

TABLES OF RELATIVE STRENGTHS OF SPECTRAL LINES WITH MIXED VECTOR COUPLINGS: DIPOLE TRANSITIONS BETWEEN LS AND OTHER COUPLINGS

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RESUMEN

Se presentan tablas de intensidades de oscilador de transiciones dipolares del tipo $(2S_p+1)L_p nl - (2S_p+1)L_p ml'$ para $0 \leq S_p \leq 2$, $0 \leq L_p \leq 2$, $1 \leq l \leq 4$, para cualquier n y m , en que uno de los estados se describe en el esquema de acoplamiento LS y el otro se describe en el esquema de acoplamiento LK, jK ó jj. Nuestros resultados son útiles en la interpretación e identificación de líneas espectrales entre estados con números cuánticos similares.

ABSTRACT

Tables are presented for the relative strength of dipole transitions of the type $(2S_p+1)L_p nl - (2S_p+1)L_p ml'$ for $0 \leq S_p \leq 2$, $0 \leq L_p \leq 2$, $1 \leq l \leq 4$, and for any n and m , in which one of the states is described with the LS coupling scheme, and the other is described with the LK, jK, or jj coupling scheme. Our results are useful in the interpretation and identification of spectral lines between states with similar quantum numbers.

Key words: ATOMIC AND MOLECULAR DATA - TRANSITION PROBABILITIES

I. INTRODUCTION

The identification and measurement of permitted transitions of complex atoms and ions is important in the determination of elemental abundances and the study of atomic processes in astrophysical objects and the laboratory. Relative strengths of lines are useful in the identification of such transitions. Relative strengths are needed to relate transition probabilities of individual fine structure components to the total transition probability of a multiplet.

Relative strengths of lines in which the two terms involved in the transition can be described with LS coupling have been tabulated extensively (Condon and Shortley 1935; Russell 1936; Shore and Menzel 1965; Allen 1973). There are many configurations, however, that cannot be described with the LS coupling scheme, and a different coupling is nec-

essary. The inappropriate assignment of the LS coupling scheme to these terms has led in some cases to report intercombination transitions that have strengths comparable to LS permitted transitions. Transitions between terms in couplings other than LS have been discussed by several authors (Vizbaraitė, Chiulis and Yutsis 1960; Levinson and Nikitin 1962; Warner 1968; Escalante and Góngora-T. 1990).

We present tables of relative strengths for transitions not involving equivalent electrons in which one of the states is described in LS coupling, and the other is described in LK, jK, or jj coupling. The tables cover the configurations appearing in singly excited states of the first row of the periodic table (configurations $s^p p^q$ for $0 \leq p \leq 2$, $0 \leq q \leq 6$). A detailed discussion as well as the selection rules and formulae used for each type of transition have been given by Escalante and Góngora-T. (1990). Some

examples of the use of these tables in astrophysical situations have also been described by Escalante and Góngora-T. (1990).

II. TABLES

We consider transitions between two terms of the type

$$(2S_p+1)L_p nl (2S+1)L_J - (2S_p+1)L_p ml' T^i U^{j'}, \quad (1)$$

where S_p and L_p are the total spin and orbital angular momentum, respectively, of the atomic core or parent term described in LS coupling. The left term in transition (1) is described in LS coupling with total spin S , total angular momentum L , and total angular momentum J so that the vector sum $L + S = J$. The other term in transition (1) is described in a different coupling scheme by intermediate quantum numbers T^i and $U^{j'}$ so that J^i is the total angular momentum. If we represent the two levels in the transition with i and i' , the Einstein coefficient of radiative decay for transition (1) is

$$A(i - i') = \frac{64\pi^4 e^2 \nu_{i,i'}^3 S(i - i')}{3hc^3 g_i}, \quad (2)$$

where g_i is the statistical weight of the initial state. The relative strength s is related to the line strength S of equation (2) by

$$S(i - i') = s(lSLJ - l'T^i U^{j'}) P(nl - ml')^2, \quad (3)$$

where $P(nl - ml')$ is the reduced dipole matrix element.

Tables 1 to 11 give the relative strengths $s(lSLJ - l'T^i U^{j'})$. Tables 1a to 11a are for transitions between terms in LS coupling and terms in LK coupling, Tables 1b to 11b are for transitions between terms in LS coupling and terms in jK coupling, and Tables 1c to 11c are for transitions between terms in LS coupling and terms in jj coupling.

The notation that we use for terms in couplings other than LS is:

for LK coupling, $ml L[K]_J$, where $J = K + s_e$, and $K = L + S_p$;

for jK coupling, $ml (J_p)[K]_J$, where $J = K + s_e$, $K = J_p + 1$, and $J_p = L_p + S_p$;

for jj coupling, $ml (J_p)(j)_J$, where $J = J_p + j$, $j = 1 + s_e$, and $J_p = L_p + S_p$.

In all cases the electron spin $s_e = 1/2$.

Similarly to Allen's tables (Allen 1973, p. 61) we call the line strengths between two terms $x_1, x_2, \dots, y_1, y_2, \dots$, and z_1, z_2, \dots . If we write the J values of one term horizontally and the J values of the other vertically, we obtain the arrangement

	J_{max}	$J_{max} - 1$	$J_{max} - 2$...
$J_{max} - 1$	x_1	y_1	z_1	
$J_{max} - 2$		x_2	y_2	...
...		

where J_{max} is the maximum total angular momentum that is involved in the transition multiplet. If both terms in the transition have a level with $J = J_{max}$, the following table must be used:

	J_{max}^{xx}	$J_{max}^{xx} - 1$	$J_{max}^{xx} - 2$...
J_{max}^{LS}	x_1	z_1		
$J_{max}^{LS} - 1$	y_1	x_2	z_2	
...	

where the superscript LS refers to the states in LS coupling and xx refers to any other coupling.

The column labeled with $\sum_{J,J'} s$ gives the total multiplet strength summed over all the fine structure states in units of $P(nl - ml')^2$ (see equation (3)).

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TABLE 1a

TRANSITIONS BETWEEN LS AND LK STATES. PARENT TERM: $1S$

$s^{(2S+1)L - p L'[K]}$	$\sum_{J,J'}^s$	2.0000	$x = 0.6667$	$y = 0.3333$	
$s^2S - p P [1]$					
$p^{(2S+1)L - s L'[K]}$	$\sum_{J,J'}^s$	2.0000	$x = 0.6667$	$y = 0.3333$	
$p^2P - s S [0]$					
$p^{(2S+1)L - d L'[K]}$	$\sum_{J,J'}^s$	2.0000	$x = 0.6000$	0.3333	$y = 0.0667$
$p^2P - d D [2]$					
$d^{(2S+1)L - p L'[K]}$	$\sum_{J,J'}^s$	2.0000	$x = 0.6000$	0.3333	$y = 0.0667$
$d^2D - p P [1]$					
$d^{(2S+1)L - f L'[K]}$	$\sum_{J,J'}^s$	2.0000	$x = 0.5714$	0.4000	$y = 0.0286$
$d^2D - f F [3]$					
$f^{(2S+1)L - d L'[K]}$	$\sum_{J,J'}^s$	2.0000	$x = 0.5714$	0.4000	$y = 0.0286$
$f^2F - d D [2]$					
$f^{(2S+1)L - g L'[K]}$	$\sum_{J,J'}^s$	2.0000	$x = 0.5556$	0.4286	$y = 0.0159$
$f^2F - g G [4]$					
$g^{(2S+1)L - f L'[K]}$	$\sum_{J,J'}^s$	2.0000	$x = 0.5556$	0.4286	$y = 0.0159$
$g^2G - f F [3]$					

TABLE 1b

TRANSITIONS BETWEEN LS AND JK STATES. PARENT TERM: $1S$

$s^{(2S+1)L - p (J_p)[K]}$	$\sum_{J,J'}^s$	2.0000	$x = 0.6667$	$y = 0.3333$	
$s^2S - p (0)[1]$					
$p^{(2S+1)L - s (J_p)[K]}$	$\sum_{J,J'}^s$	2.0000	$x = 0.6667$	$y = 0.3333$	
$p^2P - s (0)[0]$					
$p^{(2S+1)L - d (J_p)[K]}$	$\sum_{J,J'}^s$	2.0000	$x = 0.6000$	0.3333	$y = 0.0667$
$p^2P - d (0)[2]$					
$d^{(2S+1)L - p (J_p)[K]}$	$\sum_{J,J'}^s$	2.0000	$x = 0.6000$	0.3333	$y = 0.0667$
$d^2D - p (0)[1]$					

TABLE 1b (CONTINUED)

$d^{(2S+1)L - f (J_p)[K]}$	$\sum_{J,J'}^s$	2.0000	$x = 0.5714$	0.4000	$y = 0.0286$
$d^2D - f (0)[3]$					
$f^{(2S+1)L - d (J_p)[K]}$	$\sum_{J,J'}^s$	2.0000	$x = 0.5714$	0.4000	$y = 0.0286$
$f^2F - d (0)[2]$					
$f^{(2S+1)L - g (J_p)[K]}$	$\sum_{J,J'}^s$	2.0000	$x = 0.5556$	0.4286	$y = 0.0159$
$f^2F - g (0)[4]$					
$g^{(2S+1)L - f (J_p)[K]}$	$\sum_{J,J'}^s$	2.0000	$x = 0.5556$	0.4286	$y = 0.0159$
$g^2G - f (0)[3]$					

TABLE 1c

TRANSITIONS BETWEEN LS AND JJ STATES. PARENT TERM: $1S$

$s^{(2S+1)L - p (J_p, j)}$	$\sum_{J,J'}^s$	2.0000	$x = 0.6667$	$y = 0.3333$
$s^2S - p (0, \frac{1}{2})$				
$s^2S - p (0, \frac{3}{2})$				
$p^{(2S+1)L - s (J_p, j)}$	$\sum_{J,J'}^s$	2.0000	$x = 0.6667$	$y = 0.3333$
$p^2P - s (0, \frac{1}{2})$				
$p^{(2S+1)L - d (J_p, j)}$	$\sum_{J,J'}^s$	2.0000	$x = 0.6667$	$y = 0.3333$
$p^2P - d (0, \frac{3}{2})$				
$p^2P - d (0, \frac{5}{2})$				
$d^{(2S+1)L - p (J_p, j)}$	$\sum_{J,J'}^s$	2.0000	$x = 0.6667$	$y = 0.3333$
$d^2D - p (0, \frac{1}{2})$				
$d^2D - p (0, \frac{3}{2})$				
$d^{(2S+1)L - f (J_p, j)}$	$\sum_{J,J'}^s$	2.0000	$x = 0.6667$	$y = 0.3333$
$d^2D - f (0, \frac{5}{2})$				
$d^2D - f (0, \frac{7}{2})$				
$f^{(2S+1)L - d (J_p, j)}$	$\sum_{J,J'}^s$	2.0000	$x = 0.6667$	$y = 0.3333$
$f^2F - d (0, \frac{3}{2})$				
$f^2F - d (0, \frac{5}{2})$				
$f^{(2S+1)L - g (J_p, j)}$	$\sum_{J,J'}^s$	2.0000	$x = 0.6667$	$y = 0.3333$
$f^2F - g (0, \frac{7}{2})$				
$f^2F - g (0, \frac{9}{2})$				

TABLE 2a (CONTINUED)

$f^{(2S+1)L - g L'[K]}$	$\sum_{J,J'}^e$
$f^1 F - g G [\frac{7}{2}]$	0.4444 $x = 1.0000$ $y = 0.0000$
$f^1 F - g G [\frac{9}{2}]$	0.5556 $x = 1.0000$
$f^3 F - g G [\frac{7}{2}]$	1.3333 $x = 0.0260$ 0.0469 $y = 0.0007$ $z = 0.3906$ 0.5557
$f^3 F - g G [\frac{9}{2}]$	1.6667 $x = 0.7333$ 0.2500 $y = 0.0167$
$g^{(2S+1)L - f L'[K]}$	$\sum_{J,J'}^e$
$g^1 G - f F [\frac{5}{2}]$	0.4286 $x = 1.0000$
$g^1 G - f F [\frac{7}{2}]$	0.5714 $x = 0.0000$ $y = 1.0000$
$g^3 G - f F [\frac{5}{2}]$	1.2857 $x = 0.4167$ 0.5556 $y = 0.0278$
$g^3 G - f F [\frac{7}{2}]$	1.7143 $x = 0.7130$ 0.2344 $y = 0.0365$ 0.0156 $z = 0.0006$

TABLE 2b

TRANSITIONS BETWEEN LS AND JK STATES. PARENT TERM: $2S$

$s^{(2S+1)L - p (J_p)[K]}$	$\sum_{J,J'}^e$
$s^1 S - p (\frac{1}{2})[\frac{1}{2}]$	0.3333 $x = 1.0000$
$s^1 S - p (\frac{1}{2})[\frac{3}{2}]$	0.6667 $x = 1.0000$
$s^3 S - p (\frac{1}{2})[\frac{1}{2}]$	1.0000 $x = 0.6667$ $y = 0.3333$
$s^3 S - p (\frac{1}{2})[\frac{3}{2}]$	2.0000 $x = 0.8333$ $y = 0.1667$
$p^{(2S+1)L - s (J_p)[K]}$	$\sum_{J,J'}^e$
$p^1 P - s (\frac{1}{2})[\frac{1}{2}]$	1.0000 $x = 0.0000$ $y = 1.0000$
$p^3 P - s (\frac{1}{2})[\frac{1}{2}]$	3.0000 $x = 0.5556$ 0.0000 $y = 0.3333$ $z = 0.1111$
$p^{(2S+1)L - d (J_p)[K]}$	$\sum_{J,J'}^e$
$p^1 P - d (\frac{1}{2})[\frac{3}{2}]$	0.4000 $x = 1.0000$ $y = 0.0000$
$p^1 P - d (\frac{1}{2})[\frac{5}{2}]$	0.6000 $x = 1.0000$
$p^3 P - d (\frac{1}{2})[\frac{3}{2}]$	1.2000 $x = 0.1250$ 0.2083 $y = 0.0139$ $z = 0.3750$ 0.2778
$p^3 P - d (\frac{1}{2})[\frac{5}{2}]$	1.8000 $x = 0.7778$ 0.1667 $y = 0.0556$
$d^{(2S+1)L - p (J_p)[K]}$	$\sum_{J,J'}^e$
$d^1 D - p (\frac{1}{2})[\frac{1}{2}]$	0.3333 $x = 1.0000$
$d^1 D - p (\frac{1}{2})[\frac{3}{2}]$	0.6667 $x = 0.0000$ $y = 1.0000$
$d^3 D - p (\frac{1}{2})[\frac{1}{2}]$	1.0000 $x = 0.5000$ 0.3333 $y = 0.1667$
$d^3 D - p (\frac{1}{2})[\frac{3}{2}]$	2.0000 $x = 0.7000$ 0.1250 $y = 0.1250$ 0.0417 $z = 0.0083$
$d^{(2S+1)L - f (J_p)[K]}$	$\sum_{J,J'}^e$
$d^1 D - f (\frac{1}{2})[\frac{5}{2}]$	0.4286 $x = 1.0000$ $y = 0.0000$
$d^1 D - f (\frac{1}{2})[\frac{7}{2}]$	0.5714 $x = 1.0000$

TABLE 1c (CONTINUED)

$g^{(2S+1)L - f (J_p,i)}$	$\sum_{J,J'}^e$
$g^2 G - f (0, \frac{5}{2})$	0.8571 $x = 1.0000$
$g^2 G - f (0, \frac{7}{2})$	1.1429 $x = 0.9722$ $y = 0.0278$

TABLE 2a

TRANSITIONS BETWEEN LS AND LK STATES. PARENT TERM: $2S$

$s^{(2S+1)L - p L'[K]}$	$\sum_{J,J'}^e$
$s^1 S - p P [\frac{1}{2}]$	0.3333 $x = 1.0000$
$s^1 S - p P [\frac{3}{2}]$	0.6667 $x = 1.0000$
$s^3 S - p P [\frac{1}{2}]$	1.0000 $x = 0.6667$ $y = 0.3333$
$s^3 S - p P [\frac{3}{2}]$	2.0000 $x = 0.8333$ $y = 0.1667$
$p^{(2S+1)L - s L'[K]}$	$\sum_{J,J'}^e$
$p^1 P - s S [\frac{1}{2}]$	1.0000 $x = 0.0000$ $y = 1.0000$
$p^3 P - s S [\frac{1}{2}]$	3.0000 $x = 0.5556$ 0.0000 $y = 0.3333$ $z = 0.1111$
$p^{(2S+1)L - d L'[K]}$	$\sum_{J,J'}^e$
$p^1 P - d D [\frac{3}{2}]$	0.4000 $x = 1.0000$ $y = 0.0000$
$p^1 P - d D [\frac{5}{2}]$	0.6000 $x = 1.0000$
$p^3 P - d D [\frac{3}{2}]$	1.2000 $x = 0.1250$ 0.2083 $y = 0.0139$ $z = 0.3750$ 0.2778
$p^3 P - d D [\frac{5}{2}]$	1.8000 $x = 0.7778$ 0.1667 $y = 0.0556$
$d^{(2S+1)L - p L'[K]}$	$\sum_{J,J'}^e$
$d^1 D - p P [\frac{1}{2}]$	0.3333 $x = 1.0000$
$d^1 D - p P [\frac{3}{2}]$	0.6667 $x = 0.0000$ $y = 1.0000$
$d^3 D - p P [\frac{1}{2}]$	1.0000 $x = 0.5000$ 0.3333 $y = 0.1667$
$d^3 D - p P [\frac{3}{2}]$	2.0000 $x = 0.7000$ 0.1250 $y = 0.1250$ 0.0417 $z = 0.0083$
$d^{(2S+1)L - f L'[K]}$	$\sum_{J,J'}^e$
$d^1 D - f F [\frac{5}{2}]$	0.4286 $x = 1.0000$ $y = 0.0000$
$d^1 D - f F [\frac{7}{2}]$	0.5714 $x = 1.0000$
$d^3 D - f F [\frac{5}{2}]$	1.2857 $x = 0.4949$ 0.0864 $y = 0.0025$ $z = 0.3951$ 0.4667
$d^3 D - f F [\frac{7}{2}]$	1.7143 $x = 0.7500$ 0.2222 $y = 0.0278$
$f^{(2S+1)L - d L'[K]}$	$\sum_{J,J'}^e$
$f^1 F - d D [\frac{3}{2}]$	0.4000 $x = 1.0000$
$f^1 F - d D [\frac{5}{2}]$	0.6000 $x = 0.0000$ $y = 1.0000$
$f^3 F - d D [\frac{3}{2}]$	1.2000 $x = 0.4444$ 0.5000 $y = 0.0556$
$f^3 F - d D [\frac{5}{2}]$	1.8000 $x = 0.7143$ 0.1975 $y = 0.0617$ 0.0247 $z = 0.0018$

TABLE 2b (CONTINUED)

$d^3D - f(\frac{1}{2}, \frac{3}{2}) \frac{5}{2}$	1.2857	$z = 0.0494$	0.0864	$y = 0.0025$	$z = 0.3951$	0.4667
$d^3D - f(\frac{1}{2}, \frac{3}{2}) \frac{3}{2}$	1.7143	$z = 0.7500$	0.2222	$y = 0.0278$		
$f^{(2S+1)L} - d(J_p, j) K$	$\sum_{J_p, j}^s$					
$f^1F - d(\frac{1}{2}, \frac{3}{2}) \frac{3}{2}$	0.4000	$x = 1.0000$				
$f^1F - d(\frac{1}{2}, \frac{3}{2}) \frac{1}{2}$	0.6000	$x = 0.0000$	$y = 1.0000$			
$f^3F - d(\frac{1}{2}, \frac{3}{2}) \frac{3}{2}$	1.2000	$x = 0.4444$	0.5000	$y = 0.0556$		
$f^3F - d(\frac{1}{2}, \frac{3}{2}) \frac{1}{2}$	1.8000	$x = 0.7143$	0.1975	$y = 0.0617$	0.0247	$z = 0.0018$
$f^{(2S+1)L} - g(J_p, j) K$	$\sum_{J_p, j}^s$					
$f^1F - g(\frac{1}{2}, \frac{3}{2}) \frac{7}{2}$	0.4444	$x = 1.0000$	$y = 0.0000$			
$f^1F - g(\frac{1}{2}, \frac{3}{2}) \frac{5}{2}$	0.5556	$x = 1.0000$				
$f^3F - g(\frac{1}{2}, \frac{3}{2}) \frac{7}{2}$	1.3333	$x = 0.0260$	0.0469	$y = 0.0007$	$z = 0.3906$	0.5357
$f^3F - g(\frac{1}{2}, \frac{3}{2}) \frac{5}{2}$	1.6667	$x = 0.7333$	0.2500	$y = 0.0167$		
$g^{(2S+1)L} - f(J_p, j) K$	$\sum_{J_p, j}^s$					
$g^1G - f(\frac{1}{2}, \frac{5}{2}) \frac{5}{2}$	0.4286	$x = 1.0000$				
$g^1G - f(\frac{1}{2}, \frac{5}{2}) \frac{3}{2}$	0.5714	$x = 0.0000$	$y = 1.0000$			
$g^3G - f(\frac{1}{2}, \frac{5}{2}) \frac{5}{2}$	1.2857	$x = 0.4167$	0.5556	$y = 0.0278$		
$g^3G - f(\frac{1}{2}, \frac{5}{2}) \frac{3}{2}$	1.7143	$x = 0.7130$	0.2344	$y = 0.0365$	0.0156	$z = 0.0006$

TABLE 2c

TRANSITIONS BETWEEN LS AND JJ STATES. PARENT TERM: 2S

$e^{(2S+1)L} - p(J_p, j)$	$\sum_{J_p, j}^s$					
$e^1S - p(\frac{1}{2}, \frac{1}{2})$	0.3333	$x = 1.0000$				
$e^1S - p(\frac{1}{2}, \frac{3}{2})$	0.6667	$x = 1.0000$				
$e^3S - p(\frac{1}{2}, \frac{1}{2})$	1.0000	$x = 0.6667$	$y = 0.3333$			
$e^3S - p(\frac{1}{2}, \frac{3}{2})$	2.0000	$x = 0.8333$	$y = 0.1667$			
$p^{(2S+1)L} - e(J_p, j)$	$\sum_{J_p, j}^s$					
$p^1P - e(\frac{1}{2}, \frac{1}{2})$	1.0000	$x = 0.0000$	$y = 1.0000$			
$p^3P - e(\frac{1}{2}, \frac{1}{2})$	3.0000	$x = 0.5556$	0.0000	$y = 0.3333$	$z = 0.1111$	
$p^{(2S+1)L} - d(J_p, j)$	$\sum_{J_p, j}^s$					
$p^1P - d(\frac{1}{2}, \frac{3}{2})$	0.4000	$x = 1.0000$	$y = 0.0000$			
$p^1P - d(\frac{1}{2}, \frac{5}{2})$	0.6000	$x = 1.0000$				
$p^3P - d(\frac{1}{2}, \frac{3}{2})$	1.2000	$x = 0.1250$	0.2083	$y = 0.0139$	$z = 0.3750$	0.2778
$p^3P - d(\frac{1}{2}, \frac{5}{2})$	1.8000	$x = 0.7778$	0.1667	$y = 0.0556$		
$d^{(2S+1)L} - p(J_p, j)$	$\sum_{J_p, j}^s$					
$d^1D - p(\frac{1}{2}, \frac{1}{2})$	0.3333	$x = 1.0000$				

TABLE 2c (CONTINUED)

$d^1D - p(\frac{1}{2}, \frac{3}{2})$	0.6667	$x = 0.0000$	$y = 1.0000$			
$d^3D - p(\frac{1}{2}, \frac{3}{2})$	1.0000	$x = 0.5000$	0.3333	$y = 0.1667$		
$d^3D - p(\frac{1}{2}, \frac{5}{2})$	2.0000	$x = 0.7000$	0.1250	$y = 0.1250$	0.0417	$z = 0.0083$
$d^{(2S+1)L} - f(J_p, j)$	$\sum_{J_p, j}^s$					
$d^1D - f(\frac{1}{2}, \frac{5}{2})$	0.4286	$x = 1.0000$	$y = 0.0000$			
$d^1D - f(\frac{1}{2}, \frac{7}{2})$	0.5714	$x = 1.0000$				
$d^3D - f(\frac{1}{2}, \frac{5}{2})$	1.2857	$x = 0.0494$	0.0864	$y = 0.0025$	$z = 0.3951$	0.4667
$d^3D - f(\frac{1}{2}, \frac{7}{2})$	1.7143	$x = 0.7500$	0.2222	$y = 0.0278$		
$f^{(2S+1)L} - d(J_p, j)$	$\sum_{J_p, j}^s$					
$f^1F - d(\frac{1}{2}, \frac{3}{2})$	0.4000	$x = 1.0000$				
$f^1F - d(\frac{1}{2}, \frac{5}{2})$	0.6000	$x = 0.0000$	$y = 1.0000$			
$f^3F - d(\frac{1}{2}, \frac{3}{2})$	1.2000	$x = 0.4444$	0.5000	$y = 0.0556$		
$f^3F - d(\frac{1}{2}, \frac{5}{2})$	1.8000	$x = 0.7143$	0.1975	$y = 0.0617$	0.0247	$z = 0.0018$
$f^{(2S+1)L} - g(J_p, j)$	$\sum_{J_p, j}^s$					
$f^1F - g(\frac{1}{2}, \frac{7}{2})$	0.4444	$x = 1.0000$	$y = 0.0000$			
$f^1F - g(\frac{1}{2}, \frac{5}{2})$	0.5556	$x = 1.0000$				
$f^3F - g(\frac{1}{2}, \frac{7}{2})$	1.3333	$x = 0.0260$	0.0469	$y = 0.0007$	$z = 0.3906$	0.5357
$f^3F - g(\frac{1}{2}, \frac{5}{2})$	1.6667	$x = 0.7333$	0.2500	$y = 0.0167$		
$g^{(2S+1)L} - f(J_p, j)$	$\sum_{J_p, j}^s$					
$g^1G - f(\frac{1}{2}, \frac{5}{2})$	0.4286	$x = 1.0000$				
$g^1G - f(\frac{1}{2}, \frac{7}{2})$	0.5714	$x = 0.0000$	$y = 1.0000$			
$g^3G - f(\frac{1}{2}, \frac{5}{2})$	1.2857	$x = 0.4167$	0.5556	$y = 0.0278$		
$g^3G - f(\frac{1}{2}, \frac{7}{2})$	1.7143	$x = 0.7130$	0.2344	$y = 0.0365$	0.0156	$z = 0.0006$

TABLE 3a

TRANSITIONS BETWEEN LS AND LK STATES. PARENT TERM: 3S

$e^{(2S+1)L} - p(J_p, j) K$	$\sum_{J_p, j}^s$					
$e^2S - p(1) 0$	0.2222	$x = 1.0000$				
$e^2S - p(1) 1$	0.6667	$x = 0.3333$	$y = 0.6667$			
$e^2S - p(1) 2$	1.1111	$x = 1.0000$				
$e^4S - p(1) 0$	0.4444	$x = 1.0000$				
$e^4S - p(1) 1$	1.3333	$x = 0.8333$	$y = 0.1667$			
$e^4S - p(1) 2$	2.2222	$x = 0.9000$	$y = 0.1000$			
$p^{(2S+1)L} - e(J_p, j) K$	$\sum_{J_p, j}^s$					
$p^2P - e(1) 1$	2.0000	$x = 0.0000$	0.3333	$y = 0.6667$	$z = 0.0000$	
$p^4P - e(1) 1$	4.0000	$x = 0.5000$	0.0000	$y = 0.3333$	0.0000	$z = 0.1667$

TABLE 3a (CONTINUED)

$p^{(2S+1)L} - d(J_p)[K]$	$\sum_{J,J'}^s$	$p^{(2S+1)L} - d(J_p)[K]$	$\sum_{J,J'}^s$
$p^2P - d(1)[1]$	0.4000	$x = 0.1667$	$y = 0.0000$
$p^2P - d(1)[2]$	0.6667	$z = 0.4000$	$z = 0.8333$
$p^2P - d(1)[3]$	0.9333	$x = 0.4000$	$y = 0.1000$
$p^4P - d(1)[1]$	0.8000	$x = 0.0250$	$y = 0.2667$
$p^4P - d(1)[2]$	1.3333	$z = 0.2100$	$z = 0.4900$
$p^4P - d(1)[3]$	1.8667	$x = 0.8571$	$y = 0.0429$
$d^{(2S+1)L} - p(J_p)[K]$	$\sum_{J,J'}^s$	$d^{(2S+1)L} - p(J_p)[K]$	$\sum_{J,J'}^s$
$d^2D - p(1)[0]$	0.2222	$x = 1.0000$	
$d^2D - p(1)[1]$	0.6667	$z = 0.3000$	$y = 0.0533$
$d^2D - p(1)[2]$	1.1111	$x = 0.0000$	$z = 0.9000$
$d^4D - p(1)[0]$	0.4444	$x = 0.5000$	$y = 0.5000$
$d^4D - p(1)[1]$	1.3333	$z = 0.5250$	$z = 0.0833$
$d^4D - p(1)[2]$	2.2222	$x = 0.7200$	$y = 0.1620$
		$z = 0.0180$	$z = 0.0050$
$d^{(2S+1)L} - f(J_p)[K]$	$\sum_{J,J'}^s$	$d^{(2S+1)L} - f(J_p)[K]$	$\sum_{J,J'}^s$
$d^2D - f(1)[2]$	0.4762	$x = 0.0667$	$y = 0.0000$
$d^2D - f(1)[3]$	0.6667	$z = 0.4286$	$z = 0.9333$
$d^2D - f(1)[4]$	0.8571	$x = 1.0000$	$y = 0.0381$
$d^4D - f(1)[2]$	0.9524	$x = 0.0038$	$y = 0.0975$
		$z = 0.2987$	$z = 0.1680$
$d^4D - f(1)[3]$	1.3333	$x = 0.0918$	$y = 0.0034$
$d^4D - f(1)[4]$	1.7143	$x = 0.8533$	$z = 0.1429$
$f^{(2S+1)L} - d(J_p)[K]$	$\sum_{J,J'}^s$	$f^{(2S+1)L} - d(J_p)[K]$	$\sum_{J,J'}^s$
$f^2F - d(1)[1]$	0.4000	$x = 1.0000$	
$f^2F - d(1)[2]$	0.6667	$z = 0.3810$	$z = 0.0190$
$f^2F - d(1)[3]$	0.9333	$x = 0.0000$	$y = 0.9524$
$f^4F - d(1)[1]$	0.8000	$x = 0.4000$	$y = 0.1000$
$f^4F - d(1)[2]$	1.3333	$z = 0.5714$	$z = 0.1219$
$f^4F - d(1)[3]$	1.8667	$x = 0.7653$	$y = 0.0875$
		$z = 0.0044$	$z = 0.0014$
$f^{(2S+1)L} - g(J_p)[K]$	$\sum_{J,J'}^s$	$f^{(2S+1)L} - g(J_p)[K]$	$\sum_{J,J'}^s$
$f^2F - g(1)[3]$	0.5185	$x = 0.0557$	$z = 0.0000$
$f^2F - g(1)[4]$	0.6667	$z = 0.4444$	$z = 0.0198$
$f^2F - g(1)[5]$	0.8148	$x = 1.0000$	$y = 0.0000$
$f^4F - g(1)[3]$	1.0370	$x = 0.0011$	$y = 0.0486$
		$z = 0.3075$	$z = 0.5510$
$f^4F - g(1)[4]$	1.3333	$x = 0.0509$	$z = 0.0012$
$f^4F - g(1)[5]$	1.6296	$x = 0.8182$	$y = 0.0152$

TABLE 3a (CONTINUED)

$g^{(2S+1)L} - f(J_p)[K]$	$\sum_{J,J'}^s$	$g^{(2S+1)L} - f(J_p)[K]$	$\sum_{J,J'}^s$
$g^2G - f(1)[2]$	0.4762	$x = 1.0000$	
$g^2G - f(1)[3]$	0.6667	$z = 0.4167$	$z = 0.0119$
$g^2G - f(1)[4]$	0.8571	$x = 0.0000$	$y = 0.9722$
$g^4G - f(1)[2]$	0.9524	$x = 0.3571$	$z = 0.0429$
$g^4G - f(1)[3]$	1.3333	$z = 0.5729$	$z = 0.0680$
$g^4G - f(1)[4]$	1.7143	$x = 0.7778$	$y = 0.0540$
		$z = 0.0015$	$z = 0.0005$

TABLE 3b

TRANSITIONS BETWEEN LS AND JK STATES. PARENT TERM: 3S

$s^{(2S+1)L} - p(J_p)[K]$	$\sum_{J,J'}^s$	$s^{(2S+1)L} - p(J_p)[K]$	$\sum_{J,J'}^s$
$s^2S - p(1)[0]$	0.2222	$x = 1.0000$	
$s^2S - p(1)[1]$	0.6667	$z = 0.3333$	$y = 0.6667$
$s^2S - p(1)[2]$	1.1111	$x = 1.0000$	
$s^4S - p(1)[0]$	0.4444	$x = 1.0000$	
$s^4S - p(1)[1]$	1.3333	$z = 0.8333$	$y = 0.1667$
$s^4S - p(1)[2]$	2.2222	$x = 0.9000$	$y = 0.1000$
$p^{(2S+1)L} - s(J_p)[K]$	$\sum_{J,J'}^s$	$p^{(2S+1)L} - s(J_p)[K]$	$\sum_{J,J'}^s$
$p^2P - s(1)[1]$	2.0000	$z = 0.0000$	$z = 0.3333$
$p^4P - s(1)[1]$	4.0000	$x = 0.5000$	$y = 0.3333$
$p^{(2S+1)L} - d(J_p)[K]$	$\sum_{J,J'}^s$	$p^{(2S+1)L} - d(J_p)[K]$	$\sum_{J,J'}^s$
$p^2P - d(1)[1]$	0.4000	$z = 0.1667$	$z = 0.0000$
$p^2P - d(1)[2]$	0.6667	$z = 0.4000$	$y = 0.1000$
$p^2P - d(1)[3]$	0.9333	$x = 1.0000$	
$p^4P - d(1)[1]$	0.8000	$z = 0.0250$	$z = 0.2667$
$p^4P - d(1)[2]$	1.3333	$z = 0.2100$	$z = 0.0150$
$p^4P - d(1)[3]$	1.8667	$x = 0.8571$	$y = 0.0429$
$d^{(2S+1)L} - p(J_p)[K]$	$\sum_{J,J'}^s$	$d^{(2S+1)L} - p(J_p)[K]$	$\sum_{J,J'}^s$
$d^2D - p(1)[0]$	0.2222	$x = 1.0000$	
$d^2D - p(1)[1]$	0.6667	$z = 0.3000$	$y = 0.0333$
$d^2D - p(1)[2]$	1.1111	$x = 0.0000$	$z = 0.9000$
$d^4D - p(1)[0]$	0.4444	$x = 0.5000$	$y = 0.5000$
$d^4D - p(1)[1]$	1.3333	$z = 0.5250$	$z = 0.0833$
$d^4D - p(1)[2]$	2.2222	$x = 0.7200$	$y = 0.1620$
		$z = 0.0180$	$z = 0.0050$
$d^{(2S+1)L} - f(J_p)[K]$	$\sum_{J,J'}^s$	$d^{(2S+1)L} - f(J_p)[K]$	$\sum_{J,J'}^s$
$d^2D - f(1)[2]$	0.4762	$z = 0.0667$	$z = 0.0000$
$d^2D - f(1)[3]$	0.6667	$z = 0.5000$	$z = 0.0000$
$d^2D - f(1)[4]$	0.8571	$x = 0.5000$	$y = 0.3333$

TABLE 3c (CONTINUED)

$p^{(2S+1)L - e}(J_p, j)$	$\sum_{J_p, j}^e$	$p^{(2S+1)L - e}(J_p, j)$	$\sum_{J_p, j}^e$
$p^2P - e(1, \frac{1}{2})$	2.0000	$x = 0.0000$	$y = 0.6667$
$p^4P - e(1, \frac{1}{2})$	4.0000	$x = 0.5000$	$z = 0.1667$
$p^{(2S+1)L - d}(J_p, j)$	$\sum_{J_p, j}^e$	$p^{(2S+1)L - d}(J_p, j)$	$\sum_{J_p, j}^e$
$p^2P - d(1, \frac{3}{2})$	0.8000	$x = 0.8000$	$z = 0.0000$
$p^2P - d(1, \frac{1}{2})$	1.2000	$x = 0.4667$	$y = 0.0889$
$p^4P - d(1, \frac{3}{2})$	1.6000	$x = 0.1050$	$z = 0.0200$
$p^4P - d(1, \frac{1}{2})$		$y = 0.2083$	$z = 0.0417$
		$z = 0.2450$	$z = 0.1667$
$p^4P - d(1, \frac{5}{2})$	2.4000	$x = 0.6667$	$y = 0.0800$
		$z = 0.0278$	$z = 0.0356$
		$z = 0.0033$	
$d^{(2S+1)L - p}(J_p, j)$	$\sum_{J_p, j}^e$	$d^{(2S+1)L - p}(J_p, j)$	$\sum_{J_p, j}^e$
$d^2D - p(1, \frac{1}{2})$	0.6667	$x = 0.6000$	$y = 0.0889$
$d^2D - p(1, \frac{3}{2})$	1.3333	$x = 0.0000$	$z = 0.5000$
$d^4D - p(1, \frac{1}{2})$	1.3333	$x = 0.3500$	$z = 0.1778$
$d^4D - p(1, \frac{3}{2})$	2.6667	$x = 0.6000$	$z = 0.1350$
		$z = 0.0711$	$z = 0.0139$
		$z = 0.0150$	$z = 0.0111$
$d^{(2S+1)L - f}(J_p, j)$	$\sum_{J_p, j}^e$	$d^{(2S+1)L - f}(J_p, j)$	$\sum_{J_p, j}^e$
$d^2D - f(1, \frac{5}{2})$	0.8571	$x = 0.7619$	$z = 0.0159$
$d^2D - f(1, \frac{1}{2})$	1.1429	$x = 0.4286$	$y = 0.0381$
$d^4D - f(1, \frac{1}{2})$	1.7143	$x = 0.0408$	$z = 0.0036$
		$z = 0.2449$	$z = 0.2833$
$d^4D - f(1, \frac{3}{2})$	2.2857	$x = 0.6250$	$y = 0.0408$
		$z = 0.2449$	$z = 0.0009$
$f^{(2S+1)L - d}(J_p, j)$	$\sum_{J_p, j}^e$	$f^{(2S+1)L - d}(J_p, j)$	$\sum_{J_p, j}^e$
$f^2F - d(1, \frac{3}{2})$	0.8000	$x = 0.7619$	$z = 0.0381$
$f^2F - d(1, \frac{1}{2})$	1.2000	$x = 0.0000$	$z = 0.4444$
$f^4F - d(1, \frac{3}{2})$	1.6000	$x = 0.2857$	$z = 0.0610$
		$z = 0.0033$	$z = 0.0800$
$f^4F - d(1, \frac{1}{2})$	2.4000	$x = 0.5952$	$y = 0.0680$
		$z = 0.0034$	$z = 0.0133$
$f^{(2S+1)L - g}(J_p, j)$	$\sum_{J_p, j}^e$	$f^{(2S+1)L - g}(J_p, j)$	$\sum_{J_p, j}^e$
$f^2F - g(1, \frac{1}{2})$	0.8889	$x = 0.7407$	$z = 0.0093$
$f^2F - g(1, \frac{3}{2})$	1.1111	$x = 0.4074$	$z = 0.0212$
$f^4F - g(1, \frac{1}{2})$	1.7778	$x = 0.0212$	$z = 0.0011$
		$z = 0.0504$	$z = 0.0019$
$f^4F - g(1, \frac{3}{2})$	2.2222	$x = 0.2334$	$z = 0.3214$
		$z = 0.6000$	$z = 0.0247$
		$z = 0.0003$	$z = 0.0141$

TABLE 3b (CONTINUED)

$d^2D - f(1)[3]$	0.6667	$x = 0.4286$	$y = 0.0381$
$d^2D - f(1)[4]$	0.8571	$x = 1.0000$	
$d^4D - f(1)[2]$	0.9524	$x = 0.0038$	$z = 0.0975$
		$z = 0.2987$	$z = 0.1680$
$d^4D - f(1)[3]$	1.3333	$x = 0.0918$	$z = 0.0034$
$d^4D - f(1)[4]$	1.7143	$x = 0.8333$	$z = 0.0258$
$f^{(2S+1)L - d}(J_p)[K]$	$\sum_{J_p}^e$	$f^{(2S+1)L - d}(J_p)[K]$	$\sum_{J_p}^e$
$f^2F - d(1)[1]$	0.4000	$x = 1.0000$	
$f^2F - d(1)[2]$	0.6667	$x = 0.3810$	$z = 0.0190$
$f^2F - d(1)[3]$	0.9333	$x = 0.0000$	$z = 0.9524$
$f^4F - d(1)[1]$	0.8000	$x = 0.4000$	$z = 0.1000$
$f^4F - d(1)[2]$	1.3333	$x = 0.5714$	$z = 0.1219$
$f^4F - d(1)[3]$	1.8667	$x = 0.7653$	$z = 0.0875$
		$z = 0.0044$	$z = 0.0249$
$f^{(2S+1)L - g}(J_p)[K]$	$\sum_{J_p}^e$	$f^{(2S+1)L - g}(J_p)[K]$	$\sum_{J_p}^e$
$f^2F - g(1)[3]$	0.5185	$x = 0.0357$	$z = 0.0000$
$f^2F - g(1)[4]$	0.6667	$x = 0.4444$	$z = 0.9643$
$f^2F - g(1)[5]$	0.8148	$x = 1.0000$	$z = 0.0198$
$f^4F - g(1)[3]$	1.0370	$x = 0.0011$	$z = 0.0486$
		$z = 0.0088$	$z = 0.0886$
		$z = 0.3075$	$z = 0.5510$
$f^4F - g(1)[4]$	1.3333	$x = 0.0509$	$z = 0.0012$
$f^4F - g(1)[5]$	1.6296	$x = 0.8182$	$z = 0.5602$
		$z = 0.0152$	$z = 0.3348$
$g^{(2S+1)L - f}(J_p)[K]$	$\sum_{J_p}^e$	$g^{(2S+1)L - f}(J_p)[K]$	$\sum_{J_p}^e$
$g^2G - f(1)[2]$	0.4762	$x = 1.0000$	
$g^2G - f(1)[3]$	0.6667	$x = 0.4167$	$z = 0.0119$
$g^2G - f(1)[4]$	0.8571	$x = 0.0000$	$z = 0.9722$
$g^4G - f(1)[2]$	0.9524	$x = 0.3571$	$z = 0.0000$
$g^4G - f(1)[3]$	1.3333	$x = 0.5729$	$z = 0.0680$
$g^4G - f(1)[4]$	1.7143	$x = 0.7778$	$z = 0.0383$
		$z = 0.0540$	$z = 0.0019$
		$z = 0.0015$	$z = 0.0176$

TABLE 3c

TRANSITIONS BETWEEN LS AND JJ STATES. PARENT TERM: 3S

$^e(2S+1)L - p(J_p, j)$	$\sum_{J_p, j}^e$	$^e(2S+1)L - p(J_p, j)$	$\sum_{J_p, j}^e$
$^e^2S - p(1, \frac{1}{2})$	0.6667	$x = 0.8889$	$z = 0.1111$
$^e^2S - p(1, \frac{3}{2})$	1.3333	$x = 0.5556$	$z = 0.4444$
$^e^4S - p(1, \frac{1}{2})$	1.3333	$x = 0.5556$	$z = 0.4444$
$^e^4S - p(1, \frac{3}{2})$	2.6667	$x = 0.7500$	$z = 0.2222$
		$z = 0.0278$	

TABLE 4a (CONTINUED)

$d^{(2S+1)L - f L' K} \sum_{J,J'}^s$	$d^{3D - f F [\frac{3}{2}]}$	0.4286	$z = 0.0044$	$y = 0.1556$	$z = 0.8400$
$d^{3D - f F [\frac{5}{2}]}$	0.6429	$z = 0.0817$	$y = 0.0020$	$z = 0.4958$	0.3753
$d^{3D - f F [\frac{7}{2}]}$	0.8571	$z = 0.2500$	$y = 0.0833$		
$d^{3D - f F [\frac{9}{2}]}$	1.0714	$z = 1.0000$			
$d^{5D - f F [\frac{3}{2}]}$	0.7143	$z = 0.0160$	$y = 0.1600$	$z = 0.2800$	
		$z = 0.2240$	$y = 0.1800$	$z = 0.1600$	
$d^{5D - f F [\frac{5}{2}]}$	1.0714	$z = 0.0086$	$y = 0.1800$	$z = 0.1600$	
		$z = 0.4114$	$y = 0.0036$	$z = 0.6250$	0.1714
$d^{5D - f F [\frac{7}{2}]}$	1.4286	$z = 0.1250$	$y = 0.0036$	$z = 0.0036$	
$d^{5D - f F [\frac{9}{2}]}$	1.7857	$z = 0.8800$	$y = 0.0200$		
$f^{(2S+1)L - d L' K} \sum_{J,J'}^s$	$f^{3F - d D [\frac{1}{2}]}$	0.3000	$z = 1.0000$		
	$f^{3F - d D [\frac{3}{2}]}$	0.8000	$z = 0.4444$	$y = 0.0556$	
	$f^{3F - d D [\frac{5}{2}]}$	0.9000	$z = 0.2041$	$y = 0.0176$	0.0864
	$f^{3F - d D [\frac{7}{2}]}$	1.2000	$z = 0.0000$	$y = 0.9184$	$z = 0.0000$
	$f^{5F - d D [\frac{1}{2}]}$	0.5000	$z = 0.4000$	$y = 0.2000$	
	$f^{5F - d D [\frac{3}{2}]}$	1.0000	$z = 0.4800$	$y = 0.2000$	$z = 0.1000$
	$f^{5F - d D [\frac{5}{2}]}$	1.5000	$z = 0.6122$	$y = 0.1714$	0.0571
		$z = 0.0163$	$y = 0.0057$		
	$f^{5F - d D [\frac{7}{2}]}$	2.0000	$z = 0.7857$	$y = 0.1071$	0.0214
		$z = 0.0071$	$y = 0.0020$		
$f^{(2S+1)L - g L' K} \sum_{J,J'}^s$	$f^{3F - g G [\frac{1}{2}]}$	0.5000	$z = 0.0013$	$y = 0.0804$	0.0000
	$f^{3F - g G [\frac{3}{2}]}$	0.6667	$z = 0.0365$	$y = 0.0005$	$z = 0.5469$
	$f^{3F - g G [\frac{5}{2}]}$	0.8333	$z = 0.2667$	$y = 0.0458$	
	$f^{3F - g G [\frac{7}{2}]}$	1.0000	$z = 1.0000$		
	$f^{5F - g G [\frac{1}{2}]}$	0.8333	$z = 0.0038$	$y = 0.0744$	0.1429
		$z = 0.2551$	$y = 0.5143$		
	$f^{5F - g G [\frac{3}{2}]}$	1.1111	$z = 0.0026$	$y = 0.0972$	0.1004
		$z = 0.4501$	$y = 0.3444$		
	$f^{5F - g G [\frac{5}{2}]}$	1.3889	$z = 0.0720$	$y = 0.0013$	$z = 0.6480$
	$f^{5F - g G [\frac{7}{2}]}$	1.6667	$z = 0.8667$	$y = 0.1200$	$z = 0.0133$
$g^{(2S+1)L - f L' K} \sum_{J,J'}^s$	$g^{3G - f F [\frac{3}{2}]}$	0.4286	$z = 1.0000$		
	$g^{3G - f F [\frac{5}{2}]}$	0.6429	$z = 0.5208$	$y = 0.0347$	
	$g^{3G - f F [\frac{7}{2}]}$	0.8571	$z = 0.2377$	$y = 0.0122$	0.0469
	$g^{3G - f F [\frac{9}{2}]}$	1.0714	$z = 0.0000$	$y = 0.9506$	$z = 0.0000$
	$g^{5G - f F [\frac{3}{2}]}$	0.7143	$z = 0.3333$	$y = 0.0667$	
	$g^{5G - f F [\frac{5}{2}]}$	1.0714	$z = 0.4911$	$y = 0.1042$	0.0667
		$z = 0.0048$			

TABLE 3c (CONTINUED)

$g^{(2S+1)L - f (J_{p,i}, J) \sum_{J,J'}^s$	$g^{2G - f (1, \frac{5}{2})}$	0.8571	$z = 0.7407$	$y = 0.0212$
	$g^{2G - f (1, \frac{7}{2})}$	1.1429	$z = 0.0000$	$y = 0.4167$
	$g^{4G - f (1, \frac{3}{2})}$	1.7143	$z = 0.2546$	$y = 0.0302$
		$z = 0.0009$	$y = 0.0302$	$z = 0.0408$
	$g^{4G - f (1, \frac{7}{2})}$	2.2857	$z = 0.5833$	$y = 0.0405$
		$z = 0.0012$	$y = 0.0009$	$z = 0.0096$

TABLE 4a

TRANSITIONS BETWEEN LS AND LK STATES. PARENT TERM: $4S$

$e^{(2S+1)L - p L' K} \sum_{J,J'}^s$	$e^{3S - p P [\frac{1}{2}]}$	0.5000	$z = 0.3333$	$y = 0.6667$
	$e^{3S - p P [\frac{3}{2}]}$	1.0000	$z = 0.1667$	$y = 0.8333$
	$e^{5S - p P [\frac{1}{2}]}$	1.5000	$z = 1.0000$	
	$e^{5S - p P [\frac{3}{2}]}$	0.8333	$z = 1.0000$	
	$e^{5S - p P [\frac{5}{2}]}$	1.6667	$z = 0.9000$	$y = 0.1000$
	$e^{5S - p P [\frac{7}{2}]}$	2.5000	$z = 0.9333$	$y = 0.0667$
$p^{(2S+1)L - e L' K} \sum_{J,J'}^s$	$p^{3P - e S [\frac{3}{2}]}$	3.0000	$z = 0.0000$	$y = 0.5556$
	$p^{5P - e S [\frac{5}{2}]}$	5.0000	$z = 0.4667$	$y = 0.3333$
$p^{(2S+1)L - d L' K} \sum_{J,J'}^s$	$p^{3P - d D [\frac{1}{2}]}$	0.8000	$z = 0.0278$	$y = 0.4167$
	$p^{3P - d D [\frac{3}{2}]}$	0.6000	$z = 0.1250$	$y = 0.0139$
	$p^{3P - d D [\frac{5}{2}]}$	0.9000	$z = 0.2222$	$y = 0.1944$
	$p^{3P - d D [\frac{7}{2}]}$	1.2000	$z = 1.0000$	
	$p^{5P - d D [\frac{1}{2}]}$	0.5000	$z = 0.1500$	$y = 0.4500$
	$p^{5P - d D [\frac{3}{2}]}$	1.0000	$z = 0.0467$	$y = 0.4083$
	$p^{5P - d D [\frac{5}{2}]}$	1.5000	$z = 0.2667$	$y = 0.0133$
	$p^{5P - d D [\frac{7}{2}]}$	2.0000	$z = 0.9000$	$y = 0.0333$
$d^{(2S+1)L - p L' K} \sum_{J,J'}^s$	$d^{3D - p P [\frac{1}{2}]}$	0.5000	$z = 0.2500$	$y = 0.0833$
	$d^{3D - p P [\frac{3}{2}]}$	1.0000	$z = 0.1400$	$y = 0.0250$
	$d^{3D - p P [\frac{5}{2}]}$	1.5000	$z = 0.0000$	$y = 0.8400$
	$d^{5D - p P [\frac{1}{2}]}$	0.8333	$z = 0.3500$	$y = 0.4500$
	$d^{5D - p P [\frac{3}{2}]}$	1.6667	$z = 0.5040$	$y = 0.3150$
		$z = 0.0810$	$y = 0.0200$	
	$d^{5D - p P [\frac{5}{2}]}$	2.5000	$z = 0.7200$	$y = 0.1867$
		$z = 0.0267$	$y = 0.0060$	$z = 0.0233$

TABLE 4a (CONTINUED)

$g^5G - f^5F \left[\frac{7}{2} \right]$	1.4286	$x = 0.6417$	$y = 0.2046$	$z = 0.1031$	0.0434
		$z = 0.0052$	0.0020		
$g^5G - f^5F \left[\frac{9}{2} \right]$	1.7857	$x = 0.8089$	$y = 0.1027$	$z = 0.0684$	0.0165
		$z = 0.0027$	0.0008		

TABLE 4b

TRANSITIONS BETWEEN LS AND JK STATES. PARENT TERM: $4S$

$p^{(2S+1)L} - p^{(J_p)}[K]$	$\sum_{J,J'}^s$				
$s^3S - p^3\left[\frac{3}{2} \right] \left[\frac{1}{2} \right]$	0.5000	$x = 0.3333$	$y = 0.6667$		
$s^3S - p^3\left[\frac{3}{2} \right] \left[\frac{3}{2} \right]$	1.0000	$x = 0.1667$	$y = 0.8333$		
$s^3S - p^3\left[\frac{3}{2} \right] \left[\frac{5}{2} \right]$	1.5000	$x = 1.0000$			
$s^5S - p^5\left[\frac{3}{2} \right] \left[\frac{1}{2} \right]$	0.8333	$x = 1.0000$			
$s^5S - p^5\left[\frac{3}{2} \right] \left[\frac{3}{2} \right]$	1.6667	$x = 0.9000$	$y = 0.1000$		
$s^5S - p^5\left[\frac{3}{2} \right] \left[\frac{5}{2} \right]$	2.5000	$x = 0.9333$	$y = 0.0667$		
$p^{(2S+1)L} - s^{(J_p)}[K]$	$\sum_{J,J'}^s$				
$p^3P - s^3\left[\frac{3}{2} \right] \left[\frac{3}{2} \right]$	3.0000	$x = 0.0000$	$y = 0.3333$	$z = 0.5556$	$z = 0.0000$
$p^5P - s^5\left[\frac{3}{2} \right] \left[\frac{3}{2} \right]$	5.0000	$x = 0.4667$	$y = 0.0000$	$z = 0.3333$	$z = 0.2000$
$p^{(2S+1)L} - d^{(J_p)}[K]$	$\sum_{J,J'}^s$				
$p^3P - d^3\left[\frac{3}{2} \right] \left[\frac{1}{2} \right]$	0.3000	$x = 0.0278$	$y = 0.0000$	$z = 0.4167$	$z = 0.5556$
$p^3P - d^3\left[\frac{3}{2} \right] \left[\frac{3}{2} \right]$	0.6000	$x = 0.1250$	$y = 0.2083$	$z = 0.1359$	$z = 0.3750$
$p^3P - d^3\left[\frac{3}{2} \right] \left[\frac{5}{2} \right]$	0.9000	$x = 0.2222$	$y = 0.5833$	$z = 0.1944$	
$p^5P - d^5\left[\frac{3}{2} \right] \left[\frac{1}{2} \right]$	1.2000	$x = 1.0000$			
$p^5P - d^5\left[\frac{3}{2} \right] \left[\frac{3}{2} \right]$	0.5000	$x = 0.1500$	$y = 0.4000$	$z = 0.4500$	
$p^5P - d^5\left[\frac{3}{2} \right] \left[\frac{5}{2} \right]$	1.0000	$x = 0.0467$	$y = 0.0750$	$z = 0.4083$	$z = 0.2450$
$p^5P - d^5\left[\frac{3}{2} \right] \left[\frac{7}{2} \right]$	1.5000	$x = 0.2667$	$y = 0.1167$	$z = 0.1333$	$z = 0.5333$
$p^5P - d^5\left[\frac{3}{2} \right] \left[\frac{9}{2} \right]$	2.0000	$x = 0.9000$	$y = 0.0667$	$z = 0.0333$	
$d^{(2S+1)L} - p^{(J_p)}[K]$	$\sum_{J,J'}^s$				
$d^3D - p^3\left[\frac{3}{2} \right] \left[\frac{1}{2} \right]$	0.5000	$x = 0.2500$	$y = 0.6667$	$z = 0.0833$	
$d^3D - p^3\left[\frac{3}{2} \right] \left[\frac{3}{2} \right]$	1.0000	$x = 0.1400$	$y = 0.6250$	$z = 0.0250$	$z = 0.2083$
$d^3D - p^3\left[\frac{3}{2} \right] \left[\frac{5}{2} \right]$	1.5000	$x = 0.0000$	$y = 0.1500$	$z = 0.8400$	$z = 0.0000$
$d^5D - p^5\left[\frac{3}{2} \right] \left[\frac{1}{2} \right]$	0.8333	$x = 0.3500$	$y = 0.0000$	$z = 0.4500$	$z = 0.2000$
$d^5D - p^5\left[\frac{3}{2} \right] \left[\frac{3}{2} \right]$	1.6667	$x = 0.5040$	$y = 0.0350$	$z = 0.3150$	$z = 0.0450$
		$z = 0.0810$	0.0200		
$d^5D - p^5\left[\frac{3}{2} \right] \left[\frac{5}{2} \right]$	2.5000	$x = 0.7200$	$y = 0.0373$	$z = 0.1867$	$z = 0.0233$
		$z = 0.0267$	0.0060		
$d^{(2S+1)L} - f^{(J_p)}[K]$	$\sum_{J,J'}^s$				
$d^3D - f^3\left[\frac{3}{2} \right] \left[\frac{3}{2} \right]$	0.4286	$x = 0.0044$	$y = 0.0000$	$z = 0.1556$	$z = 0.8400$
$d^3D - f^3\left[\frac{3}{2} \right] \left[\frac{5}{2} \right]$	0.8429	$x = 0.0617$	$y = 0.0691$	$z = 0.0020$	$z = 0.4938$

TABLE 4b (CONTINUED)

$d^3D - f^3\left[\frac{3}{2} \right] \left[\frac{7}{2} \right]$	0.8571	$x = 0.2500$	$y = 0.6667$	$z = 0.0833$	
$d^3D - f^3\left[\frac{3}{2} \right] \left[\frac{9}{2} \right]$	1.0714	$x = 1.0000$			
$d^5D - f^5\left[\frac{3}{2} \right] \left[\frac{3}{2} \right]$	0.7143	$x = 0.0160$	$y = 0.0400$	$z = 0.1600$	$z = 0.2800$
		$z = 0.2240$	0.2800		
$d^5D - f^5\left[\frac{3}{2} \right] \left[\frac{5}{2} \right]$	1.0714	$x = 0.0086$	$y = 0.0160$	$z = 0.1800$	$z = 0.1600$
		$z = 0.4114$	0.2240		
$d^5D - f^5\left[\frac{3}{2} \right] \left[\frac{7}{2} \right]$	1.4286	$x = 0.1250$	$y = 0.0750$	$z = 0.0036$	$z = 0.6250$
$d^5D - f^5\left[\frac{3}{2} \right] \left[\frac{9}{2} \right]$	1.7857	$x = 0.8800$	$y = 0.1000$	$z = 0.0200$	
$f^{(2S+1)L} - d^{(J_p)}[K]$	$\sum_{J,J'}^s$				
$f^3F - d^3\left[\frac{3}{2} \right] \left[\frac{1}{2} \right]$	0.3000	$x = 1.0000$			
$f^3F - d^3\left[\frac{3}{2} \right] \left[\frac{3}{2} \right]$	0.6000	$x = 0.4444$	$y = 0.5000$	$z = 0.0556$	
$f^3F - d^3\left[\frac{3}{2} \right] \left[\frac{5}{2} \right]$	0.9000	$x = 0.2041$	$y = 0.0864$	$z = 0.0005$	$z = 0.0005$
$f^5F - d^5\left[\frac{3}{2} \right] \left[\frac{1}{2} \right]$	1.2000	$x = 0.0000$	$y = 0.0794$	$z = 0.9184$	$z = 0.0000$
$f^5F - d^5\left[\frac{3}{2} \right] \left[\frac{3}{2} \right]$	0.5000	$x = 0.4000$	$y = 0.4000$	$z = 0.2000$	
$f^5F - d^5\left[\frac{3}{2} \right] \left[\frac{5}{2} \right]$	1.0000	$x = 0.4800$	$y = 0.2000$	$z = 0.2000$	$z = 0.0200$
$f^5F - d^5\left[\frac{3}{2} \right] \left[\frac{7}{2} \right]$	1.5000	$x = 0.6122$	$y = 0.1371$	$z = 0.1714$	$z = 0.0571$
		$z = 0.0163$	0.0057		
$f^5F - d^5\left[\frac{3}{2} \right] \left[\frac{9}{2} \right]$	2.0000	$x = 0.7857$	$y = 0.0765$	$z = 0.1071$	$z = 0.0214$
		$z = 0.0071$	0.0020		
$f^{(2S+1)L} - g^{(J_p)}[K]$	$\sum_{J,J'}^s$				
$f^3F - g^3\left[\frac{3}{2} \right] \left[\frac{5}{2} \right]$	0.5000	$x = 0.0013$	$y = 0.0000$	$z = 0.0804$	$z = 0.9184$
$f^3F - g^3\left[\frac{3}{2} \right] \left[\frac{7}{2} \right]$	0.6667	$x = 0.0865$	$y = 0.0335$	$z = 0.0005$	$z = 0.5469$
$f^3F - g^3\left[\frac{3}{2} \right] \left[\frac{9}{2} \right]$	0.8333	$x = 0.2667$	$y = 0.6875$	$z = 0.0458$	
$f^5F - g^5\left[\frac{3}{2} \right] \left[\frac{1}{2} \right]$	1.0000	$x = 1.0000$			
$f^5F - g^5\left[\frac{3}{2} \right] \left[\frac{3}{2} \right]$	0.8333	$x = 0.0038$	$y = 0.0095$	$z = 0.0744$	$z = 0.1429$
		$z = 0.2651$	0.5143		
$f^5F - g^5\left[\frac{3}{2} \right] \left[\frac{5}{2} \right]$	1.1111	$x = 0.0026$	$y = 0.0052$	$z = 0.0972$	$z = 0.1004$
		$z = 0.4501$	0.3444		
$f^5F - g^5\left[\frac{3}{2} \right] \left[\frac{7}{2} \right]$	1.3889	$x = 0.0720$	$y = 0.0495$	$z = 0.0013$	$z = 0.6480$
$f^5F - g^5\left[\frac{3}{2} \right] \left[\frac{9}{2} \right]$	1.6667	$x = 0.8667$	$y = 0.1200$	$z = 0.0133$	$z = 0.0133$
$g^{(2S+1)L} - f^{(J_p)}[K]$	$\sum_{J,J'}^s$				
$g^3G - f^3\left[\frac{3}{2} \right] \left[\frac{3}{2} \right]$	0.4286	$x = 1.0000$			
$g^3G - f^3\left[\frac{3}{2} \right] \left[\frac{5}{2} \right]$	0.8429	$x = 0.5208$	$y = 0.4444$	$z = 0.0347$	
$g^3G - f^3\left[\frac{3}{2} \right] \left[\frac{7}{2} \right]$	0.8571	$x = 0.2377$	$y = 0.7031$	$z = 0.0122$	$z = 0.0002$
$g^5G - f^5\left[\frac{3}{2} \right] \left[\frac{3}{2} \right]$	1.0714	$x = 0.0000$	$y = 0.0486$	$z = 0.9506$	$z = 0.0000$
$g^5G - f^5\left[\frac{3}{2} \right] \left[\frac{5}{2} \right]$	0.7143	$x = 0.3333$	$y = 0.6000$	$z = 0.0667$	
$g^5G - f^5\left[\frac{3}{2} \right] \left[\frac{7}{2} \right]$	1.0714	$x = 0.4911$	$y = 0.3333$	$z = 0.1042$	$z = 0.0048$
$g^5G - f^5\left[\frac{3}{2} \right] \left[\frac{9}{2} \right]$	1.4286	$x = 0.6417$	$y = 0.2046$	$z = 0.1031$	$z = 0.0434$
		$z = 0.0052$	0.0020		
$g^5G - f^5\left[\frac{3}{2} \right] \left[\frac{9}{2} \right]$	1.7857	$x = 0.8089$	$y = 0.1027$	$z = 0.0684$	$z = 0.0165$
		$z = 0.0027$	0.0008		

TABLE 4c (CONTINUED)

TRANSITIONS BETWEEN LS AND JJ STATES. PARENT TERM: $4S$

$d^{(2S+1)L} - p(J_p, j)$	$\sum_{J_p, j}^s$	$d^{(2S+1)L} - p(J_p, j)$	$\sum_{J_p, j}^s$
${}^s 3S - p(\frac{3}{2}, \frac{1}{2})$	1.0000	$z = 0.8333$	$y = 0.1667$
${}^s 3S - p(\frac{3}{2}, \frac{3}{2})$	2.0000	$x = 0.4167$	$y = 0.4167$
${}^s 5S - p(\frac{3}{2}, \frac{1}{2})$	1.6667	$x = 0.5000$	$y = 0.5000$
${}^s 5S - p(\frac{3}{2}, \frac{3}{2})$	3.3333	$x = 0.7000$	$y = 0.2500$
$p^{(2S+1)L} - s(J_p, j)$	$\sum_{J_p, j}^s$	$p^{(2S+1)L} - s(J_p, j)$	$\sum_{J_p, j}^s$
${}^p 3P - s(\frac{3}{2}, \frac{1}{2})$	3.0000	$x = 0.0000$	$z = 0.5556$
${}^p 5P - s(\frac{3}{2}, \frac{1}{2})$	5.0000	$x = 0.4667$	$z = 0.8333$
${}^p 3P - d(\frac{3}{2}, \frac{3}{2})$	1.2000	$x = 0.7000$	$y = 0.0278$
${}^p 3P - d(\frac{3}{2}, \frac{5}{2})$	1.8000	$x = 0.3111$	$y = 0.0972$
${}^p 5P - d(\frac{3}{2}, \frac{3}{2})$	2.0000	$x = 0.0933$	$y = 0.0253$
${}^p 5P - d(\frac{3}{2}, \frac{5}{2})$	3.0000	$x = 0.6000$	$y = 0.0953$
$d^{(2S+1)L} - p(J_p, j)$	$\sum_{J_p, j}^s$	$d^{(2S+1)L} - p(J_p, j)$	$\sum_{J_p, j}^s$
${}^d 3D - p(\frac{3}{2}, \frac{1}{2})$	1.0000	$x = 0.7000$	$y = 0.1250$
${}^d 3D - p(\frac{3}{2}, \frac{3}{2})$	2.0000	$x = 0.0000$	$y = 0.3500$
${}^d 5D - p(\frac{3}{2}, \frac{1}{2})$	1.6667	$x = 0.2800$	$y = 0.1750$
${}^d 5D - p(\frac{3}{2}, \frac{3}{2})$	3.3333	$x = 0.5400$	$y = 0.0175$
$d^{(2S+1)L} - f(J_p, j)$	$\sum_{J_p, j}^s$	$d^{(2S+1)L} - f(J_p, j)$	$\sum_{J_p, j}^s$
${}^d 3D - f(\frac{3}{2}, \frac{5}{2})$	1.2857	$x = 0.6429$	$y = 0.0309$
${}^d 3D - f(\frac{3}{2}, \frac{7}{2})$	1.7143	$x = 0.2679$	$y = 0.0417$
${}^d 5D - f(\frac{3}{2}, \frac{5}{2})$	2.1429	$x = 0.0357$	$y = 0.1143$
${}^d 5D - f(\frac{3}{2}, \frac{7}{2})$	2.8571	$x = 0.1786$	$y = 0.1600$

TABLE 4c

TRANSITIONS BETWEEN LS AND JJ STATES. PARENT TERM: $4S$

$f^{(2S+1)L} - d(J_p, j)$	$\sum_{J_p, j}^s$	$f^{(2S+1)L} - d(J_p, j)$	$\sum_{J_p, j}^s$
${}^f 3F - d(\frac{3}{2}, \frac{3}{2})$	1.2000	$x = 0.6429$	$y = 0.0556$
${}^f 3F - d(\frac{3}{2}, \frac{5}{2})$	1.8000	$x = 0.0000$	$y = 0.2857$
${}^f 5F - d(\frac{3}{2}, \frac{3}{2})$	2.0000	$x = 0.2143$	$z = 0.1800$
${}^f 5F - d(\frac{3}{2}, \frac{5}{2})$	3.0000	$x = 0.5238$	$z = 0.0686$
$g^{(2S+1)L} - f(J_p, j)$	$\sum_{J_p, j}^s$	$g^{(2S+1)L} - f(J_p, j)$	$\sum_{J_p, j}^s$
${}^g 3G - f(\frac{3}{2}, \frac{7}{2})$	1.3333	$x = 0.6111$	$y = 0.0182$
${}^g 3G - f(\frac{3}{2}, \frac{9}{2})$	1.6667	$x = 0.2444$	$y = 0.0229$
${}^g 5G - f(\frac{3}{2}, \frac{7}{2})$	2.2222	$x = 0.0183$	$z = 0.0486$
${}^g 5G - f(\frac{3}{2}, \frac{9}{2})$	2.7778	$x = 0.5200$	$z = 0.1146$
$g^{(2S+1)L} - f(J_p, j)$	$\sum_{J_p, j}^s$	$g^{(2S+1)L} - f(J_p, j)$	$\sum_{J_p, j}^s$
${}^g 3G - f(\frac{3}{2}, \frac{5}{2})$	1.2857	$x = 0.6111$	$y = 0.0313$
${}^g 3G - f(\frac{3}{2}, \frac{7}{2})$	1.7143	$x = 0.0000$	$y = 0.2546$
${}^g 5G - f(\frac{3}{2}, \frac{5}{2})$	2.1429	$x = 0.1833$	$z = 0.2381$
${}^g 5G - f(\frac{3}{2}, \frac{7}{2})$	2.8571	$x = 0.0295$	$z = 0.0015$

TABLE 5a

TRANSITIONS BETWEEN LS AND LK STATES. PARENT TERM: $5S$

${}^s (2S+1)L - p L[K]$	$\sum_{J_p, j}^s$	${}^s (2S+1)L - p L[K]$	$\sum_{J_p, j}^s$
${}^s 4S - p P[1]$	0.8000	$x = 0.1667$	$y = 0.8333$
${}^s 4S - p P[2]$	1.3333	$x = 0.1000$	$y = 0.9000$
${}^s 6S - p P[3]$	1.8667	$x = 1.0000$	$z = 1.0000$
${}^s 6S - p P[4]$	1.2000	$x = 1.0000$	$z = 1.0000$

TABLE 5a (CONTINUED)

$s^6S - pP [2]$	2.0000	$x = 0.9333$	$y = 0.0667$		
$s^6S - pP [3]$	2.8000	$x = 0.9524$	$y = 0.0476$		
$p^{(2s+1)L - sL [K]}$	$\sum_{J,J'}^s$				
$p^4P - s^4S [2]$	4.0000	$x = 0.0000$	$y = 0.5000$	$z = 0.0000$	0.1667
$p^6P - s^6S [2]$	6.0000	$x = 0.4444$	$y = 0.3333$	$z = 0.0000$	0.2222
$p^{(2s+1)L - dL [K]}$	$\sum_{J,J'}^s$				
$p^4P - dD [0]$	0.1600	$x = 0.1667$	$y = 0.8333$		
$p^4P - dD [1]$	0.4800	$x = 0.0250$	$y = 0.2667$	0.4167	$z = 0.2083$
$p^4P - dD [2]$	0.8000	$x = 0.0900$	$y = 0.3733$	$z = 0.0550$	0.2100
$p^4P - dD [3]$	1.1200	$x = 0.1429$	$y = 0.6000$	$z = 0.2571$	
$p^4P - dD [4]$	1.4400	$x = 1.0000$			
$p^6P - dD [0]$	0.2400	$x = 1.0000$			
$p^6P - dD [1]$	0.7200	$x = 0.2333$	0.2222	$y = 0.5444$	
$p^6P - dD [2]$	1.2000	$x = 0.0635$	0.0600	$y = 0.4876$	0.1400
$p^6P - dD [3]$	1.6800	$x = 0.3061$	0.0871	$y = 0.0113$	$z = 0.5510$
$p^6P - dD [4]$	2.1600	$x = 0.9259$	0.0476	$y = 0.0265$	
$d^{(2s+1)L - pP [K]}$	$\sum_{J,J'}^s$				
$d^4D - pP [1]$	0.8000	$x = 0.1050$	0.4167	$y = 0.0533$	0.4167
$d^4D - pP [2]$	1.3333	$x = 0.0800$	0.5670	$y = 0.0180$	0.2880
		$z = 0.0020$	0.0450		
$d^4D - pP [3]$	1.8667	$x = 0.0000$	0.1800	$y = 0.8000$	$z = 0.0000$
$d^6D - pP [1]$	1.2000	$x = 0.2800$	0.0000	$y = 0.4200$	0.0000
$d^6D - pP [2]$	2.0000	$x = 0.4800$	0.0187	$y = 0.3413$	0.0280
		$z = 0.1120$	0.0200		
$d^6D - pP [3]$	2.8000	$x = 0.7143$	0.0245	$y = 0.2041$	0.0174
		$z = 0.0340$	0.0057		
$d^{(2s+1)L - fF [K]}$	$\sum_{J,J'}^s$				
$d^4D - fF [1]$	0.3429	$x = 0.0200$	0.0000	$y = 0.2800$	0.0000
$d^4D - fF [2]$	0.5714	$x = 0.0057$	0.0080	$y = 0.1463$	0.1120
		$z = 0.4480$	0.2800		
$d^4D - fF [3]$	0.8000	$x = 0.0510$	0.1567	$y = 0.0061$	$z = 0.3061$
$d^4D - fF [4]$	1.0286	$x = 0.1667$	0.7143	$y = 0.1190$	
$d^4D - fF [5]$	1.2571	$x = 1.0000$			
$d^6D - fF [1]$	0.5143	$x = 0.0533$	0.1235	$y = 0.2528$	0.4321
$d^6D - fF [2]$	0.8571	$x = 0.0343$	0.0480	$y = 0.2777$	0.2276
		$z = 0.2880$	0.1244		
$d^6D - fF [3]$	1.2000	$x = 0.0132$	0.0163	$y = 0.2419$	0.1322
		$z = 0.4592$	0.1371		
$d^6D - fF [4]$	1.5429	$x = 0.1509$	0.0627	$y = 0.0034$	$z = 0.6639$
$d^6D - fF [5]$	1.8857	$x = 0.9091$	0.0741	$y = 0.0168$	

TABLE 5a (CONTINUED)

$f^{(2s+1)L - dL [K]}$	$\sum_{J,J'}^s$				
$f^4F - dD [0]$	0.1600	$x = 1.0000$			
$f^4F - dD [1]$	0.4800	$x = 0.4000$	0.5000	$y = 0.1000$	
$f^4F - dD [2]$	0.8000	$x = 0.2449$	0.5600	$y = 0.0522$	0.1400
$f^4F - dD [3]$	1.1200	$x = 0.1276$	0.6997	$y = 0.0146$	0.1493
		$z = 0.0007$	0.0082		
$f^4F - dD [4]$	1.4400	$x = 0.0000$	0.1020	$y = 0.8929$	$z = 0.0000$
$f^6F - dD [0]$	0.2400	$x = 0.4444$	$y = 0.5556$		
$f^6F - dD [1]$	0.7200	$x = 0.4000$	0.0988	$y = 0.3160$	0.1235
$f^6F - dD [2]$	1.2000	$x = 0.4898$	0.1029	$y = 0.2645$	0.0813
		$z = 0.0457$	0.0159		
$f^6F - dD [3]$	1.6800	$x = 0.6236$	0.0875	$y = 0.2073$	0.0472
		$z = 0.0262$	0.0082		
$f^6F - dD [4]$	2.1600	$x = 0.7937$	0.0539	$y = 0.1225$	0.0179
		$z = 0.0098$	0.0023		
$f^{(2s+1)L - gL [K]}$	$\sum_{J,J'}^s$				
$f^4F - gG [2]$	0.4444	$x = 0.0051$	0.0000	$y = 0.1378$	0.0000
$f^4F - gG [3]$	0.6222	$x = 0.0019$	0.0018	$y = 0.0875$	0.0192
		$z = 0.5535$	0.3061		
$f^4F - gG [4]$	0.8000	$x = 0.0324$	0.0831	$y = 0.0018$	$z = 0.3565$
$f^4F - gG [5]$	0.9778	$x = 0.1818$	0.7500	$y = 0.0682$	
$f^4F - gG [6]$	1.1556	$x = 1.0000$			
$f^6F - gG [2]$	0.6667	$x = 0.0102$	0.0238	$y = 0.1088$	0.2143
		$z = 0.2143$	0.4286		
$f^6F - gG [3]$	0.9333	$x = 0.0094$	0.0146	$y = 0.1470$	0.1555
		$z = 0.3675$	0.3061		
$f^6F - gG [4]$	1.2000	$x = 0.0043$	0.0060	$y = 0.1385$	0.0935
		$z = 0.5238$	0.2338		
$f^6F - gG [5]$	1.4667	$x = 0.0895$	0.0441	$y = 0.0014$	$z = 0.6983$
$f^6F - gG [6]$	1.7333	$x = 0.8974$	0.0909	$y = 0.0117$	
$g^{(2s+1)L - fL [K]}$	$\sum_{J,J'}^s$				
$g^4G - fF [1]$	0.3429	$x = 1.0000$			
$g^4G - fF [2]$	0.5714	$x = 0.5357$	0.4000	$y = 0.0643$	
$g^4G - fF [3]$	0.8000	$x = 0.3183$	0.5740	$y = 0.0378$	0.0689
$g^4G - fF [4]$	1.0286	$x = 0.1556$	0.7427	$y = 0.0108$	0.0882
		$z = 0.0003$	0.0025		
$g^4G - fF [5]$	1.2571	$x = 0.0000$	0.0648	$y = 0.9333$	$z = 0.0000$
$g^6G - fF [1]$	0.5143	$x = 0.3333$	0.5556	$y = 0.1111$	
$g^6G - fF [2]$	0.8571	$x = 0.4365$	0.3000	$y = 0.1524$	0.1000
$g^6G - fF [3]$	1.2000	$x = 0.5456$	0.2079	$y = 0.1559$	0.0726
		$z = 0.0128$	0.0053		
$g^6G - fF [4]$	1.5429	$x = 0.6741$	0.1415	$y = 0.1317$	0.0404
$g^6G - fF [5]$	1.8857	$x = 0.8249$	0.0752	$y = 0.0803$	0.0117
		$z = 0.0038$	0.0010		

TABLE 5b

TRANSITIONS BETWEEN LS AND JK STATES. PARENT TERM: 6S

$s^{(2s+1)L - p(J_p)} K\rangle \sum_{J,J'}^s$	$s^4S - p(2) 1\rangle$	0.8000	$x = 0.1667$	$y = 0.8333$		
$s^4S - p(2) 2\rangle$	1.3333	$x = 0.1000$	$y = 0.9000$			
$s^4S - p(2) 3\rangle$	1.8667	$x = 1.0000$				
$s^6S - p(2) 1\rangle$	1.2000	$x = 1.0000$				
$s^6S - p(2) 2\rangle$	2.0000	$x = 0.9333$	$y = 0.0667$			
$s^6S - p(2) 3\rangle$	2.8000	$x = 0.9524$	$y = 0.0476$			
$p^{(2s+1)L - s(J_p)} K\rangle \sum_{J,J'}^s$	$p^4P - s(2) 2\rangle$	4.0000	$x = 0.0000$	$y = 0.5000$	$z = 0.0000$	0.1667
$p^6P - s(2) 2\rangle$	6.0000	$x = 0.4444$	$y = 0.3333$	$z = 0.0000$	$z = 0.2222$	
$p^{(2s+1)L - d(J_p)} K\rangle \sum_{J,J'}^s$	$p^4P - d(2) 0\rangle$	0.1600	$x = 0.1667$	$y = 0.8333$		
$p^4P - d(2) 1\rangle$	0.4800	$x = 0.0250$	$y = 0.2667$	$z = 0.2083$		
$p^4P - d(2) 2\rangle$	0.8000	$x = 0.0900$	$y = 0.0350$	$z = 0.2100$	0.2917	
$p^4P - d(2) 3\rangle$	1.1200	$x = 0.1429$	$y = 0.2571$			
$p^4P - d(2) 4\rangle$	1.4400	$x = 1.0000$				
$p^6P - d(2) 0\rangle$	0.2400	$x = 1.0000$				
$p^6P - d(2) 1\rangle$	0.7200	$x = 0.2333$	$y = 0.5444$			
$p^6P - d(2) 2\rangle$	1.2000	$x = 0.0635$	$y = 0.4876$	$z = 0.2469$		
$p^6P - d(2) 3\rangle$	1.6800	$x = 0.3061$	$y = 0.0113$	$z = 0.5510$	0.0444	
$p^6P - d(2) 4\rangle$	2.1600	$x = 0.9259$	$y = 0.0265$			
$d^{(2s+1)L - p(J_p)} K\rangle \sum_{J,J'}^s$	$d^4D - p(2) 1\rangle$	0.8000	$x = 0.1050$	$y = 0.0533$	$z = 0.4167$	$z = 0.0083$
$d^4D - p(2) 2\rangle$	1.3333	$x = 0.0800$	$y = 0.5670$	$y = 0.0180$	$z = 0.2880$	
$d^4D - p(2) 3\rangle$	1.8667	$x = 0.0000$	$y = 0.1800$	$y = 0.8000$	$z = 0.0000$	0.0200
$d^6D - p(2) 1\rangle$	1.2000	$x = 0.2800$	$y = 0.4200$	$y = 0.0000$	$z = 0.3000$	
$d^6D - p(2) 2\rangle$	2.0000	$x = 0.4800$	$y = 0.0187$	$y = 0.3413$	$z = 0.0280$	
$d^6D - p(2) 3\rangle$	2.8000	$x = 0.7143$	$y = 0.0245$	$y = 0.2041$	$z = 0.0174$	
$d^6D - p(2) 4\rangle$	3.6000	$x = 0.0340$	$y = 0.0057$			
$d^{(2s+1)L - f(J_p)} K\rangle \sum_{J,J'}^s$	$d^4D - f(2) 1\rangle$	0.3429	$x = 0.0200$	$y = 0.2800$	$z = 0.0000$	$z = 0.7000$
$d^4D - f(2) 2\rangle$	0.5714	$x = 0.0057$	$y = 0.0080$	$y = 0.1463$	$z = 0.1120$	
$d^4D - f(2) 3\rangle$	0.8000	$x = 0.0510$	$y = 0.1567$	$y = 0.0061$	$z = 0.3061$	0.4800
$d^4D - f(2) 4\rangle$	1.0286	$x = 0.1667$	$y = 0.7143$	$y = 0.1190$		

TABLE 5b (CONTINUED)

$d^4D - f(2) 5\rangle$	1.2571	$x = 1.0000$				
$d^6D - f(2) 1\rangle$	0.5143	$x = 0.0533$	$y = 0.2528$	$z = 0.1383$		
$d^6D - f(2) 2\rangle$	0.8571	$x = 0.0343$	$y = 0.0480$	$y = 0.2777$	0.2276	
$d^6D - f(2) 3\rangle$	1.2000	$x = 0.2880$	$y = 0.1244$	$y = 0.2419$	0.1322	
$d^6D - f(2) 4\rangle$	1.5429	$x = 0.1509$	$y = 0.0627$	$y = 0.0034$	$z = 0.6639$	0.1190
$d^6D - f(2) 5\rangle$	1.8857	$x = 0.9091$	$y = 0.0741$	$y = 0.0168$		
$f^{(2s+1)L - d(J_p)} K\rangle \sum_{J,J'}^s$	$f^4F - d(2) 0\rangle$	0.1600	$x = 1.0000$			
$f^4F - d(2) 1\rangle$	0.4800	$x = 0.4000$	$y = 0.5000$	$y = 0.1000$		
$f^4F - d(2) 2\rangle$	0.8000	$x = 0.2449$	$y = 0.5600$	$y = 0.0522$	$z = 0.0029$	
$f^4F - d(2) 3\rangle$	1.1200	$x = 0.1276$	$y = 0.6997$	$y = 0.0146$	0.1493	
$f^4F - d(2) 4\rangle$	1.4400	$x = 0.0000$	$y = 0.1020$	$y = 0.8929$	$z = 0.0000$	0.0051
$f^6F - d(2) 0\rangle$	0.2400	$x = 0.4444$	$y = 0.5556$			
$f^6F - d(2) 1\rangle$	0.7200	$x = 0.4000$	$y = 0.0988$	$y = 0.3160$	$z = 0.0617$	
$f^6F - d(2) 2\rangle$	1.2000	$x = 0.4898$	$y = 0.1029$	$y = 0.2645$	0.0813	
$f^6F - d(2) 3\rangle$	1.6800	$x = 0.6236$	$y = 0.0875$	$y = 0.2073$	0.0472	
$f^6F - d(2) 4\rangle$	2.1600	$x = 0.7937$	$y = 0.0539$	$y = 0.1225$	0.0179	
$f^6F - d(2) 5\rangle$	2.6400	$x = 0.0098$	$y = 0.0023$			
$g^{(2s+1)L - g(J_p)} K\rangle \sum_{J,J'}^s$	$g^4G - g(2) 2\rangle$	0.4444	$x = 0.0051$	$y = 0.1378$	$z = 0.0000$	$z = 0.8571$
$g^4G - g(2) 3\rangle$	0.6222	$x = 0.0019$	$y = 0.0018$	$y = 0.0875$	$z = 0.0492$	
$g^4G - g(2) 4\rangle$	0.8000	$x = 0.0324$	$y = 0.0831$	$y = 0.0018$	$z = 0.3565$	0.5261
$g^4G - g(2) 5\rangle$	0.9778	$x = 0.1818$	$y = 0.7500$	$y = 0.0682$		
$g^4G - g(2) 6\rangle$	1.1556	$x = 1.0000$				
$g^6G - g(2) 2\rangle$	0.8667	$x = 0.0102$	$y = 0.0238$	$y = 0.1088$	$z = 0.2143$	
$g^6G - g(2) 3\rangle$	0.9333	$x = 0.2143$	$y = 0.4286$	$y = 0.1470$	0.1555	
$g^6G - g(2) 4\rangle$	1.2000	$x = 0.0043$	$y = 0.0060$	$y = 0.1385$	0.0935	
$g^6G - g(2) 5\rangle$	1.4667	$x = 0.0895$	$y = 0.0441$	$y = 0.0014$	$z = 0.6983$	0.1667
$g^6G - g(2) 6\rangle$	1.7333	$x = 0.8974$	$y = 0.0909$	$y = 0.0117$		
$g^{(2s+1)L - f(J_p)} K\rangle \sum_{J,J'}^s$	$g^4G - f(2) 1\rangle$	0.3429	$x = 1.0000$			
$g^4G - f(2) 2\rangle$	0.5714	$x = 0.5357$	$y = 0.4000$	$y = 0.0643$		

TABLE 5b (CONTINUED)

$g^4G - f(2 3)$	0.8000	$x = 0.3183$	$y = 0.0378$	$z = 0.0689$	$z = 0.0011$
$g^4G - f(2 4)$	1.0286	$x = 0.1556$	$y = 0.0108$	$z = 0.0882$	
		$z = 0.0003$	0.0025		
$g^4G - f(2 5)$	1.2571	$x = 0.0000$	$y = 0.9333$	$z = 0.0000$	0.0019
$g^6G - f(2 1)$	0.5143	$x = 0.3333$	$y = 0.1111$		
$g^6G - f(2 2)$	0.8571	$x = 0.4365$	$y = 0.1524$	$z = 0.1000$	$z = 0.0111$
$g^6G - f(2 3)$	1.2000	$x = 0.5456$	$y = 0.1559$	$z = 0.0726$	
		$z = 0.0128$	0.0053		
$g^6G - f(2 4)$	1.5429	$x = 0.6741$	$y = 0.1317$	$z = 0.0404$	
		$z = 0.0091$	0.0033		
$g^6G - f(2 5)$	1.8657	$x = 0.8249$	$y = 0.0803$	$z = 0.0147$	
		$z = 0.0038$	0.0010		

TABLE 5c

TRANSITIONS BETWEEN LS AND JJ STATES. PARENT TERM: $5S$

$s^{(2s+1)L} - p(J_p, j)$	$\sum_{J_p, j}^s$				
$s^4S - p(2, \frac{1}{2})$	1.3333	$x = 0.8000$	$y = 0.2000$		
$s^4S - p(2, \frac{3}{2})$	2.6667	$x = 0.3500$	$y = 0.4000$	$z = 0.2500$	
$s^6S - p(2, \frac{1}{2})$	2.0000	$x = 0.4667$	$y = 0.5333$		
$s^6S - p(2, \frac{3}{2})$	4.0000	$x = 0.6667$	$y = 0.2667$	$z = 0.0667$	
$p^{(2s+1)L} - s(J_p, j)$	$\sum_{J_p, j}^s$				
$p^4P - s(2, \frac{1}{2})$	4.0000	$x = 0.0000$	$y = 0.5000$	$z = 0.0000$	0.1667
$p^6P - s(2, \frac{1}{2})$	6.0000	$x = 0.4444$	$y = 0.3333$	$z = 0.2222$	
$p^{(2s+1)L} - d(J_p, j)$	$\sum_{J_p, j}^s$				
$p^4P - d(2, \frac{3}{2})$	1.6000	$x = 0.6400$	$y = 0.0333$	$z = 0.0810$	0.0427
		$z = 0.0040$	0.0017		
$p^4P - d(2, \frac{5}{2})$	2.4000	$x = 0.2400$	$y = 0.1167$	$z = 0.0960$	0.1493
		$z = 0.0140$	0.0267		
$p^6P - d(2, \frac{3}{2})$	2.4000	$x = 0.0857$	$y = 0.1960$	$z = 0.0254$	0.0840
		$z = 0.1543$	0.0996		
$p^6P - d(2, \frac{5}{2})$	3.6000	$x = 0.5556$	$y = 0.0373$	$z = 0.1016$	0.0731
		$z = 0.0095$	0.0107	0.0044	
$d^{(2s+1)L} - p(J_p, j)$	$\sum_{J_p, j}^s$				
$d^4D - p(2, \frac{1}{2})$	1.3333	$x = 0.6400$	$y = 0.1260$	$z = 0.1440$	0.0640
		$z = 0.0160$	0.0100		
$d^4D - p(2, \frac{3}{2})$	2.6667	$x = 0.0000$	$y = 0.0630$	$z = 0.1280$	0.1250
		$y = 0.2800$	0.2520	$z = 0.0000$	0.0070
$d^6D - p(2, \frac{1}{2})$	2.0000	$x = 0.2400$	$y = 0.1493$	$z = 0.1707$	0.2240
		$z = 0.0560$	0.1600		

TABLE 5c (CONTINUED)

$d^6D - p(2, \frac{3}{2})$	4.0000	$x = 0.5000$	$y = 0.1371$	$z = 0.0187$	0.0000
		$y = 0.1429$	0.0975	$z = 0.0280$	0.0000
		$z = 0.0238$	0.0320	0.0200	
$d^{(2s+1)L} - f(J_p, j)$	$\sum_{J_p, j}^s$				
$d^4D - f(2, \frac{5}{2})$	1.7143	$x = 0.5714$	$y = 0.2449$	$z = 0.0853$	0.0200
		$y = 0.0408$	0.0279	$z = 0.0080$	0.0000
		$z = 0.0011$	0.0006	0.0000	
$d^4D - f(2, \frac{7}{2})$	2.2857	$x = 0.1964$	$y = 0.2449$	$z = 0.2160$	0.1600
		$y = 0.0408$	0.0705	$z = 0.0028$	0.0046
$d^6D - f(2, \frac{5}{2})$	2.5714	$x = 0.0323$	$y = 0.0860$	$z = 0.1190$	0.1156
		$y = 0.0047$	0.0147	$z = 0.0244$	0.0247
		$z = 0.1423$	0.1633	$z = 0.1234$	0.0632
$d^6D - f(2, \frac{7}{2})$	3.4286	$x = 0.5000$	$y = 0.2328$	$z = 0.0918$	0.0274
		$y = 0.0529$	0.0484	$z = 0.0264$	0.0081
		$z = 0.0026$	0.0033	0.0017	
$f^{(2s+1)L} - d(J_p, j)$	$\sum_{J_p, j}^s$				
$f^4F - d(2, \frac{3}{2})$	1.6000	$x = 0.5714$	$y = 0.2204$	$z = 0.0640$	0.0100
		$y = 0.0653$	0.0470	$z = 0.0033$	0.0026
$f^4F - d(2, \frac{5}{2})$	2.4000	$x = 0.0000$	$y = 0.0245$	$z = 0.0557$	0.0560
		$y = 0.2143$	0.2612	$z = 0.2240$	0.1600
		$z = 0.0000$	0.0012	0.0030	
$f^6F - d(2, \frac{3}{2})$	2.4000	$x = 0.1746$	$y = 0.1959$	$z = 0.1440$	0.0711
		$y = 0.0580$	0.1058	$z = 0.1138$	0.0889
		$z = 0.0073$	0.0185	0.0222	
$f^6F - d(2, \frac{5}{2})$	3.6000	$x = 0.4762$	$y = 0.2069$	$z = 0.0735$	0.0183
		$y = 0.0735$	0.0688	$z = 0.0397$	0.0144
		$z = 0.0059$	0.0087	0.0069	0.0028
$f^{(2s+1)L} - g(J_p, j)$	$\sum_{J_p, j}^s$				
$f^4F - g(2, \frac{7}{2})$	1.7778	$x = 0.5333$	$y = 0.2674$	$z = 0.1148$	0.0557
		$y = 0.0243$	0.0181	$z = 0.0057$	0.0000
		$z = 0.0004$	0.0002	0.0000	
$f^4F - g(2, \frac{9}{2})$	2.2222	$x = 0.1733$	$y = 0.2444$	$z = 0.2526$	0.2286
		$y = 0.0222$	0.0399	$z = 0.0367$	$z = 0.0009$
$f^6F - g(2, \frac{7}{2})$	2.6667	$x = 0.0164$	$y = 0.0462$	$z = 0.0686$	0.0726
		$y = 0.0014$	0.0044	$z = 0.0068$	0.0060
		$z = 0.1280$	0.1746	$z = 0.1715$	0.1429
$f^6F - g(2, \frac{9}{2})$	3.3333	$x = 0.4667$	$y = 0.2521$	$z = 0.1222$	0.0499
		$y = 0.0323$	0.0323	$z = 0.0200$	0.0073
		$z = 0.0010$	0.0013	0.0007	
$g^{(2s+1)L} - f(J_p, j)$	$\sum_{J_p, j}^s$				
$g^4G - f(2, \frac{5}{2})$	1.7143	$x = 0.5333$	$y = 0.2546$	$z = 0.1020$	0.0286
		$y = 0.0370$	0.0302	$z = 0.0122$	$z = 0.0011$
		$z = 0.0009$	0.0009		

TABLE 5c (CONTINUED)

$g^4G - f(2, \frac{1}{2})$	$z = 0.0000$	0.0127	0.0302	0.0310
	$y = 0.1833$	0.2546	0.2583	0.2286
	$z = 0.0000$	0.0004	0.0009	
$g^6G - f(2, \frac{3}{2})$	$z = 0.1444$	0.1940	0.1871	0.1524
	$y = 0.0282$	0.0554	0.0653	0.0508
	$z = 0.0019$	0.0045	0.0048	
$g^6G - f(2, \frac{5}{2})$	$z = 0.4537$	0.2364	0.1091	0.0416
	$y = 0.0442$	0.0462	0.0312	0.0145
	$z = 0.0021$	0.0032	0.0026	0.0011

TABLE 6a

TRANSITIONS BETWEEN LS AND LK STATES. PARENT TERM: $1P$

$d^{(2s+1)L} - pL[K]$	$\sum_{J,J'}^s$	0.6667	$z = 0.6667$	$y = 0.3333$
$s^2P - pS[0]$		0.6667	$z = 0.6667$	$y = 0.3333$
$s^2P - pP[1]$		2.0000	$z = 0.5556$	0.2222
$s^2P - pD[2]$		3.3333	$z = 0.6000$	0.3333
$p^{(2s+1)L} - sL[K]$	$\sum_{J,J'}^s$	0.6667	$z = 0.6667$	$y = 0.3333$
$p^2S - sP[1]$		2.0000	$z = 0.5556$	0.2222
$p^2P - sP[1]$		3.3333	$z = 0.6000$	0.3333
$p^{(2s+1)L} - dL[K]$	$\sum_{J,J'}^s$	0.6667	$z = 0.6667$	$y = 0.3333$
$p^2S - dP[1]$		0.5000	$z = 0.5556$	0.2222
$p^2P - dP[1]$		1.5000	$z = 0.6000$	0.3333
$p^2P - dD[2]$		0.0833	$z = 0.6000$	0.3333
$p^2D - dD[2]$		0.5000	$z = 0.5600$	0.3600
$p^2D - dF[3]$		2.8000	$z = 0.5714$	0.4000
$d^{(2s+1)L} - pL[K]$	$\sum_{J,J'}^s$	0.6667	$z = 0.6667$	$y = 0.3333$
$d^2P - pS[0]$		0.5000	$z = 0.5556$	0.2222
$d^2P - pP[1]$		0.0833	$z = 0.6000$	0.3333
$d^2D - pP[1]$		1.5000	$z = 0.6000$	0.3333
$d^2D - pD[2]$		0.5000	$z = 0.5600$	0.3600
$d^2F - pD[2]$		2.8000	$z = 0.5714$	0.4000

TABLE 6a (CONTINUED)

$d^{(2s+1)L} - fL[K]$	$\sum_{J,J'}^s$	1.2000	$z = 0.6000$	0.3333	$y = 0.0667$
$d^2P - fD[2]$		0.2222	$z = 0.5600$	0.3600	$y = 0.0400$
$d^2D - fF[3]$		1.7778	$z = 0.5714$	0.4000	$y = 0.0286$
$d^2F - fD[2]$		0.0063	$z = 0.5714$	0.4000	$y = 0.0286$
$d^2F - fF[3]$		0.2222	$z = 0.5510$	0.4082	$y = 0.0204$
$d^2F - fG[4]$		2.5714	$z = 0.5556$	0.4286	$y = 0.0159$
$f^{(2s+1)L} - dL[K]$	$\sum_{J,J'}^s$	1.2000	$z = 0.6000$	0.3333	$y = 0.0667$
$f^2D - dP[1]$		0.2222	$z = 0.5600$	0.3600	$y = 0.0400$
$f^2D - dD[2]$		0.0063	$z = 0.5714$	0.4000	$y = 0.0286$
$f^2F - dD[2]$		1.7778	$z = 0.5714$	0.4000	$y = 0.0286$
$f^2F - dF[3]$		0.2222	$z = 0.5510$	0.4082	$y = 0.0204$
$f^2G - dF[3]$		2.5714	$z = 0.5556$	0.4286	$y = 0.0159$
$f^{(2s+1)L} - gL[K]$	$\sum_{J,J'}^s$	1.4286	$z = 0.5714$	0.4000	$y = 0.0286$
$f^2D - gF[3]$		0.1250	$z = 0.5510$	0.4082	$y = 0.0204$
$f^2F - gG[4]$		1.8750	$z = 0.5556$	0.4286	$y = 0.0159$
$f^2G - gF[3]$		0.0020	$z = 0.5556$	0.4286	$y = 0.0159$
$f^2G - gG[4]$		0.1250	$z = 0.5432$	0.4321	$y = 0.0123$
$f^2G - gH[5]$		2.4444	$z = 0.5455$	0.4444	$y = 0.0101$
$g^{(2s+1)L} - fL[K]$	$\sum_{J,J'}^s$	1.4286	$z = 0.5714$	0.4000	$y = 0.0286$
$g^2F - fD[2]$		0.1250	$z = 0.5510$	0.4082	$y = 0.0204$
$g^2F - fF[3]$		0.0020	$z = 0.5556$	0.4286	$y = 0.0159$
$g^2F - fG[4]$		1.8750	$z = 0.5556$	0.4286	$y = 0.0159$
$g^2G - fG[4]$		0.1250	$z = 0.5432$	0.4321	$y = 0.0123$
$g^2H - fG[4]$		2.4444	$z = 0.5455$	0.4444	$y = 0.0101$

TABLE 6b

TRANSITIONS BETWEEN LS AND JK STATES. PARENT TERM: $1P$

$s^{(2s+1)L} - p(J_p) K$	$\sum_{J,J'}^s$	0.6667	$z = 0.6667$	$y = 0.3333$
$s^2P - p(1) 0$		2.0000	$z = 0.5556$	0.2222
$s^2P - p(1) 1$		3.3333	$z = 0.6000$	0.3333
$s^2P - p(1) 2$		2.8000	$z = 0.5714$	0.4000

TABLE 6b (CONTINUED)

$p^{(2S+1)L - s(J_p)[K]} \sum_{J_p, j}$	0.6667	$x = 0.6667$	$y = 0.3333$	$z = 0.1111$	$z = 0.1111$
$p^2S - s(1)[1]$	2.0000	$x = 0.5556$	$y = 0.2222$	$y = 0.1111$	$z = 0.1111$
$p^2P - s(1)[1]$	3.3333	$x = 0.6000$	$y = 0.3333$	$y = 0.0667$	
$p^2D - s(1)[1]$					
$p^{(2S+1)L - d(J_p)[K]} \sum_{J_p, j}$	0.6667	$x = 0.6667$	$y = 0.3333$	$z = 0.1111$	
$p^2S - d(1)[1]$	0.5000	$x = 0.5556$	$y = 0.2222$	$y = 0.1111$	$z = 0.1111$
$p^2P - d(1)[1]$	1.5000	$x = 0.6000$	$y = 0.3333$	$y = 0.0667$	
$p^2D - d(1)[2]$	0.0333	$x = 0.6000$	$y = 0.3333$	$y = 0.0667$	
$p^2D - d(1)[1]$	0.5000	$x = 0.5600$	$y = 0.3600$	$y = 0.0400$	$z = 0.0400$
$p^2D - d(1)[2]$	2.8000	$x = 0.5714$	$y = 0.4000$	$y = 0.0286$	
$d^{(2S+1)L - p(J_p)[K]} \sum_{J_p, j}$	0.6667	$x = 0.6667$	$y = 0.3333$	$z = 0.1111$	
$d^2P - p(1)[0]$	0.5000	$x = 0.5556$	$y = 0.2222$	$y = 0.1111$	$z = 0.1111$
$d^2P - p(1)[1]$	0.0333	$x = 0.6000$	$y = 0.3333$	$y = 0.0667$	
$d^2P - p(1)[2]$	1.5000	$x = 0.6000$	$y = 0.3333$	$y = 0.0667$	
$d^2D - p(1)[1]$	0.5000	$x = 0.5600$	$y = 0.3600$	$y = 0.0400$	$z = 0.0400$
$d^2D - p(1)[2]$	2.8000	$x = 0.5714$	$y = 0.4000$	$y = 0.0286$	
$d^{(2S+1)L - f(J_p)[K]} \sum_{J_p, j}$	1.2000	$x = 0.6000$	$y = 0.3333$	$y = 0.0667$	
$d^2P - f(1)[2]$	0.2222	$x = 0.5600$	$y = 0.3600$	$y = 0.0400$	$z = 0.0400$
$d^2D - f(1)[2]$	1.7778	$x = 0.5714$	$y = 0.4000$	$y = 0.0286$	
$d^2D - f(1)[3]$	0.0063	$x = 0.5714$	$y = 0.4000$	$y = 0.0286$	
$d^2F - f(1)[2]$	0.2222	$x = 0.5510$	$y = 0.4082$	$y = 0.0204$	$z = 0.0204$
$d^2F - f(1)[3]$	2.5714	$x = 0.5556$	$y = 0.4286$	$y = 0.0159$	
$f^{(2S+1)L - d(J_p)[K]} \sum_{J_p, j}$	1.2000	$x = 0.6000$	$y = 0.3333$	$y = 0.0667$	
$f^2D - d(1)[1]$	0.2222	$x = 0.5600$	$y = 0.3600$	$y = 0.0400$	$z = 0.0400$
$f^2D - d(1)[2]$	0.0063	$x = 0.5714$	$y = 0.4000$	$y = 0.0286$	
$f^2D - d(1)[3]$	1.7778	$x = 0.5714$	$y = 0.4000$	$y = 0.0286$	
$f^2F - d(1)[2]$	0.2222	$x = 0.5510$	$y = 0.4082$	$y = 0.0204$	$z = 0.0204$
$f^2F - d(1)[3]$	2.5714	$x = 0.5556$	$y = 0.4286$	$y = 0.0159$	
$f^{(2S+1)L - g(J_p)[K]} \sum_{J_p, j}$	1.4286	$x = 0.5714$	$y = 0.4000$	$y = 0.0286$	
$f^2D - g(1)[3]$	0.1250	$x = 0.5510$	$y = 0.4082$	$y = 0.0204$	$z = 0.0204$
$f^2F - g(1)[3]$	1.8750	$x = 0.5556$	$y = 0.4286$	$y = 0.0159$	
$f^2F - g(1)[4]$	0.0020	$x = 0.5452$	$y = 0.4321$	$y = 0.0123$	$z = 0.0123$
$f^2G - g(1)[3]$	2.4444	$x = 0.5455$	$y = 0.4444$	$y = 0.0101$	

TABLE 6b (CONTINUED)

$f^2G - g(1)[4]$	0.1250	$x = 0.5432$	$y = 0.4321$	$y = 0.0123$	$z = 0.0123$
$f^2G - g(1)[5]$	2.4444	$x = 0.5455$	$y = 0.4444$	$y = 0.0101$	
$g^{(2S+1)L - f(J_p)[K]} \sum_{J_p, j}$	1.4286	$x = 0.5714$	$y = 0.4000$	$y = 0.0286$	
$g^2F - f(1)[2]$	0.1250	$x = 0.5510$	$y = 0.4082$	$y = 0.0204$	$z = 0.0204$
$g^2F - f(1)[3]$	0.0020	$x = 0.5556$	$y = 0.4286$	$y = 0.0159$	
$g^2F - f(1)[4]$	1.8750	$x = 0.5556$	$y = 0.4286$	$y = 0.0159$	
$g^2G - f(1)[3]$	0.1250	$x = 0.5432$	$y = 0.4321$	$y = 0.0123$	$z = 0.0123$
$g^2G - f(1)[4]$	2.4444	$x = 0.5455$	$y = 0.4444$	$y = 0.0101$	

TABLE 6c

TRANSITIONS BETWEEN LS AND JJ STATES. PARENT TERM: 1P

$s^{(2S+1)L - p(J_p, j)} \sum_{J_p, j}$	2.0000	$x = 0.3704$	$y = 0.0370$	$y = 0.2963$	$z = 0.2963$
$s^2P - p(1, \frac{1}{2})$	4.0000	$x = 0.5000$	$y = 0.1852$	$y = 0.1481$	$z = 0.0185$
$s^2P - p(1, \frac{3}{2})$					
$p^{(2S+1)L - s(J_p, j)} \sum_{J_p, j}$	0.6667	$x = 0.6667$	$y = 0.3333$		
$p^2S - s(1, \frac{1}{2})$	2.0000	$x = 0.5556$	$y = 0.2222$	$y = 0.1111$	$z = 0.1111$
$p^2P - s(1, \frac{1}{2})$	3.3333	$x = 0.6000$	$y = 0.3333$	$y = 0.0667$	
$p^2D - s(1, \frac{1}{2})$					
$p^{(2S+1)L - d(J_p, j)} \sum_{J_p, j}$	0.2667	$x = 0.1667$	$y = 0.8333$		
$p^2S - d(1, \frac{3}{2})$	0.4000	$x = 1.0000$			
$p^2S - d(1, \frac{1}{2})$	0.8000	$x = 0.0750$	$y = 0.4444$	$y = 0.2722$	$z = 0.0694$
$p^2P - d(1, \frac{3}{2})$	1.2000	$x = 0.7000$	$y = 0.1667$	$y = 0.1333$	
$p^2P - d(1, \frac{1}{2})$	1.3333	$x = 0.1260$	$y = 0.1127$	$y = 0.0240$	$z = 0.7290$
$p^2D - d(1, \frac{3}{2})$	2.0000	$x = 0.8000$	$y = 0.0840$	$y = 0.0960$	$z = 0.0040$
$p^2D - d(1, \frac{1}{2})$					
$d^{(2S+1)L - p(J_p, j)} \sum_{J_p, j}$	0.4000	$x = 0.0741$	$y = 0.7407$	$y = 0.0926$	$z = 0.0926$
$d^2P - p(1, \frac{1}{2})$	0.8000	$x = 0.0250$	$y = 0.0370$	$y = 0.3130$	$z = 0.5787$
$d^2P - p(1, \frac{3}{2})$	0.6667	$x = 0.1000$	$y = 0.5000$	$y = 0.4000$	
$d^2D - p(1, \frac{1}{2})$	1.3333	$x = 0.2100$	$y = 0.0100$	$y = 0.6400$	$z = 0.0150$
$d^2D - p(1, \frac{3}{2})$	0.9333	$x = 1.0000$			
$d^2F - p(1, \frac{1}{2})$	1.8667	$x = 0.8571$	$y = 0.1000$	$y = 0.0429$	
$d^2F - p(1, \frac{3}{2})$					

TABLE 6c (CONTINUED)

$d^{(2S+1)L} - f(J_p, j)$	$\sum_{J_p, j}^s$	$f^{(2S+1)L} - d(J_p, j)$	$\sum_{J_p, j}^s$
$d^2P - f(1, \frac{5}{2})$	0.5143	$f^2D - d(1, \frac{3}{2})$	0.5714
$d^2P - f(1, \frac{7}{2})$	$x = 0.0667 \ y = 0.7778 \ z = 0.1556$	$f^2D - d(1, \frac{5}{2})$	0.8571
$d^2D - f(1, \frac{5}{2})$	$x = 1.0000$	$f^2F - d(1, \frac{3}{2})$	0.8000
$d^2D - f(1, \frac{7}{2})$	$x = 0.0423 \ y = 0.1029 \ z = 0.0104$	$f^2F - d(1, \frac{5}{2})$	1.2000
$d^2F - f(1, \frac{5}{2})$	$x = 0.8571 \ y = 0.0667 \ z = 0.0762$	$f^2G - d(1, \frac{3}{2})$	1.0286
$d^2F - f(1, \frac{7}{2})$	$x = 0.0583 \ y = 0.0052 \ z = 0.8638$	$f^2G - d(1, \frac{5}{2})$	1.5429
$d^2P - f(1, \frac{5}{2})$	$x = 0.8929 \ y = 0.0583 \ z = 0.0012$	$f^{(2S+1)L} - g(J_p, j)$	$\sum_{J_p, j}^s$
		$f^2D - g(1, \frac{1}{2})$	0.6349
		$f^2D - g(1, \frac{3}{2})$	0.7937
		$f^2F - g(1, \frac{1}{2})$	0.8889
		$f^2F - g(1, \frac{3}{2})$	1.1111
		$f^2G - g(1, \frac{1}{2})$	1.1429
		$f^2G - g(1, \frac{3}{2})$	1.4286
		$g^{(2S+1)L} - f(J_p, j)$	$\sum_{J_p, j}^s$
		$g^2F - f(1, \frac{5}{2})$	0.9667
		$g^2F - f(1, \frac{7}{2})$	0.8889
		$g^2G - f(1, \frac{5}{2})$	0.8571
		$g^2G - f(1, \frac{7}{2})$	1.1429
		$g^2H - f(1, \frac{5}{2})$	1.0476
		$g^2H - f(1, \frac{7}{2})$	1.3968

TABLE 7a

TRANSITIONS BETWEEN LS AND LK STATES. PARENT TERM: 2P

$s^{(2S+1)L} - p L'[K]$	$\sum_{J_p, j}^s$
$s^1P - p S[\frac{1}{2}]$	0.3333
$s^1P - p P[\frac{1}{2}]$	0.3333

TABLE 7a (CONTINUED)

$s^1P - p P[\frac{3}{2}]$	0.6667	$x = 0.0000 \ y = 1.0000$
$s^1P - p D[\frac{1}{2}]$	0.6667	$x = 1.0000 \ y = 0.0000$
$s^1P - p D[\frac{3}{2}]$	1.0000	$x = 1.0000$
$s^3P - p S[\frac{1}{2}]$	1.0000	$x = 0.5556 \ y = 0.3333 \ z = 0.1111$
$s^3P - p P[\frac{1}{2}]$	1.0000	$x = 0.2778 \ y = 0.1667 \ z = 0.2222$
$s^3P - p P[\frac{3}{2}]$	2.0000	$x = 0.6250 \ y = 0.0694 \ z = 0.2083 \ 0.0556$
$s^3P - p D[\frac{1}{2}]$	2.0000	$x = 0.1250 \ y = 0.0139 \ z = 0.3750 \ 0.2778$
$s^3P - p D[\frac{3}{2}]$	3.0000	$x = 0.7778 \ y = 0.0556$
$p^{(2S+1)L} - s L'[K]$	$\sum_{J_p, j}^s$	
$p^1S - s P[\frac{1}{2}]$	0.1111	$x = 1.0000$
$p^1S - s P[\frac{3}{2}]$	0.2222	$x = 1.0000$
$p^3S - s P[\frac{1}{2}]$	0.3333	$x = 0.6667 \ y = 0.3333$
$p^3S - s P[\frac{3}{2}]$	0.6667	$x = 0.8333 \ y = 0.1667$
$p^1P - s P[\frac{1}{2}]$	0.3333	$x = 1.0000 \ y = 0.0000$
$p^1P - s P[\frac{3}{2}]$	0.6667	$x = 0.0000 \ y = 1.0000$
$p^3P - s P[\frac{1}{2}]$	1.0000	$x = 0.2778 \ y = 0.1667 \ z = 0.2222$
$p^3P - s P[\frac{3}{2}]$	2.0000	$x = 0.6250 \ y = 0.0694 \ z = 0.2083 \ 0.0556$
$p^1D - s P[\frac{1}{2}]$	0.5556	$x = 1.0000$
$p^1D - s P[\frac{3}{2}]$	1.1111	$x = 0.0000 \ y = 1.0000$
$p^3D - s P[\frac{1}{2}]$	1.6667	$x = 0.5000 \ y = 0.1667$
$p^3D - s P[\frac{3}{2}]$	3.3333	$x = 0.7000 \ y = 0.1250 \ z = 0.0083$
$p^{(2S+1)L} - d L'[K]$	$\sum_{J_p, j}^s$	
$p^1S - d P[\frac{1}{2}]$	0.1111	$x = 1.0000$
$p^1S - d P[\frac{3}{2}]$	0.2222	$x = 1.0000$
$p^3S - d P[\frac{1}{2}]$	0.3333	$x = 0.6667 \ y = 0.3333$
$p^3S - d P[\frac{3}{2}]$	0.6667	$x = 0.8333 \ y = 0.1667$
$p^1P - d P[\frac{1}{2}]$	0.0833	$x = 1.0000 \ y = 0.0000$
$p^1P - d P[\frac{3}{2}]$	0.1667	$x = 0.0000 \ y = 1.0000$
$p^3P - d P[\frac{1}{2}]$	0.3000	$x = 1.0000 \ y = 0.0000$
$p^3P - d P[\frac{3}{2}]$	0.4500	$x = 1.0000$
$p^1D - d P[\frac{1}{2}]$	0.2500	$x = 0.2778 \ y = 0.1667 \ z = 0.2222$
$p^1D - d P[\frac{3}{2}]$	0.5000	$x = 0.6250 \ y = 0.0694 \ z = 0.2083 \ 0.0556$
$p^3D - d P[\frac{1}{2}]$	0.9000	$x = 0.1250 \ y = 0.0139 \ z = 0.3750 \ 0.2778$
$p^3D - d P[\frac{3}{2}]$	1.3500	$x = 0.7778 \ y = 0.0556$
$p^1D - d F[\frac{1}{2}]$	0.0056	$x = 1.0000$
$p^1D - d F[\frac{3}{2}]$	0.0111	$x = 0.0000 \ y = 1.0000$
$p^1D - d D[\frac{1}{2}]$	0.1000	$x = 1.0000 \ y = 0.0000$
$p^1D - d D[\frac{3}{2}]$	0.1500	$x = 0.0000 \ y = 1.0000$
$p^1D - d F[\frac{5}{2}]$	0.6000	$x = 1.0000 \ y = 0.0000$
$p^1D - d F[\frac{7}{2}]$	0.8000	$x = 1.0000$
$p^3D - d P[\frac{1}{2}]$	0.0167	$x = 0.5000 \ y = 0.1667$
$p^3D - d P[\frac{3}{2}]$	0.0333	$x = 0.7000 \ y = 0.1250 \ z = 0.0083$
$p^3D - d D[\frac{1}{2}]$	0.3000	$x = 0.0778 \ y = 0.3472 \ z = 0.0750$

TABLE 7a (CONTINUED)

$p^3D - dD \left[\frac{5}{2} \right]$	0.4500	$x = 0.6914$	$y = 0.1543$	$z = 0.0346$	$z = 0.0864$	0.0333
$p^3D - dF \left[\frac{5}{2} \right]$	1.8000	$x = 0.0494$	$y = 0.0864$	$z = 0.0025$	$z = 0.3951$	0.4667
$p^3D - dF \left[\frac{7}{2} \right]$	2.4000	$x = 0.7500$	$y = 0.2222$	$z = 0.0278$		
$d^{(2s+1)L} - pL[K]$	$\sum_{J,J'}^s$					
$d^1P - pS \left[\frac{1}{2} \right]$	0.3333	$x = 0.0000$	$y = 1.0000$			
$d^1P - pP \left[\frac{1}{2} \right]$	0.0833	$x = 1.0000$	$y = 0.0000$			
$d^1P - pP \left[\frac{3}{2} \right]$	0.1667	$x = 0.0000$	$y = 1.0000$			
$d^1P - pD \left[\frac{3}{2} \right]$	0.0067	$x = 1.0000$	$y = 0.0000$			
$d^1P - pD \left[\frac{5}{2} \right]$	0.0100	$x = 1.0000$				
$d^3P - pS \left[\frac{1}{2} \right]$	1.0000	$x = 0.5556$	$y = 0.0000$	$z = 0.3333$	$z = 0.1111$	
$d^3P - pP \left[\frac{1}{2} \right]$	0.2500	$x = 0.2778$	$y = 0.3333$	$z = 0.1667$	$z = 0.2222$	
$d^3P - pP \left[\frac{3}{2} \right]$	0.5000	$x = 0.6250$	$y = 0.0417$	$z = 0.0694$	$z = 0.2083$	0.0556
$d^3P - pD \left[\frac{3}{2} \right]$	0.0200	$x = 0.1250$	$y = 0.2083$	$z = 0.0139$	$z = 0.3750$	0.2778
$d^3P - pD \left[\frac{5}{2} \right]$	0.0300	$x = 0.7778$	$y = 0.1667$	$z = 0.0556$		
$d^1D - pP \left[\frac{1}{2} \right]$	0.2500	$x = 1.0000$				
$d^1D - pP \left[\frac{3}{2} \right]$	0.5000	$x = 0.0000$	$y = 1.0000$			
$d^1D - pD \left[\frac{3}{2} \right]$	0.1000	$x = 1.0000$	$y = 0.0000$			
$d^1D - pD \left[\frac{5}{2} \right]$	0.1500	$x = 0.0000$	$y = 1.0000$			
$d^3D - pP \left[\frac{1}{2} \right]$	0.7500	$x = 0.5000$	$y = 0.3333$	$z = 0.1667$		
$d^3D - pP \left[\frac{3}{2} \right]$	1.5000	$x = 0.7000$	$y = 0.1250$	$z = 0.1250$	$z = 0.0417$	0.0083
$d^3D - pD \left[\frac{3}{2} \right]$	0.3000	$x = 0.0778$	$y = 0.1250$	$z = 0.3472$	$z = 0.3750$	0.0750
$d^3D - pD \left[\frac{5}{2} \right]$	0.4500	$x = 0.6914$	$y = 0.1543$	$z = 0.0346$	$z = 0.0864$	0.0333
$d^1F - pD \left[\frac{3}{2} \right]$	0.5800	$x = 1.0000$				
$d^1F - pD \left[\frac{5}{2} \right]$	0.8400	$x = 0.0000$	$y = 1.0000$			
$d^3F - pD \left[\frac{3}{2} \right]$	1.6800	$x = 0.4444$	$y = 0.5000$	$z = 0.0556$		
$d^3F - pD \left[\frac{5}{2} \right]$	2.5200	$x = 0.7143$	$y = 0.1975$	$z = 0.0617$	$z = 0.0247$	0.0018
$d^{(2s+1)L} - fL[K]$	$\sum_{J,J'}^s$					
$d^1P - fD \left[\frac{3}{2} \right]$	0.2400	$x = 1.0000$	$y = 0.0000$			
$d^1P - fD \left[\frac{5}{2} \right]$	0.3600	$x = 1.0000$				
$d^3P - fD \left[\frac{3}{2} \right]$	0.7200	$x = 0.1250$	$y = 0.2083$	$z = 0.0139$	$z = 0.3750$	0.2778
$d^3P - fD \left[\frac{5}{2} \right]$	1.0800	$x = 0.7778$	$y = 0.1667$	$z = 0.0556$		
$d^1D - fD \left[\frac{3}{2} \right]$	0.0444	$x = 1.0000$	$y = 0.0000$			
$d^1D - fD \left[\frac{5}{2} \right]$	0.0667	$x = 0.0000$	$y = 1.0000$			
$d^1D - fF \left[\frac{3}{2} \right]$	0.3810	$x = 1.0000$	$y = 0.0000$			
$d^1D - fF \left[\frac{5}{2} \right]$	0.5079	$x = 1.0000$				
$d^3D - fD \left[\frac{3}{2} \right]$	0.1333	$x = 0.0778$	$y = 0.1250$	$z = 0.3472$	$z = 0.3750$	0.0750
$d^3D - fD \left[\frac{5}{2} \right]$	0.2000	$x = 0.6914$	$y = 0.1543$	$z = 0.0346$	$z = 0.0864$	0.0333
$d^3D - fF \left[\frac{3}{2} \right]$	1.1429	$x = 0.0494$	$y = 0.0864$	$z = 0.0025$	$z = 0.3951$	0.4667
$d^3D - fF \left[\frac{5}{2} \right]$	1.5238	$x = 0.7500$	$y = 0.2222$	$z = 0.0278$		
$d^1F - fD \left[\frac{3}{2} \right]$	0.0013	$x = 1.0000$				
$d^1F - fD \left[\frac{5}{2} \right]$	0.0019	$x = 0.0000$	$y = 1.0000$			
$d^1F - fF \left[\frac{3}{2} \right]$	0.0176	$x = 1.0000$	$y = 0.0000$			
$d^1F - fF \left[\frac{5}{2} \right]$	0.0635	$x = 0.0000$	$y = 1.0000$			

TABLE 7a (CONTINUED)

$d^1F - fG \left[\frac{7}{2} \right]$	0.5714	$x = 1.0000$	$y = 0.0000$			
$d^1F - fG \left[\frac{9}{2} \right]$	0.7143	$x = 1.0000$				
$d^3F - fD \left[\frac{3}{2} \right]$	0.0038	$x = 0.4444$	$y = 0.5000$	$z = 0.0556$		
$d^3F - fD \left[\frac{5}{2} \right]$	0.0057	$x = 0.7143$	$y = 0.1975$	$z = 0.0617$	$z = 0.0247$	0.0018
$d^3F - fF \left[\frac{3}{2} \right]$	0.1429	$x = 0.0357$	$y = 0.0617$	$z = 0.3735$	$z = 0.4938$	0.0353
$d^3F - fF \left[\frac{5}{2} \right]$	0.1905	$x = 0.7031$	$y = 0.2101$	$z = 0.0201$	$z = 0.0469$	0.0198
$d^3F - fG \left[\frac{7}{2} \right]$	1.7143	$x = 0.0280$	$y = 0.0469$	$z = 0.0007$	$z = 0.3906$	0.5357
$d^3F - fG \left[\frac{9}{2} \right]$	2.1429	$x = 0.7333$	$y = 0.2500$	$z = 0.0167$		
$f^{(2s+1)L} - dL[K]$	$\sum_{J,J'}^s$					
$f^1D - dP \left[\frac{1}{2} \right]$	0.2000	$x = 1.0000$				
$f^1D - dP \left[\frac{3}{2} \right]$	0.4000	$x = 0.0000$	$y = 1.0000$			
$f^1D - dD \left[\frac{3}{2} \right]$	0.0444	$x = 1.0000$	$y = 0.0000$			
$f^1D - dD \left[\frac{5}{2} \right]$	0.0667	$x = 0.0000$	$y = 1.0000$			
$f^1D - dF \left[\frac{3}{2} \right]$	0.0014	$x = 1.0000$	$y = 0.0000$			
$f^1D - dF \left[\frac{5}{2} \right]$	0.0018	$x = 1.0000$				
$f^3D - dP \left[\frac{1}{2} \right]$	0.6000	$x = 0.5000$	$y = 0.3333$	$z = 0.1667$		
$f^3D - dP \left[\frac{3}{2} \right]$	1.2000	$x = 0.7000$	$y = 0.1250$	$z = 0.1250$	$z = 0.0417$	0.0083
$f^3D - dD \left[\frac{3}{2} \right]$	0.1333	$x = 0.0778$	$y = 0.1250$	$z = 0.3472$	$z = 0.3750$	0.0750
$f^3D - dD \left[\frac{5}{2} \right]$	0.2000	$x = 0.6914$	$y = 0.1543$	$z = 0.0346$	$z = 0.0864$	0.0333
$f^3D - dF \left[\frac{3}{2} \right]$	0.0041	$x = 0.0494$	$y = 0.0864$	$z = 0.0025$	$z = 0.3951$	0.4667
$f^3D - dF \left[\frac{5}{2} \right]$	0.0054	$x = 0.7500$	$y = 0.2222$	$z = 0.0278$		
$f^1F - dD \left[\frac{3}{2} \right]$	0.3556	$x = 1.0000$				
$f^1F - dD \left[\frac{5}{2} \right]$	0.5333	$x = 0.0000$	$y = 1.0000$			
$f^1F - dF \left[\frac{3}{2} \right]$	0.0476	$x = 1.0000$	$y = 0.0000$			
$f^1F - dF \left[\frac{5}{2} \right]$	0.0635	$x = 0.0000$	$y = 1.0000$			
$f^3F - dD \left[\frac{3}{2} \right]$	1.0667	$x = 0.4444$	$y = 0.5000$	$z = 0.0556$		
$f^3F - dD \left[\frac{5}{2} \right]$	1.6000	$x = 0.7143$	$y = 0.1975$	$z = 0.0617$	$z = 0.0247$	0.0018
$f^3F - dF \left[\frac{3}{2} \right]$	0.1429	$x = 0.0357$	$y = 0.0617$	$z = 0.3735$	$z = 0.4938$	0.0353
$f^3F - dF \left[\frac{5}{2} \right]$	0.1905	$x = 0.7031$	$y = 0.2101$	$z = 0.0201$	$z = 0.0469$	0.0198
$f^1G - dF \left[\frac{3}{2} \right]$	0.5510	$x = 1.0000$				
$f^1G - dF \left[\frac{5}{2} \right]$	0.7347	$x = 0.0000$	$y = 1.0000$			
$f^3G - dF \left[\frac{3}{2} \right]$	1.6531	$x = 0.4167$	$y = 0.5556$	$z = 0.0278$		
$f^3G - dF \left[\frac{5}{2} \right]$	2.2041	$x = 0.7130$	$y = 0.2344$	$z = 0.0365$	$z = 0.0156$	0.0006
$f^{(2s+1)L} - gL[K]$	$\sum_{J,J'}^s$					
$f^1D - gF \left[\frac{3}{2} \right]$	0.3061	$x = 1.0000$	$y = 0.0000$			
$f^1D - gF \left[\frac{5}{2} \right]$	0.4082	$x = 1.0000$				
$f^3D - gF \left[\frac{3}{2} \right]$	0.9184	$x = 0.0494$	$y = 0.0864$	$z = 0.0025$	$z = 0.3951$	0.4667
$f^3D - gF \left[\frac{5}{2} \right]$	1.2245	$x = 0.7500$	$y = 0.2222$	$z = 0.0278$		
$f^1F - gF \left[\frac{3}{2} \right]$	0.0288	$x = 1.0000$	$y = 0.0000$			
$f^1F - gF \left[\frac{5}{2} \right]$	0.0357	$x = 0.0000$	$y = 1.0000$			
$f^1F - gG \left[\frac{7}{2} \right]$	0.4167	$x = 1.0000$	$y = 0.0000$			
$f^1F - gG \left[\frac{9}{2} \right]$	0.5208	$x = 1.0000$				
$f^3F - gF \left[\frac{3}{2} \right]$	0.0804	$x = 0.0357$	$y = 0.0617$	$z = 0.3735$	$z = 0.4938$	0.0353

TABLE 7a (CONTINUED)

$f^3F - g^3F \left\{ \frac{1}{2} \right\}$	0.1071	$x = 0.7031$	$z = 0.0201$	$y = 0.0469$	$z = 0.0198$
$f^3F - g^3G \left\{ \frac{1}{2} \right\}$	1.2500	$x = 0.0260$	$z = 0.0469$	$y = 0.0007$	$z = 0.3906$
$f^3F - g^3G \left\{ \frac{3}{2} \right\}$	1.5625	$x = 0.7333$	$z = 0.2500$	$y = 0.0167$	
$f^1G - g^1F \left\{ \frac{1}{2} \right\}$	0.0004	$x = 1.0000$			
$f^1G - g^1F \left\{ \frac{3}{2} \right\}$	0.0006	$x = 0.0000$	$y = 1.0000$		
$f^1G - g^1G \left\{ \frac{1}{2} \right\}$	0.0278	$x = 1.0000$	$y = 0.0000$		
$f^1G - g^1G \left\{ \frac{3}{2} \right\}$	0.0347	$x = 0.0000$	$y = 1.0000$		
$f^1G - g^1H \left\{ \frac{1}{2} \right\}$	0.5556	$x = 1.0000$	$y = 0.0000$		
$f^1G - g^1H \left\{ \frac{3}{2} \right\}$	0.6667	$x = 1.0000$			
$f^3G - g^3F \left\{ \frac{1}{2} \right\}$	0.0013	$x = 0.4167$	$z = 0.5556$	$y = 0.0278$	
$f^3G - g^3F \left\{ \frac{3}{2} \right\}$	0.0017	$x = 0.7130$	$z = 0.2344$	$y = 0.0365$	$z = 0.0006$
$f^3G - g^3G \left\{ \frac{1}{2} \right\}$	0.0833	$x = 0.0204$	$z = 0.0365$	$y = 0.3760$	$z = 0.0203$
$f^3G - g^3G \left\{ \frac{3}{2} \right\}$	0.1042	$x = 0.7040$	$z = 0.2407$	$y = 0.0130$	$z = 0.0293$
$f^3G - g^3H \left\{ \frac{1}{2} \right\}$	1.6667	$x = 0.0160$	$z = 0.0293$	$y = 0.0003$	$z = 0.3840$
$f^3G - g^3H \left\{ \frac{3}{2} \right\}$	2.0000	$x = 0.7223$	$z = 0.2667$	$y = 0.0111$	
$g^{(2s+1)L} - f^{L K} \sum_{J,J'}^e$					
$g^1F - f^1D \left\{ \frac{1}{2} \right\}$	0.2857	$x = 1.0000$			
$g^1F - f^1D \left\{ \frac{3}{2} \right\}$	0.4286	$x = 0.0000$	$y = 1.0000$		
$g^1F - f^1F \left\{ \frac{1}{2} \right\}$	0.0268	$x = 1.0000$	$y = 0.0000$		
$g^1F - f^1F \left\{ \frac{3}{2} \right\}$	0.0357	$x = 0.0000$	$y = 1.0000$		
$g^1F - f^1G \left\{ \frac{1}{2} \right\}$	0.0004	$x = 1.0000$	$y = 0.0000$		
$g^1F - f^1G \left\{ \frac{3}{2} \right\}$	0.0006	$x = 1.0000$			
$g^3F - f^1D \left\{ \frac{1}{2} \right\}$	0.8571	$x = 0.4444$	$z = 0.5000$	$y = 0.0556$	
$g^3F - f^1D \left\{ \frac{3}{2} \right\}$	1.2857	$x = 0.7143$	$z = 0.1975$	$y = 0.0617$	$z = 0.0018$
$g^3F - f^1F \left\{ \frac{1}{2} \right\}$	0.0804	$x = 0.0357$	$z = 0.0617$	$y = 0.3735$	$z = 0.0553$
$g^3F - f^1F \left\{ \frac{3}{2} \right\}$	0.1071	$x = 0.7031$	$z = 0.2101$	$y = 0.0201$	$z = 0.0469$
$g^3F - f^1G \left\{ \frac{1}{2} \right\}$	0.0013	$x = 0.0260$	$z = 0.0469$	$y = 0.0007$	$z = 0.3906$
$g^3F - f^1G \left\{ \frac{3}{2} \right\}$	0.0017	$x = 0.7333$	$z = 0.2500$	$y = 0.0167$	
$g^1G - f^1F \left\{ \frac{1}{2} \right\}$	0.4018	$x = 1.0000$			
$g^1G - f^1F \left\{ \frac{3}{2} \right\}$	0.5357	$x = 0.0000$	$y = 1.0000$		
$g^1G - f^1G \left\{ \frac{1}{2} \right\}$	0.0278	$x = 1.0000$	$y = 0.0000$		
$g^1G - f^1G \left\{ \frac{3}{2} \right\}$	0.0347	$x = 0.0000$	$y = 1.0000$		
$g^3G - f^1F \left\{ \frac{1}{2} \right\}$	1.2054	$x = 0.4167$	$z = 0.5556$	$y = 0.0278$	
$g^3G - f^1F \left\{ \frac{3}{2} \right\}$	1.6071	$x = 0.7130$	$z = 0.2344$	$y = 0.0365$	$z = 0.0006$
$g^3G - f^1G \left\{ \frac{1}{2} \right\}$	0.0833	$x = 0.0204$	$z = 0.0365$	$y = 0.3760$	$z = 0.0203$
$g^3G - f^1G \left\{ \frac{3}{2} \right\}$	0.1042	$x = 0.7040$	$z = 0.2407$	$y = 0.0130$	$z = 0.0293$
$g^1H - f^1G \left\{ \frac{1}{2} \right\}$	0.5432	$x = 1.0000$			
$g^1H - f^1G \left\{ \frac{3}{2} \right\}$	0.6790	$x = 0.0000$	$y = 1.0000$		
$g^3H - f^1G \left\{ \frac{1}{2} \right\}$	1.6296	$x = 0.4000$	$z = 0.5833$	$y = 0.0167$	
$g^3H - f^1G \left\{ \frac{3}{2} \right\}$	2.0370	$x = 0.7091$	$z = 0.2560$	$y = 0.0240$	$z = 0.0002$

TABLE 7b

TRANSITIONS BETWEEN LS AND JK STATES. PARENT TERM: $2P$

$e^{(2s+1)L} - p^{(J_p K)} \sum_{J,J'}^e$					
$e^1P - p^1\left\{ \frac{1}{2} \right\} \left\{ \frac{1}{2} \right\}$	0.3333	$x = 0.6667$	$y = 0.3333$		
$e^1P - p^1\left\{ \frac{1}{2} \right\} \left\{ \frac{3}{2} \right\}$	0.6667	$x = 0.8333$	$y = 0.1667$		
$e^1P - p^1\left\{ \frac{3}{2} \right\} \left\{ \frac{1}{2} \right\}$	0.3333	$x = 0.3333$	$y = 0.6667$		
$e^1P - p^1\left\{ \frac{3}{2} \right\} \left\{ \frac{3}{2} \right\}$	0.6667	$x = 0.1667$	$y = 0.8333$		
$e^3P - p^3\left\{ \frac{1}{2} \right\} \left\{ \frac{1}{2} \right\}$	1.0000	$x = 1.0000$			
$e^3P - p^3\left\{ \frac{1}{2} \right\} \left\{ \frac{3}{2} \right\}$	1.0000	$x = 0.0000$	$z = 0.2222$	$y = 0.4444$	$z = 0.3333$
$e^3P - p^3\left\{ \frac{3}{2} \right\} \left\{ \frac{1}{2} \right\}$	2.0000	$x = 0.0000$	$z = 0.1111$	$y = 0.0000$	$z = 0.5556$
$e^3P - p^3\left\{ \frac{3}{2} \right\} \left\{ \frac{3}{2} \right\}$	1.0000	$x = 0.8333$	$z = 0.1111$	$y = 0.0556$	$z = 0.0000$
$e^3P - p^3\left\{ \frac{5}{2} \right\} \left\{ \frac{1}{2} \right\}$	2.0000	$x = 0.7500$	$z = 0.1389$	$y = 0.0833$	$z = 0.0278$
$e^3P - p^3\left\{ \frac{5}{2} \right\} \left\{ \frac{3}{2} \right\}$	3.0000	$x = 0.7778$	$z = 0.1667$	$y = 0.0556$	
$p^{(2s+1)L} - e^{(J_p K)} \sum_{J,J'}^e$					
$p^1S - e^1\left\{ \frac{1}{2} \right\} \left\{ \frac{1}{2} \right\}$	0.1111	$x = 1.0000$			
$p^1S - e^1\left\{ \frac{1}{2} \right\} \left\{ \frac{3}{2} \right\}$	0.2222	$x = 1.0000$			
$p^3S - e^3\left\{ \frac{1}{2} \right\} \left\{ \frac{1}{2} \right\}$	0.3333	$x = 0.6667$	$y = 0.3333$		
$p^3S - e^3\left\{ \frac{1}{2} \right\} \left\{ \frac{3}{2} \right\}$	0.6667	$x = 0.8333$	$y = 0.1667$		
$p^1P - e^1\left\{ \frac{1}{2} \right\} \left\{ \frac{1}{2} \right\}$	0.3333	$x = 1.0000$	$y = 0.0000$		
$p^1P - e^1\left\{ \frac{1}{2} \right\} \left\{ \frac{3}{2} \right\}$	0.6667	$x = 0.0000$	$y = 1.0000$		
$p^3P - e^3\left\{ \frac{1}{2} \right\} \left\{ \frac{1}{2} \right\}$	1.0000	$x = 0.2778$	$z = 0.3333$	$y = 0.1667$	$z = 0.2222$
$p^3P - e^3\left\{ \frac{1}{2} \right\} \left\{ \frac{3}{2} \right\}$	2.0000	$x = 0.6250$	$z = 0.0417$	$y = 0.0694$	$z = 0.2063$
$p^1D - e^1\left\{ \frac{1}{2} \right\} \left\{ \frac{1}{2} \right\}$	0.5556	$x = 1.0000$			
$p^1D - e^1\left\{ \frac{3}{2} \right\} \left\{ \frac{1}{2} \right\}$	1.1111	$x = 0.0000$	$y = 1.0000$		
$p^3D - e^3\left\{ \frac{1}{2} \right\} \left\{ \frac{1}{2} \right\}$	1.6667	$x = 0.5000$	$z = 0.3333$	$y = 0.1667$	
$p^3D - e^3\left\{ \frac{1}{2} \right\} \left\{ \frac{3}{2} \right\}$	3.3333	$x = 0.7000$	$z = 0.1250$	$y = 0.1250$	$z = 0.0083$
$p^{(2s+1)L} - d^{(J_p K)} \sum_{J,J'}^e$					
$p^1S - d^1\left\{ \frac{1}{2} \right\} \left\{ \frac{1}{2} \right\}$	0.1111	$x = 1.0000$			
$p^1S - d^1\left\{ \frac{1}{2} \right\} \left\{ \frac{3}{2} \right\}$	0.1111	$x = 1.0000$			
$p^3S - d^3\left\{ \frac{1}{2} \right\} \left\{ \frac{1}{2} \right\}$	0.1111	$x = 1.0000$			
$p^3S - d^3\left\{ \frac{1}{2} \right\} \left\{ \frac{3}{2} \right\}$	0.3333	$x = 0.8333$	$y = 0.1667$		
$p^1P - d^1\left\{ \frac{1}{2} \right\} \left\{ \frac{1}{2} \right\}$	0.3333	$x = 0.6667$	$y = 0.3333$		
$p^1P - d^1\left\{ \frac{1}{2} \right\} \left\{ \frac{3}{2} \right\}$	0.3333	$x = 0.8333$	$y = 0.1667$		
$p^3P - d^3\left\{ \frac{1}{2} \right\} \left\{ \frac{1}{2} \right\}$	0.2333	$x = 0.6429$	$y = 0.3571$		
$p^3P - d^3\left\{ \frac{1}{2} \right\} \left\{ \frac{3}{2} \right\}$	0.1000	$x = 1.0000$			
$p^1P - d^1\left\{ \frac{3}{2} \right\} \left\{ \frac{1}{2} \right\}$	0.0833	$x = 1.0000$	$y = 0.0000$		
$p^1P - d^1\left\{ \frac{3}{2} \right\} \left\{ \frac{3}{2} \right\}$	0.2333	$x = 0.6429$	$y = 0.3571$		
$p^3P - d^3\left\{ \frac{3}{2} \right\} \left\{ \frac{1}{2} \right\}$	0.3500	$x = 1.0000$			
$p^3P - d^3\left\{ \frac{3}{2} \right\} \left\{ \frac{3}{2} \right\}$	0.7000	$x = 0.0357$	$z = 0.0595$	$y = 0.0040$	$z = 0.5833$
$p^3P - d^3\left\{ \frac{5}{2} \right\} \left\{ \frac{1}{2} \right\}$	0.3000	$x = 0.7778$	$z = 0.1667$	$y = 0.0556$	
$p^3P - d^3\left\{ \frac{5}{2} \right\} \left\{ \frac{3}{2} \right\}$	0.2500	$x = 0.2778$	$z = 0.3333$	$y = 0.1667$	$z = 0.2222$
$p^3P - d^3\left\{ \frac{7}{2} \right\} \left\{ \frac{1}{2} \right\}$	0.7000	$x = 0.5714$	$z = 0.2381$	$y = 0.0635$	$z = 0.0476$

TABLE 10 (CONTINUED)

$p^3P - d(3/2)1/2$	1.0500	$x = 0.7778$	$y = 0.1667$	$z = 0.0556$
$p^1D - d(1/2)3/2$	0.0556	$x = 0.9000$	$y = 0.1000$	
$p^1D - d(1/2)1/2$	0.5000	$x = 0.9333$	$y = 0.0667$	
$p^1D - d(3/2)1/2$	0.0056	$x = 1.0000$		
$p^1D - d(3/2)3/2$	0.0556	$x = 0.9000$	$y = 0.1000$	
$p^1D - d(3/2)1/2$	0.2500	$x = 0.5333$	$y = 0.4667$	
$p^1D - d(3/2)3/2$	0.8000	$x = 1.0000$		
$p^3D - d(3/2)1/2$	0.1667	$x = 0.0000$	$y = 0.0500$	$z = 0.4500$
$p^3D - d(3/2)3/2$	1.5000	$x = 0.0000$	$y = 0.0333$	$z = 0.0000$
$p^3D - d(3/2)1/2$	0.0167	$x = 0.5000$	$y = 0.3333$	$z = 0.1667$
$p^3D - d(3/2)3/2$	0.1667	$x = 0.2800$	$y = 0.2000$	$z = 0.2000$
$p^3D - d(3/2)1/2$	0.7500	$x = 0.5333$	$y = 0.2333$	$z = 0.0267$
$p^3D - d(3/2)3/2$	2.4000	$x = 0.7500$	$y = 0.2222$	$z = 0.0278$
$d(2s+1)L - p(J_p) K$	$\sum_{J_p'} g$			
$d^1P - p(1/2)1/2$	0.1667	$x = 0.3333$	$y = 0.6667$	
$d^1P - p(3/2)1/2$	0.0333	$x = 0.1667$	$y = 0.8333$	
$d^1P - p(3/2)3/2$	0.2500	$x = 0.1111$	$y = 0.8889$	
$d^1P - p(3/2)1/2$	0.1400	$x = 0.0079$	$y = 0.9921$	
$d^1P - p(3/2)3/2$	0.0100	$x = 1.0000$		
$d^3P - p(3/2)1/2$	0.5000	$x = 0.8333$	$y = 0.1111$	$z = 0.0556$
$d^3P - p(3/2)3/2$	0.1000	$x = 0.7500$	$y = 0.1389$	$z = 0.0833$
$d^3P - p(3/2)1/2$	0.7500	$x = 0.2778$	$y = 0.0370$	$z = 0.4630$
$d^3P - p(3/2)3/2$	0.4200	$x = 0.5714$	$y = 0.0265$	$z = 0.0635$
$d^3P - p(3/2)1/2$	0.0300	$x = 0.7778$	$y = 0.1667$	$z = 0.0556$
$d^1D - p(1/2)1/2$	0.1667	$x = 1.0000$		
$d^1D - p(1/2)3/2$	0.1667	$x = 0.5000$	$y = 0.5000$	
$d^1D - p(3/2)1/2$	0.0833	$x = 1.0000$		
$d^1D - p(3/2)3/2$	0.4333	$x = 0.0385$	$y = 0.9615$	
$d^1D - p(3/2)1/2$	0.1500	$x = 0.0000$	$y = 1.0000$	
$d^3D - p(1/2)1/2$	0.5000	$x = 0.5000$	$y = 0.3333$	$z = 0.1667$
$d^3D - p(1/2)3/2$	0.5000	$x = 0.6222$	$y = 0.2500$	$z = 0.0278$
$d^3D - p(3/2)1/2$	0.2500	$x = 0.5000$	$y = 0.3333$	$z = 0.1667$
$d^3D - p(3/2)3/2$	1.3000	$x = 0.5863$	$y = 0.0769$	$z = 0.2137$
$d^3D - p(3/2)1/2$	0.4500	$x = 0.6914$	$y = 0.1543$	$z = 0.0346$
$d^3D - p(3/2)3/2$	0.4667	$x = 1.0000$		
$d^1F - p(1/2)1/2$	0.0933	$x = 1.0000$		
$d^1F - p(3/2)1/2$	0.8400	$x = 0.0000$	$y = 1.0000$	
$d^3F - p(1/2)1/2$	1.4000	$x = 0.4444$	$y = 0.5000$	$z = 0.0556$
$d^3F - p(1/2)3/2$	0.2800	$x = 0.4444$	$y = 0.5000$	$z = 0.0556$
$d^3F - p(3/2)1/2$	2.5200	$x = 0.7143$	$y = 0.1975$	$z = 0.0617$
$d(2s+1)L - f(J_p) K$	$\sum_{J_p'} g$			
$d^1P - f(1/2)1/2$	0.2000	$x = 1.0000$		
$d^1P - f(3/2)1/2$	0.2400	$x = 1.0000$	$y = 0.0000$	

TABLE 10 (CONTINUED)

$d^1P - f(3/2)1/2$	0.1600	$x = 1.0000$		
$d^3P - f(1/2)1/2$	0.6000	$x = 0.7778$	$y = 0.1667$	$z = 0.0556$
$d^3P - f(1/2)3/2$	0.7200	$x = 0.1250$	$y = 0.0139$	$z = 0.3750$
$d^3P - f(3/2)1/2$	0.4800	$x = 0.7778$	$y = 0.1667$	$z = 0.0556$
$d^1D - f(1/2)1/2$	0.2063	$x = 0.8205$	$y = 0.1795$	
$d^1D - f(1/2)3/2$	0.1270	$x = 1.0000$		
$d^1D - f(3/2)1/2$	0.0444	$x = 1.0000$	$y = 0.0000$	
$d^1D - f(3/2)3/2$	0.2413	$x = 0.8772$	$y = 0.1228$	
$d^3D - f(1/2)1/2$	0.3810	$x = 1.0000$		
$d^3D - f(1/2)3/2$	0.6190	$x = 0.0228$	$y = 0.0100$	$z = 0.0011$
$d^3D - f(3/2)1/2$	0.3810	$x = 0.7500$	$y = 0.2222$	$z = 0.0278$
$d^3D - f(3/2)3/2$	0.1333	$x = 0.0778$	$y = 0.1250$	$z = 0.3472$
$d^3D - f(3/2)1/2$	0.7238	$x = 0.2495$	$y = 0.1706$	$z = 0.0125$
$d^3D - f(3/2)3/2$	1.1429	$x = 0.7500$	$y = 0.2222$	$z = 0.0278$
$d^1F - f(1/2)1/2$	0.0222	$x = 0.9524$	$y = 0.0476$	
$d^1F - f(1/2)3/2$	0.4444	$x = 0.9643$	$y = 0.0357$	
$d^1F - f(3/2)1/2$	0.0013	$x = 1.0000$		
$d^1F - f(3/2)3/2$	0.0273	$x = 0.9690$	$y = 0.0310$	
$d^1F - f(3/2)1/2$	0.1905	$x = 0.7500$	$y = 0.2500$	
$d^1F - f(3/2)3/2$	0.7143	$x = 1.0000$		
$d^3F - f(1/2)1/2$	0.0667	$x = 0.0000$	$y = 0.0212$	$z = 0.4233$
$d^3F - f(1/2)3/2$	1.3333	$x = 0.0000$	$y = 0.0159$	$z = 0.0000$
$d^3F - f(3/2)1/2$	0.0038	$x = 0.4444$	$y = 0.5000$	$z = 0.0556$
$d^3F - f(3/2)3/2$	0.0819	$x = 0.1121$	$y = 0.1042$	$z = 0.3112$
$d^3F - f(3/2)1/2$	0.5714	$x = 0.3125$	$y = 0.1736$	$z = 0.0089$
$d^3F - f(3/2)3/2$	2.1429	$x = 0.7333$	$y = 0.2500$	$z = 0.0167$
$f(2s+1)L - d(J_p) K$	$\sum_{J_p'} g$			
$f^1D - d(1/2)1/2$	0.2222	$x = 0.1000$	$y = 0.9000$	
$f^1D - d(1/2)3/2$	0.0159	$x = 0.0667$	$y = 0.9333$	
$f^1D - d(3/2)1/2$	0.2000	$x = 1.0000$		
$f^1D - d(3/2)3/2$	0.2222	$x = 0.1000$	$y = 0.9000$	
$f^1D - d(3/2)1/2$	0.0522	$x = 0.0058$	$y = 0.9942$	
$f^1D - d(3/2)3/2$	0.0018	$x = 1.0000$		
$f^3D - d(1/2)1/2$	0.6667	$x = 0.7778$	$y = 0.2000$	$z = 0.0222$
$f^3D - d(1/2)3/2$	0.0476	$x = 0.7407$	$y = 0.2074$	$z = 0.0370$
$f^3D - d(3/2)1/2$	0.6000	$x = 0.5000$	$y = 0.3333$	$z = 0.1667$
$f^3D - d(3/2)3/2$	0.6667	$x = 0.4978$	$y = 0.0500$	$z = 0.2722$
$f^3D - d(3/2)1/2$	0.1565	$x = 0.6596$	$y = 0.1364$	$z = 0.0330$
$f^3D - d(3/2)3/2$	0.0054	$x = 0.7500$	$y = 0.2222$	$z = 0.0278$
$f^1F - d(1/2)1/2$	0.1778	$x = 1.0000$		
$f^1F - d(1/2)3/2$	0.1556	$x = 0.2381$	$y = 0.7619$	
$f^1F - d(3/2)1/2$	0.1778	$x = 1.0000$		
$f^1F - d(3/2)3/2$	0.4254	$x = 0.0249$	$y = 0.9751$	
$f^3F - d(1/2)1/2$	0.0635	$x = 0.0000$	$y = 1.0000$	
$f^3F - d(1/2)3/2$	0.5333	$x = 0.4444$	$y = 0.5000$	$z = 0.0556$

TABLE 7b (CONTINUED)

$f^3F - d(1\frac{1}{2})\frac{1}{2}$	0.4687	$x = 0.6888$	$y = 0.0066$	$z = 0.0423$	$z = 0.0030$
$f^3F - d(1\frac{1}{2})\frac{3}{2}$	0.5333	$x = 0.4444$	$y = 0.5000$	$y = 0.0556$	
$f^3F - d(3)\frac{1}{2}$	1.2762	$x = 0.6477$	$y = 0.1598$	$y = 0.1168$	$z = 0.0051$
$f^3F - d(3)\frac{3}{2}$	0.1905	$x = 0.7031$	$y = 0.2101$	$y = 0.0201$	$z = 0.0469$
$f^1G - d(1\frac{1}{2})\frac{1}{2}$	0.4286	$x = 1.0000$			
$f^1G - d(1\frac{1}{2})\frac{3}{2}$	0.1224	$x = 1.0000$			
$f^1G - d(3)\frac{1}{2}$	0.7347	$x = 0.0000$	$y = 1.0000$		
$f^1G - d(3)\frac{3}{2}$	1.2857	$x = 0.4167$	$y = 0.5556$	$y = 0.0278$	
$f^3G - d(1\frac{1}{2})\frac{1}{2}$	0.3673	$x = 0.4167$	$y = 0.5556$	$y = 0.0278$	
$f^3G - d(1\frac{1}{2})\frac{3}{2}$	2.2041	$x = 0.7130$	$y = 0.2344$	$y = 0.0365$	$z = 0.0006$

TABLE 7b (CONTINUED)

$f^3F - d(1\frac{1}{2})\frac{1}{2}$	0.4687	$x = 0.6888$	$y = 0.0066$	$z = 0.0423$	$z = 0.0030$
$f^3F - d(1\frac{1}{2})\frac{3}{2}$	0.5333	$x = 0.4444$	$y = 0.5000$	$y = 0.0556$	
$f^3F - d(3)\frac{1}{2}$	1.2762	$x = 0.6477$	$y = 0.1598$	$y = 0.1168$	$z = 0.0051$
$f^3F - d(3)\frac{3}{2}$	0.1905	$x = 0.7031$	$y = 0.2101$	$y = 0.0201$	$z = 0.0469$
$f^1G - d(1\frac{1}{2})\frac{1}{2}$	0.4286	$x = 1.0000$			
$f^1G - d(1\frac{1}{2})\frac{3}{2}$	0.1224	$x = 1.0000$			
$f^1G - d(3)\frac{1}{2}$	0.7347	$x = 0.0000$	$y = 1.0000$		
$f^1G - d(3)\frac{3}{2}$	1.2857	$x = 0.4167$	$y = 0.5556$	$y = 0.0278$	
$f^3G - d(1\frac{1}{2})\frac{1}{2}$	0.3673	$x = 0.4167$	$y = 0.5556$	$y = 0.0278$	
$f^3G - d(1\frac{1}{2})\frac{3}{2}$	2.2041	$x = 0.7130$	$y = 0.2344$	$y = 0.0365$	$z = 0.0006$

$f^{(2S+1)L} - g^{(J_p, j)} | K \rangle$

$f^1D - g(1\frac{1}{2})\frac{1}{2}$	0.2381	$x = 1.0000$			
$f^1D - g(1\frac{1}{2})\frac{3}{2}$	0.3061	$x = 1.0000$	$y = 0.0000$		
$f^1D - g(3)\frac{1}{2}$	0.1701	$x = 1.0000$			
$f^3D - g(1\frac{1}{2})\frac{1}{2}$	0.7143	$x = 0.7500$	$y = 0.2222$	$y = 0.0278$	
$f^3D - g(1\frac{1}{2})\frac{3}{2}$	0.9184	$x = 0.0494$	$y = 0.0864$	$y = 0.0025$	$z = 0.8951$
$f^3D - g(3)\frac{1}{2}$	0.5102	$x = 0.7500$	$y = 0.2222$	$y = 0.0278$	
$f^3D - g(3)\frac{3}{2}$	0.1944	$x = 0.8929$	$y = 0.1071$		
$f^1F - g(1\frac{1}{2})\frac{1}{2}$	0.1389	$x = 1.0000$			
$f^1F - g(1\frac{1}{2})\frac{3}{2}$	0.0288	$x = 1.0000$	$y = 0.0000$		
$f^1F - g(3)\frac{1}{2}$	0.2579	$x = 0.9423$	$y = 0.0577$		
$f^1F - g(3)\frac{3}{2}$	0.3819	$x = 1.0000$			
$f^3F - g(1\frac{1}{2})\frac{1}{2}$	0.5833	$x = 0.0149$	$y = 0.0030$	$y = 0.0004$	$z = 0.4375$
$f^3F - g(1\frac{1}{2})\frac{3}{2}$	0.4167	$x = 0.7333$	$y = 0.2500$	$y = 0.0167$	
$f^3F - g(3)\frac{1}{2}$	0.0804	$x = 0.0357$	$y = 0.0617$	$y = 0.3755$	$z = 0.4938$
$f^3F - g(3)\frac{3}{2}$	0.7788	$x = 0.1282$	$y = 0.1026$	$y = 0.0037$	$z = 0.3077$
$f^1G - g(1\frac{1}{2})\frac{1}{2}$	1.1458	$x = 0.7333$	$y = 0.2500$	$y = 0.0167$	
$f^1G - g(1\frac{1}{2})\frac{3}{2}$	0.0119	$x = 0.9722$	$y = 0.0278$		
$f^1G - g(3)\frac{1}{2}$	0.4167	$x = 0.9778$	$y = 0.0222$		
$f^1G - g(3)\frac{3}{2}$	0.0004	$x = 1.0000$			
$f^1G - g(3)\frac{3}{2}$	0.0164	$x = 0.9856$	$y = 0.0144$		
$f^1G - g(3)\frac{3}{2}$	0.1736	$x = 0.8533$	$y = 0.1467$		
$f^1G - g(3)\frac{3}{2}$	0.8667	$x = 1.0000$			
$f^3G - g(1\frac{1}{2})\frac{1}{2}$	0.0357	$x = 0.0000$	$y = 0.0116$	$y = 0.4051$	$z = 0.5625$
$f^3G - g(1\frac{1}{2})\frac{3}{2}$	1.2500	$x = 0.0000$	$y = 0.0093$	$y = 0.0000$	$z = 0.4074$
$f^3G - g(3)\frac{1}{2}$	0.0013	$x = 0.4167$	$y = 0.5556$	$y = 0.0278$	
$f^3G - g(3)\frac{3}{2}$	0.0493	$x = 0.0590$	$y = 0.0613$	$y = 0.3433$	$z = 0.5172$
$f^3G - g(3)\frac{3}{2}$	0.5208	$x = 0.1920$	$y = 0.1198$	$y = 0.0036$	$z = 0.2569$
$f^3G - g(3)\frac{3}{2}$	2.0000	$x = 0.7222$	$y = 0.2667$	$y = 0.0111$	

$g^{(2S+1)L} - f^{(J_p, j)} | K \rangle$

$g^1F - f(1\frac{1}{2})\frac{1}{2}$	0.2500	$x = 0.0476$	$y = 0.9524$		
$g^1F - f(1\frac{1}{2})\frac{3}{2}$	0.0093	$x = 0.0357$	$y = 0.9643$		

TABLE 7b (CONTINUED)

$g^1F - f(1\frac{1}{2})\frac{1}{2}$	0.2857	$x = 1.0000$			
$g^1F - f(1\frac{1}{2})\frac{3}{2}$	0.2054	$x = 0.0725$	$y = 0.9275$		
$g^1F - f(3)\frac{1}{2}$	0.0269	$x = 0.0041$	$y = 0.9959$		
$g^1F - f(3)\frac{3}{2}$	0.0006	$x = 1.0000$			
$g^3F - f(1\frac{1}{2})\frac{1}{2}$	0.7500	$x = 0.7500$	$y = 0.2381$	$y = 0.0119$	$z = 0.0000$
$g^3F - f(1\frac{1}{2})\frac{3}{2}$	0.0278	$x = 0.7292$	$y = 0.2411$	$y = 0.0208$	$z = 0.0089$
$g^3F - f(3)\frac{1}{2}$	0.8571	$x = 0.4444$	$y = 0.5000$	$y = 0.0556$	
$g^3F - f(3)\frac{3}{2}$	0.6161	$x = 0.5823$	$y = 0.1304$	$y = 0.1630$	$z = 0.0083$
$g^3F - f(3)\frac{3}{2}$	0.0807	$x = 0.6831$	$y = 0.1967$	$y = 0.0195$	$z = 0.0656$
$g^3F - f(3)\frac{3}{2}$	0.0017	$x = 0.7333$	$y = 0.2500$	$y = 0.0167$	
$g^1G - f(1\frac{1}{2})\frac{1}{2}$	0.1786	$x = 1.0000$			
$g^1G - f(1\frac{1}{2})\frac{3}{2}$	0.1548	$x = 0.1346$	$y = 0.8654$		
$g^1G - f(3)\frac{1}{2}$	0.2232	$x = 1.0000$			
$g^1G - f(3)\frac{3}{2}$	0.4087	$x = 0.0170$	$y = 0.9830$		
$g^1G - f(3)\frac{3}{2}$	0.0347	$x = 0.0000$	$y = 1.0000$		
$g^3G - f(1\frac{1}{2})\frac{1}{2}$	0.5857	$x = 0.4167$	$y = 0.5556$	$y = 0.0278$	
$g^3G - f(1\frac{1}{2})\frac{3}{2}$	0.4643	$x = 0.7020$	$y = 0.2708$	$y = 0.0022$	$z = 0.0009$
$g^3G - f(3)\frac{1}{2}$	0.6696	$x = 0.4167$	$y = 0.5556$	$y = 0.0278$	
$g^3G - f(3)\frac{3}{2}$	1.2262	$x = 0.6700$	$y = 0.2071$	$y = 0.0725$	$z = 0.0018$
$g^3G - f(3)\frac{3}{2}$	0.1042	$x = 0.7040$	$y = 0.2407$	$y = 0.0130$	$z = 0.0293$
$g^1H - f(1\frac{1}{2})\frac{1}{2}$	0.4074	$x = 1.0000$			
$g^1H - f(1\frac{1}{2})\frac{3}{2}$	0.1358	$x = 1.0000$			
$g^1H - f(3)\frac{1}{2}$	0.6790	$x = 0.0000$	$y = 1.0000$		
$g^3H - f(1\frac{1}{2})\frac{1}{2}$	1.2222	$x = 0.4000$	$y = 0.5833$	$y = 0.0167$	
$g^3H - f(1\frac{1}{2})\frac{3}{2}$	0.4074	$x = 0.4000$	$y = 0.5833$	$y = 0.0167$	
$g^3H - f(3)\frac{1}{2}$	2.0370	$x = 0.7091$	$y = 0.2560$	$y = 0.0240$	$z = 0.0002$
$g^3H - f(3)\frac{3}{2}$					

TABLE 7c

TRANSITIONS BETWEEN LS AND JJ STATES. PARENT TERM: $2P$

$s^{(2S+1)L} - p^{(J_p, j)}$	$\sum_{J_p, j} s$	
$s^1P - p(1\frac{1}{2})\frac{1}{2}$	0.3533	$x = 0.6667$
$s^1P - p(1\frac{1}{2})\frac{3}{2}$	0.6667	$x = 0.8333$
$s^1P - p(3)\frac{1}{2}$	0.6667	$x = 0.8333$
$s^1P - p(3)\frac{3}{2}$	1.3533	$x = 0.4167$
$s^3P - p(1\frac{1}{2})\frac{1}{2}$	1.0000	$x = 0.0000$
$s^3P - p(1\frac{1}{2})\frac{3}{2}$	2.0000	$x = 0.0000$
$s^3P - p(3)\frac{1}{2}$	2.0000	$x = 0.4167$
$s^3P - p(3)\frac{3}{2}$	4.0000	$x = 0.5833$
$p^{(2S+1)L} - s^{(J_p, j)}$	$\sum_{J_p, j} s$	
$p^1S - s(1\frac{1}{2})\frac{1}{2}$	0.1111	$x = 1.0000$

TABLE 7c (CONTINUED)

$p^1S - s(\frac{3}{2}, \frac{1}{2})$	0.2222	$x = 1.0000$	
$p^3S - s(\frac{1}{2}, \frac{1}{2})$	0.3333	$x = 0.6667$	$y = 0.3333$
$p^3S - s(\frac{3}{2}, \frac{1}{2})$	0.6667	$x = 0.8333$	$y = 0.1667$
$p^1P - s(\frac{1}{2}, \frac{1}{2})$	0.3333	$x = 1.0000$	$y = 0.0000$
$p^1P - s(\frac{3}{2}, \frac{1}{2})$	0.6667	$x = 0.0000$	$y = 1.0000$
$p^3P - s(\frac{1}{2}, \frac{1}{2})$	1.0000	$x = 0.2778$	$y = 0.3333$
$p^3P - s(\frac{3}{2}, \frac{1}{2})$	2.0000	$x = 0.6250$	$y = 0.0417$
$p^1D - s(\frac{1}{2}, \frac{1}{2})$	0.5556	$x = 1.0000$	$y = 0.2083$
$p^1D - s(\frac{3}{2}, \frac{1}{2})$	1.1111	$x = 0.0000$	$y = 1.0000$
$p^3D - s(\frac{1}{2}, \frac{1}{2})$	1.6667	$x = 0.5000$	$y = 0.3333$
$p^3D - s(\frac{3}{2}, \frac{1}{2})$	3.3333	$x = 0.7000$	$y = 0.1250$
$p^{(2S+1)L} - d(J_p, j)$	$\sum_{J_p, j} s$		$z = 0.008:$
$p^1S - d(\frac{1}{2}, \frac{3}{2})$	0.1111	$x = 1.0000$	
$p^1S - d(\frac{3}{2}, \frac{3}{2})$	0.0222	$x = 1.0000$	
$p^1S - d(\frac{5}{2}, \frac{3}{2})$	0.2000	$x = 1.0000$	
$p^3S - d(\frac{1}{2}, \frac{3}{2})$	0.0667	$x = 0.1667$	$y = 0.8333$
$p^3S - d(\frac{3}{2}, \frac{3}{2})$	0.2667	$x = 1.0000$	
$p^3S - d(\frac{5}{2}, \frac{3}{2})$	0.3333	$x = 0.1333$	$y = 0.5333$
$p^3S - d(\frac{7}{2}, \frac{3}{2})$	0.3333	$x = 0.7000$	$y = 0.3000$
$p^1P - d(\frac{1}{2}, \frac{3}{2})$	0.2333	$x = 0.6429$	$y = 0.3571$
$p^1P - d(\frac{3}{2}, \frac{3}{2})$	0.1000	$x = 1.0000$	
$p^1P - d(\frac{5}{2}, \frac{3}{2})$	0.1667	$x = 0.9000$	$y = 0.1000$
$p^1P - d(\frac{7}{2}, \frac{3}{2})$	0.5000	$x = 0.7000$	$y = 0.3000$
$p^3P - d(\frac{1}{2}, \frac{3}{2})$	0.3000	$x = 0.8333$	$y = 0.0093$
$p^3P - d(\frac{3}{2}, \frac{3}{2})$	0.7000	$x = 0.3333$	$y = 0.0238$
$p^3P - d(\frac{5}{2}, \frac{3}{2})$	0.9000	$x = 0.0778$	$y = 0.2315$
$p^3P - d(\frac{7}{2}, \frac{3}{2})$	1.1000	$x = 0.6788$	$y = 0.0909$
$p^1D - d(\frac{1}{2}, \frac{3}{2})$	0.0556	$x = 0.9000$	$y = 0.1000$
$p^1D - d(\frac{3}{2}, \frac{3}{2})$	0.5000	$x = 0.9333$	$y = 0.0667$
$p^1D - d(\frac{5}{2}, \frac{3}{2})$	0.6111	$x = 0.9164$	$y = 0.0818$
$p^1D - d(\frac{7}{2}, \frac{3}{2})$	0.5000	$x = 0.7467$	$y = 0.2333$
$p^3D - d(\frac{1}{2}, \frac{3}{2})$	0.8333	$x = 0.0000$	$y = 0.0900$
$p^3D - d(\frac{3}{2}, \frac{3}{2})$	0.8333	$x = 0.0000$	$y = 0.0400$
$p^3D - d(\frac{5}{2}, \frac{3}{2})$	1.1667	$x = 0.1600$	$y = 0.0253$
$p^3D - d(\frac{7}{2}, \frac{3}{2})$	2.1667	$x = 0.8308$	$y = 0.0215$
$d^{(2S+1)L} - p(J_p, j)$	$\sum_{J_p, j} s$		$z = 0.0092$
$d^1P - p(\frac{1}{2}, \frac{1}{2})$	0.1667	$x = 0.3333$	$y = 0.6667$
$d^1P - p(\frac{1}{2}, \frac{3}{2})$	0.0333	$x = 0.1667$	$y = 0.8333$
$d^1P - p(\frac{3}{2}, \frac{1}{2})$	0.0333	$x = 0.1667$	$y = 0.8333$

TABLE 7c (CONTINUED)

$d^1P - p(\frac{3}{2}, \frac{3}{2})$	0.3667	$x = 0.0152$	$y = 0.3788$	$z = 0.6061$
$d^3P - p(\frac{1}{2}, \frac{1}{2})$	0.1000	$x = 0.1667$	$y = 0.5556$	$z = 0.2778$
$d^3P - p(\frac{1}{2}, \frac{3}{2})$	0.5000	$x = 0.1500$	$y = 0.0278$	$z = 0.8167$
$d^3P - p(\frac{3}{2}, \frac{1}{2})$	0.5000	$x = 0.0667$	$y = 0.4444$	$z = 0.0667$
$d^3P - p(\frac{3}{2}, \frac{3}{2})$	0.7000	$x = 0.0333$	$y = 0.0992$	$z = 0.2976$
$i^1D - p(\frac{1}{2}, \frac{1}{2})$	0.1667	$x = 1.0000$		
$i^1D - p(\frac{1}{2}, \frac{3}{2})$	0.1667	$x = 0.5000$	$y = 0.5000$	
$d^1D - p(\frac{3}{2}, \frac{1}{2})$	0.1667	$x = 0.5000$	$y = 0.5000$	
$d^1D - p(\frac{3}{2}, \frac{3}{2})$	0.5000	$x = 0.0000$	$y = 0.1667$	$z = 0.8333$
$d^3D - p(\frac{1}{2}, \frac{1}{2})$	0.2778	$x = 0.1000$	$y = 0.6000$	$z = 0.3000$
$d^3D - p(\frac{1}{2}, \frac{3}{2})$	0.7222	$x = 0.4308$	$y = 0.4808$	$z = 0.0192$
$d^3D - p(\frac{3}{2}, \frac{1}{2})$	0.7222	$x = 0.1077$	$y = 0.3077$	$z = 0.3077$
$d^3D - p(\frac{3}{2}, \frac{3}{2})$	1.2778	$x = 0.2435$	$y = 0.0978$	$z = 0.5478$
$d^1F - p(\frac{1}{2}, \frac{3}{2})$	0.4667	$x = 1.0000$		
$d^1F - p(\frac{3}{2}, \frac{1}{2})$	0.4667	$x = 1.0000$		
$d^1F - p(\frac{3}{2}, \frac{3}{2})$	0.4667	$x = 0.0000$	$y = 1.0000$	
$d^3F - p(\frac{1}{2}, \frac{1}{2})$	0.6222	$x = 1.0000$		
$d^3F - p(\frac{1}{2}, \frac{3}{2})$	0.7778	$x = 0.8000$	$y = 0.1000$	$z = 0.1000$
$d^3F - p(\frac{3}{2}, \frac{1}{2})$	0.7778	$x = 0.8000$	$y = 0.1000$	$z = 0.1000$
$d^3F - p(\frac{3}{2}, \frac{3}{2})$	2.0222	$x = 0.8901$	$y = 0.0000$	$z = 0.0789$
$d^{(2S+1)L} - f(J_p, j)$	$\sum_{J_p, j} s$		$z = 0.0022$	
$d^1P - f(\frac{1}{2}, \frac{5}{2})$	0.2000	$x = 1.0000$		
$d^1P - f(\frac{3}{2}, \frac{5}{2})$	0.0571	$x = 1.0000$	$y = 0.0000$	
$d^1P - f(\frac{5}{2}, \frac{5}{2})$	0.3429	$x = 1.0000$		
$d^3P - f(\frac{1}{2}, \frac{5}{2})$	0.1429	$x = 0.0667$	$y = 0.7000$	$z = 0.2333$
$d^3P - f(\frac{3}{2}, \frac{5}{2})$	0.4571	$x = 1.0000$		
$d^3P - f(\frac{5}{2}, \frac{5}{2})$	0.6286	$x = 0.0485$	$y = 0.2841$	$z = 0.0947$
$d^3P - f(\frac{7}{2}, \frac{5}{2})$	0.0159	$x = 0.0159$		
$d^3P - f(\frac{9}{2}, \frac{5}{2})$	0.5714	$x = 0.6000$	$y = 0.3000$	$z = 0.1000$
$d^1D - f(\frac{1}{2}, \frac{5}{2})$	0.2063	$x = 0.8205$	$y = 0.1795$	
$d^1D - f(\frac{3}{2}, \frac{5}{2})$	0.1270	$x = 1.0000$		
$d^1D - f(\frac{5}{2}, \frac{5}{2})$	0.2222	$x = 0.9524$	$y = 0.0476$	$z = 0.0000$
$d^1D - f(\frac{7}{2}, \frac{5}{2})$	0.4444	$x = 0.8571$	$y = 0.1429$	
$d^3D - f(\frac{1}{2}, \frac{5}{2})$	0.3951	$x = 0.0386$	$y = 0.0169$	$z = 0.0019$
$d^3D - f(\frac{3}{2}, \frac{5}{2})$	0.6849	$x = 0.4500$	$y = 0.5333$	$z = 0.0167$
$d^3D - f(\frac{5}{2}, \frac{5}{2})$	0.9206	$x = 0.0443$	$y = 0.3923$	$z = 0.0927$
$d^3D - f(\frac{7}{2}, \frac{5}{2})$	0.0158	$x = 0.0158$	$z = 0.0181$	
$d^3D - f(\frac{9}{2}, \frac{5}{2})$	1.0794	$x = 0.7563$	$y = 0.0588$	$z = 0.1176$
$d^1F - f(\frac{1}{2}, \frac{5}{2})$	0.0222	$x = 0.0045$	$y = 0.9524$	$z = 0.0476$
$d^1F - f(\frac{3}{2}, \frac{5}{2})$	0.4444	$x = 0.9643$	$y = 0.0357$	

TABLE 7c (CONTINUED)

$d^1F - f(\frac{3}{2}, \frac{1}{2})$	0.5778	$x = 0.9537$	$y = 0.0458$	$z = 0.0005$
$d^1F - f(\frac{3}{2}, \frac{3}{2})$	0.3556	$x = 0.8610$	$y = 0.1359$	$z = 0.0051$
$d^3F - f(\frac{1}{2}, \frac{1}{2})$	0.7778	$x = 0.0000$	$y = 0.0363$	$z = 0.9175$
$d^3F - f(\frac{1}{2}, \frac{3}{2})$	0.6222	$x = 0.0000$	$y = 0.0340$	$z = 0.9184$
$d^3F - f(\frac{3}{2}, \frac{1}{2})$	1.0222	$x = 0.0749$	$y = 0.1181$	$z = 0.0090$
		$z = 0.8039$	$y = 0.1516$	
$d^3F - f(\frac{3}{2}, \frac{3}{2})$	1.7778	$x = 0.8839$	$y = 0.0143$	$z = 0.0775$
		$z = 0.0029$	$y = 0.0001$	
$f^{(2S+1)L} - d(J_p, j)$	$\sum_{J_p, j}$			
$f^1D - d(\frac{1}{2}, \frac{3}{2})$	0.2222	$x = 0.1000$	$y = 0.9000$	
$f^1D - d(\frac{3}{2}, \frac{3}{2})$	0.0159	$x = 0.0667$	$y = 0.9333$	
$f^1D - d(\frac{1}{2}, \frac{1}{2})$	0.0635	$x = 0.0200$	$y = 0.3500$	$z = 0.6500$
$f^1D - d(\frac{3}{2}, \frac{1}{2})$	0.4127	$x = 0.0021$	$y = 0.1256$	$z = 0.8723$
$f^3D - d(\frac{1}{2}, \frac{3}{2})$	0.1587	$x = 0.0667$	$y = 0.8400$	$z = 0.0933$
$f^3D - d(\frac{1}{2}, \frac{1}{2})$	0.5556	$x = 0.0635$	$y = 0.0178$	$z = 0.9175$
$f^3D - d(\frac{3}{2}, \frac{3}{2})$	0.6984	$x = 0.0097$	$y = 0.1326$	$z = 0.0388$
		$z = 0.0076$	$y = 0.0286$	
$f^3D - d(\frac{3}{2}, \frac{1}{2})$	0.7302	$x = 0.0056$	$y = 0.0193$	$z = 0.1323$
		$z = 0.4245$	$y = 0.2283$	
$f^1F - d(\frac{1}{2}, \frac{3}{2})$	0.1778	$x = 1.0000$		
$f^1F - d(\frac{3}{2}, \frac{3}{2})$	0.1556	$x = 0.2381$	$y = 0.7619$	
$f^1F - d(\frac{1}{2}, \frac{1}{2})$	0.2222	$x = 0.2000$	$y = 0.8000$	
$f^1F - d(\frac{3}{2}, \frac{1}{2})$	0.4444	$x = 0.0000$	$y = 0.0667$	$z = 0.9333$
$f^3F - d(\frac{1}{2}, \frac{3}{2})$	0.3556	$x = 0.1667$	$y = 0.7500$	$z = 0.0833$
$f^3F - d(\frac{1}{2}, \frac{1}{2})$	0.6444	$x = 0.4988$	$y = 0.4636$	$z = 0.0048$
$f^3F - d(\frac{3}{2}, \frac{3}{2})$	0.8444	$x = 0.0508$	$y = 0.4386$	$z = 0.1096$
		$z = 0.0080$		
$f^3F - d(\frac{3}{2}, \frac{1}{2})$	1.1556	$x = 0.1159$	$y = 0.0835$	$z = 0.6815$
		$z = 0.0077$	$y = 0.0030$	
$f^1G - d(\frac{1}{2}, \frac{5}{2})$	0.4286	$x = 1.0000$		
$f^1G - d(\frac{3}{2}, \frac{5}{2})$	0.5143	$x = 1.0000$		
$f^1G - d(\frac{1}{2}, \frac{3}{2})$	0.3429	$x = 0.0000$	$y = 1.0000$	
$f^3G - d(\frac{1}{2}, \frac{5}{2})$	0.6857	$x = 1.0000$		
$f^3G - d(\frac{1}{2}, \frac{3}{2})$	0.6000	$x = 0.8929$	$y = 0.0476$	$z = 0.0595$
$f^3G - d(\frac{3}{2}, \frac{5}{2})$	0.8571	$x = 0.7500$	$y = 0.2000$	$z = 0.0500$
$f^3G - d(\frac{3}{2}, \frac{3}{2})$	1.7143	$x = 0.9167$	$y = 0.0156$	$z = 0.0469$
		$z = 0.0007$		
$f^{(2S+1)L} - g(J_p, j)$	$\sum_{J_p, j}$			
$f^1D - g(\frac{1}{2}, \frac{1}{2})$	0.2381	$x = 1.0000$		
$f^1D - g(\frac{3}{2}, \frac{1}{2})$	0.0794	$x = 1.0000$	$y = 0.0000$	
$f^1D - g(\frac{1}{2}, \frac{3}{2})$	0.3968	$x = 1.0000$		
$f^3D - g(\frac{1}{2}, \frac{1}{2})$	0.1852	$x = 0.0357$	$y = 0.8571$	$z = 0.1071$
$f^3D - g(\frac{1}{2}, \frac{3}{2})$	0.5291	$x = 1.0000$		

TABLE 7c (CONTINUED)

$f^3D - g(\frac{3}{2}, \frac{1}{2})$	0.7672	$x = 0.0246$	$y = 0.2759$	$z = 0.0345$
		$z = 0.0030$		
$f^3D - g(\frac{3}{2}, \frac{3}{2})$	0.8614	$x = 0.5500$	$y = 0.4000$	$z = 0.0500$
$f^1F - g(\frac{1}{2}, \frac{1}{2})$	0.1944	$x = 0.8929$	$y = 0.1071$	
$f^1F - g(\frac{1}{2}, \frac{3}{2})$	0.1389	$x = 1.0000$		
$f^1F - g(\frac{3}{2}, \frac{1}{2})$	0.2500	$x = 0.9722$	$y = 0.0278$	$z = 0.0000$
$f^1F - g(\frac{3}{2}, \frac{3}{2})$	0.4167	$x = 0.9167$	$y = 0.0833$	
$f^3F - g(\frac{1}{2}, \frac{1}{2})$	0.3981	$x = 0.0218$	$y = 0.0044$	$z = 0.0006$
$f^3F - g(\frac{1}{2}, \frac{3}{2})$	0.6019	$x = 0.5077$	$y = 0.4808$	$z = 0.0115$
$f^3F - g(\frac{3}{2}, \frac{1}{2})$	0.9352	$x = 0.0272$	$y = 0.4248$	$z = 0.0448$
		$z = 0.0043$	$y = 0.0053$	
$f^3F - g(\frac{3}{2}, \frac{3}{2})$	1.0648	$x = 0.7652$	$y = 0.1196$	$z = 0.0717$
		$z = 0.0016$		
$f^1G - g(\frac{1}{2}, \frac{1}{2})$	0.0119	$x = 0.9722$	$y = 0.0278$	
$f^1G - g(\frac{1}{2}, \frac{3}{2})$	0.4167	$x = 0.9778$	$y = 0.0222$	
$f^1G - g(\frac{3}{2}, \frac{1}{2})$	0.5595	$x = 0.9708$	$y = 0.0290$	$z = 0.0002$
$f^1G - g(\frac{3}{2}, \frac{3}{2})$	0.2976	$x = 0.9126$	$y = 0.0856$	$z = 0.0019$
$f^3G - g(\frac{1}{2}, \frac{1}{2})$	0.7500	$x = 0.0000$	$y = 0.0006$	$z = 0.9534$
$f^3G - g(\frac{1}{2}, \frac{3}{2})$	0.5357	$x = 0.0000$	$y = 0.0216$	$z = 0.9506$
$f^3G - g(\frac{3}{2}, \frac{1}{2})$	0.9643	$x = 0.0422$	$y = 0.0770$	$z = 0.0030$
		$z = 0.6355$	$y = 0.2132$	
$f^3G - g(\frac{3}{2}, \frac{3}{2})$	1.6071	$x = 0.8988$	$y = 0.0338$	$z = 0.0507$
		$z = 0.0012$	$y = 0.0001$	
$g^{(2S+1)L} - f(J_p, j)$	$\sum_{J_p, j}$			
$g^1F - f(\frac{1}{2}, \frac{5}{2})$	0.2500	$x = 0.0476$	$y = 0.9524$	
$g^1F - f(\frac{1}{2}, \frac{3}{2})$	0.0093	$x = 0.0357$	$y = 0.9643$	
$g^1F - f(\frac{3}{2}, \frac{5}{2})$	0.0833	$x = 0.0051$	$y = 0.1786$	$z = 0.8163$
$g^1F - f(\frac{3}{2}, \frac{3}{2})$	0.4352	$x = 0.0005$	$y = 0.0616$	$z = 0.9379$
$g^3F - f(\frac{1}{2}, \frac{5}{2})$	0.1944	$x = 0.0357$	$y = 0.9184$	$z = 0.0459$
$g^3F - f(\frac{1}{2}, \frac{3}{2})$	0.5833	$x = 0.0347$	$y = 0.0115$	$z = 0.9534$
$g^3F - f(\frac{3}{2}, \frac{5}{2})$	0.8056	$x = 0.0028$	$y = 0.0554$	$z = 0.0220$
		$z = 0.0016$	$y = 0.0063$	
$g^3F - f(\frac{3}{2}, \frac{3}{2})$	0.7500	$x = 0.0016$	$y = 0.0059$	$z = 0.0707$
		$z = 0.4568$	$y = 0.3430$	
$g^1G - f(\frac{1}{2}, \frac{5}{2})$	0.1786	$x = 1.0000$		
$g^1G - f(\frac{3}{2}, \frac{5}{2})$	0.1548	$x = 0.1346$	$y = 0.8654$	
$g^1G - f(\frac{1}{2}, \frac{3}{2})$	0.2500	$x = 0.1071$	$y = 0.8929$	
$g^1G - f(\frac{3}{2}, \frac{3}{2})$	0.4167	$x = 0.0000$	$y = 0.0357$	$z = 0.9643$
$g^3G - f(\frac{1}{2}, \frac{5}{2})$	0.3929	$x = 0.2045$	$y = 0.7576$	$z = 0.0379$
$g^3G - f(\frac{1}{2}, \frac{3}{2})$	0.6071	$x = 0.5368$	$y = 0.4424$	$z = 0.0017$
$g^3G - f(\frac{3}{2}, \frac{5}{2})$	0.8929	$x = 0.0293$	$y = 0.4500$	$z = 0.0540$
		$z = 0.0024$		
$g^3G - f(\frac{3}{2}, \frac{3}{2})$	1.1071	$x = 0.0662$	$y = 0.0594$	$z = 0.7197$
		$z = 0.0028$	$y = 0.0013$	

TABLE 7c (CONTINUED)

$g^1H - f(\frac{1}{2}, \frac{7}{2})$	0.4074	$x = 1.0000$
$g^1H - f(\frac{3}{2}, \frac{5}{2})$	0.5238	$x = 1.0000$
$g^1H - f(\frac{3}{2}, \frac{7}{2})$	0.2910	$x = 0.0000$ $y = 1.0000$
$g^3H - f(\frac{1}{2}, \frac{7}{2})$	0.6984	$x = 1.0000$
$g^3H - f(\frac{1}{2}, \frac{5}{2})$	0.5238	$x = 0.9333$ 0.0278 $y = 0.0389$
$g^3H - f(\frac{3}{2}, \frac{5}{2})$	0.8730	$x = 0.7200$ 0.2500 $y = 0.0300$
$g^3H - f(\frac{3}{2}, \frac{7}{2})$	1.5714	$x = 0.9192$ 0.0356 0.0123 $y = 0.0311$ 0.0015
	$z = 0.0003$	

TABLE 8a

TRANSITIONS BETWEEN LS AND LK STATES. PARENT TERM: 3P

$^s(2S+1)L - ^pL'[K]$	$\sum_{J,J'}^s$	x	y	z
$^s2P - ^pS[1]$	0.6667	$x = 0.0000$	0.3333	$y = 0.6667$ $z = 0.0000$
$^s2P - ^pP[0]$	0.2222	$x = 0.3333$	$y = 0.6667$	
$^s2P - ^pP[1]$	0.6667	$x = 0.2778$ 0.4444	$y = 0.2222$	$z = 0.0556$
$^s2P - ^pP[2]$	1.1111	$x = 0.0000$ 0.1667	$y = 0.8333$	
$^s2P - ^pD[1]$	0.6667	$x = 0.1667$ 0.0000	$y = 0.0000$	$z = 0.8333$
$^s2P - ^pD[2]$	1.1111	$x = 0.4000$ 0.5000	$y = 0.1000$	
$^s2P - ^pD[3]$	1.5556	$x = 1.0000$		
$^s4P - ^pS[1]$	1.3333	$x = 0.5000$ 0.0000	$y = 0.3333$ 0.0000	$z = 0.1667$
$^s4P - ^pP[0]$	0.4444	$x = 0.8333$	$y = 0.1667$	
$^s4P - ^pP[1]$	1.3333	$x = 0.3750$ 0.1389	$y = 0.1111$ 0.0278	$z = 0.3472$
$^s4P - ^pP[2]$	2.2222	$x = 0.6300$ 0.0133	$y = 0.0450$	$z = 0.2700$ 0.0417
$^s4P - ^pD[1]$	1.3333	$x = 0.0250$ 0.0833	$y = 0.2667$ 0.4167	$z = 0.2083$
$^s4P - ^pD[2]$	2.2222	$x = 0.2100$ 0.1600	$y = 0.0150$	$z = 0.4900$ 0.1250
$^s4P - ^pD[3]$	3.1111	$x = 0.8571$ 0.1000	$y = 0.0429$	
$^p(2S+1)L - ^sL'[K]$	$\sum_{J,J'}^s$	x	y	z
$^p2S - ^sP[0]$	0.0741	$x = 1.0000$		
$^p2S - ^sP[1]$	0.2222	$x = 0.3333$	$y = 0.6667$	
$^p2S - ^sP[2]$	0.3704	$x = 1.0000$		
$^p4S - ^sP[0]$	0.1481	$x = 1.0000$		
$^p4S - ^sP[1]$	0.4444	$x = 0.8333$	$y = 0.1667$	
$^p4S - ^sP[2]$	0.7407	$x = 0.9000$	$y = 0.1000$	
$^p2P - ^sD[0]$	0.0556	$x = 0.3333$	$y = 0.6667$	
$^p2P - ^sD[1]$	0.1667	$x = 0.2778$ 0.4444	$y = 0.2222$	$z = 0.0556$
$^p2P - ^sD[2]$	0.2778	$x = 0.0000$ 0.1667	$y = 0.8333$	
$^p2P - ^sD[3]$	0.3000	$x = 0.1667$ 0.0000	$y = 0.0000$	$z = 0.8333$
$^p2P - ^sD[4]$	0.5000	$x = 0.4000$ 0.5000	$y = 0.1000$	
$^p2P - ^sD[5]$	0.7000	$x = 1.0000$		
$^p4P - ^sD[0]$	0.1111	$x = 0.8333$	$y = 0.1667$	
$^p4P - ^sD[1]$	0.3333	$x = 0.3750$ 0.1389	$y = 0.1111$ 0.0278	$z = 0.3472$
$^p4P - ^sD[2]$	0.5556	$x = 0.6300$ 0.0133	$y = 0.0450$	$z = 0.2700$ 0.0417
$^p4P - ^sD[3]$	0.6000	$x = 0.0250$ 0.0833	$y = 0.2667$ 0.4167	$z = 0.2083$
$^p4P - ^sD[4]$	1.0000	$x = 0.2100$ 0.1600	$y = 0.0150$	$z = 0.4900$ 0.1250
$^p4P - ^sD[5]$	1.4000	$x = 0.8571$ 0.1000	$y = 0.0429$	
$^p2D - ^sP[0]$	0.0037	$x = 1.0000$		
$^p2D - ^sP[1]$	0.0111	$x = 0.3000$ 0.6667	$y = 0.0333$	
$^p2D - ^sP[2]$	0.0185	$x = 0.0000$ 0.1000	$y = 0.9000$	$z = 0.0000$
$^p2D - ^sD[1]$	0.1000	$x = 0.1000$ 0.0000	$y = 0.9000$	
$^p2D - ^sD[2]$	0.1667	$x = 0.3733$ 0.5400	$y = 0.0600$	$z = 0.0267$
$^p2D - ^sD[3]$	0.2333	$x = 0.0000$ 0.0667	$y = 0.9333$	
$^p2D - ^sF[2]$	0.6667	$x = 0.0667$ 0.0000	$y = 0.0000$	$z = 0.9333$
$^p2D - ^sF[3]$	0.9333	$x = 0.4286$ 0.5333	$y = 0.0381$	
$^p2D - ^sF[4]$	1.2000	$x = 1.0000$		
$^p4D - ^sP[0]$	0.0074	$x = 0.5000$	$y = 0.5000$	
$^p4D - ^sP[1]$	0.0222	$x = 0.5250$ 0.0833	$y = 0.2667$ 0.0833	$z = 0.0417$
$^p4D - ^sP[2]$	0.0370	$x = 0.7200$ 0.0630	$y = 0.1620$ 0.0320	
	$z = 0.0180$ 0.0050			
$^p4D - ^sD[1]$	0.2000	$x = 0.1750$ 0.2500	$y = 0.2000$ 0.2500	$z = 0.1250$
$^p4D - ^sD[2]$	0.3333	$x = 0.1333$ 0.1050	$y = 0.4033$ 0.1200	
	$z = 0.1633$ 0.0750			
$^p4D - ^sD[3]$	0.4667	$x = 0.7347$ 0.0823	$y = 0.0272$	$z = 0.1224$ 0.0333

TABLE 8a (CONTINUED)

$^p4P - ^sP[2]$	2.2222	$x = 0.6300$ 0.0133	$y = 0.0450$	$z = 0.2700$ 0.0417
$^p2D - ^sP[0]$	0.3704	$x = 1.0000$		
$^p2D - ^sP[1]$	1.1111	$x = 0.3000$ 0.6667	$y = 0.0333$	
$^p2D - ^sP[2]$	1.8519	$x = 0.0000$ 0.1000	$y = 0.9000$	$z = 0.0000$
$^p4D - ^sP[0]$	0.7407	$x = 0.5000$	$y = 0.5000$	
$^p4D - ^sP[1]$	2.2222	$x = 0.5250$ 0.0833	$y = 0.2667$ 0.0833	$z = 0.0417$
$^p4D - ^sP[2]$	3.7037	$x = 0.7200$ 0.0630	$y = 0.1620$ 0.0320	
	$z = 0.0180$ 0.0050			
$^p(2S+1)L - ^dL'[K]$	$\sum_{J,J'}^s$	x	y	z
$^p2S - ^dP[0]$	0.0741	$x = 1.0000$		
$^p2S - ^dP[1]$	0.2222	$x = 0.3333$	$y = 0.6667$	
$^p2S - ^dP[2]$	0.3704	$x = 1.0000$		
$^p4S - ^dP[0]$	0.1481	$x = 1.0000$		
$^p4S - ^dP[1]$	0.4444	$x = 0.8333$	$y = 0.1667$	
$^p4S - ^dP[2]$	0.7407	$x = 0.9000$	$y = 0.1000$	
$^p2P - ^dP[0]$	0.0556	$x = 0.3333$	$y = 0.6667$	
$^p2P - ^dP[1]$	0.1667	$x = 0.2778$ 0.4444	$y = 0.2222$	$z = 0.0556$
$^p2P - ^dP[2]$	0.2778	$x = 0.0000$ 0.1667	$y = 0.8333$	
$^p2P - ^dD[1]$	0.3000	$x = 0.1667$ 0.0000	$y = 0.0000$	$z = 0.8333$
$^p2P - ^dD[2]$	0.5000	$x = 0.4000$ 0.5000	$y = 0.1000$	
$^p2P - ^dD[3]$	0.7000	$x = 1.0000$		
$^p4P - ^dP[0]$	0.1111	$x = 0.8333$	$y = 0.1667$	
$^p4P - ^dP[1]$	0.3333	$x = 0.3750$ 0.1389	$y = 0.1111$ 0.0278	$z = 0.3472$
$^p4P - ^dP[2]$	0.5556	$x = 0.6300$ 0.0133	$y = 0.0450$	$z = 0.2700$ 0.0417
$^p4P - ^dD[1]$	0.6000	$x = 0.0250$ 0.0833	$y = 0.2667$ 0.4167	$z = 0.2083$
$^p4P - ^dD[2]$	1.0000	$x = 0.2100$ 0.1600	$y = 0.0150$	$z = 0.4900$ 0.1250
$^p4P - ^dD[3]$	1.4000	$x = 0.8571$ 0.1000	$y = 0.0429$	
$^p2D - ^dP[0]$	0.0037	$x = 1.0000$		
$^p2D - ^dP[1]$	0.0111	$x = 0.3000$ 0.6667	$y = 0.0333$	
$^p2D - ^dP[2]$	0.0185	$x = 0.0000$ 0.1000	$y = 0.9000$	$z = 0.0000$
$^p2D - ^dD[1]$	0.1000	$x = 0.1000$ 0.0000	$y = 0.9000$	
$^p2D - ^dD[2]$	0.1667	$x = 0.3733$ 0.5400	$y = 0.0600$	$z = 0.0267$
$^p2D - ^dD[3]$	0.2333	$x = 0.0000$ 0.0667	$y = 0.9333$	
$^p2D - ^dF[2]$	0.6667	$x = 0.0667$ 0.0000	$y = 0.0000$	$z = 0.9333$
$^p2D - ^dF[3]$	0.9333	$x = 0.4286$ 0.5333	$y = 0.0381$	
$^p2D - ^dF[4]$	1.2000	$x = 1.0000$		
$^p4D - ^dP[0]$	0.0074	$x = 0.5000$	$y = 0.5000$	
$^p4D - ^dP[1]$	0.0222	$x = 0.5250$ 0.0833	$y = 0.2667$ 0.0833	$z = 0.0417$
$^p4D - ^dP[2]$	0.0370	$x = 0.7200$ 0.0630	$y = 0.1620$ 0.0320	
	$z = 0.0180$ 0.0050			
$^p4D - ^dD[1]$	0.2000	$x = 0.1750$ 0.2500	$y = 0.2000$ 0.2500	$z = 0.1250$
$^p4D - ^dD[2]$	0.3333	$x = 0.1333$ 0.1050	$y = 0.4033$ 0.1200	
	$z = 0.1633$ 0.0750			
$^p4D - ^dD[3]$	0.4667	$x = 0.7347$ 0.0823	$y = 0.0272$	$z = 0.1224$ 0.0333

TABLE 8a (CONTINUED)

$p^4D - dF [2]$	1.3333	$x = 0.0038$	$y = 0.0975$	$z = 0.1680$
		$z = 0.2987$	0.4200	
$p^4D - dF [3]$	1.8667	$x = 0.0918$	$y = 0.0034$	$z = 0.5510$
$p^4D - dF [4]$	2.4000	$x = 0.8333$	$y = 0.1429$	$z = 0.0238$
$d^{(2s+1)L} - pL^{[K]}$	$\sum_{j,j'}^s$			
$d^2P - pS [1]$	0.6667	$x = 0.0000$	$y = 0.3333$	$z = 0.6667$
$d^2P - pP [0]$	0.0556	$x = 0.3333$	$y = 0.6667$	
$d^2P - pP [1]$	0.1667	$x = 0.2778$	$y = 0.4444$	$z = 0.0556$
$d^2P - pP [2]$	0.2778	$x = 0.0000$	$y = 0.1667$	$z = 0.8333$
$d^2P - pD [1]$	0.0067	$x = 0.1667$	$y = 0.0000$	$z = 0.8333$
$d^2P - pD [2]$	0.0111	$x = 0.4000$	$y = 0.5000$	$z = 0.1000$
$d^2P - pD [3]$	0.0156	$x = 1.0000$		
$d^4P - pS [1]$	1.3333	$x = 0.5000$	$y = 0.3333$	$z = 0.0000$
$d^4P - pP [0]$	0.1111	$x = 0.8333$	$y = 0.1667$	
$d^4P - pP [1]$	0.3333	$x = 0.3750$	$y = 0.1389$	$z = 0.1111$
$d^4P - pP [2]$	0.5556	$x = 0.6300$	$y = 0.0133$	$z = 0.0450$
$d^4P - pD [1]$	0.0133	$x = 0.0250$	$y = 0.0833$	$z = 0.2667$
$d^4P - pD [2]$	0.0222	$x = 0.2100$	$y = 0.1600$	$z = 0.0150$
$d^4P - pD [3]$	0.0311	$x = 0.8571$	$y = 0.1000$	$z = 0.0429$
$d^2D - pP [0]$	0.1667	$x = 1.0000$		
$d^2D - pP [1]$	0.5000	$x = 0.3000$	$y = 0.6667$	$z = 0.0333$
$d^2D - pP [2]$	0.8333	$x = 0.0000$	$y = 0.1000$	$z = 0.9000$
$d^2D - pD [1]$	0.1000	$x = 0.1000$	$y = 0.0000$	$z = 0.9000$
$d^2D - pD [2]$	0.1667	$x = 0.3733$	$y = 0.5400$	$z = 0.0267$
$d^2D - pD [3]$	0.2333	$x = 0.0000$	$y = 0.0667$	$z = 0.9333$
$d^4D - pP [0]$	0.3333	$x = 0.5000$	$y = 0.5000$	
$d^4D - pP [1]$	1.0000	$x = 0.5250$	$y = 0.0833$	$z = 0.2667$
$d^4D - pP [2]$	1.6667	$x = 0.7200$	$y = 0.0630$	$z = 0.1620$
		$z = 0.0180$	0.0050	
$d^4D - pD [1]$	0.2000	$x = 0.1750$	$y = 0.2500$	$z = 0.1250$
$d^4D - pD [2]$	0.3333	$x = 0.1333$	$y = 0.1050$	$z = 0.4033$
		$z = 0.1633$	0.0750	
$d^4D - pD [3]$	0.4667	$x = 0.7347$	$y = 0.0823$	$z = 0.0272$
$d^2F - pD [1]$	0.5600	$x = 1.0000$		
$d^2F - pD [2]$	0.9333	$x = 0.3810$	$y = 0.6000$	$z = 0.0190$
$d^2F - pD [3]$	1.3067	$x = 0.0000$	$y = 0.0476$	$z = 0.9524$
$d^4F - pD [1]$	1.1200	$x = 0.4000$	$y = 0.5000$	$z = 0.1000$
$d^4F - pD [2]$	1.8667	$x = 0.5714$	$y = 0.2400$	$z = 0.1219$
$d^4F - pD [3]$	2.6133	$x = 0.7653$	$y = 0.1166$	$z = 0.0875$
		$z = 0.0044$	0.0014	
$d^{(2s+1)L} - fL^{[K]}$	$\sum_{j,j'}^s$			
$d^2P - fD [1]$	0.2400	$x = 0.1667$	$y = 0.0000$	$z = 0.8333$
$d^2P - fD [2]$	0.4000	$x = 0.4000$	$y = 0.5000$	$z = 0.1000$

TABLE 8a (CONTINUED)

$d^2P - fD [3]$	0.5600	$x = 1.0000$		
$d^4P - fD [1]$	0.4800	$x = 0.0250$	$y = 0.0833$	$z = 0.2667$
$d^4P - fD [2]$	0.8000	$x = 0.2100$	$y = 0.1600$	$z = 0.0150$
$d^4P - fD [3]$	1.1200	$x = 0.8571$	$y = 0.1000$	$z = 0.0429$
$d^2D - fD [1]$	0.0444	$x = 0.1000$	$y = 0.0000$	$z = 0.9000$
$d^2D - fD [2]$	0.0741	$x = 0.3733$	$y = 0.5400$	$z = 0.0600$
$d^2D - fD [3]$	0.1037	$x = 0.0000$	$y = 0.0667$	$z = 0.9333$
$d^2D - fF [2]$	0.4233	$x = 0.0667$	$y = 0.0000$	$z = 0.9333$
$d^2D - fF [3]$	0.5926	$x = 0.4286$	$y = 0.5333$	$z = 0.0381$
$d^2D - fF [4]$	0.7619	$x = 1.0000$		
$d^4D - fD [1]$	0.0889	$x = 0.1750$	$y = 0.2500$	$z = 0.2000$
$d^4D - fD [2]$	0.1481	$x = 0.1333$	$y = 0.1050$	$z = 0.4033$
		$z = 0.1633$	0.0750	
$d^4D - fD [3]$	0.2074	$x = 0.7347$	$y = 0.0823$	$z = 0.0272$
$d^4D - fF [2]$	0.8466	$x = 0.0038$	$y = 0.0120$	$z = 0.0975$
		$z = 0.2987$	0.4200	
$d^4D - fF [3]$	1.1852	$x = 0.0918$	$y = 0.0871$	$z = 0.0034$
$d^4D - fF [4]$	1.5238	$x = 0.8333$	$y = 0.1429$	$z = 0.0238$
$d^2F - fD [1]$	0.0013	$x = 1.0000$		
$d^2F - fD [2]$	0.0021	$x = 0.3810$	$y = 0.6000$	$z = 0.0190$
$d^2F - fD [3]$	0.0030	$x = 0.0000$	$y = 0.0476$	$z = 0.9524$
$d^2F - fF [2]$	0.0529	$x = 0.0476$	$y = 0.0000$	$z = 0.9524$
$d^2F - fF [3]$	0.0741	$x = 0.4133$	$y = 0.5442$	$z = 0.0272$
$d^2F - fF [4]$	0.0952	$x = 0.0000$	$y = 0.0357$	$z = 0.9643$
$d^2F - fG [3]$	0.6667	$x = 0.0357$	$y = 0.0000$	$z = 0.9643$
$d^2F - fG [4]$	0.8571	$x = 0.4444$	$y = 0.5357$	$z = 0.0198$
$d^2F - fG [5]$	1.0476	$x = 1.0000$		
$d^4F - fD [1]$	0.0025	$x = 0.4000$	$y = 0.5000$	$z = 0.1000$
$d^4F - fD [2]$	0.0042	$x = 0.5714$	$y = 0.2400$	$z = 0.1219$
$d^4F - fD [3]$	0.0059	$x = 0.7653$	$y = 0.1166$	$z = 0.0875$
		$z = 0.0044$	0.0014	
$d^4F - fF [2]$	0.1058	$x = 0.0714$	$y = 0.1200$	$z = 0.2752$
$d^4F - fF [3]$	0.1481	$x = 0.0670$	$y = 0.0638$	$z = 0.4898$
		$z = 0.0861$	0.0476	
$d^4F - fF [4]$	0.1905	$x = 0.7639$	$y = 0.1270$	$z = 0.0174$
$d^4F - fG [3]$	1.3333	$x = 0.0011$	$y = 0.0033$	$z = 0.0486$
		$z = 0.3075$	0.5510	
$d^4F - fG [4]$	1.7143	$x = 0.0509$	$y = 0.0529$	$z = 0.0012$
$d^4F - fG [5]$	2.0952	$x = 0.8182$	$y = 0.1667$	$z = 0.0152$
$f^{(2s+1)L} - dL^{[K]}$	$\sum_{j,j'}^s$			
$f^2D - dP [0]$	0.1333	$x = 1.0000$		
$f^2D - dP [1]$	0.4000	$x = 0.3000$	$y = 0.6667$	$z = 0.0333$
$f^2D - dP [2]$	0.6667	$x = 0.0000$	$y = 0.1000$	$z = 0.9000$
$f^2D - dD [1]$	0.0444	$x = 0.1000$	$y = 0.0000$	$z = 0.9000$
$f^2D - dD [2]$	0.0741	$x = 0.3733$	$y = 0.5400$	$z = 0.0600$

TABLE 8a (CONTINUED)

$f^2D - dD [3]$	0.1037	$x = 0.0000$	$y = 0.9833$	
$f^2D - dF [2]$	0.0015	$x = 0.0667$	$y = 0.0000$	$z = 0.9333$
$f^2D - dF [3]$	0.0021	$x = 0.4286$	$y = 0.0381$	
$f^2D - dF [4]$	0.0027	$x = 1.0000$		
$f^4D - dP [0]$	0.2667	$x = 0.5000$	$y = 0.5000$	
$f^4D - dP [1]$	0.8000	$x = 0.5250$	$y = 0.2667$	$z = 0.0417$
$f^4D - dP [2]$	1.3333	$x = 0.7200$	$y = 0.1620$	$z = 0.0320$
		$x = 0.0180$	$y = 0.0050$	
$f^4D - dD [1]$	0.0689	$x = 0.1750$	$y = 0.2000$	$z = 0.1250$
$f^4D - dD [2]$	0.1481	$x = 0.1333$	$y = 0.4033$	$z = 0.1200$
		$x = 0.1633$	$y = 0.0750$	
$f^4D - dD [3]$	0.2074	$x = 0.7347$	$y = 0.0272$	$z = 0.1224$
$f^4D - dF [2]$	0.0030	$x = 0.0038$	$y = 0.0975$	$z = 0.1680$
		$x = 0.2987$	$y = 0.4200$	
$f^4D - dF [3]$	0.0042	$x = 0.0918$	$y = 0.0034$	$z = 0.5510$
$f^4D - dF [4]$	0.0054	$x = 0.8333$	$y = 0.0238$	
$f^2F - dD [1]$	0.3556	$x = 1.0000$		
$f^2F - dD [2]$	0.5926	$x = 0.3810$	$y = 0.0190$	
$f^2F - dD [3]$	0.8296	$x = 0.0000$	$y = 0.9524$	$z = 0.0000$
$f^2F - dF [2]$	0.0529	$x = 0.0476$	$y = 0.9524$	
$f^2F - dF [3]$	0.0741	$x = 0.4133$	$y = 0.0272$	$z = 0.0153$
$f^2F - dF [4]$	0.0952	$x = 0.0000$	$y = 0.9643$	
$f^4F - dD [1]$	0.7111	$x = 0.4000$	$y = 0.1000$	
$f^4F - dD [2]$	1.1852	$x = 0.5714$	$y = 0.1219$	$z = 0.0067$
$f^4F - dD [3]$	1.6593	$x = 0.7653$	$y = 0.0875$	$z = 0.0249$
		$x = 0.0044$	$y = 0.0014$	
$f^4F - dF [2]$	0.1058	$x = 0.0714$	$y = 0.2752$	$z = 0.0533$
$f^4F - dF [3]$	0.1481	$x = 0.0670$	$y = 0.4898$	$z = 0.2457$
		$x = 0.0861$	$y = 0.0476$	
$f^4F - dF [4]$	0.1905	$x = 0.7639$	$y = 0.0174$	$z = 0.0694$
$f^2G - dF [2]$	0.6122	$x = 1.0000$		
$f^2G - dF [3]$	0.8571	$x = 0.4167$	$y = 0.0119$	
$f^2G - dF [4]$	1.1020	$x = 0.0000$	$y = 0.9722$	$z = 0.0000$
$f^4G - dF [2]$	1.2245	$x = 0.3571$	$y = 0.0429$	
$f^4G - dF [3]$	1.7143	$x = 0.5729$	$y = 0.0680$	$z = 0.0019$
$f^4G - dF [4]$	2.2041	$x = 0.7778$	$y = 0.0540$	$z = 0.0176$
		$x = 0.0015$	$y = 0.0005$	

$f^{(2s+1)L} - gL[K]$	$\sum_{J,J'}$			
$f^2D - gF [2]$	0.3401	$x = 0.0667$	$y = 0.0000$	$z = 0.9833$
$f^2D - gF [3]$	0.4762	$x = 0.4286$	$y = 0.0381$	
$f^2D - gF [4]$	0.6122	$x = 1.0000$		
$f^4D - gF [2]$	0.6803	$x = 0.0038$	$y = 0.0975$	$z = 0.1680$
		$x = 0.2987$	$y = 0.4200$	
$f^4D - gF [3]$	0.9524	$x = 0.0918$	$y = 0.0034$	$z = 0.5510$
$f^4D - gF [4]$	1.2245	$x = 0.8333$	$y = 0.0238$	

TABLE 8a (CONTINUED)

$f^2F - gF [2]$	0.0298	$x = 0.0476$	$y = 0.0000$	$z = 0.9524$
$f^2F - gF [3]$	0.0417	$x = 0.4133$	$y = 0.0272$	$z = 0.0153$
$f^2F - gF [4]$	0.0536	$x = 0.0000$	$y = 0.9643$	
$f^2F - gG [3]$	0.4861	$x = 0.0357$	$y = 0.0000$	$z = 0.9643$
$f^2F - gG [4]$	0.6250	$x = 0.4444$	$y = 0.0198$	
$f^2F - gG [5]$	0.7639	$x = 1.0000$		
$f^4F - gF [2]$	0.0595	$x = 0.0714$	$y = 0.2752$	$z = 0.0533$
$f^4F - gF [3]$	0.0833	$x = 0.0670$	$y = 0.4898$	$z = 0.2457$
		$x = 0.0861$	$y = 0.0476$	
$f^4F - gF [4]$	0.1071	$x = 0.7639$	$y = 0.0174$	$z = 0.0694$
$f^4F - gG [3]$	0.9722	$x = 0.0011$	$y = 0.0486$	$z = 0.0886$
		$x = 0.3075$	$y = 0.5510$	
$f^4F - gG [4]$	1.2500	$x = 0.0509$	$y = 0.0012$	$z = 0.5602$
$f^4F - gG [5]$	1.5278	$x = 0.8182$	$y = 0.0152$	
$f^2G - gF [2]$	0.0005	$x = 1.0000$		
$f^2G - gF [3]$	0.0007	$x = 0.4167$	$y = 0.0119$	
$f^2G - gF [4]$	0.0009	$x = 0.0000$	$y = 0.9722$	$z = 0.0000$
$f^2G - gG [3]$	0.0324	$x = 0.0278$	$y = 0.0000$	
$f^2G - gG [4]$	0.0417	$x = 0.4346$	$y = 0.0154$	$z = 0.0099$
$f^2G - gG [5]$	0.0509	$x = 0.0000$	$y = 0.9778$	
$f^2G - gH [4]$	0.6667	$x = 0.0222$	$y = 0.0000$	$z = 0.9778$
$f^2G - gH [5]$	0.8148	$x = 0.4545$	$y = 0.0121$	
$f^2G - gH [6]$	0.9630	$x = 1.0000$		
$f^4G - gF [2]$	0.0009	$x = 0.3571$	$y = 0.0429$	
$f^4G - gF [3]$	0.0013	$x = 0.5729$	$y = 0.0680$	$z = 0.0019$
$f^4G - gF [4]$	0.0017	$x = 0.7778$	$y = 0.0540$	$z = 0.0176$
		$x = 0.0015$	$y = 0.0005$	
$f^4G - gG [3]$	0.0648	$x = 0.0382$	$y = 0.2902$	$z = 0.0287$
$f^4G - gG [4]$	0.0833	$x = 0.0400$	$y = 0.5188$	$z = 0.3160$
		$x = 0.0523$	$y = 0.0313$	
$f^4G - gG [5]$	0.1019	$x = 0.7736$	$y = 0.0119$	$z = 0.0446$
$f^4G - gH [4]$	1.3333	$x = 0.0004$	$y = 0.0287$	$z = 0.0543$
		$x = 0.3042$	$y = 0.6111$	
$f^4G - gH [5]$	1.6296	$x = 0.0322$	$y = 0.0005$	$z = 0.5587$
$f^4G - gH [6]$	1.9259	$x = 0.8077$	$y = 0.0105$	

$g^{(2s+1)L} - fL[K]$	$\sum_{J,J'}$			
$g^2F - fD [1]$	0.2857	$x = 1.0000$		
$g^2F - fD [2]$	0.4762	$x = 0.3810$	$y = 0.0190$	
$g^2F - fD [3]$	0.6667	$x = 0.0000$	$y = 0.9524$	$z = 0.0000$
$g^2F - fF [2]$	0.0298	$x = 0.0476$	$y = 0.0000$	$z = 0.9524$
$g^2F - fF [3]$	0.0417	$x = 0.4133$	$y = 0.0272$	$z = 0.0153$
$g^2F - fF [4]$	0.0536	$x = 0.0000$	$y = 0.9643$	
$g^2F - fG [3]$	0.0005	$x = 0.0357$	$y = 0.0000$	$z = 0.9643$
$g^2F - fG [4]$	0.0007	$x = 0.4545$	$y = 0.0000$	$z = 0.0198$
		$x = 0.4444$	$y = 0.0000$	
		$x = 1.0000$		

TABLE 8a (CONTINUED)

$g^4F - fD [1]$	0.5714	$x = 0.4000$	$y = 0.5000$	$z = 0.1000$
$g^4F - fD [2]$	0.9524	$x = 0.5714$	$y = 0.2400$	$z = 0.1219$
$g^4F - fD [3]$	1.3333	$x = 0.7653$	$y = 0.1166$	$z = 0.0875$
		$x = 0.0044$	$y = 0.0014$	$z = 0.0249$
$g^4F - fF [2]$	0.0595	$x = 0.0714$	$y = 0.1200$	$z = 0.2752$
$g^4F - fF [3]$	0.0833	$x = 0.0670$	$y = 0.0638$	$z = 0.4898$
		$x = 0.0861$	$y = 0.0476$	$z = 0.2457$
$g^4F - fF [4]$	0.1071	$x = 0.7639$	$y = 0.1270$	$z = 0.0174$
$g^4F - fG [3]$	0.0010	$x = 0.0011$	$y = 0.0033$	$z = 0.0486$
		$x = 0.3075$	$y = 0.5510$	$z = 0.0886$
$g^4F - fG [4]$	0.0013	$x = 0.0509$	$y = 0.0529$	$z = 0.0012$
$g^4F - fG [5]$	0.0016	$x = 0.8182$	$y = 0.1667$	$z = 0.5602$
$g^2G - fF [2]$	0.4464	$x = 1.0000$		$z = 0.0152$
$g^2G - fF [3]$	0.6250	$x = 0.4167$	$y = 0.5714$	$z = 0.0119$
$g^2G - fF [4]$	0.8036	$x = 0.0000$	$y = 0.0278$	$z = 0.9722$
$g^2G - fG [3]$	0.0324	$x = 0.0278$	$y = 0.0000$	$z = 0.0000$
$g^2G - fG [4]$	0.0417	$x = 0.4346$	$y = 0.5401$	$z = 0.9722$
$g^2G - fG [5]$	0.0509	$x = 0.0000$	$y = 0.0222$	$z = 0.0099$
$g^4G - fF [2]$	0.8929	$x = 0.3571$	$y = 0.6000$	$z = 0.9778$
$g^4G - fF [3]$	1.2500	$x = 0.5729$	$y = 0.3189$	$z = 0.0429$
$g^4G - fF [4]$	1.6071	$x = 0.7778$	$y = 0.1485$	$z = 0.0680$
		$x = 0.0015$	$y = 0.0005$	$z = 0.0019$
$g^4G - fG [3]$	0.0648	$x = 0.0382$	$y = 0.0689$	$z = 0.0540$
$g^4G - fG [4]$	0.0833	$x = 0.0400$	$y = 0.0416$	$z = 0.2902$
		$x = 0.5188$	$y = 0.3160$	$z = 0.0287$
$g^4G - fG [5]$	0.1019	$x = 0.7736$	$y = 0.1544$	$z = 0.5188$
$g^2H - fG [3]$	0.6337	$x = 1.0000$		$z = 0.0446$
$g^2H - fG [4]$	0.8148	$x = 0.4364$	$y = 0.5556$	$z = 0.0119$
$g^2H - fG [5]$	0.9959	$x = 0.0000$	$y = 0.0182$	$z = 0.0081$
$g^4H - fG [3]$	1.2675	$x = 0.3333$	$y = 0.6429$	$z = 0.9818$
$g^4H - fG [4]$	1.6296	$x = 0.5673$	$y = 0.3630$	$z = 0.0000$
$g^4H - fG [5]$	1.9918	$x = 0.7810$	$y = 0.1688$	$z = 0.0238$
		$x = 0.0365$	$y = 0.0128$	$z = 0.0007$
		$x = 0.0007$	$y = 0.0002$	$z = 0.0365$

TABLE 8b

TRANSITIONS BETWEEN LS AND JK STATES. PARENT TERM: 3P

$^s(2s+1)L - p (^sJ_p)[K]$	$\sum_{J,J'}^s$	z
$^s2P - p(0)[1]$	0.6667	$x = 0.0000$
$^s2P - p(1)[0]$	0.2222	$x = 0.3333$
$^s2P - p(1)[1]$	0.6667	$x = 0.0000$
$^s2P - p(2)[1]$	0.6667	$x = 0.2778$
$^s2P - p(2)[2]$	0.6667	$x = 0.0556$
$^s2P - p(2)[3]$	0.6667	$x = 0.1667$

TABLE 8b (CONTINUED)

$^s2P - p(2)[4]$	1.1111	$x = 0.3000$
$^s2P - p(2)[5]$	0.6667	$x = 0.1667$
$^s2P - p(2)[6]$	1.1111	$x = 0.1000$
$^s2P - p(2)[7]$	1.5556	$x = 1.0000$
$^s4P - p(0)[1]$	1.3333	$x = 0.0000$
$^s4P - p(1)[0]$	0.4444	$x = 0.8333$
$^s4P - p(1)[1]$	1.3333	$x = 0.0000$
$^s4P - p(1)[2]$	2.2222	$x = 0.0000$
$^s4P - p(1)[3]$	1.3333	$x = 0.9000$
$^s4P - p(1)[4]$	2.2222	$x = 0.8400$
$^s4P - p(1)[5]$	3.1111	$x = 0.8571$
$^s(2s+1)L - s (^sJ_p)[K]$	$\sum_{J,J'}^s$	z
$^s2S - s(0)[0]$	0.0741	$x = 1.0000$
$^s2S - s(1)[1]$	0.2222	$x = 0.3333$
$^s2S - s(2)[2]$	0.3704	$x = 1.0000$
$^s4S - s(0)[0]$	0.1481	$x = 1.0000$
$^s4S - s(1)[1]$	0.4444	$x = 0.8333$
$^s4S - s(2)[2]$	0.7407	$x = 0.9000$
$^s2P - s(0)[0]$	0.2222	$x = 0.3333$
$^s2P - s(1)[1]$	0.6667	$x = 0.2778$
$^s2P - s(2)[2]$	1.1111	$x = 0.0000$
$^s4P - s(0)[0]$	0.4444	$x = 0.8333$
$^s4P - s(1)[1]$	1.3333	$x = 0.3750$
$^s4P - s(2)[2]$	2.2222	$x = 0.6300$
$^s2D - s(0)[0]$	0.3704	$x = 1.0000$
$^s2D - s(1)[1]$	1.1111	$x = 0.3000$
$^s2D - s(2)[2]$	1.8519	$x = 0.0000$
$^s4D - s(0)[0]$	0.7407	$x = 0.5000$
$^s4D - s(1)[1]$	2.2222	$x = 0.5250$
$^s4D - s(2)[2]$	3.7037	$x = 0.7200$
		$x = 0.0180$

TABLE 8b (CONTINUED)

$^s2S - d(0)[2]$	0.0741	$x = 1.0000$
$^s2S - d(1)[1]$	0.0556	$x = 0.3333$
$^s2S - d(1)[2]$	0.1667	$x = 1.0000$
$^s2S - d(2)[0]$	0.0741	$x = 1.0000$
$^s2S - d(2)[1]$	0.1667	$x = 0.3333$
$^s2S - d(2)[2]$	0.1296	$x = 1.0000$
$^s4S - d(0)[2]$	0.1481	$x = 0.9000$
$^s4S - d(1)[1]$	0.1111	$x = 0.8533$
$^s4S - d(1)[2]$	0.3333	$x = 0.9000$
$^s4S - d(2)[0]$	0.1481	$x = 1.0000$
$^s4S - d(2)[1]$	0.3333	$x = 0.8333$
$^s4S - d(2)[2]$	0.3333	$x = 0.1667$

TABLE 8b (CONTINUED)

$p^4S - d(2)2$	$z = 0.2593$	$x = 0.9000$	$y = 0.1000$
$p^2P - d(0)2$	0.2222	$z = 0.3000$	0.6667
$p^2P - d(1)1$	0.2667	$z = 0.0278$	0.0694
$p^2P - d(1)2$	0.1667	$z = 0.1000$	0.5000
$p^2P - d(1)3$	0.2333	$z = 1.0000$	
$p^2P - d(2)0$	0.0556	$z = 0.3333$	$y = 0.6667$
$p^2P - d(2)1$	0.2000	$z = 0.4444$	0.2778
$p^2P - d(2)2$	0.3669	$z = 0.3000$	0.1667
$p^2P - d(2)3$	0.4667	$z = 1.0000$	
$p^4P - d(0)2$	0.4444	$z = 0.0000$	0.0853
$p^4P - d(1)1$	0.5333	$z = 0.0094$	0.0159
$p^4P - d(1)2$	0.3533	$z = 0.2100$	0.0100
$p^4P - d(1)3$	0.4667	$z = 0.8571$	0.1000
$p^4P - d(2)0$	0.1111	$z = 0.8333$	$y = 0.1667$
$p^4P - d(2)1$	0.4000	$z = 0.3375$	0.2222
$p^4P - d(2)2$	0.7778	$z = 0.6300$	0.1633
$p^4P - d(2)3$	0.9333	$z = 0.8571$	0.1000
$p^2D - d(0)2$	0.3704	$z = 0.0000$	0.1000
$p^2D - d(1)1$	0.0778	$z = 0.0429$	0.0238
$p^2D - d(1)2$	0.3333	$z = 0.1400$	0.0400
$p^2D - d(1)3$	0.7000	$z = 0.3810$	0.6000
$p^2D - d(2)0$	0.0037	$z = 1.0000$	
$p^2D - d(2)1$	0.0333	$z = 0.3000$	0.1667
$p^2D - d(2)2$	0.1481	$z = 0.4050$	0.2800
$p^2D - d(2)3$	0.4667	$z = 0.2857$	0.2000
$p^4D - d(2)4$	1.2000	$z = 1.0000$	
$p^4D - d(0)2$	0.7407	$z = 0.0000$	0.0000
	$z = 0.4500$	0.5000	
$p^4D - d(1)1$	0.1556	$z = 0.0750$	0.1905
$p^4D - d(1)2$	0.6667	$z = 0.0000$	0.0175
	$z = 0.1800$	0.3125	
$p^4D - d(1)3$	1.4000	$z = 0.0000$	0.0333
$p^4D - d(2)0$	0.0074	$z = 0.5000$	$y = 0.5000$
$p^4D - d(2)1$	0.0667	$z = 0.5250$	0.3333
$p^4D - d(2)2$	0.2963	$z = 0.2571$	0.1406
	$z = 0.0000$	0.0219	
$p^4D - d(2)3$	0.9333	$z = 0.5510$	0.1653
$p^4D - d(2)4$	2.4000	$z = 0.8333$	0.1429

$d^{(2s+1)L} - p(j_p)K$	\sum_{j_p, j_l}^s
$d^2P - p(0)1$	0.1333
$d^2P - p(1)0$	0.0556
$d^2P - p(1)1$	0.2667
$d^2P - p(1)2$	0.0778
$d^2P - p(2)1$	0.4400

$d^{(2s+1)L} - f(j_p)K$	\sum_{j_p, j_l}^s
$d^2P - f(0)3$	0.1333
$d^2P - f(1)2$	0.1333
$d^2P - f(1)3$	0.2667
$d^2P - f(2)1$	0.2400
$d^2P - f(2)2$	0.2667
$d^2P - f(2)3$	0.1600

TABLE 8b (CONTINUED)

$d^2P - p(2)2$	0.2111	$z = 0.0053$	0.2368
$d^2P - p(2)3$	0.0156	$z = 1.0000$	
$d^4P - p(0)1$	0.2667	$z = 0.9000$	0.0833
$d^4P - p(1)0$	0.1111	$z = 0.8333$	$y = 0.1667$
$d^4P - p(1)1$	0.5333	$z = 0.7594$	0.0139
$d^4P - p(1)2$	0.1556	$z = 0.8100$	0.0576
$d^4P - p(2)1$	0.8800	$z = 0.1670$	0.0202
$d^4P - p(2)2$	0.4222	$z = 0.5416$	0.0047
$d^4P - p(2)3$	0.0311	$z = 0.8571$	0.1000
$d^2D - p(0)1$	0.2222	$z = 0.4000$	0.5000
$d^2D - p(1)0$	0.1667	$z = 1.0000$	
$d^2D - p(1)1$	0.1667	$z = 0.1000$	0.5000
$d^2D - p(1)2$	0.3333	$z = 0.1400$	0.0400
$d^2D - p(2)1$	0.2111	$z = 0.2579$	0.6579
$d^2D - p(2)2$	0.6667	$z = 0.0233$	0.2400
$d^2D - p(2)3$	0.2333	$z = 0.0000$	0.0667
$d^4D - p(0)1$	0.4444	$z = 0.7000$	0.2500
$d^4D - p(1)0$	0.3333	$z = 0.5000$	$y = 0.5000$
$d^4D - p(1)1$	0.3333	$z = 0.1750$	0.0000
$d^4D - p(1)2$	0.6667	$z = 0.8000$	0.1575
	$z = 0.0200$	0.0125	
$d^4D - p(2)1$	0.4222	$z = 0.4513$	0.0526
$d^4D - p(2)2$	1.3333	$z = 0.5333$	0.0263
	$z = 0.0533$	0.0188	
$d^4D - p(2)3$	0.4667	$z = 0.7347$	0.0823
$d^2F - p(0)1$	0.3111	$z = 1.0000$	
$d^2F - p(1)1$	0.2333	$z = 1.0000$	
$d^2F - p(1)2$	0.7000	$z = 0.3810$	0.6000
$d^2F - p(2)1$	0.0156	$z = 1.0000$	
$d^2F - p(2)2$	0.2333	$z = 0.3810$	0.6000
$d^2F - p(2)3$	1.3067	$z = 0.0000$	0.0476
$d^4F - p(0)1$	0.6222	$z = 0.4000$	0.5000
$d^4F - p(1)1$	0.4667	$z = 0.4000$	0.5000
$d^4F - p(1)2$	1.4000	$z = 0.5714$	0.2400
$d^4F - p(2)1$	0.0311	$z = 0.4000$	0.5000
$d^4F - p(2)2$	0.4667	$z = 0.5714$	0.2400
$d^4F - p(2)3$	2.6133	$z = 0.7653$	0.1166
	$z = 0.0044$	0.0014	

$d^{(2s+1)L} - f(j_p)K$	\sum_{j_p, j_l}^s
$d^2P - f(0)3$	0.1333
$d^2P - f(1)2$	0.1333
$d^2P - f(1)3$	0.2667
$d^2P - f(2)1$	0.2400
$d^2P - f(2)2$	0.2667
$d^2P - f(2)3$	0.1600

TABLE 8b (CONTINUED)

$d^4P - f(0) 3$	0.2667	$z = 0.8571$	$y = 0.1000$	$y = 0.0429$
$d^4P - f(1) 2$	0.2667	$z = 0.2100$	$y = 0.1600$	$z = 0.4900$
$d^4P - f(1) 3$	0.5333	$z = 0.8571$	$y = 0.1000$	$z = 0.0429$
$d^4P - f(2) 1$	0.4800	$z = 0.0250$	$y = 0.0833$	$z = 0.2667$
$d^4P - f(2) 2$	0.5333	$z = 0.2100$	$y = 0.1600$	$z = 0.4900$
$d^4P - f(2) 3$	0.3200	$z = 0.8571$	$y = 0.1000$	$z = 0.0429$
$d^2D - f(0) 3$	0.2222	$z = 0.3810$	$y = 0.6000$	$z = 0.0190$
$d^2D - f(1) 2$	0.3069	$z = 0.0055$	$y = 0.0434$	$z = 0.9462$
$d^2D - f(1) 3$	0.0741	$z = 0.1429$	$y = 0.4000$	$z = 0.4571$
$d^2D - f(1) 4$	0.2857	$z = 1.0000$		
$d^2D - f(2) 1$	0.0444	$z = 0.1000$	$y = 0.0000$	$z = 0.9000$
$d^2D - f(2) 2$	0.1905	$z = 0.2844$	$y = 0.1400$	$z = 0.0156$
$d^2D - f(2) 3$	0.4000	$z = 0.3968$	$y = 0.4000$	$z = 0.2032$
$d^2D - f(2) 4$	0.4762	$z = 1.0000$		
$d^4D - f(0) 3$	0.4444	$z = 0.0000$	$y = 0.0333$	$z = 0.0000$
$d^4D - f(1) 2$	0.6138	$z = 0.0020$	$y = 0.0002$	$z = 0.0142$
	$z = 0.4079$	$z = 0.4888$		$z = 0.0867$
$d^4D - f(1) 3$	0.1481	$z = 0.2755$	$y = 0.0041$	$z = 0.0102$
$d^4D - f(1) 4$	0.5714	$z = 0.8333$	$y = 0.1429$	$z = 0.5102$
$d^4D - f(2) 1$	0.0889	$z = 0.1750$	$y = 0.2500$	$z = 0.0238$
$d^4D - f(2) 2$	0.3810	$z = 0.0571$	$y = 0.0672$	$z = 0.2000$
	$z = 0.0700$	$z = 0.1750$	$z = 0.3506$	$z = 0.2800$
$d^4D - f(2) 3$	0.8000	$z = 0.2755$	$y = 0.1311$	$z = 0.0102$
$d^4D - f(2) 4$	0.9524	$z = 0.8333$	$y = 0.1429$	$z = 0.0238$
$d^2F - f(0) 3$	0.3111	$z = 0.0000$	$y = 0.0476$	$z = 0.0000$
$d^2F - f(1) 2$	0.0360	$z = 0.0168$	$y = 0.0118$	$z = 0.9714$
$d^2F - f(1) 3$	0.3259	$z = 0.0626$	$y = 0.0074$	$z = 0.0023$
$d^2F - f(1) 4$	0.5714	$z = 0.4167$	$y = 0.5714$	$z = 0.0119$
$d^2F - f(2) 1$	0.0013	$z = 1.0000$		
$d^2F - f(2) 2$	0.0190	$z = 0.1429$	$y = 0.0444$	$z = 0.8127$
$d^2F - f(2) 3$	0.1067	$z = 0.3189$	$y = 0.2177$	$z = 0.0383$
$d^2F - f(2) 4$	0.3810	$z = 0.3750$	$y = 0.3571$	$z = 0.2679$
$d^4F - f(2) 5$	1.0476	$z = 1.0000$		
$d^4F - f(0) 3$	0.6222	$z = 0.0000$	$y = 0.0000$	$z = 0.0000$
	$z = 0.3810$	$z = 0.6000$		
$d^4F - f(1) 2$	0.0720	$z = 0.0252$	$y = 0.0753$	$z = 0.3230$
$d^4F - f(1) 3$	0.6519	$z = 0.0000$	$y = 0.0035$	$z = 0.0939$
	$z = 0.2681$	$z = 0.5091$		
$d^4F - f(1) 4$	1.1429	$z = 0.0000$	$y = 0.0179$	$z = 0.0000$
$d^4F - f(2) 1$	0.0025	$z = 0.4000$	$y = 0.5000$	$z = 0.1000$
$d^4F - f(2) 2$	0.0381	$z = 0.2143$	$y = 0.2178$	$z = 0.1679$
$d^4F - f(2) 3$	0.2133	$z = 0.0744$	$y = 0.0574$	$z = 0.3593$
	$z = 0.0514$	$z = 0.1714$		
$d^4F - f(2) 4$	0.7619	$z = 0.3056$	$y = 0.1240$	$z = 0.0069$
$d^4F - f(2) 5$	2.0952	$z = 0.8182$	$y = 0.1667$	$z = 0.0152$

TABLE 8b (CONTINUED)

$f^{(2s+1)L} - d^{(J_p)} K$	$\sum_{J_p}^s$			
$f^2D - d(0) 2$	0.1587	$z = 0.0667$	$y = 0.0000$	$z = 0.9333$
$f^2D - d(1) 1$	0.1333	$z = 0.4000$	$y = 0.5000$	$z = 0.1000$
$f^2D - d(1) 2$	0.3069	$z = 0.0055$	$y = 0.0434$	$z = 0.9462$
$f^2D - d(1) 3$	0.0360	$z = 0.0168$	$y = 0.0118$	$z = 0.9714$
$f^2D - d(2) 0$	0.1333	$z = 1.0000$		
$f^2D - d(2) 1$	0.3111	$z = 0.2286$	$y = 0.6429$	$z = 0.1286$
$f^2D - d(2) 2$	0.2766	$z = 0.0560$	$y = 0.3374$	$z = 0.5938$
$f^2D - d(2) 3$	0.0698	$z = 0.0043$	$y = 0.1091$	$z = 0.8866$
$f^2D - d(2) 4$	0.0027	$z = 1.0000$		
$f^4D - d(0) 2$	0.3175	$z = 0.8571$	$y = 0.1333$	$z = 0.0095$
	$z = 0.0000$	$z = 0.0000$		
$f^4D - d(1) 1$	0.2667	$z = 0.7000$	$y = 0.2500$	$z = 0.0500$
$f^4D - d(1) 2$	0.6138	$z = 0.7882$	$y = 0.0834$	$z = 0.1042$
	$z = 0.0024$	$z = 0.0000$		
$f^4D - d(1) 3$	0.0720	$z = 0.8103$	$y = 0.1154$	$z = 0.0300$
$f^4D - d(2) 0$	0.2667	$z = 0.5000$	$y = 0.5000$	
$f^4D - d(2) 1$	0.6222	$z = 0.4000$	$y = 0.0857$	$z = 0.3500$
$f^4D - d(2) 2$	0.5533	$z = 0.4047$	$y = 0.0109$	$z = 0.3778$
	$z = 0.0861$	$z = 0.0861$	$z = 0.0844$	
$f^4D - d(2) 3$	0.1397	$z = 0.6763$	$y = 0.0654$	$z = 0.0250$
$f^4D - d(2) 4$	0.0054	$z = 0.8333$	$y = 0.1429$	$z = 0.0238$
$f^2F - d(0) 2$	0.2222	$z = 0.4286$	$y = 0.5333$	$z = 0.0381$
$f^2F - d(1) 1$	0.2667	$z = 1.0000$		
$f^2F - d(1) 2$	0.0741	$z = 0.1429$	$y = 0.4000$	$z = 0.4571$
$f^2F - d(1) 3$	0.3259	$z = 0.0626$	$y = 0.0074$	$z = 0.9276$
$f^2F - d(2) 1$	0.0889	$z = 1.0000$		
$f^2F - d(2) 2$	0.3492	$z = 0.3506$	$y = 0.5939$	$z = 0.0554$
$f^2F - d(2) 3$	0.5778	$z = 0.0177$	$y = 0.1340$	$z = 0.8477$
$f^2F - d(2) 4$	0.0952	$z = 0.0000$	$y = 0.0357$	$z = 0.9643$
$f^4F - d(0) 2$	0.4444	$z = 0.6429$	$y = 0.3333$	$z = 0.0238$
$f^4F - d(1) 1$	0.5333	$z = 0.4000$	$y = 0.5000$	$z = 0.1000$
$f^4F - d(1) 2$	0.1481	$z = 0.2143$	$y = 0.0400$	$z = 0.3457$
$f^4F - d(1) 3$	0.6519	$z = 0.8218$	$y = 0.1705$	$z = 0.0000$
	$z = 0.0028$	$z = 0.0028$		
$f^4F - d(2) 1$	0.1778	$z = 0.4000$	$y = 0.5000$	$z = 0.1000$
$f^4F - d(2) 2$	0.6984	$z = 0.5260$	$y = 0.2048$	$z = 0.1601$
$f^4F - d(2) 3$	1.1556	$z = 0.6439$	$y = 0.0795$	$z = 0.1884$
	$z = 0.0157$	$z = 0.0066$		
$f^4F - d(2) 4$	0.1905	$z = 0.7639$	$y = 0.1270$	$z = 0.0174$
$f^2G - d(0) 2$	0.2857	$z = 1.0000$		
$f^2G - d(1) 2$	0.2857	$z = 1.0000$		
$f^2G - d(1) 3$	0.5714	$z = 0.4167$	$y = 0.5714$	$z = 0.0119$
$f^2G - d(2) 2$	0.0408	$z = 1.0000$		
$f^2G - d(2) 3$	0.2857	$z = 0.4167$	$y = 0.5714$	$z = 0.0119$

TABLE 8b (CONTINUED)

$f^2G - d(2)[4]$	1.1020	$z = 0.0000$	0.0278	$y = 0.9722$	$z = 0.0000$
$f^4G - d(0)[2]$	0.5714	$z = 0.3571$	0.6000	$y = 0.0429$	
$f^4G - d(1)[2]$	0.5714	$z = 0.3571$	0.6000	$y = 0.0429$	
$f^4G - d(1)[3]$	1.1429	$z = 0.5729$	0.3189	$y = 0.0680$	0.0383 $z = 0.0019$
$f^4G - d(2)[2]$	0.0816	$z = 0.3571$	0.6000	$y = 0.0429$	
$f^4G - d(2)[3]$	0.5714	$z = 0.35729$	0.3189	$y = 0.0680$	0.0383 $z = 0.0019$
$f^4G - d(2)[4]$	2.2041	$z = 0.7778$	0.1485	$y = 0.0540$	0.0176
		$z = 0.0015$	0.0005		
$f^{(2s+1)L} - g(J_p)[K]$	$\sum_{J,J'}^s$				
$f^2D - g(0)[4]$	0.1587	$z = 1.0000$			
$f^2D - g(1)[3]$	0.1786	$z = 0.4286$	0.5333	$y = 0.0381$	
$f^2D - g(1)[4]$	0.2976	$z = 1.0000$			
$f^2D - g(2)[2]$	0.3401	$z = 0.0667$	0.0000	$y = 0.0000$	$z = 0.9333$
$f^2D - g(2)[3]$	0.2976	$z = 0.4286$	0.5333	$y = 0.0381$	
$f^2D - g(2)[4]$	0.1559	$z = 1.0000$			
$f^4D - g(0)[4]$	0.3175	$z = 0.8333$	0.1429	$y = 0.0238$	
$f^4D - g(1)[3]$	0.3571	$z = 0.0918$	0.0871	$y = 0.0034$	$z = 0.5510$
$f^4D - g(1)[4]$	0.5952	$z = 0.8333$	0.1429	$y = 0.0238$	
$f^4D - g(2)[2]$	0.6803	$z = 0.0038$	0.0120	$y = 0.0975$	0.1680
		$z = 0.2987$	0.4200		
$f^4D - g(2)[3]$	0.5952	$z = 0.0918$	0.0871	$y = 0.0034$	$z = 0.5510$
$f^4D - g(2)[4]$	0.3118	$z = 0.8333$	0.1429	$y = 0.0238$	
$f^2F - g(0)[4]$	0.2222	$z = 0.4167$	0.5714	$y = 0.0119$	
$f^2F - g(1)[3]$	0.3194	$z = 0.0018$	0.0266	$y = 0.0013$	$z = 0.9703$
$f^2F - g(1)[4]$	0.0417	$z = 0.1667$	0.3571	$y = 0.4762$	
$f^2F - g(1)[5]$	0.3056	$z = 1.0000$			
$f^2F - g(2)[2]$	0.0298	$z = 0.0476$	0.0000	$y = 0.9524$	
$f^2F - g(2)[3]$	0.2063	$z = 0.1633$	0.0680	$y = 0.0034$	$z = 0.7653$
$f^2F - g(2)[4]$	0.4147	$z = 0.4298$	0.4699	$y = 0.1003$	
$f^2F - g(2)[5]$	0.4583	$z = 1.0000$			
$f^4F - g(0)[4]$	0.4444	$z = 0.0000$	0.0179	$y = 0.0000$	$z = 0.6250$
$f^4F - g(1)[3]$	0.6389	$z = 0.0006$	0.0000	$y = 0.0036$	0.0326
		$z = 0.3668$	0.5963		
$f^4F - g(1)[4]$	0.0833	$z = 0.3056$	0.0198	$y = 0.0069$	$z = 0.4344$
$f^4F - g(1)[5]$	0.6111	$z = 0.8182$	0.1667	$y = 0.0152$	0.2232
$f^4F - g(2)[2]$	0.0595	$z = 0.0714$	0.1200	$y = 0.2752$	0.4800 $z = 0.0533$
$f^4F - g(2)[3]$	0.4167	$z = 0.0149$	0.0204	$y = 0.2058$	0.2058
		$z = 0.1722$	0.3810		
$f^4F - g(2)[4]$	0.8294	$z = 0.1447$	0.0846	$y = 0.0033$	$z = 0.4737$
$f^4F - g(2)[5]$	0.9167	$z = 0.8182$	0.1667	$y = 0.0152$	0.2937
$f^2G - g(0)[4]$	0.2857	$z = 0.0000$	0.0278	$y = 0.0000$	$z = 0.9722$
$f^2G - g(1)[3]$	0.0205	$z = 0.0090$	0.0069	$y = 0.9841$	
$f^2G - g(1)[4]$	0.3274	$z = 0.0346$	0.0022	$y = 0.0008$	$z = 0.9624$
$f^2G - g(1)[5]$	0.5093	$z = 0.4364$	0.5556	$y = 0.0081$	
$f^2G - g(2)[2]$	0.0005	$z = 1.0000$			

TABLE 8b (CONTINUED)

$f^2G - g(2)[3]$	0.0126	$z = 0.0789$	0.0188	$y = 0.9023$	
$f^2G - g(2)[4]$	0.0961	$z = 0.2248$	0.1442	$y = 0.0126$	$z = 0.8183$
$f^2G - g(2)[5]$	0.3565	$z = 0.4156$	0.4286	$y = 0.1558$	
$f^2G - g(2)[6]$	0.9630	$z = 1.0000$			
$f^4G - g(0)[4]$	0.5714	$z = 0.0000$	0.0000	$y = 0.0000$	0.0099
		$z = 0.3472$	0.6429		
$f^4G - g(1)[3]$	0.0410	$z = 0.0123$	0.0395	$y = 0.3183$	0.5999 $z = 0.0300$
$f^4G - g(1)[4]$	0.6548	$z = 0.0000$	0.0011	$y = 0.0475$	0.0724
		$z = 0.2873$	0.5917		
$f^4G - g(1)[5]$	1.0185	$z = 0.0000$	0.0111	$y = 0.0000$	$z = 0.6000$
$f^4G - g(2)[2]$	0.0009	$z = 0.3571$	0.6000	$y = 0.0429$	
$f^4G - g(2)[3]$	0.0251	$z = 0.1086$	0.1300	$y = 0.2328$	0.5035 $z = 0.0252$
$f^4G - g(2)[4]$	0.1922	$z = 0.0270$	0.0242	$y = 0.2629$	0.2381
		$z = 0.1219$	0.3259		
$f^4G - g(2)[5]$	0.7130	$z = 0.1842$	0.0868	$y = 0.0028$	$z = 0.4262$
$f^4G - g(2)[6]$	1.9259	$z = 0.8077$	0.1818	$y = 0.0105$	
		$z = 0.0000$	0.0000		
$g^2F - f(0)[3]$	0.1728	$z = 0.0357$	0.0000	$y = 0.9643$	$z = 0.0000$
$g^2F - f(1)[2]$	0.1786	$z = 0.4286$	0.5333	$y = 0.0391$	
$g^2F - f(1)[3]$	0.3194	$z = 0.0018$	0.0266	$y = 0.9703$	$z = 0.0013$
$g^2F - f(1)[4]$	0.0205	$z = 0.0090$	0.0069	$y = 0.9841$	
$g^2F - f(2)[1]$	0.2857	$z = 1.0000$			
$g^2F - f(2)[2]$	0.3274	$z = 0.3247$	0.5818	$y = 0.0935$	
$g^2F - f(2)[3]$	0.2166	$z = 0.0485$	0.2120	$y = 0.7392$	$z = 0.0033$
$g^2F - f(2)[4]$	0.0537	$z = 0.0033$	0.0630	$y = 0.9337$	
$g^2F - f(2)[5]$	0.0008	$z = 1.0000$			
$g^4F - f(0)[3]$	0.3457	$z = 0.8333$	0.1607	$y = 0.0060$	0.0000
		$z = 0.0000$	0.0000		
$g^4F - f(1)[2]$	0.3571	$z = 0.6429$	0.3333	$y = 0.0238$	0.0000 $z = 0.0000$
$g^4F - f(1)[3]$	0.6389	$z = 0.7926$	0.1278	$y = 0.0622$	0.0166
		$z = 0.0008$	0.0000		
$g^4F - f(1)[4]$	0.0410	$z = 0.8050$	0.1485	$y = 0.0183$	$z = 0.0239$
$g^4F - f(2)[1]$	0.5714	$z = 0.4000$	0.5000	$y = 0.1000$	
$g^4F - f(2)[2]$	0.6548	$z = 0.4870$	0.1782	$y = 0.1894$	0.1309 $z = 0.0145$
$g^4F - f(2)[3]$	0.4331	$z = 0.5346$	0.0545	$y = 0.2671$	0.0995
		$z = 0.0295$	0.0147		
$g^4F - f(2)[4]$	0.0875	$z = 0.7249$	0.1124	$y = 0.0165$	$z = 0.1068$
$g^4F - f(2)[5]$	0.0016	$z = 0.8182$	0.1667	$y = 0.0152$	
$g^2G - f(0)[3]$	0.2222	$z = 0.4444$	0.5357	$y = 0.0198$	
$g^2G - f(1)[2]$	0.2976	$z = 1.0000$			
$g^2G - f(1)[3]$	0.0417	$z = 0.1667$	0.3571	$y = 0.4762$	
$g^2G - f(1)[4]$	0.3274	$z = 0.0346$	0.0022	$y = 0.9624$	$z = 0.0008$
$g^2G - f(2)[2]$	0.1488	$z = 1.0000$			
$g^2G - f(2)[3]$	0.3935	$z = 0.3954$	0.5672	$y = 0.0373$	

TABLE 8b (CONTINUED)

$g^2G - f(2)[4]$	0.5179	$z = 0.0131$	0.0851	$y = 0.9014$	$z = 0.0003$
$g^2G - f(2)[5]$	0.0509	$z = 0.0000$	0.0222	$y = 0.9778$	
$g^4G - f(0)[3]$	0.4444	$z = 0.6111$	0.3750	$y = 0.0139$	$z = 0.0000$
$g^4G - f(1)[2]$	0.5952	$z = 0.3571$	0.6000	$y = 0.0429$	
$g^4G - f(1)[3]$	0.0833	$z = 0.2292$	0.0816	$y = 0.2874$	$z = 0.0191$
$g^4G - f(1)[4]$	0.6548	$z = 0.8145$	0.1828	$y = 0.0004$	$z = 0.0010$
		$z = 0.0007$	0.0008		
$g^4G - f(2)[2]$	0.2976	$z = 0.3571$	0.6000	$y = 0.0429$	
$g^4G - f(2)[3]$	0.7870	$z = 0.5437$	0.2917	$y = 0.0937$	$z = 0.0034$
$g^4G - f(2)[4]$	1.0357	$z = 0.6952$	0.1184	$y = 0.1253$	$z = 0.0522$
		$z = 0.0061$	0.0028		
$g^4G - f(2)[5]$	0.1019	$z = 0.7736$	0.1544	$y = 0.0119$	$z = 0.0446$
$g^2H - f(0)[3]$	0.2716	$z = 1.0000$			0.0156
$g^2H - f(1)[3]$	0.3056	$z = 1.0000$			
$g^2H - f(1)[4]$	0.5093	$z = 0.4364$	0.5556	$y = 0.0061$	
$g^2H - f(2)[3]$	0.0566	$z = 1.0000$			
$g^2H - f(2)[4]$	0.3056	$z = 0.4364$	0.5556	$y = 0.0061$	
$g^2H - f(2)[5]$	0.9959	$z = 0.0000$	0.0182	$y = 0.9818$	$z = 0.0000$
$g^4H - f(0)[3]$	0.5432	$z = 0.3333$	0.6429	$y = 0.0238$	
$g^4H - f(1)[3]$	0.6111	$z = 0.3333$	0.6429	$y = 0.0238$	
$g^4H - f(1)[4]$	1.0185	$z = 0.5673$	0.3630	$y = 0.0431$	$z = 0.0007$
$g^4H - f(2)[3]$	0.1132	$z = 0.3333$	0.6429	$y = 0.0238$	
$g^4H - f(2)[4]$	0.8111	$z = 0.5673$	0.3630	$y = 0.0431$	$z = 0.0007$
$g^4H - f(2)[5]$	1.9918	$z = 0.7810$	0.1688	$y = 0.0365$	$z = 0.0128$
		$z = 0.0007$	0.0002		

TABLE 8c (CONTINUED)

$s^4P - p(2, \frac{1}{2})$	2.2222	$z = 0.4200$	0.0200	$y = 0.4800$	$z = 0.0800$
$s^4P - p(2, \frac{3}{2})$	4.4444	$z = 0.6000$	0.0350	$y = 0.2400$	$z = 0.0400$
		$z = 0.0600$	0.0250		
$p^{(2S+1)L - s}(J_p, j)$	$\sum_{J_p, j} s$				
$p^2S - s(0, \frac{1}{2})$	0.0741	$z = 1.0000$			
$p^2S - s(1, \frac{1}{2})$	0.2222	$z = 0.3333$	$y = 0.6667$		
$p^2S - s(2, \frac{1}{2})$	0.3704	$z = 1.0000$			
$p^4S - s(0, \frac{1}{2})$	0.1481	$z = 1.0000$			
$p^4S - s(1, \frac{1}{2})$	0.4444	$z = 0.8333$	$y = 0.1667$		
$p^4S - s(2, \frac{1}{2})$	0.7407	$z = 0.9000$	$y = 0.1000$		
$p^2P - s(0, \frac{1}{2})$	0.2222	$z = 0.2778$	0.4444	$y = 0.2222$	$z = 0.0556$
$p^2P - s(1, \frac{1}{2})$	0.6667	$z = 0.2778$	0.4444	$y = 0.8333$	
$p^2P - s(2, \frac{1}{2})$	1.1111	$z = 0.0000$	0.1667	$y = 0.8333$	
$p^4P - s(0, \frac{1}{2})$	0.4444	$z = 0.8333$	$y = 0.1667$		
$p^4P - s(1, \frac{1}{2})$	1.3333	$z = 0.3750$	0.1989	$y = 0.1111$	$z = 0.3472$
$p^4P - s(2, \frac{1}{2})$	2.2222	$z = 0.6300$	0.0133	$y = 0.0450$	$z = 0.2700$
$p^2D - s(0, \frac{1}{2})$	0.3704	$z = 1.0000$			
$p^2D - s(1, \frac{1}{2})$	1.1111	$z = 0.3000$	0.6667	$y = 0.0333$	
$p^2D - s(2, \frac{1}{2})$	1.8519	$z = 0.0000$	0.1000	$y = 0.9000$	$z = 0.0000$
$p^4D - s(0, \frac{1}{2})$	0.7407	$z = 0.5000$	$y = 0.5000$		
$p^4D - s(1, \frac{1}{2})$	2.2222	$z = 0.5250$	0.0833	$y = 0.2667$	$z = 0.0417$
$p^4D - s(2, \frac{1}{2})$	3.7037	$z = 0.7200$	0.0630	$y = 0.1620$	$z = 0.0320$
		$z = 0.0180$	0.0050		

TABLE 8c (CONTINUED)

$p^{(2S+1)L - d}(J_p, j)$	$\sum_{J_p, j} s$				
$p^2S - d(0, \frac{3}{2})$	0.0741	$z = 1.0000$			
$p^2S - d(1, \frac{3}{2})$	0.1556	$z = 0.7619$	$y = 0.2381$		
$p^2S - d(2, \frac{3}{2})$	0.0667	$z = 1.0000$			
$p^4S - d(0, \frac{3}{2})$	0.0870	$z = 0.8000$	$y = 0.2000$		
$p^4S - d(1, \frac{3}{2})$	0.3533	$z = 0.4667$	$y = 0.5333$		
$p^4S - d(2, \frac{3}{2})$	0.0148	$z = 1.0000$			
$p^4S - d(0, \frac{5}{2})$	0.1333	$z = 1.0000$			
$p^4S - d(1, \frac{5}{2})$	0.1111	$z = 0.1800$	$y = 0.6533$	$z = 0.1667$	
$p^4S - d(2, \frac{5}{2})$	0.3333	$z = 0.8400$	$y = 0.1600$		
$p^2P - d(0, \frac{3}{2})$	0.4074	$z = 0.1145$	$y = 0.4400$	$z = 0.4455$	
$p^2P - d(1, \frac{3}{2})$	0.3333	$z = 0.5600$	$y = 0.3733$	$z = 0.0667$	
$p^2P - d(2, \frac{3}{2})$	0.1556	$z = 0.0476$	$z = 0.9524$		
$p^4P - d(0, \frac{3}{2})$	0.0667	$z = 1.0000$			
$p^4P - d(1, \frac{3}{2})$	0.3667	$z = 0.6818$	0.0404	$y = 0.2020$	$z = 0.0253$
$p^4P - d(2, \frac{3}{2})$	0.3000	$z = 0.0000$	1.0000	$y = 0.0000$	
$p^2P - d(1, \frac{5}{2})$	0.2778	$z = 0.7560$	0.0553	$y = 0.1707$	$z = 0.0067$
$p^2P - d(2, \frac{5}{2})$	0.8333	$z = 0.4480$	0.0933	$y = 0.2987$	$z = 0.0533$
$p^4P - d(0, \frac{5}{2})$	0.1111	$z = 0.0000$	$y = 0.3333$	$z = 0.6667$	
$p^4P - d(1, \frac{5}{2})$	0.3333	$z = 0.0000$	$z = 1.0000$		

TRANSITIONS BETWEEN LS AND j STATES. PARENT TERM: 3P

$s^{(2S+1)L - p}(J_p, j)$	$\sum_{J_p, j} s$				
$s^2P - p(0, \frac{1}{2})$	0.2222	$z = 0.0000$	$y = 1.0000$		
$s^2P - p(0, \frac{3}{2})$	0.4444	$z = 0.0000$	$z = 1.0000$		
$s^2P - p(1, \frac{1}{2})$	0.6667	$z = 0.1852$	0.0741	$y = 0.1481$	$z = 0.5926$
$s^2P - p(1, \frac{3}{2})$	1.3333	$z = 0.2500$	0.3704	$y = 0.0741$	$z = 0.0093$
$s^4P - p(2, \frac{1}{2})$	1.1111	$z = 0.8000$	0.0000	$y = 0.2000$	
$s^4P - p(2, \frac{3}{2})$	2.2222	$z = 0.3500$	0.0000	$y = 0.4000$	$z = 0.2500$
$s^4P - p(0, \frac{1}{2})$	0.4444	$z = 0.0000$	$y = 1.0000$		
$s^4P - p(0, \frac{3}{2})$	0.8889	$z = 0.0000$	$y = 0.0000$	$z = 1.0000$	
$s^4P - p(1, \frac{1}{2})$	1.3333	$z = 0.0000$	0.3704	$y = 0.4630$	$z = 0.1481$
$s^4P - p(1, \frac{3}{2})$	2.6667	$z = 0.0000$	0.1852	0.0741	$y = 0.0000$
		$z = 0.6250$	0.0926		

TABLE 8c (CONTINUED)

$p^4P - d(1, \frac{3}{2})$	0.4333	$x = 0.0969$	0.0414	0.5342	$y = 0.0185$	0.0171
		$z = 0.0185$	0.2735			
$p^4P - d(1, \frac{5}{2})$	0.9000	$x = 0.4444$	0.2800	0.1667	$y = 0.0533$	0.0533
		$z = 0.0022$				
$p^4P - d(2, \frac{3}{2})$	1.0556	$x = 0.0758$	0.1592	0.0070	$y = 0.2293$	0.2359
		$z = 0.1213$	0.1698			
$p^4P - d(2, \frac{5}{2})$	1.1667	$x = 0.6171$	0.0160	0.0333	$y = 0.2469$	0.0107
		$z = 0.0360$	0.0019			
$p^2D - d(0, \frac{3}{2})$	0.0370	$x = 0.0000$	$y = 1.0000$			
$p^2D - d(0, \frac{5}{2})$	0.3333	$x = 0.0000$	$z = 1.0000$			
$p^2D - d(1, \frac{3}{2})$	0.2778	$x = 0.1008$	0.0021	$y = 0.0192$	0.0067	$z = 0.8712$
$p^2D - d(1, \frac{5}{2})$	0.8333	$x = 0.3200$	0.5376	$y = 0.0384$	0.1024	$z = 0.0016$
$p^2D - d(2, \frac{3}{2})$	1.0185	$x = 0.8378$	0.0412	$y = 0.1060$	0.0093	
		$z = 0.0052$	0.0004			
$p^2D - d(2, \frac{5}{2})$	0.8333	$x = 0.5760$	0.0896	$y = 0.2304$	0.0597	
		$z = 0.0336$	0.0107			
$p^4D - d(0, \frac{3}{2})$	0.4074	$x = 0.0000$	$y = 0.0909$	$z = 0.9091$		
$p^4D - d(0, \frac{5}{2})$	0.3333	$x = 0.0000$	$y = 0.0000$	$z = 1.0000$		
$p^4D - d(1, \frac{3}{2})$	1.0556	$x = 0.0000$	0.0177	0.0281	$y = 0.0928$	0.1921
		$z = 0.4851$	0.1404			
$p^4D - d(1, \frac{5}{2})$	1.1667	$x = 0.0000$	0.0960	0.0046	$y = 0.0000$	0.0040
		$z = 0.8000$	0.0240	0.0714		
$p^4D - d(2, \frac{3}{2})$	1.2037	$x = 0.1709$	0.2058	0.0444	0.0003	
		$y = 0.0506$	0.0620	0.0197	$z = 0.3829$	0.0620
$p^4D - d(2, \frac{5}{2})$	2.5000	$x = 0.8000$	0.0137	0.0075	0.0031	
		$y = 0.1463$	0.0055	0.0050	0.0036	
		$z = 0.0137$	0.0008	0.0009		

TABLE 8c (CONTINUED)

$d^2D - p(1, \frac{3}{2})$	0.3889	$x = 0.1200$	0.2057	$y = 0.0229$	0.6429	$z = 0.0086$
$d^2D - p(2, \frac{3}{2})$	0.2778	$x = 0.4480$	0.1280	$y = 0.3920$	$z = 0.0820$	
$d^2D - p(2, \frac{5}{2})$	0.8333	$x = 0.0000$	0.0093	$y = 0.1307$	0.1707	
		$z = 0.5227$	0.1667			
$d^4D - p(0, \frac{1}{2})$	0.1111	$x = 1.0000$	$y = 0.0000$			
$d^4D - p(0, \frac{3}{2})$	0.3333	$x = 0.9333$	$y = 0.0667$	$z = 0.0000$		
$d^4D - p(1, \frac{1}{2})$	0.3889	$x = 0.1000$	0.1429	$y = 0.1143$	0.5714	$z = 0.0714$
$d^4D - p(1, \frac{3}{2})$	0.9444	$x = 0.5647$	0.1318	0.1176	$y = 0.0035$	0.1153
		$z = 0.0141$	0.0235			
$d^4D - p(2, \frac{1}{2})$	0.8333	$x = 0.1067$	0.2333	$y = 0.2667$	0.2667	
		$z = 0.0667$	0.0800			
$d^4D - p(2, \frac{3}{2})$	1.3889	$x = 0.2469$	0.1565	0.0016	0.0360	
		$y = 0.4571$	0.0224	0.0160	$z = 0.0411$	0.0224
		$z = 1.0000$				
$d^2F - p(0, \frac{3}{2})$	0.3111	$x = 1.0000$				
$d^2F - p(1, \frac{1}{2})$	0.1556	$x = 1.0000$				
$d^2F - p(1, \frac{3}{2})$	0.7778	$x = 0.3429$	0.6400	$y = 0.0171$		
$d^2F - p(2, \frac{1}{2})$	0.7778	$x = 0.9143$	0.0400	$y = 0.0457$		
$d^2F - p(2, \frac{3}{2})$	0.7778	$x = 0.0000$	0.0400	$y = 0.8000$	0.1600	$z = 0.0000$
$d^4F - p(0, \frac{1}{2})$	0.3111	$x = 1.0000$				
$d^4F - p(0, \frac{3}{2})$	0.3111	$x = 0.8000$	$y = 0.2000$			
$d^4F - p(1, \frac{1}{2})$	0.7778	$x = 0.6400$	0.2000	$y = 0.1600$		
$d^4F - p(1, \frac{3}{2})$	1.0889	$x = 0.7347$	0.0229	0.0714	$y = 0.1567$	0.0057
		$z = 0.0086$				
$d^4F - p(2, \frac{1}{2})$	0.7778	$x = 0.6857$	0.1280	$y = 0.1463$	0.0320	$z = 0.0080$
$d^4F - p(2, \frac{3}{2})$	2.3333	$x = 0.8571$	0.0163	0.0107	0.0067	
		$y = 0.0980$	0.0035	0.0027	$z = 0.0049$	0.0002

$d^{(2s+1)L} - f(J_p, j)$

$d^2P - f(0, \frac{5}{2})$	0.1333	$x = 1.0000$				
$d^2P - f(1, \frac{3}{2})$	0.2857	$x = 0.7200$	0.2333	$y = 0.0467$		
$d^2P - f(1, \frac{5}{2})$	0.1143	$x = 1.0000$				
$d^2P - f(2, \frac{3}{2})$	0.0952	$x = 0.6400$	0.3000	$y = 0.0600$	0.0000	$z = 0.0000$
$d^2P - f(2, \frac{5}{2})$	0.5714	$x = 0.3600$	0.5333	$y = 0.1067$		
$d^4P - f(0, \frac{5}{2})$	0.0381	$x = 0.3000$	$z = 0.7000$			
$d^4P - f(0, \frac{7}{2})$	0.2286	$x = 1.0000$				
$d^4P - f(1, \frac{3}{2})$	0.2286	$x = 0.0714$	0.4050	0.1458	$y = 0.1736$	0.1867
		$z = 0.0175$				
$d^4P - f(1, \frac{5}{2})$	0.5714	$x = 0.7714$	0.1600	$y = 0.0686$		
$d^4P - f(2, \frac{3}{2})$	0.7619	$x = 0.0386$	0.1690	0.1688	$y = 0.0724$	0.2160
		$z = 0.0203$	0.0525			
$d^4P - f(2, \frac{5}{2})$	0.5714	$x = 0.4286$	0.2880	0.0667	$y = 0.1234$	0.0853
		$z = 0.0080$				
$d^2D - f(0, \frac{5}{2})$	0.1376	$x = 0.0308$	$z = 0.9692$			
$d^2D - f(0, \frac{7}{2})$	0.0847	$x = 1.0000$				
$d^2D - f(1, \frac{3}{2})$	0.3492	$x = 0.8485$	0.0073	$y = 0.1018$	0.0382	$z = 0.0042$
$d^2D - f(1, \frac{5}{2})$	0.3175	$x = 0.0000$	1.0000	$y = 0.0000$		

TABLE 8c (CONTINUED)

$d^2D - f(2, \frac{5}{2})$	0.3704	$z = 0.7347$	$y = 0.0836$	$z = 0.0154$
		$z = 0.0017$	0.0000	
$d^2D - f(2, \frac{7}{2})$	0.7407	$x = 0.4898$	0.2777	$y = 0.1411$
		$z = 0.0000$	$y = 0.1000$	$z = 0.0091$
$d^4D - f(0, \frac{5}{2})$	0.1481	$x = 0.0000$	$y = 0.1000$	$z = 0.9000$
$d^4D - f(0, \frac{7}{2})$	0.2963	$x = 0.0000$	$z = 1.0000$	
$d^4D - f(1, \frac{5}{2})$	0.5079	$x = 0.0459$	0.0000	$y = 0.0041$
		$z = 0.1029$	0.1512	0.5906
$d^4D - f(1, \frac{7}{2})$	0.8254	$x = 0.5769$	0.1272	0.2462
		$z = 0.0008$		$y = 0.0377$
		0.0113		
$d^4D - f(2, \frac{5}{2})$	1.0582	$x = 0.0429$	0.2652	0.1764
		$y = 0.0828$	0.1812	0.1176
		$z = 0.0184$	0.0360	0.0210
$d^4D - f(2, \frac{7}{2})$	1.1640	$x = 0.6429$	0.1391	0.0000
		$y = 0.1336$	0.0401	0.0000
		$z = 0.0090$	0.0026	
$d^2F - f(0, \frac{5}{2})$	0.0148	$x = 0.0000$	$y = 1.0000$	
$d^2F - f(0, \frac{7}{2})$	0.2963	$x = 0.0000$	$z = 1.0000$	
$d^2F - f(1, \frac{5}{2})$	0.2222	$x = 0.0525$	0.0002	$y = 0.0047$
		$z = 0.3348$	0.5904	$y = 0.0219$
$d^2F - f(1, \frac{7}{2})$	0.7111	$x = 0.8348$	0.5904	$y = 0.0219$
		$z = 0.8477$	0.0807	$y = 0.0606$
$d^2F - f(2, \frac{5}{2})$	0.9630	$x = 0.0016$	0.0002	
$d^2F - f(2, \frac{7}{2})$	0.5926	$x = 0.6314$	0.1749	$y = 0.1312$
		$z = 0.0089$	0.0033	
$d^4F - f(0, \frac{5}{2})$	0.3852	$x = 0.0000$	$y = 0.0308$	$z = 0.9692$
$d^4F - f(0, \frac{7}{2})$	0.2370	$x = 0.0000$	$z = 0.0000$	$z = 1.0000$
$d^4F - f(1, \frac{5}{2})$	0.9778	$x = 0.0000$	0.0032	0.0055
		$z = 0.0358$	0.0998	0.0382
		$z = 0.5103$	0.3073	
$d^4F - f(1, \frac{7}{2})$	0.8889	$x = 0.0000$	0.0525	0.0084
		$z = 0.8036$	0.0945	0.0400
$d^4F - f(2, \frac{5}{2})$	1.0370	$x = 0.0802$	0.1400	0.0647
		$y = 0.0117$	0.0180	0.0090
		$z = 0.4665$	0.1733	0.0254
$d^4F - f(2, \frac{7}{2})$	2.0741	$x = 0.8265$	0.0601	0.0008
		$y = 0.0875$	0.0125	0.0002
		$z = 0.0044$	0.0008	0.0000
$f^{(2S+1)L} - d(J_p, z)$	$\sum_{j,j'}^s$			
$f^2D - d(0, \frac{3}{2})$	0.1481	$x = 1.0000$	$y = 0.0000$	
$f^2D - d(0, \frac{5}{2})$	0.0106	$x = 1.0000$	$z = 0.0000$	
$f^2D - d(1, \frac{3}{2})$	0.3175	$x = 0.1152$	0.0672	$y = 0.6048$
		$z = 0.0038$	0.0064	$y = 0.0005$
$f^2D - d(1, \frac{5}{2})$	0.1587	$x = 0.0083$	0.0324	$y = 0.2633$
		$z = 0.3584$	0.1260	
$f^2D - d(2, \frac{5}{2})$	0.1058	$x = 0.0016$	0.0089	$y = 0.0720$
		$z = 0.2895$	0.4652	
$f^4D - d(0, \frac{3}{2})$	0.0423	$x = 1.0000$	$y = 0.0000$	$z = 0.0000$
$f^4D - d(0, \frac{5}{2})$	0.6878	$x = 0.0016$	0.0089	$y = 0.0720$
		$z = 0.2895$	0.4652	
$f^4D - d(0, \frac{7}{2})$	0.1587	$x = 1.0000$	$z = 1.0000$	
$f^{(2S+1)L} - g(J_p, j)$	$\sum_{j,j'}^s$			
$f^2D - g(0, \frac{1}{2})$	0.1587	$x = 1.0000$	$z = 1.0000$	
$f^4D - d(0, \frac{3}{2})$	0.2751	$x = 0.9890$	$y = 0.0110$	$z = 0.0000$
$f^4D - d(1, \frac{3}{2})$	0.2540	$x = 0.0714$	0.4860	0.2625
		$z = 0.0035$	0.0000	
$f^4D - d(1, \frac{5}{2})$	0.6984	$x = 0.0835$	0.0698	0.0076
		$z = 0.0040$	0.0015	0.0000
$f^4D - d(2, \frac{3}{2})$	0.8466	$x = 0.0088$	0.0993	0.2268
		$y = 0.0298$	0.1552	0.1417
$f^4D - d(2, \frac{5}{2})$	0.7407	$x = 0.0061$	0.0269	0.0329
		$y = 0.1176$	0.1810	0.0991
		$z = 0.2750$	0.1896	0.0480
$f^2F - d(0, \frac{3}{2})$	0.1185	$x = 1.0000$		
$f^2F - d(0, \frac{5}{2})$	0.1037	$x = 0.9184$	$y = 0.0816$	
$f^2F - d(1, \frac{3}{2})$	0.3111	$x = 1.0000$	0.0000	$y = 0.0000$
$f^2F - d(1, \frac{5}{2})$	0.3556	$x = 0.0574$	0.1020	$y = 0.0051$
		$z = 0.1763$	0.0940	$y = 0.5951$
$f^2F - d(2, \frac{3}{2})$	0.3704	$x = 0.0000$	0.0018	$y = 0.0496$
		$z = 0.5290$	0.3360	
$f^4F - d(0, \frac{3}{2})$	0.1481	$x = 1.0000$	$y = 0.0000$	
$f^4F - d(0, \frac{5}{2})$	0.2963	$x = 0.9643$	$y = 0.0357$	$z = 0.0000$
$f^4F - d(1, \frac{3}{2})$	0.4889	$x = 0.1558$	0.0982	0.5455
		$z = 0.0073$		
$f^4F - d(1, \frac{5}{2})$	0.8444	$x = 0.6344$	0.0789	0.2028
		$z = 0.0022$	0.0048	
$f^4F - d(2, \frac{3}{2})$	0.9630	$x = 0.0495$	0.3052	0.2222
		$y = 0.0904$	0.1632	0.0886
$f^4F - d(2, \frac{5}{2})$	1.2593	$x = 0.1155$	0.1229	0.0245
		$y = 0.5557$	0.1313	0.0002
		$z = 0.0105$	0.0091	0.0012
$f^2G - d(0, \frac{5}{2})$	0.2857	$x = 1.0000$		
$f^2G - d(1, \frac{3}{2})$	0.1714	$x = 1.0000$		
$f^2G - d(1, \frac{5}{2})$	0.6857	$x = 0.3472$	0.6429	$y = 0.0099$
$f^2G - d(2, \frac{3}{2})$	0.8571	$x = 0.8889$	0.0857	$y = 0.0254$
$f^2G - d(2, \frac{5}{2})$	0.5714	$x = 0.0000$	0.0214	$y = 0.7500$
		$z = 0.0000$	0.0214	$y = 0.7500$
$f^4G - d(0, \frac{3}{2})$	0.3429	$x = 1.0000$		
$f^4G - d(0, \frac{5}{2})$	0.2286	$x = 0.8929$	$y = 0.1071$	
$f^4G - d(1, \frac{3}{2})$	0.8571	$x = 0.5714$	0.3600	$y = 0.0686$
$f^4G - d(1, \frac{5}{2})$	0.8571	$x = 0.7639$	0.0918	0.0400
		$z = 0.0026$		
$f^4G - d(2, \frac{3}{2})$	0.8571	$x = 0.6111$	0.2449	0.0400
		$z = 0.0020$		
$f^4G - d(2, \frac{5}{2})$	2.0000	$x = 0.8571$	0.0655	0.0007
		$y = 0.0595$	0.0078	0.0001
		$z = 0.0017$	0.0002	

TABLE 8c (CONTINUED)

$f^2D - g(1, \frac{1}{2})$	$x = 0.7033$	$y = 0.2769$	$z = 0.0198$
$f^2D - g(1, \frac{3}{2})$	$x = 1.0000$		
$f^2D - g(2, \frac{1}{2})$	$x = 0.5714$	$y = 0.4000$	$z = 0.0286$
$f^2D - g(2, \frac{3}{2})$	$x = 0.3143$	$y = 0.6400$	$z = 0.0457$
$f^4D - g(0, \frac{1}{2})$	$x = 0.1429$	$z = 0.8571$	
$f^4D - g(0, \frac{3}{2})$	$x = 1.0000$		
$f^4D - g(1, \frac{1}{2})$	$x = 0.0379$	$y = 0.4490$	$z = 0.0748$
$f^4D - g(1, \frac{3}{2})$	$z = 0.0042$		
$f^4D - g(1, \frac{5}{2})$	$x = 0.7333$	$y = 0.2286$	$z = 0.0581$
$f^4D - g(2, \frac{1}{2})$	$x = 0.0187$	$y = 0.1458$	$z = 0.2766$
$f^4D - g(2, \frac{3}{2})$	$y = 0.0243$	$z = 0.0903$	$z = 0.0085$
$f^4D - g(2, \frac{5}{2})$	$x = 0.3667$	$y = 0.3592$	$z = 0.0599$
	$z = 0.0020$		
$f^2F - g(0, \frac{1}{2})$	$x = 0.0204$	$z = 0.9796$	
$f^2F - g(0, \frac{3}{2})$	$x = 1.0000$		
$f^2F - g(1, \frac{1}{2})$	$x = 0.9122$	$z = 0.0022$	$z = 0.0596$
$f^2F - g(1, \frac{3}{2})$	$x = 0.0000$	$z = 1.0000$	$z = 0.0012$
$f^2F - g(1, \frac{5}{2})$	$x = 0.0000$	$z = 1.0000$	$z = 0.0000$
$f^2F - g(2, \frac{1}{2})$	$x = 0.7130$	$y = 0.2268$	$z = 0.0484$
	$z = 0.0008$		
$f^2F - g(2, \frac{3}{2})$	$x = 0.4889$	$y = 0.3741$	$z = 0.0798$
$f^4F - g(0, \frac{1}{2})$	$x = 0.0000$	$y = 0.0476$	$z = 0.9524$
$f^4F - g(0, \frac{3}{2})$	$x = 0.0000$	$z = 1.0000$	
$f^4F - g(1, \frac{1}{2})$	$x = 0.0259$	$z = 0.0019$	$z = 0.0381$
$f^4F - g(1, \frac{3}{2})$	$z = 0.1507$	$z = 0.0847$	$z = 0.6973$
$f^4F - g(1, \frac{5}{2})$	$x = 0.6353$	$y = 0.0719$	$z = 0.2626$
	$z = 0.0003$		
$f^4F - g(2, \frac{1}{2})$	$x = 0.0261$	$z = 0.2839$	$z = 0.1272$
$f^4F - g(2, \frac{3}{2})$	$y = 0.0388$	$z = 0.1074$	$z = 0.0941$
	$z = 0.0050$		
$f^4F - g(2, \frac{5}{2})$	$x = 0.6240$	$z = 0.2200$	$z = 0.1112$
	$z = 0.0800$		
$f^2G - g(0, \frac{1}{2})$	$x = 0.0079$	$z = 0.0000$	$z = 1.0000$
$f^2G - g(0, \frac{3}{2})$	$x = 0.2778$	$z = 0.0000$	$z = 1.0000$
$f^2G - g(1, \frac{1}{2})$	$x = 0.2024$	$z = 0.0311$	$z = 0.0000$
$f^2G - g(1, \frac{3}{2})$	$x = 0.6548$	$z = 0.3394$	$z = 0.6145$
$f^2G - g(1, \frac{5}{2})$	$x = 0.9325$	$z = 0.8473$	$z = 0.1062$
	$z = 0.0006$		
$f^2G - g(2, \frac{1}{2})$	$x = 0.6471$	$z = 0.2281$	$z = 0.0850$
$f^2G - g(2, \frac{3}{2})$	$z = 0.0033$		
$f^4G - g(0, \frac{1}{2})$	$x = 0.3730$	$z = 0.0000$	$z = 0.0152$
$f^4G - g(0, \frac{3}{2})$	$x = 0.1984$	$z = 0.0000$	$z = 0.9848$
$f^4G - g(1, \frac{1}{2})$	$x = 0.9405$	$z = 0.0000$	$z = 1.0000$
	$z = 0.0000$		
$f^4G - g(1, \frac{3}{2})$	$x = 0.0000$	$z = 0.0010$	$z = 0.0017$
	$z = 0.5018$		
$f^4G - g(1, \frac{5}{2})$	$x = 0.7738$	$z = 0.0000$	$z = 0.0325$
	$z = 0.7897$		

TABLE 8c (CONTINUED)

$f^4G - g(2, \frac{1}{2})$	$x = 0.9722$	$z = 0.0450$	$z = 0.0915$	$z = 0.0529$	$z = 0.0117$
	$y = 0.0040$	$z = 0.0067$	$z = 0.0037$	$z = 0.0006$	
$f^4G - g(2, \frac{3}{2})$	$x = 1.8849$	$z = 0.4851$	$z = 0.2433$	$z = 0.0555$	
	$x = 0.8253$	$z = 0.0968$	$z = 0.0004$	$z = 0.0049$	
	$y = 0.0572$	$z = 0.0124$	$z = 0.0001$	$z = 0.0007$	
	$z = 0.0018$	$z = 0.0005$	$z = 0.0000$		
$g^{(2S+1)L} - f(J_p, i)$	$\sum_{J_p, i}$				
$g^2F - f(0, \frac{1}{2})$	$x = 0.1667$	$z = 1.0000$	$z = 0.0000$		
$g^2F - f(0, \frac{3}{2})$	$x = 0.0062$	$z = 1.0000$	$z = 0.0000$		
$g^2F - f(1, \frac{1}{2})$	$x = 0.3611$	$z = 0.0574$	$z = 0.0323$	$z = 0.6459$	$z = 0.0007$
$g^2F - f(1, \frac{3}{2})$	$x = 0.1574$	$z = 0.0012$	$z = 0.0021$	$z = 0.0001$	$z = 0.0232$
$g^2F - f(1, \frac{5}{2})$	$x = 0.1389$	$z = 0.0045$	$z = 0.0087$	$z = 0.1296$	$z = 0.1259$
	$z = 0.4373$				
$g^2F - f(2, \frac{1}{2})$	$x = 0.7253$	$z = 0.0004$	$z = 0.0022$	$z = 0.0331$	$z = 0.0814$
	$z = 0.2826$				
$g^4F - f(0, \frac{1}{2})$	$x = 0.0556$	$z = 1.0000$	$z = 0.0000$	$z = 0.0000$	
$g^4F - f(0, \frac{3}{2})$	$x = 0.2901$	$z = 0.9929$	$z = 0.0071$	$z = 0.0000$	
$g^4F - f(1, \frac{1}{2})$	$x = 0.3056$	$z = 0.0379$	$z = 0.4810$	$z = 0.3896$	$z = 0.0428$
	$z = 0.0010$				
$g^4F - f(1, \frac{3}{2})$	$x = 0.7315$	$z = 0.0451$	$z = 0.0448$	$z = 0.0062$	$z = 0.6774$
	$z = 0.0013$				
$g^4F - f(2, \frac{1}{2})$	$x = 0.9722$	$z = 0.0024$	$z = 0.0386$	$z = 0.1089$	$z = 0.1343$
	$y = 0.0163$	$z = 0.1302$	$z = 0.2540$	$z = 0.2939$	
	$z = 0.0013$				
$g^4F - f(2, \frac{3}{2})$	$x = 0.7562$	$z = 0.0017$	$z = 0.0081$	$z = 0.0107$	$z = 0.0048$
	$y = 0.0617$	$z = 0.1135$	$z = 0.0810$	$z = 0.0162$	
	$z = 0.2867$				
$g^2G - f(0, \frac{1}{2})$	$x = 0.1190$	$z = 1.0000$			
$g^2G - f(0, \frac{3}{2})$	$x = 0.1032$	$z = 0.9573$	$z = 0.0427$		
$g^2G - f(1, \frac{1}{2})$	$x = 0.3214$	$z = 1.0000$	$z = 0.0000$	$z = 0.0000$	
$g^2G - f(1, \frac{3}{2})$	$x = 0.3452$	$z = 0.0328$	$z = 0.0596$	$z = 0.0017$	$z = 0.9052$
$g^2G - f(1, \frac{5}{2})$	$x = 0.4167$	$z = 0.0931$	$z = 0.0605$	$z = 0.6402$	$z = 0.0021$
$g^2G - f(2, \frac{1}{2})$	$x = 0.6944$	$z = 0.0000$	$z = 0.0006$	$z = 0.0256$	$z = 0.0484$
	$z = 0.5122$				
$g^4G - f(0, \frac{1}{2})$	$x = 0.1667$	$z = 1.0000$	$z = 0.0000$		
$g^4G - f(0, \frac{3}{2})$	$x = 0.2778$	$z = 0.9778$	$z = 0.0222$	$z = 0.0000$	
$g^4G - f(1, \frac{1}{2})$	$x = 0.5857$	$z = 0.1833$	$z = 0.0612$	$z = 0.6667$	$z = 0.0054$
	$z = 0.0017$				
$g^4G - f(1, \frac{3}{2})$	$x = 0.7976$	$z = 0.6687$	$z = 0.0507$	$z = 0.2339$	$z = 0.0003$
	$z = 0.0006$				
$g^4G - f(2, \frac{1}{2})$	$x = 1.0119$	$z = 0.0282$	$z = 0.2936$	$z = 0.3175$	$z = 0.1513$
	$z = 0.0427$				

TABLE 9a (CONTINUED)

$d^{(2S+1)L - p} L'[K]$	$\sum_{J,J'}^s$	$d^{2S - p} P [1]$	0.4000	$x = 0.6667$	$y = 0.3333$	$z = 0.1111$
$d^{2S - p} P [1]$	0.9000	$x = 0.5556$	0.2222	$y = 0.1111$	$z = 0.1111$	
$d^{2P - p} P [1]$	0.3000	$x = 0.6000$	0.3333	$y = 0.0667$	$z = 0.0667$	
$d^{2D - p} P [1]$	0.7000	$x = 0.6000$	0.3333	$y = 0.0667$	$z = 0.0667$	
$d^{2D - p} P [2]$	1.1667	$x = 0.5600$	0.3600	$y = 0.0400$	$z = 0.0400$	
$d^{2D - p} P [3]$	1.8333	$x = 0.5714$	0.4000	$y = 0.0286$	$z = 0.0286$	
$d^{2F - p} P [3]$	0.9333	$x = 0.5510$	0.4082	$y = 0.0204$	$z = 0.0204$	
$d^{2G - p} P [3]$	3.6000	$x = 0.5556$	0.4286	$y = 0.0159$	$z = 0.0159$	
$d^{(2S+1)L - f} L'[K]$	$\sum_{J,J'}^s$	$d^{2S - f} P [1]$	0.4000	$x = 0.6667$	$y = 0.3333$	$z = 0.1111$
$d^{2P - f} P [1]$	0.4000	$x = 0.5556$	0.2222	$y = 0.1111$	$z = 0.1111$	
$d^{2D - f} P [2]$	0.8000	$x = 0.6000$	0.3333	$y = 0.0667$	$z = 0.0667$	
$d^{2D - f} P [3]$	0.0571	$x = 0.6000$	0.3333	$y = 0.0667$	$z = 0.0667$	
$d^{2D - f} D [2]$	0.5714	$x = 0.5600$	0.3600	$y = 0.0400$	$z = 0.0400$	
$d^{2D - f} F [3]$	1.3714	$x = 0.5714$	0.4000	$y = 0.0286$	$z = 0.0286$	
$d^{2F - f} F [3]$	0.0571	$x = 0.5714$	0.4000	$y = 0.0286$	$z = 0.0286$	
$d^{2F - f} G [4]$	2.1429	$x = 0.5510$	0.4082	$y = 0.0204$	$z = 0.0204$	
$d^{2G - f} F [3]$	0.0286	$x = 0.5556$	0.4286	$y = 0.0159$	$z = 0.0159$	
$d^{2G - f} G [4]$	0.4286	$x = 0.5432$	0.4321	$y = 0.0123$	$z = 0.0123$	
$d^{2G - f} H [5]$	3.1429	$x = 0.5455$	0.4444	$y = 0.0101$	$z = 0.0101$	
$f^{(2S+1)L - d} L'[K]$	$\sum_{J,J'}^s$	$f^{2P - d} S [0]$	0.4000	$x = 0.6667$	$y = 0.3333$	$z = 0.1111$
$f^{2P - d} P [1]$	0.4000	$x = 0.5556$	0.2222	$y = 0.1111$	$z = 0.1111$	
$f^{2P - d} D [2]$	0.0571	$x = 0.6000$	0.3333	$y = 0.0667$	$z = 0.0667$	
$f^{2D - d} P [1]$	0.8000	$x = 0.6000$	0.3333	$y = 0.0667$	$z = 0.0667$	
$f^{2D - d} D [2]$	0.5714	$x = 0.5600$	0.3600	$y = 0.0400$	$z = 0.0400$	
$f^{2D - d} F [3]$	0.0571	$x = 0.5714$	0.4000	$y = 0.0286$	$z = 0.0286$	
$f^{2F - d} D [2]$	1.3714	$x = 0.5714$	0.4000	$y = 0.0286$	$z = 0.0286$	
$f^{2F - d} F [3]$	0.0286	$x = 0.5510$	0.4082	$y = 0.0204$	$z = 0.0204$	
$f^{2F - d} G [4]$	2.1429	$x = 0.5556$	0.4286	$y = 0.0159$	$z = 0.0159$	
$f^{2G - d} G [4]$	0.4286	$x = 0.5432$	0.4321	$y = 0.0123$	$z = 0.0123$	
$f^{2H - d} G [4]$	3.1429	$x = 0.5455$	0.4444	$y = 0.0101$	$z = 0.0101$	
$f^{(2S+1)L - g} L'[K]$	$\sum_{J,J'}^s$	$f^{2P - g} D [2]$	0.8571	$x = 0.6000$	0.3333	$y = 0.0667$
$f^{2D - g} D [2]$	0.2381	$x = 0.5600$	0.3600	$y = 0.0400$	$z = 0.0400$	
$f^{2D - g} F [3]$	1.1905	$x = 0.5714$	0.4000	$y = 0.0286$	$z = 0.0286$	
$f^{2F - g} D [2]$	0.0159	$x = 0.5714$	0.4000	$y = 0.0286$	$z = 0.0286$	

TABLE 8c (CONTINUED)

$g^4 G - f(2, \frac{7}{2})$	1.2103	$x = 0.0651$	0.0845	0.0269	0.0003
		$y = 0.5723$	0.2094	0.0120	0.0211
		$z = 0.0038$	0.0038	0.0008	
$g^2 H - f(0, \frac{7}{2})$	0.2716	$x = 1.0000$			
$g^2 H - f(1, \frac{5}{2})$	0.1746	$x = 1.0000$			
$g^2 H - f(1, \frac{7}{2})$	0.6402	$x = 0.3471$	0.6465	$y = 0.0064$	
$g^2 H - f(2, \frac{5}{2})$	0.8730	$x = 0.8727$	0.1111	$y = 0.0162$	
$g^2 H - f(2, \frac{7}{2})$	0.4850	$x = 0.0000$	0.0133	$y = 0.7200$	0.2667
$g^4 H - f(0, \frac{5}{2})$	0.3492	$x = 1.0000$			
$g^4 H - f(0, \frac{7}{2})$	0.1940	$x = 0.9333$	$y = 0.0667$		
$g^4 H - f(1, \frac{5}{2})$	0.8730	$x = 0.5333$	0.4286	$y = 0.0381$	
$g^4 H - f(1, \frac{7}{2})$	0.7566	$x = 0.7636$	0.1425	0.0247	$y = 0.0580$
		$z = 0.0010$			
$g^4 H - f(2, \frac{5}{2})$	0.8730	$x = 0.5673$	0.2963	0.0714	$y = 0.0431$
		$z = 0.0007$			
$g^4 H - f(2, \frac{7}{2})$	1.8430	$x = 0.8440$	0.1018	0.0005	0.0056
		$y = 0.0395$	0.0077	0.0000	$z = 0.0007$

TABLE 9a

TRANSITIONS BETWEEN LS AND LK STATES. PARENT TERM: 1D

$s^{(2S+1)L - p} L'[K]$	$\sum_{J,J'}^s$	$s^{2D - p} P [1]$	2.0000	$x = 0.6000$	0.3333	$y = 0.0667$
$s^{2D - p} D [2]$	3.3333	$x = 0.5600$	0.3600	$y = 0.0400$	$z = 0.0400$	
$s^{2D - p} F [3]$	4.6667	$x = 0.5714$	0.4000	$y = 0.0286$	$z = 0.0286$	
$p^{(2S+1)L - s} L'[K]$	$\sum_{J,J'}^s$	$p^{2P - s} D [2]$	2.0000	$x = 0.6000$	0.3333	$y = 0.0667$
$p^{2D - s} D [2]$	3.3333	$x = 0.5600$	0.3600	$y = 0.0400$	$z = 0.0400$	
$p^{2F - s} D [2]$	4.6667	$x = 0.5714$	0.4000	$y = 0.0286$	$z = 0.0286$	
$p^{(2S+1)L - d} L'[K]$	$\sum_{J,J'}^s$	$p^{2P - d} S [0]$	0.4000	$x = 0.6667$	$y = 0.3333$	$z = 0.1111$
$p^{2P - d} P [1]$	0.9000	$x = 0.5556$	0.2222	$y = 0.1111$	$z = 0.1111$	
$p^{2P - d} D [2]$	0.7000	$x = 0.6000$	0.3333	$y = 0.0667$	$z = 0.0667$	
$p^{2D - d} P [1]$	0.3000	$x = 0.6000$	0.3333	$y = 0.0667$	$z = 0.0667$	
$p^{2D - d} D [2]$	1.1667	$x = 0.5600$	0.3600	$y = 0.0400$	$z = 0.0400$	
$p^{2D - d} F [3]$	1.8667	$x = 0.5714$	0.4000	$y = 0.0286$	$z = 0.0286$	
$p^{2F - d} D [2]$	0.1333	$x = 0.5714$	0.4000	$y = 0.0286$	$z = 0.0286$	
$p^{2F - d} F [3]$	0.9333	$x = 0.5510$	0.4082	$y = 0.0204$	$z = 0.0204$	
$p^{2F - d} G [4]$	3.6000	$x = 0.5556$	0.4286	$y = 0.0159$	$z = 0.0159$	

TABLE 9a (CONTINUED)

$f^2F - gF [3]$	0.3472	$x = 0.5510$	$z = 0.4082$	$y = 0.0204$	$z = 0.0204$
$f^2F - gG [4]$	1.6369	$x = 0.5556$	$z = 0.4286$	$y = 0.0159$	
$f^2G - gF [3]$	0.0179	$x = 0.5556$	$z = 0.4286$	$y = 0.0159$	
$f^2G - gG [4]$	0.3536	$x = 0.5432$	$z = 0.4321$	$y = 0.0123$	$z = 0.0123$
$f^2G - gH [5]$	2.2000	$x = 0.5455$	$z = 0.4444$	$y = 0.0101$	
$f^2H - gG [4]$	0.0095	$x = 0.5455$	$z = 0.4444$	$y = 0.0101$	
$f^2H - gH [5]$	0.2444	$x = 0.5372$	$z = 0.4463$	$y = 0.0083$	$z = 0.0083$
$f^2H - gI [6]$	2.8889	$x = 0.5385$	$z = 0.4545$	$y = 0.0070$	
$g^{(2S+1)L} - fL[K]$	$\sum_{J,J'}^g$				
$g^2D - fP [1]$	0.8571	$x = 0.6000$	$z = 0.3333$	$y = 0.0667$	
$g^2D - fD [2]$	0.2381	$x = 0.5600$	$z = 0.3600$	$y = 0.0400$	$z = 0.0400$
$g^2D - fF [3]$	0.0159	$x = 0.5714$	$z = 0.4000$	$y = 0.0286$	
$g^2F - fD [2]$	1.1905	$x = 0.5714$	$z = 0.4000$	$y = 0.0286$	
$g^2F - fF [3]$	0.3472	$x = 0.5510$	$z = 0.4082$	$y = 0.0204$	$z = 0.0204$
$g^2F - fG [4]$	0.0179	$x = 0.5556$	$z = 0.4286$	$y = 0.0159$	
$g^2G - fF [3]$	1.6369	$x = 0.5556$	$z = 0.4286$	$y = 0.0159$	
$g^2G - fG [4]$	0.3536	$x = 0.5432$	$z = 0.4321$	$y = 0.0123$	$z = 0.0123$
$g^2G - fH [5]$	0.0095	$x = 0.5455$	$z = 0.4444$	$y = 0.0101$	
$g^2H - fG [4]$	2.2000	$x = 0.5455$	$z = 0.4444$	$y = 0.0101$	
$g^2H - fH [5]$	0.2444	$x = 0.5372$	$z = 0.4463$	$y = 0.0083$	$z = 0.0083$
$g^2I - fH [5]$	2.8889	$x = 0.5385$	$z = 0.4545$	$y = 0.0070$	

TABLE 9b (CONTINUED)

$p^2D - d(2)[1]$	0.3000	$x = 0.6000$	$z = 0.3333$	$y = 0.0667$	$z = 0.0400$
$p^2D - d(2)[2]$	1.1667	$x = 0.5600$	$z = 0.3600$	$y = 0.0400$	$z = 0.0400$
$p^2D - d(2)[3]$	1.8667	$x = 0.5714$	$z = 0.4000$	$y = 0.0286$	
$p^2F - d(2)[2]$	0.1333	$x = 0.5714$	$z = 0.4000$	$y = 0.0286$	
$p^2F - d(2)[3]$	0.9333	$x = 0.5510$	$z = 0.4082$	$y = 0.0204$	$z = 0.0204$
$p^2F - d(2)[4]$	3.6000	$x = 0.5556$	$z = 0.4286$	$y = 0.0159$	
$d^{(2S+1)L} - p(J_p)[K]$	$\sum_{J,J'}^d$				
$d^2S - p(2)[1]$	0.4000	$x = 0.6667$	$y = 0.3333$		
$d^2P - p(2)[1]$	0.9000	$x = 0.5556$	$z = 0.2222$	$y = 0.1111$	$z = 0.1111$
$d^2P - p(2)[2]$	0.3000	$x = 0.6000$	$z = 0.3333$	$y = 0.0667$	
$d^2D - p(2)[1]$	0.7000	$x = 0.6000$	$z = 0.3333$	$y = 0.0667$	$z = 0.0400$
$d^2D - p(2)[2]$	1.1667	$x = 0.5600$	$z = 0.3600$	$y = 0.0400$	$z = 0.0400$
$d^2D - p(2)[3]$	0.1333	$x = 0.5714$	$z = 0.4000$	$y = 0.0286$	
$d^2F - p(2)[2]$	1.8667	$x = 0.5714$	$z = 0.4000$	$y = 0.0286$	
$d^2F - p(2)[3]$	0.9333	$x = 0.5510$	$z = 0.4082$	$y = 0.0204$	$z = 0.0204$
$d^2G - p(2)[3]$	3.6000	$x = 0.5556$	$z = 0.4286$	$y = 0.0159$	
$d^{(2S+1)L} - f(J_p)[K]$	$\sum_{J,J'}^d$				
$d^2S - f(2)[1]$	0.4000	$x = 0.6667$	$y = 0.3333$		
$d^2P - f(2)[1]$	0.4000	$x = 0.5556$	$z = 0.2222$	$y = 0.1111$	$z = 0.1111$
$d^2P - f(2)[2]$	0.8000	$x = 0.6000$	$z = 0.3333$	$y = 0.0667$	
$d^2D - f(2)[1]$	0.0571	$x = 0.6000$	$z = 0.3333$	$y = 0.0667$	
$d^2D - f(2)[2]$	0.5714	$x = 0.5600$	$z = 0.3600$	$y = 0.0400$	$z = 0.0400$
$d^2D - f(2)[3]$	1.3714	$x = 0.5714$	$z = 0.4000$	$y = 0.0286$	
$d^2F - f(2)[2]$	0.0571	$x = 0.5714$	$z = 0.4000$	$y = 0.0286$	
$d^2F - f(2)[3]$	0.6000	$x = 0.5510$	$z = 0.4082$	$y = 0.0204$	$z = 0.0204$
$d^2F - f(2)[4]$	2.1429	$x = 0.5556$	$z = 0.4286$	$y = 0.0159$	
$d^2G - f(2)[3]$	0.0286	$x = 0.5556$	$z = 0.4286$	$y = 0.0159$	
$d^2G - f(2)[4]$	0.4286	$x = 0.5432$	$z = 0.4321$	$y = 0.0123$	$z = 0.0123$
$d^2G - f(2)[5]$	3.1429	$x = 0.5455$	$z = 0.4444$	$y = 0.0101$	
$f^{(2S+1)L} - d(J_p)[K]$	$\sum_{J,J'}^f$				
$f^2P - d(2)[0]$	0.4000	$x = 0.6667$	$y = 0.3333$		
$f^2P - d(2)[1]$	0.4000	$x = 0.5556$	$z = 0.2222$	$y = 0.1111$	$z = 0.1111$
$f^2P - d(2)[2]$	0.0571	$x = 0.6000$	$z = 0.3333$	$y = 0.0667$	
$f^2D - d(2)[1]$	0.8000	$x = 0.6000$	$z = 0.3333$	$y = 0.0667$	
$f^2D - d(2)[2]$	0.5714	$x = 0.5600$	$z = 0.3600$	$y = 0.0400$	$z = 0.0400$
$f^2D - d(2)[3]$	0.0571	$x = 0.5714$	$z = 0.4000$	$y = 0.0286$	
$f^2F - d(2)[2]$	1.3714	$x = 0.5714$	$z = 0.4000$	$y = 0.0286$	
$f^2F - d(2)[3]$	0.6000	$x = 0.5510$	$z = 0.4082$	$y = 0.0204$	$z = 0.0204$
$f^2F - d(2)[4]$	0.0286	$x = 0.5556$	$z = 0.4286$	$y = 0.0159$	
$f^2H - d(2)[4]$	3.1429	$x = 0.5455$	$z = 0.4444$	$y = 0.0101$	

TABLE 9b

TRANSITIONS BETWEEN LS AND JK STATES. PARENT TERM: 1D

$s^{(2S+1)L} - p(J_p)[K]$	$\sum_{J,J'}^s$				
$s^2D - p(2)[1]$	2.0000	$x = 0.6000$	$z = 0.3333$	$y = 0.0667$	
$s^2D - p(2)[2]$	3.3333	$x = 0.5600$	$z = 0.3600$	$y = 0.0400$	$z = 0.0400$
$s^2D - p(2)[3]$	4.6667	$x = 0.5714$	$z = 0.4000$	$y = 0.0286$	
$p^{(2S+1)L} - s(J_p)[K]$	$\sum_{J,J'}^p$				
$p^2P - s(2)[2]$	2.0000	$x = 0.6000$	$z = 0.3333$	$y = 0.0667$	
$p^2D - s(2)[2]$	3.3333	$x = 0.5600$	$z = 0.3600$	$y = 0.0400$	$z = 0.0400$
$p^2F - s(2)[2]$	4.6667	$x = 0.5714$	$z = 0.4000$	$y = 0.0286$	
$p^{(2S+1)L} - d(J_p)[K]$	$\sum_{J,J'}^p$				
$p^2P - d(2)[0]$	0.4000	$x = 0.6667$	$y = 0.3333$		
$p^2P - d(2)[1]$	0.9000	$x = 0.5556$	$z = 0.2222$	$y = 0.1111$	$z = 0.1111$
$p^2P - d(2)[2]$	0.7000	$x = 0.6000$	$z = 0.3333$	$y = 0.0667$	

TABLE 9c (CONTINUED)

$p^{(2s+1)L} - d(J_p, j)$	$\sum_{J_p, j} \epsilon$	$p^{2P} - d(2, \frac{3}{2})$	$x = 0.1050$	$y = 0.4033$	$z = 0.0187$	$z = 0.4083$
$p^{2P} - d(2, \frac{3}{2})$	0.8000	$p^{2P} - d(2, \frac{3}{2})$	$x = 0.2800$	$y = 0.1867$	$z = 0.2667$	$z = 0.0333$
$p^{2D} - d(2, \frac{3}{2})$	1.3333	$p^{2D} - d(2, \frac{3}{2})$	$x = 0.0800$	$y = 0.2420$	$z = 0.1620$	
$p^{2D} - d(2, \frac{5}{2})$	2.0000	$p^{2D} - d(2, \frac{5}{2})$	$x = 0.1280$	$y = 0.1920$	$z = 0.1120$	
$p^{2F} - d(2, \frac{3}{2})$	1.8667	$p^{2F} - d(2, \frac{3}{2})$	$x = 0.1102$	$y = 0.0327$	$z = 0.0200$	$z = 0.6898$
$p^{2F} - d(2, \frac{5}{2})$	2.8000	$p^{2F} - d(2, \frac{5}{2})$	$x = 0.7143$	$y = 0.1308$	$z = 0.0392$	
$p^{2F} - d(2, \frac{7}{2})$		$p^{2F} - d(2, \frac{7}{2})$	$x = 0.0122$	$y = 0.0057$		
$d^{(2s+1)L} - p(J_p, j)$	$\sum_{J_p, j} \epsilon$	$d^{2S} - p(2, \frac{1}{2})$	$x = 0.1333$	$y = 1.0000$		
$d^{2S} - p(2, \frac{1}{2})$	0.1333	$d^{2S} - p(2, \frac{3}{2})$	$x = 0.2667$	$y = 0.5000$	$z = 0.5000$	
$d^{2P} - p(2, \frac{1}{2})$	0.4000	$d^{2P} - p(2, \frac{3}{2})$	$x = 0.1000$	$y = 0.5000$	$z = 0.4000$	
$d^{2P} - p(2, \frac{3}{2})$	0.8000	$d^{2P} - p(2, \frac{5}{2})$	$x = 0.1750$	$y = 0.4500$	$z = 0.2500$	$z = 0.1250$
$d^{2D} - p(2, \frac{1}{2})$	0.6667	$d^{2D} - p(2, \frac{3}{2})$	$x = 0.1600$	$y = 0.1400$	$z = 0.1400$	
$d^{2D} - p(2, \frac{3}{2})$	1.3333	$d^{2D} - p(2, \frac{5}{2})$	$x = 0.0571$	$y = 0.4129$	$z = 0.0700$	
$d^{2D} - p(2, \frac{7}{2})$		$d^{2D} - p(2, \frac{7}{2})$	$x = 0.2800$	$y = 0.1750$		
$d^{2F} - p(2, \frac{1}{2})$	0.9333	$d^{2F} - p(2, \frac{3}{2})$	$x = 0.1429$	$y = 0.4000$	$z = 0.4571$	
$d^{2F} - p(2, \frac{3}{2})$	1.8667	$d^{2F} - p(2, \frac{5}{2})$	$x = 0.2755$	$y = 0.5102$	$z = 0.2000$	$z = 0.0102$
$d^{2G} - p(2, \frac{1}{2})$	1.2000	$d^{2G} - p(2, \frac{3}{2})$	$x = 1.0000$			
$d^{2G} - p(2, \frac{3}{2})$	2.4000	$d^{2G} - p(2, \frac{5}{2})$	$x = 0.8333$	$y = 0.1429$	$z = 0.0238$	
$d^{(2s+1)L} - f(J_p, j)$	$\sum_{J_p, j} \epsilon$	$d^{2S} - f(2, \frac{5}{2})$	$x = 0.1714$	$y = 0.2222$	$z = 0.7778$	
$d^{2S} - f(2, \frac{5}{2})$	0.1714	$d^{2S} - f(2, \frac{7}{2})$	$x = 0.2286$	$y = 1.0000$		
$d^{2P} - f(2, \frac{5}{2})$	0.5143	$d^{2P} - f(2, \frac{7}{2})$	$x = 0.1333$	$y = 0.2988$	$z = 0.1728$	$z = 0.0864$
$d^{2P} - f(2, \frac{7}{2})$	0.8857	$d^{2P} - f(2, \frac{9}{2})$	$x = 0.6000$	$y = 0.2222$	$z = 0.1778$	
$d^{2D} - f(2, \frac{5}{2})$	0.8571	$d^{2D} - f(2, \frac{7}{2})$	$x = 0.0980$	$y = 0.1839$	$z = 0.1835$	
$d^{2D} - f(2, \frac{7}{2})$		$d^{2D} - f(2, \frac{9}{2})$	$x = 0.0514$	$y = 0.0222$		
$d^{2F} - f(2, \frac{5}{2})$	1.1429	$d^{2F} - f(2, \frac{7}{2})$	$x = 0.6122$	$y = 0.1543$	$z = 0.1763$	$z = 0.0114$
$d^{2F} - f(2, \frac{7}{2})$	1.2000	$d^{2F} - f(2, \frac{9}{2})$	$x = 0.0567$	$y = 0.1095$	$z = 0.1635$	
$d^{2F} - f(2, \frac{9}{2})$		$d^{2F} - f(2, \frac{11}{2})$	$x = 0.0243$	$y = 0.0163$		
$d^{2G} - f(2, \frac{5}{2})$	1.6000	$d^{2G} - f(2, \frac{7}{2})$	$x = 0.7015$	$y = 0.1456$	$z = 0.0315$	
$d^{2G} - f(2, \frac{7}{2})$	1.5429	$d^{2G} - f(2, \frac{9}{2})$	$x = 0.0098$	$y = 0.0020$		
$d^{2G} - f(2, \frac{9}{2})$	2.0571	$d^{2G} - f(2, \frac{11}{2})$	$x = 0.0539$	$y = 0.1035$	$z = 0.0078$	$z = 0.8279$
$d^{2G} - f(2, \frac{11}{2})$		$d^{2G} - f(2, \frac{13}{2})$	$x = 0.8333$	$y = 0.0606$	$z = 0.0832$	$z = 0.0126$
$f^{(2s+1)L} - d(J_p, j)$	$\sum_{J_p, j} \epsilon$	$f^{2P} - d(2, \frac{3}{2})$	$x = 0.3429$	$y = 0.0200$	$z = 0.1556$	$z = 0.1244$
$f^{2P} - d(2, \frac{3}{2})$	0.3429	$f^{2P} - d(2, \frac{5}{2})$	$x = 0.0200$	$y = 0.1556$	$z = 0.1244$	$z = 0.0778$

TABLE 9b (CONTINUED)

$f^{(2s+1)L} - g(J_p, K)$	$\sum_{J_p, K} \epsilon$	$f^{2P} - g(2, 2)$	$x = 0.6000$	$y = 0.3333$	$z = 0.0667$
$f^{2P} - g(2, 2)$	0.8571	$f^{2D} - g(2, 2)$	$x = 0.5600$	$y = 0.3600$	$z = 0.0400$
$f^{2D} - g(2, 2)$	0.2381	$f^{2D} - g(2, 3)$	$x = 0.5714$	$y = 0.4000$	$z = 0.0286$
$f^{2F} - g(2, 2)$	1.1905	$f^{2F} - g(2, 3)$	$x = 0.5714$	$y = 0.4000$	$z = 0.0286$
$f^{2F} - g(2, 3)$	0.0159	$f^{2F} - g(2, 4)$	$x = 0.5510$	$y = 0.4082$	$z = 0.0204$
$f^{2F} - g(2, 4)$	0.3472	$f^{2F} - g(2, 5)$	$x = 0.5556$	$y = 0.4286$	$z = 0.0159$
$f^{2G} - g(2, 3)$	1.6369	$f^{2G} - g(2, 4)$	$x = 0.5556$	$y = 0.4286$	$z = 0.0159$
$f^{2G} - g(2, 4)$	0.0179	$f^{2G} - g(2, 5)$	$x = 0.5432$	$y = 0.4321$	$z = 0.0123$
$f^{2G} - g(2, 5)$	0.3536	$f^{2H} - g(2, 4)$	$x = 0.5455$	$y = 0.4444$	$z = 0.0101$
$f^{2H} - g(2, 4)$	2.2000	$f^{2H} - g(2, 5)$	$x = 0.5455$	$y = 0.4444$	$z = 0.0101$
$f^{2H} - g(2, 5)$	0.0095	$f^{2H} - g(2, 6)$	$x = 0.5372$	$y = 0.4463$	$z = 0.0083$
$f^{2H} - g(2, 6)$	0.2444		$x = 0.5372$	$y = 0.4463$	$z = 0.0083$
	2.8889		$x = 0.5385$	$y = 0.4545$	$z = 0.0070$

$g^{(2s+1)L} - f(J_p, K)$	$\sum_{J_p, K} \epsilon$	$g^{2D} - f(2, 1)$	$x = 0.6000$	$y = 0.3333$	$z = 0.0667$
$g^{2D} - f(2, 1)$	0.8571	$g^{2D} - f(2, 2)$	$x = 0.5600$	$y = 0.3600$	$z = 0.0400$
$g^{2D} - f(2, 2)$	0.2381	$g^{2D} - f(2, 3)$	$x = 0.5714$	$y = 0.4000$	$z = 0.0286$
$g^{2F} - f(2, 2)$	0.0159	$g^{2F} - f(2, 3)$	$x = 0.5714$	$y = 0.4000$	$z = 0.0286$
$g^{2F} - f(2, 3)$	1.1905	$g^{2F} - f(2, 4)$	$x = 0.5510$	$y = 0.4082$	$z = 0.0204$
$g^{2F} - f(2, 4)$	0.3472	$g^{2F} - f(2, 5)$	$x = 0.5556$	$y = 0.4286$	$z = 0.0159$
$g^{2G} - f(2, 3)$	0.0179	$g^{2G} - f(2, 4)$	$x = 0.5556$	$y = 0.4286$	$z = 0.0159$
$g^{2G} - f(2, 4)$	1.6369	$g^{2G} - f(2, 5)$	$x = 0.5432$	$y = 0.4321$	$z = 0.0123$
$g^{2G} - f(2, 5)$	0.3536	$g^{2H} - f(2, 4)$	$x = 0.5455$	$y = 0.4444$	$z = 0.0101$
$g^{2H} - f(2, 4)$	0.0095	$g^{2H} - f(2, 5)$	$x = 0.5455$	$y = 0.4444$	$z = 0.0101$
$g^{2H} - f(2, 5)$	2.2000	$g^{2I} - f(2, 5)$	$x = 0.5372$	$y = 0.4463$	$z = 0.0083$
$g^{2I} - f(2, 5)$	0.2444		$x = 0.5372$	$y = 0.4463$	$z = 0.0083$
	2.8889		$x = 0.5385$	$y = 0.4545$	$z = 0.0070$

TABLE 9c

TRANSITIONS BETWEEN LS AND jj STATES. PARENT TERM: $1D$

$s^{(2s+1)L} - p(J_p, j)$	$\sum_{J_p, j} \epsilon$	$s^{2D} - p(2, \frac{1}{2})$	$x = 0.2800$	$y = 0.3200$	$z = 0.3200$
$s^{2D} - p(2, \frac{1}{2})$	3.3333	$s^{2D} - p(2, \frac{3}{2})$	$x = 0.4000$	$y = 0.1600$	$z = 0.1600$
$s^{2D} - p(2, \frac{3}{2})$	6.6667	$s^{2D} - p(2, \frac{5}{2})$	$x = 0.0400$	$y = 0.1000$	
$s^{(2s+1)L} - s(J_p, j)$	$\sum_{J_p, j} \epsilon$	$p^{2P} - s(2, \frac{1}{2})$	$x = 0.6000$	$y = 0.3333$	$z = 0.0667$
$p^{2P} - s(2, \frac{1}{2})$	2.0000	$p^{2D} - s(2, \frac{1}{2})$	$x = 0.5600$	$y = 0.3600$	$z = 0.0400$
$p^{2D} - s(2, \frac{1}{2})$	3.3333	$p^{2F} - s(2, \frac{1}{2})$	$x = 0.5714$	$y = 0.4000$	$z = 0.0286$
$p^{2F} - s(2, \frac{1}{2})$	4.6667				

TABLE 59 (CONTINUED)

TRANSITIONS BETWEEN LS AND LK STATES. PARENT TERM: 2D

f $(2s+1)L - g$ (J_p, j)	$\sum_{J_p, j}^g$	x	y	z
$f^2P - d(2, \frac{5}{2})$	0.5143	$x = 0.0533$	$y = 0.3565$	$z = 0.5531$
$f^2D - d(2, \frac{3}{2})$	0.5714	$x = 0.0057$	$y = 0.0823$	$z = 0.4480$
		$x = 0.1120$	$y = 0.2800$	
$f^2D - d(2, \frac{5}{2})$	0.8571	$x = 0.0343$	$y = 0.3204$	$z = 0.0036$
		$x = 0.5120$	$y = 0.1244$	
$f^2F - d(2, \frac{3}{2})$	0.8000	$x = 0.0327$	$y = 0.1102$	$z = 0.0245$
$f^2F - d(2, \frac{5}{2})$	1.2000	$x = 0.0132$	$y = 0.2541$	$z = 0.0016$
		$x = 0.5898$	$y = 0.1371$	
$f^2G - d(2, \frac{3}{2})$	1.0286	$x = 0.0741$	$y = 0.2116$	
$f^2G - d(2, \frac{5}{2})$	1.5429	$x = 0.1509$	$y = 0.7257$	$z = 0.0034$
$f^2H - d(2, \frac{3}{2})$	1.2571	$x = 1.0000$		
$f^2H - d(2, \frac{5}{2})$	1.8857	$x = 0.9091$	$y = 0.0168$	
f $(2s+1)L - g$ (J_p, j)	$\sum_{J_p, j}^g$	x	y	z
$f^2P - g(2, \frac{1}{2})$	0.3810	$x = 0.1000$	$y = 0.1500$	
$f^2P - g(2, \frac{3}{2})$	0.4762	$x = 1.0000$		
$f^2D - g(2, \frac{1}{2})$	0.6349	$x = 0.0893$	$y = 0.1207$	$z = 0.0150$
$f^2D - g(2, \frac{3}{2})$	0.7937	$x = 0.7857$	$y = 0.1143$	
$f^2F - g(2, \frac{1}{2})$	0.8889	$x = 0.0682$	$y = 0.0886$	$z = 0.1429$
		$x = 0.0129$	$y = 0.0071$	
$f^2F - g(2, \frac{3}{2})$	1.1111	$x = 0.7639$	$y = 0.1247$	$z = 0.0043$
$f^2G - g(2, \frac{1}{2})$	1.1429	$x = 0.0389$	$y = 0.0579$	$z = 0.1194$
		$x = 0.0074$	$y = 0.0062$	
$f^2G - g(2, \frac{3}{2})$	1.4286	$x = 0.8089$	$y = 0.1037$	$z = 0.0116$
		$x = 0.0041$	$y = 0.0004$	
$f^2H - g(2, \frac{1}{2})$	1.3968	$x = 0.0313$	$y = 0.0028$	$z = 0.8914$
$f^2H - g(2, \frac{3}{2})$	1.7460	$x = 0.8909$	$y = 0.0617$	$z = 0.0051$
		$x = 0.0019$	$y = 0.0002$	
g $(2s+1)L - f$ (J_p, j)	$\sum_{J_p, j}^g$	x	y	z
$g^2D - f(2, \frac{5}{2})$	0.4762	$x = 0.0020$	$y = 0.0294$	$z = 0.2743$
		$x = 0.0686$	$y = 0.6000$	
$g^2D - f(2, \frac{7}{2})$	0.6349	$x = 0.0128$	$y = 0.1887$	$z = 0.7736$
$g^2F - f(2, \frac{3}{2})$	0.6687	$x = 0.0009$	$y = 0.0243$	$z = 0.2624$
		$x = 0.0820$	$y = 0.6122$	
$g^2F - f(2, \frac{7}{2})$	0.8889	$x = 0.0105$	$y = 0.1973$	$z = 0.0009$
		$x = 0.7118$	$y = 0.0765$	
$g^2G - f(2, \frac{5}{2})$	0.8571	$x = 0.0108$	$y = 0.0728$	$z = 0.0073$
$g^2G - f(2, \frac{7}{2})$	1.1429	$x = 0.0045$	$y = 0.1602$	$z = 0.0005$
		$x = 0.7450$	$y = 0.0877$	
$g^2H - f(2, \frac{5}{2})$	1.0476	$x = 0.0455$	$y = 0.1212$	
$g^2H - f(2, \frac{7}{2})$	1.3968	$x = 0.0940$	$y = 0.8264$	$z = 0.0014$
$g^2I - f(2, \frac{3}{2})$	1.2381	$x = 1.0000$		
$g^2I - f(2, \frac{7}{2})$	1.6508	$x = 0.9423$	$y = 0.0122$	

TABLE 104

TRANSITIONS BETWEEN LS AND LK STATES. PARENT TERM: 2D

p $(2s+1)L - p$ $L'(K)$	$\sum_{J_p, j}^s$	x	y	z
$p^1D - pP(\frac{1}{2})$	0.3333	$x = 1.0000$		
$p^1D - pP(\frac{3}{2})$	0.6667	$x = 0.0000$	$y = 1.0000$	
$p^1D - pD(\frac{3}{2})$	0.6667	$x = 1.0000$	$y = 0.0000$	
$p^1D - pD(\frac{5}{2})$	1.0000	$x = 0.0000$	$y = 1.0000$	
$p^1D - pF(\frac{3}{2})$	1.0000	$x = 1.0000$	$y = 0.0000$	
$p^1D - pF(\frac{5}{2})$	1.3333	$x = 1.0000$		
$p^3D - pP(\frac{1}{2})$	1.0000	$x = 0.5000$	$y = 0.3333$	$z = 0.1687$
$p^3D - pP(\frac{3}{2})$	2.0000	$x = 0.7000$	$y = 0.1250$	$z = 0.1250$
$p^3D - pD(\frac{3}{2})$	2.0000	$x = 0.0778$	$y = 0.3472$	$z = 0.3750$
$p^3D - pD(\frac{5}{2})$	3.0000	$x = 0.6914$	$y = 0.0346$	$z = 0.0864$
$p^3D - pF(\frac{3}{2})$	3.0000	$x = 0.0494$	$y = 0.0025$	$z = 0.3951$
$p^3D - pF(\frac{5}{2})$	4.0000	$x = 0.7500$	$y = 0.2222$	$z = 0.0278$
p $(2s+1)L - s$ $L'(K)$	$\sum_{J_p, j}^s$	x	y	z
$p^1P - sD(\frac{3}{2})$	0.4000	$x = 1.0000$	$y = 0.0000$	
$p^1P - sD(\frac{5}{2})$	0.8000	$x = 1.0000$		
$p^3P - sD(\frac{3}{2})$	1.2000	$x = 0.1250$	$y = 0.0139$	$z = 0.3750$
$p^3P - sD(\frac{5}{2})$	1.8000	$x = 0.7778$	$y = 0.0556$	
$p^1D - sD(\frac{3}{2})$	0.6667	$x = 1.0000$	$y = 0.0000$	
$p^1D - sD(\frac{5}{2})$	1.0000	$x = 0.0000$	$y = 1.0000$	
$p^3D - sD(\frac{3}{2})$	2.0000	$x = 0.0778$	$y = 0.1250$	$z = 0.3472$
$p^3D - sD(\frac{5}{2})$	3.0000	$x = 0.6914$	$y = 0.0346$	$z = 0.0864$
$p^1F - sD(\frac{3}{2})$	0.9333	$x = 1.0000$		
$p^1F - sD(\frac{5}{2})$	1.4000	$x = 0.0000$	$y = 1.0000$	
$p^3F - sD(\frac{3}{2})$	2.8000	$x = 0.4444$	$y = 0.5000$	$z = 0.0556$
$p^3F - sD(\frac{5}{2})$	4.2000	$x = 0.7143$	$y = 0.0617$	$z = 0.0018$
p $(2s+1)L - d$ $L'(K)$	$\sum_{J_p, j}^s$	x	y	z
$p^1P - dS(\frac{1}{2})$	0.2000	$x = 0.0000$	$y = 1.0000$	
$p^1P - dP(\frac{1}{2})$	0.1500	$x = 1.0000$	$y = 0.0000$	
$p^1P - dP(\frac{3}{2})$	0.3000	$x = 0.0000$	$y = 1.0000$	
$p^1P - dD(\frac{3}{2})$	0.1400	$x = 1.0000$	$y = 0.0000$	
$p^1P - dD(\frac{5}{2})$	0.2100	$x = 1.0000$		
$p^3P - dS(\frac{1}{2})$	0.6000	$x = 0.5556$	$y = 0.3333$	$z = 0.1111$
$p^3P - dP(\frac{1}{2})$	0.4500	$x = 0.2778$	$y = 0.1687$	$z = 0.2222$
$p^3P - dP(\frac{3}{2})$	0.9000	$x = 0.6250$	$y = 0.0694$	$z = 0.2083$
$p^3P - dD(\frac{3}{2})$	0.4200	$x = 0.1250$	$y = 0.0139$	$z = 0.3750$
$p^3P - dD(\frac{5}{2})$	0.6300	$x = 0.7778$	$y = 0.0556$	
$p^1D - dP(\frac{1}{2})$	0.0500	$x = 1.0000$		
$p^1D - dP(\frac{3}{2})$	0.1000	$x = 0.0000$	$y = 1.0000$	
$p^1D - dD(\frac{3}{2})$	0.2333	$x = 1.0000$	$y = 0.0000$	

TABLE 10a (CONTINUED)

$d^{(2s+1)L} - p L/K$	$\sum_{J,J'}^s$	x	y	z	$d^{(2s+1)L} - f L/K$	$\sum_{J,J'}^s$	x	y	z
$p^1D - dD \left \frac{5}{2} \right $	0.3500	$x = 0.0000$	$y = 1.0000$		$d^3D - pF \left \frac{5}{2} \right $	0.0857	$x = 0.0494$	$y = 0.0025$	$z = 0.3951$
$p^1D - dF \left \frac{5}{2} \right $	0.4000	$x = 1.0000$	$y = 0.0000$		$d^3D - pF \left \frac{7}{2} \right $	0.1143	$x = 0.7500$	$y = 0.0278$	
$p^1D - dF \left \frac{7}{2} \right $	0.5333	$x = 1.0000$			$d^1F - pD \left \frac{3}{2} \right $	0.3733	$x = 1.0000$		
$p^3D - dP \left \frac{1}{2} \right $	0.1500	$x = 0.5000$	$y = 0.3333$	$y = 0.1667$	$d^1F - pD \left \frac{3}{2} \right $	0.5600	$x = 0.0000$	$y = 1.0000$	
$p^3D - dP \left \frac{3}{2} \right $	0.3000	$x = 0.7000$	$y = 0.1250$	$y = 0.1250$	$d^1F - pF \left \frac{5}{2} \right $	0.2000	$x = 1.0000$	$y = 0.0000$	
$p^3D - dD \left \frac{1}{2} \right $	0.7000	$x = 0.0778$	$y = 0.1250$	$y = 0.3472$	$d^1F - pF \left \frac{5}{2} \right $	0.2667	$x = 0.0000$	$y = 1.0000$	
$p^3D - dD \left \frac{3}{2} \right $	1.0500	$x = 0.6914$	$y = 0.1543$	$y = 0.0346$	$d^3F - pD \left \frac{3}{2} \right $	1.1200	$x = 0.4444$	$y = 0.5000$	$y = 0.0556$
$p^3D - dF \left \frac{3}{2} \right $	1.2000	$x = 0.0494$	$y = 0.0864$	$y = 0.0025$	$d^3F - pD \left \frac{5}{2} \right $	1.6800	$x = 0.7143$	$y = 0.1975$	$y = 0.0617$
$p^3D - dF \left \frac{7}{2} \right $	1.6000	$x = 0.7500$	$y = 0.2222$	$y = 0.0278$	$d^3F - pF \left \frac{5}{2} \right $	0.6000	$x = 0.0357$	$y = 0.0617$	$y = 0.3735$
$p^1F - dD \left \frac{3}{2} \right $	0.0267	$x = 1.0000$			$d^3F - pF \left \frac{7}{2} \right $	0.8000	$x = 0.7031$	$y = 0.2101$	$y = 0.0201$
$p^1F - dD \left \frac{5}{2} \right $	0.0400	$x = 0.0000$	$y = 1.0000$		$d^1G - pF \left \frac{1}{2} \right $	0.7714	$x = 1.0000$		
$p^1F - dF \left \frac{1}{2} \right $	0.2000	$x = 1.0000$	$y = 0.0000$		$d^1G - pF \left \frac{3}{2} \right $	1.0286	$x = 0.0000$	$y = 1.0000$	
$p^1F - dF \left \frac{3}{2} \right $	0.2667	$x = 0.0000$	$y = 1.0000$		$d^1G - pF \left \frac{5}{2} \right $	2.3143	$x = 0.4167$	$y = 0.5556$	$y = 0.0278$
$p^1F - dG \left \frac{1}{2} \right $	0.8000	$x = 1.0000$	$y = 0.0000$		$d^3G - pF \left \frac{3}{2} \right $	3.0857	$x = 0.7130$	$y = 0.2344$	$y = 0.0365$
$p^1F - dG \left \frac{3}{2} \right $	1.0000	$x = 1.0000$							
$p^3F - dD \left \frac{3}{2} \right $	0.0800	$x = 0.4444$	$y = 0.5000$	$y = 0.0556$					
$p^3F - dD \left \frac{5}{2} \right $	0.1200	$x = 0.7143$	$y = 0.1975$	$y = 0.0617$					
$p^3F - dF \left \frac{1}{2} \right $	0.6000	$x = 0.0857$	$y = 0.0617$	$y = 0.3735$					
$p^3F - dF \left \frac{3}{2} \right $	0.8000	$x = 0.7031$	$y = 0.2101$	$y = 0.0201$					
$p^3F - dG \left \frac{1}{2} \right $	2.4000	$x = 0.0260$	$y = 0.0469$	$y = 0.0007$					
$p^3F - dG \left \frac{3}{2} \right $	3.0000	$x = 0.7333$	$y = 0.2500$	$y = 0.0167$					
$d^{(2s+1)L} - p L/K$	$\sum_{J,J'}^s$	x	y	z	$d^{(2s+1)L} - f L/K$	$\sum_{J,J'}^s$	x	y	z
$d^1S - pP \left \frac{1}{2} \right $	0.0667	$x = 1.0000$			$d^1S - fP \left \frac{1}{2} \right $	0.0667	$x = 1.0000$		
$d^1S - pP \left \frac{3}{2} \right $	0.1333	$x = 1.0000$			$d^1S - fP \left \frac{3}{2} \right $	0.1333	$x = 1.0000$		
$d^3S - pP \left \frac{1}{2} \right $	0.2000	$x = 0.6667$	$y = 0.3333$		$d^3S - fP \left \frac{1}{2} \right $	0.2000	$x = 0.6667$	$y = 0.3333$	
$d^3S - pP \left \frac{3}{2} \right $	0.4000	$x = 0.8333$	$y = 0.1667$		$d^3S - fP \left \frac{3}{2} \right $	0.4000	$x = 0.8333$	$y = 0.1667$	
$d^1P - pP \left \frac{1}{2} \right $	0.1500	$x = 1.0000$	$y = 0.0000$		$d^1P - fP \left \frac{1}{2} \right $	0.0667	$x = 1.0000$	$y = 0.0000$	
$d^1P - pP \left \frac{3}{2} \right $	0.3000	$x = 0.0000$	$y = 1.0000$		$d^1P - fP \left \frac{3}{2} \right $	0.1333	$x = 0.0000$	$y = 1.0000$	
$d^1P - pD \left \frac{1}{2} \right $	0.0600	$x = 1.0000$	$y = 0.0000$		$d^1P - fD \left \frac{3}{2} \right $	0.1600	$x = 1.0000$	$y = 0.0000$	
$d^1P - pD \left \frac{3}{2} \right $	0.0900	$x = 1.0000$			$d^1P - fD \left \frac{5}{2} \right $	0.2400	$x = 1.0000$		
$d^3P - pP \left \frac{1}{2} \right $	0.4500	$x = 0.2778$	$y = 0.3333$	$y = 0.1667$	$d^3P - fP \left \frac{1}{2} \right $	0.2000	$x = 0.2778$	$y = 0.3333$	$y = 0.1667$
$d^3P - pP \left \frac{3}{2} \right $	0.9000	$x = 0.6250$	$y = 0.0417$	$y = 0.0694$	$d^3P - fP \left \frac{3}{2} \right $	0.4000	$x = 0.6250$	$y = 0.0417$	$y = 0.0694$
$d^3P - pD \left \frac{1}{2} \right $	0.1800	$x = 0.1250$	$y = 0.2083$	$y = 0.0139$	$d^3P - fD \left \frac{1}{2} \right $	0.4800	$x = 0.1250$	$y = 0.2083$	$y = 0.0139$
$d^3P - pD \left \frac{3}{2} \right $	0.2700	$x = 0.7778$	$y = 0.1667$	$y = 0.0556$	$d^3P - fD \left \frac{3}{2} \right $	0.7200	$x = 0.7778$	$y = 0.1667$	$y = 0.0556$
$d^1D - pP \left \frac{1}{2} \right $	0.1167	$x = 1.0000$			$d^1D - fP \left \frac{1}{2} \right $	0.0095	$x = 1.0000$		
$d^1D - pP \left \frac{3}{2} \right $	0.2333	$x = 0.0000$	$y = 1.0000$		$d^1D - fP \left \frac{3}{2} \right $	0.0190	$x = 0.0000$	$y = 1.0000$	
$d^1D - pD \left \frac{1}{2} \right $	0.2333	$x = 1.0000$	$y = 0.0000$		$d^1D - fD \left \frac{1}{2} \right $	0.1143	$x = 1.0000$	$y = 0.0000$	
$d^1D - pD \left \frac{3}{2} \right $	0.3500	$x = 0.0000$	$y = 1.0000$		$d^1D - fD \left \frac{3}{2} \right $	0.1714	$x = 0.0000$	$y = 1.0000$	
$d^1D - pF \left \frac{1}{2} \right $	0.0286	$x = 1.0000$	$y = 0.0000$		$d^1D - fF \left \frac{1}{2} \right $	0.2939	$x = 1.0000$	$y = 0.0000$	
$d^1D - pF \left \frac{3}{2} \right $	0.0381	$x = 1.0000$			$d^1D - fF \left \frac{3}{2} \right $	0.3918	$x = 1.0000$		
$d^3D - pP \left \frac{1}{2} \right $	0.3500	$x = 0.5000$	$y = 0.3333$	$y = 0.1667$	$d^3D - fP \left \frac{1}{2} \right $	0.0286	$x = 0.5000$	$y = 0.3333$	$y = 0.1667$
$d^3D - pP \left \frac{3}{2} \right $	0.7000	$x = 0.7000$	$y = 0.1250$	$y = 0.1250$	$d^3D - fP \left \frac{3}{2} \right $	0.0571	$x = 0.7000$	$y = 0.1250$	$y = 0.1250$
$d^3D - pD \left \frac{1}{2} \right $	0.2333	$x = 1.0000$	$y = 0.0000$		$d^3D - fD \left \frac{1}{2} \right $	0.3429	$x = 0.0778$	$y = 0.1250$	$y = 0.3472$
$d^3D - pD \left \frac{3}{2} \right $	0.3500	$x = 0.0000$	$y = 1.0000$		$d^3D - fD \left \frac{3}{2} \right $	0.5143	$x = 0.6914$	$y = 0.1543$	$y = 0.0346$
$d^1D - pF \left \frac{1}{2} \right $	0.0286	$x = 1.0000$	$y = 0.0000$		$d^3D - fF \left \frac{1}{2} \right $	0.8816	$x = 0.0494$	$y = 0.0864$	$y = 0.0025$
$d^1D - pF \left \frac{3}{2} \right $	0.0381	$x = 1.0000$			$d^3D - fF \left \frac{3}{2} \right $	1.1755	$x = 0.7500$	$y = 0.2222$	$y = 0.0278$
$d^3D - pP \left \frac{1}{2} \right $	0.3500	$x = 0.5000$	$y = 0.3333$	$y = 0.1667$	$d^1F - fD \left \frac{1}{2} \right $	0.0114	$x = 1.0000$		
$d^3D - pP \left \frac{3}{2} \right $	0.7000	$x = 0.7000$	$y = 0.1250$	$y = 0.1250$	$d^1F - fD \left \frac{3}{2} \right $	0.0171	$x = 0.0000$	$y = 1.0000$	
$d^3D - pD \left \frac{1}{2} \right $	0.2333	$x = 1.0000$	$y = 0.0000$		$d^1F - fF \left \frac{1}{2} \right $	0.1286	$x = 1.0000$	$y = 0.0000$	
$d^3D - pD \left \frac{3}{2} \right $	0.3500	$x = 0.0778$	$y = 0.1250$	$y = 0.3472$	$d^1F - fF \left \frac{3}{2} \right $	0.1714	$x = 0.0000$	$y = 1.0000$	
$d^3D - pF \left \frac{1}{2} \right $	0.0286	$x = 1.0000$	$y = 0.0000$		$d^1F - fG \left \frac{1}{2} \right $	0.4762	$x = 1.0000$	$y = 0.0000$	
$d^3D - pF \left \frac{3}{2} \right $	1.0500	$x = 0.6914$	$y = 0.1543$	$y = 0.0346$					

TABLE 10a (CONTINUED)

$f^1F - dF \left[\frac{1}{2} \right]$	0.1714	$x = 0.0000$	$y = 1.0000$	0.1714	$x = 0.0000$	$y = 1.0000$
$f^1F - dG \left[\frac{1}{2} \right]$	0.0063	$x = 1.0000$	$y = 0.0000$	0.0063	$x = 1.0000$	$y = 0.0000$
$f^1F - dG \left[\frac{3}{2} \right]$	0.0079	$x = 1.0000$		0.0079	$x = 1.0000$	
$f^3F - dD \left[\frac{3}{2} \right]$	0.8229	$x = 0.4444$	$y = 0.5000$	0.8229	$x = 0.4444$	$y = 0.5000$
$f^3F - dD \left[\frac{5}{2} \right]$	1.2343	$x = 0.7143$	$y = 0.1975$	1.2343	$x = 0.7143$	$y = 0.1975$
$f^3F - dF \left[\frac{1}{2} \right]$	0.3857	$x = 0.0357$	$y = 0.0617$	0.3857	$x = 0.0357$	$y = 0.0617$
$f^3F - dF \left[\frac{3}{2} \right]$	0.5143	$x = 0.7031$	$y = 0.2101$	0.5143	$x = 0.7031$	$y = 0.2101$
$f^3F - dG \left[\frac{1}{2} \right]$	0.0190	$x = 0.0260$	$y = 0.0469$	0.0190	$x = 0.0260$	$y = 0.0469$
$f^3F - dG \left[\frac{3}{2} \right]$	0.0238	$x = 0.7333$	$y = 0.2500$	0.0238	$x = 0.7333$	$y = 0.2500$
$f^1G - dF \left[\frac{1}{2} \right]$	0.4592	$x = 1.0000$		0.4592	$x = 1.0000$	
$f^1G - dF \left[\frac{3}{2} \right]$	0.6122	$x = 0.0000$	$y = 1.0000$	0.6122	$x = 0.0000$	$y = 1.0000$
$f^1G - dG \left[\frac{1}{2} \right]$	0.0952	$x = 1.0000$	$y = 0.0000$	0.0952	$x = 1.0000$	$y = 0.0000$
$f^1G - dG \left[\frac{3}{2} \right]$	0.1190	$x = 0.0000$	$y = 1.0000$	0.1190	$x = 0.0000$	$y = 1.0000$
$f^3G - dF \left[\frac{1}{2} \right]$	1.3776	$x = 0.4167$	$y = 0.5556$	1.3776	$x = 0.4167$	$y = 0.5556$
$f^3G - dF \left[\frac{3}{2} \right]$	1.8367	$x = 0.7130$	$y = 0.2344$	1.8367	$x = 0.7130$	$y = 0.2344$
$f^3G - dG \left[\frac{1}{2} \right]$	0.2857	$x = 0.0204$	$y = 0.0365$	0.2857	$x = 0.0204$	$y = 0.0365$
$f^3G - dG \left[\frac{3}{2} \right]$	0.3571	$x = 0.7040$	$y = 0.2407$	0.3571	$x = 0.7040$	$y = 0.2407$
$f^1H - dG \left[\frac{1}{2} \right]$	0.6984	$x = 1.0000$		0.6984	$x = 1.0000$	
$f^1H - dG \left[\frac{3}{2} \right]$	0.8730	$x = 0.0000$	$y = 1.0000$	0.8730	$x = 0.0000$	$y = 1.0000$
$f^3H - dG \left[\frac{1}{2} \right]$	2.0952	$x = 0.4000$	$y = 0.5833$	2.0952	$x = 0.4000$	$y = 0.5833$
$f^3H - dG \left[\frac{3}{2} \right]$	2.8190	$x = 0.7091$	$y = 0.2560$	2.8190	$x = 0.7091$	$y = 0.2560$

TABLE 10a (CONTINUED)

$d^1F - fG \left[\frac{9}{2} \right]$	0.5952	$x = 1.0000$		0.5952	$x = 1.0000$	
$d^3F - fD \left[\frac{3}{2} \right]$	0.0343	$x = 0.4444$	$y = 0.5000$	0.0343	$x = 0.4444$	$y = 0.5000$
$d^3F - fD \left[\frac{5}{2} \right]$	0.0514	$x = 0.7143$	$y = 0.1975$	0.0514	$x = 0.7143$	$y = 0.1975$
$d^3F - fF \left[\frac{1}{2} \right]$	0.3857	$x = 0.0357$	$y = 0.0617$	0.3857	$x = 0.0357$	$y = 0.0617$
$d^3F - fF \left[\frac{3}{2} \right]$	0.5143	$x = 0.7031$	$y = 0.2101$	0.5143	$x = 0.7031$	$y = 0.2101$
$d^3F - fG \left[\frac{1}{2} \right]$	1.4286	$x = 0.0260$	$y = 0.0469$	1.4286	$x = 0.0260$	$y = 0.0469$
$d^3F - fG \left[\frac{3}{2} \right]$	1.7857	$x = 0.7333$	$y = 0.2500$	1.7857	$x = 0.7333$	$y = 0.2500$
$d^1G - fF \left[\frac{1}{2} \right]$	0.0061	$x = 1.0000$		0.0061	$x = 1.0000$	
$d^1G - fF \left[\frac{3}{2} \right]$	0.0082	$x = 0.0000$	$y = 1.0000$	0.0082	$x = 0.0000$	$y = 1.0000$
$d^1G - fG \left[\frac{1}{2} \right]$	0.0952	$x = 1.0000$	$y = 0.0000$	0.0952	$x = 1.0000$	$y = 0.0000$
$d^1G - fG \left[\frac{3}{2} \right]$	0.1190	$x = 0.0000$	$y = 1.0000$	0.1190	$x = 0.0000$	$y = 1.0000$
$d^1G - fH \left[\frac{1}{2} \right]$	0.7143	$x = 1.0000$	$y = 0.0000$	0.7143	$x = 1.0000$	$y = 0.0000$
$d^1G - fH \left[\frac{3}{2} \right]$	0.8571	$x = 1.0000$		0.8571	$x = 1.0000$	
$d^3G - fF \left[\frac{1}{2} \right]$	0.0184	$x = 0.4167$	$y = 0.5556$	0.0184	$x = 0.4167$	$y = 0.5556$
$d^3G - fF \left[\frac{3}{2} \right]$	0.0245	$x = 0.7130$	$y = 0.2344$	0.0245	$x = 0.7130$	$y = 0.2344$
$d^3G - fG \left[\frac{1}{2} \right]$	0.2857	$x = 0.0204$	$y = 0.0365$	0.2857	$x = 0.0204$	$y = 0.0365$
$d^3G - fG \left[\frac{3}{2} \right]$	0.3571	$x = 0.7040$	$y = 0.2407$	0.3571	$x = 0.7040$	$y = 0.2407$
$d^3G - fH \left[\frac{1}{2} \right]$	2.1429	$x = 0.0160$	$y = 0.0293$	2.1429	$x = 0.0160$	$y = 0.0293$
$d^3G - fH \left[\frac{3}{2} \right]$	2.5714	$x = 0.7222$	$y = 0.2667$	2.5714	$x = 0.7222$	$y = 0.2667$

$f^{(2s+1)L - g} L' [K]$	$\sum_{J,J'}^s$	$f^{(2s+1)L - g} L' [K]$	$\sum_{J,J'}^s$
$f^1P - gD \left[\frac{3}{2} \right]$	0.1714	$x = 1.0000$	$y = 0.0000$
$f^1P - gD \left[\frac{5}{2} \right]$	0.2571	$x = 1.0000$	
$f^3P - gD \left[\frac{3}{2} \right]$	0.5143	$x = 0.1250$	$y = 0.2083$
$f^3P - gD \left[\frac{5}{2} \right]$	0.7714	$x = 0.7778$	$y = 0.1667$
$f^1D - gD \left[\frac{3}{2} \right]$	0.0476	$x = 1.0000$	$y = 0.0000$
$f^1D - gD \left[\frac{5}{2} \right]$	0.0714	$x = 0.0000$	$y = 1.0000$
$f^1D - gF \left[\frac{1}{2} \right]$	0.2551	$x = 1.0000$	$y = 0.0000$
$f^1D - gF \left[\frac{3}{2} \right]$	0.3401	$x = 1.0000$	
$f^3D - gD \left[\frac{3}{2} \right]$	0.1429	$x = 0.0778$	$y = 0.1250$
$f^3D - gD \left[\frac{5}{2} \right]$	0.2143	$x = 0.6914$	$y = 0.1543$
$f^3D - gF \left[\frac{1}{2} \right]$	0.7653	$x = 0.0494$	$y = 0.0864$
$f^3D - gF \left[\frac{3}{2} \right]$	1.0204	$x = 0.7500$	$y = 0.2222$
$f^1F - gD \left[\frac{3}{2} \right]$	0.0032	$x = 1.0000$	
$f^1F - gD \left[\frac{5}{2} \right]$	0.0048	$x = 0.0000$	$y = 1.0000$
$f^1F - gF \left[\frac{1}{2} \right]$	0.0744	$x = 1.0000$	$y = 0.0000$
$f^1F - gF \left[\frac{3}{2} \right]$	0.0992	$x = 0.0000$	$y = 1.0000$
$f^1F - gG \left[\frac{1}{2} \right]$	0.3638	$x = 1.0000$	$y = 0.0000$
$f^1F - gG \left[\frac{3}{2} \right]$	0.4547	$x = 1.0000$	
$f^3F - gD \left[\frac{3}{2} \right]$	0.0095	$x = 0.4444$	$y = 0.5000$
$f^3F - gD \left[\frac{5}{2} \right]$	0.0143	$x = 0.7143$	$y = 0.1975$
$f^3F - gF \left[\frac{1}{2} \right]$	0.2232	$x = 0.0357$	$y = 0.0617$
$f^3F - gF \left[\frac{3}{2} \right]$	0.2976	$x = 0.7031$	$y = 0.2101$
$f^3F - gG \left[\frac{1}{2} \right]$	1.0913	$x = 0.0260$	$y = 0.0469$
$f^3F - gG \left[\frac{3}{2} \right]$	1.4667	$x = 0.0007$	$y = 0.0167$

$f^{(2s+1)L - d} L' [K]$	$\sum_{J,J'}^s$	$f^{(2s+1)L - d} L' [K]$	$\sum_{J,J'}^s$
$f^1P - dS \left[\frac{1}{2} \right]$	0.2000	$x = 0.0000$	$y = 1.0000$
$f^1P - dP \left[\frac{1}{2} \right]$	0.0667	$x = 1.0000$	$y = 0.0000$
$f^1P - dP \left[\frac{3}{2} \right]$	0.1333	$x = 0.0000$	$y = 1.0000$
$f^1P - dD \left[\frac{1}{2} \right]$	0.0114	$x = 1.0000$	$y = 0.0000$
$f^1P - dD \left[\frac{3}{2} \right]$	0.0171	$x = 1.0000$	
$f^3P - dS \left[\frac{1}{2} \right]$	0.6000	$x = 0.5556$	$y = 0.0000$
$f^3P - dP \left[\frac{1}{2} \right]$	0.2000	$x = 0.2778$	$y = 0.3333$
$f^3P - dP \left[\frac{3}{2} \right]$	0.4000	$x = 0.6250$	$y = 0.0417$
$f^3P - dD \left[\frac{1}{2} \right]$	0.0343	$x = 0.1250$	$y = 0.2083$
$f^3P - dD \left[\frac{3}{2} \right]$	0.0514	$x = 0.7778$	$y = 0.1667$
$f^1D - dP \left[\frac{1}{2} \right]$	0.1333	$x = 1.0000$	
$f^1D - dP \left[\frac{3}{2} \right]$	0.2667	$x = 0.0000$	$y = 1.0000$
$f^1D - dD \left[\frac{3}{2} \right]$	0.1143	$x = 1.0000$	$y = 0.0000$
$f^1D - dD \left[\frac{5}{2} \right]$	0.1714	$x = 0.0000$	$y = 1.0000$
$f^1D - dF \left[\frac{1}{2} \right]$	0.0122	$x = 1.0000$	$y = 0.0000$
$f^1D - dF \left[\frac{3}{2} \right]$	0.0163	$x = 1.0000$	
$f^3D - dP \left[\frac{1}{2} \right]$	0.4000	$x = 0.5000$	$y = 0.3333$
$f^3D - dP \left[\frac{3}{2} \right]$	0.8000	$x = 0.7000$	$y = 0.1250$
$f^3D - dD \left[\frac{3}{2} \right]$	0.3429	$x = 0.0778$	$y = 0.1250$
$f^3D - dD \left[\frac{5}{2} \right]$	0.5143	$x = 0.6914$	$y = 0.1543$
$f^3D - dF \left[\frac{1}{2} \right]$	0.0367	$x = 0.0494$	$y = 0.0864$
$f^3D - dF \left[\frac{3}{2} \right]$	0.0490	$x = 0.7500$	$y = 0.2222$
$f^1F - dD \left[\frac{3}{2} \right]$	0.2743	$x = 1.0000$	
$f^1F - dD \left[\frac{5}{2} \right]$	0.4114	$x = 0.0000$	$y = 1.0000$
$f^1F - dF \left[\frac{1}{2} \right]$	0.1286	$x = 1.0000$	$y = 0.0000$

TABLE 10a (CONTINUED)

$g^3F - fD \left[\frac{9}{2} \right]$	1.3641	$x = 0.7333$	$y = 0.2500$	$z = 0.0167$
$g^3F - fD \left[\frac{7}{2} \right]$	0.0038	$x = 1.0000$		
$g^3F - fD \left[\frac{5}{2} \right]$	0.0051	$x = 0.0000$	$y = 1.0000$	
$g^3F - fD \left[\frac{3}{2} \right]$	0.0786	$x = 1.0000$	$y = 0.0000$	
$g^3F - fD \left[\frac{1}{2} \right]$	0.0982	$x = 0.0000$	$y = 1.0000$	
$g^3F - fD \left[\frac{9}{2} \right]$	0.5000	$x = 1.0000$	$y = 0.0000$	
$g^3F - fD \left[\frac{7}{2} \right]$	0.8000	$x = 1.0000$		
$g^3F - fD \left[\frac{5}{2} \right]$	0.0115	$x = 0.4167$	$y = 0.5556$	$z = 0.0278$
$g^3F - fD \left[\frac{3}{2} \right]$	0.0153	$x = 0.7130$	$y = 0.2344$	$z = 0.0365$
$g^3F - fD \left[\frac{1}{2} \right]$	0.2357	$x = 0.0204$	$y = 0.0365$	$z = 0.3760$
$g^3F - fD \left[\frac{9}{2} \right]$	0.2946	$x = 0.7040$	$y = 0.2407$	$z = 0.0130$
$g^3F - fD \left[\frac{7}{2} \right]$	1.5000	$x = 0.0160$	$y = 0.0293$	$z = 0.0003$
$g^3F - fD \left[\frac{5}{2} \right]$	1.8000	$x = 0.7222$	$y = 0.2667$	$z = 0.0111$
$g^3F - fD \left[\frac{3}{2} \right]$	0.0021	$x = 1.0000$		
$g^3F - fD \left[\frac{1}{2} \right]$	0.0026	$x = 0.0000$	$y = 1.0000$	
$g^3F - fD \left[\frac{9}{2} \right]$	0.0556	$x = 1.0000$	$y = 0.0000$	
$g^3F - fD \left[\frac{7}{2} \right]$	0.0667	$x = 0.0000$	$y = 1.0000$	
$g^3F - fD \left[\frac{5}{2} \right]$	0.6667	$x = 1.0000$	$y = 0.0000$	
$g^3F - fD \left[\frac{3}{2} \right]$	0.7778	$x = 1.0000$		
$g^3F - fD \left[\frac{1}{2} \right]$	0.0083	$x = 0.4000$	$y = 0.5833$	$z = 0.0167$
$g^3F - fD \left[\frac{9}{2} \right]$	0.0079	$x = 0.7091$	$y = 0.2560$	$z = 0.0240$
$g^3F - fD \left[\frac{7}{2} \right]$	0.1667	$x = 0.0131$	$y = 0.0240$	$z = 0.3738$
$g^3F - fD \left[\frac{5}{2} \right]$	0.2000	$x = 0.7022$	$y = 0.2596$	$z = 0.0091$
$g^3F - fD \left[\frac{3}{2} \right]$	2.0000	$x = 0.0108$	$y = 0.0201$	$z = 0.0001$
$g^3F - fD \left[\frac{1}{2} \right]$	2.8333	$x = 0.7143$	$y = 0.2778$	$z = 0.0079$
$\sum_{J,J'} g^{(2s+1)L - fL K}$				
$g^1D - fP \left[\frac{1}{2} \right]$	0.1429	$x = 1.0000$		
$g^1D - fP \left[\frac{3}{2} \right]$	0.2857	$x = 0.0000$	$y = 1.0000$	
$g^1D - fP \left[\frac{5}{2} \right]$	0.0476	$x = 1.0000$	$y = 0.0000$	
$g^1D - fP \left[\frac{7}{2} \right]$	0.0714	$x = 0.0000$	$y = 1.0000$	
$g^1D - fP \left[\frac{9}{2} \right]$	0.0034	$x = 1.0000$	$y = 0.0000$	
$g^1D - fP \left[\frac{1}{2} \right]$	0.0045	$x = 1.0000$		
$g^1D - fP \left[\frac{3}{2} \right]$	0.4286	$x = 0.5000$	$y = 0.3333$	$z = 0.1667$
$g^1D - fP \left[\frac{5}{2} \right]$	0.8571	$x = 0.7000$	$y = 0.1250$	$z = 0.1250$
$g^1D - fP \left[\frac{7}{2} \right]$	0.1429	$x = 0.0778$	$y = 0.1250$	$z = 0.3472$
$g^1D - fP \left[\frac{9}{2} \right]$	0.2143	$x = 0.6914$	$y = 0.1543$	$z = 0.0346$
$g^1D - fP \left[\frac{1}{2} \right]$	0.0102	$x = 0.0494$	$y = 0.0864$	$z = 0.0025$
$g^1D - fP \left[\frac{3}{2} \right]$	0.0136	$x = 0.7500$	$y = 0.2222$	$z = 0.0278$
$g^1D - fP \left[\frac{5}{2} \right]$	0.2381	$x = 1.0000$		
$g^1D - fP \left[\frac{7}{2} \right]$	0.3571	$x = 0.0000$	$y = 1.0000$	
$g^1D - fP \left[\frac{9}{2} \right]$	0.0744	$x = 1.0000$	$y = 0.0000$	
$g^1D - fP \left[\frac{1}{2} \right]$	0.0992	$x = 0.0000$	$y = 1.0000$	
$g^1D - fP \left[\frac{3}{2} \right]$	0.0040	$x = 1.0000$	$y = 0.0000$	
$g^1D - fP \left[\frac{5}{2} \right]$	0.0050	$x = 1.0000$		

TABLE 10a (CONTINUED)

$g^3F - fD \left[\frac{9}{2} \right]$	0.7143	$x = 0.4444$	$y = 0.5000$	$z = 0.0556$
$g^3F - fD \left[\frac{7}{2} \right]$	1.0714	$x = 0.7143$	$y = 0.1975$	$z = 0.0817$
$g^3F - fD \left[\frac{5}{2} \right]$	0.2232	$x = 0.0357$	$y = 0.0617$	$z = 0.3735$
$g^3F - fD \left[\frac{3}{2} \right]$	0.2976	$x = 0.7031$	$y = 0.2101$	$z = 0.0201$
$g^3F - fD \left[\frac{1}{2} \right]$	0.0119	$x = 0.0260$	$y = 0.0469$	$z = 0.0469$
$g^3F - fD \left[\frac{9}{2} \right]$	0.0149	$x = 0.7333$	$y = 0.2500$	$z = 0.0396$
$g^3F - fD \left[\frac{7}{2} \right]$	0.3508	$x = 1.0000$		
$g^3F - fD \left[\frac{5}{2} \right]$	0.4677	$x = 0.0000$	$y = 1.0000$	
$g^3F - fD \left[\frac{3}{2} \right]$	0.0786	$x = 1.0000$	$y = 0.0000$	
$g^3F - fD \left[\frac{1}{2} \right]$	0.0982	$x = 0.0000$	$y = 1.0000$	
$g^3F - fD \left[\frac{9}{2} \right]$	0.0022	$x = 1.0000$	$y = 0.0000$	
$g^3F - fD \left[\frac{7}{2} \right]$	0.0026	$x = 1.0000$		
$g^3F - fD \left[\frac{5}{2} \right]$	1.0523	$x = 0.4167$	$y = 0.5556$	$z = 0.0278$
$g^3F - fD \left[\frac{3}{2} \right]$	1.4031	$x = 0.7130$	$y = 0.2344$	$z = 0.0365$
$g^3F - fD \left[\frac{1}{2} \right]$	0.2357	$x = 0.0204$	$y = 0.0365$	$z = 0.3760$
$g^3F - fD \left[\frac{9}{2} \right]$	0.2946	$x = 0.7040$	$y = 0.2407$	$z = 0.0130$
$g^3F - fD \left[\frac{7}{2} \right]$	0.0065	$x = 0.0160$	$y = 0.0293$	$z = 0.0003$
$g^3F - fD \left[\frac{5}{2} \right]$	0.0078	$x = 0.7222$	$y = 0.2667$	$z = 0.0111$
$g^3F - fD \left[\frac{3}{2} \right]$	0.4889	$x = 1.0000$		
$g^3F - fD \left[\frac{1}{2} \right]$	0.6111	$x = 0.0000$	$y = 1.0000$	
$g^3F - fD \left[\frac{9}{2} \right]$	0.0556	$x = 1.0000$	$y = 0.0000$	
$g^3F - fD \left[\frac{7}{2} \right]$	0.0667	$x = 0.0000$	$y = 1.0000$	
$g^3F - fD \left[\frac{5}{2} \right]$	1.4667	$x = 0.4000$	$y = 0.5833$	$z = 0.0167$
$g^3F - fD \left[\frac{3}{2} \right]$	1.8333	$x = 0.7091$	$y = 0.2560$	$z = 0.0240$
$g^3F - fD \left[\frac{1}{2} \right]$	0.1667	$x = 0.0131$	$y = 0.0240$	$z = 0.3738$
$g^3F - fD \left[\frac{9}{2} \right]$	0.2000	$x = 0.7022$	$y = 0.2596$	$z = 0.0091$
$g^3F - fD \left[\frac{7}{2} \right]$	2.0000	$x = 0.0108$	$y = 0.0201$	$z = 0.0001$
$g^3F - fD \left[\frac{5}{2} \right]$	2.8333	$x = 0.7143$	$y = 0.2778$	$z = 0.0079$
$\sum_{J,J'} g^{(2s+1)L - p(J_p) K}$				
$g^1D - p \left(\frac{3}{2} \right) \left[\frac{1}{2} \right]$	0.3333	$x = 1.0000$		
$g^1D - p \left(\frac{3}{2} \right) \left[\frac{3}{2} \right]$	0.6667	$x = 0.9000$	$y = 0.1000$	
$g^1D - p \left(\frac{3}{2} \right) \left[\frac{5}{2} \right]$	1.0000	$x = 0.9333$	$y = 0.0667$	
$g^1D - p \left(\frac{3}{2} \right) \left[\frac{7}{2} \right]$	0.6667	$x = 0.1000$	$y = 0.9000$	

TABLE 10b

TRANSITIONS BETWEEN LS AND JK STATES. PARENT TERM: 2D

$\sum_{J,J'} g^{(2s+1)L - p(J_p) K}$	
$g^1D - p \left(\frac{3}{2} \right) \left[\frac{1}{2} \right]$	0.3333
$g^1D - p \left(\frac{3}{2} \right) \left[\frac{3}{2} \right]$	0.6667
$g^1D - p \left(\frac{3}{2} \right) \left[\frac{5}{2} \right]$	1.0000
$g^1D - p \left(\frac{3}{2} \right) \left[\frac{7}{2} \right]$	0.6667

TABLE 10b (CONTINUED)

$s^1D - p \left(\frac{5}{2} \right) \left(\frac{5}{2} \right)$	1.0000	$x = 0.0667$	$y = 0.9333$
$s^1D - p \left(\frac{3}{2} \right) \left(\frac{7}{2} \right)$	1.3333	$x = 1.0000$	
$s^3D - p \left(\frac{3}{2} \right) \left(\frac{5}{2} \right)$	1.0000	$x = 0.5000$	$y = 0.1667$
$s^3D - p \left(\frac{3}{2} \right) \left(\frac{3}{2} \right)$	2.0000	$x = 0.0000$	$y = 0.4500$
$s^3D - p \left(\frac{3}{2} \right) \left(\frac{7}{2} \right)$	3.0000	$x = 0.0000$	$y = 0.0833$
$s^3D - p \left(\frac{3}{2} \right) \left(\frac{1}{2} \right)$	2.0000	$x = 0.7778$	$y = 0.2222$
$s^3D - p \left(\frac{3}{2} \right) \left(\frac{9}{2} \right)$	3.0000	$x = 0.7407$	$y = 0.0370$
$s^3D - p \left(\frac{3}{2} \right) \left(\frac{1}{2} \right)$	4.0000	$x = 0.7500$	$y = 0.0278$
$p^{(2S+1)L} - s(J_p)K$	$\sum_{J,J'}$		
$p^1P - s \left(\frac{3}{2} \right) \left(\frac{3}{2} \right)$	0.4000	$x = 1.0000$	$y = 0.0000$
$p^1P - s \left(\frac{3}{2} \right) \left(\frac{1}{2} \right)$	0.6000	$x = 1.0000$	
$p^3P - s \left(\frac{3}{2} \right) \left(\frac{3}{2} \right)$	1.2000	$x = 0.1250$	$y = 0.0139$
$p^3P - s \left(\frac{3}{2} \right) \left(\frac{1}{2} \right)$	1.8000	$x = 0.7778$	$y = 0.0556$
$p^1D - s \left(\frac{5}{2} \right) \left(\frac{5}{2} \right)$	0.8667	$x = 1.0000$	$y = 0.0000$
$p^1D - s \left(\frac{5}{2} \right) \left(\frac{3}{2} \right)$	1.0000	$x = 0.0000$	$y = 1.0000$
$p^3D - s \left(\frac{5}{2} \right) \left(\frac{5}{2} \right)$	2.0000	$x = 0.0778$	$y = 0.1250$
$p^3D - s \left(\frac{5}{2} \right) \left(\frac{3}{2} \right)$	3.0000	$x = 0.6914$	$y = 0.0346$
$p^1F - s \left(\frac{3}{2} \right) \left(\frac{3}{2} \right)$	0.9333	$x = 1.0000$	
$p^1F - s \left(\frac{3}{2} \right) \left(\frac{1}{2} \right)$	1.4000	$x = 0.0000$	$y = 1.0000$
$p^3F - s \left(\frac{3}{2} \right) \left(\frac{3}{2} \right)$	2.8000	$x = 0.4444$	$y = 0.0556$
$p^3F - s \left(\frac{3}{2} \right) \left(\frac{1}{2} \right)$	4.2000	$x = 0.7143$	$y = 0.0617$

$p^{(2S+1)L} - d(J_p)K$	$\sum_{J,J'}$		
$p^1P - d \left(\frac{3}{2} \right) \left(\frac{1}{2} \right)$	0.1700	$x = 0.5294$	$y = 0.4706$
$p^1P - d \left(\frac{3}{2} \right) \left(\frac{3}{2} \right)$	0.1880	$x = 0.5213$	$y = 0.4787$
$p^1P - d \left(\frac{3}{2} \right) \left(\frac{5}{2} \right)$	0.0420	$x = 1.0000$	
$p^1P - d \left(\frac{3}{2} \right) \left(\frac{7}{2} \right)$	0.1800	$x = 0.3333$	$y = 0.6667$
$p^1P - d \left(\frac{3}{2} \right) \left(\frac{9}{2} \right)$	0.2520	$x = 0.1667$	$y = 0.8333$
$p^1P - d \left(\frac{3}{2} \right) \left(\frac{1}{2} \right)$	0.4680	$x = 1.0000$	
$p^3P - d \left(\frac{3}{2} \right) \left(\frac{1}{2} \right)$	0.5100	$x = 0.0163$	$y = 0.4804$
$p^3P - d \left(\frac{3}{2} \right) \left(\frac{3}{2} \right)$	0.5640	$x = 0.0851$	$y = 0.0095$
$p^3P - d \left(\frac{3}{2} \right) \left(\frac{5}{2} \right)$	0.1260	$x = 0.7778$	$y = 0.0556$
$p^3P - d \left(\frac{3}{2} \right) \left(\frac{7}{2} \right)$	0.5400	$x = 0.8333$	$y = 0.0556$
$p^3P - d \left(\frac{3}{2} \right) \left(\frac{9}{2} \right)$	0.7580	$x = 0.7500$	$y = 0.0833$
$p^3P - d \left(\frac{3}{2} \right) \left(\frac{1}{2} \right)$	0.5040	$x = 0.7778$	$y = 0.0556$
$p^1D - d \left(\frac{3}{2} \right) \left(\frac{1}{2} \right)$	0.0300	$x = 1.0000$	
$p^1D - d \left(\frac{3}{2} \right) \left(\frac{3}{2} \right)$	0.1933	$x = 0.8448$	$y = 0.1552$
$p^1D - d \left(\frac{3}{2} \right) \left(\frac{5}{2} \right)$	0.3900	$x = 0.8205$	$y = 0.1795$
$p^1D - d \left(\frac{3}{2} \right) \left(\frac{7}{2} \right)$	0.0533	$x = 1.0000$	
$p^1D - d \left(\frac{3}{2} \right) \left(\frac{9}{2} \right)$	0.0200	$x = 1.0000$	
$p^1D - d \left(\frac{3}{2} \right) \left(\frac{1}{2} \right)$	0.1400	$x = 0.5000$	$y = 0.5000$
$p^1D - d \left(\frac{3}{2} \right) \left(\frac{3}{2} \right)$	0.3600	$x = 0.2222$	$y = 0.7778$
$p^1D - d \left(\frac{3}{2} \right) \left(\frac{5}{2} \right)$	0.4800	$x = 1.0000$	
$p^3D - d \left(\frac{3}{2} \right) \left(\frac{1}{2} \right)$	0.0900	$x = 0.5000$	$y = 0.1667$

TABLE 10b (CONTINUED)

$p^3D - d \left(\frac{3}{2} \right) \left(\frac{3}{2} \right)$	0.5800	$x = 0.0054$	$y = 0.4636$
$p^3D - d \left(\frac{3}{2} \right) \left(\frac{1}{2} \right)$	1.1700	$x = 0.0228$	$y = 0.0011$
$p^3D - d \left(\frac{3}{2} \right) \left(\frac{5}{2} \right)$	0.1600	$x = 0.7500$	$y = 0.0278$
$p^3D - d \left(\frac{3}{2} \right) \left(\frac{7}{2} \right)$	0.0600	$x = 0.5000$	$y = 0.1667$
$p^3D - d \left(\frac{3}{2} \right) \left(\frac{9}{2} \right)$	0.4200	$x = 0.6222$	$y = 0.0278$
$p^3D - d \left(\frac{3}{2} \right) \left(\frac{1}{2} \right)$	1.0600	$x = 0.7023$	$y = 0.0351$
$p^3D - d \left(\frac{3}{2} \right) \left(\frac{3}{2} \right)$	1.4400	$x = 0.7500$	$y = 0.0278$
$p^1F - d \left(\frac{3}{2} \right) \left(\frac{3}{2} \right)$	0.0187	$x = 1.0000$	
$p^1F - d \left(\frac{3}{2} \right) \left(\frac{1}{2} \right)$	0.1680	$x = 0.9524$	$y = 0.0476$
$p^1F - d \left(\frac{3}{2} \right) \left(\frac{5}{2} \right)$	0.7467	$x = 0.9643$	$y = 0.0357$
$p^1F - d \left(\frac{3}{2} \right) \left(\frac{7}{2} \right)$	0.0080	$x = 1.0000$	
$p^1F - d \left(\frac{3}{2} \right) \left(\frac{9}{2} \right)$	0.0720	$x = 0.5556$	$y = 0.4444$
$p^1F - d \left(\frac{3}{2} \right) \left(\frac{1}{2} \right)$	0.3200	$x = 0.2500$	$y = 0.7500$
$p^1F - d \left(\frac{3}{2} \right) \left(\frac{3}{2} \right)$	1.0000	$x = 1.0000$	
$p^3F - d \left(\frac{3}{2} \right) \left(\frac{3}{2} \right)$	0.0560	$x = 0.4444$	$y = 0.0556$
$p^3F - d \left(\frac{3}{2} \right) \left(\frac{1}{2} \right)$	0.5040	$x = 0.0000$	$y = 0.4233$
$p^3F - d \left(\frac{3}{2} \right) \left(\frac{5}{2} \right)$	2.2400	$x = 0.0000$	$y = 0.0000$
$p^3F - d \left(\frac{3}{2} \right) \left(\frac{7}{2} \right)$	0.0240	$x = 0.4444$	$y = 0.0556$
$p^3F - d \left(\frac{3}{2} \right) \left(\frac{9}{2} \right)$	0.2160	$x = 0.4960$	$y = 0.0840$
$p^3F - d \left(\frac{3}{2} \right) \left(\frac{1}{2} \right)$	0.9600	$x = 0.6510$	$y = 0.0186$
$p^3F - d \left(\frac{3}{2} \right) \left(\frac{3}{2} \right)$	3.0000	$x = 0.7333$	$y = 0.0167$

$d^{(2S+1)L} - p(J_p)K$	$\sum_{J,J'}$		
$d^1S - p \left(\frac{3}{2} \right) \left(\frac{1}{2} \right)$	0.0667	$x = 1.0000$	
$d^1S - p \left(\frac{3}{2} \right) \left(\frac{3}{2} \right)$	0.0133	$x = 1.0000$	
$d^1S - p \left(\frac{3}{2} \right) \left(\frac{5}{2} \right)$	0.1200	$x = 1.0000$	
$d^3S - p \left(\frac{3}{2} \right) \left(\frac{1}{2} \right)$	0.2000	$x = 0.6667$	$y = 0.3333$
$d^3S - p \left(\frac{3}{2} \right) \left(\frac{3}{2} \right)$	0.0400	$x = 0.8333$	$y = 0.1667$
$d^3S - p \left(\frac{3}{2} \right) \left(\frac{5}{2} \right)$	0.3600	$x = 0.8333$	$y = 0.1667$
$d^1P - p \left(\frac{3}{2} \right) \left(\frac{1}{2} \right)$	0.1500	$x = 1.0000$	$y = 0.0000$
$d^1P - p \left(\frac{3}{2} \right) \left(\frac{3}{2} \right)$	0.0840	$x = 0.6429$	$y = 0.3571$
$d^1P - p \left(\frac{3}{2} \right) \left(\frac{5}{2} \right)$	0.0060	$x = 1.0000$	
$d^1P - p \left(\frac{3}{2} \right) \left(\frac{7}{2} \right)$	0.2760	$x = 0.0217$	$y = 0.9783$
$d^1P - p \left(\frac{3}{2} \right) \left(\frac{9}{2} \right)$	0.0840	$x = 1.0000$	
$d^3P - p \left(\frac{3}{2} \right) \left(\frac{1}{2} \right)$	0.4500	$x = 0.2778$	$y = 0.1667$
$d^3P - p \left(\frac{3}{2} \right) \left(\frac{3}{2} \right)$	0.2520	$x = 0.5714$	$y = 0.0635$
$d^3P - p \left(\frac{3}{2} \right) \left(\frac{5}{2} \right)$	0.0180	$x = 0.7778$	$y = 0.0556$
$d^3P - p \left(\frac{3}{2} \right) \left(\frac{7}{2} \right)$	0.8280	$x = 0.5326$	$y = 0.0592$
$d^3P - p \left(\frac{3}{2} \right) \left(\frac{9}{2} \right)$	0.2520	$x = 0.7778$	$y = 0.0556$
$d^1D - p \left(\frac{3}{2} \right) \left(\frac{1}{2} \right)$	0.1167	$x = 1.0000$	
$d^1D - p \left(\frac{3}{2} \right) \left(\frac{3}{2} \right)$	0.2333	$x = 0.9000$	$y = 0.1000$
$d^1D - p \left(\frac{3}{2} \right) \left(\frac{5}{2} \right)$	0.0500	$x = 0.5333$	$y = 0.4667$
$d^1D - p \left(\frac{3}{2} \right) \left(\frac{7}{2} \right)$	0.2333	$x = 0.1000$	$y = 0.9000$
$d^1D - p \left(\frac{3}{2} \right) \left(\frac{9}{2} \right)$	0.3286	$x = 0.0058$	$y = 0.9942$
$d^1D - p \left(\frac{3}{2} \right) \left(\frac{1}{2} \right)$	0.0381	$x = 1.0000$	

TABLE 10b (CONTINUED)

$d^1D - f^{(5/2)}_{(1/2)}$	0.2204	$x = 0.5333$	$y = 0.4667$
$d^1D - f^{(5/2)}_{(1/2)}$	0.2939	$x = 1.0000$	
$d^3D - f^{(3/2)}_{(1/2)}$	0.1714	$x = 0.0156$	$y = 0.4694$
$d^3D - f^{(3/2)}_{(1/2)}$	0.7347	$x = 0.0652$	$y = 0.0082$
$d^3D - f^{(3/2)}_{(1/2)}$	0.2939	$x = 0.7500$	$y = 0.0278$
$d^3D - f^{(3/2)}_{(1/2)}$	0.0286	$x = 0.5000$	$y = 0.1667$
$d^3D - f^{(3/2)}_{(1/2)}$	0.2286	$x = 0.2800$	$y = 0.2000$
$d^3D - f^{(3/2)}_{(1/2)}$	0.6612	$x = 0.5333$	$y = 0.0267$
$d^3D - f^{(3/2)}_{(1/2)}$	0.8816	$x = 0.7500$	$y = 0.0278$
$d^1F - f^{(3/2)}_{(1/2)}$	0.0046	$x = 1.0000$	
$d^1F - f^{(3/2)}_{(1/2)}$	0.0840	$x = 0.9184$	$y = 0.0816$
$d^1F - f^{(3/2)}_{(1/2)}$	0.4000	$x = 0.8929$	$y = 0.1071$
$d^1F - f^{(3/2)}_{(1/2)}$	0.0714	$x = 1.0000$	
$d^1F - f^{(3/2)}_{(1/2)}$	0.0069	$x = 1.0000$	
$d^1F - f^{(3/2)}_{(1/2)}$	0.0617	$x = 0.8333$	$y = 0.1667$
$d^1F - f^{(3/2)}_{(1/2)}$	0.2476	$x = 0.4808$	$y = 0.5192$
$d^1F - f^{(3/2)}_{(1/2)}$	0.5238	$x = 1.0000$	
$d^3F - f^{(3/2)}_{(1/2)}$	0.0137	$x = 0.4444$	$y = 0.0556$
$d^3F - f^{(3/2)}_{(1/2)}$	0.2520	$x = 0.0036$	$y = 0.4312$
$d^3F - f^{(3/2)}_{(1/2)}$	1.2000	$x = 0.0149$	$y = 0.0004$
$d^3F - f^{(3/2)}_{(1/2)}$	0.2143	$x = 0.7333$	$y = 0.0167$
$d^3F - f^{(3/2)}_{(1/2)}$	0.0206	$x = 0.4444$	$y = 0.0556$
$d^3F - f^{(3/2)}_{(1/2)}$	0.1851	$x = 0.2679$	$y = 0.2083$
$d^3F - f^{(3/2)}_{(1/2)}$	0.7429	$x = 0.5128$	$y = 0.0147$
$d^3F - f^{(3/2)}_{(1/2)}$	1.5714	$x = 0.7333$	$y = 0.0167$
$d^1G - f^{(3/2)}_{(1/2)}$	0.0037	$x = 1.0000$	
$d^1G - f^{(3/2)}_{(1/2)}$	0.0735	$x = 0.9722$	$y = 0.0278$
$d^1G - f^{(3/2)}_{(1/2)}$	0.6429	$x = 0.9778$	$y = 0.0222$
$d^1G - f^{(3/2)}_{(1/2)}$	0.0024	$x = 1.0000$	
$d^1G - f^{(3/2)}_{(1/2)}$	0.0299	$x = 0.7955$	$y = 0.2045$
$d^1G - f^{(3/2)}_{(1/2)}$	0.1905	$x = 0.4500$	$y = 0.5500$
$d^1G - f^{(3/2)}_{(1/2)}$	0.8571	$x = 1.0000$	
$d^3G - f^{(3/2)}_{(1/2)}$	0.0110	$x = 0.4167$	$y = 0.0278$
$d^3G - f^{(3/2)}_{(1/2)}$	0.2204	$x = 0.0000$	$y = 0.4051$
$d^3G - f^{(3/2)}_{(1/2)}$	1.9286	$x = 0.0000$	$y = 0.0000$
$d^3G - f^{(3/2)}_{(1/2)}$	0.0073	$x = 0.4167$	$y = 0.0278$
$d^3G - f^{(3/2)}_{(1/2)}$	0.0898	$x = 0.2593$	$y = 0.2121$
$d^3G - f^{(3/2)}_{(1/2)}$	0.5714	$x = 0.5000$	$y = 0.0093$
$d^3G - f^{(3/2)}_{(1/2)}$	2.5714	$x = 0.7222$	$y = 0.0111$

TABLE 10b (CONTINUED)

$d^3D - p^{(2/2)}_{(1/2)}$	0.3500	$x = 0.5000$	$y = 0.1667$
$d^3D - p^{(2/2)}_{(1/2)}$	0.7000	$x = 0.2800$	$y = 0.2000$
$d^3D - p^{(2/2)}_{(1/2)}$	0.1500	$x = 0.5333$	$y = 0.0267$
$d^3D - p^{(2/2)}_{(1/2)}$	0.7000	$x = 0.4978$	$y = 0.2722$
$d^3D - p^{(2/2)}_{(1/2)}$	0.9857	$x = 0.6598$	$y = 0.0330$
$d^3D - p^{(2/2)}_{(1/2)}$	0.1143	$x = 0.7500$	$y = 0.0278$
$d^1F - p^{(2/2)}_{(1/2)}$	0.3360	$x = 1.0000$	
$d^1F - p^{(2/2)}_{(1/2)}$	0.2240	$x = 0.8333$	$y = 0.1667$
$d^1F - p^{(2/2)}_{(1/2)}$	0.0373	$x = 1.0000$	
$d^1F - p^{(2/2)}_{(1/2)}$	0.5360	$x = 0.0249$	$y = 0.9751$
$d^1F - p^{(2/2)}_{(1/2)}$	0.2667	$x = 0.0000$	$y = 1.0000$
$d^3F - p^{(2/2)}_{(1/2)}$	1.0080	$x = 0.4444$	$y = 0.0556$
$d^3F - p^{(2/2)}_{(1/2)}$	0.8720	$x = 0.2679$	$y = 0.2083$
$d^3F - p^{(2/2)}_{(1/2)}$	0.1120	$x = 0.4444$	$y = 0.0556$
$d^3F - p^{(2/2)}_{(1/2)}$	1.6080	$x = 0.6477$	$y = 0.1168$
$d^3F - p^{(2/2)}_{(1/2)}$	0.8000	$x = 0.7031$	$y = 0.0201$
$d^1G - p^{(2/2)}_{(1/2)}$	0.7200	$x = 1.0000$	
$d^1G - p^{(2/2)}_{(1/2)}$	0.0514	$x = 1.0000$	
$d^1G - p^{(2/2)}_{(1/2)}$	1.0286	$x = 0.0000$	$y = 1.0000$
$d^3G - p^{(2/2)}_{(1/2)}$	2.1600	$x = 0.4167$	$y = 0.0278$
$d^3G - p^{(2/2)}_{(1/2)}$	0.1543	$x = 0.4167$	$y = 0.0278$
$d^3G - p^{(2/2)}_{(1/2)}$	3.0857	$x = 0.7130$	$y = 0.0365$

$f^{(2s+1)L} - d^{(J_p)}|K|$

$f^{1P} - d^{(3/2)}_{(1/2)}$	0.1200	$x = 0.3333$	$y = 0.6667$
$f^{1P} - d^{(3/2)}_{(1/2)}$	0.0480	$x = 0.1667$	$y = 0.8333$
$f^{1P} - d^{(3/2)}_{(1/2)}$	0.0034	$x = 1.0000$	
$f^{1P} - d^{(3/2)}_{(1/2)}$	0.1467	$x = 0.1818$	$y = 0.8182$

TABLE 10b (CONTINUED)

$f^1P - d^1(2)1/2$	0.0968	$z = 0.0354$	$y = 0.9646$
$f^1P - d^1(2)1/2$	0.0137	$z = 1.0000$	
$f^3P - d^1(2)1/2$	0.3600	$z = 0.8533$	$y = 0.0556$
$f^3P - d^1(2)1/2$	0.1440	$z = 0.7500$	$y = 0.0383$
$f^3P - d^1(2)1/2$	0.0103	$z = 0.7778$	$y = 0.0556$
$f^3P - d^1(2)1/2$	0.4400	$z = 0.2020$	$y = 0.4848$
$f^3P - d^1(2)1/2$	0.2908	$z = 0.5039$	$y = 0.0560$
$f^3P - d^1(2)1/2$	0.0411	$z = 0.7778$	$y = 0.0556$
$f^1D - d^1(2)1/2$	0.0800	$z = 1.0000$	
$f^1D - d^1(2)1/2$	0.1600	$z = 0.5000$	$y = 0.5000$
$f^1D - d^1(2)1/2$	0.0441	$z = 0.2222$	$y = 0.7778$
$f^1D - d^1(2)1/2$	0.0016	$z = 1.0000$	
$f^1D - d^1(2)1/2$	0.0533	$z = 1.0000$	
$f^1D - d^1(2)1/2$	0.2210	$z = 0.1552$	$y = 0.8448$
$f^1D - d^1(2)1/2$	0.1396	$z = 0.0175$	$y = 0.9825$
$f^1D - d^1(2)1/2$	0.0147	$z = 1.0000$	
$f^3D - d^1(2)1/2$	0.2400	$z = 0.5000$	$y = 0.1667$
$f^3D - d^1(2)1/2$	0.4800	$z = 0.6222$	$y = 0.0278$
$f^3D - d^1(2)1/2$	0.1322	$z = 0.7023$	$y = 0.0351$
$f^3D - d^1(2)1/2$	0.0049	$z = 0.7500$	$y = 0.0278$
$f^3D - d^1(2)1/2$	0.1600	$z = 0.5000$	$y = 0.1667$
$f^3D - d^1(2)1/2$	0.6629	$z = 0.4345$	$y = 0.3103$
$f^3D - d^1(2)1/2$	0.4188	$z = 0.6316$	$y = 0.0316$
$f^3D - d^1(2)1/2$	0.0441	$z = 0.7500$	$y = 0.0278$
$f^1F - d^1(2)1/2$	0.1920	$z = 1.0000$	
$f^1F - d^1(2)1/2$	0.1851	$z = 0.5556$	$y = 0.4444$
$f^1F - d^1(2)1/2$	0.0229	$z = 0.2500$	$y = 0.7500$
$f^1F - d^1(2)1/2$	0.0823	$z = 1.0000$	
$f^1F - d^1(2)1/2$	0.3549	$z = 0.0725$	$y = 0.9275$
$f^1F - d^1(2)1/2$	0.1549	$z = 0.0041$	$y = 0.9959$
$f^1F - d^1(2)1/2$	0.0079	$z = 1.0000$	
$f^3F - d^1(2)1/2$	0.5760	$z = 0.4444$	$y = 0.0556$
$f^3F - d^1(2)1/2$	0.5554	$z = 0.4960$	$y = 0.0840$
$f^3F - d^1(2)1/2$	0.0686	$z = 0.6510$	$y = 0.0186$
$f^3F - d^1(2)1/2$	0.2469	$z = 0.4444$	$y = 0.0556$
$f^3F - d^1(2)1/2$	1.0646	$z = 0.5823$	$y = 0.1630$
$f^3F - d^1(2)1/2$	0.4648	$z = 0.6831$	$y = 0.0195$
$f^3F - d^1(2)1/2$	0.0238	$z = 0.7333$	$y = 0.0167$
$f^1G - d^1(2)1/2$	0.3673	$z = 1.0000$	
$f^1G - d^1(2)1/2$	0.1469	$z = 0.5833$	$y = 0.4167$
$f^1G - d^1(2)1/2$	0.0918	$z = 1.0000$	
$f^1G - d^1(2)1/2$	0.5605	$z = 0.0170$	$y = 0.9830$
$f^1G - d^1(2)1/2$	0.1190	$z = 0.0000$	$y = 1.0000$
$f^3G - d^1(2)1/2$	1.1020	$z = 0.4167$	$y = 0.5556$
$f^3G - d^1(2)1/2$	0.4408	$z = 0.4278$	$y = 0.2101$
$f^3G - d^1(2)1/2$	0.2755	$z = 0.4167$	$y = 0.5556$

TABLE 10b (CONTINUED)

$f^3G - d^1(2)1/2$	1.6816	$z = 0.6700$	$y = 0.0725$
$f^3G - d^1(2)1/2$	0.3571	$z = 0.7040$	$y = 0.0130$
$f^1H - d^1(2)1/2$	0.6286	$z = 1.0000$	
$f^1H - d^1(2)1/2$	0.0698	$z = 1.0000$	
$f^1H - d^1(2)1/2$	0.8730	$z = 0.0000$	$y = 1.0000$
$f^3H - d^1(2)1/2$	1.8857	$z = 0.4000$	$y = 0.5833$
$f^3H - d^1(2)1/2$	0.2095	$z = 0.4000$	$y = 0.5833$
$f^3H - d^1(2)1/2$	2.8190	$z = 0.7091$	$y = 0.0240$
$f^{(2S+1)L - g(J_p)[K]}$	$\sum_{J_p'}^g$		
$f^1P - g^1(2)1/2$	0.1714	$z = 1.0000$	
$f^1P - g^1(2)1/2$	0.1714	$z = 1.0000$	$y = 0.0000$
$f^1P - g^1(2)1/2$	0.0857	$z = 1.0000$	
$f^3P - g^1(2)1/2$	0.5143	$z = 0.7778$	$y = 0.1667$
$f^3P - g^1(2)1/2$	0.5143	$z = 0.1250$	$y = 0.0139$
$f^3P - g^1(2)1/2$	0.2571	$z = 0.7778$	$y = 0.1667$
$f^1D - g^1(2)1/2$	0.1327	$z = 0.6410$	$y = 0.3590$
$f^1D - g^1(2)1/2$	0.1531	$z = 1.0000$	
$f^1D - g^1(2)1/2$	0.0476	$z = 1.0000$	$y = 0.0000$
$f^1D - g^1(2)1/2$	0.1939	$z = 0.8772$	$y = 0.1228$
$f^1D - g^1(2)1/2$	0.1871	$z = 1.0000$	
$f^3D - g^1(2)1/2$	0.3980	$z = 0.1026$	$y = 0.0051$
$f^3D - g^1(2)1/2$	0.4592	$z = 0.7500$	$y = 0.2222$
$f^3D - g^1(2)1/2$	0.1429	$z = 0.0778$	$y = 0.1250$
$f^3D - g^1(2)1/2$	0.5816	$z = 0.2495$	$y = 0.1706$
$f^3D - g^1(2)1/2$	0.5612	$z = 0.7500$	$y = 0.2222$
$f^1F - g^1(2)1/2$	0.0280	$z = 0.8865$	$y = 0.1155$
$f^1F - g^1(2)1/2$	0.2447	$z = 0.8176$	$y = 0.1824$
$f^1F - g^1(2)1/2$	0.1273	$z = 1.0000$	
$f^1F - g^1(2)1/2$	0.0032	$z = 1.0000$	
$f^1F - g^1(2)1/2$	0.0512	$z = 0.9690$	$y = 0.0310$
$f^1F - g^1(2)1/2$	0.2183	$z = 0.7500$	$y = 0.2500$
$f^1F - g^1(2)1/2$	0.3274	$z = 1.0000$	
$f^3F - g^1(2)1/2$	0.0839	$z = 0.0114$	$y = 0.4344$
$f^3F - g^1(2)1/2$	0.7341	$z = 0.0450$	$y = 0.0013$
$f^3F - g^1(2)1/2$	0.3819	$z = 0.7333$	$y = 0.0167$
$f^3F - g^1(2)1/2$	0.0095	$z = 0.4444$	$y = 0.5000$
$f^3F - g^1(2)1/2$	0.1536	$z = 0.1121$	$y = 0.1042$
$f^3F - g^1(2)1/2$	0.6548	$z = 0.3125$	$y = 0.1736$
$f^3F - g^1(2)1/2$	0.9821	$z = 0.7333$	$y = 0.0167$
$f^1G - g^1(2)1/2$	0.0013	$z = 1.0000$	
$f^1G - g^1(2)1/2$	0.0455	$z = 0.9496$	$y = 0.0504$
$f^1G - g^1(2)1/2$	0.3875	$z = 0.9290$	$y = 0.0710$
$f^3G - g^1(2)1/2$	0.0800	$z = 1.0000$	
$f^3G - g^1(2)1/2$	0.0028	$z = 1.0000$	

TABLE 10b (CONTINUED)

$f^1G - g^5(1/2)$	0.0382	$x = 0.9265$	$y = 0.0735$	
$f^1G - g^5(3/2)$	0.2107	$x = 0.6644$	$y = 0.3356$	
$f^1G - g^5(5/2)$	0.5200	$x = 0.0000$		
$f^3G - g^3(1/2)$	0.0038	$x = 0.4167$	$y = 0.0278$	
$f^3G - g^3(3/2)$	0.1365	$x = 0.0026$	$y = 0.4102$	$z = 0.0208$
$f^3G - g^3(5/2)$	1.1625	$x = 0.0103$	$y = 0.0002$	$z = 0.4133$
$f^3G - g^3(7/2)$	0.2400	$x = 0.7222$	$y = 0.0111$	
$f^3G - g^3(9/2)$	0.0077	$x = 0.4167$	$y = 0.0278$	
$f^3G - g^3(11/2)$	0.1145	$x = 0.1342$	$y = 0.0993$	$z = 0.0170$
$f^3G - g^3(13/2)$	0.6321	$x = 0.3471$	$y = 0.0064$	$z = 0.1647$
$f^3G - g^3(15/2)$	1.5600	$x = 0.7222$	$y = 0.0111$	
$f^1H - g^3(1/2)$	0.0012	$x = 1.0000$		
$f^1H - g^3(3/2)$	0.0407	$x = 0.9818$	$y = 0.0182$	
$f^1H - g^3(5/2)$	0.5867	$x = 0.9848$	$y = 0.0152$	
$f^1H - g^3(7/2)$	0.0010	$x = 1.0000$		
$f^1H - g^3(9/2)$	0.0175	$x = 0.8909$	$y = 0.1091$	
$f^1H - g^3(11/2)$	0.1467	$x = 0.6061$	$y = 0.3939$	
$f^1H - g^3(13/2)$	0.7778	$x = 1.0000$		
$f^3H - g^3(1/2)$	0.0035	$x = 0.4000$	$y = 0.0167$	
$f^3H - g^3(3/2)$	0.1222	$x = 0.0000$	$y = 0.3927$	$z = 0.0133$
$f^3H - g^3(5/2)$	1.7600	$x = 0.0000$	$y = 0.0000$	$z = 0.3939$
$f^3H - g^3(7/2)$	0.0029	$x = 0.4000$	$y = 0.0167$	
$f^3H - g^3(9/2)$	0.0524	$x = 0.1492$	$y = 0.2766$	$z = 0.0106$
$f^3H - g^3(11/2)$	0.4400	$x = 0.3683$	$y = 0.0048$	$z = 0.1519$
$f^3H - g^3(13/2)$	2.3533	$x = 0.7143$	$y = 0.0079$	
$g^{(2S+1)L} - f^{(J_p)K}$	$\sum_{J,J'}^6$			
$g^1D - f^3(3/2)$	0.1905	$x = 0.1000$	$y = 0.9000$	
$g^1D - f^3(5/2)$	0.0306	$x = 0.0667$	$y = 0.9333$	
$g^1D - f^3(7/2)$	0.0011	$x = 1.0000$		
$g^1D - f^3(9/2)$	0.1429	$x = 1.0000$		
$g^1D - f^3(11/2)$	0.1429	$x = 0.2000$	$y = 0.8000$	
$g^1D - f^3(13/2)$	0.0442	$x = 0.0308$	$y = 0.9692$	
$g^1D - f^3(15/2)$	0.0034	$x = 1.0000$		
$g^3D - f^3(3/2)$	0.5714	$x = 0.7778$	$y = 0.0222$	$z = 0.0000$
$g^3D - f^3(5/2)$	0.0918	$x = 0.7407$	$y = 0.0370$	$z = 0.0148$
$g^3D - f^3(7/2)$	0.0034	$x = 0.7500$	$y = 0.0278$	
$g^3D - f^3(9/2)$	0.4286	$x = 0.5000$	$y = 0.1667$	
$g^3D - f^3(11/2)$	0.4286	$x = 0.3889$	$y = 0.3361$	$z = 0.0417$
$g^3D - f^3(13/2)$	0.1327	$x = 0.6078$	$y = 0.0304$	$z = 0.1597$
$g^3D - f^3(15/2)$	0.0102	$x = 0.7500$	$y = 0.0278$	
$g^1F - f^3(3/2)$	0.0952	$x = 1.0000$		
$g^1F - f^3(5/2)$	0.8875	$x = 0.2381$	$y = 0.7619$	
$g^1F - f^3(7/2)$	0.0278	$x = 0.1071$	$y = 0.8929$	

TABLE 10b (CONTINUED)

$g^1F - f^3(9/2)$	0.0006	$x = 1.0000$		
$g^1F - f^3(11/2)$	0.1429	$x = 1.0000$		
$g^1F - f^3(13/2)$	0.2440	$x = 0.1220$	$y = 0.8780$	
$g^1F - f^3(15/2)$	0.0754	$x = 0.0132$	$y = 0.9868$	
$g^3F - f^3(1/2)$	0.0044	$x = 1.0000$		
$g^3F - f^3(3/2)$	0.2857	$x = 0.4444$	$y = 0.0556$	
$g^3F - f^3(5/2)$	0.5625	$x = 0.6888$	$y = 0.0066$	$z = 0.0030$
$g^3F - f^3(7/2)$	0.0833	$x = 0.7143$	$y = 0.0204$	$z = 0.0000$
$g^3F - f^3(9/2)$	0.0018	$x = 0.7333$	$y = 0.0167$	
$g^3F - f^3(11/2)$	0.4286	$x = 0.4444$	$y = 0.0556$	
$g^3F - f^3(13/2)$	0.7321	$x = 0.5270$	$y = 0.1991$	$z = 0.0110$
$g^3F - f^3(15/2)$	0.2262	$x = 0.6634$	$y = 0.0190$	$z = 0.0822$
$g^1G - f^3(1/2)$	0.0131	$x = 0.7333$	$y = 0.0167$	
$g^1G - f^3(3/2)$	0.2105	$x = 1.0000$		
$g^1G - f^3(5/2)$	0.1759	$x = 0.3351$	$y = 0.6649$	
$g^1G - f^3(7/2)$	0.0137	$x = 0.1391$	$y = 0.8609$	
$g^1G - f^3(9/2)$	0.1403	$x = 1.0000$		
$g^1G - f^3(11/2)$	0.3704	$x = 0.0530$	$y = 0.9470$	
$g^1G - f^3(13/2)$	0.0867	$x = 0.0030$	$y = 0.9970$	
$g^3G - f^3(1/2)$	0.0026	$x = 1.0000$		
$g^3G - f^3(3/2)$	0.6314	$x = 0.4167$	$y = 0.0278$	
$g^3G - f^3(5/2)$	0.5276	$x = 0.5946$	$y = 0.0397$	$z = 0.0039$
$g^3G - f^3(7/2)$	0.0411	$x = 0.6817$	$y = 0.0426$	$z = 0.0052$
$g^3G - f^3(9/2)$	0.4209	$x = 0.4167$	$y = 0.0278$	
$g^3G - f^3(11/2)$	1.1112	$x = 0.6222$	$y = 0.1069$	$z = 0.0032$
$g^3G - f^3(13/2)$	0.2601	$x = 0.6903$	$y = 0.0128$	$z = 0.0420$
$g^3G - f^3(15/2)$	0.0078	$x = 0.7222$	$y = 0.0111$	
$g^1H - f^3(1/2)$	0.3667	$x = 1.0000$		
$g^1H - f^3(3/2)$	0.1222	$x = 0.4000$	$y = 0.6000$	
$g^1H - f^3(5/2)$	0.1222	$x = 1.0000$		
$g^1H - f^3(7/2)$	0.5444	$x = 0.0122$	$y = 0.9878$	
$g^3H - f^3(1/2)$	0.0667	$x = 0.0000$	$y = 1.0000$	
$g^3H - f^3(3/2)$	1.1000	$x = 0.4000$	$y = 0.0167$	
$g^3H - f^3(5/2)$	0.3667	$x = 0.5253$	$y = 0.0711$	$z = 0.0036$
$g^3H - f^3(7/2)$	0.3667	$x = 0.4000$	$y = 0.0167$	
$g^3H - f^3(9/2)$	1.6333	$x = 0.6793$	$y = 0.0491$	$z = 0.0008$
$g^3H - f^3(11/2)$	0.2000	$x = 0.7022$	$y = 0.0091$	$z = 0.0201$
$g^1J - f^3(3/2)$	0.5778	$x = 1.0000$		
$g^1J - f^3(5/2)$	0.0788	$x = 1.0000$		
$g^3J - f^3(3/2)$	0.7879	$x = 0.0000$	$y = 1.0000$	
$g^3J - f^3(5/2)$	1.7333	$x = 0.3889$	$y = 0.0111$	
$g^3J - f^3(7/2)$	0.2364	$x = 0.3889$	$y = 0.0111$	
$g^3J - f^3(9/2)$	2.3636	$x = 0.7051$	$y = 0.0170$	$z = 0.0001$

TABLE 10c

TRANSITIONS BETWEEN LS AND jJ STATES. PARENT TERM: 2D

$s(2S+1)L - p(J_p, j)$	$\sum_{j', j''} s$	x	y	z
$s^1D - p(\frac{3}{2}, \frac{1}{2})$	0.6667	$x = 0.5000$	$y = 0.5000$	$z = 0.0000$
$s^1D - p(\frac{3}{2}, \frac{3}{2})$	1.3333	$x = 0.7000$	$y = 0.2500$	$z = 0.0500$
$s^1D - p(\frac{5}{2}, \frac{1}{2})$	1.0000	$x = 0.7778$	$y = 0.2222$	$z = 0.0000$
$s^1D - p(\frac{5}{2}, \frac{3}{2})$	2.0000	$x = 0.3111$	$y = 0.3889$	$z = 0.3000$
$s^3D - p(\frac{3}{2}, \frac{1}{2})$	2.0000	$x = 0.0000$	$y = 0.2500$	$z = 0.4167$
$s^3D - p(\frac{3}{2}, \frac{3}{2})$	4.0000	$x = 0.0000$	$y = 0.0000$	$z = 0.0833$
$s^3D - p(\frac{5}{2}, \frac{1}{2})$	3.0000	$x = 0.3457$	$y = 0.0494$	$z = 0.4321$
$s^3D - p(\frac{5}{2}, \frac{3}{2})$	6.0000	$x = 0.5000$	$y = 0.0691$	$z = 0.2160$
$s^3D - p(\frac{7}{2}, \frac{1}{2})$		$z = 0.0617$	0.0667	
$p(2S+1)L - s(J_p, j)$	$\sum_{j', j''} s$	x	y	z
$p^1P - s(\frac{3}{2}, \frac{1}{2})$	0.4000	$x = 1.0000$	$y = 0.0000$	$z = 0.0000$
$p^1P - s(\frac{3}{2}, \frac{3}{2})$	0.8000	$x = 1.0000$	$y = 0.0000$	$z = 0.0000$
$p^3P - s(\frac{3}{2}, \frac{1}{2})$	1.2000	$x = 0.1250$	$y = 0.2083$	$z = 0.0159$
$p^3P - s(\frac{3}{2}, \frac{3}{2})$	1.8000	$x = 0.7778$	$y = 0.1667$	$z = 0.0556$
$p^1D - s(\frac{3}{2}, \frac{1}{2})$	0.6667	$x = 1.0000$	$y = 0.0000$	$z = 0.0000$
$p^1D - s(\frac{3}{2}, \frac{3}{2})$	1.0000	$x = 0.0000$	$y = 1.0000$	$z = 0.0000$
$p^3D - s(\frac{3}{2}, \frac{1}{2})$	2.0000	$x = 0.0778$	$y = 0.1250$	$z = 0.5472$
$p^3D - s(\frac{3}{2}, \frac{3}{2})$	3.0000	$x = 0.6914$	$y = 0.1543$	$z = 0.0346$
$p^1F - s(\frac{3}{2}, \frac{1}{2})$	0.9333	$x = 1.0000$	$y = 0.0000$	$z = 0.0000$
$p^1F - s(\frac{3}{2}, \frac{3}{2})$	1.4000	$x = 0.0000$	$y = 1.0000$	$z = 0.0000$
$p^3F - s(\frac{3}{2}, \frac{1}{2})$	2.8000	$x = 0.4444$	$y = 0.5000$	$z = 0.0556$
$p^3F - s(\frac{3}{2}, \frac{3}{2})$	4.2000	$x = 0.7143$	$y = 0.1975$	$z = 0.0617$
$p(2S+1)L - d(J_p, j)$	$\sum_{j', j''} s$	x	y	z
$p^1P - d(\frac{3}{2}, \frac{3}{2})$	0.3400	$x = 0.2882$	$y = 0.4765$	$z = 0.2353$
$p^1P - d(\frac{3}{2}, \frac{1}{2})$	0.0600	$x = 0.7000$	$y = 0.3000$	$z = 0.0000$
$p^1P - d(\frac{5}{2}, \frac{3}{2})$	0.0600	$x = 0.7000$	$y = 0.3000$	$z = 0.0000$
$p^1P - d(\frac{5}{2}, \frac{1}{2})$	0.5400	$x = 0.3111$	$y = 0.4667$	$z = 0.2222$
$p^3P - d(\frac{3}{2}, \frac{3}{2})$	0.3000	$x = 0.0280$	$y = 0.0300$	$z = 0.0900$
$p^3P - d(\frac{3}{2}, \frac{1}{2})$		$z = 0.0376$	0.3000	
$p^3P - d(\frac{5}{2}, \frac{3}{2})$	0.9000	$x = 0.0996$	$y = 0.3733$	$z = 0.0311$
$p^3P - d(\frac{5}{2}, \frac{1}{2})$	0.9000	$x = 0.0996$	$y = 0.0233$	$z = 0.3811$
$p^3P - d(\frac{7}{2}, \frac{3}{2})$	0.9000	$x = 0.3360$	$y = 0.0933$	$z = 0.2800$
$p^1D - d(\frac{3}{2}, \frac{3}{2})$	0.3667	$x = 0.4073$	$y = 0.4455$	$z = 0.1473$
$p^1D - d(\frac{3}{2}, \frac{1}{2})$	0.3000	$x = 0.7467$	$y = 0.2333$	$z = 0.0200$
$p^1D - d(\frac{5}{2}, \frac{3}{2})$	0.3000	$x = 0.7467$	$y = 0.2333$	$z = 0.0200$

TABLE 10c (CONTINUED)

$s(2S+1)L - p(J_p, j)$	$\sum_{j', j''} s$	x	y	z
$p^1D - d(\frac{5}{2}, \frac{5}{2})$	0.7000	$x = 0.4800$	$y = 0.4000$	$z = 0.1200$
$p^3D - d(\frac{3}{2}, \frac{3}{2})$	0.7000	$x = 0.0178$	$y = 0.1341$	$z = 0.0044$
$p^3D - d(\frac{3}{2}, \frac{1}{2})$		$z = 0.0022$	0.5186	
$p^3D - d(\frac{5}{2}, \frac{5}{2})$	1.3000	$x = 0.0923$	$y = 0.4595$	$z = 0.0144$
$p^3D - d(\frac{5}{2}, \frac{3}{2})$	1.3000	$x = 0.0923$	$y = 0.2042$	$z = 0.2696$
$p^3D - d(\frac{5}{2}, \frac{1}{2})$		$z = 0.1646$	0.0931	
$p^3D - d(\frac{7}{2}, \frac{5}{2})$	1.7000	$x = 0.5647$	$y = 0.0329$	$z = 0.2635$
$p^3D - d(\frac{7}{2}, \frac{3}{2})$		$z = 0.0502$	0.0082	0.0118
$p^1F - d(\frac{3}{2}, \frac{3}{2})$	0.0933	$x = 0.8000$	$y = 0.2000$	$z = 0.0000$
$p^1F - d(\frac{3}{2}, \frac{1}{2})$	0.8400	$x = 0.8571$	$y = 0.1333$	$z = 0.0095$
$p^1F - d(\frac{5}{2}, \frac{3}{2})$	0.8400	$x = 0.8571$	$y = 0.1333$	$z = 0.0095$
$p^1F - d(\frac{5}{2}, \frac{1}{2})$	0.5600	$x = 0.6429$	$y = 0.3000$	$z = 0.0571$
$p^3F - d(\frac{3}{2}, \frac{3}{2})$	1.4000	$x = 0.0000$	$y = 0.0178$	$z = 0.0711$
$p^3F - d(\frac{3}{2}, \frac{1}{2})$		$z = 0.7529$		
$p^3F - d(\frac{5}{2}, \frac{3}{2})$	1.4000	$x = 0.0000$	$y = 0.1067$	$z = 0.0000$
$p^3F - d(\frac{5}{2}, \frac{1}{2})$		$z = 0.8657$	0.1493	
$p^3F - d(\frac{7}{2}, \frac{3}{2})$	1.4000	$x = 0.1607$	$y = 0.1780$	$z = 0.0536$
$p^3F - d(\frac{7}{2}, \frac{1}{2})$		$z = 0.5250$	0.0245	
$p^3F - d(\frac{9}{2}, \frac{5}{2})$	2.8000	$x = 0.7857$	$y = 0.0107$	$z = 0.1607$
$p^3F - d(\frac{9}{2}, \frac{3}{2})$		$z = 0.0179$	0.0010	0.0023
$d(2S+1)L - p(J_p, j)$	$\sum_{j', j''} s$	x	y	z
$d^1S - p(\frac{3}{2}, \frac{1}{2})$	0.0667	$x = 1.0000$	$y = 0.0000$	$z = 0.0000$
$d^1S - p(\frac{3}{2}, \frac{3}{2})$	0.0133	$x = 1.0000$	$y = 0.0000$	$z = 0.0000$
$d^1S - p(\frac{5}{2}, \frac{3}{2})$	0.1200	$x = 1.0000$	$y = 0.0000$	$z = 0.0000$
$d^3S - p(\frac{3}{2}, \frac{3}{2})$	0.0400	$x = 0.1667$	$y = 0.8333$	$z = 0.0000$
$d^3S - p(\frac{3}{2}, \frac{1}{2})$	0.2000	$x = 0.1333$	$y = 0.5333$	$z = 0.3333$
$d^3S - p(\frac{5}{2}, \frac{3}{2})$	0.1600	$x = 1.0000$	$y = 0.0000$	$z = 0.0000$
$d^3S - p(\frac{5}{2}, \frac{1}{2})$	0.2000	$x = 0.7000$	$y = 0.3000$	$z = 0.0000$
$d^1P - p(\frac{3}{2}, \frac{3}{2})$	0.1800	$x = 0.1667$	$y = 0.8333$	$z = 0.0000$
$d^1P - p(\frac{3}{2}, \frac{1}{2})$	0.0600	$x = 0.5000$	$y = 0.5000$	$z = 0.0000$
$d^1P - p(\frac{5}{2}, \frac{3}{2})$	0.0200	$x = 1.0000$	$y = 0.0000$	$z = 0.0000$
$d^1P - p(\frac{5}{2}, \frac{1}{2})$	0.3400	$x = 0.2059$	$y = 0.7941$	$z = 0.0000$
$d^3P - p(\frac{3}{2}, \frac{3}{2})$	0.1400	$x = 0.1429$	$y = 0.0000$	$z = 0.1429$
$d^3P - p(\frac{3}{2}, \frac{1}{2})$	0.5800	$x = 0.0241$	$y = 0.0259$	$z = 0.2155$
$d^3P - p(\frac{5}{2}, \frac{3}{2})$		$z = 0.2086$	0.2586	
$d^3P - p(\frac{5}{2}, \frac{1}{2})$	0.4600	$x = 0.1014$	$y = 0.5435$	$z = 0.3551$
$d^3P - p(\frac{7}{2}, \frac{3}{2})$	0.6200	$x = 0.2409$	$y = 0.0565$	$z = 0.4704$
$d^3P - p(\frac{7}{2}, \frac{1}{2})$		$z = 0.0790$		
$d^1D - p(\frac{3}{2}, \frac{3}{2})$	0.2333	$x = 0.5000$	$y = 0.5000$	$z = 0.0000$
$d^1D - p(\frac{3}{2}, \frac{1}{2})$	0.1667	$x = 0.1600$	$y = 0.7000$	$z = 0.1400$
$d^1D - p(\frac{5}{2}, \frac{3}{2})$	0.1000	$x = 0.2222$	$y = 0.7778$	$z = 0.0000$
$d^1D - p(\frac{5}{2}, \frac{1}{2})$	0.5000	$x = 0.0356$	$y = 0.5444$	$z = 0.4200$
$d^3D - p(\frac{3}{2}, \frac{3}{2})$	0.3000	$x = 0.0667$	$y = 0.0000$	$z = 0.1556$

TABLE 10c (CONTINUED)

$d^3D - p \left(\frac{3}{2}, \frac{3}{2}\right)$	0.9000	$x = 0.0889$	$y = 0.1944$	$z = 0.0130$	$y = 0.2000$	$z = 0.3500$	0.1296
		$z = 0.0111$	0.0130				
$d^3D - p \left(\frac{5}{2}, \frac{1}{2}\right)$	0.7000	$x = 0.1693$	$y = 0.4630$	$z = 0.1354$	$z = 0.1323$	0.1000	
$d^3D - p \left(\frac{5}{2}, \frac{3}{2}\right)$	1.1000	$x = 0.0779$	$y = 0.0431$	$z = 0.0045$	$y = 0.4862$	0.0008	0.0955
		$z = 0.2601$	0.0318				
$d^1F - p \left(\frac{3}{2}, \frac{1}{2}\right)$	0.1867	$x = 1.0000$					
$d^1F - p \left(\frac{3}{2}, \frac{3}{2}\right)$	0.3733	$x = 0.5000$	$y = 0.5000$				
$d^1F - p \left(\frac{5}{2}, \frac{1}{2}\right)$	0.2800	$x = 0.5556$	$y = 0.4444$				
$d^1F - p \left(\frac{5}{2}, \frac{3}{2}\right)$	0.5600	$x = 0.0000$	$y = 0.2222$	$z = 0.7778$			
$d^3F - p \left(\frac{3}{2}, \frac{1}{2}\right)$	0.5600	$x = 0.0000$	$y = 0.5000$				
$d^3F - p \left(\frac{3}{2}, \frac{3}{2}\right)$	1.1200	$x = 0.1607$	$y = 0.5000$	$z = 0.1250$	0.0000		
		$z = 0.0143$					
$d^3F - p \left(\frac{5}{2}, \frac{1}{2}\right)$	0.8400	$x = 0.1786$	$y = 0.3086$	$z = 0.8858$	0.0988	$z = 0.0282$	
$d^3F - p \left(\frac{5}{2}, \frac{3}{2}\right)$	1.6800	$x = 0.3348$	$y = 0.0189$	$z = 0.0220$	$y = 0.5402$	0.0282	0.0333
		$z = 0.0223$	0.0002				
$d^1G - p \left(\frac{3}{2}, \frac{1}{2}\right)$	0.7200	$x = 1.0000$					
$d^1G - p \left(\frac{3}{2}, \frac{3}{2}\right)$	0.6000	$x = 1.0000$					
$d^1G - p \left(\frac{5}{2}, \frac{1}{2}\right)$	0.4800	$x = 0.0000$	$y = 1.0000$				
$d^3G - p \left(\frac{3}{2}, \frac{1}{2}\right)$	0.9600	$x = 1.0000$					
$d^3G - p \left(\frac{3}{2}, \frac{3}{2}\right)$	1.2000	$x = 0.7500$	$z = 0.2000$	$y = 0.0500$			
$d^3G - p \left(\frac{5}{2}, \frac{1}{2}\right)$	0.8400	$x = 0.8929$	$y = 0.0476$	$z = 0.0595$			
$d^3G - p \left(\frac{5}{2}, \frac{3}{2}\right)$	2.4000	$x = 0.9167$	$y = 0.0158$	$z = 0.0190$	$y = 0.0469$	0.0010	
		$z = 0.0007$					

$d^{(2S+1)L} - f(J_p, i)$

$d^1S - f \left(\frac{3}{2}, \frac{1}{2}\right)$	$\sum_{J_p, i}^s$	0.0800	$x = 1.0000$				
$d^1S - f \left(\frac{3}{2}, \frac{3}{2}\right)$		0.0057	$x = 1.0000$				
$d^1S - f \left(\frac{5}{2}, \frac{1}{2}\right)$		0.1143	$x = 1.0000$				
$d^3S - f \left(\frac{3}{2}, \frac{1}{2}\right)$		0.0571	$x = 0.3000$	$y = 0.7000$			
$d^3S - f \left(\frac{3}{2}, \frac{3}{2}\right)$		0.1829	$x = 1.0000$				
$d^3S - f \left(\frac{5}{2}, \frac{1}{2}\right)$		0.2000	$x = 0.1524$	$y = 0.5143$	$z = 0.3333$		
$d^3S - f \left(\frac{5}{2}, \frac{3}{2}\right)$		0.1600	$x = 0.6429$	$y = 0.3571$			
$d^1P - f \left(\frac{3}{2}, \frac{1}{2}\right)$		0.2171	$x = 0.6316$	$y = 0.3684$			
$d^1P - f \left(\frac{3}{2}, \frac{3}{2}\right)$		0.0229	$x = 1.0000$				
$d^1P - f \left(\frac{5}{2}, \frac{1}{2}\right)$		0.0400	$x = 0.8571$	$y = 0.1429$	$z = 0.0000$		
$d^1P - f \left(\frac{5}{2}, \frac{3}{2}\right)$		0.3200	$x = 0.6429$	$y = 0.3571$			
$d^3P - f \left(\frac{3}{2}, \frac{1}{2}\right)$		0.1943	$x = 0.0941$	$z = 0.0221$	$y = 0.1838$	0.0515	
		$z = 0.0309$					
$d^3P - f \left(\frac{3}{2}, \frac{3}{2}\right)$		0.5257	$x = 0.3913$	$y = 0.5435$	$z = 0.0652$		
$d^3P - f \left(\frac{5}{2}, \frac{1}{2}\right)$		0.5771	$x = 0.1069$	$y = 0.1617$	$z = 0.2475$	0.2426	
		$z = 0.1191$	0.1155				
$d^3P - f \left(\frac{5}{2}, \frac{3}{2}\right)$		0.5029	$x = 0.5455$	$z = 0.0000$	$y = 0.2727$	0.0000	
		$z = 0.0808$					
$d^1D - f \left(\frac{3}{2}, \frac{1}{2}\right)$		0.2857	$x = 0.6171$	$y = 0.3429$	$z = 0.0400$		
$d^1D - f \left(\frac{3}{2}, \frac{3}{2}\right)$		0.1143	$x = 0.8571$	$y = 0.1429$			

TABLE 10c (CONTINUED)

$d^1D - f \left(\frac{5}{2}, \frac{1}{2}\right)$	0.1429	$x = 0.8229$	$y = 0.1714$	$z = 0.0057$			
$d^1D - f \left(\frac{5}{2}, \frac{3}{2}\right)$	0.4571	$x = 0.6429$	$y = 0.3214$	$z = 0.0357$			
$d^3D - f \left(\frac{3}{2}, \frac{1}{2}\right)$	0.4000	$x = 0.2822$	$y = 0.0145$	$z = 0.6750$	$y = 0.0549$	0.0343	0.1750
		$z = 0.0094$	0.0107				
$d^3D - f \left(\frac{3}{2}, \frac{3}{2}\right)$	0.8000	$x = 0.2624$	$y = 0.5102$	$z = 0.1000$	$y = 0.0408$	0.0850	
		$z = 0.0016$					
$d^3D - f \left(\frac{5}{2}, \frac{1}{2}\right)$	0.8857	$x = 0.0948$	$y = 0.2710$	$z = 0.0519$	$y = 0.1770$	0.2258	0.0373
		$z = 0.0637$	0.0677	0.0108			
$d^3D - f \left(\frac{5}{2}, \frac{3}{2}\right)$	0.9143	$x = 0.6314$	$z = 0.0000$	0.0643	$y = 0.2411$	0.0000	0.0357
		$z = 0.0276$	0.0000				
$d^1F - f \left(\frac{3}{2}, \frac{1}{2}\right)$	0.2400	$x = 0.6378$	$y = 0.3214$	$z = 0.0408$			
$d^1F - f \left(\frac{3}{2}, \frac{3}{2}\right)$	0.3200	$x = 0.8610$	$y = 0.1339$	$z = 0.0051$			
$d^1F - f \left(\frac{5}{2}, \frac{1}{2}\right)$	0.3600	$x = 0.8503$	$y = 0.1429$	$z = 0.0068$			
$d^1F - f \left(\frac{5}{2}, \frac{3}{2}\right)$	0.4800	$x = 0.7015$	$y = 0.2679$	$z = 0.0306$			
$d^3F - f \left(\frac{3}{2}, \frac{1}{2}\right)$	0.7200	$x = 0.0106$	$z = 0.0819$	0.1575	$y = 0.0013$	0.0081	0.0095
		$z = 0.0064$	0.7748				
$d^3F - f \left(\frac{3}{2}, \frac{3}{2}\right)$	0.9600	$x = 0.1637$	$y = 0.5979$	$z = 0.1088$	$y = 0.0143$	0.0930	0.0181
		$z = 0.0005$	0.0055				
$d^3F - f \left(\frac{5}{2}, \frac{1}{2}\right)$	1.0800	$x = 0.0693$	$z = 0.4167$	0.0766	$y = 0.1276$	0.1944	0.0378
		$z = 0.0333$	0.0370	0.0073			
$d^3F - f \left(\frac{5}{2}, \frac{3}{2}\right)$	1.4400	$x = 0.7483$	$z = 0.0000$	0.0306	$y = 0.1871$	0.0000	0.0153
		$z = 0.0170$	0.0000	0.0017			
$d^1G - f \left(\frac{3}{2}, \frac{1}{2}\right)$	0.0343	$x = 0.8929$	$y = 0.1071$				
$d^1G - f \left(\frac{3}{2}, \frac{3}{2}\right)$	0.6857	$x = 0.9167$	$y = 0.0804$	$z = 0.0030$			
$d^1G - f \left(\frac{5}{2}, \frac{1}{2}\right)$	0.7371	$x = 0.9136$	$y = 0.0831$	$z = 0.0033$			
$d^1G - f \left(\frac{5}{2}, \frac{3}{2}\right)$	0.3429	$x = 0.7857$	$y = 0.1964$	$z = 0.0179$			
$d^3G - f \left(\frac{3}{2}, \frac{1}{2}\right)$	1.2000	$x = 0.0000$	$z = 0.0038$	0.0047	$y = 0.0319$	0.0921	
		$z = 0.8675$					
$d^3G - f \left(\frac{3}{2}, \frac{3}{2}\right)$	0.9600	$x = 0.0000$	$z = 0.0717$	0.0143	$y = 0.0000$	0.0027	0.0005
		$z = 0.8185$	0.0922				
$d^3G - f \left(\frac{5}{2}, \frac{1}{2}\right)$	1.1143	$x = 0.0806$	$z = 0.1346$	0.0222	$y = 0.0134$	0.0150	0.0028
		$z = 0.6581$	0.0733				
$d^3G - f \left(\frac{5}{2}, \frac{3}{2}\right)$	2.1257	$x = 0.8737$	$z = 0.0000$	0.0101	$y = 0.1056$	0.0000	0.0038
		$z = 0.0064$	0.0000	0.0004			
$f^{(2S+1)L} - d(J_p, i)$	$\sum_{J_p, i}^s$						
$f^1P - d \left(\frac{3}{2}, \frac{1}{2}\right)$		0.1600	$x = 0.0500$	$y = 0.4500$	$z = 0.5000$		
$f^1P - d \left(\frac{3}{2}, \frac{3}{2}\right)$		0.0114	$x = 0.3000$	$y = 0.7000$			
$f^1P - d \left(\frac{5}{2}, \frac{1}{2}\right)$		0.0114	$x = 0.3000$	$y = 0.7000$			
$f^1P - d \left(\frac{5}{2}, \frac{3}{2}\right)$		0.2457	$x = 0.0558$	$y = 0.4558$	$z = 0.4884$		
$f^3P - d \left(\frac{3}{2}, \frac{1}{2}\right)$		0.1143	$x = 0.0060$	$z = 0.0350$	0.0000	$y = 0.1050$	0.3150
		$z = 0.1890$	0.3500				
$f^3P - d \left(\frac{3}{2}, \frac{3}{2}\right)$		0.4000	$x = 0.0183$	$z = 0.0043$	0.0000	$y = 0.2414$	0.0100
		$z = 0.7260$					
$f^3P - d \left(\frac{5}{2}, \frac{1}{2}\right)$		0.4000	$x = 0.0183$	$z = 0.1543$	0.3333	$y = 0.0914$	0.3600
		$z = 0.0427$					

TABLE 10c (CONTINUED)

$f^3P - d(\frac{5}{2}, \frac{5}{2})$	0.3714	$x = 0.0665$	$y = 0.1005$	$z = 0.0256$	$y = 0.3015$	0.1969
		$z = 0.2371$	0.0718			
$f^1D - d(\frac{3}{2}, \frac{3}{2})$	0.2286	$x = 0.0200$	$y = 0.3500$	$z = 0.6300$		
$f^1D - d(\frac{3}{2}, \frac{3}{2})$	0.0571	$x = 0.1200$	$y = 0.6000$	$z = 0.2800$		
$f^1D - d(\frac{3}{2}, \frac{3}{2})$	0.0571	$x = 0.1200$	$y = 0.6000$	$z = 0.2800$		
$f^1D - d(\frac{3}{2}, \frac{3}{2})$	0.3714	$x = 0.0277$	$y = 0.3692$	$z = 0.6031$		
$f^3D - d(\frac{3}{2}, \frac{3}{2})$	0.2286	$x = 0.0267$	$y = 0.0583$	$z = 0.3150$	$y = 0.1067$	0.1050 0.3500
		$z = 0.0033$	0.0350			
$f^3D - d(\frac{3}{2}, \frac{5}{2})$	0.6286	$x = 0.0058$	$y = 0.0008$	$z = 0.0055$	$y = 0.1383$	0.0495 0.0127
		$z = 0.4438$	0.3436			
$f^3D - d(\frac{5}{2}, \frac{3}{2})$	0.6286	$x = 0.0058$	$y = 0.0655$	$z = 0.0873$	$y = 0.0736$	0.3273 0.2036
		$z = 0.0842$	0.1527			
$f^3D - d(\frac{5}{2}, \frac{5}{2})$	0.6571	$x = 0.0447$	$y = 0.0417$	$z = 0.0006$	$y = 0.3339$	0.0783 0.0313
		$z = 0.3779$	0.0104 0.0812			
$f^1F - d(\frac{3}{2}, \frac{3}{2})$	0.2400	$x = 0.2000$	$y = 0.8000$			
$f^1F - d(\frac{3}{2}, \frac{5}{2})$	0.1600	$x = 0.0357$	$y = 0.4500$	$z = 0.5143$		
$f^1F - d(\frac{3}{2}, \frac{5}{2})$	0.1600	$x = 0.0357$	$y = 0.4500$	$z = 0.5143$		
$f^1F - d(\frac{3}{2}, \frac{5}{2})$	0.4400	$x = 0.0065$	$y = 0.2455$	$z = 0.7481$		
$f^3F - d(\frac{3}{2}, \frac{3}{2})$	0.4000	$x = 0.0057$	$y = 0.0400$	$z = 0.5760$	$y = 0.0100$	0.3200
		$z = 0.0183$				
$f^3F - d(\frac{3}{2}, \frac{5}{2})$	0.8000	$x = 0.0558$	$y = 0.0752$	$z = 0.0019$	$y = 0.3281$	0.4610 0.0720
		$z = 0.0013$	0.0047			
$f^3F - d(\frac{5}{2}, \frac{3}{2})$	0.8000	$x = 0.0357$	$y = 0.2700$	$z = 0.1543$	$y = 0.1071$	0.3086 0.0720
		$z = 0.0214$	0.0309			
$f^3F - d(\frac{5}{2}, \frac{5}{2})$	1.0000	$x = 0.0175$	$y = 0.0193$	$z = 0.0005$	$y = 0.2893$	0.0490 0.0137
		$z = 0.5433$	0.0017 0.0658			
$f^1G - d(\frac{3}{2}, \frac{3}{2})$	0.1714	$x = 1.0000$				
$f^1G - d(\frac{3}{2}, \frac{5}{2})$	0.3429	$x = 0.2500$	$y = 0.7500$			
$f^1G - d(\frac{3}{2}, \frac{5}{2})$	0.3429	$x = 0.2500$	$y = 0.7500$			
$f^1G - d(\frac{3}{2}, \frac{5}{2})$	0.4286	$x = 0.0000$	$y = 0.1000$	$z = 0.9000$		
$f^3G - d(\frac{3}{2}, \frac{3}{2})$	0.6514	$x = 0.0132$	$y = 0.7895$	$z = 0.1974$		
$f^3G - d(\frac{3}{2}, \frac{5}{2})$	0.8914	$x = 0.2115$	$y = 0.8094$	$z = 0.1099$	$y = 0.0589$	0.0060
		$z = 0.0043$				
$f^3G - d(\frac{5}{2}, \frac{3}{2})$	0.8914	$x = 0.0940$	$y = 0.5192$	$z = 0.1099$	$y = 0.1731$	0.0962
		$z = 0.0076$				
$f^3G - d(\frac{5}{2}, \frac{5}{2})$	1.4229	$x = 0.1767$	$y = 0.0377$	$z = 0.0025$	$y = 0.7363$	0.0002 0.0387
		$z = 0.0074$	0.0006			
$f^1H - d(\frac{3}{2}, \frac{5}{2})$	0.6286	$x = 1.0000$				
$f^1H - d(\frac{5}{2}, \frac{3}{2})$	0.6286	$x = 1.0000$				
$f^1H - d(\frac{5}{2}, \frac{5}{2})$	0.3143	$x = 0.0000$	$y = 1.0000$			
$f^3H - d(\frac{3}{2}, \frac{3}{2})$	1.0057	$x = 1.0000$				
$f^3H - d(\frac{3}{2}, \frac{5}{2})$	0.8800	$x = 0.8571$	$z = 0.1071$	$y = 0.0357$		
$f^3H - d(\frac{3}{2}, \frac{5}{2})$	0.8800	$x = 0.8571$	$z = 0.1071$	$y = 0.0357$		
$f^3H - d(\frac{5}{2}, \frac{3}{2})$	1.9486	$x = 0.9531$	$z = 0.0000$	$y = 0.0143$	$y = 0.0323$	0.0000
		$z = 0.0003$				

TABLE 10c (CONTINUED)

$f^{(2s+1)L} - g(J_{P,i})$	$\sum_{J_i}^s$					
$f^1P - g(\frac{3}{2}, \frac{7}{2})$	0.1714	$x = 1.0000$				
$f^1P - g(\frac{5}{2}, \frac{7}{2})$	0.0190	$x = 1.0000$	$y = 0.0000$			
$f^1P - g(\frac{7}{2}, \frac{7}{2})$	0.2381	$x = 1.0000$				
$f^3P - g(\frac{3}{2}, \frac{7}{2})$	0.1333	$x = 0.1429$	$y = 0.6429$	$z = 0.2143$		
$f^3P - g(\frac{5}{2}, \frac{7}{2})$	0.3810	$x = 1.0000$				
$f^3P - g(\frac{7}{2}, \frac{7}{2})$	0.4381	$x = 0.0580$	$y = 0.2663$	$z = 0.3261$	$y = 0.0888$	0.2446
		$z = 0.0163$				
$f^3P - g(\frac{5}{2}, \frac{9}{2})$	0.3333	$x = 0.5238$	$z = 0.3571$	$y = 0.1190$		
$f^1D - g(\frac{3}{2}, \frac{7}{2})$	0.2460	$x = 0.8065$	$y = 0.1935$			
$f^1D - g(\frac{5}{2}, \frac{7}{2})$	0.0397	$x = 1.0000$				
$f^1D - g(\frac{7}{2}, \frac{7}{2})$	0.0714	$x = 0.9259$	$y = 0.0741$	$z = 0.0000$		
$f^1D - g(\frac{5}{2}, \frac{9}{2})$	0.3571	$x = 0.8148$	$y = 0.1852$			
$f^3D - g(\frac{3}{2}, \frac{7}{2})$	0.2619	$x = 0.0849$	$z = 0.1818$	$y = 0.0909$	0.0000	
		$z = 0.0078$				
$f^3D - g(\frac{5}{2}, \frac{9}{2})$	0.5952	$x = 0.5500$	$z = 0.4000$	$y = 0.0500$		
$f^3D - g(\frac{7}{2}, \frac{9}{2})$	0.6905	$x = 0.0677$	$z = 0.3091$	$y = 0.2086$	$y = 0.0923$	0.1996 0.0776
		$z = 0.0193$	0.0259			
$f^3D - g(\frac{5}{2}, \frac{9}{2})$	0.5952	$x = 0.6286$	$z = 0.0815$	$y = 0.1000$	$y = 0.1630$	0.0185
		$z = 0.0085$				
$f^1F - g(\frac{3}{2}, \frac{7}{2})$	0.2611	$x = 0.7662$	$y = 0.2216$	$z = 0.0122$		
$f^1F - g(\frac{5}{2}, \frac{7}{2})$	0.1389	$x = 0.9167$	$y = 0.0833$			
$f^1F - g(\frac{7}{2}, \frac{7}{2})$	0.1833	$x = 0.8929$	$y = 0.1052$	$z = 0.0019$		
$f^1F - g(\frac{5}{2}, \frac{9}{2})$	0.4167	$x = 0.7857$	$y = 0.2037$	$z = 0.0106$		
$f^3F - g(\frac{3}{2}, \frac{7}{2})$	0.4500	$x = 0.0189$	$z = 0.0689$	$y = 0.7778$	$y = 0.0310$	0.0039 0.0952
		$z = 0.0030$	0.0013			
$f^3F - g(\frac{5}{2}, \frac{9}{2})$	0.7500	$x = 0.3621$	$z = 0.5093$	$y = 0.0476$	$y = 0.0340$	0.0463
		$z = 0.0007$				
$f^3F - g(\frac{7}{2}, \frac{7}{2})$	0.8633	$x = 0.0659$	$z = 0.3861$	$y = 0.1822$	$y = 0.0834$	0.1748 0.0640
		$z = 0.0158$	0.0225 0.0054			
$f^3F - g(\frac{5}{2}, \frac{9}{2})$	0.9167	$x = 0.7222$	$z = 0.0298$	$y = 0.0564$	$y = 0.1607$	0.0077 0.0128
		$z = 0.0099$	0.0094			
$f^1G - g(\frac{3}{2}, \frac{7}{2})$	0.1929	$x = 0.7605$	$y = 0.2241$	$z = 0.0154$		
$f^1G - g(\frac{5}{2}, \frac{7}{2})$	0.3214	$x = 0.9126$	$y = 0.0856$	$z = 0.0019$		
$f^1G - g(\frac{7}{2}, \frac{7}{2})$	0.3786	$x = 0.9040$	$y = 0.0934$	$z = 0.0026$		
$f^1G - g(\frac{5}{2}, \frac{9}{2})$	0.3929	$x = 0.8089$	$y = 0.1800$	$z = 0.0111$		
$f^3G - g(\frac{3}{2}, \frac{7}{2})$	0.7214	$x = 0.0068$	$z = 0.0109$	$y = 0.0994$	$y = 0.0005$	0.0019 0.0029
		$z = 0.0229$	0.8548			
$f^3G - g(\frac{5}{2}, \frac{9}{2})$	0.8214	$x = 0.2110$	$z = 0.6428$	$y = 0.0664$	$y = 0.0119$	0.0603 0.0060
		$z = 0.0003$	0.0013			
$f^3G - g(\frac{7}{2}, \frac{7}{2})$	0.9929	$x = 0.0485$	$z = 0.5079$	$y = 0.1590$	$y = 0.0678$	0.1442 0.0440
		$z = 0.0104$	0.0144 0.0038			
$f^3G - g(\frac{5}{2}, \frac{9}{2})$	1.3214	$x = 0.8162$	$z = 0.0120$	$y = 0.0265$	$y = 0.1283$	0.0027 0.0069
		$z = 0.0069$	0.0002 0.0004			
$f^1H - g(\frac{3}{2}, \frac{7}{2})$	0.0175	$x = 0.9333$	$y = 0.0667$			

TABLE 10c (CONTINUED)

$g^3G - f(\frac{3}{2}, \frac{5}{2})$	0.8557	$z = 0.0117$	$y = 0.1481$	0.1259	$y = 0.0703$	0.4113	0.2159
		$z = 0.0060$	0.0108				
$g^3G - f(\frac{5}{2}, \frac{7}{2})$	0.9843	$z = 0.0058$	0.0083	0.0008	$y = 0.1761$	0.0572	0.0012
		$z = 0.6595$	0.0356	0.0554			
$g^1H - f(\frac{3}{2}, \frac{5}{2})$	0.1571	$z = 1.0000$					
$g^1H - f(\frac{5}{2}, \frac{7}{2})$	0.3317	$z = 0.1474$	$y = 0.8526$				
$g^1H - f(\frac{7}{2}, \frac{9}{2})$	0.3667	$z = 0.1429$	$y = 0.8571$				
$g^1H - f(\frac{9}{2}, \frac{11}{2})$	0.3667	$z = 0.0000$	$y = 0.0571$	$z = 0.9429$			
$g^3H - f(\frac{3}{2}, \frac{5}{2})$	0.6810	$z = 0.0308$	0.8654	$y = 0.1038$			
$g^3H - f(\frac{5}{2}, \frac{7}{2})$	0.7857	$z = 0.2451$	0.6453	0.0667	$y = 0.0533$	0.0080	
		$z = 0.0017$					
$g^3H - f(\frac{7}{2}, \frac{9}{2})$	0.8905	$z = 0.0579$	0.5765	0.1961	$y = 0.0961$	0.0706	
		$z = 0.0029$					
$g^3H - f(\frac{9}{2}, \frac{11}{2})$	1.3095	$z = 0.1072$	0.0356	0.0001	$y = 0.8093$	0.0143	0.0300
		$z = 0.0081$	0.0004				
$g^1I - f(\frac{3}{2}, \frac{5}{2})$	0.5778	$z = 1.0000$					
$g^1I - f(\frac{5}{2}, \frac{7}{2})$	0.6190	$z = 1.0000$					
$g^1I - f(\frac{7}{2}, \frac{9}{2})$	0.2476	$z = 0.0000$	$y = 1.0000$				
$g^3I - f(\frac{3}{2}, \frac{5}{2})$	0.9905	$z = 1.0000$					
$g^3I - f(\frac{5}{2}, \frac{7}{2})$	0.7429	$z = 0.9074$	0.0667	$y = 0.0259$			
$g^3I - f(\frac{7}{2}, \frac{9}{2})$	0.8667	$z = 0.8333$	0.1429	$y = 0.0238$			
$g^3I - f(\frac{9}{2}, \frac{11}{2})$	1.7333	$z = 0.9615$	0.0046	0.0104	$y = 0.0231$	0.0001	
		$z = 0.0002$					

TABLE 11a

TRANSITIONS BETWEEN LS AND LK STATES. PARENT TERM: $3D$

$(2s+1)L - pL[K]$	$\sum_{J,J'}^{\sigma}$	σ
$g^2D - pP[0]$	0.2222	$z = 1.0000$
$g^2D - pP[1]$	0.6667	$z = 0.3000$
$g^2D - pP[2]$	1.1111	$z = 0.0000$
$g^2D - pD[1]$	0.6667	$z = 0.1000$
$g^2D - pD[2]$	1.1111	$z = 0.3733$
$g^2D - pD[3]$	1.5556	$z = 0.0000$
$g^2D - pF[2]$	1.1111	$z = 0.0667$
$g^2D - pF[3]$	1.5556	$z = 0.4286$
$g^2D - pF[4]$	2.0000	$z = 1.0000$
$g^4D - pP[0]$	0.4444	$z = 0.5000$
$g^4D - pP[1]$	1.3333	$z = 0.2500$
$g^4D - pP[2]$	2.2222	$z = 0.7200$
		$z = 0.0180$

TABLE 10c (CONTINUED)

$f^1H - g(\frac{3}{2}, \frac{9}{2})$	0.6111	$z = 0.9455$	$y = 0.0533$	$z = 0.0012$
$f^1H - g(\frac{5}{2}, \frac{7}{2})$	0.6810	$z = 0.9428$	$y = 0.0558$	$z = 0.0014$
$f^1H - g(\frac{7}{2}, \frac{9}{2})$	0.2619	$z = 0.8579$	$y = 0.1348$	$z = 0.0073$
$f^3H - g(\frac{3}{2}, \frac{7}{2})$	1.1000	$z = 0.0000$	0.0013	0.0018
		$z = 0.9180$		
$f^3H - g(\frac{5}{2}, \frac{9}{2})$	0.7857	$z = 0.0000$	0.0498	0.0057
		$z = 0.8824$	0.0608	
$f^3H - g(\frac{7}{2}, \frac{11}{2})$	0.9952	$z = 0.0470$	0.0951	0.0211
		$z = 0.7109$	0.1133	
$f^3H - g(\frac{9}{2}, \frac{13}{2})$	1.8333	$z = 0.9091$	0.0041	0.0084
		$z = 0.0028$	0.0000	0.0001
$g^{(2s+1)L} - f(J_p, j)$	$\sum_{J,J'}^{\sigma}$			
$g^1D - f(\frac{3}{2}, \frac{5}{2})$	0.2143	$z = 0.0095$	$y = 0.1905$	$z = 0.8000$
$g^1D - f(\frac{5}{2}, \frac{7}{2})$	0.0079	$z = 0.1429$	$y = 0.8571$	
$g^1D - f(\frac{7}{2}, \frac{9}{2})$	0.0238	$z = 0.0571$	$y = 0.4286$	$z = 0.5143$
$g^1D - f(\frac{9}{2}, \frac{11}{2})$	0.3095	$z = 0.0110$	$y = 0.1978$	$z = 0.7912$
$g^3D - f(\frac{3}{2}, \frac{5}{2})$	0.1667	$z = 0.0007$	0.0082	0.0000
		$z = 0.1166$	0.6857	
$g^3D - f(\frac{5}{2}, \frac{7}{2})$	0.5000	$z = 0.0049$	0.0015	0.0000
		$z = 0.8568$		
$g^3D - f(\frac{7}{2}, \frac{9}{2})$	0.5476	$z = 0.0018$	0.0203	0.0466
		$z = 0.0355$	0.1826	0.2609
$g^3D - f(\frac{9}{2}, \frac{11}{2})$	0.4524	$z = 0.0148$	0.0273	0.0094
		$z = 0.3344$	0.2763	
$g^1F - f(\frac{3}{2}, \frac{5}{2})$	0.2500	$z = 0.0051$	$y = 0.1786$	$z = 0.8163$
$g^1F - f(\frac{5}{2}, \frac{7}{2})$	0.0611	$z = 0.0376$	$y = 0.4058$	$z = 0.5566$
$g^1F - f(\frac{7}{2}, \frac{9}{2})$	0.0833	$z = 0.0306$	$y = 0.3571$	$z = 0.6122$
$g^1F - f(\frac{9}{2}, \frac{11}{2})$	0.3833	$z = 0.0073$	$y = 0.1941$	$z = 0.7986$
$g^3F - f(\frac{3}{2}, \frac{5}{2})$	0.2833	$z = 0.0081$	0.0525	0.1200
		$z = 0.0015$	0.0060	
$g^3F - f(\frac{5}{2}, \frac{7}{2})$	0.6500	$z = 0.0020$	0.0000	0.0015
		$z = 0.5692$	0.3151	
$g^3F - f(\frac{7}{2}, \frac{9}{2})$	0.7167	$z = 0.0009$	0.0145	0.0253
		$z = 0.0598$	0.2907	0.2278
$g^3F - f(\frac{9}{2}, \frac{11}{2})$	0.6833	$z = 0.0131$	0.0168	0.0018
		$z = 0.5082$	0.0903	0.0747
$g^1G - f(\frac{3}{2}, \frac{5}{2})$	0.2357	$z = 0.1071$	$y = 0.8929$	
$g^1G - f(\frac{5}{2}, \frac{7}{2})$	0.1643	$z = 0.0116$	$y = 0.2767$	$z = 0.7117$
$g^1G - f(\frac{7}{2}, \frac{9}{2})$	0.1929	$z = 0.0106$	$y = 0.2619$	$z = 0.7275$
$g^1G - f(\frac{9}{2}, \frac{11}{2})$	0.4071	$z = 0.0020$	$y = 0.1365$	$z = 0.8615$
$g^3G - f(\frac{3}{2}, \frac{5}{2})$	0.4500	$z = 0.0222$	0.0935	0.7127
		$z = 0.0045$		
$g^3G - f(\frac{5}{2}, \frac{7}{2})$	0.7500	$z = 0.0373$	0.0360	0.0047
		$z = 0.0003$	0.0018	

TABLE 11a (CONTINUED)

$s^4D - p^4D [1]$	1.3333	$x = 0.1750$	$y = 0.2000$	$z = 0.2500$	$z = 0.1250$
$s^4D - p^4D [2]$	2.2222	$x = 0.1333$	$y = 0.4033$	$z = 0.1200$	
		$z = 0.1633$	$z = 0.0750$		
$s^4D - p^4D [3]$	3.1111	$x = 0.7347$	$y = 0.0823$	$z = 0.0272$	$z = 0.1224$
$s^4D - p^4D [2]$	2.2222	$x = 0.0038$	$y = 0.0120$	$z = 0.0975$	$z = 0.1680$
		$z = 0.2987$	$z = 0.4200$		
$s^4D - p^4D [3]$	3.1111	$x = 0.0918$	$y = 0.0871$	$z = 0.0084$	$z = 0.5510$
$s^4D - p^4D [4]$	4.0000	$x = 0.8333$	$y = 0.1429$	$z = 0.0238$	
$p^{(2s+1)L - s} L[K]$	$\sum_{J,J'}$				
$p^2P - s^2D [1]$	0.4000	$x = 0.1667$	$y = 0.0000$	$z = 0.0000$	$z = 0.8333$
$p^2P - s^2D [2]$	0.6667	$x = 0.4000$	$y = 0.5000$	$z = 0.1000$	
$p^2P - s^2D [3]$	0.9333	$x = 1.0000$			
$p^4P - s^4D [1]$	0.8000	$x = 0.0250$	$y = 0.0833$	$z = 0.2667$	$z = 0.2083$
$p^4P - s^4D [2]$	1.3333	$x = 0.2100$	$y = 0.1600$	$z = 0.0150$	$z = 0.4900$
$p^4P - s^4D [3]$	1.8667	$x = 0.8571$	$y = 0.1000$	$z = 0.0429$	
$p^2D - s^2D [1]$	0.6667	$x = 0.1000$	$y = 0.0000$	$z = 0.9000$	
$p^2D - s^2D [2]$	1.1111	$x = 0.3733$	$y = 0.5400$	$z = 0.0600$	$z = 0.0267$
$p^2D - s^2D [3]$	1.5556	$x = 0.0000$	$y = 0.0667$	$z = 0.9333$	
$p^4D - s^4D [1]$	1.3333	$x = 0.1750$	$y = 0.2500$	$z = 0.2000$	$z = 0.1250$
$p^4D - s^4D [2]$	2.2222	$x = 0.1333$	$y = 0.1050$	$z = 0.4033$	$z = 0.1200$
		$z = 0.1633$	$z = 0.0750$		
$p^4D - s^4D [3]$	3.1111	$x = 0.7347$	$y = 0.0823$	$z = 0.0272$	$z = 0.1224$
$p^2F - s^2D [1]$	0.9333	$x = 1.0000$			
$p^2F - s^2D [2]$	1.5556	$x = 0.3810$	$y = 0.6000$	$z = 0.0190$	
$p^2F - s^2D [3]$	2.1778	$x = 0.0000$	$y = 0.0476$	$z = 0.9524$	$z = 0.0000$
$p^4F - s^4D [1]$	1.8667	$x = 0.4000$	$y = 0.5000$	$z = 0.1000$	
$p^4F - s^4D [2]$	3.1111	$x = 0.5714$	$y = 0.2400$	$z = 0.1219$	$z = 0.0600$
$p^4F - s^4D [3]$	4.3556	$x = 0.7653$	$y = 0.1166$	$z = 0.0875$	$z = 0.0249$
		$z = 0.0044$	$z = 0.0014$		

$p^{(2s+1)L - d} L[K]$	$\sum_{J,J'}$				
$p^2P - d^2S [1]$	0.4000	$x = 0.0000$	$y = 0.3333$	$z = 0.6667$	$z = 0.0000$
$p^2P - d^2P [0]$	0.1000	$x = 0.3333$	$y = 0.6667$		
$p^2P - d^2P [1]$	0.3000	$x = 0.2778$	$y = 0.4444$	$z = 0.2222$	$z = 0.0556$
$p^2P - d^2P [2]$	0.5000	$x = 0.0000$	$y = 0.1667$	$z = 0.8333$	
$p^2P - d^2D [1]$	0.1400	$x = 0.1667$	$y = 0.0000$	$z = 0.0000$	$z = 0.8333$
$p^2P - d^2D [2]$	0.2333	$x = 0.4000$	$y = 0.5000$	$z = 0.1000$	
$p^2P - d^2D [3]$	0.3267	$x = 1.0000$			
$p^4P - d^4S [1]$	0.8000	$x = 0.5000$	$y = 0.0000$	$z = 0.3333$	$z = 0.1667$
$p^4P - d^4P [0]$	0.2000	$x = 0.8333$	$y = 0.1667$		
$p^4P - d^4P [1]$	0.6000	$x = 0.3750$	$y = 0.1389$	$z = 0.1111$	$z = 0.0278$
$p^4P - d^4P [2]$	1.0000	$x = 0.6300$	$y = 0.0133$	$z = 0.0450$	$z = 0.2700$
$p^4P - d^4D [1]$	0.2800	$x = 0.0250$	$y = 0.0833$	$z = 0.2667$	$z = 0.2083$
$p^4P - d^4D [2]$	0.4667	$x = 0.2100$	$y = 0.1600$	$z = 0.0150$	$z = 0.4900$

TABLE 11a (CONTINUED)

$p^4P - d^4D [3]$	0.6533	$x = 0.8571$	$y = 0.1000$	$z = 0.0429$	
$p^2D - d^2P [0]$	0.0333	$x = 1.0000$			
$p^2D - d^2P [1]$	0.1000	$x = 0.3000$	$y = 0.6667$	$z = 0.0333$	
$p^2D - d^2P [2]$	0.1667	$x = 0.0000$	$y = 0.1000$	$z = 0.9000$	$z = 0.0000$
$p^2D - d^2D [1]$	0.2333	$x = 0.1000$	$y = 0.0000$	$z = 0.9000$	
$p^2D - d^2D [2]$	0.3889	$x = 0.3733$	$y = 0.5400$	$z = 0.0600$	$z = 0.0267$
$p^2D - d^2D [3]$	0.5444	$x = 0.0000$	$y = 0.0667$	$z = 0.9333$	
$p^2D - d^2F [2]$	0.4444	$x = 0.0667$	$y = 0.0000$	$z = 0.0000$	$z = 0.9333$
$p^2D - d^2F [3]$	0.6222	$x = 0.4286$	$y = 0.5333$	$z = 0.0381$	
$p^2D - d^2F [4]$	0.8000	$x = 1.0000$			
$p^4D - d^4P [0]$	0.0667	$x = 0.5000$	$y = 0.5000$		$z = 0.5000$
$p^4D - d^4P [1]$	0.2000	$x = 0.5250$	$y = 0.0833$	$z = 0.2667$	$z = 0.0417$
$p^4D - d^4P [2]$	0.3333	$x = 0.7200$	$y = 0.0630$	$z = 0.1620$	$z = 0.0320$
		$z = 0.0180$	$z = 0.0050$		
$p^4D - d^4D [1]$	0.4667	$x = 0.1750$	$y = 0.2500$	$z = 0.2000$	$z = 0.1250$
$p^4D - d^4D [2]$	0.7778	$x = 0.1333$	$y = 0.1050$	$z = 0.4033$	$z = 0.1200$
		$z = 0.1633$	$z = 0.0750$		
$p^4D - d^4D [3]$	1.0889	$x = 0.7347$	$y = 0.0823$	$z = 0.0272$	$z = 0.1224$
$p^4D - d^4F [2]$	0.8889	$x = 0.0038$	$y = 0.0120$	$z = 0.0975$	$z = 0.1680$
		$z = 0.2987$	$z = 0.4200$		
$p^4D - d^4F [3]$	1.2444	$x = 0.0918$	$y = 0.0871$	$z = 0.0034$	$z = 0.5510$
$p^4D - d^4F [4]$	1.6000	$x = 0.8333$	$y = 0.1429$	$z = 0.0238$	
$p^2F - d^2D [1]$	0.0267	$x = 1.0000$			
$p^2F - d^2D [2]$	0.0444	$x = 0.3810$	$y = 0.6000$	$z = 0.0190$	
$p^2F - d^2D [3]$	0.0622	$x = 0.0000$	$y = 0.0476$	$z = 0.9524$	$z = 0.0000$
$p^2F - d^2F [2]$	0.2222	$x = 0.0476$	$y = 0.0000$	$z = 0.9524$	
$p^2F - d^2F [3]$	0.3111	$x = 0.4133$	$y = 0.5442$	$z = 0.0272$	$z = 0.0153$
$p^2F - d^2F [4]$	0.4000	$x = 0.0000$	$y = 0.0857$	$z = 0.9643$	
$p^2F - d^2G [3]$	0.9333	$x = 0.0357$	$y = 0.0000$	$z = 0.0000$	$z = 0.9643$
$p^2F - d^2G [4]$	1.2000	$x = 0.4444$	$y = 0.5357$	$z = 0.0198$	
$p^2F - d^2G [5]$	1.4667	$x = 1.0000$			
$p^4F - d^4D [1]$	0.0533	$x = 0.4000$	$y = 0.5000$	$z = 0.1000$	
$p^4F - d^4D [2]$	0.0889	$x = 0.5714$	$y = 0.2400$	$z = 0.1219$	$z = 0.0600$
$p^4F - d^4D [3]$	0.1244	$x = 0.7653$	$y = 0.1166$	$z = 0.0875$	$z = 0.0249$
		$z = 0.0044$	$z = 0.0014$		
$p^4F - d^4F [2]$	0.4444	$x = 0.0714$	$y = 0.1200$	$z = 0.2752$	$z = 0.0533$
$p^4F - d^4F [3]$	0.6222	$x = 0.0670$	$y = 0.0638$	$z = 0.4898$	$z = 0.2457$
		$z = 0.0861$	$z = 0.0476$		
$p^4F - d^4F [4]$	0.8000	$x = 0.7639$	$y = 0.1270$	$z = 0.0174$	$z = 0.0694$
$p^4F - d^4G [3]$	1.8667	$x = 0.0011$	$y = 0.0033$	$z = 0.0486$	$z = 0.0886$
		$z = 0.3075$	$z = 0.5510$		
$p^4F - d^4G [4]$	2.4000	$x = 0.0509$	$y = 0.0529$	$z = 0.0012$	$z = 0.5602$
$p^4F - d^4G [5]$	2.9333	$x = 0.8182$	$y = 0.1687$	$z = 0.0152$	
$d^{(2s+1)L - p} L[K]$	$\sum_{J,J'}$				
$d^2S - p^2P [0]$	0.0444	$x = 1.0000$			

TABLE 11a (CONTINUED)

$d^2S - p P [1]$	0.1333	$x = 0.3833$	$y = 0.6667$			
$d^2S - p P [2]$	0.2222	$x = 1.0000$				
$d^4S - p P [0]$	0.0889	$x = 1.0000$				
$d^4S - p P [1]$	0.2667	$x = 0.8333$	$y = 0.1667$			
$d^4S - p P [2]$	0.4444	$x = 0.9000$	$y = 0.1000$			
$d^2P - p P [0]$	0.1000	$x = 0.3333$	$y = 0.6667$			
$d^2P - p P [1]$	0.3000	$x = 0.2778$	0.4444	$y = 0.2222$	$z = 0.0556$	
$d^2P - p P [2]$	0.5000	$x = 0.0000$	0.1667	$y = 0.8333$		
$d^2P - p D [1]$	0.0600	$x = 0.1667$	0.0000	$y = 0.0000$	$z = 0.8533$	
$d^2P - p D [2]$	0.1000	$x = 0.4000$	0.5000	$y = 0.1000$		
$d^2P - p D [3]$	0.1400	$x = 1.0000$				
$d^4P - p P [0]$	0.2000	$x = 0.8333$	$y = 0.1667$			
$d^4P - p P [1]$	0.6000	$x = 0.3750$	0.1389	$y = 0.1111$	0.0278	$z = 0.3472$
$d^4P - p P [2]$	1.0000	$x = 0.6300$	0.0133	$y = 0.0450$	$z = 0.2700$	0.0417
$d^4P - p D [1]$	0.1200	$x = 0.0250$	0.0833	$y = 0.2667$	0.4167	$z = 0.2083$
$d^4P - p D [2]$	0.2000	$x = 0.2100$	0.1600	$y = 0.0150$	$z = 0.4900$	0.1250
$d^4P - p D [3]$	0.2800	$x = 0.8571$	0.1000	$y = 0.0429$		
$d^2D - p P [0]$	0.0778	$x = 1.0000$				
$d^2D - p P [1]$	0.2333	$x = 0.3000$	0.6667	$y = 0.0333$		
$d^2D - p P [2]$	0.3889	$x = 0.0000$	0.1000	$y = 0.9000$	$z = 0.0000$	
$d^2D - p D [1]$	0.2333	$x = 0.1000$	0.0000	$y = 0.9000$		
$d^2D - p D [2]$	0.3889	$x = 0.3733$	0.5400	$y = 0.0600$	$z = 0.0267$	
$d^2D - p D [3]$	0.5444	$x = 0.0000$	0.0667	$y = 0.9333$		
$d^2D - p F [2]$	0.0317	$x = 0.0667$	0.0000	$y = 0.0000$	$z = 0.9333$	
$d^2D - p F [3]$	0.0444	$x = 0.4286$	0.5333	$y = 0.0381$		
$d^2D - p F [4]$	0.0571	$x = 1.0000$				
$d^4D - p P [0]$	0.1556	$x = 0.5000$	$y = 0.5000$			
$d^4D - p P [1]$	0.4667	$x = 0.5250$	0.0833	$y = 0.2667$	0.0833	$z = 0.0417$
$d^4D - p P [2]$	0.7778	$x = 0.7200$	0.0630	$y = 0.1620$	0.0320	
		$z = 0.0180$	0.0050			
$d^4D - p D [1]$	0.4667	$x = 0.1750$	0.2500	$y = 0.2000$	0.2500	$z = 0.1250$
$d^4D - p D [2]$	0.7778	$x = 0.1333$	0.1050	$y = 0.4033$	0.1200	
		$z = 0.1633$	0.0750			
$d^4D - p D [3]$	1.0889	$x = 0.7347$	0.0823	$y = 0.0272$	$z = 0.1224$	0.0333
$d^4D - p F [2]$	0.0635	$x = 0.0038$	0.0120	$y = 0.0975$	0.1680	
		$z = 0.2987$	0.4200			
$d^4D - p F [3]$	0.0889	$x = 0.0918$	0.0871	$y = 0.0034$	$z = 0.5510$	0.2667
$d^4D - p F [4]$	0.1143	$x = 0.8333$	0.1429	$y = 0.0238$		
$d^2F - p D [1]$	0.3733	$x = 1.0000$				
$d^2F - p D [2]$	0.6222	$x = 0.3810$	0.6000	$y = 0.0190$		
$d^2F - p D [3]$	0.8711	$x = 0.0000$	0.0476	$y = 0.9524$	$z = 0.0000$	
$d^2F - p F [2]$	0.2222	$x = 0.0476$	0.0000	$y = 0.9524$		
$d^2F - p F [3]$	0.3111	$x = 0.4133$	0.5442	$y = 0.0272$	$z = 0.0153$	
$d^2F - p F [4]$	0.4000	$x = 0.0000$	0.0357	$y = 0.9643$		
$d^4F - p D [1]$	0.7467	$x = 0.4000$	0.5000	$y = 0.1000$		
$d^4F - p D [2]$	1.2444	$x = 0.5714$	0.2400	$y = 0.1219$	0.0600	$z = 0.0067$

TABLE 11a (CONTINUED)

$d^4F - p D [3]$	1.7422	$x = 0.7653$	0.1166	$y = 0.0875$	0.0249	
		$z = 0.0044$	0.0014			
$d^4F - p F [2]$	0.4444	$x = 0.0714$	0.1200	$y = 0.2752$	0.4800	$z = 0.0553$
$d^4F - p F [3]$	0.6222	$x = 0.0670$	0.0638	$y = 0.4898$	0.2457	
		$z = 0.0861$	0.0476			
$d^4F - p F [4]$	0.8000	$x = 0.7639$	0.1270	$y = 0.0174$	$z = 0.0694$	0.0223
$d^2G - p F [2]$	0.8571	$x = 1.0000$				
$d^2G - p F [3]$	1.2000	$x = 0.4167$	0.5714	$y = 0.0119$		
$d^2G - p F [4]$	1.5429	$x = 0.0000$	0.0278	$y = 0.9722$	$z = 0.0000$	
$d^4G - p F [2]$	1.7143	$x = 0.3571$	0.6000	$y = 0.0429$		
$d^4G - p F [3]$	2.4000	$x = 0.5729$	0.3189	$y = 0.0680$	0.0383	$z = 0.0019$
$d^4G - p F [4]$	3.0857	$x = 0.7778$	0.1485	$y = 0.0540$	0.0176	
		$z = 0.0015$	0.0005			
$d^{(2s+1)L} - f L [K]$	$\sum_{j=1}^s$					
$d^2S - f P [0]$	0.0444	$x = 1.0000$				
$d^2S - f P [1]$	0.1333	$x = 0.3333$	$y = 0.6667$			
$d^2S - f P [2]$	0.2222	$x = 1.0000$				
$d^4S - f P [0]$	0.0889	$x = 1.0000$				
$d^4S - f P [1]$	0.2667	$x = 0.8333$	$y = 0.1667$			
$d^4S - f P [2]$	0.4444	$x = 0.9000$	$y = 0.1000$			
$d^2P - f P [0]$	0.0444	$x = 0.3333$	$y = 0.6667$			
$d^2P - f P [1]$	0.1333	$x = 0.2778$	0.4444	$y = 0.2222$	$z = 0.0556$	
$d^2P - f P [2]$	0.2222	$x = 0.0000$	0.1667	$y = 0.8333$		
$d^2P - f D [1]$	0.1600	$x = 0.1667$	0.0000	$y = 0.0000$	$z = 0.8333$	
$d^2P - f D [2]$	0.2667	$x = 0.4000$	0.5000	$y = 0.1000$		
$d^2P - f D [3]$	0.3733	$x = 1.0000$				
$d^4P - f P [0]$	0.0889	$x = 0.8333$	$y = 0.1667$			
$d^4P - f P [1]$	0.2667	$x = 0.3750$	0.1389	$y = 0.1111$	0.0278	$z = 0.3472$
$d^4P - f P [2]$	0.4444	$x = 0.6300$	0.0133	$y = 0.0450$	$z = 0.2700$	0.0417
$d^4P - f D [1]$	0.3200	$x = 0.0250$	0.0833	$y = 0.2667$	0.4167	$z = 0.2083$
$d^4P - f D [2]$	0.5333	$x = 0.2100$	0.1600	$y = 0.0150$	$z = 0.4900$	0.1250
$d^4P - f D [3]$	0.7467	$x = 0.8571$	0.1000	$y = 0.0429$		
$d^2D - f P [0]$	0.0083	$x = 1.0000$				
$d^2D - f P [1]$	0.0190	$x = 0.3000$	0.6667	$y = 0.0333$		
$d^2D - f P [2]$	0.0317	$x = 0.0000$	0.1000	$y = 0.9000$	$z = 0.0000$	
$d^2D - f D [1]$	0.1143	$x = 0.1000$	0.0000	$y = 0.9000$		
$d^2D - f D [2]$	0.1905	$x = 0.3733$	0.5400	$y = 0.0600$	$z = 0.0267$	
$d^2D - f D [3]$	0.2667	$x = 0.0000$	0.0667	$y = 0.9333$		
$d^2D - f F [2]$	0.3265	$x = 0.0667$	0.0000	$y = 0.0000$	$z = 0.9333$	
$d^2D - f F [3]$	0.4571	$x = 0.4286$	0.5333	$y = 0.0381$		
$d^2D - f F [4]$	0.5878	$x = 1.0000$				
$d^4D - f P [0]$	0.0127	$x = 0.5000$	$y = 0.5000$			
$d^4D - f P [1]$	0.0381	$x = 0.5250$	0.0833	$y = 0.2667$	0.0833	$z = 0.0417$
$d^4D - f P [2]$	0.0635	$x = 0.7200$	0.0630	$y = 0.1620$	0.0320	
		$z = 0.0180$	0.0050			

TABLE 11a (CONTINUED)

$d^4G - fH [4]$	1.7143	$x = 0.0004$	0.0012	$y = 0.0287$	$z = 0.0543$
		$z = 0.3042$	0.6111		
$d^4G - fH [5]$	2.0952	$x = 0.0322$	0.0353	$y = 0.0005$	$z = 0.5587$
$d^4G - fH [6]$	2.4762	$x = 0.8077$	0.1818	$y = 0.0105$	
$f^{(2S+1)L - dL^i [K]$	$\sum_{J,J'}^s$				
$f^2P - dS [1]$	0.4000	$x = 0.0000$	0.3333	$y = 0.6667$	$z = 0.0000$
$f^2P - dP [0]$	0.0444	$x = 0.3333$	$y = 0.8687$		
$f^2P - dP [1]$	0.1333	$x = 0.2778$	0.4444	$y = 0.2222$	$z = 0.0556$
$f^2P - dP [2]$	0.2222	$x = 0.0000$	0.1667	$y = 0.8333$	
$f^2P - dD [1]$	0.0114	$x = 0.1667$	0.0000	$y = 0.0000$	$z = 0.8333$
$f^2P - dD [2]$	0.0190	$x = 0.4000$	0.5000	$y = 0.1000$	
$f^2P - dD [3]$	0.0267	$z = 1.0000$			
$f^4P - dS [1]$	0.8000	$x = 0.5000$	0.0000	$y = 0.3333$	$z = 0.1667$
$f^4P - dP [0]$	0.0889	$x = 0.8333$	$y = 0.1667$		
$f^4P - dP [1]$	0.2667	$x = 0.3750$	0.1389	$y = 0.1111$	$z = 0.3472$
$f^4P - dP [2]$	0.4444	$x = 0.6300$	0.0133	$y = 0.0450$	$z = 0.2700$
$f^4P - dD [1]$	0.0229	$x = 0.0250$	0.0833	$y = 0.2667$	$z = 0.2083$
$f^4P - dD [2]$	0.0381	$x = 0.2100$	0.1600	$y = 0.0150$	$z = 0.4900$
$f^4P - dD [3]$	0.0533	$x = 0.8571$	0.1000	$y = 0.0429$	
$f^2D - dP [0]$	0.0889	$z = 1.0000$			
$f^2D - dP [1]$	0.2667	$x = 0.3000$	0.6667	$y = 0.0333$	
$f^2D - dP [2]$	0.4444	$x = 0.0000$	0.1000	$y = 0.9000$	$z = 0.0000$
$f^2D - dD [1]$	0.1143	$x = 0.1000$	0.0000	$y = 0.9000$	
$f^2D - dD [2]$	0.1905	$x = 0.3733$	0.5400	$y = 0.0600$	$z = 0.0267$
$f^2D - dD [3]$	0.2667	$x = 0.0000$	0.0667	$y = 0.9333$	
$f^2D - dF [2]$	0.0136	$x = 0.0667$	0.0000	$y = 0.0000$	$z = 0.9333$
$f^2D - dF [3]$	0.0190	$x = 0.4286$	0.5333	$y = 0.0381$	
$f^2D - dF [4]$	0.0245	$z = 1.0000$			
$f^4D - dP [0]$	0.1778	$x = 0.5000$	$y = 0.5000$		
$f^4D - dP [1]$	0.5333	$x = 0.5250$	0.0833	$y = 0.2667$	$z = 0.0417$
$f^4D - dP [2]$	0.8889	$x = 0.7200$	0.0630	$y = 0.1620$	$z = 0.0320$
		$z = 0.0180$	0.0050		
$f^4D - dD [1]$	0.2286	$x = 0.1750$	0.2500	$y = 0.2000$	$z = 0.1250$
$f^4D - dD [2]$	0.3810	$x = 0.1333$	0.1050	$y = 0.4033$	$z = 0.1200$
		$z = 0.1633$	0.0750		
$f^4D - dD [3]$	0.5333	$x = 0.7347$	0.0823	$y = 0.0272$	$z = 0.1224$
$f^4D - dF [2]$	0.0272	$x = 0.0038$	0.0120	$y = 0.0975$	$z = 0.1680$
		$z = 0.2987$	0.4200		
$f^4D - dF [3]$	0.0381	$x = 0.0918$	0.0871	$y = 0.0034$	$z = 0.5510$
$f^4D - dF [4]$	0.0490	$x = 0.8333$	0.1429	$y = 0.0238$	
$f^2F - dD [1]$	0.2743	$z = 1.0000$			
$f^2F - dD [2]$	0.4571	$x = 0.8810$	0.6000	$y = 0.0190$	
$f^2F - dD [3]$	0.6400	$x = 0.0000$	0.0476	$y = 0.9524$	$z = 0.0000$
$f^2F - dF [2]$	0.1429	$x = 0.0476$	0.0000	$y = 0.9524$	

TABLE 11a (CONTINUED)

$d^4D - fD [1]$	0.2286	$x = 0.1750$	0.2500	$y = 0.2000$	$z = 0.1250$
$d^4D - fD [2]$	0.3810	$x = 0.1333$	0.1050	$y = 0.4033$	$z = 0.1200$
		$z = 0.1633$	0.0750		
$d^4D - fD [3]$	0.5333	$x = 0.7347$	0.0823	$y = 0.0272$	$z = 0.1224$
$d^4D - fF [2]$	0.6531	$x = 0.0038$	0.0120	$y = 0.0975$	$z = 0.1680$
		$z = 0.2987$	0.4200		
$d^4D - fF [3]$	0.9143	$x = 0.0918$	0.0871	$y = 0.0034$	$z = 0.5510$
$d^4D - fF [4]$	1.1755	$x = 0.8333$	0.1429	$y = 0.0238$	
$d^2F - fD [1]$	0.0114	$z = 1.0000$			
$d^2F - fD [2]$	0.0190	$x = 0.3810$	0.6000	$y = 0.0190$	
$d^2F - fD [3]$	0.0267	$x = 0.0000$	0.0476	$y = 0.9524$	$z = 0.0000$
$d^2F - fF [2]$	0.1429	$x = 0.0476$	0.0000	$y = 0.9524$	
$d^2F - fF [3]$	0.2000	$x = 0.4133$	0.5442	$y = 0.0272$	$z = 0.0153$
$d^2F - fF [4]$	0.2571	$x = 0.0000$	0.0357	$y = 0.9643$	
$d^2F - fG [3]$	0.5556	$x = 0.0357$	0.0000	$y = 0.0000$	$z = 0.9643$
$d^2F - fG [4]$	0.7143	$x = 0.4444$	0.5357	$y = 0.0198$	
$d^2F - fG [5]$	0.8730	$z = 1.0000$			
$d^4F - fD [1]$	0.0229	$x = 0.4000$	0.5000	$y = 0.1000$	
$d^4F - fD [2]$	0.0381	$x = 0.5714$	0.2400	$y = 0.1219$	$z = 0.0067$
$d^4F - fD [3]$	0.0533	$x = 0.7653$	0.1166	$y = 0.0875$	$z = 0.0249$
		$z = 0.0044$	0.0014		
$d^4F - fF [2]$	0.2857	$x = 0.0714$	0.1200	$y = 0.2752$	$z = 0.4800$
$d^4F - fF [3]$	0.4000	$x = 0.0670$	0.0638	$y = 0.4898$	$z = 0.2457$
		$z = 0.0861$	0.0476		
$d^4F - fF [4]$	0.5143	$x = 0.7639$	0.1270	$y = 0.0174$	$z = 0.0694$
$d^4F - fG [3]$	1.1111	$x = 0.0011$	0.0033	$y = 0.0486$	$z = 0.0886$
		$z = 0.3075$	0.5510		
$d^4F - fG [4]$	1.4286	$x = 0.0509$	0.0529	$y = 0.0012$	$z = 0.5602$
$d^4F - fG [5]$	1.7460	$x = 0.8182$	0.1667	$y = 0.0152$	
$d^2G - fF [2]$	0.0068	$z = 1.0000$			
$d^2G - fF [3]$	0.0095	$x = 0.4167$	0.5714	$y = 0.0119$	
$d^2G - fF [4]$	0.0122	$x = 0.0000$	0.0278	$y = 0.9722$	$z = 0.0000$
$d^2G - fG [3]$	0.1111	$x = 0.0278$	0.0000	$y = 0.9722$	
$d^2G - fG [4]$	0.1429	$x = 0.4346$	0.5401	$y = 0.0154$	$z = 0.0099$
$d^2G - fG [5]$	0.1746	$x = 0.0000$	0.0222	$y = 0.9778$	
$d^2G - fH [4]$	0.8571	$x = 0.0222$	0.0000	$y = 0.0000$	$z = 0.9778$
$d^2G - fH [5]$	1.0476	$x = 0.4545$	0.5333	$y = 0.0121$	
$d^2G - fH [6]$	1.2381	$z = 1.0000$			
$d^4G - fF [2]$	0.0136	$x = 0.3571$	0.6000	$y = 0.0429$	
$d^4G - fF [3]$	0.0190	$x = 0.5729$	0.3189	$y = 0.0680$	$z = 0.0019$
$d^4G - fF [4]$	0.0245	$x = 0.7778$	0.1485	$y = 0.0540$	$z = 0.0176$
		$z = 0.0015$	0.0005		
$d^4G - fG [3]$	0.2222	$x = 0.0382$	0.0089	$y = 0.2902$	$z = 0.0287$
$d^4G - fG [4]$	0.2857	$x = 0.0400$	0.0416	$y = 0.5188$	$z = 0.3160$
		$z = 0.0523$	0.0312		
$d^4G - fG [5]$	0.3492	$x = 0.7736$	0.1544	$y = 0.0119$	$z = 0.0446$

TABLE 11a (CONTINUED)

$f^2F - dF [3]$	0.2000	$x = 0.4133$	$y = 0.5442$	$z = 0.0272$	$z = 0.0153$
$f^2F - dF [4]$	0.2571	$x = 0.0000$	$y = 0.0357$	$z = 0.9843$	
$f^2F - dG [3]$	0.0074	$x = 0.0357$	$y = 0.0000$	$z = 0.0000$	$z = 0.9843$
$f^2F - dG [4]$	0.0095	$x = 0.4444$	$y = 0.5357$	$z = 0.0198$	
$f^2F - dG [5]$	0.0116	$x = 1.0000$			
$f^4F - dD [1]$	0.5486	$x = 0.4000$	$y = 0.5000$	$z = 0.1000$	
$f^4F - dD [2]$	0.9143	$x = 0.5714$	$y = 0.2400$	$z = 0.1219$	$z = 0.0067$
$f^4F - dD [3]$	1.2800	$x = 0.7653$	$y = 0.1166$	$z = 0.0875$	$z = 0.0249$
		$z = 0.0044$	$z = 0.0014$		
$f^4F - dF [2]$	0.2857	$x = 0.0714$	$y = 0.1200$	$z = 0.2752$	$z = 0.4800$
$f^4F - dF [3]$	0.4000	$x = 0.0670$	$y = 0.0638$	$z = 0.4898$	$z = 0.2457$
		$z = 0.0861$	$z = 0.0476$		
$f^4F - dF [4]$	0.5143	$x = 0.7639$	$y = 0.1270$	$z = 0.0174$	$z = 0.0694$
$f^4F - dG [3]$	0.0148	$x = 0.0011$	$y = 0.0033$	$z = 0.0486$	$z = 0.0886$
		$z = 0.3075$	$z = 0.5510$		
$f^4F - dG [4]$	0.0190	$x = 0.0509$	$y = 0.0529$	$z = 0.0012$	$z = 0.5602$
$f^4F - dG [5]$	0.0233	$x = 0.8182$	$y = 0.1667$	$z = 0.0152$	$z = 0.3348$
$f^2G - dF [2]$	0.5102	$x = 1.0000$			
$f^2G - dF [3]$	0.7143	$x = 0.4167$	$y = 0.5714$	$z = 0.0119$	
$f^2G - dF [4]$	0.9184	$x = 0.0000$	$y = 0.0278$	$z = 0.9722$	$z = 0.0000$
$f^2G - dG [3]$	0.1111	$x = 0.0278$	$y = 0.0000$	$z = 0.9722$	$z = 0.0000$
$f^2G - dG [4]$	0.1429	$x = 0.4346$	$y = 0.5401$	$z = 0.0154$	$z = 0.0099$
$f^2G - dG [5]$	0.1746	$x = 0.0000$	$y = 0.0222$	$z = 0.9778$	
$f^4G - dF [2]$	1.0204	$x = 0.3571$	$y = 0.6000$	$z = 0.0429$	
$f^4G - dF [3]$	1.4286	$x = 0.5729$	$y = 0.3189$	$z = 0.0680$	$z = 0.0019$
$f^4G - dF [4]$	1.8367	$x = 0.7778$	$y = 0.1485$	$z = 0.0540$	$z = 0.0176$
		$z = 0.0015$	$z = 0.0005$		
$f^4G - dG [3]$	0.2222	$x = 0.0382$	$y = 0.0689$	$z = 0.2902$	$z = 0.5740$
$f^4G - dG [4]$	0.2857	$x = 0.0400$	$y = 0.0416$	$z = 0.5188$	$z = 0.3160$
		$z = 0.0523$	$z = 0.0312$		
$f^4G - dG [5]$	0.3492	$x = 0.7736$	$y = 0.1544$	$z = 0.0119$	$z = 0.0446$
$f^2H - dG [3]$	0.8148	$x = 1.0000$			
$f^2H - dG [4]$	1.0476	$x = 0.4364$	$y = 0.5556$	$z = 0.0081$	
$f^2H - dG [5]$	1.2804	$x = 0.0000$	$y = 0.0182$	$z = 0.9818$	$z = 0.0000$
$f^4H - dG [3]$	1.6296	$x = 0.3333$	$y = 0.6429$	$z = 0.0238$	
$f^4H - dG [4]$	2.0952	$x = 0.5673$	$y = 0.3630$	$z = 0.0431$	$z = 0.0259$
$f^4H - dG [5]$	2.5608	$x = 0.7810$	$y = 0.1688$	$z = 0.0365$	$z = 0.0128$
		$z = 0.0007$	$z = 0.0002$		
$f^{(2S+1)L} - g L[K]$	$\sum_{J,J'}^s$				
$f^2P - gD [1]$	0.1714	$x = 0.1667$	$y = 0.0000$	$z = 0.0000$	$z = 0.8333$
$f^2P - gD [2]$	0.2857	$x = 0.4000$	$y = 0.5000$	$z = 0.1000$	
$f^2P - gD [3]$	0.4000	$x = 1.0000$			
$f^4P - gD [1]$	0.3429	$x = 0.0250$	$y = 0.0833$	$z = 0.2667$	$z = 0.4167$
$f^4P - gD [2]$	0.5714	$x = 0.2100$	$y = 0.1600$	$z = 0.0150$	$z = 0.4000$
$f^4P - gD [3]$	0.8000	$x = 0.3571$	$y = 0.6000$	$z = 0.0429$	$z = 0.0176$

TABLE 11a (CONTINUED)

$f^4P - gD [3]$	0.8000	$x = 0.8571$	$y = 0.1000$	$z = 0.0429$	
$f^2D - gD [1]$	0.0476	$x = 0.1000$	$y = 0.0000$	$z = 0.9000$	
$f^2D - gD [2]$	0.0794	$x = 0.3733$	$y = 0.5400$	$z = 0.0600$	$z = 0.0267$
$f^2D - gD [3]$	0.1111	$x = 0.0000$	$y = 0.0667$	$z = 0.9333$	
$f^2D - gF [2]$	0.2834	$x = 0.0667$	$y = 0.0000$	$z = 0.9333$	
$f^2D - gF [3]$	0.3968	$x = 0.4286$	$y = 0.5333$	$z = 0.0381$	
$f^2D - gF [4]$	0.5102	$x = 1.0000$			
$f^4D - gD [1]$	0.0952	$x = 0.1750$	$y = 0.2500$	$z = 0.2000$	$z = 0.1250$
$f^4D - gD [2]$	0.1587	$x = 0.1333$	$y = 0.1050$	$z = 0.4033$	$z = 0.1200$
		$z = 0.1633$	$z = 0.0750$		
$f^4D - gD [3]$	0.2222	$x = 0.7347$	$y = 0.0823$	$z = 0.0272$	$z = 0.1224$
$f^4D - gF [2]$	0.5669	$x = 0.0038$	$y = 0.0120$	$z = 0.0975$	$z = 0.1680$
		$z = 0.2987$	$z = 0.4200$		
$f^4D - gF [3]$	0.7937	$x = 0.0918$	$y = 0.0871$	$z = 0.0034$	$z = 0.5510$
$f^4D - gF [4]$	1.0204	$x = 0.8333$	$y = 0.1429$	$z = 0.0238$	
$f^2F - gD [1]$	0.0032	$x = 1.0000$			
$f^2F - gD [2]$	0.0053	$x = 0.3810$	$y = 0.6000$	$z = 0.0190$	
$f^2F - gD [3]$	0.0074	$x = 0.0000$	$y = 0.0476$	$z = 0.9524$	$z = 0.0000$
$f^2F - gF [2]$	0.0827	$x = 0.0476$	$y = 0.0000$	$z = 0.9524$	
$f^2F - gF [3]$	0.1157	$x = 0.4133$	$y = 0.5442$	$z = 0.0272$	$z = 0.0153$
$f^2F - gF [4]$	0.1488	$x = 0.0000$	$y = 0.0357$	$z = 0.9643$	
$f^2F - gG [3]$	0.4244	$x = 0.0357$	$y = 0.0000$	$z = 0.0000$	$z = 0.9643$
$f^2F - gG [4]$	0.5458	$x = 0.4444$	$y = 0.5357$	$z = 0.0198$	
$f^2F - gG [5]$	0.6669	$x = 1.0000$			
$f^4F - gD [1]$	0.0063	$x = 0.4000$	$y = 0.5000$	$z = 0.1000$	
$f^4F - gD [2]$	0.0106	$x = 0.5714$	$y = 0.2400$	$z = 0.1219$	$z = 0.0067$
$f^4F - gD [3]$	0.0148	$x = 0.7653$	$y = 0.1166$	$z = 0.0875$	$z = 0.0249$
		$z = 0.0044$	$z = 0.0014$		
$f^4F - gF [2]$	0.1653	$x = 0.0714$	$y = 0.1200$	$z = 0.2752$	$z = 0.4800$
$f^4F - gF [3]$	0.2315	$x = 0.0670$	$y = 0.0638$	$z = 0.4898$	$z = 0.2457$
		$z = 0.0861$	$z = 0.0476$		
$f^4F - gF [4]$	0.2976	$x = 0.7639$	$y = 0.1270$	$z = 0.0174$	$z = 0.0694$
$f^4F - gG [3]$	0.8488	$x = 0.0011$	$y = 0.0033$	$z = 0.0486$	$z = 0.0886$
		$z = 0.3075$	$z = 0.5510$		
$f^4F - gG [4]$	1.0913	$x = 0.0509$	$y = 0.0529$	$z = 0.0012$	$z = 0.5602$
$f^4F - gG [5]$	1.3338	$x = 0.8182$	$y = 0.1667$	$z = 0.0152$	$z = 0.3348$
$f^2G - gF [2]$	0.0043	$x = 1.0000$			
$f^2G - gF [3]$	0.0060	$x = 0.4167$	$y = 0.5714$	$z = 0.0119$	
$f^2G - gF [4]$	0.0077	$x = 0.0000$	$y = 0.0278$	$z = 0.9722$	$z = 0.0000$
$f^2G - gG [3]$	0.0917	$x = 0.0278$	$y = 0.0000$	$z = 0.9722$	$z = 0.0000$
$f^2G - gG [4]$	0.1179	$x = 0.4346$	$y = 0.5401$	$z = 0.0154$	$z = 0.0099$
$f^2G - gG [5]$	0.1440	$x = 0.0000$	$y = 0.0222$	$z = 0.9778$	
$f^2G - gH [4]$	0.6000	$x = 0.0222$	$y = 0.0000$	$z = 0.0000$	$z = 0.9778$
$f^2G - gH [5]$	0.7833	$x = 0.4545$	$y = 0.5333$	$z = 0.0121$	
$f^2G - gH [6]$	0.8667	$x = 1.0000$			
$f^4G - gF [9]$	0.0085	$x = 0.3571$	$y = 0.6000$	$z = 0.0429$	$z = 0.0176$

TABLE IIa (CONTINUED)

$f^4G - gF [3]$	0.0119	$x = 0.5729$	$y = 0.0680$	$z = 0.0883$	$x = 0.0019$	$g^4D - fP [2]$	0.9524	$x = 0.7200$	$y = 0.1620$	$z = 0.0320$
$f^4G - gF [4]$	0.0153	$x = -0.7778$	$y = 0.0540$	$z = 0.0176$	$z = 0.0015$			$x = 0.0180$	$y = 0.0050$	
$f^4G - gG [3]$	0.1833	$x = 0.0382$	$y = 0.2902$	$z = 0.5740$	$z = 0.0287$	$g^4D - fD [1]$	0.0952	$x = 0.1750$	$y = 0.2000$	$z = 0.2500$
$f^4G - gG [4]$	0.2357	$x = 0.0400$	$y = 0.5188$	$z = 0.3160$	$z = 0.0287$	$g^4D - fD [2]$	0.1587	$x = 0.1333$	$y = 0.4033$	$z = 0.1200$
$f^4G - gG [5]$	0.2881	$x = 0.7736$	$y = 0.0119$	$z = 0.0448$	$z = 0.0156$	$g^4D - fD [3]$	0.2222	$x = 0.7347$	$y = 0.0272$	$z = 0.1224$
$f^4G - gH [4]$	1.2000	$x = 0.0004$	$y = 0.0287$	$z = 0.0543$	$z = 0.0287$	$g^4D - fF [2]$	0.0076	$x = 0.0038$	$y = 0.0975$	$z = 0.1680$
$f^4G - gH [5]$	1.4667	$x = 0.0322$	$y = 0.0005$	$z = 0.5587$	$z = 0.3733$	$g^4D - fF [3]$	0.0106	$x = 0.0918$	$y = 0.0034$	$z = 0.5510$
$f^4G - gH [6]$	1.7533	$x = 0.8077$	$y = 0.0105$			$g^4D - fF [4]$	0.0136	$x = 0.8333$	$y = 0.0238$	
$f^2H - gG [3]$	0.0025	$x = 1.0000$				$g^2F - fD [1]$	0.2381	$x = 1.0000$		
$f^2H - gG [4]$	0.0032	$x = 0.4364$	$y = 0.0081$			$g^2F - fD [2]$	0.3968	$x = 0.3810$	$y = 0.0190$	
$f^2H - gG [5]$	0.0039	$x = 0.0000$	$y = 0.9818$	$z = 0.0000$		$g^2F - fD [3]$	0.5556	$x = 0.0000$	$y = 0.9524$	$z = 0.0000$
$f^2H - gH [4]$	0.0667	$x = 0.0182$	$y = 0.9818$			$g^2F - fD [2]$	0.0827	$x = 0.0476$	$y = 0.9524$	
$f^2H - gH [5]$	0.0815	$x = 0.4477$	$y = 0.0099$	$z = 0.0069$		$g^2F - fF [3]$	0.1157	$x = 0.4133$	$y = 0.0272$	$z = 0.0153$
$f^2H - gH [6]$	0.0963	$x = 0.0000$	$y = 0.9848$			$g^2F - fF [4]$	0.1488	$x = 0.0000$	$y = 0.9643$	
$f^2H - gI [5]$	0.8148	$x = 0.0152$	$y = 0.0000$	$z = 0.9848$		$g^2F - fG [3]$	0.0046	$x = 0.0357$	$y = 0.0000$	$z = 0.9643$
$f^2H - gI [6]$	0.9630	$x = 0.4615$	$y = 0.0082$			$g^2F - fG [4]$	0.0060	$x = 0.4444$	$y = 0.0198$	
$f^2H - gI [7]$	1.1111	$x = 1.0000$				$g^2F - fG [5]$	0.0073	$x = 1.0000$		
$f^4H - gG [3]$	0.0049	$x = 0.3333$	$y = 0.0238$			$g^4F - fD [1]$	0.4762	$x = 0.4000$	$y = 0.1000$	
$f^4H - gG [4]$	0.0063	$x = 0.5673$	$y = 0.0431$	$z = 0.0007$		$g^4F - fD [2]$	0.7937	$x = 0.5714$	$y = 0.1219$	$z = 0.0067$
$f^4H - gG [5]$	0.0078	$x = 0.7810$	$y = 0.0365$	$z = 0.0128$		$g^4F - fD [3]$	1.1111	$x = 0.7653$	$y = 0.0875$	$z = 0.0249$
$f^4H - gH [4]$	0.1333	$x = 0.0236$	$y = 0.0444$	$z = 0.0178$				$x = 0.0044$	$y = 0.0014$	
$f^4H - gH [5]$	0.1630	$x = 0.0265$	$y = 0.0290$	$z = 0.3583$		$g^4F - fF [2]$	0.1653	$x = 0.0714$	$y = 0.2752$	$z = 0.4800$
$f^4H - gH [6]$	0.1926	$x = 0.7766$	$y = 0.0086$	$z = 0.0311$	$z = 0.0114$	$g^4F - fF [3]$	0.2315	$x = 0.0670$	$y = 0.4898$	$z = 0.2457$
$f^4H - gI [5]$	1.6296	$x = 0.0002$	$y = 0.0189$	$z = 0.0366$				$x = 0.0861$	$y = 0.0476$	
$f^4H - gI [6]$	1.9259	$x = 0.0222$	$y = 0.0002$	$z = 0.5547$	$z = 0.3977$	$g^4F - fF [4]$	0.2976	$x = 0.7639$	$y = 0.0174$	$z = 0.0694$
$f^4H - gI [7]$	2.2222	$x = 0.8000$	$y = 0.0077$			$g^4F - fG [3]$	0.0093	$x = 0.0011$	$y = 0.0486$	$z = 0.0886$
$g^{(2S+1)L} - fL'[K]$	$\sum_{J,J'}^s$							$x = 0.3075$	$y = 0.5510$	
$g^2D - fP [0]$	0.0952	$x = 1.0000$				$g^4F - fG [4]$	0.0119	$x = 0.0509$	$y = 0.0012$	$z = 0.5602$
$g^2D - fP [1]$	0.2857	$x = 0.3000$	$y = 0.0667$	$z = 0.0333$		$g^4F - fG [5]$	0.0146	$x = 0.8182$	$y = 0.0152$	
$g^2D - fP [2]$	0.4762	$x = 0.0000$	$y = 0.9000$	$z = 0.0000$		$g^2G - fF [2]$	0.3897	$x = 1.0000$		
$g^2D - fD [1]$	0.0476	$x = 0.1000$	$y = 0.9000$			$g^2G - fF [3]$	0.5456	$x = 0.4167$	$y = 0.0119$	
$g^2D - fD [2]$	0.0794	$x = 0.3733$	$y = 0.0600$	$z = 0.0267$		$g^2G - fF [4]$	0.7015	$x = 0.0000$	$y = 0.9722$	$z = 0.0000$
$g^2D - fD [3]$	0.1111	$x = 0.0000$	$y = 0.9333$			$g^2G - fG [3]$	0.0917	$x = 0.0278$	$y = 0.9722$	
$g^2D - fF [2]$	0.0038	$x = 0.0667$	$y = 0.0000$	$z = 0.9333$		$g^2G - fG [4]$	0.1179	$x = 0.4346$	$y = 0.0154$	$z = 0.0099$
$g^2D - fF [3]$	0.0053	$x = 0.4286$	$y = 0.0000$	$z = 0.0381$		$g^2G - fG [5]$	0.1440	$x = 0.0000$	$y = 0.9778$	
$g^2D - fF [4]$	0.0068	$x = 1.0000$				$g^2G - fH [4]$	0.0026	$x = 0.0222$	$y = 0.0000$	$z = 0.9778$
$g^4D - fP [0]$	0.1905	$x = 0.5000$	$y = 0.5000$			$g^2G - fH [5]$	0.0032	$x = 0.4545$	$y = 0.0121$	
$g^4D - fP [1]$	0.5714	$x = 0.5250$	$y = 0.0833$	$z = 0.2667$	$z = 0.0417$	$g^2G - fH [6]$	0.0038	$x = 1.0000$		
						$g^4G - fF [2]$	0.7795	$x = 0.3571$	$y = 0.6000$	$z = 0.0429$
						$g^4G - fF [3]$	1.0913	$x = 0.5729$	$y = 0.0680$	$z = 0.0019$
						$g^4G - fF [4]$	1.4031	$x = 0.7778$	$y = 0.0540$	$z = 0.0176$
								$x = 0.0015$	$y = 0.0005$	
						$g^4G - fG [3]$	0.1833	$x = 0.0382$	$y = 0.2902$	$z = 0.5740$

TABLE 11a (CONTINUED)

$g^4G - fG [4]$	0.2357	$x = 0.0400$	$y = 0.5188$	$z = 0.3160$
		$z = 0.0523$	0.0313	
$g^4G - fG [5]$	0.2881	$x = 0.7736$	$y = 0.0119$	$z = 0.0446$
$g^4G - fH [4]$	0.0052	$x = 0.0004$	$y = 0.0287$	$z = 0.0543$
		$z = 0.3042$	0.6111	
$g^4G - fH [5]$	0.0063	$x = 0.0322$	$y = 0.0005$	$z = 0.5587$
$g^4G - fH [6]$	0.0075	$x = 0.8077$	$y = 0.1818$	$z = 0.0105$
$g^2H - fG [3]$	0.5704	$x = 1.0000$		
$g^2H - fG [4]$	0.7333	$x = 0.4364$	$y = 0.5556$	$z = 0.0081$
$g^2H - fG [5]$	0.8963	$x = 0.0000$	$y = 0.0182$	$z = 0.9818$
$g^2H - fH [4]$	0.0687	$x = 0.0182$	$y = 0.0000$	$z = 0.9818$
$g^2H - fH [5]$	0.0815	$x = 0.4477$	$y = 0.5355$	$z = 0.0099$
$g^2H - fH [6]$	0.0963	$x = 0.0000$	$y = 0.0152$	$z = 0.9848$
$g^4H - fG [3]$	1.1407	$x = 0.8333$	$y = 0.6429$	$z = 0.0238$
$g^4H - fG [4]$	1.4667	$x = 0.5673$	$y = 0.3630$	$z = 0.0431$
$g^4H - fG [5]$	1.7926	$x = 0.7810$	$y = 0.1688$	$z = 0.0365$
		$z = 0.0007$	0.0002	
$g^4H - fH [4]$	0.1333	$x = 0.0236$	$y = 0.0444$	$z = 0.2919$
$g^4H - fH [5]$	0.1630	$x = 0.0265$	$y = 0.0290$	$z = 0.5295$
		$z = 0.0349$	0.0218	
$g^4H - fH [6]$	0.1926	$x = 0.7768$	$y = 0.1723$	$z = 0.0086$
$g^2I - fH [4]$	0.7879	$x = 1.0000$		$z = 0.0311$
$g^2I - fH [5]$	0.9630	$x = 0.4487$	$y = 0.5455$	$z = 0.0058$
$g^2I - fH [6]$	1.1380	$x = 0.0000$	$y = 0.0128$	$z = 0.9872$
$g^4I - fH [4]$	1.5758	$x = 0.3182$	$y = 0.6667$	$z = 0.0152$
$g^4I - fH [5]$	1.9259	$x = 0.5609$	$y = 0.3905$	$z = 0.0297$
$g^4I - fH [6]$	2.2761	$x = 0.7811$	$y = 0.1825$	$z = 0.0283$
		$z = 0.0003$	0.0001	

TABLE 11b

TRANSITIONS BETWEEN LS AND jK STATES. PARENT TERM: $3D$

$s^{(2s+1)L - p (J_p) K}$	$\sum_{J_p'} s$	0.2222	$x = 1.0000$
$s^2D - p (1) 0$	0.6667	$x = 0.0000$	$y = 0.1667$
$s^2D - p (1) 1$	1.1111	$x = 0.0000$	$y = 0.0000$
$s^2D - p (1) 2$	0.6667	$x = 0.4000$	$y = 0.5000$
$s^2D - p (2) 1$	1.1111	$x = 0.3733$	$y = 0.5400$
$s^2D - p (2) 2$	1.5556	$x = 0.3810$	$y = 0.6000$
$s^2D - p (2) 3$	1.1111	$x = 0.0667$	$y = 0.0000$
$s^2D - p (3) 2$	1.5556	$x = 0.0667$	$y = 0.0000$
$s^2D - p (3) 3$	1.5556	$x = 0.0476$	$y = 0.0000$

TABLE 11b (CONTINUED)

$s^2D - p (3) 4$	2.0000	$x = 1.0000$
$s^4D - p (1) 0$	0.4444	$x = 0.5000$
$s^4D - p (1) 1$	1.3333	$x = 0.0000$
$s^4D - p (1) 2$	2.2222	$x = 0.0000$
		$z = 0.4500$
$s^4D - p (2) 1$	1.3333	$x = 0.7000$
$s^4D - p (2) 2$	2.2222	$x = 0.0000$
		$z = 0.0300$
$s^4D - p (2) 3$	3.1111	$x = 0.0000$
$s^4D - p (3) 2$	2.2222	$x = 0.8571$
		$z = 0.0000$
$s^4D - p (3) 3$	3.1111	$x = 0.8265$
$s^4D - p (3) 4$	4.0000	$x = 0.8333$
		$z = 0.0068$
$p^{(2s+1)L - s (J_p) K}$	$\sum_{J_p'} s$	
$p^2P - s (1) 1$	0.4000	$x = 0.1667$
$p^2P - s (2) 2$	0.6667	$x = 0.4000$
$p^2P - s (3) 3$	0.9333	$x = 1.0000$
$p^4P - s (1) 1$	0.8000	$x = 0.0250$
$p^4P - s (2) 2$	1.8333	$x = 0.2100$
$p^4P - s (3) 3$	1.8667	$x = 0.8571$
$p^2D - s (1) 1$	0.6667	$x = 0.1000$
$p^2D - s (2) 2$	1.1111	$x = 0.3733$
$p^2D - s (3) 3$	1.5556	$x = 0.0000$
$p^4D - s (1) 1$	1.3333	$x = 0.1750$
$p^4D - s (2) 2$	2.2222	$x = 0.1333$
		$z = 0.1633$
$p^4D - s (3) 3$	3.1111	$x = 0.7347$
$p^2F - s (1) 1$	0.9333	$x = 1.0000$
$p^2F - s (2) 2$	1.5556	$x = 0.3810$
$p^2F - s (3) 3$	2.1778	$x = 0.0000$
$p^4F - s (1) 1$	1.8667	$x = 0.4000$
$p^4F - s (2) 2$	3.1111	$x = 0.5714$
$p^4F - s (3) 3$	4.3556	$x = 0.7653$
		$z = 0.0044$
$p^{(2s+1)L - d (J_p) K}$	$\sum_{J_p'} s$	
$p^2P - d (1) 1$	0.2640	$x = 0.0404$
$p^2P - d (1) 2$	0.1267	$x = 0.2579$
$p^2P - d (1) 3$	0.0093	$x = 1.0000$
$p^2P - d (2) 0$	0.1000	$x = 0.3333$
$p^2P - d (2) 1$	0.2400	$x = 0.1667$
$p^2P - d (2) 2$	0.2333	$x = 0.1000$
$p^2P - d (2) 3$	0.0933	$x = 1.0000$
		$z = 0.1667$
$p^2P - d (3) 1$	0.3360	$x = 0.1667$
		$z = 0.0000$

TABLE 11b (CONTINUED)

$p^2P - d(3) 2$	0.3733	$x = 0.1000$	$y = 0.9000$			
$p^2P - d(3) 3$	0.2240	$x = 1.0000$				
$p^4P - d(1) 1$	0.5280	$x = 0.0004$	0.0202	$y = 0.1114$	0.1578	$z = 0.7102$
$p^4P - d(1) 2$	0.2533	$x = 0.0111$	0.0637	$y = 0.0008$	$z = 0.7600$	0.1645
$p^4P - d(1) 3$	0.0187	$x = 0.8571$	0.1000	$y = 0.0429$		
$p^4P - d(2) 0$	0.2000	$x = 0.8333$	$y = 0.1667$			
$p^4P - d(2) 1$	0.4800	$x = 0.0562$	0.0833	$y = 0.7042$	0.1042	$z = 0.0521$
$p^4P - d(2) 2$	0.4667	$x = 0.2100$	0.0100	$y = 0.0150$	$z = 0.6400$	0.1250
$p^4P - d(2) 3$	0.1867	$x = 0.8571$	0.1000	$y = 0.0429$		
$p^4P - d(3) 1$	0.6720	$x = 0.9000$	0.0833	$y = 0.0167$	0.0000	$z = 0.0000$
$p^4P - d(3) 2$	0.7467	$x = 0.8400$	0.0900	$y = 0.0600$	$z = 0.0100$	0.0000
$p^4P - d(3) 3$	0.4480	$x = 0.8571$	0.1000	$y = 0.0429$		
$p^2D - d(1) 1$	0.1267	$x = 0.0053$	0.2368	$y = 0.7579$		
$p^2D - d(1) 2$	0.4000	$x = 0.0233$	0.2400	$y = 0.0017$	$z = 0.7350$	
$p^2D - d(1) 3$	0.1400	$x = 0.3810$	0.6000	$y = 0.0190$		
$p^2D - d(2) 0$	0.0333	$x = 1.0000$				
$p^2D - d(2) 1$	0.1444	$x = 0.1923$	0.0385	$y = 0.7692$		
$p^2D - d(2) 2$	0.3333	$x = 0.2689$	0.2800	$y = 0.0700$	$z = 0.3811$	
$p^2D - d(2) 3$	0.4667	$x = 0.2857$	0.5556	$y = 0.1587$		
$p^2D - d(2) 4$	0.1333	$x = 1.0000$				
$p^2D - d(3) 1$	0.0622	$x = 0.4000$	0.5000	$y = 0.1000$		
$p^2D - d(3) 2$	0.2667	$x = 0.2844$	0.1400	$y = 0.5600$	$z = 0.0156$	
$p^2D - d(3) 3$	0.5600	$x = 0.1429$	0.0444	$y = 0.8127$		
$p^2D - d(3) 4$	0.6667	$x = 1.0000$				
$p^4D - d(1) 1$	0.2533	$x = 0.0092$	0.0526	$y = 0.4447$	0.3289	$z = 0.1645$
$p^4D - d(1) 2$	0.8000	$x = 0.0000$	0.0029	$y = 0.0408$	0.0075	
		$z = 0.4800$	0.4688			
$p^4D - d(1) 3$	0.2800	$x = 0.0000$	0.0333	$y = 0.0000$	$z = 0.6667$	0.3000
$p^4D - d(2) 0$	0.0667	$x = 0.5000$	$y = 0.5000$			
$p^4D - d(2) 1$	0.2889	$x = 0.3365$	0.3077	$y = 0.0962$	0.1731	$z = 0.0865$
$p^4D - d(2) 2$	0.6667	$x = 0.0127$	0.0225	$y = 0.5467$	0.3150	
		$z = 0.0156$	0.0875			
$p^4D - d(2) 3$	0.9333	$x = 0.0612$	0.0057	$y = 0.0023$	$z = 0.6531$	0.2778
$p^4D - d(2) 4$	0.2667	$x = 0.8333$	0.1429	$y = 0.0238$		
$p^4D - d(3) 1$	0.1244	$x = 0.7000$	0.2500	$y = 0.0500$	0.0000	$z = 0.0000$
$p^4D - d(3) 2$	0.5333	$x = 0.6349$	0.1800	$y = 0.1073$	0.0700	
		$z = 0.0078$	0.0000			
$p^4D - d(3) 3$	1.1200	$x = 0.7653$	0.1637	$y = 0.0283$	$z = 0.0204$	0.0222
$p^4D - d(3) 4$	1.3333	$x = 0.8333$	0.1429	$y = 0.0238$		
$p^2F - d(1) 1$	0.0093	$x = 1.0000$				
$p^2F - d(1) 2$	0.1400	$x = 0.0000$	0.0667	$y = 0.9333$		
$p^2F - d(1) 3$	0.7840	$x = 0.0000$	0.0476	$y = 0.0000$	$z = 0.9524$	
$p^2F - d(2) 1$	0.0156	$x = 1.0000$				
$p^2F - d(2) 2$	0.1000	$x = 0.1693$	0.0667	$y = 0.7640$		
$p^2F - d(2) 3$	0.3733	$x = 0.3061$	0.2744	$y = 0.0113$	$z = 0.4082$	
$p^2F - d(2) 4$	1.0667	$x = 0.4167$	0.5714	$y = 0.0119$		
$p^2F - d(3) 1$	0.0018	$x = 1.0000$				

TABLE 11b (CONTINUED)

$p^2F - d(3) 2$	0.0267	$x = 0.3968$	0.4000	$y = 0.2032$		
$p^2F - d(3) 3$	0.1493	$x = 0.3189$	0.2177	$y = 0.4252$	$z = 0.0383$	
$p^2F - d(3) 4$	0.5333	$x = 0.1667$	0.0893	$y = 0.7440$		
$p^2F - d(3) 5$	1.4667	$x = 1.0000$				
$p^4F - d(1) 1$	0.0187	$x = 0.4000$	0.5000	$y = 0.1000$		
$p^4F - d(1) 2$	0.2800	$x = 0.0000$	0.0267	$y = 0.3733$	0.5400	$z = 0.0600$
$p^4F - d(1) 3$	1.5680	$x = 0.0000$	0.0000	$y = 0.0000$	0.0190	
		$z = 0.3810$	0.6000			
$p^4F - d(2) 1$	0.0311	$x = 0.4000$	0.5000	$y = 0.1000$		
$p^4F - d(2) 2$	0.2000	$x = 0.2540$	0.2400	$y = 0.1431$	0.3267	$z = 0.0363$
$p^4F - d(2) 3$	0.7467	$x = 0.0000$	0.0170	$y = 0.4592$	0.3274	
		$z = 0.0408$	0.1556			
$p^4F - d(2) 4$	2.1533	$x = 0.0000$	0.0179	$y = 0.0000$	$z = 0.6250$	0.3571
$p^4F - d(3) 1$	0.0036	$x = 0.4000$	0.5000	$y = 0.1000$		
$p^4F - d(3) 2$	0.0533	$x = 0.5952$	0.3600	$y = 0.0003$	0.0400	$z = 0.0044$
$p^4F - d(3) 3$	0.2987	$x = 0.4650$	0.1594	$y = 0.2126$	0.1572	
		$z = 0.0010$	0.0048			
$p^4F - d(3) 4$	1.0667	$x = 0.6875$	0.1786	$y = 0.0156$	$z = 0.0625$	0.0558
$p^4F - d(3) 5$	2.9333	$x = 0.8182$	0.1667	$y = 0.0152$		
		$z = 0.0010$	0.0048			
$d(2s+1)L - p(J_p)(K)$	$\sum_{J_p} g$					
$d^2S - p(1) 0$	0.0444	$x = 1.0000$				
$d^2S - p(1) 1$	0.0533	$x = 0.3333$	$y = 0.6667$			
$d^2S - p(1) 2$	0.0022	$x = 1.0000$				
$d^2S - p(2) 1$	0.1000	$x = 0.3333$	$y = 0.6667$			
$d^2S - p(2) 2$	0.0533	$x = 1.0000$				
$d^2S - p(3) 2$	0.1867	$x = 1.0000$				
$d^4S - p(1) 0$	0.0889	$x = 1.0000$				
$d^4S - p(1) 1$	0.0667	$x = 0.8333$	$y = 0.1667$			
$d^4S - p(1) 2$	0.0044	$x = 0.9000$	$y = 0.1000$			
$d^4S - p(2) 1$	0.2000	$x = 0.8333$	$y = 0.1667$			
$d^4S - p(2) 2$	0.0667	$x = 0.9000$	$y = 0.1000$			
$d^4S - p(3) 2$	0.3733	$x = 0.9000$	$y = 0.1000$			
$d^2P - p(1) 0$	0.1000	$x = 0.3333$	$y = 0.6667$			
$d^2P - p(1) 1$	0.1200	$x = 0.4444$	0.2778	$y = 0.1389$	$z = 0.1389$	
$d^2P - p(1) 2$	0.0200	$x = 0.3000$	0.1667	$y = 0.5333$		
$d^2P - p(2) 1$	0.2400	$x = 0.1667$	0.4167	$y = 0.2083$	$z = 0.2083$	
$d^2P - p(2) 2$	0.1444	$x = 0.1923$	0.0885	$y = 0.7692$		
$d^2P - p(2) 3$	0.0156	$x = 1.0000$				
$d^2P - p(3) 2$	0.4356	$x = 0.0143$	0.2857	$y = 0.7000$		
$d^2P - p(3) 3$	0.1244	$x = 1.0000$				
$d^4P - p(1) 0$	0.2000	$x = 0.8333$	$y = 0.1667$			
$d^4P - p(1) 1$	0.2400	$x = 0.3375$	0.2222	$y = 0.3361$	0.0694	$z = 0.0347$
$d^4P - p(1) 2$	0.0400	$x = 0.6300$	0.1633	$y = 0.0450$	$z = 0.1200$	0.0417
$d^4P - p(2) 1$	0.4800	$x = 0.3062$	0.0833	$y = 0.0375$	0.1042	$z = 0.4688$

TABLE 11b (CONTINUED)

$d^4P - p(2 2)$	$z = 0.2889$	$x = 0.7915$	$y = 0.1300$	$z = 0.0123$	0.0096
$d^4P - p(2 3)$	0.0311	$z = 0.8571$	0.1000	$y = 0.0429$	
$d^4P - p(3 2)$	0.8711	$x = 0.4800$	0.0014	$y = 0.0343$	$z = 0.4129$
$d^4P - p(3 3)$	0.2489	$x = 0.8571$	0.1000	$y = 0.0429$	
$d^2D - p(1 0)$	0.0778	$x = 1.0000$			
$d^2D - p(1 1)$	0.2333	$x = 0.3000$	0.1667	$y = 0.5333$	
$d^2D - p(1 2)$	0.0889	$x = 0.4050$	0.2800	$y = 0.1575$	$z = 0.1575$
$d^2D - p(2 1)$	0.2333	$x = 0.1000$	0.5000	$y = 0.4000$	
$d^2D - p(2 2)$	0.3333	$x = 0.2689$	0.2800	$y = 0.3811$	$z = 0.0700$
$d^2D - p(2 3)$	0.1000	$x = 0.1693$	0.0667	$y = 0.7640$	
$d^2D - p(3 2)$	0.3873	$x = 0.0560$	0.3374	$y = 0.5998$	$z = 0.0069$
$d^2D - p(3 3)$	0.4889	$x = 0.0043$	0.1091	$y = 0.8866$	
$d^2D - p(3 4)$	0.0571	$x = 1.0000$			
$d^4D - p(1 0)$	0.1556	$x = 0.5000$	$y = 0.5000$		
$d^4D - p(1 1)$	0.4667	$x = 0.5250$	0.3333	$y = 0.0167$	0.0833
$d^4D - p(1 2)$	0.1778	$x = 0.2571$	0.1406	$y = 0.3616$	0.2187
		$z = 0.0000$	0.0219		
$d^4D - p(2 1)$	0.4667	$x = 0.1750$	0.0000	$y = 0.4500$	0.2500
$d^4D - p(2 2)$	0.6667	$x = 0.4571$	0.1469	$y = 0.1334$	0.0350
		$z = 0.1400$	0.0875		
$d^4D - p(2 3)$	0.2000	$x = 0.7347$	0.1670	$y = 0.0272$	$z = 0.0378$
$d^4D - p(3 2)$	0.7746	$x = 0.4047$	0.0109	$y = 0.3778$	0.0861
		$z = 0.0861$	0.0344		
$d^4D - p(3 3)$	0.9778	$x = 0.6763$	0.0654	$y = 0.0250$	$z = 0.1787$
$d^4D - p(3 4)$	0.1143	$x = 0.8333$	0.1429	$y = 0.0238$	
$d^2F - p(1 1)$	0.2800	$x = 1.0000$			
$d^2F - p(1 2)$	0.2800	$x = 0.2857$	0.2000	$y = 0.5143$	
$d^2F - p(2 1)$	0.0933	$x = 1.0000$			
$d^2F - p(2 2)$	0.4667	$x = 0.2857$	0.5556	$y = 0.1587$	
$d^2F - p(2 3)$	0.3733	$x = 0.3061$	0.2744	$y = 0.4082$	$z = 0.0113$
$d^2F - p(3 2)$	0.0978	$x = 0.3506$	0.5939	$y = 0.0554$	
$d^2F - p(3 3)$	0.8089	$x = 0.0177$	0.1340	$y = 0.8477$	$z = 0.0007$
$d^2F - p(3 4)$	0.4000	$x = 0.0000$	0.0357	$y = 0.9643$	
$d^4F - p(1 1)$	0.5600	$x = 0.4000$	0.5000	$y = 0.1000$	
$d^4F - p(1 2)$	0.5600	$x = 0.4286$	0.3200	$y = 0.0514$	0.1800
$d^4F - p(2 1)$	0.1867	$x = 0.4000$	0.5000	$y = 0.1000$	
$d^4F - p(2 2)$	0.3333	$x = 0.4286$	0.1422	$y = 0.2292$	0.1800
$d^4F - p(2 3)$	0.7467	$x = 0.4464$	0.1531	$y = 0.2041$	0.1200
		$z = 0.0479$	0.0286		
$d^4F - p(3 2)$	0.1956	$x = 0.5260$	0.2048	$y = 0.1601$	0.0982
$d^4F - p(3 3)$	1.6178	$x = 0.6439$	0.0795	$y = 0.1884$	0.0659
		$z = 0.0157$	0.0066		
$d^4F - p(3 4)$	0.8000	$x = 0.7639$	0.1270	$y = 0.0174$	$z = 0.0694$
$d^2G - p(1 2)$	0.7200	$x = 1.0000$			
$d^2G - p(2 2)$	0.1333	$x = 1.0000$			
$d^2G - p(2 3)$	1.0667	$x = 0.4167$	0.5714	$y = 0.0119$	

TABLE 11b (CONTINUED)

$d^2G - p(3 2)$	0.0038	$x = 1.0000$			
$d^2G - p(3 3)$	0.1333	$x = 0.4167$	0.5714	$y = 0.0119$	
$d^2G - p(3 4)$	1.5429	$x = 0.0000$	0.0278	$y = 0.9722$	$z = 0.0000$
$d^4G - p(1 2)$	1.4400	$x = 0.3571$	0.6000	$y = 0.0429$	
$d^4G - p(2 2)$	0.2667	$x = 0.3571$	0.6000	$y = 0.0429$	
$d^4G - p(2 3)$	2.1333	$x = 0.5729$	0.3189	$y = 0.0680$	0.0383
$d^4G - p(3 2)$	0.0076	$x = 0.3571$	0.6000	$y = 0.0429$	
$d^4G - p(3 3)$	0.2667	$x = 0.5729$	0.3189	$y = 0.0680$	0.0383
$d^4G - p(3 4)$	3.0657	$x = 0.7778$	0.1485	$y = 0.0540$	0.0176
		$z = 0.0015$	0.0005		
$d^{(2s+1)L} - f(J_p K)$	$\sum_{J_p'}^s$				
$d^2S - f(1 2)$	0.0800	$x = 1.0000$			
$d^2S - f(2 1)$	0.0444	$x = 0.3333$	$y = 0.6667$		
$d^2S - f(2 2)$	0.0889	$x = 1.0000$			
$d^2S - f(3 0)$	0.0444	$x = 1.0000$			
$d^2S - f(3 1)$	0.0889	$x = 0.3333$	$y = 0.6667$		
$d^2S - f(3 2)$	0.0533	$x = 1.0000$			
$d^4S - f(1 2)$	0.1600	$x = 0.9000$	$y = 0.1000$		
$d^4S - f(2 1)$	0.0889	$x = 0.8333$	$y = 0.1667$		
$d^4S - f(2 2)$	0.1778	$x = 0.9000$	$y = 0.1000$		
$d^4S - f(3 0)$	0.0889	$x = 1.0000$			
$d^4S - f(3 1)$	0.1778	$x = 0.8333$	$y = 0.1667$		
$d^4S - f(3 2)$	0.1067	$x = 0.9000$	$y = 0.1000$		
$d^2P - f(1 2)$	0.1867	$x = 0.2286$	0.6429	$y = 0.1286$	
$d^2P - f(1 3)$	0.0533	$x = 1.0000$			
$d^2P - f(2 1)$	0.1511	$x = 0.0033$	0.1307	$y = 0.0654$	$z = 0.8007$
$d^2P - f(2 2)$	0.0889	$x = 0.0000$	0.1667	$y = 0.8333$	
$d^2P - f(2 3)$	0.1600	$x = 1.0000$			
$d^2P - f(3 0)$	0.0444	$x = 0.3333$	$y = 0.6667$		
$d^2P - f(3 1)$	0.1422	$x = 0.4444$	0.2778	$y = 0.1389$	$z = 0.1389$
$d^2P - f(3 2)$	0.2133	$x = 0.3000$	0.1667	$y = 0.5333$	
$d^2P - f(3 3)$	0.1600	$x = 1.0000$			
$d^4P - f(1 2)$	0.3733	$x = 0.0300$	0.0514	$y = 0.0021$	$z = 0.7557$
$d^4P - f(1 3)$	0.1067	$x = 0.8571$	0.1000	$y = 0.0429$	
$d^4P - f(2 1)$	0.3022	$x = 0.0397$	0.0016	$y = 0.0641$	0.4003
$d^4P - f(2 2)$	0.1778	$x = 0.6300$	0.0133	$y = 0.0450$	$z = 0.2700$
$d^4P - f(2 3)$	0.3200	$x = 0.8571$	0.1000	$y = 0.0429$	
$d^4P - f(3 0)$	0.0889	$x = 0.8333$	$y = 0.1667$		
$d^4P - f(3 1)$	0.2844	$x = 0.3375$	0.2222	$y = 0.3361$	0.0694
$d^4P - f(3 2)$	0.4267	$x = 0.6300$	0.1633	$y = 0.0450$	$z = 0.1200$
$d^4P - f(3 3)$	0.8200	$x = 0.8571$	0.1000	$y = 0.0429$	
$d^2D - f(1 2)$	0.1660	$x = 0.0560$	0.3374	$y = 0.0069$	$z = 0.5998$
$d^2D - f(1 3)$	0.2095	$x = 0.3506$	0.5939	$y = 0.0554$	
$d^2D - f(1 4)$	0.0245	$x = 1.0000$			

TABLE IIB (CONTINUED)

$d^4F - f(2)[5]$	0.3492	$x = 0.8182$	$y = 0.1667$	$z = 0.0152$
$d^4F - f(3)[1]$	0.0076	$x = 0.4000$	$y = 0.5000$	$z = 0.1000$
$d^4F - f(3)[2]$	0.0686	$x = 0.4288$	$y = 0.3200$	$z = 0.0514$
$d^4F - f(3)[3]$	0.3022	$x = 0.2188$	$y = 0.1080$	$z = 0.3611$
		$z = 0.0041$	$y = 0.0454$	
$d^4F - f(3)[4]$	0.8381	$x = 0.5093$	$y = 0.1601$	$z = 0.0116$
$d^4F - f(3)[5]$	1.3968	$x = 0.8182$	$y = 0.1667$	$z = 0.0152$
$d^2G - f(1)[2]$	0.0016	$x = 1.0000$		
$d^2G - f(1)[3]$	0.0571	$x = 0.0000$	$y = 0.0357$	$z = 0.9643$
$d^2G - f(1)[4]$	0.6612	$x = 0.0000$	$y = 0.0278$	$z = 0.0000$
$d^2G - f(2)[2]$	0.0041	$x = 1.0000$		
$d^2G - f(2)[3]$	0.0508	$x = 0.0694$	$y = 0.0134$	$z = 0.9172$
$d^2G - f(2)[4]$	0.2721	$x = 0.1901$	$y = 0.1304$	$z = 0.0043$
$d^2G - f(2)[5]$	0.8750	$x = 0.4364$	$y = 0.5556$	$z = 0.0081$
$d^2G - f(3)[2]$	0.0011	$x = 1.0000$		
$d^2G - f(3)[3]$	0.0127	$x = 0.2778$	$y = 0.2143$	$z = 0.5079$
$d^2G - f(3)[4]$	0.0769	$x = 0.3725$	$y = 0.2997$	$z = 0.1639$
$d^2G - f(3)[5]$	0.3492	$x = 0.2727$	$y = 0.2222$	$z = 0.5051$
$d^2G - f(3)[6]$	1.2881	$x = 1.0000$		
$d^4G - f(1)[2]$	0.0033	$x = 0.3571$	$y = 0.6000$	$z = 0.0429$
$d^4G - f(1)[3]$	0.1143	$x = 0.0000$	$y = 0.0128$	$z = 0.3444$
$d^4G - f(1)[4]$	1.3224	$x = 0.0000$	$y = 0.0000$	$z = 0.0000$
		$z = 0.3472$	$y = 0.6429$	
$d^4G - f(2)[2]$	0.0082	$x = 0.3571$	$y = 0.6000$	$z = 0.0429$
$d^4G - f(2)[3]$	0.1016	$x = 0.0955$	$y = 0.1196$	$z = 0.2425$
$d^4G - f(2)[4]$	0.5442	$x = 0.0000$	$y = 0.0059$	$z = 0.2614$
		$z = 0.1393$	$y = 0.3616$	
$d^4G - f(2)[5]$	1.7460	$x = 0.0000$	$y = 0.0111$	$z = 0.0000$
$d^4G - f(3)[2]$	0.0022	$x = 0.3571$	$y = 0.6000$	$z = 0.0429$
$d^4G - f(3)[3]$	0.0254	$x = 0.3819$	$y = 0.3061$	$z = 0.0709$
$d^4G - f(3)[4]$	0.1578	$x = 0.1975$	$y = 0.0913$	$z = 0.3583$
		$z = 0.0094$	$y = 0.0610$	
$d^4G - f(3)[5]$	0.6984	$x = 0.4835$	$y = 0.1552$	$z = 0.0074$
$d^4G - f(3)[6]$	2.4762	$x = 0.8077$	$y = 0.1818$	$z = 0.0105$

$f^{(2S+1)L} - d(J_p)|K$

$f^2P - d(1)[1]$	0.1440	$x = 0.1667$	$y = 0.0000$	$z = 0.8333$
$f^2P - d(1)[2]$	0.0267	$x = 0.1000$	$y = 0.0000$	$z = 0.9000$
$f^2P - d(1)[3]$	0.0008	$x = 1.0000$		
$f^2P - d(2)[0]$	0.0444	$x = 0.3333$	$y = 0.6667$	
$f^2P - d(2)[1]$	0.1511	$x = 0.0033$	$y = 0.1307$	$z = 0.8007$
$f^2P - d(2)[2]$	0.0825	$x = 0.0231$	$y = 0.0513$	$z = 0.9256$
$f^2P - d(2)[3]$	0.0076	$x = 1.0000$		
$f^2P - d(3)[1]$	0.2497	$x = 0.0579$	$y = 0.6923$	$z = 0.2215$
$f^2P - d(3)[2]$	0.1321	$x = 0.0231$	$y = 0.3205$	$z = 0.6564$
$f^2P - d(3)[3]$	0.0183	$x = 1.0000$		

TABLE IID (CONTINUED)

$d^2D - f(2)[1]$	0.0825	$x = 0.0231$	$y = 0.0513$	$z = 0.9256$
$d^2D - f(2)[2]$	0.2086	$x = 0.0626$	$y = 0.0061$	$z = 0.0548$
$d^2D - f(2)[3]$	0.1714	$x = 0.1429$	$y = 0.4000$	$z = 0.8765$
$d^2D - f(2)[4]$	0.2041	$x = 1.0000$		
$d^2D - f(3)[0]$	0.0068	$x = 1.0000$		
$d^2D - f(3)[1]$	0.0508	$x = 0.3000$	$y = 0.1667$	$z = 0.5833$
$d^2D - f(3)[2]$	0.1741	$x = 0.4050$	$y = 0.2800$	$z = 0.1575$
$d^2D - f(3)[3]$	0.3429	$x = 0.2857$	$y = 0.2000$	$z = 0.5143$
$d^2D - f(3)[4]$	0.3592	$x = 1.0000$		
$d^4D - f(1)[2]$	0.3320	$x = 0.0003$	$y = 0.0061$	$z = 0.1032$
		$z = 0.4686$	$y = 0.4217$	
$d^4D - f(1)[3]$	0.4190	$x = 0.0083$	$y = 0.0209$	$z = 0.0003$
$d^4D - f(1)[4]$	0.0490	$x = 0.8533$	$y = 0.1429$	$z = 0.0238$
$d^4D - f(2)[1]$	0.1651	$x = 0.0404$	$y = 0.1603$	$z = 0.3282$
$d^4D - f(2)[2]$	0.4172	$x = 0.0224$	$y = 0.0020$	$z = 0.1616$
		$z = 0.2465$	$y = 0.3728$	
$d^4D - f(2)[3]$	0.3429	$x = 0.2755$	$y = 0.0041$	$z = 0.0102$
$d^4D - f(2)[4]$	0.4082	$x = 0.8333$	$y = 0.1429$	$z = 0.0238$
$d^4D - f(3)[0]$	0.0127	$x = 0.5000$	$y = 0.5000$	
$d^4D - f(3)[1]$	0.1016	$x = 0.5250$	$y = 0.3333$	$z = 0.0167$
$d^4D - f(3)[2]$	0.3483	$x = 0.2571$	$y = 0.1406$	$z = 0.3616$
		$z = 0.0000$	$y = 0.0219$	
$d^4D - f(3)[3]$	0.6857	$x = 0.5510$	$y = 0.1653$	$z = 0.0204$
$d^4D - f(3)[4]$	0.7184	$x = 0.8333$	$y = 0.1429$	$z = 0.0238$
$d^2F - f(1)[2]$	0.0419	$x = 0.0043$	$y = 0.1091$	$z = 0.8868$
$d^2F - f(1)[3]$	0.3467	$x = 0.0177$	$y = 0.1340$	$z = 0.0007$
$d^2F - f(1)[4]$	0.1714	$x = 0.4187$	$y = 0.5714$	$z = 0.0119$
$d^2F - f(2)[1]$	0.0076	$x = 1.0000$		
$d^2F - f(2)[2]$	0.0857	$x = 0.0476$	$y = 0.0000$	$z = 0.9524$
$d^2F - f(2)[3]$	0.2844	$x = 0.1347$	$y = 0.0689$	$z = 0.0215$
$d^2F - f(2)[4]$	0.3810	$x = 0.3403$	$y = 0.5357$	$z = 0.1240$
$d^2F - f(2)[5]$	0.1746	$x = 1.0000$		
$d^2F - f(3)[1]$	0.0038	$x = 1.0000$		
$d^2F - f(3)[2]$	0.0343	$x = 0.2857$	$y = 0.2000$	$z = 0.5143$
$d^2F - f(3)[3]$	0.1511	$x = 0.3842$	$y = 0.2917$	$z = 0.1621$
$d^2F - f(3)[4]$	0.4190	$x = 0.2778$	$y = 0.2143$	$z = 0.5079$
$d^2F - f(3)[5]$	0.6984	$x = 1.0000$		
$d^4F - f(1)[2]$	0.0838	$x = 0.0065$	$y = 0.0109$	$z = 0.3887$
$d^4F - f(1)[3]$	0.6933	$x = 0.0000$	$y = 0.0010$	$z = 0.0265$
		$z = 0.3980$	$y = 0.5744$	
$d^4F - f(1)[4]$	0.3429	$x = 0.0000$	$y = 0.0179$	$z = 0.0000$
$d^4F - f(2)[1]$	0.0152	$x = 0.4000$	$y = 0.5000$	$z = 0.1000$
$d^4F - f(2)[2]$	0.1714	$x = 0.0714$	$y = 0.1200$	$z = 0.2752$
$d^4F - f(2)[3]$	0.5689	$x = 0.0047$	$y = 0.0036$	$z = 0.2233$
		$z = 0.1743$	$y = 0.3857$	
$d^4F - f(2)[4]$	0.7619	$x = 0.0509$	$y = 0.0008$	$z = 0.0012$
		$z = 0.6123$	$y = 0.3348$	

TABLE 11b (CONTINUED)

$f^4 F - d(3)[5]$	0.4990	$x = 0.0485$	0.2120	$y = 0.7362$	$z = 0.0033$
$f^2 F - d(3)[4]$	0.2159	$x = 0.0033$	0.0630	$y = 0.9337$	
$f^2 F - d(3)[5]$	0.0116	$x = 1.0000$			
$f^4 F - d(1)[1]$	0.1920	$x = 0.4000$	0.5000	$y = 0.1000$	
$f^4 F - d(1)[2]$	0.4800	$x = 0.5952$	0.3600	$y = 0.0003$	0.0400
$f^4 F - d(1)[3]$	0.1280	$x = 0.4650$	0.1594	$y = 0.2126$	0.1572
		$z = 0.0010$	0.0048		
$f^4 F - d(2)[1]$	0.3200	$x = 0.4000$	0.5000	$y = 0.1000$	
$f^4 F - d(2)[2]$	0.3429	$x = 0.2143$	0.0400	$y = 0.3457$	0.3600
$f^4 F - d(2)[3]$	0.5689	$x = 0.7266$	0.1758	$y = 0.0260$	0.0211
		$z = 0.0264$	0.0241		
$f^4 F - d(2)[4]$	0.1016	$x = 0.7957$	0.1749	$y = 0.0181$	$z = 0.0029$
$f^4 F - d(3)[1]$	0.0366	$x = 0.4000$	0.5000	$y = 0.1000$	
$f^4 F - d(3)[2]$	0.3771	$x = 0.4870$	0.1782	$y = 0.1894$	0.1809
$f^4 F - d(3)[3]$	0.9979	$x = 0.5346$	0.0545	$y = 0.2671$	0.0995
		$z = 0.0295$	0.0147		
$f^4 F - d(3)[4]$	0.4317	$x = 0.7249$	0.1124	$y = 0.0165$	$z = 0.1068$
$f^4 F - d(3)[5]$	0.0233	$x = 0.8182$	0.1667	$y = 0.0152$	
$f^2 G - d(1)[2]$	0.2857	$x = 1.0000$			
$f^2 G - d(1)[3]$	0.2286	$x = 0.3750$	0.3571	$y = 0.2679$	
$f^2 G - d(2)[2]$	0.2041	$x = 1.0000$			
$f^2 G - d(2)[3]$	0.3810	$x = 0.3403$	0.5357	$y = 0.1240$	
$f^2 G - d(2)[4]$	0.2721	$x = 0.1901$	0.1304	$y = 0.6752$	$z = 0.0043$
$f^2 G - d(3)[2]$	0.0204	$x = 1.0000$			
$f^2 G - d(3)[3]$	0.2159	$x = 0.3954$	0.5672	$y = 0.0373$	
$f^2 G - d(3)[4]$	0.7891	$x = 0.0131$	0.0851	$y = 0.9014$	$z = 0.0003$
$f^2 G - d(3)[5]$	0.1746	$x = 0.0000$	0.0222	$y = 0.9778$	
$f^4 G - d(1)[2]$	0.5714	$x = 0.3571$	0.6000	$y = 0.0429$	
$f^4 G - d(1)[3]$	0.4571	$x = 0.5156$	0.3686	$y = 0.0153$	0.0957
$f^4 G - d(2)[2]$	0.4082	$x = 0.3571$	0.6000	$y = 0.0429$	
$f^4 G - d(2)[3]$	0.7619	$x = 0.4679$	0.2315	$y = 0.1499$	0.1435
$f^4 G - d(2)[4]$	0.5442	$x = 0.6300$	0.1797	$y = 0.0913$	0.0741
		$z = 0.0148$	0.0100		
$f^4 G - d(3)[2]$	0.0408	$x = 0.3571$	0.6000	$y = 0.0429$	
$f^4 G - d(3)[3]$	0.4317	$x = 0.5437$	0.2917	$y = 0.0937$	0.0675
$f^4 G - d(3)[4]$	1.5782	$x = 0.6952$	0.1184	$y = 0.1253$	0.0522
		$z = 0.0061$	0.0028		
$f^4 G - d(3)[5]$	0.3492	$x = 0.7756$	0.1544	$y = 0.0119$	$z = 0.0446$
$f^2 H - d(1)[3]$	0.6286	$x = 1.0000$			
$f^2 H - d(2)[3]$	0.1746	$x = 1.0000$			
$f^2 H - d(2)[4]$	0.8730	$x = 0.4364$	0.5556	$y = 0.0081$	
$f^2 H - d(3)[3]$	0.0116	$x = 1.0000$			
$f^2 H - d(3)[4]$	0.1746	$x = 0.4364$	0.5556	$y = 0.0081$	
$f^2 H - d(3)[5]$	1.2804	$x = 0.0000$	0.0182	$y = 0.9818$	$z = 0.0000$
$f^4 H - d(1)[3]$	1.2571	$x = 0.3333$	0.6429	$y = 0.0238$	
$f^4 H - d(2)[3]$	0.3492	$x = 0.3333$	0.6429	$y = 0.0238$	

TABLE 11b (CONTINUED)

$f^4 P - d(1)[1]$	0.2880	$x = 0.9000$	0.0833	$y = 0.0167$	0.0000	$z = 0.0000$
$f^4 P - d(1)[2]$	0.0533	$x = 0.8400$	0.0900	$y = 0.0800$	$z = 0.0100$	0.0000
$f^4 P - d(1)[3]$	0.0015	$x = 0.8571$	0.1000	$y = 0.0429$		
$f^4 P - d(2)[0]$	0.0889	$x = 0.8333$	$y = 0.1667$			
$f^4 P - d(2)[1]$	0.3022	$x = 0.6353$	0.0016	$y = 0.3141$	0.0327	$z = 0.0163$
$f^4 P - d(2)[2]$	0.1651	$x = 0.7754$	0.0433	$y = 0.0554$	$z = 0.1131$	0.0128
$f^4 P - d(2)[3]$	0.0152	$x = 0.8571$	0.1000	$y = 0.0429$		
$f^4 P - d(3)[1]$	0.4993	$x = 0.0989$	0.0289	$y = 0.4059$	0.0141	$z = 0.4521$
$f^4 P - d(3)[2]$	0.2641	$x = 0.4362$	0.0003	$y = 0.0312$	$z = 0.4523$	0.0801
$f^4 P - d(3)[3]$	0.0366	$x = 0.8571$	0.1000	$y = 0.0429$		
$f^2 D - d(1)[1]$	0.1600	$x = 0.4000$	0.5000	$y = 0.1000$		
$f^2 D - d(1)[2]$	0.1143	$x = 0.2844$	0.1400	$y = 0.5600$	$z = 0.0156$	
$f^2 D - d(1)[3]$	0.0114	$x = 0.1429$	0.0444	$y = 0.8127$		
$f^2 D - d(2)[0]$	0.0889	$x = 1.0000$				
$f^2 D - d(2)[1]$	0.0889	$x = 0.0000$	0.1667	$y = 0.8333$		
$f^2 D - d(2)[2]$	0.2086	$x = 0.0626$	0.0061	$y = 0.8765$	$z = 0.0548$	
$f^2 D - d(2)[3]$	0.0857	$x = 0.0476$	0.0000	$y = 0.9524$		
$f^2 D - d(2)[4]$	0.0041	$x = 1.0000$				
$f^2 D - d(3)[1]$	0.1321	$x = 0.2077$	0.6282	$y = 0.1641$		
$f^2 D - d(3)[2]$	0.3256	$x = 0.0812$	0.3993	$y = 0.5054$	$z = 0.0140$	
$f^2 D - d(3)[3]$	0.1886	$x = 0.0130$	0.1455	$y = 0.8416$		
$f^2 D - d(3)[4]$	0.0204	$x = 1.0000$				
$f^4 D - d(1)[1]$	0.3200	$x = 0.7000$	0.2500	$y = 0.0500$	0.0000	$z = 0.0000$
$f^4 D - d(1)[2]$	0.2286	$x = 0.6349$	0.1800	$y = 0.1073$	0.0700	
		$z = 0.0078$	0.0000			
$f^4 D - d(1)[3]$	0.0229	$x = 0.7653$	0.1637	$y = 0.0283$	$z = 0.0204$	0.0222
$f^4 D - d(2)[0]$	0.1778	$x = 0.5000$	$y = 0.5000$			
$f^4 D - d(2)[1]$	0.1778	$x = 0.0000$	0.0833	$y = 0.4167$	0.3333	$z = 0.1667$
$f^4 D - d(2)[2]$	0.4172	$x = 0.8050$	0.1252	$y = 0.0089$	0.0030	
		$z = 0.0274$	0.0304			
$f^4 D - d(2)[3]$	0.1714	$x = 0.8265$	0.1361	$y = 0.0306$	$z = 0.0068$	0.0000
$f^4 D - d(2)[4]$	0.0082	$x = 0.8333$	0.1429	$y = 0.0238$		
$f^4 D - d(3)[1]$	0.2641	$x = 0.3635$	0.0256	$y = 0.3705$	0.1603	$z = 0.0801$
$f^4 D - d(3)[2]$	0.6512	$x = 0.3223$	0.0045	$y = 0.4177$	0.0944	
		$z = 0.1123$	0.0487			
$f^4 D - d(3)[3]$	0.3771	$x = 0.6262$	0.0534	$y = 0.0232$	$z = 0.2245$	0.0727
$f^4 D - d(3)[4]$	0.0408	$x = 0.8333$	0.1429	$y = 0.0238$		
$f^2 F - d(1)[1]$	0.0980	$x = 1.0000$				
$f^2 F - d(1)[2]$	0.2400	$x = 0.3968$	0.4000	$y = 0.2032$		
$f^2 F - d(1)[3]$	0.0640	$x = 0.3189$	0.2177	$y = 0.4252$	$z = 0.0383$	
$f^2 F - d(2)[1]$	0.1600	$x = 1.0000$				
$f^2 F - d(2)[2]$	0.1714	$x = 0.1429$	0.4000	$y = 0.4571$		
$f^2 F - d(2)[3]$	0.2844	$x = 0.1347$	0.0689	$y = 0.7749$	$z = 0.0215$	
$f^2 F - d(2)[4]$	0.0508	$x = 0.0694$	0.0134	$y = 0.9172$		
$f^2 F - d(3)[1]$	0.0183	$x = 1.0000$				
$f^2 F - d(3)[2]$	0.1886	$x = 0.3247$	0.5818	$y = 0.0935$		

TABLE 11b (CONTINUED)

$f^4H - d(2)[4]$	1.7460	$x = 0.5675$	$z = 0.0431$	$y = 0.0259$	$z = 0.0007$
$f^4H - d(3)[3]$	0.0233	$x = 0.3333$	$y = 0.6429$	$y = 0.0238$	
$f^4H - d(3)[4]$	0.3492	$x = 0.5675$	$z = 0.3630$	$y = 0.0431$	$z = 0.0007$
$f^4H - d(3)[5]$	2.5608	$x = 0.7810$	$y = 0.1688$	$y = 0.0365$	$z = 0.0128$
		$z = 0.0007$	$z = 0.0002$		
$f^{(2S+1)L - g(J_p)(K) \sum_{J,J'} S}$					
$f^2P - g(1)[3]$	0.1714	$x = 1.0000$			
$f^2P - g(2)[2]$	0.1270	$x = 0.4000$	$z = 0.5000$	$y = 0.1000$	
$f^2P - g(2)[3]$	0.1587	$x = 1.0000$			
$f^2P - g(3)[1]$	0.1714	$x = 0.1667$	$z = 0.0000$	$y = 0.8333$	
$f^2P - g(3)[2]$	0.1587	$x = 0.4000$	$z = 0.5000$	$y = 0.1000$	
$f^2P - g(3)[3]$	0.0698	$x = 1.0000$			
$f^4P - g(1)[3]$	0.3429	$x = 0.8571$	$z = 0.1000$	$y = 0.0429$	
$f^4P - g(2)[2]$	0.2540	$x = 0.2100$	$z = 0.1600$	$y = 0.0150$	$z = 0.4900$
$f^4P - g(2)[3]$	0.3175	$x = 0.8571$	$z = 0.1000$	$y = 0.0429$	
$f^4P - g(3)[1]$	0.3429	$x = 0.0250$	$z = 0.0833$	$y = 0.2667$	$z = 0.2083$
$f^4P - g(3)[2]$	0.3175	$x = 0.2100$	$z = 0.1600$	$y = 0.0150$	$z = 0.4900$
$f^4P - g(3)[3]$	0.1937	$x = 0.8571$	$z = 0.1000$	$y = 0.0429$	
$f^2D - g(1)[3]$	0.1964	$x = 0.3247$	$z = 0.5818$	$y = 0.0935$	
$f^2D - g(1)[4]$	0.0893	$x = 1.0000$			
$f^2D - g(2)[2]$	0.1927	$x = 0.0008$	$z = 0.0988$	$y = 0.0110$	$z = 0.8894$
$f^2D - g(2)[3]$	0.0496	$x = 0.0476$	$z = 0.0000$	$y = 0.9524$	
$f^2D - g(2)[4]$	0.2338	$x = 1.0000$			
$f^2D - g(3)[1]$	0.0476	$x = 0.1000$	$z = 0.0000$	$y = 0.9000$	
$f^2D - g(3)[2]$	0.1701	$x = 0.2844$	$z = 0.1400$	$y = 0.0156$	$z = 0.5600$
$f^2D - g(3)[3]$	0.2619	$x = 0.3968$	$z = 0.4000$	$y = 0.2032$	
$f^2D - g(3)[4]$	0.1871	$x = 1.0000$			
$f^4D - g(1)[3]$	0.3929	$x = 0.0250$	$z = 0.0134$	$y = 0.0009$	$z = 0.6698$
$f^4D - g(1)[4]$	0.1786	$x = 0.8333$	$z = 0.1429$	$y = 0.0238$	
$f^4D - g(2)[2]$	0.3855	$x = 0.0101$	$z = 0.0016$	$y = 0.0001$	$z = 0.0494$
		$z = 0.4447$	$z = 0.4941$		
$f^4D - g(2)[3]$	0.0992	$x = 0.8265$	$z = 0.1361$	$y = 0.0306$	$z = 0.0088$
$f^4D - g(2)[4]$	0.4677	$x = 0.8333$	$z = 0.1429$	$y = 0.0238$	
$f^4D - g(3)[1]$	0.0952	$x = 0.1750$	$z = 0.2500$	$y = 0.2000$	$z = 0.1250$
$f^4D - g(3)[2]$	0.3401	$x = 0.0571$	$z = 0.0672$	$y = 0.3506$	$z = 0.2800$
		$z = 0.0700$	$z = 0.1750$		
$f^4D - g(3)[3]$	0.5238	$x = 0.2755$	$z = 0.1311$	$y = 0.0102$	$z = 0.3832$
$f^4D - g(3)[4]$	0.3741	$x = 0.8333$	$z = 0.1429$	$y = 0.0238$	
$f^2F - g(1)[3]$	0.1299	$x = 0.0485$	$z = 0.2120$	$y = 0.0033$	$z = 0.7362$
$f^2F - g(1)[4]$	0.2361	$x = 0.3954$	$z = 0.5672$	$y = 0.0373$	
$f^2F - g(1)[5]$	0.0340	$x = 1.0000$			
$f^2F - g(2)[2]$	0.0483	$x = 0.0059$	$z = 0.0292$	$y = 0.9649$	
$f^2F - g(2)[3]$	0.2546	$x = 0.0186$	$z = 0.0012$	$y = 0.0139$	$z = 0.9663$
$f^2F - g(2)[4]$	0.1091	$x = 0.1667$	$z = 0.3571$	$y = 0.4762$	

TABLE 11b (CONTINUED)

$f^2F - g(2)[5]$	0.2546	$x = 1.0000$			
$f^2F - g(3)[1]$	0.0032	$x = 1.0000$			
$f^2F - g(3)[2]$	0.0397	$x = 0.1429$	$z = 0.0444$	$y = 0.8127$	
$f^2F - g(3)[3]$	0.1630	$x = 0.3189$	$z = 0.2177$	$y = 0.0383$	$z = 0.4252$
$f^2F - g(3)[4]$	0.3492	$x = 0.3750$	$z = 0.3571$	$y = 0.2679$	
$f^2F - g(3)[5]$	0.3783	$x = 1.0000$			
$f^4F - g(1)[3]$	0.2599	$x = 0.0002$	$z = 0.0022$	$y = 0.0752$	$z = 0.0053$
		$z = 0.3895$	$z = 0.5277$		
$f^4F - g(1)[4]$	0.4722	$x = 0.0060$	$z = 0.0097$	$y = 0.0001$	$z = 0.6296$
$f^4F - g(1)[5]$	0.0679	$x = 0.8182$	$z = 0.1667$	$y = 0.0152$	
$f^4F - g(2)[2]$	0.0966	$x = 0.0088$	$z = 0.0528$	$y = 0.3466$	$z = 0.0592$
$f^4F - g(2)[3]$	0.5093	$x = 0.0068$	$z = 0.0000$	$y = 0.0379$	$z = 0.0742$
		$z = 0.3201$	$z = 0.5610$		
$f^4F - g(2)[4]$	0.2183	$x = 0.3056$	$z = 0.0198$	$y = 0.0069$	$z = 0.4444$
$f^4F - g(2)[5]$	0.5093	$x = 0.8182$	$z = 0.1667$	$y = 0.0152$	
$f^4F - g(3)[1]$	0.0063	$x = 0.4000$	$z = 0.5000$	$y = 0.1000$	
$f^4F - g(3)[2]$	0.0794	$x = 0.2145$	$z = 0.2178$	$y = 0.1679$	$z = 0.0400$
$f^4F - g(3)[3]$	0.3259	$x = 0.0744$	$z = 0.0574$	$y = 0.3593$	$z = 0.2861$
		$z = 0.0514$	$z = 0.1714$		
$f^4F - g(3)[4]$	0.6984	$x = 0.3056$	$z = 0.1240$	$y = 0.0069$	$z = 0.3403$
$f^4F - g(3)[5]$	0.7566	$x = 0.8182$	$z = 0.1667$	$y = 0.0152$	
$f^2G - g(1)[3]$	0.0202	$x = 0.0033$	$z = 0.0630$	$y = 0.9837$	
$f^2G - g(1)[4]$	0.3107	$x = 0.0131$	$z = 0.0851$	$y = 0.0003$	$z = 0.9014$
$f^2G - g(1)[5]$	0.1833	$x = 0.4364$	$z = 0.5556$	$y = 0.0081$	
$f^2G - g(2)[2]$	0.0024	$x = 1.0000$			
$f^2G - g(2)[3]$	0.0541	$x = 0.0200$	$z = 0.0009$	$y = 0.9792$	
$f^2G - g(2)[4]$	0.2923	$x = 0.0679$	$z = 0.0213$	$y = 0.0075$	$z = 0.9033$
$f^2G - g(2)[5]$	0.3157	$x = 0.3754$	$z = 0.5269$	$y = 0.0978$	
$f^2G - g(2)[6]$	0.1926	$x = 1.0000$			
$f^2G - g(3)[2]$	0.0019	$x = 1.0000$			
$f^2G - g(3)[3]$	0.0233	$x = 0.1667$	$z = 0.0893$	$y = 0.7440$	
$f^2G - g(3)[4]$	0.1224	$x = 0.3319$	$z = 0.2546$	$y = 0.0570$	$z = 0.3565$
$f^2G - g(3)[5]$	0.3783	$x = 0.3564$	$z = 0.3333$	$y = 0.3103$	
$f^2G - g(3)[6]$	0.6741	$x = 1.0000$			
$f^4G - g(1)[3]$	0.0405	$x = 0.0045$	$z = 0.0036$	$y = 0.3538$	$z = 0.0304$
$f^4G - g(1)[4]$	0.6214	$x = 0.0000$	$z = 0.0004$	$y = 0.0180$	$z = 0.0001$
		$z = 0.3580$	$z = 0.6235$		
$f^4G - g(1)[5]$	0.3667	$x = 0.0000$	$z = 0.0111$	$y = 0.0000$	$z = 0.6000$
$f^4G - g(2)[2]$	0.0047	$x = 0.3571$	$z = 0.6000$	$y = 0.0429$	
$f^4G - g(2)[3]$	0.1082	$x = 0.0275$	$z = 0.0577$	$y = 0.3009$	$z = 0.0292$
$f^4G - g(2)[4]$	0.5847	$x = 0.0018$	$z = 0.0008$	$y = 0.1002$	$z = 0.1159$
		$z = 0.2457$	$z = 0.5356$		
$f^4G - g(2)[5]$	0.6315	$x = 0.0416$	$z = 0.0000$	$y = 0.0006$	$z = 0.5889$
$f^4G - g(2)[6]$	0.3852	$x = 0.8077$	$z = 0.1818$	$y = 0.0105$	
$f^4G - g(3)[2]$	0.0038	$x = 0.3571$	$z = 0.6000$	$y = 0.0429$	
$f^4G - g(3)[3]$	0.0466	$x = 0.2292$	$z = 0.2156$	$y = 0.1535$	$z = 0.0191$

TABLE 11b (CONTINUED)

$f^4G - g(3)[4]$	0.2449	$x = 0.0848$	$y = 0.3585$	$z = 0.2946$
$f^4G - g(3)[5]$	0.7566	$x = 0.3223$	$y = 0.0050$	$z = 0.3177$
$f^4G - g(3)[6]$	1.3481	$x = 0.8077$	$y = 0.0105$	$z = 0.2333$
$f^2H - g(1)[3]$	0.0005	$x = 1.0000$		
$f^2H - g(1)[4]$	0.0306	$x = 0.0000$	$y = 0.3778$	
$f^2H - g(1)[5]$	0.5975	$x = 0.0000$	$y = 0.0000$	$z = 0.9818$
$f^2H - g(2)[3]$	0.0015	$x = 1.0000$		
$f^2H - g(2)[4]$	0.0313	$x = 0.0368$	$y = 0.9590$	
$f^2H - g(2)[5]$	0.2444	$x = 0.1194$	$y = 0.0018$	$z = 0.8099$
$f^2H - g(2)[6]$	0.7704	$x = 0.4487$	$y = 0.0058$	
$f^2H - g(3)[3]$	0.0005	$x = 1.0000$		
$f^2H - g(3)[4]$	0.0079	$x = 0.1818$	$y = 0.6982$	
$f^2H - g(3)[5]$	0.0582	$x = 0.3375$	$y = 0.0716$	$z = 0.3159$
$f^2H - g(3)[6]$	0.2889	$x = 0.3419$	$y = 0.3399$	
$f^2H - g(3)[7]$	1.1111	$x = 1.0000$		
$f^4H - g(1)[3]$	0.0010	$x = 0.3333$	$y = 0.0238$	
$f^4H - g(1)[4]$	0.0611	$x = 0.0000$	$y = 0.3259$	$z = 0.0185$
$f^4H - g(1)[5]$	1.1951	$x = 0.0000$	$y = 0.0000$	$z = 0.0001$
$f^4H - g(2)[3]$	0.0029	$x = 0.3333$	$y = 0.6429$	$z = 0.0238$
$f^4H - g(2)[4]$	0.0627	$x = 0.0479$	$y = 0.2706$	$z = 0.0170$
$f^4H - g(2)[5]$	0.4889	$x = 0.0000$	$y = 0.1552$	$z = 0.1552$
$f^4H - g(2)[6]$	1.5407	$x = 0.0000$	$y = 0.0000$	$z = 0.5833$
$f^4H - g(3)[3]$	0.0011	$x = 0.3333$	$y = 0.6429$	$z = 0.0238$
$f^4H - g(3)[4]$	0.0159	$x = 0.2384$	$y = 0.1459$	$z = 0.0111$
$f^4H - g(3)[5]$	0.1164	$x = 0.0918$	$y = 0.3562$	$z = 0.3012$
$f^4H - g(3)[6]$	0.5778	$x = 0.3328$	$y = 0.0037$	$z = 0.3059$
$f^4H - g(3)[7]$	2.2222	$x = 0.8000$	$y = 0.1923$	$z = 0.0077$
$g^{(2S+1)}L - f(J_p K)$	$\sum_{J_p'}^6$			
$g^2D - f(1)[2]$	0.2041	$x = 0.0667$	$y = 0.9333$	$z = 0.0000$
$g^2D - f(1)[3]$	0.0179	$x = 0.0476$	$y = 0.9524$	
$g^2D - f(1)[4]$	0.0003	$x = 1.0000$		
$g^2D - f(2)[1]$	0.1270	$x = 0.4000$	$y = 0.1000$	
$g^2D - f(2)[2]$	0.1927	$x = 0.0008$	$y = 0.8894$	$z = 0.0110$
$g^2D - f(2)[3]$	0.0483	$x = 0.0059$	$y = 0.9649$	
$g^2D - f(2)[4]$	0.0024	$x = 1.0000$		
$g^2D - f(3)[0]$	0.0952	$x = 1.0000$		
$g^2D - f(3)[1]$	0.2063	$x = 0.1923$	$y = 0.6154$	$z = 0.1923$
$g^2D - f(3)[2]$	0.1625	$x = 0.0992$	$y = 0.4395$	$z = 0.0217$
$g^2D - f(3)[3]$	0.0503	$x = 0.0226$	$y = 0.1754$	$z = 0.8020$
$g^2D - f(3)[4]$	0.0042	$x = 1.0000$		
$g^4D - f(1)[2]$	0.4082	$x = 0.8571$	$y = 0.0095$	$z = 0.0000$
$g^4D - f(1)[3]$	0.0357	$x = 0.8265$	$y = 0.0306$	$z = 0.0068$
$g^4D - f(1)[4]$	0.0006	$x = 0.8333$	$y = 0.0238$	
$g^4D - f(2)[1]$	0.2540	$x = 0.7000$	$y = 0.0500$	$z = 0.0000$
$g^4D - f(2)[2]$	0.3855	$x = 0.7003$	$y = 0.1883$	$z = 0.0494$
$g^4D - f(2)[3]$	0.0966	$x = 0.7863$	$y = 0.0291$	$z = 0.0679$
$g^4D - f(2)[4]$	0.0047	$x = 0.8333$	$y = 0.0238$	
$g^4D - f(3)[0]$	0.1905	$x = 0.5000$	$y = 0.5000$	
$g^4D - f(3)[1]$	0.4127	$x = 0.3365$	$y = 0.3846$	$z = 0.0865$
$g^4D - f(3)[2]$	0.3250	$x = 0.2680$	$y = 0.4386$	$z = 0.0977$
$g^4D - f(3)[3]$	0.1005	$x = 0.5849$	$y = 0.0217$	$z = 0.2610$
$g^4D - f(3)[4]$	0.0083	$x = 0.8333$	$y = 0.0238$	
$g^2F - f(1)[2]$	0.1786	$x = 0.4286$	$y = 0.0381$	
$g^2F - f(1)[3]$	0.1250	$x = 0.1633$	$y = 0.7653$	$z = 0.0034$
$g^2F - f(1)[4]$	0.0075	$x = 0.0789$	$y = 0.9023$	
$g^2F - f(2)[1]$	0.1587	$x = 1.0000$		
$g^2F - f(2)[2]$	0.0496	$x = 0.0476$	$y = 0.9524$	
$g^2F - f(2)[3]$	0.2546	$x = 0.0186$	$y = 0.9663$	$z = 0.0139$
$g^2F - f(2)[4]$	0.0541	$x = 0.0200$	$y = 0.9792$	
$g^2F - f(2)[5]$	0.0015	$x = 1.0000$		
$g^2F - f(3)[1]$	0.0794	$x = 1.0000$		
$g^2F - f(3)[2]$	0.2513	$x = 0.3033$	$y = 0.1283$	
$g^2F - f(3)[3]$	0.2963	$x = 0.0772$	$y = 0.6431$	$z = 0.0077$
$g^2F - f(3)[4]$	0.0931	$x = 0.0104$	$y = 0.9003$	
$g^2F - f(3)[5]$	0.0058	$x = 1.0000$		
$g^4F - f(1)[2]$	0.3571	$x = 0.6429$	$y = 0.0238$	$z = 0.0000$
$g^4F - f(1)[3]$	0.2500	$x = 0.7292$	$y = 0.0425$	$z = 0.0425$
$g^4F - f(1)[4]$	0.0151	$x = 0.7880$	$y = 0.0179$	$z = 0.0058$
$g^4F - f(2)[1]$	0.3175	$x = 0.4000$	$y = 0.1000$	
$g^4F - f(2)[2]$	0.0992	$x = 0.0714$	$y = 0.2752$	$z = 0.0533$
$g^4F - f(2)[3]$	0.5093	$x = 0.8185$	$y = 0.0193$	$z = 0.0037$
$g^4F - f(2)[4]$	0.1082	$x = 0.8136$	$y = 0.0185$	$z = 0.0098$
$g^4F - f(2)[5]$	0.0029	$x = 0.8182$	$y = 0.0152$	
$g^4F - f(3)[1]$	0.1587	$x = 0.4000$	$y = 0.1000$	
$g^4F - f(3)[2]$	0.5026	$x = 0.4549$	$y = 0.2118$	$z = 0.0175$
$g^4F - f(3)[3]$	0.5926	$x = 0.4501$	$y = 0.3215$	$z = 0.1229$
$g^4F - f(3)[4]$	0.1862	$x = 0.6875$	$y = 0.0156$	$z = 0.1408$
$g^4F - f(3)[5]$	0.0116	$x = 0.8182$	$y = 0.0152$	
$g^2G - f(1)[2]$	0.0935	$x = 1.0000$		
$g^2G - f(1)[3]$	0.2488	$x = 0.4298$	$y = 0.1003$	

TABLE 11b (CONTINUED)

$f^4G - g(3)[4]$	0.2449	$x = 0.0848$	$y = 0.3585$	$z = 0.2946$
$f^4G - g(3)[5]$	0.7566	$x = 0.3223$	$y = 0.0050$	$z = 0.3177$
$f^4G - g(3)[6]$	1.3481	$x = 0.8077$	$y = 0.0105$	$z = 0.2333$
$f^2H - g(1)[3]$	0.0005	$x = 1.0000$		
$f^2H - g(1)[4]$	0.0306	$x = 0.0000$	$y = 0.3778$	
$f^2H - g(1)[5]$	0.5975	$x = 0.0000$	$y = 0.0000$	$z = 0.9818$
$f^2H - g(2)[3]$	0.0015	$x = 1.0000$		
$f^2H - g(2)[4]$	0.0313	$x = 0.0368$	$y = 0.9590$	
$f^2H - g(2)[5]$	0.2444	$x = 0.1194$	$y = 0.0018$	$z = 0.8099$
$f^2H - g(2)[6]$	0.7704	$x = 0.4487$	$y = 0.0058$	
$f^2H - g(3)[3]$	0.0005	$x = 1.0000$		
$f^2H - g(3)[4]$	0.0079	$x = 0.1818$	$y = 0.6982$	
$f^2H - g(3)[5]$	0.0582	$x = 0.3375$	$y = 0.0716$	$z = 0.3159$
$f^2H - g(3)[6]$	0.2889	$x = 0.3419$	$y = 0.3399$	
$f^2H - g(3)[7]$	1.1111	$x = 1.0000$		
$f^4H - g(1)[3]$	0.0010	$x = 0.3333$	$y = 0.0238$	
$f^4H - g(1)[4]$	0.0611	$x = 0.0000$	$y = 0.3259$	$z = 0.0185$
$f^4H - g(1)[5]$	1.1951	$x = 0.0000$	$y = 0.0000$	$z = 0.0001$
$f^4H - g(2)[3]$	0.0029	$x = 0.3333$	$y = 0.6429$	$z = 0.0238$
$f^4H - g(2)[4]$	0.0627	$x = 0.0479$	$y = 0.2706$	$z = 0.0170$
$f^4H - g(2)[5]$	0.4889	$x = 0.0000$	$y = 0.1552$	$z = 0.1552$
$f^4H - g(2)[6]$	1.5407	$x = 0.0000$	$y = 0.0000$	$z = 0.5833$
$f^4H - g(3)[3]$	0.0011	$x = 0.3333$	$y = 0.6429$	$z = 0.0238$
$f^4H - g(3)[4]$	0.0159	$x = 0.2384$	$y = 0.1459$	$z = 0.0111$
$f^4H - g(3)[5]$	0.1164	$x = 0.0918$	$y = 0.3562$	$z = 0.3012$
$f^4H - g(3)[6]$	0.5778	$x = 0.3328$	$y = 0.0037$	$z = 0.3059$
$f^4H - g(3)[7]$	2.2222	$x = 0.8000$	$y = 0.1923$	$z = 0.0077$
$g^{(2S+1)}L - f(J_p K)$	$\sum_{J_p'}^6$			
$g^2D - f(1)[2]$	0.2041	$x = 0.0667$	$y = 0.9333$	$z = 0.0000$
$g^2D - f(1)[3]$	0.0179	$x = 0.0476$	$y = 0.9524$	
$g^2D - f(1)[4]$	0.0003	$x = 1.0000$		
$g^2D - f(2)[1]$	0.1270	$x = 0.4000$	$y = 0.1000$	
$g^2D - f(2)[2]$	0.1927	$x = 0.0008$	$y = 0.8894$	$z = 0.0110$
$g^2D - f(2)[3]$	0.0483	$x = 0.0059$	$y = 0.9649$	
$g^2D - f(2)[4]$	0.0024	$x = 1.0000$		
$g^2D - f(3)[0]$	0.0952	$x = 1.0000$		
$g^2D - f(3)[1]$	0.2063	$x = 0.1923$	$y = 0.6154$	$z = 0.1923$
$g^2D - f(3)[2]$	0.1625	$x = 0.0992$	$y = 0.4395$	$z = 0.0217$
$g^2D - f(3)[3]$	0.0503	$x = 0.0226$	$y = 0.1754$	$z = 0.8020$
$g^2D - f(3)[4]$	0.0042	$x = 1.0000$		

TABLE 11b (CONTINUED)

$g^2G - f(1 4)$	0.0577	$x = 0.2248$	$y = 0.6183$	$z = 0.0126$
$g^2G - f(2 2)$	0.2338	$x = 1.0000$		
$g^2G - f(2 3)$	0.1091	$x = 0.1667$	$y = 0.4762$	
$g^2G - f(2 4)$	0.2923	$x = 0.0679$	$y = 0.9033$	$z = 0.0075$
$g^2G - f(2 5)$	0.0313	$x = 0.0368$	$y = 0.9590$	
$g^2G - f(3 2)$	0.0624	$x = 1.0000$		
$g^2G - f(3 3)$	0.2794	$x = 0.3750$	$y = 0.0670$	
$g^2G - f(3 4)$	0.4720	$x = 0.0391$	$y = 0.8139$	$z = 0.0017$
$g^2G - f(3 5)$	0.1159	$x = 0.0025$	$y = 0.9564$	
$g^2G - f(3 6)$	0.0038	$x = 1.0000$		
$g^4G - f(1 2)$	0.1871	$x = 0.3571$	$y = 0.6000$	$z = 0.0429$
$g^4G - f(1 3)$	0.4976	$x = 0.5910$	$y = 0.3878$	$z = 0.0001$
$g^4G - f(1 4)$	0.1153	$x = 0.5887$	$y = 0.1757$	$z = 0.1252$
		$z = 0.0007$	$y = 0.0014$	
$g^4G - f(2 2)$	0.4677	$x = 0.3571$	$y = 0.6000$	$z = 0.0429$
$g^4G - f(2 3)$	0.2183	$x = 0.2292$	$y = 0.0816$	$z = 0.2874$
$g^4G - f(2 4)$	0.5847	$x = 0.7836$	$y = 0.1874$	$z = 0.0052$
		$z = 0.0068$	$y = 0.0077$	
$g^4G - f(2 5)$	0.0627	$x = 0.7997$	$y = 0.1850$	$z = 0.0123$
$g^4G - f(3 2)$	0.1247	$x = 0.3571$	$y = 0.6000$	$z = 0.0429$
$g^4G - f(3 3)$	0.5587	$x = 0.5156$	$y = 0.2682$	$z = 0.1158$
$g^4G - f(3 4)$	0.9440	$x = 0.6087$	$y = 0.0936$	$z = 0.1915$
		$z = 0.0127$	$y = 0.0069$	
$g^4G - f(3 5)$	0.2317	$x = 0.7462$	$y = 0.1428$	$z = 0.0115$
$g^4G - f(3 6)$	0.0075	$x = 0.8077$	$y = 0.1818$	$z = 0.0105$
$g^2H - f(1 3)$	0.2750	$x = 1.0000$		
$g^2H - f(1 4)$	0.2139	$x = 0.4156$	$y = 0.4286$	$z = 0.1558$
$g^2H - f(2 3)$	0.2546	$x = 1.0000$		
$g^2H - f(2 4)$	0.3157	$x = 0.3754$	$y = 0.5269$	$z = 0.0978$
$g^2H - f(2 5)$	0.2444	$x = 0.1194$	$y = 0.0689$	$z = 0.8099$
$g^2H - f(3 3)$	0.0407	$x = 1.0000$		
$g^2H - f(3 4)$	0.2704	$x = 0.4209$	$y = 0.5525$	$z = 0.0266$
$g^2H - f(3 5)$	0.7333	$x = 0.0099$	$y = 0.0588$	$z = 0.9311$
$g^2H - f(3 6)$	0.0963	$x = 0.0000$	$y = 0.0152$	$z = 0.9848$
$g^4H - f(1 3)$	0.5500	$x = 0.3333$	$y = 0.6429$	$z = 0.0238$
$g^4H - f(1 4)$	0.4278	$x = 0.5403$	$y = 0.3968$	$z = 0.0058$
$g^4H - f(2 3)$	0.5093	$x = 0.3333$	$y = 0.6429$	$z = 0.0238$
$g^4H - f(2 4)$	0.6315	$x = 0.4880$	$y = 0.2903$	$z = 0.1056$
$g^4H - f(2 5)$	0.4889	$x = 0.7071$	$y = 0.1934$	$z = 0.0450$
		$z = 0.0055$	$y = 0.0040$	
$g^4H - f(3 3)$	0.0815	$x = 0.3333$	$y = 0.6429$	$z = 0.0238$
$g^4H - f(3 4)$	0.5407	$x = 0.5472$	$y = 0.3425$	$z = 0.0610$
$g^4H - f(3 5)$	1.4667	$x = 0.7218$	$y = 0.1450$	$z = 0.0885$
		$z = 0.0029$	$y = 0.0013$	
$g^4H - f(3 6)$	0.1926	$x = 0.7766$	$y = 0.1723$	$z = 0.0086$
$g^2J - f(1 4)$	0.5778	$x = 1.0000$		

TABLE 11b (CONTINUED)

$g^2J - f(2 4)$	0.1926	$x = 1.0000$		
$g^2J - f(2 5)$	0.7704	$x = 0.4487$	$y = 0.5455$	$z = 0.0058$
$g^2J - f(3 4)$	0.0175	$x = 1.0000$		
$g^2J - f(3 5)$	0.1926	$x = 0.4487$	$y = 0.5455$	$z = 0.0058$
$g^2J - f(3 6)$	1.1380	$x = 0.0000$	$y = 0.0128$	$z = 0.9872$
$g^4J - f(1 4)$	1.1556	$x = 0.3182$	$y = 0.6667$	$z = 0.0152$
$g^4J - f(2 4)$	0.3852	$x = 0.3182$	$y = 0.6667$	$z = 0.0152$
$g^4J - f(2 5)$	1.5407	$x = 0.5609$	$y = 0.3905$	$z = 0.0297$
$g^4J - f(2 6)$	0.0350	$x = 0.3182$	$y = 0.6667$	$z = 0.0152$
$g^4J - f(3 5)$	0.3852	$x = 0.5609$	$y = 0.3905$	$z = 0.0297$
$g^4J - f(3 6)$	2.2761	$x = 0.7811$	$y = 0.1825$	$z = 0.0263$
		$z = 0.0003$	$y = 0.0001$	

TABLE 11c

TRANSITIONS BETWEEN LS AND j*j* STATES. PARENT TERM: 3D

$^s(2S+1)L - p(J_p, j)$	$\sum_{j,j'}$	s
$^s^2D - p(1, \frac{1}{2})$	0.6667	$x = 0.0000$
$^s^2D - p(1, \frac{3}{2})$	1.3333	$x = 0.0000$
$^s^2D - p(2, \frac{1}{2})$	1.1111	$x = 0.1867$
$^s^2D - p(2, \frac{3}{2})$	2.2222	$x = 0.2667$
		$z = 0.0267$
$^s^2D - p(3, \frac{1}{2})$	1.5556	$x = 0.7619$
$^s^2D - p(3, \frac{3}{2})$	3.1111	$x = 0.2857$
$^s^4D - p(1, \frac{1}{2})$	1.3333	$x = 0.0000$
$^s^4D - p(1, \frac{3}{2})$	2.6667	$x = 0.0000$
		$z = 0.3750$
$^s^4D - p(2, \frac{1}{2})$	2.2222	$x = 0.0000$
$^s^4D - p(2, \frac{3}{2})$	4.4444	$x = 0.0000$
		$z = 0.2400$
$^s^4D - p(3, \frac{1}{2})$	3.1111	$x = 0.0000$
$^s^4D - p(3, \frac{3}{2})$	6.2222	$x = 0.5657$
		$z = 0.2449$
$^p(2S+1)L - s(J_p, j)$	$\sum_{j,j'}$	s
$^p^2P - s(1, \frac{1}{2})$	0.4000	$x = 0.1667$
$^p^2P - s(1, \frac{3}{2})$	0.6667	$x = 0.4000$
$^p^2P - s(2, \frac{1}{2})$	0.9333	$x = 0.3333$
$^p^2P - s(2, \frac{3}{2})$	0.8000	$x = 0.0250$
		$z = 0.2667$

TABLE 11c (CONTINUED)

$p^4 P - s(2, \frac{1}{2})$	1.3533	$x = 0.2100$	$y = 0.0150$	$z = 0.4900$	0.1250
$p^4 P - s(3, \frac{1}{2})$	1.8667	$x = 0.8571$	$y = 0.1000$	$y = 0.0429$	
$p^2 D - s(1, \frac{1}{2})$	0.6667	$x = 0.1000$	$y = 0.0000$	$y = 0.9000$	
$p^2 D - s(2, \frac{1}{2})$	1.1111	$x = 0.3733$	$y = 0.5400$	$y = 0.0800$	$z = 0.0267$
$p^2 D - s(3, \frac{1}{2})$	1.5556	$x = 0.0000$	$y = 0.0667$	$y = 0.9333$	
$p^4 D - s(1, \frac{1}{2})$	1.3533	$x = 0.1750$	$y = 0.2500$	$y = 0.2000$	$z = 0.1250$
$p^4 D - s(2, \frac{1}{2})$	2.2222	$x = 0.1333$	$y = 0.1050$	$y = 0.4033$	$z = 0.1200$
		$z = 0.1633$	$y = 0.0750$		
$p^4 D - s(3, \frac{1}{2})$	3.1111	$x = 0.7347$	$y = 0.0823$	$y = 0.0272$	$z = 0.1224$
$p^2 F - s(1, \frac{1}{2})$	0.9333	$x = 1.0000$			0.0533
$p^2 F - s(2, \frac{1}{2})$	1.5556	$x = 0.3810$	$y = 0.6000$	$y = 0.0190$	
$p^2 F - s(3, \frac{1}{2})$	2.1778	$x = 0.0000$	$y = 0.0476$	$y = 0.9524$	$z = 0.0000$
$p^4 F - s(1, \frac{1}{2})$	1.8667	$x = 0.4000$	$y = 0.5000$	$y = 0.1000$	
$p^4 F - s(2, \frac{1}{2})$	3.1111	$x = 0.5714$	$y = 0.2400$	$y = 0.1219$	$z = 0.0067$
$p^4 F - s(3, \frac{1}{2})$	4.3556	$x = 0.7653$	$y = 0.1166$	$y = 0.0875$	$z = 0.0249$
		$z = 0.0044$	$y = 0.0014$		
$p^{(2S+1)L} - d(J_p, j)$	$\sum_{J, j}$				
$p^2 P - d(1, \frac{3}{2})$	0.3400	$x = 0.0576$	$y = 0.3922$	$y = 0.0502$	$z = 0.0098$
$p^2 P - d(1, \frac{5}{2})$	0.0400	$x = 0.3733$	$y = 0.5556$	$y = 0.0711$	
$p^2 P - d(2, \frac{3}{2})$	0.3667	$x = 0.3182$	$y = 0.0727$	$y = 0.3636$	$z = 0.2273$
$p^2 P - d(2, \frac{5}{2})$	0.3000	$x = 0.0000$	$y = 0.4667$	$y = 0.0000$	$z = 0.0000$
$p^2 P - d(3, \frac{3}{2})$	0.0933	$x = 0.6400$	$y = 0.0000$	$y = 0.3600$	
$p^2 P - d(3, \frac{5}{2})$	0.8400	$x = 0.2400$	$y = 0.0000$	$y = 0.4267$	$z = 0.3533$
$p^4 P - d(1, \frac{3}{2})$	0.1400	$x = 0.0120$	$y = 0.2777$	$y = 0.5952$	$z = 0.0023$
		$z = 0.0366$	$y = 0.0000$		
$p^4 P - d(1, \frac{5}{2})$	0.6600	$x = 0.0242$	$y = 0.2868$	$y = 0.6513$	$z = 0.0029$
		$z = 0.0001$			
$p^4 P - d(2, \frac{3}{2})$	0.4533	$x = 0.0369$	$y = 0.0345$	$y = 0.0308$	$z = 0.1117$
		$z = 0.0591$	$y = 0.3938$		
$p^4 P - d(2, \frac{5}{2})$	0.9000	$x = 0.1600$	$y = 0.3360$	$y = 0.0778$	$z = 0.0840$
		$z = 0.0093$	$y = 0.0400$		
$p^4 P - d(3, \frac{3}{2})$	1.0267	$x = 0.0935$	$y = 0.0116$	$y = 0.0000$	$z = 0.3603$
		$z = 0.5280$			
$p^4 P - d(3, \frac{5}{2})$	0.8400	$x = 0.3429$	$y = 0.0480$	$y = 0.0000$	$z = 0.3291$
		$z = 0.1280$	$y = 0.0667$		
$p^2 D - d(1, \frac{3}{2})$	0.3667	$x = 0.0153$	$y = 0.4189$	$y = 0.0029$	$z = 0.4811$
$p^2 D - d(1, \frac{5}{2})$	0.3000	$x = 0.1778$	$y = 0.6720$	$y = 0.0213$	$z = 0.0009$
$p^2 D - d(2, \frac{3}{2})$	0.5000	$x = 0.4267$	$y = 0.1753$	$y = 0.2847$	$z = 0.0107$
		$z = 0.0960$	$y = 0.0067$		
$p^2 D - d(2, \frac{5}{2})$	0.6111	$x = 0.0873$	$y = 0.4887$	$y = 0.0349$	$z = 0.3258$
		$z = 0.0051$	$y = 0.0582$		
$p^2 D - d(3, \frac{3}{2})$	0.4667	$x = 0.6857$	$y = 0.0142$	$y = 0.2601$	$z = 0.0320$
$p^2 D - d(3, \frac{5}{2})$	1.0889	$x = 0.3918$	$y = 0.0206$	$y = 0.3762$	$z = 0.0366$
		$z = 0.1463$	$y = 0.0286$		

TABLE 11c (CONTINUED)

$p^4 D - d(1, \frac{3}{2})$	0.4333	$x = 0.0000$	$y = 0.0086$	$y = 0.0452$	$z = 0.0745$
		$z = 0.0332$	$y = 0.6154$		
$p^4 D - d(1, \frac{5}{2})$	0.9000	$x = 0.0000$	$y = 0.0249$	$y = 0.0960$	$z = 0.0000$
		$z = 0.2074$	$y = 0.5040$	$y = 0.1667$	
$p^4 D - d(2, \frac{3}{2})$	0.8333	$x = 0.0274$	$y = 0.1347$	$y = 0.2704$	$z = 0.0040$
		$z = 0.0081$	$y = 0.0896$	$y = 0.1440$	$z = 0.0046$
$p^4 D - d(2, \frac{5}{2})$	1.3889	$x = 0.1600$	$y = 0.4635$	$y = 0.0134$	$z = 0.0504$
		$z = 0.0293$	$y = 0.1854$	$y = 0.0090$	$z = 0.0576$
		$z = 0.0027$	$y = 0.0270$	$y = 0.0016$	
$p^4 D - d(3, \frac{3}{2})$	1.4000	$x = 0.0952$	$y = 0.1469$	$y = 0.0047$	$z = 0.0000$
		$z = 0.2721$	$y = 0.1666$	$y = 0.0027$	$z = 0.1829$
$p^4 D - d(3, \frac{5}{2})$	1.7111	$x = 0.5714$	$y = 0.0045$	$y = 0.0131$	$z = 0.0000$
		$z = 0.2968$	$y = 0.0043$	$y = 0.0233$	$z = 0.0000$
		$z = 0.0668$	$y = 0.0017$	$y = 0.0182$	
$p^2 F - d(1, \frac{3}{2})$	0.0933	$x = 0.0000$	$y = 0.1800$	$y = 0.8400$	
$p^2 F - d(1, \frac{5}{2})$	0.8400	$x = 0.0000$	$y = 0.1067$	$y = 0.0000$	$z = 0.8889$
$p^2 F - d(2, \frac{3}{2})$	0.4667	$x = 0.0980$	$y = 0.0567$	$y = 0.0290$	$z = 0.8163$
$p^2 F - d(2, \frac{5}{2})$	1.0889	$x = 0.4082$	$y = 0.3499$	$y = 0.0746$	$z = 0.1399$
		$z = 0.0070$	$y = 0.0204$		
$p^2 F - d(3, \frac{3}{2})$	1.3067	$x = 0.8163$	$y = 0.0175$	$y = 0.1458$	$z = 0.0066$
		$z = 0.0130$	$y = 0.0008$		
$p^2 F - d(3, \frac{5}{2})$	0.8711	$x = 0.5612$	$y = 0.0350$	$y = 0.2915$	$z = 0.0336$
		$z = 0.0656$	$y = 0.0131$		
$p^4 F - d(1, \frac{3}{2})$	1.0267	$x = 0.0000$	$y = 0.0116$	$y = 0.0091$	$z = 0.0611$
		$z = 0.7953$			
$p^4 F - d(1, \frac{5}{2})$	0.8400	$x = 0.0000$	$y = 0.0036$	$y = 0.0000$	$z = 0.0853$
		$z = 0.7111$	$y = 0.1680$		
$p^4 F - d(2, \frac{3}{2})$	1.4000	$x = 0.0000$	$y = 0.0290$	$y = 0.0427$	$z = 0.0067$
		$z = 0.0980$	$y = 0.1916$	$y = 0.0240$	$z = 0.5573$
$p^4 F - d(2, \frac{5}{2})$	1.7111	$x = 0.0000$	$y = 0.1425$	$y = 0.0028$	$z = 0.0204$
		$z = 0.0000$	$y = 0.0134$	$y = 0.0004$	$z = 0.0086$
		$z = 0.7792$	$y = 0.0071$	$y = 0.0305$	
$p^4 F - d(3, \frac{3}{2})$	1.3067	$x = 0.1871$	$y = 0.1944$	$y = 0.0222$	$z = 0.0002$
		$z = 0.0680$	$y = 0.0607$	$y = 0.0104$	$z = 0.4252$
$p^4 F - d(3, \frac{5}{2})$	3.0489	$x = 0.7872$	$y = 0.0000$	$y = 0.0061$	$z = 0.0004$
		$z = 0.1749$	$y = 0.0000$	$y = 0.0059$	$z = 0.0007$
		$z = 0.0219$	$y = 0.0000$	$y = 0.0023$	$z = 0.0066$
$d^{(2S+1)L} - p(J_p, j)$	$\sum_{J, j}$				
$d^2 S - p(1, \frac{1}{2})$	0.0667	$x = 0.1111$	$y = 0.8889$		
$d^2 S - p(1, \frac{3}{2})$	0.0133	$x = 0.4444$	$y = 0.5556$		
$d^2 S - p(2, \frac{1}{2})$	0.0667	$x = 1.0000$			
$d^2 S - p(2, \frac{3}{2})$	0.0667	$x = 0.0000$	$y = 1.0000$		
$d^2 S - p(3, \frac{1}{2})$	0.1867	$x = 1.0000$			
$d^4 S - p(1, \frac{1}{2})$	0.0133	$x = 0.4444$	$y = 0.5556$		

TABLE III (CONTINUED)

$d^4S - p(1, \frac{1}{2})$	0.1467	$x = 0.0273$	$y = 0.3414$	$z = 0.6313$
$d^4S - p(2, \frac{1}{2})$	0.0867	$x = 0.2000$	$y = 0.8000$	
$d^4S - p(2, \frac{3}{2})$	0.2000	$x = 0.2333$	$y = 0.6000$	$z = 0.1667$
$d^4S - p(3, \frac{1}{2})$	0.1867	$x = 1.0000$		
$d^4S - p(3, \frac{3}{2})$	0.1867	$x = 0.8000$	$y = 0.2000$	
$d^2P - p(1, \frac{1}{2})$	0.1800	$x = 0.1975$	$y = 0.4938$	$z = 0.0617$
$d^2P - p(1, \frac{3}{2})$	0.0600	$x = 0.1000$	$y = 0.4741$	$z = 0.0926$
$d^2P - p(2, \frac{1}{2})$	0.1889	$x = 0.1882$	$y = 0.0588$	$z = 0.7529$
$d^2P - p(2, \frac{3}{2})$	0.2111	$x = 0.0368$	$y = 0.2105$	$z = 0.0421$
$d^2P - p(3, \frac{1}{2})$	0.0311	$x = 1.0000$		
$d^2P - p(3, \frac{3}{2})$	0.5289	$x = 0.1882$	$y = 0.2353$	$z = 0.5765$
$d^4P - p(1, \frac{1}{2})$	0.0600	$x = 0.1000$	$y = 0.0370$	$z = 0.0926$
$d^4P - p(1, \frac{3}{2})$	0.4200	$x = 0.0600$	$y = 0.2034$	$z = 0.1829$
		$z = 0.0114$	0.0106	
$d^4P - p(2, \frac{1}{2})$	0.2111	$x = 0.1768$	$y = 0.0084$	$z = 0.1547$
$d^4P - p(2, \frac{3}{2})$	0.5889	$x = 0.0453$	$y = 0.0106$	$z = 0.1509$
		$y = 0.3272$	0.0913	0.0849
		$z = 0.2219$	0.0679	
$d^4P - p(3, \frac{1}{2})$	0.5289	$x = 0.1008$	$y = 0.5765$	$z = 0.3227$
$d^4P - p(3, \frac{3}{2})$	0.5911	$x = 0.2707$	$y = 0.1347$	$z = 0.4367$
		$z = 0.0505$		
$d^2D - p(1, \frac{1}{2})$	0.2333	$x = 0.2000$	$y = 0.4444$	$z = 0.3556$
$d^2D - p(1, \frac{3}{2})$	0.1667	$x = 0.2160$	$y = 0.3982$	$z = 0.2240$
$d^2D - p(2, \frac{1}{2})$	0.2778	$x = 0.5333$	$y = 0.0000$	$z = 0.4667$
$d^2D - p(2, \frac{3}{2})$	0.3889	$x = 0.0435$	$y = 0.0771$	$z = 0.0460$
		$z = 0.0533$	0.3000	
$d^2D - p(3, \frac{1}{2})$	0.1556	$x = 0.2177$	$y = 0.0857$	$z = 0.6966$
$d^2D - p(3, \frac{3}{2})$	0.7778	$x = 0.0327$	$y = 0.0549$	$z = 0.4458$
$d^4D - p(1, \frac{1}{2})$	0.1667	$x = 0.0200$	$y = 0.1556$	$z = 0.1244$
$d^4D - p(1, \frac{3}{2})$	0.6333	$x = 0.0722$	$y = 0.4211$	$z = 0.3275$
		$z = 0.0000$	0.0164	
$d^4D - p(2, \frac{1}{2})$	0.3889	$x = 0.0980$	$y = 0.0010$	$z = 0.0011$
$d^4D - p(2, \frac{3}{2})$	0.9444	$x = 0.1556$	$y = 0.1291$	$z = 0.0494$
		$z = 0.1200$	0.3000	
$d^4D - p(3, \frac{1}{2})$	0.7778	$x = 0.1679$	$y = 0.4204$	$z = 0.1259$
$d^4D - p(3, \frac{3}{2})$	1.0889	$x = 0.0875$	$y = 0.0816$	$z = 0.0000$
		$z = 0.4898$	0.0272	0.0612
		$z = 0.2204$	0.0078	
$d^2F - p(1, \frac{1}{2})$	0.1867	$x = 1.0000$		
$d^2F - p(1, \frac{3}{2})$	0.3733	$x = 0.2143$	$y = 0.4000$	$z = 0.3657$
$d^2F - p(2, \frac{1}{2})$	0.3111	$x = 0.8571$	$y = 0.0667$	$z = 0.0762$
$d^2F - p(2, \frac{3}{2})$	0.6222	$x = 0.1837$	$y = 0.2456$	$z = 0.0306$
$d^2F - p(3, \frac{1}{2})$	0.4356	$x = 0.5248$	$y = 0.0622$	$z = 0.3936$
$d^2F - p(3, \frac{3}{2})$	0.8711	$x = 0.0000$	$y = 0.0073$	$z = 0.1914$
		$z = 0.6297$	0.0667	
$d^4F - p(1, \frac{1}{2})$	0.3733	$x = 0.1000$	$y = 0.5000$	$z = 0.4000$
$d^4F - p(1, \frac{3}{2})$	0.7467	$x = 0.3214$	$y = 0.4900$	$z = 0.1250$
		$z = 0.0150$		
$d^4F - p(2, \frac{1}{2})$	0.6222	$x = 0.0000$	$y = 0.3267$	$z = 0.0600$
$d^4F - p(2, \frac{3}{2})$	1.2444	$x = 0.2679$	$y = 0.4133$	$z = 0.0033$
		$z = 0.1224$	0.0572	0.0300
		$z = 0.1913$	0.2624	$z = 0.3499$
		$z = 0.0439$	0.0122	
$d^4F - p(3, \frac{1}{2})$	1.7422	$x = 0.5102$	$y = 0.0016$	$z = 0.0230$
$d^4F - p(3, \frac{3}{2})$	0.7200	$x = 1.0000$		
$d^2G - p(1, \frac{1}{2})$	0.2667	$x = 1.0000$		
$d^2G - p(2, \frac{1}{2})$	0.9333	$x = 0.4762$	$y = 0.5102$	$z = 0.0136$
$d^2G - p(2, \frac{3}{2})$	0.9333	$x = 0.9524$	$y = 0.0204$	$z = 0.0272$
$d^2G - p(3, \frac{1}{2})$	0.7467	$x = 0.0000$	$y = 0.0255$	$z = 0.8929$
$d^2G - p(3, \frac{3}{2})$	0.7200	$x = 1.0000$		
$d^4G - p(1, \frac{1}{2})$	0.7200	$x = 0.7143$	$y = 0.2000$	$z = 0.0857$
$d^4G - p(1, \frac{3}{2})$	0.9333	$x = 0.8163$	$y = 0.0857$	$z = 0.0980$
$d^4G - p(2, \frac{1}{2})$	1.4667	$x = 0.8333$	$y = 0.0093$	$z = 0.0545$
$d^4G - p(2, \frac{3}{2})$		$z = 0.0028$		
$d^4G - p(3, \frac{1}{2})$	0.7467	$x = 0.8185$	$y = 0.0729$	$z = 0.0972$
$d^4G - p(3, \frac{3}{2})$	2.6133	$x = 0.9184$	$y = 0.0000$	$z = 0.0128$
		$z = 0.0638$	0.0000	0.0015
		$z = 0.0018$	0.0000	
$d(2S+1)L - f(J_p, j)$	$\sum_{J_p, j} g$			
$d^2S - f(1, \frac{1}{2})$	0.0800	$x = 1.0000$		
$d^2S - f(2, \frac{1}{2})$	0.0825	$x = 0.6410$	$y = 0.3590$	
$d^2S - f(2, \frac{3}{2})$	0.0508	$x = 1.0000$		
$d^2S - f(3, \frac{1}{2})$	0.0089	$x = 0.7619$	$y = 0.2381$	
$d^2S - f(3, \frac{3}{2})$	0.1778	$x = 0.4286$	$y = 0.5714$	
$d^4S - f(1, \frac{1}{2})$	0.0229	$x = 0.3000$	$y = 0.7000$	
$d^4S - f(1, \frac{3}{2})$	0.1371	$x = 1.0000$		
$d^4S - f(2, \frac{1}{2})$	0.0889	$x = 0.2571$	$y = 0.5762$	$z = 0.1667$
$d^4S - f(2, \frac{3}{2})$	0.1778	$x = 0.7714$	$y = 0.2286$	
$d^4S - f(3, \frac{1}{2})$	0.2311	$x = 0.1187$	$y = 0.4234$	$z = 0.4579$
$d^4S - f(3, \frac{3}{2})$	0.1422	$x = 0.4821$	$y = 0.4286$	$z = 0.0893$
$d^2P - f(1, \frac{1}{2})$	0.2171	$x = 0.3968$	$y = 0.5526$	$z = 0.1105$
$d^2P - f(1, \frac{3}{2})$	0.0229	$x = 1.0000$		
$d^2P - f(2, \frac{1}{2})$	0.2349	$x = 0.5838$	$y = 0.0015$	$z = 0.2886$
$d^2P - f(2, \frac{3}{2})$	0.1651	$x = 0.1385$	$y = 0.8205$	$z = 0.0410$
$d^2P - f(3, \frac{1}{2})$	0.0622	$x = 0.6612$	$y = 0.0726$	$z = 0.2322$
$d^2P - f(3, \frac{3}{2})$	0.4978	$x = 0.3673$	$y = 0.1020$	$z = 0.3265$
$d^4P - f(1, \frac{1}{2})$	0.0914	$x = 0.0357$	$y = 0.0025$	$z = 0.6063$
$d^4P - f(1, \frac{3}{2})$		$z = 0.0088$		
$d^4P - f(1, \frac{5}{2})$	0.3886	$x = 0.2269$	$y = 0.7529$	$z = 0.0202$
$d^4P - f(2, \frac{1}{2})$	0.2794	$x = 0.1052$	$y = 0.0245$	$z = 0.1824$
		$z = 0.0552$	0.0018	
$d^4P - f(2, \frac{3}{2})$	0.5206	$x = 0.4704$	$y = 0.1405$	$z = 0.2033$
		$z = 0.0088$		

TABLE 11c (CONTINUED)

$d^4P - f(3, \frac{5}{2})$	0.6578	$x = 0.0894$	$y = 0.1126$	$z = 0.0034$	$y = 0.2150$	$z = 0.2389$	0.0011
		$z = 0.1334$	0.2061				
$d^4P - f(3, \frac{7}{2})$	0.4622	$x = 0.4662$	$y = 0.0198$	$z = 0.0549$	$y = 0.3052$	$z = 0.0176$	0.0733
		$z = 0.0593$	0.0037				
$d^2D - f(1, \frac{5}{2})$	0.2857	$x = 0.1469$	$y = 0.5973$	$z = 0.0557$	$y = 0.1980$	$z = 0.0040$	
$d^2D - f(1, \frac{7}{2})$	0.1143	$x = 0.4898$	$y = 0.4667$	$z = 0.0435$			
$d^2D - f(2, \frac{5}{2})$	0.3492	$x = 0.6545$	$y = 0.0187$	$z = 0.2618$	$y = 0.0146$		
		$z = 0.0382$	0.0121				
$d^2D - f(2, \frac{7}{2})$	0.3175	$x = 0.0000$	$y = 0.7714$	$z = 0.0000$	$y = 0.2286$	$z = 0.0000$	
$d^2D - f(3, \frac{5}{2})$	0.2222	$x = 0.6717$	$y = 0.0793$	$z = 0.2040$	$y = 0.0279$		
		$z = 0.0157$	0.0014				
$d^2D - f(3, \frac{7}{2})$	0.7111	$x = 0.4329$	$y = 0.1102$	$z = 0.2834$	$y = 0.0980$		
		$z = 0.0551$	0.0204				
$d^4D - f(1, \frac{5}{2})$	0.2286	$x = 0.0087$	$y = 0.0759$	$z = 0.0000$	$y = 0.0008$	$z = 0.0089$	
		$z = 0.0015$	0.2917	0.6125			
$d^4D - f(1, \frac{7}{2})$	0.5714	$x = 0.0714$	$y = 0.5055$	$z = 0.3733$	$y = 0.0047$	$z = 0.0449$	
		$z = 0.0001$					
$d^4D - f(2, \frac{5}{2})$	0.5079	$x = 0.0383$	$y = 0.0164$	$z = 0.2604$	$y = 0.1823$		
		$z = 0.0739$	0.0079	0.2438	0.1021		
$d^4D - f(2, \frac{7}{2})$	0.8254	$x = 0.3885$	$y = 0.2725$	$z = 0.0475$	$y = 0.1077$		
		$z = 0.0807$	0.0785	0.0141	$z = 0.0054$	0.0051	
$d^4D - f(3, \frac{5}{2})$	0.9778	$x = 0.0875$	$y = 0.1970$	$z = 0.0501$	$y = 0.0010$		
		$z = 0.1640$	0.2300	0.0618	0.0003		
		$z = 0.0691$	0.1018	0.0374			
$d^4D - f(3, \frac{7}{2})$	0.8889	$x = 0.5773$	$y = 0.0247$	$z = 0.0220$	$y = 0.0122$		
		$z = 0.2639$	0.0162	0.0196	0.0163		
		$z = 0.0405$	0.0031	0.0041			
$d^2F - f(1, \frac{5}{2})$	0.2400	$x = 0.0146$	$y = 0.2654$	$z = 0.0013$	$y = 0.0190$	$z = 0.6997$	
$d^2F - f(1, \frac{7}{2})$	0.3200	$x = 0.2232$	$y = 0.6997$	$z = 0.0146$	$y = 0.0622$	$z = 0.0003$	
$d^2F - f(2, \frac{5}{2})$	0.4000	$x = 0.6047$	$y = 0.1866$	$z = 0.1815$	$y = 0.0012$		
		$z = 0.0233$	0.0027				
$d^2F - f(2, \frac{7}{2})$	0.5333	$x = 0.1169$	$y = 0.8560$	$z = 0.0243$	$y = 0.1889$		
		$z = 0.0016$	0.0122				
$d^2F - f(3, \frac{5}{2})$	0.5600	$x = 0.7424$	$y = 0.0666$	$z = 0.1580$	$y = 0.0202$		
		$z = 0.0112$	0.0016				
$d^2F - f(3, \frac{7}{2})$	0.7467	$x = 0.5845$	$y = 0.1031$	$z = 0.2443$	$y = 0.0675$		
		$z = 0.0375$	0.0131				
$d^4F - f(1, \frac{5}{2})$	0.4800	$x = 0.0000$	$y = 0.0019$	$z = 0.0219$	$y = 0.0054$	$z = 0.0933$	
		$z = 0.1244$	0.7511				
$d^4F - f(1, \frac{7}{2})$	0.6400	$x = 0.0000$	$y = 0.0219$	$z = 0.0470$	$y = 0.0000$	$z = 0.0005$	
		$z = 0.3348$	0.5292	0.0667			
$d^4F - f(2, \frac{5}{2})$	0.8000	$x = 0.0173$	$y = 0.0246$	$z = 0.2008$	$y = 0.0786$		
		$z = 0.0025$	0.0087	0.0329	0.0095		
		$z = 0.0063$	0.4210	0.1976			
$d^4F - f(2, \frac{7}{2})$	1.0667	$x = 0.2679$	$y = 0.4872$	$z = 0.0164$	$y = 0.0661$		

TABLE 11c (CONTINUED)

	$y = 0.0283$	$z = 0.1012$	$y = 0.0047$	$z = 0.0196$
	$z = 0.0014$	0.0088	0.0003	
$d^4F - f(3, \frac{5}{2})$	1.1200	$x = 0.0729$	$y = 0.3167$	$z = 0.0876$
		$z = 0.1300$	0.2036	0.0650
$d^4F - f(3, \frac{7}{2})$	1.4933	$x = 0.0380$	$y = 0.0533$	$z = 0.0206$
		$z = 0.7106$	0.2223	0.1013
		$z = 0.2025$	0.0102	0.0067
		$z = 0.0223$	0.0016	0.0013
$d^2G - f(1, \frac{5}{2})$	0.0843	$x = 0.0000$	$y = 0.0816$	$z = 0.9184$
$d^2G - f(1, \frac{7}{2})$	0.6857	$x = 0.0000$	$y = 0.0612$	$z = 0.0000$
$d^2G - f(2, \frac{5}{2})$	0.3619	$x = 0.0511$	$y = 0.0318$	$z = 0.0074$
$d^2G - f(2, \frac{7}{2})$	0.8381	$x = 0.4545$	$y = 0.4051$	$z = 0.0481$
		$z = 0.0024$	0.0057	
$d^2G - f(3, \frac{5}{2})$	1.1467	$x = 0.8543$	$y = 0.0403$	$z = 0.0916$
		$z = 0.0047$	0.0006	
$d^2G - f(3, \frac{7}{2})$	0.5833	$x = 0.8633$	$y = 0.0831$	$z = 0.1890$
		$z = 0.0208$	0.0058	
$d^4G - f(1, \frac{5}{2})$	0.8914	$x = 0.0000$	$y = 0.0022$	$z = 0.0252$
		$z = 0.8971$		
$d^4G - f(1, \frac{7}{2})$	0.5486	$x = 0.0000$	$y = 0.0000$	$z = 0.0000$
		$z = 0.8371$	0.0984	
$d^4G - f(2, \frac{5}{2})$	1.1810	$x = 0.0000$	$y = 0.0083$	$z = 0.0127$
		$z = 0.0430$	0.1288	0.0356
$d^4G - f(2, \frac{7}{2})$	1.2190	$x = 0.0000$	$y = 0.0909$	$z = 0.0089$
		$z = 0.0000$	0.0045	0.0001
		$z = 0.8594$	0.0041	0.0307
		$z = 0.0952$	0.1537	0.0422
$d^4G - f(3, \frac{5}{2})$	1.0133	$x = 0.0176$	$y = 0.0228$	$z = 0.0079$
		$z = 0.5493$	0.1009	0.0062
$d^4G - f(3, \frac{7}{2})$	2.3467	$x = 0.8523$	$y = 0.0137$	$z = 0.0034$
		$z = 0.1138$	0.0039	0.0015
		$z = 0.0079$	0.0004	0.0002
$f^{(2s+1)}L - d(\sqrt{p}, f)$	$\sum_{j=1}^s$			
$f^2P - d(1, \frac{3}{2})$	0.1600	$x = 0.0100$	$y = 0.2400$	$z = 0.0000$
$f^2P - d(1, \frac{5}{2})$	0.0114	$x = 0.1600$	$y = 0.0000$	$z = 0.8400$
$f^2P - d(2, \frac{3}{2})$	0.1651	$x = 0.0577$	$y = 0.0718$	$z = 0.3590$
$f^2P - d(2, \frac{5}{2})$	0.1206	$x = 0.0000$	$y = 0.0187$	$z = 0.1462$
$f^2P - d(3, \frac{3}{2})$	0.0178	$x = 0.2743$	$y = 0.2381$	$z = 0.4876$
$f^2P - d(3, \frac{5}{2})$	0.3822	$x = 0.0431$	$y = 0.1181$	$z = 0.2419$
$f^4P - d(1, \frac{3}{2})$	0.0457	$x = 0.0480$	$y = 0.1680$	$z = 0.2520$
		$z = 0.0070$	0.0000	
$f^4P - d(1, \frac{5}{2})$	0.2971	$x = 0.0044$	$y = 0.0012$	$z = 0.1436$
		$z = 0.8443$		
$f^4P - d(2, \frac{3}{2})$	0.1778	$x = 0.0073$	$y = 0.0519$	$z = 0.1058$
		$z = 0.1440$	0.2017	

TABLE 11c (CONTINUED)

$f^4P - d(2, \frac{5}{2})$	0.3937	$x = 0.0299$	$y = 0.0029$	$z = 0.2790$	0.1136	0.0025
		$z = 0.4459$	0.0984			
$f^4P - d(3, \frac{3}{2})$	0.4622	$x = 0.0170$	$y = 0.1524$	$z = 0.4579$	0.0732	0.2710
		$z = 0.0285$				
$f^4P - d(3, \frac{5}{2})$	0.3378	$x = 0.0696$	$y = 0.1559$	$z = 0.1044$	0.2455	0.0209
		$z = 0.1315$	0.0428			
$f^2D - d(1, \frac{3}{2})$	0.2286	$x = 0.0853$	0.1120	$y = 0.4480$	0.3500	$z = 0.0047$
$f^2D - d(1, \frac{5}{2})$	0.0571	$x = 0.0286$	0.0213	$y = 0.8901$	0.1120	$z = 0.4480$
$f^2D - d(2, \frac{3}{2})$	0.2540	$x = 0.0257$	0.0090	$y = 0.3703$	0.0560	
		$z = 0.5040$	0.0850			
$f^2D - d(2, \frac{5}{2})$	0.2222	$x = 0.0073$	0.0411	$y = 0.0029$	0.2750	
		$z = 0.2469$	0.4267			
$f^2D - d(3, \frac{3}{2})$	0.0889	$x = 0.1102$	0.0823	$y = 0.4761$	0.1463	$z = 0.1851$
$f^2D - d(3, \frac{5}{2})$	0.5778	$x = 0.0226$	0.0427	$y = 0.2472$	0.2401	
		$z = 0.3038$	0.1436			
$f^4D - d(1, \frac{3}{2})$	0.1143	$x = 0.0476$	0.0160	0.7000	$y = 0.0030$	0.2240
		$z = 0.0093$	0.0000			
$f^4D - d(1, \frac{5}{2})$	0.4571	$x = 0.0383$	0.0611	0.0140	$y = 0.3070$	0.5760
		$z = 0.0010$	0.0027	0.0000		
$f^4D - d(2, \frac{3}{2})$	0.3175	$x = 0.0353$	0.0846	0.0448	0.4480	
		$y = 0.1190$	0.1152	0.0280	$z = 0.0059$	0.0072
$f^4D - d(2, \frac{5}{2})$	0.6349	$x = 0.0107$	0.0007	0.0144	0.0107	
		$y = 0.2058$	0.0003	0.0963	0.0093	
		$z = 0.4777$	0.0247	0.1493		
$f^4D - d(3, \frac{3}{2})$	0.7111	$x = 0.0057$	0.0630	0.1260	0.0714	
		$y = 0.0656$	0.2720	0.2240	$z = 0.0664$	0.1058
$f^4D - d(3, \frac{5}{2})$	0.6222	$x = 0.0481$	0.0735	0.0176	0.0034	
		$y = 0.3061$	0.1587	0.0001	0.0680	
		$z = 0.2755$	0.0381	0.0109		
$f^2F - d(1, \frac{3}{2})$	0.2400	$x = 0.2381$	0.6400	$y = 0.1219$		
$f^2F - d(1, \frac{5}{2})$	0.1600	$x = 0.1276$	0.2090	$y = 0.4082$	0.2400	$z = 0.0153$
$f^2F - d(2, \frac{3}{2})$	0.3111	$x = 0.2286$	0.0000	$y = 0.7714$	0.0000	$z = 0.0000$
$f^2F - d(2, \frac{5}{2})$	0.3556	$x = 0.0099$	0.0191	$y = 0.0388$	0.2755	
		$z = 0.0138$	0.6429			
$f^2F - d(3, \frac{3}{2})$	0.2489	$x = 0.0340$	0.0262	$y = 0.3887$	0.1134	
		$z = 0.3936$	0.0441			
$f^2F - d(3, \frac{5}{2})$	0.6844	$x = 0.0057$	0.0127	$y = 0.1865$	0.1391	
		$z = 0.4830$	0.1710			
$f^4F - d(1, \frac{3}{2})$	0.2400	$x = 0.0000$	0.3920	0.4000	$y = 0.0747$	0.1280
		$z = 0.0053$				
$f^4F - d(1, \frac{5}{2})$	0.5600	$x = 0.1063$	0.5466	0.2777	$y = 0.0486$	0.0042
		$z = 0.0002$	0.0026			
$f^4F - d(2, \frac{3}{2})$	0.4869	$x = 0.0541$	0.0534	0.1767	0.1964	
		$y = 0.0158$	0.1298	0.3142	$z = 0.0090$	0.0505
$f^4F - d(2, \frac{5}{2})$	0.8444	$x = 0.0957$	0.0294	0.0794	0.0022	
		$y = 0.4604$	0.1745	0.0655	0.0758	

TABLE 11c (CONTINUED)

$f^4F - d(3, \frac{3}{2})$	0.8711	$x = 0.0003$	0.0135	0.0032		
		$z = 0.0556$	0.2314	0.1959	0.0403	
$f^4F - d(3, \frac{5}{2})$	0.9956	$x = 0.0191$	0.0325	0.0070	0.0004	0.0227
		$y = 0.2836$	0.1141	0.0001	0.0180	
		$z = 0.4573$	0.0342	0.0155	0.0184	
$f^2G - d(1, \frac{3}{2})$	0.1714	$x = 1.0000$				
$f^2G - d(1, \frac{5}{2})$	0.3429	$x = 0.2500$	0.5714	$y = 0.1786$		
$f^2G - d(2, \frac{3}{2})$	0.3238	$x = 0.8366$	0.1261	$y = 0.0373$		
$f^2G - d(2, \frac{5}{2})$	0.5333	$x = 0.0970$	0.1324	$y = 0.0796$	0.6888	$z = 0.0022$
$f^2G - d(3, \frac{3}{2})$	0.5333	$x = 0.2328$	0.0605	$y = 0.6402$	0.0612	$z = 0.0053$
$f^2G - d(3, \frac{5}{2})$	0.6667	$x = 0.0000$	0.0019	$y = 0.0854$	0.0645	
		$z = 0.6829$	0.1653			
$f^4G - d(1, \frac{3}{2})$	0.4457	$x = 0.1758$	0.6923	$y = 0.1319$		
$f^4G - d(1, \frac{5}{2})$	0.5629	$x = 0.4044$	0.5048	0.0588	$y = 0.0120$	0.0162
		$z = 0.0038$				
$f^4G - d(2, \frac{3}{2})$	0.7048	$x = 0.0165$	0.4236	0.2432	$y = 0.1255$	0.1787
		$z = 0.0124$				
$f^4G - d(2, \frac{5}{2})$	1.0095	$x = 0.3396$	0.4385	0.0234	0.0728	
		$y = 0.0492$	0.0655	0.0009	$z = 0.0080$	0.0022
$f^4G - d(3, \frac{3}{2})$	0.9067	$x = 0.1008$	0.4194	0.1361	0.0108	
		$y = 0.1525$	0.1344	0.0278	$z = 0.0118$	0.0064
$f^4G - d(3, \frac{5}{2})$	1.4933	$x = 0.1809$	0.0759	0.0006	0.0038	
		$y = 0.6763$	0.0277	0.0115	0.0098	
		$z = 0.0104$	0.0030	0.0000		
$f^2H - d(1, \frac{5}{2})$	0.6286	$x = 1.0000$				
$f^2H - d(2, \frac{3}{2})$	0.2794	$x = 1.0000$				
$f^2H - d(2, \frac{5}{2})$	0.7683	$x = 0.4959$	0.4949	$y = 0.0092$		
$f^2H - d(3, \frac{3}{2})$	0.9778	$x = 0.9351$	0.0476	$y = 0.0173$		
$f^2H - d(3, \frac{5}{2})$	0.4889	$x = 0.0000$	0.0159	$y = 0.8571$	0.1270	$z = 0.0000$
$f^4H - d(1, \frac{3}{2})$	0.7543	$x = 1.0000$				
$f^4H - d(1, \frac{5}{2})$	0.5029	$x = 0.8333$	0.1071	$y = 0.0595$		
$f^4H - d(2, \frac{3}{2})$	0.9778	$x = 0.7619$	0.1837	$y = 0.0544$		
$f^4H - d(2, \frac{5}{2})$	1.1175	$x = 0.8864$	0.0046	0.0402	$y = 0.0673$	0.0003
		$z = 0.0012$				
$f^4H - d(3, \frac{3}{2})$	0.7622	$x = 0.7597$	0.1587	0.0115	$y = 0.0577$	0.0113
		$z = 0.0010$				
$f^4H - d(3, \frac{5}{2})$	2.1511	$x = 0.9298$	0.0167	0.0048	0.0028	
		$y = 0.0435$	0.0013	0.0003	$z = 0.0008$	0.0000
$f^{(2S+1)L - g(J_p, J)}$	$\sum_{J, J'}^g$					
$f^2P - g(1, \frac{7}{2})$	0.1714	$x = 1.0000$				
$f^2P - g(2, \frac{7}{2})$	0.1799	$x = 0.5765$	0.3529	$y = 0.0706$		
$f^2P - g(2, \frac{5}{2})$	0.1058	$x = 1.0000$				
$f^2P - g(3, \frac{7}{2})$	0.0296	$x = 0.5714$	0.3571	$y = 0.0714$	0.0000	$z = 0.0000$

TABLE 11c (CONTINUED)

$f^2P - g(3, \frac{9}{2})$	0.3704	$x = 0.3143$	$y = 0.5714$	$z = 0.1143$
$f^4P - g(1, \frac{9}{2})$	0.0571	$x = 0.1429$	$y = 0.6000$	$z = 0.2571$
$f^4P - g(1, \frac{9}{2})$	0.2857	$x = 1.0000$		
$f^4P - g(2, \frac{1}{2})$	0.2011	$x = 0.1128$	$y = 0.3558$	$z = 0.1525$
		$x = 0.0189$		$z = 0.2021$
$f^4P - g(2, \frac{9}{2})$	0.3704	$x = 0.6735$	$y = 0.2286$	$z = 0.0980$
$f^4P - g(3, \frac{1}{2})$	0.5037	$x = 0.0396$	$y = 0.1517$	$z = 0.1681$
		$x = 0.0202$	$y = 0.0567$	$z = 0.2151$
$f^4P - g(3, \frac{9}{2})$	0.2963	$x = 0.3367$	$y = 0.3143$	$z = 0.0893$
		$x = 0.0107$		$z = 0.1347$
$f^2D - g(1, \frac{7}{2})$	0.2460	$x = 0.4608$	$y = 0.4645$	$z = 0.0747$
$f^2D - g(1, \frac{9}{2})$	0.0397	$x = 1.0000$		
$f^2D - g(2, \frac{1}{2})$	0.2778	$x = 0.7256$	$y = 0.0457$	$z = 0.1525$
$f^2D - g(2, \frac{9}{2})$	0.1984	$x = 0.1746$	$y = 0.8000$	$z = 0.0076$
$f^2D - g(3, \frac{7}{2})$	0.1111	$x = 0.6236$	$y = 0.2286$	$z = 0.1161$
		$x = 0.0032$	$z = 0.0000$	$z = 0.0286$
$f^2D - g(3, \frac{9}{2})$	0.5556	$x = 0.3991$	$y = 0.3143$	$z = 0.1596$
$f^4D - g(1, \frac{7}{2})$	0.1349	$x = 0.0245$	$y = 0.0384$	$z = 0.8471$
		$x = 0.0027$		$z = 0.0484$
$f^4D - g(1, \frac{9}{2})$	0.4365	$x = 0.3333$	$y = 0.6494$	$z = 0.0173$
$f^4D - g(2, \frac{1}{2})$	0.3571	$x = 0.0728$	$y = 0.1612$	$z = 0.0356$
		$y = 0.0945$	$z = 0.0533$	$z = 0.0137$
$f^4D - g(2, \frac{9}{2})$	0.5952	$x = 0.6111$	$y = 0.0166$	$z = 0.2667$
		$x = 0.0034$		$z = 0.0996$
$f^4D - g(3, \frac{7}{2})$	0.7778	$x = 0.0534$	$y = 0.1995$	$z = 0.1653$
		$y = 0.0748$	$z = 0.1469$	$z = 0.0306$
$f^4D - g(3, \frac{9}{2})$	0.5556	$x = 0.4864$	$y = 0.1782$	$z = 0.0000$
		$y = 0.1710$	$z = 0.0000$	$z = 0.0714$
$f^2F - g(1, \frac{7}{2})$	0.2611	$x = 0.1986$	$y = 0.6513$	$z = 0.0429$
$f^2F - g(1, \frac{9}{2})$	0.1389	$x = 0.5432$	$y = 0.4286$	$z = 0.0282$
$f^2F - g(2, \frac{1}{2})$	0.3426	$x = 0.7963$	$y = 0.0061$	$z = 0.1655$
		$x = 0.0112$	$z = 0.0041$	$z = 0.0168$
$f^2F - g(2, \frac{9}{2})$	0.3241	$x = 0.0000$	$y = 0.8730$	$z = 0.0000$
$f^2F - g(3, \frac{7}{2})$	0.2852	$x = 0.6803$	$y = 0.1620$	$z = 0.1215$
		$x = 0.0053$	$z = 0.0008$	$z = 0.0302$
$f^2F - g(3, \frac{9}{2})$	0.6481	$x = 0.4864$	$y = 0.2281$	$z = 0.1710$
		$x = 0.0160$	$z = 0.0073$	$z = 0.0912$
$f^4F - g(1, \frac{7}{2})$	0.2722	$x = 0.0058$	$y = 0.0298$	$z = 0.0051$
		$x = 0.0021$	$z = 0.4511$	$z = 0.0003$
$f^4F - g(1, \frac{9}{2})$	0.5278	$x = 0.1053$	$y = 0.5837$	$z = 0.2763$
		$x = 0.0001$		$z = 0.0043$
$f^4F - g(2, \frac{7}{2})$	0.5463	$x = 0.0282$	$y = 0.0740$	$z = 0.1968$
		$y = 0.0420$	$z = 0.0010$	$z = 0.1027$
$f^4F - g(2, \frac{9}{2})$	0.7870	$x = 0.0054$	$z = 0.0001$	$z = 0.0093$
		$x = 0.5098$	$z = 0.1797$	$z = 0.1324$
				$z = 0.0605$
$f^4F - g(3, \frac{7}{2})$	0.9593	$y = 0.0654$	$z = 0.0193$	$z = 0.0026$
		$x = 0.0598$	$z = 0.1781$	$z = 0.0373$
$f^4F - g(3, \frac{9}{2})$	0.9074	$y = 0.0751$	$z = 0.1738$	$z = 0.0216$
		$z = 0.0169$	$z = 0.0206$	$z = 0.0033$
$f^2G - g(1, \frac{7}{2})$	0.1929	$x = 0.0117$	$y = 0.1742$	$z = 0.0008$
$f^2G - g(1, \frac{9}{2})$	0.3214	$x = 0.2489$	$y = 0.7042$	$z = 0.0102$
$f^2G - g(2, \frac{1}{2})$	0.3611	$x = 0.6838$	$y = 0.1892$	$z = 0.1176$
		$x = 0.0081$	$z = 0.0011$	$z = 0.0002$
$f^2G - g(2, \frac{9}{2})$	0.4960	$x = 0.1294$	$y = 0.7301$	$z = 0.0166$
		$x = 0.0007$	$z = 0.0041$	$z = 0.1192$
$f^2G - g(3, \frac{7}{2})$	0.5689	$x = 0.7631$	$y = 0.1098$	$z = 0.1022$
		$x = 0.0044$	$z = 0.0009$	$z = 0.0196$
$f^2G - g(3, \frac{9}{2})$	0.6111	$x = 0.5883$	$y = 0.1720$	$z = 0.1601$
		$x = 0.0135$	$z = 0.0057$	$z = 0.0605$
$f^4G - g(1, \frac{7}{2})$	0.4929	$x = 0.0000$	$y = 0.0007$	$z = 0.0003$
		$x = 0.1864$	$z = 0.7498$	$z = 0.0126$
$f^4G - g(1, \frac{9}{2})$	0.5357	$x = 0.0000$	$y = 0.0169$	$z = 0.0265$
		$x = 0.4107$	$z = 0.5100$	$z = 0.0000$
$f^4G - g(2, \frac{1}{2})$	0.7817	$x = 0.0112$	$y = 0.0058$	$z = 0.1161$
		$y = 0.0010$	$z = 0.0017$	$z = 0.0097$
$f^4G - g(2, \frac{9}{2})$	0.9325	$x = 0.0259$	$y = 0.4071$	$z = 0.3453$
		$x = 0.3336$	$z = 0.4522$	$z = 0.0626$
$f^4G - g(3, \frac{7}{2})$	1.0111	$x = 0.0231$	$y = 0.0580$	$z = 0.0102$
		$x = 0.0007$	$z = 0.0023$	$z = 0.0072$
$f^4G - g(3, \frac{9}{2})$	1.3689	$x = 0.0513$	$y = 0.3812$	$z = 0.1827$
		$y = 0.0687$	$z = 0.1510$	$z = 0.0774$
$f^2H - g(1, \frac{7}{2})$	0.0175	$x = 0.0119$	$y = 0.0210$	$z = 0.0112$
$f^2H - g(1, \frac{9}{2})$	0.6111	$x = 0.7467$	$y = 0.0721$	$z = 0.0022$
$f^2H - g(2, \frac{1}{2})$	0.3201	$x = 0.0304$	$y = 0.0203$	$z = 0.0027$
$f^2H - g(2, \frac{9}{2})$	0.7275	$x = 0.4752$	$y = 0.4332$	$z = 0.0329$
		$x = 0.0010$	$z = 0.0022$	$z = 0.0555$
$f^2H - g(3, \frac{7}{2})$	1.0593	$x = 0.8702$	$y = 0.0579$	$z = 0.0618$
		$x = 0.0020$	$z = 0.0003$	$z = 0.0077$
$f^2H - g(3, \frac{9}{2})$	0.4074	$x = 0.7071$	$y = 0.1203$	$z = 0.1286$
		$x = 0.0085$	$z = 0.0028$	$z = 0.0327$
$f^4H - g(1, \frac{7}{2})$	0.8206	$x = 0.0000$	$y = 0.0007$	$z = 0.0008$
		$x = 0.9385$		$z = 0.0135$
$f^4H - g(1, \frac{9}{2})$	0.4365	$x = 0.0000$	$y = 0.0000$	$z = 0.0005$
		$x = 0.0000$	$z = 0.0005$	$z = 0.0000$
		$x = 0.8960$	$z = 0.0634$	$z = 0.0033$

TABLE 11c (CONTINUED)

$f^4H - g(2, \frac{1}{2})$	1.0767	$x = 0.0000$	0.0021	0.0048	0.0016
		$y = 0.0235$	0.0834	0.0310	$z = 0.6538$
$f^4H - g(2, \frac{3}{2})$	1.0185	$x = 0.0000$	0.0611	0.0029	0.0040
		$y = 0.0000$	0.0019	0.0001	0.0001
		$z = 0.8824$	0.0229	0.0244	
$f^4H - g(3, \frac{1}{2})$	0.8963	$x = 0.0556$	0.1098	0.0411	0.0054
		$y = 0.0064$	0.0097	0.0042	0.0006
		$z = 0.5936$	0.1572	0.0164	
$f^4H - g(3, \frac{3}{2})$	2.0370	$x = 0.8727$	0.0348	0.0010	0.0019
		$y = 0.0783$	0.0063	0.0003	0.0007
		$z = 0.0035$	0.0004	0.0000	0.0001
$g^{(2S+1)L} - f(J_p, j) \sum_{J, j'} s$					
$g^2D - f(1, \frac{5}{2})$	0.2143	$x = 0.0023$	0.0000	$y = 0.1088$	0.0000
		$z = 0.8889$			
$g^2D - f(1, \frac{3}{2})$	0.0079	$x = 0.0816$	0.0000	$y = 0.9184$	
$g^2D - f(2, \frac{3}{2})$	0.2249	$x = 0.0118$	0.0121	$y = 0.1694$	0.1291
		$z = 0.3953$	0.2824		
$g^2D - f(2, \frac{1}{2})$	0.1455	$x = 0.0000$	0.0055	$y = 0.0594$	0.0187
		$z = 0.9164$			
$g^2D - f(3, \frac{3}{2})$	0.0370	$x = 0.0466$	0.0612	$y = 0.2799$	0.2449
		$z = 0.2449$	0.1224		
$g^2D - f(3, \frac{1}{2})$	0.4815	$x = 0.0074$	0.0209	$y = 0.0957$	0.2119
		$z = 0.2119$	0.4521		
$g^4D - f(1, \frac{5}{2})$	0.0714	$x = 0.0117$	0.0933	0.0000	$y = 0.1312$
		$z = 0.7619$			
$g^4D - f(1, \frac{3}{2})$	0.3730	$x = 0.0019$	0.0000	0.0000	
		$z = 0.0019$	0.0000	0.0000	
$g^4D - f(2, \frac{5}{2})$	0.2513	$x = 0.0013$	0.0005	0.0000	$y = 0.0769$
		$z = 0.9157$			
$g^4D - f(2, \frac{3}{2})$	0.4894	$x = 0.0009$	0.0104	0.0108	0.0000
		$y = 0.0256$	0.1494	0.1155	0.0000
		$z = 0.0863$	0.3485	0.2526	
$g^4D - f(3, \frac{5}{2})$	0.6296	$x = 0.1422$	0.0918	0.0056	$z = 0.5130$
		$y = 0.0016$	0.0177	0.0576	0.0810
		$z = 0.0158$	0.1061	0.2305	0.2593
		$z = 0.0222$	0.0929	0.1152	
$g^4D - f(3, \frac{3}{2})$	0.4074	$x = 0.0146$	0.0400	0.0387	0.0111
		$y = 0.1204$	0.1969	0.1113	0.0083
		$z = 0.1848$	0.1988	0.0751	
$g^2F - f(1, \frac{5}{2})$	0.2500	$x = 0.0466$	0.0466	$y = 0.5248$	0.3810
		$z = 0.0010$			
$g^2F - f(1, \frac{3}{2})$	0.0611	$x = 0.0097$	0.0053	$y = 0.2544$	0.0596
		$z = 0.8709$			
$g^2F - f(2, \frac{5}{2})$	0.2870	$x = 0.0070$	0.0024	$y = 0.2006$	0.0359
		$z = 0.6771$	0.0790		
$g^2F - f(2, \frac{3}{2})$	0.2315	$x = 0.0022$	0.0126	$y = 0.0005$	0.1635
		$z = 0.2335$	0.5878		
$g^2F - f(3, \frac{5}{2})$	0.1296	$x = 0.0267$	0.0267	$y = 0.2688$	0.1599
		$z = 0.3780$	0.1399		

TABLE 11c (CONTINUED)

$g^2F - f(3, \frac{1}{2})$	0.5963	$x = 0.0056$	0.0120	$y = 0.1205$	0.1545
		$z = 0.3652$	0.3422		
$g^4F - f(1, \frac{5}{2})$	0.1500	$x = 0.0278$	0.0729	0.7937	$y = 0.0065$
		$z = 0.0020$	0.0000		0.0972
$g^4F - f(1, \frac{3}{2})$	0.4722	$x = 0.0252$	0.0261	0.0096	$y = 0.3778$
		$z = 0.0002$	0.0009	0.0000	0.5603
$g^4F - f(2, \frac{5}{2})$	0.3796	$x = 0.0110$	0.0640	0.0013	0.1911
		$y = 0.0753$	0.2160	0.0030	0.4181
		$z = 0.0022$	0.0001	0.0179	
$g^4F - f(2, \frac{3}{2})$	0.6574	$x = 0.0036$	0.0011	0.0025	0.0031
		$y = 0.1276$	0.0040	0.0437	0.0103
		$z = 0.5936$	0.0010	0.2095	
$g^4F - f(3, \frac{5}{2})$	0.8037	$x = 0.0008$	0.0129	0.0336	0.0282
		$y = 0.0188$	0.1301	0.2015	0.1129
		$z = 0.0455$	0.1829	0.1763	0.0564
$g^4F - f(3, \frac{3}{2})$	0.6481	$x = 0.0136$	0.0274	0.0137	0.0004
		$y = 0.1745$	0.1616	0.0267	0.0070
		$z = 0.3596$	0.1613	0.0017	0.0525
$g^2G - f(1, \frac{5}{2})$	0.2357	$x = 0.2593$	0.6803	$y = 0.0605$	
$g^2G - f(1, \frac{3}{2})$	0.1643	$x = 0.0789$	0.1157	$y = 0.4960$	0.3050
		$z = 0.0044$			
$g^2G - f(2, \frac{5}{2})$	0.8214	$x = 0.1270$	0.0000	$y = 0.8730$	0.0000
		$z = 0.0033$	0.0067	$y = 0.0263$	0.1686
$g^2G - f(2, \frac{3}{2})$	0.3452	$x = 0.0048$	0.7902		
$g^2G - f(3, \frac{5}{2})$	0.3000	$x = 0.0099$	0.0094	$y = 0.2199$	0.0950
		$z = 0.5321$	0.1336		
$g^2G - f(3, \frac{3}{2})$	0.6333	$x = 0.0017$	0.0043	$y = 0.1000$	0.0928
		$z = 0.5199$	0.2813		
$g^4G - f(1, \frac{5}{2})$	0.2786	$x = 0.0050$	0.4975	0.4029	$y = 0.0442$
		$z = 0.0010$			0.0493
$g^4G - f(1, \frac{3}{2})$	0.5214	$x = 0.1302$	0.6002	0.2324	$y = 0.0277$
		$z = 0.0002$	0.0007		0.0004
$g^4G - f(2, \frac{5}{2})$	0.5357	$x = 0.0839$	0.1071	0.1443	0.4490
		$y = 0.0156$	0.0428	0.1924	$z = 0.0015$
$g^4G - f(2, \frac{3}{2})$	0.7976	$x = 0.0629$	0.0079	0.0567	0.0006
		$y = 0.5526$	0.1281	0.1348	0.0503
		$z = 0.0000$	0.0042	0.0019	
$g^4G - f(3, \frac{5}{2})$	0.9000	$x = 0.0117$	0.1204	0.1529	0.0611
		$y = 0.0633$	0.2913	0.2151	0.0534
		$z = 0.0054$	0.0152	0.0162	
$g^4G - f(3, \frac{3}{2})$	0.9667	$x = 0.0063$	0.0133	0.0051	0.0001
		$y = 0.1681$	0.1092	0.0090	0.0039
		$z = 0.5382$	0.1183	0.0008	0.0276
$g^2H - f(1, \frac{5}{2})$	0.1571	$x = 1.0000$			
$g^2H - f(1, \frac{3}{2})$	0.3317	$x = 0.2679$	0.6316	$y = 0.1005$	
$g^2H - f(2, \frac{5}{2})$	0.3201	$x = 0.8264$	0.1515	$y = 0.0220$	
$g^2H - f(2, \frac{3}{2})$	0.4947	$x = 0.0590$	0.0822	$y = 0.1050$	0.7529
		$z = 0.0009$			

TABLE 11c (CONTINUED)

$g^2H - f(3, \frac{5}{2})$	0.5704	$x = 0.1316$	0.0450	$y = 0.7126$	0.1088	$z = 0.0020$
$g^2H - f(3, \frac{7}{2})$	0.5704	$x = 0.0000$	0.0007	$y = 0.0475$	0.0432	
		$z = 0.6841$	0.2245			
$g^4H - f(1, \frac{5}{2})$	0.4714	$x = 0.2222$	0.7143	$y = 0.0635$		
$g^4H - f(1, \frac{7}{2})$	0.5063	$x = 0.4564$	0.4904	0.0333	$y = 0.0049$	0.0137
		$z = 0.0013$				
$g^4H - f(2, \frac{5}{2})$	0.7275	$x = 0.0378$	0.4000	0.3857	$y = 0.0582$	0.1143
		$z = 0.0040$				
$g^4H - f(2, \frac{7}{2})$	0.9021	$x = 0.3832$	0.4159	0.0688	0.0518	
		$y = 0.0244$	0.0514	0.0003	$z = 0.0030$	0.0012
$g^4H - f(3, \frac{5}{2})$	0.8963	$x = 0.0620$	0.4465	0.2338	0.0417	
		$y = 0.0824$	0.0966	0.0297	$z = 0.0043$	0.0030
$g^4H - f(3, \frac{7}{2})$	1.3852	$x = 0.1080$	0.0643	0.0042	0.0009	
		$y = 0.7254$	0.0783	0.0020	0.0108	
		$z = 0.0043$	0.0018	0.0001		

$g^2I - f(1, \frac{7}{2})$	0.5778	$x = 1.0000$				
$g^2I - f(2, \frac{5}{2})$	0.2751	$x = 1.0000$				
$g^2I - f(2, \frac{7}{2})$	0.6878	$x = 0.5026$	0.4909	$y = 0.0065$		
$g^2I - f(3, \frac{5}{2})$	0.9630	$x = 0.9231$	0.0649	$y = 0.0120$		
$g^2I - f(3, \frac{7}{2})$	0.3852	$x = 0.0000$	0.0108	$y = 0.8333$	0.1558	$z = 0.0000$
$g^4I - f(1, \frac{5}{2})$	0.7429	$x = 1.0000$				
$g^4I - f(1, \frac{7}{2})$	0.4127	$x = 0.8909$	0.0667	$y = 0.0424$		
$g^4I - f(2, \frac{5}{2})$	0.9630	$x = 0.7273$	0.2381	$y = 0.0346$		
$g^4I - f(2, \frac{7}{2})$	0.9630	$x = 0.8974$	0.0248	0.0286	$y = 0.0475$	0.0012
		$z = 0.0006$				
$g^4I - f(3, \frac{5}{2})$	0.7704	$x = 0.7212$	0.2066	0.0238	$y = 0.0381$	0.0098
		$z = 0.0004$				
$g^4I - f(3, \frac{7}{2})$	1.9259	$x = 0.9231$	0.0394	0.0012	0.0026	
		$y = 0.0311$	0.0021	0.0001	$z = 0.0004$	0.0000

TABLE 11c (CONTINUED)

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