

MPG No. 12.3.42 $4'22'$ ($4'22'$ setting) [Type III, tetragonal]

 Table 1: Wyckoff site: **1o**, site symmetry: $4'22'$

No.	position	mapping
1	[0, 0, 0]	[1, 2, 3, 4, 5, 6, 7, 8]

 Table 2: Wyckoff site: **2a**, site symmetry: $4'\dots$

No.	position	mapping
1	[0, 0, z]	[1, 4, 6, 7]
2	[0, 0, $-z$]	[2, 3, 5, 8]

 Table 3: Wyckoff site: **4b**, site symmetry: $\dots2'$

No.	position	mapping
1	[x , x , 0]	[1, 8]
2	[$-x$, $-x$, 0]	[4, 5]
3	[$-x$, x , 0]	[3, 6]
4	[x , $-x$, 0]	[2, 7]

 Table 4: Wyckoff site: **4c**, site symmetry: $.2.$

No.	position	mapping
1	[x , 0, 0]	[1, 2]
2	[$-x$, 0, 0]	[3, 4]
3	[0, x , 0]	[6, 8]
4	[0, $-x$, 0]	[5, 7]

 Table 5: Wyckoff site: **8d**, site symmetry: **1**

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

continued ...

Table 5

No.	position	mapping
8	$[-y, -x, -z]$	[5]