

MSG No. 183.189  $P6m'm'$  [ Type III, hexagonal ]

Table 1: Wyckoff site:  $1a$ , site symmetry:  $6m'm'$

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

Table 2: Wyckoff site:  $2b$ , site symmetry:  $3m'$

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

Table 3: Wyckoff site:  $3c$ , site symmetry:  $2m'm'$

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

Table 4: Wyckoff site:  $6d$ , site symmetry:  $.m'$

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

Table 5: Wyckoff site:  $6e$ , site symmetry:  $.m'$

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

Table 6: Wyckoff site: 12f, site symmetry: 1

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