MSG No. 86.71 $P4_2'/n'$ [Type III, tetragonal]

Table 1: Wyckoff site: `2a`, site symmetry: `-4..`

No.	position	mapping
1	$\left[\frac{1}{4}, \frac{1}{4}, \frac{1}{4}\right]$	`[1,2,3,4]`
2	$\left[\frac{3}{4}, \frac{3}{4}, \frac{3}{4}\right]$	`[5,6,7,8]`

Table 2: Wyckoff site: `2b`, site symmetry: `-4..`

No.	position	mapping
1	$\left[\frac{1}{4}, \frac{1}{4}, \frac{3}{4}\right]$	`[1,2,3,4]`
2	$\left[\frac{3}{4}, \frac{3}{4}, \frac{1}{4}\right]$	`[5,6,7,8]`

Table 3: Wyckoff site: `4c`, site symmetry: `-1'`

No.	position	mapping
1	$[0, 0, 0]$	`[1,7]`
2	$\left[\frac{1}{2}, \frac{1}{2}, 0\right]$	`[2,8]`
3	$\left[0, \frac{1}{2}, \frac{1}{2}\right]$	`[3,5]`
4	$\left[\frac{1}{2}, 0, \frac{1}{2}\right]$	`[4,6]`

Table 4: Wyckoff site: `4d`, site symmetry: `-1'`

No.	position	mapping
1	$\left[0, 0, \frac{1}{2}\right]$	`[1,7]`
2	$\left[\frac{1}{2}, \frac{1}{2}, \frac{1}{2}\right]$	`[2,8]`
3	$\left[0, \frac{1}{2}, 0\right]$	`[3,5]`
4	$\left[\frac{1}{2}, 0, 0\right]$	`[4,6]`

Table 5: Wyckoff site: `4e`, site symmetry: `2..`

No.	position	mapping
1	$\left[\frac{3}{4}, \frac{1}{4}, z\right]$	`[1,2]`
2	$\left[\frac{1}{4}, \frac{3}{4}, \frac{1}{2} - z\right]$	`[3,4]`
3	$\left[\frac{3}{4}, \frac{1}{4}, z + \frac{1}{2}\right]$	`[5,6]`
4	$\left[\frac{1}{4}, \frac{3}{4}, -z\right]$	`[7,8]`

Table 6: Wyckoff site: `4f`, site symmetry: `2..`

No.	position	mapping
1	$\left[\frac{1}{4},\ \frac{1}{4},\ z\right]$	`[1,2]`
2	$\left[\frac{1}{4},\ \frac{1}{4},\ \frac{1}{2}-z\right]$	`[3,4]`
3	$\left[\frac{3}{4},\ \frac{3}{4},\ z+\frac{1}{2}\right]$	`[5,6]`
4	$\left[\frac{3}{4},\ \frac{3}{4},\ -z\right]$	`[7,8]`

Table 7: Wyckoff site: `8g`, site symmetry: `1`

No.	position	mapping
1	$[x,\ y,\ z]$	`[1]`
2	$\left[\frac{1}{2}-x,\ \frac{1}{2}-y,\ z\right]$	`[2]`
3	$\left[y,\ \frac{1}{2}-x,\ \frac{1}{2}-z\right]$	`[3]`
4	$\left[\frac{1}{2}-y,\ x,\ \frac{1}{2}-z\right]$	`[4]`
5	$\left[-y,\ x+\frac{1}{2},\ z+\frac{1}{2}\right]$	`[5]`
6	$\left[y+\frac{1}{2},\ -x,\ z+\frac{1}{2}\right]$	`[6]`
7	$[-x,\ -y,\ -z]$	`[7]`
8	$\left[x+\frac{1}{2},\ y+\frac{1}{2},\ -z\right]$	`[8]`