SG No. 214 O^8 $I4_132$ [cubic]

* plus set: $+[0,\ 0,\ 0]$, $+\left[\frac{1}{2},\ \frac{1}{2},\ \frac{1}{2}\right]$

Table 1: Wyckoff site: `8a`, site symmetry: `.32`

No.	position	mapping
1	$\left[\frac{1}{8},\ \frac{1}{8},\ \frac{1}{8}\right]$	`[1,5,9,14,19,24]`
2	$\left[\frac{3}{8},\ \frac{7}{8},\ \frac{5}{8}\right]$	`[2,7,12,13,17,21]`
3	$\left[\frac{7}{8},\ \frac{5}{8},\ \frac{3}{8}\right]$	`[3,8,10,15,20,22]`
4	$\left[\frac{5}{8},\ \frac{3}{8},\ \frac{7}{8}\right]$	`[4,6,11,16,18,23]`

Table 2: Wyckoff site: `8b`, site symmetry: `.32`

No.	position	mapping
1	$\left[\frac{7}{8},\ \frac{7}{8},\ \frac{7}{8}\right]$	`[1,5,9,14,19,24]`
2	$\left[\frac{5}{8},\ \frac{1}{8},\ \frac{3}{8}\right]$	`[2,7,12,13,17,21]`
3	$\left[\frac{1}{8},\ \frac{3}{8},\ \frac{5}{8}\right]$	`[3,8,10,15,20,22]`
4	$\left[\frac{3}{8},\ \frac{5}{8},\ \frac{1}{8}\right]$	`[4,6,11,16,18,23]`

Table 3: Wyckoff site: `12c`, site symmetry: `2.22`

No.	position	mapping
1	$\left[\frac{1}{8},\ 0,\ \frac{1}{4}\right]$	`[1,4,18,19]`
2	$\left[\frac{3}{8},\ 0,\ \frac{3}{4}\right]$	`[2,3,17,20]`
3	$\left[\frac{1}{4},\ \frac{1}{8},\ 0\right]$	`[5,8,14,15]`
4	$\left[\frac{3}{4},\ \frac{3}{8},\ 0\right]$	`[6,7,13,16]`
5	$\left[0,\ \frac{1}{4},\ \frac{1}{8}\right]$	`[9,12,21,24]`
6	$\left[0,\ \frac{3}{4},\ \frac{3}{8}\right]$	`[10,11,22,23]`

Table 4: Wyckoff site: `12d`, site symmetry: `2.22`

No.	position	mapping
1	$\left[\frac{5}{8},\ 0,\ \frac{1}{4}\right]$	`[1,4,18,19]`
2	$\left[\frac{7}{8},\ 0,\ \frac{3}{4}\right]$	`[2,3,17,20]`
3	$\left[\frac{1}{4},\ \frac{5}{8},\ 0\right]$	`[5,8,14,15]`
4	$\left[\frac{3}{4},\ \frac{7}{8},\ 0\right]$	`[6,7,13,16]`
5	$\left[0,\ \frac{1}{4},\ \frac{5}{8}\right]$	`[9,12,21,24]`
6	$\left[0,\ \frac{3}{4},\ \frac{7}{8}\right]$	`[10,11,22,23]`

Table 5: Wyckoff site: `16e`, site symmetry: `.3.`

No.	position	mapping
1	$[x,\ x,\ x]$	`[1,5,9]`
2	$[\frac{1}{2}-x,\ -x,\ x+\frac{1}{2}]$	`[2,7,12]`
3	$[-x,\ x+\frac{1}{2},\ \frac{1}{2}-x]$	`[3,8,10]`
4	$[x+\frac{1}{2},\ \frac{1}{2}-x,\ -x]$	`[4,6,11]`
5	$[x+\frac{3}{4},\ x+\frac{1}{4},\ \frac{1}{4}-x]$	`[13,17,21]`
6	$[\frac{3}{4}-x,\ \frac{3}{4}-x,\ \frac{3}{4}-x]$	`[14,19,24]`
7	$[x+\frac{1}{4},\ \frac{1}{4}-x,\ x+\frac{3}{4}]$	`[15,20,22]`
8	$[\frac{1}{4}-x,\ x+\frac{3}{4},\ x+\frac{1}{4}]$	`[16,18,23]`

Table 6: Wyckoff site: `24f`, site symmetry: `2..`

No.	position	mapping
1	$[x,\ 0,\ \frac{1}{4}]$	`[1,4]`
2	$[\frac{1}{2}-x,\ 0,\ \frac{3}{4}]$	`[2,3]`
3	$[\frac{1}{4},\ x,\ 0]$	`[5,8]`
4	$[\frac{3}{4},\ \frac{1}{2}-x,\ 0]$	`[6,7]`
5	$[0,\ \frac{1}{4},\ x]$	`[9,12]`
6	$[0,\ \frac{3}{4},\ \frac{1}{2}-x]$	`[10,11]`
7	$[\frac{3}{4},\ x+\frac{1}{4},\ 0]$	`[13,16]`
8	$[\frac{3}{4},\ \frac{3}{4}-x,\ \frac{1}{2}]$	`[14,15]`
9	$[x+\frac{3}{4},\ \frac{1}{2},\ \frac{1}{4}]$	`[17,20]`
10	$[\frac{1}{4}-x,\ 0,\ \frac{1}{4}]$	`[18,19]`
11	$[0,\ \frac{1}{4},\ \frac{1}{4}-x]$	`[21,24]`
12	$[\frac{1}{2},\ \frac{1}{4},\ x+\frac{3}{4}]$	`[22,23]`

Table 7: Wyckoff site: `24g`, site symmetry: `..2`

No.	position	mapping
1	$[\frac{1}{8},\ y,\ y+\frac{1}{4}]$	`[1,18]`
2	$[\frac{3}{8},\ -y,\ y+\frac{3}{4}]$	`[2,20]`
3	$[\frac{7}{8},\ y+\frac{1}{2},\ \frac{1}{4}-y]$	`[3,17]`
4	$[\frac{5}{8},\ \frac{1}{2}-y,\ \frac{3}{4}-y]$	`[4,19]`
5	$[y+\frac{1}{4},\ \frac{1}{8},\ y]$	`[5,15]`
6	$[y+\frac{3}{4},\ \frac{3}{8},\ -y]$	`[6,13]`
7	$[\frac{1}{4}-y,\ \frac{7}{8},\ y+\frac{1}{2}]$	`[7,16]`
8	$[\frac{3}{4}-y,\ \frac{5}{8},\ \frac{1}{2}-y]$	`[8,14]`
9	$[y,\ y+\frac{1}{4},\ \frac{1}{8}]$	`[9,21]`
10	$[-y,\ y+\frac{3}{4},\ \frac{3}{8}]$	`[10,23]`
11	$[y+\frac{1}{2},\ \frac{1}{4}-y,\ \frac{7}{8}]$	`[11,22]`
12	$[\frac{1}{2}-y,\ \frac{3}{4}-y,\ \frac{5}{8}]$	`[12,24]`

Table 8: Wyckoff site: `24h`, site symmetry: `..2`

No.	position	mapping
1	$\left[\frac{1}{8},\ y,\ \frac{1}{4}-y\right]$	`[1,19]`
2	$\left[\frac{3}{8},\ -y,\ \frac{3}{4}-y\right]$	`[2,17]`
3	$\left[\frac{7}{8},\ y+\frac{1}{2},\ y+\frac{1}{4}\right]$	`[3,20]`
4	$\left[\frac{5}{8},\ \frac{1}{2}-y,\ y+\frac{3}{4}\right]$	`[4,18]`
5	$\left[\frac{1}{4}-y,\ \frac{1}{8},\ y\right]$	`[5,14]`
6	$\left[\frac{3}{4}-y,\ \frac{3}{8},\ -y\right]$	`[6,16]`
7	$\left[y+\frac{1}{4},\ \frac{7}{8},\ y+\frac{1}{2}\right]$	`[7,13]`
8	$\left[y+\frac{3}{4},\ \frac{5}{8},\ \frac{1}{2}-y\right]$	`[8,15]`
9	$\left[y,\ \frac{1}{4}-y,\ \frac{1}{8}\right]$	`[9,24]`
10	$\left[-y,\ \frac{3}{4}-y,\ \frac{3}{8}\right]$	`[10,22]`
11	$\left[y+\frac{1}{2},\ y+\frac{1}{4},\ \frac{7}{8}\right]$	`[11,23]`
12	$\left[\frac{1}{2}-y,\ y+\frac{3}{4},\ \frac{5}{8}\right]$	`[12,21]`

Table 9: Wyckoff site: `48i`, site symmetry: `1`

No.	position	mapping
1	$[x,\ y,\ z]$	`[1]`
2	$\left[\frac{1}{2}-x,\ -y,\ z+\frac{1}{2}\right]$	`[2]`
3	$\left[-x,\ y+\frac{1}{2},\ \frac{1}{2}-z\right]$	`[3]`
4	$\left[x+\frac{1}{2},\ \frac{1}{2}-y,\ -z\right]$	`[4]`
5	$[z,\ x,\ y]$	`[5]`
6	$\left[z+\frac{1}{2},\ \frac{1}{2}-x,\ -y\right]$	`[6]`
7	$\left[\frac{1}{2}-z,\ -x,\ y+\frac{1}{2}\right]$	`[7]`
8	$\left[-z,\ x+\frac{1}{2},\ \frac{1}{2}-y\right]$	`[8]`
9	$[y,\ z,\ x]$	`[9]`
10	$\left[-y,\ z+\frac{1}{2},\ \frac{1}{2}-x\right]$	`[10]`
11	$\left[y+\frac{1}{2},\ \frac{1}{2}-z,\ -x\right]$	`[11]`
12	$\left[\frac{1}{2}-y,\ -z,\ x+\frac{1}{2}\right]$	`[12]`
13	$\left[y+\frac{3}{4},\ x+\frac{1}{4},\ \frac{1}{4}-z\right]$	`[13]`
14	$\left[\frac{3}{4}-y,\ \frac{3}{4}-x,\ \frac{3}{4}-z\right]$	`[14]`
15	$\left[y+\frac{1}{4},\ \frac{1}{4}-x,\ z+\frac{3}{4}\right]$	`[15]`
16	$\left[\frac{1}{4}-y,\ x+\frac{3}{4},\ z+\frac{1}{4}\right]$	`[16]`
17	$\left[x+\frac{3}{4},\ z+\frac{1}{4},\ \frac{1}{4}-y\right]$	`[17]`
18	$\left[\frac{1}{4}-x,\ z+\frac{3}{4},\ y+\frac{1}{4}\right]$	`[18]`
19	$\left[\frac{3}{4}-x,\ \frac{3}{4}-z,\ \frac{3}{4}-y\right]$	`[19]`
20	$\left[x+\frac{1}{4},\ \frac{1}{4}-z,\ y+\frac{3}{4}\right]$	`[20]`
21	$\left[z+\frac{3}{4},\ y+\frac{1}{4},\ \frac{1}{4}-x\right]$	`[21]`
22	$\left[z+\frac{1}{4},\ \frac{1}{4}-y,\ x+\frac{3}{4}\right]$	`[22]`
23	$\left[\frac{1}{4}-z,\ y+\frac{3}{4},\ x+\frac{1}{4}\right]$	`[23]`
24	$\left[\frac{3}{4}-z,\ \frac{3}{4}-y,\ \frac{3}{4}-x\right]$	`[24]`