Monoclinic 2-4-6 Trinitrotoluene ($C_7H_5N_3O_6$) Structure: A7B5C3D6_mP168_14_14e_10e_6e_12e-001

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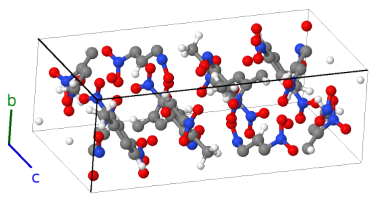
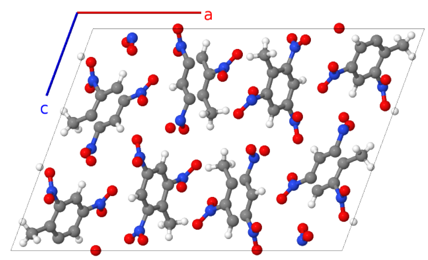
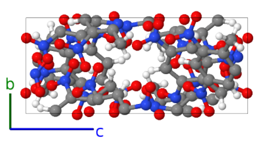
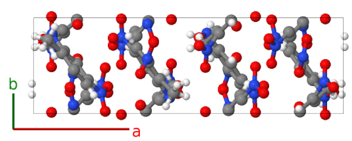
https://aflow.org/p/A7B5C3D6_mP168_14_14e_10e_6e_12e-001









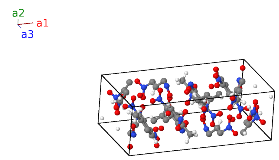
Prototype	$C_7H_5N_3O_6$
AFLOW prototype label	A7B5C3D6_mP168_14_14e_10e_6e_12e-001
Mineral name	2-4-6 trinitrotoluene
CCDC	227799
Pearson symbol	mP168
Space group number	14
Space group symbol	$P2_1/c$
AFLOW prototype command	`aflow --proto=A7B5C3D6_mP168_14_14e_10e_6e_12e-001` `--params=`$a, b/a, c/a, \beta, x_1, y_1, z_1, x_2, y_2, z_2, x_3, y_3, z_3, x_4, y_4, z_4, x_5, y_5, z_5, x_6, y_6, z_6, x_7, y_7, z_7, x_8, y_8, z_8, x_9, y_9, z_9, x_{10}, y_{10}, z_{10}, x_{11}, y_{11}, z_{11}, x_{12}, y_{12}, z_{12}, x_{13}, y_{13}, z_{13}, x_{14}, y_{14}, z_{14}, x_{15},$

$y_{15}, z_{15}, x_{16}, y_{16}, z_{16}, x_{17}, y_{17}, z_{17}, x_{18}, y_{18}, z_{18}, x_{19}, y_{19}, z_{19}, x_{20}, y_{20}, z_{20}, x_{21}, y_{21}, z_{21}, x_{22}, y_{22}, z_{22}, x_{23}, y_{23}, z_{23}, x_{24}, y_{24}, z_{24}, x_{25}, y_{25}, z_{25}, x_{26}, y_{26}, z_{26}, x_{27}, y_{27}, z_{27}, x_{28}, y_{28}, z_{28}, x_{29}, y_{29}, z_{29}, x_{30}, y_{30}, z_{30}, x_{31}, y_{31}, z_{31}, x_{32}, y_{32}, z_{32}, x_{33}, y_{33}, z_{33}, x_{34}, y_{34}, z_{34}, x_{35}, y_{35}, z_{35}, x_{36}, y_{36}, z_{36}, x_{37}, y_{37}, z_{37}, x_{38}, y_{38}, z_{38}, x_{39}, y_{39}, z_{39}, x_{40}, y_{40}, z_{40}, x_{41}, y_{41}, z_{41}, x_{42}, y_{42}, z_{42}$

- The solid form of 2-4-6 Trinitrotoluene (TNT) has two polymorphs (Vrcelj, 2003):
  - This low temperature monoclinic structure, and
  - the somewhat higher temperature orthorhombic structure.
- Both can be prepared at room temperature, from ethyl acetate and ethanol solutions, respectively.
- Data for the monoclinic phase was taken at 100K.
- (Vrcelj, 2003) gave the structure for the monoclinic phase in the $P2_1/a$ setting of space group #14. We used FINDSYM to translate this to the standard $P2_1/c$ setting.

Simple Monoclinic primitive vectors

$$\mathbf{a_1} = a\,\hat{\mathbf{x}}$$
$$\mathbf{a_2} = b\,\hat{\mathbf{y}}$$
$$\mathbf{a_3} = c\cos\beta\,\hat{\mathbf{x}} + c\sin\beta\,\hat{\mathbf{z}}$$



Basis vectors

		Lattice coordinates		Cartesian coordinates	Wyckoff position	Atom type
$\mathbf{B_1}$	=	$x_1\,\mathbf{a}_1 + y_1\,\mathbf{a}_2 + z_1\,\mathbf{a}_3$	=	$(ax_1 + cz_1\cos\beta)\,\hat{\mathbf{x}} + by_1\,\hat{\mathbf{y}} + cz_1\sin\beta\,\hat{\mathbf{z}}$	(4e)	C I
$\mathbf{B_2}$	=	$-x_1\,\mathbf{a}_1 + \left(y_1+\frac{1}{2}\right)\,\mathbf{a}_2 - \left(z_1-\frac{1}{2}\right)\,\mathbf{a}_3$	=	$-\left(ax_1 + c\left(z_1-\frac{1}{2}\right)\cos\beta\right)\,\hat{\mathbf{x}} + b\left(y_1+\frac{1}{2}\right)\,\hat{\mathbf{y}} - c\left(z_1-\frac{1}{2}\right)\sin\beta\,\hat{\mathbf{z}}$	(4e)	C I
$\mathbf{B_3}$	=	$-x_1\,\mathbf{a}_1 - y_1\,\mathbf{a}_2 - z_1\,\mathbf{a}_3$	=	$-(ax_1 + cz_1\cos\beta)\,\hat{\mathbf{x}} - by_1\,\hat{\mathbf{y}} - cz_1\sin\beta\,\hat{\mathbf{z}}$	(4e)	C I
$\mathbf{B_4}$	=	$x_1\,\mathbf{a}_1 - \left(y_1-\frac{1}{2}\right)\,\mathbf{a}_2 + \left(z_1+\frac{1}{2}\right)\,\mathbf{a}_3$	=	$\left(ax_1 + c\left(z_1+\frac{1}{2}\right)\cos\beta\right)\,\hat{\mathbf{x}} - b\left(y_1-\frac{1}{2}\right)\,\hat{\mathbf{y}} + c\left(z_1+\frac{1}{2}\right)\sin\beta\,\hat{\mathbf{z}}$	(4e)	C I
$\mathbf{B_5}$	=	$x_2\,\mathbf{a}_1 + y_2\,\mathbf{a}_2 + z_2\,\mathbf{a}_3$	=	$(ax_2 + cz_2\cos\beta)\,\hat{\mathbf{x}} + by_2\,\hat{\mathbf{y}} + cz_2\sin\beta\,\hat{\mathbf{z}}$	(4e)	C II
$\mathbf{B_6}$	=	$-x_2\,\mathbf{a}_1 + \left(y_2+\frac{1}{2}\right)\,\mathbf{a}_2 - \left(z_2-\frac{1}{2}\right)\,\mathbf{a}_3$	=	$-\left(ax_2 + c\left(z_2-\frac{1}{2}\right)\cos\beta\right)\,\hat{\mathbf{x}} + b\left(y_2+\frac{1}{2}\right)\,\hat{\mathbf{y}} - c\left(z_2-\frac{1}{2}\right)\sin\beta\,\hat{\mathbf{z}}$	(4e)	C II
$\mathbf{B_7}$	=	$-x_2\,\mathbf{a}_1 - y_2\,\mathbf{a}_2 - z_2\,\mathbf{a}_3$	=	$-(ax_2 + cz_2\cos\beta)\,\hat{\mathbf{x}} - by_2\,\hat{\mathbf{y}} - cz_2\sin\beta\,\hat{\mathbf{z}}$	(4e)	C II
$\mathbf{B_8}$	=	$x_2\,\mathbf{a}_1 - \left(y_2-\frac{1}{2}\right)\,\mathbf{a}_2 + \left(z_2+\frac{1}{2}\right)\,\mathbf{a}_3$	=	$\left(ax_2 + c\left(z_2+\frac{1}{2}\right)\cos\beta\right)\,\hat{\mathbf{x}} - b\left(y_2-\frac{1}{2}\right)\,\hat{\mathbf{y}} + c\left(z_2+\frac{1}{2}\right)\sin\beta\,\hat{\mathbf{z}}$	(4e)	C II
$\mathbf{B_9}$	=	$x_3\,\mathbf{a}_1 + y_3\,\mathbf{a}_2 + z_3\,\mathbf{a}_3$	=	$(ax_3 + cz_3\cos\beta)\,\hat{\mathbf{x}} + by_3\,\hat{\mathbf{y}} + cz_3\sin\beta\,\hat{\mathbf{z}}$	(4e)	C III
$\mathbf{B_{10}}$	=	$-x_3\,\mathbf{a}_1 + \left(y_3+\frac{1}{2}\right)\,\mathbf{a}_2 - \left(z_3-\frac{1}{2}\right)\,\mathbf{a}_3$	=	$-\left(ax_3 + c\left(z_3-\frac{1}{2}\right)\cos\beta\right)\,\hat{\mathbf{x}} + b\left(y_3+\frac{1}{2}\right)\,\hat{\mathbf{y}} - c\left(z_3-\frac{1}{2}\right)\sin\beta\,\hat{\mathbf{z}}$	(4e)	C III
$\mathbf{B_{11}}$	=	$-x_3\,\mathbf{a}_1 - y_3\,\mathbf{a}_2 - z_3\,\mathbf{a}_3$	=	$-(ax_3 + cz_3\cos\beta)\,\hat{\mathbf{x}} - by_3\,\hat{\mathbf{y}} - cz_3\sin\beta\,\hat{\mathbf{z}}$	(4e)	C III
$\mathbf{B_{12}}$	=	$x_3\,\mathbf{a}_1 - \left(y_3-\frac{1}{2}\right)\,\mathbf{a}_2 + \left(z_3+\frac{1}{2}\right)\,\mathbf{a}_3$	=	$\left(ax_3 + c\left(z_3+\frac{1}{2}\right)\cos\beta\right)\,\hat{\mathbf{x}} - b\left(y_3-\frac{1}{2}\right)\,\hat{\mathbf{y}} + c\left(z_3+\frac{1}{2}\right)\sin\beta\,\hat{\mathbf{z}}$	(4e)	C III
$\mathbf{B_{13}}$	=	$x_4\,\mathbf{a}_1 + y_4\,\mathbf{a}_2 + z_4\,\mathbf{a}_3$	=	$(ax_4 + cz_4\cos\beta)\,\hat{\mathbf{x}} + by_4\,\hat{\mathbf{y}} + cz_4\sin\beta\,\hat{\mathbf{z}}$	(4e)	C IV

$\mathbf{B_{14}}$	=	$-x_{4}\,\mathbf{a}_{1}+\left(y_{4}+\frac{1}{2}\right)\,\mathbf{a}_{2}-\left(z_{4}-\frac{1}{2}\right)\,\mathbf{a}_{3}$	=	$-\left(ax_{4}+c\left(z_{4}-\frac{1}{2}\right)\cos\beta\right)\,\mathbf{\hat{x}}+b\left(y_{4}+\frac{1}{2}\right)\,\mathbf{\hat{y}}-c\left(z_{4}-\frac{1}{2}\right)\sin\beta\,\mathbf{\hat{z}}$	(4e)	C IV
$\mathbf{B_{15}}$	=	$-x_{4}\,\mathbf{a}_{1}-y_{4}\,\mathbf{a}_{2}-z_{4}\,\mathbf{a}_{3}$	=	$-\left(ax_{4}+cz_{4}\cos\beta\right)\,\mathbf{\hat{x}}-by_{4}\,\mathbf{\hat{y}}-cz_{4}\sin\beta\,\mathbf{\hat{z}}$	(4e)	C IV
$\mathbf{B_{16}}$	=	$x_{4}\,\mathbf{a}_{1}-\left(y_{4}-\frac{1}{2}\right)\,\mathbf{a}_{2}+\left(z_{4}+\frac{1}{2}\right)\,\mathbf{a}_{3}$	=	$\left(ax_{4}+c\left(z_{4}+\frac{1}{2}\right)\cos\beta\right)\,\mathbf{\hat{x}}-b\left(y_{4}-\frac{1}{2}\right)\,\mathbf{\hat{y}}+c\left(z_{4}+\frac{1}{2}\right)\sin\beta\,\mathbf{\hat{z}}$	(4e)	C IV
$\mathbf{B_{17}}$	=	$x_{5}\,\mathbf{a}_{1}+y_{5}\,\mathbf{a}_{2}+z_{5}\,\mathbf{a}_{3}$	=	$\left(ax_{5}+cz_{5}\cos\beta\right)\,\mathbf{\hat{x}}+by_{5}\,\mathbf{\hat{y}}+cz_{5}\sin\beta\,\mathbf{\hat{z}}$	(4e)	C V
$\mathbf{B_{18}}$	=	$-x_{5}\,\mathbf{a}_{1}+\left(y_{5}+\frac{1}{2}\right)\,\mathbf{a}_{2}-\left(z_{5}-\frac{1}{2}\right)\,\mathbf{a}_{3}$	=	$-\left(ax_{5}+c\left(z_{5}-\frac{1}{2}\right)\cos\beta\right)\,\mathbf{\hat{x}}+b\left(y_{5}+\frac{1}{2}\right)\,\mathbf{\hat{y}}-c\left(z_{5}-\frac{1}{2}\right)\sin\beta\,\mathbf{\hat{z}}$	(4e)	C V
$\mathbf{B_{19}}$	=	$-x_{5}\,\mathbf{a}_{1}-y_{5}\,\mathbf{a}_{2}-z_{5}\,\mathbf{a}_{3}$	=	$-\left(ax_{5}+cz_{5}\cos\beta\right)\,\mathbf{\hat{x}}-by_{5}\,\mathbf{\hat{y}}-cz_{5}\sin\beta\,\mathbf{\hat{z}}$	(4e)	C V
$\mathbf{B_{20}}$	=	$x_{5}\,\mathbf{a}_{1}-\left(y_{5}-\frac{1}{2}\right)\,\mathbf{a}_{2}+\left(z_{5}+\frac{1}{2}\right)\,\mathbf{a}_{3}$	=	$\left(ax_{5}+c\left(z_{5}+\frac{1}{2}\right)\cos\beta\right)\,\mathbf{\hat{x}}-b\left(y_{5}-\frac{1}{2}\right)\,\mathbf{\hat{y}}+c\left(z_{5}+\frac{1}{2}\right)\sin\beta\,\mathbf{\hat{z}}$	(4e)	C V
$\mathbf{B_{21}}$	=	$x_{6}\,\mathbf{a}_{1}+y_{6}\,\mathbf{a}_{2}+z_{6}\,\mathbf{a}_{3}$	=	$\left(ax_{6}+cz_{6}\cos\beta\right)\,\mathbf{\hat{x}}+by_{6}\,\mathbf{\hat{y}}+cz_{6}\sin\beta\,\mathbf{\hat{z}}$	(4e)	C VI
$\mathbf{B_{22}}$	=	$-x_{6}\,\mathbf{a}_{1}+\left(y_{6}+\frac{1}{2}\right)\,\mathbf{a}_{2}-\left(z_{6}-\frac{1}{2}\right)\,\mathbf{a}_{3}$	=	$-\left(ax_{6}+c\left(z_{6}-\frac{1}{2}\right)\cos\beta\right)\,\mathbf{\hat{x}}+b\left(y_{6}+\frac{1}{2}\right)\,\mathbf{\hat{y}}-c\left(z_{6}-\frac{1}{2}\right)\sin\beta\,\mathbf{\hat{z}}$	(4e)	C VI
$\mathbf{B_{23}}$	=	$-x_{6}\,\mathbf{a}_{1}-y_{6}\,\mathbf{a}_{2}-z_{6}\,\mathbf{a}_{3}$	=	$-\left(ax_{6}+cz_{6}\cos\beta\right)\,\mathbf{\hat{x}}-by_{6}\,\mathbf{\hat{y}}-cz_{6}\sin\beta\,\mathbf{\hat{z}}$	(4e)	C VI
$\mathbf{B_{24}}$	=	$x_{6}\,\mathbf{a}_{1}-\left(y_{6}-\frac{1}{2}\right)\,\mathbf{a}_{2}+\left(z_{6}+\frac{1}{2}\right)\,\mathbf{a}_{3}$	=	$\left(ax_{6}+c\left(z_{6}+\frac{1}{2}\right)\cos\beta\right)\,\mathbf{\hat{x}}-b\left(y_{6}-\frac{1}{2}\right)\,\mathbf{\hat{y}}+c\left(z_{6}+\frac{1}{2}\right)\sin\beta\,\mathbf{\hat{z}}$	(4e)	C VI
$\mathbf{B_{25}}$	=	$x_{7}\,\mathbf{a}_{1}+y_{7}\,\mathbf{a}_{2}+z_{7}\,\mathbf{a}_{3}$	=	$\left(ax_{7}+cz_{7}\cos\beta\right)\,\mathbf{\hat{x}}+by_{7}\,\mathbf{\hat{y}}+cz_{7}\sin\beta\,\mathbf{\hat{z}}$	(4e)	C VII
$\mathbf{B_{26}}$	=	$-x_{7}\,\mathbf{a}_{1}+\left(y_{7}+\frac{1}{2}\right)\,\mathbf{a}_{2}-\left(z_{7}-\frac{1}{2}\right)\,\mathbf{a}_{3}$	=	$-\left(ax_{7}+c\left(z_{7}-\frac{1}{2}\right)\cos\beta\right)\,\mathbf{\hat{x}}+b\left(y_{7}+\frac{1}{2}\right)\,\mathbf{\hat{y}}-c\left(z_{7}-\frac{1}{2}\right)\sin\beta\,\mathbf{\hat{z}}$	(4e)	C VII
$\mathbf{B_{27}}$	=	$-x_{7}\,\mathbf{a}_{1}-y_{7}\,\mathbf{a}_{2}-z_{7}\,\mathbf{a}_{3}$	=	$-\left(ax_{7}+cz_{7}\cos\beta\right)\,\mathbf{\hat{x}}-by_{7}\,\mathbf{\hat{y}}-cz_{7}\sin\beta\,\mathbf{\hat{z}}$	(4e)	C VII
$\mathbf{B_{28}}$	=	$x_{7}\,\mathbf{a}_{1}-\left(y_{7}-\frac{1}{2}\right)\,\mathbf{a}_{2}+\left(z_{7}+\frac{1}{2}\right)\,\mathbf{a}_{3}$	=	$\left(ax_{7}+c\left(z_{7}+\frac{1}{2}\right)\cos\beta\right)\,\mathbf{\hat{x}}-b\left(y_{7}-\frac{1}{2}\right)\,\mathbf{\hat{y}}+c\left(z_{7}+\frac{1}{2}\right)\sin\beta\,\mathbf{\hat{z}}$	(4e)	C VII
$\mathbf{B_{29}}$	=	$x_{8}\,\mathbf{a}_{1}+y_{8}\,\mathbf{a}_{2}+z_{8}\,\mathbf{a}_{3}$	=	$\left(ax_{8}+cz_{8}\cos\beta\right)\,\mathbf{\hat{x}}+by_{8}\,\mathbf{\hat{y}}+cz_{8}\sin\beta\,\mathbf{\hat{z}}$	(4e)	C VIII
$\mathbf{B_{30}}$	=	$-x_{8}\,\mathbf{a}_{1}+\left(y_{8}+\frac{1}{2}\right)\,\mathbf{a}_{2}-\left(z_{8}-\frac{1}{2}\right)\,\mathbf{a}_{3}$	=	$-\left(ax_{8}+c\left(z_{8}-\frac{1}{2}\right)\cos\beta\right)\,\mathbf{\hat{x}}+b\left(y_{8}+\frac{1}{2}\right)\,\mathbf{\hat{y}}-c\left(z_{8}-\frac{1}{2}\right)\sin\beta\,\mathbf{\hat{z}}$	(4e)	C VIII
$\mathbf{B_{31}}$	=	$-x_{8}\,\mathbf{a}_{1}-y_{8}\,\mathbf{a}_{2}-z_{8}\,\mathbf{a}_{3}$	=	$-\left(ax_{8}+cz_{8}\cos\beta\right)\,\mathbf{\hat{x}}-by_{8}\,\mathbf{\hat{y}}-cz_{8}\sin\beta\,\mathbf{\hat{z}}$	(4e)	C VIII
$\mathbf{B_{32}}$	=	$x_{8}\,\mathbf{a}_{1}-\left(y_{8}-\frac{1}{2}\right)\,\mathbf{a}_{2}+\left(z_{8}+\frac{1}{2}\right)\,\mathbf{a}_{3}$	=	$\left(ax_{8}+c\left(z_{8}+\frac{1}{2}\right)\cos\beta\right)\,\mathbf{\hat{x}}-b\left(y_{8}-\frac{1}{2}\right)\,\mathbf{\hat{y}}+c\left(z_{8}+\frac{1}{2}\right)\sin\beta\,\mathbf{\hat{z}}$	(4e)	C VIII
$\mathbf{B_{33}}$	=	$x_{9}\,\mathbf{a}_{1}+y_{9}\,\mathbf{a}_{2}+z_{9}\,\mathbf{a}_{3}$	=	$\left(ax_{9}+cz_{9}\cos\beta\right)\,\mathbf{\hat{x}}+by_{9}\,\mathbf{\hat{y}}+cz_{9}\sin\beta\,\mathbf{\hat{z}}$	(4e)	C IX
$\mathbf{B_{34}}$	=	$-x_{9}\,\mathbf{a}_{1}+\left(y_{9}+\frac{1}{2}\right)\,\mathbf{a}_{2}-\left(z_{9}-\frac{1}{2}\right)\,\mathbf{a}_{3}$	=	$-\left(ax_{9}+c\left(z_{9}-\frac{1}{2}\right)\cos\beta\right)\,\mathbf{\hat{x}}+b\left(y_{9}+\frac{1}{2}\right)\,\mathbf{\hat{y}}-c\left(z_{9}-\frac{1}{2}\right)\sin\beta\,\mathbf{\hat{z}}$	(4e)	C IX
$\mathbf{B_{35}}$	=	$-x_{9}\,\mathbf{a}_{1}-y_{9}\,\mathbf{a}_{2}-z_{9}\,\mathbf{a}_{3}$	=	$-\left(ax_{9}+cz_{9}\cos\beta\right)\,\mathbf{\hat{x}}-by_{9}\,\mathbf{\hat{y}}-cz_{9}\sin\beta\,\mathbf{\hat{z}}$	(4e)	C IX
$\mathbf{B_{36}}$	=	$x_{9}\,\mathbf{a}_{1}-\left(y_{9}-\frac{1}{2}\right)\,\mathbf{a}_{2}+\left(z_{9}+\frac{1}{2}\right)\,\mathbf{a}_{3}$	=	$\left(ax_{9}+c\left(z_{9}+\frac{1}{2}\right)\cos\beta\right)\,\mathbf{\hat{x}}-b\left(y_{9}-\frac{1}{2}\right)\,\mathbf{\hat{y}}+c\left(z_{9}+\frac{1}{2}\right)\sin\beta\,\mathbf{\hat{z}}$	(4e)	C IX
$\mathbf{B_{37}}$	=	$x_{10}\,\mathbf{a}_{1}+y_{10}\,\mathbf{a}_{2}+z_{10}\,\mathbf{a}_{3}$	=	$\left(ax_{10}+cz_{10}\cos\beta\right)\,\mathbf{\hat{x}}+by_{10}\,\mathbf{\hat{y}}+cz_{10}\sin\beta\,\mathbf{\hat{z}}$	(4e)	C X
$\mathbf{B_{38}}$	=	$-x_{10}\,\mathbf{a}_{1}+\left(y_{10}+\frac{1}{2}\right)\,\mathbf{a}_{2}-\left(z_{10}-\frac{1}{2}\right)\,\mathbf{a}_{3}$	=	$-\left(ax_{10}+c\left(z_{10}-\frac{1}{2}\right)\cos\beta\right)\,\mathbf{\hat{x}}+b\left(y_{10}+\frac{1}{2}\right)\,\mathbf{\hat{y}}-c\left(z_{10}-\frac{1}{2}\right)\sin\beta\,\mathbf{\hat{z}}$	(4e)	C X
$\mathbf{B_{39}}$	=	$-x_{10}\,\mathbf{a}_{1}-y_{10}\,\mathbf{a}_{2}-z_{10}\,\mathbf{a}_{3}$	=	$-\left(ax_{10}+cz_{10}\cos\beta\right)\,\mathbf{\hat{x}}-by_{10}\,\mathbf{\hat{y}}-cz_{10}\sin\beta\,\mathbf{\hat{z}}$	(4e)	C X
$\mathbf{B_{40}}$	=	$x_{10}\,\mathbf{a}_{1}-\left(y_{10}-\frac{1}{2}\right)\,\mathbf{a}_{2}+\left(z_{10}+\frac{1}{2}\right)\,\mathbf{a}_{3}$	=	$\left(ax_{10}+c\left(z_{10}+\frac{1}{2}\right)\cos\beta\right)\,\mathbf{\hat{x}}-b\left(y_{10}-\frac{1}{2}\right)\,\mathbf{\hat{y}}+c\left(z_{10}+\frac{1}{2}\right)\sin\beta\,\mathbf{\hat{z}}$	(4e)	C X
$\mathbf{B_{41}}$	=	$x_{11}\,\mathbf{a}_{1}+y_{11}\,\mathbf{a}_{2}+z_{11}\,\mathbf{a}_{3}$	=	$\left(ax_{11}+cz_{11}\cos\beta\right)\,\mathbf{\hat{x}}+by_{11}\,\mathbf{\hat{y}}+cz_{11}\sin\beta\,\mathbf{\hat{z}}$	(4e)	C XI
$\mathbf{B_{42}}$	=	$-x_{11}\,\mathbf{a}_{1}+\left(y_{11}+\frac{1}{2}\right)\,\mathbf{a}_{2}-\left(z_{11}-\frac{1}{2}\right)\,\mathbf{a}_{3}$	=	$-\left(ax_{11}+c\left(z_{11}-\frac{1}{2}\right)\cos\beta\right)\,\mathbf{\hat{x}}+b\left(y_{11}+\frac{1}{2}\right)\,\mathbf{\hat{y}}-c\left(z_{11}-\frac{1}{2}\right)\sin\beta\,\mathbf{\hat{z}}$	(4e)	C XI

$\mathbf{B}_{43}$	=	$-x_{11}\,\mathbf{a}_1 - y_{11}\,\mathbf{a}_2 - z_{11}\,\mathbf{a}_3$	=	$-\left(ax_{11}+cz_{11}\cos\beta\right)\hat{\mathbf{x}} - by_{11}\,\hat{\mathbf{y}} - cz_{11}\sin\beta\,\hat{\mathbf{z}}$	(4e)	C XI
$\mathbf{B}_{44}$	=	$x_{11}\,\mathbf{a}_1 - \left(y_{11}-\frac{1}{2}\right)\mathbf{a}_2 + \left(z_{11}+\frac{1}{2}\right)\mathbf{a}_3$	=	$\left(ax_{11}+c\left(z_{11}+\frac{1}{2}\right)\cos\beta\right)\hat{\mathbf{x}} - b\left(y_{11}-\frac{1}{2}\right)\hat{\mathbf{y}} + c\left(z_{11}+\frac{1}{2}\right)\sin\beta\,\hat{\mathbf{z}}$	(4e)	C XI
$\mathbf{B}_{45}$	=	$x_{12}\,\mathbf{a}_1 + y_{12}\,\mathbf{a}_2 + z_{12}\,\mathbf{a}_3$	=	$\left(ax_{12}+cz_{12}\cos\beta\right)\hat{\mathbf{x}} + by_{12}\,\hat{\mathbf{y}} + cz_{12}\sin\beta\,\hat{\mathbf{z}}$	(4e)	C XII
$\mathbf{B}_{46}$	=	$-x_{12}\,\mathbf{a}_1 + \left(y_{12}+\frac{1}{2}\right)\mathbf{a}_2 - \left(z_{12}-\frac{1}{2}\right)\mathbf{a}_3$	=	$-\left(ax_{12}+c\left(z_{12}-\frac{1}{2}\right)\cos\beta\right)\hat{\mathbf{x}} + b\left(y_{12}+\frac{1}{2}\right)\hat{\mathbf{y}} - c\left(z_{12}-\frac{1}{2}\right)\sin\beta\,\hat{\mathbf{z}}$	(4e)	C XII
$\mathbf{B}_{47}$	=	$-x_{12}\,\mathbf{a}_1 - y_{12}\,\mathbf{a}_2 - z_{12}\,\mathbf{a}_3$	=	$-\left(ax_{12}+cz_{12}\cos\beta\right)\hat{\mathbf{x}} - by_{12}\,\hat{\mathbf{y}} - cz_{12}\sin\beta\,\hat{\mathbf{z}}$	(4e)	C XII
$\mathbf{B}_{48}$	=	$x_{12}\,\mathbf{a}_1 - \left(y_{12}-\frac{1}{2}\right)\mathbf{a}_2 + \left(z_{12}+\frac{1}{2}\right)\mathbf{a}_3$	=	$\left(ax_{12}+c\left(z_{12}+\frac{1}{2}\right)\cos\beta\right)\hat{\mathbf{x}} - b\left(y_{12}-\frac{1}{2}\right)\hat{\mathbf{y}} + c\left(z_{12}+\frac{1}{2}\right)\sin\beta\,\hat{\mathbf{z}}$	(4e)	C XII
$\mathbf{B}_{49}$	=	$x_{13}\,\mathbf{a}_1 + y_{13}\,\mathbf{a}_2 + z_{13}\,\mathbf{a}_3$	=	$\left(ax_{13}+cz_{13}\cos\beta\right)\hat{\mathbf{x}} + by_{13}\,\hat{\mathbf{y}} + cz_{13}\sin\beta\,\hat{\mathbf{z}}$	(4e)	C XIII
$\mathbf{B}_{50}$	=	$-x_{13}\,\mathbf{a}_1 + \left(y_{13}+\frac{1}{2}\right)\mathbf{a}_2 - \left(z_{13}-\frac{1}{2}\right)\mathbf{a}_3$	=	$-\left(ax_{13}+c\left(z_{13}-\frac{1}{2}\right)\cos\beta\right)\hat{\mathbf{x}} + b\left(y_{13}+\frac{1}{2}\right)\hat{\mathbf{y}} - c\left(z_{13}-\frac{1}{2}\right)\sin\beta\,\hat{\mathbf{z}}$	(4e)	C XIII
$\mathbf{B}_{51}$	=	$-x_{13}\,\mathbf{a}_1 - y_{13}\,\mathbf{a}_2 - z_{13}\,\mathbf{a}_3$	=	$-\left(ax_{13}+cz_{13}\cos\beta\right)\hat{\mathbf{x}} - by_{13}\,\hat{\mathbf{y}} - cz_{13}\sin\beta\,\hat{\mathbf{z}}$	(4e)	C XIII
$\mathbf{B}_{52}$	=	$x_{13}\,\mathbf{a}_1 - \left(y_{13}-\frac{1}{2}\right)\mathbf{a}_2 + \left(z_{13}+\frac{1}{2}\right)\mathbf{a}_3$	=	$\left(ax_{13}+c\left(z_{13}+\frac{1}{2}\right)\cos\beta\right)\hat{\mathbf{x}} - b\left(y_{13}-\frac{1}{2}\right)\hat{\mathbf{y}} + c\left(z_{13}+\frac{1}{2}\right)\sin\beta\,\hat{\mathbf{z}}$	(4e)	C XIII
$\mathbf{B}_{53}$	=	$x_{14}\,\mathbf{a}_1 + y_{14}\,\mathbf{a}_2 + z_{14}\,\mathbf{a}_3$	=	$\left(ax_{14}+cz_{14}\cos\beta\right)\hat{\mathbf{x}} + by_{14}\,\hat{\mathbf{y}} + cz_{14}\sin\beta\,\hat{\mathbf{z}}$	(4e)	C XIV
$\mathbf{B}_{54}$	=	$-x_{14}\,\mathbf{a}_1 + \left(y_{14}+\frac{1}{2}\right)\mathbf{a}_2 - \left(z_{14}-\frac{1}{2}\right)\mathbf{a}_3$	=	$-\left(ax_{14}+c\left(z_{14}-\frac{1}{2}\right)\cos\beta\right)\hat{\mathbf{x}} + b\left(y_{14}+\frac{1}{2}\right)\hat{\mathbf{y}} - c\left(z_{14}-\frac{1}{2}\right)\sin\beta\,\hat{\mathbf{z}}$	(4e)	C XIV
$\mathbf{B}_{55}$	=	$-x_{14}\,\mathbf{a}_1 - y_{14}\,\mathbf{a}_2 - z_{14}\,\mathbf{a}_3$	=	$-\left(ax_{14}+cz_{14}\cos\beta\right)\hat{\mathbf{x}} - by_{14}\,\hat{\mathbf{y}} - cz_{14}\sin\beta\,\hat{\mathbf{z}}$	(4e)	C XIV
$\mathbf{B}_{56}$	=	$x_{14}\,\mathbf{a}_1 - \left(y_{14}-\frac{1}{2}\right)\mathbf{a}_2 + \left(z_{14}+\frac{1}{2}\right)\mathbf{a}_3$	=	$\left(ax_{14}+c\left(z_{14}+\frac{1}{2}\right)\cos\beta\right)\hat{\mathbf{x}} - b\left(y_{14}-\frac{1}{2}\right)\hat{\mathbf{y}} + c\left(z_{14}+\frac{1}{2}\right)\sin\beta\,\hat{\mathbf{z}}$	(4e)	C XIV
$\mathbf{B}_{57}$	=	$x_{15}\,\mathbf{a}_1 + y_{15}\,\mathbf{a}_2 + z_{15}\,\mathbf{a}_3$	=	$\left(ax_{15}+cz_{15}\cos\beta\right)\hat{\mathbf{x}} + by_{15}\,\hat{\mathbf{y}} + cz_{15}\sin\beta\,\hat{\mathbf{z}}$	(4e)	H I
$\mathbf{B}_{58}$	=	$-x_{15}\,\mathbf{a}_1 + \left(y_{15}+\frac{1}{2}\right)\mathbf{a}_2 - \left(z_{15}-\frac{1}{2}\right)\mathbf{a}_3$	=	$-\left(ax_{15}+c\left(z_{15}-\frac{1}{2}\right)\cos\beta\right)\hat{\mathbf{x}} + b\left(y_{15}+\frac{1}{2}\right)\hat{\mathbf{y}} - c\left(z_{15}-\frac{1}{2}\right)\sin\beta\,\hat{\mathbf{z}}$	(4e)	H I
$\mathbf{B}_{59}$	=	$-x_{15}\,\mathbf{a}_1 - y_{15}\,\mathbf{a}_2 - z_{15}\,\mathbf{a}_3$	=	$-\left(ax_{15}+cz_{15}\cos\beta\right)\hat{\mathbf{x}} - by_{15}\,\hat{\mathbf{y}} - cz_{15}\sin\beta\,\hat{\mathbf{z}}$	(4e)	H I
$\mathbf{B}_{60}$	=	$x_{15}\,\mathbf{a}_1 - \left(y_{15}-\frac{1}{2}\right)\mathbf{a}_2 + \left(z_{15}+\frac{1}{2}\right)\mathbf{a}_3$	=	$\left(ax_{15}+c\left(z_{15}+\frac{1}{2}\right)\cos\beta\right)\hat{\mathbf{x}} - b\left(y_{15}-\frac{1}{2}\right)\hat{\mathbf{y}} + c\left(z_{15}+\frac{1}{2}\right)\sin\beta\,\hat{\mathbf{z}}$	(4e)	H I
$\mathbf{B}_{61}$	=	$x_{16}\,\mathbf{a}_1 + y_{16}\,\mathbf{a}_2 + z_{16}\,\mathbf{a}_3$	=	$\left(ax_{16}+cz_{16}\cos\beta\right)\hat{\mathbf{x}} + by_{16}\,\hat{\mathbf{y}} + cz_{16}\sin\beta\,\hat{\mathbf{z}}$	(4e)	H II
$\mathbf{B}_{62}$	=	$-x_{16}\,\mathbf{a}_1 + \left(y_{16}+\frac{1}{2}\right)\mathbf{a}_2 - \left(z_{16}-\frac{1}{2}\right)\mathbf{a}_3$	=	$-\left(ax_{16}+c\left(z_{16}-\frac{1}{2}\right)\cos\beta\right)\hat{\mathbf{x}} + b\left(y_{16}+\frac{1}{2}\right)\hat{\mathbf{y}} - c\left(z_{16}-\frac{1}{2}\right)\sin\beta\,\hat{\mathbf{z}}$	(4e)	H II
$\mathbf{B}_{63}$	=	$-x_{16}\,\mathbf{a}_1 - y_{16}\,\mathbf{a}_2 - z_{16}\,\mathbf{a}_3$	=	$-\left(ax_{16}+cz_{16}\cos\beta\right)\hat{\mathbf{x}} - by_{16}\,\hat{\mathbf{y}} - cz_{16}\sin\beta\,\hat{\mathbf{z}}$	(4e)	H II
$\mathbf{B}_{64}$	=	$x_{16}\,\mathbf{a}_1 - \left(y_{16}-\frac{1}{2}\right)\mathbf{a}_2 + \left(z_{16}+\frac{1}{2}\right)\mathbf{a}_3$	=	$\left(ax_{16}+c\left(z_{16}+\frac{1}{2}\right)\cos\beta\right)\hat{\mathbf{x}} - b\left(y_{16}-\frac{1}{2}\right)\hat{\mathbf{y}} + c\left(z_{16}+\frac{1}{2}\right)\sin\beta\,\hat{\mathbf{z}}$	(4e)	H II
$\mathbf{B}_{65}$	=	$x_{17}\,\mathbf{a}_1 + y_{17}\,\mathbf{a}_2 + z_{17}\,\mathbf{a}_3$	=	$\left(ax_{17}+cz_{17}\cos\beta\right)\hat{\mathbf{x}} + by_{17}\,\hat{\mathbf{y}} + cz_{17}\sin\beta\,\hat{\mathbf{z}}$	(4e)	H III
$\mathbf{B}_{66}$	=	$-x_{17}\,\mathbf{a}_1 + \left(y_{17}+\frac{1}{2}\right)\mathbf{a}_2 - \left(z_{17}-\frac{1}{2}\right)\mathbf{a}_3$	=	$-\left(ax_{17}+c\left(z_{17}-\frac{1}{2}\right)\cos\beta\right)\hat{\mathbf{x}} + b\left(y_{17}+\frac{1}{2}\right)\hat{\mathbf{y}} - c\left(z_{17}-\frac{1}{2}\right)\sin\beta\,\hat{\mathbf{z}}$	(4e)	H III
$\mathbf{B}_{67}$	=	$-x_{17}\,\mathbf{a}_1 - y_{17}\,\mathbf{a}_2 - z_{17}\,\mathbf{a}_3$	=	$-\left(ax_{17}+cz_{17}\cos\beta\right)\hat{\mathbf{x}} - by_{17}\,\hat{\mathbf{y}} - cz_{17}\sin\beta\,\hat{\mathbf{z}}$	(4e)	H III
$\mathbf{B}_{68}$	=	$x_{17}\,\mathbf{a}_1 - \left(y_{17}-\frac{1}{2}\right)\mathbf{a}_2 + \left(z_{17}+\frac{1}{2}\right)\mathbf{a}_3$	=	$\left(ax_{17}+c\left(z_{17}+\frac{1}{2}\right)\cos\beta\right)\hat{\mathbf{x}} - b\left(y_{17}-\frac{1}{2}\right)\hat{\mathbf{y}} + c\left(z_{17}+\frac{1}{2}\right)\sin\beta\,\hat{\mathbf{z}}$	(4e)	H III

$\mathbf{B_{69}}$	=	$x_{18}\,\mathbf{a}_1 + y_{18}\,\mathbf{a}_2 + z_{18}\,\mathbf{a}_3$	=	$(ax_{18} + cz_{18}\cos\beta)\,\hat{\mathbf{x}} + by_{18}\,\hat{\mathbf{y}} + cz_{18}\sin\beta\,\hat{\mathbf{z}}$	(4e)	H IV
$\mathbf{B_{70}}$	=	$-x_{18}\,\mathbf{a}_1 + \left(y_{18} + \frac{1}{2}\right)\,\mathbf{a}_2 - \left(z_{18} - \frac{1}{2}\right)\,\mathbf{a}_3$	=	$-\left(ax_{18} + c\left(z_{18} - \frac{1}{2}\right)\cos\beta\right)\,\hat{\mathbf{x}} + b\left(y_{18} + \frac{1}{2}\right)\,\hat{\mathbf{y}} - c\left(z_{18} - \frac{1}{2}\right)\sin\beta\,\hat{\mathbf{z}}$	(4e)	H IV
$\mathbf{B_{71}}$	=	$-x_{18}\,\mathbf{a}_1 - y_{18}\,\mathbf{a}_2 - z_{18}\,\mathbf{a}_3$	=	$-(ax_{18} + cz_{18}\cos\beta)\,\hat{\mathbf{x}} - by_{18}\,\hat{\mathbf{y}} - cz_{18}\sin\beta\,\hat{\mathbf{z}}$	(4e)	H IV
$\mathbf{B_{72}}$	=	$x_{18}\,\mathbf{a}_1 - \left(y_{18} - \frac{1}{2}\right)\,\mathbf{a}_2 + \left(z_{18} + \frac{1}{2}\right)\,\mathbf{a}_3$	=	$\left(ax_{18} + c\left(z_{18} + \frac{1}{2}\right)\cos\beta\right)\,\hat{\mathbf{x}} - b\left(y_{18} - \frac{1}{2}\right)\,\hat{\mathbf{y}} + c\left(z_{18} + \frac{1}{2}\right)\sin\beta\,\hat{\mathbf{z}}$	(4e)	H IV
$\mathbf{B_{73}}$	=	$x_{19}\,\mathbf{a}_1 + y_{19}\,\mathbf{a}_2 + z_{19}\,\mathbf{a}_3$	=	$(ax_{19} + cz_{19}\cos\beta)\,\hat{\mathbf{x}} + by_{19}\,\hat{\mathbf{y}} + cz_{19}\sin\beta\,\hat{\mathbf{z}}$	(4e)	H V
$\mathbf{B_{74}}$	=	$-x_{19}\,\mathbf{a}_1 + \left(y_{19} + \frac{1}{2}\right)\,\mathbf{a}_2 - \left(z_{19} - \frac{1}{2}\right)\,\mathbf{a}_3$	=	$-\left(ax_{19} + c\left(z_{19} - \frac{1}{2}\right)\cos\beta\right)\,\hat{\mathbf{x}} + b\left(y_{19} + \frac{1}{2}\right)\,\hat{\mathbf{y}} - c\left(z_{19} - \frac{1}{2}\right)\sin\beta\,\hat{\mathbf{z}}$	(4e)	H V
$\mathbf{B_{75}}$	=	$-x_{19}\,\mathbf{a}_1 - y_{19}\,\mathbf{a}_2 - z_{19}\,\mathbf{a}_3$	=	$-(ax_{19} + cz_{19}\cos\beta)\,\hat{\mathbf{x}} - by_{19}\,\hat{\mathbf{y}} - cz_{19}\sin\beta\,\hat{\mathbf{z}}$	(4e)	H V
$\mathbf{B_{76}}$	=	$x_{19}\,\mathbf{a}_1 - \left(y_{19} - \frac{1}{2}\right)\,\mathbf{a}_2 + \left(z_{19} + \frac{1}{2}\right)\,\mathbf{a}_3$	=	$\left(ax_{19} + c\left(z_{19} + \frac{1}{2}\right)\cos\beta\right)\,\hat{\mathbf{x}} - b\left(y_{19} - \frac{1}{2}\right)\,\hat{\mathbf{y}} + c\left(z_{19} + \frac{1}{2}\right)\sin\beta\,\hat{\mathbf{z}}$	(4e)	H V
$\mathbf{B_{77}}$	=	$x_{20}\,\mathbf{a}_1 + y_{20}\,\mathbf{a}_2 + z_{20}\,\mathbf{a}_3$	=	$(ax_{20} + cz_{20}\cos\beta)\,\hat{\mathbf{x}} + by_{20}\,\hat{\mathbf{y}} + cz_{20}\sin\beta\,\hat{\mathbf{z}}$	(4e)	H VI
$\mathbf{B_{78}}$	=	$-x_{20}\,\mathbf{a}_1 + \left(y_{20} + \frac{1}{2}\right)\,\mathbf{a}_2 - \left(z_{20} - \frac{1}{2}\right)\,\mathbf{a}_3$	=	$-\left(ax_{20} + c\left(z_{20} - \frac{1}{2}\right)\cos\beta\right)\,\hat{\mathbf{x}} + b\left(y_{20} + \frac{1}{2}\right)\,\hat{\mathbf{y}} - c\left(z_{20} - \frac{1}{2}\right)\sin\beta\,\hat{\mathbf{z}}$	(4e)	H VI
$\mathbf{B_{79}}$	=	$-x_{20}\,\mathbf{a}_1 - y_{20}\,\mathbf{a}_2 - z_{20}\,\mathbf{a}_3$	=	$-(ax_{20} + cz_{20}\cos\beta)\,\hat{\mathbf{x}} - by_{20}\,\hat{\mathbf{y}} - cz_{20}\sin\beta\,\hat{\mathbf{z}}$	(4e)	H VI
$\mathbf{B_{80}}$	=	$x_{20}\,\mathbf{a}_1 - \left(y_{20} - \frac{1}{2}\right)\,\mathbf{a}_2 + \left(z_{20} + \frac{1}{2}\right)\,\mathbf{a}_3$	=	$\left(ax_{20} + c\left(z_{20} + \frac{1}{2}\right)\cos\beta\right)\,\hat{\mathbf{x}} - b\left(y_{20} - \frac{1}{2}\right)\,\hat{\mathbf{y}} + c\left(z_{20} + \frac{1}{2}\right)\sin\beta\,\hat{\mathbf{z}}$	(4e)	H VI
$\mathbf{B_{81}}$	=	$x_{21}\,\mathbf{a}_1 + y_{21}\,\mathbf{a}_2 + z_{21}\,\mathbf{a}_3$	=	$(ax_{21} + cz_{21}\cos\beta)\,\hat{\mathbf{x}} + by_{21}\,\hat{\mathbf{y}} + cz_{21}\sin\beta\,\hat{\mathbf{z}}$	(4e)	H VII
$\mathbf{B_{82}}$	=	$-x_{21}\,\mathbf{a}_1 + \left(y_{21} + \frac{1}{2}\right)\,\mathbf{a}_2 - \left(z_{21} - \frac{1}{2}\right)\,\mathbf{a}_3$	=	$-\left(ax_{21} + c\left(z_{21} - \frac{1}{2}\right)\cos\beta\right)\,\hat{\mathbf{x}} + b\left(y_{21} + \frac{1}{2}\right)\,\hat{\mathbf{y}} - c\left(z_{21} - \frac{1}{2}\right)\sin\beta\,\hat{\mathbf{z}}$	(4e)	H VII
$\mathbf{B_{83}}$	=	$-x_{21}\,\mathbf{a}_1 - y_{21}\,\mathbf{a}_2 - z_{21}\,\mathbf{a}_3$	=	$-(ax_{21} + cz_{21}\cos\beta)\,\hat{\mathbf{x}} - by_{21}\,\hat{\mathbf{y}} - cz_{21}\sin\beta\,\hat{\mathbf{z}}$	(4e)	H VII
$\mathbf{B_{84}}$	=	$x_{21}\,\mathbf{a}_1 - \left(y_{21} - \frac{1}{2}\right)\,\mathbf{a}_2 + \left(z_{21} + \frac{1}{2}\right)\,\mathbf{a}_3$	=	$\left(ax_{21} + c\left(z_{21} + \frac{1}{2}\right)\cos\beta\right)\,\hat{\mathbf{x}} - b\left(y_{21} - \frac{1}{2}\right)\,\hat{\mathbf{y}} + c\left(z_{21} + \frac{1}{2}\right)\sin\beta\,\hat{\mathbf{z}}$	(4e)	H VII
$\mathbf{B_{85}}$	=	$x_{22}\,\mathbf{a}_1 + y_{22}\,\mathbf{a}_2 + z_{22}\,\mathbf{a}_3$	=	$(ax_{22} + cz_{22}\cos\beta)\,\hat{\mathbf{x}} + by_{22}\,\hat{\mathbf{y}} + cz_{22}\sin\beta\,\hat{\mathbf{z}}$	(4e)	H VIII
$\mathbf{B_{86}}$	=	$-x_{22}\,\mathbf{a}_1 + \left(y_{22} + \frac{1}{2}\right)\,\mathbf{a}_2 - \left(z_{22} - \frac{1}{2}\right)\,\mathbf{a}_3$	=	$-\left(ax_{22} + c\left(z_{22} - \frac{1}{2}\right)\cos\beta\right)\,\hat{\mathbf{x}} + b\left(y_{22} + \frac{1}{2}\right)\,\hat{\mathbf{y}} - c\left(z_{22} - \frac{1}{2}\right)\sin\beta\,\hat{\mathbf{z}}$	(4e)	H VIII
$\mathbf{B_{87}}$	=	$-x_{22}\,\mathbf{a}_1 - y_{22}\,\mathbf{a}_2 - z_{22}\,\mathbf{a}_3$	=	$-(ax_{22} + cz_{22}\cos\beta)\,\hat{\mathbf{x}} - by_{22}\,\hat{\mathbf{y}} - cz_{22}\sin\beta\,\hat{\mathbf{z}}$	(4e)	H VIII
$\mathbf{B_{88}}$	=	$x_{22}\,\mathbf{a}_1 - \left(y_{22} - \frac{1}{2}\right)\,\mathbf{a}_2 + \left(z_{22} + \frac{1}{2}\right)\,\mathbf{a}_3$	=	$\left(ax_{22} + c\left(z_{22} + \frac{1}{2}\right)\cos\beta\right)\,\hat{\mathbf{x}} - b\left(y_{22} - \frac{1}{2}\right)\,\hat{\mathbf{y}} + c\left(z_{22} + \frac{1}{2}\right)\sin\beta\,\hat{\mathbf{z}}$	(4e)	H VIII
$\mathbf{B_{89}}$	=	$x_{23}\,\mathbf{a}_1 + y_{23}\,\mathbf{a}_2 + z_{23}\,\mathbf{a}_3$	=	$(ax_{23} + cz_{23}\cos\beta)\,\hat{\mathbf{x}} + by_{23}\,\hat{\mathbf{y}} + cz_{23}\sin\beta\,\hat{\mathbf{z}}$	(4e)	H IX
$\mathbf{B_{90}}$	=	$-x_{23}\,\mathbf{a}_1 + \left(y_{23} + \frac{1}{2}\right)\,\mathbf{a}_2 - \left(z_{23} - \frac{1}{2}\right)\,\mathbf{a}_3$	=	$-\left(ax_{23} + c\left(z_{23} - \frac{1}{2}\right)\cos\beta\right)\,\hat{\mathbf{x}} + b\left(y_{23} + \frac{1}{2}\right)\,\hat{\mathbf{y}} - c\left(z_{23} - \frac{1}{2}\right)\sin\beta\,\hat{\mathbf{z}}$	(4e)	H IX
$\mathbf{B_{91}}$	=	$-x_{23}\,\mathbf{a}_1 - y_{23}\,\mathbf{a}_2 - z_{23}\,\mathbf{a}_3$	=	$-(ax_{23} + cz_{23}\cos\beta)\,\hat{\mathbf{x}} - by_{23}\,\hat{\mathbf{y}} - cz_{23}\sin\beta\,\hat{\mathbf{z}}$	(4e)	H IX
$\mathbf{B_{92}}$	=	$x_{23}\,\mathbf{a}_1 - \left(y_{23} - \frac{1}{2}\right)\,\mathbf{a}_2 + \left(z_{23} + \frac{1}{2}\right)\,\mathbf{a}_3$	=	$\left(ax_{23} + c\left(z_{23} + \frac{1}{2}\right)\cos\beta\right)\,\hat{\mathbf{x}} - b\left(y_{23} - \frac{1}{2}\right)\,\hat{\mathbf{y}} + c\left(z_{23} + \frac{1}{2}\right)\sin\beta\,\hat{\mathbf{z}}$	(4e)	H IX
$\mathbf{B_{93}}$	=	$x_{24}\,\mathbf{a}_1 + y_{24}\,\mathbf{a}_2 + z_{24}\,\mathbf{a}_3$	=	$(ax_{24} + cz_{24}\cos\beta)\,\hat{\mathbf{x}} + by_{24}\,\hat{\mathbf{y}} + cz_{24}\sin\beta\,\hat{\mathbf{z}}$	(4e)	H X
$\mathbf{B_{94}}$	=	$-x_{24}\,\mathbf{a}_1 + \left(y_{24} + \frac{1}{2}\right)\,\mathbf{a}_2 - \left(z_{24} - \frac{1}{2}\right)\,\mathbf{a}_3$	=	$-\left(ax_{24} + c\left(z_{24} - \frac{1}{2}\right)\cos\beta\right)\,\hat{\mathbf{x}} + b\left(y_{24} + \frac{1}{2}\right)\,\hat{\mathbf{y}} - c\left(z_{24} - \frac{1}{2}\right)\sin\beta\,\hat{\mathbf{z}}$	(4e)	H X

$\mathbf{B_{95}}$	=	$-x_{24}\,\mathbf{a}_1 - y_{24}\,\mathbf{a}_2 - z_{24}\,\mathbf{a}_3$	=	$-\left(ax_{24} + cz_{24}\cos\beta\right)\,\mathbf{\hat{x}} - by_{24}\,\mathbf{\hat{y}} - cz_{24}\sin\beta\,\mathbf{\hat{z}}$	(4e)	H X
$\mathbf{B_{96}}$	=	$x_{24}\,\mathbf{a}_1 - \left(y_{24} - \frac{1}{2}\right)\,\mathbf{a}_2 + \left(z_{24} + \frac{1}{2}\right)\,\mathbf{a}_3$	=	$\left(ax_{24} + c\left(z_{24} + \frac{1}{2}\right)\cos\beta\right)\,\mathbf{\hat{x}} - b\left(y_{24} - \frac{1}{2}\right)\,\mathbf{\hat{y}} + c\left(z_{24} + \frac{1}{2}\right)\sin\beta\,\mathbf{\hat{z}}$	(4e)	H X
$\mathbf{B_{97}}$	=	$x_{25}\,\mathbf{a}_1 + y_{25}\,\mathbf{a}_2 + z_{25}\,\mathbf{a}_3$	=	$\left(ax_{25} + cz_{25}\cos\beta\right)\,\mathbf{\hat{x}} + by_{25}\,\mathbf{\hat{y}} + cz_{25}\sin\beta\,\mathbf{\hat{z}}$	(4e)	N I
$\mathbf{B_{98}}$	=	$-x_{25}\,\mathbf{a}_1 + \left(y_{25} + \frac{1}{2}\right)\,\mathbf{a}_2 - \left(z_{25} - \frac{1}{2}\right)\,\mathbf{a}_3$	=	$-\left(ax_{25} + c\left(z_{25} - \frac{1}{2}\right)\cos\beta\right)\,\mathbf{\hat{x}} + b\left(y_{25} + \frac{1}{2}\right)\,\mathbf{\hat{y}} - c\left(z_{25} - \frac{1}{2}\right)\sin\beta\,\mathbf{\hat{z}}$	(4e)	N I
$\mathbf{B_{99}}$	=	$-x_{25}\,\mathbf{a}_1 - y_{25}\,\mathbf{a}_2 - z_{25}\,\mathbf{a}_3$	=	$-\left(ax_{25} + cz_{25}\cos\beta\right)\,\mathbf{\hat{x}} - by_{25}\,\mathbf{\hat{y}} - cz_{25}\sin\beta\,\mathbf{\hat{z}}$	(4e)	N I
$\mathbf{B_{100}}$	=	$x_{25}\,\mathbf{a}_1 - \left(y_{25} - \frac{1}{2}\right)\,\mathbf{a}_2 + \left(z_{25} + \frac{1}{2}\right)\,\mathbf{a}_3$	=	$\left(ax_{25} + c\left(z_{25} + \frac{1}{2}\right)\cos\beta\right)\,\mathbf{\hat{x}} - b\left(y_{25} - \frac{1}{2}\right)\,\mathbf{\hat{y}} + c\left(z_{25} + \frac{1}{2}\right)\sin\beta\,\mathbf{\hat{z}}$	(4e)	N I
$\mathbf{B_{101}}$	=	$x_{26}\,\mathbf{a}_1 + y_{26}\,\mathbf{a}_2 + z_{26}\,\mathbf{a}_3$	=	$\left(ax_{26} + cz_{26}\cos\beta\right)\,\mathbf{\hat{x}} + by_{26}\,\mathbf{\hat{y}} + cz_{26}\sin\beta\,\mathbf{\hat{z}}$	(4e)	N II
$\mathbf{B_{102}}$	=	$-x_{26}\,\mathbf{a}_1 + \left(y_{26} + \frac{1}{2}\right)\,\mathbf{a}_2 - \left(z_{26} - \frac{1}{2}\right)\,\mathbf{a}_3$	=	$-\left(ax_{26} + c\left(z_{26} - \frac{1}{2}\right)\cos\beta\right)\,\mathbf{\hat{x}} + b\left(y_{26} + \frac{1}{2}\right)\,\mathbf{\hat{y}} - c\left(z_{26} - \frac{1}{2}\right)\sin\beta\,\mathbf{\hat{z}}$	(4e)	N II
$\mathbf{B_{103}}$	=	$-x_{26}\,\mathbf{a}_1 - y_{26}\,\mathbf{a}_2 - z_{26}\,\mathbf{a}_3$	=	$-\left(ax_{26} + cz_{26}\cos\beta\right)\,\mathbf{\hat{x}} - by_{26}\,\mathbf{\hat{y}} - cz_{26}\sin\beta\,\mathbf{\hat{z}}$	(4e)	N II
$\mathbf{B_{104}}$	=	$x_{26}\,\mathbf{a}_1 - \left(y_{26} - \frac{1}{2}\right)\,\mathbf{a}_2 + \left(z_{26} + \frac{1}{2}\right)\,\mathbf{a}_3$	=	$\left(ax_{26} + c\left(z_{26} + \frac{1}{2}\right)\cos\beta\right)\,\mathbf{\hat{x}} - b\left(y_{26} - \frac{1}{2}\right)\,\mathbf{\hat{y}} + c\left(z_{26} + \frac{1}{2}\right)\sin\beta\,\mathbf{\hat{z}}$	(4e)	N II
$\mathbf{B_{105}}$	=	$x_{27}\,\mathbf{a}_1 + y_{27}\,\mathbf{a}_2 + z_{27}\,\mathbf{a}_3$	=	$\left(ax_{27} + cz_{27}\cos\beta\right)\,\mathbf{\hat{x}} + by_{27}\,\mathbf{\hat{y}} + cz_{27}\sin\beta\,\mathbf{\hat{z}}$	(4e)	N III
$\mathbf{B_{106}}$	=	$-x_{27}\,\mathbf{a}_1 + \left(y_{27} + \frac{1}{2}\right)\,\mathbf{a}_2 - \left(z_{27} - \frac{1}{2}\right)\,\mathbf{a}_3$	=	$-\left(ax_{27} + c\left(z_{27} - \frac{1}{2}\right)\cos\beta\right)\,\mathbf{\hat{x}} + b\left(y_{27} + \frac{1}{2}\right)\,\mathbf{\hat{y}} - c\left(z_{27} - \frac{1}{2}\right)\sin\beta\,\mathbf{\hat{z}}$	(4e)	N III
$\mathbf{B_{107}}$	=	$-x_{27}\,\mathbf{a}_1 - y_{27}\,\mathbf{a}_2 - z_{27}\,\mathbf{a}_3$	=	$-\left(ax_{27} + cz_{27}\cos\beta\right)\,\mathbf{\hat{x}} - by_{27}\,\mathbf{\hat{y}} - cz_{27}\sin\beta\,\mathbf{\hat{z}}$	(4e)	N III
$\mathbf{B_{108}}$	=	$x_{27}\,\mathbf{a}_1 - \left(y_{27} - \frac{1}{2}\right)\,\mathbf{a}_2 + \left(z_{27} + \frac{1}{2}\right)\,\mathbf{a}_3$	=	$\left(ax_{27} + c\left(z_{27} + \frac{1}{2}\right)\cos\beta\right)\,\mathbf{\hat{x}} - b\left(y_{27} - \frac{1}{2}\right)\,\mathbf{\hat{y}} + c\left(z_{27} + \frac{1}{2}\right)\sin\beta\,\mathbf{\hat{z}}$	(4e)	N III
$\mathbf{B_{109}}$	=	$x_{28}\,\mathbf{a}_1 + y_{28}\,\mathbf{a}_2 + z_{28}\,\mathbf{a}_3$	=	$\left(ax_{28} + cz_{28}\cos\beta\right)\,\mathbf{\hat{x}} + by_{28}\,\mathbf{\hat{y}} + cz_{28}\sin\beta\,\mathbf{\hat{z}}$	(4e)	N IV
$\mathbf{B_{110}}$	=	$-x_{28}\,\mathbf{a}_1 + \left(y_{28} + \frac{1}{2}\right)\,\mathbf{a}_2 - \left(z_{28} - \frac{1}{2}\right)\,\mathbf{a}_3$	=	$-\left(ax_{28} + c\left(z_{28} - \frac{1}{2}\right)\cos\beta\right)\,\mathbf{\hat{x}} + b\left(y_{28} + \frac{1}{2}\right)\,\mathbf{\hat{y}} - c\left(z_{28} - \frac{1}{2}\right)\sin\beta\,\mathbf{\hat{z}}$	(4e)	N IV
$\mathbf{B_{111}}$	=	$-x_{28}\,\mathbf{a}_1 - y_{28}\,\mathbf{a}_2 - z_{28}\,\mathbf{a}_3$	=	$-\left(ax_{28} + cz_{28}\cos\beta\right)\,\mathbf{\hat{x}} - by_{28}\,\mathbf{\hat{y}} - cz_{28}\sin\beta\,\mathbf{\hat{z}}$	(4e)	N IV
$\mathbf{B_{112}}$	=	$x_{28}\,\mathbf{a}_1 - \left(y_{28} - \frac{1}{2}\right)\,\mathbf{a}_2 + \left(z_{28} + \frac{1}{2}\right)\,\mathbf{a}_3$	=	$\left(ax_{28} + c\left(z_{28} + \frac{1}{2}\right)\cos\beta\right)\,\mathbf{\hat{x}} - b\left(y_{28} - \frac{1}{2}\right)\,\mathbf{\hat{y}} + c\left(z_{28} + \frac{1}{2}\right)\sin\beta\,\mathbf{\hat{z}}$	(4e)	N IV
$\mathbf{B_{113}}$	=	$x_{29}\,\mathbf{a}_1 + y_{29}\,\mathbf{a}_2 + z_{29}\,\mathbf{a}_3$	=	$\left(ax_{29} + cz_{29}\cos\beta\right)\,\mathbf{\hat{x}} + by_{29}\,\mathbf{\hat{y}} + cz_{29}\sin\beta\,\mathbf{\hat{z}}$	(4e)	N V
$\mathbf{B_{114}}$	=	$-x_{29}\,\mathbf{a}_1 + \left(y_{29} + \frac{1}{2}\right)\,\mathbf{a}_2 - \left(z_{29} - \frac{1}{2}\right)\,\mathbf{a}_3$	=	$-\left(ax_{29} + c\left(z_{29} - \frac{1}{2}\right)\cos\beta\right)\,\mathbf{\hat{x}} + b\left(y_{29} + \frac{1}{2}\right)\,\mathbf{\hat{y}} - c\left(z_{29} - \frac{1}{2}\right)\sin\beta\,\mathbf{\hat{z}}$	(4e)	N V
$\mathbf{B_{115}}$	=	$-x_{29}\,\mathbf{a}_1 - y_{29}\,\mathbf{a}_2 - z_{29}\,\mathbf{a}_3$	=	$-\left(ax_{29} + cz_{29}\cos\beta\right)\,\mathbf{\hat{x}} - by_{29}\,\mathbf{\hat{y}} - cz_{29}\sin\beta\,\mathbf{\hat{z}}$	(4e)	N V
$\mathbf{B_{116}}$	=	$x_{29}\,\mathbf{a}_1 - \left(y_{29} - \frac{1}{2}\right)\,\mathbf{a}_2 + \left(z_{29} + \frac{1}{2}\right)\,\mathbf{a}_3$	=	$\left(ax_{29} + c\left(z_{29} + \frac{1}{2}\right)\cos\beta\right)\,\mathbf{\hat{x}} - b\left(y_{29} - \frac{1}{2}\right)\,\mathbf{\hat{y}} + c\left(z_{29} + \frac{1}{2}\right)\sin\beta\,\mathbf{\hat{z}}$	(4e)	N V
$\mathbf{B_{117}}$	=	$x_{30}\,\mathbf{a}_1 + y_{30}\,\mathbf{a}_2 + z_{30}\,\mathbf{a}_3$	=	$\left(ax_{30} + cz_{30}\cos\beta\right)\,\mathbf{\hat{x}} + by_{30}\,\mathbf{\hat{y}} + cz_{30}\sin\beta\,\mathbf{\hat{z}}$	(4e)	N VI
$\mathbf{B_{118}}$	=	$-x_{30}\,\mathbf{a}_1 + \left(y_{30} + \frac{1}{2}\right)\,\mathbf{a}_2 - \left(z_{30} - \frac{1}{2}\right)\,\mathbf{a}_3$	=	$-\left(ax_{30} + c\left(z_{30} - \frac{1}{2}\right)\cos\beta\right)\,\mathbf{\hat{x}} + b\left(y_{30} + \frac{1}{2}\right)\,\mathbf{\hat{y}} - c\left(z_{30} - \frac{1}{2}\right)\sin\beta\,\mathbf{\hat{z}}$	(4e)	N VI
$\mathbf{B_{119}}$	=	$-x_{30}\,\mathbf{a}_1 - y_{30}\,\mathbf{a}_2 - z_{30}\,\mathbf{a}_3$	=	$-\left(ax_{30} + cz_{30}\cos\beta\right)\,\mathbf{\hat{x}} - by_{30}\,\mathbf{\hat{y}} - cz_{30}\sin\beta\,\mathbf{\hat{z}}$	(4e)	N VI
$\mathbf{B_{120}}$	=	$x_{30}\,\mathbf{a}_1 - \left(y_{30} - \frac{1}{2}\right)\,\mathbf{a}_2 + \left(z_{30} + \frac{1}{2}\right)\,\mathbf{a}_3$	=	$\left(ax_{30} + c\left(z_{30} + \frac{1}{2}\right)\cos\beta\right)\,\mathbf{\hat{x}} - b\left(y_{30} - \frac{1}{2}\right)\,\mathbf{\hat{y}} + c\left(z_{30} + \frac{1}{2}\right)\sin\beta\,\mathbf{\hat{z}}$	(4e)	N VI

$\mathbf{B_{121}}$	=	$x_{31}\,\mathbf{a}_{1}+y_{31}\,\mathbf{a}_{2}+z_{31}\,\mathbf{a}_{3}$	=	$\left(a x_{31}+c z_{31}\cos\beta\right)\,\mathbf{\hat{x}}+b y_{31}\,\mathbf{\hat{y}}+c z_{31}\sin\beta\,\mathbf{\hat{z}}$	(4e)	O I
$\mathbf{B_{122}}$	=	$-x_{31}\,\mathbf{a}_{1}+\left(y_{31}+\frac{1}{2}\right)\,\mathbf{a}_{2}-\left(z_{31}-\frac{1}{2}\right)\,\mathbf{a}_{3}$	=	$-\left(a x_{31}+c\left(z_{31}-\frac{1}{2}\right)\cos\beta\right)\,\mathbf{\hat{x}}+b\left(y_{31}+\frac{1}{2}\right)\,\mathbf{\hat{y}}-c\left(z_{31}-\frac{1}{2}\right)\sin\beta\,\mathbf{\hat{z}}$	(4e)	O I
$\mathbf{B_{123}}$	=	$-x_{31}\,\mathbf{a}_{1}-y_{31}\,\mathbf{a}_{2}-z_{31}\,\mathbf{a}_{3}$	=	$-\left(a x_{31}+c z_{31}\cos\beta\right)\,\mathbf{\hat{x}}-b y_{31}\,\mathbf{\hat{y}}-c z_{31}\sin\beta\,\mathbf{\hat{z}}$	(4e)	O I
$\mathbf{B_{124}}$	=	$x_{31}\,\mathbf{a}_{1}-\left(y_{31}-\frac{1}{2}\right)\,\mathbf{a}_{2}+\left(z_{31}+\frac{1}{2}\right)\,\mathbf{a}_{3}$	=	$\left(a x_{31}+c\left(z_{31}+\frac{1}{2}\right)\cos\beta\right)\,\mathbf{\hat{x}}-b\left(y_{31}-\frac{1}{2}\right)\,\mathbf{\hat{y}}+c\left(z_{31}+\frac{1}{2}\right)\sin\beta\,\mathbf{\hat{z}}$	(4e)	O I
$\mathbf{B_{125}}$	=	$x_{32}\,\mathbf{a}_{1}+y_{32}\,\mathbf{a}_{2}+z_{32}\,\mathbf{a}_{3}$	=	$\left(a x_{32}+c z_{32}\cos\beta\right)\,\mathbf{\hat{x}}+b y_{32}\,\mathbf{\hat{y}}+c z_{32}\sin\beta\,\mathbf{\hat{z}}$	(4e)	O II
$\mathbf{B_{126}}$	=	$-x_{32}\,\mathbf{a}_{1}+\left(y_{32}+\frac{1}{2}\right)\,\mathbf{a}_{2}-\left(z_{32}-\frac{1}{2}\right)\,\mathbf{a}_{3}$	=	$-\left(a x_{32}+c\left(z_{32}-\frac{1}{2}\right)\cos\beta\right)\,\mathbf{\hat{x}}+b\left(y_{32}+\frac{1}{2}\right)\,\mathbf{\hat{y}}-c\left(z_{32}-\frac{1}{2}\right)\sin\beta\,\mathbf{\hat{z}}$	(4e)	O II
$\mathbf{B_{127}}$	=	$-x_{32}\,\mathbf{a}_{1}-y_{32}\,\mathbf{a}_{2}-z_{32}\,\mathbf{a}_{3}$	=	$-\left(a x_{32}+c z_{32}\cos\beta\right)\,\mathbf{\hat{x}}-b y_{32}\,\mathbf{\hat{y}}-c z_{32}\sin\beta\,\mathbf{\hat{z}}$	(4e)	O II
$\mathbf{B_{128}}$	=	$x_{32}\,\mathbf{a}_{1}-\left(y_{32}-\frac{1}{2}\right)\,\mathbf{a}_{2}+\left(z_{32}+\frac{1}{2}\right)\,\mathbf{a}_{3}$	=	$\left(a x_{32}+c\left(z_{32}+\frac{1}{2}\right)\cos\beta\right)\,\mathbf{\hat{x}}-b\left(y_{32}-\frac{1}{2}\right)\,\mathbf{\hat{y}}+c\left(z_{32}+\frac{1}{2}\right)\sin\beta\,\mathbf{\hat{z}}$	(4e)	O II
$\mathbf{B_{129}}$	=	$x_{33}\,\mathbf{a}_{1}+y_{33}\,\mathbf{a}_{2}+z_{33}\,\mathbf{a}_{3}$	=	$\left(a x_{33}+c z_{33}\cos\beta\right)\,\mathbf{\hat{x}}+b y_{33}\,\mathbf{\hat{y}}+c z_{33}\sin\beta\,\mathbf{\hat{z}}$	(4e)	O III
$\mathbf{B_{130}}$	=	$-x_{33}\,\mathbf{a}_{1}+\left(y_{33}+\frac{1}{2}\right)\,\mathbf{a}_{2}-\left(z_{33}-\frac{1}{2}\right)\,\mathbf{a}_{3}$	=	$-\left(a x_{33}+c\left(z_{33}-\frac{1}{2}\right)\cos\beta\right)\,\mathbf{\hat{x}}+b\left(y_{33}+\frac{1}{2}\right)\,\mathbf{\hat{y}}-c\left(z_{33}-\frac{1}{2}\right)\sin\beta\,\mathbf{\hat{z}}$	(4e)	O III
$\mathbf{B_{131}}$	=	$-x_{33}\,\mathbf{a}_{1}-y_{33}\,\mathbf{a}_{2}-z_{33}\,\mathbf{a}_{3}$	=	$-\left(a x_{33}+c z_{33}\cos\beta\right)\,\mathbf{\hat{x}}-b y_{33}\,\mathbf{\hat{y}}-c z_{33}\sin\beta\,\mathbf{\hat{z}}$	(4e)	O III
$\mathbf{B_{132}}$	=	$x_{33}\,\mathbf{a}_{1}-\left(y_{33}-\frac{1}{2}\right)\,\mathbf{a}_{2}+\left(z_{33}+\frac{1}{2}\right)\,\mathbf{a}_{3}$	=	$\left(a x_{33}+c\left(z_{33}+\frac{1}{2}\right)\cos\beta\right)\,\mathbf{\hat{x}}-b\left(y_{33}-\frac{1}{2}\right)\,\mathbf{\hat{y}}+c\left(z_{33}+\frac{1}{2}\right)\sin\beta\,\mathbf{\hat{z}}$	(4e)	O III
$\mathbf{B_{133}}$	=	$x_{34}\,\mathbf{a}_{1}+y_{34}\,\mathbf{a}_{2}+z_{34}\,\mathbf{a}_{3}$	=	$\left(a x_{34}+c z_{34}\cos\beta\right)\,\mathbf{\hat{x}}+b y_{34}\,\mathbf{\hat{y}}+c z_{34}\sin\beta\,\mathbf{\hat{z}}$	(4e)	O IV
$\mathbf{B_{134}}$	=	$-x_{34}\,\mathbf{a}_{1}+\left(y_{34}+\frac{1}{2}\right)\,\mathbf{a}_{2}-\left(z_{34}-\frac{1}{2}\right)\,\mathbf{a}_{3}$	=	$-\left(a x_{34}+c\left(z_{34}-\frac{1}{2}\right)\cos\beta\right)\,\mathbf{\hat{x}}+b\left(y_{34}+\frac{1}{2}\right)\,\mathbf{\hat{y}}-c\left(z_{34}-\frac{1}{2}\right)\sin\beta\,\mathbf{\hat{z}}$	(4e)	O IV
$\mathbf{B_{135}}$	=	$-x_{34}\,\mathbf{a}_{1}-y_{34}\,\mathbf{a}_{2}-z_{34}\,\mathbf{a}_{3}$	=	$-\left(a x_{34}+c z_{34}\cos\beta\right)\,\mathbf{\hat{x}}-b y_{34}\,\mathbf{\hat{y}}-c z_{34}\sin\beta\,\mathbf{\hat{z}}$	(4e)	O IV
$\mathbf{B_{136}}$	=	$x_{34}\,\mathbf{a}_{1}-\left(y_{34}-\frac{1}{2}\right)\,\mathbf{a}_{2}+\left(z_{34}+\frac{1}{2}\right)\,\mathbf{a}_{3}$	=	$\left(a x_{34}+c\left(z_{34}+\frac{1}{2}\right)\cos\beta\right)\,\mathbf{\hat{x}}-b\left(y_{34}-\frac{1}{2}\right)\,\mathbf{\hat{y}}+c\left(z_{34}+\frac{1}{2}\right)\sin\beta\,\mathbf{\hat{z}}$	(4e)	O IV
$\mathbf{B_{137}}$	=	$x_{35}\,\mathbf{a}_{1}+y_{35}\,\mathbf{a}_{2}+z_{35}\,\mathbf{a}_{3}$	=	$\left(a x_{35}+c z_{35}\cos\beta\right)\,\mathbf{\hat{x}}+b y_{35}\,\mathbf{\hat{y}}+c z_{35}\sin\beta\,\mathbf{\hat{z}}$	(4e)	O V
$\mathbf{B_{138}}$	=	$-x_{35}\,\mathbf{a}_{1}+\left(y_{35}+\frac{1}{2}\right)\,\mathbf{a}_{2}-\left(z_{35}-\frac{1}{2}\right)\,\mathbf{a}_{3}$	=	$-\left(a x_{35}+c\left(z_{35}-\frac{1}{2}\right)\cos\beta\right)\,\mathbf{\hat{x}}+b\left(y_{35}+\frac{1}{2}\right)\,\mathbf{\hat{y}}-c\left(z_{35}-\frac{1}{2}\right)\sin\beta\,\mathbf{\hat{z}}$	(4e)	O V
$\mathbf{B_{139}}$	=	$-x_{35}\,\mathbf{a}_{1}-y_{35}\,\mathbf{a}_{2}-z_{35}\,\mathbf{a}_{3}$	=	$-\left(a x_{35}+c z_{35}\cos\beta\right)\,\mathbf{\hat{x}}-b y_{35}\,\mathbf{\hat{y}}-c z_{35}\sin\beta\,\mathbf{\hat{z}}$	(4e)	O V
$\mathbf{B_{140}}$	=	$x_{35}\,\mathbf{a}_{1}-\left(y_{35}-\frac{1}{2}\right)\,\mathbf{a}_{2}+\left(z_{35}+\frac{1}{2}\right)\,\mathbf{a}_{3}$	=	$\left(a x_{35}+c\left(z_{35}+\frac{1}{2}\right)\cos\beta\right)\,\mathbf{\hat{x}}-b\left(y_{35}-\frac{1}{2}\right)\,\mathbf{\hat{y}}+c\left(z_{35}+\frac{1}{2}\right)\sin\beta\,\mathbf{\hat{z}}$	(4e)	O V
$\mathbf{B_{141}}$	=	$x_{36}\,\mathbf{a}_{1}+y_{36}\,\mathbf{a}_{2}+z_{36}\,\mathbf{a}_{3}$	=	$\left(a x_{36}+c z_{36}\cos\beta\right)\,\mathbf{\hat{x}}+b y_{36}\,\mathbf{\hat{y}}+c z_{36}\sin\beta\,\mathbf{\hat{z}}$	(4e)	O VI
$\mathbf{B_{142}}$	=	$-x_{36}\,\mathbf{a}_{1}+\left(y_{36}+\frac{1}{2}\right)\,\mathbf{a}_{2}-\left(z_{36}-\frac{1}{2}\right)\,\mathbf{a}_{3}$	=	$-\left(a x_{36}+c\left(z_{36}-\frac{1}{2}\right)\cos\beta\right)\,\mathbf{\hat{x}}+b\left(y_{36}+\frac{1}{2}\right)\,\mathbf{\hat{y}}-c\left(z_{36}-\frac{1}{2}\right)\sin\beta\,\mathbf{\hat{z}}$	(4e)	O VI
$\mathbf{B_{143}}$	=	$-x_{36}\,\mathbf{a}_{1}-y_{36}\,\mathbf{a}_{2}-z_{36}\,\mathbf{a}_{3}$	=	$-\left(a x_{36}+c z_{36}\cos\beta\right)\,\mathbf{\hat{x}}-b y_{36}\,\mathbf{\hat{y}}-c z_{36}\sin\beta\,\mathbf{\hat{z}}$	(4e)	O VI
$\mathbf{B_{144}}$	=	$x_{36}\,\mathbf{a}_{1}-\left(y_{36}-\frac{1}{2}\right)\,\mathbf{a}_{2}+\left(z_{36}+\frac{1}{2}\right)\,\mathbf{a}_{3}$	=	$\left(a x_{36}+c\left(z_{36}+\frac{1}{2}\right)\cos\beta\right)\,\mathbf{\hat{x}}-b\left(y_{36}-\frac{1}{2}\right)\,\mathbf{\hat{y}}+c\left(z_{36}+\frac{1}{2}\right)\sin\beta\,\mathbf{\hat{z}}$	(4e)	O VI
$\mathbf{B_{145}}$	=	$x_{37}\,\mathbf{a}_{1}+y_{37}\,\mathbf{a}_{2}+z_{37}\,\mathbf{a}_{3}$	=	$\left(a x_{37}+c z_{37}\cos\beta\right)\,\mathbf{\hat{x}}+b y_{37}\,\mathbf{\hat{y}}+c z_{37}\sin\beta\,\mathbf{\hat{z}}$	(4e)	O VII
$\mathbf{B_{146}}$	=	$-x_{37}\,\mathbf{a}_{1}+\left(y_{37}+\frac{1}{2}\right)\,\mathbf{a}_{2}-\left(z_{37}-\frac{1}{2}\right)\,\mathbf{a}_{3}$	=	$-\left(a x_{37}+c\left(z_{37}-\frac{1}{2}\right)\cos\beta\right)\,\mathbf{\hat{x}}+b\left(y_{37}+\frac{1}{2}\right)\,\mathbf{\hat{y}}-c\left(z_{37}-\frac{1}{2}\right)\sin\beta\,\mathbf{\hat{z}}$	(4e)	O VII

$\mathbf{B_{147}}$ =	$-x_{37}\,\mathbf{a}_1 - y_{37}\,\mathbf{a}_2 - z_{37}\,\mathbf{a}_3$	= $-\left(ax_{37} + cz_{37}\cos\beta\right)\,\hat{\mathbf{x}} - by_{37}\,\hat{\mathbf{y}} - cz_{37}\sin\beta\,\hat{\mathbf{z}}$	(4e)	O VII
$\mathbf{B_{148}}$ =	$x_{37}\,\mathbf{a}_1 - \left(y_{37} - \frac{1}{2}\right)\,\mathbf{a}_2 + \left(z_{37} + \frac{1}{2}\right)\,\mathbf{a}_3$	= $\left(ax_{37} + c\left(z_{37} + \frac{1}{2}\right)\cos\beta\right)\,\hat{\mathbf{x}} - b\left(y_{37} - \frac{1}{2}\right)\,\hat{\mathbf{y}} + c\left(z_{37} + \frac{1}{2}\right)\sin\beta\,\hat{\mathbf{z}}$	(4e)	O VII
$\mathbf{B_{149}}$ =	$x_{38}\,\mathbf{a}_1 + y_{38}\,\mathbf{a}_2 + z_{38}\,\mathbf{a}_3$	= $\left(ax_{38} + cz_{38}\cos\beta\right)\,\hat{\mathbf{x}} + by_{38}\,\hat{\mathbf{y}} + cz_{38}\sin\beta\,\hat{\mathbf{z}}$	(4e)	O VIII
$\mathbf{B_{150}}$ =	$-x_{38}\,\mathbf{a}_1 + \left(y_{38} + \frac{1}{2}\right)\,\mathbf{a}_2 - \left(z_{38} - \frac{1}{2}\right)\,\mathbf{a}_3$	= $-\left(ax_{38} + c\left(z_{38} - \frac{1}{2}\right)\cos\beta\right)\,\hat{\mathbf{x}} + b\left(y_{38} + \frac{1}{2}\right)\,\hat{\mathbf{y}} - c\left(z_{38} - \frac{1}{2}\right)\sin\beta\,\hat{\mathbf{z}}$	(4e)	O VIII
$\mathbf{B_{151}}$ =	$-x_{38}\,\mathbf{a}_1 - y_{38}\,\mathbf{a}_2 - z_{38}\,\mathbf{a}_3$	= $-\left(ax_{38} + cz_{38}\cos\beta\right)\,\hat{\mathbf{x}} - by_{38}\,\hat{\mathbf{y}} - cz_{38}\sin\beta\,\hat{\mathbf{z}}$	(4e)	O VIII
$\mathbf{B_{152}}$ =	$x_{38}\,\mathbf{a}_1 - \left(y_{38} - \frac{1}{2}\right)\,\mathbf{a}_2 + \left(z_{38} + \frac{1}{2}\right)\,\mathbf{a}_3$	= $\left(ax_{38} + c\left(z_{38} + \frac{1}{2}\right)\cos\beta\right)\,\hat{\mathbf{x}} - b\left(y_{38} - \frac{1}{2}\right)\,\hat{\mathbf{y}} + c\left(z_{38} + \frac{1}{2}\right)\sin\beta\,\hat{\mathbf{z}}$	(4e)	O VIII
$\mathbf{B_{153}}$ =	$x_{39}\,\mathbf{a}_1 + y_{39}\,\mathbf{a}_2 + z_{39}\,\mathbf{a}_3$	= $\left(ax_{39} + cz_{39}\cos\beta\right)\,\hat{\mathbf{x}} + by_{39}\,\hat{\mathbf{y}} + cz_{39}\sin\beta\,\hat{\mathbf{z}}$	(4e)	O IX
$\mathbf{B_{154}}$ =	$-x_{39}\,\mathbf{a}_1 + \left(y_{39} + \frac{1}{2}\right)\,\mathbf{a}_2 - \left(z_{39} - \frac{1}{2}\right)\,\mathbf{a}_3$	= $-\left(ax_{39} + c\left(z_{39} - \frac{1}{2}\right)\cos\beta\right)\,\hat{\mathbf{x}} + b\left(y_{39} + \frac{1}{2}\right)\,\hat{\mathbf{y}} - c\left(z_{39} - \frac{1}{2}\right)\sin\beta\,\hat{\mathbf{z}}$	(4e)	O IX
$\mathbf{B_{155}}$ =	$-x_{39}\,\mathbf{a}_1 - y_{39}\,\mathbf{a}_2 - z_{39}\,\mathbf{a}_3$	= $-\left(ax_{39} + cz_{39}\cos\beta\right)\,\hat{\mathbf{x}} - by_{39}\,\hat{\mathbf{y}} - cz_{39}\sin\beta\,\hat{\mathbf{z}}$	(4e)	O IX
$\mathbf{B_{156}}$ =	$x_{39}\,\mathbf{a}_1 - \left(y_{39} - \frac{1}{2}\right)\,\mathbf{a}_2 + \left(z_{39} + \frac{1}{2}\right)\,\mathbf{a}_3$	= $\left(ax_{39} + c\left(z_{39} + \frac{1}{2}\right)\cos\beta\right)\,\hat{\mathbf{x}} - b\left(y_{39} - \frac{1}{2}\right)\,\hat{\mathbf{y}} + c\left(z_{39} + \frac{1}{2}\right)\sin\beta\,\hat{\mathbf{z}}$	(4e)	O IX
$\mathbf{B_{157}}$ =	$x_{40}\,\mathbf{a}_1 + y_{40}\,\mathbf{a}_2 + z_{40}\,\mathbf{a}_3$	= $\left(ax_{40} + cz_{40}\cos\beta\right)\,\hat{\mathbf{x}} + by_{40}\,\hat{\mathbf{y}} + cz_{40}\sin\beta\,\hat{\mathbf{z}}$	(4e)	O X
$\mathbf{B_{158}}$ =	$-x_{40}\,\mathbf{a}_1 + \left(y_{40} + \frac{1}{2}\right)\,\mathbf{a}_2 - \left(z_{40} - \frac{1}{2}\right)\,\mathbf{a}_3$	= $-\left(ax_{40} + c\left(z_{40} - \frac{1}{2}\right)\cos\beta\right)\,\hat{\mathbf{x}} + b\left(y_{40} + \frac{1}{2}\right)\,\hat{\mathbf{y}} - c\left(z_{40} - \frac{1}{2}\right)\sin\beta\,\hat{\mathbf{z}}$	(4e)	O X
$\mathbf{B_{159}}$ =	$-x_{40}\,\mathbf{a}_1 - y_{40}\,\mathbf{a}_2 - z_{40}\,\mathbf{a}_3$	= $-\left(ax_{40} + cz_{40}\cos\beta\right)\,\hat{\mathbf{x}} - by_{40}\,\hat{\mathbf{y}} - cz_{40}\sin\beta\,\hat{\mathbf{z}}$	(4e)	O X
$\mathbf{B_{160}}$ =	$x_{40}\,\mathbf{a}_1 - \left(y_{40} - \frac{1}{2}\right)\,\mathbf{a}_2 + \left(z_{40} + \frac{1}{2}\right)\,\mathbf{a}_3$	= $\left(ax_{40} + c\left(z_{40} + \frac{1}{2}\right)\cos\beta\right)\,\hat{\mathbf{x}} - b\left(y_{40} - \frac{1}{2}\right)\,\hat{\mathbf{y}} + c\left(z_{40} + \frac{1}{2}\right)\sin\beta\,\hat{\mathbf{z}}$	(4e)	O X
$\mathbf{B_{161}}$ =	$x_{41}\,\mathbf{a}_1 + y_{41}\,\mathbf{a}_2 + z_{41}\,\mathbf{a}_3$	= $\left(ax_{41} + cz_{41}\cos\beta\right)\,\hat{\mathbf{x}} + by_{41}\,\hat{\mathbf{y}} + cz_{41}\sin\beta\,\hat{\mathbf{z}}$	(4e)	O XI
$\mathbf{B_{162}}$ =	$-x_{41}\,\mathbf{a}_1 + \left(y_{41} + \frac{1}{2}\right)\,\mathbf{a}_2 - \left(z_{41} - \frac{1}{2}\right)\,\mathbf{a}_3$	= $-\left(ax_{41} + c\left(z_{41} - \frac{1}{2}\right)\cos\beta\right)\,\hat{\mathbf{x}} + b\left(y_{41} + \frac{1}{2}\right)\,\hat{\mathbf{y}} - c\left(z_{41} - \frac{1}{2}\right)\sin\beta\,\hat{\mathbf{z}}$	(4e)	O XI
$\mathbf{B_{163}}$ =	$-x_{41}\,\mathbf{a}_1 - y_{41}\,\mathbf{a}_2 - z_{41}\,\mathbf{a}_3$	= $-\left(ax_{41} + cz_{41}\cos\beta\right)\,\hat{\mathbf{x}} - by_{41}\,\hat{\mathbf{y}} - cz_{41}\sin\beta\,\hat{\mathbf{z}}$	(4e)	O XI
$\mathbf{B_{164}}$ =	$x_{41}\,\mathbf{a}_1 - \left(y_{41} - \frac{1}{2}\right)\,\mathbf{a}_2 + \left(z_{41} + \frac{1}{2}\right)\,\mathbf{a}_3$	= $\left(ax_{41} + c\left(z_{41} + \frac{1}{2}\right)\cos\beta\right)\,\hat{\mathbf{x}} - b\left(y_{41} - \frac{1}{2}\right)\,\hat{\mathbf{y}} + c\left(z_{41} + \frac{1}{2}\right)\sin\beta\,\hat{\mathbf{z}}$	(4e)	O XI
$\mathbf{B_{165}}$ =	$x_{42}\,\mathbf{a}_1 + y_{42}\,\mathbf{a}_2 + z_{42}\,\mathbf{a}_3$	= $\left(ax_{42} + cz_{42}\cos\beta\right)\,\hat{\mathbf{x}} + by_{42}\,\hat{\mathbf{y}} + cz_{42}\sin\beta\,\hat{\mathbf{z}}$	(4e)	O XII
$\mathbf{B_{166}}$ =	$-x_{42}\,\mathbf{a}_1 + \left(y_{42} + \frac{1}{2}\right)\,\mathbf{a}_2 - \left(z_{42} - \frac{1}{2}\right)\,\mathbf{a}_3$	= $-\left(ax_{42} + c\left(z_{42} - \frac{1}{2}\right)\cos\beta\right)\,\hat{\mathbf{x}} + b\left(y_{42} + \frac{1}{2}\right)\,\hat{\mathbf{y}} - c\left(z_{42} - \frac{1}{2}\right)\sin\beta\,\hat{\mathbf{z}}$	(4e)	O XII
$\mathbf{B_{167}}$ =	$-x_{42}\,\mathbf{a}_1 - y_{42}\,\mathbf{a}_2 - z_{42}\,\mathbf{a}_3$	= $-\left(ax_{42} + cz_{42}\cos\beta\right)\,\hat{\mathbf{x}} - by_{42}\,\hat{\mathbf{y}} - cz_{42}\sin\beta\,\hat{\mathbf{z}}$	(4e)	O XII
$\mathbf{B_{168}}$ =	$x_{42}\,\mathbf{a}_1 - \left(y_{42} - \frac{1}{2}\right)\,\mathbf{a}_2 + \left(z_{42} + \frac{1}{2}\right)\,\mathbf{a}_3$	= $\left(ax_{42} + c\left(z_{42} + \frac{1}{2}\right)\cos\beta\right)\,\hat{\mathbf{x}} - b\left(y_{42} - \frac{1}{2}\right)\,\hat{\mathbf{y}} + c\left(z_{42} + \frac{1}{2}\right)\sin\beta\,\hat{\mathbf{z}}$	(4e)	O XII

References

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