α-AlB_{12} Structure: A5B22_tP216_96_5b_2a21b-001

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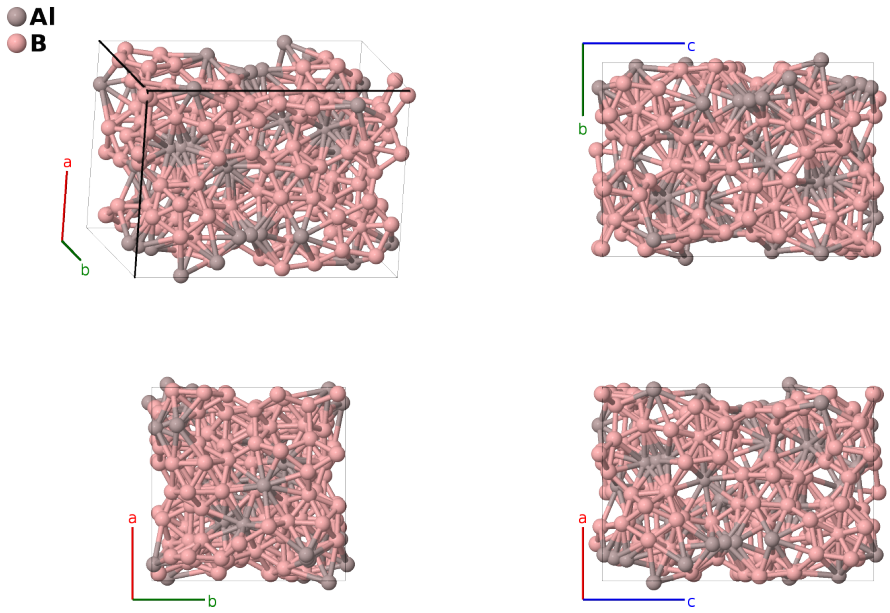
https://aflow.org/p/ZF6C

https://aflow.org/p/A5B22_tP216_96_5b_2a21b-001



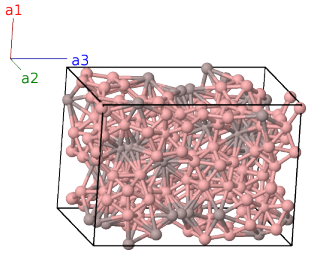
Prototype	AlB_{12}
AFLOW prototype label	A5B22_tP216_96_5b_2a21b-001
ICSD	1091
Pearson symbol	tP216
Space group number	96
Space group symbol	$P4_32_12$
AFLOW prototype command	`aflow --proto=A5B22_tP216_96_5b_2a21b-001 --params=`$a, c/a, x_1, x_2, x_3, y_3, z_3, x_4, y_4, z_4, x_5, y_5, z_5, x_6, y_6, z_6, x_7, y_7, z_7, x_8, y_8, z_8, x_9, y_9, z_9, x_{10}, y_{10}, z_{10}, x_{11}, y_{11}, z_{11}, x_{12}, y_{12}, z_{12}, x_{13}, y_{13}, z_{13}, x_{14}, y_{14}, z_{14}, x_{15}, y_{15}, z_{15}, x_{16}, y_{16}, z_{16}, x_{17}, y_{17}, z_{17}, x_{18}, y_{18}, z_{18}, x_{19}, y_{19}, z_{19}, x_{20}, y_{20}, z_{20}, x_{21}, y_{21}, z_{21}, x_{22}, y_{22}, z_{22}, x_{23}, y_{23}, z_{23}, x_{24}, y_{24}, z_{24}, x_{25}, y_{25}, z_{25}, x_{26}, y_{26}, z_{26}, x_{27}, y_{27}, z_{27}, x_{28}, y_{28}, z_{28}$

- AlB_{12} can also be found as orthorhombic γ-AlB_{12}. Unfortunately we do not have a determination of the atomic positions in that system.
- As the γ structure has never been isolated from the α structure, and can be transformed into the α structure but not reconstituted from it, α-AlB_{12} is the ground state of the system. (Higashi, 2000)

- According to (Higashi, 1977), there are thirteen aluminum atoms in this cell, distributed statistically among the five sites. This gives a stoichiometry of $Al_{0.88}B_{12}$. The sites Al-I, Al-III, and Al-V are extremely close together. The combined site is 98% occupied, and only one site is occupied at any one position, so the occupancy of these sites are approximately 33%. Similarly, pairs of Al-II atoms are rather close together, and each pair of sites contains approximately 98%, giving an occupation of 49% for the A-II site. If there are thirteen aluminum atoms in the unit cell, puts the occupation of the Al-IV site at 14.5%.
- This structure can also be found in the enantiomorphic space group $P4_12_12$ #92. We follow the authors and place it in $P4_32_12$ #96.

Simple Tetragonal primitive vectors

$$\mathbf{a_1} = a\,\hat{\mathbf{x}}$$
$$\mathbf{a_2} = a\,\hat{\mathbf{y}}$$
$$\mathbf{a_3} = c\,\hat{\mathbf{z}}$$



Basis vectors

		Lattice coordinates		Cartesian coordinates	Wyckoff position	Atom type
$\mathbf{B_1}$	=	$x_1\,\mathbf{a}_1 + x_1\,\mathbf{a}_2$	=	$ax_1\,\hat{\mathbf{x}} + ax_1\,\hat{\mathbf{y}}$	(4a)	B I
$\mathbf{B_2}$	=	$-x_1\,\mathbf{a}_1 - x_1\,\mathbf{a}_2 + \frac{1}{2}\,\mathbf{a}_3$	=	$-ax_1\,\hat{\mathbf{x}} - ax_1\,\hat{\mathbf{y}} + \frac{1}{2}c\,\hat{\mathbf{z}}$	(4a)	B I
$\mathbf{B_3}$	=	$-\left(x_1 - \frac{1}{2}\right)\,\mathbf{a}_1 + \left(x_1 + \frac{1}{2}\right)\,\mathbf{a}_2 + \frac{3}{4}\,\mathbf{a}_3$	=	$-a\left(x_1 - \frac{1}{2}\right)\,\hat{\mathbf{x}} + a\left(x_1 + \frac{1}{2}\right)\,\hat{\mathbf{y}} + \frac{3}{4}c\,\hat{\mathbf{z}}$	(4a)	B I
$\mathbf{B_4}$	=	$\left(x_1 + \frac{1}{2}\right)\,\mathbf{a}_1 - \left(x_1 - \frac{1}{2}\right)\,\mathbf{a}_2 + \frac{1}{4}\,\mathbf{a}_3$	=	$a\left(x_1 + \frac{1}{2}\right)\,\hat{\mathbf{x}} - a\left(x_1 - \frac{1}{2}\right)\,\hat{\mathbf{y}} + \frac{1}{4}c\,\hat{\mathbf{z}}$	(4a)	B I
$\mathbf{B_5}$	=	$x_2\,\mathbf{a}_1 + x_2\,\mathbf{a}_2$	=	$ax_2\,\hat{\mathbf{x}} + ax_2\,\hat{\mathbf{y}}$	(4a)	B II
$\mathbf{B_6}$	=	$-x_2\,\mathbf{a}_1 - x_2\,\mathbf{a}_2 + \frac{1}{2}\,\mathbf{a}_3$	=	$-ax_2\,\hat{\mathbf{x}} - ax_2\,\hat{\mathbf{y}} + \frac{1}{2}c\,\hat{\mathbf{z}}$	(4a)	B II
$\mathbf{B_7}$	=	$-\left(x_2 - \frac{1}{2}\right)\,\mathbf{a}_1 + \left(x_2 + \frac{1}{2}\right)\,\mathbf{a}_2 + \frac{3}{4}\,\mathbf{a}_3$	=	$-a\left(x_2 - \frac{1}{2}\right)\,\hat{\mathbf{x}} + a\left(x_2 + \frac{1}{2}\right)\,\hat{\mathbf{y}} + \frac{3}{4}c\,\hat{\mathbf{z}}$	(4a)	B II
$\mathbf{B_8}$	=	$\left(x_2 + \frac{1}{2}\right)\,\mathbf{a}_1 - \left(x_2 - \frac{1}{2}\right)\,\mathbf{a}_2 + \frac{1}{4}\,\mathbf{a}_3$	=	$a\left(x_2 + \frac{1}{2}\right)\,\hat{\mathbf{x}} - a\left(x_2 - \frac{1}{2}\right)\,\hat{\mathbf{y}} + \frac{1}{4}c\,\hat{\mathbf{z}}$	(4a)	B II
$\mathbf{B_9}$	=	$x_3\,\mathbf{a}_1 + y_3\,\mathbf{a}_2 + z_3\,\mathbf{a}_3$	=	$ax_3\,\hat{\mathbf{x}} + ay_3\,\hat{\mathbf{y}} + cz_3\,\hat{\mathbf{z}}$	(8b)	Al I
$\mathbf{B_{10}}$	=	$-x_3\,\mathbf{a}_1 - y_3\,\mathbf{a}_2 + \left(z_3 + \frac{1}{2}\right)\,\mathbf{a}_3$	=	$-ax_3\,\hat{\mathbf{x}} - ay_3\,\hat{\mathbf{y}} + c\left(z_3 + \frac{1}{2}\right)\,\hat{\mathbf{z}}$	(8b)	Al I
$\mathbf{B_{11}}$	=	$-\left(y_3 - \frac{1}{2}\right)\,\mathbf{a}_1 + \left(x_3 + \frac{1}{2}\right)\,\mathbf{a}_2 + \left(z_3 + \frac{3}{4}\right)\,\mathbf{a}_3$	=	$-a\left(y_3 - \frac{1}{2}\right)\,\hat{\mathbf{x}} + a\left(x_3 + \frac{1}{2}\right)\,\hat{\mathbf{y}} + c\left(z_3 + \frac{3}{4}\right)\,\hat{\mathbf{z}}$	(8b)	Al I
$\mathbf{B_{12}}$	=	$\left(y_3 + \frac{1}{2}\right)\,\mathbf{a}_1 - \left(x_3 - \frac{1}{2}\right)\,\mathbf{a}_2 + \left(z_3 + \frac{1}{4}\right)\,\mathbf{a}_3$	=	$a\left(y_3 + \frac{1}{2}\right)\,\hat{\mathbf{x}} - a\left(x_3 - \frac{1}{2}\right)\,\hat{\mathbf{y}} + c\left(z_3 + \frac{1}{4}\right)\,\hat{\mathbf{z}}$	(8b)	Al I
$\mathbf{B_{13}}$	=	$-\left(x_3 - \frac{1}{2}\right)\,\mathbf{a}_1 + \left(y_3 + \frac{1}{2}\right)\,\mathbf{a}_2 - \left(z_3 - \frac{3}{4}\right)\,\mathbf{a}_3$	=	$-a\left(x_3 - \frac{1}{2}\right)\,\hat{\mathbf{x}} + a\left(y_3 + \frac{1}{2}\right)\,\hat{\mathbf{y}} - c\left(z_3 - \frac{3}{4}\right)\,\hat{\mathbf{z}}$	(8b)	Al I
$\mathbf{B_{14}}$	=	$\left(x_3 + \frac{1}{2}\right)\,\mathbf{a}_1 - \left(y_3 - \frac{1}{2}\right)\,\mathbf{a}_2 - \left(z_3 - \frac{1}{4}\right)\,\mathbf{a}_3$	=	$a\left(x_3 + \frac{1}{2}\right)\,\hat{\mathbf{x}} - a\left(y_3 - \frac{1}{2}\right)\,\hat{\mathbf{y}} - c\left(z_3 - \frac{1}{4}\right)\,\hat{\mathbf{z}}$	(8b)	Al I
$\mathbf{B_{15}}$	=	$y_3\,\mathbf{a}_1 + x_3\,\mathbf{a}_2 - z_3\,\mathbf{a}_3$	=	$ay_3\,\hat{\mathbf{x}} + ax_3\,\hat{\mathbf{y}} - cz_3\,\hat{\mathbf{z}}$	(8b)	Al I
$\mathbf{B_{16}}$	=	$-y_3\,\mathbf{a}_1 - x_3\,\mathbf{a}_2 - \left(z_3 - \frac{1}{2}\right)\,\mathbf{a}_3$	=	$-ay_3\,\hat{\mathbf{x}} - ax_3\,\hat{\mathbf{y}} - c\left(z_3 - \frac{1}{2}\right)\,\hat{\mathbf{z}}$	(8b)	Al I
$\mathbf{B_{17}}$	=	$x_4\,\mathbf{a}_1 + y_4\,\mathbf{a}_2 + z_4\,\mathbf{a}_3$	=	$ax_4\,\hat{\mathbf{x}} + ay_4\,\hat{\mathbf{y}} + cz_4\,\hat{\mathbf{z}}$	(8b)	Al II
$\mathbf{B_{18}}$	=	$-x_4\,\mathbf{a}_1 - y_4\,\mathbf{a}_2 + \left(z_4 + \frac{1}{2}\right)\,\mathbf{a}_3$	=	$-ax_4\,\hat{\mathbf{x}} - ay_4\,\hat{\mathbf{y}} + c\left(z_4 + \frac{1}{2}\right)\,\hat{\mathbf{z}}$	(8b)	Al II

$$\mathbf{B_{19}} = -\left(y_4-\tfrac{1}{2}\right)\mathbf{a}_1+\left(x_4+\tfrac{1}{2}\right)\mathbf{a}_2+\left(z_4+\tfrac{3}{4}\right)\mathbf{a}_3 = -a\left(y_4-\tfrac{1}{2}\right)\hat{\mathbf{x}}+a\left(x_4+\tfrac{1}{2}\right)\hat{\mathbf{y}}+c\left(z_4+\tfrac{3}{4}\right)\hat{\mathbf{z}} \quad (8b) \quad \text{Al II}$$

$$\mathbf{B_{20}} = \left(y_4+\tfrac{1}{2}\right)\mathbf{a}_1-\left(x_4-\tfrac{1}{2}\right)\mathbf{a}_2+\left(z_4+\tfrac{1}{4}\right)\mathbf{a}_3 = a\left(y_4+\tfrac{1}{2}\right)\hat{\mathbf{x}}-a\left(x_4-\tfrac{1}{2}\right)\hat{\mathbf{y}}+c\left(z_4+\tfrac{1}{4}\right)\hat{\mathbf{z}} \quad (8b) \quad \text{Al II}$$

$$\mathbf{B_{21}} = -\left(x_4-\tfrac{1}{2}\right)\mathbf{a}_1+\left(y_4+\tfrac{1}{2}\right)\mathbf{a}_2-\left(z_4-\tfrac{3}{4}\right)\mathbf{a}_3 = -a\left(x_4-\tfrac{1}{2}\right)\hat{\mathbf{x}}+a\left(y_4+\tfrac{1}{2}\right)\hat{\mathbf{y}}-c\left(z_4-\tfrac{3}{4}\right)\hat{\mathbf{z}} \quad (8b) \quad \text{Al II}$$

$$\mathbf{B_{22}} = \left(x_4+\tfrac{1}{2}\right)\mathbf{a}_1-\left(y_4-\tfrac{1}{2}\right)\mathbf{a}_2-\left(z_4-\tfrac{1}{4}\right)\mathbf{a}_3 = a\left(x_4+\tfrac{1}{2}\right)\hat{\mathbf{x}}-a\left(y_4-\tfrac{1}{2}\right)\hat{\mathbf{y}}-c\left(z_4-\tfrac{1}{4}\right)\hat{\mathbf{z}} \quad (8b) \quad \text{Al II}$$

$$\mathbf{B_{23}} = y_4\,\mathbf{a}_1+x_4\,\mathbf{a}_2-z_4\,\mathbf{a}_3 = ay_4\,\hat{\mathbf{x}}+ax_4\,\hat{\mathbf{y}}-cz_4\,\hat{\mathbf{z}} \quad (8b) \quad \text{Al II}$$

$$\mathbf{B_{24}} = -y_4\,\mathbf{a}_1-x_4\,\mathbf{a}_2-\left(z_4-\tfrac{1}{2}\right)\mathbf{a}_3 = -ay_4\,\hat{\mathbf{x}}-ax_4\,\hat{\mathbf{y}}-c\left(z_4-\tfrac{1}{2}\right)\hat{\mathbf{z}} \quad (8b) \quad \text{Al II}$$

$$\mathbf{B_{25}} = x_5\,\mathbf{a}_1+y_5\,\mathbf{a}_2+z_5\,\mathbf{a}_3 = ax_5\,\hat{\mathbf{x}}+ay_5\,\hat{\mathbf{y}}+cz_5\,\hat{\mathbf{z}} \quad (8b) \quad \text{Al III}$$

$$\mathbf{B_{26}} = -x_5\,\mathbf{a}_1-y_5\,\mathbf{a}_2+\left(z_5+\tfrac{1}{2}\right)\mathbf{a}_3 = -ax_5\,\hat{\mathbf{x}}-ay_5\,\hat{\mathbf{y}}+c\left(z_5+\tfrac{1}{2}\right)\hat{\mathbf{z}} \quad (8b) \quad \text{Al III}$$

$$\mathbf{B_{27}} = -\left(y_5-\tfrac{1}{2}\right)\mathbf{a}_1+\left(x_5+\tfrac{1}{2}\right)\mathbf{a}_2+\left(z_5+\tfrac{3}{4}\right)\mathbf{a}_3 = -a\left(y_5-\tfrac{1}{2}\right)\hat{\mathbf{x}}+a\left(x_5+\tfrac{1}{2}\right)\hat{\mathbf{y}}+c\left(z_5+\tfrac{3}{4}\right)\hat{\mathbf{z}} \quad (8b) \quad \text{Al III}$$

$$\mathbf{B_{28}} = \left(y_5+\tfrac{1}{2}\right)\mathbf{a}_1-\left(x_5-\tfrac{1}{2}\right)\mathbf{a}_2+\left(z_5+\tfrac{1}{4}\right)\mathbf{a}_3 = a\left(y_5+\tfrac{1}{2}\right)\hat{\mathbf{x}}-a\left(x_5-\tfrac{1}{2}\right)\hat{\mathbf{y}}+c\left(z_5+\tfrac{1}{4}\right)\hat{\mathbf{z}} \quad (8b) \quad \text{Al III}$$

$$\mathbf{B_{29}} = -\left(x_5-\tfrac{1}{2}\right)\mathbf{a}_1+\left(y_5+\tfrac{1}{2}\right)\mathbf{a}_2-\left(z_5-\tfrac{3}{4}\right)\mathbf{a}_3 = -a\left(x_5-\tfrac{1}{2}\right)\hat{\mathbf{x}}+a\left(y_5+\tfrac{1}{2}\right)\hat{\mathbf{y}}-c\left(z_5-\tfrac{3}{4}\right)\hat{\mathbf{z}} \quad (8b) \quad \text{Al III}$$

$$\mathbf{B_{30}} = \left(x_5+\tfrac{1}{2}\right)\mathbf{a}_1-\left(y_5-\tfrac{1}{2}\right)\mathbf{a}_2-\left(z_5-\tfrac{1}{4}\right)\mathbf{a}_3 = a\left(x_5+\tfrac{1}{2}\right)\hat{\mathbf{x}}-a\left(y_5-\tfrac{1}{2}\right)\hat{\mathbf{y}}-c\left(z_5-\tfrac{1}{4}\right)\hat{\mathbf{z}} \quad (8b) \quad \text{Al III}$$

$$\mathbf{B_{31}} = y_5\,\mathbf{a}_1+x_5\,\mathbf{a}_2-z_5\,\mathbf{a}_3 = ay_5\,\hat{\mathbf{x}}+ax_5\,\hat{\mathbf{y}}-cz_5\,\hat{\mathbf{z}} \quad (8b) \quad \text{Al III}$$

$$\mathbf{B_{32}} = -y_5\,\mathbf{a}_1-x_5\,\mathbf{a}_2-\left(z_5-\tfrac{1}{2}\right)\mathbf{a}_3 = -ay_5\,\hat{\mathbf{x}}-ax_5\,\hat{\mathbf{y}}-c\left(z_5-\tfrac{1}{2}\right)\hat{\mathbf{z}} \quad (8b) \quad \text{Al III}$$

$$\mathbf{B_{33}} = x_6\,\mathbf{a}_1+y_6\,\mathbf{a}_2+z_6\,\mathbf{a}_3 = ax_6\,\hat{\mathbf{x}}+ay_6\,\hat{\mathbf{y}}+cz_6\,\hat{\mathbf{z}} \quad (8b) \quad \text{Al IV}$$

$$\mathbf{B_{34}} = -x_6\,\mathbf{a}_1-y_6\,\mathbf{a}_2+\left(z_6+\tfrac{1}{2}\right)\mathbf{a}_3 = -ax_6\,\hat{\mathbf{x}}-ay_6\,\hat{\mathbf{y}}+c\left(z_6+\tfrac{1}{2}\right)\hat{\mathbf{z}} \quad (8b) \quad \text{Al IV}$$

$$\mathbf{B_{35}} = -\left(y_6-\tfrac{1}{2}\right)\mathbf{a}_1+\left(x_6+\tfrac{1}{2}\right)\mathbf{a}_2+\left(z_6+\tfrac{3}{4}\right)\mathbf{a}_3 = -a\left(y_6-\tfrac{1}{2}\right)\hat{\mathbf{x}}+a\left(x_6+\tfrac{1}{2}\right)\hat{\mathbf{y}}+c\left(z_6+\tfrac{3}{4}\right)\hat{\mathbf{z}} \quad (8b) \quad \text{Al IV}$$

$$\mathbf{B_{36}} = \left(y_6+\tfrac{1}{2}\right)\mathbf{a}_1-\left(x_6-\tfrac{1}{2}\right)\mathbf{a}_2+\left(z_6+\tfrac{1}{4}\right)\mathbf{a}_3 = a\left(y_6+\tfrac{1}{2}\right)\hat{\mathbf{x}}-a\left(x_6-\tfrac{1}{2}\right)\hat{\mathbf{y}}+c\left(z_6+\tfrac{1}{4}\right)\hat{\mathbf{z}} \quad (8b) \quad \text{Al IV}$$

$$\mathbf{B_{37}} = -\left(x_6-\tfrac{1}{2}\right)\mathbf{a}_1+\left(y_6+\tfrac{1}{2}\right)\mathbf{a}_2-\left(z_6-\tfrac{3}{4}\right)\mathbf{a}_3 = -a\left(x_6-\tfrac{1}{2}\right)\hat{\mathbf{x}}+a\left(y_6+\tfrac{1}{2}\right)\hat{\mathbf{y}}-c\left(z_6-\tfrac{3}{4}\right)\hat{\mathbf{z}} \quad (8b) \quad \text{Al IV}$$

$$\mathbf{B_{38}} = \left(x_6+\tfrac{1}{2}\right)\mathbf{a}_1-\left(y_6-\tfrac{1}{2}\right)\mathbf{a}_2-\left(z_6-\tfrac{1}{4}\right)\mathbf{a}_3 = a\left(x_6+\tfrac{1}{2}\right)\hat{\mathbf{x}}-a\left(y_6-\tfrac{1}{2}\right)\hat{\mathbf{y}}-c\left(z_6-\tfrac{1}{4}\right)\hat{\mathbf{z}} \quad (8b) \quad \text{Al IV}$$

$$\mathbf{B_{39}} = y_6\,\mathbf{a}_1+x_6\,\mathbf{a}_2-z_6\,\mathbf{a}_3 = ay_6\,\hat{\mathbf{x}}+ax_6\,\hat{\mathbf{y}}-cz_6\,\hat{\mathbf{z}} \quad (8b) \quad \text{Al IV}$$

$$\mathbf{B_{40}} = -y_6\,\mathbf{a}_1-x_6\,\mathbf{a}_2-\left(z_6-\tfrac{1}{2}\right)\mathbf{a}_3 = -ay_6\,\hat{\mathbf{x}}-ax_6\,\hat{\mathbf{y}}-c\left(z_6-\tfrac{1}{2}\right)\hat{\mathbf{z}} \quad (8b) \quad \text{Al IV}$$

$$\mathbf{B_{41}} = x_7\,\mathbf{a}_1+y_7\,\mathbf{a}_2+z_7\,\mathbf{a}_3 = ax_7\,\hat{\mathbf{x}}+ay_7\,\hat{\mathbf{y}}+cz_7\,\hat{\mathbf{z}} \quad (8b) \quad \text{Al V}$$

$$\mathbf{B_{42}} = -x_7\,\mathbf{a}_1-y_7\,\mathbf{a}_2+\left(z_7+\tfrac{1}{2}\right)\mathbf{a}_3 = -ax_7\,\hat{\mathbf{x}}-ay_7\,\hat{\mathbf{y}}+c\left(z_7+\tfrac{1}{2}\right)\hat{\mathbf{z}} \quad (8b) \quad \text{Al V}$$

$$\mathbf{B_{43}} = -\left(y_7-\tfrac{1}{2}\right)\mathbf{a}_1+\left(x_7+\tfrac{1}{2}\right)\mathbf{a}_2+\left(z_7+\tfrac{3}{4}\right)\mathbf{a}_3 = -a\left(y_7-\tfrac{1}{2}\right)\hat{\mathbf{x}}+a\left(x_7+\tfrac{1}{2}\right)\hat{\mathbf{y}}+c\left(z_7+\tfrac{3}{4}\right)\hat{\mathbf{z}} \quad (8b) \quad \text{Al V}$$

$$\mathbf{B_{44}} = \left(y_7+\tfrac{1}{2}\right)\mathbf{a}_1-\left(x_7-\tfrac{1}{2}\right)\mathbf{a}_2+\left(z_7+\tfrac{1}{4}\right)\mathbf{a}_3 = a\left(y_7+\tfrac{1}{2}\right)\hat{\mathbf{x}}-a\left(x_7-\tfrac{1}{2}\right)\hat{\mathbf{y}}+c\left(z_7+\tfrac{1}{4}\right)\hat{\mathbf{z}} \quad (8b) \quad \text{Al V}$$

$$\mathbf{B_{45}} = -\left(x_7-\tfrac{1}{2}\right)\mathbf{a}_1+\left(y_7+\tfrac{1}{2}\right)\mathbf{a}_2-\left(z_7-\tfrac{3}{4}\right)\mathbf{a}_3 = -a\left(x_7-\tfrac{1}{2}\right)\hat{\mathbf{x}}+a\left(y_7+\tfrac{1}{2}\right)\hat{\mathbf{y}}-c\left(z_7-\tfrac{3}{4}\right)\hat{\mathbf{z}} \quad (8b) \quad \text{Al V}$$

$$\mathbf{B_{46}} = \left(x_7+\tfrac{1}{2}\right)\mathbf{a}_1-\left(y_7-\tfrac{1}{2}\right)\mathbf{a}_2-\left(z_7-\tfrac{1}{4}\right)\mathbf{a}_3 = a\left(x_7+\tfrac{1}{2}\right)\hat{\mathbf{x}}-a\left(y_7-\tfrac{1}{2}\right)\hat{\mathbf{y}}-c\left(z_7-\tfrac{1}{4}\right)\hat{\mathbf{z}} \quad (8b) \quad \text{Al V}$$

$$\mathbf{B_{47}} = y_7\,\mathbf{a}_1+x_7\,\mathbf{a}_2-z_7\,\mathbf{a}_3 = ay_7\,\hat{\mathbf{x}}+ax_7\,\hat{\mathbf{y}}-cz_7\,\hat{\mathbf{z}} \quad (8b) \quad \text{Al V}$$

$$\mathbf{B_{48}} = -y_7\,\mathbf{a}_1 - x_7\,\mathbf{a}_2 - \left(z_7 - \tfrac{1}{2}\right)\,\mathbf{a}_3 = -ay_7\,\hat{\mathbf{x}} - ax_7\,\hat{\mathbf{y}} - c\left(z_7 - \tfrac{1}{2}\right)\,\hat{\mathbf{z}} \quad (8b) \quad \text{Al V}$$

$$\mathbf{B_{49}} = x_8\,\mathbf{a}_1 + y_8\,\mathbf{a}_2 + z_8\,\mathbf{a}_3 = ax_8\,\hat{\mathbf{x}} + ay_8\,\hat{\mathbf{y}} + cz_8\,\hat{\mathbf{z}} \quad (8b) \quad \text{B III}$$

$$\mathbf{B_{50}} = -x_8\,\mathbf{a}_1 - y_8\,\mathbf{a}_2 + \left(z_8 + \tfrac{1}{2}\right)\,\mathbf{a}_3 = -ax_8\,\hat{\mathbf{x}} - ay_8\,\hat{\mathbf{y}} + c\left(z_8 + \tfrac{1}{2}\right)\,\hat{\mathbf{z}} \quad (8b) \quad \text{B III}$$

$$\mathbf{B_{51}} = -\left(y_8 - \tfrac{1}{2}\right)\,\mathbf{a}_1 + \left(x_8 + \tfrac{1}{2}\right)\,\mathbf{a}_2 + \left(z_8 + \tfrac{3}{4}\right)\,\mathbf{a}_3 = -a\left(y_8 - \tfrac{1}{2}\right)\,\hat{\mathbf{x}} + a\left(x_8 + \tfrac{1}{2}\right)\,\hat{\mathbf{y}} + c\left(z_8 + \tfrac{3}{4}\right)\,\hat{\mathbf{z}} \quad (8b) \quad \text{B III}$$

$$\mathbf{B_{52}} = \left(y_8 + \tfrac{1}{2}\right)\,\mathbf{a}_1 - \left(x_8 - \tfrac{1}{2}\right)\,\mathbf{a}_2 + \left(z_8 + \tfrac{1}{4}\right)\,\mathbf{a}_3 = a\left(y_8 + \tfrac{1}{2}\right)\,\hat{\mathbf{x}} - a\left(x_8 - \tfrac{1}{2}\right)\,\hat{\mathbf{y}} + c\left(z_8 + \tfrac{1}{4}\right)\,\hat{\mathbf{z}} \quad (8b) \quad \text{B III}$$

$$\mathbf{B_{53}} = -\left(x_8 - \tfrac{1}{2}\right)\,\mathbf{a}_1 + \left(y_8 + \tfrac{1}{2}\right)\,\mathbf{a}_2 - \left(z_8 - \tfrac{3}{4}\right)\,\mathbf{a}_3 = -a\left(x_8 - \tfrac{1}{2}\right)\,\hat{\mathbf{x}} + a\left(y_8 + \tfrac{1}{2}\right)\,\hat{\mathbf{y}} - c\left(z_8 - \tfrac{3}{4}\right)\,\hat{\mathbf{z}} \quad (8b) \quad \text{B III}$$

$$\mathbf{B_{54}} = \left(x_8 + \tfrac{1}{2}\right)\,\mathbf{a}_1 - \left(y_8 - \tfrac{1}{2}\right)\,\mathbf{a}_2 - \left(z_8 - \tfrac{1}{4}\right)\,\mathbf{a}_3 = a\left(x_8 + \tfrac{1}{2}\right)\,\hat{\mathbf{x}} - a\left(y_8 - \tfrac{1}{2}\right)\,\hat{\mathbf{y}} - c\left(z_8 - \tfrac{1}{4}\right)\,\hat{\mathbf{z}} \quad (8b) \quad \text{B III}$$

$$\mathbf{B_{55}} = y_8\,\mathbf{a}_1 + x_8\,\mathbf{a}_2 - z_8\,\mathbf{a}_3 = ay_8\,\hat{\mathbf{x}} + ax_8\,\hat{\mathbf{y}} - cz_8\,\hat{\mathbf{z}} \quad (8b) \quad \text{B III}$$

$$\mathbf{B_{56}} = -y_8\,\mathbf{a}_1 - x_8\,\mathbf{a}_2 - \left(z_8 - \tfrac{1}{2}\right)\,\mathbf{a}_3 = -ay_8\,\hat{\mathbf{x}} - ax_8\,\hat{\mathbf{y}} - c\left(z_8 - \tfrac{1}{2}\right)\,\hat{\mathbf{z}} \quad (8b) \quad \text{B III}$$

$$\mathbf{B_{57}} = x_9\,\mathbf{a}_1 + y_9\,\mathbf{a}_2 + z_9\,\mathbf{a}_3 = ax_9\,\hat{\mathbf{x}} + ay_9\,\hat{\mathbf{y}} + cz_9\,\hat{\mathbf{z}} \quad (8b) \quad \text{B IV}$$

$$\mathbf{B_{58}} = -x_9\,\mathbf{a}_1 - y_9\,\mathbf{a}_2 + \left(z_9 + \tfrac{1}{2}\right)\,\mathbf{a}_3 = -ax_9\,\hat{\mathbf{x}} - ay_9\,\hat{\mathbf{y}} + c\left(z_9 + \tfrac{1}{2}\right)\,\hat{\mathbf{z}} \quad (8b) \quad \text{B IV}$$

$$\mathbf{B_{59}} = -\left(y_9 - \tfrac{1}{2}\right)\,\mathbf{a}_1 + \left(x_9 + \tfrac{1}{2}\right)\,\mathbf{a}_2 + \left(z_9 + \tfrac{3}{4}\right)\,\mathbf{a}_3 = -a\left(y_9 - \tfrac{1}{2}\right)\,\hat{\mathbf{x}} + a\left(x_9 + \tfrac{1}{2}\right)\,\hat{\mathbf{y}} + c\left(z_9 + \tfrac{3}{4}\right)\,\hat{\mathbf{z}} \quad (8b) \quad \text{B IV}$$

$$\mathbf{B_{60}} = \left(y_9 + \tfrac{1}{2}\right)\,\mathbf{a}_1 - \left(x_9 - \tfrac{1}{2}\right)\,\mathbf{a}_2 + \left(z_9 + \tfrac{1}{4}\right)\,\mathbf{a}_3 = a\left(y_9 + \tfrac{1}{2}\right)\,\hat{\mathbf{x}} - a\left(x_9 - \tfrac{1}{2}\right)\,\hat{\mathbf{y}} + c\left(z_9 + \tfrac{1}{4}\right)\,\hat{\mathbf{z}} \quad (8b) \quad \text{B IV}$$

$$\mathbf{B_{61}} = -\left(x_9 - \tfrac{1}{2}\right)\,\mathbf{a}_1 + \left(y_9 + \tfrac{1}{2}\right)\,\mathbf{a}_2 - \left(z_9 - \tfrac{3}{4}\right)\,\mathbf{a}_3 = -a\left(x_9 - \tfrac{1}{2}\right)\,\hat{\mathbf{x}} + a\left(y_9 + \tfrac{1}{2}\right)\,\hat{\mathbf{y}} - c\left(z_9 - \tfrac{3}{4}\right)\,\hat{\mathbf{z}} \quad (8b) \quad \text{B IV}$$

$$\mathbf{B_{62}} = \left(x_9 + \tfrac{1}{2}\right)\,\mathbf{a}_1 - \left(y_9 - \tfrac{1}{2}\right)\,\mathbf{a}_2 - \left(z_9 - \tfrac{1}{4}\right)\,\mathbf{a}_3 = a\left(x_9 + \tfrac{1}{2}\right)\,\hat{\mathbf{x}} - a\left(y_9 - \tfrac{1}{2}\right)\,\hat{\mathbf{y}} - c\left(z_9 - \tfrac{1}{4}\right)\,\hat{\mathbf{z}} \quad (8b) \quad \text{B IV}$$

$$\mathbf{B_{63}} = y_9\,\mathbf{a}_1 + x_9\,\mathbf{a}_2 - z_9\,\mathbf{a}_3 = ay_9\,\hat{\mathbf{x}} + ax_9\,\hat{\mathbf{y}} - cz_9\,\hat{\mathbf{z}} \quad (8b) \quad \text{B IV}$$

$$\mathbf{B_{64}} = -y_9\,\mathbf{a}_1 - x_9\,\mathbf{a}_2 - \left(z_9 - \tfrac{1}{2}\right)\,\mathbf{a}_3 = -ay_9\,\hat{\mathbf{x}} - ax_9\,\hat{\mathbf{y}} - c\left(z_9 - \tfrac{1}{2}\right)\,\hat{\mathbf{z}} \quad (8b) \quad \text{B IV}$$

$$\mathbf{B_{65}} = x_{10}\,\mathbf{a}_1 + y_{10}\,\mathbf{a}_2 + z_{10}\,\mathbf{a}_3 = ax_{10}\,\hat{\mathbf{x}} + ay_{10}\,\hat{\mathbf{y}} + cz_{10}\,\hat{\mathbf{z}} \quad (8b) \quad \text{B V}$$

$$\mathbf{B_{66}} = -x_{10}\,\mathbf{a}_1 - y_{10}\,\mathbf{a}_2 + \left(z_{10} + \tfrac{1}{2}\right)\,\mathbf{a}_3 = -ax_{10}\,\hat{\mathbf{x}} - ay_{10}\,\hat{\mathbf{y}} + c\left(z_{10} + \tfrac{1}{2}\right)\,\hat{\mathbf{z}} \quad (8b) \quad \text{B V}$$

$$\mathbf{B_{67}} = -\left(y_{10} - \tfrac{1}{2}\right)\,\mathbf{a}_1 + \left(x_{10} + \tfrac{1}{2}\right)\,\mathbf{a}_2 + \left(z_{10} + \tfrac{3}{4}\right)\,\mathbf{a}_3 = -a\left(y_{10} - \tfrac{1}{2}\right)\,\hat{\mathbf{x}} + a\left(x_{10} + \tfrac{1}{2}\right)\,\hat{\mathbf{y}} + c\left(z_{10} + \tfrac{3}{4}\right)\,\hat{\mathbf{z}} \quad (8b) \quad \text{B V}$$

$$\mathbf{B_{68}} = \left(y_{10} + \tfrac{1}{2}\right)\,\mathbf{a}_1 - \left(x_{10} - \tfrac{1}{2}\right)\,\mathbf{a}_2 + \left(z_{10} + \tfrac{1}{4}\right)\,\mathbf{a}_3 = a\left(y_{10} + \tfrac{1}{2}\right)\,\hat{\mathbf{x}} - a\left(x_{10} - \tfrac{1}{2}\right)\,\hat{\mathbf{y}} + c\left(z_{10} + \tfrac{1}{4}\right)\,\hat{\mathbf{z}} \quad (8b) \quad \text{B V}$$

$$\mathbf{B_{69}} = -\left(x_{10} - \tfrac{1}{2}\right)\,\mathbf{a}_1 + \left(y_{10} + \tfrac{1}{2}\right)\,\mathbf{a}_2 - \left(z_{10} - \tfrac{3}{4}\right)\,\mathbf{a}_3 = -a\left(x_{10} - \tfrac{1}{2}\right)\,\hat{\mathbf{x}} + a\left(y_{10} + \tfrac{1}{2}\right)\,\hat{\mathbf{y}} - c\left(z_{10} - \tfrac{3}{4}\right)\,\hat{\mathbf{z}} \quad (8b) \quad \text{B V}$$

$$\mathbf{B_{70}} = \left(x_{10} + \tfrac{1}{2}\right)\,\mathbf{a}_1 - \left(y_{10} - \tfrac{1}{2}\right)\,\mathbf{a}_2 - \left(z_{10} - \tfrac{1}{4}\right)\,\mathbf{a}_3 = a\left(x_{10} + \tfrac{1}{2}\right)\,\hat{\mathbf{x}} - a\left(y_{10} - \tfrac{1}{2}\right)\,\hat{\mathbf{y}} - c\left(z_{10} - \tfrac{1}{4}\right)\,\hat{\mathbf{z}} \quad (8b) \quad \text{B V}$$

$$\mathbf{B_{71}} = y_{10}\,\mathbf{a}_1 + x_{10}\,\mathbf{a}_2 - z_{10}\,\mathbf{a}_3 = ay_{10}\,\hat{\mathbf{x}} + ax_{10}\,\hat{\mathbf{y}} - cz_{10}\,\hat{\mathbf{z}} \quad (8b) \quad \text{B V}$$

$$\mathbf{B_{72}} = -y_{10}\,\mathbf{a}_1 - x_{10}\,\mathbf{a}_2 - \left(z_{10} - \tfrac{1}{2}\right)\,\mathbf{a}_3 = -ay_{10}\,\hat{\mathbf{x}} - ax_{10}\,\hat{\mathbf{y}} - c\left(z_{10} - \tfrac{1}{2}\right)\,\hat{\mathbf{z}} \quad (8b) \quad \text{B V}$$

$$\mathbf{B_{73}} = x_{11}\,\mathbf{a}_1 + y_{11}\,\mathbf{a}_2 + z_{11}\,\mathbf{a}_3 = ax_{11}\,\hat{\mathbf{x}} + ay_{11}\,\hat{\mathbf{y}} + cz_{11}\,\hat{\mathbf{z}} \quad (8b) \quad \text{B VI}$$

$$\mathbf{B_{74}} = -x_{11}\,\mathbf{a}_1 - y_{11}\,\mathbf{a}_2 + \left(z_{11} + \tfrac{1}{2}\right)\,\mathbf{a}_3 = -ax_{11}\,\hat{\mathbf{x}} - ay_{11}\,\hat{\mathbf{y}} + c\left(z_{11} + \tfrac{1}{2}\right)\,\hat{\mathbf{z}} \quad (8b) \quad \text{B VI}$$

$$\mathbf{B_{75}} = -\left(y_{11} - \tfrac{1}{2}\right)\,\mathbf{a}_1 + \left(x_{11} + \tfrac{1}{2}\right)\,\mathbf{a}_2 + \left(z_{11} + \tfrac{3}{4}\right)\,\mathbf{a}_3 = -a\left(y_{11} - \tfrac{1}{2}\right)\,\hat{\mathbf{x}} + a\left(x_{11} + \tfrac{1}{2}\right)\,\hat{\mathbf{y}} + c\left(z_{11} + \tfrac{3}{4}\right)\,\hat{\mathbf{z}} \quad (8b) \quad \text{B VI}$$

$$\mathbf{B_{76}} = \left(y_{11} + \tfrac{1}{2}\right)\,\mathbf{a}_1 - \left(x_{11} - \tfrac{1}{2}\right)\,\mathbf{a}_2 + \left(z_{11} + \tfrac{1}{4}\right)\,\mathbf{a}_3 = a\left(y_{11} + \tfrac{1}{2}\right)\,\hat{\mathbf{x}} - a\left(x_{11} - \tfrac{1}{2}\right)\,\hat{\mathbf{y}} + c\left(z_{11} + \tfrac{1}{4}\right)\,\hat{\mathbf{z}} \quad (8b) \quad \text{B VI}$$

$$\mathbf{B_{77}} = -\left(x_{11} - \tfrac{1}{2}\right)\,\mathbf{a}_1 + \left(y_{11} + \tfrac{1}{2}\right)\,\mathbf{a}_2 - \left(z_{11} - \tfrac{3}{4}\right)\,\mathbf{a}_3 = -a\left(x_{11} - \tfrac{1}{2}\right)\,\hat{\mathbf{x}} + a\left(y_{11} + \tfrac{1}{2}\right)\,\hat{\mathbf{y}} - c\left(z_{11} - \tfrac{3}{4}\right)\,\hat{\mathbf{z}} \quad (8b) \quad \text{B VI}$$

$$
\begin{array}{lcccccc}
\mathbf{B_{78}} & = & \left(x_{11}+\frac{1}{2}\right)\mathbf{a}_1-\left(y_{11}-\frac{1}{2}\right)\mathbf{a}_2- & = & a\left(x_{11}+\frac{1}{2}\right)\hat{\mathbf{x}}-a\left(y_{11}-\frac{1}{2}\right)\hat{\mathbf{y}}- & (8b) & \text{B VI}\\
 & & \left(z_{11}-\frac{1}{4}\right)\mathbf{a}_3 & & c\left(z_{11}-\frac{1}{4}\right)\hat{\mathbf{z}} & & \\
\mathbf{B_{79}} & = & y_{11}\,\mathbf{a}_1+x_{11}\,\mathbf{a}_2-z_{11}\,\mathbf{a}_3 & = & ay_{11}\,\hat{\mathbf{x}}+ax_{11}\,\hat{\mathbf{y}}-cz_{11}\,\hat{\mathbf{z}} & (8b) & \text{B VI}\\
\mathbf{B_{80}} & = & -y_{11}\,\mathbf{a}_1-x_{11}\,\mathbf{a}_2-\left(z_{11}-\frac{1}{2}\right)\mathbf{a}_3 & = & -ay_{11}\,\hat{\mathbf{x}}-ax_{11}\,\hat{\mathbf{y}}-c\left(z_{11}-\frac{1}{2}\right)\hat{\mathbf{z}} & (8b) & \text{B VI}\\
\mathbf{B_{81}} & = & x_{12}\,\mathbf{a}_1+y_{12}\,\mathbf{a}_2+z_{12}\,\mathbf{a}_3 & = & ax_{12}\,\hat{\mathbf{x}}+ay_{12}\,\hat{\mathbf{y}}+cz_{12}\,\hat{\mathbf{z}} & (8b) & \text{B VII}\\
\mathbf{B_{82}} & = & -x_{12}\,\mathbf{a}_1-y_{12}\,\mathbf{a}_2+\left(z_{12}+\frac{1}{2}\right)\mathbf{a}_3 & = & -ax_{12}\,\hat{\mathbf{x}}-ay_{12}\,\hat{\mathbf{y}}+c\left(z_{12}+\frac{1}{2}\right)\hat{\mathbf{z}} & (8b) & \text{B VII}\\
\mathbf{B_{83}} & = & -\left(y_{12}-\frac{1}{2}\right)\mathbf{a}_1+\left(x_{12}+\frac{1}{2}\right)\mathbf{a}_2+ & = & -a\left(y_{12}-\frac{1}{2}\right)\hat{\mathbf{x}}+a\left(x_{12}+\frac{1}{2}\right)\hat{\mathbf{y}}+ & (8b) & \text{B VII}\\
 & & \left(z_{12}+\frac{3}{4}\right)\mathbf{a}_3 & & c\left(z_{12}+\frac{3}{4}\right)\hat{\mathbf{z}} & & \\
\mathbf{B_{84}} & = & \left(y_{12}+\frac{1}{2}\right)\mathbf{a}_1-\left(x_{12}-\frac{1}{2}\right)\mathbf{a}_2+ & = & a\left(y_{12}+\frac{1}{2}\right)\hat{\mathbf{x}}-a\left(x_{12}-\frac{1}{2}\right)\hat{\mathbf{y}}+ & (8b) & \text{B VII}\\
 & & \left(z_{12}+\frac{1}{4}\right)\mathbf{a}_3 & & c\left(z_{12}+\frac{1}{4}\right)\hat{\mathbf{z}} & & \\
\mathbf{B_{85}} & = & -\left(x_{12}-\frac{1}{2}\right)\mathbf{a}_1+\left(y_{12}+\frac{1}{2}\right)\mathbf{a}_2- & = & -a\left(x_{12}-\frac{1}{2}\right)\hat{\mathbf{x}}+a\left(y_{12}+\frac{1}{2}\right)\hat{\mathbf{y}}- & (8b) & \text{B VII}\\
 & & \left(z_{12}-\frac{3}{4}\right)\mathbf{a}_3 & & c\left(z_{12}-\frac{3}{4}\right)\hat{\mathbf{z}} & & \\
\mathbf{B_{86}} & = & \left(x_{12}+\frac{1}{2}\right)\mathbf{a}_1-\left(y_{12}-\frac{1}{2}\right)\mathbf{a}_2- & = & a\left(x_{12}+\frac{1}{2}\right)\hat{\mathbf{x}}-a\left(y_{12}-\frac{1}{2}\right)\hat{\mathbf{y}}- & (8b) & \text{B VII}\\
 & & \left(z_{12}-\frac{1}{4}\right)\mathbf{a}_3 & & c\left(z_{12}-\frac{1}{4}\right)\hat{\mathbf{z}} & & \\
\mathbf{B_{87}} & = & y_{12}\,\mathbf{a}_1+x_{12}\,\mathbf{a}_2-z_{12}\,\mathbf{a}_3 & = & ay_{12}\,\hat{\mathbf{x}}+ax_{12}\,\hat{\mathbf{y}}-cz_{12}\,\hat{\mathbf{z}} & (8b) & \text{B VII}\\
\mathbf{B_{88}} & = & -y_{12}\,\mathbf{a}_1-x_{12}\,\mathbf{a}_2-\left(z_{12}-\frac{1}{2}\right)\mathbf{a}_3 & = & -ay_{12}\,\hat{\mathbf{x}}-ax_{12}\,\hat{\mathbf{y}}-c\left(z_{12}-\frac{1}{2}\right)\hat{\mathbf{z}} & (8b) & \text{B VII}\\
\mathbf{B_{89}} & = & x_{13}\,\mathbf{a}_1+y_{13}\,\mathbf{a}_2+z_{13}\,\mathbf{a}_3 & = & ax_{13}\,\hat{\mathbf{x}}+ay_{13}\,\hat{\mathbf{y}}+cz_{13}\,\hat{\mathbf{z}} & (8b) & \text{B VIII}\\
\mathbf{B_{90}} & = & -x_{13}\,\mathbf{a}_1-y_{13}\,\mathbf{a}_2+\left(z_{13}+\frac{1}{2}\right)\mathbf{a}_3 & = & -ax_{13}\,\hat{\mathbf{x}}-ay_{13}\,\hat{\mathbf{y}}+c\left(z_{13}+\frac{1}{2}\right)\hat{\mathbf{z}} & (8b) & \text{B VIII}\\
\mathbf{B_{91}} & = & -\left(y_{13}-\frac{1}{2}\right)\mathbf{a}_1+\left(x_{13}+\frac{1}{2}\right)\mathbf{a}_2+ & = & -a\left(y_{13}-\frac{1}{2}\right)\hat{\mathbf{x}}+a\left(x_{13}+\frac{1}{2}\right)\hat{\mathbf{y}}+ & (8b) & \text{B VIII}\\
 & & \left(z_{13}+\frac{3}{4}\right)\mathbf{a}_3 & & c\left(z_{13}+\frac{3}{4}\right)\hat{\mathbf{z}} & & \\
\mathbf{B_{92}} & = & \left(y_{13}+\frac{1}{2}\right)\mathbf{a}_1-\left(x_{13}-\frac{1}{2}\right)\mathbf{a}_2+ & = & a\left(y_{13}+\frac{1}{2}\right)\hat{\mathbf{x}}-a\left(x_{13}-\frac{1}{2}\right)\hat{\mathbf{y}}+ & (8b) & \text{B VIII}\\
 & & \left(z_{13}+\frac{1}{4}\right)\mathbf{a}_3 & & c\left(z_{13}+\frac{1}{4}\right)\hat{\mathbf{z}} & & \\
\mathbf{B_{93}} & = & -\left(x_{13}-\frac{1}{2}\right)\mathbf{a}_1+\left(y_{13}+\frac{1}{2}\right)\mathbf{a}_2- & = & -a\left(x_{13}-\frac{1}{2}\right)\hat{\mathbf{x}}+a\left(y_{13}+\frac{1}{2}\right)\hat{\mathbf{y}}- & (8b) & \text{B VIII}\\
 & & \left(z_{13}-\frac{3}{4}\right)\mathbf{a}_3 & & c\left(z_{13}-\frac{3}{4}\right)\hat{\mathbf{z}} & & \\
\mathbf{B_{94}} & = & \left(x_{13}+\frac{1}{2}\right)\mathbf{a}_1-\left(y_{13}-\frac{1}{2}\right)\mathbf{a}_2- & = & a\left(x_{13}+\frac{1}{2}\right)\hat{\mathbf{x}}-a\left(y_{13}-\frac{1}{2}\right)\hat{\mathbf{y}}- & (8b) & \text{B VIII}\\
 & & \left(z_{13}-\frac{1}{4}\right)\mathbf{a}_3 & & c\left(z_{13}-\frac{1}{4}\right)\hat{\mathbf{z}} & & \\
\mathbf{B_{95}} & = & y_{13}\,\mathbf{a}_1+x_{13}\,\mathbf{a}_2-z_{13}\,\mathbf{a}_3 & = & ay_{13}\,\hat{\mathbf{x}}+ax_{13}\,\hat{\mathbf{y}}-cz_{13}\,\hat{\mathbf{z}} & (8b) & \text{B VIII}\\
\mathbf{B_{96}} & = & -y_{13}\,\mathbf{a}_1-x_{13}\,\mathbf{a}_2-\left(z_{13}-\frac{1}{2}\right)\mathbf{a}_3 & = & -ay_{13}\,\hat{\mathbf{x}}-ax_{13}\,\hat{\mathbf{y}}-c\left(z_{13}-\frac{1}{2}\right)\hat{\mathbf{z}} & (8b) & \text{B VIII}\\
\mathbf{B_{97}} & = & x_{14}\,\mathbf{a}_1+y_{14}\,\mathbf{a}_2+z_{14}\,\mathbf{a}_3 & = & ax_{14}\,\hat{\mathbf{x}}+ay_{14}\,\hat{\mathbf{y}}+cz_{14}\,\hat{\mathbf{z}} & (8b) & \text{B IX}\\
\mathbf{B_{98}} & = & -x_{14}\,\mathbf{a}_1-y_{14}\,\mathbf{a}_2+\left(z_{14}+\frac{1}{2}\right)\mathbf{a}_3 & = & -ax_{14}\,\hat{\mathbf{x}}-ay_{14}\,\hat{\mathbf{y}}+c\left(z_{14}+\frac{1}{2}\right)\hat{\mathbf{z}} & (8b) & \text{B IX}\\
\mathbf{B_{99}} & = & -\left(y_{14}-\frac{1}{2}\right)\mathbf{a}_1+\left(x_{14}+\frac{1}{2}\right)\mathbf{a}_2+ & = & -a\left(y_{14}-\frac{1}{2}\right)\hat{\mathbf{x}}+a\left(x_{14}+\frac{1}{2}\right)\hat{\mathbf{y}}+ & (8b) & \text{B IX}\\
 & & \left(z_{14}+\frac{3}{4}\right)\mathbf{a}_3 & & c\left(z_{14}+\frac{3}{4}\right)\hat{\mathbf{z}} & & \\
\mathbf{B_{100}} & = & \left(y_{14}+\frac{1}{2}\right)\mathbf{a}_1-\left(x_{14}-\frac{1}{2}\right)\mathbf{a}_2+ & = & a\left(y_{14}+\frac{1}{2}\right)\hat{\mathbf{x}}-a\left(x_{14}-\frac{1}{2}\right)\hat{\mathbf{y}}+ & (8b) & \text{B IX}\\
 & & \left(z_{14}+\frac{1}{4}\right)\mathbf{a}_3 & & c\left(z_{14}+\frac{1}{4}\right)\hat{\mathbf{z}} & & \\
\mathbf{B_{101}} & = & -\left(x_{14}-\frac{1}{2}\right)\mathbf{a}_1+\left(y_{14}+\frac{1}{2}\right)\mathbf{a}_2- & = & -a\left(x_{14}-\frac{1}{2}\right)\hat{\mathbf{x}}+a\left(y_{14}+\frac{1}{2}\right)\hat{\mathbf{y}}- & (8b) & \text{B IX}\\
 & & \left(z_{14}-\frac{3}{4}\right)\mathbf{a}_3 & & c\left(z_{14}-\frac{3}{4}\right)\hat{\mathbf{z}} & & \\
\mathbf{B_{102}} & = & \left(x_{14}+\frac{1}{2}\right)\mathbf{a}_1-\left(y_{14}-\frac{1}{2}\right)\mathbf{a}_2- & = & a\left(x_{14}+\frac{1}{2}\right)\hat{\mathbf{x}}-a\left(y_{14}-\frac{1}{2}\right)\hat{\mathbf{y}}- & (8b) & \text{B IX}\\
 & & \left(z_{14}-\frac{1}{4}\right)\mathbf{a}_3 & & c\left(z_{14}-\frac{1}{4}\right)\hat{\mathbf{z}} & & \\
\mathbf{B_{103}} & = & y_{14}\,\mathbf{a}_1+x_{14}\,\mathbf{a}_2-z_{14}\,\mathbf{a}_3 & = & ay_{14}\,\hat{\mathbf{x}}+ax_{14}\,\hat{\mathbf{y}}-cz_{14}\,\hat{\mathbf{z}} & (8b) & \text{B IX}\\
\mathbf{B_{104}} & = & -y_{14}\,\mathbf{a}_1-x_{14}\,\mathbf{a}_2-\left(z_{14}-\frac{1}{2}\right)\mathbf{a}_3 & = & -ay_{14}\,\hat{\mathbf{x}}-ax_{14}\,\hat{\mathbf{y}}-c\left(z_{14}-\frac{1}{2}\right)\hat{\mathbf{z}} & (8b) & \text{B IX}\\
\mathbf{B_{105}} & = & x_{15}\,\mathbf{a}_1+y_{15}\,\mathbf{a}_2+z_{15}\,\mathbf{a}_3 & = & ax_{15}\,\hat{\mathbf{x}}+ay_{15}\,\hat{\mathbf{y}}+cz_{15}\,\hat{\mathbf{z}} & (8b) & \text{B X}\\
\mathbf{B_{106}} & = & -x_{15}\,\mathbf{a}_1-y_{15}\,\mathbf{a}_2+\left(z_{15}+\frac{1}{2}\right)\mathbf{a}_3 & = & -ax_{15}\,\hat{\mathbf{x}}-ay_{15}\,\hat{\mathbf{y}}+c\left(z_{15}+\frac{1}{2}\right)\hat{\mathbf{z}} & (8b) & \text{B X}\\
\mathbf{B_{107}} & = & -\left(y_{15}-\frac{1}{2}\right)\mathbf{a}_1+\left(x_{15}+\frac{1}{2}\right)\mathbf{a}_2+ & = & -a\left(y_{15}-\frac{1}{2}\right)\hat{\mathbf{x}}+a\left(x_{15}+\frac{1}{2}\right)\hat{\mathbf{y}}+ & (8b) & \text{B X}\\
 & & \left(z_{15}+\frac{3}{4}\right)\mathbf{a}_3 & & c\left(z_{15}+\frac{3}{4}\right)\hat{\mathbf{z}} & &
\end{array}
$$

$$\mathbf{B_{108}} = \left(y_{15}+\tfrac{1}{2}\right)\mathbf{a}_1 - \left(x_{15}-\tfrac{1}{2}\right)\mathbf{a}_2 + \left(z_{15}+\tfrac{1}{4}\right)\mathbf{a}_3 = a\left(y_{15}+\tfrac{1}{2}\right)\hat{\mathbf{x}} - a\left(x_{15}-\tfrac{1}{2}\right)\hat{\mathbf{y}} + c\left(z_{15}+\tfrac{1}{4}\right)\hat{\mathbf{z}} \quad (8b) \quad \text{B X}$$

$$\mathbf{B_{109}} = -\left(x_{15}-\tfrac{1}{2}\right)\mathbf{a}_1 + \left(y_{15}+\tfrac{1}{2}\right)\mathbf{a}_2 - \left(z_{15}-\tfrac{3}{4}\right)\mathbf{a}_3 = -a\left(x_{15}-\tfrac{1}{2}\right)\hat{\mathbf{x}} + a\left(y_{15}+\tfrac{1}{2}\right)\hat{\mathbf{y}} - c\left(z_{15}-\tfrac{3}{4}\right)\hat{\mathbf{z}} \quad (8b) \quad \text{B X}$$

$$\mathbf{B_{110}} = \left(x_{15}+\tfrac{1}{2}\right)\mathbf{a}_1 - \left(y_{15}-\tfrac{1}{2}\right)\mathbf{a}_2 - \left(z_{15}-\tfrac{1}{4}\right)\mathbf{a}_3 = a\left(x_{15}+\tfrac{1}{2}\right)\hat{\mathbf{x}} - a\left(y_{15}-\tfrac{1}{2}\right)\hat{\mathbf{y}} - c\left(z_{15}-\tfrac{1}{4}\right)\hat{\mathbf{z}} \quad (8b) \quad \text{B X}$$

$$\mathbf{B_{111}} = y_{15}\,\mathbf{a}_1 + x_{15}\,\mathbf{a}_2 - z_{15}\,\mathbf{a}_3 = ay_{15}\,\hat{\mathbf{x}} + ax_{15}\,\hat{\mathbf{y}} - cz_{15}\,\hat{\mathbf{z}} \quad (8b) \quad \text{B X}$$

$$\mathbf{B_{112}} = -y_{15}\,\mathbf{a}_1 - x_{15}\,\mathbf{a}_2 - \left(z_{15}-\tfrac{1}{2}\right)\mathbf{a}_3 = -ay_{15}\,\hat{\mathbf{x}} - ax_{15}\,\hat{\mathbf{y}} - c\left(z_{15}-\tfrac{1}{2}\right)\hat{\mathbf{z}} \quad (8b) \quad \text{B X}$$

$$\mathbf{B_{113}} = x_{16}\,\mathbf{a}_1 + y_{16}\,\mathbf{a}_2 + z_{16}\,\mathbf{a}_3 = ax_{16}\,\hat{\mathbf{x}} + ay_{16}\,\hat{\mathbf{y}} + cz_{16}\,\hat{\mathbf{z}} \quad (8b) \quad \text{B XI}$$

$$\mathbf{B_{114}} = -x_{16}\,\mathbf{a}_1 - y_{16}\,\mathbf{a}_2 + \left(z_{16}+\tfrac{1}{2}\right)\mathbf{a}_3 = -ax_{16}\,\hat{\mathbf{x}} - ay_{16}\,\hat{\mathbf{y}} + c\left(z_{16}+\tfrac{1}{2}\right)\hat{\mathbf{z}} \quad (8b) \quad \text{B XI}$$

$$\mathbf{B_{115}} = -\left(y_{16}-\tfrac{1}{2}\right)\mathbf{a}_1 + \left(x_{16}+\tfrac{1}{2}\right)\mathbf{a}_2 + \left(z_{16}+\tfrac{3}{4}\right)\mathbf{a}_3 = -a\left(y_{16}-\tfrac{1}{2}\right)\hat{\mathbf{x}} + a\left(x_{16}+\tfrac{1}{2}\right)\hat{\mathbf{y}} + c\left(z_{16}+\tfrac{3}{4}\right)\hat{\mathbf{z}} \quad (8b) \quad \text{B XI}$$

$$\mathbf{B_{116}} = \left(y_{16}+\tfrac{1}{2}\right)\mathbf{a}_1 - \left(x_{16}-\tfrac{1}{2}\right)\mathbf{a}_2 + \left(z_{16}+\tfrac{1}{4}\right)\mathbf{a}_3 = a\left(y_{16}+\tfrac{1}{2}\right)\hat{\mathbf{x}} - a\left(x_{16}-\tfrac{1}{2}\right)\hat{\mathbf{y}} + c\left(z_{16}+\tfrac{1}{4}\right)\hat{\mathbf{z}} \quad (8b) \quad \text{B XI}$$

$$\mathbf{B_{117}} = -\left(x_{16}-\tfrac{1}{2}\right)\mathbf{a}_1 + \left(y_{16}+\tfrac{1}{2}\right)\mathbf{a}_2 - \left(z_{16}-\tfrac{3}{4}\right)\mathbf{a}_3 = -a\left(x_{16}-\tfrac{1}{2}\right)\hat{\mathbf{x}} + a\left(y_{16}+\tfrac{1}{2}\right)\hat{\mathbf{y}} - c\left(z_{16}-\tfrac{3}{4}\right)\hat{\mathbf{z}} \quad (8b) \quad \text{B XI}$$

$$\mathbf{B_{118}} = \left(x_{16}+\tfrac{1}{2}\right)\mathbf{a}_1 - \left(y_{16}-\tfrac{1}{2}\right)\mathbf{a}_2 - \left(z_{16}-\tfrac{1}{4}\right)\mathbf{a}_3 = a\left(x_{16}+\tfrac{1}{2}\right)\hat{\mathbf{x}} - a\left(y_{16}-\tfrac{1}{2}\right)\hat{\mathbf{y}} - c\left(z_{16}-\tfrac{1}{4}\right)\hat{\mathbf{z}} \quad (8b) \quad \text{B XI}$$

$$\mathbf{B_{119}} = y_{16}\,\mathbf{a}_1 + x_{16}\,\mathbf{a}_2 - z_{16}\,\mathbf{a}_3 = ay_{16}\,\hat{\mathbf{x}} + ax_{16}\,\hat{\mathbf{y}} - cz_{16}\,\hat{\mathbf{z}} \quad (8b) \quad \text{B XI}$$

$$\mathbf{B_{120}} = -y_{16}\,\mathbf{a}_1 - x_{16}\,\mathbf{a}_2 - \left(z_{16}-\tfrac{1}{2}\right)\mathbf{a}_3 = -ay_{16}\,\hat{\mathbf{x}} - ax_{16}\,\hat{\mathbf{y}} - c\left(z_{16}-\tfrac{1}{2}\right)\hat{\mathbf{z}} \quad (8b) \quad \text{B XI}$$

$$\mathbf{B_{121}} = x_{17}\,\mathbf{a}_1 + y_{17}\,\mathbf{a}_2 + z_{17}\,\mathbf{a}_3 = ax_{17}\,\hat{\mathbf{x}} + ay_{17}\,\hat{\mathbf{y}} + cz_{17}\,\hat{\mathbf{z}} \quad (8b) \quad \text{B XII}$$

$$\mathbf{B_{122}} = -x_{17}\,\mathbf{a}_1 - y_{17}\,\mathbf{a}_2 + \left(z_{17}+\tfrac{1}{2}\right)\mathbf{a}_3 = -ax_{17}\,\hat{\mathbf{x}} - ay_{17}\,\hat{\mathbf{y}} + c\left(z_{17}+\tfrac{1}{2}\right)\hat{\mathbf{z}} \quad (8b) \quad \text{B XII}$$

$$\mathbf{B_{123}} = -\left(y_{17}-\tfrac{1}{2}\right)\mathbf{a}_1 + \left(x_{17}+\tfrac{1}{2}\right)\mathbf{a}_2 + \left(z_{17}+\tfrac{3}{4}\right)\mathbf{a}_3 = -a\left(y_{17}-\tfrac{1}{2}\right)\hat{\mathbf{x}} + a\left(x_{17}+\tfrac{1}{2}\right)\hat{\mathbf{y}} + c\left(z_{17}+\tfrac{3}{4}\right)\hat{\mathbf{z}} \quad (8b) \quad \text{B XII}$$

$$\mathbf{B_{124}} = \left(y_{17}+\tfrac{1}{2}\right)\mathbf{a}_1 - \left(x_{17}-\tfrac{1}{2}\right)\mathbf{a}_2 + \left(z_{17}+\tfrac{1}{4}\right)\mathbf{a}_3 = a\left(y_{17}+\tfrac{1}{2}\right)\hat{\mathbf{x}} - a\left(x_{17}-\tfrac{1}{2}\right)\hat{\mathbf{y}} + c\left(z_{17}+\tfrac{1}{4}\right)\hat{\mathbf{z}} \quad (8b) \quad \text{B XII}$$

$$\mathbf{B_{125}} = -\left(x_{17}-\tfrac{1}{2}\right)\mathbf{a}_1 + \left(y_{17}+\tfrac{1}{2}\right)\mathbf{a}_2 - \left(z_{17}-\tfrac{3}{4}\right)\mathbf{a}_3 = -a\left(x_{17}-\tfrac{1}{2}\right)\hat{\mathbf{x}} + a\left(y_{17}+\tfrac{1}{2}\right)\hat{\mathbf{y}} - c\left(z_{17}-\tfrac{3}{4}\right)\hat{\mathbf{z}} \quad (8b) \quad \text{B XII}$$

$$\mathbf{B_{126}} = \left(x_{17}+\tfrac{1}{2}\right)\mathbf{a}_1 - \left(y_{17}-\tfrac{1}{2}\right)\mathbf{a}_2 - \left(z_{17}-\tfrac{1}{4}\right)\mathbf{a}_3 = a\left(x_{17}+\tfrac{1}{2}\right)\hat{\mathbf{x}} - a\left(y_{17}-\tfrac{1}{2}\right)\hat{\mathbf{y}} - c\left(z_{17}-\tfrac{1}{4}\right)\hat{\mathbf{z}} \quad (8b) \quad \text{B XII}$$

$$\mathbf{B_{127}} = y_{17}\,\mathbf{a}_1 + x_{17}\,\mathbf{a}_2 - z_{17}\,\mathbf{a}_3 = ay_{17}\,\hat{\mathbf{x}} + ax_{17}\,\hat{\mathbf{y}} - cz_{17}\,\hat{\mathbf{z}} \quad (8b) \quad \text{B XII}$$

$$\mathbf{B_{128}} = -y_{17}\,\mathbf{a}_1 - x_{17}\,\mathbf{a}_2 - \left(z_{17}-\tfrac{1}{2}\right)\mathbf{a}_3 = -ay_{17}\,\hat{\mathbf{x}} - ax_{17}\,\hat{\mathbf{y}} - c\left(z_{17}-\tfrac{1}{2}\right)\hat{\mathbf{z}} \quad (8b) \quad \text{B XII}$$

$$\mathbf{B_{129}} = x_{18}\,\mathbf{a}_1 + y_{18}\,\mathbf{a}_2 + z_{18}\,\mathbf{a}_3 = ax_{18}\,\hat{\mathbf{x}} + ay_{18}\,\hat{\mathbf{y}} + cz_{18}\,\hat{\mathbf{z}} \quad (8b) \quad \text{B XIII}$$

$$\mathbf{B_{130}} = -x_{18}\,\mathbf{a}_1 - y_{18}\,\mathbf{a}_2 + \left(z_{18}+\tfrac{1}{2}\right)\mathbf{a}_3 = -ax_{18}\,\hat{\mathbf{x}} - ay_{18}\,\hat{\mathbf{y}} + c\left(z_{18}+\tfrac{1}{2}\right)\hat{\mathbf{z}} \quad (8b) \quad \text{B XIII}$$

$$\mathbf{B_{131}} = -\left(y_{18}-\tfrac{1}{2}\right)\mathbf{a}_1 + \left(x_{18}+\tfrac{1}{2}\right)\mathbf{a}_2 + \left(z_{18}+\tfrac{3}{4}\right)\mathbf{a}_3 = -a\left(y_{18}-\tfrac{1}{2}\right)\hat{\mathbf{x}} + a\left(x_{18}+\tfrac{1}{2}\right)\hat{\mathbf{y}} + c\left(z_{18}+\tfrac{3}{4}\right)\hat{\mathbf{z}} \quad (8b) \quad \text{B XIII}$$

$$\mathbf{B_{132}} = \left(y_{18}+\tfrac{1}{2}\right)\mathbf{a}_1 - \left(x_{18}-\tfrac{1}{2}\right)\mathbf{a}_2 + \left(z_{18}+\tfrac{1}{4}\right)\mathbf{a}_3 = a\left(y_{18}+\tfrac{1}{2}\right)\hat{\mathbf{x}} - a\left(x_{18}-\tfrac{1}{2}\right)\hat{\mathbf{y}} + c\left(z_{18}+\tfrac{1}{4}\right)\hat{\mathbf{z}} \quad (8b) \quad \text{B XIII}$$

$$\mathbf{B_{133}} = -\left(x_{18}-\tfrac{1}{2}\right)\mathbf{a}_1 + \left(y_{18}+\tfrac{1}{2}\right)\mathbf{a}_2 - \left(z_{18}-\tfrac{3}{4}\right)\mathbf{a}_3 = -a\left(x_{18}-\tfrac{1}{2}\right)\hat{\mathbf{x}} + a\left(y_{18}+\tfrac{1}{2}\right)\hat{\mathbf{y}} - c\left(z_{18}-\tfrac{3}{4}\right)\hat{\mathbf{z}} \quad (8b) \quad \text{B XIII}$$

$$\mathbf{B_{134}} = \left(x_{18}+\tfrac{1}{2}\right)\mathbf{a}_1 - \left(y_{18}-\tfrac{1}{2}\right)\mathbf{a}_2 - \left(z_{18}-\tfrac{1}{4}\right)\mathbf{a}_3 = a\left(x_{18}+\tfrac{1}{2}\right)\hat{\mathbf{x}} - a\left(y_{18}-\tfrac{1}{2}\right)\hat{\mathbf{y}} - c\left(z_{18}-\tfrac{1}{4}\right)\hat{\mathbf{z}} \quad (8b) \quad \text{B XIII}$$

$$\mathbf{B_{135}} = y_{18}\,\mathbf{a}_1 + x_{18}\,\mathbf{a}_2 - z_{18}\,\mathbf{a}_3 = ay_{18}\,\hat{\mathbf{x}} + ax_{18}\,\hat{\mathbf{y}} - cz_{18}\,\hat{\mathbf{z}} \quad (8b) \quad \text{B XIII}$$

$$\mathbf{B_{136}} = -y_{18}\,\mathbf{a}_1 - x_{18}\,\mathbf{a}_2 - \left(z_{18}-\tfrac{1}{2}\right)\mathbf{a}_3 = -ay_{18}\,\hat{\mathbf{x}} - ax_{18}\,\hat{\mathbf{y}} - c\left(z_{18}-\tfrac{1}{2}\right)\hat{\mathbf{z}} \quad (8b) \quad \text{B XIII}$$

$$\mathbf{B_{137}} = x_{19}\,\mathbf{a}_1 + y_{19}\,\mathbf{a}_2 + z_{19}\,\mathbf{a}_3 = ax_{19}\,\hat{\mathbf{x}} + ay_{19}\,\hat{\mathbf{y}} + cz_{19}\,\hat{\mathbf{z}} \quad (8b) \quad \text{B XIV}$$

$$\mathbf{B_{138}} = -x_{19}\,\mathbf{a}_1 - y_{19}\,\mathbf{a}_2 + \left(z_{19}+\tfrac{1}{2}\right)\,\mathbf{a}_3 = -ax_{19}\,\hat{\mathbf{x}} - ay_{19}\,\hat{\mathbf{y}} + c\left(z_{19}+\tfrac{1}{2}\right)\,\hat{\mathbf{z}} \quad (8b) \quad \text{B XIV}$$

$$\mathbf{B_{139}} = -\left(y_{19}-\tfrac{1}{2}\right)\,\mathbf{a}_1 + \left(x_{19}+\tfrac{1}{2}\right)\,\mathbf{a}_2 + \left(z_{19}+\tfrac{3}{4}\right)\,\mathbf{a}_3 = -a\left(y_{19}-\tfrac{1}{2}\right)\,\hat{\mathbf{x}} + a\left(x_{19}+\tfrac{1}{2}\right)\,\hat{\mathbf{y}} + c\left(z_{19}+\tfrac{3}{4}\right)\,\hat{\mathbf{z}} \quad (8b) \quad \text{B XIV}$$

$$\mathbf{B_{140}} = \left(y_{19}+\tfrac{1}{2}\right)\,\mathbf{a}_1 - \left(x_{19}-\tfrac{1}{2}\right)\,\mathbf{a}_2 + \left(z_{19}+\tfrac{1}{4}\right)\,\mathbf{a}_3 = a\left(y_{19}+\tfrac{1}{2}\right)\,\hat{\mathbf{x}} - a\left(x_{19}-\tfrac{1}{2}\right)\,\hat{\mathbf{y}} + c\left(z_{19}+\tfrac{1}{4}\right)\,\hat{\mathbf{z}} \quad (8b) \quad \text{B XIV}$$

$$\mathbf{B_{141}} = -\left(x_{19}-\tfrac{1}{2}\right)\,\mathbf{a}_1 + \left(y_{19}+\tfrac{1}{2}\right)\,\mathbf{a}_2 - \left(z_{19}-\tfrac{3}{4}\right)\,\mathbf{a}_3 = -a\left(x_{19}-\tfrac{1}{2}\right)\,\hat{\mathbf{x}} + a\left(y_{19}+\tfrac{1}{2}\right)\,\hat{\mathbf{y}} - c\left(z_{19}-\tfrac{3}{4}\right)\,\hat{\mathbf{z}} \quad (8b) \quad \text{B XIV}$$

$$\mathbf{B_{142}} = \left(x_{19}+\tfrac{1}{2}\right)\,\mathbf{a}_1 - \left(y_{19}-\tfrac{1}{2}\right)\,\mathbf{a}_2 - \left(z_{19}-\tfrac{1}{4}\right)\,\mathbf{a}_3 = a\left(x_{19}+\tfrac{1}{2}\right)\,\hat{\mathbf{x}} - a\left(y_{19}-\tfrac{1}{2}\right)\,\hat{\mathbf{y}} - c\left(z_{19}-\tfrac{1}{4}\right)\,\hat{\mathbf{z}} \quad (8b) \quad \text{B XIV}$$

$$\mathbf{B_{143}} = y_{19}\,\mathbf{a}_1 + x_{19}\,\mathbf{a}_2 - z_{19}\,\mathbf{a}_3 = ay_{19}\,\hat{\mathbf{x}} + ax_{19}\,\hat{\mathbf{y}} - cz_{19}\,\hat{\mathbf{z}} \quad (8b) \quad \text{B XIV}$$

$$\mathbf{B_{144}} = -y_{19}\,\mathbf{a}_1 - x_{19}\,\mathbf{a}_2 - \left(z_{19}-\tfrac{1}{2}\right)\,\mathbf{a}_3 = -ay_{19}\,\hat{\mathbf{x}} - ax_{19}\,\hat{\mathbf{y}} - c\left(z_{19}-\tfrac{1}{2}\right)\,\hat{\mathbf{z}} \quad (8b) \quad \text{B XIV}$$

$$\mathbf{B_{145}} = x_{20}\,\mathbf{a}_1 + y_{20}\,\mathbf{a}_2 + z_{20}\,\mathbf{a}_3 = ax_{20}\,\hat{\mathbf{x}} + ay_{20}\,\hat{\mathbf{y}} + cz_{20}\,\hat{\mathbf{z}} \quad (8b) \quad \text{B XV}$$

$$\mathbf{B_{146}} = -x_{20}\,\mathbf{a}_1 - y_{20}\,\mathbf{a}_2 + \left(z_{20}+\tfrac{1}{2}\right)\,\mathbf{a}_3 = -ax_{20}\,\hat{\mathbf{x}} - ay_{20}\,\hat{\mathbf{y}} + c\left(z_{20}+\tfrac{1}{2}\right)\,\hat{\mathbf{z}} \quad (8b) \quad \text{B XV}$$

$$\mathbf{B_{147}} = -\left(y_{20}-\tfrac{1}{2}\right)\,\mathbf{a}_1 + \left(x_{20}+\tfrac{1}{2}\right)\,\mathbf{a}_2 + \left(z_{20}+\tfrac{3}{4}\right)\,\mathbf{a}_3 = -a\left(y_{20}-\tfrac{1}{2}\right)\,\hat{\mathbf{x}} + a\left(x_{20}+\tfrac{1}{2}\right)\,\hat{\mathbf{y}} + c\left(z_{20}+\tfrac{3}{4}\right)\,\hat{\mathbf{z}} \quad (8b) \quad \text{B XV}$$

$$\mathbf{B_{148}} = \left(y_{20}+\tfrac{1}{2}\right)\,\mathbf{a}_1 - \left(x_{20}-\tfrac{1}{2}\right)\,\mathbf{a}_2 + \left(z_{20}+\tfrac{1}{4}\right)\,\mathbf{a}_3 = a\left(y_{20}+\tfrac{1}{2}\right)\,\hat{\mathbf{x}} - a\left(x_{20}-\tfrac{1}{2}\right)\,\hat{\mathbf{y}} + c\left(z_{20}+\tfrac{1}{4}\right)\,\hat{\mathbf{z}} \quad (8b) \quad \text{B XV}$$

$$\mathbf{B_{149}} = -\left(x_{20}-\tfrac{1}{2}\right)\,\mathbf{a}_1 + \left(y_{20}+\tfrac{1}{2}\right)\,\mathbf{a}_2 - \left(z_{20}-\tfrac{3}{4}\right)\,\mathbf{a}_3 = -a\left(x_{20}-\tfrac{1}{2}\right)\,\hat{\mathbf{x}} + a\left(y_{20}+\tfrac{1}{2}\right)\,\hat{\mathbf{y}} - c\left(z_{20}-\tfrac{3}{4}\right)\,\hat{\mathbf{z}} \quad (8b) \quad \text{B XV}$$

$$\mathbf{B_{150}} = \left(x_{20}+\tfrac{1}{2}\right)\,\mathbf{a}_1 - \left(y_{20}-\tfrac{1}{2}\right)\,\mathbf{a}_2 - \left(z_{20}-\tfrac{1}{4}\right)\,\mathbf{a}_3 = a\left(x_{20}+\tfrac{1}{2}\right)\,\hat{\mathbf{x}} - a\left(y_{20}-\tfrac{1}{2}\right)\,\hat{\mathbf{y}} - c\left(z_{20}-\tfrac{1}{4}\right)\,\hat{\mathbf{z}} \quad (8b) \quad \text{B XV}$$

$$\mathbf{B_{151}} = y_{20}\,\mathbf{a}_1 + x_{20}\,\mathbf{a}_2 - z_{20}\,\mathbf{a}_3 = ay_{20}\,\hat{\mathbf{x}} + ax_{20}\,\hat{\mathbf{y}} - cz_{20}\,\hat{\mathbf{z}} \quad (8b) \quad \text{B XV}$$

$$\mathbf{B_{152}} = -y_{20}\,\mathbf{a}_1 - x_{20}\,\mathbf{a}_2 - \left(z_{20}-\tfrac{1}{2}\right)\,\mathbf{a}_3 = -ay_{20}\,\hat{\mathbf{x}} - ax_{20}\,\hat{\mathbf{y}} - c\left(z_{20}-\tfrac{1}{2}\right)\,\hat{\mathbf{z}} \quad (8b) \quad \text{B XV}$$

$$\mathbf{B_{153}} = x_{21}\,\mathbf{a}_1 + y_{21}\,\mathbf{a}_2 + z_{21}\,\mathbf{a}_3 = ax_{21}\,\hat{\mathbf{x}} + ay_{21}\,\hat{\mathbf{y}} + cz_{21}\,\hat{\mathbf{z}} \quad (8b) \quad \text{B XVI}$$

$$\mathbf{B_{154}} = -x_{21}\,\mathbf{a}_1 - y_{21}\,\mathbf{a}_2 + \left(z_{21}+\tfrac{1}{2}\right)\,\mathbf{a}_3 = -ax_{21}\,\hat{\mathbf{x}} - ay_{21}\,\hat{\mathbf{y}} + c\left(z_{21}+\tfrac{1}{2}\right)\,\hat{\mathbf{z}} \quad (8b) \quad \text{B XVI}$$

$$\mathbf{B_{155}} = -\left(y_{21}-\tfrac{1}{2}\right)\,\mathbf{a}_1 + \left(x_{21}+\tfrac{1}{2}\right)\,\mathbf{a}_2 + \left(z_{21}+\tfrac{3}{4}\right)\,\mathbf{a}_3 = -a\left(y_{21}-\tfrac{1}{2}\right)\,\hat{\mathbf{x}} + a\left(x_{21}+\tfrac{1}{2}\right)\,\hat{\mathbf{y}} + c\left(z_{21}+\tfrac{3}{4}\right)\,\hat{\mathbf{z}} \quad (8b) \quad \text{B XVI}$$

$$\mathbf{B_{156}} = \left(y_{21}+\tfrac{1}{2}\right)\,\mathbf{a}_1 - \left(x_{21}-\tfrac{1}{2}\right)\,\mathbf{a}_2 + \left(z_{21}+\tfrac{1}{4}\right)\,\mathbf{a}_3 = a\left(y_{21}+\tfrac{1}{2}\right)\,\hat{\mathbf{x}} - a\left(x_{21}-\tfrac{1}{2}\right)\,\hat{\mathbf{y}} + c\left(z_{21}+\tfrac{1}{4}\right)\,\hat{\mathbf{z}} \quad (8b) \quad \text{B XVI}$$

$$\mathbf{B_{157}} = -\left(x_{21}-\tfrac{1}{2}\right)\,\mathbf{a}_1 + \left(y_{21}+\tfrac{1}{2}\right)\,\mathbf{a}_2 - \left(z_{21}-\tfrac{3}{4}\right)\,\mathbf{a}_3 = -a\left(x_{21}-\tfrac{1}{2}\right)\,\hat{\mathbf{x}} + a\left(y_{21}+\tfrac{1}{2}\right)\,\hat{\mathbf{y}} - c\left(z_{21}-\tfrac{3}{4}\right)\,\hat{\mathbf{z}} \quad (8b) \quad \text{B XVI}$$

$$\mathbf{B_{158}} = \left(x_{21}+\tfrac{1}{2}\right)\,\mathbf{a}_1 - \left(y_{21}-\tfrac{1}{2}\right)\,\mathbf{a}_2 - \left(z_{21}-\tfrac{1}{4}\right)\,\mathbf{a}_3 = a\left(x_{21}+\tfrac{1}{2}\right)\,\hat{\mathbf{x}} - a\left(y_{21}-\tfrac{1}{2}\right)\,\hat{\mathbf{y}} - c\left(z_{21}-\tfrac{1}{4}\right)\,\hat{\mathbf{z}} \quad (8b) \quad \text{B XVI}$$

$$\mathbf{B_{159}} = y_{21}\,\mathbf{a}_1 + x_{21}\,\mathbf{a}_2 - z_{21}\,\mathbf{a}_3 = ay_{21}\,\hat{\mathbf{x}} + ax_{21}\,\hat{\mathbf{y}} - cz_{21}\,\hat{\mathbf{z}} \quad (8b) \quad \text{B XVI}$$

$$\mathbf{B_{160}} = -y_{21}\,\mathbf{a}_1 - x_{21}\,\mathbf{a}_2 - \left(z_{21}-\tfrac{1}{2}\right)\,\mathbf{a}_3 = -ay_{21}\,\hat{\mathbf{x}} - ax_{21}\,\hat{\mathbf{y}} - c\left(z_{21}-\tfrac{1}{2}\right)\,\hat{\mathbf{z}} \quad (8b) \quad \text{B XVI}$$

$$\mathbf{B_{161}} = x_{22}\,\mathbf{a}_1 + y_{22}\,\mathbf{a}_2 + z_{22}\,\mathbf{a}_3 = ax_{22}\,\hat{\mathbf{x}} + ay_{22}\,\hat{\mathbf{y}} + cz_{22}\,\hat{\mathbf{z}} \quad (8b) \quad \text{B XVII}$$

$$\mathbf{B_{162}} = -x_{22}\,\mathbf{a}_1 - y_{22}\,\mathbf{a}_2 + \left(z_{22}+\tfrac{1}{2}\right)\,\mathbf{a}_3 = -ax_{22}\,\hat{\mathbf{x}} - ay_{22}\,\hat{\mathbf{y}} + c\left(z_{22}+\tfrac{1}{2}\right)\,\hat{\mathbf{z}} \quad (8b) \quad \text{B XVII}$$

$$\mathbf{B_{163}} = -\left(y_{22}-\tfrac{1}{2}\right)\,\mathbf{a}_1 + \left(x_{22}+\tfrac{1}{2}\right)\,\mathbf{a}_2 + \left(z_{22}+\tfrac{3}{4}\right)\,\mathbf{a}_3 = -a\left(y_{22}-\tfrac{1}{2}\right)\,\hat{\mathbf{x}} + a\left(x_{22}+\tfrac{1}{2}\right)\,\hat{\mathbf{y}} + c\left(z_{22}+\tfrac{3}{4}\right)\,\hat{\mathbf{z}} \quad (8b) \quad \text{B XVII}$$

$$\mathbf{B_{164}} = \left(y_{22}+\tfrac{1}{2}\right)\,\mathbf{a}_1 - \left(x_{22}-\tfrac{1}{2}\right)\,\mathbf{a}_2 + \left(z_{22}+\tfrac{1}{4}\right)\,\mathbf{a}_3 = a\left(y_{22}+\tfrac{1}{2}\right)\,\hat{\mathbf{x}} - a\left(x_{22}-\tfrac{1}{2}\right)\,\hat{\mathbf{y}} + c\left(z_{22}+\tfrac{1}{4}\right)\,\hat{\mathbf{z}} \quad (8b) \quad \text{B XVII}$$

$$\mathbf{B_{165}} = -\left(x_{22}-\tfrac{1}{2}\right)\,\mathbf{a}_1 + \left(y_{22}+\tfrac{1}{2}\right)\,\mathbf{a}_2 - \left(z_{22}-\tfrac{3}{4}\right)\,\mathbf{a}_3 = -a\left(x_{22}-\tfrac{1}{2}\right)\,\hat{\mathbf{x}} + a\left(y_{22}+\tfrac{1}{2}\right)\,\hat{\mathbf{y}} - c\left(z_{22}-\tfrac{3}{4}\right)\,\hat{\mathbf{z}} \quad (8b) \quad \text{B XVII}$$

$$\mathbf{B_{166}} = \left(x_{22}+\tfrac{1}{2}\right)\,\mathbf{a}_1 - \left(y_{22}-\tfrac{1}{2}\right)\,\mathbf{a}_2 - \left(z_{22}-\tfrac{1}{4}\right)\,\mathbf{a}_3 = a\left(x_{22}+\tfrac{1}{2}\right)\,\hat{\mathbf{x}} - a\left(y_{22}-\tfrac{1}{2}\right)\,\hat{\mathbf{y}} - c\left(z_{22}-\tfrac{1}{4}\right)\,\hat{\mathbf{z}} \quad (8b) \quad \text{B XVII}$$

$$\mathbf{B_{167}} = y_{22}\,\mathbf{a}_1 + x_{22}\,\mathbf{a}_2 - z_{22}\,\mathbf{a}_3 = ay_{22}\,\hat{\mathbf{x}} + ax_{22}\,\hat{\mathbf{y}} - cz_{22}\,\hat{\mathbf{z}} \quad (8b) \quad \text{B XVII}$$

$$\mathbf{B_{168}} = -y_{22}\,\mathbf{a}_1 - x_{22}\,\mathbf{a}_2 - \left(z_{22} - \tfrac{1}{2}\right)\,\mathbf{a}_3 = -ay_{22}\,\hat{\mathbf{x}} - ax_{22}\,\hat{\mathbf{y}} - c\left(z_{22} - \tfrac{1}{2}\right)\,\hat{\mathbf{z}} \quad (8b) \quad \text{B XVII}$$

$$\mathbf{B_{169}} = x_{23}\,\mathbf{a}_1 + y_{23}\,\mathbf{a}_2 + z_{23}\,\mathbf{a}_3 = ax_{23}\,\hat{\mathbf{x}} + ay_{23}\,\hat{\mathbf{y}} + cz_{23}\,\hat{\mathbf{z}} \quad (8b) \quad \text{B XVIII}$$

$$\mathbf{B_{170}} = -x_{23}\,\mathbf{a}_1 - y_{23}\,\mathbf{a}_2 + \left(z_{23} + \tfrac{1}{2}\right)\,\mathbf{a}_3 = -ax_{23}\,\hat{\mathbf{x}} - ay_{23}\,\hat{\mathbf{y}} + c\left(z_{23} + \tfrac{1}{2}\right)\,\hat{\mathbf{z}} \quad (8b) \quad \text{B XVIII}$$

$$\mathbf{B_{171}} = -\left(y_{23} - \tfrac{1}{2}\right)\,\mathbf{a}_1 + \left(x_{23} + \tfrac{1}{2}\right)\,\mathbf{a}_2 + \left(z_{23} + \tfrac{3}{4}\right)\,\mathbf{a}_3 = -a\left(y_{23} - \tfrac{1}{2}\right)\,\hat{\mathbf{x}} + a\left(x_{23} + \tfrac{1}{2}\right)\,\hat{\mathbf{y}} + c\left(z_{23} + \tfrac{3}{4}\right)\,\hat{\mathbf{z}} \quad (8b) \quad \text{B XVIII}$$

$$\mathbf{B_{172}} = \left(y_{23} + \tfrac{1}{2}\right)\,\mathbf{a}_1 - \left(x_{23} - \tfrac{1}{2}\right)\,\mathbf{a}_2 + \left(z_{23} + \tfrac{1}{4}\right)\,\mathbf{a}_3 = a\left(y_{23} + \tfrac{1}{2}\right)\,\hat{\mathbf{x}} - a\left(x_{23} - \tfrac{1}{2}\right)\,\hat{\mathbf{y}} + c\left(z_{23} + \tfrac{1}{4}\right)\,\hat{\mathbf{z}} \quad (8b) \quad \text{B XVIII}$$

$$\mathbf{B_{173}} = -\left(x_{23} - \tfrac{1}{2}\right)\,\mathbf{a}_1 + \left(y_{23} + \tfrac{1}{2}\right)\,\mathbf{a}_2 - \left(z_{23} - \tfrac{3}{4}\right)\,\mathbf{a}_3 = -a\left(x_{23} - \tfrac{1}{2}\right)\,\hat{\mathbf{x}} + a\left(y_{23} + \tfrac{1}{2}\right)\,\hat{\mathbf{y}} - c\left(z_{23} - \tfrac{3}{4}\right)\,\hat{\mathbf{z}} \quad (8b) \quad \text{B XVIII}$$

$$\mathbf{B_{174}} = \left(x_{23} + \tfrac{1}{2}\right)\,\mathbf{a}_1 - \left(y_{23} - \tfrac{1}{2}\right)\,\mathbf{a}_2 - \left(z_{23} - \tfrac{1}{4}\right)\,\mathbf{a}_3 = a\left(x_{23} + \tfrac{1}{2}\right)\,\hat{\mathbf{x}} - a\left(y_{23} - \tfrac{1}{2}\right)\,\hat{\mathbf{y}} - c\left(z_{23} - \tfrac{1}{4}\right)\,\hat{\mathbf{z}} \quad (8b) \quad \text{B XVIII}$$

$$\mathbf{B_{175}} = y_{23}\,\mathbf{a}_1 + x_{23}\,\mathbf{a}_2 - z_{23}\,\mathbf{a}_3 = ay_{23}\,\hat{\mathbf{x}} + ax_{23}\,\hat{\mathbf{y}} - cz_{23}\,\hat{\mathbf{z}} \quad (8b) \quad \text{B XVIII}$$

$$\mathbf{B_{176}} = -y_{23}\,\mathbf{a}_1 - x_{23}\,\mathbf{a}_2 - \left(z_{23} - \tfrac{1}{2}\right)\,\mathbf{a}_3 = -ay_{23}\,\hat{\mathbf{x}} - ax_{23}\,\hat{\mathbf{y}} - c\left(z_{23} - \tfrac{1}{2}\right)\,\hat{\mathbf{z}} \quad (8b) \quad \text{B XVIII}$$

$$\mathbf{B_{177}} = x_{24}\,\mathbf{a}_1 + y_{24}\,\mathbf{a}_2 + z_{24}\,\mathbf{a}_3 = ax_{24}\,\hat{\mathbf{x}} + ay_{24}\,\hat{\mathbf{y}} + cz_{24}\,\hat{\mathbf{z}} \quad (8b) \quad \text{B XIX}$$

$$\mathbf{B_{178}} = -x_{24}\,\mathbf{a}_1 - y_{24}\,\mathbf{a}_2 + \left(z_{24} + \tfrac{1}{2}\right)\,\mathbf{a}_3 = -ax_{24}\,\hat{\mathbf{x}} - ay_{24}\,\hat{\mathbf{y}} + c\left(z_{24} + \tfrac{1}{2}\right)\,\hat{\mathbf{z}} \quad (8b) \quad \text{B XIX}$$

$$\mathbf{B_{179}} = -\left(y_{24} - \tfrac{1}{2}\right)\,\mathbf{a}_1 + \left(x_{24} + \tfrac{1}{2}\right)\,\mathbf{a}_2 + \left(z_{24} + \tfrac{3}{4}\right)\,\mathbf{a}_3 = -a\left(y_{24} - \tfrac{1}{2}\right)\,\hat{\mathbf{x}} + a\left(x_{24} + \tfrac{1}{2}\right)\,\hat{\mathbf{y}} + c\left(z_{24} + \tfrac{3}{4}\right)\,\hat{\mathbf{z}} \quad (8b) \quad \text{B XIX}$$

$$\mathbf{B_{180}} = \left(y_{24} + \tfrac{1}{2}\right)\,\mathbf{a}_1 - \left(x_{24} - \tfrac{1}{2}\right)\,\mathbf{a}_2 + \left(z_{24} + \tfrac{1}{4}\right)\,\mathbf{a}_3 = a\left(y_{24} + \tfrac{1}{2}\right)\,\hat{\mathbf{x}} - a\left(x_{24} - \tfrac{1}{2}\right)\,\hat{\mathbf{y}} + c\left(z_{24} + \tfrac{1}{4}\right)\,\hat{\mathbf{z}} \quad (8b) \quad \text{B XIX}$$

$$\mathbf{B_{181}} = -\left(x_{24} - \tfrac{1}{2}\right)\,\mathbf{a}_1 + \left(y_{24} + \tfrac{1}{2}\right)\,\mathbf{a}_2 - \left(z_{24} - \tfrac{3}{4}\right)\,\mathbf{a}_3 = -a\left(x_{24} - \tfrac{1}{2}\right)\,\hat{\mathbf{x}} + a\left(y_{24} + \tfrac{1}{2}\right)\,\hat{\mathbf{y}} - c\left(z_{24} - \tfrac{3}{4}\right)\,\hat{\mathbf{z}} \quad (8b) \quad \text{B XIX}$$

$$\mathbf{B_{182}} = \left(x_{24} + \tfrac{1}{2}\right)\,\mathbf{a}_1 - \left(y_{24} - \tfrac{1}{2}\right)\,\mathbf{a}_2 - \left(z_{24} - \tfrac{1}{4}\right)\,\mathbf{a}_3 = a\left(x_{24} + \tfrac{1}{2}\right)\,\hat{\mathbf{x}} - a\left(y_{24} - \tfrac{1}{2}\right)\,\hat{\mathbf{y}} - c\left(z_{24} - \tfrac{1}{4}\right)\,\hat{\mathbf{z}} \quad (8b) \quad \text{B XIX}$$

$$\mathbf{B_{183}} = y_{24}\,\mathbf{a}_1 + x_{24}\,\mathbf{a}_2 - z_{24}\,\mathbf{a}_3 = ay_{24}\,\hat{\mathbf{x}} + ax_{24}\,\hat{\mathbf{y}} - cz_{24}\,\hat{\mathbf{z}} \quad (8b) \quad \text{B XIX}$$

$$\mathbf{B_{184}} = -y_{24}\,\mathbf{a}_1 - x_{24}\,\mathbf{a}_2 - \left(z_{24} - \tfrac{1}{2}\right)\,\mathbf{a}_3 = -ay_{24}\,\hat{\mathbf{x}} - ax_{24}\,\hat{\mathbf{y}} - c\left(z_{24} - \tfrac{1}{2}\right)\,\hat{\mathbf{z}} \quad (8b) \quad \text{B XIX}$$

$$\mathbf{B_{185}} = x_{25}\,\mathbf{a}_1 + y_{25}\,\mathbf{a}_2 + z_{25}\,\mathbf{a}_3 = ax_{25}\,\hat{\mathbf{x}} + ay_{25}\,\hat{\mathbf{y}} + cz_{25}\,\hat{\mathbf{z}} \quad (8b) \quad \text{B XX}$$

$$\mathbf{B_{186}} = -x_{25}\,\mathbf{a}_1 - y_{25}\,\mathbf{a}_2 + \left(z_{25} + \tfrac{1}{2}\right)\,\mathbf{a}_3 = -ax_{25}\,\hat{\mathbf{x}} - ay_{25}\,\hat{\mathbf{y}} + c\left(z_{25} + \tfrac{1}{2}\right)\,\hat{\mathbf{z}} \quad (8b) \quad \text{B XX}$$

$$\mathbf{B_{187}} = -\left(y_{25} - \tfrac{1}{2}\right)\,\mathbf{a}_1 + \left(x_{25} + \tfrac{1}{2}\right)\,\mathbf{a}_2 + \left(z_{25} + \tfrac{3}{4}\right)\,\mathbf{a}_3 = -a\left(y_{25} - \tfrac{1}{2}\right)\,\hat{\mathbf{x}} + a\left(x_{25} + \tfrac{1}{2}\right)\,\hat{\mathbf{y}} + c\left(z_{25} + \tfrac{3}{4}\right)\,\hat{\mathbf{z}} \quad (8b) \quad \text{B XX}$$

$$\mathbf{B_{188}} = \left(y_{25} + \tfrac{1}{2}\right)\,\mathbf{a}_1 - \left(x_{25} - \tfrac{1}{2}\right)\,\mathbf{a}_2 + \left(z_{25} + \tfrac{1}{4}\right)\,\mathbf{a}_3 = a\left(y_{25} + \tfrac{1}{2}\right)\,\hat{\mathbf{x}} - a\left(x_{25} - \tfrac{1}{2}\right)\,\hat{\mathbf{y}} + c\left(z_{25} + \tfrac{1}{4}\right)\,\hat{\mathbf{z}} \quad (8b) \quad \text{B XX}$$

$$\mathbf{B_{189}} = -\left(x_{25} - \tfrac{1}{2}\right)\,\mathbf{a}_1 + \left(y_{25} + \tfrac{1}{2}\right)\,\mathbf{a}_2 - \left(z_{25} - \tfrac{3}{4}\right)\,\mathbf{a}_3 = -a\left(x_{25} - \tfrac{1}{2}\right)\,\hat{\mathbf{x}} + a\left(y_{25} + \tfrac{1}{2}\right)\,\hat{\mathbf{y}} - c\left(z_{25} - \tfrac{3}{4}\right)\,\hat{\mathbf{z}} \quad (8b) \quad \text{B XX}$$

$$\mathbf{B_{190}} = \left(x_{25} + \tfrac{1}{2}\right)\,\mathbf{a}_1 - \left(y_{25} - \tfrac{1}{2}\right)\,\mathbf{a}_2 - \left(z_{25} - \tfrac{1}{4}\right)\,\mathbf{a}_3 = a\left(x_{25} + \tfrac{1}{2}\right)\,\hat{\mathbf{x}} - a\left(y_{25} - \tfrac{1}{2}\right)\,\hat{\mathbf{y}} - c\left(z_{25} - \tfrac{1}{4}\right)\,\hat{\mathbf{z}} \quad (8b) \quad \text{B XX}$$

$$\mathbf{B_{191}} = y_{25}\,\mathbf{a}_1 + x_{25}\,\mathbf{a}_2 - z_{25}\,\mathbf{a}_3 = ay_{25}\,\hat{\mathbf{x}} + ax_{25}\,\hat{\mathbf{y}} - cz_{25}\,\hat{\mathbf{z}} \quad (8b) \quad \text{B XX}$$

$$\mathbf{B_{192}} = -y_{25}\,\mathbf{a}_1 - x_{25}\,\mathbf{a}_2 - \left(z_{25} - \tfrac{1}{2}\right)\,\mathbf{a}_3 = -ay_{25}\,\hat{\mathbf{x}} - ax_{25}\,\hat{\mathbf{y}} - c\left(z_{25} - \tfrac{1}{2}\right)\,\hat{\mathbf{z}} \quad (8b) \quad \text{B XX}$$

$$\mathbf{B_{193}} = x_{26}\,\mathbf{a}_1 + y_{26}\,\mathbf{a}_2 + z_{26}\,\mathbf{a}_3 = ax_{26}\,\hat{\mathbf{x}} + ay_{26}\,\hat{\mathbf{y}} + cz_{26}\,\hat{\mathbf{z}} \quad (8b) \quad \text{B XXI}$$

$$\mathbf{B_{194}} = -x_{26}\,\mathbf{a}_1 - y_{26}\,\mathbf{a}_2 + \left(z_{26} + \tfrac{1}{2}\right)\,\mathbf{a}_3 = -ax_{26}\,\hat{\mathbf{x}} - ay_{26}\,\hat{\mathbf{y}} + c\left(z_{26} + \tfrac{1}{2}\right)\,\hat{\mathbf{z}} \quad (8b) \quad \text{B XXI}$$

$$\mathbf{B_{195}} = -\left(y_{26} - \tfrac{1}{2}\right)\,\mathbf{a}_1 + \left(x_{26} + \tfrac{1}{2}\right)\,\mathbf{a}_2 + \left(z_{26} + \tfrac{3}{4}\right)\,\mathbf{a}_3 = -a\left(y_{26} - \tfrac{1}{2}\right)\,\hat{\mathbf{x}} + a\left(x_{26} + \tfrac{1}{2}\right)\,\hat{\mathbf{y}} + c\left(z_{26} + \tfrac{3}{4}\right)\,\hat{\mathbf{z}} \quad (8b) \quad \text{B XXI}$$

$$\mathbf{B_{196}} = \left(y_{26} + \tfrac{1}{2}\right)\,\mathbf{a}_1 - \left(x_{26} - \tfrac{1}{2}\right)\,\mathbf{a}_2 + \left(z_{26} + \tfrac{1}{4}\right)\,\mathbf{a}_3 = a\left(y_{26} + \tfrac{1}{2}\right)\,\hat{\mathbf{x}} - a\left(x_{26} - \tfrac{1}{2}\right)\,\hat{\mathbf{y}} + c\left(z_{26} + \tfrac{1}{4}\right)\,\hat{\mathbf{z}} \quad (8b) \quad \text{B XXI}$$

$$\mathbf{B_{197}} = -\left(x_{26}-\tfrac{1}{2}\right)\mathbf{a}_1+\left(y_{26}+\tfrac{1}{2}\right)\mathbf{a}_2-\left(z_{26}-\tfrac{3}{4}\right)\mathbf{a}_3 = -a\left(x_{26}-\tfrac{1}{2}\right)\hat{\mathbf{x}}+a\left(y_{26}+\tfrac{1}{2}\right)\hat{\mathbf{y}}-c\left(z_{26}-\tfrac{3}{4}\right)\hat{\mathbf{z}} \quad (8b) \quad \text{B XXI}$$

$$\mathbf{B_{198}} = \left(x_{26}+\tfrac{1}{2}\right)\mathbf{a}_1-\left(y_{26}-\tfrac{1}{2}\right)\mathbf{a}_2-\left(z_{26}-\tfrac{1}{4}\right)\mathbf{a}_3 = a\left(x_{26}+\tfrac{1}{2}\right)\hat{\mathbf{x}}-a\left(y_{26}-\tfrac{1}{2}\right)\hat{\mathbf{y}}-c\left(z_{26}-\tfrac{1}{4}\right)\hat{\mathbf{z}} \quad (8b) \quad \text{B XXI}$$

$$\mathbf{B_{199}} = y_{26}\,\mathbf{a}_1+x_{26}\,\mathbf{a}_2-z_{26}\,\mathbf{a}_3 = ay_{26}\,\hat{\mathbf{x}}+ax_{26}\,\hat{\mathbf{y}}-cz_{26}\,\hat{\mathbf{z}} \quad (8b) \quad \text{B XXI}$$

$$\mathbf{B_{200}} = -y_{26}\,\mathbf{a}_1-x_{26}\,\mathbf{a}_2-\left(z_{26}-\tfrac{1}{2}\right)\mathbf{a}_3 = -ay_{26}\,\hat{\mathbf{x}}-ax_{26}\,\hat{\mathbf{y}}-c\left(z_{26}-\tfrac{1}{2}\right)\hat{\mathbf{z}} \quad (8b) \quad \text{B XXI}$$

$$\mathbf{B_{201}} = x_{27}\,\mathbf{a}_1+y_{27}\,\mathbf{a}_2+z_{27}\,\mathbf{a}_3 = ax_{27}\,\hat{\mathbf{x}}+ay_{27}\,\hat{\mathbf{y}}+cz_{27}\,\hat{\mathbf{z}} \quad (8b) \quad \text{B XXII}$$

$$\mathbf{B_{202}} = -x_{27}\,\mathbf{a}_1-y_{27}\,\mathbf{a}_2+\left(z_{27}+\tfrac{1}{2}\right)\mathbf{a}_3 = -ax_{27}\,\hat{\mathbf{x}}-ay_{27}\,\hat{\mathbf{y}}+c\left(z_{27}+\tfrac{1}{2}\right)\hat{\mathbf{z}} \quad (8b) \quad \text{B XXII}$$

$$\mathbf{B_{203}} = -\left(y_{27}-\tfrac{1}{2}\right)\mathbf{a}_1+\left(x_{27}+\tfrac{1}{2}\right)\mathbf{a}_2+\left(z_{27}+\tfrac{3}{4}\right)\mathbf{a}_3 = -a\left(y_{27}-\tfrac{1}{2}\right)\hat{\mathbf{x}}+a\left(x_{27}+\tfrac{1}{2}\right)\hat{\mathbf{y}}+c\left(z_{27}+\tfrac{3}{4}\right)\hat{\mathbf{z}} \quad (8b) \quad \text{B XXII}$$

$$\mathbf{B_{204}} = \left(y_{27}+\tfrac{1}{2}\right)\mathbf{a}_1-\left(x_{27}-\tfrac{1}{2}\right)\mathbf{a}_2+\left(z_{27}+\tfrac{1}{4}\right)\mathbf{a}_3 = a\left(y_{27}+\tfrac{1}{2}\right)\hat{\mathbf{x}}-a\left(x_{27}-\tfrac{1}{2}\right)\hat{\mathbf{y}}+c\left(z_{27}+\tfrac{1}{4}\right)\hat{\mathbf{z}} \quad (8b) \quad \text{B XXII}$$

$$\mathbf{B_{205}} = -\left(x_{27}-\tfrac{1}{2}\right)\mathbf{a}_1+\left(y_{27}+\tfrac{1}{2}\right)\mathbf{a}_2-\left(z_{27}-\tfrac{3}{4}\right)\mathbf{a}_3 = -a\left(x_{27}-\tfrac{1}{2}\right)\hat{\mathbf{x}}+a\left(y_{27}+\tfrac{1}{2}\right)\hat{\mathbf{y}}-c\left(z_{27}-\tfrac{3}{4}\right)\hat{\mathbf{z}} \quad (8b) \quad \text{B XXII}$$

$$\mathbf{B_{206}} = \left(x_{27}+\tfrac{1}{2}\right)\mathbf{a}_1-\left(y_{27}-\tfrac{1}{2}\right)\mathbf{a}_2-\left(z_{27}-\tfrac{1}{4}\right)\mathbf{a}_3 = a\left(x_{27}+\tfrac{1}{2}\right)\hat{\mathbf{x}}-a\left(y_{27}-\tfrac{1}{2}\right)\hat{\mathbf{y}}-c\left(z_{27}-\tfrac{1}{4}\right)\hat{\mathbf{z}} \quad (8b) \quad \text{B XXII}$$

$$\mathbf{B_{207}} = y_{27}\,\mathbf{a}_1+x_{27}\,\mathbf{a}_2-z_{27}\,\mathbf{a}_3 = ay_{27}\,\hat{\mathbf{x}}+ax_{27}\,\hat{\mathbf{y}}-cz_{27}\,\hat{\mathbf{z}} \quad (8b) \quad \text{B XXII}$$

$$\mathbf{B_{208}} = -y_{27}\,\mathbf{a}_1-x_{27}\,\mathbf{a}_2-\left(z_{27}-\tfrac{1}{2}\right)\mathbf{a}_3 = -ay_{27}\,\hat{\mathbf{x}}-ax_{27}\,\hat{\mathbf{y}}-c\left(z_{27}-\tfrac{1}{2}\right)\hat{\mathbf{z}} \quad (8b) \quad \text{B XXII}$$

$$\mathbf{B_{209}} = x_{28}\,\mathbf{a}_1+y_{28}\,\mathbf{a}_2+z_{28}\,\mathbf{a}_3 = ax_{28}\,\hat{\mathbf{x}}+ay_{28}\,\hat{\mathbf{y}}+cz_{28}\,\hat{\mathbf{z}} \quad (8b) \quad \text{B XXIII}$$

$$\mathbf{B_{210}} = -x_{28}\,\mathbf{a}_1-y_{28}\,\mathbf{a}_2+\left(z_{28}+\tfrac{1}{2}\right)\mathbf{a}_3 = -ax_{28}\,\hat{\mathbf{x}}-ay_{28}\,\hat{\mathbf{y}}+c\left(z_{28}+\tfrac{1}{2}\right)\hat{\mathbf{z}} \quad (8b) \quad \text{B XXIII}$$

$$\mathbf{B_{211}} = -\left(y_{28}-\tfrac{1}{2}\right)\mathbf{a}_1+\left(x_{28}+\tfrac{1}{2}\right)\mathbf{a}_2+\left(z_{28}+\tfrac{3}{4}\right)\mathbf{a}_3 = -a\left(y_{28}-\tfrac{1}{2}\right)\hat{\mathbf{x}}+a\left(x_{28}+\tfrac{1}{2}\right)\hat{\mathbf{y}}+c\left(z_{28}+\tfrac{3}{4}\right)\hat{\mathbf{z}} \quad (8b) \quad \text{B XXIII}$$

$$\mathbf{B_{212}} = \left(y_{28}+\tfrac{1}{2}\right)\mathbf{a}_1-\left(x_{28}-\tfrac{1}{2}\right)\mathbf{a}_2+\left(z_{28}+\tfrac{1}{4}\right)\mathbf{a}_3 = a\left(y_{28}+\tfrac{1}{2}\right)\hat{\mathbf{x}}-a\left(x_{28}-\tfrac{1}{2}\right)\hat{\mathbf{y}}+c\left(z_{28}+\tfrac{1}{4}\right)\hat{\mathbf{z}} \quad (8b) \quad \text{B XXIII}$$

$$\mathbf{B_{213}} = -\left(x_{28}-\tfrac{1}{2}\right)\mathbf{a}_1+\left(y_{28}+\tfrac{1}{2}\right)\mathbf{a}_2-\left(z_{28}-\tfrac{3}{4}\right)\mathbf{a}_3 = -a\left(x_{28}-\tfrac{1}{2}\right)\hat{\mathbf{x}}+a\left(y_{28}+\tfrac{1}{2}\right)\hat{\mathbf{y}}-c\left(z_{28}-\tfrac{3}{4}\right)\hat{\mathbf{z}} \quad (8b) \quad \text{B XXIII}$$

$$\mathbf{B_{214}} = \left(x_{28}+\tfrac{1}{2}\right)\mathbf{a}_1-\left(y_{28}-\tfrac{1}{2}\right)\mathbf{a}_2-\left(z_{28}-\tfrac{1}{4}\right)\mathbf{a}_3 = a\left(x_{28}+\tfrac{1}{2}\right)\hat{\mathbf{x}}-a\left(y_{28}-\tfrac{1}{2}\right)\hat{\mathbf{y}}-c\left(z_{28}-\tfrac{1}{4}\right)\hat{\mathbf{z}} \quad (8b) \quad \text{B XXIII}$$

$$\mathbf{B_{215}} = y_{28}\,\mathbf{a}_1+x_{28}\,\mathbf{a}_2-z_{28}\,\mathbf{a}_3 = ay_{28}\,\hat{\mathbf{x}}+ax_{28}\,\hat{\mathbf{y}}-cz_{28}\,\hat{\mathbf{z}} \quad (8b) \quad \text{B XXIII}$$

$$\mathbf{B_{216}} = -y_{28}\,\mathbf{a}_1-x_{28}\,\mathbf{a}_2-\left(z_{28}-\tfrac{1}{2}\right)\mathbf{a}_3 = -ay_{28}\,\hat{\mathbf{x}}-ax_{28}\,\hat{\mathbf{y}}-c\left(z_{28}-\tfrac{1}{2}\right)\hat{\mathbf{z}} \quad (8b) \quad \text{B XXIII}$$

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