$Sr_8Os_{6.3}O_{24}$ Structure: A36B11C12_hP118_185_4c4d_a2b2c_ab3c-001

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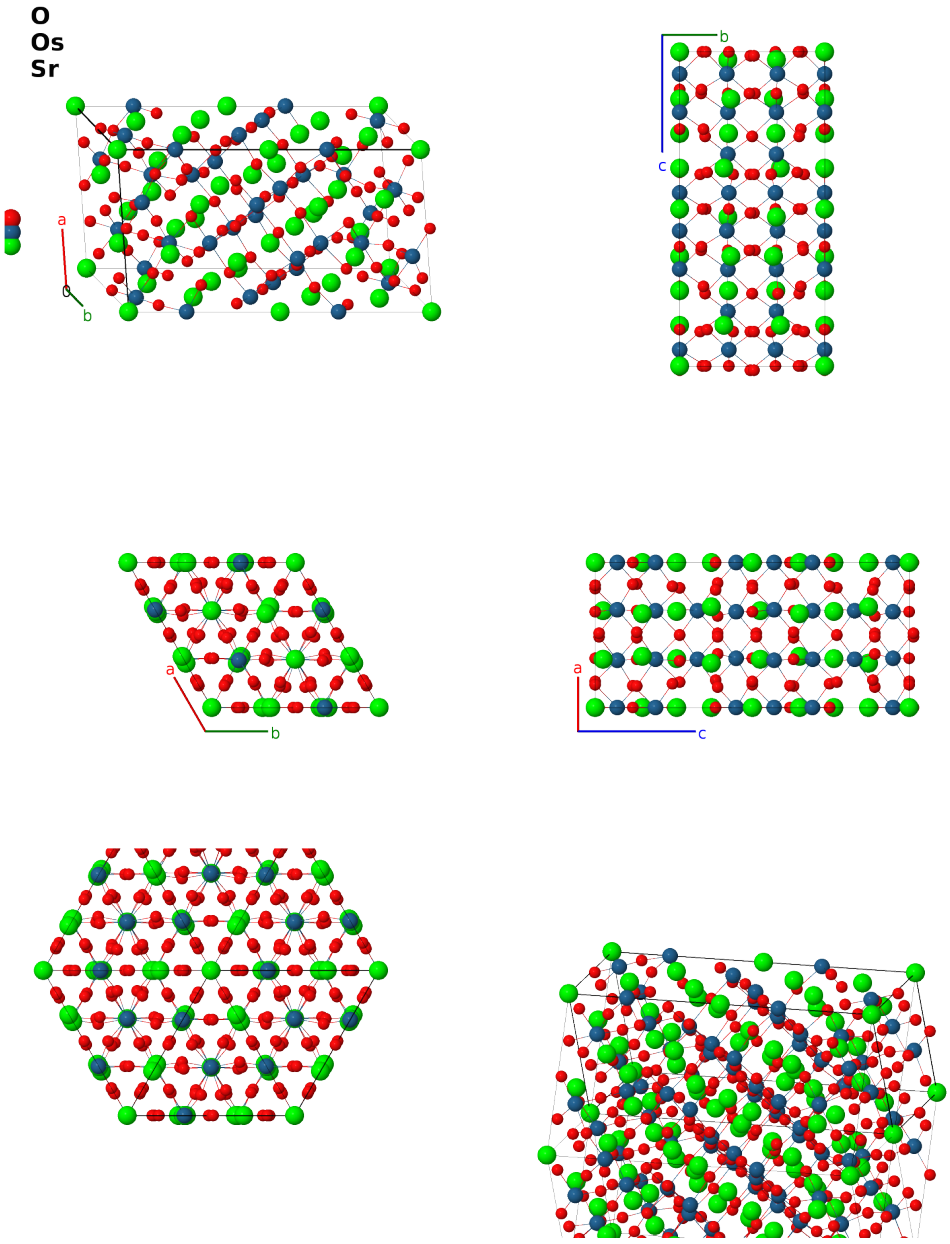
https://aflow.org/prototype-encyclopedia/AL94

https://aflow.org/prototype-encyclopedia/A36B11C12_hP118_185_4c4d_a2b2c_ab3c-001



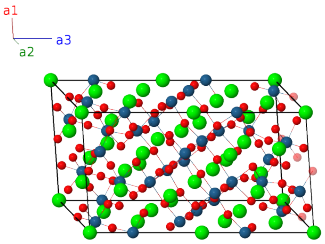
Prototype	$O_{24}Os_{6.3}Sr_8$
AFLOW prototype label	A36B11C12_hP118_185_4c4d_a2b2c_ab3c-001

ICSD	112868
CCDC	2059167
Pearson symbol	hP118
Space group number	185
Space group symbol	$P6_3cm$
AFLOW prototype command	`aflow --proto=A36B11C12_hP118_185_4c4d_a2b2c_ab3c-001 --params=`$a, c/a, z_1, z_2, z_3, z_4, z_5, x_6, z_6, x_7, z_7, x_8, z_8, x_9, z_9, x_{10}, z_{10}, x_{11}, z_{11}, x_{12}, z_{12}, x_{13}, z_{13}, x_{14}, z_{14}, x_{15}, y_{15}, z_{15}, x_{16}, y_{16}, z_{16}, x_{17}, y_{17}, z_{17}, x_{18}, y_{18}, z_{18}$

- The first osmium (4b) site (Os-II) has an occupancy of 93.1%, while the next (4b) site (Os-III) has 27.9% occupancy.
- Space group $P6_3cm$ does not specify the origin of the z axis, we follow (Thakur, 2021) and set $z_2 = 0$ for the Sr-I atom.

Hexagonal primitive vectors

$$\mathbf{a_1} = \frac{1}{2}a\,\hat{\mathbf{x}} - \frac{\sqrt{3}}{2}a\,\hat{\mathbf{y}}$$
$$\mathbf{a_2} = \frac{1}{2}a\,\hat{\mathbf{x}} + \frac{\sqrt{3}}{2}a\,\hat{\mathbf{y}}$$
$$\mathbf{a_3} = c\,\hat{\mathbf{z}}$$



Basis vectors

		Lattice coordinates		Cartesian coordinates	Wyckoff position	Atom type
$\mathbf{B_1}$	=	$z_1\,\mathbf{a}_3$	=	$cz_1\,\hat{\mathbf{z}}$	(2a)	Os I
$\mathbf{B_2}$	=	$\left(z_1 + \frac{1}{2}\right)\,\mathbf{a}_3$	=	$c\left(z_1 + \frac{1}{2}\right)\,\hat{\mathbf{z}}$	(2a)	Os I
$\mathbf{B_3}$	=	$z_2\,\mathbf{a}_3$	=	$cz_2\,\hat{\mathbf{z}}$	(2a)	Sr I
$\mathbf{B_4}$	=	$\left(z_2 + \frac{1}{2}\right)\,\mathbf{a}_3$	=	$c\left(z_2 + \frac{1}{2}\right)\,\hat{\mathbf{z}}$	(2a)	Sr I
$\mathbf{B_5}$	=	$\frac{1}{3}\,\mathbf{a}_1 + \frac{2}{3}\,\mathbf{a}_2 + z_3\,\mathbf{a}_3$	=	$\frac{1}{2}a\,\hat{\mathbf{x}} + \frac{\sqrt{3}}{6}a\,\hat{\mathbf{y}} + cz_3\,\hat{\mathbf{z}}$	(4b)	Os II
$\mathbf{B_6}$	=	$\frac{2}{3}\,\mathbf{a}_1 + \frac{1}{3}\,\mathbf{a}_2 + \left(z_3 + \frac{1}{2}\right)\,\mathbf{a}_3$	=	$\frac{1}{2}a\,\hat{\mathbf{x}} - \frac{\sqrt{3}}{6}a\,\hat{\mathbf{y}} + c\left(z_3 + \frac{1}{2}\right)\,\hat{\mathbf{z}}$	(4b)	Os II
$\mathbf{B_7}$	=	$\frac{1}{3}\,\mathbf{a}_1 + \frac{2}{3}\,\mathbf{a}_2 + \left(z_3 + \frac{1}{2}\right)\,\mathbf{a}_3$	=	$\frac{1}{2}a\,\hat{\mathbf{x}} + \frac{\sqrt{3}}{6}a\,\hat{\mathbf{y}} + c\left(z_3 + \frac{1}{2}\right)\,\hat{\mathbf{z}}$	(4b)	Os II
$\mathbf{B_8}$	=	$\frac{2}{3}\,\mathbf{a}_1 + \frac{1}{3}\,\mathbf{a}_2 + z_3\,\mathbf{a}_3$	=	$\frac{1}{2}a\,\hat{\mathbf{x}} - \frac{\sqrt{3}}{6}a\,\hat{\mathbf{y}} + cz_3\,\hat{\mathbf{z}}$	(4b)	Os II
$\mathbf{B_9}$	=	$\frac{1}{3}\,\mathbf{a}_1 + \frac{2}{3}\,\mathbf{a}_2 + z_4\,\mathbf{a}_3$	=	$\frac{1}{2}a\,\hat{\mathbf{x}} + \frac{\sqrt{3}}{6}a\,\hat{\mathbf{y}} + cz_4\,\hat{\mathbf{z}}$	(4b)	Os III
$\mathbf{B_{10}}$	=	$\frac{2}{3}\,\mathbf{a}_1 + \frac{1}{3}\,\mathbf{a}_2 + \left(z_4 + \frac{1}{2}\right)\,\mathbf{a}_3$	=	$\frac{1}{2}a\,\hat{\mathbf{x}} - \frac{\sqrt{3}}{6}a\,\hat{\mathbf{y}} + c\left(z_4 + \frac{1}{2}\right)\,\hat{\mathbf{z}}$	(4b)	Os III
$\mathbf{B_{11}}$	=	$\frac{1}{3}\,\mathbf{a}_1 + \frac{2}{3}\,\mathbf{a}_2 + \left(z_4 + \frac{1}{2}\right)\,\mathbf{a}_3$	=	$\frac{1}{2}a\,\hat{\mathbf{x}} + \frac{\sqrt{3}}{6}a\,\hat{\mathbf{y}} + c\left(z_4 + \frac{1}{2}\right)\,\hat{\mathbf{z}}$	(4b)	Os III
$\mathbf{B_{12}}$	=	$\frac{2}{3}\,\mathbf{a}_1 + \frac{1}{3}\,\mathbf{a}_2 + z_4\,\mathbf{a}_3$	=	$\frac{1}{2}a\,\hat{\mathbf{x}} - \frac{\sqrt{3}}{6}a\,\hat{\mathbf{y}} + cz_4\,\hat{\mathbf{z}}$	(4b)	Os III
$\mathbf{B_{13}}$	=	$\frac{1}{3}\,\mathbf{a}_1 + \frac{2}{3}\,\mathbf{a}_2 + z_5\,\mathbf{a}_3$	=	$\frac{1}{2}a\,\hat{\mathbf{x}} + \frac{\sqrt{3}}{6}a\,\hat{\mathbf{y}} + cz_5\,\hat{\mathbf{z}}$	(4b)	Sr II
$\mathbf{B_{14}}$	=	$\frac{2}{3}\,\mathbf{a}_1 + \frac{1}{3}\,\mathbf{a}_2 + \left(z_5 + \frac{1}{2}\right)\,\mathbf{a}_3$	=	$\frac{1}{2}a\,\hat{\mathbf{x}} - \frac{\sqrt{3}}{6}a\,\hat{\mathbf{y}} + c\left(z_5 + \frac{1}{2}\right)\,\hat{\mathbf{z}}$	(4b)	Sr II
$\mathbf{B_{15}}$	=	$\frac{1}{3}\,\mathbf{a}_1 + \frac{2}{3}\,\mathbf{a}_2 + \left(z_5 + \frac{1}{2}\right)\,\mathbf{a}_3$	=	$\frac{1}{2}a\,\hat{\mathbf{x}} + \frac{\sqrt{3}}{6}a\,\hat{\mathbf{y}} + c\left(z_5 + \frac{1}{2}\right)\,\hat{\mathbf{z}}$	(4b)	Sr II
$\mathbf{B_{16}}$	=	$\frac{2}{3}\,\mathbf{a}_1 + \frac{1}{3}\,\mathbf{a}_2 + z_5\,\mathbf{a}_3$	=	$\frac{1}{2}a\,\hat{\mathbf{x}} - \frac{\sqrt{3}}{6}a\,\hat{\mathbf{y}} + cz_5\,\hat{\mathbf{z}}$	(4b)	Sr II

$\mathbf{B_{17}}$	=	$x_6\,\mathbf{a}_1 + z_6\,\mathbf{a}_3$	=	$\frac{1}{2}ax_6\,\hat{\mathbf{x}} - \frac{\sqrt{3}}{2}ax_6\,\hat{\mathbf{y}} + cz_6\,\hat{\mathbf{z}}$	(6c)	O I
$\mathbf{B_{18}}$	=	$x_6\,\mathbf{a}_2 + z_6\,\mathbf{a}_3$	=	$\frac{1}{2}ax_6\,\hat{\mathbf{x}} + \frac{\sqrt{3}}{2}ax_6\,\hat{\mathbf{y}} + cz_6\,\hat{\mathbf{z}}$	(6c)	O I
$\mathbf{B_{19}}$	=	$-x_6\,\mathbf{a}_1 - x_6\,\mathbf{a}_2 + z_6\,\mathbf{a}_3$	=	$-ax_6\,\hat{\mathbf{x}} + cz_6\,\hat{\mathbf{z}}$	(6c)	O I
$\mathbf{B_{20}}$	=	$-x_6\,\mathbf{a}_1 + \left(z_6 + \frac{1}{2}\right)\,\mathbf{a}_3$	=	$-\frac{1}{2}ax_6\,\hat{\mathbf{x}} + \frac{\sqrt{3}}{2}ax_6\,\hat{\mathbf{y}} + c\left(z_6 + \frac{1}{2}\right)\,\hat{\mathbf{z}}$	(6c)	O I
$\mathbf{B_{21}}$	=	$-x_6\,\mathbf{a}_2 + \left(z_6 + \frac{1}{2}\right)\,\mathbf{a}_3$	=	$-\frac{1}{2}ax_6\,\hat{\mathbf{x}} - \frac{\sqrt{3}}{2}ax_6\,\hat{\mathbf{y}} + c\left(z_6 + \frac{1}{2}\right)\,\hat{\mathbf{z}}$	(6c)	O I
$\mathbf{B_{22}}$	=	$x_6\,\mathbf{a}_1 + x_6\,\mathbf{a}_2 + \left(z_6 + \frac{1}{2}\right)\,\mathbf{a}_3$	=	$ax_6\,\hat{\mathbf{x}} + c\left(z_6 + \frac{1}{2}\right)\,\hat{\mathbf{z}}$	(6c)	O I
$\mathbf{B_{23}}$	=	$x_7\,\mathbf{a}_1 + z_7\,\mathbf{a}_3$	=	$\frac{1}{2}ax_7\,\hat{\mathbf{x}} - \frac{\sqrt{3}}{2}ax_7\,\hat{\mathbf{y}} + cz_7\,\hat{\mathbf{z}}$	(6c)	O II
$\mathbf{B_{24}}$	=	$x_7\,\mathbf{a}_2 + z_7\,\mathbf{a}_3$	=	$\frac{1}{2}ax_7\,\hat{\mathbf{x}} + \frac{\sqrt{3}}{2}ax_7\,\hat{\mathbf{y}} + cz_7\,\hat{\mathbf{z}}$	(6c)	O II
$\mathbf{B_{25}}$	=	$-x_7\,\mathbf{a}_1 - x_7\,\mathbf{a}_2 + z_7\,\mathbf{a}_3$	=	$-ax_7\,\hat{\mathbf{x}} + cz_7\,\hat{\mathbf{z}}$	(6c)	O II
$\mathbf{B_{26}}$	=	$-x_7\,\mathbf{a}_1 + \left(z_7 + \frac{1}{2}\right)\,\mathbf{a}_3$	=	$-\frac{1}{2}ax_7\,\hat{\mathbf{x}} + \frac{\sqrt{3}}{2}ax_7\,\hat{\mathbf{y}} + c\left(z_7 + \frac{1}{2}\right)\,\hat{\mathbf{z}}$	(6c)	O II
$\mathbf{B_{27}}$	=	$-x_7\,\mathbf{a}_2 + \left(z_7 + \frac{1}{2}\right)\,\mathbf{a}_3$	=	$-\frac{1}{2}ax_7\,\hat{\mathbf{x}} - \frac{\sqrt{3}}{2}ax_7\,\hat{\mathbf{y}} + c\left(z_7 + \frac{1}{2}\right)\,\hat{\mathbf{z}}$	(6c)	O II
$\mathbf{B_{28}}$	=	$x_7\,\mathbf{a}_1 + x_7\,\mathbf{a}_2 + \left(z_7 + \frac{1}{2}\right)\,\mathbf{a}_3$	=	$ax_7\,\hat{\mathbf{x}} + c\left(z_7 + \frac{1}{2}\right)\,\hat{\mathbf{z}}$	(6c)	O II
$\mathbf{B_{29}}$	=	$x_8\,\mathbf{a}_1 + z_8\,\mathbf{a}_3$	=	$\frac{1}{2}ax_8\,\hat{\mathbf{x}} - \frac{\sqrt{3}}{2}ax_8\,\hat{\mathbf{y}} + cz_8\,\hat{\mathbf{z}}$	(6c)	O III
$\mathbf{B_{30}}$	=	$x_8\,\mathbf{a}_2 + z_8\,\mathbf{a}_3$	=	$\frac{1}{2}ax_8\,\hat{\mathbf{x}} + \frac{\sqrt{3}}{2}ax_8\,\hat{\mathbf{y}} + cz_8\,\hat{\mathbf{z}}$	(6c)	O III
$\mathbf{B_{31}}$	=	$-x_8\,\mathbf{a}_1 - x_8\,\mathbf{a}_2 + z_8\,\mathbf{a}_3$	=	$-ax_8\,\hat{\mathbf{x}} + cz_8\,\hat{\mathbf{z}}$	(6c)	O III
$\mathbf{B_{32}}$	=	$-x_8\,\mathbf{a}_1 + \left(z_8 + \frac{1}{2}\right)\,\mathbf{a}_3$	=	$-\frac{1}{2}ax_8\,\hat{\mathbf{x}} + \frac{\sqrt{3}}{2}ax_8\,\hat{\mathbf{y}} + c\left(z_8 + \frac{1}{2}\right)\,\hat{\mathbf{z}}$	(6c)	O III
$\mathbf{B_{33}}$	=	$-x_8\,\mathbf{a}_2 + \left(z_8 + \frac{1}{2}\right)\,\mathbf{a}_3$	=	$-\frac{1}{2}ax_8\,\hat{\mathbf{x}} - \frac{\sqrt{3}}{2}ax_8\,\hat{\mathbf{y}} + c\left(z_8 + \frac{1}{2}\right)\,\hat{\mathbf{z}}$	(6c)	O III
$\mathbf{B_{34}}$	=	$x_8\,\mathbf{a}_1 + x_8\,\mathbf{a}_2 + \left(z_8 + \frac{1}{2}\right)\,\mathbf{a}_3$	=	$ax_8\,\hat{\mathbf{x}} + c\left(z_8 + \frac{1}{2}\right)\,\hat{\mathbf{z}}$	(6c)	O III
$\mathbf{B_{35}}$	=	$x_9\,\mathbf{a}_1 + z_9\,\mathbf{a}_3$	=	$\frac{1}{2}ax_9\,\hat{\mathbf{x}} - \frac{\sqrt{3}}{2}ax_9\,\hat{\mathbf{y}} + cz_9\,\hat{\mathbf{z}}$	(6c)	O IV
$\mathbf{B_{36}}$	=	$x_9\,\mathbf{a}_2 + z_9\,\mathbf{a}_3$	=	$\frac{1}{2}ax_9\,\hat{\mathbf{x}} + \frac{\sqrt{3}}{2}ax_9\,\hat{\mathbf{y}} + cz_9\,\hat{\mathbf{z}}$	(6c)	O IV
$\mathbf{B_{37}}$	=	$-x_9\,\mathbf{a}_1 - x_9\,\mathbf{a}_2 + z_9\,\mathbf{a}_3$	=	$-ax_9\,\hat{\mathbf{x}} + cz_9\,\hat{\mathbf{z}}$	(6c)	O IV
$\mathbf{B_{38}}$	=	$-x_9\,\mathbf{a}_1 + \left(z_9 + \frac{1}{2}\right)\,\mathbf{a}_3$	=	$-\frac{1}{2}ax_9\,\hat{\mathbf{x}} + \frac{\sqrt{3}}{2}ax_9\,\hat{\mathbf{y}} + c\left(z_9 + \frac{1}{2}\right)\,\hat{\mathbf{z}}$	(6c)	O IV
$\mathbf{B_{39}}$	=	$-x_9\,\mathbf{a}_2 + \left(z_9 + \frac{1}{2}\right)\,\mathbf{a}_3$	=	$-\frac{1}{2}ax_9\,\hat{\mathbf{x}} - \frac{\sqrt{3}}{2}ax_9\,\hat{\mathbf{y}} + c\left(z_9 + \frac{1}{2}\right)\,\hat{\mathbf{z}}$	(6c)	O IV
$\mathbf{B_{40}}$	=	$x_9\,\mathbf{a}_1 + x_9\,\mathbf{a}_2 + \left(z_9 + \frac{1}{2}\right)\,\mathbf{a}_3$	=	$ax_9\,\hat{\mathbf{x}} + c\left(z_9 + \frac{1}{2}\right)\,\hat{\mathbf{z}}$	(6c)	O IV
$\mathbf{B_{41}}$	=	$x_{10}\,\mathbf{a}_1 + z_{10}\,\mathbf{a}_3$	=	$\frac{1}{2}ax_{10}\,\hat{\mathbf{x}} - \frac{\sqrt{3}}{2}ax_{10}\,\hat{\mathbf{y}} + cz_{10}\,\hat{\mathbf{z}}$	(6c)	Os IV
$\mathbf{B_{42}}$	=	$x_{10}\,\mathbf{a}_2 + z_{10}\,\mathbf{a}_3$	=	$\frac{1}{2}ax_{10}\,\hat{\mathbf{x}} + \frac{\sqrt{3}}{2}ax_{10}\,\hat{\mathbf{y}} + cz_{10}\,\hat{\mathbf{z}}$	(6c)	Os IV
$\mathbf{B_{43}}$	=	$-x_{10}\,\mathbf{a}_1 - x_{10}\,\mathbf{a}_2 + z_{10}\,\mathbf{a}_3$	=	$-ax_{10}\,\hat{\mathbf{x}} + cz_{10}\,\hat{\mathbf{z}}$	(6c)	Os IV
$\mathbf{B_{44}}$	=	$-x_{10}\,\mathbf{a}_1 + \left(z_{10} + \frac{1}{2}\right)\,\mathbf{a}_3$	=	$-\frac{1}{2}ax_{10}\,\hat{\mathbf{x}} + \frac{\sqrt{3}}{2}ax_{10}\,\hat{\mathbf{y}} + c\left(z_{10} + \frac{1}{2}\right)\,\hat{\mathbf{z}}$	(6c)	Os IV
$\mathbf{B_{45}}$	=	$-x_{10}\,\mathbf{a}_2 + \left(z_{10} + \frac{1}{2}\right)\,\mathbf{a}_3$	=	$-\frac{1}{2}ax_{10}\,\hat{\mathbf{x}} - \frac{\sqrt{3}}{2}ax_{10}\,\hat{\mathbf{y}} + c\left(z_{10} + \frac{1}{2}\right)\,\hat{\mathbf{z}}$	(6c)	Os IV
$\mathbf{B_{46}}$	=	$x_{10}\,\mathbf{a}_1 + x_{10}\,\mathbf{a}_2 + \left(z_{10} + \frac{1}{2}\right)\,\mathbf{a}_3$	=	$ax_{10}\,\hat{\mathbf{x}} + c\left(z_{10} + \frac{1}{2}\right)\,\hat{\mathbf{z}}$	(6c)	Os IV
$\mathbf{B_{47}}$	=	$x_{11}\,\mathbf{a}_1 + z_{11}\,\mathbf{a}_3$	=	$\frac{1}{2}ax_{11}\,\hat{\mathbf{x}} - \frac{\sqrt{3}}{2}ax_{11}\,\hat{\mathbf{y}} + cz_{11}\,\hat{\mathbf{z}}$	(6c)	Os V
$\mathbf{B_{48}}$	=	$x_{11}\,\mathbf{a}_2 + z_{11}\,\mathbf{a}_3$	=	$\frac{1}{2}ax_{11}\,\hat{\mathbf{x}} + \frac{\sqrt{3}}{2}ax_{11}\,\hat{\mathbf{y}} + cz_{11}\,\hat{\mathbf{z}}$	(6c)	Os V
$\mathbf{B_{49}}$	=	$-x_{11}\,\mathbf{a}_1 - x_{11}\,\mathbf{a}_2 + z_{11}\,\mathbf{a}_3$	=	$-ax_{11}\,\hat{\mathbf{x}} + cz_{11}\,\hat{\mathbf{z}}$	(6c)	Os V
$\mathbf{B_{50}}$	=	$-x_{11}\,\mathbf{a}_1 + \left(z_{11} + \frac{1}{2}\right)\,\mathbf{a}_3$	=	$-\frac{1}{2}ax_{11}\,\hat{\mathbf{x}} + \frac{\sqrt{3}}{2}ax_{11}\,\hat{\mathbf{y}} + c\left(z_{11} + \frac{1}{2}\right)\,\hat{\mathbf{z}}$	(6c)	Os V
$\mathbf{B_{51}}$	=	$-x_{11}\,\mathbf{a}_2 + \left(z_{11} + \frac{1}{2}\right)\,\mathbf{a}_3$	=	$-\frac{1}{2}ax_{11}\,\hat{\mathbf{x}} - \frac{\sqrt{3}}{2}ax_{11}\,\hat{\mathbf{y}} + c\left(z_{11} + \frac{1}{2}\right)\,\hat{\mathbf{z}}$	(6c)	Os V
$\mathbf{B_{52}}$	=	$x_{11}\,\mathbf{a}_1 + x_{11}\,\mathbf{a}_2 + \left(z_{11} + \frac{1}{2}\right)\,\mathbf{a}_3$	=	$ax_{11}\,\hat{\mathbf{x}} + c\left(z_{11} + \frac{1}{2}\right)\,\hat{\mathbf{z}}$	(6c)	Os V
$\mathbf{B_{53}}$	=	$x_{12}\,\mathbf{a}_1 + z_{12}\,\mathbf{a}_3$	=	$\frac{1}{2}ax_{12}\,\hat{\mathbf{x}} - \frac{\sqrt{3}}{2}ax_{12}\,\hat{\mathbf{y}} + cz_{12}\,\hat{\mathbf{z}}$	(6c)	Sr III
$\mathbf{B_{54}}$	=	$x_{12}\,\mathbf{a}_2 + z_{12}\,\mathbf{a}_3$	=	$\frac{1}{2}ax_{12}\,\hat{\mathbf{x}} + \frac{\sqrt{3}}{2}ax_{12}\,\hat{\mathbf{y}} + cz_{12}\,\hat{\mathbf{z}}$	(6c)	Sr III
$\mathbf{B_{55}}$	=	$-x_{12}\,\mathbf{a}_1 - x_{12}\,\mathbf{a}_2 + z_{12}\,\mathbf{a}_3$	=	$-ax_{12}\,\hat{\mathbf{x}} + cz_{12}\,\hat{\mathbf{z}}$	(6c)	Sr III
$\mathbf{B_{56}}$	=	$-x_{12}\,\mathbf{a}_1 + \left(z_{12} + \frac{1}{2}\right)\,\mathbf{a}_3$	=	$-\frac{1}{2}ax_{12}\,\hat{\mathbf{x}} + \frac{\sqrt{3}}{2}ax_{12}\,\hat{\mathbf{y}} + c\left(z_{12} + \frac{1}{2}\right)\,\hat{\mathbf{z}}$	(6c)	Sr III
$\mathbf{B_{57}}$	=	$-x_{12}\,\mathbf{a}_2 + \left(z_{12} + \frac{1}{2}\right)\,\mathbf{a}_3$	=	$-\frac{1}{2}ax_{12}\,\hat{\mathbf{x}} - \frac{\sqrt{3}}{2}ax_{12}\,\hat{\mathbf{y}} + c\left(z_{12} + \frac{1}{2}\right)\,\hat{\mathbf{z}}$	(6c)	Sr III

$$\mathbf{B_{58}} = x_{12}\,\mathbf{a}_1 + x_{12}\,\mathbf{a}_2 + \left(z_{12}+\tfrac{1}{2}\right)\,\mathbf{a}_3 = ax_{12}\,\hat{\mathbf{x}} + c\left(z_{12}+\tfrac{1}{2}\right)\,\hat{\mathbf{z}} \quad (6c) \quad \text{Sr III}$$

$$\mathbf{B_{59}} = x_{13}\,\mathbf{a}_1 + z_{13}\,\mathbf{a}_3 = \tfrac{1}{2}ax_{13}\,\hat{\mathbf{x}} - \tfrac{\sqrt{3}}{2}ax_{13}\,\hat{\mathbf{y}} + cz_{13}\,\hat{\mathbf{z}} \quad (6c) \quad \text{Sr IV}$$

$$\mathbf{B_{60}} = x_{13}\,\mathbf{a}_2 + z_{13}\,\mathbf{a}_3 = \tfrac{1}{2}ax_{13}\,\hat{\mathbf{x}} + \tfrac{\sqrt{3}}{2}ax_{13}\,\hat{\mathbf{y}} + cz_{13}\,\hat{\mathbf{z}} \quad (6c) \quad \text{Sr IV}$$

$$\mathbf{B_{61}} = -x_{13}\,\mathbf{a}_1 - x_{13}\,\mathbf{a}_2 + z_{13}\,\mathbf{a}_3 = -ax_{13}\,\hat{\mathbf{x}} + cz_{13}\,\hat{\mathbf{z}} \quad (6c) \quad \text{Sr IV}$$

$$\mathbf{B_{62}} = -x_{13}\,\mathbf{a}_1 + \left(z_{13}+\tfrac{1}{2}\right)\,\mathbf{a}_3 = -\tfrac{1}{2}ax_{13}\,\hat{\mathbf{x}} + \tfrac{\sqrt{3}}{2}ax_{13}\,\hat{\mathbf{y}} + c\left(z_{13}+\tfrac{1}{2}\right)\,\hat{\mathbf{z}} \quad (6c) \quad \text{Sr IV}$$

$$\mathbf{B_{63}} = -x_{13}\,\mathbf{a}_2 + \left(z_{13}+\tfrac{1}{2}\right)\,\mathbf{a}_3 = -\tfrac{1}{2}ax_{13}\,\hat{\mathbf{x}} - \tfrac{\sqrt{3}}{2}ax_{13}\,\hat{\mathbf{y}} + c\left(z_{13}+\tfrac{1}{2}\right)\,\hat{\mathbf{z}} \quad (6c) \quad \text{Sr IV}$$

$$\mathbf{B_{64}} = x_{13}\,\mathbf{a}_1 + x_{13}\,\mathbf{a}_2 + \left(z_{13}+\tfrac{1}{2}\right)\,\mathbf{a}_3 = ax_{13}\,\hat{\mathbf{x}} + c\left(z_{13}+\tfrac{1}{2}\right)\,\hat{\mathbf{z}} \quad (6c) \quad \text{Sr IV}$$

$$\mathbf{B_{65}} = x_{14}\,\mathbf{a}_1 + z_{14}\,\mathbf{a}_3 = \tfrac{1}{2}ax_{14}\,\hat{\mathbf{x}} - \tfrac{\sqrt{3}}{2}ax_{14}\,\hat{\mathbf{y}} + cz_{14}\,\hat{\mathbf{z}} \quad (6c) \quad \text{Sr V}$$

$$\mathbf{B_{66}} = x_{14}\,\mathbf{a}_2 + z_{14}\,\mathbf{a}_3 = \tfrac{1}{2}ax_{14}\,\hat{\mathbf{x}} + \tfrac{\sqrt{3}}{2}ax_{14}\,\hat{\mathbf{y}} + cz_{14}\,\hat{\mathbf{z}} \quad (6c) \quad \text{Sr V}$$

$$\mathbf{B_{67}} = -x_{14}\,\mathbf{a}_1 - x_{14}\,\mathbf{a}_2 + z_{14}\,\mathbf{a}_3 = -ax_{14}\,\hat{\mathbf{x}} + cz_{14}\,\hat{\mathbf{z}} \quad (6c) \quad \text{Sr V}$$

$$\mathbf{B_{68}} = -x_{14}\,\mathbf{a}_1 + \left(z_{14}+\tfrac{1}{2}\right)\,\mathbf{a}_3 = -\tfrac{1}{2}ax_{14}\,\hat{\mathbf{x}} + \tfrac{\sqrt{3}}{2}ax_{14}\,\hat{\mathbf{y}} + c\left(z_{14}+\tfrac{1}{2}\right)\,\hat{\mathbf{z}} \quad (6c) \quad \text{Sr V}$$

$$\mathbf{B_{69}} = -x_{14}\,\mathbf{a}_2 + \left(z_{14}+\tfrac{1}{2}\right)\,\mathbf{a}_3 = -\tfrac{1}{2}ax_{14}\,\hat{\mathbf{x}} - \tfrac{\sqrt{3}}{2}ax_{14}\,\hat{\mathbf{y}} + c\left(z_{14}+\tfrac{1}{2}\right)\,\hat{\mathbf{z}} \quad (6c) \quad \text{Sr V}$$

$$\mathbf{B_{70}} = x_{14}\,\mathbf{a}_1 + x_{14}\,\mathbf{a}_2 + \left(z_{14}+\tfrac{1}{2}\right)\,\mathbf{a}_3 = ax_{14}\,\hat{\mathbf{x}} + c\left(z_{14}+\tfrac{1}{2}\right)\,\hat{\mathbf{z}} \quad (6c) \quad \text{Sr V}$$

$$\mathbf{B_{71}} = x_{15}\,\mathbf{a}_1 + y_{15}\,\mathbf{a}_2 + z_{15}\,\mathbf{a}_3 = \tfrac{1}{2}a\left(x_{15}+y_{15}\right)\,\hat{\mathbf{x}} - \tfrac{\sqrt{3}}{2}a\left(x_{15}-y_{15}\right)\,\hat{\mathbf{y}} + cz_{15}\,\hat{\mathbf{z}} \quad (12d) \quad \text{O V}$$

$$\mathbf{B_{72}} = -y_{15}\,\mathbf{a}_1 + \left(x_{15}-y_{15}\right)\,\mathbf{a}_2 + z_{15}\,\mathbf{a}_3 = \tfrac{1}{2}a\left(x_{15}-2y_{15}\right)\,\hat{\mathbf{x}} + \tfrac{\sqrt{3}}{2}ax_{15}\,\hat{\mathbf{y}} + cz_{15}\,\hat{\mathbf{z}} \quad (12d) \quad \text{O V}$$

$$\mathbf{B_{73}} = -\left(x_{15}-y_{15}\right)\,\mathbf{a}_1 - x_{15}\,\mathbf{a}_2 + z_{15}\,\mathbf{a}_3 = -\tfrac{1}{2}a\left(2x_{15}-y_{15}\right)\,\hat{\mathbf{x}} - \tfrac{\sqrt{3}}{2}ay_{15}\,\hat{\mathbf{y}} + cz_{15}\,\hat{\mathbf{z}} \quad (12d) \quad \text{O V}$$

$$\mathbf{B_{74}} = -x_{15}\,\mathbf{a}_1 - y_{15}\,\mathbf{a}_2 + \left(z_{15}+\tfrac{1}{2}\right)\,\mathbf{a}_3 = -\tfrac{1}{2}a\left(x_{15}+y_{15}\right)\,\hat{\mathbf{x}} + \tfrac{\sqrt{3}}{2}a\left(x_{15}-y_{15}\right)\,\hat{\mathbf{y}} + c\left(z_{15}+\tfrac{1}{2}\right)\,\hat{\mathbf{z}} \quad (12d) \quad \text{O V}$$

$$\mathbf{B_{75}} = y_{15}\,\mathbf{a}_1 - \left(x_{15}-y_{15}\right)\,\mathbf{a}_2 + \left(z_{15}+\tfrac{1}{2}\right)\,\mathbf{a}_3 = \tfrac{1}{2}a\left(-x_{15}+2y_{15}\right)\,\hat{\mathbf{x}} - \tfrac{\sqrt{3}}{2}ax_{15}\,\hat{\mathbf{y}} + c\left(z_{15}+\tfrac{1}{2}\right)\,\hat{\mathbf{z}} \quad (12d) \quad \text{O V}$$

$$\mathbf{B_{76}} = \left(x_{15}-y_{15}\right)\,\mathbf{a}_1 + x_{15}\,\mathbf{a}_2 + \left(z_{15}+\tfrac{1}{2}\right)\,\mathbf{a}_3 = \tfrac{1}{2}a\left(2x_{15}-y_{15}\right)\,\hat{\mathbf{x}} + \tfrac{\sqrt{3}}{2}ay_{15}\,\hat{\mathbf{y}} + c\left(z_{15}+\tfrac{1}{2}\right)\,\hat{\mathbf{z}} \quad (12d) \quad \text{O V}$$

$$\mathbf{B_{77}} = -y_{15}\,\mathbf{a}_1 - x_{15}\,\mathbf{a}_2 + \left(z_{15}+\tfrac{1}{2}\right)\,\mathbf{a}_3 = -\tfrac{1}{2}a\left(x_{15}+y_{15}\right)\,\hat{\mathbf{x}} - \tfrac{\sqrt{3}}{2}a\left(x_{15}-y_{15}\right)\,\hat{\mathbf{y}} + c\left(z_{15}+\tfrac{1}{2}\right)\,\hat{\mathbf{z}} \quad (12d) \quad \text{O V}$$

$$\mathbf{B_{78}} = -\left(x_{15}-y_{15}\right)\,\mathbf{a}_1 + y_{15}\,\mathbf{a}_2 + \left(z_{15}+\tfrac{1}{2}\right)\,\mathbf{a}_3 = \tfrac{1}{2}a\left(-x_{15}+2y_{15}\right)\,\hat{\mathbf{x}} + \tfrac{\sqrt{3}}{2}ax_{15}\,\hat{\mathbf{y}} + c\left(z_{15}+\tfrac{1}{2}\right)\,\hat{\mathbf{z}} \quad (12d) \quad \text{O V}$$

$$\mathbf{B_{79}} = x_{15}\,\mathbf{a}_1 + \left(x_{15}-y_{15}\right)\,\mathbf{a}_2 + \left(z_{15}+\tfrac{1}{2}\right)\,\mathbf{a}_3 = \tfrac{1}{2}a\left(2x_{15}-y_{15}\right)\,\hat{\mathbf{x}} - \tfrac{\sqrt{3}}{2}ay_{15}\,\hat{\mathbf{y}} + c\left(z_{15}+\tfrac{1}{2}\right)\,\hat{\mathbf{z}} \quad (12d) \quad \text{O V}$$

$$\mathbf{B_{80}} = y_{15}\,\mathbf{a}_1 + x_{15}\,\mathbf{a}_2 + z_{15}\,\mathbf{a}_3 = \tfrac{1}{2}a\left(x_{15}+y_{15}\right)\,\hat{\mathbf{x}} + \tfrac{\sqrt{3}}{2}a\left(x_{15}-y_{15}\right)\,\hat{\mathbf{y}} + cz_{15}\,\hat{\mathbf{z}} \quad (12d) \quad \text{O V}$$

$$\mathbf{B_{81}} = \left(x_{15}-y_{15}\right)\,\mathbf{a}_1 - y_{15}\,\mathbf{a}_2 + z_{15}\,\mathbf{a}_3 = \tfrac{1}{2}a\left(x_{15}-2y_{15}\right)\,\hat{\mathbf{x}} - \tfrac{\sqrt{3}}{2}ax_{15}\,\hat{\mathbf{y}} + cz_{15}\,\hat{\mathbf{z}} \quad (12d) \quad \text{O V}$$

$$\mathbf{B_{82}} = -x_{15}\,\mathbf{a}_1 - \left(x_{15}-y_{15}\right)\,\mathbf{a}_2 + z_{15}\,\mathbf{a}_3 = -\tfrac{1}{2}a\left(2x_{15}-y_{15}\right)\,\hat{\mathbf{x}} + \tfrac{\sqrt{3}}{2}ay_{15}\,\hat{\mathbf{y}} + cz_{15}\,\hat{\mathbf{z}} \quad (12d) \quad \text{O V}$$

$$\mathbf{B_{83}} = x_{16}\,\mathbf{a}_1 + y_{16}\,\mathbf{a}_2 + z_{16}\,\mathbf{a}_3 = \tfrac{1}{2}a\left(x_{16}+y_{16}\right)\,\hat{\mathbf{x}} - \tfrac{\sqrt{3}}{2}a\left(x_{16}-y_{16}\right)\,\hat{\mathbf{y}} + cz_{16}\,\hat{\mathbf{z}} \quad (12d) \quad \text{O VI}$$

$$\mathbf{B_{84}} = -y_{16}\,\mathbf{a}_1 + \left(x_{16}-y_{16}\right)\,\mathbf{a}_2 + z_{16}\,\mathbf{a}_3 = \tfrac{1}{2}a\left(x_{16}-2y_{16}\right)\,\hat{\mathbf{x}} + \tfrac{\sqrt{3}}{2}ax_{16}\,\hat{\mathbf{y}} + cz_{16}\,\hat{\mathbf{z}} \quad (12d) \quad \text{O VI}$$

$$\mathbf{B_{85}} = -\left(x_{16}-y_{16}\right)\,\mathbf{a}_1 - x_{16}\,\mathbf{a}_2 + z_{16}\,\mathbf{a}_3 = -\tfrac{1}{2}a\left(2x_{16}-y_{16}\right)\,\hat{\mathbf{x}} - \tfrac{\sqrt{3}}{2}ay_{16}\,\hat{\mathbf{y}} + cz_{16}\,\hat{\mathbf{z}} \quad (12d) \quad \text{O VI}$$

$$\mathbf{B_{86}} = -x_{16}\,\mathbf{a}_1 - y_{16}\,\mathbf{a}_2 + \left(z_{16}+\tfrac{1}{2}\right)\,\mathbf{a}_3 = -\tfrac{1}{2}a\left(x_{16}+y_{16}\right)\,\hat{\mathbf{x}} + \tfrac{\sqrt{3}}{2}a\left(x_{16}-y_{16}\right)\,\hat{\mathbf{y}} + c\left(z_{16}+\tfrac{1}{2}\right)\,\hat{\mathbf{z}} \quad (12d) \quad \text{O VI}$$

$$\mathbf{B_{87}} = y_{16}\,\mathbf{a}_1 - \left(x_{16}-y_{16}\right)\,\mathbf{a}_2 + \left(z_{16}+\tfrac{1}{2}\right)\,\mathbf{a}_3 = \tfrac{1}{2}a\left(-x_{16}+2y_{16}\right)\,\hat{\mathbf{x}} - \tfrac{\sqrt{3}}{2}ax_{16}\,\hat{\mathbf{y}} + c\left(z_{16}+\tfrac{1}{2}\right)\,\hat{\mathbf{z}} \quad (12d) \quad \text{O VI}$$

$$\mathbf{B_{88}} = \left(x_{16}-y_{16}\right)\,\mathbf{a}_1 + x_{16}\,\mathbf{a}_2 + \left(z_{16}+\tfrac{1}{2}\right)\,\mathbf{a}_3 = \tfrac{1}{2}a\left(2x_{16}-y_{16}\right)\,\hat{\mathbf{x}} + \tfrac{\sqrt{3}}{2}ay_{16}\,\hat{\mathbf{y}} + c\left(z_{16}+\tfrac{1}{2}\right)\,\hat{\mathbf{z}} \quad (12d) \quad \text{O VI}$$

$$\mathbf{B_{89}} = -y_{16}\,\mathbf{a}_1 - x_{16}\,\mathbf{a}_2 + \left(z_{16}+\tfrac{1}{2}\right)\,\mathbf{a}_3 = -\tfrac{1}{2}a\left(x_{16}+y_{16}\right)\,\hat{\mathbf{x}} - \tfrac{\sqrt{3}}{2}a\left(x_{16}-y_{16}\right)\,\hat{\mathbf{y}} + c\left(z_{16}+\tfrac{1}{2}\right)\,\hat{\mathbf{z}} \quad (12d) \quad \text{O VI}$$

$\mathbf{B_{90}}$	$-(x_{16}-y_{16})\,\mathbf{a}_1+y_{16}\,\mathbf{a}_2+\left(z_{16}+\frac{1}{2}\right)\,\mathbf{a}_3$	=	$\frac{1}{2}a\,(-x_{16}+2y_{16})\,\hat{\mathbf{x}}+\frac{\sqrt{3}}{2}ax_{16}\,\hat{\mathbf{y}}+c\left(z_{16}+\frac{1}{2}\right)\,\hat{\mathbf{z}}$	(12d)	O VI
$\mathbf{B_{91}}$	$x_{16}\,\mathbf{a}_1+(x_{16}-y_{16})\,\mathbf{a}_2+\left(z_{16}+\frac{1}{2}\right)\,\mathbf{a}_3$	=	$\frac{1}{2}a\,(2x_{16}-y_{16})\,\hat{\mathbf{x}}-\frac{\sqrt{3}}{2}ay_{16}\,\hat{\mathbf{y}}+c\left(z_{16}+\frac{1}{2}\right)\,\hat{\mathbf{z}}$	(12d)	O VI
$\mathbf{B_{92}}$	$y_{16}\,\mathbf{a}_1+x_{16}\,\mathbf{a}_2+z_{16}\,\mathbf{a}_3$	=	$\frac{1}{2}a\,(x_{16}+y_{16})\,\hat{\mathbf{x}}+\frac{\sqrt{3}}{2}a\,(x_{16}-y_{16})\,\hat{\mathbf{y}}+cz_{16}\,\hat{\mathbf{z}}$	(12d)	O VI
$\mathbf{B_{93}}$	$(x_{16}-y_{16})\,\mathbf{a}_1-y_{16}\,\mathbf{a}_2+z_{16}\,\mathbf{a}_3$	=	$\frac{1}{2}a\,(x_{16}-2y_{16})\,\hat{\mathbf{x}}-\frac{\sqrt{3}}{2}ax_{16}\,\hat{\mathbf{y}}+cz_{16}\,\hat{\mathbf{z}}$	(12d)	O VI
$\mathbf{B_{94}}$	$-x_{16}\,\mathbf{a}_1-(x_{16}-y_{16})\,\mathbf{a}_2+z_{16}\,\mathbf{a}_3$	=	$-\frac{1}{2}a\,(2x_{16}-y_{16})\,\hat{\mathbf{x}}+\frac{\sqrt{3}}{2}ay_{16}\,\hat{\mathbf{y}}+cz_{16}\,\hat{\mathbf{z}}$	(12d)	O VI
$\mathbf{B_{95}}$	$x_{17}\,\mathbf{a}_1+y_{17}\,\mathbf{a}_2+z_{17}\,\mathbf{a}_3$	=	$\frac{1}{2}a\,(x_{17}+y_{17})\,\hat{\mathbf{x}}-\frac{\sqrt{3}}{2}a\,(x_{17}-y_{17})\,\hat{\mathbf{y}}+cz_{17}\,\hat{\mathbf{z}}$	(12d)	O VII
$\mathbf{B_{96}}$	$-y_{17}\,\mathbf{a}_1+(x_{17}-y_{17})\,\mathbf{a}_2+z_{17}\,\mathbf{a}_3$	=	$\frac{1}{2}a\,(x_{17}-2y_{17})\,\hat{\mathbf{x}}+\frac{\sqrt{3}}{2}ax_{17}\,\hat{\mathbf{y}}+cz_{17}\,\hat{\mathbf{z}}$	(12d)	O VII
$\mathbf{B_{97}}$	$-(x_{17}-y_{17})\,\mathbf{a}_1-x_{17}\,\mathbf{a}_2+z_{17}\,\mathbf{a}_3$	=	$-\frac{1}{2}a\,(2x_{17}-y_{17})\,\hat{\mathbf{x}}-\frac{\sqrt{3}}{2}ay_{17}\,\hat{\mathbf{y}}+cz_{17}\,\hat{\mathbf{z}}$	(12d)	O VII
$\mathbf{B_{98}}$	$-x_{17}\,\mathbf{a}_1-y_{17}\,\mathbf{a}_2+\left(z_{17}+\frac{1}{2}\right)\,\mathbf{a}_3$	=	$-\frac{1}{2}a\,(x_{17}+y_{17})\,\hat{\mathbf{x}}+\frac{\sqrt{3}}{2}a\,(x_{17}-y_{17})\,\hat{\mathbf{y}}+c\left(z_{17}+\frac{1}{2}\right)\,\hat{\mathbf{z}}$	(12d)	O VII
$\mathbf{B_{99}}$	$y_{17}\,\mathbf{a}_1-(x_{17}-y_{17})\,\mathbf{a}_2+\left(z_{17}+\frac{1}{2}\right)\,\mathbf{a}_3$	=	$\frac{1}{2}a\,(-x_{17}+2y_{17})\,\hat{\mathbf{x}}-\frac{\sqrt{3}}{2}ax_{17}\,\hat{\mathbf{y}}+c\left(z_{17}+\frac{1}{2}\right)\,\hat{\mathbf{z}}$	(12d)	O VII
$\mathbf{B_{100}}$	$(x_{17}-y_{17})\,\mathbf{a}_1+x_{17}\,\mathbf{a}_2+\left(z_{17}+\frac{1}{2}\right)\,\mathbf{a}_3$	=	$\frac{1}{2}a\,(2x_{17}-y_{17})\,\hat{\mathbf{x}}+\frac{\sqrt{3}}{2}ay_{17}\,\hat{\mathbf{y}}+c\left(z_{17}+\frac{1}{2}\right)\,\hat{\mathbf{z}}$	(12d)	O VII
$\mathbf{B_{101}}$	$-y_{17}\,\mathbf{a}_1-x_{17}\,\mathbf{a}_2+\left(z_{17}+\frac{1}{2}\right)\,\mathbf{a}_3$	=	$-\frac{1}{2}a\,(x_{17}+y_{17})\,\hat{\mathbf{x}}-\frac{\sqrt{3}}{2}a\,(x_{17}-y_{17})\,\hat{\mathbf{y}}+c\left(z_{17}+\frac{1}{2}\right)\,\hat{\mathbf{z}}$	(12d)	O VII
$\mathbf{B_{102}}$	$-(x_{17}-y_{17})\,\mathbf{a}_1+y_{17}\,\mathbf{a}_2+\left(z_{17}+\frac{1}{2}\right)\,\mathbf{a}_3$	=	$\frac{1}{2}a\,(-x_{17}+2y_{17})\,\hat{\mathbf{x}}+\frac{\sqrt{3}}{2}ax_{17}\,\hat{\mathbf{y}}+c\left(z_{17}+\frac{1}{2}\right)\,\hat{\mathbf{z}}$	(12d)	O VII
$\mathbf{B_{103}}$	$x_{17}\,\mathbf{a}_1+(x_{17}-y_{17})\,\mathbf{a}_2+\left(z_{17}+\frac{1}{2}\right)\,\mathbf{a}_3$	=	$\frac{1}{2}a\,(2x_{17}-y_{17})\,\hat{\mathbf{x}}-\frac{\sqrt{3}}{2}ay_{17}\,\hat{\mathbf{y}}+c\left(z_{17}+\frac{1}{2}\right)\,\hat{\mathbf{z}}$	(12d)	O VII
$\mathbf{B_{104}}$	$y_{17}\,\mathbf{a}_1+x_{17}\,\mathbf{a}_2+z_{17}\,\mathbf{a}_3$	=	$\frac{1}{2}a\,(x_{17}+y_{17})\,\hat{\mathbf{x}}+\frac{\sqrt{3}}{2}a\,(x_{17}-y_{17})\,\hat{\mathbf{y}}+cz_{17}\,\hat{\mathbf{z}}$	(12d)	O VII
$\mathbf{B_{105}}$	$(x_{17}-y_{17})\,\mathbf{a}_1-y_{17}\,\mathbf{a}_2+z_{17}\,\mathbf{a}_3$	=	$\frac{1}{2}a\,(x_{17}-2y_{17})\,\hat{\mathbf{x}}-\frac{\sqrt{3}}{2}ax_{17}\,\hat{\mathbf{y}}+cz_{17}\,\hat{\mathbf{z}}$	(12d)	O VII
$\mathbf{B_{106}}$	$-x_{17}\,\mathbf{a}_1-(x_{17}-y_{17})\,\mathbf{a}_2+z_{17}\,\mathbf{a}_3$	=	$-\frac{1}{2}a\,(2x_{17}-y_{17})\,\hat{\mathbf{x}}+\frac{\sqrt{3}}{2}ay_{17}\,\hat{\mathbf{y}}+cz_{17}\,\hat{\mathbf{z}}$	(12d)	O VII
$\mathbf{B_{107}}$	$x_{18}\,\mathbf{a}_1+y_{18}\,\mathbf{a}_2+z_{18}\,\mathbf{a}_3$	=	$\frac{1}{2}a\,(x_{18}+y_{18})\,\hat{\mathbf{x}}-\frac{\sqrt{3}}{2}a\,(x_{18}-y_{18})\,\hat{\mathbf{y}}+cz_{18}\,\hat{\mathbf{z}}$	(12d)	O VIII
$\mathbf{B_{108}}$	$-y_{18}\,\mathbf{a}_1+(x_{18}-y_{18})\,\mathbf{a}_2+z_{18}\,\mathbf{a}_3$	=	$\frac{1}{2}a\,(x_{18}-2y_{18})\,\hat{\mathbf{x}}+\frac{\sqrt{3}}{2}ax_{18}\,\hat{\mathbf{y}}+cz_{18}\,\hat{\mathbf{z}}$	(12d)	O VIII
$\mathbf{B_{109}}$	$-(x_{18}-y_{18})\,\mathbf{a}_1-x_{18}\,\mathbf{a}_2+z_{18}\,\mathbf{a}_3$	=	$-\frac{1}{2}a\,(2x_{18}-y_{18})\,\hat{\mathbf{x}}-\frac{\sqrt{3}}{2}ay_{18}\,\hat{\mathbf{y}}+cz_{18}\,\hat{\mathbf{z}}$	(12d)	O VIII
$\mathbf{B_{110}}$	$-x_{18}\,\mathbf{a}_1-y_{18}\,\mathbf{a}_2+\left(z_{18}+\frac{1}{2}\right)\,\mathbf{a}_3$	=	$-\frac{1}{2}a\,(x_{18}+y_{18})\,\hat{\mathbf{x}}+\frac{\sqrt{3}}{2}a\,(x_{18}-y_{18})\,\hat{\mathbf{y}}+c\left(z_{18}+\frac{1}{2}\right)\,\hat{\mathbf{z}}$	(12d)	O VIII
$\mathbf{B_{111}}$	$y_{18}\,\mathbf{a}_1-(x_{18}-y_{18})\,\mathbf{a}_2+\left(z_{18}+\frac{1}{2}\right)\,\mathbf{a}_3$	=	$\frac{1}{2}a\,(-x_{18}+2y_{18})\,\hat{\mathbf{x}}-\frac{\sqrt{3}}{2}ax_{18}\,\hat{\mathbf{y}}+c\left(z_{18}+\frac{1}{2}\right)\,\hat{\mathbf{z}}$	(12d)	O VIII
$\mathbf{B_{112}}$	$(x_{18}-y_{18})\,\mathbf{a}_1+x_{18}\,\mathbf{a}_2+\left(z_{18}+\frac{1}{2}\right)\,\mathbf{a}_3$	=	$\frac{1}{2}a\,(2x_{18}-y_{18})\,\hat{\mathbf{x}}+\frac{\sqrt{3}}{2}ay_{18}\,\hat{\mathbf{y}}+c\left(z_{18}+\frac{1}{2}\right)\,\hat{\mathbf{z}}$	(12d)	O VIII
$\mathbf{B_{113}}$	$-y_{18}\,\mathbf{a}_1-x_{18}\,\mathbf{a}_2+\left(z_{18}+\frac{1}{2}\right)\,\mathbf{a}_3$	=	$-\frac{1}{2}a\,(x_{18}+y_{18})\,\hat{\mathbf{x}}-\frac{\sqrt{3}}{2}a\,(x_{18}-y_{18})\,\hat{\mathbf{y}}+c\left(z_{18}+\frac{1}{2}\right)\,\hat{\mathbf{z}}$	(12d)	O VIII
$\mathbf{B_{114}}$	$-(x_{18}-y_{18})\,\mathbf{a}_1+y_{18}\,\mathbf{a}_2+\left(z_{18}+\frac{1}{2}\right)\,\mathbf{a}_3$	=	$\frac{1}{2}a\,(-x_{18}+2y_{18})\,\hat{\mathbf{x}}+\frac{\sqrt{3}}{2}ax_{18}\,\hat{\mathbf{y}}+c\left(z_{18}+\frac{1}{2}\right)\,\hat{\mathbf{z}}$	(12d)	O VIII
$\mathbf{B_{115}}$	$x_{18}\,\mathbf{a}_1+(x_{18}-y_{18})\,\mathbf{a}_2+\left(z_{18}+\frac{1}{2}\right)\,\mathbf{a}_3$	=	$\frac{1}{2}a\,(2x_{18}-y_{18})\,\hat{\mathbf{x}}-\frac{\sqrt{3}}{2}ay_{18}\,\hat{\mathbf{y}}+c\left(z_{18}+\frac{1}{2}\right)\,\hat{\mathbf{z}}$	(12d)	O VIII
$\mathbf{B_{116}}$	$y_{18}\,\mathbf{a}_1+x_{18}\,\mathbf{a}_2+z_{18}\,\mathbf{a}_3$	=	$\frac{1}{2}a\,(x_{18}+y_{18})\,\hat{\mathbf{x}}+\frac{\sqrt{3}}{2}a\,(x_{18}-y_{18})\,\hat{\mathbf{y}}+cz_{18}\,\hat{\mathbf{z}}$	(12d)	O VIII
$\mathbf{B_{117}}$	$(x_{18}-y_{18})\,\mathbf{a}_1-y_{18}\,\mathbf{a}_2+z_{18}\,\mathbf{a}_3$	=	$\frac{1}{2}a\,(x_{18}-2y_{18})\,\hat{\mathbf{x}}-\frac{\sqrt{3}}{2}ax_{18}\,\hat{\mathbf{y}}+cz_{18}\,\hat{\mathbf{z}}$	(12d)	O VIII

$$\mathbf{B_{118}} = -x_{18}\,\mathbf{a}_1 - (x_{18} - y_{18})\,\mathbf{a}_2 + z_{18}\,\mathbf{a}_3 = -\tfrac{1}{2}a\,(2x_{18} - y_{18})\,\hat{\mathbf{x}} + \tfrac{\sqrt{3}}{2}a y_{18}\,\hat{\mathbf{y}} + c z_{18}\,\hat{\mathbf{z}} \quad \text{(12d)} \quad \text{O VIII}$$

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