

SUPPLEMENTARY MATERIAL

Ferroic Classifications Extended to Ferrotoroidic Crystals

D.B. Litvin

Department of Physics, Eberly College of Science,
The Pennsylvania State University, Penn State Berks, P.O. Box 7009, Reading, PA 19610-6009. Correspondence e-mail:
u3c@psu.edu

[Main Menu](#)

Supplementary Material

Multiferroic Classifications Extended to Ferrotoroidic Crystals

I. Distinction quadruplet characterization of the 773 species.

Introduction.

Table 1: Specie distinction quadruplet characterization.

II. Classification of species into ensembles and sub-ensemble.

Introduction.

Table 2: Numbers of species in each ensemble and sub-ensemble.

Table 3: Index of sub-ensembles.

Table 4: Listing of species in each sub-ensemble.

Table 5: Index of ensembles.

Table 6: Listing of sub-ensembles and species in each ensemble.

III. Physical Property tensors invariant under the 122 reduced superfamilies of magnetic groups.

Introduction.

Table 7: Physical property tensors.

I. Distinction quadruplet characterization of the 773 species.

Introduction.

The 773 species of phase transitions $\mathbf{G1'FH}$ (Aizu, 1970) represent transitions between a paramagnetic phase of point group symmetry $\mathbf{G1'}$ and a lower symmetry phase of symmetry \mathbf{H} . Each specie is characterized by four physical properties' ability to distinguish among the single domain states that arise due to the phase transition. These four physical properties are spontaneous toroidal moment, spontaneous magnetization, spontaneous polarization, and spontaneous strain. Each physical property is assigned a letter according to its ability to distinguish among the single domain states:

- | | | |
|---|--|-----|
| F | “Full” - distinguishes all n domain states. | |
| P | “Partial” - distinguishes m , $1 < m < n$, domain states, i.e. some but not all domain states.. | (1) |
| N | “Null” - does not distinguish any domain state and is non-zero. | |
| Z | “Zero” - does not distinguish any domain state and is zero. | |

Each specie is then assigned a *distinction quadruplet*, an ordered quadruplet of these letters representing the ability of the spontaneous toroidal moment, spontaneous magnetization, spontaneous polarization, and spontaneous strain to distinguish among the single domain states. The distinction quadruplet of each specie is given in Table 1. For example:

152	4-2m1'F2(p)	4-(z)2(x)m(xy)1'F2(z)	4x2	P P P F
160	4-2m1'Fm1'	4-(z)2(x)m(xy)1'Fm(xy)1'	4	Z Z F F
161	4-2m1'F222	4-(z)2(x)m(xy)1'F2(x)2(y) 2(z)	2x2	Z Z Z F

The first column gives the sequential numbering as found in Aizu (1970). The second column gives $\mathbf{G1'FH}$ with the groups given in a non-coordinate format with "p" and "s" denoting *principle* and *secondary* axes. In the third column, $\mathbf{G1'FH}$ is given in a format specifying the coordinate axes of \mathbf{G} and \mathbf{H} . The notation is “single lined” i.e., e.g., $\bar{4}_z$ is written on one line as 4-(z).

For each specie, the number $n = |\mathbf{G1'}|/|\mathbf{H}|$ of domains is given in two formats depending on the group \mathbf{H} :

- 1) If $\mathbf{H} = \mathbf{K1'}$, i.e. the group \mathbf{H} contains the time inversion $1'$, the number of single domain states is given simply as “n”. In

such cases the meaning of “Full”, “Partial”, “Null”, and “Zero” follows the definitions in (1) above.

2) If the group \mathbf{H} does not contain the time inversion $1'$ the number is given as $n/2 \times 2$. In these cases, the meaning of “Full” and “Partial”, in (1) above, for spontaneous polarization, and spontaneous strain are replaced with

- F “Full” - distinguishes $n/2$ domain states.
 - P “Partial” - distinguishes m , $1 < m < n/2$, domain states, i.e. some but not all domain states..
- (2)

This follows from the fact that time inversion can be taken as a coset representative and both polarizations and strain are invariant under time inversion. Consequently for a group \mathbf{H} not containing $1'$, a listing of “Full” under spontaneous polarization means there are not n but $n/2$ distinct domain states.

For example: For specie number 160, where \mathbf{H} contains $1'$, one finds “F” under spontaneous polarization meaning that spontaneous polarization distinguishes among all $n = 4$ domain states. For specie number 161 where \mathbf{H} does not contain $1'$, one also finds “F” under spontaneous polarization meaning here, however, that spontaneous polarization distinguishes not all $n = 4$ domain states, but only $n/2 = 2$.

The final four columns contains the distinction quadruplet, the ordered quadruplet of letters representing the distinguishability of the single domain states of the specie by, respectively, the spontaneous toroidal moment, spontaneous magnetization, spontaneous polarization, and spontaneous strain. For example, the distinction quadruplet of specie #151 is PPPF.

Go to Table 1: Specie distinction quadruplet characterization

II. Classification of species into ensembles and subensembles.

Introduction

In Aizu’s original characterization each of the 773 species of phase transitions, each was characterized by three physical properties’ ability to distinguish among the single domain states that arise due to the phase transition. These three physical properties were

spontaneous magnetization, spontaneous polarization, and spontaneous strain. Each physical property was assigned a symbol according to its ability to distinguish among the single domain states as described above. These were “Full”, “P”, and “...” corresponding to the letters F, P, and N or Z, listed in (1). Each specie consequently was characterized by a *distinction triplet*, an ordered triplet of these symbols representing the distinguishability of the single domain states by, respectively, spontaneous magnetization, spontaneous polarization, and spontaneous strain.

Schmid (1999) defined 36 *ensembles* and classified the 773 species into 30 of these ensembles. Each ensemble consists of all species with the same distinction triplet. There are 36 and not 27 ensembles defined, as the zero spontaneous magnetization case was divided into two subtypes: the PDM ,*para-* or *diamagnetic*, subtype where $\mathbf{H} = \mathbf{J}\mathbf{1}'$ and the AFM , *antiferromagnetic*, subtype where \mathbf{H} is a group which does not allow an invariant magnetization and which does not contain 1'.

Using the distinction quadruplets to classify the 773 species, and again dividing the zero spontaneous magnetization case into two subtypes, we obtain 144 *sub-ensembles*. In Table 2 we show the 36 ensembles defined by Schmid and how each ensemble splits into sub-ensembles. This table also gives the number of species in each ensemble and sub-ensemble. FT, PT, and ZT denote full, partial, and zero ferrotoroidics, FM, PM, and ZM denote full, partial, and zero ferromagnetics. The zero ferromagnetics are divided into two, the AFM -antiferromagnetic case and PDM - para and diamagnetic. FE, PE, and NE denote full, partial and null ferroelastics. FP, PP, and N/ZP denote full, partial, and null or zero ferroelectrics. Each rectangular box represents a single ensemble. The pair of numbers n(m) in the upper left corner of each rectangular represent the ensemble number n, and the total number m of species in that ensemble.

The 108 distinction quadruplets defined to classify the 773 species are listed in Table 3. Each entry is linked to the same distinction quadruplet in Table 4 where all species with this distinction quadruplet are listed. In Table 5 the distinction triplet of each of the 36 ensembles are listed. Each is linked to the same ensemble in Table 6 where all sub-ensembles and species in that ensemble is listed.

Go to Table 2: Numbers of species in each ensemble and sub-ensemble

Go to Table 3: Index of sub-ensembles.

Go to Table 4: Listing of species in each sub-ensemble.

Go to Table 5: Index of ensembles.

Go to Table 6: Listing of sub-ensembles and species in each ensemble.

III. Physical property tensors invariant under the 122 reduced superfamilies of magnetic point groups

Introduction

In Table 7 we list the form of physical property tensors invariant under the 122 reduced superfamilies (Opechowski, 1986) of magnetic point groups. These physical properties are: (each is linked to the corresponding subtable in Table 7)

Physical Property	Ferroic Type	Jahn tensor notation
spontaneous strain	Ferroelastic	$[V^2]$
spontaneous magnetization	Ferromagnetic	aeV
spontaneous polarization	Ferroelectric	V
spontaneous toroidal moment	Ferrotoroidic	aV
elastic compliance	Ferrobielastic	$[[V^2]^2]$
magnetic susceptibility	Ferrobimagnetic	$[V^2]$
electric susceptibility	Ferrobielectric	$[V^2]$
toroidic susceptibility	Ferrobotoroidic	$[V^2]$
piezoelectric coefficient	Ferroelastoelectric	$V [V^2]$
piezomagnetic coefficient	Ferromagnetoelastic	$aeV [V^2]$
piezotoroidic coefficient	Ferroelastotoroidic	$aV [V^2]$
magnetoelectric coefficient	Ferromagnetoelectric	aeV^2
magnetotoroidic coefficient	Ferromagnetotoroidic	eV^2
electrotoroidic coefficient	Ferroelectrotoroidic	aV^2

In the Jahn (1949) notation, V transforms as a polar vector, e and a are scalars which change sign under spatial and time inversion, respectively, $[]$ denotes symmetrization of the enclosed tensor. Tensors of the type V , aV , and aeV are given as column matrix and of the type $[V^2]$, aV^2 , eV^2 , and aeV^2 as a three by three square matrix. Tensors $V [V^2]$, $aV [V^2]$, and $aeV [V^2]$ are given in a three by six rectangular matrix M_{iq} , $i = 1,2,3$ and $q = 1,2,\dots,6$, where

$$M_{iq} = V_i [V^2]_{mn}$$

The values of q are associated with values of mn via the following table:

$$\begin{array}{l} q: 1 \quad 2 \quad 3 \quad 4 \quad 5 \quad 6 \\ mn: 11 \quad 22 \quad 33 \quad 23 \quad 13 \quad 12 \end{array}$$

For the $[[V^2]^2]$ tensor, a six by six triangular matrix M_{pq} , $p, q = 1, 2, \dots, 6$ triangular for typographical simplicity since $M_{pq} = M_{qp}$ and is defined by

$$M_{pq} = [[V^2]_{ij} [V^2]_{mn}]$$

The values of p and q are associated with values of ij and mn via the following tables:

$$\begin{array}{l} p: 1 \quad 2 \quad 3 \quad 4 \quad 5 \quad 6 \\ ij: 11 \quad 22 \quad 33 \quad 23 \quad 13 \quad 12 \end{array} \qquad \begin{array}{l} q: 1 \quad 2 \quad 3 \quad 4 \quad 5 \quad 6 \\ mn: 11 \quad 22 \quad 33 \quad 23 \quad 13 \quad 12 \end{array}$$

References

Aizu, K. (1970). *Phys. Rev.* **B2**, 754-772.

Jahn, H. A. (1949), *Acta Cryst.* **2**, 30-33, see also Litvin, D.B. (1994). *Acta Cryst.* **A50**, 406-408.

Opechowski, W. (1986). *Crystallographic and Metacrystallographic Groups*, Amsterdam: North Holland.

Schmid, H. (1999). *Ferroelectrics.* **221**, 9-17.

Table 1: Distinction quadruplets of the 733 species. In columns T,M,P,E are the distinction characterizations due to, respectively, spontaneous toroidal moment, spontaneous magnetization, spontaneous polarization, and spontaneous strain.

			T	M	P	E	
1	1'F1	1'F1	1x2	F	F	N	N
2	1-1'F1	1-1'F1	2x2	P	P	F	N
3	1-1'F1'	1-1'F1'	2	Z	Z	F	N
4	1-1'F 1-	1-1'F 1-	1x2	Z	F	Z	N
5	1-1'F 1-'	1-1'F 1-'	1x2	F	Z	Z	N
6	21'F1	2(z)1'F1	2x2	F	F	F	F
7	21'F1'	2(z)1'F1'	2	Z	Z	F	F
8	21'F2	2(z)1'F2(z)	1x2	F	F	N	N
9	21'F2'	2(z)1'F2(z)'	1x2	F	F	N	N
10	m1'F1	m(z)1'F1	2x2	F	F	F	F
11	m1'F1'	m(z)1'F1'	2	Z	Z	F	F
12	m1'Fm	m(z)1'Fm(z)	1x2	F	F	N	N
13	m1'Fm'	m(z)1'Fm(z)'	1x2	F	F	N	N
14	2/m1'F1	2(z)/m(z)1'F1	4x2	P	P	F	P
15	2/m1'F1'	2(z)/m(z)1'F1'	4	Z	Z	F	P
16	2/m1'F 1-	2(z)/m(z)1'F 1-	2x2	Z	F	Z	F
17	2/m1'F 1-'	2(z)/m(z)1'F 1-'	2x2	F	Z	Z	F
18	2/m1'F 1-1'	2(z)/m(z)1'F 1-1'	2	Z	Z	Z	F
19	2/m1'F2	2(z)/m(z)1'F2(z)	2x2	P	P	F	N
20	2/m1'F2'	2(z)/m(z)1'F2(z)'	2x2	P	P	F	N
21	2/m1'F21'	2(z)/m(z)1'F2(z)1'	2	Z	Z	F	N
22	2/m1'Fm	2(z)/m(z)1'Fm(z)	2x2	P	P	F	N
23	2/m1'Fm'	2(z)/m(z)1'Fm(z)'	2x2	P	P	F	N
24	2/m1'Fm1'	2(z)/m(z)1'Fm(z)1'	2	Z	Z	F	N
25	2/m1'F2/m	2(z)/m(z)1'F2(z)/m(z)	1x2	Z	F	Z	N
26	2/m1'F2'/m	2(z)/m(z)1'F2(z)'/m(z)	1x2	F	Z	Z	N
27	2/m1'F2/m'	2(z)/m(z)1'F2(z)/m(z)'	1x2	F	Z	Z	N
28	2/m1'F2'/m'	2(z)/m(z)1'F2(z)'/m(z)'	1x2	Z	F	Z	N
29	2221'F1	2(x)2(y)2(z)1'F1	4x2	F	F	F	F
30	2221'F1'	2(x)2(y)2(z)1'F1'	4	Z	Z	F	F
31	2221'F2	2(x)2(y)2(z)1'F2(z)	2x2	P	P	F	F
32	2221'F2'	2(x)2(y)2(z)1'F2(z)'	2x2	F	F	F	F

33	2221'F21'	$2(x)2(y)2(z)1'F2(z)1'$	2	Z	Z	F	F
34	2221'F222	$2(x)2(y)2(z)1'F 2(x)2(y)2(z)$	1x2	Z	Z	Z	N
35	2221'F2'2'2	$2(x)2(y)2(z)1'F 2(x)'2(y)'2(z)$	1x2	F	F	Z	N
36	mm21'F1	$m(x)m(y)2(z)1'F1$	4x2	F	F	F	F
37	mm21'F1'	$m(x)m(y)2(z)1'F1'$	4	Z	Z	F	F
38	mm21'F2	$m(x)m(y)2(z)1'F2(z)$	2x2	P	P	N	F
39	mm21'F2'	$m(x)m(y)2(z)1'F2(z)'$	2x2	F	F	N	F
40	mm21'F21'	$m(x)m(y)2(z)1'F2(z)1'$	2	Z	Z	N	F
41	mm21'Fm	$m(x)m(y)2(z)1'Fm(x)$	2x2	F	P	F	F
42	mm21'Fm'	$m(x)m(y)2(z)1'Fm(x)'$	2x2	P	F	F	F
43	mm21'Fm1'	$m(x)m(y)2(z)1'Fm(x)1'$	2	Z	Z	F	F
44	mm21'Fmm2	$m(x)m(y)2(z)1'Fm(x)m(y)2(z)$	1x2	F	Z	N	N
45	mm21'Fm'm2'	$m(x)m(y)2(z)1'Fm(x)'m(y)2(z)'$	1x2	F	F	N	N
46	mm21'Fm'm'2	$m(x)m(y)2(z)1'Fm(x)'m(y)'2(z)$	1x2	Z	F	N	N
47	mmm1'F1	$m(x)m(y)m(z)1'F1$	8x2	P	P	F	P
48	mmm1'F1'	$m(x)m(y)m(z)1'F1'$	8	Z	Z	F	P
49	mmm1'F1-	$m(x)m(y)m(z)1'F1-$	4x2	Z	F	Z	F
50	mmm1'F1-'	$m(x)m(y)m(z)1'F1-'$	4x2	F	Z	Z	F
51	mmm1'F1-1'	$m(x)m(y)m(z)1'F1-1'$	4	Z	Z	Z	F
52	mmm1'F2	$m(x)m(y)m(z)1'F2(z)$	4x2	P	P	P	P
53	mmm1'F2'	$m(x)m(y)m(z)1'F2(z)'$	4x2	P	P	P	P
54	mmm1'F21'	$m(x)m(y)m(z)1'F2(z)1'$	4	Z	Z	P	P
55	mmm1'Fm	$m(x)m(y)m(z)1'Fm(z)$	4x2	P	P	F	P
56	mmm1'Fm'	$m(x)m(y)m(z)1'Fm(z)'$	4x2	P	P	F	P
57	mmm1'Fm1'	$m(x)m(y)m(z)1'Fm(z)1'$	4	Z	Z	F	P
58	mmm1'F2/m	$m(x)m(y)m(z)1'F2(z)/m(z)$	2x2	Z	P	Z	F
59	mmm1'F2'/m	$m(x)m(y)m(z)1'F2(z)'/m(z)$	2x2	F	Z	Z	F
60	mmm1'F2/m'	$m(x)m(y)m(z)1'F2(z)/m(z)'$	2x2	P	Z	Z	F
61	mmm1'F2'/m'	$m(x)m(y)m(z)1'F2(z)'/m(z)'$	2x2	Z	F	Z	F
62	mmm1'F2/m1'	$m(x)m(y)m(z)1'F2(z)/m(z)1'$	2	Z	Z	Z	F
63	mmm1'F222	$m(x)m(y)m(z)1'F2(x)2(y)2(z)$	2x2	Z	Z	Z	N
64	mmm1'F2'2'2	$m(x)m(y)m(z)1'F2(x)'2(y)'2(z)$	2x2	P	P	Z	N
65	mmm1'F2221'	$m(x)m(y)m(z)1'F2(x)2(y)2(z)1'$	2	Z	Z	Z	N
66	mmm1'Fmm2	$m(x)m(y)m(z)1'Fm(x)m(y)2(z)$	2x2	P	Z	F	N
67	mmm1'Fm'm2'	$m(x)m(y)m(z)1'Fm(x)'m(y)2(z)'$	2x2	P	P	F	N
68	mmm1'Fm'm'2	$m(x)m(y)m(z)1'Fm(x)'m(y)'2(z)$	2x2	Z	P	F	N
69	mmm1'Fmm21'	$m(x)m(y)m(z)1'Fm(x)m(y)2(z)1'$	2	Z	Z	F	N
70	mmm1'Fmmmm	$m(x)m(y)m(z)1'Fm(x)m(y)m(z)$	1x2	Z	Z	Z	N
71	mmm1'Fmmmm'	$m(x)m(y)m(z)1'Fm(x)m(y)m(z)'$	1x2	F	Z	Z	N

72	$mmm1'Fm'm'm$	$m(x)m(y)m(z)1'Fm(x)'m(y)'m(z)$	1x2	Z	F	Z	N
73	$mmm1'Fm'm'm'$	$m(x)m(y)m(z)1'Fm(x)'m(y)'m(z)'$	1x2	Z	Z	Z	N
74	41'F1	4(z)1'F1	4x2	F	F	F	F
75	41'F1'	4(z)1'F1'	4	Z	Z	F	F
76	41'F2	4(z)1'F2(z)	2x2	P	P	N	F
77	41'F2'	4(z)1'F2(z)'	2x2	F	F	N	F
78	41'F21'	4(z)1'F2(z)1'	2	Z	Z	N	F
79	41'F4	4(z)1'F4(z)	1x2	F	F	N	N
80	41'F4'	4(z)1'F4(z)'	1x2	Z	Z	N	N
81	4-1'F1	4-(z)1'F1	4x2	F	F	F	F
82	4-1'F1'	4-(z)1'F1'	4	Z	Z	F	F
83	4-1'F2	4-(z)1'F2(z)	2x2	P	P	F	F
84	4-1'F2'	4-(z)1'F2(z)'	2x2	F	F	F	F
85	4-1'F21'	4-(z)1'F2(z)1'	2	Z	Z	F	F
86	4-1'F4-	4-(z)1'F4-(z)	1x2	Z	F	Z	N
87	4-1'F4-'	4-(z)1'F4-(z)'	1x2	F	Z	Z	N
88	4/m1'F1	4(z)/m(z)1'F1	8x2	P	P	F	P
89	4/m1'F1'	4(z)/m(z)1'F1'	8	Z	Z	F	P
90	4/m1'F1-	4(z)/m(z)1'F1-	4x2	Z	F	Z	F
91	4/m1'F1-'	4(z)/m(z)1'F1-'	4x2	F	Z	Z	F
92	4/m1'F1-1'	4(z)/m(z)1'F1-1'	4	Z	Z	Z	F
93	4/m1'F2	4(z)/m(z)1'F2(z)	4x2	P	P	P	P
94	4/m1'F2'	4(z)/m(z)1'F2(z)'	4x2	P	P	P	P
95	4/m1'F21'	4(z)/m(z)1'F2(z)1'	4	Z	Z	P	P
96	4/m1'Fm	4(z)/m(z)1'Fm(z)	4x2	P	P	F	P
97	4/m1'Fm'	4(z)/m(z)1'Fm(z)'	4x2	P	P	F	P
98	4/m1'Fm1'	4(z)/m(z)1'Fm(z)1'	4	Z	Z	F	P
99	4/m1'F2/m	4(z)/m(z)1'F2(z)/m(z)	2x2	Z	P	Z	F
100	4/m1'F2'/m	4(z)/m(z)1'F2(z)'/m(z)	2x2	F	Z	Z	F
101	4/m1'F2/m'	4(z)/m(z)1'F2(z)/m(z)'	2x2	P	Z	Z	F
102	4/m1'F2'/m'	4(z)/m(z)1'F2(z)'/m(z)'	2x2	Z	F	Z	F
103	4/m1'F2/m1'	4(z)/m(z)1'F2(z)/m(z)1'	2	Z	Z	Z	F
104	4/m1'F4	4(z)/m(z)1'F4(z)	2x2	P	P	F	N
105	4/m1'F4'	4(z)/m(z)1'F4(z)'	2x2	Z	Z	F	N
106	4/m1'F41'	4(z)/m(z)1'F4(z)1'	2	Z	Z	F	N
107	4/m1'F 4-	4(z)/m(z)1'F4-(z)	2x2	Z	P	Z	N
108	4/m1'F 4-'	4(z)/m(z)1'F4-(z)'	2x2	P	Z	Z	N
109	4/m1'F 4-1'	4(z)/m(z)1'F4-(z) 1'	2	Z	Z	Z	N

110	4/m1'F4/m	4(z)/m(z)1'F4(z)/m(z)	1x2	Z	F	Z	N
111	4/m1'F4/m'	4(z)/m(z)1'F4(z)/m(z)'	1x2	F	Z	Z	N
112	4/m1'F4'/m	4(z)/m(z)1'F4(z)'/m(z)	1x2	Z	Z	Z	N
113	4/m1'F4'/m'	4(z)/m(z)1'F4(z)'/m(z)'	1x2	Z	Z	Z	N
114	4221'F1	4(z)2(x)2(xy)1'F1	8x2	F	F	F	F
115	4221'F1'	4(z)2(x)2(xy)1'F1'	8	Z	Z	F	F
116	4221'F2(p)	4(z)2(x)2(xy)1'F2(z)	4x2	P	P	P	F
117	4221'F2(s)	4(z)2(x)2(xy)1'F2(x)	4x2	P	P	F	F
118	4221'F2'(p)	4(z)2(x)2(xy)1'F2(z)'	4x2	F	F	P	F
119	4221'F2'(s)	4(z)2(x)2(xy)1'F2(x)'	4x2	F	F	F	F
120	4221'F21'(p)	4(z)2(x)2(xy)1'F2(z)1'	4	Z	Z	P	F
121	4221'F21'(s)	4(z)2(x)2(xy)1'F2(x)1'	4	Z	Z	F	F
122	4221'F222	4(z)2(x)2(xy)1'F2(x)2(y) 2(z)	2x2	Z	Z	Z	F
123	4221'F2'2'2(p)	4(z)2(x)2(xy)1'F2(x)'2(y)'2(z)	2x2	P	P	Z	F
124	4221'F2'2'2(s)	4(z)2(x)2(xy)1'F2(x)2(y)'2(z)'	2x2	F	F	Z	F
125	4221'F2221'	4(z)2(x)2(xy)1'F2(x)2(xy) 2(z)1'	2	Z	Z	Z	F
126	4221'F4	4(z)2(x)2(xy)1'F4(z)	2x2	P	P	F	N
127	4221'F4'	4(z)2(x)2(xy)1'F4(z)'	2x2	Z	Z	F	N
128	4221'F41'	4(z)2(x)2(xy)1'F4(z)1'	2	Z	Z	F	N
129	4221'F422	4(z)2(x)2(xy)1'F4(z) 2(x) 2(xy)	1x2	Z	Z	Z	N
130	4221'F42'2'	4(z)2(x)2(xy)1'F4(z) 2(x)'2(xy)'	1x2	F	F	Z	N
131	4221'F4'2'2'	4(z)2(x)2(xy)1'F4(z)'2(x)'2(xy)'	1x2	Z	Z	Z	N
132	4mm1'F1	4(z)m(x)m(xy)1'F1	8x2	F	F	F	F
133	4mm1'F1'	4(z)m(x)m(xy)1'F1'	8	Z	Z	F	F
134	4mm1'F2	4(z)m(x)m(xy)1'F2(z)	4x2	P	P	N	F
135	4mm1'F2'	4(z)m(x)m(xy)1'F2(z)'	4x2	F	F	N	F
136	4mm1'F21'	4(z)m(x)m(xy)1'F2(z)1'	4	Z	Z	N	F
137	4mm1'Fm	4(z)m(x)m(xy)1'Fm(x)	4x2	F	P	F	F
138	4mm1'Fm'	4(z)m(x)m(xy)1'Fm(x)'	4x2	P	F	F	F
139	4mm1'Fm1'	4(z)m(x)m(xy)1'Fm(x)1'	4	Z	Z	F	F
140	4mm1'Fmm2	4(z)m(x)m(xy)1'Fm(x) m(y)2(z)	2x2	P	Z	N	F
141	4mm1'Fm'm2'	4(z)m(x)m(xy)1'Fm(x)'m(y)'2(z)'	2x2	F	F	N	F
142	4mm1'Fm'm'2	4(z)m(x)m(xy)1'Fm(x)'m(y)'2(z)	2x2	Z	P	N	F
143	4mm1'Fmm21'	4(z)m(x)m(xy)1'Fm(x) m(y)2(z)1'	2	Z	Z	N	F
144	4mm1'F4	4(z)m(x)m(xy)1'F4(z)	2x2	P	P	N	N
145	4mm1'F4'	4(z)m(x)m(xy)1'F4(z)'	2x2	Z	Z	N	N
146	4mm1'F41'	4(z)m(x)m(xy)1'F4(z) 1'	2	Z	Z	N	N
147	4mm1'F4mm	4(z)m(x)m(xy)1'F 4(z)m(x)m(xy)	1x2	F	Z	N	N
148	4mm1'F4m'm'	4(z)m(x)m(xy)1'F 4(z)m(x)' m(xy)'	1x2	Z	F	N	N

149	4mm1'F4'm'm	$4(z)m(x)m(xy)1'F$	$4(z)'m(x)'m(xy)$	1x2	Z	Z	N	N
150	4-2m1'F1	$4-(z)2(x)m(xy)1'F1$		8x2	F	F	F	F
151	4-2m1'F1'	$4-(z)2(x)m(xy)1'F1'$		8	Z	Z	F	F
152	4-2m1'F2(p)	$4-(z)2(x)m(xy)1'F2(z)$		4x2	P	P	P	F
153	4-2m1'F2(s)	$4-(z)2(x)m(xy)1'F2(x)$		4x2	P	P	F	F
154	4-2m1'F2'(p)	$4-(z)2(x)m(xy)1'F2(z)'$		4x2	F	F	P	F
155	4-2m1'F2'(s)	$4-(z)2(x)m(xy)1'F2(x)'$		4x2	F	F	F	F
156	4-2m1'F21'(p)	$4-(z)2(x)m(xy)1'F2(z)1'$		4	Z	Z	P	F
157	4-2m1'F21'(s)	$4-(z)2(x)m(xy)1'F2(x)1'$		4	Z	Z	F	F
158	4-2m1'Fm	$4-(z)2(x)m(xy)1'Fm(xy)$		4x2	F	P	F	F
159	4-2m1'Fm'	$4-(z)2(x)m(xy)1'Fm(xy)'$		4x2	P	F	F	F
160	4-2m1'Fm1'	$4-(z)2(x)m(xy)1'Fm(xy)1'$		4	Z	Z	F	F
161	4-2m1'F222	$4-(z)2(x)m(xy)1'F2(x)2(y)2(z)$		2x2	Z	Z	Z	F
162	4-2m1'F2'2'2'(p)	$4-(z)2(x)m(xy)1'F2(x)'2(y)'2(z)$		2x2	P	P	Z	F
163	4-2m1'F2'2'2'(s)	$4-(z)2(x)m(xy)1'F2(x)2(y)'2(z)'$		2x2	F	F	Z	F
164	4-2m1'F2221'	$4-(z)2(x)m(xy)1'F2(x)2(y)2(z)1'$		2	Z	Z	Z	F
165	4-2m1'Fmm2	$4-(z)2(x)m(xy)1'Fm(xy)m(x-y)2(z)$		2x2	P	Z	F	F
166	4-2m1'Fm'm2'	$4-(z)2(x)m(xy)1'Fm(xy)'m(x-y)2(z)'$		2x2	F	F	F	F
167	4-2m1'Fm'm'2	$4-(z)2(x)m(xy)1'Fm(xy)'m(x-y)'2(z)$		2x2	Z	P	F	F
168	4-2m1'Fmm21'	$4-(z)2(x)m(xy)1'Fm(xy)m(x-y)2(z)1'$		2	Z	Z	F	F
169	4-2m1'F4-	$4-(z)2(x)m(xy)1'F4-(z)$		2x2	Z	P	Z	N
170	4-2m1'F4-'	$4-(z)2(x)m(xy)1'F4-(z)'$		2x2	P	Z	Z	N
171	4-2m1'F4-1'	$4-(z)2(x)m(xy)1'F4-(z)1'$		2	Z	Z	Z	N
172	4-2m1'F4-2m	$4-(z)2(x)m(xy)1'F4-(z)2(x)m(xy)$		1x2	Z	Z	Z	N
173	4-2m1'F4-2'm'	$4-(z)2(x)m(xy)1'F4-(z)2(x)'m(xy)'$		1x2	Z	F	Z	N
174	4-2m1'F4-2'm	$4-(z)2(x)m(xy)1'F4-(z)'2(x)'m(xy)$		1x2	F	Z	Z	N
175	4-2m1'F4-2m'	$4-(z)2(x)m(xy)1'F4-(z)'2(x)m(xy)'$		1x2	Z	Z	Z	N
176	4/mmm1'F1	$4(z)/m(z)m(x)m(xy)1'F1$		16x2	P	P	F	P
177	4/mmm1'F1'	$4(z)/m(z)m(x)m(xy)1'F1'$		16	Z	Z	F	P
178	4/mmm1'F 1-	$4(z)/m(z)m(x)m(xy)1'F 1-$		8x2	Z	F	Z	F
179	4/mmm1'F 1-'	$4(z)/m(z)m(x)m(xy)1'F 1-'$		8x2	F	Z	Z	F
180	4/mmm1'F 1-1'	$4(z)/m(z)m(x)m(xy)1'F 1-1'$		8	Z	Z	Z	F
181	4/mmm1'F2(p)	$4(z)/m(z)m(x)m(xy)1'F2(z)$		8x2	P	P	P	P
182	4/mmm1'F2(s)	$4(z)/m(z)m(x)m(xy)1'F2(x)$		8x2	P	P	P	P
183	4/mmm1'F2'(p)	$4(z)/m(z)m(x)m(xy)1'F2(z)'$		8x2	P	P	P	P
184	4/mmm1'F2'(s)	$4(z)/m(z)m(x)m(xy)1'F2(x)'$		8x2	P	P	P	P
185	4/mmm1'F21'(p)	$4(z)/m(z)m(x)m(xy)1'F2(z)1'$		8	Z	Z	P	P
186	4/mmm1'F21'(s)	$4(z)/m(z)m(x)m(xy)1'F2(x)1'$		8	Z	Z	P	P
187	4/mmm1'Fm(p)	$4(z)/m(z)m(x)m(xy)1'Fm(z)$		8x2	P	P	F	P

188	4/mmm1'Fm(s)	4(z)/m(z)m(x)m(xy)1'Fm(x)	8x2	P	P	F	P
189	4/mmm1'Fm'(p)	4(z)/m(z)m(x)m(xy)1'Fm(z)'	8x2	P	P	F	P
190	4/mmm1'Fm'(s)	4(z)/m(z)m(x)m(xy)1'Fm(x)'	8x2	P	P	F	P
191	4/mmm1'Fm1'(p)	4(z)/m(z)m(x)m(xy)1'Fm(z)1'	8	Z	Z	F	P
192	4/mmm1'Fm1'(s)	4(z)/m(z)m(x)m(xy)1'Fm(x)1'	8	Z	Z	F	P
193	4/mmm1'F2/m(p)	4(z)/m(z)m(x)m(xy)1'F2(z)/m(z)	4x2	Z	P	Z	F
194	4/mmm1'F2/m(s)	4(z)/m(z)m(x)m(xy)1'F2(x)/m(x)	4x2	Z	P	Z	F
195	4/mmm1'F2'/m(p)	4(z)/m(z)m(x)m(xy)1'F2(z)'/m(z)	4x2	F	Z	Z	F
196	4/mmm1'F2'/m(s)	4(z)/m(z)m(x)m(xy)1'F2(x)'/m(x)	4x2	F	Z	Z	F
197	4/mmm1'F2/m'(p)	4(z)/m(z)m(x)m(xy)1'F2(z)/m(z)'	4x2	P	Z	Z	F
198	4/mmm1'F2/m'(s)	4(z)/m(z)m(x)m(xy)1'F2(x)/m(x)'	4x2	P	Z	Z	F
199	4/mmm1'F2'/m'(p)	4(z)/m(z)m(x)m(xy)1'F2(z)'/m(z)'	4x2	Z	F	Z	F
200	4/mmm1'F2'/m'(s)	4(z)/m(z)m(x)m(xy)1'F2(x)'/m(x)'	4x2	Z	F	Z	F
201	4/mmm1'F2/m1'(p)	4(z)/m(z)m(x)m(xy)1'F2(z)/m(z)1'	4	Z	Z	Z	F
202	4/mmm1'F2/m1'(s)	4(z)/m(z)m(x)m(xy)1'F2(x)/m(x)1'	4	Z	Z	Z	F
203	4/mmm1'F222	4(z)/m(z)m(x)m(xy)1'F2(x)2(y) 2(z)	4x2	Z	Z	Z	P
204	4/mmm1'F2'2'2(p)	4(z)/m(z)m(x)m(xy)1'F2(x)' 2(y)' 2(z)	4x2	P	P	Z	P
205	4/mmm1'F2'2'2(s)	4(z)/m(z)m(x)m(xy)1'F2(x)2(y)' 2(z)'	4x2	P	P	Z	P
206	4/mmm1'F2221'	4(z)/m(z)m(x)m(xy)1'F2(x)2(y) 2(z) 1'	4	Z	Z	Z	P
207	4/mmm1'Fmm2(p)	4(z)/m(z)m(x)m(xy)1'Fm(x)m(y) 2(z)	4x2	P	Z	P	P
208	4/mmm1'Fmm2(s)	4(z)/m(z)m(x)m(xy)1'Fm(y)m(z)2(x)	4x2	P	Z	F	P
209	4/mmm1'Fm'm2'(ss)	4(z)/m(z)m(x)m(xy)1'Fm(x)' m(y) 2(z)'	4x2	P	P	P	P
210	4/mmm1'Fm'm2'(ps)	4(z)/m(z)m(x)m(xy)1'Fm(y)m(z)' 2(x)'	4x2	P	P	F	P
211	4/mmm1'Fm'm2'(sp)	4(z)/m(z)m(x)m(xy)1'Fm(y)' m(z)2(x)'	4x2	P	P	F	P
212	4/mmm1'Fm'm2(p)	4(z)/m(z)m(x)m(xy)1'Fm(x)' m(y)' 2(z)	4x2	Z	P	P	P
213	4/mmm1'Fm'm2(s)	4(z)/m(z)m(x)m(xy)1'Fm(y)' m(z)' 2(x)	4x2	Z	P	F	P
214	4/mmm1'Fmm21'(p)	4(z)/m(z)m(x)m(xy)1'Fm(x)m(y) 2(z)1'	4	Z	Z	P	P
215	4/mmm1'Fmm21'(s)	4(z)/m(z)m(x)m(xy)1'Fm(y)m(z)2(x)1'	4	Z	Z	F	P
216	4/mmm1'Fmmm	4(z)/m(z)m(x)m(xy)1'Fm(x)m(y) m(z)	2x2	Z	Z	Z	F
217	4/mmm1'Fmmm'(p)	4(z)/m(z)m(x)m(xy)1'Fm(x)m(y) m(z)'	2x2	P	Z	Z	F
218	4/mmm1'Fmmm'(s)	4(z)/m(z)m(x)m(xy)1'Fm(x)'m(y)m(z)	2x2	F	Z	Z	F
219	4/mmm1'Fm'm'm (p)	4(z)/m(z)m(x)m(xy)1'Fm(x)'m(y)'m(z)	2x2	Z	P	Z	F
220	4/mmm1'Fm'm'm (s)	4(z)/m(z)m(x)m(xy)1'Fm(x)m(y)'m(z)'	2x2	Z	F	Z	F
221	4/mmm1'Fm'm'm'	4(z)/m(z)m(x)m(xy)1'Fm(x)'m(y)'m(z)'	2x2	Z	Z	Z	F
222	4/mmm1'Fmmm1'	4(z)/m(z)m(x)m(xy)1'Fm(x)m(y)m(z)1'	2	Z	Z	Z	F
223	4/mmm1'F4	4(z)/m(z)m(x)m(xy)1'F4(z)	4x2	P	P	P	N
224	4/mmm1'F4'	4(z)/m(z)m(x)m(xy)1'F4(z)'	4x2	Z	Z	P	N
225	4/mmm1'F41'	4(z)/m(z)m(x)m(xy)1'F4(z)1'	4	Z	Z	P	N
226	4/mmm1'F4-	4(z)/m(z)m(x)m(xy)1'F4-(z)	4x2	Z	P	Z	N
227	4/mmm1'F4-'	4(z)/m(z)m(x)m(xy)1'F4-(z)'	4x2	P	Z	Z	N
228	4/mmm1'F4-1'	4(z)/m(z)m(x)m(xy)1'F4-(z)1'	4	Z	Z	Z	N

229	4/mmm1'F4/m	4(z)/m(z)m(x)m(xy)1'F4(z)/m(z)	2x2	Z	P	Z	N
230	4/mmm1'F4/m'	4(z)/m(z)m(x)m(xy)1'F4(z)/m(z)'	2x2	P	Z	Z	N
231	4/mmm1'F4'/m	4(z)/m(z)m(x)m(xy)1'F4(z)'/m(z)	2x2	Z	Z	Z	N
232	4/mmm1'F4'/m'	4(z)/m(z)m(x)m(xy)1'F4(z)'/m(z)'	2x2	Z	Z	Z	N
233	4/mmm1'F4/m1'	4(z)/m(z)m(x)m(xy)1'F4(z)/m(z)1'	2	Z	Z	Z	N
234	4/mmm1'F422	4(z)/m(z)m(x)m(xy)1'F4(z)2(x)2(xy)	2x2	Z	Z	Z	N
235	4/mmm1'F42'2'	4(z)/m(z)m(x)m(xy)1'F4(z)2(x)'2(xy)'	2x2	P	P	Z	N
236	4/mmm1'F4'2'2	4(z)/m(z)m(x)m(xy)1'F4(z)'2(x)'2(xy)	2x2	Z	Z	Z	N
237	4/mmm1'F4221'	4(z)/m(z)m(x)m(xy)1'F4(z)2(x)2(xy)1'	2	Z	Z	Z	N
238	4/mmm1'F4mm	4(z)/m(z)m(x)m(xy)1'F4(z)m(x)m(xy)	2x2	P	Z	F	N
239	4/mmm1'F4m'm'	4(z)/m(z)m(x)m(xy)1'F4(z)m(x)'m(xy)'	2x2	Z	P	F	N
240	4/mmm1'F4'm'm	4(z)/m(z)m(x)m(xy)1'F4(z)'m(x)'m(xy)	2x2	Z	Z	F	N
241	4/mmm1'F4mm1'	4(z)/m(z)m(x)m(xy)1'F4(z)m(x)m(xy)1'	2	Z	Z	F	N
242	4/mmm1'F4-2m	4(z)/m(z)m(x)m(xy)1'F4-2(x)m(xy)	2x2	Z	Z	Z	N
243	4/mmm1'F4-2'm'	4(z)/m(z)m(x)m(xy)1'F4-(z)2(x)'m(xy)'	2x2	Z	P	Z	N
244	4/mmm1'F4-'2'm	4(z)/m(z)m(x)m(xy)1'F4-(z)'2(x)'m(xy)	2x2	P	Z	Z	N
245	4/mmm1'F4-'2m'	4(z)/m(z)m(x)m(xy)1'F4-(z)'2(x)m(xy)'	2x2	Z	Z	Z	N
246	4/mmm1'F4-2m1'	4(z)/m(z)m(x)m(xy)1'F4-(z)2(x)m(xy)1'	2	Z	Z	Z	N
247	4/mmm1'F4/mmm	4(z)/m(z)m(x)m(xy)1'F4(z)/m(z)m(x)m(xy)	1x2	Z	Z	Z	N
248	4/mmm1'F4/mm'm'	4(z)/m(z)m(x)m(xy)1'F4(z)/m(z)m(x)'m(xy)'	1x2	Z	F	Z	N
249	4/mmm1'F4/m'mm	4(z)/m(z)m(x)m(xy)1'F4(z)/m(z)'m(x)m(xy)	1x2	F	Z	Z	N
250	4/mmm1'F4/m'm'm'	4(z)/m(z)m(x)m(xy)1'F4(z)/m(z)'m(x)'m(xy)'	1x2	Z	Z	Z	N
251	4/mmm1'F4'/mm'm	4(z)/m(z)m(x)m(xy)1'F4(z)'/m(z)m(x)'m(xy)'	1x2	Z	Z	Z	N
252	4/mmm1'F4'/m'm'm	4(z)/m(z)m(x)m(xy)1'F4(z)'/m(z)'m(x)'m(xy)'	1x2	Z	Z	Z	N
253	31'F1	3(z)1'F1	3x2	F	F	F	F
254	31'F1'	3(z)1'F1'	3	Z	Z	F	F
255	31'F3	3(z)1'F 3(z)	1x2	F	F	N	N
256	3-1'F1	3-(z)1'F1	6x2	P	P	F	P
257	3-1'F1'	3-(z)1'F1'	6	Z	Z	F	P
258	3-1'F1-	3-(z)1'F1-	3x2	Z	F	Z	F
259	3-1'F1-'	3-(z)1'F1-'	3x2	F	Z	Z	F
260	3-1'F1-1'	3-(z)1'F1-1'	3	Z	Z	Z	F
261	3-1'F3	3-(z)1'F3(z)	2x2	P	P	F	N
262	3-1'F31'	3-(z)1'F3(z)1'	2	Z	Z	F	N
263	3-1'F3-	3-(z)1'F3-(z)	1x2	Z	F	Z	N
264	3-1'F3-'	3-(z)1'F3-(z)'	1x2	F	Z	Z	N
265	321'F1	3(z)2(x)1'F1	6x2	F	F	F	F
266	321'F1'	3(z)2(x)1'F1'	6	Z	Z	F	F

267	321'F2	$3(z)2(x)1'F2(x)$	3x2	F	F	F	F
268	321'F2'	$3(z)2(x)1'F2(x)'$	3x2	F	F	F	F
269	321'F21'	$3(z)2(x)1'F2(x)1'$	3	Z	Z	F	F
270	321'F3	$3(z)2(x)1'F3(z)$	2x2	P	P	F	N
271	321'F31'	$3(z)2(x)1'F3(z)1'$	2	Z	Z	F	N
272	321'F32	$3(z)2(x)1'F3(z)2(x)$	1x2	Z	Z	Z	N
273	321'F32'	$3(z)2(x)1'F3(z)2(x)'$	1x2	F	F	Z	N
274	3m1'F1	$3(z)m(x)1'F1$	6x2	F	F	F	F
275	3m1'F1'	$3(z)m(x)1'F1'$	6	Z	Z	F	F
276	3m1'Fm	$3(z)m(x)1'Fm(x)$	3x2	F	F	F	F
277	3m1'Fm'	$3(z)m(x)1'Fm(x)'$	3x2	F	F	F	F
278	3m1'Fm1'	$3(z)m(x)1'Fm(x)1'$	3	Z	Z	F	F
279	3m1'F3	$3(z)m(x)1'F3(z)$	2x2	P	P	N	N
280	3m1'F31'	$3(z)m(x)1'F3(z)1'$	2	Z	Z	N	N
281	3m1'F3m	$3(z)m(x)1'F3(z)m(x)$	1x2	F	Z	N	N
282	3m1'F3m'	$3(z)m(x)1'F3(z)m(x)'$	1x2	Z	F	N	N
283	3-m1'F1	$3-(z)m(x)1'F1$	12x2	P	P	F	P
284	3-m1'F1'	$3-(z)m(x)1'F1'$	12	Z	Z	F	P
285	3-m1'F1-	$3-(z)m(x)1'F1-$	6x2	Z	F	Z	F
286	3-m1'F1-'	$3-(z)m(x)1'F1-'$	6x2	F	Z	Z	F
287	3-m1'F1-1'	$3-(z)m(x)1'F1-1'$	6	Z	Z	Z	F
288	3-m1'F2	$3-(z)m(x)1'F2(x)$	6x2	P	P	F	P
289	3-m1'F2'	$3-(z)m(x)1'F2(x)'$	6x2	P	P	F	P
290	3-m1'F21'	$3-(z)m(x)1'F2(x)1'$	6	Z	Z	F	P
291	3-m1'Fm	$3-(z)m(x)1'Fm(x)$	6x2	P	P	F	P
292	3-m1'Fm'	$3-(z)m(x)1'Fm(x)'$	6x2	P	P	F	P
293	3-m1'Fm1'	$3-(z)m(x)1'Fm(x)1'$	6	Z	Z	F	P
294	3-m1'F2/m	$3-(z)m(x)1'F2(x)/m(x)$	3x2	Z	F	Z	F
295	3-m1'F2'/m	$3-(z)m(x)1'F2(x)'/m(x)$	3x2	F	Z	Z	F
296	3-m1'F2/m'	$3-(z)m(x)1'F2(x)/m(x)'$	3x2	F	Z	Z	F
297	3-m1'F2'/m'	$3-(z)m(x)1'F2(x)'/m(x)'$	3x2	Z	F	Z	F
298	3-m1'F2/m1'	$3-(z)m(x)1'F2(x)/m(x)1'$	3	Z	Z	Z	F
299	3-m1'F3	$3-(z)m(x)1'F3(z)$	4x2	P	P	P	N
300	3-m1'F31'	$3-(z)m(x)1'F3(z)1'$	4	Z	Z	P	N
301	3-m1'F3-	$3-(z)m(x)1'F3-(z)$	2x2	Z	P	Z	N
302	3-m1'F3-'	$3-(z)m(x)1'F3-(z)'$	2x2	P	Z	Z	N
303	3-m1'F3-1'	$3-(z)m(x)1'F3-(z)1'$	2	Z	Z	Z	N
304	3-m1'F32	$3-(z)m(x)1'F3(z)2(x)$	2x2	Z	Z	Z	N
305	3-m1'F32'	$3-(z)m(x)1'F3(z)2(x)'$	2x2	P	P	Z	N
306	3-m1'F321'	$3-(z)m(x)1'F3(z)2(x)1'$	2	Z	Z	Z	N

307	3-m1'F3m	3-(z)m(x)1'F3(z)m(x)	2x2	P	Z	F	N
308	3-m1'F3m'	3-(z)m(x)1'F3(z)m(x)'	2x2	Z	P	F	N
309	3-m1'F3m1'	3-(z)m(x)1'F3(z)m(x)1'	2	Z	Z	F	N
310	3-m1'F3-m	3-(z)m(x)1'F3-(z)m(x)	1x2	Z	Z	Z	N
311	3-m1'F3-m'	3-(z)m(x)1'F3-(z)m(x)'	1x2	Z	F	Z	N
312	3-m1'F3-'m	3-(z)m(x)1'F3-(z)'m(x)	1x2	F	Z	Z	N
313	3-m1'F3-'m'	3-(z)m(x)1'F3-(z)'m(x)'	1x2	Z	Z	Z	N
314	61'F1	6(z)1'F1	6x2	F	F	F	F
315	61'F1'	6(z)1'F1'	6	Z	Z	F	F
316	61'F2	6(z)1'F2(z)	3x2	P	P	N	F
317	61'F2'	6(z)1'F2(z)'	3x2	F	F	N	F
318	61'F21'	6(z)1'F2(z)1'	3	Z	Z	N	F
319	61'F3	6(z)1'F3(z)	2x2	P	P	N	N
320	61'F31'	6(z)1'F3(z)1'	2	Z	Z	N	N
321	61'F6	6(z)1'F6(z)	1x2	F	F	N	N
322	61'F6'	6(z)1'F6(z)'	1x2	Z	Z	N	N
323	6-1'F1	6-(z)1'F1	6x2	F	F	F	F
324	6-1'F1'	6-(z)1'F1'	6	Z	Z	F	F
325	6-1'Fm	6-(z)1'Fm(z)	3x2	F	P	F	F
326	6-1'Fm'	6-(z)1'Fm(z)'	3x2	P	F	F	F
327	6-1'Fm1'	6-(z)1'Fm(z)1'	3	Z	Z	F	F
328	6-1'F3	6-(z)1'F3(z)	2x2	P	P	F	N
329	6-1'F31'	6-(z)1'F3(z)1'	2	Z	Z	F	N
330	6-1'F6-	6-(z)1'F6-(z)	1x2	Z	F	Z	N
331	6-1'F6-'	6-(z)1'F6-(z)'	1x2	F	Z	Z	N
332	6/m1'F1	6(z)/m(z)1'F1	12x2	P	P	F	P
333	6/m1'F1'	6(z)/m(z)1'F1'	12	Z	Z	F	P
334	6/m1'F1-	6(z)/m(z)1'F1-	6x2	Z	F	Z	F
335	6/m1'F1-'	6(z)/m(z)1'F1-'	6x2	F	Z	Z	F
336	6/m1'F1-1'	6(z)/m(z)1'F1-1'	6	Z	Z	Z	F
337	6/m1'F2	6(z)/m(z)1'F2(z)	6x2	P	P	P	P
338	6/m1'F2'	6(z)/m(z)1'F2(z)'	6x2	P	P	P	P
339	6/m1'F21'	6(z)/m(z)1'F2(z)1'	6	Z	Z	P	P
340	6/m1'Fm	6(z)/m(z)1'Fm(z)	6x2	P	P	F	P
341	6/m1'Fm'	6(z)/m(z)1'Fm(z)'	6x2	P	P	F	P
342	6/m1'Fm1'	6(z)/m(z)1'Fm(z)1'	6	Z	Z	F	P
343	6/m1'F2/m	6(z)/m(z)1'F2(z)/m(z)	3x2	Z	P	Z	F
344	6/m1'F2'/m	6(z)/m(z)1'F2(z)'/m(z)	3x2	F	Z	Z	F

345	6/m1'F2/m'	6(z)/m(z)1'F2(z)/m(z)'	3x2	P	Z	Z	F
346	6/m1'F2'/m'	6(z)/m(z)1'F2(z)'/m(z)'	3x2	Z	F	Z	F
347	6/m1'F2/m1'	6(z)/m(z)1'F2(z)/m(z)1'	3	Z	Z	Z	F
348	6/m1'F3	6(z)/m(z)1'F3(z)	4x2	P	P	P	N
349	6/m1'F31'	6(z)/m(z)1'F3(z)1'	4	Z	Z	P	N
350	6/m1'F3-	6(z)/m(z)1'F3-(z)	2x2	Z	P	Z	N
351	6/m1'F3-'	6(z)/m(z)1'F3-(z)'	2x2	P	Z	Z	N
352	6/m1'F3-1'	6(z)/m(z)1'F3-(z)1'	2	Z	Z	Z	N
353	6/m1'F6	6(z)/m(z)1'F6(z)	2x2	P	P	F	N
354	6/m1'F6'	6(z)/m(z)1'F6(z)'	2x2	Z	Z	F	N
355	6/m1'F61'	6(z)/m(z)1'F6(z)1'	2	Z	Z	F	N
356	6/m1'F6-	6(z)/m(z)1'F6-(z)	2x2	Z	P	Z	N
357	6/m1'F6-'	6(z)/m(z)1'F6-(z)'	2x2	P	Z	Z	N
358	6/m1'F6-1'	6(z)/m(z)1'F6-(z)1'	2	Z	Z	Z	N
359	6/m1'F6/m	6(z)/m(z)1'F6(z)/m(z)	1x2	Z	F	Z	N
360	6/m1'F6/m'	6(z)/m(z)1'F6(z)'/m(z)'	1x2	F	Z	Z	N
361	6/m1'F6'/m	6(z)/m(z)1'F6(z)'/m(z)	1x2	Z	Z	Z	N
362	6/m1'F6'/m'	6(z)/m(z)1'F6(z)'/m(z)'	1x2	Z	Z	Z	N
363	6221'F1	6(z)2(x)2(1)1'F1	12x2	F	F	F	F
364	6221'F1'	6(z)2(x)2(1)1'F1'	12	Z	Z	F	F
365	6221'F2(p)	6(z)2(x)2(1)1'F2(z)	6x2	P	P	P	F
366	6221'F2(s)	6(z)2(x)2(1)1'F2(x)	6x2	P	P	F	F
367	6221'F2'(p)	6(z)2(x)2(1)1'F2(z)'	6x2	F	F	P	F
368	6221'F2'(s)	6(z)2(x)2(1)1'F2(x)'	6x2	F	F	F	F
369	6221'F21'(p)	6(z)2(x)2(1)1'F2(z)1'	6	Z	Z	P	F
370	6221'F21'(s)	6(z)2(x)2(1)1'F2(x)1'	6	Z	Z	F	F
371	6221'F222	6(z)2(x)2(1)1'F2(x)2(2)2(z)	3x2	Z	Z	Z	F
372	6221'F2'2'2(p)	6(z)2(x)2(1)1'F2(x)'2(2)'2(z)	3x2	P	P	Z	F
373	6221'F2'2'2(s)	6(z)2(x)2(1)1'F2(x)2(2)'2(z)'	3x2	F	F	Z	F
374	6221'F2221'	6(z)2(x)2(1)1'F2(x)2(2)2(z)1'	3	Z	Z	Z	F
375	6221'F3	6(z)2(x)2(1)1'F3(z)	4x2	P	P	P	N
376	6221'F31'	6(z)2(x)2(1)1'F3(z)1'	4	Z	Z	P	N
377	6221'F32	6(z)2(x)2(1)1'F3(z)2(x)	2x2	Z	Z	Z	N
378	6221'F32'	6(z)2(x)2(1)1'F3(z)2(x)'	2x2	P	P	Z	N
379	6221'F321'	6(z)2(x)2(1)1'F3(z)2(x)1'	2	Z	Z	Z	N
380	6221'F6	6(z)2(x)2(1)1'F6(z)	2x2	P	P	F	N
381	6221'F6'	6(z)2(x)2(1)1'F6(z)'	2x2	Z	Z	F	N
382	6221'F61'	6(z)2(x)2(1)1'F6(z)1'	2	Z	Z	F	N
383	6221'F622	6(z)2(x)2(1)1'F6(z)2(x)2(1)	1x2	Z	Z	Z	N
384	6221'F62'2'	6(z)2(x)2(1)1'F6(z)2(x)'2(1)'	1x2	F	F	Z	N

385	6221'F6'2'2	$6(z)2(x)2(1)1'F6(z)' 2(x)' 2(1)$	1x2	Z	Z	Z	N
386	6mm1'F1	$6(z)m(x)m(1)1'F1$	12x2	F	F	F	F
387	6mm1'F1'	$6(z)m(x)m(1)1'F1'$	12	Z	Z	F	F
388	6mm1'F2	$6(z)m(x)m(1)1'F2(z)$	6x2	P	P	N	F
389	6mm1'F2'	$6(z)m(x)m(1)1'F2(z)'$	6x2	F	F	N	F
390	6mm1'F21'	$6(z)m(x)m(1)1'F2(z)1'$	6	Z	Z	N	F
391	6mm1'Fm	$6(z)m(x)m(1)1'Fm(x)$	6x2	F	P	F	F
392	6mm1'Fm'	$6(z)m(x)m(1)1'Fm(x)'$	6x2	P	F	F	F
393	6mm1'Fm1'	$6(z)m(x)m(1)1'Fm(x)1'$	6	Z	Z	F	F
394	6mm1'Fmm2	$6(z)m(x)m(1)1'Fm(x)m(2)2(z)$	3x2	P	Z	N	F
395	6mm1'Fm'm2'	$6(z)m(x)m(1)1'Fm(x)'m(2)' 2(z)'$	3x2	F	F	N	F
396	6mm1'Fm'm'2	$6(z)m(x)m(1)1'Fm(x)'m(2)'2(z)$	3x2	Z	P	N	F
397	6mm1'Fmm21'	$6(z)m(x)m(1)1'Fm(x)m(2)2(z)1'$	3	Z	Z	N	F
398	6mm1'F3	$6(z)m(x)m(1)1'F3(z)$	4x2	P	P	N	N
399	6mm1'F31'	$6(z)m(x)m(1)1'F3(z)1'$	4	Z	Z	N	N
400	6mm1'F3m	$6(z)m(x)m(1)1'F3(z)m(x)$	2x2	P	Z	N	N
401	6mm1'F3m'	$6(z)m(x)m(1)1'F3(z)m(x)'$	2x2	Z	P	N	N
402	6mm1'F3m1'	$6(z)m(x)m(1)1'F3(z)m(x)1'$	2	Z	Z	N	N
403	6mm1'F6	$6(z)m(x)m(1)1'F6(z)$	2x2	P	P	N	N
404	6mm1'F6'	$6(z)m(x)m(1)1'F6(z)'$	2x2	Z	Z	N	N
405	6mm1'F61'	$6(z)m(x)m(1)1'F6(z)1'$	2	Z	Z	N	N
406	6mm1'F6mm	$6(z)m(x)m(1)1'F 6(z)m(x)m(1)$	1x2	F	Z	N	N
407	6mm1'F6m'm'	$6(z)m(x)m(1)1'F6(z)m(x)'m(1)'$	1x2	Z	F	N	N
408	6mm1'F6'm'm	$6(z)m(x)m(1)1'F6(z)'m(x)'m(1)$	1x2	Z	Z	N	N
409	6-m21'F1	$6-(z)m(x)2(1)1'F1$	12x2	F	F	F	F
410	6-m21'F1'	$6-(z)m(x)2(1)1'F1'$	12	Z	Z	F	F
411	6-m21'F2	$6-(z)m(x)2(1)1'F2(1)$	6x2	P	P	P	F
412	6-m21'F2'	$6-(z)m(x)2(1)1'F2(1)'$	6x2	F	F	P	F
413	6-m21'F21'	$6-(z)m(x)2(1)1'F2(1)1'$	6	Z	Z	P	F
414	6-m21'Fm(p)	$6-(z)m(x)2(1)1'Fm(z)$	6x2	F	P	F	F
415	6-m21'Fm(s)	$6-(z)m(x)2(1)1'Fm(x)$	6x2	F	P	F	F
416	6-m21'Fm'(p)	$6-(z)m(x)2(1)1'Fm(z)'$	6x2	P	F	F	F
417	6-m21'Fm'(s)	$6-(z)m(x)2(1)1'Fm(x)'$	6x2	P	F	F	F
418	6-m21'Fm1'(p)	$6-(z)m(x)2(1)1'Fm(z)1'$	6	Z	Z	F	F
419	6-m21'Fm1'(s)	$6-(z)m(x)2(1)1'Fm(x)1'$	6	Z	Z	F	F
420	6-m21'Fmm2	$6-(z)m(x)2(1)1'Fm(z) m(y)2(1)$	3x2	F	Z	F	F
421	6-m21'Fm'm2'(ps)	$6-(z)m(x)2(1)1'Fm(z)' m(y)2(1)'$	3x2	P	F	F	F
422	6-m21'Fm'm2'(sp)	$6-(z)m(x)2(1)1'Fm(z)m(y)'2(1)'$	3x2	F	P	F	F
423	6-m21'Fm'm'2	$6-(z)m(x)2(1)1'Fm(z)'m(y)'2(1)$	3x2	Z	F	F	F

424	6-m21'Fmm21'	$6-(z)m(x)2(1)1'Fm(z) m(y)2(1)1'$	3	Z	Z	F	F
425	6-m21'F3	$6-(z)m(x)2(1)1'F3(z)$	4x2	P	P	P	N
426	6-m21'F31'	$6-(z)m(x)2(1)1'F3(z)1'$	4	Z	Z	P	N
427	6-m21'F32	$6-(z)m(x)2(1)1'F3(z)2(1)$	2x2	Z	Z	Z	N
428	6-m21'F32'	$6-(z)m(x)2(1)1'F3(z)2(1)'$	2x2	P	P	Z	N
429	6-m21'F321'	$6-(z)m(x)2(1)1'F3(z)2(1)1'$	2	Z	Z	Z	N
430	6-m21'F3m	$6-(z)m(x)2(1)1'F3(z)m(x)$	2x2	P	Z	F	N
431	6-m21'F3m'	$6-(z)m(x)2(1)1'F3(z)m(x)'$	2x2	Z	P	F	N
432	6-m21'F3m1'	$6-(z)m(x)2(1)1'F3(z)m(x)1'$	2	Z	Z	F	N
433	6-m21'F6-	$6-(z)m(x)2(1)1'F6-(z)$	2x2	Z	P	Z	N
434	6-m21'F6-'	$6-(z)m(x)2(1)1'F6-(z)'$	2x2	P	Z	Z	N
435	6-m21'F6-1'	$6-(z)m(x)2(1)1'F6-(z)1'$	2	Z	Z	Z	N
436	6-m21'F6-m2	$6-(z)m(x)2(1)1'F6-(z)m(x)2(1)$	1x2	Z	Z	Z	N
437	6-m21'F6-m2'	$6-(z)m(x)2(1)1'F6-(z)m(x)2(1)'$	1x2	Z	F	Z	N
438	6-m21'F6-'m2'	$6-(z)m(x)2(1)1'F6-(z)'m(x)2(1)'$	1x2	F	Z	Z	N
439	6-m21'F6-'m2	$6-(z)m(x)2(1)1'F6-(z)'m(x)2(1)$	1x2	Z	Z	Z	N
440	6/mmm1'F1	$6(z)/m(z)m(x)m(1)1'F1$	24x2	P	P	F	P
441	6/mmm1'F1'	$6(z)/m(z)m(x)m(1)1'F1'$	24	Z	Z	F	P
442	6/mmm1'F1-	$6(z)/m(z)m(x)m(1)1'F1-$	12x2	Z	F	Z	F
443	6/mmm1'F1-'	$6(z)/m(z)m(x)m(1)1'F1-'$	12x2	F	Z	Z	F
444	6/mmm1'F1-1'	$6(z)/m(z)m(x)m(1)1'F1-1'$	12	Z	Z	Z	F
445	6/mmm1'F2(p)	$6(z)/m(z)m(x)m(1)1'F2(z)$	12x2	P	P	P	P
446	6/mmm1'F2(s)	$6(z)/m(z)m(x)m(1)1'F2(x)$	12x2	P	P	P	P
447	6/mmm1'F2'(p)	$6(z)/m(z)m(x)m(1)1'F2(z)'$	12x2	P	P	P	P
448	6/mmm1'F2'(s)	$6(z)/m(z)m(x)m(1)1'F2(x)'$	12x2	P	P	P	P
449	6/mmm1'F21'(p)	$6(z)/m(z)m(x)m(1)1'F2(z)1'$	12	Z	Z	P	P
450	6/mmm1'F21'(s)	$6(z)/m(z)m(x)m(1)1'F2(x)1'$	12	Z	Z	P	P
451	6/mmm1'Fm(p)	$6(z)/m(z)m(x)m(1)1'Fm(z)$	12x2	P	P	F	P
452	6/mmm1'Fm(s)	$6(z)/m(z)m(x)m(1)1'Fm(x)$	12x2	P	P	F	P
453	6/mmm1'Fm'(p)	$6(z)/m(z)m(x)m(1)1'Fm(z)'$	12x2	P	P	F	P
454	6/mmm1'Fm'(s)	$6(z)/m(z)m(x)m(1)1'Fm(x)'$	12x2	P	P	F	P
455	6/mmm1'Fm1'(p)	$6(z)/m(z)m(x)m(1)1'Fm(z)1'$	12	Z	Z	F	P
456	6/mmm1'Fm1'(p)	$6(z)/m(z)m(x)m(1)1'Fm(x)1'$	12	Z	Z	F	P
457	6/mmm1'F2/m(p)	$6(z)/m(z)m(x)m(1)1'F2(z)/m(z)$	6x2	Z	P	Z	F
458	6/mmm1'F2/m(s)	$6(z)/m(z)m(x)m(1)1'F2(x)/m(x)$	6x2	Z	P	Z	F
459	6/mmm1'F2'/m(p)	$6(z)/m(z)m(x)m(1)1'F2(z)'/m(z)$	6x2	F	Z	Z	F
460	6/mmm1'F2'/m(s)	$6(z)/m(z)m(x)m(1)1'F2(x)'/m(x)$	6x2	F	Z	Z	F
461	6/mmm1'F2/m'(p)	$6(z)/m(z)m(x)m(1)1'F2(z)/m(z)'$	6x2	P	Z	Z	F
462	6/mmm1'F2/m'(s)	$6(z)/m(z)m(x)m(1)1'F2(x)/m(x)'$	6x2	P	Z	Z	F
463	6/mmm1'F2'/m'(p)	$6(z)/m(z)m(x)m(1)1'F2(z)'/m(z)'$	6x2	Z	F	Z	F

464	6/mmm1'F2'/m'(s)	6(z)/m(z)m(x)m(1)'F2(x)/m(x)'	6x2	Z	F	Z	F
465	6/mmm1'F2/m1'(p)	6(z)/m(z)m(x)m(1)'F2(z)/m(z)1'	6	Z	Z	Z	F
466	6/mmm1'F2/m1'(s)	6(z)/m(z)m(x)m(1)'F2(x)/m(x)1'	6	Z	Z	Z	F
467	6/mmm1'F222	6(z)/m(z)m(x)m(1)'F2(x)2(y)2(z)	6x2	Z	Z	Z	P
468	6/mmm1'F2'2'2(p)	6(z)/m(z)m(x)m(1)'F2(x)'2(2)'2(z)	6x2	P	P	Z	P
469	6/mmm1'F2'2'2(s)	6(z)/m(z)m(x)m(1)'F2(x)2(2)'2(z)'	6x2	P	P	Z	P
470	6/mmm1'F2221'	6(z)/m(z)m(x)m(1)'F2(x)2(2)2(z)1'	6	Z	Z	Z	P
471	6/mmm1'Fmm2(p)	6(z)/m(z)m(x)m(1)'Fm(x)m(2)2(z)	6x2	P	Z	P	P
472	6/mmm1'Fmm2(s)	6(z)/m(z)m(x)m(1)'Fm(z)m(2)2(x)	6x2	P	Z	F	P
473	6/mmm1'Fm'm2'(ss)	6(z)/m(z)m(x)m(1)'Fm(x)'m(2)2(z)'	6x2	P	P	P	P
474	6/mmm1'Fm'm2'(ps)	6(z)/m(z)m(x)m(1)'Fm(z)'m(2)2(x)'	6x2	P	P	F	P
475	6/mmm1'Fm'm2'(sp)	6(z)/m(z)m(x)m(1)'Fm(z)m(2)'2(x)'	6x2	P	P	F	P
476	6/mmm1'Fm'm'2(p)	6(z)/m(z)m(x)m(1)'Fm(x)'m(2)'2(z)	6x2	Z	P	P	P
477	6/mmm1'Fm'm'2(s)	6(z)/m(z)m(x)m(1)'Fm(z)'m(2)'2(x)	6x2	Z	P	F	P
478	6/mmm1'Fmm21'(p)	6(z)/m(z)m(x)m(1)'Fm(x)m(2)2(z)1'	6	Z	Z	P	P
479	6/mmm1'Fmm21'(s)	6(z)/m(z)m(x)m(1)'Fm(z)m(2)2(x)1'	6	Z	Z	F	P
480	6/mmm1'Fmmm	6(z)/m(z)m(x)m(1)'Fm(x)m(2)2(z)	3x2	Z	Z	Z	F
481	6/mmm1'Fmmm'(p)	6(z)/m(z)m(x)m(1)'Fm(x)m(2)m(z)'	3x2	P	Z	Z	F
482	6/mmm1'Fmmm'(s)	6(z)/m(z)m(x)m(1)'Fm(x)'m(2)m(z)	3x2	F	Z	Z	F
483	6/mmm1'Fm'm'm(p)	6(z)/m(z)m(x)m(1)'Fm(x)'m(2)'m(z)	3x2	Z	P	Z	F
484	6/mmm1'Fm'm'm(s)	6(z)/m(z)m(x)m(1)'Fm(x)m(2)' m(z)'	3x2	Z	F	Z	F
485	6/mmm1'Fm'm'm'	6(z)/m(z)m(x)m(1)'Fm(x)'m(2)'m(z)'	3x2	Z	Z	Z	F
486	6/mmm1'Fmmm1'	6(z)/m(z)m(x)m(1)'Fm(x)' m(2)m(z)1'	3	Z	Z	Z	F
487	6/mmm1'F3	6(z)/m(z)m(x)m(1)'F3(z)	8x2	P	P	P	N
488	6/mmm1'F31'	6(z)/m(z)m(x)m(1)'F3(z)1'	8	Z	Z	P	N
489	6/mmm1'F3-	6(z)/m(z)m(x)m(1)'F3-(z)	4x2	Z	P	Z	N
490	6/mmm1'F3-'	6(z)/m(z)m(x)m(1)'F3-(z)'	4x2	P	Z	Z	N
491	6/mmm1'F3-1'	6(z)/m(z)m(x)m(1)'F3-(z)1'	4	Z	Z	Z	N
492	6/mmm1'F32	6(z)/m(z)m(x)m(1)'F3(z)2(x)	4x2	Z	Z	Z	N
493	6/mmm1'F32'	6(z)/m(z)m(x)m(1)'F3(z)2(x)'	4x2	P	P	Z	N
494	6/mmm1'F321'	6(z)/m(z)m(x)m(1)'F3(z)21'	4	Z	Z	Z	N
495	6/mmm1'F3m	6(z)/m(z)m(x)m(1)'F3(z)m(x)	4x2	P	Z	P	N
496	6/mmm1'F3m'	6(z)/m(z)m(x)m(1)'F3(z)m(x)'	4x2	Z	P	P	N
497	6/mmm1'F3m1'	6(z)/m(z)m(x)m(1)'F3(z)m(x)1'	4	Z	Z	P	N
498	6/mmm1'F3-m	6(z)/m(z)m(x)m(1)'F3-(z)m(x)	2x2	Z	Z	Z	N
499	6/mmm1'F3-m'	6(z)/m(z)m(x)m(1)'F3-(z)m(x)'	2x2	Z	P	Z	N
500	6/mmm1'F3-'m	6(z)/m(z)m(x)m(1)'F3-(z)'m(x)	2x2	P	Z	Z	N
501	6/mmm1'F3-'m'	6(z)/m(z)m(x)m(1)'F3-(z)'m(x)'	2x2	Z	Z	Z	N
502	6/mmm1'F3-m1'	6(z)/m(z)m(x)m(1)'F3-(z)m(x)1'	2	Z	Z	Z	N
503	6/mmm1'F6	6(z)/m(z)m(x)m(1)'F6(z)	4x2	P	P	P	N
504	6/mmm1'F6'	6(z)/m(z)m(x)m(1)'F6(z)'	4x2	Z	Z	P	N

505	6/mmm1'F61'	$6(z)/m(z)m(x)m(1)'F6(z)1'$	4	Z	Z	P	N
506	6/mmm1'F6-	$6(z)/m(z)m(x)m(1)'F6-(z)$	4x2	Z	P	Z	N
507	6/mmm1'F6-'	$6(z)/m(z)m(x)m(1)'F6-(z)'$	4x2	P	Z	Z	N
508	6/mmm1'F6-1'	$6(z)/m(z)m(x)m(1)'F6-(z)1'$	4	Z	Z	Z	N
509	6/mmm1'F6/m	$6(z)/m(z)m(x)m(1)'F6(z)/m(z)$	2x2	Z	P	Z	N
510	6/mmm1'F6/m'	$6(z)/m(z)m(x)m(1)'F6(z)/m(z)'$	2x2	P	Z	Z	N
511	6/mmm1'F6'/m	$6(z)/m(z)m(x)m(1)'F6(z)'/m(z)$	2x2	Z	Z	Z	N
512	6/mmm1'F6'/m'	$6(z)/m(z)m(x)m(1)'F6(z)'/m(z)'$	2x2	Z	Z	Z	N
513	6/mmm1'F6/m1'	$6(z)/m(z)m(x)m(1)'F6(z)/m(z)1'$	2	Z	Z	Z	N
514	6/mmm1'F622	$6(z)/m(z)m(x)m(1)'F6(z)2(x)2(1)$	2x2	Z	Z	Z	N
515	6/mmm1'F62'2'	$6(z)/m(z)m(x)m(1)'F6(z)2(x)'2(1)'$	2x2	P	P	Z	N
516	6/mmm1'F6'2'2	$6(z)/m(z)m(x)m(1)'F6(z)'2(x)'2(1)$	2x2	Z	Z	Z	N
517	6/mmm1'F6221'	$6(z)/m(z)m(x)m(1)'F6(z)2(x)2(1)1'$	2	Z	Z	Z	N
518	6/mmm1'F6mm	$6(z)/m(z)m(x)m(1)'F6(z)m(x)m(1)$	2x2	P	Z	F	N
519	6/mmm1'F6m'm'	$6(z)/m(z)m(x)m(1)'F6(z)m(x)'m(1)'$	2x2	Z	P	F	N
520	6/mmm1'F6'm'm	$6(z)/m(z)m(x)m(1)'F6(z)'m(x)'m(1)$	2x2	Z	Z	F	N
521	6/mmm1'F6mm1'	$6(z)/m(z)m(x)m(1)'F6(z) m(x)m(1)1'$	2	Z	Z	F	N
522	6/mmm1'F6-m2	$6(z)/m(z)m(x)m(1)'F6-(z)m(x) 2(1)$	2x2	Z	Z	Z	N
523	6/mmm1'F6-m'2'	$6(z)/m(z)m(x)m(1)'F6-(z)m(x)'2(1)'$	2x2	Z	P	Z	N
524	6/mmm1'F6-'m2'	$6(z)/m(z)m(x)m(1)'F6-(z)'m(x) 2(1)'$	2x2	P	Z	Z	N
525	6/mmm1'F6-'m'2	$6(z)/m(z)m(x)m(1)'F6-(z)'m(x)'2(1)$	2x2	Z	Z	Z	N
526	6/mmm1'F6-m21'	$6(z)/m(z)m(x)m(1)'F6-(z)m(x) 2(1)1'$	2	Z	Z	Z	N
527	6/mmm1'F6/mmm	$6(z)/m(z)m(x)m(1)'F 6(z)/m(z)m(x)m(1)$	1x2	Z	Z	Z	N
528	6/mmm1'F6/mm'm'	$6(z)/m(z)m(x)m(1)'F6(z)/m(z) m(x)'m(1)'$	1x2	Z	F	Z	N
529	6/mmm1'F6/m'mm	$6(z)/m(z)m(x)m(1)'F6(z)/m(z)'m(x)m(1)$	1x2	F	Z	Z	N
530	6/mmm1'F6/m'm'm'	$6(z)/m(z)m(x)m(1)'F6(z)/m(z)'m(x)'m(1)'$	1x2	Z	Z	Z	N
531	6/mmm1'F6'/mm'm	$6(z)/m(z)m(x)m(1)'F6(z)'/m(z) m(x)'m(1)$	1x2	Z	Z	Z	N
532	6/mmm1'F6'/m'm'm	$6(z)/m(z)m(x)m(1)'F6(z)'/m(z)'m(x)'m(1)$	1x2	Z	Z	Z	N
533	231'F1	$2(x)3(xyz)1'F1$	12x2	F	F	F	F
534	231'F1'	$2(x)3(xyz)1'F1'$	12	Z	Z	F	F
535	231'F2	$2(x)3(xyz)1'F2(x)$	6x2	P	P	F	F
536	231'F2'	$2(x)3(xyz)1'F2(x)'$	6x2	F	F	F	F
537	231'F21'	$2(x)3(xyz)1'F2(x)1'$	6	Z	Z	F	F
538	231'F222	$2(x)3(xyz)1'F2(x)2(y)2(z)$	3x2	Z	Z	Z	F
539	231'F2'2'2	$2(x)3(xyz)1'F2(x)'2(y)'2(z)$	3x2	F	F	Z	F
540	231'F2221'	$2(x)3(xyz)1'F2(x)2(y)2(z)1'$	3	Z	Z	Z	F
541	231'F3	$2(x)3(xyz)1'F3(xyz)$	4x2	F	F	F	F
542	231'F31'	$2(x)3(xyz)1'F3(xyz)1'$	4	Z	Z	F	F
543	231'F23	$2(x)3(xyz)1'F 2(x)3(xyz)$	1x2	Z	Z	Z	N

544	m3-1'F1	$m(x)3-(xyz)1'F1$	24x2	P	P	F	P
545	m3-1'F1'	$m(x)3-(xyz)1'F1'$	24	Z	Z	F	P
546	m3-1'F1-	$m(x)3-(xyz)1'F1-$	12x2	Z	F	Z	F
547	m3-1'F1-'	$m(x)3-(xyz)1'F1-'$	12x2	F	Z	Z	F
548	m3-1'F1-1'	$m(x)3-(xyz)1'F1-1'$	12	Z	Z	Z	F
549	m3-1'F2	$m(x)3-(xyz)1'F2(z)$	12x2	P	P	P	P
550	m3-1'F2'	$m(x)3-(xyz)1'F2(z)'$	12x2	P	P	P	P
551	m3-1'F21'	$m(x)3-(xyz)1'F2(z)1'$	12	Z	Z	P	P
552	m3-1'Fm	$m(x)3-(xyz)1'Fm(z)$	12x2	P	P	F	P
553	m3-1'Fm'	$m(x)3-(xyz)1'Fm(z)'$	12x2	P	P	F	P
554	m3-1'Fm1'	$m(x)3-(xyz)1'Fm(z)1'$	12	Z	Z	F	P
555	m3-1'F2/m	$m(x)3-(xyz)1'F2(z)/m(z)$	6x2	Z	P	Z	F
556	m3-1'F2'/m	$m(x)3-(xyz)1'F2(z)'/m(z)$	6x2	F	Z	Z	F
557	m3-1'F2/m'	$m(x)3-(xyz)1'F2(z)/m(z)'$	6x2	P	Z	Z	F
558	m3-1'F2'/m'	$m(x)3-(xyz)1'F2(z)'/m(z)'$	6x2	Z	F	Z	F
559	m3-1'F2/m1'	$m(x)3-(xyz)1'F2(z)/m(z)1'$	6	Z	Z	Z	F
560	m3-1'F222	$m(x)3-(xyz)1'F2(x)2(y)2(z)$	6x2	Z	Z	Z	P
561	m3-1'F2'2'2	$m(x)3-(xyz)1'F2(x)'2(y)'2(z)$	6x2	P	P	Z	P
562	m3-1'F2221'	$m(x)3-(xyz)1'F2(x)2(y)2(z)1'$	6	Z	Z	Z	P
563	m3-1'Fmm2	$m(x)3-(xyz)1'Fm(x)m(y)2(z)$	6x2	P	Z	F	P
564	m3-1'Fm'm2'	$m(x)3-(xyz)1'Fm(x)'m(y)2(z)'$	6x2	P	P	F	P
565	m3-1'Fm'm'2	$m(x)3-(xyz)1'Fm(x)'m(y)'2(z)$	6x2	Z	P	F	P
566	m3-1'Fmm21'	$m(x)3-(xyz)1'Fm(x)m(y)2(z)1'$	6	Z	Z	F	P
567	m3-1'Fmmm	$m(x)3-(xyz)1'Fm(x)m(y)m(z)$	3x2	Z	Z	Z	F
568	m3-1'Fmmm'	$m(x)3-(xyz)1'Fm(x)m(y)m(z)'$	3x2	F	Z	Z	F
569	m3-1'Fm'm'm	$m(x)3-(xyz)1'Fm(x)'m(y)'m(z)$	3x2	Z	F	Z	F
570	m3-1'Fm'm'm'	$m(x)3-(xyz)1'Fm(x)'m(y)'m(z)'$	3x2	Z	Z	Z	F
571	m3-1'Fmmm1'	$m(x)3-(xyz)1'Fm(x)m(y)m(z)1'$	3	Z	Z	Z	F
572	m3-1'F3	$m(x)3-(xyz)1'F3(xyz)$	8x2	P	P	F	P
573	m3-1'F31'	$m(x)3-(xyz)1'F3(xyz)1'$	8	Z	Z	F	P
574	m3-1'F3-	$m(x)3-(xyz)1'F3-(xyz)$	4x2	Z	F	Z	F
575	m3-1'F3-'	$m(x)3-(xyz)1'F3-(xyz)'$	4x2	F	Z	Z	F
576	m3-1'F3-1'	$m(x)3-(xyz)1'F3-(xyz)1'$	4	Z	Z	Z	F
577	m3-1'F23	$m(x)3-(xyz)1'F2(x)3(xyz)$	2x2	Z	Z	Z	N
578	m3-1'F231'	$m(x)3-(xyz)1'F2(x)3(xyz)1'$	2	Z	Z	Z	N
579	m3-1'Fm3-	$m(x)3-(xyz)1'F m(x)3-(xyz)$	1x2	Z	Z	Z	N
580	m3-1'Fm'3-'	$m(x)3-(xyz)1'F m(x)'3-(xyz)'$	1x2	Z	Z	Z	N
581	4321'F1	$4(z)3(xyz) 2(xy)1'F1$	24x2	F	F	F	F
582	4321'F1'	$4(z)3(xyz) 2(xy)1'F1'$	24	Z	Z	F	F
583	4321'F2(p)	$4(z)3(xyz) 2(xy)1'F2(z)$	12x2	P	P	P	F

584	4321'F2(s)	$4(z)3(xyz) 2(xy)1'F2(xy)$	12x2	P	P	F	F
585	4321'F2'(p)	$4(z)3(xyz) 2(xy)1'F2(z)'$	12x2	F	F	P	F
586	4321'F2'(s)	$4(z)3(xyz) 2(xy)1'F2(xy)'$	12x2	F	F	F	F
587	4321'F21'(p)	$4(z)3(xyz) 2(xy)1'F2(z)1'$	12	Z	Z	P	F
588	4321'F21'(s)	$4(z)3(xyz) 2(xy)1'F2(xy)1'$	12	Z	Z	F	F
589	4321'F222(pp)	$4(z)3(xyz) 2(xy)1'F2(x)2(y)2(z)$	6x2	Z	Z	Z	F
590	4321'F222(ss)	$4(z)3(xyz) 2(xy)1'F2(xy)2(x-y) 2(z)$	6x2	Z	Z	Z	F
591	4321'F2'2'2(pp)	$4(z)3(xyz) 2(xy)1'F2(x)'2(y)'2(z)$	6x2	P	P	Z	F
592	4321'F2'2'2(ss)	$4(z)3(xyz) 2(xy)1'F2(xy)'2(x-y)'2(z)$	6x2	P	P	Z	F
593	4321'F2'2'2(ps)	$4(z)3(xyz) 2(xy)1'F2(xy)2(x-y)'2(z)'$	6x2	F	F	Z	F
594	4321'F2221'(pp)	$4(z)3(xyz) 2(xy)1'F2(x)2(y)2(z)1'$	6	Z	Z	Z	F
595	4321'F2221'(ss)	$4(z)3(xyz) 2(xy)1'F2(xy)2(x-y) 2(z)1'$	6	Z	Z	Z	F
596	4321'F4	$4(z)3(xyz) 2(xy)1'F4(z)$	6x2	P	P	F	P
597	4321'F4'	$4(z)3(xyz) 2(xy)1'F4(z)'$	6x2	Z	Z	F	P
598	4321'F41'	$4(z)3(xyz) 2(xy)1'F4(z)1'$	6	Z	Z	F	P
599	4321'F422	$4(z)3(xyz) 2(xy)1'F4(z)2(x)2(xy)$	3x2	Z	Z	Z	F
600	4321'F42'2'	$4(z)3(xyz) 2(xy)1'F4(z)2(x)'2(xy)'$	3x2	F	F	Z	F
601	4321'F4'2'2'	$4(z)3(xyz) 2(xy)1'F4(z)'2(x)'2(xy)'$	3x2	Z	Z	Z	F
602	4321'F4221'	$4(z)3(xyz) 2(xy)1'F4(z)2(x)2(xy)1'$	3	Z	Z	Z	F
603	4321'F3	$4(z)3(xyz) 2(xy)1'F3(xyz)$	8x2	P	P	F	P
604	4321'F31'	$4(z)3(xyz) 2(xy)1'F3(xyz)1'$	8	Z	Z	F	P
605	4321'F32	$4(z)3(xyz) 2(xy)1'F3(xyz)2(x-y)$	4x2	Z	Z	Z	F
606	4321'F32'	$4(z)3(xyz) 2(xy)1'F3(xyz)2(x-y)'$	4x2	F	F	Z	F
607	4321'F321'	$4(z)3(xyz) 2(xy)1'F3(xyz)2(x-y)1'$	4	Z	Z	Z	F
608	4321'F23	$4(z)3(xyz) 2(xy)1'F2(x)3(xyz)$	2x2	Z	Z	Z	N
609	4321'F231'	$4(z)3(xyz) 2(xy)1'F2(x)3(xyz)1'$	2	Z	Z	Z	N
610	4321'F432	$4(z)3(xyz) 2(xy)1'F4(z)3(xyz)2(xy)$	1x2	Z	Z	Z	N
611	4321'F4'32'	$4(z)3(xyz) 2(xy)1'F4(z)'3(xyz)2(xy)'$	1x2	Z	Z	Z	N
612	4-3m1'F1	$4-(z)3(xyz)m(xy)1'F1$	24x2	F	F	F	F
613	4-3m1'F1'	$4-(z)3(xyz)m(xy)1'F1'$	24	Z	Z	F	F
614	4-3m1'F2	$4-(z)3(xyz)m(xy)1'F2(z)$	12x2	P	P	P	F
615	4-3m1'F2'	$4-(z)3(xyz)m(xy)1'F2(z)'$	12x2	F	F	P	F
616	4-3m1'F21'	$4-(z)3(xyz)m(xy)1'F2(z)1'$	12	Z	Z	P	F
617	4-3m1'Fm	$4-(z)3(xyz)m(xy)1'Fm(xy)$	12x2	F	P	F	F
618	4-3m1'Fm'	$4-(z)3(xyz)m(xy)1'Fm(xy)'$	12x2	P	F	F	F
619	4-3m1'Fm1'	$4-(z)3(xyz)m(xy)1'Fm(xy)1'$	12	Z	Z	F	F
620	4-3m1'F222	$4-(z)3(xyz)m(xy)1'F2(x)2(y)2(z)$	6x2	Z	Z	Z	F
621	4-3m1'F2'2'2'	$4-(z)3(xyz)m(xy)1'F2(x)'2(y)'2(z)$	6x2	P	P	Z	F
622	4-3m1'F2221'	$4-(z)3(xyz)m(xy)1'F2(x)2(y)2(z)1'$	6	Z	Z	Z	F
623	4-3m1'Fmm2	$4-(z)3(xyz)m(xy)1'Fm(xy)m(x-y) 2(z)$	6x2	P	Z	F	F

624	4-3m1'Fm'm2'	4-(z)3(xyz)m(xy)1'Fm(xy)'m(x-y) 2(z)'	6x2	F	F	F	F
625	4-3m1'Fm'm'2	4-(z)3(xyz)m(xy)1'Fm(xy)'m(x-y)'2(z)	6x2	Z	P	F	F
626	4-3m1'Fmm21'	4-(z)3(xyz)m(xy)1'Fm(xy)m(x-y) 2(z)1'	6	Z	Z	F	F
627	4-3m1'F4-	4-(z)3(xyz)m(xy)1'F4-(z)	6x2	Z	P	Z	P
628	4-3m1'F4-'	4-(z)3(xyz)m(xy)1'F4-(z)'	6x2	P	Z	Z	P
629	4-3m1'F4-1'	4-(z)3(xyz)m(xy)1'F4-(z)1'	6	Z	Z	Z	P
630	4-3m1'F4-2m	4-(z)3(xyz)m(xy)1'F4-(z)2(x)m(xy)	3x2	Z	Z	Z	F
631	4-3m1'F4-2'm'	4-(z)3(xyz)m(xy)1'F4-(z)2(x)'m(xy)'	3x2	Z	F	Z	F
632	4-3m1'F4-'2'm	4-(z)3(xyz)m(xy)1'F4-(z)'2(x)'m(xy)	3x2	F	Z	Z	F
633	4-3m1'F4-'2m'	4-(z)3(xyz)m(xy)1'F4-(z)'2(x)m(xy)'	3x2	Z	Z	Z	F
634	4-3m1'F4-2m1'	4-(z)3(xyz)m(xy)1'F4-(z)2(x)m(xy)1'	3	Z	Z	Z	F
635	4-3m1'F3	4-(z)3(xyz)m(xy)1'F3(xyz)	8x2	P	P	P	P
636	4-3m1'F31'	4-(z)3(xyz)m(xy)1'F3(xyz)1'	8	Z	Z	P	P
637	4-3m1'F3m	4-(z)3(xyz)m(xy)1'F3(xyz)m(x-y)	4x2	F	Z	F	F
638	4-3m1'F3m'	4-(z)3(xyz)m(xy)1'F3(xyz)m(x-y)'	4x2	Z	F	F	F
639	4-3m1'F3m1'	4-(z)3(xyz)m(xy)1'F3(xyz)m(x-y)1'	4	Z	Z	F	F
640	4-3m1'F23	4-(z)3(xyz)m(xy)1'F23(xyz)	2x2	Z	Z	Z	N
641	4-3m1'F231'	4-(z)3(xyz)m(xy)1'F23(xyz)1'	2	Z	Z	Z	N
642	4-3m1'F 4-3m	4-(z)3(xyz)m(xy)1'F4-(z)3(xyz)m(xy)	1x2	Z	Z	Z	N
643	4-3m1'F 4-'3m'	4-(z)3(xyz)m(xy)1'F4-(z)'3(xyz)m(xy)'	1x2	Z	Z	Z	N
644	m3-m1'F1	m(z)3-(xyz)m(xy)1'F1	48x2	P	P	F	P
645	m3-m1'F1'	m(z)3-(xyz)m(xy)1'F1'	48	Z	Z	F	P
646	m3-m1'F1-	m(z)3-(xyz)m(xy)1'F1-	24x2	Z	F	Z	F
647	m3-m1'F1-'	m(z)3-(xyz)m(xy)1'F1-'	24x2	F	Z	Z	F
648	m3-m1'F1-1'	m(z)3-(xyz)m(xy)1'F1-1'	24	Z	Z	Z	F
649	m3-m1'F2(p)	m(z)3-(xyz)m(xy)1'F2(z)	24x2	P	P	P	P
650	m3-m1'F2(s)	m(z)3-(xyz)m(xy)1'F2(xy)	24x2	P	P	P	P
651	m3-m1'F2'(p)	m(z)3-(xyz)m(xy)1'F2(z)'	24x2	P	P	P	P
652	m3-m1'F2'(s)	m(z)3-(xyz)m(xy)1'F2(xy)'	24x2	P	P	P	P
653	m3-m1'F21'(p)	m(z)3-(xyz)m(xy)1'F2(z)1'	24	Z	Z	P	P
654	m3-m1'F21'(s)	m(z)3-(xyz)m(xy)1'F2(xy)1'	24	Z	Z	P	P
655	m3-m1'Fm(p)	m(z)3-(xyz)m(xy)1'Fm(z)	24x2	P	P	F	P
656	m3-m1'Fm(s)	m(z)3-(xyz)m(xy)1'Fm(xy)	24x2	P	P	F	P
657	m3-m1'Fm'(p)	m(z)3-(xyz)m(xy)1'Fm(z)'	24x2	P	P	F	P
658	m3-m1'Fm'(s)	m(z)3-(xyz)m(xy)1'Fm(xy)'	24x2	P	P	F	P
659	m3-m1'Fm1'(p)	m(z)3-(xyz)m(xy)1'Fm(z)1'	24	Z	Z	F	P
660	m3-m1'Fm1'(s)	m(z)3-(xyz)m(xy)1'Fm(xy)1'	24	Z	Z	F	P
661	m3-m1'F2/m(p)	m(z)3-(xyz)m(xy)1'F2(z)/m(z)	12x2	Z	P	Z	F
662	m3-m1'F2/m(s)	m(z)3-(xyz)m(xy)1'F2(xy)/m(xy)	12x2	Z	P	Z	F
663	m3-m1'F2'/m(p)	m(z)3-(xyz)m(xy)1'F2(z)'/m(z)	12x2	F	Z	Z	F

664	m3-m1'F2'/m(s)	$m(z)^3-(xyz)m(xy)^1F2(xy)'/m(xy)$	12x2	F	Z	Z	F
665	m3-m1'F2'/m'(p)	$m(z)^3-(xyz)m(xy)^1F2(z)/m(z)'$	12x2	P	Z	Z	F
666	m3-m1'F2'/m'(s)	$m(z)^3-(xyz)m(xy)^1F2(xy)/m(xy)'$	12x2	P	Z	Z	F
667	m3-m1'F2'/m'(p)	$m(z)^3-(xyz)m(xy)^1F2(z)'/m(z)'$	12x2	Z	F	Z	F
668	m3-m1'F2'/m'(s)	$m(z)^3-(xyz)m(xy)^1F2(xy)'/m(xy)'$	12x2	Z	F	Z	F
669	m3-m1'F2'/m1'(p)	$m(z)^3-(xyz)m(xy)^1F2(z)/m(z)1'$	12	Z	Z	Z	F
670	m3-m1'F2'/m1'(s)	$m(z)^3-(xyz)m(xy)^1F2(xy)/m(xy)1'$	12	Z	Z	Z	F
671	m3-m1'F222(pp)	$m(z)^3-(xyz)m(xy)^1F2(x)2(y)2(z)$	12x2	Z	Z	Z	P
672	m3-m1'F222(ss)	$m(z)^3-(xyz)m(xy)^1F2(xy)2(x-y)2(z)$	12x2	Z	Z	Z	P
673	m3-m1'F2'2'2(pp)	$m(z)^3-(xyz)m(xy)^1F2(x)'2(y)'2(z)$	12x2	P	P	Z	P
674	m3-m1'F2'2'2(ss)	$m(z)^3-(xyz)m(xy)^1F2(xy)'2(x-y)'2(z)$	12x2	P	P	Z	P
675	m3-m1'F2'2'2(ps)	$m(z)^3-(xyz)m(xy)^1F2(xy)2(x-y)'2(z)'$	12x2	P	P	Z	P
676	m3-m1'F2221'(pp)	$m(z)^3-(xyz)m(xy)^1F2(x)2(y)2(z)1'$	12	Z	Z	Z	P
677	m3-m1'F2221'(ss)	$m(z)^3-(xyz)m(xy)^1F2(xy)2(x-y)2(z)1'$	12	Z	Z	Z	P
678	m3-m1'Fmm2(pp)	$m(z)^3-(xyz)m(xy)^1Fm(x)m(y)2(z)$	12x2	P	Z	P	P
679	m3-m1'Fmm2(ss)	$m(z)^3-(xyz)m(xy)^1Fm(xy)m(x-y)2(z)$	12x2	P	Z	P	P
680	m3-m1'Fmm2(ps)	$m(z)^3-(xyz)m(xy)^1Fm(z)m(xy)2(x-y)$	12x2	P	Z	F	P
681	m3-m1'Fm'm2'(pp)	$m(z)^3-(xyz)m(xy)^1Fm(x)'m(y)2(z)'$	12x2	P	P	P	P
682	m3-m1'Fm'm2'(ss)	$m(z)^3-(xyz)m(xy)^1Fm(xy)'my2(z)'$	12x2	P	P	P	P
683	m3-m1'Fm'm2'(ps)	$m(z)^3-(xyz)m(xy)^1Fm(z)'m(xy)2(x-y)'$	12x2	P	P	F	P
684	m3-m1'Fm'm2'(sp)	$m(z)^3-(xyz)m(xy)^1Fm(z)m(xy)'2(x-y)'$	12x2	P	P	F	P
685	m3-m1'Fm'm2'(pp)	$m(z)^3-(xyz)m(xy)^1Fm(x)'m(y)2(z)$	12x2	Z	P	P	P
686	m3-m1'Fm'm2'(ss)	$m(z)^3-(xyz)m(xy)^1Fm(xy)'my'2(z)$	12x2	Z	P	P	P
687	m3-m1'Fm'm2'(ps)	$m(z)^3-(xyz)m(xy)^1Fm(z)'m(xy)'2(x-y)$	12x2	Z	P	F	P
688	m3-m1'Fmm21'(pp)	$m(z)^3-(xyz)m(xy)^1Fm(x)m(y)2(z)1'$	12	Z	Z	P	P
689	m3-m1'Fmm21'(ss)	$m(z)^3-(xyz)m(xy)^1Fm(xy)my2(z)1'$	12	Z	Z	P	P
690	m3-m1'Fmm21'(ps)	$m(z)^3-(xyz)m(xy)^1Fm(z)m(xy)2(x-y)1'$	12	Z	Z	F	P
691	m3-m1'Fmmmm(pp)	$m(z)^3-(xyz)m(xy)^1Fm(x)m(y)m(z)$	6x2	Z	Z	Z	F
692	m3-m1'Fmmmm(ss)	$m(z)^3-(xyz)m(xy)^1Fm(xy)mym(z)$	6x2	Z	Z	Z	F
693	m3-m1'Fmmmm'(pp)	$m(z)^3-(xyz)m(xy)^1Fm(x)m(y)m(z)'$	6x2	P	Z	Z	F
694	m3-m1'Fmmmm'(ss)	$m(z)^3-(xyz)m(xy)^1Fm(xy)mym(z)'$	6x2	P	Z	Z	F
695	m3-m1'Fmmmm'(ps)	$m(z)^3-(xyz)m(xy)^1Fm(z)m(xy)m(x-y)'$	6x2	F	Z	Z	F
696	m3-m1'Fm'm'm(pp)	$m(z)^3-(xyz)m(xy)^1Fm(x)'m(y)'m(z)$	6x2	Z	P	Z	F
697	m3-m1'Fm'm'm(ss)	$m(z)^3-(xyz)m(xy)^1Fm(xy)'my'm(z)$	6x2	Z	P	Z	F
698	m3-m1'Fm'm'm(ps)	$m(z)^3-(xyz)m(xy)^1Fm(z)'m(xy)'m(x-y)$	6x2	Z	F	Z	F
699	m3-m1'Fm'm'm'(pp)	$m(z)^3-(xyz)m(xy)^1Fm(x)'m(y)'m(z)'$	6x2	Z	Z	Z	F
700	m3-m1'Fm'm'm'(ss)	$m(z)^3-(xyz)m(xy)^1Fm(xy)'my'm(z)'$	6x2	Z	Z	Z	F
701	m3-m1'Fmmmm1'(pp)	$m(z)^3-(xyz)m(xy)^1Fm(x)m(y)m(z)1'$	6	Z	Z	Z	F
702	m3-m1'Fmmmm1'(ss)	$m(z)^3-(xyz)m(xy)^1Fm(xy)mym(z)1'$	6	Z	Z	Z	F
703	m3-m1'F4	$m(z)^3-(xyz)m(xy)^1F4(z)$	12x2	P	P	P	P
704	m3-m1'F4'	$m(z)^3-(xyz)m(xy)^1F4(z)'$	12x2	Z	Z	P	P

705	m3-m1'F41'	$m(z)^3-(xyz)m(xy)1'F4(z)1'$	12	Z	Z	P	P
706	m3-m1'F4-	$m(z)^3-(xyz)m(xy)1'F4-(z)$	12x2	Z	P	Z	P
707	m3-m1'F4-'	$m(z)^3-(xyz)m(xy)1'F4-(z)'$	12x2	P	Z	Z	P
708	m3-m1'F4-1'	$m(z)^3-(xyz)m(xy)1'F4-(z)1'$	12	Z	Z	Z	P
709	m3-m1'F4/m	$m(z)^3-(xyz)m(xy)1'F4(z)/m(z)$	6x2	Z	P	Z	P
710	m3-m1'F4/m'	$m(z)^3-(xyz)m(xy)1'F4(z)/m(z)'$	6x2	P	Z	Z	P
711	m3-m1'F4'/m	$m(z)^3-(xyz)m(xy)1'F4(z)'/m(z)$	6x2	Z	Z	Z	P
712	m3-m1'F4'/m'	$m(z)^3-(xyz)m(xy)1'F4(z)'/m(z)'$	6x2	Z	Z	Z	P
713	m3-m1'F4/m1'	$m(z)^3-(xyz)m(xy)1'F4(z)/m(z)1'$	6	Z	Z	Z	P
714	m3-m1'F422	$m(z)^3-(xyz)m(xy)1'F4(z)2(x)2(xy)$	6x2	Z	Z	Z	P
715	m3-m1'F42'2'	$m(z)^3-(xyz)m(xy)1'F4(z)2(x)'2(xy)'$	6x2	P	P	Z	P
716	m3-m1'F4'2'2(ps)	$m(z)^3-(xyz)m(xy)1'F4(z)'2(x)'2(xy)$	6x2	Z	Z	Z	P
717	m3-m1'F4'2'2(sp)	$m(z)^3-(xyz)m(xy)1'F4(z)'2(x)2(xy)'$	6x2	Z	Z	Z	P
718	m3-m1'F4221'	$m(z)^3-(xyz)m(xy)1'F4(z)2(x)2(xy)1'$	6	Z	Z	Z	P
719	m3-m1'F4mm	$m(z)^3-(xyz)m(xy)1'F4(z)m(x)m(xy)$	6x2	P	Z	F	P
720	m3-m1'F4m'm'	$m(z)^3-(xyz)m(xy)1'F4(z)m(x)'m(xy)'$	6x2	Z	P	F	P
721	m3-m1'F4'm'm(ps)	$m(z)^3-(xyz)m(xy)1'F4(z)'m(x)'m(xy)$	6x2	Z	Z	F	P
722	m3-m1'F4'm'm(sp)	$m(z)^3-(xyz)m(xy)1'F4(z)'m(x)m(xy)'$	6x2	Z	Z	F	P
723	m3-m1'F4mm1'	$m(z)^3-(xyz)m(xy)1'F4(z)m(x)m(xy)1'$	6	Z	Z	F	P
724	m3-m1'F4-2m(ps)	$m(z)^3-(xyz)m(xy)1'F4-(z)2(x)m(xy)$	6x2	Z	Z	Z	P
725	m3-m1'F4-2m(sp)	$m(z)^3-(xyz)m(xy)1'F4-(z)2(xy)m(x)$	6x2	Z	Z	Z	P
726	m3-m1'F4-2'm'(ps)	$m(z)^3-(xyz)m(xy)1'F4-(z)2(x)'m(xy)'$	6x2	Z	P	Z	P
727	m3-m1'F4-2'm'(sp)	$m(z)^3-(xyz)m(xy)1'F4-(z)2(xy)'m(x)'$	6x2	Z	P	Z	P
728	m3-m1'F4-'2'm'(ps)	$m(z)^3-(xyz)m(xy)1'F4-(z)'2(x)'m(xy)'$	6x2	P	Z	Z	P
729	m3-m1'F4-'2'm'(sp)	$m(z)^3-(xyz)m(xy)1'F4-(z)'2(xy)'m(x)'$	6x2	P	Z	Z	P
730	m3-m1'F4-'2m'(ps)	$m(z)^3-(xyz)m(xy)1'F4-(z)'2(x)m(xy)'$	6x2	Z	Z	Z	P
731	m3-m1'F4-'2m'(sp)	$m(z)^3-(xyz)m(xy)1'F4-(z)'2(xy)m(x)'$	6x2	Z	Z	Z	P
732	m3-m1'F4-2m1'(ps)	$m(z)^3-(xyz)m(xy)1'F4-(z)2(x)m(xy)1'$	6	Z	Z	Z	P
733	m3-m1'F4-2m1'(sp)	$m(z)^3-(xyz)m(xy)1'F4-(z)2(xy)m(x)1'$	6	Z	Z	Z	P
734	m3-m1'F4/mmm	$m(z)^3-(xyz)m(xy)1'F4(z)/m(z)m(x)m(xy)$	3x2	Z	Z	Z	F
735	m3-m1'F4/mm'm'	$m(z)^3-(xyz)m(xy)1'F4(z)/m(z)m(x)'m(xy)'$	3x2	Z	F	Z	F
736	m3-m1'F4/m'mm	$m(z)^3-(xyz)m(xy)1'F4(z)/m(z)'m(x)m(xy)$	3x2	F	Z	Z	F
737	m3-m1'F4/m'm'm'	$m(z)^3-(xyz)m(xy)1'F4(z)/m(z)'m(x)'m(xy)'$	3x2	Z	Z	Z	F
738	m3-m1'F4'/mm'm(ps)	$m(z)^3-(xyz)m(xy)1'F4(z)'/m(z)m(x)'m(xy)'$	3x2	Z	Z	Z	F
739	m3-m1'F4'/mm'm(sp)	$m(z)^3-(xyz)m(xy)1'F4(z)'/m(z)m(x)m(xy)'$	3x2	Z	Z	Z	F
740	m3-m1'F4'/m'm'm(ps)	$m(z)^3-(xyz)m(xy)1'F4(z)'/m(z)'m(x)'m(xy)'$	3x2	Z	Z	Z	F
741	m3-m1'F4'/m'm'm(sp)	$m(z)^3-(xyz)m(xy)1'F4(z)'/m(z)'m(x)m(xy)'$	3x2	Z	Z	Z	F
742	m3-m1'F4/mmm1'	$m(z)^3-(xyz)m(xy)1'F4(z)/m(z)m(x)m(xy)1'$	3	Z	Z	Z	F
743	m3-m1'F3	$m(z)^3-(xyz)m(xy)1'F3(xyz)$	16x2	P	P	P	P
744	m3-m1'F31'	$m(z)^3-(xyz)m(xy)1'F3(xyz)1'$	16	Z	Z	P	P
745	m3-m1'F3-	$m(z)^3-(xyz)m(xy)1'F3-(xyz)$	8x2	Z	P	Z	P

746	m3-m1'F3-'	$m(z)^3-(xyz)m(xy)^1F3-(xyz)'$	8x2	P	Z	Z	P
747	m3-m1'F3-1'	$m(z)^3-(xyz)m(xy)^1F3-(xyz)1'$	8	Z	Z	Z	P
748	m3-m1'F32	$m(z)^3-(xyz)m(xy)^1F3(xyz)^2(x-y)$	8x2	Z	Z	Z	P
749	m3-m1'F32'	$m(z)^3-(xyz)m(xy)^1F3(xyz)^2(x-y)'$	8x2	P	P	Z	P
750	m3-m1'F321'	$m(z)^3-(xyz)m(xy)^1F3(xyz)^2(x-y)1'$	8	Z	Z	Z	P
751	m3-m1'F3m	$m(z)^3-(xyz)m(xy)^1F3(xyz)m(x-y)$	8x2	P	Z	F	P
752	m3-m1'F3m'	$m(z)^3-(xyz)m(xy)^1F3(xyz)m(x-y)'$	8x2	Z	P	F	P
753	m3-m1'F3m1'	$m(z)^3-(xyz)m(xy)^1F3(xyz)m(x-y)1'$	8	Z	Z	F	P
754	m3-m1'F3-m	$m(z)^3-(xyz)m(xy)^1F3-(xyz)m(x-y)$	4x2	Z	Z	Z	F
755	m3-m1'F3-m'	$m(z)^3-(xyz)m(xy)^1F3-(xyz)m(x-y)'$	4x2	Z	F	Z	F
756	m3-m1'F3-'m	$m(z)^3-(xyz)m(xy)^1F3-(xyz)m(x-y)'$	4x2	F	Z	Z	F
757	m3-m1'F3-'m'	$m(z)^3-(xyz)m(xy)^1F3-(xyz)m(x-y)'$	4x2	Z	Z	Z	F
758	m3-m1'F3-m1'	$m(z)^3-(xyz)m(xy)^1F3-(xyz)m(x-y)1'$	4	Z	Z	Z	F
759	m3-m1'F23	$m(z)^3-(xyz)m(xy)^1F2(z)^3(xyz)$	4x2	Z	Z	Z	N
760	m3-m1'F231'	$m(z)^3-(xyz)m(xy)^1F2(z)^3(xyz)1'$	4	Z	Z	Z	N
761	m3-m1'Fm3-	$m(z)^3-(xyz)m(xy)^1Fm(z)^3-(xyz)$	2x2	Z	Z	Z	N
762	m3-m1'Fm'3-	$m(z)^3-(xyz)m(xy)^1Fm(z)^3-(xyz)'$	2x2	Z	Z	Z	N
763	m3-m1'Fm3-1'	$m(z)^3-(xyz)m(xy)^1Fm(z)^3-(xyz)1'$	2	Z	Z	Z	N
764	m3-m1'F432	$m(z)^3-(xyz)m(xy)^1F4(z)^3(xyz)^2(xy)$	2x2	Z	Z	Z	N
765	m3-m1'F4'32'	$m(z)^3-(xyz)m(xy)^1F4(z)^3(xyz)^2(xy)'$	2x2	Z	Z	Z	N
766	m3-m1'F4321'	$m(z)^3-(xyz)m(xy)^1F4(z)^3(xyz)^2(xy)1'$	2	Z	Z	Z	N
767	m3-m1'F4-3m	$m(z)^3-(xyz)m(xy)^1F4-(z)^3(xyz)m(xy)$	2x2	Z	Z	Z	N
768	m3-m1'F4-'3m'	$m(z)^3-(xyz)m(xy)^1F4-(z)^3(xyz)m(xy)'$	2x2	Z	Z	Z	N
769	m3-m1'F4-3m1'	$m(z)^3-(xyz)m(xy)^1F4-(z)^3(xyz)m(xy)1'$	2	Z	Z	Z	N
770	m3-m1'F m3-m	$m(z)^3-(xyz)m(xy)^1Fm(z)^3-(xyz)m(xy)$	1x2	Z	Z	Z	N
771	m3-m1'F m3-m'	$m(z)^3-(xyz)m(xy)^1Fm(z)^3-(xyz)m(xy)'$	1x2	Z	Z	Z	N
772	m3-m1'F m'3-'m	$m(z)^3-(xyz)m(xy)^1F m(z)^3-(xyz)m(xy)'$	1x2	Z	Z	Z	N
773	m3-m1'F m'3-'m'	$m(z)^3-(xyz)m(xy)^1F m(z)^3-(xyz)m(xy)'$	1x2	Z	Z	Z	N

Table 2: Number of species in each ensemble and sub-ensemble.

		FP			PP			N/ZP					
		FT	PT	ZT	FT	PT	ZT	N	Z	N	Z	N	Z
								FT		PT		ZT	
FM	FE	1(45) 34	9	2	2(6) 6	0	0	3(44) 7	7	0	0	0	30
	PE	4(0) 0	0	0	5(0) 0	0	0	6(0) 0	0	0	0	0	0
	NE	7(0) 0	0	0	8(0) 0	0	0	9(31) 9	4	0	0	4	14
PM	FE	10(18) 9	7	2	11(6) 0	6	0	12(27) 0	0	5	6	2	14
	PE	13(50) 0	44	6	14(31) 0	27	4	15(16) 0	0	0	10	0	6
	NE	16(18) 0	13	5	17(8) 0	7	1	18(27) 0	0	5	7	1	14
AFM — PDM	FE	19(4) 2	2	0	20(0) 0	0	0	21(76) 0	30	2	14	0	30
		28(42) 0	0	42	29(6) 0	0	6	30(46) 0	0	0	0	7	39
AFM — PDM	PE	22(9) 0	6	3	23(5) 0	4	1	24(21) 0	0	0	6	0	15
		31(31) 0	0	31	32(17) 0	0	17	33(13) 0	0	0	0	0	13
AFM — PDM	NE	25(11) 0	5	6	26(3) 0	1	2	27(105) 4	14	1	14	6	66
		34(15) 0	0	15	35(8) 0	0	8	36(34) 0	0	0	0	6	28

Table 3: Index of sub-ensemble distinction quadruplets.

				Number of Species in each SubEnsemble
F	F	F	F	34
F	F	F	P	0
F	F	F	N	0
F	F	P	F	6
F	F	P	P	0
F	F	P	N	0
F	F	Z	F	7
F	F	Z	P	0
F	F	Z	N	4
F	F	N	F	7
F	F	N	P	0
F	F	N	N	9
F	P	F	F	9
F	P	F	P	0
F	P	F	N	0
F	P	P	F	0
F	P	P	P	0
F	P	P	N	0
F	P	Z	F	0
F	P	Z	P	0
F	P	Z	N	0
F	P	N	F	0
F	P	N	P	0
F	P	N	N	0
F	Z	F	F	2
F	Z	F	P	0
F	Z	F	N	0
F	Z	P	F	0
F	Z	P	P	0
F	Z	P	N	0
F	Z	Z	F	30
F	Z	Z	P	0
F	Z	Z	N	14
F	Z	N	F	0
F	Z	N	P	0
F	Z	N	N	4

P	F	F	F	9
P	F	F	P	0
P	F	F	N	0
P	F	P	F	0
P	F	P	P	0
P	F	P	N	0
P	F	Z	F	0
P	F	Z	P	0
P	F	Z	N	0
P	F	N	F	0
P	F	N	P	0
P	F	N	N	0
P	P	F	F	7
P	P	F	P	44
P	P	F	N	13
P	P	P	F	6
P	P	P	P	27
P	P	P	N	7
P	P	Z	F	6
P	P	Z	P	10
P	P	Z	N	7
P	P	N	F	5
P	P	N	P	0
P	P	N	N	5
P	Z	F	F	2
P	Z	F	P	6
P	Z	F	N	5
P	Z	P	F	0
P	Z	P	P	4
P	Z	P	N	1
P	Z	Z	F	14
P	Z	Z	P	6
P	Z	Z	N	14
P	Z	N	F	2
P	Z	N	P	0
P	Z	N	N	1

Z	F	F	F	2
Z	F	F	P	0
Z	F	F	N	0
Z	F	P	F	0
Z	F	P	P	0
Z	F	P	N	0
Z	F	Z	F	30
Z	F	Z	P	0
Z	F	Z	N	14
Z	F	N	F	0
Z	F	N	P	0
Z	F	N	N	4
Z	P	F	F	2
Z	P	F	P	6
Z	P	F	N	5
Z	P	P	F	0
Z	P	P	P	4
Z	P	P	N	1
Z	P	Z	F	14
Z	P	Z	P	6
Z	P	Z	N	14
Z	P	N	F	2
Z	P	N	P	0
Z	P	N	N	1
Z	Z	F	F	42
Z	Z	F	P	34
Z	Z	F	N	21
Z	Z	P	F	6
Z	Z	P	P	18
Z	Z	P	N	10
Z	Z	Z	F	69
Z	Z	Z	P	28
Z	Z	Z	N	94
Z	Z	N	F	7
Z	Z	N	P	0
Z	Z	N	N	12

Table 4: Listing of species in each sub-ensemble

F	F	F	F	34	6 21'F1	2(z)1'F1
					10 m1'F1	m(z)1'F1
					29 2221'F1	2(x)2(y)2(z)1'F1
					32 2221'F2'	2(x)2(y)2(z)1'F2(z)'
					36 mm21'F1	m(x)m(y)2(z)1'F1
					74 41'F1	4(z)1'F1
					81 4-1'F1	4-(z)1'F1
					84 4-1'F2'	4-(z)1'F2(z)'
					114 4221'F1	4(z)2(x)2(xy)1'F1
					119 4221'F2'(s)	4(z)2(x)2(xy)1'F2(x)'
					132 4mm1'F1	4(z)m(x)m(xy)1'F1
					150 4-2m1'F1	4-(z)2(x)m(xy)1'F1
					155 4-2m1'F2'(s)	4-(z)2(x)m(xy)1'F2(x)'
					166 4-2m1'Fm'm2'	4-(z)2(x)m(xy)1'Fm(xy)'m(x-y) 2(z)'
					253 31'F1	3(z)1'F1
					265 321'F1	3(z)2(x)1'F1
					267 321'F2	3(z)2(x)1'F2(x)
					268 321'F2'	3(z)2(x)1'F2(x)'
					274 3m1'F1	3(z)m(x)1'F1
					276 3m1'Fm	3(z)m(x)1'Fm(x)
					277 3m1'Fm'	3(z)m(x)1'Fm(x)'
					314 61'F1	6(z)1'F1
					323 6-1'F1	6-(z)1'F1
					363 6221'F1	6(z)2(x)2(1)1'F1
					368 6221'F2'(s)	6(z)2(x)2(1)1'F2(x)'
					386 6mm1'F1	6(z)m(x)m(1)1'F1
					409 6-m21'F1	6-(z)m(x)2(1)1'F1
					533 231'F1	2(x)3(xyz)1'F1
					536 231'F2'	2(x)3(xyz)1'F2(x)'
					541 231'F3	2(x)3(xyz)1'F3(xyz)
					581 4321'F1	4(z)3(xyz) 2(xy)1'F1
					586 4321'F2'(s)	4(z)3(xyz) 2(xy)1'F2(xy)'
					612 4-3m1'F1	4-(z)3(xyz)m(xy)1'F1
					624 4-3m1'Fm'm2'	4-(z)3(xyz)m(xy)1'Fm(xy)'m(x-y) 2(z)'
F	F	F	P	0		
F	F	F	N	0		
F	F	P	F	6	118 4221'F2'(p)	4(z)2(x)2(xy)1'F2(z)'
					154 4-2m1'F2'(p)	4-(z)2(x)m(xy)1'F2(z)'

367 6221'F2'(p) 6(z)2(x)2(1)1'F2(z)
 412 6-m21'F2' 6-(z)m(x)2(1)1'F2(1)
 585 4321'F2'(p) 4(z)3(xyz) 2(xy)1'F2(z)
 615 4-3m1'F2' 4-(z)3(xyz)m(xy)1'F2(z)

F F P P 0

F F P N 0

F F Z F 7

124 4221'F2'2'2(s) 4(z)2(x)2(xy)1'F2(x)2(y)'2(z)
 163 4-2m1'F2'2'2(s) 4-(z)2(x)m(xy)1'F2(x)2(y)' 2(z)
 373 6221'F2'2'2(s) 6(z)2(x)2(1)1'F2(x)2(2)'2(z)
 539 231'F2'2'2 2(x)3(xyz)1'F2(x)'2(y)'2(z)
 593 4321'F2'2'2(ps) 4(z)3(xyz) 2(xy)1'F2(xy)2(x-y)'2(z)
 600 4321'F42'2' 4(z)3(xyz) 2(xy)1'F4(z)2(x)'2(xy)
 606 4321'F32' 4(z)3(xyz) 2(xy)1'F3(xyz)2(x-y)'

F F Z P 0

F F Z N 4

35 2221'F2'2'2 2(x)2(y)2(z)1'F 2(x)'2(y)'2(z)
 130 4221'F42'2' 4(z)2(x)2(xy)1'F4(z) 2(x)'2(xy)
 273 321'F32' 3(z)2(x)1'F3(z)2(x)
 384 6221'F62'2' 6(z)2(x)2(1)1'F6(z)2(x)'2(1)'

F F N F 7

39 mm21'F2' m(x)m(y)2(z)1'F2(z)
 77 41'F2' 4(z)1'F2(z)
 135 4mm1'F2' 4(z)m(x)m(xy)1'F2(z)
 141 4mm1'Fm'm2' 4(z)m(x)m(xy)1'Fm(x)'m(y)2(z)
 317 61'F2' 6(z)1'F2(z)
 389 6mm1'F2' 6(z)m(x)m(1)1'F2(z)
 395 6mm1'Fm'm2' 6(z)m(x)m(1)1'Fm(x)'m(2) 2(z)'

F F N P 0

F F N N 9

1 1'F1 1'F1
 8 21'F2 2(z)1'F2(z)
 9 21'F2' 2(z)1'F2(z)
 12 m1'Fm m(z)1'Fm(z)
 13 m1'Fm' m(z)1'Fm(z)
 45 mm21'Fm'm2' m(x)m(y)2(z)1'Fm(x)'m(y)2(z)
 79 41'F4 4(z)1'F4(z)

255 31'F3
321 61'F6

3(z)1'F 3(z)
6(z)1'F6(z)

F	P	F	F	9	41 mm21'Fm 137 4mm1'Fm 158 4-2m1'Fm 325 6-1'Fm 391 6mm1'Fm 414 6-m21'Fm(p) 415 6-m21'Fm(s) 422 6-m21'Fm'm2'(sp) 617 4-3m1'Fm	m(x)m(y)2(z)1'Fm(x) 4(z)m(x)m(xy)1'Fm(x) 4-(z)2(x)m(xy)1'Fm(xy) 6-(z)1'Fm(z) 6(z)m(x)m(1)1'Fm(x) 6-(z)m(x)2(1)1'Fm(z) 6-(z)m(x)2(1)1'Fm(x) 6-(z)m(x)2(1)1'Fm(z)m(y)'2(1) 4-(z)3(xyz)m(xy)1'Fm(xy)
F	P	F	P	0		
F	P	F	N	0		
F	P	P	F	0		
F	P	P	P	0		
F	P	P	N	0		
F	P	Z	F	0		
F	P	Z	P	0		
F	P	Z	N	0		
F	P	N	F	0		
F	P	N	P	0		
F	P	N	N	0		
F	Z	F	F	2	420 6-m21'Fmm2 637 4-3m1'F3m	6-(z)m(x)2(1)1'Fm(z) m(y)2(1) 4-(z)3(xyz)m(xy)1'F3(xyz)m(x-y)
F	Z	F	P	0		
F	Z	F	N	0		

F	Z	P	F	0		
F	Z	P	P	0		
F	Z	P	N	0		
F	Z	Z	F	30	17 $2/m1'F 1'$ 50 $mmm1'F1'$ 59 $mmm1'F2'/m$ 91 $4/m1'F1'$ 100 $4/m1'F2'/m$ 179 $4/mmm1'F 1'$ 195 $4/mmm1'F2'/m(p)$ 196 $4/mmm1'F2'/m(s)$ 218 $4/mmm1'Fmmm'(s)$ 259 $3-1'F1'$ 286 $3-m1'F1'$ 295 $3-m1'F2'/m$ 296 $3-m1'F2/m'$ 335 $6/m1'F1'$ 344 $6/m1'F2'/m$ 443 $6/mmm1'F1'$ 459 $6/mmm1'F2'/m(p)$ 460 $6/mmm1'F2'/m(s)$ 482 $6/mmm1'Fmmm'(s)$ 547 $m3-1'F1'$ 556 $m3-1'F2'/m$ 568 $m3-1'Fmmm'$ 575 $m3-1'F3-$ 632 $4-3m1'F4'-2'm$ 647 $m3-m1'F1'$ 663 $m3-m1'F2'/m(p)$ 664 $m3-m1'F2'/m(s)$ 695 $m3-m1'Fmmm'(ps)$ 736 $m3-m1'F4/m'mm$ 756 $m3-m1'F3-'m$	$2(z)/m(z)1'F 1'$ $m(x)m(y)m(z)1'F1'$ $m(x)m(y)m(z)1'F2(z)'/m(z)$ $4(z)/m(z)1'F1'$ $4(z)/m(z)1'F2(z)'/m(z)$ $4(z)/m(z)m(x)m(xy)1'F 1'$ $4(z)/m(z)m(x)m(xy)1'F2(z)'/m(z)$ $4(z)/m(z)m(x)m(xy)1'F2(x)'/m(x)$ $4(z)/m(z)m(x)m(xy)1'Fm(x)'m(y)m(z)$ $3-(z)1'F1'$ $3-(z)m(x)1'F1'$ $3-(z)m(x)1'F2(x)'/m(x)$ $3-(z)m(x)1'F2(x)'/m(x)'$ $6(z)/m(z)1'F1'$ $6(z)/m(z)1'F2(z)'/m(z)$ $6(z)/m(z)m(x)m(1)1'F1'$ $6(z)/m(z)m(x)m(1)1'F2(z)'/m(z)$ $6(z)/m(z)m(x)m(1)1'F2(x)'/m(x)$ $6(z)/m(z)m(x)m(1)1'Fm(x)'m(2)m(z)$ $m(x)3-(xyz)1'F1'$ $m(x)3-(xyz)1'F2(z)'/m(z)$ $m(x)3-(xyz)1'Fm(x)m(y)m(z)'$ $m(x)3-(xyz)1'F3-(xyz)'$ $4-(z)3(xyz)m(xy)1'F4-(z)'2(x)'m(xy)$ $m(z)3-(xyz)m(xy)1'F1'$ $m(z)3-(xyz)m(xy)1'F2(z)'/m(z)$ $m(z)3-(xyz)m(xy)1'F2(xy)'/m(xy)$ $m(z)3-(xyz)m(xy)1'Fm(z)m(xy)m(x-y)'$ $m(z)3-(xyz)m(xy)1'F4(z)/m(z)'m(x)m(xy)$ $m(z)3-(xyz)m(xy)1'F3-(xyz)'m(x-y)$
F	Z	Z	P	0		
F	Z	Z	N	14	5 $1-1'F 1'$	$1-1'F 1'$

26	$2/m1'F2'/m$	$2(z)/m(z)1'F2(z)/m(z)$
27	$2/m1'F2/m'$	$2(z)/m(z)1'F2(z)/m(z)'$
71	$mmm1'Fmmm'$	$m(x)m(y)m(z)1'Fm(x)m(y)m(z)'$
87	$4-1'F4-'$	$4-(z)1'F4-(z)'$
111	$4/m1'F4/m'$	$4(z)/m(z)1'F4(z)/m(z)'$
174	$4-2m1'F4-'2m$	$4-(z)2(x)m(xy)1'F4-(z)2(x)'m(xy)$
249	$4/mmm1'F4/m'mm$	$4(z)/m(z)m(x)m(xy)1'F4(z)/m(z)'m(x)m(xy)$
264	$3-1'F3-'$	$3-(z)1'F3-(z)'$
312	$3-m1'F3-'m$	$3-(z)m(x)1'F3-(z)'m(x)$
331	$6-1'F6-'$	$6-(z)1'F6-(z)'$
360	$6/m1'F6/m'$	$6(z)/m(z)1'F6(z)/m(z)'$
438	$6-m21'F6-'m2'$	$6-(z)m(x)2(1)1'F6-(z)'m(x)2(1)'$
529	$6/mmm1'F6/m'mm$	$6(z)/m(z)m(x)m(1)1'F6(z)/m(z)'m(x)m(1)$

F Z N F 0

F Z N P 0

F Z N N 4

44	$mm21'Fmm2$	$m(x)m(y)2(z)1'Fm(x)m(y)2(z)$
147	$4mm1'F4mm$	$4(z)m(x)m(xy)1'F4(z)m(x)m(xy)$
281	$3m1'F3m$	$3(z)m(x)1'F3(z)m(x)$
406	$6mm1'F6mm$	$6(z)m(x)m(1)1'F6(z)m(x)m(1)$

P F F F 9

42	$mm21'Fm'$	$m(x)m(y)2(z)1'Fm(x)'$
138	$4mm1'Fm'$	$4(z)m(x)m(xy)1'Fm(x)'$
159	$4-2m1'Fm'$	$4-(z)2(x)m(xy)1'Fm(xy)'$
326	$6-1'Fm'$	$6-(z)1'Fm(z)'$
392	$6mm1'Fm'$	$6(z)m(x)m(1)1'Fm(x)'$
416	$6-m21'Fm'(p)$	$6-(z)m(x)2(1)1'Fm(z)'$
417	$6-m21'Fm'(s)$	$6-(z)m(x)2(1)1'Fm(x)'$
421	$6-m21'Fm'm2'(ps)$	$6-(z)m(x)2(1)1'Fm(z)'m(y)2(1)'$
618	$4-3m1'Fm'$	$4-(z)3(xy)z)m(xy)1'Fm(xy)'$

P F F P 0

P F F N 0

P F P F 0

P F P P 0

P	F	P	N	0
P	F	Z	F	0
P	F	Z	P	0
P	F	Z	N	0
P	F	N	F	0
P	F	N	P	0
P	F	N	N	0

P	P	F	F	7	31 2221'F2	2(x)2(y)2(z)1'F2(z)
					83 4-1'F2	4-(z)1'F2(z)
					117 4221'F2(s)	4(z)2(x)2(xy)1'F2(x)
					153 4-2m1'F2(s)	4-(z)2(x)m(xy)1'F2(x)
					366 6221'F2(s)	6(z)2(x)2(1)1'F2(x)
					535 231'F2	2(x)3(xyz)1'F2(x)
					584 4321'F2(s)	4(z)3(xyz) 2(xy)1'F2(xy)

P	P	F	P	44	14 2/m1'F1	2(z)/m(z)1'F1
					47 mmm1'F1	m(x)m(y)m(z)1'F1
					55 mmm1'Fm	m(x)m(y)m(z)1'Fm(z)
					56 mmm1'Fm'	m(x)m(y)m(z)1'Fm(z)'
					88 4/m1'F1	4(z)/m(z)1'F1
					96 4/m1'Fm	4(z)/m(z)1'Fm(z)
					97 4/m1'Fm'	4(z)/m(z)1'Fm(z)'
					176 4/mmm1'F1	4(z)/m(z)m(x)m(xy)1'F1
					187 4/mmm1'Fm(p)	4(z)/m(z)m(x)m(xy)1'Fm(z)
					188 4/mmm1'Fm(s)	4(z)/m(z)m(x)m(xy)1'Fm(x)
					189 4/mmm1'Fm'(p)	4(z)/m(z)m(x)m(xy)1'Fm(z)'
					190 4/mmm1'Fm'(s)	4(z)/m(z)m(x)m(xy)1'Fm(x)'
					210 4/mmm1'Fm'm2'(ps)	4(z)/m(z)m(x)m(xy)1'Fm(y)m(z)' 2(x)'
					211 4/mmm1'Fm'm2'(sp)	4(z)/m(z)m(x)m(xy)1'Fm(y)' m(z)2(x)'
					256 3-1'F1	3-(z)1'F1
					283 3-m1'F1	3-(z)m(x)1'F1
					288 3-m1'F2	3-(z)m(x)1'F2(x)
					289 3-m1'F2'	3-(z)m(x)1'F2(x)'
					291 3-m1'Fm	3-(z)m(x)1'Fm(x)

292	3-m1'Fm'	3-(z)m(x)1'Fm(x)'
332	6/m1'F1	6(z)/m(z)1'F1
340	6/m1'Fm	6(z)/m(z)1'Fm(z)
341	6/m1'Fm'	6(z)/m(z)1'Fm(z)'
440	6/mmm1'F1	6(z)/m(z)m(x)m(1)1'F1
451	6/mmm1'Fm(p)	6(z)/m(z)m(x)m(1)1'Fm(z)
452	6/mmm1'Fm(s)	6(z)/m(z)m(x)m(1)1'Fm(x)
453	6/mmm1'Fm'(p)	6(z)/m(z)m(x)m(1)1'Fm(z)'
454	6/mmm1'Fm'(s)	6(z)/m(z)m(x)m(1)1'Fm(x)'
474	6/mmm1'Fm'm2'(ps)	6(z)/m(z)m(x)m(1)1'Fm(z)'m(2)2(x)'
475	6/mmm1'Fm'm2'(sp)	6(z)/m(z)m(x)m(1)1'Fm(z)m(2)'2(x)'
544	m3-1'F1	m(x)3-(xyz)1'F1
552	m3-1'Fm	m(x)3-(xyz)1'Fm(z)
553	m3-1'Fm'	m(x)3-(xyz)1'Fm(z)'
564	m3-1'Fm'm2'	m(x)3-(xyz)1'Fm(x)'m(y)2(z)'
572	m3-1'F3	m(x)3-(xyz)1'F3(xyz)
596	4321'F4	4(z)3(xyz) 2(xy)1'F4(z)
603	4321'F3	4(z)3(xyz) 2(xy)1'F3(xyz)
644	m3-m1'F1	m(z)3-(xyz)m(xy)1'F1
655	m3-m1'Fm(p)	m(z)3-(xyz)m(xy)1'Fm(z)
656	m3-m1'Fm(s)	m(z)3-(xyz)m(xy)1'Fm(xy)
657	m3-m1'Fm'(p)	m(z)3-(xyz)m(xy)1'Fm(z)'
658	m3-m1'Fm'(s)	m(z)3-(xyz)m(xy)1'Fm(xy)'
683	m3-m1'Fm'm2'(ps)	m(z)3-(xyz)m(xy)1'Fm(z)'m(xy)2(x-y)'
684	m3-m1'Fm'm2'(sp)	m(z)3-(xyz)m(xy)1'Fm(z)m(xy)'2(x-y)'

P	P	F	N	13	2	1-1'F1	1-1'F1
					19	2/m1'F2	2(z)/m(z)1'F2(z)
					20	2/m1'F2'	2(z)/m(z)1'F2(z)'
					22	2/m1'Fm	2(z)/m(z)1'Fm(z)
					23	2/m1'Fm'	2(z)/m(z)1'Fm(z)'
					67	mmm1'Fm'm2'	m(x)m(y)m(z)1'Fm(x)'m(y)2(z)'
					104	4/m1'F4	4(z)/m(z)1'F4(z)
					126	4221'F4	4(z)2(x)2(xy)1'F4(z)
					261	3-1'F3	3-(z)1'F3(z)
					270	321'F3	3(z)2(x)1'F3(z)
					328	6-1'F3	6-(z)1'F3(z)
					353	6/m1'F6	6(z)/m(z)1'F6(z)
					380	6221'F6	6(z)2(x)2(1)1'F6(z)
P	P	P	F	6	116	4221'F2(p)	4(z)2(x)2(xy)1'F2(z)

152 4-2m1'F2(p) 4-(z)2(x)m(xy)1'F2(z)
 365 6221'F2(p) 6(z)2(x)2(1)1'F2(z)
 411 6-m21'F2 6-(z)m(x)2(1)1'F2(1)
 583 4321'F2(p) 4(z)3(xyz) 2(xy)1'F2(z)
 614 4-3m1'F2 4-(z)3(xyz)m(xy)1'F2(z)

P P P P

27

52 mmm1'F2 m(x)m(y)m(z)1'F2(z)
 53 mmm1'F2' m(x)m(y)m(z)1'F2(z)'
 93 4/m1'F2 4(z)/m(z)1'F2(z)
 94 4/m1'F2' 4(z)/m(z)1'F2(z)'
 181 4/mmm1'F2(p) 4(z)/m(z)m(x)m(xy)1'F2(z)
 182 4/mmm1'F2(s) 4(z)/m(z)m(x)m(xy)1'F2(x)
 183 4/mmm1'F2'(p) 4(z)/m(z)m(x)m(xy)1'F2(z)'
 184 4/mmm1'F2'(s) 4(z)/m(z)m(x)m(xy)1'F2(x)'
 209 4/mmm1'Fm'm2'(ss) 4(z)/m(z)m(x)m(xy)1'Fm(x)' m(y) 2(z)'
 337 6/m1'F2 6(z)/m(z)1'F2(z)
 338 6/m1'F2' 6(z)/m(z)1'F2(z)'
 445 6/mmm1'F2(p) 6(z)/m(z)m(x)m(1)1'F2(z)
 446 6/mmm1'F2(s) 6(z)/m(z)m(x)m(1)1'F2(x)
 447 6/mmm1'F2'(p) 6(z)/m(z)m(x)m(1)1'F2(z)'
 448 6/mmm1'F2'(s) 6(z)/m(z)m(x)m(1)1'F2(x)'
 473 6/mmm1'Fm'm2'(ss) 6(z)/m(z)m(x)m(1)1'Fm(x)'m(2)2(z)'
 549 m3-1'F2 m(x)3-(xyz)1'F2(z)
 550 m3-1'F2' m(x)3-(xyz)1'F2(z)'
 635 4-3m1'F3 4-(z)3(xyz)m(xy)1'F3(xyz)
 649 m3-m1'F2(p) m(z)3-(xyz)m(xy)1'F2(z)
 650 m3-m1'F2(s) m(z)3-(xyz)m(xy)1'F2(xy)
 651 m3-m1'F2'(p) m(z)3-(xyz)m(xy)1'F2(z)'
 652 m3-m1'F2'(s) m(z)3-(xyz)m(xy)1'F2(xy)'
 681 m3-m1'Fm'm2'(pp) m(z)3-(xyz)m(xy)1'Fm(x)'m(y)2(z)'
 682 m3-m1'Fm'm2'(ss) m(z)3-(xyz)m(xy)1'Fm(xy)'my 2(z)'
 703 m3-m1'F4 m(z)3-(xyz)m(xy)1'F4(z)
 743 m3-m1'F3 m(z)3-(xyz)m(xy)1'F3(xyz)

P P P N

7

223 4/mmm1'F4 4(z)/m(z)m(x)m(xy)1'F4(z)
 299 3-m1'F3 3-(z)m(x)1'F3(z)
 348 6/m1'F3 6(z)/m(z)1'F3(z)
 375 6221'F3 6(z)2(x)2(1)1'F3(z)
 425 6-m21'F3 6-(z)m(x)2(1)1'F3(z)
 487 6/mmm1'F3 6(z)/m(z)m(x)m(1)1'F3(z)
 503 6/mmm1'F6 6(z)/m(z)m(x)m(1)1'F6(z)

P	P	Z	F	6	123 4221'F2'2'2(p) 162 4-2m1'F2'2'2(p) 372 6221'F2'2'2(p) 591 4321'F2'2'2(pp) 592 4321'F2'2'2(ss) 621 4-3m1'F2'2'2	4(z)2(x)2(xy)1'F2(x)'2(y)'2(z) 4-(z)2(x)m(xy)1'F2(x)' 2(y)' 2(z) 6(z)2(x)2(1)1'F2(x)'2(2)'2(z) 4(z)3(xyz) 2(xy)1'F2(x)'2(y)'2(z) 4(z)3(xyz) 2(xy)1'F2(xy)'2(x-y)'2(z) 4-(z)3(xyz)m(xy)1'F2(x)'2(y)'2(z)
P	P	Z	P	10	204 4/mmm1'F2'2'2(p) 205 4/mmm1'F2'2'2(s) 468 6/mmm1'F2'2'2(p) 469 6/mmm1'F2'2'2(s) 561 m3-1'F2'2'2 673 m3-m1'F2'2'2(pp) 674 m3-m1'F2'2'2(ss) 675 m3-m1'F2'2'2(ps) 715 m3-m1'F4'2'2' 749 m3-m1'F3'2'	4(z)/m(z)m(x)m(xy)1'F2(x)' 2(y)' 2(z) 4(z)/m(z)m(x)m(xy)1'F2(x)2(y)' 2(z)' 6(z)/m(z)m(x)m(1)1'F2(x)'2(2)'2(z) 6(z)/m(z)m(x)m(1)1'F2(x)2(2)'2(z)' m(x)3-(xyz)1'F2(x)'2(y)'2(z) m(z)3-(xyz)m(xy)1'F2(x)'2(y)'2(z) m(z)3-(xyz)m(xy)1'F2(xy)'2(x-y)'2(z) m(z)3-(xyz)m(xy)1'F2(xy)2(x-y)'2(z)' m(z)3-(xyz)m(xy)1'F4(z)2(x)'2(xy)' m(z)3-(xyz)m(xy)1'F3(xyz)2(x-y)'
P	P	Z	N	7	64 mmm1'F2'2'2 235 4/mmm1'F4'2'2' 305 3-m1'F3'2' 378 6221'F3'2' 428 6-m21'F3'2' 493 6/mmm1'F3'2' 515 6/mmm1'F6'2'2'	m(x)m(y)m(z)1'F2(x)'2(y)'2(z) 4(z)/m(z)m(x)m(xy)1'F4(z)2(x)'2(xy)' 3-(z)m(x)1'F3(z)2(x)' 6(z)2(x)2(1)1'F3(z)2(x)' 6-(z)m(x)2(1)1'F3(z)2(1)' 6(z)/m(z)m(x)m(1)1'F3(z)2(x)' 6(z)/m(z)m(x)m(1)1'F6(z)2(x)'2(1)'
P	P	N	F	5	38 mm21'F2 76 41'F2 134 4mm1'F2 316 61'F2 388 6mm1'F2	m(x)m(y)2(z)1'F2(z) 4(z)1'F2(z) 4(z)m(x)m(xy)1'F2(z) 6(z)1'F2(z) 6(z)m(x)m(1)1'F2(z)
P	P	N	P	0		
P	P	N	N	5	144 4mm1'F4 279 3m1'F3 319 61'F3 398 6mm1'F3 403 6mm1'F6	4(z)m(x)m(xy)1'F4(z) 3(z)m(x)1'F3(z) 6(z)1'F3(z) 6(z)m(x)m(1)1'F3(z) 6(z)m(x)m(1)1'F6(z)

P	Z	F	F	2	165 4-2m1'Fmm2 623 4-3m1'Fmm2	4-(z) ² (x)m(xy)1'Fm(xy)m(x-y)2(z) 4-(z) ³ (xyz)m(xy)1'Fm(xy)m(x-y) 2(z)
P	Z	F	P	6	208 4/mmm1'Fmm2(s) 472 6/mmm1'Fmm2(s) 563 m3-1'Fmm2 680 m3-m1'Fmm2(ps) 719 m3-m1'F4mm 751 m3-m1'F3m	4(z)/m(z)m(x)m(xy)1'Fm(y)m(z)2(x) 6(z)/m(z)m(x)m(1)1'Fm(z)m(2)2(x) m(x) ³ -(xyz)1'Fm(x)m(y)2(z) m(z) ³ -(xyz)m(xy)1'Fm(z)m(xy)2(x-y) m(z) ³ -(xyz)m(xy)1'F4(z)m(x)m(xy) m(z) ³ -(xyz)m(xy)1'F3(xyz)m(x-y)
P	Z	F	N	5	66 mmm1'Fmm2 238 4/mmm1'F4mm 307 3-m1'F3m 430 6-m21'F3m 518 6/mmm1'F6mm	m(x)m(y)m(z)1'Fm(x)m(y)2(z) 4(z)/m(z)m(x)m(xy)1'F4(z)m(x)m(xy) 3-(z)m(x)1'F3(z)m(x) 6-(z)m(x)2(1)1'F3(z)m(x) 6(z)/m(z)m(x)m(1)1'F6(z)m(x)m(1)
P	Z	P	F	0		
P	Z	P	P	4	207 4/mmm1'Fmm2(p) 471 6/mmm1'Fmm2(p) 678 m3-m1'Fmm2(pp) 679 m3-m1'Fmm2(ss)	4(z)/m(z)m(x)m(xy)1'Fm(x)m(y) 2(z) 6(z)/m(z)m(x)m(1)1'Fm(x)m(2)2(z) m(z) ³ -(xyz)m(xy)1'Fm(x)m(y)2(z) m(z) ³ -(xyz)m(xy)1'Fm(xy)m(x-y)2(z)
P	Z	P	N	1	495 6/mmm1'F3m	6(z)/m(z)m(x)m(1)1'F3(z)m(x)
P	Z	Z	F	14	60 mmm1'F2/m' 101 4/m1'F2/m' 197 4/mmm1'F2/m'(p) 198 4/mmm1'F2/m'(s) 217 4/mmm1'Fmmm'(p) 345 6/m1'F2/m' 461 6/mmm1'F2/m'(p) 462 6/mmm1'F2/m'(s) 481 6/mmm1'Fmmm'(p) 557 m3-1'F2/m' 665 m3-m1'F2/m'(p) 666 m3-m1'F2/m'(s) 693 m3-m1'Fmmm'(pp) 694 m3-m1'Fmmm'(ss)	m(x)m(y)m(z)1'F2(z)/m(z)' 4(z)/m(z)1'F2(z)/m(z)' 4(z)/m(z)m(x)m(xy)1'F2(z)/m(z)' 4(z)/m(z)m(x)m(xy)1'F2(x)/m(x)' 4(z)/m(z)m(x)m(xy)1'Fm(x)m(y) m(z)' 6(z)/m(z)1'F2(z)/m(z)' 6(z)/m(z)m(x)m(1)1'F2(z)/m(z)' 6(z)/m(z)m(x)m(1)1'F2(x)/m(x)' 6(z)/m(z)m(x)m(1)1'Fm(x)m(2)m(z)' m(x) ³ -(xyz)1'F2(z)/m(z)' m(z) ³ -(xyz)m(xy)1'F2(z)/m(z)' m(z) ³ -(xyz)m(xy)1'F2(xy)/m(xy)' m(z) ³ -(xyz)m(xy)1'Fm(x)m(y)m(z)' m(z) ³ -(xyz)m(xy)1'Fm(xy)mym(z)'
P	Z	Z	P	6	628 4-3m1'F4-'	4-(z) ³ (xyz)m(xy)1'F4-(z)'

707 $m3-m1'F4-'$ $m(z)3-(xyz)m(xy)1'F4-(z)'$
710 $m3-m1'F4/m'$ $m(z)3-(xyz)m(xy)1'F4(z)/m(z)'$
728 $m3-m1'F4-'2'm(ps)$ $m(z)3-(xyz)m(xy)1'F4-(z)' 2(x)' m(xy)$
729 $m3-m1'F4-'2'm(sp)$ $m(z)3-(xyz)m(xy)1'F4-(z)' 2(xy)'m(x)$
746 $m3-m1'F3-'$ $m(z)3-(xyz)m(xy)1'F3-(xyz)'$

P	Z	Z	N	14	108 $4/m1'F 4-'$ $4(z)/m(z)1'F4-(z)'$ 170 $4-2m1'F4-'$ $4-(z)2(x)m(xy)1'F4-(z)'$ 227 $4/mmm1'F4-'$ $4(z)/m(z)m(x)m(xy)1'F4-(z)'$ 230 $4/mmm1'F4/m'$ $4(z)/m(z)m(x)m(xy)1'F4(z)/m(z)'$ 244 $4/mmm1'F4-'2'm$ $4(z)/m(z)m(x)m(xy)1'F4-(z)'2(x)'m(xy)$ 302 $3-m1'F3-'$ $3-(z)m(x)1'F3-(z)'$ 351 $6/m1'F3-'$ $6(z)/m(z)1'F3-(z)'$ 357 $6/m1'F6-'$ $6(z)/m(z)1'F6-(z)'$ 434 $6-m21'F6-'$ $6-(z)m(x)2(1)1'F6-(z)'$ 490 $6/mmm1'F3-'$ $6(z)/m(z)m(x)m(1)1'F3-(z)'$ 500 $6/mmm1'F3-'m$ $6(z)/m(z)m(x)m(1)1'F3-(z)'m(x)$ 507 $6/mmm1'F6-'$ $6(z)/m(z)m(x)m(1)1'F6-(z)'$ 510 $6/mmm1'F6/m'$ $6(z)/m(z)m(x)m(1)1'F6(z)/m(z)'$ 524 $6/mmm1'F6-'m2'$ $6(z)/m(z)m(x)m(1)1'F6-(z)'m(x) 2(1)'$
---	---	---	---	----	--

P	Z	N	F	2	140 $4mm1'Fmm2$ $4(z)m(x)m(xy)1'Fm(x) m(y)2(z)$ 394 $6mm1'Fmm2$ $6(z)m(x)m(1)1'Fm(x)m(2)2(z)$
---	---	---	---	---	--

P	Z	N	P	0	
---	---	---	---	---	--

P	Z	N	N	1	400 $6mm1'F3m$ $6(z)m(x)m(1)1'F3(z)m(x)$
---	---	---	---	---	--

Z	F	F	F	2	423 $6-m21'Fm'm'2$ $6-(z)m(x)2(1)1'Fm(z)'m(y)'2(1)$ 638 $4-3m1'F3m'$ $4-(z)3(xyz)m(xy)1'F3(xyz)m(x-y)'$
---	---	---	---	---	--

Z	F	F	P	0	
---	---	---	---	---	--

Z	F	F	N	0	
---	---	---	---	---	--

Z	F	P	F	0	
---	---	---	---	---	--

Z	F	P	P	0	
---	---	---	---	---	--

Z	F	P	N	0	
---	---	---	---	---	--

Z	F	Z	F	30	<p>16 2/m1'F 1- 49 mmm1'F1- 61 mmm1'F2'/m' 90 4/m1'F1- 102 4/m1'F2'/m' 178 4/mmm1'F 1- 199 4/mmm1'F2'/m'(p) 200 4/mmm1'F2'/m'(s) 220 4/mmm1'Fm'm'm (s) 258 3-1'F1- 285 3-m1'F1- 294 3-m1'F2/m 297 3-m1'F2'/m' 334 6/m1'F1- 346 6/m1'F2'/m' 442 6/mmm1'F1- 463 6/mmm1'F2'/m'(p) 464 6/mmm1'F2'/m'(s) 484 6/mmm1'Fm'm'm(s) 546 m3-1'F1- 569 m3-1'Fm'm'm 574 m3-1'F3- 631 4-3m1'F4-2'm' 646 m3-m1'F1- 667 m3-m1'F2'/m'(p) 668 m3-m1'F2'/m'(s) 698 m3-m1'Fm'm'm(ps) 735 m3-m1'F4/mm'm' 755 m3-m1'F3-m' 558 m3-1'F2'/m'</p>	<p>2(z)/m(z)1'F 1- m(x)m(y)m(z)1'F1- m(x)m(y)m(z)1'F2(z)'/m(z)' 4(z)/m(z)1'F1- 4(z)/m(z)1'F2(z)'/m(z)' 4(z)/m(z)m(x)m(xy)1'F 1- 4(z)/m(z)m(x)m(xy)1'F2(z)'/m(z)' 4(z)/m(z)m(x)m(xy)1'F2(x)'/m(x)' 4(z)/m(z)m(x)m(xy)1'Fm(x)m(y)'m(z)' 3-(z)1'F1- 3-(z)m(x)1'F1- 3-(z)m(x)1'F2(x)/m(x) 3-(z)m(x)1'F2(x)'/m(x)' 6(z)/m(z)1'F1- 6(z)/m(z)1'F2(z)'/m(z)' 6(z)/m(z)m(x)m(1)1'F1- 6(z)/m(z)m(x)m(1)1'F2(z)'/m(z)' 6(z)/m(z)m(x)m(1)1'F2(x)'/m(x)' 6(z)/m(z)m(x)m(1)1'Fm(x)m(2)' m(z)' m(x)3-(xyz)1'F1- m(x)3-(xyz)1'Fm(x)'m(y)'m(z) m(x)3-(xyz)1'F3-(xyz) 4-(z)3(xyz)m(xy)1'F4-(z)2(x)'m(xy)' m(z)3-(xyz)m(xy)1'F1- m(z)3-(xyz)m(xy)1'F2(z)'/m(z)' m(z)3-(xyz)m(xy)1'F2(xy)'/m(xy)' m(z)3-(xyz)m(xy)1'Fm(z)'m(xy)'m(x-y)' m(z)3-(xyz)m(xy)1'F4(z)/m(z)m(x)'m(xy)' m(z)3-(xyz)m(xy)1'F3-(xyz) m(x-y)' m(x)3-(xyz)1'F2(z)'/m(z)'</p>
Z	F	Z	P	0		
Z	F	Z	N	14	<p>4 1-1'F 1- 25 2/m1'F2/m 28 2/m1'F2'/m' 72 mmm1'Fm'm'm 86 4-1'F4- 110 4/m1'F4/m 173 4-2m1'F4-2'm' 248 4/mmm1'F4/mm'm' 263 3-1'F3-</p>	<p>1-1'F 1- 2(z)/m(z)1'F2(z)/m(z) 2(z)/m(z)1'F2(z)'/m(z)' m(x)m(y)m(z)1'Fm(x)'m(y)'m(z) 4-(z)1'F4-(z) 4(z)/m(z)1'F4(z)/m(z) 4-(z)2(x)m(xy)1'F4-(z)2(x)'m(xy)' 4(z)/m(z)m(x)m(xy)1'F4(z)/m(z)m(x)'m(xy)' 3-(z)1'F3-(z)</p>

311	3-m1'F3-m'	3-(z)m(x)1'F3-(z)m(x)'
330	6-1'F6-	6-(z)1'F6-(z)
359	6/m1'F6/m	6(z)/m(z)1'F6(z)/m(z)
437	6-m21'F6-m'2'	6-(z)m(x)2(1)1'F6-(z)m(x)'2(1)'
528	6/mmm1'F6/mm'm'	6(z)/m(z)m(x)m(1)1'F6(z)/m(z) m(x)'m(1)'

Z F N F 0

Z F N P 0

Z F N N 4

46	mm21'Fm'm'2	m(x)m(y)2(z)1'Fm(x)'m(y)'2(z)
148	4mm1'F4m'm'	4(z)m(x)m(xy)1'F 4(z)m(x)' m(xy)'
282	3m1'F3m'	3(z)m(x)1'F3(z)m(x)'
407	6mm1'F6m'm'	6(z)m(x)m(1)1'F6(z)m(x)'m(1)'

Z P F F 2

167	4-2m1'Fm'm'2	4-(z)2(x)m(xy)1'Fm(xy)'m(x-y)'2(z)
625	4-3m1'Fm'm'2	4-(z)3(xyz)m(xy)1'Fm(xy)'m(x-y)'2(z)

Z P F P 6

213	4/mmm1'Fm'm'2(s)	4(z)/m(z)m(x)m(xy)1'Fm(y)' m(z)' 2(x)
477	6/mmm1'Fm'm'2(s)	6(z)/m(z)m(x)m(1)1'Fm(z)'m(2)'2(x)
565	m3-1'Fm'm'2	m(x)3-(xyz)1'Fm(x)'m(y)'2(z)
687	m3-m1'Fm'm'2(ps)	m(z)3-(xyz)m(xy)1'Fm(z)'m(xy)'2(x-y)
720	m3-m1'F4m'm'	m(z)3-(xyz)m(xy)1'F4(z)m(x)'m(xy)'
752	m3-m1'F3m'	m(z)3-(xyz)m(xy)1'F3(xyz)m(x-y)'

Z P F N 5

68	mmm1'Fm'm'2	m(x)m(y)m(z)1'Fm(x)'m(y)'2(z)
239	4/mmm1'F4m'm'	4(z)/m(z)m(x)m(xy)1'F4(z)m(x)'m(xy)'
308	3-m1'F3m'	3-(z)m(x)1'F3(z)m(x)'
431	6-m21'F3m'	6-(z)m(x)2(1)1'F3(z)m(x)'
519	6/mmm1'F6m'm'	6(z)/m(z)m(x)m(1)1'F6(z)m(x)'m(1)'

Z P P F 0

Z P P P 4

212	4/mmm1'Fm'm'2(p)	4(z)/m(z)m(x)m(xy)1'Fm(x)' m(y)' 2(z)
476	6/mmm1'Fm'm'2(p)	6(z)/m(z)m(x)m(1)1'Fm(x)'m(2)'2(z)
685	m3-m1'Fm'm'2(pp)	m(z)3-(xyz)m(xy)1'Fm(x)'m(y)'2(z)
686	m3-m1'Fm'm'2(ss)	m(z)3-(xyz)m(xy)1'Fm(xy)'m(y)'2(z)

Z P P N 1

496	6/mmm1'F3m'	6(z)/m(z)m(x)m(1)1'F3(z)m(x)'
-----	-------------	-------------------------------

Z	P	Z	F	14	58 mmm1'F2/m 99 4/m1'F2/m 193 4/mmm1'F2/m(p) 194 4/mmm1'F2/m(s) 219 4/mmm1'Fm'm'm (p) 343 6/m1'F2/m 457 6/mmm1'F2/m(p) 458 6/mmm1'F2/m(s) 483 6/mmm1'Fm'm'm(p) 555 m3-1'F2/m 661 m3-m1'F2/m(p) 662 m3-m1'F2/m(s) 696 m3-m1'Fm'm'm(pp) 697 m3-m1'Fm'm'm(ss)	$m(x)m(y)m(z)1'F2(z)/m(z)$ $4(z)/m(z)1'F2(z)/m(z)$ $4(z)/m(z)m(x)m(xy)1'F2(z)/m(z)$ $4(z)/m(z)m(x)m(xy)1'F2(x)/m(x)$ $4(z)/m(z)m(x)m(xy)1'Fm(x)'m(y)'m(z)$ $6(z)/m(z)1'F2(z)/m(z)$ $6(z)/m(z)m(x)m(1)1'F2(z)/m(z)$ $6(z)/m(z)m(x)m(1)1'F2(x)/m(x)$ $6(z)/m(z)m(x)m(1)1'Fm(x)'m(2)'m(z)$ $m(x)3-(xyz)1'F2(z)/m(z)$ $m(z)3-(xyz)m(xy)1'F2(z)/m(z)$ $m(z)3-(xyz)m(xy)1'F2(xy)/m(xy)$ $m(z)3-(xyz)m(xy)1'Fm(x)'m(y)'m(z)$ $m(z)3-(xyz)m(xy)1'Fm(xy)'m'y'm(z)$
Z	P	Z	P	6	627 4-3m1'F4- 706 m3-m1'F4- 709 m3-m1'F4/m 726 m3-m1'F4-2'm'(ps) 727 m3-m1'F4-2'm'(sp) 745 m3-m1'F3-	$4-(z)3(xyz)m(xy)1'F4-(z)$ $m(z)3-(xyz)m(xy)1'F4-(z)$ $m(z)3-(xyz)m(xy)1'F4(z)/m(z)$ $m(z)3-(xyz)m(xy)1'F4-(z)2(x)'m(xy)'$ $m(z)3-(xyz)m(xy)1'F4-(z)2(xy)'m(x)'$ $m(z)3-(xyz)m(xy)1'F3-(xyz)$
Z	P	Z	N	14	107 4/m1'F 4- 169 4-2m1'F4- 226 4/mmm1'F4- 229 4/mmm1'F4/m 243 4/mmm1'F4-2'm' 301 3-m1'F3- 350 6/m1'F3- 356 6/m1'F6- 433 6-m21'F6- 489 6/mmm1'F3- 499 6/mmm1'F3-m' 506 6/mmm1'F6- 509 6/mmm1'F6/m 523 6/mmm1'F6-m'2'	$4(z)/m(z)1'F4-(z)$ $4-(z)2(x)m(xy)1'F4-(z)$ $4(z)/m(z)m(x)m(xy)1'F4-(z)$ $4(z)/m(z)m(x)m(xy)1'F4(z)/m(z)$ $4(z)/m(z)m(x)m(xy)1'F4-(z)2(x)'m(xy)'$ $3-(z)m(x)1'F3-(z)$ $6(z)/m(z)1'F3-(z)$ $6(z)/m(z)1'F6-(z)$ $6-(z)m(x)2(1)1'F6-(z)$ $6(z)/m(z)m(x)m(1)1'F3-(z)$ $6(z)/m(z)m(x)m(1)1'F3-(z)m(x)'$ $6(z)/m(z)m(x)m(1)1'F6-(z)$ $6(z)/m(z)m(x)m(1)1'F6(z)/m(z)$ $6(z)/m(z)m(x)m(1)1'F6-(z)m(x)'2(1)'$
Z	P	N	F	2	142 4mm1'Fm'm'2 396 6mm1'Fm'm'2	$4(z)m(x)m(xy)1'Fm(x)'m(y)'2(z)$ $6(z)m(x)m(1)1'Fm(x)'m(2)'2(z)$
Z	P	N	P	0		

Z	P	N	N	1	401	6mm1'F3m'	6(z)m(x)m(1)1'F3(z)m(x)'
Z	Z	F	F	42	7	21'F1'	2(z)1'F1'
					11	m1'F1'	m(z)1'F1'
					30	2221'F1'	2(x)2(y)2(z)1'F1'
					33	2221'F21'	2(x)2(y)2(z)1'F2(z)1'
					37	mm21'F1'	m(x)m(y)2(z)1'F1'
					43	mm21'Fm1'	m(x)m(y)2(z)1'Fm(x)1'
					75	41'F1'	4(z)1'F1'
					82	4-1'F1'	4-(z)1'F1'
					85	4-1'F21'	4-(z)1'F2(z)1'
					115	4221'F1'	4(z)2(x)2(xy)1'F1'
					121	4221'F21'(s)	4(z)2(x)2(xy)1'F2(x)1'
					133	4mm1'F1'	4(z)m(x)m(xy)1'F1'
					139	4mm1'Fm1'	4(z)m(x)m(xy)1'Fm(x)1'
					151	4-2m1'F1'	4-(z)2(x)m(xy)1'F1'
					157	4-2m1'F21'(s)	4-(z)2(x)m(xy)1'F2(x)1'
					160	4-2m1'Fm1'	4-(z)2(x)m(xy)1'Fm(xy)1'
					168	4-2m1'Fmm21'	4-(z)2(x)m(xy)1'Fm(xy)m(x-y)2(z)1'
					254	31'F1'	3(z)1'F1'
					266	321'F1'	3(z)2(x)1'F1'
					269	321'F21'	3(z)2(x)1'F2(x)1'
					275	3m1'F1'	3(z)m(x)1'F1'
					278	3m1'Fm1'	3(z)m(x)1'Fm(x)1'
					315	61'F1'	6(z)1'F1'
					324	6-1'F1'	6-(z)1'F1'
					327	6-1'Fm1'	6-(z)1'Fm(z)1'
					364	6221'F1'	6(z)2(x)2(1)1'F1'
					370	6221'F21'(s)	6(z)2(x)2(1)1'F2(x)1'
					387	6mm1'F1'	6(z)m(x)m(1)1'F1'
					393	6mm1'Fm1'	6(z)m(x)m(1)1'Fm(x)1'
					410	6-m21'F1'	6-(z)m(x)2(1)1'F1'
					418	6-m21'Fm1'(p)	6-(z)m(x)2(1)1'Fm(z)1'
					419	6-m21'Fm1'(s)	6-(z)m(x)2(1)1'Fm(x)1'
					424	6-m21'Fmm21'	6-(z)m(x)2(1)1'Fm(z) m(y)2(1)1'
					534	231'F1'	2(x)3(xyz)1'F1'
					537	231'F21'	2(x)3(xyz)1'F2(x)1'
					542	231'F31'	2(x)3(xyz)1'F3(xyz)1'
					582	4321'F1'	4(z)3(xyz) 2(xy)1'F1'
					588	4321'F21'(s)	4(z)3(xyz) 2(xy)1'F2(xy)1'

613 4-3m1'F1' 4-(z)3(xyz)m(xy)1'F1'
 619 4-3m1'Fm1' 4-(z)3(xyz)m(xy)1'Fm(xy)1'
 626 4-3m1'Fmm21' 4-(z)3(xyz)m(xy)1'Fm(xy)m(x-y) 2(z)1'
 639 4-3m1'F3m1' 4-(z)3(xyz)m(xy)1'F3(xyz)m(x-y)1'

Z Z F P

34

597 4321'F4' 4(z)3(xyz) 2(xy)1'F4(z)'
 721 m3-m1'F4'm'm(ps) m(z)3-(xyz)m(xy)1'F4(z)'m(x)'m(xy)
 722 m3-m1'F4'm'm(sp) m(z)3-(xyz)m(xy)1'F4(z)'m(x)m(xy)'

 15 2/m1'F1' 2(z)/m(z)1'F1'
 48 mmm1'F1' m(x)m(y)m(z)1'F1'
 57 mmm1'Fm1' m(x)m(y)m(z)1'Fm(z)1'
 89 4/m1'F1' 4(z)/m(z)1'F1'
 98 4/m1'Fm1' 4(z)/m(z)1'Fm(z)1'
 177 4/mmm1'F1' 4(z)/m(z)m(x)m(xy)1'F1'
 191 4/mmm1'Fm1'(p) 4(z)/m(z)m(x)m(xy)1'Fm(z)1'
 192 4/mmm1'Fm1'(s) 4(z)/m(z)m(x)m(xy)1'Fm(x)1'
 215 4/mmm1'Fmm21'(s) 4(z)/m(z)m(x)m(xy)1'Fm(y)m(z)2(x)1'
 257 3-1'F1' 3-(z)1'F1'
 284 3-m1'F1' 3-(z)m(x)1'F1'
 290 3-m1'F21' 3-(z)m(x)1'F2(x)1'
 293 3-m1'Fm1' 3-(z)m(x)1'Fm(x)1'
 333 6/m1'F1' 6(z)/m(z)1'F1'
 342 6/m1'Fm1' 6(z)/m(z)1'Fm(z)1'
 441 6/mmm1'F1' 6(z)/m(z)m(x)m(1)1'F1'
 455 6/mmm1'Fm1'(p) 6(z)/m(z)m(x)m(1)1'Fm(z)1'
 456 6/mmm1'Fm1'(s) 6(z)/m(z)m(x)m(1)1'Fm(x)1'
 479 6/mmm1'Fmm21'(s) 6(z)/m(z)m(x)m(1)1'Fm(z)m(2)2(x)1'
 545 m3-1'F1' m(x)3-(xyz)1'F1'
 554 m3-1'Fm1' m(x)3-(xyz)1'Fm(z)1'
 566 m3-1'Fmm21' m(x)3-(xyz)1'Fm(x)m(y)2(z)1'
 573 m3-1'F31' m(x)3-(xyz)1'F3(xyz)1'
 598 4321'F41' 4(z)3(xyz) 2(xy)1'F4(z)1'
 604 4321'F31' 4(z)3(xyz) 2(xy)1'F3(xyz)1'
 645 m3-m1'F1' m(z)3-(xyz)m(xy)1'F1'
 659 m3-m1'Fm1'(p) m(z)3-(xyz)m(xy)1'Fm(z)1'
 660 m3-m1'Fm1'(s) m(z)3-(xyz)m(xy)1'Fm(xy)1'
 690 m3-m1'Fmm21'(ps) m(z)3-(xyz)m(xy)1'Fm(z)m(xy)2(x-y)1'
 723 m3-m1'F4mm1' m(z)3-(xyz)m(xy)1'F4(z)m(x)m(xy)1'
 753 m3-m1'F3m1' m(z)3-(xyz)m(xy)1'F3(xyz)m(x-y)1'

Z Z F N

21

105 4/m1'F4' 4(z)/m(z)1'F4(z)'

127	4221'F4'	$4(z)2(x)2(xy)1'F4(z)'$
240	4/mmm1'F4'm'm	$4(z)/m(z)m(x)m(xy)1'F4(z)'m(x)'m(xy)$
354	6/m1'F6'	$6(z)/m(z)1'F6(z)'$
381	6221'F6'	$6(z)2(x)2(1)1'F6(z)'$
520	6/mmm1'F6'm'm	$6(z)/m(z)m(x)m(1)1'F6(z)'m(x)'m(1)$

3	1-1'F1'	1-1'F1'
21	2/m1'F21'	$2(z)/m(z)1'F2(z)1'$
24	2/m1'Fm1'	$2(z)/m(z)1'Fm(z)1'$
69	mmm1'Fmm21'	$m(x)m(y)m(z)1'Fm(x)m(y)2(z)1'$
106	4/m1'F41'	$4(z)/m(z)1'F4(z)1'$
128	4221'F41'	$4(z)2(x)2(xy)1'F4(z)1'$
241	4/mmm1'F4mm1'	$4(z)/m(z)m(x)m(xy)1'F4(z)m(x)m(xy)1'$
262	3-1'F31'	$3-(z)1'F3(z)1'$
271	321'F31'	$3(z)2(x)1'F3(z)1'$
309	3-m1'F3m1'	$3-(z)m(x)1'F3(z)m(x)1'$
329	6-1'F31'	$6-(z)1'F3(z)1'$
355	6/m1'F61'	$6(z)/m(z)1'F6(z)1'$
382	6221'F61'	$6(z)2(x)2(1)1'F6(z)1'$
432	6-m21'F3m1'	$6-(z)m(x)2(1)1'F3(z)m(x)1'$
521	6/mmm1'F6mm1'	$6(z)/m(z)m(x)m(1)1'F6(z) m(x)m(1)1'$

Z	Z	P	F	6	120	4221'F21'(p)	$4(z)2(x)2(xy)1'F2(z)1'$
					156	4-2m1'F21'(p)	$4-(z)2(x)m(xy)1'F2(z)1'$
					369	6221'F21'(p)	$6(z)2(x)2(1)1'F2(z)1'$
					413	6-m21'F21'	$6-(z)m(x)2(1)1'F2(1)1'$
					587	4321'F21'(p)	$4(z)3(xyz) 2(xy)1'F2(z)1'$
					616	4-3m1'F21'	$4-(z)3(xyz)m(xy)1'F2(z)1'$

Z	Z	P	P	18	704	m3-m1'F4'	$m(z)3-(xyz)m(xy)1'F4(z)'$
					54	mmm1'F21'	$m(x)m(y)m(z)1'F2(z)1'$
					95	4/m1'F21'	$4(z)/m(z)1'F2(z)1'$
					185	4/mmm1'F21'(p)	$4(z)/m(z)m(x)m(xy)1'F2(z)1'$
					186	4/mmm1'F21'(s)	$4(z)/m(z)m(x)m(xy)1'F2(x)1'$
					214	4/mmm1'Fmm21'(p)	$4(z)/m(z)m(x)m(xy)1'Fm(x)m(y) 2(z)1'$
					339	6/m1'F21'	$6(z)/m(z)1'F2(z)1'$
					449	6/mmm1'F21'(p)	$6(z)/m(z)m(x)m(1)1'F2(z)1'$
					450	6/mmm1'F21'(s)	$6(z)/m(z)m(x)m(1)1'F2(x)1'$
					478	6/mmm1'Fmm21'(p)	$6(z)/m(z)m(x)m(1)1'Fm(x)m(2)2(z)1'$
					551	m3-1'F21'	$m(x)3-(xyz)1'F2(z)1'$
					636	4-3m1'F31'	$4-(z)3(xyz)m(xy)1'F3(xyz)1'$
					653	m3-m1'F21'(p)	$m(z)3-(xyz)m(xy)1'F2(z)1'$

					654	$m^3-m^1F21'(s)$	$m(z)^3-(xyz)m(xy)^1F2(xy)^1$
					688	$m^3-m^1Fmm21'(pp)$	$m(z)^3-(xyz)m(xy)^1Fm(x)m(y)^2(z)^1$
					689	$m^3-m^1Fmm21'(ss)$	$m(z)^3-(xyz)m(xy)^1Fm(xy)my^2(z)^1$
					705	m^3-m^1F41'	$m(z)^3-(xyz)m(xy)^1F4(z)^1$
					744	m^3-m^1F31'	$m(z)^3-(xyz)m(xy)^1F3(xyz)^1$
Z	Z	P	N	10	224	$4/mmm^1F4'$	$4(z)/m(z)m(x)m(xy)^1F4(z)'$
					504	$6/mmm^1F6'$	$6(z)/m(z)m(x)m(1)^1F6(z)'$
					225	$4/mmm^1F41'$	$4(z)/m(z)m(x)m(xy)^1F4(z)^1$
					300	$3-m^1F31'$	$3-(z)m(x)^1F3(z)^1$
					349	$6/m^1F31'$	$6(z)/m(z)^1F3(z)^1$
					376	$6221F31'$	$6(z)2(x)2(1)^1F3(z)^1$
					426	$6-m21F31'$	$6-(z)m(x)2(1)^1F3(z)^1$
					488	$6/mmm^1F31'$	$6(z)/m(z)m(x)m(1)^1F3(z)^1$
					497	$6/mmm^1F3m1'$	$6(z)/m(z)m(x)m(1)^1F3(z)m(x)^1$
					505	$6/mmm^1F61'$	$6(z)/m(z)m(x)m(1)^1F6(z)^1$
Z	Z	Z	F	69	122	$4221F222$	$4(z)2(x)2(xy)^1F2(x)2(y) 2(z)$
					161	$4-2m^1F222$	$4-(z)2(x)m(xy)^1F2(x)2(y) 2(z)$
					216	$4/mmm^1Fmmm$	$4(z)/m(z)m(x)m(xy)^1Fm(x)m(y) m(z)$
					221	$4/mmm^1Fm'm'm'$	$4(z)/m(z)m(x)m(xy)^1Fm(x)'m(y)''m(z)'$
					371	$6221F222$	$6(z)2(x)2(1)^1F2(x)2(2)2(z)$
					480	$6/mmm^1Fmmm$	$6(z)/m(z)m(x)m(1)^1Fm(x)m(2)2(z)$
					485	$6/mmm^1Fm'm'm'$	$6(z)/m(z)m(x)m(1)^1Fm(x)'m(2)''m(z)'$
					538	$231F222$	$2(x)3(xyz)^1F2(x)2(y)2(z)$
					567	$m^3-1Fmmm$	$m(x)^3-(xyz)^1Fm(x)m(y)m(z)$
					570	$m^3-1Fm'm'm'$	$m(x)^3-(xyz)^1Fm(x)'m(y)''m(z)'$
					589	$4321F222(pp)$	$4(z)3(xyz) 2(xy)^1F2(x)2(y)2(z)$
					590	$4321F222(ss)$	$4(z)3(xyz) 2(xy)^1F2(xy)2(x-y) 2(z)$
					599	$4321F422$	$4(z)3(xyz) 2(xy)^1F4(z)2(x)2(xy)$
					601	$4321F4'2'2$	$4(z)3(xyz) 2(xy)^1F4(z)''2(x)''2(xy)$
					605	$4321F32$	$4(z)3(xyz) 2(xy)^1F3(xyz)2(x-y)$
					620	$4-3m^1F222$	$4-(z)3(xyz)m(xy)^1F2(x)2(y)2(z)$
					630	$4-3m^1F4-2m$	$4-(z)3(xyz)m(xy)^1F4-(z)2(x)m(xy)$
					633	$4-3m^1F4-'2m'$	$4-(z)3(xyz)m(xy)^1F4-(z)''2(x)m(xy)'$
					691	$m^3-m^1Fmmm(pp)$	$m(z)^3-(xyz)m(xy)^1Fm(x)m(y)m(z)$
					692	$m^3-m^1Fmmm(ss)$	$m(z)^3-(xyz)m(xy)^1Fm(xy)mym(z)$
					699	$m^3-m^1Fm'm'm'(pp)$	$m(z)^3-(xyz)m(xy)^1Fm(x)'m(y)''m(z)'$
					700	$m^3-m^1Fm'm'm'(ss)$	$m(z)^3-(xyz)m(xy)^1Fm(xy)'my''m(z)'$
					734	m^3-m^1F4/mmm	$m(z)^3-(xyz)m(xy)^1F4(z)/m(z)m(x)m(xy)$
					737	$m^3-m^1F4/m'm'm'$	$m(z)^3-(xyz)m(xy)^1F4(z)/m(z)''m(x)''m(xy)'$

738	$m3-m1'F4'/mm'm(ps)$	$m(z)3-(xyz)m(xy)1'F4(z)'/m(z)m(x)'m(xy)$
739	$m3-m1'F4'/mm'm(sp)$	$m(z)3-(xyz)m(xy)1'F4(z)'/m(z)m(x)m(xy)'$
740	$m3-m1'F4'/m'm'm(ps)$	$m(z)3-(xyz)m(xy)1'F4(z)'/m(z)'m(x)'m(xy)$
741	$m3-m1'F4'/m'm'm(sp)$	$m(z)3-(xyz)m(xy)1'F4(z)'/m(z)'m(x)m(xy)'$
754	$m3-m1'F3-m$	$m(z)3-(xyz)m(xy)1'F3-(xyz)m(x-y)$
757	$m3-m1'F3-'m'$	$m(z)3-(xyz)m(xy)1'F3-(xyz)'m(x-y)'$
18	$2/m1'F 1-1'$	$2(z)/m(z)1'F 1-1'$
51	$mmm1'F1-1'$	$m(x)m(y)m(z)1'F1-1'$
62	$mmm1'F2/m1'$	$m(x)m(y)m(z)1'F2(z)/m(z)1'$
92	$4/m1'F1-1'$	$4(z)/m(z)1'F1-1'$
103	$4/m1'F2/m1'$	$4(z)/m(z)1'F2(z)/m(z)1'$
125	$4221'F2221'$	$4(z)2(x)2(xy)1'F2(x)2(xy) 2(z)1'$
164	$4-2m1'F2221'$	$4-(z)2(x)m(xy)1'F2(x)2(y) 2(z)1'$
180	$4/mmm1'F 1-1'$	$4(z)/m(z)m(x)m(xy)1'F 1-1'$
201	$4/mmm1'F2/m1'(p)$	$4(z)/m(z)m(x)m(xy)1'F2(z)/m(z)1'$
202	$4/mmm1'F2/m1'(s)$	$4(z)/m(z)m(x)m(xy)1'F2(x)/m(x)1'$
222	$4/mmm1'Fmmm1'$	$4(z)/m(z)m(x)m(xy)1'Fm(x)m(y)m(z)1'$
260	$3-1'F1-1'$	$3-(z)1'F1-1'$
287	$3-m1'F1-1'$	$3-(z)m(x)1'F1-1'$
298	$3-m1'F2/m1'$	$3-(z)m(x)1'F2(x)/m(x)1'$
336	$6/m1'F1-1'$	$6(z)/m(z)1'F1-1'$
347	$6/m1'F2/m1'$	$6(z)/m(z)1'F2(z)/m(z)1'$
374	$6221'F2221'$	$6(z)2(x)2(1)1'F2(x)2(2)2(z)1'$
444	$6/mmm1'F1-1'$	$6(z)/m(z)m(x)m(1)1'F1-1'$
465	$6/mmm1'F2/m1'(p)$	$6(z)/m(z)m(x)m(1)1'F2(z)/m(z)1'$
466	$6/mmm1'F2/m1'(s)$	$6(z)/m(z)m(x)m(1)1'F2(x)/m(x)1'$
486	$6/mmm1'Fmmm1'$	$6(z)/m(z)m(x)m(1)1'Fm(x)' m(2)m(z)1'$
540	$231'F2221'$	$2(x)3(xyz)1'F2(x)2(y)2(z)1'$
548	$m3-1'F1-1'$	$m(x)3-(xyz)1'F1-1'$
559	$m3-1'F2/m1'$	$m(x)3-(xyz)1'F2(z)/m(z)1'$
571	$m3-1'Fmmm1'$	$m(x)3-(xyz)1'Fm(x)m(y)m(z)1'$
576	$m3-1'F3-1'$	$m(x)3-(xyz)1'F3-(xyz)1'$
594	$4321'F2221'(pp)$	$4(z)3(xyz) 2(xy)1'F2(x)2(y)2(z)1'$
595	$4321'F2221'(ss)$	$4(z)3(xyz) 2(xy)1'F2(xy)2(x-y) 2(z)1'$
602	$4321'F4221'$	$4(z)3(xyz) 2(xy)1'F4(z)2(x)2(xy)1'$
607	$4321'F321'$	$4(z)3(xyz) 2(xy)1'F3(xyz)2(x-y)1'$
622	$4-3m1'F2221'$	$4-(z)3(xyz)m(xy)1'F2(x)2(y)2(z)1'$
634	$4-3m1'F4-2m1'$	$4-(z)3(xyz)m(xy)1'F4-(z)2(x)m(xy)1'$
648	$m3-m1'F1-1'$	$m(z)3-(xyz)m(xy)1'F1-1'$
669	$m3-m1'F2/m1'(p)$	$m(z)3-(xyz)m(xy)1'F2(z)/m(z)1'$
670	$m3-m1'F2/m1'(s)$	$m(z)3-(xyz)m(xy)1'F2(xy)/m(xy)1'$

701 m3-m1'Fmmm1'(pp) m(z)3-(xyz)m(xy)1'Fm(x)m(y)m(z)1'
 702 m3-m1'Fmmm1'(ss) m(z)3-(xyz)m(xy)1'Fm(xy)mym(z)1'
 742 m3-m1'F4/mmm1' m(z)3-(xyz)m(xy)1'F4(z)/m(z)m(x)m(xy)1'
 758 m3-m1'F3-m1' m(z)3-(xyz)m(xy)1'F3-(xyz) m(x-y)1'

Z Z Z P 28

203 4/mmm1'F222 4(z)/m(z)m(x)m(xy)1'F2(x)2(y) 2(z)
 467 6/mmm1'F222 6(z)/m(z)m(x)m(1)1'F2(x)2(y)2(z)
 560 m3-1'F222 m(x)3-(xyz)1'F2(x)2(y)2(z)
 671 m3-m1'F222(pp) m(z)3-(xyz)m(xy)1'F2(x)2(y)2(z)
 672 m3-m1'F222(ss) m(z)3-(xyz)m(xy)1'F2(xy)2(x-y) 2(z)
 711 m3-m1'F4'/m m(z)3-(xyz)m(xy)1'F4(z)'/m(z)
 712 m3-m1'F4'/m' m(z)3-(xyz)m(xy)1'F4(z)'/m(z)'
 714 m3-m1'F422 m(z)3-(xyz)m(xy)1'F4(z)2(x)2(xy)
 716 m3-m1'F4'2'2(ps) m(z)3-(xyz)m(xy)1'F4(z)'2(x)'2(xy)
 717 m3-m1'F4'2'2(sp) m(z)3-(xyz)m(xy)1'F4(z)'2(x)2(xy)'
 724 m3-m1'F4-2m(ps) m(z)3-(xyz)m(xy)1'F4-(z)2(x)m(xy)
 725 m3-m1'F4-2m(sp) m(z)3-(xyz)m(xy)1'F4-(z)2(xy)m(x)
 730 m3-m1'F4-'2m(ps) m(z)3-(xyz)m(xy)1'F4-(z)' 2(x)m(xy)'
 731 m3-m1'F4-'2m(sp) m(z)3-(xyz)m(xy)1'F4-(z)' 2(xy)m(x)'
 748 m3-m1'F32 m(z)3-(xyz)m(xy)1'F3(xyz)2(x-y)

206 4/mmm1'F2221' 4(z)/m(z)m(x)m(xy)1'F2(x)2(y) 2(z) 1'
 470 6/mmm1'F2221' 6(z)/m(z)m(x)m(1)1'F2(x)2(2)2(z)1'
 562 m3-1'F2221' m(x)3-(xyz)1'F2(x)2(y)2(z)1'
 629 4-3m1'F4-1' 4-(z)3(xyz)m(xy)1'F4-(z)1'
 676 m3-m1'F2221'(pp) m(z)3-(xyz)m(xy)1'F2(x)2(y)2(z)1'
 677 m3-m1'F2221'(ss) m(z)3-(xyz)m(xy)1'F2(xy)2(x-y)2(z)1'
 708 m3-m1'F4-1' m(z)3-(xyz)m(xy)1'F4-(z)1'
 713 m3-m1'F4/m1' m(z)3-(xyz)m(xy)1'F4(z)/m(z)1'
 718 m3-m1'F4221' m(z)3-(xyz)m(xy)1'F4(z)2(x)2(xy)1'
 732 m3-m1'F4-2m1'(ps) m(z)3-(xyz)m(xy)1'F4-(z)2(x)m(xy)1'
 733 m3-m1'F4-2m1'(sp) m(z)3-(xyz)m(xy)1'F4-(z)2(xy)m(x)1'
 747 m3-m1'F3-1' m(z)3-(xyz)m(xy)1'F3-(xyz)1'
 750 m3-m1'F321' m(z)3-(xyz)m(xy)1'F3(xyz)2(x-y)1'

Z Z Z N 94

34 2221'F222 2(x)2(y)2(z)1'F 2(x)2(y)2(z)
 63 mmm1'F222 m(x)m(y)m(z)1'F2(x)2(y)2(z)
 70 mmm1'Fmmm m(x)m(y)m(z)1'Fm(x)m(y)m(z)
 73 mmm1'Fm'm'm' m(x)m(y)m(z)1'Fm(x)'m(y)'m(z)'
 112 4/m1'F4'/m 4(z)/m(z)1'F4(z)'/m(z)
 113 4/m1'F4'/m' 4(z)/m(z)1'F4(z)'/m(z)'
 129 4221'F422 4(z)2(x)2(xy)1'F4(z) 2(x) 2(xy)

131	4221'F4'2'2	$4(z)^2(x)^2(xy)^1F4(z)^2(x)^2(xy)$
172	4-2m1'F4-2m	$4-(z)^2(x)m(xy)^1F4-(z)^2(x)m(xy)$
175	4-2m1'F4-'2m'	$4-(z)^2(x)m(xy)^1F4-(z)^2(x)m(xy)'$
231	4/mmm1'F4'/m	$4(z)/m(z)m(x)m(xy)^1F4(z)'/m(z)$
232	4/mmm1'F4'/m'	$4(z)/m(z)m(x)m(xy)^1F4(z)'/m(z)'$
234	4/mmm1'F422	$4(z)/m(z)m(x)m(xy)^1F4(z)^2(x)^2(xy)$
236	4/mmm1'F4'2'2	$4(z)/m(z)m(x)m(xy)^1F4(z)^2(x)^2(xy)$
242	4/mmm1'F4-2m	$4(z)/m(z)m(x)m(xy)^1F4-2(x)m(xy)$
245	4/mmm1'F4-'2m'	$4(z)/m(z)m(x)m(xy)^1F4-(z)^2(x)m(xy)'$
247	4/mmm1'F4/mmm	$4(z)/m(z)m(x)m(xy)^1F4(z)/m(z)m(x)m(xy)$
250	4/mmm1'F4/m'm'm'	$4(z)/m(z)m(x)m(xy)^1F4(z)/m(z)'m(x)'m(xy)'$
251	4/mmm1'F4'/mm'm	$4(z)/m(z)m(x)m(xy)^1F4(z)'/m(z)m(x)'m(xy)$
252	4/mmm1'F4'/m'm'm	$4(z)/m(z)m(x)m(xy)^1F4(z)'/m(z)'m(x)'m(xy)$
272	321'F32	$3(z)^2(x)^1F3(z)^2(x)$
304	3-m1'F32	$3-(z)m(x)^1F3(z)^2(x)$
310	3-m1'F3-m	$3-(z)m(x)^1F3-(z)m(x)$
313	3-m1'F3-'m'	$3-(z)m(x)^1F3-(z)'m(x)'$
361	6/m1'F6'/m	$6(z)/m(z)^1F6(z)'/m(z)$
362	6/m1'F6'/m'	$6(z)/m(z)^1F6(z)'/m(z)'$
377	6221'F32	$6(z)^2(x)^2(1)^1F3(z)^2(x)$
383	6221'F622	$6(z)^2(x)^2(1)^1F6(z)^2(x)^2(1)$
385	6221'F6'2'2	$6(z)^2(x)^2(1)^1F6(z)'^2(x)'^2(1)$
427	6-m21'F32	$6-(z)m(x)^2(1)^1F3(z)^2(1)$
436	6-m21'F6-m2	$6-(z)m(x)^2(1)^1F6-(z)m(x)^2(1)$
439	6-m21'F6-'m'2	$6-(z)m(x)^2(1)^1F6-(z)'m(x)^2(1)$
492	6/mmm1'F32	$6(z)/m(z)m(x)m(1)^1F3(z)^2(x)$
498	6/mmm1'F3-m	$6(z)/m(z)m(x)m(1)^1F3-(z)m(x)$
501	6/mmm1'F3-'m'	$6(z)/m(z)m(x)m(1)^1F3-(z)'m(x)'$
511	6/mmm1'F6'/m	$6(z)/m(z)m(x)m(1)^1F6(z)'/m(z)$
512	6/mmm1'F6'/m'	$6(z)/m(z)m(x)m(1)^1F6(z)'/m(z)'$
514	6/mmm1'F622	$6(z)/m(z)m(x)m(1)^1F6(z)^2(x)^2(1)$
516	6/mmm1'F6'2'2	$6(z)/m(z)m(x)m(1)^1F6(z)'^2(x)'^2(1)$
522	6/mmm1'F6-m2	$6(z)/m(z)m(x)m(1)^1F6-(z)m(x)^2(1)$
525	6/mmm1'F6-'m'2	$6(z)/m(z)m(x)m(1)^1F6-(z)'m(x)'^2(1)$
527	6/mmm1'F6/mmm	$6(z)/m(z)m(x)m(1)^1F6(z)/m(z)m(x)m(1)$
530	6/mmm1'F6/m'm'm'	$6(z)/m(z)m(x)m(1)^1F6(z)/m(z)'m(x)'m(1)'$
531	6/mmm1'F6'/mm'm	$6(z)/m(z)m(x)m(1)^1F6(z)'/m(z)m(x)'m(1)$
532	6/mmm1'F6'/m'm'm	$6(z)/m(z)m(x)m(1)^1F6(z)'/m(z)'m(x)'m(1)$
543	231'F23	$2(x)^3(xyz)^1F2(x)^3(xyz)$
577	m3-1'F23	$m(x)^3-(xyz)^1F2(x)^3(xyz)$
579	m3-1'Fm3-	$m(x)^3-(xyz)^1Fm(x)^3-(xyz)$

580	$m^3-1'Fm^3-$	$m(x)^3-(xyz)^1F m(x)^3-(xyz)'$
608	4321'F23	$4(z)^3(xyz)^2(xy)^1F2(x)^3(xyz)$
610	4321'F432	$4(z)^3(xyz)^2(xy)^1F4(z)^3(xyz)^2(xy)$
611	4321'F4'32'	$4(z)^3(xyz)^2(xy)^1F4(z)^3(xyz)^2(xy)'$
640	4-3m1'F23	$4-(z)^3(xyz)m(xy)^1F23(xyz)$
642	4-3m1'F 4-3m	$4-(z)^3(xyz)m(xy)^1F4-(z)^3(xyz)m(xy)$
643	4-3m1'F 4-'3m'	$4-(z)^3(xyz)m(xy)^1F4-(z)^3(xyz)m(xy)'$
759	$m^3-m^1'F23$	$m(z)^3-(xyz)m(xy)^1F2(z)^3(xyz)$
761	$m^3-m^1'Fm^3-$	$m(z)^3-(xyz)m(xy)^1Fm(z)^3-(xyz)$
762	$m^3-m^1'Fm^3-$	$m(z)^3-(xyz)m(xy)^1Fm(z)^3-(xyz)'$
764	$m^3-m^1'F432$	$m(z)^3-(xyz)m(xy)^1F4(z)^3(xyz)^2(xy)$
765	$m^3-m^1'F4'32'$	$m(z)^3-(xyz)m(xy)^1F4(z)^3(xyz)^2(xy)'$
767	$m^3-m^1'F4-3m$	$m(z)^3-(xyz)m(xy)^1F4-(z)^3(xyz)m(xy)$
768	$m^3-m^1'F4-'3m'$	$m(z)^3-(xyz)m(xy)^1F4-(z)^3(xyz)m(xy)'$
770	$m^3-m^1'F m^3-m$	$m(z)^3-(xyz)m(xy)^1Fm(z)^3-(xyz)m(xy)$
771	$m^3-m^1'F m^3-m'$	$m(z)^3-(xyz)m(xy)^1Fm(z)^3-(xyz)m(xy)'$
772	$m^3-m^1'F m^3-'m$	$m(z)^3-(xyz)m(xy)^1F m(z)^3-(xyz)m(xy)'$
773	$m^3-m^1'F m^3-'m'$	$m(z)^3-(xyz)m(xy)^1F m(z)^3-(xyz)m(xy)'$
65	$mmm^1'F2221'$	$m(x)m(y)m(z)^1F2(x)^2(y)^2(z)^1'$
109	4/m1'F 4-1'	$4(z)/m(z)^1F4-(z)^1'$
171	4-2m1'F4-1'	$4-(z)^2(x)m(xy)^1F4-(z)^1'$
228	4/mmm1'F4-1'	$4(z)/m(z)m(x)m(xy)^1F4-(z)^1'$
233	4/mmm1'F4/m1'	$4(z)/m(z)m(x)m(xy)^1F4(z)/m(z)^1'$
237	4/mmm1'F4221'	$4(z)/m(z)m(x)m(xy)^1F4(z)^2(x)^2(xy)^1'$
246	4/mmm1'F4-2m1'	$4(z)/m(z)m(x)m(xy)^1F4-(z)^2(x)m(xy)^1'$
303	3-m1'F3-1'	$3-(z)m(x)^1F3-(z)^1'$
306	3-m1'F321'	$3-(z)m(x)^1F3(z)^2(x)^1'$
352	6/m1'F3-1'	$6(z)/m(z)^1F3-(z)^1'$
358	6/m1'F6-1'	$6(z)/m(z)^1F6-(z)^1'$
379	6221'F321'	$6(z)^2(x)^2(1)^1F3(z)^2(x)^1'$
429	6-m21'F321'	$6-(z)m(x)^2(1)^1F3(z)^2(1)^1'$
435	6-m21'F6-1'	$6-(z)m(x)^2(1)^1F6-(z)^1'$
491	6/mmm1'F3-1'	$6(z)/m(z)m(x)m(1)^1F3-(z)^1'$
494	6/mmm1'F321'	$6(z)/m(z)m(x)m(1)^1F3(z)^21'$
502	6/mmm1'F3-m1'	$6(z)/m(z)m(x)m(1)^1F3-(z)m(x)^1'$
508	6/mmm1'F6-1'	$6(z)/m(z)m(x)m(1)^1F6-(z)^1'$
513	6/mmm1'F6/m1'	$6(z)/m(z)m(x)m(1)^1F6(z)/m(z)^1'$
517	6/mmm1'F6221'	$6(z)/m(z)m(x)m(1)^1F6(z)^2(x)^2(1)^1'$
526	6/mmm1'F6-m21'	$6(z)/m(z)m(x)m(1)^1F6-(z)m(x)^2(1)^1'$
578	$m^3-1'F231'$	$m(x)^3-(xyz)^1F2(x)^3(xyz)^1'$
609	4321'F231'	$4(z)^3(xyz)^2(xy)^1F2(x)^3(xyz)^1'$

641 4-3m1'F231'
 760 m3-m1'F231'
 763 m3-m1'Fm3-1'
 766 m3-m1'F4321'
 769 m3-m1'F4-3m1'

4-(z)3(xyz)m(xy)1'F23(xyz)1'
 m(z)3-(xyz)m(xy)1'F2(z)3(xyz)1'
 m(z)3-(xyz)m(xy)1'Fm(z)3-(xyz)1'
 m(z)3-(xyz)m(xy)1'F4(z) 3(xyz)2(xy)1'
 m(z)3-(xyz)m(xy)1'F4-(z)3(xyz)m(xy)1'

Z Z N F 7

40 mm21'F21'
 78 41'F21'
 136 4mm1'F21'
 143 4mm1'Fmm21'
 318 61'F21'
 390 6mm1'F21'
 397 6mm1'Fmm21'

m(x)m(y)2(z)1'F2(z)1'
 4(z)1'F2(z)1'
 4(z)m(x)m(xy)1'F2(z)1'
 4(z)m(x)m(xy)1'Fm(x) m(y)2(z)1'
 6(z)1'F2(z)1'
 6(z)m(x)m(1)1'F2(z)1'
 6(z)m(x)m(1)1'Fm(x)m(2)2(z)1'

Z Z N P 0

Z Z N N 12

80 41'F4'
 145 4mm1'F4'
 149 4mm1'F4'm'm
 322 61'F6'
 404 6mm1'F6'
 408 6mm1'F6'm'm

 146 4mm1'F41'
 280 3m1'F31'
 320 61'F31'
 399 6mm1'F31'
 402 6mm1'F3m1'
 405 6mm1'F61'

4(z)1'F4(z)'
 4(z)m(x)m(xy)1'F4(z)'
 4(z)m(x)m(xy)1'F 4(z)'m(x)'m(xy)
 6(z)1'F6(z)'
 6(z)m(x)m(1)1'F6(z)'
 6(z)m(x)m(1)1'F6(z)'m(x)'m(1)

 4(z)m(x)m(xy)1'F4(z) 1'
 3(z)m(x)1'F3(z)1'
 6(z)1'F3(z)1'
 6(z)m(x)m(1)1'F3(z)1'
 6(z)m(x)m(1)1'F3(z)m(x)1'
 6(z)m(x)m(1)1'F6(z)1'

Table 5: Index of ensembles

Ensemble number	Distinction Trio			Ensemble number	Distinction Trio			Ensemble number	Distinction Trio		
1	F	F	F	13	P	F	P	25 AFM	Z	F	N
2	F	P	F	14	P	P	P	26 AFM	Z	P	N
3	F	N/Z	F	15	P	N/Z	P	27 AFM	Z	N/Z	N
4	F	F	P	16	P	F	N	28 PDM	Z	F	F
5	F	P	P	17	P	P	N	29 PDM	Z	P	F
6	F	N/Z	P	18	P	N/Z	N	30 PDM	Z	N/Z	F
7	F	F	N	19 AFM	Z	F	F	31 PDM	Z	F	P
8	F	P	N	20 AFM	Z	P	F	32 PDM	Z	P	P
9	F	N/Z	N	21 AFM	Z	N/Z	F	33 PDM	Z	N/Z	P
10	P	F	F	22 AFM	Z	F	P	34 PDM	Z	F	N
11	P	P	F	23 AFM	Z	P	P	35 PDM	Z	P	N
12	P	N/Z	F	24 AFM	Z	N/Z	P	36 PDM	Z	N/Z	N

Table 6: Listing of sub-ensembles and species in each ensemble

1	F	F	F	F	45		
1	F	F	F	F	34	6 21'F1	2(z)1'F1
						10 m1'F1	m(z)1'F1
						29 2221'F1	2(x)2(y)2(z)1'F1
						32 2221'F2'	2(x)2(y)2(z)1'F2(z)'
						36 mm21'F1	m(x)m(y)2(z)1'F1
						74 41'F1	4(z)1'F1
						81 4-1'F1	4-(z)1'F1
						84 4-1'F2'	4-(z)1'F2(z)'
						114 4221'F1	4(z)2(x)2(xy)1'F1
						119 4221'F2'(s)	4(z)2(x)2(xy)1'F2(x)'
						132 4mm1'F1	4(z)m(x)m(xy)1'F1
						150 4-2m1'F1	4-(z)2(x)m(xy)1'F1
						155 4-2m1'F2'(s)	4-(z)2(x)m(xy)1'F2(x)'
						166 4-2m1'Fm'm2'	4-(z)2(x)m(xy)1'Fm(xy)'m(x-y) 2(z)'
						253 31'F1	3(z)1'F1
						265 321'F1	3(z)2(x)1'F1
						267 321'F2	3(z)2(x)1'F2(x)
						268 321'F2'	3(z)2(x)1'F2(x)'
						274 3m1'F1	3(z)m(x)1'F1
						276 3m1'Fm	3(z)m(x)1'Fm(x)
						277 3m1'Fm'	3(z)m(x)1'Fm(x)'
						314 61'F1	6(z)1'F1
						323 6-1'F1	6-(z)1'F1
						363 6221'F1	6(z)2(x)2(1)1'F1
						368 6221'F2'(s)	6(z)2(x)2(1)1'F2(x)'
						386 6mm1'F1	6(z)m(x)m(1)1'F1
						409 6-m21'F1	6-(z)m(x)2(1)1'F1
						533 231'F1	2(x)3(xyz)1'F1
						536 231'F2'	2(x)3(xyz)1'F2(x)'
						541 231'F3	2(x)3(xyz)1'F3(xyz)
						581 4321'F1	4(z)3(xyz) 2(xy)1'F1
						586 4321'F2'(s)	4(z)3(xyz) 2(xy)1'F2(xy)'
						612 4-3m1'F1	4-(z)3(xyz)m(xy)1'F1
						624 4-3m1'Fm'm2'	4-(z)3(xyz)m(xy)1'Fm(xy)'m(x-y) 2(z)'

1	P	F	F	F	9	42 mm21'Fm' 138 4mm1'Fm' 159 4-2m1'Fm' 326 6-1'Fm' 392 6mm1'Fm' 416 6-m21'Fm'(p) 417 6-m21'Fm'(s) 421 6-m21'Fm'm2'(ps) 618 4-3m1'Fm'	m(x)m(y)2(z)1'Fm(x)' 4(z)m(x)m(xy)1'Fm(x)' 4-(z)2(x)m(xy)1'Fm(xy)' 6-(z)1'Fm(z)' 6(z)m(x)m(1)1'Fm(x)' 6-(z)m(x)2(1)1'Fm(z)' 6-(z)m(x)2(1)1'Fm(x)' 6-(z)m(x)2(1)1'Fm(z)' m(y)2(1)' 4-(z)3(xyz)m(xy)1'Fm(xy)'
1	Z	F	F	F	2	423 6-m21'Fm'm2' 638 4-3m1'F3m'	6-(z)m(x)2(1)1'Fm(z)'m(y)2(1)' 4-(z)3(xyz)m(xy)1'F3(xyz)m(x-y)'
2		F	P	F	6		
2	F	F	P	F	6	118 4221'F2'(p) 154 4-2m1'F2'(p) 367 6221'F2'(p) 412 6-m21'F2' 585 4321'F2'(p) 615 4-3m1'F2'	4(z)2(x)2(xy)1'F2(z)' 4-(z)2(x)m(xy)1'F2(z)' 6(z)2(x)2(1)1'F2(z)' 6-(z)m(x)2(1)1'F2(1)' 4(z)3(xyz) 2(xy)1'F2(z)' 4-(z)3(xyz)m(xy)1'F2(z)'
2	P	F	P	F	0		
2	Z	F	P	F	0		
3		F	N/Z	F	44		
3	F	F	N	F	7	39 mm21'F2' 77 41'F2' 135 4mm1'F2' 141 4mm1'Fm'm2' 317 61'F2' 389 6mm1'F2' 395 6mm1'Fm'm2'	m(x)m(y)2(z)1'F2(z)' 4(z)1'F2(z)' 4(z)m(x)m(xy)1'F2(z)' 4(z)m(x)m(xy)1'Fm(x)'m(y)2(z)' 6(z)1'F2(z)' 6(z)m(x)m(1)1'F2(z)' 6(z)m(x)m(1)1'Fm(x)'m(2) 2(z)'

3	F	F	Z	F	7	124 4221'F2'2'2(s)	$4(z)2(x)2(xy)1'F2(x)2(y)'2(z)'$
						163 4-2m1'F2'2'2(s)	$4-(z)2(x)m(xy)1'F2(x)2(y)' 2(z)'$
						373 6221'F2'2'2(s)	$6(z)2(x)2(1)1'F2(x)2(2)'2(z)'$
						539 231'F2'2'2	$2(x)3(xyz)1'F2(x)'2(y)'2(z)'$
						593 4321'F2'2'2(ps)	$4(z)3(xyz) 2(xy)1'F2(xy)2(x-y)'2(z)'$
						600 4321'F42'2'	$4(z)3(xyz) 2(xy)1'F4(z)2(x)'2(xy)'$
						606 4321'F32'	$4(z)3(xyz) 2(xy)1'F3(xyz)2(x-y)'$
3	P	F	N	F	0		
3	P	F	Z	F	0		
3	Z	F	N	F	0		
3	Z	F	Z	F	30	16 2/m1'F 1-	$2(z)/m(z)1'F 1-$
						49 mmm1'F1-	$m(x)m(y)m(z)1'F1-$
						61 mmm1'F2'/m'	$m(x)m(y)m(z)1'F2(z)'/m(z)'$
						90 4/m1'F1-	$4(z)/m(z)1'F1-$
						102 4/m1'F2'/m'	$4(z)/m(z)1'F2(z)'/m(z)'$
						178 4/mmm1'F 1-	$4(z)/m(z)m(x)m(xy)1'F 1-$
						199 4/mmm1'F2'/m'(p)	$4(z)/m(z)m(x)m(xy)1'F2(z)'/m(z)'$
						200 4/mmm1'F2'/m'(s)	$4(z)/m(z)m(x)m(xy)1'F2(x)'/m(x)'$
						220 4/mmm1'Fm'm'm (s)	$4(z)/m(z)m(x)m(xy)1'Fm(x)m(y)'m(z)'$
						258 3-1'F1-	$3-(z)1'F1-$
						285 3-m1'F1-	$3-(z)m(x)1'F1-$
						294 3-m1'F2/m	$3-(z)m(x)1'F2(x)/m(x)$
						297 3-m1'F2'/m'	$3-(z)m(x)1'F2(x)'/m(x)'$
						334 6/m1'F1-	$6(z)/m(z)1'F1-$
						346 6/m1'F2'/m'	$6(z)/m(z)1'F2(z)'/m(z)'$
						442 6/mmm1'F1-	$6(z)/m(z)m(x)m(1)1'F1-$
						463 6/mmm1'F2'/m'(p)	$6(z)/m(z)m(x)m(1)1'F2(z)'/m(z)'$
						464 6/mmm1'F2'/m'(s)	$6(z)/m(z)m(x)m(1)1'F2(x)'/m(x)'$
						484 6/mmm1'Fm'm'm(s)	$6(z)/m(z)m(x)m(1)1'Fm(x)m(2)' m(z)'$
						546 m3-1'F1-	$m(x)3-(xyz)1'F1-$
						569 m3-1'Fm'm'm	$m(x)3-(xyz)1'Fm(x)'m(y)'m(z)'$
						574 m3-1'F3-	$m(x)3-(xyz)1'F3-(xyz)$
						631 4-3m1'F4-2'm'	$4-(z)3(xyz)m(xy)1'F4-(z)2(x)'m(xy)'$
						646 m3-m1'F1-	$m(z)3-(xyz)m(xy)1'F1-$
						667 m3-m1'F2'/m'(p)	$m(z)3-(xyz)m(xy)1'F2(z)'/m(z)'$
						668 m3-m1'F2'/m'(s)	$m(z)3-(xyz)m(xy)1'F2(xy)'/m(xy)'$

698 m3-m1'Fm'm'm(ps) m(z)3-(xyz)m(xy)1'Fm(z)'m(xy)'m(x-y)
 735 m3-m1'F4/mm'm' m(z)3-(xyz)m(xy)1'F4(z)/m(z)m(x)'m(xy)'
 755 m3-m1'F3-m' m(z)3-(xyz)m(xy)1'F3-(xyz) m(x-y)'
 558 m3-1'F2'/m' m(x)3-(xyz)1'F2(z)'/m(z)'

4 **F** **F** **P** **0**

4 F F F P 0

4 P F F P 0

4 Z F F P 0

5 **F** **P** **P** **0**

5 F F P P 0

5 P F P P 0

5 Z F P P 0

6 **F** **N/Z** **P** **0**

6 F F N P 0

6 F F Z P 0

6 P F N P 0

6 P F Z P 0

6 Z F N P 0

6 Z F Z P 0

7 **F** **P** **N** **0**

7 F F P N 0

7 P F P N 0

7 Z F P N 0

8 **F** **P** **N** **0**

8 F F P N 0

8 P F P N 0

8 Z F P N 0

9 **F** **N/Z** **N** **31**

9 F F N N 9

1	1'F1	1'F1
8	21'F2	2(z)1'F2(z)
9	21'F2'	2(z)1'F2(z)'
12	m1'Fm	m(z)1'Fm(z)
13	m1'Fm'	m(z)1'Fm(z)'
45	mm21'Fm'm2'	m(x)m(y)2(z)1'Fm(x)'m(y)2(z)'
79	41'F4	4(z)1'F4(z)
255	31'F3	3(z)1'F 3(z)
321	61'F6	6(z)1'F6(z)

9 F F Z N 4

35	2221'F2'2'2	2(x)2(y)2(z)1'F 2(x)'2(y)'2(z)
130	4221'F42'2'	4(z)2(x)2(xy)1'F4(z) 2(x)'2(xy)'
273	321'F32'	3(z)2(x)1'F3(z)2(x)'
384	6221'F62'2'	6(z)2(x)2(1)1'F6(z)2(x)'2(1)'

9	P	F	N	N	0		
9	P	F	Z	N	0		
9	Z	F	N	N	4	46 mm21'Fm'm'2 148 4mm1'F4m'm' 282 3m1'F3m' 407 6mm1'F6m'm'	$m(x)m(y)2(z)1'Fm(x)'m(y)'2(z)$ $4(z)m(x)m(xy)1'F 4(z)m(x)' m(xy)'$ $3(z)m(x)1'F3(z)m(x)'$ $6(z)m(x)m(1)1'F6(z)m(x)'m(1)'$
9	Z	F	Z	N	14	4 1-1'F 1- 25 2/m1'F2/m 28 2/m1'F2'/m' 72 mmm1'Fm'm'm 86 4-1'F4- 110 4/m1'F4/m 173 4-2m1'F4-2'm' 248 4/mmm1'F4/mm'm' 263 3-1'F3- 311 3-m1'F3-m' 330 6-1'F6- 359 6/m1'F6/m 437 6-m21'F6-m'2' 528 6/mmm1'F6/mm'm'	$1-1'F 1-$ $2(z)/m(z)1'F2(z)/m(z)$ $2(z)/m(z)1'F2(z)'/m(z)'$ $m(x)m(y)m(z)1'Fm(x)'m(y)'m(z)$ $4-(z)1'F4-(z)$ $4(z)/m(z)1'F4(z)/m(z)$ $4-(z)2(x)m(xy)1'F4-(z)2(x)'m(xy)'$ $4(z)/m(z)m(x)m(xy)1'F4(z)/m(z)m(x)'m(xy)'$ $3-(z)1'F3-(z)$ $3-(z)m(x)1'F3-(z)m(x)'$ $6-(z)1'F6-(z)$ $6(z)/m(z)1'F6(z)/m(z)$ $6-(z)m(x)2(1)1'F6-(z)m(x)'2(1)'$ $6(z)/m(z)m(x)m(1)1'F6(z)/m(z) m(x)'m(1)'$

10 P F F 18

10	F	P	F	F	9	41 mm21'Fm 137 4mm1'Fm 158 4-2m1'Fm 325 6-1'Fm 391 6mm1'Fm 414 6-m21'Fm(p) 415 6-m21'Fm(s) 422 6-m21'Fm'm'2'(sp) 617 4-3m1'Fm	$m(x)m(y)2(z)1'Fm(x)$ $4(z)m(x)m(xy)1'Fm(x)$ $4-(z)2(x)m(xy)1'Fm(xy)$ $6-(z)1'Fm(z)$ $6(z)m(x)m(1)1'Fm(x)$ $6-(z)m(x)2(1)1'Fm(z)$ $6-(z)m(x)2(1)1'Fm(x)$ $6-(z)m(x)2(1)1'Fm(z)m(y)'2(1)'$ $4-(z)3(xyz)m(xy)1'Fm(xy)$
10	P	P	F	F	7	31 2221'F2 83 4-1'F2 117 4221'F2(s)	$2(x)2(y)2(z)1'F2(z)$ $4-(z)1'F2(z)$ $4(z)2(x)2(xy)1'F2(x)$

						153 4-2m1'F2(s) 366 6221'F2(s) 535 231'F2 584 4321'F2(s)	4-(z)2(x)m(xy)1'F2(x) 6(z)2(x)2(1)1'F2(x) 2(x)3(xyz)1'F2(x) 4(z)3(xyz) 2(xy)1'F2(xy)
10	Z	P	F	F	2	167 4-2m1'Fm'm'2 625 4-3m1'Fm'm'2	4-(z)2(x)m(xy)1'Fm(xy)'m(x-y)'2(z) 4-(z)3(xyz)m(xy)1'Fm(xy)'m(x-y)'2(z)
11		P	P	F	6		
11	F	P	P	F	0		
11	P	P	P	F	6	116 4221'F2(p) 152 4-2m1'F2(p) 365 6221'F2(p) 411 6-m21'F2 583 4321'F2(p) 614 4-3m1'F2	4(z)2(x)2(xy)1'F2(z) 4-(z)2(x)m(xy)1'F2(z) 6(z)2(x)2(1)1'F2(z) 6-(z)m(x)2(1)1'F2(1) 4(z)3(xyz) 2(xy)1'F2(z) 4-(z)3(xyz)m(xy)1'F2(z)
11	Z	P	P	F	0		
12		P	N/Z	F	27		
12	F	P	N	F	0		
12	F	P	Z	F	0		
12	P	P	N	F	5	38 mm21'F2 76 41'F2 134 4mm1'F2 316 61'F2 388 6mm1'F2	m(x)m(y)2(z)1'F2(z) 4(z)1'F2(z) 4(z)m(x)m(xy)1'F2(z) 6(z)1'F2(z) 6(z)m(x)m(1)1'F2(z)
12	P	P	Z	F	6	123 4221'F2'2'2(p) 162 4-2m1'F2'2'2(p) 372 6221'F2'2'2(p) 591 4321'F2'2'2(pp)	4(z)2(x)2(xy)1'F2(x)'2(y)'2(z) 4-(z)2(x)m(xy)1'F2(x)' 2(y)' 2(z) 6(z)2(x)2(1)1'F2(x)'2(2)'2(z) 4(z)3(xyz) 2(xy)1'F2(x)'2(y)'2(z)

						592	4321'F2'2'2(ss)	4(z)3(xyz) 2(xy)1'F2(xy)'2(x-y)'2(z)
						621	4-3m1'F2'2'2	4-(z)3(xyz)m(xy)1'F2(x)'2(y)'2(z)
12	Z	P	N	F	2	142	4mm1'Fm'm'2	4(z)m(x)m(xy)1'Fm(x)'m(y)'2(z)
						396	6mm1'Fm'm'2	6(z)m(x)m(1)1'Fm(x)'m(2)'2(z)
12	Z	P	Z	F	14	58	mmm1'F2/m	m(x)m(y)m(z)1'F2(z)/m(z)
						99	4/m1'F2/m	4(z)/m(z)1'F2(z)/m(z)
						193	4/mmm1'F2/m(p)	4(z)/m(z)m(x)m(xy)1'F2(z)/m(z)
						194	4/mmm1'F2/m(s)	4(z)/m(z)m(x)m(xy)1'F2(x)/m(x)
						219	4/mmm1'Fm'm'm(p)	4(z)/m(z)m(x)m(xy)1'Fm(x)'m(y)'m(z)
						343	6/m1'F2/m	6(z)/m(z)1'F2(z)/m(z)
						457	6/mmm1'F2/m(p)	6(z)/m(z)m(x)m(1)1'F2(z)/m(z)
						458	6/mmm1'F2/m(s)	6(z)/m(z)m(x)m(1)1'F2(x)/m(x)
						483	6/mmm1'Fm'm'm(p)	6(z)/m(z)m(x)m(1)1'Fm(x)'m(2)'m(z)
						555	m3-1'F2/m	m(x)3-(xyz)1'F2(z)/m(z)
						661	m3-m1'F2/m(p)	m(z)3-(xyz)m(xy)1'F2(z)/m(z)
						662	m3-m1'F2/m(s)	m(z)3-(xyz)m(xy)1'F2(xy)/m(xy)
						696	m3-m1'Fm'm'm(pp)	m(z)3-(xyz)m(xy)1'Fm(x)'m(y)'m(z)
						697	m3-m1'Fm'm'm(ss)	m(z)3-(xyz)m(xy)1'Fm(xy)'m(y)'m(z)
13		P	F	P	50			
13	F	P	F	P	0			
13	P	P	F	P	44	14	2/m1'F1	2(z)/m(z)1'F1
						47	mmm1'F1	m(x)m(y)m(z)1'F1
						55	mmm1'Fm	m(x)m(y)m(z)1'Fm(z)
						56	mmm1'Fm'	m(x)m(y)m(z)1'Fm(z)'
						88	4/m1'F1	4(z)/m(z)1'F1
						96	4/m1'Fm	4(z)/m(z)1'Fm(z)
						97	4/m1'Fm'	4(z)/m(z)1'Fm(z)'
						176	4/mmm1'F1	4(z)/m(z)m(x)m(xy)1'F1
						187	4/mmm1'Fm(p)	4(z)/m(z)m(x)m(xy)1'Fm(z)
						188	4/mmm1'Fm(s)	4(z)/m(z)m(x)m(xy)1'Fm(x)
						189	4/mmm1'Fm'(p)	4(z)/m(z)m(x)m(xy)1'Fm(z)'
						190	4/mmm1'Fm'(s)	4(z)/m(z)m(x)m(xy)1'Fm(x)'
						210	4/mmm1'Fm'm'2'(ps)	4(z)/m(z)m(x)m(xy)1'Fm(y)m(z)' 2(x)'
						211	4/mmm1'Fm'm'2'(sp)	4(z)/m(z)m(x)m(xy)1'Fm(y)' m(z)2(x)'

256	3-1'F1	3-(z)1'F1						
283	3-m1'F1	3-(z)m(x)1'F1						
288	3-m1'F2	3-(z)m(x)1'F2(x)						
289	3-m1'F2'	3-(z)m(x)1'F2(x)'						
291	3-m1'Fm	3-(z)m(x)1'Fm(x)						
292	3-m1'Fm'	3-(z)m(x)1'Fm(x)'						
332	6/m1'F1	6(z)/m(z)1'F1						
340	6/m1'Fm	6(z)/m(z)1'Fm(z)						
341	6/m1'Fm'	6(z)/m(z)1'Fm(z)'						
440	6/mmm1'F1	6(z)/m(z)m(x)m(1)1'F1						
451	6/mmm1'Fm(p)	6(z)/m(z)m(x)m(1)1'Fm(z)						
452	6/mmm1'Fm(s)	6(z)/m(z)m(x)m(1)1'Fm(x)						
453	6/mmm1'Fm'(p)	6(z)/m(z)m(x)m(1)1'Fm(z)'						
454	6/mmm1'Fm'(s)	6(z)/m(z)m(x)m(1)1'Fm(x)'						
474	6/mmm1'Fm'm2'(ps)	6(z)/m(z)m(x)m(1)1'Fm(z)m(2)2(x)'						
475	6/mmm1'Fm'm2'(sp)	6(z)/m(z)m(x)m(1)1'Fm(z)m(2)'2(x)'						
544	m3-1'F1	m(x)3-(xyz)1'F1						
552	m3-1'Fm	m(x)3-(xyz)1'Fm(z)						
553	m3-1'Fm'	m(x)3-(xyz)1'Fm(z)'						
564	m3-1'Fm'm2'	m(x)3-(xyz)1'Fm(x)'m(y)2(z)'						
572	m3-1'F3	m(x)3-(xyz)1'F3(xyz)						
596	4321'F4	4(z)3(xyz) 2(xy)1'F4(z)						
603	4321'F3	4(z)3(xyz) 2(xy)1'F3(xyz)						
644	m3-m1'F1	m(z)3-(xyz)m(xy)1'F1						
655	m3-m1'Fm(p)	m(z)3-(xyz)m(xy)1'Fm(z)						
656	m3-m1'Fm(s)	m(z)3-(xyz)m(xy)1'Fm(xy)						
657	m3-m1'Fm'(p)	m(z)3-(xyz)m(xy)1'Fm(z)'						
658	m3-m1'Fm'(s)	m(z)3-(xyz)m(xy)1'Fm(xy)'						
683	m3-m1'Fm'm2'(ps)	m(z)3-(xyz)m(xy)1'Fm(z)'m(xy)2(x-y)'						
684	m3-m1'Fm'm2'(sp)	m(z)3-(xyz)m(xy)1'Fm(z)m(xy)'2(x-y)'						
13	Z	P	F	P	6	213	4/mmm1'Fm'm2'(s)	4(z)/m(z)m(x)m(xy)1'Fm(y)' m(z)' 2(x)
						477	6/mmm1'Fm'm2'(s)	6(z)/m(z)m(x)m(1)1'Fm(z)'m(2)'2(x)
						565	m3-1'Fm'm2'	m(x)3-(xyz)1'Fm(x)'m(y)'2(z)
						687	m3-m1'Fm'm2'(ps)	m(z)3-(xyz)m(xy)1'Fm(z)'m(xy)'2(x-y)
						720	m3-m1'F4m'm'	m(z)3-(xyz)m(xy)1'F4(z)m(x)'m(xy)'
						752	m3-m1'F3m'	m(z)3-(xyz)m(xy)1'F3(xyz)m(x-y)'

14	F	P	P	P	0		
14	P	P	P	P	27	52 mmm1'F2	$m(x)m(y)m(z)1'F2(z)$
						53 mmm1'F2'	$m(x)m(y)m(z)1'F2(z)'$
						93 4/m1'F2	$4(z)/m(z)1'F2(z)$
						94 4/m1'F2'	$4(z)/m(z)1'F2(z)'$
						181 4/mmm1'F2(p)	$4(z)/m(z)m(x)m(xy)1'F2(z)$
						182 4/mmm1'F2(s)	$4(z)/m(z)m(x)m(xy)1'F2(x)$
						183 4/mmm1'F2'(p)	$4(z)/m(z)m(x)m(xy)1'F2(z)'$
						184 4/mmm1'F2'(s)	$4(z)/m(z)m(x)m(xy)1'F2(x)'$
						209 4/mmm1'Fm'm2'(ss)	$4(z)/m(z)m(x)m(xy)1'Fm(x)' m(y) 2(z)'$
						337 6/m1'F2	$6(z)/m(z)1'F2(z)$
						338 6/m1'F2'	$6(z)/m(z)1'F2(z)'$
						445 6/mmm1'F2(p)	$6(z)/m(z)m(x)m(1)1'F2(z)$
						446 6/mmm1'F2(s)	$6(z)/m(z)m(x)m(1)1'F2(x)$
						447 6/mmm1'F2'(p)	$6(z)/m(z)m(x)m(1)1'F2(z)'$
						448 6/mmm1'F2'(s)	$6(z)/m(z)m(x)m(1)1'F2(x)'$
						473 6/mmm1'Fm'm2'(ss)	$6(z)/m(z)m(x)m(1)1'Fm(x)'m(2)2(z)'$
						549 m3-1'F2	$m(x)3-(xyz)1'F2(z)$
						550 m3-1'F2'	$m(x)3-(xyz)1'F2(z)'$
						635 4-3m1'F3	$4-(z)3(xyz)m(xy)1'F3(xyz)$
						649 m3-m1'F2(p)	$m(z)3-(xyz)m(xy)1'F2(z)$
						650 m3-m1'F2(s)	$m(z)3-(xyz)m(xy)1'F2(xy)$
						651 m3-m1'F2'(p)	$m(z)3-(xyz)m(xy)1'F2(z)'$
						652 m3-m1'F2'(s)	$m(z)3-(xyz)m(xy)1'F2(xy)'$
						681 m3-m1'Fm'm2'(pp)	$m(z)3-(xyz)m(xy)1'Fm(x)'m(y)2(z)'$
						682 m3-m1'Fm'm2'(ss)	$m(z)3-(xyz)m(xy)1'Fm(xy)'my 2(z)'$
						703 m3-m1'F4	$m(z)3-(xyz)m(xy)1'F4(z)$
						743 m3-m1'F3	$m(z)3-(xyz)m(xy)1'F3(xyz)$
14	Z	P	P	P	4	212 4/mmm1'Fm'm2'(p)	$4(z)/m(z)m(x)m(xy)1'Fm(x)' m(y)' 2(z)$
						476 6/mmm1'Fm'm2'(p)	$6(z)/m(z)m(x)m(1)1'Fm(x)'m(2)2(z)$
						685 m3-m1'Fm'm2'(pp)	$m(z)3-(xyz)m(xy)1'Fm(x)'m(y)'2(z)$
						686 m3-m1'Fm'm2'(ss)	$m(z)3-(xyz)m(xy)1'Fm(xy)'my'2(z)$

15 **P** **N/Z** **P** **16**

15 F P N P 0

15	F	P	Z	P	0		
15	P	P	N	P	0		
15	P	P	Z	P	10	204 4/mmm1'F2'2'2(p) 205 4/mmm1'F2'2'2(s) 468 6/mmm1'F2'2'2(p) 469 6/mmm1'F2'2'2(s) 561 m3-1'F2'2'2 673 m3-m1'F2'2'2(pp) 674 m3-m1'F2'2'2(ss) 675 m3-m1'F2'2'2(ps) 715 m3-m1'F42'2' 749 m3-m1'F32'	$4(z)/m(z)m(x)m(xy)1'F2(x)'2(y)'2(z)$ $4(z)/m(z)m(x)m(xy)1'F2(x)2(y)'2(z)'$ $6(z)/m(z)m(x)m(1)1'F2(x)'2(2)'2(z)$ $6(z)/m(z)m(x)m(1)1'F2(x)2(2)'2(z)'$ $m(x)3-(xyz)1'F2(x)'2(y)'2(z)$ $m(z)3-(xyz)m(xy)1'F2(x)'2(y)'2(z)$ $m(z)3-(xyz)m(xy)1'F2(xy)'2(x-y)'2(z)$ $m(z)3-(xyz)m(xy)1'F2(xy)2(x-y)'2(z)'$ $m(z)3-(xyz)m(xy)1'F4(z)2(x)'2(xy)'$ $m(z)3-(xyz)m(xy)1'F3(xyz)2(x-y)'$
15	Z	P	N	P	0		
15	Z	P	Z	P	6	627 4-3m1'F4- 706 m3-m1'F4- 709 m3-m1'F4/m 726 m3-m1'F4-2'm'(ps) 727 m3-m1'F4-2'm'(sp) 745 m3-m1'F3-	$4-(z)3(xyz)m(xy)1'F4-(z)$ $m(z)3-(xyz)m(xy)1'F4-(z)$ $m(z)3-(xyz)m(xy)1'F4(z)/m(z)$ $m(z)3-(xyz)m(xy)1'F4-(z)2(x)'m(xy)'$ $m(z)3-(xyz)m(xy)1'F4-(z)2(xy)'m(x)'$ $m(z)3-(xyz)m(xy)1'F3-(xyz)$
16		P	F	N	18		
16	F	P	F	N	0		
16	P	P	F	N	13	2 1-1'F1 19 2/m1'F2 20 2/m1'F2' 22 2/m1'Fm 23 2/m1'Fm' 67 mmm1'Fm'm2' 104 4/m1'F4 126 4221'F4 261 3-1'F3 270 321'F3	$1-1'F1$ $2(z)/m(z)1'F2(z)$ $2(z)/m(z)1'F2(z)'$ $2(z)/m(z)1'Fm(z)$ $2(z)/m(z)1'Fm(z)'$ $m(x)m(y)m(z)1'Fm(x)'m(y)2(z)'$ $4(z)/m(z)1'F4(z)$ $4(z)2(x)2(xy)1'F4(z)$ $3-(z)1'F3(z)$ $3(z)2(x)1'F3(z)$

						328	6-1'F3	6-(z)1'F3(z)
						353	6/m1'F6	6(z)/m(z)1'F6(z)
						380	6221'F6	6(z)2(x)2(1)1'F6(z)
16	Z	P	F	N	5	68	mmm1'Fm'm'2	m(x)m(y)m(z)1'Fm(x)'m(y)'2(z)
						239	4/mmm1'F4m'm'	4(z)/m(z)m(x)m(xy)1'F4(z)m(x)'m(xy)'
						308	3-m1'F3m'	3-(z)m(x)1'F3(z)m(x)'
						431	6-m21'F3m'	6-(z)m(x)2(1)1'F3(z)m(x)'
						519	6/mmm1'F6m'm'	6(z)/m(z)m(x)m(1)1'F6(z)m(x)'m(1)'
17		P	P	N	8			
17	F	P	P	N	0			
17	P	P	P	N	7	223	4/mmm1'F4	4(z)/m(z)m(x)m(xy)1'F4(z)
						299	3-m1'F3	3-(z)m(x)1'F3(z)
						348	6/m1'F3	6(z)/m(z)1'F3(z)
						375	6221'F3	6(z)2(x)2(1)1'F3(z)
						425	6-m21'F3	6-(z)m(x)2(1)1'F3(z)
						487	6/mmm1'F3	6(z)/m(z)m(x)m(1)1'F3(z)
						503	6/mmm1'F6	6(z)/m(z)m(x)m(1)1'F6(z)
17	Z	P	P	N	1	496	6/mmm1'F3m'	6(z)/m(z)m(x)m(1)1'F3(z)m(x)'
18		P	N/Z	N	27			
18	F	P	N	N	0			
18	F	P	Z	N	0			
18	P	P	N	N	5	144	4mm1'F4	4(z)m(x)m(xy)1'F4(z)
						279	3m1'F3	3(z)m(x)1'F3(z)
						319	61'F3	6(z)1'F3(z)
						398	6mm1'F3	6(z)m(x)m(1)1'F3(z)
						403	6mm1'F6	6(z)m(x)m(1)1'F6(z)
18	P	P	Z	N	7	64	mmm1'F2'2'2	m(x)m(y)m(z)1'F2(x)'2(y)'2(z)

						235	4/mmm1'F42'2'	4(z)/m(z)m(x)m(xy)1'F4(z)2(x)'2(xy)'
						305	3-m1'F32'	3-(z)m(x)1'F3(z)2(x)'
						378	6221'F32'	6(z)2(x)2(1)1'F3(z)2(x)'
						428	6-m21'F32'	6-(z)m(x)2(1)1'F3(z)2(1)'
						493	6/mmm1'F32'	6(z)/m(z)m(x)m(1)1'F3(z)2(x)'
						515	6/mmm1'F62'2'	6(z)/m(z)m(x)m(1)1'F6(z)2(x)'2(1)'
18	Z	P	N	N	1	401	6mm1'F3m'	6(z)m(x)m(1)1'F3(z)m(x)'
18	Z	P	Z	N	14	107	4/m1'F 4-	4(z)/m(z)1'F4-(z)
						169	4-2m1'F4-	4-(z)2(x)m(xy)1'F4-(z)
						226	4/mmm1'F4-	4(z)/m(z)m(x)m(xy)1'F4-(z)
						229	4/mmm1'F4/m	4(z)/m(z)m(x)m(xy)1'F4(z)/m(z)
						243	4/mmm1'F4-2'm'	4(z)/m(z)m(x)m(xy)1'F4-(z)2(x)'m(xy)'
						301	3-m1'F3-	3-(z)m(x)1'F3-(z)
						350	6/m1'F3-	6(z)/m(z)1'F3-(z)
						356	6/m1'F6-	6(z)/m(z)1'F6-(z)
						433	6-m21'F6-	6-(z)m(x)2(1)1'F6-(z)
						489	6/mmm1'F3-	6(z)/m(z)m(x)m(1)1'F3-(z)
						499	6/mmm1'F3-m'	6(z)/m(z)m(x)m(1)1'F3-(z)m(x)'
						506	6/mmm1'F6-	6(z)/m(z)m(x)m(1)1'F6-(z)
						509	6/mmm1'F6/m	6(z)/m(z)m(x)m(1)1'F6(z)/m(z)
						523	6/mmm1'F6-m'2'	6(z)/m(z)m(x)m(1)1'F6-(z)m(x)'2(1)'
19	AFM	Z	F	F	4			
19	F	Z	F	F	2	420	6-m21'Fmm2	6-(z)m(x)2(1)1'Fm(z) m(y)2(1)
						637	4-3m1'F3m	4-(z)3(xyz)m(xy)1'F3(xyz)m(x-y)
19	P	Z	F	F	2	165	4-2m1'Fmm2	4-(z)2(x)m(xy)1'Fm(xy)m(x-y)2(z)
						623	4-3m1'Fmm2	4-(z)3(xyz)m(xy)1'Fm(xy)m(x-y) 2(z)
19	Z	Z	F	F	0			
20	AFM	Z	P	F	0			
20	F	Z	P	F	0			

20	P	Z	P	F	0
20	Z	Z	P	F	0

21 AFM Z N/Z F 76

21	F	Z	N	F	0
21	F	Z	Z	F	30

17	2/m1'F 1-'	2(z)/m(z)1'F 1-'
50	mmm1'F1-'	m(x)m(y)m(z)1'F1-'
59	mmm1'F2'/m	m(x)m(y)m(z)1'F2(z)'/m(z)
91	4/m1'F1-'	4(z)/m(z)1'F1-'
100	4/m1'F2'/m	4(z)/m(z)1'F2(z)'/m(z)
179	4/mmm1'F 1-'	4(z)/m(z)m(x)m(xy)1'F 1-'
195	4/mmm1'F2'/m(p)	4(z)/m(z)m(x)m(xy)1'F2(z)'/m(z)
196	4/mmm1'F2'/m(s)	4(z)/m(z)m(x)m(xy)1'F2(x)'/m(x)
218	4/mmm1'Fmmm'(s)	4(z)/m(z)m(x)m(xy)1'Fm(x)'m(y)m(z)
259	3-1'F1-'	3-(z)1'F1-'
286	3-m1'F1-'	3-(z)m(x)1'F1-'
295	3-m1'F2'/m	3-(z)m(x)1'F2(x)'/m(x)
296	3-m1'F2/m'	3-(z)m(x)1'F2(x)/m(x)'
335	6/m1'F1-'	6(z)/m(z)1'F1-'
344	6/m1'F2'/m	6(z)/m(z)1'F2(z)'/m(z)
443	6/mmm1'F1-'	6(z)/m(z)m(x)m(1)1'F1-'
459	6/mmm1'F2'/m(p)	6(z)/m(z)m(x)m(1)1'F2(z)'/m(z)
460	6/mmm1'F2'/m(s)	6(z)/m(z)m(x)m(1)1'F2(x)'/m(x)
482	6/mmm1'Fmmm'(s)	6(z)/m(z)m(x)m(1)1'Fm(x)'m(2)m(z)
547	m3-1'F1-'	m(x)3-(xyz)1'F1-'
556	m3-1'F2'/m	m(x)3-(xyz)1'F2(z)'/m(z)
568	m3-1'Fmmm'	m(x)3-(xyz)1'Fm(x)m(y)m(z)'
575	m3-1'F3-'	m(x)3-(xyz)1'F3-(xyz)'
632	4-3m1'F4-'2'm	4-(z)3(xyz)m(xy)1'F4-(z)'2(x)'m(xy)
647	m3-m1'F1-'	m(z)3-(xyz)m(xy)1'F1-'
663	m3-m1'F2'/m(p)	m(z)3-(xyz)m(xy)1'F2(z)'/m(z)
664	m3-m1'F2'/m(s)	m(z)3-(xyz)m(xy)1'F2(xy)'/m(xy)
695	m3-m1'Fmmm'(ps)	m(z)3-(xyz)m(xy)1'Fm(z)m(xy)m(x-y)'
736	m3-m1'F4/m'mm	m(z)3-(xyz)m(xy)1'F4(z)/m(z)'m(x)m(xy)
756	m3-m1'F3-'m	m(z)3-(xyz)m(xy)1'F3-(xyz)'m(x-y)

21	P	Z	N	F	2	140 4mm1'Fmm2 394 6mm1'Fmm2	4(z)m(x)m(xy)1'Fm(x) m(y)2(z) 6(z)m(x)m(1)1'Fm(x)m(2)2(z)
21	P	Z	Z	F	14	60 mmm1'F2/m' 101 4/m1'F2/m' 197 4/mmm1'F2/m'(p) 198 4/mmm1'F2/m'(s) 217 4/mmm1'Fmmm'(p) 345 6/m1'F2/m' 461 6/mmm1'F2/m'(p) 462 6/mmm1'F2/m'(s) 481 6/mmm1'Fmmm'(p) 557 m3-1'F2/m' 665 m3-m1'F2/m'(p) 666 m3-m1'F2/m'(s) 693 m3-m1'Fmmm'(pp) 694 m3-m1'Fmmm'(ss)	m(x)m(y)m(z)1'F2(z)/m(z) 4(z)/m(z)1'F2(z)/m(z) 4(z)/m(z)m(x)m(xy)1'F2(z)/m(z) 4(z)/m(z)m(x)m(xy)1'F2(x)/m(x) 4(z)/m(z)m(x)m(xy)1'Fm(x)m(y) m(z) 6(z)/m(z)1'F2(z)/m(z) 6(z)/m(z)m(x)m(1)1'F2(z)/m(z) 6(z)/m(z)m(x)m(1)1'F2(x)/m(x) 6(z)/m(z)m(x)m(1)1'Fm(x)m(2)m(z) m(x)3-(xyz)1'F2(z)/m(z) m(z)3-(xyz)m(xy)1'F2(z)/m(z) m(z)3-(xyz)m(xy)1'F2(xy)/m(xy) m(z)3-(xyz)m(xy)1'Fm(x)m(y)m(z) m(z)3-(xyz)m(xy)1'Fm(xy)mym(z)
21	Z	Z	N	F	0		
21	Z	Z	Z	F	30	122 4221'F222 161 4-2m1'F222 216 4/mmm1'Fmmm 221 4/mmm1'Fm'm'm' 371 6221'F222 480 6/mmm1'Fmmm 485 6/mmm1'Fm'm'm' 538 231'F222 567 m3-1'Fmmm 570 m3-1'Fm'm'm' 589 4321'F222(pp) 590 4321'F222(ss) 599 4321'F422 601 4321'F4'2'2 605 4321'F32 620 4-3m1'F222 630 4-3m1'F4-2m 633 4-3m1'F4-'2m' 691 m3-m1'Fmmm(pp) 692 m3-m1'Fmmm(ss)	4(z)2(x)2(xy)1'F2(x)2(y) 2(z) 4-(z)2(x)m(xy)1'F2(x)2(y) 2(z) 4(z)/m(z)m(x)m(xy)1'Fm(x)m(y) m(z) 4(z)/m(z)m(x)m(xy)1'Fm(x)'m(y)'m(z) 6(z)2(x)2(1)1'F2(x)2(2)2(z) 6(z)/m(z)m(x)m(1)1'Fm(x)m(2)2(z) 6(z)/m(z)m(x)m(1)1'Fm(x)'m(2)'m(z) 2(x)3(xyz)1'F2(x)2(y)2(z) m(x)3-(xyz)1'Fm(x)m(y)m(z) m(x)3-(xyz)1'Fm(x)'m(y)'m(z) 4(z)3(xyz) 2(xy)1'F2(x)2(y)2(z) 4(z)3(xyz) 2(xy)1'F2(xy)2(x-y) 2(z) 4(z)3(xyz) 2(xy)1'F4(z)2(x)2(xy) 4(z)3(xyz) 2(xy)1'F4(z)'2(x)'2(xy) 4(z)3(xyz) 2(xy)1'F3(xyz)2(x-y) 4-(z)3(xyz)m(xy)1'F2(x)2(y)2(z) 4-(z)3(xyz)m(xy)1'F4-(z)2(x)m(xy) 4-(z)3(xyz)m(xy)1'F4-(z)'2(x)m(xy) m(z)3-(xyz)m(xy)1'Fm(x)m(y)m(z) m(z)3-(xyz)m(xy)1'Fm(xy)mym(z)

699 m3-m1'Fm'm'm'(pp) m(z)3-(xyz)m(xy)1'Fm(x)'m(y)'m(z)'
700 m3-m1'Fm'm'm'(ss) m(z)3-(xyz)m(xy)1'Fm(xy)'m(y)'m(z)'
734 m3-m1'F4/mmm m(z)3-(xyz)m(xy)1'F4(z)/m(z)m(x)m(xy)
737 m3-m1'F4/m'm'm' m(z)3-(xyz)m(xy)1'F4(z)/m(z)'m(x)'m(xy)'
738 m3-m1'F4'/mm'm(ps) m(z)3-(xyz)m(xy)1'F4(z)'/m(z)m(x)'m(xy)'
739 m3-m1'F4'/mm'm(sp) m(z)3-(xyz)m(xy)1'F4(z)'/m(z)m(x)m(xy)'
740 m3-m1'F4'/m'm'm(ps) m(z)3-(xyz)m(xy)1'F4(z)'/m(z)'m(x)'m(xy)'
741 m3-m1'F4'/m'm'm(sp) m(z)3-(xyz)m(xy)1'F4(z)'/m(z)'m(x)m(xy)'
754 m3-m1'F3-m m(z)3-(xyz)m(xy)1'F3-(xyz)m(x-y)
757 m3-m1'F3-'m' m(z)3-(xyz)m(xy)1'F3-(xyz)'m(x-y)'

22 AFM Z F P 9

22 F Z F P 0

22 P Z F P 6

208 4/mmm1'Fmm2(s) 4(z)/m(z)m(x)m(xy)1'Fm(y)m(z)2(x)
472 6/mmm1'Fmm2(s) 6(z)/m(z)m(x)m(1)1'Fm(z)m(2)2(x)
563 m3-1'Fmm2 m(x)3-(xyz)1'Fm(x)m(y)2(z)
680 m3-m1'Fmm2(ps) m(z)3-(xyz)m(xy)1'Fm(z)m(xy)2(x-y)
719 m3-m1'F4mm m(z)3-(xyz)m(xy)1'F4(z)m(x)m(xy)
751 m3-m1'F3m m(z)3-(xyz)m(xy)1'F3(xyz)m(x-y)

22 Z Z F P 3

597 4321'F4' 4(z)3(xyz) 2(xy)1'F4(z)'
721 m3-m1'F4'm'm(ps) m(z)3-(xyz)m(xy)1'F4(z)'m(x)'m(xy)'
722 m3-m1'F4'm'm(sp) m(z)3-(xyz)m(xy)1'F4(z)'m(x)m(xy)'

23 AFM Z P P 5

23 F Z P P 0

23 P Z P P 4

207 4/mmm1'Fmm2(p) 4(z)/m(z)m(x)m(xy)1'Fm(x)m(y) 2(z)
471 6/mmm1'Fmm2(p) 6(z)/m(z)m(x)m(1)1'Fm(x)m(2)2(z)
678 m3-m1'Fmm2(pp) m(z)3-(xyz)m(xy)1'Fm(x)m(y)2(z)
679 m3-m1'Fmm2(ss) m(z)3-(xyz)m(xy)1'Fm(xy)m(x-y)2(z)

23 Z Z P P 1

704 m3-m1'F4' m(z)3-(xyz)m(xy)1'F4(z)'

24	AFM	Z	N/Z	P	21		
24	F	Z	N	P	0		
24	F	Z	Z	P	0		
24	P	Z	N	P	0		
24	P	Z	Z	P	6	628 4-3m1'F4-' 707 m3-m1'F4-' 710 m3-m1'F4/m' 728 m3-m1'F4-'2m(ps) 729 m3-m1'F4-'2m(sp) 746 m3-m1'F3-'	4-(z)3(xyz)m(xy)1'F4-(z)' m(z)3-(xyz)m(xy)1'F4-(z)' m(z)3-(xyz)m(xy)1'F4(z)/m(z)' m(z)3-(xyz)m(xy)1'F4-(z)' 2(x)' m(xy) m(z)3-(xyz)m(xy)1'F4-(z)' 2(xy)'m(x) m(z)3-(xyz)m(xy)1'F3-(xyz)'
24	Z	Z	N	P	0		
24	Z	Z	Z	P	15	203 4/mmm1'F222 467 6/mmm1'F222 560 m3-1'F222 671 m3-m1'F222(pp) 672 m3-m1'F222(ss) 711 m3-m1'F4'/m 712 m3-m1'F4'/m' 714 m3-m1'F422 716 m3-m1'F4'2'2(ps) 717 m3-m1'F4'2'2(sp) 724 m3-m1'F4-2m(ps) 725 m3-m1'F4-2m(sp) 730 m3-m1'F4-'2m'(ps) 731 m3-m1'F4-'2m'(sp) 748 m3-m1'F32	4(z)/m(z)m(x)m(xy)1'F2(x)2(y) 2(z) 6(z)/m(z)m(x)m(1)1'F2(x)2(y)2(z) m(x)3-(xyz)1'F2(x)2(y)2(z) m(z)3-(xyz)m(xy)1'F2(x)2(y)2(z) m(z)3-(xyz)m(xy)1'F2(xy)2(x-y) 2(z) m(z)3-(xyz)m(xy)1'F4(z)'/m(z) m(z)3-(xyz)m(xy)1'F4(z)'/m(z)' m(z)3-(xyz)m(xy)1'F4(z)2(x)2(xy) m(z)3-(xyz)m(xy)1'F4(z)'2(x)'2(xy) m(z)3-(xyz)m(xy)1'F4(z)'2(x)2(xy)' m(z)3-(xyz)m(xy)1'F4-(z)2(x)m(xy) m(z)3-(xyz)m(xy)1'F4-(z)2(xy)m(x) m(z)3-(xyz)m(xy)1'F4-(z)' 2(x)m(xy)' m(z)3-(xyz)m(xy)1'F4-(z)' 2(xy)m(x)' m(z)3-(xyz)m(xy)1'F3(xyz)2(x-y)
25	AFM	Z	F	N	11		
25	F	Z	F	N	0		
25	P	Z	F	N	5	66 mmm1'Fmm2 238 4/mmm1'F4mm	m(x)m(y)m(z)1'Fm(x)m(y)2(z) 4(z)/m(z)m(x)m(xy)1'F4(z)m(x)m(xy)

						307	3-m1'F3m	3-(z)m(x)1'F3(z)m(x)
						430	6-m21'F3m	6-(z)m(x)2(1)1'F3(z)m(x)
						518	6/mmm1'F6mm	6(z)/m(z)m(x)m(1)1'F6(z)m(x)m(1)
25	Z	Z	F	N	6	105	4/m1'F4'	4(z)/m(z)1'F4(z)'
						127	4221'F4'	4(z)2(x)2(xy)1'F4(z)'
						240	4/mmm1'F4'm'm	4(z)/m(z)m(x)m(xy)1'F4(z)'m(x)'m(xy)
						354	6/m1'F6'	6(z)/m(z)1'F6(z)'
						381	6221'F6'	6(z)2(x)2(1)1'F6(z)'
						520	6/mmm1'F6'm'm	6(z)/m(z)m(x)m(1)1'F6(z)'m(x)'m(1)
26	AFM	Z	P	N	3			
26	F	Z	P	N	0			
26	P	Z	P	N	1	495	6/mmm1'F3m	6(z)/m(z)m(x)m(1)1'F3(z)m(x)
26	Z	Z	P	N	2	224	4/mmm1'F4'	4(z)/m(z)m(x)m(xy)1'F4(z)'
						504	6/mmm1'F6'	6(z)/m(z)m(x)m(1)1'F6(z)'
27	AFM	Z	N/Z	N	105			
27	F	Z	N	N	4	44	mm21'Fmm2	m(x)m(y)2(z)1'Fm(x)m(y)2(z)
						147	4mm1'F4mm	4(z)m(x)m(xy)1'F 4(z)m(x)m(xy)
						281	3m1'F3m	3(z)m(x)1'F3(z)m(x)
						406	6mm1'F6mm	6(z)m(x)m(1)1'F 6(z)m(x)m(1)
27	F	Z	Z	N	14	5	1-1'F 1-'	1-1'F 1-'
						26	2/m1'F2'/m	2(z)/m(z)1'F2(z)'/m(z)
						27	2/m1'F2'/m'	2(z)/m(z)1'F2(z)'/m(z)'
						71	mmm1'Fmmm'	m(x)m(y)m(z)1'Fm(x)m(y)m(z)'
						87	4-1'F4-'	4-(z)1'F4-(z)'
						111	4/m1'F4'/m'	4(z)/m(z)1'F4(z)'/m(z)'
						174	4-2m1'F4-'2'm	4-(z)2(x)m(xy)1'F4-(z)'2(x)'m(xy)
						249	4/mmm1'F4'/m'mm	4(z)/m(z)m(x)m(xy)1'F4(z)'/m(z)'m(x)m(xy)
						264	3-1'F3-'	3-(z)1'F3-(z)'
						312	3-m1'F3-'m	3-(z)m(x)1'F3-(z)'m(x)

						331	6-1'F6-'	6-(z)1'F6-(z)'
						360	6/m1'F6/m'	6(z)/m(z)1'F6(z)/m(z)'
						438	6-m21'F6-'m2'	6-(z)m(x)2(1)1'F6-(z)'m(x)2(1)'
						529	6/mmm1'F6/m'mm	6(z)/m(z)m(x)m(1)1'F6(z)/m(z)'m(x)m(1)'
27	P	Z	N	N	1	400	6mm1'F3m	6(z)m(x)m(1)1'F3(z)m(x)'
27	P	Z	Z	N	14	108	4/m1'F4-'	4(z)/m(z)1'F4-(z)'
						170	4-2m1'F4-'	4-(z)2(x)m(xy)1'F4-(z)'
						227	4/mmm1'F4-'	4(z)/m(z)m(x)m(xy)1'F4-(z)'
						230	4/mmm1'F4/m'	4(z)/m(z)m(x)m(xy)1'F4(z)/m(z)'
						244	4/mmm1'F4-'2'm	4(z)/m(z)m(x)m(xy)1'F4-(z)2(x)'m(xy)'
						302	3-m1'F3-'	3-(z)m(x)1'F3-(z)'
						351	6/m1'F3-'	6(z)/m(z)1'F3-(z)'
						357	6/m1'F6-'	6(z)/m(z)1'F6-(z)'
						434	6-m21'F6-'	6-(z)m(x)2(1)1'F6-(z)'
						490	6/mmm1'F3-'	6(z)/m(z)m(x)m(1)1'F3-(z)'
						500	6/mmm1'F3-'m	6(z)/m(z)m(x)m(1)1'F3-(z)'m(x)'
						507	6/mmm1'F6-'	6(z)/m(z)m(x)m(1)1'F6-(z)'
						510	6/mmm1'F6/m'	6(z)/m(z)m(x)m(1)1'F6(z)/m(z)'
						524	6/mmm1'F6-'m2'	6(z)/m(z)m(x)m(1)1'F6-(z)'m(x)2(1)'
27	Z	Z	N	N	6	80	41'F4'	4(z)1'F4(z)'
						145	4mm1'F4'	4(z)m(x)m(xy)1'F4(z)'
						149	4mm1'F4'm'm	4(z)m(x)m(xy)1'F4(z)'m(x)m(xy)'
						322	61'F6'	6(z)1'F6(z)'
						404	6mm1'F6'	6(z)m(x)m(1)1'F6(z)'
						408	6mm1'F6'm'm	6(z)m(x)m(1)1'F6(z)'m(x)m(1)'
27	Z	Z	Z	N	66	34	2221'F222	2(x)2(y)2(z)1'F2(x)2(y)2(z)'
						63	mmm1'F222	m(x)m(y)m(z)1'F2(x)2(y)2(z)'
						70	mmm1'Fmmm	m(x)m(y)m(z)1'Fm(x)m(y)m(z)'
						73	mmm1'Fm'm'm'	m(x)m(y)m(z)1'Fm(x)'m(y)'m(z)'
						112	4/m1'F4'/m	4(z)/m(z)1'F4(z)'/m(z)'
						113	4/m1'F4'/m'	4(z)/m(z)1'F4(z)'/m(z)'
						129	4221'F422	4(z)2(x)2(xy)1'F4(z)2(x)2(xy)'
						131	4221'F4'2'2	4(z)2(x)2(xy)1'F4(z)'2(x)'2(xy)'
						172	4-2m1'F4-2m	4-(z)2(x)m(xy)1'F4-(z)2(x)m(xy)'
						175	4-2m1'F4-'2m'	4-(z)2(x)m(xy)1'F4-(z)'2(x)m(xy)'
						231	4/mmm1'F4'/m	4(z)/m(z)m(x)m(xy)1'F4(z)'/m(z)'
						232	4/mmm1'F4'/m'	4(z)/m(z)m(x)m(xy)1'F4(z)'/m(z)'

234	4/mmm1'F422	$4(z)/m(z)m(x)m(xy)1'F4(z)2(x)2(xy)$
236	4/mmm1'F4'2'2	$4(z)/m(z)m(x)m(xy)1'F4(z)'2(x)'2(xy)$
242	4/mmm1'F4-2m	$4(z)/m(z)m(x)m(xy)1'F4-2(x)m(xy)$
245	4/mmm1'F4-'2m'	$4(z)/m(z)m(x)m(xy)1'F4-(z)'2(x)m(xy)'$
247	4/mmm1'F4/mmm	$4(z)/m(z)m(x)m(xy)1'F4(z)/m(z)m(x)m(xy)$
250	4/mmm1'F4/m'm'm'	$4(z)/m(z)m(x)m(xy)1'F4(z)/m(z)'m(x)'m(xy)'$
251	4/mmm1'F4'/mm'm	$4(z)/m(z)m(x)m(xy)1'F4(z)'/m(z)m(x)'m(xy)$
252	4/mmm1'F4'/m'm'm	$4(z)/m(z)m(x)m(xy)1'F4(z)'/m(z)'m(x)'m(xy)$
272	321'F32	$3(z)2(x)1'F3(z)2(x)$
304	3-m1'F32	$3-(z)m(x)1'F3(z)2(x)$
310	3-m1'F3-m	$3-(z)m(x)1'F3-(z)m(x)$
313	3-m1'F3-'m'	$3-(z)m(x)1'F3-(z)'m(x)'$
361	6/m1'F6'/m	$6(z)/m(z)1'F6(z)'/m(z)$
362	6/m1'F6'/m'	$6(z)/m(z)1'F6(z)'/m(z)'$
377	6221'F32	$6(z)2(x)2(1)1'F3(z)2(x)$
383	6221'F622	$6(z)2(x)2(1)1'F6(z)2(x)2(1)$
385	6221'F6'2'2	$6(z)2(x)2(1)1'F6(z)'2(x)2(1)$
427	6-m21'F32	$6-(z)m(x)2(1)1'F3(z)2(1)$
436	6-m21'F6-m2	$6-(z)m(x)2(1)1'F6-(z)m(x)2(1)$
439	6-m21'F6-'m'2	$6-(z)m(x)2(1)1'F6-(z)'m(x)2(1)$
492	6/mmm1'F32	$6(z)/m(z)m(x)m(1)1'F3(z)2(x)$
498	6/mmm1'F3-m	$6(z)/m(z)m(x)m(1)1'F3-(z)m(x)$
501	6/mmm1'F3-'m'	$6(z)/m(z)m(x)m(1)1'F3-(z)'m(x)'$
511	6/mmm1'F6'/m	$6(z)/m(z)m(x)m(1)1'F6(z)'/m(z)$
512	6/mmm1'F6'/m'	$6(z)/m(z)m(x)m(1)1'F6(z)'/m(z)'$
514	6/mmm1'F622	$6(z)/m(z)m(x)m(1)1'F6(z)2(x)2(1)$
516	6/mmm1'F6'2'2	$6(z)/m(z)m(x)m(1)1'F6(z)'2(x)2(1)$
522	6/mmm1'F6-m2	$6(z)/m(z)m(x)m(1)1'F6-(z)m(x)2(1)$
525	6/mmm1'F6-'m'2	$6(z)/m(z)m(x)m(1)1'F6-(z)'m(x)2(1)$
527	6/mmm1'F6/mmm	$6(z)/m(z)m(x)m(1)1'F6(z)/m(z)m(x)m(1)$
530	6/mmm1'F6/m'm'm'	$6(z)/m(z)m(x)m(1)1'F6(z)/m(z)'m(x)'m(1)'$
531	6/mmm1'F6'/mm'm	$6(z)/m(z)m(x)m(1)1'F6(z)'/m(z)m(x)'m(1)$
532	6/mmm1'F6'/m'm'm	$6(z)/m(z)m(x)m(1)1'F6(z)'/m(z)'m(x)'m(1)$
543	231'F23	$2(x)3(xyz)1'F2(x)3(xyz)$
577	m3-1'F23	$m(x)3-(xyz)1'F2(x)3(xyz)$
579	m3-1'Fm3-	$m(x)3-(xyz)1'Fm(x)3-(xyz)$
580	m3-1'Fm'3-'	$m(x)3-(xyz)1'Fm(x)'3-(xyz)'$
608	4321'F23	$4(z)3(xyz)2(xy)1'F2(x)3(xyz)$
610	4321'F432	$4(z)3(xyz)2(xy)1'F4(z)3(xyz)2(xy)$
611	4321'F4'32'	$4(z)3(xyz)2(xy)1'F4(z)'3(xyz)2(xy)'$
640	4-3m1'F23	$4-(z)3(xyz)m(xy)1'F23(xyz)$

642	4-3m1'F 4-3m	4-(z)3(xyz)m(xy)1'F4-(z)3(xyz)m(xy)
643	4-3m1'F 4-'3m'	4-(z)3(xyz)m(xy)1'F4-(z)'3(xyz)m(xy)'
759	m3-m1'F23	m(z)3-(xyz)m(xy)1'F2(z)3(xyz)
761	m3-m1'Fm3-	m(z)3-(xyz)m(xy)1'Fm(z)3-(xyz)
762	m3-m1'Fm'3-'	m(z)3-(xyz)m(xy)1'Fm(z)'3-(xyz)'
764	m3-m1'F432	m(z)3-(xyz)m(xy)1'F4(z) 3(xyz)2(xy)
765	m3-m1'F4'32'	m(z)3-(xyz)m(xy)1'F4(z)'3(xyz)2(xy)'
767	m3-m1'F4-3m	m(z)3-(xyz)m(xy)1'F4-(z)3(xyz)m(xy)
768	m3-m1'F4-'3m'	m(z)3-(xyz)m(xy)1'F4-(z)'3(xyz)m(xy)'
770	m3-m1'F m3-m	m(z)3-(xyz)m(xy)1'Fm(z)3-(xyz)m(xy)
771	m3-m1'F m3-m'	m(z)3-(xyz)m(xy)1'Fm(z)'3-(xyz)m(xy)'
772	m3-m1'F m'3-'m	m(z)3-(xyz)m(xy)1'F m(z)'3-(xyz)'m(xy)'
773	m3-m1'F m'3-'m'	m(z)3-(xyz)m(xy)1'F m(z)'3-(xyz)'m(xy)'

28 PDM Z F F 42

28	F	Z	F	F	0
28	P	Z	F	F	0
28	Z	Z	F	F	42

7	21'F1'	2(z)1'F1'
11	m1'F1'	m(z)1'F1'
30	2221'F1'	2(x)2(y)2(z)1'F1'
33	2221'F21'	2(x)2(y)2(z)1'F2(z)1'
37	mm21'F1'	m(x)m(y)2(z)1'F1'
43	mm21'Fm1'	m(x)m(y)2(z)1'Fm(x)1'
75	41'F1'	4(z)1'F1'
82	4-1'F1'	4-(z)1'F1'
85	4-1'F21'	4-(z)1'F2(z)1'
115	4221'F1'	4(z)2(x)2(xy)1'F1'
121	4221'F21'(s)	4(z)2(x)2(xy)1'F2(x)1'
133	4mm1'F1'	4(z)m(x)m(xy)1'F1'
139	4mm1'Fm1'	4(z)m(x)m(xy)1'Fm(x)1'
151	4-2m1'F1'	4-(z)2(x)m(xy)1'F1'
157	4-2m1'F21'(s)	4-(z)2(x)m(xy)1'F2(x)1'
160	4-2m1'Fm1'	4-(z)2(x)m(xy)1'Fm(xy)1'
168	4-2m1'Fmm21'	4-(z)2(x)m(xy)1'Fm(xy)m(x-y)2(z)1'
254	31'F1'	3(z)1'F1'
266	321'F1'	3(z)2(x)1'F1'

269	321'F21'	$3(z)2(x)1'F2(x)1'$
275	3m1'F1'	$3(z)m(x)1'F1'$
278	3m1'Fm1'	$3(z)m(x)1'Fm(x)1'$
315	61'F1'	$6(z)1'F1'$
324	6-1'F1'	$6-(z)1'F1'$
327	6-1'Fm1'	$6-(z)1'Fm(z)1'$
364	6221'F1'	$6(z)2(x)2(1)1'F1'$
370	6221'F21'(s)	$6(z)2(x)2(1)1'F2(x)1'$
387	6mm1'F1'	$6(z)m(x)m(1)1'F1'$
393	6mm1'Fm1'	$6(z)m(x)m(1)1'Fm(x)1'$
410	6-m21'F1'	$6-(z)m(x)2(1)1'F1'$
418	6-m21'Fm1'(p)	$6-(z)m(x)2(1)1'Fm(z)1'$
419	6-m21'Fm1'(s)	$6-(z)m(x)2(1)1'Fm(x)1'$
424	6-m21'Fmm21'	$6-(z)m(x)2(1)1'Fm(z) m(y)2(1)1'$
534	231'F1'	$2(x)3(xyz)1'F1'$
537	231'F21'	$2(x)3(xyz)1'F2(x)1'$
542	231'F31'	$2(x)3(xyz)1'F3(xyz)1'$
582	4321'F1'	$4(z)3(xyz) 2(xy)1'F1'$
588	4321'F21'(s)	$4(z)3(xyz) 2(xy)1'F2(xy)1'$
613	4-3m1'F1'	$4-(z)3(xyz)m(xy)1'F1'$
619	4-3m1'Fm1'	$4-(z)3(xyz)m(xy)1'Fm(xy)1'$
626	4-3m1'Fmm21'	$4-(z)3(xyz)m(xy)1'Fm(xy)m(x-y) 2(z)1'$
639	4-3m1'F3m1'	$4-(z)3(xyz)m(xy)1'F3(xyz)m(x-y)1'$

29 PDM Z P F 6

29 F Z P F 0

29 P Z P F 0

29 Z Z P F 6

120	4221'F21'(p)	$4(z)2(x)2(xy)1'F2(z)1'$
156	4-2m1'F21'(p)	$4-(z)2(x)m(xy)1'F2(z)1'$
369	6221'F21'(p)	$6(z)2(x)2(1)1'F2(z)1'$
413	6-m21'F21'	$6-(z)m(x)2(1)1'F2(1)1'$
587	4321'F21'(p)	$4(z)3(xyz) 2(xy)1'F2(z)1'$
616	4-3m1'F21'	$4-(z)3(xyz)m(xy)1'F2(z)1'$

30	PDM	Z	N/Z	F	46		
30	F	Z	N	F	0		
30	F	Z	Z	F	0		
30	P	Z	N	F	0		
30	P	Z	Z	F	0		
30	Z	Z	N	F	7	40 mm21'F21'	$m(x)m(y)2(z)1'F2(z)1'$
						78 41'F21'	$4(z)1'F2(z)1'$
						136 4mm1'F21'	$4(z)m(x)m(xy)1'F2(z)1'$
						143 4mm1'Fmm21'	$4(z)m(x)m(xy)1'Fm(x) m(y)2(z)1'$
						318 61'F21'	$6(z)1'F2(z)1'$
						390 6mm1'F21'	$6(z)m(x)m(1)1'F2(z)1'$
						397 6mm1'Fmm21'	$6(z)m(x)m(1)1'Fm(x)m(2)2(z)1'$
30	Z	Z	Z	F	39	18 2/m1'F 1-1'	$2(z)/m(z)1'F 1-1'$
						51 mmm1'F1-1'	$m(x)m(y)m(z)1'F1-1'$
						62 mmm1'F2/m1'	$m(x)m(y)m(z)1'F2(z)/m(z)1'$
						92 4/m1'F1-1'	$4(z)/m(z)1'F1-1'$
						103 4/m1'F2/m1'	$4(z)/m(z)1'F2(z)/m(z)1'$
						125 4221'F2221'	$4(z)2(x)2(xy)1'F2(x)2(xy) 2(z)1'$
						164 4-2m1'F2221'	$4-(z)2(x)m(xy)1'F2(x)2(y) 2(z)1'$
						180 4/mmm1'F 1-1'	$4(z)/m(z)m(x)m(xy)1'F 1-1'$
						201 4/mmm1'F2/m1'(p)	$4(z)/m(z)m(x)m(xy)1'F2(z)/m(z)1'$
						202 4/mmm1'F2/m1'(s)	$4(z)/m(z)m(x)m(xy)1'F2(x)/m(x)1'$
						222 4/mmm1'Fmmm1'	$4(z)/m(z)m(x)m(xy)1'Fm(x)m(y)m(z)1'$
						260 3-1'F1-1'	$3-(z)1'F1-1'$
						287 3-m1'F1-1'	$3-(z)m(x)1'F1-1'$
						298 3-m1'F2/m1'	$3-(z)m(x)1'F2(x)/m(x)1'$
						336 6/m1'F1-1'	$6(z)/m(z)1'F1-1'$
						347 6/m1'F2/m1'	$6(z)/m(z)1'F2(z)/m(z)1'$
						374 6221'F2221'	$6(z)2(x)2(1)1'F2(x)2(2)2(z)1'$
						444 6/mmm1'F1-1'	$6(z)/m(z)m(x)m(1)1'F1-1'$
						465 6/mmm1'F2/m1'(p)	$6(z)/m(z)m(x)m(1)1'F2(z)/m(z)1'$
						466 6/mmm1'F2/m1'(s)	$6(z)/m(z)m(x)m(1)1'F2(x)/m(x)1'$
						486 6/mmm1'Fmmm1'	$6(z)/m(z)m(x)m(1)1'Fm(x) m(2)m(z)1'$
						540 231'F2221'	$2(x)3(xyz)1'F2(x)2(y)2(z)1'$
						548 m3-1'F1-1'	$m(x)3-(xyz)1'F1-1'$

559	$m3-1'F2/m1'$	$m(x)3-(xyz)1'F2(z)/m(z)1'$
571	$m3-1'Fmmm1'$	$m(x)3-(xyz)1'Fm(x)m(y)m(z)1'$
576	$m3-1'F3-1'$	$m(x)3-(xyz)1'F3-(xyz)1'$
594	$4321'F2221'(pp)$	$4(z)3(xyz)2(xy)1'F2(x)2(y)2(z)1'$
595	$4321'F2221'(ss)$	$4(z)3(xyz)2(xy)1'F2(xy)2(x-y)2(z)1'$
602	$4321'F4221'$	$4(z)3(xyz)2(xy)1'F4(z)2(x)2(xy)1'$
607	$4321'F321'$	$4(z)3(xyz)2(xy)1'F3(xyz)2(x-y)1'$
622	$4-3m1'F2221'$	$4-(z)3(xyz)m(xy)1'F2(x)2(y)2(z)1'$
634	$4-3m1'F4-2m1'$	$4-(z)3(xyz)m(xy)1'F4-(z)2(x)m(xy)1'$
648	$m3-m1'F1-1'$	$m(z)3-(xyz)m(xy)1'F1-1'$
669	$m3-m1'F2/m1'(p)$	$m(z)3-(xyz)m(xy)1'F2(z)/m(z)1'$
670	$m3-m1'F2/m1'(s)$	$m(z)3-(xyz)m(xy)1'F2(xy)/m(xy)1'$
701	$m3-m1'Fmmm1'(pp)$	$m(z)3-(xyz)m(xy)1'Fm(x)m(y)m(z)1'$
702	$m3-m1'Fmmm1'(ss)$	$m(z)3-(xyz)m(xy)1'Fm(xy)mym(z)1'$
742	$m3-m1'F4/mmm1'$	$m(z)3-(xyz)m(xy)1'F4(z)/m(z)m(x)m(xy)1'$
758	$m3-m1'F3-m1'$	$m(z)3-(xyz)m(xy)1'F3-(xyz)m(x-y)1'$

31 PDM Z F P 31

31	F	Z	F	P	0
31	P	Z	F	P	0
31	Z	Z	F	P	31

15	$2/m1'F1'$	$2(z)/m(z)1'F1'$
48	$mmm1'F1'$	$m(x)m(y)m(z)1'F1'$
57	$mmm1'Fm1'$	$m(x)m(y)m(z)1'Fm(z)1'$
89	$4/m1'F1'$	$4(z)/m(z)1'F1'$
98	$4/m1'Fm1'$	$4(z)/m(z)1'Fm(z)1'$
177	$4/mmm1'F1'$	$4(z)/m(z)m(x)m(xy)1'F1'$
191	$4/mmm1'Fm1'(p)$	$4(z)/m(z)m(x)m(xy)1'Fm(z)1'$
192	$4/mmm1'Fm1'(s)$	$4(z)/m(z)m(x)m(xy)1'Fm(x)1'$
215	$4/mmm1'Fmm21'(s)$	$4(z)/m(z)m(x)m(xy)1'Fm(y)m(z)2(x)1'$
257	$3-1'F1'$	$3-(z)1'F1'$
284	$3-m1'F1'$	$3-(z)m(x)1'F1'$
290	$3-m1'F21'$	$3-(z)m(x)1'F2(x)1'$
293	$3-m1'Fm1'$	$3-(z)m(x)1'Fm(x)1'$
333	$6/m1'F1'$	$6(z)/m(z)1'F1'$
342	$6/m1'Fm1'$	$6(z)/m(z)1'Fm(z)1'$
441	$6/mmm1'F1'$	$6(z)/m(z)m(x)m(1)1'F1'$

455	6/mmm1'Fm1'(p)	6(z)/m(z)m(x)m(1)1'Fm(z)1'
456	6/mmm1'Fm1'(p)	6(z)/m(z)m(x)m(1)1'Fm(x)1'
479	6/mmm1'Fmm21'(s)	6(z)/m(z)m(x)m(1)1'Fm(z)m(2)2(x)1'
545	m3-1'F1'	m(x)3-(xyz)1'F1'
554	m3-1'Fm1'	m(x)3-(xyz)1'Fm(z)1'
566	m3-1'Fmm21'	m(x)3-(xyz)1'Fm(x)m(y)2(z)1'
573	m3-1'F31'	m(x)3-(xyz)1'F3(xyz)1'
598	4321'F41'	4(z)3(xyz) 2(xy)1'F4(z)1'
604	4321'F31'	4(z)3(xyz) 2(xy)1'F3(xyz)1'
645	m3-m1'F1'	m(z)3-(xyz)m(xy)1'F1'
659	m3-m1'Fm1'(p)	m(z)3-(xyz)m(xy)1'Fm(z)1'
660	m3-m1'Fm1'(s)	m(z)3-(xyz)m(xy)1'Fm(xy)1'
690	m3-m1'Fmm21'(ps)	m(z)3-(xyz)m(xy)1'Fm(z)m(xy)2(x-y)1'
723	m3-m1'F4mm1'	m(z)3-(xyz)m(xy)1'F4(z)m(x)m(xy)1'
753	m3-m1'F3m1'	m(z)3-(xyz)m(xy)1'F3(xyz)m(x-y)1'

32 PDM Z P P 17

32	F	Z	P	P	0
32	P	Z	P	P	0
32	Z	Z	P	P	17

54	mmm1'F21'	m(x)m(y)m(z)1'F2(z)1'
95	4/m1'F21'	4(z)/m(z)1'F2(z)1'
185	4/mmm1'F21'(p)	4(z)/m(z)m(x)m(xy)1'F2(z)1'
186	4/mmm1'F21'(s)	4(z)/m(z)m(x)m(xy)1'F2(x)1'
214	4/mmm1'Fmm21'(p)	4(z)/m(z)m(x)m(xy)1'Fm(x)m(y) 2(z)1'
339	6/m1'F21'	6(z)/m(z)1'F2(z)1'
449	6/mmm1'F21'(p)	6(z)/m(z)m(x)m(1)1'F2(z)1'
450	6/mmm1'F21'(s)	6(z)/m(z)m(x)m(1)1'F2(x)1'
478	6/mmm1'Fmm21'(p)	6(z)/m(z)m(x)m(1)1'Fm(x)m(2)2(z)1'
551	m3-1'F21'	m(x)3-(xyz)1'F2(z)1'
636	4-3m1'F31'	4-(z)3(xyz)m(xy)1'F3(xyz)1'
653	m3-m1'F21'(p)	m(z)3-(xyz)m(xy)1'F2(z)1'
654	m3-m1'F21'(s)	m(z)3-(xyz)m(xy)1'F2(xy)1'
688	m3-m1'Fmm21'(pp)	m(z)3-(xyz)m(xy)1'Fm(x)m(y)2(z)1'
689	m3-m1'Fmm21'(ss)	m(z)3-(xyz)m(xy)1'Fm(xy)m(y)2(z)1'
705	m3-m1'F41'	m(z)3-(xyz)m(xy)1'F4(z)1'
744	m3-m1'F31'	m(z)3-(xyz)m(xy)1'F3(xyz)1'

33 PDM Z N/Z P 13

33	F	Z	N	P	0
33	F	Z	Z	P	0
33	P	Z	N	P	0
33	P	Z	Z	P	0
33	Z	Z	N	P	0
33	Z	Z	Z	P	13

206	4/mmm1'F2221'	4(z)/m(z)m(x)m(xy)1'F2(x)2(y) 2(z) 1'
470	6/mmm1'F2221'	6(z)/m(z)m(x)m(1)1'F2(x)2(2)2(z)1'
562	m3-1'F2221'	m(x)3-(xyz)1'F2(x)2(y)2(z)1'
629	4-3m1'F4-1'	4-(z)3(xyz)m(xy)1'F4-(z)1'
676	m3-m1'F2221'(pp)	m(z)3-(xyz)m(xy)1'F2(x)2(y)2(z)1'
677	m3-m1'F2221'(ss)	m(z)3-(xyz)m(xy)1'F2(xy)2(x-y)2(z)1'
708	m3-m1'F4-1'	m(z)3-(xyz)m(xy)1'F4-(z)1'
713	m3-m1'F4/m1'	m(z)3-(xyz)m(xy)1'F4(z)/m(z)1'
718	m3-m1'F4221'	m(z)3-(xyz)m(xy)1'F4(z)2(x)2(xy)1'
732	m3-m1'F4-2m1'(ps)	m(z)3-(xyz)m(xy)1'F4-(z)2(x)m(xy)1'
733	m3-m1'F4-2m1'(sp)	m(z)3-(xyz)m(xy)1'F4-(z)2(xy)m(x)1'
747	m3-m1'F3-1'	m(z)3-(xyz)m(xy)1'F3-(xyz)1'
750	m3-m1'F321'	m(z)3-(xyz)m(xy)1'F3(xyz)2(x-y)1'

34 PDM Z F N 15

34	F	Z	F	N	0
34	P	Z	F	N	0
34	Z	Z	F	N	15

3	1-1'F1'	1-1'F1'
21	2/m1'F21'	2(z)/m(z)1'F2(z)1'
24	2/m1'Fm1'	2(z)/m(z)1'Fm(z)1'
69	mmm1'Fmm21'	m(x)m(y)m(z)1'Fm(x)m(y)2(z)1'

106	4/m1'F41'	4(z)/m(z)1'F4(z)1'
128	4221'F41'	4(z)2(x)2(xy)1'F4(z)1'
241	4/mmm1'F4mm1'	4(z)/m(z)m(x)m(xy)1'F4(z)m(x)m(xy)1'
262	3-1'F31'	3-(z)1'F3(z)1'
271	321'F31'	3(z)2(x)1'F3(z)1'
309	3-m1'F3m1'	3-(z)m(x)1'F3(z)m(x)1'
329	6-1'F31'	6-(z)1'F3(z)1'
355	6/m1'F61'	6(z)/m(z)1'F6(z)1'
382	6221'F61'	6(z)2(x)2(1)1'F6(z)1'
432	6-m21'F3m1'	6-(z)m(x)2(1)1'F3(z)m(x)1'
521	6/mmm1'F6mm1'	6(z)/m(z)m(x)m(1)1'F6(z) m(x)m(1)1'

35 PDM Z P N 8

35	F	Z	P	N	0
35	P	Z	P	N	0
35	Z	Z	P	N	8

225	4/mmm1'F41'	4(z)/m(z)m(x)m(xy)1'F4(z)1'
300	3-m1'F31'	3-(z)m(x)1'F3(z)1'
349	6/m1'F31'	6(z)/m(z)1'F3(z)1'
376	6221'F31'	6(z)2(x)2(1)1'F3(z)1'
426	6-m21'F31'	6-(z)m(x)2(1)1'F3(z)1'
488	6/mmm1'F31'	6(z)/m(z)m(x)m(1)1'F3(z)1'
497	6/mmm1'F3m1'	6(z)/m(z)m(x)m(1)1'F3(z)m(x)1'
505	6/mmm1'F61'	6(z)/m(z)m(x)m(1)1'F6(z)1'

36 PDM Z N/Z N 34

36	F	Z	N	N	0
36	F	Z	Z	N	0
36	P	Z	N	N	0
36	P	Z	Z	N	0

36	Z	Z	N	N	6	146	$4mm1'F41'$	$4(z)m(x)m(xy)1'F4(z) 1'$
						280	$3m1'F31'$	$3(z)m(x)1'F3(z)1'$
						320	$61'F31'$	$6(z)1'F3(z)1'$
						399	$6mm1'F31'$	$6(z)m(x)m(1)1'F3(z)1'$
						402	$6mm1'F3m1'$	$6(z)m(x)m(1)1'F3(z)m(x)1'$
						405	$6mm1'F61'$	$6(z)m(x)m(1)1'F6(z)1'$
36	Z	Z	Z	N	28	65	$mmm1'F2221'$	$m(x)m(y)m(z)1'F2(x)2(y)2(z)1'$
						109	$4/m1'F 4-1'$	$4(z)/m(z)1'F4-(z) 1'$
						171	$4-2m1'F4-1'$	$4-(z)2(x)m(xy)1'F4-(z) 1'$
						228	$4/mmm1'F4-1'$	$4(z)/m(z)m(x)m(xy)1'F4-(z)1'$
						233	$4/mmm1'F4/m1'$	$4(z)/m(z)m(x)m(xy)1'F4(z)/m(z)1'$
						237	$4/mmm1'F4221'$	$4(z)/m(z)m(x)m(xy)1'F4(z)2(x)2(xy)1'$
						246	$4/mmm1'F4-2m1'$	$4(z)/m(z)m(x)m(xy)1'F4-(z)2(x)m(xy)1'$
						303	$3-m1'F3-1'$	$3-(z)m(x)1'F3-(z)1'$
						306	$3-m1'F321'$	$3-(z)m(x)1'F3(z)2(x)1'$
						352	$6/m1'F3-1'$	$6(z)/m(z)1'F3-(z)1'$
						358	$6/m1'F6-1'$	$6(z)/m(z)1'F6-(z)1'$
						379	$6221'F321'$	$6(z)2(x)2(1)1'F3(z)2(x)1'$
						429	$6-m21'F321'$	$6-(z)m(x)2(1)1'F3(z)2(1)1'$
						435	$6-m21'F6-1'$	$6-(z)m(x)2(1)1'F6-(z)1'$
						491	$6/mmm1'F3-1'$	$6(z)/m(z)m(x)m(1)1'F3-(z)1'$
						494	$6/mmm1'F321'$	$6(z)/m(z)m(x)m(1)1'F3(z)21'$
						502	$6/mmm1'F3-m1'$	$6(z)/m(z)m(x)m(1)1'F3-(z)m(x)1'$
						508	$6/mmm1'F6-1'$	$6(z)/m(z)m(x)m(1)1'F6-(z)1'$
						513	$6/mmm1'F6/m1'$	$6(z)/m(z)m(x)m(1)1'F6(z)/m(z)1'$
						517	$6/mmm1'F6221'$	$6(z)/m(z)m(x)m(1)1'F6(z)2(x)2(1)1'$
						526	$6/mmm1'F6-m21'$	$6(z)/m(z)m(x)m(1)1'F6-(z)m(x) 2(1)1'$
						578	$m3-1'F231'$	$m(x)3-(xyz)1'F2(x)3(xyz)1'$
						609	$4321'F231'$	$4(z)3(xyz) 2(xy)1'F2(x)3(xyz)1'$
						641	$4-3m1'F231'$	$4-(z)3(xyz)m(xy)1'F23(xyz)1'$
						760	$m3-m1'F231'$	$m(z)3-(xyz)m(xy)1'F2(z)3(xyz)1'$
						763	$m3-m1'Fm3-1'$	$m(z)3-(xyz)m(xy)1'Fm(z)3-(xyz)1'$
						766	$m3-m1'F4321'$	$m(z)3-(xyz)m(xy)1'F4(z) 3(xyz)2(xy)1'$
						769	$m3-m1'F4-3m1'$	$m(z)3-(xyz)m(xy)1'F4-(z)3(xyz)m(xy)1'$

Table 7: Physical Property Tensors

reduced superfamilies of magnetic point groups	aV Ferrotoroidic spontaneous toroidal moment	aeV Ferromagnetic spontaneous magnetization	v Ferroelectric spontaneous polarization	[V ²] Ferroelastic spontaneous strain
1) 1	T1 T2 T3	T1 T2 T3	T1 T2 T3	T11, T12, T13 T12, T22, T23 T13, T23, T33
2) 1'	-	-	T1 T2 T3	T11, T12, T13 T12, T22, T23 T13, T23, T33
3) $\bar{1}$	-	T1 T2 T3	-	T11, T12, T13 T12, T22, T23 T13, T23, T33
4) $\bar{1}1'$	-	-	-	T11, T12, T13 T12, T22, T23 T13, T23, T33
5) $\bar{1}'$	T1 T2 T3	-	-	T11, T12, T13 T12, T22, T23 T13, T23, T33
6) 2	0 0 T3	0 0 T3	0 0 T3	T11, T12, 0 T12, T22, 0 0, 0, T33
7) 21'	-	-	0 0 T3	T11, T12, 0 T12, T22, 0 0, 0, T33
8) 2'	T1 T2 0	T1 T2 0	0 0 T3	T11, T12, 0 T12, T22, 0 0, 0, T33

9) m	T1 T2 0	0 0 T3	T1 T2 0	T11, T12, 0 T12, T22, 0 0, 0, T33
10) m1'	-	-	T1 T2 T3	T11, T12, 0 T12, T22, 0 0, 0, T33
11) m'	0 0 T3	T1 T2 0	T1 T2 0	T11, T12, 0 T12, T22, 0 0, 0, T33
12) 2/m	-	0 0 T3	-	T11, T12, 0 T12, T22, 0 0, 0, T33
13) 2/m1'	-	-	-	T11, T12, 0 T12, T22, 0 0, 0, T33
14) 2'/m	T1 T2 0	-	-	T11, T12, 0 T12, T22, 0 0, 0, T33
15) 2/m'	0 0 T3	-	-	T11, T12, 0 T12, T22, 0 0, 0, T33
16) 2'/m'	-	T1 T2 0	-	T11, T12, 0 T12, T22, 0 0, 0, T33
17) 222	-	-	-	T11, 0, 0 0, T22, 0 0, 0, T33

18) 2221'	-	-	-	T11,0 ,0 0 ,T22,0 0 ,0 ,T33
19) 2'2'2	0 0 T3	0 0 T3	-	T11,0 ,0 0 ,T22,0 0 ,0 ,T33
20) mm2	0 0 T3	-	0 0 T3	T11,0 ,0 0 ,T22,0 0 ,0 ,T33
21) mm21'	-	-	0 0 T3	T11,0 ,0 0 ,T22,0 0 ,0 ,T33
22) m'm2'	T1 0 0	0 T2 0	0 0 T3	T11,0 ,0 0 ,T22,0 0 ,0 ,T33
23) m'm'2	-	0 0 T3	0 0 T3	T11,0 ,0 0 ,T22,0 0 ,0 ,T33
24) mmm	-	-	-	T11,0 ,0 0 ,T22,0 0 ,0 ,T33
25) mmm1'	-	-	-	T11,0 ,0 0 ,T22,0 0 ,0 ,T33
26) m'mm	T1 0 0	-	-	T11,0 ,0 0 ,T22,0 0 ,0 ,T33

27) m'm'm	-	0 0 T3	-	T11,0 ,0 0 ,T22,0 0 ,0 ,T33
28) m'm'm'	-	-	-	T11,0 ,0 0 ,T22,0 0 ,0 ,T33
29) 4	0 0 T3	0 0 T3	0 0 T3	T11,0 ,0 0 ,T11,0 0 ,0 ,T33
30) 41'	-	-	0 0 T3	T11,0 ,0 0 ,T11,0 0 ,0 ,T33
31) 4'	-	-	0 0 T3	T11,0 ,0 0 ,T11,0 0 ,0 ,T33
32) $\bar{4}$	-	0 0 T3	-	T11,0 ,0 0 ,T11,0 0 ,0 ,T33
33) $\bar{41}'$	-	-	-	T11,0 ,0 0 ,T11,0 0 ,0 ,T33
34) $\bar{4}'$	0 0 T3	-	-	T11,0 ,0 0 ,T11,0 0 ,0 ,T33
35) 4/m	-	0 0 T3	-	T11,0 ,0 0 ,T11,0 0 ,0 ,T33

36) 4/m1'	-	-	-	T11,0 ,0 0 ,T11,0 0 ,0 ,T33
37) 4'/m	-	-	-	T11,0 ,0 0 ,T11,0 0 ,0 ,T33
38) 4/m'	0 0 T3	-	-	T11,0 ,0 0 ,T11,0 0 ,0 ,T33
39) 4'/m'	-	-	-	T11,0 ,0 0 ,T11,0 0 ,0 ,T33
40) 422	-	-	-	T11,0 ,0 0 ,T11,0 0 ,0 ,T33
41) 4221'	-	-	-	T11,0 ,0 0 ,T11,0 0 ,0 ,T33
42) 4'22'	-	-	-	T11,0 ,0 0 ,T11,0 0 ,0 ,T33
43) 42'2'	0 0 T3	0 0 T3	-	T11,0 ,0 0 ,T11,0 0 ,0 ,T33
44) 4mm	0 0 T3	-	0 0 T3	T11,0 ,0 0 ,T11,0 0 ,0 ,T33

45) $4mm1'$	-	-	0 0 T3	T11,0 ,0 0 ,T11,0 0 ,0 ,T33
46) $4'm'm$	-	-	0 0 T3	T11,0 ,0 0 ,T11,0 0 ,0 ,T33
47) $4m'm'$	-	0 0 T3	0 0 T3	T11,0 ,0 0 ,T11,0 0 ,0 ,T33
48) $\overline{4}2m$	-	-	-	T11,0 ,0 0 ,T11,0 0 ,0 ,T33
49) $\overline{4}2m1'$	-	-	-	T11,0 ,0 0 ,T11,0 0 ,0 ,T33
50) $\overline{4}'2'm$	0 0 T3	-	-	T11,0 ,0 0 ,T11,0 0 ,0 ,T33
51) $\overline{4}'2m'$	-	-	-	T11,0 ,0 0 ,T11,0 0 ,0 ,T33
52) $\overline{4}2'm'$	-	0 0 T3	-	T11,0 ,0 0 ,T11,0 0 ,0 ,T33
53) $4/mmm$	-	-	-	T11,0 ,0 0 ,T11,0 0 ,0 ,T33

54)	4/mm1'	-	-	-	T11,0 ,0 0 ,T11,0 0 ,0 ,T33
55)	4/m'mm	0 0 T3	-	-	T11,0 ,0 0 ,T11,0 0 ,0 ,T33
56)	4'/mm'm	-	-	-	T11,0 ,0 0 ,T11,0 0 ,0 ,T33
57)	4'/m'm'm	-	-	-	T11,0 ,0 0 ,T11,0 0 ,0 ,T33
58)	4/mm'm'	-	0 0 T3	-	T11,0 ,0 0 ,T11,0 0 ,0 ,T33
59)	4/m'm'm'	-	-	-	T11,0 ,0 0 ,T11,0 0 ,0 ,T33
60)	3	0 0 T3	0 0 T3	0 0 T3	T11,0 ,0 0 ,T11,0 0 ,0 ,T33
61)	31'	-	-	0 0 T3	T11,0 ,0 0 ,T11,0 0 ,0 ,T33
62)	$\bar{3}$	-	0 0 T3	-	T11,0 ,0 0 ,T11,0 0 ,0 ,T33

63)	$\bar{3}1'$	-	-	-	T11,0 ,0 0 ,T11,0 0 ,0 ,T33
64)	$\bar{3}'$	0 0 T3	-	-	T11,0 ,0 0 ,T11,0 0 ,0 ,T33
65)	32	-	-	-	T11,0 ,0 0 ,T11,0 0 ,0 ,T33
66)	321'	-	-	-	T11,0 ,0 0 ,T11,0 0 ,0 ,T33
67)	32'	0 0 T3	0 0 T3	-	T11,0 ,0 0 ,T11,0 0 ,0 ,T33
68)	3m	0 0 T3	-	0 0 T3	T11,0 ,0 0 ,T11,0 0 ,0 ,T33
69)	3m1'	-	-	0 0 T3	T11,0 ,0 0 ,T11,0 0 ,0 ,T33
70)	3m'	-	0 0 T3	0 0 T3	T11,0 ,0 0 ,T11,0 0 ,0 ,T33
71)	$\bar{3}m$	-	-	-	T11,0 ,0 0 ,T11,0 0 ,0 ,T33

72)	$\bar{3}m1'$	-	-	-	T11,0 ,0 0 ,T11,0 0 ,0 ,T33
73)	$\bar{3}'m$	0 0 T3	-	-	T11,0 ,0 0 ,T11,0 0 ,0 ,T33
74)	$\bar{3}'m'$	-	-	-	T11,0 ,0 0 ,T11,0 0 ,0 ,T33
75)	$\bar{3}m'$	-	0 0 T3	-	T11,0 ,0 0 ,T11,0 0 ,0 ,T33
76)	6	0 0 T3	0 0 T3	0 0 T3	T11,0 ,0 0 ,T11,0 0 ,0 ,T33
77)	$\bar{6}1'$	-	-	0 0 T3	T11,0 ,0 0 ,T11,0 0 ,0 ,T33
78)	6'	-	-	0 0 T3	T11,0 ,0 0 ,T11,0 0 ,0 ,T33
79)	$\bar{6}$	-	0 0 T3	-	T11,0 ,0 0 ,T11,0 0 ,0 ,T33
80)	$\bar{6}1'$	-	-	-	T11,0 ,0 0 ,T11,0 0 ,0 ,T33

81) $\bar{6}$ '	0 0 T3	-	-	T11,0 ,0 0 ,T11,0 0 ,0 ,T33
82) 6/m	-	0 0 T3	-	T11,0 ,0 0 ,T11,0 0 ,0 ,T33
83) 6/m1'	-	-	-	T11,0 ,0 0 ,T11,0 0 ,0 ,T33
84) 6'/m	-	-	-	T11,0 ,0 0 ,T11,0 0 ,0 ,T33
85) 6/m'	0 0 T3	-	-	T11,0 ,0 0 ,T11,0 0 ,0 ,T33
86) 6'/m'	-	-	-	T11,0 ,0 0 ,T11,0 0 ,0 ,T33
87) 622	-	-	-	T11,0 ,0 0 ,T11,0 0 ,0 ,T33
88) 6221'	-	-	-	T11,0 ,0 0 ,T11,0 0 ,0 ,T33
89) 6'2'2	-	-	-	T11,0 ,0 0 ,T11,0 0 ,0 ,T33

90) 62'2'	0 0 T3	0 0 T3	-	T11,0 ,0 0 ,T11,0 0 ,0 ,T33
91) 6mm	0 0 T3	-	0 0 T3	T11,0 ,0 0 ,T11,0 0 ,0 ,T33
92) 6mm1'	-	-	0 0 T3	T11,0 ,0 0 ,T11,0 0 ,0 ,T33
93) 6'm'm	-	-	0 0 T3	T11,0 ,0 0 ,T11,0 0 ,0 ,T33
94) 6m'm'	-	0 0 T3	0 0 T3	T11,0 ,0 0 ,T11,0 0 ,0 ,T33
95) $\overline{6m2}$	-	-	-	T11,0 ,0 0 ,T11,0 0 ,0 ,T33
96) $\overline{6m21'}$	-	-	-	T11,0 ,0 0 ,T11,0 0 ,0 ,T33
97) $\overline{6'm'2}$	-	-	-	T11,0 ,0 0 ,T11,0 0 ,0 ,T33
98) $\overline{6'm2'}$	0 0 T3	-	-	T11,0 ,0 0 ,T11,0 0 ,0 ,T33

99)	$\overline{6m}2'$	-	0 0 T3	-	T11,0 ,0 0 ,T11,0 0 ,0 ,T33
100)	6/mmm	-	-	-	T11,0 ,0 0 ,T11,0 0 ,0 ,T33
101)	6/mmm1'	-	-	-	T11,0 ,0 0 ,T11,0 0 ,0 ,T33
102)	6/m'mm	0 0 T3	-	-	T11,0 ,0 0 ,T11,0 0 ,0 ,T33
103)	6'/mm'm	-	-	-	T11,0 ,0 0 ,T11,0 0 ,0 ,T33
104)	6'/m'm'm	-	-	-	T11,0 ,0 0 ,T11,0 0 ,0 ,T33
105)	6/mm'm'	-	0 0 T3	-	T11,0 ,0 0 ,T11,0 0 ,0 ,T33
106)	6/m'm'm'	-	-	-	T11,0 ,0 0 ,T11,0 0 ,0 ,T33
107)	23	-	-	-	T11,0 ,0 0 ,T11,0 0 ,0 ,T11

108)	231'	-	-	-	T11,0 ,0 0 ,T11,0 0 ,0 ,T11
109)	m $\bar{3}$	-	-	-	T11,0 ,0 0 ,T11,0 0 ,0 ,T11
110)	m $\bar{3}1'$	-	-	-	T11,0 ,0 0 ,T11,0 0 ,0 ,T11
111)	m' $\bar{3}'$	-	-	-	T11,0 ,0 0 ,T11,0 0 ,0 ,T11
112)	432	-	-	-	T11,0 ,0 0 ,T11,0 0 ,0 ,T11
113)	4321'	-	-	-	T11,0 ,0 0 ,T11,0 0 ,0 ,T11
114)	4' $\bar{3}2'$	-	-	-	T11,0 ,0 0 ,T11,0 0 ,0 ,T11
115)	$\bar{4}3m$	-	-	-	T11,0 ,0 0 ,T11,0 0 ,0 ,T11
116)	$\bar{4}3m1'$	-	-	-	T11,0 ,0 0 ,T11,0 0 ,0 ,T11

117)	$\overline{4}3m'$	-	-	-	T11,0 ,0 0 ,T11,0 0 ,0 ,T11
118)	$m\overline{3}m$	-	-	-	T11,0 ,0 0 ,T11,0 0 ,0 ,T11
119)	$m\overline{3}m1'$	-	-	-	T11,0 ,0 0 ,T11,0 0 ,0 ,T11
120)	$m'\overline{3}'m$	-	-	-	T11,0 ,0 0 ,T11,0 0 ,0 ,T11
121)	$m\overline{3}m'$	-	-	-	T11,0 ,0 0 ,T11,0 0 ,0 ,T11
122)	$m'\overline{3}'m'$	-	-	-	T11,0 ,0 0 ,T11,0 0 ,0 ,T11

reduced superfamilies of magnetic point groups	aev^2 ferromagnetolectric	ev^2 ferromagnetotoroidic	av^2 ferroelectrotoroidic
	magnetolectric coefficient	magnetotoroidic coefficient	electrotoroidic coefficient
1) 1	T11, T12, T13 T21, T22, T23 T31, T32, T33	T11, T12, T13 T21, T22, T23 T31, T32, T33	T11, T12, T13 T21, T22, T23 T31, T32, T33
2) 1'	---	T11, T12, T13 T21, T22, T23 T31, T32, T33	---
3) $\bar{1}$	---	---	T11, T12, T13 T21, T22, T23 T31, T32, T33
4) $\bar{1}1'$	---	---	---
5) $\bar{1}'$	T11, T12, T13 T21, T22, T23 T31, T32, T33	---	---
6) 2	T11, T12, 0 T21, T22, 0 0, 0, T33	T11, T12, 0 T21, T22, 0 0, 0, T33	T11, T12, 0 T21, T22, 0 0, 0, T33
7) 21'	---	T11, T12, 0 T21, T22, 0 0, 0, T33	---
8) 2'	0, 0, T13 0, 0, T23 T31, T32, 0	T11, T12, 0 T21, T22, 0 0, 0, T33	0, 0, T13 0, 0, T23 T31, T32, 0

9) m	0 ,0 ,T13 0 ,0 ,T23 T31 ,T32 ,0	0 ,0 ,T13 0 ,0 ,T23 T31 ,T32 ,0	T11 ,T12 ,0 T21 ,T22 ,0 0 ,0 ,T33
10) m1'	---	0 ,0 ,T13 0 ,0 ,T23 T31 ,T32 ,0	---
11) m'	T11 ,T12 ,0 T21 ,T22 ,0 0 ,0 ,T33	0 ,0 ,T13 0 ,0 ,T23 T31 ,T32 ,0	0 ,0 ,T13 0 ,0 ,T23 T31 ,T32 ,0
12) 2/m	---	---	T11 ,T12 ,0 T21 ,T22 ,0 0 ,0 ,T33
13) 2/m1'	---	---	---
14) 2'/m	0 ,0 ,T13 0 ,0 ,T23 T31 ,T32 ,0	---	---
15) 2/m'	T11 ,T12 ,0 T21 ,T22 ,0 0 ,0 ,T33	---	---
16) 2'/m'	---	---	0 ,0 ,T13 0 ,0 ,T23 T31 ,T32 ,0
17) 222	T11 ,0 ,0 0 ,T22 ,0 0 ,0 ,T33	T11 ,0 ,0 0 ,T22 ,0 0 ,0 ,T33	T11 ,0 ,0 0 ,T22 ,0 0 ,0 ,T33

18) 2221'	---	T11,0 ,0 0 ,T22,0 0 ,0 ,T33	---
19) 2'2'2	0 ,T12,0 T21,0 ,0 0 ,0 ,0	T11,0 ,0 0 ,T22,0 0 ,0 ,T33	0 ,T12,0 T21,0 ,0 0 ,0 ,0
20) mm2	0 ,T12,0 T21,0 ,0 0 ,0 ,0	0 ,T12,0 T21,0 ,0 0 ,0 ,0	T11,0 ,0 0 ,T22,0 0 ,0 ,T33
21) mm21'	---	0 ,T12,0 T21,0 ,0 0 ,0 ,0	---
22) m'm2'	0 ,0 ,0 0 ,0 ,T23 0 ,T32,0	0 ,T12,0 T21,0 ,0 0 ,0 ,0	0 ,0 ,T13 0 ,0 ,0 T31,0 ,0
23) m'm'2	T11,0 ,0 0 ,T22,0 0 ,0 ,T33	0 ,T12,0 T21,0 ,0 0 ,0 ,0	0 ,T12,0 T21,0 ,0 0 ,0 ,0
24) mmm	---	---	T11,0 ,0 0 ,T22,0 0 ,0 ,T33
25) mmm1'	---	---	---
26) m'mm	0 ,0 ,0 0 ,0 ,T23 0 ,T32,0	---	---

27) m'm'm	---	---	0 ,T12,0 T21,0 ,0 0 ,0 ,0
28) m'm'm'	T11,0 ,0 0 ,T22,0 0 ,0 ,T33	---	---
29) 4	T11,T12,0 -T12,T11,0 0 ,0 ,T33	T11,T12,0 -T12,T11,0 0 ,0 ,T33	T11,T12,0 -T12,T11,0 0 ,0 ,T33
30) 41'	---	T11,T12,0 -T12,T11,0 0 ,0 ,T33	---
31) 4'	T11, T12,0 T12,-T11,0 0 , 0 ,0	T11,T12,0 -T12,T11,0 0 ,0 ,T33	T11, T12,0 T12,-T11,0 0 , 0 ,0
32) $\bar{4}$	T11, T12,0 T12,-T11,0 0 , 0 ,0	T11, T12,0 T12,-T11,0 0 , 0 ,0	T11,T12,0 -T12,T11,0 0 ,0 ,T33
33) $\bar{4}1'$	---	T11, T12,0 T12,-T11,0 0 , 0 ,0	---
34) $\bar{4}'$	T11,T12,0 -T12,T11,0 0 ,0 ,T33	T11, T12,0 T12,-T11,0 0 , 0 ,0	T11, T12,0 T12,-T11,0 0 , 0 ,0
35) 4/m	---	---	T11,T12,0 -T12,T11,0 0 ,0 ,T33

36) 4/m1'	---	---	---
37) 4'/m	---	---	T11, T12,0 T12,-T11,0 0 , 0 ,0
38) 4/m'	T11,T12,0 -T12,T11,0 0 ,0 ,T33	---	---
39) 4'/m'	T11, T12,0 T12,-T11,0 0 , 0 ,0	---	---
40) 422	T11,0 ,0 0 ,T11,0 0 ,0 ,T33	T11,0 ,0 0 ,T11,0 0 ,0 ,T33	T11,0 ,0 0 ,T11,0 0 ,0 ,T33
41) 4221'	---	T11,0 ,0 0 ,T11,0 0 ,0 ,T33	---
42) 4'22'	T11, 0 ,0 0 ,-T11,0 0 , 0 ,0	T11,0 ,0 0 ,T11,0 0 ,0 ,T33	T11, 0 ,0 0 ,-T11,0 0 , 0 ,0
43) 42'2'	0 ,T12,0 -T12,0 ,0 0 ,0 ,0	T11,0 ,0 0 ,T11,0 0 ,0 ,T33	0 ,T12,0 -T12,0 ,0 0 ,0 ,0
44) 4mm	0 ,T12,0 -T12,0 ,0 0 ,0 ,0	0 ,T12,0 -T12,0 ,0 0 ,0 ,0	T11,0 ,0 0 ,T11,0 0 ,0 ,T33

45) 4mm1'	---	0 ,T12,0 -T12,0 ,0 0 ,0 ,0	---
46) 4'm'm	T11, 0 ,0 0 , -T11,0 0 , 0 ,0	0 ,T12,0 -T12,0 ,0 0 ,0 ,0	0 ,T12,0 T12,0 ,0 0 ,0 ,0
47) 4m'm'	T11,0 ,0 0 ,T11,0 0 ,0 ,T33	0 ,T12,0 -T12,0 ,0 0 ,0 ,0	0 ,T12,0 -T12,0 ,0 0 ,0 ,0
48) 42m	T11, 0 ,0 0 , -T11,0 0 , 0 ,0	T11, 0 ,0 0 , -T11,0 0 , 0 ,0	T11,0 ,0 0 ,T11,0 0 ,0 ,T33
49) 42m1'	---	T11, 0 ,0 0 , -T11,0 0 , 0 ,0	---
50) 4'2'm	0 ,T12,0 -T12,0 ,0 0 ,0 ,0	T11, 0 ,0 0 , -T11,0 0 , 0 ,0	0 ,T12,0 T12,0 ,0 0 ,0 ,0
51) 4'2m'	T11,0 ,0 0 ,T11,0 0 ,0 ,T33	T11, 0 ,0 0 , -T11,0 0 , 0 ,0	T11, 0 ,0 0 , -T11,0 0 , 0 ,0
52) 42'm'	0 ,T12,0 T12,0 ,0 0 ,0 ,0	T11, 0 ,0 0 , -T11,0 0 , 0 ,0	0 ,T12,0 -T12,0 ,0 0 ,0 ,0
53) 4/mmm	---	---	T11,0 ,0 0 ,T11,0 0 ,0 ,T33

54) 4/mmm1'	---	---	---
55) 4/m'mm	0 ,T12,0 -T12,0 ,0 0 ,0 ,0	---	---
56) 4'/mm'm	---	---	0 ,T12,0 T12,0 ,0 0 ,0 ,0
57) 4'/m'm'm	T11, 0 ,0 0 ,-T11,0 0 , 0 ,0	---	---
58) 4/mm'm'	---	---	0 ,T12,0 -T12,0 ,0 0 ,0 ,0
59) 4/m'm'm'	T11,0 ,0 0 ,T11,0 0 ,0 ,T33	---	---
60) 3	T11,T12,0 -T12,T11,0 0 ,0 ,T33	T11,T12,0 -T12,T11,0 0 ,0 ,T33	T11,T12,0 -T12,T11,0 0 ,0 ,T33
61) 31'	---	T11,T12,0 -T12,T11,0 0 ,0 ,T33	---
62) $\bar{3}$	---	---	T11,T12,0 -T12,T11,0 0 ,0 ,T33

63) $\bar{3}1'$	---	---	---
64) $\bar{3}'$	T11,T12,0 -T12,T11,0 0 ,0 ,T33	---	---
65) 32	T11,0 ,0 0 ,T11,0 0 ,0 ,T33	T11,0 ,0 0 ,T11,0 0 ,0 ,T33	T11,0 ,0 0 ,T11,0 0 ,0 ,T33
66) 321'	---	T11,0 ,0 0 ,T11,0 0 ,0 ,T33	---
67) 32'	0 ,T12,0 -T12,0 ,0 0 ,0 ,0	T11,0 ,0 0 ,T11,0 0 ,0 ,T33	0 ,T12,0 -T12,0 ,0 0 ,0 ,0
68) 3m	0 ,T12,0 -T12,0 ,0 0 ,0 ,0	0 ,T12,0 -T12,0 ,0 0 ,0 ,0	T11,0 ,0 0 ,T11,0 0 ,0 ,T33
69) 3m1'	---	0 ,T12,0 -T12,0 ,0 0 ,0 ,0	---
70) 3m'	T11,0 ,0 0 ,T11,0 0 ,0 ,T33	0 ,T12,0 -T12,0 ,0 0 ,0 ,0	0 ,T12,0 -T12,0 ,0 0 ,0 ,0
71) $\bar{3}m$	---	---	T11,0 ,0 0 ,T11,0 0 ,0 ,T33

72) $\bar{3}m1'$	---	---	---
73) $\bar{3}'m$	$0, T_{12}, 0$ $-T_{12}, 0, 0$ $0, 0, 0$	---	---
74) $\bar{3}'m'$	$T_{11}, 0, 0$ $0, T_{11}, 0$ $0, 0, T_{33}$	---	---
75) $\bar{3}m'$	---	---	$0, T_{12}, 0$ $-T_{12}, 0, 0$ $0, 0, 0$
76) $\bar{6}$	$T_{11}, T_{12}, 0$ $-T_{12}, T_{11}, 0$ $0, 0, T_{33}$	$T_{11}, T_{12}, 0$ $-T_{12}, T_{11}, 0$ $0, 0, T_{33}$	$T_{11}, T_{12}, 0$ $-T_{12}, T_{11}, 0$ $0, 0, T_{33}$
77) $\bar{6}1'$	---	$T_{11}, T_{12}, 0$ $-T_{12}, T_{11}, 0$ $0, 0, T_{33}$	---
78) $\bar{6}'$	---	$T_{11}, T_{12}, 0$ $-T_{12}, T_{11}, 0$ $0, 0, T_{33}$	---
79) $\bar{6}$	---	---	$T_{11}, T_{12}, 0$ $-T_{12}, T_{11}, 0$ $0, 0, T_{33}$
80) $\bar{6}1'$	---	---	---

81) $\bar{6}$ '	T11,T12,0 -T12,T11,0 0 ,0 ,T33	---	---
82) 6/m	---	---	T11,T12,0 -T12,T11,0 0 ,0 ,T33
83) 6/m1'	---	---	---
84) 6'/m	---	---	---
85) 6/m'	T11,T12,0 -T12,T11,0 0 ,0 ,T33	---	---
86) 6'/m'	---	---	---
87) 622	T11,0 ,0 0 ,T11,0 0 ,0 ,T33	T11,0 ,0 0 ,T11,0 0 ,0 ,T33	T11,0 ,0 0 ,T11,0 0 ,0 ,T33
88) 6221'	---	T11,0 ,0 0 ,T11,0 0 ,0 ,T33	---
89) 6'2'2	---	T11,0 ,0 0 ,T11,0 0 ,0 ,T33	---

90) 62'2'	0 ,T12,0 -T12,0 ,0 0 ,0 ,0	T11,0 ,0 0 ,T11,0 0 ,0 ,T33	0 ,T12,0 -T12,0 ,0 0 ,0 ,0
91) 6mm	0 ,T12,0 -T12,0 ,0 0 ,0 ,0	0 ,T12,0 -T12,0 ,0 0 ,0 ,0	T11,0 ,0 0 ,T11,0 0 ,0 ,T33
92) 6mm1'	---	0 ,T12,0 -T12,0 ,0 0 ,0 ,0	---
93) 6'm'm	---	0 ,T12,0 -T12,0 ,0 0 ,0 ,0	---
94) 6m'm'	T11,0 ,0 0 ,T11,0 0 ,0 ,T33	0 ,T12,0 -T12,0 ,0 0 ,0 ,0	0 ,T12,0 -T12,0 ,0 0 ,0 ,0
95) $\overline{6m2}$	---	---	T11,0 ,0 0 ,T11,0 0 ,0 ,T33
96) $\overline{6m21'}$	---	---	---
97) $\overline{6'm'2}$	T11,0 ,0 0 ,T11,0 0 ,0 ,T33	---	---
98) $\overline{6'm2'}$	0 ,T12,0 -T12,0 ,0 0 ,0 ,0	---	---

99) $\overline{6m'2'}$	---	---	0 ,T12,0 -T12,0 ,0 0 ,0 ,0
100) $6/mmm$	---	---	T11,0 ,0 0 ,T11,0 0 ,0 ,T33
101) $6/mmm1'$	---	---	---
102) $6/m'mm$	0 ,T12,0 -T12,0 ,0 0 ,0 ,0	---	---
103) $6'/mm'm$	---	---	---
104) $6'/m'm'm$	---	---	---
105) $6/mm'm'$	---	---	0 ,T12,0 -T12,0 ,0 0 ,0 ,0
106) $6/m'm'm'$	T11,0 ,0 0 ,T11,0 0 ,0 ,T33	---	---
107) 23	T11,0 ,0 0 ,T11,0 0 ,0 ,T11	T11,0 ,0 0 ,T11,0 0 ,0 ,T11	T11,0 ,0 0 ,T11,0 0 ,0 ,T11

108) 231'	---	T11,0 ,0 0 ,T11,0 0 ,0 ,T11	---
109) m $\bar{3}$	---	---	T11,0 ,0 0 ,T11,0 0 ,0 ,T11
110) m $\bar{3}1'$	---	---	---
111) m' $\bar{3}'$	T11,0 ,0 0 ,T11,0 0 ,0 ,T11	---	---
112) 432	T11,0 ,0 0 ,T11,0 0 ,0 ,T11	T11,0 ,0 0 ,T11,0 0 ,0 ,T11	T11,0 ,0 0 ,T11,0 0 ,0 ,T11
113) 4321'	---	T11,0 ,0 0 ,T11,0 0 ,0 ,T11	---
114) 4'32'	---	T11,0 ,0 0 ,T11,0 0 ,0 ,T11	---
115) $\bar{4}3m$	---	---	T11,0 ,0 0 ,T11,0 0 ,0 ,T11
116) $\bar{4}3m1'$	---	---	---

117)	$\bar{4}'3m'$	T11,0 ,0 0 ,T11,0 0 ,0 ,T11	---	---
118)	$m\bar{3}m$	---	---	T11,0 ,0 0 ,T11,0 0 ,0 ,T11
119)	$m\bar{3}m1'$	---	---	---
120)	$m'\bar{3}'m$	---	---	---
121)	$m\bar{3}m'$	---	---	---
122)	$m'\bar{3}'m'$	T11,0 ,0 0 ,T11,0 0 ,0 ,T11	---	---

reduced superfamilies of magnetic point groups	$v[V^2]$ Ferroelastoelectric piezoelectric coefficient
1) 1	T11, T12, T13, T14, T15, T16 T21, T22, T23, T24, T25, T26 T31, T32, T33, T34, T35, T36
2) 1'	T11, T12, T13, T14, T15, T16 T21, T22, T23, T24, T25, T26 T31, T32, T33, T34, T35, T36
3) $\bar{1}$	---
4) $\bar{1}1'$	---
5) $\bar{1}'$	---
6) 2	0, 0, 0, T14, T15, 0 0, 0, 0, T24, T25, 0 T31, T32, T33, 0, 0, T36
7) 21'	0, 0, 0, T14, T15, 0 0, 0, 0, T24, T25, 0 T31, T32, T33, 0, 0, T36
8) 2'	0, 0, 0, T14, T15, 0 0, 0, 0, T24, T25, 0 T31, T32, T33, 0, 0, T36

9) m	T11, T12, T13, 0, 0, T16 T21, T22, T23, 0, 0, T26 0, 0, 0, T34, T35, 0
10) m1'	T11, T12, T13, 0, 0, T16 T21, T22, T23, 0, 0, T26 0, 0, 0, T34, T35, 0
11) m'	T11, T12, T13, 0, 0, T16 T21, T22, T23, 0, 0, T26 0, 0, 0, T34, T35, 0
12) 2/m	---
13) 2/m1'	---
14) 2'/m	---
15) 2/m'	---
16) 2'/m'	---
17) 222	0, 0, 0, T14, 0, 0 0, 0, 0, 0, T25, 0 0, 0, 0, 0, 0, T36

18) 2221'	0,	0,	0,	T14,	0,	0
	0,	0,	0,	0,	T25,	0
	0,	0,	0,	0,	0,	T36
19) 2'2'2	0,	0,	0,	T14,	0,	0
	0,	0,	0,	0,	T25,	0
	0,	0,	0,	0,	0,	T36
20) mm2	0,	0,	0,	0,	T15,	0
	0,	0,	0,	T24,	0,	0
	T31,	T32,	T33,	0,	0,	0
21) mm21'	0,	0,	0,	0,	T15,	0
	0,	0,	0,	T24,	0,	0
	T31,	T32,	T33,	0,	0,	0
22) m'm2'	0,	0,	0,	0,	T15,	0
	0,	0,	0,	T24,	0,	0
	T31,	T32,	T33,	0,	0,	0
23) m'm'2	0,	0,	0,	0,	T15,	0
	0,	0,	0,	T24,	0,	0
	T31,	T32,	T33,	0,	0,	0
24) mmm	---					
25) mmm1'	---					
26) m'mm	---					

27) m'm'm ---

28) m'm'm' ---

29) 4 0, 0, 0, T14, T15, 0
 0, 0, 0, T15, -T14, 0
 T31, T31, T33, 0, 0, 0

30) 41' 0, 0, 0, T14, T15, 0
 0, 0, 0, T15, -T14, 0
 T31, T31, T33, 0, 0, 0

31) 4' 0, 0, 0, T14, T15, 0
 0, 0, 0, T15, -T14, 0
 T31, T31, T33, 0, 0, 0

32) $\bar{4}$ 0, 0, 0, T14, T15, 0
 0, 0, 0, -T15, T14, 0
 T31, -T31, 0, 0, 0, T36

33) $\bar{41}'$ 0, 0, 0, T14, T15, 0
 0, 0, 0, -T15, T14, 0
 T31, -T31, 0, 0, 0, T36

34) $\bar{4}'$ 0, 0, 0, T14, T15, 0
 0, 0, 0, -T15, T14, 0
 T31, -T31, 0, 0, 0, T36

35) 4/m ---

36) 4/m1' ---

37) 4'/m ---

38) 4/m' ---

39) 4'/m' ---

40) 422 0, 0, 0, T14, 0, 0
 0, 0, 0, 0, -T14, 0
 0, 0, 0, 0, 0, 0

41) 4221' 0, 0, 0, T14, 0, 0
 0, 0, 0, 0, -T14, 0
 0, 0, 0, 0, 0, 0

42) 4'22' 0, 0, 0, T14, 0, 0
 0, 0, 0, 0, -T14, 0
 0, 0, 0, 0, 0, 0

43) 42'2 0, 0, 0, T14, 0, 0
 0, 0, 0, 0, -T14, 0
 0, 0, 0, 0, 0, 0

44) 4mm 0, 0, 0, 0, T15, 0
 0, 0, 0, T15, 0, 0
 T31, T31, T33, 0, 0, 0

45) $4mm1'$	0,	0,	0,	0,	T15,	0
	0,	0,	0,	T15,	0,	0
	T31,	T31,	T33,	0,	0,	0
46) $4'm'm$	0,	0,	0,	0,	T15,	0
	0,	0,	0,	T15,	0,	0
	T31,	T31,	T33,	0,	0,	0
47) $4m'm$	0,	0,	0,	0,	T15,	0
	0,	0,	0,	T15,	0,	0
	T31,	T31,	T33,	0,	0,	0
48) $\overline{4}2m$	0,	0,	0,	T14,	0,	0
	0,	0,	0,	0,	T14,	0
	0,	0,	0,	0,	0,	T36
49) $\overline{4}2m1'$	0,	0,	0,	T14,	0,	0
	0,	0,	0,	0,	T14,	0
	0,	0,	0,	0,	0,	T36
50) $\overline{4}'2'm$	0,	0,	0,	T14,	0,	0
	0,	0,	0,	0,	T14,	0
	0,	0,	0,	0,	0,	T36
51) $\overline{4}'2m'$	0,	0,	0,	T14,	0,	0
	0,	0,	0,	0,	T14,	0
	0,	0,	0,	0,	0,	T36
52) $\overline{4}2'm'$	0,	0,	0,	T14,	0,	0
	0,	0,	0,	0,	T14,	0
	0,	0,	0,	0,	0,	T36
53) $4/mmm$	---					

54) $4/m\bar{m}m1'$ ---

55) $4/m'mm$ ---

56) $4'/mm'm$ ---

57) $4'/m'm'm$ ---

58) $4/mm'm'$ ---

59) $4/m'm'm'$ ---

60) 3 $T_{11}, -T_{11}, 0, T_{14}, T_{15}, -T_{22}$
 $-T_{22}, T_{22}, 0, T_{15}, -T_{14}, -T_{11}$
 $T_{31}, T_{31}, T_{33}, 0, 0, 0$

61) $31'$ $T_{11}, -T_{11}, 0, T_{14}, T_{15}, -T_{22}$
 $-T_{22}, T_{22}, 0, T_{15}, -T_{14}, -T_{11}$
 $T_{31}, T_{31}, T_{33}, 0, 0, 0$

62) $\bar{3}$ ---

63) $\bar{3}1'$ ---

64) $\bar{3}'$ ---

65) 32 T11, -T11, 0, T14, 0, 0
 0, 0, 0, 0, -T14, -T11
 0, 0, 0, 0, 0, 0

66) $321'$ T11, -T11, 0, T14, 0, 0
 0, 0, 0, 0, -T14, -T11
 0, 0, 0, 0, 0, 0

67) $32'$ T11, -T11, 0, T14, 0, 0
 0, 0, 0, 0, -T14, -T11
 0, 0, 0, 0, 0, 0

68) 3m 0, 0, 0, 0, T15, -T22
 -T22, T22, 0, T15, 0, 0
 T31, T31, T33, 0, 0, 0

69) $3m1'$ 0, 0, 0, 0, T15, -T22
 -T22, T22, 0, T15, 0, 0
 T31, T31, T33, 0, 0, 0

70) $3m'$ 0, 0, 0, 0, T15, -T22
 -T22, T22, 0, T15, 0, 0
 T31, T31, T33, 0, 0, 0

71) $\bar{3}m$ ---

72)	$\bar{3}m1'$	---				
73)	$\bar{3}'m$	---				
74)	$\bar{3}'m'$	---				
75)	$\bar{3}m'$	---				
76)	6		0,	0,	0,	T14, T15, 0
			0,	0,	0,	T15, -T14, 0
			T31,	T31,	T33,	0, 0, 0
77)	61'		0,	0,	0,	T14, T15, 0
			0,	0,	0,	T15, -T14, 0
			T31,	T31,	T33,	0, 0, 0
78)	6'		0,	0,	0,	T14, T15, 0
			0,	0,	0,	T15, -T14, 0
			T31,	T31,	T33,	0, 0, 0
79)	$\bar{6}$		T11, -T11,	0,	0,	0, -T22
			-T22, T22,	0,	0,	0, -T11
			0,	0,	0,	0, 0
80)	$\bar{6}1'$		T11, -T11,	0,	0,	0, -T22
			-T22, T22,	0,	0,	0, -T11
			0,	0,	0,	0, 0

81) $\bar{6}'$ T11, -T11, 0, 0, 0, -T22
 -T22, T22, 0, 0, 0, -T11
 0, 0, 0, 0, 0, 0

82) 6/m ---

83) 6/m1' ---

84) 6'/m ---

85) 6/m' ---

86) 6'/m' ---

87) 622 0, 0, 0, T14, 0, 0
 0, 0, 0, 0, -T14, 0
 0, 0, 0, 0, 0, 0

88) 6221' 0, 0, 0, T14, 0, 0
 0, 0, 0, 0, -T14, 0
 0, 0, 0, 0, 0, 0

89) 6'2'2 0, 0, 0, T14, 0, 0
 0, 0, 0, 0, -T14, 0
 0, 0, 0, 0, 0, 0

90) 62'2'	0,	0,	0,	T14,	0,	0
	0,	0,	0,	0,-T14,	0,	0
	0,	0,	0,	0,	0,	0
91) 6mm	0,	0,	0,	0,	T15,	0
	0,	0,	0,	T15,	0,	0
	T31,	T31,	T33,	0,	0,	0
92) 6mm1'	0,	0,	0,	0,	T15,	0
	0,	0,	0,	T15,	0,	0
	T31,	T31,	T33,	0,	0,	0
93) 6'm'm	0,	0,	0,	0,	T15,	0
	0,	0,	0,	T15,	0,	0
	T31,	T31,	T33,	0,	0,	0
94) 6m'm'	0,	0,	0,	0,	T15,	0
	0,	0,	0,	T15,	0,	0
	T31,	T31,	T33,	0,	0,	0
95) $\overline{6m2}$	0,	0,	0,	0,	0,-T22	
	-T22,	T22,	0,	0,	0,	0
	0,	0,	0,	0,	0,	0
96) $\overline{6m21'}$	0,	0,	0,	0,	0,-T22	
	-T22,	T22,	0,	0,	0,	0
	0,	0,	0,	0,	0,	0
97) $\overline{6'm'2}$	0,	0,	0,	0,	0,-T22	
	-T22,	T22,	0,	0,	0,	0
	0,	0,	0,	0,	0,	0
98) $\overline{6'm2'}$	0,	0,	0,	0,	0,-T22	
	-T22,	T22,	0,	0,	0,	0
	0,	0,	0,	0,	0,	0

99) $\overline{6m} ' 2 '$ 0, 0, 0, 0, 0, -T22
 -T22, T22, 0, 0, 0, 0
 0, 0, 0, 0, 0, 0

100) 6/mmm ---

101) 6/mmm1' ---

102) 6/m'mm ---

103) 6'/mm'm ---

104) 6'/m'm'm ---

105) 6/mm'm'm' ---

106) 6/m'm'm'm' ---

107) 23 0, 0, 0, T14, 0, 0
 0, 0, 0, 0, T14, 0
 0, 0, 0, 0, 0, T14

108) 231' 0, 0, 0, T14, 0, 0
 0, 0, 0, 0, T14, 0
 0, 0, 0, 0, 0, T14

109) $\overline{m3}$ ---

110) $\overline{m31}'$ ---

111) $\overline{m'3}'$ ---

112) 432 ---

113) 4321' ---

114) 4'32' ---

115) $\overline{43m}$ 0, 0, 0, T14, 0, 0
 0, 0, 0, 0, T14, 0
 0, 0, 0, 0, 0, T14

116) $\overline{43m1}'$ 0, 0, 0, T14, 0, 0
 0, 0, 0, 0, T14, 0
 0, 0, 0, 0, 0, T14

117) $\bar{4}'3m'$ 0, 0, 0, T14, 0, 0
 0, 0, 0, 0, T14, 0
 0, 0, 0, 0, 0, T14

118) $m\bar{3}m$ ---

119) $m\bar{3}m1'$ ---

120) $m'\bar{3}'m$ ---

121) $m\bar{3}m'$ ---

122) $m'\bar{3}'m'$ ---

reduced
superfamilies
of magnetic
point groups

$aeV[V^2]$
Ferromagnetoelastic
piezomagnetic coefficient

1) 1 T11, T12, T13, T14, T15, T16
 T21, T22, T23, T24, T25, T26
 T31, T32, T33, T34, T35, T36

2) 1' ---

3) $\bar{1}$ T11, T12, T13, T14, T15, T16
 T21, T22, T23, T24, T25, T26
 T31, T32, T33, T34, T35, T36

4) $\bar{1}1'$ ---

5) $\bar{1}'$ ---

6) 2 0, 0, 0, T14, T15, 0
 0, 0, 0, T24, T25, 0
 T31, T32, T33, 0, 0, T36

7) 21' ---

8) 2' T11, T12, T13, 0, 0, T16
 T21, T22, T23, 0, 0, T26
 0, 0, 0, T34, T35, 0

9) m 0, 0, 0, T14, T15, 0
 0, 0, 0, T24, T25, 0
 T31, T32, T33, 0, 0, T36

10) m1' ---

11) m' T11, T12, T13, 0, 0, T16
 T21, T22, T23, 0, 0, T26
 0, 0, 0, T34, T35, 0

12) 2/m 0, 0, 0, T14, T15, 0
 0, 0, 0, T24, T25, 0
 T31, T32, T33, 0, 0, T36

13) 2/m1' ---

14) 2'/m ---

15) 2/m' ---

16) 2'/m' T11, T12, T13, 0, 0, T16
 T21, T22, T23, 0, 0, T26
 0, 0, 0, T34, T35, 0

17) 222 0, 0, 0, T14, 0, 0
 0, 0, 0, 0, T25, 0
 0, 0, 0, 0, 0, T36

18) 2221' ---

19) 2'2'2 0, 0, 0, 0, T15, 0
 0, 0, 0, T24, 0, 0
 T31, T32, T33, 0, 0, 0

20) mm2 0, 0, 0, T14, 0, 0
 0, 0, 0, 0, T25, 0
 0, 0, 0, 0, 0, T36

21) mm21' ---

22) m'm2' 0, 0, 0, 0, 0, T16
 T21, T22, T23, 0, 0, 0
 0, 0, 0, T34, 0, 0

23) m'm'2 0, 0, 0, 0, T15, 0
 0, 0, 0, T24, 0, 0
 T31, T32, T33, 0, 0, 0

24) mmm 0, 0, 0, T14, 0, 0
 0, 0, 0, 0, T25, 0
 0, 0, 0, 0, 0, T36

25) mmm1' ---

26) m'mm ---

27) m'm'm 0, 0, 0, 0, T15, 0
 0, 0, 0, T24, 0, 0
 T31, T32, T33, 0, 0, 0

28) m'm'm' ---

29) 4 0, 0, 0, T14, T15, 0
 0, 0, 0, T15, -T14, 0
 T31, T31, T33, 0, 0, 0

30) 41' ---

31) 4' 0, 0, 0, T14, T15, 0
 0, 0, 0, -T15, T14, 0
 T31, -T31, 0, 0, 0, T36

32) $\bar{4}$ 0, 0, 0, T14, T15, 0
 0, 0, 0, T15, -T14, 0
 T31, T31, T33, 0, 0, 0

33) $\bar{41}'$ ---

34) $\bar{4}'$ 0, 0, 0, T14, T15, 0
 0, 0, 0, -T15, T14, 0
 T31, -T31, 0, 0, 0, T36

35) 4/m 0, 0, 0, T14, T15, 0
 0, 0, 0, T15, -T14, 0
 T31, T31, T33, 0, 0, 0

36) 4/m1' ---

37) 4'/m 0, 0, 0, T14, T15, 0
 0, 0, 0, -T15, T14, 0
 T31, -T31, 0, 0, 0, T36

38) 4/m' ---

39) 4'/m' ---

40) 422 0, 0, 0, T14, 0, 0
 0, 0, 0, 0, -T14, 0
 0, 0, 0, 0, 0, 0

41) 4221' ---

42) 4'22' 0, 0, 0, T14, 0, 0
 0, 0, 0, 0, T14, 0
 0, 0, 0, 0, 0, T36

43) 42'2' 0, 0, 0, 0, T15, 0
 0, 0, 0, T15, 0, 0
 T31, T31, T33, 0, 0, 0

44) 4mm 0, 0, 0, T14, 0, 0
 0, 0, 0, 0, -T14, 0
 0, 0, 0, 0, 0, 0

45) $4mm1'$ ---

46) $4'm'm$ 0, 0, 0, 0, T15, 0
 0, 0, 0, -T15, 0, 0
 T31, -T31, 0, 0, 0, 0

47) $4m'm'$ 0, 0, 0, 0, T15, 0
 0, 0, 0, T15, 0, 0
 T31, T31, T33, 0, 0, 0

48) $\overline{4}2m$ 0, 0, 0, T14, 0, 0
 0, 0, 0, 0, -T14, 0
 0, 0, 0, 0, 0, 0

49) $\overline{4}2m1'$ ---

50) $\overline{4}'2'm$ 0, 0, 0, 0, T15, 0
 0, 0, 0, -T15, 0, 0
 T31, -T31, 0, 0, 0, 0

51) $\overline{4}'2m'$ 0, 0, 0, T14, 0, 0
 0, 0, 0, 0, T14, 0
 0, 0, 0, 0, 0, T36

52) $\overline{4}2'm'$ 0, 0, 0, 0, T15, 0
 0, 0, 0, T15, 0, 0
 T31, T31, T33, 0, 0, 0

53) $4/mmm$ 0, 0, 0, T14, 0, 0
 0, 0, 0, 0, -T14, 0
 0, 0, 0, 0, 0, 0

54) $4/mmm1'$ ---

55) $4/m'mm$ ---

56) $4'/mm'm$ 0, 0, 0, 0, T15, 0
 0, 0, 0, -T15, 0, 0
 T31, -T31, 0, 0, 0, 0

57) $4'/m'm'm$ ---

58) $4/mm'm'$ 0, 0, 0, 0, T15, 0
 0, 0, 0, T15, 0, 0
 T31, T31, T33, 0, 0, 0

59) $4/m'm'm'$ ---

60) 3 T11, -T11, 0, T14, T15, -T22
 -T22, T22, 0, T15, -T14, -T11
 T31, T31, T33, 0, 0, 0

61) $31'$ ---

62) $\bar{3}$ T11, -T11, 0, T14, T15, -T22
 -T22, T22, 0, T15, -T14, -T11
 T31, T31, T33, 0, 0, 0

63) $\bar{3}1'$ ---

64) $\bar{3}$ ' ---

65) 32
T11, -T11, 0, T14, 0, 0
0, 0, 0, 0, -T14, -T11
0, 0, 0, 0, 0, 0

66) 321' ---

67) 32'
0, 0, 0, 0, T15, -T22
-T22, T22, 0, T15, 0, 0
T31, T31, T33, 0, 0, 0

68) 3m
T11, -T11, 0, T14, 0, 0
0, 0, 0, 0, -T14, -T11
0, 0, 0, 0, 0, 0

69) 3m1' ---

70) 3m'
0, 0, 0, 0, T15, -T22
-T22, T22, 0, T15, 0, 0
T31, T31, T33, 0, 0, 0

71) $\bar{3}m$
T11, -T11, 0, T14, 0, 0
0, 0, 0, 0, -T14, -T11
0, 0, 0, 0, 0, 0

72) $\bar{3}m1'$ ---

73) $\bar{3}'m$ ---

74) $\bar{3}'m'$ ---

75) $\bar{3}m'$

0,	0,	0,	0,	T15,	-T22
-T22,	T22,	0,	T15,	0,	0
T31,	T31,	T33,	0,	0,	0

76) $\bar{6}$

0,	0,	0,	T14,	T15,	0
0,	0,	0,	T15,	-T14,	0
T31,	T31,	T33,	0,	0,	0

77) $\bar{6}1'$ ---

78) $\bar{6}'$

T11,	-T11,	0,	0,	0,	-T22
-T22,	T22,	0,	0,	0,	-T11
0,	0,	0,	0,	0,	0

79) $\bar{6}$

0,	0,	0,	T14,	T15,	0
0,	0,	0,	T15,	-T14,	0
T31,	T31,	T33,	0,	0,	0

80) $\bar{6}1'$ ---

81) $\bar{6}$ ' T11, -T11, 0, 0, 0, -T22
 -T22, T22, 0, 0, 0, -T11
 0, 0, 0, 0, 0, 0

82) 6/m 0, 0, 0, T14, T15, 0
 0, 0, 0, T15, -T14, 0
 T31, T31, T33, 0, 0, 0

83) 6/m1' ---

84) 6'/m ---

85) 6/m' ---

86) 6'/m' T11, -T11, 0, 0, 0, -T22
 -T22, T22, 0, 0, 0, -T11
 0, 0, 0, 0, 0, 0

87) 622 0, 0, 0, T14, 0, 0
 0, 0, 0, 0, -T14, 0
 0, 0, 0, 0, 0, 0

88) 6221' ---

89) 6'2'2 0, 0, 0, 0, 0, -T22
 -T22, T22, 0, 0, 0, 0
 0, 0, 0, 0, 0, 0

90) 62'2' 0, 0, 0, 0, T15, 0
 0, 0, 0, T15, 0, 0
 T31, T31, T33, 0, 0, 0

91) 6mm 0, 0, 0, T14, 0, 0
 0, 0, 0, 0, -T14, 0
 0, 0, 0, 0, 0, 0

92) 6mm1' ---

93) 6'm'm 0, 0, 0, 0, 0, -T22
 -T22, T22, 0, 0, 0, 0
 0, 0, 0, 0, 0, 0

94) 6m'm' 0, 0, 0, 0, T15, 0
 0, 0, 0, T15, 0, 0
 T31, T31, T33, 0, 0, 0

95) $\bar{6}m2$ 0, 0, 0, T14, 0, 0
 0, 0, 0, 0, -T14, 0
 0, 0, 0, 0, 0, 0

96) $\bar{6}m21'$ ---

97) $\bar{6}'m'2$ 0, 0, 0, 0, 0, -T22
 -T22, T22, 0, 0, 0, 0
 0, 0, 0, 0, 0, 0

98) $\bar{6}'m2'$ T11, -T11, 0, 0, 0, 0
 0, 0, 0, 0, 0, -T11
 0, 0, 0, 0, 0, 0

99) $\overline{6m}2'$ 0, 0, 0, 0, T15, 0
 0, 0, 0, T15, 0, 0
 T31, T31, T33, 0, 0, 0

100) 6/mmm 0, 0, 0, T14, 0, 0
 0, 0, 0, 0, -T14, 0
 0, 0, 0, 0, 0, 0

101) 6/mmm1' ---

102) 6/m'mm ---

103) 6'/mm'm ---

104) 6'/m'm'm 0, 0, 0, 0, 0, -T22
 -T22, T22, 0, 0, 0, 0
 0, 0, 0, 0, 0, 0

105) 6/mm'm' 0, 0, 0, 0, T15, 0
 0, 0, 0, T15, 0, 0
 T31, T31, T33, 0, 0, 0

106) 6/m'm'm' ---

107) 23 0, 0, 0, T14, 0, 0
 0, 0, 0, 0, T14, 0
 0, 0, 0, 0, 0, T14

108) 231' ---

109) $m\bar{3}$ 0, 0, 0, T14, 0, 0
 0, 0, 0, 0, T14, 0
 0, 0, 0, 0, 0, T14

110) $m\bar{3}1'$ ---

111) $m'3'$ ---

112) 432 ---

113) 4321' ---

114) 4'32' 0, 0, 0, T14, 0, 0
 0, 0, 0, 0, T14, 0
 0, 0, 0, 0, 0, T14

115) $\bar{4}3m$ ---

116) $\bar{4}3m1'$ ---

117) $\bar{4}'3m'$ 0, 0, 0, T14, 0, 0
 0, 0, 0, 0, T14, 0
 0, 0, 0, 0, 0, T14

118) $m\bar{3}m$ ---

119) $m\bar{3}m1'$ ---

120) $m'\bar{3}'m$ ---

121) $m\bar{3}m'$ 0, 0, 0, T14, 0, 0
 0, 0, 0, 0, T14, 0
 0, 0, 0, 0, 0, T14

122) $m'\bar{3}'m'$ ---

reduced
superfamilies
of magnetic
point groups

$aV[V^2]$
Ferroelastotoroidic
piezotoroidic coefficient

1) 1	T11, T12, T13, T14, T15, T16 T21, T22, T23, T24, T25, T26 T31, T32, T33, T34, T35, T36
2) 1'	---
3) $\bar{1}$	---
4) $\bar{1}1'$	---
5) $\bar{1}'$	T11, T12, T13, T14, T15, T16 T21, T22, T23, T24, T25, T26 T31, T32, T33, T34, T35, T36
6) 2	0, 0, 0, T14, T15, 0 0, 0, 0, T24, T25, 0 T31, T32, T33, 0, 0, T36
7) 21'	---
8) 2'	T11, T12, T13, 0, 0, T16 T21, T22, T23, 0, 0, T26 0, 0, 0, T34, T35, 0

9) m T11, T12, T13, 0, 0, T16
 T21, T22, T23, 0, 0, T26
 0, 0, 0, T34, T35, 0

10) m1' ---

11) m' 0, 0, 0, T14, T15, 0
 0, 0, 0, T24, T25, 0
 T31, T32, T33, 0, 0, T36

12) 2/m ---

13) 2/m1' ---

14) 2'/m T11, T12, T13, 0, 0, T16
 T21, T22, T23, 0, 0, T26
 0, 0, 0, T34, T35, 0

15) 2/m' 0, 0, 0, T14, T15, 0
 0, 0, 0, T24, T25, 0
 T31, T32, T33, 0, 0, T36

16) 2'/m' ---

17) 222 0, 0, 0, T14, 0, 0
 0, 0, 0, 0, T25, 0
 0, 0, 0, 0, 0, T36

18) 2221' ---

19) 2'2'2 0, 0, 0, 0, T15, 0
 0, 0, 0, T24, 0, 0
 T31, T32, T33, 0, 0, 0

20) mm2 0, 0, 0, 0, T15, 0
 0, 0, 0, T24, 0, 0
 T31, T32, T33, 0, 0, 0

21) mm21' ---

22) m'm2' T11, T12, T13, 0, 0, 0
 0, 0, 0, 0, 0, T26
 0, 0, 0, 0, T35, 0

23) m'm'2 0, 0, 0, T14, 0, 0
 0, 0, 0, 0, T25, 0
 0, 0, 0, 0, 0, T36

24) mmm ---

25) mmm1' ---

26) m'mm T11, T12, T13, 0, 0, 0
 0, 0, 0, 0, 0, T26
 0, 0, 0, 0, T35, 0

- 27) $m'm'm$ ---
- 28) $m'm'm'$ 0, 0, 0, T14, 0, 0
0, 0, 0, 0, T25, 0
0, 0, 0, 0, 0, T36
- 29) 4 0, 0, 0, T14, T15, 0
0, 0, 0, T15, -T14, 0
T31, T31, T33, 0, 0, 0
- 30) $41'$ ---
- 31) $4'$ 0, 0, 0, T14, T15, 0
0, 0, 0, -T15, T14, 0
T31, -T31, 0, 0, 0, T36
- 32) $\bar{4}$ 0, 0, 0, T14, T15, 0
0, 0, 0, -T15, T14, 0
T31, -T31, 0, 0, 0, T36
- 33) $\bar{41}'$ ---
- 34) $\bar{4}'$ 0, 0, 0, T14, T15, 0
0, 0, 0, T15, -T14, 0
T31, T31, T33, 0, 0, 0
- 35) $4/m$ ---

36) 4/m1' ---

37) 4'/m ---

38) 4/m' 0, 0, 0, T14, T15, 0
0, 0, 0, T15, -T14, 0
T31, T31, T33, 0, 0, 0

39) 4'/m' 0, 0, 0, T14, T15, 0
0, 0, 0, -T15, T14, 0
T31, -T31, 0, 0, 0, T36

40) 422 0, 0, 0, T14, 0, 0
0, 0, 0, 0, -T14, 0
0, 0, 0, 0, 0, 0

41) 4221' ---

42) 4'22' 0, 0, 0, T14, 0, 0
0, 0, 0, 0, T14, 0
0, 0, 0, 0, 0, T36

43) 42'2' 0, 0, 0, 0, T15, 0
0, 0, 0, T15, 0, 0
T31, T31, T33, 0, 0, 0

44) 4mm 0, 0, 0, 0, T15, 0
0, 0, 0, T15, 0, 0
T31, T31, T33, 0, 0, 0

45) $4mm1'$ ---

46) $4'm'm$ 0, 0, 0, T14, 0, 0
 0, 0, 0, 0, T14, 0
 0, 0, 0, 0, 0, T36

47) $4m'm'$ 0, 0, 0, T14, 0, 0
 0, 0, 0, 0, -T14, 0
 0, 0, 0, 0, 0, 0

48) $\overline{4}2m$ 0, 0, 0, T14, 0, 0
 0, 0, 0, 0, T14, 0
 0, 0, 0, 0, 0, T36

49) $\overline{4}2m1'$ ---

50) $\overline{4}'2'm$ 0, 0, 0, 0, T15, 0
 0, 0, 0, T15, 0, 0
 T31, T31, T33, 0, 0, 0

51) $\overline{4}'2m'$ 0, 0, 0, T14, 0, 0
 0, 0, 0, 0, -T14, 0
 0, 0, 0, 0, 0, 0

52) $\overline{4}2'm'$ 0, 0, 0, 0, T15, 0
 0, 0, 0, -T15, 0, 0
 T31, -T31, 0, 0, 0, 0

53) $4/mmm$ ---

54) $4/m\bar{m}m1'$ ---

55) $4/m'mm$ 0, 0, 0, 0, T15, 0
 0, 0, 0, T15, 0, 0
 T31, T31, T33, 0, 0, 0

56) $4'/mm'm$ ---

57) $4'/m'm'm$ 0, 0, 0, T14, 0, 0
 0, 0, 0, 0, T14, 0
 0, 0, 0, 0, 0, T36

58) $4/mm'm'$ ---

59) $4/m'm'm'$ 0, 0, 0, T14, 0, 0
 0, 0, 0, 0, -T14, 0
 0, 0, 0, 0, 0, 0

60) 3 T11, -T11, 0, T14, T15, -T22
 -T22, T22, 0, T15, -T14, -T11
 T31, T31, T33, 0, 0, 0

61) $31'$ ---

62) $\bar{3}$ ---

63) $\bar{3}1'$ ---

64) $\bar{3}'$ T11, -T11, 0, T14, T15, -T22
 -T22, T22, 0, T15, -T14, -T11
 T31, T31, T33, 0, 0, 0

65) 32 T11, -T11, 0, T14, 0, 0
 0, 0, 0, 0, -T14, -T11
 0, 0, 0, 0, 0, 0

66) 321' ---

67) 32' 0, 0, 0, 0, T15, -T22
 -T22, T22, 0, T15, 0, 0
 T31, T31, T33, 0, 0, 0

68) 3m 0, 0, 0, 0, T15, -T22
 -T22, T22, 0, T15, 0, 0
 T31, T31, T33, 0, 0, 0

69) 3m1' ---

70) 3m' T11, -T11, 0, T14, 0, 0
 0, 0, 0, 0, -T14, -T11
 0, 0, 0, 0, 0, 0

71) $\bar{3}m$ ---

72) $\bar{3}m1'$ ---

73) $\bar{3}'m$ 0, 0, 0, 0, T15, -T22
-T22, T22, 0, T15, 0, 0
T31, T31, T33, 0, 0, 0

74) $\bar{3}'m'$ T11, -T11, 0, T14, 0, 0
0, 0, 0, 0, -T14, -T11
0, 0, 0, 0, 0, 0

75) $\bar{3}m'$ ---

76) 6 0, 0, 0, T14, T15, 0
0, 0, 0, T15, -T14, 0
T31, T31, T33, 0, 0, 0

77) $\bar{6}1'$ ---

78) 6' T11, -T11, 0, 0, 0, -T22
-T22, T22, 0, 0, 0, -T11
0, 0, 0, 0, 0, 0

79) $\bar{6}$ T11, -T11, 0, 0, 0, -T22
-T22, T22, 0, 0, 0, -T11
0, 0, 0, 0, 0, 0

80) $\bar{6}1'$ ---

81) $\bar{6}$ ' 0, 0, 0, T14, T15, 0
 0, 0, 0, T15, -T14, 0
 T31, T31, T33, 0, 0, 0

82) 6/m ---

83) 6/m1' ---

84) 6'/m T11, -T11, 0, 0, 0, -T22
 -T22, T22, 0, 0, 0, -T11
 0, 0, 0, 0, 0, 0

85) 6/m' 0, 0, 0, T14, T15, 0
 0, 0, 0, T15, -T14, 0
 T31, T31, T33, 0, 0, 0

86) 6'/m' ---

87) 622 0, 0, 0, T14, 0, 0
 0, 0, 0, 0, -T14, 0
 0, 0, 0, 0, 0, 0

88) 6221' ---

89) 6'2'2 0, 0, 0, 0, 0, -T22
 -T22, T22, 0, 0, 0, 0
 0, 0, 0, 0, 0, 0

90) $62'2'$ 0, 0, 0, 0, T15, 0
 0, 0, 0, T15, 0, 0
 T31, T31, T33, 0, 0, 0

91) 6mm 0, 0, 0, 0, T15, 0
 0, 0, 0, T15, 0, 0
 T31, T31, T33, 0, 0, 0

92) $6mm1'$ ---

93) $6'm'm$ T11, -T11, 0, 0, 0, 0
 0, 0, 0, 0, 0, -T11
 0, 0, 0, 0, 0, 0

94) $6m'm'$ 0, 0, 0, T14, 0, 0
 0, 0, 0, 0, -T14, 0
 0, 0, 0, 0, 0, 0

95) $\overline{6}m2$ 0, 0, 0, 0, 0, -T22
 -T22, T22, 0, 0, 0, 0
 0, 0, 0, 0, 0, 0

96) $\overline{6}m21'$ ---

97) $\overline{6}'m'2$ 0, 0, 0, T14, 0, 0
 0, 0, 0, 0, -T14, 0
 0, 0, 0, 0, 0, 0

98) $\overline{6}'m2'$ 0, 0, 0, 0, T15, 0
 0, 0, 0, T15, 0, 0
 T31, T31, T33, 0, 0, 0

99) $\bar{6}m'2'$ T11, -T11, 0, 0, 0, 0
 0, 0, 0, 0, 0, -T11
 0, 0, 0, 0, 0, 0

100) $6/mmm$ ---

101) $6/mmm1'$ ---

102) $6/m'mm$ 0, 0, 0, 0, T15, 0
 0, 0, 0, T15, 0, 0
 T31, T31, T33, 0, 0, 0

103) $6'/mm'm$ T11, -T11, 0, 0, 0, 0
 0, 0, 0, 0, 0, -T11
 0, 0, 0, 0, 0, 0

104) $6'/m'm'm$ ---

105) $6/mm'm'$ ---

106) $6/m'm'm'$ 0, 0, 0, T14, 0, 0
 0, 0, 0, 0, -T14, 0
 0, 0, 0, 0, 0, 0

107) 23 0, 0, 0, T14, 0, 0
 0, 0, 0, 0, T14, 0
 0, 0, 0, 0, 0, T14

108) 231' ---

109) $\overline{m3}$ ---

110) $\overline{m31}$ ' ---

111) $\overline{m'3}$ ' 0, 0, 0, T14, 0, 0
0, 0, 0, 0, T14, 0
0, 0, 0, 0, 0, T14

112) 432 ---

113) 4321' ---

114) 4'32' 0, 0, 0, T14, 0, 0
0, 0, 0, 0, T14, 0
0, 0, 0, 0, 0, T14

115) $\overline{43m}$ 0, 0, 0, T14, 0, 0
0, 0, 0, 0, T14, 0
0, 0, 0, 0, 0, T14

116) $\overline{43m1}$ ' ---

117) $\overline{4} ' 3m'$ ---

118) $m\overline{3}m$ ---

119) $m\overline{3}m1'$ ---

120) $m' \overline{3}' m$ 0, 0, 0, T14, 0, 0
 0, 0, 0, 0, T14, 0
 0, 0, 0, 0, 0, T14

121) $m\overline{3}m'$ ---

122) $m' \overline{3}' m'$ ---

[V²]

<p>reduced superfamilies of magnetic point groups</p>	<p>Ferrobimagnetic magnetic susceptibility</p>	<p>Ferrobielectric electric susceptibility</p>	<p>Ferrotoroidic toroidic susceptibility</p>
---	--	--	--

1) 1 T11, T12, T13
 T12, T22, T23
 T13, T23, T33

2) 1' T11, T12, T13
 T12, T22, T23
 T13, T23, T33

3) $\bar{1}$ T11, T12, T13
 T12, T22, T23
 T13, T23, T33

4) $\bar{1}1'$ T11, T12, T13
 T12, T22, T23
 T13, T23, T33

5) $\bar{1}'$ T11, T12, T13
 T12, T22, T23
 T13, T23, T33

6) 2 T11, T12, 0
 T12, T22, 0
 0, 0, T33

7) 21' T11, T12, 0
 T12, T22, 0
 0, 0, T33

8) 2' T11, T12, 0
 T12, T22, 0
 0, 0, T33

9) m	T11, T12, 0 T12, T22, 0 0, 0, T33
10) m1'	T11, T12, 0 T12, T22, 0 0, 0, T33
11) m'	T11, T12, 0 T12, T22, 0 0, 0, T33
12) 2/m	T11, T12, 0 T12, T22, 0 0, 0, T33
13) 2/m1'	T11, T12, 0 T12, T22, 0 0, 0, T33
14) 2'/m	T11, T12, 0 T12, T22, 0 0, 0, T33
15) 2/m'	T11, T12, 0 T12, T22, 0 0, 0, T33
16) 2'/m'	T11, T12, 0 T12, T22, 0 0, 0, T33
17) 222	T11, 0, 0 0, T22, 0 0, 0, T33

18) 2221'	T11,0 ,0 0 ,T22,0 0 ,0 ,T33
19) 2'2'2	T11,0 ,0 0 ,T22,0 0 ,0 ,T33
20) mm2	T11,0 ,0 0 ,T22,0 0 ,0 ,T33
21) mm21'	T11,0 ,0 0 ,T22,0 0 ,0 ,T33
22) m'm2'	T11,0 ,0 0 ,T22,0 0 ,0 ,T33
23) m'm'2	T11,0 ,0 0 ,T22,0 0 ,0 ,T33
24) mmm	T11,0 ,0 0 ,T22,0 0 ,0 ,T33
25) mmm1'	T11,0 ,0 0 ,T22,0 0 ,0 ,T33
26) m'mm	T11,0 ,0 0 ,T22,0 0 ,0 ,T33

- 27) $m'm'm$ $T_{11}, 0, 0$
 $0, T_{22}, 0$
 $0, 0, T_{33}$
- 28) $m'm'm'$ $T_{11}, 0, 0$
 $0, T_{22}, 0$
 $0, 0, T_{33}$
- 29) 4 $T_{11}, 0, 0$
 $0, T_{11}, 0$
 $0, 0, T_{33}$
- 30) $41'$ $T_{11}, 0, 0$
 $0, T_{11}, 0$
 $0, 0, T_{33}$
- 31) $4'$ $T_{11}, 0, 0$
 $0, T_{11}, 0$
 $0, 0, T_{33}$
- 32) $\bar{4}$ $T_{11}, 0, 0$
 $0, T_{11}, 0$
 $0, 0, T_{33}$
- 33) $\bar{41}'$ $T_{11}, 0, 0$
 $0, T_{11}, 0$
 $0, 0, T_{33}$
- 34) $\bar{4}'$ $T_{11}, 0, 0$
 $0, T_{11}, 0$
 $0, 0, T_{33}$
- 35) $4/m$ $T_{11}, 0, 0$
 $0, T_{11}, 0$
 $0, 0, T_{33}$

36) 4/m1' T11,0 ,0
 0 ,T11,0
 0 ,0 ,T33

37) 4'/m T11,0 ,0
 0 ,T11,0
 0 ,0 ,T33

38) 4/m' T11,0 ,0
 0 ,T11,0
 0 ,0 ,T33

39) 4'/m' T11,0 ,0
 0 ,T11,0
 0 ,0 ,T33

40) 422 T11,0 ,0
 0 ,T11,0
 0 ,0 ,T33

41) 4221' T11,0 ,0
 0 ,T11,0
 0 ,0 ,T33

42) 4'22' T11,0 ,0
 0 ,T11,0
 0 ,0 ,T33

43) 42'2' T11,0 ,0
 0 ,T11,0
 0 ,0 ,T33

44) 4mm T11,0 ,0
 0 ,T11,0
 0 ,0 ,T33

45) $4mm1'$	T11,0 ,0 0 ,T11,0 0 ,0 ,T33
46) $4'm'm$	T11,0 ,0 0 ,T11,0 0 ,0 ,T33
47) $4m'm'$	T11,0 ,0 0 ,T11,0 0 ,0 ,T33
48) $\overline{4}2m$	T11,0 ,0 0 ,T11,0 0 ,0 ,T33
49) $\overline{4}2m1'$	T11,0 ,0 0 ,T11,0 0 ,0 ,T33
50) $\overline{4}'2'm$	T11,0 ,0 0 ,T11,0 0 ,0 ,T33
51) $\overline{4}'2m'$	T11,0 ,0 0 ,T11,0 0 ,0 ,T33
52) $\overline{4}2'm'$	T11,0 ,0 0 ,T11,0 0 ,0 ,T33
53) $4/mmm$	T11,0 ,0 0 ,T11,0 0 ,0 ,T33

54) $4/mmm1'$	T11,0 ,0 0 ,T11,0 0 ,0 ,T33
55) $4/m'mm$	T11,0 ,0 0 ,T11,0 0 ,0 ,T33
56) $4'/mm'm$	T11,0 ,0 0 ,T11,0 0 ,0 ,T33
57) $4'/m'm'm$	T11,0 ,0 0 ,T11,0 0 ,0 ,T33
58) $4/mm'm'$	T11,0 ,0 0 ,T11,0 0 ,0 ,T33
59) $4/m'm'm'$	T11,0 ,0 0 ,T11,0 0 ,0 ,T33
60) 3	T11,0 ,0 0 ,T11,0 0 ,0 ,T33
61) $31'$	T11,0 ,0 0 ,T11,0 0 ,0 ,T33
62) $\bar{3}$	T11,0 ,0 0 ,T11,0 0 ,0 ,T33

63) $\bar{3}1'$ T11,0 ,0
 0 ,T11,0
 0 ,0 ,T33

64) $\bar{3}$ ' T11,0 ,0
 0 ,T11,0
 0 ,0 ,T33

65) 32 T11,0 ,0
 0 ,T11,0
 0 ,0 ,T33

66) 321' T11,0 ,0
 0 ,T11,0
 0 ,0 ,T33

67) 32' T11,0 ,0
 0 ,T11,0
 0 ,0 ,T33

68) 3m T11,0 ,0
 0 ,T11,0
 0 ,0 ,T33

69) 3m1' T11,0 ,0
 0 ,T11,0
 0 ,0 ,T33

70) 3m' T11,0 ,0
 0 ,T11,0
 0 ,0 ,T33

71) $\bar{3}m$ T11,0 ,0
 0 ,T11,0
 0 ,0 ,T33

72) $\bar{3}m1'$	T11,0 ,0 0 ,T11,0 0 ,0 ,T33
73) $\bar{3}'m$	T11,0 ,0 0 ,T11,0 0 ,0 ,T33
74) $\bar{3}'m'$	T11,0 ,0 0 ,T11,0 0 ,0 ,T33
75) $\bar{3}m'$	T11,0 ,0 0 ,T11,0 0 ,0 ,T33
76) 6	T11,0 ,0 0 ,T11,0 0 ,0 ,T33
77) $\bar{6}1'$	T11,0 ,0 0 ,T11,0 0 ,0 ,T33
78) 6'	T11,0 ,0 0 ,T11,0 0 ,0 ,T33
79) $\bar{6}$	T11,0 ,0 0 ,T11,0 0 ,0 ,T33
80) $\bar{6}1'$	T11,0 ,0 0 ,T11,0 0 ,0 ,T33

81) $\bar{6}$ '	T11,0 ,0 0 ,T11,0 0 ,0 ,T33
82) 6/m	T11,0 ,0 0 ,T11,0 0 ,0 ,T33
83) 6/m1'	T11,0 ,0 0 ,T11,0 0 ,0 ,T33
84) 6'/m	T11,0 ,0 0 ,T11,0 0 ,0 ,T33
85) 6/m'	T11,0 ,0 0 ,T11,0 0 ,0 ,T33
86) 6'/m'	T11,0 ,0 0 ,T11,0 0 ,0 ,T33
87) 622	T11,0 ,0 0 ,T11,0 0 ,0 ,T33
88) 6221'	T11,0 ,0 0 ,T11,0 0 ,0 ,T33
89) 6'2'2	T11,0 ,0 0 ,T11,0 0 ,0 ,T33

90) 62'2'	T11,0 ,0 0 ,T11,0 0 ,0 ,T33
91) 6mm	T11,0 ,0 0 ,T11,0 0 ,0 ,T33
92) 6mm1'	T11,0 ,0 0 ,T11,0 0 ,0 ,T33
93) 6'm'm	T11,0 ,0 0 ,T11,0 0 ,0 ,T33
94) 6m'm'	T11,0 ,0 0 ,T11,0 0 ,0 ,T33
95) $\overline{6}m2$	T11,0 ,0 0 ,T11,0 0 ,0 ,T33
96) $\overline{6}m21'$	T11,0 ,0 0 ,T11,0 0 ,0 ,T33
97) $\overline{6}'m'2$	T11,0 ,0 0 ,T11,0 0 ,0 ,T33
98) $\overline{6}'m2'$	T11,0 ,0 0 ,T11,0 0 ,0 ,T33

99) $\overline{6}m'2'$	T11,0 ,0 0 ,T11,0 0 ,0 ,T33
100) $6/mmm$	T11,0 ,0 0 ,T11,0 0 ,0 ,T33
101) $6/mmm1'$	T11,0 ,0 0 ,T11,0 0 ,0 ,T33
102) $6/m'mm$	T11,0 ,0 0 ,T11,0 0 ,0 ,T33
103) $6'/mm'm$	T11,0 ,0 0 ,T11,0 0 ,0 ,T33
104) $6'/m'm'm$	T11,0 ,0 0 ,T11,0 0 ,0 ,T33
105) $6/mm'm'$	T11,0 ,0 0 ,T11,0 0 ,0 ,T33
106) $6/m'm'm'$	T11,0 ,0 0 ,T11,0 0 ,0 ,T33
107) 23	T11,0 ,0 0 ,T11,0 0 ,0 ,T11

108) 231' T11,0 ,0
 0 ,T11,0
 0 ,0 ,T11

109) $m\bar{3}$ T11,0 ,0
 0 ,T11,0
 0 ,0 ,T11

110) $m\bar{3}1'$ T11,0 ,0
 0 ,T11,0
 0 ,0 ,T11

111) $m'\bar{3}'$ T11,0 ,0
 0 ,T11,0
 0 ,0 ,T11

112) 432 T11,0 ,0
 0 ,T11,0
 0 ,0 ,T11

113) 4321' T11,0 ,0
 0 ,T11,0
 0 ,0 ,T11

114) 4'32' T11,0 ,0
 0 ,T11,0
 0 ,0 ,T11

115) $\bar{4}3m$ T11,0 ,0
 0 ,T11,0
 0 ,0 ,T11

116) $\bar{4}3m1'$ T11,0 ,0
 0 ,T11,0
 0 ,0 ,T11

117) $\overline{4} ' 3m'$ T11,0 ,0
 0 ,T11,0
 0 ,0 ,T11

118) $m\overline{3}m$ T11,0 ,0
 0 ,T11,0
 0 ,0 ,T11

119) $m\overline{3}m1'$ T11,0 ,0
 0 ,T11,0
 0 ,0 ,T11

120) $m' \overline{3} 'm$ T11,0 ,0
 0 ,T11,0
 0 ,0 ,T11

121) $m\overline{3}m'$ T11,0 ,0
 0 ,T11,0
 0 ,0 ,T11

122) $m' \overline{3} 'm'$ T11,0 ,0
 0 ,T11,0
 0 ,0 ,T11

reduced
superfamilies
of magnetic
point groups

$[[V^2]^2]$
Ferrobielastic
elastic compliance

1) 1	T11, T12, T13, T14, T15, T16
	T22, T23, T24, T25, T26
	T33, T34, T35, T36
	T44, T45, T46
	T55, T56
	T66
2) $1'$	T11, T12, T13, T14, T15, T16
	T22, T23, T24, T25, T26
	T33, T34, T35, T36
	T44, T45, T46
	T55, T56
	T66
3) $\bar{1}$	T11, T12, T13, T14, T15, T16
	T22, T23, T24, T25, T26
	T33, T34, T35, T36
	T44, T45, T46
	T55, T56
	T66
4) $\bar{1}1'$	T11, T12, T13, T14, T15, T16
	T22, T23, T24, T25, T26
	T33, T34, T35, T36
	T44, T45, T46
	T55, T56
	T66

5) $\bar{1}$ '
T11, T12, T13, T14, T15, T16
T22, T23, T24, T25, T26
T33, T34, T35, T36
T44, T45, T46
T55, T56
T66

6) 2
T11, T12, T13, 0, 0, T16
T22, T23, 0, 0, T26
T33, 0, 0, T36
T44, T45, 0
T55, 0
T66

7) 21'
T11, T12, T13, 0, 0, T16
T22, T23, 0, 0, T26
T33, 0, 0, T36
T44, T45, 0
T55, 0
T66

8) 2'
T11, T12, T13, 0, 0, T16
T22, T23, 0, 0, T26
T33, 0, 0, T36
T44, T45, 0
T55, 0
T66

9) m
T11, T12, T13, 0, 0, T16
T22, T23, 0, 0, T26
T33, 0, 0, T36
T44, T45, 0
T55, 0
T66

10) $m1'$

T11,	T12,	T13,	0,	0,	T16
	T22,	T23,	0,	0,	T26
		T33,	0,	0,	T36
			T44,	T45,	0
				T55,	0
					T66

11) m'

T11,	T12,	T13,	0,	0,	T16
	T22,	T23,	0,	0,	T26
		T33,	0,	0,	T36
			T44,	T45,	0
				T55,	0
					T66

12) $2/m$

T11,	T12,	T13,	0,	0,	T16
	T22,	T23,	0,	0,	T26
		T33,	0,	0,	T36
			T44,	T45,	0
				T55,	0
					T66

13) $2/m1'$

T11,	T12,	T13,	0,	0,	T16
	T22,	T23,	0,	0,	T26
		T33,	0,	0,	T36
			T44,	T45,	0
				T55,	0
					T66

14) $2'/m$

T11,	T12,	T13,	0,	0,	T16
	T22,	T23,	0,	0,	T26
		T33,	0,	0,	T36
			T44,	T45,	0
				T55,	0
					T66

15) 2/m' T11, T12, T13, 0, 0, T16
 T22, T23, 0, 0, T26
 T33, 0, 0, T36
 T44, T45, 0
 T55, 0
 T66

16) 2'/m' T11, T12, T13, 0, 0, T16
 T22, T23, 0, 0, T26
 T33, 0, 0, T36
 T44, T45, 0
 T55, 0
 T66

17) 222 T11, T12, T13, 0, 0, 0
 T22, T23, 0, 0, 0
 T33, 0, 0, 0
 T44, 0, 0
 T55, 0
 T66

18) 2221' T11, T12, T13, 0, 0, 0
 T22, T23, 0, 0, 0
 T33, 0, 0, 0
 T44, 0, 0
 T55, 0
 T66

19) 2'2'2 T11, T12, T13, 0, 0, 0
 T22, T23, 0, 0, 0
 T33, 0, 0, 0
 T44, 0, 0
 T55, 0
 T66

20) mm2

T11,	T12,	T13,	0,	0,	0
	T22,	T23,	0,	0,	0
		T33,	0,	0,	0
			T44,	0,	0
				T55,	0
					T66

21) mm21'

T11,	T12,	T13,	0,	0,	0
	T22,	T23,	0,	0,	0
		T33,	0,	0,	0
			T44,	0,	0
				T55,	0
					T66

22) m'm2'

T11,	T12,	T13,	0,	0,	0
	T22,	T23,	0,	0,	0
		T33,	0,	0,	0
			T44,	0,	0
				T55,	0
					T66

23) m'm'2

T11,	T12,	T13,	0,	0,	0
	T22,	T23,	0,	0,	0
		T33,	0,	0,	0
			T44,	0,	0
				T55,	0
					T66

24) mmm

T11,	T12,	T13,	0,	0,	0
	T22,	T23,	0,	0,	0
		T33,	0,	0,	0
			T44,	0,	0
				T55,	0
					T66

25) mmm1'

T11,	T12,	T13,	0,	0,	0
	T22,	T23,	0,	0,	0
		T33,	0,	0,	0
			T44,	0,	0
				T55,	0
					T66

26) m'mm

T11,	T12,	T13,	0,	0,	0
	T22,	T23,	0,	0,	0
		T33,	0,	0,	0
			T44,	0,	0
				T55,	0
					T66

27) m'm'm

T11,	T12,	T13,	0,	0,	0
	T22,	T23,	0,	0,	0
		T33,	0,	0,	0
			T44,	0,	0
				T55,	0
					T66

28) m'm'm'

T11,	T12,	T13,	0,	0,	0
	T22,	T23,	0,	0,	0
		T33,	0,	0,	0
			T44,	0,	0
				T55,	0
					T66

29) 4

T11,	T12,	T13,	0,	0,	T16
	T11,	T13,	0,	0,	-T16
		T33,	0,	0,	0
			T44,	0,	0
				T44,	0
					T66

30) 41'

T11,	T12,	T13,	0,	0,	T16
	T11,	T13,	0,	0,	-T16
		T33,	0,	0,	0
			T44,	0,	0
				T44,	0
					T66

31) 4'

T11,	T12,	T13,	0,	0,	T16
	T11,	T13,	0,	0,	-T16
		T33,	0,	0,	0
			T44,	0,	0
				T44,	0
					T66

32) 4'

T11,	T12,	T13,	0,	0,	T16
	T11,	T13,	0,	0,	-T16
		T33,	0,	0,	0
			T44,	0,	0
				T44,	0
					T66

33) 41'

T11,	T12,	T13,	0,	0,	T16
	T11,	T13,	0,	0,	-T16
		T33,	0,	0,	0
			T44,	0,	0
				T44,	0
					T66

34) 4'

T11,	T12,	T13,	0,	0,	T16
	T11,	T13,	0,	0,	-T16
		T33,	0,	0,	0
			T44,	0,	0
				T44,	0
					T66

35) 4/m

T11,	T12,	T13,	0,	0,	T16
	T11,	T13,	0,	0,	-T16
		T33,	0,	0,	0
			T44,	0,	0
				T44,	0
					T66

36) 4/m1'

T11,	T12,	T13,	0,	0,	T16
	T11,	T13,	0,	0,	-T16
		T33,	0,	0,	0
			T44,	0,	0
				T44,	0
					T66

37) 4'/m

T11,	T12,	T13,	0,	0,	T16
	T11,	T13,	0,	0,	-T16
		T33,	0,	0,	0
			T44,	0,	0
				T44,	0
					T66

38) 4/m'

T11,	T12,	T13,	0,	0,	T16
	T11,	T13,	0,	0,	-T16
		T33,	0,	0,	0
			T44,	0,	0
				T44,	0
					T66

39) 4'/m'

T11,	T12,	T13,	0,	0,	T16
	T11,	T13,	0,	0,	-T16
		T33,	0,	0,	0
			T44,	0,	0
				T44,	0
					T66

40) 422
T11, T12, T13, 0, 0, 0
T11, T13, 0, 0, 0
T33, 0, 0, 0
T44, 0, 0
T44, 0
T66

41) 4221'
T11, T12, T13, 0, 0, 0
T11, T13, 0, 0, 0
T33, 0, 0, 0
T44, 0, 0
T44, 0
T66

42) 4'22'
T11, T12, T13, 0, 0, 0
T11, T13, 0, 0, 0
T33, 0, 0, 0
T44, 0, 0
T44, 0
T66

43) 42'2'
T11, T12, T13, 0, 0, 0
T11, T13, 0, 0, 0
T33, 0, 0, 0
T44, 0, 0
T44, 0
T66

44) 4mm
T11, T12, T13, 0, 0, 0
T11, T13, 0, 0, 0
T33, 0, 0, 0
T44, 0, 0
T44, 0
T66

45) 4mm1' T11, T12, T13, 0, 0, 0
 T11, T13, 0, 0, 0
 T33, 0, 0, 0
 T44, 0, 0
 T44, 0
 T66

46) 4'm'm T11, T12, T13, 0, 0, 0
 T11, T13, 0, 0, 0
 T33, 0, 0, 0
 T44, 0, 0
 T44, 0
 T66

47) 4m'm' T11, T12, T13, 0, 0, 0
 T11, T13, 0, 0, 0
 T33, 0, 0, 0
 T44, 0, 0
 T44, 0
 T66

48) $\overline{4}2m$ T11, T12, T13, 0, 0, 0
 T11, T13, 0, 0, 0
 T33, 0, 0, 0
 T44, 0, 0
 T44, 0
 T66

49) $\overline{4}2m1'$ T11, T12, T13, 0, 0, 0
 T11, T13, 0, 0, 0
 T33, 0, 0, 0
 T44, 0, 0
 T44, 0
 T66

50) $\bar{4}'2'm$

T11,	T12,	T13,	0,	0,	0
	T11,	T13,	0,	0,	0
		T33,	0,	0,	0
			T44,	0,	0
				T44,	0
					T66

51) $\bar{4}'2m'$

T11,	T12,	T13,	0,	0,	0
	T11,	T13,	0,	0,	0
		T33,	0,	0,	0
			T44,	0,	0
				T44,	0
					T66

52) $\bar{4}2'm'$

T11,	T12,	T13,	0,	0,	0
	T11,	T13,	0,	0,	0
		T33,	0,	0,	0
			T44,	0,	0
				T44,	0
					T66

53) $4/mmm$

T11,	T12,	T13,	0,	0,	0
	T11,	T13,	0,	0,	0
		T33,	0,	0,	0
			T44,	0,	0
				T44,	0
					T66

54) $4/mmm1'$

T11,	T12,	T13,	0,	0,	0
	T11,	T13,	0,	0,	0
		T33,	0,	0,	0
			T44,	0,	0
				T44,	0
					T66

55) 4/m'mm

T11,	T12,	T13,	0,	0,	0
	T11,	T13,	0,	0,	0
		T33,	0,	0,	0
			T44,	0,	0
				T44,	0
					T66

56) 4'/mm'm

T11,	T12,	T13,	0,	0,	0
	T11,	T13,	0,	0,	0
		T33,	0,	0,	0
			T44,	0,	0
				T44,	0
					T66

57) 4'/m'm'm

T11,	T12,	T13,	0,	0,	0
	T11,	T13,	0,	0,	0
		T33,	0,	0,	0
			T44,	0,	0
				T44,	0
					T66

58) 4/mm'm'

T11,	T12,	T13,	0,	0,	0
	T11,	T13,	0,	0,	0
		T33,	0,	0,	0
			T44,	0,	0
				T44,	0
					T66

59) 4/m'm'm'

T11,	T12,	T13,	0,	0,	0
	T11,	T13,	0,	0,	0
		T33,	0,	0,	0
			T44,	0,	0
				T44,	0
					T66

$$\begin{array}{r}
60) \quad 3 \\
T11, \quad T12, \quad T13, \quad T14, \quad -T25, \quad 0 \\
\quad T11, \quad T13, \quad -T14, \quad T25, \quad 0 \\
\quad \quad T33, \quad 0, \quad 0, \quad 0 \\
\quad \quad \quad T44, \quad 0, \quad T25 \\
\quad \quad \quad \quad T44, \quad T14 \\
\quad \quad \quad \quad \quad (T11-T12)/2
\end{array}$$

$$\begin{array}{r}
61) \quad 31' \\
T11, \quad T12, \quad T13, \quad T14, \quad -T25, \quad 0 \\
\quad T11, \quad T13, \quad -T14, \quad T25, \quad 0 \\
\quad \quad T33, \quad 0, \quad 0, \quad 0 \\
\quad \quad \quad T44, \quad 0, \quad T25 \\
\quad \quad \quad \quad T44, \quad T14 \\
\quad \quad \quad \quad \quad (T11-T12)/2
\end{array}$$

$$\begin{array}{r}
62) \quad \bar{3} \\
T11, \quad T12, \quad T13, \quad T14, \quad -T25, \quad 0 \\
\quad T11, \quad T13, \quad -T14, \quad T25, \quad 0 \\
\quad \quad T33, \quad 0, \quad 0, \quad 0 \\
\quad \quad \quad T44, \quad 0, \quad T25 \\
\quad \quad \quad \quad T44, \quad T14 \\
\quad \quad \quad \quad \quad (T11-T12)/2
\end{array}$$

$$\begin{array}{r}
63) \quad \bar{31}' \\
T11, \quad T12, \quad T13, \quad T14, \quad -T25, \quad 0 \\
\quad T11, \quad T13, \quad -T14, \quad T25, \quad 0 \\
\quad \quad T33, \quad 0, \quad 0, \quad 0 \\
\quad \quad \quad T44, \quad 0, \quad T25 \\
\quad \quad \quad \quad T44, \quad T14 \\
\quad \quad \quad \quad \quad (T11-T12)/2
\end{array}$$

$$\begin{array}{r}
64) \quad \bar{3}' \\
T11, \quad T12, \quad T13, \quad T14, \quad -T25, \quad 0 \\
\quad T11, \quad T13, \quad -T14, \quad T25, \quad 0 \\
\quad \quad T33, \quad 0, \quad 0, \quad 0 \\
\quad \quad \quad T44, \quad 0, \quad T25 \\
\quad \quad \quad \quad T44, \quad T14 \\
\quad \quad \quad \quad \quad (T11-T12)/2
\end{array}$$

65) 32

$$\begin{array}{r}
 T11, T12, T13, T14, 0, 0 \\
 T11, T13, -T14, 0, 0 \\
 T33, 0, 0, 0 \\
 T44, 0, 0 \\
 T44, T14 \\
 (T11-T12)/2
 \end{array}$$

66) 321'

$$\begin{array}{r}
 T11, T12, T13, T14, 0, 0 \\
 T11, T13, -T14, 0, 0 \\
 T33, 0, 0, 0 \\
 T44, 0, 0 \\
 T44, T14 \\
 (T11-T12)/2
 \end{array}$$

67) 32'

$$\begin{array}{r}
 T11, T12, T13, T14, 0, 0 \\
 T11, T13, -T14, 0, 0 \\
 T33, 0, 0, 0 \\
 T44, 0, 0 \\
 T44, T14 \\
 (T11-T12)/2
 \end{array}$$

68) 3m

$$\begin{array}{r}
 T11, T12, T13, T14, 0, 0 \\
 T11, T13, -T14, 0, 0 \\
 T33, 0, 0, 0 \\
 T44, 0, 0 \\
 T44, T14 \\
 (T11-T12)/2
 \end{array}$$

69) 3m1'

$$\begin{array}{r}
 T11, T12, T13, T14, 0, 0 \\
 T11, T13, -T14, 0, 0 \\
 T33, 0, 0, 0 \\
 T44, 0, 0 \\
 T44, T14 \\
 (T11-T12)/2
 \end{array}$$

$$\begin{array}{r}
70) \ 3m' \\
T11, \ T12, \ T13, \ T14, \ 0, \ 0 \\
\quad T11, \ T13, \ -T14, \ 0, \ 0 \\
\quad \quad T33, \ 0, \ 0, \ 0 \\
\quad \quad \quad T44, \ 0, \ 0 \\
\quad \quad \quad \quad T44, \ T14 \\
\quad \quad \quad \quad \quad (T11-T12)/2
\end{array}$$

$$\begin{array}{r}
71) \ \bar{3}m \\
T11, \ T12, \ T13, \ T14, \ 0, \ 0 \\
\quad T11, \ T13, \ -T14, \ 0, \ 0 \\
\quad \quad T33, \ 0, \ 0, \ 0 \\
\quad \quad \quad T44, \ 0, \ 0 \\
\quad \quad \quad \quad T44, \ T14 \\
\quad \quad \quad \quad \quad (T11-T12)/2
\end{array}$$

$$\begin{array}{r}
72) \ \bar{3}m1' \\
T11, \ T12, \ T13, \ T14, \ 0, \ 0 \\
\quad T11, \ T13, \ -T14, \ 0, \ 0 \\
\quad \quad T33, \ 0, \ 0, \ 0 \\
\quad \quad \quad T44, \ 0, \ 0 \\
\quad \quad \quad \quad T44, \ T14 \\
\quad \quad \quad \quad \quad (T11-T12)/2
\end{array}$$

$$\begin{array}{r}
73) \ \bar{3}'m \\
T11, \ T12, \ T13, \ T14, \ 0, \ 0 \\
\quad T11, \ T13, \ -T14, \ 0, \ 0 \\
\quad \quad T33, \ 0, \ 0, \ 0 \\
\quad \quad \quad T44, \ 0, \ 0 \\
\quad \quad \quad \quad T44, \ T14 \\
\quad \quad \quad \quad \quad (T11-T12)/2
\end{array}$$

$$\begin{array}{r}
74) \ \bar{3}'m' \\
T11, \ T12, \ T13, \ T14, \ 0, \ 0 \\
\quad T11, \ T13, \ -T14, \ 0, \ 0 \\
\quad \quad T33, \ 0, \ 0, \ 0 \\
\quad \quad \quad T44, \ 0, \ 0 \\
\quad \quad \quad \quad T44, \ T14 \\
\quad \quad \quad \quad \quad (T11-T12)/2
\end{array}$$

$$\begin{array}{r}
 75) \bar{3m}' \\
 T11, T12, T13, T14, 0, 0 \\
 T11, T13, -T14, 0, 0 \\
 T33, 0, 0, 0 \\
 T44, 0, 0 \\
 T44, T14 \\
 (T11-T12)/2
 \end{array}$$

$$\begin{array}{r}
 76) 6 \\
 T11, T12, T13, 0, 0, 0 \\
 T11, T13, 0, 0, 0 \\
 T33, 0, 0, 0 \\
 T44, 0, 0 \\
 T44, 0 \\
 (T11-T12)/2
 \end{array}$$

$$\begin{array}{r}
 77) 61' \\
 T11, T12, T13, 0, 0, 0 \\
 T11, T13, 0, 0, 0 \\
 T33, 0, 0, 0 \\
 T44, 0, 0 \\
 T44, 0 \\
 (T11-T12)/2
 \end{array}$$

$$\begin{array}{r}
 78) 6' \\
 T11, T12, T13, 0, 0, 0 \\
 T11, T13, 0, 0, 0 \\
 T33, 0, 0, 0 \\
 T44, 0, 0 \\
 T44, 0 \\
 (T11-T12)/2
 \end{array}$$

$$\begin{array}{r}
 79) \bar{6} \\
 T11, T12, T13, 0, 0, 0 \\
 T11, T13, 0, 0, 0 \\
 T33, 0, 0, 0 \\
 T44, 0, 0 \\
 T44, 0 \\
 (T11-T12)/2
 \end{array}$$

$$\begin{array}{r}
 80) \bar{6}1' \\
 T11, T12, T13, 0, 0, 0 \\
 T11, T13, 0, 0, 0 \\
 T33, 0, 0, 0 \\
 T44, 0, 0 \\
 T44, 0 \\
 (T11-T12)/2
 \end{array}$$

$$\begin{array}{r}
 81) \bar{6}' \\
 T11, T12, T13, 0, 0, 0 \\
 T11, T13, 0, 0, 0 \\
 T33, 0, 0, 0 \\
 T44, 0, 0 \\
 T44, 0 \\
 (T11-T12)/2
 \end{array}$$

$$\begin{array}{r}
 82) 6/m \\
 T11, T12, T13, 0, 0, 0 \\
 T11, T13, 0, 0, 0 \\
 T33, 0, 0, 0 \\
 T44, 0, 0 \\
 T44, 0 \\
 (T11-T12)/2
 \end{array}$$

$$\begin{array}{r}
 83) 6/m1' \\
 T11, T12, T13, 0, 0, 0 \\
 T11, T13, 0, 0, 0 \\
 T33, 0, 0, 0 \\
 T44, 0, 0 \\
 T44, 0 \\
 (T11-T12)/2
 \end{array}$$

$$\begin{array}{r}
 84) 6'/m \\
 T11, T12, T13, 0, 0, 0 \\
 T11, T13, 0, 0, 0 \\
 T33, 0, 0, 0 \\
 T44, 0, 0 \\
 T44, 0 \\
 (T11-T12)/2
 \end{array}$$

85) 6/m'

$$\begin{array}{rcccccc}
 T11, & T12, & T13, & 0, & 0, & 0 \\
 & T11, & T13, & 0, & 0, & 0 \\
 & & T33, & 0, & 0, & 0 \\
 & & & T44, & 0, & 0 \\
 & & & & T44, & 0 \\
 & & & & & (T11-T12)/2
 \end{array}$$

86) 6'/m'

$$\begin{array}{rcccccc}
 T11, & T12, & T13, & 0, & 0, & 0 \\
 & T11, & T13, & 0, & 0, & 0 \\
 & & T33, & 0, & 0, & 0 \\
 & & & T44, & 0, & 0 \\
 & & & & T44, & 0 \\
 & & & & & (T11-T12)/2
 \end{array}$$

87) 622

$$\begin{array}{rcccccc}
 T11, & T12, & T13, & 0, & 0, & 0 \\
 & T11, & T13, & 0, & 0, & 0 \\
 & & T33, & 0, & 0, & 0 \\
 & & & T44, & 0, & 0 \\
 & & & & T44, & 0 \\
 & & & & & (T11-T12)/2
 \end{array}$$

88) 6221'

$$\begin{array}{rcccccc}
 T11, & T12, & T13, & 0, & 0, & 0 \\
 & T11, & T13, & 0, & 0, & 0 \\
 & & T33, & 0, & 0, & 0 \\
 & & & T44, & 0, & 0 \\
 & & & & T44, & 0 \\
 & & & & & (T11-T12)/2
 \end{array}$$

89) 6'2'2

$$\begin{array}{rcccccc}
 T11, & T12, & T13, & 0, & 0, & 0 \\
 & T11, & T13, & 0, & 0, & 0 \\
 & & T33, & 0, & 0, & 0 \\
 & & & T44, & 0, & 0 \\
 & & & & T44, & 0 \\
 & & & & & (T11-T12)/2
 \end{array}$$

90) 62'2'

$$\begin{array}{r}
 T11, T12, T13, 0, 0, 0 \\
 T11, T13, 0, 0, 0 \\
 T33, 0, 0, 0 \\
 T44, 0, 0 \\
 T44, 0 \\
 (T11-T12)/2
 \end{array}$$

91) 6mm

$$\begin{array}{r}
 T11, T12, T13, 0, 0, 0 \\
 T11, T13, 0, 0, 0 \\
 T33, 0, 0, 0 \\
 T44, 0, 0 \\
 T44, 0 \\
 (T11-T12)/2
 \end{array}$$

92) 6mm1'

$$\begin{array}{r}
 T11, T12, T13, 0, 0, 0 \\
 T11, T13, 0, 0, 0 \\
 T33, 0, 0, 0 \\
 T44, 0, 0 \\
 T44, 0 \\
 (T11-T12)/2
 \end{array}$$

93) 6'm'm

$$\begin{array}{r}
 T11, T12, T13, 0, 0, 0 \\
 T11, T13, 0, 0, 0 \\
 T33, 0, 0, 0 \\
 T44, 0, 0 \\
 T44, 0 \\
 (T11-T12)/2
 \end{array}$$

94) 6m'm'

$$\begin{array}{r}
 T11, T12, T13, 0, 0, 0 \\
 T11, T13, 0, 0, 0 \\
 T33, 0, 0, 0 \\
 T44, 0, 0 \\
 T44, 0 \\
 (T11-T12)/2
 \end{array}$$

$$\begin{array}{r}
 95) \bar{6}m^2 \\
 T11, T12, T13, 0, 0, 0 \\
 T11, T13, 0, 0, 0 \\
 T33, 0, 0, 0 \\
 T44, 0, 0 \\
 T44, 0 \\
 (T11-T12)/2
 \end{array}$$

$$\begin{array}{r}
 96) \bar{6}m^2 1' \\
 T11, T12, T13, 0, 0, 0 \\
 T11, T13, 0, 0, 0 \\
 T33, 0, 0, 0 \\
 T44, 0, 0 \\
 T44, 0 \\
 (T11-T12)/2
 \end{array}$$

$$\begin{array}{r}
 97) \bar{6}'m^2 \\
 T11, T12, T13, 0, 0, 0 \\
 T11, T13, 0, 0, 0 \\
 T33, 0, 0, 0 \\
 T44, 0, 0 \\
 T44, 0 \\
 (T11-T12)/2
 \end{array}$$

$$\begin{array}{r}
 98) \bar{6}'m^2 1' \\
 T11, T12, T13, 0, 0, 0 \\
 T11, T13, 0, 0, 0 \\
 T33, 0, 0, 0 \\
 T44, 0, 0 \\
 T44, 0 \\
 (T11-T12)/2
 \end{array}$$

$$\begin{array}{r}
 99) \bar{6}m^2 1' \\
 T11, T12, T13, 0, 0, 0 \\
 T11, T13, 0, 0, 0 \\
 T33, 0, 0, 0 \\
 T44, 0, 0 \\
 T44, 0 \\
 (T11-T12)/2
 \end{array}$$

100) 6/mmm

T11,	T12,	T13,	0,	0,	0
	T11,	T13,	0,	0,	0
		T33,	0,	0,	0
			T44,	0,	0
				T44,	0
					(T11-T12)/2

101) 6/mmm1'

T11,	T12,	T13,	0,	0,	0
	T11,	T13,	0,	0,	0
		T33,	0,	0,	0
			T44,	0,	0
				T44,	0
					(T11-T12)/2

102) 6/m'mm

T11,	T12,	T13,	0,	0,	0
	T11,	T13,	0,	0,	0
		T33,	0,	0,	0
			T44,	0,	0
				T44,	0
					(T11-T12)/2

103) 6'/mm'm

T11,	T12,	T13,	0,	0,	0
	T11,	T13,	0,	0,	0
		T33,	0,	0,	0
			T44,	0,	0
				T44,	0
					(T11-T12)/2

104) 6'/m'm'm

T11,	T12,	T13,	0,	0,	0
	T11,	T13,	0,	0,	0
		T33,	0,	0,	0
			T44,	0,	0
				T44,	0
					(T11-T12)/2

105) $6/\text{mm}'\text{m}'$

T11,	T12,	T13,	0,	0,	0
	T11,	T13,	0,	0,	0
		T33,	0,	0,	0
			T44,	0,	0
				T44,	0
					$(T11-T12)/2$

106) $6/\text{m}'\text{m}'\text{m}'$

T11,	T12,	T13,	0,	0,	0
	T11,	T13,	0,	0,	0
		T33,	0,	0,	0
			T44,	0,	0
				T44,	0
					$(T11-T12)/2$

107) $2\bar{3}$

T11,	T12,	T12,	0,	0,	0
	T11,	T12,	0,	0,	0
		T11,	0,	0,	0
			T44,	0,	0
				T44,	0
					T44

108) $231'$

T11,	T12,	T12,	0,	0,	0
	T11,	T12,	0,	0,	0
		T11,	0,	0,	0
			T44,	0,	0
				T44,	0
					T44

109) $\bar{m}\bar{3}$

T11,	T12,	T12,	0,	0,	0
	T11,	T12,	0,	0,	0
		T11,	0,	0,	0
			T44,	0,	0
				T44,	0
					T44

110) $m\bar{3}1'$

T11,	T12,	T12,	0,	0,	0
	T11,	T12,	0,	0,	0
		T11,	0,	0,	0
			T44,	0,	0
				T44,	0
					T44

111) $m'3'$

T11,	T12,	T12,	0,	0,	0
	T11,	T12,	0,	0,	0
		T11,	0,	0,	0
			T44,	0,	0
				T44,	0
					T44

112) 432

T11,	T12,	T12,	0,	0,	0
	T11,	T12,	0,	0,	0
		T11,	0,	0,	0
			T44,	0,	0
				T44,	0
					T44

113) 4321'

T11,	T12,	T12,	0,	0,	0
	T11,	T12,	0,	0,	0
		T11,	0,	0,	0
			T44,	0,	0
				T44,	0
					T44

114) 4'32'

T11,	T12,	T12,	0,	0,	0
	T11,	T12,	0,	0,	0
		T11,	0,	0,	0
			T44,	0,	0
				T44,	0
					T44

115) $\overline{43m}$

T11,	T12,	T12,	0,	0,	0
	T11,	T12,	0,	0,	0
		T11,	0,	0,	0
			T44,	0,	0
				T44,	0
					T44

116) $\overline{43m1'}$

T11,	T12,	T12,	0,	0,	0
	T11,	T12,	0,	0,	0
		T11,	0,	0,	0
			T44,	0,	0
				T44,	0
					T44

117) $\overline{4'3m'}$

T11,	T12,	T12,	0,	0,	0
	T11,	T12,	0,	0,	0
		T11,	0,	0,	0
			T44,	0,	0
				T44,	0
					T44

118) $m\overline{3m}$

T11,	T12,	T12,	0,	0,	0
	T11,	T12,	0,	0,	0
		T11,	0,	0,	0
			T44,	0,	0
				T44,	0
					T44

119) $m\overline{3m1'}$

T11,	T12,	T12,	0,	0,	0
	T11,	T12,	0,	0,	0
		T11,	0,	0,	0
			T44,	0,	0
				T44,	0
					T44

120) $m'\bar{3}'m$

T11,	T12,	T12,	0,	0,	0
	T11,	T12,	0,	0,	0
		T11,	0,	0,	0
			T44,	0,	0
				T44,	0
					T44

121) $m\bar{3}m'$

T11,	T12,	T12,	0,	0,	0
	T11,	T12,	0,	0,	0
		T11,	0,	0,	0
			T44,	0,	0
				T44,	0
					T44

122) $m'\bar{3}'m'$

T11,	T12,	T12,	0,	0,	0
	T11,	T12,	0,	0,	0
		T11,	0,	0,	0
			T44,	0,	0
				T44,	0
					T44