MSG No. 187.210 $P\bar{6}m21'$ [Type II, hexagonal]

Table 1: Wyckoff site: `1a`, site symmetry: `-6m21'`

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

Table 2: Wyckoff site: `1b`, site symmetry: `-6m21'`

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

Table 3: Wyckoff site: `1c`, site symmetry: `-6m21'`

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

Table 4: Wyckoff site: `1d`, site symmetry: `-6m21'`

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

Table 5: Wyckoff site: `1e`, site symmetry: `-6m21'`

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

Table 6: Wyckoff site: `1f`, site symmetry: `-6m21'`

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

Table 7: Wyckoff site: 2g, site symmetry: 3m.1'

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

Table 8: Wyckoff site: 2h, site symmetry: 3m.1'

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

Table 9: Wyckoff site: 2i, site symmetry: 3m.1'

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

Table 10: Wyckoff site: 3j, site symmetry: mm21'

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

Table 11: Wyckoff site: 3k, site symmetry: mm21'

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

Table 12: Wyckoff site: 6l, site symmetry: m..1'

No.	position	mapping
1	$[x,\ y,\ 0]$	[1,8,13,20]
2	$[-y,\ x-y,\ 0]$	[2,9,14,21]

continued ...

Table 12

No.	position	mapping
3	$[-x+y,\ -x,\ 0]$	[3,7,15,19]
4	$[x,\ x-y,\ 0]$	[4,12,16,24]
5	$[-x+y,\ y,\ 0]$	[5,10,17,22]
6	$[-y,\ -x,\ 0]$	[6,11,18,23]

Table 13: Wyckoff site: 6m, site symmetry: m..1'

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

Table 14: Wyckoff site: 6n, site symmetry: .m.1'

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

Table 15: Wyckoff site: 12o, site symmetry: 11'

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

continued ...

Table 15

No.	position	mapping
12	$[x,\, x-y,\, z]$	`[12,24]`