MSG No. 182.183 $P6_32'2'$ [Type III, hexagonal]

Table 1: Wyckoff site: 2a, site symmetry: 32'.

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

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

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

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

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

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

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

Table 5: Wyckoff site: 4e, site symmetry: 3..

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

Table 6: Wyckoff site: `4f`, site symmetry: `3..`

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

Table 7: Wyckoff site: `6g`, site symmetry: `.2'.`

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

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

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

Table 9: Wyckoff site: `12i`, site symmetry: `1`

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

continued ...

Table 9

No.	position	mapping
12	$\left[-y,\, -x,\, \frac{1}{2}-z\right]$	[12]