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Bistatic Radar Cross Sections of Horizontally Oriented Chaff

Peyton Z. Peebles, Jr.

March 1984

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20. ABSTRACT (Continue on reverse side if necessary and identify by block number)
Bistatic Radar Cross sections are determined for scattering from a cloud of randomly positioned resonant dipoles (chaff). Dipoles are assumed to be horizontally oriented with axes randomly oriented in the horizontal plane. The cloud is arbitrarily located relative to an illuminating source having an arbitrary (elliptical) polarization. Cloud cross section is found for an arbitrarily located receiver that views the cloud with an antenna of arbitrary polarization. A cross section applicable to the receiver's orthogonal polarization is also found.

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1. INTRODUCTION

In earlier work[1,2] bistatic radar cross sections were determined for scattering from a cloud of randomly positioned resonant dipoles (chaff) having axes randomly and uniformly distributed in direction over a sphere. In this paper we again consider scattering from a cloud of randomly positioned dipoles, but extend the earlier work to the case where dipole axes all lie in a horizontal plane with random and uniform distribution of directions within the plane. For some practical chaff the horizontal distribution is more realistic than the spherical distribution.

The geometry applicable to a typical dipole is shown in figure 1. The axis of the dipole has its midpoint at D, the origin of coordinate system x', y',z'. Point D is in the coordinate frame x,y,z with spherical coordinates (r_1, θ_1, ϕ_1). A transmitter at point T radiates an arbitrarily polarized wave toward D. A receiver at point R, located at (r_2, θ_2, ϕ_2) in spherical coordinates within the x',y',z' frame, receives bistatic scattering from the dipole. The receiver is presumed to have a preferred, but arbitrary, polarization that can be different than that of the transmitter. Axes of the x',y',z' frame are parallel, respectively, to those of the x,y,z frame. The axis of the dipole is assumed to lie in the x',y' plane and form an angle ϕ_d from the x' axis. The angle ϕ_d is assumed random with uniform distribution on $(0, 2\pi)$.

More generally, for fixed points T and R, scattering at R is due to many dipoles in a cloud. These dipoles are assumed to be distributed randomly and uniformly in position so that the cross sections seen at point R become the cross sections of a single dipole multiplied by N, the number of common dipoles illuminated by T and viewed by the receiver at R.[1,2] Other assumptions leading to this result are given in earlier work.[1,2,*] Thus, only a single dipole requires analysis.

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[1] Peebles, Peyton Z., Jr., Bistatic Radar Cross Sections of Chaff, IEEE Trans. Aerosp. Electron. Syst., AES-20, No. 2 (March 1984).

[2] Peebles, Peyton Z., Jr., Bistatic Radar Cross Sections of Chaff, University of Florida, Electronic Communications Laboratory, prepared the report for Harry Diamond Laboratories, HDL-CR-83-107-6 (June 1983).

[*] Mainly, r_1 and r_2 are large enough that they have approximately the same values for all dipoles of interest (those in the common volume of intersection of transmit and receive antenna patterns).

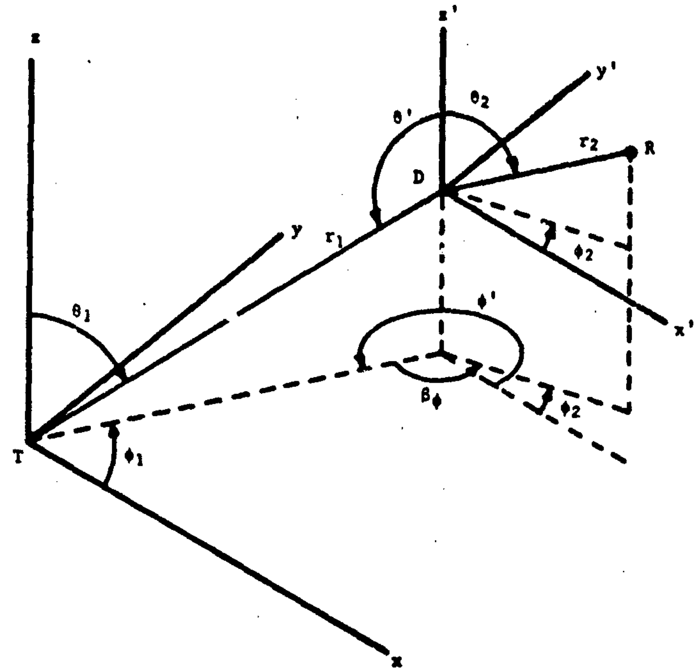

Figure 1. Geometry of bistatic scattering. A transmitter is located at point T, a receiver is at R and the scattering dipole is at point D.

2. ANALYSIS

Unfortunately, for the planar dipole distribution there seems to be no simple way to separate dipole scattering from transmit-receive station geometry, as was done in earlier work[1] using the scattering plane approach for a spherical dipole distribution. Because of this fact a direct approach to analysis is indicated. As a consequence, the resulting cross-section formulas are somewhat more cumbersome than for the spherical distribution, but can still be obtained.

2.1 General Equations

Consider first a very thin highly conducting dipole of total phycical length L, having its wire axis pointing in the direction (θ_d, ϕ_d) in spherical coordinates. It is helpful to think of the dipole as located at point D in figure 1. Let P be an arbitrary point at (r,θ,ϕ) from the dipole in spherical coordinates. If the dipole radiates due to excitation by a terminal current

[1] Peebles, Peyton Z., Jr., Bistatic Radar Cross Sections of Chaff, IEEE Trans. Aerosp. Electron. Syst., AES-20, No. 2 (March 1984).

I_T, the electric field components E_θ and E_ϕ in directions θ and ϕ at P are known.[3] In matrix notation they may be written as

$$\begin{bmatrix} E_\theta \\ E_\phi \end{bmatrix} = \frac{-j\eta\, e^{j[\omega t-(2\pi r/\lambda)]}}{2\lambda r} \begin{bmatrix} h_\theta \\ h_\phi \end{bmatrix} I_T \quad , \tag{1}$$

where η is the intrinsic impedance of the medium ($\eta = 120\pi$ for free space), $j = \sqrt{-1}$, ω is angular frequency, λ is wavelength, t is time, and

$$\begin{bmatrix} h_\theta \\ h_\phi \end{bmatrix} = A \begin{bmatrix} \cos\theta \sin\theta_d \cos(\phi - \phi_d) - \sin\theta \cos\theta_d \\ \sin\theta_d \sin(\phi_d - \phi) \end{bmatrix} , \tag{2}$$

$$A = \frac{(\lambda/\pi)}{\sin(\pi L/\lambda)} \cdot \frac{\cos\left[\frac{\pi L}{\lambda}\cos\psi\right] - \cos(\pi L/\lambda)}{\sin^2\psi} \quad , \tag{3}$$

$$\cos\psi = \cos\theta \cos\theta_d + \sin\theta \sin\theta_d \cos(\phi - \phi_d) \ . \tag{4}$$

Here h_θ and h_ϕ are the effective lengths of the dipole evaluated in the direction (θ, ϕ).

The current I_T that excites the fields of equation (1) is induced by fields at D that are presumed to be due to a source in a direction possibly different from that of point P (actually due to the transmitter at T in figure 1). If (θ', ϕ') is the direction of the source, the terminal current becomes

$$I_T = \frac{1}{Z_{rad}} \begin{bmatrix} h_{\theta'} & h_{\phi'} \end{bmatrix} \begin{bmatrix} E_{\theta'} \\ E_{\phi'} \end{bmatrix} \quad , \tag{5}$$

where Z_{rad} is the dipole's radiation impedance, $E_{\theta'}$ and $E_{\phi'}$ are field components at the dipole in directions θ' and ϕ', respectively, and $h_{\theta'}$ and $h_{\phi'}$ are equal to h_θ and h_ϕ of equation (2) evaluated for $\theta = \theta'$, $\phi = \phi'$.

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[3] Cross, J. L., Response of Arrays to Stochastic Fields, Ph.D. dissertation, University of Florida (1969).

2.2 Special Equations

For the problem at hand, θ' and ϕ' define the location of the transmitter relative to the dipole in figure 1, while θ and ϕ define the receiver's location. Thus, we set $\theta = \theta_2$, $\phi = \phi_2$, $E_\theta = E_{\theta_2}$, $E_\phi = E_{\phi_2}$, $\theta' = \pi - \theta_1$, $\phi' = \pi + \phi_1$, $E_{\theta'} = E_{\theta_1}$, and $E_{\phi'} = -E_{\phi_1}$ in the general equations. Here we define E_{θ_1} and E_{ϕ_1} as electric field components at D in directions θ_1 and ϕ_1, respectively, due to the transmitter at T. By using the additional fact that $\theta_d = \pi/2$ for the dipoles of interest here, we substitute equation (5) into (1) to obtain

$$\begin{bmatrix} E_{\theta_2} \\ E_{\phi_2} \end{bmatrix} = \begin{bmatrix} d_{11} & d_{12} \\ d_{21} & d_{22} \end{bmatrix} \begin{bmatrix} E_{\theta_1} \\ E_{\phi_1} \end{bmatrix} B e^{j\omega t} \quad , \tag{6}$$

where

$$B \triangleq \frac{-j\eta \, e^{-j2\pi r_2/\lambda}}{2\lambda Z_{rad} \, r_2} \quad , \tag{7}$$

$$d_{11} = A_1 A_0 \cos\theta_1 \cos\theta_2 \cos(\phi_1 - \phi_d) \cos(\phi_2 - \phi_d) \quad , \tag{8a}$$

$$d_{12} = -A_1 A_0 \cos\theta_2 \sin(\phi_1 - \phi_d) \cos(\phi_2 - \phi_d) \quad , \tag{8b}$$

$$d_{21} = -A_1 A_0 \cos\theta_1 \cos(\phi_1 - \phi_d) \sin(\phi_2 - \phi_d) \quad , \tag{8c}$$

$$d_{22} = A_1 A_0 \sin(\phi_1 - \phi_d) \sin(\phi_2 - \phi_d) \quad , \tag{8d}$$

and

$$A_0 = \frac{\cos\left[\frac{\pi L}{\lambda}\cos\psi_1\right] - \cos\left(\frac{\pi L}{\lambda}\right)}{\sin^2\psi_1} \cdot \frac{\cos\left[\frac{\pi L}{\lambda}\cos\psi_2\right] - \cos\left(\frac{\pi L}{\lambda}\right)}{\sin^2\psi_2} \quad , \tag{9}$$

$$A_1 = (\lambda/\pi)^2/\sin^2(\pi L/\lambda) \quad , \tag{10}$$

with

$$\cos\psi_1 = -\sin\theta_1 \cos(\phi_1 - \phi_d) \quad , \tag{11}$$

$$\cos\psi_2 = \sin\theta_2 \cos(\phi_2 - \phi_d) \quad . \tag{12}$$

2.3 Cross Sections

We only briefly outline the development of cross section formulas because the procedures follow those in the earlier work.[1] The total received electric-field vector, denoted by $\vec{E}_2$, can be decomposed into two orthogonally polarized components $\vec{E}_{R_1}$ and $\vec{E}_{R_2}$ that have "amplitudes" E_{R_1} and E_{R_2}, respectively. $\vec{E}_{R_1}$ has the arbitrary polarization of the receiver that is determined by the receiver's field component ratio, Q_R.[1] The power in $\vec{E}_{R_1}$ is proportional to

$$|\vec{E}_{R_1}|^2 = (1 + |Q_R|^2)|E_{R_1}|^2 \quad . \tag{13}$$

Similarly, the power in the orthogonally polarized field component is proportional to

$$|\vec{E}_{R_2}|^2 = (1 + |Q_R|^2)|E_{R_2}|^2 \quad . \tag{14}$$

Furthermore,[1]

$$\begin{bmatrix} E_{R_1} \\ E_{R_2} \end{bmatrix} = \frac{1}{1 + |Q_R|^2} \begin{bmatrix} 1 & Q_R{}^* \\ -Q_R & 1 \end{bmatrix} \begin{bmatrix} E_{\theta_2} \\ E_{\phi_2} \end{bmatrix} , \tag{15}$$

where * represents complex conjugation.

In an analogous manner, the field components $E_{\theta 1}$ and $E_{\phi 1}$ are related to the transmitter's field component ratio, denoted as Q_T, by[1]

$$\begin{bmatrix} E_{\theta_1} \\ E_{\phi_1} \end{bmatrix} = \begin{bmatrix} 1 \\ Q_T \end{bmatrix} E_T \quad , \tag{16}$$

where E_T is the complex "amplitude" of the electric field vector, denoted by $\vec{E}_1$, incident on the dipole. By substituting equations (6) and (16) into (15) we have

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[1] Peebles, Peyton Z., Jr., Bistatic Radar Cross Sections of Chaff, IEEE Trans. Aerosp. Electron. Syst., AES-20, No. 2 (March 1984).

$$\begin{bmatrix} E_{R_1} \\ \\ E_{R_2} \end{bmatrix} = \frac{B\ e^{j\omega t}}{1 + |Q_R|^2} \begin{bmatrix} 1 & Q_R^* \\ \\ -Q_R & 1 \end{bmatrix} \begin{bmatrix} d_{11} & d_{12} \\ \\ d_{21} & d_{22} \end{bmatrix} \begin{bmatrix} 1 \\ \\ Q_T \end{bmatrix} E_T \quad . \tag{17}$$

Next, as in the earlier work,[1] we define average cross sections by

$$\bar{\sigma} = 4\pi r_2^2 E[|\vec{E}_{R_1}|^2]/|\vec{E}_1|^2 = \frac{4\pi r_2^2(1 + |Q_R|^2)E[|E_{R_1}|^2]}{(1 + |Q_T|^2)|E_T|^2} \quad , \tag{18}$$

$$\bar{\sigma}_x = 4\pi r_2^2 E[|\vec{E}_{R_2}|^2]/|\vec{E}_1|^2 = \frac{4\pi r_2^2(1 + |Q_R|^2)E[|E_{R_2}|^2]}{(1 + |Q_T|^2)|E_T|^2} \quad , \tag{19}$$

where $E[\cdot]$ represents the statistical expectation operation, and r_2 is assumed large. The second forms of equations (15) and (16) derive from the use of equations (13) and (14), and the fact that

$$|\vec{E}_1|^2 = (1 + |Q_T|^2)|E_T|^2 \ . \tag{20}$$

Solutions for $\bar{\sigma}$ and $\bar{\sigma}_x$ follow from solving equation (17) for E_{R_1} and E_{R_2} and substituting these quantities into equations (18) and (19). The expectations involved are each found to contain 16 terms of the form $d_{ij}d_{mn}^*$. Examination of these terms, using equation (8), shows that some terms are equal according to the following definitions:

1 Peebles, Peyton Z., Jr., Bistatic Radar Cross Sections of Chaff, IEEE Trans. Aerosp. Electron. Syst., AES-20, No. 2 (March 1984).

$$\left.\begin{aligned}
z_1 &\triangleq d_{11}d_{11}^* \ , \\
z_2 &\triangleq d_{11}d_{12}^* = d_{12}d_{11}^* \ , \\
z_3 &\triangleq d_{12}d_{12}^* \ , \\
z_4 &\triangleq d_{21}d_{21}^* \ , \\
z_5 &\triangleq d_{21}d_{22}^* = d_{22}d_{21}^* \ , \\
z_6 &\triangleq d_{22}d_{22}^* \ , \\
z_7 &\triangleq d_{11}d_{21}^* = d_{21}d_{11}^* \ , \\
z_8 &\triangleq d_{11}d_{22}^* = d_{12}d_{21}^* = d_{21}d_{12}^* + d_{22}d_{11}^* \ , \\
z_9 &\triangleq d_{12}d_{22}^* = d_{22}d_{12}^* \ .
\end{aligned}\right\} \tag{21}$$

The number of distinct parameters is therefore reduced from 16 to 9 which makes the solutions of equations (18) and (19) somewhat simpler. Note, however, that nine parameters are now required to define cross sections, whereas only four were necessary when dipoles are spherically distributed as in the earlier work.[1]

If parameters σ_i are defined according to

$$\sigma_i \triangleq 4\pi r_2^2 E[|B|^2 z_i] \ , \quad i = 1, 2, \ldots, 9 \ , \tag{22}$$

the solutions for the cross sections can be written as

$$\begin{aligned}
\bar{\sigma} = \frac{1}{(1 + |Q_T|^2)(1 + |Q_R|^2)} \Big\{ &[\sigma_1 + 2\sigma_2 \operatorname{Re}(Q_T) + \sigma_3 |Q_T|^2] \\
&+ 2 \operatorname{Re}(Q_R)[\sigma_7 + 2\sigma_8 \operatorname{Re}(Q_T) + \sigma_9 |Q_T|^2] \\
&+ |Q_R|^2 [\sigma_4 + 2\sigma_5 \operatorname{Re}(Q_T) + \sigma_6 |Q_T|^2] \Big\} \ ,
\end{aligned} \tag{23}$$

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[1] Peebles, Peyton Z., Jr., Bistatic Radar Cross Sections of Chaff, IEEE Trans. Aerosp. Electron. Syst., AES-20, No. 2 (March 1984).

$$\bar{\sigma}_x = \frac{1}{(1 + |Q_T|^2)(1 + |Q_R|^2)} \Big\{ [\sigma_4 + 2\sigma_5 \, \mathrm{Re}(Q_T) + \sigma_6 |Q_T|^2] - 2\,\mathrm{Re}(Q_R)[\sigma_7 + 2\sigma_8 \, \mathrm{Re}(Q_T) + \sigma_9 |Q_T|^2] + |Q_R|^2 [\sigma_1 + 2\sigma_2 \, \mathrm{Re}(Q_T) + \sigma_3 |Q_T|^2] \Big\} \quad . \tag{24}$$

Here Re[·] represents the real part of the bracketed quantity. Specific expressions for the parameters σ_i derive from equation (22) using equations (21) and (7). They are

$$\sigma_1/\lambda^2 = A_a \int_0^{2\pi} A_0^2 \cos^2 \phi_d \cos^2(\phi_d - \beta_\phi) d\phi_d \cos^2 \theta_1 \cos^2 \theta_2 \; , \tag{25a}$$

$$\sigma_2/\lambda^2 = A_a \int_0^{2\pi} A_0^2 \cos \phi_d \sin \phi_d \cos^2(\phi_d - \beta_\phi) d\phi_d \cos \theta_1 \cos^2 \theta_2 \; , \tag{25b}$$

$$\sigma_3/\lambda^2 = A_a \int_0^{2\pi} A_0^2 \sin^2 \phi_d \cos^2(\phi_d - \beta_\phi) d\phi_d \cos^2 \theta_2 \; , \tag{25c}$$

$$\sigma_4/\lambda^2 = A_a \int_0^{2\pi} A_0^2 \cos^2 \phi_d \sin^2(\phi_d - \beta_\phi) d\phi_d \cos^2 \theta_1 \; , \tag{25d}$$

$$\sigma_5/\lambda^2 = A_a \int_0^{2\pi} A_0^2 \sin \phi_d \cos \phi_d \sin^2(\phi_d - \beta_\phi) d\phi_d \cos \theta_1 \; , \tag{25e}$$

$$\sigma_6/\lambda^2 = A_a \int_0^{2\pi} A_0^2 \sin^2 \phi_d \sin^2(\phi_d - \beta_\phi) d\phi_d \; , \tag{25f}$$

$$\sigma_7/\lambda^2 = -A_a \int_0^{2\pi} A_0^2 \cos^2 \phi_d \cos(\phi_d - \beta_\phi) \sin(\phi_d - \beta_\phi) d\phi_d \cos^2 \theta_1 \cos \theta_2 \; , \tag{25g}$$

$$\sigma_8/\lambda^2 = -A_a \int_0^{2\pi} A_0^2 \cos \phi_d \sin \phi_d \cos(\phi_d - \beta_\phi) \sin(\phi_d - \beta_\phi) d\phi_d \cos \theta_1 \cos \theta_2 \; , \tag{25h}$$

$$\sigma_9/\lambda^2 = -A_a \int_0^{2\pi} A_0^2 \sin^2 \phi_d \cos(\phi_d - \beta_\phi) \sin(\phi_d - \beta_\phi) d\phi_d \cos \theta_2 \; , \tag{25i}$$

where we define

$$A_a \triangleq [\eta/\sqrt{2}\, Z_{rad} \pi^2 \sin^2 (\pi L/\lambda)]^2 \; , \tag{26}$$

$$\beta_\phi \triangleq \pi + \phi_2 - \phi_1 \; . \tag{27}$$

2.4 Coefficient Evaluation

To use equations (23) or (24) the coefficients of (25) must be evaluated. Because of the complexity of the integrands, mainly due to A_0 of (9), closed solutions for the integrals were not obtained. Solutions were obtained, however, using a digital computer. Coefficients depend on the three variables θ_1, θ_2, and β_ϕ, once a particular relative dipole length is chosen (L/λ sets Z_{rad}, see the earlier paper[1]). The symmetry of (25) as a function of θ_1 or θ_2 can be analytically determined. Symmetry of (25) with β_ϕ was determined by computer. table 1 gives a summary of results.

TABLE 1. SYMMETRY OF COEFFICIENTS WITH VARIATIONS IN θ_1, θ_2, and β_ϕ

i in σ_i	Symmetry† of σ_i about			
	$\theta_1 = \pi/2$	$\theta_2 = \pi/2$	$\beta_\phi = 0$	$\beta_\phi = \pi/2$
1	E	E	E	E
2	0	E	0	0
3	E	E	E	E
4	E	E	E	E
5	0	E	0	0
6	E	E	E	E
7	E	0	0	0
8	0	0	E	E
9	E	0	0	0

† E = even, 0 = odd

A consequence of the results shown in table I is that parameters σ_i need only be evaluated for each of the three variables θ_1, θ_2, and β_ϕ over a 90-degree range; we choose the ranges $0 \leq \theta_1 \leq \pi/2$, $0 \leq \theta_2 \leq \pi/2$, and $0 \leq \beta_\phi \leq \pi/2$. Tables 2, 3, and 4 give the computed results for half-wave ($L = \lambda/2$), full-wave ($L = \lambda$), and three halves-wave ($L = 3\lambda/2$) dipoles, respectively.

Several checks were made to verify the correctness of the computed data. For example, the backscatter point for horizontal transmit and receive polar-

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1 Peebles, Peyton Z., Jr., Bistatic Radar Cross Sections of Chaff, IEEE Trans. Aerosp. Electron. Syst., AES-20, No. 2 (March 1984).

izations with $\theta_1 = \pi/2$ and $\theta_2 = \pi/2$ can be solved analytically with $L = \lambda/2$. In this case only σ_6 is nonzero. The average backscatter cross section was found by Bloch, Hammermesh, and Phillips[4] to be $\bar{\sigma} = 0.289\lambda^2$. Solution of $\bar{\sigma}$ as given in equation (23) gives $\bar{\sigma} = \sigma_6 = 0.2797\lambda^2$ where an integral given by Bloch et al.[4] was used. The computed data give $\bar{\sigma} = \sigma_6 = 0.2795\lambda^2$ for an error of about 0.072 percent.

3. CROSS SECTIONS FOR SPECIAL CASES

Cross sections, as obtained from equation (23), can be obtained for a number of special cases of transmit and receive polarizations. We shall use subscripts on $\bar{\sigma}$ to indicate polarizations involved. The first subscript indicates the transmitter's polarization while the second applies to the wave's polarization at the receiver. We use V and H to represent linear polarizations where electric-field components are only vertical (θ_1 or θ_2 directions) and horizontal (ϕ_1 or ϕ_2 directions). Thus $\bar{\sigma}_{VH}$ corresponds to cross section as seen by the receiver when the transmitter transmits linear polarization only in the θ_1 (or V) direction and the receiver responds only to the linear field component in the ϕ_2 (or H) direction.

In an analogous manner O is used to represent circular polarization (sense, left and right, will be seen to be irrelevant). Linear polarizations tilted 45 degrees from the ϕ direction (ϕ_1 or ϕ_2) are denoted by /, while the opposite tilt for −45 degrees is denoted by subscript \.

3.1 Vertical and Horizontal Polarizations

To evaluate $\bar{\sigma}_{VV}$ the proper values of Q_T and Q_R are both zero from the earlier work.[1] By use of equation (23) we have

$$\bar{\sigma}_{VV} = \sigma_1 . \tag{28}$$

For $\bar{\sigma}_{HH}$ we use $Q_T = \infty$ and $Q_R = \infty$ to obtain

$$\bar{\sigma}_{HH} = \sigma_6 . \tag{29}$$

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[1] Peebles, Peyton Z., Jr., Bistatic Radar Cross Sections of Chaff, IEEE Trans. Aerosp. Electron. Syst., AES-20, No. 2 (March 1984).

[4] Bloch, F., M. Hammermesh, and M. Phillips, Return Cross Sections from Random Oriented Resonant Half-Wave Length Chaff, Harvard University, Radio Research Laboratory, Technical Memorandum 411-TM-127 (June 19, 1944).

For $\bar{\sigma}_{HV}$, $Q_T = \infty$, $Q_R = 0$, and

$$\bar{\sigma}_{HV} = \sigma_3 \quad . \tag{30}$$

Similarly,

$$\bar{\sigma}_{VH} = \sigma_4 \quad . \tag{31}$$

In these four simple cases only one of the parameters σ_i is needed to determine cross section. We note that $\bar{\sigma}_{VH} \neq \bar{\sigma}_{HV}$ in general.

3.2 Circular Polarizations

For circular polarizations we have $Q_T = \pm j$ and $Q_R = \pm j$ from the earlier paper.[1] Choice of sign determines rotation sense. Since $\mathrm{Re}(Q_T) = 0$ and $\mathrm{Re}(Q_R) = 0$ while $|Q_T|^2 = 1$ and $|Q_R|^2 = 1$, regardless of sense, equation (23) readily gives

$$\bar{\sigma}_{00} = (\sigma_1 + \sigma_3 + \sigma_4 + \sigma_6)/4. \tag{32}$$

Thus, the cross section seen by the receiver does not depend on the senses of either receiver or transmitter circular polarizations. This fact was also found earlier to be true for spherically distributed dipoles.[1]

3.3 Tilted Linear Polarizations

When the linear polarization is tilted 45 degrees (/notation) or -45 degrees (\notation) from the appropriate ϕ direction (ϕ_1 or ϕ_2) the proper values of Q (Q_T or Q_R) are 1 or -1, respectively. On substituting these values into (23) we obtain

$$\sigma_{//} = [(\sigma_1 + 2\sigma_2 + \sigma_3) + 2(\sigma_7 + 2\sigma_8 + \sigma_9) + (\sigma_4 + 2\sigma_5 + \sigma_6)]/4 \ , \tag{33}$$

$$\sigma_{/\backslash} = [(\sigma_1 + 2\sigma_2 + \sigma_3) - 2(\sigma_7 + 2\sigma_8 + \sigma_9) + (\sigma_4 + 2\sigma_5 + \sigma_6)]/4 \ , \tag{34}$$

$$\sigma_{\backslash\backslash} = [(\sigma_1 - 2\sigma_2 + \sigma_3) - 2(\sigma_7 - 2\sigma_8 + \sigma_9) + (\sigma_4 - 2\sigma_5 + \sigma_6)]/4 \ , \tag{35}$$

$$\sigma_{\backslash/} = [(\sigma_1 - 2\sigma_2 + \sigma_3) + 2(\sigma_7 - 2\sigma_8 + \sigma_9) + (\sigma_4 - 2\sigma_5 + \sigma_6)]/4 \ . \tag{36}$$

We see that these linear polarization combinations require all nine parameters σ_i.

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Peebles, Peyton Z., Jr., Bistatic Radar Cross Sections of Chaff, IEEE Trans. Aerosp. Electron. Syst., AES-20, No. 2 (March 1984).

By solving equations (33) through (36) we may solve for σ_8:

$$\sigma_8 = [(\sigma_{//} - \sigma_{/\backslash})/4] + [(\sigma_{\backslash\backslash} - \sigma_{\backslash /})/4] \quad . \tag{37}$$

Here σ_8 is somewhat analogous to σ_Δ in the earlier paper.[1]

3.4 Other Combinations of Linear Polarizations

By proceeding in the same manner for various combinations of vertical, horizontal, and 45-degree tilted linear polarizations we have

$$\sigma_{V/} = (\sigma_1 + 2\sigma_7 + \sigma_4)/2 \quad , \tag{38}$$

$$\sigma_{V\backslash} = (\sigma_1 - 2\sigma_7 + \sigma_4)/2 \quad , \tag{39}$$

$$\sigma_{/V} = (\sigma_1 + 2\sigma_2 + \sigma_3)/2 \quad , \tag{40}$$

$$\sigma_{\backslash V} = (\sigma_1 - 2\sigma_2 + \sigma_3)/2 \quad , \tag{41}$$

$$\sigma_{H/} = (\sigma_3 + 2\sigma_9 + \sigma_6)/2 \quad , \tag{42}$$

$$\sigma_{H\backslash} = (\sigma_3 - 2\sigma_9 + \sigma_6)/2 \quad , \tag{43}$$

$$\sigma_{/H} = (\sigma_4 + 2\sigma_5 + \sigma_6)/2 \quad , \tag{44}$$

$$\sigma_{\backslash H} = (\sigma_4 - 2\sigma_5 + \sigma_6)/2 \quad . \tag{45}$$

One of the advantages of developing equations (38) through (45) is that all remaining parameters σ_i can be derived as follows:

$$\sigma_2 = (\sigma_{/V} - \sigma_{\backslash V})/2 \quad , \tag{46}$$

$$\sigma_5 = (\sigma_{/H} - \sigma_{\backslash H})/2 \quad , \tag{47}$$

$$\sigma_7 = (\sigma_{V/} - \sigma_{V\backslash})/2 \quad , \tag{48}$$

$$\sigma_9 = (\sigma_{H/} - \sigma_{H\backslash})/2 \quad . \tag{49}$$

4. SUMMARY

An analysis has been given for bistatic radar scattering from a chaff cloud consisting of resonant dipoles randomly positioned in space in a uniform manner. Dipole axes were assumed to lie in a horizontal plane with random,

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[1] Peebles, Peyton Z., Jr., Bistatic Radar Cross Sections of Chaff, IEEE Trans. Aerosp. Electron. Syst., AES-20, No. 2 (March 1984).

uniformly distributed orientation angles within the horizontal plane. The chaff cloud is illuminated by a source having arbitrary polarization and arbitrary location relative to the cloud. The average bistatic cross section seen by a receiver of arbitrary location and arbitrary polarization was found and is given by equation (23). The cross section seen by the receiver in the orthogonal receiver polarization is given by equation (24). Both equations (23) and (24) apply to a single dipole. Cloud cross sections result from multiplication of equations (23) or (24) by N, the number of dipoles illuminated by the transmitter and viewed in common by the receiver.

Solutions of equations (23) and (24) require (1) specification of transmit and receive polarizations by defining values of Q_T and Q_R according to examples given, or from the earlier paper[1] in general; (2) specification of geometry parameters θ_1, θ_2, and β_ϕ (figure 1); (3) specification of resonant dipole length ($L = \lambda/2$, λ, or $3\lambda/2$ only); (4) determining the cross section parameters σ_i/λ^2 needed from tables 2, 3, or 4 using table 1--depending on choices of Q_T and Q_R some of the σ_i may not be required; and (5) computation of equations (23) or (24). The numerical results obtained will equal $\bar{\sigma}/\lambda^2$ or $\bar{\sigma}_x/\lambda^2$. Actual cross sections per dipole require λ be specified.

Equation (23) was used to develop cross sections in section 3 for several specific transmit/receive polarization combinations of linear, tilted linear, and circular polarizations.

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[1] Peebles, Peyton Z., Jr., Bistatic Radar Cross Sections of Chaff, IEEE Trans. Aerosp. Electron. Syst., AES-20, No. 2 (March 1984).

TABLE 2. PARAMETERS σ_i, $i = 1, 2, \ldots, 9$, NORMALIZED TO λ^2 FOR SCATTERING FROM A HALF-WAVELENGTH DIPOLE ($L = \lambda/2$). ANGLES θ_1, θ_2, AND β_ϕ SHOWN IN DEGREES.

θ_1	θ_2	β_ϕ	σ_1/λ^2	σ_2/λ^2	σ_3/λ^2	σ_4/λ^2	σ_5/λ^2	σ_6/λ^2	σ_7/λ^2	σ_8/λ^2	σ_9/λ^2
0.0	0.0	0.0	0.3226	0.0000	0.1075	0.1075	-0.0000	0.3226	-0.0000	-0.1075	0.0000
0.0	0.0	10.0	0.3161	0.0368	0.1140	0.1140	-0.0368	0.3161	0.0368	-0.1010	-0.0368
0.0	0.0	20.0	0.2974	0.0691	0.1327	0.1327	-0.0691	0.2974	0.0691	-0.0824	-0.0691
0.0	0.0	30.0	0.2688	0.0931	0.1613	0.1613	-0.09[illegible]	0.2688	0.0931	-0.0538	-0.0931
0.0	0.0	40.0	0.2337	0.1059	0.1964	0.1964	-0.1059	0.2337	0.1059	-0.0187	-0.1059
0.0	0.0	50.0	0.1964	0.1059	0.2337	0.2337	-0.1059	0.1964	0.1059	0.0187	-0.1059
0.0	0.0	60.0	0.1613	0.0931	0.2688	0.2688	-0.0931	0.1613	0.0931	0.0538	-0.0931
0.0	0.0	70.0	0.1327	0.0691	0.2974	0.2974	-0.0691	0.1327	0.0691	0.0824	-0.0691
0.0	0.0	80.0	0.1140	0.0368	0.3161	0.3161	-0.0368	0.1140	0.0368	0.1010	-0.0368
0.0	0.0	90.0	0.1075	-0.0000	0.3226	0.3226	0.0000	0.1075	-0.0000	0.1075	0.0000
0.0	15.0	0.0	0.2932	0.0000	0.0988	0.1058	-0.0000	0.3209	-0.0000	-0.1022	0.0000
0.0	15.0	10.0	0.2873	0.0332	0.1046	0.1123	-0.0368	0.3144	0.0350	-0.0961	-0.0350
0.0	15.0	20.0	0.2704	0.0625	0.1215	0.1310	-0.0691	0.2957	0.0657	-0.0783	-0.0657
0.0	15.0	30.0	0.2446	0.0842	0.1474	0.1596	-0.0931	0.2671	0.0885	-0.0511	-0.0885
0.0	15.0	40.0	0.2129	0.0957	0.1791	0.1947	-0.1059	0.2320	0.1007	-0.0178	-0.1007
0.0	15.0	50.0	0.1791	0.0957	0.2129	0.2320	-0.1059	0.1947	0.1007	0.0178	-0.1007
0.0	15.0	60.0	0.1474	0.0842	0.2446	0.2671	-0.0931	0.1596	0.0885	0.0511	-0.0835
0.0	15.0	70.0	0.1215	0.0625	0.2704	0.2957	-0.0691	0.1310	0.0657	0.0783	-0.0657
0.0	15.0	80.0	0.1046	0.0332	0.2873	0.3144	-0.0368	0.1123	0.0350	0.0961	-0.0350
0.0	15.0	90.0	0.0988	-0.0000	0.2932	0.3209	0.0000	0.1058	-0.0000	0.1022	0.0000
0.0	30.0	0.0	0.2194	0.0000	0.0761	0.1014	-0.0000	0.3164	-0.0000	-0.0878	0.0000
0.0	30.0	10.0	0.2151	0.0245	0.0804	0.1079	-0.0368	0.3099	0.0300	-0.0825	-0.0300
0.0	30.0	20.0	0.2026	0.0461	0.0928	0.1266	-0.0691	0.2912	0.0565	-0.0673	-0.0565
0.0	30.0	30.0	0.1835	0.0621	0.1119	0.1552	-0.0931	0.2626	0.0761	-0.0439	-0.0761
0.0	30.0	40.0	0.1602	0.0706	0.1353	0.1902	-0.1058	0.2276	0.0865	-0.0153	-0.0865
0.0	30.0	50.0	0.1353	0.0706	0.1602	0.2276	-0.1058	0.1902	0.0865	0.0153	-0.0865
0.0	30.0	60.0	0.1119	0.0621	0.1835	0.2626	-0.0931	0.1552	0.0761	0.0439	-0.0761
0.0	30.0	70.0	0.0928	0.0461	0.2026	0.2912	-0.0691	0.1266	0.0565	0.0673	-0.0565
0.0	30.0	80.0	0.0804	0.0245	0.2151	0.3099	-0.0368	0.1079	0.0300	0.0825	-0.0300
0.0	30.0	90.0	0.0761	-0.0000	0.2194	0.3164	0.0000	0.1014	-0.0000	0.0878	0.0000
0.0	45.0	0.0	0.1325	0.0000	0.0479	0.0957	-0.0000	0.3105	-0.0000	-0.0677	0.0000
0.0	45.0	10.0	0.1300	0.0145	0.0504	0.1022	-0.0367	0.3040	0.0231	-0.0636	-0.0231
0.0	45.0	20.0	0.1226	0.0272	0.0578	0.1208	-0.0690	0.2853	0.0435	-0.0518	-0.0435
0.0	45.0	30.0	0.1113	0.0367	0.0690	0.1494	-0.0930	0.2568	0.0586	-0.0338	-0.0586
0.0	45.0	40.0	0.0975	0.0417	0.0828	0.1844	-0.1057	0.2217	0.0667	-0.0118	-0.0667
0.0	45.0	50.0	0.0828	0.0417	0.0975	0.2217	-0.1057	0.1844	0.0667	0.0118	-0.0667
0.0	45.0	60.0	0.0690	0.0367	0.1113	0.2568	-0.0930	0.1494	0.0586	0.0338	-0.0586
0.0	45.0	70.0	0.0578	0.0272	0.1226	0.2853	-0.0690	0.1208	0.0435	0.0518	-0.0435
0.0	45.0	80.0	0.0504	0.0145	0.1300	0.3040	-0.0367	0.1022	0.0231	0.0636	-0.0231
0.0	45.0	90.0	0.0479	-0.0000	0.1325	0.3105	0.0000	0.0957	-0.0000	0.0677	0.0000
0.0	60.0	0.0	0.0600	0.0000	0.0226	0.0904	-0.0000	0.3047	-0.0000	-0.0452	0.0000
0.0	60.0	10.0	0.0588	0.0064	0.0237	0.0968	-0.0367	0.2983	0.0155	-0.0425	-0.0155
0.0	60.0	20.0	0.0556	0.0120	0.0270	0.1154	-0.0689	0.2797	0.0290	-0.0346	-0.0290
0.0	60.0	30.0	0.0506	0.0162	0.0319	0.1439	-0.0928	0.2511	0.0391	-0.0226	-0.0391
0.0	60.0	40.0	0.0445	0.0184	0.0380	0.1789	-0.1056	0.2162	0.0445	-0.0078	-0.0445
0.0	60.0	50.0	0.0380	0.0184	0.0445	0.2162	-0.1056	0.1789	0.0445	0.0078	-0.0445
0.0	60.0	60.0	0.0319	0.0162	0.0506	0.2511	-0.0928	0.1439	0.0391	0.0226	-0.0391
0.0	60.0	70.0	0.0270	0.0120	0.0556	0.2797	-0.0689	0.1154	0.0290	0.0346	-0.0290
0.0	60.0	80.0	0.0237	0.0064	0.0588	0.2983	-0.0367	0.0968	0.0155	0.0425	-0.0155
0.0	60.0	90.0	0.0226	-0.0000	0.0600	0.3047	0.0000	0.0904	-0.0000	0.0452	0.0000
0.0	75.0	0.0	0.0149	0.0000	0.0058	0.0866	-0.0000	0.3007	-0.0000	-0.0224	0.0000
0.0	75.0	10.0	0.0147	0.0016	0.0061	0.0931	-0.0366	0.2942	0.0077	-0.0211	-0.0077
0.0	75.0	20.0	0.0139	0.0029	0.0069	0.1117	-0.0608	0.2756	0.0144	-0.0172	-0.0144
0.0	75.0	30.0	0.0126	0.0040	0.0081	0.1401	-0.0927	0.2472	0.0194	-0.0112	-0.0194
0.0	75.0	40.0	0.0112	0.0045	0.0096	0.1751	-0.1054	0.2122	0.0221	-0.0039	-0.0221
0.0	75.0	50.0	0.0096	0.0045	0.0112	0.2122	-0.1054	0.1751	0.0221	0.0039	-0.0221
0.0	75.0	60.0	0.0081	0.0040	0.0126	0.2472	-0.0927	0.1401	0.0194	0.0112	-0.0194
0.0	75.0	70.0	0.0069	0.0029	0.0139	0.2756	-0.0688	0.1117	0.0144	0.0172	-0.0144
0.0	75.0	80.0	0.0061	0.0016	0.0147	0.2942	-0.0366	0.0931	0.0077	0.0211	-0.0077
0.0	75.0	90.0	0.0058	-0.0000	0.0149	0.3007	0.0000	0.0866	-0.0000	0.0224	0.0000
0.0	90.0	0.0	0.0000	0.0000	0.0000	0.0853	-0.0000	0.2992	0.0000	0.0000	-0.0000
0.0	90.0	10.0	0.0000	0.0000	0.0000	0.0918	-0.0366	0.2928	-0.0000	0.0000	0.0000
0.0	90.0	20.0	0.0000	0.0000	0.0000	0.1103	-0.0687	0.2742	-0.0000	0.0000	0.0000
0.0	90.0	30.0	0.0000	0.0000	0.0000	0.1388	-0.0926	0.2457	-0.0000	0.0000	0.0000
0.0	90.0	40.0	0.0000	0.0000	0.0000	0.1737	-0.1053	0.2108	-0.0000	0.0000	0.0000
0.0	90.0	50.0	0.0000	0.0000	0.0000	0.2108	-0.1053	0.1737	-0.0000	-0.0000	0.0000
0.0	90.0	60.0	0.0000	0.0000	0.0000	0.2457	-0.0926	0.1388	-0.0000	-0.0000	0.0000
0.0	90.0	70.0	0.0000	0.0000	0.0000	0.2742	-0.0687	0.1103	-0.0000	-0.0000	0.0000
0.0	90.0	80.0	0.0000	0.0000	0.0000	0.2928	-0.0366	0.0918	-0.0000	-0.0000	0.0000
0.0	90.0	90.0	0.0000	-0.0000	0.0000	0.2992	0.0000	0.0853	0.0000	-0.0000	-0.0000

Table 2 continued, part 2 of 7.

θ_1	θ_2	β_ϕ	σ_1/λ^2	σ_2/λ^2	σ_3/λ^2	σ_4/λ^2	σ_5/λ^2	σ_6/λ^2	σ_7/λ^2	σ_8/λ^2	σ_9/λ^2
15.0	0.0	0.0	0.2932	0.0000	0.1058	0.0988	-0.0000	0.3209	-0.0000	-0.1022	0.0000
15.0	0.0	10.0	0.2873	0.0350	0.1123	0.1046	-0.0350	0.3144	0.0332	-0.0961	-0.0358
15.0	0.0	20.0	0.2704	0.0657	0.1310	0.1215	-0.0657	0.2957	0.0625	-0.0783	-0.0591
15.0	0.0	30.0	0.2446	0.0885	0.1596	0.1474	-0.0885	0.2671	0.0842	-0.0511	-0.0931
15.0	0.0	40.0	0.2129	0.1007	0.1947	0.1791	-0.1007	0.2320	0.0957	-0.0178	-0.1059
15.0	0.0	50.0	0.1791	0.1007	0.2320	0.2129	-0.1007	0.1947	0.0957	0.0178	-0.1059
15.0	0.0	60.0	0.1474	0.0885	0.2671	0.2446	-0.0885	0.1596	0.0842	0.0511	-0.0931
15.0	0.0	70.0	0.1215	0.0657	0.2957	0.2704	-0.0657	0.1310	0.0625	0.0783	-0.0691
15.0	0.0	80.0	0.1046	0.0350	0.3144	0.2873	-0.0350	0.1123	0.0332	0.0961	-0.0358
15.0	0.0	90.0	0.0988	-0.0000	0.3209	0.2932	0.0000	0.1058	-0.0000	0.1022	0.0000
15.0	15.0	0.0	0.2665	0.0000	0.0972	0.0972	-0.0000	0.3192	-0.0000	-0.0972	0.0000
15.0	15.0	10.0	0.2612	0.0316	0.1031	0.1031	-0.0350	0.3127	0.0316	-0.0914	-0.0350
15.0	15.0	20.0	0.2459	0.0594	0.1200	0.1200	-0.0657	0.2941	0.0594	-0.0745	-0.0657
15.0	15.0	30.0	0.2225	0.0801	0.1458	0.1453	-0.0885	0.2655	0.0801	-0.0486	-0.0885
15.0	15.0	40.0	0.1939	0.0910	0.1776	0.1776	-0.1007	0.2304	0.0910	-0.0169	-0.1007
15.0	15.0	50.0	0.1633	0.0910	0.2113	0.2113	-0.1007	0.1930	0.0910	0.0169	-0.1007
15.0	15.0	60.0	0.1346	0.0801	0.2431	0.2431	-0.0885	0.1579	0.0801	0.0486	-0.0885
15.0	15.0	70.0	0.1113	0.0594	0.2689	0.2689	-0.0657	0.1293	0.0594	0.0745	-0.0657
15.0	15.0	80.0	0.0960	0.0316	0.2858	0.2838	-0.0350	0.1107	0.0316	0.0714	-0.0350
15.0	15.0	90.0	0.0907	-0.0000	0.2917	0.2917	0.0000	0.1042	-0.0000	0.0972	0.0000
15.0	30.0	0.0	0.1994	0.0000	0.0749	0.0932	-0.0000	0.3148	-0.0000	-0.0735	0.0000
15.0	30.0	10.0	0.1955	0.0233	0.0792	0.0991	-0.0350	0.3083	0.0272	-0.0735	-0.0301
15.0	30.0	20.0	0.1843	0.0438	0.0917	0.1159	-0.0657	0.2896	0.0511	-0.0640	-0.0565
15.0	30.0	30.0	0.1670	0.0590	0.1108	0.1418	-0.0885	0.2610	0.0683	-0.0418	-0.0761
15.0	30.0	40.0	0.1459	0.0671	0.1341	0.1735	-0.1007	0.2259	0.0782	-0.0145	-0.0865
15.0	30.0	50.0	0.1234	0.0671	0.1590	0.2073	-0.1006	0.1886	0.0782	0.0145	-0.0865
15.0	30.0	60.0	0.1022	0.0590	0.1824	0.2390	-0.0885	0.1535	0.0608	0.0418	-0.0761
15.0	30.0	70.0	0.0850	0.0438	0.2015	0.2648	-0.0657	0.1250	0.0310	0.0640	-0.0564
15.0	30.0	80.0	0.0738	0.0233	0.2139	0.2817	-0.0349	0.1063	0.0272	0.0735	-0.0300
15.0	30.0	90.0	0.0699	-0.0000	0.2182	0.2875	0.0000	0.0998	-0.0000	0.0735	0.0000
15.0	45.0	0.0	0.1205	0.0000	0.0471	0.0880	-0.0000	0.3059	-0.0000	-0.0644	0.0000
15.0	45.0	10.0	0.1182	0.0138	0.0497	0.0938	-0.0349	0.3024	0.0209	-0.0605	-0.0232
15.0	45.0	20.0	0.1115	0.0259	0.0571	0.1107	-0.0657	0.2858	0.0394	-0.0493	-0.0435
15.0	45.0	30.0	0.1013	0.0349	0.0683	0.1366	-0.0885	0.2552	0.0530	-0.0322	-0.0536
15.0	45.0	40.0	0.0888	0.0396	0.0822	0.1683	-0.1006	0.2201	0.0603	-0.0111	-0.0667
15.0	45.0	50.0	0.0755	0.0396	0.0968	0.2020	-0.1005	0.1828	0.0603	0.0112	-0.0666
15.0	45.0	60.0	0.0630	0.0348	0.1107	0.2336	-0.0884	0.1478	0.0530	0.0322	-0.0536
15.0	45.0	70.0	0.0529	0.0259	0.1219	0.2594	-0.0656	0.1193	0.0393	0.0493	-0.0435
15.0	45.0	80.0	0.0462	0.0138	0.1292	0.2763	-0.0349	0.1007	0.0209	0.0605	-0.0231
15.0	45.0	90.0	0.0439	-0.0000	0.1318	0.2821	0.0000	0.0942	-0.0000	0.0643	0.0000
15.0	60.0	0.0	0.0545	0.0000	0.0223	0.0831	-0.0000	0.3033	-0.0000	-0.0430	0.0000
15.0	60.0	10.0	0.0535	0.0061	0.0234	0.0889	-0.0349	0.2968	0.0140	-0.0404	-0.0155
15.0	60.0	20.0	0.0506	0.0114	0.0266	0.1058	-0.0656	0.2781	0.0263	-0.0329	-0.0291
15.0	60.0	30.0	0.0461	0.0154	0.0316	0.1316	-0.0883	0.2496	0.0354	-0.0215	-0.0392
15.0	60.0	40.0	0.0405	0.0175	0.0377	0.1633	-0.1004	0.2146	0.0402	-0.0074	-0.0445
15.0	60.0	50.0	0.0347	0.0175	0.0442	0.1969	-0.1004	0.1773	0.0402	0.0075	-0.0445
15.0	60.0	60.0	0.0292	0.0154	0.0503	0.2285	-0.0882	0.1424	0.0353	0.0215	-0.0391
15.0	60.0	70.0	0.0247	0.0114	0.0553	0.2543	-0.0655	0.1139	0.0262	0.0329	-0.0290
15.0	60.0	80.0	0.0217	0.0061	0.0585	0.2711	-0.0348	0.0953	0.0140	0.0403	-0.0154
15.0	60.0	90.0	0.0207	-0.0000	0.0596	0.2769	0.0000	0.0839	-0.0000	0.0429	0.0000
15.0	75.0	0.0	0.0136	0.0000	0.0057	0.0796	-0.0000	0.2993	-0.0000	-0.0213	0.0000
15.0	75.0	10.0	0.0133	0.0015	0.0060	0.0855	-0.0349	0.2928	0.0069	-0.0201	-0.0077
15.0	75.0	20.0	0.0126	0.0028	0.0068	0.1024	-0.0655	0.2741	0.0130	-0.0163	-0.0144
15.0	75.0	30.0	0.0115	0.0038	0.0080	0.1281	-0.0882	0.2456	0.0176	-0.0107	-0.0194
15.0	75.0	40.0	0.0102	0.0043	0.0095	0.1598	-0.1003	0.2107	0.0200	-0.0037	-0.0221
15.0	75.0	50.0	0.0087	0.0043	0.0111	0.1934	-0.1002	0.1735	0.0200	0.0037	-0.0221
15.0	75.0	60.0	0.0074	0.0038	0.0126	0.2249	-0.0881	0.1386	0.0175	0.0107	-0.0194
15.0	75.0	70.0	0.0063	0.0028	0.0133	0.2506	-0.0653	0.1102	0.0130	0.0163	-0.0144
15.0	75.0	80.0	0.0056	0.0015	0.0146	0.2674	-0.0348	0.0917	0.0069	0.0200	-0.0077
15.0	75.0	90.0	0.0053	-0.0000	0.0148	0.2732	0.0000	0.0832	-0.0000	0.0213	0.0000
15.0	90.0	0.0	0.0000	0.0000	0.0000	0.0784	-0.0000	0.2978	0.0000	0.0000	-0.0000
15.0	90.0	10.0	0.0000	0.0000	0.0000	0.0843	-0.0348	0.2913	-0.0000	0.0000	0.0000
15.0	90.0	20.0	0.0000	0.0000	0.0000	0.1011	-0.0655	0.2727	-0.0000	0.0000	0.0000
15.0	90.0	30.0	0.0000	0.0000	0.0000	0.1269	-0.0802	0.2442	-0.0000	0.0000	0.0000
15.0	90.0	40.0	0.0000	0.0000	0.0000	0.1585	-0.1002	0.2093	-0.0000	0.0000	0.0000
15.0	90.0	50.0	0.0000	0.0000	0.0000	0.1921	-0.1001	0.1721	-0.0000	-0.0000	0.0000
15.0	90.0	60.0	0.0000	0.0000	0.0000	0.2236	-0.0880	0.1373	-0.0000	-0.0000	0.0000
15.0	90.0	70.0	0.0000	0.0000	0.0000	0.2493	-0.0653	0.1009	-0.0000	-0.0000	0.0000
15.0	90.0	80.0	0.0000	0.0000	0.0000	0.2660	-0.0347	0.0903	-0.0000	-0.0000	0.0000
15.0	90.0	90.0	0.0000	-0.0000	0.0000	0.2718	0.0000	0.0839	0.0000	-0.0000	-0.0000

Table 2 continued, part 3 of 7.

θ_1	θ_2	β_ϕ	σ_1/λ^2	σ_2/λ^2	σ_3/λ^2	σ_4/λ^2	σ_5/λ^2	σ_6/λ^2	σ_7/λ^2	σ_8/λ^2	σ_9/λ^2
30.0	0.0	0.0	0.2174	0.0000	0.1014	0.0761	-0.0000	0.3164	-0.0000	-0.0878	0.0000
30.0	0.0	10.0	0.2151	0.0300	0.1079	0.0804	-0.0300	0.3099	0.0245	-0.0825	-0.0368
30.0	0.0	20.0	0.2026	0.0565	0.1266	0.0928	-0.0565	0.2912	0.0461	-0.0673	-0.0691
30.0	0.0	30.0	0.1835	0.0761	0.1552	0.1119	-0.0761	0.2626	0.0621	-0.0439	-0.0931
30.0	0.0	40.0	0.1602	0.0865	0.1702	0.1353	-0.0865	0.2276	0.0706	-0.0153	-0.1058
30.0	0.0	50.0	0.1353	0.0865	0.2276	0.1602	-0.0865	0.1902	0.0706	0.0153	-0.1058
30.0	0.0	60.0	0.1119	0.0761	0.2626	0.1835	-0.0761	0.1552	0.0621	0.0439	-0.0931
30.0	0.0	70.0	0.0928	0.0565	0.2712	0.2026	-0.0565	0.1266	0.0461	0.0673	-0.0691
30.0	0.0	80.0	0.0804	0.0300	0.3099	0.2151	-0.0300	0.1079	0.0245	0.0825	-0.0368
30.0	0.0	90.0	0.0761	-0.0000	0.3164	0.2194	0.0000	0.1014	-0.0000	0.0878	0.0000
30.0	15.0	0.0	0.1954	0.0000	0.0932	0.0749	-0.0000	0.3148	-0.0000	-0.0835	0.0000
30.0	15.0	10.0	0.1955	0.0272	0.0991	0.0792	-0.0301	0.3083	0.0233	-0.0785	-0.0350
30.0	15.0	20.0	0.1843	0.0511	0.1159	0.0917	-0.0565	0.2896	0.0438	-0.0640	-0.0657
30.0	15.0	30.0	0.1670	0.0688	0.1418	0.1108	-0.0761	0.2610	0.0590	-0.0418	-0.0885
30.0	15.0	40.0	0.1459	0.0782	0.1735	0.1341	-0.0865	0.2259	0.0671	-0.0145	-0.1007
30.0	15.0	50.0	0.1234	0.0782	0.2073	0.1590	-0.0865	0.1886	0.0671	0.0145	-0.1006
30.0	15.0	60.0	0.1022	0.0688	0.2390	0.1824	-0.0761	0.1535	0.0590	0.0418	-0.0885
30.0	15.0	70.0	0.0850	0.0510	0.2548	0.2015	-0.0564	0.1250	0.0438	0.0640	-0.0657
30.0	15.0	80.0	0.0738	0.0272	0.2817	0.2139	-0.0300	0.1063	0.0233	0.0785	-0.0349
30.0	15.0	90.0	0.0699	-0.0000	0.2875	0.2182	0.0000	0.0978	-0.0000	0.0835	0.0000
30.0	30.0	0.0	0.1493	0.0000	0.0718	0.0718	-0.0000	0.3105	-0.0000	-0.0718	0.0000
30.0	30.0	10.0	0.1464	0.0201	0.0762	0.0762	-0.0301	0.3040	0.0201	-0.0675	-0.0301
30.0	30.0	20.0	0.1381	0.0377	0.0886	0.0886	-0.0565	0.2853	0.0377	-0.0550	-0.0565
30.0	30.0	30.0	0.1253	0.0507	0.1077	0.1077	-0.0761	0.2566	0.0507	-0.0359	-0.0761
30.0	30.0	40.0	0.1097	0.0577	0.1311	0.1311	-0.0865	0.2215	0.0577	-0.0124	-0.0865
30.0	30.0	50.0	0.0[illegible]31	0.0576	0.1560	0.1560	-0.0865	0.1842	0.0576	0.0125	-0.0865
30.0	30.0	60.0	0.0776	0.0506	0.1794	0.1794	-0.0760	0.1492	0.0506	0.0359	-0.0760
30.0	30.0	70.0	0.0649	0.0376	0.1984	0.1984	-0.0564	0.1207	0.0376	0.0550	-0.0564
30.0	30.0	80.0	0.0566	0.0200	0.2108	0.2108	-0.0300	0.1021	0.0200	0.0674	-0.0300
30.0	30.0	90.0	0.0538	-0.0000	0.2151	0.2151	0.0000	0.0956	-0.0000	0.0717	0.0000
30.0	45.0	0.0	0.0902	0.0000	0.04[illegible]2	0.0678	-0.0000	0.3048	-0.0000	-0.0554	0.0000
30.0	45.0	10.0	0.0885	0.0119	0.0478	0.0722	-0.0301	0.2983	0.0155	-0.0520	-0.0232
30.0	45.0	20.0	0.0836	0.0223	0.0552	0.0847	-0.0565	0.2795	0.0291	-0.0424	-0.0436
30.0	45.0	30.0	0.0760	0.0300	0.0665	0.1038	-0.0761	0.2509	0.0391	-0.0276	-0.0587
30.0	45.0	40.0	0.0668	0.0341	0.0803	0.1272	-0.0864	0.2158	0.0444	-0.0095	-0.0667
30.0	45.0	50.0	0.0[illegible]70	0.0340	0.0[illegible]50	0.15[illegible]1	-0.0863	0.1785	0.0444	0.0097	-0.0666
30.0	45.0	60.0	0.0478	0.0299	0.1088	0.1753	-0.0758	0.1435	0.0390	0.0277	-0.0585
30.0	45.0	70.0	0.0404	0.0222	0.1200	0.1943	-0.0562	0.1151	0.0289	0.0423	-0.04[illegible]4
30.0	45.0	80.0	0.0355	0.0118	0.1273	0.2067	-0.0297	0.0966	0.0154	0.0519	-0.0231
30.0	45.0	90.0	0.0338	-0.0000	0.1298	0.2109	0.0000	0.0901	-0.0000	0.0552	0.0000
30.0	60.0	0.0	0.0409	0.0000	0.0214	0.0641	-0.0000	0.2993	-0.0000	-0.0370	0.0000
30.0	60.0	10.0	0.0401	0.0053	0.0225	0.0684	-0.0301	0.2928	0.0103	-0.0348	-0.0155
30.0	60.0	20.0	0.0379	0.0099	0.0258	0.0810	-0.0565	0.2740	0.0194	-0.0283	-0.0291
30.0	60.0	30.0	0.0346	0.0133	0.0308	0.1001	-0.0760	0.2454	0.0261	-0.0184	-0.0392
30.0	60.0	40.0	0.0305	0.0151	0.0369	0.1235	-0.0863	0.2103	0.0297	-0.0063	-0.0445
30.0	60.0	50.0	0.0262	0.0150	0.0434	0.1483	-0.0862	0.1731	0.0296	0.0065	-0.0444
30.0	60.0	60.0	0.0221	0.0132	0.0495	0.1715	-0.0757	0.1382	0.0260	0.0185	-0.0390
30.0	60.0	70.0	0.0188	0.0098	0.0544	0.1904	-0.0561	0.1099	0.0193	0.0283	-0.0289
30.0	60.0	80.0	0.0167	0.0052	0.0576	0.2027	-0.0298	0.0914	0.0102	0.0346	-0.0154
30.0	60.0	90.0	0.0159	-0.0000	0.0587	0.2070	0.0000	0.0850	-0.0000	0.0368	0.0[illegible]00
30.0	75.0	0.0	0.0102	0.0000	0.[illegible]055	0.0615	-0.0000	0.2954	-0.0000	-0.0184	0.0000
30.0	75.0	10.0	0.0100	0.0013	0.[illegible]058	0.0659	-0.0301	0.2889	0.0051	-0.0173	-0.0077
30.0	75.0	20.0	0.0075	0.0024	0.0066	0.0784	-0.0565	0.2701	0.0097	-0.0140	-0.0145
30.0	75.0	30.0	0.0086	0.0032	0.0078	0.0975	-0.0759	0.2415	0.0130	-0.0091	-0.0195
30.0	75.0	40.0	0.0076	0.0037	0.0093	0.1209	-0.0862	0.2064	0.0147	-0.0031	-0.0221
30.0	75.0	50.0	0.0066	0.0037	0.0109	0.1456	-0.0860	0.1693	0.0147	0.0032	-0.0221
30.0	75.0	60.0	0.0056	0.0032	0.0124	0.1688	-0.0755	0.1345	0.0129	0.0092	-0.0194
30.0	75.0	70.0	0.0048	0.0024	0.0136	0.1876	-0.0559	0.1062	0.0096	0.0140	-0.0143
30.0	75.0	80.0	0.0043	0.0013	0.0143	0.1999	-0.0277	0.0878	0.0051	0.0172	-0.0076
30.0	75.0	90.0	0.0041	-0.0000	0.0146	0.2041	0.0000	0.0815	-0.0000	0.0183	0.0000
30.0	90.0	0.0	0.0000	0.0000	0.0000	0.0606	-0.0000	0.2940	0.0000	0.0000	-0.0000
30.0	90.0	10.0	0.0000	0.0000	0.0000	0.0649	-0.0301	0.2875	-0.0000	0.0000	0.0000
30.0	90.0	20.0	0.0000	0.0000	0.0000	0.0774	-0.0564	0.2688	-0.0000	0.0000	0.0000
30.0	90.0	30.0	0.0000	0.0000	0.0000	0.0966	-0.0759	0.2401	-0.0000	0.0000	0.0000
30.0	90.0	40.0	0.0000	0.0000	0.0000	0.1199	-0.0861	0.2051	-0.0000	0.0000	0.0000
30.0	90.0	50.0	0.0000	0.0000	0.0000	0.1447	-0.0860	0.1679	-0.0000	-0.0000	0.0000
30.0	90.0	60.0	0.0000	0.0000	0.0000	0.1678	-0.0754	0.1332	-0.0000	-0.0000	0.0000
30.0	90.0	70.0	0.0000	0.0000	0.0000	0.1866	-0.0557	0.1050	-0.0000	-0.0000	0.0000
30.0	90.0	80.0	0.0000	0.0000	0.0000	0.1989	-0.0277	0.0866	-0.0000	-0.0000	0.0000
30.0	90.0	90.0	0.0000	-0.0000	0.0000	0.2031	0.0000	0.0802	0.0000	-0.0000	-0.0000

Table 2 continued, part 4 of 7.

θ_1	θ_2	β_ϕ	σ_1/λ^2	σ_2/λ^2	σ_3/λ^2	σ_4/λ^2	σ_5/λ^2	σ_6/λ^2	σ_7/λ^2	σ_8/λ^2	σ_9/λ^2
45.0	0.0	0.0	0.1325	0.0000	0.0957	0.0479	-0.0000	0.3105	-0.0000	-0.0677	0.0000
45.0	0.0	10.0	0.1300	0.0231	0.1022	0.0504	-0.0231	0.3040	0.0145	-0.0636	-0.0367
45.0	0.0	20.0	0.1226	0.0435	0.1208	0.0578	-0.0435	0.2853	0.0272	-0.0518	-0.0690
43.0	0.0	30.0	0.1113	0.0586	0.1494	0.0690	-0.0586	0.2568	0.0367	-0.0338	-0.0930
45.0	0.0	40.0	0.0975	0.0667	0.1844	0.0828	-0.0667	0.2217	0.0417	-0.0118	-0.1057
45.0	0.0	50.0	0.0828	0.0667	0.2217	0.0975	-0.0667	0.1844	0.0417	0.0118	-0.1057
45.0	0.0	60.0	0.0690	0.0586	0.2568	0.1113	-0.0586	0.1494	0.0367	0.0338	-0.0930
45.0	0.0	70.0	0.0578	0.0435	0.2853	0.1226	-0.0435	0.1208	0.0272	0.0518	-0.0690
45.0	0.0	80.0	0.0504	0.0231	0.3040	0.1300	-0.0231	0.1022	0.0145	0.0636	-0.0367
45.0	0.0	90.0	0.0479	-0.0000	0.3105	0.1325	0.0000	0.0957	-0.0000	0.0677	0.0000
45.0	15.0	0.0	0.1205	0.0000	0.0880	0.0471	-0.0000	0.3089	-0.0000	-0.0644	0.0000
45.0	15.0	10.0	0.1182	0.0209	0.0938	0.0497	-0.0232	0.3024	0.0138	-0.0605	-0.0349
45.0	15.0	20.0	0.1115	0.0394	0.1107	0.0571	-0.0435	0.2838	0.0259	-0.0493	-0.0657
45.0	15.0	30.0	0.1013	0.0530	0.1366	0.0683	-0.0586	0.2552	0.0349	-0.0322	-0.0885
45.0	15.0	40.0	0.0888	0.0603	0.1683	0.0822	-0.0667	0.2201	0.0396	-0.0111	-0.1006
45.0	15.0	50.0	0.0755	0.0603	0.2020	0.0968	-0.0666	0.1828	0.0376	0.0112	-0.1005
45.0	15.0	60.0	0.0630	0.0530	0.2336	0.1107	-0.0586	0.1478	0.0348	0.0322	-0.0884
45.0	15.0	70.0	0.0529	0.0393	0.2594	0.1219	-0.0435	0.1193	0.0259	0.0493	-0.0656
45.0	15.0	80.0	0.0462	0.0209	0.2763	0.1292	-0.0231	0.1007	0.0138	0.0605	-0.0349
45.0	15.0	90.0	0.0439	-0.0000	0.2821	0.1318	0.0000	0.0942	-0.0000	0.0643	0.0000
45.0	30.0	0.0	0.0902	0.0000	0.0678	0.0452	-0.0000	0.3048	-0.0000	-0.0554	0.0000
45.0	30.0	10.0	0.0885	0.0155	0.0722	0.0478	-0.0232	0.2983	0.0119	-0.0520	-0.0301
45.0	30.0	20.0	0.0836	0.0291	0.0847	0.0552	-0.0436	0.2795	0.0223	-0.0424	-0.0565
45.0	30.0	30.0	0.0760	0.0391	0.1078	0.0665	-0.0587	0.2509	0.0300	-0.0276	-0.0761
45.0	30.0	40.0	0.0668	0.0444	0.1272	0.0803	-0.0667	0.2158	0.0341	-0.0095	-0.0864
45.0	30.0	50.0	0.0570	0.0444	0.1521	0.0930	-0.0666	0.1785	0.0340	0.0097	-0.0863
45.0	30.0	60.0	0.0478	0.0390	0.1753	0.1088	-0.0585	0.1435	0.0299	0.0277	-0.0758
45.0	30.0	70.0	0.0404	0.0289	0.1943	0.1200	-0.0434	0.1151	0.0222	0.0423	-0.0562
45.0	30.0	80.0	0.0355	0.0154	0.2067	0.1273	-0.0231	0.0966	0.0118	0.0519	-0.0299
45.0	30.0	90.0	0.0338	-0.0000	0.2109	0.1298	0.0000	0.0901	-0.0000	0.0552	0.0000
45.0	45.0	0.0	0.0545	0.0000	0.0428	0.0428	-0.0000	0.2993	-0.0000	-0.0428	0.0000
45.0	45.0	10.0	0.0535	0.0092	0.0453	0.0453	-0.0233	0.2928	0.0092	-0.0402	-0.0233
45.0	45.0	20.0	0.0506	0.0172	0.0528	0.0528	-0.0437	0.2740	0.0172	-0.0327	-0.0437
45.0	45.0	30.0	0.0461	0.0232	0.0641	0.0641	-0.0587	0.2452	0.0232	-0.0212	-0.0587
45.0	45.0	40.0	0.0406	0.0263	0.0780	0.0780	-0.0666	0.2101	0.0263	-0.0073	-0.0666
45.0	45.0	50.0	0.0349	0.0262	0.0926	0.0926	-0.0665	0.1729	0.0262	0.0075	-0.0665
45.0	45.0	60.0	0.0295	0.0230	0.1064	0.1064	-0.0583	0.1380	0.0230	0.0214	-0.0583
45.0	45.0	70.0	0.0251	0.0170	0.1175	0.1175	-0.0432	0.1097	0.0170	0.0326	-0.0432
45.0	45.0	80.0	0.0222	0.0090	0.1248	0.1248	-0.0230	0.0913	0.0090	0.0399	-0.0230
45.0	45.0	90.0	0.0212	-0.0000	0.1273	0.1273	0.0000	0.0849	-0.0000	0.0425	0.0000
45.0	60.0	0.0	0.0247	0.0000	0.0202	0.0404	-0.0000	0.2941	-0.0000	-0.0286	0.0000
45.0	60.0	10.0	0.0243	0.0041	0.0214	0.0430	-0.0233	0.2875	0.0061	-0.0268	-0.0156
45.0	60.0	20.0	0.0230	0.0076	0.0247	0.0505	-0.0437	0.2686	0.0115	-0.0218	-0.0292
45.0	60.0	30.0	0.0210	0.0103	0.0297	0.0619	-0.0587	0.2398	0.0155	-0.0141	-0.0393
45.0	60.0	40.0	0.0185	0.0116	0.0358	0.0757	-0.0666	0.2047	0.0175	-0.0048	-0.0445
45.0	60.0	50.0	0.0160	0.0116	0.0423	0.0904	-0.0663	0.1675	0.0175	0.0031	-0.0444
45.0	60.0	60.0	0.0136	0.0101	0.0484	0.1041	-0.0582	0.1328	0.0153	0.0143	-0.0389
45.0	60.0	70.0	0.0117	0.0075	0.0533	0.1151	-0.0431	0.1047	0.0113	0.0218	-0.0288
45.0	60.0	80.0	0.0104	0.0040	0.0564	0.1223	-0.0229	0.0864	0.0060	0.0266	-0.0153
45.0	60.0	90.0	0.0100	-0.0000	0.0575	0.1248	0.0000	0.0800	-0.0000	0.0283	0.0000
45.0	75.0	0.0	0.0062	0.0000	0.0052	0.0388	-0.0000	0.2904	-0.0000	-0.0142	0.0000
45.0	75.0	10.0	0.0060	0.0010	0.0055	0.0414	-0.0233	0.2838	0.0031	-0.0133	-0.0077
45.0	75.0	20.0	0.0057	0.0019	0.0063	0.0489	-0.0437	0.2649	0.0057	-0.0108	-0.0145
45.0	75.0	30.0	0.0052	0.0025	0.0075	0.0603	-0.0587	0.2360	0.0077	-0.0070	-0.0195
45.0	75.0	40.0	0.0046	0.0028	0.0090	0.0742	-0.0665	0.2009	0.0087	-0.0024	-0.0221
45.0	75.0	50.0	0.0040	0.0028	0.0106	0.0888	-0.0662	0.1638	0.0087	0.0025	-0.0220
45.0	75.0	60.0	0.0034	0.0025	0.0121	0.1024	-0.0580	0.1292	0.0076	0.0071	-0.0193
45.0	75.0	70.0	0.0030	0.0018	0.0133	0.1134	-0.0429	0.1011	0.0056	0.0108	-0.0143
45.0	75.0	80.0	0.0027	0.0010	0.0140	0.1206	-0.0228	0.0829	0.0030	0.0132	-0.0076
45.0	75.0	90.0	0.0026	-0.0000	0.0143	0.1231	0.0000	0.0766	-0.0000	0.0140	0.0000
45.0	90.0	0.0	0.0000	0.0000	0.0000	0.0382	-0.0000	0.2890	0.0000	0.0000	-0.0000
45.0	90.0	10.0	0.0000	0.0000	0.0000	0.0409	-0.0233	0.2824	-0.0000	0.0000	0.0000
45.0	90.0	20.0	0.0000	0.0000	0.0000	0.0483	-0.0437	0.2635	-0.0000	0.0000	0.0000
45.0	90.0	30.0	0.0000	0.0000	0.0000	0.0597	-0.0587	0.2347	-0.0000	0.0000	0.0000
45.0	90.0	40.0	0.0000	0.0000	0.0000	0.0736	-0.0664	0.1995	-0.0000	0.0000	0.0000
45.0	90.0	50.0	0.0000	0.0000	0.0000	0.0882	-0.0662	0.1624	-0.0000	-0.0000	0.0000
45.0	90.0	60.0	0.0000	0.0000	0.0000	0.1018	-0.0579	0.1279	-0.0000	-0.0000	0.0000
45.0	90.0	70.0	0.0000	0.0000	0.0000	0.1128	-0.0427	0.0999	-0.0000	-0.0000	0.0000
45.0	90.0	80.0	0.0000	0.0000	0.0000	0.1200	-0.0228	0.0817	-0.0000	-0.0000	0.0000
45.0	90.0	90.0	0.0000	-0.0000	0.0000	0.1225	0.0000	0.0754	0.0000	-0.0000	-0.0000

Table 2 continued, part 5 of 7.

θ_1	θ_2	β_ϕ	σ_1/λ^2	σ_2/λ^2	σ_3/λ^2	σ_4/λ^2	σ_5/λ^2	σ_6/λ^2	σ_7/λ^2	σ_8/λ^2	σ_9/λ^2
60.0	0.0	0.0	0.0600	0.0000	0.0704	0.0226	-0.0000	0.3047	-0.0000	-0.0452	0.0000
60.0	0.0	10.0	0.0583	0.0155	0.0968	0.0237	-0.0155	0.2983	0.0064	-0.0425	-0.0367
60.0	0.0	20.0	0.0556	0.0290	0.1154	0.0270	-0.0290	0.2797	0.0120	-0.0346	-0.0689
60.0	0.0	30.0	0.0506	0.0391	0.1439	0.0319	-0.0391	0.2511	0.0162	-0.0226	-0.0928
60.0	0.0	40.0	0.0443	0.0445	0.1709	0.0380	-0.0445	0.2162	0.0184	-0.0078	-0.1056
60.0	0.0	50.0	0.0380	0.0445	0.2162	0.0445	-0.0445	0.1709	0.0184	0.0078	-0.1056
60.0	0.0	60.0	0.0319	0.0391	0.2511	0.0506	-0.0391	0.1439	0.0162	0.0226	-0.0928
60.0	0.0	70.0	0.0270	0.0290	0.2797	0.0556	-0.0290	0.1154	0.0120	0.0346	-0.0689
60.0	0.0	80.0	0.0237	0.0155	0.2983	0.0583	-0.0155	0.0968	0.0064	0.0425	-0.0367
60.0	0.0	90.0	0.0226	-0.0000	0.3047	0.0600	0.0000	0.0904	-0.0000	0.0452	0.0000
60.0	15.0	0.0	0.0545	0.0000	0.0831	0.0223	-0.0000	0.3033	-0.0000	-0.0430	0.0000
60.0	15.0	10.0	0.0535	0.0140	0.0839	0.0234	-0.0155	0.2968	0.0061	-0.0404	-0.0349
60.0	15.0	20.0	0.0506	0.0263	0.1058	0.0266	-0.0291	0.2781	0.0114	-0.0329	-0.0656
60.0	15.0	30.0	0.0461	0.0334	0.1316	0.0316	-0.0392	0.2496	0.0154	-0.0215	-0.0883
60.0	15.0	40.0	0.0405	0.0402	0.1633	0.0377	-0.0445	0.2146	0.0175	-0.0074	-0.1004
60.0	15.0	50.0	0.0347	0.0402	0.1969	0.0442	-0.0445	0.1773	0.0175	0.0075	-0.1004
60.0	15.0	60.0	0.0292	0.0353	0.2285	0.0503	-0.0391	0.1424	0.0154	0.0215	-0.0882
60.0	15.0	70.0	0.0247	0.0262	0.2543	0.0553	-0.0290	0.1139	0.0114	0.0329	-0.0655
60.0	15.0	80.0	0.0217	0.0140	0.2711	0.0585	-0.0154	0.0953	0.0061	0.0403	-0.0348
60.0	15.0	90.0	0.0207	-0.0000	0.2769	0.0596	0.0000	0.0889	-0.0000	0.0429	0.0000
60.0	30.0	0.0	0.0409	0.0000	0.0541	0.0214	-0.0000	0.2993	-0.0000	-0.0370	0.0000
60.0	30.0	10.0	0.0401	0.0103	0.0604	0.0225	-0.0155	0.2928	0.0053	-0.0348	-0.0301
60.0	30.0	20.0	0.0379	0.0194	0.0810	0.0258	-0.0291	0.2740	0.0099	-0.0283	-0.0565
60.0	30.0	30.0	0.0346	0.0251	0.1001	0.0308	-0.0392	0.2434	0.0133	-0.0184	-0.0760
60.0	30.0	40.0	0.0305	0.0297	0.1235	0.0369	-0.0445	0.2103	0.0151	-0.0063	-0.0863
60.0	30.0	50.0	0.0262	0.0296	0.1403	0.0434	-0.0444	0.1731	0.0150	0.0065	-0.0862
60.0	30.0	60.0	0.0221	0.0260	0.1715	0.0495	-0.0390	0.1332	0.0132	0.0185	-0.0757
60.0	30.0	70.0	0.0183	0.0193	0.1904	0.0544	-0.0289	0.1099	0.0098	0.0283	-0.0561
60.0	30.0	80.0	0.0167	0.0102	0.2027	0.0576	-0.0154	0.0914	0.0052	0.0346	-0.0298
60.0	30.0	90.0	0.0159	-0.0000	0.2070	0.0587	0.0000	0.0850	-0.0000	0.0368	0.0000
60.0	45.0	0.0	0.0247	0.0000	0.0404	0.0202	-0.0000	0.2941	-0.0000	-0.0286	0.0000
60.0	45.0	10.0	0.0243	0.0061	0.0430	0.0214	-0.0156	0.2875	0.0041	-0.0266	-0.0233
60.0	45.0	20.0	0.0230	0.0115	0.0505	0.0247	-0.0292	0.2686	0.0076	-0.0218	-0.0437
60.0	45.0	30.0	0.0210	0.0155	0.0619	0.0297	-0.0393	0.2398	0.0103	-0.0141	-0.0587
60.0	45.0	40.0	0.0185	0.0175	0.0757	0.0358	-0.0445	0.2047	0.0116	-0.0048	-0.0666
60.0	45.0	50.0	0.0160	0.0175	0.0904	0.0423	-0.0444	0.1675	0.0116	0.0051	-0.0663
60.0	45.0	60.0	0.0136	0.0153	0.1041	0.0484	-0.0387	0.1328	0.0101	0.0143	-0.0582
60.0	45.0	70.0	0.0117	0.0113	0.1151	0.0533	-0.0288	0.1047	0.0075	0.0218	-0.0431
60.0	45.0	80.0	0.0104	0.0060	0.1223	0.0564	-0.0153	0.0864	0.0040	0.0266	-0.0229
60.0	45.0	90.0	0.0100	-0.0000	0.1248	0.0575	0.0000	0.0800	-0.0000	0.0283	0.0000
60.0	60.0	0.0	0.0112	0.0000	0.0191	0.0191	-0.0000	0.2890	-0.0000	-0.0191	0.0000
60.0	60.0	10.0	0.0110	0.0027	0.0203	0.0203	-0.0156	0.2824	0.0027	-0.0180	-0.0156
60.0	60.0	20.0	0.0104	0.0051	0.0236	0.0236	-0.0293	0.2635	0.0051	-0.0146	-0.0293
60.0	60.0	30.0	0.0095	0.0069	0.0287	0.0287	-0.0393	0.2345	0.0069	-0.0094	-0.0393
60.0	60.0	40.0	0.0085	0.0078	0.0348	0.0348	-0.0445	0.1994	0.0078	-0.0032	-0.0445
60.0	60.0	50.0	0.0073	0.0077	0.0413	0.0413	-0.0442	0.1623	0.0077	0.0034	-0.0442
60.0	60.0	60.0	0.0063	0.0067	0.0473	0.0473	-0.0387	0.1277	0.0057	0.0096	-0.0387
60.0	60.0	70.0	0.0054	0.0050	0.0522	0.0522	-0.0286	0.0997	0.0050	0.0145	-0.0286
60.0	60.0	80.0	0.0049	0.0026	0.0553	0.0553	-0.0152	0.0816	0.0026	0.0177	-0.0152
60.0	60.0	90.0	0.0047	-0.0000	0.0564	0.0564	0.0000	0.0753	-0.0000	0.0188	0.0000
60.0	75.0	0.0	0.0028	0.0000	0.0049	0.0184	-0.0000	0.2855	-0.0000	-0.0095	0.0000
60.0	75.0	10.0	0.0027	0.0007	0.0052	0.0196	-0.0156	0.2788	0.0014	-0.0089	-0.0078
60.0	75.0	20.0	0.0026	0.0013	0.0060	0.0229	-0.0273	0.2598	0.0025	-0.0072	-0.0146
60.0	75.0	30.0	0.0024	0.0017	0.0073	0.0280	-0.0393	0.2308	0.0034	-0.0047	-0.0195
60.0	75.0	40.0	0.0021	0.0019	0.0088	0.0341	-0.0444	0.1956	0.0039	-0.0015	-0.0221
60.0	75.0	50.0	0.0018	0.0019	0.0104	0.0406	-0.0441	0.1586	0.0038	0.0017	-0.0219
60.0	75.0	60.0	0.0016	0.0016	0.0118	0.0466	-0.0386	0.1241	0.0033	0.0048	-0.0192
60.0	75.0	70.0	0.0014	0.0012	0.0120	0.0514	-0.0285	0.0963	0.0025	0.0072	-0.0142
60.0	75.0	80.0	0.0013	0.0006	0.0133	0.0545	-0.0151	0.0783	0.0013	0.0088	-0.0075
60.0	75.0	90.0	0.0012	-0.0000	0.0140	0.0556	0.0000	0.0721	-0.0000	0.0093	0.0000
60.0	90.0	0.0	0.0000	0.0000	0.0000	0.0181	-0.0000	0.2842	0.0000	0.0000	-0.0000
60.0	90.0	10.0	0.0000	0.0000	0.0000	0.0193	-0.0156	0.2775	-0.0000	0.0000	0.0000
60.0	90.0	20.0	0.0000	0.0000	0.0000	0.0226	-0.0273	0.2585	-0.0000	0.0000	0.0000
60.0	90.0	30.0	0.0000	0.0000	0.0000	0.0277	-0.0393	0.2295	-0.0000	0.0000	0.0000
60.0	90.0	40.0	0.0000	0.0000	0.0000	0.0339	-0.0444	0.1943	-0.0000	0.0000	0.0000
60.0	90.0	50.0	0.0000	0.0000	0.0000	0.0403	-0.0441	0.1572	-0.0000	-0.0000	0.0000
60.0	90.0	60.0	0.0000	0.0000	0.0000	0.0463	-0.0385	0.1229	-0.0000	-0.0000	0.0000
60.0	90.0	70.0	0.0000	0.0000	0.0000	0.0511	-0.0285	0.0951	-0.0000	-0.0000	0.0000
60.0	90.0	80.0	0.0000	0.0000	0.0000	0.0542	-0.0151	0.0771	-0.0000	-0.0000	0.0000
60.0	90.0	90.0	0.0000	-0.0000	0.0000	0.0553	0.0000	0.0709	0.0000	-0.0000	-0.0000

Table 2 continued, part 6 of 7.

θ_1	θ_2	β_ϕ	σ_1/λ^2	σ_2/λ^2	σ_3/λ^2	σ_4/λ^2	σ_5/λ^2	σ_6/λ^2	σ_7/λ^2	σ_8/λ^2	σ_9/λ^2
75.0	0.0	0.0	0.0149	0.0000	0.0866	0.0058	-0.0000	0.3007	-0.0000	-0.0224	0.0000
75.0	0.0	10.0	0.0147	0.0077	0.0731	0.0061	-0.0077	0.2942	0.0016	-0.0211	-0.0366
75.0	0.0	20.0	0.0139	0.0144	0.1117	0.0069	-0.0144	0.2756	0.0029	-0.0172	-0.0688
75.0	0.0	30.0	0.0126	0.0194	0.1401	0.0081	-0.0194	0.2472	0.0040	-0.0112	-0.0927
75.0	0.0	40.0	0.0112	0.0221	0.1751	0.0096	-0.0221	0.2122	0.0045	-0.0039	-0.1054
75.0	0.0	50.0	0.0096	0.0221	0.2122	[illegible]	-0.0221	0.1751	0.0045	0.0039	-0.1054
75.0	0.0	60.0	0.0081	0.0194	0.2472	0.0126	-0.0194	0.1401	0.0040	0.0112	-0.0927
75.0	0.0	70.0	0.0069	0.0144	0.2756	0.0139	-0.0144	0.1117	0.0029	0.0172	-0.0688
75.0	0.0	80.0	0.0061	0.0077	0.2942	0.0147	-0.0077	0.0931	0.0016	0.0211	-0.0366
75.0	0.0	90.0	0.0058	-0.0000	0.3007	[illegible]	0.0000	0.0866	-0.0000	0.0224	0.0000
75.0	15.0	0.0	0.0136	0.0000	0.0796	[illegible]	-0.0000	0.2993	-0.0000	-0.0213	0.0000
75.0	15.0	10.0	0.0133	0.0069	0.0855	[illegible]	-0.0077	0.2928	0.0015	-0.0201	-0.0349
75.0	15.0	20.0	0.0126	0.0130	0.1024	[illegible]	-0.0144	0.2741	0.0028	-0.0163	-0.0655
75.0	15.0	30.0	0.0115	0.0176	0.1281	[illegible]	-0.0194	0.2456	0.0038	-0.0107	-0.0882
75.0	15.0	40.0	0.0102	0.0200	0.1598	0.0095	[illegible]	0.2107	0.0043	-0.0037	-0.1003
75.0	15.0	50.0	0.0087	0.0200	0.1934	0.0111	[illegible]	0.1735	0.0043	0.0037	-0.1002
75.0	15.0	60.0	0.0074	0.0175	0.2249	0.0126	[illegible]	0.1386	0.0038	0.0107	-0.0891
75.0	15.0	70.0	0.0063	0.0130	0.2506	0.0138	-0.0144	0.1102	0.0028	0.0163	-0.0633
75.0	15.0	80.0	0.0056	0.0069	0.2674	0.0146	-0.0077	0.0917	0.0015	0.0200	-0.0348
75.0	15.0	90.0	0.0053	-0.0000	0.2732	0.0148	0.0000	0.0852	-0.0000	0.0213	0.0000
75.0	30.0	0.0	0.0102	0.0000	0.0615	0.0055	-0.0000	0.2954	-0.0000	-0.0184	0.0000
75.0	30.0	10.0	0.0100	0.0051	0.0659	0.0058	-0.0077	0.2889	0.0013	-0.0173	-0.0301
75.0	30.0	20.0	0.0095	0.0097	[illegible]	0.0066	-0.0145	0.2701	0.0024	-0.0140	-0.0565
75.0	30.0	30.0	0.0086	0.0130	0.0973	0.0078	-0.0195	0.2415	0.0032	-0.0091	-0.0759
75.0	30.0	40.0	0.0076	0.0147	0.1209	0.0093	-0.0221	0.2064	0.0037	-0.0031	-0.0862
75.0	30.0	50.0	0.0066	0.0147	0.1456	0.0109	-0.0221	0.1693	0.0037	0.0032	-0.0860
75.0	30.0	60.0	0.0056	0.0129	0.1688	0.0124	-0.0194	[illegible]	0.0032	0.0092	-0.0755
75.0	30.0	70.0	0.0048	0.0096	0.1876	0.0136	-0.0143	0.1062	0.0024	0.0140	-0.0559
75.0	30.0	80.0	0.0043	0.0051	0.1999	0.0143	-0.0076	0.0878	0.0013	0.0172	-0.0297
75.0	30.0	90.0	0.0041	-0.0000	0.2041	0.0146	0.0000	0.0815	-0.0000	0.0183	0.0000
75.0	45.0	0.0	0.0062	0.0000	0.0388	0.0052	-0.0000	0.2904	-0.0000	-0.0142	0.0000
75.0	45.0	10.0	0.0060	0.0031	0.0414	0.0055	-0.0077	0.2838	0.0010	-0.0133	-0.0233
75.0	45.0	20.0	0.0057	0.0057	0.0489	0.0063	-0.0145	0.2649	0.0019	-0.0108	-0.0437
75.0	45.0	30.0	0.0052	0.0077	0.0603	0.0075	-0.0175	0.2360	0.0025	-0.0070	-0.0587
75.0	45.0	40.0	0.0046	0.0087	0.0742	0.0090	-0.0221	0.2009	0.0028	-0.0024	-0.0665
75.0	45.0	50.0	0.0040	0.0087	0.0888	0.0106	-0.0220	0.1638	0.0028	0.0025	-0.0662
75.0	45.0	60.0	0.0034	0.0076	0.1024	0.0121	-0.0193	0.1292	0.0025	0.0071	-0.0580
75.0	45.0	70.0	0.0030	0.0056	0.1134	0.0133	-0.0143	0.1011	0.0018	0.0108	-0.0429
75.0	45.0	80.0	0.0027	0.0030	0.1206	0.0140	-0.0076	0.0829	0.0010	0.0132	-0.0228
75.0	45.0	90.0	0.0026	-0.0000	0.1231	0.0143	0.0000	0.0766	-0.0000	0.0140	0.0000
75.0	60.0	0.0	0.0028	0.0000	0.0184	0.0049	-0.0000	0.2855	-0.0000	-0.0095	0.0000
75.0	60.0	10.0	0.0027	0.0014	0.0196	0.0052	-0.0078	0.2788	0.0007	-0.0089	-0.0156
75.0	60.0	20.0	0.0026	0.0025	0.0229	0.0060	-0.0146	0.2598	0.0013	-0.0072	-0.0293
75.0	60.0	30.0	0.0024	0.0034	0.0280	[illegible]	-0.0175	0.2308	0.0017	-0.0047	-0.0393
75.0	60.0	40.0	0.0021	0.0039	0.0341	0.0088	-0.0221	0.1956	0.0019	-0.0015	-0.0444
75.0	60.0	50.0	0.0018	0.0038	0.0406	0.0104	-0.0219	0.1586	0.0019	0.0017	-0.0441
75.0	60.0	60.0	0.0016	0.0033	0.0466	0.0118	-0.0192	0.1241	0.0016	0.0048	-0.0386
75.0	60.0	70.0	0.0014	0.0025	0.0514	0.0130	-0.0142	0.0963	0.0012	0.0072	-0.0285
75.0	60.0	80.0	0.0013	0.0013	0.0545	0.0138	-0.0075	0.0783	0.0006	0.0088	-0.0151
75.0	60.0	90.0	0.0012	-0.0000	0.0556	0.0140	0.0000	0.0721	-0.0000	0.0093	0.0000
75.0	75.0	0.0	0.0007	0.0000	0.0047	0.0047	-0.0000	0.2820	-0.0000	-0.0047	0.0000
75.0	75.0	10.0	0.0007	0.0003	0.0050	0.0050	-0.0078	0.2753	0.0003	-0.0044	-0.0078
75.0	75.0	20.0	0.0006	0.0006	0.0058	0.0058	-0.0146	0.2562	0.0006	-0.0036	-0.0146
75.0	75.0	30.0	0.0006	0.0008	0.0071	0.0071	-0.0195	0.2271	0.0008	-0.0023	-0.0195
75.0	75.0	40.0	0.0005	0.0009	0.0086	0.0086	-0.0221	0.1919	0.0009	-0.0008	-0.0221
75.0	75.0	50.0	0.0005	0.0009	0.0102	0.0102	-0.0219	0.1549	0.0009	0.0009	-0.0219
75.0	75.0	60.0	0.0004	0.0008	0.0116	0.0116	-0.0191	0.1206	0.0008	0.0024	-0.0191
75.0	75.0	70.0	0.0004	0.0006	0.0128	0.0128	-0.0141	0.0930	0.0006	0.0036	-0.0141
75.0	75.0	80.0	0.0003	0.0003	0.0136	0.0136	-0.0075	0.0751	0.0003	0.0043	-0.0075
75.0	75.0	90.0	0.0003	-0.0000	0.0138	0.0138	0.0000	0.0689	-0.0000	0.0046	0.0000
75.0	90.0	0.0	0.0000	0.0000	0.0000	0.0047	-0.0000	0.2807	0.0000	0.0000	-0.0000
75.0	90.0	10.0	0.0000	0.0000	0.0000	0.0050	-0.0078	0.2741	-0.0000	0.0000	0.0000
75.0	90.0	20.0	0.0000	0.0000	0.0000	0.0058	-0.0146	0.2549	-0.0000	0.0000	0.0000
75.0	90.0	30.0	0.0000	0.0000	0.0000	0.0070	-0.0195	0.2258	-0.0000	0.0000	0.0000
75.0	90.0	40.0	0.0000	0.0000	0.0000	0.0085	-0.0221	0.1906	-0.0000	0.0000	0.0000
75.0	90.0	50.0	0.0000	0.0000	0.0000	0.0101	-0.0219	0.1536	-0.0000	-0.0000	0.0000
75.0	90.0	60.0	0.0000	0.0000	0.0000	0.0116	-0.0191	0.1194	-0.0000	-0.0000	0.0000
75.0	90.0	70.0	0.0000	0.0000	0.0000	0.0127	-0.0141	0.0918	-0.0000	-0.0000	0.0000
75.0	90.0	80.0	0.0000	0.0000	0.0000	0.0135	-0.0075	0.0740	-0.0000	-0.0000	0.0000
75.0	90.0	90.0	0.0000	-0.0000	0.0000	0.0137	0.0000	0.0678	0.0000	-0.0000	-0.0000

Table 2 continued, part 7 of 7.

θ_1	θ_2	β_ϕ	σ_1/λ^2	σ_2/λ^2	σ_3/λ^2	σ_4/λ^2	σ_5/λ^2	σ_6/λ^2	σ_7/λ^2	σ_8/λ^2	σ_9/λ^2
90.0	0.0	0.0	0.0000	-0.0000	0.0853	0.0000	0.0000	0.2992	-0.0000	0.0000	0.0000
90.0	0.0	10.0	0.0000	-0.0000	0.0918	0.0000	0.0000	0.2928	0.0000	0.0000	-0.0366
90.0	0.0	20.0	0.0000	-0.0000	0.1103	0.0000	0.0000	0.2742	0.0000	0.0000	-0.0687
90.0	0.0	30.0	0.0000	-0.0000	0.1388	0.0000	0.0000	0.2457	0.0000	0.0000	-0.0926
90.0	0.0	40.0	0.0000	-0.0000	0.1737	0.0000	0.0000	0.2108	0.0000	0.0000	-0.1053
90.0	0.0	50.0	0.0000	-0.0000	0.2108	0.0000	0.0000	0.1737	0.0000	-0.0000	-0.1053
90.0	0.0	60.0	0.0000	-0.0000	0.2457	0.0000	0.0000	0.1388	0.0000	-0.0000	-0.0926
90.0	0.0	70.0	0.0000	-0.0000	0.2742	0.0000	0.0000	0.1103	0.0000	-0.0000	-0.0687
90.0	0.0	80.0	0.0000	-0.0000	0.2928	0.0000	0.0000	0.0918	0.0000	-0.0000	-0.0366
90.0	0.0	90.0	0.0000	0.0000	0.2992	0.0000	-0.0000	0.0853	-0.0000	-0.0000	0.0000
90.0	15.0	0.0	0.0000	-0.0000	0.0784	0.0000	0.0000	0.2978	-0.0000	0.0000	0.0000
90.0	15.0	10.0	0.0000	-0.0000	0.0843	0.0000	0.0000	0.2913	0.0000	0.0000	-0.0348
90.0	15.0	20.0	0.0000	-0.0000	0.1011	0.0000	0.0000	0.2727	0.0000	0.0000	-0.0655
90.0	15.0	30.0	0.0000	-0.0000	0.1269	0.0000	0.0000	0.2442	0.0000	0.0000	-0.0882
90.0	15.0	40.0	0.0000	-0.0000	0.1585	0.0000	0.0000	0.2093	0.0000	0.0000	-0.1002
90.0	15.0	50.0	0.0000	-0.0000	0.1921	0.0000	0.0000	0.1721	0.0000	-0.0000	-0.1001
90.0	15.0	60.0	0.0000	-0.0000	0.2236	0.0000	0.0000	0.1373	0.0000	-0.0000	-0.0880
90.0	15.0	70.0	0.0000	-0.0000	0.2493	0.0000	0.0000	0.1089	0.0000	-0.0000	-0.0653
90.0	15.0	80.0	0.0000	-0.0000	0.2660	0.0000	0.0000	0.0903	0.0000	-0.0000	-0.0347
90.0	15.0	90.0	0.0000	0.0000	0.2718	0.0000	-0.0000	0.0839	-0.0000	-0.0000	0.0000
90.0	30.0	0.0	0.0000	-0.0000	0.0606	0.0000	0.0000	0.2940	-0.0000	0.0000	0.0000
90.0	30.0	10.0	0.0000	-0.0000	0.0649	0.0000	0.0000	0.2875	0.0000	0.0000	-0.0301
90.0	30.0	20.0	0.0000	-0.0000	0.0774	0.0000	0.0000	0.2688	0.0000	0.0000	-0.0564
90.0	30.0	30.0	0.0000	-0.0000	0.0966	0.0000	0.0000	0.2401	0.0000	0.0000	-0.0759
90.0	30.0	40.0	0.0000	-0.0000	0.1199	0.0000	0.0000	0.2051	0.0000	0.0000	-0.0861
90.0	30.0	50.0	0.0000	-0.0000	0.1447	0.0000	0.0000	0.1679	0.0000	-0.0000	-0.0860
90.0	30.0	60.0	0.0000	-0.0000	0.1678	0.0000	0.0000	0.1332	0.0000	-0.0000	-0.0754
90.0	30.0	70.0	0.0000	-0.0000	0.1866	0.0000	0.0000	0.1050	0.0000	-0.0000	-0.0559
90.0	30.0	80.0	0.0000	-0.0000	0.1989	0.0000	0.0000	0.0866	0.0000	-0.0000	-0.0297
90.0	30.0	90.0	0.0000	0.0000	0.2031	0.0000	-0.0000	0.0802	-0.0000	-0.0000	0.0000
90.0	45.0	0.0	0.0000	-0.0000	0.0382	0.0000	0.0000	0.2890	-0.0000	0.0000	0.0000
90.0	45.0	10.0	0.0000	-0.0000	0.0409	0.0000	0.0000	0.2824	0.0000	0.0000	-0.0233
90.0	45.0	20.0	0.0000	-0.0000	0.0483	0.0000	0.0000	0.2635	0.0000	0.0000	-0.0437
90.0	45.0	30.0	0.0000	-0.0000	0.0597	0.0000	0.0000	0.2347	0.0000	0.0000	-0.0587
90.0	45.0	40.0	0.0000	-0.0000	0.0736	0.0000	0.0000	0.1995	0.0000	0.0000	-0.0664
90.0	45.0	50.0	0.0000	-0.0000	0.0882	0.0000	0.0000	0.1624	0.0000	-0.0000	-0.0662
90.0	45.0	60.0	0.0000	-0.0000	0.1018	0.0000	0.0000	0.1279	0.0000	-0.0000	-0.0579
90.0	45.0	70.0	0.0000	-0.0000	0.1128	0.0000	0.0000	0.0999	0.0000	-0.0000	-0.0429
90.0	45.0	80.0	0.0000	-0.0000	0.1200	0.0000	0.0000	0.0817	0.0000	-0.0000	-0.0228
90.0	45.0	90.0	0.0000	0.0000	0.1225	0.0000	-0.0000	0.0754	-0.0000	-0.0000	0.0000
90.0	60.0	0.0	0.0000	-0.0000	0.0181	0.0000	0.0000	0.2842	-0.0000	0.0000	0.0000
90.0	60.0	10.0	0.0000	-0.0000	0.0193	0.0000	0.0000	0.2775	0.0000	0.0000	-0.0156
90.0	60.0	20.0	0.0000	-0.0000	0.0226	0.0000	0.0000	0.2585	0.0000	0.0000	-0.0293
90.0	60.0	30.0	0.0000	-0.0000	0.0277	0.0000	0.0000	0.2295	0.0000	0.0000	-0.0393
90.0	60.0	40.0	0.0000	-0.0000	0.0339	0.0000	0.0000	0.1943	0.0000	0.0000	-0.0444
90.0	60.0	50.0	0.0000	-0.0000	0.0403	0.0000	0.0000	0.1572	0.0000	-0.0000	-0.0441
90.0	60.0	60.0	0.0000	-0.0000	0.0463	0.0000	0.0000	0.1229	0.0000	-0.0000	-0.0385
90.0	60.0	70.0	0.0000	-0.0000	0.0511	0.0000	0.0000	0.0951	0.0000	-0.0000	-0.0285
90.0	60.0	80.0	0.0000	-0.0000	0.0542	0.0000	0.0000	0.0771	0.0000	-0.0000	-0.0151
90.0	60.0	90.0	0.0000	0.0000	0.0553	0.0000	-0.0000	0.0709	-0.0000	-0.0000	0.0000
90.0	75.0	0.0	0.0000	-0.0000	0.0047	0.0000	0.0000	0.2807	-0.0000	0.0000	0.0000
90.0	75.0	10.0	0.0000	-0.0000	0.0050	0.0000	0.0000	0.2741	0.0000	0.0000	-0.0078
90.0	75.0	20.0	0.0000	-0.0000	0.0058	0.0000	0.0000	0.2549	0.0000	0.0000	-0.0146
90.0	75.0	30.0	0.0000	-0.0000	0.0070	0.0000	0.0000	0.2258	0.0000	0.0000	-0.0195
90.0	75.0	40.0	0.0000	-0.0000	0.0085	0.0000	0.0000	0.1906	0.0000	0.0000	-0.0221
90.0	75.0	50.0	0.0000	-0.0000	0.0101	0.0000	0.0000	0.1536	0.0000	-0.0000	-0.0219
90.0	75.0	60.0	0.0000	-0.0000	0.0116	0.0000	0.0000	0.1[illegible]74	0.0000	-0.0000	-0.0191
90.0	75.0	70.0	0.0000	-0.0000	0.0127	0.0000	0.0000	0.0916	0.0000	-0.0000	-0.0141
90.0	75.0	80.0	0.0000	-0.0000	0.0135	0.0000	0.0000	0.0740	0.0000	-0.0000	-0.0075
90.0	75.0	90.0	0.0000	0.0000	0.0137	0.0000	-0.0000	0.0678	-0.0000	-0.0000	0.0000
90.0	90.0	0.0	0.0000	-0.0000	0.0000	0.0000	0.0000	0.2795	0.0000	-0.0000	-0.0000
90.0	90.0	10.0	0.0000	-0.0000	0.0000	0.0000	0.0000	0.2728	-0.0000	-0.0000	0.0000
90.0	90.0	20.0	0.0000	-0.0000	0.0000	0.0000	0.0000	0.2536	-0.0000	-0.0000	0.0000
90.0	90.0	30.0	0.0000	-0.0000	0.0000	0.0000	0.0000	0.2245	-0.0000	-0.0000	0.0000
90.0	90.0	40.0	0.0000	-0.0000	0.0000	0.0000	0.0000	0.1893	-0.0000	-0.0000	0.0000
90.0	90.0	50.0	0.0000	-0.0000	0.0000	0.0000	0.0000	0.1523	-0.0000	0.0000	0.0000
90.0	90.0	60.0	0.0000	-0.0000	0.0000	0.0000	0.0000	0.1181	-0.0000	0.0000	0.0000
90.0	90.0	70.0	0.0000	-0.0000	0.0000	0.0000	0.0000	0.0906	-0.0000	0.0000	0.0000
90.0	90.0	80.0	0.0000	-0.0000	0.0000	0.0000	0.0000	0.0729	-0.0000	0.0000	0.0000
90.0	90.0	90.0	0.0000	0.0000	0.0000	0.0000	-0.0000	0.0667	0.0000	0.0000	-0.0000

TABLE 3. PARAMETERS σ_i, $i = 1, 2, \ldots, 9$, NORMALIZED TO λ^2 FOR SCATTERING FROM A FULL-WAVELENGTH DIPOLE ($L = \lambda$). ANGLES θ_1, θ_2, AND β_ϕ SHOWN IN DEGREES.

θ_1	θ_2	β_ϕ	σ_1/λ^2	σ_2/λ^2	σ_3/λ^2	σ_4/λ^2	σ_5/λ^2	σ_6/λ^2	σ_7/λ^2	σ_8/λ^2	σ_9/λ^2
0.0	0.0	0.0	0.0341	0.0000	0.0114	0.0114	-0.0000	0.0341	-0.0000	-0.0114	0.0000
0.0	0.0	10.0	0.0334	0.0039	0.0120	0.0120	-0.0039	0.0334	0.0039	-0.0107	-0.0039
0.0	0.0	20.0	0.0314	0.0073	0.0140	0.0140	-0.0073	0.0314	0.0073	-0.0087	-0.0073
0.0	0.0	30.0	0.0284	0.0098	0.0170	0.0170	-0.0098	0.0284	0.0098	-0.0057	-0.0098
0.0	0.0	40.0	0.0247	0.0112	0.0207	0.0207	-0.0112	0.0247	0.0112	-0.0020	-0.0112
0.0	0.0	50.0	0.0207	0.0112	0.0247	0.0247	-0.0112	0.0207	0.0112	0.0020	-0.0112
0.0	0.0	60.0	0.0170	0.0098	0.0284	0.0284	-0.0098	0.0170	0.0098	0.0057	-0.0098
0.0	0.0	70.0	0.0140	0.0073	0.0314	0.0314	-0.0073	0.0140	0.0073	0.0087	-0.0073
0.0	0.0	80.0	0.0120	0.0039	0.0334	0.0334	-0.0039	0.0120	0.0039	0.0107	-0.0039
0.0	0.0	90.0	0.0114	-0.0000	0.0341	0.0341	0.0000	0.0114	-0.0000	0.0114	0.0000
0.0	15.0	0.0	0.0310	0.0000	0.0104	0.0112	-0.0000	0.0339	-0.0000	-0.0108	0.0000
0.0	15.0	10.0	0.0304	0.0035	0.0111	0.0119	-0.0039	0.0332	0.0037	-0.0101	-0.0037
0.0	15.0	20.0	0.0286	0.0066	0.0128	0.0138	-0.0073	0.0312	0.0069	-0.0083	-0.0069
0.0	15.0	30.0	0.0258	0.0089	0.0156	0.0169	-0.0098	0.0282	0.0094	-0.0054	-0.0094
0.0	15.0	40.0	0.0225	0.0101	0.0189	0.0206	-0.0112	0.0245	0.0106	-0.0019	-0.0106
0.0	15.0	50.0	0.0189	0.0101	0.0225	0.0245	-0.0112	0.0206	0.0106	0.0019	-0.0106
0.0	15.0	60.0	0.0156	0.0089	0.0258	0.0282	-0.0098	0.0169	0.0094	0.0054	-0.0094
0.0	15.0	70.0	0.0128	0.0066	0.0286	0.0312	-0.0073	0.0138	0.0069	0.0083	-0.0069
0.0	15.0	80.0	0.0111	0.0035	0.0304	0.0332	-0.0039	0.0119	0.0037	0.0101	-0.0037
0.0	15.0	90.0	0.0104	-0.0000	0.0310	0.0339	0.0000	0.0112	-0.0000	0.0108	0.0000
0.0	30.0	0.0	0.0232	0.0000	0.0080	0.0107	-0.0000	0.0334	-0.0000	-0.0093	0.0000
0.0	30.0	10.0	0.0227	0.0026	0.0085	0.0114	-0.0039	0.0327	0.0032	-0.0087	-0.0032
0.0	30.0	20.0	0.0214	0.0049	0.0098	0.0134	-0.0073	0.0[illegible]08	0.0060	-0.0071	-0.0060
0.0	30.0	30.0	0.0[illegible]74	0.0066	0.0118	0.0164	-0.0098	0.0277	0.0080	-0.0046	-0.0080
0.0	30.0	40.0	0.0169	0.0075	0.0143	0.0201	-0.0112	0.0[illegible]40	0.0091	-0.0016	-0.0091
0.0	30.0	50.0	0.0143	0.0075	0.0169	0.0240	-0.0112	0.0201	0.0091	0.0016	-0.0091
0.0	30.0	60.0	0.0118	0.0066	0.0194	0.0277	-0.0098	0.0164	0.0080	0.0046	-0.0080
0.0	30.0	70.0	0.0098	0.0049	0.0214	0.0308	-0.0073	0.0134	0.0060	0.0071	-0.0060
0.0	30.0	80.0	0.0085	0.0026	0.0227	0.0327	-0.0039	0.0114	0.0032	0.0087	-0.0032
0.0	30.0	90.0	0.0080	-0.0000	0.0232	0.0334	0.0000	0.0107	-0.0000	0.0093	0.0000
0.0	45.0	0.0	0.0140	0.0000	0.0051	0.0101	-0.0000	0.0328	-0.0000	-0.0071	0.0000
0.0	45.0	10.0	0.0137	0.0015	0.0053	0.0108	-0.0037	0.0321	0.0024	-0.0067	-0.0024
0.0	45.0	20.0	0.0130	0.0029	0.0061	0.0123	-0.0073	0.0301	0.0046	-0.0055	-0.0046
0.0	45.0	30.0	0.0118	0.0039	0.0073	0.0158	-0.0098	0.0271	0.0062	-0.0036	-0.0062
0.0	45.0	40.0	0.0103	0.0044	0.0088	0.0195	-0.0112	0.0234	0.0070	-0.0012	-0.0070
0.0	45.0	50.0	0.0088	0.0044	0.0103	0.0234	-0.0112	0.0195	0.0070	0.0012	-0.0070
0.0	45.0	60.0	0.0073	0.0039	0.0118	0.0271	-0.0098	0.0158	0.0062	0.0036	-0.0062
0.0	45.0	70.0	0.0061	0.0029	0.0130	0.0301	-0.0073	0.0128	0.0046	0.0055	-0.0046
0.0	45.0	80.0	0.0053	0.0015	0.0137	0.0321	-0.0039	0.0108	0.0024	0.0067	-0.0024
0.0	45.0	90.0	0.0051	-0.0000	0.0140	0.0328	0.0000	0.0101	-0.0000	0.0071	0.0000
0.0	60.0	0.0	0.0063	0.0000	0.0024	0.0095	-0.0000	0.0322	-0.0000	-0.0048	0.0000
0.0	60.0	10.0	0.0062	0.0007	0.0025	0.0102	-0.0039	0.0315	0.0016	-0.0045	-0.0016
0.0	60.0	20.0	0.0059	0.0013	0.0028	0.0122	-0.0073	0.0295	0.0031	-0.0037	-0.0031
0.0	60.0	30.0	0.0053	0.0017	0.0034	0.0152	-0.0098	0.0265	0.0041	-0.0024	-0.0041
0.0	60.0	40.0	0.0047	0.0019	0.0040	0.0189	-0.0112	0.0228	0.0047	-0.0008	-0.0047
0.0	60.0	50.0	0.0040	0.0019	0.0047	0.0228	-0.0112	0.0189	0.0047	0.0008	-0.0047
0.0	60.0	60.0	0.0034	0.0017	0.0053	0.0265	-0.0098	0.0152	0.0041	0.0024	-0.0041
0.0	60.0	70.0	0.0028	0.0013	0.0059	0.0295	-0.0073	0.0122	0.0031	0.0037	-0.0031
0.0	60.0	80.0	0.0025	0.0007	0.0062	0.0315	-0.0039	0.0102	0.0016	0.0045	-0.0016
0.0	60.0	90.0	0.0024	-0.0000	0.0063	0.0322	0.0000	0.0095	-0.0000	0.0048	0.0000
0.0	75.0	0.0	0.0016	0.0000	0.0006	0.0092	-0.0000	0.0318	-0.0000	-0.0024	0.0000
0.0	75.0	10.0	0.0015	0.0002	0.0006	0.0098	-0.0039	0.0311	0.0008	-0.0022	-0.0008
0.0	75.0	20.0	0.0015	0.0003	0.0007	0.0118	-0.0073	0.0291	0.0015	-0.0018	-0.0015
0.0	75.0	30.0	0.0013	0.0004	0.0009	0.0148	-0.0098	0.0261	0.0021	-0.0012	-0.0021
0.0	75.0	40.0	0.0012	0.0005	0.0010	0.0185	-0.0111	0.0224	0.0023	-0.0004	-0.0023
0.0	75.0	50.0	0.0010	0.0005	0.0012	0.0224	-0.0111	0.0185	0.0023	0.0004	-0.0023
0.0	75.0	60.0	0.0009	0.0004	0.0013	0.0261	-0.0098	0.0148	0.0021	0.0012	-0.0021
0.0	75.0	70.0	0.0007	0.0003	0.0015	0.0291	-0.0073	0.0118	0.0015	0.0018	-0.0015
0.0	75.0	80.0	0.0006	0.0002	0.0015	0.0311	-0.0039	0.0098	0.0008	0.0022	-0.0008
0.0	75.0	90.0	0.0006	-0.0000	0.0016	0.0318	0.0000	0.0092	-0.0000	0.0024	0.0000
0.0	90.0	0.0	0.0000	0.0000	0.0000	0.0090	-0.0000	0.0316	0.0000	0.0000	-0.0000
0.0	90.0	10.0	0.0000	0.0000	0.0000	0.0097	-0.0039	0.0309	-0.0000	0.0000	0.0000
0.0	90.0	20.0	0.0000	0.0000	0.0000	0.0117	-0.0073	0.0290	-0.0000	0.0000	0.0000
0.0	90.0	30.0	0.0000	0.0000	0.0000	0.0147	-0.0098	0.0260	-0.0000	0.0000	0.0000
0.0	90.0	40.0	0.0000	0.0000	0.0000	0.0183	-0.0111	0.0223	-0.0000	0.0000	0.0000
0.0	90.0	50.0	0.0000	0.0000	0.0000	0.0223	-0.0111	0.0183	-0.0000	-0.0000	0.0000
0.0	90.0	60.0	0.0000	0.0000	0.0000	0.0260	-0.0098	0.0147	-0.0000	-0.0000	0.0000
0.0	90.0	70.0	0.0000	0.0000	0.0000	0.0290	-0.0073	0.0117	-0.0000	-0.0000	0.0000
0.0	90.0	80.0	0.0000	0.0000	0.0000	0.0309	-0.0039	0.0097	-0.0000	-0.0000	0.0000
0.0	90.0	90.0	0.0000	-0.0000	0.0000	0.0316	0.0000	0.0090	0.0000	-0.0000	-0.0000

Table 3 continued, part 2 of 7.

θ_1	θ_2	β_ϕ	σ_1/λ^2	σ_2/λ^2	σ_3/λ^2	σ_4/λ^2	σ_5/λ^2	σ_6/λ^2	σ_7/λ^2	σ_8/λ^2	σ_9/λ^2
15.0	0.0	0.0	0.0310	0.0000	0.0112	0.0104	-0.0000	0.0339	-0.0000	-0.0108	0.0000
15.0	0.0	10.0	0.0304	0.0037	0.0119	0.0111	-0.0037	0.0332	0.0035	-0.0101	-0.0039
15.0	0.0	20.0	0.0286	0.0069	0.0138	0.0128	-0.0069	0.0312	0.0066	-0.0083	-0.0073
15.0	0.0	30.0	0.0258	0.0094	0.0169	0.0156	-0.0094	0.0282	0.0089	-0.0054	-0.0098
15.0	0.0	40.0	0.0225	0.0106	0.0206	0.0189	-0.0106	0.0245	0.0101	-0.0019	-0.0112
15.0	0.0	50.0	0.0189	0.0106	0.0245	0.0225	-0.0106	0.0206	0.0101	0.0019	-0.0112
15.0	0.0	60.0	0.0156	0.0094	0.0282	0.0258	-0.0094	0.0169	0.0089	0.0054	-0.0098
15.0	0.0	70.0	0.0128	0.0069	0.0312	0.0286	-0.0069	0.0138	0.0066	0.0083	-0.0073
15.0	0.0	80.0	0.0111	0.0037	0.0332	0.0304	-0.0037	0.0119	0.0035	0.0101	-0.0039
15.0	0.0	90.0	0.0104	-0.0000	0.0339	0.0310	0.0000	0.0112	-0.0000	0.0108	0.0000
15.0	15.0	0.0	0.0282	0.0000	0.0103	0.0103	-0.0000	0.0337	-0.0000	-0.0103	0.0000
15.0	15.0	10.0	0.0276	0.0033	0.0109	0.0109	-0.0037	0.0330	0.0033	-0.0097	-0.0037
15.0	15.0	20.0	0.0260	0.0063	0.0127	0.0127	-0.0069	0.0311	0.0063	-0.0079	-0.0069
15.0	15.0	30.0	0.0235	0.0085	0.0154	0.0154	-0.0094	0.0280	0.0085	-0.0051	-0.0094
15.0	15.0	40.0	0.0205	0.0096	0.0188	0.0188	-0.0106	0.0243	0.0096	-0.0018	-0.0106
15.0	15.0	50.0	0.0173	0.0096	0.0223	0.0223	-0.0106	0.0204	0.0096	0.0018	-0.0106
15.0	15.0	60.0	0.0142	0.0085	0.0257	0.0257	-0.0094	0.0167	0.0085	0.0051	-0.0094
15.0	15.0	70.0	0.0118	0.0063	0.0284	0.0284	-0.0069	0.0137	0.0063	0.0079	-0.0069
15.0	15.0	80.0	0.0101	0.0033	0.0302	0.0302	-0.0037	0.0117	0.0033	0.0097	-0.0037
15.0	15.0	90.0	0.0096	-0.0000	0.0308	0.0308	0.0000	0.0110	-0.0000	0.0103	0.0000
15.0	30.0	0.0	0.0211	0.0000	0.0079	0.0098	-0.0000	0.0333	-0.0000	-0.0088	0.0000
15.0	30.0	10.0	0.0207	0.0025	0.0084	0.0105	-0.0037	0.0326	0.0029	-0.0083	-0.0032
15.0	30.0	20.0	0.0195	0.0046	0.0097	0.0122	-0.0069	0.0306	0.0054	-0.0068	-0.0060
15.0	30.0	30.0	0.0176	0.0062	0.0117	0.0150	-0.0094	0.0276	0.0073	-0.0044	-0.0080
15.0	30.0	40.0	0.0154	0.0071	0.0142	0.0183	-0.0106	0.0239	0.0083	-0.0015	-0.0091
15.0	30.0	50.0	0.0130	0.0071	0.0168	0.0219	-0.0106	0.0199	0.0083	0.0015	-0.0091
15.0	30.0	60.0	0.0108	0.0062	0.0193	0.0252	-0.0093	0.0162	0.0073	0.0044	-0.0080
15.0	30.0	70.0	0.0090	0.0046	0.0213	0.0280	-0.0069	0.0132	0.0054	0.0068	-0.0060
15.0	30.0	80.0	0.0078	0.0025	0.0226	0.0298	-0.0037	0.0112	0.0029	0.0093	-0.0032
15.0	30.0	90.0	0.0074	-0.0000	0.0231	0.0304	0.0000	0.0105	-0.0000	0.0088	0.0000
15.0	45.0	0.0	0.0127	0.0000	0.0050	0.0093	-0.0000	0.0326	-0.0000	-0.0068	0.0000
15.0	45.0	10.0	0.0125	0.0015	0.0052	0.0099	-0.0037	0.0319	0.0022	-0.0064	-0.0024
15.0	45.0	20.0	0.0118	0.0027	0.0060	0.0117	-0.0069	0.0300	0.0042	-0.0052	-0.0046
15.0	45.0	30.0	0.0107	0.0037	0.0072	0.0144	-0.0093	0.0270	0.0056	-0.0034	-0.0062
15.0	45.0	40.0	0.0094	0.0042	0.0087	0.0178	-0.0106	0.0233	0.0064	-0.0012	-0.0070
15.0	45.0	50.0	0.0080	0.0042	0.0102	0.0213	-0.0106	0.0193	0.0064	0.0012	-0.0070
15.0	45.0	60.0	0.0067	0.0037	0.0117	0.0247	-0.0093	0.0156	0.0056	0.0034	-0.0062
15.0	45.0	70.0	0.0056	0.0027	0.0129	0.0274	-0.0069	0.0126	0.0042	0.0052	-0.0046
15.0	45.0	80.0	0.0049	0.0015	0.0137	0.0292	-0.0037	0.0106	0.0022	0.0064	-0.0024
15.0	45.0	90.0	0.0046	-0.0000	0.0139	0.0298	0.0000	0.0099	-0.0000	0.0068	0.0000
15.0	60.0	0.0	0.0058	0.0000	0.0024	0.0088	-0.0000	0.0320	-0.0000	-0.0045	0.0000
15.0	60.0	10.0	0.0057	0.0006	0.0025	0.0094	-0.0037	0.0314	0.0015	-0.0043	-0.0016
15.0	60.0	20.0	0.0053	0.0012	0.0028	0.0112	-0.0069	0.0294	0.0028	-0.0035	-0.0031
15.0	60.0	30.0	0.0049	0.0016	0.0033	0.0139	-0.0093	0.0264	0.0037	-0.0023	-0.0041
15.0	60.0	40.0	0.0043	0.0018	0.0040	0.0172	-0.0106	0.0227	0.0043	-0.0008	-0.0047
15.0	60.0	50.0	0.0037	0.0018	0.0047	0.0208	-0.0106	0.0187	0.0042	0.0008	-0.0047
15.0	60.0	60.0	0.0031	0.0016	0.0053	0.0241	-0.0093	0.0150	0.0037	0.0023	-0.0041
15.0	60.0	70.0	0.0026	0.0012	0.0058	0.0269	-0.0069	0.0120	0.0028	0.0035	-0.0031
15.0	60.0	80.0	0.0023	0.0006	0.0062	0.0286	-0.0037	0.0101	0.0015	0.0043	-0.0016
15.0	60.0	90.0	0.0022	-0.0000	0.0063	0.0293	0.0000	0.0094	-0.0000	0.0045	0.0000
15.0	75.0	0.0	0.0014	0.0000	0.0006	0.0084	-0.0000	0.0316	-0.0000	-0.0023	0.0000
15.0	75.0	10.0	0.0014	0.0002	0.0006	0.0090	-0.0037	0.0309	0.0007	-0.0021	-0.0008
15.0	75.0	20.0	0.0013	0.0003	0.0007	0.0108	-0.0069	0.0290	0.0014	-0.0017	-0.0015
15.0	75.0	30.0	0.0012	0.0004	0.0008	0.0135	-0.0093	0.0259	0.0019	-0.0011	-0.0021
15.0	75.0	40.0	0.0011	0.0005	0.0010	0.0169	-0.0106	0.0223	0.0021	-0.0004	-0.0023
15.0	75.0	50.0	0.0009	0.0005	0.0012	0.0204	-0.0106	0.0183	0.0021	0.0004	-0.0023
15.0	75.0	60.0	0.0008	0.0004	0.0013	0.0238	-0.0093	0.0146	0.0019	0.0011	-0.0020
15.0	75.0	70.0	0.0007	0.0003	0.0015	0.0265	-0.0069	0.0116	0.0014	0.0017	-0.0015
15.0	75.0	80.0	0.0006	0.0002	0.0015	0.0282	-0.0037	0.0097	0.0007	0.0021	-0.0008
15.0	75.0	90.0	0.0006	-0.0000	0.0016	0.0289	0.0000	0.0090	-0.0000	0.0023	0.0000
15.0	90.0	0.0	0.0000	0.0000	0.0000	0.0083	-0.0000	0.0315	0.0000	0.0000	-0.0000
15.0	90.0	10.0	0.0000	0.0000	0.0000	0.0089	-0.0037	0.0308	-0.0000	0.0000	0.0000
15.0	90.0	20.0	0.0000	0.0000	0.0000	0.0107	-0.0069	0.0288	-0.0000	0.0000	0.0000
15.0	90.0	30.0	0.0000	0.0000	0.0000	0.0134	-0.0093	0.0258	-0.0000	0.0000	0.0000
15.0	90.0	40.0	0.0000	0.0000	0.0000	0.0167	-0.0106	0.0221	-0.0000	0.0000	0.0000
15.0	90.0	50.0	0.0000	0.0000	0.0000	0.0203	-0.0106	0.0182	-0.0000	-0.0000	0.0000
15.0	90.0	60.0	0.0000	0.0000	0.0000	0.0236	-0.0093	0.0145	-0.0000	-0.0000	0.0000
15.0	90.0	70.0	0.0000	0.0000	0.0000	0.0263	-0.0069	0.0115	-0.0000	-0.0000	0.0000
15.0	90.0	80.0	0.0000	0.0000	0.0000	0.0281	-0.0037	0.0095	-0.0000	-0.0000	0.0000
15.0	90.0	90.0	0.0000	-0.0000	0.0000	0.0287	0.0000	0.0089	0.0000	-0.0000	-0.0000

Table 3 continued, part 3 of 7.

θ_1	θ_2	β_ϕ	σ_1/λ^2	σ_2/λ^2	σ_3/λ^2	σ_4/λ^2	σ_5/λ^2	σ_6/λ^2	σ_7/λ^2	σ_8/λ^2	σ_9/λ^2
30.0	0.0	0.0	0.0232	0.0000	0.0107	0.0080	-0.0000	0.0334	-0.0000	-0.0093	0.0000
30.0	0.0	10.0	0.0227	0.0032	0.0114	0.0085	-0.0032	0.0327	0.0026	-0.0087	-0.0039
30.0	0.0	20.0	0.0214	0.0060	0.0134	0.0098	-0.0060	0.0308	0.0049	-0.0071	-0.0073
30.0	0.0	30.0	0.0194	0.0080	0.0164	0.0118	-0.0080	0.0277	0.0066	-0.0046	-0.0098
30.0	0.0	40.0	0.0169	0.0091	0.0201	0.0143	-0.0091	0.0240	0.0075	-0.0016	-0.0112
30.0	0.0	50.0	0.0143	0.0091	0.0240	0.0169	-0.0091	0.0201	0.0075	0.0016	-0.0112
30.0	0.0	60.0	0.0118	0.0080	0.0277	0.0194	-0.0080	0.0164	0.0066	0.0046	-0.0098
30.0	0.0	70.0	0.0098	0.0060	0.0308	0.0214	-0.0060	0.0134	0.0049	0.0071	-0.0073
30.0	0.0	80.0	0.0085	0.0032	0.0327	0.0227	-0.0032	0.0114	0.0026	0.0087	-0.0039
30.0	0.0	90.0	0.0080	-0.0000	0.0334	0.0232	0.0000	0.0107	-0.0000	0.0093	0.0000
30.0	15.0	0.0	0.0211	0.0000	0.0098	0.0079	-0.0000	0.0333	-0.0000	-0.0088	0.0000
30.0	15.0	10.0	0.0207	0.0029	0.0105	0.0084	-0.0032	0.0326	0.0025	-0.0083	-0.0037
30.0	15.0	20.0	0.0195	0.0054	0.0122	0.0097	-0.0060	0.0306	0.0046	-0.0068	-0.0069
30.0	15.0	30.0	0.0176	0.0073	0.0150	0.0117	-0.0080	0.0276	0.0062	-0.004[illegible]	-0.0094
30.0	15.0	40.0	0.0154	0.0083	0.0183	0.0142	-0.0091	0.0239	0.0071	-0.001[illegible]	-0.0106
30.0	15.0	50.0	0.0130	0.0083	0.0219	0.0168	-0.0091	0.0199	0.0071	0.001[illegible]	-0.0106
30.0	15.0	60.0	0.0108	0.0073	0.0252	0.0193	-0.0080	0.0162	0.0062	0.004[illegible]	-0.0093
30.0	15.0	70.0	0.0090	0.0054	0.0280	0.0213	-0.0060	0.0132	0.0046	0.006[illegible]	-0.0069
30.0	15.0	80.0	0.0078	0.0029	0.0298	0.0226	-0.0032	0.0112	0.0025	0.008[illegible]	-0.0037
30.0	15.0	90.0	0.0074	-0.0000	0.0304	0.0231	0.0000	0.0105	-0.0000	0.00[illegible]3	0.0000
30.0	30.0	0.0	0.0158	0.0000	0.0076	0.0076	-0.0000	0.0328	-0.0000	-0.00[illegible]6	0.0000
30.0	30.0	10.0	0.0155	0.0021	0.0080	0.0080	-0.0032	0.0321	0.0021	-0.00[illegible]1	-0.0032
30.0	30.0	20.0	0.0146	0.0040	0.0094	0.0094	-0.0060	0.0301	0.0040	-0.00[illegible]8	-0.0060
30.0	30.0	30.0	0.0132	0.0054	0.0114	0.0114	-0.0080	0.0271	0.0054	-0.00[illegible]8	-0.0080
30.0	30.0	40.0	0.0116	0.0061	0.0139	0.0139	-0.0091	0.0234	0.0061	-0.00[illegible]3	-0.0091
30.0	30.0	50.0	0.0098	0.0061	0.0165	0.0165	-0.0091	0.0195	0.0061	0.00[illegible]3	-0.0091
30.0	30.0	60.0	0.0082	0.0054	0.0189	0.0189	-0.0080	0.0158	0.0054	0.00[illegible]8	-0.0080
30.0	30.0	70.0	0.0069	0.0040	0.0210	0.0210	-0.0060	0.0127	0.0040	0.0058	-0.0060
30.0	30.0	80.0	0.0060	0.0021	0.0223	0.0223	-0.0032	0.0108	0.0021	0.0071	-0.0032
30.0	30.0	90.0	0.0057	-0.0000	0.0227	0.0227	0.0000	0.0101	-0.0000	0.0076	0.0000
30.0	45.0	0.0	0.0095	0.0000	0.0048	0.0072	-0.0000	0.0322	-0.0000	-0.0059	0.0000
30.0	45.0	10.0	0.0093	0.0013	0.0050	0.0076	-0.0032	0.0315	0.0016	-0.0055	-0.0025
30.0	45.0	20.0	0.0088	0.0024	0.0058	0.0089	-0.0060	0.0295	0.0031	-0.0045	-0.0046
30.0	45.0	30.0	0.0080	0.0032	0.0070	0.0110	-0.0080	0.0265	0.0041	-0.0029	-0.0062
30.0	45.0	40.0	0.0071	0.0036	0.0085	0.0134	-0.0091	0.0228	0.0047	-0.0010	-0.0070
30.0	45.0	50.0	0.0060	0.0036	0.0100	0.0161	-0.0091	0.0189	0.0047	0.0010	-0.0070
30.0	45.0	60.0	0.0051	0.0032	0.0115	0.0185	-0.0080	0.0152	0.0041	0.0029	-0.0062
30.0	45.0	70.0	0.0043	0.0023	0.0127	0.0205	-0.0059	0.0122	0.0031	0.0045	-0.0046
30.0	45.0	80.0	0.0037	0.0012	0.0134	0.0218	-0.0032	0.0102	0.0016	0.0055	-0.0024
30.0	45.0	90.0	0.0036	-0.0000	0.0137	0.0223	0.0000	0.0095	-0.0000	0.0058	0.0000
30.0	60.0	0.0	0.0043	0.0000	0.0023	0.0068	-0.0000	0.0316	-0.0000	-0.0039	0.0000
30.0	60.0	10.0	0.0042	0.0006	0.0024	0.0072	-0.0032	0.0309	0.0011	-0.0037	-0.0016
30.0	60.0	20.0	0.0040	0.0010	0.0027	0.0086	-0.0060	0.0289	0.0021	-0.0030	-0.0031
30.0	60.0	30.0	0.0037	0.0014	0.0033	0.0106	-0.0080	0.0259	0.0028	-0.0019	-0.0041
30.0	60.0	40.0	0.0032	0.0016	0.0039	0.0130	-0.0091	0.0222	0.0031	-0.0007	-0.0047
30.0	60.0	50.0	0.0028	0.0016	0.0046	0.0157	-0.0091	0.0183	0.0031	0.0007	-0.0047
30.0	60.0	60.0	0.0023	0.0014	0.0052	0.0181	-0.0080	0.0146	0.0027	0.0020	-0.0041
30.0	60.0	70.0	0.0020	0.0010	0.0057	0.0201	-0.0059	0.0116	0.0020	0.0030	-0.0031
30.0	60.0	80.0	0.0018	0.0005	0.0061	0.0214	-0.0031	0.0097	0.0011	0.0037	-0.0016
30.0	60.0	90.0	0.0017	-0.0000	0.0062	0.0219	0.0000	0.0090	-0.0006	0.0039	0.0000
30.0	75.0	0.0	0.0011	0.0000	0.0006	0.0065	-0.0000	0.0312	-0.0000	-0.0019	0.0000
30.0	75.0	10.0	0.0011	0.0001	0.0006	0.0070	-0.0032	0.0305	0.0005	-0.0018	-0.0008
30.0	75.0	20.0	0.0010	0.0003	0.0007	0.0083	-0.0060	0.0285	0.0010	-0.0015	-0.0015
30.0	75.0	30.0	0.0009	0.0003	0.0008	0.0103	-0.0080	0.0255	0.0014	-0.0010	-0.0021
30.0	75.0	40.0	0.0008	0.0004	0.0010	0.0128	-0.0091	0.0218	0.0016	-0.0003	-0.0023
30.0	75.0	50.0	0.0007	0.0004	0.0011	0.0154	-0.0091	0.0179	0.0016	0.0003	-0.0023
30.0	75.0	60.0	0.0006	0.0003	0.0013	0.0178	-0.0080	0.0142	0.0014	0.0010	-0.0020
30.0	75.0	70.0	0.0005	0.0003	0.0014	0.0198	-0.0059	0.0112	0.0010	0.0015	-0.0015
30.0	75.0	80.0	0.0005	0.0001	0.0015	0.0211	-0.0031	0.0093	0.0005	0.0018	-0.0008
30.0	75.0	90.0	0.0004	-0.0000	0.0015	0.0216	0.0000	0.0086	-0.0003	0.0019	0.0000
30.0	90.0	0.0	0.0000	0.0000	0.0000	0.0064	-0.0000	0.0311	0.0000	0.0000	0.0000
30.0	90.0	10.0	0.0000	0.0000	0.0000	0.0069	-0.0032	0.0304	-0.0000	0.0000	0.0000
30.0	90.0	20.0	0.0000	0.0000	0.0000	0.0082	-0.0060	0.0284	-0.0000	0.0000	0.0000
30.0	90.0	30.0	0.0000	0.0000	0.0000	0.0102	-0.0080	0.0254	-0.0000	0.0000	0.0000
30.0	90.0	40.0	0.0000	0.0000	0.0000	0.0127	-0.0091	0.0217	-0.0000	0.0000	0.0000
30.0	90.0	50.0	0.0000	0.0000	0.0000	0.0153	-0.0091	0.0177	-0.0000	-0.0000	0.0000
30.0	90.0	60.0	0.0000	0.0000	0.0000	0.0177	-0.0080	0.0141	-0.0000	-0.0000	0.0000
30.0	90.0	70.0	0.0000	0.0000	0.0000	0.0197	-0.0059	0.0111	-0.0000	-0.0000	0.0000
30.0	90.0	80.0	0.0000	0.0000	0.0000	0.0210	-0.0031	0.0091	-0.0000	-0.0000	0.0000
30.0	90.0	90.0	0.0000	-0.0000	0.0000	0.0215	0.0000	0.0085	0.0000	-0.0000	-0.0000

Table 3 continued, part 4 of 7.

θ_1	θ_2	β_ϕ	σ_1/λ^2	σ_2/λ^2	σ_3/λ^2	σ_4/λ^2	σ_5/λ^2	σ_6/λ^2	σ_7/λ^2	σ_8/λ^2	σ_9/λ^2
45.0	0.0	0.0	0.0140	0.0000	0.0101	0.0051	-0.0000	0.0328	-0.0000	-0.0071	0.0000
45.0	0.0	10.0	0.0137	0.0024	0.0108	0.0053	-0.0024	0.0321	0.0015	-0.0067	-0.0039
45.0	0.0	20.0	0.0130	0.0046	0.0128	0.0061	-0.0046	0.0301	0.0029	-0.0055	-0.0073
45.0	0.0	30.0	0.0118	0.0062	0.0158	0.0073	-0.0062	0.0271	0.0039	-0.0036	-0.0098
45.0	0.0	40.0	0.0103	0.0070	0.0195	0.0088	-0.0070	0.0234	0.0044	-0.0012	-0.0112
45.0	0.0	50.0	0.0088	0.0070	0.0234	0.0103	-0.0070	0.0195	0.0044	0.0012	-0.0112
45.0	0.0	60.0	0.0073	0.0062	0.0271	0.0116	-0.0062	0.0158	0.0039	0.0036	-0.0098
45.0	0.0	70.0	0.0061	0.0046	0.0301	0.0130	-0.0046	0.0128	0.0029	0.0055	-0.0073
45.0	0.0	80.0	0.0053	0.0024	0.0321	0.0137	-0.0024	0.0108	0.0015	0.0067	-0.0039
45.0	0.0	90.0	0.0051	-0.0000	0.0328	0.0140	0.0000	0.0101	-0.0000	0.0071	0.0000
45.0	15.0	0.0	0.0127	0.0000	0.0093	0.0050	-0.0000	0.0326	-0.0000	-0.0068	0.0000
45.0	15.0	10.0	0.0125	0.0022	0.0099	0.0052	-0.0024	0.0317	0.0015	-0.0064	-0.0037
45.0	15.0	20.0	0.0118	0.0042	0.0117	0.0060	-0.0046	0.0300	0.0027	-0.0052	-0.0069
45.0	15.0	30.0	0.0107	0.0056	0.0144	0.0072	-0.0062	0.0270	0.0037	-0.0034	-0.0093
45.0	15.0	40.0	0.0094	0.0064	0.0178	0.0087	-0.0070	0.0233	0.0042	-0.0012	-0.0106
45.0	15.0	50.0	0.0080	0.0064	0.0213	0.0102	-0.0070	0.0193	0.0042	0.0012	-0.0106
45.0	15.0	60.0	0.0067	0.0056	0.0247	0.0117	-0.0062	0.0156	0.0037	0.0034	-0.0093
45.0	15.0	70.0	0.0056	0.0042	0.0274	0.0129	-0.0046	0.0126	0.0027	0.0052	-0.0069
45.0	15.0	80.0	0.0049	0.0022	0.0292	0.0137	-0.0024	0.0106	0.0015	0.0064	-0.0037
45.0	15.0	90.0	0.0046	-0.0000	0.0298	0.0139	0.0000	0.0099	-0.0000	0.0068	0.0000
45.0	30.0	0.0	0.0095	0.0000	0.0072	0.0048	-0.0000	0.0322	-0.0000	-0.0059	0.0000
45.0	30.0	10.0	0.0093	0.0016	0.0076	0.0050	-0.0025	0.0315	0.0013	-0.0055	-0.0032
45.0	30.0	20.0	0.0088	0.0031	0.0089	0.0058	-0.0046	0.0295	0.0024	-0.0045	-0.0060
45.0	30.0	30.0	0.0080	0.0041	0.0110	0.0070	-0.0062	0.0265	0.0032	-0.0029	-0.0080
45.0	30.0	40.0	0.0071	0.0047	0.0134	0.0085	-0.0070	0.0228	0.0036	-0.0010	-0.0091
45.0	30.0	50.0	0.0060	0.0047	0.0161	0.0100	-0.0070	0.0199	0.0036	0.0010	-0.0091
45.0	30.0	60.0	0.0051	0.0041	0.0185	0.0115	-0.0062	0.0152	0.0032	0.0029	-0.0080
45.0	30.0	70.0	0.0043	0.0031	0.0205	0.0127	-0.0046	0.0122	0.0023	0.0045	-0.0059
45.0	30.0	80.0	0.0037	0.0016	0.0218	0.0134	-0.0024	0.0102	0.0012	0.0055	-0.0032
45.0	30.0	90.0	0.0036	-0.0000	0.0223	0.0137	0.0000	0.0095	-0.0000	0.0058	0.0000
45.0	45.0	0.0	0.0058	0.0000	0.0045	0.0045	-0.0000	0.0316	-0.0000	-0.0045	0.0000
45.0	45.0	10.0	0.0057	0.0010	0.0048	0.0043	-0.0025	0.0309	0.0010	-0.0042	-0.0025
45.0	45.0	20.0	0.0053	0.0018	0.0056	0.0056	-0.0046	0.0289	0.0018	-0.0035	-0.0046
45.0	45.0	30.0	0.0049	0.0024	0.0068	0.0068	-0.0062	0.0259	0.0024	-0.0022	-0.0062
45.0	45.0	40.0	0.0043	0.0028	0.0082	0.0082	-0.0070	0.0222	0.0028	-0.0008	-0.0070
45.0	45.0	50.0	0.0037	0.0028	0.0098	0.0098	-0.0070	0.0183	0.0028	0.0008	-0.0070
45.0	45.0	60.0	0.0031	0.0024	0.0112	0.0112	-0.0062	0.0146	0.0024	0.0023	-0.0062
45.0	45.0	70.0	0.0026	0.0018	0.0124	0.0124	-0.0046	0.0116	0.0018	0.0034	-0.0046
45.0	45.0	80.0	0.0023	0.0010	0.0132	0.0132	-0.0024	0.0096	0.0010	0.0042	-0.0024
45.0	45.0	90.0	0.0022	-0.0000	0.0134	0.0134	0.0000	0.0090	-0.0000	0.0045	0.0000
45.0	60.0	0.0	0.0026	0.0000	0.0021	0.0043	-0.0000	0.0311	-0.0000	-0.0030	0.0000
45.0	60.0	10.0	0.0026	0.0004	0.0023	0.0045	-0.0025	0.0304	0.0006	-0.0028	-0.0016
45.0	60.0	20.0	0.0024	0.0008	0.0026	0.0053	-0.0046	0.0284	0.0012	-0.0023	-0.0031
45.0	60.0	30.0	0.0022	0.0011	0.0031	0.0065	-0.0062	0.0253	0.0016	-0.0015	-0.0041
45.0	60.0	40.0	0.0020	0.0012	0.0038	0.0080	-0.0070	0.0216	0.0019	-0.0005	-0.0047
45.0	60.0	50.0	0.0017	0.0012	0.0045	0.0095	-0.0070	0.0177	0.0018	0.0005	-0.0047
45.0	60.0	60.0	0.0014	0.0011	0.0051	0.0110	-0.0061	0.0140	0.0016	0.0015	-0.0041
45.0	60.0	70.0	0.0012	0.0008	0.0056	0.0122	-0.0045	0.0111	0.0012	0.0023	-0.0030
45.0	60.0	80.0	0.0011	0.0004	0.0060	0.0129	-0.0024	0.0091	0.0006	0.0028	-0.0016
45.0	60.0	90.0	0.0011	-0.0000	0.0061	0.0132	0.0000	0.0085	-0.0000	0.0030	0.0000
45.0	75.0	0.0	0.0007	0.0000	0.0005	0.0041	-0.0000	0.0307	-0.0000	-0.0015	0.0000
45.0	75.0	10.0	0.0006	0.0001	0.0006	0.0044	-0.0025	0.0300	0.0003	-0.0014	-0.0008
45.0	75.0	20.0	0.0006	0.0002	0.0007	0.0052	-0.0046	0.0280	0.0006	-0.0011	-0.0015
45.0	75.0	30.0	0.0006	0.0003	0.0008	0.0064	-0.0062	0.0249	0.0008	-0.0007	-0.0021
45.0	75.0	40.0	0.0005	0.0003	0.0010	0.0078	-0.0070	0.0212	0.0009	-0.0002	-0.0023
45.0	75.0	50.0	0.0004	0.0003	0.0011	0.0094	-0.0070	0.0173	0.0009	0.0003	-0.0023
45.0	75.0	60.0	0.0004	0.0003	0.0013	0.0108	-0.0061	0.0136	0.0008	0.0008	-0.0020
45.0	75.0	70.0	0.0003	0.0002	0.0014	0.0120	-0.0045	0.0107	0.0006	0.0011	-0.0015
45.0	75.0	80.0	0.0003	0.0001	0.0015	0.0127	-0.0024	0.0088	0.0003	0.0014	-0.0008
45.0	75.0	90.0	0.0003	-0.0000	0.0015	0.0130	0.0000	0.0081	-0.0000	0.0015	0.0000
45.0	90.0	0.0	0.0000	0.0000	0.0000	0.0040	-0.0000	0.0305	0.0000	0.0000	-0.0000
45.0	90.0	10.0	0.0000	0.0000	0.0000	0.0043	-0.0025	0.0298	-0.0000	0.0000	0.0000
45.0	90.0	20.0	0.0000	0.0000	0.0000	0.0051	-0.0046	0.0278	-0.0000	0.0000	0.0000
45.0	90.0	30.0	0.0000	0.0000	0.0000	0.0063	-0.0062	0.0248	-0.0000	0.0000	0.0000
45.0	90.0	40.0	0.0000	0.0000	0.0000	0.0078	-0.0070	0.0211	-0.0000	0.0000	0.0000
45.0	90.0	50.0	0.0000	0.0000	0.0000	0.0093	-0.0070	0.0172	-0.0000	-0.0000	0.0000
45.0	90.0	60.0	0.0000	0.0000	0.0000	0.0108	-0.0061	0.0135	-0.0000	-0.0000	0.0000
45.0	90.0	70.0	0.0000	0.0000	0.0000	0.0119	-0.0045	0.0106	-0.0000	-0.0000	0.0000
45.0	90.0	80.0	0.0000	0.0000	0.0000	0.0127	-0.0024	0.0086	-0.0000	-0.0000	0.0000
45.0	90.0	90.0	0.0000	-0.0000	0.0000	0.0129	0.0000	0.0080	0.0000	-0.0000	-0.0000

Table 3 continued, part 5 of 7.

θ_1	θ_2	β_ϕ	σ_1/λ^2	σ_2/λ^2	σ_3/λ^2	σ_4/λ^2	σ_5/λ^2	σ_6/λ^2	σ_7/λ^2	σ_8/λ^2	σ_9/λ^2
60.0	0.0	0.0	0.0063	0.0000	0.0095	0.0024	-0.0000	0.0322	-0.0000	-0.0048	0.0000
60.0	0.0	10.0	0.0062	0.0016	0.0102	0.0025	-0.0016	0.0315	0.0007	-0.0045	-0.0039
60.0	0.0	20.0	0.0059	0.0031	0.0122	0.0028	-0.0031	0.0295	0.0013	-0.0037	-0.0073
60.0	0.0	30.0	0.0053	0.0041	0.0152	0.0034	-0.0041	0.0265	0.0017	-0.0024	-0.0098
60.0	0.0	40.0	0.0047	0.0047	0.0189	0.0040	-0.0047	0.0228	0.0019	-0.0008	-0.0112
60.0	0.0	50.0	0.0040	0.0047	0.0228	0.0047	-0.0047	0.0189	0.0019	0.0008	-0.0112
60.0	0.0	60.0	0.0034	0.0041	0.0265	0.0053	-0.0041	0.0152	0.0017	0.0024	-0.0098
60.0	0.0	70.0	0.0028	0.0031	0.0295	0.0059	-0.0031	0.0122	0.0013	0.0037	-0.0073
60.0	0.0	80.0	0.0025	0.0016	0.0315	0.0062	-0.0016	0.0102	0.0007	0.0045	-0.0039
60.0	0.0	90.0	0.0024	-0.0000	0.0322	0.0063	0.0000	0.0095	-0.0000	0.0048	0.0000
60.0	15.0	0.0	0.0058	0.0000	0.0088	0.0024	-0.0000	0.0320	-0.0000	-0.0045	0.0000
60.0	15.0	10.0	0.0057	0.0015	0.0094	0.0025	-0.0016	0.0314	0.0006	-0.0043	-0.0037
60.0	15.0	20.0	0.0053	0.0028	0.0112	0.0028	-0.0031	0.0294	0.0012	-0.0035	-0.0069
60.0	15.0	30.0	0.0049	0.0037	0.0139	0.0033	-0.0041	0.0264	0.0016	-0.0023	-0.0093
60.0	15.0	40.0	0.0043	0.0043	0.0172	0.0040	-0.0047	0.0227	0.0018	-0.0008	-0.0106
60.0	15.0	50.0	0.0037	0.0042	0.0208	0.0047	-0.0047	0.0187	0.0018	0.0008	-0.0106
60.0	15.0	60.0	0.0031	0.0037	0.0241	0.0053	-0.0041	0.0150	0.0016	0.0023	-0.0093
60.0	15.0	70.0	0.0026	0.0028	0.0269	0.0058	-0.0031	0.0120	0.0012	0.0035	-0.0069
60.0	15.0	80.0	0.0023	0.0015	0.0286	0.0062	-0.0016	0.0101	0.0006	0.0043	-0.0037
60.0	15.0	90.0	0.0022	-0.0000	0.0293	0.0063	0.0000	0.0094	-0.0000	0.0045	0.0000
60.0	30.0	0.0	0.0043	0.0000	0.0068	0.0023	-0.0000	0.0316	-0.0000	-0.0039	0.0000
60.0	30.0	10.0	0.0042	0.0011	0.0072	0.0024	-0.0016	0.0309	0.0006	-0.0037	-0.0032
60.0	30.0	20.0	0.0040	0.0021	0.0086	0.0027	-0.0031	0.0289	0.0010	-0.0030	-0.0060
60.0	30.0	30.0	0.0037	0.0028	0.0106	0.0033	-0.0041	0.0259	0.0014	-0.0019	-0.0080
60.0	30.0	40.0	0.0032	0.0031	0.0130	0.0039	-0.0047	0.0222	0.0016	-0.0007	-0.0091
60.0	30.0	50.0	0.0028	0.0031	0.0157	0.0046	-0.0047	0.0183	0.0016	0.0007	-0.0091
60.0	30.0	60.0	0.0023	0.0027	0.0181	0.0052	-0.0041	0.0146	0.0014	0.0020	-0.0090
60.0	30.0	70.0	0.0020	0.0020	0.0201	0.0057	-0.0031	0.0116	0.0010	0.0030	-0.0059
60.0	30.0	80.0	0.0018	0.0011	0.0214	0.0061	-0.0016	0.0097	0.0005	0.0037	-0.0031
60.0	30.0	90.0	0.0017	-0.0000	0.0219	0.0062	0.0000	0.0090	-0.0000	0.0039	0.0000
60.0	45.0	0.0	0.0026	0.0000	0.0043	0.0021	-0.0000	0.0311	-0.0000	-0.0030	0.0000
60.0	45.0	10.0	0.0026	0.0006	0.0045	0.0023	-0.0016	0.0304	0.0004	-0.0028	-0.0025
60.0	45.0	20.0	0.0024	0.0012	0.0053	0.0026	-0.0031	0.0284	0.0008	-0.0023	-0.0046
60.0	45.0	30.0	0.0022	0.0016	0.0065	0.0031	-0.0041	0.0253	0.0011	-0.0015	-0.0062
60.0	45.0	40.0	0.0020	0.0019	0.0080	0.0038	-0.0047	0.0216	0.0012	-0.0005	-0.0070
60.0	45.0	50.0	0.0017	0.0018	0.0095	0.0045	-0.0047	0.0177	0.0012	0.0005	-0.0070
60.0	45.0	60.0	0.0014	0.0016	0.0110	0.0051	-0.0041	0.0140	0.0011	0.0015	-0.0061
60.0	45.0	70.0	0.0012	0.0012	0.0122	0.0056	-0.0030	0.0111	0.0008	0.0023	-0.0045
60.0	45.0	80.0	0.0011	0.0006	0.0129	0.0060	-0.0016	0.0091	0.0004	0.0028	-0.0024
60.0	45.0	90.0	0.0011	-0.0000	0.0132	0.0061	0.0000	0.0085	-0.0000	0.0030	0.0000
60.0	60.0	0.0	0.0012	0.0000	0.0020	0.0020	-0.0000	0.0305	-0.0000	-0.0020	0.0000
60.0	60.0	10.0	0.0012	0.0003	0.0021	0.0021	-0.0016	0.0298	0.0003	-0.0019	-0.0016
60.0	60.0	20.0	0.0011	0.0005	0.0025	0.0025	-0.0031	0.0278	0.0005	-0.0015	-0.0031
60.0	60.0	30.0	0.0010	0.0007	0.0030	0.0030	-0.0042	0.0248	0.0007	-0.0010	-0.0042
60.0	60.0	40.0	0.0009	0.0008	0.0037	0.0037	-0.0047	0.0211	0.0008	-0.0003	-0.0047
60.0	60.0	50.0	0.0008	0.0008	0.0044	0.0044	-0.0047	0.0171	0.0008	0.0004	-0.0047
60.0	60.0	60.0	0.0007	0.0007	0.0050	0.0050	-0.0041	0.0135	0.0007	0.0010	-0.0041
60.0	60.0	70.0	0.0006	0.0005	0.0055	0.0055	-0.0030	0.0105	0.0005	0.0015	-0.0030
60.0	60.0	80.0	0.0005	0.0003	0.0058	0.0058	-0.0016	0.0086	0.0003	0.0019	-0.0016
60.0	60.0	90.0	0.0005	-0.0000	0.0060	0.0060	0.0000	0.0080	-0.0000	0.0020	0.0000
60.0	75.0	0.0	0.0003	0.0000	0.0005	0.0019	-0.0000	0.0302	-0.0000	-0.0010	0.0000
60.0	75.0	10.0	0.0003	0.0001	0.0006	0.0021	-0.0017	0.0295	0.0001	-0.0009	-0.0008
60.0	75.0	20.0	0.0003	0.0001	0.0006	0.0024	-0.0031	0.0274	0.0003	-0.0008	-0.0015
60.0	75.0	30.0	0.0003	0.0002	0.0008	0.0030	-0.0042	0.0244	0.0004	-0.0005	-0.0021
60.0	75.0	40.0	0.0002	0.0002	0.0009	0.0036	-0.0047	0.0207	0.0004	-0.0002	-0.0023
60.0	75.0	50.0	0.0002	0.0002	0.0011	0.0043	-0.0047	0.0168	0.0004	0.0002	-0.0023
60.0	75.0	60.0	0.0002	0.0002	0.0012	0.0049	-0.0041	0.0131	0.0004	0.0005	-0.0020
60.0	75.0	70.0	0.0001	0.0001	0.0014	0.0054	-0.0030	0.0102	0.0003	0.0008	-0.0015
60.0	75.0	80.0	0.0001	0.0001	0.0015	0.0058	-0.0016	0.0083	0.0001	0.0009	-0.0008
60.0	75.0	90.0	0.0001	-0.0000	0.0015	0.0059	0.0000	0.0076	-0.0000	0.0010	0.0000
60.0	90.0	0.0	0.0000	0.0000	0.0000	0.0019	-0.0000	0.0300	0.0000	0.0000	-0.0000
60.0	90.0	10.0	0.0000	0.0000	0.0000	0.0020	-0.0017	0.0293	-0.0000	0.0000	0.0000
60.0	90.0	20.0	0.0000	0.0000	0.0000	0.0024	-0.0031	0.0273	-0.0000	0.0000	0.0000
60.0	90.0	30.0	0.0000	0.0000	0.0000	0.0029	-0.0042	0.0242	-0.0000	0.0000	0.0000
60.0	90.0	40.0	0.0000	0.0000	0.0000	0.0036	-0.0047	0.0205	-0.0000	0.0000	0.0000
60.0	90.0	50.0	0.0000	0.0000	0.0000	0.0043	-0.0047	0.0166	-0.0000	-0.0000	0.0000
60.0	90.0	60.0	0.0000	0.0000	0.0000	0.0049	-0.0041	0.0130	-0.0000	-0.0000	0.0000
60.0	90.0	70.0	0.0000	0.0000	0.0000	0.0054	-0.0030	0.0100	-0.0000	-0.0000	0.0000
60.0	90.0	80.0	0.0000	0.0000	0.0000	0.0057	-0.0016	0.0081	-0.0000	-0.0000	0.0000
60.0	90.0	90.0	0.0000	-0.0000	0.0000	0.0058	0.0000	0.0075	0.0000	-0.0000	-0.0000

Table 3 continued, part 6 of 7.

θ_1	θ_2	β_ϕ	σ_1/λ^2	σ_2/λ^2	σ_3/λ^2	σ_4/λ^2	σ_5/λ^2	σ_6/λ^2	σ_7/λ^2	σ_8/λ^2	σ_9/λ^2
75.0	0.0	0.0	0.0016	0.0000	0.0092	0.0006	-0.0000	0.0318	-0.0000	-0.0024	0.0000
75.0	0.0	10.0	0.0015	0.0008	0.0098	0.0006	-0.0008	0.0311	0.0002	-0.0022	-0.0039
75.0	0.0	20.0	0.0015	0.0015	0.0118	0.0007	-0.0015	0.0291	0.0003	-0.0018	-0.0073
75.0	0.0	30.0	0.0013	0.0021	0.0148	0.0009	-0.0021	0.0261	0.0004	-0.0012	-0.0098
75.0	0.0	40.0	0.0012	0.0023	0.0185	0.0010	-0.0023	0.0224	0.0005	-0.0004	-0.0111
75.0	0.0	50.0	0.0010	0.0023	0.0224	0.0012	-0.0023	0.0185	0.0005	0.0004	-0.0111
75.0	0.0	60.0	0.0009	0.0021	0.0261	0.0013	-0.0021	0.0148	0.0004	0.0012	-0.0098
75.0	0.0	70.0	0.0007	0.0015	0.0291	0.0015	-0.0015	0.0118	0.0003	0.0018	-0.0073
75.0	0.0	80.0	0.0006	0.0008	0.0311	0.0015	-0.0008	0.0098	0.0002	0.0022	-0.0039
75.0	0.0	90.0	0.0006	-0.0000	0.0318	0.0016	0.0000	0.0092	-0.0000	0.0024	0.0000
75.0	15.0	0.0	0.0014	0.0000	0.0084	0.0006	-0.0000	0.0316	-0.0000	-0.0023	0.0000
75.0	15.0	10.0	0.0014	0.0007	0.0090	0.0006	-0.0008	0.0309	0.0002	-0.0021	-0.0037
75.0	15.0	20.0	0.0013	0.0014	0.0108	0.0007	-0.0015	0.0290	0.0003	-0.0017	-0.0069
75.0	15.0	30.0	0.0012	0.0019	0.0135	0.0008	-0.0021	0.0259	0.0004	-0.0011	-0.0093
75.0	15.0	40.0	0.0011	0.0021	0.0169	0.0010	-0.0023	0.0223	0.0005	-0.0004	-0.0106
75.0	15.0	50.0	0.0009	0.0021	0.0204	0.0012	-0.0023	0.0183	0.0005	0.0004	-0.0106
75.0	15.0	60.0	0.0008	0.0019	0.0238	0.0013	-0.0020	0.0146	0.0004	0.0011	-0.0093
75.0	15.0	70.0	0.0007	0.0014	0.0265	0.0015	-0.0015	0.0116	0.0003	0.0017	-0.0069
75.0	15.0	80.0	0.0006	0.0007	0.0282	0.0015	-0.0008	0.0097	0.0002	0.0021	-0.0037
75.0	15.0	90.0	0.0006	-0.0000	0.0289	0.0016	0.0000	0.0090	-0.0000	0.0023	0.0000
75.0	30.0	0.0	0.0011	0.0000	0.0065	0.0006	-0.0000	0.0312	-0.0000	-0.0019	0.0000
75.0	30.0	10.0	0.0011	0.0005	0.0070	0.0006	-0.0008	0.0305	0.0001	-0.0018	-0.0032
75.0	30.0	20.0	0.0010	0.0010	0.0083	0.0007	-0.0015	0.0285	0.0003	-0.0015	-0.0060
75.0	30.0	30.0	0.0009	0.0014	0.0103	0.0008	-0.0021	0.0255	0.0003	-0.0010	-0.0080
75.0	30.0	40.0	0.0008	0.0016	0.0128	0.0010	-0.0023	0.0218	0.0004	-0.0003	-0.0091
75.0	30.0	50.0	0.0007	0.0016	0.0154	0.0011	-0.0023	0.0179	0.0004	0.0003	-0.0091
75.0	30.0	60.0	0.0006	0.0014	0.0178	0.0013	-0.0020	0.0142	0.0003	0.0010	-0.0080
75.0	30.0	70.0	0.0005	0.0010	0.0198	0.0014	-0.0015	0.0112	0.0003	0.0015	-0.0059
75.0	30.0	80.0	0.0005	0.0005	0.0211	0.0015	-0.0008	0.0093	0.0001	0.0018	-0.0031
75.0	30.0	90.0	0.0004	-0.0000	0.0216	0.0015	0.0000	0.0086	-0.0000	0.0019	0.0000
75.0	45.0	0.0	0.0007	0.0000	0.0041	0.0005	-0.0000	0.0307	-0.0000	-0.0015	0.0000
75.0	45.0	10.0	0.0006	0.0003	0.0044	0.0006	-0.0008	0.0300	0.0001	-0.0014	-0.0025
75.0	45.0	20.0	0.0006	0.0006	0.0052	0.0007	-0.0015	0.0280	0.0002	-0.0011	-0.0046
75.0	45.0	30.0	0.0006	0.0008	0.0064	0.0008	-0.0021	0.0249	0.0003	-0.0007	-0.0062
75.0	45.0	40.0	0.0005	0.0009	0.0078	0.0010	-0.0023	0.0212	0.0003	-0.0002	-0.0070
75.0	45.0	50.0	0.0004	0.0009	0.0094	0.0011	-0.0023	0.0173	0.0003	0.0003	-0.0070
75.0	45.0	60.0	0.0004	0.0008	0.0108	0.0013	-0.0020	0.0136	0.0003	0.0008	-0.0061
75.0	45.0	70.0	0.0003	0.0006	0.0120	0.0014	-0.0015	0.0107	0.0002	0.0011	-0.0045
75.0	45.0	80.0	0.0003	0.0003	0.0127	0.0015	-0.0008	0.0088	0.0001	0.0014	-0.0024
75.0	45.0	90.0	0.0003	-0.0000	0.0130	0.0015	0.0000	0.0081	-0.0000	0.0015	0.0000
75.0	60.0	0.0	0.0003	0.0000	0.0019	0.0005	-0.0000	0.0302	-0.0000	-0.0010	0.0000
75.0	60.0	10.0	0.0003	0.0001	0.0021	0.0006	-0.0008	0.0295	0.0001	-0.0009	-0.0017
75.0	60.0	20.0	0.0003	0.0003	0.0024	0.0006	-0.0015	0.0274	0.0001	-0.0008	-0.0031
75.0	60.0	30.0	0.0003	0.0004	0.0030	0.0008	-0.0021	0.0244	0.0002	-0.0005	-0.0042
75.0	60.0	40.0	0.0002	0.0004	0.0036	0.0009	-0.0023	0.0207	0.0002	-0.0002	-0.0047
75.0	60.0	50.0	0.0002	0.0004	0.0043	0.0011	-0.0023	0.0168	0.0002	0.0002	-0.0047
75.0	60.0	60.0	0.0002	0.0004	0.0049	0.0012	-0.0020	0.0131	0.0002	0.0005	-0.0041
75.0	60.0	70.0	0.0001	0.0003	0.0054	0.0014	-0.0015	0.0102	0.0001	0.0008	-0.0030
75.0	60.0	80.0	0.0001	0.0001	0.0058	0.0015	-0.0008	0.0083	0.0001	0.0009	-0.0016
75.0	60.0	90.0	0.0001	-0.0000	0.0059	0.0015	0.0000	0.0076	-0.0000	0.0010	0.0000
75.0	75.0	0.0	0.0001	0.0000	0.0005	0.0005	-0.0000	0.0298	-0.0000	-0.0005	0.0000
75.0	75.0	10.0	0.0001	0.0000	0.0005	0.0005	-0.0008	0.0291	0.0000	-0.0005	-0.0008
75.0	75.0	20.0	0.0001	0.0001	0.0006	0.0006	-0.0015	0.0271	0.0001	-0.0004	-0.0015
75.0	75.0	30.0	0.0001	0.0001	0.0007	0.0007	-0.0021	0.0240	0.0001	-0.0002	-0.0021
75.0	75.0	40.0	0.0001	0.0001	0.0009	0.0009	-0.0023	0.0203	0.0001	-0.0001	-0.0023
75.0	75.0	50.0	0.0000	0.0001	0.0011	0.0011	-0.0023	0.016[illegible]	0.0001	0.0001	-0.0023
75.0	75.0	60.0	0.0000	0.0001	0.0012	0.0012	-0.0020	0.0127	0.0001	0.0003	-0.0020
75.0	75.0	70.0	0.0000	0.0001	0.0014	0.0014	-0.0015	0.0098	0.0001	0.0004	-0.0015
75.0	75.0	80.0	0.0000	0.0000	0.0014	0.0014	-0.0008	0.0079	0.0000	0.0005	-0.0008
75.0	75.0	90.0	0.0000	-0.0000	0.0015	0.0015	0.0000	0.0073	-0.0000	0.0005	0.0000
75.0	90.0	0.0	0.0000	0.0000	0.0000	0.0005	-0.0000	0.0297	0.0000	0.0000	-0.0000
75.0	90.0	10.0	0.0000	0.0000	0.0000	0.0005	-0.0008	0.0290	-0.0000	0.0000	0.0000
75.0	90.0	20.0	0.0000	0.0000	0.0000	0.0006	-0.0015	0.0269	-0.0000	0.0000	0.0000
75.0	90.0	30.0	0.0000	0.0000	0.0000	0.0007	-0.0021	0.0239	-0.0000	0.0000	0.0000
75.0	90.0	40.0	0.0000	0.0000	0.0000	0.0009	-0.0023	0.0201	-0.0000	0.0000	0.0000
75.0	90.0	50.0	0.0000	0.0000	0.0000	0.0011	-0.0023	0.0162	-0.0000	-0.0000	0.0000
75.0	90.0	60.0	0.0000	0.0000	0.0000	0.0012	-0.0020	0.0126	-0.0000	-0.0000	0.0000
75.0	90.0	70.0	0.0000	0.0000	0.0000	0.0013	-0.0015	0.0097	-0.0000	-0.0000	0.0000
75.0	90.0	80.0	0.0000	0.0000	0.0000	0.0014	-0.0008	0.0078	-0.0000	-0.0000	0.0000
75.0	90.0	90.0	0.0000	-0.0000	0.0000	0.0015	0.0000	0.0072	0.0000	-0.0000	-0.0000

Table 3 continued, part 7 of 7.

θ_1	θ_2	β_ϕ	σ_1/λ^2	σ_2/λ^2	σ_3/λ^2	σ_4/λ^2	σ_5/λ^2	σ_6/λ^2	σ_7/λ^2	σ_8/λ^2	σ_9/λ^2
90.0	0.0	0.0	0.0000	-0.0000	0.0090	0.0000	0.0000	0.0316	-0.0000	0.0000	0.0000
90.0	0.0	10.0	0.0000	-0.0000	0.0097	0.0000	0.0000	0.0309	0.0000	0.0000	-0.0039
90.0	0.0	20.0	0.0000	-0.0000	0.0117	0.0000	0.0000	0.0290	0.0000	0.0000	-0.0073
90.0	0.0	30.0	0.0000	-0.0000	0.0147	0.0000	0.0000	0.0260	0.0000	0.0000	-0.0098
90.0	0.0	40.0	0.0000	-0.0000	0.0183	0.0000	0.0000	0.0223	0.0000	0.0000	-0.0111
90.0	0.0	50.0	0.0000	-0.0000	0.0223	0.0000	0.0000	0.0183	0.0000	-0.0000	-0.0111
90.0	0.0	60.0	0.0000	-0.0000	0.0260	0.0000	0.0000	0.0147	0.0000	-0.0000	-0.0098
90.0	0.0	70.0	0.0000	-0.0000	0.0290	0.0000	0.0000	0.0117	0.0000	-0.0000	-0.0073
90.0	0.0	80.0	0.0000	-0.0000	0.0309	0.0000	0.0000	0.0097	0.0000	-0.0000	-0.0039
90.0	0.0	90.0	0.0000	0.0000	0.0316	0.0000	-0.0000	0.0090	-0.0000	-0.0000	0.0000
90.0	15.0	0.0	0.0000	-0.0000	0.0083	0.0000	0.0000	0.0315	-0.0000	0.0000	0.0000
90.0	15.0	10.0	0.0000	-0.0000	0.0089	0.0000	0.0000	0.0308	0.0000	0.0000	-0.0037
90.0	15.0	20.0	0.0000	-0.0000	0.0107	0.0000	0.0000	0.0288	0.0000	0.0000	-0.0069
90.0	15.0	30.0	0.0000	-0.0000	0.0134	0.0000	0.0000	0.0258	0.0000	0.0000	-0.0093
90.0	15.0	40.0	0.0000	-0.0000	0.0167	0.0000	0.0000	0.0221	0.0000	0.0000	-0.0106
90.0	15.0	50.0	0.0000	-0.0000	0.0203	0.0000	0.0000	0.0182	0.0000	-0.0000	-0.0106
90.0	15.0	60.0	0.0000	-0.0000	0.0236	0.0000	0.0000	0.0145	0.0000	-0.0000	-0.0093
90.0	15.0	70.0	0.0000	-0.0000	0.0263	0.0000	0.0000	0.0115	0.0000	-0.0000	-0.0069
90.0	15.0	80.0	0.0000	-0.0000	0.0281	0.0000	0.0000	0.0095	0.0000	-0.0000	-0.0037
90.0	15.0	90.0	0.0000	0.0000	0.0287	0.0000	-0.0000	0.0089	-0.0000	-0.0000	0.0000
90.0	30.0	0.0	0.0000	-0.0000	0.0064	0.0000	0.0000	0.0311	-0.0000	0.0000	0.0000
90.0	30.0	10.0	0.0000	-0.0000	0.0069	0.0000	0.0000	0.0304	0.0000	0.0000	-0.0032
90.0	30.0	20.0	0.0000	-0.0000	0.0082	0.0000	0.0000	0.0284	0.0000	0.0000	-0.0060
90.0	30.0	30.0	0.0000	-0.0000	0.0102	0.0000	0.0000	0.0254	0.0000	0.0000	-0.0080
90.0	30.0	40.0	0.0000	-0.0000	0.0127	0.0000	0.0000	0.0217	0.0000	0.0000	-0.0091
90.0	30.0	50.0	0.0000	-0.0000	0.0153	0.0000	0.0000	0.0177	0.0000	-0.0000	-0.0091
90.0	30.0	60.0	0.0000	-0.0000	0.0177	0.0000	0.0000	0.0141	0.0000	-0.0000	-0.0080
90.0	30.0	70.0	0.0000	-0.0000	0.0197	0.0000	0.0000	0.0111	0.0000	-0.0000	-0.0059
90.0	30.0	80.0	0.0000	-0.0000	0.0210	0.0000	0.0000	0.0091	0.0000	-0.0000	-0.0031
90.0	30.0	90.0	0.0000	0.0000	0.0215	0.0000	-0.0000	0.0085	-0.0000	-0.0000	0.0000
90.0	45.0	0.0	0.0000	-0.0000	0.0040	0.0000	0.0000	0.0305	-0.0000	0.0000	0.0000
90.0	45.0	10.0	0.0000	-0.0000	0.0043	0.0000	0.0000	0.0298	0.0000	0.0000	-0.0025
90.0	45.0	20.0	0.0000	-0.0000	0.0051	0.0000	0.0000	0.0278	0.0000	0.0000	-0.0046
90.0	45.0	30.0	0.0000	-0.0000	0.0063	0.0000	0.0000	0.0248	0.0000	0.0000	-0.0062
90.0	45.0	40.0	0.0000	-0.0000	0.0078	0.0000	0.0000	0.0211	0.0000	0.0000	-0.0070
90.0	45.0	50.0	0.0000	-0.0000	0.0093	0.0000	0.0000	0.0172	0.0000	-0.0000	-0.0070
90.0	45.0	60.0	0.0000	-0.0000	0.0108	0.0000	0.0000	0.0135	0.0000	-0.0000	-0.0061
90.0	45.0	70.0	0.0000	-0.0000	0.0119	0.0000	0.0000	0.0106	0.0000	-0.0000	-0.0045
90.0	45.0	80.0	0.0000	-0.0000	0.0127	0.0000	0.0000	0.0086	0.0000	-0.0000	-0.0024
90.0	45.0	90.0	0.0000	0.0000	0.0129	0.0000	-0.0000	0.0080	-0.0000	-0.0000	0.0000
90.0	60.0	0.0	0.0000	-0.0000	0.0019	0.0000	0.0000	0.0300	-0.0000	0.0000	0.0000
90.0	60.0	10.0	0.0000	-0.0000	0.0020	0.0000	0.0000	0.0293	0.0000	0.0000	-0.0017
90.0	60.0	20.0	0.0000	-0.0000	0.0024	0.0000	0.0000	0.0273	0.0000	0.0000	-0.0031
90.0	60.0	30.0	0.0000	-0.0000	0.0029	0.0000	0.0000	0.0242	0.0000	0.0000	-0.0042
90.0	60.0	40.0	0.0000	-0.0000	0.0036	0.0000	0.0000	0.0205	0.0000	0.0000	-0.0047
90.0	60.0	50.0	0.0000	-0.0000	0.0043	0.0000	0.0000	0.0166	0.0000	-0.0000	-0.0047
90.0	60.0	60.0	0.0000	-0.0000	0.0049	0.0000	0.0000	0.0130	0.0000	-0.0000	-0.0041
90.0	60.0	70.0	0.0000	-0.0000	0.0054	0.0000	0.0000	0.0100	0.0000	-0.0000	-0.0030
90.0	60.0	80.0	0.0000	-0.0000	0.0057	0.0000	0.0000	0.0081	0.0000	-0.0000	-0.0016
90.0	60.0	90.0	0.0000	0.0000	0.0058	0.0000	-0.0000	0.0075	-0.0000	-0.0000	0.0000
90.0	75.0	0.0	0.0000	-0.0000	0.0005	0.0000	0.0000	0.0297	-0.0000	0.0000	0.0000
90.0	75.0	10.0	0.0000	-0.0000	0.0005	0.0000	0.0000	0.0290	0.0000	0.0000	-0.0008
90.0	75.0	20.0	0.0000	-0.0000	0.0006	0.0000	0.0000	0.0269	0.0000	0.0000	-0.0015
90.0	75.0	30.0	0.0000	-0.0000	0.0007	0.0000	0.0000	0.0239	0.0000	0.0000	-0.0021
90.0	75.0	40.0	0.0000	-0.0000	0.0009	0.0000	0.0000	0.0201	0.0000	0.0000	-0.0023
90.0	75.0	50.0	0.0000	-0.0000	0.0011	0.0000	0.0000	0.0162	0.0000	-0.0000	-0.0023
90.0	75.0	60.0	0.0000	-0.0000	0.0012	0.0000	0.0000	0.0126	0.0000	-0.0000	-0.0020
90.0	75.0	70.0	0.0000	-0.0000	0.0013	0.0000	0.0000	0.0097	0.0000	-0.0000	-0.0015
90.0	75.0	80.0	0.0000	-0.0000	0.0014	0.0000	0.0000	0.0078	0.0000	-0.0000	-0.0008
90.0	75.0	90.0	0.0000	0.0000	0.0015	0.0000	-0.0000	0.0072	-0.0000	-0.0000	0.0000
90.0	90.0	0.0	0.0000	-0.0000	0.0000	0.0000	0.0000	0.0295	-0.0000	-0.0000	-0.0000
90.0	90.0	10.0	0.0000	-0.0000	0.0000	0.0000	0.0000	0.0288	-0.0000	-0.0000	0.0000
90.0	90.0	20.0	0.0000	-0.0000	0.0000	0.0000	0.0000	0.0268	-0.0000	-0.0000	0.0000
90.0	90.0	30.0	0.0000	-0.0000	0.0000	0.0000	0.0000	0.0237	-0.0000	-0.0000	0.0000
90.0	90.0	40.0	0.0000	-0.0000	0.0000	0.0000	0.0000	0.0200	-0.0000	-0.0000	0.0000
90.0	90.0	50.0	0.0000	-0.0000	0.0000	0.0000	0.0000	0.0161	-0.0000	0.0000	0.0000
90.0	90.0	60.0	0.0000	-0.0000	0.0000	0.0000	0.0000	0.0125	-0.0000	0.0000	0.0000
90.0	90.0	70.0	0.0000	-0.0000	0.0000	0.0000	0.0000	0.0096	-0.0000	0.0000	0.0000
90.0	90.0	80.0	0.0000	-0.0000	0.0000	0.0000	0.0000	0.0077	-0.0000	0.0000	0.0000
90.0	90.0	90.0	0.0000	0.0000	0.0000	0.0000	-0.0000	0.0070	0.0000	0.0000	-0.0000

TABLE 4. PARAMETERS σ_i, $i = 1, 2, \ldots, 9$, NORMALIZED TO λ^2 FOR SCATTERING FROM A 3/2-WAVELENGTH DIPOLE ($L = 3\lambda/2$). ANGLES θ_1, θ_2, AND β_ϕ SHOWN IN DEGREES.

θ_1	θ_2	β_ϕ	σ_1/λ^2	σ_2/λ^2	σ_3/λ^2	σ_4/λ^2	σ_5/λ^2	σ_6/λ^2	σ_7/λ^2	σ_8/λ^2	σ_9/λ^2
0.0	0.0	0.0	0.1547	0.0000	0.0516	0.0516	-0.0000	0.1547	-0.0000	-0.0516	0.0000
0.0	0.0	10.0	0.1516	0.0176	0.0547	0.0547	-0.0176	0.1516	0.0176	-0.0485	-0.0176
0.0	0.0	20.0	0.1427	0.0332	0.0636	0.0636	-0.0332	0.1427	0.0332	-0.0395	-0.0332
0.0	0.0	30.0	0.1289	0.0447	0.0774	0.0774	-0.0447	0.1289	0.0447	-0.0258	-0.0447
0.0	0.0	40.0	0.1121	0.0508	0.0942	0.0942	-0.0508	0.1121	0.0508	-0.0090	-0.0508
0.0	0.0	50.0	0.0942	0.0508	0.1121	0.1121	-0.0508	0.0942	0.0508	0.0090	-0.0508
0.0	0.0	60.0	0.0774	0.0447	0.1289	0.1289	-0.0447	0.0774	0.0447	0.0258	-0.0447
0.0	0.0	70.0	0.0636	0.0332	0.1427	0.1427	-0.0332	0.0636	0.0332	0.0395	-0.0332
0.0	0.0	80.0	0.0547	0.0176	0.1516	0.1516	-0.0176	0.0547	0.0176	0.0485	-0.0176
0.0	0.0	90.0	0.0516	-0.0000	0.1547	0.1547	0.0000	0.0516	-0.0000	0.0516	0.0000
0.0	15.0	0.0	0.1406	0.0000	0.0474	0.0508	-0.0000	0.1539	-0.0000	-0.0490	0.0000
0.0	15.0	10.0	0.1378	0.0159	0.0502	0.0539	-0.0176	0.1508	0.0168	-0.0461	-0.0168
0.0	15.0	20.0	0.1297	0.0300	0.0583	0.0628	-0.0332	0.1419	0.0315	-0.0376	-0.0315
0.0	15.0	30.0	0.1173	0.0404	0.0707	0.0766	-0.0447	0.1281	0.0425	-0.0245	-0.0425
0.0	15.0	40.0	0.1021	0.0459	0.0859	0.0934	-0.0508	0.1113	0.0483	-0.0085	-0.0483
0.0	15.0	50.0	0.0859	0.0457	0.1021	0.1113	-0.0508	0.0934	0.0483	0.0085	-0.0483
0.0	15.0	60.0	0.0707	0.0404	0.1173	0.1281	-0.0447	0.0766	0.0425	0.0245	-0.0425
0.0	15.0	70.0	0.0583	0.0300	0.1297	0.1419	-0.0332	0.0628	0.0315	0.0376	-0.0315
0.0	15.0	80.0	0.0502	0.0159	0.1378	0.1508	-0.0176	0.0539	0.0168	0.0461	-0.0168
0.0	15.0	90.0	0.0474	-0.0000	0.1406	0.1539	0.0000	0.0508	-0.0000	0.0490	0.0000
0.0	30.0	0.0	0.1052	0.0000	0.0365	0.0487	-0.0000	0.1518	-0.0000	-0.0421	0.0000
0.0	30.0	10.0	0.1032	0.0118	0.0386	0.0518	-0.0176	0.1487	0.0144	-0.0396	-0.0144
0.0	30.0	20.0	0.0972	0.0221	0.0445	0.0607	-0.0331	0.1397	0.0271	-0.0323	-0.0271
0.0	30.0	30.0	0.0880	0.0298	0.0537	0.0744	-0.0446	0.1260	0.0365	-0.0211	-0.0365
0.0	30.0	40.0	0.0768	0.0338	0.0649	0.0913	-0.0508	0.1092	0.0415	-0.0073	-0.0415
0.0	30.0	50.0	0.0649	0.0338	0.0768	0.1092	-0.0508	0.0913	0.0415	0.0073	-0.0415
0.0	30.0	60.0	0.0537	0.0298	0.0880	0.1260	-0.0446	0.0744	0.0365	0.0211	-0.0365
0.0	30.0	70.0	0.0445	0.0221	0.0972	0.1397	-0.0331	0.0607	0.0271	0.0323	-0.0271
0.0	30.0	80.0	0.0386	0.0118	0.1032	0.1487	-0.0176	0.0518	0.0144	0.0396	-0.0144
0.0	30.0	90.0	0.0365	-0.0000	0.1052	0.1518	0.0000	0.0487	-0.0000	0.0421	0.0000
0.0	45.0	0.0	0.0636	0.0000	0.0230	0.0459	-0.0000	0.1489	-0.0000	-0.0325	0.0000
0.0	45.0	10.0	0.0623	0.0069	0.0242	0.0490	-0.0176	0.1458	0.0111	-0.0305	-0.0111
0.0	45.0	20.0	0.0588	0.0131	0.0277	0.0580	-0.0331	0.1369	0.0209	-0.0249	-0.0209
0.0	45.0	30.0	0.0534	0.0176	0.0331	0.0717	-0.0446	0.1232	0.0281	-0.0162	-0.0281
0.0	45.0	40.0	0.0468	0.0200	0.0397	0.0885	-0.0507	0.1064	0.0320	-0.0056	-0.0320
0.0	45.0	50.0	0.0397	0.0200	0.0468	0.1064	-0.0507	0.0885	0.0320	0.0056	-0.0320
0.0	45.0	60.0	0.0331	0.0176	0.0534	0.1232	-0.0446	0.0717	0.0281	0.0162	-0.0281
0.0	45.0	70.0	0.0277	0.0131	0.0588	0.1369	-0.0331	0.0580	0.0209	0.0249	-0.0209
0.0	45.0	80.0	0.0242	0.0069	0.0623	0.1458	-0.0176	0.0490	0.0111	0.0305	-0.0111
0.0	45.0	90.0	0.0230	-0.0000	0.0636	0.1489	0.0000	0.0459	-0.0000	0.0325	0.0000
0.0	60.0	0.0	0.0288	0.0000	0.0108	0.0433	-0.0000	0.1462	-0.0000	-0.0217	0.0000
0.0	60.0	10.0	0.0282	0.0031	0.0114	0.0464	-0.0176	0.1431	0.0074	-0.0204	-0.0074
0.0	60.0	20.0	0.0267	0.0058	0.0129	0.0554	-0.0331	0.1341	0.0139	-0.0166	-0.0139
0.0	60.0	30.0	0.0243	0.0078	0.0153	0.0691	-0.0445	0.1205	0.0188	-0.0108	-0.0188
0.0	60.0	40.0	0.0214	0.0088	0.0182	0.0858	-0.0506	0.1037	0.0213	-0.0038	-0.0213
0.0	60.0	50.0	0.0182	0.0088	0.0214	0.1037	-0.0506	0.0858	0.0213	0.0038	-0.0213
0.0	60.0	60.0	0.0153	0.0078	0.0243	0.1205	-0.0445	0.0691	0.0188	0.0108	-0.0188
0.0	60.0	70.0	0.0129	0.0058	0.0267	0.1341	-0.0331	0.0554	0.0139	0.0166	-0.0139
0.0	60.0	80.0	0.0114	0.0031	0.0282	0.1431	-0.0176	0.0464	0.0074	0.0204	-0.0074
0.0	60.0	90.0	0.0108	-0.0000	0.0288	0.1462	0.0000	0.0433	-0.0000	0.0217	0.0000
0.0	75.0	0.0	0.0072	0.0000	0.0028	0.0416	-0.0000	0.1442	-0.0000	-0.0108	0.0000
0.0	75.0	10.0	0.0070	0.0007	0.0029	0.0447	-0.0176	0.1411	0.0037	-0.0101	-0.0037
0.0	75.0	20.0	0.0067	0.0014	0.0033	0.0536	-0.0330	0.1322	0.0069	-0.0082	-0.0069
0.0	75.0	30.0	0.0061	0.0019	0.0039	0.0672	-0.0445	0.1186	0.0093	-0.0054	-0.0093
0.0	75.0	40.0	0.0054	0.0022	0.0046	0.0840	-0.0506	0.1018	0.0106	-0.0019	-0.0106
0.0	75.0	50.0	0.0046	0.0022	0.0054	0.1018	-0.0506	0.0810	0.0106	0.0019	-0.0106
0.0	75.0	60.0	0.0039	0.0019	0.0061	0.1186	-0.0445	0.0672	0.0093	0.0054	-0.0093
0.0	75.0	70.0	0.0033	0.0014	0.0067	0.1322	-0.0330	0.0536	0.0069	0.0082	-0.0069
0.0	75.0	80.0	0.0029	0.0007	0.0070	0.1411	-0.0176	0.0447	0.0037	0.0101	-0.0037
0.0	75.0	90.0	0.0028	-0.0000	0.0072	0.1442	0.0000	0.0416	-0.0000	0.0108	0.0000
0.0	90.0	0.0	0.0000	0.0000	0.0000	0.0409	-0.0000	0.1435	0.0000	0.0000	-0.0000
0.0	90.0	10.0	0.0000	0.0000	0.0000	0.0440	-0.0175	0.1404	-0.0000	0.0000	0.0000
0.0	90.0	20.0	0.0000	0.0000	0.0000	0.0529	-0.0330	0.1315	-0.0000	0.0000	0.0000
0.0	90.0	30.0	0.0000	0.0000	0.0000	0.0666	-0.0444	0.1179	-0.0000	0.0000	0.0000
0.0	90.0	40.0	0.0000	0.0000	0.0000	0.0833	-0.0505	0.1011	-0.0000	0.0000	0.0000
0.0	90.0	50.0	0.0000	0.0000	0.0000	0.1011	-0.0505	0.0833	-0.0000	-0.0000	0.0000
0.0	90.0	60.0	0.0000	0.0000	0.0000	0.1179	-0.0444	0.0666	-0.0000	-0.0000	0.0000
0.0	90.0	70.0	0.0000	0.0000	0.0000	0.1315	-0.0330	0.0529	-0.0000	-0.0000	0.0000
0.0	90.0	80.0	0.0000	0.0000	0.0000	0.1404	-0.0175	0.0440	-0.0000	-0.0000	0.0000
0.0	90.0	90.0	0.0000	-0.0000	0.0000	0.1435	0.0000	0.0409	0.0000	-0.0000	-0.0000

Table 4 continued, part 2 of 7.

θ_1	θ_2	β_ϕ	σ_1/λ^2	σ_2/λ^2	σ_3/λ^2	σ_4/λ^2	σ_5/λ^2	σ_6/λ^2	σ_7/λ^2	σ_8/λ^2	σ_9/λ^2
15.0	0.0	0.0	0.1406	0.0000	0.0508	0.0474	-0.0000	0.1539	-0.0000	-0.0490	0.0000
15.0	0.0	10.0	0.1378	0.0168	0.0539	0.0502	-0.0168	0.1508	0.0159	-0.0461	-0.0176
15.0	0.0	20.0	0.1297	0.0315	0.0628	0.0583	-0.0315	0.1419	0.0300	-0.0376	-0.0332
15.0	0.0	30.0	0.1173	0.0425	0.0766	0.0707	-0.0425	0.1281	0.0404	-0.0245	-0.0447
15.0	0.0	40.0	0.1021	0.0483	0.0934	0.0859	-0.0483	0.1113	0.0459	-0.0085	-0.0508
15.0	0.0	50.0	0.0859	0.0483	0.1113	0.1021	-0.0483	0.0934	0.0459	0.0085	-0.0508
15.0	0.0	60.0	0.0707	0.0425	0.1281	0.1173	-0.0425	0.0766	0.0404	0.0245	-0.0447
15.0	0.0	70.0	0.0583	0.0315	0.1419	0.1297	-0.0315	0.0628	0.0300	0.0376	-0.0332
15.0	0.0	80.0	0.0502	0.0168	0.1508	0.1378	-0.0168	0.0539	0.0159	0.0461	-0.0176
15.0	0.0	90.0	0.0474	-0.0000	0.1539	0.1406	0.0000	0.0508	-0.0000	0.0490	0.0000
15.0	15.0	0.0	0.1278	0.0000	0.0466	0.0466	-0.0000	0.1531	-0.0000	-0.0466	0.0000
15.0	15.0	10.0	0.1253	0.0152	0.0495	0.0495	-0.0168	0.1500	0.0152	-0.0438	-0.0168
15.0	15.0	20.0	0.1180	0.0285	0.0576	0.0576	-0.0315	0.1411	0.0285	-0.0357	-0.0315
15.0	15.0	30.0	0.1068	0.0384	0.0700	0.0700	-0.0425	0.1273	0.0384	-0.0233	-0.0425
15.0	15.0	40.0	0.0930	0.0437	0.0852	0.0852	-0.0483	0.1105	0.0437	-0.0081	-0.0483
15.0	15.0	50.0	0.0783	0.0437	0.1014	0.1014	-0.0483	0.0926	0.0437	0.0081	-0.0483
15.0	15.0	60.0	0.0646	0.0384	0.1166	0.1166	-0.0425	0.0758	0.0384	0.0233	-0.0425
15.0	15.0	70.0	0.0534	0.0285	0.1290	0.1290	-0.0315	0.0620	0.0285	0.0357	-0.0315
15.0	15.0	80.0	0.0461	0.0152	0.1371	0.1371	-0.0168	0.0531	0.0152	0.0438	-0.0168
15.0	15.0	90.0	0.0435	-0.0000	0.1399	0.1399	0.0000	0.0500	-0.0000	0.0466	0.0000
15.0	30.0	0.0	0.0957	0.0000	0.0359	0.0447	-0.0000	0.1510	-0.0000	-0.0401	0.0000
15.0	30.0	10.0	0.0938	0.0112	0.0380	0.0475	-0.0168	0.1479	0.0130	-0.0377	-0.0144
15.0	30.0	20.0	0.0884	0.0210	0.0440	0.0556	-0.0315	0.1389	0.0245	-0.0307	-0.0271
15.0	30.0	30.0	0.0801	0.0283	0.0531	0.0680	-0.0425	0.1252	0.0330	-0.0200	-0.0365
15.0	30.0	40.0	0.0700	0.0322	0.0644	0.0832	-0.0483	0.1084	0.0375	-0.0069	-0.0415
15.0	30.0	50.0	0.0592	0.0322	0.0763	0.0994	-0.0483	0.0905	0.0375	0.0070	-0.0415
15.0	30.0	60.0	0.0490	0.0283	0.0875	0.1146	-0.0424	0.0736	0.0330	0.0200	-0.0365
15.0	30.0	70.0	0.0408	0.0210	0.0966	0.1270	-0.0315	0.0599	0.0245	0.0307	-0.0271
15.0	30.0	80.0	0.0354	0.0112	0.1026	0.1351	-0.0168	0.0510	0.0130	0.0376	-0.0144
15.0	30.0	90.0	0.0335	-0.0000	0.1047	0.1379	0.0000	0.0479	-0.0000	0.0401	0.0000
15.0	45.0	0.0	0.0578	0.0000	0.0226	0.0422	-0.0000	0.1482	-0.0000	-0.0309	0.0000
15.0	45.0	10.0	0.0567	0.0066	0.0238	0.0450	-0.0168	0.1451	0.0100	-0.0290	-0.0111
15.0	45.0	20.0	0.0535	0.0124	0.0274	0.0531	-0.0315	0.1361	0.0189	-0.0237	-0.0209
15.0	45.0	30.0	0.0486	0.0167	0.0328	0.0655	-0.0424	0.1224	0.0254	-0.0154	-0.0281
15.0	45.0	40.0	0.0425	0.0190	0.0394	0.0807	-0.0482	0.1056	0.0289	-0.0053	-0.0320
15.0	45.0	50.0	0.0362	0.0190	0.0465	0.0969	-0.0482	0.0877	0.0289	0.0054	-0.0320
15.0	45.0	60.0	0.0302	0.0167	0.0531	0.1121	-0.0424	0.0709	0.0254	0.0154	-0.0281
15.0	45.0	70.0	0.0254	0.0124	0.0585	0.1245	-0.0315	0.0572	0.0189	0.0236	-0.0209
15.0	45.0	80.0	0.0222	0.0066	0.0620	0.1325	-0.0167	0.0483	0.0100	0.0290	-0.0111
15.0	45.0	90.0	0.0211	-0.0000	0.0632	0.1353	0.0000	0.0452	-0.0000	0.0309	0.0000
15.0	60.0	0.0	0.0262	0.0000	0.0107	0.0398	-0.0000	0.1455	-0.0000	-0.0206	0.0000
15.0	60.0	10.0	0.0257	0.0029	0.0112	0.0426	-0.0167	0.1424	0.0067	-0.0194	-0.0074
15.0	60.0	20.0	0.0243	0.0055	0.0128	0.0507	-0.0315	0.1334	0.0126	-0.0158	-0.0139
15.0	60.0	30.0	0.0221	0.0074	0.0152	0.0631	-0.0424	0.1197	0.0170	-0.0103	-0.0188
15.0	60.0	40.0	0.0194	0.0084	0.0181	0.0783	-0.0482	0.1029	0.0193	-0.0036	-0.0213
15.0	60.0	50.0	0.0166	0.0084	0.0212	0.0945	-0.0481	0.0351	0.0193	0.0036	-0.0213
15.0	60.0	60.0	0.0140	0.0074	0.0241	0.1096	-0.0422	0.0683	0.0170	0.0103	-0.0188
15.0	60.0	70.0	0.0118	0.0055	0.0265	0.1220	-0.0314	0.0546	0.0126	0.0158	-0.0139
15.0	60.0	80.0	0.0104	0.0029	0.0281	0.1300	-0.0167	0.0457	0.0067	0.0194	-0.0074
15.0	60.0	90.0	0.0099	-0.0000	0.0286	0.1328	0.0000	0.0426	-0.0000	0.0206	0.0000
15.0	75.0	0.0	0.0065	0.0000	0.0027	0.0382	-0.0000	0.1436	-0.0000	-0.0102	0.0000
15.0	75.0	10.0	0.0064	0.0007	0.0029	0.0410	-0.0167	0.1404	0.0033	-0.0096	-0.0037
15.0	75.0	20.0	0.0060	0.0013	0.0033	0.0491	-0.0314	0.1315	0.0063	-0.0078	-0.0069
15.0	75.0	30.0	0.0055	0.0018	0.0038	0.0615	-0.0423	0.1178	0.0084	-0.0051	-0.0093
15.0	75.0	40.0	0.0049	0.0021	0.0046	0.0766	-0.0481	0.1011	0.0096	-0.0018	-0.0106
15.0	75.0	50.0	0.0042	0.0020	0.0053	0.0928	-0.0481	0.0832	0.0096	0.0018	-0.0106
15.0	75.0	60.0	0.0035	0.0018	0.0060	0.1079	-0.0422	0.0665	0.0084	0.0051	-0.0093
15.0	75.0	70.0	0.0030	0.0013	0.0066	0.1202	-0.0313	0.0529	0.0062	0.0078	-0.0069
15.0	75.0	80.0	0.0027	0.0007	0.0070	0.1283	-0.0167	0.0440	0.0033	0.0096	-0.0037
15.0	75.0	90.0	0.0026	-0.0000	0.0071	0.1310	0.0000	0.0409	-0.0000	0.0102	0.0000
15.0	90.0	0.0	0.0000	0.0000	0.0000	0.0376	-0.0000	0.1429	0.0000	0.0000	-0.0000
15.0	90.0	10.0	0.0000	0.0000	0.0000	0.0404	-0.0167	0.1398	-0.0000	0.0000	0.0000
15.0	90.0	20.0	0.0000	0.0000	0.0000	0.0485	-0.0314	0.1308	-0.0000	0.0000	0.0000
15.0	90.0	30.0	0.0000	0.0000	0.0000	0.0609	-0.0423	0.1171	-0.0000	0.0000	0.0000
15.0	90.0	40.0	0.0000	0.0000	0.0000	0.0760	-0.0481	0.1004	-0.0000	0.0000	0.0000
15.0	90.0	50.0	0.0000	0.0000	0.0000	0.0921	-0.0480	0.0826	-0.0000	-0.0000	0.0000
15.0	90.0	60.0	0.0000	0.0000	0.0000	0.1073	-0.0422	0.0658	-0.0000	-0.0000	0.0000
15.0	90.0	70.0	0.0000	0.0000	0.0000	0.1196	-0.0313	0.0522	-0.0000	-0.0000	0.0000
15.0	90.0	80.0	0.0000	0.0000	0.0000	0.1276	-0.0167	0.0433	-0.0000	-0.0000	0.0000
15.0	90.0	90.0	0.0000	-0.0000	0.0000	0.1304	0.0000	0.0403	0.0000	-0.0000	-0.0000

Table 4 continued, part 3 of 7.

θ_1	θ_2	β_ϕ	σ_1/λ^2	σ_2/λ^2	σ_3/λ^2	σ_4/λ^2	σ_5/λ^2	σ_6/λ^2	σ_7/λ^2	σ_8/λ^2	σ_9/λ^2
30.0	0.0	0.0	0.1052	0.0000	0.0487	0.0365	-0.0000	0.1518	-0.0000	-0.0421	0.0000
30.0	0.0	10.0	0.1032	0.0144	0.0518	0.0386	-0.0144	0.1487	0.0118	-0.0396	-0.0176
30.0	0.0	20.0	0.0972	0.0271	0.0607	0.0445	-0.0271	0.1397	0.0221	-0.0323	-0.0331
30.0	0.0	30.0	0.0880	0.0365	0.0744	0.0537	-0.0365	0.1260	0.0298	-0.0211	-0.0446
30.0	0.0	40.0	0.0768	0.0415	0.0913	0.0649	-0.0415	0.1092	0.0338	-0.0073	-0.0508
30.0	0.0	50.0	0.0649	0.0415	0.1092	0.0768	-0.0415	0.0913	0.0338	0.0073	-0.0508
30.0	0.0	60.0	0.0537	0.0365	0.1260	0.0880	-0.0365	0.0744	0.0298	0.0211	-0.0446
30.0	0.0	70.0	0.0445	0.0271	0.1397	0.0972	-0.0271	0.0607	0.0221	0.0323	-0.0331
30.0	0.0	80.0	0.0386	0.0144	0.1487	0.1032	-0.0144	0.0518	0.0118	0.0396	-0.0176
30.0	0.0	90.0	0.0365	-0.0000	0.1518	0.1052	0.0000	0.0487	-0.0000	0.0421	0.0000
30.0	15.0	0.0	0.0957	0.0000	0.0447	0.0359	-0.0000	0.1510	-0.0000	-0.0401	0.0000
30.0	15.0	10.0	0.0938	0.0130	0.0475	0.0380	-0.0144	0.1479	0.0112	-0.0377	-0.0168
30.0	15.0	20.0	0.0884	0.0245	0.0556	0.0440	-0.0271	0.1389	0.0210	-0.0307	-0.0315
30.0	15.0	30.0	0.0801	0.0330	0.0680	0.0531	-0.0365	0.1252	0.0283	-0.0200	-0.0425
30.0	15.0	40.0	0.0700	0.0375	0.0832	0.0644	-0.0415	0.1084	0.0322	-0.0069	-0.0483
30.0	15.0	50.0	0.0592	0.0375	0.0994	0.0763	-0.0415	0.0905	0.0322	0.0070	-0.0483
30.0	15.0	60.0	0.0490	0.0330	0.1146	0.0875	-0.0365	0.0736	0.0283	0.0200	-0.0424
30.0	15.0	70.0	0.0408	0.0245	0.1270	0.0966	-0.0271	0.0599	0.0210	0.0307	-0.0315
30.0	15.0	80.0	0.0354	0.0130	0.1351	0.1026	-0.0144	0.0510	0.0112	0.0376	-0.0168
30.0	15.0	90.0	0.0333	-0.0000	0.1379	0.1047	[illegible]	0.0479	-0.0000	0.0401	0.0000
30.0	30.0	0.0	0.0716	0.0000	0.0345	0.0345	[illegible]	0.1489	-0.0000	-0.0345	0.0000
30.0	30.0	10.0	0.0702	0.0096	0.0363	0.0365	-0.0144	0.1458	0.0096	-0.0324	-0.0144
30.0	30.0	20.0	0.0662	0.0181	0.0425	0.0425	-0.0271	0.1368	0.0181	-0.0264	-0.0271
30.0	30.0	30.0	0.0601	0.0243	0.0517	0.0517	-0.0365	0.1231	0.0243	-0.0172	-0.0365
30.0	30.0	40.0	0.0526	0.0277	0.0629	0.0629	-0.0415	0.1063	0.0277	-0.0059	-0.0415
30.0	30.0	50.0	0.0447	0.0276	0.0748	0.0748	-0.0415	0.0884	0.0276	0.0060	-0.0415
30.0	30.0	60.0	0.0372	0.0243	0.0860	0.0860	-0.0364	0.0716	0.0243	0.0172	-0.0364
30.0	30.0	70.0	0.0311	0.0180	0.0952	0.0952	-0.0270	0.0579	0.0180	0.0264	-0.0270
30.0	30.0	80.0	0.0272	0.0096	0.1011	0.1011	-0.0144	0.0490	0.0096	0.0323	-0.0144
30.0	30.0	90.0	0.0258	-0.0000	0.1032	0.1032	0.0000	0.0459	-0.0000	0.0344	0.0000
30.0	45.0	0.0	0.0433	0.0000	0.0217	0.0325	-0.0000	0.1462	-0.0000	-0.0266	0.0000
30.0	45.0	10.0	0.0425	0.0057	0.0229	0.0346	-0.0144	0.1431	0.0074	-0.0250	-0.0111
30.0	45.0	20.0	0.0401	0.0107	0.0265	0.0406	-0.0271	0.1341	0.0139	-0.0203	-0.0209
30.0	45.0	30.0	0.0365	0.0144	0.0319	0.0498	-0.0365	0.1203	0.0188	-0.0132	-0.0282
30.0	45.0	40.0	0.0320	0.0163	0.0385	0.0610	-0.0415	0.1035	0.0213	-0.0046	-0.0320
30.0	45.0	50.0	0.0273	0.0163	0.0456	0.0729	-0.0414	0.0656	0.0213	0.0046	-0.0319
30.0	45.0	60.0	0.0229	0.0143	0.0522	0.0841	-0.0364	0.0689	0.0187	0.0133	-0.0281
30.0	45.0	70.0	0.0194	0.0106	0.0576	0.0732	-0.0270	0.0552	0.0139	0.0203	-0.0208
30.0	45.0	80.0	0.0170	0.0057	0.0611	0.0991	-0.0143	0.0463	0.0074	0.0249	-0.0111
30.0	45.0	90.0	0.0162	-0.0000	0.0623	0.1012	0.0000	0.0432	-0.0000	0.0265	0.0000
30.0	60.0	0.0	0.0196	0.0000	0.0102	0.0307	-0.0000	0.1436	-0.0000	-0.0178	0.0000
30.0	60.0	10.0	0.0192	0.0025	0.0108	0.0328	-0.0144	0.1405	0.0050	-0.0167	-0.0074
30.0	60.0	20.0	0.0182	0.0047	0.0124	0.0388	-0.0271	0.1315	0.0093	-0.0136	-0.0140
30.0	60.0	30.0	0.0166	0.0064	0.0148	0.0480	-0.0365	0.1177	0.0125	-0.0088	-0.0188
30.0	60.0	40.0	0.0146	0.0072	0.0177	0.0592	-0.0414	0.1009	0.0142	-0.0030	-0.0214
30.0	60.0	50.0	0.0125	0.0072	0.0208	0.0711	-0.0413	0.0830	0.0142	0.0031	-0.0213
30.0	60.0	60.0	0.0106	0.0063	0.0237	0.0823	-0.0363	0.0663	0.0125	0.0089	-0.0187
30.0	60.0	70.0	0.0090	0.0047	0.0261	0.0913	-0.0269	0.0527	0.0092	0.0136	-0.0139
30.0	60.0	80.0	0.0080	0.0025	0.0276	0.0972	-0.0143	0.0439	0.0049	0.0166	-0.0074
30.0	60.0	90.0	0.0076	-0.0000	0.0282	0.0993	0.0000	0.0408	-0.0000	0.0177	0.0000
30.0	75.0	0.0	0.0049	0.0000	0.0026	0.0295	-0.0000	0.1417	-0.0000	-0.0088	0.0000
30.0	75.0	10.0	0.0048	0.0006	0.0028	0.0316	-0.0144	0.1386	0.0025	-0.0083	-0.0037
30.0	75.0	20.0	0.0045	0.0012	0.0032	0.0376	-0.0271	0.1276	0.0046	-0.0067	-0.0069
30.0	75.0	30.0	0.0041	0.0016	0.0037	0.0468	-0.0364	0.1158	0.0062	-0.0044	-0.0093
30.0	75.0	40.0	0.0037	0.0018	0.0045	0.0580	-0.0413	0.0990	0.0071	-0.0015	-0.0106
30.0	75.0	50.0	0.0032	0.0018	0.0052	0.0699	-0.0413	0.0812	0.0071	0.0016	-0.0106
30.0	75.0	60.0	0.0027	0.0015	0.0059	0.0810	-0.0362	0.0645	0.0062	0.0044	-0.0093
30.0	75.0	70.0	0.0023	0.0011	0.0065	0.0900	-0.0268	0.0510	0.0046	0.0067	-0.0069
30.0	75.0	80.0	0.0020	0.0006	0.0069	0.0959	-0.0143	0.0421	0.0024	0.0082	-0.0037
30.0	75.0	90.0	0.0020	-0.0000	0.0070	0.0979	0.0000	0.0391	-0.0000	0.0088	0.0000
30.0	90.0	0.0	0.0000	0.0000	0.0000	0.0291	-0.0000	0.1410	0.0000	0.0000	-0.0000
30.0	90.0	10.0	0.0000	0.0000	0.0000	0.0311	-0.0144	0.1379	-0.0000	0.0000	0.0000
30.0	90.0	20.0	0.0000	0.0000	0.0000	0.0372	-0.0271	0.1289	-0.0000	0.0000	0.0000
30.0	90.0	30.0	0.0000	0.0000	0.0000	0.0463	-0.0364	0.1152	-0.0000	0.0000	0.0000
30.0	90.0	40.0	0.0000	0.0000	0.0000	0.0575	-0.0413	0.0984	-0.0000	0.0000	0.0000
30.0	90.0	50.0	0.0000	0.0000	0.0000	0.0694	-0.0412	0.0806	-0.0000	-0.0000	0.0000
30.0	90.0	60.0	0.0000	0.0000	0.0000	0.0805	-0.0362	0.0639	-0.0000	-0.0000	0.0000
30.0	90.0	70.0	0.0000	0.0000	0.0000	0.0895	-0.0268	0.0503	-0.0000	-0.0000	0.0000
30.0	90.0	80.0	0.0000	0.0000	0.0000	0.0954	-0.0143	0.0415	-0.0000	-0.0000	0.0000
30.0	90.0	90.0	0.0000	-0.0000	0.0000	0.0974	0.0000	0.0385	0.0000	-0.0000	-0.0000

Table 4 continued, part 4 of 7.

θ_1	θ_2	β_ϕ	σ_1/λ^2	σ_2/λ^2	σ_3/λ^2	σ_4/λ^2	σ_5/λ^2	σ_6/λ^2	σ_7/λ^2	σ_8/λ^2	σ_9/λ^2
45.0	0.0	0.0	0.0636	0.0000	0.0459	0.0230	-0.0000	0.1489	-0.0000	-0.0325	0.0000
45.0	0.0	10.0	0.0623	0.0111	0.0490	0.0242	-0.0111	0.1458	0.0069	-0.0305	-0.0176
45.0	0.0	20.0	0.0588	0.0209	0.0580	0.0277	-0.0209	0.1369	0.0131	-0.0249	-0.0331
45.0	0.0	30.0	0.0534	0.0281	0.0717	0.0331	-0.0281	0.1232	0.0176	-0.0162	-0.0446
45.0	0.0	40.0	0.0468	0.0320	0.0885	0.0397	-0.0320	0.1064	0.0200	-0.0056	-0.0507
45.0	0.0	50.0	0.0397	0.0320	0.1064	0.0468	-0.0320	0.0885	0.0200	0.0056	-0.0507
45.0	0.0	60.0	0.0331	0.0281	0.1232	0.0534	-0.0281	0.0717	0.0176	0.0162	-0.0446
45.0	0.0	70.0	0.0277	0.0209	0.1369	0.0588	-0.0209	0.0580	0.0131	0.0249	-0.0331
45.0	0.0	80.0	0.0242	0.0111	0.1458	0.0623	-0.0111	0.0490	0.0069	0.0305	-0.0176
45.0	0.0	90.0	0.0230	-0.0000	0.1489	0.0636	0.0000	0.0459	-0.0000	0.0325	0.0000
45.0	15.0	0.0	0.0578	0.0000	0.0422	0.0226	-0.0000	0.1482	-0.0000	-0.0309	0.0000
45.0	15.0	10.0	0.0567	0.0100	0.0450	0.0238	-0.0111	0.1451	0.0066	-0.0290	-0.0168
45.0	15.0	20.0	0.0535	0.0189	0.0531	0.0274	-0.0209	0.1361	0.0124	-0.0237	-0.0315
45.0	15.0	30.0	0.0486	0.0254	0.0655	0.0328	-0.0281	0.1224	0.0167	-0.0154	-0.0424
45.0	15.0	40.0	0.0426	0.0289	0.0807	0.0394	-0.0320	0.1056	0.0190	-0.0053	-0.0482
45.0	15.0	50.0	0.0362	0.0289	0.0969	0.0465	-0.0320	0.0877	0.0190	0.0054	-0.0482
45.0	15.0	60.0	0.0302	0.0254	0.1121	0.0531	-0.0281	0.0709	0.0167	0.0154	-0.0424
45.0	15.0	70.0	0.0234	0.0189	0.1245	0.0585	-0.0209	0.0572	0.0124	0.0236	-0.0315
45.0	15.0	80.0	0.0222	0.0100	0.1325	0.0620	-0.0111	0.0483	0.0066	0.0290	-0.0167
45.0	15.0	90.0	0.0211	-0.0000	0.1353	0.0632	0.0000	0.0452	-0.0000	0.0309	0.0000
45.0	30.0	0.0	0.0433	0.0000	0.0325	0.0217	-0.0000	0.1462	-0.0000	-0.0266	0.0000
45.0	30.0	10.0	0.0425	0.0074	0.0346	0.0229	-0.0111	0.1431	0.0057	-0.0250	-0.0144
45.0	30.0	20.0	0.0401	0.0139	0.0406	0.0265	-0.0209	0.1341	0.0107	-0.0203	-0.0271
45.0	30.0	30.0	0.0365	0.0188	0.0498	0.0319	-0.0282	0.1203	0.0144	-0.0132	-0.0365
45.0	30.0	40.0	0.0320	0.0213	0.0610	0.0385	-0.0320	0.1035	0.0163	-0.0046	-0.0415
45.0	30.0	50.0	0.0273	0.0213	0.0729	0.0456	-0.0319	0.0856	0.0163	0.0046	-0.0414
45.0	30.0	60.0	0.0229	0.0187	0.0841	0.0522	-0.0281	0.0689	0.0143	0.0133	-0.0364
45.0	30.0	70.0	0.0194	0.0139	0.0932	0.0576	-0.0208	0.0552	0.0106	0.0203	-0.0270
45.0	30.0	80.0	0.0170	0.0074	0.0991	0.0611	-0.0111	0.0463	0.0057	0.0249	-0.0143
45.0	30.0	90.0	0.0162	-0.0000	0.1012	0.0623	0.0000	0.0432	-0.0000	0.0265	0.0000
45.0	45.0	0.0	0.0262	0.0000	0.0205	0.0205	-0.0000	0.1436	-0.0000	-0.0205	0.0000
45.0	45.0	10.0	0.0257	0.0044	0.0217	0.0217	-0.0112	0.1405	0.0044	-0.0193	-0.0112
45.0	45.0	20.0	0.0243	0.0083	0.0253	0.0253	-0.0209	0.1314	0.0083	-0.0157	-0.0209
45.0	45.0	30.0	0.0221	0.0111	0.0308	0.0308	-0.0282	0.1176	0.0111	-0.0102	-0.0282
45.0	45.0	40.0	0.0195	0.0126	0.0374	0.0374	-0.0320	0.1008	0.0126	-0.0035	-0.0320
45.0	45.0	50.0	0.0167	0.0126	0.0444	0.0444	-0.0319	0.0829	0.0126	0.0036	-0.0319
45.0	45.0	60.0	0.0141	0.0110	0.0510	0.0510	-0.0290	0.0662	0.0110	0.0103	-0.0280
45.0	45.0	70.0	0.0120	0.0082	0.0564	0.0564	-0.0207	0.0526	0.0082	0.0156	-0.0207
45.0	45.0	80.0	0.0107	0.0043	0.0599	0.0599	-0.0110	0.0438	0.0043	0.0191	-0.0110
45.0	45.0	90.0	0.0102	-0.0000	0.0611	0.0611	0.0000	0.0407	-0.0000	0.0204	0.0000
45.0	60.0	0.0	0.0119	0.0000	0.0097	0.0194	-0.0000	0.1411	-0.0000	-0.0136	0.0000
45.0	60.0	10.0	0.0116	0.0020	0.0102	0.0206	-0.0112	0.1379	0.0029	-0.0129	-0.0075
45.0	60.0	20.0	0.0110	0.0037	0.0118	0.0242	-0.0210	0.1289	0.0055	-0.0103	-0.0140
45.0	60.0	30.0	0.0101	0.0049	0.0142	0.0297	-0.0282	0.1151	0.0074	-0.0068	-0.0188
45.0	60.0	40.0	0.0089	0.0056	0.0172	0.0363	-0.0319	0.0982	0.0084	-0.0023	-0.0213
45.0	60.0	50.0	0.0077	0.0055	0.0203	0.0434	-0.0318	0.0804	0.0084	0.0024	-0.0213
45.0	60.0	60.0	0.0065	0.0049	0.0232	0.0499	-0.0279	0.0637	0.0073	0.0069	-0.0186
45.0	60.0	70.0	0.0056	0.0036	0.0256	0.0552	-0.0207	0.0502	0.0054	0.0104	-0.0138
45.0	60.0	80.0	0.0050	0.0019	0.0271	0.0587	-0.0110	0.0414	0.0029	0.0128	-0.0073
45.0	60.0	90.0	0.0048	-0.0000	0.0276	0.0599	0.0000	0.0384	-0.0000	0.0136	0.0000
45.0	75.0	0.0	0.0030	0.0000	0.0025	0.0186	-0.0000	0.1393	-0.0000	-0.0068	0.0000
45.0	75.0	10.0	0.0029	0.0005	0.0026	0.0199	-0.0112	0.1361	0.0015	-0.0064	-0.0037
45.0	75.0	20.0	0.0027	0.0009	0.0030	0.0235	-0.0210	0.1271	0.0028	-0.0052	-0.0070
45.0	75.0	30.0	0.0025	0.0012	0.0036	0.0289	-0.0282	0.1132	0.0037	-0.0034	-0.0094
45.0	75.0	40.0	0.0022	0.0014	0.0043	0.0356	-0.0319	0.0964	0.0042	-0.0011	-0.0106
45.0	75.0	50.0	0.0019	0.0014	0.0051	0.0426	-0.0318	0.0786	0.0042	0.0012	-0.0106
45.0	75.0	60.0	0.0017	0.0012	0.0058	0.0491	-0.0278	0.0620	0.0036	0.0034	-0.0092
45.0	75.0	70.0	0.0014	0.0009	0.0064	0.0544	-0.0206	0.0485	0.0027	0.0052	-0.0068
45.0	75.0	80.0	0.0013	0.0005	0.0067	0.0579	-0.0109	0.0398	0.0014	0.0063	-0.0036
45.0	75.0	90.0	0.0012	-0.0000	0.0069	0.0590	0.0000	0.0368	-0.0000	0.0067	0.0000
45.0	90.0	0.0	0.0000	0.0000	0.0000	0.0183	-0.0000	0.1386	0.0000	0.0000	-0.0000
45.0	90.0	10.0	0.0000	0.0000	0.0000	0.0196	-0.0112	0.1335	-0.0000	0.0000	0.0000
45.0	90.0	20.0	0.0000	0.0000	0.0000	0.0232	-0.0210	0.1264	-0.0000	0.0000	0.0000
45.0	90.0	30.0	0.0000	0.0000	0.0000	0.0287	-0.0281	0.1126	-0.0000	0.0000	0.0000
45.0	90.0	40.0	0.0000	0.0000	0.0000	0.0333	-0.0319	0.0957	-0.0000	0.0000	0.0000
45.0	90.0	50.0	0.0000	0.0000	0.0000	0.0423	-0.0317	0.0779	-0.0000	-0.0000	0.0000
45.0	90.0	60.0	0.0000	0.0000	0.0000	0.0488	-0.0278	0.0613	-0.0000	-0.0000	0.0000
45.0	90.0	70.0	0.0000	0.0000	0.0000	0.0541	-0.0206	0.0477	-0.0000	-0.0000	0.0000
45.0	90.0	80.0	0.0000	0.0000	0.0000	0.0576	-0.0109	0.0392	-0.0000	-0.0000	0.0000
45.0	90.0	90.0	0.0000	-0.0000	0.0000	0.0587	0.0000	0.0362	0.0000	-0.0000	-0.0000

Table 4 continued, part 5 of 7.

θ_1	θ_2	β_ϕ	σ_1/λ^2	σ_2/λ^2	σ_3/λ^2	σ_4/λ^2	σ_5/λ^2	σ_6/λ^2	σ_7/λ^2	σ_8/λ^2	σ_9/λ^2
60.0	0.0	0.0	0.0288	0.0000	0.0433	0.0108	-0.0000	0.1462	-0.0000	-0.0217	0.0000
60.0	0.0	10.0	0.0282	0.0074	0.0464	0.0114	-0.0074	0.1431	0.0031	-0.0204	-0.0176
60.0	0.0	20.0	0.0267	0.0139	0.0554	0.0129	-0.0139	0.1341	0.0058	-0.0166	-0.0331
60.0	0.0	30.0	0.0243	0.0188	0.0691	0.0153	-0.0188	0.1205	0.0078	-0.0103	-0.0445
60.0	0.0	40.0	0.0214	0.0213	0.0858	0.0182	-0.0213	0.1037	0.0088	-0.0033	-0.0506
60.0	0.0	50.0	0.0182	0.0213	0.1037	0.0214	-0.0213	0.0858	0.0088	0.0033	-0.0506
60.0	0.0	60.0	0.0153	0.0188	0.1205	0.0243	-0.0188	0.0691	0.0078	0.0103	-0.0445
60.0	0.0	70.0	0.0129	0.0139	0.1341	0.0267	-0.0139	0.0554	0.0058	0.0165	-0.0331
60.0	0.0	80.0	0.0114	0.0074	0.1431	0.0282	-0.0074	0.0464	0.0031	0.0204	-0.0176
60.0	0.0	90.0	0.0108	-0.0000	0.1462	0.0288	0.0000	0.0433	-0.0000	0.0217	0.0000
60.0	15.0	0.0	0.0262	0.0000	0.0398	0.0107	-0.0000	0.1455	-0.0000	-0.0206	0.0000
60.0	15.0	10.0	0.0257	0.0067	0.0426	0.0112	-0.0074	0.1424	0.0029	-0.0194	-0.0167
60.0	15.0	20.0	0.0243	0.0126	0.0507	0.0128	-0.0139	0.1334	0.0055	-0.0158	-0.0315
60.0	15.0	30.0	0.0221	0.0170	0.0631	0.0152	-0.0188	0.1197	0.0074	-0.0103	-0.0424
60.0	15.0	40.0	0.0194	0.0193	0.0783	0.0181	-0.0213	0.1029	0.0084	-0.0036	-0.0482
60.0	15.0	50.0	0.0166	0.0193	0.0945	0.0212	-0.0213	0.0851	0.0084	0.0036	-0.0481
60.0	15.0	60.0	0.0140	0.0170	0.1096	0.0241	-0.0188	0.0683	0.0074	0.0103	-0.0423
60.0	15.0	70.0	0.0118	0.0126	0.1220	0.0265	-0.0139	0.0546	0.0055	0.0158	-0.0314
60.0	15.0	80.0	0.0104	0.0067	0.1300	0.0281	-0.0074	0.0457	0.0029	0.0194	-0.0167
60.0	15.0	90.0	0.0099	-0.0000	0.1328	0.0286	0.0000	0.0426	-0.0000	0.0206	0.0000
60.0	30.0	0.0	0.0196	0.0000	0.0307	0.0102	-0.0000	0.1436	-0.0000	-0.0178	0.0000
60.0	30.0	10.0	0.0192	0.0050	0.0325	0.0108	-0.0074	0.1405	0.0025	-0.0167	-0.0144
60.0	30.0	20.0	0.0182	0.0093	0.0388	0.0124	-0.0140	0.1315	0.0047	-0.0136	-0.0271
60.0	30.0	30.0	0.0166	0.0125	0.0480	0.0148	-0.0188	0.1177	0.0064	-0.0088	-0.0365
60.0	30.0	40.0	0.0145	0.0142	0.0592	0.0177	-0.0214	0.1009	0.0072	-0.0030	-0.0414
60.0	30.0	50.0	0.0125	0.0142	0.0711	0.0203	-0.0213	0.0830	0.0072	0.0031	-0.0413
60.0	30.0	60.0	0.0106	0.0125	0.0823	0.0237	-0.0187	0.0663	0.0063	0.0089	-0.0363
60.0	30.0	70.0	0.0090	0.0092	0.0913	0.0261	-0.0139	0.0527	0.0047	0.0136	-0.0269
60.0	30.0	80.0	0.0080	0.0049	0.0972	0.0276	-0.0074	0.0439	0.0025	0.0166	-0.0143
60.0	30.0	90.0	0.0076	-0.0000	0.0993	0.0282	0.0000	0.0408	-0.0000	0.0177	0.0000
60.0	45.0	0.0	0.0119	0.0000	0.0194	0.0097	-0.0000	0.1411	-0.0000	-0.0137	0.0000
60.0	45.0	10.0	0.0116	0.0029	0.0206	0.0102	-0.0075	0.1379	0.0020	-0.0129	-0.0112
60.0	45.0	20.0	0.0110	0.0055	0.0242	0.0118	-0.0140	0.1289	0.0037	-0.0105	-0.0210
60.0	45.0	30.0	0.0101	0.0074	0.0297	0.0142	-0.0188	0.1151	0.0049	-0.0068	-0.0282
60.0	45.0	40.0	0.0089	0.0084	0.0363	0.0172	-0.0213	0.0982	0.0056	-0.0023	-0.0319
60.0	45.0	50.0	0.0077	0.0084	0.0434	0.0203	-0.0213	0.0804	0.0055	0.0024	-0.0318
60.0	45.0	60.0	0.0065	0.0073	0.0499	0.0232	-0.0186	0.0637	0.0049	0.0069	-0.0279
60.0	45.0	70.0	0.0056	0.0054	0.0552	0.0256	-0.0138	0.0502	0.0036	0.0104	-0.0207
60.0	45.0	80.0	0.0050	0.0029	0.0587	0.0271	-0.0073	0.0414	0.0019	0.0128	-0.0110
60.0	45.0	90.0	0.0048	-0.0000	0.0599	0.0276	0.0000	0.0384	-0.0000	0.0136	0.0000
60.0	60.0	0.0	0.0054	0.0000	0.0092	0.0092	-0.0000	0.1387	-0.0000	-0.0092	0.0000
60.0	60.0	10.0	0.0053	0.0013	0.0097	0.0097	-0.0075	0.1355	0.0013	-0.0086	-0.0075
60.0	60.0	20.0	0.0050	0.0025	0.0113	0.0113	-0.0140	0.1264	0.0025	-0.0070	-0.0140
60.0	60.0	30.0	0.0046	0.0033	0.0138	0.0138	-0.0188	0.1125	0.0033	-0.0045	-0.0188
60.0	60.0	40.0	0.0041	0.0037	0.0167	0.0167	-0.0213	0.0956	0.0037	-0.0015	-0.0213
60.0	60.0	50.0	0.0035	0.0037	0.0198	0.0198	-0.0212	0.0778	0.0037	0.0016	-0.0212
60.0	60.0	60.0	0.0030	0.0032	0.0227	0.0227	-0.0186	0.0613	0.0032	0.0046	-0.0186
60.0	60.0	70.0	0.0026	0.0024	0.0250	0.0250	-0.0137	0.0478	0.0024	0.0070	-0.0137
60.0	60.0	80.0	0.0023	0.0013	0.0265	0.0265	-0.0073	0.0391	0.0013	0.0085	-0.0073
60.0	60.0	90.0	0.0023	-0.0000	0.0271	0.0271	0.0000	0.0361	-0.0000	0.0090	0.0000
60.0	75.0	0.0	0.0013	0.0000	0.0024	0.0088	-0.0000	0.1369	-0.0000	-0.0046	0.0000
60.0	75.0	10.0	0.0013	0.0003	0.0025	0.0094	-0.0075	0.1338	0.0007	-0.0043	-0.0037
60.0	75.0	20.0	0.0012	0.0006	0.0029	0.0110	-0.0141	0.1246	0.0012	-0.0035	-0.0070
60.0	75.0	30.0	0.0011	0.0008	0.0035	0.0134	-0.0188	0.1107	0.0016	-0.0022	-0.0094
60.0	75.0	40.0	0.0010	0.0009	0.0042	0.0164	-0.0213	0.0938	0.0018	-0.0007	-0.0106
60.0	75.0	50.0	0.0009	0.0009	0.0050	0.0195	-0.0212	0.0761	0.0018	0.0008	-0.0105
60.0	75.0	60.0	0.0008	0.0008	0.0057	0.0223	-0.0185	0.0595	0.0016	0.0023	-0.0092
60.0	75.0	70.0	0.0007	0.0006	0.0062	0.0247	-0.0137	0.0462	0.0012	0.0035	-0.0068
60.0	75.0	80.0	0.0006	0.0003	0.0066	0.0262	-0.0073	0.0376	0.0006	0.0042	-0.0036
60.0	75.0	90.0	0.0006	-0.0000	0.0067	0.0267	0.0000	0.0346	-0.0000	0.0045	0.0000
60.0	90.0	0.0	0.0000	0.0000	0.0000	0.0087	-0.0000	0.1363	0.0000	0.0000	-0.0000
60.0	90.0	10.0	0.0000	0.0000	0.0000	0.0093	-0.0075	0.1331	-0.0000	0.0000	0.0000
60.0	90.0	20.0	0.0000	0.0000	0.0000	0.0109	-0.0141	0.1240	-0.0000	0.0000	0.0000
60.0	90.0	30.0	0.0000	0.0000	0.0000	0.0133	-0.0188	0.1101	-0.0000	0.0000	0.0000
60.0	90.0	40.0	0.0000	0.0000	0.0000	0.0162	-0.0213	0.0932	-0.0000	0.0000	0.0000
60.0	90.0	50.0	0.0000	0.0000	0.0000	0.0193	-0.0212	0.0754	-0.0000	-0.0000	0.0000
60.0	90.0	60.0	0.0000	0.0000	0.0000	0.0222	-0.0185	0.0589	-0.0000	-0.0000	0.0000
60.0	90.0	70.0	0.0000	0.0000	0.0000	0.0245	-0.0137	0.0456	-0.0000	-0.0000	0.0000
60.0	90.0	80.0	0.0000	0.0000	0.0000	0.0260	-0.0072	0.0370	-0.0000	-0.0000	0.0000
60.0	90.0	90.0	0.0000	-0.0000	0.0000	0.0265	0.0000	0.0340	0.0000	-0.0000	-0.0000

Table 4 continued, part 6 of 7.

θ_1	θ_2	β_ϕ	σ_1/λ^2	σ_2/λ^2	σ_3/λ^2	σ_4/λ^2	σ_5/λ^2	σ_6/λ^2	σ_7/λ^2	σ_8/λ^2	σ_9/λ^2
75.0	0.0	0.0	0.0072	0.0000	0.0416	0.0028	-0.0000	0.1442	-0.0000	-0.0108	0.0000
75.0	0.0	10.0	0.0070	0.0037	0.0447	0.0029	-0.0037	0.1411	0.0007	-0.0101	-0.0176
75.0	0.0	20.0	0.0067	0.0069	0.0536	0.0033	-0.0069	0.1322	0.0014	-0.0082	-0.0330
75.0	0.0	30.0	0.0061	0.0093	[illegible].0672	0.0039	-0.0093	0.1186	0.0019	-0.0054	-0.0445
75.0	0.0	40.0	0.0054	0.0106	0.0840	0.0046	-0.0106	0.1018	0.0022	-0.0019	-0.0506
75.0	0.0	50.0	0.0046	0.0106	0.1018	0.0054	-0.0106	0.0840	0.0022	0.0019	-0.0506
75.0	0.0	60.0	0.0039	0.0093	0.1186	0.0061	-0.0093	0.0672	0.0019	0.0054	-0.0445
75.0	0.0	70.0	0.0033	0.0069	0.1322	0.0067	-0.0069	0.0536	0.0014	0.0082	-0.0330
75.0	0.0	80.0	0.0029	0.0037	0.1411	0.0070	-0.0037	0.0447	0.0007	0.0101	-0.0176
75.0	0.0	90.0	0.0028	-0.0000	0.1442	0.0072	0.0000	0.0416	-0.0000	0.0108	0.0000
75.0	15.0	0.0	0.0065	0.0000	0.0382	0.0027	-0.0000	0.1436	-0.0000	-0.0102	0.0000
75.0	15.0	10.0	0.0064	0.0033	0.0410	0.0029	-0.0037	0.1404	0.0007	-0.0096	-0.0167
75.0	15.0	20.0	0.0060	0.0063	0.0491	0.0033	-0.0069	0.1315	0.0013	-0.0078	-0.0314
75.0	15.0	30.0	0.0055	0.0084	0.0615	0.0038	-0.0093	0.1178	0.0018	-0.0051	-0.0423
75.0	15.0	40.0	0.0049	0.0096	0.0766	0.0046	-0.0106	0.1011	0.0021	-0.0018	-0.0481
75.0	15.0	50.0	0.0042	0.0096	0.0928	0.0053	-0.0106	0.0832	0.0020	0.0018	-0.0481
75.0	15.0	60.0	0.0035	0.0084	0.1079	0.0060	-0.0093	0.0665	0.0018	0.0051	-0.0422
75.0	15.0	70.0	0.0030	0.0062	0.1202	0.0066	-0.0069	0.0529	0.0013	0.0078	-0.0313
75.0	15.0	80.0	0.0027	0.0033	0.1283	0.0070	-0.0037	0.0440	0.0007	0.0096	-0.0167
75.0	15.0	90.0	0.0026	-0.0000	0.1310	0.0071	0.0000	0.0409	-0.0000	0.0102	0.0000
75.0	30.0	0.0	0.0049	0.0000	0.0295	0.0026	-0.0000	0.1417	-0.0000	-0.0088	0.0000
75.0	30.0	10.0	0.0048	0.0025	0.0316	0.0028	-0.0037	0.1386	0.0006	-0.0083	-0.0144
75.0	30.0	20.0	0.0045	0.0046	0.0376	0.0032	-0.0069	0.1296	0.0012	-0.0067	-0.0271
75.0	30.0	30.0	0.0041	0.0062	0.0468	0.0037	-0.0093	0.1158	0.0016	-0.0044	-0.0364
75.0	30.0	40.	0.0037	0.0071	0.0580	0.0045	-0.0106	0.0990	0.0018	-0.0015	-0.0413
75.0	30.0	50.0	0.0032	0.0071	0.0699	0.0052	-0.0106	0.0812	0.0018	0.0016	-0.0413
75.0	30.0	60.0	0.0027	0.0062	0.0810	0.0059	-0.0093	0.0649	0.0015	0.0044	-0.0362
75.0	30.0	70.0	0.0023	0.0046	0.0900	0.0065	-0.0069	0.0510	0.0011	0.0067	-0.0268
75.0	30.0	[illegible]	0.0020	0.0024	0.0959	0.0069	-0.0037	0.0421	0.0006	0.0082	-0.0143
75.0	30.0	90.0	0.0020	-0.0000	0.0979	0.0070	0.0000	0.0391	-0.0000	0.0088	0.0000
75.0	45.0	[illegible]	0.0030	0.0000	0.0186	0.0025	-0.0000	0.1393	-0.0000	-0.0068	0.0000
75.0	45.0	[illegible]	0.0029	0.0015	0.0199	0.0026	-0.0037	0.1361	0.0005	-0.0064	-0.0112
75.0	45.0	20.0	0.0027	0.0028	0.0235	0.0030	-0.0070	0.1271	0.0009	-0.0052	-0.0210
75.0	45.0	30.0	0.0025	0.0037	0.0289	0.0036	-0.0094	0.1132	0.0012	-0.0034	-0.0282
75.0	45.0	40.0	0.0022	0.0042	0.0356	0.0043	-0.0106	0.0964	0.0014	-0.0011	-0.0319
75.0	45.0	50.0	0.0019	0.0042	0.0426	0.0051	-0.0106	0.0766	0.0014	0.0012	-0.0318
75.0	45.0	60.0	0.0017	0.0036	0.0491	0.0058	-0.0092	0.0620	0.0012	0.0034	-0.0278
75.0	45.0	70.0	0.0014	0.0027	0.0544	0.0064	-0.0068	0.0485	0.0009	0.0052	-0.0206
75.0	45.0	80.0	0.0013	0.0014	0.0579	0.0067	-0.0036	0.0398	0.0005	0.0063	-0.0109
75.0	45.0	90.0	0.0012	-0.0000	0.0590	0.0069	0.0000	0.0368	-0.0000	0.0067	0.0000
75.0	60.0	0.0	0.0013	0.0000	0.0088	0.0024	-0.0000	0.1369	-0.0000	-0.0046	0.0000
75.0	60.0	10.0	0.0013	0.0007	0.0094	0.0025	-0.0037	0.1338	0.0003	-0.0043	-0.0075
75.0	60.0	20.0	0.0012	0.0012	0.0110	0.0029	-0.0070	0.1243	0.0006	-0.0035	-0.0141
75.0	60.0	30.0	0.0011	0.0015	0.0134	0.0035	-0.0094	0.1107	0.0008	-0.0022	-0.0188
75.0	60.0	40.0	0.0010	0.0018	0.0164	0.0042	-0.0106	0.0938	0.0009	-0.0007	-0.0213
75.0	60.0	50.0	0.0009	0.0018	0.0195	0.0050	-0.0105	0.0761	0.0009	0.0008	-0.0212
75.0	60.0	60.0	0.0008	0.0016	0.0223	0.0057	-0.0092	0.0595	0.0008	0.0023	-0.0185
75.0	60.0	70.0	0.0007	0.0012	0.0247	0.0062	-0.0068	0.0462	0.0006	0.0035	-0.0137
75.0	60.0	80.0	0.0005	0.0006	0.0262	0.0066	-0.0035	0.0376	0.0003	0.0042	-0.0073
75.0	60.0	90.0	0.0006	-0.0000	0.0267	0.0067	0.0000	0.0346	-0.0000	0.0045	0.0000
75.0	75.0	0.0	0.0003	0.0000	0.0023	0.0023	-0.0000	0.1353	-0.0000	-0.0023	0.0000
75.0	75.0	10.0	0.0003	0.0002	0.0024	0.0024	-0.0037	0.1321	0.0002	-0.0021	-0.0037
75.0	75.0	20.0	0.0003	0.0003	0.0028	0.0028	-0.0070	0.1229	0.0003	-0.0017	-0.0070
75.0	75.0	30.0	0.0003	0.0004	0.0034	0.0034	-0.0094	0.1090	0.0004	-0.0011	-0.0094
75.0	75.0	40.0	0.0003	0.0005	0.0041	0.0041	-0.0106	0.0921	0.0005	-0.0004	-0.0106
75.0	75.0	50.0	0.0002	0.0004	0.0049	0.0049	-0.0105	0.0743	0.0004	0.0004	-0.0105
75.0	75.0	60.0	0.0002	0.0004	0.0056	0.0056	-0.0092	0.0579	0.0004	0.0011	-0.0092
75.0	75.0	70.0	0.0002	0.0003	0.0061	0.0061	-0.0068	0.0446	0.0003	0.0017	-0.0068
75.0	75.0	80.0	0.0002	0.0002	0.0065	0.0065	-0.0036	0.0360	0.0002	0.0021	-0.0036
75.0	75.0	90.0	0.0001	-0.0000	0.0066	0.0066	0.0000	0.0331	-0.0000	0.0022	0.0000
75.0	90.0	0.0	0.0000	0.0000	0.0000	0.0022	-0.0000	0.1347	0.0000	0.0000	-0.0000
75.0	90.0	10.0	0.0000	0.0000	0.0000	0.0024	-0.0037	0.1315	-0.0000	0.0000	0.0000
75.0	90.0	20.0	0.0000	0.0000	0.0000	0.0028	-0.0070	0.122[illegible]	-0.0000	0.0000	0.0000
75.0	90.0	30.0	0.0000	0.0000	0.0000	0.0034	-0.0094	0.1083	-0.0000	0.0000	0.0000
75.0	90.0	40.0	0.0000	0.0000	0.0000	0.0041	-0.0106	0.0914	-0.0000	0.0000	0.0000
75.0	90.0	50.0	0.0000	0.0000	0.0000	0.0049	-0.0105	0.0737	-0.0000	-0.0000	0.0000
75.0	90.0	60.0	0.0000	0.0000	0.0000	0.0056	-0.0092	0.0573	-0.0000	-0.0000	0.0000
75.0	90.0	70.0	0.0000	0.0000	0.0000	0.0061	-0.0068	0.0440	-0.0000	-0.0000	0.0000
75.0	90.0	80.0	0.0000	0.0000	0.0000	0.0065	-0.0036	0.0355	-0.0000	-0.0000	0.0000
75.0	90.0	90.0	0.0000	-0.0000	0.0000	0.0066	0.0000	0.0325	0.0000	-0.0000	-0.0000

Table 4 continued, part 7 of 7.

θ_1	θ_2	β_ϕ	σ_1/λ^2	σ_2/λ^2	σ_3/λ^2	σ_4/λ^2	σ_5/λ^2	σ_6/λ^2	σ_7/λ^2	σ_8/λ^2	σ_9/λ^2
90.0	0.0	0.0	0.0000	-0.0000	0.0409	0.0000	0.0000	0.1435	-0.0000	0.0000	0.0000
90.0	0.0	10.0	0.0000	-0.0000	0.0440	0.0000	0.0000	0.1404	0.0000	0.0000	-0.0175
90.0	0.0	20.0	0.0000	-0.0000	0.0529	0.0000	0.0000	0.1315	0.0000	0.0000	-0.0330
90.0	0.0	30.0	0.0000	-0.0000	0.0666	0.0000	0.0000	0.1179	0.0000	0.0000	-0.0444
90.0	0.0	40.0	0.0000	-0.0000	0.0833	0.0000	0.0000	0.1011	0.0000	0.0000	-0.0505
90.0	0.0	50.0	0.0000	-0.0000	0.1011	0.0000	0.0000	0.0833	0.0000	-0.0000	-0.0505
90.0	0.0	60.0	0.0000	-0.0000	0.1179	0.0000	0.0000	0.0666	0.0000	-0.0000	-0.0444
90.0	0.0	70.0	0.0000	-0.0000	0.1315	0.0000	0.0000	0.0529	0.0000	-0.0000	-0.0330
90.0	0.0	80.0	0.0000	-0.0000	0.1404	0.0000	0.0000	0.0440	0.0000	-0.0000	-0.0175
90.0	0.0	90.0	0.0000	0.0000	0.1435	0.0000	-0.0000	0.0409	-0.0000	-0.0000	0.0000
90.0	15.0	0.0	0.0000	-0.0000	0.0376	0.0000	0.0000	0.1429	-0.0000	0.0000	0.0000
90.0	15.0	10.0	0.0000	-0.0000	0.0404	0.0000	0.0000	0.1398	0.0000	0.0000	-0.0167
90.0	15.0	20.0	0.0000	-0.0000	0.0485	0.0000	0.0000	0.1308	0.0000	0.0000	-0.0314
90.0	15.0	30.0	0.0000	-0.0000	0.0609	0.0000	0.0000	0.1171	0.0000	0.0000	-0.0423
90.0	15.0	40.0	0.0000	-0.0000	0.0760	0.0000	0.0000	0.1004	0.0000	0.0000	-0.0481
90.0	15.0	50.0	0.0000	-0.0000	0.0921	0.0000	0.0000	0.0826	0.0000	-0.0000	-0.0480
90.0	15.0	60.0	0.0000	-0.0000	0.1073	0.0000	0.0000	0.0658	0.0000	-0.0000	-0.0422
90.0	15.0	70.0	0.0000	-0.0000	0.1196	0.0000	0.0000	0.0522	0.0000	-0.0000	-0.0313
90.0	15.0	80.0	0.0000	-0.0000	0.1276	0.0000	0.0000	0.0433	0.0000	-0.0000	-0.0167
90.0	15.0	90.0	0.0000	0.0000	0.1304	0.0000	-0.0000	0.0403	-0.0000	-0.0000	0.0000
90.0	30.0	0.0	0.0000	-0.0000	0.0291	0.0000	0.0000	0.1410	-0.0000	0.0000	0.0000
90.0	30.0	10.0	0.0000	-0.0000	0.0311	0.0000	0.0000	0.1379	0.0000	0.0000	-0.0144
90.0	30.0	20.0	0.0000	-0.0000	0.0372	0.0000	0.0000	0.1289	0.0000	0.0000	-0.0271
90.0	30.0	30.0	0.0000	-0.0000	0.0463	0.0000	0.0000	0.1152	0.0000	0.0000	-0.0364
90.0	30.0	40.0	0.0000	-0.0000	0.0575	0.0000	0.0000	0.0984	0.0000	0.0000	-0.0413
90.0	30.0	50.0	0.0000	-0.0000	0.0694	0.0000	0.0000	0.0806	0.0000	-0.0000	-0.0412
90.0	30.0	60.0	0.0000	-0.0000	0.0805	0.0000	0.0000	0.0639	0.0000	-0.0000	-0.0362
90.0	30.0	70.0	0.0000	-0.0000	0.0895	0.0000	0.0000	0.0503	0.0000	-0.0000	-0.0268
90.0	30.0	80.0	0.0000	-0.0000	0.0954	0.0000	0.0000	0.0415	0.0000	-0.0000	-0.0143
90.0	30.0	90.0	0.0000	0.0000	0.0974	0.0000	-0.0000	0.0385	-0.0000	-0.0000	0.0000
90.0	45.0	0.0	0.0000	-0.0000	0.0183	0.0000	0.0000	0.1386	-0.0000	0.0000	0.0000
90.0	45.0	10.0	0.0000	-0.0000	0.0196	0.0000	0.0000	0.1355	0.0000	0.0000	-0.0112
90.0	45.0	20.0	0.0000	-0.0000	0.0232	0.0000	0.0000	0.1264	0.0000	0.0000	-0.0210
90.0	45.0	30.0	0.0000	-0.0000	0.0287	0.0000	0.0000	0.1126	0.0000	0.0000	-0.0281
90.0	45.0	40.0	0.0000	-0.0000	0.0353	0.0000	0.0000	0.0957	0.0000	0.0000	-0.0319
90.0	45.0	50.0	0.0000	-0.0000	0.0423	0.0000	0.0000	0.0779	0.0000	-0.0000	-0.0317
90.0	45.0	60.0	0.0000	-0.0000	0.0488	0.0000	0.0000	0.0613	0.0000	-0.0000	-0.0278
90.0	45.0	70.0	0.0000	-0.0000	0.0541	0.0000	0.0000	0.0479	0.0000	-0.0000	-0.0206
90.0	45.0	80.0	0.0000	-0.0000	0.0576	0.0000	0.0000	0.0392	0.0000	-0.0000	-0.0109
90.0	45.0	90.0	0.0000	0.0000	0.0587	0.0000	-0.0000	0.0362	-0.0000	-0.0000	0.0000
90.0	60.0	0.0	0.0000	-0.0000	0.0087	0.0000	0.0000	0.1363	-0.0000	0.0000	0.0000
90.0	60.0	10.0	0.0000	-0.0000	0.0093	0.0000	0.0000	0.1331	0.0000	0.0000	-0.0075
90.0	60.0	20.0	0.0000	-0.0000	0.0109	0.0000	0.0000	0.1240	0.0000	0.0000	-0.0141
90.0	60.0	30.0	0.0000	-0.0000	0.0133	0.0000	0.0000	0.1101	0.0000	0.0000	-0.0188
90.0	60.0	40.0	0.0000	-0.0000	0.0162	0.0000	0.0000	0.0932	0.0000	0.0000	-0.0213
90.0	60.0	50.0	0.0000	-0.0000	0.0193	0.0000	0.0000	0.0754	0.0000	-0.0000	-0.0212
90.0	60.0	60.0	0.0000	-0.0000	0.0222	0.0000	0.0000	0.0589	0.0000	-0.0000	-0.0185
90.0	60.0	70.0	0.0000	-0.0000	0.0245	0.0000	0.0000	0.0456	0.0000	-0.0000	-0.0137
90.0	60.0	80.0	0.0000	-0.0000	0.0260	0.0000	0.0000	0.0370	0.0000	-0.0000	-0.0072
90.0	60.0	90.0	0.0000	0.0000	0.0265	0.0000	-0.0000	0.0340	-0.0000	-0.0000	0.0000
90.0	75.0	0.0	0.0000	-0.0000	0.0022	0.0000	0.0000	0.1347	-0.0000	0.0000	0.0000
90.0	75.0	10.0	0.0000	-0.0000	0.0024	0.0000	0.0000	0.1315	0.0000	0.0000	-0.0037
90.0	75.0	20.0	0.0000	-0.0000	0.0028	0.0000	0.0000	0.1223	0.0000	0.0000	-0.0070
90.0	75.0	30.0	0.0000	-0.0000	0.0034	0.0000	0.0000	0.1083	0.0000	0.0000	-0.0094
90.0	75.0	40.0	0.0000	-0.0000	0.0041	0.0000	0.0000	0.0914	0.0000	0.0000	-0.0106
90.0	75.0	50.0	0.0000	-0.0000	0.0049	0.0000	0.0000	0.0737	0.0000	-0.0000	-0.0105
90.0	75.0	60.0	0.0000	-0.0000	0.0056	0.0000	0.0000	0.0573	0.0000	-0.0000	-0.0092
90.0	75.0	70.0	0.0000	-0.0000	0.0061	0.0000	0.0000	0.0440	0.0000	-0.0000	-0.0068
90.0	75.0	80.0	0.0000	-0.0000	0.0065	0.0000	0.0000	0.0355	0.0000	-0.0000	-0.0036
90.0	75.0	90.0	0.0000	0.0000	0.0066	0.0000	-0.0000	0.0325	-0.0000	-0.0000	0.0000
90.0	90.0	0.0	0.0000	-0.0000	0.0000	0.0000	0.0000	0.1341	0.0000	-0.0000	-0.0000
90.0	90.0	10.0	0.0000	-0.0000	0.0000	0.0000	0.0000	0.1309	-0.0000	-0.0000	0.0000
90.0	90.0	20.0	0.0000	-0.0000	0.0000	0.0000	0.0000	0.1217	-0.0000	-0.0000	0.0000
90.0	90.0	30.0	0.0000	-0.0000	0.0000	0.0000	0.0000	0.1077	-0.0000	-0.0000	0.0000
90.0	70.0	40.0	0.0000	-0.0000	0.0000	0.0000	0.0000	0.0908	-0.0000	-0.0000	0.0000
90.0	90.0	50.0	0.0000	-0.0000	0.0000	0.0000	0.0000	0.0731	-0.0000	0.0000	0.0000
90.0	90.0	60.0	0.0000	-0.0000	0.0000	0.0000	0.0000	0.0567	-0.0000	0.0000	0.0000
90.0	90.0	70.0	0.0000	-0.0000	0.0000	0.0000	0.0000	0.0435	-0.0000	0.0000	0.0000
90.0	90.0	80.0	0.0000	-0.0000	0.0000	0.0000	0.0000	0.0350	-0.0000	0.0000	0.0000
90.0	90.0	90.0	0.0000	0.0000	0.0000	0.0000	-0.0000	0.0320	0.0000	0.0000	-0.0000

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