MSG No. 149.22 $P3121'$ [Type II, trigonal]

Table 1: Wyckoff site: `1a`, site symmetry: `3.21'`

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: `3.21'`

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

Table 3: Wyckoff site: `1c`, site symmetry: `3.21'`

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]`

Table 4: Wyckoff site: `1d`, site symmetry: `3.21'`

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]`

Table 5: Wyckoff site: `1e`, site symmetry: `3.21'`

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]`

Table 6: Wyckoff site: `1f`, site symmetry: `3.21'`

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]`

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

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

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

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

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

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

Table 10: Wyckoff site: 3j, site symmetry: ..21'

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

Table 11: Wyckoff site: 3k, site symmetry: ..21'

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

Table 12: Wyckoff site: 6l, site symmetry: 11'

No.	position	mapping
1	$[x,\ y,\ z]$	[1,7]
2	$[-y,\ x-y,\ z]$	[2,8]

continued ...

Table 12

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