MSG No. 96.150 $P_I4_32_12$ [Type IV, tetragonal]

Table 1: Wyckoff site: `4a`, site symmetry: `2.22`

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

Table 2: Wyckoff site: `4b`, site symmetry: `2.22`

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

Table 3: Wyckoff site: `8c`, site symmetry: `2'..`

No.	position	mapping
1	$\left[\frac{3}{4}, \frac{1}{4}, z\right]$	`[1,14]`
2	$\left[\frac{1}{4}, \frac{1}{4}, z+\frac{3}{4}\right]$	`[2,11]`
3	$\left[\frac{3}{4}, \frac{3}{4}, z+\frac{1}{4}\right]$	`[3,10]`
4	$\left[\frac{1}{4}, \frac{1}{4}, \frac{1}{4}-z\right]$	`[4,13]`
5	$\left[\frac{3}{4}, \frac{3}{4}, \frac{3}{4}-z\right]$	`[5,12]`
6	$\left[\frac{1}{4}, \frac{3}{4}, z+\frac{1}{2}\right]$	`[6,9]`
7	$\left[\frac{1}{4}, \frac{3}{4}, -z\right]$	`[7,16]`
8	$\left[\frac{3}{4}, \frac{1}{4}, \frac{1}{2}-z\right]$	`[8,15]`

Table 4: Wyckoff site: `8d`, site symmetry: `..2'`

No.	position	mapping
1	$\left[x, x+\frac{1}{2}, \frac{3}{4}\right]$	`[1,15]`
2	$\left[-x, x+\frac{1}{2}, \frac{1}{2}\right]$	`[2,13]`
3	$\left[x, \frac{1}{2}-x, 0\right]$	`[3,12]`
4	$\left[x+\frac{1}{2}, -x, \frac{1}{2}\right]$	`[4,11]`
5	$\left[\frac{1}{2}-x, x, 0\right]$	`[5,10]`
6	$\left[-x, \frac{1}{2}-x, \frac{1}{4}\right]$	`[6,16]`
7	$\left[x+\frac{1}{2}, x, \frac{1}{4}\right]$	`[7,9]`
8	$\left[\frac{1}{2}-x, -x, \frac{3}{4}\right]$	`[8,14]`

Table 5: Wyckoff site: `8e`, site symmetry: `..2`

No.	position	mapping
1	$\left[x,\ -x,\ \frac{3}{4}\right]$	`[1,8]`
2	$\left[x+\frac{1}{2},\ x+\frac{1}{2},\ \frac{1}{2}\right]$	`[2,4]`
3	$\left[\frac{1}{2}-x,\ \frac{1}{2}-x,\ 0\right]$	`[3,5]`
4	$\left[-x,\ x,\ \frac{1}{4}\right]$	`[6,7]`
5	$\left[x+\frac{1}{2},\ \frac{1}{2}-x,\ \frac{1}{4}\right]$	`[9,16]`
6	$[x,\ x,\ 0]$	`[10,12]`
7	$\left[-x,\ -x,\ \frac{1}{2}\right]$	`[11,13]`
8	$\left[\frac{1}{2}-x,\ x+\frac{1}{2},\ \frac{3}{4}\right]$	`[14,15]`

Table 6: Wyckoff site: `8f`, site symmetry: `.2'.`

No.	position	mapping
1	$\left[x,\ \frac{1}{2},\ \frac{7}{8}\right]$	`[1,12]`
2	$\left[0,\ x+\frac{1}{2},\ \frac{5}{8}\right]$	`[2,15]`
3	$\left[0,\ \frac{1}{2}-x,\ \frac{1}{8}\right]$	`[3,16]`
4	$\left[x+\frac{1}{2},\ 0,\ \frac{3}{8}\right]$	`[4,9]`
5	$\left[\frac{1}{2}-x,\ 0,\ \frac{7}{8}\right]$	`[5,14]`
6	$\left[-x,\ \frac{1}{2},\ \frac{3}{8}\right]$	`[6,13]`
7	$\left[\frac{1}{2},\ x,\ \frac{1}{8}\right]$	`[7,10]`
8	$\left[\frac{1}{2},\ -x,\ \frac{5}{8}\right]$	`[8,11]`

Table 7: Wyckoff site: `16g`, site symmetry: `1`

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