

Table 1: Magnetic point group information.

ID	tag	international	setting	crystal	PG	type
1.1.1	MPG:1.1.1	1		triclinic	C_1	I
1.2.2	MPG:1.2.2	$11'$		triclinic	C_1	II
2.1.3	MPG:2.1.3	$\bar{1}$		triclinic	C_i	I
2.2.4	MPG:2.2.4	$\bar{1}1'$		triclinic	C_i	II
2.3.5	MPG:2.3.5	$\bar{1}'$		triclinic	C_i	III
3.1.6	MPG:3.1.6	2		monoclinic	C_2	I
3.2.7	MPG:3.2.7	$21'$		monoclinic	C_2	II
3.3.8	MPG:3.3.8	$2'$		monoclinic	C_2	III
4.1.9	MPG:4.1.9	m		monoclinic	C_s	I
4.2.10	MPG:4.2.10	$m1'$		monoclinic	C_s	II
4.3.11	MPG:4.3.11	m'		monoclinic	C_s	III
5.1.12	MPG:5.1.12	$2/m$		monoclinic	C_{2h}	I
5.2.13	MPG:5.2.13	$2/m1'$		monoclinic	C_{2h}	II
5.3.14	MPG:5.3.14	$2'/m$		monoclinic	C_{2h}	III
5.4.15	MPG:5.4.15	$2/m'$		monoclinic	C_{2h}	III
5.5.16	MPG:5.5.16	$2'/m'$		monoclinic	C_{2h}	III
6.1.17	MPG:6.1.17	222		orthorhombic	D_2	I
6.2.18	MPG:6.2.18	2221'		orthorhombic	D_2	II
6.3.19	MPG:6.3.19	$2'2'2$	$2'2'2$	orthorhombic	D_2	III
6.4.123	MPG:6.4.123	$2'2'2$	$22'2'$	orthorhombic	D_2	III
7.1.20	MPG:7.1.20	$mm2$		orthorhombic	C_{2v}	I
7.2.21	MPG:7.2.21	$mm21'$		orthorhombic	C_{2v}	II
7.3.22	MPG:7.3.22	$m'm2'$	$m'm2'$	orthorhombic	C_{2v}	III
7.4.23	MPG:7.4.23	$m'm'2$		orthorhombic	C_{2v}	III
7.5.124	MPG:7.5.124	$m'm2'$	$mm'2'$	orthorhombic	C_{2v}	III
8.1.24	MPG:8.1.24	mmm		orthorhombic	D_{2h}	I
8.2.25	MPG:8.2.25	$mmm1'$		orthorhombic	D_{2h}	II
8.3.26	MPG:8.3.26	$m'mm$	$m'mm$	orthorhombic	D_{2h}	III
8.4.27	MPG:8.4.27	$m'm'm$	$m'm'm$	orthorhombic	D_{2h}	III
8.5.28	MPG:8.5.28	$m'm'm'$		orthorhombic	D_{2h}	III
8.6.125	MPG:8.6.125	$m'mm$	mmm'	orthorhombic	D_{2h}	III
8.7.126	MPG:8.7.126	$m'mm$	$mm'm$	orthorhombic	D_{2h}	III
8.8.127	MPG:8.8.127	$m'm'm$	$m'mm'$	orthorhombic	D_{2h}	III
8.9.128	MPG:8.9.128	$m'm'm$	$mm'm'$	orthorhombic	D_{2h}	III
9.1.29	MPG:9.1.29	4		tetragonal	C_4	I
9.2.30	MPG:9.2.30	$41'$		tetragonal	C_4	II
9.3.31	MPG:9.3.31	$4'$		tetragonal	C_4	III
10.1.32	MPG:10.1.32	$\bar{4}$		tetragonal	S_4	I
10.2.33	MPG:10.2.33	$\bar{4}1'$		tetragonal	S_4	II
10.3.34	MPG:10.3.34	$\bar{4}'$		tetragonal	S_4	III
11.1.35	MPG:11.1.35	$4/m$		tetragonal	C_{4h}	I
11.2.36	MPG:11.2.36	$4/m1'$		tetragonal	C_{4h}	II
11.3.37	MPG:11.3.37	$4'/m$		tetragonal	C_{4h}	III

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11.4.38	MPG:11.4.38	$4/m'$		tetragonal	C_{4h}	III
11.5.39	MPG:11.5.39	$4'/m'$		tetragonal	C_{4h}	III
12.1.40	MPG:12.1.40	422		tetragonal	D_4	I
12.2.41	MPG:12.2.41	4221'		tetragonal	D_4	II
12.3.42	MPG:12.3.42	$4'22'$	$4'22'$	tetragonal	D_4	III
12.4.43	MPG:12.4.43	$42'2'$		tetragonal	D_4	III
12.5.129	MPG:12.5.129	$4'22'$	$4'2'2$	tetragonal	D_4	III
13.1.44	MPG:13.1.44	$4mm$		tetragonal	C_{4v}	I
13.2.45	MPG:13.2.45	$4mm1'$		tetragonal	C_{4v}	II
13.3.46	MPG:13.3.46	$4'm'm$	$4'm'm$	tetragonal	C_{4v}	III
13.4.47	MPG:13.4.47	$4m'm'$		tetragonal	C_{4v}	III
13.5.130	MPG:13.5.130	$4'm'm$	$4'mm'$	tetragonal	C_{4v}	III
14.1.48	MPG:14.1.48	$\bar{4}2m$	$-42m$	tetragonal	D_{2d}	I
14.2.49	MPG:14.2.49	$\bar{4}2m1'$	$-42m1'$	tetragonal	D_{2d}	II
14.3.50	MPG:14.3.50	$\bar{4}'2'm$	$-4'2'm$	tetragonal	D_{2d}	III
14.4.51	MPG:14.4.51	$\bar{4}'2m'$	$-4'2m'$	tetragonal	D_{2d}	III
14.5.52	MPG:14.5.52	$\bar{4}2'm'$	$-42'm'$	tetragonal	D_{2d}	III
15.1.53	MPG:15.1.53	$4/mmm$		tetragonal	D_{4h}	I
15.2.54	MPG:15.2.54	$4/mmm1'$		tetragonal	D_{4h}	II
15.3.55	MPG:15.3.55	$4/m'mm$		tetragonal	D_{4h}	III
15.4.56	MPG:15.4.56	$4'/mm'm$	$4'/mm'm$	tetragonal	D_{4h}	III
15.5.57	MPG:15.5.57	$4'/m'm'm$	$4'/m'm'm$	tetragonal	D_{4h}	III
15.6.58	MPG:15.6.58	$4/mm'm'$		tetragonal	D_{4h}	III
15.7.59	MPG:15.7.59	$4/m'm'm'$		tetragonal	D_{4h}	III
15.8.136	MPG:15.8.136	$4'/mm'm$	$4'/mmm'$	tetragonal	D_{4h}	III
15.9.137	MPG:15.9.137	$4'/m'm'm$	$4'/m'mm'$	tetragonal	D_{4h}	III
16.1.60	MPG:16.1.60	3		trigonal	C_3	I
16.2.61	MPG:16.2.61	$31'$		trigonal	C_3	II
17.1.62	MPG:17.1.62	$\bar{3}$		trigonal	C_{3i}	I
17.2.63	MPG:17.2.63	$\bar{3}1'$		trigonal	C_{3i}	II
17.3.64	MPG:17.3.64	$\bar{3}'$		trigonal	C_{3i}	III
18.1.65	MPG:18.1.65	32	321	trigonal	D_3	I
18.2.66	MPG:18.2.66	$321'$	$3211'$	trigonal	D_3	II
18.3.67	MPG:18.3.67	$32'$	$32'1$	trigonal	D_3	III
19.1.68	MPG:19.1.68	$3m$	$3m1$	trigonal	C_{3v}	I
19.2.69	MPG:19.2.69	$3m1'$	$3m11'$	trigonal	C_{3v}	II
19.3.70	MPG:19.3.70	$3m'$	$3m'1$	trigonal	C_{3v}	III
20.1.71	MPG:20.1.71	$\bar{3}m$	$-3m1$	trigonal	D_{3d}	I
20.2.72	MPG:20.2.72	$\bar{3}m1'$	$-3m11'$	trigonal	D_{3d}	II
20.3.73	MPG:20.3.73	$\bar{3}'m$	$-3'm1$	trigonal	D_{3d}	III
20.4.74	MPG:20.4.74	$\bar{3}'m'$	$-3'm'1$	trigonal	D_{3d}	III
20.5.75	MPG:20.5.75	$\bar{3}m'$	$-3m'1$	trigonal	D_{3d}	III
21.1.76	MPG:21.1.76	6		hexagonal	C_6	I
21.2.77	MPG:21.2.77	$61'$		hexagonal	C_6	II

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21.3.78	MPG:21.3.78	$6'$		hexagonal	C_6	III
22.1.79	MPG:22.1.79	$\bar{6}$		hexagonal	C_{3h}	I
22.2.80	MPG:22.2.80	$\bar{6}1'$		hexagonal	C_{3h}	II
22.3.81	MPG:22.3.81	$\bar{6}'$		hexagonal	C_{3h}	III
23.1.82	MPG:23.1.82	$6/m$		hexagonal	C_{6h}	I
23.2.83	MPG:23.2.83	$6/m1'$		hexagonal	C_{6h}	II
23.3.84	MPG:23.3.84	$6'/m$		hexagonal	C_{6h}	III
23.4.85	MPG:23.4.85	$6/m'$		hexagonal	C_{6h}	III
23.5.86	MPG:23.5.86	$6'/m'$		hexagonal	C_{6h}	III
24.1.87	MPG:24.1.87	622		hexagonal	D_6	I
24.2.88	MPG:24.2.88	6221'		hexagonal	D_6	II
24.3.89	MPG:24.3.89	$6'22'$	$6'22'$	hexagonal	D_6	III
24.4.90	MPG:24.4.90	$62'2'$		hexagonal	D_6	III
24.5.149	MPG:24.5.149	$6'22'$	$6'2'2$	hexagonal	D_6	III
25.1.91	MPG:25.1.91	$6mm$		hexagonal	C_{6v}	I
25.2.92	MPG:25.2.92	$6mm1'$		hexagonal	C_{6v}	II
25.3.93	MPG:25.3.93	$6'mm'$	$6'mm'$	hexagonal	C_{6v}	III
25.4.94	MPG:25.4.94	$6m'm'$		hexagonal	C_{6v}	III
25.5.150	MPG:25.5.150	$6'mm'$	$6'm'm$	hexagonal	C_{6v}	III
26.1.95	MPG:26.1.95	$\bar{6}m2$	$-6m2$	hexagonal	D_{3h}	I
26.2.96	MPG:26.2.96	$\bar{6}m21'$	$-6m21'$	hexagonal	D_{3h}	II
26.3.97	MPG:26.3.97	$\bar{6}'m'2$	$-6'm'2$	hexagonal	D_{3h}	III
26.4.98	MPG:26.4.98	$\bar{6}'m2'$	$-6'm2'$	hexagonal	D_{3h}	III
26.5.99	MPG:26.5.99	$\bar{6}m'2'$	$-6m'2'$	hexagonal	D_{3h}	III
27.1.100	MPG:27.1.100	$6/mmm$		hexagonal	D_{6h}	I
27.2.101	MPG:27.2.101	$6/mmm1'$		hexagonal	D_{6h}	II
27.3.102	MPG:27.3.102	$6/m'mm$		hexagonal	D_{6h}	III
27.4.103	MPG:27.4.103	$6'/mmm'$	$6'/mmm'$	hexagonal	D_{6h}	III
27.5.104	MPG:27.5.104	$6'/m'mm'$	$6'/m'mm'$	hexagonal	D_{6h}	III
27.6.105	MPG:27.6.105	$6/mm'm'$		hexagonal	D_{6h}	III
27.7.106	MPG:27.7.106	$6/m'm'm'$		hexagonal	D_{6h}	III
27.8.156	MPG:27.8.156	$6'/mmm'$	$6'/mm'm$	hexagonal	D_{6h}	III
27.9.157	MPG:27.9.157	$6'/m'mm'$	$6'/m'm'm$	hexagonal	D_{6h}	III
28.1.107	MPG:28.1.107	23		cubic	T	I
28.2.108	MPG:28.2.108	231'		cubic	T	II
29.1.109	MPG:29.1.109	$m\bar{3}$		cubic	T_h	I
29.2.110	MPG:29.2.110	$m\bar{3}1'$		cubic	T_h	II
29.3.111	MPG:29.3.111	$m'\bar{3}'$		cubic	T_h	III
30.1.112	MPG:30.1.112	432		cubic	O	I
30.2.113	MPG:30.2.113	4321'		cubic	O	II
30.3.114	MPG:30.3.114	4'32'		cubic	O	III
31.1.115	MPG:31.1.115	$\bar{4}3m$		cubic	T_d	I
31.2.116	MPG:31.2.116	$\bar{4}3m1'$		cubic	T_d	II
31.3.117	MPG:31.3.117	$\bar{4}'3m'$		cubic	T_d	III

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ID	tag	international	setting	crystal	PG	type
32.1.118	MPG:32.1.118	$m\bar{3}m$		cubic	O_h	I
32.2.119	MPG:32.2.119	$m\bar{3}m1'$		cubic	O_h	II
32.3.120	MPG:32.3.120	$m'\bar{3}'m$		cubic	O_h	III
32.4.121	MPG:32.4.121	$m\bar{3}m'$		cubic	O_h	III
32.5.122	MPG:32.5.122	$m'\bar{3}'m'$		cubic	O_h	III
33.1.131	MPG:33.1.131	$\bar{4}2m$	$-4m2$	tetragonal	$D_{2d}(1)$	I
33.2.132	MPG:33.2.132	$\bar{4}2m1'$	$-4m21'$	tetragonal	$D_{2d}(1)$	II
33.3.133	MPG:33.3.133	$\bar{4}'2'm$	$-4'm2'$	tetragonal	$D_{2d}(1)$	III
33.4.134	MPG:33.4.134	$\bar{4}'2m'$	$-4'm'2$	tetragonal	$D_{2d}(1)$	III
33.5.135	MPG:33.5.135	$\bar{4}2'm'$	$-4m'2'$	tetragonal	$D_{2d}(1)$	III
34.1.138	MPG:34.1.138	32	312	trigonal	$D_3(1)$	I
34.2.139	MPG:34.2.139	321'	3121'	trigonal	$D_3(1)$	II
34.3.140	MPG:34.3.140	32'	312'	trigonal	$D_3(1)$	III
35.1.141	MPG:35.1.141	3m	31m	trigonal	$C_{3v}(1)$	I
35.2.142	MPG:35.2.142	3m1'	31m1'	trigonal	$C_{3v}(1)$	II
35.3.143	MPG:35.3.143	3m'	31m'	trigonal	$C_{3v}(1)$	III
36.1.144	MPG:36.1.144	$\bar{3}m$	$-31m$	trigonal	$D_{3d}(1)$	I
36.2.145	MPG:36.2.145	$\bar{3}m1'$	$-31m1'$	trigonal	$D_{3d}(1)$	II
36.3.146	MPG:36.3.146	$\bar{3}'m$	$-3'1m$	trigonal	$D_{3d}(1)$	III
36.4.147	MPG:36.4.147	$\bar{3}'m'$	$-3'1m'$	trigonal	$D_{3d}(1)$	III
36.5.148	MPG:36.5.148	$\bar{3}m'$	$-31m'$	trigonal	$D_{3d}(1)$	III
37.1.151	MPG:37.1.151	$\bar{6}m2$	$-62m$	hexagonal	$D_{3h}(1)$	I
37.2.152	MPG:37.2.152	$\bar{6}m21'$	$-62m1'$	hexagonal	$D_{3h}(1)$	II
37.3.153	MPG:37.3.153	$\bar{6}'m'2$	$-6'2m'$	hexagonal	$D_{3h}(1)$	III
37.4.154	MPG:37.4.154	$\bar{6}'m'2'$	$-6'2'm$	hexagonal	$D_{3h}(1)$	III
37.5.155	MPG:37.5.155	$\bar{6}m'2'$	$-62'm'$	hexagonal	$D_{3h}(1)$	III