.0092	.0064
45.0	.1757	.0966	.0693	.0548	.0385	.0283	.0205	.0144	.0101	.0070
50.0	.1870	.1013	.0719	.0564	.0394	.0292	.0217	.0156	.0110	.0076
55.0	.1967	.1051	.0738	.0575	.0398	.0294	.0221	.0164	.0117	.0081
60.0	.2050	.1082	.0752	.0581	.0397	.0292	.0220	.0165	.0121	.0086
65.0	.2114	.1104	.0759	.0581	.0392	.0286	.0215	.0162	.0121	.0088
70.0	.2167	.1118	.0761	.0577	.0383	.0276	.0206	.0155	.0116	.0085
75.0	.2201	.1123	.0756	.0568	.0370	.0263	.0194	.0145	.0108	.0079
80.0	.2218	.1119	.0746	.0555	.0355	.0248	.0180	.0132	.0097	.0071
85.0	.2218	.1107	.0730	.0537	.0337	.0230	.0163	.0118	.0085	.0061

θ_{xy}, deg / α, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	.0001	.0001	.0001	.0000	.0000	.0000	.0000	.0000	.0000
2.0	.0002	.0002	.0001	.0001	.0000	.0000	.0000	.0000	.0000
4.0	.0005	.0003	.0002	.0001	.0001	.0000	.0000	.0000	.0000
6.0	.0007	.0005	.0003	.0002	.0001	.0001	.0000	.0000	.0000
8.0	.0009	.0006	.0004	.0002	.0001	.0001	.0000	.0000	.0000
10.0	.0012	.0008	.0005	.0003	.0002	.0001	.0000	.0000	.0000
12.0	.0014	.0009	.0006	.0004	.0002	.0001	.0000	.0000	.0000
15.0	.0018	.0012	.0007	.0004	.0003	.0001	.0001	.0000	.0000
20.0	.0023	.0015	.0010	.0006	.0003	.0002	.0001	.0000	.0000
25.0	.0029	.0019	.0012	.0007	.0004	.0002	.0001	.0000	.0000
30.0	.0034	.0022	.0014	.0009	.0005	.0002	.0001	.0000	.0000
35.0	.0039	.0026	.0016	.0010	.0006	.0003	.0001	.0000	.0000
40.0	.0044	.0029	.0018	.0011	.0006	.0003	.0001	.0000	.0000
45.0	.0048	.0032	.0020	.0012	.0007	.0003	.0001	.0000	.0000
50.0	.0052	.0034	.0022	.0013	.0007	.0004	.0002	.0000	.0000
55.0	.0055	.0037	.0023	.0014	.0008	.0004	.0002	.0000	.0000
60.0	.0059	.0039	.0025	.0015	.0008	.0004	.0002	.0001	.0000
65.0	.0061	.0041	.0026	.0016	.0009	.0004	.0002	.0001	.0000
70.0	.0061	.0042	.0027	.0016	.0009	.0005	.0002	.0001	.0000
75.0	.0058	.0040	.0027	.0017	.0009	.0005	.0002	.0001	.0000
80.0	.0051	.0036	.0024	.0016	.0009	.0005	.0002	.0001	.0000
85.0	.0043	.0030	.0020	.0013	.0008	.0004	.0002	.0001	.0000

$\phi_1 = 0^0$; $\phi_2 = 360^0$; $\beta = 15^0$

θ_{xy}, deg / α, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.0146	.0087	.0064	.0050	.0032	.0021	.0015	.0010	.0007	.0005
2.0	.0291	.0173	.0127	.0099	.0063	.0042	.0029	.0021	.0014	.0010
4.0	.0579	.0345	.0254	.0198	.0127	.0085	.0059	.0041	.0029	.0020
6.0	.0864	.0514	.0379	.0296	.0190	.0127	.0088	.0061	.0043	.0030
8.0	.1143	.0678	.0501	.0393	.0253	.0169	.0117	.0082	.0057	.0040
10.0	.1416	.0838	.0619	.0487	.0315	.0211	.0146	.0102	.0072	.0050
12.0	.1681	.0992	.0733	.0579	.0377	.0252	.0175	.0122	.0086	.0059
15.0	.2063	.1211	.0896	.0710	.0468	.0314	.0217	.0152	.0107	.0074
20.0	.2662	.1544	.1141	.0909	.0613	.0415	.0287	.0201	.0141	.0098
25.0	.3214	.1840	.1352	.1080	.0742	.0513	.0355	.0249	.0174	.0121
30.0	.3721	.2101	.1534	.1224	.0852	.0603	.0420	.0294	.0206	.0143
35.0	.4186	.2332	.1688	.1343	.0940	.0679	.0481	.0337	.0236	.0164
40.0	.4608	.2534	.1819	.1439	.1008	.0738	.0535	.0378	.0265	.0184
45.0	.4988	.2710	.1927	.1515	.1057	.0780	.0576	.0415	.0291	.0202
50.0	.5325	.2859	.2014	.1572	.1089	.0805	.0601	.0443	.0316	.0219
55.0	.5618	.2982	.2081	.1613	.1107	.0815	.0612	.0457	.0333	.0234
60.0	.5864	.3079	.2129	.1637	.1110	.0813	.0611	.0459	.0340	.0245
65.0	.6064	.3150	.2158	.1646	.1102	.0800	.0598	.0450	.0336	.0246
70.0	.6216	.3196	.2169	.1641	.1082	.0776	.0576	.0432	.0322	.0238
75.0	.6320	.3217	.2162	.1621	.1052	.0744	.0546	.0405	.0301	.0222
80.0	.6375	.3212	.2138	.1588	.1012	.0705	.0509	.0373	.0273	.0199
85.0	.6381	.3182	.2097	.1542	.0964	.0658	.0466	.0335	.0241	.0173

θ_{xy}, deg / α, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	.0003	.0002	.0001	.0001	.0000	.0000	.0000	.0000	.0000
2.0	.0007	.0005	.0003	.0002	.0001	.0000	.0000	.0000	.0000
4.0	.0014	.0009	.0006	.0003	.0002	.0001	.0000	.0000	.0000
6.0	.0020	.0014	.0009	.0005	.0003	.0001	.0001	.0000	.0000
8.0	.0027	.0018	.0011	.0007	.0004	.0002	.0001	.0000	.0000
10.0	.0034	.0022	.0014	.0009	.0005	.0002	.0001	.0000	.0000
12.0	.0041	.0027	.0017	.0010	.0006	.0003	.0001	.0000	.0000
15.0	.0050	.0033	.0021	.0013	.0007	.0004	.0001	.0000	.0000
20.0	.0067	.0044	.0028	.0017	.0010	.0005	.0002	.0001	.0000
25.0	.0082	.0055	.0035	.0021	.0012	.0006	.0002	.0001	.0000
30.0	.0097	.0065	.0041	.0025	.0014	.0007	.0003	.0001	.0000
35.0	.0112	.0074	.0047	.0029	.0016	.0008	.0003	.0001	.0000
40.0	.0125	.0083	.0053	.0032	.0018	.0009	.0004	.0001	.0000
45.0	.0138	.0091	.0058	.0035	.0020	.0010	.0004	.0001	.0000
50.0	.0149	.0099	.0063	.0038	.0021	.0011	.0004	.0001	.0000
55.0	.0160	.0106	.0068	.0041	.0023	.0011	.0005	.0001	.0000
60.0	.0169	.0112	.0071	.0043	.0024	.0012	.0005	.0001	.0000
65.0	.0174	.0117	.0075	.0045	.0025	.0013	.0005	.0002	.0000
70.0	.0171	.0118	.0077	.0047	.0026	.0013	.0005	.0002	.0000
75.0	.0160	.0112	.0076	.0048	.0027	.0013	.0006	.0002	.0000
80.0	.0143	.0100	.0068	.0044	.0026	.0014	.0006	.0002	.0000
85.0	.0122	.0084	.0056	.0036	.0021	.0011	.0005	.0002	.0000

TABLE IV. - CONTINUED

(g) C_l. Continued.

$\beta_1 = -90^\circ$; $\beta_2 = 90^\circ$; $\beta = 2^\circ$

α, deg \ θ_{xy}, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	-.0202	-.0216	-.0217	-.0215	-.0203	-.0187	-.0168	-.0148	-.0127	-.0107
2.0	-.0171	-.0200	-.0207	-.0207	-.0199	-.0184	-.0166	-.0146	-.0126	-.0106
4.0	-.0110	-.0170	-.0187	-.0192	-.0190	-.0178	-.0162	-.0143	-.0124	-.0105
6.0	-.0065	-.0138	-.0166	-.0177	-.0180	-.0171	-.0157	-.0140	-.0121	-.0103
8.0	-.0040	-.0107	-.0146	-.0162	-.0171	-.0165	-.0152	-.0136	-.0119	-.0101
10.0	-.0027	-.0077	-.0125	-.0147	-.0161	-.0158	-.0147	-.0133	-.0116	-.0099
12.0	-.0019	-.0054	-.0104	-.0131	-.0151	-.0151	-.0142	-.0129	-.0113	-.0097
15.0	-.0012	-.0034	-.0072	-.0107	-.0135	-.0140	-.0134	-.0123	-.0109	-.0094
20.0	-.0007	-.0019	-.0039	-.0067	-.0109	-.0121	-.0120	-.0112	-.0101	-.0088
25.0	-.0004	-.0011	-.0023	-.0040	-.0081	-.0101	-.0105	-.0101	-.0092	-.0081
30.0	-.0003	-.0007	-.0014	-.0025	-.0054	-.0080	-.0089	-.0088	-.0082	-.0073
35.0	-.0002	-.0005	-.0009	-.0016	-.0035	-.0059	-.0072	-.0075	-.0072	-.0065
40.0	-.0001	-.0003	-.0006	-.0010	-.0022	-.0039	-.0055	-.0062	-.0061	-.0057
45.0	-.0001	-.0002	-.0004	-.0007	-.0015	-.0025	-.0038	-.0048	-.0050	-.0048
50.0	-.0001	-.0001	-.0003	-.0004	-.0009	-.0016	-.0024	-.0033	-.0038	-.0039
55.0	-.0000	-.0001	-.0002	-.0003	-.0006	-.0010	-.0015	-.0021	-.0026	-.0029
60.0	-.0000	-.0001	-.0001	-.0002	-.0004	-.0006	-.0009	-.0012	-.0016	-.0019
65.0	-.0000	-.0000	-.0001	-.0001	-.0002	-.0003	-.0005	-.0007	-.0009	-.0011
70.0	-.0000	-.0000	-.0000	-.0001	-.0001	-.0002	-.0003	-.0003	-.0004	-.0006
75.0	-.0000	-.0000	-.0000	-.0000	-.0000	-.0001	-.0001	-.0001	-.0002	-.0002
80.0	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000	-.0001	-.0001
85.0	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000

α, deg \ θ_{xy}, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	-.0088	-.0070	-.0054	-.0040	-.0028	-.0018	-.0010	-.0004	-.0001
2.0	-.0087	-.0070	-.0054	-.0040	-.0028	-.0018	-.0010	-.0004	-.0001
4.0	-.0086	-.0069	-.0053	-.0040	-.0028	-.0018	-.0010	-.0004	-.0001
6.0	-.0085	-.0068	-.0053	-.0039	-.0027	-.0018	-.0010	-.0004	-.0001
8.0	-.0084	-.0067	-.0052	-.0039	-.0027	-.0018	-.0010	-.0004	-.0001
10.0	-.0082	-.0066	-.0051	-.0038	-.0027	-.0017	-.0010	-.0004	-.0001
12.0	-.0081	-.0065	-.0051	-.0038	-.0027	-.0017	-.0010	-.0004	-.0001
15.0	-.0078	-.0063	-.0049	-.0037	-.0026	-.0017	-.0010	-.0004	-.0001
20.0	-.0074	-.0060	-.0047	-.0035	-.0025	-.0016	-.0009	-.0004	-.0001
25.0	-.0069	-.0056	-.0044	-.0033	-.0024	-.0015	-.0009	-.0004	-.0001
30.0	-.0063	-.0052	-.0041	-.0031	-.0022	-.0015	-.0008	-.0004	-.0001
35.0	-.0057	-.0047	-.0038	-.0029	-.0021	-.0014	-.0008	-.0004	-.0001
40.0	-.0050	-.0042	-.0034	-.0026	-.0019	-.0013	-.0007	-.0003	-.0001
45.0	-.0043	-.0037	-.0030	-.0023	-.0017	-.0011	-.0007	-.0003	-.0001
50.0	-.0036	-.0031	-.0026	-.0020	-.0015	-.0010	-.0006	-.0003	-.0001
55.0	-.0028	-.0026	-.0022	-.0017	-.0013	-.0009	-.0005	-.0002	-.0001
60.0	-.0021	-.0020	-.0017	-.0014	-.0011	-.0007	-.0004	-.0002	-.0001
65.0	-.0013	-.0013	-.0013	-.0011	-.0008	-.0006	-.0004	-.0002	-.0000
70.0	-.0007	-.0007	-.0008	-.0007	-.0006	-.0004	-.0003	-.0001	-.0000
75.0	-.0003	-.0003	-.0003	-.0004	-.0003	-.0003	-.0002	-.0001	-.0000
80.0	-.0001	-.0001	-.0001	-.0001	-.0001	-.0001	-.0001	-.0001	-.0000
85.0	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000

TABLE IV.- CONTINUED

(g) C_l. Continued.

$\phi_1 = 90^o$; $\phi_2 = 270^o$; $\beta = 2^o$

α, deg \ θ_{xy}, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.0264	.0246	.0237	.0229	.0212	.0193	.0172	.0151	.0129	.0108
2.0	.0295	.0261	.0247	.0236	.0217	.0196	.0174	.0152	.0130	.0109
4.0	.0356	.0291	.0266	.0250	.0225	.0201	.0178	.0155	.0132	.0110
6.0	.0417	.0321	.0285	.0264	.0233	.0207	.0182	.0157	.0133	.0111
8.0	.0477	.0350	.0304	.0277	.0241	.0212	.0185	.0159	.0135	.0112
10.0	.0537	.0379	.0322	.0290	.0249	.0217	.0188	.0161	.0136	.0113
12.0	.0596	.0407	.0340	.0303	.0256	.0221	.0191	.0163	.0137	.0114
15.0	.0683	.0449	.0367	.0321	.0266	.0227	.0195	.0165	.0139	.0114
20.0	.0824	.0515	.0408	.0350	.0282	.0237	.0200	.0168	.0140	.0115
25.0	.0959	.0578	.0446	.0376	.0295	.0244	.0204	.0170	.0140	.0114
30.0	.1086	.0636	.0481	.0399	.0307	.0249	.0206	.0170	.0140	.0113
35.0	.1205	.0690	.0512	.0419	.0316	.0253	.0207	.0169	.0138	.0111
40.0	.1315	.0738	.0540	.0436	.0322	.0254	.0206	.0167	.0135	.0108
45.0	.1415	.0780	.0563	.0450	.0326	.0254	.0203	.0164	.0131	.0104
50.0	.1505	.0817	.0582	.0460	.0328	.0252	.0199	.0159	.0126	.0100
55.0	.1582	.0847	.0596	.0466	.0327	.0248	.0194	.0153	.0121	.0094
60.0	.1648	.0871	.0606	.0469	.0323	.0242	.0187	.0146	.0114	.0088
65.0	.1701	.0888	.0612	.0469	.0317	.0234	.0178	.0137	.0106	.0082
70.0	.1742	.0899	.0612	.0465	.0309	.0224	.0168	.0128	.0098	.0074
75.0	.1769	.0903	.0608	.0457	.0299	.0213	.0157	.0118	.0089	.0066
80.0	.1782	.0899	.0600	.0446	.0286	.0200	.0145	.0107	.0079	.0058
85.0	.1782	.0889	.0587	.0432	.0271	.0185	.0131	.0095	.0068	.0049

α, deg \ θ_{xy}, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	.0089	.0071	.0055	.0040	.0028	.0018	.0010	.0005	.0001
2.0	.0089	.0071	.0055	.0040	.0028	.0018	.0010	.0005	.0001
4.0	.0090	.0072	.0055	.0041	.0028	.0018	.0010	.0005	.0001
6.0	.0091	.0072	.0055	.0041	.0028	.0018	.0010	.0005	.0001
8.0	.0091	.0072	.0055	.0041	.0028	.0018	.0010	.0004	.0001
10.0	.0092	.0073	.0055	.0041	.0028	.0018	.0010	.0004	.0001
12.0	.0092	.0073	.0056	.0041	.0028	.0018	.0010	.0004	.0001
15.0	.0092	.0073	.0055	.0041	.0028	.0018	.0010	.0004	.0001
20.0	.0092	.0072	.0055	.0040	.0028	.0018	.0010	.0004	.0001
25.0	.0092	.0071	.0054	.0039	.0027	.0017	.0010	.0004	.0001
30.0	.0090	.0070	.0053	.0038	.0026	.0017	.0009	.0004	.0001
35.0	.0088	.0068	.0051	.0037	.0025	.0016	.0009	.0004	.0001
40.0	.0085	.0066	.0049	.0035	.0024	.0015	.0008	.0004	.0001
45.0	.0082	.0063	.0047	.0033	.0023	.0014	.0008	.0003	.0001
50.0	.0078	.0059	.0044	.0031	.0021	.0013	.0007	.0003	.0001
55.0	.0073	.0055	.0041	.0029	.0019	.0012	.0006	.0003	.0001
60.0	.0068	.0051	.0037	.0026	.0017	.0011	.0006	.0002	.0001
65.0	.0062	.0046	.0033	.0023	.0015	.0009	.0005	.0002	.0001
70.0	.0056	.0041	.0029	.0020	.0013	.0008	.0004	.0002	.0000
75.0	.0049	.0036	.0025	.0017	.0011	.0007	.0003	.0001	.0000
80.0	.0042	.0030	.0021	.0014	.0009	.0005	.0003	.0001	.0000
85.0	.0035	.0024	.0016	.0010	.0006	.0004	.0002	.0001	.0000

TABLE IV.- CONTINUED

(g) C_{l_1}. Continued.

$\beta_1 = -90^\circ$; $\beta_2 = 90^\circ$; $\beta = 5^\circ$

θ_{xy}, deg / α, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	-.0537	-.0537	-.0541	-.0534	-.0506	-.0466	-.0419	-.0368	-.0317	-.0266
2.0	-.0473	-.0499	-.0516	-.0516	-.0495	-.0458	-.0413	-.0364	-.0314	-.0264
4.0	-.0358	-.0422	-.0465	-.0479	-.0472	-.0443	-.0402	-.0356	-.0308	-.0260
6.0	-.0267	-.0367	-.0434	-.0461	-.0468	-.0457	-.0391	-.0348	-.0302	-.0256
8.0	-.0199	-.0278	-.0363	-.0403	-.0424	-.0410	-.0379	-.0340	-.0296	-.0252
10.0	-.0150	-.0219	-.0311	-.0365	-.0400	-.0393	-.0367	-.0330	-.0289	-.0247
12.0	-.0116	-.0172	-.0259	-.0326	-.0375	-.0375	-.0354	-.0321	-.0282	-.0242
15.0	-.0081	-.0122	-.0190	-.0267	-.0336	-.0348	-.0334	-.0306	-.0271	-.0233
20.0	-.0049	-.0073	-.0115	-.0172	-.0270	-.0301	-.0299	-.0279	-.0251	-.0218
25.0	-.0032	-.0047	-.0073	-.0109	-.0202	-.0251	-.0261	-.0250	-.0229	-.0201
30.0	-.0022	-.0032	-.0048	-.0072	-.0137	-.0199	-.0221	-.0220	-.0205	-.0182
35.0	-.0016	-.0022	-.0033	-.0048	-.0091	-.0146	-.0180	-.0187	-.0179	-.0163
40.0	-.0012	-.0016	-.0023	-.0033	-.0061	-.0099	-.0137	-.0153	-.0152	-.0141
45.0	-.0009	-.0011	-.0016	-.0023	-.0041	-.0066	-.0095	-.0118	-.0124	-.0119
50.0	-.0007	-.0008	-.0011	-.0016	-.0027	-.0043	-.0062	-.0083	-.0095	-.0096
55.0	-.0006	-.0006	-.0008	-.0011	-.0018	-.0028	-.0040	-.0053	-.0066	-.0072
60.0	-.0004	-.0005	-.0006	-.0007	-.0011	-.0017	-.0024	-.0032	-.0041	-.0048
65.0	-.0004	-.0003	-.0004	-.0005	-.0007	-.0010	-.0014	-.0019	-.0023	-.0028
70.0	-.0003	-.0003	-.0003	-.0003	-.0004	-.0006	-.0008	-.0010	-.0012	-.0014
75.0	-.0002	-.0002	-.0002	-.0002	-.0002	-.0003	-.0004	-.0004	-.0005	-.0006
80.0	-.0002	-.0001	-.0001	-.0001	-.0001	-.0001	-.0002	-.0002	-.0002	-.0002
85.0	-.0002	-.0001	-.0001	-.0001	-.0001	-.0001	-.0000	-.0000	-.0000	-.0000

θ_{xy}, deg / α, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	-.0219	-.0175	-.0135	-.0100	-.0069	-.0045	-.0025	-.0011	-.0003
2.0	-.0217	-.0174	-.0134	-.0099	-.0069	-.0045	-.0025	-.0011	-.0003
4.0	-.0215	-.0172	-.0133	-.0098	-.0069	-.0044	-.0025	-.0011	-.0003
6.0	-.0212	-.0170	-.0131	-.0098	-.0068	-.0044	-.0025	-.0011	-.0003
8.0	-.0208	-.0167	-.0130	-.0096	-.0068	-.0044	-.0025	-.0011	-.0003
10.0	-.0205	-.0165	-.0128	-.0095	-.0067	-.0043	-.0024	-.0011	-.0003
12.0	-.0201	-.0162	-.0126	-.0094	-.0066	-.0043	-.0024	-.0011	-.0003
15.0	-.0195	-.0158	-.0123	-.0092	-.0065	-.0042	-.0024	-.0011	-.0003
20.0	-.0183	-.0149	-.0117	-.0088	-.0062	-.0040	-.0023	-.0010	-.0003
25.0	-.0171	-.0140	-.0110	-.0083	-.0059	-.0038	-.0022	-.0010	-.0003
30.0	-.0157	-.0129	-.0103	-.0078	-.0055	-.0036	-.0021	-.0009	-.0002
35.0	-.0141	-.0118	-.0094	-.0072	-.0051	-.0034	-.0019	-.0009	-.0002
40.0	-.0125	-.0105	-.0085	-.0065	-.0047	-.0031	-.0018	-.0008	-.0002
45.0	-.0108	-.0092	-.0075	-.0058	-.0042	-.0028	-.0016	-.0008	-.0002
50.0	-.0089	-.0078	-.0065	-.0051	-.0037	-.0025	-.0015	-.0007	-.0002
55.0	-.0071	-.0064	-.0054	-.0043	-.0032	-.0022	-.0013	-.0006	-.0002
60.0	-.0051	-.0049	-.0043	-.0035	-.0026	-.0018	-.0011	-.0005	-.0001
65.0	-.0032	-.0033	-.0031	-.0027	-.0021	-.0015	-.0009	-.0004	-.0001
70.0	-.0017	-.0018	-.0019	-.0018	-.0015	-.0011	-.0007	-.0003	-.0001
75.0	-.0007	-.0008	-.0009	-.0009	-.0009	-.0007	-.0005	-.0002	-.0001
80.0	-.0002	-.0003	-.0003	-.0003	-.0003	-.0003	-.0002	-.0001	-.0000
85.0	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000

$\beta_1 = -90^\circ$; $\beta_2 = 90^\circ$; $\beta = 15^\circ$

θ_{xy}, deg / α, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	-.2557	-.1833	-.1638	-.1556	-.1457	-.1341	-.1205	-.1059	-.0911	-.0767
2.0	-.2420	-.1749	-.1575	-.1507	-.1425	-.1320	-.1190	-.1049	-.0904	-.0761
4.0	-.2161	-.1587	-.1451	-.1407	-.1359	-.1275	-.1159	-.1026	-.0888	-.0750
6.0	-.1924	-.1434	-.1330	-.1307	-.1291	-.1229	-.1126	-.1003	-.0871	-.0738
8.0	-.1711	-.1292	-.1214	-.1209	-.1222	-.1181	-.1091	-.0978	-.0852	-.0725
10.0	-.1521	-.1160	-.1104	-.1113	-.1152	-.1132	-.1056	-.0951	-.0833	-.0710
12.0	-.1353	-.1041	-.1000	-.1020	-.1080	-.1081	-.1019	-.0924	-.0813	-.0696
15.0	-.1137	-.0883	-.0858	-.0888	-.0972	-.1002	-.0961	-.0881	-.0781	-.0672
20.0	-.0861	-.0672	-.0661	-.0695	-.0796	-.0866	-.0860	-.0804	-.0722	-.0627
25.0	-.0664	-.0517	-.0509	-.0538	-.0633	-.0723	-.0751	-.0721	-.0658	-.0579
30.0	-.0522	-.0403	-.0394	-.0416	-.0494	-.0581	-.0637	-.0632	-.0590	-.0525
35.0	-.0419	-.0318	-.0308	-.0323	-.0381	-.0454	-.0518	-.0539	-.0516	-.0468
40.0	-.0343	-.0255	-.0243	-.0251	-.0292	-.0347	-.0403	-.0441	-.0439	-.0407
45.0	-.0286	-.0208	-.0194	-.0197	-.0224	-.0262	-.0305	-.0342	-.0358	-.0344
50.0	-.0242	-.0171	-.0156	-.0155	-.0171	-.0196	-.0225	-.0253	-.0275	-.0277
55.0	-.0208	-.0142	-.0126	-.0123	-.0130	-.0145	-.0163	-.0181	-.0198	-.0208
60.0	-.0181	-.0119	-.0103	-.0097	-.0098	-.0106	-.0116	-.0126	-.0136	-.0144
65.0	-.0160	-.0101	-.0084	-.0077	-.0074	-.0076	-.0080	-.0085	-.0090	-.0094
70.0	-.0143	-.0087	-.0069	-.0062	-.0056	-.0054	-.0055	-.0056	-.0057	-.0058
75.0	-.0130	-.0075	-.0058	-.0049	-.0041	-.0038	-.0036	-.0035	-.0034	-.0033
80.0	-.0119	-.0066	-.0048	-.0039	-.0030	-.0026	-.0023	-.0021	-.0019	-.0017
85.0	-.0110	-.0058	-.0040	-.0031	-.0022	-.0017	-.0014	-.0011	-.0010	-.0008

θ_{xy}, deg / α, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	-.0630	-.0503	-.0388	-.0287	-.0200	-.0128	-.0072	-.0032	-.0008
2.0	-.0626	-.0500	-.0386	-.0286	-.0199	-.0128	-.0072	-.0032	-.0008
4.0	-.0618	-.0495	-.0383	-.0283	-.0198	-.0127	-.0072	-.0032	-.0008
6.0	-.0609	-.0489	-.0379	-.0281	-.0196	-.0127	-.0072	-.0032	-.0008
8.0	-.0600	-.0482	-.0374	-.0278	-.0195	-.0126	-.0071	-.0032	-.0008
10.0	-.0590	-.0475	-.0369	-.0275	-.0193	-.0124	-.0070	-.0032	-.0008
12.0	-.0579	-.0467	-.0364	-.0271	-.0190	-.0123	-.0070	-.0031	-.0008
15.0	-.0561	-.0454	-.0355	-.0265	-.0186	-.0121	-.0069	-.0031	-.0008
20.0	-.0528	-.0430	-.0338	-.0253	-.0179	-.0116	-.0066	-.0030	-.0008
25.0	-.0491	-.0403	-.0318	-.0240	-.0170	-.0111	-.0063	-.0029	-.0007
30.0	-.0451	-.0373	-.0296	-.0224	-.0160	-.0105	-.0060	-.0027	-.0007
35.0	-.0407	-.0339	-.0272	-.0207	-.0148	-.0097	-.0056	-.0025	-.0006
40.0	-.0360	-.0304	-.0245	-.0188	-.0136	-.0090	-.0052	-.0024	-.0006
45.0	-.0310	-.0266	-.0217	-.0168	-.0122	-.0081	-.0047	-.0022	-.0006
50.0	-.0258	-.0226	-.0187	-.0147	-.0107	-.0072	-.0042	-.0019	-.0005
55.0	-.0203	-.0184	-.0156	-.0124	-.0092	-.0062	-.0037	-.0017	-.0004
60.0	-.0148	-.0140	-.0123	-.0101	-.0076	-.0052	-.0031	-.0015	-.0004
65.0	-.0097	-.0096	-.0090	-.0076	-.0059	-.0042	-.0025	-.0012	-.0003
70.0	-.0058	-.0058	-.0056	-.0051	-.0042	-.0031	-.0019	-.0009	-.0003
75.0	-.0032	-.0031	-.0029	-.0028	-.0025	-.0020	-.0013	-.0007	-.0002
80.0	-.0016	-.0014	-.0013	-.0012	-.0010	-.0009	-.0007	-.0004	-.0001
85.0	-.0007	-.0005	-.0004	-.0004	-.0003	-.0002	-.0002	-.0001	-.0000

TABLE IV.- CONTINUED

(g) C_l. Continued.

$\beta_1 = 90^0$; $\beta_2 = 270^0$; $\beta = 5^0$

θ_{xy}, deg / α, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.0676	.0613	.0590	.0570	.0528	.0481	.0429	.0375	.0322	.0270
2.0	.0748	.0650	.0614	.0588	.0539	.0488	.0434	.0378	.0324	.0271
4.0	.0894	.0725	.0663	.0623	.0560	.0502	.0443	.0385	.0328	.0274
6.0	.1043	.0799	.0710	.0657	.0580	.0515	.0452	.0391	.0332	.0277
8.0	.1191	.0872	.0757	.0690	.0600	.0527	.0460	.0396	.0336	.0279
10.0	.1339	.0943	.0803	.0723	.0619	.0539	.0468	.0401	.0339	.0281
12.0	.1485	.1014	.0847	.0754	.0637	.0551	.0475	.0406	.0342	.0283
15.0	.1702	.1118	.0913	.0800	.0663	.0566	.0485	.0412	.0345	.0285
20.0	.2052	.1283	.1016	.0871	.0702	.0589	.0498	.0419	.0349	.0286
25.0	.2388	.1439	.1111	.0936	.0735	.0607	.0507	.0423	.0350	.0285
30.0	.2705	.1584	.1198	.0994	.0763	.0621	.0513	.0424	.0348	.0282
35.0	.3001	.1717	.1276	.1044	.0786	.0629	.0514	.0422	.0343	.0277
40.0	.3275	.1837	.1344	.1086	.0802	.0633	.0512	.0416	.0336	.0269
45.0	.3524	.1942	.1401	.1119	.0812	.0633	.0506	.0407	.0327	.0260
50.0	.3746	.2034	.1449	.1144	.0816	.0627	.0496	.0395	.0315	.0248
55.0	.3940	.2109	.1485	.1161	.0813	.0617	.0482	.0380	.0300	.0235
60.0	.4104	.2169	.1510	.1169	.0805	.0601	.0464	.0363	.0283	.0220
65.0	.4236	.2212	.1523	.1167	.0790	.0582	.0443	.0342	.0265	.0203
70.0	.4336	.2238	.1525	.1157	.0770	.0558	.0419	.0319	.0244	.0185
75.0	.4404	.2247	.1515	.1138	.0743	.0529	.0391	.0294	.0221	.0165
80.0	.4437	.2239	.1493	.1111	.0711	.0497	.0361	.0266	.0196	.0144
85.0	.4437	.2214	.1461	.1075	.0674	.0461	.0327	.0236	.0170	.0122

θ_{xy}, deg / α, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	.0221	.0176	.0136	.0100	.0070	.0045	.0025	.0011	.0003
2.0	.0222	.0177	.0136	.0100	.0070	.0045	.0025	.0011	.0003
4.0	.0224	.0178	.0137	.0101	.0070	.0045	.0025	.0011	.0003
6.0	.0226	.0179	.0137	.0101	.0070	.0045	.0025	.0011	.0003
8.0	.0227	.0180	.0138	.0101	.0070	.0045	.0025	.0011	.0003
10.0	.0228	.0180	.0138	.0101	.0070	.0045	.0025	.0011	.0003
12.0	.0229	.0181	.0138	.0101	.0070	.0045	.0025	.0011	.0003
15.0	.0230	.0181	.0138	.0101	.0070	.0044	.0025	.0011	.0003
20.0	.0230	.0180	.0137	.0100	.0069	.0044	.0024	.0011	.0003
25.0	.0228	.0178	.0135	.0098	.0067	.0043	.0024	.0010	.0003
30.0	.0224	.0174	.0131	.0095	.0065	.0041	.0023	.0010	.0002
35.0	.0219	.0169	.0127	.0092	.0063	.0039	.0022	.0010	.0002
40.0	.0212	.0163	.0122	.0088	.0060	.0037	.0021	.0009	.0002
45.0	.0203	.0156	.0116	.0083	.0056	.0035	.0019	.0008	.0002
50.0	.0193	.0147	.0109	.0077	.0052	.0032	.0018	.0008	.0002
55.0	.0182	.0137	.0101	.0071	.0048	.0030	.0016	.0007	.0002
60.0	.0169	.0127	.0092	.0065	.0043	.0027	.0014	.0006	.0001
65.0	.0154	.0115	.0083	.0058	.0038	.0023	.0012	.0005	.0001
70.0	.0139	.0102	.0073	.0050	.0033	.0020	.0010	.0004	.0001
75.0	.0122	.0089	.0063	.0043	.0027	.0016	.0008	.0003	.0001
80.0	.0105	.0075	.0052	.0034	.0022	.0013	.0006	.0003	.0001
85.0	.0087	.0060	.0040	.0026	.0016	.0009	.0004	.0002	.0000

$\beta_1 = 90^0$; $\beta_2 = 270^0$; $\beta = 15^0$

θ_{xy}, deg / α, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.2848	.2007	.1765	.1656	.1521	.1384	.1235	.1080	.0926	.0777
2.0	.3001	.2095	.1830	.1705	.1552	.1404	.1249	.1090	.0933	.0781
4.0	.3319	.2277	.1959	.1803	.1613	.1444	.1276	.1108	.0945	.0790
6.0	.3653	.2461	.2087	.1900	.1671	.1482	.1301	.1125	.0957	.0798
8.0	.3998	.2648	.2215	.1995	.1728	.1518	.1325	.1141	.0967	.0804
10.0	.4352	.2836	.2342	.2087	.1782	.1553	.1347	.1156	.0976	.0810
12.0	.4714	.3024	.2467	.2177	.1835	.1585	.1368	.1169	.0984	.0814
15.0	.5264	.3305	.2650	.2308	.1909	.1630	.1396	.1186	.0994	.0820
20.0	.6185	.3761	.2942	.2513	.2021	.1696	.1434	.1207	.1004	.0823
25.0	.7092	.4197	.3213	.2698	.2118	.1748	.1461	.1218	.1007	.0820
30.0	.7965	.4606	.3462	.2864	.2198	.1787	.1476	.1221	.1002	.0811
35.0	.8791	.4983	.3685	.3008	.2262	.1812	.1481	.1214	.0989	.0796
40.0	.9560	.5324	.3880	.3129	.2309	.1824	.1474	.1198	.0969	.0775
45.0	1.0263	.5627	.4047	.3227	.2338	.1821	.1456	.1172	.0941	.0748
50.0	1.0892	.5888	.4183	.3300	.2349	.1805	.1427	.1138	.0906	.0715
55.0	1.1443	.6105	.4288	.3348	.2343	.1775	.1387	.1096	.0865	.0677
60.0	1.1910	.6277	.4361	.3372	.2319	.1732	.1337	.1044	.0816	.0634
65.0	1.2288	.6402	.4401	.3370	.2278	.1676	.1276	.0985	.0762	.0585
70.0	1.2576	.6480	.4408	.3343	.2220	.1607	.1206	.0919	.0702	.0533
75.0	1.2770	.6508	.4382	.3291	.2145	.1527	.1127	.0845	.0636	.0476
80.0	1.2869	.6489	.4324	.3214	.2055	.1435	.1040	.0766	.0566	.0416
85.0	1.2872	.6421	.4234	.3115	.1950	.1334	.0947	.0682	.0492	.0353

θ_{xy}, deg / α, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	.0636	.0507	.0391	.0288	.0201	.0129	.0073	.0032	.0008
2.0	.0639	.0509	.0392	.0289	.0201	.0129	.0073	.0032	.0008
4.0	.0645	.0513	.0394	.0290	.0202	.0129	.0073	.0032	.0008
6.0	.0650	.0516	.0396	.0291	.0202	.0129	.0073	.0032	.0008
8.0	.0654	.0518	.0397	.0292	.0202	.0129	.0073	.0032	.0008
10.0	.0657	.0520	.0398	.0292	.0202	.0129	.0072	.0032	.0008
12.0	.0660	.0521	.0398	.0292	.0202	.0129	.0072	.0032	.0008
15.0	.0662	.0521	.0397	.0291	.0201	.0128	.0072	.0032	.0008
20.0	.0662	.0519	.0394	.0287	.0198	.0126	.0070	.0031	.0008
25.0	.0656	.0512	.0388	.0282	.0194	.0123	.0068	.0030	.0007
30.0	.0646	.0502	.0378	.0274	.0188	.0118	.0066	.0029	.0007
35.0	.0630	.0488	.0366	.0264	.0180	.0113	.0063	.0027	.0007
40.0	.0610	.0470	.0351	.0252	.0172	.0108	.0059	.0026	.0006
45.0	.0585	.0448	.0334	.0239	.0162	.0101	.0055	.0024	.0006
50.0	.0556	.0424	.0313	.0223	.0150	.0093	.0051	.0022	.0005
55.0	.0523	.0396	.0291	.0206	.0138	.0085	.0046	.0020	.0005
60.0	.0485	.0364	.0266	.0187	.0124	.0076	.0041	.0018	.0004
65.0	.0444	.0331	.0239	.0167	.0110	.0067	.0036	.0015	.0004
70.0	.0400	.0294	.0211	.0145	.0095	.0057	.0030	.0013	.0003
75.0	.0352	.0256	.0180	.0123	.0079	.0047	.0024	.0010	.0002
80.0	.0302	.0215	.0149	.0099	.0062	.0036	.0018	.0007	.0002
85.0	.0250	.0173	.0116	.0075	.0045	.0025	.0012	.0004	.0001

TABLE IV.- CONTINUED

(g) C_l. Continued.

$\phi_1 = 105^o$; $\phi_2 = 255^o$; $\beta = 2^o$

α, deg \ θ_{xy}, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.0284	.0265	.0255	.0246	.0228	.0207	.0185	.0161	.0138	.0116
2.0	.0318	.0281	.0265	.0254	.0233	.0210	.0187	.0163	.0139	.0117
4.0	.0385	.0314	.0287	.0269	.0242	.0216	.0191	.0166	.0141	.0118
6.0	.0451	.0346	.0307	.0284	.0251	.0222	.0195	.0168	.0143	.0119
8.0	.0517	.0378	.0328	.0299	.0259	.0228	.0198	.0171	.0145	.0120
10.0	.0582	.0410	.0348	.0313	.0268	.0233	.0202	.0173	.0146	.0121
12.0	.0646	.0440	.0368	.0327	.0276	.0238	.0205	.0175	.0147	.0122
15.0	.0741	.0486	.0396	.0347	.0287	.0245	.0209	.0178	.0149	.0122
20.0	.0895	.0558	.0441	.0378	.0304	.0255	.0215	.0181	.0150	.0123
25.0	.1042	.0627	.0483	.0407	.0319	.0263	.0219	.0183	.0151	.0123
30.0	.1181	.0690	.0521	.0432	.0331	.0269	.0222	.0183	.0150	.0121
35.0	.1311	.0749	.0556	.0454	.0341	.0273	.0223	.0182	.0148	.0119
40.0	.1431	.0802	.0586	.0473	.0348	.0275	.0222	.0180	.0145	.0116
45.0	.1541	.0848	.0611	.0488	.0353	.0275	.0219	.0176	.0141	.0112
50.0	.1638	.0888	.0632	.0499	.0355	.0272	.0215	.0171	.0136	.0107
55.0	.1723	.0922	.0648	.0506	.0354	.0268	.0209	.0165	.0130	.0102
60.0	.1795	.0948	.0659	.0510	.0351	.0262	.0202	.0157	.0123	.0095
65.0	.1853	.0967	.0665	.0510	.0345	.0253	.0193	.0149	.0115	.0088
70.0	.1897	.0979	.0666	.0506	.0336	.0243	.0182	.0139	.0106	.0080
75.0	.1927	.0983	.0662	.0498	.0325	.0231	.0170	.0128	.0096	.0072
80.0	.1942	.0980	.0653	.0486	.0311	.0217	.0157	.0116	.0086	.0063
85.0	.1942	.0969	.0639	.0470	.0295	.0202	.0143	.0103	.0074	.0053

α, deg \ θ_{xy}, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	.0095	.0076	.0058	.0043	.0030	.0019	.0011	.0005	.0001
2.0	.0095	.0076	.0058	.0043	.0030	.0019	.0011	.0005	.0001
4.0	.0096	.0076	.0059	.0043	.0030	.0019	.0011	.0005	.0001
6.0	.0097	.0077	.0059	.0043	.0030	.0019	.0011	.0005	.0001
8.0	.0098	.0077	.0059	.0043	.0030	.0019	.0011	.0005	.0001
10.0	.0098	.0077	.0059	.0043	.0030	.0019	.0011	.0005	.0001
12.0	.0098	.0078	.0059	.0043	.0030	.0019	.0011	.0005	.0001
15.0	.0099	.0078	.0059	.0043	.0030	.0019	.0011	.0005	.0001
20.0	.0099	.0077	.0059	.0043	.0029	.0019	.0010	.0005	.0001
25.0	.0098	.0076	.0058	.0042	.0029	.0018	.0010	.0004	.0001
30.0	.0097	.0075	.0056	.0041	.0028	.0018	.0010	.0004	.0001
35.0	.0094	.0073	.0055	.0039	.0027	.0017	.0009	.0004	.0001
40.0	.0091	.0070	.0052	.0038	.0026	.0016	.0009	.0004	.0001
45.0	.0088	.0067	.0050	.0036	.0024	.0015	.0008	.0004	.0001
50.0	.0083	.0063	.0047	.0033	.0022	.0014	.0008	.0003	.0001
55.0	.0078	.0059	.0044	.0031	.0021	.0013	.0007	.0003	.0001
60.0	.0073	.0055	.0040	.0028	.0019	.0011	.0006	.0003	.0001
65.0	.0067	.0050	.0036	.0025	.0016	.0010	.0005	.0002	.0001
70.0	.0060	.0044	.0032	.0022	.0014	.0009	.0005	.0002	.0000
75.0	.0053	.0038	.0027	.0018	.0012	.0007	.0004	.0001	.0000
80.0	.0046	.0032	.0022	.0015	.0009	.0005	.0003	.0001	.0000
85.0	.0038	.0026	.0018	.0011	.0007	.0004	.0002	.0001	.0000

TABLE IV.- CONTINUED

(g) C_l. Continued.

$\phi_1 = 105^\circ$; $\phi_2 = 255^\circ$; $\beta = 5^\circ$

θ_{xy}, deg / α, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.0726	.0659	.0634	.0613	.0567	.0516	.0460	.0402	.0344	.0288
2.0	.0805	.0700	.0661	.0632	.0579	.0523	.0465	.0406	.0347	.0290
4.0	.0965	.0781	.0713	.0670	.0602	.0539	.0475	.0413	.0352	.0294
6.0	.1127	.0862	.0765	.0707	.0624	.0553	.0485	.0419	.0356	.0296
8.0	.1289	.0941	.0816	.0744	.0646	.0567	.0494	.0425	.0360	.0299
10.0	.1450	.1019	.0866	.0779	.0666	.0580	.0503	.0431	.0363	.0301
12.0	.1609	.1096	.0915	.0814	.0686	.0592	.0510	.0436	.0366	.0303
15.0	.1846	.1209	.0986	.0864	.0714	.0609	.0521	.0442	.0370	.0305
20.0	.2228	.1390	.1099	.0942	.0757	.0634	.0536	.0450	.0374	.0306
25.0	.2594	.1561	.1203	.1012	.0794	.0654	.0546	.0455	.0375	.0306
30.0	.2940	.1719	.1298	.1075	.0825	.0669	.0552	.0456	.0374	.0302
35.0	.3264	.1864	.1383	.1130	.0849	.0679	.0554	.0454	.0369	.0297
40.0	.3563	.1995	.1458	.1176	.0867	.0684	.0552	.0448	.0362	.0289
45.0	.3835	.2111	.1521	.1214	.0879	.0684	.0546	.0439	.0352	.0279
50.0	.4078	.2211	.1573	.1242	.0884	.0678	.0535	.0426	.0339	.0267
55.0	.4289	.2294	.1613	.1260	.0882	.0667	.0521	.0411	.0324	.0253
60.0	.4468	.2360	.1641	.1269	.0873	.0652	.0502	.0392	.0306	.0237
65.0	.4613	.2407	.1656	.1269	.0858	.0631	.0480	.0370	.0286	.0219
70.0	.4723	.2436	.1659	.1259	.0836	.0605	.0454	.0345	.0263	.0200
75.0	.4797	.2447	.1649	.1239	.0808	.0575	.0424	.0318	.0239	.0179
80.0	.4835	.2439	.1626	.1209	.0774	.0540	.0392	.0288	.0213	.0156
85.0	.4836	.2413	.1591	.1171	.0733	.0502	.0356	.0256	.0185	.0133

θ_{xy}, deg / α, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	.0236	.0188	.0145	.0107	.0074	.0048	.0027	.0012	.0003
2.0	.0237	.0189	.0145	.0107	.0075	.0048	.0027	.0012	.0003
4.0	.0239	.0190	.0146	.0108	.0075	.0048	.0027	.0012	.0003
6.0	.0241	.0191	.0147	.0108	.0075	.0048	.0027	.0012	.0003
8.0	.0243	.0192	.0147	.0108	.0075	.0048	.0027	.0012	.0003
10.0	.0244	.0193	.0147	.0108	.0075	.0048	.0027	.0012	.0003
12.0	.0245	.0193	.0148	.0108	.0075	.0048	.0027	.0012	.0003
15.0	.0246	.0193	.0147	.0108	.0074	.0047	.0026	.0012	.0003
20.0	.0246	.0193	.0146	.0107	.0073	.0047	.0026	.0011	.0003
25.0	.0244	.0190	.0144	.0104	.0072	.0045	.0025	.0011	.0003
30.0	.0240	.0187	.0141	.0102	.0070	.0044	.0024	.0011	.0003
35.0	.0235	.0181	.0136	.0098	.0067	.0042	.0023	.0010	.0002
40.0	.0227	.0175	.0131	.0094	.0064	.0040	.0022	.0010	.0002
45.0	.0218	.0167	.0124	.0089	.0060	.0037	.0021	.0009	.0002
50.0	.0207	.0158	.0117	.0083	.0056	.0035	.0019	.0008	.0002
55.0	.0195	.0147	.0108	.0077	.0051	.0032	.0017	.0007	.0002
60.0	.0181	.0136	.0099	.0070	.0046	.0028	.0015	.0007	.0002
65.0	.0166	.0123	.0089	.0062	.0041	.0025	.0013	.0006	.0001
70.0	.0150	.0110	.0079	.0054	.0035	.0021	.0011	.0005	.0001
75.0	.0132	.0096	.0067	.0046	.0029	.0017	.0009	.0004	.0001
80.0	.0113	.0081	.0056	.0037	.0023	.0013	.0007	.0003	.0001
85.0	.0094	.0065	.0044	.0028	.0017	.0009	.0005	.0002	.0000

$\phi_1 = 105^\circ$; $\phi_2 = 255^\circ$; $\beta = 15^\circ$

θ_{xy}, deg / α, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.3049	.2151	.1895	.1778	.1633	.1485	.1324	.1157	.0991	.0831
2.0	.3215	.2248	.1965	.1832	.1667	.1507	.1339	.1168	.0998	.0836
4.0	.3562	.2446	.2105	.1939	.1733	.1551	.1369	.1188	.1012	.0845
6.0	.3926	.2647	.2246	.2044	.1797	.1592	.1396	.1207	.1025	.0853
8.0	.4302	.2851	.2385	.2148	.1859	.1632	.1423	.1224	.1036	.0861
10.0	.4689	.3057	.2524	.2249	.1918	.1669	.1447	.1240	.1046	.0867
12.0	.5084	.3262	.2660	.2347	.1975	.1705	.1470	.1254	.1055	.0872
15.0	.5684	.3568	.2860	.2490	.2057	.1754	.1500	.1273	.1066	.0878
20.0	.6690	.4066	.3179	.2714	.2180	.1826	.1542	.1296	.1078	.0882
25.0	.7679	.4542	.3476	.2917	.2286	.1884	.1572	.1309	.1081	.0880
30.0	.8632	.4989	.3748	.3098	.2375	.1927	.1590	.1313	.1076	.0871
35.0	.9534	.5401	.3992	.3256	.2445	.1956	.1596	.1306	.1063	.0855
40.0	1.0374	.5775	.4206	.3390	.2497	.1970	.1590	.1290	.1042	.0833
45.0	1.1142	.6106	.4389	.3497	.2531	.1969	.1572	.1264	.1013	.0804
50.0	1.1830	.6392	.4539	.3579	.2545	.1953	.1541	.1228	.0976	.0769
55.0	1.2432	.6630	.4655	.3633	.2539	.1922	.1500	.1182	.0932	.0729
60.0	1.2943	.6819	.4735	.3660	.2515	.1876	.1446	.1128	.0881	.0683
65.0	1.3357	.6957	.4780	.3659	.2471	.1816	.1382	.1065	.0823	.0631
70.0	1.3672	.7042	.4790	.3631	.2409	.1743	.1307	.0994	.0758	.0575
75.0	1.3885	.7075	.4763	.3576	.2330	.1657	.1222	.0916	.0688	.0515
80.0	1.3994	.7055	.4701	.3494	.2233	.1558	.1129	.0831	.0613	.0450
85.0	1.3999	.6983	.4604	.3386	.2120	.1449	.1028	.0740	.0534	.0383

θ_{xy}, deg / α, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	.0680	.0541	.0417	.0307	.0214	.0137	.0077	.0034	.0009
2.0	.0683	.0544	.0418	.0308	.0215	.0137	.0077	.0034	.0009
4.0	.0690	.0548	.0421	.0310	.0215	.0138	.0077	.0034	.0009
6.0	.0695	.0551	.0422	.0311	.0216	.0138	.0077	.0034	.0009
8.0	.0699	.0553	.0424	.0311	.0216	.0138	.0077	.0034	.0009
10.0	.0703	.0555	.0425	.0311	.0216	.0138	.0077	.0034	.0009
12.0	.0706	.0557	.0425	.0311	.0215	.0137	.0077	.0034	.0008
15.0	.0708	.0557	.0424	.0310	.0214	.0136	.0076	.0034	.0008
20.0	.0708	.0555	.0421	.0307	.0211	.0134	.0075	.0033	.0008
25.0	.0703	.0548	.0414	.0301	.0206	.0131	.0073	.0032	.0008
30.0	.0692	.0537	.0405	.0293	.0200	.0126	.0070	.0031	.0008
35.0	.0676	.0522	.0392	.0282	.0192	.0121	.0067	.0029	.0007
40.0	.0655	.0503	.0376	.0270	.0183	.0115	.0063	.0027	.0007
45.0	.0628	.0481	.0357	.0255	.0173	.0108	.0059	.0026	.0006
50.0	.0597	.0454	.0336	.0239	.0161	.0100	.0054	.0023	.0006
55.0	.0562	.0425	.0312	.0220	.0147	.0091	.0049	.0021	.0005
60.0	.0522	.0391	.0286	.0200	.0133	.0082	.0044	.0019	.0004
65.0	.0478	.0355	.0257	.0179	.0118	.0072	.0038	.0016	.0004
70.0	.0431	.0317	.0227	.0156	.0102	.0061	.0032	.0013	.0003
75.0	.0380	.0276	.0194	.0132	.0085	.0050	.0026	.0011	.0002
80.0	.0327	.0232	.0161	.0107	.0067	.0039	.0020	.0008	.0002
85.0	.0271	.0187	.0126	.0081	.0049	.0027	.0013	.0005	.0001

TABLE IV.- CONTINUED

(g) C_l. Continued.

$\phi_1 = 120^\circ$; $\phi_2 = 240^\circ$; $\beta = 2^\circ$

α, deg \ θ_{xy}, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.0300	.0279	.0268	.0258	.0239	.0217	.0193	.0168	.0143	.0120
2.0	.0337	.0297	.0279	.0267	.0244	.0220	.0195	.0169	.0144	.0121
4.0	.0410	.0332	.0303	.0284	.0254	.0227	.0199	.0173	.0147	.0122
6.0	.0482	.0368	.0325	.0300	.0264	.0233	.0204	.0175	.0148	.0123
8.0	.0554	.0403	.0348	.0316	.0273	.0239	.0208	.0178	.0150	.0124
10.0	.0625	.0437	.0370	.0332	.0282	.0245	.0211	.0181	.0152	.0125
12.0	.0696	.0471	.0391	.0347	.0291	.0250	.0215	.0183	.0153	.0126
15.0	.0800	.0521	.0423	.0369	.0304	.0258	.0220	.0186	.0155	.0127
20.0	.0969	.0601	.0473	.0404	.0323	.0269	.0226	.0189	.0157	.0128
25.0	.1130	.0676	.0519	.0435	.0339	.0278	.0231	.0192	.0158	.0128
30.0	.1283	.0746	.0561	.0463	.0353	.0285	.0234	.0193	.0157	.0127
35.0	.1425	.0810	.0599	.0488	.0364	.0290	.0236	.0192	.0156	.0125
40.0	.1557	.0868	.0632	.0509	.0373	.0293	.0235	.0190	.0153	.0122
45.0	.1678	.0920	.0661	.0526	.0379	.0293	.0233	.0186	.0149	.0118
50.0	.1785	.0965	.0684	.0539	.0381	.0291	.0229	.0181	.0144	.0113
55.0	.1879	.1002	.0703	.0548	.0381	.0287	.0223	.0175	.0137	.0107
60.0	.1958	.1031	.0716	.0552	.0378	.0281	.0216	.0167	.0130	.0100
65.0	.2023	.1053	.0723	.0553	.0372	.0273	.0207	.0159	.0122	.0093
70.0	.2072	.1067	.0725	.0549	.0364	.0262	.0196	.0148	.0113	.0085
75.0	.2106	.1073	.0722	.0541	.0352	.0250	.0184	.0137	.0103	.0076
80.0	.2123	.1070	.0713	.0529	.0338	.0235	.0170	.0125	.0092	.0067
85.0	.2124	.1059	.0698	.0513	.0321	.0219	.0155	.0112	.0080	.0057

α, deg \ θ_{xy}, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	.0098	.0078	.0060	.0044	.0030	.0020	.0011	.0005	.0001
2.0	.0098	.0078	.0060	.0044	.0031	.0020	.0011	.0005	.0001
4.0	.0099	.0079	.0060	.0044	.0031	.0020	.0011	.0005	.0001
6.0	.0100	.0079	.0060	.0044	.0031	.0020	.0011	.0005	.0001
8.0	.0101	.0079	.0061	.0044	.0031	.0020	.0011	.0005	.0001
10.0	.0101	.0080	.0061	.0044	.0031	.0020	.0011	.0005	.0001
12.0	.0102	.0080	.0061	.0044	.0031	.0020	.0011	.0005	.0001
15.0	.0102	.0080	.0061	.0044	.0031	.0019	.0011	.0005	.0001
20.0	.0102	.0080	.0060	.0044	.0030	.0019	.0011	.0005	.0001
25.0	.0102	.0079	.0060	.0043	.0029	.0019	.0010	.0005	.0001
30.0	.0100	.0078	.0058	.0042	.0029	.0018	.0010	.0004	.0001
35.0	.0098	.0076	.0056	.0041	.0028	.0017	.0010	.0004	.0001
40.0	.0095	.0073	.0054	.0039	.0026	.0016	.0009	.0004	.0001
45.0	.0091	.0070	.0052	.0037	.0025	.0015	.0008	.0004	.0001
50.0	.0087	.0066	.0049	.0034	.0023	.0014	.0008	.0003	.0001
55.0	.0082	.0062	.0045	.0032	.0021	.0013	.0007	.0003	.0001
60.0	.0076	.0057	.0041	.0029	.0019	.0012	.0006	.0003	.0001
65.0	.0070	.0052	.0037	.0026	.0017	.0010	.0005	.0002	.0001
70.0	.0063	.0046	.0033	.0023	.0015	.0009	.0005	.0002	.0000
75.0	.0056	.0041	.0028	.0019	.0012	.0007	.0004	.0002	.0000
80.0	.0049	.0034	.0024	.0016	.0010	.0006	.0003	.0001	.0000
85.0	.0041	.0028	.0019	.0012	.0007	.0004	.0002	.0001	.0000

TABLE IV.- CONTINUED

(g) C_1. Continued.

$\phi_1 = 120^\circ$; $\phi_2 = 240^\circ$; $\beta = 5^\circ$

θ_{xy}, deg / α, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.0763	.0693	.0667	.0643	.0594	.0539	.0479	.0418	.0357	.0298
2.0	.0849	.0738	.0696	.0664	.0607	.0548	.0485	.0422	.0360	.0300
4.0	.1025	.0827	.0753	.0706	.0632	.0564	.0496	.0430	.0365	.0304
6.0	.1203	.0916	.0810	.0747	.0657	.0580	.0507	.0437	.0370	.0307
8.0	.1381	.1003	.0866	.0787	.0680	.0595	.0517	.0443	.0374	.0310
10.0	.1557	.1088	.0921	.0826	.0703	.0609	.0526	.0449	.0378	.0312
12.0	.1733	.1173	.0974	.0864	.0725	.0623	.0535	.0455	.0381	.0314
15.0	.1992	.1297	.1053	.0919	.0756	.0642	.0547	.0462	.0386	.0317
20.0	.2412	.1495	.1176	.1005	.0803	.0670	.0563	.0472	.0391	.0319
25.0	.2813	.1682	.1291	.1083	.0844	.0693	.0575	.0477	.0392	.0318
30.0	.3193	.1857	.1396	.1153	.0879	.0710	.0583	.0479	.0391	.0315
35.0	.3548	.2017	.1491	.1214	.0907	.0722	.0587	.0478	.0387	.0310
40.0	.3877	.2162	.1574	.1266	.0928	.0729	.0585	.0473	.0380	.0302
45.0	.4176	.2290	.1645	.1308	.0942	.0730	.0580	.0464	.0370	.0293
50.0	.4444	.2401	.1704	.1341	.0949	.0725	.0570	.0452	.0357	.0280
55.0	.4677	.2494	.1749	.1363	.0949	.0715	.0555	.0436	.0342	.0266
60.0	.4875	.2568	.1781	.1375	.0941	.0699	.0537	.0417	.0324	.0250
65.0	.5036	.2622	.1800	.1376	.0927	.0679	.0514	.0395	.0303	.0232
70.0	.5158	.2656	.1805	.1367	.0905	.0653	.0488	.0369	.0281	.0212
75.0	.5242	.2670	.1797	.1348	.0876	.0622	.0457	.0341	.0256	.0190
80.0	.5285	.2664	.1774	.1318	.0841	.0586	.0423	.0311	.0229	.0167
85.0	.5288	.2637	.1738	.1278	.0799	.0546	.0386	.0278	.0200	.0143

θ_{xy}, deg / α, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	.0243	.0193	.0148	.0109	.0076	.0049	.0027	.0012	.0003
2.0	.0245	.0194	.0149	.0110	.0076	.0049	.0027	.0012	.0003
4.0	.0247	.0196	.0150	.0110	.0076	.0049	.0027	.0012	.0003
6.0	.0249	.0197	.0151	.0110	.0076	.0049	.0027	.0012	.0003
8.0	.0251	.0198	.0151	.0111	.0077	.0049	.0027	.0012	.0003
10.0	.0252	.0199	.0151	.0111	.0077	.0049	.0027	.0012	.0003
12.0	.0253	.0199	.0152	.0111	.0076	.0049	.0027	.0012	.0003
15.0	.0254	.0200	.0152	.0110	.0076	.0048	.0027	.0012	.0003
20.0	.0255	.0199	.0150	.0109	.0075	.0048	.0026	.0012	.0003
25.0	.0253	.0197	.0148	.0107	.0073	.0046	.0026	.0011	.0003
30.0	.0250	.0193	.0145	.0104	.0071	.0045	.0025	.0011	.0003
35.0	.0244	.0188	.0140	.0101	.0069	.0043	.0024	.0010	.0003
40.0	.0237	.0181	.0135	.0097	.0065	.0041	.0022	.0010	.0002
45.0	.0228	.0174	.0128	.0091	.0062	.0038	.0021	.0009	.0002
50.0	.0217	.0164	.0121	.0086	.0057	.0036	.0019	.0008	.0002
55.0	.0204	.0154	.0112	.0079	.0053	.0032	.0018	.0008	.0002
60.0	.0190	.0142	.0103	.0072	.0048	.0029	.0016	.0007	.0002
65.0	.0175	.0129	.0093	.0065	.0042	.0026	.0014	.0006	.0001
70.0	.0158	.0116	.0082	.0056	.0037	.0022	.0012	.0005	.0001
75.0	.0140	.0101	.0071	.0048	.0031	.0018	.0009	.0004	.0001
80.0	.0121	.0086	.0059	.0039	.0024	.0014	.0007	.0003	.0001
85.0	.0101	.0070	.0047	.0030	.0018	.0010	.0005	.0002	.0000

$\phi_1 = 120^\circ$; $\phi_2 = 240^\circ$; $\beta = 15^\circ$

θ_{xy}, deg / α, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.3159	.2243	.1982	.1864	.1711	.1552	.1380	.1203	.1027	.0859
2.0	.3341	.2349	.2059	.1923	.1748	.1577	.1397	.1215	.1035	.0864
4.0	.3722	.2566	.2214	.2040	.1821	.1624	.1429	.1237	.1050	.0874
6.0	.4122	.2788	.2368	.2156	.1891	.1670	.1460	.1257	.1064	.0884
8.0	.4536	.3012	.2522	.2270	.1959	.1713	.1489	.1277	.1077	.0892
10.0	.4962	.3238	.2674	.2381	.2024	.1755	.1516	.1294	.1088	.0899
12.0	.5396	.3464	.2824	.2489	.2087	.1794	.1541	.1310	.1098	.0905
15.0	.6056	.3801	.3044	.2647	.2177	.1849	.1575	.1331	.1111	.0911
20.0	.7164	.4350	.3396	.2893	.2313	.1929	.1622	.1358	.1125	.0917
25.0	.8254	.4875	.3724	.3118	.2431	.1994	.1657	.1375	.1130	.0916
30.0	.9305	.5368	.4024	.3320	.2531	.2045	.1679	.1381	.1127	.0908
35.0	1.0300	.5824	.4295	.3496	.2612	.2079	.1689	.1376	.1115	.0893
40.0	1.1227	.6237	.4534	.3646	.2673	.2098	.1686	.1361	.1095	.0871
45.0	1.2075	.6605	.4738	.3768	.2714	.2101	.1669	.1336	.1066	.0843
50.0	1.2835	.6923	.4907	.3861	.2733	.2088	.1641	.1301	.1029	.0808
55.0	1.3501	.7189	.5038	.3925	.2733	.2059	.1599	.1255	.0985	.0767
60.0	1.4066	.7401	.5132	.3959	.2711	.2014	.1546	.1200	.0933	.0720
65.0	1.4526	.7557	.5186	.3964	.2669	.1954	.1480	.1136	.0874	.0667
70.0	1.4877	.7656	.5201	.3938	.2606	.1879	.1404	.1064	.0808	.0610
75.0	1.5116	.7697	.5177	.3882	.2524	.1790	.1317	.0983	.0736	.0548
80.0	1.5241	.7680	.5114	.3798	.2423	.1687	.1219	.0895	.0658	.0482
85.0	1.5252	.7605	.5012	.3685	.2304	.1572	.1113	.0800	.0576	.0412

θ_{xy}, deg / α, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	.0701	.0556	.0427	.0314	.0219	.0140	.0079	.0035	.0009
2.0	.0704	.0559	.0429	.0315	.0219	.0140	.0079	.0035	.0009
4.0	.0711	.0563	.0431	.0317	.0220	.0140	.0079	.0035	.0009
6.0	.0717	.0567	.0433	.0318	.0220	.0141	.0079	.0035	.0009
8.0	.0722	.0570	.0435	.0319	.0220	.0141	.0079	.0035	.0009
10.0	.0726	.0572	.0436	.0319	.0220	.0140	.0079	.0035	.0009
12.0	.0730	.0573	.0437	.0319	.0220	.0140	.0078	.0035	.0009
15.0	.0733	.0574	.0436	.0318	.0219	.0139	.0078	.0034	.0008
20.0	.0734	.0573	.0433	.0315	.0216	.0137	.0076	.0033	.0008
25.0	.0729	.0566	.0427	.0309	.0211	.0133	.0074	.0032	.0008
30.0	.0719	.0556	.0417	.0301	.0205	.0129	.0071	.0031	.0008
35.0	.0703	.0541	.0405	.0290	.0197	.0124	.0068	.0030	.0007
40.0	.0682	.0522	.0389	.0278	.0188	.0117	.0065	.0028	.0007
45.0	.0656	.0500	.0370	.0263	.0177	.0110	.0060	.0026	.0006
50.0	.0625	.0473	.0348	.0247	.0165	.0102	.0056	.0024	.0006
55.0	.0589	.0443	.0324	.0228	.0152	.0093	.0051	.0022	.0005
60.0	.0548	.0409	.0297	.0208	.0137	.0084	.0045	.0019	.0005
65.0	.0503	.0372	.0268	.0186	.0122	.0074	.0039	.0017	.0004
70.0	.0455	.0333	.0237	.0162	.0105	.0063	.0033	.0014	.0003
75.0	.0403	.0291	.0204	.0138	.0088	.0052	.0027	.0011	.0002
80.0	.0348	.0247	.0170	.0112	.0070	.0040	.0020	.0008	.0002
85.0	.0290	.0200	.0134	.0086	.0052	.0028	.0014	.0005	.0001

TABLE IV. - CONTINUED

(g) C_l. Continued.

$\phi_1 = 135^o$; $\phi_2 = 225^o$; $\beta = 2^o$

α, deg \ θ_{xy}, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.0306	.0283	.0272	.0262	.0241	.0217	.0192	.0166	.0141	.0117
2.0	.0346	.0303	.0284	.0271	.0246	.0221	.0194	.0168	.0142	.0118
4.0	.0425	.0342	.0309	.0289	.0257	.0228	.0199	.0171	.0144	.0119
6.0	.0504	.0380	.0334	.0307	.0268	.0235	.0204	.0174	.0146	.0121
8.0	.0582	.0418	.0359	.0324	.0278	.0241	.0208	.0177	.0148	.0122
10.0	.0660	.0455	.0382	.0341	.0288	.0248	.0212	.0180	.0150	.0123
12.0	.0736	.0492	.0406	.0358	.0298	.0254	.0216	.0182	.0152	.0124
15.0	.0850	.0547	.0440	.0382	.0311	.0262	.0221	.0186	.0154	.0125
20.0	.1033	.0634	.0495	.0420	.0332	.0275	.0229	.0190	.0156	.0126
25.0	.1208	.0716	.0545	.0454	.0351	.0285	.0235	.0193	.0157	.0126
30.0	.1375	.0792	.0592	.0486	.0366	.0293	.0239	.0194	.0157	.0126
35.0	.1531	.0863	.0634	.0513	.0379	.0299	.0241	.0194	.0156	.0124
40.0	.1675	.0927	.0671	.0537	.0389	.0303	.0241	.0193	.0154	.0121
45.0	.1806	.0984	.0703	.0556	.0397	.0304	.0239	.0190	.0150	.0118
50.0	.1924	.1034	.0730	.0571	.0401	.0303	.0236	.0185	.0145	.0113
55.0	.2027	.1075	.0751	.0582	.0402	.0300	.0231	.0180	.0140	.0108
60.0	.2115	.1109	.0766	.0589	.0400	.0294	.0224	.0172	.0133	.0101
65.0	.2186	.1134	.0776	.0591	.0395	.0287	.0215	.0164	.0125	.0094
70.0	.2241	.1150	.0779	.0588	.0387	.0277	.0205	.0154	.0116	.0087
75.0	.2279	.1158	.0777	.0581	.0376	.0265	.0193	.0143	.0106	.0078
80.0	.2299	.1157	.0769	.0570	.0362	.0251	.0180	.0131	.0096	.0070
85.0	.2302	.1147	.0755	.0554	.0345	.0235	.0165	.0118	.0084	.0060

α, deg \ θ_{xy}, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	.0095	.0075	.0057	.0042	.0029	.0018	.0010	.0005	.0001
2.0	.0095	.0075	.0057	.0042	.0029	.0018	.0010	.0005	.0001
4.0	.0096	.0076	.0058	.0042	.0029	.0019	.0010	.0005	.0001
6.0	.0097	.0076	.0058	.0042	.0029	.0019	.0010	.0005	.0001
8.0	.0098	.0077	.0058	.0042	.0029	.0019	.0010	.0005	.0001
10.0	.0099	.0077	.0059	.0043	.0029	.0019	.0010	.0005	.0001
12.0	.0099	.0078	.0059	.0043	.0029	.0019	.0010	.0005	.0001
15.0	.0100	.0078	.0059	.0043	.0029	.0018	.0010	.0005	.0001
20.0	.0100	.0078	.0058	.0042	.0029	.0018	.0010	.0004	.0001
25.0	.0100	.0077	.0058	.0041	.0028	.0018	.0010	.0004	.0001
30.0	.0099	.0076	.0056	.0040	.0027	.0017	.0009	.0004	.0001
35.0	.0097	.0074	.0055	.0039	.0026	.0016	.0009	.0004	.0001
40.0	.0094	.0071	.0053	.0037	.0025	.0016	.0009	.0004	.0001
45.0	.0091	.0069	.0050	.0036	.0024	.0015	.0008	.0003	.0001
50.0	.0087	.0065	.0048	.0033	.0022	.0014	.0007	.0003	.0001
55.0	.0082	.0061	.0044	.0031	.0020	.0013	.0007	.0003	.0001
60.0	.0077	.0057	.0041	.0028	.0019	.0011	.0006	.0003	.0001
65.0	.0071	.0052	.0037	.0025	.0017	.0010	.0005	.0002	.0001
70.0	.0064	.0047	.0033	.0022	.0014	.0009	.0004	.0002	.0000
75.0	.0057	.0041	.0028	.0019	.0012	.0007	.0004	.0001	.0000
80.0	.0050	.0035	.0024	.0016	.0010	.0006	.0003	.0001	.0000
85.0	.0042	.0029	.0019	.0012	.0007	.0004	.0002	.0001	.0000

TABLE IV. - CONTINUED

(g) C_l. Continued.

$\phi_1 = 135^\circ$; $\phi_2 = 225^\circ$; $\beta = 5^\circ$

θ_{xy}, deg / α, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.0773	.0705	.0676	.0651	.0599	.0540	.0477	.0413	.0351	.0291
2.0	.0868	.0754	.0708	.0674	.0613	.0549	.0484	.0418	.0354	.0293
4.0	.1061	.0850	.0770	.0719	.0640	.0567	.0496	.0426	.0359	.0297
6.0	.1255	.0946	.0832	.0763	.0666	.0584	.0507	.0434	.0365	.0301
8.0	.1450	.1041	.0893	.0807	.0692	.0601	.0518	.0441	.0369	.0304
10.0	.1642	.1134	.0952	.0849	.0717	.0617	.0528	.0448	.0374	.0306
12.0	.1833	.1226	.1011	.0891	.0741	.0631	.0538	.0454	.0378	.0309
15.0	.2115	.1361	.1096	.0951	.0775	.0652	.0551	.0462	.0383	.0311
20.0	.2571	.1577	.1231	.1045	.0827	.0683	.0570	.0473	.0388	.0314
25.0	.3008	.1782	.1357	.1131	.0873	.0709	.0584	.0480	.0391	.0315
30.0	.3422	.1973	.1473	.1209	.0912	.0730	.0594	.0484	.0391	.0313
35.0	.3810	.2148	.1577	.1277	.0944	.0745	.0599	.0484	.0388	.0308
40.0	.4169	.2308	.1670	.1336	.0970	.0754	.0600	.0480	.0382	.0302
45.0	.4496	.2450	.1750	.1384	.0987	.0757	.0596	.0473	.0374	.0293
50.0	.4789	.2573	.1816	.1422	.0998	.0755	.0588	.0462	.0362	.0281
55.0	.5046	.2677	.1869	.1450	.1000	.0747	.0575	.0447	.0347	.0268
60.0	.5264	.2760	.1907	.1466	.0995	.0733	.0558	.0429	.0330	.0253
65.0	.5442	.2823	.1931	.1471	.0983	.0714	.0536	.0408	.0311	.0235
70.0	.5578	.2864	.1940	.1465	.0963	.0689	.0511	.0384	.0289	.0216
75.0	.5673	.2883	.1935	.1447	.0935	.0659	.0481	.0356	.0265	.0195
80.0	.5724	.2880	.1914	.1419	.0901	.0624	.0448	.0326	.0238	.0173
85.0	.5731	.2855	.1879	.1380	.0860	.0584	.0412	.0294	.0210	.0149

θ_{xy}, deg / α, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	.0236	.0186	.0142	.0104	.0072	.0046	.0026	.0011	.0003
2.0	.0237	.0187	.0143	.0105	.0072	.0046	.0026	.0011	.0003
4.0	.0240	.0189	.0144	.0105	.0073	.0046	.0026	.0011	.0003
6.0	.0242	.0190	.0145	.0105	.0073	.0046	.0026	.0011	.0003
8.0	.0244	.0191	.0145	.0106	.0073	.0046	.0026	.0011	.0003
10.0	.0246	.0192	.0146	.0106	.0073	.0046	.0026	.0011	.0003
12.0	.0247	.0193	.0146	.0106	.0073	.0046	.0026	.0011	.0003
15.0	.0249	.0194	.0146	.0106	.0073	.0046	.0025	.0011	.0003
20.0	.0249	.0193	.0145	.0105	.0072	.0045	.0025	.0011	.0003
25.0	.0248	.0192	.0143	.0103	.0070	.0044	.0024	.0011	.0003
30.0	.0246	.0188	.0140	.0101	.0068	.0043	.0024	.0010	.0003
35.0	.0241	.0184	.0136	.0097	.0066	.0041	.0022	.0010	.0002
40.0	.0234	.0178	.0131	.0093	.0063	.0039	.0021	.0009	.0002
45.0	.0226	.0171	.0125	.0089	.0059	.0037	.0020	.0009	.0002
50.0	.0216	.0162	.0118	.0083	.0055	.0034	.0018	.0008	.0002
55.0	.0204	.0152	.0110	.0077	.0051	.0031	.0017	.0007	.0002
60.0	.0191	.0141	.0102	.0070	.0046	.0028	.0015	.0006	.0002
65.0	.0176	.0129	.0092	.0063	.0041	.0025	.0013	.0005	.0001
70.0	.0160	.0116	.0082	.0056	.0036	.0021	.0011	.0005	.0001
75.0	.0142	.0102	.0071	.0047	.0030	.0018	.0009	.0004	.0001
80.0	.0124	.0087	.0060	.0039	.0024	.0014	.0007	.0003	.0001
85.0	.0105	.0072	.0048	.0030	.0018	.0010	.0005	.0002	.0000

$\phi_1 = 135^\circ$; $\phi_2 = 225^\circ$; $\beta = 15^\circ$

θ_{xy}, deg / α, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.3102	.2235	.1992	.1881	.1724	.1555	.1375	.1190	.1010	.0838
2.0	.3302	.2352	.2077	.1945	.1764	.1582	.1393	.1203	.1018	.0844
4.0	.3721	.2590	.2246	.2073	.1842	.1633	.1428	.1227	.1035	.0855
6.0	.4160	.2834	.2415	.2200	.1918	.1683	.1461	.1249	.1050	.0865
8.0	.4617	.3087	.2584	.2324	.1992	.1730	.1492	.1270	.1064	.0874
10.0	.5087	.3330	.2751	.2446	.2064	.1775	.1522	.1289	.1076	.0882
12.0	.5566	.3579	.2917	.2565	.2132	.1818	.1549	.1307	.1087	.0889
15.0	.6297	.3951	.3159	.2737	.2231	.1879	.1587	.1331	.1101	.0897
20.0	.7522	.4557	.3546	.3009	.2381	.1968	.1641	.1362	.1119	.0905
25.0	.8727	.5138	.3908	.3257	.2513	.2042	.1682	.1383	.1127	.0906
30.0	.9889	.5683	.4241	.3480	.2626	.2101	.1710	.1393	.1127	.0900
35.0	1.0990	.6187	.4542	.3678	.2719	.2144	.1725	.1393	.1118	.0888
40.0	1.2014	.6646	.4808	.3847	.2792	.2170	.1727	.1382	.1101	.0868
45.0	1.2951	.7054	.5038	.3986	.2843	.2180	.1716	.1361	.1076	.0843
50.0	1.3792	.7409	.5229	.4096	.2872	.2173	.1692	.1329	.1042	.0810
55.0	1.4529	.7708	.5381	.4174	.2880	.2150	.1655	.1287	.1000	.0772
60.0	1.5157	.7948	.5491	.4221	.2866	.2111	.1605	.1235	.0951	.0727
65.0	1.5669	.8128	.5560	.4235	.2830	.2055	.1544	.1174	.0895	.0677
70.0	1.6063	.8245	.5586	.4217	.2772	.1984	.1470	.1104	.0831	.0622
75.0	1.6334	.8300	.5570	.4167	.2693	.1897	.1385	.1026	.0762	.0562
80.0	1.6481	.8292	.5512	.4085	.2594	.1796	.1290	.0940	.0686	.0498
85.0	1.6502	.8221	.5412	.3973	.2475	.1682	.1185	.0846	.0606	.0430

θ_{xy}, deg / α, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	.0680	.0537	.0410	.0300	.0208	.0132	.0074	.0033	.0008
2.0	.0684	.0539	.0411	.0301	.0208	.0133	.0074	.0033	.0008
4.0	.0691	.0544	.0414	.0303	.0209	.0133	.0074	.0033	.0008
6.0	.0698	.0548	.0416	.0304	.0209	.0133	.0074	.0033	.0008
8.0	.0703	.0551	.0418	.0305	.0210	.0133	.0074	.0033	.0008
10.0	.0708	.0554	.0420	.0305	.0210	.0133	.0074	.0033	.0008
12.0	.0712	.0556	.0420	.0305	.0210	.0133	.0074	.0033	.0008
15.0	.0716	.0557	.0421	.0305	.0209	.0132	.0073	.0032	.0008
20.0	.0718	.0557	.0418	.0302	.0206	.0130	.0072	.0032	.0008
25.0	.0715	.0552	.0413	.0297	.0202	.0127	.0070	.0031	.0008
30.0	.0707	.0543	.0404	.0290	.0196	.0123	.0068	.0029	.0007
35.0	.0693	.0529	.0393	.0280	.0189	.0118	.0065	.0028	.0007
40.0	.0674	.0512	.0378	.0269	.0181	.0112	.0061	.0026	.0006
45.0	.0650	.0491	.0361	.0255	.0171	.0105	.0057	.0025	.0006
50.0	.0621	.0466	.0340	.0239	.0159	.0098	.0053	.0023	.0005
55.0	.0587	.0438	.0318	.0222	.0147	.0090	.0048	.0021	.0005
60.0	.0549	.0406	.0292	.0203	.0133	.0081	.0043	.0018	.0004
65.0	.0506	.0371	.0265	.0182	.0119	.0071	.0038	.0016	.0004
70.0	.0460	.0334	.0235	.0160	.0103	.0061	.0032	.0013	.0003
75.0	.0410	.0293	.0204	.0137	.0087	.0051	.0026	.0010	.0002
80.0	.0357	.0251	.0171	.0112	.0070	.0040	.0020	.0008	.0002
85.0	.0301	.0207	.0137	.0087	.0052	.0028	.0013	.0005	.0001

TABLE IV. - CONTINUED

(g) C_l. Continued.

$\phi_1 = 150^o$; $\phi_2 = 210^o$; $\beta = 2^o$

α, deg \ θ_{xy}, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.0284	.0261	.0249	.0238	.0217	.0193	.0169	.0144	.0120	.0098
2.0	.0324	.0280	.0261	.0248	.0223	.0197	.0171	.0146	.0121	.0099
4.0	.0405	.0320	.0287	.0266	.0233	.0204	.0176	.0149	.0124	.0101
6.0	.0484	.0358	.0312	.0284	.0244	.0211	.0180	.0152	.0126	.0102
8.0	.0563	.0397	.0337	.0302	.0255	.0218	.0185	.0155	.0128	.0103
10.0	.0642	.0435	.0361	.0319	.0265	.0224	.0189	.0157	.0129	.0104
12.0	.0719	.0472	.0385	.0336	.0274	.0230	.0193	.0160	.0131	.0105
15.0	.0834	.0527	.0419	.0360	.0288	.0239	.0198	.0163	.0133	.0107
20.0	.1020	.0616	.0475	.0399	.0310	.0252	.0206	.0168	.0136	.0108
25.0	.1198	.0700	.0527	.0434	.0329	.0262	.0212	.0171	.0137	.0108
30.0	.1367	.0778	.0575	.0467	.0346	.0271	.0217	.0173	.0138	.0108
35.0	.1526	.0851	.0618	.0496	.0360	.0278	.0220	.0174	.0137	.0107
40.0	.1673	.0917	.0657	.0521	.0371	.0283	.0221	.0174	.0136	.0105
45.0	.1808	.0976	.0691	.0542	.0379	.0286	.0221	.0172	.0133	.0103
50.0	.1928	.1027	.0719	.0559	.0385	.0286	.0219	.0169	.0130	.0099
55.0	.2034	.1071	.0742	.0571	.0388	.0284	.0215	.0164	.0125	.0095
60.0	.2125	.1107	.0759	.0579	.0387	.0280	.0210	.0158	.0120	.0090
65.0	.2199	.1134	.0771	.0583	.0384	.0274	.0203	.0151	.0113	.0084
70.0	.2256	.1153	.0777	.0583	.0378	.0266	.0194	.0143	.0106	.0078
75.0	.2297	.1163	.0777	.0578	.0369	.0256	.0184	.0134	.0098	.0071
80.0	.2320	.1164	.0771	.0569	.0357	.0244	.0173	.0124	.0089	.0064
85.0	.2325	.1156	.0759	.0555	.0342	.0230	.0160	.0113	.0080	.0056

α, deg \ θ_{xy}, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	.0079	.0061	.0046	.0034	.0023	.0015	.0008	.0004	.0001
2.0	.0079	.0062	.0047	.0034	.0023	.0015	.0008	.0004	.0001
4.0	.0080	.0062	.0047	.0034	.0023	.0015	.0008	.0004	.0001
6.0	.0081	.0063	.0047	.0034	.0023	.0015	.0008	.0004	.0001
8.0	.0082	.0063	.0047	.0034	.0023	.0015	.0008	.0004	.0001
10.0	.0083	.0064	.0048	.0034	.0023	.0015	.0008	.0004	.0001
12.0	.0083	.0064	.0048	.0034	.0023	.0015	.0008	.0004	.0001
15.0	.0084	.0064	.0048	.0034	.0023	.0015	.0008	.0004	.0001
20.0	.0084	.0064	.0048	.0034	.0023	.0014	.0008	.0003	.0001
25.0	.0084	.0064	.0047	.0034	.0023	.0014	.0008	.0003	.0001
30.0	.0084	.0063	.0046	.0033	.0022	.0014	.0007	.0003	.0001
35.0	.0082	.0062	.0045	.0032	.0021	.0013	.0007	.0003	.0001
40.0	.0080	.0060	.0044	.0031	.0020	.0013	.0007	.0003	.0001
45.0	.0078	.0058	.0042	.0029	.0019	.0012	.0006	.0003	.0001
50.0	.0075	.0055	.0040	.0027	.0018	.0011	.0006	.0003	.0001
55.0	.0071	.0052	.0037	.0026	.0017	.0010	.0005	.0002	.0001
60.0	.0067	.0048	.0034	.0023	.0015	.0009	.0005	.0002	.0000
65.0	.0062	.0045	.0031	.0021	.0014	.0008	.0004	.0002	.0000
70.0	.0057	.0040	.0028	.0019	.0012	.0007	.0004	.0001	.0000
75.0	.0051	.0036	.0025	.0016	.0010	.0006	.0003	.0001	.0000
80.0	.0045	.0031	.0021	.0013	.0008	.0005	.0002	.0001	.0000
85.0	.0038	.0026	.0017	.0011	.0006	.0003	.0002	.0001	.0000

TABLE IV.- CONCLUDED

(g) C_l. Concluded.

$\beta_1 = 150^0$; $\beta_2 = 210^0$; $\beta = 5^0$

θ_{xy}, deg / α, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.0710	.0649	.0619	.0593	.0540	.0481	.0420	.0358	.0299	.0245
2.0	.0808	.0698	.0651	.0616	.0554	.0490	.0426	.0362	.0302	.0247
4.0	.1007	.0796	.0714	.0662	.0581	.0508	.0438	.0370	.0308	.0251
6.0	.1205	.0892	.0776	.0707	.0608	.0525	.0449	.0378	.0313	.0254
8.0	.1402	.0988	.0838	.0751	.0634	.0542	.0460	.0385	.0318	.0257
10.0	.1597	.1083	.0898	.0794	.0659	.0558	.0470	.0392	.0322	.0260
12.0	.1790	.1176	.0957	.0834	.0683	.0573	.0480	.0398	.0326	.0262
15.0	.2076	.1313	.1044	.0897	.0718	.0594	.0493	.0407	.0331	.0265
20.0	.2539	.1533	.1182	.0993	.0771	.0626	.0513	.0418	.0338	.0269
25.0	.2983	.1741	.1311	.1082	.0819	.0653	.0528	.0427	.0342	.0270
30.0	.3404	.1937	.1430	.1162	.0860	.0676	.0540	.0432	.0343	.0269
35.0	.3799	.2117	.1538	.1234	.0895	.0693	.0547	.0434	.0342	.0267
40.0	.4165	.2282	.1635	.1296	.0923	.0705	.0550	.0432	.0338	.0262
45.0	.4500	.2429	.1719	.1348	.0945	.0711	.0549	.0428	.0332	.0255
50.0	.4800	.2557	.1790	.1390	.0958	.0712	.0544	.0420	.0323	.0247
55.0	.5064	.2666	.1847	.1422	.0965	.0708	.0535	.0408	.0312	.0236
60.0	.5289	.2755	.1891	.1443	.0964	.0698	.0522	.0394	.0298	.0224
65.0	.5474	.2823	.1919	.1452	.0956	.0683	.0504	.0377	.0282	.0210
70.0	.5617	.2869	.1934	.1451	.0941	.0663	.0483	.0357	.0264	.0194
75.0	.5717	.2894	.1933	.1439	.0918	.0638	.0458	.0334	.0244	.0177
80.0	.5774	.2896	.1918	.1415	.0889	.0608	.0430	.0308	.0222	.0158
85.0	.5787	.2877	.1888	.1381	.0853	.0573	.0398	.0281	.0198	.0139

θ_{xy}, deg / α, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	.0196	.0153	.0115	.0084	.0057	.0036	.0020	.0009	.0002
2.0	.0197	.0154	.0116	.0084	.0058	.0036	.0020	.0009	.0002
4.0	.0200	.0155	.0117	.0084	.0058	.0037	.0020	.0009	.0002
6.0	.0202	.0156	.0118	.0085	.0058	.0037	.0020	.0009	.0002
8.0	.0204	.0158	.0118	.0085	.0058	.0037	.0020	.0009	.0002
10.0	.0205	.0159	.0119	.0085	.0058	.0037	.0020	.0009	.0002
12.0	.0207	.0159	.0119	.0085	.0058	.0037	.0020	.0009	.0002
15.0	.0209	.0160	.0119	.0085	.0058	.0036	.0020	.0009	.0002
20.0	.0210	.0160	.0119	.0085	.0057	.0036	.0020	.0009	.0002
25.0	.0210	.0159	.0118	.0084	.0056	.0035	.0019	.0008	.0002
30.0	.0208	.0157	.0116	.0082	.0055	.0034	.0019	.0008	.0002
35.0	.0205	.0154	.0113	.0079	.0053	.0033	.0018	.0008	.0002
40.0	.0200	.0150	.0109	.0076	.0051	.0031	.0017	.0007	.0002
45.0	.0194	.0144	.0104	.0073	.0048	.0029	.0016	.0007	.0002
50.0	.0186	.0137	.0099	.0068	.0045	.0027	.0015	.0006	.0001
55.0	.0176	.0129	.0092	.0064	.0042	.0025	.0013	.0006	.0001
60.0	.0166	.0121	.0086	.0058	.0038	.0023	.0012	.0005	.0001
65.0	.0154	.0111	.0078	.0053	.0034	.0020	.0011	.0004	.0001
70.0	.0141	.0101	.0070	.0047	.0030	.0017	.0009	.0004	.0001
75.0	.0127	.0089	.0061	.0040	.0025	.0015	.0007	.0003	.0001
80.0	.0112	.0077	.0052	.0034	.0021	.0012	.0006	.0002	.0000
85.0	.0096	.0065	.0042	.0027	.0016	.0008	.0004	.0001	.0000

$\beta_1 = 150^0$; $\beta_2 = 210^0$; $\beta = 15^0$

θ_{xy}, deg / α, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.2649	.1978	.1797	.1709	.1555	.1386	.1208	.1031	.0862	.0706
2.0	.2858	.2101	.1885	.1775	.1595	.1412	.1224	.1043	.0870	.0711
4.0	.3298	.2352	.2062	.1906	.1673	.1463	.1260	.1067	.0886	.0722
6.0	.3762	.2609	.2238	.2035	.1750	.1513	.1293	.1089	.0901	.0731
8.0	.4246	.2869	.2413	.2161	.1824	.1560	.1324	.1109	.0914	.0740
10.0	.4745	.3131	.2586	.2285	.1896	.1606	.1354	.1129	.0927	.0748
12.0	.5254	.3392	.2757	.2406	.1966	.1649	.1382	.1147	.0938	.0755
15.0	.6029	.3782	.3006	.2582	.2066	.1711	.1421	.1171	.0953	.0764
20.0	.7324	.4414	.3404	.2859	.2221	.1803	.1477	.1204	.0972	.0774
25.0	.8590	.5014	.3775	.3114	.2358	.1881	.1521	.1229	.0984	.0778
30.0	.9801	.5577	.4118	.3346	.2477	.1946	.1554	.1243	.0988	.0776
35.0	1.0939	.6096	.4430	.3552	.2578	.1995	.1576	.1249	.0985	.0768
40.0	1.1993	.6570	.4708	.3731	.2659	.2029	.1585	.1245	.0974	.0754
45.0	1.2956	.6993	.4950	.3882	.2720	.2048	.1582	.1231	.0955	.0735
50.0	1.3821	.7363	.5154	.4003	.2760	.2051	.1567	.1208	.0930	.0710
55.0	1.4580	.7678	.5319	.4094	.2779	.2039	.1541	.1176	.0897	.0679
60.0	1.5228	.7933	.5443	.4154	.2777	.2011	.1502	.1135	.0858	.0644
65.0	1.5761	.8129	.5527	.4182	.2753	.1967	.1452	.1085	.0812	.0603
70.0	1.6173	.8262	.5568	.4178	.2709	.1909	.1391	.1027	.0759	.0558
75.0	1.6463	.8333	.5566	.4142	.2644	.1836	.1320	.0961	.0701	.0509
80.0	1.6627	.8340	.5523	.4075	.2559	.1749	.1238	.0888	.0638	.0456
85.0	1.6664	.8284	.5437	.3977	.2455	.1649	.1147	.0808	.0570	.0399

θ_{xy}, deg / α, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
1.0	.0564	.0440	.0332	.0241	.0165	.0105	.0058	.0026	.0006
2.0	.0568	.0442	.0334	.0242	.0166	.0105	.0058	.0026	.0006
4.0	.0575	.0447	.0336	.0243	.0166	.0105	.0058	.0026	.0006
6.0	.0581	.0450	.0338	.0244	.0167	.0105	.0059	.0026	.0006
8.0	.0587	.0453	.0340	.0245	.0167	.0105	.0059	.0026	.0006
10.0	.0592	.0457	.0342	.0246	.0167	.0105	.0058	.0026	.0006
12.0	.0596	.0459	.0343	.0246	.0167	.0105	.0058	.0026	.0006
15.0	.0600	.0461	.0343	.0246	.0167	.0105	.0058	.0025	.0006
20.0	.0605	.0462	.0343	.0244	.0165	.0103	.0057	.0025	.0006
25.0	.0604	.0459	.0339	.0241	.0162	.0101	.0055	.0024	.0006
30.0	.0599	.0453	.0333	.0236	.0158	.0098	.0054	.0023	.0006
35.0	.0590	.0444	.0324	.0228	.0153	.0094	.0051	.0022	.0005
40.0	.0576	.0431	.0313	.0220	.0146	.0090	.0049	.0021	.0005
45.0	.0557	.0414	.0300	.0209	.0138	.0085	.0046	.0019	.0005
50.0	.0535	.0395	.0284	.0197	.0130	.0079	.0042	.0018	.0004
55.0	.0508	.0373	.0266	.0183	.0120	.0072	.0039	.0016	.0004
60.0	.0477	.0348	.0246	.0168	.0109	.0065	.0035	.0014	.0003
65.0	.0443	.0320	.0225	.0152	.0098	.0058	.0030	.0013	.0003
70.0	.0406	.0289	.0201	.0135	.0085	.0050	.0026	.0011	.0002
75.0	.0365	.0257	.0176	.0116	.0073	.0042	.0021	.0008	.0002
80.0	.0322	.0222	.0150	.0097	.0059	.0033	.0016	.0006	.0001
85.0	.0276	.0186	.0122	.0077	.0045	.0024	.0011	.0004	.0001

TABLE V.- AERODYNAMIC CHARACTERISTICS OF CIRCULAR CONE BODIES

(a) C_N

$\phi_1 = 0^\circ$; $\phi_2 = 360^\circ$; $\beta = 0^\circ$

α, deg \ θ_c, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.0348	.0346	.0343	.0338	.0326	.0308	.0287	.0262	.0234	.0205
2.0	.0696	.0692	.0686	.0677	.0651	.0616	.0573	.0523	.0468	.0409
4.0	.1433	.1381	.1368	.1350	.1299	.1229	.1143	.1044	.0934	.0817
6.0	.2368	.2078	.2044	.2016	.1940	.1836	.1708	.1559	.1395	.1220
8.0	.3525	.2824	.2710	.2673	.2572	.2434	.2264	.2067	.1850	.1618
10.0	.4900	.3674	.3396	.3317	.3191	.3020	.2809	.2565	.2295	.2007
12.0	.6488	.4621	.4131	.3958	.3795	.3592	.3341	.3051	.2729	.2387
15.0	.9253	.6217	.5333	.4966	.4665	.4415	.4107	.3750	.3355	.2934
20.0	1.4802	.9307	.7585	.6790	.6065	.5676	.5280	.4821	.4313	.3772
25.0	2.1379	1.2852	1.0097	.8768	.7823	.6810	.6292	.5745	.5140	.4495
30.0	2.8785	1.6747	1.2794	1.0846	.9806	.7879	.7147	.6495	.5811	.5082
35.0	3.6795	2.0871	1.5595	1.2963	1.0300	.8877	.7991	.7074	.6305	.5514
40.0	4.5164	2.5102	1.8415	1.5057	1.1626	.9774	.8728	.7721	.6829	.5779
45.0	5.3640	2.9309	2.1170	1.7064	1.2845	1.0575	.9042	.7995	.6820	.5805
50.0	6.1964	3.3366	2.3776	1.9023	1.3921	1.1299	.9426	.8045	.6890	.5870
55.0	6.9883	3.7148	2.6152	2.0878	1.4822	1.1727	.9671	.8112	.6946	.5749
60.0	7.7157	4.0542	2.8228	2.1979	1.5521	1.2056	.9779	.8065	.6693	.5535
65.0	8.3565	4.3444	2.9941	2.3084	1.5996	1.2204	.9721	.7891	.6440	.5230
70.0	8.8912	4.5765	3.1237	2.3857	1.6234	1.2169	.9526	.7600	.6096	.4771
75.0	9.3076	4.7435	3.2078	2.4279	1.6227	1.1951	.9192	.7203	.5672	.4445
80.0	9.5811	4.8404	3.2438	2.4331	1.5976	1.1558	.8729	.6713	.5132	.3977
85.0	9.7153	4.8642	3.2307	2.4017	1.5489	1.1001	.8151	.6144	.4642	.3479

α, deg \ θ_c, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0	90.0
1.0	.0174	.0144	.0115	.0087	.0062	.0041	.0023	.0011	.0003	.0000
2.0	.0349	.0288	.0229	.0174	.0125	.0082	.0047	.0021	.0005	.0000
4.0	.0696	.0575	.0458	.0348	.0249	.0163	.0092	.0042	.0011	.0000
6.0	.1040	.0859	.0684	.0520	.0371	.0243	.0139	.0063	.0016	.0000
8.0	.1379	.1139	.0907	.0689	.0492	.0322	.0185	.0083	.0021	.0000
10.0	.1710	.1413	.1125	.0855	.0611	.0400	.0229	.0103	.0026	.0000
12.0	.2034	.1681	.1338	.1017	.0726	.0476	.0272	.0123	.0031	.0000
15.0	.2500	.2066	.1645	.1250	.0893	.0585	.0335	.0151	.0038	.0000
20.0	.3214	.2656	.2115	.1607	.1148	.0752	.0431	.0194	.0049	.0000
25.0	.3838	.3165	.2520	.1915	.1368	.0896	.0513	.0231	.0058	.0000
30.0	.4330	.3578	.2849	.2165	.1547	.1013	.0580	.0261	.0066	.0000
35.0	.4698	.3903	.3091	.2349	.1678	.1099	.0629	.0283	.0071	.0000
40.0	.4924	.4069	.3240	.2462	.1759	.1152	.0660	.0297	.0075	.0000
45.0	.5000	.4132	.3290	.2500	.1786	.1170	.0670	.0302	.0076	.0000
50.0	.4938	.4069	.3240	.2462	.1759	.1152	.0660	.0297	.0075	.0000
55.0	.4775	.3895	.3091	.2349	.1678	.1099	.0629	.0283	.0071	.0000
60.0	.4529	.3644	.2860	.2165	.1547	.1013	.0580	.0261	.0066	.0000
65.0	.4216	.3336	.2577	.1924	.1368	.0896	.0513	.0231	.0058	.0000
70.0	.3849	.2988	.2262	.1656	.1156	.0752	.0431	.0194	.0049	.0000
75.0	.3442	.2614	.1933	.1378	.0935	.0592	.0335	.0151	.0038	.0000
80.0	.3009	.2228	.1601	.1104	.0721	.0436	.0235	.0103	.0026	.0000
85.0	.2564	.1843	.1279	.0846	.0524	.0296	.0144	.0057	.0013	.0000

$\phi_1 = 0^\circ$; $\phi_2 = 360^\circ$; $\beta = 2^\circ$

α, deg \ θ_c, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.0348	.0346	.0343	.0338	.0325	.0308	.0286	.0261	.0234	.0205
2.0	.0696	.0691	.0685	.0676	.0650	.0615	.0572	.0523	.0468	.0409
4.0	.1461	.1379	.1366	.1348	.1297	.1227	.1142	.1043	.0933	.0816
6.0	.2409	.2073	.2041	.2014	.1937	.1834	.1706	.1557	.1393	.1219
8.0	.3571	.2835	.2708	.2670	.2569	.2431	.2261	.2065	.1847	.1616
10.0	.4947	.3688	.3398	.3313	.3187	.3016	.2806	.2562	.2292	.2005
12.0	.6535	.4637	.4135	.3956	.3790	.3587	.3337	.3047	.2726	.2384
15.0	.9298	.6234	.5339	.4966	.4659	.4410	.4102	.3745	.3351	.2931
20.0	1.4842	.9322	.7592	.6791	.6061	.5669	.5273	.4815	.4308	.3767
25.0	2.1411	1.2864	1.0102	.8768	.7479	.6803	.6285	.5738	.5134	.4490
30.0	2.8809	1.6754	1.2796	1.0845	.9902	.7873	.7139	.6487	.5804	.5076
35.0	3.6809	2.0875	1.5594	1.2960	1.0295	.8871	.7884	.7046	.6298	.5508
40.0	4.5168	2.5100	1.8412	1.5052	1.1620	.9776	.8719	.7813	.6621	.5772
45.0	5.3634	2.9303	2.1163	1.7057	1.2836	1.0567	.9434	.7838	.6812	.5879
50.0	6.1947	3.3354	2.3766	1.8914	1.3913	1.1221	.9419	.8037	.6883	.5863
55.0	6.9857	3.7132	2.6140	2.0567	1.4813	1.1719	.9663	.8110	.6839	.5743
60.0	7.7122	4.0522	2.8213	2.1967	1.5511	1.2047	.9762	.8059	.6687	.5530
65.0	8.3523	4.3420	2.9923	2.3070	1.5986	1.2195	.9713	.7834	.6435	.5233
70.0	8.8863	4.5738	3.1218	2.3843	1.6223	1.2160	.9519	.7594	.6091	.4866
75.0	9.2992	4.7407	3.2058	2.4262	1.6217	1.1943	.9185	.7199	.5667	.4442
80.0	9.5754	4.8375	3.2418	2.4316	1.5966	1.1550	.8723	.6708	.5175	.3973
85.0	9.7094	4.8612	3.2287	2.4002	1.5478	1.0993	.8145	.6139	.4638	.3476

α, deg \ θ_c, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0	90.0
1.0	.0174	.0144	.0115	.0087	.0062	.0041	.0023	.0011	.0003	.0000
2.0	.0348	.0288	.0229	.0174	.0124	.0082	.0047	.0021	.0005	.0000
4.0	.0695	.0574	.0457	.0348	.0248	.0163	.0093	.0042	.0011	.0000
6.0	.1038	.0858	.0683	.0519	.0371	.0243	.0139	.0063	.0016	.0000
8.0	.1377	.1137	.0906	.0688	.0492	.0322	.0184	.0083	.0021	.0000
10.0	.1709	.1411	.1124	.0854	.0610	.0400	.0229	.0103	.0026	.0000
12.0	.2031	.1678	.1336	.1016	.0726	.0475	.0272	.0122	.0031	.0000
15.0	.2497	.2063	.1643	.1248	.0892	.0584	.0335	.0151	.0038	.0000
20.0	.3210	.2653	.2112	.1605	.1147	.0751	.0430	.0194	.0049	.0000
25.0	.3826	.3161	.2517	.1913	.1367	.0895	.0513	.0231	.0058	.0000
30.0	.4325	.3574	.2846	.2162	.1545	.1012	.0579	.0261	.0066	.0000
35.0	.4693	.3879	.3088	.2346	.1676	.1098	.0629	.0283	.0071	.0000
40.0	.4918	.4064	.3236	.2459	.1757	.1151	.0659	.0297	.0075	.0000
45.0	.4994	.4127	.3286	.2497	.1784	.1168	.0669	.0301	.0076	.0000
50.0	.4933	.4064	.3236	.2459	.1757	.1151	.0659	.0297	.0075	.0000
55.0	.4770	.3890	.3088	.2346	.1676	.1098	.0629	.0283	.0071	.0000
60.0	.4525	.3640	.2856	.2162	.1545	.1012	.0579	.0261	.0066	.0000
65.0	.4212	.3333	.2574	.1922	.1367	.0895	.0513	.0231	.0058	.0000
70.0	.3845	.2985	.2260	.1654	.1154	.0751	.0430	.0194	.0049	.0000
75.0	.3439	.2612	.1931	.1376	.0934	.0591	.0335	.0151	.0038	.0000
80.0	.3006	.2226	.1599	.1103	.0720	.0435	.0234	.0103	.0026	.0000
85.0	.2562	.1841	.1278	.0845	.0524	.0296	.0146	.0057	.0013	.0000

TABLE V.- CONTINUED

(a) C_N. Continued.

$\phi_1 = 0^0$; $\phi_2 = 360^0$; $\beta = 5^0$

α, deg \ θ_c, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.0375	.0344	.0340	.0336	.0323	.0306	.0284	.0260	.0232	.0203
2.0	.0762	.0687	.0680	.0671	.0646	.0611	.0569	.0519	.0465	.0406
4.0	.1609	.1380	.1358	.1340	.1289	.1220	.1134	.1036	.0927	.0810
6.0	.2609	.2106	.2028	.2001	.1925	.1822	.1695	.1547	.1385	.1211
8.0	.3795	.2895	.2704	.2653	.2552	.2415	.2247	.2052	.1836	.1605
10.0	.5182	.3765	.3411	.3295	.3167	.2997	.2788	.2546	.2278	.1992
12.0	.6772	.4721	.4159	.3947	.3766	.3564	.3316	.3027	.2709	.2369
15.0	.9528	.6321	.5372	.4967	.4630	.4382	.4076	.3722	.3330	.2912
20.0	1.5045	.9401	.7624	.6797	.6037	.5633	.5240	.4784	.4280	.3743
25.0	2.1577	1.2926	1.0126	.8771	.7457	.6768	.6245	.5702	.5101	.4461
30.0	2.8929	1.6795	1.2807	1.0839	.8878	.7838	.7099	.6446	.5767	.5043
35.0	3.6880	2.0891	1.5590	1.2945	1.0266	.8834	.7843	.7024	.6258	.5472
40.0	4.5187	2.5090	1.8391	1.5025	1.1585	.9738	.8478	.7472	.6581	.5735
45.0	5.3599	2.9267	2.1126	1.7019	1.2798	1.0526	.8993	.7797	.6773	.5843
50.0	6.1860	3.3293	2.3713	1.8865	1.3867	1.1177	.9377	.7997	.6846	.5829
55.0	6.9719	3.7048	2.6072	2.0509	1.4763	1.1674	.9621	.8072	.6804	.5712
60.0	7.6939	4.0416	2.8133	2.1900	1.5457	1.2001	.9721	.8022	.6654	.5501
65.0	8.3298	4.3295	2.9832	2.2996	1.5930	1.2149	.9673	.7849	.6404	.5207
70.0	8.8605	4.5599	3.1119	2.3764	1.6166	1.2115	.9481	.7562	.6064	.4843
75.0	9.2697	4.7257	3.1954	2.4181	1.6160	1.1899	.9150	.7169	.5644	.4422
80.0	9.5451	4.8219	3.2312	2.4235	1.5911	1.1509	.8690	.6682	.5158	.3957
85.0	9.6783	4.8455	3.2182	2.3923	1.5427	1.0956	.8117	.6118	.4622	.3464

α, deg \ θ_c, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0	90.0
1.0	.0173	.0143	.0114	.0087	.0062	.0041	.0023	.0010	.0003	.0000
2.0	.0346	.0286	.0228	.0173	.0124	.0081	.0046	.0021	.0005	.0000
4.0	.0691	.0571	.0454	.0345	.0247	.0162	.0093	.0042	.0010	.0000
6.0	.1032	.0853	.0679	.0516	.0369	.0241	.0138	.0062	.0016	.0000
8.0	.1368	.1130	.0900	.0684	.0489	.0320	.0183	.0082	.0021	.0000
10.0	.1697	.1402	.1117	.0849	.0606	.0397	.0227	.0102	.0026	.0000
12.0	.2018	.1668	.1328	.1009	.0721	.0472	.0270	.0122	.0031	.0000
15.0	.2481	.2050	.1632	.1241	.0886	.0580	.0332	.0150	.0038	.0000
20.0	.3190	.2636	.2099	.1595	.1139	.0746	.0427	.0192	.0048	.0000
25.0	.3801	.3141	.2501	.1901	.1358	.0889	.0509	.0229	.0058	.0000
30.0	.4297	.3551	.2827	.2149	.1535	.1005	.0576	.0259	.0065	.0000
35.0	.4663	.3853	.3068	.2331	.1666	.1091	.0625	.0281	.0071	.0000
40.0	.4887	.4038	.3215	.2443	.1746	.1143	.0655	.0295	.0074	.0000
45.0	.4962	.4100	.3265	.2481	.1772	.1161	.0665	.0299	.0075	.0000
50.0	.4902	.4038	.3215	.2443	.1746	.1143	.0655	.0295	.0074	.0000
55.0	.4742	.3866	.3068	.2331	.1666	.1091	.0625	.0281	.0071	.0000
60.0	.4499	.3618	.2839	.2149	.1535	.1005	.0576	.0259	.0065	.0000
65.0	.4190	.3314	.2559	.1910	.1358	.0889	.0509	.0229	.0058	.0000
70.0	.3826	.2969	.2248	.1644	.1147	.0746	.0427	.0192	.0048	.0000
75.0	.3423	.2599	.1921	.1369	.0929	.0587	.0332	.0150	.0038	.0000
80.0	.2994	.2216	.1592	.1098	.0716	.0433	.0233	.0102	.0026	.0000
85.0	.2553	.1834	.1272	.0842	.0522	.0295	.0145	.0056	.0013	.0000

$\phi_1 = 0^0$; $\phi_2 = 360^0$; $\beta = 15^0$

α, deg \ θ_c, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.0603	.0405	.0348	.0323	.0304	.0288	.0267	.0244	.0218	.0191
2.0	.1212	.0812	.0696	.0647	.0607	.0575	.0535	.0488	.0437	.0382
4.0	.2461	.1640	.1398	.1296	.1212	.1147	.1067	.0974	.0871	.0762
6.0	.3782	.2497	.2114	.1949	.1811	.1713	.1593	.1455	.1302	.1138
8.0	.5204	.3395	.2848	.2608	.2403	.2271	.2112	.1929	.1726	.1509
10.0	.6748	.4344	.3607	.3277	.2988	.2818	.2621	.2393	.2141	.1873
12.0	.8429	.5351	.4395	.3959	.3567	.3351	.3117	.2846	.2546	.2227
15.0	1.1224	.6979	.5637	.5009	.4427	.4120	.3832	.3499	.3130	.2738
20.0	1.6625	1.0008	.7872	.6842	.5849	.5329	.4926	.4498	.4024	.3519
25.0	2.2890	1.3403	1.0296	.8771	.7260	.6461	.5886	.5360	.4796	.4194
30.0	2.9879	1.7090	1.2863	1.0763	.8798	.7521	.6784	.6068	.5422	.4742
35.0	3.7403	2.0974	1.5511	1.2775	1.0390	.8698	.7473	.6642	.5887	.5145
40.0	4.5247	2.4945	1.8166	1.4754	1.1257	.9377	.8100	.7092	.6213	.5394
45.0	5.3179	2.8888	2.0753	1.6644	1.2416	1.0140	.8608	.7422	.6415	.5510
50.0	6.0963	3.2685	2.3196	1.8392	1.3435	1.0769	.8987	.7629	.6501	.5514
55.0	6.8365	3.6223	2.5422	1.9945	1.4288	1.1247	.9231	.7714	.6477	.5418
60.0	7.5161	3.9396	2.7366	2.1260	1.4948	1.1564	.9335	.7677	.6346	.5231
65.0	8.1147	4.2108	2.8988	2.2295	1.5399	1.1711	.9299	.7524	.6122	.4964
70.0	8.6141	4.4278	3.0182	2.3021	1.5625	1.1684	.9123	.7261	.5809	.4629
75.0	8.9993	4.5839	3.0969	2.3416	1.5623	1.1485	.8816	.6896	.5419	.4238
80.0	9.2584	4.6745	3.1307	2.3468	1.5391	1.1120	.8387	.6442	.4966	.3805
85.0	9.3838	4.6968	3.1186	2.3176	1.4937	1.0602	.7850	.5913	.4464	.3343

α, deg \ θ_c, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0	90.0
1.0	.0163	.0135	.0107	.0081	.0058	.0038	.0022	.0010	.0002	.0000
2.0	.0325	.0269	.0214	.0163	.0116	.0076	.0044	.0020	.0005	.0000
4.0	.0649	.0537	.0427	.0325	.0232	.0152	.0087	.0039	.0010	.0000
6.0	.0970	.0801	.0638	.0485	.0346	.0227	.0130	.0058	.0015	.0000
8.0	.1286	.1063	.0846	.0643	.0459	.0301	.0172	.0078	.0020	.0000
10.0	.1596	.1318	.1050	.0798	.0570	.0373	.0214	.0096	.0024	.0000
12.0	.1897	.1568	.1248	.0949	.0678	.0444	.0254	.0114	.0029	.0000
15.0	.2333	.1927	.1535	.1166	.0833	.0546	.0312	.0141	.0035	.0000
20.0	.2999	.2478	.1973	.1499	.1071	.0702	.0402	.0181	.0046	.0000
25.0	.3574	.2953	.2351	.1787	.1277	.0836	.0479	.0216	.0054	.0000
30.0	.4040	.3339	.2658	.2020	.1443	.0945	.0541	.0244	.0061	.0000
35.0	.4384	.3622	.2884	.2192	.1566	.1026	.0587	.0264	.0067	.0000
40.0	.4594	.3796	.3023	.2297	.1641	.1075	.0616	.0277	.0070	.0000
45.0	.4666	.3855	.3070	.2333	.1666	.1091	.0625	.0281	.0071	.0000
50.0	.4621	.3797	.3023	.2297	.1641	.1075	.0616	.0277	.0070	.0000
55.0	.4482	.3643	.2885	.2192	.1566	.1026	.0587	.0264	.0067	.0000
60.0	.4265	.3419	.2675	.2020	.1443	.0945	.0541	.0244	.0061	.0000
65.0	.3983	.3141	.2418	.1800	.1277	.0836	.0479	.0216	.0054	.0000
70.0	.3648	.2824	.2131	.1555	.1082	.0702	.0402	.0181	.0046	.0000
75.0	.3274	.2480	.1829	.1300	.0879	.0554	.0313	.0141	.0035	.0000
80.0	.2874	.2124	.1523	.1048	.0682	.0411	.0229	.0096	.0024	.0000
85.0	.2462	.1767	.1224	.0809	.0500	.0282	.0138	.0053	.0012	.0000

TABLE V. - CONTINUED

(a) C_N. Continued.

$\phi_1 = -90^\circ$; $\phi_2 = 90^\circ$; $\beta = 0^\circ$

α, deg \ θ_c, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	-.0265	-.0788	-.1323	-.1852	-.2866	-.3789	-.4593	-.5253	-.5749	-.6065
2.0	-.0094	-.0529	-.1037	-.1555	-.2564	-.3496	-.4316	-.4997	-.5517	-.5860
4.0	-.0019	-.0187	-.0580	-.1044	-.2013	-.2943	-.3783	-.4496	-.5059	-.5451
6.0	-.0008	-.0069	-.0278	-.0647	-.1531	-.2437	-.3279	-.4014	-.4611	-.5046
8.0	-.0004	-.0037	-.0133	-.0366	-.1122	-.1978	-.2808	-.3553	-.4174	-.4646
10.0	-.0003	-.0023	-.0079	-.0202	-.0787	-.1570	-.2371	-.3114	-.3752	-.4252
12.0	-.0002	-.0015	-.0053	-.0130	-.0528	-.1214	-.1971	-.2701	-.3346	-.3865
15.0	-.0001	-.0009	-.0032	-.0077	-.0285	-.0792	-.1445	-.2133	-.2771	-.3313
20.0	-.0001	-.0005	-.0016	-.0039	-.0135	-.0346	-.0776	-.1337	-.1921	-.2458
25.0	-.0000	-.0003	-.0009	-.0022	-.0075	-.0183	-.0384	-.0753	-.1226	-.1715
30.0	-.0000	-.0002	-.0005	-.0013	-.0044	-.0106	-.0215	-.0396	-.0769	-.1104
35.0	-.0000	-.0001	-.0003	-.0008	-.0026	-.0064	-.0127	-.0227	-.0385	-.0646
40.0	-.0000	-.0001	-.0002	-.0005	-.0016	-.0038	-.0076	-.0135	-.0222	-.0353
45.0	-.0000	-.0000	-.0001	-.0003	-.0010	-.0023	-.0045	-.0079	-.0129	-.0200
50.0	-.0000	-.0000	-.0001	-.0002	-.0006	-.0013	-.0026	-.0046	-.0074	-.0113
55.0	-.0000	-.0000	-.0000	-.0001	-.0003	-.0007	-.0014	-.0025	-.0040	-.0062
60.0	-.0000	-.0000	-.0000	-.0000	-.0002	-.0004	-.0007	-.0013	-.0021	-.0031
65.0	-.0000	-.0000	-.0000	-.0000	-.0001	-.0002	-.0003	-.0006	-.0010	-.0015
70.0	-.0000	-.0000	-.0000	-.0000	-.0000	-.0001	-.0001	-.0002	-.0004	-.0006
75.0	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000	-.0001	-.0001	-.0002
80.0	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000
85.0	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000

α, deg \ θ_c, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0	90.0
1.0	-.6191	-.6124	-.5866	-.5425	-.4813	-.4050	-.3159	-.2166	-.1102	.0000
2.0	-.6015	-.5977	-.5748	-.5334	-.4747	-.4006	-.3133	-.2154	-.1099	.0000
4.0	-.5660	-.5678	-.5505	-.5144	-.4608	-.3911	-.3075	-.2125	-.1090	.0000
6.0	-.5303	-.5374	-.5254	-.4947	-.4460	-.3808	-.3011	-.2091	-.1073	.0000
8.0	-.4947	-.5066	-.4997	-.4741	-.4304	-.3697	-.2940	-.2053	-.1063	.0000
10.0	-.4592	-.4756	-.4736	-.4529	-.4140	-.3580	-.2863	-.2010	-.1046	.0000
12.0	-.4241	-.4445	-.4470	-.4311	-.3970	-.3455	-.2780	-.1963	-.1027	.0000
15.0	-.3724	-.3981	-.4068	-.3976	-.3704	-.3257	-.2645	-.1884	-.0994	.0000
20.0	-.2904	-.3224	-.3397	-.3405	-.3241	-.2904	-.2397	-.1734	-.0928	.0000
25.0	-.2157	-.2530	-.2743	-.2832	-.2764	-.2530	-.2129	-.1566	-.0851	.0000
30.0	-.1506	-.1860	-.2126	-.2276	-.2288	-.2146	-.1845	-.1383	-.0765	.0000
35.0	-.0970	-.1292	-.1566	-.1753	-.1827	-.1766	-.1557	-.1193	-.0672	.0000
40.0	-.0565	-.0826	-.1079	-.1280	-.1395	-.1399	-.1271	-.0999	-.0576	.0000
45.0	-.0305	-.0474	-.0679	-.0869	-.1006	-.1057	-.0998	-.0810	-.0480	.0000
50.0	-.0168	-.0248	-.0379	-.0535	-.0671	-.0751	-.0745	-.0629	-.0385	.0000
55.0	-.0090	-.0130	-.0189	-.0287	-.0400	-.0490	-.0520	-.0463	-.0296	.0000
60.0	-.0046	-.0065	-.0092	-.0132	-.0203	-.0291	-.0330	-.0317	-.0215	.0000
65.0	-.0021	-.0030	-.0041	-.0058	-.0084	-.0132	-.0181	-.0195	-.0144	.0000
70.0	-.0008	-.0012	-.0016	-.0022	-.0031	-.0046	-.0076	-.0101	-.0085	.0000
75.0	-.0003	-.0004	-.0005	-.0007	-.0009	-.0013	-.0020	-.0037	-.0041	.0000
80.0	-.0000	-.0001	-.0001	-.0001	-.0002	-.0002	-.0004	-.0006	-.0013	.0000
85.0	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000	-.0001	.0000

$\phi_1 = -90^\circ$; $\phi_2 = 90^\circ$; $\beta = 2^\circ$

α, deg \ θ_c, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	-.0303	-.0846	-.1360	-.1879	-.2880	-.3797	-.4597	-.5254	-.5747	-.6061
2.0	-.0211	-.0587	-.1075	-.1582	-.2579	-.3505	-.4320	-.4997	-.5515	-.5856
4.0	-.0078	-.0246	-.0618	-.1071	-.2028	-.2952	-.3787	-.4498	-.5058	-.5448
6.0	-.0035	-.0116	-.0317	-.0675	-.1548	-.2444	-.3284	-.4016	-.4610	-.5043
8.0	-.0022	-.0067	-.0169	-.0394	-.1139	-.1988	-.2814	-.3555	-.4174	-.4643
10.0	-.0014	-.0043	-.0106	-.0251	-.0804	-.1580	-.2377	-.3117	-.3753	-.4251
12.0	-.0010	-.0030	-.0072	-.0153	-.0546	-.1225	-.1978	-.2705	-.3347	-.3867
15.0	-.0006	-.0019	-.0045	-.0093	-.0302	-.0794	-.1452	-.2137	-.2773	-.3313
20.0	-.0003	-.0010	-.0023	-.0048	-.0147	-.0359	-.0784	-.1342	-.1923	-.2459
25.0	-.0002	-.0006	-.0014	-.0027	-.0083	-.0193	-.0393	-.0758	-.1230	-.1716
30.0	-.0001	-.0004	-.0008	-.0017	-.0049	-.0113	-.0222	-.0403	-.0713	-.1106
35.0	-.0001	-.0002	-.0005	-.0010	-.0030	-.0068	-.0132	-.0233	-.0389	-.0648
40.0	-.0001	-.0002	-.0003	-.0007	-.0017	-.0042	-.0080	-.0139	-.0226	-.0356
45.0	-.0000	-.0001	-.0002	-.0004	-.0011	-.0025	-.0048	-.0082	-.0132	-.0203
50.0	-.0000	-.0001	-.0001	-.0003	-.0007	-.0015	-.0028	-.0048	-.0076	-.0115
55.0	-.0000	-.0000	-.0001	-.0002	-.0004	-.0009	-.0016	-.0027	-.0042	-.0063
60.0	-.0000	-.0000	-.0001	-.0001	-.0002	-.0005	-.0008	-.0014	-.0022	-.0033
65.0	-.0000	-.0000	-.0000	-.0001	-.0001	-.0002	-.0004	-.0007	-.0010	-.0015
70.0	-.0000	-.0000	-.0000	-.0000	-.0001	-.0001	-.0002	-.0003	-.0004	-.0006
75.0	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000	-.0001	-.0001	-.0001	-.0002
80.0	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000
85.0	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000

α, deg \ θ_c, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0	90.0
1.0	-.6186	-.6119	-.5860	-.5419	-.4808	-.4045	-.3155	-.2164	-.1101	.0000
2.0	-.6010	-.5972	-.5742	-.5328	-.4742	-.4001	-.3129	-.2151	-.1098	.0000
4.0	-.5656	-.5673	-.5499	-.5139	-.4603	-.3907	-.3071	-.2122	-.1088	.0000
6.0	-.5300	-.5369	-.5249	-.4941	-.4455	-.3804	-.3007	-.2089	-.1076	.0000
8.0	-.4943	-.5062	-.4993	-.4736	-.4299	-.3693	-.2936	-.2050	-.1062	.0000
10.0	-.4589	-.4752	-.4731	-.4524	-.4136	-.3575	-.2859	-.2008	-.1045	.0000
12.0	-.4238	-.4442	-.4466	-.4307	-.3966	-.3451	-.2776	-.1960	-.1026	.0000
15.0	-.3722	-.3978	-.4064	-.3972	-.3700	-.3254	-.2642	-.1881	-.0993	.0000
20.0	-.2903	-.3222	-.3394	-.3401	-.3237	-.2900	-.2395	-.1732	-.0927	.0000
25.0	-.2157	-.2509	-.2741	-.2830	-.2761	-.2527	-.2126	-.1564	-.0850	.0000
30.0	-.1506	-.1859	-.2125	-.2274	-.2285	-.2144	-.1843	-.1382	-.0764	.0000
35.0	-.0971	-.1293	-.1565	-.1752	-.1825	-.1764	-.1555	-.1191	-.0671	.0000
40.0	-.0567	-.0827	-.1078	-.1279	-.1394	-.1397	-.1270	-.0998	-.0576	.0000
45.0	-.0307	-.0476	-.0679	-.0869	-.1005	-.1056	-.0997	-.0809	-.0479	.0000
50.0	-.0170	-.0250	-.0380	-.0535	-.0671	-.0750	-.0744	-.0628	-.0385	.0000
55.0	-.0092	-.0132	-.0190	-.0287	-.0400	-.0489	-.0519	-.0463	-.0296	.0000
60.0	-.0047	-.0066	-.0093	-.0133	-.0203	-.0291	-.0330	-.0317	-.0215	.0000
65.0	-.0022	-.0031	-.0042	-.0058	-.0084	-.0132	-.0180	-.0195	-.0144	.0000
70.0	-.0009	-.0012	-.0017	-.0023	-.0031	-.0046	-.0076	-.0101	-.0085	.0000
75.0	-.0003	-.0004	-.0005	-.0007	-.0009	-.0013	-.0021	-.0037	-.0041	.0000
80.0	-.0001	-.0001	-.0001	-.0001	-.0002	-.0003	-.0004	-.0006	-.0013	.0000
85.0	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000	-.0001	.0000

TABLE V. - CONTINUED

(a) C_N. Continued.

$\theta_1 = -90^\circ$; $\theta_2 = 90^\circ$; $\beta = 5^\circ$

θ_c, deg / α, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	-.0915	-.1148	-.1554	-.2016	-.2956	-.3838	-.4615	-.5255	-.5736	-.6041
2.0	-.0673	-.0890	-.1270	-.1721	-.2657	-.3548	-.4340	-.5001	-.5506	-.5838
4.0	-.0375	-.0533	-.0816	-.1214	-.2110	-.2999	-.3811	-.4504	-.5051	-.5432
6.0	-.0224	-.0331	-.0517	-.0870	-.1632	-.2496	-.3311	-.4026	-.4607	-.5030
8.0	-.0146	-.0217	-.0343	-.0541	-.1226	-.2041	-.2843	-.3568	-.4174	-.4633
10.0	-.0099	-.0150	-.0238	-.0372	-.0894	-.1636	-.2410	-.3133	-.3755	-.4243
12.0	-.0072	-.0109	-.0173	-.0268	-.0636	-.1283	-.2013	-.2722	-.3352	-.3861
15.0	-.0047	-.0072	-.0114	-.0176	-.0393	-.0855	-.1491	-.2158	-.2781	-.3310
20.0	-.0027	-.0040	-.0063	-.0097	-.0210	-.0422	-.0826	-.1369	-.1937	-.2462
25.0	-.0017	-.0025	-.0039	-.0059	-.0124	-.0240	-.0438	-.0789	-.1248	-.1724
30.0	-.0012	-.0017	-.0025	-.0038	-.0078	-.0147	-.0258	-.0435	-.0735	-.1119
35.0	-.0008	-.0011	-.0017	-.0025	-.0050	-.0093	-.0159	-.0260	-.0413	-.0663
40.0	-.0006	-.0008	-.0012	-.0017	-.0033	-.0059	-.0100	-.0159	-.0246	-.0373
45.0	-.0005	-.0006	-.0008	-.0012	-.0022	-.0038	-.0062	-.0098	-.0148	-.0218
50.0	-.0004	-.0004	-.0006	-.0008	-.0014	-.0024	-.0039	-.0059	-.0088	-.0127
55.0	-.0003	-.0003	-.0004	-.0005	-.0009	-.0015	-.0023	-.0035	-.0051	-.0072
60.0	-.0002	-.0002	-.0003	-.0004	-.0006	-.0009	-.0014	-.0020	-.0028	-.0039
65.0	-.0002	-.0002	-.0002	-.0002	-.0004	-.0005	-.0008	-.0010	-.0014	-.0019
70.0	-.0001	-.0001	-.0001	-.0002	-.0002	-.0003	-.0004	-.0005	-.0007	-.0009
75.0	-.0001	-.0001	-.0001	-.0001	-.0001	-.0001	-.0002	-.0002	-.0003	-.0003
80.0	-.0001	-.0001	-.0001	-.0001	-.0001	-.0001	-.0001	-.0001	-.0001	-.0001
85.0	-.0001	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000

θ_c, deg / α, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0	90.0
1.0	-.6160	-.6089	-.5829	-.5388	-.4779	-.4021	-.3135	-.2150	-.1094	.0000
2.0	-.5985	-.5943	-.5712	-.5298	-.4714	-.3977	-.3109	-.2138	-.1091	.0000
4.0	-.5633	-.5646	-.5470	-.5110	-.4576	-.3883	-.3052	-.2109	-.1081	.0000
6.0	-.5279	-.5344	-.5222	-.4914	-.4429	-.3781	-.2980	-.2076	-.1070	.0000
8.0	-.4925	-.5039	-.4967	-.4710	-.4274	-.3671	-.2918	-.2038	-.1055	.0000
10.0	-.4573	-.4731	-.4707	-.4499	-.4111	-.3554	-.2841	-.1995	-.1038	.0000
12.0	-.4225	-.4423	-.4444	-.4283	-.3943	-.3430	-.2759	-.1948	-.1019	.0000
15.0	-.3712	-.3962	-.4044	-.3950	-.3679	-.3234	-.2626	-.1870	-.0986	.0000
20.0	-.2898	-.3211	-.3378	-.3383	-.3219	-.2883	-.2380	-.1721	-.0921	.0000
25.0	-.2157	-.2502	-.2729	-.2815	-.2746	-.2512	-.2113	-.1554	-.0844	.0000
30.0	-.1510	-.1857	-.2118	-.2264	-.2273	-.2131	-.1832	-.1373	-.0759	.0000
35.0	-.0978	-.1294	-.1561	-.1745	-.1815	-.1753	-.1545	-.1184	-.0667	.0000
40.0	-.0577	-.0831	-.1078	-.1274	-.1387	-.1389	-.1262	-.0992	-.0572	.0000
45.0	-.0319	-.0482	-.0681	-.0867	-.1001	-.1050	-.0991	-.0804	-.0476	.0000
50.0	-.0180	-.0268	-.0384	-.0535	-.0668	-.0747	-.0740	-.0625	-.0382	.0000
55.0	-.0100	-.0139	-.0195	-.0289	-.0400	-.0487	-.0517	-.0460	-.0294	.0000
60.0	-.0053	-.0072	-.0097	-.0136	-.0204	-.0280	-.0328	-.0315	-.0213	.0000
65.0	-.0026	-.0034	-.0046	-.0061	-.0086	-.0132	-.0180	-.0194	-.0143	.0000
70.0	-.0011	-.0015	-.0019	-.0025	-.0033	-.0047	-.0076	-.0100	-.0085	.0000
75.0	-.0004	-.0005	-.0007	-.0008	-.0010	-.0014	-.0021	-.0037	-.0041	.0000
80.0	-.0001	-.0001	-.0002	-.0002	-.0002	-.0003	-.0004	-.0006	-.0013	.0000
85.0	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000	-.0001	.0000

$\theta_1 = -90^\circ$; $\theta_2 = 90^\circ$; $\beta = 15^\circ$

θ_c, deg / α, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	-.4541	-.3378	-.3187	-.3252	-.3664	-.4225	-.4786	-.5271	-.5636	-.5857
2.0	-.4035	-.3030	-.2883	-.2943	-.3383	-.3952	-.4529	-.5031	-.5420	-.5666
4.0	-.3189	-.2436	-.2353	-.2452	-.2868	-.3436	-.4030	-.4564	-.4992	-.5265
6.0	-.2593	-.1963	-.1920	-.2024	-.2417	-.2963	-.3560	-.4115	-.4574	-.4907
8.0	-.2028	-.1589	-.1570	-.1671	-.2030	-.2535	-.3121	-.3684	-.4167	-.4533
10.0	-.1639	-.1296	-.1290	-.1383	-.1703	-.2154	-.2713	-.3275	-.3773	-.4166
12.0	-.1339	-.1065	-.1067	-.1150	-.1430	-.1822	-.2340	-.2889	-.3394	-.3809
15.0	-.1010	-.0808	-.0813	-.0881	-.1106	-.1418	-.1849	-.2359	-.2858	-.3290
20.0	-.0667	-.0533	-.0537	-.0583	-.0736	-.0947	-.1224	-.1617	-.2065	-.2493
25.0	-.0487	-.0370	-.0371	-.0401	-.0504	-.0646	-.0828	-.1072	-.1417	-.1799
30.0	-.0343	-.0268	-.0266	-.0286	-.0354	-.0450	-.0571	-.0723	-.0934	-.1229
35.0	-.0262	-.0201	-.0197	-.0209	-.0254	-.0319	-.0397	-.0498	-.0623	-.0801
40.0	-.0207	-.0155	-.0149	-.0156	-.0185	-.0228	-.0281	-.0345	-.0423	-.0523
45.0	-.0168	-.0123	-.0115	-.0118	-.0137	-.0164	-.0199	-.0240	-.0288	-.0347
50.0	-.0139	-.0099	-.0091	-.0091	-.0101	-.0119	-.0140	-.0166	-.0195	-.0229
55.0	-.0118	-.0081	-.0072	-.0071	-.0076	-.0086	-.0098	-.0113	-.0130	-.0150
60.0	-.0101	-.0067	-.0058	-.0055	-.0056	-.0061	-.0068	-.0076	-.0085	-.0095
65.0	-.0089	-.0056	-.0047	-.0043	-.0042	-.0044	-.0047	-.0050	-.0055	-.0059
70.0	-.0079	-.0048	-.0038	-.0034	-.0031	-.0031	-.0031	-.0032	-.0034	-.0035
75.0	-.0071	-.0041	-.0032	-.0027	-.0023	-.0021	-.0020	-.0020	-.0020	-.0019
80.0	-.0065	-.0036	-.0026	-.0021	-.0017	-.0014	-.0013	-.0012	-.0011	-.0010
85.0	-.0060	-.0031	-.0022	-.0017	-.0012	-.0009	-.0008	-.0006	-.0005	-.0005

θ_c, deg / α, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0	90.0
1.0	-.5918	-.5813	-.5539	-.5102	-.4514	-.3791	-.2952	-.2023	-.1029	.0000
2.0	-.5754	-.5675	-.5428	-.5017	-.4453	-.3750	-.2928	-.2011	-.1025	.0000
4.0	-.5423	-.5396	-.5202	-.4841	-.4325	-.3661	-.2874	-.1984	-.1017	.0000
6.0	-.5090	-.5113	-.4988	-.4656	-.4185	-.3565	-.2814	-.1953	-.1006	.0000
8.0	-.4758	-.4825	-.4728	-.4465	-.4039	-.3462	-.2748	-.1917	-.0992	.0000
10.0	-.4427	-.4536	-.4484	-.4267	-.3887	-.3352	-.2676	-.1877	-.0976	.0000
12.0	-.4099	-.4246	-.4236	-.4063	-.3728	-.3236	-.2599	-.1833	-.0958	.0000
15.0	-.3617	-.3813	-.3861	-.3751	-.3480	-.3051	-.2473	-.1759	-.0927	.0000
20.0	-.2852	-.3107	-.3234	-.3218	-.3048	-.2721	-.2242	-.1619	-.0866	.0000
25.0	-.2155	-.2441	-.2625	-.2684	-.2602	-.2372	-.1991	-.1462	-.0794	.0000
30.0	-.1547	-.1834	-.2049	-.2165	-.2158	-.2015	-.1727	-.1292	-.0714	.0000
35.0	-.1047	-.1304	-.1527	-.1677	-.1728	-.1659	-.1457	-.1114	-.0627	.0000
40.0	-.0670	-.0869	-.1072	-.1235	-.1325	-.1317	-.1191	-.0934	-.0538	.0000
45.0	-.0424	-.0541	-.0699	-.0852	-.0962	-.0998	-.0936	-.0757	-.0448	.0000
50.0	-.0272	-.0329	-.0419	-.0540	-.0650	-.0713	-.0700	-.0589	-.0360	.0000
55.0	-.0172	-.0201	-.0241	-.0309	-.0397	-.0469	-.0490	-.0434	-.0276	.0000
60.0	-.0107	-.0120	-.0138	-.0164	-.0213	-.0274	-.0313	-.0297	-.0201	.0000
65.0	-.0064	-.0069	-.0076	-.0086	-.0101	-.0135	-.0174	-.0183	-.0134	.0000
70.0	-.0036	-.0038	-.0040	-.0042	-.0047	-.0055	-.0076	-.0095	-.0080	.0000
75.0	-.0019	-.0019	-.0019	-.0019	-.0019	-.0020	-.0024	-.0036	-.0039	.0000
80.0	-.0009	-.0009	-.0008	-.0007	-.0007	-.0006	-.0006	-.0007	-.0012	.0000
85.0	-.0004	-.0003	-.0003	-.0002	-.0002	-.0001	-.0001	-.0001	-.0001	.0000

TABLE V.- CONTINUED

(a) C_N. Continued.

$\phi_1 = 90^0$; $\phi_2 = 270^0$; $\beta = 0^0$

θ_c, deg / α, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.0962	.1481	.2010	.2529	.3517	.4405	.5167	.5777	.6217	.6474
2.0	.1487	.1914	.2409	.2908	.3866	.4728	.5462	.6043	.6453	.6678
4.0	.2985	.2950	.3316	.3744	.4610	.5401	.6069	.6584	.6927	.7085
6.0	.4744	.4209	.4366	.4680	.5411	.6108	.6695	.7133	.7401	.7486
8.0	.7054	.5684	.5553	.5713	.6266	.6846	.7336	.7687	.7876	.7881
10.0	.9803	.7370	.6871	.6837	.7169	.7610	.7992	.8245	.8342	.8266
12.0	1.2978	.9256	.8314	.8046	.8118	.8397	.8653	.8802	.8805	.8642
15.0	1.8507	1.2443	1.0698	1.0008	.9615	.9613	.9659	.9633	.9481	.9181
20.0	2.9604	1.8618	1.5187	1.3618	1.2265	1.1698	1.1335	1.0979	1.0547	1.0003
25.0	4.2759	2.5707	2.0203	1.7557	1.5041	1.3804	1.2969	1.2243	1.1507	1.0705
30.0	5.7571	3.3495	2.5593	2.1704	1.7857	1.5865	1.4509	1.3387	1.2331	1.1268
35.0	7.3590	4.1744	3.1193	2.5934	2.0627	1.7819	1.5910	1.4375	1.2996	1.1674
40.0	9.0329	5.0204	3.6833	3.0119	2.3268	1.9606	1.7127	1.5177	1.3490	1.1911
45.0	10.7280	5.8619	4.2342	3.4131	2.5700	2.1173	1.8129	1.5770	1.3768	1.1971
50.0	12.3928	6.6732	4.7552	3.7848	2.7848	2.2471	1.8878	1.6135	1.3853	1.1853
55.0	13.9767	7.4297	5.2305	4.1158	2.9647	2.3462	1.9356	1.6260	1.3732	1.1560
60.0	15.4315	8.1084	5.6457	4.3959	3.1043	2.4115	1.9547	1.6143	1.3407	1.1102
65.0	16.7131	8.6887	5.9881	4.6167	3.1993	2.4410	1.9445	1.5787	1.2890	1.0491
70.0	17.7825	9.1530	6.2474	4.7715	3.2469	2.4339	1.9057	1.5203	1.2196	.9747
75.0	18.6073	9.4871	6.4156	4.8555	3.2455	2.3903	1.8384	1.4407	1.1345	.8893
80.0	19.1623	9.6809	6.4877	4.8663	3.1952	2.3116	1.7457	1.3425	1.0364	.7953
85.0	19.4307	9.7285	6.4614	4.8034	3.0976	2.2001	1.6302	1.2287	.9283	.6958

θ_c, deg / α, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0	90.0
1.0	.6540	.6413	.6096	.5599	.4938	.4132	.3206	.2187	.1108	-.0000
2.0	.6712	.6554	.6207	.5682	.4996	.4169	.3226	.2196	.1109	-.0000
4.0	.7052	.6828	.6421	.5840	.5105	.4237	.3262	.2209	.1111	-.0000
6.0	.7303	.7092	.6622	.5986	.5203	.4295	.3289	.2217	.1109	-.0000
8.0	.7703	.7344	.6811	.6119	.5288	.4342	.3309	.2219	.1105	-.0000
10.0	.8012	.7582	.6986	.6239	.5362	.4380	.3321	.2216	.1098	-.0000
12.0	.8308	.7806	.7146	.6345	.5423	.4407	.3325	.2208	.1089	-.0000
15.0	.8724	.8113	.7357	.6476	.5490	.4427	.3315	.2185	.1070	-.0000
20.0	.9332	.8536	.7626	.6619	.5537	.4408	.3259	.2122	.1026	-.0000
25.0	.9817	.8840	.7783	.6663	.5500	.4322	.3155	.2028	.0967	-.0000
30.0	1.0166	.9016	.7825	.6606	.5381	.4172	.3006	.1905	.0896	-.0000
35.0	1.0367	.9058	.7749	.6452	.5183	.3964	.2815	.1759	.0815	-.0000
40.0	1.0413	.8964	.7558	.6204	.4913	.3703	.2591	.1593	.0726	-.0000
45.0	1.0305	.8738	.7259	.5869	.4578	.3397	.2339	.1413	.0632	-.0000
50.0	1.0045	.8386	.6859	.5459	.4189	.3055	.2064	.1223	.0535	-.0000
55.0	.9641	.7920	.6372	.4985	.3757	.2688	.1779	.1030	.0439	-.0000
60.0	.9105	.7353	.5811	.4462	.3296	.2307	.1490	.0839	.0346	-.0000
65.0	.8453	.6702	.5195	.3906	.2820	.1924	.1207	.0657	.0260	-.0000
70.0	.7706	.5988	.4541	.3334	.2343	.1550	.0937	.0488	.0183	-.0000
75.0	.6886	.5232	.3870	.2762	.1879	.1196	.0690	.0339	.0117	-.0000
80.0	.6018	.4456	.3202	.2210	.1444	.0874	.0473	.0213	.0065	-.0000
85.0	.5128	.3686	.2557	.1692	.1049	.0593	.0292	.0114	.0027	-.0000

$\phi_1 = 90^0$; $\phi_2 = 270^0$; $\beta = 2^0$

θ_c, deg / α, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.1079	.1538	.2046	.2555	.3530	.4412	.5169	.5776	.6214	.6470
2.0	.1603	.1970	.2444	.2933	.3879	.4735	.5464	.6043	.6450	.6674
4.0	.3000	.3005	.3351	.3768	.4622	.5407	.6071	.6583	.6923	.7080
6.0	.4856	.4262	.4399	.4703	.5423	.6113	.6696	.7131	.7397	.7480
8.0	.7163	.5736	.5585	.5734	.6276	.6850	.7336	.7685	.7869	.7875
10.0	.9909	.7419	.6901	.6857	.7179	.7613	.7989	.8241	.8337	.8260
12.0	1.3071	.9304	.8343	.8065	.8126	.8399	.8652	.8798	.8799	.8635
15.0	1.8802	1.2487	1.0723	1.0024	.9621	.9613	.9656	.9628	.9475	.9174
20.0	2.9626	1.8654	1.5207	1.3630	1.2269	1.1697	1.1330	1.0972	1.0539	.9994
25.0	4.2825	2.5735	2.0217	1.7564	1.5041	1.3799	1.2962	1.2235	1.1498	1.0696
30.0	5.7619	3.3512	2.5600	2.1706	1.7853	1.5858	1.4500	1.3377	1.2321	1.1258
35.0	7.3618	4.1752	3.1193	2.5931	2.0620	1.7809	1.5900	1.4364	1.2985	1.1664
40.0	9.0337	5.0202	3.6826	3.0111	2.3258	1.9595	1.7117	1.5166	1.3468	1.1900
45.0	10.7268	5.8606	4.2329	3.4118	2.5687	2.1160	1.8115	1.5757	1.3757	1.1960
50.0	12.3895	6.6709	4.7532	3.7831	2.7832	2.2457	1.8864	1.6122	1.3841	1.1842
55.0	13.9715	7.4265	5.2280	4.1136	2.9629	2.3446	1.9341	1.6247	1.3720	1.1550
60.0	15.4245	8.1044	5.6427	4.3934	3.1024	2.4098	1.9532	1.6130	1.3396	1.1092
65.0	16.7046	8.6840	5.9847	4.6140	3.1972	2.4393	1.9430	1.5775	1.2879	1.0482
70.0	17.7727	9.1477	6.2436	4.7685	3.2447	2.4322	1.9039	1.5191	1.2186	.9739
75.0	18.5964	9.4814	6.4117	4.8525	3.2433	2.3886	1.8371	1.4396	1.1336	.8885
80.0	19.1507	9.6749	6.4836	4.8632	3.1931	2.3100	1.7445	1.3416	1.0357	.7947
85.0	19.4188	9.7225	6.4574	4.8004	3.0957	2.1987	1.6291	1.2279	.9277	.6953

θ_c, deg / α, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0	90.0
1.0	.6535	.6407	.6090	.5593	.4932	.4127	.3202	.2185	.1106	-.0000
2.0	.6707	.6547	.6200	.5676	.4991	.4164	.3222	.2193	.1108	-.0000
4.0	.7046	.6822	.6414	.5834	.5099	.4232	.3258	.2206	.1109	-.0000
6.0	.7376	.7085	.6615	.5980	.5197	.4290	.3285	.2214	.1108	-.0000
8.0	.7696	.7337	.6804	.6113	.5282	.4337	.3305	.2217	.1104	-.0000
10.0	.8005	.7575	.6979	.6232	.5356	.4375	.3317	.2214	.1097	-.0000
12.0	.8301	.7799	.7139	.6338	.5417	.4401	.3321	.2205	.1088	-.0000
15.0	.8716	.8104	.7350	.6469	.5484	.4422	.3311	.2183	.1068	-.0000
20.0	.9323	.8528	.7618	.6611	.5531	.4402	.3255	.2119	.1024	-.0000
25.0	.9809	.8831	.7775	.6655	.5494	.4317	.3151	.2025	.0966	-.0000
30.0	1.0156	.9007	.7816	.6599	.5375	.4168	.3002	.1903	.0895	-.0000
35.0	1.0356	.9048	.7741	.6445	.5177	.3959	.2812	.1757	.0814	-.0000
40.0	1.0403	.8955	.7550	.6197	.4907	.3698	.2589	.1591	.0725	-.0000
45.0	1.0295	.8729	.7251	.5863	.4573	.3393	.2335	.1411	.0631	-.0000
50.0	1.0035	.8378	.6852	.5453	.4184	.3051	.2062	.1222	.0534	-.0000
55.0	.9632	.7912	.6365	.4980	.3753	.2685	.1777	.1029	.0438	-.0000
60.0	.9096	.7346	.5805	.4458	.3293	.2305	.1488	.0838	.0346	-.0000
65.0	.8446	.6696	.5190	.3902	.2817	.1922	.1205	.0656	.0260	-.0000
70.0	.7700	.5982	.4537	.3330	.2340	.1548	.0936	.0488	.0183	-.0000
75.0	.6880	.5227	.3867	.2760	.1877	.1195	.0690	.0338	.0117	-.0000
80.0	.6013	.4453	.3199	.2208	.1442	.0873	.0472	.0212	.0065	-.0000
85.0	.5125	.3683	.2555	.1691	.1048	.0592	.0291	.0114	.0027	-.0000

TABLE V. - CONTINUED

(a) C_N. Continued.

$\phi_1 = 90^\circ$; $\phi_2 = 270^\circ$; $\beta = 5^\circ$

α, deg \ θ_c, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.1666	.1835	.2235	.2688	.3602	.4450	.5184	.5775	.6201	.6448
2.0	.2197	.2265	.2631	.3063	.3949	.4770	.5477	.6039	.6435	.6650
4.0	.3594	.3293	.3532	.3893	.4687	.5439	.6080	.6576	.6905	.7053
6.0	.5442	.4542	.4573	.4822	.5482	.6140	.6701	.7121	.7376	.7452
8.0	.7735	.6007	.5761	.5847	.6330	.6872	.7337	.7671	.7845	.7843
10.0	1.0464	.7679	.7059	.6962	.7227	.7630	.7986	.8224	.8310	.8226
12.0	1.3616	.9552	.8492	.8162	.8169	.8411	.8644	.8777	.8769	.8599
15.0	1.9102	1.2714	1.0857	1.0110	.9654	.9618	.9642	.9601	.9440	.9134
20.0	3.0116	1.8843	1.5312	1.3692	1.2285	1.1688	1.1306	1.0938	1.0498	.9949
25.0	4.3171	2.5878	2.0290	1.7601	1.5039	1.3777	1.2927	1.2192	1.1450	1.0647
30.0	5.7870	3.3606	2.5639	2.1717	1.7833	1.5822	1.4456	1.3327	1.2269	1.1205
35.0	7.3767	4.1792	3.1196	2.5915	2.0583	1.7761	1.5846	1.4307	1.2928	1.1608
40.0	9.0380	5.0189	3.6794	3.0068	2.3204	1.9535	1.7055	1.5104	1.3408	1.1843
45.0	10.7202	5.8539	4.2261	3.4049	2.5617	2.1090	1.8047	1.5692	1.3695	1.1903
50.0	12.3723	6.6591	4.7431	3.7738	2.7749	2.2379	1.8792	1.6054	1.3779	1.1786
55.0	13.9442	7.4098	5.2148	4.1023	2.9534	2.3362	1.9266	1.6179	1.3658	1.1495
60.0	15.3879	8.0834	5.6269	4.3803	3.0920	2.4010	1.9455	1.6063	1.3336	1.1040
65.0	16.6598	8.6593	5.9667	4.5994	3.1863	2.4303	1.9354	1.5709	1.2823	1.0434
70.0	17.7211	9.1200	6.2240	4.7530	3.2334	2.4232	1.8965	1.5129	1.2134	.9696
75.0	18.5396	9.4515	6.3909	4.8364	3.2321	2.3800	1.8301	1.4340	1.1290	.8848
80.0	19.0903	9.6439	6.4625	4.8470	3.1822	2.3018	1.7382	1.3365	1.0317	.7915
85.0	19.3567	9.6911	6.4364	4.7846	3.0853	2.1912	1.6235	1.2236	.9244	.6927

α, deg \ θ_c, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0	90.0
1.0	.6506	.6375	.6057	.5561	.4903	.4102	.3182	.2171	.1099	-.0000
2.0	.6678	.6515	.6167	.5644	.4961	.4139	.3202	.2179	.1101	-.0000
4.0	.7014	.6788	.6379	.5801	.5069	.4206	.3237	.2192	.1102	-.0000
6.0	.7343	.7049	.6579	.5945	.5166	.4263	.3265	.2200	.1101	-.0000
8.0	.7661	.7299	.6767	.6077	.5251	.4311	.3284	.2202	.1097	-.0000
10.0	.7968	.7536	.6940	.6196	.5324	.4348	.3296	.2200	.1090	-.0000
12.0	.8261	.7758	.7099	.6301	.5384	.4375	.3300	.2191	.1081	-.0000
15.0	.8674	.8062	.7309	.6431	.5451	.4395	.3290	.2169	.1062	-.0000
20.0	.9277	.8483	.7575	.6573	.5498	.4376	.3235	.2106	.1018	-.0000
25.0	.9759	.8784	.7732	.6617	.5461	.4290	.3132	.2012	.0960	-.0000
30.0	1.0105	.8959	.7773	.6561	.5343	.4142	.2983	.1891	.0890	-.0000
35.0	1.0304	.9000	.7698	.6407	.5147	.3935	.2795	.1746	.0809	-.0000
40.0	1.0350	.8907	.7508	.6161	.4878	.3676	.2571	.1581	.0720	-.0000
45.0	1.0243	.8683	.7211	.5829	.4546	.3372	.2320	.1402	.0627	-.0000
50.0	.9985	.8334	.6814	.5422	.4160	.3033	.2049	.1214	.0531	-.0000
55.0	.9584	.7871	.6331	.4952	.3731	.2669	.1766	.1022	.0436	-.0000
60.0	.9052	.7308	.5775	.4433	.3274	.2291	.1479	.0833	.0344	-.0000
65.0	.8405	.6662	.5163	.3881	.2801	.1911	.1198	.0652	.0258	-.0000
70.0	.7664	.5954	.4514	.3313	.2328	.1539	.0931	.0485	.0182	-.0000
75.0	.6850	.5203	.3848	.2746	.1868	.1188	.0686	.0336	.0116	-.0000
80.0	.5989	.4434	.3185	.2197	.1435	.0869	.0470	.0211	.0064	-.0000
85.0	.5106	.3669	.2545	.1684	.1043	.0590	.0290	.0113	.0027	-.0000

$\phi_1 = 90^\circ$; $\phi_2 = 270^\circ$; $\beta = 15^\circ$

α, deg \ θ_c, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.5748	.4189	.3882	.3899	.4271	.4800	.5321	.5759	.6073	.6239
2.0	.6458	.4655	.4274	.4257	.4597	.5101	.5597	.6008	.6293	.6430
4.0	.8112	.5717	.5150	.5044	.5291	.5729	.6163	.6512	.6735	.6809
6.0	1.0098	.6957	.6147	.5961	.6139	.6389	.6747	.7024	.7178	.7183
8.0	1.2436	.8379	.7267	.6887	.6836	.7077	.7345	.7542	.7619	.7551
10.0	1.5135	.9984	.8505	.7937	.7679	.7790	.7955	.8062	.8056	.7912
12.0	1.8196	1.1768	.9857	.9067	.8564	.8524	.8574	.8582	.8487	.8262
15.0	2.3458	1.4765	1.2087	1.0898	.9961	.9658	.9512	.9357	.9119	.8765
20.0	3.3916	2.0549	1.6281	1.4267	1.2434	1.1604	1.1077	1.0613	1.0113	.9531
25.0	4.6246	2.7175	2.0963	1.7942	1.5023	1.3569	1.2601	1.1793	1.1009	1.0187
30.0	6.0100	3.4448	2.5993	2.1812	1.7650	1.5492	1.4038	1.2859	1.1778	1.0712
35.0	7.5068	4.2149	3.1219	2.5759	2.0235	1.7315	1.5345	1.3781	1.2398	1.1091
40.0	9.0700	5.0045	3.6482	2.9663	2.2700	1.8982	1.6482	1.4530	1.2849	1.1312
45.0	10.6526	5.7898	4.1621	3.3406	2.4968	2.0444	1.7415	1.5083	1.3119	1.1368
50.0	12.2065	6.5488	4.6482	3.6874	2.6972	2.1656	1.8114	1.5423	1.3198	1.1258
55.0	13.6847	7.2527	5.0917	3.9962	2.8651	2.2580	1.8560	1.5541	1.3084	1.0985
60.0	15.0424	7.8859	5.4790	4.2575	2.9953	2.3189	1.8738	1.5431	1.2782	1.0557
65.0	16.2383	8.4273	5.7984	4.4634	3.0839	2.3465	1.8643	1.5099	1.2299	.9987
70.0	17.2362	8.8603	6.0402	4.6077	3.1282	2.3398	1.8278	1.4553	1.1651	.9293
75.0	18.0056	9.1719	6.1970	4.6860	3.1268	2.2990	1.7653	1.3811	1.0858	.8496
80.0	18.5234	9.3526	6.2640	4.6958	3.0798	2.2255	1.6788	1.2895	.9942	.7619
85.0	18.7736	9.3968	6.2393	4.6369	2.9885	2.1214	1.5709	1.1832	.8933	.6690

α, deg \ θ_c, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0	90.0
1.0	.6244	.6082	.5753	.5265	.4631	.3867	.2996	.2042	.1034	-.0000
2.0	.6405	.6213	.5857	.5343	.4685	.3902	.3015	.2050	.1035	-.0000
4.0	.6722	.6469	.6056	.5490	.4787	.3965	.3048	.2062	.1036	-.0000
6.0	.7030	.6716	.6244	.5626	.4878	.4019	.3074	.2070	.1035	-.0000
8.0	.7329	.6951	.6420	.5750	.4958	.4064	.3092	.2072	.1031	-.0000
10.0	.7618	.7173	.6584	.5862	.5026	.4098	.3103	.2069	.1025	-.0000
12.0	.7894	.7382	.6733	.5961	.5083	.4124	.3107	.2061	.1016	-.0000
15.0	.8282	.7668	.6930	.6083	.5146	.4143	.3098	.2040	.0998	-.0000
20.0	.8849	.8063	.7181	.6216	.5190	.4124	.3046	.1981	.0957	-.0000
25.0	.9302	.8347	.7327	.6257	.5155	.4044	.2949	.1893	.0903	-.0000
30.0	.9627	.8511	.7366	.6205	.5044	.3905	.2809	.1779	.0836	-.0000
35.0	.9814	.8549	.7295	.6061	.4860	.3711	.2632	.1643	.0761	-.0000
40.0	.9858	.8462	.7118	.5829	.4607	.3467	.2422	.1488	.0677	-.0000
45.0	.9757	.8251	.6838	.5517	.4295	.3181	.2186	.1320	.0589	-.0000
50.0	.9514	.7923	.6465	.5134	.3932	.2862	.1931	.1143	.0499	-.0000
55.0	.9137	.7488	.6010	.4692	.3529	.2520	.1665	.0962	.0410	-.0000
60.0	.8637	.6959	.5487	.4204	.3099	.2165	.1395	.0785	.0323	-.0000
65.0	.8029	.6352	.4912	.3686	.2655	.1807	.1131	.0614	.0243	-.0000
70.0	.7332	.5685	.4302	.3151	.2210	.1458	.0880	.0457	.0171	-.0000
75.0	.6567	.4980	.3676	.2618	.1777	.1128	.0649	.0318	.0110	-.0000
80.0	.5757	.4256	.3053	.2103	.1371	.0828	.0446	.0200	.0061	-.0000
85.0	.4927	.3537	.2451	.1620	.1002	.0565	.0277	.0108	.0026	-.0000

TABLE V.- CONTINUED

(a) C_N. Continued.

$\phi_1 = 105^\circ$; $\phi_2 = 255^\circ$; $\beta = 0^\circ$

α, deg \ θ_c, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.1129	.1729	.2341	.2943	.4087	.5116	.5998	.6704	.7214	.7511
2.0	.1755	.2245	.2817	.3395	.4503	.5501	.6350	.7022	.7495	.7754
4.0	.3425	.3481	.3899	.4391	.5390	.6304	.7074	.7667	.8060	.8239
6.0	.5647	.4985	.5153	.5509	.6346	.7147	.7821	.8322	.8626	.8718
8.0	.8410	.6748	.6570	.6742	.7367	.8029	.8587	.8985	.9191	.9190
10.0	1.1699	.8763	.8146	.8085	.8447	.8941	.9368	.9651	.9752	.9653
12.0	1.5499	1.1019	.9871	.9530	.9580	.9882	1.0162	1.0318	1.0306	1.0103
15.0	2.2115	1.4832	1.2721	1.1877	1.1370	1.1336	1.1365	1.1313	1.1118	1.0751
20.0	3.5400	2.2221	1.8093	1.6196	1.4542	1.3834	1.3375	1.2930	1.2400	1.1741
25.0	5.1152	3.0708	2.4097	2.0911	1.7867	1.6358	1.5336	1.4451	1.3558	1.2593
30.0	6.8890	4.0032	3.0551	2.5878	2.1242	1.8832	1.7189	1.5831	1.4558	1.3281
35.0	8.8076	4.9913	3.7260	3.0948	2.4566	2.1181	1.8878	1.7027	1.5368	1.3783
40.0	10.8127	6.0048	4.4018	3.5965	2.7738	2.3333	2.0352	1.8004	1.5965	1.4085
45.0	12.8434	7.0131	5.0622	4.0777	3.0660	2.5223	2.1565	1.8732	1.6331	1.4178
50.0	14.8380	7.9855	5.6870	4.5238	3.3245	2.6793	2.2481	1.9189	1.6453	1.4058
55.0	16.7359	8.8924	6.2573	4.9213	3.5414	2.7996	2.3071	1.9360	1.6330	1.3730
60.0	18.4794	9.7063	6.7556	5.2581	3.7101	2.8796	2.3319	1.9240	1.5963	1.3203
65.0	20.0155	10.4024	7.1670	5.5239	3.8254	2.9167	2.3216	1.8834	1.5364	1.2493
70.0	21.2976	10.9597	7.4788	5.7106	3.8839	2.9098	2.2766	1.8153	1.4553	1.1622
75.0	22.2866	11.3611	7.6816	5.8127	3.8838	2.8593	2.1982	1.7219	1.3552	1.0616
80.0	22.9527	11.5945	7.7693	5.8269	3.8251	2.7665	2.0888	1.6059	1.2393	.9508
85.0	23.2754	11.6528	7.7391	5.7529	3.7095	2.6344	1.9517	1.4708	1.1111	.8326

α, deg \ θ_c, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0	90.0
1.0	.7586	.7438	.7069	.6493	.5726	.4791	.3716	.2536	.1284	-.0000
2.0	.7792	.7606	.7202	.6592	.5795	.4835	.3741	.2546	.1286	-.0000
4.0	.8197	.7934	.7457	.6781	.5925	.4916	.3784	.2562	.1288	-.0000
6.0	.8592	.8249	.7699	.6956	.6042	.4986	.3817	.2571	.1286	-.0000
8.0	.8976	.8551	.7925	.7116	.6146	.5044	.3842	.2575	.1282	-.0000
10.0	.9347	.8837	.8136	.7260	.6235	.5090	.3857	.2572	.1274	-.0000
12.0	.9702	.9107	.8329	.7389	.6310	.5124	.3862	.2563	.1263	-.0000
15.0	1.0203	.9477	.8586	.7549	.6394	.5151	.3854	.2538	.1241	-.0000
20.0	1.0938	.9992	.8916	.7729	.6458	.5135	.3792	.2466	.1190	-.0000
25.0	1.1531	1.0368	.9116	.7792	.6424	.5041	.3674	.2358	.1123	-.0000
30.0	1.1963	1.0593	.9179	.7738	.6293	.4872	.3504	.2217	.1041	-.0000
35.0	1.2220	1.0660	.9105	.7569	.6071	.4634	.3285	.2049	.0947	-.0000
40.0	1.2295	1.0567	.8896	.7289	.5762	.4334	.3026	.1857	.0844	-.0000
45.0	1.2187	1.0317	.8556	.6907	.5377	.3981	.2734	.1648	.0735	-.0000
50.0	1.1897	.9917	.8091	.6434	.4927	.3586	.2417	.1428	.0622	-.0000
55.0	1.1435	.9380	.7535	.5885	.4427	.3160	.2086	.1204	.0511	-.0000
60.0	1.0815	.8722	.6894	.5277	.3891	.2717	.1750	.0983	.0404	-.0000
65.0	1.0056	.7963	.6164	.4628	.3335	.2270	.1420	.0770	.0304	-.0000
70.0	.9180	.7126	.5398	.3957	.2776	.1833	.1106	.0574	.0214	-.0000
75.0	.8215	.6236	.4609	.3286	.2232	.1418	.0816	.0399	.0137	-.0000
80.0	.7190	.5321	.3821	.2634	.1719	.1039	.0561	.0251	.0076	-.0000
85.0	.6136	.4408	.3058	.2022	.1253	.0708	.0349	.0135	.0032	-.0000

$\phi_1 = 105^\circ$; $\phi_2 = 255^\circ$; $\beta = 2^\circ$

α, deg \ θ_c, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.1255	.1790	.2380	.2970	.4102	.5124	.6000	.6703	.7210	.7506
2.0	.1800	.2305	.2855	.3421	.4517	.5508	.6352	.7021	.7491	.7749
4.0	.3549	.3541	.3936	.4417	.5403	.6310	.7075	.7665	.8056	.8233
6.0	.5768	.5042	.5188	.5533	.6358	.7152	.7821	.8319	.8621	.8712
8.0	.8527	.6804	.6604	.6765	.7377	.8032	.8586	.8981	.9186	.9183
10.0	1.1912	.8816	.8177	.8106	.8456	.8944	.9367	.9647	.9746	.9645
12.0	1.5607	1.1069	.9901	.9550	.9588	.9884	1.0159	1.0313	1.0299	1.0095
15.0	2.2216	1.4877	1.2747	1.1893	1.1376	1.1336	1.1361	1.1307	1.1110	1.0742
20.0	3.5485	2.2258	1.8112	1.6207	1.4544	1.3831	1.3368	1.2921	1.2390	1.1731
25.0	5.1217	3.0734	2.4109	2.0916	1.7864	1.6352	1.5327	1.4441	1.3547	1.2582
30.0	6.8934	4.0047	3.0556	2.5878	2.1236	1.8823	1.7178	1.5819	1.4545	1.3268
35.0	8.8096	4.9915	3.7256	3.0941	2.4556	2.1169	1.8865	1.7014	1.5355	1.3770
40.0	10.8123	6.0039	4.4007	3.5952	2.7723	2.3318	2.0337	1.7990	1.5951	1.4072
45.0	12.8406	7.0109	5.0602	4.0758	3.0642	2.5206	2.1548	1.8717	1.6316	1.4165
50.0	14.8327	7.9821	5.6843	4.5214	3.3224	2.6774	2.2463	1.9172	1.6439	1.4045
55.0	16.7283	8.8879	6.2538	4.9184	3.5390	2.7976	2.3053	1.9343	1.6315	1.3717
60.0	18.4696	9.7008	6.7516	5.2548	3.7075	2.8774	2.3300	1.9224	1.5949	1.3191
65.0	20.0039	10.3961	7.1624	5.5202	3.8227	2.9145	2.3198	1.8818	1.5351	1.2482
70.0	21.2844	10.9527	7.4739	5.7067	3.8811	2.9077	2.2748	1.8138	1.4540	1.1612
75.0	22.2723	11.3536	7.6764	5.8087	3.8810	2.8572	2.1965	1.7205	1.3541	1.0607
80.0	22.9375	11.5868	7.7640	5.8229	3.8224	2.7645	2.0872	1.6046	1.2383	.9499
85.0	23.2599	11.6450	7.7339	5.7490	3.7070	2.6326	1.9503	1.4698	1.1103	.8320

α, deg \ θ_c, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0	90.0
1.0	.7580	.7430	.7062	.6486	.5719	.4785	.3712	.2533	.1283	-.0000
2.0	.7785	.7598	.7194	.6585	.5789	.4829	.3736	.2543	.1285	-.0000
4.0	.8190	.7926	.7449	.6773	.5919	.4910	.3779	.2559	.1286	-.0000
6.0	.8584	.8241	.7690	.6948	.6036	.4980	.3813	.2568	.1285	-.0000
8.0	.8968	.8542	.7917	.7108	.6139	.5038	.3837	.2572	.1280	-.0000
10.0	.9338	.8828	.8127	.7252	.6228	.5084	.3852	.2569	.1272	-.0000
12.0	.9693	.9098	.8320	.7381	.6303	.5118	.3858	.2560	.1262	-.0000
15.0	1.0193	.9467	.8576	.7541	.6387	.5145	.3849	.2535	.1240	-.0000
20.0	1.0928	.9982	.8906	.7720	.6450	.5129	.3788	.2463	.1189	-.0000
25.0	1.1520	1.0358	.9106	.7783	.6417	.5035	.3670	.2355	.1122	-.0000
30.0	1.1951	1.0582	.9170	.7730	.6286	.4866	.3500	.2215	.1040	-.0000
35.0	1.2208	1.0649	.9096	.7560	.6064	.4629	.3282	.2046	.0946	-.0000
40.0	1.2283	1.0556	.8886	.7281	.5755	.4329	.3023	.1855	.0843	-.0000
45.0	1.2175	1.0306	.8547	.6899	.5371	.3977	.2731	.1646	.0734	-.0000
50.0	1.1885	.9907	.8090	.6427	.4922	.3582	.2414	.1426	.0622	-.0000
55.0	1.1424	.9373	.7527	.5879	.4422	.3157	.2088	.1203	.0510	-.0000
60.0	1.0805	.8714	.6877	.5271	.3886	.2714	.1760	.0981	.0403	-.0000
65.0	1.0046	.7955	.6158	.4623	.3331	.2267	.1441	.0769	.0303	-.0000
70.0	.9172	.7119	.5393	.3953	.2773	.1831	.1104	.0573	.0214	-.0000
75.0	.8208	.6231	.4605	.3283	.2230	.1417	.0815	.0399	.0137	-.0000
80.0	.7184	.5317	.3818	.2632	.1718	.1038	.0561	.0251	.0076	-.0000
85.0	.6131	.4405	.3055	.2020	.1252	.0707	.0347	.0135	.0032	-.0000

TABLE V. - CONTINUED

(a) C_N. Continued.

$\phi_1 = 120^\circ$; $\phi_2 = 240^\circ$; $\beta = 0^\circ$

α, deg \ θ_c, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.1299	.1968	.2653	.3327	.4607	.5759	.6745	.7535	.8103	.8434
2.0	.2049	.2584	.3220	.3864	.5102	.6217	.7164	.7912	.8433	.8724
4.0	.4061	.4066	.4514	.5055	.6160	.7173	.8026	.8681	.9111	.9301
6.0	.6745	.5874	.6019	.6393	.7304	.8122	.8919	.9464	.9788	.9875
8.0	1.0088	.8000	.7723	.7874	.8527	.9236	.9835	1.0257	1.0465	1.0441
10.0	1.4075	1.0433	.9621	.9489	.9823	1.0332	1.0774	1.1058	1.1139	1.0997
12.0	1.8686	1.3162	1.1703	1.1231	1.1187	1.1464	1.1723	1.1861	1.1807	1.1541
15.0	2.6723	1.7780	1.5148	1.4064	1.3346	1.3216	1.3180	1.3062	1.2789	1.2327
20.0	4.2877	2.6745	2.1655	1.9291	1.7181	1.6237	1.5613	1.5024	1.4349	1.3538
25.0	6.2046	3.7057	2.8944	2.5011	2.1214	1.9303	1.8000	1.6882	1.5772	1.4593
30.0	8.3653	4.8403	3.6793	3.1051	2.5321	2.2328	2.0269	1.8581	1.7014	1.5461
35.0	10.7035	6.0438	4.4963	3.7227	2.9378	2.5197	2.2350	2.0069	1.8038	1.6114
40.0	13.1484	7.2796	5.3207	4.3351	3.3261	2.7846	2.4180	2.1301	1.8913	1.6532
45.0	15.6258	8.5101	6.1274	4.9238	3.6853	3.0187	2.5703	2.2239	1.9514	1.6705
50.0	18.0602	9.6981	6.8919	5.4708	4.0044	3.2149	2.6874	2.2956	1.9527	1.6625
55.0	20.3778	10.8073	7.5909	5.9596	4.2737	3.3672	2.7657	2.3131	1.9446	1.6295
60.0	22.5082	11.8041	8.2032	6.3752	4.4851	3.4710	2.8027	2.3057	1.9073	1.5726
65.0	24.3866	12.6582	8.7103	6.7051	4.6321	3.5231	2.7974	2.2636	1.8418	1.4935
70.0	25.9559	13.3436	9.0966	6.9392	4.7103	3.5220	2.7499	2.1882	1.7503	1.3945
75.0	27.1684	13.8396	9.3505	7.0704	4.7172	3.4676	2.6617	2.0815	1.6354	1.2787
80.0	27.9874	14.1310	9.4643	7.0947	4.6527	3.3617	2.5354	1.9470	1.5007	1.1496
85.0	28.3880	14.2090	9.4345	7.0114	4.5188	3.2074	2.3749	1.7887	1.3503	1.0112

α, deg \ θ_c, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0	90.0
1.0	.8516	.8347	.7932	.7284	.6422	.5372	.4167	.2843	.1439	-.0000
2.0	.8760	.8547	.8090	.7402	.6505	.5425	.4196	.2855	.1442	-.0000
4.0	.9243	.8938	.8394	.7628	.6661	.5523	.4249	.2874	.1444	-.0000
6.0	.9717	.9317	.8684	.7838	.6802	.5607	.4289	.2887	.1443	-.0000
8.0	1.0178	.9680	.8958	.8032	.6928	.5679	.4320	.2892	.1438	-.0000
10.0	1.0625	1.0026	.9214	.8209	.7039	.5737	.4341	.2891	.1430	-.0000
12.0	1.1055	1.0354	.9450	.8367	.7133	.5781	.4351	.2882	.1418	-.0000
15.0	1.1665	1.0807	.9767	.8569	.7242	.5822	.4346	.2857	.1394	-.0000
20.0	1.2571	1.1449	1.0186	.8805	.7338	.5819	.4286	.2779	.1338	-.0000
25.0	1.3315	1.1932	1.0456	.8910	.7322	.5727	.4162	.2662	.1263	-.0000
30.0	1.3874	1.2241	1.0570	.8879	.7196	.5551	.3977	.2507	.1172	-.0000
35.0	1.4231	1.2368	1.0524	.8715	.6963	.5294	.3738	.2320	.1067	-.0000
40.0	1.4376	1.2308	1.0321	.8423	.6631	.4966	.3451	.2107	.0952	-.0000
45.0	1.4304	1.2063	.9965	.8010	.6209	.4575	.3126	.1873	.0830	-.0000
50.0	1.4017	1.1640	.9467	.7490	.5710	.4135	.2772	.1627	.0704	-.0000
55.0	1.3524	1.1053	.8844	.6878	.5150	.3657	.2400	.1375	.0579	-.0000
60.0	1.2840	1.0319	.8113	.6194	.4545	.3157	.2021	.1126	.0458	-.0000
65.0	1.1986	.9461	.7298	.5457	.3914	.2650	.1647	.0886	.0346	-.0000
70.0	1.0987	.8504	.6422	.4690	.3276	.2151	.1289	.0663	.0244	-.0000
75.0	.9875	.7478	.5512	.3917	.2651	.1676	.0959	.0464	.0159	-.0000
80.0	.8682	.6414	.4596	.3161	.2056	.1238	.0664	.0295	.0088	-.0000
85.0	.7445	.5344	.3702	.2445	.1512	.0852	.0417	.0161	.0033	-.0000

$\phi_1 = 120^\circ$; $\phi_2 = 240^\circ$; $\beta = 2^\circ$

α, deg \ θ_c, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.1413	.2023	.2687	.3350	.4619	.5764	.6746	.7532	.8095	.8427
2.0	.2162	.2638	.3254	.3887	.5114	.6221	.7164	.7902	.8432	.8716
4.0	.4171	.4118	.4546	.5076	.6170	.7177	.8026	.8677	.9105	.9293
6.0	.6851	.5924	.6048	.6413	.7312	.8184	.8917	.9459	.9781	.9866
8.0	1.0191	.8048	.7751	.7892	.8534	.9237	.9833	1.0252	1.0457	1.0432
10.0	1.4173	1.0478	.9647	.9505	.9829	1.0332	1.0770	1.1051	1.1131	1.0987
12.0	1.8779	1.3203	1.1726	1.1245	1.1191	1.1462	1.1723	1.1853	1.1797	1.1530
15.0	2.6805	1.7815	1.5168	1.4075	1.3347	1.3213	1.3174	1.3053	1.2779	1.2316
20.0	4.2940	2.6770	2.1667	1.9295	1.7178	1.6230	1.5607	1.5012	1.4337	1.3525
25.0	6.2088	3.7069	2.8946	2.5008	2.1206	1.9272	1.7997	1.6968	1.5758	1.4579
30.0	8.3666	4.8401	3.6786	3.1041	2.5308	2.2305	2.0253	1.8565	1.6998	1.5445
35.0	10.7020	6.0421	4.4946	3.7209	2.9360	2.5178	2.2332	2.0351	1.8021	1.6097
40.0	13.1439	7.2764	5.3180	4.3326	3.3239	2.7824	2.4159	2.1282	1.8795	1.6516
45.0	15.6182	8.5055	6.1237	4.9206	3.6825	3.0163	2.5681	2.2219	1.9295	1.6638
50.0	18.0497	9.6920	6.8872	5.4669	4.0013	3.2122	2.6852	2.2834	1.9508	1.6607
55.0	20.3645	10.7998	7.5854	5.9551	4.2703	3.3643	2.7632	2.3109	1.9427	1.6279
60.0	22.4923	11.7954	8.1970	6.3702	4.4814	3.4690	2.8002	2.3036	1.9054	1.5710
65.0	24.3684	12.6485	8.7034	6.6997	4.6282	3.5200	2.7949	2.2615	1.8401	1.4920
70.0	25.9358	13.3331	9.0893	6.9335	4.7063	3.5189	2.7478	2.1861	1.7486	1.3932
75.0	27.1469	13.8284	9.3429	7.0645	4.7132	3.4646	2.6593	2.0797	1.6339	1.2775
80.0	27.9649	14.1195	9.4565	7.0898	4.6498	3.3578	2.5332	1.9453	1.4974	1.1484
85.0	28.3649	14.1974	9.4267	7.0056	4.5150	3.2048	2.3729	1.7872	1.3492	1.0103

α, deg \ θ_c, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0	90.0
1.0	.8508	.8339	.7923	.7276	.6414	.5366	.4162	.2839	.1438	-.0000
2.0	.8752	.8538	.8081	.7394	.6497	.5419	.4191	.2851	.1440	-.0000
4.0	.9235	.8929	.8385	.7619	.6653	.5516	.4243	.2871	.1442	-.0000
6.0	.9707	.9307	.8675	.7829	.6794	.5601	.4284	.2883	.1441	-.0000
8.0	1.0168	.9670	.8948	.8023	.6920	.5672	.4315	.2889	.1436	-.0000
10.0	1.0614	1.0015	.9203	.8199	.7031	.5730	.4336	.2887	.1428	-.0000
12.0	1.1044	1.0343	.9440	.8358	.7125	.5775	.4346	.2879	.1416	-.0000
15.0	1.1653	1.0796	.9756	.8559	.7234	.5815	.4341	.2853	.1392	-.0000
20.0	1.2558	1.1437	1.0174	.8795	.7329	.5812	.4281	.2776	.1336	-.0000
25.0	1.3301	1.1919	1.0444	.8899	.7314	.5721	.4157	.2658	.1262	-.0000
30.0	1.3859	1.2228	1.0558	.8869	.7188	.5544	.3972	.2504	.1171	-.0000
35.0	1.4216	1.2354	1.0513	.8706	.6955	.5288	.3733	.2317	.1066	-.0000
40.0	1.4361	1.2294	1.0309	.8413	.6623	.4960	.3447	.2104	.0951	-.0000
45.0	1.4289	1.2050	.9954	.8001	.6202	.4570	.3122	.1871	.0829	-.0000
50.0	1.4002	1.1628	.9457	.7482	.5704	.4130	.2768	.1625	.0703	-.0000
55.0	1.3510	1.1042	.8834	.6871	.5144	.3653	.2397	.1374	.0573	-.0000
60.0	1.2827	1.0309	.8105	.6187	.4540	.3153	.2013	.1124	.0458	-.0000
65.0	1.1974	.9451	.7290	.5451	.3910	.2647	.1645	.0885	.0345	-.0000
70.0	1.0976	.8496	.6415	.4685	.3273	.2149	.1287	.0662	.0244	-.0000
75.0	.9865	.7471	.5506	.3913	.2648	.1674	.0957	.0464	.0157	-.0000
80.0	.8674	.6408	.4592	.3158	.2054	.1237	.0664	.0295	.0088	-.0000
85.0	.7439	.5339	.3699	.2443	.1510	.0851	.0416	.0161	.0033	-.0000

TABLE V.- CONTINUED

(a) C_N. Continued.

$\phi_1 = 105^0$; $\phi_2 = 255^0$; $\beta = 5^0$

θ_c, deg / α, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.1895	.2111	.2584	.3113	.4177	.5162	.6014	.6699	.7192	.7478
2.0	.2528	.2623	.3056	.3561	.4591	.5544	.6363	.7014	.7471	.7720
4.0	.4194	.3850	.4130	.4550	.5471	.6341	.7082	.7654	.8032	.8201
6.0	.6401	.5343	.5374	.5659	.6420	.7178	.7823	.8304	.8594	.8677
8.0	.9143	.7093	.6781	.6883	.7432	.8052	.8583	.8962	.9155	.9145
10.0	1.2407	.9092	.8344	.8215	.8504	.8958	.9359	.9623	.9711	.9604
12.0	1.6177	1.1331	1.0056	.9650	.9629	.9892	1.0146	1.0285	1.0261	1.0051
15.0	2.2743	1.5115	1.2885	1.1978	1.1405	1.1335	1.1340	1.1273	1.1067	1.0694
20.0	3.5924	2.2448	1.8215	1.6264	1.4553	1.3814	1.3335	1.2877	1.2339	1.1674
25.0	5.1552	3.0870	2.4174	2.0944	1.7852	1.6319	1.5281	1.4386	1.3488	1.2522
30.0	6.9150	4.0124	3.0579	2.5873	2.1202	1.8774	1.7120	1.5756	1.4480	1.3204
35.0	8.8185	4.9929	3.7237	3.0904	2.4501	2.1105	1.8796	1.6943	1.5285	1.3703
40.0	10.8078	5.9988	4.3944	3.5883	2.7648	2.3240	2.0259	1.7913	1.5878	1.4003
45.0	12.8224	6.9994	5.0498	4.0659	3.0549	2.5116	2.1462	1.8635	1.6240	1.4095
50.0	14.8012	7.9644	5.6699	4.5087	3.3114	2.6674	2.2371	1.9088	1.6362	1.3976
55.0	16.6841	8.8644	6.2358	4.9031	3.5266	2.7868	2.2957	1.9258	1.6239	1.3650
60.0	18.4138	9.6721	6.7304	5.2373	3.6940	2.8661	2.3203	1.9139	1.5875	1.3127
65.0	19.9378	10.3630	7.1386	5.5011	3.8085	2.9030	2.3101	1.8736	1.5281	1.2422
70.0	21.2098	10.9160	7.4480	5.6864	3.8666	2.8962	2.2654	1.8061	1.4475	1.1558
75.0	22.1911	11.3144	7.6493	5.7877	3.8665	2.8460	2.1876	1.7133	1.3482	1.0560
80.0	22.8520	11.5460	7.7363	5.8018	3.8082	2.7540	2.0790	1.5982	1.2332	.9458
85.0	23.1724	11.6039	7.7064	5.7284	3.6935	2.6229	1.9430	1.4642	1.1060	.8287
θ_c, deg / α, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0	90.0
1.0	.7546	.7393	.7024	.6449	.5685	.4756	.3689	.2517	.1274	-.0000
2.0	.7750	.7560	.7155	.6547	.5754	.4800	.3713	.2527	.1276	-.0000
4.0	.8152	.7885	.7408	.6734	.5883	.4880	.3755	.2542	.1278	-.0000
6.0	.8544	.8199	.7648	.6908	.5999	.4949	.3789	.2552	.1277	-.0000
8.0	.8925	.8498	.7873	.7067	.6102	.5007	.3813	.2556	.1272	-.0000
10.0	.9293	.8782	.8082	.7210	.6191	.5053	.3828	.2553	.1264	-.0000
12.0	.9646	.9050	.8274	.7338	.6265	.5086	.3834	.2544	.1253	-.0000
15.0	1.0143	.9417	.8528	.7497	.6349	.5113	.3825	.2519	.1232	-.0000
20.0	1.0873	.9929	.8856	.7675	.6412	.5097	.3764	.2447	.1181	-.0000
25.0	1.1461	1.0302	.9054	.7738	.6378	.5004	.3647	.2340	.1115	-.0000
30.0	1.1889	1.0525	.9118	.7685	.6249	.4837	.3478	.2201	.1033	-.0000
35.0	1.2145	1.0591	.9044	.7516	.6027	.4601	.3261	.2033	.0940	-.0000
40.0	1.2219	1.0499	.8836	.7238	.5721	.4303	.3004	.1843	.0837	-.0000
45.0	1.2111	1.0251	.8500	.6859	.5339	.3953	.2714	.1636	.0729	-.0000
50.0	1.1824	.9854	.8045	.6390	.4893	.3560	.2399	.1418	.0618	-.0000
55.0	1.1366	.9321	.7486	.5845	.4396	.3138	.2071	.1195	.0507	-.0000
60.0	1.0750	.8668	.6839	.5242	.3864	.2698	.1738	.0975	.0401	-.0000
65.0	.9997	.7915	.6125	.4598	.3312	.2254	.1410	.0765	.0301	-.0000
70.0	.9128	.7084	.5365	.3932	.2758	.1820	.1098	.0570	.0212	-.0000
75.0	.8170	.6201	.4582	.3266	.2218	.1409	.0811	.0396	.0136	-.0000
80.0	.7155	.5293	.3800	.2619	.1709	.1033	.0557	.0250	.0076	-.0000
85.0	.6107	.4387	.3042	.2012	.1246	.0704	.0346	.0134	.0032	-.0000

$\phi_1 = 105^0$; $\phi_2 = 255^0$; $\beta = 15^0$

θ_c, deg / α, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.6364	.4681	.4372	.4417	.4884	.5520	.6138	.6655	.7025	.7223
2.0	.7206	.5235	.4838	.4844	.5272	.5879	.6466	.6951	.7288	.7450
4.0	.9169	.6497	.5879	.5780	.6100	.6627	.7142	.7553	.7815	.7902
6.0	1.1532	.7974	.7068	.6827	.6992	.7415	.7838	.8164	.8343	.8349
8.0	1.4316	.9670	.8404	.7979	.7944	.8236	.8553	.8782	.8870	.8790
10.0	1.7533	1.1584	.9881	.9233	.8951	.9088	.9282	.9404	.9394	.9221
12.0	2.1185	1.3712	1.1496	1.0583	1.0009	.9966	1.0023	1.0027	.9910	.9641
15.0	2.7467	1.7292	1.4160	1.2772	1.1679	1.1323	1.1146	1.0955	1.0668	1.0246
20.0	3.9963	2.4206	1.9175	1.6802	1.4639	1.3653	1.3021	1.2463	1.1864	1.1170
25.0	5.4707	3.2132	2.4778	2.1201	1.7741	1.6009	1.4850	1.3882	1.2944	1.1965
30.0	7.1281	4.0836	3.0800	2.5836	2.0890	1.8317	1.6580	1.5170	1.3877	1.2606
35.0	8.9194	5.0056	3.7059	3.0566	2.3991	2.0508	1.8155	1.6286	1.4633	1.3075
40.0	10.7908	5.9513	4.3365	3.5246	2.6950	2.2516	1.9530	1.7198	1.5191	1.3357
45.0	12.6858	6.8921	4.9527	3.9736	2.9677	2.4279	2.0662	1.7877	1.5532	1.3443
50.0	14.5469	7.7993	5.5356	4.3899	3.2089	2.5744	2.1516	1.8303	1.5646	1.3332
55.0	16.3176	8.6455	6.0677	4.7607	3.4112	2.6867	2.2067	1.8462	1.5530	1.3025
60.0	17.9443	9.4049	6.5327	5.0749	3.5686	2.7613	2.2298	1.8351	1.5188	1.2533
65.0	19.3776	10.0544	6.9164	5.3229	3.6762	2.7959	2.2202	1.7972	1.4630	1.1871
70.0	20.5738	10.5743	7.2074	5.4972	3.7308	2.7895	2.1782	1.7336	1.3872	1.1058
75.0	21.4966	10.9488	7.3966	5.5924	3.7307	2.7423	2.1051	1.6465	1.2939	1.0120
80.0	22.1180	11.1666	7.4784	5.6057	3.6759	2.6558	2.0030	1.5382	1.1857	.9085
85.0	22.4191	11.2210	7.4503	5.5366	3.5681	2.5325	1.8751	1.4123	1.0661	.7983
θ_c, deg / α, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0	90.0
1.0	.7232	.7046	.6667	.6102	.5368	.4483	.3473	.2367	.1198	-.0000
2.0	.7424	.7203	.6790	.6195	.5433	.4524	.3496	.2377	.1200	-.0000
4.0	.7801	.7509	.7028	.6371	.5554	.4600	.3536	.2392	.1202	-.0000
6.0	.8170	.7803	.7254	.6534	.5663	.4665	.3567	.2401	.1200	-.0000
8.0	.8529	.8085	.7465	.6684	.5760	.4719	.3590	.2404	.1196	-.0000
10.0	.8874	.8352	.7662	.6818	.5843	.4762	.3604	.2401	.1189	-.0000
12.0	.9206	.8603	.7842	.6938	.5913	.4793	.3609	.2393	.1179	-.0000
15.0	.9673	.8949	.8081	.7088	.5992	.4819	.3601	.2370	.1158	-.0000
20.0	1.0359	.9430	.8389	.7255	.6051	.4804	.3544	.2302	.1111	-.0000
25.0	1.0912	.9780	.8576	.7315	.6019	.4716	.3434	.2201	.1048	-.0000
30.0	1.1315	.9990	.8635	.7264	.5897	.4559	.3275	.2070	.0972	-.0000
35.0	1.1555	1.0053	.8566	.7106	.5690	.4337	.3071	.1913	.0884	-.0000
40.0	1.1625	.9966	.8371	.6845	.5402	.4057	.2829	.1734	.0788	-.0000
45.0	1.1524	.9733	.8054	.6488	.5042	.3728	.2556	.1539	.0686	-.0000
50.0	1.1254	.9360	.7627	.6047	.4623	.3359	.2261	.1334	.0581	-.0000
55.0	1.0823	.8859	.7101	.5535	.4156	.2962	.1952	.1125	.0477	-.0000
60.0	1.0244	.8245	.6493	.4968	.3656	.2548	.1638	.0918	.0377	-.0000
65.0	.9536	.7536	.5822	.4362	.3137	.2131	.1330	.0720	.0284	-.0000
70.0	.8719	.6755	.5107	.3737	.2616	.1723	.1037	.0537	.0200	-.0000
75.0	.7819	.5925	.4371	.3110	.2108	.1336	.0767	.0374	.0128	-.0000
80.0	.6862	.5071	.3636	.2502	.1630	.0983	.0529	.0236	.0071	-.0000
85.0	.5878	.4220	.2924	.1931	.1194	.0673	.0330	.0128	.0030	-.0000

TABLE V. - CONTINUED

(a) C_N. Continued.

$\phi_1 = 135^0$; $\phi_2 = 225^0$; $\beta = 0^0$

θ_c, deg / α, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.1459	.2182	.2925	.3657	.5049	.6301	.7372	.8229	.8845	.9202
2.0	.2341	.2902	.3586	.4283	.5625	.6833	.7858	.8667	.9233	.9538
4.0	.4723	.4644	.5103	.5675	.6859	.7947	.8863	.9562	1.0017	1.0211
6.0	.7920	.6783	.6874	.7248	.8198	.9126	.9905	1.0477	1.0808	1.0831
8.0	1.1916	.9307	.8889	.8993	.9635	1.0364	1.0981	1.1407	1.1602	1.1545
10.0	1.6691	1.2204	1.1140	1.0904	1.1164	1.1653	1.2084	1.2348	1.2395	1.2200
12.0	2.2223	1.5460	1.3616	1.2970	1.2776	1.2969	1.3209	1.3295	1.3173	1.2843
15.0	3.1878	2.0981	1.7723	1.6338	1.5335	1.5064	1.4927	1.4718	1.4348	1.3777
20.0	5.1319	3.1731	2.5504	2.2576	1.9902	1.8658	1.7823	1.7055	1.6212	1.5230
25.0	7.4424	4.4126	3.4248	2.9429	2.4727	2.2326	2.0684	1.9289	1.7930	1.6514
30.0	10.0491	5.7790	4.3688	3.6689	2.9663	2.5957	2.3423	2.1351	1.9451	1.7591
35.0	12.8728	7.2308	5.3539	4.4134	3.4559	2.9440	2.5956	2.3179	2.0727	1.8427
40.0	15.8276	8.7238	6.3500	5.1539	3.9268	3.2669	2.8207	2.4717	2.1721	1.8997
45.0	18.8239	10.2128	7.3270	5.8679	4.3645	3.5547	3.0107	2.5919	2.2402	1.9284
50.0	21.7705	11.6523	8.2550	6.5336	4.7559	3.7996	3.1599	2.6748	2.2749	1.9280
55.0	24.5780	12.9998	9.1060	7.1309	5.0890	3.9912	3.2637	2.7179	2.2752	1.8923
60.0	27.1610	14.2113	9.8541	7.6416	5.3536	4.1265	3.3190	2.7199	2.2410	1.8404
65.0	29.4411	15.2529	10.4764	8.0501	5.5419	4.2006	3.3241	2.6806	2.1735	1.7560
70.0	31.3489	16.0921	10.9542	8.3442	5.6479	4.2112	3.2787	2.6014	2.0746	1.6477
75.0	32.8265	16.7032	11.2729	8.5147	5.6686	4.1579	3.1845	2.4846	1.9474	1.5187
80.0	33.8290	17.0673	11.4229	8.5566	5.6032	4.0424	3.0440	2.3338	1.7957	1.3730
85.0	34.3260	17.1748	11.3995	8.4686	5.4538	3.8681	2.8619	2.1535	1.6242	1.2149
θ_c, deg / α, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0	90.0
1.0	.9288	.9101	.8647	.7938	.6997	.5852	.4539	.3096	.1567	-.0000
2.0	.9572	.9334	.8830	.8076	.7094	.5914	.4573	.3110	.1570	-.0000
4.0	1.0135	.9790	.9185	.8339	.7276	.6029	.4634	.3133	.1573	-.0000
6.0	1.0688	1.0232	.9525	.8586	.7443	.6129	.4683	.3149	.1572	-.0000
8.0	1.1230	1.0659	.9847	.8816	.7593	.6215	.4722	.3157	.1568	-.0000
10.0	1.1757	1.1069	1.0151	.9027	.7726	.6287	.4749	.3158	.1559	-.0000
12.0	1.2267	1.1458	1.0434	.9218	.7842	.6343	.4765	.3150	.1547	-.0000
15.0	1.2994	1.2002	1.0817	.9466	.7980	.6399	.4766	.3125	.1521	-.0000
20.0	1.4088	1.2784	1.1336	.9768	.8115	.6415	.4711	.3046	.1462	-.0000
25.0	1.5004	1.3392	1.1691	.9926	.8127	.6334	.4586	.2922	.1381	-.0000
30.0	1.5715	1.3807	1.1872	.9933	.8017	.6158	.4393	.2757	.1283	-.0000
35.0	1.6199	1.4015	1.1874	.9789	.7786	.5892	.4139	.2556	.1169	-.0000
40.0	1.6442	1.4012	1.1695	.9500	.7442	.5545	.3833	.2326	.1044	-.0000
45.0	1.6436	1.3796	1.1343	.9073	.6996	.5127	.3482	.2073	.0911	-.0000
50.0	1.6181	1.3376	1.0827	.8522	.6462	.4651	.3099	.1805	.0774	-.0000
55.0	1.5686	1.2762	1.0162	.7863	.5854	.4132	.2692	.1530	.0638	-.0000
60.0	1.4965	1.1974	.9370	.7117	.5193	.3584	.2277	.1257	.0506	-.0000
65.0	1.4039	1.1037	.8475	.6306	.4498	.3025	.1865	.0994	.0383	-.0000
70.0	1.2938	.9977	.7503	.5455	.3789	.2472	.1469	.0748	.0272	-.0000
75.0	1.1695	.8829	.6484	.4589	.3090	.1941	.1101	.0527	.0176	-.0000
80.0	1.0347	.7626	.5449	.3735	.2420	.1449	.0772	.0339	.0099	-.0000
85.0	.8935	.6404	.4430	.2919	.1800	.1010	.0492	.0188	.0043	-.0000

$\phi_1 = 135^0$; $\phi_2 = 225^0$; $\beta = 2^0$

θ_c, deg / α, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.1541	.2220	.2949	.3673	.5056	.6302	.7369	.8224	.8838	.9193
2.0	.2422	.2940	.3609	.4298	.5631	.6833	.7855	.8662	.9226	.9529
4.0	.4801	.4680	.5124	.5688	.6863	.7947	.8859	.9555	1.0009	1.0201
6.0	.7994	.6816	.6893	.7259	.8201	.9124	.9900	1.0469	1.0793	1.0870
8.0	1.1985	.9337	.8906	.9002	.9636	1.0360	1.0974	1.1398	1.1591	1.1534
10.0	1.6755	1.2230	1.1154	1.0911	1.1163	1.1648	1.2075	1.2338	1.2383	1.2188
12.0	2.2279	1.5482	1.3626	1.2974	1.2774	1.2982	1.3199	1.3284	1.3170	1.2830
15.0	3.1923	2.0997	1.7728	1.6338	1.5329	1.5054	1.4915	1.4705	1.4334	1.3763
20.0	5.1340	3.1734	2.5500	2.2569	1.9891	1.8644	1.7808	1.7039	1.6195	1.5214
25.0	7.4417	4.4114	3.4233	2.9414	2.4710	2.2308	2.0665	1.9270	1.7912	1.6497
30.0	10.0452	5.7762	4.3662	3.6664	2.9639	2.5934	2.3400	2.1330	1.9430	1.7572
35.0	12.8654	7.2262	5.3501	4.4101	3.4530	2.9413	2.5931	2.3156	2.0705	1.8407
40.0	15.8167	8.7174	6.3450	5.1497	3.9232	3.2639	2.8179	2.4692	2.1698	1.8976
45.0	18.8093	10.2045	7.3208	5.8627	4.3605	3.5513	3.0077	2.5893	2.2378	1.9263
50.0	21.7524	11.6423	8.2477	6.5277	4.7514	3.7949	3.1567	2.6720	2.2725	1.9259
55.0	24.5564	12.9871	9.0976	7.1242	5.0840	3.9872	3.2604	2.7151	2.2728	1.8963
60.0	27.1363	14.1991	9.8448	7.6343	5.3484	4.1224	3.3156	2.7170	2.2387	1.8385
65.0	29.4136	15.2385	10.4664	8.0423	5.5364	4.1964	3.3206	2.6779	2.1712	1.7542
70.0	31.3191	16.0766	10.9436	8.3360	5.6423	4.2070	3.2754	2.5987	2.0724	1.6459
75.0	32.7949	16.6870	11.2619	8.5063	5.6629	4.1537	3.1817	2.4821	1.9454	1.5171
80.0	33.7962	17.0512	11.4117	8.5482	5.5976	4.0303	3.0410	2.3314	1.7939	1.3715
85.0	34.2926	17.1580	11.3883	8.4603	5.4484	3.8643	2.8589	2.1514	1.6225	1.2137
θ_c, deg / α, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0	90.0
1.0	.9279	.9091	.8637	.7929	.6989	.5845	.4533	.3092	.1565	-.0000
2.0	.9562	.9324	.8820	.8066	.7086	.5907	.4567	.3106	.1568	-.0000
4.0	1.0124	.9779	.9175	.8329	.7268	.6021	.4628	.3130	.1571	-.0000
6.0	1.0677	1.0221	.9514	.8576	.7434	.6122	.4677	.3145	.1570	-.0000
8.0	1.1218	1.0648	.9836	.8805	.7584	.6207	.4716	.3153	.1566	-.0000
10.0	1.1744	1.1056	1.0139	.9016	.7717	.6277	.4743	.3154	.1557	-.0000
12.0	1.2254	1.1446	1.0422	.9207	.7832	.6336	.4757	.3147	.1545	-.0000
15.0	1.2980	1.1989	1.0805	.9455	.7971	.6392	.4760	.3121	.1520	-.0000
20.0	1.4072	1.2770	1.1323	.9757	.8106	.6408	.4706	.3042	.1460	-.0000
25.0	1.4987	1.3377	1.1678	.9914	.8118	.6327	.4580	.2918	.1379	-.0000
30.0	1.5697	1.3791	1.1859	.9921	.8007	.6151	.4388	.2753	.1281	-.0000
35.0	1.6181	1.3999	1.1860	.9778	.7777	.5885	.4134	.2553	.1168	-.0000
40.0	1.6424	1.3996	1.1682	.9489	.7434	.5539	.3828	.2323	.1043	-.0000
45.0	1.6419	1.3781	1.1330	.9062	.6988	.5121	.3478	.2071	.0910	-.0000
50.0	1.6164	1.3361	1.0814	.8512	.6453	.4646	.3094	.1803	.0773	-.0000
55.0	1.5669	1.2748	1.0151	.7854	.5848	.4127	.2689	.1528	.0637	-.0000
60.0	1.4948	1.1961	.9360	.7109	.5187	.3580	.2274	.1256	.0505	-.0000
65.0	1.4024	1.1025	.8465	.6299	.4492	.3021	.1863	.0992	.0382	-.0000
70.0	1.2924	.9967	.7495	.5448	.3785	.2469	.1467	.0747	.0271	-.0000
75.0	1.1682	.8819	.6477	.4584	.3086	.1939	.1100	.0527	.0176	-.0000
80.0	1.0336	.7618	.5443	.3731	.2417	.1447	.0771	.0339	.0099	-.0000
85.0	.8926	.6398	.4425	.2916	.1798	.1009	.0491	.0188	.0043	-.0000

TABLE V. - CONTINUED

(a) C_N. Continued.

$\phi_1 = 120^\circ$; $\phi_2 = 240^\circ$; $\beta = 5^\circ$

α, deg \ θ_c, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.1999	.2309	.2867	.3474	.4681	.5791	.6749	.7518	.8072	.8392
2.0	.2750	.2921	.3430	.4008	.5173	.6246	.7165	.7893	.8404	.8679
4.0	.4743	.4391	.4715	.5189	.6223	.7195	.8021	.8656	.9072	.9253
6.0	.7385	.6186	.6207	.6517	.7358	.8196	.8906	.9433	.9744	.9822
8.0	1.0662	.8296	.7899	.7987	.8571	.9242	.9817	1.0228	1.0416	1.0384
10.0	1.4561	1.0710	.9782	.9590	.9858	1.0330	1.0747	1.1015	1.1085	1.0934
12.0	1.9061	1.3418	1.1848	1.1319	1.1212	1.1453	1.1694	1.1812	1.1747	1.1475
15.0	2.6890	1.9001	1.5268	1.4130	1.3354	1.3192	1.3135	1.3004	1.2722	1.2256
20.0	4.2601	2.6898	2.1725	1.9317	1.7160	1.6190	1.5550	1.4950	1.4270	1.3457
25.0	6.1220	3.7132	2.8959	2.4994	2.1162	1.9233	1.7919	1.6795	1.5682	1.4504
30.0	8.2184	4.8392	3.6748	3.0988	2.5238	2.2227	2.0170	1.8481	1.6915	1.5365
35.0	10.4859	6.0335	4.4856	3.7117	2.9264	2.5082	2.2235	1.9957	1.7931	1.6013
40.0	12.8560	7.2599	5.3037	4.3195	3.3118	2.7711	2.4052	2.1180	1.8700	1.6429
45.0	15.2570	8.4811	6.1043	4.9037	3.6682	3.0034	2.5564	2.2111	1.9198	1.6600
50.0	17.6161	9.6600	6.8630	5.4466	3.9849	3.1991	2.6725	2.2723	1.9409	1.6520
55.0	19.8619	10.7608	7.5567	5.9316	4.2522	3.3492	2.7502	2.2996	1.9328	1.6193
60.0	21.9263	11.7501	8.1644	6.3440	4.4620	3.4522	2.7869	2.2923	1.8958	1.5629
65.0	23.7469	12.5977	8.6676	6.6714	4.6079	3.5048	2.7817	2.2505	1.8308	1.4843
70.0	25.2684	13.2779	9.0510	6.9037	4.6854	3.5028	2.7345	2.1756	1.7400	1.3861
75.0	26.4448	13.7701	9.3030	7.0339	4.6923	3.4499	2.6470	2.0698	1.6260	1.2712
80.0	27.2404	14.0593	9.4159	7.0581	4.6283	3.3438	2.5217	1.9363	1.4924	1.1421
85.0	27.6310	14.1366	9.3863	6.9754	4.4954	3.1907	2.3624	1.7792	1.3431	1.0057

α, deg \ θ_c, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0	90.0
1.0	.8467	.8294	.7879	.7233	.6375	.5333	.4136	.2821	.1420	-.0000
2.0	.8710	.8493	.8035	.7350	.6458	.5385	.4165	.2833	.1431	-.0000
4.0	.9189	.8881	.8338	.7574	.6613	.5482	.4216	.2853	.1432	-.0000
6.0	.9659	.9257	.8626	.7783	.6753	.5566	.4257	.2865	.1432	-.0000
8.0	1.0116	.9617	.8897	.7975	.6878	.5637	.4289	.2871	.1427	-.0000
10.0	1.0560	.9961	.9151	.8151	.6988	.5695	.4308	.2869	.1419	-.0000
12.0	1.0987	1.0286	.9386	.8308	.7081	.5739	.4317	.2861	.1407	-.0000
15.0	1.1592	1.0736	.9700	.8508	.7190	.5779	.4314	.2835	.1384	-.0000
20.0	1.2491	1.1373	1.0115	.8743	.7285	.5776	.4254	.2758	.1323	-.0000
25.0	1.3229	1.1852	1.0384	.8846	.7269	.5685	.4130	.2642	.1254	-.0000
30.0	1.3784	1.2159	1.0497	.8816	.7144	.5510	.3947	.2480	.1163	-.0000
35.0	1.4139	1.2285	1.0452	.8654	.6913	.5256	.3710	.2303	.1059	-.0000
40.0	1.4282	1.2225	1.0249	.8363	.6583	.4930	.3425	.2091	.0945	-.0000
45.0	1.4211	1.1982	.9896	.7954	.6164	.4542	.3102	.1859	.0823	-.0000
50.0	1.3926	1.1563	.9403	.7438	.5669	.4105	.2751	.1615	.0699	-.0000
55.0	1.3437	1.0980	.8784	.6831	.5113	.3631	.2382	.1365	.0574	-.0000
60.0	1.2758	1.0252	.8059	.6151	.4513	.3134	.2006	.1117	.0455	-.0000
65.0	1.1910	.9400	.7249	.5420	.3887	.2631	.1635	.0879	.0343	-.0000
70.0	1.0919	.8451	.6380	.4659	.3254	.2136	.1280	.0658	.0242	-.0000
75.0	.9815	.7432	.5477	.3892	.2633	.1664	.0951	.0461	.0156	-.0000
80.0	.8632	.6376	.4569	.3142	.2043	.1230	.0660	.0293	.0087	-.0000
85.0	.7405	.5314	.3682	.2431	.1503	.0847	.0414	.0160	.0037	-.0000

$\phi_1 = 120^\circ$; $\phi_2 = 240^\circ$; $\beta = 15^\circ$

α, deg \ θ_c, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.6172	.4686	.4485	.4622	.5263	.6045	.6781	.7390	.7826	.8063
2.0	.7141	.5330	.5032	.5126	.5725	.6472	.7172	.7742	.8138	.8333
4.0	.9423	.6812	.6263	.6239	.6712	.7365	.7977	.8459	.8766	.8912
6.0	1.2198	.8558	.7677	.7489	.7779	.8306	.8809	.9190	.9398	.9407
8.0	1.5493	1.0575	.9272	.8870	.8920	.9289	.9665	.9930	1.0030	.9935
10.0	1.9324	1.2864	1.1044	1.0377	1.0130	1.0312	1.0540	1.0677	1.0659	1.0454
12.0	2.3693	1.5418	1.2987	1.2002	1.1403	1.1368	1.1430	1.1426	1.1281	1.0962
15.0	3.1242	1.9730	1.6199	1.4643	1.3416	1.3003	1.2785	1.2547	1.2198	1.1695
20.0	4.6336	2.8093	2.2262	1.9516	1.6995	1.5822	1.5055	1.4377	1.3654	1.2825
25.0	6.4219	3.7703	2.9049	2.4849	2.0757	1.8682	1.7283	1.6111	1.4981	1.3809
30.0	8.4358	4.8272	3.6355	3.0479	2.4589	2.1497	1.9399	1.7696	1.6140	1.4619
35.0	10.6143	5.9477	4.3958	3.6236	2.9374	2.4181	2.1341	1.9085	1.7095	1.5228
40.0	12.8913	7.0981	5.1629	4.1945	3.1998	2.6653	2.3048	2.0234	1.7818	1.5619
45.0	15.1980	8.2434	5.9133	4.7432	3.5349	2.8837	2.4470	2.1109	1.8286	1.5779
50.0	17.4644	9.3489	6.6245	5.2531	3.8326	3.0667	2.5562	2.1694	1.8465	1.5705
55.0	19.6216	10.3810	7.2748	5.7087	4.0839	3.2088	2.6292	2.1941	1.8409	1.5397
60.0	21.6044	11.3086	7.8446	6.0962	4.2811	3.3057	2.6637	2.1873	1.8060	1.4866
65.0	23.3526	12.1034	8.3164	6.4037	4.4182	3.3543	2.6588	2.1480	1.7450	1.4128
70.0	24.8132	12.7413	8.6761	6.6221	4.4912	3.3532	2.6145	2.0776	1.6596	1.3205
75.0	25.9418	13.2031	8.9127	6.7445	4.4977	3.3025	2.5322	1.9781	1.5524	1.2124
80.0	26.7042	13.4746	9.0190	6.7674	4.4375	3.2037	2.4144	1.8526	1.4268	1.0920
85.0	27.0772	13.5476	8.9918	6.6899	4.3125	3.0598	2.2646	1.7049	1.2864	.9626

α, deg \ θ_c, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0	90.0
1.0	.8084	.7884	.7464	.6836	.6015	.5024	.3893	.2654	.1343	-.0000
2.0	.8312	.8070	.7612	.6946	.6092	.5074	.3920	.2665	.1345	-.0000
4.0	.8763	.8436	.7896	.7157	.6238	.5164	.3968	.2683	.1349	-.0000
6.0	.9204	.8788	.8166	.7353	.6370	.5243	.4007	.2695	.1346	-.0000
8.0	.9635	.9127	.8422	.7534	.6487	.5310	.4036	.2700	.1342	-.0000
10.0	1.0052	.9450	.8660	.7699	.6590	.5364	.4055	.2699	.1334	-.0000
12.0	1.0453	.9756	.8881	.7847	.6678	.5406	.4064	.2691	.1323	-.0000
15.0	1.1022	1.0179	.9177	.8035	.6780	.5444	.4060	.2667	.1301	-.0000
20.0	1.1867	1.0778	.9567	.8255	.6869	.5441	.4004	.2595	.1242	-.0000
25.0	1.2561	1.1228	.9819	.8353	.6855	.5355	.3889	.2485	.1179	-.0000
30.0	1.3083	1.1517	.9926	.8325	.6737	.5191	.3715	.2341	.1094	-.0000
35.0	1.3416	1.1635	.9883	.8172	.6520	.4952	.3492	.2166	.0996	-.0000
40.0	1.3551	1.1579	.9693	.7898	.6210	.4645	.3225	.1967	.0888	-.0000
45.0	1.3484	1.1351	.9361	.7513	.5816	.4291	.2921	.1749	.0774	-.0000
50.0	1.3216	1.0957	.8897	.7028	.5351	.3869	.2591	.1520	.0657	-.0000
55.0	1.2756	1.0409	.8315	.6458	.4828	.3424	.2244	.1285	.0540	-.0000
60.0	1.2119	.9724	.7634	.5819	.4264	.2957	.1890	.1052	.0428	-.0000
65.0	1.1321	.8923	.6872	.5131	.3675	.2484	.1541	.0829	.0323	-.0000
70.0	1.0390	.8031	.6055	.4416	.3080	.2019	.1208	.0620	.0228	-.0000
75.0	.9352	.7073	.5206	.3695	.2496	.1575	.0899	.0435	.0147	-.0000
80.0	.8239	.6080	.4352	.2989	.1942	.1167	.0625	.0277	.0082	-.0000
85.0	.7085	.5082	.3518	.2321	.1434	.0806	.0394	.0152	.0035	-.0000

TABLE V.- CONTINUED

(a) C_N. Continued.

$\phi_1 = 150^0$; $\phi_2 = 210^0$; $\beta = 0^0$

α, deg \ θ_c, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.1590	.2351	.3137	.3913	.5387	.6712	.7846	.8753	.9404	.9779
2.0	.2591	.3163	.3880	.4615	.6032	.7308	.8391	.9243	.9838	1.0156
4.0	.5313	.5140	.5595	.6185	.7420	.8560	.9518	1.0247	1.0718	1.0910
6.0	.8987	.7580	.7607	.7966	.8933	.9889	1.0692	1.1277	1.1608	1.1664
8.0	1.3594	1.0470	.9906	.9952	1.0561	1.1289	1.1907	1.2327	1.2504	1.2414
10.0	1.9112	1.3798	1.2481	1.2131	1.2299	1.2752	1.3157	1.3393	1.3402	1.3157
12.0	2.5513	1.7545	1.5320	1.4494	1.4137	1.4271	1.4436	1.4469	1.4297	1.3888
15.0	3.6703	2.3915	2.0041	1.8357	1.7061	1.6639	1.6394	1.6091	1.5626	1.4955
20.0	5.9272	3.6349	2.9017	2.5538	2.2304	2.0759	1.9713	1.8771	1.7766	1.6628
25.0	8.6133	5.0720	3.9134	3.3455	2.7868	2.4986	2.3012	2.1351	1.9758	1.8124
30.0	11.6470	6.6592	5.0085	4.1868	3.3583	2.9193	2.6192	2.3755	2.1541	1.9399
35.0	14.9360	8.3483	6.1538	5.0522	3.9277	3.3252	2.9156	2.5907	2.3061	2.0413
40.0	18.3805	10.0880	7.3144	5.9153	4.4776	3.7039	3.1913	2.7744	2.4271	2.1136
45.0	21.8758	11.8253	8.4551	6.7699	4.9914	4.0439	3.4084	2.9202	2.5135	2.1545
50.0	25.3157	13.5076	9.5413	7.5307	5.4533	4.3348	3.5899	3.0257	2.5626	2.1629
55.0	28.5957	15.0837	10.5399	8.2339	5.8494	4.5679	3.7201	3.0857	2.5730	2.1384
60.0	31.6161	16.5056	11.4206	8.8382	6.1676	4.7361	3.7954	3.0991	2.5443	2.0819
65.0	34.2851	17.7303	12.1566	9.3252	6.3983	4.8342	3.8133	3.0654	2.4774	1.9949
70.0	36.5217	18.7205	12.7256	9.6801	6.5345	4.8593	3.7733	2.9857	2.3744	1.8803
75.0	38.2578	19.4460	13.1102	9.8921	6.5720	4.8106	3.6766	2.8624	2.2384	1.7414
80.0	39.4408	19.8849	13.2989	9.9549	6.5096	4.6896	3.5262	2.6992	2.0735	1.5825
85.0	40.0347	20.0239	13.2858	9.8664	6.3494	4.4999	3.3266	2.5012	1.8847	1.4084

α, deg \ θ_c, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0	90.0
1.0	.9868	.9667	.9182	.8428	.7427	.6211	.4816	.3284	.1663	-.0000
2.0	1.0186	.9927	.9387	.8582	.7536	.6281	.4855	.3301	.1666	-.0000
4.0	1.0817	1.0439	.9786	.8878	.7741	.6409	.4923	.3327	.1670	-.0000
6.0	1.1440	1.0937	1.0169	.9157	.7930	.6524	.4980	.3346	.1669	-.0000
8.0	1.2052	1.1420	1.0534	.9418	.8101	.6623	.5026	.3356	.1665	-.0000
10.0	1.2650	1.1885	1.0880	.9659	.8255	.6707	.5059	.3359	.1656	-.0000
12.0	1.3230	1.2330	1.1205	.9879	.8389	.6774	.5080	.3353	.1643	-.0000
15.0	1.4063	1.2955	1.1648	1.0169	.8554	.6846	.5089	.3329	.1617	-.0000
20.0	1.5328	1.3866	1.2259	1.0534	.8728	.6881	.5040	.3249	.1555	-.0000
25.0	1.6405	1.4591	1.2695	1.0743	.8769	.6812	.4916	.3121	.1470	-.0000
30.0	1.7261	1.5108	1.2944	1.0790	.8677	.6641	.4719	.2950	.1367	-.0000
35.0	1.7872	1.5401	1.2996	1.0673	.8455	.6372	.4457	.2740	.1247	-.0000
40.0	1.8217	1.5460	1.2851	1.0395	.8109	.6015	.4137	.2498	.1115	-.0000
45.0	1.8286	1.5286	1.2514	.9966	.7650	.5579	.3768	.2230	.0974	-.0000
50.0	1.8079	1.4881	1.1994	.9398	.7092	.5078	.3362	.1947	.0829	-.0000
55.0	1.7599	1.4260	1.1306	.8708	.6451	.4528	.2932	.1655	.0684	-.0000
60.0	1.6864	1.3441	1.0473	.7918	.5748	.3944	.2489	.1363	.0543	-.0000
65.0	1.5893	1.2448	.9520	.7052	.5004	.3346	.2048	.1082	.0412	-.0000
70.0	1.4718	1.1312	.8474	.6135	.4241	.2750	.1623	.0818	.0293	-.0000
75.0	1.3374	1.0067	.7369	.5195	.3482	.2175	.1225	.0581	.0191	-.0000
80.0	1.1902	.8752	.6238	.4262	.2751	.1639	.0867	.0377	.0109	-.0000
85.0	1.0346	.7406	.5114	.3364	.2069	.1157	.0561	.0213	.0048	-.0000

$\phi_1 = 150^0$; $\phi_2 = 210^0$; $\beta = 2^0$

α, deg \ θ_c, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.1633	.2370	.3148	.3919	.5387	.6709	.7840	.8744	.9394	.9769
2.0	.2632	.3181	.3890	.4620	.6032	.7304	.8384	.9235	.9828	1.0145
4.0	.5351	.5156	.5603	.6198	.7418	.8554	.9510	1.0237	1.0706	1.0898
6.0	.9021	.7592	.7612	.7967	.8928	.9882	1.0683	1.1266	1.1595	1.1651
8.0	1.3622	1.0479	.9908	.9950	1.0555	1.1280	1.1896	1.2315	1.2490	1.2401
10.0	1.9133	1.3803	1.2480	1.2127	1.2291	1.2741	1.3145	1.3379	1.3387	1.3142
12.0	2.5527	1.7546	1.5315	1.4487	1.4126	1.4258	1.4422	1.4454	1.4281	1.3872
15.0	3.6703	2.3908	2.0032	1.8346	1.7047	1.6623	1.6378	1.6074	1.5609	1.4938
20.0	5.9245	3.6327	2.8996	2.5517	2.2284	2.0738	1.9692	1.8750	1.7747	1.6609
25.0	8.6073	5.0680	3.9100	3.3425	2.7841	2.4961	2.2989	2.1328	1.9736	1.8104
30.0	11.6372	6.6533	5.0038	4.1828	3.3549	2.9163	2.6164	2.3728	2.1517	1.9377
35.0	14.9223	8.3404	6.1477	5.0471	3.9236	3.3216	2.9124	2.5878	2.3034	2.0389
40.0	18.3626	10.0779	7.3069	5.9091	4.4729	3.6998	3.1778	2.7713	2.4243	2.1111
45.0	21.8536	11.8131	8.4463	6.7627	4.9860	4.0394	3.4045	2.9176	2.5106	2.1520
50.0	25.2893	13.4934	9.5311	7.5226	5.4473	4.3300	3.5859	3.0223	2.5596	2.1604
55.0	28.5653	15.0675	10.5285	8.2249	5.8429	4.5628	3.7159	3.0822	2.5700	2.1359
60.0	31.5820	16.4877	11.4081	8.8285	6.1608	4.7308	3.7911	3.0956	2.5414	2.0795
65.0	34.2478	17.7109	12.1432	9.3149	6.3912	4.8288	3.8090	3.0619	2.4746	1.9926
70.0	36.4816	18.6999	12.7115	9.6694	6.5272	4.8539	3.7690	2.9823	2.3717	1.8781
75.0	38.2157	19.4245	13.0957	9.8812	6.5646	4.8052	3.6725	2.8592	2.2359	1.7394
80.0	39.3972	19.8629	13.2841	9.9438	6.5024	4.6843	3.5222	2.6962	2.0711	1.5807
85.0	39.9904	20.0017	13.2711	9.8554	6.3423	4.4949	3.3229	2.4984	1.8825	1.4068

α, deg \ θ_c, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0	90.0
1.0	.9857	.9656	.9171	.8418	.7418	.6204	.4810	.3280	.1661	-.0000
2.0	1.0174	.9915	.9376	.8571	.7527	.6273	.4849	.3297	.1664	-.0000
4.0	1.0805	1.0427	.9774	.8867	.7732	.6402	.4917	.3323	.1667	-.0000
6.0	1.1427	1.0925	1.0157	.9146	.7920	.6516	.4974	.3342	.1667	-.0000
8.0	1.2038	1.1407	1.0522	.9406	.8091	.6615	.5020	.3352	.1663	-.0000
10.0	1.2635	1.1872	1.0867	.9647	.8245	.6698	.5053	.3355	.1654	-.0000
12.0	1.3215	1.2316	1.1191	.9868	.8379	.6766	.5073	.3349	.1641	-.0000
15.0	1.4047	1.2940	1.1634	1.0157	.8544	.6837	.5082	.3325	.1615	-.0000
20.0	1.5310	1.3850	1.2245	1.0521	.8717	.6873	.5033	.3245	.1553	-.0000
25.0	1.6386	1.4574	1.2680	1.0730	.8758	.6804	.4910	.3118	.1469	-.0000
30.0	1.7241	1.5090	1.2928	1.0777	.8666	.6633	.4714	.2946	.1365	-.0000
35.0	1.7851	1.5383	1.2981	1.0660	.8444	.6365	.4452	.2737	.1245	-.0000
40.0	1.8195	1.5442	1.2836	1.0383	.8099	.6007	.4132	.2495	.1113	-.0000
45.0	1.8265	1.5268	1.2499	.9954	.7641	.5572	.3764	.2228	.0973	-.0000
50.0	1.8057	1.4864	1.1979	.9387	.7083	.5072	.3358	.1944	.0828	-.0000
55.0	1.7579	1.4243	1.1293	.8698	.6444	.4522	.2928	.1653	.0683	-.0000
60.0	1.6844	1.3425	1.0461	.7909	.5741	.3940	.2486	.1362	.0543	-.0000
65.0	1.5875	1.2433	.9509	.7043	.4998	.3342	.2046	.1081	.0412	-.0000
70.0	1.4701	1.1299	.8465	.6127	.4236	.2747	.1621	.0817	.0293	-.0000
75.0	1.3359	1.0056	.7361	.5189	.3478	.2173	.1223	.0580	.0191	-.0000
80.0	1.1888	.8742	.6231	.4257	.2748	.1637	.0866	.0377	.0109	-.0000
85.0	1.0334	.7397	.5108	.3360	.2067	.1156	.0560	.0213	.0048	-.0000

TABLE V. - CONTINUED

(a) C_N. Continued.

$\phi_1 = 135^\circ$; $\phi_2 = 225^\circ$; $\beta = 5^\circ$

α, deg \ θ_c, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.1969	.2424	.3073	.3755	.5090	.6308	.7356	.8196	.8800	.9148
2.0	.2843	.3138	.3729	.4378	.5662	.6836	.7839	.8631	.9185	.9482
4.0	.5188	.4868	.5234	.5757	.6886	.7942	.8836	.9519	.9963	1.0149
6.0	.8321	.6990	.6992	.7318	.8215	.9112	.9870	1.0427	1.0748	1.0814
8.0	1.2226	.9495	.8992	.9050	.9642	1.0340	1.0937	1.1350	1.1536	1.1473
10.0	1.6684	1.2370	1.1226	1.0946	1.1159	1.1620	1.2032	1.2284	1.2322	1.2124
12.0	2.2273	1.5601	1.3683	1.2997	1.2759	1.2955	1.3149	1.3224	1.3105	1.2761
15.0	3.1668	2.1081	1.7758	1.6339	1.5298	1.5005	1.4854	1.4636	1.4261	1.3689
20.0	5.0564	3.1749	2.5480	2.2530	1.9830	1.8572	1.7725	1.6955	1.6110	1.5130
25.0	7.3000	4.4050	3.4158	2.9331	2.4619	2.2212	2.0567	1.9172	1.7816	1.6405
30.0	9.8296	5.7610	4.3527	3.6536	2.9517	2.5815	2.3285	2.1218	1.9325	1.7473
35.0	12.5686	7.2018	5.3303	4.3924	3.4376	2.9272	2.5799	2.3033	2.0592	1.8303
40.0	15.4342	8.6834	6.3188	5.1273	3.9049	3.2477	2.8033	2.4559	2.1578	1.8869
45.0	18.3393	10.1610	7.2883	5.8359	4.3393	3.5333	2.9919	2.5752	2.2253	1.9154
50.0	21.1959	11.5897	8.2093	6.4965	4.7277	3.7753	3.1399	2.6575	2.2598	1.9149
55.0	23.9175	12.9259	9.0539	7.0893	5.0582	3.9664	3.2429	2.7002	2.2601	1.8855
60.0	26.4214	14.1292	9.7962	7.5961	5.3209	4.1007	3.2978	2.7022	2.2262	1.8281
65.0	28.6317	15.1629	10.4139	8.0015	5.5077	4.1743	3.3028	2.6632	2.1592	1.7443
70.0	30.4814	15.9957	10.8880	8.2933	5.6129	4.1847	3.2579	2.5846	2.0610	1.6368
75.0	31.9144	16.6022	11.2043	8.4626	5.6334	4.1318	3.1643	2.4687	1.9348	1.5088
80.0	32.8872	16.9640	11.3531	8.5041	5.5686	4.0172	3.0249	2.3190	1.7843	1.3641
85.0	33.3703	17.0702	11.3299	8.4168	5.4203	3.8442	2.8440	2.1401	1.6140	1.2073

α, deg \ θ_c, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0	90.0
1.0	.9229	.9040	.8586	.7881	.6946	.5809	.4504	.3072	.1555	-.0000
2.0	.9511	.9271	.8768	.8017	.7042	.5870	.4539	.3087	.1558	-.0000
4.0	1.0069	.9723	.9121	.8279	.7223	.5984	.4599	.3110	.1561	-.0000
6.0	1.0618	1.0162	.9458	.8524	.7388	.6083	.4648	.3125	.1560	-.0000
8.0	1.1156	1.0586	.9778	.8752	.7537	.6169	.4686	.3133	.1556	-.0000
10.0	1.1679	1.0993	1.0079	.8961	.7670	.6240	.4713	.3134	.1547	-.0000
12.0	1.2185	1.1379	1.0360	.9151	.7784	.6296	.4729	.3127	.1535	-.0000
15.0	1.2907	1.1919	1.0740	.9397	.7921	.6352	.4730	.3101	.1510	-.0000
20.0	1.3992	1.2695	1.1255	.9697	.8055	.6368	.4676	.3023	.1450	-.0000
25.0	1.4901	1.3298	1.1608	.9853	.8068	.6287	.4551	.2900	.1371	-.0000
30.0	1.5607	1.3710	1.1787	.9860	.7958	.6112	.4360	.2736	.1273	-.0000
35.0	1.6087	1.3917	1.1789	.9718	.7729	.5849	.4109	.2537	.1160	-.0000
40.0	1.6328	1.3913	1.1612	.9431	.7388	.5504	.3804	.2308	.1036	-.0000
45.0	1.6323	1.3700	1.1262	.9007	.6945	.5089	.3456	.2057	.0904	-.0000
50.0	1.6070	1.3282	1.0750	.8460	.6414	.4617	.3075	.1792	.0768	-.0000
55.0	1.5578	1.2673	1.0090	.7807	.5812	.4101	.2672	.1519	.0633	-.0000
60.0	1.4862	1.1891	.9305	.7066	.5155	.3558	.2260	.1248	.0502	-.0000
65.0	1.3944	1.0961	.8416	.6261	.4465	.3003	.1851	.0986	.0380	-.0000
70.0	1.2851	.9910	.7451	.5416	.3762	.2454	.1458	.0742	.0270	-.0000
75.0	1.1617	.8770	.6440	.4557	.3068	.1927	.1093	.0524	.0175	-.0000
80.0	1.0279	.7576	.5413	.3710	.2403	.1439	.0766	.0337	.0099	-.0000
85.0	.8879	.6364	.4401	.2900	.1788	.1004	.0489	.0187	.0043	-.0000

$\phi_1 = 135^\circ$; $\phi_2 = 225^\circ$; $\beta = 15^\circ$

α, deg \ θ_c, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.5191	.4201	.4220	.4518	.5411	.6366	.7232	.7939	.8445	.8726
2.0	.6234	.4918	.4843	.5102	.5948	.6863	.7686	.8348	.8808	.9040
4.0	.8752	.6594	.6262	.6400	.7100	.7903	.8623	.9183	.9539	.9668
6.0	1.1891	.8606	.7913	.7867	.8349	.9003	.9596	1.0036	1.0277	1.0293
8.0	1.5689	1.0964	.9790	.9495	.9690	1.0157	1.0599	1.0904	1.1017	1.0912
10.0	2.0166	1.3666	1.1884	1.1277	1.1116	1.1360	1.1628	1.1782	1.1757	1.1524
12.0	2.5326	1.6701	1.4185	1.3204	1.2621	1.2606	1.2678	1.2664	1.2492	1.2123
15.0	3.4300	2.1847	1.7998	1.6344	1.5008	1.4543	1.4281	1.3993	1.3579	1.2995
20.0	5.2295	3.1858	2.5217	2.2161	1.9269	1.7896	1.6983	1.6174	1.5318	1.4351
25.0	7.3612	4.3396	3.3323	2.8550	2.3771	2.1318	1.9652	1.8258	1.6922	1.5549
30.0	9.7611	5.6112	4.2069	3.5318	2.8376	2.4706	2.2208	2.0182	1.8340	1.6553
35.0	12.3570	6.9619	5.1192	4.2259	3.2944	2.7956	2.4571	2.1887	1.9531	1.7333
40.0	15.0705	8.3508	6.0415	4.9162	3.7337	3.0969	2.6672	2.3323	2.0459	1.7865
45.0	17.8199	9.7357	6.9459	5.5818	4.1422	3.3654	2.8445	2.4444	2.1094	1.8133
50.0	20.5221	11.0746	7.8049	6.2024	4.5073	3.5929	2.9837	2.5218	2.1418	1.8129
55.0	23.0956	12.3269	8.5925	6.7592	4.8181	3.7726	3.0805	2.5620	2.1420	1.7852
60.0	25.4626	13.4546	9.2850	7.2353	5.0650	3.8989	3.1321	2.5638	2.1102	1.7312
65.0	27.5516	14.4232	9.8611	7.6162	5.2406	3.9680	3.1368	2.5272	2.0472	1.6525
70.0	29.2995	15.2037	10.3036	7.8903	5.3396	3.9779	3.0945	2.4533	1.9549	1.5514
75.0	30.6533	15.7721	10.5990	8.0494	5.3588	3.9281	3.0065	2.3443	1.8362	1.4310
80.0	31.5722	16.1114	10.7383	8.0885	5.2979	3.8203	2.8755	2.2036	1.6947	1.2951
85.0	32.0283	16.2111	10.7173	8.0065	5.1585	3.6578	2.7055	2.0354	1.5346	1.1476

α, deg \ θ_c, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0	90.0
1.0	.8767	.8561	.8114	.7435	.6545	.5469	.4238	.2889	.1462	-.0000
2.0	.9031	.8778	.8285	.7564	.6635	.5527	.4270	.2903	.1465	-.0000
4.0	.9556	.9204	.8616	.7809	.6805	.5633	.4327	.2925	.1468	-.0000
6.0	1.0073	.9617	.8933	.8040	.6961	.5727	.4373	.2939	.1467	-.0000
8.0	1.0578	1.0015	.9234	.8254	.7101	.5807	.4409	.2947	.1463	-.0000
10.0	1.1070	1.0397	.9517	.8451	.7225	.5874	.4434	.2947	.1455	-.0000
12.0	1.1545	1.0761	.9781	.8629	.7333	.5927	.4449	.2940	.1443	-.0000
15.0	1.2224	1.1268	1.0139	.8860	.7462	.5979	.4451	.2917	.1420	-.0000
20.0	1.3244	1.1998	1.0623	.9143	.7588	.5994	.4399	.2843	.1364	-.0000
25.0	1.4099	1.2565	1.0954	.9290	.7600	.5918	.4282	.2727	.1289	-.0000
30.0	1.4763	1.2951	1.1123	.9296	.7496	.5754	.4102	.2573	.1197	-.0000
35.0	1.5214	1.3146	1.1125	.9162	.7281	.5506	.3866	.2386	.1091	-.0000
40.0	1.5441	1.3143	1.0958	.8892	.6960	.5182	.3579	.2171	.0974	-.0000
45.0	1.5436	1.2942	1.0629	.8494	.6544	.4793	.3252	.1935	.0850	-.0000
50.0	1.5198	1.2549	1.0148	.7980	.6046	.4348	.2894	.1685	.0723	-.0000
55.0	1.4736	1.1977	.9528	.7365	.5479	.3863	.2515	.1429	.0595	-.0000
60.0	1.4063	1.1242	.8789	.6669	.4862	.3352	.2128	.1174	.0472	-.0000
65.0	1.3199	1.0367	.7954	.5912	.4213	.2831	.1744	.0928	.0357	-.0000
70.0	1.2172	.9379	.7047	.5118	.3552	.2315	.1374	.0699	.0254	-.0000
75.0	1.1012	.8307	.6096	.4310	.2899	.1820	.1031	.0493	.0165	-.0000
80.0	.9754	.7184	.5130	.3514	.2274	.1360	.0724	.0317	.0093	-.0000
85.0	.8437	.6045	.4179	.2753	.1696	.0951	.0463	.0177	.0041	-.0000

TABLE V.- CONTINUED

(b) C_A

$\phi_1 = 0^0$; $\phi_2 = 360^0$; $\beta = 0^0$

α, deg \ θ_c, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.0041	.0155	.0344	.0606	.1342	.2342	.3574	.5001	.6580	.8263
2.0	.0050	.0164	.0352	.0614	.1349	.2347	.3578	.5003	.6580	.8261
4.0	.0084	.0199	.0387	.0647	.1379	.2371	.3595	.5012	.6580	.8252
6.0	.0133	.0258	.0444	.0702	.1427	.2410	.3623	.5027	.6581	.8237
8.0	.0193	.0333	.0524	.0779	.1495	.2465	.3662	.5048	.6582	.8217
10.0	.0265	.0420	.0622	.0877	.1581	.2535	.3712	.5075	.6584	.8191
12.0	.0348	.0518	.0732	.0994	.1685	.2620	.3773	.5108	.6585	.8160
15.0	.0491	.0685	.0917	.1191	.1875	.2774	.3883	.5167	.6589	.8103
20.0	.0779	.1006	.1267	.1561	.2256	.3099	.4115	.5292	.6595	.7983
25.0	.1120	.1375	.1657	.1968	.2671	.3482	.4401	.5447	.6603	.7836
30.0	.1502	.1778	.2076	.2396	.3097	.3873	.4716	.5625	.6612	.7665
35.0	.1915	.2204	.2510	.2832	.3517	.4248	.5015	.5807	.6623	.7475
40.0	.2346	.2640	.2945	.3261	.3915	.4589	.5272	.5951	.6619	.7274
45.0	.2782	.3072	.3369	.3670	.4278	.4884	.5474	.6038	.6565	.7051
50.0	.3210	.3488	.3768	.4046	.4595	.5121	.5611	.6056	.6446	.6778
55.0	.3616	.3874	.4129	.4379	.4855	.5291	.5676	.6000	.6258	.6446
60.0	.3988	.4219	.4443	.4657	.5050	.5389	.5664	.5869	.6000	.6056
65.0	.4315	.4513	.4699	.4872	.5174	.5410	.5575	.5664	.5676	.5611
70.0	.4587	.4746	.4890	.5018	.5222	.5355	.5410	.5389	.5291	.5121
75.0	.4796	.4911	.5009	.5089	.5194	.5222	.5174	.5050	.4855	.4595
80.0	.4935	.5004	.5054	.5085	.5089	.5018	.4872	.4657	.4379	.4046
85.0	.5001	.5021	.5022	.5004	.4911	.4746	.4513	.4219	.3874	.3488

α, deg \ θ_c, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0	90.0
1.0	.9998	1.1734	1.3417	1.4996	1.6423	1.7655	1.8655	1.9391	1.9842	1.9994
2.0	.9994	1.1727	1.3408	1.4985	1.6410	1.7640	1.8638	1.9374	1.9824	1.9976
4.0	.9976	1.1699	1.3371	1.4939	1.6357	1.7580	1.8573	1.9304	1.9752	1.9903
6.0	.9945	1.1653	1.3310	1.4863	1.6268	1.7480	1.8464	1.9188	1.9632	1.9731
8.0	.9903	1.1589	1.3224	1.4758	1.6144	1.7341	1.8312	1.9027	1.9465	1.9613
10.0	.9849	1.1507	1.3115	1.4623	1.5986	1.7163	1.8118	1.8821	1.9252	1.9397
12.0	.9784	1.1408	1.2982	1.4460	1.5795	1.6948	1.7883	1.8571	1.8993	1.9135
15.0	.9665	1.1227	1.2742	1.4163	1.5447	1.6556	1.7455	1.8118	1.8524	1.8660
20.0	.9415	1.0847	1.2235	1.3538	1.4715	1.5731	1.6556	1.7163	1.7535	1.7660
25.0	.9107	1.0378	1.1611	1.2767	1.3813	1.4715	1.5447	1.5986	1.6317	1.6428
30.0	.8750	.9835	1.0888	1.1875	1.2767	1.3538	1.4163	1.4623	1.4905	1.5000
35.0	.8355	.9235	1.0087	1.0888	1.1611	1.2235	1.2742	1.3115	1.3343	1.3420
40.0	.7934	.8594	.9235	.9835	1.0378	1.0847	1.1227	1.1507	1.1679	1.1736
45.0	.7500	.7934	.8355	.8750	.9107	.9415	.9665	.9849	.9962	1.0000
50.0	.7051	.7274	.7475	.7665	.7836	.7983	.8103	.8191	.8245	.8264
55.0	.6565	.6619	.6623	.6612	.6603	.6595	.6589	.6584	.6581	.6580
60.0	.6038	.5951	.5807	.5625	.5447	.5292	.5167	.5075	.5019	.5000
65.0	.5474	.5272	.5015	.4716	.4401	.4115	.3883	.3712	.3607	.3572
70.0	.4884	.4589	.4248	.3873	.3482	.3099	.2774	.2535	.2389	.2340
75.0	.4278	.3915	.3517	.3097	.2671	.2256	.1875	.1581	.1400	.1340
80.0	.3670	.3261	.2832	.2396	.1968	.1561	.1191	.0877	.0672	.0603
85.0	.3072	.2640	.2204	.1778	.1375	.1006	.0685	.0420	.0226	.0152

$\phi_1 = 0^0$; $\phi_2 = 360^0$; $\beta = 2^0$

α, deg \ θ_c, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.0053	.0167	.0355	.0617	.1352	.2349	.3579	.5004	.6580	.8260
2.0	.0062	.0176	.0364	.0625	.1359	.2355	.3583	.5006	.6580	.8258
4.0	.0095	.0211	.0398	.0658	.1388	.2379	.3600	.5015	.6581	.8249
6.0	.0142	.0269	.0456	.0713	.1437	.2418	.3628	.5030	.6581	.8234
8.0	.0201	.0343	.0536	.0790	.1504	.2473	.3668	.5051	.6582	.8214
10.0	.0272	.0429	.0633	.0888	.1590	.2543	.3718	.5078	.6584	.8189
12.0	.0355	.0527	.0742	.1004	.1694	.2628	.3779	.5111	.6586	.8157
15.0	.0498	.0692	.0925	.1200	.1884	.2782	.3887	.5170	.6589	.8100
20.0	.0785	.1013	.1274	.1569	.2263	.3106	.4120	.5295	.6595	.7981
25.0	.1125	.1380	.1663	.1974	.2677	.3487	.4406	.5449	.6603	.7833
30.0	.1507	.1783	.2081	.2401	.3102	.3878	.4720	.5627	.6612	.7663
35.0	.1920	.2208	.2514	.2836	.3521	.4252	.5017	.5809	.6623	.7474
40.0	.2350	.2644	.2949	.3264	.3918	.4592	.5274	.5952	.6618	.7272
45.0	.2785	.3075	.3372	.3672	.4281	.4886	.5475	.6038	.6564	.7049
50.0	.3212	.3490	.3770	.4048	.4597	.5122	.5612	.6056	.6446	.6777
55.0	.3618	.3876	.4131	.4380	.4856	.5292	.5676	.6000	.6257	.6445
60.0	.3989	.4221	.4444	.4658	.5051	.5389	.5664	.5869	.5999	.6054
65.0	.4316	.4514	.4700	.4872	.5174	.5410	.5575	.5663	.5675	.5610
70.0	.4588	.4746	.4890	.5018	.5222	.5354	.5410	.5388	.5290	.5119
75.0	.4797	.4911	.5009	.5089	.5194	.5222	.5173	.5049	.4854	.4594
80.0	.4936	.5004	.5054	.5084	.5089	.5017	.4871	.4656	.4378	.4046
85.0	.5001	.5021	.5022	.5004	.4911	.4746	.4513	.4219	.3874	.3488

α, deg \ θ_c, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0	90.0
1.0	.9992	1.1725	1.3405	1.4981	1.6406	1.7635	1.8633	1.9368	1.9818	1.9970
2.0	.9988	1.1718	1.3396	1.4970	1.6392	1.7620	1.8616	1.9350	1.9800	1.9951
4.0	.9970	1.1690	1.3359	1.4924	1.6339	1.7560	1.8551	1.9281	1.9728	1.9878
6.0	.9939	1.1644	1.3297	1.4848	1.6250	1.7460	1.8442	1.9165	1.9608	1.9757
8.0	.9897	1.1580	1.3212	1.4743	1.6127	1.7321	1.8290	1.9004	1.9441	1.9589
10.0	.9843	1.1498	1.3103	1.4608	1.5969	1.7144	1.8097	1.8799	1.9229	1.9373
12.0	.9778	1.1399	1.2970	1.4445	1.5778	1.6928	1.7862	1.8549	1.8970	1.9112
15.0	.9659	1.1218	1.2730	1.4148	1.5430	1.6537	1.7435	1.8096	1.8501	1.8638
20.0	.9410	1.0839	1.2224	1.3524	1.4699	1.5714	1.6536	1.7143	1.7514	1.7639
25.0	.9102	1.0371	1.1601	1.2755	1.3798	1.4699	1.5429	1.5967	1.6297	1.6408
30.0	.8745	.9828	1.0878	1.1864	1.2754	1.3523	1.4146	1.4606	1.4887	1.4982
35.0	.8351	.9228	1.0079	1.0877	1.1599	1.2222	1.2727	1.3099	1.3327	1.3404
40.0	.7931	.8589	.9227	.9826	1.0368	1.0835	1.1214	1.1494	1.1665	1.1722
45.0	.7497	.7929	.8349	.8742	.9098	.9405	.9654	.9838	.9950	.9988
50.0	.7048	.7270	.7470	.7658	.7828	.7975	.8094	.8182	.8235	.8253
55.0	.6562	.6615	.6619	.6607	.6597	.6588	.6581	.6576	.6573	.6572
60.0	.6035	.5948	.5804	.5621	.5442	.5287	.5162	.5070	.5013	.4994
65.0	.5472	.5270	.5012	.4714	.4398	.4112	.3879	.3708	.3603	.3568
70.0	.4882	.4588	.4246	.3871	.3479	.3096	.2772	.2533	.2386	.2337
75.0	.4277	.3913	.3515	.3096	.2670	.2254	.1874	.1579	.1399	.1338
80.0	.3669	.3260	.2831	.2395	.1967	.1560	.1190	.0877	.0671	.0602
85.0	.3072	.2640	.2204	.1778	.1374	.1006	.0684	.0420	.0226	.0152

TABLE V.- CONTINUED

(a) C_N. Concluded.

$\phi_1 = 150^\circ$; $\phi_2 = 210^\circ$; $\beta = 5^\circ$

θ_c, deg / α, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.1855	.2470	.3204	.3950	.5388	.6691	.7808	.8702	.9344	.9713
2.0	.2847	.3276	.3941	.4647	.6028	.7252	.8348	.9189	.9775	1.0087
4.0	.5550	.5238	.5643	.6204	.7406	.8525	.9467	1.0185	1.0648	1.0836
6.0	.9195	.7659	.7639	.7972	.8907	.9844	1.0632	1.1207	1.1531	1.1584
8.0	1.3767	1.0528	.9921	.9943	1.0523	1.1232	1.1838	1.2249	1.2420	1.2329
10.0	1.9243	1.3830	1.2476	1.2106	1.2248	1.2684	1.3078	1.3307	1.3311	1.3065
12.0	2.5596	1.7549	1.5293	1.4451	1.4071	1.4192	1.4347	1.4375	1.4200	1.3791
15.0	3.6701	2.3871	1.9979	1.8284	1.6974	1.6541	1.6291	1.5984	1.5519	1.4850
20.0	5.9099	3.6210	2.8886	2.5410	2.2177	2.0630	1.9585	1.8644	1.7643	1.6510
25.0	8.5755	5.0472	3.8927	3.3267	2.7698	2.4826	2.2859	2.1205	1.9620	1.7995
30.0	11.5862	6.6224	4.9795	4.1616	3.3370	2.9001	2.6015	2.3590	2.1389	1.9260
35.0	14.8502	8.2986	6.1160	5.0204	3.9021	3.3029	2.9056	2.5726	2.2897	2.0266
40.0	18.2686	10.0251	7.2679	5.8770	4.4878	3.6787	3.1593	2.7549	2.4098	2.0984
45.0	21.7373	11.7492	8.3999	6.7053	4.9577	4.0161	3.3846	2.9002	2.4955	2.1390
50.0	25.1511	13.4187	9.4778	7.4801	5.4161	4.3048	3.5647	3.0043	2.5443	2.1473
55.0	28.4061	14.9828	10.4689	8.1780	5.8092	4.5362	3.6940	3.0638	2.5546	2.1230
60.0	31.4036	16.3940	11.3428	8.7777	6.1250	4.7031	3.7687	3.0771	2.5261	2.0669
65.0	34.0523	17.6093	12.0733	9.2610	6.3539	4.8004	3.7865	3.0437	2.4598	1.9806
70.0	36.2719	18.5920	12.6379	9.6132	6.4891	4.8253	3.7468	2.9646	2.3576	1.8669
75.0	37.9949	19.3120	13.0197	9.8236	6.5263	4.7770	3.6508	2.8422	2.2225	1.7290
80.0	39.1689	19.7476	13.2069	9.8859	6.4644	4.6569	3.5015	2.6803	2.0589	1.5713
85.0	39.7582	19.8855	13.1939	9.7981	6.3053	4.4686	3.3034	2.4837	1.8715	1.3985

θ_c, deg / α, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0	90.0
1.0	.9799	.9597	.9115	.8365	.7372	.6164	.4780	.3259	.1650	-.0000
2.0	1.0114	.9856	.9318	.8518	.7479	.6233	.4817	.3276	.1653	-.0000
4.0	1.0741	1.0363	.9714	.8812	.7683	.6361	.4886	.3302	.1657	-.0000
6.0	1.1359	1.0858	1.0095	.9089	.7870	.6475	.4943	.3321	.1656	-.0000
8.0	1.1966	1.1338	1.0457	.9348	.8041	.6573	.4988	.3331	.1652	-.0000
10.0	1.2560	1.1799	1.0800	.9587	.8193	.6656	.5021	.3333	.1643	-.0000
12.0	1.3136	1.2241	1.1122	.9806	.8327	.6723	.5041	.3328	.1631	-.0000
15.0	1.3963	1.2861	1.1562	1.0093	.8490	.6794	.5049	.3304	.1605	-.0000
20.0	1.5218	1.3765	1.2169	1.0456	.8662	.6829	.5001	.3224	.1543	-.0000
25.0	1.6286	1.4485	1.2602	1.0663	.8703	.6761	.4879	.3098	.1459	-.0000
30.0	1.7136	1.4997	1.2848	1.0710	.8612	.6591	.4684	.2928	.1356	-.0000
35.0	1.7742	1.5288	1.2900	1.0593	.8391	.6324	.4424	.2719	.1237	-.0000
40.0	1.8084	1.5347	1.2757	1.0318	.8048	.5970	.4106	.2479	.1106	-.0000
45.0	1.8154	1.5174	1.2422	.9892	.7593	.5537	.3740	.2214	.0966	-.0000
50.0	1.7947	1.4773	1.1905	.9328	.7039	.5040	.3337	.1932	.0822	-.0000
55.0	1.7472	1.4156	1.1223	.8644	.6403	.4494	.2910	.1642	.0679	-.0000
60.0	1.6742	1.3343	1.0397	.7860	.5706	.3915	.2471	.1353	.0539	-.0000
65.0	1.5779	1.2357	.9450	.7000	.4967	.3321	.2033	.1074	.0409	-.0000
70.0	1.4613	1.1230	.8413	.6090	.4210	.2730	.1611	.0812	.0291	-.0000
75.0	1.3279	.9995	.7316	.5158	.3457	.2159	.1216	.0577	.0190	-.0000
80.0	1.1817	.8690	.6193	.4232	.2731	.1627	.0861	.0374	.0108	-.0000
85.0	1.0273	.7354	.5078	.3340	.2054	.1149	.0557	.0211	.0048	-.0000

$\phi_1 = 150^\circ$; $\phi_2 = 210^\circ$; $\beta = 15^\circ$

θ_c, deg / α, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.3712	.3395	.3723	.4237	.5397	.6521	.7508	.8305	.8876	.9199
2.0	.4751	.4159	.4417	.4893	.5999	.7077	.8016	.8763	.9281	.9550
4.0	.7383	.5999	.6016	.6357	.7295	.8245	.9068	.9699	1.0102	1.0254
6.0	1.0822	.8249	.7893	.8019	.8705	.9486	1.0164	1.0660	1.0932	1.0958
8.0	1.5121	1.0899	1.0038	.9872	1.0225	1.0791	1.1297	1.1640	1.1768	1.1657
10.0	2.0269	1.3936	1.2441	1.1905	1.1846	1.2156	1.2464	1.2634	1.2606	1.2350
12.0	2.6241	1.7345	1.5089	1.4110	1.3561	1.3573	1.3657	1.3638	1.3441	1.3032
15.0	3.6681	2.3123	1.9495	1.7714	1.6290	1.5783	1.5484	1.5151	1.4681	1.4028
20.0	5.7738	3.4360	2.7869	2.4413	2.1181	1.9627	1.8580	1.7652	1.6678	1.5589
25.0	8.2798	4.7312	3.7308	3.1800	2.6372	2.3571	2.1659	2.0060	1.8537	1.6905
30.0	11.1101	6.1588	4.7526	3.9650	3.1705	2.7496	2.4626	2.2302	2.0200	1.8174
35.0	14.1787	7.6759	5.8211	4.7724	3.7017	3.1283	2.7391	2.4310	2.1618	1.9120
40.0	17.3923	9.2368	6.9040	5.5777	4.2148	3.4816	2.9870	2.6024	2.2747	1.9794
45.0	20.6532	10.7946	7.9683	6.3564	4.6941	3.7988	3.1988	2.7390	2.3553	2.0176
50.0	23.8625	12.3021	8.9817	7.0848	5.1251	4.0703	3.3681	2.8369	2.4011	2.0254
55.0	26.9226	13.7138	9.9135	7.7410	5.4947	4.2878	3.4897	2.8929	2.4108	2.0026
60.0	29.7405	14.9873	10.7351	8.3048	5.7916	4.4447	3.5599	2.9053	2.3841	1.9499
65.0	32.2306	16.0839	11.4219	8.7591	6.0069	4.5363	3.5766	2.8739	2.3217	1.8688
70.0	34.3172	16.9706	11.9527	9.0903	6.1339	4.5597	3.5393	2.7996	2.2256	1.7618
75.0	35.9370	17.6206	12.3116	9.2881	6.1689	4.5142	3.4491	2.6845	2.0987	1.6322
80.0	37.0406	18.0141	12.4876	9.3467	6.1107	4.4013	3.3087	2.5323	1.9448	1.4839
85.0	37.5947	18.1395	12.4754	9.2641	5.9612	4.2243	3.1225	2.3475	1.7686	1.3215

θ_c, deg / α, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0	90.0
1.0	.9260	.9056	.8591	.7878	.6939	.5800	.4495	.3065	.1551	-.0000
2.0	.9557	.9299	.8782	.8022	.7040	.5864	.4531	.3020	.1554	-.0000
4.0	1.0145	.9776	.9155	.8298	.7231	.5985	.4595	.3105	.1558	-.0000
6.0	1.0727	1.0242	.9512	.8559	.7407	.6091	.4649	.3122	.1557	-.0000
8.0	1.1298	1.0692	.9853	.8802	.7567	.6184	.4691	.3132	.1553	-.0000
10.0	1.1856	1.1126	1.0176	.9027	.7711	.6262	.4722	.3134	.1545	-.0000
12.0	1.2397	1.1541	1.0479	.9233	.7836	.6325	.4741	.3129	.1533	-.0000
15.0	1.3175	1.2124	1.0892	.9503	.7990	.6391	.4749	.3107	.1509	-.0000
20.0	1.4355	1.2974	1.1462	.9844	.8152	.6425	.4704	.3032	.1451	-.0000
25.0	1.5359	1.3651	1.1870	1.0039	.8190	.6360	.4588	.2913	.1372	-.0000
30.0	1.6158	1.4133	1.2101	1.0082	.8104	.6201	.4405	.2753	.1275	-.0000
35.0	1.6728	1.4406	1.2150	.9973	.7897	.5950	.4161	.2557	.1163	-.0000
40.0	1.7050	1.4462	1.2015	.9714	.7574	.5616	.3862	.2331	.1040	-.0000
45.0	1.7115	1.4299	1.1700	.9314	.7146	.5210	.3518	.2082	.0909	-.0000
50.0	1.6921	1.3922	1.1215	.8784	.6625	.4743	.3139	.1817	.0773	-.0000
55.0	1.6474	1.3342	1.0574	.8140	.6028	.4229	.2737	.1544	.0638	-.0000
60.0	1.5787	1.2577	.9796	.7403	.5372	.3685	.2324	.1273	.0507	-.0000
65.0	1.4882	1.1651	.8907	.6595	.4678	.3126	.1913	.1010	.0385	-.0000
70.0	1.3786	1.0591	.7931	.5739	.3966	.2570	.1516	.0764	.0274	-.0000
75.0	1.2532	.9430	.6900	.4863	.3258	.2034	.1145	.0543	.0179	-.0000
80.0	1.1158	.8203	.5844	.3992	.2575	.1534	.0811	.0352	.0102	-.0000
85.0	.9706	.6947	.4796	.3154	.1939	.1084	.0525	.0199	.0045	-.0000

TABLE V. - CONTINUED

(b) C_A. Continued.

$\beta_1 = -90^\circ$; $\beta_2 = 90^\circ$; $\beta = 0^\circ$

α, deg \ θ_c, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.0022	.0116	.0286	.0530	.1231	.2199	.3403	.4808	.6371	.8044
2.0	.0011	.0087	.0237	.0462	.1127	.2062	.3238	.4618	.6163	.7823
4.0	.0005	.0046	.0158	.0344	.0936	.1802	.2916	.4245	.5748	.7379
6.0	.0003	.0028	.0102	.0250	.0765	.1560	.2609	.3881	.5337	.6934
8.0	.0002	.0020	.0070	.0179	.0617	.1337	.2319	.3529	.4933	.6489
10.0	.0002	.0016	.0054	.0133	.0492	.1136	.2044	.3190	.4538	.6047
12.0	.0002	.0013	.0044	.0106	.0390	.0956	.1789	.2866	.4152	.5610
15.0	.0001	.0010	.0034	.0080	.0293	.0728	.1445	.2411	.3597	.4968
20.0	.0001	.0007	.0023	.0055	.0191	.0468	.0980	.1749	.2750	.3953
25.0	.0001	.0005	.0017	.0040	.0137	.0330	.0665	.1223	.2020	.3033
30.0	.0000	.0004	.0012	.0029	.0100	.0240	.0477	.0850	.1432	.2235
35.0	.0000	.0003	.0009	.0022	.0074	.0176	.0347	.0611	.1001	.1534
40.0	.0000	.0002	.0007	.0016	.0054	.0129	.0251	.0440	.0712	.1100
45.0	.0000	.0001	.0005	.0011	.0038	.0091	.0179	.0312	.0502	.0767
50.0	.0000	.0001	.0003	.0008	.0026	.0063	.0124	.0215	.0345	.0524
55.0	.0000	.0001	.0002	.0005	.0018	.0042	.0082	.0142	.0227	.0345
60.0	.0000	.0000	.0001	.0003	.0011	.0026	.0051	.0089	.0142	.0215
65.0	.0000	.0000	.0001	.0002	.0006	.0015	.0030	.0051	.0082	.0124
70.0	.0000	.0000	.0000	.0001	.0003	.0008	.0015	.0026	.0042	.0063
75.0	.0000	.0000	.0000	.0000	.0001	.0003	.0006	.0011	.0018	.0026
80.0	.0000	.0000	.0000	.0000	.0000	.0001	.0002	.0003	.0005	.0008
85.0	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0001	.0001

α, deg \ θ_c, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0	90.0
1.0	.9776	1.1515	1.3208	1.4804	1.6253	1.7513	1.8544	1.9315	1.9803	1.9994
2.0	.9550	1.1290	1.2991	1.4600	1.6070	1.7355	1.8416	1.9222	1.9747	1.9976
4.0	.9090	1.0827	1.2538	1.4172	1.5678	1.7011	1.8130	1.9001	1.9598	1.9903
6.0	.8622	1.0350	1.2066	1.3717	1.5254	1.6629	1.7802	1.8736	1.9402	1.9781
8.0	.8148	.9861	1.1575	1.3238	1.4800	1.6213	1.7434	1.8427	1.9160	1.9613
10.0	.7672	.9363	1.1069	1.2737	1.4318	1.5764	1.7029	1.8076	1.8874	1.9397
12.0	.7194	.8858	1.0549	1.2217	1.3811	1.5283	1.6588	1.7686	1.8544	1.9135
15.0	.6482	.8092	.9750	1.1406	1.3069	1.4610	1.5864	1.7029	1.7971	1.8660
20.0	.5323	.6817	.8390	.9994	1.1580	1.3101	1.4510	1.5764	1.6825	1.7660
25.0	.4230	.5576	.7028	.8544	1.0077	1.1530	1.3009	1.4318	1.5470	1.6428
30.0	.3237	.4406	.5707	.7100	.8544	.9994	1.1406	1.2737	1.3948	1.5000
35.0	.2373	.3343	.4466	.5707	.7026	.8390	.9750	1.1069	1.2304	1.3420
40.0	.1665	.2420	.3343	.4406	.5576	.6817	.8092	.9363	1.0590	1.1736
45.0	.1134	.1665	.2373	.3237	.4230	.5323	.6482	.7672	.8657	1.0000
50.0	.0767	.1100	.1584	.2235	.3033	.3953	.4969	.6047	.7157	.8264
55.0	.0502	.0712	.1001	.1432	.2020	.2750	.3597	.4538	.5542	.6580
60.0	.0312	.0440	.0611	.0850	.1223	.1749	.2411	.3190	.4062	.5000
65.0	.0179	.0251	.0347	.0477	.0665	.0980	.1445	.2044	.2761	.3572
70.0	.0091	.0128	.0176	.0240	.0330	.0468	.0720	.1136	.1678	.2340
75.0	.0038	.0054	.0074	.0100	.0137	.0191	.0293	.0492	.0848	.1340
80.0	.0011	.0016	.0022	.0029	.0040	.0055	.0080	.0133	.0294	.0603
85.0	.0001	.0002	.0003	.0004	.0005	.0007	.0010	.0016	.0034	.0152

$\beta_1 = -90^\circ$; $\beta_2 = 90^\circ$; $\beta = 2^\circ$

α, deg \ θ_c, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.0034	.0128	.0298	.0541	.1241	.2207	.3409	.4812	.6371	.8041
2.0	.0023	.0099	.0249	.0474	.1137	.2070	.3244	.4622	.6163	.7821
4.0	.0014	.0058	.0169	.0356	.0946	.1810	.2922	.4249	.5749	.7377
6.0	.0009	.0039	.0114	.0261	.0776	.1569	.2616	.3885	.5339	.6933
8.0	.0007	.0029	.0082	.0191	.0628	.1348	.2325	.3534	.4936	.6488
10.0	.0006	.0023	.0064	.0144	.0503	.1145	.2052	.3195	.4540	.6047
12.0	.0005	.0019	.0052	.0116	.0401	.0965	.1797	.2871	.4155	.5610
15.0	.0004	.0015	.0041	.0089	.0294	.0738	.1453	.2417	.3601	.4969
20.0	.0003	.0011	.0029	.0062	.0200	.0479	.0989	.1756	.2755	.3956
25.0	.0002	.0008	.0021	.0046	.0144	.0339	.0675	.1231	.2026	.3036
30.0	.0002	.0006	.0016	.0034	.0106	.0248	.0485	.0858	.1438	.2240
35.0	.0001	.0005	.0012	.0025	.0079	.0182	.0354	.0619	.1008	.1509
40.0	.0001	.0004	.0009	.0019	.0058	.0133	.0258	.0447	.0719	.1105
45.0	.0001	.0003	.0007	.0014	.0042	.0096	.0184	.0318	.0508	.0773
50.0	.0001	.0002	.0005	.0010	.0030	.0067	.0129	.0220	.0351	.0530
55.0	.0001	.0002	.0004	.0007	.0020	.0045	.0086	.0147	.0233	.0350
60.0	.0000	.0001	.0003	.0005	.0013	.0029	.0055	.0093	.0146	.0219
65.0	.0000	.0001	.0002	.0003	.0008	.0017	.0032	.0054	.0085	.0127
70.0	.0000	.0001	.0001	.0002	.0005	.0009	.0017	.0029	.0044	.0066
75.0	.0000	.0000	.0001	.0001	.0002	.0005	.0009	.0013	.0019	.0028
80.0	.0000	.0000	.0000	.0001	.0001	.0002	.0003	.0004	.0006	.0009
85.0	.0000	.0000	.0000	.0000	.0000	.0001	.0001	.0001	.0001	.0002

α, deg \ θ_c, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0	90.0
1.0	.9770	1.1506	1.3196	1.4789	1.6236	1.7493	1.8522	1.9292	1.9779	1.9970
2.0	.9544	1.1281	1.2979	1.4585	1.6052	1.7335	1.8395	1.9199	1.9723	1.9951
4.0	.9085	1.0819	1.2527	1.4158	1.5661	1.6991	1.8109	1.8978	1.9574	1.9878
6.0	.8617	1.0342	1.2055	1.3703	1.5238	1.6611	1.7781	1.8717	1.9379	1.9757
8.0	.8145	.9854	1.1565	1.3225	1.4784	1.6195	1.7414	1.8405	1.9137	1.9509
10.0	.7669	.9357	1.1059	1.2725	1.4303	1.5746	1.7009	1.8055	1.8851	1.9373
12.0	.7192	.8852	1.0540	1.2205	1.3797	1.5266	1.6569	1.7665	1.8521	1.9112
15.0	.6480	.8087	.9743	1.1395	1.2995	1.4493	1.5845	1.7009	1.7949	1.8638
20.0	.5323	.6814	.8384	.9985	1.1568	1.3087	1.4493	1.5745	1.6804	1.7639
25.0	.4231	.5574	.7024	.8537	1.0067	1.1568	1.2994	1.4301	1.5451	1.6408
30.0	.3239	.4405	.5704	.7095	.8536	.9983	1.1393	1.2722	1.3931	1.4982
35.0	.2376	.3344	.4465	.5703	.7022	.8381	.9739	1.1056	1.2290	1.3404
40.0	.1669	.2422	.3343	.4403	.5571	.6810	.8083	.9352	1.0577	1.1722
45.0	.1139	.1668	.2374	.3236	.4227	.5318	.6475	.7663	.8846	.9988
50.0	.0772	.1103	.1586	.2235	.3031	.3950	.4963	.6040	.7148	.8253
55.0	.0507	.0716	.1004	.1433	.2020	.2748	.3594	.4533	.5535	.6572
60.0	.0316	.0443	.0614	.0852	.1224	.1748	.2407	.3186	.4057	.4994
65.0	.0182	.0254	.0350	.0479	.0667	.0981	.1444	.2042	.2757	.3568
70.0	.0094	.0130	.0178	.0242	.0331	.0469	.0729	.1135	.1676	.2337
75.0	.0040	.0055	.0075	.0102	.0138	.0192	.0284	.0492	.0847	.1338
80.0	.0013	.0017	.0023	.0031	.0041	.0056	.0081	.0133	.0294	.0602
85.0	.0002	.0003	.0003	.0004	.0005	.0007	.0010	.0016	.0034	.0152

TABLE V. - CONTINUED

(b) C_A. Continued.

$\beta_1 = 0^\circ$; $\beta_2 = 360^\circ$; $\beta = 5^\circ$

α, deg \ θ_c, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.0109	.0229	.0416	.0675	.1403	.2391	.3609	.5020	.6581	.8245
2.0	.0117	.0238	.0424	.0683	.1410	.2397	.3613	.5022	.6581	.8242
4.0	.0134	.0272	.0459	.0716	.1439	.2420	.3630	.5031	.6581	.8234
6.0	.0187	.0325	.0516	.0771	.1487	.2459	.3658	.5046	.6582	.8219
8.0	.0243	.0394	.0593	.0847	.1554	.2514	.3697	.5067	.6583	.8199
10.0	.0312	.0476	.0685	.0944	.1640	.2583	.3746	.5094	.6585	.8174
12.0	.0392	.0571	.0791	.1056	.1743	.2667	.3807	.5126	.6586	.8143
15.0	.0533	.0732	.0969	.1246	.1931	.2820	.3916	.5185	.6589	.8086
20.0	.0817	.1048	.1311	.1607	.2303	.3142	.4146	.5309	.6596	.7967
25.0	.1154	.1411	.1695	.2007	.2710	.3518	.4430	.5462	.6604	.7821
30.0	.1532	.1809	.2108	.2429	.3129	.3902	.4740	.5639	.6613	.7651
35.0	.1942	.2231	.2537	.2859	.3542	.4270	.5032	.5817	.6623	.7463
40.0	.2369	.2663	.2968	.3282	.3935	.4606	.5284	.5957	.6617	.7263
45.0	.2801	.3091	.3387	.3687	.4293	.4896	.5482	.6040	.6561	.7060
50.0	.3225	.3503	.3781	.4059	.4606	.5128	.5615	.6055	.6441	.6767
55.0	.3628	.3885	.4140	.4388	.4862	.5295	.5676	.5997	.6252	.6435
60.0	.3997	.4227	.4450	.4663	.5054	.5390	.5663	.5865	.5993	.6045
65.0	.4321	.4518	.4703	.4876	.5176	.5410	.5573	.5659	.5668	.5602
70.0	.4591	.4749	.4892	.5019	.5223	.5353	.5407	.5384	.5284	.5113
75.0	.4798	.4913	.5010	.5090	.5193	.5220	.5171	.5046	.4850	.4589
80.0	.4936	.5004	.5054	.5084	.5088	.5016	.4869	.4654	.4375	.4042
85.0	.5001	.5021	.5022	.5003	.4910	.4745	.4511	.4218	.3872	.3486

α, deg \ θ_c, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0	90.0
1.0	.9961	1.1676	1.3340	1.4901	1.6312	1.7530	1.8518	1.9246	1.9692	1.9842
2.0	.9956	1.1670	1.3331	1.4890	1.6299	1.7515	1.8502	1.9229	1.9674	1.9824
4.0	.9938	1.1642	1.3294	1.4845	1.6246	1.7456	1.8437	1.9160	1.9602	1.9751
6.0	.9908	1.1596	1.3233	1.4770	1.6158	1.7356	1.8329	1.9045	1.9483	1.9631
8.0	.9866	1.1533	1.3149	1.4665	1.6035	1.7218	1.8178	1.8885	1.9318	1.9464
10.0	.9812	1.1451	1.3040	1.4531	1.5879	1.7042	1.7985	1.8680	1.9106	1.9250
12.0	.9748	1.1352	1.2909	1.4369	1.5689	1.6828	1.7752	1.8433	1.8850	1.8990
15.0	.9630	1.1173	1.2670	1.4074	1.5343	1.6439	1.7328	1.7982	1.8383	1.8519
20.0	.9382	1.0796	1.2167	1.3454	1.4617	1.5621	1.6435	1.7035	1.7403	1.7526
25.0	.9076	1.0331	1.1548	1.2689	1.3721	1.4612	1.5335	1.5867	1.6193	1.6303
30.0	.8722	.9792	1.0830	1.1804	1.2684	1.3444	1.4060	1.4514	1.4792	1.4886
35.0	.8330	.9196	1.0036	1.0824	1.1536	1.2151	1.2650	1.3017	1.3242	1.3318
40.0	.7912	.8560	.9189	.9780	1.0313	1.0773	1.1147	1.1422	1.1591	1.1647
45.0	.7481	.7905	.8317	.8703	.9051	.9352	.9597	.9777	.9887	.9924
50.0	.7034	.7250	.7444	.7625	.7790	.7932	.8047	.8131	.8183	.8201
55.0	.6549	.6599	.6597	.6581	.6566	.6554	.6544	.6536	.6531	.6530
60.0	.6024	.5934	.5787	.5601	.5419	.5261	.5133	.5039	.4981	.4962
65.0	.5463	.5258	.4999	.4699	.4381	.4093	.3859	.3686	.3581	.3545
70.0	.4874	.4579	.4236	.3860	.3468	.3084	.2758	.2518	.2371	.2322
75.0	.4271	.3907	.3508	.3088	.2662	.2247	.1866	.1571	.1390	.1330
80.0	.3665	.3256	.2826	.2391	.1963	.1556	.1186	.0873	.0668	.0598
85.0	.3076	.2638	.2202	.1776	.1373	.1004	.0683	.0419	.0225	.0151

$\beta_1 = 0^\circ$; $\beta_2 = 360^\circ$; $\beta = 15^\circ$

α, deg \ θ_c, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.0493	.0686	.0919	.1193	.1877	.2776	.3884	.5168	.6589	.8102
2.0	.0498	.0692	.0925	.1200	.1884	.2782	.3889	.5170	.6589	.8100
4.0	.0518	.0715	.0950	.1227	.1911	.2804	.3904	.5179	.6589	.8092
6.0	.0551	.0753	.0992	.1270	.1956	.2841	.3930	.5193	.6590	.8079
8.0	.0597	.0804	.1048	.1330	.2017	.2892	.3967	.5213	.6591	.8060
10.0	.0655	.0869	.1118	.1405	.2094	.2957	.4014	.5238	.6592	.8036
12.0	.0725	.0946	.1202	.1493	.2185	.3036	.4070	.5268	.6594	.8006
15.0	.0849	.1083	.1349	.1647	.2344	.3180	.4173	.5324	.6597	.7953
20.0	.1106	.1360	.1642	.1952	.2655	.3467	.4390	.5440	.6603	.7847
25.0	.1416	.1687	.1983	.2301	.3004	.3783	.4648	.5584	.6610	.7704
30.0	.1766	.2051	.2355	.2677	.3369	.4118	.4912	.5745	.6619	.7544
35.0	.2147	.2439	.2746	.3065	.3735	.4437	.5160	.5891	.6625	.7368
40.0	.2545	.2838	.3140	.3450	.4085	.4730	.5372	.5998	.6602	.7178
45.0	.2948	.3235	.3526	.3819	.4406	.4982	.5535	.6053	.6527	.6953
50.0	.3344	.3617	.3889	.4159	.4686	.5183	.5640	.6046	.6393	.6677
55.0	.3720	.3972	.4219	.4460	.4915	.5325	.5680	.5972	.6195	.6346
60.0	.4066	.4290	.4506	.4711	.5084	.5400	.5651	.5830	.5933	.5961
65.0	.4369	.4560	.4739	.4904	.5188	.5406	.5551	.5619	.5610	.5525
70.0	.4621	.4774	.4911	.5032	.5223	.5340	.5381	.5344	.5232	.5048
75.0	.4814	.4924	.5017	.5092	.5186	.5204	.5145	.5011	.4807	.4538
80.0	.4942	.5007	.5054	.5081	.5079	.5001	.4849	.4628	.4345	.4008
85.0	.5002	.5020	.5019	.5000	.4904	.4735	.4500	.4204	.3857	.3469

α, deg \ θ_c, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0	90.0
1.0	.9664	1.1225	1.2739	1.4159	1.5443	1.6551	1.7450	1.8112	1.8518	1.8655
2.0	.9659	1.1218	1.2730	1.4148	1.5430	1.6537	1.7435	1.8096	1.8501	1.8638
4.0	.9642	1.1193	1.2696	1.4106	1.5381	1.6481	1.7373	1.8031	1.8434	1.8569
6.0	.9614	1.1150	1.2638	1.4035	1.5298	1.6388	1.7272	1.7923	1.8322	1.8456
8.0	.9575	1.1090	1.2559	1.3937	1.5182	1.6258	1.7130	1.7773	1.8166	1.8299
10.0	.9524	1.1013	1.2457	1.3811	1.5035	1.6092	1.6949	1.7581	1.7967	1.8098
12.0	.9463	1.0920	1.2333	1.3659	1.4857	1.5891	1.6730	1.7348	1.7726	1.7854
15.0	.9353	1.0752	1.2108	1.3381	1.4532	1.5525	1.6331	1.6924	1.7288	1.7410
20.0	.9119	1.0397	1.1636	1.2798	1.3849	1.4756	1.5492	1.6034	1.6366	1.6477
25.0	.8832	.9960	1.1053	1.2080	1.3007	1.3808	1.4457	1.4936	1.5229	1.5327
30.0	.8499	.9453	1.0379	1.1247	1.2032	1.2709	1.3259	1.3664	1.3912	1.3995
35.0	.8130	.8893	.9632	1.0326	1.0953	1.1494	1.1933	1.2256	1.2455	1.2521
40.0	.7738	.8295	.8836	.9344	.9803	1.0199	1.0520	1.0757	1.0901	1.0950
45.0	.7331	.7679	.8016	.8331	.8617	.8863	.9062	.9210	.9300	.9330
50.0	.6898	.7062	.7195	.7319	.7430	.7527	.7605	.7663	.7698	.7710
55.0	.6426	.6439	.6399	.6337	.6280	.6232	.6192	.6163	.6145	.6139
60.0	.5914	.5800	.5627	.5415	.5201	.5016	.4866	.4756	.4688	.4665
65.0	.5369	.5148	.4873	.4559	.4226	.3918	.3668	.3484	.3371	.3333
70.0	.4799	.4493	.4142	.3759	.3360	.2969	.2633	.2386	.2234	.2183
75.0	.4214	.3845	.3443	.3020	.2592	.2176	.1794	.1495	.1312	.1250
80.0	.3628	.3217	.2786	.2351	.1923	.1518	.1151	.0839	.0632	.0563
85.0	.3052	.2620	.2184	.1758	.1356	.0990	.0670	.0408	.0216	.0142

TABLE V. - CONTINUED

(b) C_A. Continued.

$\phi_1 = -90^\circ$; $\phi_2 = 90^\circ$; $\beta = 5^\circ$

α, deg \ θ_c, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.0088	.0191	.0359	.0600	.1293	.2249	.3440	.4829	.6374	.8027
2.0	.0073	.0161	.0310	.0532	.1190	.2113	.3275	.4640	.6167	.7808
4.0	.0052	.0118	.0231	.0415	.0999	.1855	.2956	.4270	.5755	.7368
6.0	.0039	.0090	.0176	.0322	.0830	.1615	.2651	.3909	.5348	.6926
8.0	.0031	.0072	.0140	.0251	.0683	.1394	.2363	.3559	.4947	.6484
10.0	.0025	.0059	.0115	.0204	.0559	.1194	.2091	.3222	.4554	.6046
12.0	.0021	.0050	.0096	.0171	.0458	.1016	.1838	.2901	.4172	.5612
15.0	.0017	.0040	.0077	.0136	.0352	.0790	.1496	.2449	.3621	.4975
20.0	.0013	.0029	.0056	.0098	.0248	.0532	.1035	.1792	.2780	.3968
25.0	.0010	.0023	.0043	.0074	.0184	.0386	.0723	.1271	.2056	.3055
30.0	.0008	.0018	.0034	.0057	.0139	.0288	.0529	.0901	.1472	.2263
35.0	.0007	.0015	.0027	.0045	.0106	.0216	.0393	.0658	.1045	.1617
40.0	.0006	.0012	.0021	.0035	.0081	.0162	.0291	.0482	.0754	.1136
45.0	.0005	.0010	.0017	.0028	.0062	.0121	.0213	.0349	.0540	.0802
50.0	.0004	.0008	.0014	.0022	.0046	.0088	.0153	.0247	.0378	.0557
55.0	.0004	.0007	.0011	.0017	.0034	.0063	.0107	.0170	.0257	.0374
60.0	.0003	.0005	.0009	.0013	.0025	.0044	.0072	.0112	.0167	.0240
65.0	.0003	.0004	.0007	.0010	.0018	.0029	.0046	.0070	.0102	.0144
70.0	.0002	.0004	.0005	.0007	.0012	.0019	.0028	.0041	.0058	.0079
75.0	.0002	.0003	.0004	.0005	.0008	.0012	.0016	.0022	.0030	.0039
80.0	.0002	.0002	.0003	.0003	.0005	.0006	.0008	.0011	.0013	.0016
85.0	.0002	.0002	.0002	.0002	.0003	.0003	.0004	.0004	.0005	.0005

α, deg \ θ_c, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0	90.0
1.0	.9740	1.1459	1.3133	1.4710	1.6143	1.7388	1.8408	1.9171	1.9654	1.9842
2.0	.9515	1.1236	1.2917	1.4508	1.5961	1.7232	1.8281	1.9078	1.9597	1.9824
4.0	.9059	1.0776	1.2468	1.4083	1.5572	1.6890	1.7997	1.8859	1.9450	1.9751
6.0	.8594	1.0303	1.1999	1.3632	1.5152	1.6512	1.7672	1.8596	1.9255	1.9631
8.0	.8124	.9818	1.1512	1.3157	1.4701	1.6099	1.7307	1.8289	1.9015	1.9464
10.0	.7652	.9323	1.1010	1.2660	1.4223	1.5653	1.6905	1.7941	1.8731	1.9250
12.0	.7178	.8822	1.0494	1.2143	1.3720	1.5176	1.6467	1.7554	1.8403	1.8990
15.0	.6471	.8062	.9701	1.1338	1.2923	1.4408	1.5748	1.6902	1.7835	1.8519
20.0	.5321	.6797	.8351	.9937	1.1506	1.3010	1.4405	1.5646	1.6697	1.7526
25.0	.4236	.5565	.7000	.8498	1.0014	1.1501	1.2915	1.4212	1.5353	1.6303
30.0	.3250	.4404	.5688	.7065	.8493	.9927	1.1324	1.2643	1.3842	1.4886
35.0	.2393	.3349	.4457	.5682	.6988	.8335	.9681	1.0987	1.2212	1.3318
40.0	.1690	.2433	.3343	.4391	.5547	.6774	.8036	.9294	1.0510	1.1647
45.0	.1163	.1683	.2380	.3231	.4212	.5291	.6438	.7616	.8790	.9924
50.0	.0796	.1123	.1597	.2237	.3024	.3932	.4936	.6003	.7103	.8201
55.0	.0529	.0736	.1019	.1440	.2019	.2738	.3575	.4505	.5500	.6530
60.0	.0336	.0462	.0629	.0863	.1227	.1744	.2398	.3168	.4031	.4962
65.0	.0199	.0270	.0364	.0490	.0674	.0982	.1439	.2031	.2740	.3545
70.0	.0107	.0143	.0190	.0252	.0339	.0474	.0728	.1129	.1666	.2322
75.0	.0051	.0066	.0085	.0110	.0145	.0197	.0286	.0491	.0842	.1330
80.0	.0020	.0024	.0029	.0036	.0046	.0060	.0084	.0134	.0292	.0598
85.0	.0006	.0006	.0007	.0007	.0008	.0009	.0012	.0017	.0035	.0151

$\phi_1 = -90^\circ$; $\phi_2 = 90^\circ$; $\beta = 15^\circ$

α, deg \ θ_c, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.0456	.0638	.0858	.1119	.1774	.2643	.3726	.4989	.6394	.7898
2.0	.0423	.0595	.0804	.1052	.1677	.2515	.3571	.4811	.6199	.7692
4.0	.0366	.0519	.0706	.0930	.1498	.2272	.3271	.4463	.5812	.7278
6.0	.0319	.0456	.0623	.0824	.1338	.2047	.2984	.4123	.5429	.6862
8.0	.0281	.0402	.0552	.0733	.1197	.1839	.2713	.3795	.5052	.6447
10.0	.0249	.0358	.0492	.0655	.1073	.1651	.2457	.3478	.4683	.6035
12.0	.0222	.0320	.0441	.0588	.0965	.1483	.2220	.3176	.4324	.5627
15.0	.0190	.0274	.0378	.0504	.0829	.1270	.1898	.2752	.3808	.5029
20.0	.0152	.0218	.0300	.0399	.0654	.0997	.1465	.2134	.3015	.4082
25.0	.0126	.0179	.0244	.0323	.0526	.0795	.1153	.1644	.2335	.3223
30.0	.0107	.0150	.0203	.0267	.0428	.0641	.0919	.1285	.1785	.2479
35.0	.0092	.0128	.0171	.0223	.0352	.0520	.0736	.1014	.1377	.1871
40.0	.0081	.0111	.0146	.0187	.0291	.0423	.0590	.0800	.1068	.1415
45.0	.0072	.0097	.0125	.0159	.0241	.0344	.0471	.0628	.0824	.1071
50.0	.0065	.0085	.0108	.0135	.0199	.0279	.0375	.0490	.0630	.0803
55.0	.0059	.0075	.0094	.0115	.0164	.0225	.0295	.0378	.0475	.0592
60.0	.0054	.0067	.0082	.0098	.0135	.0179	.0230	.0288	.0353	.0428
65.0	.0050	.0060	.0071	.0083	.0110	.0141	.0176	.0214	.0256	.0302
70.0	.0047	.0054	.0062	.0071	.0090	.0110	.0132	.0156	.0181	.0206
75.0	.0044	.0049	.0055	.0060	.0072	.0084	.0097	.0110	.0122	.0134
80.0	.0041	.0045	.0048	.0051	.0057	.0063	.0069	.0074	.0078	.0082
85.0	.0039	.0041	.0042	.0043	.0045	.0047	.0047	.0047	.0047	.0046

α, deg \ θ_c, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0	90.0
1.0	.9456	1.1021	1.2544	1.3980	1.5284	1.6418	1.7346	1.8041	1.8482	1.8655
2.0	.9245	1.0810	1.2341	1.3790	1.5113	1.6271	1.7228	1.7954	1.8429	1.8638
4.0	.8816	1.0378	1.1919	1.3390	1.4747	1.5950	1.6960	1.7748	1.8290	1.8569
6.0	.8379	.9933	1.1478	1.2966	1.4352	1.5594	1.6654	1.7501	1.8108	1.8456
8.0	.7937	.9477	1.1020	1.2519	1.3928	1.5205	1.6311	1.7213	1.7882	1.8299
10.0	.7493	.9012	1.0548	1.2052	1.3479	1.4786	1.5933	1.6886	1.7615	1.8098
12.0	.7047	.8541	1.0063	1.1566	1.3006	1.4338	1.5522	1.6521	1.7307	1.7854
15.0	.6383	.7827	.9318	1.0809	1.2257	1.3616	1.4846	1.5909	1.6772	1.7410
20.0	.5301	.6637	.8048	.9492	1.0924	1.2302	1.3583	1.4728	1.5703	1.6477
25.0	.4282	.5479	.6778	.8139	.9522	1.0883	1.2182	1.3379	1.4439	1.5327
30.0	.3355	.4387	.5545	.6792	.8091	.9403	1.0687	1.1904	1.3018	1.3995
35.0	.2549	.3396	.4387	.5492	.6677	.7906	.9142	1.0347	1.1485	1.2521
40.0	.1888	.2535	.3340	.4278	.5322	.6439	.7595	.8756	.9886	1.0950
45.0	.1390	.1830	.2434	.3187	.4066	.5045	.6093	.7178	.8268	.9330
50.0	.1019	.1301	.1698	.2253	.2949	.3767	.4680	.5662	.6682	.7710
55.0	.0735	.0915	.1153	.1503	.2005	.2644	.3401	.4254	.5176	.6139
60.0	.0518	.0628	.0768	.0960	.1261	.1710	.2294	.2996	.3795	.4665
65.0	.0354	.0416	.0493	.0594	.0740	.0993	.1393	.1927	.2581	.3333
70.0	.0234	.0264	.0300	.0347	.0411	.0515	.0724	.1080	.1571	.2183
75.0	.0147	.0159	.0171	.0187	.0209	.0243	.0309	.0479	.0796	.1250
80.0	.0085	.0087	.0089	.0090	.0093	.0097	.0109	.0144	.0279	.0563
85.0	.0044	.0041	.0039	.0036	.0033	.0030	.0027	.0027	.0037	.0142

TABLE V.- CONTINUED

(b) C_A. Continued.

$\phi_1 = 90^0$; $\phi_2 = 270^0$; $\beta = 0^0$

α, deg \ θ_c, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.0050	.0193	.0401	.0682	.1453	.2484	.3744	.5193	.6789	.8482
2.0	.0099	.0241	.0467	.0766	.1572	.2633	.3910	.5388	.6997	.8698
4.0	.0164	.0353	.0616	.0950	.1822	.2941	.4273	.5779	.7413	.9124
6.0	.0262	.0489	.0787	.1155	.2089	.3261	.4637	.6174	.7825	.9541
8.0	.0384	.0646	.0979	.1379	.2372	.3593	.5006	.6568	.8231	.9945
10.0	.0528	.0825	.1190	.1622	.2669	.3935	.5380	.6961	.8630	1.0336
12.0	.0694	.1024	.1421	.1882	.2980	.4285	.5756	.7351	.9019	1.0710
15.0	.0982	.1359	.1800	.2301	.3467	.4820	.6321	.7924	.9580	1.1238
20.0	.1558	.2006	.2510	.3067	.4320	.5729	.7250	.8836	1.0440	1.2013
25.0	.2239	.2744	.3298	.3896	.5205	.6634	.8137	.9670	1.1186	1.2638
30.0	.3004	.3552	.4140	.4763	.6094	.7506	.8956	1.0400	1.1793	1.3094
35.0	.3831	.4406	.5011	.5641	.6960	.8320	.9682	1.1003	1.2244	1.3367
40.0	.4693	.5278	.5884	.6505	.7776	.9051	1.0293	1.1462	1.2525	1.3448
45.0	.5564	.6143	.6733	.7328	.8519	.9677	1.0770	1.1763	1.2627	1.3335
50.0	.6419	.6975	.7532	.8085	.9163	1.0178	1.1099	1.1997	1.2548	1.3032
55.0	.7231	.7748	.8256	.8752	.9693	1.0540	1.1270	1.1858	1.2289	1.2548
60.0	.7976	.8438	.8884	.9310	1.0089	1.0751	1.1277	1.1650	1.1852	1.1897
65.0	.8630	.9026	.9397	.9762	1.0341	1.0806	1.1121	1.1277	1.1270	1.1099
70.0	.9175	.9492	.9779	1.0034	1.0441	1.0701	1.0806	1.0751	1.0540	1.0178
75.0	.9592	.9822	1.0018	1.0178	1.0386	1.0441	1.0341	1.0089	.9693	.9163
80.0	.9871	1.0007	1.0107	1.0169	1.0178	1.0034	.9742	.9310	.8752	.8085
85.0	1.0002	1.0042	1.0044	1.0007	.9822	.9492	.9024	.8438	.7748	.6975

α, deg \ θ_c, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0	90.0
1.0	1.0221	1.1953	1.3626	1.5189	1.6594	1.7798	1.8766	1.9467	1.9881	1.9994
2.0	1.0438	1.2165	1.3825	1.5369	1.6750	1.7926	1.8860	1.9526	1.9901	1.9976
4.0	1.0862	1.2572	1.4203	1.5706	1.7035	1.8150	1.9016	1.9607	1.9906	1.9903
6.0	1.1269	1.2957	1.4553	1.6010	1.7282	1.8331	1.9125	1.9641	1.9862	1.9781
8.0	1.1658	1.3317	1.4873	1.6278	1.7489	1.8469	1.9189	1.9627	1.9770	1.9613
10.0	1.2027	1.3651	1.5161	1.6509	1.7654	1.8563	1.9206	1.9566	1.9630	1.9397
12.0	1.2373	1.3958	1.5416	1.6702	1.7779	1.8612	1.9177	1.9457	1.9443	1.9135
15.0	1.2848	1.4362	1.5733	1.6919	1.7885	1.8602	1.9047	1.9206	1.9076	1.8660
20.0	1.3507	1.4877	1.6081	1.7082	1.7850	1.8362	1.8602	1.8563	1.8246	1.7660
25.0	1.3984	1.5181	1.6194	1.6991	1.7549	1.7850	1.7885	1.7654	1.7163	1.6428
30.0	1.4263	1.5265	1.6068	1.6650	1.6991	1.7082	1.6919	1.6509	1.5862	1.5000
35.0	1.4337	1.5126	1.5709	1.6068	1.6194	1.6091	1.5733	1.5161	1.4382	1.3420
40.0	1.4204	1.4769	1.5126	1.5265	1.5181	1.4877	1.4362	1.3651	1.2767	1.1736
45.0	1.3866	1.4204	1.4337	1.4263	1.3984	1.3507	1.2848	1.2027	1.1067	1.0000
50.0	1.3335	1.3448	1.3367	1.3094	1.2638	1.2013	1.1238	1.0336	.9334	.8264
55.0	1.2627	1.2525	1.2244	1.1793	1.1186	1.0440	.9580	.8630	.7620	.6580
60.0	1.1763	1.1462	1.1003	1.0400	.9670	.8836	.7924	.6961	.5976	.5000
65.0	1.0770	1.0293	.9682	.8956	.8137	.7250	.6321	.5380	.4454	.3572
70.0	.9677	.9051	.8320	.7506	.6634	.5729	.4820	.3935	.3099	.2340
75.0	.8518	.7776	.6960	.6094	.5205	.4320	.3467	.2669	.1953	.1340
80.0	.7328	.6505	.5641	.4763	.3896	.3067	.2301	.1622	.1050	.0603
85.0	.6143	.5278	.4406	.3552	.2744	.2006	.1359	.0825	.0418	.0152

$\phi_1 = 90^0$; $\phi_2 = 270^0$; $\beta = 2^0$

α, deg \ θ_c, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.0073	.0205	.0413	.0693	.1463	.2492	.3749	.5196	.6789	.8478
2.0	.0101	.0253	.0479	.0777	.1581	.2640	.3923	.5390	.6997	.8694
4.0	.0176	.0365	.0627	.0961	.1831	.2948	.4278	.5782	.7412	.9120
6.0	.0274	.0500	.0798	.1166	.2098	.3268	.4641	.6175	.7824	.9536
8.0	.0395	.0657	.0989	.1390	.2380	.3600	.5010	.6569	.8229	.9940
10.0	.0539	.0836	.1201	.1632	.2677	.3941	.5384	.6962	.8627	1.0330
12.0	.0705	.1035	.1431	.1891	.2988	.4290	.5759	.7351	.9016	1.0704
15.0	.0992	.1370	.1810	.2310	.3474	.4825	.6324	.7924	.9576	1.1231
20.0	.1568	.2015	.2519	.3075	.4327	.5733	.7251	.8835	1.0436	1.2006
25.0	.2248	.2753	.3306	.3903	.5210	.6636	.8137	.9667	1.1180	1.2630
30.0	.3013	.3560	.4147	.4769	.6098	.7508	.8955	1.0396	1.1787	1.3085
35.0	.3838	.4412	.5017	.5646	.6963	.8321	.9680	1.0999	1.2237	1.3356
40.0	.4699	.5284	.5889	.6509	.7778	.9051	1.0290	1.1458	1.2518	1.3439
45.0	.5570	.6148	.6737	.7331	.8519	.9676	1.0767	1.1758	1.2620	1.3326
50.0	.6424	.6979	.7535	.8087	.9164	1.0177	1.1095	1.1991	1.2541	1.3023
55.0	.7235	.7751	.8258	.8753	.9692	1.0538	1.1266	1.1853	1.2282	1.2540
60.0	.7978	.8440	.8886	.9311	1.0088	1.0749	1.1273	1.1645	1.1852	1.1829
65.0	.8632	.9027	.9398	.9742	1.0340	1.0803	1.1117	1.1272	1.1264	1.1092
70.0	.9175	.9492	.9779	1.0034	1.0440	1.0699	1.0803	1.0747	1.0536	1.0173
75.0	.9593	.9822	1.0018	1.0177	1.0385	1.0440	1.0339	1.0086	.9689	.9159
80.0	.9871	1.0007	1.0107	1.0168	1.0177	1.0033	.9740	.9308	.8750	.8082
85.0	1.0002	1.0042	1.0043	1.0007	.9822	.9491	.9025	.8437	.7747	.6974

α, deg \ θ_c, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0	90.0
1.0	1.0214	1.1943	1.3613	1.5173	1.6576	1.7778	1.8744	1.9444	1.9857	1.9970
2.0	1.0431	1.2155	1.3812	1.5354	1.6732	1.7905	1.8838	1.9502	1.9877	1.9951
4.0	1.0855	1.2562	1.4190	1.5690	1.7017	1.8129	1.8993	1.9584	1.9882	1.9878
6.0	1.1261	1.2946	1.4540	1.5993	1.7263	1.8310	1.9103	1.9617	1.9838	1.9757
8.0	1.1650	1.3306	1.4859	1.6261	1.7469	1.8448	1.9167	1.9604	1.9746	1.9589
10.0	1.2018	1.3640	1.5146	1.6492	1.7635	1.8542	1.9184	1.9542	1.9606	1.9373
12.0	1.2364	1.3946	1.5401	1.6685	1.7759	1.8591	1.9155	1.9434	1.9419	1.9112
15.0	1.2839	1.4349	1.5718	1.6902	1.7866	1.8581	1.9024	1.9183	1.9053	1.8638
20.0	1.3497	1.4864	1.6065	1.7064	1.7830	1.8341	1.8580	1.8541	1.8224	1.7639
25.0	1.3973	1.5167	1.6178	1.6973	1.7529	1.7830	1.7864	1.7633	1.7143	1.6408
30.0	1.4252	1.5251	1.6053	1.6632	1.6972	1.7062	1.6900	1.6489	1.5843	1.4982
35.0	1.4326	1.5113	1.5694	1.6052	1.6176	1.6062	1.5714	1.5143	1.4365	1.3404
40.0	1.4192	1.4756	1.5112	1.5249	1.5165	1.4860	1.4345	1.3635	1.2752	1.1722
45.0	1.3855	1.4191	1.4324	1.4249	1.3969	1.3492	1.2833	1.2012	1.1054	.9988
50.0	1.3325	1.3437	1.3355	1.3081	1.2625	1.2000	1.1225	1.0323	.9323	.8253
55.0	1.2618	1.2515	1.2233	1.1782	1.1174	1.0429	.9569	.8620	.7610	.6572
60.0	1.1755	1.1454	1.0994	1.0390	.9660	.8827	.7915	.6953	.5969	.4994
65.0	1.0763	1.0285	.9674	.8948	.8129	.7242	.6315	.5374	.4449	.3568
70.0	.9671	.9045	.8314	.7500	.6628	.5724	.4815	.3930	.3096	.2337
75.0	.8514	.7771	.6955	.6090	.5201	.4317	.3463	.2666	.1951	.1338
80.0	.7325	.6502	.5639	.4760	.3893	.3064	.2299	.1620	.1049	.0602
85.0	.6142	.5277	.4404	.3551	.2743	.2005	.1358	.0824	.0418	.0152

TABLE V. - CONTINUED

(b) C_A. Continued.

$\beta_1 = 90^\circ$; $\beta_2 = 270^\circ$; $\beta = 5^\circ$

α, deg \ θ_c, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.0131	.0267	.0473	.0750	.1513	.2533	.3778	.5211	.6788	.8462
2.0	.0161	.0314	.0538	.0834	.1630	.2680	.3951	.5404	.6995	.8676
4.0	.0236	.0426	.0686	.1017	.1879	.2985	.4303	.5793	.7408	.9100
6.0	.0334	.0560	.0856	.1220	.2144	.3304	.4664	.6184	.7817	.9513
8.0	.0455	.0716	.1046	.1443	.2425	.3633	.5031	.6575	.8220	.9914
10.0	.0598	.0894	.1256	.1683	.2720	.3972	.5402	.6965	.8615	1.0302
12.0	.0763	.1092	.1485	.1941	.3028	.4319	.5775	.7352	.9001	1.0673
15.0	.1049	.1424	.1861	.2357	.3511	.4851	.6336	.7921	.9558	1.1197
20.0	.1621	.2066	.2565	.3117	.4359	.5753	.7257	.8826	1.0412	1.1967
25.0	.2297	.2799	.3367	.3940	.5237	.6650	.8139	.9653	1.1152	1.2587
30.0	.3057	.3601	.4183	.4800	.6119	.7516	.8950	1.0378	1.1755	1.3039
35.0	.3877	.4448	.5047	.5672	.6978	.8324	.9671	1.0977	1.2207	1.3310
40.0	.4732	.5313	.5914	.6530	.7788	.9050	1.0277	1.1432	1.2481	1.3391
45.0	.5597	.6172	.6756	.7346	.8524	.9671	1.0750	1.1731	1.2582	1.3279
50.0	.6446	.6997	.7549	.8097	.9165	1.0168	1.1077	1.1863	1.2503	1.2978
55.0	.7252	.7764	.8268	.8759	.9690	1.0527	1.1246	1.1825	1.2246	1.2497
60.0	.7990	.8449	.8892	.9313	1.0083	1.0737	1.1254	1.1618	1.1819	1.1951
65.0	.8640	.9032	.9400	.9742	1.0334	1.0791	1.1099	1.1248	1.1235	1.1059
70.0	.9180	.9494	.9779	1.0031	1.0433	1.0687	1.0786	1.0727	1.0511	1.0146
75.0	.9594	.9822	1.0016	1.0174	1.0378	1.0429	1.0325	1.0070	.9670	.9138
80.0	.9871	1.0006	1.0104	1.0165	1.0171	1.0025	.9730	.9297	.8737	.8068
85.0	1.0000	1.0040	1.0041	1.0004	.9818	.9486	.9019	.8431	.7740	.6967

α, deg \ θ_c, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0	90.0
1.0	1.0181	1.1894	1.3547	1.5092	1.6481	1.7672	1.8628	1.9322	1.9730	1.9862
2.0	1.0397	1.2104	1.3745	1.5272	1.6637	1.7799	1.8722	1.9380	1.9751	1.9824
4.0	1.0817	1.2508	1.4121	1.5606	1.6920	1.8021	1.8876	1.9460	1.9755	1.9751
6.0	1.1221	1.2890	1.4468	1.5907	1.7164	1.8201	1.8985	1.9494	1.9712	1.9631
8.0	1.1607	1.3248	1.4785	1.6173	1.7369	1.8338	1.9048	1.9480	1.9620	1.9464
10.0	1.1973	1.3579	1.5071	1.6402	1.7534	1.8431	1.9066	1.9419	1.9481	1.9250
12.0	1.2317	1.3883	1.5323	1.6594	1.7657	1.8480	1.9037	1.9312	1.9296	1.8990
15.0	1.2789	1.4284	1.5638	1.6810	1.7763	1.8469	1.8907	1.9063	1.8932	1.8519
20.0	1.3443	1.4795	1.5983	1.6971	1.7728	1.8231	1.8466	1.8424	1.8108	1.7526
25.0	1.3916	1.5097	1.6096	1.6881	1.7429	1.7723	1.7755	1.7523	1.7034	1.6303
30.0	1.4193	1.5180	1.5971	1.6542	1.6875	1.6961	1.6796	1.6386	1.5743	1.4886
35.0	1.4266	1.5042	1.5615	1.5965	1.6084	1.5967	1.5618	1.5048	1.4273	1.3318
40.0	1.4134	1.4688	1.5036	1.5168	1.5079	1.4773	1.4258	1.3550	1.2671	1.1647
45.0	1.3799	1.4127	1.4253	1.4174	1.3891	1.3414	1.2756	1.1938	1.0904	.9924
50.0	1.3272	1.3377	1.3290	1.3014	1.2556	1.1931	1.1158	1.0259	.9264	.8201
55.0	1.2569	1.2461	1.2176	1.1723	1.1114	1.0370	.9512	.8567	.7562	.6530
60.0	1.1712	1.1407	1.0945	1.0340	.9610	.8778	.7869	.6910	.5932	.4962
65.0	1.0726	1.0246	.9633	.8907	.8089	.7204	.6279	.5341	.4421	.3545
70.0	.9641	.9014	.8282	.7468	.6597	.5695	.4789	.3907	.3076	.2322
75.0	.8491	.7748	.6932	.6067	.5179	.4297	.3445	.2651	.1939	.1330
80.0	.7310	.6487	.5624	.4745	.3880	.3052	.2289	.1612	.1043	.0598
85.0	.6135	.5269	.4397	.3544	.2737	.1999	.1354	.0821	.0416	.0151

$\beta_1 = 90^\circ$; $\beta_2 = 270^\circ$; $\beta = 15^\circ$

α, deg \ θ_c, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.0531	.0735	.0980	.1267	.1981	.2909	.4043	.5348	.6783	.8307
2.0	.0573	.0789	.1047	.1348	.2091	.3048	.4206	.5529	.6978	.8508
4.0	.0670	.0911	.1195	.1523	.2325	.3335	.4537	.5895	.7366	.8906
6.0	.0784	.1050	.1360	.1717	.2574	.3634	.4876	.6262	.7750	.9295
8.0	.0914	.1206	.1544	.1928	.2838	.3944	.5221	.6631	.8129	.9672
10.0	.1062	.1380	.1745	.2155	.3116	.4263	.5570	.6997	.8501	1.0036
12.0	.1227	.1572	.1963	.2398	.3405	.4589	.5921	.7361	.8864	1.0386
15.0	.1509	.1892	.2319	.2790	.3859	.5089	.6448	.7996	.9387	1.0878
20.0	.2060	.2502	.2984	.3505	.4656	.5937	.7314	.8747	1.0190	1.1602
25.0	.2705	.3196	.3721	.4279	.5482	.6781	.8142	.9525	1.0886	1.2185
30.0	.3426	.3952	.4507	.5087	.6311	.7595	.8906	1.0205	1.1453	1.2610
35.0	.4201	.4750	.5320	.5907	.7118	.8354	.9584	1.0769	1.1873	1.2865
40.0	.5008	.5565	.6134	.6712	.7879	.9036	1.0153	1.1197	1.2135	1.2940
45.0	.5824	.6373	.6926	.7479	.8571	.9620	1.0599	1.1478	1.2231	1.2835
50.0	.6623	.7149	.7670	.8184	.9173	1.0088	1.0906	1.1602	1.2157	1.2552
55.0	.7382	.7869	.8345	.8805	.9665	1.0425	1.1065	1.1566	1.1915	1.2100
60.0	.8077	.8513	.8929	.9324	1.0033	1.0621	1.1072	1.1372	1.1513	1.1493
65.0	.8687	.9059	.9408	.9724	1.0266	1.0671	1.0925	1.1024	1.0964	1.0748
70.0	.9195	.9493	.9760	.9994	1.0356	1.0571	1.0630	1.0533	1.0204	.9690
75.0	.9584	.9799	.9980	1.0124	1.0301	1.0324	1.0194	.9913	.9492	.8943
80.0	.9843	.9970	1.0060	1.0112	1.0101	.9938	.9629	.9182	.8611	.7934
85.0	.9964	1.0000	.9997	.9956	.9762	.9424	.8952	.8360	.7667	.6892

α, deg \ θ_c, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0	90.0
1.0	.9871	1.1429	1.2934	1.4339	1.5602	1.6684	1.7554	1.8183	1.8554	1.8655
2.0	1.0074	1.1626	1.3119	1.4507	1.5748	1.6803	1.7642	1.8238	1.8573	1.8638
4.0	1.0469	1.2007	1.3472	1.4822	1.6014	1.7012	1.7787	1.8314	1.8577	1.8569
6.0	1.0849	1.2366	1.3799	1.5105	1.6244	1.7181	1.7889	1.8345	1.8536	1.8456
8.0	1.1212	1.2702	1.4097	1.5355	1.6437	1.7310	1.7949	1.8333	1.8451	1.8299
10.0	1.1556	1.3014	1.4366	1.5570	1.6591	1.7398	1.7965	1.8275	1.8320	1.8098
12.0	1.1879	1.3300	1.4603	1.5751	1.6707	1.7444	1.7938	1.8174	1.8146	1.7854
15.0	1.2322	1.3677	1.4899	1.5953	1.6807	1.7434	1.7816	1.7940	1.7804	1.7410
20.0	1.2937	1.4157	1.5224	1.6105	1.6774	1.7210	1.7401	1.7340	1.7029	1.6477
25.0	1.3382	1.4461	1.5329	1.6020	1.6493	1.6732	1.6732	1.6492	1.6019	1.5327
30.0	1.3643	1.4519	1.5212	1.5702	1.5972	1.6016	1.5831	1.5423	1.4805	1.3995
35.0	1.3712	1.4390	1.4877	1.5160	1.5228	1.5082	1.4724	1.4165	1.3424	1.2521
40.0	1.3587	1.4056	1.4333	1.4410	1.4284	1.3959	1.3445	1.2757	1.1917	1.0950
45.0	1.3272	1.3529	1.3597	1.3475	1.3167	1.2681	1.2032	1.1241	1.0331	.9330
50.0	1.2777	1.2824	1.2692	1.2385	1.1911	1.1287	1.0530	.9663	.8714	.7710
55.0	1.2116	1.1963	1.1644	1.1171	1.0556	.9819	.8983	.8072	.7114	.6139
60.0	1.1310	1.0971	1.0487	.9870	.9142	.8323	.7438	.6515	.5581	.4665
65.0	1.0383	.9880	.9254	.8524	.7712	.6843	.5943	.5040	.4161	.3333
70.0	.9364	.8722	.7983	.7171	.6309	.5424	.4542	.3691	.2897	.2183
75.0	.8282	.7532	.6714	.5853	.4976	.4109	.3279	.2511	.1827	.1250
80.0	.7171	.6346	.5484	.4611	.3754	.2940	.2192	.1534	.0985	.0563
85.0	.6061	.5198	.4329	.3481	.2680	.1950	.1313	.0790	.0395	.0142

TABLE V.- CONTINUED

(b) C_A. Continued.

$\phi_1 = 105^\circ$; $\phi_2 = 255^\circ$; $\beta = 0^\circ$

α, deg \ θ_c, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.0064	.0200	.0411	.0694	.1471	.2509	.3771	.5224	.6822	.8517
2.0	.0097	.0256	.0488	.0792	.1609	.2680	.3974	.5451	.7065	.8769
4.0	.0185	.0387	.0662	.1008	.1901	.3039	.4389	.5909	.7552	.9269
6.0	.0301	.0546	.0862	.1247	.2214	.3415	.4815	.6372	.8037	.9760
8.0	.0445	.0731	.1087	.1511	.2546	.3805	.5251	.6838	.8518	1.0242
10.0	.0615	.0942	.1337	.1796	.2896	.4208	.5693	.7304	.8994	1.0711
12.0	.0812	.1177	.1609	.2103	.3263	.4622	.6140	.7769	.9461	1.1164
15.0	.1153	.1574	.2057	.2598	.3839	.5259	.6815	.8459	1.0141	1.1812
20.0	.1838	.2340	.2898	.3506	.4854	.6345	.7932	.9568	1.1202	1.2786
25.0	.2647	.3217	.3834	.4492	.5912	.7434	.9012	1.0598	1.2144	1.3603
30.0	.3557	.4178	.4836	.5526	.6978	.8492	1.0020	1.1517	1.2938	1.4238
35.0	.4541	.5194	.5875	.6576	.8022	.9487	1.0927	1.2299	1.3560	1.4673
40.0	.5567	.6235	.6918	.7612	.9011	1.0389	1.1705	1.2918	1.3992	1.4894
45.0	.6606	.7267	.7934	.8601	.9915	1.1171	1.2330	1.3357	1.4220	1.4893
50.0	.7625	.8261	.8892	.9513	1.0708	1.1809	1.2783	1.3601	1.4237	1.4672
55.0	.8593	.9185	.9762	1.0321	1.1364	1.2284	1.3051	1.3644	1.4043	1.4237
60.0	.9482	1.0012	1.0519	1.1000	1.1864	1.2580	1.3125	1.3484	1.3644	1.3601
65.0	1.0264	1.0717	1.1140	1.1529	1.2193	1.2690	1.3004	1.3125	1.3051	1.2783
70.0	1.0915	1.1278	1.1605	1.1892	1.2341	1.2609	1.2690	1.2580	1.2284	1.1809
75.0	1.1415	1.1679	1.1900	1.2079	1.2302	1.2341	1.2193	1.1864	1.1364	1.0708
80.0	1.1750	1.1906	1.2017	1.2084	1.2079	1.1892	1.1529	1.1000	1.0321	.9513
85.0	1.1909	1.1953	1.1952	1.1906	1.1679	1.1278	1.0717	1.0012	.9185	.8261

α, deg \ θ_c, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0	90.0
1.0	1.0256	1.1998	1.3659	1.5219	1.6621	1.7821	1.8784	1.9479	1.9867	1.9994
2.0	1.0510	1.2235	1.3892	1.5431	1.6805	1.7972	1.8896	1.9550	1.9913	1.9976
4.0	1.1007	1.2715	1.4339	1.5831	1.7145	1.8241	1.9087	1.9656	1.9930	1.9903
6.0	1.1490	1.3173	1.4758	1.6197	1.7447	1.8469	1.9232	1.9714	1.9899	1.9781
8.0	1.1956	1.3608	1.5147	1.6529	1.7709	1.8653	1.9331	1.9724	1.9819	1.9613
10.0	1.2402	1.4016	1.5505	1.6823	1.7930	1.8792	1.9384	1.9686	1.9691	1.9397
12.0	1.2827	1.4398	1.5830	1.7080	1.8109	1.8886	1.9389	1.9600	1.9515	1.9135
15.0	1.3419	1.4913	1.6251	1.7390	1.8296	1.8942	1.9309	1.9384	1.9165	1.8660
20.0	1.4270	1.5610	1.6766	1.7701	1.8389	1.8806	1.8942	1.8792	1.8361	1.7660
25.0	1.4930	1.6086	1.7035	1.7748	1.8204	1.8389	1.8296	1.7930	1.7301	1.6428
30.0	1.5379	1.6326	1.7050	1.7529	1.7748	1.7701	1.7390	1.6823	1.6018	1.5000
35.0	1.5603	1.6323	1.6810	1.7050	1.7035	1.6766	1.6251	1.5505	1.4552	1.3420
40.0	1.5596	1.6077	1.6323	1.6326	1.6086	1.5610	1.4913	1.4016	1.2947	1.1736
45.0	1.5357	1.5596	1.5603	1.5379	1.4930	1.4270	1.3419	1.2402	1.1251	1.0000
50.0	1.4893	1.4894	1.4673	1.4238	1.3603	1.2786	1.1812	1.0711	.9516	.8264
55.0	1.4220	1.3992	1.3560	1.2938	1.2144	1.1202	1.0141	.8994	.7795	.6580
60.0	1.3357	1.2918	1.2299	1.1517	1.0598	.9568	.8459	.7304	.6140	.5000
65.0	1.2330	1.1705	1.0927	1.0020	.9012	.7932	.6815	.5693	.4601	.3572
70.0	1.1171	1.0389	.9487	.8492	.7434	.6345	.5259	.4208	.3225	.2340
75.0	.9915	.9011	.8022	.6978	.5912	.4854	.3839	.2896	.2055	.1340
80.0	.8601	.7612	.6576	.5526	.4492	.3506	.2598	.1796	.1124	.0603
85.0	.7267	.6235	.5194	.4178	.3217	.2340	.1574	.0942	.0463	.0152

$\phi_1 = 105^\circ$; $\phi_2 = 255^\circ$; $\beta = 2^\circ$

α, deg \ θ_c, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.0074	.0210	.0420	.0703	.1479	.2513	.3775	.5225	.6821	.8512
2.0	.0107	.0265	.0497	.0801	.1616	.2686	.3977	.5451	.7063	.8764
4.0	.0195	.0396	.0671	.1016	.1908	.3044	.4392	.5909	.7549	.9263
6.0	.0311	.0555	.0871	.1255	.2220	.3420	.4817	.6371	.8034	.9754
8.0	.0454	.0740	.1096	.1518	.2552	.3809	.5252	.6837	.8515	1.0235
10.0	.0624	.0951	.1345	.1804	.2902	.4212	.5694	.7303	.8990	1.0703
12.0	.0821	.1186	.1617	.2110	.3268	.4625	.6140	.7767	.9456	1.1156
15.0	.1162	.1592	.2064	.2605	.3844	.5261	.6814	.8456	1.0136	1.1803
20.0	.1845	.2347	.2904	.3511	.4858	.6346	.7931	.9563	1.1195	1.2776
25.0	.2654	.3223	.3839	.4496	.5914	.7433	.9009	1.0592	1.2136	1.3592
30.0	.3563	.4183	.4840	.5528	.6979	.8490	1.0016	1.1511	1.2929	1.4227
35.0	.4545	.5198	.5877	.6578	.8021	.9484	1.0922	1.2291	1.3550	1.4661
40.0	.5570	.6237	.6919	.7612	.9009	1.0385	1.1699	1.2910	1.3921	1.4881
45.0	.6608	.7268	.7934	.8600	.9913	1.1166	1.2323	1.3348	1.4209	1.4861
50.0	.7625	.8260	.8890	.9511	1.0704	1.1804	1.2776	1.3592	1.4226	1.4660
55.0	.8593	.9184	.9760	1.0318	1.1359	1.2277	1.3044	1.3635	1.4033	1.4226
60.0	.9480	1.0010	1.0516	1.0996	1.1959	1.2574	1.3118	1.3475	1.3634	1.3590
65.0	1.0261	1.0714	1.1136	1.1524	1.2187	1.2693	1.2996	1.3117	1.3042	1.2774
70.0	1.0911	1.1274	1.1601	1.1897	1.2335	1.2602	1.2682	1.2572	1.2275	1.1801
75.0	1.1411	1.1674	1.1896	1.2074	1.2296	1.2334	1.2186	1.1857	1.1357	1.0701
80.0	1.1745	1.1901	1.2012	1.2079	1.2074	1.1887	1.1523	1.0993	1.0315	.9507
85.0	1.1904	1.1948	1.1947	1.1901	1.1673	1.1273	1.0712	1.0007	.9180	.8256

α, deg \ θ_c, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0	90.0
1.0	1.0249	1.1977	1.3646	1.5203	1.6602	1.7800	1.8761	1.9456	1.9863	1.9970
2.0	1.0502	1.2224	1.3879	1.5415	1.6786	1.7951	1.8874	1.9526	1.9889	1.9951
4.0	1.0999	1.2703	1.4325	1.5814	1.7126	1.8220	1.9064	1.9632	1.9906	1.9878
6.0	1.1481	1.3161	1.4743	1.6180	1.7427	1.8448	1.9209	1.9690	1.9874	1.9757
8.0	1.1946	1.3595	1.5132	1.6511	1.7689	1.8631	1.9307	1.9700	1.9795	1.9589
10.0	1.2392	1.4003	1.5490	1.6805	1.7910	1.8770	1.9361	1.9662	1.9667	1.9373
12.0	1.2816	1.4384	1.5814	1.7061	1.8089	1.8865	1.9366	1.9577	1.9491	1.9112
15.0	1.3407	1.4899	1.6234	1.7371	1.8276	1.8920	1.9286	1.9360	1.9142	1.8638
20.0	1.4258	1.5595	1.6749	1.7682	1.8368	1.8785	1.8920	1.8770	1.8339	1.7639
25.0	1.4917	1.6071	1.7017	1.7729	1.8184	1.8367	1.8275	1.7908	1.7280	1.6408
30.0	1.5365	1.6310	1.7032	1.7510	1.7728	1.7681	1.7369	1.6803	1.5999	1.4982
35.0	1.5589	1.6307	1.6793	1.7032	1.7016	1.6747	1.6232	1.5487	1.4534	1.3404
40.0	1.5582	1.6062	1.6306	1.6309	1.6068	1.5592	1.4896	1.4000	1.2931	1.1722
45.0	1.5343	1.5581	1.5588	1.5363	1.4914	1.4254	1.3403	1.2387	1.1237	.9988
50.0	1.4880	1.4879	1.4658	1.4223	1.3588	1.2771	1.1798	1.0698	.9504	.8253
55.0	1.4207	1.3979	1.3547	1.2925	1.2131	1.1190	1.0130	.8983	.7785	.6572
60.0	1.3345	1.2907	1.2287	1.1506	1.0587	.9557	.8449	.7296	.6132	.4994
65.0	1.2320	1.1695	1.0917	1.0010	.9002	.7924	.6807	.5686	.4595	.3568
70.0	1.1163	1.0381	.9479	.8484	.7426	.6338	.5253	.4204	.3221	.2337
75.0	.9908	.9004	.8015	.6972	.5906	.4850	.3835	.2993	.2052	.1338
80.0	.8595	.7607	.6572	.5521	.4488	.3503	.2596	.1794	.1123	.0602
85.0	.7263	.6231	.5191	.4176	.3215	.2339	.1573	.0941	.0463	.0152

TABLE V. - CONTINUED

(b) C_A. Continued.

$\phi_1 = 105^0$; $\phi_2 = 255^0$; $\beta = 5^0$

θ_c, deg / α, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.0123	.0260	.0468	.0749	.1518	.2543	.3793	.5231	.6812	.8488
2.0	.0157	.0315	.0545	.0846	.1654	.2714	.3994	.5455	.7053	.8738
4.0	.0245	.0445	.0717	.1060	.1944	.3071	.4406	.5910	.7536	.9234
6.0	.0360	.0603	.0916	.1298	.2254	.3443	.4829	.6369	.8017	.9722
8.0	.0503	.0787	.1139	.1559	.2584	.3831	.5261	.6832	.8495	1.0200
10.0	.0672	.0996	.1387	.1842	.2932	.4231	.5700	.7295	.8967	1.0665
12.0	.0867	.1229	.1657	.2146	.3295	.4641	.6144	.7756	.9431	1.1115
15.0	.1206	.1623	.2102	.2638	.3867	.5273	.6813	.8441	1.0106	1.1758
20.0	.1884	.2384	.2936	.3539	.4875	.6351	.7922	.9541	1.1158	1.2725
25.0	.2687	.3254	.3865	.4517	.5924	.7431	.8994	1.0563	1.2093	1.3535
30.0	.3590	.4208	.4860	.5543	.6982	.8481	.9995	1.1476	1.2881	1.4166
35.0	.4564	.5216	.5891	.6586	.8018	.9469	1.0895	1.2252	1.3498	1.4598
40.0	.5582	.6248	.6926	.7614	.9000	1.0365	1.1667	1.2866	1.3927	1.4816
45.0	.6612	.7273	.7934	.8595	.9897	1.1141	1.2287	1.3301	1.4153	1.4816
50.0	.7622	.8259	.8884	.9500	1.0684	1.1774	1.2737	1.3544	1.4170	1.4597
55.0	.8582	.9176	.9749	1.0302	1.1335	1.2245	1.3003	1.3586	1.3978	1.4165
60.0	.9463	.9997	1.0500	1.0976	1.1831	1.2539	1.3076	1.3427	1.3581	1.3534
65.0	1.0238	1.0697	1.1116	1.1501	1.2158	1.2648	1.2955	1.3072	1.2993	1.2727
70.0	1.0884	1.1254	1.1577	1.1862	1.2304	1.2567	1.2644	1.2531	1.2232	1.1756
75.0	1.1380	1.1651	1.1870	1.2047	1.2266	1.2301	1.2151	1.1820	1.1319	1.0663
80.0	1.1712	1.1876	1.1987	1.2052	1.2045	1.1856	1.1492	1.0962	1.0284	.9477
85.0	1.1870	1.1923	1.1922	1.1875	1.1647	1.1247	1.0686	.9982	.9156	.8234

θ_c, deg / α, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0	90.0
1.0	1.0209	1.1922	1.3576	1.5119	1.6506	1.7693	1.8645	1.9333	1.9736	1.9842
2.0	1.0461	1.2168	1.3807	1.5329	1.6688	1.7842	1.8756	1.9403	1.9763	1.9824
4.0	1.0954	1.2643	1.4250	1.5726	1.7026	1.8110	1.8946	1.9508	1.9779	1.9751
6.0	1.1433	1.3098	1.4666	1.6090	1.7325	1.8336	1.9090	1.9566	1.9748	1.9631
8.0	1.1896	1.3530	1.5053	1.6418	1.7585	1.8518	1.9189	1.9576	1.9669	1.9464
10.0	1.2338	1.3935	1.5408	1.6711	1.7805	1.8657	1.9240	1.9538	1.9541	1.9250
12.0	1.2760	1.4314	1.5730	1.6965	1.7982	1.8750	1.9246	1.9453	1.9367	1.8990
15.0	1.3347	1.4826	1.6148	1.7273	1.8168	1.8806	1.9166	1.9238	1.9020	1.8519
20.0	1.4192	1.5517	1.6659	1.7582	1.8260	1.8671	1.8803	1.8651	1.8222	1.7526
25.0	1.4848	1.5989	1.6926	1.7629	1.8077	1.8256	1.8161	1.7796	1.7170	1.6303
30.0	1.5293	1.6227	1.6941	1.7411	1.7624	1.7574	1.7262	1.6697	1.5897	1.4886
35.0	1.5516	1.6224	1.6703	1.6936	1.6917	1.6646	1.6131	1.5389	1.4442	1.3318
40.0	1.5508	1.5980	1.6219	1.6217	1.5975	1.5499	1.4804	1.3912	1.2849	1.1647
45.0	1.5271	1.5503	1.5505	1.5278	1.4828	1.4169	1.3321	1.2309	1.1166	.9924
50.0	1.4811	1.4806	1.4582	1.4146	1.3510	1.2696	1.1726	1.0631	.9444	.8201
55.0	1.4143	1.3911	1.3477	1.2855	1.2063	1.1324	1.0069	.8928	.7736	.6530
60.0	1.3286	1.2845	1.2226	1.1445	1.0528	.9502	.8399	.7251	.6093	.4962
65.0	1.2267	1.1642	1.0864	.9959	.8954	.7879	.6767	.5651	.4566	.3545
70.0	1.1117	1.0336	.9435	.8642	.7388	.6304	.5223	.4178	.3201	.2322
75.0	.9871	.8968	.7981	.6940	.5878	.4825	.3814	.2876	.2040	.1350
80.0	.8566	.7579	.6547	.5499	.4469	.3487	.2583	.1785	.1116	.0598
85.0	.7243	.6213	.5175	.4162	.3204	.2330	.1566	.0937	.0460	.0151

$\phi_1 = 105^0$; $\phi_2 = 255^0$; $\beta = 15^0$

θ_c, deg / α, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.0457	.0649	.0884	.1165	.1879	.2818	.3964	.5281	.6729	.8264
2.0	.0505	.0712	.0961	.1258	.2007	.2979	.4153	.5492	.6956	.8500
4.0	.0617	.0851	.1132	.1462	.2279	.3314	.4540	.5919	.7409	.8966
6.0	.0747	.1012	.1325	.1687	.2571	.3665	.4938	.6351	.7862	.9425
8.0	.0898	.1194	.1539	.1934	.2881	.4029	.5344	.6786	.8311	.9874
10.0	.1070	.1398	.1774	.2201	.3208	.4405	.5757	.7221	.8755	1.0311
12.0	.1264	.1622	.2030	.2487	.3550	.4791	.6174	.7655	.9191	1.0734
15.0	.1593	.1998	.2450	.2950	.4088	.5385	.6803	.8299	.9826	1.1338
20.0	.2243	.2717	.3236	.3797	.5035	.6398	.7846	.9333	1.0815	1.2247
25.0	.3004	.3538	.4110	.4716	.6021	.7414	.8853	1.0294	1.1694	1.3010
30.0	.3857	.4436	.5045	.5681	.7016	.8401	.9794	1.1152	1.2435	1.3603
35.0	.4776	.5384	.6014	.6661	.7990	.9330	1.0640	1.1881	1.3015	1.4008
40.0	.5734	.6355	.6987	.7627	.8913	1.0172	1.1366	1.2459	1.3418	1.4214
45.0	.6704	.7318	.7935	.8550	.9757	1.0902	1.1949	1.2868	1.3631	1.4214
50.0	.7655	.8245	.8829	.9401	1.0496	1.1497	1.2372	1.3096	1.3647	1.4007
55.0	.8559	.9108	.9641	1.0155	1.1108	1.1939	1.2622	1.3136	1.3466	1.3601
60.0	.9388	.9879	1.0347	1.0788	1.1575	1.2216	1.2691	1.2987	1.3093	1.3008
65.0	1.0117	1.0537	1.0926	1.1282	1.1882	1.2318	1.2578	1.2653	1.2541	1.2245
70.0	1.0724	1.1061	1.1360	1.1621	1.2019	1.2243	1.2285	1.2144	1.1924	1.1336
75.0	1.1191	1.1434	1.1636	1.1796	1.1984	1.1992	1.1821	1.1476	1.0967	1.0309
80.0	1.1504	1.1646	1.1745	1.1800	1.1776	1.1574	1.1202	1.0669	.9993	.9174
85.0	1.1652	1.1690	1.1684	1.1634	1.1402	1.1001	1.0444	.9748	.8933	.8025

θ_c, deg / α, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0	90.0
1.0	.9840	1.1409	1.2923	1.4335	1.5604	1.6691	1.7562	1.8191	1.8559	1.8655
2.0	1.0077	1.1639	1.3140	1.4533	1.5776	1.6831	1.7666	1.8257	1.8584	1.8638
4.0	1.0541	1.2087	1.3557	1.4906	1.6093	1.7083	1.7845	1.8355	1.8599	1.8569
6.0	1.0991	1.2514	1.3948	1.5248	1.6375	1.7295	1.7980	1.8409	1.8570	1.8456
8.0	1.1426	1.2920	1.4311	1.5557	1.6620	1.7467	1.8073	1.8419	1.8495	1.8299
10.0	1.1842	1.3301	1.4645	1.5832	1.6826	1.7597	1.8121	1.8384	1.8376	1.8098
12.0	1.2238	1.3657	1.4948	1.6071	1.6993	1.7685	1.8126	1.8304	1.8212	1.7854
15.0	1.2791	1.4138	1.5340	1.6360	1.7167	1.7737	1.8051	1.8101	1.7886	1.7410
20.0	1.3585	1.4789	1.5821	1.6651	1.7254	1.7610	1.7710	1.7550	1.7135	1.6477
25.0	1.4201	1.5232	1.6072	1.6695	1.7081	1.7220	1.7107	1.6745	1.6146	1.5327
30.0	1.4620	1.5456	1.6086	1.6490	1.6656	1.6579	1.6261	1.5713	1.4949	1.3995
35.0	1.4829	1.5453	1.5862	1.6043	1.5991	1.5706	1.5198	1.4483	1.3581	1.2521
40.0	1.4822	1.5224	1.5408	1.5368	1.5105	1.4628	1.3951	1.3094	1.2083	1.0950
45.0	1.4599	1.4775	1.4736	1.4485	1.4027	1.3378	1.2556	1.1587	1.0501	.9330
50.0	1.4167	1.4120	1.3868	1.3420	1.2788	1.1993	1.1057	1.0009	.8882	.7710
55.0	1.3538	1.3279	1.2830	1.2207	1.1427	1.0515	.9698	.8708	.7277	.6139
60.0	1.2733	1.2277	1.1653	1.0881	.9985	.8990	.7928	.6831	.5732	.4665
65.0	1.1775	1.1145	1.0373	.9684	.8505	.7464	.6594	.5528	.4297	.3333
70.0	1.0694	.9917	.9030	.8058	.7032	.5983	.4943	.3943	.3013	.2183
75.0	.9522	.8631	.7663	.6646	.5612	.4593	.3618	.2719	.1921	.1250
80.0	.8296	.7326	.6314	.5291	.4288	.3335	.2461	.1692	.1053	.0563
85.0	.7051	.6041	.5025	.4034	.3099	.2247	.1505	.0895	.0436	.0142

TABLE V. - CONTINUED

(b) C_A. Continued.

$\phi_1 = 120^\circ$; $\phi_2 = 240^\circ$; $\beta = 0^\circ$

α, deg \ θ_c, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.0067	.0206	.0420	.0706	.1488	.2528	.3796	.5252	.6852	.8548
2.0	.0105	.0269	.0507	.0816	.1643	.2723	.4024	.5506	.7125	.8832
4.0	.0207	.0419	.0705	.1060	.1973	.3129	.4493	.6024	.7675	.9397
6.0	.0342	.0602	.0934	.1334	.2329	.3556	.4977	.6550	.8227	.9957
8.0	.0509	.0817	.1193	.1637	.2709	.4001	.5474	.7083	.8778	1.0509
10.0	.0709	.1061	.1481	.1966	.3111	.4463	.5981	.7618	.9325	1.1050
12.0	.0939	.1336	.1797	.2320	.3534	.4940	.6496	.8155	.9866	1.1577
15.0	.1341	.1799	.2319	.2895	.4201	.5677	.7278	.8956	1.0660	1.2338
20.0	.2147	.2698	.3302	.3954	.5394	.6943	.8585	1.0259	1.1915	1.3502
25.0	.3103	.3730	.4401	.5111	.6624	.8223	.9861	1.1487	1.3052	1.4508
30.0	.4180	.4865	.5583	.6329	.7883	.9479	1.1068	1.2603	1.4036	1.5324
35.0	.5344	.6066	.6811	.7573	.9123	1.0671	1.2170	1.3573	1.4838	1.5927
40.0	.6561	.7299	.8049	.8804	1.0307	1.1765	1.3132	1.4367	1.5433	1.6297
45.0	.7794	.8526	.9258	.9984	1.1399	1.2726	1.3926	1.4963	1.5803	1.6423
50.0	.9005	.9709	1.0402	1.1079	1.2365	1.3526	1.4528	1.5340	1.5938	1.6302
55.0	1.0156	1.0812	1.1447	1.2055	1.3176	1.4140	1.4919	1.5489	1.5832	1.5938
60.0	1.1215	1.1802	1.2359	1.2882	1.3807	1.4550	1.5087	1.5403	1.5499	1.5340
65.0	1.2147	1.2649	1.3113	1.3535	1.4239	1.4742	1.5029	1.5087	1.4919	1.4528
70.0	1.2925	1.3328	1.3685	1.3994	1.4460	1.4712	1.4742	1.4550	1.4140	1.3526
75.0	1.3526	1.3816	1.4056	1.4245	1.4462	1.4460	1.4239	1.3807	1.3176	1.2365
80.0	1.3930	1.4100	1.4218	1.4291	1.4245	1.3994	1.3535	1.2882	1.2055	1.1079
85.0	1.4126	1.4172	1.4163	1.4100	1.3816	1.3328	1.2649	1.1802	1.0812	.9709

α, deg \ θ_c, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0	90.0
1.0	1.0288	1.2019	1.3689	1.5246	1.6645	1.7841	1.8799	1.9490	1.9892	1.9994
2.0	1.0573	1.2297	1.3952	1.5486	1.6853	1.8012	1.8927	1.9571	1.9924	1.9976
4.0	1.1137	1.2841	1.4459	1.5941	1.7242	1.8322	1.9150	1.9698	1.9952	1.9903
6.0	1.1687	1.3365	1.4940	1.6364	1.7593	1.8591	1.9326	1.9778	1.9931	1.9781
8.0	1.2223	1.3867	1.5392	1.6752	1.7905	1.8816	1.9457	1.9809	1.9862	1.9613
10.0	1.2740	1.4344	1.5814	1.7104	1.8175	1.8996	1.9540	1.9792	1.9744	1.9397
12.0	1.3237	1.4794	1.6202	1.7417	1.8404	1.9131	1.9576	1.9727	1.9579	1.9135
15.0	1.3939	1.5414	1.6718	1.7813	1.8664	1.9246	1.9541	1.9540	1.9244	1.8660
20.0	1.4973	1.6232	1.7390	1.8262	1.8974	1.9205	1.9246	1.8996	1.8462	1.7660
25.0	1.5811	1.6922	1.7807	1.8438	1.8998	1.8974	1.8664	1.8175	1.7422	1.6428
30.0	1.6429	1.7316	1.7958	1.8336	1.8438	1.8262	1.7813	1.7104	1.6157	1.5000
35.0	1.6806	1.7450	1.7838	1.7958	1.7807	1.7390	1.6718	1.5814	1.4703	1.3420
40.0	1.6933	1.7321	1.7450	1.7316	1.6922	1.6282	1.5414	1.4344	1.3106	1.1736
45.0	1.6804	1.6933	1.6806	1.6429	1.5811	1.4973	1.3939	1.2740	1.1414	1.0000
50.0	1.6423	1.6297	1.5927	1.5324	1.4508	1.3502	1.2339	1.1050	.9678	.8264
55.0	1.5803	1.5433	1.4838	1.4036	1.3052	1.1915	1.0660	.9325	.7951	.6580
60.0	1.4963	1.4367	1.3573	1.2603	1.1487	1.0259	.8956	.7618	.6286	.5000
65.0	1.3926	1.3132	1.2170	1.1068	.9861	.8585	.7278	.5981	.4733	.3572
70.0	1.2726	1.1765	1.0671	.9479	.8223	.6943	.5677	.4463	.3340	.2340
75.0	1.1399	1.0307	.9123	.7883	.6624	.5384	.4201	.3111	.2148	.1340
80.0	.9984	.8804	.7573	.6329	.5111	.3954	.2895	.1966	.1194	.0603
85.0	.8526	.7299	.6066	.4865	.3730	.2698	.1799	.1061	.0507	.0152

$\phi_1 = 120^\circ$; $\phi_2 = 240^\circ$; $\beta = 2^\circ$

α, deg \ θ_c, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.0075	.0213	.0426	.0712	.1493	.2531	.3797	.5251	.6848	.8542
2.0	.0112	.0276	.0513	.0822	.1647	.2726	.4025	.5505	.7122	.8825
4.0	.0214	.0426	.0711	.1066	.1977	.3131	.4493	.6022	.7671	.9390
6.0	.0348	.0608	.0940	.1340	.2333	.3558	.4977	.6548	.8222	.9949
8.0	.0516	.0823	.1199	.1641	.2712	.4003	.5473	.7079	.8772	1.0500
10.0	.0715	.1067	.1487	.1970	.3114	.4464	.5980	.7615	.9319	1.1041
12.0	.0945	.1341	.1802	.2324	.3536	.4940	.6494	.8151	.9859	1.1568
15.0	.1346	.1804	.2323	.2899	.4202	.5676	.7275	.8951	1.0652	1.2327
20.0	.2152	.2702	.3305	.3956	.5384	.6941	.8580	1.0252	1.1905	1.3490
25.0	.3107	.3733	.4403	.5111	.6622	.8219	.9855	1.1478	1.3041	1.4495
30.0	.4182	.4866	.5583	.6328	.7880	.9473	1.1060	1.2593	1.4024	1.5310
35.0	.5345	.6066	.6810	.7570	.9119	1.0665	1.2161	1.3562	1.4825	1.5912
40.0	.6560	.7297	.8046	.8800	1.0301	1.1757	1.3122	1.4355	1.5419	1.6281
45.0	.7791	.8523	.9254	.9979	1.1392	1.2717	1.3915	1.4950	1.5789	1.6408
50.0	.9001	.9704	1.0396	1.1073	1.2356	1.3516	1.4516	1.5327	1.5923	1.6287
55.0	1.0151	1.0806	1.1440	1.2067	1.3166	1.4129	1.4907	1.5475	1.5817	1.5922
60.0	1.1208	1.1795	1.2351	1.2873	1.3797	1.4538	1.5075	1.5390	1.5474	1.5326
65.0	1.2140	1.2641	1.3104	1.3525	1.4229	1.4731	1.5015	1.5074	1.4906	1.4515
70.0	1.2917	1.3318	1.3675	1.3984	1.4449	1.4700	1.4730	1.4537	1.4128	1.3514
75.0	1.3517	1.3806	1.4046	1.4235	1.4451	1.4449	1.4228	1.3796	1.3164	1.2354
80.0	1.3920	1.4090	1.4207	1.4270	1.4234	1.3993	1.3524	1.2872	1.2045	1.1070
85.0	1.4116	1.4161	1.4153	1.4090	1.3806	1.3318	1.2640	1.1793	1.0804	.9701

α, deg \ θ_c, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0	90.0
1.0	1.0279	1.2007	1.3674	1.5230	1.6626	1.7820	1.8777	1.9466	1.9868	1.9970
2.0	1.0564	1.2285	1.3937	1.5469	1.6834	1.7991	1.8905	1.9548	1.9900	1.9951
4.0	1.1127	1.2829	1.4444	1.5923	1.7222	1.8301	1.9127	1.9674	1.9928	1.9878
6.0	1.1677	1.3352	1.4924	1.6346	1.7573	1.8569	1.9303	1.9754	1.9907	1.9757
8.0	1.2211	1.3853	1.5376	1.6733	1.7884	1.8794	1.9434	1.9785	1.9837	1.9589
10.0	1.2728	1.4330	1.5797	1.7085	1.8155	1.8974	1.9517	1.9768	1.9720	1.9373
12.0	1.3224	1.4779	1.6185	1.7398	1.8382	1.9108	1.9553	1.9704	1.9555	1.9112
15.0	1.3925	1.5398	1.6700	1.7793	1.8643	1.9223	1.9518	1.9517	1.9220	1.8638
20.0	1.4958	1.6265	1.7371	1.8242	1.8952	1.9182	1.9223	1.8973	1.8440	1.7639
25.0	1.5796	1.6905	1.7788	1.8418	1.8976	1.8851	1.8682	1.8153	1.7401	1.6408
30.0	1.6412	1.7297	1.7938	1.8315	1.8417	1.8241	1.7792	1.7083	1.6137	1.4982
35.0	1.6790	1.7432	1.7818	1.7938	1.7787	1.7369	1.6698	1.5795	1.4685	1.3404
40.0	1.6916	1.7303	1.7431	1.7296	1.6903	1.6263	1.5395	1.4327	1.3090	1.1722
45.0	1.6787	1.6915	1.6788	1.6411	1.5793	1.4955	1.3922	1.2725	1.1400	.9988
50.0	1.6407	1.6280	1.5910	1.5308	1.4492	1.3487	1.2323	1.1037	.9666	.8253
55.0	1.5788	1.5417	1.4822	1.4021	1.3037	1.1901	1.0647	.9314	.7942	.6572
60.0	1.4948	1.4353	1.3559	1.2589	1.1474	1.0247	.8946	.7609	.6279	.4994
65.0	1.3913	1.3119	1.2157	1.1056	.9850	.8575	.7270	.5974	.4728	.3568
70.0	1.2714	1.1754	1.0661	.9469	.8214	.6935	.5670	.4458	.3336	.2337
75.0	1.1389	1.0299	.9115	.7875	.6617	.5378	.4196	.3108	.2145	.1338
80.0	.9976	.8796	.7566	.6323	.5106	.3950	.2892	.1963	.1192	.0602
85.0	.8519	.7293	.6061	.4860	.3727	.2696	.1799	.1060	.0506	.0152

TABLE V. - CONTINUED

(b) C_A. Continued.

$\beta_1 = 120^0$; $\beta_2 = 240^0$; $\beta = 5^0$

θ_c, deg / α, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.0111	.0249	.0460	.0744	.1518	.2548	.3803	.5245	.6830	.8509
2.0	.0149	.0311	.0547	.0853	.1672	.2741	.4030	.5499	.7101	.8791
4.0	.0249	.0460	.0743	.1096	.1999	.3144	.4495	.6012	.7647	.9352
6.0	.0382	.0642	.0971	.1367	.2353	.3568	.4976	.6534	.8195	.9908
8.0	.0545	.0855	.1228	.1667	.2730	.4010	.5469	.7062	.8741	1.0455
10.0	.0739	.1098	.1514	.1994	.3129	.4469	.5972	.7594	.9284	1.0992
12.0	.0962	.1370	.1827	.2346	.3548	.4942	.6484	.8127	.9821	1.1516
15.0	.1349	.1830	.2345	.2916	.4211	.5673	.7259	.8922	1.0609	1.2270
20.0	.2126	.2722	.3321	.3967	.5384	.6929	.8556	1.0214	1.1354	1.3426
25.0	.3044	.3746	.4411	.5115	.6615	.8200	.9822	1.1433	1.2982	1.4424
30.0	.4077	.4872	.5584	.6324	.7865	.9446	1.1021	1.2540	1.3959	1.5234
35.0	.5193	.6064	.6803	.7558	.9096	1.0630	1.2114	1.3503	1.4755	1.5832
40.0	.6359	.7288	.8031	.8780	1.0271	1.1715	1.3069	1.4292	1.5346	1.6179
45.0	.7539	.8505	.9231	.9952	1.1354	1.2669	1.3957	1.4982	1.5713	1.6325
50.0	.8698	.9679	1.0367	1.1038	1.2312	1.3463	1.4654	1.5257	1.5846	1.6205
55.0	.9801	1.0774	1.1403	1.2007	1.3117	1.4072	1.4842	1.5404	1.5741	1.5843
60.0	1.0814	1.1757	1.2309	1.2827	1.3744	1.4478	1.5009	1.5320	1.5401	1.5230
65.0	1.1707	1.2598	1.3057	1.3475	1.4173	1.4670	1.4950	1.5006	1.4836	1.4444
70.0	1.2452	1.3271	1.3624	1.3931	1.4392	1.4640	1.4667	1.4473	1.4063	1.3450
75.0	1.3028	1.3755	1.3993	1.4180	1.4394	1.4390	1.4168	1.3736	1.3106	1.2297
80.0	1.3417	1.4037	1.4153	1.4216	1.4178	1.3927	1.3469	1.2817	1.1993	1.1021
85.0	1.3606	1.4108	1.4099	1.4036	1.3753	1.3266	1.2590	1.1746	1.0760	.9641

θ_c, deg / α, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0	90.0
1.0	1.0232	1.1946	1.3599	1.5142	1.6526	1.7711	1.8659	1.9343	1.9741	1.9842
2.0	1.0515	1.2222	1.3860	1.5379	1.6733	1.7880	1.8786	1.9424	1.9773	1.9824
4.0	1.1074	1.2762	1.4364	1.5831	1.7119	1.8188	1.9007	1.9550	1.9801	1.9751
6.0	1.1621	1.3282	1.4841	1.6251	1.7467	1.8455	1.9183	1.9629	1.9780	1.9631
8.0	1.2152	1.3780	1.5290	1.6636	1.7777	1.8678	1.9312	1.9660	1.9711	1.9464
10.0	1.2666	1.4254	1.5708	1.6985	1.8045	1.8857	1.9395	1.9643	1.9594	1.9250
12.0	1.3159	1.4700	1.6094	1.7296	1.8272	1.8991	1.9431	1.9579	1.9430	1.8990
15.0	1.3855	1.5315	1.6606	1.7689	1.8530	1.9105	1.9396	1.9393	1.9098	1.8519
20.0	1.4881	1.6177	1.7272	1.8135	1.8738	1.9064	1.9103	1.8853	1.8322	1.7526
25.0	1.5714	1.6812	1.7686	1.8310	1.8663	1.8735	1.8525	1.8039	1.7290	1.6303
30.0	1.6326	1.7202	1.7836	1.8208	1.8306	1.8129	1.7681	1.6975	1.6034	1.4886
35.0	1.6701	1.7336	1.7717	1.7832	1.7680	1.7263	1.6594	1.5695	1.4592	1.3318
40.0	1.6826	1.7208	1.7332	1.7195	1.6802	1.6163	1.5300	1.4237	1.3007	1.1647
45.0	1.6698	1.6822	1.6693	1.6315	1.5699	1.4864	1.3836	1.2645	1.1327	.9924
50.0	1.6321	1.6192	1.5821	1.5219	1.4406	1.3405	1.2247	1.0967	.9805	.8201
55.0	1.5706	1.5334	1.4740	1.3941	1.2961	1.1830	1.0582	.9256	.7891	.6530
60.0	1.4871	1.4277	1.3484	1.2518	1.1408	1.0186	.8891	.7562	.6239	.4962
65.0	1.3843	1.3051	1.2092	1.0995	.9794	.8525	.7226	.5937	.4698	.3545
70.0	1.2652	1.1694	1.0605	.9418	.8169	.6895	.5637	.4431	.3315	.2322
75.0	1.1335	1.0247	.9069	.7834	.6581	.5348	.4172	.3089	.2132	.1330
80.0	.9931	.8755	.7530	.6292	.5080	.3929	.2876	.1952	.1185	.0598
85.0	.8483	.7262	.6035	.4839	.3710	.2683	.1789	.1055	.0503	.0151

$\beta_1 = 120^0$; $\beta_2 = 240^0$; $\beta = 15^0$

θ_c, deg / α, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.0365	.0542	.0765	.1038	.1755	.2706	.3864	.5195	.6657	.8206
2.0	.0417	.0610	.0850	.1142	.1899	.2887	.4077	.5432	.6912	.8471
4.0	.0537	.0763	.1040	.1370	.2207	.3266	.4515	.5915	.7425	.8998
6.0	.0680	.0942	.1256	.1626	.2539	.3664	.4966	.6406	.7940	.9521
8.0	.0849	.1147	.1499	.1908	.2894	.4080	.5430	.6903	.8454	1.0036
10.0	.1043	.1378	.1768	.2215	.3269	.4511	.5903	.7403	.8964	1.0540
12.0	.1263	.1636	.2063	.2545	.3664	.4956	.6384	.7904	.9469	1.1032
15.0	.1641	.2069	.2549	.3081	.4286	.5643	.7113	.8651	1.0210	1.1742
20.0	.2395	.2907	.3464	.4068	.5390	.6825	.8332	.9866	1.1380	1.2828
25.0	.3287	.3868	.4487	.5146	.6546	.8019	.9523	1.1012	1.2441	1.3767
30.0	.4290	.4923	.5585	.6281	.7721	.9191	1.0649	1.2053	1.3359	1.4528
35.0	.5374	.6041	.6726	.7439	.8879	1.0303	1.1677	1.2958	1.4108	1.5091
40.0	.6506	.7187	.7875	.8586	.9983	1.1324	1.2575	1.3700	1.4663	1.5436
45.0	.7652	.8326	.8998	.9686	1.1002	1.2221	1.3316	1.4255	1.5008	1.5554
50.0	.8777	.9425	1.0060	1.0706	1.1903	1.2967	1.3878	1.4607	1.5134	1.5441
55.0	.9848	1.0450	1.1030	1.1615	1.2660	1.3540	1.4242	1.4746	1.5035	1.5101
60.0	1.0831	1.1370	1.1878	1.2385	1.3249	1.3922	1.4399	1.4666	1.4715	1.4543
65.0	1.1698	1.2157	1.2578	1.2993	1.3652	1.4102	1.4344	1.4371	1.4183	1.3785
70.0	1.2421	1.2787	1.3109	1.3421	1.3858	1.4073	1.4077	1.3870	1.3457	1.2851
75.0	1.2979	1.3241	1.3455	1.3656	1.3860	1.3838	1.3608	1.3177	1.2557	1.1767
80.0	1.3354	1.3506	1.3606	1.3690	1.3657	1.3403	1.2951	1.2314	1.1511	1.0568
85.0	1.3537	1.3572	1.3556	1.3523	1.3257	1.2782	1.2125	1.1306	1.0351	.9289

θ_c, deg / α, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0	90.0
1.0	.9795	1.1376	1.2901	1.4323	1.5600	1.6692	1.7566	1.8196	1.8563	1.8655
2.0	1.0061	1.1636	1.3146	1.4547	1.5794	1.6851	1.7686	1.8272	1.8593	1.8638
4.0	1.0587	1.2143	1.3620	1.4971	1.6157	1.7141	1.7893	1.8391	1.8618	1.8569
6.0	1.1101	1.2632	1.4069	1.5366	1.6485	1.7391	1.8058	1.8465	1.8599	1.8456
8.0	1.1600	1.3101	1.4491	1.5728	1.6776	1.7601	1.8180	1.8494	1.8534	1.8299
10.0	1.2083	1.3546	1.4884	1.6056	1.7028	1.7769	1.8258	1.8478	1.8424	1.8090
12.0	1.2547	1.3965	1.5246	1.6349	1.7241	1.7895	1.8291	1.8418	1.8270	1.7854
15.0	1.3201	1.4543	1.5728	1.6718	1.7484	1.8003	1.8258	1.8243	1.7958	1.7410
20.0	1.4166	1.5353	1.6354	1.7137	1.7680	1.7964	1.7983	1.7735	1.7228	1.6477
25.0	1.4949	1.5951	1.6743	1.7302	1.7609	1.7655	1.7440	1.6970	1.6258	1.5327
30.0	1.5525	1.6318	1.6884	1.7206	1.7273	1.7085	1.6646	1.5970	1.5077	1.3995
35.0	1.5877	1.6443	1.6772	1.6853	1.6684	1.6271	1.5625	1.4766	1.3721	1.2521
40.0	1.5995	1.6323	1.6410	1.6254	1.5859	1.5237	1.4407	1.3395	1.2231	1.0950
45.0	1.5874	1.5961	1.5810	1.5427	1.4822	1.4016	1.3031	1.1898	1.0652	.9330
50.0	1.5520	1.5358	1.4989	1.4396	1.3606	1.2644	1.1538	1.0322	.9033	.7710
55.0	1.4941	1.4562	1.3973	1.3194	1.2248	1.1163	.9972	.8712	.7622	.6139
60.0	1.4157	1.3567	1.2793	1.1857	1.0788	.9618	.8383	.7120	.5868	.4665
65.0	1.3190	1.2415	1.1484	1.0425	.9270	.8055	.6817	.5592	.4419	.3333
70.0	1.2070	1.1139	1.0086	.8942	.7742	.6524	.5323	.4176	.3119	.2183
75.0	1.0832	.9779	.8641	.7453	.6250	.5069	.3946	.2915	.2007	.1250
80.0	.9512	.8376	.7195	.6003	.4838	.3735	.2728	.1846	.1117	.0563
85.0	.8151	.6973	.5789	.4637	.3551	.2563	.1705	.1002	.0476	.0142

TABLE V.- CONTINUED

(b) C_A. Continued.

$\phi_1 = 135^o$; $\phi_2 = 225^o$; $\beta = 0^o$

α, deg \ θ_c, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.0070	.0211	.0427	.0715	.1501	.2545	.3816	.5274	.6876	.8573
2.0	.0113	.0281	.0522	.0836	.1671	.2798	.4065	.5553	.7175	.8884
4.0	.0227	.0448	.0742	.1106	.2034	.3204	.4580	.6121	.7779	.9504
6.0	.0379	.0653	.0997	.1410	.2428	.3675	.5114	.6701	.8387	1.0122
8.0	.0570	.0894	.1288	.1748	.2850	.4169	.5664	.7290	.8997	1.0733
10.0	.0798	.1172	.1613	.2117	.3299	.4684	.6229	.7886	.9606	1.1336
12.0	.1062	.1483	.1969	.2516	.3773	.5217	.6804	.8486	1.0211	1.1928
15.0	.1522	.2011	.2561	.3166	.4524	.6044	.7682	.9386	1.1105	1.2787
20.0	.2449	.3039	.3681	.4369	.5863	.7476	.9160	1.0863	1.2533	1.4120
25.0	.3550	.4223	.4938	.5689	.7276	.8936	1.0618	1.2272	1.3847	1.5295
30.0	.4792	.5528	.6295	.7087	.8721	1.0379	1.2013	1.3571	1.5007	1.6277
35.0	.6137	.6914	.7711	.8520	1.0153	1.1762	1.3300	1.4720	1.5978	1.7036
40.0	.7544	.8340	.9142	.9945	1.1529	1.3043	1.4443	1.5684	1.6730	1.7549
45.0	.8971	.9760	1.0544	1.1317	1.2806	1.4183	1.5404	1.6434	1.7241	1.7800
50.0	1.0374	1.1134	1.1876	1.2596	1.3947	1.5146	1.6157	1.6947	1.7495	1.7782
55.0	1.1711	1.2418	1.3097	1.3743	1.4917	1.5905	1.6677	1.7208	1.7484	1.7495
60.0	1.2940	1.3573	1.4169	1.4722	1.5686	1.6435	1.6948	1.7208	1.7208	1.6947
65.0	1.4025	1.4566	1.5060	1.5504	1.6230	1.6722	1.6963	1.6948	1.6677	1.6157
70.0	1.4933	1.5365	1.5743	1.6066	1.6534	1.6755	1.6722	1.6435	1.5905	1.5146
75.0	1.5636	1.5946	1.6198	1.6389	1.6588	1.6534	1.6230	1.5686	1.4917	1.3947
80.0	1.6112	1.6291	1.6410	1.6465	1.6389	1.6066	1.5504	1.4722	1.3743	1.2596
85.0	1.6348	1.6391	1.6372	1.6291	1.5946	1.5365	1.4566	1.3573	1.2418	1.1134

α, deg \ θ_c, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0	90.0
1.0	1.0314	1.2044	1.3713	1.5269	1.6664	1.7858	1.8812	1.9499	1.9897	1.9994
2.0	1.0626	1.2349	1.4001	1.5531	1.6893	1.8045	1.8953	1.9589	1.9933	1.9976
4.0	1.1244	1.2946	1.4559	1.6032	1.7322	1.8389	1.9201	1.9733	1.9970	1.9903
6.0	1.1852	1.3526	1.5091	1.6502	1.7714	1.8692	1.9404	1.9831	1.9958	1.9781
8.0	1.2446	1.4084	1.5597	1.6938	1.8067	1.8951	1.9561	1.9880	1.9897	1.9613
10.0	1.3024	1.4619	1.6071	1.7338	1.8380	1.9165	1.9670	1.9880	1.9788	1.9397
12.0	1.3583	1.5128	1.6514	1.7700	1.8649	1.9334	1.9732	1.9832	1.9631	1.9135
15.0	1.4380	1.5836	1.7112	1.8168	1.8972	1.9499	1.9734	1.9670	1.9309	1.8660
20.0	1.5575	1.6854	1.7918	1.8736	1.9281	1.9538	1.9499	1.9165	1.8546	1.7660
25.0	1.6572	1.7640	1.8466	1.9025	1.9299	1.9281	1.8972	1.8380	1.7523	1.6428
30.0	1.7343	1.8171	1.8738	1.9025	1.9025	1.8736	1.8168	1.7338	1.6271	1.5000
35.0	1.7862	1.8432	1.8726	1.8738	1.8466	1.7918	1.7112	1.6071	1.4628	1.3420
40.0	1.8116	1.8413	1.8432	1.8171	1.7640	1.6854	1.5836	1.4619	1.3238	1.1736
45.0	1.8095	1.8116	1.7862	1.7343	1.6572	1.5575	1.4380	1.3024	1.1550	1.0000
50.0	1.7800	1.7549	1.7036	1.6277	1.5295	1.4120	1.2787	1.1336	.9813	.8264
55.0	1.7241	1.6730	1.5978	1.5007	1.3847	1.2533	1.1105	.9606	.8082	.6580
60.0	1.6434	1.5684	1.4720	1.3571	1.2272	1.0863	.9386	.7886	.6409	.5000
65.0	1.5404	1.4443	1.3300	1.2013	1.0618	.9160	.7682	.6229	.4845	.3572
70.0	1.4183	1.3043	1.1762	1.0379	.8936	.7476	.6044	.4684	.3436	.2340
75.0	1.2806	1.1529	1.0153	.8721	.7276	.5863	.4524	.3299	.2227	.1340
80.0	1.1317	.9945	.8520	.7087	.5689	.4369	.3166	.2117	.1254	.0603
85.0	.9760	.8340	.6914	.5528	.4223	.3039	.2011	.1172	.0546	.0152

$\phi_1 = 135^o$; $\phi_2 = 225^o$; $\beta = 2^o$

α, deg \ θ_c, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.0075	.0216	.0431	.0719	.1503	.2546	.3815	.5271	.6871	.8566
2.0	.0117	.0285	.0526	.0840	.1673	.2759	.4064	.5549	.7170	.8875
4.0	.0231	.0452	.0745	.1109	.2036	.3204	.4578	.6116	.7772	.9495
6.0	.0383	.0656	.1000	.1413	.2429	.3675	.5111	.6696	.8380	1.0112
8.0	.0574	.0898	.1291	.1750	.2851	.4168	.5661	.7284	.8989	1.0723
10.0	.0801	.1175	.1615	.2118	.3300	.4682	.6225	.7880	.9597	1.1325
12.0	.1065	.1486	.1971	.2517	.3772	.5215	.6799	.8479	1.0202	1.1916
15.0	.1525	.2013	.2562	.3166	.4522	.6041	.7676	.9378	1.1094	1.2774
20.0	.2450	.3040	.3680	.4368	.5860	.7471	.9152	1.0853	1.2521	1.4105
25.0	.3550	.4223	.4937	.5687	.7271	.8929	1.0609	1.2260	1.3833	1.5279
30.0	.4790	.5526	.6292	.7083	.8714	1.0371	1.2002	1.3558	1.4992	1.6260
35.0	.6134	.6910	.7706	.8514	1.0144	1.1752	1.3288	1.4705	1.5962	1.7018
40.0	.7540	.8334	.9135	.9937	1.1519	1.3031	1.4429	1.5668	1.6713	1.7530
45.0	.8965	.9753	1.0536	1.1308	1.2795	1.4169	1.5389	1.6418	1.7223	1.7781
50.0	1.0366	1.1124	1.1866	1.2585	1.3935	1.5132	1.6141	1.6930	1.7476	1.7763
55.0	1.1701	1.2407	1.3085	1.3730	1.4903	1.5890	1.6660	1.7190	1.7465	1.7476
60.0	1.2929	1.3561	1.4156	1.4708	1.5671	1.6419	1.6931	1.7191	1.7190	1.6929
65.0	1.4013	1.4552	1.5046	1.5490	1.6215	1.6705	1.6946	1.6931	1.6659	1.6140
70.0	1.4919	1.5350	1.5728	1.6051	1.6518	1.6738	1.6705	1.6419	1.5889	1.5131
75.0	1.5621	1.5931	1.6182	1.6374	1.6571	1.6518	1.6214	1.5670	1.4902	1.3933
80.0	1.6097	1.6276	1.6394	1.6450	1.6374	1.6050	1.5489	1.4707	1.3729	1.2583
85.0	1.6332	1.6376	1.6357	1.6276	1.6930	1.5350	1.4552	1.3560	1.2405	1.1123

α, deg \ θ_c, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0	90.0
1.0	1.0303	1.2032	1.3698	1.5251	1.6645	1.7836	1.8789	1.9475	1.9872	1.9970
2.0	1.0615	1.2336	1.3985	1.5513	1.6873	1.8023	1.8930	1.9565	1.9909	1.9951
4.0	1.1233	1.2932	1.4542	1.6014	1.7302	1.8367	1.9178	1.9710	1.9945	1.9878
6.0	1.1840	1.3511	1.5074	1.6483	1.7693	1.8669	1.9381	1.9807	1.9933	1.9757
8.0	1.2433	1.4069	1.5579	1.6918	1.8046	1.8928	1.9537	1.9855	1.9873	1.9589
10.0	1.3011	1.4603	1.6053	1.7318	1.8358	1.9142	1.9647	1.9856	1.9764	1.9373
12.0	1.3569	1.5111	1.6495	1.7679	1.8627	1.9311	1.9708	1.9808	1.9607	1.9112
15.0	1.4365	1.5819	1.7093	1.8147	1.8949	1.9476	1.9711	1.9646	1.9285	1.8638
20.0	1.5558	1.6835	1.7898	1.8714	1.9259	1.9515	1.9476	1.9142	1.8523	1.7639
25.0	1.6554	1.7620	1.8445	1.9002	1.9276	1.9258	1.8949	1.8357	1.7502	1.6408
30.0	1.7324	1.8151	1.8717	1.9003	1.9002	1.8713	1.8146	1.7317	1.6251	1.4982
35.0	1.7843	1.8411	1.8705	1.8716	1.8444	1.7897	1.7091	1.6052	1.4810	1.3404
40.0	1.8096	1.8392	1.8411	1.8150	1.7619	1.6834	1.5817	1.4601	1.3222	1.1722
45.0	1.8075	1.8095	1.7842	1.7323	1.6553	1.5556	1.4363	1.3009	1.1536	.9988
50.0	1.7781	1.7530	1.7017	1.6258	1.5277	1.4103	1.2771	1.1323	.9801	.8253
55.0	1.7222	1.6712	1.5960	1.4990	1.3831	1.2518	1.1092	.9595	.8073	.6572
60.0	1.6416	1.5667	1.4704	1.3556	1.2258	1.0850	.9375	.7877	.6401	.4994
65.0	1.5388	1.4427	1.3286	1.1999	1.0606	.9149	.7673	.6221	.4839	.3568
70.0	1.4168	1.3029	1.1750	1.0368	.8926	.7468	.6037	.4679	.3432	.2337
75.0	1.2793	1.1516	1.0142	.8711	.7268	.5856	.4518	.3296	.2225	.1338
80.0	1.1306	.9934	.8511	.7080	.5683	.4364	.3162	.2114	.1252	.0602
85.0	.9751	.8331	.6907	.5523	.4219	.3036	.2009	.1171	.0545	.0152

TABLE V. - CONTINUED

(b) C_A. Continued.

$\beta_1 = 150^0$; $\beta_2 = 210^0$; $\beta = 0^0$

α, deg \ θ_c, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.0073	.0215	.0432	.0722	.1511	.2558	.3831	.5291	.6895	.8592
2.0	.0118	.0289	.0535	.0852	.1692	.2785	.4096	.5587	.7213	.8923
4.0	.0242	.0470	.0770	.1141	.2081	.3261	.4646	.6193	.7856	.9584
6.0	.0410	.0693	.1047	.1469	.2504	.3766	.5219	.6815	.8508	1.0246
8.0	.0620	.0957	.1363	.1835	.2960	.4299	.5810	.7448	.9163	1.0903
10.0	.0871	.1261	.1717	.2236	.3446	.4855	.6419	.8091	.9820	1.1554
12.0	.1163	.1604	.2108	.2671	.3961	.5432	.7042	.8740	1.0475	1.2195
15.0	.1673	.2185	.2757	.3383	.4779	.6333	.7996	.9718	1.1447	1.3130
20.0	.2702	.3321	.3990	.4705	.6246	.7899	.9612	1.1334	1.3012	1.4596
25.0	.3926	.4633	.5381	.6162	.7803	.9505	1.1218	1.2889	1.4468	1.5907
30.0	.5308	.6083	.6886	.7711	.9401	1.1104	1.2766	1.4338	1.5771	1.7022
35.0	.6807	.7625	.8459	.9303	1.0994	1.2645	1.4209	1.5634	1.6881	1.7909
40.0	.8376	.9214	1.0054	1.0891	1.2531	1.4083	1.5501	1.6740	1.7764	1.8540
45.0	.9969	1.0800	1.1621	1.2427	1.3968	1.5374	1.6605	1.7621	1.8393	1.8897
50.0	1.1536	1.2336	1.3113	1.3864	1.5259	1.6479	1.7486	1.8251	1.8750	1.8967
55.0	1.3031	1.3774	1.4485	1.5157	1.6366	1.7363	1.8119	1.8611	1.8823	1.8750
60.0	1.4407	1.5072	1.5695	1.6269	1.7254	1.8000	1.8483	1.8689	1.8611	1.8251
65.0	1.5623	1.6190	1.6705	1.7164	1.7898	1.8371	1.8568	1.8483	1.8119	1.7486
70.0	1.6641	1.7094	1.7486	1.7816	1.8278	1.8465	1.8371	1.8000	1.7363	1.6479
75.0	1.7432	1.7756	1.8014	1.8206	1.8381	1.8278	1.7898	1.7254	1.6366	1.5259
80.0	1.7971	1.8156	1.8273	1.8320	1.8206	1.7816	1.7164	1.6269	1.5157	1.3864
85.0	1.8241	1.8283	1.8254	1.8156	1.7756	1.7094	1.6190	1.5072	1.3774	1.2336

α, deg \ θ_c, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0	90.0
1.0	1.0333	1.2063	1.3731	1.5285	1.6679	1.7870	1.8822	1.9505	1.9900	1.9994
2.0	1.0665	1.2387	1.4037	1.5564	1.6922	1.8070	1.8972	1.9602	1.9940	1.9976
4.0	1.1325	1.3025	1.4633	1.6100	1.7382	1.8439	1.9240	1.9760	1.9983	1.9903
6.0	1.1976	1.3646	1.5205	1.6605	1.7805	1.8767	1.9462	1.9870	1.9977	1.9781
8.0	1.2615	1.4248	1.5750	1.7077	1.8189	1.9052	1.9639	1.9932	1.9923	1.9613
10.0	1.3240	1.4827	1.6266	1.7514	1.8533	1.9292	1.9768	1.9946	1.9821	1.9397
12.0	1.3847	1.5380	1.6750	1.7913	1.8834	1.9486	1.9849	1.9911	1.9671	1.9135
15.0	1.4717	1.6158	1.7411	1.8436	1.9204	1.9690	1.9880	1.9768	1.9357	1.8660
20.0	1.6037	1.7292	1.8321	1.9095	1.9590	1.9790	1.9690	1.9292	1.8608	1.7660
25.0	1.7161	1.8193	1.8971	1.9472	1.9680	1.9590	1.9204	1.8533	1.7598	1.6428
30.0	1.8054	1.8834	1.9339	1.9554	1.9472	1.9095	1.8436	1.7514	1.6357	1.5000
35.0	1.8689	1.9196	1.9415	1.9339	1.8971	1.8321	1.7411	1.6266	1.4922	1.3420
40.0	1.9047	1.9268	1.9196	1.8834	1.8193	1.7292	1.6158	1.4827	1.3338	1.1736
45.0	1.9117	1.9047	1.8689	1.8054	1.7161	1.6037	1.4717	1.3240	1.1652	1.0000
50.0	1.8897	1.8540	1.7909	1.7022	1.5907	1.4596	1.3130	1.1554	.9915	.8264
55.0	1.8393	1.7764	1.6881	1.5771	1.4468	1.3012	1.1447	.9820	.8181	.6580
60.0	1.7621	1.6740	1.5634	1.4338	1.2889	1.1334	.9718	.8091	.6502	.5000
65.0	1.6605	1.5501	1.4208	1.2766	1.1218	.9612	.7996	.6419	.4929	.3572
70.0	1.5374	1.4083	1.2645	1.1104	.9505	.7899	.6333	.4855	.3510	.2340
75.0	1.3968	1.2531	1.0994	.9401	.7803	.6246	.4779	.3446	.2288	.1340
80.0	1.2427	1.0891	.9303	.7711	.6162	.4705	.3383	.2236	.1300	.0603
85.0	1.0800	.9214	.7625	.6083	.4633	.3321	.2185	.1261	.0576	.0152

$\beta_1 = 150^0$; $\beta_2 = 210^0$; $\beta = 2^0$

α, deg \ θ_c, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.0075	.0217	.0434	.0723	.1511	.2557	.3828	.5286	.6888	.8583
2.0	.0120	.0291	.0536	.0853	.1692	.2783	.4093	.5582	.7205	.8913
4.0	.0244	.0472	.0772	.1142	.2080	.3259	.4642	.6187	.7848	.9574
6.0	.0412	.0694	.1048	.1469	.2503	.3764	.5213	.6808	.8499	1.0234
8.0	.0621	.0958	.1364	.1835	.2958	.4295	.5805	.7441	.9153	1.0891
10.0	.0872	.1262	.1717	.2236	.3444	.4851	.6413	.8083	.9810	1.1541
12.0	.1164	.1604	.2107	.2670	.3958	.5428	.7035	.8731	1.0464	1.2181
15.0	.1673	.2185	.2755	.3381	.4775	.6327	.7988	.9708	1.1434	1.3116
20.0	.2701	.3319	.3988	.4701	.6240	.7891	.9602	1.1322	1.2998	1.4579
25.0	.3923	.4630	.5376	.6157	.7795	.9496	1.1206	1.2875	1.4452	1.5888
30.0	.5304	.6077	.6879	.7703	.9392	1.1092	1.2752	1.4322	1.5753	1.7003
35.0	.6801	.7618	.8451	.9294	1.0982	1.2632	1.4192	1.5617	1.6861	1.7889
40.0	.8368	.9204	1.0044	1.0880	1.2518	1.4068	1.5484	1.6721	1.7743	1.8519
45.0	.9959	1.0789	1.1609	1.2414	1.3953	1.5357	1.6586	1.7601	1.8372	1.8875
50.0	1.1524	1.2323	1.3099	1.3849	1.5272	1.6460	1.7477	1.8230	1.8728	1.8945
55.0	1.3017	1.3760	1.4469	1.5141	1.6348	1.7344	1.8099	1.8590	1.8802	1.8728
60.0	1.4391	1.5056	1.5678	1.6251	1.7235	1.7980	1.8462	1.8668	1.8589	1.8230
65.0	1.5606	1.6173	1.6687	1.7145	1.7879	1.8351	1.8547	1.8462	1.8098	1.7466
70.0	1.6623	1.7075	1.7467	1.7797	1.8258	1.8444	1.8351	1.7980	1.7343	1.6460
75.0	1.7413	1.7736	1.7994	1.8185	1.8361	1.8257	1.7878	1.7235	1.6347	1.5241
80.0	1.7951	1.8136	1.8253	1.8300	1.8185	1.7796	1.7145	1.6250	1.5140	1.3848
85.0	1.8221	1.8262	1.8234	1.8136	1.7736	1.7075	1.6172	1.5056	1.3759	1.2322

α, deg \ θ_c, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0	90.0
1.0	1.0321	1.2050	1.3715	1.5267	1.6659	1.7848	1.8799	1.9481	1.9876	1.9970
2.0	1.0653	1.2373	1.4021	1.5546	1.6902	1.8048	1.8949	1.9578	1.9915	1.9951
4.0	1.1312	1.3010	1.4616	1.6081	1.7361	1.8417	1.9217	1.9736	1.9959	1.9878
6.0	1.1962	1.3630	1.5187	1.6586	1.7784	1.8744	1.9439	1.9846	1.9953	1.9757
8.0	1.2601	1.4231	1.5732	1.7057	1.8167	1.9029	1.9615	1.9908	1.9899	1.9589
10.0	1.3225	1.4809	1.6247	1.7493	1.8511	1.9268	1.9744	1.9921	1.9797	1.9373
12.0	1.3831	1.5363	1.6730	1.7891	1.8812	1.9463	1.9825	1.9886	1.9647	1.9112
15.0	1.4700	1.6139	1.7390	1.8414	1.9181	1.9666	1.9855	1.9743	1.9333	1.8638
20.0	1.6018	1.7271	1.8300	1.9073	1.9567	1.9766	1.9666	1.9268	1.8586	1.7639
25.0	1.7141	1.8171	1.8948	1.9449	1.9657	1.9566	1.9180	1.8510	1.7577	1.6408
30.0	1.8033	1.8812	1.9316	1.9531	1.9448	1.9072	1.8414	1.7493	1.6337	1.4982
35.0	1.8667	1.9173	1.9392	1.9316	1.8948	1.8299	1.7389	1.6246	1.4904	1.3404
40.0	1.9025	1.9245	1.9173	1.8811	1.8171	1.7271	1.6139	1.4809	1.3321	1.1722
45.0	1.9095	1.9024	1.8667	1.8032	1.7140	1.6018	1.4699	1.3224	1.1637	.9988
50.0	1.8875	1.8519	1.7888	1.7002	1.5888	1.4578	1.3114	1.1540	.9903	.8253
55.0	1.8372	1.7743	1.6861	1.5752	1.4451	1.2997	1.1433	.9808	.8171	.6572
60.0	1.7601	1.6720	1.5616	1.4321	1.2874	1.1320	.9706	.8081	.6494	.4994
65.0	1.6585	1.5483	1.4191	1.2751	1.1205	.9600	.7986	.6411	.4923	.3568
70.0	1.5357	1.4067	1.2631	1.1091	.9494	.7889	.6325	.4849	.3506	.2337
75.0	1.3952	1.2517	1.0981	.9390	.7793	.6239	.4774	.3442	.2285	.1338
80.0	1.2413	1.0879	.9292	.7702	.6155	.4699	.3379	.2234	.1299	.0602
85.0	1.0788	.9203	.7617	.6076	.4628	.3317	.2183	.1260	.0576	.0152

TABLE V.- CONTINUED

(b) C_A. Continued.

$\beta_1 = 135^\circ$; $\beta_2 = 225^\circ$; $\beta = 5^\circ$

α, deg \ θ_c, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.0097	.0237	.0451	.0737	.1515	.2550	.3810	.5255	.6843	.8524
2.0	.0139	.0306	.0546	.0857	.1684	.2761	.4057	.5531	.7139	.8832
4.0	.0251	.0472	.0763	.1124	.2044	.3204	.4568	.6095	.7738	.9448
6.0	.0400	.0675	.1017	.1426	.2435	.3672	.5098	.6670	.8342	1.0061
8.0	.0586	.0915	.1305	.1761	.2854	.4162	.5644	.7255	.8947	1.0668
10.0	.0807	.1190	.1627	.2127	.3300	.4673	.6204	.7847	.9552	1.1267
12.0	.1063	.1499	.1981	.2523	.3770	.5202	.6775	.8442	1.0152	1.1853
15.0	.1509	.2024	.2568	.3168	.4515	.6023	.7646	.9335	1.1039	1.2706
20.0	.2405	.3043	.3680	.4362	.5844	.7444	.9113	1.0801	1.2456	1.4028
25.0	.3468	.4219	.4928	.5673	.7247	.8893	1.0560	1.2200	1.3760	1.5195
30.0	.4667	.5514	.6275	.7060	.8680	1.0325	1.1944	1.3889	1.4912	1.6170
35.0	.5964	.6889	.7679	.8482	1.0101	1.1697	1.3222	1.4629	1.5875	1.6923
40.0	.7321	.8304	.9099	.9896	1.1447	1.2969	1.4356	1.5586	1.6622	1.7432
45.0	.8697	.9714	1.0491	1.1258	1.2735	1.4099	1.5310	1.6330	1.7129	1.7681
50.0	1.0049	1.1076	1.1813	1.2527	1.3867	1.5056	1.6057	1.6839	1.7380	1.7663
55.0	1.1337	1.2351	1.3024	1.3665	1.4830	1.5809	1.6573	1.7098	1.7369	1.7378
60.0	1.2522	1.3498	1.4088	1.4637	1.5592	1.6335	1.6842	1.7098	1.7096	1.6835
65.0	1.3567	1.4482	1.4973	1.5413	1.6133	1.6619	1.6857	1.6840	1.6568	1.6050
70.0	1.4442	1.5275	1.5651	1.5971	1.6434	1.6652	1.6617	1.6331	1.5803	1.5048
75.0	1.5120	1.5852	1.6102	1.6292	1.6487	1.6433	1.6130	1.5587	1.4622	1.3858
80.0	1.5579	1.6195	1.6312	1.6367	1.6291	1.5968	1.5409	1.4631	1.3657	1.2517
85.0	1.5807	1.6294	1.6275	1.6194	1.5850	1.5272	1.4478	1.3491	1.2342	1.1065

α, deg \ θ_c, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0	90.0
1.0	1.0249	1.1964	1.3618	1.5160	1.6543	1.7725	1.8671	1.9351	1.9746	1.9842
2.0	1.0559	1.2267	1.3903	1.5420	1.6769	1.7911	1.8811	1.9441	1.9782	1.9724
4.0	1.1173	1.2859	1.4457	1.5917	1.7195	1.8253	1.9057	1.9584	1.9818	1.9751
6.0	1.1776	1.3434	1.4986	1.6383	1.7585	1.8553	1.9259	1.9681	1.9806	1.9631
8.0	1.2366	1.3988	1.5487	1.6816	1.7935	1.8810	1.9414	1.9729	1.9746	1.9464
10.0	1.2939	1.4519	1.5958	1.7213	1.8245	1.9023	1.9523	1.9730	1.9638	1.9250
12.0	1.3494	1.5024	1.6398	1.7572	1.8513	1.9190	1.9584	1.9682	1.9482	1.8990
15.0	1.4284	1.5728	1.6991	1.8037	1.8832	1.9354	1.9586	1.9522	1.9162	1.8519
20.0	1.5470	1.6737	1.7791	1.8600	1.9140	1.9393	1.9353	1.9020	1.8405	1.7526
25.0	1.6460	1.7517	1.8335	1.8887	1.9157	1.9138	1.8829	1.8241	1.7390	1.6303
30.0	1.7225	1.8045	1.8605	1.8888	1.8885	1.8597	1.8032	1.7207	1.6148	1.4886
35.0	1.7741	1.8303	1.8593	1.8603	1.8330	1.7785	1.6984	1.5950	1.4716	1.3318
40.0	1.7992	1.8284	1.8301	1.8040	1.7511	1.6729	1.5718	1.4509	1.3138	1.1647
45.0	1.7971	1.7989	1.7736	1.7218	1.6451	1.5460	1.4272	1.2926	1.1462	.9924
50.0	1.7679	1.7427	1.6916	1.6160	1.5184	1.4016	1.2691	1.1251	.9739	.8201
55.0	1.7124	1.6615	1.5866	1.4900	1.3747	1.2441	1.1022	.9534	.8021	.6530
60.0	1.6323	1.5576	1.4617	1.3475	1.2184	1.0783	.9316	.7827	.6361	.4962
65.0	1.5301	1.4344	1.3209	1.1928	1.0543	.9094	.7625	.6122	.4808	.3545
70.0	1.4089	1.2956	1.1682	1.0307	.8873	.7423	.6000	.4649	.3411	.2322
75.0	1.2723	1.1452	1.0085	.8661	.7226	.5822	.4491	.3275	.2211	.1330
80.0	1.1245	.9880	.8465	.7040	.5651	.4339	.3143	.2101	.1244	.0598
85.0	.9700	.8288	.6871	.5493	.4196	.3019	.1990	.1164	.0542	.0151

$\beta_1 = 135^\circ$; $\beta_2 = 225^\circ$; $\beta = 15^\circ$

α, deg \ θ_c, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.0267	.0426	.0636	.0903	.1628	.2590	.3760	.5104	.6579	.8142
2.0	.0318	.0495	.0726	.1017	.1786	.2788	.3993	.5363	.6858	.8431
4.0	.0440	.0657	.0931	.1268	.2125	.3204	.4473	.5893	.7421	.9010
6.0	.0591	.0850	.1170	.1552	.2492	.3644	.4971	.6434	.7988	.9586
8.0	.0773	.1076	.1440	.1866	.2887	.4105	.5485	.6984	.8550	1.0157
10.0	.0987	.1335	.1742	.2210	.3306	.4585	.6011	.7540	.9126	1.0720
12.0	.1233	.1625	.2073	.2582	.3747	.5082	.6548	.8100	.9690	1.1272
15.0	.1661	.2117	.2621	.3188	.4448	.5855	.7367	.8940	1.0524	1.2073
20.0	.2517	.3074	.3659	.4310	.5697	.7190	.8746	1.0318	1.1857	1.3317
25.0	.3530	.4175	.4823	.5541	.7016	.8552	1.0107	1.1633	1.3083	1.4413
30.0	.4670	.5389	.6078	.6844	.8364	.9899	1.1408	1.2845	1.4165	1.5330
35.0	.5902	.6677	.7386	.8179	.9700	1.1189	1.2609	1.3917	1.5071	1.6038
40.0	.7189	.8002	.8708	.9507	1.0983	1.2384	1.3675	1.4816	1.5773	1.6516
45.0	.8493	.9322	1.0003	1.0786	1.2176	1.3448	1.4572	1.5516	1.6249	1.6751
50.0	.9774	1.0598	1.1233	1.1978	1.3240	1.4347	1.5274	1.5995	1.6486	1.6734
55.0	1.0994	1.1791	1.2361	1.3047	1.4145	1.5055	1.5759	1.6238	1.6476	1.6466
60.0	1.2115	1.2865	1.3351	1.3959	1.4862	1.5549	1.6013	1.6238	1.6219	1.5955
65.0	1.3105	1.3787	1.4174	1.4689	1.5370	1.5816	1.6027	1.5995	1.5723	1.5217
70.0	1.3932	1.4530	1.4806	1.5212	1.5653	1.5847	1.5801	1.5517	1.5003	1.4275
75.0	1.4573	1.5070	1.5226	1.5514	1.5703	1.5641	1.5343	1.4818	1.4081	1.3156
80.0	1.5008	1.5391	1.5422	1.5585	1.5519	1.5205	1.4666	1.3918	1.2965	1.1895
85.0	1.5223	1.5484	1.5389	1.5423	1.5105	1.4550	1.3790	1.2847	1.1749	1.0531

α, deg \ θ_c, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0	90.0
1.0	.9744	1.1338	1.2874	1.4307	1.5592	1.6690	1.7568	1.8200	1.8566	1.8665
2.0	1.0036	1.1622	1.3143	1.4551	1.5804	1.6865	1.7700	1.8284	1.8600	1.8638
4.0	1.0613	1.2180	1.3663	1.5019	1.6205	1.7186	1.7931	1.8419	1.8634	1.8569
6.0	1.1180	1.2720	1.4161	1.5457	1.6571	1.7468	1.8121	1.8510	1.8623	1.8456
8.0	1.1734	1.3241	1.4632	1.5864	1.6901	1.7710	1.8267	1.8555	1.8566	1.8297
10.0	1.2274	1.3740	1.5075	1.6237	1.7192	1.7910	1.8369	1.8556	1.8464	1.8095
12.0	1.2795	1.4215	1.5488	1.6575	1.7444	1.8067	1.8426	1.8511	1.8319	1.7854
15.0	1.3538	1.4876	1.6046	1.7012	1.7744	1.8221	1.8429	1.8360	1.8017	1.7410
20.0	1.4653	1.5825	1.6798	1.7542	1.8033	1.8258	1.8209	1.7888	1.7305	1.6377
25.0	1.5584	1.6559	1.7309	1.7811	1.8050	1.8018	1.7717	1.7156	1.6351	1.5327
30.0	1.6303	1.7055	1.7563	1.7812	1.7794	1.7509	1.6967	1.6184	1.5183	1.3995
35.0	1.6788	1.7298	1.7552	1.7544	1.7272	1.6746	1.5982	1.5002	1.3837	1.2521
40.0	1.7024	1.7280	1.7277	1.7015	1.6502	1.5753	1.4792	1.3647	1.2353	1.0950
45.0	1.7004	1.7003	1.6746	1.6242	1.5506	1.4560	1.3433	1.2159	1.0778	.9330
50.0	1.6730	1.6474	1.5975	1.5248	1.4314	1.3202	1.1946	1.0584	.9158	.7710
55.0	1.6208	1.5710	1.4988	1.4063	1.2963	1.1722	1.0377	.8970	.7543	.6139
60.0	1.5455	1.4734	1.3814	1.2723	1.1494	1.0164	.8773	.7565	.5982	.4665
65.0	1.4494	1.3576	1.2490	1.1269	.9951	.8575	.7183	.5819	.4522	.3333
70.0	1.3354	1.2270	1.1055	.9745	.8381	.7004	.5656	.4378	.3208	.2193
75.0	1.2070	1.0857	.9553	.8197	.6832	.5499	.4237	.3086	.2088	.1250
80.0	1.0681	.9379	.8030	.6673	.5352	.4104	.2970	.1982	.1172	.0563
85.0	.9228	.7881	.6531	.5219	.3984	.2864	.1893	.1101	.0511	.0142

TABLE V.- CONTINUED

(b) C_A. Concluded.

$\phi_1 = 150^\circ$; $\phi_2 = 210^\circ$; $\beta = 5^\circ$

α, deg \ θ_c, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.0085	.0227	.0442	.0730	.1512	.2550	.3813	.5261	.6851	.8535
2.0	.0130	.0300	.0543	.0858	.1691	.2775	.4076	.5555	.7167	.8862
4.0	.0254	.0480	.0778	.1145	.2077	.3248	.4621	.6156	.7805	.9519
6.0	.0420	.0701	.1052	.1471	.2497	.3749	.5189	.6773	.8452	1.0176
8.0	.0628	.0963	.1366	.1834	.2950	.4278	.5777	.7401	.9102	1.0828
10.0	.0878	.1265	.1717	.2232	.3432	.4830	.6381	.8039	.9754	1.1474
12.0	.1167	.1604	.2104	.2664	.3943	.5403	.6999	.8683	1.0404	1.2110
15.0	.1674	.2182	.2749	.3370	.4755	.6296	.7946	.9654	1.1369	1.3038
20.0	.2694	.3309	.3973	.4682	.6211	.7850	.9550	1.1258	1.2922	1.4493
25.0	.3909	.4611	.5353	.6128	.7756	.9445	1.1144	1.2801	1.4367	1.5793
30.0	.5281	.6050	.6846	.7665	.9342	1.1031	1.2680	1.4239	1.5660	1.6901
35.0	.6768	.7580	.8408	.9245	1.0922	1.2561	1.4111	1.5525	1.6761	1.7781
40.0	.8326	.9157	.9991	1.0821	1.2448	1.3988	1.5394	1.6623	1.7637	1.8407
45.0	.9906	1.0731	1.1546	1.2345	1.3874	1.5269	1.6489	1.7497	1.8262	1.8761
50.0	1.1462	1.2255	1.3027	1.3771	1.5155	1.6365	1.7364	1.8122	1.8616	1.8831
55.0	1.2945	1.3683	1.4388	1.5055	1.6254	1.7243	1.7992	1.8479	1.8689	1.8615
60.0	1.4310	1.4971	1.5588	1.6158	1.7136	1.7875	1.8354	1.8557	1.8478	1.8120
65.0	1.5517	1.6080	1.6591	1.7046	1.7775	1.8243	1.8438	1.8353	1.7990	1.7361
70.0	1.6528	1.6977	1.7367	1.7694	1.8151	1.8336	1.8243	1.7875	1.7240	1.6361
75.0	1.7313	1.7634	1.7890	1.8090	1.8254	1.8151	1.7773	1.7133	1.6250	1.5151
80.0	1.7848	1.8031	1.8147	1.8194	1.8079	1.7692	1.7044	1.6155	1.5051	1.3766
85.0	1.8116	1.8157	1.8128	1.8031	1.7633	1.6976	1.6078	1.4968	1.3679	1.2250

α, deg \ θ_c, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0	90.0
1.0	1.0261	1.1977	1.3631	1.5173	1.6555	1.7736	1.8679	1.9357	1.9749	1.9842
2.0	1.0591	1.2299	1.3935	1.5449	1.6796	1.7934	1.8829	1.9453	1.9788	1.9824
4.0	1.1245	1.2931	1.4526	1.5981	1.7252	1.8301	1.9095	1.9610	1.9831	1.9751
6.0	1.1892	1.3548	1.5094	1.6483	1.7672	1.8626	1.9315	1.9720	1.9826	1.9631
8.0	1.2526	1.4145	1.5635	1.6951	1.8053	1.8908	1.9490	1.9781	1.9772	1.9464
10.0	1.3146	1.4719	1.6147	1.7384	1.8394	1.9147	1.9618	1.9795	1.9670	1.9250
12.0	1.3748	1.5269	1.6627	1.7780	1.8693	1.9340	1.9699	1.9760	1.9521	1.8990
15.0	1.4611	1.6041	1.7283	1.8299	1.9060	1.9542	1.9729	1.9618	1.9210	1.8519
20.0	1.5922	1.7166	1.8187	1.8954	1.9444	1.9641	1.9541	1.9146	1.8467	1.7526
25.0	1.7037	1.8060	1.8831	1.9327	1.9533	1.9443	1.9059	1.8392	1.7465	1.6303
30.0	1.7923	1.8696	1.9196	1.9409	1.9326	1.8952	1.8297	1.7301	1.6233	1.4886
35.0	1.8553	1.9055	1.9272	1.9195	1.8829	1.8184	1.7279	1.6143	1.4809	1.3318
40.0	1.8909	1.9127	1.9054	1.8694	1.8057	1.7162	1.6036	1.4714	1.3236	1.1647
45.0	1.8978	1.8908	1.8551	1.7920	1.7033	1.5917	1.4606	1.3140	1.1563	.9924
50.0	1.8760	1.8405	1.7777	1.6896	1.5788	1.4487	1.3031	1.1467	.9840	.8201
55.0	1.8260	1.7634	1.6757	1.5654	1.4361	1.2915	1.1361	.9746	.8117	.6630
60.0	1.7494	1.6618	1.5520	1.4232	1.2794	1.1249	.9645	.8030	.6453	.4962
65.0	1.6485	1.5388	1.4104	1.2672	1.1135	.9540	.7936	.6370	.4892	.3545
70.0	1.5264	1.3982	1.2554	1.1023	.9435	.7840	.6285	.4818	.3484	.2322
75.0	1.3868	1.2442	1.0914	.9333	.7746	.6200	.4744	.3421	.2271	.1330
80.0	1.2339	1.0814	.9237	.7655	.6118	.4670	.3350	.2220	.1290	.0598
85.0	1.0724	.9149	.7572	.6040	.4601	.3297	.2170	.1252	.0572	.0151

$\phi_1 = 150^\circ$; $\phi_2 = 210^\circ$; $\beta = 15^\circ$

α, deg \ θ_c, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.0173	.0315	.0517	.0786	.1518	.2489	.3669	.5024	.6511	.8085
2.0	.0221	.0385	.0613	.0907	.1687	.2700	.3917	.5300	.6807	.8393
4.0	.0341	.0553	.0833	.1177	.2049	.3145	.4430	.5865	.7408	.9010
6.0	.0498	.0758	.1091	.1483	.2444	.3616	.4964	.6445	.8015	.9627
8.0	.0694	.1000	.1386	.1824	.2870	.4113	.5516	.7036	.8627	1.0241
10.0	.0929	.1277	.1716	.2199	.3324	.4632	.6084	.7636	.9240	1.0847
12.0	.1201	.1588	.2080	.2605	.3804	.5171	.6665	.8241	.9851	1.1446
15.0	.1677	.2114	.2686	.3268	.4567	.6011	.7555	.9154	1.0758	1.2319
20.0	.2636	.3138	.3837	.4502	.5936	.7472	.9063	1.0662	1.2218	1.3636
25.0	.3778	.4317	.5134	.5862	.7388	.8971	1.0562	1.2113	1.3577	1.4909
30.0	.5068	.5616	.6538	.7306	.8880	1.0462	1.2006	1.3464	1.4792	1.5950
35.0	.6466	.6997	.8007	.8792	1.0365	1.1901	1.3351	1.4674	1.5828	1.6777
40.0	.7930	.8417	.9494	1.0274	1.1800	1.3242	1.4558	1.5705	1.6651	1.7366
45.0	.9416	.9835	1.0957	1.1707	1.3140	1.4447	1.5588	1.6528	1.7239	1.7699
50.0	1.0879	1.1206	1.2349	1.3047	1.4345	1.5477	1.6410	1.7115	1.7572	1.7765
55.0	1.2273	1.2490	1.3629	1.4254	1.5377	1.6302	1.7000	1.7451	1.7640	1.7562
60.0	1.3557	1.3648	1.4757	1.5291	1.6207	1.6897	1.7340	1.7524	1.7442	1.7097
65.0	1.4691	1.4646	1.5700	1.6127	1.6808	1.7243	1.7420	1.7332	1.6983	1.6383
70.0	1.5642	1.5452	1.6429	1.6735	1.7162	1.7330	1.7236	1.6881	1.6278	1.5443
75.0	1.6379	1.6043	1.6921	1.7098	1.7258	1.7156	1.6795	1.6186	1.5347	1.4305
80.0	1.6882	1.6400	1.7163	1.7205	1.7094	1.6725	1.6109	1.5266	1.4220	1.3003
85.0	1.7134	1.6514	1.7145	1.7052	1.6675	1.6051	1.5201	1.4150	1.2929	1.1577

α, deg \ θ_c, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0	90.0
1.0	.9699	1.1303	1.2849	1.4290	1.5583	1.6686	1.7569	1.8202	1.8568	1.8655
2.0	1.0009	1.1605	1.3135	1.4551	1.5809	1.6873	1.7709	1.8292	1.8605	1.8638
4.0	1.0624	1.2200	1.3691	1.5051	1.6238	1.7218	1.7959	1.8440	1.8645	1.8569
6.0	1.1232	1.2780	1.4225	1.5522	1.6633	1.7523	1.8166	1.8543	1.8640	1.8456
8.0	1.1828	1.3341	1.4733	1.5962	1.6991	1.7789	1.8331	1.8600	1.8590	1.8299
10.0	1.2411	1.3881	1.5214	1.6370	1.7312	1.8013	1.8451	1.8613	1.8494	1.8097
12.0	1.2977	1.4398	1.5666	1.6742	1.7593	1.8194	1.8527	1.8580	1.8354	1.7854
15.0	1.3789	1.5124	1.6282	1.7230	1.7938	1.8384	1.8556	1.8447	1.8061	1.7410
20.0	1.5021	1.6181	1.7132	1.7845	1.8298	1.8478	1.8378	1.8003	1.7363	1.6477
25.0	1.6069	1.7022	1.7738	1.8196	1.8383	1.8297	1.7925	1.7295	1.6420	1.5327
30.0	1.6902	1.7620	1.8082	1.8273	1.8188	1.7830	1.7209	1.6344	1.5262	1.3995
35.0	1.7495	1.7958	1.8152	1.8073	1.7721	1.7108	1.6252	1.5180	1.3923	1.2521
40.0	1.7829	1.8025	1.7948	1.7601	1.6995	1.6147	1.5083	1.3837	1.2445	1.0950
45.0	1.7894	1.7819	1.7475	1.6873	1.6032	1.4976	1.3739	1.2357	1.0872	.9330
50.0	1.7689	1.7346	1.6748	1.5911	1.4862	1.3632	1.2258	1.0784	.9252	.7710
55.0	1.7219	1.6621	1.5788	1.4743	1.3520	1.2154	1.0688	.9164	.7634	.6139
60.0	1.6499	1.5666	1.4625	1.3406	1.2047	1.0588	.9075	.7552	.6067	.4665
65.0	1.5550	1.4510	1.3294	1.1940	1.0487	.8982	.7968	.5992	.4600	.3333
70.0	1.4402	1.3188	1.1836	1.0389	.8889	.7383	.5916	.4533	.3276	.2183
75.0	1.3090	1.1740	1.0295	.8801	.7301	.5841	.4467	.3219	.2136	.1250
80.0	1.1653	1.0210	.8718	.7223	.5770	.4403	.3164	.2090	.1214	.0563
85.0	1.0134	.8644	.7152	.5704	.4344	.3112	.2047	.1180	.0539	.0142

TABLE V.- CONTINUED

(c) C_Y

$\beta_1 = 0^o$; $\beta_2 = 360^o$; $\beta = 2^o$

α, deg \ θ_c, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	-.0696	-.0692	-.0686	-.0676	-.0651	-.0616	-.0573	-.0523	-.0468	-.0409
2.0	-.0697	-.0692	-.0685	-.0676	-.0650	-.0616	-.0573	-.0523	-.0468	-.0409
4.0	-.0731	-.0691	-.0684	-.0675	-.0649	-.0614	-.0572	-.0522	-.0467	-.0408
6.0	-.0805	-.0693	-.0682	-.0673	-.0647	-.0613	-.0570	-.0520	-.0466	-.0407
8.0	-.0896	-.0711	-.0679	-.0670	-.0645	-.0610	-.0567	-.0518	-.0464	-.0405
10.0	-.0995	-.0742	-.0683	-.0666	-.0641	-.0607	-.0564	-.0515	-.0461	-.0403
12.0	-.1098	-.0779	-.0695	-.0664	-.0637	-.0603	-.0560	-.0512	-.0458	-.0400
15.0	-.1255	-.0841	-.0720	-.0670	-.0629	-.0595	-.0553	-.0505	-.0452	-.0395
20.0	-.1515	-.0952	-.0775	-.0693	-.0619	-.0579	-.0538	-.0492	-.0440	-.0385
25.0	-.1769	-.1063	-.0835	-.0725	-.0618	-.0562	-.0519	-.0474	-.0424	-.0371
30.0	-.2012	-.1170	-.0894	-.0757	-.0622	-.0550	-.0499	-.0453	-.0405	-.0355
35.0	-.2241	-.1271	-.0949	-.0789	-.0627	-.0540	-.0480	-.0430	-.0383	-.0335
40.0	-.2454	-.1364	-.1000	-.0818	-.0631	-.0531	-.0463	-.0408	-.0360	-.0314
45.0	-.2649	-.1447	-.1045	-.0842	-.0634	-.0522	-.0446	-.0387	-.0336	-.0290
50.0	-.2824	-.1520	-.1083	-.0862	-.0634	-.0512	-.0429	-.0366	-.0314	-.0267
55.0	-.2978	-.1583	-.1114	-.0877	-.0631	-.0500	-.0412	-.0346	-.0292	-.0245
60.0	-.3110	-.1634	-.1138	-.0886	-.0625	-.0486	-.0394	-.0325	-.0270	-.0223
65.0	-.3218	-.1673	-.1153	-.0889	-.0616	-.0470	-.0374	-.0304	-.0248	-.0202
70.0	-.3302	-.1700	-.1160	-.0886	-.0603	-.0452	-.0354	-.0282	-.0226	-.0181
75.0	-.3362	-.1714	-.1159	-.0877	-.0586	-.0432	-.0332	-.0260	-.0205	-.0161
80.0	-.3395	-.1715	-.1150	-.0862	-.0566	-.0410	-.0309	-.0238	-.0184	-.0141
85.0	-.3404	-.1704	-.1132	-.0841	-.0543	-.0385	-.0286	-.0215	-.0163	-.0122

α, deg \ θ_c, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0	90.0
1.0	-.0349	-.0288	-.0229	-.0174	-.0125	-.0082	-.0047	-.0021	-.0005	-.0000
2.0	-.0349	-.0288	-.0229	-.0174	-.0125	-.0082	-.0047	-.0021	-.0005	-.0000
4.0	-.0348	-.0288	-.0229	-.0174	-.0124	-.0081	-.0047	-.0021	-.0005	-.0000
6.0	-.0347	-.0287	-.0228	-.0173	-.0124	-.0081	-.0046	-.0021	-.0005	-.0000
8.0	-.0345	-.0285	-.0227	-.0173	-.0123	-.0081	-.0046	-.0021	-.0005	-.0000
10.0	-.0343	-.0284	-.0226	-.0172	-.0123	-.0080	-.0046	-.0021	-.0005	-.0000
12.0	-.0341	-.0282	-.0224	-.0171	-.0122	-.0080	-.0046	-.0021	-.0005	-.0000
15.0	-.0337	-.0278	-.0222	-.0168	-.0120	-.0079	-.0045	-.0020	-.0005	-.0000
20.0	-.0328	-.0271	-.0216	-.0164	-.0117	-.0077	-.0044	-.0020	-.0005	-.0000
25.0	-.0316	-.0261	-.0208	-.0158	-.0113	-.0074	-.0042	-.0019	-.0005	-.0000
30.0	-.0302	-.0250	-.0199	-.0151	-.0108	-.0071	-.0040	-.0018	-.0005	-.0000
35.0	-.0286	-.0236	-.0188	-.0143	-.0102	-.0067	-.0038	-.0017	-.0004	-.0000
40.0	-.0267	-.0221	-.0176	-.0134	-.0095	-.0063	-.0036	-.0016	-.0004	.0000
45.0	-.0247	-.0204	-.0162	-.0123	-.0088	-.0058	-.0033	-.0015	-.0004	-.0000
50.0	-.0225	-.0185	-.0148	-.0112	-.0080	-.0052	-.0030	-.0014	-.0003	-.0000
55.0	-.0203	-.0166	-.0132	-.0100	-.0071	-.0047	-.0027	-.0012	-.0003	-.0000
60.0	-.0182	-.0147	-.0115	-.0087	-.0062	-.0041	-.0023	-.0011	-.0003	-.0000
65.0	-.0162	-.0128	-.0099	-.0074	-.0053	-.0034	-.0020	-.0009	-.0002	-.0000
70.0	-.0143	-.0111	-.0084	-.0061	-.0043	-.0028	-.0016	-.0007	-.0002	-.0000
75.0	-.0124	-.0094	-.0070	-.0050	-.0034	-.0021	-.0012	-.0005	-.0001	-.0000
80.0	-.0107	-.0079	-.0057	-.0039	-.0026	-.0015	-.0009	-.0004	-.0001	-.0000
85.0	-.0090	-.0065	-.0045	-.0030	-.0018	-.0010	-.0005	-.0002	-.0000	-.0000

TABLE V.- CONTINUED

(c) C_Y. Continued.

$\phi_1 = -90^\circ$; $\phi_2 = 90^\circ$; $\beta = 2^\circ$

α, deg \ θ_c, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	-.0578	-.0634	-.0647	-.0648	-.0633	-.0603	-.0564	-.0516	-.0463	-.0406
2.0	-.0461	-.0575	-.0608	-.0619	-.0614	-.0591	-.0554	-.0509	-.0458	-.0402
4.0	-.0296	-.0456	-.0530	-.0561	-.0577	-.0564	-.0535	-.0495	-.0447	-.0394
6.0	-.0210	-.0346	-.0451	-.0503	-.0540	-.0538	-.0515	-.0480	-.0436	-.0385
8.0	-.0160	-.0270	-.0372	-.0443	-.0501	-.0510	-.0495	-.0465	-.0424	-.0377
10.0	-.0129	-.0219	-.0307	-.0384	-.0462	-.0482	-.0474	-.0448	-.0412	-.0367
12.0	-.0107	-.0182	-.0259	-.0329	-.0422	-.0453	-.0452	-.0432	-.0399	-.0357
15.0	-.0085	-.0144	-.0206	-.0265	-.0362	-.0409	-.0418	-.0406	-.0379	-.0342
20.0	-.0062	-.0105	-.0150	-.0194	-.0273	-.0333	-.0360	-.0360	-.0343	-.0314
25.0	-.0047	-.0079	-.0114	-.0148	-.0210	-.0263	-.0299	-.0312	-.0304	-.0283
30.0	-.0037	-.0062	-.0088	-.0115	-.0164	-.0207	-.0240	-.0261	-.0264	-.0251
35.0	-.0030	-.0049	-.0069	-.0090	-.0129	-.0164	-.0191	-.0211	-.0221	-.0217
40.0	-.0024	-.0038	-.0054	-.0071	-.0101	-.0129	-.0151	-.0168	-.0179	-.0180
45.0	-.0019	-.0030	-.0042	-.0055	-.0079	-.0100	-.0118	-.0132	-.0141	-.0145
50.0	-.0016	-.0023	-.0033	-.0042	-.0060	-.0077	-.0091	-.0102	-.0109	-.0113
55.0	-.0013	-.0018	-.0025	-.0032	-.0045	-.0057	-.0068	-.0076	-.0082	-.0085
60.0	-.0010	-.0013	-.0018	-.0023	-.0033	-.0042	-.0049	-.0055	-.0060	-.0062
65.0	-.0008	-.0010	-.0013	-.0016	-.0023	-.0029	-.0034	-.0038	-.0041	-.0043
70.0	-.0006	-.0007	-.0009	-.0011	-.0014	-.0018	-.0021	-.0024	-.0026	-.0027
75.0	-.0005	-.0005	-.0005	-.0006	-.0008	-.0010	-.0012	-.0014	-.0015	-.0015
80.0	-.0004	-.0003	-.0003	-.0003	-.0004	-.0005	-.0006	-.0006	-.0007	-.0007
85.0	-.0003	-.0002	-.0002	-.0001	-.0001	-.0002	-.0002	-.0002	-.0002	-.0002

α, deg \ θ_c, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0	90.0
1.0	-.0346	-.0286	-.0228	-.0174	-.0124	-.0081	-.0047	-.0021	-.0005	.0000
2.0	-.0343	-.0284	-.0227	-.0173	-.0124	-.0081	-.0047	-.0021	-.0005	.0000
4.0	-.0338	-.0280	-.0224	-.0171	-.0123	-.0081	-.0046	-.0021	-.0005	.0000
6.0	-.0331	-.0276	-.0221	-.0169	-.0121	-.0080	-.0046	-.0021	-.0005	.0000
8.0	-.0325	-.0271	-.0218	-.0167	-.0120	-.0079	-.0046	-.0021	-.0005	.0000
10.0	-.0318	-.0266	-.0214	-.0164	-.0118	-.0078	-.0045	-.0020	-.0005	.0000
12.0	-.0310	-.0261	-.0210	-.0162	-.0117	-.0077	-.0045	-.0020	-.0005	.0000
15.0	-.0299	-.0252	-.0204	-.0157	-.0114	-.0076	-.0044	-.0020	-.0005	.0000
20.0	-.0277	-.0236	-.0192	-.0149	-.0109	-.0072	-.0042	-.0019	-.0005	.0000
25.0	-.0254	-.0218	-.0179	-.0140	-.0102	-.0069	-.0040	-.0018	-.0005	.0000
30.0	-.0228	-.0198	-.0165	-.0130	-.0096	-.0064	-.0039	-.0017	-.0004	.0000
35.0	-.0201	-.0177	-.0149	-.0118	-.0088	-.0060	-.0035	-.0016	-.0004	.0000
40.0	-.0172	-.0155	-.0132	-.0106	-.0080	-.0054	-.0032	-.0015	-.0004	.0000
45.0	-.0142	-.0131	-.0114	-.0093	-.0071	-.0049	-.0029	-.0014	-.0004	.0000
50.0	-.0112	-.0107	-.0095	-.0079	-.0061	-.0043	-.0026	-.0012	-.0003	.0000
55.0	-.0085	-.0082	-.0076	-.0065	-.0051	-.0036	-.0022	-.0011	-.0003	.0000
60.0	-.0062	-.0061	-.0057	-.0050	-.0041	-.0030	-.0019	-.0009	-.0002	.0000
65.0	-.0043	-.0042	-.0040	-.0036	-.0030	-.0023	-.0015	-.0007	-.0002	.0000
70.0	-.0027	-.0027	-.0025	-.0023	-.0020	-.0016	-.0011	-.0006	-.0002	.0000
75.0	-.0015	-.0015	-.0014	-.0013	-.0011	-.0009	-.0007	-.0004	-.0001	.0000
80.0	-.0007	-.0007	-.0006	-.0006	-.0005	-.0004	-.0003	-.0002	-.0001	.0000
85.0	-.0002	-.0002	-.0002	-.0001	-.0001	-.0001	-.0001	-.0001	-.0000	.0000

TABLE V.- CONTINUED

(c) C_Y. Continued.

$\beta_1 = 0^0$; $\beta_2 = 360^0$; $\beta = 5^0$

α, deg \ θ_c, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	-.1882	-.1723	-.1707	-.1684	-.1620	-.1533	-.1426	-.1302	-.1165	-.1019
2.0	-.1910	-.1723	-.1706	-.1683	-.1619	-.1532	-.1425	-.1302	-.1164	-.1019
4.0	-.2019	-.1731	-.1703	-.1680	-.1616	-.1530	-.1423	-.1299	-.1162	-.1017
6.0	-.2183	-.1763	-.1698	-.1675	-.1611	-.1525	-.1419	-.1295	-.1159	-.1013
8.0	-.2386	-.1820	-.1700	-.1668	-.1604	-.1518	-.1412	-.1290	-.1154	-.1009
10.0	-.2611	-.1897	-.1718	-.1660	-.1596	-.1510	-.1405	-.1283	-.1147	-.1004
12.0	-.2850	-.1987	-.1750	-.1661	-.1585	-.1500	-.1395	-.1274	-.1140	-.0997
15.0	-.3221	-.2137	-.1816	-.1679	-.1565	-.1481	-.1378	-.1258	-.1125	-.0984
20.0	-.3848	-.2405	-.1950	-.1739	-.1544	-.1441	-.1340	-.1224	-.1095	-.0958
25.0	-.4467	-.2676	-.2096	-.1816	-.1544	-.1401	-.1293	-.1180	-.1056	-.0924
30.0	-.5062	-.2939	-.2241	-.1897	-.1553	-.1371	-.1242	-.1128	-.1009	-.0882
35.0	-.5625	-.3186	-.2378	-.1975	-.1566	-.1348	-.1196	-.1071	-.0954	-.0835
40.0	-.6150	-.3415	-.2503	-.2045	-.1577	-.1325	-.1154	-.1017	-.0896	-.0751
45.0	-.6632	-.3621	-.2614	-.2106	-.1583	-.1302	-.1113	-.0965	-.0838	-.0723
50.0	-.7065	-.3802	-.2708	-.2155	-.1584	-.1277	-.1071	-.0913	-.0782	-.0666
55.0	-.7446	-.3957	-.2785	-.2190	-.1577	-.1247	-.1028	-.0862	-.0727	-.0610
60.0	-.7773	-.4083	-.2842	-.2212	-.1562	-.1212	-.0982	-.0810	-.0672	-.0556
65.0	-.8041	-.4179	-.2880	-.2220	-.1538	-.1173	-.0934	-.0758	-.0618	-.0503
70.0	-.8249	-.4245	-.2897	-.2213	-.1505	-.1128	-.0883	-.0704	-.0565	-.0451
75.0	-.8396	-.4280	-.2894	-.2190	-.1464	-.1078	-.0829	-.0649	-.0511	-.0401
80.0	-.8480	-.4284	-.2871	-.2153	-.1413	-.1022	-.0772	-.0594	-.0458	-.0352
85.0	-.8500	-.4255	-.2826	-.2101	-.1355	-.0962	-.0713	-.0537	-.0406	-.0304

α, deg \ θ_c, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0	90.0
1.0	-.0868	-.0717	-.0571	-.0434	-.0310	-.0203	-.0116	-.0052	-.0013	-.0000
2.0	-.0868	-.0717	-.0571	-.0434	-.0310	-.0203	-.0116	-.0052	-.0013	-.0000
4.0	-.0866	-.0716	-.0570	-.0433	-.0309	-.0203	-.0116	-.0052	-.0013	-.0000
6.0	-.0863	-.0714	-.0568	-.0432	-.0308	-.0202	-.0116	-.0052	-.0013	-.0000
8.0	-.0860	-.0710	-.0566	-.0430	-.0307	-.0201	-.0115	-.0052	-.0013	-.0000
10.0	-.0855	-.0707	-.0563	-.0428	-.0305	-.0200	-.0115	-.0052	-.0013	-.0000
12.0	-.0849	-.0702	-.0559	-.0425	-.0303	-.0199	-.0114	-.0051	-.0013	-.0000
15.0	-.0839	-.0693	-.0552	-.0419	-.0300	-.0196	-.0112	-.0051	-.0013	-.0000
20.0	-.0816	-.0674	-.0537	-.0408	-.0291	-.0191	-.0109	-.0049	-.0012	-.0000
25.0	-.0787	-.0650	-.0518	-.0393	-.0281	-.0184	-.0105	-.0047	-.0012	-.0000
30.0	-.0752	-.0621	-.0495	-.0376	-.0269	-.0176	-.0101	-.0045	-.0011	-.0000
35.0	-.0711	-.0588	-.0468	-.0356	-.0254	-.0166	-.0095	-.0043	-.0011	-.0000
40.0	-.0665	-.0550	-.0438	-.0333	-.0238	-.0156	-.0089	-.0040	-.0010	-.0000
45.0	-.0614	-.0507	-.0404	-.0307	-.0219	-.0144	-.0082	-.0037	-.0009	-.0000
50.0	-.0560	-.0461	-.0367	-.0279	-.0199	-.0131	-.0075	-.0034	-.0008	-.0000
55.0	-.0506	-.0413	-.0328	-.0249	-.0178	-.0117	-.0067	-.0030	-.0008	-.0000
60.0	-.0455	-.0366	-.0287	-.0217	-.0155	-.0102	-.0058	-.0026	-.0007	-.0000
65.0	-.0404	-.0320	-.0247	-.0184	-.0131	-.0086	-.0049	-.0022	-.0006	-.0000
70.0	-.0356	-.0276	-.0209	-.0153	-.0107	-.0069	-.0040	-.0018	-.0005	-.0000
75.0	-.0310	-.0235	-.0174	-.0124	-.0084	-.0053	-.0030	-.0014	-.0003	-.0000
80.0	-.0266	-.0197	-.0141	-.0098	-.0064	-.0038	-.0021	-.0009	-.0002	-.0000
85.0	-.0224	-.0161	-.0112	-.0074	-.0046	-.0026	-.0013	-.0005	-.0001	-.0000

$\beta_1 = 0^0$; $\beta_2 = 360^0$; $\beta = 15^0$

α, deg \ θ_c, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	-.9265	-.6222	-.5335	-.4966	-.4664	-.4414	-.4106	-.3749	-.3355	-.2934
2.0	-.9304	-.6238	-.5342	-.4969	-.4662	-.4412	-.4104	-.3748	-.3353	-.2932
4.0	-.9454	-.6300	-.5371	-.4978	-.4654	-.4404	-.4097	-.3741	-.3347	-.2927
6.0	-.9696	-.6401	-.5418	-.4996	-.4641	-.4391	-.4084	-.3729	-.3337	-.2918
8.0	-1.0019	-.6537	-.5484	-.5022	-.4626	-.4372	-.4067	-.3714	-.3322	-.2906
10.0	-1.0412	-.6703	-.5566	-.5057	-.4611	-.4348	-.4045	-.3693	-.3304	-.2890
12.0	-1.0862	-.6896	-.5664	-.5102	-.4597	-.4319	-.4017	-.3668	-.3282	-.2870
15.0	-1.1620	-.7225	-.5836	-.5186	-.4584	-.4265	-.3967	-.3622	-.3241	-.2834
20.0	-1.3024	-.7841	-.6167	-.5360	-.4582	-.4175	-.3859	-.3524	-.3153	-.2757
25.0	-1.4573	-.8498	-.6528	-.5561	-.4603	-.4097	-.3732	-.3399	-.3041	-.2659
30.0	-1.6012	-.9158	-.6894	-.5768	-.4634	-.4030	-.3608	-.3252	-.2906	-.2541
35.0	-1.7473	-.9798	-.7246	-.5968	-.4667	-.3970	-.3491	-.3103	-.2750	-.2403
40.0	-1.8861	-1.0398	-.7573	-.6150	-.4693	-.3909	-.3377	-.2957	-.2590	-.2249
45.0	-2.0152	-1.0947	-.7864	-.6307	-.4705	-.3842	-.3262	-.2812	-.2431	-.2088
50.0	-2.1324	-1.1433	-.8114	-.6433	-.4699	-.3767	-.3144	-.2668	-.2274	-.1929
55.0	-2.2363	-1.1849	-.8316	-.6524	-.4674	-.3679	-.3019	-.2523	-.2119	-.1772
60.0	-2.3255	-1.2189	-.8467	-.6578	-.4625	-.3578	-.2888	-.2375	-.1964	-.1618
65.0	-2.3991	-1.2449	-.8564	-.6592	-.4553	-.3462	-.2749	-.2225	-.1810	-.1468
70.0	-2.4563	-1.2626	-.8606	-.6564	-.4456	-.3332	-.2601	-.2070	-.1656	-.1320
75.0	-2.4964	-1.2716	-.8591	-.6496	-.4334	-.3186	-.2446	-.1913	-.1503	-.1176
80.0	-2.5191	-1.2718	-.8518	-.6385	-.4188	-.3026	-.2282	-.1753	-.1351	-.1035
85.0	-2.5240	-1.2633	-.8388	-.6234	-.4018	-.2852	-.2112	-.1590	-.1201	-.0899

α, deg \ θ_c, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0	90.0
1.0	-.2500	-.2066	-.1645	-.1250	-.0893	-.0585	-.0335	-.0151	-.0038	-.0000
2.0	-.2498	-.2065	-.1644	-.1249	-.0892	-.0585	-.0335	-.0151	-.0038	-.0000
4.0	-.2494	-.2061	-.1641	-.1247	-.0891	-.0583	-.0334	-.0150	-.0038	-.0000
6.0	-.2486	-.2055	-.1636	-.1243	-.0888	-.0582	-.0333	-.0150	-.0038	-.0000
8.0	-.2476	-.2046	-.1629	-.1238	-.0884	-.0579	-.0332	-.0149	-.0038	-.0000
10.0	-.2462	-.2034	-.1620	-.1231	-.0879	-.0576	-.0330	-.0148	-.0037	-.0000
12.0	-.2445	-.2021	-.1609	-.1223	-.0874	-.0572	-.0328	-.0147	-.0037	-.0000
15.0	-.2415	-.1995	-.1589	-.1207	-.0863	-.0565	-.0324	-.0146	-.0037	-.0000
20.0	-.2349	-.1941	-.1546	-.1175	-.0839	-.0550	-.0315	-.0142	-.0036	-.0000
25.0	-.2266	-.1872	-.1491	-.1133	-.0809	-.0530	-.0304	-.0137	-.0034	-.0000
30.0	-.2165	-.1789	-.1425	-.1083	-.0773	-.0507	-.0290	-.0131	-.0033	-.0000
35.0	-.2048	-.1692	-.1347	-.1024	-.0732	-.0479	-.0274	-.0124	-.0031	-.0000
40.0	-.1915	-.1583	-.1260	-.0958	-.0684	-.0448	-.0257	-.0115	-.0029	-.0000
45.0	-.1768	-.1461	-.1163	-.0884	-.0631	-.0414	-.0237	-.0107	-.0027	-.0000
50.0	-.1616	-.1328	-.1057	-.0803	-.0574	-.0376	-.0215	-.0097	-.0024	-.0000
55.0	-.1466	-.1192	-.0944	-.0717	-.0512	-.0335	-.0192	-.0086	-.0022	-.0000
60.0	-.1320	-.1058	-.0828	-.0625	-.0447	-.0292	-.0167	-.0075	-.0019	-.0000
65.0	-.1177	-.0929	-.0715	-.0532	-.0377	-.0247	-.0142	-.0064	-.0016	-.0000
70.0	-.1040	-.0805	-.0608	-.0443	-.0308	-.0200	-.0115	-.0052	-.0013	-.0000
75.0	-.0908	-.0688	-.0507	-.0361	-.0244	-.0154	-.0087	-.0039	-.0010	-.0000
80.0	-.0782	-.0578	-.0414	-.0285	-.0186	-.0112	-.0060	-.0026	-.0007	-.0000
85.0	-.0662	-.0475	-.0329	-.0218	-.0135	-.0076	-.0037	-.0014	-.0003	-.0000

TABLE V.- CONTINUED

(c) C_Y. Continued.

$\beta_1 = -90^0$; $\beta_2 = 90^0$; $\beta = 5^0$

α, deg \ θ_c, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	-.1636	-.1577	-.1611	-.1613	-.1575	-.1502	-.1403	-.1285	-.1153	-.1010
2.0	-.1623	-.1432	-.1574	-.1542	-.1530	-.1470	-.1380	-.1268	-.1140	-.1000
4.0	-.1083	-.1159	-.1319	-.1397	-.1437	-.1405	-.1332	-.1232	-.1113	-.0961
6.0	-.0846	-.0937	-.1123	-.1251	-.1343	-.1338	-.1283	-.1195	-.1085	-.0960
8.0	-.0682	-.0770	-.0944	-.1104	-.1247	-.1270	-.1232	-.1156	-.1056	-.0937
10.0	-.0566	-.0645	-.0800	-.0958	-.1150	-.1200	-.1179	-.1116	-.1025	-.0914
12.0	-.0481	-.0550	-.0687	-.0832	-.1051	-.1128	-.1125	-.1075	-.0993	-.0890
15.0	-.0390	-.0445	-.0559	-.0682	-.0901	-.1018	-.1042	-.1010	-.0943	-.0851
20.0	-.0292	-.0331	-.0415	-.0509	-.0688	-.0829	-.0896	-.0896	-.0853	-.0781
25.0	-.0230	-.0257	-.0320	-.0392	-.0535	-.0657	-.0744	-.0776	-.0758	-.0706
30.0	-.0187	-.0205	-.0252	-.0308	-.0421	-.0521	-.0600	-.0649	-.0656	-.0625
35.0	-.0156	-.0166	-.0201	-.0244	-.0333	-.0413	-.0480	-.0527	-.0549	-.0539
40.0	-.0132	-.0136	-.0162	-.0194	-.0263	-.0327	-.0381	-.0421	-.0445	-.0449
45.0	-.0112	-.0112	-.0130	-.0154	-.0207	-.0256	-.0299	-.0332	-.0353	-.0361
50.0	-.0097	-.0092	-.0104	-.0121	-.0160	-.0198	-.0230	-.0256	-.0274	-.0282
55.0	-.0083	-.0076	-.0083	-.0094	-.0122	-.0149	-.0174	-.0193	-.0207	-.0213
60.0	-.0072	-.0062	-.0065	-.0072	-.0091	-.0110	-.0127	-.0140	-.0150	-.0156
65.0	-.0063	-.0051	-.0051	-.0054	-.0065	-.0077	-.0088	-.0097	-.0104	-.0108
70.0	-.0055	-.0041	-.0039	-.0040	-.0045	-.0051	-.0058	-.0063	-.0067	-.0069
75.0	-.0048	-.0033	-.0029	-.0028	-.0029	-.0032	-.0034	-.0037	-.0039	-.0039
80.0	-.0042	-.0026	-.0021	-.0019	-.0018	-.0018	-.0018	-.0018	-.0019	-.0019
85.0	-.0037	-.0021	-.0015	-.0013	-.0010	-.0009	-.0008	-.0007	-.0007	-.0006

α, deg \ θ_c, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0	90.0
1.0	-.0862	-.0713	-.0568	-.0432	-.0309	-.0203	-.0116	-.0052	-.0013	.0000
2.0	-.0855	-.0708	-.0565	-.0430	-.0308	-.0202	-.0116	-.0052	-.0013	.0000
4.0	-.0840	-.0698	-.0558	-.0426	-.0305	-.0200	-.0115	-.0052	-.0013	.0000
6.0	-.0825	-.0687	-.0550	-.0421	-.0302	-.0199	-.0114	-.0052	-.0013	.0000
8.0	-.0809	-.0675	-.0542	-.0415	-.0299	-.0197	-.0113	-.0051	-.0013	.0000
10.0	-.0791	-.0662	-.0533	-.0409	-.0295	-.0195	-.0112	-.0051	-.0013	.0000
12.0	-.0773	-.0649	-.0524	-.0403	-.0291	-.0192	-.0111	-.0050	-.0013	.0000
15.0	-.0743	-.0627	-.0508	-.0392	-.0284	-.0188	-.0109	-.0050	-.0013	.0000
20.0	-.0690	-.0587	-.0479	-.0372	-.0270	-.0180	-.0105	-.0048	-.0012	.0000
25.0	-.0631	-.0542	-.0446	-.0348	-.0255	-.0171	-.0100	-.0046	-.0012	.0000
30.0	-.0568	-.0494	-.0410	-.0323	-.0238	-.0160	-.0094	-.0043	-.0011	.0000
35.0	-.0500	-.0441	-.0371	-.0295	-.0219	-.0148	-.0088	-.0041	-.0011	.0000
40.0	-.0428	-.0385	-.0329	-.0264	-.0198	-.0135	-.0081	-.0038	-.0010	.0000
45.0	-.0353	-.0327	-.0284	-.0232	-.0176	-.0121	-.0073	-.0034	-.0009	.0000
50.0	-.0279	-.0265	-.0237	-.0198	-.0152	-.0107	-.0065	-.0031	-.0008	.0000
55.0	-.0213	-.0205	-.0189	-.0162	-.0128	-.0091	-.0056	-.0027	-.0007	.0000
60.0	-.0156	-.0151	-.0141	-.0125	-.0102	-.0074	-.0047	-.0023	-.0006	.0000
65.0	-.0108	-.0105	-.0099	-.0089	-.0075	-.0057	-.0037	-.0019	-.0005	.0000
70.0	-.0069	-.0067	-.0064	-.0058	-.0050	-.0040	-.0027	-.0014	-.0004	.0000
75.0	-.0039	-.0038	-.0036	-.0033	-.0029	-.0023	-.0017	-.0010	-.0003	.0000
80.0	-.0018	-.0018	-.0016	-.0015	-.0013	-.0011	-.0009	-.0005	-.0002	.0000
85.0	-.0006	-.0005	-.0005	-.0004	-.0003	-.0003	-.0002	-.0001	-.0001	.0000

$\beta_1 = -90^0$; $\beta_2 = 90^0$; $\beta = 15^0$

α, deg \ θ_c, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	-.8740	-.5913	-.5103	-.4779	-.4535	-.4325	-.4041	-.3701	-.3319	-.2908
2.0	-.8253	-.5621	-.4880	-.4594	-.4404	-.4233	-.3974	-.3652	-.3282	-.2881
4.0	-.7362	-.5073	-.4451	-.4233	-.4139	-.4045	-.3836	-.3549	-.3205	-.2823
6.0	-.6578	-.4577	-.4053	-.3889	-.3871	-.3853	-.3694	-.3441	-.3124	-.2763
8.0	-.5896	-.4135	-.3689	-.3566	-.3604	-.3656	-.3547	-.3330	-.3039	-.2699
10.0	-.5307	-.3743	-.3360	-.3266	-.3345	-.3454	-.3395	-.3214	-.2951	-.2632
12.0	-.4800	-.3400	-.3065	-.2993	-.3095	-.3248	-.3240	-.3095	-.2859	-.2561
15.0	-.4170	-.2963	-.2681	-.2630	-.2749	-.2934	-.3000	-.2909	-.2714	-.2450
20.0	-.3381	-.2402	-.2176	-.2140	-.2253	-.2440	-.2581	-.2581	-.2457	-.2250
25.0	-.2819	-.1990	-.1796	-.1762	-.1854	-.2016	-.2162	-.2234	-.2181	-.2032
30.0	-.2404	-.1680	-.1505	-.1468	-.1534	-.1663	-.1791	-.1878	-.1889	-.1799
35.0	-.2088	-.1440	-.1276	-.1234	-.1273	-.1370	-.1474	-.1552	-.1586	-.1552
40.0	-.1842	-.1248	-.1091	-.1044	-.1059	-.1126	-.1205	-.1268	-.1302	-.1296
45.0	-.1644	-.1093	-.0940	-.0887	-.0881	-.0922	-.0977	-.1024	-.1052	-.1052
50.0	-.1484	-.0964	-.0814	-.0756	-.0732	-.0751	-.0784	-.0815	-.0834	-.0835
55.0	-.1351	-.0856	-.0708	-.0645	-.0608	-.0607	-.0621	-.0637	-.0647	-.0646
60.0	-.1240	-.0765	-.0617	-.0551	-.0499	-.0486	-.0486	-.0489	-.0490	-.0484
65.0	-.1147	-.0686	-.0539	-.0470	-.0409	-.0385	-.0373	-.0366	-.0359	-.0350
70.0	-.1068	-.0618	-.0471	-.0400	-.0332	-.0300	-.0281	-.0267	-.0254	-.0242
75.0	-.1001	-.0559	-.0413	-.0340	-.0268	-.0230	-.0206	-.0188	-.0173	-.0158
80.0	-.0944	-.0508	-.0362	-.0288	-.0213	-.0173	-.0147	-.0127	-.0111	-.0097
85.0	-.0896	-.0463	-.0318	-.0244	-.0168	-.0127	-.0101	-.0082	-.0066	-.0054

α, deg \ θ_c, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0	90.0
1.0	-.2481	-.2053	-.1636	-.1244	-.0890	-.0583	-.0334	-.0151	-.0038	.0000
2.0	-.2461	-.2039	-.1627	-.1239	-.0886	-.0581	-.0333	-.0150	-.0038	.0000
4.0	-.2420	-.2010	-.1607	-.1226	-.0879	-.0577	-.0331	-.0150	-.0038	.0000
6.0	-.2375	-.1978	-.1585	-.1211	-.0870	-.0572	-.0329	-.0149	-.0038	.0000
8.0	-.2328	-.1943	-.1561	-.1195	-.0860	-.0567	-.0326	-.0148	-.0037	.0000
10.0	-.2278	-.1907	-.1535	-.1178	-.0849	-.0560	-.0323	-.0147	-.0037	.0000
12.0	-.2225	-.1868	-.1507	-.1159	-.0837	-.0553	-.0320	-.0145	-.0037	.0000
15.0	-.2140	-.1805	-.1462	-.1128	-.0817	-.0542	-.0314	-.0143	-.0036	.0000
20.0	-.1986	-.1690	-.1379	-.1070	-.0779	-.0519	-.0302	-.0138	-.0035	.0000
25.0	-.1817	-.1561	-.1284	-.1003	-.0735	-.0492	-.0287	-.0132	-.0034	.0000
30.0	-.1635	-.1421	-.1180	-.0929	-.0685	-.0461	-.0271	-.0125	-.0032	.0000
35.0	-.1439	-.1270	-.1067	-.0848	-.0630	-.0427	-.0253	-.0117	-.0030	.0000
40.0	-.1233	-.1110	-.0946	-.0761	-.0570	-.0390	-.0232	-.0108	-.0028	.0000
45.0	-.1018	-.0941	-.0817	-.0667	-.0506	-.0350	-.0210	-.0099	-.0026	.0000
50.0	-.0813	-.0765	-.0683	-.0569	-.0439	-.0307	-.0186	-.0088	-.0023	.0000
55.0	-.0629	-.0596	-.0543	-.0466	-.0367	-.0261	-.0161	-.0077	-.0021	.0000
60.0	-.0470	-.0446	-.0409	-.0360	-.0293	-.0214	-.0134	-.0066	-.0018	.0000
65.0	-.0337	-.0318	-.0292	-.0258	-.0217	-.0165	-.0107	-.0053	-.0015	.0000
70.0	-.0228	-.0212	-.0194	-.0171	-.0145	-.0115	-.0079	-.0041	-.0012	.0000
75.0	-.0144	-.0131	-.0117	-.0102	-.0086	-.0069	-.0050	-.0028	-.0008	.0000
80.0	-.0084	-.0072	-.0061	-.0051	-.0042	-.0033	-.0024	-.0015	-.0005	.0000
85.0	-.0043	-.0035	-.0027	-.0021	-.0015	-.0011	-.0007	-.0004	-.0002	.0000

TABLE V. - CONTINUED

(c) C_Y. Continued.

$\phi_1 = 90^\circ$; $\phi_2 = 270^\circ$; $\beta = 2^\circ$

α, deg \ θ_c, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	-.0814	-.0751	-.0724	-.0705	-.0669	-.0628	-.0582	-.0530	-.0473	-.0413
2.0	-.0932	-.0809	-.0762	-.0733	-.0686	-.0641	-.0591	-.0536	-.0478	-.0416
4.0	-.1167	-.0925	-.0838	-.0788	-.0721	-.0665	-.0608	-.0549	-.0487	-.0423
6.0	-.1400	-.1040	-.0913	-.0843	-.0755	-.0688	-.0624	-.0561	-.0495	-.0429
8.0	-.1631	-.1153	-.0987	-.0897	-.0788	-.0710	-.0640	-.0572	-.0503	-.0434
10.0	-.1861	-.1265	-.1059	-.0949	-.0820	-.0731	-.0655	-.0582	-.0510	-.0439
12.0	-.2088	-.1375	-.1130	-.1000	-.0851	-.0752	-.0669	-.0592	-.0517	-.0443
15.0	-.2424	-.1538	-.1234	-.1075	-.0895	-.0781	-.0688	-.0605	-.0526	-.0449
20.0	-.2969	-.1799	-.1400	-.1193	-.0964	-.0824	-.0717	-.0623	-.0537	-.0455
25.0	-.3491	-.2047	-.1556	-.1301	-.1026	-.0862	-.0740	-.0637	-.0544	-.0458
30.0	-.3987	-.2279	-.1699	-.1400	-.1079	-.0893	-.0757	-.0645	-.0547	-.0458
35.0	-.4452	-.2493	-.1830	-.1488	-.1124	-.0917	-.0768	-.0649	-.0546	-.0454
40.0	-.4884	-.2689	-.1946	-.1565	-.1161	-.0934	-.0774	-.0648	-.0541	-.0447
45.0	-.5278	-.2864	-.2048	-.1630	-.1189	-.0943	-.0774	-.0642	-.0532	-.0436
50.0	-.5632	-.3018	-.2134	-.1682	-.1208	-.0946	-.0768	-.0631	-.0518	-.0422
55.0	-.5943	-.3148	-.2204	-.1722	-.1218	-.0942	-.0756	-.0615	-.0501	-.0404
60.0	-.6209	-.3254	-.2257	-.1748	-.1218	-.0930	-.0738	-.0595	-.0480	-.0384
65.0	-.6428	-.3336	-.2293	-.1762	-.1209	-.0911	-.0715	-.0570	-.0455	-.0361
70.0	-.6598	-.3392	-.2312	-.1762	-.1191	-.0886	-.0686	-.0540	-.0427	-.0335
75.0	-.6718	-.3423	-.2313	-.1748	-.1164	-.0853	-.0652	-.0507	-.0395	-.0306
80.0	-.6787	-.3428	-.2296	-.1721	-.1128	-.0814	-.0613	-.0470	-.0361	-.0275
85.0	-.6804	-.3406	-.2262	-.1681	-.1084	-.0769	-.0569	-.0429	-.0323	-.0242

α, deg \ θ_c, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0	90.0
1.0	-.0351	-.0290	-.0231	-.0175	-.0125	-.0082	-.0047	-.0021	-.0005	.0000
2.0	-.0354	-.0292	-.0232	-.0176	-.0125	-.0082	-.0047	-.0021	-.0005	.0000
4.0	-.0358	-.0295	-.0234	-.0177	-.0126	-.0082	-.0047	-.0021	-.0005	.0000
6.0	-.0362	-.0297	-.0235	-.0178	-.0126	-.0082	-.0047	-.0021	-.0005	.0000
8.0	-.0366	-.0300	-.0237	-.0179	-.0127	-.0083	-.0047	-.0021	-.0005	.0000
10.0	-.0369	-.0302	-.0238	-.0179	-.0127	-.0083	-.0047	-.0021	-.0005	.0000
12.0	-.0372	-.0303	-.0239	-.0179	-.0127	-.0082	-.0047	-.0021	-.0005	.0000
15.0	-.0375	-.0305	-.0239	-.0180	-.0127	-.0082	-.0047	-.0021	-.0005	.0000
20.0	-.0378	-.0306	-.0239	-.0178	-.0126	-.0081	-.0046	-.0020	-.0005	.0000
25.0	-.0379	-.0305	-.0237	-.0176	-.0123	-.0079	-.0045	-.0020	-.0005	.0000
30.0	-.0376	-.0301	-.0233	-.0172	-.0120	-.0077	-.0043	-.0019	-.0005	.0000
35.0	-.0371	-.0295	-.0227	-.0167	-.0116	-.0074	-.0041	-.0018	-.0004	.0000
40.0	-.0362	-.0287	-.0220	-.0161	-.0111	-.0071	-.0039	-.0017	-.0004	.0000
45.0	-.0351	-.0276	-.0210	-.0154	-.0106	-.0067	-.0037	-.0016	-.0004	.0000
50.0	-.0338	-.0264	-.0200	-.0145	-.0099	-.0062	-.0034	-.0015	-.0004	.0000
55.0	-.0321	-.0249	-.0187	-.0135	-.0092	-.0057	-.0031	-.0013	-.0003	.0000
60.0	-.0303	-.0233	-.0174	-.0124	-.0084	-.0052	-.0028	-.0012	-.0003	.0000
65.0	-.0282	-.0215	-.0159	-.0112	-.0075	-.0046	-.0025	-.0010	-.0002	.0000
70.0	-.0258	-.0195	-.0143	-.0100	-.0066	-.0040	-.0021	-.0009	-.0002	.0000
75.0	-.0233	-.0174	-.0125	-.0086	-.0056	-.0033	-.0017	-.0007	-.0002	.0000
80.0	-.0206	-.0151	-.0107	-.0072	-.0046	-.0027	-.0013	-.0005	-.0001	.0000
85.0	-.0178	-.0127	-.0088	-.0058	-.0035	-.0020	-.0009	-.0003	-.0001	.0000

TABLE V.- CONTINUED

(c) C_Y. Continued.

$\phi_1 = 90^\circ$; $\phi_2 = 270^\circ$; $\beta = 5^\circ$

α, deg \ θ_c, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	-.2129	-.1869	-.1803	-.1755	-.1665	-.1564	-.1449	-.1319	-.1177	-.1028
2.0	-.2398	-.2014	-.1898	-.1825	-.1709	-.1595	-.1471	-.1335	-.1189	-.1036
4.0	-.2954	-.2302	-.2087	-.1963	-.1795	-.1654	-.1513	-.1366	-.1212	-.1052
6.0	-.3521	-.2588	-.2273	-.2099	-.1880	-.1712	-.1554	-.1395	-.1233	-.1067
8.0	-.4090	-.2870	-.2456	-.2232	-.1962	-.1767	-.1593	-.1423	-.1252	-.1081
10.0	-.4656	-.3149	-.2636	-.2362	-.2041	-.1821	-.1630	-.1449	-.1270	-.1093
12.0	-.5218	-.3424	-.2814	-.2490	-.2118	-.1872	-.1665	-.1473	-.1287	-.1104
15.0	-.6052	-.3828	-.3073	-.2676	-.2229	-.1944	-.1714	-.1506	-.1308	-.1117
20.0	-.7405	-.4479	-.3486	-.2969	-.2400	-.2052	-.1784	-.1551	-.1336	-.1134
25.0	-.8703	-.5095	-.3872	-.3239	-.2553	-.2145	-.1841	-.1585	-.1355	-.1141
30.0	-.9937	-.5672	-.4230	-.3485	-.2686	-.2222	-.1884	-.1607	-.1362	-.1140
35.0	-1.1095	-.6207	-.4554	-.3705	-.2799	-.2282	-.1913	-.1616	-.1360	-.1130
40.0	-1.2169	-.6694	-.4845	-.3896	-.2891	-.2324	-.1927	-.1613	-.1347	-.1112
45.0	-1.3151	-.7130	-.5098	-.4057	-.2960	-.2349	-.1927	-.1598	-.1323	-.1085
50.0	-1.4033	-.7513	-.5312	-.4188	-.3007	-.2355	-.1911	-.1571	-.1290	-.1050
55.0	-1.4809	-.7838	-.5487	-.4287	-.3031	-.2344	-.1882	-.1531	-.1247	-.1007
60.0	-1.5473	-.8104	-.5619	-.4353	-.3032	-.2315	-.1837	-.1480	-.1194	-.0956
65.0	-1.6019	-.8308	-.5709	-.4386	-.3010	-.2268	-.1779	-.1418	-.1133	-.0899
70.0	-1.6444	-.8450	-.5756	-.4385	-.2966	-.2205	-.1708	-.1345	-.1062	-.0833
75.0	-1.6744	-.8528	-.5759	-.4352	-.2898	-.2124	-.1623	-.1262	-.0984	-.0762
80.0	-1.6918	-.8541	-.5720	-.4287	-.2809	-.2027	-.1526	-.1169	-.0898	-.0685
85.0	-1.6963	-.8490	-.5637	-.4189	-.2700	-.1916	-.1419	-.1067	-.0805	-.0602

α, deg \ θ_c, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0	90.0
1.0	-.0875	-.0722	-.0574	-.0436	-.0311	-.0204	-.0117	-.0052	-.0013	.0000
2.0	-.0881	-.0726	-.0577	-.0438	-.0312	-.0204	-.0117	-.0052	-.0013	.0000
4.0	-.0892	-.0734	-.0582	-.0440	-.0314	-.0205	-.0117	-.0053	-.0013	.0000
6.0	-.0902	-.0740	-.0586	-.0443	-.0315	-.0205	-.0117	-.0052	-.0013	.0000
8.0	-.0911	-.0746	-.0589	-.0445	-.0316	-.0206	-.0117	-.0052	-.0013	.0000
10.0	-.0919	-.0751	-.0592	-.0446	-.0316	-.0205	-.0117	-.0052	-.0013	.0000
12.0	-.0926	-.0755	-.0594	-.0447	-.0316	-.0205	-.0117	-.0052	-.0013	.0000
15.0	-.0934	-.0759	-.0596	-.0447	-.0315	-.0204	-.0116	-.0052	-.0013	.0000
20.0	-.0942	-.0762	-.0595	-.0444	-.0312	-.0202	-.0114	-.0051	-.0013	.0000
25.0	-.0943	-.0758	-.0590	-.0438	-.0307	-.0197	-.0111	-.0049	-.0012	.0000
30.0	-.0936	-.0749	-.0580	-.0429	-.0299	-.0192	-.0107	-.0047	-.0012	.0000
35.0	-.0928	-.0734	-.0565	-.0417	-.0289	-.0184	-.0103	-.0045	-.0011	.0000
40.0	-.0902	-.0714	-.0547	-.0401	-.0277	-.0176	-.0098	-.0043	-.0010	.0000
45.0	-.0875	-.0688	-.0524	-.0382	-.0263	-.0166	-.0092	-.0040	-.0010	.0000
50.0	-.0840	-.0657	-.0497	-.0361	-.0246	-.0155	-.0085	-.0037	-.0009	.0000
55.0	-.0800	-.0621	-.0467	-.0336	-.0228	-.0142	-.0078	-.0033	-.0008	.0000
60.0	-.0753	-.0580	-.0433	-.0309	-.0208	-.0129	-.0070	-.0030	-.0007	.0000
65.0	-.0701	-.0535	-.0395	-.0280	-.0187	-.0114	-.0061	-.0026	-.0006	.0000
70.0	-.0643	-.0485	-.0355	-.0248	-.0164	-.0099	-.0052	-.0022	-.0005	.0000
75.0	-.0581	-.0432	-.0312	-.0215	-.0140	-.0083	-.0043	-.0017	-.0004	.0000
80.0	-.0514	-.0376	-.0266	-.0180	-.0114	-.0066	-.0033	-.0013	-.0003	.0000
85.0	-.0443	-.0317	-.0219	-.0144	-.0088	-.0049	-.0023	-.0008	-.0002	-.0000

$\phi_1 = 90^\circ$; $\phi_2 = 270^\circ$; $\beta = 15^\circ$

α, deg \ θ_c, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	-.9791	-.6531	-.5567	-.5154	-.4793	-.4504	-.4172	-.3798	-.3390	-.2960
2.0	-1.0554	-.6855	-.5805	-.5344	-.4920	-.4592	-.4235	-.3844	-.3424	-.2984
4.0	-1.1546	-.7527	-.6291	-.5724	-.5169	-.4763	-.4358	-.3933	-.3489	-.3030
6.0	-1.2814	-.8224	-.6783	-.6102	-.5412	-.4929	-.4475	-.4018	-.3549	-.3073
8.0	-1.4143	-.8939	-.7278	-.6477	-.5648	-.5089	-.4587	-.4097	-.3605	-.3112
10.0	-1.5518	-.9663	-.7773	-.6847	-.5877	-.5242	-.4694	-.4172	-.3657	-.3147
12.0	-1.6924	-1.0393	-.8264	-.7210	-.6099	-.5389	-.4794	-.4241	-.3705	-.3179
15.0	-1.9070	-1.1486	-.8990	-.7741	-.6419	-.5597	-.4934	-.4336	-.3767	-.3218
20.0	-2.2667	-1.3279	-1.0158	-.8581	-.6911	-.5910	-.5138	-.4467	-.3848	-.3265
25.0	-2.5257	-1.5005	-1.1259	-.9359	-.7351	-.6177	-.5302	-.4564	-.3900	-.3286
30.0	-2.9620	-1.6637	-1.2282	-1.0068	-.7735	-.6398	-.5426	-.4626	-.3922	-.3283
35.0	-3.2858	-1.8156	-1.3216	-1.0702	-.8061	-.6570	-.5508	-.4653	-.3915	-.3255
40.0	-3.5881	-1.9548	-1.4054	-1.1256	-.8326	-.6691	-.5549	-.4645	-.3877	-.3202
45.0	-3.8659	-2.0800	-1.4788	-1.1727	-.8528	-.6762	-.5547	-.4601	-.3810	-.3124
50.0	-4.1164	-2.1901	-1.5413	-1.2110	-.8667	-.6782	-.5503	-.4522	-.3714	-.3023
55.0	-4.3374	-2.2841	-1.5924	-1.2403	-.8741	-.6751	-.5418	-.4409	-.3590	-.2899
60.0	-4.5270	-2.3614	-1.6317	-1.2605	-.8751	-.6670	-.5291	-.4262	-.3439	-.2757
65.0	-4.6835	-2.4213	-1.6590	-1.2713	-.8696	-.6540	-.5125	-.4083	-.3261	-.2595
70.0	-4.8058	-2.4633	-1.6741	-1.2729	-.8579	-.6363	-.4922	-.3874	-.3058	-.2390
75.0	-4.8928	-2.4873	-1.6769	-1.2651	-.8400	-.6141	-.4685	-.3638	-.2834	-.2193
80.0	-4.9438	-2.4929	-1.6674	-1.2482	-.8162	-.5878	-.4417	-.3378	-.2591	-.1974
85.0	-4.9584	-2.4803	-1.6458	-1.2223	-.7867	-.5576	-.4122	-.3099	-.2335	-.1744

α, deg \ θ_c, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0	90.0
1.0	-.2518	-.2078	-.1653	-.1255	-.0896	-.0586	-.0336	-.0151	-.0038	.0000
2.0	-.2536	-.2090	-.1661	-.1260	-.0899	-.0588	-.0336	-.0151	-.0038	.0000
4.0	-.2568	-.2112	-.1675	-.1268	-.0903	-.0590	-.0337	-.0151	-.0038	.0000
6.0	-.2597	-.2131	-.1687	-.1275	-.0907	-.0591	-.0337	-.0151	-.0038	.0000
8.0	-.2623	-.2148	-.1697	-.1280	-.0909	-.0592	-.0337	-.0151	-.0038	.0000
10.0	-.2646	-.2162	-.1705	-.1284	-.0910	-.0592	-.0336	-.0150	-.0038	.0000
12.0	-.2666	-.2174	-.1711	-.1286	-.0910	-.0591	-.0336	-.0150	-.0037	.0000
15.0	-.2689	-.2186	-.1715	-.1287	-.0908	-.0588	-.0333	-.0149	-.0037	.0000
20.0	-.2712	-.2193	-.1713	-.1279	-.0900	-.0581	-.0328	-.0146	-.0036	.0000
25.0	-.2714	-.2183	-.1697	-.1262	-.0886	-.0568	-.0320	-.0141	-.0035	.0000
30.0	-.2696	-.2157	-.1669	-.1236	-.0862	-.0552	-.0309	-.0136	-.0034	.0000
35.0	-.2656	-.2114	-.1628	-.1200	-.0833	-.0531	-.0296	-.0130	-.0032	.0000
40.0	-.2597	-.2055	-.1574	-.1154	-.0798	-.0506	-.0281	-.0123	-.0030	.0000
45.0	-.2518	-.1981	-.1509	-.1100	-.0756	-.0477	-.0264	-.0115	-.0028	.0000
50.0	-.2420	-.1892	-.1432	-.1038	-.0709	-.0445	-.0244	-.0106	-.0025	.0000
55.0	-.2303	-.1788	-.1344	-.0968	-.0657	-.0409	-.0223	-.0096	-.0023	.0000
60.0	-.2169	-.1670	-.1246	-.0890	-.0600	-.0371	-.0200	-.0085	-.0020	.0000
65.0	-.2018	-.1540	-.1138	-.0806	-.0538	-.0329	-.0176	-.0074	-.0017	.0000
70.0	-.1852	-.1398	-.1022	-.0715	-.0472	-.0285	-.0150	-.0062	-.0014	.0000
75.0	-.1672	-.1245	-.0898	-.0619	-.0402	-.0239	-.0123	-.0050	-.0011	-.0000
80.0	-.1480	-.1083	-.0767	-.0519	-.0329	-.0191	-.0096	-.0037	-.0008	-.0000
85.0	-.1281	-.0916	-.0632	-.0415	-.0254	-.0141	-.0067	-.0024	-.0005	-.0000

TABLE V.- CONTINUED

(c) C_Y. Continued.

$\beta_1 = 105^0$; $\beta_2 = 255^0$; $\beta = 2^0$

α, deg \ θ_c, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	-.0691	-.0623	-.0596	-.0578	-.0546	-.0512	-.0473	-.0430	-.0384	-.0335
2.0	-.0818	-.0686	-.0638	-.0608	-.0565	-.0525	-.0483	-.0438	-.0389	-.0339
4.0	-.1072	-.0812	-.0720	-.0669	-.0603	-.0551	-.0502	-.0451	-.0399	-.0346
6.0	-.1325	-.0937	-.0802	-.0728	-.0640	-.0577	-.0520	-.0464	-.0409	-.0353
8.0	-.1576	-.1060	-.0882	-.0787	-.0677	-.0602	-.0538	-.0477	-.0418	-.0359
10.0	-.1826	-.1182	-.0961	-.0845	-.0712	-.0626	-.0554	-.0489	-.0426	-.0365
12.0	-.2073	-.1303	-.1040	-.0902	-.0747	-.0649	-.0571	-.0500	-.0434	-.0370
15.0	-.2438	-.1481	-.1155	-.0984	-.0797	-.0682	-.0594	-.0516	-.0445	-.0378
20.0	-.3033	-.1768	-.1339	-.1117	-.0876	-.0734	-.0628	-.0540	-.0461	-.0388
25.0	-.3604	-.2042	-.1513	-.1240	-.0948	-.0780	-.0658	-.0559	-.0473	-.0395
30.0	-.4147	-.2301	-.1676	-.1355	-.1013	-.0820	-.0683	-.0575	-.0481	-.0399
35.0	-.4660	-.2542	-.1826	-.1458	-.1071	-.0854	-.0703	-.0585	-.0486	-.0400
40.0	-.5136	-.2764	-.1962	-.1551	-.1120	-.0881	-.0718	-.0592	-.0487	-.0398
45.0	-.5574	-.2964	-.2083	-.1632	-.1161	-.0902	-.0727	-.0593	-.0485	-.0393
50.0	-.5969	-.3142	-.2188	-.1701	-.1192	-.0915	-.0730	-.0591	-.0478	-.0384
55.0	-.6319	-.3296	-.2276	-.1756	-.1215	-.0922	-.0728	-.0583	-.0469	-.0373
60.0	-.6620	-.3425	-.2348	-.1799	-.1229	-.0922	-.0720	-.0572	-.0455	-.0359
65.0	-.6872	-.3528	-.2401	-.1827	-.1233	-.0915	-.0707	-.0556	-.0438	-.0343
70.0	-.7070	-.3604	-.2436	-.1842	-.1228	-.0900	-.0689	-.0536	-.0418	-.0324
75.0	-.7216	-.3653	-.2453	-.1843	-.1213	-.0879	-.0665	-.0511	-.0394	-.0302
80.0	-.7306	-.3674	-.2451	-.1829	-.1189	-.0852	-.0636	-.0483	-.0368	-.0278
85.0	-.7340	-.3667	-.2430	-.1802	-.1157	-.0817	-.0602	-.0451	-.0339	-.0252

α, deg \ θ_c, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0	90.0
1.0	-.0285	-.0235	-.0187	-.0142	-.0101	-.0066	-.0038	-.0017	-.0004	.0000
2.0	-.0288	-.0237	-.0188	-.0143	-.0102	-.0066	-.0038	-.0017	-.0004	.0000
4.0	-.0293	-.0240	-.0190	-.0144	-.0102	-.0067	-.0038	-.0017	-.0004	.0000
6.0	-.0297	-.0243	-.0192	-.0145	-.0103	-.0067	-.0038	-.0017	-.0004	.0000
8.0	-.0302	-.0246	-.0194	-.0146	-.0104	-.0067	-.0038	-.0017	-.0004	.0000
10.0	-.0306	-.0249	-.0196	-.0147	-.0104	-.0067	-.0038	-.0017	-.0004	.0000
12.0	-.0309	-.0251	-.0197	-.0148	-.0104	-.0067	-.0038	-.0017	-.0004	.0000
15.0	-.0314	-.0254	-.0198	-.0148	-.0104	-.0067	-.0038	-.0017	-.0004	.0000
20.0	-.0320	-.0257	-.0200	-.0148	-.0104	-.0067	-.0037	-.0017	-.0004	.0000
25.0	-.0323	-.0258	-.0199	-.0147	-.0103	-.0066	-.0037	-.0016	-.0004	.0000
30.0	-.0324	-.0257	-.0198	-.0145	-.0101	-.0064	-.0036	-.0016	-.0004	.0000
35.0	-.0323	-.0255	-.0194	-.0142	-.0098	-.0062	-.0034	-.0015	-.0004	.0000
40.0	-.0319	-.0250	-.0190	-.0138	-.0094	-.0059	-.0033	-.0014	-.0003	.0000
45.0	-.0313	-.0243	-.0183	-.0132	-.0090	-.0056	-.0031	-.0013	-.0003	.0000
50.0	-.0304	-.0235	-.0176	-.0126	-.0085	-.0053	-.0029	-.0012	-.0003	.0000
55.0	-.0293	-.0225	-.0167	-.0119	-.0080	-.0049	-.0026	-.0011	-.0003	.0000
60.0	-.0280	-.0213	-.0157	-.0111	-.0073	-.0045	-.0024	-.0010	-.0002	.0000
65.0	-.0264	-.0199	-.0145	-.0102	-.0067	-.0040	-.0021	-.0009	-.0002	.0000
70.0	-.0247	-.0184	-.0133	-.0092	-.0060	-.0035	-.0018	-.0007	-.0002	.0000
75.0	-.0228	-.0168	-.0119	-.0081	-.0052	-.0030	-.0015	-.0006	-.0001	.0000
80.0	-.0207	-.0150	-.0105	-.0070	-.0044	-.0025	-.0012	-.0005	-.0001	.0000
85.0	-.0184	-.0131	-.0090	-.0058	-.0035	-.0019	-.0009	-.0003	-.0001	.0000

TABLE V.- CONTINUED

(c) C_Y. Continued.

$\beta_1 = 105^0$; $\beta_2 = 255^0$; $\beta = 5^0$

θ_c, deg / α, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	-.1769	-.1552	-.1485	-.1439	-.1359	-.1274	-.1178	-.1072	-.0956	-.0834
2.0	-.2064	-.1709	-.1588	-.1515	-.1407	-.1307	-.1202	-.1089	-.0969	-.0843
4.0	-.2677	-.2021	-.1793	-.1665	-.1501	-.1372	-.1249	-.1123	-.0994	-.0861
6.0	-.3300	-.2332	-.1995	-.1813	-.1594	-.1436	-.1294	-.1156	-.1017	-.0878
8.0	-.3924	-.2639	-.2196	-.1959	-.1684	-.1498	-.1338	-.1187	-.1040	-.0894
10.0	-.4545	-.2943	-.2393	-.2103	-.1773	-.1557	-.1380	-.1217	-.1061	-.0909
12.0	-.5161	-.3243	-.2588	-.2244	-.1859	-.1615	-.1421	-.1246	-.1081	-.0922
15.0	-.6075	-.3687	-.2874	-.2451	-.1984	-.1699	-.1478	-.1286	-.1108	-.0941
20.0	-.7564	-.4402	-.3333	-.2780	-.2181	-.1827	-.1565	-.1344	-.1147	-.0965
25.0	-.8999	-.5084	-.3766	-.3088	-.2361	-.1941	-.1639	-.1392	-.1177	-.0963
30.0	-1.0371	-.5728	-.4171	-.3372	-.2523	-.2041	-.1701	-.1430	-.1198	-.0993
35.0	-1.1666	-.6328	-.4544	-.3631	-.2666	-.2125	-.1751	-.1457	-.1210	-.0995
40.0	-1.2874	-.6879	-.4883	-.3862	-.2788	-.2193	-.1786	-.1473	-.1213	-.0990
45.0	-1.3986	-.7379	-.5184	-.4063	-.2889	-.2244	-.1809	-.1477	-.1207	-.0977
50.0	-1.4991	-.7822	-.5446	-.4234	-.2969	-.2279	-.1817	-.1470	-.1191	-.0957
55.0	-1.5882	-.8205	-.5667	-.4373	-.3025	-.2295	-.1812	-.1452	-.1166	-.0929
60.0	-1.6652	-.8527	-.5844	-.4478	-.3059	-.2295	-.1793	-.1423	-.1133	-.0895
65.0	-1.7292	-.8783	-.5977	-.4549	-.3069	-.2277	-.1760	-.1384	-.1091	-.0854
70.0	-1.7799	-.8972	-.6064	-.4585	-.3056	-.2241	-.1714	-.1333	-.1040	-.0806
75.0	-1.8168	-.9094	-.6105	-.4587	-.3020	-.2189	-.1655	-.1273	-.0962	-.0752
80.0	-1.8396	-.9146	-.6100	-.4554	-.2961	-.2120	-.1583	-.1203	-.0916	-.0692
85.0	-1.8481	-.9128	-.6049	-.4486	-.2879	-.2034	-.1499	-.1123	-.0843	-.0627
θ_c, deg / α, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0	90.0
1.0	-.0709	-.0585	-.0465	-.0353	-.0252	-.0165	-.0094	-.0042	-.0011	.0000
2.0	-.0716	-.0590	-.0468	-.0355	-.0253	-.0165	-.0095	-.0042	-.0011	.0000
4.0	-.0729	-.0598	-.0474	-.0358	-.0255	-.0166	-.0095	-.0043	-.0011	.0000
6.0	-.0740	-.0606	-.0479	-.0361	-.0256	-.0167	-.0095	-.0043	-.0011	.0000
8.0	-.0751	-.0613	-.0483	-.0364	-.0258	-.0167	-.0095	-.0043	-.0011	.0000
10.0	-.0761	-.0620	-.0487	-.0366	-.0259	-.0168	-.0095	-.0042	-.0011	.0000
12.0	-.0770	-.0625	-.0490	-.0367	-.0259	-.0168	-.0095	-.0042	-.0011	.0000
15.0	-.0782	-.0632	-.0494	-.0369	-.0260	-.0168	-.0095	-.0042	-.0010	.0000
20.0	-.0796	-.0640	-.0497	-.0369	-.0258	-.0166	-.0093	-.0041	-.0010	.0000
25.0	-.0805	-.0643	-.0496	-.0367	-.0255	-.0163	-.0091	-.0040	-.0010	.0000
30.0	-.0808	-.0641	-.0492	-.0362	-.0250	-.0159	-.0089	-.0039	-.0010	.0000
35.0	-.0804	-.0634	-.0484	-.0354	-.0244	-.0154	-.0085	-.0037	-.0009	.0000
40.0	-.0794	-.0622	-.0472	-.0343	-.0235	-.0148	-.0081	-.0035	-.0009	.0000
45.0	-.0778	-.0606	-.0457	-.0330	-.0224	-.0140	-.0077	-.0033	-.0008	.0000
50.0	-.0757	-.0585	-.0438	-.0314	-.0212	-.0132	-.0071	-.0030	-.0007	.0000
55.0	-.0729	-.0559	-.0415	-.0296	-.0198	-.0122	-.0066	-.0028	-.0007	.0000
60.0	-.0696	-.0530	-.0390	-.0275	-.0183	-.0112	-.0059	-.0025	-.0006	.0000
65.0	-.0658	-.0496	-.0362	-.0253	-.0166	-.0100	-.0053	-.0022	-.0005	.0000
70.0	-.0615	-.0458	-.0331	-.0228	-.0148	-.0088	-.0046	-.0018	-.0004	.0000
75.0	-.0567	-.0417	-.0297	-.0202	-.0129	-.0075	-.0038	-.0015	-.0003	.0000
80.0	-.0514	-.0373	-.0261	-.0174	-.0109	-.0062	-.0030	-.0012	-.0002	.0000
85.0	-.0458	-.0326	-.0223	-.0145	-.0088	-.0048	-.0022	-.0008	-.0001	.0000

$\beta_1 = 105^0$; $\beta_2 = 255^0$; $\beta = 15^0$

θ_c, deg / α, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	-.7675	-.5205	-.4490	-.4189	-.3913	-.3669	-.3393	-.3085	-.2752	-.2401
2.0	-.8291	-.5561	-.4751	-.4397	-.4051	-.3764	-.3462	-.3136	-.2789	-.2428
4.0	-.9603	-.6302	-.5286	-.4815	-.4322	-.3952	-.3596	-.3234	-.2861	-.2480
6.0	-1.1007	-.7074	-.5831	-.5233	-.4589	-.4134	-.3727	-.3329	-.2929	-.2529
8.0	-1.2483	-.7867	-.6380	-.5648	-.4850	-.4312	-.3853	-.3419	-.2994	-.2574
10.0	-1.4013	-.8674	-.6931	-.6059	-.5104	-.4484	-.3974	-.3505	-.3055	-.2616
12.0	-1.5582	-.9487	-.7478	-.6463	-.5353	-.4651	-.4090	-.3587	-.3112	-.2656
15.0	-1.7980	-1.0709	-.8289	-.7057	-.5714	-.4891	-.4256	-.3702	-.3191	-.2708
20.0	-2.2006	-1.2719	-.9601	-.8004	-.6280	-.5261	-.4505	-.3870	-.3303	-.2780
25.0	-2.5972	-1.4658	-1.0846	-.8890	-.6798	-.5590	-.4720	-.4009	-.3389	-.2830
30.0	-2.9799	-1.6500	-1.2011	-.9709	-.7264	-.5877	-.4899	-.4118	-.3450	-.2858
35.0	-3.3433	-1.8222	-1.3085	-1.0454	-.7675	-.6119	-.5040	-.4195	-.3485	-.2865
40.0	-3.6831	-1.9809	-1.4060	-1.1120	-.8028	-.6315	-.5144	-.4240	-.3493	-.2850
45.0	-3.9958	-2.1246	-1.4928	-1.1701	-.8319	-.6463	-.5209	-.4253	-.3474	-.2813
50.0	-4.2786	-2.2522	-1.5682	-1.2193	-.8547	-.6561	-.5232	-.4234	-.3429	-.2755
55.0	-4.5291	-2.3627	-1.6317	-1.2592	-.8711	-.6610	-.5217	-.4182	-.3358	-.2676
60.0	-4.7453	-2.4552	-1.6827	-1.2895	-.8808	-.6608	-.5162	-.4099	-.3262	-.2577
65.0	-4.9254	-2.5290	-1.7210	-1.3099	-.8837	-.6556	-.5068	-.3984	-.3140	-.2458
70.0	-5.0680	-2.5835	-1.7462	-1.3204	-.8800	-.6454	-.4935	-.3839	-.2995	-.2320
75.0	-5.1720	-2.6184	-1.7580	-1.3209	-.8696	-.6302	-.4765	-.3665	-.2827	-.2165
80.0	-5.2367	-2.6334	-1.7565	-1.3113	-.8525	-.6103	-.4558	-.3463	-.2637	-.1993
85.0	-5.2615	-2.6283	-1.7416	-1.2917	-.8290	-.5858	-.4317	-.3234	-.2427	-.1806
θ_c, deg / α, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0	90.0
1.0	-.2042	-.1685	-.1340	-.1017	-.0726	-.0475	-.0272	-.0122	-.0031	.0000
2.0	-.2061	-.1698	-.1348	-.1022	-.0729	-.0476	-.0272	-.0122	-.0031	.0000
4.0	-.2098	-.1723	-.1364	-.1032	-.0734	-.0479	-.0273	-.0123	-.0031	.0000
6.0	-.2131	-.1745	-.1379	-.1040	-.0738	-.0481	-.0274	-.0123	-.0031	.0000
8.0	-.2163	-.1766	-.1391	-.1048	-.0742	-.0482	-.0274	-.0122	-.0031	.0000
10.0	-.2191	-.1784	-.1402	-.1053	-.0745	-.0483	-.0274	-.0122	-.0031	.0000
12.0	-.2217	-.1800	-.1412	-.1058	-.0746	-.0483	-.0274	-.0122	-.0030	.0000
15.0	-.2251	-.1820	-.1422	-.1063	-.0747	-.0482	-.0272	-.0121	-.0030	.0000
20.0	-.2293	-.1843	-.1431	-.1064	-.0744	-.0478	-.0269	-.0119	-.0029	.0000
25.0	-.2318	-.1851	-.1430	-.1057	-.0736	-.0470	-.0263	-.0116	-.0028	.0000
30.0	-.2325	-.1845	-.1417	-.1041	-.0721	-.0459	-.0255	-.0112	-.0027	.0000
35.0	-.2315	-.1825	-.1393	-.1018	-.0701	-.0444	-.0246	-.0107	-.0026	.0000
40.0	-.2287	-.1792	-.1359	-.0988	-.0676	-.0425	-.0234	-.0101	-.0025	.0000
45.0	-.2242	-.1744	-.1315	-.0949	-.0646	-.0404	-.0221	-.0095	-.0023	.0000
50.0	-.2179	-.1684	-.1260	-.0904	-.0611	-.0379	-.0206	-.0088	-.0021	.0000
55.0	-.2100	-.1610	-.1196	-.0851	-.0571	-.0351	-.0189	-.0080	-.0019	.0000
60.0	-.2005	-.1525	-.1123	-.0793	-.0527	-.0321	-.0171	-.0072	-.0017	.0000
65.0	-.1895	-.1427	-.1042	-.0728	-.0479	-.0289	-.0152	-.0063	-.0014	.0000
70.0	-.1770	-.1319	-.0952	-.0657	-.0427	-.0254	-.0131	-.0053	-.0012	.0000
75.0	-.1632	-.1201	-.0855	-.0582	-.0372	-.0217	-.0110	-.0043	-.0009	.0000
80.0	-.1481	-.1074	-.0752	-.0502	-.0314	-.0178	-.0088	-.0033	-.0007	.0000
85.0	-.1319	-.0938	-.0643	-.0418	-.0253	-.0139	-.0065	-.0023	-.0004	.0000

TABLE V.- CONTINUED

(c) C_Y. Continued.

$\phi_1 = 120^0$; $\phi_2 = 240^0$; $\beta = 2^0$

α, deg \ θ_c, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	-.0523	-.0463	-.0440	-.0424	-.0399	-.0373	-.0345	-.0313	-.0279	-.0244
2.0	-.0638	-.0520	-.0477	-.0452	-.0417	-.0385	-.0354	-.0320	-.0284	-.0247
4.0	-.0867	-.0633	-.0551	-.0506	-.0451	-.0409	-.0371	-.0332	-.0293	-.0254
6.0	-.1095	-.0746	-.0625	-.0560	-.0485	-.0432	-.0387	-.0344	-.0302	-.0260
8.0	-.1322	-.0857	-.0698	-.0614	-.0518	-.0455	-.0403	-.0356	-.0310	-.0266
10.0	-.1547	-.0968	-.0770	-.0666	-.0550	-.0477	-.0419	-.0367	-.0318	-.0271
12.0	-.1770	-.1077	-.0841	-.0718	-.0582	-.0499	-.0434	-.0378	-.0326	-.0277
15.0	-.2101	-.1239	-.0946	-.0794	-.0629	-.0530	-.0456	-.0393	-.0337	-.0284
20.0	-.2639	-.1501	-.1114	-.0915	-.0702	-.0579	-.0490	-.0416	-.0353	-.0295
25.0	-.3157	-.1751	-.1275	-.1030	-.0770	-.0623	-.0519	-.0436	-.0366	-.0303
30.0	-.3651	-.1988	-.1425	-.1137	-.0833	-.0663	-.0545	-.0453	-.0376	-.0309
35.0	-.4117	-.2209	-.1565	-.1235	-.0889	-.0697	-.0567	-.0466	-.0383	-.0312
40.0	-.4551	-.2414	-.1692	-.1324	-.0938	-.0727	-.0584	-.0476	-.0388	-.0314
45.0	-.4951	-.2601	-.1807	-.1402	-.0980	-.0750	-.0597	-.0482	-.0390	-.0312
50.0	-.5314	-.2767	-.1908	-.1470	-.1015	-.0768	-.0605	-.0484	-.0388	-.0309
55.0	-.5636	-.2913	-.1995	-.1527	-.1042	-.0780	-.0609	-.0483	-.0384	-.0303
60.0	-.5915	-.3037	-.2066	-.1572	-.1061	-.0787	-.0608	-.0478	-.0377	-.0295
65.0	-.6149	-.3137	-.2122	-.1606	-.1072	-.0787	-.0603	-.0469	-.0367	-.0284
70.0	-.6336	-.3213	-.2161	-.1627	-.1074	-.0781	-.0592	-.0457	-.0354	-.0272
75.0	-.6475	-.3265	-.2184	-.1635	-.1069	-.0769	-.0578	-.0441	-.0338	-.0257
80.0	-.6565	-.3293	-.2191	-.1631	-.1055	-.0752	-.0559	-.0422	-.0320	-.0240
85.0	-.6604	-.3295	-.2180	-.1615	-.1034	-.0729	-.0535	-.0400	-.0299	-.0222

α, deg \ θ_c, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0	90.0
1.0	-.0207	-.0171	-.0136	-.0103	-.0073	-.0048	-.0027	-.0012	-.0003	.0000
2.0	-.0209	-.0172	-.0137	-.0104	-.0074	-.0048	-.0028	-.0012	-.0003	.0000
4.0	-.0214	-.0176	-.0139	-.0105	-.0075	-.0049	-.0028	-.0012	-.0003	.0000
6.0	-.0219	-.0179	-.0141	-.0106	-.0075	-.0049	-.0028	-.0012	-.0003	.0000
8.0	-.0223	-.0181	-.0143	-.0107	-.0076	-.0049	-.0028	-.0012	-.0003	.0000
10.0	-.0226	-.0184	-.0144	-.0108	-.0076	-.0049	-.0028	-.0012	-.0003	.0000
12.0	-.0230	-.0186	-.0145	-.0109	-.0076	-.0049	-.0028	-.0012	-.0003	.0000
15.0	-.0235	-.0189	-.0147	-.0110	-.0077	-.0049	-.0028	-.0012	-.0003	.0000
20.0	-.0242	-.0193	-.0149	-.0110	-.0077	-.0049	-.0028	-.0012	-.0003	.0000
25.0	-.0246	-.0195	-.0150	-.0110	-.0076	-.0049	-.0027	-.0012	-.0003	.0000
30.0	-.0249	-.0196	-.0150	-.0109	-.0075	-.0048	-.0026	-.0011	-.0003	.0000
35.0	-.0250	-.0196	-.0148	-.0108	-.0074	-.0046	-.0025	-.0011	-.0003	.0000
40.0	-.0249	-.0194	-.0146	-.0105	-.0071	-.0045	-.0024	-.0010	-.0003	.0000
45.0	-.0247	-.0190	-.0142	-.0102	-.0069	-.0043	-.0023	-.0010	-.0002	.0000
50.0	-.0242	-.0185	-.0137	-.0098	-.0065	-.0040	-.0022	-.0009	-.0002	.0000
55.0	-.0235	-.0179	-.0132	-.0093	-.0062	-.0038	-.0020	-.0008	-.0002	.0000
60.0	-.0227	-.0171	-.0125	-.0087	-.0057	-.0035	-.0018	-.0007	-.0002	.0000
65.0	-.0217	-.0162	-.0117	-.0081	-.0053	-.0031	-.0016	-.0007	-.0001	.0000
70.0	-.0205	-.0152	-.0108	-.0074	-.0048	-.0028	-.0014	-.0006	-.0001	.0000
75.0	-.0192	-.0140	-.0099	-.0067	-.0042	-.0024	-.0012	-.0005	-.0001	.0000
80.0	-.0178	-.0128	-.0089	-.0059	-.0036	-.0020	-.0010	-.0004	-.0001	.0000
85.0	-.0162	-.0114	-.0078	-.0050	-.0030	-.0016	-.0008	-.0003	-.0000	.0000

TABLE V.- CONTINUED

(c) C_Y. Continued.

$\phi_1 = 135^o$; $\phi_2 = 225^o$; $\beta = 2^o$

α, deg \ θ_c, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	-.0336	-.0293	-.0276	-.0266	-.0249	-.0233	-.0215	-.0195	-.0174	-.0151
2.0	-.0420	-.0334	-.0304	-.0286	-.0262	-.0241	-.0221	-.0199	-.0177	-.0154
4.0	-.0586	-.0417	-.0358	-.0326	-.0287	-.0259	-.0233	-.0209	-.0184	-.0159
6.0	-.0752	-.0498	-.0411	-.0365	-.0311	-.0276	-.0246	-.0217	-.0190	-.0163
8.0	-.0917	-.0580	-.0464	-.0404	-.0336	-.0292	-.0258	-.0226	-.0196	-.0168
10.0	-.1080	-.0660	-.0517	-.0442	-.0359	-.0309	-.0269	-.0234	-.0202	-.0172
12.0	-.1242	-.0740	-.0569	-.0480	-.0383	-.0325	-.0280	-.0242	-.0208	-.0176
15.0	-.1483	-.0858	-.0645	-.0535	-.0417	-.0348	-.0297	-.0254	-.0216	-.0182
20.0	-.1875	-.1049	-.0769	-.0625	-.0472	-.0384	-.0322	-.0272	-.0228	-.0190
25.0	-.2252	-.1232	-.0886	-.0709	-.0522	-.0417	-.0345	-.0287	-.0239	-.0197
30.0	-.2612	-.1405	-.0997	-.0789	-.0569	-.0448	-.0365	-.0301	-.0248	-.0202
35.0	-.2952	-.1568	-.1101	-.0862	-.0612	-.0475	-.0382	-.0312	-.0254	-.0206
40.0	-.3270	-.1719	-.1196	-.0928	-.0650	-.0498	-.0397	-.0320	-.0259	-.0208
45.0	-.3563	-.1857	-.1281	-.0988	-.0683	-.0517	-.0408	-.0327	-.0262	-.0209
50.0	-.3829	-.1981	-.1358	-.1040	-.0710	-.0533	-.0416	-.0331	-.0263	-.0208
55.0	-.4065	-.2089	-.1423	-.1084	-.0733	-.0544	-.0421	-.0332	-.0262	-.0205
60.0	-.4271	-.2182	-.1478	-.1120	-.0750	-.0552	-.0423	-.0331	-.0259	-.0201
65.0	-.4444	-.2258	-.1522	-.1147	-.0761	-.0555	-.0422	-.0327	-.0254	-.0196
70.0	-.4584	-.2317	-.1554	-.1166	-.0766	-.0554	-.0418	-.0321	-.0247	-.0188
75.0	-.4688	-.2359	-.1574	-.1176	-.0765	-.0549	-.0410	-.0312	-.0238	-.0180
80.0	-.4757	-.2382	-.1583	-.1177	-.0759	-.0539	-.0399	-.0301	-.0227	-.0170
85.0	-.4789	-.2388	-.1579	-.1168	-.0747	-.0525	-.0385	-.0287	-.0215	-.0159
α, deg \ θ_c, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0	90.0
1.0	-.0129	-.0106	-.0084	-.0064	-.0046	-.0030	-.0017	-.0008	-.0002	.0000
2.0	-.0130	-.0107	-.0085	-.0064	-.0046	-.0030	-.0017	-.0008	-.0002	.0000
4.0	-.0134	-.0110	-.0087	-.0065	-.0046	-.0030	-.0017	-.0008	-.0002	.0000
6.0	-.0137	-.0112	-.0088	-.0066	-.0047	-.0030	-.0017	-.0008	-.0002	.0000
8.0	-.0140	-.0114	-.0089	-.0067	-.0047	-.0031	-.0017	-.0008	-.0002	.0000
10.0	-.0143	-.0116	-.0091	-.0068	-.0048	-.0031	-.0017	-.0008	-.0002	.0000
12.0	-.0146	-.0118	-.0092	-.0068	-.0048	-.0031	-.0017	-.0008	-.0002	.0000
15.0	-.0150	-.0120	-.0093	-.0069	-.0048	-.0031	-.0017	-.0008	-.0002	.0000
20.0	-.0155	-.0123	-.0095	-.0070	-.0049	-.0031	-.0017	-.0008	-.0002	.0000
25.0	-.0159	-.0126	-.0096	-.0070	-.0048	-.0031	-.0017	-.0007	-.0002	.0000
30.0	-.0162	-.0127	-.0096	-.0070	-.0048	-.0030	-.0017	-.0007	-.0002	.0000
35.0	-.0164	-.0127	-.0096	-.0069	-.0047	-.0029	-.0016	-.0007	-.0002	.0000
40.0	-.0164	-.0127	-.0095	-.0068	-.0046	-.0028	-.0015	-.0007	-.0002	.0000
45.0	-.0164	-.0125	-.0093	-.0066	-.0044	-.0027	-.0015	-.0006	-.0001	.0000
50.0	-.0162	-.0123	-.0091	-.0064	-.0042	-.0026	-.0014	-.0006	-.0001	.0000
55.0	-.0158	-.0120	-.0087	-.0061	-.0040	-.0024	-.0013	-.0005	-.0001	.0000
60.0	-.0154	-.0115	-.0083	-.0058	-.0038	-.0023	-.0012	-.0005	-.0001	.0000
65.0	-.0148	-.0110	-.0079	-.0054	-.0035	-.0021	-.0011	-.0004	-.0001	.0000
70.0	-.0142	-.0104	-.0074	-.0050	-.0032	-.0019	-.0009	-.0004	-.0001	.0000
75.0	-.0134	-.0097	-.0068	-.0046	-.0029	-.0016	-.0008	-.0003	-.0001	.0000
80.0	-.0125	-.0090	-.0062	-.0041	-.0025	-.0014	-.0007	-.0002	-.0000	.0000
85.0	-.0115	-.0081	-.0055	-.0036	-.0021	-.0011	-.0005	-.0002	-.0000	.0000

TABLE V. - CONTINUED

(c) C_Y. Continued.

$\phi_1 = 120^0$; $\phi_2 = 240^0$; $\beta = 5^0$

θ_c, deg / α, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	-.1315	-.1153	-.1095	-.1057	-.0994	-.0930	-.0858	-.0780	-.0695	-.0606
2.0	-.1591	-.1294	-.1188	-.1125	-.1037	-.0960	-.0880	-.0796	-.0707	-.0615
4.0	-.2165	-.1576	-.1373	-.1261	-.1122	-.1019	-.0923	-.0827	-.0730	-.0631
6.0	-.2763	-.1857	-.1556	-.1395	-.1206	-.1076	-.0964	-.0857	-.0752	-.0647
8.0	-.3382	-.2134	-.1737	-.1528	-.1289	-.1133	-.1004	-.0886	-.0773	-.0662
10.0	-.4023	-.2410	-.1917	-.1659	-.1370	-.1188	-.1043	-.0914	-.0792	-.0676
12.0	-.4684	-.2682	-.2094	-.1787	-.1449	-.1242	-.1081	-.0941	-.0812	-.0689
15.0	-.5708	-.3084	-.2355	-.1976	-.1565	-.1320	-.1135	-.0979	-.0838	-.0707
20.0	-.7490	-.3735	-.2774	-.2279	-.1748	-.1441	-.1219	-.1037	-.0878	-.0733
25.0	-.9342	-.4358	-.3173	-.2564	-.1918	-.1551	-.1293	-.1086	-.0910	-.0754
30.0	-1.1230	-.4948	-.3548	-.2830	-.2073	-.1650	-.1357	-.1128	-.0936	-.0769
35.0	-1.3122	-.5500	-.3895	-.3074	-.2212	-.1736	-.1411	-.1161	-.0954	-.0778
40.0	-1.4982	-.6010	-.4213	-.3295	-.2335	-.1809	-.1454	-.1185	-.0966	-.0781
45.0	-1.6774	-.6474	-.4499	-.3491	-.2440	-.1868	-.1486	-.1200	-.0970	-.0778
50.0	-1.8463	-.6889	-.4750	-.3660	-.2526	-.1913	-.1507	-.1206	-.0966	-.0769
55.0	-2.0015	-.7252	-.4966	-.3802	-.2593	-.1943	-.1516	-.1202	-.0956	-.0754
60.0	-2.1397	-.7559	-.5143	-.3914	-.2640	-.1958	-.1514	-.1190	-.0938	-.0734
65.0	-2.2582	-.7809	-.5282	-.3997	-.2668	-.1959	-.1500	-.1168	-.0912	-.0707
70.0	-2.3543	-.7999	-.5380	-.4049	-.2674	-.1945	-.1475	-.1138	-.0880	-.0676
75.0	-2.4262	-.8129	-.5437	-.4070	-.2661	-.1915	-.1438	-.1099	-.0842	-.0640
80.0	-2.4722	-.8197	-.5453	-.4061	-.2627	-.1872	-.1391	-.1051	-.0796	-.0598
85.0	-2.4915	-.8202	-.5428	-.4020	-.2574	-.1814	-.1333	-.0996	-.0745	-.0552

θ_c, deg / α, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0	90.0
1.0	-.0515	-.0425	-.0338	-.0256	-.0183	-.0120	-.0068	-.0031	-.0007	.0000
2.0	-.0521	-.0429	-.0341	-.0258	-.0184	-.0120	-.0069	-.0031	-.0008	.0000
4.0	-.0533	-.0437	-.0346	-.0261	-.0186	-.0121	-.0069	-.0031	-.0008	.0000
6.0	-.0544	-.0445	-.0351	-.0264	-.0187	-.0122	-.0069	-.0031	-.0008	.0000
8.0	-.0554	-.0451	-.0355	-.0267	-.0188	-.0122	-.0069	-.0031	-.0008	.0000
10.0	-.0564	-.0458	-.0359	-.0269	-.0190	-.0123	-.0069	-.0031	-.0008	.0000
12.0	-.0573	-.0463	-.0362	-.0271	-.0190	-.0123	-.0069	-.0031	-.0008	.0000
15.0	-.0585	-.0471	-.0366	-.0273	-.0191	-.0123	-.0069	-.0031	-.0008	.0000
20.0	-.0601	-.0481	-.0371	-.0275	-.0191	-.0122	-.0069	-.0030	-.0007	.0000
25.0	-.0613	-.0487	-.0374	-.0275	-.0190	-.0121	-.0067	-.0029	-.0007	.0000
30.0	-.0621	-.0489	-.0373	-.0272	-.0187	-.0118	-.0066	-.0029	-.0007	.0000
35.0	-.0623	-.0487	-.0369	-.0268	-.0183	-.0115	-.0063	-.0027	-.0007	.0000
40.0	-.0621	-.0482	-.0363	-.0262	-.0178	-.0111	-.0061	-.0026	-.0006	.0000
45.0	-.0614	-.0474	-.0354	-.0253	-.0171	-.0106	-.0057	-.0024	-.0006	.0000
50.0	-.0602	-.0461	-.0342	-.0243	-.0163	-.0100	-.0054	-.0023	-.0005	.0000
55.0	-.0586	-.0445	-.0328	-.0231	-.0153	-.0093	-.0050	-.0021	-.0005	.0000
60.0	-.0566	-.0426	-.0311	-.0217	-.0143	-.0086	-.0045	-.0019	-.0004	.0000
65.0	-.0541	-.0403	-.0292	-.0202	-.0131	-.0078	-.0041	-.0016	-.0004	.0000
70.0	-.0512	-.0378	-.0270	-.0184	-.0118	-.0069	-.0035	-.0014	-.0003	.0000
75.0	-.0479	-.0349	-.0246	-.0166	-.0105	-.0060	-.0030	-.0012	-.0002	.0000
80.0	-.0442	-.0318	-.0221	-.0146	-.0090	-.0051	-.0025	-.0009	-.0002	.0000
85.0	-.0402	-.0285	-.0194	-.0125	-.0075	-.0041	-.0019	-.0006	-.0001	.0000

$\phi_1 = 120^0$; $\phi_2 = 240^0$; $\beta = 15^0$

θ_c, deg / α, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	-.5247	-.3668	-.3229	-.3051	-.2861	-.2677	-.2472	-.2246	-.2002	-.1746
2.0	-.5824	-.4003	-.3475	-.3244	-.2986	-.2763	-.2534	-.2292	-.2036	-.1770
4.0	-.7064	-.4704	-.3977	-.3631	-.3232	-.2933	-.2657	-.2381	-.2101	-.1818
6.0	-.8403	-.5437	-.4490	-.4017	-.3474	-.3100	-.2776	-.2468	-.2164	-.1863
8.0	-.9819	-.6192	-.5005	-.4399	-.3711	-.3262	-.2892	-.2552	-.2224	-.1905
10.0	-1.1291	-.6958	-.5520	-.4776	-.3945	-.3421	-.3005	-.2632	-.2282	-.1946
12.0	-1.2799	-.7729	-.6029	-.5148	-.4173	-.3576	-.3113	-.2710	-.2337	-.1934
15.0	-1.5095	-.8881	-.6783	-.5695	-.4506	-.3799	-.3269	-.2820	-.2413	-.2036
20.0	-1.8916	-1.0760	-.8005	-.6572	-.5033	-.4149	-.3509	-.2985	-.2527	-.2112
25.0	-2.2635	-1.2571	-.9175	-.7401	-.5522	-.4467	-.3722	-.3128	-.2621	-.2171
30.0	-2.6205	-1.4297	-1.0281	-.8175	-.5969	-.4750	-.3907	-.3248	-.2695	-.2213
35.0	-2.9596	-1.5923	-1.1314	-.8887	-.6370	-.4998	-.4062	-.3342	-.2748	-.2239
40.0	-3.2778	-1.7435	-1.2264	-.9532	-.6723	-.5208	-.4186	-.3411	-.2781	-.2248
45.0	-3.5722	-1.8818	-1.3123	-1.0105	-.7025	-.5378	-.4278	-.3454	-.2792	-.2239
50.0	-3.8402	-2.0060	-1.3881	-1.0601	-.7274	-.5507	-.4338	-.3471	-.2783	-.2214
55.0	-4.0793	-2.1149	-1.4531	-1.1014	-.7466	-.5594	-.4365	-.3462	-.2752	-.2171
60.0	-4.2873	-2.2074	-1.5069	-1.1343	-.7603	-.5639	-.4358	-.3426	-.2700	-.2113
65.0	-4.4621	-2.2828	-1.5487	-1.1585	-.7681	-.5640	-.4319	-.3364	-.2627	-.2038
70.0	-4.6023	-2.3402	-1.5783	-1.1737	-.7701	-.5599	-.4246	-.3276	-.2535	-.1947
75.0	-4.7065	-2.3791	-1.5954	-1.1798	-.7662	-.5515	-.4141	-.3163	-.2423	-.1842
80.0	-4.7736	-2.3992	-1.5997	-1.1767	-.7565	-.5389	-.4005	-.3027	-.2293	-.1723
85.0	-4.8031	-2.4004	-1.5913	-1.1646	-.7410	-.5222	-.3838	-.2867	-.2145	-.1590

θ_c, deg / α, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0	90.0
1.0	-.1484	-.1224	-.0973	-.0738	-.0527	-.0345	-.0197	-.0089	-.0022	.0000
2.0	-.1501	-.1236	-.0981	-.0743	-.0529	-.0346	-.0193	-.0089	-.0022	.0000
4.0	-.1535	-.1259	-.0996	-.0752	-.0535	-.0348	-.0199	-.0089	-.0022	.0000
6.0	-.1566	-.1280	-.1009	-.0760	-.0539	-.0350	-.0199	-.0089	-.0022	.0000
8.0	-.1596	-.1300	-.1022	-.0768	-.0543	-.0352	-.0200	-.0089	-.0022	.0000
10.0	-.1623	-.1318	-.1033	-.0774	-.0546	-.0353	-.0200	-.0089	-.0022	.0000
12.0	-.1649	-.1334	-.1043	-.0779	-.0548	-.0354	-.0200	-.0089	-.0022	.0000
15.0	-.1684	-.1356	-.1055	-.0785	-.0550	-.0354	-.0199	-.0088	-.0022	.0000
20.0	-.1731	-.1384	-.1069	-.0791	-.0551	-.0352	-.0197	-.0087	-.0021	.0000
25.0	-.1766	-.1401	-.1076	-.0791	-.0547	-.0348	-.0194	-.0085	-.0021	.0000
30.0	-.1787	-.1408	-.1074	-.0784	-.0540	-.0341	-.0189	-.0082	-.0020	.0000
35.0	-.1794	-.1404	-.1063	-.0772	-.0528	-.0331	-.0182	-.0079	-.0019	.0000
40.0	-.1788	-.1389	-.1045	-.0753	-.0512	-.0319	-.0174	-.0075	-.0018	.0000
45.0	-.1768	-.1364	-.1019	-.0729	-.0492	-.0305	-.0165	-.0070	-.0017	.0000
50.0	-.1734	-.1328	-.0985	-.0700	-.0469	-.0288	-.0155	-.0065	-.0015	.0000
55.0	-.1688	-.1282	-.0944	-.0665	-.0441	-.0269	-.0143	-.0060	-.0014	.0000
60.0	-.1628	-.1227	-.0895	-.0625	-.0411	-.0248	-.0130	-.0054	-.0012	.0000
65.0	-.1557	-.1162	-.0839	-.0580	-.0377	-.0225	-.0117	-.0047	-.0011	.0000
70.0	-.1473	-.1088	-.0778	-.0531	-.0341	-.0200	-.0102	-.0041	-.0009	.0000
75.0	-.1378	-.1006	-.0710	-.0478	-.0302	-.0174	-.0087	-.0034	-.0007	.0000
80.0	-.1273	-.0916	-.0637	-.0421	-.0261	-.0146	-.0071	-.0026	-.0005	.0000
85.0	-.1158	-.0820	-.0559	-.0361	-.0217	-.0118	-.0054	-.0019	-.0003	-.0000

TABLE V.- CONTINUED

(c) C_Y. Continued.

$\phi_1 = 135^0$; $\phi_2 = 225^0$; $\beta = 5^0$

α, deg \ θ_c, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	-.0838	-.0729	-.0688	-.0662	-.0620	-.0579	-.0534	-.0485	-.0432	-.0377
2.0	-.1047	-.0832	-.0756	-.0712	-.0652	-.0601	-.0550	-.0497	-.0441	-.0383
4.0	-.1478	-.1037	-.0890	-.0810	-.0714	-.0644	-.0581	-.0519	-.0457	-.0395
6.0	-.1927	-.1241	-.1024	-.0908	-.0775	-.0686	-.0611	-.0541	-.0473	-.0406
8.0	-.2393	-.1443	-.1156	-.1005	-.0836	-.0728	-.0641	-.0563	-.0489	-.0417
10.0	-.2875	-.1643	-.1286	-.1100	-.0895	-.0768	-.0670	-.0584	-.0504	-.0428
12.0	-.3372	-.1842	-.1416	-.1195	-.0953	-.0808	-.0698	-.0604	-.0518	-.0438
15.0	-.4143	-.2135	-.1606	-.1333	-.1038	-.0865	-.0738	-.0632	-.0538	-.0452
20.0	-.5485	-.2610	-.1914	-.1555	-.1174	-.0956	-.0801	-.0676	-.0569	-.0473
25.0	-.6880	-.3066	-.2207	-.1766	-.1300	-.1039	-.0859	-.0715	-.0595	-.0490
30.0	-.8305	-.3498	-.2483	-.1963	-.1417	-.1115	-.0909	-.0748	-.0616	-.0503
35.0	-.9736	-.3904	-.2740	-.2145	-.1523	-.1182	-.0951	-.0776	-.0633	-.0512
40.0	-1.1145	-.4279	-.2976	-.2311	-.1617	-.1240	-.0987	-.0798	-.0645	-.0518
45.0	-1.2506	-.4623	-.3190	-.2460	-.1699	-.1288	-.1016	-.0813	-.0653	-.0520
50.0	-1.3792	-.4931	-.3379	-.2589	-.1768	-.1327	-.1036	-.0823	-.0655	-.0517
55.0	-1.4978	-.5201	-.3543	-.2699	-.1824	-.1355	-.1049	-.0826	-.0652	-.0511
60.0	-1.6039	-.5432	-.3680	-.2788	-.1866	-.1374	-.1054	-.0823	-.0644	-.0501
65.0	-1.6954	-.5622	-.3789	-.2856	-.1893	-.1381	-.1051	-.0814	-.0632	-.0487
70.0	-1.7704	-.5769	-.3868	-.2903	-.1907	-.1379	-.1040	-.0798	-.0614	-.0469
75.0	-1.8273	-.5872	-.3919	-.2927	-.1905	-.1365	-.1021	-.0776	-.0592	-.0449
80.0	-1.8648	-.5930	-.3940	-.2929	-.1889	-.1342	-.0994	-.0749	-.0565	-.0423
85.0	-1.8823	-.5943	-.3930	-.2909	-.1859	-.1308	-.0960	-.0716	-.0534	-.0395

α, deg \ θ_c, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0	90.0
1.0	-.0320	-.0264	-.0210	-.0159	-.0113	-.0074	-.0042	-.0019	-.0005	.0000
2.0	-.0324	-.0267	-.0212	-.0160	-.0114	-.0075	-.0043	-.0019	-.0005	.0000
4.0	-.0333	-.0273	-.0215	-.0163	-.0115	-.0075	-.0043	-.0019	-.0005	.0000
6.0	-.0341	-.0278	-.0219	-.0165	-.0117	-.0076	-.0043	-.0019	-.0005	.0000
8.0	-.0349	-.0283	-.0222	-.0167	-.0118	-.0076	-.0043	-.0019	-.0005	.0000
10.0	-.0356	-.0288	-.0225	-.0168	-.0119	-.0077	-.0043	-.0019	-.0005	.0000
12.0	-.0363	-.0293	-.0228	-.0170	-.0119	-.0077	-.0043	-.0019	-.0005	.0000
15.0	-.0372	-.0299	-.0232	-.0172	-.0120	-.0077	-.0043	-.0019	-.0005	.0000
20.0	-.0386	-.0307	-.0236	-.0174	-.0121	-.0077	-.0043	-.0019	-.0005	.0000
25.0	-.0396	-.0313	-.0239	-.0175	-.0120	-.0076	-.0042	-.0018	-.0004	.0000
30.0	-.0404	-.0316	-.0240	-.0174	-.0119	-.0075	-.0041	-.0018	-.0004	.0000
35.0	-.0408	-.0317	-.0239	-.0172	-.0117	-.0073	-.0040	-.0017	-.0004	.0000
40.0	-.0409	-.0316	-.0236	-.0169	-.0114	-.0071	-.0038	-.0016	-.0004	.0000
45.0	-.0407	-.0312	-.0232	-.0165	-.0110	-.0068	-.0037	-.0015	-.0004	.0000
50.0	-.0402	-.0306	-.0225	-.0159	-.0106	-.0064	-.0034	-.0014	-.0003	.0000
55.0	-.0394	-.0298	-.0217	-.0152	-.0100	-.0061	-.0032	-.0013	-.0003	.0000
60.0	-.0383	-.0287	-.0208	-.0144	-.0094	-.0056	-.0029	-.0012	-.0003	.0000
65.0	-.0369	-.0274	-.0197	-.0135	-.0087	-.0051	-.0026	-.0011	-.0002	.0000
70.0	-.0353	-.0259	-.0184	-.0125	-.0079	-.0046	-.0023	-.0009	-.0002	.0000
75.0	-.0333	-.0242	-.0170	-.0113	-.0071	-.0041	-.0020	-.0008	-.0002	.0000
80.0	-.0311	-.0223	-.0154	-.0101	-.0062	-.0035	-.0017	-.0006	-.0001	.0000
85.0	-.0287	-.0203	-.0138	-.0089	-.0053	-.0029	-.0013	-.0004	-.0001	.0000

$\phi_1 = 135^0$; $\phi_2 = 225^0$; $\beta = 15^0$

α, deg \ θ_c, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	-.2984	-.2194	-.1990	-.1906	-.1786	-.1668	-.1538	-.1396	-.1244	-.1084
2.0	-.3432	-.2455	-.2179	-.2049	-.1877	-.1730	-.1584	-.1430	-.1269	-.1102
4.0	-.4409	-.3004	-.2563	-.2334	-.2056	-.1854	-.1673	-.1495	-.1316	-.1137
6.0	-.5472	-.3575	-.2948	-.2616	-.2232	-.1976	-.1761	-.1559	-.1363	-.1170
8.0	-.6593	-.4154	-.3332	-.2895	-.2406	-.2095	-.1846	-.1621	-.1407	-.1202
10.0	-.7745	-.4732	-.3715	-.3171	-.2577	-.2212	-.1929	-.1680	-.1450	-.1232
12.0	-.8909	-.5306	-.4095	-.3443	-.2744	-.2326	-.2009	-.1738	-.1491	-.1261
15.0	-1.0665	-.6156	-.4661	-.3843	-.2990	-.2492	-.2126	-.1821	-.1550	-.1303
20.0	-1.3604	-.7543	-.5586	-.4488	-.3380	-.2753	-.2306	-.1967	-.1637	-.1361
25.0	-1.6529	-.8881	-.6480	-.5099	-.3745	-.2993	-.2470	-.2059	-.1713	-.1410
30.0	-1.9408	-1.0158	-.7335	-.5672	-.4081	-.3210	-.2614	-.2155	-.1775	-.1448
35.0	-2.2205	-1.1364	-.8141	-.6202	-.4386	-.3402	-.2739	-.2234	-.1823	-.1475
40.0	-2.4884	-1.2487	-.8890	-.6685	-.4657	-.3569	-.2842	-.2297	-.1858	-.1491
45.0	-2.7411	-1.3517	-.9574	-.7118	-.4893	-.3709	-.2924	-.2342	-.1879	-.1496
50.0	-2.9750	-1.4446	-1.0186	-.7496	-.5092	-.3820	-.2984	-.2369	-.1885	-.1489
55.0	-3.1871	-1.5265	-1.0718	-.7817	-.5252	-.3902	-.3021	-.2378	-.1877	-.1471
60.0	-3.3743	-1.5966	-1.1165	-.8078	-.5373	-.3955	-.3035	-.2369	-.1855	-.1442
65.0	-3.5339	-1.6543	-1.1521	-.8277	-.5452	-.3977	-.3026	-.2343	-.1818	-.1402
70.0	-3.6635	-1.6990	-1.1783	-.8413	-.5490	-.3970	-.2994	-.2298	-.1768	-.1351
75.0	-3.7614	-1.7304	-1.1948	-.8483	-.5486	-.3932	-.2939	-.2236	-.1705	-.1290
80.0	-3.8260	-1.7481	-1.2013	-.8489	-.5440	-.3864	-.2862	-.2156	-.1628	-.1219
85.0	-3.8563	-1.7519	-1.1978	-.8429	-.5353	-.3766	-.2763	-.2061	-.1539	-.1138

α, deg \ θ_c, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0	90.0
1.0	-.0921	-.0760	-.0604	-.0458	-.0327	-.0214	-.0122	-.0055	-.0014	.0000
2.0	-.0934	-.0768	-.0609	-.0462	-.0329	-.0215	-.0123	-.0055	-.0014	.0000
4.0	-.0959	-.0785	-.0620	-.0468	-.0332	-.0216	-.0123	-.0055	-.0014	.0000
6.0	-.0982	-.0801	-.0631	-.0474	-.0336	-.0218	-.0124	-.0055	-.0014	.0000
8.0	-.1004	-.0816	-.0640	-.0480	-.0339	-.0219	-.0124	-.0055	-.0014	.0000
10.0	-.1025	-.0830	-.0649	-.0485	-.0341	-.0220	-.0125	-.0055	-.0014	.0000
12.0	-.1045	-.0842	-.0657	-.0489	-.0343	-.0221	-.0125	-.0055	-.0014	.0000
15.0	-.1072	-.0860	-.0667	-.0495	-.0346	-.0222	-.0125	-.0055	-.0014	.0000
20.0	-.1110	-.0883	-.0680	-.0501	-.0348	-.0222	-.0124	-.0054	-.0013	.0000
25.0	-.1140	-.0900	-.0688	-.0503	-.0347	-.0220	-.0122	-.0053	-.0013	.0000
30.0	-.1162	-.0910	-.0690	-.0502	-.0344	-.0216	-.0119	-.0051	-.0012	.0000
35.0	-.1174	-.0913	-.0688	-.0496	-.0338	-.0211	-.0115	-.0049	-.0012	.0000
40.0	-.1178	-.0909	-.0680	-.0487	-.0329	-.0204	-.0111	-.0047	-.0011	.0000
45.0	-.1173	-.0899	-.0667	-.0474	-.0318	-.0195	-.0105	-.0044	-.0010	.0000
50.0	-.1159	-.0881	-.0649	-.0458	-.0304	-.0186	-.0099	-.0041	-.0010	.0000
55.0	-.1136	-.0857	-.0626	-.0438	-.0289	-.0174	-.0092	-.0038	-.0009	.0000
60.0	-.1104	-.0826	-.0598	-.0415	-.0270	-.0162	-.0084	-.0034	-.0008	.0000
65.0	-.1064	-.0789	-.0566	-.0388	-.0250	-.0148	-.0076	-.0030	-.0007	.0000
70.0	-.1016	-.0746	-.0529	-.0359	-.0228	-.0133	-.0067	-.0026	-.0006	.0000
75.0	-.0960	-.0697	-.0489	-.0327	-.0205	-.0117	-.0058	-.0022	-.0005	.0000
80.0	-.0897	-.0643	-.0444	-.0292	-.0179	-.0100	-.0048	-.0017	-.0003	.0000
85.0	-.0827	-.0584	-.0396	-.0255	-.0153	-.0082	-.0037	-.0013	-.0002	.0000

TABLE V. - CONTINUED

(c) C_Y. Continued.

$\phi_1 = 150^\circ$; $\phi_2 = 210^\circ$; $\beta = 2^\circ$

α, deg \ θ_c, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	-.0165	-.0142	-.0133	-.0128	-.0119	-.0111	-.0103	-.0093	-.0083	-.0072
2.0	-.0209	-.0164	-.0147	-.0138	-.0126	-.0116	-.0106	-.0095	-.0085	-.0073
4.0	-.0297	-.0207	-.0176	-.0159	-.0139	-.0125	-.0113	-.0100	-.0088	-.0076
6.0	-.0385	-.0251	-.0205	-.0180	-.0152	-.0134	-.0119	-.0105	-.0092	-.0079
8.0	-.0472	-.0294	-.0233	-.0201	-.0165	-.0143	-.0125	-.0110	-.0095	-.0081
10.0	-.0559	-.0337	-.0261	-.0221	-.0178	-.0152	-.0132	-.0114	-.0098	-.0083
12.0	-.0645	-.0379	-.0288	-.0241	-.0191	-.0160	-.0138	-.0119	-.0101	-.0085
15.0	-.0773	-.0442	-.0329	-.0271	-.0209	-.0173	-.0146	-.0125	-.0106	-.0089
20.0	-.0981	-.0543	-.0395	-.0319	-.0238	-.0192	-.0160	-.0134	-.0112	-.0093
25.0	-.1182	-.0641	-.0458	-.0364	-.0265	-.0210	-.0172	-.0143	-.0118	-.0097
30.0	-.1373	-.0733	-.0517	-.0407	-.0291	-.0227	-.0184	-.0150	-.0123	-.0100
35.0	-.1554	-.0820	-.0573	-.0446	-.0314	-.0242	-.0193	-.0157	-.0127	-.0103
40.0	-.1724	-.0901	-.0624	-.0482	-.0335	-.0255	-.0202	-.0162	-.0130	-.0104
45.0	-.1880	-.0975	-.0670	-.0515	-.0353	-.0266	-.0208	-.0166	-.0132	-.0105
50.0	-.2022	-.1042	-.0711	-.0543	-.0369	-.0275	-.0214	-.0169	-.0134	-.0105
55.0	-.2148	-.1100	-.0747	-.0567	-.0381	-.0282	-.0217	-.0170	-.0134	-.0104
60.0	-.2258	-.1151	-.0777	-.0587	-.0391	-.0287	-.0219	-.0170	-.0133	-.0103
65.0	-.2351	-.1192	-.0801	-.0603	-.0398	-.0289	-.0219	-.0169	-.0131	-.0100
70.0	-.2426	-.1224	-.0820	-.0614	-.0402	-.0290	-.0218	-.0166	-.0128	-.0097
75.0	-.2483	-.1247	-.0831	-.0620	-.0403	-.0288	-.0215	-.0163	-.0124	-.0093
80.0	-.2520	-.1261	-.0837	-.0622	-.0400	-.0284	-.0210	-.0158	-.0119	-.0089
85.0	-.2539	-.1265	-.0836	-.0619	-.0395	-.0278	-.0203	-.0152	-.0113	-.0084

α, deg \ θ_c, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0	90.0
1.0	-.0061	-.0051	-.0040	-.0030	-.0022	-.0014	-.0008	-.0004	-.0001	.0000
2.0	-.0062	-.0051	-.0041	-.0031	-.0022	-.0014	-.0008	-.0004	-.0001	.0000
4.0	-.0064	-.0052	-.0041	-.0031	-.0022	-.0014	-.0008	-.0004	-.0001	.0000
6.0	-.0066	-.0054	-.0042	-.0032	-.0022	-.0015	-.0008	-.0004	-.0001	.0000
8.0	-.0067	-.0055	-.0043	-.0032	-.0023	-.0015	-.0009	-.0004	-.0001	.0000
10.0	-.0069	-.0056	-.0044	-.0032	-.0023	-.0015	-.0008	-.0004	-.0001	.0000
12.0	-.0071	-.0057	-.0044	-.0033	-.0023	-.0015	-.0008	-.0004	-.0001	.0000
15.0	-.0073	-.0058	-.0045	-.0033	-.0023	-.0015	-.0008	-.0004	-.0001	.0000
20.0	-.0076	-.0060	-.0046	-.0034	-.0023	-.0015	-.0008	-.0004	-.0001	.0000
25.0	-.0078	-.0061	-.0047	-.0034	-.0023	-.0015	-.0008	-.0004	-.0001	.0000
30.0	-.0080	-.0062	-.0047	-.0034	-.0023	-.0015	-.0008	-.0003	-.0001	.0000
35.0	-.0081	-.0063	-.0047	-.0034	-.0023	-.0014	-.0008	-.0003	-.0001	.0000
40.0	-.0082	-.0063	-.0047	-.0033	-.0022	-.0014	-.0007	-.0003	-.0001	.0000
45.0	-.0082	-.0062	-.0046	-.0033	-.0022	-.0013	-.0007	-.0003	-.0001	.0000
50.0	-.0081	-.0062	-.0045	-.0032	-.0021	-.0013	-.0007	-.0003	-.0001	.0000
55.0	-.0080	-.0060	-.0044	-.0030	-.0020	-.0012	-.0006	-.0003	-.0001	.0000
60.0	-.0078	-.0058	-.0042	-.0029	-.0019	-.0011	-.0006	-.0002	-.0001	.0000
65.0	-.0076	-.0056	-.0040	-.0027	-.0017	-.0010	-.0005	-.0002	-.0000	.0000
70.0	-.0073	-.0053	-.0038	-.0025	-.0016	-.0009	-.0005	-.0002	-.0000	.0000
75.0	-.0069	-.0050	-.0035	-.0023	-.0015	-.0008	-.0004	-.0002	-.0000	.0000
80.0	-.0065	-.0047	-.0032	-.0021	-.0013	-.0007	-.0003	-.0001	-.0000	.0000
85.0	-.0061	-.0043	-.0029	-.0019	-.0011	-.0006	-.0003	-.0001	-.0000	.0000

TABLE V.- CONTINUED

(d) C_L

$\phi_1 = 0^o$; $\phi_2 = 360^o$; $\beta = 0^o$

α, deg \ θ_c, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.0348	.0344	.0337	.0328	.0302	.0267	.0224	.0174	.0119	.0061
2.0	.0694	.0686	.0673	.0655	.0603	.0534	.0448	.0348	.0238	.0121
4.0	.1424	.1364	.1338	.1301	.1199	.1061	.0890	.0692	.0473	.0239
6.0	.2341	.2032	.1986	.1932	.1780	.1574	.1320	.1025	.0700	.0352
8.0	.3463	.2750	.2611	.2539	.2339	.2067	.1732	.1345	.0915	.0458
10.0	.4780	.3545	.3236	.3114	.2868	.2534	.2122	.1645	.1117	.0554
12.0	.6274	.4412	.3888	.3665	.3362	.2968	.2483	.1922	.1300	.0638
15.0	.8810	.5828	.4914	.4488	.4021	.3547	.2962	.2285	.1535	.0737
20.0	1.3643	.8401	.6695	.5846	.4928	.4274	.3554	.2720	.1797	.0814
25.0	1.8903	1.1067	.8450	.7114	.5653	.4701	.3843	.2905	.1868	.0763
30.0	2.4178	1.3614	1.0041	.8195	.6165	.4887	.3831	.2812	.1726	.0569
35.0	2.9042	1.5833	1.1335	.8995	.6421	.4835	.3588	.2464	.1367	.0229
40.0	3.3090	1.7532	1.2214	.9439	.6390	.4545	.3143	.1936	.0824	-.0249
45.0	3.5962	1.8552	1.2587	.9471	.6058	.4024	.2522	.1278	.0180	-.0824
50.0	3.7371	1.8775	1.2397	.9064	.5428	.3295	.1761	.0532	-.0510	-.1419
55.0	3.7122	1.8134	1.1618	.8216	.4525	.2392	.0898	-.0259	-.1200	-.1983
60.0	3.5125	1.6617	1.0267	.6957	.3387	.1361	-.0020	-.1050	-.1850	-.2477
65.0	3.1405	1.4270	.8395	.5340	.2071	.0254	-.0945	-.1799	-.2422	-.2872
70.0	2.6099	1.1193	.6089	.3445	.0645	-.0870	-.1826	-.2464	-.2887	-.3146
75.0	1.9447	.7533	.3464	.1368	-.0817	-.1951	-.2619	-.3014	-.3222	-.3288
80.0	1.1777	.3478	.0656	-.0782	-.2238	-.2934	-.3282	-.3420	-.3412	-.3294
85.0	.3486	-.0762	-.2187	-.2891	-.3543	-.3769	-.3785	-.3668	-.3455	-.3172

α, deg \ θ_c, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0	90.0
1.0	-.0000	-.0061	-.0119	-.0174	-.0224	-.0267	-.0302	-.0328	-.0344	-.0349
2.0	-.0000	-.0121	-.0239	-.0349	-.0448	-.0534	-.0604	-.0655	-.0687	-.0697
4.0	-.0002	-.0242	-.0476	-.0695	-.0893	-.1064	-.1203	-.1305	-.1367	-.1388
6.0	-.0006	-.0364	-.0711	-.1037	-.1331	-.1585	-.1791	-.1943	-.2036	-.2068
8.0	-.0013	-.0485	-.0942	-.1372	-.1759	-.2094	-.2366	-.2566	-.2688	-.2730
10.0	-.0026	-.0607	-.1169	-.1697	-.2174	-.2586	-.2920	-.3167	-.3317	-.3368
12.0	-.0045	-.0728	-.1390	-.2012	-.2573	-.3058	-.3451	-.3741	-.3919	-.3978
15.0	-.0087	-.0910	-.1709	-.2458	-.3135	-.3720	-.4194	-.4544	-.4758	-.4830
20.0	-.0200	-.1214	-.2198	-.3120	-.3954	-.4674	-.5258	-.5688	-.5952	-.6040
25.0	-.0377	-.1517	-.2623	-.3660	-.4598	-.5407	-.6063	-.6547	-.6843	-.6943
30.0	-.0625	-.1819	-.2976	-.4062	-.5044	-.5892	-.6579	-.7085	-.7396	-.7500
35.0	-.0944	-.2116	-.3254	-.4321	-.5285	-.6117	-.6793	-.7290	-.7595	-.7698
40.0	-.1328	-.2407	-.3454	-.4436	-.5324	-.6090	-.6711	-.7169	-.7450	-.7544
45.0	-.1768	-.2689	-.3582	-.4419	-.5177	-.5830	-.6361	-.6751	-.6990	-.7071
50.0	-.2227	-.2957	-.3644	-.4289	-.4872	-.5375	-.5783	-.6084	-.6268	-.6330
55.0	-.2639	-.3188	-.3652	-.4069	-.4446	-.4772	-.5036	-.5231	-.5350	-.5390
60.0	-.2964	-.3332	-.3599	-.3789	-.3943	-.4077	-.4185	-.4265	-.4314	-.4330
65.0	-.3180	-.3368	-.3456	-.3461	-.3411	-.3351	-.3302	-.3267	-.3245	-.3237
70.0	-.3273	-.3291	-.3218	-.3073	-.2876	-.2655	-.2460	-.2316	-.2228	-.2198
75.0	-.3242	-.3105	-.2897	-.2635	-.2338	-.2026	-.1724	-.1488	-.1343	-.1294
80.0	-.3091	-.2824	-.2511	-.2168	-.1813	-.1462	-.1132	-.0846	-.0657	-.0594
85.0	-.2837	-.2469	-.2084	-.1698	-.1324	-.0977	-.0669	-.0414	-.0224	-.0151

TABLE V.- CONTINUED

(c) C_Y. Concluded.

$\beta_1 = 150^0$; $\beta_2 = 210^0$; $\beta = 5^0$

θ_c, deg / α, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	-.0410	-.0353	-.0331	-.0318	-.0297	-.0277	-.0255	-.0232	-.0206	-.0180
2.0	-.0520	-.0407	-.0367	-.0344	-.0314	-.0289	-.0264	-.0238	-.0211	-.0183
4.0	-.0740	-.0516	-.0439	-.0397	-.0347	-.0311	-.0280	-.0250	-.0220	-.0190
6.0	-.0959	-.0624	-.0509	-.0449	-.0379	-.0334	-.0296	-.0262	-.0228	-.0196
8.0	-.1176	-.0732	-.0580	-.0500	-.0412	-.0356	-.0312	-.0273	-.0236	-.0201
10.0	-.1392	-.0838	-.0649	-.0551	-.0443	-.0378	-.0328	-.0284	-.0245	-.0207
12.0	-.1607	-.0943	-.0718	-.0601	-.0474	-.0399	-.0343	-.0295	-.0252	-.0213
15.0	-.1925	-.1099	-.0819	-.0675	-.0520	-.0430	-.0364	-.0311	-.0263	-.0220
20.0	-.2443	-.1352	-.0983	-.0794	-.0593	-.0479	-.0398	-.0335	-.0280	-.0232
25.0	-.2942	-.1595	-.1140	-.0906	-.0661	-.0524	-.0427	-.0356	-.0295	-.0241
30.0	-.3419	-.1826	-.1287	-.1012	-.0724	-.0565	-.0457	-.0375	-.0307	-.0249
35.0	-.3869	-.2042	-.1425	-.1111	-.0782	-.0602	-.0481	-.0390	-.0317	-.0255
40.0	-.4291	-.2243	-.1553	-.1200	-.0833	-.0634	-.0502	-.0403	-.0325	-.0259
45.0	-.4679	-.2428	-.1668	-.1281	-.0879	-.0662	-.0519	-.0413	-.0330	-.0261
50.0	-.5033	-.2593	-.1771	-.1352	-.0917	-.0684	-.0532	-.0420	-.0332	-.0261
55.0	-.5347	-.2739	-.1860	-.1412	-.0949	-.0701	-.0540	-.0423	-.0333	-.0259
60.0	-.5621	-.2864	-.1935	-.1462	-.0974	-.0713	-.0545	-.0424	-.0330	-.0256
65.0	-.5853	-.2967	-.1995	-.1501	-.0991	-.0720	-.0545	-.0421	-.0325	-.0250
70.0	-.6039	-.3048	-.2040	-.1528	-.1000	-.0721	-.0542	-.0414	-.0318	-.0242
75.0	-.6180	-.3105	-.2070	-.1544	-.1002	-.0716	-.0534	-.0405	-.0308	-.0232
80.0	-.6274	-.3139	-.2083	-.1548	-.0996	-.0706	-.0522	-.0393	-.0296	-.0221
85.0	-.6320	-.3149	-.2081	-.1540	-.0983	-.0691	-.0506	-.0377	-.0281	-.0208

θ_c, deg / α, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0	90.0
1.0	-.0153	-.0126	-.0100	-.0076	-.0054	-.0035	-.0020	-.0009	-.0002	.0000
2.0	-.0155	-.0127	-.0101	-.0076	-.0054	-.0036	-.0020	-.0009	-.0002	.0000
4.0	-.0159	-.0131	-.0103	-.0078	-.0055	-.0036	-.0020	-.0009	-.0002	.0000
6.0	-.0164	-.0133	-.0105	-.0079	-.0056	-.0036	-.0021	-.0009	-.0002	.0000
8.0	-.0168	-.0136	-.0107	-.0080	-.0056	-.0036	-.0021	-.0009	-.0002	.0000
10.0	-.0172	-.0139	-.0108	-.0081	-.0057	-.0037	-.0021	-.0009	-.0002	.0000
12.0	-.0176	-.0141	-.0110	-.0082	-.0057	-.0037	-.0021	-.0009	-.0002	.0000
15.0	-.0181	-.0145	-.0112	-.0083	-.0058	-.0037	-.0021	-.0009	-.0002	.0000
20.0	-.0188	-.0149	-.0115	-.0084	-.0058	-.0037	-.0021	-.0009	-.0002	.0000
25.0	-.0195	-.0153	-.0116	-.0085	-.0058	-.0037	-.0020	-.0009	-.0002	.0000
30.0	-.0199	-.0155	-.0117	-.0085	-.0058	-.0036	-.0020	-.0009	-.0002	.0000
35.0	-.0202	-.0157	-.0117	-.0084	-.0057	-.0036	-.0019	-.0008	-.0002	.0000
40.0	-.0204	-.0157	-.0117	-.0083	-.0056	-.0034	-.0019	-.0008	-.0002	.0000
45.0	-.0204	-.0156	-.0115	-.0081	-.0054	-.0033	-.0018	-.0007	-.0002	.0000
50.0	-.0202	-.0153	-.0112	-.0079	-.0052	-.0032	-.0017	-.0007	-.0002	.0000
55.0	-.0199	-.0150	-.0109	-.0076	-.0050	-.0030	-.0016	-.0006	-.0001	.0000
60.0	-.0195	-.0145	-.0105	-.0072	-.0047	-.0028	-.0014	-.0006	-.0001	.0000
65.0	-.0189	-.0139	-.0099	-.0068	-.0044	-.0026	-.0013	-.0005	-.0001	.0000
70.0	-.0181	-.0132	-.0094	-.0063	-.0040	-.0023	-.0012	-.0004	-.0001	.0000
75.0	-.0172	-.0125	-.0087	-.0058	-.0036	-.0020	-.0010	-.0004	-.0001	.0000
80.0	-.0162	-.0116	-.0080	-.0052	-.0032	-.0018	-.0008	-.0003	-.0001	.0000
85.0	-.0151	-.0106	-.0072	-.0046	-.0028	-.0015	-.0007	-.0002	-.0000	.0000

$\beta_1 = 150^0$; $\beta_2 = 210^0$; $\beta = 15^0$

θ_c, deg / α, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	-.1281	-.1020	-.0954	-.0915	-.0855	-.0797	-.0735	-.0667	-.0594	-.0517
2.0	-.1550	-.1174	-.1057	-.0991	-.0903	-.0831	-.0759	-.0684	-.0607	-.0527
4.0	-.2137	-.1489	-.1263	-.1142	-.0998	-.0897	-.0807	-.0719	-.0632	-.0545
6.0	-.2760	-.1814	-.1467	-.1292	-.1092	-.0961	-.0853	-.0753	-.0657	-.0563
8.0	-.3387	-.2149	-.1669	-.1440	-.1185	-.1025	-.0899	-.0786	-.0681	-.0580
10.0	-.4009	-.2491	-.1869	-.1586	-.1276	-.1087	-.0943	-.0818	-.0704	-.0597
12.0	-.4627	-.2841	-.2067	-.1731	-.1366	-.1149	-.0986	-.0850	-.0726	-.0612
15.0	-.5543	-.3379	-.2359	-.1943	-.1497	-.1237	-.1049	-.0894	-.0758	-.0634
20.0	-.7034	-.4301	-.2831	-.2285	-.1706	-.1378	-.1147	-.0963	-.0806	-.0667
25.0	-.8472	-.5244	-.3282	-.2610	-.1903	-.1508	-.1236	-.1025	-.0848	-.0695
30.0	-.9846	-.6193	-.3707	-.2915	-.2084	-.1627	-.1316	-.1079	-.0884	-.0718
35.0	-1.1145	-.7131	-.4104	-.3198	-.2250	-.1733	-.1386	-.1124	-.0913	-.0735
40.0	-1.2359	-.8043	-.4471	-.3456	-.2399	-.1826	-.1445	-.1161	-.0935	-.0747
45.0	-1.3479	-.8911	-.4803	-.3688	-.2530	-.1905	-.1494	-.1190	-.0950	-.0752
50.0	-1.4497	-.9719	-.5098	-.3892	-.2641	-.1970	-.1531	-.1209	-.0957	-.0753
55.0	-1.5404	-1.0453	-.5355	-.4067	-.2733	-.2020	-.1556	-.1219	-.0958	-.0747
60.0	-1.6194	-1.1097	-.5571	-.4210	-.2803	-.2054	-.1569	-.1220	-.0951	-.0736
65.0	-1.6861	-1.1640	-.5744	-.4321	-.2852	-.2073	-.1571	-.1211	-.0936	-.0719
70.0	-1.7400	-1.2071	-.5874	-.4400	-.2880	-.2075	-.1560	-.1193	-.0915	-.0697
75.0	-1.7806	-1.2381	-.5959	-.4445	-.2885	-.2063	-.1538	-.1166	-.0887	-.0669
80.0	-1.8076	-1.2563	-.5999	-.4456	-.2869	-.2034	-.1504	-.1131	-.0852	-.0636
85.0	-1.8209	-1.2615	-.5993	-.4433	-.2831	-.1990	-.1458	-.1086	-.0810	-.0599

θ_c, deg / α, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0	90.0
1.0	-.0439	-.0362	-.0288	-.0218	-.0156	-.0102	-.0058	-.0026	-.0007	.0000
2.0	-.0446	-.0367	-.0291	-.0220	-.0157	-.0102	-.0058	-.0026	-.0007	.0000
4.0	-.0459	-.0376	-.0297	-.0224	-.0159	-.0103	-.0059	-.0026	-.0007	.0000
6.0	-.0472	-.0384	-.0302	-.0227	-.0161	-.0104	-.0059	-.0026	-.0007	.0000
8.0	-.0484	-.0392	-.0307	-.0230	-.0162	-.0105	-.0059	-.0026	-.0007	.0000
10.0	-.0495	-.0400	-.0312	-.0233	-.0164	-.0106	-.0060	-.0026	-.0007	.0000
12.0	-.0506	-.0407	-.0316	-.0235	-.0165	-.0106	-.0060	-.0026	-.0007	.0000
15.0	-.0521	-.0417	-.0322	-.0239	-.0166	-.0107	-.0060	-.0026	-.0006	.0000
20.0	-.0543	-.0430	-.0330	-.0243	-.0168	-.0107	-.0059	-.0026	-.0006	.0000
25.0	-.0560	-.0441	-.0335	-.0245	-.0168	-.0106	-.0059	-.0025	-.0006	.0000
30.0	-.0574	-.0447	-.0338	-.0245	-.0167	-.0105	-.0057	-.0025	-.0006	.0000
35.0	-.0583	-.0451	-.0338	-.0243	-.0165	-.0102	-.0056	-.0024	-.0006	.0000
40.0	-.0587	-.0451	-.0336	-.0239	-.0161	-.0099	-.0054	-.0023	-.0005	.0000
45.0	-.0587	-.0448	-.0331	-.0234	-.0156	-.0096	-.0051	-.0021	-.0005	.0000
50.0	-.0583	-.0441	-.0323	-.0227	-.0150	-.0091	-.0049	-.0020	-.0005	.0000
55.0	-.0574	-.0431	-.0313	-.0218	-.0143	-.0086	-.0045	-.0018	-.0004	.0000
60.0	-.0561	-.0418	-.0301	-.0208	-.0135	-.0080	-.0041	-.0017	-.0004	.0000
65.0	-.0543	-.0401	-.0286	-.0195	-.0125	-.0073	-.0037	-.0015	-.0003	.0000
70.0	-.0522	-.0381	-.0270	-.0182	-.0115	-.0066	-.0033	-.0013	-.0003	.0000
75.0	-.0496	-.0359	-.0251	-.0167	-.0104	-.0059	-.0029	-.0011	-.0002	.0000
80.0	-.0467	-.0334	-.0230	-.0151	-.0092	-.0051	-.0024	-.0009	-.0002	.0000
85.0	-.0434	-.0306	-.0207	-.0133	-.0079	-.0043	-.0019	-.0006	-.0001	.0000

TABLE V.- CONTINUED

(d) C_{L_α} Continued.

$\phi_1 = 105^\circ$; $\phi_2 = 255^\circ$; $\beta = 0^\circ$

α, deg \ θ_c, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.1127	.1725	.2333	.2931	.4061	.5072	.5931	.6612	.7094	.7361
2.0	.1750	.2234	.2798	.3365	.4444	.5404	.6209	.6927	.7444	.7744
4.0	.3404	.3446	.3844	.4310	.5245	.6076	.6750	.7236	.7514	.7672
6.0	.5585	.4901	.5034	.5348	.6080	.6751	.7274	.7611	.7739	.7650
8.0	.8266	.6581	.6355	.6466	.6941	.7420	.7772	.7946	.7916	.7676
10.0	1.1414	.8466	.7790	.7650	.7815	.8074	.8237	.8236	.8042	.7646
12.0	1.4991	1.0534	.9321	.8885	.8693	.8705	.8663	.8478	.8114	.7561
15.0	2.1063	1.3919	1.1755	1.0799	.9989	.9589	.9214	.8739	.8115	.7328
20.0	3.2637	2.0081	1.6010	1.4020	1.2005	1.0830	.9855	.8978	.7821	.6660
25.0	4.5240	2.6471	2.0219	1.7053	1.3694	1.1684	1.0091	.8618	.7156	.5664
30.0	5.7802	3.2580	2.4040	1.9648	1.4907	1.2064	1.0076	.7951	.6135	.4332
35.0	6.9543	3.7907	2.7152	2.1579	1.5522	1.1909	.9797	.6994	.4811	.2875
40.0	7.9252	4.1992	2.9273	2.2658	1.5456	1.1196	.8967	.5439	.3236	.1217
45.0	8.6146	4.4452	3.0185	2.2752	1.4669	.9936	.6530	.3801	.1422	-.0506
50.0	8.9536	4.5002	2.9744	2.1791	1.3167	.8176	.4657	.1915	-.0330	-.2203
55.0	8.8954	4.3481	2.7893	1.9773	1.1004	.5996	.2542	-.0072	-.2137	-.3787
60.0	8.4195	3.9861	2.4668	1.6765	.8276	.3503	.0292	-.2057	-.3934	-.5177
65.0	7.5287	3.4250	2.0193	1.2896	.5116	.0826	-.1974	-.3936	-.5335	-.6306
70.0	6.2586	2.6886	1.4674	.8356	.1688	-.1896	-.4139	-.5613	-.6566	-.7122
75.0	4.6656	1.8124	.8387	.3377	-.1851	-.4520	-.6088	-.7003	-.7469	-.7595
80.0	2.8286	.8409	.1656	-.1782	-.5254	-.6908	-.7727	-.8044	-.8012	-.7718
85.0	.8422	-.1752	-.5162	-.6847	-.8401	-.8939	-.8975	-.8692	-.8182	-.7503

α, deg \ θ_c, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0	90.0
1.0	.7406	.7227	.6830	.6226	.5435	.4477	.3388	.2195	.0937	-.0349
2.0	.7420	.7174	.6713	.6050	.5205	.4205	.3077	.1862	.0590	-.0697
4.0	.7409	.7027	.6439	.5660	.4715	.3632	.2443	.1134	-.0106	-.1388
6.0	.7344	.6827	.6114	.5225	.4196	.3028	.1786	.0497	-.0301	-.2068
8.0	.7225	.6574	.5740	.4746	.3622	.2399	.1114	-.0195	-.1489	-.2730
10.0	.7051	.6269	.5320	.4229	.3027	.1749	.0432	-.0885	-.2165	-.3368
12.0	.6823	.5914	.4856	.3676	.2407	.1085	-.0253	-.1568	-.2822	-.3978
15.0	.6382	.5294	.4087	.2791	.1441	.0073	-.1275	-.2565	-.3761	-.4830
20.0	.5398	.4051	.2644	.1208	-.0221	-.1607	-.2915	-.4110	-.5161	-.6040
25.0	.4141	.2599	.1062	-.0439	-.1871	-.3203	-.4402	-.5441	-.6294	-.6943
30.0	.2670	.1011	-.0575	-.2063	-.3424	-.4631	-.5661	-.6491	-.7103	-.7500
35.0	.1060	-.0630	-.2183	-.3579	-.4798	-.5820	-.6630	-.7215	-.7571	-.7698
40.0	-.0606	-.2239	-.3678	-.4911	-.5926	-.6714	-.7265	-.7587	-.7676	-.7544
45.0	-.2242	-.3733	-.4983	-.5991	-.6755	-.7275	-.7555	-.7604	-.7436	-.7071
50.0	-.3762	-.5034	-.6035	-.6772	-.7253	-.7489	-.7494	-.7287	-.6889	-.6330
55.0	-.5089	-.6091	-.6786	-.7223	-.7408	-.7364	-.7111	-.6677	-.6092	-.5390
60.0	-.6160	-.6826	-.7209	-.7336	-.7233	-.6927	-.6450	-.5834	-.5115	-.4330
65.0	-.6925	-.7243	-.7298	-.7126	-.6758	-.6230	-.5576	-.4934	-.4041	-.3237
70.0	-.7358	-.7325	-.7069	-.6626	-.6036	-.5336	-.4564	-.3758	-.2952	-.2198
75.0	-.7451	-.7090	-.6556	-.5890	-.5132	-.4322	-.3497	-.2694	-.1949	-.1294
80.0	-.7222	-.6572	-.5813	-.4984	-.4125	-.3272	-.2461	-.1725	-.1094	-.0594
85.0	-.6705	-.5827	-.4908	-.3986	-.3096	-.2270	-.1538	-.0927	-.0458	-.0151

$\phi_1 = 120^\circ$; $\phi_2 = 240^\circ$; $\beta = 0^\circ$

α, deg \ θ_c, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.1298	.1964	.2645	.3314	.4580	.5714	.6678	.7442	.7983	.8283
2.0	.2044	.2573	.3200	.3834	.5042	.6118	.7019	.7715	.8184	.8410
4.0	.4036	.4027	.4454	.4968	.6008	.6938	.7694	.8240	.8554	.8623
6.0	.6672	.5779	.5887	.6219	.7020	.7765	.8349	.8727	.8875	.8780
8.0	.9919	.7809	.7481	.7570	.8067	.8589	.8978	.9172	.9142	.8877
10.0	1.3738	1.0091	.9217	.9004	.9134	.9400	.9572	.9567	.9351	.8911
12.0	1.8083	1.2597	1.1073	1.0504	1.0208	1.0186	1.0121	.9906	.9498	.8862
15.0	2.5465	1.6701	1.4032	1.2835	1.1803	1.1297	1.0847	1.0299	.9595	.8714
20.0	3.9557	2.4205	1.9220	1.6775	1.4304	1.2884	1.1735	1.0609	.9609	.8104
25.0	5.4923	3.2001	2.4372	2.0508	1.6427	1.4019	1.2147	1.0446	.8779	.7095
30.0	7.0356	3.9481	2.9072	2.3726	1.7987	1.4590	1.2019	.9790	.7717	.5727
35.0	8.4613	4.6026	3.2925	2.6151	1.8832	1.4519	1.1328	.8655	.6265	.4064
40.0	9.6505	5.1073	3.5586	2.7550	1.8854	1.3769	1.0082	.7082	.4491	.2189
45.0	10.4980	5.4147	3.6781	2.7757	1.7999	1.2347	.8329	.5146	.2482	.0199
50.0	10.9191	5.4901	3.6332	2.6679	1.6268	1.0303	.6145	.2940	.0343	-.1802
55.0	10.8563	5.3131	3.4163	2.4308	1.3720	.7730	.3642	.0580	-.1915	-.3709
60.0	10.2829	4.8799	3.0313	2.0720	1.0468	.4755	.0947	-.1811	-.3877	-.5422
65.0	9.2053	4.2032	2.4927	1.6070	.6671	.1528	-.1797	-.4107	-.5737	-.6855
70.0	7.6628	3.3114	1.8253	1.0583	.2522	-.1779	-.4448	-.6188	-.7301	-.7941
75.0	5.7252	2.2474	1.0623	.4540	-.1760	-.4992	-.6865	-.7949	-.8494	-.8634
80.0	3.4881	1.0652	.2433	-.1744	-.5949	-.7944	-.8926	-.9305	-.9266	-.8915
85.0	1.0669	-.1734	-.5886	-.7936	-.9825	-1.0481	-1.0531	-1.0198	-.9594	-.8791

α, deg \ θ_c, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0	90.0
1.0	.8335	.8136	.7692	.7016	.6130	.5060	.3838	.2502	.1092	-.0349
2.0	.8386	.8113	.7598	.6857	.5913	.4793	.3533	.2170	.0746	-.0697
4.0	.8444	.8021	.7365	.6497	.5442	.4231	.2902	.1493	.0049	-.1388
6.0	.8442	.7868	.7075	.6085	.4926	.3633	.2245	.0804	-.0648	-.2068
8.0	.8378	.7655	.6728	.5622	.4369	.3005	.1570	.0107	-.1340	-.2730
10.0	.8251	.7383	.6328	.5114	.3776	.2351	.0882	-.0590	-.2020	-.3368
12.0	.8061	.7051	.5875	.4563	.3151	.1678	.0185	-.1282	-.2684	-.3978
15.0	.7660	.6449	.5107	.3667	.2165	.0642	-.0859	-.2298	-.3634	-.4830
20.0	.6692	.5190	.3624	.2028	.0440	-.1101	-.2555	-.3885	-.5057	-.6040
25.0	.5385	.3662	.1951	.0282	-.1308	-.2786	-.4116	-.5269	-.6218	-.6943
30.0	.3801	.1943	.0175	-.1478	-.2987	-.4324	-.5462	-.6381	-.7063	-.7500
35.0	.2018	.0122	-.1610	-.3161	-.4510	-.5637	-.6528	-.7170	-.7559	-.7698
40.0	.0128	-.1705	-.3310	-.4678	-.5798	-.6662	-.7264	-.7606	-.7695	-.7544
45.0	-.1768	-.3444	-.4838	-.5953	-.6790	-.7352	-.7646	-.7684	-.7484	-.7071
50.0	-.3571	-.5002	-.6115	-.6925	-.7443	-.7686	-.7670	-.7419	-.6961	-.6330
55.0	-.5188	-.6302	-.7082	-.7552	-.7738	-.7662	-.7356	-.6850	-.6191	-.5390
60.0	-.6538	-.7283	-.7698	-.7817	-.7675	-.7306	-.6746	-.6035	-.5215	-.4330
65.0	-.7556	-.7903	-.7945	-.7725	-.7283	-.6660	-.5900	-.5046	-.4144	-.3237
70.0	-.8201	-.8147	-.7832	-.7303	-.6607	-.5788	-.4894	-.3968	-.3055	-.2198
75.0	-.8455	-.8021	-.7386	-.6680	-.5712	-.4767	-.3719	-.2685	-.2034	-.1294
80.0	-.8325	-.7556	-.6659	-.5684	-.4676	-.3679	-.2736	-.1885	-.1160	-.0594
85.0	-.7844	-.6806	-.5721	-.4633	-.3584	-.2614	-.1756	-.1043	-.0501	-.0151

TABLE V. - CONTINUED

(d) C_L. Continued.

$\beta_1 = -90^\circ$; $\beta_2 = 90^\circ$; $\beta = 0^\circ$

θ_c, deg / α, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	-.0266	-.0790	-.1328	-.1861	-.2787	-.3827	-.4652	-.5336	-.5859	-.6204
2.0	-.0095	-.0532	-.1045	-.1570	-.2602	-.3566	-.4426	-.5155	-.5729	-.6129
4.0	-.0019	-.0190	-.0590	-.1066	-.2073	-.3062	-.3977	-.4781	-.5448	-.5953
6.0	-.0008	-.0071	-.0288	-.0670	-.1603	-.2586	-.3534	-.4398	-.5143	-.5743
8.0	-.0005	-.0039	-.0141	-.0388	-.1197	-.2165	-.3103	-.4009	-.4820	-.5503
10.0	-.0003	-.0025	-.0087	-.0222	-.0861	-.1743	-.2690	-.3621	-.4483	-.5238
12.0	-.0002	-.0018	-.0061	-.0149	-.0598	-.1386	-.2300	-.3238	-.4136	-.4950
15.0	-.0001	-.0012	-.0039	-.0095	-.0348	-.0944	-.1769	-.2684	-.3608	-.4486
20.0	-.0001	-.0007	-.0023	-.0055	-.0192	-.0486	-.1064	-.1855	-.2745	-.3662
25.0	-.0001	-.0005	-.0015	-.0037	-.0125	-.0305	-.0629	-.1199	-.1965	-.2836
30.0	-.0000	-.0003	-.0011	-.0026	-.0098	-.0212	-.0425	-.0768	-.1330	-.2074
35.0	-.0000	-.0002	-.0008	-.0019	-.0064	-.0153	-.0303	-.0537	-.0889	-.1437
40.0	-.0000	-.0002	-.0006	-.0014	-.0047	-.0111	-.0220	-.0386	-.0628	-.0977
45.0	-.0000	-.0001	-.0004	-.0010	-.0034	-.0081	-.0158	-.0277	-.0447	-.0684
50.0	-.0000	-.0001	-.0003	-.0007	-.0024	-.0057	-.0111	-.0194	-.0312	-.0474
55.0	-.0000	-.0001	-.0002	-.0005	-.0016	-.0038	-.0075	-.0131	-.0210	-.0318
60.0	-.0000	-.0000	-.0001	-.0003	-.0010	-.0025	-.0049	-.0083	-.0134	-.0202
65.0	-.0000	-.0000	-.0001	-.0002	-.0006	-.0014	-.0028	-.0049	-.0078	-.0118
70.0	-.0000	-.0000	-.0000	-.0001	-.0003	-.0007	-.0015	-.0025	-.0041	-.0061
75.0	-.0000	-.0000	-.0000	-.0000	-.0001	-.0003	-.0006	-.0011	-.0017	-.0026
80.0	-.0000	-.0000	-.0000	-.0000	-.0000	-.0001	-.0002	-.0003	-.0005	-.0008
85.0	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000	-.0001	-.0001

θ_c, deg / α, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0	90.0
1.0	-.6361	-.6324	-.6096	-.5682	-.5096	-.4355	-.3482	-.2503	-.1448	-.0349
2.0	-.6344	-.6368	-.6198	-.5840	-.5305	-.4609	-.3773	-.2823	-.1787	-.0697
4.0	-.6280	-.6420	-.6366	-.6121	-.5690	-.5088	-.4332	-.3445	-.2454	-.1388
6.0	-.6176	-.6427	-.6487	-.6353	-.6030	-.5526	-.4855	-.4038	-.3100	-.2068
8.0	-.6033	-.6389	-.6560	-.6537	-.6322	-.5918	-.5338	-.4598	-.3720	-.2730
10.0	-.5855	-.6310	-.6586	-.6672	-.6564	-.6262	-.5776	-.5118	-.4308	-.3368
12.0	-.5644	-.6190	-.6566	-.6757	-.6755	-.6557	-.6168	-.5597	-.4860	-.3978
15.0	-.5275	-.5940	-.6453	-.6793	-.6945	-.6902	-.6661	-.6227	-.5611	-.4830
20.0	-.4549	-.5362	-.6061	-.6617	-.7006	-.7209	-.7216	-.7021	-.6626	-.6040
25.0	-.3743	-.4631	-.5456	-.6178	-.6764	-.7187	-.7427	-.7470	-.7309	-.6943
30.0	-.2922	-.3813	-.4695	-.5521	-.6253	-.6856	-.7301	-.7567	-.7636	-.7500
35.0	-.2155	-.2976	-.3844	-.4710	-.5527	-.6258	-.6868	-.7326	-.7608	-.7698
40.0	-.1503	-.2188	-.2975	-.3812	-.4653	-.5453	-.6175	-.6784	-.7249	-.7544
45.0	-.1018	-.1513	-.2158	-.2903	-.3702	-.4511	-.5289	-.5997	-.6602	-.7071
50.0	-.0696	-.1002	-.1457	-.2056	-.2755	-.3511	-.4285	-.5037	-.5730	-.6330
55.0	-.0463	-.0658	-.0928	-.1337	-.1885	-.2533	-.3245	-.3983	-.4710	-.5390
60.0	-.0293	-.0413	-.0575	-.0802	-.1161	-.1655	-.2253	-.2921	-.3625	-.4330
65.0	-.0171	-.0240	-.0332	-.0457	-.0638	-.0944	-.1386	-.1935	-.2563	-.3237
70.0	-.0088	-.0124	-.0171	-.0233	-.0320	-.0456	-.0710	-.1102	-.1606	-.2198
75.0	-.0038	-.0053	-.0072	-.0098	-.0134	-.0187	-.0279	-.0485	-.0830	-.1294
80.0	-.0011	-.0016	-.0022	-.0029	-.0040	-.0055	-.0080	-.0132	-.0292	-.0594
85.0	-.0001	-.0002	-.0003	-.0004	-.0005	-.0007	-.0010	-.0016	-.0034	-.0151

$\beta_1 = 90^\circ$; $\beta_2 = 270^\circ$; $\beta = 0^\circ$

θ_c, deg / α, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.0961	.1477	.2002	.2517	.3491	.4361	.5100	.5685	.6098	.6325
2.0	.1483	.1904	.2391	.2880	.3809	.4633	.5322	.5851	.6205	.6371
4.0	.2867	.2918	.3265	.3668	.4472	.5183	.5756	.6165	.6393	.6431
6.0	.4691	.4135	.4260	.4534	.5163	.5734	.6173	.6448	.6542	.6448
8.0	.6932	.5539	.5362	.5465	.5875	.6279	.6568	.6698	.6651	.6420
10.0	.9562	.7115	.6560	.6451	.6597	.6811	.6934	.6911	.6717	.6346
12.0	1.2551	.8841	.7837	.7479	.7321	.7323	.7267	.7082	.6737	.6226
15.0	1.7622	1.1667	.9867	.9072	.8390	.8037	.7693	.7253	.6679	.5960
20.0	2.7286	1.6810	1.3413	1.1748	1.0048	.9033	.8172	.7295	.6340	.5291
25.0	3.7807	2.2139	1.6916	1.4265	1.1432	.9707	.8315	.7010	.5701	.4361
30.0	4.8356	2.7231	2.0094	1.6415	1.2417	.9986	.8087	.6393	.4783	.3211
35.0	5.8084	3.1668	2.2677	1.8008	1.2905	.9824	.7479	.5464	.3622	.1896
40.0	6.6190	3.5066	2.4433	1.8891	1.2826	.9201	.6505	.4259	.2275	.0480
45.0	7.1924	3.7106	2.5179	1.8953	1.2149	.8129	.5203	.2833	.0807	-.0965
50.0	7.4742	3.7551	2.4796	1.8135	1.0881	.6647	.3633	.1258	-.0707	-.2364
55.0	7.4243	3.6268	2.3238	1.6438	.9065	.4823	.1871	-.0387	-.2190	-.3648
60.0	7.0250	3.3234	2.0534	1.3917	.6784	.2747	.0007	-.2017	-.3566	-.4752
65.0	6.2811	2.8540	1.6790	1.0682	.4149	.0523	-.1861	-.3548	-.4766	-.5625
70.0	5.2199	2.2386	1.2178	.6891	.1293	-.1732	-.3637	-.4903	-.5733	-.6231
75.0	3.8894	1.5067	.6928	.2736	-.1633	-.3899	-.5231	-.6017	-.6426	-.6550
80.0	2.3554	.6955	.1312	-.1564	-.4475	-.5868	-.6562	-.6838	-.6819	-.6581
85.0	.6971	-.1525	-.4374	-.5783	-.7085	-.7538	-.7570	-.7335	-.6909	-.6342

θ_c, deg / α, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0	90.0
1.0	.6361	.6203	.5857	.5333	.4648	.3821	.2878	.1847	.0761	-.0349
2.0	.6344	.6125	.5721	.5143	.4409	.3541	.2566	.1513	.0414	-.0697
4.0	.6277	.5935	.5414	.4731	.3904	.2960	.1927	.0836	-.0281	-.1388
6.0	.6164	.5699	.5065	.4280	.3368	.2355	.1272	.0152	-.0973	-.2068
8.0	.6006	.5419	.4675	.3794	.2803	.1730	.0606	-.0534	-.1657	-.2730
10.0	.5802	.5097	.4247	.3278	.2215	.1090	-.0065	-.1215	-.2327	-.3368
12.0	.5564	.4734	.3785	.2734	.1608	.0441	-.0735	-.1886	-.2977	-.3978
15.0	.5101	.4119	.3035	.1876	.0674	-.0538	-.1728	-.2860	-.3904	-.4830
20.0	.4149	.2933	.1666	.0377	-.0902	-.2138	-.3300	-.4355	-.5277	-.6040
25.0	.2988	.1596	.0210	-.1142	-.2431	-.3627	-.4699	-.5623	-.6377	-.6943
30.0	.1672	.0176	-.1258	-.2604	-.3835	-.4927	-.5857	-.6604	-.7155	-.7500
35.0	.0268	-.1256	-.2663	-.3931	-.5042	-.5976	-.6718	-.7255	-.7582	-.7698
40.0	-.1153	-.2626	-.3933	-.5060	-.5995	-.6726	-.7247	-.7554	-.7651	-.7544
45.0	-.2518	-.3865	-.5005	-.5935	-.6651	-.7149	-.7432	-.7505	-.7379	-.7071
50.0	-.3759	-.4911	-.5831	-.6522	-.6989	-.7239	-.7282	-.7131	-.6806	-.6330
55.0	-.4814	-.5717	-.6375	-.6801	-.7008	-.7010	-.6827	-.6478	-.5990	-.5390
60.0	-.5635	-.6250	-.6623	-.6775	-.6726	-.6499	-.6117	-.5609	-.5002	-.4330
65.0	-.6188	-.6496	-.6579	-.6466	-.6183	-.5758	-.5219	-.4598	-.3927	-.3237
70.0	-.6458	-.6457	-.6265	-.5913	-.5432	-.4854	-.4209	-.3531	-.2850	-.2198
75.0	-.6445	-.6157	-.5721	-.5171	-.4542	-.3864	-.3170	-.2491	-.1856	-.1294
80.0	-.6172	-.5633	-.5000	-.4307	-.3586	-.2868	-.2184	-.1560	-.1023	-.0594
85.0	-.5673	-.4937	-.4166	-.3391	-.2642	-.1946	-.1329	-.0812	-.0414	-.0151

TABLE V.- CONTINUED

(e) C_D

$\phi_1 = 0^0$; $\phi_2 = 360^0$; $\beta = 0^0$

α, deg \ θ_c, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.0047	.0161	.0350	.0612	.1348	.2347	.3578	.5005	.6583	.8265
2.0	.0074	.0188	.0376	.0637	.1371	.2368	.3596	.5018	.6592	.8270
4.0	.0184	.0295	.0481	.0740	.1466	.2451	.3666	.5073	.6630	.8289
6.0	.0379	.0473	.0656	.0909	.1622	.2589	.3782	.5163	.6691	.8320
8.0	.0682	.0723	.0897	.1144	.1838	.2780	.3941	.5287	.6776	.8362
10.0	.1112	.1052	.1202	.1440	.2111	.3021	.4144	.5444	.6882	.8415
12.0	.1689	.1468	.1575	.1795	.2437	.3310	.4385	.5631	.7009	.8478
15.0	.2869	.2270	.2266	.2435	.3019	.3823	.4814	.5962	.7232	.8586
20.0	.5795	.4129	.3785	.3789	.4194	.4853	.5673	.6622	.7673	.8792
25.0	1.0050	.6677	.5769	.5489	.5583	.6034	.6648	.7364	.8157	.9001
30.0	1.5694	.9913	.8195	.7498	.7135	.7294	.7658	.8119	.8632	.9179
35.0	2.2674	1.3777	1.1001	.9755	.8789	.8572	.8634	.8814	.9042	.9286
40.0	3.0829	1.8158	1.4093	1.2176	1.0472	.9805	.9519	.9393	.9331	.9287
45.0	3.9897	2.2897	1.7352	1.4661	1.2108	1.0931	1.0264	.9817	.9464	.9148
50.0	4.9530	2.7802	2.0635	1.7097	1.3618	1.1893	1.0823	1.0055	.9422	.8854
55.0	5.9319	3.2652	2.3791	1.9368	1.4926	1.2641	1.1177	1.0091	.9197	.8407
60.0	6.8814	3.7220	2.6668	2.1363	1.5967	1.3135	1.1293	.9919	.8797	.7821
65.0	7.7560	4.1280	2.9121	2.2980	1.6684	1.3347	1.1166	.9545	.8236	.7119
70.0	8.5119	4.4628	3.1025	2.4135	1.7041	1.3267	1.0802	.8985	.7538	.6328
75.0	9.1107	4.7090	3.2281	2.4768	1.7019	1.2896	1.0213	.8265	.6735	.5483
80.0	9.5213	4.8538	3.2823	2.4845	1.6617	1.2254	.9442	.7419	.5864	.4619
85.0	9.7220	4.8895	3.2622	2.4362	1.5857	1.1372	.8513	.6488	.4962	.3770

α, deg \ θ_c, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0	90.0
1.0	1.0000	1.1735	1.3417	1.4995	1.6422	1.7653	1.8652	1.9388	1.9839	1.9991
2.0	1.0000	1.1730	1.3408	1.4982	1.6404	1.7632	1.8629	1.9363	1.9812	1.9963
4.0	1.0000	1.1711	1.3370	1.4927	1.6334	1.7549	1.8534	1.9260	1.9704	1.9854
6.0	1.0000	1.1679	1.3308	1.4836	1.6218	1.7410	1.8377	1.9090	1.9526	1.9673
8.0	.9999	1.1635	1.3221	1.4710	1.6056	1.7217	1.8159	1.8853	1.9279	1.9422
10.0	.9997	1.1578	1.3111	1.4549	1.5850	1.6972	1.7882	1.8553	1.8964	1.9102
12.0	.9993	1.1508	1.2977	1.4355	1.5601	1.6676	1.7548	1.8191	1.8585	1.8717
15.0	.9983	1.1379	1.2733	1.4004	1.5152	1.6143	1.6947	1.7539	1.7902	1.8024
20.0	.9947	1.1101	1.2221	1.3271	1.4220	1.5040	1.5705	1.6194	1.6494	1.6595
25.0	.9872	1.0744	1.1588	1.2381	1.3097	1.3715	1.4217	1.4586	1.4813	1.4889
30.0	.9743	1.0307	1.0854	1.1367	1.1830	1.2231	1.2555	1.2795	1.2941	1.2990
35.0	.9539	.9792	1.0036	1.0266	1.0474	1.0653	1.0793	1.0905	1.0971	1.0993
40.0	.9243	.9199	.9157	.9117	.9081	.9050	.9024	.9006	.8994	.8991
45.0	.8839	.8532	.8234	.7955	.7703	.7495	.7308	.7178	.7098	.7071
50.0	.8315	.7793	.7287	.6813	.6384	.6014	.5714	.5493	.5357	.5312
55.0	.7677	.6987	.6331	.5717	.5162	.4683	.4295	.4008	.3833	.3774
60.0	.6941	.6131	.5380	.4687	.4063	.3524	.3086	.2764	.2566	.2500
65.0	.6135	.5252	.4454	.3737	.3100	.2551	.2106	.1778	.1577	.1510
70.0	.5287	.4378	.3579	.2881	.2277	.1766	.1354	.1049	.0863	.0800
75.0	.4432	.3538	.2777	.2132	.1594	.1155	.0809	.0555	.0399	.0347
80.0	.3600	.2760	.2068	.1503	.1052	.0700	.0438	.0254	.0142	.0105
85.0	.2822	.2066	.1466	.0998	.0642	.0383	.0205	.0093	.0033	.0013

TABLE V.- CONTINUED

(d) C_L. Concluded.

$\phi_1 = 135^0$; $\phi_2 = 225^0$; $\beta = 0^0$

α, deg \ θ_c, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.1458	.2178	.2917	.3644	.5022	.6255	.7304	.8136	.8724	.9051
2.0	.2336	.2890	.3566	.4251	.5563	.6732	.7712	.8468	.8977	.9222
4.0	.4696	.4602	.5039	.5584	.6700	.7705	.8522	.9112	.9450	.9523
6.0	.7837	.6678	.6732	.7060	.7899	.8692	.9316	.9719	.9872	.9763
8.0	1.1721	.9092	.8624	.8663	.9145	.9682	1.0085	1.0281	1.0237	.9939
10.0	1.6299	1.1815	1.0691	1.0371	1.0421	1.0663	1.0819	1.0791	1.0538	1.0046
12.0	2.1516	1.4813	1.2909	1.2163	1.1713	1.1620	1.1506	1.1240	1.0772	1.0082
15.0	3.0398	1.9746	1.6456	1.4962	1.3642	1.2986	1.2430	1.1787	1.0985	.9999
20.0	4.7382	2.8778	2.2707	1.9721	1.6697	1.4976	1.3615	1.2311	1.0947	.9402
25.0	6.5951	3.8207	2.8952	2.4268	1.9335	1.6458	1.4258	1.2295	1.0398	.8503
30.0	8.4632	4.7284	3.4688	2.8230	2.1328	1.7290	1.4278	1.1705	.9341	.7095
35.0	10.1928	5.5265	3.9434	3.1266	2.2486	1.7369	1.3633	1.0544	.7814	.5323
40.0	11.6397	6.1468	4.2768	3.3089	2.2670	1.6642	1.2324	.8853	.5885	.3272
45.0	12.6761	6.5314	4.4354	3.3490	2.1806	1.5107	1.0396	.6707	.3649	.1049
50.0	13.1991	6.6371	4.3965	3.2348	1.9886	1.2614	.7935	.4211	.1221	-.1229
55.0	13.1381	6.4386	4.1502	2.9644	1.6970	.9864	.5059	.1493	-.1272	-.3442
60.0	12.4598	5.9302	3.7000	2.5458	1.3194	.6399	.1917	-.1304	-.3698	-.5475
65.0	11.1712	5.1261	3.0626	1.9970	.8711	.2598	-.1326	-.4031	-.5928	-.7222
70.0	9.3187	4.0600	2.2672	1.3442	.3780	-.1341	-.4499	-.6547	-.7850	-.8598
75.0	6.9858	2.7829	1.3531	.6207	-.1351	-.5209	-.7435	-.8721	-.9369	-.9542
80.0	4.2876	1.3594	.3675	-.1357	-.6411	-.8802	-.9983	-1.0466	-1.0416	-1.0021
85.0	1.3632	-.1360	-.6375	-.8849	-1.1132	-1.1935	-1.2016	-1.1645	-1.0955	-1.0032

α, deg \ θ_c, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0	90.0
1.0	.9107	.8890	.8606	.7670	.6705	.5540	.4210	.2755	.1220	-.0349
2.0	.9195	.8897	.8336	.7529	.6500	.5281	.3909	.2425	.0874	-.0697
4.0	.9326	.8863	.8147	.7200	.6050	.4731	.3283	.1749	.0176	-.1388
6.0	.9391	.8762	.7895	.6814	.5550	.4142	.2629	.1059	-.0522	-.2068
8.0	.9388	.8595	.7581	.6373	.5005	.3517	.1953	.0360	-.1217	-.2730
10.0	.9316	.8362	.7206	.5879	.4417	.2863	.1261	-.0343	-.1901	-.3368
12.0	.9174	.8063	.6772	.5336	.3793	.2185	.0558	-.1042	-.2569	-.3978
15.0	.8830	.7494	.6020	.4441	.2798	.1135	-.0504	-.2072	-.3528	-.4830
20.0	.7911	.6249	.4524	.2771	.1031	-.0654	-.2242	-.3693	-.4970	-.6040
25.0	.6594	.4682	.2792	.0955	-.0790	-.2408	-.3862	-.5120	-.6154	-.6943
30.0	.4938	.2871	.0913	-.0911	-.2570	-.4035	-.5279	-.6281	-.7025	-.7500
35.0	.3024	.0909	-.1015	-.2729	-.4214	-.5451	-.6424	-.7124	-.7567	-.7698
40.0	.0951	-.1102	-.2888	-.4603	-.5638	-.6585	-.7244	-.7615	-.7710	-.7544
45.0	-.1173	-.3054	-.4610	-.5848	-.6771	-.7387	-.7706	-.7744	-.7523	-.7071
50.0	-.3235	-.4846	-.6091	-.6991	-.7563	-.7826	-.7804	-.7524	-.7020	-.6330
55.0	-.5126	-.6385	-.7260	-.7783	-.7985	-.7897	-.7552	-.6991	-.6255	-.5390
60.0	-.6750	-.7596	-.8063	-.8194	-.8031	-.7615	-.6990	-.6201	-.5298	-.4330
65.0	-.8028	-.8425	-.8473	-.8222	-.7723	-.7023	-.6174	-.5225	-.4229	-.3237
70.0	-.8902	-.8844	-.8487	-.7888	-.7101	-.6180	-.5177	-.4146	-.3136	-.2198
75.0	-.9343	-.8851	-.8129	-.7236	-.6229	-.5161	-.4085	-.3050	-.2106	-.1294
80.0	-.9349	-.8469	-.7445	-.6331	-.5193	-.4051	-.2983	-.2026	-.1217	-.0594
85.0	-.8944	-.7750	-.6502	-.5253	-.4050	-.2939	-.1961	-.1151	-.0540	-.0151

$\phi_1 = 150^0$; $\phi_2 = 210^0$; $\beta = 0^0$

α, deg \ θ_c, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.1589	.2347	.3129	.3900	.5359	.6667	.7778	.8659	.9282	.9628
2.0	.2585	.3151	.3859	.4583	.5969	.7206	.8243	.9043	.9580	.9838
4.0	.5284	.5095	.5528	.6090	.7257	.8312	.9171	.9790	1.0143	1.0215
6.0	.8895	.7466	.7455	.7769	.8622	.9441	1.0088	1.0503	1.0655	1.0529
8.0	1.3376	1.0235	.9619	.9600	1.0047	1.0581	1.0983	1.1171	1.1107	1.0778
10.0	1.8670	1.3369	1.1993	1.1559	1.1514	1.1715	1.1843	1.1784	1.1493	1.0950
12.0	2.4714	1.6829	1.4547	1.3622	1.3004	1.2829	1.2656	1.2338	1.1807	1.1049
15.0	3.5020	2.2535	1.8645	1.6856	1.5243	1.4433	1.3766	1.3027	1.2131	1.1047
20.0	5.4774	3.3021	2.5902	2.2389	1.8823	1.6805	1.5237	1.3762	1.2245	1.0633
25.0	7.6404	4.4010	3.3193	2.7716	2.1959	1.8628	1.6115	1.3904	1.1793	.9704
30.0	9.8212	5.4629	3.9932	3.2404	2.4383	1.9730	1.6300	1.3403	1.0770	.8289
35.0	11.8445	6.4012	4.5556	3.6049	2.5868	1.9985	1.5734	1.2255	.9208	.6449
40.0	13.5419	7.1356	4.9569	3.8313	2.6246	1.9321	1.4407	1.0493	.7174	.4273
45.0	14.7637	7.5981	5.1569	3.8942	2.5418	1.7723	1.2359	.8194	.4767	.1873
50.0	15.3889	7.7376	5.1285	3.7786	2.3364	1.5240	.9679	.5468	.2109	-.0627
55.0	15.3344	7.5233	4.8589	3.4812	2.0145	1.1978	.6496	.2454	-.0661	-.3093
60.0	14.5604	6.9475	4.3511	3.0102	1.5895	.8092	.2970	-.0690	-.3396	-.5397
65.0	13.0736	6.0258	3.6236	2.3854	1.0919	.3780	-.0713	-.3797	-.5951	-.7417
70.0	10.9274	4.7965	2.7092	1.6366	.5174	-.0731	-.4358	-.6703	-.8195	-.9054
75.0	8.2180	3.3179	1.6531	.8018	-.0745	-.5204	-.7773	-.9258	-1.0015	-1.0232
80.0	5.0790	1.6650	.5098	-.0755	-.6625	-.9402	-1.0780	-1.1334	-1.1326	-1.0905
85.0	1.6720	-.0761	-.6605	-.9488	-1.2154	-1.3107	-1.3229	-1.2835	-1.2079	-1.1061

α, deg \ θ_c, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0	90.0
1.0	.9686	.9455	.8941	.8160	.7135	.5898	.4487	.2943	.1315	-.0349
2.0	.9807	.9488	.8891	.8033	.6941	.5646	.4190	.2615	.0969	-.0697
4.0	1.0000	.9505	.8741	.7733	.6509	.5108	.3569	.1941	.0272	-.1388
6.0	1.0125	.9451	.8524	.7371	.6025	.4526	.2919	.1251	-.0428	-.2068
8.0	1.0179	.9326	.8240	.6949	.5491	.3907	.2244	.0550	-.1124	-.2730
10.0	1.0158	.9130	.7890	.6471	.4911	.3255	.1549	-.0156	-.1811	-.3368
12.0	1.0062	.8863	.7477	.5939	.4290	.2575	.0842	-.0860	-.2482	-.3978
15.0	.9775	.8332	.6745	.5051	.3293	.1516	-.0231	-.1901	-.3448	-.4830
20.0	.8919	.7116	.5263	.3368	.1501	-.0303	-.1999	-.3545	-.4903	-.6040
25.0	.7616	.5536	.3489	.1507	-.0370	-.2105	-.3661	-.5003	-.6105	-.6943
30.0	.5922	.3667	.1540	-.0433	-.2222	-.3797	-.5131	-.6202	-.6995	-.7500
35.0	.3920	.1605	-.0490	-.2350	-.3956	-.5289	-.6335	-.7085	-.7538	-.7698
40.0	.1712	-.0542	-.2494	-.4143	-.5482	-.6507	-.7217	-.7617	-.7720	-.7544
45.0	-.0587	-.2660	-.4366	-.5719	-.6725	-.7395	-.7742	-.7785	-.7550	-.7071
50.0	-.2855	-.4637	-.6010	-.6999	-.7627	-.7917	-.7897	-.7600	-.7063	-.6330
55.0	-.4972	-.6372	-.7343	-.7924	-.8151	-.8062	-.7695	-.7095	-.6309	-.5390
60.0	-.6829	-.7777	-.8303	-.8458	-.8288	-.7843	-.7171	-.6325	-.5359	-.4330
65.0	-.8332	-.8788	-.8854	-.8590	-.8052	-.7297	-.6381	-.5360	-.4293	-.3237
70.0	-.9413	-.9365	-.8984	-.8336	-.7482	-.6682	-.5596	-.4282	-.3198	-.2198
75.0	-1.0030	-.9499	-.8712	-.7736	-.6636	-.5670	-.4299	-.3179	-.2161	-.1294
80.0	-1.0172	-.9206	-.8079	-.6853	-.5591	-.4349	-.3181	-.2137	-.1262	-.0594
85.0	-.9857	-.8533	-.7150	-.5766	-.4435	-.3207	-.2128	-.1238	-.0570	-.0151

TABLE V. - CONTINUED

(e) C_D. Continued.

$\phi_1 = 105^\circ$; $\phi_2 = 255^\circ$; $\beta = 0^\circ$

α, deg \ θ_c, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.0084	.0230	.0452	.0746	.1543	.2596	.3875	.5340	.6947	.8647
2.0	.0159	.0334	.0586	.0910	.1765	.2871	.4193	.5692	.7322	.9034
4.0	.0424	.0629	.0932	.1311	.2272	.3472	.4872	.6429	.8096	.9821
6.0	.0890	.1064	.1396	.1816	.2865	.4143	.5606	.7207	.8895	1.0618
8.0	.1611	.1663	.1991	.2434	.3546	.4886	.6394	.8022	.9715	1.1421
10.0	.2637	.2449	.2731	.3173	.4319	.5697	.7233	.8869	1.0551	1.2224
12.0	.4016	.3443	.3626	.4038	.5183	.6576	.8119	.9745	1.1397	1.3021
15.0	.6838	.5359	.5279	.5584	.6651	.9014	.9524	1.1099	1.2673	1.4192
20.0	1.3834	.9799	.8911	.8834	.9536	1.0694	1.2028	1.3413	1.4768	1.6030
25.0	2.4017	1.5894	1.3658	1.2908	1.2908	1.3650	1.4649	1.5712	1.6736	1.7650
30.0	3.7526	2.3635	1.9464	1.7725	1.6664	1.6770	1.7272	1.7890	1.8483	1.8971
35.0	5.4238	3.2884	2.6184	2.3138	2.0662	1.9920	1.9779	1.9841	1.9923	1.9925
40.0	7.3768	4.3374	3.3594	2.8949	2.4732	2.2957	2.2042	2.1469	2.0981	2.0463
45.0	9.5488	5.4729	4.1405	3.4915	2.9691	2.5735	2.3967	2.2690	2.1603	2.0557
50.0	11.8567	6.6482	4.9281	4.0769	3.2350	2.8116	2.5438	2.3442	2.1755	2.0200
55.0	14.2021	7.8111	5.6856	4.6233	3.5528	2.9979	2.6385	2.3684	2.1431	1.9413
60.0	16.4777	8.9065	6.3765	5.1036	3.8062	3.1228	2.6757	2.3404	2.0646	1.8235
65.0	18.5739	9.8807	6.9663	5.4936	3.9823	3.1797	2.6536	2.2616	1.9441	1.6725
70.0	20.3865	10.6845	7.4247	5.7730	4.0718	3.1656	2.5733	2.1361	1.7876	1.4960
75.0	21.8227	11.2763	7.7279	5.9272	4.0699	3.0813	2.4388	1.9703	1.6031	1.3026
80.0	22.8080	11.6251	7.8599	5.9482	3.9767	2.9310	2.2572	1.7725	1.3997	1.1014
85.0	23.2907	11.7127	7.8139	5.8348	3.7972	2.7227	2.0377	1.5525	1.1869	.9014

α, deg \ θ_c, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0	90.0
1.0	1.0387	1.2116	1.3781	1.5330	1.6718	1.7902	1.8846	1.9520	1.9906	1.9991
2.0	1.0775	1.2493	1.4135	1.5652	1.6997	1.8129	1.9015	1.9627	1.9946	1.9963
4.0	1.1552	1.3237	1.4824	1.6265	1.7517	1.8540	1.9304	1.9786	1.9972	1.9854
6.0	1.2325	1.3963	1.5482	1.6836	1.7983	1.8899	1.9526	1.9874	1.9924	1.9673
8.0	1.3089	1.4665	1.6103	1.7358	1.8392	1.9173	1.9678	1.9890	1.9804	1.9422
10.0	1.3836	1.5338	1.6682	1.7828	1.8740	1.9391	1.9759	1.9834	1.9613	1.9102
12.0	1.4563	1.5976	1.7216	1.8243	1.9025	1.9539	1.9768	1.9705	1.9351	1.8717
15.0	1.5602	1.6858	1.7919	1.8751	1.9328	1.9630	1.9648	1.9380	1.8833	1.8024
20.0	1.7151	1.8087	1.8804	1.9277	1.9488	1.9428	1.9097	1.8502	1.7660	1.6595
25.0	1.8405	1.8961	1.9291	1.9378	1.9213	1.8796	1.8135	1.7247	1.6154	1.4889
30.0	1.9300	1.9435	1.9355	1.9049	1.8517	1.7766	1.6812	1.5678	1.4393	1.2990
35.0	1.9791	1.9485	1.8993	1.8308	1.7436	1.6392	1.5195	1.3876	1.2484	1.0993
40.0	1.9850	1.9108	1.8222	1.7192	1.6026	1.4744	1.3378	1.1931	1.0460	.8991
45.0	1.9476	1.8323	1.7084	1.5758	1.4359	1.2906	1.1422	.9935	.8475	.7071
50.0	1.8687	1.7171	1.5635	1.4081	1.2518	1.0965	.9444	.7979	.6593	.5312
55.0	1.7523	1.5709	1.3950	1.2242	1.0592	.9014	.7526	.6145	.4889	.3774
60.0	1.6044	1.4013	1.2111	1.0329	.8668	.7137	.5745	.4503	.3419	.2500
65.0	1.4325	1.2164	1.0205	.8429	.6831	.5410	.4167	.3104	.2220	.1510
70.0	1.2448	1.0250	.8317	.6623	.5151	.3892	.2839	.1979	.1304	.0800
75.0	1.0502	.8356	.6528	.4980	.3686	.2626	.1782	.1135	.0664	.0347
80.0	.8574	.6562	.4905	.3554	.2473	.1632	.1004	.0559	.0270	.0105
85.0	.6746	.4935	.3499	.2379	.1528	.0909	.0484	.0217	.0072	.0013

$\phi_1 = 120^\circ$; $\phi_2 = 240^\circ$; $\beta = 0^\circ$

α, deg \ θ_c, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.0090	.0241	.0466	.0764	.1568	.2628	.3913	.5382	.6992	.8694
2.0	.0177	.0359	.0619	.0951	.1820	.2938	.4271	.5779	.7416	.9131
4.0	.0490	.0702	.1018	.1411	.2398	.3621	.5042	.6615	.8292	1.0023
6.0	.1045	.1213	.1558	.1995	.3080	.4391	.5882	.7504	.9205	1.0935
8.0	.1908	.1922	.2256	.2716	.3869	.5248	.6790	.8441	1.0149	1.1860
10.0	.3142	.2857	.3130	.3584	.4770	.6190	.7761	.9423	1.1118	1.2792
12.0	.4804	.4043	.4191	.4605	.5783	.7216	.8793	1.0443	1.2105	1.3724
15.0	.8212	.6340	.6161	.6437	.7512	.8904	1.0441	1.2032	1.3607	1.5108
20.0	1.6683	1.1683	1.0509	1.0314	1.0935	1.2078	1.3407	1.4779	1.6104	1.7318
25.0	2.9035	1.9042	1.6221	1.5202	1.4968	1.5610	1.6544	1.7545	1.8494	1.9316
30.0	4.5446	2.8414	2.3231	2.1007	1.9487	1.9369	1.9720	2.0205	2.0663	2.1002
35.0	6.5771	3.9635	3.1369	2.7556	2.4324	2.3194	2.2788	2.2629	2.2501	2.2289
40.0	8.9543	5.2384	4.0366	3.4610	2.9276	2.6912	2.5602	2.4698	2.3915	2.3111
45.0	11.6002	6.6204	4.9874	4.1877	3.4119	3.0344	2.8023	2.6306	2.4832	2.3425
50.0	14.4137	8.0532	5.9481	4.9031	3.8623	3.3322	2.9925	2.7369	2.5203	2.3214
55.0	17.2751	9.4730	6.8746	5.5732	4.2565	3.5693	3.1212	2.7832	2.5010	2.2490
60.0	20.0534	10.8128	7.7222	6.1652	4.5745	3.7334	3.1816	2.7670	2.4262	2.1289
65.0	22.6151	12.0068	8.4484	6.6489	4.7999	3.8160	3.1704	2.6892	2.2998	1.9675
70.0	24.8326	12.9947	9.0161	6.9993	4.9208	3.8127	3.0883	2.5538	2.1283	1.7730
75.0	26.5928	13.7256	9.3957	7.1981	4.9308	3.7237	2.9395	2.3680	1.9207	1.5552
80.0	27.8041	14.1611	9.5674	7.2349	4.8294	3.5536	2.7319	2.1411	1.6873	1.3246
85.0	28.4030	14.2784	9.5220	7.1076	4.6220	3.3114	2.4761	1.8848	1.4394	1.0919

α, deg \ θ_c, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0	90.0
1.0	1.0435	1.2163	1.3825	1.5371	1.6754	1.7932	1.8869	1.9536	1.9914	1.9991
2.0	1.0873	1.2588	1.4225	1.5735	1.7070	1.8190	1.9062	1.9659	1.9962	1.9963
4.0	1.1754	1.3433	1.5009	1.6434	1.7665	1.8663	1.9399	1.9851	2.0004	1.9854
6.0	1.2639	1.4266	1.5766	1.7093	1.8208	1.9075	1.9669	1.9971	1.9973	1.9673
8.0	1.3520	1.5079	1.6489	1.7707	1.8695	1.9423	1.9869	2.0019	1.9868	1.9422
10.0	1.4391	1.5867	1.7173	1.8269	1.9122	1.9704	1.9997	1.9994	1.9692	1.9102
12.0	1.5246	1.6624	1.7813	1.8776	1.9484	1.9915	2.0053	1.9896	1.9446	1.8717
15.0	1.6483	1.7685	1.8677	1.9424	1.9903	2.0097	2.0000	1.9614	1.8949	1.8024
20.0	1.8369	1.9216	1.9824	2.0172	2.0245	2.0037	1.9551	1.8801	1.7808	1.6595
25.0	1.9957	2.0379	2.0557	2.0476	2.0131	1.9526	1.8674	1.7597	1.6324	1.4889
30.0	2.1165	2.1116	2.0837	2.0319	1.9566	1.8591	1.7415	1.6066	1.4578	1.2990
35.0	2.1930	2.1338	2.0648	1.9709	1.8580	1.7281	1.5839	1.4285	1.2656	1.0993
40.0	2.2212	2.1180	2.0001	1.8678	1.7225	1.5665	1.4026	1.2343	1.0652	.8991
45.0	2.1996	2.0503	1.8930	1.7281	1.5571	1.3823	1.2066	1.0333	.8657	.7071
50.0	2.1294	1.9392	1.7490	1.5588	1.3700	1.1846	1.0054	.8349	.6760	.5312
55.0	2.0143	1.7908	1.5765	1.3685	1.1705	.9830	.8080	.6475	.5035	.3774
60.0	1.8601	1.6121	1.3813	1.1665	.9679	.7863	.6228	.4784	.3540	.2500
65.0	1.6748	1.4125	1.1757	.9623	.7715	.6030	.4568	.3331	.2314	.1510
70.0	1.4677	1.2015	.9684	.7649	.5891	.4396	.3153	.2150	.1372	.0800
75.0	1.2488	.9891	.7685	.5824	.4275	.3012	.2013	.1254	.0708	.0347
80.0	1.0284	.7845	.5841	.4212	.2913	.1906	.1157	.0632	.0294	.0105
85.0	.8160	.5960	.4217	.2860	.1931	.1084	.0572	.0253	.0082	.0013

TABLE V.- CONTINUED

(e) C_D. Continued.

$\phi_1 = -90^\circ$; $\phi_2 = 90^\circ$; $\beta = 0^\circ$

α, deg \ θ_c, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.0017	.0103	.0263	.0497	.1181	.2132	.3323	.4716	.6270	.7937
2.0	.0008	.0068	.0201	.0408	.1037	.1939	.3085	.4441	.5966	.7614
4.0	.0004	.0032	.0117	.0271	.0793	.1592	.2645	.3921	.5381	.6981
6.0	.0002	.0020	.0072	.0181	.0601	.1296	.2252	.3440	.4826	.6368
8.0	.0002	.0015	.0051	.0126	.0455	.1049	.1904	.3000	.4304	.5779
10.0	.0001	.0012	.0039	.0095	.0348	.0846	.1601	.2600	.3817	.5217
12.0	.0001	.0009	.0032	.0076	.0272	.0682	.1340	.2241	.3366	.4683
15.0	.0001	.0007	.0024	.0058	.0200	.0501	.1022	.1777	.2758	.3942
20.0	.0001	.0005	.0016	.0039	.0133	.0322	.0656	.1186	.1927	.2874
25.0	.0000	.0003	.0011	.0027	.0092	.0221	.0441	.0790	.1313	.2024
30.0	.0000	.0002	.0008	.0019	.0065	.0155	.0306	.0538	.0885	.1384
35.0	.0000	.0002	.0006	.0013	.0045	.0107	.0211	.0370	.0599	.0927
40.0	.0000	.0001	.0004	.0009	.0031	.0073	.0144	.0250	.0403	.0616
45.0	.0000	.0001	.0003	.0006	.0020	.0048	.0094	.0164	.0264	.0401
50.0	.0000	.0000	.0002	.0004	.0013	.0030	.0059	.0103	.0165	.0250
55.0	.0000	.0000	.0001	.0002	.0008	.0018	.0035	.0061	.0098	.0148
60.0	.0000	.0000	.0001	.0001	.0004	.0010	.0019	.0033	.0053	.0080
65.0	.0000	.0000	.0000	.0001	.0002	.0005	.0009	.0016	.0026	.0039
70.0	-.0000	.0000	.0000	.0000	.0001	.0002	.0004	.0007	.0011	.0016
75.0	-.0000	.0000	.0000	.0000	.0000	.0001	.0002	.0002	.0003	.0005
80.0	-.0000	-.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0001	.0001
85.0	-.0000	-.0000	-.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000

α, deg \ θ_c, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0	90.0
1.0	.9667	1.1407	1.3104	1.4707	1.6167	1.7439	1.8486	1.9274	1.9781	1.9991
2.0	.9334	1.1074	1.2782	1.4405	1.5894	1.7205	1.8296	1.9135	1.9697	1.9963
4.0	.8673	1.0404	1.2124	1.3778	1.5318	1.6696	1.7871	1.8806	1.9474	1.9854
6.0	.8020	.9731	1.1450	1.3125	1.4704	1.6140	1.7390	1.8414	1.9183	1.9673
8.0	.7381	.9060	1.0767	1.2450	1.4057	1.5541	1.6856	1.7962	1.8826	1.9422
10.0	.6758	.8395	1.0078	1.1757	1.3382	1.4903	1.6273	1.7453	1.8405	1.9102
12.0	.6156	.7740	.9389	1.1054	1.2684	1.4231	1.5647	1.6891	1.7925	1.8717
15.0	.5297	.6786	.8365	.9988	1.1607	1.3172	1.4638	1.5961	1.7101	1.8024
20.0	.4009	.5303	.6722	.8227	.9774	1.1318	1.2815	1.4220	1.5493	1.6595
25.0	.2922	.3992	.5211	.6547	.7965	.9426	1.0890	1.2315	1.3661	1.4889
30.0	.2050	.2886	.3879	.5011	.6256	.7582	.8955	1.0339	1.1697	1.2990
35.0	.1388	.1997	.2760	.3669	.4709	.5860	.7094	.8323	.9694	1.0993
40.0	.0912	.1323	.1868	.2553	.3374	.4323	.5382	.6530	.7742	.8991
45.0	.0586	.0842	.1198	.1674	.2290	.3017	.3879	.4852	.5923	.7071
50.0	.0364	.0517	.0728	.1027	.1436	.1966	.2623	.3405	.4305	.5312
55.0	.0214	.0302	.0420	.0596	.0831	.1176	.1637	.2223	.2936	.3774
60.0	.0116	.0163	.0226	.0311	.0436	.0631	.0920	.1320	.1845	.2500
65.0	.0056	.0079	.0109	.0149	.0206	.0295	.0447	.0687	.1036	.1510
70.0	.0023	.0033	.0045	.0061	.0084	.0117	.0177	.0294	.0494	.0800
75.0	.0007	.0010	.0014	.0019	.0026	.0037	.0054	.0091	.0179	.0347
80.0	.0001	.0002	.0003	.0004	.0005	.0007	.0010	.0017	.0038	.0105
85.0	.0000	.0000	.0000	.0000	.0000	.0000	.0001	.0001	.0002	.0013

$\phi_1 = 90^\circ$; $\phi_2 = 270^\circ$; $\beta = 0^\circ$

α, deg \ θ_c, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.0077	.0219	.0436	.0726	.1514	.2561	.3833	.5293	.6896	.8593
2.0	.0141	.0308	.0551	.0867	.1705	.2796	.4106	.5595	.7218	.8926
4.0	.0365	.0558	.0846	.1209	.2139	.3310	.4686	.6225	.7878	.9596
6.0	.0757	.0926	.1239	.1638	.2643	.3882	.5311	.6885	.8556	1.0271
8.0	.1362	.1431	.1742	.2161	.3221	.4511	.5979	.7574	.9247	1.0945
10.0	.2222	.2092	.2365	.2785	.3874	.5197	.6686	.8287	.9947	1.1614
12.0	.3377	.2926	.3119	.3514	.4603	.5937	.7430	.9020	1.0652	1.2273
15.0	.5738	.4534	.4508	.4813	.5837	.7144	.8606	1.0147	1.1707	1.3231
20.0	1.1589	.8253	.7553	.7539	.8255	.9385	1.0689	1.2059	1.3418	1.4710
25.0	2.0100	1.3351	1.1527	1.0950	1.1074	1.1846	1.2855	1.3938	1.5001	1.5979
30.0	3.1387	1.9824	1.6382	1.4977	1.4206	1.4433	1.5011	1.5700	1.6379	1.6974
35.0	4.5347	2.7552	2.1996	1.9977	1.7532	1.7036	1.7057	1.7258	1.7484	1.7646
40.0	6.1657	3.6314	2.8183	2.4344	2.0913	1.9536	1.8895	1.8537	1.8259	1.7958
45.0	7.9793	4.5794	3.4701	2.9316	2.4196	2.1814	2.0434	1.9469	1.8665	1.7894
50.0	9.9060	5.5603	4.1268	3.4190	2.7223	2.3757	2.1596	2.0007	1.8678	1.7457
55.0	11.8638	6.5305	4.7581	3.8735	2.9845	2.5265	2.2319	2.0121	1.8297	1.6667
60.0	13.7629	7.4440	5.3335	4.2725	3.1929	2.6260	2.2566	1.9805	1.7540	1.5563
65.0	15.5119	8.2561	5.8242	4.5959	3.3366	2.6690	2.2323	1.9074	1.6445	1.4199
70.0	17.0239	8.9256	6.2051	4.8269	3.4082	2.6531	2.1600	1.7963	1.5065	1.2641
75.0	18.2215	9.4180	6.4563	4.9535	3.4037	2.5791	2.0434	1.6528	1.3467	1.0961
80.0	19.0425	9.7076	6.5646	4.9689	3.3234	2.4507	1.8884	1.4838	1.1727	.9236
85.0	19.4439	9.7790	6.5244	4.8723	3.1715	2.2745	1.7026	1.2976	.9923	.7539

α, deg \ θ_c, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0	90.0
1.0	1.0333	1.2063	1.3730	1.5284	1.6677	1.7868	1.8819	1.9502	1.9897	1.9991
2.0	1.0666	1.2386	1.4033	1.5558	1.6914	1.8060	1.8961	1.9590	1.9928	1.9963
4.0	1.1327	1.3018	1.4617	1.6076	1.7350	1.8401	1.9197	1.9713	1.9935	1.9854
6.0	1.1979	1.3627	1.5166	1.6548	1.7731	1.8680	1.9365	1.9765	1.9869	1.9673
8.0	1.2617	1.4210	1.5676	1.6971	1.8054	1.8894	1.9443	1.9745	1.9731	1.9422
10.0	1.3235	1.4761	1.6144	1.7341	1.8317	1.9041	1.9491	1.9653	1.9522	1.9102
12.0	1.3830	1.5276	1.6564	1.7656	1.8518	1.9121	1.9449	1.9491	1.9245	1.8717
15.0	1.4668	1.5972	1.7101	1.8019	1.8697	1.9111	1.9256	1.9118	1.8703	1.8024
20.0	1.5884	1.6899	1.7719	1.8315	1.8667	1.8762	1.8595	1.8169	1.7496	1.6595
25.0	1.6823	1.7495	1.7966	1.8215	1.8229	1.8004	1.7543	1.6857	1.5964	1.4889
30.0	1.7435	1.7728	1.7828	1.7722	1.7405	1.6879	1.6155	1.5250	1.4185	1.2990
35.0	1.7690	1.7586	1.7313	1.6863	1.6238	1.5446	1.4502	1.3428	1.2249	1.0993
40.0	1.7574	1.7075	1.6446	1.5681	1.4787	1.3776	1.2667	1.1482	1.0247	.8991
45.0	1.7092	1.6222	1.5271	1.4236	1.3125	1.1953	1.0733	.9503	.8272	.7071
50.0	1.6267	1.5069	1.3846	1.2599	1.1333	1.0062	.8805	.7581	.6410	.5312
55.0	1.5140	1.3672	1.2242	1.0868	.9494	.8190	.6952	.5794	.4730	.3774
60.0	1.3767	1.2099	1.0534	.9064	.7690	.6416	.5253	.4207	.3288	.2500
65.0	1.2213	1.0424	.8800	.7325	.5995	.4808	.3765	.2869	.2118	.1510
70.0	1.0551	.8722	.7113	.5700	.4470	.3416	.2530	.1805	.1232	.0800
75.0	.8856	.7066	.5539	.4246	.3162	.2274	.1564	.1018	.0619	.0347
80.0	.7199	.5518	.4133	.3003	.2098	.1393	.0865	.0491	.0246	.0105
85.0	.5644	.4132	.2921	.1995	.1284	.0765	.0409	.0185	.0064	.0013

TABLE V.- CONTINUED

(f) L/D

$\phi_1 = 0^o$; $\phi_2 = 360^o$; $\beta = 0^o$

α, deg \ θ_c, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	7.3707	2.1351	.9640	.5360	.2242	.1139	.0627	.0349	.0181	.0073
2.0	9.3249	3.6519	1.7897	1.0271	.4400	.2254	.1245	.0694	.0361	.0146
4.0	7.7319	4.6181	2.7788	1.7588	.8181	.4327	.2427	.1363	.0713	.0288
6.0	6.1692	4.2949	3.0293	2.1245	1.0974	.6079	.3490	.1986	.1045	.0424
8.0	5.0808	3.8049	2.9121	2.2198	1.2725	.7436	.4395	.2543	.1351	.0548
10.0	4.2996	3.3705	2.6914	2.1627	1.3588	.8387	.5121	.3022	.1623	.0659
12.0	3.7149	3.0059	2.4683	2.0418	1.3792	.8969	.5664	.3413	.1855	.0753
15.0	3.0704	2.5670	2.1686	1.8429	1.3321	.9278	.6153	.3832	.2123	.0858
20.0	2.3543	2.0349	1.7690	1.5429	1.1750	.8806	.6265	.4108	.2343	.0926
25.0	1.8809	1.6574	1.4648	1.2962	1.0125	.7791	.5780	.3945	.2290	.0847
30.0	1.5406	1.3733	1.2254	1.0929	.8640	.6700	.5003	.3464	.2000	.0620
35.0	1.2809	1.1492	1.0304	.9221	.7305	.5641	.4156	.2795	.1511	.0247
40.0	1.0733	.9656	.8666	.7752	.6102	.4635	.3301	.2061	.0883	-.0268
45.0	.9014	.8102	.7254	.6460	.5003	.3681	.2457	.1302	.0190	-.0901
50.0	.7546	.6753	.6008	.5302	.3986	.2771	.1626	.0529	-.0541	-.1603
55.0	.6258	.5554	.4883	.4242	.3031	.1893	.0803	-.0257	-.1305	-.2359
60.0	.5104	.4464	.3850	.3256	.2121	.1036	-.0018	-.1059	-.2103	-.3167
65.0	.4049	.3457	.2883	.2324	.1241	.0191	-.0846	-.1884	-.2941	-.4034
70.0	.3066	.2508	.1963	.1427	.0378	-.0655	-.1690	-.2743	-.3830	-.4971
75.0	.2134	.1600	.1073	.0552	-.0480	-.1513	-.2563	-.3646	-.4783	-.5996
80.0	.1237	.0716	.0200	-.0315	-.1347	-.2395	-.3476	-.4610	-.5819	-.7132
85.0	.0359	-.0156	-.0670	-.1187	-.2234	-.3314	-.4446	-.5653	-.6964	-.8413

α, deg \ θ_c, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0	90.0
1.0	-.0000	-.0052	-.0089	-.0116	-.0137	-.0151	-.0162	-.0169	-.0173	-.0175
2.0	-.0000	-.0103	-.0178	-.0233	-.0273	-.0303	-.0324	-.0338	-.0347	-.0349
4.0	-.0002	-.0207	-.0356	-.0466	-.0547	-.0606	-.0649	-.0677	-.0694	-.0699
6.0	-.0006	-.0311	-.0534	-.0699	-.0821	-.0911	-.0975	-.1018	-.1043	-.1051
8.0	-.0013	-.0417	-.0713	-.0932	-.1096	-.1216	-.1303	-.1361	-.1394	-.1405
10.0	-.0026	-.0524	-.0892	-.1167	-.1372	-.1524	-.1633	-.1707	-.1749	-.1763
12.0	-.0045	-.0633	-.1071	-.1401	-.1650	-.1834	-.1967	-.2057	-.2109	-.2126
15.0	-.0087	-.0800	-.1342	-.1755	-.2069	-.2304	-.2475	-.2591	-.2658	-.2679
20.0	-.0201	-.1094	-.1798	-.2351	-.2781	-.3108	-.3348	-.3512	-.3608	-.3640
25.0	-.0382	-.1412	-.2263	-.2956	-.3510	-.3942	-.4265	-.4488	-.4620	-.4663
30.0	-.0642	-.1765	-.2742	-.3574	-.4264	-.4817	-.5240	-.5538	-.5715	-.5774
35.0	-.0989	-.2161	-.3242	-.4209	-.5046	-.5742	-.6290	-.6685	-.6923	-.7002
40.0	-.1437	-.2617	-.3772	-.4866	-.5862	-.6729	-.7437	-.7961	-.8282	-.8391
45.0	-.2000	-.3151	-.4350	-.5556	-.6721	-.7790	-.8704	-.9406	-.9849	-1.0000
50.0	-.2678	-.3794	-.5001	-.6295	-.7631	-.8938	-1.0121	-1.1076	-1.1700	-1.1919
55.0	-.3437	-.4563	-.5768	-.7117	-.8613	-1.0189	-1.1726	-1.3049	-1.3957	-1.4281
60.0	-.4270	-.5434	-.6690	-.8083	-.9706	-1.1570	-1.3561	-1.5431	-1.6808	-1.7321
65.0	-.5183	-.6414	-.7758	-.9262	-1.1002	-1.3134	-1.5680	-1.8371	-2.0572	-2.1445
70.0	-.6190	-.7517	-.8991	-1.0669	-1.2633	-1.5029	-1.8173	-2.2074	-2.5820	-2.7475
75.0	-.7314	-.8775	-1.0431	-1.2356	-1.4663	-1.7536	-2.1321	-2.6820	-3.3644	-3.7321
80.0	-.8587	-1.0232	-1.2141	-1.4420	-1.7237	-2.0874	-2.5854	-3.3322	-4.6199	-5.6713
85.0	-1.0053	-1.1954	-1.4220	-1.7015	-2.0613	-2.5503	-3.2671	-4.4443	-6.8230	-11.4301

TABLE V.- CONTINUED

(e) C_D. Concluded.

$\phi_1 = 135^0$; $\phi_2 = 225^0$; $\beta = 0^0$

α, deg \ θ_c, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.0096	.0249	.0478	.0779	.1589	.2655	.3944	.5417	.7030	.8733
2.0	.0194	.0382	.0647	.0985	.1866	.2995	.4337	.5852	.7493	.9211
4.0	.0555	.0771	.1096	.1499	.2508	.3750	.5187	.6773	.8458	1.0193
6.0	.1205	.1358	.1710	.2160	.3272	.4609	.6121	.7759	.9471	1.1204
8.0	.2223	.2161	.2513	.2982	.4164	.5571	.7137	.8807	1.0524	1.2236
10.0	.3684	.3273	.3523	.3978	.5198	.6636	.8232	.9910	1.1612	1.3283
12.0	.5659	.4665	.4757	.5157	.6347	.7803	.9402	1.1065	1.2729	1.4337
15.0	.9721	.7373	.7060	.7286	.8339	.9737	1.1283	1.2875	1.4440	1.5917
20.0	1.9853	1.3708	1.2181	1.1827	1.2316	1.3407	1.4703	1.6041	1.7322	1.8477
25.0	3.4670	2.2476	1.8949	1.7594	1.7045	1.7534	1.8365	1.9274	2.0127	2.0841
30.0	5.4395	3.3683	2.7296	2.4482	2.2384	2.1967	2.2115	2.2428	2.2722	2.2892
35.0	7.8862	4.7138	3.7025	3.2294	2.8139	2.6521	2.5783	2.5353	2.4977	2.4524
40.0	10.7517	6.2464	4.7820	4.0747	3.4072	3.0991	2.9195	2.7903	2.6778	2.5654
45.0	13.9449	7.9117	5.9265	4.9495	3.9917	3.5164	3.2182	2.9949	2.8032	2.6223
50.0	17.3840	9.6419	7.0871	5.8147	4.5397	3.8835	3.4592	3.1384	2.8672	2.6199
55.0	20.8048	11.3602	8.2104	6.6295	5.0242	4.1816	3.6360	3.2134	2.8665	2.5985
60.0	24.1692	12.9860	9.2923	7.3539	5.4207	4.3955	3.7217	3.2159	2.8012	2.4612
65.0	27.2754	14.4394	10.1313	7.9511	5.7085	4.5138	3.7295	3.1458	2.6746	2.2743
70.0	29.9691	15.6471	10.8321	8.3904	5.8728	4.5303	3.6529	3.0067	2.4935	2.0664
75.0	32.1127	16.5468	11.3081	8.6488	5.9047	4.4441	3.4960	2.8059	2.2671	1.8279
80.0	33.5949	17.0914	11.5343	8.7125	5.8027	4.2599	3.2670	2.5540	2.0071	1.5708
85.0	34.3379	17.2523	11.4988	8.5793	5.5720	3.9873	2.9779	2.2636	1.7262	1.3073

α, deg \ θ_c, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0	90.0
1.0	1.0474	1.2201	1.3862	1.5405	1.6784	1.7957	1.8880	1.9550	1.9921	1.9991
2.0	1.0953	1.2667	1.4300	1.5803	1.7130	1.8240	1.9101	1.9685	1.9976	1.9963
4.0	1.1924	1.3598	1.5164	1.6575	1.7787	1.8765	1.9478	1.9904	2.0031	1.9854
6.0	1.2904	1.4521	1.6004	1.7309	1.8395	1.9230	1.9789	2.0051	2.0013	1.9673
8.0	1.3888	1.5430	1.6815	1.8000	1.8949	1.9631	2.0029	2.0125	1.9921	1.9422
10.0	1.4868	1.6319	1.7590	1.8642	1.9442	1.9965	2.0196	2.0126	1.9758	1.9102
12.0	1.5837	1.7179	1.8322	1.9229	1.9872	2.0230	2.0291	2.0054	1.9524	1.8717
15.0	1.7253	1.8403	1.9329	1.9999	2.0391	2.0471	2.0296	1.9809	1.9044	1.8024
20.0	1.9454	2.0210	2.0715	2.0947	2.0894	2.0554	1.9935	1.9051	1.7927	1.6595
25.0	2.1360	2.1667	2.1677	2.1437	2.0926	2.0152	1.9132	1.7892	1.6465	1.4859
30.0	2.2877	2.2640	2.2164	2.1443	2.0484	1.9305	1.7930	1.6393	1.4733	1.2990
35.0	2.3923	2.3137	2.2150	2.0964	1.9592	1.8058	1.6392	1.4631	1.2817	1.0993
40.0	2.4446	2.3112	2.1637	2.0026	1.8297	1.6475	1.4595	1.2694	1.0812	.8991
45.0	2.4417	2.2565	2.0651	1.8679	1.6666	1.4639	1.2630	1.0674	.8811	.7071
50.0	2.3837	2.1527	1.9244	1.6991	1.4781	1.2639	1.0592	.8670	.6901	.5312
55.0	2.2738	2.0050	1.7489	1.5049	1.2738	1.0573	.8575	.6763	.5158	.3774
60.0	2.1177	1.8212	1.5475	1.2949	1.0633	.8535	.6665	.5032	.3643	.2500
65.0	1.9234	1.6106	1.3302	1.0792	.8564	.6613	.4937	.3533	.2394	.1510
70.0	1.7009	1.3837	1.1073	.8676	.6617	.4880	.3448	.2305	.1431	.0800
75.0	1.4611	1.1512	.8891	.6690	.4867	.3392	.2234	.1363	.0747	.0347
80.0	1.2155	.9237	.6846	.4909	.3371	.2185	.1310	.0701	.0316	.0105
85.0	.9752	.7107	.5015	.3390	.2161	.1271	.0665	.0290	.0091	.0013

$\phi_1 = 150^0$; $\phi_2 = 210^0$; $\beta = 0^0$

α, deg \ θ_c, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	.0100	.0256	.0487	.0790	.1605	.2675	.3967	.5443	.7058	.8762
2.0	.0209	.0400	.0670	.1012	.1901	.3038	.4387	.5907	.7552	.9272
4.0	.0612	.0820	.1159	.1570	.2593	.3850	.5299	.6893	.8585	1.0322
6.0	.1367	.1482	.1836	.2294	.3394	.4770	.6307	.7956	.9674	1.1409
8.0	.2506	.2405	.2729	.3202	.4401	.5828	.7411	.9091	1.0814	1.2525
10.0	.4177	.3638	.3858	.4309	.5530	.6995	.8606	1.0294	1.1993	1.3663
12.0	.6442	.5216	.5247	.5627	.6813	.8281	.9889	1.1557	1.3219	1.4816
15.0	1.1116	.8301	.7850	.8019	.9032	1.0423	1.1966	1.3551	1.5101	1.6554
20.0	2.2811	1.5553	1.3674	1.3155	1.3498	1.4522	1.5774	1.7070	1.8304	1.9403
25.0	3.9959	2.5635	2.1415	1.9723	1.8849	1.9174	1.9893	2.0705	2.1463	2.2076
30.0	6.2832	3.8564	3.1005	2.7612	2.4933	2.4213	2.4152	2.4294	2.4429	2.4441
35.0	9.1245	5.4130	4.2226	3.6599	3.1534	2.9431	2.8362	2.7667	2.7055	2.6379
40.0	12.4564	7.1902	5.4718	4.6366	3.8381	3.4597	3.2323	3.0657	2.9209	2.7788
45.0	16.1735	9.1254	6.8009	5.6516	4.5571	3.9466	3.5842	3.3114	3.0779	2.8597
50.0	20.1395	11.1403	8.1520	6.6600	5.1583	4.3799	3.8739	3.4910	3.1683	2.8760
55.0	24.1716	13.1459	9.4646	7.6142	5.7302	4.7377	4.0866	3.5951	3.1873	2.8271
60.0	28.1007	15.0479	10.6752	8.4675	6.2040	5.0016	4.2111	3.6183	3.1340	2.7155
65.0	31.7331	16.7533	11.7236	9.1769	6.5553	5.1577	4.2407	3.5593	3.0111	2.5470
70.0	34.8883	18.1761	12.5562	9.7057	6.7656	5.1978	4.1741	3.4213	2.8251	2.3305
75.0	37.4054	19.2430	13.1298	10.0263	6.8238	5.1197	4.0146	3.2115	2.5857	2.0770
80.0	39.1537	19.8981	13.4141	10.1217	6.7269	4.9277	3.7706	2.9407	2.3052	1.7992
85.0	40.0413	20.1070	13.3943	9.9871	6.4800	4.6318	3.4550	2.6230	1.9975	1.5105

α, deg \ θ_c, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0	90.0
1.0	1.0504	1.2230	1.3889	1.5430	1.6806	1.7976	1.8903	1.9560	1.9926	1.9991
2.0	1.1014	1.2726	1.4356	1.5854	1.7175	1.8278	1.9130	1.9705	1.9986	1.9963
4.0	1.2052	1.3721	1.5280	1.6720	1.7980	1.8041	1.9536	1.9944	2.0051	1.9854
6.0	1.3106	1.4714	1.6185	1.7472	1.8536	1.9346	1.9876	2.0111	2.0043	1.9673
8.0	1.4170	1.5698	1.7063	1.8222	1.9140	1.9788	2.0147	2.0205	1.9961	1.9422
10.0	1.5235	1.6665	1.7908	1.8925	1.9685	2.0163	2.0346	2.0226	1.9807	1.9102
12.0	1.6295	1.7608	1.8713	1.9575	2.0167	2.0469	2.0471	2.0173	1.9582	1.8717
15.0	1.7855	1.7961	1.9932	2.0440	2.0763	2.0791	2.0519	1.9956	1.9116	1.8024
20.0	2.0312	2.0991	2.1409	2.1547	2.1394	2.0950	2.0226	1.9240	1.8010	1.6595
25.0	2.2486	2.2655	2.2559	2.2188	2.1542	2.0634	1.9482	1.8116	1.6571	1.4889
30.0	2.4266	2.3865	2.3220	2.2329	2.1202	1.9859	1.8326	1.6642	1.4849	1.2990
35.0	2.5560	2.4558	2.3358	2.1963	2.0389	1.8663	1.6818	1.4896	1.2939	1.0993
40.0	2.6300	2.4698	2.2966	2.1109	1.9148	1.7112	1.5037	1.2963	1.0934	.8991
45.0	2.6448	2.4277	2.2064	1.9813	1.7544	1.5285	1.3071	1.0939	.8927	.7071
50.0	2.5995	2.3317	2.0699	1.8141	1.5657	1.3272	1.1016	.8918	.7008	.5312
55.0	2.4966	2.1870	1.8944	1.6179	1.3583	1.1172	.8967	.6988	.5253	.3774
60.0	2.3415	2.0010	1.6887	1.4026	1.1423	.9083	.7015	.5226	.3722	.2500
65.0	2.1422	1.7832	1.4632	1.1786	.9276	.7094	.5236	.3693	.2457	.1510
70.0	1.9089	1.5447	1.2288	.9562	.7236	.5286	.3691	.2429	.1476	.0800
75.0	1.6534	1.2968	.9963	.7452	.5383	.3718	.2420	.1453	.0777	.0347
80.0	1.3879	1.0510	.7758	.5536	.3779	.2431	.1442	.0760	.0333	.0105
85.0	1.1248	.8181	.5759	.3881	.2465	.1443	.0749	.0322	.0098	.0013

TABLE V.- CONTINUED

(Ω L/D. Continued.

$\vartheta_1 = -90^\circ$; $\vartheta_2 = 90^\circ$; $\beta = 0^\circ$

α, deg \ θ_c, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	-15.5604	-7.7042	-5.0506	-3.7420	-2.4444	-1.7947	-1.4001	-1.1316	-.9345	-.7817
2.0	-11.5933	-7.7993	-5.1977	-3.8513	-2.5087	-1.8394	-1.4348	-1.1607	-.9601	-.8050
4.0	-5.0014	-5.8639	-5.0501	-3.9378	-2.6147	-1.9235	-1.5035	-1.2195	-1.0124	-.8527
6.0	-3.3505	-3.5027	-3.9842	-3.7044	-2.6674	-1.9958	-1.5693	-1.2784	-1.0657	-.9018
8.0	-2.5752	-2.6300	-2.7617	-3.0672	-2.6314	-2.0444	-1.6294	-1.3365	-1.1199	-.9523
10.0	-2.1337	-2.1601	-2.2134	-2.3298	-2.4747	-2.0605	-1.6800	-1.3924	-1.1745	-1.0040
12.0	-1.8562	-1.8711	-1.8991	-1.9484	-2.1973	-2.0309	-1.7164	-1.4446	-1.2289	-1.0570
15.0	-1.6037	-1.6111	-1.6244	-1.6457	-1.7410	-1.8847	-1.7321	-1.5106	-1.3084	-1.1331
20.0	-1.4029	-1.4052	-1.4106	-1.4186	-1.4463	-1.5098	-1.6221	-1.5642	-1.4248	-1.2742
25.0	-1.3389	-1.3387	-1.3413	-1.3452	-1.3579	-1.3804	-1.4278	-1.5170	-1.4971	-1.4009
30.0	-1.3482	-1.3489	-1.3500	-1.3521	-1.3590	-1.3704	-1.3895	-1.4278	-1.5024	-1.4988
35.0	-1.4177	-1.4106	-1.4116	-1.4128	-1.4169	-1.4236	-1.4340	-1.4509	-1.4840	-1.5499
40.0	-1.5522	-1.5171	-1.5174	-1.5182	-1.5208	-1.5251	-1.5314	-1.5411	-1.5567	-1.5870
45.0	-1.6698	-1.6710	-1.6675	-1.6682	-1.6700	-1.6728	-1.6770	-1.6831	-1.6924	-1.7073
50.0	-2.0652	-1.8807	-1.8712	-1.8702	-1.8711	-1.8731	-1.8759	-1.8801	-1.8861	-1.8952
55.0	-2.2679	-2.1550	-2.1428	-2.1385	-2.1393	-2.1408	-2.1428	-2.1457	-2.1498	-2.1558
60.0	-3.3400	-2.5405	-2.5061	-2.5059	-2.5035	-2.5042	-2.5057	-2.5078	-2.5107	-2.5148
65.0	-4.1250	-3.1390	-3.0202	-3.0188	-3.0163	-3.0167	-3.0178	-3.0191	-3.0212	-3.0241
70.0	13.7500	-3.8578	-3.8699	-3.8013	-3.7893	-3.7871	-3.7867	-3.7876	-3.7892	-3.7913
75.0	.0000	-6.5000	-5.4951	-5.1404	-5.0833	-5.0716	-5.0657	-5.0677	-5.0688	-5.0701
80.0	1.1250	25.5000	-10.6563	-8.3395	-7.7129	-7.6424	-7.6363	-7.6273	-7.6235	-7.6241
85.0	.1458	.7250	5.4375	.0000	-17.7632	-16.0750	-15.8914	-15.5149	-15.3536	-15.2894

α, deg \ θ_c, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0	90.0
1.0	-.6580	-.5544	-.4652	-.3864	-.3152	-.2497	-.1884	-.1299	-.0732	-.0175
2.0	-.6797	-.5750	-.4849	-.4054	-.3338	-.2679	-.2062	-.1475	-.0907	-.0349
4.0	-.7241	-.6170	-.5251	-.4442	-.3715	-.3048	-.2424	-.1832	-.1260	-.0699
6.0	-.7700	-.6604	-.5665	-.4841	-.4101	-.3423	-.2792	-.2193	-.1616	-.1051
8.0	-.8174	-.7052	-.6093	-.5251	-.4497	-.3808	-.3167	-.2560	-.1976	-.1405
10.0	-.8663	-.7516	-.6535	-.5675	-.4905	-.4202	-.3549	-.2933	-.2341	-.1763
12.0	-.9169	-.7997	-.6993	-.6113	-.5325	-.4608	-.3942	-.3313	-.2711	-.2126
15.0	-.9958	-.8752	-.7713	-.6801	-.5984	-.5240	-.4550	-.3901	-.3251	-.2679
20.0	-1.1349	-1.0110	-.9017	-.8044	-.7169	-.6370	-.5631	-.4937	-.4277	-.3640
25.0	-1.2807	-1.1601	-1.0471	-.9437	-.8492	-.7624	-.6020	-.6066	-.5350	-.4663
30.0	-1.4253	-1.3215	-1.2103	-1.1019	-.9996	-.9042	-.8153	-.7318	-.6528	-.5774
35.0	-1.5533	-1.4902	-1.3928	-1.2836	-1.1737	-1.0680	-.9681	-.8739	-.7849	-.7002
40.0	-1.6486	-1.6541	-1.5929	-1.4935	-1.3788	-1.2614	-1.1474	-1.0389	-.9363	-.8391
45.0	-1.7365	-1.7972	-1.8016	-1.7343	-1.6239	-1.4955	-1.3639	-1.2360	-1.1145	-1.0000
50.0	-1.9099	-1.9397	-2.0026	-2.0020	-1.9188	-1.7859	-1.6336	-1.4792	-1.3310	-1.1918
55.0	-2.1650	-2.1802	-2.2120	-2.2807	-2.2684	-2.1538	-1.9818	-1.7914	-1.6040	-1.4281
60.0	-2.5209	-2.5303	-2.5466	-2.5825	-2.6614	-2.6229	-2.4405	-2.2123	-1.9649	-1.7321
65.0	-3.0283	-3.0345	-3.0446	-3.0627	-3.1060	-3.2002	-3.1002	-2.8159	-2.4731	-2.1445
70.0	-3.7941	-3.7984	-3.8050	-3.8159	-3.8369	-3.8933	-4.0051	-3.7500	-3.2537	-2.7475
75.0	-5.0719	-5.0747	-5.0790	-5.0858	-5.0980	-5.1234	-5.2051	-5.3042	-4.6219	-3.7321
80.0	-7.6253	-7.6265	-7.6289	-7.6330	-7.6399	-7.6533	-7.6854	-7.8248	-7.5929	-5.6713
85.0	-15.2758	-15.2851	-15.2806	-15.2768	-15.2783	-15.2849	-15.2973	-15.3372	-15.6717	-11.4301

$\vartheta_1 = 90^\circ$; $\vartheta_2 = 270^\circ$; $\beta = 0^\circ$

α, deg \ θ_c, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	12.4426	6.7362	4.5908	3.4677	2.3051	1.7031	1.3305	1.0741	.8842	.7361
2.0	10.5383	6.1906	4.3389	3.3211	2.2333	1.6570	1.2961	1.0458	.8596	.7138
4.0	7.6648	5.2271	3.8592	3.0337	2.0908	1.5658	1.2283	.9904	.8114	.6701
6.0	6.2005	4.4660	3.4379	2.7678	1.9535	1.4771	1.1623	.9365	.7647	.6277
8.0	5.0911	3.8716	3.0784	2.5290	1.8239	1.3919	1.0986	.8844	.7193	.5865
10.0	4.3037	3.4010	2.7732	2.3167	1.7030	1.3107	1.0372	.8339	.6752	.5464
12.0	3.7168	3.0215	2.5129	2.1286	1.5907	1.2335	.9781	.7851	.6325	.5073
15.0	3.0711	2.5736	2.1890	1.8848	1.4374	1.1250	.8940	.7148	.5705	.4504
20.0	2.3545	2.0369	1.7759	1.5582	1.2172	.9626	.7645	.6050	.4725	.3597
25.0	1.8809	1.6582	1.4476	1.3027	1.0323	.8194	.6468	.5029	.3801	.2729
30.0	1.5406	1.3737	1.2266	1.0960	.8741	.6919	.5388	.4072	.2920	.1892
35.0	1.2809	1.1494	1.0310	.9237	.7361	.5767	.4385	.3166	.2072	.1075
40.0	1.0733	.9656	.8670	.7760	.6133	.4710	.3443	.2297	.1246	.0267
45.0	.9014	.8103	.7256	.6465	.5021	.3726	.2546	.1455	.0432	-.0539
50.0	.7545	.6753	.6009	.5304	.3997	.2798	.1682	.0629	-.0379	-.1354
55.0	.6258	.5554	.4884	.4244	.3037	.1909	.0839	-.0192	-.1197	-.2189
60.0	.5104	.4465	.3850	.3257	.2125	.1046	.0003	-.1018	-.2033	-.3053
65.0	.4049	.3457	.2883	.2324	.1243	.0196	-.0834	-.1860	-.2898	-.3962
70.0	.3066	.2508	.1963	.1428	.0379	-.0653	-.1684	-.2730	-.3806	-.4929
75.0	.2134	.1600	.1073	.0552	-.0480	-.1512	-.2560	-.3640	-.4771	-.5975
80.0	.1237	.0716	.0200	-.0315	-.1346	-.2394	-.3475	-.4608	-.5815	-.7125
85.0	.0359	-.0156	-.0670	-.1187	-.2234	-.3314	-.4446	-.5653	-.6963	-.8412

α, deg \ θ_c, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0	90.0
1.0	.6156	.5142	.4266	.3489	.2787	.2138	.1529	.0947	.0382	-.0175
2.0	.5948	.4945	.4076	.3305	.2606	.1961	.1353	.0772	.0208	-.0349
4.0	.5541	.4559	.3704	.2943	.2250	.1609	.1004	.0424	-.0141	-.0699
6.0	.5146	.4182	.3340	.2586	.1899	.1261	.0657	.0077	-.0490	-.1051
8.0	.4760	.3814	.2982	.2236	.1553	.0915	.0311	-.0270	-.0840	-.1405
10.0	.4384	.3453	.2631	.1890	.1209	.0572	-.0033	-.0618	-.1192	-.1763
12.0	.4016	.3099	.2285	.1548	.0868	.0230	-.0378	-.0968	-.1547	-.2126
15.0	.3478	.2579	.1775	.1041	.0361	-.0282	-.0897	-.1496	-.2087	-.2679
20.0	.2612	.1736	.0940	.0206	-.0483	-.1140	-.1774	-.2397	-.3016	-.3640
25.0	.1776	.0913	.0117	-.0627	-.1334	-.2014	-.2679	-.3336	-.3995	-.4663
30.0	.0959	.0099	-.0706	-.1469	-.2204	-.2919	-.3625	-.4331	-.5044	-.5774
35.0	.0152	-.0714	-.1538	-.2331	-.3105	-.3869	-.4632	-.5403	-.6190	-.7002
40.0	-.0656	-.1538	-.2391	-.3227	-.4054	-.4882	-.5721	-.6579	-.7466	-.8391
45.0	-.1473	-.2382	-.3278	-.4169	-.5067	-.5981	-.6921	-.7898	-.8920	-1.0000
50.0	-.2311	-.3259	-.4211	-.5177	-.6167	-.7194	-.8270	-.9407	-1.0619	-1.1918
55.0	-.3180	-.4182	-.5207	-.6269	-.7392	-.8560	-.9820	-1.1182	-1.2664	-1.4281
60.0	-.4093	-.5166	-.6288	-.7475	-.8747	-1.0129	-1.1646	-1.3331	-1.5214	-1.7321
65.0	-.5067	-.6232	-.7477	-.8827	-1.0314	-1.1976	-1.3861	-1.6027	-1.8538	-2.1445
70.0	-.6120	-.7403	-.8808	-1.0374	-1.2152	-1.4209	-1.6639	-1.9563	-2.3129	-2.7475
75.0	-.7278	-.8714	-1.0327	-1.2181	-1.4361	-1.6993	-2.0267	-2.4465	-2.9997	-3.7321
80.0	-.8573	-1.0207	-1.2097	-1.4341	-1.7090	-2.0587	-2.5241	-3.1782	-4.1558	-5.6713
85.0	-1.0051	-1.1949	-1.4211	-1.6999	-2.0579	-2.5428	-3.2481	-4.3841	-6.5197	-11.4301

TABLE V.- CONTINUED

(f) L/D. Continued.

$\phi_1 = 105^\circ$; $\phi_2 = 255^\circ$; $\beta = 0^\circ$

α, deg \ θ_c, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	13.4533	7.4885	5.1665	3.9298	2.6324	1.9533	1.5305	1.2381	1.0211	.8513
2.0	11.0406	6.6960	4.7761	3.6958	2.5178	1.8825	1.4804	1.1994	.9893	.8239
4.0	8.0342	5.4789	4.1230	3.2866	2.3082	1.7502	1.3856	1.1255	.9281	.7710
6.0	6.2760	4.6063	3.6065	2.9444	2.1224	1.6294	1.2975	1.0560	.8701	.7205
8.0	5.1312	3.9569	3.1916	2.6562	1.9571	1.5183	1.2155	.9905	.8149	.6720
10.0	4.3278	3.4566	2.8525	2.4110	1.8095	1.4173	1.1389	.9286	.7622	.6255
12.0	3.7324	3.0597	2.5705	2.2001	1.6770	1.3232	1.0671	.8700	.7119	.5807
15.0	3.0803	2.5972	2.2766	1.9341	1.5019	1.1966	.9675	.7874	.6403	.5163
20.0	2.3591	2.0492	1.7966	1.5071	1.2590	1.0127	.8194	.6619	.5296	.4155
25.0	1.8837	1.6655	1.4803	1.3211	1.0609	.8560	.6889	.5485	.4276	.3209
30.0	1.5425	1.3785	1.2351	1.1085	.8946	.7193	.5719	.4445	.3321	.2310
35.0	1.2922	1.1527	1.0370	.9326	.7513	.5978	.4650	.3474	.2415	.1443
40.0	1.0743	.9681	.8714	.7827	.6249	.4877	.3659	.2557	.1543	.0595
45.0	.9022	.8122	.7290	.6516	.5113	.3861	.2724	.1675	.0691	-.0246
50.0	.7552	.6769	.6036	.5345	.4070	.2908	.1831	.0817	-.0152	-.1091
55.0	.6263	.5567	.4906	.4277	.3097	.2000	.0963	-.0030	-.0997	-.1951
60.0	.5109	.4475	.3869	.3285	.2174	.1122	.0109	-.0879	-.1857	-.2839
65.0	.4053	.3466	.2899	.2348	.1285	.0260	-.0744	-.1740	-.2744	-.3770
70.0	.3070	.2516	.1976	.1447	.0414	-.0599	-.1608	-.2628	-.3673	-.4761
75.0	.2138	.1607	.1085	.0570	-.0450	-.1467	-.2496	-.3555	-.4659	-.5831
80.0	.1240	.0723	.0211	-.0300	-.1321	-.2357	-.3423	-.4538	-.5724	-.7007
85.0	.0362	-.0150	-.0661	-.1173	-.2212	-.3283	-.4405	-.5599	-.6893	-.8324

α, deg \ θ_c, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0	90.0
1.0	.7130	.5965	.4956	.4061	.3251	.2502	.1798	.1125	.0471	-.0175
2.0	.6886	.5742	.4749	.3865	.3062	.2319	.1619	.0949	.0296	-.0349
4.0	.6413	.5309	.4343	.3480	.2692	.1959	.1265	.0599	-.0053	-.0699
6.0	.5959	.4899	.3949	.3103	.2328	.1603	.0915	.0250	-.0402	-.1051
8.0	.5520	.4483	.3565	.2734	.1969	.1251	.0566	-.0098	-.0752	-.1405
10.0	.5096	.4087	.3189	.2372	.1615	.0902	.0219	-.0446	-.1104	-.1763
12.0	.4685	.3702	.2821	.2015	.1265	.0555	-.0129	-.0798	-.1458	-.2126
15.0	.4091	.3140	.2281	.1489	.0746	.0037	-.0649	-.1324	-.1997	-.2679
20.0	.3147	.2240	.1406	.0627	-.0113	-.0827	-.1527	-.2221	-.2922	-.3640
25.0	.2250	.1371	.0551	-.0226	-.0974	-.1704	-.2429	-.3155	-.3896	-.4663
30.0	.1384	.0520	-.0297	-.1083	-.1849	-.2607	-.3367	-.4140	-.4930	-.5774
35.0	.0536	-.0323	-.1149	-.1955	-.2752	-.3551	-.4363	-.5200	-.6074	-.7002
40.0	-.0305	-.1172	-.2018	-.2856	-.3698	-.4554	-.5436	-.6359	-.7338	-.8393
45.0	-.1151	-.2037	-.2917	-.3802	-.4704	-.5637	-.6615	-.7654	-.8774	-1.0000
50.0	-.2013	-.2932	-.3860	-.4809	-.5794	-.6830	-.7936	-.9133	-1.0449	-1.1918
55.0	-.2904	-.3871	-.4864	-.5900	-.6995	-.8162	-.9449	-1.0865	-1.2459	-1.4281
60.0	-.3839	-.4871	-.5953	-.7102	-.8344	-.9706	-1.1229	-1.2957	-1.4959	-1.7321
65.0	-.4834	-.5954	-.7152	-.8454	-.9893	-1.1516	-1.3381	-1.5573	-1.8207	-2.1445
70.0	-.5911	-.7147	-.8499	-1.0004	-1.1717	-1.3708	-1.6083	-1.8995	-2.2677	-2.7475
75.0	-.7095	-.8485	-1.0042	-1.1826	-1.3922	-1.6456	-1.9622	-2.3737	-2.9333	-3.7321
80.0	-.8422	-1.0015	-1.1851	-1.4024	-1.6679	-2.0045	-2.4521	-3.0840	-4.0489	-5.6713
85.0	-.9939	-1.1807	-1.4028	-1.6759	-2.0256	-2.4974	-3.1803	-4.2747	-6.3341	-11.4301

$\phi_1 = 120^\circ$; $\phi_2 = 240^\circ$; $\beta = 0^\circ$

α, deg \ θ_c, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	14.3959	8.1641	5.6787	4.3392	2.9215	2.1740	1.7066	1.3826	1.1416	.9528
2.0	11.5555	7.1674	5.1731	4.0323	2.7100	2.0093	1.6433	1.3350	1.1036	.9211
4.0	8.2444	5.7370	4.3765	3.5224	2.5056	1.9157	1.5259	1.2456	1.0315	.8603
6.0	6.3860	4.7650	3.7793	3.1167	2.2796	1.7683	1.4195	1.1631	.9641	.8029
8.0	5.1979	4.0629	3.3156	2.7865	2.0848	1.6369	1.3224	1.0866	.9007	.7495
10.0	4.3722	3.5318	2.9452	2.5125	1.9149	1.5186	1.2333	1.0153	.8410	.6967
12.0	3.7641	3.1155	2.6421	2.2812	1.7654	1.4117	1.1511	.9486	.7846	.6472
15.0	3.1011	2.6354	2.2777	1.9941	1.5713	1.2697	1.0382	.8560	.7051	.5768
20.0	2.3712	2.0722	1.8288	1.6265	1.3080	1.0667	.8753	.7179	.5843	.4679
25.0	1.8916	1.6810	1.5025	1.3490	1.0975	.8981	.7342	.5954	.4747	.3673
30.0	1.5481	1.3897	1.2514	1.1295	.9230	.7533	.6095	.4846	.3735	.2727
35.0	1.2865	1.1613	1.0496	.9490	.7742	.6260	.4971	.3825	.2784	.1823
40.0	1.0770	.9750	.8816	.7960	.6440	.5116	.3939	.2868	.1878	.0947
45.0	.9058	.8179	.7375	.6628	.5275	.4069	.2972	.1956	.1000	.0085
50.0	.7575	.6817	.6108	.5441	.4212	.3092	.2054	.1074	.0136	-.0776
55.0	.6284	.5609	.4969	.4362	.3223	.2166	.1167	.0208	-.0726	-.1649
60.0	.5128	.4513	.3925	.3361	.2288	.1273	.0298	-.0655	-.1598	-.2547
65.0	.4070	.3501	.2950	.2417	.1390	.0400	-.0567	-.1527	-.2495	-.3484
70.0	.3086	.2548	.2024	.1512	.0513	-.0467	-.1440	-.2423	-.3430	-.4479
75.0	.2153	.1637	.1131	.0631	-.0357	-.1341	-.2336	-.3357	-.4422	-.5552
80.0	.1255	.0752	.0254	-.0241	-.1232	-.2235	-.3267	-.4346	-.5492	-.6730
85.0	.0376	-.0121	-.0618	-.1117	-.2126	-.3165	-.4253	-.5411	-.6665	-.8050

α, deg \ θ_c, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0	90.0
1.0	.7988	.6689	.5564	.4565	.3659	.2822	.2034	.1281	.0548	-.0175
2.0	.7713	.6445	.5341	.4358	.3464	.2635	.1853	.1104	.0373	-.0349
4.0	.7184	.5971	.4907	.3953	.3081	.2267	.1496	.0752	.0024	-.0699
6.0	.6679	.5516	.4488	.3560	.2705	.1905	.1142	.0402	-.0325	-.1051
8.0	.6192	.5077	.4080	.3175	.2337	.1547	.0790	.0054	-.0675	-.1405
10.0	.5733	.4653	.3685	.2799	.1975	.1193	.0441	-.0295	-.1026	-.1763
12.0	.5288	.4242	.3298	.2430	.1617	.0842	.0093	-.0644	-.1380	-.2126
15.0	.4647	.3647	.2735	.1888	.1088	.0320	-.0430	-.1172	-.1918	-.2679
20.0	.3643	.2701	.1828	.1005	.0217	-.0549	-.1307	-.2067	-.2840	-.3640
25.0	.2698	.1797	.0949	.0138	-.0650	-.1427	-.2204	-.2994	-.3809	-.4663
30.0	.1796	.0920	.0084	-.0727	-.1527	-.2326	-.3137	-.3972	-.4845	-.5774
35.0	.0920	.0057	-.0780	-.1604	-.2427	-.3262	-.4121	-.5019	-.5973	-.7002
40.0	.0058	-.0805	-.1655	-.2505	-.3366	-.4253	-.5179	-.6163	-.7224	-.8391
45.0	-.0804	-.1680	-.2556	-.3445	-.4361	-.5319	-.6337	-.7436	-.8645	-1.0000
50.0	-.1677	-.2579	-.3496	-.4442	-.5433	-.6488	-.7629	-.8886	-1.0298	-1.1918
55.0	-.2576	-.3520	-.4495	-.5519	-.6611	-.7795	-.9104	-1.0579	-1.2277	-1.4281
60.0	-.3515	-.4518	-.5573	-.6701	-.7930	-.9291	-1.0831	-1.2614	-1.4732	-1.7321
65.0	-.4512	-.5596	-.6758	-.8027	-.9440	-1.1046	-1.2916	-1.5152	-1.7911	-2.1445
70.0	-.5588	-.6780	-.8087	-.9547	-1.1215	-1.3168	-1.5522	-1.8456	-2.2268	-2.7475
75.0	-.6770	-.8109	-.9610	-1.1333	-1.3362	-1.5826	-1.8923	-2.3015	-2.8722	-3.7321
80.0	-.8095	-.9631	-1.1400	-1.3494	-1.6053	-1.9304	-2.3643	-2.9225	-3.9471	-5.6713
85.0	-.9613	-1.1419	-1.3565	-1.6201	-1.9574	-2.4121	-3.0702	-4.1266	-6.1341	-11.4301

TABLE V.- CONCLUDED

(f) L/D. Concluded.

$\beta_1 = 135^0$; $\beta_2 = 225^0$; $\beta = 0^0$

α, deg \ θ_c, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	15.2060	8.7303	6.1048	4.6788	3.1606	2.3563	1.8520	1.5018	1.2410	1.0365
2.0	12.0227	7.5724	5.5084	4.3143	2.9813	2.2430	1.7781	1.4471	1.1981	1.0012
4.0	8.4539	5.9712	4.5982	3.7249	2.6721	2.0543	1.6429	1.3454	1.1173	.9343
6.0	6.5035	4.9164	3.9360	3.2687	2.4146	1.8859	1.5220	1.2526	1.0424	.8715
8.0	5.2729	4.1685	3.4321	2.9047	2.1964	1.7380	1.4130	1.1674	.9727	.8123
10.0	4.4242	3.6096	3.0351	2.6070	2.0088	1.6067	1.3142	1.0888	.9075	.7563
12.0	3.8023	3.1753	2.7136	2.3585	1.8455	1.4891	1.2238	1.0159	.8462	.7032
15.0	3.1271	2.6790	2.3308	2.0534	1.6360	1.3336	1.1016	.9155	.7607	.6282
20.0	2.3868	2.0993	1.8641	1.6675	1.3557	1.1170	.9260	.7675	.6320	.5132
25.0	1.9022	1.6999	1.5279	1.3794	1.1344	.9386	.7764	.6379	.5166	.4030
30.0	1.5559	1.4038	1.2708	1.1531	.9528	.7871	.6456	.5219	.4111	.3100
35.0	1.2925	1.1724	1.0651	.9682	.7991	.6549	.5288	.4159	.3129	.2170
40.0	1.0826	.9841	.8943	.8121	.6654	.5370	.4221	.3173	.2198	.1276
45.0	.9090	.8255	.7484	.6766	.5463	.4296	.3231	.2239	.1302	.0400
50.0	.7610	.6884	.6203	.5563	.4380	.3300	.2294	.1342	.0426	-.0469
55.0	.6315	.5668	.5055	.4471	.3378	.2359	.1394	.0463	-.0444	-.1345
60.0	.5155	.4567	.4003	.3462	.2432	.1456	.0515	-.0405	-.1320	-.2243
65.0	.4096	.3550	.3023	.2512	.1526	.0576	-.0356	-.1252	-.2217	-.3175
70.0	.3109	.2596	.2093	.1602	.0644	-.0296	-.1232	-.2177	-.3148	-.4161
75.0	.2175	.1692	.1197	.0718	-.0229	-.1172	-.2177	-.3108	-.4132	-.5220
80.0	.1276	.0795	.0319	-.0156	-.1105	-.2066	-.3056	-.4090	-.5190	-.6379
85.0	.0397	-.0079	-.0554	-.1032	-.1998	-.2993	-.4035	-.5144	-.6346	-.7674

α, deg \ θ_c, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0	90.0
1.0	.8695	.7286	.6064	.4979	.3995	.3085	.2229	.1409	.0612	-.0175
2.0	.8395	.7024	.5829	.4764	.3795	.2895	.2046	.1232	.0437	-.0349
4.0	.7821	.6518	.5373	.4344	.3401	.2521	.1685	.0879	.0088	-.0699
6.0	.7277	.6034	.4933	.3927	.3017	.2154	.1329	.0528	-.0261	-.1051
8.0	.6760	.5570	.4508	.3540	.2643	.1792	.0975	.0179	-.0611	-.1405
10.0	.6266	.5124	.4097	.3154	.2272	.1434	.0624	-.0170	-.0962	-.1763
12.0	.5793	.4693	.3696	.2775	.1909	.1080	.0275	-.0520	-.1316	-.2126
15.0	.5118	.4072	.3114	.2221	.1372	.0554	-.0249	-.1046	-.1852	-.2679
20.0	.4067	.3092	.2184	.1323	.0494	-.0318	-.1125	-.1938	-.2772	-.3640
25.0	.3087	.2163	.1288	.0446	-.0378	-.1195	-.2019	-.2861	-.3737	-.4663
30.0	.2159	.1268	.0412	-.0425	-.1255	-.2090	-.2944	-.3932	-.4768	-.5774
35.0	.1264	.0393	-.0458	-.1302	-.2151	-.3019	-.3919	-.4869	-.5889	-.7002
40.0	.0389	-.0477	-.1335	-.2199	-.3081	-.3997	-.4963	-.5999	-.7131	-.8391
45.0	-.0490	-.1353	-.2232	-.3131	-.4063	-.5046	-.6101	-.7254	-.8538	-1.0000
50.0	-.1357	-.2251	-.3165	-.4115	-.5117	-.6192	-.7362	-.8678	-1.0172	-1.1918
55.0	-.2254	-.3184	-.4151	-.5172	-.6269	-.7469	-.8807	-1.0337	-1.2126	-1.4281
60.0	-.3188	-.4171	-.5210	-.6328	-.7553	-.8922	-1.0488	-1.2324	-1.4542	-1.7321
65.0	-.4174	-.5231	-.6370	-.7619	-.9018	-1.0621	-1.2506	-1.4790	-1.7663	-2.1445
70.0	-.5234	-.6392	-.7664	-.9092	-1.0732	-1.2665	-1.5017	-1.7988	-2.1924	-2.7475
75.0	-.6395	-.7688	-.9143	-1.0817	-1.2796	-1.5213	-1.8291	-2.2373	-2.8203	-3.7321
80.0	-.7691	-.9169	-1.0875	-1.2897	-1.5374	-1.8534	-2.2776	-2.8879	-3.8584	-5.6713
85.0	-.9172	-1.0905	-1.2964	-1.5496	-1.8739	-2.3119	-2.9474	-3.9732	-5.9479	-11.430

$\beta_1 = 150^0$; $\beta_2 = 210^0$; $\beta = 0^0$

α, deg \ θ_c, deg	2.5	5.0	7.5	10.0	15.0	20.0	25.0	30.0	35.0	40.0
1.0	15.8271	9.1578	6.4250	4.9334	3.3394	2.4924	1.9606	1.5908	1.3151	1.0988
2.0	12.3913	7.8830	5.7629	4.5271	3.1394	2.3721	1.8790	1.5309	1.2687	1.0611
4.0	8.6265	6.1559	4.7699	3.8801	2.7985	2.1589	1.7309	1.4203	1.1816	.9896
6.0	6.6032	5.0388	4.0597	3.3871	2.5180	1.9754	1.5995	1.3201	1.1013	.9229
8.0	5.3378	4.2556	3.5255	2.9980	2.2828	1.8155	1.4820	1.2287	1.0270	.8604
10.0	4.4698	3.6748	3.1082	2.6826	2.0821	1.6746	1.3761	1.1448	.9579	.8015
12.0	3.8362	3.2261	2.7726	2.4211	1.9086	1.5493	1.2799	1.0674	.8932	.7457
15.0	3.1505	2.7148	2.3752	2.1021	1.6876	1.3847	1.1504	.9613	.8033	.6674
20.0	2.4012	2.1232	1.8943	1.7019	1.3945	1.1572	.9659	.8062	.6690	.5480
25.0	1.9120	1.7168	1.5500	1.4053	1.1650	.9715	.8101	.6715	.5494	.4396
30.0	1.5631	1.4166	1.2879	1.1735	.9779	.8149	.6747	.5517	.4409	.3391
35.0	1.2981	1.1826	1.0789	.9850	.8203	.6791	.5548	.4429	.3403	.2445
40.0	1.0871	.9924	.9059	.8263	.6838	.5585	.4457	.3423	.2456	.1538
45.0	.9128	.8326	.7583	.6890	.5627	.4491	.3448	.2474	.1549	.0655
50.0	.7643	.6946	.6291	.5674	.4529	.3480	.2499	.1566	.0666	-.0218
55.0	.6344	.5723	.5134	.4572	.3516	.2528	.1589	.0683	-.0207	-.1094
60.0	.5182	.4617	.4074	.3555	.2562	.1618	.0705	-.0191	-.1084	-.1987
65.0	.4120	.3597	.3091	.2599	.1650	.0733	-.0168	-.1067	-.1976	-.2912
70.0	.3132	.2639	.2158	.1686	.0765	-.0141	-.1044	-.1959	-.2901	-.3885
75.0	.2197	.1724	.1259	.0800	-.0109	-.1017	-.1936	-.2883	-.3873	-.4926
80.0	.1297	.0837	.0380	-.0075	-.0985	-.1908	-.2859	-.3854	-.4913	-.6061
85.0	.0418	-.0038	-.0493	-.0950	-.1876	-.2830	-.3829	-.4893	-.6047	-.7323

α, deg \ θ_c, deg	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0	90.0
1.0	.9222	.7731	.6437	.5288	.4245	.3281	.2374	.1505	.0660	-.0175
2.0	.8904	.7456	.6193	.5067	.4041	.3089	.2190	.1327	.0485	-.0349
4.0	.8298	.6927	.5721	.4636	.3641	.2711	.1827	.0973	.0135	-.0699
6.0	.7726	.6423	.5267	.4219	.3250	.2340	.1468	.0622	-.0214	-.1051
8.0	.7183	.5941	.4829	.3814	.2869	.1974	.1114	.0272	-.0563	-.1405
10.0	.6668	.5479	.4406	.3419	.2495	.1614	.0761	-.0077	-.0914	-.1763
12.0	.6175	.5034	.3996	.3034	.2127	.1258	.0411	-.0426	-.1268	-.2126
15.0	.5475	.4394	.3401	.2471	.1586	.0729	-.0112	-.0952	-.1804	-.2679
20.0	.4391	.3390	.2454	.1563	.0702	-.0144	-.0988	-.1843	-.2721	-.3640
25.0	.3387	.2444	.1546	.0679	-.0172	-.1020	-.1879	-.2762	-.3684	-.4663
30.0	.2440	.1537	.0663	-.0194	-.1048	-.1912	-.2800	-.3727	-.4711	-.5774
35.0	.1534	.0654	-.0210	-.1070	-.1940	-.2834	-.3767	-.4757	-.5826	-.7002
40.0	.0651	-.0219	-.1086	-.1963	-.2863	-.3903	-.4800	-.5876	-.7060	-.8391
45.0	-.0222	-.1096	-.1979	-.2886	-.3833	-.4838	-.5923	-.7116	-.8458	-1.0000
50.0	-.1098	-.1989	-.2903	-.3858	-.4871	-.5965	-.7169	-.8522	-1.0078	-1.1918
55.0	-.1991	-.2913	-.3876	-.4898	-.6001	-.7216	-.8582	-1.0153	-1.2012	-1.4281
60.0	-.2916	-.3887	-.4917	-.6030	-.7256	-.8635	-1.0223	-1.2103	-1.4400	-1.7321
65.0	-.3890	-.4928	-.6051	-.7288	-.8681	-1.0286	-1.2187	-1.4514	-1.7476	-2.1445
70.0	-.4931	-.6063	-.7311	-.8717	-1.0339	-1.2263	-1.4620	-1.7626	-2.1663	-2.7475
75.0	-.6066	-.7325	-.8744	-1.0392	-1.2327	-1.4714	-1.7765	-2.1872	-2.7807	-3.7321
80.0	-.7329	-.8759	-1.0413	-1.2378	-1.4794	-1.7888	-2.2064	-2.8124	-3.7899	-5.6713
85.0	-.8764	-1.0431	-1.2415	-1.4858	-1.7992	-2.2235	-2.8415	-3.8447	-5.7991	-11.4301

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