SG No. 210 O^4 $F4_132$ [cubic]

* plus set: $+[0,\,0,\,0]$, $+\left[0,\,\frac{1}{2},\,\frac{1}{2}\right]$, $+\left[\frac{1}{2},\,0,\,\frac{1}{2}\right]$, $+\left[\frac{1}{2},\,\frac{1}{2},\,0\right]$
* Wyckoff site: `8a`, site symmetry: `23.`

Table 1: Wyckoff bond: `24a@8a`

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

Table 2: Wyckoff bond: `32b@8a`

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

Table 3: Wyckoff bond: `48c@8a`

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

Table 4: Wyckoff bond: `96d@8a`

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

* Wyckoff site: `8b`, site symmetry: `23.`

Table 5: Wyckoff bond: `24a@8b`

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

Table 6: Wyckoff bond: `32b@8b`

No.	vector	center	mapping
1	$[X, X, X]$	$[\frac{1}{2}, \frac{1}{2}, \frac{1}{2}]$	`[1,5,9]`
2	$[-X, -X, X]$	$[\frac{1}{2}, \frac{1}{2}, \frac{1}{2}]$	`[2,7,12]`

continued ...

Table 6

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

Table 7: Wyckoff bond: `48c@8b`

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

Table 8: Wyckoff bond: `96d@8b`

No.	vector	center	mapping
1	$[X, Y, Z]$	$\left[\frac{1}{2}, \frac{1}{2}, \frac{1}{2}\right]$	`[1]`
2	$[-X, -Y, Z]$	$\left[\frac{1}{2}, \frac{1}{2}, \frac{1}{2}\right]$	`[2]`
3	$[-X, Y, -Z]$	$\left[\frac{1}{2}, \frac{1}{2}, \frac{1}{2}\right]$	`[3]`
4	$[X, -Y, -Z]$	$\left[\frac{1}{2}, \frac{1}{2}, \frac{1}{2}\right]$	`[4]`
5	$[Z, X, Y]$	$\left[\frac{1}{2}, \frac{1}{2}, \frac{1}{2}\right]$	`[5]`
6	$[Z, -X, -Y]$	$\left[\frac{1}{2}, \frac{1}{2}, \frac{1}{2}\right]$	`[6]`
7	$[-Z, -X, Y]$	$\left[\frac{1}{2}, \frac{1}{2}, \frac{1}{2}\right]$	`[7]`
8	$[-Z, X, -Y]$	$\left[\frac{1}{2}, \frac{1}{2}, \frac{1}{2}\right]$	`[8]`
9	$[Y, Z, X]$	$\left[\frac{1}{2}, \frac{1}{2}, \frac{1}{2}\right]$	`[9]`
10	$[-Y, Z, -X]$	$\left[\frac{1}{2}, \frac{1}{2}, \frac{1}{2}\right]$	`[10]`
11	$[Y, -Z, -X]$	$\left[\frac{1}{2}, \frac{1}{2}, \frac{1}{2}\right]$	`[11]`
12	$[-Y, -Z, X]$	$\left[\frac{1}{2}, \frac{1}{2}, \frac{1}{2}\right]$	`[12]`
13	$[Y, X, -Z]$	$\left[\frac{1}{4}, \frac{3}{4}, \frac{1}{4}\right]$	`[13]`
14	$[-Y, -X, -Z]$	$\left[\frac{1}{4}, \frac{3}{4}, \frac{1}{4}\right]$	`[14]`
15	$[Y, -X, Z]$	$\left[\frac{1}{4}, \frac{3}{4}, \frac{1}{4}\right]$	`[15]`
16	$[-Y, X, Z]$	$\left[\frac{1}{4}, \frac{3}{4}, \frac{1}{4}\right]$	`[16]`

continued ...

Table 8

No.	vector	center	mapping
17	$[X, Z, -Y]$	$\left[\frac{1}{4}, \frac{3}{4}, \frac{1}{4}\right]$	`[17]`
18	$[-X, Z, Y]$	$\left[\frac{1}{4}, \frac{3}{4}, \frac{1}{4}\right]$	`[18]`
19	$[-X, -Z, -Y]$	$\left[\frac{1}{4}, \frac{3}{4}, \frac{1}{4}\right]$	`[19]`
20	$[X, -Z, Y]$	$\left[\frac{1}{4}, \frac{3}{4}, \frac{1}{4}\right]$	`[20]`
21	$[Z, Y, -X]$	$\left[\frac{1}{4}, \frac{3}{4}, \frac{1}{4}\right]$	`[21]`
22	$[Z, -Y, X]$	$\left[\frac{1}{4}, \frac{3}{4}, \frac{1}{4}\right]$	`[22]`
23	$[-Z, Y, X]$	$\left[\frac{1}{4}, \frac{3}{4}, \frac{1}{4}\right]$	`[23]`
24	$[-Z, -Y, -X]$	$\left[\frac{1}{4}, \frac{3}{4}, \frac{1}{4}\right]$	`[24]`

* Wyckoff site: `16c`, site symmetry: `.32`

Table 9: Wyckoff bond: `16a@16c`

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

Table 10: Wyckoff bond: `48b@16c`

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

Table 11: Wyckoff bond: `48c@16c`

No.	vector	center	mapping
1	$[X, -X, 0]$	$\left[\frac{1}{8}, \frac{1}{8}, \frac{1}{8}\right]$	`[1,14]`
2	$[-X, X, 0]$	$\left[\frac{7}{8}, \frac{3}{8}, \frac{5}{8}\right]$	`[2,13]`

continued ...

Table 11

No.	vector	center	mapping
3	$[-X, -X, 0]$	$\left[\frac{3}{8}, \frac{5}{8}, \frac{7}{8}\right]$	[3,15]
4	$[X, X, 0]$	$\left[\frac{5}{8}, \frac{7}{8}, \frac{3}{8}\right]$	[4,16]
5	$[0, X, -X]$	$\left[\frac{1}{8}, \frac{1}{8}, \frac{1}{8}\right]$	[5,24]
6	$[0, -X, X]$	$\left[\frac{5}{8}, \frac{7}{8}, \frac{3}{8}\right]$	[6,23]
7	$[0, -X, -X]$	$\left[\frac{7}{8}, \frac{3}{8}, \frac{5}{8}\right]$	[7,21]
8	$[0, X, X]$	$\left[\frac{3}{8}, \frac{5}{8}, \frac{7}{8}\right]$	[8,22]
9	$[-X, 0, X]$	$\left[\frac{1}{8}, \frac{1}{8}, \frac{1}{8}\right]$	[9,19]
10	$[X, 0, -X]$	$\left[\frac{3}{8}, \frac{5}{8}, \frac{7}{8}\right]$	[10,20]
11	$[-X, 0, -X]$	$\left[\frac{5}{8}, \frac{7}{8}, \frac{3}{8}\right]$	[11,18]
12	$[X, 0, X]$	$\left[\frac{7}{8}, \frac{3}{8}, \frac{5}{8}\right]$	[12,17]

Table 12: Wyckoff bond: 96d@16c

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

* Wyckoff site: 16d, site symmetry: .32

Table 13: Wyckoff bond: `16a@16d`

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

Table 14: Wyckoff bond: `48b@16d`

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

Table 15: Wyckoff bond: `48c@16d`

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

Table 16: Wyckoff bond: `96d@16d`

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

* Wyckoff site: `32e`, site symmetry: `.3.`

Table 17: Wyckoff bond: `32a@32e`

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

Table 18: Wyckoff bond: `96b@32e`

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

* Wyckoff site: `48f`, site symmetry: `2..`

Table 19: Wyckoff bond: `48a@48f`

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

Table 20: Wyckoff bond: `48b@48f`

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

Table 21: Wyckoff bond: `96c@48f`

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

* Wyckoff site: `48g`, site symmetry: `..2`

Table 22: Wyckoff bond: `48a@48g`

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

Table 23: Wyckoff bond: `48b@48g`

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

Table 24: Wyckoff bond: `96c@48g`

No.	vector	center	mapping
1	$[X,\ Y,\ Z]$	$\left[\frac{1}{8},\ y,\ \frac{1}{4}-y\right]$	`[1]`
2	$[-X,\ -Y,\ Z]$	$\left[\frac{7}{8},\ \frac{1}{2}-y,\ \frac{3}{4}-y\right]$	`[2]`
3	$[-X,\ Y,\ -Z]$	$\left[\frac{3}{8},\ y+\frac{1}{2},\ y+\frac{3}{4}\right]$	`[3]`
4	$[X,\ -Y,\ -Z]$	$\left[\frac{5}{8},\ -y,\ y+\frac{1}{4}\right]$	`[4]`
5	$[Z,\ X,\ Y]$	$\left[\frac{1}{4}-y,\ \frac{1}{8},\ y\right]$	`[5]`
6	$[Z,\ -X,\ -Y]$	$\left[\frac{3}{4}-y,\ \frac{7}{8},\ \frac{1}{2}-y\right]$	`[6]`
7	$[-Z,\ -X,\ Y]$	$\left[y+\frac{3}{4},\ \frac{3}{8},\ y+\frac{1}{2}\right]$	`[7]`
8	$[-Z,\ X,\ -Y]$	$\left[y+\frac{1}{4},\ \frac{5}{8},\ -y\right]$	`[8]`
9	$[Y,\ Z,\ X]$	$\left[y,\ \frac{1}{4}-y,\ \frac{1}{8}\right]$	`[9]`

continued ...

Table 24

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

* Wyckoff site: 96h, site symmetry: 1

Table 25: Wyckoff bond: 96a@96h

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