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# TABLES OF THE CLASSICAL ORBITAL INTEGRALS IN COULOMB EXCITATION

BY

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### Synopsis.

In the classical description of the Coulomb excitation process one is led to some non-elementary definite integrals. These integrals can also be used in a more refined treatment, which is related to the WBK method, for the calculation of the quantum mechanical corrections. This paper contains a collection of formulae, mathematical properties, and asymptotic expansions of these integrals. An explicit tabulation of the integrals for a large range of the interesting parameters is given.

## I. Introduction.

In a Coulomb excitation process, the amplitude for excitation of the nucleus depends on the nuclear properties only through matrix elements identical to those which determine the corresponding radiative transitions. The dependence of the cross section on the various parameters of the process, such as velocity and charge of the projectile, is given through numerical functions (e.g.,  $f$  and  $a$ ) of dimensionless combinations of these quantities (e.g.,  $\eta$ ,  $\xi$ , and  $\vartheta$ ).<sup>1</sup>

In the classical description of the excitation process, these functions (cf. eqs. (24—26)) are simply related to the orbital integrals  $I_{\lambda\mu}(\vartheta, \xi)$  defined by

$$I_{\lambda\mu}(\vartheta, \xi) = \int_{-\infty}^{+\infty} e^{i\xi[\varepsilon \sinh w + w]} \frac{[\cosh w + \varepsilon + i\sqrt{\varepsilon^2 - 1} \sinh w]^\mu dw}{[\varepsilon \cosh w + 1]^{\lambda + \mu}}, \quad (1)$$

where  $\vartheta$  is the deflection angle of the projectile and is connected with the eccentricity  $\varepsilon$  of the hyperbolic orbit through

$$\varepsilon = (\sin \vartheta/2)^{-1}. \quad (2)$$

The classical approximation is valid only when the parameter  $\eta$ , defined by

$$\eta = \frac{Z_1 Z_2 e^2}{\hbar v}, \quad (3)$$

is much larger than unity. By a proper symmetrization of the classical expressions for the cross sections, introducing a symmetrized adiabaticity parameter  $\xi$  through

<sup>1</sup> For a discussion of the theory and experimental data concerning Coulomb excitation, the reader is referred to a review article by K. ALDER, A. BOHR, T. HUUS, B. MOTTELSON, and A. WINther (Rev. Mod. Phys., in press). This article contains references to the original papers in which the theoretical relations employed here are derived.

$$\xi = \eta_f - \eta_i = \frac{Z_1 Z_2 e^2}{\hbar} \left( \frac{1}{v_f} - \frac{1}{v_i} \right), \quad (4)$$

one obtains, however, results for the total cross sections which differ only slightly from the quantum mechanical expressions, even for  $\eta$  of the order of unity. The angular distributions of the  $\gamma$ -rays following a Coulomb excitation have proved to be more sensitive to quantal corrections. Also the differential cross sections which have so far been evaluated only in the classical approximation are expected to be more sensitive to quantum effects.

In the quantum mechanical treatment of Coulomb excitation, the  $f$ - and  $a$ -functions are expressed as sums of radial matrix elements between Coulomb wave functions of different angular momenta. As is seen, for instance, from a WKB approximation, these radial matrix elements can for large values of  $\eta$  or  $l$  be expressed in terms of the classical orbital integrals by the relation

$$M_{l, l+\mu}^{-\lambda-1} \approx \frac{k^{\lambda-2}}{4\eta^\lambda} I_{\lambda\mu}(\vartheta, \xi), \quad (5)$$

where

$$\varepsilon = \frac{1}{\sin \vartheta/2} = \eta^{-1} \left[ \eta^2 + \left( l + \frac{\mu}{2} \right) \left( l + \frac{\mu}{2} + 1 \right) \right]^{1/2} \quad (6)$$

and where  $\eta$  and  $k$  are the geometric mean values of the classical parameter and wave numbers, respectively, in the initial and final state. Employing the relation (6) between the angular momenta involved in the radial matrix elements, and the deflection angle entering in the  $I_{\lambda\mu}$ , one may in this way obtain a very good approximation of the radial matrix elements, even for  $\eta$  and  $l$  of the order of unity. In turn, the study of the radial matrix elements has proved fruitful in the development of the theory of the classical integrals. The exact expressions which one has obtained for the matrix elements reduce, in the limit of  $|l + i\eta| \gg 1$ , to functions which provide series forms of the  $I_{\lambda\mu}$ . Also recursion relations for the  $I_{\lambda\mu}$  can easily be obtained from recursion formulae for the radial matrix elements.

In the theory of Coulomb excitation enter only the orbital integrals with  $\mu = -\lambda, -\lambda+2, -\lambda+4, \dots, \lambda$ . With these integrals one may easily evaluate the  $f$ -functions entering in the differential and total excitation cross sections. Tables of these functions are also included in this paper. Furthermore, one can calculate the  $a$ -coefficients for the angular distribution of the de-excitation  $\gamma$ -rays. The coefficients for the distribution, irrespective of the scattering angle of the projectile, are given in ref. 1. The  $\gamma$ -ray angular

distribution for a fixed scattering angle is expressed as a simple polynomial in the  $I_{\lambda\mu}$  and is thus readily evaluated from the present tables (loc. cit., eq. (II A. 66)). Also the cross sections for higher order excitation processes may be evaluated from the  $I_{\lambda\mu}$  (loc. cit., eqs. (II D 10 and 11)).

Besides these applications of the orbital integrals in the classical theory of Coulomb excitation, one obtains by means of the relation (5) an extension of the applicability of the  $I_{\lambda\mu}$  in the domain where quantum mechanics must be used.

The present paper contains a tabulation of the  $I_{\lambda\mu}(\vartheta, \xi)$  for  $\lambda = 1, 2, 3$ , and 4. Before we give the tables, we quote some mathematical properties of these functions.

## II. Some Properties of the $I_{\lambda\mu}$ .

For the numerical evaluation of the orbital integrals (1), it is convenient to translate the path of integration by an amount  $i\pi/2$ , whereby the integral takes the form

$$I_{\lambda\mu}(\vartheta, \xi) = e^{-\frac{\pi}{2}\xi} \int_{-\infty}^{+\infty} e^{-\xi w} e^{i\xi w} \frac{[i \sinh w + e - \sqrt{e^2 - 1} \cosh w]^{\mu} dw}{[i \varepsilon \sinh w + 1]^{\lambda + \mu}}. \quad (7)$$

While the integral forms (1) and (7) are convenient for a discussion of different limiting cases, it may especially for small values of  $\xi$  be convenient to use a series form. As mentioned before, this was obtained from the series expression for the radial matrix elements in the limit  $|l + i\eta| \gg 1$ . For  $\mu = \pm \lambda$  the result may be written

$$\left. \begin{aligned} I_{\lambda, -\lambda}(\vartheta, \xi) &= 2^\lambda \sin^\lambda \vartheta/2 e^{-\xi (\cot \vartheta/2 + \vartheta/2 - \pi/2)} \\ &\times \left\{ \frac{|\Gamma(\lambda + i\xi)|^2}{(2\lambda - 1)!} \psi_2(-2\lambda + 1, -\lambda + 1 - i\xi, -\lambda + 1 + i\xi, z, z^*) \right. \\ &\quad \left. + 2 \operatorname{Re} [e^{-\pi\xi} \Gamma(-\lambda - i\xi) z^{\lambda + i\xi} \right. \\ &\quad \left. \psi_2(-\lambda + 1 + i\xi, \lambda + 1 + i\xi, -\lambda + 1 + i\xi, z, z^*)] \right\} \end{aligned} \right\} \quad (8)$$

with

$$z = \xi/2 (\cot \vartheta/2 - i) = e^{-i\vartheta/2} \frac{\xi}{2 \sin \vartheta/2} \quad (9)$$

and

$$\left. \begin{aligned}
 I_{\lambda, \lambda}(\vartheta, \xi) &= 2^\lambda \sin^\lambda \vartheta/2 (-1)^\lambda e^{\xi [\cot \vartheta/2 + \vartheta/2 - \pi/2]} \\
 \left\{ \frac{|\Gamma(\lambda + i\xi)|^2}{(2\lambda - 1)!} \psi_2(-2\lambda + 1, -\lambda + 1 - i\xi, -\lambda + 1 + i\xi, -z^*, -z) \right. \\
 &\quad + 2 \operatorname{Re} [\Gamma(-\lambda - i\xi) (z^*)^{\lambda + i\xi} (-1)^\lambda \\
 &\quad \left. \psi_2(-\lambda + 1 + i\xi, \lambda + 1 + i\xi, -\lambda + 1 + i\xi, -z^*, -z) \right\} \\
 &= e^{-\pi\xi} (-1)^\lambda I_{\lambda, -\lambda}(-\vartheta, \xi).
 \end{aligned} \right\} \quad (10)$$

The function  $\psi_2$  is a generalized confluent hypergeometric function of two variables, and is defined by the power series

$$\psi_2(\alpha, \beta, \beta'; x, y) = \sum_{m, n} \frac{\alpha_m + n}{\beta_m \beta'_n} \frac{x^m}{m!} \frac{y^n}{n!} \quad (11)$$

with

$$a_m = \frac{\Gamma(a + m)}{\Gamma(a)} \quad (12)$$

which is convergent for all  $x$  and  $y$ .

The first  $\psi_2$  function in (8) and (10) is, according to (11), a polynomial which for the lowest multipole orders is given by

$$\left. \begin{aligned}
 \psi_2(-2\lambda + 1, -\lambda + 1 - i\xi, -\lambda + 1 + i\xi, z, z^*) \\
 = \left\{ \begin{array}{ll} 0 & \lambda = 1 \\ \frac{1}{(1 + \xi^2)} & \lambda = 2 \\ \frac{2}{(1 + \xi^2)(4 + \xi^2)} (5\xi \cot \vartheta/2 + 4) & \lambda = 3. \end{array} \right. \end{aligned} \right\} \quad (13)$$

In the dipole ( $\lambda = 1$ ) case, (8) and (10) may be expressed in terms of Hankel functions, as may be seen directly from (1) or (7). One finds

$$I_{1, \pm 1}(\vartheta, \xi) = -2\xi e^{-\frac{\pi}{2}\xi} \left[ K'_{i\xi}(\xi\varepsilon) \pm \frac{\sqrt{\varepsilon^2 - 1}}{\varepsilon} K_{i\xi}(\xi\varepsilon) \right], \quad (14)$$

where  $K$  is the Hankel function of imaginary argument, and where  $K'$  means the derivative with respect to the argument.

The integrals  $I_{\lambda\mu}$  with  $|\mu| + \lambda$  are most easily obtained from the recursion relations. There exist a large number of such relations which may

be derived from the recursion formulae for the radial matrix elements. We shall here give the following three examples of such relations:

$$(\lambda + 1) I_{\lambda+1, 1} = -\frac{\partial}{\partial \varepsilon} I_{\lambda, 0} - \xi \frac{\sqrt{\varepsilon^2 - 1}}{\varepsilon} I_{\lambda, 0} \quad (15)$$

$$\left. \begin{aligned} 2(\lambda - 1) I_{\lambda+1, 0} &= -\frac{\partial}{\partial \varepsilon} (I_{\lambda, 1} + I_{\lambda, -1}) + \frac{\sqrt{\varepsilon^2 - 1}}{\varepsilon} (I_{\lambda, 1} + I_{\lambda, -1}) \\ &\quad + \xi (I_{\lambda, 1} - I_{\lambda, -1}), \end{aligned} \right\} \quad (16)$$

$$\left. \begin{aligned} \frac{2\xi}{3} I_{2, 0} &= \frac{\varepsilon}{\sqrt{\varepsilon^2 - 1}} \frac{\partial}{\partial \varepsilon} (I_{2, -2} - I_{2, 2}) + \xi (I_{2, -2} + I_{2, 2}) \\ &\quad + [3(\varepsilon^2 - 1)^{-\frac{1}{2}} - (\varepsilon^2 - 1)^{-\frac{3}{2}}] (I_{2, -2} - I_{2, 2}). \end{aligned} \right\} \quad (17)$$

The series form of the  $I_{\lambda\mu}$  is especially convenient for small values of  $\xi$  and not too small values of  $\vartheta$ .

For small values of  $\vartheta$  (and arbitrary  $\xi$ ) it is convenient to use the asymptotic formula

$$I_{\lambda\mu}(\vartheta, \xi) \approx (-1)^{\frac{\lambda+\mu}{2}} \varepsilon^{-1} \left( \frac{\xi}{2\varepsilon} \right)^{\frac{\lambda-1}{2}} \Gamma\left( \frac{-\lambda+\mu+1}{2} \right) e^{-\frac{\pi i \xi}{2}} W_{-\frac{\mu}{2}, -\frac{\lambda}{2}}(2\xi\varepsilon). \quad (18)$$

The function  $W$  is the Whittaker function, which in this case may be expressed in terms of Hankel functions of integer order.

For  $\xi \cdot \varepsilon$  large, one may use the asymptotic expansion of  $W$  which leads to

$$I_{\lambda\mu}(\vartheta, \xi) \approx \frac{2\pi}{\Gamma\left(\frac{\lambda-\mu+1}{2}\right)} e^{-\xi\left(\varepsilon + \frac{\pi}{2}\right)} \xi^{\frac{\lambda-\mu-1}{2}} (2\varepsilon)^{-\frac{\lambda+\mu+1}{2}}. \quad (19)$$

For large values of  $\xi$  and arbitrary values of  $\varepsilon$ , one may employ the method of steepest descent leading to

$$I_{\lambda, \mu}(\vartheta, \xi) = e^{-\xi(\pi + \zeta - \arctg \zeta)} \int_{-\infty - i\delta}^{+\infty - i\delta} dx \frac{\exp\left\{-\frac{\zeta\xi}{2}x^2 - \frac{i\xi}{6}x^3\right\}}{x^{\lambda-\mu} (x - 2i\zeta)^{\lambda+\mu}} \quad (20)$$

with  $\zeta = \sqrt{\varepsilon^2 - 1} = \cot \vartheta/2$ . For the evaluation of the integral, a series development in  $\zeta$  may be employed.

For  $\xi = 0$ , the orbital integrals may be reduced to elementary functions. Thus, one obtains

$$I_{\lambda, \mu}(\vartheta, 0) = \sqrt{2\pi}(\lambda-1)! \varepsilon^{-\frac{\lambda}{2}} (\varepsilon^2 - 1)^{-\frac{\lambda}{2} + \frac{1}{4}} P_{\mu-\frac{\lambda}{2}}^{-\lambda+\frac{1}{2}}(1/\varepsilon), \quad (21)$$

where  $P$  is the Legendre function. For the lowest multipole orders, one finds the following explicit expressions in terms of elementary functions.

$$\left. \begin{aligned} I_{1\pm 1} &= 2 \sin \vartheta/2 \\ I_{2\pm 2} &= \frac{2}{3} \sin^2 \vartheta/2 \\ I_{20} &= 2 \operatorname{tg}^2 \vartheta/2 \left[ 1 - \frac{\pi - \vartheta}{2} \operatorname{tg} \vartheta/2 \right] \\ I_{3\pm 3} &= \frac{4}{15} \sin^3 \vartheta/2 \\ I_{3\pm 1} &= \frac{2 \sin^3 \vartheta/2}{\cos^4 \vartheta/2} \left[ \frac{2 + \sin^2 \vartheta/2}{3} - \operatorname{tg} \vartheta/2 \cdot \frac{\pi - \vartheta}{2} \right] \\ I_{4\pm 4} &= \frac{4}{35} \sin^4 \vartheta/2 \\ I_{4\pm 2} &= \frac{2 \sin^4 \vartheta/2}{\cos^6 \vartheta/2} \left[ \frac{8 + 9 \sin^2 \vartheta/2 - 2 \sin^4 \vartheta/2}{20} - \frac{\pi - \vartheta}{2} \cdot \frac{3}{4} \operatorname{tg} \vartheta/2 \right] \\ I_{40} &= 2 \operatorname{tg}^6 \vartheta/2 \left[ \frac{2}{3 \sin^2 \vartheta/2} + \frac{11}{6} - \frac{5 \operatorname{tg}^2 \vartheta/2 + 3}{2 \operatorname{tg} \vartheta/2} \cdot \frac{\pi - \vartheta}{2} \right]. \end{aligned} \right\} \quad (22)$$

The orbital integrals for negative values of  $\xi$  can be found from the following symmetry relation:

$$I_{\lambda, \mu}(\vartheta, -\xi) = I_{\lambda, -\mu}(\vartheta, \xi). \quad (23)$$

### III. Tables of $I_{\lambda\mu}(\vartheta, \xi)$ .

The following tables of the orbital integrals were obtained from the integral form (7) by numerical integration. This calculation was performed on the high speed electronic computor BESK in Stockholm and the tables are directly reproduced from the output of the machine.

Besides the  $I_{\lambda\mu}$ , the tables contain the differential and total cross section functions  $df_{\lambda}(\vartheta, \xi)/d\Omega$  and  $f_{\lambda}(\xi)$ , entering in the classical theory of Coulomb excitation. These functions are defined in terms of the orbital integrals by

$$df_{E\lambda}(\vartheta, \xi)/d\Omega = \frac{4\pi^2}{(2\lambda+1)^3} \sum_{\mu} \left| Y_{\lambda\mu}\left(\frac{\pi}{2}, 0\right) \right|^2 |I_{\lambda\mu}(\vartheta, \xi)|^2 \sin^{-4} \vartheta/2, \quad (24)$$

$$df_{M\lambda}(\vartheta, \xi)/d\Omega = \frac{4\pi^2}{(2\lambda+1)^2} \sum_{\mu} \frac{(\lambda+1)^2 - \mu^2}{\lambda^2(2\lambda+3)} \left| Y_{\lambda+1, \mu}\left(\frac{\pi}{2}, 0\right) \right|^2 \\ |I_{\lambda+1, \mu}(\vartheta, \xi)|^2 \cdot \cot^2 \vartheta/2 \cdot \sin^{-4} \vartheta/2, \quad (25)$$

$$f_{\lambda}(\xi) = 2\pi \int_0^{\pi} \frac{df_{\lambda}(\vartheta, \xi)}{d\Omega} \sin \vartheta d\vartheta. \quad (26)$$

The table contains the  $f$ -functions

$$df_{E\lambda}(\vartheta, \xi)/d\Omega \text{ and } f_{E\lambda}(\xi) \text{ for } \lambda = 1, 2, 3, \text{ and } 4$$

$$df_{M\lambda}(\vartheta, \xi)/d\Omega \text{ and } f_{M\lambda}(\xi) \text{ for } \lambda = 1 \text{ and } 2$$

and the following orbital integrals necessary for the evaluation of these functions

$$I_{\lambda\mu}(\vartheta, \xi) \text{ for } \lambda = 1, 2, 3, \text{ and } 4$$

$$\text{and } \mu = -\lambda, -\lambda + 2, \dots, \lambda.$$

All integrals were calculated for the following values of the parameters

$$\vartheta = 10^\circ (10^\circ) 180^\circ$$

and

$$\xi = 0.0 (0.1) 1.0 (0.2) 2.0, 4.0 \text{ for } \lambda = 1 \text{ and } 2$$

$$\xi = 0.2 (0.2) 1.0 (0.5) 2.0, 4.0 \text{ for } \lambda = 3 \text{ and } 4.$$

The table is expected to be accurate with the number of decimals given, except for small angles ( $10^\circ$ ), where a strong cancellation in the integral (7) diminishes the accuracy especially for the higher multipoles. More accurate values may here be obtained by means of (18).

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### Explanation of the Tables.

Column 1     $10 \xi$ .

Column 2    angle  $\vartheta$  in degrees.

Column 3     $\lambda, \mu$ .

Columns 4-5     $I_{\lambda\mu}(\vartheta, \xi)$  as a decimal fraction (decimal point in front of the number) and the power of ten by which it should be multiplied, e. g.,

$$298559 - 02 = 0.00298559.$$

The last line for each value of  $\vartheta$  and  $\xi$  (indicated by  $DF$  in the third column) gives the  $df_E\lambda(\vartheta, \xi)/d\Omega$  for the  $\lambda, \vartheta, \xi$  in question. For each value of  $\xi$ , the table concludes with the value of  $f_E\lambda(\xi)$ , indicated by  $F$ . In this line, the first and second columns give  $\lambda$  and  $10 \xi$ , respectively.

The tables 5 and 6 contain only the  $df_M\lambda(\vartheta, \xi)/d\Omega$  and  $f_M\lambda(\xi)$ , since the  $I_{\lambda\mu}$  necessary are the same as those for the electric excitations.

Table 1.  $I_{1\mu}(\vartheta, \xi)$ ,  $df_{E1}(\vartheta, \xi)/d\Omega$  and  $f_{E1}(\xi)$ .

00	180	l.+1 l.-1 l DF	200000 01 200000 01 139626 01	00	060	l.+1 l.-1 l DF	100000 01 100000 01 055850 02
00	170	l.+1 l.-1 l DF	199238 01 199238 01 140695 01	00	050	l.+1 l.-1 l DF	084523 01 084523 01 078175 02
00	160	l.+1 l.-1 l DF	196961 01 196961 01 143967 01	00	040	l.+1 l.-1 l DF	068404 01 068404 01 119361 02
00	150	l.+1 l.-1 l DF	193185 01 193185 01 149651 01	00	030	l.+1 l.-1 l DF	051763 01 051763 01 208437 02
00	140	l.+1 l.-1 l DF	187938 01 187938 01 158123 01	00	020	l.+1 l.-1 l DF	347296 00 347296 00 463048 02
00	130	l.+1 l.-1 l DF	181261 01 181261 01 169987 01	00	010	l.+1 l.-1 l DF	174311 00 174311 00 183812 03
00	120	l.+1 l.-1 l DF	173205 01 173205 01 186168 01	1	000	F	113945 03
00	110	l.+1 l.-1 l DF	163830 01 163830 01 208083 01	01	180	l.+1 l.-1 l DF	162146 01 162146 01 091774 01
00	100	l.+1 l.-1 l DF	153208 01 153208 01 237935 01	01	170	l.+1 l.-1 l DF	157978 01 165081 01 092522 01
00	090	l.+1 l.-1 l DF	141421 01 141421 01 279252 01	01	160	l.+1 l.-1 l DF	152638 01 166726 01 094811 01
00	080	l.+1 l.-1 l DF	128557 01 128557 01 337934 01	01	150	l.+1 l.-1 l DF	146200 01 167034 01 098793 01
00	070	l.+1 l.-1 l DF	114715 01 114715 01 424409 01	01	140	l.+1 l.-1 l DF	138739 01 165965 01 104741 01
				01	130	l.+1 l.-1 l DF	130344 01 163490 01 113095 01

TABLE 1 (cont.).

01	120	1.+1 1.-1 1 DF	121106 01 159584 01 124528 01	02	180	1.+1 1.-1 1 DF	126875 01 126875 01 056190 01
01	110	1.+1 1.-1 1 DF	111125 01 154231 01 140075 01	02	170	1.+1 1.-1 1 DF	122133 01 130653 01 056685 01
01	100	1.+1 1.-1 1 DF	100507 01 147419 01 161345 01	02	160	1.+1 1.-1 1 DF	116509 01 133383 01 058200 01
01	090	1.+1 1.-1 1 DF	089366 01 139142 01 190917 01	02	150	1.+1 1.-1 1 DF	110093 01 134989 01 060835 01
01	080	1.+1 1.-1 1 DF	077824 01 129391 01 233087 01	02	140	1.+1 1.-1 1 DF	102977 01 135398 01 064772 01
01	070	1.+1 1.-1 1 DF	066015 01 118154 01 295395 01	02	130	1.+1 1.-1 1 DF	095257 01 134542 01 070300 01
01	060	1.+1 1.-1 1 DF	054088 01 105405 01 391957 01	02	120	1.+1 1.-1 1 DF	087030 01 132357 01 077858 01
01	050	1.+1 1.-1 1 DF	422186 00 091087 01 055146 02	02	110	1.+1 1.-1 1 DF	078399 01 128780 01 088112 01
01	040	1.+1 1.-1 1 DF	306259 00 075082 01 083865 02	02	100	1.+1 1.-1 1 DF	069469 01 123752 01 102079 01
01	030	1.+1 1.-1 1 DF	196251 00 057156 01 142045 02	02	090	1.+1 1.-1 1 DF	060350 01 117215 01 121346 01
01	020	1.+1 1.-1 1 DF	097539 00 368676 00 279170 02	02	080	1.+1 1.-1 1 DF	051158 01 109106 01 148462 01
01	010	1.+1 1.-1 1 DF	222266 -01 138437 00 059464 03	02	070	1.+1 1.-1 1 DF	420200 00 099357 01 187661 01
1	01	F	060419 03				

TABLE 1 (cont.).

02	060	1.+1 1.-1 1 DF	330777 00 087886 01 246251 01	03	120	1.+1 1.-1 1 DF	062757 01 106078 01 471351 00
02	050	1.+1 1.-1 1 DF	245018 00 074594 01 337287 01	03	110	1.+1 1.-1 1 DF	055694 01 103526 01 053569 01
02	040	1.+1 1.-1 1 DF	165127 00 059364 01 484278 01	03	100	1.+1 1.-1 1 DF	485281 00 099625 01 062239 01
02	030	1.+1 1.-1 1 DF	094291 00 421108 00 072431 02	03	090	1.+1 1.-1 1 DF	413534 00 094291 01 074009 01
02	020	1.+1 1.-1 1 DF	037718 00 230991 00 105152 02	03	080	1.+1 1.-1 1 DF	342707 00 087443 01 090180 01
02	010	1.+1 1.-1 1 DF	046571 -01 050675 00 078333 02	03	070	1.+1 1.-1 1 DF	273880 00 078997 01 112727 01
1	02	F	272124 02	03	060	1.+1 1.-1 1 DF	208271 00 068877 01 144594 01
03	180	1.+1 1.-1 1 DF	097783 01 097783 01 333762 00	03	050	1.+1 1.-1 1 DF	147338 00 057027 01 189811 01
03	170	1.+1 1.-1 1 DF	093277 01 101544 01 336921 00	03	040	1.+1 1.-1 1 DF	092965 00 434640 00 251975 01
03	160	1.+1 1.-1 1 DF	088117 01 104471 01 346596 00	03	030	1.+1 1.-1 1 DF	047772 00 284464 00 323614 01
03	150	1.+1 1.-1 1 DF	082394 01 106474 01 363412 00	03	020	1.+1 1.-1 1 DF	155923 -01 131024 00 334203 01
03	140	1.+1 1.-1 1 DF	076199 01 107468 01 388487 00	03	010	1.+1 1.-1 1 DF	106667 -02 165056 -01 082750 01
03	130	1.+1 1.-1 1 DF	069622 01 107364 01 423585 00	1	03	F	134950 02

TABLE 1 (cont.).

04	180	1.+1 1.-1 1 DF	074673 01 074673 01 194642 00	04	060	1.+1 1.-1 1 DF	133164 00 052291 01 081309 01
04	170	1.+1 1.-1 1 DF	070704 01 078072 01 196611 00	04	050	1.+1 1.-1 1 DF	090266 00 421157 00 101502 01
04	160	1.+1 1.-1 1 DF	066254 01 080815 01 202639 00	04	040	1.+1 1.-1 1 DF	053527 00 306430 00 123420 01
04	150	1.+1 1.-1 1 DF	061406 01 082811 01 213095 00	04	030	1.+1 1.-1 1 DF	248684 -01 184358 00 134601 01
04	140	1.+1 1.-1 1 DF	056246 01 083968 01 228636 00	04	020	1.+1 1.-1 1 DF	066629 -01 070989 00 097587 01
04	130	1.+1 1.-1 1 DF	050853 01 084197 01 250286 00	04	010	1.+1 1.-1 1 DF	254773 -03 051067 -01 079080 00
04	120	1.+1 1.-1 1 DF	453087 00 083404 01 279538 00	1	04	F	069261 02
04	110	1.+1 1.-1 1 DF	396907 00 081499 01 318534 00	05	180	1.+1 1.-1 1 DF	056667 01 056667 01 112091 00
04	100	1.+1 1.-1 1 DF	340776 00 078390 01 370305 00	05	170	1.+1 1.-1 1 DF	053314 01 059588 01 113296 00
04	090	1.+1 1.-1 1 DF	285484 00 073990 01 439094 00	05	160	1.+1 1.-1 1 DF	496091 00 061995 01 116982 00
04	080	1.+1 1.-1 1 DF	231849 00 068216 01 053070 01	05	150	1.+1 1.-1 1 DF	456266 00 063803 01 123358 00
04	070	1.+1 1.-1 1 DF	180748 00 060997 01 065266 01	05	140	1.+1 1.-1 1 DF	414398 00 064927 01 132799 00
				05	130	1.+1 1.-1 1 DF	371185 00 065276 01 145868 00

TABLE 1 (cont.).

05	120	1.+1 1.-1 1 DF	327297 00 064761 01 163371 00	06	180	1.+1 1.-1 1 DF	428044 00 428044 00 063956 00
05	110	1.+1 1.-1 1 DF	283384 00 063292 01 186412 00	06	170	1.+1 1.-1 1 DF	400462 00 452363 00 064684 00
05	100	1.+1 1.-1 1 DF	240079 00 060782 01 216458 00	06	160	1.+1 1.-1 1 DF	370309 00 472691 00 066904 00
05	090	1.+1 1.-1 1 DF	198014 00 057147 01 255372 00	06	150	1.+1 1.-1 1 DF	338238 00 488262 00 070735 00
05	080	1.+1 1.-1 1 DF	157838 00 052318 01 305311 00	06	140	1.+1 1.-1 1 DF	304865 00 498285 00 076380 00
05	070	1.+1 1.-1 1 DF	120238 00 462451 00 368175 00	06	130	1.+1 1.-1 1 DF	270770 00 050193 01 084140 00
05	060	1.+1 1.-1 1 DF	085981 00 389263 00 443784 00	06	120	1.+1 1.-1 1 DF	236503 00 498396 00 094428 00
05	050	1.+1 1.-1 1 DF	055960 00 304530 00 052452 01	06	110	1.+1 1.-1 1 DF	202584 00 486828 00 107778 00
05	040	1.+1 1.-1 1 DF	031258 00 211184 00 058130 01	06	100	1.+1 1.-1 1 DF	169518 00 466444 00 124835 00
05	030	1.+1 1.-1 1 DF	131657 -01 116583 00 053539 01	06	090	1.+1 1.-1 1 DF	137799 00 436530 00 146292 00
05	020	1.+1 1.-1 1 DF	290526 -02 037451 00 270857 00	06	080	1.+1 1.-1 1 DF	107929 00 396535 00 172667 00
05	010	1.+1 1.-1 1 DF	062375 -03 153467 -02 071358 -01	06	070	1.+1 1.-1 1 DF	080437 00 346214 00 203720 00
1	05	F	359110 01				

TABLE 1 (cont.).

06	060	1.+1 1.-1 1 DF	055901 00 285907 00 236995 00		07	120	1.+1 1.-1 1 DF	170927 00 380996 00 054105 00
06	050	1.+1 1.-1 1 DF	034982 00 217071 00 264498 00		07	110	1.+1 1.-1 1 DF	144956 00 371767 00 061720 00
06	040	1.+1 1.-1 1 DF	184358 -01 143339 00 266395 00		07	100	1.+1 1.-1 1 DF	119897 00 355205 00 071232 00
06	030	1.+1 1.-1 1 DF	070516 -01 072533 00 206563 00		07	090	1.+1 1.-1 1 DF	096134 00 330724 00 082812 00
06	020	1.+1 1.-1 1 DF	128428 -02 194162 -01 072681 00		07	080	1.+1 1.-1 1 DF	074049 00 297936 00 096357 00
06	010	1.+1 1.-1 1 DF	155231 -04 045261 -02 062037 -02		07	070	1.+1 1.-1 1 DF	054039 00 256806 00 111055 00
1	06	F	187172 01		07	060	1.+1 1.-1 1 DF	036534 00 207946 00 124481 00
07	180	1.+1 1.-1 1 DF	322178 00 322178 00 036232 00		07	050	1.+1 1.-1 1 DF	220049 -01 153133 00 130949 00
07	170	1.+1 1.-1 1 DF	299898 00 342000 00 036666 00		07	040	1.+1 1.-1 1 DF	109530 -01 096228 00 119638 00
07	160	1.+1 1.-1 1 DF	275753 00 358735 00 037988 00		07	030	1.+1 1.-1 1 DF	038093 -01 044605 00 077952 00
07	150	1.+1 1.-1 1 DF	250290 00 371714 00 040262 00		07	020	1.+1 1.-1 1 DF	057340 -02 099426 -01 190390 -01
07	140	1.+1 1.-1 1 DF	224022 00 380237 00 043596 00		07	010	1.+1 1.-1 1 DF	039085 -04 131741 -03 052544 -03
07	130	1.+1 1.-1 1 DF	197421 00 383577 00 048143 00		1	07	F	097952 01

TABLE 1 (cont.).

08	180	1.+1 1.-1 1 DF	241805 00 241805 00 204098 -01	08	060	1.+1 1.-1 1 DF	239742 -01 150118 00 064535 00
08	170	1.+1 1.-1 1 DF	224049 00 257716 00 206661 -01	08	050	1.+1 1.-1 1 DF	139090 -01 107182 00 063912 00
08	160	1.+1 1.-1 1 DF	204943 00 271248 00 214459 -01	08	040	1.+1 1.-1 1 DF	065444 -01 064068 00 052902 00
08	150	1.+1 1.-1 1 DF	184941 00 281830 00 227825 -01	08	030	1.+1 1.-1 1 DF	207144 -02 271929 -01 289279 -01
08	140	1.+1 1.-1 1 DF	164460 00 288858 00 247310 -01	08	020	1.+1 1.-1 1 DF	257957 -03 050448 -01 048981 -01
08	130	1.+1 1.-1 1 DF	143880 00 291702 00 273670 -01	08	010	1.+1 1.-1 1 DF	099274 -05 037975 -03 043651 -04
08	120	1.+1 1.-1 1 DF	123551 00 289728 00 307821 -01	1	08	F	051430 01
08	110	1.+1 1.-1 1 DF	103794 00 282311 00 035070 00	09	180	1.+1 1.-1 1 DF	181061 00 181061 00 114434 -01
08	100	1.+1 1.-1 1 DF	084913 00 268881 00 040296 00	09	170	1.+1 1.-1 1 DF	167054 00 193685 00 115936 -01
08	090	1.+1 1.-1 1 DF	067198 00 248977 00 046429 00	09	160	1.+1 1.-1 1 DF	152074 00 204482 00 120498 -01
08	080	1.+1 1.-1 1 DF	050937 00 222354 00 053200 00	09	150	1.+1 1.-1 1 DF	136491 00 212971 00 128290 -01
08	070	1.+1 1.-1 1 DF	036426 00 189141 00 059827 00	09	140	1.+1 1.-1 1 DF	120640 00 218642 00 139582 -01
				09	130	1.+1 1.-1 1 DF	104823 00 220963 00 154728 -01

TABLE 1 (cont.).

09	120	1.+1 1.-1 1 DF	089315 00 219394 00 174102 -01		10	180	1.+1 1.-1 1 DF	135312 00 135312 00 063912 -01
09	110	1.+1 1.-1 1 DF	074364 00 213416 00 197989 -01		10	170	1.+1 1.-1 1 DF	124353 00 145238 00 064786 -01
09	100	1.+1 1.-1 1 DF	060202 00 202563 00 226331 -01		10	160	1.+1 1.-1 1 DF	112693 00 153765 00 067437 -01
09	090	1.+1 1.-1 1 DF	047047 00 186490 00 258252 -01		10	150	1.+1 1.-1 1 DF	100632 00 160493 00 071947 -01
09	080	1.+1 1.-1 1 DF	035114 00 165063 00 291161 -01		10	140	1.+1 1.-1 1 DF	088437 00 164998 00 078445 -01
09	070	1.+1 1.-1 1 DF	246200 -01 138524 00 031920 00		10	130	1.+1 1.-1 1 DF	076345 00 166835 00 087081 -01
09	060	1.+1 1.-1 1 DF	157841 -01 107734 00 033107 00		10	120	1.+1 1.-1 1 DF	064571 00 165557 00 097982 -01
09	050	1.+1 1.-1 1 DF	088262 -01 074557 00 308396 -01		10	110	1.+1 1.-1 1 DF	053304 00 160736 00 111163 -01
09	040	1.+1 1.-1 1 DF	039281 -01 042381 00 231069 -01		10	100	1.+1 1.-1 1 DF	042720 00 152004 00 126354 -01
09	030	1.+1 1.-1 1 DF	113230 -02 164655 -01 105948 -01		10	090	1.+1 1.-1 1 DF	032982 00 139107 00 142689 -01
09	020	1.+1 1.-1 1 DF	116741 -03 254160 -02 124259 -02		10	080	1.+1 1.-1 1 DF	242500 -01 122001 00 158184 -01
09	010	1.+1 1.-1 1 DF	253874 -06 108653 -04 035728 -05		10	070	1.+1 1.-1 1 DF	166779 -01 100991 00 168954 -01
1	09	F	270749 00					

TABLE 1 (cont.).

10	060	1.+1 1.-1 1 DF	104203 -01 076948 00 168379 -01	12	120	1.+1 1.-1 1 DF	033756 00 093491 00 306564 -02
10	050	1.+1 1.-1 1 DF	056188 -01 051604 00 147429 -01	12	110	1.+1 1.-1 1 DF	274202 -01 090375 00 034575 -01
10	040	1.+1 1.-1 1 DF	236663 -02 278898 -01 099926 -01	12	100	1.+1 1.-1 1 DF	215592 -01 084798 00 038801 -01
10	030	1.+1 1.-1 1 DF	062159 -02 099159 -01 038394 -01	12	090	1.+1 1.-1 1 DF	162631 -01 076643 00 042856 -01
10	020	1.+1 1.-1 1 DF	053088 -03 127321 -02 311714 -03	12	080	1.+1 1.-1 1 DF	116155 -01 065965 00 045867 -01
10	010	1.+1 1.-1 1 DF	065277 -06 309033 -05 289000 -07	12	070	1.+1 1.-1 1 DF	076950 -01 053104 00 046430 -01
1	10	F	142827 00	12	060	1.+1 1.-1 1 DF	045715 -01 038816 00 042660 -01
12	180	1.+1 1.-1 1 DF	075217 00 075217 00 197488 -02	12	050	1.+1 1.-1 1 DF	229489 -02 244355 -01 032956 -01
12	170	1.+1 1.-1 1 DF	068630 00 081228 00 200399 -02	12	040	1.+1 1.-1 1 DF	086671 -02 119320 -01 182551 -02
12	160	1.+1 1.-1 1 DF	061684 00 086424 00 209196 -02	12	030	1.+1 1.-1 1 DF	189223 -03 055512 -01 049190 -02
12	150	1.+1 1.-1 1 DF	054568 00 090538 00 224052 -02	12	020	1.+1 1.-1 1 DF	111033 -04 031535 -02 191134 -04
12	140	1.+1 1.-1 1 DF	047448 00 093286 00 245187 -02	12	010	1.+1 1.-1 1 DF	043705 -07 246611 -06 184016 -09
12	130	1.+1 1.-1 1 DF	040469 00 094370 00 272747 -02	1	12	F	039924 00

TABLE 1 (cont.).

14	180	1.+1 1.-1 1 DF	04 1603 00 04 1603 00 060419 -02	14	060	1.+1 1.-1 1 DF	201951 -02 193589 -01 105794 -02
14	170	1.+1 1.-1 1 DF	037717 00 045171 00 061371 -02	14	050	1.+1 1.-1 1 DF	094488 -02 114343 -01 072021 -02
14	160	1.+1 1.-1 1 DF	033648 00 048267 00 064238 -02	14	040	1.+1 1.-1 1 DF	032035 -02 050426 -01 032563 -02
14	150	1.+1 1.-1 1 DF	295137 -01 050720 00 069042 -02	14	030	1.+1 1.-1 1 DF	058202 -03 125577 -02 061467 -03
14	140	1.+1 1.-1 1 DF	254143 -01 052344 00 075788 -02	14	020	1.+1 1.-1 1 DF	234915 -05 077090 -03 114181 -05
14	130	1.+1 1.-1 1 DF	214359 -01 052948 00 084409 -02	14	010	1.+1 1.-1 1 DF	296367 -09 194141 -07 114033 -11
14	120	1.+1 1.-1 1 DF	176514 -01 052340 00 094668 -02	1	14	F	112058 -01
14	110	1.+1 1.-1 1 DF	141232 -01 050350 00 106002 -02	16	180	1.+1 1.-1 1 DF	229229 -01 229229 -01 183420 -03
14	100	1.+1 1.-1 1 DF	109056 -01 046852 00 117284 -02	16	170	1.+1 1.-1 1 DF	206605 -01 250097 -01 186491 -03
14	090	1.+1 1.-1 1 DF	080467 -01 041802 00 126516 -02	16	160	1.+1 1.-1 1 DF	183061 -01 268249 -01 195702 -03
14	080	1.+1 1.-1 1 DF	055893 -01 035292 00 130539 -02	16	150	1.+1 1.-1 1 DF	159308 -01 282607 -01 211012 -03
14	070	1.+1 1.-1 1 DF	035708 -01 276185 -01 125058 -02	16	140	1.+1 1.-1 1 DF	135947 -01 292004 -01 232227 -03
				16	130	1.+1 1.-1 1 DF	113479 -01 295222 -01 258774 -03

TABLE 1 (cont.).

16	120	1.+1 1.-1 1 DF	092320 -01 291080 -01 289339 -03	18	180	1.+1 1.-1 1 DF	125911 -01 125911 -01 055339 -03
16	110	1.+1 1.-1 1 DF	072819 -01 278554 -01 032132 -02	18	170	1.+1 1.-1 1 DF	112875 -01 137980 -01 056317 -03
16	100	1.+1 1.-1 1 DF	055269 -01 256967 -01 035015 -02	18	160	1.+1 1.-1 1 DF	099380 -01 148495 -01 059242 -03
16	090	1.+1 1.-1 1 DF	039922 -01 226255 -01 036851 -02	18	150	1.+1 1.-1 1 DF	085853 -01 156790 -01 064066 -03
16	080	1.+1 1.-1 1 DF	269929 -02 187319 -01 036618 -02	18	140	1.+1 1.-1 1 DF	072646 -01 162138 -01 070658 -03
16	070	1.+1 1.-1 1 DF	166451 -02 142452 -01 033169 -02	18	130	1.+1 1.-1 1 DF	060049 -01 163791 -01 078727 -03
16	060	1.+1 1.-1 1 DF	089691 -02 095722 -01 258122 -03	18	120	1.+1 1.-1 1 DF	048295 -01 161029 -01 087694 -03
16	050	1.+1 1.-1 1 DF	039146 -02 053033 -01 154717 -03	18	110	1.+1 1.-1 1 DF	037577 -01 153254 -01 096516 -03
16	040	1.+1 1.-1 1 DF	119245 -03 211166 -02 057056 -03	18	100	1.+1 1.-1 1 DF	280533 -02 140123 -01 103501 -03
16	030	1.+1 1.-1 1 DF	180436 -04 043989 -02 075392 -04	18	090	1.+1 1.-1 1 DF	198515 -02 121723 -01 106189 -03
16	020	1.+1 1.-1 1 DF	050132 -05 186629 -04 066906 -06	18	080	1.+1 1.-1 1 DF	130739 -02 098800 -01 101547 -03
16	010	1.+1 1.-1 1 DF	202870 -10 151315 -08 069268 -13	18	070	1.+1 1.-1 1 DF	077870 -02 072999 -01 086910 -03
1	16	F	031536 -01				

TABLE 1 (cont.).

18	060	1.+1 1.-1 1 DF	040006 -02 047016 -01 062175 -03		20	120	1.+1 1.-1 1 DF	252696 -02 088703 -01 263949 -04
18	050	1.+1 1.-1 1 DF	162991 -03 244284 -02 032794 -03		20	110	1.+1 1.-1 1 DF	194061 -02 083939 -01 287716 -04
18	040	1.+1 1.-1 1 DF	044634 -03 087805 -02 098589 -04		20	100	1.+1 1.-1 1 DF	142577 -02 076050 -01 303439 -04
18	030	1.+1 1.-1 1 DF	056283 -04 152979 -03 091148 -05		20	090	1.+1 1.-1 1 DF	098895 -02 065167 -01 303309 -04
18	020	1.+1 1.-1 1 DF	107708 -06 044845 -04 038626 -07		20	080	1.+1 1.-1 1 DF	063477 -02 051849 -01 278972 -04
18	010	1.+1 1.-1 1 DF	139885 -11 117035 -09 041436 -15		20	070	1.+1 1.-1 1 DF	036538 -02 037214 -01 225481 -04
1	18	F	088918 -02		20	060	1.+1 1.-1 1 DF	179074 -03 229693 -02 148227 -04
20	180	1.+1 1.-1 1 DF	068984 -01 068984 -01 166116 -04		20	050	1.+1 1.-1 1 DF	068157 -03 111905 -02 068769 -04
20	170	1.+1 1.-1 1 DF	061534 -01 075905 -01 169206 -04		20	040	1.+1 1.-1 1 DF	167831 -04 036304 -02 168470 -05
20	160	1.+1 1.-1 1 DF	053858 -01 081939 -01 178406 -04		20	030	1.+1 1.-1 1 DF	176442 -05 052893 -03 108938 -06
20	150	1.+1 1.-1 1 DF	046207 -01 086681 -01 193451 -04		20	020	1.+1 1.-1 1 DF	232662 -07 107123 -05 220381 -09
20	140	1.+1 1.-1 1 DF	038788 -01 089688 -01 213734 -04		20	010	1.+1 1.-1 1 DF	097015 -12 089973 -10 244893 -18
20	130	1.+1 1.-1 1 DF	031765 -01 090506 -01 238003 -04		1	20	F	251066 -03

TABLE 1 (cont.).

40	180	1.+1 1.-1 1 DF	155192 -04 155192 -04 084071 -09	40	090	1.+1 1.-1 1 DF	099105 -05 108687 -04 083155 -09
40	170	1.+1 1.-1 1 DF	133306 -04 175867 -04 086303 -09	40	080	1.+1 1.-1 1 DF	050052 -05 070513 -04 051089 -09
40	160	1.+1 1.-1 1 DF	111449 -04 193770 -04 092717 -09	40	070	1.+1 1.-1 1 DF	208191 -06 037719 -04 230123 -10
40	150	1.+1 1.-1 1 DF	090551 -04 207052 -04 102392 -09	40	060	1.+1 1.-1 1 DF	064681 -06 151517 -05 064226 -10
40	140	1.+1 1.-1 1 DF	071271 -04 213700 -04 113592 -09	40	050	1.+1 1.-1 1 DF	126043 -07 038652 -05 081827 -11
40	130	1.+1 1.-1 1 DF	054063 -04 211796 -04 123602 -09	40	040	1.+1 1.-1 1 DF	108996 -08 044843 -06 256636 -13
40	120	1.+1 1.-1 1 DF	039215 -04 199903 -04 128764 -09	40	030	1.+1 1.-1 1 DF	188087 -10 108891 -08 046132 -15
40	110	1.+1 1.-1 1 DF	268908 -05 177612 -04 125085 -09	40	020	1.+1 1.-1 1 DF	060463 -13 054459 -11 056937 -21
40	100	1.+1 1.-1 1 DF	171420 -05 146123 -04 109707 -09	40	010	1.+1 1.-1 1 DF	296282 -24 054357 -21 089377 -40
				1	40	F	083914 -08

Table 2.  $I_{2\mu}(\vartheta, \xi)$ ,  $df_{E2}(\vartheta, \xi)/d\Omega$  and  $f_{E2}(\xi)$ .

00	180	2.+2 2. 0 2.-2 2 DF	066666 01 066666 01 066666 01 055850 00	00	090	2.+2 2. 0 2.-2 2 DF	333333 00 429203 00 333333 00 065037 00
00	170	2.+2 2. 0 2.-2 2 DF	066160 01 066362 01 066160 01 055935 00	00	080	2.+2 2. 0 2.-2 2 DF	275450 00 377035 00 275450 00 068048 00
00	160	2.+2 2. 0 2.-2 2 DF	064656 01 065449 01 064656 01 056195 00	00	070	2.+2 2. 0 2.-2 2 DF	219326 00 321482 00 219326 00 071886 00
00	150	2.+2 2. 0 2.-2 2 DF	062200 01 063934 01 062200 01 056639 00	00	060	2.+2 2. 0 2.-2 2 DF	166666 00 263600 00 166666 00 076814 00
00	140	2.+2 2. 0 2.-2 2 DF	058868 01 061822 01 058868 01 057287 00	00	050	2.+2 2. 0 2.-2 2 DF	119070 00 204827 00 119070 00 083205 00
00	130	2.+2 2. 0 2.-2 2 DF	054759 01 059125 01 054759 01 058165 00	00	040	2.+2 2. 0 2.-2 2 DF	077985 00 147133 00 077985 00 091588 00
00	120	2.+2 2. 0 2.-2 2 DF	050000 01 055860 01 050000 01 059315 00	00	030	2.+2 2. 0 2.-2 2 DF	044658 00 093228 00 044658 00 102738 00
00	110	2.+2 2. 0 2.-2 2 DF	447340 00 052048 01 447340 00 060789 00	00	020	2.+2 2. 0 2.-2 2 DF	201024 -01 046873 00 201024 -01 117801 00
00	100	2.+2 2. 0 2.-2 2 DF	391216 00 477210 00 391216 00 062663 00	00	010	2.+2 2. 0 2.-2 2 DF	050640 -01 133216 -01 050640 -01 138510 00
				2	00	F	089539 01

TABLE 2 (cont.).

01	180	2.+2 2. 0 2.-2 2 DF	062881 01 062881 01 062881 01 049688 00		01	090	2.+2 2. 0 2.-2 2 DF	248499 00 397998 00 396812 00 061226 00
01	170	2.+2 2. 0 2.-2 2 DF	061012 01 062584 01 063825 01 049797 00		01	080	2.+2 2. 0 2.-2 2 DF	197651 00 347469 00 340188 00 064947 00
01	160	2.+2 2. 0 2.-2 2 DF	058284 01 061696 01 063808 01 050130 00		01	070	2.+2 2. 0 2.-2 2 DF	150493 00 293779 00 282588 00 069680 00
01	150	2.+2 2. 0 2.-2 2 DF	054785 01 060220 01 062820 01 050698 00		01	060	2.+2 2. 0 2.-2 2 DF	108292 00 238017 00 225805 00 075763 00
01	140	2.+2 2. 0 2.-2 2 DF	050627 01 058165 01 060883 01 051524 00		01	050	2.+2 2. 0 2.-2 2 DF	072137 00 181673 00 171619 00 083700 00
01	130	2.+2 2. 0 2.-2 2 DF	459390 00 055541 01 058048 01 052639 00		01	040	2.+2 2. 0 2.-2 2 DF	042896 00 126804 00 121719 00 094274 00
01	120	2.+2 2. 0 2.-2 2 DF	408633 00 052364 01 054394 01 054090 00		01	030	2.+2 2. 0 2.-2 2 DF	211746 -01 076278 00 077632 00 108734 00
01	110	2.+2 2. 0 2.-2 2 DF	355524 00 486597 00 050025 01 055941 00		01	020	2.+2 2. 0 2.-2 2 DF	072506 -01 034174 00 040632 00 128642 00
01	100	2.+2 2. 0 2.-2 2 DF	301626 00 444570 00 450715 00 058279 00		01	010	2.+2 2. 0 2.-2 2 DF	086749 -02 065051 -01 119526 -01 140331 00
					2	01	F	086382 01

TABLE 2 (cont.).

02	180	2.+2 2.-0 2.-2 2 DF	055614 055614 055614 038868	01 01 01 00	02	090	2.+2 2.-0 2.-2 2 DF	182332 341975 410649 052749	00 00 00 00
02	170	2.+2 2.-0 2.-2 2 DF	053028 055338 057430 039005	01 01 01 00	02	080	2.+2 2.-0 2.-2 2 DF	140649 295484 358637 057032	00 00 00 00
02	160	2.+2 2.-0 2.-2 2 DF	497638 054510 058403 039420	00 01 01 00	02	070	2.+2 2.-0 2.-2 2 DF	103320 246349 303462 062357	00 00 00 00
02	150	2.+2 2.-0 2.-2 2 DF	459291 053136 058488 040127	00 01 01 00	02	060	2.+2 2.-0 2.-2 2 DF	071169 195713 246788 068993	00 00 00 00
02	140	2.+2 2.-0 2.-2 2 DF	416472 051222 057662 041148	00 01 01 00	02	050	2.+2 2.-0 2.-2 2 DF	044821 145146 190355 077243	00 00 00 00
02	130	2.+2 2.-0 2.-2 2 DF	370502 487808 055932 042518	00 00 01 00	02	040	2.+2 2.-0 2.-2 2 DF	246615 096829 135942 087262	-01 00 00 00
02	120	2.+2 2.-0 2.-2 2 DF	322749 458291 053331 044285	00 00 01 00	02	030	2.+2 2.-0 2.-2 2 DF	107972 053815 085379 098053	-01 00 00 00
02	110	2.+2 2.-0 2.-2 2 DF	274589 423908 499236 046514	00 00 00 00	02	020	2.+2 2.-0 2.-2 2 DF	295693 204034 040918 101614	-02 -01 00 00
02	100	2.+2 2.-0 2.-2 2 DF	227362 384987 457967 049296	00 00 00 00	02	010	2.+2 2.-0 2.-2 2 DF	189515 228018 077651 052104	-03 -02 -01 00
					2	02	F	072889	01

TABLE 2 (cont.).

03	180	2.+2 2. 0 2.-2 2 DF	474507 00 474507 00 474507 00 282940 -01	03	090	2.+2 2. 0 2.-2 2 DF	132700 00 282477 00 392199 00 042341 00
03	170	2.+2 2. 0 2.-2 2 DF	446003 00 472014 00 496880 00 284380 -01	03	080	2.+2 2. 0 2.-2 2 DF	099656 00 241269 00 345624 00 046428 00
03	160	2.+2 2. 0 2.-2 2 DF	412401 00 464550 00 051223 01 288740 -01	03	070	2.+2 2. 0 2.-2 2 DF	070929 00 198031 00 294411 00 051311 00
03	150	2.+2 2. 0 2.-2 2 DF	374832 00 452159 00 051985 01 296138 -01	03	060	2.+2 2. 0 2.-2 2 DF	046998 00 153937 00 240063 00 057029 00
03	140	2.+2 2. 0 2.-2 2 DF	334493 00 434920 00 051924 01 306777 -01	03	050	2.+2 2. 0 2.-2 2 DF	281455 -01 110595 00 184298 00 063391 00
03	130	2.+2 2. 0 2.-2 2 DF	292603 00 412954 00 051011 01 032095 00	03	040	2.+2 2. 0 2.-2 2 DF	144327 -01 070216 00 129098 00 069432 00
03	120	2.+2 2. 0 2.-2 2 DF	250369 00 386434 00 492468 00 033909 00	03	030	2.+2 2. 0 2.-2 2 DF	056582 -01 035822 00 076985 00 071561 00
03	110	2.+2 2. 0 2.-2 2 DF	208945 00 355604 00 466539 00 036172 00	03	020	2.+2 2. 0 2.-2 2 DF	125689 -02 113714 -01 032064 00 057835 00
03	100	2.+2 2. 0 2.-2 2 DF	169403 00 320798 00 432853 00 038954 00	03	010	2.+2 2. 0 2.-2 2 DF	044254 -03 073107 -02 036372 -01 110973 -01
				2	03	F	056084 01

TABLE 2 (cont.).

04	180	2.+2 2. 0 2.-2 2 DF	395284 00 395284 00 395284 00 196349 -01	04	090	2.+2 2. 0 2.-2 2 DF	096090 00 227546 00 355774 00 032105 00
04	170	2.+2 2. 0 2.-2 2 DF	367024 00 393092 00 418822 00 197676 -01	04	080	2.+2 2. 0 2.-2 2 DF	070428 00 192028 00 314685 00 035490 00
04	160	2.+2 2. 0 2.-2 2 DF	335077 00 386529 00 436683 00 201687 -01	04	070	2.+2 2. 0 2.-2 2 DF	048698 00 155075 00 268159 00 039321 00
04	150	2.+2 2. 0 2.-2 2 DF	300524 00 375640 00 448031 00 208477 -01	04	060	2.+2 2. 0 2.-2 2 DF	311342 -01 117848 00 217581 00 043406 00
04	140	2.+2 2. 0 2.-2 2 DF	264454 00 360503 00 452186 00 218205 -01	04	050	2.+2 2. 0 2.-2 2 DF	177915 -01 081924 00 164712 00 047154 00
04	130	2.+2 2. 0 2.-2 2 DF	227931 00 341237 00 448652 00 231098 -01	04	040	2.+2 2. 0 2.-2 2 DF	085379 -01 049418 00 111866 00 048953 00
04	120	2.+2 2. 0 2.-2 2 DF	191964 00 318017 00 437151 00 247452 -01	04	030	2.+2 2. 0 2.-2 2 DF	301281 -02 230851 -01 062416 00 044738 00
04	110	2.+2 2. 0 2.-2 2 DF	157478 00 291083 00 417643 00 267630 -01	04	020	2.+2 2. 0 2.-2 2 DF	054666 -02 061113 -01 221719 -01 267841 -01
04	100	2.+2 2. 0 2.-2 2 DF	125289 00 260773 00 390353 00 292036 -01	04	010	2.+2 2. 0 2.-2 2 DF	106908 -04 224451 -03 146820 -02 178800 -02
				2	04	F	404593 00

TABLE 2 (cont.).

05	180	2.+2 2. 0 2.-2 2 DF	323662 00 323662 00 323662 00 131642 -01	05	090	2.+2 2. 0 2.-2 2 DF	069338 00 180105 00 311377 00 232562 -01
05	170	2.+2 2. 0 2.-2 2 DF	297321 00 321772 00 346451 00 132756 -01	05	080	2.+2 2. 0 2.-2 2 DF	049688 00 150150 00 275531 00 257867 -01
05	160	2.+2 2. 0 2.-2 2 DF	268405 00 316115 00 364745 00 136121 -01	05	070	2.+2 2. 0 2.-2 2 DF	033444 00 119272 00 234001 00 284564 -01
05	150	2.+2 2. 0 2.-2 2 DF	237893 00 306735 00 377671 00 141804 -01	05	060	2.+2 2. 0 2.-2 2 DF	206737 -01 088580 00 188104 00 309446 -01
05	140	2.+2 2. 0 2.-2 2 DF	206733 00 293706 00 384463 00 149918 -01	05	050	2.+2 2. 0 2.-2 2 DF	112998 -01 059551 00 139691 00 032507 00
05	130	2.+2 2. 0 2.-2 2 DF	175819 00 277145 00 384495 00 160613 -01	05	040	2.+2 2. 0 2.-2 2 DF	050885 -01 034103 00 091420 00 031541 00
05	120	2.+2 2. 0 2.-2 2 DF	145966 00 257221 00 377319 00 174073 -01	05	030	2.+2 2. 0 2.-2 2 DF	162149 -02 145704 -01 047373 00 250826 -01
05	110	2.+2 2. 0 2.-2 2 DF	117887 00 234168 00 362694 00 190483 -01	05	020	2.+2 2. 0 2.-2 2 DF	241324 -03 032108 -01 142263 -01 108484 -01
05	100	2.+2 2. 0 2.-2 2 DF	092186 00 208314 00 340622 00 209989 -01	05	010	2.+2 2. 0 2.-2 2 DF	263715 -05 067156 -03 054419 -02 244322 -03
				2	05	F	278098 00

TABLE 2 (cont.).

06	180	2.+2 2. 0 2.-2 2 DF	261573 00 261573 00 261573 00 085980 -01	06	090	2.+2 2. 0 2.-2 2 DF	049908 00 140709 00 265435 00 162381 -01
06	170	2.+2 2. 0 2.-2 2 DF	238000 00 259970 00 282528 00 086855 -01	06	080	2.+2 2. 0 2.-2 2 DF	038015 00 115878 00 234466 00 179846 -01
06	160	2.+2 2. 0 2.-2 2 DF	212691 00 255172 00 299980 00 089495 -01	06	070	2.+2 2. 0 2.-2 2 DF	229750 -01 090534 00 197967 00 196721 -01
06	150	2.+2 2. 0 2.-2 2 DF	186502 00 247220 00 313076 00 093946 -01	06	060	2.+2 2. 0 2.-2 2 DF	137537 -01 065699 00 157224 00 209503 -01
06	140	2.+2 2. 0 2.-2 2 DF	160236 00 236185 00 321030 00 100279 -01	06	050	2.+2 2. 0 2.-2 2 DF	072028 -01 042704 00 114176 00 211301 -01
06	130	2.+2 2. 0 2.-2 2 DF	134622 00 222178 00 323157 00 108583 -01	06	040	2.+2 2. 0 2.-2 2 DF	304961 -02 232090 -01 071738 00 189916 -01
06	120	2.+2 2. 0 2.-2 2 DF	110299 00 205357 00 318913 00 118950 -01	06	030	2.+2 2. 0 2.-2 2 DF	087952 -02 090635 -01 034379 00 129956 -01
06	110	2.+2 2. 0 2.-2 2 DF	087806 00 185947 00 307932 00 131435 -01	06	020	2.+2 2. 0 2.-2 2 DF	107661 -03 166102 -02 086848 -01 040050 -01
06	100	2.+2 2. 0 2.-2 2 DF	067571 00 164257 00 290067 00 146001 -01	06	010	2.+2 2. 0 2.-2 2 DF	065982 -05 197523 -04 190847 -03 299588 -04
				2	06	F	184375 00

TABLE 2 (cont.).

07	180	2.+2 2. 0 2.-2 2 DF	209230 00 209230 00 209230 00 055012 -01	07	090	2.+2 2. 0 2.-2 2 DF	035855 00 108829 00 221747 00 109993 -01
07	170	2.+2 2. 0 2.-2 2 DF	188733 00 207887 00 227830 00 055665 -01	07	080	2.+2 2. 0 2.-2 2 DF	246560 -01 088534 00 195232 00 121316 -01
07	160	2.+2 2. 0 2.-2 2 DF	167115 00 203871 00 243734 00 057636 -01	07	070	2.+2 2. 0 2.-2 2 DF	157884 -01 068031 00 163605 00 131058 -01
07	150	2.+2 2. 0 2.-2 2 DF	145105 00 197218 00 256144 00 060952 -01	07	060	2.+2 2. 0 2.-2 2 DF	091643 -01 048238 00 128130 00 136113 -01
07	140	2.+2 2. 0 2.-2 2 DF	123367 00 187996 00 264300 00 065655 -01	07	050	2.+2 2. 0 2.-2 2 DF	046045 -01 303125 -01 090797 00 131148 -01
07	130	2.+2 2. 0 2.-2 2 DF	102482 00 176304 00 267508 00 071791 -01	07	040	2.+2 2. 0 2.-2 2 DF	183563 -02 156311 -01 054641 00 108544 -01
07	120	2.+2 2. 0 2.-2 2 DF	082943 00 162292 00 265186 00 079388 -01	07	030	2.+2 2. 0 2.-2 2 DF	047992 -02 055778 -01 241519 -01 063459 -01
07	110	2.+2 2. 0 2.-2 2 DF	065146 00 146167 00 256899 00 088422 -01	07	020	2.+2 2. 0 2.-2 2 DF	048411 -03 084965 -02 051169 -01 138207 -02
07	100	2.+2 2. 0 2.-2 2 DF	049385 00 128216 00 242414 00 098750 -01	07	010	2.+2 2. 0 2.-2 2 DF	166802 -06 057391 -04 064380 -03 034029 -04
				2	07	F	118941 00

TABLE 2 (cont.).

08	180	2.+2 2. 0 2.-2 2 DF	165971 00 165971 00 165971 00 034616 -01	08	090	2.+2 2. 0 2.-2 2 DF	257221 -01 083499 00 182312 00 072660 -01
08	170	2.+2 2. 0 2.-2 2 DF	148530 00 164860 00 182063 00 035085 -01	08	080	2.+2 2. 0 2.-2 2 DF	173512 -01 067104 00 159806 00 079612 -01
08	160	2.+2 2. 0 2.-2 2 DF	130405 00 161535 00 196099 00 036500 -01	08	070	2.+2 2. 0 2.-2 2 DF	108536 -01 050716 00 132751 00 084707 -01
08	150	2.+2 2. 0 2.-2 2 DF	112205 00 156031 00 207359 00 038877 -01	08	060	2.+2 2. 0 2.-2 2 DF	061145 -01 035136 00 102386 00 085526 -01
08	140	2.+2 2. 0 2.-2 2 DF	094468 00 148408 00 215133 00 042239 -01	08	050	2.+2 2. 0 2.-2 2 DF	295058 -02 213449 -01 070694 00 078443 -01
08	130	2.+2 2. 0 2.-2 2 DF	077652 00 138757 00 218757 00 046601 -01	08	040	2.+2 2. 0 2.-2 2 DF	110879 -02 104427 -01 040680 00 059537 -01
08	120	2.+2 2. 0 2.-2 2 DF	062129 00 127214 00 217643 00 051957 -01	08	030	2.+2 2. 0 2.-2 2 DF	263126 -03 034044 -01 165545 -01 295986 -02
08	110	2.+2 2. 0 2.-2 2 DF	048182 00 113968 00 211350 00 058243 -01	08	020	2.+2 2. 0 2.-2 2 DF	219029 -04 043090 -02 293566 -02 045309 -02
08	100	2.+2 2. 0 2.-2 2 DF	036010 00 099278 00 199585 00 065276 -01	08	010	2.+2 2. 0 2.-2 2 DF	042499 -06 165236 -05 211021 -04 036516 -05
				2	08	F	075113 00

TABLE 2 (cont.).

09	180	2.+2 2. 0 2.-2 2 DF	130753 00 130753 00 130753 00 214839 -02	09	090	2.+2 2. 0 2.-2 2 DF	184312 -01 063645 00 147959 00 046996 -01
09	170	2.+2 2. 0 2.-2 2 DF	116158 00 129841 00 144403 00 218112 -02	09	080	2.+2 2. 0 2.-2 2 DF	122055 -01 050531 00 129013 00 051055 -01
09	160	2.+2 2. 0 2.-2 2 DF	101182 00 127114 00 156500 00 227965 -02	09	070	2.+2 2. 0 2.-2 2 DF	074638 -01 037565 00 106140 00 053588 -01
09	150	2.+2 2. 0 2.-2 2 DF	086324 00 122603 00 166407 00 244490 -02	09	060	2.+2 2. 0 2.-2 2 DF	040843 -01 254295 -01 080537 00 052281 -01
09	140	2.+2 2. 0 2.-2 2 DF	072016 00 116361 00 173481 00 267785 -02	09	050	2.+2 2. 0 2.-2 2 DF	189452 -02 149340 -01 054124 00 045525 -01
09	130	2.+2 2. 0 2.-2 2 DF	058612 00 108470 00 177107 00 297865 -02	09	040	2.+2 2. 0 2.-2 2 DF	067170 -02 069316 -01 297469 -01 031591 -01
09	120	2.+2 2. 0 2.-2 2 DF	046389 00 099050 00 176730 00 033448 -01	09	030	2.+2 2. 0 2.-2 2 DF	144822 -03 206436 -02 111302 -01 133103 -02
09	110	2.+2 2. 0 2.-2 2 DF	035546 00 088271 00 171903 00 037687 -01	09	020	2.+2 2. 0 2.-2 2 DF	099586 -04 217070 -03 164975 -02 142691 -03
09	100	2.+2 2. 0 2.-2 2 DF	262085 -01 076365 00 162335 00 042322 -01	09	010	2.+2 2. 0 2.-2 2 DF	108957 -07 047236 -05 067651 -04 037499 -06
				2	09	F	046634 00

TABLE 2 (cont.).

10	180	2.+2 2. 0 2.-2 2 DF	102412 00 102412 00 102412 00 131799 -02	10	090	2.+2 2. 0 2.-2 2 DF	131946 -01 048249 00 118798 00 298559 -02
10	170	2.+2 2. 0 2.-2 2 DF	090362 00 101669 00 113813 00 134023 -02	10	080	2.+2 2. 0 2.-2 2 DF	085832 -01 037847 00 102972 00 032108 -01
10	160	2.+2 2. 0 2.-2 2 DF	078132 00 099451 00 124050 00 140715 -02	10	070	2.+2 2. 0 2.-2 2 DF	051344 -01 276758 -01 083842 00 032944 -01
10	150	2.+2 2. 0 2.-2 2 DF	066130 00 095784 00 132568 00 151920 -02	10	060	2.+2 2. 0 2.-2 2 DF	273104 -02 183068 -01 062540 00 312314 -02
10	140	2.+2 2. 0 2.-2 2 DF	054695 00 090713 00 138800 00 167668 -02	10	050	2.+2 2. 0 2.-2 2 DF	121853 -02 103937 -01 040875 00 257673 -02
10	130	2.+2 2. 0 2.-2 2 DF	044098 00 084313 00 142190 00 187898 -02	10	040	2.+2 2. 0 2.-2 2 DF	040791 -02 045768 -01 214372 -01 163126 -02
10	120	2.+2 2. 0 2.-2 2 DF	034544 00 076688 00 142229 00 212315 -02	10	030	2.+2 2. 0 2.-2 2 DF	079966 -03 124512 -02 073681 -01 058104 -02
10	110	2.+2 2. 0 2.-2 2 DF	261685 -01 067988 00 138496 00 240171 -02	10	020	2.+2 2. 0 2.-2 2 DF	045463 -04 108756 -03 091190 -02 043508 -03
10	100	2.+2 2. 0 2.-2 2 DF	190456 -01 058416 00 130710 00 269897 -02	10	010	2.+2 2. 0 2.-2 2 DF	280731 -08 134270 -06 213102 -05 037186 -07
				2	10	F	285521 -01

TABLE 2 (cont.).

12	180	2.+2 2. 0 2.-2 2 DF	061942 00 061942 00 061942 00 048215 -02	12	090	2.+2 2. 0 2.-2 2 DF	067476 -01 273656 -01 074635 00 115268 -02
12	170	2.+2 2. 0 2.-2 2 DF	053980 00 061460 00 069620 00 049184 -02	12	080	2.+2 2. 0 2.-2 2 DF	042420 -01 209570 -01 063834 00 121059 -02
12	160	2.+2 2. 0 2.-2 2 DF	046047 00 060022 00 076654 00 052094 -02	12	070	2.+2 2. 0 2.-2 2 DF	243222 -02 148307 -01 050827 00 119120 -02
12	150	2.+2 2. 0 2.-2 2 DF	038405 00 057646 00 082645 00 056952 -02	12	060	2.+2 2. 0 2.-2 2 DF	122428 -02 093684 -01 036579 00 105409 -02
12	140	2.+2 2. 0 2.-2 2 DF	031261 00 054367 00 087170 00 063739 -02	12	050	2.+2 2. 0 2.-2 2 DF	050628 -02 049717 -01 225714 -01 077732 -02
12	130	2.+2 2. 0 2.-2 2 DF	247687 -01 050241 00 089803 00 072367 -02	12	040	2.+2 2. 0 2.-2 2 DF	151351 -03 197064 -02 107589 -01 040762 -02
12	120	2.+2 2. 0 2.-2 2 DF	190323 -01 045345 00 090145 00 082596 -02	12	030	2.+2 2. 0 2.-2 2 DF	245727 -04 044733 -02 311408 -02 103247 -03
12	110	2.+2 2. 0 2.-2 2 DF	141105 -01 039791 00 087855 00 093914 -02	12	020	2.+2 2. 0 2.-2 2 DF	095671 -05 269554 -04 268148 -03 037517 -04
12	100	2.+2 2. 0 2.-2 2 DF	100214 -01 033730 00 082704 00 105356 -02	12	010	2.+2 2. 0 2.-2 2 DF	188555 -09 107070 -07 203058 -06 033736 -09
				2	12	F	103532 -01

TABLE 2 (cont.).

14	180	2.+2 2. 0 2.-2 2 DF	036905 00 036905 00 036905 00 171156 -03		14	090	2.+2 2. 0 2.-2 2 DF	034434 -01 153085 -01 045647 00 042445 -02
14	170	2.+2 2. 0 2.-2 2 DF	031806 00 036599 00 041897 00 175128 -03		14	080	2.+2 2. 0 2.-2 2 DF	209562 -02 114483 -01 038467 00 043380 -02
14	160	2.+2 2. 0 2.-2 2 DF	268033 -01 035686 00 046540 00 187046 -03		14	070	2.+2 2. 0 2.-2 2 DF	115358 -02 078422 -01 299078 -01 040787 -02
14	150	2.+2 2. 0 2.-2 2 DF	220590 -01 034181 00 050558 00 206880 -03		14	060	2.+2 2. 0 2.-2 2 DF	055045 -02 047317 -01 207335 -01 033560 -02
14	140	2.+2 2. 0 2.-2 2 DF	176955 -01 032107 00 053652 00 234431 -03		14	050	2.+2 2. 0 2.-2 2 DF	211344 -03 234761 -02 120588 -01 220306 -03
14	130	2.+2 2. 0 2.-2 2 DF	137974 -01 295039 -01 055514 00 269081 -03		14	040	2.+2 2. 0 2.-2 2 DF	056520 -03 083768 -02 052150 -01 095282 -03
14	120	2.+2 2. 0 2.-2 2 DF	104150 -01 264283 -01 055848 00 309400 -03		14	030	2.+2 2. 0 2.-2 2 DF	076132 -04 158670 -03 126884 -02 170840 -04
14	110	2.+2 2. 0 2.-2 2 DF	075687 -01 229596 -01 054404 00 035256 -02		14	020	2.+2 2. 0 2.-2 2 DF	203351 -06 065953 -04 075870 -03 299845 -06
14	100	2.+2 2. 0 2.-2 2 DF	052535 -01 192057 -01 051015 00 039357 -02		14	010	2.+2 2. 0 2.-2 2 DF	128157 -10 084259 -08 185820 -07 282382 -12
					2	14	F	036276 -01

TABLE 2 (cont.).

16	180	2.+2 2. 0 2.-2 2 DF	217313 -01 217313 -01 217313 -01 059345 -03	16	090	2.+2 2. 0 2.-2 2 DF	175469 -02 084733 -01 273501 -01 150603 -03
16	170	2.+2 2. 0 2.-2 2 DF	185408 -01 215406 -01 248942 -01 060901 -03	16	080	2.+2 2. 0 2.-2 2 DF	103507 -02 061892 -01 226857 -01 149406 -03
16	160	2.+2 2. 0 2.-2 2 DF	154511 -01 209714 -01 278711 -01 065567 -03	16	070	2.+2 2. 0 2.-2 2 DF	054776 -02 041047 -01 172038 -01 133884 -03
16	150	2.+2 2. 0 2.-2 2 DF	125612 -01 200334 -01 304777 -01 073309 -03	16	060	2.+2 2. 0 2.-2 2 DF	248108 -03 236614 -02 114760 -01 102159 -03
16	140	2.+2 2. 0 2.-2 2 DF	099415 -01 187440 -01 032509 00 084000 -03	16	050	2.+2 2. 0 2.-2 2 DF	088560 -03 109769 -02 062840 -01 059533 -03
16	130	2.+2 2. 0 2.-2 2 DF	076369 -01 171302 -01 033750 00 097300 -03	16	040	2.+2 2. 0 2.-2 2 DF	212154 -04 035265 -02 246281 -02 211750 -04
16	120	2.+2 2. 0 2.-2 2 DF	056697 -01 152313 -01 033996 00 112476 -03	16	030	2.+2 2. 0 2.-2 2 DF	237389 -05 055743 -03 050307 -02 267961 -05
16	110	2.+2 2. 0 2.-2 2 DF	040435 -01 131024 -01 033070 00 128150 -03	16	020	2.+2 2. 0 2.-2 2 DF	043553 -06 159829 -05 208635 -04 226481 -07
16	100	2.+2 2. 0 2.-2 2 DF	274649 -02 108176 -01 308582 -01 142015 -03	16	010	2.+2 2. 0 2.-2 2 DF	087883 -11 065661 -09 165057 -08 222734 -14
				2	16	F	123845 -02

TABLE 2 (cont.).

18	180	2.+2 2. 0 2.-2 2 DF	126758 -01 126758 -01 126758 -01 201914 -04	18	090	2.+2 2. 0 2.-2 2 DF	089317 -02 046506 -01 161222 -01 051863 -03
18	170	2.+2 2. 0 2.-2 2 DF	107150 -01 125585 -01 146404 -01 207804 -04	18	080	2.+2 2. 0 2.-2 2 DF	051123 -02 033185 -01 131523 -01 049849 -03
18	160	2.+2 2. 0 2.-2 2 DF	088379 -01 122086 -01 165077 -01 225439 -04	18	070	2.+2 2. 0 2.-2 2 DF	260368 -03 213127 -02 097212 -01 042493 -03
18	150	2.+2 2. 0 2.-2 2 DF	071035 -01 116326 -01 181570 -01 254616 -04	18	060	2.+2 2. 0 2.-2 2 DF	112066 -03 117392 -02 062348 -01 300115 -04
18	140	2.+2 2. 0 2.-2 2 DF	055517 -01 108422 -01 194519 -01 294670 -04	18	050	2.+2 2. 0 2.-2 2 DF	037226 -03 050931 -02 032116 -01 154949 -04
18	130	2.+2 2. 0 2.-2 2 DF	042056 -01 098558 -01 202483 -01 034394 -03	18	040	2.+2 2. 0 2.-2 2 DF	079963 -04 147342 -03 113971 -02 045233 -04
18	120	2.+2 2. 0 2.-2 2 DF	307382 -02 086999 -01 204060 -01 039903 -03	18	030	2.+2 2. 0 2.-2 2 DF	074399 -05 194374 -04 195292 -03 040317 -05
18	110	2.+2 2. 0 2.-2 2 DF	215349 -02 074117 -01 198067 -01 045377 -03	18	020	2.+2 2. 0 2.-2 2 DF	093847 -07 038444 -05 056124 -04 163764 -08
18	100	2.+2 2. 0 2.-2 2 DF	143280 -02 060407 -01 183778 -01 049828 -03	18	010	2.+2 2. 0 2.-2 2 DF	060683 -12 050783 -10 143304 -09 167858 -16
				2	18	F	041427 -02

TABLE 2 (cont.).

20	180	2.+2 2. 0 2.-2 2 DF	073366 -01 073366 -01 073366 -01 067639 -04	20	090	2.+2 2. 0 2.-2 2 DF	045428 -02 253511 -02 093788 -01 174269 -04
20	170	2.+2 2. 0 2.-2 2 DF	061486 -01 072652 -01 085379 -01 069806 -04	20	080	2.+2 2. 0 2.-2 2 DF	252524 -03 176753 -02 075206 -01 162055 -04
20	160	2.+2 2. 0 2.-2 2 DF	050230 -01 070527 -01 096891 -01 076287 -04	20	070	2.+2 2. 0 2.-2 2 DF	123879 -03 109942 -02 054146 -01 131223 -04
20	150	2.+2 2. 0 2.-2 2 DF	039944 -01 067031 -01 107127 -01 086978 -04	20	060	2.+2 2. 0 2.-2 2 DF	050710 -03 057873 -02 033368 -01 085657 -04
20	140	2.+2 2. 0 2.-2 2 DF	308513 -02 062243 -01 115200 -01 101568 -04	20	050	2.+2 2. 0 2.-2 2 DF	156900 -04 234857 -03 161602 -02 039125 -04
20	130	2.+2 2. 0 2.-2 2 DF	230646 -02 056284 -01 120161 -01 119315 -04	20	040	2.+2 2. 0 2.-2 2 DF	302435 -05 061188 -03 051894 -02 093603 -05
20	120	2.+2 2. 0 2.-2 2 DF	166090 -02 049331 -01 121087 -01 138735 -04	20	030	2.+2 2. 0 2.-2 2 DF	234150 -06 067373 -04 074545 -03 058676 -06
20	110	2.+2 2. 0 2.-2 2 DF	114402 -02 041627 -01 117206 -01 157237 -04	20	020	2.+2 2. 0 2.-2 2 DF	203203 -08 091925 -06 148364 -05 114374 -09
20	100	2.+2 2. 0 2.-2 2 DF	074623 -02 033497 -01 108075 -01 170836 -04	20	010	2.+2 2. 0 2.-2 2 DF	042134 -13 039042 -11 122189 -10 122017 -18
				2	20	F	136350 -03

TABLE 2 (cont.).

40	180	2.+2 2. 0 2.-2 2 DF	242113 -04 242113 -04 242113 -04 073662 -09	40	090	2.+2 2. 0 2.-2 2 DF	051767 -05 047574 -04 277190 -04 147724 -09
40	170	2.+2 2. 0 2.-2 2 DF	190282 -04 238763 -04 297649 -04 077900 -09	40	080	2.+2 2. 0 2.-2 2 DF	220858 -06 264706 -05 184244 -04 095007 -09
40	160	2.+2 2. 0 2.-2 2 DF	144444 -04 228823 -04 035321 -03 090445 -09	40	070	2.+2 2. 0 2.-2 2 DF	076548 -06 120318 -05 100430 -04 044337 -09
40	150	2.+2 2. 0 2.-2 2 DF	105725 -04 212642 -04 040365 -03 110574 -09	40	060	2.+2 2. 0 2.-2 2 DF	194741 -07 040491 -05 040895 -04 126925 -10
40	140	2.+2 2. 0 2.-2 2 DF	074367 -04 190858 -04 044257 -03 136397 -09	40	050	2.+2 2. 0 2.-2 2 DF	303428 -08 084679 -06 105219 -05 164254 -11
40	130	2.+2 2. 0 2.-2 2 DF	050001 -04 164470 -04 046291 -03 164013 -09	40	040	2.+2 2. 0 2.-2 2 DF	202522 -09 077798 -07 122520 -06 051834 -12
40	120	2.+2 2. 0 2.-2 2 DF	031877 -04 134906 -04 045820 -03 186903 -09	40	030	2.+2 2. 0 2.-2 2 DF	254587 -11 141087 -09 297239 -08 092922 -15
40	110	2.+2 2. 0 2.-2 2 DF	190442 -05 104041 -04 042433 -03 196382 -09	40	020	2.+2 2. 0 2.-2 2 DF	053421 -14 047089 -12 147898 -11 113443 -21
40	100	2.+2 2. 0 2.-2 2 DF	104789 -05 074131 -04 036172 -03 184219 -09	40	010	2.+2 2. 0 2.-2 2 DF	129364 -25 236159 -23 146365 -21 174987 -40
				2	40	F	124705 -08

Table 3.  $I_{3\mu}(\vartheta, \xi)$ ,  $df_{E3}(\vartheta, \xi)/d\Omega$  and  $f_{E3}(\xi)$ .

02	180	3.+3 3.+1 3.-1 3.-3 3 DF	242049 242049 242049 242049 037563	00 00 00 00 -01	02	100	3.+3 3.+1 3.-1 3.-3 3 DF	076150 126661 159656 155212 031889	00 00 00 00 -01
02	170	3.+3 3.+1 3.-1 3.-3 3 DF	229876 237097 243528 249100 037474	00 00 00 00 -01	02	090	3.+3 3.+1 3.-1 3.-3 3 DF	056470 105068 137310 129333 303358	00 00 00 00 -02
02	160	3.+3 3.+1 3.-1 3.-3 3 DF	213265 228829 241450 250597 037207	00 00 00 00 -01	02	080	3.+3 3.+1 3.-1 3.-3 3 DF	039688 083746 113927 103658 285381	00 00 00 00 -02
02	150	3.+3 3.+1 3.-1 3.-3 3 DF	193103 217468 235805 246395 036765	00 00 00 00 -01	02	070	3.+3 3.+1 3.-1 3.-3 3 DF	260904 063415 090322 079355 264450	-01 00 00 00 -02
02	140	3.+3 3.+1 3.-1 3.-3 3 DF	170419 203304 226663 236651 036146	00 00 00 00 -01	02	060	3.+3 3.+1 3.-1 3.-3 3 DF	157249 044833 067432 057439 239815	-01 00 00 00 -02
02	130	3.+3 3.+1 3.-1 3.-3 3 DF	146315 186691 214179 221821 035353	00 00 00 00 -01	02	050	3.+3 3.+1 3.-1 3.-3 3 DF	084119 287677 046307 038693 210473	-01 -01 00 00 -02
02	120	3.+3 3.+1 3.-1 3.-3 3 DF	121897 168049 198601 202635 034383	00 00 00 00 -01	02	040	3.+3 3.+1 3.-1 3.-3 3 DF	037711 159324 280645 236132 175217	-01 -01 -01 -01 -02
02	110	3.+3 3.+1 3.-1 3.-3 3 DF	098204 147857 180276 180056 033232	00 00 00 00 -01	02	030	3.+3 3.+1 3.-1 3.-3 3 DF	126157 068802 138111 123726 132843	-02 -01 -01 -01 -02

TABLE 3 (cont.).

02	020	3.+3 3.+1 3.-1 3.-3 3 DF	235291 179359 044727 048329 082293	-03 -02 -01 -01 -02		04	130	3.+3 3.+1 3.-1 3.-3 3 DF	098053 138731 177188 205869 244643	00 00 00 00 -02
02	010	3.+3 3.+1 3.-1 3.-3 3 DF	077688 102117 040499 073394 223411	-04 -03 -02 -02 -03		04	120	3.+3 3.+1 3.-1 3.-3 3 DF	078640 122749 165152 194128 246753	00 00 00 00 -02
3	02	F	035323	00		04	110	3.+3 3.+1 3.-1 3.-3 3 DF	060833 105927 150449 178121 248041	00 00 00 00 -02
04	180	3.+3 3.+1 3.-1 3.-3 3 DF	192022 192022 192022 192022 236404	00 00 00 00 -02		04	100	3.+3 3.+1 3.-1 3.-3 3 DF	045137 088743 133442 158612 247882	00 00 00 00 -02
04	170	3.+3 3.+1 3.-1 3.-3 3 DF	176622 186033 195169 203955 236826	00 00 00 00 -02		04	090	3.+3 3.+1 3.-1 3.-3 3 DF	031879 071712 114619 136563 245510	00 00 00 00 -02
04	160	3.+3 3.+1 3.-1 3.-3 3 DF	158603 177419 195318 211712 238044	00 00 00 00 -02		04	080	3.+3 3.+1 3.-1 3.-3 3 DF	212006 055378 094606 113086 239987	-01 00 00 00 -02
04	150	3.+3 3.+1 3.-1 3.-3 3 DF	138884 166446 192373 214767 239920	00 00 00 00 -02		04	070	3.+3 3.+1 3.-1 3.-3 3 DF	130638 040305 074180 089360 230139	-01 00 00 00 -02
04	140	3.+3 3.+1 3.-1 3.-3 3 DF	118402 153431 186310 212830 242227	00 00 00 00 -02		04	060	3.+3 3.+1 3.-1 3.-3 3 DF	072764 270566 054272 066561 214457	-01 -01 00 00 -02

TABLE 3 (cont.).

04	050	3.+3	035162	-01	06	180	3.+3	140477	00
		3.+1	161602	-01			3.+1	140477	00
		3.-1	035959	00			3.-1	140477	00
		3.-3	045777	00			3.-3	140477	00
		3 DF	190967	-02			3 DF	126521	-02
04	040	3.+3	136833	-02	06	170	3.+3	125892	00
		3.+1	080411	-01			3.+1	134869	00
		3.-1	204245	-01			3.-1	143933	00
		3.-3	279584	-01			3.-3	153028	00
		3 DF	157054	-02			3 DF	127372	-02
04	030	3.+3	036701	-02	06	160	3.+3	110052	00
		3.+1	290268	-02			3.+1	127334	00
		3.-1	088489	-01			3.-1	145058	00
		3.-3	139029	-01			3.-3	162809	00
		3 DF	109599	-02			3 DF	129875	-02
04	020	3.+3	045064	-03	06	150	3.+3	093722	00
		3.+1	052638	-02			3.+1	118127	00
		3.-1	213131	-02			3.-1	143721	00
		3.-3	043778	-01			3.-3	169169	00
		3 DF	048608	-02			3 DF	133880	-02
04	010	3.+3	044968	-05	06	140	3.+3	077612	00
		3.+1	098568	-04			3.+1	107539	00
		3.-1	069483	-03			3.-1	139851	00
		3.-3	257358	-03			3.-3	171603	00
		3 DF	240245	-04			3 DF	139130	-02
3	04	F	272275	-01	06	130	3.+3	062338	00
							3.+1	095886	00
							3.-1	133445	00
							3.-3	169789	00
							3 DF	145261	-02
					06	120	3.+3	048399	00
							3.+1	083508	00
							3.-1	124579	00
							3.-3	163628	00
							3 DF	151783	-02
					06	110	3.+3	036155	00
							3.+1	070767	00
							3.-1	113429	00
							3.-3	153267	00
							3 DF	158070	-02

TABLE 3 (cont.).

06	100	3.+3	258237	-01	06	020	3.+3	090392	-04
		3.+1	058043	00			3.+1	142251	-03
		3.-1	100276	00			3.-1	079657	-02
		3.-3	139109	00			3.-3	241800	-02
		3 DF	163332	-02			3 DF	137495	-03
06	090	3.+3	174801	-01	06	010	3.+3	280755	-07
		3.+1	045731	00			3.+1	086187	-05
		3.-1	085530	00			3.-1	087327	-04
		3.-3	121800	00			3.-3	048868	-03
		3 DF	166577	-02			3 DF	084526	-05
06	080	3.+3	110734	-01	3	06	F	173639	-01
		3.+1	034236	00					
		3.-1	069743	00					
		3.-3	102211	00					
		3 DF	166558	-02					
06	070	3.+3	064431	-01	08	180	3.+3	097409	00
		3.+1	239557	-01			3.+1	097409	00
		3.-1	053620	00			3.-1	097409	00
		3.-3	081391	00			3.-3	097409	00
		3 DF	161705	-02			3 DF	060835	-02
06	060	3.+3	033438	-01	08	170	3.+3	085404	00
		3.+1	152656	-01			3.+1	092806	00
		3.-1	038024	00			3.-1	100469	00
		3.-3	060518	00			3.-3	108366	00
		3 DF	150058	-02			3 DF	061562	-02
06	050	3.+3	147340	-02	08	160	3.+3	072970	00
		3.+1	084787	-01			3.+1	086856	00
		3.-1	239602	-01			3.-1	101817	00
		3.-3	040853	00			3.-3	117635	00
		3 DF	129304	-02			3 DF	063709	-02
06	040	3.+3	050328	-02	08	150	3.+3	060671	00
		3.+1	037822	-01			3.+1	079782	00
		3.-1	125059	-01			3.-1	101320	00
		3.-3	237061	-01			3.-3	124600	00
		3 DF	097318	-02			3 DF	067171	-02
06	030	3.+3	109745	-03	08	140	3.+3	048991	00
		3.+1	113656	-02			3.+1	071820	00
		3.-1	046384	-01			3.-1	098892	00
		3.-3	104393	-01			3.-3	128712	00
		3 DF	054774	-02			3 DF	071767	-02

TABLE 3 (cont.).

08	130	3.+3	038313	00	08	050	3.+3	061904	-02	
		3.+1	063226	00			3.+1	042754	-01	
		3.-1	094502	00			3.-1	145928	-01	
		3.-3	129535	00			3.-3	310122	-01	
		3 DF	077222	-02			3 DF	069143	-02	
08	120	3.+3	289092	-01	08	040	3.+3	186800	-03	
		3.+1	054265	00			3.+1	170973	-02	
		3.-1	088189	00			3.-1	069433	-01	
		3.-3	126792	00			3.-3	167499	-01	
		3 DF	083153	-02			3 DF	045576	-02	
08	110	3.+3	209381	-01	08	030	3.+3	033362	-03	
		3.+1	045211	00			3.+1	042737	-02	
		3.-1	080075	00			3.-1	218121	-02	
		3.-3	120405	00			3.-3	063740	-01	
		3 DF	089039	-02			3 DF	194647	-03	
08	100	3.+3	144544	-01	08	020	3.+3	186012	-05	
		3.+1	036345	00			3.+1	036842	-03	
		3.-1	070379	00			3.-1	263169	-03	
		3.-3	110520	00			3.-3	105560	-02	
		3 DF	094186	-02			3 DF	254878	-04	
08	090	3.+3	094173	-01	08	010	3.+3	182037	-08	
		3.+1	279498	-01			3.+1	071897	-06	
		3.-1	059439	00			3.-1	094980	-05	
		3.-3	097534	00			3.-3	071060	-04	
		3 DF	097694	-02			3 DF	177230	-07	
08	080	3.+3	057087	-01	3	08	F	095574	-01	
		3.+1	203041	-01						
		3.-1	047720	00						
		3.-3	082090	00						
		3 DF	098410	-02						
08	070	3.+3	031516	-01						
		3.+1	136702	-01						
		3.-1	035827	00						
		3.-3	065079	00						
		3 DF	094917	-02						
08	060	3.+3	153190	-02						
		3.+1	082748	-01						
		3.-1	245037	-01						
		3.-3	047614	00						
		3 DF	085620	-02						

TABLE 3 (cont.).

10	180	3.+3	065031	00		10	100	3.+3	079715	-01
		3.+1	065031	00				3.+1	220840	-01
		3.-1	065031	00				3.-1	047117	00
		3.-3	065031	00				3.-3	082034	00
		3 DF	271143	-03				3 DF	048976	-02
10	170	3.+3	055944	00		10	090	3.+3	050145	-01
		3.+1	061544	00				3.+1	165917	-01
		3.-1	057452	00				3.-1	059336	00
		3.-3	073658	00				3.-3	072573	00
		3 DF	275817	-03				3 DF	051176	-02
10	160	3.+3	046853	00		10	080	3.+3	291819	-02
		3.+1	057153	00				3.+1	117065	-01
		3.-1	068666	00				3.-1	310349	-01
		3.-3	081327	00				3.-3	060892	00
		3 DF	289657	-03				3 DF	051365	-02
10	150	3.+3	038142	00		10	070	3.+3	153382	-02
		3.+1	052031	00				3.+1	075903	-01
		3.-1	068558	00				3.-1	227042	-01
		3.-3	087522	00				3.-3	047732	00
		3 DF	312085	-03				3 DF	048585	-02
10	140	3.+3	301180	-01		10	060	3.+3	070082	-02
		3.+1	046362	00				3.+1	043677	-01
		3.-1	067046	00				3.-1	149372	-01
		3.-3	091747	00				3.-3	034098	00
		3 DF	034204	-02				3 DF	041946	-02
10	130	3.+3	229979	-01		10	050	3.+3	260730	-03
		3.+1	040337	00				3.+1	210065	-02
		3.-1	064092	00				3.-1	083806	-01
		3.-3	093565	00				3.-3	212382	-01
		3 DF	037786	-02				3 DF	311474	-03
10	120	3.+3	169126	-01		10	040	3.+3	069797	-03
		3.+1	034151	00				3.+1	075338	-02
		3.-1	059714	00				3.-1	036206	-01
		3.-3	092644	00				3.-3	105696	-01
		3 DF	041704	-02				3 DF	175597	-03
10	110	3.+3	119110	-01		10	030	3.+3	102575	-04
		3.+1	280014	-01				3.+1	156662	-03
		3.-1	053999	00				3.-1	095846	-02
		3.-3	088800	00				3.-3	034365	-01
		3 DF	045599	-02				3 DF	055257	-03

TABLE 3 (cont.).

10	020	3.+3 3.+1 3.-1 3.-3 3 DF	038916 -05 092976 -04 080700 -03 040187 -02 036460 -04	15	130	3.+3 3.+1 3.-1 3.-3 3 DF	059987 -01 119238 -01 214368 -01 .035469 00 049149 -03
10	010	3.+3 3.+1 3.-1 3.-3 3 DF	120762 -09 058342 -07 095007 -06 088939 -05 276559 -09	15	120	3.+3 3.+1 3.-1 3.-3 3 DF	041730 -01 097883 -01 198325 -01 035762 00 056629 -03
3	10	F	047217 -01	15	110	3.+3 3.+1 3.-1 3.-3 3 DF	276459 -02 077360 -01 176965 -01 034689 00 063847 -03
15	180	3.+3 3.+1 3.-1 3.-3 3 DF	212135 -01 212135 -01 212135 -01 212135 -01 288522 -04	15	100	3.+3 3.+1 3.-1 3.-3 3 DF	172776 -02 058357 -01 151118 -01 032169 00 069547 -03
15	170	3.+3 3.+1 3.-1 3.-3 3 DF	175504 -01 197972 -01 222476 -01 249106 -01 297156 -04	15	090	3.+3 3.+1 3.-1 3.-3 3 DF	100492 -02 041497 -01 122126 -01 282610 -01 072089 -03
15	160	3.+3 3.+1 3.-1 3.-3 3 DF	141000 -01 180842 -01 228409 -01 284412 -01 032312 -03	15	080	3.+3 3.+1 3.-1 3.-3 3 DF	053324 -02 273088 -02 091865 -01 231946 -01 069642 -03
15	150	3.+3 3.+1 3.-1 3.-3 3 DF	109804 -01 161487 -01 229302 -01 031555 00 036555 -03	15	070	3.+3 3.+1 3.-1 3.-3 3 DF	250395 -03 161655 -02 062693 -01 174012 -01 060720 -03
15	140	3.+3 3.+1 3.-1 3.-3 3 DF	082682 -01 140693 -01 224704 -01 033987 00 042274 -03	15	060	3.+3 3.+1 3.-1 3.-3 3 DF	099043 -03 082201 -02 037229 -01 115095 -01 045265 -03

TABLE 3 (cont.).

15	050	3.+3	302943	-04	20	180	3.+3	062533	-01
		3.+1	033137	-02			3.+1	062533	-01
		3.-1	178783	-02			3.-1	062533	-01
		3.-3	062911	-01			3.-3	062533	-01
		3 DF	261050	-04			3 DF	250713	-05
15	040	3.+3	060798	-04	20	170	3.+3	050160	-01
		3.+1	090717	-03			3.+1	057720	-01
		3.-1	060199	-02			3.-1	066163	-01
		3.-3	249949	-02			3.-3	075560	-01
		3 DF	094731	-04			3 DF	261434	-05
15	030	3.+3	055525	-05	20	160	3.+3	038962	-01
		3.+1	119241	-04			3.+1	052009	-01
		3.-1	102861	-03			3.-1	068338	-01
		3.-3	053623	-02			3.-3	088505	-01
		3 DF	131264	-05			3 DF	293449	-05
15	020	3.+3	081470	-07	20	150	3.+3	292553	-02
		3.+1	278340	-06			3.+1	045687	-01
		3.-1	034791	-04			3.-1	068819	-01
		3.-3	256630	-04			3.-3	100427	-01
		3 DF	146734	-07			3 DF	034606	-04
15	010	3.+3	145122	-12	20	140	3.+3	211755	-02
		3.+1	102191	-10			3.+1	039038	-01
		3.-1	244787	-09			3.-1	067422	-01
		3.-3	034370	-07			3.-3	110226	-01
		3 DF	041144	-13			3 DF	041729	-04
3	15	F	059321	-02	20	130	3.+3	147162	-02
							3.+1	032329	-01
							3.-1	064045	-01
							3.-3	116724	-01
							3 DF	050273	-04
					20	120	3.+3	097643	-02
							3.+1	258169	-02
							3.-1	058704	-01
							3.-3	118798	-01
							3 DF	059398	-04
					20	110	3.+3	061367	-02
							3.+1	197334	-02
							3.-1	051568	-01
							3.-3	115556	-01
							3 DF	067727	-04

TABLE 3 (cont.).

20	100	3.+3 3.+1 3.-1 3.-3 3 DF	036127 -02 142866 -02 042995 -01 106550 -01 073295 -04	20	020	3.+3 3.+1 3.-1 3.-3 3 DF	177277 -09 078905 -07 128595 -06 125334 -05 034834 -09
20	090	3.+3 3.+1 3.-1 3.-3 3 DF	196024 -03 096487 -02 033550 -01 092018 -01 073751 -04	20	010	3.+3 3.+1 3.-1 3.-3 3 DF	182981 -15 169426 -13 053552 -11 100147 -10 034885 -18
20	080	3.+3 3.+1 3.-1 3.-3 3 DF	095714 -03 059423 -02 239958 -02 073089 -01 067010 -04	3	20	F	056542 -03
20	070	3.+3 3.+1 3.-1 3.-3 3 DF	040527 -03 032221 -02 152300 -02 051888 -01 052534 -04	40	180	3.+3 3.+1 3.-1 3.-3 3 DF	295043 -04 295043 -04 295043 -04 295043 -04 055811 -09
20	060	3.+3 3.+1 3.-1 3.-3 3 DF	140097 -04 145248 -03 081351 -02 031395 -01 032912 -04	40	170	3.+3 3.+1 3.-1 3.-3 3 DF	216114 -04 262894 -04 031838 -03 038398 -03 060305 -09
20	050	3.+3 3.+1 3.-1 3.-3 3 DF	035568 -04 049221 -03 033302 -02 148681 -02 143114 -05	40	160	3.+3 3.+1 3.-1 3.-3 3 DF	152302 -04 227366 -04 033332 -03 048080 -03 074990 -09
20	040	3.+3 3.+1 3.-1 3.-3 3 DF	054028 -05 103121 -04 086977 -03 046521 -02 032363 -05	40	150	3.+3 3.+1 3.-1 3.-3 3 DF	102708 -04 189847 -04 033661 -03 057618 -03 099462 -09
20	030	3.+3 3.+1 3.-1 3.-3 3 DF	309530 -07 085849 -05 095355 -04 064929 -03 190689 -07	40	140	3.+3 3.+1 3.-1 3.-3 3 DF	066031 -04 152464 -04 032653 -03 065847 -03 132557 -09

TABLE 3 (cont.).

40	130	3.+3 3.+1 3.-1 3.-3 3 DF	040234 -04 117063 -04 302419 -04 071376 -03 170507 -09	40	050	3.+3 3.+1 3.-1 3.-3 3 DF	072108 -08 184969 -07 223150 -06 179328 -05 203870 -11
40	120	3.+3 3.+1 3.-1 3.-3 3 DF	230352 -05 085182 -04 265056 -04 072810 -03 205584 -09	40	040	3.+3 3.+1 3.-1 3.-3 3 DF	037370 -09 134813 -08 208432 -07 207178 -06 063230 -12
40	110	3.+3 3.+1 3.-1 3.-3 3 DF	122383 -05 058001 -04 217136 -04 069119 -03 226143 -09	40	030	3.+3 3.+1 3.-1 3.-3 3 DF	034355 -11 182746 -10 038168 -08 049690 -07 110639 -15
40	100	3.+3 3.+1 3.-1 3.-3 3 DF	059251 -05 036289 -04 163358 -04 060085 -03 219849 -09	40	020	3.+3 3.+1 3.-1 3.-3 3 DF	047155 -15 040716 -13 127735 -12 243739 -11 131126 -21
40	090	3.+3 3.+1 3.-1 3.-3 3 DF	254520 -06 203140 -05 110020 -04 046717 -03 180938 -09	40	010	3.+3 3.+1 3.-1 3.-3 3 DF	056473 -26 102603 -24 063763 -22 237418 -21 195811 -40
40	080	3.+3 3.+1 3.-1 3.-3 3 DF	093155 -06 097751 -05 063848 -04 031354 -03 118316 -09	3	40	F	139778 -08
40	070	3.+3 3.+1 3.-1 3.-3 3 DF	272599 -07 037988 -05 300810 -05 171757 -04 055631 -09				
40	060	3.+3 3.+1 3.-1 3.-3 3 DF	057400 -07 107581 -06 104269 -05 069969 -04 159056 -10				

Table 4.  $I_{4\mu}(\vartheta, \xi)$ ,  $df_{E4}(\vartheta, \xi)/d\Omega$  and  $f_{E4}(\xi)$ .

02	180	4.+4 4.+2 4. 0 4.-2 4.-4 4 DF	107360 00 107360 00 107360 00 107360 00 107360 00 044704 -02		02	120	4.+4 4.+2 4. 0 4.-2 4.-4 4 DF	047084 00 064003 00 076790 00 081892 00 077552 00 032875 -02
02	170	4.+4 4.+2 4. 0 4.-2 4.-4 4 DF	101651 00 104190 00 106438 00 108376 00 109987 00 044334 -02		02	110	4.+4 4.+2 4. 0 4.-2 4.-4 4 DF	035925 00 053507 00 067093 00 071710 00 065162 00 292688 -03
02	160	4.+4 4.+2 4. 0 4.-2 4.-4 4 DF	093304 00 099023 00 103697 00 107167 00 109307 00 043239 -02		02	100	4.+4 4.+2 4. 0 4.-2 4.-4 4 DF	260881 -01 043141 00 056797 00 060757 00 052526 00 254742 -03
02	150	4.+4 4.+2 4. 0 4.-2 4.-4 4 DF	082936 00 092093 00 099210 00 103753 00 105345 00 041465 -02		02	090	4.+4 4.+2 4. 0 4.-2 4.-4 4 DF	178870 -01 033312 00 046285 00 049526 00 040415 00 215961 -03
02	140	4.+4 4.+2 4. 0 4.-2 4.-4 4 DF	071273 00 083703 00 093104 00 098250 00 098371 00 039082 -02		02	080	4.+4 4.+2 4. 0 4.-2 4.-4 4 DF	114498 -01 243931 -01 035979 00 038529 00 294776 -01 177304 -03
02	130	4.+4 4.+2 4. 0 4.-2 4.-4 4 DF	059078 00 074208 00 085554 00 090864 00 088883 00 036184 -02		02	070	4.+4 4.+2 4. 0 4.-2 4.-4 4 DF	067321 -01 166944 -01 263254 -01 282788 -01 201857 -01 139670 -03

TABLE 4 (cont.).

02	060	4.+4 4.+2 4. 0 4.-2 4.-4 4 DF	035472 104454 177697 192447 128016 103989	-01 -01 -01 -01 -01 -03	04	180	4.+4 4.+2 4. 0 4.-2 4.-4 4 DF	090829 090829 090829 090829 090829 031997	00 00 00 00 00 -02
02	050	4.+4 4.+2 4. 0 4.-2 4.-4 4 DF	160987 057649 107137 118143 073682 071366	-02 -01 -01 -01 -01 -03	04	170	4.+4 4.+2 4. 0 4.-2 4.-4 4 DF	083077 086616 090018 093256 096307 031875	00 00 00 00 00 -02
02	040	4.+4 4.+2 4. 0 4.-2 4.-4 4 DF	058699 263521 054535 062405 037307 043231	-02 -02 -01 -01 -01 -03	04	160	4.+4 4.+2 4. 0 4.-2 4.-4 4 DF	073632 080838 087606 093746 099069 031501	00 00 00 00 00 -02
02	030	4.+4 4.+2 4. 0 4.-2 4.-4 4 DF	149669 087965 209637 258655 158395 214045	-03 -02 -02 -02 -02 -04	04	150	4.+4 4.+2 4. 0 4.-2 4.-4 4 DF	063155 073769 083663 092222 098855 308596	00 00 00 00 00 -03
02	020	4.+4 4.+2 4. 0 4.-2 4.-4 4 DF	189397 157118 046300 067265 055008 079996	-04 -03 -02 -02 -02 -04	04	140	4.+4 4.+2 4. 0 4.-2 4.-4 4 DF	052317 065725 078303 088698 095629 299223	00 00 00 00 00 -03
02	010	4.+4 4.+2 4. 0 4.-2 4.-4 4 DF	032039 045564 205367 045943 283788 150660	-05 -04 -04 -03 -03 -04	04	130	4.+4 4.+2 4. 0 4.-2 4.-4 4 DF	041744 057050 071688 083275 089585 286614	00 00 00 00 00 -03
4	02	F	272938	-02					

TABLE 4 (cont.).

04	120	4.+4	031964	00	04	060	4.+4	170678	-02
		4.+2	048100	00			4.+2	062950	-01
		4.-0	064026	00			4.-0	134901	-01
		4.-2	076151	00			4.-2	189798	-01
		4.-4	081134	00			4.-4	175792	-01
		4 DF	270527	-03			4 DF	107584	-03
04	110	4.+4	233716	-01	04	050	4.+4	069816	-02
		4.+2	039229	00			4.+2	032198	-01
		4.-0	055577	00			4.-0	077680	-01
		4.-2	067615	00			4.-2	115726	-01
		4.-4	070867	00			4.-4	106961	-01
		4 DF	250823	-03			4 DF	075926	-03
04	100	4.+4	162090	-01	04	040	4.+4	220440	-03
		4.+2	307723	-01			4.+2	131690	-02
		4.-0	046646	00			4.-0	036700	-01
		4.-2	058042	00			4.-2	059544	-01
		4.-4	059499	00			4.-4	056925	-01
		4 DF	227532	-03			4 DF	046991	-03
04	090	4.+4	105641	-01	04	030	4.+4	044939	-03
		4.+2	230310	-01			4.+2	036609	-02
		4.-0	037581	00			4.-0	123198	-02
		4.-2	047879	00			4.-2	229323	-02
		4.-4	047800	00			4.-4	243920	-02
		4 DF	200900	-03			4 DF	231944	-04
04	080	4.+4	063860	-01	04	020	4.+4	037303	-04
		4.+2	162589	-01			4.+2	045356	-03
		4.-0	287664	-01			4.-0	201723	-03
		4.-2	037628	00			4.-2	048012	-02
		4.-4	036511	00			4.-4	067130	-02
		4 DF	171435	-03			4 DF	070507	-04
04	070	4.+4	035124	-01	04	010	4.+4	189553	-07
		4.+2	106445	-01			4.+2	043255	-05
		4.-0	206045	-01			4.-0	032637	-04
		4.-2	278212	-01			4.-2	132920	-04
		4.-4	262775	-01			4.-4	049843	-03
		4 DF	139944	-03			4 DF	047621	-05
					4	04	F	233022	-02

TABLE 4 (cont.).

06	180	4.+4	071211	00		06	120	4.+4	206657	-01
		4.+2	071211	00				4.+2	033901	00
		4.+0	071211	00				4.+0	049271	00
		4.-2	071211	00				4.-2	064261	00
		4.-4	071211	00				4.-4	075613	00
		4 DF	196681	-03				4 DF	196258	-03
06	170	4.+4	063224	00		06	110	4.+4	145480	-01
		4.+2	066887	00				4.+2	270137	-01
		4.+0	070543	00				4.+0	042415	00
		4.-2	074172	00				4.-2	057536	00
		4.-4	077750	00				4.-4	067957	00
		4 DF	197082	-03				4 DF	189934	-03
06	160	4.+4	054360	00		06	100	4.+4	096827	-01
		4.+2	061435	00				4.+2	206436	-01
		4.+0	068561	00				4.+0	035211	00
		4.-2	075582	00				4.-2	049708	00
		4.-4	082330	00				4.-4	058699	00
		4 DF	198126	-03				4 DF	179622	-03
06	150	4.+4	045193	00		06	090	4.+4	060298	-01
		4.+2	055122	00				4.+2	149928	-01
		4.+0	065323	00				4.+0	279612	-01
		4.-2	075313	00				4.-2	041160	00
		4.-4	084550	00				4.-4	048491	00
		4 DF	199350	-03				4 DF	164868	-03
06	140	4.+4	036248	00		06	080	4.+4	034615	-01
		4.+2	048234	00				4.+2	102141	-01
		4.+0	060928	00				4.+0	209912	-01
		4.-2	073306	00				4.-2	032348	00
		4.-4	084169	00				4.-4	038045	00
		4 DF	200045	-03				4 DF	145592	-03
06	130	4.+4	279648	-01		06	070	4.+4	179213	-02
		4.+2	041064	00				4.+2	064010	-01
		4.+0	055517	00				4.+0	146398	-01
		4.-2	069585	00				4.-2	237815	-01
		4.-4	081137	00				4.-4	280540	-01
		4 DF	199330	-03				4 DF	122192	-03

TABLE 4 (cont.).

06	060	4.+4 4.+2 4. 0 4.-2 4.-4 4 DF	080875 -02 035786 -01 092292 -01 159852 -01 191256 -01 095632 -03	08	180	4.+4 4.+2 4. 0 4.-2 4.-4 4 DF	052800 00 052800 00 052800 00 052800 00 052800 00 108130 -03	
06	050	4.+4 4.+2 4. 0 4.-2 4.-4 4 DF	300641 -03 169562 -02 050239 -01 094536 -01 117216 -01 067547 -03	08	170	4.+4 4.+2 4. 0 4.-2 4.-4 4 DF	045682 00 048944 00 052280 00 055677 00 059120 00 109061 -03	
06	040	4.+4 4.+2 4. 0 4.-2 4.-4 4 DF	083025 -03 061953 -02 217026 -02 045795 -01 061206 -01 040374 -03	08	160	4.+4 4.+2 4. 0 4.-2 4.-4 4 DF	038245 00 044324 00 050735 00 057385 00 064160 00 111707 -03	
06	030	4.+4 4.+2 4. 0 4.-2 4.-4 4 DF	137080 -04 142931 -03 062168 -02 155666 -02 241135 -02 175127 -04	08	150	4.+4 4.+2 4. 0 4.-2 4.-4 4 DF	309312 -01 039170 00 048215 00 057780 00 067491 00 115638 -03	
06	020	4.+4 4.+2 4. 0 4.-2 4.-4 4 DF	076010 -05 121933 -04 072605 -03 241652 -03 050214 -02 033629 -04	08	140	4.+4 4.+2 4. 0 4.-2 4.-4 4 DF	241070 -01 033719 00 044801 00 056769 00 068779 00 120171 -03	
06	010	4.+4 4.+2 4. 0 4.-2 4.-4 4 DF	119578 -08 037601 -06 039834 -05 236381 -05 102927 -04 200736 -07	08	130	4.+4 4.+2 4. 0 4.-2 4.-4 4 DF	180458 -01 282025 -01 040610 00 054325 00 067829 00 124422 -03	
4	06	F	175975 -02					

TABLE 4 (cont.).

08	120	4.+4 4.+2 4. 0 4.-2 4.-4 4 DF	129164 -01 228332 -01 035790 00 050497 00 064617 00 127378 -03	08	060	4.+4 4.+2 4. 0 4.-2 4.-4 4 DF	037986 -02 195938 -02 058927 -01 120894 -01 176877 -01 070685 -03
08	110	4.+4 4.+2 4. 0 4.-2 4.-4 4 DF	087863 -01 178034 -01 305286 -01 045422 00 059304 00 127983 -03	08	050	4.+4 4.+2 4. 0 4.-2 4.-4 4 DF	129037 -03 086059 -02 301799 -02 068502 -01 106451 -01 048291 -03
08	100	4.+4 4.+2 4. 0 4.-2 4.-4 4 DF	056333 -01 132736 -01 250400 -01 039325 00 052233 00 125248 -03	08	040	4.+4 4.+2 4. 0 4.-2 4.-4 4 DF	031366 -03 280979 -03 118416 -02 307382 -02 052801 -01 263869 -04
08	090	4.+4 4.+2 4. 0 4.-2 4.-4 4 DF	033652 -01 093677 -01 195696 -01 032519 00 043904 00 118368 -03	08	030	4.+4 4.+2 4. 0 4.-2 4.-4 4 DF	042261 -04 053772 -03 286650 -03 090196 -02 183848 -02 091908 -04
08	080	4.+4 4.+2 4. 0 4.-2 4.-4 4 DF	184233 -02 061666 -01 143811 -01 254013 -01 034929 00 106865 -03	08	020	4.+4 4.+2 4. 0 4.-2 4.-4 4 DF	158029 -06 031528 -04 235225 -04 100637 -03 279284 -03 098066 -05
08	070	4.+4 4.+2 4. 0 4.-2 4.-4 4 DF	090187 -02 037035 -01 097409 -01 184284 -01 259729 -01 090744 -03	08	010	4.+4 4.+2 4. 0 4.-2 4.-4 4 DF	078009 -09 031284 -07 042681 -06 033286 -05 181632 -05 061816 -08
				4	08	F	117557 -02

TABLE 4 (cont.).

10	180	4.+4	037535	00			10	120	4.+4	078753	-01
		4.+2	037535	00			4.+2	148713	-01		
		4.+0	037535	00			4.+0	249047	-01		
		4.-2	037535	00			4.-2	037618	00		
		4.-4	037535	00			4.-4	051729	00		
		4 DF	054645	-03			4 DF	075264	-03		
10	170	4.+4	031742	00			10	110	4.+4	051915	-01
		4.+2	034390	00			4.+2	113612	-01		
		4.+0	037147	00			4.+0	210402	-01		
		4.-2	040006	00			4.-2	033908	00		
		4.-4	042962	00			4.-4	048221	00		
		4 DF	055494	-03			4 DF	077980	-03		
10	160	4.+4	259528	-01			10	100	4.+4	032159	-01
		4.+2	307515	-01			4.+2	082750	-01		
		4.+0	035993	00			4.+0	170412	-01		
		4.-2	041637	00			4.-2	293342	-01		
		4.-4	047624	00			4.-4	043043	00		
		4 DF	057942	-03			4 DF	078324	-03		
10	150	4.+4	204772	-01			10	090	4.+4	184854	-02
		4.+2	268053	-01			4.+2	056821	-01		
		4.+0	034114	00			4.+0	130981	-01		
		4.-2	042288	00			4.-2	241459	-01		
		4.-4	051129	00			4.-4	036552	00		
		4 DF	061699	-03			4 DF	075480	-03		
10	140	4.+4	155516	-01			10	080	4.+4	096821	-02
		4.+2	227330	-01			4.+2	036187	-01		
		4.+0	031573	00			4.+0	094129	-01		
		4.-2	041858	00			4.-2	186731	-01		
		4.-4	053131	00			4.-4	292443	-01		
		4 DF	066344	-03			4 DF	068861	-03		
10	130	4.+4	113277	-01			10	070	4.+4	044969	-02
		4.+2	187046	-01			4.+2	208521	-02		
		4.+0	284644	-01			4.+0	061841	-01		
		4.-2	040297	00			4.-2	133079	-01		
		4.-4	053374	00			4.-4	217151	-01		
		4 DF	071075	-03			4 DF	058311	-03		

TABLE 4 (cont.).

10	060	4.+4 4.+2 4. 0 4.-2 4.-4 4 DF	177428 -03 104507 -02 035834 -01 084733 -01 146006 -01 044366 -03	15	180	4.+4 4.+2 4. 0 4.-2 4.-4 4 DF	140552 -01 140552 -01 140552 -01 140552 -01 140552 -01 076619 -04
10	050	4.+4 4.+2 4. 0 4.-2 4.-4 4 DF	055297 -03 042589 -02 172263 -02 045686 -01 085093 -01 285805 -04	15	170	4.+4 4.+2 4. 0 4.-2 4.-4 4 DF	113342 -01 125667 -01 138918 -01 153122 -01 168304 -01 079168 -04
10	040	4.+4 4.+2 4. 0 4.-2 4.-4 4 DF	118839 -04 124343 -03 061185 -02 188257 -02 039434 -01 137778 -04	15	160	4.+4 4.+2 4. 0 4.-2 4.-4 4 DF	088149 -01 109380 -01 134078 -01 162466 -01 194712 -01 086646 -04
10	030	4.+4 4.+2 4. 0 4.-2 4.-4 4 DF	131308 -05 197461 -04 124563 -03 047156 -02 119055 -02 036696 -04	15	150	4.+4 4.+2 4. 0 4.-2 4.-4 4 DF	065983 -01 092555 -01 126219 -01 167734 -01 217601 -01 098521 -04
10	020	4.+4 4.+2 4. 0 4.-2 4.-4 4 DF	033303 -06 079546 -05 071309 -04 037267 -03 129474 -03 205094 -06	15	140	4.+4 4.+2 4. 0 4.-2 4.-4 4 DF	047397 -01 075967 -01 115656 -01 168219 -01 234692 -01 113807 -04
10	010	4.+4 4.+2 4. 0 4.-2 4.-4 4 DF	051961 -10 253526 -09 042317 -07 040887 -06 273850 -06 139609 -10	15	130	4.+4 4.+2 4. 0 4.-2 4.-4 4 DF	032537 -01 060275 -01 102831 -01 163447 -01 243860 -01 130948 -04
4	10	F	070503 -02				

TABLE 4 (cont.).

15	120	4.+4 4.+2 4. 0 4.-2 4.-4 4 DF	212253 -02 046009 -01 088315 -01 153263 -01 243425 -01 147719 -04		15	060	4.+4 4.+2 4. 0 4.-2 4.-4 4 DF	260935 -04 201511 -03 089836 -02 280346 -02 065745 -01 081711 -04
15	110	4.+4 4.+2 4. 0 4.-2 4.-4 4 DF	130558 -02 033556 -01 072802 -01 137931 -01 232456 -01 161220 -04		15	050	4.+4 4.+2 4. 0 4.-2 4.-4 4 DF	066342 -04 068356 -03 036690 -02 131496 -02 034296 -01 042628 -04
15	100	4.+4 4.+2 4. 0 4.-2 4.-4 4 DF	074914 -02 231600 -02 057087 -01 118208 -01 211048 -01 168042 -04		15	040	4.+4 4.+2 4. 0 4.-2 4.-4 4 DF	106097 -05 151396 -04 100948 -03 042987 -02 129571 -02 138718 -05
15	090	4.+4 4.+2 4. 0 4.-2 4.-4 4 DF	039493 -02 149176 -02 042036 -01 095387 -01 180518 -01 164754 -04		15	030	4.+4 4.+2 4. 0 4.-2 4.-4 4 DF	072350 -06 151158 -05 132071 -04 070871 -03 263756 -03 171414 -06
15	080	4.+4 4.+2 4. 0 4.-2 4.-4 4 DF	187091 -03 087853 -02 285217 -02 071271 -01 143475 -01 148808 -04		15	020	4.+4 4.+2 4. 0 4.-2 4.-4 4 DF	070527 -08 238479 -07 303201 -06 229884 -05 119802 -04 170985 -08
15	070	4.+4 4.+2 4. 0 4.-2 4.-4 4 DF	077006 -03 045844 -02 173206 -02 048053 -01 103693 -01 119921 -04		15	010	4.+4 4.+2 4. 0 4.-2 4.-4 4 DF	062815 -13 044354 -11 107814 -10 154289 -09 153699 -08 043670 -14
					4	15	F	137004 -03

TABLE 4 (cont.).

20	180	4.+4	046509	-01		20	120	4.+4	053364	-02
		4.+2	046509	-01				4.+2	129383	-02
		4.+0	046509	-01				4.+0	276947	-02
		4.-2	046509	-01				4.-2	053600	-01
		4.-4	046509	-01				4.-4	095151	-01
		4 DF	083898	-05				4 DF	211429	-05
20	170	4.+4	036092	-01		20	110	4.+4	309141	-03
		4.+2	040768	-01				4.+2	090525	-02
		4.+0	045911	-01				4.+0	222772	-02
		4.-2	051553	-01				4.-2	047896	-01
		4.-4	057724	-01				4.-4	091928	-01
		4 DF	088163	-05				4 DF	237267	-05
20	160	4.+4	269427	-02		20	100	4.+4	165875	-03
		4.+2	034700	-01				4.+2	059493	-02
		4.+0	044142	-01				4.+0	169111	-02
		4.-2	055504	-01				4.-2	040424	-01
		4.-4	069032	-01				4.-4	083757	-01
		4 DF	100820	-05				4 DF	250045	-05
20	150	4.+4	193050	-02		20	090	4.+4	080985	-03
		4.+2	286372	-02				4.+2	036120	-02
		4.+0	041279	-01				4.+0	119268	-02
		4.-2	057977	-01				4.-2	031772	-01
		4.-4	079510	-01				4.-4	071115	-01
		4 DF	121344	-05				4 DF	242462	-05
20	140	4.+4	132338	-02		20	080	4.+4	035048	-03
		4.+2	228550	-02				4.+2	197659	-03
		4.+0	037453	-01				4.+0	076357	-02
		4.-2	058628	-01				4.-2	227746	-02
		4.-4	088083	-01				4.-4	055263	-01
		4 DF	148499	-05				4 DF	210149	-05
20	130	4.+4	086392	-02		20	070	4.+4	129165	-04
		4.+2	175705	-02				4.+2	093847	-03
		4.+0	032847	-01				4.+0	042819	-02
		4.-2	057206	-01				4.-2	144122	-02
		4.-4	093634	-01				4.-4	038203	-01
		4 DF	179875	-05				4 DF	155612	-05

TABLE 4 (cont.).

20	060	4.+4 4.+2 4. 0 4.-2 4.-4 4 DF	037988 -04 036342 -03 198474 -03 076352 -02 224092 -02 091220 -05	40	180	4.+4 4.+2 4. 0 4.-2 4.-4 4 DF	303399 -04 303399 -04 303399 -04 303399 -04 303399 -04 035702 -09
20	050	4.+4 4.+2 4. 0 4.-2 4.-4 4 DF	079651 -05 103050 -04 068701 -03 308332 -03 102473 -02 036799 -05	40	170	4.+4 4.+2 4. 0 4.-2 4.-4 4 DF	211188 -04 251338 -04 298127 -04 035250 -03 041552 -03 039850 -09
20	040	4.+4 4.+2 4. 0 4.-2 4.-4 4 DF	095839 -06 173795 -05 145900 -04 079001 -03 308584 -03 076651 -06	40	160	4.+4 4.+2 4. 0 4.-2 4.-4 4 DF	139991 -04 200293 -04 282638 -04 039381 -03 054233 -03 052582 -09
20	030	4.+4 4.+2 4. 0 4.-2 4.-4 4 DF	040784 -07 109432 -06 122022 -05 084497 -04 041357 -03 041407 -07	40	150	4.+4 4.+2 4. 0 4.-2 4.-4 4 D	088146 -04 153227 -04 257913 -04 042203 -03 067342 -03 074398 -09
20	020	4.+4 4.+2 4. 0 4.-2 4.-4 4 DF	154509 -10 067749 -08 111460 -07 110568 -06 076633 -05 069320 -10	40	140	4.+4 4.+2 4. 0 4.-2 4.-4 4 D	052495 -04 112092 -04 225587 -04 043206 -03 079290 -03 104932 -09
20	010	4.+4 4.+2 4. 0 4.-2 4.-4 4 DF	079460 -16 073528 -14 234677 -13 044463 -11 059043 -10 064283 -19	40	130	4.+4 4.+2 4. 0 4.-2 4.-4 4 DF	293803 -05 077934 -04 187926 -04 041997 -03 088066 -03 141289 -09
4	20	F	186996 -04				

TABLE 4 (cont.).

40	120	4.+4	153089	-05		40	060	4.+4	166222	-08
		4.+2	051033	-04				4.+2	284338	-07
		4.+0	147738	-04				4.+0	265304	-06
		4.-2	038421	-03				4.-2	174506	-05
		4.-4	091565	-03				4.-4	089123	-04
		4 DF	176419	-09				4 DF	137797	-10
40	110	4.+4	073280	-05		40	050	4.+4	169474	-09
		4.+2	310631	-05				4.+2	040296	-07
		4.+0	108180	-04				4.+0	047289	-06
		4.-2	032675	-03				4.-2	037540	-05
		4.-4	088143	-03				4.-4	225470	-05
		4 DF	198928	-09				4 DF	171724	-11
40	100	4.+4	031611	-05		40	040	4.+4	068538	-10
		4.+2	172453	-05				4.+2	233354	-09
		4.+0	072419	-04				4.+0	035454	-07
		4.-2	253821	-04				4.-2	035058	-06
		4.-4	077316	-03				4.-4	256221	-06
		4 DF	196321	-09				4 DF	051429	-12
40	090	4.+4	119473	-06		40	030	4.+4	046235	-12
		4.+2	084930	-05				4.+2	236637	-11
		4.+0	043137	-04				4.+0	049017	-09
		4.-2	175559	-04				4.-2	063849	-08
		4.-4	060368	-03				4.-4	060273	-07
		4 DF	162491	-09				4 DF	086413	-15
40	080	4.+4	037921	-06		40	020	4.+4	041591	-16
		4.+2	035586	-05				4.+2	035205	-14
		4.+0	219595	-05				4.+0	110329	-13
		4.-2	104070	-04				4.-2	211414	-12
		4.-4	040498	-03				4.-4	289426	-11
		4 DF	105891	-09				4 DF	098003	-21
40	070	4.+4	094594	-07		40	010	4.+4	246533	-28
		4.+2	118867	-06				4.+2	044578	-25
		4.+0	089716	-05				4.+0	277783	-24
		4.-2	049816	-04				4.-2	103923	-22
		4.-4	220773	-04				4.-4	276001	-21
		4 DF	049189	-09				4 DF	140124	-40
					4	40	F		120367	-08

Table 5.  $df_{M1}(\vartheta, \xi)/d\Omega$  and  $f_{M1}(\xi)$ .

01	180	1 DF	000000 -27	02	180	1 DF	000000 -27
01	170	1 DF	106260 -02	02	170	1 DF	083078 -02
01	160	1 DF	043919 -01	02	160	1 DF	034285 -01
01	150	1 DF	104407 -01	02	150	1 DF	081286 -01
01	140	1 DF	200642 -01	02	140	1 DF	155601 -01
01	130	1 DF	034703 00	02	130	1 DF	267700 -01
01	120	1 DF	056721 00	02	120	1 DF	043445 00
01	110	1 DF	090000 00	02	110	1 DF	068304 00
01	100	1 DF	141058 00	02	100	1 DF	105781 00
01	090	1 DF	221172 00	02	090	1 DF	163289 00
01	080	1 DF	350625 00	02	080	1 DF	253560 00
01	070	1 DF	056771 01	02	070	1 DF	399202 00
01	060	1 DF	094921 01	02	060	1 DF	064178 01
01	050	1 DF	166093 01	02	050	1 DF	106018 01
01	040	1 DF	309626 01	02	040	1 DF	180545 01
01	030	1 DF	063040 02	02	030	1 DF	313784 01
01	020	1 DF	144206 02	02	020	1 DF	051403 02
01	010	1 DF	334450 02	02	010	1 DF	410923 01
1	01	F	222970 02	1	02	F	082765 02

TABLE 5 (cont.).

03	180	1 DF	000000 -27	04	180	1 DF	000000 -27
03	170	1 DF	060442 -02	04	170	1 DF	041920 -02
03	160	1 DF	249003 -02	04	160	1 DF	172387 -02
03	150	1 DF	058860 -01	04	150	1 DF	040623 -01
03	140	1 DF	112180 -01	04	140	1 DF	077075 -01
03	130	1 DF	191846 -01	04	130	1 DF	130997 -01
03	120	1 DF	308898 -01	04	120	1 DF	209201 -01
03	110	1 DF	048065 00	04	110	1 DF	032206 00
03	100	1 DF	073448 00	04	100	1 DF	048534 00
03	090	1 DF	111412 00	04	090	1 DF	072294 00
03	080	1 DF	169049 00	04	080	1 DF	107088 00
03	070	1 DF	257962 00	04	070	1 DF	158188 00
03	060	1 DF	397040 00	04	060	1 DF	232701 00
03	050	1 DF	061551 01	04	050	1 DF	337749 00
03	040	1 DF	094939 01	04	040	1 DF	470261 00
03	030	1 DF	139036 01	04	030	1 DF	057740 01
03	020	1 DF	159669 01	04	020	1 DF	461165 00
03	010	1 DF	422415 00	04	010	1 DF	039816 00
1	03	F	371930 01	1	04	F	180858 01

TABLE 5 (cont.).

05	180	1 DF	000000 -27	06	180	1 DF	000000 -27
05	170	1 DF	280887 -03	06	170	1 DF	183350 -03
05	160	1 DF	115300 -02	06	160	1 DF	075128 -02
05	150	1 DF	270872 -02	06	150	1 DF	175956 -02
05	140	1 DF	051159 -01	06	140	1 DF	033082 -01
05	130	1 DF	086410 -01	06	130	1 DF	055533 -01
05	120	1 DF	136860 -01	06	120	1 DF	087233 -01
05	110	1 DF	208429 -01	06	110	1 DF	131426 -01
05	100	1 DF	309711 -01	06	100	1 DF	192560 -01
05	090	1 DF	045291 00	06	090	1 DF	276449 -01
05	080	1 DF	065472 00	06	080	1 DF	038995 00
05	070	1 DF	093576 00	06	070	1 DF	053915 00
05	060	1 DF	131468 00	06	060	1 DF	072322 00
05	050	1 DF	178463 00	06	050	1 DF	091775 00
05	040	1 DF	223957 00	06	040	1 DF	103724 00
05	030	1 DF	230018 00	06	030	1 DF	089005 00
05	020	1 DF	127299 00	06	020	1 DF	034067 00
05	010	1 DF	035644 -01	06	010	1 DF	308359 -03
1	05	F	090523 01	1	06	F	460313 00

TABLE 5 (cont.).

07	180	1 DF	000000 -27	08	180	1 DF	000000 -27
07	170	1 DF	117243 -03	08	170	1 DF	073733 -03
07	160	1 DF	047956 -02	08	160	1 DF	301074 -03
07	150	1 DF	111978 -02	08	150	1 DF	070090 -02
07	140	1 DF	209601 -02	08	140	1 DF	130620 -02
07	130	1 DF	034968 -01	08	130	1 DF	216602 -02
07	120	1 DF	054483 -01	08	120	1 DF	033476 -01
07	110	1 DF	081209 -01	08	110	1 DF	049370 -01
07	100	1 DF	117328 -01	08	100	1 DF	070344 -01
07	090	1 DF	165371 -01	08	090	1 DF	097348 -01
07	080	1 DF	227632 -01	08	080	1 DF	130770 -01
07	070	1 DF	304448 -01	08	070	1 DF	169197 -01
07	060	1 DF	038987 00	08	060	1 DF	206856 -01
07	050	1 DF	046239 00	08	050	1 DF	229276 -01
07	040	1 DF	047049 00	08	040	1 DF	209991 -01
07	030	1 DF	033709 00	08	030	1 DF	125577 -01
07	020	1 DF	089140 -01	08	020	1 DF	229276 -02
07	010	1 DF	260324 -04	08	010	1 DF	215790 -05
1	07	F	236791 00	1	08	F	122911 00

TABLE 5 (cont.).

09	180	1 DF	000000 -27	10	180	1 DF	000000 -27
09	170	1 DF	045736 -03	10	170	1 DF	280426 -04
09	160	1 DF	186436 -03	10	160	1 DF	114120 -03
09	150	1 DF	043275 -02	10	150	1 DF	264133 -03
09	140	1 DF	080299 -02	10	140	1 DF	048802 -02
09	130	1 DF	132363 -02	10	130	1 DF	079972 -02
09	120	1 DF	202944 -02	10	120	1 DF	121653 -02
09	110	1 DF	296171 -02	10	110	1 DF	175700 -02
09	100	1 DF	041620 -01	10	100	1 DF	243554 -02
09	090	1 DF	056559 -01	10	090	1 DF	032504 -01
09	080	1 DF	074154 -01	10	080	1 DF	041598 -01
09	070	1 DF	092824 -01	10	070	1 DF	050383 -01
09	060	1 DF	108348 -01	10	060	1 DF	056153 -01
09	050	1 DF	112234 -01	10	050	1 DF	054364 -01
09	040	1 DF	092522 -01	10	040	1 DF	040337 -01
09	030	1 DF	046173 -01	10	030	1 DF	167975 -02
09	020	1 DF	058182 -02	10	020	1 DF	146050 -03
09	010	1 DF	176349 -06	10	010	1 DF	142489 -07
1	09	F	064248 00	1	10	F	033766 00

TABLE 5 (cont.).

12	180	1 DF	000000 -27		14	180	1 DF	000000 -27
12	170	1 DF	102478 -04		14	170	1 DF	036340 -04
12	160	1 DF	041568 -03		14	160	1 DF	146946 -04
12	150	1 DF	095671 -03		14	150	1 DF	033636 -03
12	140	1 DF	175300 -03		14	140	1 DF	061136 -03
12	130	1 DF	283969 -03		14	130	1 DF	097928 -03
12	120	1 DF	042533 -02		14	120	1 DF	144478 -03
12	110	1 DF	060184 -02		14	110	1 DF	200370 -03
12	100	1 DF	081203 -02		14	100	1 DF	263257 -03
12	090	1 DF	104562 -02		14	090	1 DF	032721 -02
12	080	1 DF	127547 -02		14	080	1 DF	038062 -02
12	070	1 DF	144682 -02		14	070	1 DF	040454 -02
12	060	1 DF	147056 -02		14	060	1 DF	037514 -02
12	050	1 DF	124390 -02		14	050	1 DF	277347 -03
12	040	1 DF	074779 -02		14	040	1 DF	135122 -03
12	030	1 DF	216808 -03		14	030	1 DF	272777 -04
12	020	1 DF	089718 -04		14	020	1 DF	053711 -05
12	010	1 DF	090607 -09		14	010	1 DF	056111 -11
1	12	F	094358 -01		1	14	F	266399 -02

TABLE 5 (cont.).

16	180	1 DF	000000 -27	18	180	1 DF	000000 -27
16	170	1 DF	125878 -05	18	170	1 DF	042787 -05
16	160	1 DF	050745 -04	18	160	1 DF	171978 -05
16	150	1 DF	115544 -04	18	150	1 DF	038957 -04
16	140	1 DF	208363 -04	18	140	1 DF	069716 -04
16	130	1 DF	033012 -03	18	130	1 DF	109279 -04
16	120	1 DF	047988 -03	18	120	1 DF	156567 -04
16	110	1 DF	065254 -03	18	110	1 DF	208807 -04
16	100	1 DF	083518 -03	18	100	1 DF	260438 -04
16	090	1 DF	100247 -03	18	090	1 DF	301990 -04
16	080	1 DF	111245 -03	18	080	1 DF	031982 -03
16	070	1 DF	110831 -03	18	070	1 DF	298792 -04
16	060	1 DF	093805 -03	18	060	1 DF	230902 -04
16	050	1 DF	060636 -03	18	050	1 DF	130541 -04
16	040	1 DF	239476 -04	18	040	1 DF	041804 -04
16	030	1 DF	033666 -04	18	030	1 DF	040935 -05
16	020	1 DF	031543 -06	18	020	1 DF	182500 -08
16	010	1 DF	034075 -13	18	010	1 DF	203828 -16
1	16	F	075696 -02	1	18	F	215998 -03

TABLE 5 (cont.).

20	180	1 DF	000000	-27		40	180	1 DF	000000	-27
20	170	1 DF	143199	-06		40	170	1 DF	154657	-11
20	160	1 DF	057391	-05		40	160	1 DF	060414	-10
20	150	1 DF	129357	-05		40	150	1 DF	130177	-10
20	140	1 DF	229764	-05		40	140	1 DF	216031	-10
20	130	1 DF	035639	-04		40	130	1 DF	304317	-10
20	120	1 DF	050338	-04		40	120	1 DF	037646	-09
20	110	1 DF	065864	-04		40	110	1 DF	041144	-09
20	100	1 DF	080081	-04		40	100	1 DF	039221	-09
20	090	1 DF	089734	-04		40	090	1 DF	031601	-09
20	080	1 DF	090729	-04		40	080	1 DF	203488	-10
20	070	1 DF	079509	-04		40	070	1 DF	095224	-10
20	060	1 DF	056119	-04		40	060	1 DF	274716	-11
20	050	1 DF	277573	-05		40	050	1 DF	036084	-11
20	040	1 DF	072095	-05		40	040	1 DF	116550	-13
20	030	1 DF	049180	-06		40	030	1 DF	215673	-16
20	020	1 DF	104341	-09		40	020	1 DF	273796	-22
20	010	1 DF	120473	-18		40	010	1 DF	044078	-40
1	20	F	061814	-03		1	40	F	240355	-09

Table 6.  $df_{M^2}(\vartheta, \xi)/d\Omega$  and  $f_{M^2}(\xi)$ .

02	180	2 DF	000000 -27	04	180	2 DF	000000 -27
02	170	2 DF	042308 -03	04	170	2 DF	266256 -04
02	160	2 DF	172372 -03	04	160	2 DF	108455 -03
02	150	2 DF	039991 -02	04	150	2 DF	251510 -03
02	140	2 DF	074225 -02	04	140	2 DF	046638 -02
02	130	2 DF	122602 -02	04	130	2 DF	076912 -02
02	120	2 DF	189007 -02	04	120	2 DF	118243 -02
02	110	2 DF	278950 -02	04	110	2 DF	173727 -02
02	100	2 DF	040017 -01	04	100	2 DF	247450 -02
02	090	2 DF	056348 -01	04	090	2 DF	034457 -01
02	080	2 DF	078383 -01	04	080	2 DF	047113 -01
02	070	2 DF	108157 -01	04	070	2 DF	063291 -01
02	060	2 DF	148321 -01	04	060	2 DF	083185 -01
02	050	2 DF	201904 -01	04	050	2 DF	105591 -01
02	040	2 DF	270735 -01	04	040	2 DF	125253 -01
02	030	2 DF	034824 00	04	030	2 DF	126858 -01
02	020	2 DF	038710 00	04	020	2 DF	080340 -01
02	010	2 DF	186133 -01	04	010	2 DF	052549 -02
2	02	F	123315 00	2	04	F	057738 00

TABLE 6 (cont.).

06	180	2 DF	000000	-27	08	180	2 DF	000000	-27
06	170	2 DF	142492	-04	08	170	2 DF	068513	-04
06	160	2 DF	058032	-03	08	160	2 DF	278989	-04
06	150	2 DF	134516	-03	08	150	2 DF	064637	-03
06	140	2 DF	249181	-03	08	140	2 DF	119596	-03
06	130	2 DF	041008	-02	08	130	2 DF	196348	-03
06	120	2 DF	062814	-02	08	120	2 DF	299419	-03
06	110	2 DF	091719	-02	08	110	2 DF	043391	-02
06	100	2 DF	129344	-02	08	100	2 DF	060452	-02
06	090	2 DF	177316	-02	08	090	2 DF	081321	-02
06	080	2 DF	236653	-02	08	080	2 DF	105440	-02
06	070	2 DF	306279	-02	08	070	2 DF	130582	-02
06	060	2 DF	037976	-01	08	060	2 DF	151303	-02
06	050	2 DF	043885	-01	08	050	2 DF	157089	-02
06	040	2 DF	044376	-01	08	040	2 DF	132924	-02
06	030	2 DF	033359	-01	08	030	2 DF	072262	-02
06	020	2 DF	109145	-02	08	020	2 DF	117712	-03
06	010	2 DF	082161	-04	08	010	2 DF	096807	-06
2	06	F	239060	-01	2	08	F	091953	-01

TABLE 6 (cont.).

10	180	2 DF	000000 -27	15	180	2 DF	000000 -27
10	170	2 DF	305357 -05	15	170	2 DF	032481 -05
10	160	2 DF	124326 -04	15	160	2 DF	132205 -05
10	150	2 DF	287902 -04	15	150	2 DF	305712 -05
10	140	2 DF	053199 -03	15	140	2 DF	056273 -04
10	130	2 DF	087099 -03	15	130	2 DF	091384 -04
10	120	2 DF	132146 -03	15	120	2 DF	136593 -04
10	110	2 DF	189862 -03	15	110	2 DF	191408 -04
10	100	2 DF	260891 -03	15	100	2 DF	252846 -04
10	090	2 DF	034356 -02	15	090	2 DF	031359 -03
10	080	2 DF	043134 -02	15	080	2 DF	036010 -03
10	070	2 DF	050891 -02	15	070	2 DF	037224 -03
10	060	2 DF	054783 -02	15	060	2 DF	032880 -03
10	050	2 DF	050712 -02	15	050	2 DF	224609 -04
10	040	2 DF	035553 -02	15	040	2 DF	096348 -04
10	030	2 DF	137960 -03	15	030	2 DF	156840 -05
10	020	2 DF	110003 -04	15	020	2 DF	203064 -07
10	010	2 DF	096673 -08	15	010	2 DF	064045 -13
2	10	F	033775 -01	2	15	F	243260 -03

TABLE 6 (cont.).

20	180	2 DF	000000	-27	40	180	2 DF	000000	-27
20	170	2 DF	282341	-07	40	170	2 DF	062438	-11
20	160	2 DF	114878	-06	40	160	2 DF	253590	-11
20	150	2 DF	265204	-06	40	150	2 DF	058046	-10
20	140	2 DF	048596	-05	40	140	2 DF	103979	-10
20	130	2 DF	078170	-05	40	130	2 DF	159713	-10
20	120	2 DF	114848	-05	40	120	2 DF	216451	-10
20	110	2 DF	156442	-05	40	110	2 DF	259199	-10
20	100	2 DF	197778	-05	40	100	2 DF	269807	-10
20	090	2 DF	229719	-05	40	090	2 DF	235944	-10
20	080	2 DF	239588	-05	40	080	2 DF	163571	-10
20	070	2 DF	215200	-05	40	070	2 DF	081635	-10
20	060	2 DF	154470	-05	40	060	2 DF	248540	-11
20	050	2 DF	076992	-05	40	050	2 DF	034062	-11
20	040	2 DF	199422	-06	40	040	2 DF	113408	-13
20	030	2 DF	134076	-07	40	030	2 DF	213583	-16
20	020	2 DF	276700	-10	40	020	2 DF	272262	-22
20	010	2 DF	306302	-19	40	010	2 DF	043392	-40
2	20	F	156189	-04	2	40	F	156007	-09