SG No. 175 C_{6h}^{1} $P6/m$ [hexagonal]

* plus set: $+[0, 0, 0]$

Table 1: Wyckoff site: `1a`, site symmetry: `6/m..`

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: `6/m..`

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: `2c`, site symmetry: `-6..`

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

Table 4: Wyckoff site: `2d`, site symmetry: `-6..`

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

Table 5: Wyckoff site: `2e`, site symmetry: `6..`

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

Table 6: Wyckoff site: `3f`, site symmetry: `2/m..`

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

3	$\left[\frac{1}{2}, \frac{1}{2}, 0\right]$	`[3,6,9,12]`

Table 7: Wyckoff site: `3g`, site symmetry: `2/m..`

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

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	$\left[\frac{2}{3}, \frac{1}{3}, z\right]$	`[4,5,6]`
3	$\left[\frac{2}{3}, \frac{1}{3}, -z\right]$	`[7,8,9]`
4	$\left[\frac{1}{3}, \frac{2}{3}, -z\right]$	`[10,11,12]`

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

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

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

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

Table 11: Wyckoff site: `6k`, site symmetry: `m..`

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

Table 12: Wyckoff site: `12l`, site symmetry: `1`

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