General Positions of the Group *P6/mmm* (No. 191)

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No.	(x,y,z) form	Matrix form	Symmetry operation	
			ITA	Seitz
1	x,y,z	$\begin{pmatrix} 1 & 0 & 0 & 0 \\ 0 & 1 & 0 & 0 \\ 0 & 0 & 1 & 0 \end{pmatrix}$	1	{ 1 | 0 }
2	-y,x-y,z	$\begin{pmatrix} 0 & -1 & 0 & 0 \\ 1 & -1 & 0 & 0 \\ 0 & 0 & 1 & 0 \end{pmatrix}$	3^+ 0,0,z	$\{ 3^+_{001} \mid 0 \}$
3	-x+y,-x,z	$\begin{pmatrix} -1 & 1 & 0 & 0 \\ -1 & 0 & 0 & 0 \\ 0 & 0 & 1 & 0 \end{pmatrix}$	3^- 0,0,z	$\{ 3^-_{001} \mid 0 \}$
4	-x,-y,z	$\begin{pmatrix} -1 & 0 & 0 & 0 \\ 0 & -1 & 0 & 0 \\ 0 & 0 & 1 & 0 \end{pmatrix}$	2 0,0,z	$\{ 2_{001} \mid 0 \}$
5	y,-x+y,z	$\begin{pmatrix} 0 & 1 & 0 & 0 \\ -1 & 1 & 0 & 0 \\ 0 & 0 & 1 & 0 \end{pmatrix}$	6^- 0,0,z	$\{ 6^-_{001} \mid 0 \}$
6	x-y,x,z	$\begin{pmatrix} 1 & -1 & 0 & 0 \\ 1 & 0 & 0 & 0 \\ 0 & 0 & 1 & 0 \end{pmatrix}$	6^+ 0,0,z	$\{ 6^+_{001} \mid 0 \}$
7	y,x,-z	$\begin{pmatrix} 0 & 1 & 0 & 0 \\ 1 & 0 & 0 & 0 \\ 0 & 0 & -1 & 0 \end{pmatrix}$	2 x,x,0	$\{ 2_{110} \mid 0 \}$

8	x-y,-y,-z	$\begin{pmatrix} 1 & -1 & 0 & 0 \\ 0 & -1 & 0 & 0 \\ 0 & 0 & -1 & 0 \end{pmatrix}$	2 x,0,0	$\{ 2_{100} \mid 0 \}$
9	-x,-x+y,-z	$\begin{pmatrix} -1 & 0 & 0 & 0 \\ -1 & 1 & 0 & 0 \\ 0 & 0 & -1 & 0 \end{pmatrix}$	2 0,y,0	$\{ 2_{010} \mid 0 \}$
10	-y,-x,-z	$\begin{pmatrix} 0 & -1 & 0 & 0 \\ -1 & 0 & 0 & 0 \\ 0 & 0 & -1 & 0 \end{pmatrix}$	2 x,-x,0	$\{ 2_{1\text{-}10} \mid 0 \}$
11	-x+y,y,-z	$\begin{pmatrix} -1 & 1 & 0 & 0 \\ 0 & 1 & 0 & 0 \\ 0 & 0 & -1 & 0 \end{pmatrix}$	2 x,2x,0	$\{ 2_{120} \mid 0 \}$
12	x,x-y,-z	$\begin{pmatrix} 1 & 0 & 0 & 0 \\ 1 & -1 & 0 & 0 \\ 0 & 0 & -1 & 0 \end{pmatrix}$	2 2x,x,0	$\{ 2_{210} \mid 0 \}$
13	-x,-y,-z	$\begin{pmatrix} -1 & 0 & 0 & 0 \\ 0 & -1 & 0 & 0 \\ 0 & 0 & -1 & 0 \end{pmatrix}$	-1 0,0,0	$\{ -1 \mid 0 \}$
14	y,-x+y,-z	$\begin{pmatrix} 0 & 1 & 0 & 0 \\ -1 & 1 & 0 & 0 \\ 0 & 0 & -1 & 0 \end{pmatrix}$	-3^{+} 0,0,z; 0,0,0	$\{ -3^{+}_{001} \mid 0 \}$
15	x-y,x,-z	$\begin{pmatrix} 1 & -1 & 0 & 0 \\ 1 & 0 & 0 & 0 \\ 0 & 0 & -1 & 0 \end{pmatrix}$	-3^{-} 0,0,z; 0,0,0	$\{ -3^{-}_{001} \mid 0 \}$
16	x,y,-z	$\begin{pmatrix} 1 & 0 & 0 & 0 \\ 0 & 1 & 0 & 0 \\ 0 & 0 & -1 & 0 \end{pmatrix}$	m x,y,0	$\{ m_{001} \mid 0 \}$
17	-y,x-y,-z	$\begin{pmatrix} 0 & -1 & 0 & 0 \\ 1 & -1 & 0 & 0 \\ 0 & 0 & -1 & 0 \end{pmatrix}$	-6^{-} 0,0,z; 0,0,0	$\{ -6^{-}_{001} \mid 0 \}$

18	-x+y,-x,-z	$\begin{pmatrix} -1 & 1 & 0 & 0 \\ -1 & 0 & 0 & 0 \\ 0 & 0 & -1 & 0 \end{pmatrix}$	-6^+ 0,0,z; 0,0,0	$\{ -6^+_{001} \mid 0 \}$
19	-y,-x,z	$\begin{pmatrix} 0 & -1 & 0 & 0 \\ -1 & 0 & 0 & 0 \\ 0 & 0 & 1 & 0 \end{pmatrix}$	m x,-x,z	$\{ m_{110} \mid 0 \}$
20	-x+y,y,z	$\begin{pmatrix} -1 & 1 & 0 & 0 \\ 0 & 1 & 0 & 0 \\ 0 & 0 & 1 & 0 \end{pmatrix}$	m x,2x,z	$\{ m_{100} \mid 0 \}$
21	x,x-y,z	$\begin{pmatrix} 1 & 0 & 0 & 0 \\ 1 & -1 & 0 & 0 \\ 0 & 0 & 1 & 0 \end{pmatrix}$	m 2x,x,z	$\{ m_{010} \mid 0 \}$
22	y,x,z	$\begin{pmatrix} 0 & 1 & 0 & 0 \\ 1 & 0 & 0 & 0 \\ 0 & 0 & 1 & 0 \end{pmatrix}$	m x,x,z	$\{ m_{1\text{-}10} \mid 0 \}$
23	x-y,-y,z	$\begin{pmatrix} 1 & -1 & 0 & 0 \\ 0 & -1 & 0 & 0 \\ 0 & 0 & 1 & 0 \end{pmatrix}$	m x,0,z	$\{ m_{120} \mid 0 \}$
24	-x,-x+y,z	$\begin{pmatrix} -1 & 0 & 0 & 0 \\ -1 & 1 & 0 & 0 \\ 0 & 0 & 1 & 0 \end{pmatrix}$	m 0,y,z	$\{ m_{210} \mid 0 \}$