

La₄₃Ni₁₇Mg₅ Structure:

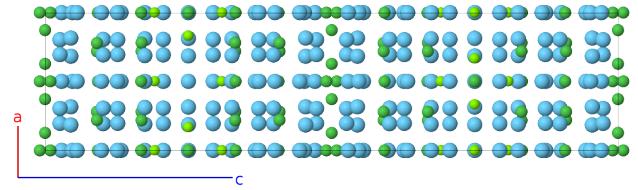
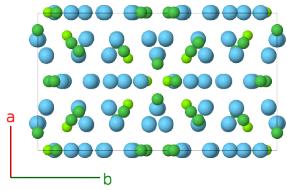
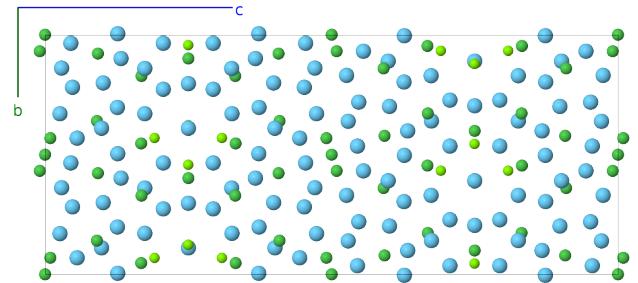
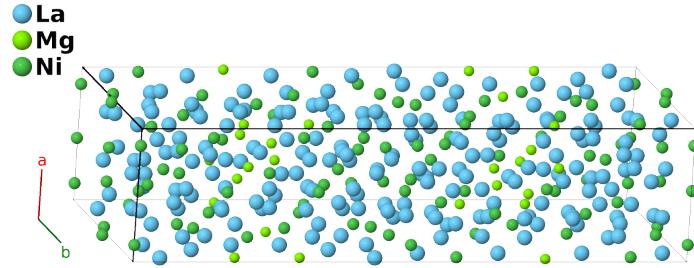
A43B5C17_oC260_63_c8fg6h_cfg_ce3f2h-001

This structure originally had the label A43B5C17_oC260_63_c8fg6h_cfg_ce3f2h. Calls to that address will be redirected here.

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<https://aflow.org/p/Z34R>

https://aflow.org/p/A43B5C17_oC260_63_c8fg6h_cfg_ce3f2h-001



Prototype La₄₃Mg₅Ni₁₇

AFLOW prototype label A43B5C17_oC260_63_c8fg6h_cfg_ce3f2h-001

ICSD 249963

Pearson symbol oC260

Space group number 63

Space group symbol *Cmcm*

AFLOW prototype command

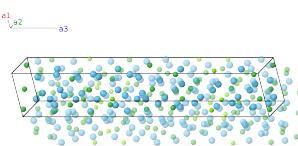
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x22,y22,z22,x23,y23,z23,x24,y24,z24,x25,y25,z25,x26,y26,z26
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Base-centered Orthorhombic primitive vectors

$$\mathbf{a}_1 = \frac{1}{2}a\hat{\mathbf{x}} - \frac{1}{2}b\hat{\mathbf{y}}$$

$$\mathbf{a}_2 = \frac{1}{2}a\hat{\mathbf{x}} + \frac{1}{2}b\hat{\mathbf{y}}$$

$$\mathbf{a}_3 = c\hat{\mathbf{z}}$$



Basis vectors

	Lattice coordinates		Cartesian coordinates	Wyckoff position	Atom type
\mathbf{B}_1	$-y_1 \mathbf{a}_1 + y_1 \mathbf{a}_2 + \frac{1}{4} \mathbf{a}_3$	$=$	$by_1 \hat{\mathbf{y}} + \frac{1}{4}c \hat{\mathbf{z}}$	(4c)	La I
\mathbf{B}_2	$y_1 \mathbf{a}_1 - y_1 \mathbf{a}_2 + \frac{3}{4} \mathbf{a}_3$	$=$	$-by_1 \hat{\mathbf{y}} + \frac{3}{4}c \hat{\mathbf{z}}$	(4c)	La I
\mathbf{B}_3	$-y_2 \mathbf{a}_1 + y_2 \mathbf{a}_2 + \frac{1}{4} \mathbf{a}_3$	$=$	$by_2 \hat{\mathbf{y}} + \frac{1}{4}c \hat{\mathbf{z}}$	(4c)	Mg I
\mathbf{B}_4	$y_2 \mathbf{a}_1 - y_2 \mathbf{a}_2 + \frac{3}{4} \mathbf{a}_3$	$=$	$-by_2 \hat{\mathbf{y}} + \frac{3}{4}c \hat{\mathbf{z}}$	(4c)	Mg I
\mathbf{B}_5	$-y_3 \mathbf{a}_1 + y_3 \mathbf{a}_2 + \frac{1}{4} \mathbf{a}_3$	$=$	$by_3 \hat{\mathbf{y}} + \frac{1}{4}c \hat{\mathbf{z}}$	(4c)	Ni I
\mathbf{B}_6	$y_3 \mathbf{a}_1 - y_3 \mathbf{a}_2 + \frac{3}{4} \mathbf{a}_3$	$=$	$-by_3 \hat{\mathbf{y}} + \frac{3}{4}c \hat{\mathbf{z}}$	(4c)	Ni I
\mathbf{B}_7	$x_4 \mathbf{a}_1 + x_4 \mathbf{a}_2$	$=$	$ax_4 \hat{\mathbf{x}}$	(8e)	Ni II
\mathbf{B}_8	$-x_4 \mathbf{a}_1 - x_4 \mathbf{a}_2 + \frac{1}{2} \mathbf{a}_3$	$=$	$-ax_4 \hat{\mathbf{x}} + \frac{1}{2}c \hat{\mathbf{z}}$	(8e)	Ni II
\mathbf{B}_9	$-x_4 \mathbf{a}_1 - x_4 \mathbf{a}_2$	$=$	$-ax_4 \hat{\mathbf{x}}$	(8e)	Ni II
\mathbf{B}_{10}	$x_4 \mathbf{a}_1 + x_4 \mathbf{a}_2 + \frac{1}{2} \mathbf{a}_3$	$=$	$ax_4 \hat{\mathbf{x}} + \frac{1}{2}c \hat{\mathbf{z}}$	(8e)	Ni II
\mathbf{B}_{11}	$-y_5 \mathbf{a}_1 + y_5 \mathbf{a}_2 + z_5 \mathbf{a}_3$	$=$	$by_5 \hat{\mathbf{y}} + cz_5 \hat{\mathbf{z}}$	(8f)	La II
\mathbf{B}_{12}	$y_5 \mathbf{a}_1 - y_5 \mathbf{a}_2 + (z_5 + \frac{1}{2}) \mathbf{a}_3$	$=$	$-by_5 \hat{\mathbf{y}} + c(z_5 + \frac{1}{2}) \hat{\mathbf{z}}$	(8f)	La II
\mathbf{B}_{13}	$-y_5 \mathbf{a}_1 + y_5 \mathbf{a}_2 - (z_5 - \frac{1}{2}) \mathbf{a}_3$	$=$	$by_5 \hat{\mathbf{y}} - c(z_5 - \frac{1}{2}) \hat{\mathbf{z}}$	(8f)	La II
\mathbf{B}_{14}	$y_5 \mathbf{a}_1 - y_5 \mathbf{a}_2 - z_5 \mathbf{a}_3$	$=$	$-by_5 \hat{\mathbf{y}} - cz_5 \hat{\mathbf{z}}$	(8f)	La II
\mathbf{B}_{15}	$-y_6 \mathbf{a}_1 + y_6 \mathbf{a}_2 + z_6 \mathbf{a}_3$	$=$	$by_6 \hat{\mathbf{y}} + cz_6 \hat{\mathbf{z}}$	(8f)	La III
\mathbf{B}_{16}	$y_6 \mathbf{a}_1 - y_6 \mathbf{a}_2 + (z_6 + \frac{1}{2}) \mathbf{a}_3$	$=$	$-by_6 \hat{\mathbf{y}} + c(z_6 + \frac{1}{2}) \hat{\mathbf{z}}$	(8f)	La III
\mathbf{B}_{17}	$-y_6 \mathbf{a}_1 + y_6 \mathbf{a}_2 - (z_6 - \frac{1}{2}) \mathbf{a}_3$	$=$	$by_6 \hat{\mathbf{y}} - c(z_6 - \frac{1}{2}) \hat{\mathbf{z}}$	(8f)	La III
\mathbf{B}_{18}	$y_6 \mathbf{a}_1 - y_6 \mathbf{a}_2 - z_6 \mathbf{a}_3$	$=$	$-by_6 \hat{\mathbf{y}} - cz_6 \hat{\mathbf{z}}$	(8f)	La III
\mathbf{B}_{19}	$-y_7 \mathbf{a}_1 + y_7 \mathbf{a}_2 + z_7 \mathbf{a}_3$	$=$	$by_7 \hat{\mathbf{y}} + cz_7 \hat{\mathbf{z}}$	(8f)	La IV
\mathbf{B}_{20}	$y_7 \mathbf{a}_1 - y_7 \mathbf{a}_2 + (z_7 + \frac{1}{2}) \mathbf{a}_3$	$=$	$-by_7 \hat{\mathbf{y}} + c(z_7 + \frac{1}{2}) \hat{\mathbf{z}}$	(8f)	La IV
\mathbf{B}_{21}	$-y_7 \mathbf{a}_1 + y_7 \mathbf{a}_2 - (z_7 - \frac{1}{2}) \mathbf{a}_3$	$=$	$by_7 \hat{\mathbf{y}} - c(z_7 - \frac{1}{2}) \hat{\mathbf{z}}$	(8f)	La IV
\mathbf{B}_{22}	$y_7 \mathbf{a}_1 - y_7 \mathbf{a}_2 - z_7 \mathbf{a}_3$	$=$	$-by_7 \hat{\mathbf{y}} - cz_7 \hat{\mathbf{z}}$	(8f)	La IV
\mathbf{B}_{23}	$-y_8 \mathbf{a}_1 + y_8 \mathbf{a}_2 + z_8 \mathbf{a}_3$	$=$	$by_8 \hat{\mathbf{y}} + cz_8 \hat{\mathbf{z}}$	(8f)	La V
\mathbf{B}_{24}	$y_8 \mathbf{a}_1 - y_8 \mathbf{a}_2 + (z_8 + \frac{1}{2}) \mathbf{a}_3$	$=$	$-by_8 \hat{\mathbf{y}} + c(z_8 + \frac{1}{2}) \hat{\mathbf{z}}$	(8f)	La V
\mathbf{B}_{25}	$-y_8 \mathbf{a}_1 + y_8 \mathbf{a}_2 - (z_8 - \frac{1}{2}) \mathbf{a}_3$	$=$	$by_8 \hat{\mathbf{y}} - c(z_8 - \frac{1}{2}) \hat{\mathbf{z}}$	(8f)	La V
\mathbf{B}_{26}	$y_8 \mathbf{a}_1 - y_8 \mathbf{a}_2 - z_8 \mathbf{a}_3$	$=$	$-by_8 \hat{\mathbf{y}} - cz_8 \hat{\mathbf{z}}$	(8f)	La V
\mathbf{B}_{27}	$-y_9 \mathbf{a}_1 + y_9 \mathbf{a}_2 + z_9 \mathbf{a}_3$	$=$	$by_9 \hat{\mathbf{y}} + cz_9 \hat{\mathbf{z}}$	(8f)	La VI
\mathbf{B}_{28}	$y_9 \mathbf{a}_1 - y_9 \mathbf{a}_2 + (z_9 + \frac{1}{2}) \mathbf{a}_3$	$=$	$-by_9 \hat{\mathbf{y}} + c(z_9 + \frac{1}{2}) \hat{\mathbf{z}}$	(8f)	La VI
\mathbf{B}_{29}	$-y_9 \mathbf{a}_1 + y_9 \mathbf{a}_2 - (z_9 - \frac{1}{2}) \mathbf{a}_3$	$=$	$by_9 \hat{\mathbf{y}} - c(z_9 - \frac{1}{2}) \hat{\mathbf{z}}$	(8f)	La VI
\mathbf{B}_{30}	$y_9 \mathbf{a}_1 - y_9 \mathbf{a}_2 - z_9 \mathbf{a}_3$	$=$	$-by_9 \hat{\mathbf{y}} - cz_9 \hat{\mathbf{z}}$	(8f)	La VI
\mathbf{B}_{31}	$-y_{10} \mathbf{a}_1 + y_{10} \mathbf{a}_2 + z_{10} \mathbf{a}_3$	$=$	$by_{10} \hat{\mathbf{y}} + cz_{10} \hat{\mathbf{z}}$	(8f)	La VII
\mathbf{B}_{32}	$y_{10} \mathbf{a}_1 - y_{10} \mathbf{a}_2 + (z_{10} + \frac{1}{2}) \mathbf{a}_3$	$=$	$-by_{10} \hat{\mathbf{y}} + c(z_{10} + \frac{1}{2}) \hat{\mathbf{z}}$	(8f)	La VII
\mathbf{B}_{33}	$-y_{10} \mathbf{a}_1 + y_{10} \mathbf{a}_2 - (z_{10} - \frac{1}{2}) \mathbf{a}_3$	$=$	$by_{10} \hat{\mathbf{y}} - c(z_{10} - \frac{1}{2}) \hat{\mathbf{z}}$	(8f)	La VII
\mathbf{B}_{34}	$y_{10} \mathbf{a}_1 - y_{10} \mathbf{a}_2 - z_{10} \mathbf{a}_3$	$=$	$-by_{10} \hat{\mathbf{y}} - cz_{10} \hat{\mathbf{z}}$	(8f)	La VII
\mathbf{B}_{35}	$-y_{11} \mathbf{a}_1 + y_{11} \mathbf{a}_2 + z_{11} \mathbf{a}_3$	$=$	$by_{11} \hat{\mathbf{y}} + cz_{11} \hat{\mathbf{z}}$	(8f)	La VIII
\mathbf{B}_{36}	$y_{11} \mathbf{a}_1 - y_{11} \mathbf{a}_2 + (z_{11} + \frac{1}{2}) \mathbf{a}_3$	$=$	$-by_{11} \hat{\mathbf{y}} + c(z_{11} + \frac{1}{2}) \hat{\mathbf{z}}$	(8f)	La VIII
\mathbf{B}_{37}	$-y_{11} \mathbf{a}_1 + y_{11} \mathbf{a}_2 - (z_{11} - \frac{1}{2}) \mathbf{a}_3$	$=$	$by_{11} \hat{\mathbf{y}} - c(z_{11} - \frac{1}{2}) \hat{\mathbf{z}}$	(8f)	La VIII
\mathbf{B}_{38}	$y_{11} \mathbf{a}_1 - y_{11} \mathbf{a}_2 - z_{11} \mathbf{a}_3$	$=$	$-by_{11} \hat{\mathbf{y}} - cz_{11} \hat{\mathbf{z}}$	(8f)	La VIII

B₃₉	$-y_{12} \mathbf{a}_1 + y_{12} \mathbf{a}_2 + z_{12} \mathbf{a}_3$	=	$b y_{12} \hat{\mathbf{y}} + c z_{12} \hat{\mathbf{z}}$	(8f)	La IX
B₄₀	$y_{12} \mathbf{a}_1 - y_{12} \mathbf{a}_2 + (z_{12} + \frac{1}{2}) \mathbf{a}_3$	=	$-b y_{12} \hat{\mathbf{y}} + c (z_{12} + \frac{1}{2}) \hat{\mathbf{z}}$	(8f)	La IX
B₄₁	$-y_{12} \mathbf{a}_1 + y_{12} \mathbf{a}_2 - (z_{12} - \frac{1}{2}) \mathbf{a}_3$	=	$b y_{12} \hat{\mathbf{y}} - c (z_{12} - \frac{1}{2}) \hat{\mathbf{z}}$	(8f)	La IX
B₄₂	$y_{12} \mathbf{a}_1 - y_{12} \mathbf{a}_2 - z_{12} \mathbf{a}_3$	=	$-b y_{12} \hat{\mathbf{y}} - c z_{12} \hat{\mathbf{z}}$	(8f)	La IX
B₄₃	$-y_{13} \mathbf{a}_1 + y_{13} \mathbf{a}_2 + z_{13} \mathbf{a}_3$	=	$b y_{13} \hat{\mathbf{y}} + c z_{13} \hat{\mathbf{z}}$	(8f)	Mg II
B₄₄	$y_{13} \mathbf{a}_1 - y_{13} \mathbf{a}_2 + (z_{13} + \frac{1}{2}) \mathbf{a}_3$	=	$-b y_{13} \hat{\mathbf{y}} + c (z_{13} + \frac{1}{2}) \hat{\mathbf{z}}$	(8f)	Mg II
B₄₅	$-y_{13} \mathbf{a}_1 + y_{13} \mathbf{a}_2 - (z_{13} - \frac{1}{2}) \mathbf{a}_3$	=	$b y_{13} \hat{\mathbf{y}} - c (z_{13} - \frac{1}{2}) \hat{\mathbf{z}}$	(8f)	Mg II
B₄₆	$y_{13} \mathbf{a}_1 - y_{13} \mathbf{a}_2 - z_{13} \mathbf{a}_3$	=	$-b y_{13} \hat{\mathbf{y}} - c z_{13} \hat{\mathbf{z}}$	(8f)	Mg II
B₄₇	$-y_{14} \mathbf{a}_1 + y_{14} \mathbf{a}_2 + z_{14} \mathbf{a}_3$	=	$b y_{14} \hat{\mathbf{y}} + c z_{14} \hat{\mathbf{z}}$	(8f)	Ni III
B₄₈	$y_{14} \mathbf{a}_1 - y_{14} \mathbf{a}_2 + (z_{14} + \frac{1}{2}) \mathbf{a}_3$	=	$-b y_{14} \hat{\mathbf{y}} + c (z_{14} + \frac{1}{2}) \hat{\mathbf{z}}$	(8f)	Ni III
B₄₉	$-y_{14} \mathbf{a}_1 + y_{14} \mathbf{a}_2 - (z_{14} - \frac{1}{2}) \mathbf{a}_3$	=	$b y_{14} \hat{\mathbf{y}} - c (z_{14} - \frac{1}{2}) \hat{\mathbf{z}}$	(8f)	Ni III
B₅₀	$y_{14} \mathbf{a}_1 - y_{14} \mathbf{a}_2 - z_{14} \mathbf{a}_3$	=	$-b y_{14} \hat{\mathbf{y}} - c z_{14} \hat{\mathbf{z}}$	(8f)	Ni III
B₅₁	$-y_{15} \mathbf{a}_1 + y_{15} \mathbf{a}_2 + z_{15} \mathbf{a}_3$	=	$b y_{15} \hat{\mathbf{y}} + c z_{15} \hat{\mathbf{z}}$	(8f)	Ni IV
B₅₂	$y_{15} \mathbf{a}_1 - y_{15} \mathbf{a}_2 + (z_{15} + \frac{1}{2}) \mathbf{a}_3$	=	$-b y_{15} \hat{\mathbf{y}} + c (z_{15} + \frac{1}{2}) \hat{\mathbf{z}}$	(8f)	Ni IV
B₅₃	$-y_{15} \mathbf{a}_1 + y_{15} \mathbf{a}_2 - (z_{15} - \frac{1}{2}) \mathbf{a}_3$	=	$b y_{15} \hat{\mathbf{y}} - c (z_{15} - \frac{1}{2}) \hat{\mathbf{z}}$	(8f)	Ni IV
B₅₄	$y_{15} \mathbf{a}_1 - y_{15} \mathbf{a}_2 - z_{15} \mathbf{a}_3$	=	$-b y_{15} \hat{\mathbf{y}} - c z_{15} \hat{\mathbf{z}}$	(8f)	Ni IV
B₅₅	$-y_{16} \mathbf{a}_1 + y_{16} \mathbf{a}_2 + z_{16} \mathbf{a}_3$	=	$b y_{16} \hat{\mathbf{y}} + c z_{16} \hat{\mathbf{z}}$	(8f)	Ni V
B₅₆	$y_{16} \mathbf{a}_1 - y_{16} \mathbf{a}_2 + (z_{16} + \frac{1}{2}) \mathbf{a}_3$	=	$-b y_{16} \hat{\mathbf{y}} + c (z_{16} + \frac{1}{2}) \hat{\mathbf{z}}$	(8f)	Ni V
B₅₇	$-y_{16} \mathbf{a}_1 + y_{16} \mathbf{a}_2 - (z_{16} - \frac{1}{2}) \mathbf{a}_3$	=	$b y_{16} \hat{\mathbf{y}} - c (z_{16} - \frac{1}{2}) \hat{\mathbf{z}}$	(8f)	Ni V
B₅₈	$y_{16} \mathbf{a}_1 - y_{16} \mathbf{a}_2 - z_{16} \mathbf{a}_3$	=	$-b y_{16} \hat{\mathbf{y}} - c z_{16} \hat{\mathbf{z}}$	(8f)	Ni V
B₅₉	$(x_{17} - y_{17}) \mathbf{a}_1 +$ $(x_{17} + y_{17}) \mathbf{a}_2 + \frac{1}{4} \mathbf{a}_3$	=	$a x_{17} \hat{\mathbf{x}} + b y_{17} \hat{\mathbf{y}} + \frac{1}{4} c \hat{\mathbf{z}}$	(8g)	La X
B₆₀	$-(x_{17} - y_{17}) \mathbf{a}_1 -$ $(x_{17} + y_{17}) \mathbf{a}_2 + \frac{3}{4} \mathbf{a}_3$	=	$-a x_{17} \hat{\mathbf{x}} - b y_{17} \hat{\mathbf{y}} + \frac{3}{4} c \hat{\mathbf{z}}$	(8g)	La X
B₆₁	$-(x_{17} + y_{17}) \mathbf{a}_1 -$ $(x_{17} - y_{17}) \mathbf{a}_2 + \frac{1}{4} \mathbf{a}_3$	=	$-a x_{17} \hat{\mathbf{x}} + b y_{17} \hat{\mathbf{y}} + \frac{1}{4} c \hat{\mathbf{z}}$	(8g)	La X
B₆₂	$(x_{17} + y_{17}) \mathbf{a}_1 +$ $(x_{17} - y_{17}) \mathbf{a}_2 + \frac{3}{4} \mathbf{a}_3$	=	$a x_{17} \hat{\mathbf{x}} - b y_{17} \hat{\mathbf{y}} + \frac{3}{4} c \hat{\mathbf{z}}$	(8g)	La X
B₆₃	$(x_{18} - y_{18}) \mathbf{a}_1 +$ $(x_{18} + y_{18}) \mathbf{a}_2 + \frac{1}{4} \mathbf{a}_3$	=	$a x_{18} \hat{\mathbf{x}} + b y_{18} \hat{\mathbf{y}} + \frac{1}{4} c \hat{\mathbf{z}}$	(8g)	Mg III
B₆₄	$-(x_{18} - y_{18}) \mathbf{a}_1 -$ $(x_{18} + y_{18}) \mathbf{a}_2 + \frac{3}{4} \mathbf{a}_3$	=	$-a x_{18} \hat{\mathbf{x}} - b y_{18} \hat{\mathbf{y}} + \frac{3}{4} c \hat{\mathbf{z}}$	(8g)	Mg III
B₆₅	$-(x_{18} + y_{18}) \mathbf{a}_1 -$ $(x_{18} - y_{18}) \mathbf{a}_2 + \frac{1}{4} \mathbf{a}_3$	=	$-a x_{18} \hat{\mathbf{x}} + b y_{18} \hat{\mathbf{y}} + \frac{1}{4} c \hat{\mathbf{z}}$	(8g)	Mg III
B₆₆	$(x_{18} + y_{18}) \mathbf{a}_1 +$ $(x_{18} - y_{18}) \mathbf{a}_2 + \frac{3}{4} \mathbf{a}_3$	=	$a x_{18} \hat{\mathbf{x}} - b y_{18} \hat{\mathbf{y}} + \frac{3}{4} c \hat{\mathbf{z}}$	(8g)	Mg III
B₆₇	$(x_{19} - y_{19}) \mathbf{a}_1 +$ $(x_{19} + y_{19}) \mathbf{a}_2 + z_{19} \mathbf{a}_3$	=	$a x_{19} \hat{\mathbf{x}} + b y_{19} \hat{\mathbf{y}} + c z_{19} \hat{\mathbf{z}}$	(16h)	La XI
B₆₈	$-(x_{19} - y_{19}) \mathbf{a}_1 -$ $(x_{19} + y_{19}) \mathbf{a}_2 + (z_{19} + \frac{1}{2}) \mathbf{a}_3$	=	$-a x_{19} \hat{\mathbf{x}} - b y_{19} \hat{\mathbf{y}} + c (z_{19} + \frac{1}{2}) \hat{\mathbf{z}}$	(16h)	La XI
B₆₉	$-(x_{19} + y_{19}) \mathbf{a}_1 -$ $(x_{19} - y_{19}) \mathbf{a}_2 - (z_{19} - \frac{1}{2}) \mathbf{a}_3$	=	$-a x_{19} \hat{\mathbf{x}} + b y_{19} \hat{\mathbf{y}} - c (z_{19} - \frac{1}{2}) \hat{\mathbf{z}}$	(16h)	La XI
B₇₀	$(x_{19} + y_{19}) \mathbf{a}_1 +$ $(x_{19} - y_{19}) \mathbf{a}_2 - z_{19} \mathbf{a}_3$	=	$a x_{19} \hat{\mathbf{x}} - b y_{19} \hat{\mathbf{y}} - c z_{19} \hat{\mathbf{z}}$	(16h)	La XI

$$\begin{aligned}
\mathbf{B}_{119} &= -(x_{25} - y_{25}) \mathbf{a}_1 - (x_{25} + y_{25}) \mathbf{a}_2 - z_{25} \mathbf{a}_3 & = & -ax_{25} \hat{\mathbf{x}} - by_{25} \hat{\mathbf{y}} - cz_{25} \hat{\mathbf{z}} & (16h) & \text{Ni VI} \\
\mathbf{B}_{120} &= (x_{25} - y_{25}) \mathbf{a}_1 + (x_{25} + y_{25}) \mathbf{a}_2 - (z_{25} - \frac{1}{2}) \mathbf{a}_3 & = & ax_{25} \hat{\mathbf{x}} + by_{25} \hat{\mathbf{y}} - c(z_{25} - \frac{1}{2}) \hat{\mathbf{z}} & (16h) & \text{Ni VI} \\
\mathbf{B}_{121} &= (x_{25} + y_{25}) \mathbf{a}_1 + (x_{25} - y_{25}) \mathbf{a}_2 + (z_{25} + \frac{1}{2}) \mathbf{a}_3 & = & ax_{25} \hat{\mathbf{x}} - by_{25} \hat{\mathbf{y}} + c(z_{25} + \frac{1}{2}) \hat{\mathbf{z}} & (16h) & \text{Ni VI} \\
\mathbf{B}_{122} &= -(x_{25} + y_{25}) \mathbf{a}_1 - (x_{25} - y_{25}) \mathbf{a}_2 + z_{25} \mathbf{a}_3 & = & -ax_{25} \hat{\mathbf{x}} + by_{25} \hat{\mathbf{y}} + cz_{25} \hat{\mathbf{z}} & (16h) & \text{Ni VI} \\
\mathbf{B}_{123} &= (x_{26} - y_{26}) \mathbf{a}_1 + (x_{26} + y_{26}) \mathbf{a}_2 + z_{26} \mathbf{a}_3 & = & ax_{26} \hat{\mathbf{x}} + by_{26} \hat{\mathbf{y}} + cz_{26} \hat{\mathbf{z}} & (16h) & \text{Ni VII} \\
\mathbf{B}_{124} &= -(x_{26} - y_{26}) \mathbf{a}_1 - (x_{26} + y_{26}) \mathbf{a}_2 + (z_{26} + \frac{1}{2}) \mathbf{a}_3 & = & -ax_{26} \hat{\mathbf{x}} - by_{26} \hat{\mathbf{y}} + c(z_{26} + \frac{1}{2}) \hat{\mathbf{z}} & (16h) & \text{Ni VII} \\
\mathbf{B}_{125} &= -(x_{26} + y_{26}) \mathbf{a}_1 - (x_{26} - y_{26}) \mathbf{a}_2 - (z_{26} - \frac{1}{2}) \mathbf{a}_3 & = & -ax_{26} \hat{\mathbf{x}} + by_{26} \hat{\mathbf{y}} - c(z_{26} - \frac{1}{2}) \hat{\mathbf{z}} & (16h) & \text{Ni VII} \\
\mathbf{B}_{126} &= (x_{26} + y_{26}) \mathbf{a}_1 + (x_{26} - y_{26}) \mathbf{a}_2 - z_{26} \mathbf{a}_3 & = & ax_{26} \hat{\mathbf{x}} - by_{26} \hat{\mathbf{y}} - cz_{26} \hat{\mathbf{z}} & (16h) & \text{Ni VII} \\
\mathbf{B}_{127} &= -(x_{26} - y_{26}) \mathbf{a}_1 - (x_{26} + y_{26}) \mathbf{a}_2 - z_{26} \mathbf{a}_3 & = & -ax_{26} \hat{\mathbf{x}} - by_{26} \hat{\mathbf{y}} - cz_{26} \hat{\mathbf{z}} & (16h) & \text{Ni VII} \\
\mathbf{B}_{128} &= (x_{26} - y_{26}) \mathbf{a}_1 + (x_{26} + y_{26}) \mathbf{a}_2 - (z_{26} - \frac{1}{2}) \mathbf{a}_3 & = & ax_{26} \hat{\mathbf{x}} + by_{26} \hat{\mathbf{y}} - c(z_{26} - \frac{1}{2}) \hat{\mathbf{z}} & (16h) & \text{Ni VII} \\
\mathbf{B}_{129} &= (x_{26} + y_{26}) \mathbf{a}_1 + (x_{26} - y_{26}) \mathbf{a}_2 + (z_{26} + \frac{1}{2}) \mathbf{a}_3 & = & ax_{26} \hat{\mathbf{x}} - by_{26} \hat{\mathbf{y}} + c(z_{26} + \frac{1}{2}) \hat{\mathbf{z}} & (16h) & \text{Ni VII} \\
\mathbf{B}_{130} &= -(x_{26} + y_{26}) \mathbf{a}_1 - (x_{26} - y_{26}) \mathbf{a}_2 + z_{26} \mathbf{a}_3 & = & -ax_{26} \hat{\mathbf{x}} + by_{26} \hat{\mathbf{y}} + cz_{26} \hat{\mathbf{z}} & (16h) & \text{Ni VII}
\end{aligned}$$

References

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