SG No. 147 C_{3i}^{1} $P\bar{3}$ [trigonal]

* plus set: $+[0, 0, 0]$
* Wyckoff site: `1a`, site symmetry: `-3..`

Table 1: Wyckoff bond: `1a@1a`

No.	vector	center	mapping
1	$[0, 0, Z]$	$[0, 0, 0]$	`[1,2,3,-4,-5,-6]`

Table 2: Wyckoff bond: `3b@1a`

No.	vector	center	mapping
1	$[X, Y, Z]$	$[0, 0, 0]$	`[1,-4]`
2	$[-Y, X-Y, Z]$	$[0, 0, 0]$	`[2,-5]`
3	$[-X+Y, -X, Z]$	$[0, 0, 0]$	`[3,-6]`

* Wyckoff site: `1b`, site symmetry: `-3..`

Table 3: Wyckoff bond: `1a@1b`

No.	vector	center	mapping
1	$[0, 0, Z]$	$\left[0, 0, \frac{1}{2}\right]$	`[1,2,3,-4,-5,-6]`

Table 4: Wyckoff bond: `3b@1b`

No.	vector	center	mapping
1	$[X, Y, Z]$	$\left[0, 0, \frac{1}{2}\right]$	`[1,-4]`
2	$[-Y, X-Y, Z]$	$\left[0, 0, \frac{1}{2}\right]$	`[2,-5]`
3	$[-X+Y, -X, Z]$	$\left[0, 0, \frac{1}{2}\right]$	`[3,-6]`

* Wyckoff site: `2c`, site symmetry: `3..`

Table 5: Wyckoff bond: `2a@2c`

No.	vector	center	mapping
1	$[0, 0, Z]$	$[0, 0, z]$	`[1,2,3]`
2	$[0, 0, -Z]$	$[0, 0, -z]$	`[4,5,6]`

Table 6: Wyckoff bond: `6b@2c`

No.	vector	center	mapping
1	$[X, Y, Z]$	$[0, 0, z]$	`[1]`
2	$[-Y, X-Y, Z]$	$[0, 0, z]$	`[2]`
3	$[-X+Y, -X, Z]$	$[0, 0, z]$	`[3]`
4	$[-X, -Y, -Z]$	$[0, 0, -z]$	`[4]`
5	$[Y, -X+Y, -Z]$	$[0, 0, -z]$	`[5]`
6	$[X-Y, X, -Z]$	$[0, 0, -z]$	`[6]`

* Wyckoff site: `2d`, site symmetry: `3..`

Table 7: Wyckoff bond: `2a@2d`

No.	vector	center	mapping
1	$[0, 0, Z]$	$\left[\frac{1}{3}, \frac{2}{3}, z\right]$	`[1,2,3]`
2	$[0, 0, -Z]$	$\left[\frac{2}{3}, \frac{1}{3}, -z\right]$	`[4,5,6]`

Table 8: Wyckoff bond: `6b@2d`

No.	vector	center	mapping
1	$[X, Y, Z]$	$\left[\frac{1}{3}, \frac{2}{3}, z\right]$	`[1]`
2	$[-Y, X-Y, Z]$	$\left[\frac{1}{3}, \frac{2}{3}, z\right]$	`[2]`
3	$[-X+Y, -X, Z]$	$\left[\frac{1}{3}, \frac{2}{3}, z\right]$	`[3]`
4	$[-X, -Y, -Z]$	$\left[\frac{2}{3}, \frac{1}{3}, -z\right]$	`[4]`
5	$[Y, -X+Y, -Z]$	$\left[\frac{2}{3}, \frac{1}{3}, -z\right]$	`[5]`
6	$[X-Y, X, -Z]$	$\left[\frac{2}{3}, \frac{1}{3}, -z\right]$	`[6]`

* Wyckoff site: `3e`, site symmetry: `-1`

Table 9: Wyckoff bond: `3a@3e`

No.	vector	center	mapping
1	$[X, Y, Z]$	$\left[\frac{1}{2}, 0, 0\right]$	`[1,-4]`
2	$[-Y, X-Y, Z]$	$\left[0, \frac{1}{2}, 0\right]$	`[2,-5]`
3	$[-X+Y, -X, Z]$	$\left[\frac{1}{2}, \frac{1}{2}, 0\right]$	`[3,-6]`

* Wyckoff site: `3f`, site symmetry: `-1`

Table 10: Wyckoff bond: `3a@3f`

No.	vector	center	mapping
1	$[X, Y, Z]$	$[\frac{1}{2}, 0, \frac{1}{2}]$	`[1,-4]`
2	$[-Y, X-Y, Z]$	$[0, \frac{1}{2}, \frac{1}{2}]$	`[2,-5]`
3	$[-X+Y, -X, Z]$	$[\frac{1}{2}, \frac{1}{2}, \frac{1}{2}]$	`[3,-6]`

* Wyckoff site: `6g`, site symmetry: `1`

Table 11: Wyckoff bond: `6a@6g`

No.	vector	center	mapping
1	$[X, Y, Z]$	$[x, y, z]$	`[1]`
2	$[-Y, X-Y, Z]$	$[-y, x-y, z]$	`[2]`
3	$[-X+Y, -X, Z]$	$[-x+y, -x, z]$	`[3]`
4	$[-X, -Y, -Z]$	$[-x, -y, -z]$	`[4]`
5	$[Y, -X+Y, -Z]$	$[y, -x+y, -z]$	`[5]`
6	$[X-Y, X, -Z]$	$[x-y, x, -z]$	`[6]`