MSG No. 149.24 P_c312 [Type IV, trigonal]

Table 1: Wyckoff site: `2a`, site symmetry: `3.2`

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

Table 2: Wyckoff site: `2b`, site symmetry: `3.2'`

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

Table 3: Wyckoff site: `2c`, site symmetry: `3.2`

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

Table 4: Wyckoff site: `2d`, site symmetry: `3.2'`

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

Table 5: Wyckoff site: `2e`, site symmetry: `3.2`

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

Table 6: Wyckoff site: `2f`, site symmetry: `3.2'`

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

Table 7: Wyckoff site: `4g`, site symmetry: `3..`

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

Table 8: Wyckoff site: `4h`, site symmetry: `3..`

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

Table 9: Wyckoff site: `4i`, site symmetry: `3..`

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

Table 10: Wyckoff site: `6j`, site symmetry: `..2`

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

Table 11: Wyckoff site: `6k`, site symmetry: `..2'`

No.	position	mapping
1	$\left[x,\ -x,\ \frac{1}{4}\right]$	`[1,12]`
2	$\left[x,\ 2x,\ \frac{1}{4}\right]$	`[2,10]`

continued ...

Table 11

No.	position	mapping
3	$\left[-2x,\ -x,\ \frac{1}{4}\right]$	[3,11]
4	$\left[x,\ 2x,\ \frac{3}{4}\right]$	[4,8]
5	$\left[-2x,\ -x,\ \frac{3}{4}\right]$	[5,9]
6	$\left[x,\ -x,\ \frac{3}{4}\right]$	[6,7]

Table 12: Wyckoff site: 121, site symmetry: 1

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