MSG No. 195.1 $P23$ [Type I, cubic]

Table 1: Wyckoff site: `1a`, site symmetry: `23.`

No.	position	mapping
1	[0, 0, 0]	`[1,2,3,4,5,6,7,8,9,10,11,12]`

Table 2: Wyckoff site: `1b`, site symmetry: `23.`

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

Table 3: Wyckoff site: `3c`, site symmetry: `222..`

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

Table 4: Wyckoff site: `3d`, site symmetry: `222..`

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

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

No.	position	mapping
1	$[x, x, x]$	`[1,5,6]`
2	$[x, -x, -x]$	`[2,10,11]`
3	$[-x, x, -x]$	`[3,7,12]`
4	$[-x, -x, x]$	`[4,8,9]`

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

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

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

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

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

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

Table 9: Wyckoff site: `6i`, site symmetry: `2..`

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

Table 10: Wyckoff site: `12j`, site symmetry: `1`

No.	position	mapping
1	$[x,\ y,\ z]$	`[1]`
2	$[x,\ -y,\ -z]$	`[2]`
3	$[-x,\ y,\ -z]$	`[3]`
4	$[-x,\ -y,\ z]$	`[4]`
5	$[z,\ x,\ y]$	`[5]`
6	$[y,\ z,\ x]$	`[6]`
7	$[-y,\ z,\ -x]$	`[7]`
8	$[-z,\ -x,\ y]$	`[8]`
9	$[-y,\ -z,\ x]$	`[9]`
10	$[z,\ -x,\ -y]$	`[10]`
11	$[y,\ -z,\ -x]$	`[11]`
12	$[-z,\ x,\ -y]$	`[12]`