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Analytical Development of the Planetary Disturbing Function on a Digital Computer

by

I. G. Izsak, B. Benima, and Sara B. Mills

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ANALYTICAL DEVELOPMENT OF THE PLANETARY DISTURBING FUNCTION ON A DIGITAL COMPUTER

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I. G. Izsak, B. Benima, and Sara B. Mills

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TABLE OF CONTENTS

ANALYTICAL DEVELOPMENT OF THE PLANETARY DISTURBING FUNCTION ON A DIGITAL COMPUTER[1]

by

I. G. Izsak,[2] B. Benima,[3] and Sara B. Mills[3]

Introduction

The purpose of this report is to describe our recently completed IBM 7094 computer program for the analytical development of the planetary disturbing function. Our reason for undertaking this work and the mathematics of the program has already been documented in sufficient detail (Izsak and Benima, 1963; Izsak, Gerard, Efimba, and Barnett, 1964) We are now concerned with implementing the construction of a powerful computational tool that has various applications in celestial mechanics.

A few equations have to be added to those given in SAO Special Report No. 140, and their numbering is continued in this report. There will be a small change in notation. The choice of the indices m_1 and m_2 in the series (30) and in related formulas was unfortunate inasmuch as the same symbols were used to denote the masses of the planets. In this report these indices are marked with s_1 and s_2. The adopted expansion of the Jacobi coefficients is the classical one (12). In order to assure greater flexibility, our program does not use equations (28) and (29). Instead, the complementary part of the disturbing function is obtained separately from the principal one as follows.

The planetary disturbing function takes slightly different forms depending on the chosen coordinates in the basic differential equations of motion. Such a choice also affects the most convenient definition of orbital elements. Three possibilities of distinct advantage offer themselves: conventional relative coordinates, canonical relative coordinates, and Jacobi's canonical coordinates (Charlier, 1927). Only the first two will be considered here.

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[1]This work was supported in part by grant number NsG 87/60 from the National Aeronautics and Space Administration.

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Working with conventional relative coordinates, we need for the perturbations of an inner planet by an outer one the function

$$R = Gm_2 a_2^{-1} \{ a_2 \Delta^{-1} - a_2 r_1 r_2^{-2} \cos \Phi \} ,$$

and for the perturbations of an outer planet by an inner one

$$R = Gm_1 a_2^{-1} \{ a_2 \Delta^{-1} - a_2 r_2 r_1^{-2} \cos \Phi \} ,$$

where $\Delta = (r_1^2 + r_2^2 - 2r_1 r_2 \cos \Phi)^{\frac{1}{2}}$ denotes the mutual distance of the planets, and the expressions in curly brackets are dimensionless. Let us introduce the auxiliary function

$$\rho = \frac{r_1 r_2}{a_1 a_2} \cos \Phi \; ; \tag{68}$$

then we can write

$$- a_2 r_1 r_2^{-2} \cos \Phi = \frac{a_1}{a_2} \frac{\partial^2 \rho}{\partial M_2^2} \quad \text{and} \quad - a_2 r_2 r_1^{-2} \cos \Phi = \left(\frac{a_2}{a_1}\right)^2 \frac{\partial^2 \rho}{\partial M_1^2} .$$

Working with canonical relative coordinates (Poincaré, 1897), we find again $a_2 \Delta^{-1}$ as the (dimensionless) principal part of the disturbing function. The complementary part, however, turns out to be

$$- \frac{m_0 \sqrt{a_2/a_1}}{\sqrt{m_0 + m_1} \sqrt{m_0 + m_2}} \frac{\partial^2 \rho}{\partial M_1 \, \partial M_2} ,$$

where m_0 stands for the mass of the Sun. This function is the same for the perturbations of the inner and outer planets.

To sum up, the elaboration of a planetary perturbation theory requires in either of these cases the development of the functions $a_2 \Delta^{-1}$ and ρ into a multiple Fourier series.

1. The principal part

In analogy with equation (31), the development of the function $a_2\Delta^{-1}$ is of the form

$$a_2\Delta^{-1} = \sum_{-\infty}^{\infty}\sum_{-\infty}^{\infty}\sum_{-\infty}^{\infty}\sum_{-\infty}^{\infty} c_{j_1 j_2 k\ell} \cos[j_1 M_1 + j_2 M_2 + (k+\ell)\lambda_1 - (k-\ell)\lambda_2] , \qquad (31')$$

whose arguments can also be written as

$$i_1\lambda_1 + i_2\lambda_2 - j_1\omega_1 - j_2\omega_2 ,$$

where

$$i_1 = j_1 + k + \ell \quad \text{and} \quad i_2 = j_2 - k + \ell .$$

The coefficients $c_{j_1 j_2 k\ell}$ of the above trigonometric series in turn are power series in the elements e_1, e_2, and $\nu = \sin^2(J/2)$. Their general expressions by means of Laplace coefficients and Newcomb operators were derived in Special Report No. 140. For the sake of easy reference we repeat here some of the equations used in their computation:

$$c_{j_1 j_2 k\ell} = c_{-j_1, -j_2, -k, -\ell} = \sum_{s_1}\sum_{s_2} c_{j_1 j_2 k\ell}^{s_1 s_2}\, e_1^{s_1} e_2^{s_2} , \qquad (30')$$

the summations being extended over all values of the indices s_1 and s_2 for which

$$s_1 = |j_1| + 2h_1 , \quad s_2 = |j_2| + 2h_2 ,$$

and

$$c_{j_1 j_2 k\ell}^{s_1 s_2} = \prod_{j_1 j_2}^{s_1 s_2}(D|k,\ell)\; b_{k\ell}(\alpha) ; \qquad (27')$$

the combined Newcomb operators are defined by

$$\prod_{j_1 j_2}^{s_1 s_2}(D|k,\ell) = \prod_{j_1}^{s_1}(D|k+\ell) \cdot \prod_{j_2}^{s_2}(D|-k+\ell) ; \qquad (26')$$

$\alpha = a_1/a_2$, $b_{k\ell}(\alpha) = b_{|k||\ell|}(\alpha)$, and for $\ell \geq 0$ the expansion of the Jacobi coefficients in terms of Laplace coefficients is given by

$$b_{k\ell}(\alpha) = \sum_{m} (-1)^m \, \nu^{\ell+m} \, b_{k\ell m}(\alpha) \ ,$$

where (12)

$$b_{k\ell m}(\alpha) = \begin{bmatrix} \frac{1}{2} \\ \ell+m \end{bmatrix} \sum_{j=0}^{m} \binom{\ell+m}{j} \binom{\ell+m}{m-j} b_{k+m-2j}^{\frac{1}{2}+\ell+m} \ .$$

In other words, we have

$$c_{j_1 j_2 k\ell} = \sum_{s_1} \sum_{s_2} \sum_{s} c_{j_1 j_2 k\ell}^{s_1 s_2 s} \, e_1^{s_1} e_2^{s_2} \nu^{s} \tag{69}$$

with

$$s = \ell + m \quad \text{and}$$

$$c_{j_1 j_2 k\ell}^{s_1 s_2 s} = (-1)^m \prod_{j_1 j_2}^{s_1 s_2} (D|k,\ell) \, b_{k\ell m}(\alpha) \ . \tag{70}$$

2. The complementary part

There is not much to say about the analytical development of such a simple function as ρ. It is easily obtained from the definition of Hansen coefficients by the expansion (32).

The general form

$$\rho = \sum_{-\infty}^{\infty} \sum_{-\infty}^{\infty} \sum_{k,\ell} \gamma_{j_1 j_2 k\ell} \cos[j_1 M_1 + j_2 M_2 + (k+\ell)\lambda_1 - (k-\ell)\lambda_2] \tag{71}$$

of this development is the same as (31′). But because in (68)

$$\cos \Phi = \mu \cos (u_1 - u_2) + \nu \cos (u_1 + u_2) \ , \tag{72}$$

$$(r_1/a_1) \exp iu_1 = \sum_{-\infty}^{\infty} X_{j_1+1}^{1,1} z_1^{j_1} \zeta_1 \quad \text{and} \quad (r_2/a_2) \exp iu_2 = \sum_{-\infty}^{\infty} X_{j_2+1}^{1,1} z_2^{j_2} \zeta_2 \ ,$$

only the following combinations of the indices k,ℓ occur:

$$(k,\ell) = (1,0),\ (-1,0),\ (0,1),\ (0,-1)\ .$$

The coefficients $\gamma_{j_1 j_2 k\ell}$ are

$$\gamma_{j_1 j_2 10} = \gamma_{-j_1,-j_2,-1,0} = \frac{\mu}{2} X^{1,1}_{j_1+1} X^{1,-1}_{j_2-1}$$

$$\gamma_{j_1 j_2 01} = \gamma_{-j_1,-j_2,0,-1} = \frac{\nu}{2} X^{1,1}_{j_1+1} X^{1,1}_{j_2+1}\ .$$

Thus using the definition

$$X^{n,k}_{j+k}(e) = \sum_m \prod^m_j (n|k)\ e^m$$

of the Newcomb "operators," we find the expansions

$$\begin{aligned} 2\gamma_{j_1 j_2 10} &= \sum_{s_1} \sum_{s_2} \gamma^{s_1 s_2 0}_{j_1 j_2 10}\ e_1^{s_1} e_2^{s_2} + \sum_{s_1} \sum_{s_2} \gamma^{s_1 s_2 1}_{j_1 j_2 10}\ e_1^{s_1} e_2^{s_2} \nu \\ 2\gamma_{j_1 j_2 01} &= \sum_{s_1} \sum_{s_2} \gamma^{s_1 s_2 1}_{j_1 j_2 01}\ e_1^{s_1} e_2^{s_2} \nu\ , \end{aligned} \tag{73}$$

where

$$\begin{aligned} \gamma^{s_1 s_2 0}_{j_1 j_2 10} &= -\gamma^{s_1 s_2 1}_{j_1 j_2 10} = \prod^{s_1}_{j_1} (1|1) \prod^{s_2}_{j_2} (1|-1) \\ \gamma^{s_1 s_2 1}_{j_1 j_2 01} &= \prod^{s_1}_{j_1} (1|1) \prod^{s_2}_{j_2} (1|1)\ . \end{aligned} \tag{74}$$

Then the coefficients in the Fourier series of the (dimensionless) complementary part of the disturbing function are

$$-\alpha\, i_2 i_2\, \gamma_{j_1 j_2 k \ell} \quad \text{and} \quad -\alpha^{-2}\, i_1 i_1\, \gamma_{j_1 j_2 k \ell}$$

for conventional relative coordinates,

and (75)

$$\frac{m_0\, \alpha^{-\frac{1}{2}}}{\sqrt{m_0 + m_1}\,\sqrt{m_0 + m_2}}\; i_1 i_2\, \gamma_{j_1 j_2 k \ell}$$

for canonical relative coordinates.

From now on we assume that the principal and complementary parts of the disturbing function have been merged. That is, the c-coefficients are supposed to have been modified so as to include the contribution of the γ-coefficients.

3. The pattern of indices

Once the mathematics of the developments (31′) and (75) is formulated and the several required subroutines are all coded, our problem consists of organizing the latter into an efficient unity.

The ultimate building elements of the disturbing function depend on seven indices. Each of these indices $j_1, j_2, k, \ell, s_1, s_2, s$ has a theoretically infinite range. In practical applications, of course, the relevant expansions have to be limited to a finite, although sometimes a very large number of terms. Various circumstances can be used with advantage.

The coefficients $c_{j_1 j_2 k \ell}$ of our quadruple Fourier series contain the factor $e_1^{|j_1|}\, e_2^{|j_2|}\, \nu^{|\ell|}$. As e_1, e_2, and $\nu^{\frac{1}{2}}$ are small quantities of usually comparable order of magnitude, it is natural to limit the development to those values of the indices, j_1, j_2, and ℓ, for which

$$p = |j_1| + |j_2| + 2|\ell| ,$$

called the <u>rank</u> of a term, does not exceed a certain preassigned integer P.

Similarly, with the expansion (69) we associate the integers

$$q = s_1 + s_2 + 2s \le Q ,$$

and call them the <u>degree</u> of a coefficient $c^{s_1 s_2 s}_{j_1 j_2 k \ell}$. Note that $q - p = 2r$ is always a nonnegative even integer. Needless to say, the proper limits P and Q depend largely on the pair of planets under consideration.

In general, the Laplace coefficients and their derivatives decrease with increasing absolute values of the index k. Moreover, the integration of the Fourier series derived from (31′) introduces divisors that, as a rule, slowly increase at the same time. (Long-period terms with small divisors constitute a notable exception to this rule. Like the secular terms, they must be treated with special care.) Thus we may also impose a condition $|k| \le K$.

Due to the symmetry in relation (30′), it is sufficient to compute the terms of the disturbing function the indices of which are

$j_1 = 0$	$j_2 = 0$	$\ell = 0$	$(p = 0)$	$k = 0$
$j_1 = 0$	$j_2 = 0$	$\ell = 0$	$(p = 0)$	$k = 1,\dots,K$
$j_1 > 0$	$j_2 = 0$	$\ell = 0$	$(p = j_1 = 0,\dots,P)$	$k = -K,\dots,K$
	$j_2 > 0$	$\ell = 0$	$(p = \|j_1\| + j_2 = 0,\dots P)$	$k = -K,\dots,K$
		$\ell > 0$	$(p = \|j_1\| + \|j_2\| + 2\ell = 0,\dots,P)$	$k = -K,\dots,K$

If the terms belonging to these indices are known, then the complete expression (31′) in the range $p \le P$, $|k| \le K$ is obtained by taking twice all the terms just specified, except the first one, which is a constant.

Let us give a concrete example. The 98 solutions of the inequality $|j_1|+|j_2|+ 2\ell \le 6$ in question are:

j_1	j_2	ℓ	j_1	j_2	ℓ	j_1	j_2	ℓ	j_1	j_2	ℓ
0	0	0	0	4	0	0	3	1	4	0	1
			-1	3	0	-1	2	1	3	1	1
1	0	0	-2	2	0	-2	1	1	2	2	1
0	1	0	-3	1	0	-3	0	1	1	3	1
			2	0	1	-2	-1	1	0	4	1
2	0	0	1	1	1	-1	-2	1	-1	3	1
1	1	0	0	2	1	0	-3	1	-2	2	1
0	2	0	-1	1	1	1	-2	1	-3	1	1
-1	1	0	-2	0	1	2	-1	1	-4	0	1
0	0	1	-1	-1	1	1	0	2	-3	-1	1
			0	-2	1	0	1	2	-2	-2	1
3	0	0	1	-1	1	-1	0	2	-1	-3	1
2	1	0	0	0	2	0	-1	2	0	-4	1
1	2	0							1	-3	1
0	3	0	5	0	0	6	0	0	2	-2	1
-1	2	0	4	1	0	5	1	0	3	-1	1
-2	1	0	3	2	0	4	2	0	2	0	2
1	0	1	2	3	0	3	3	0	1	1	2
0	1	1	1	4	0	2	4	0	0	2	2
-1	0	1	0	5	0	1	5	0	-1	1	2
0	-1	1	-1	4	0	0	6	0	-2	0	2
			-2	3	0	-1	5	0	-1	-1	2
4	0	0	-3	2	0	-2	4	0	0	-2	2
3	1	0	-4	1	0	-3	3	0	1	-1	2
2	2	0	3	0	1	-4	2	0	0	0	3
1	3	0	2	1	1	-5	1	0			
			1	2	1						

To find the appropriate indices s_1, s_2, s we recall that

$$s_1 = |j_1| + 2h_1, \quad s_2 = |j_2| + 2h_2, \quad \text{and} \quad s = \ell + m,$$

so that

$$h_1 + h_2 + m = r \leq \tfrac{1}{2}(Q-p) .$$

For example, corresponding to the choice P = 6 and Q = 8, we get:

$p = 0$
$r = 4$

h_1	h_2	m
0	0	0
1	0	0
0	1	0
2	0	0
1	1	0
0	2	0
3	0	0
2	1	0
1	2	0
0	3	0
4	0	0
3	1	0
2	2	0
1	3	0
0	4	0
0	0	1
1	0	1
0	1	1
2	0	1
1	1	1
0	2	1
3	0	1
2	1	1
1	2	1
0	3	1
0	0	2
1	0	2
0	1	2
2	0	2
1	1	2
0	2	2
0	0	3
1	0	3
0	1	3
0	0	4

$p = 1, 2$
$r = 3$

h_1	h_2	m
0	0	0
1	0	0
0	1	0
2	0	0
1	1	0
0	2	0
3	0	0
2	1	0
1	2	0
0	3	0
0	0	1
1	0	1
0	1	1
2	0	1
1	1	1
0	2	1
0	0	2
1	0	2
0	1	2
0	0	3

$p = 3, 4$
$r = 2$

h_1	h_2	m
0	0	0
1	0	0
0	1	0
2	0	0
1	1	0
0	2	0
0	0	1
1	0	1
0	1	1
0	0	2

$p = 5, 6$
$r = 1$

h_1	h_2	m
0	0	0
1	0	0
0	1	0
0	0	1

The size of the individual coefficients is in reality much less regular than the foregoing general remarks would seem to indicate. Human judgment as to which terms should be kept and which neglected is here probably preferable to computer-made decisions. The efficient use of the present program is facilitated by the following features. First, for each combination of the j_1, j_2, ℓ indices we specify separately the degree q of the coefficients to be retained, as well as an interval $\underline{k} \le k \le \bar{k}$ of the index k. Second, the program can be run in two modes, namely either to compute the coefficients $c^{s_1 s_2 s}_{j_1 j_2 k \ell}$, or to evaluate the monomials $c^{s_1 s_2 s}_{j_1 j_2 k \ell}\, e_1^{s_1} e_2^{s_2} \nu^{s}$. This way we get a fair idea about the convergence of the analytical development of the disturbing function in any particular case. Third, the effect of the divisors of integration is also exhibited. We shall say more about the program in Part 4.

Since the quantities n_1, n_2 are the mean motions of the two planets, the angular frequency of a term in the Fourier series (31′) is approximately $i_1 n_1 + i_2 n_2$. It is therefore of interest to know which indices j_1, j_2, k, ℓ can give rise to a certain combination

$$i_1 = j_1 + k + \ell \quad \text{and} \quad i_2 = j_2 - k + \ell \,.$$

These relations are equivalent to

$$j_1 + j_2 + 2\ell = i_1 + i_2 \,, \tag{76}$$

$$j_1 - j_2 + 2k = i_1 - i_2 \,. \tag{77}$$

For a given pair of indices i_1, i_2 equation (76) has an infinite number of solutions. But we are interested only in solutions with rank $p \le P$, and these are finite in number. Indeed, the indices j_1, j_2, ℓ satisfying the conditions (76) and $|j_1|+|j_2|+2|\ell| \le P$ are:

$$\ell = -[v/2], \ \ldots\ , [u/2]-1, [u/2] \,,$$

$$(j_1, j_2) = ([u]-2\ell, -[v]) \,, \ \ldots\ , (-[v], [u]-2\ell) \qquad \text{if } \ell \ge 0,$$

$$(j_1, j_2) = ([u], -[v]-2\ell) \,, \ \ldots\ , (-[v]-2\ell, [u]) \qquad \text{if } \ell < 0,$$

with

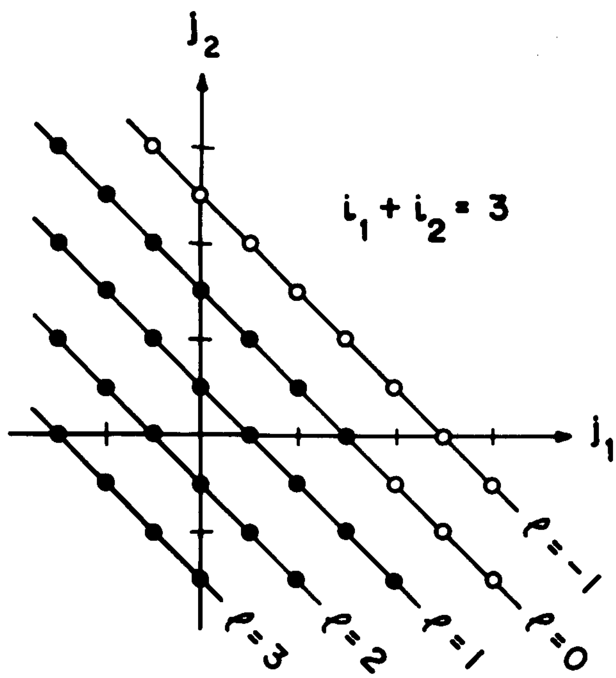
$$u = \tfrac{1}{2}(P+i_1+i_2) \ge 0 \quad \text{and} \quad v = \tfrac{1}{2}(P-i_1-i_2) \ge 0 \,.$$

Once a pair (j_1, j_2) has properly been chosen, the value of the index k is determined by equation (77). It is sufficient to obtain the quadruples (j_1, j_2, k, ℓ) under the condition $i_1 + i_2 \geq 0$; whenever the convention adopted on p. 7 is violated, we simply change signs, except in the case $i_1 + i_2 = 0$, where the quadruples violating our convention can be disregarded.

As an example, let us consider the great inequality in the theories of Jupiter and Saturn associated with the arguments

$$-2\lambda_1 + 5\lambda_2 - j_1\omega_1 - j_2\omega_2 \,.$$

Due to their small divisors, such terms of the disturbing function must be carried up to an exceptionally high rank. Put P = 9, so that u = 6, v = 3. The appropriate solutions of equation (76) are exhibited in the following figure, where open circles indicate that the sign of the corresponding indices is to be changed.



4. The program

Introduction

The program is written in FORTRAN II for the IBM 7094 computer and double-precision arithmetic is used. It computes the coefficients $c^{s_1 s_2 s}_{j_1 j_2 k \ell}$ (70) of the Fourier expansion of the disturbing function by applying the combined Newcomb operators (see Special Report No. 140) to the Jacobi coefficients which are derived from the Laplace coefficients (see Special Report No.129). It also gives the first and second derivatives DC and D^2C, where $D = \alpha \frac{\partial}{\partial\alpha}$ and $C = c^{s_1 s_2 s}_{j_1 j_2 k \ell}$, and the fractions C/N, DC/N, and C/N^2, where $N = i_1 + \beta i_2$.

A second mode is provided that computes the monomials $c^{s_1 s_2 s}_{j_1 j_2 k\ell}\, e_1^{s_1} e_2^{s_2} \nu^s$ (69). The complementary parts are computed in conventional relative coordinates (inner or outer planets), or in canonical relative coordinates as specified by the user.

Program limitations

There are two versions of the program. The first and smaller version requires 13356 cells of lower core and 3341 cells of common storage. The limitations of this version are:

$|k| \le 15,\ \ell \ge 0$ for k and ℓ in $c^{s_1 s_2 s}_{j_1 j_2 k\ell}$,

the degree $q \le 8$,

the rank $p \le 6$.

The second version requires 15360 cells of lower core and 6305 cells of common storage. Here the limitations are:

$$|k| \le 20,\quad \ell \ge 0\ ,\quad q \le 10\ ,\quad \text{and}\quad p \le 9\ .$$

Method

First the Laplace coefficients $D^j b_k^{s+\frac{1}{2}}$ are computed and stored for later use. Next we generate the inner and outer Newcomb operators and store the coefficients of these polynomials. The program then reads in the parameters j_1, j_2, ℓ, the minimum and the maximum limits of k, and the degree q of the coefficients $c^{s_1 s_2 s}_{j_1 j_2 k\ell}$ we want to compute.

All possible combinations of s_1, s_2, and s for the given parameters j_1, j_2, ℓ, and q are computed and stored. Then for each k from k_{min} to k_{max} and for each combination of s_1, s_2, and s we recall from storage the corresponding inner and outer Newcomb operators $\prod^{s_1}_{j_1}$ and ${}^{s_2}_{j_2}\prod$ and evaluate them for the current values of $(k+\ell)$ and $(-k+\ell)$, respectively (26′). The two resulting polynomials in the differential operator D are multiplied together. The product polynomial is the combined operator $\prod^{s_1 s_2}_{j_1 j_2}$ (26′). Next the $b_{k\ell m}$ and all its required derivatives are determined for each new m. Finally we apply the combined operator to the $b_{k\ell m}$ (70).

If the $c_{j_1 j_2 k\ell}^{s_1 s_2 s}$ have to be evaluated for a very large number of indices, it is more efficient to compute all the possible combinations of the $b_{k\ell m}$ directly after the computation of the Laplace coefficients, storing them for later use. In the smaller version of the program this would require an extra 1200 locations.

Because of the symmetry $c_{j_1 j_2 k\ell} = c_{-j_1,-j_2,-k,-\ell}$ (30′) we evaluate only half of the coefficients and then multiply each of them by two except the c_{0000}. To avoid duplication, we adopt the convention that ℓ is always greater than or equal to zero and if $\ell = 0$ then $j_2 \geq 0$. If this convention is violated we simply reverse the signs of all four indices.

If $|k| + \ell = 1$ and the coefficients of the complementary parts in formula (75) are nonzero then we compute the complementary parts of the c-coefficients in the coordinates specified by the user in the input and add them to the principal parts. In these cases the printout is preceded by an asterisk.

Usage

The first data card should contain six control characters for the printing of intermediate results using the format (6I10). They control the printing of the Laplace coefficients, the inner and the outer J's, the inner and the outer X's (Special Report No. 140), and the time used by the program, in that order. A blank card will suppress the printing of all intermediate results.

Each group of input cards with indices must be preceded by a control card which indicates the mode and the choice of coordinates and gives the values of the program parameters. The first character on a control card should be either a 'C' for coefficients or a 'M' for monomials followed by a 1, 2, or 3 for conventional relative coordinates, inner or outer planet, or canonical relative coordinates, respectively. The values for $\alpha (0 < \alpha = a_1/a_2 < 1)$ and $\beta (0 < \beta = n_2/n_1 < 1)$ follow, and if monomials are requested, the values for e_1, e_2, and $\sqrt{\nu}$ (= sin J/2). Finally, if canonical relative coordinates were specified, m_0/m_1 and m_0/m_2. The control cards are in free-field format, and numerals are defined by a trailing blank.

This control card is followed by a group of parameter cards, each card containing j_1, j_2, ℓ, k_{min}, k_{max}, and q with a format of (6I10). For each j_1, j_2, k, and ℓ where k runs through all the integral values from k_{min} to k_{max}, all the combinations of s_1, s_2 and s such that $s_1 + s_2 + 2s \leq q$ are generated. For every set of indices s_1, s_2, s, j_1, j_2, k, ℓ, the coefficient $c^{s_1 s_2 s}_{j_1 j_2 k \ell}$, its first two Newcomb derivatives, and the fractions C/N, DC/N, and C/N^2 are evaluated and printed out. If the value for q is preceded by a minus sign on the input card, the printout will be suppressed.

To end a group of parameter cards a blank card is inserted. The program then reads a new control card for the next group of parameter cards. In order to terminate the program a card with a zero or a decimal point is placed directly after the blank card.

We shall now discuss the MAIN program and the subroutines that have not already been described in the Special Reports Nos. 129 and 140.

MAIN program

After the necessary initializations and the reading of the print-control card, the MAIN program reads the first control card into a buffer. The program will exit if the coordinate code number is zero. Hence a card with a zero or a decimal point in the place of a control card will terminate the program. A blank card may not be used since the numerals on the control card are read in a free-field format. If the coordinate code number is not zero, the first character of the control card image is read from the buffer. If this character is neither a 'M' or a 'C' an error message is returned and the program exits. If it is a 'C' the card is read for the second time from the buffer and α, β, m_1, and m_2 are picked up. For monomials, i.e., in case of a 'M', α, β, e_1, e_2, $\sqrt{\nu}$, m_1, and m_2 are read and the coordinate control code is set negative. The program then calls the subroutine MORCOE to compute and store the Laplace coefficients. If the first print control is greater than zero, the Laplace coefficients are printed out. Next the subroutine COMBOP is called to develop the inner and outer Newcomb operators and store them in two linear arrays. The appropriate headings are written according to the choice of coordinates. If the coordinate code is negative, i.e., if monomials were requested, the values of e_1, e_2, and ν are printed out and their powers are computed and stored.

The program now proceeds to read a parameter card with j_1, j_2, ℓ, k_{min}, k_{max}, and q using the format (6I10). Compliance with the program limitations is checked, and if not satisfied an error message is returned.

The subroutine INDEX finds and stores all possible combinations of s_1, s_2, and s for the given set of parameters. The program ends with a loop in which k is stepped up from k_{min} to k_{max}. For each k and each combination of s_1, s_2, and s the subroutine SOLVE is called to compute and print the $c_{j_1 j_2 k\ell}^{s_1 s_2 s}$.

The program then goes back and reads the next parameter card. If a blank parameter card is encountered, the page line count is reset and a new control card is read in. If the new α differs from the previous one, the Laplace coefficients are computed again for the new α.

MORCOE

The subroutine MORCOE first computes the Laplace coefficients for $s + \frac{1}{2} = \frac{1}{2}$ by calling LPLCOF. This program LPLCOF is described in detail in Special Report No. 129 and is used here essentially unchanged except for dimensions and storage arrangement.

All the results of LPLCOF are stored in the common area and are later overwritten by the results of the Newcomb operator program. MORCOE then computes the Laplace coefficients $D^j b_k^{s+\frac{1}{2}}$ from $s + \frac{1}{2} = 1\frac{1}{2}$ to $s + \frac{1}{2} = 4\frac{1}{2}$ by recursion and stores the results in lower core for later use by the BKLM program.

Using formula (16) in Special Report No. 129 we compute $D^j b_k^{s+\frac{1}{2}}$ for $s = 1, 2, 3, 4$, and $j = 0, \ldots, Q - 2s + 2$, first for $k = 0$ (taking $D^j b_{-1}^{s+\frac{1}{2}} = D^j b_1^{s+\frac{1}{2}}$) and then for $k = 1, \ldots, 19$ (smaller version).

COMBOP

The subroutine COMBOP constructs the inner and outer Newcomb operators and stores their coefficients for later use in two linear arrays AICM and ATEMP, respectively.

It does so by calling the Newcomb operator program written at M.I.T. and described in the second part of Special Report No. 140. We have adapted this program to fit our needs. We were mainly concerned with storage limitations and made some changes of which the more important are the following. The numbers in column 16 of array AICT on the bottom of page 30 (Special Report No. 140) were eliminated. This made it possible to store the coefficients of all inner and outer operators up to degree 8 in two arrays AICM and ATEMP each of only 625 double words. These two arrays occupy the same space in the common area that was used previously for all the intermediate results of the Laplace coefficients program. The PRINT routine was simplified, and INTVAL was eliminated. The routines GETAS, GETPSI, and BIGPSI are not needed for the present application. We added the routine OUTRJS which constructs the outer J's from the inner J's by substituting (-D-1) for D (page 14, Special Report No. 140) which is accomplished by the subroutine NSUBST. The outer J's are stored in ATEMP. The subroutines STORE and KEEP are combined to one routine and modified so that it now can service both arrays AICM and ATEMP. The subroutines TRANS and DIVIDE are similarly changed.

After calling GETJS, COMBOP calls OUTRJS and then twice GETXS, once with AICM as argument and the second time with ATEMP to produce the inner and outer X's. The X-arrays overwrite the J-arrays in storage.

Having generated and stored the Laplace coefficients and the inner and outer Newcomb operators, we are ready to enter the inner loop of the program which computes and prints the $c_{j_1 j_2 k \ell}^{s_1 s_2 s}$ for each set of indices.

OUTRJS

OUTRJS moves each inner J to the working array AICT with the subroutine TRANS, then converts it with NSUBST to the corresponding outer J and stores this outer J in the array ATEMP.

NSUBST

The subroutine NSUBST constructs each element of the outer J-array by multiplying each element of the same or higher degree in D in the same k-column of the inner J-array by the proper coefficient of the Pascal triangle, which triangle was stored during the development of the Newcomb operators, and by the proper alternating sign and then adding these products together.

INDEX

The subroutine INDEX generates all combinations of s_1, s_2, and s according to the scheme on page 8 and stores the resulting sets in a two-dimensional array. The routine consists of three loops. The total number of combinations s_1, s_2, and s for each set of indices is also returned to the MAIN program.

SOLVE

The subroutine SOLVE has two functions, the computation and the printing of the coefficients $c_{j_1 j_2 k \ell}^{s_1 s_2 s}$.

The format for the headings is constructed during execution time. The spacing of the coefficients of the cosine argument is handled by a subroutine FORMAT. If the divisor $N = i_1 + \beta i_2$ is zero, only the first half of the heading is printed and three columns instead of six are written out.

If $|k| + \ell = 1$ and the coefficients of the γ-components (75) belonging to the selected coordinate system are nonzero, then there will be a complementary part. The format is adjusted so that the heading is preceded by an asterisk and a flag is set for the computation of the complementary part. A running line count is kept lest the headings are split over two pages.

After the headings are written out, the coefficients are computed in a loop that is repeated for each combination of s_1, s_2, and s. The first time through the loop and each time m changes, the $b_{k\ell m}$ and its derivatives are evaluated by the subroutine BKLM from the Laplace coefficients. The appropriate combined Newcomb operator now is produced by the subroutine COMBIN in the form of a polynomial in D. The subroutine APPLY then applies this combined operator to the proper derivatives of $b_{k\ell m}$ to yield the $c_{j_1 j_2 k\ell}^{s_1 s_2 s}$ (70), the $Dc_{j_1 j_2 k\ell}^{s_1 s_2 s}$, and the $D^2 c_{j_1 j_2 k\ell}^{s_1 s_2 s}$. Because of the symmetry in (30′) the coefficients are doubled except for the $c_{0000}^{s_1 s_2 s}$ and then divided by N and N^2.

If the flag for a complementary part is set, the value of s is checked. If s is greater than one, the flag is erased. But if s = 0 or s = 1, the function program GAMMA computes $\pm \prod_{j_1}^{s_1} (1|1) \prod_{j_2}^{s_2} (1|\pm 1)$ and depending on which coordinate-system was selected, γ then is multiplied by the relevant factor in (75). The complementary part and its first and second derivatives are added to the corresponding principal parts. In case of monomials all coefficients and quotients are multiplied by $e_1^{s_1} e_2^{s_2} \nu^s$.

After the final loop is satisfied, control is returned to the MAIN program to pick up a new set of indices.

FORMAT

This function subprogram checks each coefficient in the cosine argument. If it is positive a + sign is inserted in the format. Proper spacing is provided depending on whether the integers have one or two digits.

BKLM

Using the binomial coefficients computed by the Newcomb operator program and the Laplace coefficients computed by MORCOE, the terms of the sum in (12) are evaluated and summed. The sum is then multiplied by $\left[\begin{smallmatrix}\frac{1}{2}\\ \ell+m\end{smallmatrix}\right]$ and given the sign from formula (70). This is repeated for all derivatives up to degree $(q-2s+2)$.

COMBIN

This subroutine moves the inner Newcomb operator $\prod_{j_1}^{s_1}$

from the linear array AICM to the working array AICT. If j_1 happens to be negative, we change first the signs of j_1, k, and ℓ, using the equality (33), since the Newcomb operators were constructed only for $\rho \geq \sigma$ in view of the symmetry relation (33) or (37) of Special Report No. 140. It then calls the subroutine EVALUK which evaluates this polynomial by substituting for k the current numerical value of $k + \ell$. The same procedure is followed for the outer operator ${}^{s_2}_{j_2}\prod$ except that this time the polynomial is evaluated for the value $(-k+\ell)$.

The subroutine MPPOLY multiplies the two polynomials in D and stores the resulting combined operator. Control then is returned to the SOLVE program.

EVALUK

Subroutine EVALUK simply multiplies each element of the array AICT by the proper power of the constant $k+\ell$ for the inner operators and $-k+\ell$ for the outer operators, and sums the products in each row.

MPPOLY

MPPOLY multiplies the two polynomials that resulted from the two calls to EVALUK. It first establishes the degree of the product polynomial. Then each term of the product polynomial is assembled by forming all products that contribute to this term and summing these products. They are found by stepping up the degree of the term in the first polynomial and stepping down the degree in the second polynomial, thus keeping the sum of the degrees constant and equal to the degree of the term of the product polynomial being assembled.

APPLY

The subroutine APPLY multiplies each numerical coefficient of the combined operator with the corresponding derivative of $b_{k\ell m}$ and with the first and second higher derivatives. Each of these products is summed into its previous total to form $c^{s_1 s_2 s}_{j_1 j_2 k\ell}$, $Dc^{s_1 s_2 s}_{j_1 j_2 k\ell}$, and $D^2 c^{s_1 s_2 s}_{j_1 j_2 k\ell}$

GAMMA

To compute the γ's of formula (74) for the complementary part, we first check the value of k. If k is nonzero, $|k|$ must be one and ℓ must be zero. Otherwise an error message is returned. If k is negative we change the signs of j_1, j_2, and k. Then we evaluate $\prod_{j_1}^{s_1}(1|1)$ and $\prod_{j_2}^{s_2}(1|-1)$ with the function routine PI and multiply them together. If s = 0, we return. If s = 1, we change sign. In case k = 0, we check if $\ell = 1$ and s = 1. If this is true, we compute $\gamma = \prod_{j_1}^{s}(1|1)\prod_{j_2}^{s_2}(1|1)$. All other cases result in an error message and exit from the program.

PI

PI evaluates $\prod_{j_1}^{s_1}(1|1)$ and $\prod_{j_2}^{s_2}(1|-1)$. If a j is negative, we change the sign of j and of k, using the relation (33). Then with equation (36′) we find $\prod_{j}^{s}$ from the inner X-array and move it to AICT with the routine TRANS.

We add all elements of each column and then add these column totals, if k = 1. Or if k = -1, we form an alternating sum.

Immediately following the references, we give two print-out samples of the program. They both pertain to the planets Jupiter and Saturn. Appendix I presents (in mode C) a somewhat more extended development of the disturbing function than Leverrier's classical one in the Annales de l'Observatoire de Paris, vol. 10, p. 68 and pp. 72-93. It was produced by the smaller version of our program; the required machine-time was about one minute. Appendix II exhibits (in mode M) the secular terms and the long-period terms of the great inequality up to the 9th powers of the eccentricities, whenever necessary to conform with modern standards of accuracy.

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Appendix I

THIS

COMPUTER RUN

IS DEDICATED

TO THE MEMORY OF

U.-J. LE VERRIER

(1811-1877)

SAO ANALYTICAL DEVELOPMENT OF THE PLANETARY DISTURBING FUNCTION

CONVENTIONAL RELATIVE COORDINATES, INNER PLANET

ALPHA = .5454323   BETA = .4026858

$(J_1, J_2; K, L)$ $\mathrm{COS}\,(I_1 L_1 + I_2 L_2 - J_1 W_1 - J_2 W_2)$

	C	DC	D^2C	C/N	DC/N	C/N*N
$(S_1, S_2; S)$	X.XXXXXXXE---	X.XXXXXXXE---	X.XXXXXXXE---	X.XXXXXXXE---	X.XXXXXXXE---	X.XXXXXXXE---

(0, 0; 0, 0) $\mathrm{COS}\,(+0L_1 \;+0L_2 \;+0W_1 \;+0W_2)$

	C	DC	D^2C
(0, 0; 0)	1.0901656E 00	2.2065981E-01	6.4855371E-01
(2, 0; 0)	2.1730338E-01	7.8442622E-01	3.8380575E 00
(0, 2; 0)	2.1730338E-01	7.8442622E-01	3.8380575E 00
(4, 0; 0)	1.1996160E-01	9.3373426E-01	8.4976785E 00
(2, 2; 0)	1.1556209E 00	7.1807815E 00	5.6956745E 01
(0, 4; 0)	5.6650056E-01	3.0488696E 00	2.1899725E 01
(6, 0; 0)	9.4474330E-02	1.1488470E 00	1.5457093E 01
(4, 2; 0)	2.3578527E 00	2.4533773E 01	2.9289563E 02
(2, 4; 0)	6.2371487E 00	5.4807341E 01	5.8165933E 02
(0, 6; 0)	1.6852656E 00	1.2650127E 01	1.2064836E 02
(0, 0; 1)	-8.6921352E-01	-3.1377049E 00	-1.5352230E 01
(2, 0; 1)	-4.6224838E 00	-2.8723126E 01	-2.2782698E 02
(0, 2; 1)	-4.6224838E 00	-2.8723126E 01	-2.2782698E 02
(4, 0; 1)	-9.4314108E 00	-9.8135091E 01	-1.1715825E 03
(2, 2; 1)	-6.4137527E 01	-6.0600578E 02	-6.7686129E 03
(0, 4; 1)	-2.4948595E 01	-2.1922936E 02	-2.3266374E 03
(0, 0; 2)	4.1878770E 00	2.7154273E 01	2.2015087E 02
(2, 0; 2)	6.1826285E 01	5.9164422E 02	6.6546993E 03
(0, 2; 2)	6.1826285E 01	5.9164422E 02	6.6546993E 03
(0, 0; 3)	-2.4686431E 01	-2.4485014E 02	-2.8108789E 03

*(0, 0; 1, 0) $\mathrm{COS}\,(+1L_1 \;-1L_2 \;+0W_1 \;+0W_2)$

	C	DC	D^2C	C/N	DC/N	C/N*N
(0, 0; 0)	7.5381742E-02	2.6368667E-01	1.0235760E 00	1.2620115E-01	4.4145388E-01	2.1128102E-01
(2, 0; 0)	2.4643393E-01	1.1508804E 00	6.5262463E 00	4.1257001E-01	1.9267588E 00	6.9070852E-01
(0, 2; 0)	2.4643393E-01	1.1508804E 00	6.5262463E 00	4.1257001E-01	1.9267588E 00	6.9070852E-01
(4, 0; 0)	1.2715741E-01	1.3395223E 00	1.4024265E 01	2.1288195E-01	2.2425757E 00	3.5639861E-01
(2, 2; 0)	1.6728477E 00	1.1837164E 01	1.0064119E 02	2.8006161E 00	1.9817315E 01	4.6886815E 00
(0, 4; 0)	8.3955046E-01	5.1792204E 00	3.9655412E 01	1.4055424E 00	8.6708475E 00	2.3531040E 00
(0, 0; 1)	-1.2118809E 00	-5.3945815E 00	-2.9175713E 01	-2.0288835E 00	-9.0313966E 00	-3.3966772E 00
(2, 0; 1)	-7.4306928E 00	-5.0801296E 01	-4.2214348E 02	-1.2440174E 01	-8.5049536E 01	-2.0826851E 01
(0, 2; 1)	-7.4306928E 00	-5.0801296E 01	-4.2214348E 02	-1.2440174E 01	-8.5049536E 01	-2.0826851E 01
(0, 0; 2)	7.7525085E 00	5.2215863E 01	4.2969331E 02	1.2978945E 01	8.7417749E 01	2.1728841E 01

(0, 0; 2, 0) $\mathrm{COS}\,(+2L_1 \;-2L_2 \;+0W_1 \;+0W_2)$

	C	DC	D^2C	C/N	DC/N	C/N*N
(0, 0; 0)	2.5776796E-01	6.0300775E-01	1.6509552E 00	2.1577250E-01	5.0476596E-01	1.8061893E-01
(2, 0; 0)	-4.6758111E-01	-5.4167466E-01	1.8977718E 00	-3.9140298E-01	-4.5342523E-01	-3.2763575E-01
(0, 2; 0)	-4.6758111E-01	-5.4167466E-01	1.8977718E 00	-3.9140298E-01	-4.5342523E-01	-3.2763575E-01
(4, 0; 0)	3.1169384E-01	1.0901857E 00	9.0196383E 00	2.6091280E-01	9.1257309E-01	2.1840498E-01
(2, 2; 0)	2.2093487E 00	9.9820144E 00	7.6566829E 01	1.8494025E 00	8.3557484E 00	1.5480985E 00
(0, 4; 0)	6.5585296E-01	3.8561121E 00	3.0831773E 01	5.4900165E-01	3.2278758E 00	4.5955850E-01
(0, 0; 1)	-1.2228911E 00	-5.0693944E 00	-2.7402550E 01	-1.0236582E 00	-4.2434905E 00	-8.5688416E-01
(2, 0; 1)	-3.2264216E 00	-3.3427961E 01	-3.2904058E 02	-2.7007743E 00	-2.7981891E 01	-2.2607651E 00

(0, 2, 1)	-3.2264216E 00	-3.3427961E 01	-3.2904058E 02	-2.7007743E 00	-2.7981891E 01	-2.2607651E 00
(0, 0, 2)	6.5414174E 00	4.6704455E 01	3.9919791E 02	5.4756922E 00	3.9095383E 01	4.5835944E 00

(0, 0, 3, 0) COS ($+3L_1$ $-3L_2$ $+0W_1$ $+0W_2$)

	C	DC	D^2C	C/N	DC/N	C/N*N
(0, 0, 0)	1.1806266E-01	3.9649685E-01	1.4483783E 00	6.5885288E-02	2.2126649E-01	3.6767522E-02
(2, 0, 0)	-6.0134512E-01	-1.6910027E 00	-3.8248027E 00	-3.3558280E-01	-9.4367013E-01	-1.8727319E-01
(0, 2, 0)	-6.0134512E-01	-1.6910027E 00	-3.8248027E 00	-3.3558280E-01	-9.4367013E-01	-1.8727319E-01
(4, 0, 0)	8.9320970E-01	2.7679761E 00	1.1000039E 01	4.9845888E-01	1.5446790E 00	2.7816676E-01
(2, 2, 0)	4.0331547E 00	1.4833335E 01	7.6286055E 01	2.2507165E 00	8.2777957E 00	1.2560204E 00
(0, 4, 0)	9.2231047E-01	4.1377341E 00	2.6452656E 01	5.1469867E-01	2.3090774E 00	2.8722944E-01
(0, 0, 1)	-7.8231122E-01	-3.9414043E 00	-2.3807002E 01	-4.3657158E-01	-2.1995148E 00	-2.4363034E-01
(2, 0, 1)	1.0369931E-01	-1.3676266E 01	-2.0187455E 02	5.7869770E-02	-7.6320893E 00	3.2294433E-02
(0, 2, 1)	1.0369931E-01	-1.3676266E 01	-2.0187455E 02	5.7869770E-02	-7.6320893E 00	3.2294433E-02
(0, 0, 2)	5.0513868E 00	3.9202160E 01	3.5392717E 02	2.8189445E 00	2.1876906E 01	1.5731221E 00

(0, 0, 4, 0) COS ($+4L_1$ $-4L_2$ $+0W_1$ $+0W_2$)

	C	DC	D^2C	C/N	DC/N	C/N*N
(0, 0, 0)	5.6610497E-02	2.4740095E-01	1.1392802E 00	2.3693768E-02	1.0354724E-01	9.9167942E-03
(2, 0, 0)	-5.5909766E-01	-2.2503676E 00	-8.7854828E 00	-2.3400484E-01	-9.4186928E-01	-9.7940432E-02
(0, 2, 0)	-5.5909766E-01	-2.2503676E 00	-8.7854828E 00	-2.3400484E-01	-9.4186928E-01	-9.7940432E-02
(4, 0, 0)	1.5304002E 00	6.1477816E 00	2.5553369E 01	6.4053398E-01	2.5730937E 00	2.6808921E-01
(2, 2, 0)	6.1866000E 00	2.6292470E 01	1.2322062E 02	2.5893407E 00	1.1004455E 01	1.0837432E 00
(0, 4, 0)	1.3682667E 00	6.2443711E 00	3.3373117E 01	5.7267462E-01	2.6135203E 00	2.3968735E-01
(0, 0, 1)	-4.8091320E-01	-2.8737751E 00	-1.9543519E 01	-2.0128150E-01	-1.2027904E 00	-8.4244398E-02
(2, 0, 1)	2.0902877E 00	2.8477645E 00	-7.1179293E 01	8.7486942E-01	1.1919039E 00	3.6616801E-01
(0, 2, 1)	2.0902877E 00	2.8477645E 00	-7.1179293E 01	8.7486942E-01	1.1919039E 00	3.6616801E-01
(0, 0, 2)	3.6666560E 00	3.1190252E 01	3.0048688E 02	1.5346429E 00	1.3054374E 01	6.4230974E-01

(0, 0, 5, 0) COS ($+5L_1$ $-5L_2$ $+0W_1$ $+0W_2$)

	C	DC	D^2C	C/N	DC/N	C/N*N
(0, 0, 0)	2.7877790E-02	1.4993749E-01	8.3574156E-01	9.3343804E-03	5.0203891E-02	3.1254507E-03
(2, 0, 0)	-4.5052498E-01	-2.3107713E 00	-1.1849384E 01	-1.5085025E-01	-7.7372053E-01	-5.0509514E-02
(0, 2, 0)	-4.5052498E-01	-2.3107713E 00	-1.1849384E 01	-1.5085025E-01	-7.7372053E-01	-5.0509514E-02
(4, 0, 0)	1.9727055E 00	9.9770055E 00	5.0864352E 01	6.6052521E-01	3.3406222E 00	2.2116508E-01
(2, 2, 0)	7.7230906E 00	3.9895090E 01	2.1247706E 02	2.5859391E 00	1.3358159E 01	8.6585554E-01
(0, 4, 0)	1.7289159E 00	9.1665698E 00	5.1408262E 01	5.7889665E-01	3.0692623E 00	1.9383321E-01
(0, 0, 1)	-2.8873430E-01	-2.0022262E 00	-1.5283160E 01	-9.6677529E-02	-6.7040972E-01	-3.2370745E-02
(2, 0, 1)	2.8970111E 00	1.3727488E 01	3.8794101E 01	9.7001244E-01	4.5964044E 00	3.2479136E-01
(0, 2, 1)	2.8970111E 00	1.3727488E 01	3.8794101E 01	9.7001244E-01	4.5964044E 00	3.2479136E-01
(0, 0, 2)	2.5466262E 00	2.3750250E 01	2.4534695E 02	8.5269232E-01	7.9523473E 00	2.8550880E-01

(0, 0, 6, 0) COS ($+6L_1$ $-6L_2$ $+0W_1$ $+0W_2$)

	C	DC	D^2C	C/N	DC/N	C/N*N
(0, 0, 0)	1.3970332E-02	8.9191436E-02	5.8438975E-01	3.8980970E-03	2.4886800E-02	1.0876735E-03
(2, 0, 0)	-3.3453667E-01	-2.0709131E 00	-1.2908508E 01	-9.3344694E-02	-5.7784024E-01	-2.6045671E-02
(0, 2, 0)	-3.3453667E-01	-2.0709131E 00	-1.2908508E 01	-9.3344694E-02	-5.7784024E-01	-2.6045671E-02
(4, 0, 0)	2.1413002E 00	1.3072987E 01	8.0240208E 01	5.9748219E-01	3.6477137E 00	1.6671354E-01
(2, 2, 0)	8.2984648E 00	5.1138593E 01	3.1954080E 02	2.3154940E 00	1.4269038E 01	6.4608487E-01
(0, 4, 0)	1.8878063E 00	1.1761874E 01	7.5048254E 01	5.2674854E-01	3.2818780E 00	1.4697696E-01
(0, 0, 1)	-1.7064922E-01	-1.3490227E 00	-1.1480059E 01	-4.7615703E-02	-3.7641346E-01	-1.3286057E-02
(2, 0, 1)	2.9361012E 00	1.9104241E 01	1.1595568E 02	8.1925092E-01	5.3305951E 00	2.2859296E-01
(0, 2, 1)	2.9361012E 00	1.9104241E 01	1.1595568E 02	8.1925092E-01	5.3305951E 00	2.2859296E-01
(0, 0, 2)	1.7118360E 00	1.7447582E 01	1.9352540E 02	4.7764810E-01	4.8683430E 00	1.3327662E-01

(0, 0, 7, 0) COS ($+7L_1$ $-7L_2$ $+0W_1$ $+0W_2$)

	C	DC	D^2C	C/N	DC/N	C/N*N
(0, 0, 0)	7.0878928E-03	5.2371734E-02	3.9466512E-01	1.6951817E-03	1.2525529E-02	4.0542953E-04
(2, 0, 0)	-2.3554753E-01	-1.7031770E 00	-1.2418494E 01	-5.6334919E-02	-4.0734174E-01	-1.3473387E-02
(0, 2, 0)	-2.3554753E-01	-1.7031770E 00	-1.2418494E 01	-5.6334919E-02	-4.0734174E-01	-1.3473387E-02
(4, 0, 0)	2.0730001E 00	1.4812724E 01	1.0640541E 02	4.9579078E-01	3.5426974E 00	1.1857621E-01
(2, 2, 0)	8.0114113E 00	5.7513675E 01	4.1659849E 02	1.9160558E 00	1.3755306E 01	4.5825506E-01
(0, 4, 0)	1.8474918E 00	1.3333108E 01	9.7497573E 01	4.4185690E-01	3.1888237E 00	1.0567707E-01
(0, 0, 1)	-9.9738104E-02	-8.8593668E-01	-8.3417962E 00	-2.3852032E-02	-2.1188577E-01	-5.7045910E-03
(2, 0, 1)	2.5798419E 00	2.0312324E 01	1.5912467E 02	6.1701001E-01	4.8580136E 00	1.4756771E-01
(0, 2, 1)	2.5798419E 00	2.0312324E 01	1.5912467E 02	6.1701001E-01	4.8580136E 00	1.4756771E-01
(0, 0, 2)	1.1222011E 00	1.2444434E 01	1.4810009E 02	2.6839214E-01	2.9762834E 00	6.4190227E-02

(0, 0, 8, 0) COS ($+8L_1$ $-8L_2$ $+0W_1$ $+0W_2$)

	C	DC	D^2C	C/N	DC/N	C/N*N
(0, 0, 0)	3.6292800E-03	3.0458721E-02	2.5960818E-01	7.5949976E-04	6.3740994E-03	1.5894059E-04
(2, 0, 0)	-1.5975719E-01	-1.3194675E 00	-1.0986979E 01	-3.3432403E-02	-2.7612509E-01	-6.9964022E-03
(0, 2, 0)	-1.5975719E-01	-1.3194675E 00	-1.0986979E 01	-3.3432403E-02	-2.7612509E-01	-6.9964022E-03
(4, 0, 0)	1.8495604E 00	1.5126129E 01	1.2435468E 02	3.8705768E-01	3.1654465E 00	8.0999597E-02
(2, 2, 0)	7.1478488E 00	5.8606567E 01	4.8390673E 02	1.4958310E 00	1.2264602E 01	3.1303270E-01
(0, 4, 0)	1.6662611E 00	1.3700173E 01	1.1366085E 02	3.4869862E-01	2.8670366E 00	7.2972193E-02
(0, 0, 1)	-5.7792981E-02	-5.7020427E-01	-5.8968555E 00	-1.2094343E-02	-1.1932670E-01	-2.5309843E-03
(2, 0, 1)	2.0819859E 00	1.8911495E 01	1.7387299E 02	4.3569738E-01	3.9576104E 00	9.1178432E-02
(0, 2, 1)	2.0819859E 00	1.8911495E 01	1.7387299E 02	4.3569738E-01	3.9576104E 00	9.1178432E-02
(0, 0, 2)	7.2124923E-01	8.6605474E 00	1.1038138E 02	1.5093590E-01	1.8123936E 00	3.1586369E-02

(0, 0, 9, 0) COS ($+9L_1$ $-9L_2$ $+0W_1$ $+0W_2$)

	C	DC	D^2C	C/N	DC/N	C/N*N
(0, 0, 0)	1.8716032E-03	1.7584480E-02	1.6728580E-01	3.4815162E-04	3.2710274E-03	6.4762421E-05

(2, 0, 0)	-1.0538229E-01	-9.7798861E-01	-9.1442206E 00	-1.9602988E-02	-1.8192335E-01	-3.6465059E-03
(0, 2, 0)	-1.0538229E-01	-9.7798861E-01	-9.1442206E 00	-1.9602988E-02	-1.8192335E-01	-3.6465059E-03
(4, 0, 0)	1.5522660E 00	1.4288054E 01	1.3218260E 02	2.8874920E-01	2.6578332E 00	5.3712509E-02
(2, 2, 0)	6.0054129E 00	5.5361085E 01	5.1340396E 02	1.1171141E 00	1.0298151E 01	2.0780317E-01
(0, 4, 0)	1.4119618E 00	1.3037027E 01	1.2121760E 02	2.6265012E-01	2.4251198E 00	4.8857614E-02
(0, 0, 1)	-3.3270426E-02	-3.6107422E-01	-4.0735682E 00	-6.1888936E-03	-6.7166254E-02	-1.1512448E-03
(2, 0, 1)	1.5862440E 00	1.6206892E 01	1.6842972E 02	2.9506971E-01	3.0147715E 00	5.4888237E-02
(0, 2, 1)	1.5862440E 00	1.6206892E 01	1.6842972E 02	2.9506971E-01	3.0147715E 00	5.4888237E-02
(0, 0, 2)	4.5619920E-01	5.9039151E 00	8.0390297E 01	8.4861201E-02	1.0982337E 00	1.5785699E-02

(0, 0, 10, 0) $\cos(+10L_1 - 10L_2 + 0W_1 + 0W_2)$

	C	DC	D^2C	C/N	DC/N	C/N*N
(0, 0, 0)	9.7066606E-04	1.0092811E-02	1.0602588E-01	1.6250510E-04	1.6896988E-03	2.7205967E-05
(2, 0, 0)	-6.8036935E-02	-7.0055923E-01	-7.2620080E 00	-1.1390477E-02	-1.1728488E-01	-1.9069489E-03
(0, 2, 0)	-6.8036935E-02	-7.0055923E-01	-7.2620080E 00	-1.1390477E-02	-1.1728488E-01	-1.9069489E-03
(4, 0, 0)	1.2422213E 00	1.2703236E 01	1.3052350E 02	2.0796782E-01	2.1267260E 00	3.4817156E-02
(2, 2, 0)	4.8130517E 00	4.9265590E 01	5.0693141E 02	8.0578223E-01	8.2478518E 00	1.3490090E-01
(0, 4, 0)	1.1393861E 00	1.1673899E 01	1.2030520E 02	1.9075155E-01	1.9543985E 00	3.1934875E-02
(0, 0, 1)	-1.9052081E-02	-2.2560640E-01	-2.7597313E 00	-3.1896246E-03	-3.7770137E-02	-5.3399444E-04
(2, 0, 1)	1.1588737E 00	1.3105405E 01	1.5087672E 02	1.9401408E-01	2.1940554E 00	3.2481076E-02
(0, 2, 1)	1.1588737E 00	1.3105405E 01	1.5087672E 02	1.9401408E-01	2.1940554E 00	3.2481076E-02
(0, 0, 2)	2.8477301E-01	3.9545920E 00	5.7373905E 01	4.7675580E-02	6.6206227E-01	7.9816586E-03

(0, 0, 11, 0) $\cos(+11L_1 - 11L_2 + 0W_1 + 0W_2)$

	C	DC	D^2C	C/N	DC/N	C/N*N
(0, 0, 0)	5.0574918E-04	5.7654629E-03	6.6292945E-02	7.6973222E-05	8.7748289E-04	1.1715050E-05
(2, 0, 0)	-4.3181049E-02	-4.8836731E-01	-5.5563914E 00	-6.5720016E-03	-7.4327763E-02	-1.0002352E-03
(0, 2, 0)	-4.3181049E-02	-4.8836731E-01	-5.5563914E 00	-6.5720016E-03	-7.4327763E-02	-1.0002352E-03
(4, 0, 0)	9.5696471E-01	1.0760210E 01	1.2152076E 02	1.4564661E-01	1.6376656E 00	2.2166895E-02
(2, 2, 0)	3.7137173E 00	4.1782956E 01	4.7230970E 02	5.6521452E-01	6.3592169E 00	8.6023633E-02
(0, 4, 0)	8.8404050E-01	9.9524865E 00	1.1260790E 02	1.3454781E-01	1.5147330E 00	2.0477697E-02
(0, 0, 1)	-1.0862757E-02	-1.3939380E-01	-1.8387735E 00	-1.6532729E-03	-2.1215240E-02	-2.5162223E-04
(2, 0, 1)	8.1985176E-01	1.0145510E 01	1.2773127E 02	1.2477851E-01	1.5441104E 00	1.8990845E-02
(0, 2, 1)	8.1985176E-01	1.0145510E 01	1.2773127E 02	1.2477851E-01	1.5441104E 00	1.8990845E-02
(0, 0, 2)	1.7581096E-01	2.6091859E 00	4.0223404E 01	2.6757802E-02	3.9710879E-01	4.0724420E-03

(1, 0,-12, 0) $\cos(-11L_1 + 12L_2 - 1W_1 + 0W_2)$

	C	DC	D^2C	C/N	DC/N	C/N*N
(1, 0, 0)	-4.8146128E-03	-5.9857984E-02	-7.5015510E-01	7.8060831E-04	9.7049628E-03	-1.2656248E-04
(3, 0, 0)	2.2034644E-01	2.7186188E 00	3.3729958E 01	-3.5725462E-02	-4.4077821E-01	5.7922814E-03
(1, 2, 0)	4.9080098E-01	6.0577672E 00	7.5197224E 01	-7.9575105E-02	-9.8216484E-01	1.2901762E-02
(1, 0, 1)	1.1670883E-01	1.6275799E 00	2.3278105E 01	-1.8922369E-02	-2.6388464E-01	3.0679432E-03

(1, 0,-11, 0) $\cos(-10L_1 + 11L_2 - 1W_1 + 0W_2)$

	C	DC	D^2C	C/N	DC/N	C/N*N
(1, 0, 0)	-8.4459724E-03	-9.6566565E-02	-1.1145833E 00	1.5162084E-03	1.7335486E-02	-2.7218747E-04
(3, 0, 0)	3.1951210E-01	3.6190734E 00	4.1249376E 01	-5.7358335E-02	-6.4969066E-01	1.0296883E-02
(1, 2, 0)	7.1917520E-01	8.1502361E 00	9.2961086E 01	-1.2910526E-01	-1.4631183E 00	2.3176784E-02
(1, 0, 1)	1.8918723E-01	2.4527186E 00	3.2749402E 01	-3.3962609E-02	-4.4030839E-01	6.0969170E-03

(1, 0,-10, 0) $\cos(-9L_1 + 10L_2 - 1W_1 + 0W_2)$

	C	DC	D^2C	C/N	DC/N	C/N*N
(1, 0, 0)	-1.4753066E-02	-1.5394105E-01	-1.6246896E 00	2.9665483E-03	3.0954485E-02	-5.9651390E-04
(3, 0, 0)	4.5289280E-01	4.6623025E 00	4.8415012E 01	-9.0906875E-02	-9.3749634E-01	1.8279565E-02
(1, 2, 0)	1.0308490E 00	1.0636596E 01	1.1056974E 02	-2.0724302E-01	-2.1388081E 00	4.1672451E-02
(1, 0, 1)	3.0332401E-01	3.6359296E 00	4.5127917E 01	-6.0992428E-02	-7.3111317E-01	1.2264365E-02

(1, 0, -9, 0) $\cos(-8L_1 + 9L_2 - 1W_1 + 0W_2)$

	C	DC	D^2C	C/N	DC/N	C/N*N
(1, 0, 0)	-2.5636669E-02	-2.4190322E-01	-2.3146379E 00	5.8587014E-03	5.5281705E-02	-1.3388784E-03
(3, 0, 0)	6.2080709E-01	5.7679098E 00	5.4011784E 01	-1.4182621E-01	-1.3181300E 00	3.2411287E-02
(1, 2, 0)	1.4374349E 00	1.3374008E 01	1.2543786E 02	-3.2849439E-01	-3.0563378E 00	7.5070227E-02
(1, 0, 1)	4.7997095E-01	5.2864521E 00	6.0705568E 01	-1.0968689E-01	-1.2081033E 00	2.5066546E-02

(1, 0, -8, 0) $\cos(-7L_1 + 8L_2 - 1W_1 + 0W_2)$

	C	DC	D^2C	C/N	DC/N	C/N*N
(1, 0, 0)	-4.4263600E-02	-3.7347386E-01	-3.2068425E 00	1.1714554E-02	9.8841474E-02	-3.1003073E-03
(3, 0, 0)	8.1982769E-01	6.7784832E 00	5.6481093E 01	-2.1697095E-01	-1.7939550E 00	5.7422302E-02
(1, 2, 0)	1.9377913E 00	1.6049230E 01	1.3408105E 02	-5.1284487E-01	-4.2474982E 00	1.3572662E-01
(1, 0, 1)	7.4744598E-01	7.5100619E 00	7.9389573E 01	-1.9781482E-01	-1.9875704E 00	5.2352549E-02

(1, 0, -7, 0) $\cos(-6L_1 + 7L_2 - 1W_1 + 0W_2)$

	C	DC	D^2C	C/N	DC/N	C/N*N
(1, 0, 0)	-7.5801116E-02	-5.6393469E-01	-4.2913991E 00	2.3827842E-02	1.7727109E-01	-7.4902069E-03
(3, 0, 0)	1.0297608E 00	7.4458717E 00	5.4199008E 01	-3.2370204E-01	-2.3405863E 00	1.0175472E-01
(1, 2, 0)	2.5004213E 00	1.8131486E 01	1.3260421E 02	-7.8599954E-01	-5.6995755E 00	2.4707648E-01
(1, 0, 1)	1.1410791E 00	1.0372455E 01	1.0041882E 02	-3.5869460E-01	-3.2605485E 00	1.1275452E-01

(1, 0, -6, 0)   COS ($-5L_1$ $+6L_2$ $-1W_1$ $+0W_2$)

	C	DC	D^2C	C/N	DC/N	C/N*N
(1, 0, 0)	-1.2841771E-01	-8.2734348E-01	-5.4941007E 00	4.9699464E-02	3.2019359E-01	-1.9234393E-02
(3, 0, 0)	1.2069153E 00	7.4490278E 00	4.6042965E 01	-4.6709324E-01	-2.8828788E 00	1.8077167E-01
(1, 2, 0)	3.0426766E 00	1.8879732E 01	1.1782535E 02	-1.1775587E 00	-7.3067227E 00	4.5573183E-01
(1, 0, 1)	1.6984066E 00	1.3834165E 01	1.2206147E 02	-6.5730730E-01	-5.3540171E 00	2.5438719E-01

(1, 0, -5, 0)   COS ($-4L_1$ $+5L_2$ $-1W_1$ $+0W_2$)

	C	DC	D^2C	C/N	DC/N	C/N*N
(1, 0, 0)	-2.1435769E-01	-1.1675582E 00	-6.6361687E 00	1.0790336E-01	5.8772538E-01	-5.4316388E-02
(3, 0, 0)	1.2778530E 00	6.4777661E 00	3.2220669E 01	-6.4324558E-01	-3.2607775E 00	3.2379692E-01
(1, 2, 0)	3.4080106E 00	1.7478539E 01	8.9070524E 01	-1.7155242E 00	-8.7983458E 00	8.6356045E-01
(1, 0, 1)	2.4447846E 00	1.7652711E 01	1.4143056E 02	-1.2306556E 00	-8.8860207E 00	6.1948732E-01

(1, 0, -4, 0)   COS ($-3L_1$ $+4L_2$ $-1W_1$ $+0W_2$)

	C	DC	D^2C	C/N	DC/N	C/N*N
(1, 0, 0)	-3.5014246E-01	-1.5592439E 00	-7.4035758E 00	2.5203581E-01	1.1223583E 00	-1.8141772E-01
(3, 0, 0)	1.1462345E 00	4.4175655E 00	1.5072469E 01	-8.2507027E-01	-3.1798049E 00	5.9389327E-01
(1, 2, 0)	3.3615745E 00	1.3394212E 01	5.0176012E 01	-2.4196926E 00	-9.6412785E 00	1.7417173E 00
(1, 0, 1)	3.3605403E 00	2.1266859E 01	1.5466759E 02	-2.4189482E 00	-1.5308084E 01	1.7411815E 00

(1, 0, -3, 0)   COS ($-2L_1$ $+3L_2$ $-1W_1$ $+0W_2$)

	C	DC	D^2C	C/N	DC/N	C/N*N
(1, 0, 0)	-5.5243639E-01	-1.9136797E 00	-7.3758836E 00	6.9757125E-01	2.4164374E 00	-8.8083562E-01
(3, 0, 0)	7.3730038E-01	1.6256416E 00	-8.6274087E-01	-9.3100230E-01	-2.0527265E 00	1.1755931E 00
(1, 2, 0)	2.6495367E 00	6.9854095E 00	1.0333386E 01	-3.3456171E 00	-8.8206006E 00	4.2245702E 00
(1, 0, 1)	4.3178358E 00	2.3727714E 01	1.5781531E 02	-5.4519554E 00	-2.9961406E 01	6.8842810E 00

(1, 0, -2, 0)   COS ($-1L_1$ $+2L_2$ $-1W_1$ $+0W_2$)

	C	DC	D^2C	C/N	DC/N	C/N*N
(1, 0, 0)	-8.1703980E-01	-2.0314931E 00	-6.2171455E 00	4.1979474E 00	1.0437804E 01	-2.1569038E 01
(3, 0, 0)	1.1632731E-01	-8.7028106E-01	-1.0524519E 01	-5.9768928E-01	4.4715009E 00	3.0709253E 00
(1, 2, 0)	1.2059996E 00	1.3446341E-01	-1.8477289E 01	-6.1964212E 00	-6.9087250E-01	3.1837189E 01
(1, 0, 1)	4.9804794E 00	2.3840063E 01	1.4851490E 02	-2.5589684E 01	-1.2249016E 02	1.3147970E 02

*(1, 0, -1, 0)   COS ($+0L_1$ $+1L_2$ $-1W_1$ $+0W_2$)

	C	DC	D^2C	C/N	DC/N	C/N*N
(1, 0, 0)	-2.0722508E-01	-7.7547467E-01	-3.3409221E 00	-5.1460736E-01	-1.9257562E 00	-1.2779377E 00
(3, 0, 0)	-3.2068092E-01	-1.7595086E 00	-1.1935819E 01	-7.9635519E-01	-4.3694329E 00	-1.9776093E 00
(1, 2, 0)	-8.2187411E-01	-4.4140035E 00	-2.9239211E 01	-2.0409811E 00	-1.0961408E 01	-5.0684209E 00
(1, 0, 1)	3.9091717E 00	1.9982438E 01	1.2697961E 02	9.7077465E 00	4.9622902E 01	2.4107496E 01

(1, 0, -0, 0)   COS ($+1L_1$ $+0L_2$ $-1W_1$ $+0W_2$)

	C	DC	D^2C	C/N	DC/N	C/N*N
(1, 0, 0)	-2.2065981E-01	-6.4855371E-01	-2.4891512E 00	-2.2065981E-01	-6.4855371E-01	-2.2065981E-01
(3, 0, 0)	-1.4732726E-01	-1.0535333E 00	-8.2933327E 00	-1.4732726E-01	-1.0535333E 00	-1.4732726E-01
(1, 2, 0)	-7.8442622E-01	-3.8380575E 00	-2.4885068E 01	-7.8442622E-01	-3.8380575E 00	-7.8442622E-01
(1, 0, 1)	3.1377049E 00	1.5352230E 01	9.9540273E 01	3.1377049E 00	1.5352230E 01	3.1377049E 00

*(1, 0, 2, 0)   COS ($+2L_1$ $-1L_2$ $-1W_1$ $+0W_2$)

	C	DC	D^2C	C/N	DC/N	C/N*N
(1, 0, 0)	-5.6461594E-02	-2.4810133E-01	-1.2937701E 00	-3.5347831E-02	-1.5532406E-01	-2.2129542E-02
(3, 0, 0)	5.7900668E-03	-2.9070888E-01	-3.9274573E 00	3.6248765E-03	-1.8199856E-01	2.2693572E-03
(1, 2, 0)	-3.2900626E-01	-2.1122428E 00	-1.6186719E 01	-2.0597466E-01	-1.3223715E 00	-1.2895063E-01
(1, 0, 1)	1.4854098E 00	9.1932751E 00	6.8628185E 01	9.2994214E-01	5.7554582E 00	5.8219112E-01

(1, 0, 2, 0)   COS ($+3L_1$ $-2L_2$ $-1W_1$ $+0W_2$)

	C	DC	D^2C	C/N	DC/N	C/N*N
(1, 0, 0)	2.1403205E-01	3.8053789E-01	3.8667539E-01	9.7525418E-02	1.7339513E-01	4.4438238E-02
(3, 0, 0)	-4.9546309E-01	-1.0169178E 00	-3.1816009E 00	-2.2576172E-01	-4.6336675E-01	-1.0287014E-01
(1, 2, 0)	-6.6432490E-01	-2.0322352E 00	-1.0886202E 01	-3.0270495E-01	-9.2600424E-01	-1.3792994E-01
(1, 0, 1)	8.8914943E-02	3.5624863E 00	3.8904703E 01	4.0514805E-02	1.6232754E 00	1.8460895E-02

(1, 0, 3, 0)   COS ($+4L_1$ $-3L_2$ $-1W_1$ $+0W_2$)

	C	DC	D^2C	C/N	DC/N	C/N*N
(1, 0, 0)	1.6593954E-01	4.6530143E-01	1.3143840E 00	5.5853419E-02	1.6665867E-01	2.0005217E-02
(3, 0, 0)	-7.0922301E-01	-2.1153136E 00	-6.6042478E 00	-2.5402493E-01	-7.5764939E-01	-9.0985010E-02
(1, 2, 0)	-9.5853401E-01	-3.1606068E 00	-1.2615430E 01	-3.4332153E-01	-1.1320458E 00	-1.2296869E-01
(1, 0, 1)	-3.7623154E-01	7.9288510E-02	1.4973299E 01	-1.3475619E-01	2.8399047E-02	-4.8266102E-02

(1, 0, 4, 0) $\cos(+5L_1 -4L_2 -1W_1 +0W_2)$

	C	DC	D^2C	C/N	DC/N	C/N*N
(1, 0, 0)	1.0274151E-01	4.1996369E-01	1.7106658E 00	3.0313877E-02	1.2391026E-01	8.9441074E-03
(3, 0, 0)	-7.7566523E-01	-3.1223855E 00	-1.2669377E 01	-2.2885998E-01	-9.2125964E-01	-6.7525120E-02
(1, 2, 0)	-1.1112068E 00	-4.6087291E 00	-2.0107849E 01	-3.2786151E-01	-1.3598052E 00	-9.6735516E-02
(1, 0, 1)	-4.8676526E-01	-1.7233409E 00	-1.6805614E 00	-1.4362006E-01	-5.0847161E-01	-4.2375089E-02

(1, 0, 5, 0) $\cos(+6L_1 -5L_2 -1W_1 +0W_2)$

	C	DC	D^2C	C/N	DC/N	C/N*N
(1, 0, 0)	6.4420205E-02	3.3181665E-01	1.7212489E 00	1.6159302E-02	8.3233598E-02	4.0534339E-03
(3, 0, 0)	-7.2848634E-01	-3.6964968E 00	-1.8855350E 01	-1.8273507E-01	-9.2723716E-01	-4.5837657E-02
(1, 2, 0)	-1.0972393E 00	-5.6291744E 00	-2.9423118E 01	-2.7523384E-01	-1.4120341E 00	-6.9040246E-02
(1, 0, 1)	-4.4255839E-01	-2.3695513E 00	-1.1401043E 01	-1.1101229E-01	-5.9438331E-01	-2.7846561E-02

(1, 0, 6, 0) $\cos(+7L_1 -6L_2 -1W_1 +0W_2)$

	C	DC	D^2C	C/N	DC/N	C/N*N
(1, 0, 0)	3.9226276E-02	2.4295374E-01	1.5185762E 00	8.5574298E-03	5.3001707E-02	1.8668508E-03
(3, 0, 0)	-6.2057949E-01	-3.7953610E 00	-2.3339738E 01	-1.3538286E-01	-8.2797906E-01	-2.9534522E-02
(1, 2, 0)	-9.7176347E-01	-5.9712244E 00	-3.7076747E 01	-2.1199560E-01	-1.3026558E 00	-4.6248016E-02
(1, 0, 1)	-3.4938397E-01	-2.3541062E 00	-1.5699237E 01	-7.6220051E-02	-5.1356133E-01	-1.6627827E-02

(1, 0, 7, 0) $\cos(+8L_1 -7L_2 -1W_1 +0W_2)$

	C	DC	D^2C	C/N	DC/N	C/N*N
(1, 0, 0)	2.3429382E-02	1.6926958E-01	1.2339126E 00	4.5219997E-03	3.2669960E-02	8.7277083E-04
(3, 0, 0)	-4.9399999E-01	-3.5320223E 00	-2.5395211E 01	-9.5344715E-02	-6.8169973E-01	-1.8402055E-02
(1, 2, 0)	-7.9724421E-01	-5.7129924E 00	-4.1254705E 01	-1.5387252E-01	-1.1026390E 00	-2.9698243E-02
(1, 0, 1)	-2.5514239E-01	-2.0306586E 00	-1.6366325E 01	-4.9243886E-02	-3.9192829E-01	-9.5043410E-03

(1, 0, 8, 0) $\cos(+9L_1 -8L_2 -1W_1 +0W_2)$

	C	DC	D^2C	C/N	DC/N	C/N*N
(1, 0, 0)	1.3804879E-02	1.1386568E-01	9.4688833E-01	2.3890018E-03	1.9705011E-02	4.1342843E-04
(3, 0, 0)	-3.7411226E-01	-3.0593499E 00	-2.5154090E 01	-6.4741953E-02	-5.2943543E-01	-1.1203911E-02
(1, 2, 0)	-6.1832379E-01	-5.0622508E 00	-4.1710610E 01	-1.0700395E-01	-8.7604722E-01	-1.8517556E-02
(1, 0, 1)	-1.7724171E-01	-1.6132064E 00	-1.4960115E 01	-3.0672544E-02	-2.7917325E-01	-5.3080336E-03

(1, 0, 9, 0) $\cos(+10L_1 -9L_2 -1W_1 +0W_2)$

	C	DC	D^2C	C/N	DC/N	C/N*N
(1, 0, 0)	8.0521885E-03	7.4617418E-02	6.9650659E-01	1.2629244E-03	1.1703173E-02	1.9808007E-04
(3, 0, 0)	-2.7269697E-01	-2.5089632E 00	-2.3201401E 01	-4.2770442E-02	-3.9351175E-01	-6.7082179E-03
(1, 2, 0)	-4.5944627E-01	-4.2297872E 00	-3.9158110E 01	-7.2060646E-02	-6.6340989E-01	-1.1302163E-02
(1, 0, 1)	-1.1889673E-01	-1.2128839E 00	-1.2618659E 01	-1.8648046E-02	-1.9023159E-01	-2.9248039E-03

(1, 0, 10, 0) $\cos(+11L_1 -10L_2 -1W_1 +0W_2)$

	C	DC	D^2C	C/N	DC/N	C/N*N
(1, 0, 0)	4.6602551E-03	4.7915171E-02	4.9582796E-01	6.6831496E-04	6.8713890E-03	9.5841296E-05
(3, 0, 0)	-1.9285517E-01	-1.9709248E 00	-2.0236900E 01	-2.7656854E-02	-2.8264515E-01	-3.9661969E-03
(1, 2, 0)	-3.3008974E-01	-3.3745883E 00	-3.4670419E 01	-4.7337303E-02	-4.8394085E-01	-6.7885184E-03
(1, 0, 1)	-7.7717611E-02	-8.7619830E-01	-1.0066709E 01	-1.1145279E-02	-1.2565330E-01	-1.5983151E-03

(0, 1, -10, 0) $\cos(-10L_1 +11L_2 +0W_1 -1W_2)$

	C	DC	D^2C	C/N	DC/N	C/N*N
(0, 1, 0)	1.5238399E-02	1.5898745E-01	1.6777025E 00	-2.7355747E-03	-2.8541191E-02	4.9108630E-04
(2, 1, 0)	-1.0646674E 00	-1.0986876E 01	-1.1420074E 02	1.9112751E-01	1.9723476E 00	-3.4310926E-02
(0, 3, 0)	-6.0113433E-01	-6.2074736E 00	-6.4581825E 01	1.0791474E-01	1.1143564E 00	-1.9372693E-02
(0, 1, 1)	-3.1285005E-01	-3.7487328E 00	-4.6507782E 01	5.6162374E-02	6.7296693E-01	-1.0082186E-02

(0, 1, -9, 0) $\cos(-9L_1 +10L_2 +0W_1 -1W_2)$

	C	DC	D^2C	C/N	DC/N	C/N*N
(0, 1, 0)	2.6572470E-02	2.5069546E-01	2.3982808E 00	-5.3431956E-03	-5.0409874E-02	1.0744104E-03
(2, 1, 0)	-1.4901260E 00	-1.3863002E 01	-1.3000997E 02	2.9963472E-01	2.7875741E 00	-6.0250586E-02
(0, 3, 0)	-8.5285784E-01	-7.9418437E 00	-7.4583541E 01	1.7149276E-01	1.5969469E 00	-3.4483784E-02
(0, 1, 1)	-4.9660616E-01	-5.4669892E 00	-6.2742352E 01	9.9857627E-02	1.0993028E 00	-2.0079384E-02

(0, 1, -8, 0) $\cos(-8L_1 +9L_2 +0W_1 -1W_2)$

	C	DC	D^2C	C/N	DC/N	C/N*N
(0, 1, 0)	4.8078240E-02	3.8870322E-01	3.3366466E 00	-1.0530177E-02	-8.8829640E-02	2.4064422E-03
(2, 1, 0)	-2.0176699E 00	-1.6708963E 01	-1.3957454E 02	4.6109444E-01	3.8184691E 00	-1.0537308E-01
(0, 3, 0)	-1.1746396E 00	-9.7415735E 00	-8.1554048E 01	2.6843825E-01	2.2262241E 00	-6.1345707E-02
(0, 1, 1)	-7.7634248E-01	-7.7951640E 00	-8.2337999E 01	1.7741614E-01	1.7814147E 00	-4.0544589E-02

(0, 1, -7, 0) COS $(-7L_1 \; +8L_2 \; +0W_1 \; -1W_2)$

	C	DC	D^2C	C/N	DC/N	C/N*N
(0, 1, 0)	7.9345062E-02	5.9012056E-01	4.4887316E 00	-2.0999014E-02	-1.5617796E-01	5.5574802E-03
(2, 1, 0)	-2.6181950E 00	-1.8983075E 01	-1.3881346E 02	6.9291666E-01	5.0239530E 00	-1.8338339E-01
(0, 3, 0)	-1.5582435E 00	-1.1324404E 01	-8.3125340E 01	4.1239589E-01	2.9970525E 00	-1.0914236E-01
(0, 1, 1)	-1.1909441E 00	-1.0815423E 01	-1.0458972E 02	3.1518852E-01	2.8623486E 00	-8.3416008E-02

(0, 1, -6, 0) COS $(-6L_1 \; +7L_2 \; +0W_1 \; -1W_2)$

	C	DC	D^2C	C/N	DC/N	C/N*N
(0, 1, 0)	1.3540288E-01	8.7193919E-01	5.7862957E 00	-4.2563468E-02	-2.7409134E-01	1.3379692E-02
(2, 1, 0)	-3.2099449E 00	-1.9915189E 01	-1.2427960E 02	1.0090360E 00	6.2602769E 00	-3.1718730E-01
(0, 3, 0)	-1.9680896E 00	-1.2261184E 01	-7.7077001E 01	6.1866276E-01	3.8542645E 00	-1.9447469E-01
(0, 1, 1)	-1.7837312E 00	-1.4508677E 01	-1.2780150E 02	5.6071028E-01	4.5607568E 00	-1.7625751E-01

(0, 1, -5, 0) COS $(-5L_1 \; +6L_2 \; +0W_1 \; -1W_2)$

	C	DC	D^2C	C/N	DC/N	C/N*N
(0, 1, 0)	2.2829659E-01	1.2425269E 00	7.0540395E 00	-8.8353996E-02	-4.8087544E-01	3.4194243E-02
(2, 1, 0)	-3.6332731E 00	-1.8633924E 01	-9.4995205E 01	1.4061279E 00	7.2115914E 00	-5.4419131E-01
(0, 3, 0)	-2.3242560E 00	-1.2020292E 01	-6.2306980E 01	8.9951984E-01	4.6520226E 00	-3.4812686E-01
(0, 1, 1)	-2.5891518E 00	-1.8653824E 01	-1.4907213E 02	1.0020382E 00	7.2192929E 00	-3.8780292E-01

(0, 1, -4, 0) COS $(-4L_1 \; +5L_2 \; +0W_1 \; -1W_2)$

	C	DC	D^2C	C/N	DC/N	C/N*N
(0, 1, 0)	3.7844771E-01	1.6829444E 00	7.9732159E 00	-1.9050299E-01	-8.4716043E-01	9.5895382E-02
(2, 1, 0)	-3.6411233E 00	-1.4519396E 01	-5.4568754E 01	1.8328684E 00	7.3087725E 00	-9.2262920E-01
(0, 3, 0)	-2.4888460E 00	-1.0130062E 01	-4.0076473E 01	1.2527345E 00	5.0992702E 00	-6.3060141E-01
(0, 1, 1)	-3.6089969E 00	-2.2703747E 01	-1.6443935E 02	1.8126696E 00	1.1428611E 01	-9.1246153E-01

(0, 1, -3, 0) COS $(-3L_1 \; +4L_2 \; +0W_1 \; -1W_2)$

	C	DC	D^2C	C/N	DC/N	C/N*N
(0, 1, 0)	6.1146773E-01	2.1119281E 00	8.1000727E 00	-4.4014016E-01	-1.5201856E 00	3.1681699E-01
(2, 1, 0)	-2.9502093E 00	-7.8309109E 00	-1.2245787E 01	2.1235881E 00	5.6367626E 00	-1.5285785E 00
(0, 3, 0)	-2.2744709E 00	-6.5087490E 00	-1.4901535E 01	1.6371854E 00	4.6850582E 00	-1.1784613E 00
(0, 1, 1)	-4.7087914E 00	-2.5698416E 01	-1.6971881E 02	3.3894320E 00	1.8497959E 01	-2.4397447E 00

(0, 1, -2, 0) COS $(-2L_1 \; +3L_2 \; +0W_1 \; -1W_2)$

	C	DC	D^2C	C/N	DC/N	C/N*N
(0, 1, 0)	9.4592378E-01	2.3329970E 00	7.0426231E 00	-1.1944348E 00	-2.9459167E 00	1.5082340E 00
(2, 1, 0)	-1.4397901E 00	-4.0530074E-01	1.9426175E 01	1.8180486E 00	5.1178045E-01	-2.2956822E 00
(0, 3, 0)	-1.5236010E 00	-1.9118523E 00	6.1506335E 00	1.9238780E 00	2.4141299E 00	-2.4293149E 00
(0, 1, 1)	-5.5919250E 00	-2.6374761E 01	-1.6221618E 02	7.0610230E 00	3.3303879E 01	-8.9160793E 00

*(0, 1, -1, 0) COS $(-1L_1 \; +2L_2 \; +0W_1 \; -1W_2)$

	C	DC	D^2C	C/N	DC/N	C/N*N
(0, 1, 0)	2.4491595E-01	9.0731801E-01	3.8527101E 00	-1.2583772E 00	-4.6617965E 00	6.4655374E 00
(2, 1, 0)	9.4509107E-01	4.9894437E 00	3.2502334E 01	-4.8558744E 00	-2.5635743E 01	2.4949464E 01
(0, 3, 0)	4.9214996E-01	2.6824247E 00	1.7843829E 01	-2.5286646E 00	-1.3782288E 01	1.2992269E 01
(0, 1, 1)	-4.5151121E 00	-2.2679729E 01	-1.4156747E 02	2.3198629E 01	1.1652836E 02	-1.1919447E 02

(0, 1, -0, 0) COS $(+0L_1 \; +1L_2 \; +0W_1 \; -1W_2)$

	C	DC	D^2C	C/N	DC/N	C/N*N
(0, 1, 0)	1.3108254E 00	8.6921352E-01	3.1377049E 00	3.2552064E 00	2.1585403E 00	8.0837377E 00
(2, 1, 0)	1.0017296E 00	4.6224838E 00	2.8723126E 01	2.4876209E 00	1.1479133E 01	6.1775730E 00
(0, 3, 0)	5.5431501E-01	2.9870164E 00	1.7807407E 01	1.3765447E 00	7.4177347E 00	3.4184089E 00
(0, 1, 1)	-4.0069184E 00	-1.8489935E 01	-1.1489250E 02	-9.9504836E 00	-4.5916531E 01	-2.4710292E 01

(0, 1, 1, 0) COS $(+1L_1 \; +0L_2 \; +0W_1 \; -1W_2)$

	C	DC	D^2C	C/N	DC/N	C/N*N
(0, 1, 0)	9.4152464E-02	3.7994466E-01	1.8055581E 00	9.4152464E-02	3.7994466E-01	9.4152464E-02
(2, 1, 0)	4.5222322E-01	2.6876830E 00	1.9449842E 01	4.5222322E-01	2.6876830E 00	4.5222322E-01
(0, 3, 0)	3.9171212E-01	2.0801895E 00	1.3695328E 01	3.9171212E-01	2.0801895E 00	3.9171212E-01
(0, 1, 1)	-2.0913503E 00	-1.1890566E 01	-8.3216041E 01	-2.0913503E 00	-1.1890566E 01	-2.0913503E 00

(0, 1, 2, 0) COS $(+2L_1 \; -1L_2 \; +0W_1 \; -1W_2)$

	C	DC	D^2C	C/N	DC/N	C/N*N
(0, 1, 0)	-8.5148072E-02	-7.9034011E-02	4.3880222E-01	-5.3307027E-02	-4.9479314E-02	-3.3372913E-02
(2, 1, 0)	4.3053434E-01	1.7613979E 00	1.1835088E 01	2.6953641E-01	1.1027247E 00	1.6874352E-01
(0, 3, 0)	1.8602703E-01	1.1634731E 00	8.7916365E 00	1.1646239E-01	7.2839339E-01	7.2911385E-02
(0, 1, 1)	-7.0038049E-01	-6.0971835E 00	-5.2605978E 01	-4.3846132E-01	-3.8171472E 00	-2.7449911E-01

(0, 1, 3, 0) $\cos(+3L_1 -2L_2 +0W_1 -1W_2)$

	C	DC	D^2C	C/N	DC/N	C/N*N
(0, 1, 0)	-9.6908212E-02	-2.6705300E-01	-5.9019684E-01	-4.4157003E-02	-1.2168484E-01	-2.0120492E-02
(2, 1, 0)	6.5786145E-01	2.3151054E 00	1.0703029E 01	2.9975984E-01	1.0548963E 00	1.3658797E-01
(0, 3, 0)	1.9699093E-01	9.3711628E-01	6.1077673E 00	8.9760493E-02	4.2700453E-01	4.0900087E-02
(0, 1, 1)	-1.4924069E-02	-2.0499906E 00	-2.6876801E 01	-6.8002717E-03	-9.3409464E-01	-3.0985982E-03

(0, 1, 4, 0) $\cos(+4L_1 -3L_2 +0W_1 -1W_2)$

	C	DC	D^2C	C/N	DC/N	C/N*N
(0, 1, 0)	-7.4436265E-02	-2.9626321E-01	-1.1410257E 00	-2.6661101E-02	-1.0611365E-01	-9.5493014E-03
(2, 1, 0)	8.3165802E-01	3.4835453E 00	1.5715108E 01	2.9787791E-01	1.2477138E 00	1.0669199E-01
(0, 3, 0)	2.6037230E-01	1.1988307E 00	6.4530230E 00	9.3258471E-02	4.2938945E-01	3.3402718E-02
(0, 1, 1)	2.4630866E-01	2.8645334E-01	-8.0911980E 00	8.8221248E-02	1.0260001E-01	3.1598518E-02

(0, 1, 5, 0) $\cos(+5L_1 -4L_2 +0W_1 -1W_2)$

	C	DC	D^2C	C/N	DC/N	C/N*N
(0, 1, 0)	-5.0481310E-02	-2.5684791E-01	-1.3033761E 00	-1.4894508E-02	-7.5782958E-02	-4.3946234E-03
(2, 1, 0)	8.7197677E-01	4.4737887E 00	2.3498436E 01	2.5727669E-01	1.3199911E 00	7.5909470E-02
(0, 3, 0)	2.9661978E-01	1.5691342E 00	8.7670125E 00	8.7517648E-02	4.6297293E-01	2.5822076E-02
(0, 1, 1)	2.9819124E-01	1.3684382E 00	3.7594635E 00	8.7981306E-02	4.0375759E-01	2.5958879E-02

(0, 1, 6, 0) $\cos(+6L_1 -5L_2 +0W_1 -1W_2)$

	C	DC	D^2C	C/N	DC/N	C/N*N
(0, 1, 0)	-3.2241110E-02	-1.9835802E-01	-1.2263813E 00	-8.0874290E-03	-4.9756550E-02	-2.0286680E-03
(2, 1, 0)	8.0449513E-01	4.9357679E 00	3.0622493E 01	2.0180128E-01	1.2380986E 00	5.0620265E-02
(0, 3, 0)	2.9219986E-01	1.8136395E 00	1.1510440E 01	7.3296039E-02	4.5493721E-01	1.8385735E-02
(0, 1, 1)	2.6405936E-01	1.6795949E 00	9.9592072E 00	6.6237215E-02	4.2131317E-01	1.6615085E-02

(0, 1, 7, 0) $\cos(+7L_1 -6L_2 +0W_1 -1W_2)$

	C	DC	D^2C	C/N	DC/N	C/N*N
(0, 1, 0)	-1.9885436E-02	-1.4308371E-01	-1.0365800E 00	-4.3381182E-03	-3.1214506E-02	-9.4638457E-04
(2, 1, 0)	6.7947044E-01	4.8614038E 00	3.5045458E 01	1.4823025E-01	1.0605422E 00	3.2337251E-02
(0, 3, 0)	2.5907455E-01	1.8629579E 00	1.3556680E 01	5.6518551E-02	4.0641459E-01	1.2329836E-02
(0, 1, 1)	2.0527734E-01	1.5876903E 00	1.2195427E 01	4.4782391E-02	3.4636345E-01	9.7695273E-03

(0, 1, 8, 0) $\cos(+8L_1 -7L_2 +0W_1 -1W_2)$

	C	DC	D^2C	C/N	DC/N	C/N*N
(0, 1, 0)	-1.1990239E-02	-9.8636315E-02	-8.1708423E-01	-2.3141822E-03	-1.9037352E-02	-4.4664990E-04
(2, 1, 0)	5.3844519E-01	4.4025170E 00	3.6217121E 01	1.0392288E-01	8.4971001E-01	2.0057689E-02
(0, 3, 0)	2.1294054E-01	1.7452849E 00	1.4419685E 01	4.1098696E-02	3.3684959E-01	7.9322745E-03
(0, 1, 1)	1.4834522E-01	1.3281043E 00	1.2011687E 01	2.8631445E-02	2.5633143E-01	5.5260264E-03

(0, 1, 9, 0) $\cos(+9L_1 -8L_2 +0W_1 -1W_2)$

	C	DC	D^2C	C/N	DC/N	C/N*N
(0, 1, 0)	-7.1163870E-03	-6.5825178E-02	-6.1286368E-01	-1.2315255E-03	-1.1391369E-02	-2.1312150E-04
(2, 1, 0)	4.0675513E-01	3.7407929E 00	3.4586000E 01	7.0390961E-02	6.4736248E-01	1.2181500E-02
(0, 3, 0)	1.6545813E-01	1.5235560E 00	1.4116620E 01	2.8633337E-02	2.6365881E-01	4.9551388E-03
(0, 1, 1)	1.0226152E-01	1.0323468E 00	1.0581875E 01	1.7696855E-02	1.7865265E-01	3.0625272E-03

(0, 1, 10, 0) $\cos(+10L_1 -9L_2 +0W_1 -1W_2)$

	C	DC	D^2C	C/N	DC/N	C/N*N
(0, 1, 0)	-4.1749221E-03	-4.2868766E-02	-4.4281502E-01	-6.5480472E-04	-6.7236392E-03	-1.0270113E-04
(2, 1, 0)	2.9607127E-01	3.0243087E 00	3.1039415E 01	4.6436522E-02	4.7433977E-01	7.2832146E-03
(0, 3, 0)	1.2314973E-01	1.2587957E 00	1.2934146E 01	1.9315096E-02	1.9743252E-01	3.0294256E-03
(0, 1, 1)	6.8191570E-02	7.6339511E-01	8.6868434E 00	1.0695328E-02	1.1973270E-01	1.6774807E-03

(2, 0,-10, 0) $\cos(-8L_1 +10L_2 -2W_1 +0W_2)$

	C	DC	D^2C	C/N	DC/N	C/N*N
(2, 0, 0)	1.0239913E-01	1.0730379E 00	1.1388799E 01	-2.5772833E-02	-2.7007287E-01	6.4867636E-03
(4, 0, 0)	-1.8051920E 00	-1.8645701E 01	-1.9394600E 02	4.5434873E-01	4.6929361E 00	-1.1435502E-01
(2, 2, 0)	-7.1244533E 00	-7.3723667E 01	-7.6889448E 02	1.7931534E 00	1.8555508E 01	-4.5131874E-01
(2, 0, 1)	-2.2219245E 00	-2.7016688E 01	-3.4106188E 02	5.5923612E-01	6.7998295E 00	-1.4075412E-01

(2, 0, -9, 0) $\cos(-7L_1 +9L_2 -2W_1 +0W_2)$

	C	DC	D^2C	C/N	DC/N	C/N*N
(2, 0, 0)	1.5871887E-01	1.5055791E 00	1.4509582E 01	-4.7016280E-02	-4.4598812E-01	1.3927334E-02
(4, 0, 0)	-2.1652508E 00	-2.0149641E 01	-1.8887276E 02	6.4139847E-01	5.9688001E 00	-1.8999739E-01
(2, 2, 0)	-8.8524379E 00	-8.2612231E 01	-7.7766263E 02	2.6223013E 00	2.4471696E 01	-7.7678765E-01
(2, 0, 1)	-3.1589333E 00	-3.5406795E 01	-4.1517798E 02	9.3575071E-01	1.0488330E 01	-2.7719148E-01

(2, 0, -8, 0) COS ($-6L_1 +8L_2 -2W_1 +0W_2$)

	C	DC	D^2C	C/N	DC/N	C/N*N
(2, 0, 0)	2.4085444E-01	2.0459594E 00	1.7733233E 01	-8.6684636E-02	-7.3635032E-01	3.1198205E-02
(4, 0, 0)	-2.4457750E 00	-2.0230009E 01	-1.6840947E 02	8.8024580E-01	7.2808746E 00	-3.1680457E-01
(2, 2, 0)	-1.0469886E 01	-8.6999724E 01	-7.2957491E 02	3.7681609E 00	3.1311607E 01	-1.3561787E 00
(2, 0, 1)	-4.3645079E 00	-4.4825298E 01	-4.8648108E 02	1.5708067E 00	1.6132834E 01	-5.6534067E-01

(2, 0, -7, 0) COS ($-5L_1 +7L_2 -2W_1 +0W_2$)

	C	DC	D^2C	C/N	DC/N	C/N*N
(2, 0, 0)	3.5563865E-01	2.6694954E 00	2.0575143E 01	-1.6304729E-01	-1.2238658E 00	7.4751207E-02
(4, 0, 0)	-2.5488110E 00	-1.8389804E 01	-1.3301698E 02	1.1684448E 00	8.4310514E 00	-5.3568910E-01
(2, 2, 0)	-1.1615134E 01	-8.4502919E 01	-6.1992456E 02	5.3251134E 00	3.8741492E 01	-2.4413694E 00
(2, 0, 1)	-5.8183450E 00	-5.4404150E 01	-5.4484780E 02	2.6674980E 00	2.4942309E 01	-1.2229501E 00

(2, 0, -6, 0) COS ($-4L_1 +6L_2 -2W_1 +0W_2$)

	C	DC	D^2C	C/N	DC/N	C/N*N
(2, 0, 0)	5.0625347E-01	3.3019416E 00	2.2331126E 01	-3.1962763E-01	-2.0847102E 00	2.0179974E-01
(4, 0, 0)	-2.3676129E 00	-1.4477848E 01	-8.7424263E 01	1.4948134E 00	9.1407182E 00	-9.4376374E-01
(2, 2, 0)	-1.1816858E 01	-7.3488920E 01	-4.5840050E 02	7.4606783E 00	4.6397883E 01	-4.7103655E 00
(2, 0, 1)	-7.4079432E 00	-6.2654008E 01	-5.7815967E 02	4.6770707E 00	3.9557165E 01	-2.9529102E 00

(2, 0, -5, 0) COS ($-3L_1 +5L_2 -2W_1 +0W_2$)

	C	DC	D^2C	C/N	DC/N	C/N*N
(2, 0, 0)	6.8443913E-01	3.7959800E 00	2.2187008E 01	-6.9375557E-01	-3.8476501E 00	7.0319882E-01
(4, 0, 0)	-1.8377108E 00	-9.0019777E 00	-4.0704463E 01	1.8627253E 00	9.1245108E 00	-1.8880803E 00
(2, 2, 0)	-1.0615231E 01	-5.4299306E 01	-2.7226112E 02	1.0759723E 01	5.5038416E 01	-1.0906182E 01
(2, 0, 1)	-8.8720099E 00	-6.7501274E 01	-5.7498109E 02	8.9927738E 00	6.8420087E 01	-9.1151814E 00

(2, 0, -4, 0) COS ($-2L_1 +4L_2 -2W_1 +0W_2$)

	C	DC	D^2C	C/N	DC/N	C/N*N
(2, 0, 0)	8.5579429E-01	3.9236493E 00	1.9526906E 01	-2.1985339E 00	-1.0079847E 01	5.6480296E 00
(4, 0, 0)	-1.0175559E 00	-3.3010478E 00	-3.8929890E 00	2.6140991E 00	8.4803857E 00	-6.7156156E 00
(2, 2, 0)	-7.8300698E 00	-3.0411952E 01	-1.0209595E 02	2.0115435E 01	7.8128245E 01	-5.1676514E 01
(2, 0, 1)	-9.7578468E 00	-6.6687358E 01	-5.2890768E 02	2.5067890E 01	1.7131970E 02	-6.4399362E 01

(2, 0, -3, 0) COS ($-1L_1 +3L_2 -2W_1 +0W_2$)

	C	DC	D^2C	C/N	DC/N	C/N*N
(2, 0, 0)	9.3702072E-01	3.4279170E 00	1.4468791E 01	4.5036646E 00	1.6475824E 01	2.1646260E 01
(4, 0, 0)	-1.7163195E-01	7.7631493E-01	1.5136147E 01	-8.2492597E-01	3.7312537E 00	-3.9648962E 00
(2, 2, 0)	-3.9598893E 00	-8.4565296E 00	1.3173353E 01	-1.9028448E 01	-4.0645176E 01	-9.1457684E 01
(2, 0, 1)	-9.4635220E 00	-5.8727640E 01	-4.4335078E 02	-4.5485150E 01	-2.8226654E 02	-2.1861828E 02

(2, 0, -2, 0) COS ($+0L_1 +2L_2 -2W_1 +0W_2$)

	C	DC	D^2C	C/N	DC/N	C/N*N
(2, 0, 0)	7.7657521E-01	2.2129116E 00	8.4042478E 00	9.6424460E-01	2.7476901E 00	1.1972667E 00
(4, 0, 0)	2.7655529E-01	2.0013807E 00	1.7066553E 01	3.4338843E-01	2.4850401E 00	4.2637267E-01
(2, 2, 0)	-4.5201102E-01	4.4502878E 00	5.8184032E 01	-5.6124529E-01	5.5257571E 00	-6.9687744E-01
(2, 0, 1)	-7.5108585E 00	-4.4356090E 01	-3.3358710E 02	-9.3259541E 00	-5.5075309E 01	-1.1579691E 01

*(2, 0, -1, 0) COS ($+1L_1 +1L_2 -2W_1 +0W_2$)

	C	DC	D^2C	C/N	DC/N	C/N*N
(2, 0, 0)	1.5148512E-01	6.7432268E-01	3.6469642E 00	1.0799647E-01	4.8073680E-01	7.6992632E-02
(4, 0, 0)	1.4789841E-01	1.1739827E 00	1.0869078E 01	1.0543374E-01	8.3695341E-01	7.5165612E-02
(2, 2, 0)	9.2883660E-01	6.3501621E 00	5.2767935E 01	6.6218436E-01	4.5271450E 00	4.7208317E-01
(2, 0, 1)	-4.1698017E 00	-2.7423616E 01	-2.2201284E 02	-2.9727269E 00	-1.9550790E 01	-2.1193106E 00

(2, 0, -0, 0) COS ($+2L_1 +0L_2 -2W_1 +0W_2$)

	C	DC	D^2C	C/N	DC/N	C/N*N
(2, 0, 0)	-3.3564294E-03	1.3587252E-01	1.3489083E 00	-1.6782147E-03	6.7936259E-02	-8.3910733E-04
(4, 0, 0)	4.4461122E-02	4.4328648E-01	5.1442822E 00	2.2230561E-02	2.2164324E-01	1.1115280E-02
(2, 2, 0)	3.7119471E-01	3.3427239E 00	3.2071677E 01	1.8559736E-01	1.6713620E 00	9.2798679E-02
(2, 0, 1)	-1.4847789E 00	-1.3370896E 01	-1.2828871E 02	-7.4238943E-01	-6.6854479E 00	-3.7119471E-01

*(2, 0, 1, 0) COS ($+3L_1 -1L_2 -2W_1 +0W_2$)

	C	DC	D^2C	C/N	DC/N	C/N*N
(2, 0, 0)	-1.7974377E-02	-1.9644977E-02	2.9174201E-01	-6.9203708E-03	-7.5635737E-03	-2.6644334E-03
(4, 0, 0)	4.2951174E-02	2.2624661E-01	2.2447990E 00	1.6536765E-02	8.7107909E-02	6.3668711E-03
(2, 2, 0)	8.5998635E-02	1.2625162E 00	1.5499813E 01	3.3110602E-02	4.8608528E-01	1.2748016E-02
(2, 0, 1)	-2.9007141E-01	-4.9911299E 00	-6.2874478E 01	-1.1168129E-01	-1.9216504E 00	-4.2998762E-02

(2, 0, 2, 0) COS ($+4L_1$ $-2L_2$ $-2W_1$ $+0W_2$)

	C	DC	D^2C	C/N	DC/N	C/N*N
(2, 0, 0)	2.1497963E-01	4.1852051E-01	8.7069566E-01	6.7294096E-02	1.3100757E-01	2.1064765E-02
(4, 0, 0)	-5.1387643E-01	-9.1296065E-01	-8.9606065E-01	-1.6085640E-01	-2.8577992E-01	-5.0352148E-02
(2, 2, 0)	-5.3761448E-01	-6.9944246E-01	4.2014797E 00	-1.6828702E-01	-2.1894329E-01	-5.2678120E-02
(2, 0, 1)	-4.2929764E-01	-2.2244763E 00	-2.7254267E 01	-1.3438109E-01	-6.9631770E-01	-4.2064701E-02

(2, 0, 3, 0) COS ($+5L_1$ $-3L_2$ $-2W_1$ $+0W_2$)

	C	DC	D^2C	C/N	DC/N	C/N*N
(2, 0, 0)	1.9026511E-01	5.6964540E-01	1.7157170E 00	5.0176158E-02	1.5022522E-01	1.3232309E-02
(4, 0, 0)	-8.2920502E-01	-2.4193180E 00	-6.7478888E 00	-2.1867552E-01	-6.3801546E-01	-5.7668468E-02
(2, 2, 0)	-1.1410454E 00	-3.3233817E 00	-8.0157897E 00	-3.0091316E-01	-8.7643249E-01	-7.9359935E-02
(2, 0, 1)	-5.7297639E-01	-2.0868991E 00	-1.4261200E 01	-1.5110365E-01	-5.5035092E-01	-3.9848613E-02

(2, 0, 4, 0) COS ($+6L_1$ $-4L_2$ $-2W_1$ $+0W_2$)

	C	DC	D^2C	C/N	DC/N	C/N*N
(2, 0, 0)	1.4924299E-01	6.0353322E-01	2.4516673E 00	3.4001882E-02	1.3750237E-01	7.7466148E-03
(4, 0, 0)	-1.0161242E 00	-4.0496701E 00	-1.6023166E 01	-2.3150257E-01	-9.2263229E-01	-5.2742999E-02
(2, 2, 0)	-1.6240877E 00	-6.5218588E 00	-2.5750714E 01	-3.7001429E-01	-1.4858686E 00	-8.4299985E-02
(2, 0, 1)	-6.6731266E-01	-2.8821595E 00	-1.4677176E 01	-1.5203318E-01	-6.5663952E-01	-3.4637567E-02

(2, 0, 5, 0) COS ($+7L_1$ $-5L_2$ $-2W_1$ $+0W_2$)

	C	DC	D^2C	C/N	DC/N	C/N*N
(2, 0, 0)	1.0898789E-01	5.5438146E-01	2.8357837E 00	2.1856279E-02	1.1117488E-01	4.3830277E-03
(4, 0, 0)	-1.0627527E 00	-5.3489276E 00	-2.6934295E 01	-2.1312295E-01	-1.0726665E 00	-4.2739379E-02
(2, 2, 0)	-1.8771559E 00	-9.4948050E 00	-4.8082624E 01	-3.7644223E-01	-1.9040750E 00	-7.5491199E-02
(2, 0, 1)	-6.6548801E-01	-3.5993895E 00	-2.0353284E 01	-1.3345203E-01	-7.2181655E-01	-2.6762284E-02

(2, 0, 6, 0) COS ($+8L_1$ $-6L_2$ $-2W_1$ $+0W_2$)

	C	DC	D^2C	C/N	DC/N	C/N*N
(2, 0, 0)	7.5882351E-02	4.6453890E-01	2.8609022E 00	1.3589526E-02	8.3192774E-02	2.4337044E-03
(4, 0, 0)	-1.0008541E 00	-6.0759221E 00	-3.6988407E 01	-1.7923974E-01	-1.0881173E 00	-3.2099467E-02
(2, 2, 0)	-1.9004044E 00	-1.1569720E 01	-7.0722688E 01	-3.4033730E-01	-2.0719838E 00	-6.0949910E-02
(2, 0, 1)	-5.9367642E-01	-3.8913220E 00	-2.6086683E 01	-1.0631960E-01	-6.9688431E-01	-1.9040434E-02

(2, 0, 7, 0) COS ($+9L_1$ $-7L_2$ $-2W_1$ $+0W_2$)

	C	DC	D^2C	C/N	DC/N	C/N*N
(2, 0, 0)	5.1055575E-02	3.6509230E-01	2.6260576E 00	8.2598168E-03	5.9064960E-02	1.3362806E-03
(4, 0, 0)	-8.7435371E-01	-6.2094405E 00	-4.4254621E 01	-1.4145373E-01	-1.0045689E 00	-2.2884512E-02
(2, 2, 0)	-1.7539357E 00	-1.2476261E 01	-8.9139851E 01	-2.8375330E-01	-2.0184208E 00	-4.5905864E-02
(2, 0, 1)	-4.8942668E-01	-3.7635233E 00	-2.9471050E 01	-7.9179889E-02	-6.0886618E-01	-1.2809794E-02

(2, 0, 8, 0) COS ($+10L_1$ $-8L_2$ $-2W_1$ $+0W_2$)

	C	DC	D^2C	C/N	DC/N	C/N*N
(2, 0, 0)	3.3477479E-02	2.7368115E-01	2.2496811E 00	4.9387639E-03	4.0374803E-02	7.2859100E-04
(4, 0, 0)	-7.2177193E-01	-5.8664518E 00	-4.7859334E 01	-1.0647938E-01	-8.6544811E-01	-1.5708367E-02
(2, 2, 0)	-1.5117181E 00	-1.2298571E 01	-1.0048120E 02	-2.2301616E-01	-1.8143463E 00	-3.2900452E-02
(2, 0, 1)	-3.8088396E-01	-3.3524975E 00	-3.0013974E 01	-5.6178033E-02	-4.9457707E-01	-8.2876625E-03

(2, 0, 9, 0) COS ($+11L_1$ $-9L_2$ $-2W_1$ $+0W_2$)

	C	DC	D^2C	C/N	DC/N	C/N*N
(2, 0, 0)	2.1514081E-02	1.9783226E-01	1.8283660E 00	2.9168362E-03	2.6821703E-02	3.9545883E-04
(4, 0, 0)	-5.6997787E-01	-5.2153696E 00	-4.7895640E 01	-7.7276461E-02	-7.0708940E-01	-1.0476988E-02
(2, 2, 0)	-1.2360911E 00	-1.1316618E 01	-1.0401738E 02	-1.6758676E-01	-1.5342845E 00	-2.2721078E-02
(2, 0, 1)	-2.8355764E-01	-2.8067672E 00	-2.8223433E 01	-3.8444178E-02	-3.8053589E-01	-5.2121848E-03

(2, 0, 10, 0) COS ($+12L_1$ $-10L_2$ $-2W_1$ $+0W_2$)

	C	DC	D^2C	C/N	DC/N	C/N*N
(2, 0, 0)	1.3604342E-02	1.3893923E-01	1.4255065E 00	1.7062711E-03	1.7425907E-02	2.1400235E-04
(4, 0, 0)	-4.3432958E-01	-4.4168541E 00	-4.5072666E 01	-5.4474080E-02	-5.5396657E-01	-6.8321974E-03
(2, 2, 0)	-9.6932274E-01	-9.8605788E 00	-1.0067638E 02	-1.2157349E-01	-1.2367243E 00	-1.5247878E-02
(2, 0, 1)	-2.0401158E-01	-2.2394550E 00	-2.4946445E 01	-2.5587350E-02	-2.8087485E-01	-3.2091929E-03

(1, 1,-12, 0) COS ($-11L_1$ $+13L_2$ $-1W_1$ $-1W_2$)

	C	DC	D^2C	C/N	DC/N	C/N*N
(1, 1, 0)	-9.0111651E-02	-1.1233023E 00	-1.4125426E 01	1.5630586E-02	1.9484577E-01	-2.7112501E-03
(3, 1, 0)	4.1136400E 00	5.0847714E 01	6.3229069E 02	-7.1354373E-01	-8.8199424E 00	1.2376986E-01
(1, 3, 0)	5.0707887E 00	6.2729620E 01	7.8089894E 02	-8.7956883E-01	-1.0880954E 01	1.5256824E-01
(1, 1, 1)	2.2726503E 00	3.1983801E 01	4.6237748E 02	-3.9420936E-01	-5.5478460E 00	6.8378764E-02

(1, 1, -11, 0)   COS ($-10L_1 + 12L_2 - 1W_1 - 1W_2$)

	C	DC	D^2C	C/N	DC/N	C/N*N
(1, 1, 0)	-1.4541197E-01	-1.6678072E 00	-1.9329053E 01	2.8138240E-02	3.2273244E-01	-5.4449478E-03
(3, 1, 0)	5.4839258E 00	6.2244032E 01	7.1123015E 02	-1.0611783E 00	-1.2044659E 01	2.0534548E-01
(1, 3, 0)	6.8949142E 00	7.8346289E 01	8.9661006E 02	-1.3342145E 00	-1.5160559E 01	2.5817991E-01
(1, 1, 1)	3.4020124E 00	4.4580964E 01	6.0286883E 02	-6.5831338E-01	-8.6267309E 00	1.2738828E-01

(1, 1, -10, 0)   COS ($-9L_1 + 11L_2 - 1W_1 - 1W_2$)

	C	DC	D^2C	C/N	DC/N	C/N*N
(1, 1, 0)	-2.3187772E-01	-2.4287258E 00	-2.5761913E 01	5.0734042E-02	5.3139679E-01	-1.1100433E-02
(3, 1, 0)	7.0781257E 00	7.3161681E 01	7.6184195E 02	-1.5486694E 00	-1.6007523E 01	3.3884350E-01
(1, 3, 0)	9.1150801E 00	9.4365648E 01	9.8488173E 02	-1.9943480E 00	-2.0646877E 01	4.3635643E-01
(1, 1, 1)	5.0028669E 00	6.0741219E 01	7.6548027E 02	-1.0946100E 00	-1.3289969E 01	2.3949687E-01

(1, 1, -9, 0)   COS ($-8L_1 + 10L_2 - 1W_1 - 1W_2$)

	C	DC	D^2C	C/N	DC/N	C/N*N
(1, 1, 0)	-3.6449996E-01	-3.4553996E 00	-3.3272047E 01	9.1740985E-02	8.6968942E-01	-2.3090286E-02
(3, 1, 0)	8.7797222E 00	8.1801035E 01	7.6823930E 02	-2.2097681E 00	-2.0588500E 01	5.5617645E-01
(1, 3, 0)	1.1646642E 01	1.0876836E 02	1.0251129E 03	-2.9313431E 00	-2.7375906E 01	7.3778966E-01
(1, 1, 1)	7.2029501E 00	8.0574077E 01	9.4260156E 02	-1.8129103E 00	-2.0279687E 01	4.5629134E-01

(1, 1, -8, 0)   COS ($-7L_1 + 9L_2 - 1W_1 - 1W_2$)

	C	DC	D^2C	C/N	DC/N	C/N*N
(1, 1, 0)	-5.6297753E-01	-4.7779490E 00	-4.1360934E 01	1.6676725E-01	1.4153415E 00	-4.9400402E-02
(3, 1, 0)	1.0357777E 01	8.5857652E 01	7.1735536E 02	-3.0682184E 00	-2.5433066E 01	9.0887882E-01
(1, 3, 0)	1.4267903E 01	1.1870961E 02	9.9765294E 02	-4.2264902E 00	-3.5164593E 01	1.2519863E 00
(1, 1, 1)	1.0108322E 01	1.0353031E 02	1.1199476E 03	-2.9943239E 00	-3.0668126E 01	8.8698951E-01

(1, 1, -7, 0)   COS ($-6L_1 + 8L_2 - 1W_1 - 1W_2$)

	C	DC	D^2C	C/N	DC/N	C/N*N
(1, 1, 0)	-8.5047572E-01	-6.3752097E 00	-4.9042420E 01	3.0609018E-01	2.2944677E 00	-1.1016328E-01
(3, 1, 0)	1.1448141E 01	8.2943541E 01	6.0463678E 02	-4.1195197E 00	-2.9851767E 01	1.4826343E 00
(1, 3, 0)	1.6569906E 01	1.2083350E 02	8.9026171E 02	-5.9635866E 00	-4.3488538E 01	2.1463226E 00
(1, 1, 1)	1.3744320E 01	1.2800282E 02	1.2759351E 03	-4.9466450E 00	-4.6068812E 01	1.7803206E 00

(1, 1, -6, 0)   COS ($-5L_1 + 7L_2 - 1W_1 - 1W_2$)

	C	DC	D^2C	C/N	DC/N	C/N*N
(1, 1, 0)	-1.2483869E 00	-8.1247830E 00	-5.4773870E 01	5.7233963E-01	3.7249153E 00	-2.6239675E-01
(3, 1, 0)	1.1569463E 01	7.1440163E 01	4.4008685E 02	-5.3041750E 00	-3.2752697E 01	2.4317699E 00
(1, 3, 0)	1.7939129E 01	1.1210560E 02	7.0609818E 02	-8.2244335E 00	-5.1396311E 01	3.7706014E 00
(1, 1, 1)	1.7956726E 01	1.5095281E 02	1.3832222E 03	-8.2325008E 00	-6.9206334E 01	3.7742999E 00

(1, 1, -5, 0)   COS ($-4L_1 + 6L_2 - 1W_1 - 1W_2$)

	C	DC	D^2C	C/N	DC/N	C/N*N
(1, 1, 0)	-1.7627464E 00	-9.7396545E 00	-5.6601676E 01	1.1129256E 00	6.1492174E 00	-7.0265547E-01
(3, 1, 0)	1.0267074E 01	5.1738048E 01	2.5146301E 02	-6.4822088E 00	-3.2665276E 01	4.0926001E 00
(1, 3, 0)	1.7631426E 01	9.1254952E 01	4.7018836E 02	-1.1131757E 01	-5.7614625E 01	7.0281341E 00
(1, 1, 1)	2.2272671E 01	1.6780519E 02	1.4137193E 03	-1.4062049E 01	-1.0594530E 02	8.8781995E 00

(1, 1, -4, 0)   COS ($-3L_1 + 5L_2 - 1W_1 - 1W_2$)

	C	DC	D^2C	C/N	DC/N	C/N*N
(1, 1, 0)	-2.3552630E 00	-1.0718385E 01	-5.2721683E 01	2.3873224E 00	1.0864282E 01	-2.4198181E 00
(3, 1, 0)	7.3668380E 00	2.7415279E 01	7.9995395E 01	-7.4671139E 00	-2.7788450E 01	7.5687546E 00
(1, 3, 0)	1.5019615E 01	6.0558486E 01	2.2902586E 02	-1.5224059E 01	-6.1382795E 01	1.5431286E 01
(1, 1, 1)	2.5755861E 01	1.7303466E 02	1.3476070E 03	-2.6106444E 01	-1.7538997E 02	2.6461800E 01

(1, 1, -3, 0)   COS ($-2L_1 + 4L_2 - 1W_1 - 1W_2$)

	C	DC	D^2C	C/N	DC/N	C/N*N
(1, 1, 0)	-2.8903672E 00	-1.0385821E 01	-4.2603066E 01	7.4253480E 00	2.6681154E 01	-1.9075705E 01
(3, 1, 0)	3.3933721E 00	5.2583752E 00	-3.4775064E 01	-8.7175666E 00	-1.3508756E 01	2.2395412E 01
(1, 3, 0)	1.0077787E 01	2.6977014E 01	3.7550520E 01	-2.5889816E 01	-6.9303899E 01	6.6510888E 01
(1, 1, 1)	2.6975582E 01	1.6195466E 02	1.1844769E 03	-6.9300219E 01	-4.1606120E 02	1.7803213E 02

(1, 1, -2, 0)   COS ($-1L_1 + 3L_2 - 1W_1 - 1W_2$)

	C	DC	D^2C	C/N	DC/N	C/N*N
(1, 1, 0)	-3.0583461E 00	-8.1873055E 00	-2.8417309E 01	-1.4699530E 01	-3.9351187E 01	-7.0651324E 01
(3, 1, 0)	-1.4432226E-01	-7.4379624E 00	-7.7191986E 01	-6.9366561E-01	-3.5749570E 01	-3.3340108E 00
(1, 3, 0)	4.0031281E 00	7.4838786E-01	-6.6777523E 01	1.9240499E 01	3.5970260E 00	9.2476879E 01
(1, 1, 1)	2.4371230E 01	1.3385761E 02	9.5050274E 02	1.1713705E 02	6.4336867E 02	5.6300355E 02

*(1, 1, -1, 0) $\cos(+0L_1 +2L_2 -1W_1 -1W_2)$

	C	DC	D^2C	C/N	DC/N	C/N*N
(1, 1, 0)	-6.9857495E-01	-2.8336730E 00	-1.3719878E 01	-8.6739457E-01	-3.5184666E 00	-1.0770116E 00
(3, 1, 0)	-1.3607757E 00	-8.6071725E 00	-6.7406991E 01	-1.6896246E 00	-1.0687206E 01	-2.0979441E 00
(1, 3, 0)	-1.8333623E 00	-1.1604339E 01	-8.9786263E 01	-2.2764179E 00	-1.4408677E 01	-2.8265435E 00
(1, 1, 1)	1.5854976E 01	9.3463463E 01	6.9069057E 02	1.9686535E 01	1.1605011E 02	2.4444040E 01

(1, 1, -0, 0) $\cos(+1L_1 +1L_2 -1W_1 -1W_2)$

	C	DC	D^2C	C/N	DC/N	C/N*N
(1, 1, 0)	-4.3460676E-01	-1.5688525E 00	-7.6761151E 00	-3.0983900E-01	-1.1184632E 00	-2.2088981E-01
(3, 1, 0)	-6.0043029E-01	-4.6734330E 00	-4.1635668E 01	-4.2805758E-01	-3.3317747E 00	-3.0516997E-01
(1, 3, 0)	-1.4935082E 00	-8.9037037E 00	-6.8439764E 01	-1.0647489E 00	-6.3476110E 00	-7.5907872E-01
(1, 1, 1)	9.2449676E 00	5.7446252E 01	4.5565396E 02	6.5909041E 00	4.0954468E 01	4.6987743E 00

(1, 1, 1, 0) $\cos(+2L_1 +0L_2 -1W_1 -1W_2)$

	C	DC	D^2C	C/N	DC/N	C/N*N
(1, 1, 0)	-9.5819868E-02	-5.2283437E-01	-3.4269182E 00	-4.7909934E-02	-2.6141718E-01	-2.3954967E-02
(3, 1, 0)	-1.4824947E-01	-1.8183742E 00	-2.0612543E 01	-7.4124736E-02	-9.0918710E-01	-3.7062368E-02
(1, 3, 0)	-6.4838262E-01	-4.7674744E 00	-4.1775844E 01	-3.2419131E-01	-2.3837372E 00	-1.6209566E-01
(1, 1, 1)	3.8539327E 00	2.9717456E 01	2.7029926E 02	1.9269663E 00	1.4858728E 01	9.6348317E-01

(1, 1, 2, 0) $\cos(+3L_1 -1L_2 -1W_1 -1W_2)$

	C	DC	D^2C	C/N	DC/N	C/N*N
(1, 1, 0)	-1.3077914E-01	-3.7746913E-01	-1.7935182E 00	-5.0351682E-02	-1.4533056E-01	-1.9386057E-02
(3, 1, 0)	2.3473571E-01	-6.5423669E-02	-7.6364502E 00	9.0376325E-02	-2.5188970E-02	3.4796069E-02
(1, 3, 0)	-2.0968249E-01	-2.0688720E 00	-2.1739499E 01	-8.0730506E-02	-7.9654284E-01	-3.1082302E-02
(1, 1, 1)	1.6478707E 00	1.4108622E 01	1.4601922E 02	6.3445182E-01	5.4320045E 00	2.4427226E-01

(1, 1, 3, 0) $\cos(+4L_1 -2L_2 -1W_1 -1W_2)$

	C	DC	D^2C	C/N	DC/N	C/N*N
(1, 1, 0)	-1.5719813E-01	-5.0606059E-01	-1.8889457E 00	-4.9207017E-02	-1.5840984E-01	-1.5403049E-02
(3, 1, 0)	7.1540073E-01	1.9861601E 00	3.2194143E 00	2.2393864E-01	6.2171867E-01	7.0098493E-02
(1, 3, 0)	1.2241464E-01	-2.4253483E-01	-8.4046317E 00	3.8318899E-02	-7.5919574E-02	1.1994791E-02
(1, 1, 1)	9.8022310E-01	7.2884285E 00	7.6324250E 01	3.0683478E-01	2.2814636E 00	9.6047095E-02

(1, 1, 4, 0) $\cos(+5L_1 -3L_2 -1W_1 -1W_2)$

	C	DC	D^2C	C/N	DC/N	C/N*N
(1, 1, 0)	-1.4961345E-01	-6.1454002E-01	-2.6212832E 00	-3.9455622E-02	-1.6206469E-01	-1.0405121E-02
(3, 1, 0)	1.1536355E 00	4.5936608E 00	1.7588642E 01	3.0423338E-01	1.2114268E 00	8.0231537E-02
(1, 3, 0)	4.4207385E-01	1.5688113E 00	3.2200800E 00	1.1658242E-01	4.1372231E-01	3.0744775E-02
(1, 1, 1)	8.4200798E-01	5.1914123E 00	4.5536748E 01	2.2205188E-01	1.3690641E 00	5.8558872E-02

(1, 1, 5, 0) $\cos(+6L_1 -4L_2 -1W_1 -1W_2)$

	C	DC	D^2C	C/N	DC/N	C/N*N
(1, 1, 0)	-1.2398260E-01	-6.3255147E-01	-3.2737507E 00	-2.8246832E-02	-1.4411357E-01	-6.4354476E-03
(3, 1, 0)	1.4299401E 00	7.2065606E 00	3.6215977E 01	3.2578184E-01	1.6418635E 00	7.4222550E-02
(1, 3, 0)	6.9853185E-01	3.4621645E 00	1.6382529E 01	1.5914581E-01	7.8878148E-01	3.6258032E-02
(1, 1, 1)	8.0673712E-01	4.9624591E 00	3.7008432E 01	1.8379811E-01	1.1305921E 00	4.1874540E-02

(1, 1, 6, 0) $\cos(+7L_1 -5L_2 -1W_1 -1W_2)$

	C	DC	D^2C	C/N	DC/N	C/N*N
(1, 1, 0)	-9.4267650E-02	-5.7695748E-01	-3.5612367E 00	-1.8904303E-02	-1.1570225E-01	-3.7910426E-03
(3, 1, 0)	1.5155067E 00	9.2046161E 00	5.6059074E 01	3.0391760E-01	1.8458809E 00	6.0947211E-02
(1, 3, 0)	8.4637944E-01	5.1266171E 00	3.0888506E 01	1.6973175E-01	1.0280847E 00	3.4037769E-02
(1, 1, 1)	7.4455873E-01	5.0979656E 00	3.7994981E 01	1.4931277E-01	1.0223389E 00	2.9942974E-02

(1, 1, 7, 0) $\cos(+8L_1 -6L_2 -1W_1 -1W_2)$

	C	DC	D^2C	C/N	DC/N	C/N*N
(1, 1, 0)	-6.7656198E-02	-4.8329598E-01	-3.4749539E 00	-1.2116330E-02	-8.6551918E-02	-2.1698745E-03
(3, 1, 0)	1.4449888E 00	1.0260539E 01	7.3132077E 01	2.5877838E-01	1.8375269E 00	4.6343786E-02
(1, 3, 0)	8.8204293E-01	6.2623650E 00	4.4552020E 01	1.5796223E-01	1.1215068E 00	2.8288946E-02
(1, 1, 1)	6.4309626E-01	5.0161185E 00	4.0807593E 01	1.1517004E-01	8.9832050E-01	2.0625430E-02

(1, 1, 8, 0) $\cos(+9L_1 -7L_2 -1W_1 -1W_2)$

	C	DC	D^2C	C/N	DC/N	C/N*N
(1, 1, 0)	-4.6603758E-02	-3.8054840E-01	-3.1248018E 00	-7.5395979E-03	-6.1565462E-02	-1.2197629E-03
(3, 1, 0)	1.2761670E 00	1.0368079E 01	8.4557782E 01	2.0645944E-01	1.6773572E 00	3.3401195E-02
(1, 3, 0)	8.3088187E-01	6.7524366E 00	5.5068667E 01	1.3442082E-01	1.0924153E 00	2.1746720E-02
(1, 1, 1)	5.2270965E-01	4.6189906E 00	4.1901429E 01	8.4564438E-02	7.4726445E-01	1.3680911E-02

(1, 1, 9, 0) $\cos(+10L_1 -8L_2 -1W_1 -1W_2)$

	C	DC	D^2C	C/N	DC/N	C/N*N
(1, 1, 0)	-3.1134893E-02	-2.8599477E-01	-2.6401119E 00	-4.5931741E-03	-4.2191368E-02	-6.7760786E-04
(3, 1, 0)	1.0634427E 00	9.7254864E 00	8.9269415E 01	1.5688435E-01	1.4347521E 00	2.3144359E-02
(1, 3, 0)	7.2734513E-01	6.6536942E 00	6.1091353E 01	1.0730157E-01	9.8158602E-01	1.5829660E-02
(1, 1, 1)	4.0418027E-01	4.0001836E 00	4.0375078E 01	5.9626681E-02	5.9012697E-01	8.7964242E-03

(1, 1, 10, 0) $\cos(+11L_1 -9L_2 -1W_1 -1W_2)$

	C	DC	D^2C	C/N	DC/N	C/N*N
(1, 1, 0)	-2.0314838E-02	-2.0728015E-01	-2.1244218E 00	-2.7542452E-03	-2.8102629E-02	-3.7341506E-04
(3, 1, 0)	8.4666175E-01	8.6053352E 00	8.7764934E 01	1.1478871E-01	1.1666942E 00	1.5562824E-02
(1, 3, 0)	6.0209939E-01	6.1208841E 00	6.2442929E 01	8.1631433E-02	8.2985723E-01	1.1067427E-02
(1, 1, 1)	3.0021814E-01	3.2905295E 00	3.6658800E 01	4.0702975E-02	4.4612341E-01	5.5184281E-03

(0, 2, -12, 0) $\cos(-12L_1 +14L_2 +0W_1 -2W_2)$

	C	DC	D^2C	C/N	DC/N	C/N*N
(0, 2, 0)	4.9605911E-02	6.1822859E-01	7.7718856E 00	-7.7967309E-03	-9.7169104E-02	1.2254389E-03
(2, 2, 0)	-5.0457227E 00	-6.2385145E 01	-7.7604885E 02	7.9305351E-01	9.8052869E 00	-1.2464693E-01
(0, 4, 0)	-2.0480556E 00	-2.5340589E 01	-3.1553872E 02	3.2189991E-01	3.9828672E 00	-5.0594111E-02
(0, 2, 1)	-1.2468629E 00	-1.7534169E 01	-2.5325916E 02	1.9597371E-01	2.7559054E 00	-3.0801859E-02

(0, 2, -11, 0) $\cos(-11L_1 +13L_2 +0W_1 -2W_2)$

	C	DC	D^2C	C/N	DC/N	C/N*N
(0, 2, 0)	8.0709424E-02	9.2542536E-01	1.0721104E 01	-1.3999695E-02	-1.6052243E-01	2.4283589E-03
(2, 2, 0)	-6.8542082E 00	-7.7827044E 01	-8.8979642E 02	1.1889172E 00	1.3499723E 01	-2.0622719E-01
(0, 4, 0)	-2.8311202E 00	-3.2178178E 01	-3.6839790E 02	4.9108042E-01	5.5815622E 00	-8.5181824E-02
(0, 2, 1)	-1.8806885E 00	-2.4621231E 01	-3.3257489E 02	3.2622046E-01	4.2707494E 00	-5.6585545E-02

(0, 2, -10, 0) $\cos(-10L_1 +12L_2 +0W_1 -2W_2)$

	C	DC	D^2C	C/N	DC/N	C/N*N
(0, 2, 0)	1.2996392E-01	1.3607343E 00	1.4426127E 01	-2.5148936E-02	-2.6331168E-01	4.8664963E-03
(2, 2, 0)	-9.0496774E 00	-9.3595741E 01	-9.7550994E 02	1.7511764E 00	1.8111435E 01	-3.3886497E-01
(0, 4, 0)	-3.8169224E 00	-3.9531040E 01	-4.1283269E 02	7.3860139E-01	7.6495349E 00	-1.4292457E-01
(0, 2, 1)	-2.7904684E 00	-3.3837334E 01	-4.2579826E 02	5.3997530E-01	6.5477628E 00	-1.0448903E-01

(0, 2, -9, 0) $\cos(-9L_1 +11L_2 +0W_1 -2W_2)$

	C	DC	D^2C	C/N	DC/N	C/N*N
(0, 2, 0)	2.0671690E-01	1.9586127E 00	1.8846108E 01	-4.5228941E-02	-4.2853768E-01	9.8959358E-03
(2, 2, 0)	-1.1542889E 01	-1.0764877E 02	-1.0125360E 03	2.5255441E 00	2.3553177E 01	-5.5258030E-01
(0, 4, 0)	-4.9942601E 00	-4.6670542E 01	-4.4029759E 02	1.0927268E 00	1.0211353E 01	-2.3908485E-01
(0, 2, 1)	-4.0606520E 00	-4.5347819E 01	-5.2946036E 02	8.8845658E-01	9.9219460E 00	-1.9439123E-01

(0, 2, -8, 0) $\cos(-8L_1 +10L_2 +0W_1 -2W_2)$

	C	DC	D^2C	C/N	DC/N	C/N*N
(0, 2, 0)	3.2393772E-01	2.7472190E 00	2.3757506E 01	-8.1531876E-02	-6.9144747E-01	2.0520756E-02
(2, 2, 0)	-1.4105833E 01	-1.1711898E 02	-9.8125654E 02	3.5502968E 00	2.9477673E 01	-8.9357408E-01
(0, 4, 0)	-6.3006709E 00	-5.2475890E 01	-4.4178224E 02	1.5858157E 00	1.3207655E 01	-3.9913390E-01
(0, 2, 1)	-5.7727104E 00	-5.8990116E 01	-6.3641495E 02	1.4529333E 00	1.4847220E 01	-3.6568874E-01

(0, 2, -7, 0) $\cos(-7L_1 +9L_2 +0W_1 -2W_2)$

	C	DC	D^2C	C/N	DC/N	C/N*N
(0, 2, 0)	4.9838102E-01	3.7319002E 00	2.8664610E 01	-1.4763224E-01	-1.1054770E 00	4.3732159E-02
(2, 2, 0)	-1.6321542E 01	-1.1863692E 02	-8.6960987E 02	4.8348266E 00	3.5143060E 01	-1.4321899E 00
(0, 4, 0)	-7.5953090E 00	-5.5488835E 01	-4.1016430E 02	2.2499101E 00	1.6437104E 01	-6.6647655E-01
(0, 2, 1)	-7.9758405E 00	-7.4041639E 01	-7.3525821E 02	2.3626325E 00	2.1932884E 01	-6.9986759E-01

(0, 2, -6, 0) $\cos(-6L_1 +8L_2 +0W_1 -2W_2)$

	C	DC	D^2C	C/N	DC/N	C/N*N
(0, 2, 0)	7.4911857E-01	4.8674371E 00	3.2734938E 01	-2.6961126E-01	-1.7518133E 00	9.7034349E-02
(2, 2, 0)	-1.7567674E 01	-1.0917747E 02	-6.8114269E 02	6.3226879E 00	3.9293481E 01	-2.2755648E 00
(0, 4, 0)	-8.6363990E 00	-5.4162242E 01	-3.4350317E 02	3.1082803E 00	1.9493244E 01	-1.1186846E 00
(0, 2, 1)	-1.0634107E 01	-8.8973316E 01	-8.1080257E 02	3.8272648E 00	3.2021911E 01	-1.3774504E 00

(0, 2, -5, 0) $\cos(-5L_1 +7L_2 +0W_1 -2W_2)$

	C	DC	D^2C	C/N	DC/N	C/N*N
(0, 2, 0)	1.0922462E 00	6.0186433E 00	3.4832539E 01	-5.0075485E-01	-2.7593274E 00	2.2957775E-01
(2, 2, 0)	-1.7093359E 01	-8.7523304E 01	-4.4151515E 02	7.8366786E 00	4.0126227E 01	-3.5928299E 00
(0, 4, 0)	-9.0832452E 00	-4.7380792E 01	-2.4837334E 02	4.1643350E 00	2.1722357E 01	-1.9091950E 00
(0, 2, 1)	-1.3545028E 01	-1.0130503E 02	-8.4637983E 02	6.2098992E 00	4.6444642E 01	-2.8470112E 00

(0, 2, -4, 0)   COS ($-4L_1 \ +6L_2 \ +0W_1 \ -2W_2$)

	C	DC	D^2C	C/N	DC/N	C/N*N
(0, 2, 0)	1.5277740E 00	6.9184366E 00	3.3764417E 01	-9.6457367E-01	-4.3680164E 00	6.0899216E-01
(2, 2, 0)	-1.4273670E 01	-5.6075191E 01	-1.9805524E 02	9.0118083E 00	3.5403570E 01	-5.6896853E 00
(0, 4, 0)	-8.5573128E 00	-3.5237829E 01	-1.4130793E 02	5.4027355E 00	2.2247716E 01	-3.4110651E 00
(0, 2, 1)	-1.6238471E 01	-1.0778419E 02	-8.2847110E 02	1.0252303E 01	6.8050506E 01	-6.4728826E 00

(0, 2, -3, 0)   COS ($-3L_1 \ +5L_2 \ +0W_1 \ -2W_2$)

	C	DC	D^2C	C/N	DC/N	C/N*N
(0, 2, 0)	2.0123778E 00	7.1561522E 00	2.8858464E 01	-2.0397699E 00	-7.2535602E 00	2.0675348E 00
(2, 2, 0)	-9.1077465E 00	-2.2004598E 01	-6.5372185E 00	9.2317191E 00	2.2304119E 01	-9.3573793E 00
(0, 4, 0)	-6.8059115E 00	-1.9808480E 01	-4.5714988E 01	6.8985522E 00	2.0078109E 01	-6.9924538E 00
(0, 2, 1)	-1.7903215E 01	-1.0519772E 02	-7.5302966E 02	1.8146910E 01	1.0662965E 02	-1.8393922E 01

(0, 2, -2, 0)   COS ($-2L_1 \ +4L_2 \ +0W_1 \ -2W_2$)

	C	DC	D^2C	C/N	DC/N	C/N*N
(0, 2, 0)	2.4106548E 00	6.2758978E 00	2.0838539E 01	-6.1929677E 00	-1.6122769E 01	1.5909722E 01
(2, 2, 0)	-2.8640101E 00	4.1813610E 00	9.5138611E 01	7.3576367E 00	-1.0741908E 01	-1.8901754E 01
(0, 4, 0)	-3.9874692E 00	-5.2519116E 00	1.7333950E 01	1.0243801E 01	1.3492151E 01	-2.6316305E 01
(0, 2, 1)	-1.7471817E 01	-9.2036216E 01	-6.3061691E 02	4.4885066E 01	2.3644087E 02	-1.1530965E 02

*(0, 2, -1, 0)   COS ($-1L_1 \ +3L_2 \ +0W_1 \ -2W_2$)

	C	DC	D^2C	C/N	DC/N	C/N*N
(0, 2, 0)	5.8478070E-01	2.2911937E 00	1.0584702E 01	2.8106701E 00	1.1012315E 01	1.3509109E 01
(2, 2, 0)	2.6341933E 00	1.5465889E 01	1.1287792E 02	1.2660897E 01	7.4334724E 01	6.0852906E 01
(0, 4, 0)	8.6498219E-01	5.5948041E 00	4.3214132E 01	4.1574210E 00	2.6890676E 01	1.9982087E 01
(0, 2, 1)	-1.2291115E 01	-6.8737137E 01	-4.8326579E 02	-5.9075599E 01	-3.3037584E 02	-2.8393895E 02

(0, 2, -0, 0)   COS ($+0L_1 \ +2L_2 \ +0W_1 \ -2W_2$)

	C	DC	D^2C	C/N	DC/N	C/N*N
(0, 2, 0)	1.5281288E 00	1.6536397E 00	6.9757625E 00	1.8974207E 00	2.0532631E 00	2.3559569E 00
(2, 2, 0)	2.1573505E 00	1.1803265E 01	8.5679871E 01	2.6787021E 00	1.4655676E 01	3.3260449E 00
(0, 4, 0)	7.2473661E-01	5.5777249E 00	3.9007459E 01	8.9987854E-01	6.9256539E 00	1.1173458E 00
(0, 2, 1)	-8.6294022E 00	-4.7213060E 01	-3.4271949E 02	-1.0714808E 01	-5.8622704E 01	-1.3304179E 01

*(0, 2, 1, 0)   COS ($+1L_1 \ +1L_2 \ +0W_1 \ -2W_2$)

	C	DC	D^2C	C/N	DC/N	C/N*N
(0, 2, 0)	1.5148512E-01	6.7432268E-01	3.6469642E 00	1.0799647E-01	4.8073680E-01	7.6992632E-02
(2, 2, 0)	9.2883660E-01	6.3501621E 00	5.2767935E 01	6.6218436E-01	4.5271450E 00	4.7208317E-01
(0, 4, 0)	6.2281910E-01	3.7337814E 00	2.7956509E 01	4.4401897E-01	2.6618801E 00	3.1654913E-01
(0, 2, 1)	-4.1698017E 00	-2.7423616E 01	-2.2201284E 02	-2.9727269E 00	-1.9550790E 01	-2.1193106E 00

(0, 2, 2, 0)   COS ($+2L_1 \ +0L_2 \ +0W_1 \ -2W_2$)

	C	DC	D^2C	C/N	DC/N	C/N*N
(0, 2, 0)	4.4683488E-02	2.6045249E-01	1.7483001E 00	2.2341744E-02	1.3022624E-01	1.1170872E-02
(2, 2, 0)	3.2345419E-01	2.8233533E 00	2.7871656E 01	1.6172710E-01	1.4116767E 00	8.0863547E-02
(0, 4, 0)	2.7655529E-01	2.0013807E 00	1.7066553E 01	1.3827769E-01	1.0006904E 00	6.9138823E-02
(0, 2, 1)	-1.8300186E 00	-1.4418843E 01	-1.3246622E 02	-9.1500932E-01	-7.2094216E 00	-4.5750466E-01

(0, 2, 3, 0)   COS ($+3L_1 \ -1L_2 \ +0W_1 \ -2W_2$)

	C	DC	D^2C	C/N	DC/N	C/N*N
(0, 2, 0)	2.5964351E-02	1.3466361E-01	8.9741788E-01	9.9966154E-03	5.1847255E-02	3.8488279E-03
(2, 2, 0)	2.4341211E-02	8.8407848E-01	1.2434067E 01	9.3716851E-03	3.4038180E-01	3.6082216E-03
(0, 4, 0)	1.1265299E-01	9.6089402E-01	9.3581936E 00	4.3372876E-02	3.6995679E-01	1.6699126E-02
(0, 2, 1)	-7.9840233E-01	-7.1722315E 00	-7.3966551E 01	-3.0739536E-01	-2.7614031E 00	-1.1835124E-01

(0, 2, 4, 0)   COS ($+4L_1 \ -2L_2 \ +0W_1 \ -2W_2$)

	C	DC	D^2C	C/N	DC/N	C/N*N
(0, 2, 0)	2.8675710E-02	1.3470727E-01	7.3925601E-01	8.9762269E-03	4.2166803E-02	2.8097875E-03
(2, 2, 0)	-2.4032053E-01	-6.7995210E-01	1.2867606E 00	-7.5226445E-02	-2.1284232E-01	-2.3547792E-02
(0, 4, 0)	2.5740640E-02	3.5910830E-01	4.4683306E 00	8.0574753E-03	1.1241004E-01	2.5221949E-03
(0, 2, 1)	-4.1515192E-01	-3.7461404E 00	-4.0631331E 01	-1.2995312E-01	-1.1726373E 00	-4.0678634E-02

(0, 2, 5, 0)   COS ($+5L_1 \ -3L_2 \ +0W_1 \ -2W_2$)

	C	DC	D^2C	C/N	DC/N	C/N*N
(0, 2, 0)	2.8933608E-02	1.5313876E-01	8.5583770E-01	7.6302865E-03	4.0385306E-02	2.0122368E-03
(2, 2, 0)	-4.7109609E-01	-2.2803061E 00	-9.9727751E 00	-1.2423608E-01	-6.0135564E-01	-3.2763176E-02
(0, 4, 0)	-3.9120721E-02	-9.5424126E-02	8.7005891E-01	-1.0316802E-02	-2.5164971E-02	-2.7207168E-03
(0, 2, 1)	-2.8563626E-01	-2.3641828E 00	-2.4296727E 01	-7.5327158E-02	-6.2347536E-01	-1.9865058E-02

(0, 2, 6, 0) COS ($+6L_1 \ -4L_2 \ +0W_1 \ -2W_2$)

	C	DC	D^2C	C/N	DC/N	C/N*N
(0, 2, 0)	2.5370464E-02	1.5701429E-01	9.9252933E-01	5.7801275E-03	3.5772410E-02	1.3168807E-03
(2, 2, 0)	-6.2595080E-01	-3.7690972E 00	-2.2386210E 01	-1.4260975E-01	-8.5870966E-01	-3.2490636E-02
(0, 4, 0)	-8.8666059E-02	-4.9845531E-01	-2.4503961E 00	-2.0200700E-02	-1.1356258E-01	-4.6023052E-03
(0, 2, 1)	-2.3620691E-01	-1.8811549E 00	-1.7648328E 01	-5.3814785E-02	-4.2858164E-01	-1.2260569E-02

(0, 2, 7, 0) COS ($+7L_1 \ -5L_2 \ +0W_1 \ -2W_2$)

	C	DC	D^2C	C/N	DC/N	C/N*N
(0, 2, 0)	2.0144569E-02	1.4438954E-01	1.0462289E 00	4.0397637E-03	2.8955678E-02	8.1012858E-04
(2, 2, 0)	-6.8942924E-01	-4.8824249E 00	-3.4572053E 01	-1.3825718E-01	-9.7911468E-01	-2.7725902E-02
(0, 4, 0)	-1.1944622E-01	-8.3221906E-01	-5.6796002E 00	-2.3953578E-02	-1.6689205E-01	-4.8036172E-03
(0, 2, 1)	-2.0353463E-01	-1.6955636E 00	-1.5507441E 01	-4.0816550E-02	-3.4002595E-01	-8.1852942E-03

(0, 2, 8, 0) COS ($+8L_1 \ -6L_2 \ +0W_1 \ -2W_2$)

	C	DC	D^2C	C/N	DC/N	C/N*N
(0, 2, 0)	1.4940920E-02	1.2209661E-01	1.0049248E 00	2.6757211E-03	2.1865887E-02	4.7918627E-04
(2, 2, 0)	-6.7446350E-01	-5.4727383E 00	-4.4527422E 01	-1.2078749E-01	-9.8009505E-01	-2.1631443E-02
(0, 4, 0)	-1.3118313E-01	-1.0591473E 00	-8.5279939E 00	-2.3493164E-02	-1.8967928E-01	-4.2073150E-03
(0, 2, 1)	-1.7080258E-01	-1.5515953E 00	-1.4835883E 01	-3.0588484E-02	-2.7787020E-01	-5.4779930E-03

(0, 2, 9, 0) COS ($+9L_1 \ -7L_2 \ +0W_1 \ -2W_2$)

	C	DC	D^2C	C/N	DC/N	C/N*N
(0, 2, 0)	1.0556413E-02	9.6954745E-02	8.9538878E-01	1.7078584E-03	1.5685426E-02	2.7629887E-04
(2, 2, 0)	-6.0699980E-01	-5.5465124E 00	-5.0847741E 01	-9.8200972E-02	-8.9731975E-01	-1.5887042E-02
(0, 4, 0)	-1.2765028E-01	-1.1643545E 00	-1.0636943E 01	-2.0651378E-02	-1.8837032E-01	-3.3409985E-03
(0, 2, 1)	-1.3725785E-01	-1.3739536E 00	-1.4188429E 01	-2.2205698E-02	-2.2227944E-01	-3.5924578E-03

(0, 2, 10, 0) COS ($+10L_1 \ -8L_2 \ +0W_1 \ -2W_2$)

	C	DC	D^2C	C/N	DC/N	C/N*N
(0, 2, 0)	7.1958297E-03	7.3387322E-02	7.5192825E-01	1.0615645E-03	1.0826463E-02	1.5660727E-04
(2, 2, 0)	-5.1325408E-01	-5.2130799E 00	-5.3121583E 01	-7.5717791E-02	-7.6905943E-01	-1.1170265E-02
(0, 4, 0)	-1.1429784E-01	-1.1600991E 00	-1.1805956E 01	-1.6861784E-02	-1.7114358E-01	-2.4875342E-03
(0, 2, 1)	-1.0573260E-01	-1.1638776E 00	-1.3092221E 01	-1.5598199E-02	-1.7170101E-01	-2.3011237E-03

(-1, 1, -10, 0) COS ($-11L_1 \ +11L_2 \ +1W_1 \ -1W_2$)

	C	DC	D^2C	C/N	DC/N	C/N*N
(1, 1, 0)	7.2890264E-02	7.5102327E-01	7.7921373E 00	-1.1093638E-02	-1.1430306E-01	1.6884122E-03

(-1, 1, -9, 0) COS ($-10L_1 \ +10L_2 \ +1W_1 \ -1W_2$)

	C	DC	D^2C	C/N	DC/N	C/N*N
(1, 1, 0)	1.1380450E-01	1.0571188E 00	9.8970066E 00	-1.9052703E-02	-1.7697868E-01	3.1897288E-03

(-1, 1, -8, 0) COS ($-9L_1 \ +9L_2 \ +1W_1 \ -1W_2$)

	C	DC	D^2C	C/N	DC/N	C/N*N
(1, 1, 0)	1.7427431E-01	1.4413024E 00	1.2025411E 01	-3.2418135E-02	-2.6810799E-01	6.0303522E-03

(-1, 1, -7, 0) COS ($-8L_1 \ +8L_2 \ +1W_1 \ -1W_2$)

	C	DC	D^2C	C/N	DC/N	C/N*N
(1, 1, 0)	2.6035516E-01	1.8864781E 00	1.3799822E 01	-5.4484549E-02	-3.9478346E-01	1.1401987E-02

(-1, 1, -6, 0) COS ($-7L_1 \ +7L_2 \ +1W_1 \ -1W_2$)

	C	DC	D^2C	C/N	DC/N	C/N*N
(1, 1, 0)	3.7644767E-01	2.3384874E 00	1.4661677E 01	-9.0033416E-02	-5.5928627E-01	2.1532916E-02

(-1, 1, -5, 0) COS ($-6L_1 \ +6L_2 \ +1W_1 \ -1W_2$)

	C	DC	D^2C	C/N	DC/N	C/N*N
(1, 1, 0)	5.2021945E-01	2.6856150E 00	1.3938718E 01	-1.4515517E-01	-7.4935855E-01	4.0502180E-02

(-1, 1, -4, 0) COS ($-5L_1 \ +5L_2 \ +1W_1 \ -1W_2$)

	C	DC	D^2C	C/N	DC/N	C/N*N
(1, 1, 0)	6.7231866E-01	2.7451695E 00	1.1064043E 01	-2.2511390E-01	-9.1917101E-01	7.5375372E-02

(-1, 1, -3, 0) $\cos(-4L_1 + 4L_2 + 1W_1 - 1W_2)$

	C	DC	D^2C	C/N	DC/N	C/N*N
(1, 1, 0)	7.7843910E-01	2.2857480E 00	5.9973701E 00	-3.2580805E-01	-9.5667740E-01	1.3636376E-01

(-1, 1, -2, 0) $\cos(-3L_1 + 3L_2 + 1W_1 - 1W_2)$

	C	DC	D^2C	C/N	DC/N	C/N*N
(1, 1, 0)	7.2534907E-01	1.1446824E 00	-2.4681659E-01	-4.0478365E-01	-6.3879412E-01	2.2589097E-01

*(-1, 1, -1, 0) $\cos(-2L_1 + 2L_2 + 1W_1 - 1W_2)$

	C	DC	D^2C	C/N	DC/N	C/N*N
(1, 1, 0)	-2.0874305E-01	-1.0190370E 00	-6.0144583E 00	1.7473471E-01	8.5301590E-01	-1.4626700E-01

(-1, 1, -0, 0) $\cos(-1L_1 + 1L_2 + 1W_1 - 1W_2)$

	C	DC	D^2C	C/N	DC/N	C/N*N
(1, 1, 0)	-4.3460676E-01	-1.5688525E 00	-7.6761151E 00	7.2760159E-01	2.6265112E 00	-1.2181220E 00

(-1, 1, 1, 0) $\cos(+0L_1 + 0L_2 + 1W_1 - 1W_2)$

	C	DC	D^2C
(1, 1, 0)	-2.8412479E-01	-1.2827237E 00	-7.0380343E 00
(3, 1, 0)	-7.1941382E-01	-5.0881553E 00	-4.3535353E 01
(1, 3, 0)	-1.4318069E 00	-8.9278533E 00	-6.9166499E 01
(5, 1, 0)	-9.3379414E-01	-1.0559312E 01	-1.3419998E 02
(3, 3, 0)	-7.5298308E 00	-7.2669211E 01	-8.2140357E 02
(1, 5, 0)	-6.2017982E 00	-5.1742496E 01	-5.2522450E 02
(1, 1, 1)	8.0366333E 00	5.3498586E 01	4.3673134E 02
(3, 1, 1)	4.7904094E 01	4.7901852E 02	5.5594799E 03
(1, 3, 1)	7.6662546E 01	7.1075884E 02	7.8031026E 03
(1, 1, 2)	-1.1660104E 02	-1.1365995E 03	-1.2927611E 04

(-1, 1, 2, 0) $\cos(+1L_1 - 1L_2 + 1W_1 - 1W_2)$

	C	DC	D^2C	C/N	DC/N	C/N*N
(1, 1, 0)	2.0981315E-01	-6.1333088E-02	-3.5487270E 00	3.5126095E-01	-1.0268145E-01	5.8806729E-01

(-1, 1, 3, 0) $\cos(+2L_1 - 2L_2 + 1W_1 - 1W_2)$

	C	DC	D^2C	C/N	DC/N	C/N*N
(1, 1, 0)	4.2425114E-01	1.0962574E 00	1.6522353E 00	3.5513230E-01	9.1765559E-01	2.9727428E-01

(-1, 1, 4, 0) $\cos(+3L_1 - 3L_2 + 1W_1 - 1W_2)$

	C	DC	D^2C	C/N	DC/N	C/N*N
(1, 1, 0)	4.4587666E-01	1.7555657E 00	6.5069223E 00	2.4882308E-01	9.7969974E-01	1.3885661E-01

(-1, 1, 5, 0) $\cos(+4L_1 - 4L_2 + 1W_1 - 1W_2)$

	C	DC	D^2C	C/N	DC/N	C/N*N
(1, 1, 0)	3.8083051E-01	1.9359276E 00	9.7600104E 00	1.5939287E-01	8.1026350E-01	6.6712323E-02

(-1, 1, 6, 0) $\cos(+5L_1 - 5L_2 + 1W_1 - 1W_2)$

	C	DC	D^2C	C/N	DC/N	C/N*N
(1, 1, 0)	2.9262567E-01	1.8033388E 00	1.1155339E 01	9.7980484E-02	6.0381581E-01	3.2807016E-02

(-1, 1, 7, 0) $\cos(+6L_1 - 6L_2 + 1W_1 - 1W_2)$

	C	DC	D^2C	C/N	DC/N	C/N*N
(1, 1, 0)	2.1073991E-01	1.5198760E 00	1.1037166E 01	5.8802081E-02	4.2408612E-01	1.6407356E-02

(-1, 1, 8, 0) $\cos(+7L_1 - 7L_2 + 1W_1 - 1W_2)$

	C	DC	D^2C	C/N	DC/N	C/N*N
(1, 1, 0)	1.4524007E-01	1.1976326E 00	9.9485481E 00	3.4736462E-02	2.8643279E-01	8.3077744E-03

(-1, 1, 9, 0) $\cos(+8L_1 - 8L_2 + 1W_1 - 1W_2)$

	C	DC	D^2C	C/N	DC/N	C/N*N
(1, 1, 0)	9.6960071E-02	8.9885844E-01	8.3914344E 00	2.0290844E-02	1.8810419E-01	4.2462668E-03

(-1, 1, 10, 0) COS ($+9L_1$ $-9L_2$ $+1W_1$ $-1W_2$)

	C	DC	D^2C	C/N	DC/N	C/N*N
(1, 1, 0)	6.3183604E-02	6.5009517E-01	6.7318786E 00	1.1753279E-02	1.2092931E-01	2.1863198E-03

(0, 0, -7, 1) COS ($-6L_1$ $+8L_2$ $+0W_1$ $+0W_2$)

	C	DC	D^2C	C/N	DC/N	C/N*N
(0, 0, 1)	4.3413610E-02	4.0693702E-01	3.9868605E 00	-1.5624761E-02	-1.4645853E-01	5.6234242E-03
(2, 0, 1)	-4.6444061E-01	-3.3393811E 00	-1.9252317E 01	1.6715434E-01	1.2018588E 00	-6.0159626E-02
(0, 2, 1)	-1.6800217E 00	-1.4733618E 01	-1.3088441E 02	6.0464764E-01	5.3026977E 00	-2.1761550E-01
(0, 0, 2)	-7.2656778E-01	-8.1625395E 00	-9.7922919E 01	2.6149513E-01	2.9377360E 00	-9.4113317E-02

(0, 0, -6, 1) COS ($-5L_1$ $+7L_2$ $+0W_1$ $+0W_2$)

	C	DC	D^2C	C/N	DC/N	C/N*N
(0, 0, 1)	7.4672676E-02	6.2626941E-01	5.5222260E 00	-3.4234686E-02	-2.8712157E-01	1.5695349E-02
(2, 0, 1)	-3.2219307E-01	-1.0868158E 00	1.0226360E 01	1.4771372E-01	4.9826524E-01	-6.7721326E-02
(0, 2, 1)	-2.1143373E 00	-1.6117281E 01	-1.2302706E 02	9.6934618E-01	7.3891830E 00	-4.4440970E-01
(0, 0, 2)	-1.1136446E 00	-1.1493813E 01	-1.2838115E 02	5.1056522E-01	5.2694922E 00	-2.3407544E-01

(0, 0, -5, 1) COS ($-4L_1$ $+6L_2$ $+0W_1$ $+0W_2$)

	C	DC	D^2C	C/N	DC/N	C/N*N
(0, 0, 1)	1.2723560E-01	9.4208562E-01	7.4931969E 00	-8.0331329E-02	-5.9479413E-01	5.0717899E-02
(2, 0, 1)	7.3051466E-02	3.0768530E 00	5.3160612E 01	-4.6121692E-02	-1.9425985E 00	2.9119340E-02
(0, 2, 1)	-2.4716606E 00	-1.5764860E 01	-9.6703365E 01	1.5605049E 00	9.9532843E 00	-9.8523862E-01
(0, 0, 2)	-1.6666411E 00	-1.5721527E 01	-1.6329693E 02	1.0522487E 00	9.9259256E 00	-6.6434653E-01

(0, 0, -4, 1) COS ($-3L_1$ $+5L_2$ $+0W_1$ $+0W_2$)

	C	DC	D^2C	C/N	DC/N	C/N*N
(0, 0, 1)	2.1406162E-01	1.3759568E 00	9.7309338E 00	-2.1697538E-01	-1.3946861E 00	2.1992881E-01
(2, 0, 1)	8.5016803E-01	9.3746370E 00	1.0667448E 02	-8.6174033E-01	-9.5022426E 00	8.7347016E-01
(0, 2, 1)	-2.5748180E 00	-1.2640672E 01	-4.9020481E 01	2.6098658E 00	1.2812734E 01	-2.6453908E 00
(0, 0, 2)	-2.4179271E 00	-2.0755257E 01	-2.0061824E 02	2.4508394E 00	2.1037773E 01	-2.4841997E 00

(0, 0, -3, 1) COS ($-2L_1$ $+4L_2$ $+0W_1$ $+0W_2$)

	C	DC	D^2C	C/N	DC/N	C/N*N
(0, 0, 1)	3.5367759E-01	1.9316894E 00	1.2050320E 01	-9.0859706E-01	-4.9625065E 00	2.3341842E 00
(2, 0, 1)	2.0807919E 00	1.7255655E 01	1.6262252E 02	-5.3455505E 00	-4.4329746E 01	1.3732709E 01
(0, 2, 1)	-2.1633392E 00	-5.9246175E 00	1.8018681E 01	5.5576143E 00	1.5220331E 01	-1.4277501E 01
(0, 0, 2)	-3.3638519E 00	-2.6227023E 01	-2.3691389E 02	8.6417291E 00	6.7377173E 01	-2.2200586E 01

(0, 0, -2, 1) COS ($-1L_1$ $+3L_2$ $+0W_1$ $+0W_2$)

	C	DC	D^2C	C/N	DC/N	C/N*N
(0, 0, 1)	5.6824959E-01	2.5654474E 00	1.4076069E 01	2.7312155E 00	1.2330479E 01	1.3127221E 01
(2, 0, 1)	3.5921294E 00	2.4825208E 01	2.0780862E 02	1.7265089E 01	1.1931904E 02	8.2982335E 01
(0, 2, 1)	-9.5386733E-01	4.3016289E 00	9.5200070E 01	-4.5846356E 00	2.0675203E 01	-2.2035436E 01
(0, 0, 2)	-4.4106728E 00	-3.1389979E 01	-2.6769411E 02	-2.1199308E 01	-1.5087173E 02	-1.0189163E 02

(0, 0, -1, 1) COS ($+0L_1$ $+2L_2$ $+0W_1$ $+0W_2$)

	C	DC	D^2C	C/N	DC/N	C/N*N
(0, 0, 1)	8.6921352E-01	3.1377049E 00	1.5352230E 01	1.0792701E 00	3.8959717E 00	1.3400896E 00
(2, 0, 1)	4.6224838E 00	2.8723126E 01	2.2782698E 02	5.7395664E 00	3.5664438E 01	7.1266065E 00
(0, 2, 1)	1.1456297E 00	1.6172306E 01	1.6641806E 02	1.4224858E 00	2.0080552E 01	1.7662478E 00
(0, 0, 2)	-5.2940982E 00	-3.5159796E 01	-2.8841708E 02	-6.5734851E 00	-4.3656613E 01	-8.1620523E 00

*(0, 0, -0, 1) COS ($+1L_1$ $+1L_2$ $+0W_1$ $+0W_2$)

	C	DC	D^2C	C/N	DC/N	C/N*N
(0, 0, 1)	6.4363134E-01	2.8291341E 00	1.5099645E 01	4.5885638E-01	2.0169407E 00	3.2712699E-01
(2, 0, 1)	3.8385634E 00	2.5976088E 01	2.1433487E 02	2.7365810E 00	1.8518822E 01	1.9509580E 00
(0, 2, 1)	3.8385634E 00	2.5976088E 01	2.1433487E 02	2.7365810E 00	1.8518822E 01	1.9509580E 00
(0, 0, 2)	-5.5471720E 00	-3.6520874E 01	-2.9584625E 02	-3.9546790E 00	-2.6036389E 01	-2.8193620E 00

(0, 0, 1, 1) COS ($+2L_1$ $+0L_2$ $+0W_1$ $+0W_2$)

	C	DC	D^2C	C/N	DC/N	C/N*N
(0, 0, 1)	8.6921352E-01	3.1377049E 00	1.5352230E 01	4.3460676E-01	1.5688525E 00	2.1730338E-01
(2, 0, 1)	1.1456297E 00	1.6172306E 01	1.6641806E 02	5.7281484E-01	8.0861531E 00	2.8640742E-01
(0, 2, 1)	4.6224838E 00	2.8723126E 01	2.2782698E 02	2.3112419E 00	1.4361563E 01	1.1556209E 00
(0, 0, 2)	-5.2940982E 00	-3.5159796E 01	-2.8841708E 02	-2.6470491E 00	-1.7579898E 01	-1.3235245E 00

(0, 0, 2, 1) COS ($+3L_1$ $-1L_2$ $+0W_1$ $+0W_2$)

	C	DC	D^2C	C/N	DC/N	C/N*N
(0, 0, 1)	5.6824959E-01	2.5654474E 00	1.4076089E 01	2.1878354E-01	9.8773086E-01	8.4234529E-02
(2, 0, 1)	-9.5386733E-01	4.3016289E 00	9.5200070E 01	-3.6725142E-01	1.6561835E 00	-1.4139661E-01
(0, 2, 1)	3.5921294E 00	2.4825208E 01	2.0780862E 02	1.3830169E 00	9.5580304E 00	5.3247962E-01
(0, 0, 2)	-4.4106728E 00	-3.1389979E 01	-2.6769411E 02	-1.6981668E 00	-1.2085553E 01	-6.5381647E-01

(0, 0, 3, 1) COS ($+4L_1$ $-2L_2$ $+0W_1$ $+0W_2$)

	C	DC	D^2C	C/N	DC/N	C/N*N
(0, 0, 1)	3.5367759E-01	1.9316894E 00	1.2050320E 01	1.1071009E-01	6.0466795E-01	3.4655075E-02
(2, 0, 1)	-2.1633392E 00	-5.9246175E 00	1.8018681E 01	-6.7718022E-01	-1.8545561E 00	-2.1197464E-01
(0, 2, 1)	2.0807919E 00	1.7255655E 01	1.6262252E 02	6.5134083E-01	5.4014594E 00	2.0388626E-01
(0, 0, 2)	-3.3638519E 00	-2.6227023E 01	-2.3691389E 02	-1.0529713E 00	-8.2097257E 00	-3.2960680E-01

(0, 0, 4, 1) COS ($+5L_1$ $-3L_2$ $+0W_1$ $+0W_2$)

	C	DC	D^2C	C/N	DC/N	C/N*N
(0, 0, 1)	2.1406162E-01	1.3759568E 00	9.7309338E 00	5.6451705E-02	3.6286331E-01	1.4887278E-02
(2, 0, 1)	-2.5748180E 00	-1.2640672E 01	-4.9020481E 01	-6.7902346E-01	-3.3335611E 00	-1.7907008E-01
(0, 2, 1)	8.5018803E-01	9.3746370E 00	1.0667448E 02	2.2420382E-01	2.4722518E 00	5.9126375E-02
(0, 0, 2)	-2.4179271E 00	-2.0755257E 01	-2.0061824E 02	-6.3764866E-01	-5.4735156E 00	-1.6815884E-01

(0, 0, 5, 1) COS ($+6L_1$ $-4L_2$ $+0W_1$ $+0W_2$)

	C	DC	D^2C	C/N	DC/N	C/N*N
(0, 0, 1)	1.2723560E-01	9.4208562E-01	7.4931989E 00	2.8987961E-02	2.1463443E-01	6.6042982E-03
(2, 0, 1)	-2.4716606E 00	-1.5764860E 01	-9.6703365E 01	-5.6311597E-01	-3.5916923E 00	-1.2829415E-01
(0, 2, 1)	7.3051466E-02	3.0768530E 00	5.3160612E 01	1.6643243E-02	7.0099634E-01	3.7918134E-03
(0, 0, 2)	-1.6666411E 00	-1.5721527E 01	-1.6329693E 02	-3.7970918E-01	-3.5818198E 00	-8.6508763E-02

(3, 0,-10, 0) COS ($-7L_1$ $+10L_2$ $-3W_1$ $+0W_2$)

	C	DC	D^2C	C/N	DC/N	C/N*N
(3, 0, 0)	-4.2904601E-01	-4.5195529E 00	-4.8304512E 01	1.4430727E-01	1.5201268E 00	-4.8536958E-02

(3, 0, -9, 0) COS ($-6L_1$ $+9L_2$ $-3W_1$ $+0W_2$)

	C	DC	D^2C	C/N	DC/N	C/N*N
(3, 0, 0)	-5.8582504E-01	-5.5941759E 00	-5.4404154E 01	2.4657723E-01	2.3546218E 00	-1.0378582E-01

(3, 0, -8, 0) COS ($-5L_1$ $+8L_2$ $-3W_1$ $+0W_2$)

	C	DC	D^2C	C/N	DC/N	C/N*N
(3, 0, 0)	-7.6887230E-01	-6.5887394E 00	-5.7812039E 01	4.3231173E-01	3.7046326E 00	-2.4307474E-01

(3, 0, -7, 0) COS ($-4L_1$ $+7L_2$ $-3W_1$ $+0W_2$)

	C	DC	D^2C	C/N	DC/N	C/N*N
(3, 0, 0)	-9.5809240E-01	-7.2787074E 00	-5.7081969E 01	8.1111826E-01	6.1621326E 00	-6.8669037E-01

(3, 0, -6, 0) COS ($-3L_1$ $+6L_2$ $-3W_1$ $+0W_2$)

	C	DC	D^2C	C/N	DC/N	C/N*N
(3, 0, 0)	-1.1119426E 00	-7.3806973E 00	-5.1235288E 01	1.9043857E 00	1.2640665E 01	-3.2615754E 00

(3, 0, -5, 0) COS ($-2L_1$ $+5L_2$ $-3W_1$ $+0W_2$)

	C	DC	D^2C	C/N	DC/N	C/N*N
(3, 0, 0)	-1.1635323E 00	-6.6350853E 00	-4.0474750E 01	-8.6643301E 01	-4.9408657E 02	-6.4519580E 03
(5, 0, 0)	1.3066941E 00	5.5882203E 00	1.4211881E 01	9.7303947E 01	4.1613098E 02	7.2458109E 03
(3, 2, 0)	1.7310850E 01	8.7649432E 01	4.1998379E 02	1.2890653E 03	6.5268803E 03	9.5991207E 04
(7, 0, 0)	-6.1061855E-01	-4.1635057E 00	-4.4177772E 01	-4.5470165E 01	-3.1003855E 02	-3.3859697E 03
(5, 2, 0)	-2.7717327E 01	-1.6904153E 02	-1.3329390E 03	-2.0639914E 03	-1.2587804E 04	-1.5369665E 05
(3, 4, 0)	-7.1977983E 01	-4.3109450E 02	-3.1331261E 03	-5.3598941E 03	-3.2101773E 04	-3.9912850E 05
(3, 0, 1)	1.8021527E 01	1.4703367E 02	1.3556711E 03	1.3419864E 03	1.0948972E 04	9.9932017E 04
(5, 0, 1)	1.2867250E 01	2.5704961E 02	4.2658650E 03	9.5816938E 02	1.9141390E 04	7.1350796E 04
(3, 2, 1)	-7.4861976E 01	2.1561371E 02	1.1981117E 04	-5.5746529E 03	1.6055836E 04	-4.1512067E 05
(3, 0, 2)	-2.6130297E 02	-2.9404474E 03	-3.6975082E 04	-1.9458120E 04	-2.1896261E 05	-1.4489634E 06

(3, 0, -4, 0) COS ($-1L_1$ $+4L_2$ $-3W_1$ $+0W_2$)

	C	DC	D^2C	C/N	DC/N	C/N*N
(3, 0, 0)	-1.0318961E 00	-4.9759135E 00	-2.6801605E 01	-1.6895745E 00	-8.1473088E 00	-2.7664238E 00

```
( 3, 0, -3, 0 )   COS ( +0L  +3L  -3W  +0W )
                         1    2    1    2
                                                  2
                       C               DC         D C              C/N              DC/N             C/N*N
( 3, 0, 0 )     -6.7165259E-01  -2.7605864E 00  -1.3873945E 01  -5.5597737E-01  -2.2851451E 00  -4.6022431E-01

( 3, 0, -2, 0 )   COS ( +1L  +2L  -3W  +0W )
                         1    2    1    2
                                                  2
                       C               DC         D C              C/N              DC/N             C/N*N
( 3, 0, 0 )     -1.9060950E-01  -8.6675676E-01  -5.3053958E 00  -1.0557910E-01  -4.8009881E-01  -5.8480535E-02

*( 3, 0, -1, 0 )  COS ( +2L  +1L  -3W  +0W )
                         1    2    1    2
                                                  2
                       C               DC         D C              C/N              DC/N             C/N*N
( 3, 0, 0 )     -1.6890509E-02  -1.7960340E-01  -1.7404091E 00  -7.0298451E-03  -7.4751098E-02  -2.9258279E-03

( 3, 0, -0, 0 )   COS ( +3L  +0L  -3W  +0W )
                         1    2    1    2
                                                  2
                       C               DC         D C              C/N              DC/N             C/N*N
( 3, 0, 0 )     -1.6807690E-02  -6.1922134E-02  -5.5104393E-01  -5.6025634E-03  -2.0640711E-02  -1.8675211E-03

*( 3, 0,  1, 0 )  COS ( +4L  -1L  -3W  +0W )
                         1    2    1    2
                                                  2
                       C               DC         D C              C/N              DC/N             C/N*N
( 3, 0, 0 )     -1.6774880E-02  -5.4791250E-02  -2.7189554E-01  -4.6631679E-03  -1.5231155E-02  -1.2962915E-03

( 3, 0,  2, 0 )   COS ( +5L  -2L  -3W  +0W )
                         1    2    1    2
                                                  2
                       C               DC         D C              C/N              DC/N             C/N*N
( 3, 0, 0 )      2.2247529E-01   4.2288888E-01   7.2837868E-01   5.3038141E-02   1.0081677E-01   1.2644300E-02

( 2, 1,-11, 0 )   COS ( -9L +12L  -2W  -1W )
                         1    2    1    2
                                                  2
                       C               DC         D C              C/N              DC/N             C/N*N
( 2, 1, 0 )      1.1196195E 00   1.2891090E 01   1.5015527E 02  -2.6863753E-01  -3.0930423E 00   6.4455932E-02

( 2, 1,-10, 0 )   COS ( -8L +11L  -2W  -1W )
                         1    2    1    2
                                                  2
                       C               DC         D C              C/N              DC/N             C/N*N
( 2, 1, 0 )      1.6117098E 00   1.6961297E 01   1.8104823E 02  -4.5140163E-01  -4.7504566E 00   1.2642688E-01

( 2, 1, -9, 0 )   COS ( -7L +10L  -2W  -1W )
                         1    2    1    2
                                                  2
                       C               DC         D C              C/N              DC/N             C/N*N
( 2, 1, 0 )      2.2606188E 00   2.1557792E 01   2.0926559E 02  -7.6034672E-01  -7.2508453E 00   2.5573845E-01

( 2, 1, -8, 0 )   COS ( -6L  +9L  -2W  -1W )
                         1    2    1    2
                                                  2
                       C               DC         D C              C/N              DC/N             C/N*N
( 2, 1, 0 )      3.0702428E 00   2.6257271E 01   2.2974921E 02  -1.2922832E 00  -1.1051841E 01   5.4392967E-01

( 2, 1, -7, 0 )   COS ( -5L  +8L  -2W  -1W )
                         1    2    1    2
                                                  2
                       C               DC         D C              C/N              DC/N             C/N*N
( 2, 1, 0 )      4.0020376E 00   3.0308787E 01   2.3663072E 02  -2.2502148E 00  -1.7041639E 01   1.2652221E 00

( 2, 1, -6, 0 )   COS ( -4L  +7L  -2W  -1W )
                         1    2    1    2
                                                  2
                       C               DC         D C              C/N              DC/N             C/N*N
( 2, 1, 0 )      4.9416184E 00   3.2628184E 01   2.2474871E 02  -4.1835598E 00  -2.7622926E 01   3.5417896E 00

( 2, 1, -5, 0 )   COS ( -3L  +6L  -2W  -1W )
                         1    2    1    2
                                                  2
                       C               DC         D C              C/N              DC/N             C/N*N
( 2, 1, 0 )      5.6624052E 00   3.1971394E 01   1.9213543E 02  -9.6978055E 00  -5.4756300E 01   1.6609096E 01

( 2, 1, -4, 0 )   COS ( -2L  +5L  -2W  -1W )
                         1    2    1    2
                                                  2
                       C               DC         D C              C/N              DC/N             C/N*N
( 2, 1, 0 )      5.8128990E 00   2.7419875E 01   1.4284050E 02   4.3286185E 02   2.0418414E 03   3.2233380E 04
( 4, 1, 0 )     -6.2295253E 00  -1.6801210E 01   3.3703052E 01  -4.6388624E 02  -1.2511146E 03  -3.4543634E 04
( 2, 3, 0 )     -3.5158463E 01  -1.3801956E 02  -4.5933919E 02  -2.6181011E 03  -1.0277729E 04  -1.9495885E 05
( 6, 1, 0 )      3.7462306E 00   2.7134790E 01   3.3126281E 02   2.7896585E 02   2.0206123E 03   2.0773400E 04
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( 4, 3, 0 )     6.5242879E 01   3.7432573E 02   3.2163206E 03   4.8583596E 03   2.7874444E 04   3.6178136E 05
( 2, 5, 0 )     8.6768304E 01   4.7123523E 02   3.5230227E 03   6.4612665E 03   3.5090882E 04   4.8114301E 05
( 2, 1, 1 )    -7.7253990E 01  -5.6454695E 02  -4.8220797E 03  -5.7527759E 03  -4.2039409E 04  -4.2838474E 05
( 4, 1, 1 )    -1.1657425E 02  -1.7655485E 03  -2.5555367E 04  -8.6807880E 03  -1.3147288E 05  -6.4642134E 05
( 2, 3, 1 )     3.4823326E 01  -1.5914745E 03  -3.4081271E 04   2.5931449E 03  -1.1851033E 05   1.9310047E 05
( 2, 1, 2 )     1.0222653E 03   1.0799970E 04   1.2980836E 05   7.6123748E 04   8.0422784E 05   5.6686115E 06


( 2, 1, -3, 0 )   COS ( -1L  +4L  -2W  -1W )
                         1    2    1    2
                                                 2
                      C              DC         D C             C/N            DC/N           C/N*N
( 2, 1, 0 )     4.9935310E 00   1.9232105E 01   8.8195820E 01   8.1761550E 00   3.1489676E 01   1.3387222E 01


( 2, 1, -2, 0 )   COS ( +0L  +3L  -2W  -1W )
                         1    2    1    2
                                                 2
                      C              DC         D C             C/N            DC/N           C/N*N
( 2, 1, 0 )     3.0478939E 00   9.7344029E 00   4.3412384E 01   2.5229711E 00   8.0578977E 00   2.0884530E 00


*( 2, 1, -1, 0 )  COS ( +1L  +2L  -2W  -1W )
                         1    2    1    2
                                                 2
                      C              DC         D C             C/N            DC/N           C/N*N
( 2, 1, 0 )     5.6438901E-01   2.8349661E 00   1.7695933E 01   3.1261654E-01   1.5702951E 00   1.7315911E-01


( 2, 1, -0, 0 )   COS ( +2L  +1L  -2W  -1W )
                         1    2    1    2
                                                 2
                      C              DC         D C             C/N            DC/N           C/N*N
( 2, 1, 0 )     6.6258044E-02   7.4238943E-01   6.6854479E 00   2.7576658E-02   3.0898315E-01   1.1477430E-02


( 2, 1,  1, 0 )   COS ( +3L  +0L  -2W  -1W )
                         1    2    1    2
                                                 2
                      C              DC         D C             C/N            DC/N           C/N*N
( 2, 1, 0 )    -8.3530004E-04   1.5569350E-01   2.1940005E 00  -2.7843335E-04   5.1897832E-02  -9.2811116E-05


( 2, 1,  2, 0 )   COS ( +4L  -1L  -2W  -1W )
                         1    2    1    2
                                                 2
                      C              DC         D C             C/N            DC/N           C/N*N
( 2, 1, 0 )    -1.1320919E-01  -1.9243294E-01   2.0788766E-01  -3.1470476E-02  -5.3493503E-02  -8.7483257E-03


( 2, 1,  3, 0 )   COS ( +5L  -2L  -2W  -1W )
                         1    2    1    2
                                                 2
                      C              DC         D C             C/N            DC/N           C/N*N
( 2, 1, 0 )    -1.9084008E-01  -5.6625502E-01  -1.5402971E 00  -4.5496301E-02  -1.3499528E-01  -1.0846325E-02


( 1, 2,-10, 0 )   COS ( -9L +12L  -1W  -2W )
                         1    2    1    2
                                                 2
                      C              DC         D C             C/N            DC/N           C/N*N
( 1, 2, 0 )    -1.9800064E 00  -2.0820406E 01  -2.2200359E 02   4.7507569E-01   4.9955743E 00  -1.1398797E-01


( 1, 2, -9, 0 )   COS ( -8L +11L  -1W  -2W )
                         1    2    1    2
                                                 2
                      C              DC         D C             C/N            DC/N           C/N*N
( 1, 2, 0 )    -2.8397585E 00  -2.7050568E 01  -2.6218964E 02   7.9534890E-01   7.5762219E 00  -2.2275834E-01


( 1, 2, -8, 0 )   COS ( -7L +10L  -1W  -2W )
                         1    2    1    2
                                                 2
                      C              DC         D C             C/N            DC/N           C/N*N
( 1, 2, 0 )    -3.9651113E 00  -3.3856505E 01  -2.9558736E 02   1.3336434E 00   1.1387450E 01  -4.4856364E-01


( 1, 2, -7, 0 )   COS ( -6L  +9L  -1W  -2W )
                         1    2    1    2
                                                 2
                      C              DC         D C             C/N            DC/N           C/N*N
( 1, 2, 0 )    -5.3546172E 00  -4.0455606E 01  -3.1477234E 02   2.2537901E 00   1.7028004E 01  -9.4863360E-01


( 1, 2, -6, 0 )   COS ( -5L  +8L  -1W  -2W )
                         1    2    1    2
                                                 2
                      C              DC         D C             C/N            DC/N           C/N*N
( 1, 2, 0 )    -6.9284300E 00  -4.5572091E 01  -3.1214289E 02   3.8956294E 00   2.5623696E 01  -2.1903849E 00


( 1, 2, -5, 0 )   COS ( -4L  +7L  -1W  -2W )
                         1    2    1    2
                                                 2
                      C              DC         D C             C/N            DC/N           C/N*N
( 1, 2, 0 )    -8.4705524E 00  -4.7509485E 01  -2.8263198E 02   7.1711453E 00   4.0221393E 01  -6.0710708E 00
```

(1, 2, -4, 0) $\mathrm{COS}\,(-3L_1\ +6L_2\ -1W_1\ -2W_2)$

	C	DC	D^2C	C/N	DC/N	C/N*N
(1, 2, 0)	-9.5703142E 00	-4.4555955E 01	-2.2741505E 02	1.6390746E 01	7.6309443E 01	-2.8071864E 01

(1, 2, -3, 0) $\mathrm{COS}\,(-2L_1\ +5L_2\ -1W_1\ -2W_2)$

	C	DC	D^2C	C/N	DC/N	C/N*N
(1, 2, 0)	-9.6152096E 00	-3.5897688E 01	-1.5694770E 02	-7.1600375E 02	-2.6731481E 03	-5.3317752E 04
(3, 2, 0)	9.5215365E 00	3.8425563E 00	-2.5445277E 02	7.0902830E 02	2.8613881E 02	5.2798320E 04
(1, 4, 0)	3.0321975E 01	8.2282935E 01	1.0442515E 02	2.2579484E 03	6.1272601E 03	1.6813981E 05
(5, 2, 0)	-9.5503238E 00	-7.9616641E 01	-1.0617223E 03	-7.1117197E 02	-5.9287125E 03	-5.2957950E 04
(3, 4, 0)	-7.5665532E 01	-4.4168930E 02	-4.3476975E 03	-5.6344903E 03	-3.2890722E 04	-4.1957651E 05
(1, 6, 0)	-5.2562976E 01	-2.6961559E 02	-2.1979978E 03	-3.9141411E 03	-2.0077126E 04	-2.9146943E 05
(1, 2, 1)	1.0630850E 02	6.9210798E 02	5.5109320E 03	7.9163420E 03	5.1538336E 04	5.8949630E 05
(3, 2, 1)	3.3630404E 02	4.1966004E 03	5.4399236E 04	2.5043131E 04	3.1250297E 05	1.8648554E 06
(1, 4, 1)	8.6189682E 01	2.3464159E 03	3.6713763E 04	6.4181790E 03	1.7472761E 05	4.7793447E 05
(1, 2, 2)	-1.2800458E 03	-1.2756219E 04	-1.4745685E 05	-9.5319566E 04	-9.4990132E 05	-7.0980424E 06

(1, 2, -2, 0) $\mathrm{COS}\,(-1L_1\ +4L_2\ -1W_1\ -2W_2)$

	C	DC	D^2C	C/N	DC/N	C/N*N
(1, 2, 0)	-7.9592586E 00	-2.2971065E 01	-8.9827712E 01	-1.3032087E 01	-3.7611659E 01	-2.1338080E 01

*(1, 2, -1, 0) $\mathrm{COS}\,(+0L_1\ +3L_2\ -1W_1\ -2W_2)$

	C	DC	D^2C	C/N	DC/N	C/N*N
(1, 2, 0)	-1.7303776E 00	-7.5835449E 00	-4.0806516E 01	-1.4323637E 00	-6.2774706E 00	-1.1856752E 00

(1, 2, -0, 0) $\mathrm{COS}\,(+1L_1\ +2L_2\ -1W_1\ -2W_2)$

	C	DC	D^2C	C/N	DC/N	C/N*N
(1, 2, 0)	-8.2681987E-01	-3.4878812E 00	-2.0118649E 01	-4.5797766E-01	-1.9319464E 00	-2.5367501E-01

*(1, 2, 1, 0) $\mathrm{COS}\,(+2L_1\ +1L_2\ -1W_1\ -2W_2)$

	C	DC	D^2C	C/N	DC/N	C/N*N
(1, 2, 0)	-1.8567623E-01	-1.1491594E 00	-8.5785233E 00	-7.7278613E-02	-4.7828118E-01	-3.2163428E-02

(1, 2, 2, 0) $\mathrm{COS}\,(+3L_1\ +0L_2\ -1W_1\ -2W_2)$

	C	DC	D^2C	C/N	DC/N	C/N*N
(1, 2, 0)	-4.0859269E-02	-3.5324507E-01	-3.3595763E 00	-1.3619756E-02	-1.1774836E-01	-4.5399188E-03

(1, 2, 3, 0) $\mathrm{COS}\,(+4L_1\ -1L_2\ -1W_1\ -2W_2)$

	C	DC	D^2C	C/N	DC/N	C/N*N
(1, 2, 0)	1.0561248E-02	-4.4718102E-02	-1.0511394E 00	2.9358702E-03	-1.2430969E-02	8.1612837E-04

(1, 2, 4, 0) $\mathrm{COS}\,(+5L_1\ -2L_2\ -1W_1\ -2W_2)$

	C	DC	D^2C	C/N	DC/N	C/N*N
(1, 2, 0)	4.7349206E-02	1.6920106E-01	3.7592378E-01	1.1288057E-02	4.0337555E-02	2.6910745E-03

(0, 3,-10, 0) $\mathrm{COS}\,(-10L_1\ +13L_2\ +0W_1\ -3W_2)$

	C	DC	D^2C	C/N	DC/N	C/N*N
(0, 3, 0)	7.9788868E-01	8.3843396E 00	8.9319508E 01	-1.6744481E-01	-1.7595364E 00	3.5139944E-02

(0, 3, -9, 0) $\mathrm{COS}\,(-9L_1\ +12L_2\ +0W_1\ -3W_2)$

	C	DC	D^2C	C/N	DC/N	C/N*N
(0, 3, 0)	1.1660175E 00	1.1096843E 01	1.0742230E 02	-2.7977008E-01	-2.6625370E 00	6.7127038E-02

(0, 3, -8, 0) $\mathrm{COS}\,(-8L_1\ +11L_2\ +0W_1\ -3W_2)$

	C	DC	D^2C	C/N	DC/N	C/N*N
(0, 3, 0)	1.6657826E 00	1.4205106E 01	1.2379622E 02	-4.6654615E-01	-3.9785129E 00	1.3066850E-01

(0, 3, -7, 0) $\mathrm{COS}\,(-7L_1\ +10L_2\ +0W_1\ -3W_2)$

	C	DC	D^2C	C/N	DC/N	C/N*N
(0, 3, 0)	2.3146589E 00	1.7454585E 01	1.3544559E 02	-7.7852283E-01	-5.8708885E 00	2.6185188E-01

(0, 3, -6, 0) COS ($-6L_1 +9L_2 +0W_1 -3W_2$)

	C	DC	D^2C	C/N	DC/N	C/N*N
(0, 3, 0)	3.1066125E 00	2.0374776E 01	1.3895798E 02	-1.3075916E 00	-8.5758638E 00	5.5037305E-01

(0, 3, -5, 0) COS ($-5L_1 +8L_2 +0W_1 -3W_2$)

	C	DC	D^2C	C/N	DC/N	C/N*N
(0, 3, 0)	3.9873609E 00	2.2257517E 01	1.3144141E 02	-2.2419626E 00	-1.2514673E 01	1.2605822E 00

(0, 3, -4, 0) COS ($-4L_1 +7L_2 +0W_1 -3W_2$)

	C	DC	D^2C	C/N	DC/N	C/N*N
(0, 3, 0)	4.8211547E 00	2.2251157E 01	1.1201700E 02	-4.0815756E 00	-1.8837765E 01	3.4554501E 00

(0, 3, -3, 0) COS ($-3L_1 +6L_2 +0W_1 -3W_2$)

	C	DC	D^2C	C/N	DC/N	C/N*N
(0, 3, 0)	5.3597414E 00	1.9649199E 01	8.3440540E 01	-9.1794437E 00	-3.3652504E 01	1.5721316E 01

(0, 3, -2, 0) COS ($-2L_1 +5L_2 +0W_1 -3W_2$)

	C	DC	D^2C	C/N	DC/N	C/N*N
(0, 3, 0)	5.2469687E 00	1.4442611E 01	5.2649406E 01	3.9071943E 02	1.0754798E 03	2.9095213E 04
(2, 3, 0)	-4.2148704E 00	2.3651841E 01	3.4642027E 02	-3.1386346E 02	1.7612520E 03	-2.3372076E 04
(0, 5, 0)	-9.2122321E 00	-1.2563707E 01	4.4871072E 01	-6.8599573E 02	-9.3556579E 02	-5.1083183E 04
(4, 3, 0)	1.3355317E 01	1.2979491E 02	1.7338600E 03	9.9451364E 02	9.6652750E 03	7.4057199E 04
(2, 5, 0)	4.4925770E 01	2.9376791E 02	3.2125618E 03	3.3454309E 03	2.1875646E 04	2.4912000E 05
(0, 7, 0)	1.3322794E 01	6.7707614E 01	6.0559296E 02	9.9209177E 02	5.0418980E 03	7.3876854E 04
(0, 3, 1)	-4.6104142E 01	-2.6791869E 02	-2.0174739E 03	-3.4331793E 03	-1.9950765E 04	-2.5565425E 05
(2, 3, 1)	-3.8693159E 02	-4.1345559E 03	-4.8973902E 04	-2.8813149E 04	-3.0788279E 05	-2.1455926E 06
(0, 5, 1)	-6.9156293E 01	-1.0243072E 03	-1.3388700E 04	-5.1497749E 03	-7.6275797E 04	-3.8348182E 05
(0, 3, 2)	5.0743892E 02	4.8187953E 03	5.4070237E 04	3.7786817E 04	3.5883518E 05	2.8138234E 06

*(0, 3, -1, 0) COS ($-1L_1 +4L_2 +0W_1 -3W_2$)

	C	DC	D^2C	C/N	DC/N	C/N*N
(0, 3, 0)	1.2252813E 00	5.0765059E 00	2.5426754E 01	2.0062135E 00	8.3120139E 00	3.2848726E 00

(0, 3, -0, 0) COS ($+0L_1 +3L_2 +0W_1 -3W_2$)

	C	DC	D^2C	C/N	DC/N	C/N*N
(0, 3, 0)	2.0038058E 00	3.0556562E 00	1.4713868E 01	1.6587008E 00	2.5293966E 00	1.3730315E 00

*(0, 3, 1, 0) COS ($+1L_1 +2L_2 +0W_1 -3W_2$)

	C	DC	D^2C	C/N	DC/N	C/N*N
(0, 3, 0)	2.4568864E-01	1.1965809E 00	7.2321799E 00	1.3608757E-01	6.6278926E-01	7.5379258E-02

(0, 3, 2, 0) COS ($+2L_1 +1L_2 +0W_1 -3W_2$)

	C	DC	D^2C	C/N	DC/N	C/N*N
(0, 3, 0)	7.6587647E-02	4.6198099E-01	3.3519721E 00	3.1875848E-02	1.9227691E-01	1.3266757E-02

(0, 3, 3, 0) COS ($+3L_1 +0L_2 +0W_1 -3W_2$)

	C	DC	D^2C	C/N	DC/N	C/N*N
(0, 3, 0)	2.1339948E-02	1.6593965E-01	1.4554569E 00	7.1133161E-03	5.5313215E-02	2.3711053E-03

(0, 3, 4, 0) COS ($+4L_1 -1L_2 +0W_1 -3W_2$)

	C	DC	D^2C	C/N	DC/N	C/N*N
(0, 3, 0)	5.3964314E-03	5.5581512E-02	5.9423830E-01	1.5001279E-03	1.5450836E-02	4.1701331E-04

(0, 3, 5, 0) COS ($+5L_1 -2L_2 +0W_1 -3W_2$)

	C	DC	D^2C	C/N	DC/N	C/N*N
(0, 3, 0)	-2.0662960E-03	9.8924857E-04	1.4689695E-01	-4.9260526E-04	2.3583700E-04	-1.1743716E-04

(-1, 2,-10, 0) COS ($-11L_1 +12L_2 +1W_1 -2W_2$)

	C	DC	D^2C	C/N	DC/N	C/N*N
(1, 2, 0)	6.1927209E-01	6.3942801E 00	6.6518945E 01	-1.0040453E-01	-1.0367247E 00	1.6278902E-02

Index	Argument		C	DC	D^2C	C/N	DC/N	C/N*N
(-1, 2, -9, 0)	$\cos(-10L_1 +11L_2 +1W_1 -2W_2)$	(1, 2, 0)	8.8114573E-01	8.2044603E 00	7.7040302E 01	-1.5818197E-01	-1.4728525E 00	2.8396592E-02
(-1, 2, -8, 0)	$\cos(-9L_1 +10L_2 +1W_1 -2W_2)$	(1, 2, 0)	1.2178923E 00	1.0098999E 01	8.4532732E 01	-2.4489393E-01	-2.0307080E 00	4.9243301E-02
(-1, 2, -7, 0)	$\cos(-8L_1 +9L_2 +1W_1 -2W_2)$	(1, 2, 0)	1.6227170E 00	1.1790996E 01	8.6532201E 01	-3.7083658E-01	-2.6945750E 00	8.4746611E-02
(-1, 2, -6, 0)	$\cos(-7L_1 +8L_2 +1W_1 -2W_2)$	(1, 2, 0)	2.0609928E 00	1.2837154E 01	8.0676571E 01	-5.4545068E-01	-3.3974083E 00	1.4435589E-01
(-1, 2, -5, 0)	$\cos(-6L_1 +7L_2 +1W_1 -2W_2)$	(1, 2, 0)	2.4519092E 00	1.2676947E 01	6.5693411E 01	-7.7074993E-01	-3.9849582E 00	2.4220281E-01
(-1, 2, -4, 0)	$\cos(-5L_1 +6L_2 +1W_1 -2W_2)$	(1, 2, 0)	2.6518776E 00	1.0791537E 01	4.2700292E 01	-1.0263140E 00	-4.1764771E 00	3.9719799E-01
(-1, 2, -3, 0)	$\cos(-4L_1 +5L_2 +1W_1 -2W_2)$	(1, 2, 0)	2.4590575E 00	7.0392249E 00	1.6203081E 01	-1.2378402E 00	-3.5434044E 00	6.2310392E-01
(-1, 2, -2, 0)	$\cos(-3L_1 +4L_2 +1W_1 -2W_2)$	(1, 2, 0)	1.6833607E 00	2.1325262E 00	-6.4735574E 00	-1.2116988E 00	-1.5350122E 00	8.7219206E-01
**(-1, 2, -1, 0)	$\cos(-2L_1 +3L_2 +1W_1 -2W_2)$	(1, 2, 0)	-5.6081614E-01	-3.0011575E 00	-1.9637112E 01	7.0815251E-01	3.7896149E 00	-8.9419675E-01
(-1, 2, -0, 0)	$\cos(-1L_1 +2L_2 +1W_1 -2W_2)$	(1, 2, 0)	-8.2681987E-01	-3.4878812E 00	-2.0118649E 01	4.2481974E 00	1.7920720E 01	-2.1827222E 01
**(-1, 2, 1, 0)	$\cos(0L_1 +1L_2 +1W_1 -2W_2)$	(1, 2, 0)	-4.8864645E-01	-2.4978048E 00	-1.5872452E 01	-1.2134683E 00	-6.2028628E 00	-3.0134371E 00
(-1, 2, 2, 0)	$\cos(+1L_1 +0L_2 +1W_1 -2W_2)$	(1, 2, 0)	-2.1959322E-01	-1.3950550E 00	-1.0352777E 01	-2.1959322E-01	-1.3950550E 00	-2.1959322E-01
(-1, 2, 3, 0)	$\cos(+2L_1 -1L_2 +1W_1 -2W_2)$	(1, 2, 0)	-1.4522486E-01	-8.5269977E-01	-6.4356467E 00	-9.0918155E-02	-5.3383346E-01	-5.6919393E-02
(-1, 2, 4, 0)	$\cos(+3L_1 -2L_2 +1W_1 -2W_2)$	(1, 2, 0)	-1.8205647E-01	-9.0845708E-01	-5.5381244E 00	-8.2955488E-02	-4.1394573E-01	-3.7799333E-02

Index	Argument		C	DC	D^2C	C/N	DC/N	C/N*N
(-1, 2, 5, C)	COS ($+4L_1$ $-3L_2$ $+1W_1$ $-2W_2$)	(1, 2, C)	-2.2123742E-01	-1.1936127E 00	-6.9475956E 00	-7.9241393E-02	-4.2752048E-01	-2.8382171E-02
(-2, 1, -8, 0)	COS ($-10L_1$ $+9L_2$ $+2W_1$ $-1W_2$)	(2, 1, 0)	4.2139915E-01	3.4511304E 00	2.8431494E 01	-6.6093245E-02	-5.4128349E-01	1.0366222E-02
(-2, 1, -7, C)	COS ($-9L_1$ $+8L_2$ $+2W_1$ $-1W_2$)	(2, 1, C)	5.6546296E-01	4.0512210E 00	2.9208926E 01	-9.7856127E-02	-7.0108358E-01	1.6934481E-02
(-2, 1, -6, C)	COS ($-8L_1$ $+7L_2$ $+2W_1$ $-1W_2$)	(2, 1, 0)	7.2550474E-01	4.4499540E 00	2.7472774E 01	-1.4002641E-01	-8.5886561E-01	2.7025867E-02
(-2, 1, -5, C)	COS ($-7L_1$ $+6L_2$ $+2W_1$ $-1W_2$)	(2, 1, 0)	8.7662411E-01	4.4669899E 00	2.2908382E 01	-1.9124042E-01	-9.7449864E-01	4.1720158E-02
(-2, 1, -4, C)	COS ($-6L_1$ $+5L_2$ $+2W_1$ $-1W_2$)	(2, 1, 0)	9.7336007E-01	3.9417332E 00	1.6076015E 01	-2.4415972E-01	-9.8875278E-01	6.1245548E-02
(-2, 1, -3, C)	COS ($-5L_1$ $+4L_2$ $+2W_1$ $-1W_2$)	(2, 1, C)	9.5075059E-01	2.8516174E 00	8.7540048E 00	-2.8051890E-01	-8.4136952E-01	8.2767082E-02
(-2, 1, -2, 0)	COS ($-4L_1$ $+3L_2$ $+2W_1$ $-1W_2$)	(2, 1, C)	7.4670933E-01	1.4816491E 00	3.6906705E 00	-2.6745153E-01	-5.3068752E-01	9.5794066E-02
*(-2, 1, -1, 0)	COS ($-3L_1$ $+2L_2$ $+2W_1$ $-1W_2$)	(2, 1, C)	-3.6784055E-02	1.1640354E-01	2.7774845E 00	1.6760949E-02	-5.3040205E-02	-7.6372605E-03
(-2, 1, -0, 0)	COS ($-2L_1$ $+1L_2$ $+2W_1$ $-1W_2$)	(2, 1, 0)	6.6258044E-02	7.4238943E-01	6.6854479E 00	-4.1480908E-02	-4.6477357E-01	2.5969160E-02
(-2, 1, 1, C)	COS ($-1L_1$ $+0L_2$ $+2W_1$ $-1W_2$)	(2, 1, 0)	2.6141878E-01	1.4863207E 00	1.0402005E 01	-2.6141878E-01	-1.4863207E 00	2.6141878E-01
(-2, 1, 2, 0)	COS ($+0L_1$ $-1L_2$ $+2W_1$ $-1W_2$)	(2, 1, 0)	-5.8407034E-02	8.8275653E-01	9.7953727E 00	1.4504369E-01	-2.1921720E 00	-3.6019072E-01
(-2, 1, 3, C)	COS ($+1L_1$ $-2L_2$ $+2W_1$ $-1W_2$)	(2, 1, 0)	-6.2859328E-01	-1.3353968E 00	1.3830724E 00	-3.2297100E 00	-6.8612636E 00	-1.6594237E 01
(-2, 1, 4, 0)	COS ($+2L_1$ $-3L_2$ $+2W_1$ $-1W_2$)	(2, 1, C)	-1.0334554E 00	-3.9693193E 00	-1.3374752E 01	-1.3049625E 00	-5.0121301E 00	-1.6477993E 00

(-2, 1, 5, C) COS ($+3L_1 -4L_2 +2W_1 -1W_2$)

	C	DC	D^2C	C/N	DC/N	C/N*N
(2, 1, C)	-1.1819861E 00	-5.9884058E 00	-2.9734654E 01	-8.5080462E-01	-4.3105103E 00	-6.1241709E-01

(-2, 1, 6, C) COS ($+4L_1 -5L_2 +2W_1 -1W_2$)

	C	DC	D^2C	C/N	DC/N	C/N*N
(2, 1, 0)	-1.1334233E 00	-6.9951156E 00	-4.3224806E 01	-5.7054255E-01	-3.5212009E 00	-2.8719968E-01

(-2, 1, 7, C) COS ($+5L_1 -6L_2 +2W_1 -1W_2$)

	C	DC	D^2C	C/N	DC/N	C/N*N
(2, 1, C)	-9.7690350E-01	-7.0641487E 00	-5.1421289E 01	-3.7807542E-01	-2.7339251E 00	-1.4632052E-01

(-2, 1, 8, C) COS ($+6L_1 -7L_2 +2W_1 -1W_2$)

	C	DC	D^2C	C/N	DC/N	C/N*N
(2, 1, 0)	-7.8342864E-01	-6.4780789E 00	-5.3982514E 01	-2.4626832E-01	-2.0363637E 00	-7.7413669E-02

(-2, 1, 9, 0) COS ($+7L_1 -8L_2 +2W_1 -1W_2$)

	C	DC	D^2C	C/N	DC/N	C/N*N
(2, 1, C)	-5.9632081E-01	-5.5426311E 00	-5.1906890E 01	-1.5781889E-01	-1.4668813E 00	-4.1767452E-02

(-2, 1, 10, 0) COS ($+8L_1 -9L_2 +2W_1 -1W_2$)

	C	DC	D^2C	C/N	DC/N	C/N*N
(2, 1, 0)	-4.3627276E-01	-4.4994600E 00	-4.6727755E 01	-9.9700624E-02	-1.0282535E 00	-2.2784403E-02

(1, 0, -7, 1) COS ($-5L_1 +8L_2 -1W_1 +0W_2$)

	C	DC	D^2C	C/N	DC/N	C/N*N
(1, 0, 1)	-4.6395017E-01	-4.4350523E 00	-4.4548435E 01	2.6086400E-01	2.4936848E 00	-1.4667529E-01

(1, 0, -6, 1) COS ($-4L_1 +7L_2 -1W_1 +0W_2$)

	C	DC	D^2C	C/N	DC/N	C/N*N
(1, 0, 1)	-6.8649809E-01	-5.9074600E 00	-5.4124855E 01	5.8118729E-01	5.0012386E 00	-4.9203148E-01

(1, 0, -5, 1) COS ($-3L_1 +6L_2 -1W_1 +0W_2$)

	C	DC	D^2C	C/N	DC/N	C/N*N
(1, 0, 1)	-9.7998524E-01	-7.5149420E 00	-6.2526642E 01	1.6783868E 00	1.2870581E 01	-2.8745151E 00

(1, 0, -4, 1) COS ($-2L_1 +5L_2 -1W_1 +0W_2$)

	C	DC	D^2C	C/N	DC/N	C/N*N
(1, 0, 1)	-1.3301633E 00	-8.9933374E 00	-6.7843831E 01	-9.9051600E 01	-6.6969556E 02	-7.3759512E 03
(3, 0, 1)	-4.0423519E 00	-4.1940691E 01	-4.7564527E 02	-3.0101674E 02	-3.1231448E 03	-2.2415436E 04
(1, 2, 1)	1.4044790E 01	6.2432247E 01	1.1943473E 02	1.0458558E 03	4.6490638E 03	7.7880427E 04
(1, 0, 2)	1.7631410E 01	1.6257489E 02	1.6951518E 03	1.3129361E 03	1.2106260E 04	9.7768761E 04

(1, 0, -3, 1) COS ($-1L_1 +4L_2 -1W_1 +0W_2$)

	C	DC	D^2C	C/N	DC/N	C/N*N
(1, 0, 1)	-1.6731999E 00	-9.8885387E 00	-6.8040305E 01	-2.7396128E 00	-1.6190993E 01	-4.4857034E 00

(1, 0, -2, 1) COS ($+0L_1 +3L_2 -1W_1 +0W_2$)

	C	DC	D^2C	C/N	DC/N	C/N*N
(1, 0, 1)	-1.8509733E 00	-9.6034817E 00	-6.1819345E 01	-1.5321899E 00	-7.9495244E 00	-1.2683088E 00

(1, 0, -1, 1) COS ($+1L_1 +2L_2 -1W_1 +0W_2$)

	C	DC	D^2C	C/N	DC/N	C/N*N
(1, 0, 1)	-1.5688525E 00	-7.6761151E 00	-4.9770136E 01	-8.6899143E-01	-4.2518200E 00	-4.8133660E-01

*(1, 0, -0, 1) COS ($+2L_1 +1L_2 -1W_1 +0W_2$)

	C	DC	D^2C	C/N	DC/N	C/N*N
(1, 0, 1)	-7.7093570E-01	-4.7206882E 00	-3.4960978E 01	-3.2086413E-01	-1.9647547E 00	-1.3354394E-01

(1, 0, 1, 1) COS ($+3L_1$ $+0L_2$ $-1W_1$ $+0W_2$)

	C	DC	D^2C	C/N	DC/N	C/N*N
(1, 0, 1)	1.6957458E-01	-1.4007053E 00	-1.9065676E 01	5.6524861E-02	-4.6690175E-01	1.8841620E-02

(1, 0, 2, 1) COS ($+4L_1$ $-1L_2$ $-1W_1$ $+0W_2$)

	C	DC	D^2C	C/N	DC/N	C/N*N
(1, 0, 1)	4.2202508E-01	6.5830789E-01	-5.5150708E 00	1.1731671E-01	1.8299983E-01	3.2612306E-02

(0, 1, -6, 1) COS ($-5L_1$ $+8L_2$ $+0W_1$ $-1W_2$)

	C	DC	D^2C	C/N	DC/N	C/N*N
(0, 1, 1)	8.7317978E-01	7.4731336E 00	6.8005420E 01	-4.9096041E-01	-4.2018984E 00	2.7605097E-01

(0, 1, -5, 1) COS ($-4L_1$ $+7L_2$ $+0W_1$ $-1W_2$)

	C	DC	D^2C	C/N	DC/N	C/N*N
(0, 1, 1)	1.2980742E 00	9.8701560E 00	8.1259639E 01	-1.0989459E 00	-8.3560455E 00	9.3036441E-01

(0, 1, -4, 1) COS ($-3L_1$ $+6L_2$ $+0W_1$ $-1W_2$)

	C	DC	D^2C	C/N	DC/N	C/N*N
(0, 1, 1)	1.8653174E 00	1.2433229E 01	9.2171166E 01	-3.1946645E 00	-2.1293962E 01	5.4713914E 00

(0, 1, -3, 1) COS ($-2L_1$ $+5L_2$ $+0W_1$ $-1W_2$)

	C	DC	D^2C	C/N	DC/N	C/N*N
(0, 1, 1)	2.5573939E 00	1.4717762E 01	9.8166105E 01	1.9043824E 02	1.0959691E 03	1.4181125E 04
(2, 1, 1)	1.7991391E 01	1.5896171E 02	1.6014554E 03	1.3397423E 03	1.1837202E 04	9.9764912E 04
(0, 3, 1)	-1.0171392E 01	-2.7977633E 01	1.0942175E 02	-7.5742027E 02	-2.0833753E 03	-5.6401864E 04
(0, 1, 2)	-2.8250845E 01	-2.3647855E 02	-2.2988840E 03	-2.1037202E 03	-1.7609551E 04	-1.5665509E 05

(0, 1, -2, 1) COS ($-1L_1$ $+4L_2$ $+0W_1$ $-1W_2$)

	C	DC	D^2C	C/N	DC/N	C/N*N
(0, 1, 1)	3.2715973E 00	1.6017100E 01	9.7009516E 01	5.3567478E 00	2.6225589E 01	8.7708678E 00

(0, 1, -1, 1) COS ($+0L_1$ $+3L_2$ $+0W_1$ $-1W_2$)

	C	DC	D^2C	C/N	DC/N	C/N*N
(0, 1, 1)	3.7418863E 00	1.5520377E 01	8.8150711E 01	3.0974408E 00	1.2847384E 01	2.5639848E 00

*(0, 1, -0, 1) COS ($+1L_1$ $+2L_2$ $+0W_1$ $-1W_2$)

	C	DC	D^2C	C/N	DC/N	C/N*N
(0, 1, 1)	2.3800140E 00	1.1793523E 01	7.2710089E 01	1.3182959E 00	6.5324631E 00	7.3020753E-01

(0, 1, 1, 1) COS ($+2L_1$ $+1L_2$ $+0W_1$ $-1W_2$)

	C	DC	D^2C	C/N	DC/N	C/N*N
(0, 1, 1)	2.0034592E 00	9.2449676E 00	5.7446252E 01	8.3384154E-01	3.8477639E 00	3.4704560E-01

(0, 1, 2, 1) COS ($+3L_1$ $+0L_2$ $+0W_1$ $-1W_2$)

	C	DC	D^2C	C/N	DC/N	C/N*N
(0, 1, 1)	9.9059890E-01	5.7553106E 00	4.0705242E 01	3.3286630E-01	1.9184369E 00	1.1095543E-01

(0, 1, 3, 1) COS ($+4L_1$ $-1L_2$ $+0W_1$ $-1W_2$)

	C	DC	D^2C	C/N	DC/N	C/N*N
(0, 1, 1)	4.3532832E-01	3.1276257E 00	2.5864187E 01	1.2101482E-01	8.6943357E-01	3.3640324E-02

(-1, 0, -6, 1) COS ($-6L_1$ $+7L_2$ $+1W_1$ $+0W_2$)

	C	DC	D^2C	C/N	DC/N	C/N*N
(1, 0, 1)	6.0228682E-02	3.5523402E-01	1.3974045E 00	-1.8932696E-02	-1.1166669E-01	5.9514334E-03

(-1, 0, -5, 1) COS ($-5L_1$ $+6L_2$ $+1W_1$ $+0W_2$)

	C	DC	D^2C	C/N	DC/N	C/N*N
(1, 0, 1)	3.7899604E-02	2.1743053E-02	-2.5810509E 00	-1.4667681E-02	-8.4148681E-03	5.6765993E-03

Indices	Argument	C	DC	D^2C	C/N	DC/N	C/N*N
(-1, 0, -4, 1) (1, 0, 1)	COS ($-4L_1$ $+5L_2$ $+1W_1$ $+0W_2$)	-4.6793540E-02	-7.3759640E-01	-9.4582287E 00	2.3051549E-02	3.7129124E-01	-1.1603688E-02
(-1, 0, -3, 1) (1, 0, 1)	COS ($-3L_1$ $+4L_2$ $+1W_1$ $+0W_2$)	-2.5848953E-01	-2.1617810E 00	-1.9839027E 01	1.8606317E-01	1.5560701E 00	-1.3393001E-01
(-1, 0, -2, 1) (1, 0, 1)	COS ($-2L_1$ $+3L_2$ $+1W_1$ $+0W_2$)	-7.1447410E-01	-4.4725869E 00	-3.3667208E 01	9.0217915E-01	5.6476150E 00	-1.1391976E 00
(-1, 0, -1, 1) (1, 0, 1)	COS ($-1L_1$ $+2L_2$ $+1W_1$ $+0W_2$)	-1.5688525E 00	-7.6761151E 00	-4.9770136E 01	8.0607580E 00	3.9439850E 01	-4.1416144E 01
*(-1, 0, -0, 1) (1, 0, 1)	COS ($+0L_1$ $+1L_2$ $+1W_1$ $+0W_2$)	-2.0581984E 00	-1.0378956E 01	-6.5160286E 01	-5.1111770E 00	-2.5774329E 01	-1.2692717E 01
(-1, 0, 1, 1) (1, 0, 1)	COS ($+1L_1$ $+0L_2$ $+1W_1$ $+0W_2$)	-3.3072795E 00	-1.3951525E 01	-8.0474596E 01	-3.3072795E 00	-1.3951525E 01	-3.3072795E 00
(-1, 0, 2, 1) (1, 0, 1)	COS ($+2L_1$ $-1L_2$ $+1W_1$ $+0W_2$)	-2.9874725E 00	-1.4734376E 01	-8.9971482E 01	-1.8703098E 00	-9.2244698E 00	-1.1709092E 00
(-1, 0, 3, 1) (1, 0, 1)	COS ($+3L_1$ $-2L_2$ $+1W_1$ $+0W_2$)	-2.3805551E 00	-1.3751917E 01	-9.2140944E 01	-1.0847190E 00	-6.2661713E 00	-4.9426088E-01
(-1, 0, 4, 1) (1, 0, 1)	COS ($+4L_1$ $-3L_2$ $+1W_1$ $+0W_2$)	-1.7582866E 00	-1.1745251E 01	-8.7305698E 01	-6.2977174E-01	-4.2068383E 00	-2.2556758E-01
(-1, 0, 5, 1) (1, 0, 1)	COS ($+5L_1$ $-4L_2$ $+1W_1$ $+0W_2$)	-1.2344564E 00	-9.3991133E 00	-7.7513040E 01	-3.6422629E-01	-2.7732078E 00	-1.0746494E-01
(0, -1, -5, 1) (0, 1, 1)	COS ($-4L_1$ $+5L_2$ $+0W_1$ $+1W_2$)	-2.2875301E-01	-1.4348715E 00	-8.6587476E 00	1.1514968E-01	7.2228553E-01	-5.7964038E-02
(0, -1, -4, 1) (0, 1, 1)	COS ($-3L_1$ $+4L_2$ $+0W_1$ $+1W_2$)	-2.7529890E-01	-1.3263389E 00	-5.1381720E 00	1.9816271E-01	9.5471107E-01	-1.4263937E-01
(0, -1, -3, 1) (0, 1, 1)	COS ($-2L_1$ $+3L_2$ $+0W_1$ $+1W_2$)	-2.7202686E-01	-7.3575310E-01	1.7635476E 00	3.4349315E-01	9.2904851E-01	-4.3373491E-01
(0, -1, -2, 1) (0, 1, 1)	COS ($-1L_1$ $+2L_2$ $+0W_1$ $+1W_2$)	-1.3790028E-01	6.2441580E-01	1.2553105E 01	7.0853114E-01	-3.2082461E 00	-3.6404303E 00

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( 0,-1, -1, 1 )   COS ( +0L  +1L  +0W  +1W )
                          1    2    1    2
                                                  2
                      C              DC           D C             C/N              DC/N            C/N*N
( 0, 1, 1 )      2.6503218E-01   2.9695577E 00   2.6741791E 01   6.5816122E-01   7.3743790E 00   1.6344287E 00


( 0,-1, -0, 1 )   COS ( +1L  +0L  +0W  +1W )
                          1    2    1    2
                                                  2
                      C              DC           D C             C/N              DC/N            C/N*N
( 0, 1, 1 )      1.0927514E 00   6.1352553E 00   4.2510800E 01   1.0927514E 00   6.1352553E 00   1.0927514E 00


( 0,-1,  1, 1 )   COS ( +2L  -1L  +0W  +1W )
                          1    2    1    2
                                                  2
                      C              DC           D C             C/N              DC/N            C/N*N
( 0, 1, 1 )      2.0034592E 00   9.2449676E 00   5.7446252E 01   1.2542675E 00   5.7878203E 00   7.8523527E-01


( 0,-1,  2, 1 )   COS ( +3L  -2L  +0W  +1W )
                          1    2    1    2
                                                  2
                      C              DC           D C             C/N              DC/N            C/N*N
( 0, 1, 1 )      2.1350981E 00   1.0886205E 01   6.8857380E 01   9.7287453E-01   4.9603866E 00   4.4329807E-01


( 0,-1,  3, 1 )   COS ( +4L  -3L  +0W  +1W )
                          1    2    1    2
                                                  2
                      C              DC           D C             C/N              DC/N            C/N*N
( 0, 1, 1 )      1.8500387E 00   1.0854383E 01   7.4065465E 01   6.6263493E-01   3.8877531E 00   2.3733830E-01


( 0,-1,  4, 1 )   COS ( +5L  -4L  +0W  +1W )
                          1    2    1    2
                                                  2
                      C              DC           D C             C/N              DC/N            C/N*N
( 0, 1, 1 )      1.4371941E 00   9.6813158E 00   7.2709298E 01   4.2404402E-01   2.8564716E 00   1.2511416E-01


( 0,-1,  5, 1 )   COS ( +6L  -5L  +0W  +1W )
                          1    2    1    2
                                                  2
                      C              DC           D C             C/N              DC/N            C/N*N
( 0, 1, 1 )      1.0436030E 00   7.9859848E 00   6.6273242E 01   2.6177962E-01   2.0032215E 00   6.5665359E-02


( 0,-1,  6, 1 )   COS ( +7L  -6L  +0W  +1W )
                          1    2    1    2
                                                  2
                      C              DC           D C             C/N              DC/N            C/N*N
( 0, 1, 1 )      7.2383443E-01   6.2205948E 00   5.6900968E 01   1.5790850E-01   1.3570573E 00   3.4448615E-02


( 4, 0,-12, 0 )   COS ( -8L +12L  -4W  +0W )
                          1    2    1    2
                                                  2
                      C              DC           D C             C/N              DC/N            C/N*N
( 4, 0, 0 )      7.5137341E-01   9.4409336E 00   1.1993701E 02  -2.3719314E-01  -2.9803087E 00   7.4876998E-02


( 4, 0,-11, 0 )   COS ( -7L +11L  -4W  +0W )
                          1    2    1    2
                                                  2
                      C              DC           D C             C/N              DC/N            C/N*N
( 4, 0, 0 )      9.7153658E-01   1.1252295E 01   1.3208611E 02  -3.7796270E-01  -4.3775480E 00   1.4704110E-01


( 4, 0,-10, 0 )   COS ( -6L +10L  -4W  +0W )
                          1    2    1    2
                                                  2
                      C              DC           D C             C/N              DC/N            C/N*N
( 4, 0, 0 )      1.2082527E 00   1.2811895E 01   1.3814869E 02  -6.1234960E-01  -6.4931442E 00   3.1034239E-01


( 4, 0, -9, 0 )   COS ( -5L  +9L  -4W  +0W )
                          1    2    1    2
                                                  2
                      C              DC           D C             C/N              DC/N            C/N*N
( 4, 0, 0 )      1.4311361E 00   1.3784950E 01   1.3566077E 02  -1.0402000E 00  -1.0019386E 01   7.5605392E-01


( 4, 0, -8, 0 )   COS ( -4L  +8L  -4W  +0W )
                          1    2    1    2
                                                  2
                      C              DC           D C             C/N              DC/N            C/N*N
( 4, 0, 0 )      1.5918052E 00   1.3802992E 01   1.2314420E 02  -2.0446723E 00  -1.7729930E 01   2.6263796E 00


( 4, 0, -7, 0 )   COS ( -3L  +7L  -4W  +0W )
                          1    2    1    2
                                                  2
                      C              DC           D C             C/N              DC/N            C/N*N
( 4, 0, 0 )      1.6273816E 00   1.2576605E 01   1.0109781E 02  -8.9811641E 00  -6.9407538E 01   4.9565085E 01
```

	Term		C	DC	D^2C	C/N	DC/N	C/N*N
(4, 0, -6, 0)	COS ($-2L_1$ $+6L_2$ $-4W_1$ $+0W_2$)	(4, 0, 0)	1.4769938E 00	1.0070063E 01	7.2736872E 01	3.5494864E 00	2.4200204E 01	8.5300654E 00
(4, 0, -5, 0)	COS ($-1L_1$ $+5L_2$ $-4W_1$ $+0W_2$)	(4, 0, 0)	1.1179434E 00	6.6850263E 00	4.3790766E 01	1.1031295E 00	6.5964428E 00	1.0885119E 00
*(4, 0, 1, 0)	COS ($+5L_1$ $-1L_2$ $-4W_1$ $+0W_2$)	(4, 0, 0)	-1.3383950E-02	-3.4738005E-02	-4.5063299E-02	-2.9112541E-03	-7.5561520E-03	-6.3325107E-04
(3, 1, -11, 0)	COS ($-8L_1$ $+12L_2$ $-3W_1$ $-1W_2$)	(3, 1, 0)	-5.2574157E 00	-6.0815870E 01	-7.1273624E 02	1.6596580E 00	1.9198320E 01	-5.2391992E-01
(3, 1, -10, 0)	COS ($-7L_1$ $+11L_2$ $-3W_1$ $-1W_2$)	(3, 1, 0)	-6.7647595E 00	-7.1607561E 01	-7.7035629E 02	2.6317350E 00	2.7857919E 01	-1.0238396E 00
(3, 1, -9, 0)	COS ($-6L_1$ $+10L_2$ $-3W_1$ $-1W_2$)	(3, 1, 0)	-8.3624256E 00	-8.0346748E 01	-7.8801105E 02	4.2381267E 00	4.0720205E 01	-2.1479076E 00
(3, 1, -8, 0)	COS ($-5L_1$ $+9L_2$ $-3W_1$ $-1W_2$)	(3, 1, 0)	-9.8297842E 00	-8.4910305E 01	-7.5348234E 02	7.1446326E 00	6.1715792E 01	-5.1929700E 00
(3, 1, -7, 0)	COS ($-4L_1$ $+8L_2$ $-3W_1$ $-1W_2$)	(3, 1, 0)	-1.0825047E 01	-8.3131288E 01	-6.6225564E 02	1.3904762E 01	1.0678206E 02	-1.7860654E 01
(3, 1, -6, 0)	COS ($-3L_1$ $+7L_2$ $-3W_1$ $-1W_2$)	(3, 1, 0)	-1.0917975E 01	-7.3592176E 01	-5.2277296E 02	6.0253924E 01	4.0613916E 02	-3.3252826E 02
(3, 1, -5, 0)	COS ($-2L_1$ $+6L_2$ $-3W_1$ $-1W_2$)	(3, 1, 0)	-9.7169706E 00	-5.6730344E 01	-3.5882915E 02	-2.3351658E 01	-1.3633340E 02	-5.6118309E 01
(3, 1, -4, 0)	COS ($-1L_1$ $+5L_2$ $-3W_1$ $-1W_2$)	(3, 1, 0)	-7.1314893E 00	-3.5792413E 01	-2.0506586E 02	-7.0369896E 00	-3.5318126E 01	-6.9437421E 00
(3, 1, -3, 0)	COS ($+0L_1$ $+4L_2$ $-3W_1$ $-1W_2$)	(3, 1, 0)	-3.7310773E 00	-1.6599025E 01	-9.3215872E 01	-2.3163700E 00	-1.0305196E 01	-1.4380753E 00
(3, 1, 1, 0)	COS ($+4L_1$ $+0L_2$ $-3W_1$ $-1W_2$)	(3, 1, 0)	-1.9008185E-02	-1.0855215E-01	-1.2054274E 00	-4.7520462E-03	-2.7138037E-02	-1.1880116E-03
(2, 2, -10, 0)	COS ($-8L_1$ $+12L_2$ $-2W_1$ $-2W_2$)	(2, 2, 0)	1.3782584E 01	1.4568854E 02	1.5643753E 03	-4.3508784E 00	-4.5990878E 01	1.3734829E 00

Term	Argument		C	DC	D^2C	C/N	DC/N	C/N*N
(2, 2, -9, 0)	$\cos(-7L_1 + 11L_2 - 2W_1 - 2W_2)$	(2, 2, 0)	1.7644293E 01	1.6919048E 02	1.6548548E 03	-6.8642651E 00	-6.5821187E 01	2.6704462E 00
(2, 2, -8, 0)	$\cos(-6L_1 + 10L_2 - 2W_1 - 2W_2)$	(2, 2, 0)	2.1674675E 01	1.8667770E 02	1.6497558E 03	-1.0984853E 01	-9.4609358E 01	5.5671884E 00
(2, 2, -7, 0)	$\cos(-5L_1 + 9L_2 - 2W_1 - 2W_2)$	(2, 2, 0)	2.5275182E 01	1.9321141E 02	1.5290737E 03	-1.8370890E 01	-1.4043285E 02	1.3352609E 01
(2, 2, -6, 0)	$\cos(-4L_1 + 8L_2 - 2W_1 - 2W_2)$	(2, 2, 0)	2.7543829E 01	1.8422346E 02	1.2937957E 03	-3.5380023E 01	-2.3663486E 02	4.5445606E 01
(2, 2, -5, 0)	$\cos(-3L_1 + 7L_2 - 2W_1 - 2W_2)$	(2, 2, 0)	2.7383492E 01	1.5756125E 02	9.7508136E 02	-1.5112352E 02	-8.6954614E 02	8.3401772E 02
(2, 2, -4, 0)	$\cos(-2L_1 + 6L_2 - 2W_1 - 2W_2)$	(2, 2, 0)	2.3865768E 01	1.1600792E 02	6.3386416E 02	5.7353809E 01	2.7878827E 02	1.3783170E 02
(2, 2, -3, 0)	$\cos(-1L_1 + 5L_2 - 2W_1 - 2W_2)$	(2, 2, 0)	1.6940471E 01	6.8843749E 01	3.4309267E 02	1.6715992E 01	6.7931497E 01	1.6494488E 01
(2, 2, -2, 0)	$\cos(+0L_1 + 4L_2 - 2W_1 - 2W_2)$	(2, 2, 0)	8.3362445E 00	2.9768669E 01	1.5302592E 02	5.1747818E 00	1.8481325E 01	3.2126672E 00
*(2, 2, -1, 0)	$\cos(+1L_1 + 3L_2 - 2W_1 - 2W_2)$	(2, 2, 0)	1.5363094E 00	8.5921422E 00	6.0408223E 01	6.9581045E-01	3.8912676E 00	3.1512335E-01
(1, 3, -10, 0)	$\cos(-9L_1 + 13L_2 - 1W_1 - 3W_2)$	(1, 3, 0)	-1.2171057E 01	-1.2850315E 02	-1.3776024E 03	3.2326117E 00	3.4130215E 01	-8.5857611E-01
(1, 3, -9, 0)	$\cos(-8L_1 + 12L_2 - 1W_1 - 3W_2)$	(1, 3, 0)	-1.6042579E 01	-1.5358274E 02	-1.4988763E 03	5.0643123E 00	4.8482913E 01	-1.5986993E 00
(1, 3, -8, 0)	$\cos(-7L_1 + 11L_2 - 1W_1 - 3W_2)$	(1, 3, 0)	-2.0428814E 01	-1.7553896E 02	-1.5462702E 03	7.9475440E 00	6.8290973E 01	-3.0918807E 00
(1, 3, -7, 0)	$\cos(-6L_1 + 10L_2 - 1W_1 - 3W_2)$	(1, 3, 0)	-2.4930105E 01	-1.8990769E 02	-1.4953788E 03	1.2634724E 01	9.6246336E 01	-6.4033527E 00
(1, 3, -6, 0)	$\cos(-5L_1 + 9L_2 - 1W_1 - 3W_2)$	(1, 3, 0)	-2.8827063E 01	-1.9172765E 02	-1.3353981E 03	2.0952522E 01	1.3935439E 02	-1.5229029E 01

```
( 1, 3, -5, 0 )   COS ( -4L  +8L  -1W  -3W )
                        1    2    1    2
                                                       2
                      C               DC              D C            C/N              DC/N            C/N*N
( 1, 3, 0 )     -3.1065563E 01   -1.7700829E 02   -1.0792690E 03   3.9903686E 01   2.2736698E 02   -5.1256248E 01

( 1, 3, -4, 0 )   COS ( -3L  +7L  -1W  -3W )
                        1    2    1    2
                                                       2
                      C               DC              D C            C/N              DC/N            C/N*N
( 1, 3, 0 )     -3.0410197E 01   -1.4501313E 02   -7.6934183E 02   1.6782724E 02   8.0029581E 02   -9.2620193E 02

( 1, 3, -3, 0 )   COS ( -2L  +6L  -1W  -3W )
                        1    2    1    2
                                                       2
                      C               DC              D C            C/N              DC/N            C/N*N
( 1, 3, 0 )     -2.5903824E 01   -1.0066787E 02   -4.6974539E 02   -6.2251629E 01   -2.4192331E 02   -1.4960206E 02

( 1, 3, -2, 0 )   COS ( -1L  [illegible]  -1W  -3W )
                        1    2    1    2
                                                       2
                      C               DC              D C            C/N              DC/N            C/N*N
( 1, 3, 0 )     -1.7715243E 01   -5.5209925E 01   -2.4181868E 02   -1.7480497E 01   -5.4478335E 01   -1.7248862E 01

( 1, 3, -2, 0 )   COS ( +0L  +4L  -1W  -3W )
                        1    2    1    2
                                                       2
                      C               DC              D C            C/N              DC/N            C/N*N
( 1, 3, 0 )     -3.7635342E 00   -1.7789883E 01   -1.0554676E 02   -2.3365203E 00   -1.1044518E 01   -1.4509853E 00

( 1, 3, -0, 0 )   COS ( +1L  +3L  -1W  -3W )
                        1    2    1    2
                                                       2
                      C               DC              D C            C/N              DC/N            C/N*N
( 1, 3, 0 )     -1.5278281E 00   -7.3569341E 00   -4.8358868E 01   -6.9193314E-01   -3.3318582E 00   -3.1336737E-01

( 1, 3,  1, 0 )   COS ( +2L  +2L  -1W  -3W )
                        1    2    1    2
                                                       2
                      C               DC              D C            C/N              DC/N            C/N*N
( 1, 3, 0 )     -3.5280181E-01   -2.4195090E 00   -2.0037667E 01   -1.2568810E-01   -8.6245580E-01   -4.4802655E-02

( 0, 4,-10, 0 )   COS (-10L +14L  +0W  -4W )
                        1    2    1    2
                                                       2
                      C               DC              D C            C/N              DC/N            C/N*N
( 0, 4, 0 )      3.9486266E 00    4.1617001E 01    4.4558543E 02   -9.0446259E-01   -9.5399352E 00   2.0733148E-01

( 0, 4, -9, 0 )   COS ( -9L +13L  +0W  -4W )
                        1    2    1    2
                                                       2
                      C               DC              D C            C/N              DC/N            C/N*N
( 0, 4, 0 )      5.3308234E 00    5.0965775E 01    4.9648335E 02   -1.4158575E 00   -1.3536422E 01   3.7604932E-01

( 0, 4, -8, 0 )   COS ( -8L +12L  +0W  -4W )
                        1    2    1    2
                                                       2
                      C               DC              D C            C/N              DC/N            C/N*N
( 0, 4, 0 )      6.9945367E 00    5.9988875E 01    5.2703362E 02   -2.2080314E 00   -1.8937255E 01   6.9703014E-01

( 0, 4, -7, 0 )   COS ( -7L +11L  +0W  -4W )
                        1    2    1    2
                                                       2
                      C               DC              D C            C/N              DC/N            C/N*N
( 0, 4, 0 )      8.8573134E 00    6.7285876E 01    5.2772597E 02   -3.4458138E 00   -2.6176628E 01   1.3405456E 00

( 0, 4, -6, 0 )   COS ( -6L +10L  +0W  -4W )
                        1    2    1    2
                                                       2
                      C               DC              D C            C/N              DC/N            C/N*N
( 0, 4, 0 )      1.0733529E 01    7.1085764E 01    4.9198809E 02   -5.4398157E 00   -3.6026683E 01   2.7569306E 00

( 0, 4, -5, 0 )   COS ( -5L  +9L  +0W  -4W )
                        1    2    1    2
                                                       2
                      C               DC              D C            C/N              DC/N            C/N*N
( 0, 4, 0 )      1.2299483E 01    6.9592319E 01    4.1978320E 02   -8.9398420E 00   -5.0582143E 01   6.4977913E 00

( 0, 4, -4, 0 )   COS ( -4L  +8L  +0W  -4W )
                        1    2    1    2
                                                       2
                      C               DC              D C            C/N              DC/N            C/N*N
( 0, 4, 0 )      1.3095008E 01    6.1654124E 01    3.2061801E 02   -1.6820525E 01   -7.9194663E 01   2.1605949E 01
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$ 0, 4, -3, 0 )   COS ( -3L  +7L  +0W  -4W )
                         1    2    1    2
                                                        2
                     C               DC                D C               C/N               DC/N              C/N*N
$ 0, 4, 0 )      1.2600542E 01   4.7691556E 01   2.1357681E 02   -6.9539644E 01   -2.6319929E 02   3.8377412E 02

$ 0, 4, -2, 0 )   COS ( -2L  +6L  +0W  -4W )
                         1    2    1    2
                                                        2
                     C               DC                D C               C/N               DC/N              C/N*N
$ 0, 4, 0 )      1.0454467E 01   3.0480633E 01   1.2176829E 02    2.5123998E 01    7.3250540E 01   6.0377566E 01

*$ 0, 4, -1, 0 )  COS ( -1L  +5L  +0W  -4W )
                         1    2    1    2
                                                        2
                     C               DC                D C               C/N               DC/N              C/N*N
$ 0, 4, 0 )      2.3874160E 00   1.0462719E 01   5.6662525E 01    2.3557802E 00    1.0324077E 01   2.3245637E 00

$ 0, 4, -0, 0 )   COS ( +0L  +4L  +0W  -4W )
                         1    2    1    2
                                                        2
                     C               DC                D C               C/N               DC/N              C/N*N
$ 0, 4, 0 )      2.7775518E 00   5.5463970E 00   3.0013358E 01    1.7243914E 00    3.4433776E 00   1.0705564E 00

*$ 0, 4,  1, 0 )  COS ( +1L  +3L  +0W  -4W )
                         1    2    1    2
                                                        2
                     C               DC                D C               C/N               DC/N              C/N*N
$ 0, 4, 0 )      3.9898952E-01   2.1146991E 00   1.4111253E 01    1.8069708E-01    9.5771924E-01   8.1835316E-02

$ 0, 4,  2, 0 )   COS ( +2L  +2L  +0W  -4W )
                         1    2    1    2
                                                        2
                     C               DC                D C               C/N               DC/N              C/N*N
$ 0, 4, 0 )      1.2562915E-01   8.0591017E-01   6.3444500E 00    4.4781645E-02    2.8727395E-01   1.5962821E-02

$-1, 3, -3, 0 )   COS ( -4L  +6L  +1W  -3W )
                         1    2    1    2
                                                        2
                     C               DC                D C               C/N               DC/N              C/N*N
$ 1, 3, 0 )      6.2546247E 00   1.7227327E 01   3.0897855E 01   -3.9489129E 00   -1.0876626E 01   2.4931812E 00

$-1, 3, -2, 0 )   COS ( -3L  +5L  +1W  -3W )
                         1    2    1    2
                                                        2
                     C               DC                D C               C/N               DC/N              C/N*N
$ 1, 3, 0 )      3.2726320E 00   2.5605181E 00  -3.1221051E 01   -3.3171784E 00   -2.5953714E 00   3.3623311E 00

*$-1, 3, -1, 0 )  COS ( -2L  +4L  +1W  -3W )
                         1    2    1    2
                                                        2
                     C               DC                D C               C/N               DC/N              C/N*N
$ 1, 3, 0 )     -1.3129717E 00  -7.6368710E 00  -5.4693254E 01    3.3730218E 00    1.9619107E 01  -8.6652865E 00

$-1, 3, -0, 0 )   COS ( -1L  +3L  +1W  -3W )
                         1    2    1    2
                                                        2
                     C               DC                D C               C/N               DC/N              C/N*N
$ 1, 3, 0 )     -1.5278281E 00  -7.3569341E 00  -4.8358768E 01   -7.3433011E 00   -3.5360118E 01  -3.5294593E 01

$-2, 2,  2, 0 )   COS ( +0L  +0L  +2W  -2W )
                         1    2    1    2
                                                        2
                     C               DC                D C
$ 2, 2, 0 )      4.1483294E-01   3.0020711E 00   2.5599830E 01
$ 4, 2, 0 )      1.4519402E 00   1.5422114E 01   1.8676808E 02
$ 2, 4, 0 )      3.5915986E 00   3.3489358E 01   3.6587317E 02
$ 2, 2, 1 )     -2.6942569E 01  -2.6945226E 02  -3.1110389E 03

$-3, 1,  4, 0 )   COS ( +1L  -3L  +3W  -1W )
                         1    2    1    2
                                                        2
                     C               DC                D C               C/N               DC/N              C/N*N
$ 3, 1, 0 )      1.1236797E 00   4.0148945E 00   9.3469789E 00   -5.4008158E 00   -1.9297052E 01   2.5958297E 01

$-3, 1,  5, 0 )   COS ( +2L  -4L  +3W  -1W )
                         1    2    1    2
                                                        2
                     C               DC                D C               C/N               DC/N              C/N*N
$ 3, 1, 0 )      1.9183529E 00   9.6205090E 00   4.5918349E 01    4.9282449E 00    2.4715069E 01   1.2660652E 01

$-3, 1,  6, 0 )   COS ( +3L  -5L  +3W  -1W )
                         1    2    1    2
                                                        2
                     C               DC                D C               C/N               DC/N              C/N*N
$ 3, 1, 0 )      2.4253357E 00   1.4976191E 01   9.2050501E 01    2.4583489E 00    1.5180043E 01   2.4918114E 00
```

	C	DC	D^2C	C/N	DC/N	C/N*N
(2, 0, -7, 1)	$\cos(-4L_1 +8L_2 -2W_1 +0W_2)$					
(2, 0, 1)	2.1852112E 00	2.1421179E 01	2.2208646E 02	-2.8069017E 00	-2.7515485E 01	3.6054626E 00
(2, 0, -6, 1)	$\cos(-3L_1 +7L_2 -2W_1 +0W_2)$					
(2, 0, 1)	2.7249071E 00	2.4260687E 01	2.3202303E 02	-1.5038168E 01	-1.3388944E 02	8.2992365E 01
(2, 0, -5, 1)	$\cos(-2L_1 +6L_2 -2W_1 +0W_2)$					
(2, 0, 1)	3.1673349E 00	2.5496381E 01	2.2540803E 02	7.6116853E 00	6.1272469E 01	1.8292273E 01
(1, 1, -6, 1)	$\cos(-4L_1 +8L_2 -1W_1 -1W_2)$					
(1, 1, 1)	-8.1024656E 00	-7.1368377E 01	-6.7360819E 02	1.0407609E 01	9.1672614E 01	-1.3368565E 01
(1, 1, -5, 1)	$\cos(-3L_1 +7L_2 -1W_1 -1W_2)$					
(1, 1, 1)	-1.0127375E 01	-8.0110443E 01	-6.9341344E 02	5.5890772E 01	4.4211206E 02	-3.0844898E 02
(1, 1, -4, 1)	$\cos(-2L_1 +6L_2 -1W_1 -1W_2)$					
(1, 1, 1)	-1.1812567E 01	-8.3385271E 01	-6.6402183E 02	-2.8387760E 01	-2.0039007E 02	-6.8220982E 01
(0, 2, -5, 1)	$\cos(-4L_1 +8L_2 +0W_1 -2W_2)$					
(0, 2, 1)	7.5644093E 00	5.9088970E 01	5.0360809E 02	-9.7164767E 00	-7.5899726E 01	1.2480805E 01
(0, 2, -4, 1)	$\cos(-3L_1 +7L_2 +0W_1 -2W_2)$					
(0, 2, 1)	9.5031296E 00	6.5699121E 01	5.1027126E 02	-5.2445698E 01	-3.6257912E 02	2.8943637E 02
(0, 2, -3, 1)	$\cos(-2L_1 +6L_2 +0W_1 -2W_2)$					
(0, 2, 1)	1.1174783E 01	6.7728968E 01	4.8176439E 02	2.6855049E 01	1.6276511E 02	6.4537598E 01
(-1, 1, 0, 1)	$\cos(+0L_1 +2L_2 +1W_1 -1W_2)$					
(1, 1, 1)	-6.2787797E 00	-4.8148568E 01	-3.5220522E 02	-1.0276968E 01	-5.9784288E 01	-1.2760526E 01
(-2, 0, 1, 1)	$\cos(+0L_1 +0L_2 +2W_1 +0W_2)$					
(2, 0, 1)	4.5320045E 00	2.4390956E 01	1.7519700E 02			
(-1,-1, 0, 1)	$\cos(+0L_1 +0L_2 +1W_1 +1W_2)$					
(1, 1, 1)	-4.1603790E 00	-2.7390655E 01	-2.2188449E 02			
(0,-2, -2, 1)	$\cos(+0L_1 +0L_2 +0W_1 +2W_2)$					
(0, 2, 1)	9.5969281E-01	7.4698741E 00	6.7981411E 01			
(5, 0, -8, 0)	$\cos(-4L_1 +9L_2 -5W_1 +0W_2)$					
(5, 0, 0)	-2.4277200E 00	-2.3658250E 01	-2.3659916E 02	6.4596602E 00	6.2949706E 01	-1.7187818E 01

Term	Argument	Index	C	DC	D^2C	C/N	DC/N	C/N*N
(5, 0, -8, 0)	$COS(-3L_1 +8L_2 -5W_1 +0W_2)$	(5, 0, 0)	-2.2286963E 00	-1.9652073E 01	-1.7952252E 02	-1.0062452E 01	-8.8728130E 01	-4.5431470E 01
(4, 1, -9, 0)	$COS(-5L_1 +10L_2 -4W_1 -1W_2)$	(4, 1, 0)	2.0488268E 01	1.9878741E 02	1.9761239E 03	-2.1053729E 01	-2.0427380E 02	2.1634796E 01
(4, 1, -8, 0)	$COS(-4L_1 +9L_2 -4W_1 -1W_2)$	(4, 1, 0)	2.0431840E 01	1.7889753E 02	1.6182039E 03	-5.4364896E 01	-4.7600929E 02	1.4465373E 02
(4, 1, -7, 0)	$COS(-3L_1 +8L_2 -4W_1 -1W_2)$	(4, 1, 0)	1.8493665E 01	1.4487344E 02	1.1878552E 03	8.3497972E 01	6.5409636E 02	3.7698918E 02
(4, 1, -6, 0)	$COS(-2L_1 +7L_2 -4W_1 -1W_2)$	(4, 1, 0)	1.4635491E 01	1.0182385E 02	7.5801265E 02	1.7874304E 01	1.2435732E 02	2.1829863E 01
(3, 2, -8, 0)	$COS(-5L_1 +10L_2 -3W_1 -2W_2)$	(3, 2, 0)	-6.9607624E 01	-6.0633336E 02	-5.4449503E 03	7.1528742E 01	6.2306771E 02	-7.3502882E 01
(3, 2, -7, 0)	$COS(-4L_1 +9L_2 -3W_1 -2W_2)$	(3, 2, 0)	-6.8657201E 01	-5.3328582E 02	-4.3195826E 03	1.8268260E 02	1.4189632E 03	-4.8608058E 02
(3, 2, -6, 0)	$COS(-3L_1 +8L_2 -3W_1 -2W_2)$	(3, 2, 0)	-6.1235989E 01	-4.1952642E 02	-3.0539147E 03	-2.7647744E 02	-1.8941409E 03	-1.2482818E 03
(3, 2, -5, 0)	$COS(-2L_1 +7L_2 -3W_1 -2W_2)$	(3, 2, 0)	-4.7464776E 01	-2.8411656E 02	-1.8670929E 03	-5.7968663E 01	-3.4699116E 02	-7.0797045E 01
(2, 3, -7, 0)	$COS(-5L_1 +10L_2 -2W_1 -3W_2)$	(2, 3, 0)	1.1806004E 02	9.1136397E 02	7.3165392E 03	-1.2131841E 02	-9.3651693E 02	1.2466670E 02
(2, 3, -6, 0)	$COS(-4L_1 +9L_2 -2W_1 -3W_2)$	(2, 3, 0)	1.1512276E 02	7.8050781E 02	5.5949354E 03	-3.0631784E 02	-2.0767697E 03	8.1504834E 02
(2, 3, -5, 0)	$COS(-3L_1 +8L_2 -2W_1 -3W_2)$	(2, 3, 0)	1.0110891E 02	5.9349271E 02	3.7803546E 03	4.5650168E 02	2.6795900E 03	2.0610823E 03
(2, 3, -4, 0)	$COS(-2L_1 +7L_2 -2W_1 -3W_2)$	(2, 3, 0)	7.6676605E 01	3.8472744E 02	2.2091873E 03	9.3645029E 01	4.6986708E 02	1.1436854E 02
(1, 4, -6, 0)	$COS(-5L_1 +10L_2 -1W_1 -4W_2)$	(1, 4, 0)	-9.9944055E 01	-6.7250863E 02	-4.7671397E 03	1.0270244E 02	6.9106936E 02	-1.0553695E 02

```
( 1, 4, -5, 0 )   COS ( -4L  +9L  -1W  -4W )
                         1    2    1    2
                                                     2
                       C              DC            D C              C/N              DC/N             C/N*N
( 1, 4, 0 )     -9.6294578E 01  -5.5785319E 02  -3.4907157E 03   2.5621993E 02   1.4843319E 03  -6.8174819E 02

( 1, 4, -4, 0 )   COS ( -3L  +8L  -1W  -4W )
                         1    2    1    2
                                                     2
                       C              DC            D C              C/N              DC/N             C/N*N
( 1, 4, 0 )     -8.3207093E 01  -4.0692590E 02  -2.2478892E 03  -3.7567588E 02  -1.8372502E 03  -1.6961579E 03

( 1, 4, -3, 0 )   COS ( -2L  +7L  -1W  -4W )
                         1    2    1    2
                                                     2
                       C              DC            D C              C/N              DC/N             C/N*N
( 1, 4, 0 )     -4.1647406E 01  -2.4986308E 02  -1.2458123E 03  -7.5289889E 01  -3.0515742E 02  -9.1951435E 01

( 0, 5, -6, 0 )   COS ( -5L +10L  +0W  -5W )
                         1    2    1    2
                                                     2
                       C              DC            D C              C/N              DC/N             C/N*N
( 0, 5, 0 )      3.3773080E 01   1.9381952E 02   1.1954442E 03  -3.4705191E 01  -1.9916879E 02   3.5663028E 01

( 0, 5, -4, 0 )   COS ( -4L  +9L  +0W  -5W )
                         1    2    1    2
                                                     2
                       C              DC            D C              C/N              DC/N             C/N*N
( 0, 5, 0 )      3.2128940E 01   1.5445872E 02   8.3092312E 02  -8.5483134E 01  -4.1098267E 02   2.2745292E 02

( 0, 5, -3, 0 )   COS ( -3L  +8L  +0W  -5W )
                         1    2    1    2
                                                     2
                       C              DC            D C              C/N              DC/N             C/N*N
( 0, 5, 0 )      2.7276612E 01   1.0674607E 02   5.0482081E 02   1.2315254E 02   4.8195317E 02   5.5602759E 02

( 0, 5, -2, 0 )   COS ( -2L  +7L  +0W  -5W )
                         1    2    1    2
                                                     2
                       C              DC            D C              C/N              DC/N             C/N*N
( 0, 5, 0 )      1.9693220E 01   6.0929531E 01   2.6622893E 02   2.4051313E 01   7.4413150E 01   2.9373835E 01

(-1, 4, -2, 0 )   COS ( -2L  +5L  +1W  -4W )
                         1    2    1    2
                                                     2
                       C              DC            D C              C/N              DC/N             C/N*N
( 1, 4, 0 )     -2.8439434E 00  -1.7868544E 01  -1.3881307E 02  -2.1177636E 02  -1.3305944E 03  -1.5770085E 04

(-4, 1,  6, 0 )   COS ( +2L  -5L  +4W  -1W )
                         1    2    1    2
                                                     2
                       C              DC            D C              C/N              DC/N             C/N*N
( 4, 1, 0 )     -3.0884343E 00  -1.9016911E 01  -1.1482982E 02   2.2998256E 02   1.4161084E 03  -1.7125822E 04

(-1, 2, -2, 1 )   COS ( -2L  +5L  +1W  -2W )
                         1    2    1    2
                                                     2
                       C              DC            D C              C/N              DC/N             C/N*N
( 1, 2, 1 )     -1.9696369E 01  -1.4656818E 02  -1.3116775E 03  -1.4667048E 03  -1.0914308E 04  -1.0921926E 05

( 2,-1, -6, 1 )   COS ( -2L  +5L  -2W  +1W )
                         1    2    1    2
                                                     2
                       C              DC            D C              C/N              DC/N             C/N*N
( 2, 1, 1 )     -4.8721512E 00  -2.7530079E 01  -1.2864344E 02  -3.4791522E 02  -2.0500478E 03  -2.5907766E 04

( 6, 0,-10, 0 )   COS ( -4L +10L  -6W  +0W )
                         1    2    1    2
                                                     2
                       C              DC            D C              C/N              DC/N             C/N*N
( 6, 0, 0 )      3.4860592E 00   3.7713910E 01   4.1786326E 02   1.2979600E 02   1.4041972E 03   4.8326778E 03

( 5, 1, -8, 0 )   COS ( -4L +10L  -5W  -1W )
                         1    2    1    2
                                                     2
                       C              DC            D C              C/N              DC/N             C/N*N
( 5, 1, 0 )     -3.4892464E 01  -3.4305296E 02  -3.4734020E 03  -1.2991467E 03  -1.2772847E 04  -4.8370962E 04

( 4, 2, -8, 0 )   COS ( -4L +10L  -4W  -2W )
                         1    2    1    2
                                                     2
                       C              DC            D C              C/N              DC/N             C/N*N
( 4, 2, 0 )      1.4529178E 02   1.2852356E 03   1.1796784E 04   5.4096302E 03   4.7853014E 04   2.0141607E 05
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( 3, 3, -7, 0 )   COS ( -4L +10L  -3W  -3W )
                         1    2    1    2
                                                        2
                        C             DC               D C             C/N             DC/N            C/N*N
( 3, 3, 0 )     -3.2213608E 02  -2.5323508E 03  -2.0876353E 04  -1.1994051E 04  -9.4286693E 04  -4.4657298E 05

( 2, 4, -6, 0 )   COS ( -4L +10L  -2W  -4W )
                         1    2    1    2
                                                        2
                        C             DC               D C             C/N             DC/N            C/N*N
( 2, 4, 0 )      4.0105143E 02   2.7582437E 03   2.0204627E 04   1.4932297E 04   1.0269733E 05   5.5597228E 05

( 1, 5, -5, 0 )   COS ( -4L +10L  -1W  -5W )
                         1    2    1    2
                                                        2
                        C             DC               D C             C/N             DC/N            C/N*N
( 1, 5, 0 )     -2.6577516E 02  -1.5668197E 03  -1.0075156E 04  -9.8955725E 03  -5.8337197E 04  -3.6844058E 05

( 0, 6, -4, 0 )   COS ( -4L +10L  +0W  -6W )
                         1    2    1    2
                                                        2
                        C             DC               D C             C/N             DC/N            C/N*N
( 0, 6, 0 )      7.3216915E 01   3.5983163E 02   2.0053742E 03   2.7260760E 03   1.3397565E 04   1.0149964E 05

(-3, 3,  3, 0 )   COS ( +0L  +0L  +3W  -3W )
                         1    2    1    2
                                                        2
                        C             DC               D C
( 3, 3, 0 )     -6.7513727E-01  -6.9865264E 00  -8.2315120E 01

( 4, 0, -9, 1 )   COS ( -4L +10L  -4W  +0W )
                         1    2    1    2
                                                        2
                        C             DC               D C             C/N             DC/N            C/N*N
( 4, 0, 1 )      1.1168608E 01   1.3614258E 02   1.7387135E 03   4.1583936E 02   5.0689793E 03   1.5482894E 04

( 3, 1, -8, 1 )   COS ( -4L +10L  -3W  -1W )
                         1    2    1    2
                                                        2
                        C             DC               D C             C/N             DC/N            C/N*N
( 3, 1, 1 )     -8.0299606E 01  -8.9996647E 02  -1.0660414E 04  -2.9897850E 03  -3.3508337E 04  -1.1131828E 05

( 2, 2, -7, 1 )   COS ( -4L +10L  -2W  -2W )
                         1    2    1    2
                                                        2
                        C             DC               D C             C/N             DC/N            C/N*N
( 2, 2, 1 )      2.1752003E 02   2.2240979E 03   2.4307678E 04   8.0988953E 03   8.2809551E 04   3.0154513E 05

( 1, 3, -6, 1 )   COS ( -4L +10L  -1W  -3W )
                         1    2    1    2
                                                        2
                        C             DC               D C             C/N             DC/N            C/N*N
( 1, 3, 1 )     -2.6342615E 02  -2.4342373E 03  -2.4404304E 04  -9.8081124E 03  -9.0633647E 04  -3.6518420E 05

( 0, 4, -5, 1 )   COS ( -4L +10L  +0W  -4W )
                         1    2    1    2
                                                        2
                        C             DC               D C             C/N             DC/N            C/N*N
( 0, 4, 1 )      1.2053399E 02   9.9491875E 02   9.0911410E 03   4.4878267E 03   3.7043683E 04   1.6709468E 05

(-3, 1,  2, 1 )   COS ( +0L  +0L  +3W  -1W )
                         1    2    1    2
                                                        2
                        C             DC               D C
( 3, 1, 1 )     -1.8504884E 01  -1.6365791E 02  -1.7302701E 03

( 1,-3, -2, 1 )   COS ( +0L  +0L  -1W  +3W )
                         1    2    1    2
                                                        2
                        C             DC               D C
( 1, 3, 1 )     -4.4818550E 00  -4.9707600E 01  -6.2127441E 02

( 1, 1, -7, 2 )   COS ( -4L +10L  -1W  -1W )
                         1    2    1    2
                                                        2
                        C             DC               D C             C/N             DC/N            C/N*N
( 1, 1, 2 )     -2.7867694E 01  -3.4196874E 02  -4.4769826E 03  -1.0375943E 03  -1.2732478E 04  -3.8632617E 04
```

Appendix II

CONVENTIONAL RELATIVE COORDINATES, INNER PLANET

ALPHA = .5454323 BETA = .4026858

E_1 = .04823880 E_2 = .05599560 NU = 1.1967703E-04

(J_1, J_2, K, L) $\cos(I_1L_1 + I_2L_2 - J_1W_1 - J_2W_2)$

(S_1, S_2, S)	C	DC	D^2C	C/N	DC/N	C/N*N
	X.XXXXXXXE---	X.XXXXXXXE---	X.XXXXXXXE---	X.XXXXXXXE---	X.XXXXXXXE---	X.XXXXXXXE---

(0, 0, 0, 0) $\cos(+0L_1 +0L_2 +0W_1 +0W_2)$

	C	DC	D^2C
(0, 0, 0)	1.0901656E 00	2.2065981E-01	6.4855371E-01
(2, 0, 0)	5.0566100E-04	1.8253456E-03	8.9310901E-03
(0, 2, 0)	4.0135631E-04	2.4595741E-03	1.2034257E-02
(4, 0, 0)	6.4957340E-07	5.0560257E-06	4.6013595E-05
(2, 2, 0)	8.4317204E-06	5.2392908E-05	4.1557170E-04
(0, 4, 0)	5.5694967E-06	2.9974673E-05	2.1530508E-04
(6, 0, 0)	1.1903996E-09	1.4475753E-08	1.9476314E-07
(4, 2, 0)	4.0032291E-08	4.1654135E-07	4.9728651E-06
(2, 4, 0)	1.4269038E-07	1.2538550E-06	1.3306912E-05
(0, 6, 0)	5.1950744E-08	3.8995840E-07	3.7190981E-06
(0, 0, 1)	-1.0402490E-04	-3.7551122E-04	-1.8373094E-03
(2, 0, 1)	-1.2872983E-06	-7.9989966E-06	-6.3446689E-05
(0, 2, 1)	-1.7345787E-06	-1.0778301E-05	-8.5491666E-05
(4, 0, 1)	-6.1118609E-09	-6.3594730E-08	-7.5922359E-07
(2, 2, 1)	-5.6004616E-08	-5.2916167E-07	-5.9103240E-06
(0, 4, 1)	-2.9354353E-08	-2.5794383E-07	-2.7375063E-06
(0, 0, 2)	5.9981256E-08	3.8891960E-07	3.1531312E-06
(2, 0, 2)	2.0605719E-09	1.9718563E-08	2.2179056E-07
(0, 2, 2)	2.7765314E-09	2.6569909E-08	2.9885318E-07
(0, 0, 3)	-4.2314652E-11	-4.1969405E-10	-4.8180831E-09

(-1, 1, 1, 0) $\cos(+0L_1 +0L_2 +1W_1 -1W_2)$

	C	DC	D^2C
(1, 1, 0)	-7.6746669E-04	-3.4648426E-03	-1.9010860E-02
(3, 1, 0)	-4.5219126E-06	-3.1981862E-05	-2.7364370E-04
(1, 3, 0)	-1.2126700E-05	-7.5614528E-05	-5.8580624E-04
(5, 1, 0)	-1.3659013E-08	-1.5444434E-07	-1.9628577E-06
(3, 3, 0)	-1.4840086E-07	-1.4321933E-06	-1.6188544E-05
(1, 5, 0)	-1.6469622E-07	-1.3740843E-06	-1.3947969E-05
(1, 1, 1)	2.5979774E-06	1.7294322E-05	1.4118078E-04
(3, 1, 1)	3.6035192E-08	3.6033505E-07	4.1820418E-06
(1, 3, 1)	7.7705589E-08	7.2042917E-07	7.9092686E-06
(1, 1, 2)	-4.5110169E-09	-4.3972330E-08	-5.0013851E-07

(-2, 2, 2, 0) $\cos(+0L_1 +0L_2 +2W_1 -2W_2)$

	C	DC	D^2C
(2, 2, 0)	3.0267324E-06	2.1903916E-05	1.8678322E-04
(4, 2, 0)	2.4651452E-08	2.6184103E-07	3.1709675E-06
(2, 4, 0)	8.2166800E-08	7.6615283E-07	8.3702639E-06
(2, 2, 1)	-2.3526137E-08	-2.3528457E-07	-2.7165442E-06

(-3, 3, 3, 0) $\cos(+0L_1 +0L_2 +3W_1 -3W_2)$

	C	DC	D^2C
(3, 3, 0)	-1.3305870E-08	-1.3769320E-07	-1.6222986E-06

(0,-2, -1, 1) $\cos(+0L_1 +0L_2 +0W_1 +2W_2)$

	C	DC	D^2C
(0, 2, 1)	3.6012300E-07	2.8030568E-06	2.5509903E-05
(2, 2, 1)	1.6470935E-08	1.7138229E-07	2.0460418E-06
(0, 4, 1)	1.0892210E-08	1.0803340E-07	1.2402223E-06
(0, 2, 2)	-1.0863719E-09	-1.1416829E-08	-1.3725138E-07

(-1,-1, 0, 1) $\cos(+0L_1 +0L_2 +1W_1 +1W_2)$

	C	DC	D^2C
(1, 1, 1)	-1.3449128E-06	-8.8544918E-06	-7.1727971E-05
(3, 1, 1)	-1.9288180E-08	-1.8208127E-07	-2.1073953E-06
(1, 3, 1)	-3.9578439E-08	-3.6473925E-07	-3.9896881E-06
(1, 1, 2)	3.1073200E-09	2.9988256E-08	3.3896695E-07

(-2, 0, 1, 1) $\cos(+0L_1 +0L_2 +2W_1 +0W_2)$

	C	DC	D^2C
(2, 0, 1)	1.2621011E-06	6.7925469E-06	4.8790184E-05
(4, 0, 1)	5.9991037E-09	5.9501570E-08	6.8307737E-07
(2, 2, 1)	4.3570014E-08	3.8286030E-07	4.0632197E-06
(2, 0, 2)	-2.0662810E-09	-1.8671266E-08	-2.0094261E-07

(-3, 1, 2, 1) $\cos(+0L_1 +0L_2 +3W_1 -1W_2)$

	C	DC	D^2C
(3, 1, 1)	-1.3920043E-08	-1.2310940E-07	-1.3015718E-06

(-4,-1, 5, 1) $\cos(+2L_1 -5L_2 +4W_1 +1W_2)$

	C	DC	D^2C	C/N	DC/N	C/N*N
(4, 1, 1)	6.2373222E-09	5.8564766E-08	6.2168348E-07	-4.6446684E-07	-4.3610689E-06	3.4586869E-05

(-3,-2, 4, 1) $\cos(+2L_1 -5L_2 +3W_1 +2W_2)$

	C	DC	D^2C	C/N	DC/N	C/N*N
(3, 2, 1)	-1.6371801F-08	-1.4251187E-07	-1.4449807E-06	1.2191384E-06	1.0612253E-05	-9.0784047E-05

(-2,-3, 3, 1) $\cos(+2L_1 -5L_2 +2W_1 +3W_2)$

	C	DC	D^2C	C/N	DC/N	C/N*N
(2, 3, 1)	2.0127857E-08	1.6391208E-07	1.6104561E-06	-1.4988359E-06	-1.2205835E-05	1.1161193E-04

(-1,-4, 2, 1) $\cos(+2L_1 -5L_2 +1W_1 +4W_2)$

	C	DC	D^2C	C/N	DC/N	C/N*N
(1, 4, 1)	-1.1362711E-08	-8.8489593E-08	-8.6079193E-07	8.4613276E-07	6.5894434E-06	-6.3007905E-05

(0,-5, 1, 1) $\cos(+2L_1 -5L_2 +0W_1 +5W_2)$

	C	DC	D^2C	C/N	DC/N	C/N*N
(0, 5, 1)	2.2980050E-09	1.7885881E-08	1.7693910E-07	-1.7112266E-07	-1.3318854E-06	1.2742776E-05

(-5, 2, 7, 0) $\cos(+2L_1 -5L_2 +5W_1 -2W_2)$

	C	DC	D^2C	C/N	DC/N	C/N*N
(5, 2, 0)	-3.8246319E-09	-2.8969751E-08	-2.3393626E-07	2.8480406E-07	2.1572541E-06	-2.1208146E-05

(-4, 1, 6, 0) $\cos(+2L_1 -5L_2 +4W_1 -1W_2)$

	C	DC	D^2C	C/N	DC/N	C/N*N
(4, 1, 0)	-9.3643631E-07	-5.7660692E-06	-3.4817258E-05	6.9732426E-05	4.2937463E-04	-5.1926771E-03
(6, 1, 0)	3.2265113E-09	2.1744609E-08	1.6989511E-07	-2.4026456E-07	-1.6192285E-06	1.7891480E-05
(4, 3, 0)	2.7908995E-08	1.8774567E-07	1.4111277E-06	-2.0782641E-06	-1.3980621E-05	1.5475948E-04
(4, 1, 1)	8.2237509E-10	2.4980077E-09	-3.9688703E-08	-6.1238773E-08	-1.8601600E-07	4.5601909E-06

(3, 0, -5, 0) $\cos(-2L_1 +5L_2 -3W_1 +0W_2)$

	C	DC	D^2C	C/N	DC/N	C/N*N
(3, 0, 0)	-1.3060745E-04	-7.4479371E-04	-4.5433235E-03	-9.7257808E-03	-5.5461618E-02	-7.2423751E-01

(5, 0, 0)	3.4131580E-07	1.4596744E-06	3.7122229E-06	2.5416335E-05	1.0869574E-04	1.8926463E-03
(3, 2, 0)	6.0927824E-06	3.0849377E-05	1.4781885E-04	4.5370358E-04	2.2972218E-03	3.3785375E-02
(7, 0, 0)	-3.7114658E-10	-2.5306648E-09	-2.6852163E-08	-2.7637706E-08	-1.8844784E-07	-2.0580623E-06
(5, 2, 0)	-2.2700824E-08	-1.3844705E-07	-1.0916931E-06	-1.6904337E-06	-1.0309562E-05	-1.2587941E-04
(3, 4, 0)	-7.9433694E-08	-4.7574865E-07	-3.4576654E-06	-5.9150892E-06	-3.5426978E-05	-4.4047152E-04
(3, 0, 1)	2.4209838E-07	1.9752274E-06	1.8211874E-05	1.8028036E-05	1.4708678E-04	1.3424711E-03
(5, 0, 1)	4.0223425E-10	8.0354507E-09	1.3335226E-07	2.9952673E-08	5.9836582E-07	2.2304481E-06
(3, 2, 1)	-3.1533298E-09	9.0820625E-09	5.0466760E-07	-2.3481505E-07	6.7630255E-07	-1.7485678E-05
(3, 0, 2)	-4.2010269E-10	-4.7274238E-09	-5.9445677E-08	-3.1283259E-08	-3.5203114E-07	-2.3295312E-06

(2, 1, -4, 0)   COS ($-2L_1$ $+5L_2$ $-2W_1$ $-1W_2$)

	C	DC	D^2C	C/N	DC/N	C/N*N
(2, 1, 0)	7.5742505E-04	3.5728301E-03	1.8612223E-02	5.6402220E-02	2.6605345E-01	4.2000333E 00
(4, 1, 0)	-1.8888385E-06	-5.0942521E-06	1.0219017E-05	-1.4065377E-04	-3.7934727E-04	-1.0473887E-02
(2, 3, 0)	-1.4364304E-05	-5.6389120E-05	-1.8766712E-04	-1.0696486E-03	-4.1990578E-03	-7.9652177E-02
(6, 1, 0)	2.6431839E-09	1.9145174E-08	2.3372521E-07	1.9682666E-07	1.4256597E-06	1.4656843E-05
(4, 3, 0)	6.2027004E-08	3.5587490E-07	3.0577855E-06	4.6188870E-06	2.6500489E-05	3.4394886E-04
(2, 5, 0)	1.1115362E-07	6.0367090E-07	4.5131310E-06	8.2771369E-06	4.4952803E-05	6.1636317E-04
(2, 1, 1)	-1.2046992E-06	-8.8035489E-06	-7.5195543E-05	-8.9708824E-05	-6.5556282E-04	-6.6802344E-03
(4, 1, 1)	-4.2301261E-09	-6.4066404E-08	-9.2732682E-07	-3.1499949E-07	-4.7707525E-06	-2.3456672E-05
(2, 3, 1)	1.7026907E-09	-7.7815334E-08	-1.6664078E-06	1.2679213E-07	-5.7945768E-06	9.4416703E-06
(2, 1, 2)	1.9077970E-09	2.0155385E-08	2.4225413E-07	1.4206552E-07	1.5008858E-06	1.0579015E-05

(1, 2, -3, 0)   COS ($-2L_1$ $+5L_2$ $-1W_1$ $-2W_2$)

	C	DC	D^2C	C/N	DC/N	C/N*N
(1, 2, 0)	-1.4543303E-03	-5.4296368E-03	-2.3738827E-02	-1.0829779E-01	-4.0432194E-01	-8.0644754E 00
(3, 2, 0)	3.3512307E-06	1.3524385E-06	-8.9558017E-05	2.4955188E-04	1.0071034E-04	1.8583067E-02
(1, 4, 0)	1.4380354E-05	3.9023110E-05	4.9524172E-05	1.0708438E-03	2.9058849E-03	7.9741179E-02
(5, 2, 0)	-7.8218300E-09	-6.5206986E-08	-8.6956331E-07	-5.8245839E-07	-4.8556868E-06	-4.3373198E-05
(3, 4, 0)	-8.3503213E-08	-4.8744090E-07	-4.7980460E-06	-6.2181289E-06	-3.6297650E-05	-4.6303760E-04
(1, 6, 0)	-7.8162754E-08	-4.0092663E-07	-3.2684900E-06	-5.8204476E-06	-2.9855300E-05	-4.3342396E-04
(1, 2, 1)	1.9243459E-06	1.2528208E-05	9.9756262E-05	1.4329785E-04	9.3292238E-04	1.0670781E-02
(3, 2, 1)	1.4165770E-08	1.7676885E-07	2.2914000E-06	1.0548646E-06	1.3163224E-05	7.8551280E-05
(1, 4, 1)	4.8919072E-09	1.3317660E-07	2.0837798E-06	3.6427951E-07	9.9170945E-06	2.7126345E-05
(1, 2, 2)	-2.7730101E-09	-2.7634264E-08	-3.1944117E-07	-2.0649426E-07	-2.0578060E-06	-1.5376749E-05

(0, 3, -2, 0)   COS ($-2L_1$ $+5L_2$ $+0W_1$ $-3W_2$)

	C	DC	D^2C	C/N	DC/N	C/N*N
(0, 3, 0)	9.2123446E-04	2.5357557E-03	9.2438989E-03	6.8600410E-02	1.8882693E-01	5.1083806E 00
(2, 3, 0)	-1.7220229E-06	9.6631705E-06	1.4153309E-04	-1.2823171E-04	7.1957518E-04	-9.5488701E-03
(0, 5, 0)	-5.0714760E-06	-6.9165147E-06	2.4702218E-05	-3.7765124E-04	-5.1504341E-04	-2.8122081E-02
(4, 3, 0)	1.2697023E-06	1.2339721E-07	1.6483966E-06	9.4549323E-07	9.1888654E-06	7.0406858E-05
(2, 5, 0)	5.7551682E-08	3.7632828E-07	4.1154183E-06	4.2856289E-06	2.8023566E-05	3.1913254E-04
(0, 7, 0)	2.2997076E-08	1.1687317E-07	1.0453413E-06	1.7124944E-06	8.7030475E-06	1.2752217E-04
(0, 3, 1)	-9.6875168E-07	-5.6295741E-06	-4.2391663E-05	-7.2138816E-05	-4.1921042E-04	-5.3718706E-03
(2, 3, 1)	-1.8919066E-08	-2.0215961E-07	-2.3945848E-06	-1.4088224E-06	-1.5053966E-05	-1.0490901E-04
(0, 5, 1)	-4.5562971E-09	-6.7485511E-08	-8.8210186E-07	-3.3928806E-07	-5.0253589E-06	-2.5265338E-05
(0, 3, 2)	1.2760483E-09	1.2117745E-08	1.3596954E-07	9.5021887E-08	9.0235693E-07	7.0758756E-06

*(-1, 4, -1, 0)   COS ($-2L_1$ $+5L_2$ $+1W_1$ $-4W_2$)

	C	DC	D^2C	C/N	DC/N	C/N*N
(1, 4, 0)	-1.3487549E-06	-8.4742498E-06	-6.5832819E-05	-1.0043604E-04	-6.3104132E-04	-7.4790446E-03
(3, 4, 0)	-9.8742629E-09	-1.2105117E-07	-1.5337602E-06	-7.3529434E-07	-9.0141653E-06	-5.4754240E-05
(1, 6, 0)	-1.2349246E-08	-1.2631749E-07	-1.4539127E-06	-9.1959583E-07	-9.4063261E-06	-6.8478387E-05
(1, 4, 1)	8.7314346E-09	8.1122395E-08	8.9485486E-07	6.5019279E-07	6.0408396E-06	4.8417090E-05

(-2, 5, 0, 0)   COS ($-2L_1$ $+5L_2$ $+2W_1$ $-5W_2$)

	C	DC	D^2C	C/N	DC/N	C/N*N
(2, 5, 0)	4.7968031E-09	4.8634233E-08	5.5063220E-07	3.5719751E-07	3.6215844E-06	2.6598979E-05

(2,-1, -5, 1)   COS ($-2L_1$ $+5L_2$ $-2W_1$ $+1W_2$)

	C	DC	D^2C	C/N	DC/N	C/N*N
(2, 1, 1)	-7.2857556E-08	-4.2930423E-07	-2.0060355E-06	-5.4253921E-06	-3.1968459E-05	-4.0400586E-04
(4, 1, 1)	1.8001139E-10	3.3936230E-09	6.4896986E-08	1.3404682E-08	2.5270866E-07	9.9818963E-07
(2, 3, 1)	2.8117137E-09	2.4984781E-08	2.8008157E-07	2.0937636E-07	1.8605104E-06	1.5591366E-05
(2, 1, 2)	1.8677027E-11	-4.4983448E-10	-1.3877428E-08	1.3907987E-09	-3.3497260E-08	1.0356686E-07

(1, 0, -4, 1)   COS ($-2L_1$ $+5L_2$ $-1W_1$ $+0W_2$)

	C	DC	D^2C	C/N	DC/N	C/N*N
(1, 0, 1)	-7.6791344E-06	-5.1919225E-05	-3.9166763E-04	-5.7183247E-04	-3.8662038E-03	-4.2581930E-02
(3, 0, 1)	-5.4304326E-08	-5.6342471E-07	-6.3897445E-06	-4.0438120E-06	-4.1955840E-05	-3.0112547E-04
(1, 2, 1)	2.5423209E-07	1.1301188E-06	2.1619505E-06	1.8931582E-05	8.4155136E-05	1.4097543E-03
(5, 0, 1)	-2.1390346E-10	-3.4386364E-09	-5.5595875E-08	-1.5928480E-08	-2.5606062E-07	-1.1861261E-06
(3, 2, 1)	-1.1936380E-09	-2.3357575E-08	-4.2255115E-07	-8.8885139E-08	-1.7393392E-06	-6.6188980E-06
(1, 4, 1)	-4.9537759E-09	-4.2917112E-08	-4.9324243E-07	-3.6888661E-07	-3.1958547E-06	-2.7469416E-05
(1, 0, 2)	1.2181624E-08	1.1232375E-07	1.1711883E-06	9.0711367E-07	8.3642719E-06	6.7548895E-05
(3, 0, 2)	2.3838434E-10	3.0317518E-09	4.2406044E-08	1.7751467E-08	2.2576165E-07	1.3218762E-06
(1, 2, 2)	5.1226093E-11	2.9213968E-09	6.1919170E-08	3.8145892E-09	2.1754399E-07	2.8405622E-07
(1, 0, 3)	-1.5411718E-11	-1.8830473E-10	-2.5594970E-09	-1.1476450E-09	-1.4022252E-08	-8.5460243E-08

(0, 1, -3, 1)   COS ($-2L_1$ $+5L_2$ $+0W_1$ $-1W_2$)

	C	DC	D^2C	C/N	DC/N	C/N*N
(0, 1, 1)	1.7138087E-05	9.8629426E-05	6.5784910E-04	1.2762004E-03	7.3445137E-03	9.5033213E-02
(2, 1, 1)	2.8055787E-07	2.4788499E-06	2.4973105E-05	2.0891951E-05	1.8458941E-04	1.5557347E-03
(0, 3, 1)	-2.1372381E-07	-5.8787298E-07	2.2991970E-06	-1.5915103E-05	-4.3776399E-05	-1.1851300E-03
(4, 1, 1)	1.7063749E-09	2.3825420E-08	3.4778610E-07	1.2706648E-07	1.7741777E-06	9.4621000E-06
(2, 3, 1)	2.9848807E-09	5.5290381E-08	9.1454576E-07	2.2227136E-07	4.1172394E-06	1.6551602E-05

(0, 5, 1)	3.0328431E-09	2.6063917E-08	3.0595653E-07	2.2584292E-07	1.9408690E-06	1.6817561E-05
(0, 1, 2)	-2.2657239E-08	-1.8965631E-07	-1.8437100E-06	-1.6871882E-06	-1.4122898E-05	-1.2563772E-04
(2, 1, 2)	-9.7200965E-10	-1.1314472E-08	-1.4791722E-07	-7.2381423E-08	-8.4254060E-07	-5.3899365E-06
(0, 3, 2)	-1.6205411E-10	-3.6741989E-09	-6.3172241E-08	-1.2067480E-08	-2.7360196E-07	-8.9861389E-07
(0, 1, 3)	2.5610392E-11	2.9537892E-10	3.8418840E-09	1.9070969E-09	2.1995611E-08	1.4201339E-07

(-1, 2, -2, 1) COS ($-2L_1 +5L_2 +1W_1 -2W_2$)

	C	DC	D^2C	C/N	DC/N	C/N*N
(1, 2, 1)	-3.5653428E-07	-2.6531072E-06	-2.3743360E-05	-2.6549590E-05	-1.9756560E-04	-1.9770350E-03
(3, 2, 1)	-4.4305906E-09	-5.3813804E-08	-7.1043395E-07	-3.2992723E-07	-4.0072850E-06	-2.4568277E-05
(1, 4, 1)	-2.6669125E-09	-4.3852656E-08	-6.5071751E-07	-1.9859362E-07	-3.2655207E-06	-1.4788422E-05
(1, 2, 2)	9.6767902E-10	1.0304406E-08	1.2620847E-07	7.2058940E-08	7.6732529E-07	5.3659226E-06

(-2, 3, -1, 1) COS ($-2L_1 +5L_2 +2W_1 -3W_2$)

	C	DC	D^2C	C/N	DC/N	C/N*N
(2, 3, 1)	3.7660275E-09	3.9682088E-08	4.7433529E-07	2.8044004E-07	2.9549562E-06	2.0883176E-05

(6, 0, -10, 0) COS ($-4L_1 +10L_2 -6W_1 +0W_2$)

	C	DC	D^2C	C/N	DC/N	C/N*N
(6, 0, 0)	4.3925198E-08	4.7520448E-07	5.2651540E-06	1.6354613E-06	1.7693228E-05	6.0892922E-05
(8, 0, 0)	-3.3384122E-10	-3.4388288E-09	-3.5305990E-08	-1.2429868E-08	-1.2803747E-07	-4.6279967E-07
(6, 2, 0)	-9.2730438E-09	-9.7649900E-08	-1.0395336E-06	-3.4526205E-07	-3.6357862E-06	-1.2855098E-05
(6, 0, 1)	-1.6130533E-10	-2.1527894E-09	-3.0326411E-08	-6.0058608E-09	-8.0154532E-08	-2.2361545E-07

(5, 1, -9, 0) COS ($-4L_1 +10L_2 -5W_1 -1W_2$)

	C	DC	D^2C	C/N	DC/N	C/N*N
(5, 1, 0)	-5.1034988E-07	-5.0176174E-06	-5.0803241E-05	-1.9001792E-05	-1.8682031E-04	-7.0749130E-04
(7, 1, 0)	4.0094916E-09	3.7050723E-08	3.3913222E-07	1.4928489E-07	1.3795048E-06	5.5583051E-06
(5, 3, 0)	4.9293345E-08	4.6900446E-07	4.5157475E-06	1.8353328E-06	1.7462383E-05	6.8334712E-05
(5, 1, 1)	1.7332248E-09	2.1528453E-08	2.8496197E-07	6.4532937E-08	8.0156615E-07	2.4027466E-06

(4, 2, -8, C) COS ($-4L_1 +10L_2 -4W_1 -2W_2$)

	C	DC	D^2C	C/N	DC/N	C/N*N
(4, 2, 0)	2.4668050E-06	2.1821095E-05	2.0028880E-04	9.1846234E-05	8.1246203E-04	3.4196991E-03
(6, 2, 0)	-2.0306442E-08	-1.6572314E-07	-1.3234923E-06	-7.5606715E-07	-6.1703485E-06	-2.8150552E-05
(4, 4, 0)	-1.4438923E-07	-1.2264700E-06	-1.0550898E-05	-5.3760256E-06	-4.5665001E-05	-2.0016488E-04
(4, 2, 1)	-7.6873801E-09	-8.8454149E-08	-1.0977130E-06	-2.8622324E-07	-3.2934020E-06	-1.0656914E-05

(3, 3, -7, 0) COS ($-4L_1 +10L_2 -3W_1 -3W_2$)

	C	DC	D^2C	C/N	DC/N	C/N*N
(3, 3, 0)	-6.3487841E-06	-4.9908562E-05	-4.1143935E-04	-2.3638346E-04	-1.8582391E-03	-8.8012353E-03
(5, 3, 0)	5.5995250E-08	3.9490649E-07	2.6568794E-06	2.0848640E-06	1.4703503E-05	7.7625476E-05
(3, 5, 0)	2.5146197E-07	1.8779408E-06	1.4204639E-05	9.3626515E-06	6.9921131E-05	3.4859841E-04
(3, 3, 1)	1.7982372E-08	1.9070630E-07	2.2148429E-06	6.6953535E-07	7.1005431E-06	2.4928724E-05

(2, 4, -6, 0) COS ($-4L_1 +10L_2 -2W_1 -4W_2$)

	C	DC	D^2C	C/N	DC/N	C/N*N
(2, 4, 0)	9.1750546E-06	6.3101723E-05	4.6223137E-04	3.4161364E-04	2.3494584E-03	1.2719257E-02
(4, 4, 0)	-9.0269887E-08	-5.3249185E-07	-2.8209910E-06	-3.3610072E-06	-1.9826201E-05	-1.2513995E-04
(2, 6, 0)	-2.6008787E-07	-1.6735233E-06	-1.0885691E-05	-9.6838186E-06	-6.2310080E-05	-3.6055638E-04
(2, 4, 1)	-2.3340748E-08	-2.2691495E-07	-2.4637112E-06	-8.6904308E-07	-8.4486953E-06	-3.2356970E-05

(1, 5, -5, 0) COS ($-4L_1 +10L_2 -1W_1 -5W_2$)

	C	DC	D^2C	C/N	DC/N	C/N*N
(1, 5, 0)	-7.0579794E-06	-4.1608784E-05	-2.6755790E-04	-2.6278884E-04	-1.5492145E-03	-9.7843834E-03
(3, 5, 0)	8.4314951E-08	3.9379830E-07	1.3755412E-06	3.1392878E-06	1.4662245E-05	1.1688470E-04
(1, 7, 0)	1.4774152E-07	7.9644820E-07	4.3094527E-06	5.5008411E-06	2.9654054E-05	2.0481212E-04
(1, 5, 1)	1.5883200E-08	1.4077930E-07	1.4293999E-06	5.9137717E-07	5.2416176E-06	2.2018670E-05

(0, 6, -4, 0) COS ($-4L_1 +10L_2 +0W_1 -6W_2$)

	C	DC	D^2C	C/N	DC/N	C/N*N
(0, 6, 0)	2.2570170E-06	1.1092329E-05	6.1818551E-05	8.4035225E-05	4.1299927E-04	3.1288728E-03
(2, 6, 0)	-4.1617028E-08	-1.3758898E-07	-8.7197422E-08	-1.5495215E-06	-5.1228330E-06	-5.7693135E-05
(0, 8, 0)	-3.5506052E-08	-1.5387737E-07	-6.5460561E-07	-1.3219923E-06	-5.7292966E-06	-4.9221570E-05
(0, 6, 1)	-4.4039483E-09	-3.5414967E-08	-3.3717822E-07	-1.6397164E-07	-1.3186009E-06	-6.1051353E-06

(-1, 7, -3, 0) COS ($-4L_1 +10L_2 +1W_1 -7W_2$)

	C	DC	D^2C	C/N	DC/N	C/N*N
(1, 7, 0)	8.1401403E-09	1.3478615E-08	-1.0345138E-07	3.0308080E-07	5.0184755E-07	1.1284569E-05

(4, 0, -9, 1) $\cos(-4L_1 +10L_2 -4W_1 +0W_2)$

	C	DC	D^2C	C/N	DC/N	C/N*N
(4, 0, 1)	7.2376212E-09	8.8224819E-08	1.1267429E-06	2.6947743E-07	3.2848634E-06	1.0033419E-05

(3, 1, -8, 1) $\cos(-4L_1 +10L_2 -3W_1 -1W_2)$

	C	DC	D^2C	C/N	DC/N	C/N*N
(3, 1, 1)	-6.0404268E-08	-6.7698733E-07	-8.0191489E-06	-2.2490244E-06	-2.5206183E-05	-8.3737637E-05

(2, 2, -7, 1) $\cos(-4L_1 +10L_2 -2W_1 -2W_2)$

	C	DC	D^2C	C/N	DC/N	C/N*N
(2, 2, 1)	1.8993756E-07	1.9420728E-06	2.1225361E-05	7.0719210E-06	7.2308949E-05	2.6330793E-04
(4, 2, 1)	8.2891501E-11	6.7328142E-09	1.6083836E-07	3.0862887E-09	2.5068201E-07	1.1491139E-07
(2, 4, 1)	-9.3122712E-09	-8.4814880E-08	-7.7482243E-07	-3.4672260E-07	-3.1579016E-06	-1.2909478E-05
(2, 2, 2)	-5.3777348E-10	-6.9075933E-09	-9.6213090E-08	-2.0022852E-08	-2.5718954E-07	-7.4550827E-07

(1, 3, -6, 1) $\cos(-4L_1 +10L_2 -1W_1 -3W_2)$

	C	DC	D^2C	C/N	DC/N	C/N*N
(1, 3, 1)	-2.6701024E-07	-2.4673567E-06	-2.4736340E-05	-9.9415580E-06	-9.1866776E-05	-3.7015276E-04
(3, 3, 1)	-8.6780035E-10	-2.0426637E-08	-3.7567370E-07	-3.2310700E-08	-7.6054237E-07	-1.2030202E-06
(1, 5, 1)	8.7003406E-09	6.9490669E-08	5.4857628E-07	3.2393867E-07	2.5873372E-06	1.2061167E-05
(1, 3, 2)	6.8045601E-10	8.1297023E-09	1.0674888E-07	2.5335332E-08	3.0269217E-07	9.4330716E-07

(0, 4, -5, 1) $\cos(-4L_1 +10L_2 +0W_1 -4W_2)$

	C	DC	D^2C	C/N	DC/N	C/N*N
(0, 4, 1)	1.4181951E-07	1.1706149E-06	1.0696577E-05	5.2803475E-06	4.3585354E-05	1.9660250E-04
(2, 4, 1)	1.6235024E-09	2.6554233E-08	4.0967333E-07	6.0447657E-08	9.8869035E-07	2.2506399E-06
(0, 6, 1)	-3.2380448E-09	-2.2129216E-08	-1.4467557E-07	-1.2056171E-07	-8.2393426E-07	-4.4888587E-06
(0, 4, 2)	-3.2065727E-10	-3.5487649E-09	-4.3881078E-08	-1.1938991E-08	-1.3213071E-07	-4.4452294E-07

(5, 4,-11, 0) $\cos(-6L_1 +15L_2 -5W_1 -4W_2)$

	C	DC	D^2C	C/N	DC/N	C/N*N
(5, 4, 0)	-3.3249973E-08	-3.9646430E-07	-4.8390752E-06	-8.2532800E-07	-9.8410031E-06	-2.0486221E-05

(4, 5,-10, 0) $\cos(-6L_1 +15L_2 -4W_1 -5W_2)$

	C	DC	D^2C	C/N	DC/N	C/N*N
(4, 5, 0)	6.4147801E-08	7.0164095E-07	7.8942178E-06	1.5922712E-06	1.7416072E-05	3.9523221E-05

(3, 6, -9, 0) $\cos(-6L_1 +15L_2 -3W_1 -6W_2)$

	C	DC	D^2C	C/N	DC/N	C/N*N
(3, 6, 0)	-8.2445754E-08	-8.2057314E-07	-8.4552188E-06	-2.0464615E-06	-2.0368196E-05	-5.0797092E-05

(2, 7, -8, 0) $\cos(-6L_1 +15L_2 -2W_1 -7W_2)$

	C	DC	D^2C	C/N	DC/N	C/N*N
(2, 7, 0)	6.8072283E-08	6.1053009E-07	5.7186769E-06	1.6896844E-06	1.5154526E-05	4.1941202E-05

(1, 8, -7, 0) $\cos(-6L_1 +15L_2 -1W_1 -8W_2)$

	C	DC	D^2C	C/N	DC/N	C/N*N
(1, 8, 0)	-3.2764451E-08	-2.6165273E-07	-2.2090167E-06	-8.1327641E-07	-6.4947217E-06	-2.0187078E-05

Errata to Smithsonian Astrophys. Obs. Special Report No. 140

p. 3 In line 5 from bottom, the words "inner" and "outer" should be transposed.

p. 7 The superscripts h on the right side of equation (16) should read h-1.

p. 76 The first number of line 4 should read 0.11279093.

p. 77 The a in line 16 should read + .

p. 88 Erase the first $\ominus^{n,k}_{5,4}$ at top of page, and the $\ominus^{n,k}_{6,3}$.