pascalRow@1

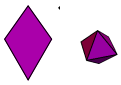
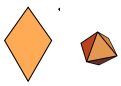
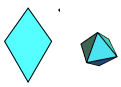
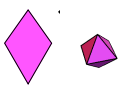
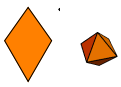
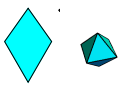
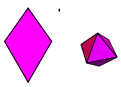
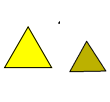
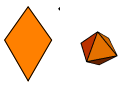
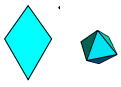
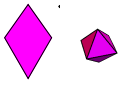
Seq #	Symbol	2D/3D Shape	Groups	Particle Quantum Bits	Binary / E8 / Physics Coordinates	Algebra Root Weight / Height / Rt‡=Atomic Element Number -->	Ele #	Octonions Flipped	Octonions Not Flipped
1	$\overset{0}{v_e}$ $\overset{\bar{R}}{w_l}$		{BC8, E7, E6, 6Cube, E5, E4, C4, H4cell8, 3Cube, B2=C2, Hamming, Idempot, ring4}	$0apggsscc$ 0010101000_2	Bn{ 0, 1/2, 0, −1/2, 0, 1/2, 0, −1/2, 0, 1/2, 0, −1/2, 0, 1/2, 0, −1/2 } E8{ 0, 1/2, 0, −1/2, 0, 1/2, 0, −1/2, 0, 1/2, 0, −1/2, 0, 1/2, 0, −1/2 } Ph{ 1/2, 1/2, 0, −1/(√2), 1/2, −√3/2, 0, 0 }	Rt{ 0 0 0 0 1 0 0 0 } Wt{ 0 0 0 0 2 −1 0 0 } Ht 1	Be 4	Triad fpi=7 BC_8 R fp_sm=3→1BH {{1, 2, 4}, {1, 5, 3}, {1, 6, 7}, {2, 6, 3}, {2, 7, 5}, {3, 4, 7}, {4, 5, 6}} flat triad/mask bits {1, 2, 4, 5, 3, 6, 7} {1, 1, 0, 1, 1, 0, 0}	Triad fpi=4 BC_8 R fp_sm=3→1BH {{1, 3, 2}, {1, 6, 4}, {1, 5, 7}, {2, 7, 4}, {2, 6, 5}, {3, 4, 5}, {3, 6, 7}} flat triad/mask bits {1, 3, 2, 6, 4, 5, 7} {1, 1, 0, 1, 1, 0, 0}

pascalRow@2

Seq #	Symbol	2D/3D Shape	Groups	Particle Quantum Bits	Binary / E8 / Physics Coordinates	Algebra Root Weight / Height / Rt‡=Atomic Element Number -->	Ele #	Octonions Flipped	Octonions Not Flipped
2	$\overline{Ex_1}$ $\overset{0\to-1/3}{L}$		{8Ortho}	$0apggsscc$ 0100000000_2	Bn{ 1, 0, 0, 0, 0, 0, 0, 0 } E8{ 0, 0, 0, 0, 0, 0, 0, −1 } Ph{ 0, 0, 0, 0, 0, −1/(√3), 0, −√(2/3) }	Rt{ 1 2 3 4 2 7/2 5 5/2 } Wt{ 0 0 0 0 1/2 0 0 0 } Ht 23	Exc 1	Invalid octonion Fano plane not defined! Invalid octonion Fano plane not defined!	Invalid octonion Fano plane not defined! Invalid octonion Fano plane not defined!
3	$\overline{Ex_1}$ $\overset{0\to-1/3}{R}$		{8Ortho}	$0apggsscc$ 0100001000_2	Bn{ 0, 1, 0, 0, 0, 0, 0, 0 } E8{ 0, 0, 0, 0, 0, 0, −1, 0 } Ph{ 0, 0, 0, 0, 0, −1/(√3), −1/(√2), 1/(√6) }	Rt{ 0 0 0 0 0 −1/2 0 1/2 } Wt{ 0 0 0 0 1/2 −1 0 1 } Ht 0	$\overline{Exc}$ 1	Invalid octonion Fano plane not defined! Invalid octonion Fano plane not defined!	Invalid octonion Fano plane not defined! Invalid octonion Fano plane not defined!
4	$\overline{Ex_1}$ $\overset{0\to-1/3}{L}$		{8Ortho}	$0apggsscc$ 0100001000_2	Bn{ 0, 0, 1, 0, 0, 0, 0, 0 } E8{ 0, 0, 0, 0, 0, 0, 0, 0 } Ph{ 0, 0, 0, 0, 0, −1/(√3), 1/(√2), 1/(√6) }	Rt{ 0 0 0 0 0 −1/2 0 −1/2 } Wt{ 0 0 0 0 1/2 −1 1 −1 } Ht 1	$\overline{Exc}$ 1	Invalid octonion Fano plane not defined! Invalid octonion Fano plane not defined!	Invalid octonion Fano plane not defined! Invalid octonion Fano plane not defined!
5	$\overline{Ex_1}$ $\overset{0}{R}$		{8Ortho}	$0apggsscc$ 0100011000_2	Bn{ 0, 0, 0, 0, 1, 0, 0, 0 } E8{ 0, 0, 0, 0, 0, −1, 0, 0 } Ph{ 0, 0, 0, 0, 0, −1, 0, 0 }	Rt{ 0 0 0 0 0 −1/2 −1 −1/2 } Wt{ 0 0 0 1 1/2 0 −1 0 } Ht 2	$\overline{Exc}$ 1	Invalid octonion Fano plane not defined! Invalid octonion Fano plane not defined!	Invalid octonion Fano plane not defined! Invalid octonion Fano plane not defined!
6	$\overline{Ex_2}$ $\overset{0\to1}{L}$		{8Ortho}	$0apggsscc$ 0110000000_2	Bn{ 0, 0, 0, 0, 1, 0, 0, 0 } Ph{ 0, 0, 1/(√2), −1/(√2), 0, 0, 0, 0 }	Rt{ 0 0 0 −1 0 −1/2 −1 −1/2 } Wt{ 0 0 1 −1 1/2 0 0 0 } Ht 3	$\overline{Exc}$ 1	Invalid octonion Fano plane not defined! Invalid octonion Fano plane not defined!	Invalid octonion Fano plane not defined! Invalid octonion Fano plane not defined!
7	$\overline{Ex_2}$ $\overset{0}{R}$		{8Ortho}	$0apggsscc$ 0110001000_2	Bn{ 0, 0, 0, −1, 0, 1, 0, 0 } E8{ 0, 0, 0, 0, 0, 0, 0, 0 } Ph{ 0, 0, −1/(√2), 1/(√2), 0, 0, 0, 0 }	Rt{ 0 0 −1 −1 0 −1/2 −1 −1/2 } Wt{ 0 1 −1 0 1/2 0 0 0 } Ht 4	$\overline{Exc}$ 1	Invalid octonion Fano plane not defined! Invalid octonion Fano plane not defined!	Invalid octonion Fano plane not defined! Invalid octonion Fano plane not defined!
8	$\overline{Ex_2}$ $\overset{0}{L}$		{8Ortho}	$0apggsscc$ 0110010000_2	Bn{ 0, 0, 0, 0, 0, 0, 1, 0 } E8{ 0, −1, 0, 0, 0, 0, 0, 0 } Ph{ 0, −1, 0, 0, 0, 0, 0, 0 }	Rt{ 0 −1 −1 −1 0 −1/2 −1 −1/2 } Wt{ 1 −1 0 0 1/2 0 0 0 } Ht 5	$\overline{Exc}$ 1	Invalid octonion Fano plane not defined! Invalid octonion Fano plane not defined!	Invalid octonion Fano plane not defined! Invalid octonion Fano plane not defined!
9	$\overline{Ex_2}$ $\overset{0}{R}$		{8Ortho}	$0apggsscc$ 0110011000_2	Bn{ 0, 0, 0, 0, 0, 0, 0, 1 } E8{ 0, 0, 0, 0, 0, 0, 0, 0 } Ph{ −1, 0, 0, 0, 0, 0, 0, 0 }	Rt{ −1 −1 −1 −1 0 −1/2 −1 −1/2 } Wt{ −1 0 0 0 1/2 0 0 0 } Ht 6	$\overline{Exc}$ 1	Invalid octonion Fano plane not defined! Invalid octonion Fano plane not defined!	Invalid octonion Fano plane not defined! Invalid octonion Fano plane not defined!

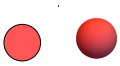
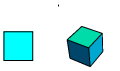
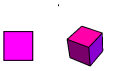
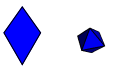
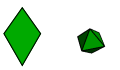
pascalRow@3

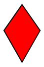
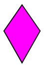
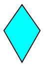
Seq #	Symbol	2D/3D Shape	Groups	Particle Quantum Bits	Binary / E8 / Physics Coordinates	Algebra Root Weight / Height / Rt‡=Atomic Element Number -->	Ele #	Octonions Flipped	Octonions Not Flipped
10	$\overset{0}{v_e}$ $\overset{\bar{L}}{w_d}$		{BC8, E7, E6, 6Cube, E5, E4, C4, snubH4Φ 8–4, 3Cube, B2=C2, ring7}	$0apggsscc$ 0010100000_2	Bn{ 1/2, 1/2, 0, −1/2, 1/2, −1/2, 1/2, −1/2 } E8{ 1/2, 1/2, −1/2, −1/2, −1/2, −1/2, −1/2, −1/2 } Ph{ 1/2, 1/2, 0, −1/(√2), −1/2, −√3/2, 0, 0 }	Rt{ 1 2 2 2 1 1 2 1 } Wt{ 0 1 0 0 1 −1 0 0 } Ht 12	Au 79	Triad fpi=7 BC_8 R fp_sm=3→05H {{1, 4, 2}, {1, 3, 5}, {1, 7, 6}, {2, 3, 6}, {2, 5, 7}, {3, 4, 7}, {4, 5, 6}} flat triad/mask bits {1, 2, 4, 3, 5, 7, 6} {1, 0, 1, 0, 0, 0, 0}	Triad fpi=4 BC_8 R fp_sm=3→05H {{1, 3, 2}, {1, 4, 6}, {1, 7, 5}, {2, 4, 7}, {2, 5, 6}, {3, 4, 5}, {3, 6, 7}} flat triad/mask bits {1, 3, 2, 4, 6, 7, 5} {1, 0, 1, 0, 0, 0, 0}
11	$\overset{0}{v_e}$ $\overset{\bar{R}}{w_m}$		{BC8, E7, E6, 6Cube, E5, E4, C4, snubH4Φ 8–3, 3Cube, B2=C2, ring6}	$0apggsscc$ 0010111000_2	Bn{ 1/2, 1/2, 0, −1/2, 1/2, −1/2, 1/2, −1/2 } E8{ 1/2, −1/2, 1/2, −1/2, −1/2, −1/2, −1/2, −1/2 } Ph{ 1/2, −1/2, 1/(√2), 0, −1/2, −√3/2, 0, 0 }	Rt{ 1 1 2 2 1 1 2 1 } Wt{ 1 −1 1 0 1 −1 0 0 } Ht 11	Ta 73	Triad fpi=7 BC_8 R fp_sm=3→36H {{1, 2, 4}, {1, 5, 3}, {1, 6, 7}, {2, 3, 6}, {2, 7, 5}, {3, 7, 4}, {4, 5, 6}} flat triad/mask bits {1, 4, 2, 6, 3, 7, 6} {0, 1, 1, 0, 1, 1, 0}	Triad fpi=4 BC_8 R fp_sm=3→36H {{1, 2, 3}, {1, 6, 4}, {1, 7, 5}, {2, 4, 7}, {2, 6, 5}, {3, 5, 4}, {3, 6, 7}} flat triad/mask bits {1, 2, 3, 6, 4, 7, 5} {0, 1, 1, 0, 1, 1, 0}
12	$\overset{e}{v_m}$ $\overset{\bar{R}}{}$		{BC8, E7, E6, 6Cube, E5, C4, snubH4Φ 16–2, 3Cube, ring6}	$0apggsscc$ 0000111000_2	Bn{ 1/2, 1/2, 0, −1/2, 1/2, −1/2, 1/2, −1/2 } E8{ 1/2, −1/2, −1/2, −1/2, −1/2, −1/2, −1/2, −1/2 } Ph{ 1/2, −1/2, −1/(√2), 0, −1/2, −√3/2, 0, 0 }	Rt{ 1 1 1 2 1 1 2 1 } Wt{ 1 0 −1 1 1 −1 0 0 } Ht 10	Ho 67	Triad fpi=4 BC_8 L fp_sm=3→31H {{1, 3, 2}, {1, 4, 6}, {1, 5, 7}, {2, 4, 7}, {2, 6, 5}, {3, 5, 4}, {3, 6, 7}} flat triad/mask bits {1, 2, 3, 4, 6, 5, 7} {1, 0, 0, 0, 1, 1, 0}	Triad fpi=7 BC_8 L fp_sm=3→31H {{1, 4, 2}, {1, 3, 5}, {1, 6, 7}, {2, 3, 6}, {2, 7, 5}, {3, 7, 4}, {4, 5, 6}} flat triad/mask bits {1, 4, 2, 3, 5, 6, 7} {1, 0, 0, 0, 1, 1, 0}
13	$\overset{v_r}{w_l}$ $\overset{0}{R}$		{BC8, E7, E6, 6Cube, C4, H4cell8, ring5}	$0apggsscc$ 0011101000_2	Bn{ 1/2, 1/2, 0, −1/2, 1/2, −1/2, 1/2, −1/2 } E8{ 1/2, −1/2, 1/2, −1/2, −1/2, −1/2, −1/2, −1/2 } Ph{ 1/2, −1/2, 0, −1/(√2), 1/2, −√3/2, 0, 0 }	Rt{ 1 1 1 1 1 1 2 1 } Wt{ 1 0 0 −1 1 −1 1 0 } Ht 9	Pm 61	Triad fpi=23 BC_8 R fp_sm=2→18H {{1, 2, 6}, {1, 3, 7}, {1, 4, 5}, {2, 4, 3}, {2, 7, 5}, {3, 5, 6}, {4, 6, 7}} flat triad/mask bits {1, 6, 2, 3, 7, 4, 5} {0, 0, 0, 1, 1, 0, 0}	Triad fpi=24 BC_8 R fp_sm=3→1BH {{1, 6, 2}, {1, 7, 3}, {1, 4, 5}, {2, 5, 3}, {2, 7, 4}, {3, 4, 6}, {5, 6, 7}} flat triad/mask bits {1, 6, 2, 7, 3, 4, 5} {1, 1, 0, 1, 1, 0, 0}
14	$\overline{b}$ $\overset{1/3}{o_d}$ $\overset{}{L}$		{BC8, E7, E6(27), 6Cube, C4, snubH4 16–1, ring1}	$0apggsscc$ 0101000012_2	Bn{ 1/2, 1/2, 0, −1/2, 1/2, 1/2, 1/2, −1/2 } E8{ 1/2, −1/2, 1/2, −1/2, −1/2, 1/2, −1/2, −1/2 } Ph{ 1/2, −1/2, 0, −1/(√2), −1/2, −1/(2√3), −1/(√2), −1/(√6) }	Rt{ 1 1 1 1 1 1 1 1 } Wt{ 1 0 0 0 1 0 −1 1 } Ht 8	Ba 56	Triad fpi=26 BC_8 L fp_sm=8→74H {{1, 2, 7}, {1, 3, 4}, {1, 6, 5}, {2, 3, 6}, {2, 5, 4}, {3, 7, 5}, {4, 7, 6}} flat triad/mask bits {1, 7, 2, 3, 4, 6, 5} {0, 0, 1, 0, 1, 1, 1}	Triad fpi=25 BC_8 L fp_sm=5→77H {{1, 7, 2}, {1, 4, 3}, {1, 6, 5}, {2, 3, 5}, {2, 6, 4}, {3, 7, 6}, {4, 7, 5}} flat triad/mask bits {1, 7, 2, 4, 3, 6, 5} {1, 1, 1, 0, 1, 1, 1}
15	$\overline{b}$ $\overset{1/3}{c_d}$ $\overset{}{L}$		{BC8, 6Cube, snubH4 8–1, ring1}	$0apggsscc$ 0101100010_2	Bn{ 1/2, 1/2, 0, −1/2, 1/2, 1/2, 1/2, −1/2 } E8{ 1/2, −1/2, 1/2, −1/2, −1/2, 1/2, −1/2, −1/2 } Ph{ 1/2, −1/2, 0, −1/(√2), −1/2, −1/(2√3), 1/(√2), −1/(√6) }	Rt{ 1 1 1 1 1 1 1 0 } Wt{ 1 0 0 0 1 0 0 −1 } Ht 7	Sn 50	Triad fpi=29 BC_8 L fp_sm=7→75H {{1, 7, 2}, {1, 3, 6}, {1, 5, 4}, {2, 3, 4}, {2, 6, 5}, {3, 7, 5}, {4, 7, 6}} flat triad/mask bits {1, 2, 7, 3, 6, 5, 4} {1, 0, 1, 0, 1, 1, 1}	Triad fpi=27 BC_8 L fp_sm=4→7CH {{1, 2, 7}, {1, 3, 5}, {1, 6, 4}, {2, 3, 4}, {2, 6, 5}, {3, 7, 6}, {4, 7, 5}} flat triad/mask bits {1, 2, 7, 3, 5, 6, 4} {0, 0, 1, 1, 1, 1, 1}

16	$\overline{{}^{b}_{m_d}}\,{}^{1/3}_{\bar{L}}$		{BC8, snubH4 8–1, ring3}	$0apggsscc_{2}$ 010110011	Bn{	1	0	0	0	0	0	0	1	}	Rt{	0	−1	−2	−3	−1	−3	−4	−2	}	$\overline{\text{Np}}$ 93	Flipped Triad fpi=28 BC_8 L fp_sm=3→7DH {{1, 2, 7}, {1, 3, 5}, {1, 6, 4}, {2, 6, 3}, {2, 5, 4}, {3, 7, 4}, {5, 7, 6}} flat triad/mask bits {1, 7, 2, 3, 5, 6, 4} {1, 0, 1, 1, 1, 1, 1}	Not Flipped Triad fpi=30 BC_8 L fp_sm=6→76H {{1, 2, 7}, {1, 6, 3}, {1, 5, 4}, {2, 3, 5}, {2, 6, 4}, {3, 7, 4}, {5, 7, 6}} flat triad/mask bits {1, 2, 7, 6, 3, 5, 4} {0, 1, 0, 1, 1, 1, 1}
					E8{	$-\frac{1}{2}$	$-\frac{1}{2}$	$-\frac{1}{2}$	$-\frac{1}{2}$	$-\frac{1}{2}$	$-\frac{1}{2}$	$-\frac{1}{2}$	$\frac{2}{3}$	}	Wt{	1	0	0	0	−1	−1	0	0	}			
					Ph{	$\frac{1}{2}$	$-\frac{1}{2}$	0	$-\frac{1}{\sqrt{2}}$	$\frac{1}{2}$	$-\frac{1}{2\sqrt{3}}$	0	$\sqrt{\frac{2}{3}}$	}	Ht	16											
17	${}^{v_e}_{w_m}\,{}^{0}_{\bar{L}}$		{BC8, E7, E6, 6Cube, E5, E4, C4, snubH4Φ 8–1, 3Cube, B2=C2, ring8}	$0apggsscc_{2}$ 001011000	Bn{	0	1	1	0	0	0	0	0	}	Rt{	0	1	2	2	1	1	2	1	}	Tb 65	Flipped Triad fpi=7 BC_8 R fp_sm=3→28H {{1, 2, 4}, {1, 3, 5}, {1, 6, 7}, {2, 6, 3}, {2, 5, 7}, {3, 7, 4}, {4, 5, 6}} flat triad/mask bits {1, 4, 2, 3, 5, 6, 7} {0, 0, 0, 1, 0, 1, 0}	Not Flipped Triad fpi=4 BC_8 R fp_sm=3→28H {{1, 2, 3}, {1, 4, 6}, {1, 5, 7}, {2, 7, 4}, {2, 5, 6}, {3, 5, 4}, {3, 6, 7}} flat triad/mask bits {1, 2, 3, 4, 6, 5, 7} {0, 0, 0, 1, 0, 1, 0}
					E8{	$-\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$-\frac{1}{2}$	$-\frac{\sqrt{3}}{2}$	$-\frac{1}{2}$	$-\frac{1}{2}$	}	Wt{	−1	0	1	0	1	−1	0	0	}			
					Ph{	$-\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{\sqrt{2}}$	0	$-\frac{1}{2}$	$-\frac{\sqrt{3}}{2}$	0	0	}	Ht	10											
18	${}^{e}_{y_m}\,{}^{\bar{}}_{\bar{L}}$		{BC8, E7, E6, 6Cube, E5, C4, snubH4Φ 16–1, 3Cube, ring6}	$0apggsscc_{2}$ 000011000	Bn{	0	1	1	0	1	0	0	0	}	Rt{	0	1	1	2	1	1	2	1	}	Pr 59	Flipped Triad fpi=4 BC_8 L fp_sm=3→2FH {{1, 3, 2}, {1, 6, 4}, {1, 7, 5}, {2, 7, 4}, {2, 5, 6}, {3, 5, 4}, {3, 6, 7}} flat triad/mask bits {1, 2, 3, 6, 4, 7, 5} {1, 1, 1, 1, 0, 1, 0}	Not Flipped Triad fpi=7 BC_8 L fp_sm=3→2FH {{1, 4, 2}, {1, 5, 3}, {1, 7, 6}, {2, 6, 3}, {2, 5, 7}, {3, 7, 4}, {4, 5, 6}} flat triad/mask bits {1, 4, 2, 5, 3, 7, 6} {1, 1, 1, 1, 0, 1, 0}
					E8{	$-\frac{1}{2}$	$\frac{1}{2}$	$-\frac{1}{\sqrt{2}}$	0	$-\frac{1}{2}$	$-\frac{\sqrt{3}}{2}$	0	0	}	Wt{	−1	1	−1	1	1	−1	0	0	}			
					Ph{	$-\frac{1}{2}$	$\frac{1}{2}$							}	Ht	9											
19	${}^{v_r}_{w_d}\,{}^{0}_{\bar{L}}$		{BC8, E7, E6, 6Cube, C4, snubH4Φ 8–1, ring7}	$0apggsscc_{2}$ 001110000	Bn{	0	1	0	0	1	0	0	0	}	Rt{	0	1	1	1	1	1	2	1	}	I 53	Flipped Triad fpi=23 BC_8 R fp_sm=2→06H {{1, 2, 6}, {1, 7, 3}, {1, 5, 4}, {2, 3, 4}, {2, 5, 7}, {3, 5, 6}, {4, 6, 7}} flat triad/mask bits {1, 6, 2, 7, 3, 5, 4} {0, 1, 1, 0, 0, 0, 0}	Not Flipped Triad fpi=24 BC_8 R fp_sm=3→05H {{1, 6, 2}, {1, 3, 7}, {1, 5, 4}, {2, 3, 5}, {2, 4, 7}, {3, 4, 6}, {5, 6, 7}} flat triad/mask bits {1, 6, 2, 3, 7, 5, 4} {0, 1, 0, 1, 0, 0, 0}
					E8{	$-\frac{1}{2}$	$\frac{1}{2}$	$-\frac{1}{2}$	$-\frac{1}{\sqrt{2}}$	$\frac{1}{2}$	$-\frac{\sqrt{3}}{2}$	0	0	}	Wt{	−1	1	0	−1	1	1	−1	0	}			
					Ph{	$\frac{1}{2}$	$\frac{1}{2}$	0						}	Ht	8											
20	$\overline{{}^{b}_{c_l}}\,{}^{1/3}_{\bar{R}}$		{BC8, E7, E6(27), 6Cube, C4, H4cell8, ring5}	$0apggsscc_{2}$ 010110101	Bn{	0	1	1	0	0	1	0	0	}	Rt{	0	1	1	1	1	1	1	1	}	Cd 48	Flipped Triad fpi=26 BC_8 L fp_sm=8→6AH {{1, 2, 7}, {1, 4, 3}, {1, 5, 6}, {2, 6, 3}, {2, 4, 5}, {3, 7, 5}, {4, 7, 6}} flat triad/mask bits {1, 7, 2, 4, 3, 5, 6} {0, 1, 0, 1, 0, 1, 1}	Not Flipped Triad fpi=5 BC_8 L fp_sm=5→69H {{1, 7, 2}, {1, 3, 4}, {1, 5, 6}, {2, 5, 3}, {2, 4, 6}, {3, 7, 6}, {4, 7, 5}} flat triad/mask bits {1, 7, 2, 3, 4, 5, 6} {1, 0, 0, 1, 0, 1, 1}
					E8{	$-\frac{1}{2}$	$\frac{2}{2}$	$-\frac{1}{2}$	$-\frac{2}{\sqrt{2}}$	$\frac{1}{2}$	$-\frac{2}{2\sqrt{3}}$	$-\frac{2}{\sqrt{2}}$	$-\frac{2}{\sqrt{6}}$	}	Wt{	−1	1	0	0	1	0	−1	1	}			
					Ph{	$-\frac{1}{2}$	$\frac{1}{2}$	0						}	Ht	7											
21	$\overline{{}^{b}_{c_l}}\,{}^{1/3}_{\bar{R}}$		{BC8, 6Cube, snubH4 8–2, ring1}	$0apggsscc_{2}$ 010110110	Bn{	0	1	0	0	0	0	1	0	}	Rt{	0	1	1	1	1	1	1	0	}	Nb 41	Flipped Triad fpi=29 BC_8 L fp_sm=7→6BH {{1, 7, 2}, {1, 6, 3}, {1, 4, 5}, {2, 4, 3}, {2, 5, 6}, {3, 7, 5}, {4, 7, 6}} flat triad/mask bits {1, 2, 7, 6, 3, 4, 5} {1, 1, 0, 1, 0, 1, 1}	Not Flipped Triad fpi=27 BC_8 L fp_sm=4→62H {{1, 2, 7}, {1, 5, 3}, {1, 4, 6}, {2, 3, 4}, {2, 5, 6}, {3, 7, 6}, {4, 7, 5}} flat triad/mask bits {1, 2, 7, 5, 3, 4, 6} {0, 1, 0, 0, 0, 1, 1}
					E8{	$-\frac{1}{2}$	$\frac{1}{2}$	$-\frac{1}{2}$	$-\frac{1}{\sqrt{2}}$	$\frac{1}{2}$	$-\frac{1}{2\sqrt{3}}$	$\frac{1}{\sqrt{2}}$	$-\frac{1}{\sqrt{6}}$	}	Wt{	−1	1	0	0	1	0	0	−1	}			
					Ph{	$-\frac{1}{2}$	$\frac{1}{2}$	0						}	Ht	6											
22	$\overline{{}^{b}_{m_l}}\,{}^{1/3}_{\bar{R}}$		{BC8, snubH4Φ 8–3, ring7}	$0apggsscc_{2}$ 010110111	Bn{	0	1	0	0	0	0	1	1	}	Rt{	−1	−1	−2	−3	−1	−3	−4	−2	}	$\overline{\text{Cf}}$ 98	Flipped Triad fpi=28 BC_8 L fp_sm=3→63H {{1, 7, 2}, {1, 5, 3}, {1, 4, 6}, {2, 3, 6}, {2, 4, 5}, {3, 7, 4}, {5, 7, 6}} flat triad/mask bits {1, 7, 2, 5, 3, 4, 6} {1, 1, 0, 0, 0, 1, 1}	Not Flipped Triad fpi=30 BC_8 L fp_sm=6→68H {{1, 2, 7}, {1, 3, 6}, {1, 4, 5}, {2, 5, 3}, {2, 4, 6}, {3, 7, 4}, {5, 7, 6}} flat triad/mask bits {1, 2, 7, 3, 6, 4, 5} {0, 0, 0, 1, 0, 1, 1}
					E8{	$-\frac{1}{2}$	$\frac{1}{2}$	$-\frac{1}{2}$	$-\frac{1}{\sqrt{2}}$	$\frac{1}{2}$	$-\frac{1}{2\sqrt{3}}$	0	$\sqrt{\frac{2}{3}}$	}	Wt{	−1	1	0	0	−1	−1	0	0	}			
					Ph{	$\frac{1}{2}$	$\frac{1}{2}$	0						}	Ht	17											
23	${}^{e}_{y_l}\,{}^{\bar{}}_{\bar{R}}$		{BC8, E7, E6, 6Cube, E5, C4, snubH4Φ 8–1, 3Cube, ring7}	$0apggsscc_{2}$ 000010100	Bn{	0	0	1	1	0	0	0	0	}	Rt{	0	0	1	2	1	1	2	1	}	Te 52	Flipped Triad fpi=4 BC_8 L fp_sm=3→1CH {{1, 2, 3}, {1, 4, 6}, {1, 7, 5}, {2, 7, 4}, {2, 6, 5}, {3, 4, 5}, {3, 6, 7}} flat triad/mask bits {1, 3, 2, 4, 6, 7, 5} {0, 0, 1, 1, 1, 0, 0}	Not Flipped Triad fpi=7 BC_8 L fp_sm=3→1CH {{1, 2, 4}, {1, 3, 5}, {1, 7, 6}, {2, 6, 3}, {2, 7, 5}, {3, 4, 7}, {4, 5, 6}} flat triad/mask bits {1, 2, 4, 3, 5, 7, 6} {0, 0, 1, 1, 1, 0, 0}
					E8{	$-\frac{1}{2}$	$-\frac{1}{2}$	$-\frac{1}{2}$	$\frac{1}{2}$	$-\frac{1}{2}$	$-\frac{\sqrt{3}}{2}$	$-\frac{1}{2}$	$-\frac{1}{2}$	}	Wt{	0	−1	0	1	1	−1	0	0	}			
					Ph{	$\frac{1}{2}$	$-\frac{1}{2}$	0	$\frac{1}{\sqrt{2}}$	$-\frac{1}{2}$	$-\frac{\sqrt{3}}{2}$	0	0	}	Ht	8											
24	${}^{v_r}_{w_m}\,{}^{0}_{\bar{R}}$		{BC8, E7, E6, 6Cube, C4, snubH4Φ 16–1, ring7}	$0apggsscc_{2}$ 001111100	Bn{	0	0	1	1	1	0	0	0	}	Rt{	0	0	1	1	1	1	2	1	}	Rh 45	Flipped Triad fpi=23 BC_8 R fp_sm=2→35H {{1, 6, 2}, {1, 3, 7}, {1, 5, 4}, {2, 3, 4}, {2, 7, 5}, {3, 6, 5}, {4, 6, 7}} flat triad/mask bits {1, 2, 6, 3, 7, 5, 4} {1, 0, 1, 0, 1, 1, 0}	Not Flipped Triad fpi=24 BC_8 R fp_sm=3→36H {{1, 2, 6}, {1, 7, 3}, {1, 5, 4}, {2, 3, 5}, {2, 7, 4}, {3, 6, 4}, {5, 6, 7}} flat triad/mask bits {1, 2, 6, 7, 3, 5, 4} {0, 1, 1, 0, 1, 1, 0}
					E8{	$-\frac{1}{2}$	$-\frac{1}{2}$	$\frac{1}{\sqrt{2}}$	0	$\frac{1}{2}$	$-\frac{\sqrt{3}}{2}$	0	0	}	Wt{	0	−1	1	−1	1	−1	1	0	}			
					Ph{	$\frac{1}{2}$	$-\frac{1}{2}$							}	Ht	7											
25	$\overline{{}^{b}_{o_m}}\,{}^{1/3}_{\bar{L}}$		{BC8, E7, E6(27), 6Cube, C4, snubH4Φ 16–2, ring2}	$0apggsscc_{2}$ 010111001	Bn{	0	0	1	1	0	1	0	0	}	Rt{	0	0	1	1	1	1	1	1	}	Y 39	Flipped Triad fpi=26 BC_8 L fp_sm=8→59H {{1, 7, 2}, {1, 3, 4}, {1, 5, 6}, {2, 6, 3}, {2, 5, 4}, {3, 5, 7}, {4, 7, 6}} flat triad/mask bits {1, 2, 7, 3, 4, 5, 6} {1, 0, 0, 1, 1, 0, 1}	Not Flipped Triad fpi=5 BC_8 L fp_sm=5→5AH {{1, 2, 7}, {1, 4, 3}, {1, 5, 6}, {2, 5, 3}, {2, 6, 4}, {3, 6, 7}, {4, 7, 5}} flat triad/mask bits {1, 2, 7, 4, 3, 5, 6} {0, 1, 0, 1, 1, 0, 1}
					E8{	$-\frac{1}{2}$	$-\frac{1}{2}$	$\frac{1}{\sqrt{2}}$	0	$-\frac{1}{2}$	$-\frac{1}{2\sqrt{3}}$	$-\frac{1}{\sqrt{2}}$	$-\frac{1}{\sqrt{6}}$	}	Wt{	0	−1	1	0	1	0	−1	1	}			
					Ph{	$\frac{1}{2}$	$-\frac{1}{2}$							}	Ht	6											
26	$\overline{{}^{b}_{c_m}}\,{}^{1/3}_{\bar{L}}$		{BC8, 6Cube, H4cell8, ring1}	$0apggsscc_{2}$ 010111010	Bn{	0	0	1	1	0	0	1	0	}	Rt{	0	0	1	1	1	1	1	0	}	As 33	Flipped Triad fpi=29 BC_8 L fp_sm=7→58H {{1, 2, 7}, {1, 3, 6}, {1, 4, 5}, {2, 4, 3}, {2, 6, 5}, {3, 5, 7}, {4, 7, 6}} flat triad/mask bits {1, 7, 2, 3, 6, 4, 5} {0, 0, 0, 1, 1, 0, 1}	Not Flipped Triad fpi=27 BC_8 L fp_sm=4→51H {{1, 7, 2}, {1, 3, 5}, {1, 4, 6}, {2, 3, 4}, {2, 6, 5}, {3, 6, 7}, {4, 7, 5}} flat triad/mask bits {1, 7, 2, 3, 5, 4, 6} {1, 0, 0, 0, 1, 1, 0}
					E8{	$-\frac{1}{2}$	$-\frac{1}{2}$	$\frac{1}{\sqrt{2}}$	0	$-\frac{1}{2}$	$-\frac{1}{2\sqrt{3}}$	$\frac{1}{\sqrt{2}}$	$-\frac{1}{\sqrt{6}}$	}	Wt{	0	−1	1	0	1	0	0	−1	}			
					Ph{	$\frac{1}{2}$	$-\frac{1}{2}$							}	Ht	5											
27	$\overline{{}^{b}_{m_m}}\,{}^{1/3}_{\bar{L}}$		{BC8, snubH4 16–4, ring4}	$0apggsscc_{2}$ 010111011	Bn{	0	0	1	0	0	0	0	1	}	Rt{	−1	−2	−2	−3	−1	−3	−4	−2	}	$\overline{\text{No}}$ 102	Flipped Triad fpi=28 BC_8 L fp_sm=3→50H {{1, 2, 7}, {1, 3, 5}, {1, 4, 6}, {2, 3, 6}, {2, 5, 4}, {3, 4, 7}, {5, 7, 6}} flat triad/mask bits {1, 2, 7, 3, 5, 4, 6} {0, 0, 0, 0, 1, 0, 1}	Not Flipped Triad fpi=30 BC_8 L fp_sm=6→5BH {{1, 7, 2}, {1, 6, 3}, {1, 4, 5}, {2, 5, 3}, {2, 6, 4}, {3, 4, 7}, {5, 7, 6}} flat triad/mask bits {1, 7, 2, 6, 3, 4, 5} {1, 1, 0, 1, 1, 0, 1}
					E8{	$-\frac{1}{2}$	$-\frac{1}{2}$	$\frac{1}{\sqrt{2}}$	0	$-\frac{1}{2}$	$-\frac{1}{2\sqrt{3}}$	0	$\sqrt{\frac{2}{3}}$	}	Wt{	−1	1	−1	0	1	−1	0	0	}			
					Ph{	$\frac{1}{2}$	$-\frac{1}{2}$							}	Ht	18											
28	${}^{r}_{y_m}\,{}^{\bar{}}_{\bar{R}}$		{BC8, E7, E6, 6Cube, C4, snubH4Φ 8–1, ring8}	$0apggsscc_{2}$ 000111100	Bn{	0	0	0	1	1	0	0	0	}	Rt{	0	0	0	1	1	1	2	1	}	Rb 37	Flipped Triad fpi=24 BC_8 L fp_sm=3→31H {{1, 6, 2}, {1, 3, 7}, {1, 4, 5}, {2, 3, 5}, {2, 7, 4}, {3, 6, 4}, {5, 6, 7}} flat triad/mask bits {1, 2, 6, 3, 7, 4, 5} {1, 0, 0, 0, 1, 1, 0}	Not Flipped Triad fpi=23 BC_8 L fp_sm=2→32H {{1, 2, 6}, {1, 7, 3}, {1, 4, 5}, {2, 3, 4}, {2, 7, 5}, {3, 6, 5}, {4, 6, 7}} flat triad/mask bits {1, 2, 6, 7, 3, 4, 5} {0, 1, 0, 0, 1, 1, 0}
					E8{	$-\frac{1}{2}$	$-\frac{1}{2}$	$-\frac{1}{\sqrt{2}}$	0	$\frac{1}{2}$	$-\frac{\sqrt{3}}{2}$	0	0	}	Wt{	0	0	−1	0	1	−1	1	0	}			
					Ph{	$\frac{1}{2}$	$-\frac{1}{2}$							}	Ht	6											
29	$\overline{{}^{b}_{o_m}}\,{}^{1/3\to-2/3}_{\bar{R}}$		{BC8, E7, E6(27), 6Cube, C4, snubH4 16–3, ring3}	$0apggsscc_{2}$ 010111101	Bn{	0	0	0	1	0	1	0	0	}	Rt{	0	0	0	1	1	1	1	1	}	Ga 31	Flipped Triad fpi=26 BC_8 L fp_sm=8→47H {{1, 7, 2}, {1, 4, 3}, {1, 6, 5}, {2, 6, 3}, {2, 4, 5}, {3, 5, 7}, {4, 7, 6}} flat triad/mask bits {1, 2, 7, 4, 3, 6, 5} {1, 1, 1, 0, 0, 0, 1}	Not Flipped Triad fpi=25 BC_8 L fp_sm=5→44H {{1, 2, 7}, {1, 3, 4}, {1, 6, 5}, {2, 3, 5}, {2, 4, 6}, {3, 6, 7}, {4, 7, 5}} flat triad/mask bits {1, 2, 7, 3, 4, 6, 5} {0, 0, 1, 0, 0, 0, 1}
					E8{	$-\frac{1}{2}$	$-\frac{1}{2}$	$-\frac{1}{\sqrt{2}}$	0	$-\frac{1}{2}$	$-\frac{1}{2\sqrt{3}}$	$-\frac{1}{\sqrt{2}}$	$-\frac{1}{\sqrt{6}}$	}	Wt{	0	0	−1	1	1	0	−1	1	}			
					Ph{	$\frac{1}{2}$	$-\frac{1}{2}$							}	Ht	5											
30	$\overline{{}^{b}_{c_m}}\,{}^{1/3\to-2/3}_{\bar{R}}$		{BC8, 6Cube, snubH4Φ 8–4, ring7}	$0apggsscc_{2}$ 010111110	Bn{	0	0	0	1	0	0	1	0	}	Rt{	0	0	0	1	1	1	1	0	}	Mn 25	Flipped Triad fpi=29 BC_8 L fp_sm=7→46H {{1, 2, 7}, {1, 6, 3}, {1, 5, 4}, {2, 3, 4}, {2, 5, 6}, {3, 5, 7}, {4, 7, 6}} flat triad/mask bits {1, 7, 2, 6, 3, 5, 4} {0, 1, 1, 0, 0, 0, 1}	Not Flipped Triad fpi=27 BC_8 L fp_sm=4→4FH {{1, 7, 2}, {1, 3, 5}, {1, 6, 4}, {2, 4, 3}, {2, 5, 6}, {3, 6, 7}, {4, 7, 5}} flat triad/mask bits {1, 7, 2, 5, 3, 6, 4} {1, 1, 1, 1, 0, 0, 1}
					E8{	$-\frac{1}{2}$	$-\frac{1}{2}$	$-\frac{1}{\sqrt{2}}$	0	$-\frac{1}{2}$	$-\frac{1}{2\sqrt{3}}$	$\frac{1}{\sqrt{2}}$	$-\frac{1}{\sqrt{6}}$	}	Wt{	0	0	−1	1	1	0	0	−1	}			
					Ph{	$\frac{1}{2}$	$-\frac{1}{2}$							}	Ht	4											
31	$\overline{{}^{b}_{m_m}}\,{}^{1/3\to-2/3}_{\bar{R}}$		{BC8, H4cell8, ring1}	$0apggsscc_{2}$ 010111111	Bn{	0	0	0	1	0	0	0	1	}	Rt{	−1	−2	−3	−3	−1	−3	−4	−2	}	$\overline{\text{Db}}$ 105	Flipped Triad fpi=28 BC_8 L fp_sm=3→4EH {{1, 2, 7}, {1, 5, 3}, {1, 6, 4}, {2, 6, 3}, {2, 4, 5}, {3, 4, 7}, {5, 7, 6}} flat triad/mask bits {1, 2, 7, 5, 3, 6, 4} {0, 1, 1, 1, 0, 0, 1}	Not Flipped Triad fpi=30 BC_8 L fp_sm=6→45H {{1, 7, 2}, {1, 3, 6}, {1, 5, 4}, {2, 6, 3}, {2, 4, 5}, {3, 4, 7}, {5, 7, 6}} flat triad/mask bits {1, 7, 2, 3, 6, 5, 4} {1, 0, 1, 0, 0, 0, 1}
					E8{	$-\frac{1}{2}$	$-\frac{1}{2}$	$-\frac{1}{\sqrt{2}}$	0	$-\frac{1}{2}$	$-\frac{1}{2\sqrt{3}}$	0	$\sqrt{\frac{2}{3}}$	}	Wt{	0	0	−1	1	1	−1	0	0	}			
					Ph{	$\frac{1}{2}$	$-\frac{1}{2}$							}	Ht	19											

Seq ♯	Symbol	2D/3D Shape	Groups	Particle Quantum Bits	Binary / E8 / Physics Coordinates	Algebra Root Weight / Height / Rt♯=Atomic Element Number -->	Ele ♯	Octonions Flipped	Octonions Not Flipped
32	$\overline{{}^{d}_{o}{}^{1/3}_{d}}$ $\hat{L}$		{BC8, E7, E6(27), 6Cube, C4, snubH4 16–4, ring1}	$0apggsscc$ 010010001_2	Bn{ 0, 1, −1/2, 1/2 } E8{ 0, 1, −1/2, 1/2 } Ph{ 0, 1, −1/2, 1/2, 0, −1/√2 }	Rt{ 0, 0, 0, 0, 1, 1, 1, 1 } Wt{ 0, 0, 0, −1, 1, 0, 0, 1 } Ht 4	V 23	Triad fpi=10 BC_8 L fp_sm=5→77H {{1, 4, 2}, {1, 5, 3}, {1, 7, 5}, {2, 3, 7}, {2, 6, 5}, {3, 5, 4}, {4, 7, 6}} flat triad/mask bits {1, 2, 4, 6, 3, 7, 5} {1, 1, 1, 0, 1, 1, 1}	Triad fpi=8 BC_8 L fp_sm=2→7EH {{1, 2, 4}, {1, 5, 3}, {1, 7, 6}, {2, 7, 3}, {2, 6, 5}, {3, 6, 4}, {4, 7, 5}} flat triad/mask bits {1, 2, 4, 5, 3, 7, 6} {0, 1, 1, 1, 1, 1, 1}
33	$\overline{{}^{d}_{c}{}^{1/3}_{d}}$ $\hat{L}$		{BC8, 6Cube, snubH4 16–3, ring4}	$0apggsscc$ 010010010_2	Bn{ 0, 1, −1/2, 1/2 } E8{ 0, 1, −1/2, 1/2 } Ph{ 0, 1, −1/2, 1/2, 0, −1/√2 }	Rt{ 0, 0, 0, 0, 1, 1, 1, 0 } Wt{ 0, 0, 0, −1, 1, 0, 1, −1 } Ht 3	Cl 17	Triad fpi=12 BC_8 L fp_sm=4→7CH {{1, 2, 4}, {1, 3, 7}, {1, 6, 5}, {2, 6, 3}, {2, 7, 5}, {3, 5, 4}, {4, 7, 6}} flat triad/mask bits {1, 4, 2, 3, 7, 6, 5} {0, 0, 1, 1, 1, 1, 1}	Triad fpi=11 BC_8 L fp_sm=1→7FH {{1, 4, 2}, {1, 7, 3}, {1, 6, 5}, {2, 5, 3}, {2, 7, 6}, {3, 6, 4}, {4, 7, 5}} flat triad/mask bits {1, 4, 2, 7, 3, 6, 5} {1, 1, 1, 1, 1, 1, 1}
34	$\overline{{}^{d}_{m}{}^{1/3}_{d}}$ $\hat{L}$		{BC8, snubH4 8–2, ring1}	$0apggsscc$ 010010011_2	Bn{ 0, 1/2, −1/2, 1/2 } E8{ 0, 1/2, −1/2, 1/2 } Ph{ −1/2, −1/2, 0, −1/√2, 1/2, −1/(2√3), 0, √(2/3) }	Rt{ −1, −2, −3, −4, −1, −3, −4, −2 } Wt{ 0, 0, 0, −1, 1, −1, 1, 0 } Ht 20	$\overline{\text{Hs}}$ 108	Triad fpi=13 BC_8 L fp_sm=6→76H {{1, 2, 5}, {1, 4, 3}, {1, 7, 6}, {2, 3, 6}, {2, 7, 4}, {3, 7, 5}, {4, 6, 5}} flat triad/mask bits {1, 5, 2, 4, 3, 7, 6} {0, 1, 1, 0, 1, 1, 1}	Triad fpi=14 BC_8 L fp_sm=7→75H {{1, 5, 2}, {1, 3, 4}, {1, 7, 6}, {2, 3, 7}, {2, 6, 4}, {3, 6, 5}, {4, 7, 5}} flat triad/mask bits {1, 5, 2, 3, 4, 7, 6} {1, 0, 1, 0, 1, 1, 1}
35	$\overline{{}^{u}_{b}{}^{2/3}_{l}}$ $\hat{R}$		{BC8, 6Cube, snubH4 8–1, ring4}	$0apggsscc$ 001010111_2	Bn{ 0, 1/2, −1/2, 1/2 } E8{ 0, 1/2, −1/2, 1/2 } Ph{ −1/2, −1/2, 0, −1/√2, −1/2, 1/(2√3), 0, −√(2/3) }	Rt{ 0, 0, 0, 0, 1, 1, 0, 0 } Wt{ 0, 0, 0, 0, 1, 1, −1, 0 } Ht 2	Na 11	Triad fpi=13 BC_8 R fp_sm=6→10H {{1, 2, 5}, {1, 3, 4}, {1, 6, 7}, {2, 3, 6}, {2, 7, 4}, {3, 5, 7}, {4, 5, 6}} flat triad/mask bits {1, 5, 2, 3, 4, 6, 7} {0, 0, 0, 0, 1, 0, 0}	Triad fpi=14 BC_8 R fp_sm=7→13H {{1, 5, 2}, {1, 4, 3}, {1, 6, 7}, {2, 3, 7}, {2, 6, 4}, {3, 5, 6}, {4, 5, 7}} flat triad/mask bits {1, 5, 2, 4, 3, 6, 7} {1, 1, 0, 0, 1, 0, 0}
36	$\overline{{}^{u}_{g}{}^{2/3}_{l}}$ $\hat{R}$		{BC8, snubH4 8–1, ring5}	$0apggsscc$ 001010110_2	Bn{ 0, 1/2, −1/2, 1/2 } E8{ 0, 1/2, −1/2, 1/2 } Ph{ −1/2, −1/2, 0, −1/√2, −1/2, 1/(2√3), −1/√2, 1/√6 }	Rt{ −1, −2, −3, −4, −1, −3, −5, −2 } Wt{ 0, 0, 0, 0, 1, 0, −1, 1 } Ht 21	$\overline{\text{Mt}}$ 109	Triad fpi=12 BC_8 R fp_sm=4→1AH {{1, 2, 4}, {1, 7, 3}, {1, 5, 6}, {2, 6, 3}, {2, 7, 5}, {3, 4, 5}, {4, 6, 7}} flat triad/mask bits {1, 4, 2, 7, 3, 5, 6} {0, 1, 0, 1, 1, 0, 0}	Triad fpi=11 BC_8 R fp_sm=1→19H {{1, 4, 2}, {1, 3, 7}, {1, 5, 6}, {2, 5, 3}, {2, 7, 6}, {3, 4, 6}, {4, 5, 7}} flat triad/mask bits {1, 4, 2, 3, 7, 5, 6} {1, 0, 0, 1, 1, 0, 0}
37	$\overline{{}^{u}_{r}{}^{2/3}_{l}}$ $\hat{R}$		{BC8, E7, E6(27), snubH4 16–1, ring4}	$0apggsscc$ 001010101_2	Bn{ 0, 1/2, −1/2, 1/2 } E8{ 0, 1/2, −1/2, 1/2 } Ph{ −1/2, −1/2, 0, −1/√2, −1/2, 1/(2√3), 1/√2, 1/√6 }	Rt{ −1, −2, −3, −4, −1, −3, −5, −3 } Wt{ 0, 0, 0, 0, 1, 0, 0, −1 } Ht 22	$\overline{\text{Rg}}$ 111	Triad fpi=10 BC_8 R fp_sm=5→11H {{1, 4, 2}, {1, 3, 6}, {1, 5, 7}, {2, 3, 7}, {2, 6, 5}, {3, 4, 5}, {4, 6, 7}} flat triad/mask bits {1, 2, 4, 3, 6, 5, 7} {1, 0, 0, 0, 1, 0, 0}	Triad fpi=8 BC_8 R fp_sm=2→18H {{1, 2, 4}, {1, 3, 5}, {1, 6, 7}, {2, 7, 3}, {2, 6, 5}, {3, 4, 6}, {4, 5, 7}} flat triad/mask bits {1, 2, 4, 3, 5, 6, 7} {0, 0, 0, 1, 1, 0, 0}

pascalRow@4

Seq ♯	Symbol	2D/3D Shape	Groups	Particle Quantum Bits	Binary / E8 / Physics Coordinates	Algebra Root Weight / Height / Rt♯=Atomic Element Number -->	Ele ♯	Octonions Flipped	Octonions Not Flipped
38	$\overline{\overline{\text{W}}}{}^{0}_{bm}$ $\hat{R}$		{D8, E7, E7(56), D7, E6, D6, E5, D5, E4, D4, F4s, snubH4 8–3, D3, D2, ring4}	$0apggsscc$ 011001111_2	Bn{ 1, −1, −1 } E8{ 1, −1, −1 } Ph{ 0, 0, 0, 0, 0, 0, 0, 0 }	Rt{ −1, −2, −2, −2, 0, −1, −2, −1 } Wt{ 0, −1, 0, 1, 0, 1, 0, 0 } Ht 11	$\overline{\text{W}}$ 74	Triad fpi=6 D_8 R fp_sm=6→42H {{1, 2, 3}, {1, 7, 4}, {1, 5, 6}, {2, 4, 6}, {2, 5, 7}, {3, 4, 5}, {3, 7, 6}} flat triad/mask bits {1, 3, 2, 7, 4, 5, 6} {0, 1, 0, 0, 0, 0, 1}	Triad fpi=9 D_8 R fp_sm=6→42H {{1, 2, 4}, {1, 6, 3}, {1, 5, 7}, {2, 3, 5}, {2, 6, 7}, {3, 4, 7}, {4, 6, 5}} flat triad/mask bits {1, 2, 4, 6, 3, 5, 7} {0, 1, 0, 0, 0, 0, 1}
39	$\overline{{}^{e_S}_{r}{}^{\phi}_{m}}{}^{0}_{l}$ $\hat{L}$		{D8, E7, E7(56), D7, E6, D6, E5, D5, E4, D4, F4s, snubH4 16–2, D3, ring1}	$0apggsscc$ 011001001_2	Bn{ 1, −1, −1 } E8{ 0, 0, 0 } Ph{ 0, −1/√2, −1/√2, 0, 0, 0, 0, 0 }	Rt{ −1, −1, −2, −2, 0, −1, −2, −1 } Wt{ −1, −1, −1, −1, 0, 0, 0, 0 } Ht 10	$\overline{\text{Er}}$ 68	Triad fpi=1 D_8 R fp_sm=5→5DH {{1, 3, 2}, {1, 4, 5}, {1, 7, 6}, {2, 6, 4}, {2, 7, 5}, {3, 4, 7}, {3, 6, 5}} flat triad/mask bits {1, 2, 3, 4, 5, 7, 6} {1, 0, 1, 1, 1, 0, 1}	Triad fpi=2 D_8 R fp_sm=8→5EH {{1, 2, 3}, {1, 5, 4}, {1, 7, 6}, {2, 7, 4}, {2, 6, 5}, {3, 4, 6}, {3, 7, 5}} flat triad/mask bits {1, 2, 3, 5, 4, 7, 6} {0, 1, 1, 1, 1, 0, 1}
40	$\overline{{}^{e_S}_{r}{}^{\phi}_{l}}{}^{0\to1}_{R}$		{D8, E7, E7(56), D7, E6, D6, E5, D5, D4, F4s, snubH4 8–4, ring4}	$0apggsscc$ 001000101_2	Bn{ 1, −1, −1 } E8{ 0, 0, 0 } Ph{ 0, 1/√2, −1/√2, 0, 0, 0, 0, 0 }	Rt{ −1, −1, −1, −2, 0, −1, −2, −1 } Wt{ −1, 0, 1, −1, 0, 1, 0, 0 } Ht 9	$\overline{\text{Sm}}$ 62	Triad fpi=2 D_8 R fp_sm=8→12H {{1, 2, 3}, {1, 5, 4}, {1, 6, 7}, {2, 4, 7}, {2, 6, 5}, {3, 4, 6}, {3, 5, 7}} flat triad/mask bits {1, 3, 2, 5, 4, 6, 7} {0, 1, 0, 0, 1, 0, 0}	Triad fpi=1 D_8 R fp_sm=5→11H {{1, 3, 2}, {1, 4, 5}, {1, 6, 7}, {2, 4, 6}, {2, 7, 5}, {3, 4, 7}, {3, 5, 6}} flat triad/mask bits {1, 3, 2, 4, 5, 6, 7} {1, 0, 0, 0, 1, 0, 0}
41	$\overline{{}^{\nu_\mu}_{w}{}^{0}_{m}}$ $\hat{L}$		{D8, E7, E7(56), D7, E6, D6, D5, H4cell16, ring1}	$0apggsscc$ 011010000_2	Bn{ 1, −1, −1 } E8{ 0, 0, 0 } Ph{ 0, 0, 0, 0, −1, −1 }	Rt{ −1, −1, 0, −1, −1, 0, −1, −2, −1 } Wt{ −1, 0, 0, 1, 1, 0, −1, 0 } Ht 8	$\overline{\text{Cs}}$ 55	Triad fpi=16 D_8 R fp_sm=3→57H {{1, 5, 2}, {1, 6, 3}, {1, 7, 4}, {2, 3, 7}, {2, 6, 4}, {3, 4, 5}, {5, 7, 6}} flat triad/mask bits {1, 2, 5, 6, 3, 7, 4} {1, 1, 1, 0, 1, 0, 1}	Triad fpi=15 D_8 R fp_sm=3→57H {{1, 5, 2}, {1, 6, 3}, {1, 7, 4}, {2, 3, 4}, {2, 7, 6}, {3, 5, 7}, {4, 6, 5}} flat triad/mask bits {1, 5, 2, 6, 3, 7, 4} {1, 1, 1, 0, 1, 0, 1}
42	$\overline{{}^{s}_{o}{}^{-1/3}_{m}}$ $\hat{R}$		{D8, E7, E7(56), D7, E6(27), D6, snubH4 8–2, ring4}	$0apggsscc$ 000101101_2	Bn{ 1, −1, −1 } E8{ 1, 0, 0 } Ph{ 0, 0, 0, 0, 0, −1/√3 }	Rt{ −1, −1, −1, −1, 0, −1, −1, −1 } Wt{ −1, 0, 0, 0, 1, −1, 1, −1 } Ht 7	$\overline{\text{In}}$ 49	Triad fpi=17 D_8 L fp_sm=8→38H {{1, 2, 5}, {1, 3, 7}, {1, 4, 6}, {2, 4, 3}, {2, 7, 6}, {3, 6, 5}, {4, 5, 7}} flat triad/mask bits {1, 5, 2, 3, 7, 4, 6} {0, 0, 0, 1, 1, 1, 0}	Triad fpi=19 D_8 L fp_sm=3→31H {{1, 6, 2}, {1, 3, 4}, {1, 5, 7}, {2, 3, 5}, {2, 7, 4}, {3, 7, 6}, {4, 5, 6}} flat triad/mask bits {1, 6, 2, 3, 4, 5, 7} {1, 0, 0, 0, 1, 1, 0}
43	$\overline{{}^{s}_{c}{}^{-1/3}_{m}}$ $\hat{R}$		{D8, E7(56), D7, snubH4 8–4, ring5}	$0apggsscc$ 000101110_2	Bn{ 1, −1, −1 } E8{ 0, 0, 0 } Ph{ 0, 0, 0, 0, 0, −1/√3 }	Rt{ −1, −1, −1, −1, 0, −1, −1, 0 } Wt{ −1, 0, 0, 0, 1, −1, 0, 1 } Ht 6	$\overline{\text{Tc}}$ 43	Triad fpi=18 D_8 L fp_sm=6→3AH {{1, 2, 5}, {1, 7, 3}, {1, 4, 6}, {2, 6, 3}, {2, 7, 4}, {3, 4, 5}, {5, 6, 7}} flat triad/mask bits {1, 5, 2, 7, 3, 4, 6} {0, 1, 0, 1, 1, 1, 0}	Triad fpi=20 D_8 L fp_sm=1→33H {{1, 6, 2}, {1, 4, 3}, {1, 5, 7}, {2, 3, 7}, {2, 5, 4}, {3, 6, 5}, {4, 6, 7}} flat triad/mask bits {1, 6, 2, 4, 3, 5, 7} {1, 1, 0, 0, 1, 1, 0}
44	$\overline{{}^{s}_{m}{}^{-1/3}_{m}}$ $\hat{R}$		{D8, E7(56), snubH4 8–3, ring5}	$0apggsscc$ 000101111_2	Bn{ 1, −1, −1 } E8{ 0, 0, 0 } Ph{ 0, 0, 0, 0, 0, −1/√3, 0, −√(2/3) }	Rt{ 0, 1, 2, 3, 2, 3, 4, 2 } Wt{ −1, 0, 0, 0, 1, 0, 0, 0 } Ht 17	$\overline{\text{Bk}}$ 97	Triad fpi=22 D_8 L fp_sm=6→3AH {{1, 2, 6}, {1, 5, 3}, {1, 4, 7}, {2, 7, 3}, {2, 5, 4}, {3, 6, 4}, {5, 6, 7}} flat triad/mask bits {1, 6, 2, 5, 3, 4, 7} {0, 1, 0, 1, 1, 1, 0}	Triad fpi=21 D_8 L fp_sm=6→3AH {{1, 2, 6}, {1, 5, 3}, {1, 4, 7}, {2, 4, 3}, {2, 7, 5}, {3, 7, 6}, {4, 5, 6}} flat triad/mask bits {1, 2, 6, 5, 3, 4, 7} {0, 1, 0, 1, 1, 1, 0}
45	$\overline{{}^{c}_{b}{}^{-2/3\to1/3}_{m}}$ $\hat{L}$		{D8, snubH4 8–1, ring4}	$0apggsscc$ 011101011_2	Bn{ 1, −1, −1 } E8{ 0, 0, 0 } Ph{ 0, 0, 0, 0, 0, 1/√3, 0, √(2/3) }	Rt{ −2, −3, −4, −5, 0, −2, −4, −6, −3 } Wt{ −1, 0, 0, 0, 0, −4, 0, 0, 0 } Ht 29	$\overline{\text{Ubn}}$ 120	Triad fpi=22 D_8 R fp_sm=6→5CH {{1, 2, 6}, {1, 3, 5}, {1, 7, 4}, {2, 7, 3}, {2, 5, 4}, {3, 4, 6}, {5, 7, 6}} flat triad/mask bits {1, 6, 2, 3, 5, 7, 4} {0, 0, 1, 1, 1, 0, 1}	Triad fpi=21 D_8 R fp_sm=6→5CH {{1, 2, 6}, {1, 3, 5}, {1, 7, 4}, {2, 4, 3}, {2, 7, 5}, {3, 6, 7}, {4, 6, 5}} flat triad/mask bits {1, 2, 6, 3, 5, 7, 4} {0, 0, 1, 1, 1, 0, 1}
46	$\overline{{}^{c}_{g}{}^{-2/3\to1/3}_{m}}$ $\hat{L}$		{D8, D7, snubH4 8–1, ring5}	$0apggsscc$ 011101010_2	Bn{ 1, −1, −1 } E8{ 0, 0, 0 } Ph{ 0, 0, 0, 0, 0, 1/√3, −1/√6 }	Rt{ −1, −1, −1, −1, 0, 0, −1, −1 } Wt{ −1, 0, 0, 0, 0, 1, 0, −1 } Ht 6	$\overline{\text{Mo}}$ 42	Triad fpi=18 D_8 R fp_sm=6→5CH {{1, 2, 5}, {1, 3, 7}, {1, 6, 4}, {2, 6, 3}, {2, 7, 4}, {3, 4, 5}, {5, 7, 6}} flat triad/mask bits {1, 5, 2, 3, 7, 6, 4} {0, 0, 1, 1, 1, 0, 1}	Triad fpi=20 D_8 R fp_sm=1→55H {{1, 6, 2}, {1, 3, 4}, {1, 7, 5}, {2, 3, 7}, {2, 5, 4}, {3, 5, 6}, {4, 7, 6}} flat triad/mask bits {1, 6, 2, 3, 4, 7, 5} {1, 0, 1, 0, 1, 0, 1}

47	$\overline{^{c}_{rm}}\,\hat{L}^{-2/3\to 1/3}$			{D8, E7, D7, E6(27), D6, snubH4 16–1, ring3}	0apggsscc 011101001$_2$	Bn{ 1 0 1 0 0 0 1 0 } E8{ –1 0 0 0 0 1 0 0 } Ph{ –1 0 0 0 0 $\frac{1}{\sqrt{3}}$ $-\frac{1}{\sqrt{2}}$ $-\frac{1}{\sqrt{6}}$ }	Rt{ –1 –1 –1 –1 0 0 –1 0 } Wt{ –1 0 0 0 0 1 –1 1 } Ht 5	$\overline{\text{Kr}}$ 36	Flipped Triad fpi=17 D_8 R fp_sm=8→5EH {{1, 2, 5}, {1, 7, 3}, {1, 6, 4}, {2, 4, 3}, {2, 7, 6}, {3, 5, 6}, {4, 7, 5}} flat triad/mask bits {1, 5, 2, 7, 3, 6, 4} {0, 1, 1, 1, 1, 0, 1}	Not Flipped Triad fpi=19 D_8 R fp_sm=3→57H {{1, 6, 2}, {1, 4, 3}, {1, 7, 5}, {2, 3, 5}, {2, 7, 4}, {3, 6, 7}, {4, 6, 5}} flat triad/mask bits {1, 6, 2, 4, 3, 7, 5} {1, 1, 1, 0, 1, 0, 1}
48	$^{\mu}_{ym}\,\check{R}^{-\to 0}$			{D8, E7, D7, E6, D6, D5, H4Φcell16, ring2}	0apggsscc 000101100$_2$	Bn{ 1 0 1 0 0 0 0 1 } E8{ –1 0 0 0 1 0 0 0 } Ph{ –1 0 0 0 1 0 0 0 }	Rt{ –1 –1 –1 –1 0 0 0 0 } Wt{ –1 0 0 –1 0 0 1 0 } Ht 4	$\overline{\text{Cu}}$ 29	Flipped Triad fpi=16 D_8 L fp_sm=3→31H {{1, 5, 2}, {1, 3, 6}, {1, 4, 7}, {2, 3, 7}, {2, 6, 4}, {3, 5, 4}, {5, 6, 7}} flat triad/mask bits {1, 2, 5, 3, 6, 4, 7} {1, 0, 0, 0, 1, 1, 0}	Not Flipped Triad fpi=15 D_8 L fp_sm=3→31H {{1, 5, 2}, {1, 3, 6}, {1, 4, 7}, {2, 3, 4}, {2, 7, 6}, {3, 7, 5}, {4, 5, 6}} flat triad/mask bits {1, 5, 2, 3, 6, 4, 7} {1, 0, 0, 0, 1, 1, 0}
49	$\overline{^{e_T\phi}_{g_d}}\,\check{L}^{0\to -1}$			{D8, E7, D7, E6, D6, E5, D5, D4, F4s, snubH4 8–2, ring5}	0apggsscc 011000010$_2$	Bn{ 1 0 0 1 1 0 0 0 } E8{ –1 0 0 1 0 0 0 0 } Ph{ –1 0 $-\frac{1}{\sqrt{2}}$ $\frac{1}{\sqrt{2}}$ 0 0 0 0 }	Rt{ –1 –1 –1 0 0 0 0 0 } Wt{ –1 0 –1 1 0 0 0 0 } Ht 3	$\overline{\text{Ti}}$ 22	Flipped Triad fpi=3 D_8 R fp_sm=4→7BH {{1, 3, 2}, {1, 6, 4}, {1, 5, 7}, {2, 5, 4}, {2, 7, 6}, {3, 7, 4}, {3, 6, 5}} flat triad/mask bits {1, 2, 3, 6, 4, 5, 7} {1, 1, 0, 1, 1, 1, 1}	Not Flipped Triad fpi=5 D_8 R fp_sm=7→72H {{1, 2, 3}, {1, 7, 4}, {1, 5, 6}, {2, 4, 5}, {2, 7, 6}, {3, 6, 4}, {3, 7, 5}} flat triad/mask bits {1, 2, 3, 7, 4, 5, 6} {0, 1, 0, 0, 1, 1, 1}
50	$^{e_T\phi}_{b_l}\,\hat{R}^{0}$			{D8, E7, D7, E6, D6, E5, D5, E4, D4, F4s, snubH4 16–3, D3, ring1}	0apggsscc 001000111$_2$	Bn{ 1 0 0 1 0 1 0 0 } E8{ –1 0 1 0 0 0 0 0 } Ph{ –1 0 $\frac{1}{\sqrt{2}}$ $\frac{1}{\sqrt{2}}$ 0 0 0 0 }	Rt{ –1 –1 0 0 0 0 0 0 } Wt{ –1 –1 1 0 0 0 0 0 } Ht 2	$\overline{\text{P}}$ 15	Flipped Triad fpi=9 D_8 R fp_sm=6→10H {{1, 2, 4}, {1, 3, 6}, {1, 5, 7}, {2, 3, 5}, {2, 7, 6}, {3, 4, 7}, {4, 5, 6}} flat triad/mask bits {1, 4, 2, 3, 6, 5, 7} {0, 0, 0, 0, 1, 0, 0}	Not Flipped Triad fpi=6 D_8 R fp_sm=6→10H {{1, 2, 3}, {1, 4, 7}, {1, 5, 6}, {2, 4, 6}, {2, 7, 5}, {3, 4, 5}, {3, 6, 7}} flat triad/mask bits {1, 2, 3, 4, 7, 5, 6} {0, 0, 0, 0, 1, 0, 0}
51	$^{\omega_R}_{gm}\,\check{R}^{0}$			{D8, E7, D7, E6, D6, E5, D5, E4, D4, F4s, snubH4 16–4, D3, D2, ring3}	0apggsscc 001001110$_2$	Bn{ 1 0 0 1 0 0 1 0 } E8{ –1 1 0 0 0 0 0 0 } Ph{ –1 1 0 0 0 0 0 0 }	Rt{ –1 0 0 0 0 0 0 0 } Wt{ –2 1 0 0 0 0 0 0 } Ht 1	$\overline{\text{O}}$ 8	Flipped Triad fpi=5 D_8 R fp_sm=7→3EH {{1, 2, 3}, {1, 7, 4}, {1, 6, 5}, {2, 5, 4}, {2, 7, 6}, {3, 6, 4}, {3, 5, 7}} flat triad/mask bits {1, 3, 2, 7, 4, 6, 5} {0, 1, 1, 1, 1, 1, 0}	Not Flipped Triad fpi=3 D_8 R fp_sm=4→37H {{1, 3, 2}, {1, 6, 4}, {1, 7, 5}, {2, 4, 5}, {2, 7, 6}, {3, 7, 4}, {3, 5, 6}} flat triad/mask bits {1, 3, 2, 6, 4, 7, 5} {1, 1, 1, 0, 1, 1, 0}
52	$^{e_S\phi}_{b_d}\,\check{L}^{0}$			{D8, E7, E7(56), D7, E6, D6, E5, D5, E4, D4, F4s, snubH4 8–3, D3, ring5}	0apggsscc 001000011$_2$	Bn{ 1 0 0 1 0 0 0 1 } E8{ 0 –1 –1 0 0 0 0 0 } Ph{ 0 –1 $-\frac{1}{\sqrt{2}}$ $-\frac{1}{\sqrt{2}}$ 0 0 0 0 }	Rt{ 0 –1 –2 –2 0 –1 –2 –1 } Wt{ 1 0 –1 0 1 0 0 0 } Ht 9	$\overline{\text{Nd}}$ 60	Flipped Triad fpi=9 D_8 R fp_sm=6→0EH {{1, 2, 4}, {1, 6, 3}, {1, 7, 5}, {2, 5, 3}, {2, 6, 7}, {3, 4, 7}, {4, 5, 6}} flat triad/mask bits {1, 4, 2, 6, 3, 7, 5} {0, 1, 1, 1, 0, 0, 0}	Not Flipped Triad fpi=6 D_8 R fp_sm=6→0EH {{1, 2, 3}, {1, 7, 4}, {1, 6, 5}, {2, 6, 4}, {2, 5, 7}, {3, 4, 5}, {3, 6, 7}} flat triad/mask bits {1, 2, 3, 7, 4, 6, 5} {0, 1, 1, 1, 0, 0, 0}
53	$\overline{^{B}_{bm}}\,\hat{L}^{0\to 1}$			{D8, E7, E7(56), D7, E6, D6, E5, D5, D4, F4s, snubH4 8–4, ring1}	0apggsscc 011001011$_2$	Bn{ 1 0 0 0 1 1 0 0 } E8{ 0 –1 0 –1 0 0 0 0 } Ph{ 0 –1 $\frac{1}{\sqrt{2}}$ $-\frac{1}{\sqrt{2}}$ 0 0 0 0 }	Rt{ 0 –1 –1 –2 0 –1 –2 –1 } Wt{ 1 –1 1 –1 1 0 0 0 } Ht 8	$\overline{\text{Xe}}$ 54	Flipped Triad fpi=6 D_8 R fp_sm=6→5CH {{1, 2, 3}, {1, 4, 7}, {1, 6, 5}, {2, 6, 4}, {2, 7, 5}, {3, 4, 5}, {3, 7, 6}} flat triad/mask bits {1, 3, 2, 4, 7, 6, 5} {0, 0, 1, 1, 1, 0, 1}	Not Flipped Triad fpi=9 D_8 R fp_sm=6→5CH {{1, 2, 4}, {1, 3, 6}, {1, 7, 5}, {2, 5, 3}, {2, 7, 6}, {3, 4, 7}, {4, 6, 5}} flat triad/mask bits {1, 2, 4, 3, 6, 7, 5} {0, 0, 1, 1, 1, 0, 1}
54	$\overline{^{\mu}_{ym}}\,\hat{L}^{+\to 0}$			{D8, E7, E7(56), D7, E6, D6, D5, snubH4Φ 8–2, ring2}	0apggsscc 010101000$_2$	Bn{ 1 0 0 0 1 0 1 0 } E8{ 0 –1 0 0 –1 0 0 0 } Ph{ 0 –1 0 0 –1 0 0 0 }	Rt{ 0 –1 –1 –1 0 –1 –2 –1 } Wt{ 1 –1 0 1 1 0 –1 0 } Ht 7	$\overline{\text{Ag}}$ 47	Flipped Triad fpi=15 D_8 L fp_sm=3→50H {{1, 2, 5}, {1, 3, 6}, {1, 4, 7}, {2, 3, 4}, {2, 7, 6}, {3, 5, 7}, {4, 6, 5}} flat triad/mask bits {1, 5, 2, 3, 6, 4, 7} {0, 0, 0, 0, 1, 0, 1}	Not Flipped Triad fpi=16 D_8 L fp_sm=3→50H {{1, 2, 5}, {1, 3, 6}, {1, 4, 7}, {2, 3, 7}, {2, 6, 4}, {3, 4, 5}, {5, 7, 6}} flat triad/mask bits {1, 2, 5, 3, 6, 4, 7} {0, 0, 0, 0, 1, 0, 1}
55	$^{c}_{rm}\,\check{R}^{2/3\to -1/3}$			{D8, E7, E7(56), D7, E6(27), D6, H4cell16, ring5}	0apggsscc 001101101$_2$	Bn{ 1 0 0 0 1 0 0 1 } E8{ 0 –1 0 0 0 –1 0 0 } Ph{ 0 –1 0 0 0 $-\frac{1}{\sqrt{3}}$ $\frac{1}{\sqrt{2}}$ $\frac{1}{\sqrt{6}}$ }	Rt{ 0 –1 –1 –1 0 –1 –1 –1 } Wt{ 1 –1 0 0 1 –1 1 –1 } Ht 6	$\overline{\text{Zr}}$ 40	Flipped Triad fpi=19 D_8 R fp_sm=3→36H {{1, 2, 6}, {1, 4, 3}, {1, 7, 5}, {2, 3, 5}, {2, 7, 4}, {3, 7, 6}, {4, 5, 6}} flat triad/mask bits {1, 6, 2, 4, 3, 7, 5} {0, 1, 1, 0, 1, 1, 0}	Not Flipped Triad fpi=17 D_8 R fp_sm=8→3FH {{1, 5, 2}, {1, 7, 3}, {1, 6, 4}, {2, 4, 3}, {2, 7, 6}, {3, 6, 5}, {4, 5, 7}} flat triad/mask bits {1, 5, 2, 7, 3, 6, 4} {1, 1, 1, 1, 1, 1, 0}
56	$^{c}_{gm}\,\check{R}^{2/3\to -1/3}$			{D8, E7(56), D7, snubH4 8–4, ring3}	0apggsscc 001101110$_2$	Bn{ 1 0 0 0 0 1 1 0 } E8{ 0 –1 0 0 0 0 –1 0 } Ph{ 0 –1 0 0 0 $-\frac{1}{\sqrt{3}}$ $-\frac{1}{\sqrt{2}}$ $\frac{1}{\sqrt{6}}$ }	Rt{ 0 –1 –1 –1 0 –1 –1 0 } Wt{ 1 –1 0 0 1 –1 0 1 } Ht 5	$\overline{\text{Br}}$ 35	Flipped Triad fpi=20 D_8 R fp_sm=1→34H {{1, 2, 6}, {1, 3, 4}, {1, 7, 5}, {2, 3, 7}, {2, 5, 4}, {3, 6, 5}, {4, 6, 7}} flat triad/mask bits {1, 6, 2, 3, 4, 7, 5} {0, 0, 1, 0, 1, 1, 0}	Not Flipped Triad fpi=18 D_8 R fp_sm=6→3DH {{1, 5, 2}, {1, 3, 7}, {1, 6, 4}, {2, 6, 3}, {2, 7, 4}, {3, 5, 4}, {5, 6, 7}} flat triad/mask bits {1, 5, 2, 3, 7, 6, 4} {1, 0, 1, 1, 1, 1, 0}
57	$^{c}_{bm}\,\check{R}^{2/3\to -1/3}$			{D8, E7(56), snubH4Φ 8–2, ring7}	0apggsscc 001101111$_2$	Bn{ 1 0 0 0 0 1 0 1 } E8{ 0 –1 0 0 0 0 0 –1 } Ph{ 0 –1 0 0 0 $-\frac{1}{\sqrt{3}}$ 0 $-\sqrt{\frac{2}{3}}$ }	Rt{ 1 1 2 3 2 3 4 2 } Wt{ 1 –1 0 0 1 0 0 0 } Ht 18	Md 101	Flipped Triad fpi=21 D_8 R fp_sm=6→3DH {{1, 6, 2}, {1, 3, 5}, {1, 7, 4}, {2, 4, 3}, {2, 7, 5}, {3, 7, 6}, {4, 5, 6}} flat triad/mask bits {1, 2, 6, 3, 5, 7, 4} {1, 0, 1, 1, 1, 1, 0}	Not Flipped Triad fpi=22 D_8 R fp_sm=6→3DH {{1, 6, 2}, {1, 3, 5}, {1, 7, 4}, {2, 7, 3}, {2, 5, 4}, {3, 6, 4}, {5, 6, 7}} flat triad/mask bits {1, 6, 2, 3, 5, 7, 4} {1, 0, 1, 1, 1, 1, 0}
58	$\overline{^{s}_{mm}}\,\hat{L}^{1/3}$			{D8, snubH4 16–3, ring5}	0apggsscc 010101011$_2$	Bn{ 1 0 0 0 0 0 1 1 } E8{ 0 –1 0 0 0 0 0 1 } Ph{ 0 –1 0 0 0 $\frac{1}{\sqrt{3}}$ 0 $\sqrt{\frac{2}{3}}$ }	Rt{ –1 –3 –4 –5 –2 –4 –6 –3 } Wt{ 1 –1 0 0 0 0 0 0 } Ht 28	$\overline{\text{Uue}}$ 119	Flipped Triad fpi=21 D_8 L fp_sm=6→5BH {{1, 6, 2}, {1, 5, 3}, {1, 4, 7}, {2, 4, 3}, {2, 7, 5}, {3, 6, 7}, {4, 6, 5}} flat triad/mask bits {1, 2, 6, 5, 3, 4, 7} {1, 1, 0, 1, 1, 0, 1}	Not Flipped Triad fpi=22 D_8 L fp_sm=6→5BH {{1, 6, 2}, {1, 5, 3}, {1, 4, 7}, {2, 7, 3}, {2, 5, 4}, {3, 4, 6}, {5, 7, 6}} flat triad/mask bits {1, 6, 2, 5, 3, 4, 7} {1, 1, 0, 1, 1, 0, 1}
59	$\overline{^{s}_{cm}}\,\hat{L}^{1/3}$			{D8, D7, snubH4Φ 16–2, ring8}	0apggsscc 010101010$_2$	Bn{ 0 1 1 1 0 0 0 0 } E8{ 0 –1 0 0 0 0 1 0 } Ph{ 0 –1 0 0 0 $\frac{1}{\sqrt{3}}$ $\frac{1}{\sqrt{2}}$ $-\frac{1}{\sqrt{6}}$ }	Rt{ 0 –1 –1 –1 0 0 –1 –1 } Wt{ 1 –1 0 0 0 1 0 –1 } Ht 5	$\overline{\text{Se}}$ 34	Flipped Triad fpi=20 D_8 L fp_sm=1→52H {{1, 2, 6}, {1, 4, 3}, {1, 5, 7}, {2, 3, 7}, {2, 5, 4}, {3, 5, 6}, {4, 7, 6}} flat triad/mask bits {1, 6, 2, 4, 3, 5, 7} {0, 1, 0, 0, 1, 0, 1}	Not Flipped Triad fpi=18 D_8 L fp_sm=6→5BH {{1, 5, 2}, {1, 7, 3}, {1, 4, 6}, {2, 6, 3}, {2, 7, 4}, {3, 4, 5}, {5, 7, 6}} flat triad/mask bits {1, 5, 2, 7, 3, 4, 6} {1, 1, 0, 1, 1, 0, 1}
60	$\overline{^{s}_{om}}\,\hat{L}^{1/3}$			{D8, E7, D7, E6(27), D6, H4Φcell16, ring6}	0apggsscc 010101001$_2$	Bn{ 0 1 1 0 1 0 0 0 } E8{ 0 –1 0 0 0 1 0 0 } Ph{ 0 –1 0 0 0 $\frac{1}{\sqrt{3}}$ $-\frac{1}{\sqrt{2}}$ $-\frac{1}{\sqrt{6}}$ }	Rt{ 0 –1 –1 –1 0 0 –1 0 } Wt{ 1 –1 0 0 0 1 –1 1 } Ht 4	$\overline{\text{Ni}}$ 28	Flipped Triad fpi=19 D_8 L fp_sm=3→50H {{1, 2, 6}, {1, 3, 4}, {1, 5, 7}, {2, 3, 5}, {2, 7, 4}, {3, 6, 7}, {4, 6, 5}} flat triad/mask bits {1, 6, 2, 3, 4, 5, 7} {0, 0, 0, 0, 1, 0, 1}	Not Flipped Triad fpi=17 D_8 L fp_sm=8→59H {{1, 5, 2}, {1, 3, 7}, {1, 4, 6}, {2, 4, 3}, {2, 7, 6}, {3, 5, 6}, {4, 7, 5}} flat triad/mask bits {1, 5, 2, 3, 7, 4, 6} {1, 0, 0, 1, 1, 0, 1}
61	$^{\nu\mu}_{wm}\,\check{R}^{0}$			{D8, E7, D7, E6, D6, D5, snubH4Φ 8–1, ring6}	0apggsscc 001101100$_2$	Bn{ 0 1 1 0 0 1 0 0 } E8{ 0 –1 0 0 1 0 0 0 } Ph{ 0 –1 0 0 1 0 0 0 }	Rt{ 0 –1 –1 –1 0 0 0 0 } Wt{ 1 –1 0 –1 0 0 1 0 } Ht 3	$\overline{\text{Sc}}$ 21	Flipped Triad fpi=15 D_8 R fp_sm=3→36H {{1, 2, 5}, {1, 6, 3}, {1, 7, 4}, {2, 3, 4}, {2, 7, 6}, {3, 7, 5}, {4, 5, 6}} flat triad/mask bits {1, 5, 2, 6, 3, 7, 4} {0, 1, 1, 0, 1, 1, 0}	Not Flipped Triad fpi=16 D_8 R fp_sm=3→36H {{1, 2, 5}, {1, 6, 3}, {1, 7, 4}, {2, 3, 7}, {2, 6, 4}, {3, 5, 4}, {5, 6, 7}} flat triad/mask bits {1, 2, 5, 6, 3, 7, 4} {0, 1, 1, 0, 1, 1, 0}
62	$^{e_S\phi}_{g_l}\,\hat{R}^{0\to -1}$			{D8, E7, D7, E6, D6, E5, D5, D4, F4s, snubH4Φ 16–1, ring8}	0apggsscc 001000110$_2$	Bn{ 0 1 1 0 0 0 1 0 } E8{ 0 –1 0 1 0 0 0 0 } Ph{ 0 –1 $-\frac{1}{\sqrt{2}}$ $\frac{1}{\sqrt{2}}$ 0 0 0 0 }	Rt{ 0 –1 –1 0 0 0 0 0 } Wt{ 1 –1 –1 1 0 0 0 0 } Ht 2	$\overline{\text{Si}}$ 14	Flipped Triad fpi=5 D_8 R fp_sm=7→13H {{1, 3, 2}, {1, 7, 4}, {1, 5, 6}, {2, 4, 5}, {2, 7, 6}, {3, 4, 6}, {3, 5, 7}} flat triad/mask bits {1, 2, 3, 7, 4, 5, 6} {1, 1, 0, 0, 1, 0, 0}	Not Flipped Triad fpi=3 D_8 R fp_sm=4→1AH {{1, 2, 3}, {1, 6, 4}, {1, 5, 7}, {2, 5, 4}, {2, 7, 6}, {3, 4, 7}, {3, 5, 6}} flat triad/mask bits {1, 2, 3, 6, 4, 5, 7} {0, 1, 0, 1, 1, 0, 0}

63	$e_T^{\phi}{}_{gm}^{0}{}_{L}^{\rightarrow}$	{D8, E7, D7, E6, D6, E5, D5, E4, D4, F4s, snubH4Φ 8–1, D3, ring2}	0apggsscc 0010010102	Bn{ 0, 1, 1, 0, 0, 0, 0, 1 } E8{ 0, −1, 1, 0, 0, 0, 0, 0 } Ph{ 0, −1, $\frac{1}{\sqrt{2}}$, $\frac{1}{\sqrt{2}}$, 0, 0, 0, 0 }	Rt{ 0, −1, 0, 0, 0, 0, 0, 0 } Wt{ 1, −2, 1, 0, 0, 0, 0, 0 } Ht 1	$\overline{N}$ 7	Flipped Triad fpi=5 D_8 R fp_sm=7→20H {{1, 2, 3}, {1, 4, 7}, {1, 5, 6}, {2, 4, 5}, {2, 6, 7}, {3, 6, 4}, {3, 5, 7}} flat triad/mask bits {1, 3, 2, 4, 7, 5, 6} {0, 0, 0, 0, 0, 1, 0}	Not Flipped Triad fpi=3 D_8 R fp_sm=4→29H {{1, 3, 2}, {1, 4, 7}, {1, 5, 7}, {2, 5, 4}, {2, 6, 7}, {3, 7, 4}, {3, 5, 6}} flat triad/mask bits {1, 3, 2, 4, 6, 5, 7} {0, 0, 0, 1, 0, 1, 0}
64	$\overline{\omega_L}^{0\rightarrow 1}{}_{rm}^{}{}_{R}^{}$	{D8, E7, E7(56), D7, E6, D6, E5, D5, D4, F4s, snubH4 8–2, ring4}	0apggsscc 0110011012	Bn{ 0, 1, 0, −1, 1, 0, 0, 0 } E8{ 0, 0, −1, −1, 0, 0, 0, 0 } Ph{ 0, 0, 0, $-\frac{1}{\sqrt{2}}$, 0, 0, 0, 0 }	Rt{ 0, 0, −1, −2, 0, −1, −2, −1 } Wt{ 0, 1, 0, −1, 1, 0, 0, 0 } Ht 7	$\overline{Pd}$ 46	Flipped Triad fpi=1 D_8 R fp_sm=5→43H {{1, 3, 2}, {1, 5, 4}, {1, 6, 7}, {2, 4, 6}, {2, 5, 7}, {3, 4, 7}, {3, 6, 5}} flat triad/mask bits {1, 2, 3, 5, 4, 6, 7} {1, 1, 0, 0, 0, 0, 1}	Not Flipped Triad fpi=2 D_8 R fp_sm=8→40H {{1, 2, 3}, {1, 4, 5}, {1, 6, 7}, {2, 4, 7}, {2, 5, 6}, {3, 4, 6}, {3, 7, 5}} flat triad/mask bits {1, 2, 3, 4, 5, 6, 7} {0, 0, 0, 0, 0, 0, 1}
65	$\overline{\mu}^{+\rightarrow 0}{}_{yl}^{}{}_{R}^{}$	{D8, E7, E7(56), D7, E6, D6, D5, snubH4Φ 16–4, ring2}	0apggsscc 0101001002	Bn{ 0, 1, 0, −1, 1, 0, 0, 0 } E8{ 0, 0, −1, 0, −1, 0, 0, 0 } Ph{ 0, 0, $-\frac{1}{\sqrt{2}}$, $-\frac{1}{\sqrt{2}}$, −1, 0, 0, 0 }	Rt{ 0, 0, −1, −1, 0, −1, −2, −1 } Wt{ 0, 1, −1, 1, 1, 0, −1, 0 } Ht 6	$\overline{Sr}$ 38	Flipped Triad fpi=15 D_8 L fp_sm=3→63H {{1, 5, 2}, {1, 6, 3}, {1, 4, 7}, {2, 3, 4}, {2, 6, 7}, {3, 7, 5}, {4, 6, 5}} flat triad/mask bits {1, 2, 5, 6, 3, 4, 7} {1, 1, 0, 0, 0, 1, 1}	Not Flipped Triad fpi=16 D_8 L fp_sm=3→63H {{1, 5, 2}, {1, 6, 3}, {1, 4, 7}, {2, 3, 7}, {2, 4, 6}, {3, 5, 4}, {5, 7, 6}} flat triad/mask bits {1, 5, 2, 6, 3, 4, 7} {1, 1, 0, 0, 0, 1, 1}
66	$^{c}{}_{rd}^{2/3\rightarrow -1/3}{}_{L}^{}$	{D8, E7, E7(56), D7, E6(27), D6, snubH4Φ 8–4, ring2}	0apggsscc 0011000012	Bn{ 0, 1, 0, −1, 1, 0, 0, 0 } E8{ 0, 0, −1, 0, −1, 0, 0, 0 } Ph{ 0, 0, $-\frac{1}{\sqrt{2}}$, $-\frac{1}{\sqrt{2}}$, 0, $-\frac{1}{\sqrt{3}}$, $\frac{1}{\sqrt{2}}$, $\frac{1}{\sqrt{6}}$ }	Rt{ 0, 0, −1, −1, 0, −1, −1, −1 } Wt{ 0, 1, −1, 0, 1, −1, 1, −1 } Ht 5	$\overline{Ge}$ 32	Flipped Triad fpi=19 D_8 R fp_sm=3→05H {{1, 6, 2}, {1, 3, 4}, {1, 7, 5}, {2, 3, 5}, {2, 4, 7}, {3, 6, 7}, {4, 5, 6}} flat triad/mask bits {1, 2, 6, 3, 4, 7, 5} {1, 0, 1, 0, 0, 0, 0}	Not Flipped Triad fpi=17 D_8 R fp_sm=8→0CH {{1, 2, 5}, {1, 3, 7}, {1, 6, 4}, {2, 4, 3}, {2, 6, 7}, {3, 5, 6}, {4, 5, 7}} flat triad/mask bits {1, 2, 5, 3, 7, 6, 4} {0, 0, 1, 1, 0, 0, 0}
67	$^{c}{}_{gd}^{2/3\rightarrow -1/3}{}_{L}^{}$	{D8, E7(56), D7, H4cell16, ring3}	0apggsscc 0011000102	Bn{ 0, 1, 0, −1, 1, 0, 0, 0 } E8{ 0, 0, −1, 0, −1, 0, 0, 0 } Ph{ 0, 0, $-\frac{1}{\sqrt{2}}$, $-\frac{1}{\sqrt{2}}$, 0, $-\frac{1}{\sqrt{3}}$, $-\frac{1}{\sqrt{2}}$, $\frac{1}{\sqrt{6}}$ }	Rt{ 0, 0, −1, −1, 0, −1, −1, 0 } Wt{ 0, 1, −1, 0, 1, −1, 0, 1 } Ht 4	$\overline{Co}$ 27	Flipped Triad fpi=20 D_8 R fp_sm=1→07H {{1, 6, 2}, {1, 4, 3}, {1, 7, 5}, {2, 3, 7}, {2, 4, 5}, {3, 5, 6}, {4, 6, 7}} flat triad/mask bits {1, 2, 6, 4, 3, 7, 5} {1, 1, 1, 0, 0, 0, 0}	Not Flipped Triad fpi=18 D_8 R fp_sm=6→0EH {{1, 2, 5}, {1, 7, 3}, {1, 6, 4}, {2, 6, 3}, {2, 4, 7}, {3, 4, 5}, {5, 6, 7}} flat triad/mask bits {1, 2, 5, 7, 3, 6, 4} {0, 1, 1, 1, 0, 0, 0}
68	$^{c}{}_{bd}^{2/3\rightarrow -1/3}{}_{L}^{}$	{D8, E7(56), snubH4 8–3, ring4}	0apggsscc 0011000112	Bn{ 0, 1, 0, −1, 0, 0, 1, 0 } E8{ 0, 0, −1, 0, −1, 0, 0, 0 } Ph{ 0, 0, $-\frac{1}{\sqrt{2}}$, $-\frac{1}{\sqrt{2}}$, 0, $-\frac{1}{\sqrt{3}}$, 0, $-\sqrt{\frac{2}{3}}$ }	Rt{ 1, 2, 2, 3, 3, 2, 3, 4, 2 } Wt{ 0, 1, −1, 0, 1, 0, 0, 0 } Ht 19	Rf 104	Flipped Triad fpi=21 D_8 R fp_sm=6→0EH {{1, 2, 6}, {1, 5, 3}, {1, 7, 4}, {2, 4, 3}, {2, 5, 7}, {3, 6, 7}, {4, 5, 6}} flat triad/mask bits {1, 6, 2, 5, 3, 7, 4} {0, 1, 1, 1, 0, 0, 0}	Not Flipped Triad fpi=22 D_8 R fp_sm=6→0EH {{1, 2, 6}, {1, 5, 3}, {1, 7, 4}, {2, 7, 3}, {2, 4, 5}, {3, 4, 6}, {5, 6, 7}} flat triad/mask bits {1, 2, 6, 5, 3, 7, 4} {0, 1, 1, 1, 0, 0, 0}
69	$\overline{s}^{1/3}{}_{ml}^{}{}_{R}^{}$	{D8, snubH4Φ 8–4, ring6}	0apggsscc 0011001112	Bn{ 0, 1, 0, −1, 0, 0, 1, 0 } E8{ 0, 0, −1, 0, −1, 0, 0, 0 } Ph{ 0, 0, $-\frac{1}{\sqrt{2}}$, $-\frac{1}{\sqrt{2}}$, 0, $\frac{1}{\sqrt{3}}$, 0, $\sqrt{\frac{2}{3}}$ }	Rt{ −1, −2, −4, −5, −6, −4, −6, −3 } Wt{ 0, 1, −1, 0, 0, 0, 0, 0 } Ht 27	$\overline{Uuo}$ 118	Flipped Triad fpi=21 D_8 L fp_sm=6→68H {{1, 2, 6}, {1, 3, 5}, {1, 4, 7}, {2, 4, 3}, {2, 5, 7}, {3, 7, 6}, {4, 6, 5}} flat triad/mask bits {1, 6, 2, 3, 5, 4, 7} {0, 0, 0, 1, 0, 1, 1}	Not Flipped Triad fpi=22 D_8 L fp_sm=6→68H {{1, 2, 6}, {1, 3, 5}, {1, 4, 7}, {2, 7, 3}, {2, 4, 5}, {3, 6, 4}, {5, 7, 6}} flat triad/mask bits {1, 2, 6, 3, 5, 4, 7} {0, 0, 0, 1, 0, 1, 1}
70	$\overline{s}^{1/3}{}_{cl}^{}{}_{R}^{}$	{D8, D7, H4Φcell16, ring7}	0apggsscc 0101001102	Bn{ 0, 1, 0, −1, 0, 0, 1, 0 } E8{ 0, 0, −1, 0, −1, 0, 0, 0 } Ph{ 0, 0, $-\frac{1}{\sqrt{2}}$, $-\frac{1}{\sqrt{2}}$, 0, $\frac{1}{\sqrt{3}}$, $\frac{1}{\sqrt{2}}$, $-\frac{1}{\sqrt{6}}$ }	Rt{ 0, 0, −1, −1, 0, 0, −1, −1 } Wt{ 0, 1, −1, 0, 0, 1, 0, −1 } Ht 4	$\overline{Fe}$ 26	Flipped Triad fpi=20 D_8 L fp_sm=1→61H {{1, 6, 2}, {1, 3, 4}, {1, 5, 7}, {2, 3, 7}, {2, 4, 5}, {3, 6, 5}, {4, 7, 6}} flat triad/mask bits {1, 2, 6, 3, 4, 5, 7} {1, 0, 0, 0, 0, 1, 1}	Not Flipped Triad fpi=18 D_8 L fp_sm=6→68H {{1, 2, 5}, {1, 3, 7}, {1, 4, 6}, {2, 6, 3}, {2, 4, 7}, {3, 5, 4}, {5, 7, 6}} flat triad/mask bits {1, 2, 5, 3, 7, 4, 6} {0, 0, 0, 1, 0, 1, 1}
71	$\overline{s}^{1/3}{}_{ol}^{}{}_{R}^{}$	{D8, E7, D7, E6(27), D6, snubH4 8–2, ring5}	0apggsscc 0101001012	Bn{ 0, 1, 0, −1, 0, 0, 0, 1 } E8{ 0, 0, −1, 0, −1, 0, 0, 0 } Ph{ 0, 0, $-\frac{1}{\sqrt{2}}$, $-\frac{1}{\sqrt{2}}$, 0, $\frac{1}{\sqrt{3}}$, $-\frac{1}{\sqrt{2}}$, $-\frac{1}{\sqrt{6}}$ }	Rt{ 0, 0, −1, −1, 0, 0, −1, 0 } Wt{ 0, 1, −1, 0, 0, 1, −1, 1 } Ht 3	$\overline{Ca}$ 20	Flipped Triad fpi=19 D_8 L fp_sm=3→63H {{1, 6, 2}, {1, 4, 3}, {1, 5, 7}, {2, 3, 5}, {2, 4, 7}, {3, 7, 6}, {4, 6, 5}} flat triad/mask bits {1, 2, 6, 4, 3, 5, 7} {1, 1, 0, 0, 0, 1, 1}	Not Flipped Triad fpi=17 D_8 L fp_sm=8→6AH {{1, 2, 5}, {1, 7, 3}, {1, 4, 6}, {2, 4, 3}, {2, 6, 7}, {3, 6, 5}, {4, 7, 5}} flat triad/mask bits {1, 2, 5, 7, 3, 4, 6} {0, 1, 0, 1, 0, 1, 1}
72	$^{\nu\mu}{}_{vd}^{0}{}_{L}^{}$	{D8, E7, D7, E6, D6, D5, snubH4Φ 16–1, ring2}	0apggsscc 0011000002	Bn{ 0, 1, 0, −1, 0, 0, 1, 0 } E8{ 0, 0, −1, 0, −1, 0, 0, 0 } Ph{ 0, 0, $-\frac{1}{\sqrt{2}}$, $-\frac{1}{\sqrt{2}}$, 1, 0, 0, 0 }	Rt{ 0, 0, −1, −1, 0, 0, 0, 0 } Wt{ 0, 1, −1, −1, 0, 0, 1, 0 } Ht 2	$\overline{Al}$ 13	Flipped Triad fpi=15 D_8 R fp_sm=3→05H {{1, 5, 2}, {1, 3, 6}, {1, 7, 4}, {2, 3, 4}, {2, 6, 7}, {3, 5, 7}, {4, 5, 6}} flat triad/mask bits {1, 2, 5, 3, 6, 7, 4} {1, 0, 1, 0, 0, 0, 0}	Not Flipped Triad fpi=16 D_8 R fp_sm=3→05H {{1, 5, 2}, {1, 3, 6}, {1, 7, 4}, {2, 3, 7}, {2, 4, 6}, {3, 4, 5}, {5, 6, 7}} flat triad/mask bits {1, 5, 2, 3, 6, 7, 4} {1, 0, 1, 0, 0, 0, 0}
73	$e_T^{\phi}{}_{rd}^{0\rightarrow -1}{}_{L}^{}$	{D8, E7, D7, E6, D6, E5, D5, D4, F4s, snubH4Φ 8–1, ring6}	0apggsscc 0010000012	Bn{ 0, 1, 0, −1, 0, 0, 0, 1 } E8{ 0, 0, −1, 1, 0, 0, 0, 0 } Ph{ 0, 0, $-\sqrt{2}$, 0, 0, 0, 0, 0 }	Rt{ 0, 0, −1, 0, 0, 0, 0, 0 } Wt{ 0, 1, −2, 1, 0, 0, 0, 0 } Ht 1	$\overline{C}$ 6	Flipped Triad fpi=2 D_8 R fp_sm=8→0CH {{1, 2, 3}, {1, 4, 5}, {1, 7, 6}, {2, 7, 4}, {2, 5, 6}, {3, 4, 6}, {3, 5, 7}} flat triad/mask bits {1, 3, 2, 4, 5, 7, 6} {0, 0, 1, 1, 0, 0, 0}	Not Flipped Triad fpi=1 D_8 R fp_sm=5→0FH {{1, 3, 2}, {1, 5, 4}, {1, 7, 6}, {2, 6, 4}, {2, 5, 7}, {3, 4, 7}, {3, 5, 6}} flat triad/mask bits {1, 3, 2, 5, 4, 7, 6} {1, 1, 1, 1, 0, 0, 0}
74	$\overline{\mu}^{+}{}_{yd}^{}{}_{L}^{}$	{D8, E7, E7(56), D7, E6, D6, D5, snubH4Φ 16–3, ring7}	0apggsscc 0101000002	Bn{ 0, 0, 1, 1, 1, 0, 0, 0 } E8{ 0, 0, 0, −1, −1, 0, 0, 0 } Ph{ 0, 0, $\frac{1}{\sqrt{2}}$, $-\frac{1}{\sqrt{2}}$, −1, 0, 0, 0 }	Rt{ 0, 0, 0, −1, 0, −1, −2, −1 } Wt{ 0, 0, 1, 0, 1, 0, −1, 0 } Ht 5	$\overline{Zn}$ 30	Flipped Triad fpi=15 D_8 L fp_sm=3→7DH {{1, 5, 2}, {1, 3, 6}, {1, 7, 4}, {2, 4, 3}, {2, 7, 6}, {3, 7, 5}, {4, 6, 5}} flat triad/mask bits {1, 2, 5, 3, 6, 7, 4} {1, 0, 1, 1, 1, 1, 1}	Not Flipped Triad fpi=16 D_8 L fp_sm=3→7DH {{1, 5, 2}, {1, 3, 6}, {1, 7, 4}, {2, 7, 3}, {2, 6, 4}, {3, 5, 4}, {5, 7, 6}} flat triad/mask bits {1, 5, 2, 3, 6, 7, 4} {1, 0, 1, 1, 1, 1, 1}
75	$^{c}{}_{rl}^{2/3}{}_{R}^{}$	{D8, E7, E7(56), D7, E6(27), D6, snubH4 16–2, ring5}	0apggsscc 0011001012	Bn{ 0, 0, 1, 1, 0, 0, 1, 0 } E8{ 0, 0, 0, −1, 0, 0, 0, 0 } Ph{ 0, 0, $\frac{1}{\sqrt{2}}$, $-\frac{1}{\sqrt{2}}$, 0, $-\frac{1}{\sqrt{3}}$, $\frac{1}{\sqrt{2}}$, $\frac{1}{\sqrt{6}}$ }	Rt{ 0, 0, 0, −1, 0, −1, −1, −1 } Wt{ 0, 0, 1, −1, 1, −1, 1, −1 } Ht 4	$\overline{Cr}$ 24	Flipped Triad fpi=19 D_8 R fp_sm=3→1BH {{1, 6, 2}, {1, 4, 3}, {1, 5, 7}, {2, 5, 3}, {2, 7, 4}, {3, 6, 7}, {4, 5, 6}} flat triad/mask bits {1, 2, 6, 4, 3, 5, 7} {1, 1, 0, 1, 1, 0, 0}	Not Flipped Triad fpi=17 D_8 R fp_sm=8→12H {{1, 2, 5}, {1, 7, 3}, {1, 4, 6}, {2, 3, 4}, {2, 7, 6}, {3, 5, 6}, {4, 5, 7}} flat triad/mask bits {1, 2, 5, 7, 3, 4, 6} {0, 1, 0, 0, 1, 0, 0}
76	$^{c}{}_{gl}^{2/3}{}_{R}^{}$	{D8, E7(56), D7, snubH4Φ 8–3, ring8}	0apggsscc 0011001102	Bn{ 0, 0, 1, 1, 0, 0, 0, 0 } E8{ 0, 0, 0, −1, 0, 0, 1, 0 } Ph{ 0, 0, $\frac{1}{\sqrt{2}}$, $-\frac{1}{\sqrt{2}}$, 0, $-\frac{1}{\sqrt{3}}$, $-\frac{1}{\sqrt{2}}$, $\frac{1}{\sqrt{6}}$ }	Rt{ 0, 0, 0, −1, 0, −1, −1, 0 } Wt{ 0, 0, 1, −1, 1, −1, 0, 1 } Ht 3	$\overline{K}$ 19	Flipped Triad fpi=20 D_8 R fp_sm=1→19H {{1, 6, 2}, {1, 3, 4}, {1, 5, 7}, {2, 7, 3}, {2, 5, 4}, {3, 5, 6}, {4, 6, 7}} flat triad/mask bits {1, 2, 6, 3, 4, 5, 7} {1, 0, 0, 1, 1, 0, 0}	Not Flipped Triad fpi=18 D_8 R fp_sm=6→10H {{1, 2, 5}, {1, 3, 7}, {1, 4, 6}, {2, 3, 6}, {2, 7, 4}, {3, 4, 5}, {5, 6, 7}} flat triad/mask bits {1, 2, 5, 3, 7, 4, 6} {0, 0, 0, 0, 1, 0, 0}
77	$^{c}{}_{bl}^{2/3}{}_{R}^{}$	{D8, E7(56), H4cell16, ring4}	0apggsscc 0011001112	Bn{ 0, 0, 1, 1, 0, 0, 0, 1 } E8{ 0, 0, 0, −1, 0, 0, 0, −1 } Ph{ 0, 0, $\frac{1}{\sqrt{2}}$, $-\frac{1}{\sqrt{2}}$, 0, $-\frac{1}{\sqrt{3}}$, 0, $-\sqrt{\frac{2}{3}}$ }	Rt{ 1, 2, 3, 3, 2, 3, 4, 2 } Wt{ 0, 0, 1, −1, 1, 0, 0, 0 } Ht 20	Bh 107	Flipped Triad fpi=21 D_8 R fp_sm=6→10H {{1, 2, 6}, {1, 3, 5}, {1, 4, 7}, {2, 3, 4}, {2, 7, 5}, {3, 6, 7}, {4, 5, 6}} flat triad/mask bits {1, 6, 2, 3, 5, 4, 7} {0, 0, 0, 0, 1, 0, 0}	Not Flipped Triad fpi=22 D_8 R fp_sm=6→10H {{1, 2, 6}, {1, 3, 5}, {1, 4, 7}, {2, 3, 7}, {2, 5, 4}, {3, 4, 6}, {5, 6, 7}} flat triad/mask bits {1, 2, 6, 3, 5, 4, 7} {0, 0, 0, 0, 1, 0, 0}
78	$\overline{s}^{1/3\rightarrow 4/3}{}_{md}^{}{}_{L}^{}$	{D8, H4Φcell16, ring8}	0apggsscc 0101001112	Bn{ 0, 0, 1, 0, 1, 0, 0, 1 } E8{ 0, 0, 0, −1, 0, 0, 0, 0 } Ph{ 0, 0, $\frac{1}{\sqrt{2}}$, $-\frac{1}{\sqrt{2}}$, 0, $\frac{1}{\sqrt{3}}$, 0, $\sqrt{\frac{2}{3}}$ }	Rt{ −1, −2, −3, −5, −2, −4, −6, −3 } Wt{ 0, 0, 1, −1, 0, 0, 0, 0 } Ht 26	$\overline{Uus}$ 117	Flipped Triad fpi=21 D_8 L fp_sm=6→76H {{1, 2, 6}, {1, 5, 3}, {1, 7, 4}, {2, 3, 4}, {2, 7, 5}, {3, 7, 6}, {4, 6, 5}} flat triad/mask bits {1, 6, 2, 5, 3, 7, 4} {0, 1, 1, 0, 1, 1, 1}	Not Flipped Triad fpi=22 D_8 L fp_sm=6→76H {{1, 2, 6}, {1, 5, 3}, {1, 7, 4}, {2, 7, 3}, {2, 5, 4}, {3, 6, 4}, {5, 7, 6}} flat triad/mask bits {1, 2, 6, 5, 3, 7, 4} {0, 1, 1, 0, 1, 1, 1}

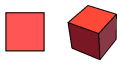
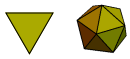
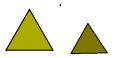
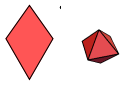
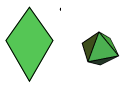
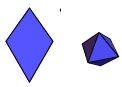
Seq #	Symbol	2D/3D Shape	Groups	Particle Quantum Bits	Binary / E8 / Physics Coordinates	Algebra Root Weight / Height / Rt#=Atomic Element Number --> #	Ele #	Octonions: Flipped	Octonions: Not Flipped
79	$\overline{\mathrm{s}}$ $\mathrm{c_d}$ 1/3→4/3 $\check{\mathrm{L}}$		{D8, D7, snubH4 16–4, ring5}	$0\mathrm{apggssscc}\,0101000010_2$	Bn{ 0 0 1 0 0 −1 1 0 0 0 1 1 0 0 } E8{ 0 0 $\frac{1}{\sqrt{2}}$ $-\frac{1}{\sqrt{2}}$ 0 $\frac{1}{\sqrt{3}}$ $\frac{1}{\sqrt{2}}$ $-\frac{1}{\sqrt{6}}$ } Ph{ 0 0 }	Rt{ 0 0 0 −1 0 0 −1 −1 } Wt{ 0 0 1 −1 0 1 0 −1 } Ht 3	$\overline{\mathrm{Ar}}$ 18	Triad fpi=20 D_8 L fp_sm=1→7FH {{1, 6, 2}, {1, 4, 3}, {1, 7, 5}, {2, 7, 3}, {2, 5, 4}, {3, 6, 5}, {4, 7, 6}} flat triad/mask bits {1, 2, 6, 4, 3, 7, 5} {1, 1, 1, 1, 1, 1, 1}	Triad fpi=18 D_8 L fp_sm=6→76H {{1, 2, 5}, {1, 7, 3}, {1, 6, 4}, {2, 3, 6}, {2, 7, 4}, {3, 5, 4}, {5, 7, 6}} flat triad/mask bits {1, 2, 5, 7, 3, 6, 4} {0, 1, 1, 0, 1, 1, 1}
80	$\overline{\mathrm{s}}$ $\mathrm{c_d}$ 1/3→4/3 $\check{\mathrm{L}}$		{D8, E7, D7, E6(27), D6, snubH4Φ 8–3, ring7}	$0\mathrm{apggssscc}\,0101000001_2$	Bn{ 0 0 1 0 0 1 1 0 0 0 1 1 0 0 } E8{ 0 0 $\frac{1}{\sqrt{2}}$ $-\frac{1}{\sqrt{2}}$ 0 $\frac{1}{\sqrt{3}}$ $-\frac{1}{\sqrt{2}}$ $-\frac{1}{\sqrt{6}}$ } Ph{ 0 0 }	Rt{ 0 0 0 −1 0 0 −1 0 } Wt{ 0 0 1 −1 0 1 −1 1 } Ht 2	$\overline{\mathrm{Mg}}$ 12	Triad fpi=19 D_8 L fp_sm=3→7DH {{1, 6, 2}, {1, 3, 4}, {1, 7, 5}, {2, 5, 3}, {2, 7, 4}, {3, 7, 6}, {4, 6, 5}} flat triad/mask bits {1, 2, 6, 3, 4, 7, 5} {1, 0, 1, 1, 1, 1, 1}	Triad fpi=17 D_8 L fp_sm=8→74H {{1, 2, 5}, {1, 3, 7}, {1, 6, 4}, {2, 3, 4}, {2, 7, 6}, {3, 6, 5}, {4, 7, 5}} flat triad/mask bits {1, 2, 5, 3, 7, 6, 4} {0, 0, 1, 0, 1, 1, 1}
81	$\overline{\mathrm{v_l}}$ $\mathrm{w_l}$ 0→1 $\check{\mathrm{R}}$		{D8, E7, D7, E6, D6, D5, snubH4Φ 8–1, ring2}	$0\mathrm{apggssscc}\,0011001002_2$	Bn{ 0 0 1 0 0 −1 0 1 1 0 1 0 0 0 } E8{ 0 0 $\frac{1}{\sqrt{2}}$ $-\frac{1}{\sqrt{2}}$ 1 0 0 0 0 } Ph{ 0 0 }	Rt{ 0 0 0 −1 0 0 0 0 } Wt{ 0 0 1 −2 0 0 1 0 } Ht 1	$\overline{\mathrm{B}}$ 5	Triad fpi=15 D_8 R fp_sm=3→1BH {{1, 5, 2}, {1, 6, 3}, {1, 4, 7}, {2, 4, 3}, {2, 7, 6}, {3, 5, 7}, {4, 5, 6}} flat triad/mask bits {1, 2, 5, 6, 3, 4, 7} {1, 1, 0, 1, 1, 0, 0}	Triad fpi=16 D_8 R fp_sm=3→1BH {{1, 5, 2}, {1, 6, 3}, {1, 4, 7}, {2, 7, 3}, {2, 6, 4}, {3, 4, 5}, {5, 6, 7}} flat triad/mask bits {1, 5, 2, 6, 3, 4, 7} {1, 1, 0, 1, 1, 0, 0}
82	$\overline{\Phi\mathrm{x_1}}$ $\mathrm{o_m}$ 0→−1/3 $\check{\mathrm{L}}$		{D8, E7, E7(56), D7, E6(27), D6, D4, F4, snubH4Φ 8–3, ring2}	$0\mathrm{apggssscc}\,0100010012_2$	Bn{ 0 0 1 0 0 −1 1 0 0 1 0 0 0 0 } E8{ 0 0 0 0 −1 $-\frac{1}{\sqrt{3}}$ $\frac{1}{\sqrt{2}}$ $\frac{1}{\sqrt{6}}$ } Ph{ 0 0 }	Rt{ 0 0 0 0 0 −1 −1 −1 } Wt{ 0 0 0 1 1 −1 0 −1 } Ht 3	$\overline{\mathrm{S}}$ 16	Triad fpi=2 D_8 L fp_sm=8→59H {{1, 3, 2}, {1, 4, 5}, {1, 6, 7}, {2, 6, 4}, {2, 6, 5}, {3, 4, 6}, {3, 7, 5}} flat triad/mask bits {1, 2, 3, 4, 5, 6, 7} {1, 0, 0, 1, 1, 0, 1}	Triad fpi=1 D_8 L fp_sm=5→5AH {{1, 2, 3}, {1, 5, 4}, {1, 6, 7}, {2, 6, 4}, {2, 7, 5}, {3, 4, 7}, {3, 6, 5}} flat triad/mask bits {1, 2, 3, 5, 4, 6, 7} {0, 1, 0, 1, 1, 0, 1}
83	$\overline{\Phi\mathrm{x_2}}$ $\mathrm{c_m}$ 0→−1/3 $\check{\mathrm{L}}$		{D8, E7(56), D7, D4, F4, snubH4Φ 8–2, ring6}	$0\mathrm{apggssscc}\,0100001010_2$	Bn{ 0 0 1 0 0 −1 0 1 1 0 1 0 0 0 } E8{ 0 0 0 0 −1 $-\frac{1}{\sqrt{3}}$ $-\frac{1}{\sqrt{2}}$ $\frac{1}{\sqrt{6}}$ } Ph{ 0 0 }	Rt{ 0 0 0 0 0 −1 −1 0 } Wt{ 0 0 0 1 1 −1 −1 1 } Ht 2	$\overline{\mathrm{Ne}}$ 10	Triad fpi=5 D_8 L fp_sm=7→58H {{1, 2, 3}, {1, 4, 7}, {1, 5, 6}, {2, 5, 4}, {2, 7, 6}, {3, 4, 6}, {3, 7, 5}} flat triad/mask bits {1, 3, 2, 4, 7, 5, 6} {0, 0, 0, 1, 1, 0, 1}	Triad fpi=3 D_8 L fp_sm=4→51H {{1, 3, 2}, {1, 4, 6}, {1, 5, 7}, {2, 4, 5}, {2, 7, 6}, {3, 4, 7}, {3, 6, 5}} flat triad/mask bits {1, 3, 2, 4, 6, 5, 7} {1, 0, 0, 0, 1, 0, 1}
84	$\overline{\Phi\mathrm{x_3}}$ $\mathrm{m_m}$ 0→−1/3 $\check{\mathrm{L}}$		{D8, E7(56), D4, F4, snubH4Φ 8–4, ring2}	$0\mathrm{apggssscc}\,0100001011_2$	Bn{ 0 0 0 0 1 1 1 0 0 0 } E8{ 0 0 0 0 −1 $-\frac{1}{\sqrt{3}}$ 0 $-\sqrt{\frac{2}{3}}$ } Ph{ 0 0 }	Rt{ 1 2 3 4 2 3 4 2 } Wt{ 0 0 0 1 1 0 −1 0 } Ht 21	$\overline{\mathrm{Ds}}$ 110	Triad fpi=9 D_8 L fp_sm=6→5BH {{1, 4, 2}, {1, 6, 3}, {1, 5, 7}, {2, 5, 3}, {2, 7, 6}, {3, 4, 7}, {4, 6, 5}} flat triad/mask bits {1, 2, 4, 6, 3, 5, 7} {1, 1, 0, 1, 1, 0, 1}	Triad fpi=6 D_8 L fp_sm=6→5BH {{1, 3, 2}, {1, 7, 4}, {1, 5, 6}, {2, 6, 4}, {2, 7, 5}, {3, 4, 5}, {3, 7, 6}} flat triad/mask bits {1, 3, 2, 7, 4, 5, 6} {1, 1, 0, 1, 1, 0, 1}
85	$\Phi\mathrm{x_3}$ $\mathrm{m_d}$ 0→1/3 $\check{\mathrm{L}}$		{D8, D4, F4, snubH4Φ 16–2, ring7}	$0\mathrm{apggssscc}\,0000000112_2$	Bn{ 0 0 0 0 1 1 0 1 0 1 } E8{ 0 0 0 0 −1 $\frac{1}{\sqrt{3}}$ 0 $\sqrt{\frac{2}{3}}$ } Ph{ 0 0 }	Rt{ −1 −2 −3 −4 −2 −4 −6 −3 } Wt{ 0 0 0 1 0 0 −1 0 } Ht 25	$\overline{\mathrm{Lv}}$ 116	Triad fpi=6 D_8 L fp_sm=6→09H {{1, 3, 2}, {1, 4, 7}, {1, 5, 6}, {2, 6, 4}, {2, 5, 7}, {3, 4, 5}, {3, 6, 7}} flat triad/mask bits {1, 2, 3, 4, 7, 5, 6} {1, 0, 0, 1, 0, 0, 0}	Triad fpi=9 D_8 L fp_sm=6→09H {{1, 4, 2}, {1, 3, 6}, {1, 5, 7}, {2, 5, 3}, {2, 6, 7}, {3, 4, 7}, {4, 5, 6}} flat triad/mask bits {1, 4, 2, 3, 6, 5, 7} {1, 0, 0, 1, 0, 0, 0}
86	$\Phi\mathrm{x_2}$ $\mathrm{c_d}$ 0→1/3 $\check{\mathrm{L}}$		{D8, D7, D4, F4, snubH4Φ 8–3, ring6}	$0\mathrm{apggssscc}\,0000000010_2$	Bn{ 0 0 0 0 1 1 0 1 0 1 } E8{ 0 0 0 0 −1 $\frac{1}{\sqrt{3}}$ $\frac{1}{\sqrt{2}}$ $-\frac{1}{\sqrt{6}}$ } Ph{ 0 0 }	Rt{ 0 0 0 0 0 0 −1 −1 } Wt{ 0 0 0 1 0 1 −1 −1 } Ht 2	$\overline{\mathrm{F}}$ 9	Triad fpi=3 D_8 L fp_sm=4→03H {{1, 3, 2}, {1, 6, 4}, {1, 5, 7}, {2, 4, 5}, {2, 6, 7}, {3, 4, 7}, {3, 5, 6}} flat triad/mask bits {1, 2, 3, 6, 4, 5, 7} {1, 1, 0, 0, 0, 0, 0}	Triad fpi=5 D_8 L fp_sm=7→0AH {{1, 2, 3}, {1, 7, 4}, {1, 5, 6}, {2, 5, 4}, {2, 6, 7}, {3, 4, 6}, {3, 5, 7}} flat triad/mask bits {1, 2, 3, 7, 4, 5, 6} {0, 1, 0, 1, 0, 0, 0}
87	$\Phi\mathrm{x_1}$ $\mathrm{o_d}$ 0→1/3 $\check{\mathrm{L}}$		{D8, E7, D7, E6(27), D6, D4, F4, snubH4Φ 8–4, ring6}	$0\mathrm{apggssscc}\,0000000012_2$	Bn{ 0 0 0 0 1 0 0 1 0 0 } E8{ 0 0 0 0 −1 $\frac{1}{\sqrt{3}}$ $-\frac{1}{\sqrt{2}}$ $-\frac{1}{\sqrt{6}}$ } Ph{ 0 0 }	Rt{ 0 0 0 0 0 0 −1 0 } Wt{ 0 0 0 1 0 1 −2 1 } Ht 1	$\overline{\mathrm{He}}$ 2	Triad fpi=1 D_8 L fp_sm=5→08H {{1, 2, 3}, {1, 4, 5}, {1, 6, 7}, {2, 6, 4}, {2, 5, 7}, {3, 4, 7}, {3, 5, 6}} flat triad/mask bits {1, 3, 2, 4, 5, 6, 7} {0, 0, 0, 1, 0, 0, 0}	Triad fpi=2 D_8 L fp_sm=8→0BH {{1, 3, 2}, {1, 5, 4}, {1, 6, 7}, {2, 7, 4}, {2, 5, 6}, {3, 4, 6}, {3, 5, 7}} flat triad/mask bits {1, 3, 2, 5, 4, 6, 7} {1, 1, 0, 1, 0, 0, 0}
88	$\Phi\mathrm{x_3}$ $\mathrm{m_l}$ 0→−2/3 $\check{\mathrm{R}}$		{D8, E7(56), D7, D4, F4, snubH4Φ 16–3, ring8}	$0\mathrm{apggssscc}\,0000000111_2$	Bn{ 0 0 0 0 1 0 0 1 0 1 } E8{ 0 0 0 0 −1 $-\frac{2}{\sqrt{3}}$ 0 $\sqrt{\frac{2}{3}}$ } Ph{ 0 0 }	Rt{ 0 0 0 0 0 0 −1 0 0 } Wt{ 0 0 0 0 0 1 −2 1 0 } Ht 1	$\overline{\mathrm{Li}}$ 3	Triad fpi=6 D_8 L fp_sm=6→17H {{1, 3, 2}, {1, 7, 4}, {1, 6, 5}, {2, 4, 6}, {2, 7, 5}, {3, 4, 5}, {3, 6, 7}} flat triad/mask bits {1, 3, 2, 7, 4, 6, 5} {1, 1, 1, 0, 1, 0, 0}	Triad fpi=9 D_8 L fp_sm=6→17H {{1, 4, 2}, {1, 6, 3}, {1, 7, 5}, {2, 3, 5}, {2, 7, 6}, {3, 4, 7}, {4, 5, 6}} flat triad/mask bits {1, 4, 2, 6, 3, 7, 5} {1, 1, 1, 0, 1, 0, 0}
89	$\Phi\mathrm{x_2}$ $\mathrm{c_l}$ 0→−2/3 $\check{\mathrm{R}}$		{D8, E7(56), D4, F4, snubH4Φ 16–4, ring8}	$0\mathrm{apggssscc}\,0000000110_2$	Bn{ 0 0 0 0 1 0 0 0 1 1 } E8{ 0 0 0 0 −1 $-\frac{2}{\sqrt{3}}$ $\frac{1}{\sqrt{2}}$ $-\frac{1}{\sqrt{6}}$ } Ph{ 0 0 }	Rt{ 1 2 3 4 2 3 5 2 } Wt{ 0 0 0 0 1 −1 1 −1 } Ht 22	$\overline{\mathrm{Cn}}$ 112	Triad fpi=3 D_8 L fp_sm=4→1DH {{1, 3, 2}, {1, 4, 6}, {1, 7, 5}, {2, 5, 4}, {2, 7, 6}, {3, 4, 7}, {3, 5, 6}} flat triad/mask bits {1, 2, 3, 4, 6, 7, 5} {1, 0, 1, 1, 1, 0, 0}	Triad fpi=5 D_8 L fp_sm=7→14H {{1, 2, 3}, {1, 4, 7}, {1, 6, 5}, {2, 4, 5}, {2, 7, 6}, {3, 4, 6}, {3, 5, 7}} flat triad/mask bits {1, 2, 3, 4, 7, 6, 5} {0, 0, 1, 0, 1, 0, 0}
90	$\overline{\mathrm{grb}}$ $\mathrm{c_m}$ 0 $\check{\mathrm{R}}$		{D8, D4, F4, snubH4 8–1, G2s, ring1}	$0\mathrm{apggssscc}\,0100011110_2$	Bn{ 0 0 0 0 1 0 1 0 1 1 } E8{ 0 0 0 0 −1 0 $\frac{1}{\sqrt{2}}$ $\sqrt{\frac{3}{2}}$ } Ph{ 0 0 }	Rt{ −1 −2 −3 −4 −2 −4 −5 −3 } Wt{ 0 0 0 0 0 −1 1 −1 } Ht 24	$\overline{\mathrm{Uup}}$ 115	Triad fpi=6 D_8 L fp_sm=6→3AH {{1, 2, 3}, {1, 7, 4}, {1, 5, 6}, {2, 6, 4}, {2, 7, 5}, {3, 5, 4}, {3, 6, 7}} flat triad/mask bits {1, 3, 2, 7, 4, 5, 6} {0, 1, 0, 1, 1, 1, 0}	Triad fpi=9 D_8 L fp_sm=6→3AH {{1, 2, 4}, {1, 6, 3}, {1, 5, 7}, {2, 5, 3}, {2, 7, 6}, {3, 7, 4}, {4, 5, 6}} flat triad/mask bits {1, 2, 4, 6, 3, 5, 7} {0, 1, 0, 1, 1, 1, 0}
91	grg $\mathrm{m_m}$ 0 $\check{\mathrm{R}}$		{D8, D7, D4, F4, snubH 8–1, G2s, ring3}	$0\mathrm{apggssscc}\,0000011112_2$	Bn{ 0 0 0 0 0 1 0 1 0 0 } E8{ 0 0 0 0 −1 0 $\frac{1}{\sqrt{2}}$ 0 } Ph{ 0 0 }	Rt{ 0 0 0 0 0 0 0 −1 } Wt{ 0 0 0 0 0 0 1 −2 } Ht 1	$\overline{\mathrm{H}}$ 1	Triad fpi=6 D_8 L fp_sm=6→3AH {{1, 2, 4}, {1, 7, 3}, {1, 5, 6}, {2, 6, 4}, {2, 7, 5}, {3, 5, 4}, {3, 6, 7}} flat triad/mask bits {1, 3, 2, 7, 4, 5, 6} {0, 1, 0, 1, 1, 1, 0}	Triad fpi=9 D_8 L fp_sm=6→3AH {{1, 2, 4}, {1, 6, 3}, {1, 5, 7}, {2, 5, 3}, {2, 7, 6}, {3, 7, 4}, {4, 5, 6}} flat triad/mask bits {1, 2, 4, 6, 3, 5, 7} {0, 1, 0, 1, 1, 1, 0}
92	$\Phi\mathrm{x_1}$ $\mathrm{o_l}$ 0→−2/3 $\check{\mathrm{R}}$		{D8, E7, E7(56), E6(27), D4, F4, snubH4Φ 8–2, ring8}	$0\mathrm{apggssscc}\,0000000101_2$	Bn{ 0 0 0 0 0 1 0 1 1 1 } E8{ 0 0 0 0 −1 0 $-\frac{2}{\sqrt{3}}$ $-\frac{1}{\sqrt{2}}$ $-\frac{1}{\sqrt{6}}$ } Ph{ 0 0 }	Rt{ 1 2 3 4 2 3 5 3 } Wt{ 0 0 0 0 1 −1 0 1 } Ht 23	$\overline{\mathrm{Uut}}$ 113	Triad fpi=1 D_8 L fp_sm=5→16H {{1, 2, 3}, {1, 5, 4}, {1, 7, 6}, {2, 4, 6}, {2, 7, 5}, {3, 4, 7}, {3, 5, 6}} flat triad/mask bits {1, 3, 2, 5, 4, 7, 6} {0, 1, 1, 0, 1, 0, 0}	Triad fpi=2 D_8 L fp_sm=8→15H {{1, 3, 2}, {1, 4, 5}, {1, 7, 6}, {2, 4, 7}, {2, 6, 5}, {3, 4, 6}, {3, 5, 7}} flat triad/mask bits {1, 3, 2, 4, 5, 7, 6} {1, 0, 1, 0, 1, 0, 0}
93	ggb $\mathrm{o_m}$ 0 $\check{\mathrm{R}}$		{D8, D4, F4, snubH4 16–1, G2s, ring5}	$0\mathrm{apggssscc}\,0000011012_2$	Bn{ 0 0 0 0 0 0 1 1 1 1 } E8{ 0 0 0 0 0 0 $-\frac{1}{\sqrt{2}}$ $\sqrt{\frac{3}{2}}$ } Ph{ 0 0 }	Rt{ −1 −2 −3 −4 −2 −4 −5 −2 } Wt{ 0 0 0 0 0 −1 0 1 } Ht 23	$\overline{\mathrm{Fl}}$ 114	Triad fpi=1 D_8 L fp_sm=5→3BH {{1, 2, 3}, {1, 5, 4}, {1, 6, 7}, {2, 6, 4}, {2, 7, 5}, {3, 7, 4}, {3, 5, 6}} flat triad/mask bits {1, 2, 3, 5, 4, 6, 7} {1, 1, 0, 1, 1, 1, 0}	Triad fpi=1 D_8 L fp_sm=8→38H {{1, 2, 3}, {1, 5, 4}, {1, 6, 7}, {2, 7, 4}, {2, 6, 5}, {3, 6, 4}, {3, 5, 7}} flat triad/mask bits {1, 2, 3, 4, 5, 6, 7} {0, 0, 0, 1, 1, 1, 0}

pascalRow@5

Seq #	Symbol	2D/3D Shape	Groups	Particle Quantum Bits	Binary / E8 / Physics Coordinates	Algebra Root Weight / Height / Rt#=Atomic Element Number --> #	Ele #	Octonions: Flipped	Octonions: Not Flipped
94	e $\mathrm{y_d}$ $\check{\mathrm{L}}$		{BC8, E7, E6, 6Cube, E5, C4, H4Φcell8, 3Cube, Hamming, ring7}	$0\mathrm{apggssscc}\,0000100002_2$	Bn{ 1 1 1 1 −1 −1 1 1 } E8{ 2 2 2 2 2 2 2 2 } Ph{ $\frac{1}{2}$ $\frac{1}{2}$ 0 $\frac{1}{\sqrt{2}}$ $-\frac{1}{2}$ $-\frac{\sqrt{3}}{2}$ 0 0 }	Rt{ 1 2 3 4 1 2 4 2 } Wt{ 0 0 0 1 0 −1 0 0 } Ht 19	$\overline{\mathrm{Sg}}$ 106	Triad fpi=4 BC_8 L fp_sm=3→02H {{1, 2, 3}, {1, 6, 4}, {1, 5, 7}, {2, 4, 7}, {2, 5, 6}, {3, 4, 5}, {3, 6, 7}} flat triad/mask bits {1, 3, 2, 6, 4, 5, 7} {0, 1, 0, 0, 0, 0, 0}	Triad fpi=7 BC_8 L fp_sm=3→02H {{1, 2, 4}, {1, 5, 3}, {1, 6, 7}, {2, 3, 6}, {2, 5, 7}, {3, 4, 7}, {4, 5, 6}} flat triad/mask bits {1, 2, 4, 5, 3, 6, 7} {0, 1, 0, 0, 0, 0, 0}

95	$^{\nu\tau}_{\mathrm{wm}}{}^{0}_{\bar{L}}$	{BC8, E7, E6, 6Cube, C4, snubH4Φ 8–4, ring8}	$0apggssscc_{0011110002}$	Bn{ $\frac{1}{2}$, $\frac{1}{2}$, $\frac{1}{2}$, $\frac{1}{2}$, $\frac{1}{2}$, $\frac{1}{2}$, $\frac{1}{2}$, $\frac{1}{2}$ } E8{ $\frac{1}{2}$, $\frac{1}{2}$, $\frac{1}{2}$, $-\frac{1}{2}$, $\frac{1}{2}$, $-\frac{\sqrt{3}}{2}$, $-\frac{1}{2}$, $-\frac{1}{2}$ } Ph{ $\frac{1}{2}$, $\frac{1}{2}$, $\frac{1}{\sqrt{2}}$, 0, $\frac{1}{2}$, $\frac{1}{2}$, 0, 0 }	Rt{ 1 2 3 3 1 2 4 2 } Wt{ 0 0 1 −1 0 −1 1 0 } Ht 18	Lr 103	Flipped Triad fpi=23 BC_8 R fp_sm=2→2BH {{1, 6, 2}, {1, 7, 3}, {1, 4, 5}, {2, 4, 3}, {2, 5, 7}, {3, 6, 5}, {4, 6, 7}} flat triad/mask bits {1, 2, 6, 7, 3, 4, 5} {1, 1, 0, 1, 0, 1, 0}	Not Flipped Triad fpi=24 BC_8 R fp_sm=3→28H {{1, 6, 2}, {1, 7, 3}, {1, 4, 5}, {2, 5, 3}, {2, 4, 7}, {3, 6, 4}, {5, 6, 7}} flat triad/mask bits {1, 2, 6, 3, 7, 4, 5} {0, 0, 0, 1, 0, 1, 0}
96	$^{t}_{\mathrm{rm}}{}^{-2/3\to1/3}_{\bar{L}}$	{BC8, E7, E6(27), 6Cube, C4, snubH4Φ 16–4, ring7}	$0apggssscc_{0111110012}$	Bn{ $\frac{1}{2}$, $\frac{1}{2}$, $\frac{1}{2}$, $-\frac{1}{2}$, $\frac{1}{2}$, $\frac{1}{2}$, $\frac{1}{2}$, $\frac{1}{2}$ } E8{ $\frac{1}{2}$, $\frac{1}{2}$, $\frac{1}{2}$, $-\frac{1}{2}$, $\frac{1}{2}$, $\frac{1}{2}$, $\frac{1}{2}$, $\frac{1}{2}$ } Ph{ $\frac{1}{2}$, $\frac{1}{2}$, $\frac{1}{\sqrt{2}}$, 0, $-\frac{1}{2}$, $-\frac{1}{2\sqrt{3}}$, $-\frac{1}{\sqrt{2}}$, $-\frac{1}{\sqrt{6}}$ }	Rt{ 1 2 3 3 1 2 3 2 } Wt{ 0 0 1 0 0 0 −1 1 } Ht 17	Fm 100	Flipped Triad fpi=25 BC_8 R fp_sm=5→5DH {{1, 7, 2}, {1, 3, 4}, {1, 6, 5}, {2, 5, 3}, {2, 6, 4}, {3, 6, 7}, {4, 7, 5}} flat triad/mask bits {1, 2, 7, 3, 4, 6, 5} {1, 0, 1, 1, 1, 0, 1}	Not Flipped Triad fpi=26 BC_8 R fp_sm=8→5EH {{1, 2, 7}, {1, 4, 3}, {1, 6, 5}, {2, 6, 3}, {2, 5, 4}, {3, 5, 7}, {4, 7, 6}} flat triad/mask bits {1, 2, 7, 6, 3, 5, 4} {0, 1, 1, 1, 0, 1, 1}
97	$^{t}_{\mathrm{gm}}{}^{-2/3\to1/3}_{\bar{L}}$	{BC8, 6Cube, snubH4 8–2, Idempot, ring3}	$0apggssscc_{0111110010}$	Bn{ $\frac{1}{2}$, $\frac{1}{2}$, $\frac{1}{2}$, $-\frac{1}{2}$, $\frac{1}{2}$, $-\frac{1}{2}$, $\frac{1}{2}$, $\frac{1}{2}$ } E8{ $\frac{1}{2}$, $\frac{1}{2}$, $\frac{1}{2}$, $-\frac{1}{2}$, $\frac{1}{2}$, $-\frac{1}{2}$, $\frac{1}{2}$, $\frac{1}{2}$ } Ph{ $\frac{1}{2}$, $\frac{1}{2}$, $\frac{1}{\sqrt{2}}$, 0, $-\frac{1}{2}$, $-\frac{1}{2\sqrt{3}}$, $-\frac{1}{\sqrt{2}}$, $-\frac{1}{\sqrt{6}}$ }	Rt{ 1 2 3 3 1 2 3 1 } Wt{ 0 0 1 0 0 0 0 −1 } Ht 16	Cm 96	Flipped Triad fpi=27 BC_8 R fp_sm=4→56H {{1, 2, 7}, {1, 5, 3}, {1, 6, 4}, {2, 3, 4}, {2, 6, 5}, {3, 6, 7}, {4, 7, 5}} flat triad/mask bits {1, 7, 2, 5, 3, 6, 4} {0, 1, 1, 0, 1, 0, 1}	Not Flipped Triad fpi=29 BC_8 R fp_sm=7→5FH {{1, 7, 2}, {1, 6, 3}, {1, 5, 4}, {2, 4, 3}, {2, 6, 5}, {3, 5, 7}, {4, 7, 6}} flat triad/mask bits {1, 7, 2, 6, 3, 5, 4} {1, 1, 1, 1, 1, 0, 1}
98	$^{t}_{\mathrm{bm}}{}^{-2/3\to1/3}_{\bar{L}}$	{BC8, H4Φcell8, ring8}	$0apggssscc_{0111110011}$	Bn{ $\frac{1}{2}$, $\frac{1}{2}$, $\frac{1}{2}$, $-\frac{1}{2}$, $\frac{1}{2}$, $-\frac{1}{2}$, $\frac{1}{2}$, $\frac{1}{2}$ } E8{ $\frac{1}{2}$, $\frac{1}{2}$, $\frac{1}{2}$, $-\frac{1}{2}$, $\frac{1}{2}$, $-\frac{1}{2}$, $\frac{1}{2}$, $\frac{1}{2}$ } Ph{ $\frac{1}{2}$, $\frac{1}{2}$, $\frac{1}{\sqrt{2}}$, 0, $-\frac{1}{2}$, $-\frac{1}{2\sqrt{3}}$, 0, $\sqrt{\frac{2}{3}}$ }	Rt{ 0 0 0 −1 −1 −2 −2 −1 } Wt{ 0 0 1 0 0 −1 0 0 } Ht 7	$\overline{\mathrm{Ru}}$ 44	Flipped Triad fpi=30 BC_8 R fp_sm=6→5CH {{1, 2, 7}, {1, 3, 6}, {1, 5, 4}, {2, 5, 3}, {2, 6, 4}, {3, 4, 7}, {5, 7, 6}} flat triad/mask bits {1, 7, 2, 3, 6, 5, 4} {0, 0, 1, 1, 1, 0, 1}	Not Flipped Triad fpi=28 BC_8 R fp_sm=3→57H {{1, 7, 2}, {1, 5, 3}, {1, 6, 4}, {2, 5, 6}, {2, 4, 3}, {3, 4, 7}, {5, 7, 6}} flat triad/mask bits {1, 7, 2, 7, 5, 3, 6, 4} {1, 1, 1, 0, 1, 0, 1}
99	$^{\tau}_{\mathrm{ym}}{}^{0}_{\bar{L}}$	{BC8, E7, E6, 6Cube, C4, snubH4Φ 8–2, Idempot, ring7}	$0apggssscc_{0001110002}$	Bn{ $\frac{1}{2}$, $\frac{1}{2}$, $-\frac{1}{2}$, $\frac{1}{2}$, $\frac{1}{2}$, $-\frac{1}{2}$, $-\frac{1}{2}$, $-\frac{1}{2}$ } E8{ $\frac{1}{2}$, $\frac{1}{2}$, $\frac{1}{2}$, $\frac{1}{2}$, $\frac{1}{2}$, $-\frac{\sqrt{3}}{2}$, $-\frac{1}{2}$, $-\frac{1}{2}$ } Ph{ $\frac{1}{2}$, $\frac{1}{2}$, $-\frac{1}{\sqrt{2}}$, 0, $\frac{1}{2}$, $-\frac{1}{2}$, 0, 0 }	Rt{ 1 2 2 3 1 2 4 2 } Wt{ 0 1 −1 0 0 −1 1 0 } Ht 17	Es 99	Flipped Triad fpi=24 BC_8 L fp_sm=3→2FH {{1, 6, 2}, {1, 7, 3}, {1, 5, 4}, {2, 5, 3}, {2, 4, 7}, {3, 6, 4}, {5, 6, 7}} flat triad/mask bits {1, 2, 6, 7, 3, 5, 4} {1, 1, 1, 1, 0, 1, 0}	Not Flipped Triad fpi=23 BC_8 L fp_sm=2→2CH {{1, 2, 6}, {1, 3, 7}, {1, 5, 4}, {2, 4, 3}, {2, 5, 7}, {3, 6, 5}, {4, 6, 7}} flat triad/mask bits {1, 2, 6, 3, 7, 5, 4} {0, 0, 1, 1, 0, 1, 0}
100	$^{t}_{\mathrm{rm}}{}^{-2/3}_{\bar{R}}$	{BC8, E7, E6(27), 6Cube, C4, snubH4 8–3, ring1}	$0apggssscc_{0111111101}$	Bn{ $\frac{1}{2}$, $\frac{1}{2}$, $-\frac{1}{2}$, $\frac{1}{2}$, $\frac{1}{2}$, $-\frac{1}{2}$, $-\frac{1}{2}$, $-\frac{1}{2}$ } E8{ $\frac{1}{2}$, $\frac{1}{2}$, $\frac{1}{2}$, $\frac{1}{2}$, $\frac{1}{2}$, $-\frac{1}{2}$, $-\frac{1}{2}$, $-\frac{1}{2}$ } Ph{ $\frac{1}{2}$, $\frac{1}{2}$, $-\frac{1}{\sqrt{2}}$, 0, $-\frac{1}{2}$, $-\frac{1}{2\sqrt{3}}$, $-\frac{1}{\sqrt{2}}$, $-\frac{1}{\sqrt{6}}$ }	Rt{ 1 2 2 3 1 2 3 2 } Wt{ 0 1 −1 1 0 0 −1 1 } Ht 16	Am 95	Flipped Triad fpi=25 BC_8 R fp_sm=5→43H {{1, 7, 2}, {1, 4, 3}, {1, 5, 6}, {2, 3, 5}, {2, 4, 6}, {3, 6, 7}, {4, 7, 5}} flat triad/mask bits {1, 2, 7, 4, 3, 5, 6} {1, 1, 0, 0, 0, 0, 1}	Not Flipped Triad fpi=26 BC_8 R fp_sm=8→40H {{1, 2, 7}, {1, 3, 4}, {1, 5, 6}, {2, 3, 6}, {2, 4, 5}, {3, 5, 7}, {4, 7, 6}} flat triad/mask bits {1, 2, 7, 3, 4, 5, 6} {0, 0, 0, 0, 0, 0, 1}
101	$^{t}_{\mathrm{gm}}{}^{-2/3}_{\bar{R}}$	{BC8, 6Cube, H4Φcell8, ring2}	$0apggssscc_{0111111110}$	Bn{ $\frac{1}{2}$, $\frac{1}{2}$, $-\frac{1}{2}$, $\frac{1}{2}$, $\frac{1}{2}$, $-\frac{1}{2}$, $-\frac{1}{2}$, $-\frac{1}{2}$ } E8{ $\frac{1}{2}$, $\frac{1}{2}$, $\frac{1}{2}$, $\frac{1}{2}$, $\frac{1}{2}$, $-\frac{1}{2}$, $-\frac{1}{2}$, $-\frac{1}{2}$ } Ph{ $\frac{1}{2}$, $\frac{1}{2}$, $-\frac{1}{\sqrt{2}}$, 0, $-\frac{1}{2}$, $-\frac{1}{2\sqrt{3}}$, $-\frac{1}{\sqrt{2}}$, $-\frac{1}{\sqrt{6}}$ }	Rt{ 1 2 2 3 1 2 3 1 } Wt{ 0 1 −1 1 0 0 0 −1 } Ht 15	U 92	Flipped Triad fpi=27 BC_8 R fp_sm=4→48H {{1, 2, 7}, {1, 3, 5}, {1, 4, 6}, {2, 4, 3}, {2, 5, 6}, {3, 6, 7}, {4, 7, 5}} flat triad/mask bits {1, 7, 2, 3, 5, 4, 6} {0, 0, 0, 1, 0, 0, 1}	Not Flipped Triad fpi=29 BC_8 R fp_sm=7→41H {{1, 7, 2}, {1, 3, 6}, {1, 4, 5}, {2, 3, 4}, {2, 5, 6}, {3, 5, 7}, {4, 7, 6}} flat triad/mask bits {1, 7, 2, 3, 6, 4, 5} {1, 0, 0, 0, 0, 0, 1}
102	$^{t}_{\mathrm{bm}}{}^{-2/3}_{\bar{R}}$	{BC8, snubH4Φ 8–2, ring2}	$0apggssscc_{0111111111}$	Bn{ $\frac{1}{2}$, $\frac{1}{2}$, $-\frac{1}{2}$, $\frac{1}{2}$, $\frac{1}{2}$, $-\frac{1}{2}$, $-\frac{1}{2}$, $-\frac{1}{2}$ } E8{ $\frac{1}{2}$, $\frac{1}{2}$, $\frac{1}{2}$, $\frac{1}{2}$, $\frac{1}{2}$, $-\frac{1}{2}$, $-\frac{1}{2}$, $-\frac{1}{2}$ } Ph{ $\frac{1}{2}$, $\frac{1}{2}$, $-\frac{1}{\sqrt{2}}$, 0, $-\frac{1}{2}$, $-\frac{1}{2\sqrt{3}}$, 0, $\sqrt{\frac{2}{3}}$ }	Rt{ 0 0 −1 −1 −1 −2 −2 −1 } Wt{ 0 1 −1 1 0 −1 0 0 } Ht 8	$\overline{\mathrm{Sb}}$ 51	Flipped Triad fpi=30 BC_8 R fp_sm=6→42H {{1, 2, 7}, {1, 6, 3}, {1, 4, 5}, {2, 3, 5}, {2, 4, 6}, {3, 4, 7}, {5, 7, 6}} flat triad/mask bits {1, 7, 2, 6, 3, 4, 5} {0, 1, 0, 0, 0, 0, 1}	Not Flipped Triad fpi=28 BC_8 R fp_sm=3→49H {{1, 7, 2}, {1, 3, 5}, {1, 4, 6}, {2, 6, 3}, {2, 4, 5}, {3, 4, 7}, {5, 7, 6}} flat triad/mask bits {1, 7, 2, 7, 3, 5, 4, 6} {1, 0, 0, 1, 0, 0, 1}
103	$^{d}_{\mathrm{cl}}{}^{1/3}_{\bar{R}}$	{BC8, E7, E6(27), 6Cube, C4, H4cell8, Hamming, ring4}	$0apggssscc_{0100010101}$	Bn{ $\frac{1}{2}$, $\frac{1}{2}$, $-\frac{1}{2}$, $-\frac{1}{2}$, $\frac{1}{2}$, $\frac{1}{2}$, $\frac{1}{2}$, $\frac{1}{2}$ } E8{ $\frac{1}{2}$, $\frac{1}{2}$, $\frac{1}{2}$, $-\frac{1}{2}$, $\frac{1}{2}$, $-\frac{1}{2}$, $-\frac{1}{2}$, $-\frac{1}{2}$ } Ph{ $\frac{1}{2}$, $\frac{1}{2}$, 0, $-\frac{1}{\sqrt{2}}$, $\frac{1}{2}$, $-\frac{1}{2\sqrt{3}}$, $-\frac{1}{\sqrt{2}}$, $-\frac{1}{\sqrt{6}}$ }	Rt{ 1 2 2 2 1 2 3 2 } Wt{ 0 1 0 −1 0 0 0 1 } Ht 15	Pa 91	Flipped Triad fpi=10 BC_8 L fp_sm=5→69H {{1, 4, 2}, {1, 3, 6}, {1, 5, 7}, {2, 7, 3}, {2, 5, 6}, {3, 5, 4}, {4, 7, 6}} flat triad/mask bits {1, 2, 4, 3, 6, 5, 7} {1, 0, 0, 1, 0, 1, 1}	Not Flipped Triad fpi=8 BC_8 L fp_sm=2→60H {{1, 2, 4}, {1, 3, 5}, {1, 6, 7}, {2, 6, 3}, {2, 5, 6}, {3, 6, 4}, {4, 7, 5}} flat triad/mask bits {1, 2, 4, 3, 6, 5, 7} {0, 0, 0, 0, 0, 1, 1}
104	$^{d}_{\mathrm{cl}}{}^{1/3}_{\bar{R}}$	{BC8, 6Cube, snubH4 8–3, ring1}	$0apggssscc_{0100010110}$	Bn{ $\frac{1}{2}$, $\frac{1}{2}$, $-\frac{1}{2}$, $-\frac{1}{2}$, $\frac{1}{2}$, $\frac{1}{2}$, $\frac{1}{2}$, $\frac{1}{2}$ } E8{ $\frac{1}{2}$, $\frac{1}{2}$, $\frac{1}{2}$, $-\frac{1}{2}$, $\frac{1}{2}$, $-\frac{1}{2}$, $-\frac{1}{2}$, $-\frac{1}{2}$ } Ph{ $\frac{1}{2}$, $\frac{1}{2}$, 0, $-\frac{1}{\sqrt{2}}$, $\frac{1}{2}$, $-\frac{1}{2\sqrt{3}}$, $-\frac{1}{\sqrt{2}}$, $-\frac{1}{\sqrt{6}}$ }	Rt{ 1 2 2 2 1 2 3 1 } Wt{ 0 1 0 −1 0 0 1 −1 } Ht 14	Ra 88	Flipped Triad fpi=12 BC_8 L fp_sm=4→62H {{1, 2, 4}, {1, 7, 3}, {1, 5, 6}, {2, 3, 6}, {2, 5, 7}, {3, 5, 4}, {4, 7, 6}} flat triad/mask bits {1, 4, 2, 7, 3, 5, 6} {0, 1, 0, 0, 0, 1, 1}	Not Flipped Triad fpi=11 BC_8 L fp_sm=1→61H {{1, 4, 2}, {1, 3, 7}, {1, 5, 6}, {2, 3, 5}, {2, 6, 7}, {3, 6, 4}, {4, 7, 5}} flat triad/mask bits {1, 4, 2, 3, 7, 5, 6} {1, 0, 0, 0, 0, 1, 1}
105	$^{d}_{\mathrm{ml}}{}^{1/3}_{\bar{R}}$	{BC8, snubH4Φ 16–4, ring6}	$0apggssscc_{0100010111}$	Bn{ $\frac{1}{2}$, $\frac{1}{2}$, $-\frac{1}{2}$, $-\frac{1}{2}$, $\frac{1}{2}$, $\frac{1}{2}$, $\frac{1}{2}$, $\frac{1}{2}$ } E8{ $\frac{1}{2}$, $\frac{1}{2}$, $\frac{1}{2}$, $-\frac{1}{2}$, $\frac{1}{2}$, $-\frac{1}{2}$, $-\frac{1}{2}$, $-\frac{1}{2}$ } Ph{ $\frac{1}{2}$, $\frac{1}{2}$, 0, $-\frac{1}{\sqrt{2}}$, $\frac{1}{2}$, $-\frac{1}{2\sqrt{3}}$, 0, $\sqrt{\frac{2}{3}}$ }	Rt{ 0 0 −1 −2 −1 −2 −2 −1 } Wt{ 0 1 0 −1 0 −1 1 0 } Ht 9	$\overline{\mathrm{La}}$ 57	Flipped Triad fpi=13 BC_8 L fp_sm=6→68H {{1, 2, 5}, {1, 3, 4}, {1, 6, 7}, {2, 6, 3}, {2, 4, 7}, {3, 7, 5}, {4, 6, 5}} flat triad/mask bits {1, 5, 2, 3, 4, 6, 7} {0, 0, 0, 1, 0, 1, 1}	Not Flipped Triad fpi=14 BC_8 L fp_sm=7→6BH {{1, 5, 2}, {1, 4, 3}, {1, 6, 7}, {2, 7, 3}, {2, 4, 6}, {3, 6, 5}, {4, 7, 5}} flat triad/mask bits {1, 5, 2, 4, 3, 6, 7} {1, 1, 0, 1, 0, 1, 1}
106	$^{u}_{\mathrm{bd}}{}^{2/3}_{\bar{L}}$	{BC8, 6Cube, snubH4 16–2, ring4}	$0apggssscc_{0010100011}$	Bn{ $\frac{1}{2}$, $\frac{1}{2}$, $-\frac{1}{2}$, $-\frac{1}{2}$, $\frac{1}{2}$, $-\frac{1}{2}$, $-\frac{1}{2}$, $-\frac{1}{2}$ } E8{ $\frac{1}{2}$, $\frac{1}{2}$, $\frac{1}{2}$, $-\frac{1}{2}$, $\frac{1}{2}$, $\frac{1}{2}$, $\frac{1}{2}$, $\frac{1}{2}$ } Ph{ $\frac{1}{2}$, $\frac{1}{2}$, 0, $-\frac{1}{\sqrt{2}}$, $-\frac{1}{2}$, $\frac{1}{2\sqrt{3}}$, 0, $-\sqrt{\frac{2}{3}}$ }	Rt{ 1 2 2 2 1 2 2 1 } Wt{ 0 1 0 0 0 1 −1 0 } Ht 13	Po 84	Flipped Triad fpi=13 BC_8 R fp_sm=6→0EH {{1, 2, 5}, {1, 4, 3}, {1, 7, 6}, {2, 6, 3}, {2, 4, 7}, {3, 5, 7}, {4, 5, 6}} flat triad/mask bits {1, 5, 2, 4, 3, 7, 6} {0, 1, 1, 1, 0, 0, 0}	Not Flipped Triad fpi=14 BC_8 R fp_sm=7→0DH {{1, 5, 2}, {1, 3, 4}, {1, 7, 6}, {2, 7, 3}, {2, 4, 6}, {3, 5, 6}, {4, 5, 7}} flat triad/mask bits {1, 5, 2, 3, 4, 7, 6} {1, 0, 1, 1, 0, 0, 0}
107	$^{u}_{\mathrm{gd}}{}^{2/3}_{\bar{L}}$	{BC8, snubH4Φ 8–4, Idempot, ring8}	$0apggssscc_{0010100010}$	Bn{ $\frac{1}{2}$, $\frac{1}{2}$, $-\frac{1}{2}$, $-\frac{1}{2}$, $\frac{1}{2}$, $-\frac{1}{2}$, $-\frac{1}{2}$, $-\frac{1}{2}$ } E8{ $\frac{1}{2}$, $\frac{1}{2}$, $\frac{1}{2}$, $-\frac{1}{2}$, $\frac{1}{2}$, $-\frac{1}{2}$, $-\frac{1}{2}$, $-\frac{1}{2}$ } Ph{ $\frac{1}{2}$, $\frac{1}{2}$, 0, $-\frac{1}{\sqrt{2}}$, $\frac{1}{2}$, $-\frac{1}{2\sqrt{3}}$, $-\frac{1}{\sqrt{2}}$, $-\frac{1}{\sqrt{6}}$ }	Rt{ 0 0 −1 −2 −1 −2 −3 −1 } Wt{ 0 1 0 0 0 0 −1 1 } Ht 10	$\overline{\mathrm{Eu}}$ 63	Flipped Triad fpi=12 BC_8 R fp_sm=4→04H {{1, 2, 4}, {1, 3, 7}, {1, 6, 5}, {2, 3, 6}, {2, 5, 7}, {3, 4, 5}, {4, 6, 7}} flat triad/mask bits {1, 4, 2, 3, 7, 6, 5} {0, 0, 1, 0, 0, 0, 0}	Not Flipped Triad fpi=11 BC_8 R fp_sm=1→07H {{1, 4, 2}, {1, 7, 3}, {1, 6, 5}, {2, 3, 5}, {2, 6, 7}, {3, 4, 6}, {4, 5, 7}} flat triad/mask bits {1, 4, 2, 7, 3, 6, 5} {1, 1, 1, 0, 0, 0, 0}
108	$^{u}_{\mathrm{rd}}{}^{2/3}_{\bar{L}}$	{BC8, E7, E6(27), H4Φcell8, Hamming, ring6}	$0apggssscc_{0010100001}$	Bn{ $\frac{1}{2}$, $\frac{1}{2}$, $-\frac{1}{2}$, $-\frac{1}{2}$, $\frac{1}{2}$, $-\frac{1}{2}$, $-\frac{1}{2}$, $-\frac{1}{2}$ } E8{ $\frac{1}{2}$, $\frac{1}{2}$, $\frac{1}{2}$, $-\frac{1}{2}$, $\frac{1}{2}$, $-\frac{1}{2}$, $-\frac{1}{2}$, $-\frac{1}{2}$ } Ph{ $\frac{1}{2}$, $\frac{1}{2}$, 0, $-\frac{1}{\sqrt{2}}$, $-\frac{1}{2}$, $\frac{1}{2\sqrt{3}}$, $\frac{1}{\sqrt{2}}$, $\frac{1}{\sqrt{6}}$ }	Rt{ 0 0 −1 −2 −1 −2 −3 −2 } Wt{ 0 1 0 0 0 0 0 −1 } Ht 11	$\overline{\mathrm{Tm}}$ 69	Flipped Triad fpi=10 BC_8 R fp_sm=5→0FH {{1, 4, 2}, {1, 6, 3}, {1, 7, 5}, {2, 7, 3}, {2, 5, 6}, {3, 4, 5}, {4, 6, 7}} flat triad/mask bits {1, 2, 4, 6, 3, 7, 5} {1, 1, 1, 1, 0, 0, 0}	Not Flipped Triad fpi=8 BC_8 R fp_sm=2→06H {{1, 2, 4}, {1, 5, 3}, {1, 7, 6}, {2, 3, 7}, {2, 5, 6}, {3, 4, 6}, {4, 5, 7}} flat triad/mask bits {1, 2, 4, 5, 3, 7, 6} {0, 1, 1, 0, 0, 0, 0}
109	$^{\tau}_{\mathrm{yl}}{}^{-}_{\bar{R}}$	{BC8, E7, E6, 6Cube, C4, snubH4Φ 8–3, ring8}	$0apggssscc_{0001101002}$	Bn{ $\frac{1}{2}$, $-\frac{1}{2}$, $\frac{1}{2}$, $\frac{1}{2}$, $\frac{1}{2}$, $-\frac{1}{2}$, $\frac{1}{2}$, $-\frac{1}{2}$ } E8{ $\frac{1}{2}$, $-\frac{1}{2}$, $\frac{1}{2}$, $\frac{1}{2}$, $\frac{1}{2}$, $-\frac{\sqrt{3}}{2}$, $-\frac{1}{2}$, $-\frac{1}{2}$ } Ph{ $\frac{1}{2}$, $-\frac{1}{2}$, 0, $\frac{1}{\sqrt{2}}$, $\frac{1}{2}$, $-\frac{1}{2}$, 0, 0 }	Rt{ 1 1 2 3 1 2 4 2 } Wt{ 1 −1 0 0 0 −1 1 0 } Ht 16	Pu 94	Flipped Triad fpi=24 BC_8 L fp_sm=3→1CH {{1, 2, 6}, {1, 3, 7}, {1, 5, 4}, {2, 5, 3}, {2, 7, 4}, {3, 4, 6}, {5, 6, 7}} flat triad/mask bits {1, 6, 2, 3, 7, 5, 4} {0, 0, 1, 1, 1, 0, 0}	Not Flipped Triad fpi=23 BC_8 L fp_sm=2→1FH {{1, 6, 2}, {1, 7, 3}, {1, 5, 4}, {2, 4, 3}, {2, 7, 5}, {3, 5, 6}, {4, 6, 7}} flat triad/mask bits {1, 6, 2, 7, 3, 5, 4} {1, 1, 1, 1, 1, 0, 0}
110	$^{t}_{\mathrm{rd}}{}^{-2/3}_{\bar{L}}$	{BC8, E7, E6(27), 6Cube, C4, H4Φcell8, ring2}	$0apggssscc_{0111100001}$	Bn{ $\frac{1}{2}$, $-\frac{1}{2}$, $\frac{1}{2}$, $\frac{1}{2}$, $\frac{1}{2}$, $-\frac{1}{2}$, $\frac{1}{2}$, $-\frac{1}{2}$ } E8{ $\frac{1}{2}$, $-\frac{1}{2}$, $\frac{1}{2}$, $\frac{1}{2}$, $\frac{1}{2}$, $-\frac{1}{2}$, $-\frac{1}{2}$, $-\frac{1}{2}$ } Ph{ $\frac{1}{2}$, $-\frac{1}{2}$, 0, $\frac{1}{\sqrt{2}}$, $-\frac{1}{2}$, $-\frac{1}{2\sqrt{3}}$, $-\frac{1}{\sqrt{2}}$, $-\frac{1}{\sqrt{6}}$ }	Rt{ 1 1 2 3 1 2 3 2 } Wt{ 1 −1 0 1 0 0 −1 1 } Ht 15	Th 90	Flipped Triad fpi=25 BC_8 R fp_sm=5→70H {{1, 2, 7}, {1, 3, 4}, {1, 5, 6}, {2, 3, 5}, {2, 6, 4}, {3, 7, 6}, {4, 7, 5}} flat triad/mask bits {1, 7, 2, 3, 4, 5, 6} {0, 0, 0, 0, 1, 1, 1}	Not Flipped Triad fpi=26 BC_8 R fp_sm=8→73H {{1, 7, 2}, {1, 4, 3}, {1, 5, 6}, {2, 3, 6}, {2, 5, 4}, {3, 7, 5}, {4, 7, 6}} flat triad/mask bits {1, 7, 2, 4, 3, 5, 6} {1, 1, 0, 0, 1, 1, 1}

111	$\overline{t}_{9d}\,\overline{L}^{2/3}$	{BC8, 6Cube, snubH4Φ 16–3, ring6}	$0apggsscc\,0111100010_2$	Bn{ 1/1, 0/1, 1/1, 1/1, 0/1, 0/1, 1/1, 0/1 } E8{ 1/1, −1/1, 1/1, 1/1, −1/1, −1/1, 1/1, −1/1 } Ph{ 1/2, −1/2, 2, $\frac{1}{\sqrt{2}}$, $\frac{1}{2}$, $-\frac{1}{2\sqrt{3}}$, $\frac{1}{\sqrt{2}}$, $-\frac{1}{\sqrt{6}}$ }	Rt{ 1 1 2 3 1 2 3 1 } Wt{ 1 −1 0 1 0 0 0 −1 } Ht 14	Fr 87	Flipped Triad fpi=27 BC_8 R fp_sm=4→7BH {{1, 7, 2}, {1, 5, 3}, {1, 4, 6}, {2, 4, 3}, {2, 6, 5}, {3, 7, 6}, {4, 7, 5}} flat triad/mask bits {1, 2, 7, 5, 3, 4, 6} {1, 1, 0, 1, 1, 1, 1}	Not Flipped Triad fpi=29 BC_8 R fp_sm=7→72H {{1, 2, 7}, {1, 5, 3}, {1, 4, 5}, {2, 3, 4}, {2, 6, 5}, {3, 7, 5}, {4, 7, 6}} flat triad/mask bits {1, 2, 7, 6, 3, 4, 5} {0, 1, 0, 0, 1, 1, 1}
112	$\overline{t}_{b_d}\,\overline{L}^{2/3}$	{BC8, snubH4 8–4, Idempot, ring1}	$0apggsscc\,0111100011_2$	Bn{ 1/1, 0/1, 1/1, 1/1, 0/1, 0/1, 0/1, 1/1 } E8{ 2, −1/2, 2, 2, −1/2, −1/2, −1/2, 2 } Ph{ 1/2, −1/2, 0, $\frac{1}{\sqrt{2}}$, $\frac{1}{2}$, $-\frac{1}{2\sqrt{3}}$, 0, $\sqrt{\frac{2}{3}}$ }	Rt{ 0 −1 −1 −1 −1 −2 −2 −1 } Wt{ 1 −1 0 1 0 −1 0 0 } Ht 9	$\overline{Ce}$ 58	Flipped Triad fpi=30 BC_8 R fp_sm=6→71H {{1, 7, 2}, {1, 3, 6}, {1, 4, 5}, {2, 3, 5}, {2, 6, 4}, {3, 7, 4}, {5, 7, 6}} flat triad/mask bits {1, 7, 2, 3, 6, 4, 5} {0, 0, 0, 0, 1, 1, 1}	Not Flipped Triad fpi=28 BC_8 R fp_sm=3→7AH {{1, 2, 7}, {1, 5, 3}, {1, 4, 6}, {2, 6, 3}, {2, 5, 4}, {3, 7, 4}, {5, 7, 6}} flat triad/mask bits {1, 2, 7, 5, 3, 4, 6} {0, 1, 0, 1, 1, 1, 1}
113	$\overline{d}_{0m}\,\overline{L}^{1/3}$	{BC8, E7, E6(27), 6Cube, C4, snubH4Φ 16–3, Idempot, ring2}	$0apggsscc\,0100110012_2$	Bn{ 1/1, 0/1, 1/1, 0/1, 1/1, 1/1, 0/1, 0/1 } E8{ 2, 2, 2, 2, 1, 1, −1/2, 2 } Ph{ 1/2, −1/2, $\frac{1}{\sqrt{2}}$, 0, $\frac{1}{2}$, $-\frac{1}{2\sqrt{3}}$, $-\frac{1}{\sqrt{2}}$, $-\frac{1}{\sqrt{6}}$ }	Rt{ 1 1 2 2 1 2 3 2 } Wt{ 1 −1 1 −1 0 0 0 1 } Ht 14	Rn 86	Flipped Triad fpi=10 BC_8 L fp_sm=5→5AH {{1, 2, 4}, {1, 6, 3}, {1, 5, 7}, {2, 7, 3}, {2, 6, 5}, {3, 4, 5}, {4, 7, 6}} flat triad/mask bits {1, 4, 2, 6, 3, 5, 7} {0, 1, 0, 1, 1, 0, 1}	Not Flipped Triad fpi=8 BC_8 L fp_sm=2→53H {{1, 4, 2}, {1, 5, 3}, {1, 6, 7}, {2, 3, 7}, {2, 6, 5}, {3, 4, 6}, {4, 7, 5}} flat triad/mask bits {1, 4, 2, 5, 3, 6, 7} {1, 1, 0, 0, 1, 0, 1}
114	$\overline{d}_{cm}\,\overline{L}^{1/3}$	{BC8, 6Cube, H4cell8, Hamming, ring3}	$0apggsscc\,0100110010_2$	Bn{ 1/1, 0/1, 1/1, 0/1, 1/1, 0/1, 1/1, 0/1 } E8{ 2, −1/2, 2, 2, −1/2, −1/2, 2, −1/2 } Ph{ 1/2, −1/2, $\frac{1}{\sqrt{2}}$, 0, $\frac{1}{2}$, $-\frac{1}{2\sqrt{3}}$, $\frac{1}{\sqrt{2}}$, $-\frac{1}{\sqrt{6}}$ }	Rt{ 1 1 2 2 1 2 3 1 } Wt{ 1 −1 1 −1 0 0 1 −1 } Ht 13	Bi 83	Flipped Triad fpi=12 BC_8 L fp_sm=4→51H {{1, 4, 2}, {1, 3, 7}, {1, 5, 6}, {2, 3, 6}, {2, 7, 5}, {3, 4, 5}, {4, 7, 6}} flat triad/mask bits {1, 2, 4, 3, 7, 5, 6} {1, 0, 0, 0, 1, 0, 1}	Not Flipped Triad fpi=11 BC_8 L fp_sm=1→52H {{1, 2, 4}, {1, 7, 3}, {1, 5, 6}, {2, 3, 5}, {2, 7, 6}, {3, 4, 6}, {4, 7, 5}} flat triad/mask bits {1, 2, 4, 7, 3, 5, 6} {0, 0, 0, 1, 0, 1, 1}
115	$\overline{d}_{mm}\,\overline{L}^{1/3}$	{BC8, snubH4 8–2, ring3}	$0apggsscc\,0100110011_2$	Bn{ 1/1, 0/1, 1/1, 0/1, 1/1, 0/1, 0/1, 1/1 } E8{ 2, −1/2, 2, −1/2, 2, 2, −1/2, 2 } Ph{ 1/2, −1/2, $\frac{1}{\sqrt{2}}$, 0, $\frac{1}{2}$, $-\frac{1}{2\sqrt{3}}$, 0, $\sqrt{\frac{2}{3}}$ }	Rt{ 0 −1 −1 −2 −1 −2 −2 −1 } Wt{ 1 −1 1 −1 0 −1 1 0 } Ht 10	$\overline{Gd}$ 64	Flipped Triad fpi=13 BC_8 L fp_sm=6→5BH {{1, 5, 2}, {1, 4, 3}, {1, 6, 7}, {2, 6, 3}, {2, 7, 4}, {3, 5, 7}, {4, 6, 5}} flat triad/mask bits {1, 2, 5, 4, 3, 6, 7} {1, 1, 0, 1, 1, 0, 1}	Not Flipped Triad fpi=14 BC_8 L fp_sm=7→58H {{1, 2, 5}, {1, 3, 4}, {1, 6, 7}, {2, 7, 3}, {2, 6, 4}, {3, 5, 6}, {4, 7, 5}} flat triad/mask bits {1, 2, 5, 3, 4, 6, 7} {0, 0, 0, 1, 1, 0, 1}
116	$\overline{u}_{bm}\,\overline{R}^{2/3}$	{BC8, 6Cube, snubH4Φ 8–3, ring2}	$0apggsscc\,0010111111_2$	Bn{ 1/1, 0/1, 1/1, 0/1, 0/1, 1/1, 1/1, 0/1 } E8{ 2, 2, 2, −1/2, −1/2, 2, 2, 2 } Ph{ 1/2, −1/2, $\frac{1}{\sqrt{2}}$, 0, $-\frac{1}{2}$, $\frac{1}{2\sqrt{3}}$, 0, $-\sqrt{\frac{2}{3}}$ }	Rt{ 1 1 2 2 1 2 2 1 } Wt{ 1 −1 1 0 0 1 −1 0 } Ht 12	Pt 78	Flipped Triad fpi=13 BC_8 R fp_sm=6→3DH {{1, 5, 2}, {1, 3, 4}, {1, 7, 6}, {2, 6, 3}, {2, 7, 4}, {3, 7, 5}, {4, 5, 6}} flat triad/mask bits {1, 2, 5, 3, 4, 7, 6} {0, 1, 1, 1, 1, 1, 0}	Not Flipped Triad fpi=14 BC_8 R fp_sm=7→3EH {{1, 2, 5}, {1, 4, 3}, {1, 7, 6}, {2, 7, 3}, {2, 6, 4}, {3, 6, 5}, {4, 5, 7}} flat triad/mask bits {1, 2, 5, 4, 3, 7, 6} {0, 1, 1, 1, 1, 1, 0}
117	$\overline{u}_{9m}\,\overline{R}^{2/3}$	{BC8, H4Φcell8, Hamming, ring6}	$0apggsscc\,0010111110_2$	Bn{ 1/1, 0/1, 1/1, 0/1, 0/1, 1/1, 0/1, 1/1 } E8{ 2, 2, 2, −1/2, 2, 2, −1/2, 2 } Ph{ 1/2, −1/2, $\frac{1}{\sqrt{2}}$, 0, $-\frac{1}{2}$, $\frac{1}{2\sqrt{3}}$, $-\frac{1}{\sqrt{2}}$, $\frac{1}{\sqrt{6}}$ }	Rt{ 0 −1 −1 −2 −1 −2 −3 −1 } Wt{ 1 −1 1 0 0 0 −1 1 } Ht 11	$\overline{Yb}$ 70	Flipped Triad fpi=12 BC_8 R fp_sm=4→37H {{1, 4, 2}, {1, 7, 3}, {1, 6, 5}, {2, 3, 6}, {2, 7, 5}, {3, 5, 4}, {4, 6, 7}} flat triad/mask bits {1, 2, 4, 7, 3, 6, 5} {1, 1, 1, 0, 1, 1, 0}	Not Flipped Triad fpi=11 BC_8 R fp_sm=1→34H {{1, 2, 4}, {1, 3, 7}, {1, 6, 5}, {2, 3, 5}, {2, 7, 6}, {3, 4, 6}, {4, 5, 7}} flat triad/mask bits {1, 2, 4, 3, 7, 6, 5} {0, 0, 1, 0, 1, 1, 0}
118	$\overline{u}_{rm}\,\overline{R}^{2/3}$	{BC8, E7, E6(27), snubH4 8–4, ring3}	$0apggsscc\,0010111101_2$	Bn{ 1/1, 0/1, 1/1, 0/1, 0/1, 0/1, 1/1, 1/1 } E8{ 2, 2, 2, −1/2, 2, 1, 2, 1 } Ph{ 1/2, −1/2, $\frac{1}{\sqrt{2}}$, 0, $-\frac{1}{2}$, $\frac{1}{2\sqrt{3}}$, $\frac{1}{\sqrt{2}}$, $\frac{1}{\sqrt{6}}$ }	Rt{ 0 −1 −1 −2 −1 −2 −3 −2 } Wt{ 1 −1 1 0 0 0 0 −1 } Ht 12	$\overline{Re}$ 75	Flipped Triad fpi=10 BC_8 R fp_sm=5→3CH {{1, 2, 4}, {1, 3, 6}, {1, 7, 5}, {2, 7, 3}, {2, 6, 5}, {3, 5, 4}, {4, 6, 7}} flat triad/mask bits {1, 4, 2, 3, 6, 7, 5} {0, 0, 1, 1, 1, 1, 0}	Not Flipped Triad fpi=8 BC_8 R fp_sm=2→35H {{1, 4, 2}, {1, 3, 5}, {1, 7, 6}, {2, 3, 7}, {2, 6, 5}, {3, 6, 4}, {4, 5, 7}} flat triad/mask bits {1, 4, 2, 3, 5, 7, 6} {0, 0, 1, 0, 1, 1, 0}
119	$\overline{u}_{rm}\,\overline{L}^{2/3}$	{BC8, E7, E6(27), 6Cube, C4, snubH4 8–4, ring5}	$0apggsscc\,0110110001_2$	Bn{ 1/1, 0/1, 0/1, 1/1, 1/1, 1/1, 0/1, 0/1 } E8{ 2, 2, 2, 2, 1, 1, −1/2, 2 } Ph{ 1/2, −1/2, $-\frac{1}{\sqrt{2}}$, 0, $\frac{1}{2}$, $-\frac{1}{2\sqrt{3}}$, $-\frac{1}{\sqrt{2}}$, $-\frac{1}{\sqrt{6}}$ }	Rt{ 1 1 1 2 1 2 3 2 } Wt{ 1 0 −1 0 0 0 0 1 } Ht 13	Pb 82	Flipped Triad fpi=8 BC_8 R fp_sm=2→54H {{1, 2, 4}, {1, 3, 5}, {1, 7, 6}, {2, 3, 7}, {2, 6, 5}, {3, 4, 6}, {4, 7, 5}} flat triad/mask bits {1, 4, 2, 3, 5, 7, 6} {0, 0, 1, 0, 1, 0, 1}	Not Flipped Triad fpi=10 BC_8 R fp_sm=5→5DH {{1, 4, 2}, {1, 3, 6}, {1, 7, 5}, {2, 7, 3}, {2, 6, 5}, {3, 4, 5}, {4, 7, 6}} flat triad/mask bits {1, 4, 2, 5, 3, 7, 6} {0, 0, 1, 1, 1, 0, 1}
120	$\overline{u}_{9m}\,\overline{L}^{2/3}$	{BC8, 6Cube, snubH4Φ 8–2, ring8}	$0apggsscc\,0110110010_2$	Bn{ 1/1, 0/1, 0/1, 1/1, 1/1, 0/1, 1/1, 0/1 } E8{ 2, 2, 2, 2, 1, 1, −1/2, 2 } Ph{ 1/2, −1/2, $-\frac{1}{\sqrt{2}}$, 0, $\frac{1}{2}$, $-\frac{1}{2\sqrt{3}}$, $\frac{1}{\sqrt{2}}$, $-\frac{1}{\sqrt{6}}$ }	Rt{ 1 1 1 2 1 2 3 1 } Wt{ 1 0 −1 0 0 0 1 −1 } Ht 12	Ir 77	Flipped Triad fpi=11 BC_8 R fp_sm=1→55H {{1, 4, 2}, {1, 3, 7}, {1, 6, 5}, {2, 3, 5}, {2, 7, 6}, {3, 4, 6}, {4, 7, 5}} flat triad/mask bits {1, 2, 4, 3, 7, 6, 5} {0, 1, 1, 0, 1, 0, 1}	Not Flipped Triad fpi=12 BC_8 R fp_sm=4→56H {{1, 2, 4}, {1, 7, 3}, {1, 6, 5}, {2, 3, 6}, {2, 7, 5}, {3, 4, 5}, {4, 7, 6}} flat triad/mask bits {1, 2, 4, 3, 7, 6, 5} {0, 1, 1, 0, 1, 0, 1}
121	$\overline{u}_{bm}\,\overline{L}^{2/3}$	{BC8, H4cell8, Hamming, ring3}	$0apggsscc\,0110110011_2$	Bn{ 1/1, 0/1, 0/1, 1/1, 1/1, 0/1, 1/1, 0/1 } E8{ 2, 2, 2, 2, 2, 1, −1/2, 2 } Ph{ 1/2, −1/2, $-\frac{1}{\sqrt{2}}$, 0, $\frac{1}{2}$, $-\frac{1}{2\sqrt{3}}$, 0, $\sqrt{\frac{2}{3}}$ }	Rt{ 0 −1 −2 −2 −1 −2 −2 −1 } Wt{ 1 0 −1 0 0 −1 1 0 } Ht 11	$\overline{Lu}$ 71	Flipped Triad fpi=14 BC_8 R fp_sm=7→5FH {{1, 5, 2}, {1, 4, 3}, {1, 7, 6}, {2, 7, 3}, {2, 6, 4}, {3, 5, 6}, {4, 7, 5}} flat triad/mask bits {1, 2, 5, 4, 3, 7, 6} {1, 1, 1, 1, 1, 0, 1}	Not Flipped Triad fpi=13 BC_8 R fp_sm=6→5CH {{1, 2, 5}, {1, 3, 4}, {1, 7, 6}, {2, 6, 3}, {2, 7, 4}, {3, 5, 7}, {4, 6, 5}} flat triad/mask bits {1, 2, 5, 3, 4, 7, 6} {0, 0, 1, 1, 1, 0, 1}
122	$\overline{d}_{mm}\,\overline{R}^{1/3}$	{BC8, 6Cube, H4Φcell8, Hamming, Idempot, ring7}	$0apggsscc\,0000111111_2$	Bn{ 1/1, 0/1, 0/1, 1/1, 1/1, 0/1, 1/1, 0/1 } E8{ 2, 2, 2, 2, 2, 2, 2, 2 } Ph{ 1/2, −1/2, $-\frac{1}{\sqrt{2}}$, 0, $-\frac{1}{2}$, $\frac{1}{2\sqrt{3}}$, 0, $-\sqrt{\frac{2}{3}}$ }	Rt{ 1 1 1 2 1 2 2 1 } Wt{ 1 0 −1 1 0 1 −1 0 } Ht 11	Hf 72	Flipped Triad fpi=14 BC_8 L fp_sm=7→39H {{1, 5, 2}, {1, 3, 4}, {1, 6, 7}, {2, 7, 3}, {2, 6, 4}, {3, 6, 5}, {4, 5, 7}} flat triad/mask bits {1, 2, 5, 3, 4, 6, 7} {0, 0, 1, 1, 1, 1, 0}	Not Flipped Triad fpi=13 BC_8 L fp_sm=6→3AH {{1, 2, 5}, {1, 4, 3}, {1, 6, 7}, {2, 6, 3}, {2, 7, 4}, {3, 7, 5}, {4, 5, 6}} flat triad/mask bits {1, 2, 5, 4, 3, 6, 7} {0, 1, 0, 1, 1, 1, 0}
123	$\overline{d}_{cm}\,\overline{R}^{1/3}$	{BC8, snubH4 8–3, ring3}	$0apggsscc\,0000111110_2$	Bn{ 1/1, 0/1, 0/1, 1/1, 0/1, 1/1, 0/1, 1/1 } E8{ 2, 2, 2, 2, 2, 1, −1/2, 2 } Ph{ 1/2, −1/2, $-\frac{1}{\sqrt{2}}$, 0, $-\frac{1}{2}$, $\frac{1}{2\sqrt{3}}$, $-\frac{1}{\sqrt{2}}$, $\frac{1}{\sqrt{6}}$ }	Rt{ 0 −1 −2 −2 −1 −2 −3 −1 } Wt{ 1 0 −1 1 0 0 −1 1 } Ht 12	$\overline{Os}$ 76	Flipped Triad fpi=11 BC_8 L fp_sm=1→33H {{1, 4, 2}, {1, 7, 3}, {1, 5, 6}, {2, 3, 5}, {2, 7, 6}, {3, 6, 4}, {4, 5, 7}} flat triad/mask bits {1, 2, 4, 7, 3, 5, 6} {1, 1, 0, 0, 1, 1, 0}	Not Flipped Triad fpi=12 BC_8 L fp_sm=4→30H {{1, 2, 4}, {1, 3, 7}, {1, 5, 6}, {2, 3, 6}, {2, 7, 5}, {3, 5, 4}, {4, 6, 7}} flat triad/mask bits {1, 2, 4, 3, 7, 5, 6} {0, 0, 0, 0, 1, 1, 0}
124	$\overline{d}_{0m}\,\overline{R}^{1/3}$	{BC8, E7, E6(27), snubH4Φ 8–2, ring6}	$0apggsscc\,0000111101_2$	Bn{ 1/1, 0/1, 0/1, 1/1, 0/1, 0/1, 1/1, 1/1 } E8{ 2, 2, 2, 2, 2, 1, −1/2, 2 } Ph{ 1/2, −1/2, $-\frac{1}{\sqrt{2}}$, 0, $-\frac{1}{2}$, $\frac{1}{2\sqrt{3}}$, $\frac{1}{\sqrt{2}}$, $\frac{1}{\sqrt{6}}$ }	Rt{ 0 −1 −2 −2 −1 −2 −3 −2 } Wt{ 1 0 −1 1 0 0 0 −1 } Ht 13	$\overline{Hg}$ 80	Flipped Triad fpi=8 BC_8 L fp_sm=2→32H {{1, 2, 4}, {1, 5, 3}, {1, 6, 7}, {2, 3, 7}, {2, 6, 5}, {3, 6, 4}, {4, 5, 7}} flat triad/mask bits {1, 4, 2, 5, 3, 6, 7} {0, 1, 0, 0, 1, 1, 0}	Not Flipped Triad fpi=10 BC_8 L fp_sm=5→3BH {{1, 4, 2}, {1, 6, 3}, {1, 5, 7}, {2, 7, 3}, {2, 6, 5}, {3, 5, 4}, {4, 6, 7}} flat triad/mask bits {1, 4, 2, 6, 3, 5, 7} {1, 1, 0, 1, 1, 1, 0}
125	$\overline{t}_{bj}\,\overline{R}^{2/3}$	{BC8, 6Cube, snubH4 8–4, ring4}	$0apggsscc\,0011110111_2$	Bn{ 1/1, 0/1, 0/1, 0/1, 1/1, 1/1, 1/1, 0/1 } E8{ 2, −1/2, 2, −1/2, 2, 2, 2, −1/2 } Ph{ 1/2, −1/2, 0, $-\frac{1}{\sqrt{2}}$, $\frac{1}{2}$, $\frac{1}{2\sqrt{3}}$, 0, $-\sqrt{\frac{2}{3}}$ }	Rt{ 1 1 1 1 1 2 2 1 } Wt{ 1 0 0 −1 0 1 0 0 } Ht 10	Dy 66	Flipped Triad fpi=28 BC_8 R fp_sm=3→1BH {{1, 7, 2}, {1, 5, 3}, {1, 4, 6}, {2, 6, 3}, {2, 5, 4}, {3, 4, 7}, {5, 6, 7}} flat triad/mask bits {1, 7, 2, 5, 3, 4, 6} {1, 1, 0, 1, 1, 0, 0}	Not Flipped Triad fpi=30 BC_8 R fp_sm=6→10H {{1, 2, 7}, {1, 3, 6}, {1, 4, 5}, {2, 3, 5}, {2, 6, 4}, {3, 4, 7}, {5, 6, 7}} flat triad/mask bits {1, 2, 7, 3, 6, 4, 5} {0, 0, 0, 0, 1, 0, 0}
126	$\overline{t}_{9j}\,\overline{R}^{2/3}$	{BC8, snubH4 16–2, ring3}	$0apggsscc\,0011110110_2$	Bn{ 1/1, 0/1, 0/1, 0/1, 1/1, 1/1, 0/1, 1/1 } E8{ 2, −1/2, 2, −1/2, 2, 2, −1/2, 2 } Ph{ 1/2, −1/2, 0, $-\frac{1}{\sqrt{2}}$, $\frac{1}{2}$, $\frac{1}{2\sqrt{3}}$, $-\frac{1}{\sqrt{2}}$, $\frac{1}{\sqrt{6}}$ }	Rt{ 0 −1 −2 −3 −1 −2 −3 −1 } Wt{ 1 0 0 −1 0 0 0 1 } Ht 13	$\overline{Tl}$ 81	Flipped Triad fpi=29 BC_8 R fp_sm=7→13H {{1, 7, 2}, {1, 6, 3}, {1, 4, 5}, {2, 3, 4}, {2, 6, 5}, {3, 5, 7}, {4, 6, 7}} flat triad/mask bits {1, 2, 7, 6, 3, 4, 5} {1, 1, 0, 0, 1, 0, 0}	Not Flipped Triad fpi=27 BC_8 R fp_sm=4→1AH {{1, 2, 7}, {1, 5, 3}, {1, 4, 6}, {2, 4, 3}, {2, 6, 5}, {3, 6, 7}, {4, 5, 7}} flat triad/mask bits {1, 2, 7, 5, 3, 4, 6} {0, 1, 0, 1, 1, 0, 0}

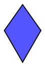
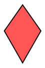
127	$\overset{t}{r}{}_{l}^{\,2/3}\,\overset{\ }{R}$		{BC8, E7, E6(27), snubH4 8–3, Idempot, ring3}	$0apggsscc_{2}$	Bn{ 1, 1, 2, 1, 2 } E8{ 0, −1, 2, 1, 2 } Ph{ 0, −1, 2, 1, 2 }	0, −1, −1, 2, 0	0, −1, −1, 2, 0	0, −1, −1, 2, $-\frac{1}{\sqrt{2}}$	1, 1, 2, 1, 2	0, −1, −1, 2, $\frac{1}{2\sqrt{3}}$	1, 1, 2, 2, $\frac{1}{\sqrt{2}}$	1, 1, 2, 2, $\frac{1}{\sqrt{6}}$	Rt{ 0, −1, −2, −3, −1, −2, −3, −2 } Wt{ 1, 0, 0, −1, 0, 0, 1, −1 } Ht 14	$\overline{\text{At}}$ 85	Flipped Triad fpi=26 BC_8 R fp_sm=8→12H {{1, 2, 7}, {1, 4, 3}, {1, 5, 6}, {2, 3, 6}, {2, 5, 4}, {3, 5, 7}, {4, 6, 7}} flat triad/mask bits {1, 7, 2, 4, 3, 5, 6} {0, 1, 0, 0, 1, 0, 0}	Not Flipped Triad fpi=25 BC_8 R fp_sm=5→11H {{1, 7, 2}, {1, 4, 3}, {1, 5, 6}, {2, 3, 5}, {2, 6, 4}, {3, 6, 7}, {4, 5, 7}} flat triad/mask bits {1, 7, 2, 3, 4, 5, 6} {1, 0, 0, 0, 1, 0, 0}
128	$\overset{r}{y}{}_{d}^{\,+}\,\overset{\ }{L}$		{BC8, E7, E6, H4Φcell8, ring8}	$0apggsscc_{2}$	Bn{ 1, 1, 2, 1, 2 } E8{ 0, −1, 2, 1, 2 } Ph{ 1, 1, 2, 0 }	0, −1, −1, 2, 0	0, −1, −1, 2, $-\frac{1}{\sqrt{2}}$	0, −1, −1, 2, $-\frac{1}{2}$	1, 1, 2, 2, $\frac{\sqrt{3}}{2}$	1, 1, 2, 2, 0	1, 1, 2, 2, 0	Rt{ 0, −1, −2, −3, −1, −2, −4, −2 } Wt{ 1, 0, 0, 0, 0, 1, −1, 0 } Ht 15	$\overline{\text{Ac}}$ 89	Flipped Triad fpi=23 BC_8 L fp_sm=2→7EH {{1, 2, 6}, {1, 7, 3}, {1, 5, 4}, {2, 4, 3}, {2, 7, 5}, {3, 6, 5}, {4, 7, 6}} flat triad/mask bits {1, 7, 2, 4, 3, 5, 6} {0, 1, 1, 1, 1, 1, 1}	Not Flipped Triad fpi=24 BC_8 L fp_sm=3→7DH {{1, 6, 2}, {1, 3, 7}, {1, 5, 4}, {2, 5, 3}, {2, 7, 4}, {3, 6, 4}, {5, 7, 6}} flat triad/mask bits {1, 6, 2, 3, 7, 5, 4} {1, 0, 1, 1, 1, 1, 1}
129	$\overset{r}{y}{}_{d}^{\,-}\,\overset{\ }{L}$		{BC8, E7, E6, 6Cube, C4, H4Φcell8, ring8}	$0apggsscc_{2}$	Bn{ 0, 1, −2, 1, 2 } E8{ 1, 1, 2, 1, 2 } Ph{ −1, 1, 2, 0 }	1, 1, 2, 2, 0	1, 1, 2, 2, $\frac{1}{\sqrt{2}}$	1, 1, 2, 2, $\frac{1}{2}$	0, 1, −2, 2, $-\frac{\sqrt{3}}{2}$	0, 1, −2, 2, 0	0, 1, −2, 2, 0	Rt{ 0, 1, 2, 3, 1, 2, 4, 2 } Wt{ −1, 0, 0, 0, 0, −1, 1, 0 } Ht 15	Ac 89	Flipped Triad fpi=24 BC_8 L fp_sm=3→02H {{1, 2, 6}, {1, 7, 3}, {1, 4, 5}, {2, 3, 5}, {2, 4, 7}, {3, 4, 6}, {5, 6, 7}} flat triad/mask bits {1, 6, 2, 7, 3, 5, 4} {0, 1, 0, 0, 0, 0, 0}	Not Flipped Triad fpi=23 BC_8 L fp_sm=2→01H {{1, 6, 2}, {1, 3, 7}, {1, 4, 5}, {2, 3, 4}, {2, 5, 7}, {3, 5, 6}, {4, 6, 7}} flat triad/mask bits {1, 6, 2, 3, 7, 4, 5} {1, 0, 0, 0, 0, 0, 0}
130	$\overset{t}{r}{}_{l}^{\,-2/3}\,\overset{\ }{R}$		{BC8, E7, 6Cube, C4, snubH4 8–3, Idempot, ring3}	$0apggsscc_{2}$	Bn{ 0, 1, −2, 1, 2 } E8{ 1, 1, 2, 1, 2 } Ph{ −1, 1, 2, 0 }	1, 1, 2, 2, $\frac{1}{\sqrt{2}}$	1, 1, 2, 2, $-\frac{1}{2}$	0, 1, −2, 2, $-\frac{1}{2\sqrt{3}}$	1, 1, 2, 2, $-\frac{1}{\sqrt{2}}$	0, 1, −2, 2, $-\frac{1}{2\sqrt{3}}$	0, 1, −2, 2, $-\frac{1}{\sqrt{6}}$	Rt{ 0, 1, 2, 3, 1, 2, 3, 2 } Wt{ −1, 0, 0, 1, 0, 0, −1, 1 } Ht 14	At 85	Flipped Triad fpi=25 BC_8 R fp_sm=5→6EH {{1, 2, 7}, {1, 4, 3}, {1, 6, 5}, {2, 5, 3}, {2, 4, 6}, {3, 7, 6}, {4, 7, 5}} flat triad/mask bits {1, 7, 2, 4, 3, 6, 5} {0, 1, 1, 1, 0, 1, 1}	Not Flipped Triad fpi=26 BC_8 R fp_sm=8→6DH {{1, 7, 2}, {1, 3, 4}, {1, 6, 5}, {2, 6, 3}, {2, 4, 5}, {3, 7, 5}, {4, 7, 6}} flat triad/mask bits {1, 7, 2, 3, 4, 6, 5} {0, 1, 1, 1, 0, 1, 1}
131	$\overset{t}{g}{}_{l}^{\,-2/3}\,\overset{\ }{R}$		{BC8, 6Cube, snubH4 16–2, ring3}	$0apggsscc_{2}$	Bn{ 0, 1, −2, 1, 2 } E8{ 1, 1, 2, 1, 2 } Ph{ −1, 1, 2, 0 }	1, 1, 2, 2, $\frac{1}{\sqrt{2}}$	1, 1, 2, 2, $-\frac{1}{2}$	0, 1, −2, 2, $-\frac{1}{2\sqrt{3}}$	1, 1, 2, 2, $\frac{1}{\sqrt{2}}$	0, 1, −2, 2, $-\frac{1}{2\sqrt{3}}$	0, 1, −2, 2, $-\frac{1}{\sqrt{6}}$	Rt{ 0, 1, 2, 3, 1, 2, 3, 1 } Wt{ −1, 0, 0, 1, 0, 0, 0, −1 } Ht 13	Tl 81	Flipped Triad fpi=27 BC_8 R fp_sm=4→65H {{1, 7, 2}, {1, 3, 5}, {1, 6, 4}, {2, 3, 4}, {2, 5, 6}, {3, 7, 6}, {4, 7, 5}} flat triad/mask bits {1, 2, 7, 3, 5, 6, 4} {1, 0, 1, 0, 0, 1, 1}	Not Flipped Triad fpi=29 BC_8 R fp_sm=7→6CH {{1, 2, 7}, {1, 3, 6}, {1, 5, 4}, {2, 4, 3}, {2, 5, 6}, {3, 7, 5}, {4, 7, 6}} flat triad/mask bits {1, 2, 7, 3, 6, 5, 4} {0, 0, 1, 1, 0, 1, 1}
132	$\overset{t}{b}{}_{l}^{\,-2/3}\,\overset{\ }{R}$		{BC8, snubH4 8–4, ring4}	$0apggsscc_{2}$	Bn{ 0, 1, −2, 1, 2 } E8{ 1, 1, 2, 1, 2 } Ph{ −1, 1, 2, 0 }	1, 1, 2, 2, $\frac{1}{\sqrt{2}}$	1, 1, 2, 2, $-\frac{1}{2}$	0, 1, −2, 2, $-\frac{1}{2\sqrt{3}}$	1, 1, 2, 2, 0	0, 1, −2, 2, 0	1, 1, 2, 2, $\sqrt{\frac{2}{3}}$	Rt{ −1, −1, −1, −1, −1, −2, −2, −1 } Wt{ −1, 0, 0, 1, 0, −1, 0, 0 } Ht 10	$\overline{\text{Dy}}$ 66	Flipped Triad fpi=30 BC_8 R fp_sm=6→6FH {{1, 7, 2}, {1, 6, 3}, {1, 5, 4}, {2, 5, 3}, {2, 4, 6}, {3, 7, 4}, {5, 7, 6}} flat triad/mask bits {1, 2, 7, 6, 3, 5, 4} {1, 1, 1, 1, 0, 1, 1}	Not Flipped Triad fpi=28 BC_8 R fp_sm=3→64H {{1, 2, 7}, {1, 3, 5}, {1, 6, 4}, {2, 3, 6}, {2, 4, 5}, {3, 7, 4}, {5, 7, 6}} flat triad/mask bits {1, 7, 2, 3, 5, 6, 4} {0, 0, 1, 0, 0, 1, 1}
133	$\overset{d}{o}{}_{m}^{\,1/3}\,\overset{\ }{R}$		{BC8, E7, 6Cube, C4, snubH4Φ 8–2, ring6}	$0apggsscc_{2}$	Bn{ 0, 1, −2, 1, 2 } E8{ 1, 1, 2, 1, 2 } Ph{ −1, 1, 2, 0 }	1, 1, 2, 2, $\frac{1}{\sqrt{2}}$	0, 1, −2, 2, 0	1, 1, 2, 2, $\frac{1}{2}$	1, 1, 2, 2, $\frac{1}{2\sqrt{3}}$	0, 1, −2, 2, $-\frac{1}{\sqrt{2}}$	0, 1, −2, 2, $-\frac{1}{\sqrt{6}}$	Rt{ 0, 1, 2, 2, 1, 2, 3, 2 } Wt{ −1, 0, 1, −1, 0, 0, 0, 1 } Ht 13	Hg 80	Flipped Triad fpi=10 BC_8 L fp_sm=5→44H {{1, 2, 4}, {1, 3, 6}, {1, 7, 5}, {2, 3, 7}, {2, 5, 6}, {3, 4, 5}, {4, 7, 6}} flat triad/mask bits {1, 4, 2, 3, 6, 7, 5} {0, 0, 1, 0, 0, 0, 1}	Not Flipped Triad fpi=8 BC_8 L fp_sm=2→4DH {{1, 4, 2}, {1, 3, 5}, {1, 7, 6}, {2, 7, 3}, {2, 5, 6}, {3, 4, 6}, {4, 7, 5}} flat triad/mask bits {1, 4, 2, 3, 5, 7, 6} {1, 0, 1, 1, 0, 0, 1}
134	$\overset{d}{c}{}_{m}^{\,1/3}\,\overset{\ }{R}$		{BC8, 6Cube, snubH4 8–3, ring3}	$0apggsscc_{2}$	Bn{ 0, 1, −2, 1, 2 } E8{ 1, 1, 2, 1, 2 } Ph{ −1, 1, 2, 0 }	1, 1, 2, 2, $\frac{1}{\sqrt{2}}$	0, 1, −2, 2, 0	1, 1, 2, 2, $\frac{1}{2}$	0, 1, −2, 2, $-\frac{1}{2\sqrt{3}}$	1, 1, 2, 2, $\frac{1}{\sqrt{2}}$	0, 1, −2, 2, $-\frac{1}{\sqrt{6}}$	Rt{ 0, 1, 2, 2, 1, 2, 3, 1 } Wt{ −1, 0, 1, −1, 0, 0, 1, −1 } Ht 12	Os 76	Flipped Triad fpi=12 BC_8 L fp_sm=4→4FH {{1, 4, 2}, {1, 7, 3}, {1, 6, 5}, {2, 6, 3}, {2, 5, 7}, {3, 4, 5}, {4, 7, 6}} flat triad/mask bits {1, 2, 4, 7, 3, 6, 5} {1, 1, 1, 1, 0, 0, 1}	Not Flipped Triad fpi=11 BC_8 L fp_sm=1→4CH {{1, 2, 4}, {1, 3, 7}, {1, 6, 5}, {2, 5, 3}, {2, 6, 7}, {3, 4, 6}, {4, 7, 5}} flat triad/mask bits {1, 2, 4, 3, 7, 6, 5} {0, 0, 1, 1, 0, 0, 1}
135	$\overset{d}{m}{}_{m}^{\,1/3}\,\overset{\ }{R}$		{BC8, H4Φcell8, Hamming, Idempot, ring7}	$0apggsscc_{2}$	Bn{ 0, 1, −2, 1, 2 } E8{ 1, 1, 2, 1, 2 } Ph{ −1, 1, 2, 0 }	1, 1, 2, 2, $\frac{1}{\sqrt{2}}$	0, 1, −2, 2, 0	1, 1, 2, 2, $\frac{1}{2}$	0, 1, −2, 2, $-\frac{1}{2\sqrt{3}}$	0, 1, −2, 2, 0	1, 1, 2, 2, $\sqrt{\frac{2}{3}}$	Rt{ −1, −1, −1, −2, −1, −2, −2, −1 } Wt{ −1, 0, 1, −1, 0, −1, 1, 0 } Ht 11	$\overline{\text{Hf}}$ 72	Flipped Triad fpi=13 BC_8 L fp_sm=6→45H {{1, 5, 2}, {1, 3, 4}, {1, 7, 6}, {2, 3, 6}, {2, 4, 7}, {3, 5, 7}, {4, 6, 5}} flat triad/mask bits {1, 2, 5, 3, 4, 7, 6} {1, 0, 1, 0, 0, 0, 1}	Not Flipped Triad fpi=14 BC_8 L fp_sm=7→46H {{1, 2, 5}, {1, 4, 3}, {1, 7, 6}, {2, 3, 7}, {2, 4, 6}, {3, 5, 6}, {4, 7, 5}} flat triad/mask bits {1, 2, 5, 4, 3, 7, 6} {0, 1, 1, 0, 0, 0, 1}
136	$\overset{u}{b}{}_{m}^{\,2/3}\,\overset{\ }{L}$		{BC8, 6Cube, H4cell8, Hamming, ring3}	0010110111_{2}	Bn{ 0, 1, −2, 1, 2 } E8{ 1, 1, 2, 1, 2 } Ph{ −1, 1, 2, 0 }	1, 1, 2, 2, $\frac{1}{\sqrt{2}}$	0, 1, −2, 2, 0	0, 1, −2, 2, $-\frac{1}{2}$	1, 1, 2, 2, $\frac{1}{2\sqrt{3}}$	1, 1, 2, 2, 0	0, 1, −2, 2, $-\sqrt{\frac{2}{3}}$	Rt{ 0, 1, 2, 2, 1, 2, 2, 1 } Wt{ −1, 0, 1, 0, 0, 1, −1, 0 } Ht 11	Lu 71	Flipped Triad fpi=13 BC_8 R fp_sm=6→23H {{1, 5, 2}, {1, 4, 3}, {1, 6, 7}, {2, 3, 6}, {2, 4, 7}, {3, 7, 5}, {4, 5, 6}} flat triad/mask bits {1, 2, 5, 4, 3, 6, 7} {1, 1, 0, 0, 0, 1, 0}	Not Flipped Triad fpi=14 BC_8 R fp_sm=7→20H {{1, 2, 5}, {1, 3, 4}, {1, 6, 7}, {2, 3, 7}, {2, 4, 6}, {3, 6, 5}, {4, 5, 7}} flat triad/mask bits {1, 2, 5, 3, 4, 6, 7} {0, 0, 0, 0, 0, 1, 0}
137	$\overset{u}{g}{}_{m}^{\,2/3}\,\overset{\ }{L}$		{BC8, snubH4Φ 8–2, ring8}	$0apggsscc_{2}$	Bn{ 0, 1, −2, 1, 2 } E8{ 1, 1, 2, 1, 2 } Ph{ −1, 1, 2, 0 }	1, 1, 2, 2, $\frac{1}{\sqrt{2}}$	0, 1, −2, 2, 0	0, 1, −2, 2, $-\frac{1}{2}$	1, 1, 2, 2, $\frac{1}{2\sqrt{3}}$	0, 1, −2, 2, $-\frac{1}{\sqrt{2}}$	1, 1, 2, 2, $\frac{1}{\sqrt{6}}$	Rt{ −1, −1, −1, −2, −1, −2, −3, −1 } Wt{ −1, 0, 1, 0, 0, 0, −1, 1 } Ht 12	$\overline{\text{Ir}}$ 77	Flipped Triad fpi=12 BC_8 R fp_sm=4→29H {{1, 4, 2}, {1, 3, 7}, {1, 5, 6}, {2, 6, 3}, {2, 5, 7}, {3, 5, 4}, {4, 6, 7}} flat triad/mask bits {1, 2, 4, 3, 7, 5, 6} {1, 0, 0, 1, 0, 1, 0}	Not Flipped Triad fpi=11 BC_8 R fp_sm=1→2AH {{1, 2, 4}, {1, 7, 3}, {1, 5, 6}, {2, 6, 3}, {2, 5, 3}, {2, 6, 7}, {3, 6, 4}, {4, 5, 7}} flat triad/mask bits {1, 2, 4, 7, 3, 5, 6} {0, 1, 0, 1, 0, 1, 0}
138	$\overset{u}{r}{}_{m}^{\,2/3}\,\overset{\ }{L}$		{BC8, E7, snubH4 8–4, ring5}	$0apggsscc_{2}$	Bn{ 0, 1, −2, 1, 2 } E8{ 1, 1, 2, 1, 2 } Ph{ −1, 1, 2, 0 }	1, 1, 2, 2, $\frac{1}{\sqrt{2}}$	0, 1, −2, 2, 0	0, 1, −2, 2, $-\frac{1}{2}$	1, 1, 2, 2, $\frac{1}{2\sqrt{3}}$	1, 1, 2, 2, $\frac{1}{\sqrt{2}}$	1, 1, 2, 2, $\frac{1}{\sqrt{6}}$	Rt{ −1, −1, −1, −2, −1, −2, −3, −2 } Wt{ −1, 0, 1, 0, 0, 0, 0, −1 } Ht 13	$\overline{\text{Pb}}$ 82	Flipped Triad fpi=10 BC_8 R fp_sm=5→22H {{1, 2, 4}, {1, 6, 3}, {1, 5, 7}, {2, 3, 7}, {2, 5, 6}, {3, 5, 4}, {4, 6, 7}} flat triad/mask bits {1, 4, 2, 6, 3, 5, 7} {0, 1, 0, 0, 0, 1, 0}	Not Flipped Triad fpi=8 BC_8 R fp_sm=2→2BH {{1, 4, 2}, {1, 5, 3}, {1, 6, 7}, {2, 7, 3}, {2, 5, 6}, {3, 6, 4}, {4, 5, 7}} flat triad/mask bits {1, 4, 2, 5, 3, 6, 7} {1, 1, 0, 1, 0, 1, 0}
139	$\overset{u}{r}{}_{m}^{\,-2/3}\,\overset{\ }{R}$		{BC8, E7, 6Cube, C4, snubH4 8–4, ring3}	$0apggsscc_{2}$	Bn{ 0, 1, −2, 1, 2 } E8{ 1, 1, 2, 1, 2 } Ph{ −1, 1, 2, 0 }	0, 1, −2, 2, $-\frac{1}{\sqrt{2}}$	1, 1, 2, 2, 0	1, 1, 2, 2, $\frac{1}{2}$	1, 1, 2, 2, $-\frac{1}{2\sqrt{3}}$	0, 1, −2, 2, $-\frac{1}{\sqrt{2}}$	0, 1, −2, 2, $-\frac{1}{\sqrt{6}}$	Rt{ 0, 1, 1, 2, 1, 2, 3, 2 } Wt{ −1, 1, −1, 0, 0, 0, 0, 1 } Ht 12	Re 75	Flipped Triad fpi=8 BC_8 R fp_sm=2→4AH {{1, 2, 4}, {1, 5, 3}, {1, 6, 7}, {2, 7, 3}, {2, 5, 6}, {3, 4, 6}, {4, 7, 5}} flat triad/mask bits {1, 4, 2, 5, 3, 6, 7} {0, 1, 0, 1, 0, 0, 1}	Not Flipped Triad fpi=10 BC_8 R fp_sm=5→43H {{1, 4, 2}, {1, 6, 3}, {1, 5, 7}, {2, 3, 7}, {2, 5, 6}, {3, 4, 5}, {4, 7, 6}} flat triad/mask bits {1, 4, 2, 6, 3, 5, 7} {1, 1, 0, 0, 0, 0, 1}
140	$\overset{u}{g}{}_{m}^{\,-2/3}\,\overset{\ }{R}$		{BC8, 6Cube, H4Φcell8, Hamming, ring6}	$0apggsscc_{2}$	Bn{ 0, 1, −2, 1, 2 } E8{ 1, 1, 2, 1, 2 } Ph{ −1, 1, 2, 0 }	0, 1, −2, 2, $-\frac{1}{\sqrt{2}}$	1, 1, 2, 2, 0	1, 1, 2, 2, $\frac{1}{2}$	1, 1, 2, 2, $-\frac{1}{2\sqrt{3}}$	1, 1, 2, 2, $\frac{1}{\sqrt{2}}$	0, 1, −2, 2, $-\frac{1}{\sqrt{6}}$	Rt{ 0, 1, 1, 2, 1, 2, 3, 1 } Wt{ −1, 1, −1, 0, 0, 0, 1, −1 } Ht 11	Yb 70	Flipped Triad fpi=11 BC_8 R fp_sm=1→4BH {{1, 4, 2}, {1, 7, 3}, {1, 5, 6}, {2, 5, 3}, {2, 6, 7}, {3, 4, 6}, {4, 7, 5}} flat triad/mask bits {1, 2, 4, 7, 3, 5, 6} {1, 1, 0, 1, 0, 0, 1}	Not Flipped Triad fpi=12 BC_8 R fp_sm=4→48H {{1, 2, 4}, {1, 3, 7}, {1, 5, 6}, {2, 6, 3}, {2, 5, 7}, {3, 4, 5}, {4, 7, 6}} flat triad/mask bits {1, 2, 4, 3, 7, 5, 6} {0, 0, 0, 1, 0, 0, 1}
141	$\overset{u}{b}{}_{m}^{\,-2/3}\,\overset{\ }{R}$		{BC8, snubH4Φ 8–3, ring2}	0010111111_{2}	Bn{ 0, 1, −2, 1, 2 } E8{ 1, 1, 2, 1, 2 } Ph{ −1, 1, 2, 0 }	0, 1, −2, 2, $-\frac{1}{\sqrt{2}}$	1, 1, 2, 2, 0	1, 1, 2, 2, $\frac{1}{2}$	0, 1, −2, 2, $-\frac{1}{2\sqrt{3}}$	0, 1, −2, 2, 0	1, 1, 2, 2, $\sqrt{\frac{2}{3}}$	Rt{ −1, −1, −2, −2, −1, −2, −2, −1 } Wt{ −1, 1, −1, 0, 0, −1, 1, 0 } Ht 12	$\overline{\text{Pt}}$ 78	Flipped Triad fpi=14 BC_8 R fp_sm=7→41H {{1, 5, 2}, {1, 3, 4}, {1, 6, 7}, {2, 3, 7}, {2, 4, 6}, {3, 5, 6}, {4, 7, 5}} flat triad/mask bits {1, 2, 5, 3, 4, 6, 7} {1, 0, 0, 0, 0, 0, 1}	Not Flipped Triad fpi=13 BC_8 R fp_sm=6→42H {{1, 2, 5}, {1, 3, 4}, {1, 6, 7}, {2, 3, 6}, {2, 4, 7}, {3, 5, 7}, {4, 6, 5}} flat triad/mask bits {1, 2, 5, 4, 3, 6, 7} {0, 1, 0, 0, 0, 0, 1}
142	$\overset{d}{m}{}_{m}^{\,-1/3}\,\overset{\ }{L}$		{BC8, 6Cube, snubH4 8–2, ring3}	0000110111_{2}	Bn{ 0, 1, −2, 1, 2 } E8{ 1, 1, 2, 1, 2 } Ph{ −1, 1, 2, 0 }	0, 1, −2, 2, $-\frac{1}{\sqrt{2}}$	1, 1, 2, 2, 0	0, 1, −2, 2, $-\frac{1}{2}$	1, 1, 2, 2, $\frac{1}{2\sqrt{3}}$	1, 1, 2, 2, 0	0, 1, −2, 2, $-\sqrt{\frac{2}{3}}$	Rt{ 0, 1, 1, 2, 1, 2, 2, 1 } Wt{ −1, 1, −1, 1, 0, 1, −1, 0 } Ht 10	Gd 64	Flipped Triad fpi=14 BC_8 L fp_sm=7→27H {{1, 5, 2}, {1, 4, 3}, {1, 7, 6}, {2, 3, 7}, {2, 4, 6}, {3, 6, 5}, {4, 5, 7}} flat triad/mask bits {1, 2, 5, 4, 3, 7, 6} {1, 1, 1, 0, 0, 1, 0}	Not Flipped Triad fpi=13 BC_8 L fp_sm=6→24H {{1, 2, 5}, {1, 3, 4}, {1, 7, 6}, {2, 3, 6}, {2, 4, 7}, {3, 7, 5}, {4, 5, 6}} flat triad/mask bits {1, 2, 5, 3, 4, 7, 6} {0, 0, 1, 0, 0, 1, 0}

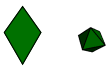
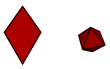
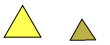
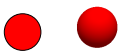
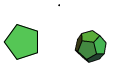
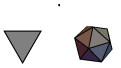
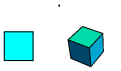
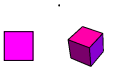
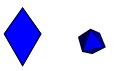
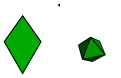
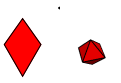
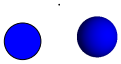
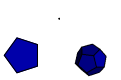
143	$^{d}c_{m}\,\bar{L}^{-1/3}$			{BC8, H4cell8, Hamming, ring3}	$0apggsscc\,0000110100_2$	Bn{	0	1	0	1	0	1	0	1	}	Rt{	−1	−1	−2	−2	−1	−2	−3	−1	}	$\overline{\text{Bi}}$ 83	Flipped Triad fpi=11 BC_8 L fp_sm=1→2DH {{1, 4, 2}, {1, 3, 7}, {1, 6, 5}, {2, 5, 3}, {2, 6, 7}, {3, 6, 4}, {4, 5, 7}} flat triad/mask bits {1, 2, 4, 3, 7, 6, 5} {1, 0, 1, 1, 0, 1, 0}	Not Flipped Triad fpi=12 BC_8 L fp_sm=4→2EH {{1, 2, 4}, {1, 3, 7}, {1, 6, 5}, {2, 6, 3}, {2, 5, 7}, {3, 5, 4}, {4, 6, 7}} flat triad/mask bits {1, 2, 4, 7, 3, 6, 5} {0, 1, 1, 1, 0, 1, 0}
						E8{	2	2	2	2	2	2	2	2		Wt{	−1	1	−1	−1	1	0	0	−1	1					
						Ph{	1	1	1	0	1	1	1	1		Ht	13												
							2	2	$-\frac{1}{\sqrt{2}}$		$-\frac{1}{2}$	$\frac{1}{2\sqrt{3}}$	$-\frac{1}{\sqrt{2}}$	$\frac{1}{\sqrt{6}}$															
144	$^{d}o_{m}\,\bar{L}^{-1/3}$			{BC8, E7, snubH4Φ 16–3, Idempot, ring2}	$0apggsscc\,0000110010_2$	Bn{	0	1	0	1	0	0	1	1	}	Rt{	−1	−1	−2	−2	−1	−2	−3	−2	}	$\overline{\text{Rn}}$ 86	Flipped Triad fpi=8 BC_8 L fp_sm=2→2CH {{1, 2, 4}, {1, 3, 5}, {1, 7, 6}, {2, 7, 3}, {2, 5, 6}, {3, 6, 4}, {4, 5, 7}} flat triad/mask bits {1, 4, 2, 3, 5, 7, 6} {0, 0, 1, 1, 0, 1, 0}	Not Flipped Triad fpi=10 BC_8 L fp_sm=5→25H {{1, 4, 2}, {1, 3, 6}, {1, 7, 5}, {2, 3, 7}, {2, 5, 6}, {3, 5, 4}, {4, 6, 7}} flat triad/mask bits {1, 4, 2, 3, 6, 7, 5} {1, 0, 1, 0, 0, 1, 0}
						E8{	2	2	2	2	2	−2	2	2		Wt{	−1	1	−1	−1	1	0	0	−1						
						Ph{	1	1	1	0	1	1	1	1		Ht	14												
							2	2	$-\frac{1}{\sqrt{2}}$		$-\frac{1}{2}$	$\frac{1}{2\sqrt{3}}$	$\frac{1}{\sqrt{2}}$	$\frac{1}{\sqrt{6}}$															
145	$^{t}b_{d}\,\bar{L}^{2/3}$			{BC8, 6Cube, snubH4 8–4, Idempot, ring1}	$0apggsscc\,0011100011_2$	Bn{	0	1	0	0	1	1	1	0	}	Rt{	0	1	1	1	1	2	2	1	}	Ce 58	Flipped Triad fpi=28 BC_8 R fp_sm=3→05H {{1, 7, 2}, {1, 3, 5}, {1, 6, 4}, {2, 3, 6}, {2, 4, 5}, {3, 4, 7}, {5, 6, 7}} flat triad/mask bits {1, 7, 2, 3, 5, 6, 4} {1, 0, 1, 0, 0, 0, 0}	Not Flipped Triad fpi=30 BC_8 R fp_sm=6→0EH {{1, 2, 7}, {1, 6, 3}, {1, 5, 4}, {2, 5, 3}, {2, 4, 6}, {3, 4, 7}, {5, 6, 7}} flat triad/mask bits {1, 2, 7, 6, 3, 5, 4} {0, 1, 1, 1, 0, 0, 0}
						E8{	2	2	2	2	2	2	2	2		Wt{	−1	1	0	−1	0	0	1	0						
						Ph{	1	1	1	0	1	1	1	1		Ht	9												
							2	2	0	$-\frac{1}{\sqrt{2}}$	2	$\frac{1}{2\sqrt{3}}$	0	$-\sqrt{\frac{2}{3}}$															
146	$^{t}g_{d}\,\bar{L}^{2/3}$			{BC8, snubH4Φ 16–3, ring6}	$0apggsscc\,0011100010_2$	Bn{	0	1	0	0	1	1	0	1	}	Rt{	−1	−1	−2	−3	−1	−2	−3	−1	}	$\overline{\text{Fr}}$ 87	Flipped Triad fpi=29 BC_8 R fp_sm=7→0DH {{1, 7, 2}, {1, 3, 6}, {1, 5, 4}, {2, 4, 3}, {2, 5, 6}, {3, 5, 7}, {4, 6, 7}} flat triad/mask bits {1, 2, 7, 3, 6, 5, 4} {1, 0, 1, 1, 0, 0, 0}	Not Flipped Triad fpi=27 BC_8 R fp_sm=4→04H {{1, 2, 7}, {1, 3, 5}, {1, 6, 4}, {2, 3, 4}, {2, 5, 6}, {3, 6, 7}, {4, 5, 7}} flat triad/mask bits {1, 2, 7, 3, 5, 6, 4} {0, 0, 1, 0, 0, 0, 0}
						E8{	2	2	2	2	2	2	2	2		Wt{	−1	1	0	−1	0	0	0	1						
						Ph{	1	1	1	0	1	1	1	1		Ht	14												
							2	2	$-\frac{1}{\sqrt{2}}$		2	$\frac{1}{2\sqrt{3}}$	$-\frac{1}{\sqrt{2}}$	$\frac{1}{\sqrt{6}}$															
147	$^{t}r_{d}\,\bar{L}^{2/3}$			{BC8, E7, H4Φcell8, ring2}	$0apggsscc\,0011100001_2$	Bn{	0	1	0	0	1	0	1	1	}	Rt{	−1	−1	−2	−3	−1	−2	−3	−2	}	$\overline{\text{Th}}$ 90	Flipped Triad fpi=26 BC_8 R fp_sm=8→0CH {{1, 2, 7}, {1, 3, 4}, {1, 6, 5}, {2, 6, 3}, {2, 4, 5}, {3, 5, 7}, {4, 6, 7}} flat triad/mask bits {1, 7, 2, 3, 4, 6, 5} {0, 0, 1, 1, 0, 0, 0}	Not Flipped Triad fpi=25 BC_8 R fp_sm=5→0FH {{1, 7, 2}, {1, 4, 3}, {1, 6, 5}, {2, 5, 3}, {2, 4, 6}, {3, 6, 7}, {4, 5, 7}} flat triad/mask bits {1, 7, 2, 4, 3, 6, 5} {1, 1, 1, 1, 0, 0, 0}
						E8{	2	2	2	2	2	2	2	2		Wt{	−1	1	0	−1	0	0	1	−1						
						Ph{	1	1	1	0	1	1	1	1		Ht	15												
							2	2	$-\frac{1}{\sqrt{2}}$		2	$\frac{1}{2\sqrt{3}}$	$\frac{1}{\sqrt{2}}$	$\frac{1}{\sqrt{6}}$															
148	$\overline{^{t}y_{l}}\,\bar{R}^{+}$			{BC8, E7, E6, snubH4Φ 8–3, ring8}	$0apggsscc\,0101101001_2$	Bn{	0	1	0	0	0	1	1	1	}	Rt{	−1	−1	−2	−3	−1	−2	−4	−2	}	$\overline{\text{Pu}}$ 94	Flipped Triad fpi=23 BC_8 L fp_sm=2→60H {{1, 2, 6}, {1, 3, 7}, {1, 4, 5}, {2, 3, 4}, {2, 5, 7}, {3, 6, 5}, {4, 7, 6}} flat triad/mask bits {1, 6, 2, 3, 7, 4, 5} {0, 0, 0, 0, 0, 1, 1}	Not Flipped Triad fpi=24 BC_8 L fp_sm=3→63H {{1, 6, 2}, {1, 7, 3}, {1, 4, 5}, {2, 3, 5}, {2, 4, 7}, {3, 6, 4}, {5, 7, 6}} flat triad/mask bits {1, 6, 2, 7, 3, 4, 5} {1, 1, 0, 0, 0, 1, 1}
						E8{	2	2	2	2	2	2	$\frac{\sqrt{3}}{2}$	2		Wt{	−1	1	0	0	0	1	−1	0						
						Ph{	1	1	1	0	1	1	1	1		Ht	16												
							2	2	$-\frac{1}{\sqrt{2}}$		$-\frac{1}{2}$	$\frac{1}{2}$	0	0															
149	$\overline{^{u}r_{d}}\,\bar{L}^{-2/3}$			{BC8, E7, 6Cube, C4, H4Φcell8, Hamming, ring6}	$0apggsscc\,0110100001_2$	Bn{	0	0	1	1	1	1	0	0	}	Rt{	0	0	1	2	1	2	3	2	}	Tm 69	Flipped Triad fpi=8 BC_8 R fp_sm=2→79H {{1, 4, 2}, {1, 3, 5}, {1, 6, 7}, {2, 7, 3}, {2, 6, 5}, {3, 6, 4}, {4, 7, 5}} flat triad/mask bits {1, 2, 4, 3, 5, 6, 7} {1, 0, 0, 1, 1, 1, 1}	Not Flipped Triad fpi=10 BC_8 R fp_sm=5→70H {{1, 2, 4}, {1, 3, 6}, {1, 5, 7}, {2, 3, 7}, {2, 6, 5}, {3, 5, 4}, {4, 7, 6}} flat triad/mask bits {1, 2, 4, 3, 6, 5, 7} {0, 0, 0, 0, 1, 1, 1}
						E8{	2	2	2	2	2	2	2	2		Wt{	−1	1	0	0	0	0	0	1						
						Ph{	1	1	1	0	1	1	1	1		Ht	11												
							2	2	$\frac{1}{\sqrt{2}}$		2	$\frac{1}{2\sqrt{3}}$	$-\frac{1}{\sqrt{2}}$	$-\frac{1}{\sqrt{6}}$															
150	$\overline{^{u}g_{d}}\,\bar{L}^{-2/3}$			{BC8, 6Cube, snubH4Φ 8–4, Idempot, ring8}	$0apggsscc\,0110100010_2$	Bn{	0	0	1	1	1	0	1	0	}	Rt{	0	0	1	2	1	2	3	1	}	Eu 63	Flipped Triad fpi=11 BC_8 R fp_sm=1→78H {{1, 2, 4}, {1, 3, 7}, {1, 5, 6}, {2, 5, 3}, {2, 7, 6}, {3, 6, 4}, {4, 7, 5}} flat triad/mask bits {1, 4, 2, 3, 7, 5, 6} {0, 0, 0, 1, 1, 1, 1}	Not Flipped Triad fpi=12 BC_8 R fp_sm=4→7BH {{1, 4, 2}, {1, 7, 3}, {1, 5, 6}, {2, 6, 3}, {2, 7, 5}, {3, 5, 4}, {4, 7, 6}} flat triad/mask bits {1, 4, 2, 7, 3, 5, 6} {1, 1, 0, 1, 1, 1, 1}
						E8{	2	2	2	2	2	−1	2	−1		Wt{	0	−1	0	0	0	0	1	−1						
						Ph{	1	1	1	0	1	1	1	1		Ht	10												
							2	2	$\frac{1}{\sqrt{2}}$		2	$-\frac{1}{2\sqrt{3}}$	$\frac{1}{\sqrt{2}}$	$-\frac{1}{\sqrt{6}}$															
151	$\overline{^{u}o_{d}}\,\bar{L}^{-2/3}$			{BC8, snubH4 16–2, ring4}	$0apggsscc\,0110100011_2$	Bn{	0	0	1	1	1	0	0	1	}	Rt{	−1	−2	−2	−2	−1	−2	−2	−1	}	$\overline{\text{Po}}$ 84	Flipped Triad fpi=14 BC_8 R fp_sm=7→72H {{1, 2, 5}, {1, 4, 3}, {1, 6, 7}, {2, 3, 7}, {2, 6, 4}, {3, 6, 5}, {4, 7, 5}} flat triad/mask bits {1, 5, 2, 4, 3, 6, 7} {0, 1, 0, 0, 1, 1, 1}	Not Flipped Triad fpi=13 BC_8 R fp_sm=6→71H {{1, 5, 2}, {1, 3, 4}, {1, 6, 7}, {2, 3, 6}, {2, 7, 4}, {3, 7, 5}, {4, 6, 5}} flat triad/mask bits {1, 5, 2, 3, 4, 6, 7} {1, 0, 0, 0, 1, 1, 1}
						E8{	2	2	2	2	2	2	2	2		Wt{	0	−1	0	0	0	−1	1	0						
						Ph{	1	1	1	0	1	1	1	1		Ht	13												
							2	2	$\frac{1}{\sqrt{2}}$		2	$-\frac{1}{2\sqrt{3}}$	0	$\sqrt{\frac{2}{3}}$															
152	$^{d}m_{l}\,\bar{R}^{-1/3}$			{BC8, 6Cube, snubH4Φ 16–4, ring6}	$0apggsscc\,0000101111_2$	Bn{	0	0	1	1	0	1	1	0	}	Rt{	0	0	1	2	1	2	2	1	}	La 57	Flipped Triad fpi=14 BC_8 L fp_sm=7→14H {{1, 2, 5}, {1, 3, 4}, {1, 7, 6}, {2, 3, 7}, {2, 6, 4}, {3, 5, 6}, {4, 5, 7}} flat triad/mask bits {1, 5, 2, 3, 4, 7, 6} {0, 0, 1, 0, 1, 0, 0}	Not Flipped Triad fpi=13 BC_8 L fp_sm=6→17H {{1, 5, 2}, {1, 4, 3}, {1, 7, 6}, {2, 3, 6}, {2, 7, 4}, {3, 5, 7}, {4, 5, 6}} flat triad/mask bits {1, 5, 2, 4, 3, 7, 6} {1, 1, 1, 0, 1, 0, 0}
						E8{	2	2	2	2	2	2	2	2		Wt{	0	−1	0	1	0	1	−1	0						
						Ph{	1	1	1	0	1	1	1	1		Ht	9												
							2	2	$\frac{1}{\sqrt{2}}$		$-\frac{1}{2}$	$\frac{1}{2\sqrt{3}}$	0	$-\sqrt{\frac{2}{3}}$															
153	$^{d}c_{l}\,\bar{R}^{-1/3}$			{BC8, snubH4 8–3, ring1}	$0apggsscc\,0000101110_2$	Bn{	0	0	1	1	0	1	0	1	}	Rt{	−1	−2	−2	−2	−1	−2	−3	−1	}	$\overline{\text{Ra}}$ 88	Flipped Triad fpi=11 BC_8 L fp_sm=1→1EH {{1, 2, 4}, {1, 7, 3}, {1, 6, 5}, {2, 5, 3}, {2, 7, 6}, {3, 4, 6}, {4, 5, 7}} flat triad/mask bits {1, 4, 2, 7, 3, 6, 5} {0, 1, 1, 1, 1, 0, 0}	Not Flipped Triad fpi=12 BC_8 L fp_sm=4→1DH {{1, 4, 2}, {1, 3, 7}, {1, 6, 5}, {2, 6, 3}, {2, 7, 5}, {3, 4, 5}, {4, 6, 7}} flat triad/mask bits {1, 4, 2, 3, 7, 6, 5} {0, 1, 1, 1, 1, 0, 0}
						E8{	2	2	2	2	2	2	2	2		Wt{	0	−1	0	1	0	−1	1	1						
						Ph{	1	1	1	0	1	1	1	1		Ht	14												
							2	2	$\frac{1}{\sqrt{2}}$		$-\frac{1}{2}$	$\frac{1}{2\sqrt{3}}$	$-\frac{1}{\sqrt{2}}$	$\frac{1}{\sqrt{6}}$															
154	$^{d}o_{l}\,\bar{R}^{-1/3}$			{BC8, E7, H4cell8, Hamming, ring4}	$0apggsscc\,0000101012_2$	Bn{	0	0	1	1	0	0	1	1	}	Rt{	−1	−2	−2	−2	−1	−2	−3	−2	}	$\overline{\text{Pa}}$ 91	Flipped Triad fpi=8 BC_8 L fp_sm=2→1FH {{1, 4, 2}, {1, 5, 3}, {1, 7, 6}, {2, 7, 3}, {2, 6, 5}, {3, 4, 6}, {4, 5, 7}} flat triad/mask bits {1, 2, 4, 5, 3, 7, 6} {1, 1, 1, 1, 1, 0, 0}	Not Flipped Triad fpi=10 BC_8 L fp_sm=5→16H {{1, 2, 4}, {1, 6, 3}, {1, 7, 5}, {2, 3, 7}, {2, 6, 5}, {3, 4, 5}, {4, 6, 7}} flat triad/mask bits {1, 2, 4, 6, 3, 7, 5} {0, 1, 1, 0, 1, 0, 0}
						E8{	2	2	2	2	2	2	2	2		Wt{	0	−1	0	1	0	−1	0	−1						
						Ph{	1	1	1	0	1	1	1	1		Ht	15												
							2	2	$\frac{1}{\sqrt{2}}$		$-\frac{1}{2}$	$\frac{1}{2\sqrt{3}}$	$\frac{1}{\sqrt{2}}$	$\frac{1}{\sqrt{6}}$															
155	$^{t}b_{m}\,\bar{R}^{2/3}$			{BC8, 6Cube, snubH4Φ 8–2, ring2}	$0apggsscc\,0011111111_2$	Bn{	0	0	1	0	1	1	1	0	}	Rt{	0	0	1	1	1	2	2	1	}	Sb 51	Flipped Triad fpi=28 BC_8 R fp_sm=3→36H {{1, 2, 7}, {1, 5, 3}, {1, 6, 4}, {2, 3, 6}, {2, 5, 4}, {3, 7, 4}, {5, 6, 7}} flat triad/mask bits {1, 2, 7, 5, 3, 6, 4} {0, 1, 1, 0, 1, 1, 0}	Not Flipped Triad fpi=30 BC_8 R fp_sm=6→3DH {{1, 7, 2}, {1, 3, 6}, {1, 5, 4}, {2, 5, 3}, {2, 6, 4}, {3, 7, 4}, {5, 6, 7}} flat triad/mask bits {1, 7, 2, 3, 6, 5, 4} {0, 1, 1, 1, 1, 1, 0}
						E8{	2	2	2	2	2	2	2	2		Wt{	0	−1	1	−1	0	1	0	0						
						Ph{	1	1	1	0	1	1	1	1		Ht	8												
							2	2	$\frac{1}{\sqrt{2}}$		$-\frac{1}{2}$	$\frac{1}{2\sqrt{3}}$	0	$-\sqrt{\frac{2}{3}}$															
156	$^{t}9_{m}\,\bar{R}^{2/3}$			{BC8, H4Φcell8, ring2}	$0apggsscc\,0011111110_2$	Bn{	0	0	1	0	1	1	0	1	}	Rt{	−1	−2	−2	−3	−1	−2	−3	−1	}	$\overline{\text{U}}$ 92	Flipped Triad fpi=29 BC_8 R fp_sm=7→3EH {{1, 2, 7}, {1, 6, 3}, {1, 5, 4}, {2, 4, 3}, {2, 6, 5}, {3, 7, 5}, {4, 6, 7}} flat triad/mask bits {1, 7, 2, 6, 3, 5, 4} {0, 1, 1, 1, 1, 1, 0}	Not Flipped Triad fpi=27 BC_8 R fp_sm=4→37H {{1, 7, 2}, {1, 5, 3}, {1, 6, 4}, {2, 3, 4}, {2, 6, 5}, {3, 7, 6}, {4, 5, 7}} flat triad/mask bits {1, 7, 2, 3, 6, 5, 4} {1, 1, 1, 0, 1, 1, 0}
						E8{	2	2	2	2	2	2	2	2		Wt{	0	−1	1	−1	0	0	0	1						
						Ph{	1	1	1	0	1	1	1	1		Ht	15												
							2	2	$\frac{1}{\sqrt{2}}$		$\frac{1}{2}$	$\frac{1}{2\sqrt{3}}$	$-\frac{1}{\sqrt{2}}$	$\frac{1}{\sqrt{6}}$															
157	$^{t}r_{m}\,\bar{R}^{2/3}$			{BC8, E7, snubH4 8–3, ring1}	$0apggsscc\,0011111101_2$	Bn{	0	0	1	0	1	0	1	1	}	Rt{	−1	−2	−2	−3	−1	−2	−3	−2	}	$\overline{\text{Am}}$ 95	Flipped Triad fpi=26 BC_8 R fp_sm=8→3FH {{1, 2, 7}, {1, 4, 3}, {1, 6, 5}, {2, 6, 3}, {2, 5, 4}, {3, 7, 5}, {4, 6, 7}} flat triad/mask bits {1, 2, 7, 4, 3, 6, 5} {1, 1, 1, 1, 1, 1, 0}	Not Flipped Triad fpi=25 BC_8 R fp_sm=5→3CH {{1, 2, 7}, {1, 3, 4}, {1, 6, 5}, {2, 5, 3}, {2, 6, 4}, {3, 7, 6}, {4, 5, 7}} flat triad/mask bits {1, 2, 7, 3, 4, 6, 5} {0, 0, 1, 1, 1, 1, 0}
						E8{	2	2	2	2	2	2	2	2		Wt{	0	−1	1	−1	0	0	1	−1						
						Ph{	1	1	1	0	1	1	1	1		Ht	16												
							2	2	$\frac{1}{\sqrt{2}}$		$-\frac{1}{2}$	$\frac{1}{2\sqrt{3}}$	$\frac{1}{\sqrt{2}}$	$\frac{1}{\sqrt{6}}$															
158	$\overline{^{t}y_{m}}\,\bar{L}^{+}$			{BC8, E7, E6, snubH4Φ 8–2, Idempot, ring7}	$0apggsscc\,0101110000_2$	Bn{	0	0	1	0	0	1	1	1	}	Rt{	−1	−2	−2	−3	−1	−2	−4	−2	}	$\overline{\text{Es}}$ 99	Flipped Triad fpi=23 BC_8 L fp_sm=2→53H {{1, 6, 2}, {1, 7, 3}, {1, 4, 5}, {2, 3, 4}, {2, 7, 5}, {3, 5, 6}, {4, 7, 6}} flat triad/mask bits {1, 2, 6, 7, 3, 4, 5} {1, 1, 0, 0, 1, 0, 1}	Not Flipped Triad fpi=24 BC_8 L fp_sm=3→50H {{1, 2, 6}, {1, 3, 7}, {1, 4, 5}, {2, 3, 5}, {2, 7, 4}, {3, 4, 6}, {5, 7, 6}} flat triad/mask bits {1, 2, 6, 3, 7, 4, 5} {0, 0, 0, 0, 1, 0, 1}
						E8{	2	2	2	2	2	2	$\frac{\sqrt{3}}{2}$	2		Wt{	0	−1	1	0	0	1	−1	0						
						Ph{	1	1	1	0	1	1	1	1		Ht	17												
							2	2	$\frac{1}{\sqrt{2}}$		$-\frac{1}{2}$	$\frac{1}{2}$	0	0															

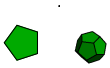
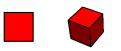
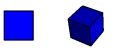
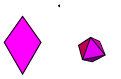
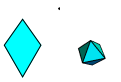
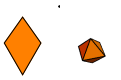
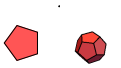
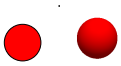
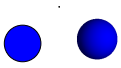
Seq ♯	Symbol	2D/3D Shape	Groups	Particle Quantum Bits	Binary / E8 / Physics Coordinates	Algebra Root Weight / Height / Rt♯=Atomic Element Number --->	Ele ♯	Octonions
159	$\overset{t}{b}{}^{2/3\to-1/3}_{m}\ \overset{0}{L}$		{BC8, 6Cube, H4Φcell8, ring8}	$0apggsscc\ 0011110110_2$	Bn{ 0, 1/2, 0, 1/2, 0, 1/2, 1, 1, 1, 1, 1, 1, 1, 1, 0, −1/2 } E8{ −1/2, 1/2, −1/2, 1/2, 1/2, 1/2, 1/2, 1/2, 1/2, 1/2 } Ph{ −1/2, −1/2, −1/√2, 0, 1/2, 1/(2√3), 0, −√(2/3) }	Rt{ 0 0 0 1 1 2 2 1 } Wt{ 0 0 −1 0 0 1 0 0 } Ht 7	Ru 44	Flipped Triad fpi=28 BC_8 R fp_sm=3→28H {{1, 2, 7}, {1, 3, 5}, {1, 4, 6}, {2, 6, 3}, {2, 4, 5}, {3, 7, 4}, {5, 6, 7}} flat triad/mask bits {1, 2, 7, 3, 5, 4, 6} {0, 0, 0, 1, 0, 1, 0} Not Flipped Triad fpi=30 BC_8 R fp_sm=6→23H {{1, 7, 2}, {1, 3, 5}, {1, 4, 5}, {2, 3, 5}, {2, 4, 6}, {3, 7, 4}, {5, 6, 7}} flat triad/mask bits {1, 7, 2, 6, 3, 4, 5} {1, 1, 0, 0, 0, 1, 0}
160	$\overset{t}{9}{}^{2/3\to-1/3}_{m}\ \overset{0}{L}$		{BC8, snubH4 8–2, Idempot, ring3}	$0apggsscc\ 0011110102_2$	Bn{ 0, 1/2, 0, 1/2, 0, 1/2, 1, 1, 1, 1, 1, 1, 0, −1/2, 1/2 } E8{ −1/2, 1/2, −1/2, 1/2, 1/2, 1/2, 1/2, 1/2, 1/2, 1/2 } Ph{ −1/2, −1/2, −1/√2, 0, 1/2, 1/(2√3), −1/√2, 1/√6 }	Rt{ −1 −2 −3 −3 −1 −2 −3 −1 } Wt{ 0 0 −1 0 0 −1 0 1 } Ht 16	Cm 96	Flipped Triad fpi=29 BC_8 R fp_sm=7→20H {{1, 2, 7}, {1, 3, 6}, {1, 4, 5}, {2, 3, 4}, {2, 5, 6}, {3, 7, 5}, {4, 6, 7}} flat triad/mask bits {1, 2, 7, 3, 6, 4, 5} {0, 0, 0, 0, 0, 1, 0} Not Flipped Triad fpi=27 BC_8 R fp_sm=4→29H {{1, 7, 2}, {1, 3, 5}, {1, 4, 6}, {2, 4, 3}, {2, 5, 6}, {3, 7, 6}, {4, 5, 7}} flat triad/mask bits {1, 7, 2, 3, 5, 4, 6} {1, 0, 0, 1, 0, 1, 0}
161	$\overset{t}{r}{}^{2/3\to-1/3}_{m}\ \overset{0}{L}$		{BC8, E7, snubH4Φ 16–4, ring7}	$0apggsscc\ 0011110012_2$	Bn{ 0, 1/2, 0, 1/2, 0, 1/2, 1, 1, 1, 1, 1, 1, 0, −1/2, 1/2 } E8{ −1/2, 1/2, −1/2, 1/2, 1/2, 1/2, 1/2, 1/2, 1/2, 1/2 } Ph{ −1/2, −1/2, −1/√2, 0, 1/2, 1/(2√3), 1/√2, 1/√6 }	Rt{ −1 −2 −3 −3 −1 −2 −3 −2 } Wt{ 0 0 −1 0 0 0 1 −1 } Ht 17	Fm 100	Flipped Triad fpi=26 BC_8 R fp_sm=8→21H {{1, 7, 2}, {1, 3, 4}, {1, 5, 6}, {2, 3, 6}, {2, 4, 5}, {3, 7, 5}, {4, 6, 7}} flat triad/mask bits {1, 2, 7, 3, 4, 5, 6} {1, 0, 0, 0, 0, 1, 0} Not Flipped Triad fpi=25 BC_8 R fp_sm=5→22H {{1, 2, 7}, {1, 4, 3}, {1, 5, 6}, {2, 3, 5}, {2, 4, 6}, {3, 7, 6}, {4, 5, 7}} flat triad/mask bits {1, 2, 7, 4, 3, 5, 6} {0, 1, 0, 0, 0, 1, 0}
162	$\overset{\overline{v_r}}{w}{}^{0}_{m}\ \overset{0}{L}$		{BC8, E7, E6, snubH4Φ 8–4, ring8}	$0apggsscc\ 0111110002_2$	Bn{ 0, 1/2, 0, 1/2, 0, 1/2, 1, 1, 0, 1/2, 1, 1, 1, 1, 1, 1 } E8{ −1/2, 1/2, −1/2, 1/2, 1/2, 1/2, 1/2, 1/2, 1/2, 1/2 } Ph{ −1/2, −1/2, −1/√2, 0, −1/2, 2/(√3), 0, 0 }	Rt{ −1 −2 −3 −3 −1 −2 −4 −2 } Wt{ 0 0 −1 1 0 1 −1 0 } Ht 18	Lr 103	Flipped Triad fpi=24 BC_8 R fp_sm=3→57H {{1, 6, 2}, {1, 7, 3}, {1, 5, 4}, {2, 3, 5}, {2, 7, 4}, {3, 4, 6}, {5, 7, 6}} flat triad/mask bits {1, 2, 6, 7, 3, 5, 4} {1, 1, 1, 0, 1, 0, 1} Not Flipped Triad fpi=23 BC_8 R fp_sm=2→54H {{1, 2, 6}, {1, 3, 7}, {1, 5, 4}, {2, 3, 4}, {2, 7, 5}, {3, 5, 6}, {4, 7, 6}} flat triad/mask bits {1, 2, 6, 3, 7, 5, 4} {0, 0, 1, 0, 1, 0, 1}
163	$\overset{\overline{e}}{y}{}^{+}_{d}\ \overset{0}{L}$		{BC8, E7, E6, E5, H4Φcell8, Hamming, ring7}	$0apggsscc\ 0100100002_2$	Bn{ 0, 1/2, 0, 1/2, 0, 1/2, 0, 1/2, 1, 1, 1, 1, 1, 1, 1, 1 } E8{ −1/2, 1/2, −1/2, 1/2, 1/2, 1/2, 1/2, 1/2, 1/2, 1/2 } Ph{ −1/2, −1/2, 0, −1/√2, 1/2, 2/(√3), 0, 0 }	Rt{ −1 −2 −3 −4 −1 −2 −4 −2 } Wt{ 0 0 0 −1 0 1 0 0 } Ht 19	Sg 106	Flipped Triad fpi=7 BC_8 L fp_sm=3→7DH {{1, 4, 2}, {1, 3, 5}, {1, 7, 6}, {2, 6, 3}, {2, 7, 5}, {3, 7, 4}, {4, 6, 5}} flat triad/mask bits {1, 2, 4, 3, 5, 7, 6} {1, 0, 1, 1, 1, 1, 1} Not Flipped Triad fpi=4 BC_8 L fp_sm=3→7DH {{1, 3, 2}, {1, 4, 6}, {1, 7, 5}, {2, 7, 4}, {2, 6, 5}, {3, 5, 4}, {3, 7, 6}} flat triad/mask bits {1, 3, 2, 4, 6, 7, 5} {1, 0, 1, 1, 1, 1, 1}

pascalRow@6

Seq ♯	Symbol	2D/3D Shape	Groups	Particle Quantum Bits	Binary / E8 / Physics Coordinates	Algebra Root Weight / Height / Rt♯=Atomic Element Number --->	Ele ♯	Octonions
164	$\overline{g}{}^{gb}_{m}\ \overset{0}{R}$		{D8, D4, F4, snubH4 16–1, G2s, ring5}	$0apggsscc\ 0100011012_2$	Bn{ 1, 0, 1, 0, 1, 0, 1, 0, 0, 0, 0, 1, 0, −1 } E8{ 0, 0, 0, 0, 0, 0, 0, 0, 1, 0 } Ph{ 0, 0, 0, 0, 0, 0, 1/√2, −√(3/2) }	Rt{ 1 2 3 4 2 4 5 2 } Wt{ 0 0 0 0 0 1 0 −1 } Ht 23	Fl 114	Flipped Triad fpi=2 D_8 L fp_sm=8→47H {{1, 3, 2}, {1, 5, 4}, {1, 7, 6}, {2, 4, 7}, {2, 5, 6}, {3, 4, 6}, {3, 7, 5}} flat triad/mask bits {1, 2, 3, 5, 4, 7, 6} {1, 1, 1, 0, 0, 0, 1} Not Flipped Triad fpi=1 D_8 L fp_sm=5→44H {{1, 2, 3}, {1, 4, 5}, {1, 7, 6}, {2, 4, 6}, {2, 5, 7}, {3, 4, 7}, {3, 6, 5}} flat triad/mask bits {1, 2, 3, 4, 5, 7, 6} {0, 0, 1, 0, 0, 0, 1}
165	$\overline{\delta x_1}\ {}^{0\to2/3}_{o_l}\ \overset{0}{R}$		{D8, E7, E7(56), D4, F4, snubH4Φ 8–2, ring8}	$0apggsscc\ 0100001012_2$	Bn{ 1, 0, 1, 0, 1, 0, 0, 0, 1, 0, 0, 1, 0, 0 } E8{ 0, 0, 0, 0, 0, 0, 2/(√3), 1/√2, 1/√6 }	Rt{ −1 −2 −3 −4 −2 −3 −5 −3 } Wt{ 0 0 0 0 −1 1 0 −1 } Ht 23	Uut 113	Flipped Triad fpi=2 D_8 L fp_sm=8→6AH {{1, 2, 3}, {1, 5, 4}, {1, 6, 7}, {2, 7, 4}, {2, 5, 6}, {3, 6, 4}, {3, 7, 5}} flat triad/mask bits {1, 3, 2, 5, 4, 6, 7} {0, 1, 0, 1, 0, 1, 1} Not Flipped Triad fpi=1 D_8 L fp_sm=5→69H {{1, 3, 2}, {1, 4, 5}, {1, 6, 7}, {2, 6, 4}, {2, 5, 7}, {3, 7, 4}, {3, 6, 5}} flat triad/mask bits {1, 3, 2, 4, 5, 6, 7} {1, 0, 0, 1, 0, 1, 1}
166	$\overline{g}{}^{rg}_{m}\ \overset{0}{R}$		{D8, D7, D4, F4, snubH4 8–1, G2s, ring3}	$0apggsscc\ 0100001112_2$	Bn{ 1, 0, 1, 0, 1, 0, 0, 0, 1, −1, 0, 0 } E8{ 0, 0, 0, 0, 0, 0, 0, −1/√2, 0 }	Rt{ 0 0 0 0 0 0 0 1 } Wt{ 0 0 0 0 0 0 −1 2 } Ht 1	H 1	Flipped Triad fpi=9 D_8 L fp_sm=6→45H {{1, 4, 2}, {1, 3, 6}, {1, 7, 5}, {2, 3, 5}, {2, 6, 7}, {3, 4, 7}, {4, 6, 5}} flat triad/mask bits {1, 2, 4, 3, 6, 7, 5} {1, 0, 1, 0, 0, 0, 1} Not Flipped Triad fpi=6 D_8 L fp_sm=6→45H {{1, 4, 2}, {1, 4, 7}, {1, 6, 5}, {2, 4, 6}, {2, 5, 7}, {3, 4, 5}, {3, 7, 6}} flat triad/mask bits {1, 3, 2, 4, 7, 6, 5} {1, 0, 1, 0, 0, 0, 1}
167	$g^{rb}_{m}\ \overset{0}{R}$		{D8, D4, F4, snubH4 8–1, G2s, ring1}	$0apggsscc\ 0000011102_2$	Bn{ 1, 0, 1, 0, 1, 0, 0, 0, 1, 0, 1, −1 } E8{ 0, 0, 0, 0, 0, 0, 0, −1/√2, −√(3/2) }	Rt{ 1 2 3 4 2 4 5 3 } Wt{ 0 0 0 0 0 1 −1 1 } Ht 24	Uup 115	Flipped Triad fpi=3 D_8 L fp_sm=4→30H {{1, 2, 3}, {1, 4, 6}, {1, 5, 7}, {2, 4, 5}, {2, 7, 6}, {3, 7, 4}, {3, 5, 6}} flat triad/mask bits {1, 3, 2, 4, 6, 5, 7} {0, 0, 0, 0, 1, 1, 0} Not Flipped Triad fpi=5 D_8 L fp_sm=7→39H {{1, 3, 2}, {1, 4, 7}, {1, 5, 6}, {2, 5, 4}, {2, 7, 6}, {3, 6, 4}, {3, 5, 7}} flat triad/mask bits {1, 3, 2, 4, 7, 5, 6} {0, 1, 0, 0, 0, 1, 1}
168	$\overline{\delta x_2}\ {}^{0\to2/3}_{c_l}\ \overset{0}{R}$		{D8, E7(56), D4, F4, snubH4Φ 16–4, ring8}	$0apggsscc\ 0100001102_2$	Bn{ 1, 0, 1, 0, 1, 0, 0, 0, 1, 1, 0, 0 } E8{ 0, 0, 0, 0, 0, 0, 2/(√3), −1/√2, 1/√6 }	Rt{ −1 −2 −3 −4 −2 −3 −5 −2 } Wt{ 0 0 0 0 −1 1 −1 1 } Ht 22	Cn 112	Flipped Triad fpi=5 D_8 L fp_sm=7→6BH {{1, 3, 2}, {1, 7, 4}, {1, 5, 6}, {2, 5, 4}, {2, 6, 7}, {3, 6, 4}, {3, 7, 5}} flat triad/mask bits {1, 2, 3, 7, 4, 5, 6} {1, 1, 0, 1, 0, 1, 1} Not Flipped Triad fpi=3 D_8 L fp_sm=4→62H {{1, 3, 2}, {1, 6, 4}, {1, 5, 7}, {2, 4, 5}, {2, 6, 7}, {3, 7, 4}, {3, 6, 5}} flat triad/mask bits {1, 2, 3, 6, 4, 5, 7} {0, 1, 0, 0, 0, 1, 1}
169	$\overline{\delta x_3}\ {}^{0\to2/3}_{m_l}\ \overset{0}{R}$		{D8, E7(56), D7, D4, F4, snubH4Φ 16–3, ring8}	$0apggsscc\ 0100001112_2$	Bn{ 1, 0, 1, 0, 1, 0, 1, 0, 0, 1, 1, 0 } E8{ 0, 0, 0, 0, 0, 0, 2/(√3), 0, −√(2/3) }	Rt{ 0 0 0 0 0 1 0 0 } Wt{ 0 0 0 0 −1 2 −1 0 } Ht 1	Li 3	Flipped Triad fpi=9 D_8 L fp_sm=6→68H {{1, 2, 4}, {1, 3, 6}, {1, 5, 7}, {2, 5, 3}, {2, 6, 7}, {3, 7, 4}, {4, 6, 5}} flat triad/mask bits {1, 4, 2, 3, 6, 5, 7} {0, 0, 0, 1, 0, 1, 1} Not Flipped Triad fpi=6 D_8 L fp_sm=6→68H {{1, 2, 3}, {1, 4, 7}, {1, 5, 6}, {2, 6, 4}, {2, 5, 7}, {3, 5, 4}, {3, 7, 6}} flat triad/mask bits {1, 2, 3, 4, 7, 5, 6} {0, 0, 0, 1, 0, 1, 1}
170	$\overline{\delta x_4}\ {}^{0\to-1/3}_{o_d}\ \overset{0}{L}$		{D8, E7, D7, D6, D4, F4, snubH4Φ 8–4, ring6}	$0apggsscc\ 0100000012_2$	Bn{ 1, 0, 1, 0, 1, 0, 0, 0, 1, 0, 0, 1 } E8{ 0, 0, 0, 0, 0, 0, −1/(√3), 1/√2, 1/√6 }	Rt{ 0 0 0 0 0 0 1 0 } Wt{ 0 0 0 0 −1 0 −1 2 } Ht 1	He 2	Flipped Triad fpi=2 D_8 L fp_sm=8→74H {{1, 2, 3}, {1, 4, 5}, {1, 7, 6}, {2, 4, 7}, {2, 6, 5}, {3, 6, 4}, {3, 7, 5}} flat triad/mask bits {1, 3, 2, 4, 5, 7, 6} {0, 0, 1, 0, 1, 1, 1} Not Flipped Triad fpi=1 D_8 L fp_sm=5→77H {{1, 3, 2}, {1, 5, 4}, {1, 7, 6}, {2, 4, 6}, {2, 7, 5}, {3, 7, 4}, {3, 6, 5}} flat triad/mask bits {1, 3, 2, 5, 4, 7, 6} {1, 1, 1, 0, 1, 1, 1}
171	$\overline{\delta x_5}\ {}^{0\to-1/3}_{c_d}\ \overset{0}{L}$		{D8, D7, D4, F4, snubH4Φ 8–3, ring6}	$0apggsscc\ 0100000102_2$	Bn{ 1, 0, 1, 0, 1, 0, 0, 0, 1, 1, 0, 0 } E8{ 0, 0, 0, 0, 0, 0, −1/(√3), −1/√2, 0 }	Rt{ 0 0 0 0 0 0 1 1 } Wt{ 0 0 0 0 −1 0 −1 1 } Ht 2	F 9	Flipped Triad fpi=5 D_8 L fp_sm=7→75H {{1, 3, 2}, {1, 4, 7}, {1, 6, 5}, {2, 4, 5}, {2, 7, 6}, {3, 6, 4}, {3, 7, 5}} flat triad/mask bits {1, 2, 3, 4, 7, 6, 5} {1, 0, 1, 0, 1, 1, 1} Not Flipped Triad fpi=3 D_8 L fp_sm=4→7CH {{1, 2, 3}, {1, 4, 6}, {1, 7, 5}, {2, 5, 4}, {2, 7, 6}, {3, 7, 4}, {3, 6, 5}} flat triad/mask bits {1, 2, 3, 4, 6, 7, 5} {0, 0, 1, 1, 1, 1, 1}
172	$\overline{\delta x_3}\ {}^{0\to-1/3}_{m_d}\ \overset{0}{L}$		{D8, D4, F4, snubH4Φ 16–2, ring7}	$0apggsscc\ 0100000112_2$	Bn{ 1, 0, 1, 0, 1, 0, 0, 0, 1, 1, 0, 1 } E8{ 0, 0, 0, 0, 0, 0, −1/(√3), 0, −√(2/3) }	Rt{ 1 2 3 4 2 4 6 3 } Wt{ 0 0 0 −1 0 0 1 0 } Ht 25	Lv 116	Flipped Triad fpi=9 D_8 L fp_sm=6→76H {{1, 2, 4}, {1, 6, 3}, {1, 7, 5}, {2, 3, 5}, {2, 7, 6}, {3, 7, 4}, {4, 6, 5}} flat triad/mask bits {1, 4, 2, 6, 3, 7, 5} {0, 1, 1, 0, 1, 1, 1} Not Flipped Triad fpi=6 D_8 L fp_sm=6→76H {{1, 2, 3}, {1, 7, 4}, {1, 6, 5}, {2, 4, 6}, {2, 7, 5}, {3, 5, 4}, {3, 7, 6}} flat triad/mask bits {1, 2, 3, 7, 4, 6, 5} {0, 1, 1, 0, 1, 1, 1}
173	$\delta x_3\ {}^{0\to1/3}_{m_m}\ \overset{0}{L}$		{D8, E7(56), D4, F4, snubH4Φ 8–4, ring2}	$0apggsscc\ 0000001112_2$	Bn{ 1, 0, 1, 0, 1, 0, 0, 0, 1, 0, 0, 1 } E8{ 0, 0, 0, 0, 0, 0, 1/(√3), 0, √(2/3) }	Rt{ −1 −2 −3 −4 −2 −3 −4 −2 } Wt{ 0 0 0 −1 −1 0 1 0 } Ht 21	Ds 110	Flipped Triad fpi=6 D_8 L fp_sm=6→24H {{1, 2, 3}, {1, 4, 7}, {1, 6, 5}, {2, 4, 6}, {2, 5, 7}, {3, 5, 4}, {3, 6, 7}} flat triad/mask bits {1, 3, 2, 4, 7, 6, 5} {0, 0, 1, 0, 0, 1, 0} Not Flipped Triad fpi=9 D_8 L fp_sm=6→24H {{1, 2, 4}, {1, 3, 6}, {1, 7, 5}, {2, 3, 5}, {2, 6, 7}, {3, 7, 4}, {4, 5, 6}} flat triad/mask bits {1, 2, 4, 3, 6, 7, 5} {0, 0, 1, 0, 0, 1, 0}

174	$^{\Phi x_2}cm\ \hat{L}^{0\to 1/3}$			{D8, E7(56), D7, D4, F4, snubH4Φ 8−2, ring6}	0apggsscc 000001010_2	Bn{ 1 1 0 1 1 1 0 0 } E8{ 0 0 0 0 1 0 1 0 } Ph{ $0\ 0\ 0\ 0\ 1\ \frac{1}{\sqrt{3}}\ \frac{1}{\sqrt{2}}\ -\frac{1}{\sqrt{6}}$ }	Rt{ 0 0 0 0 0 1 1 0 } Wt{ 0 0 0 −1 −1 1 1 −1 } Ht 2	Ne 10	Flipped Triad fpi=3 D_8 L fp_sm=4→2EH {{1, 2, 3}, {1, 6, 4}, {1, 7, 5}, {2, 5, 4}, {2, 6, 7}, {3, 7, 4}, {3, 5, 6}} flat triad/mask bits {1, 3, 2, 6, 4, 7, 5} {0, 1, 1, 1, 0, 1, 0}	Not Flipped Triad fpi=5 D_8 L fp_sm=7→27H {{1, 3, 2}, {1, 7, 4}, {1, 6, 5}, {2, 5, 4}, {2, 6, 7}, {3, 6, 4}, {3, 5, 7}} flat triad/mask bits {1, 3, 2, 7, 4, 6, 5} {1, 1, 1, 0, 0, 1, 0}
175	$^{\Phi x_1}om\ \hat{L}^{0\to 1/3}$			{D8, E7, E7(56), D7, D6, D4, F4, snubH4Φ 8−3, ring2}	0apggsscc 000001001_2	Bn{ 1 1 0 1 1 0 1 0 } E8{ 0 0 0 0 1 1 0 0 } Ph{ $0\ 0\ 0\ 0\ 1\ \frac{1}{\sqrt{3}}\ -\frac{1}{\sqrt{2}}\ -\frac{1}{\sqrt{6}}$ }	Rt{ 0 0 0 0 0 1 1 1 } Wt{ 0 0 0 −1 −1 1 0 1 } Ht 3	S 16	Flipped Triad fpi=1 D_8 L fp_sm=5→25H {{1, 3, 2}, {1, 4, 5}, {1, 7, 6}, {2, 4, 6}, {2, 5, 7}, {3, 7, 4}, {3, 5, 6}} flat triad/mask bits {1, 2, 3, 4, 5, 7, 6} {1, 0, 1, 0, 0, 1, 0}	Not Flipped Triad fpi=2 D_8 L fp_sm=8→26H {{1, 2, 3}, {1, 5, 4}, {1, 7, 6}, {2, 4, 7}, {2, 5, 6}, {3, 6, 4}, {3, 5, 7}} flat triad/mask bits {1, 2, 3, 5, 4, 7, 6} {0, 1, 1, 0, 0, 1, 0}
176	$^{\overline{\nu\mu}}w_l\ \hat{R}^{0\to -1}$			{D8, E7, D7, E6, D6, D5, snubH4Φ 8−1, ring2}	0apggsscc 011100100_2	Bn{ 1 1 0 1 1 0 0 1 } E8{ 0 0 0 1 −1 0 0 0 } Ph{ $0\ 0\ -\frac{1}{\sqrt{2}}\ \frac{1}{\sqrt{2}}\ -1\ 0\ 0\ 0$ }	Rt{ 0 0 0 1 0 0 0 0 } Wt{ 0 0 −1 2 0 0 −1 0 } Ht 1	B 5	Flipped Triad fpi=16 D_8 R fp_sm=3→64H {{1, 2, 5}, {1, 3, 6}, {1, 7, 4}, {2, 3, 7}, {2, 4, 6}, {3, 5, 4}, {5, 7, 6}} flat triad/mask bits {1, 5, 2, 3, 6, 7, 4} {0, 0, 1, 0, 0, 1, 1}	Not Flipped Triad fpi=15 D_8 R fp_sm=3→64H {{1, 2, 5}, {1, 3, 6}, {1, 7, 4}, {2, 3, 4}, {2, 6, 7}, {3, 7, 5}, {4, 6, 5}} flat triad/mask bits {1, 2, 5, 3, 6, 7, 4} {0, 0, 1, 0, 0, 1, 1}
177	$^{s}o_d\ \overset{\gamma}{L}^{-1/3\to -4/3}$			{D8, E7, D7, D6, snubH4Φ 8−3, ring7}	0apggsscc 000100001_2	Bn{ 1 1 0 1 0 1 1 0 } E8{ 0 0 0 1 0 −1 0 0 } Ph{ $0\ 0\ -\frac{1}{\sqrt{2}}\ \frac{1}{\sqrt{2}}\ 0\ -\frac{1}{\sqrt{3}}\ \frac{1}{\sqrt{2}}\ \frac{1}{\sqrt{6}}$ }	Rt{ 0 0 0 1 0 0 1 0 } Wt{ 0 0 −1 1 0 −1 1 −1 } Ht 2	Mg 12	Flipped Triad fpi=17 D_8 L fp_sm=8→0BH {{1, 5, 2}, {1, 7, 3}, {1, 4, 6}, {2, 4, 3}, {2, 6, 7}, {3, 5, 6}, {4, 5, 7}} flat triad/mask bits {1, 2, 5, 7, 3, 4, 6} {1, 1, 0, 1, 0, 0, 0}	Not Flipped Triad fpi=19 D_8 L fp_sm=3→02H {{1, 2, 6}, {1, 4, 3}, {1, 5, 7}, {2, 3, 5}, {2, 4, 7}, {3, 6, 7}, {4, 5, 6}} flat triad/mask bits {1, 2, 6, 4, 3, 5, 7} {0, 1, 0, 0, 0, 0, 0}
178	$^{s}c_d\ \overset{\gamma}{L}^{-1/3\to -4/3}$			{D8, D7, snubH4 16−4, ring5}	0apggsscc 000100010_2	Bn{ 1 1 0 1 0 1 0 1 } E8{ 0 0 0 1 0 0 −1 0 } Ph{ $0\ 0\ -\frac{1}{\sqrt{2}}\ \frac{1}{\sqrt{2}}\ 0\ -\frac{1}{\sqrt{3}}\ -\frac{1}{\sqrt{2}}\ \frac{1}{\sqrt{6}}$ }	Rt{ 0 0 0 1 0 0 1 1 } Wt{ 0 0 −1 1 0 −1 0 1 } Ht 3	Ar 18	Flipped Triad fpi=18 D_8 L fp_sm=6→09H {{1, 5, 2}, {1, 3, 7}, {1, 4, 6}, {2, 6, 3}, {2, 4, 7}, {3, 4, 5}, {5, 6, 7}} flat triad/mask bits {1, 2, 5, 3, 7, 4, 6} {1, 0, 0, 1, 0, 0, 0}	Not Flipped Triad fpi=20 D_8 L fp_sm=1→00H {{1, 2, 6}, {1, 3, 4}, {1, 5, 7}, {2, 3, 7}, {2, 4, 5}, {3, 5, 6}, {4, 6, 7}} flat triad/mask bits {1, 2, 6, 3, 4, 5, 7} {0, 0, 0, 0, 0, 0, 0}
179	$^{s}m_d\ \overset{\gamma}{L}^{-1/3\to -4/3}$			{D8, H4Φcell16, ring8}	0apggsscc 000100011_2	Bn{ 1 1 0 1 0 0 1 1 } E8{ 0 0 0 1 0 0 0 −1 } Ph{ $0\ 0\ -\frac{1}{\sqrt{2}}\ \frac{1}{\sqrt{2}}\ 0\ -\frac{1}{\sqrt{3}}\ 0\ -\sqrt{\frac{2}{3}}$ }	Rt{ 1 2 3 5 2 4 6 3 } Wt{ 0 0 −1 1 0 0 0 0 } Ht 26	Uus 117	Flipped Triad fpi=22 D_8 L fp_sm=6→09H {{1, 6, 2}, {1, 3, 5}, {1, 4, 7}, {2, 7, 3}, {2, 4, 5}, {3, 4, 6}, {5, 6, 7}} flat triad/mask bits {1, 2, 6, 3, 5, 4, 7} {1, 0, 0, 1, 0, 0, 0}	Not Flipped Triad fpi=21 D_8 L fp_sm=6→09H {{1, 6, 2}, {1, 3, 5}, {1, 4, 7}, {2, 4, 3}, {2, 5, 7}, {3, 6, 7}, {4, 5, 6}} flat triad/mask bits {1, 6, 2, 3, 5, 4, 7} {1, 0, 0, 1, 0, 0, 0}
180	$^{\overline{c}}b_l\ \hat{R}^{-2/3}$			{D8, E7(56), H4cell16, ring4}	0apggsscc 011100111_2	Bn{ 1 1 0 0 1 1 1 0 } E8{ 0 0 0 1 0 0 0 1 } Ph{ $0\ 0\ -\frac{1}{\sqrt{2}}\ \frac{1}{\sqrt{2}}\ 0\ \frac{1}{\sqrt{3}}\ 0\ \sqrt{\frac{2}{3}}$ }	Rt{ −1 −2 −3 −3 −2 −3 −4 −2 } Wt{ 0 0 −1 1 −1 0 0 0 } Ht 20	$\overline{\mathrm{Bh}}$ 107	Flipped Triad fpi=22 D_8 R fp_sm=6→6FH {{1, 6, 2}, {1, 5, 3}, {1, 7, 4}, {2, 7, 3}, {2, 4, 5}, {3, 6, 4}, {5, 7, 6}} flat triad/mask bits {1, 2, 6, 5, 3, 7, 4} {1, 1, 1, 1, 0, 1, 1}	Not Flipped Triad fpi=21 D_8 R fp_sm=6→6FH {{1, 6, 2}, {1, 5, 3}, {1, 7, 4}, {2, 4, 3}, {2, 5, 7}, {3, 7, 6}, {4, 6, 5}} flat triad/mask bits {1, 6, 2, 5, 3, 7, 4} {1, 1, 1, 1, 0, 1, 1}
181	$^{\overline{c}}g_l\ \hat{R}^{-2/3}$			{D8, E7(56), D7, snubH4Φ 8−3, ring8}	0apggsscc 011100110_2	Bn{ 1 1 0 0 1 1 0 1 } E8{ 0 0 0 1 0 0 1 0 } Ph{ $0\ 0\ -\frac{1}{\sqrt{2}}\ \frac{1}{\sqrt{2}}\ 0\ \frac{1}{\sqrt{3}}\ \frac{1}{\sqrt{2}}\ -\frac{1}{\sqrt{6}}$ }	Rt{ 0 0 0 1 0 1 1 0 } Wt{ 0 0 −1 1 −1 1 0 −1 } Ht 3	K 19	Flipped Triad fpi=18 D_8 R fp_sm=6→6FH {{1, 5, 2}, {1, 7, 3}, {1, 6, 4}, {2, 6, 3}, {2, 4, 7}, {3, 5, 4}, {5, 7, 6}} flat triad/mask bits {1, 2, 5, 7, 3, 6, 4} {1, 1, 1, 1, 0, 1, 1}	Not Flipped Triad fpi=20 D_8 R fp_sm=1→66H {{1, 2, 6}, {1, 4, 3}, {1, 7, 5}, {2, 3, 7}, {2, 4, 5}, {3, 6, 5}, {4, 7, 6}} flat triad/mask bits {1, 2, 6, 4, 3, 7, 5} {0, 1, 1, 0, 0, 1, 1}
182	$^{\overline{c}}r_l\ \hat{R}^{-2/3}$			{D8, E7, E7(56), D7, D6, snubH4 16−2, ring5}	0apggsscc 011100101_2	Bn{ 1 1 0 0 1 0 1 1 } E8{ 0 0 0 1 0 1 0 0 } Ph{ $0\ 0\ -\frac{1}{\sqrt{2}}\ \frac{1}{\sqrt{2}}\ 0\ \frac{1}{\sqrt{3}}\ -\frac{1}{\sqrt{2}}\ -\frac{1}{\sqrt{6}}$ }	Rt{ 0 0 0 1 0 1 1 1 } Wt{ 0 0 −1 1 −1 1 −1 1 } Ht 4	Cr 24	Flipped Triad fpi=17 D_8 R fp_sm=8→6DH {{1, 5, 2}, {1, 3, 7}, {1, 6, 4}, {2, 4, 3}, {2, 6, 7}, {3, 6, 5}, {4, 7, 5}} flat triad/mask bits {1, 2, 5, 3, 7, 6, 4} {1, 0, 1, 1, 0, 1, 1}	Not Flipped Triad fpi=19 D_8 R fp_sm=3→64H {{1, 2, 6}, {1, 3, 4}, {1, 7, 5}, {2, 3, 5}, {2, 4, 7}, {3, 7, 6}, {4, 6, 5}} flat triad/mask bits {1, 2, 6, 3, 4, 7, 5} {0, 0, 1, 0, 0, 1, 1}
183	$^{\mu}y_d\ \overset{\gamma}{L}^{-}$			{D8, E7, E7(56), D7, E6, D6, D5, snubH4Φ 16−3, ring7}	0apggsscc 000100000_2	Bn{ 1 1 0 0 0 1 1 1 } E8{ 0 0 0 1 1 0 0 0 } Ph{ $0\ 0\ -\frac{1}{\sqrt{2}}\ \frac{1}{\sqrt{2}}\ 1\ 0\ 0\ 0$ }	Rt{ 0 0 0 1 0 1 2 1 } Wt{ 0 0 −1 0 −1 0 1 0 } Ht 5	Zn 30	Flipped Triad fpi=16 D_8 L fp_sm=3→02H {{1, 2, 5}, {1, 6, 3}, {1, 4, 7}, {2, 3, 7}, {2, 4, 6}, {3, 4, 5}, {5, 6, 7}} flat triad/mask bits {1, 5, 2, 6, 3, 4, 7} {0, 1, 0, 0, 0, 0, 0}	Not Flipped Triad fpi=15 D_8 L fp_sm=3→02H {{1, 2, 5}, {1, 6, 3}, {1, 4, 7}, {2, 3, 4}, {2, 6, 7}, {3, 5, 7}, {4, 5, 6}} flat triad/mask bits {1, 2, 5, 6, 3, 4, 7} {0, 1, 0, 0, 0, 0, 0}
184	$^{\overline{e_T\phi}}r_d\ \overset{\gamma}{L}^{0\to 1}$			{D8, E7, D7, E6, D6, E5, D5, D4, F4s, snubH4Φ 8−1, ring6}	0apggsscc 011000001_2	Bn{ 1 0 1 1 1 1 0 0 } E8{ 0 0 1 −1 0 0 0 0 } Ph{ $0\ 0\ \sqrt{2}\ 0\ 0\ 0\ 0\ 0$ }	Rt{ 0 0 1 0 0 0 0 0 } Wt{ 0 −1 2 −1 0 0 0 0 } Ht 1	C 6	Flipped Triad fpi=1 D_8 R fp_sm=5→70H {{1, 2, 3}, {1, 4, 5}, {1, 6, 7}, {2, 4, 6}, {2, 7, 5}, {3, 7, 4}, {3, 6, 5}} flat triad/mask bits {1, 3, 2, 4, 5, 6, 7} {0, 0, 0, 0, 1, 1, 1}	Not Flipped Triad fpi=2 D_8 R fp_sm=8→73H {{1, 3, 2}, {1, 5, 4}, {1, 6, 7}, {2, 4, 7}, {2, 6, 5}, {3, 6, 4}, {3, 7, 5}} flat triad/mask bits {1, 3, 2, 5, 4, 6, 7} {1, 1, 0, 0, 1, 1, 1}
185	$^{\overline{\nu\mu}}w_d\ \overset{\gamma}{L}^{0}$			{D8, E7, D7, E6, D6, D5, snubH4Φ 16−1, ring2}	0apggsscc 011100000_2	Bn{ 1 0 1 1 1 0 1 0 } E8{ 0 0 1 0 −1 0 0 0 } Ph{ $0\ 0\ \frac{1}{\sqrt{2}}\ \frac{1}{\sqrt{2}}\ -1\ 0\ 0\ 0$ }	Rt{ 0 0 1 1 0 0 0 0 } Wt{ 0 −1 1 1 0 0 −1 0 } Ht 2	Al 13	Flipped Triad fpi=16 D_8 R fp_sm=3→7AH {{1, 2, 5}, {1, 6, 3}, {1, 4, 7}, {2, 7, 3}, {2, 6, 4}, {3, 5, 4}, {5, 7, 6}} flat triad/mask bits {1, 5, 2, 6, 3, 4, 7} {0, 1, 0, 1, 1, 1, 1}	Not Flipped Triad fpi=15 D_8 R fp_sm=3→7AH {{1, 2, 5}, {1, 6, 3}, {1, 4, 7}, {2, 4, 3}, {2, 7, 6}, {3, 7, 5}, {4, 6, 5}} flat triad/mask bits {1, 2, 5, 6, 3, 4, 7} {0, 1, 0, 1, 1, 1, 1}
186	$^{s}o_l\ \hat{R}^{-1/3}$			{D8, E7, D7, D6, snubH4 8−2, ring5}	0apggsscc 000100101_2	Bn{ 1 0 1 1 1 0 0 1 } E8{ 0 0 1 0 0 −1 0 0 } Ph{ $0\ 0\ \frac{1}{\sqrt{2}}\ \frac{1}{\sqrt{2}}\ 0\ -\frac{1}{\sqrt{3}}\ \frac{1}{\sqrt{2}}\ \frac{1}{\sqrt{6}}$ }	Rt{ 0 0 1 1 0 0 1 0 } Wt{ 0 −1 1 0 0 −1 1 −1 } Ht 3	Ca 20	Flipped Triad fpi=17 D_8 L fp_sm=8→15H {{1, 5, 2}, {1, 3, 7}, {1, 6, 4}, {2, 3, 4}, {2, 7, 6}, {3, 5, 6}, {4, 5, 7}} flat triad/mask bits {1, 2, 5, 3, 7, 6, 4} {1, 0, 1, 0, 1, 0, 0}	Not Flipped Triad fpi=19 D_8 L fp_sm=3→1CH {{1, 2, 6}, {1, 3, 4}, {1, 7, 5}, {2, 5, 3}, {2, 7, 4}, {3, 6, 7}, {4, 5, 6}} flat triad/mask bits {1, 2, 6, 3, 4, 7, 5} {0, 0, 1, 1, 1, 0, 0}
187	$^{s}c_l\ \hat{R}^{-1/3}$			{D8, D7, H4Φcell16, ring7}	0apggsscc 000100110_2	Bn{ 1 0 1 1 0 1 1 0 } E8{ 0 0 1 0 0 0 −1 0 } Ph{ $0\ 0\ \frac{1}{\sqrt{2}}\ \frac{1}{\sqrt{2}}\ 0\ -\frac{1}{\sqrt{3}}\ -\frac{1}{\sqrt{2}}\ \frac{1}{\sqrt{6}}$ }	Rt{ 0 0 1 1 0 0 1 1 } Wt{ 0 −1 1 0 0 −1 0 1 } Ht 4	Fe 26	Flipped Triad fpi=18 D_8 L fp_sm=6→17H {{1, 5, 2}, {1, 7, 3}, {1, 6, 4}, {2, 3, 6}, {2, 7, 4}, {3, 4, 5}, {5, 6, 7}} flat triad/mask bits {1, 2, 5, 7, 3, 6, 4} {1, 1, 1, 0, 1, 0, 0}	Not Flipped Triad fpi=20 D_8 L fp_sm=1→1EH {{1, 2, 6}, {1, 4, 3}, {1, 7, 5}, {2, 7, 3}, {2, 5, 4}, {3, 5, 6}, {4, 6, 7}} flat triad/mask bits {1, 2, 6, 4, 3, 7, 5} {0, 1, 1, 1, 1, 0, 0}
188	$^{s}m_l\ \hat{R}^{-1/3}$			{D8, snubH4Φ 8−4, ring6}	0apggsscc 000100111_2	Bn{ 1 0 1 1 0 1 0 1 } E8{ 0 0 1 0 0 0 0 −1 } Ph{ $0\ 0\ \frac{1}{\sqrt{2}}\ \frac{1}{\sqrt{2}}\ 0\ -\frac{1}{\sqrt{3}}\ 0\ -\sqrt{\frac{2}{3}}$ }	Rt{ 1 2 4 5 2 4 6 3 } Wt{ 0 −1 1 0 0 0 0 0 } Ht 27	Uuo 118	Flipped Triad fpi=22 D_8 L fp_sm=6→17H {{1, 6, 2}, {1, 5, 3}, {1, 7, 4}, {2, 3, 7}, {2, 5, 4}, {3, 4, 6}, {5, 6, 7}} flat triad/mask bits {1, 2, 6, 5, 3, 7, 4} {1, 1, 1, 0, 1, 0, 0}	Not Flipped Triad fpi=21 D_8 L fp_sm=6→17H {{1, 6, 2}, {1, 5, 3}, {1, 7, 4}, {2, 3, 4}, {2, 7, 5}, {3, 6, 7}, {4, 5, 6}} flat triad/mask bits {1, 6, 2, 5, 3, 7, 4} {1, 1, 1, 0, 1, 0, 0}
189	$^{\overline{c}}b_d\ \overset{\gamma}{L}^{-2/3\to 1/3}$			{D8, E7(56), snubH4 8−3, ring4}	0apggsscc 011100011_2	Bn{ 1 0 1 1 0 0 1 1 } E8{ 0 0 1 0 0 0 0 1 } Ph{ $0\ 0\ \frac{1}{\sqrt{2}}\ \frac{1}{\sqrt{2}}\ 0\ \frac{1}{\sqrt{3}}\ 0\ \sqrt{\frac{2}{3}}$ }	Rt{ −1 −2 −2 −3 −2 −3 −4 −2 } Wt{ 0 −1 1 0 −1 0 0 0 } Ht 19	$\overline{\mathrm{Rf}}$ 104	Flipped Triad fpi=22 D_8 R fp_sm=6→71H {{1, 6, 2}, {1, 3, 5}, {1, 4, 7}, {2, 3, 7}, {2, 5, 4}, {3, 6, 4}, {5, 7, 6}} flat triad/mask bits {1, 2, 6, 3, 5, 4, 7} {1, 0, 0, 0, 1, 1, 1}	Not Flipped Triad fpi=21 D_8 R fp_sm=6→71H {{1, 6, 2}, {1, 3, 5}, {1, 4, 7}, {2, 3, 4}, {2, 7, 5}, {3, 7, 6}, {4, 6, 5}} flat triad/mask bits {1, 6, 2, 3, 5, 4, 7} {1, 0, 0, 0, 1, 1, 1}

190	$\overline{\overset{c}{g}_d}\ \overset{-2/3\to 1/3}{\check{L}}$		{D8, E7(56), D7, H4cell16, ring3}	$0apggsscc\ 0111000010_2$	Bn{ 1, 0, 1, 0, 1, 1, 0, 1, 1, 0, } E8{ 0, 0, $\frac{1}{\sqrt{2}}$, $\frac{1}{\sqrt{2}}$, 0, $\frac{1}{\sqrt{3}}$, $\frac{1}{\sqrt{2}}$, $-\frac{1}{\sqrt{6}}$, } Ph{ 0, 0, }	Rt{ 0, 0, 1, 1, 0, 1, 1, 0, } Wt{ 0, 0, −1, 1, 0, −1, 1, 0, −1, } Ht 4	Co 27	Flipped Triad fpi=18 D_8 R fp_sm=6→71H {{1, 5, 2}, {1, 3, 7}, {1, 4, 6}, {2, 3, 6}, {2, 7, 4}, {3, 5, 4}, {5, 7, 6}} flat triad/mask bits {1, 2, 5, 3, 7, 4, 6} {1, 0, 0, 0, 1, 1, 1}	Not Flipped Triad fpi=20 D_8 R fp_sm=1→78H {{1, 2, 6}, {1, 3, 4}, {1, 5, 7}, {2, 7, 3}, {2, 5, 4}, {3, 6, 5}, {4, 7, 6}} flat triad/mask bits {1, 2, 6, 3, 4, 5, 7} {0, 0, 0, 1, 1, 1, 1}
191	$\overline{\overset{c}{r}_d}\ \overset{-2/3\to 1/3}{\check{L}}$		{D8, E7, E7(56), D7, D6, snubH4Φ 8–4, ring2}	$0apggsscc\ 0111000001_2$	Bn{ 1, 0, 1, 0, 1, 1, 0, 1, 1, 0, } E8{ 0, 0, $\frac{1}{\sqrt{2}}$, $\frac{1}{\sqrt{2}}$, 0, $\frac{1}{\sqrt{3}}$, $-\frac{1}{\sqrt{2}}$, $-\frac{1}{\sqrt{6}}$, } Ph{ 0, 0, }	Rt{ 0, 0, 1, 1, 0, 1, 1, 1, } Wt{ 0, 0, −1, 1, 0, −1, 1, −1, 1, } Ht 5	Ge 32	Flipped Triad fpi=17 D_8 R fp_sm=8→73H {{1, 5, 2}, {1, 7, 3}, {1, 4, 6}, {2, 3, 4}, {2, 7, 6}, {3, 6, 5}, {4, 7, 5}} flat triad/mask bits {1, 2, 5, 7, 3, 4, 6} {1, 1, 0, 0, 1, 1, 1}	Not Flipped Triad fpi=19 D_8 R fp_sm=3→7AH {{1, 2, 6}, {1, 4, 3}, {1, 5, 7}, {2, 5, 3}, {2, 7, 4}, {3, 7, 6}, {4, 6, 5}} flat triad/mask bits {1, 2, 6, 4, 3, 5, 7} {0, 1, 0, 1, 1, 1, 1}
192	$\overset{\mu}{y_l}\ \overset{\to 0}{\check{R}}$		{D8, E7, E7(56), D7, E6, D6, D5, snubH4Φ 16–4, ring2}	$0apggsscc\ 0001001002_2$	Bn{ 1, 0, 1, 0, 1, 1, 1, 0, 1, 1, } E8{ 0, 0, $\frac{1}{\sqrt{2}}$, $\frac{1}{\sqrt{2}}$, 1, 0, 0, 0, } Ph{ 0, 0, }	Rt{ 0, 0, 1, 1, 0, 1, 2, 1, } Wt{ 0, 0, −1, 1, −1, 0, 1, 0, } Ht 6	Sr 38	Flipped Triad fpi=16 D_8 L fp_sm=3→1CH {{1, 2, 5}, {1, 3, 6}, {1, 7, 4}, {2, 7, 3}, {2, 6, 4}, {3, 4, 5}, {5, 6, 7}} flat triad/mask bits {1, 5, 2, 3, 6, 7, 4} {0, 0, 1, 1, 1, 0, 0}	Not Flipped Triad fpi=15 D_8 L fp_sm=3→1CH {{1, 2, 5}, {1, 3, 6}, {1, 7, 4}, {2, 4, 3}, {2, 7, 6}, {3, 5, 7}, {4, 5, 6}} flat triad/mask bits {1, 2, 5, 3, 6, 7, 4} {0, 0, 1, 1, 1, 0, 0}
193	$\overset{\omega_l}{r_m}\ \overset{0\to -1}{\check{R}}$		{D8, E7, E7(56), D7, E6, D6, E5, D5, D4, F4s, snubH4 8–2, ring4}	$0apggsscc\ 0010011012_2$	Bn{ 1, 0, 1, 1, 0, 1, 0, 1, 1, 0, } E8{ 0, 0, 1, $\frac{1}{\sqrt{2}}$, 0, 0, 0, 0, } Ph{ 0, 0, }	Rt{ 0, 0, 1, 2, 0, 1, 2, 1, } Wt{ 0, 0, −1, 0, 1, −1, 0, 0, 0, } Ht 7	Pd 46	Flipped Triad fpi=2 D_8 R fp_sm=8→3FH {{1, 3, 2}, {1, 5, 4}, {1, 7, 6}, {2, 7, 4}, {2, 6, 5}, {3, 6, 4}, {3, 5, 7}} flat triad/mask bits {1, 2, 3, 5, 4, 7, 6} {1, 1, 1, 1, 1, 1, 0}	Not Flipped Triad fpi=1 D_8 R fp_sm=5→3CH {{1, 2, 3}, {1, 4, 5}, {1, 7, 6}, {2, 6, 4}, {2, 7, 5}, {3, 7, 4}, {3, 5, 6}} flat triad/mask bits {1, 2, 3, 4, 5, 7, 6} {0, 0, 1, 1, 1, 1, 0}
194	$\overline{\overset{e}{r_l}\ \overset{\phi}{\phi}}\ \overset{0}{g_m}\ \check{L}$		{D8, E7, D7, E6, D6, E5, D5, D4, F4s, snubH4Φ 8–1, D3, ring2}	$0apggsscc\ 0110010102_2$	Bn{ 1, 0, 0, 1, 1, 1, 1, 0, } E8{ 0, 1, $-\frac{1}{\sqrt{2}}$, $-\frac{1}{\sqrt{2}}$, 0, 0, 0, 0, } Ph{ 0, 1, }	Rt{ 0, 1, 0, 0, 0, 0, 0, 0, } Wt{ 0, 2, −1, 0, 0, 0, 0, 0, 0, } Ht 1	N 7	Flipped Triad fpi=3 D_8 R fp_sm=4→56H {{1, 2, 3}, {1, 6, 4}, {1, 7, 5}, {2, 4, 5}, {2, 7, 6}, {3, 4, 7}, {3, 6, 5}} flat triad/mask bits {1, 3, 2, 6, 4, 7, 5} {0, 1, 1, 0, 1, 0, 1}	Not Flipped Triad fpi=5 D_8 R fp_sm=7→5FH {{1, 3, 2}, {1, 7, 4}, {1, 6, 5}, {2, 5, 4}, {2, 7, 6}, {3, 4, 6}, {3, 7, 5}} flat triad/mask bits {1, 3, 2, 7, 4, 6, 5} {1, 1, 1, 1, 1, 0, 1}
195	$\overline{\overset{e}{s_l}\ \overset{\phi}{\phi}}\ \overset{0\to 1}{g_l}\ \check{R}$		{D8, E7, D7, E6, D6, E5, D5, D4, F4s, snubH4Φ 16–1, ring8}	$0apggsscc\ 0110001102_2$	Bn{ 1, 0, 0, 0, 1, 1, 0, 1, } E8{ 0, 1, 0, $\frac{1}{\sqrt{2}}$, 0, 0, 0, 0, } Ph{ 0, 1, }	Rt{ 0, 1, 1, 0, 0, 0, 0, 0, } Wt{ 0, −1, 1, −1, 0, 0, 0, 0, 0, } Ht 2	Si 14	Flipped Triad fpi=3 D_8 R fp_sm=4→65H {{1, 3, 2}, {1, 4, 6}, {1, 7, 5}, {2, 4, 5}, {2, 6, 7}, {3, 7, 4}, {3, 6, 5}} flat triad/mask bits {1, 2, 3, 4, 6, 7, 5} {1, 0, 1, 0, 0, 1, 1}	Not Flipped Triad fpi=5 D_8 R fp_sm=7→6CH {{1, 3, 2}, {1, 4, 7}, {1, 6, 5}, {2, 5, 4}, {2, 6, 7}, {3, 6, 4}, {3, 7, 5}} flat triad/mask bits {1, 2, 3, 4, 7, 6, 5} {0, 0, 1, 1, 0, 1, 1}
196	$\overline{\overset{\nu\mu}{w_m}}\ \overset{0}{\check{R}}$		{D8, E7, D7, E6, D6, D5, snubH4Φ 8–1, ring6}	$0apggsscc\ 0111011002_2$	Bn{ 1, 0, 0, 1, 1, 0, 1, 1, } E8{ 0, 1, 0, 0, −1, 0, 0, 0, } Ph{ 0, 1, }	Rt{ 0, 1, 1, 1, 0, 0, 0, 0, } Wt{ 0, −1, 1, 0, 1, 0, 0, −1, 0, } Ht 3	Sc 21	Flipped Triad fpi=16 D_8 R fp_sm=3→49H {{1, 5, 2}, {1, 3, 6}, {1, 4, 7}, {2, 7, 3}, {2, 4, 6}, {3, 4, 5}, {5, 7, 6}} flat triad/mask bits {1, 2, 5, 3, 6, 4, 7} {1, 0, 0, 1, 0, 0, 1}	Not Flipped Triad fpi=15 D_8 R fp_sm=3→49H {{1, 5, 2}, {1, 3, 6}, {1, 4, 7}, {2, 4, 3}, {2, 6, 7}, {3, 5, 7}, {4, 6, 5}} flat triad/mask bits {1, 5, 2, 3, 6, 4, 7} {1, 0, 0, 1, 0, 0, 1}
197	$\overset{s}{o_m}\ \overset{-1/3}{\check{L}}$		{D8, E7, D7, D6, H4Φcell16, ring6}	$0apggsscc\ 0001010012_2$	Bn{ 1, 0, 0, 1, 0, 0, 1, 1, } E8{ 0, 1, 0, 0, 0, $-\frac{1}{\sqrt{3}}$, $\frac{1}{\sqrt{2}}$, $\frac{1}{\sqrt{6}}$, } Ph{ 0, 1, }	Rt{ 0, 1, 1, 1, 0, 0, 1, 0, } Wt{ 0, −1, 1, 0, 0, 0, −1, 1, −1, } Ht 4	Ni 28	Flipped Triad fpi=17 D_8 L fp_sm=8→26H {{1, 2, 5}, {1, 7, 3}, {1, 6, 4}, {2, 3, 4}, {2, 6, 7}, {3, 6, 5}, {4, 5, 7}} flat triad/mask bits {1, 5, 2, 7, 3, 6, 4} {0, 1, 1, 0, 0, 1, 0}	Not Flipped Triad fpi=19 D_8 L fp_sm=3→2FH {{1, 6, 2}, {1, 4, 3}, {1, 7, 5}, {2, 5, 3}, {2, 4, 7}, {3, 7, 6}, {4, 5, 6}} flat triad/mask bits {1, 6, 2, 4, 3, 7, 5} {1, 1, 1, 1, 0, 1, 0}
198	$\overset{s}{c_m}\ \overset{-1/3}{\check{L}}$		{D8, D7, snubH4Φ 16–2, ring8}	$0apggsscc\ 0001010102_2$	Bn{ 1, 0, 0, 0, 1, 1, 1, 0, } E8{ 0, 1, 0, 0, 0, $-\frac{1}{\sqrt{3}}$, $-\frac{1}{\sqrt{2}}$, $\frac{1}{\sqrt{6}}$, } Ph{ 0, 1, }	Rt{ 0, 1, 1, 1, 0, 0, 1, 1, } Wt{ 0, −1, 1, 0, 0, 0, −1, 0, 1, } Ht 5	Se 34	Flipped Triad fpi=18 D_8 L fp_sm=6→24H {{1, 2, 5}, {1, 3, 7}, {1, 6, 4}, {2, 3, 6}, {2, 4, 7}, {3, 5, 4}, {5, 6, 7}} flat triad/mask bits {1, 5, 2, 3, 7, 6, 4} {0, 0, 1, 0, 0, 1, 0}	Not Flipped Triad fpi=20 D_8 L fp_sm=1→2DH {{1, 6, 2}, {1, 3, 4}, {1, 7, 5}, {2, 7, 3}, {2, 4, 5}, {3, 6, 5}, {4, 6, 7}} flat triad/mask bits {1, 6, 2, 3, 4, 7, 5} {1, 0, 1, 1, 0, 1, 0}
199	$\overset{s}{m_m}\ \overset{-1/3}{\check{L}}$		{D8, snubH4 16–3, ring5}	$0apggsscc\ 0001010112_2$	Bn{ 0, 1, 1, 1, 1, 1, 0, 0, } E8{ 0, 1, 0, 0, 0, $-\frac{1}{\sqrt{3}}$, 0, $-\sqrt{\frac{2}{3}}$, } Ph{ 0, 1, }	Rt{ 1, 3, 4, 5, 2, 4, 6, 3, } Wt{ −1, 1, 0, 0, 0, 0, 0, 0, } Ht 28	Uue 119	Flipped Triad fpi=22 D_8 L fp_sm=6→24H {{1, 2, 6}, {1, 3, 5}, {1, 7, 4}, {2, 3, 7}, {2, 4, 5}, {3, 6, 4}, {5, 6, 7}} flat triad/mask bits {1, 6, 2, 3, 5, 7, 4} {0, 0, 1, 0, 0, 1, 0}	Not Flipped Triad fpi=21 D_8 L fp_sm=6→24H {{1, 2, 6}, {1, 3, 5}, {1, 7, 4}, {2, 3, 4}, {2, 5, 7}, {3, 7, 6}, {4, 5, 6}} flat triad/mask bits {1, 6, 2, 5, 3, 4, 7} {0, 1, 0, 0, 1, 0, 0}
200	$\overline{\overset{c}{b_m}}\ \overset{-2/3\to 1/3}{\check{R}}$		{D8, E7(56), snubH4Φ 8–2, ring7}	$0apggsscc\ 0111011112_2$	Bn{ 0, 1, 1, 1, 1, 0, 0, 1, } E8{ 0, 1, 0, 0, 0, $\frac{1}{\sqrt{3}}$, 0, $\sqrt{\frac{2}{3}}$, } Ph{ 0, 1, }	Rt{ −1, −1, −2, −3, −2, −3, −4, −2, } Wt{ −1, 1, 0, 0, −1, 0, 0, 0, } Ht 18	$\overline{\text{Md}}$ 101	Flipped Triad fpi=22 D_8 R fp_sm=6→42H {{1, 2, 6}, {1, 5, 3}, {1, 4, 7}, {2, 3, 7}, {2, 4, 5}, {3, 4, 6}, {5, 7, 6}} flat triad/mask bits {1, 6, 2, 5, 3, 4, 7} {0, 1, 0, 0, 0, 0, 1}	Not Flipped Triad fpi=21 D_8 R fp_sm=6→42H {{1, 2, 6}, {1, 5, 3}, {1, 4, 7}, {2, 3, 4}, {2, 5, 7}, {3, 6, 7}, {4, 6, 5}} flat triad/mask bits {1, 2, 6, 5, 3, 4, 7} {0, 1, 0, 0, 0, 0, 1}
201	$\overline{\overset{c}{g_m}}\ \overset{-2/3\to 1/3}{\check{R}}$		{D8, E7(56), D7, snubH4 8–4, ring3}	$0apggsscc\ 0111011102_2$	Bn{ 0, 1, 1, 1, 1, 0, 0, 1, } E8{ 0, 1, 0, 0, 0, $\frac{1}{\sqrt{3}}$, $\frac{1}{\sqrt{2}}$, $-\frac{1}{\sqrt{6}}$, } Ph{ 0, 1, }	Rt{ 0, 1, 1, 1, 0, 1, 1, 0, } Wt{ −1, 1, 0, 0, −1, 1, 0, −1, } Ht 5	Br 35	Flipped Triad fpi=17 D_8 R fp_sm=8→40H {{1, 2, 5}, {1, 3, 7}, {1, 4, 6}, {2, 3, 4}, {2, 6, 7}, {3, 5, 6}, {4, 7, 5}} flat triad/mask bits {1, 5, 2, 3, 7, 4, 6} {0, 0, 0, 0, 0, 0, 1}	Not Flipped Triad fpi=19 D_8 R fp_sm=3→49H {{1, 6, 2}, {1, 4, 3}, {1, 5, 7}, {2, 5, 3}, {2, 4, 7}, {3, 6, 7}, {4, 6, 5}} flat triad/mask bits {1, 6, 2, 3, 4, 5, 7} {1, 0, 0, 1, 0, 0, 1}
202	$\overline{\overset{c}{r_m}}\ \overset{-2/3\to 1/3}{\check{R}}$		{D8, E7, E7(56), D7, D6, H4cell16, ring5}	$0apggsscc\ 0111011012_2$	Bn{ 0, 1, 1, 1, 0, 0, 1, 1, } E8{ 0, 1, 0, 0, 0, $\frac{1}{\sqrt{3}}$, $-\frac{1}{\sqrt{2}}$, $-\frac{1}{\sqrt{6}}$, } Ph{ 0, 1, }	Rt{ 0, 1, 1, 1, 0, 1, 1, 1, } Wt{ 0, −1, 1, 0, 0, −1, 1, −1, 1, } Ht 6	Zr 40	Flipped Triad fpi=16 D_8 L fp_sm=3→2FH {{1, 5, 2}, {1, 6, 3}, {1, 7, 4}, {2, 7, 3}, {2, 4, 6}, {3, 5, 4}, {5, 6, 7}} flat triad/mask bits {1, 5, 2, 6, 3, 7, 4} {1, 1, 1, 1, 0, 1, 0}	Not Flipped Triad fpi=15 D_8 L fp_sm=3→2FH {{1, 5, 2}, {1, 6, 3}, {1, 7, 4}, {2, 4, 3}, {2, 6, 7}, {3, 7, 5}, {4, 5, 6}} flat triad/mask bits {1, 5, 2, 6, 3, 7, 4} {1, 1, 1, 1, 0, 1, 0}
203	$\overset{\mu}{y_m}\ \overset{\to 0}{\check{L}}$		{D8, E7, E7(56), D7, E6, D6, D5, snubH4Φ 8–2, ring2}	$0apggsscc\ 0001010002_2$	Bn{ 0, 1, 1, 1, 0, 1, 0, 1, } E8{ 0, 1, 0, 0, 1, 0, 0, 0, } Ph{ 0, 1, }	Rt{ 0, 1, 1, 1, 0, 1, 2, 1, } Wt{ 0, −1, 1, 0, −1, −1, 0, 1, 0, } Ht 7	Ag 47	Flipped Triad fpi=16 D_8 L fp_sm=3→2FH {{1, 5, 2}, {1, 6, 3}, {1, 7, 4}, {2, 7, 3}, {2, 4, 6}, {3, 5, 4}, {5, 6, 7}} flat triad/mask bits {1, 2, 5, 6, 3, 7, 4} {1, 1, 1, 1, 0, 1, 0}	Not Flipped Triad fpi=15 D_8 L fp_sm=3→2FH {{1, 5, 2}, {1, 6, 3}, {1, 7, 4}, {2, 4, 3}, {2, 6, 7}, {3, 7, 5}, {4, 5, 6}} flat triad/mask bits {1, 2, 5, 6, 3, 7, 4} {1, 1, 1, 1, 0, 1, 0}
204	$\overset{B}{b_m}\ \overset{0\to -1}{\check{L}}$		{D8, E7, E7(56), D7, E6, D6, E5, D5, D4, F4s, snubH4 8–4, ring1}	$0apggsscc\ 0010010112_2$	Bn{ 0, 1, 1, 1, 0, 0, 0, 1, } E8{ 0, 1, 0, $-\frac{1}{\sqrt{2}}$, $\frac{1}{\sqrt{2}}$, 0, 0, 0, } Ph{ 0, 1, }	Rt{ 0, 1, 1, 2, 0, 1, 2, 1, } Wt{ 0, 1, −1, 1, −1, 0, 0, 0, } Ht 8	Xe 54	Flipped Triad fpi=9 D_8 R fp_sm=6→23H {{1, 4, 2}, {1, 6, 3}, {1, 5, 7}, {2, 3, 5}, {2, 6, 7}, {3, 7, 4}, {4, 5, 6}} flat triad/mask bits {1, 2, 4, 6, 3, 5, 7} {1, 1, 0, 0, 0, 1, 0}	Not Flipped Triad fpi=6 D_8 R fp_sm=6→23H {{1, 3, 2}, {1, 7, 4}, {1, 5, 6}, {2, 4, 6}, {2, 5, 7}, {3, 5, 4}, {3, 6, 7}} flat triad/mask bits {1, 3, 2, 7, 4, 5, 6} {1, 1, 0, 0, 0, 1, 0}
205	$\overline{\overset{e}{s_d}\ \overset{\phi}{\phi}}\ \overset{0}{b_d}\ \check{L}$		{D8, E7, E7(56), D7, E6, D6, E5, D5, E4, D4, F4s, snubH4 8–3, D3, ring5}	$0apggsscc\ 0110000112_2$	Bn{ 0, 1, 1, 1, 0, 1, 0, 0, } E8{ 0, 1, 1, $\frac{1}{\sqrt{2}}$, $\frac{1}{\sqrt{2}}$, 0, 0, 0, } Ph{ 0, 1, }	Rt{ 0, 1, 2, 2, 0, 1, 2, 1, } Wt{ 0, −1, 0, 1, 0, −1, 0, 0, 0, } Ht 9	Nd 60	Flipped Triad fpi=6 D_8 R fp_sm=6→71H {{1, 3, 2}, {1, 4, 7}, {1, 5, 6}, {2, 4, 6}, {2, 7, 5}, {3, 5, 4}, {3, 7, 6}} flat triad/mask bits {1, 2, 3, 4, 7, 5, 6} {1, 0, 0, 0, 1, 1, 1}	Not Flipped Triad fpi=9 D_8 R fp_sm=6→71H {{1, 4, 2}, {1, 3, 6}, {1, 5, 7}, {2, 3, 5}, {2, 7, 6}, {3, 7, 4}, {4, 6, 5}} flat triad/mask bits {1, 4, 2, 3, 6, 5, 7} {1, 0, 0, 0, 1, 1, 1}

Seq #	Symbol	2D/3D Shape	Groups	Particle Quantum Bits	Binary / E8 / Physics Coordinates	Algebra Root Weight / Height / Rt#=Atomic Element Number -->	Ele #	Octonions
206	$\overline{\omega}_{gm}^{0}\,\overline{R}$		{D8, E7, D7, E6, D6, E5, D5, E4, D4, F4s, snubH4 16–4, D3, D2, ring3}	$0apggsscc_{2}$ 011001110	Bn{ 0 1 1 0 0 1 0 0 } E8{ 1 −1 0 0 0 0 0 0 } Ph{ 1 −1 0 0 0 0 0 0 }	Rt{ 1 0 0 0 0 0 0 0 } Wt{ 2 −1 0 0 0 0 0 0 } Ht 1	O 8	Flipped Triad fpi=3 D_8 R fp_sm=4→48H {{1, 2, 3}, {1, 4, 6}, {1, 5, 7}, {2, 5, 4}, {2, 6, 7}, {3, 4, 7}, {3, 6, 5}} flat triad/mask bits {1, 3, 2, 4, 6, 5, 7} {0, 0, 0, 1, 0, 0, 1} Not Flipped Triad fpi=5 D_8 R fp_sm=7→41H {{1, 3, 2}, {1, 4, 7}, {1, 5, 6}, {2, 4, 5}, {2, 6, 7}, {3, 4, 6}, {3, 7, 5}} flat triad/mask bits {1, 3, 2, 4, 7, 5, 6} {1, 0, 0, 0, 0, 0, 1}
207	$\overline{e}_{T}\phi_{b_l}^{0}\,\overline{R}$		{D8, E7, D7, E6, D6, E5, D5, E4, D4, F4s, snubH4 16–3, D3, ring1}	$0apggsscc_{2}$ 011000111	Bn{ 0 1 1 0 0 1 0 0 } E8{ 1 0 $-\frac{1}{\sqrt{2}}$ $-\frac{1}{\sqrt{2}}$ 0 0 0 0 } Ph{ 1 0 0 0 0 0 0 0 }	Rt{ 1 1 0 0 0 0 0 0 } Wt{ 1 1 −1 0 0 0 0 0 } Ht 2	P 15	Flipped Triad fpi=6 D_8 R fp_sm=6→6FH {{1, 3, 2}, {1, 7, 4}, {1, 6, 5}, {2, 6, 4}, {2, 5, 7}, {3, 5, 4}, {3, 7, 6}} flat triad/mask bits {1, 2, 3, 7, 4, 6, 5} {1, 1, 1, 1, 0, 1, 1} Not Flipped Triad fpi=9 D_8 R fp_sm=6→6FH {{1, 4, 2}, {1, 6, 3}, {1, 7, 5}, {2, 5, 3}, {2, 6, 7}, {3, 7, 4}, {4, 6, 5}} flat triad/mask bits {1, 4, 2, 6, 3, 7, 5} {1, 1, 1, 1, 0, 1, 1}
208	$e_{T}\phi_{g_d}^{0\to 1}\,\overline{L}$		{D8, E7, D7, E6, D6, E5, D5, D4, F4s, snubH4 8–2, ring5}	$0apggsscc_{2}$ 001000010	Bn{ 0 1 1 0 0 1 1 1 } E8{ 1 0 $\frac{1}{\sqrt{2}}$ $-\frac{1}{\sqrt{2}}$ 0 0 0 0 } Ph{ 1 0 0 0 0 0 0 0 }	Rt{ 1 1 1 0 0 0 0 0 } Wt{ 1 0 1 −1 0 0 0 0 } Ht 3	Ti 22	Flipped Triad fpi=5 D_8 R fp_sm=7→0DH {{1, 3, 2}, {1, 4, 7}, {1, 6, 5}, {2, 5, 4}, {2, 6, 7}, {3, 4, 6}, {3, 5, 7}} flat triad/mask bits {1, 2, 3, 4, 7, 6, 5} {1, 0, 1, 1, 0, 0, 0} Not Flipped Triad fpi=3 D_8 R fp_sm=4→04H {{1, 2, 3}, {1, 4, 6}, {1, 7, 5}, {2, 4, 5}, {2, 6, 7}, {3, 4, 7}, {3, 5, 6}} flat triad/mask bits {1, 2, 3, 4, 6, 7, 5} {0, 0, 1, 0, 0, 0, 0}
209	$\overline{\mu}_{ym}^{\uparrow\to 0}\,\overline{R}$		{D8, E7, D7, E6, D6, D5, H4⊗cell16, ring2}	$0apggsscc_{2}$ 010101100	Bn{ 0 1 0 0 1 0 1 0 } E8{ 1 0 0 0 −1 0 0 0 } Ph{ 1 0 0 0 −1 0 0 0 }	Rt{ 1 1 1 1 0 0 0 0 } Wt{ 1 0 0 1 0 0 −1 0 } Ht 4	Cu 29	Flipped Triad fpi=15 D_8 L fp_sm=3→4EH {{1, 2, 5}, {1, 6, 3}, {1, 7, 4}, {2, 4, 3}, {2, 6, 7}, {3, 5, 7}, {4, 6, 5}} flat triad/mask bits {1, 5, 2, 6, 3, 7, 4} {0, 1, 1, 1, 0, 0, 1} Not Flipped Triad fpi=16 D_8 L fp_sm=3→4EH {{1, 2, 5}, {1, 6, 3}, {1, 7, 4}, {2, 7, 3}, {2, 4, 6}, {3, 4, 5}, {5, 7, 6}} flat triad/mask bits {1, 2, 5, 6, 3, 7, 4} {0, 1, 1, 1, 0, 0, 1}
210	$\overline{c}_{rm}^{2/3\to -1/3}\,\overline{L}$		{D8, E7, D7, D6, snubH4 16–1, ring3}	$0apggsscc_{2}$ 001101001	Bn{ 0 1 0 0 1 0 1 0 } E8{ 1 0 0 0 0 0 $-\frac{1}{\sqrt{3}}$ $\frac{1}{\sqrt{2}}$ $\frac{1}{\sqrt{6}}$ } Ph{ 1 0 0 0 0 0 0 0 }	Rt{ 1 1 1 1 0 0 1 0 } Wt{ 1 0 0 0 0 −1 1 −1 } Ht 5	Kr 36	Flipped Triad fpi=19 D_8 R fp_sm=3→28H {{1, 2, 6}, {1, 3, 4}, {1, 5, 7}, {2, 5, 3}, {2, 4, 7}, {3, 7, 6}, {4, 5, 6}} flat triad/mask bits {1, 6, 2, 3, 4, 5, 7} {0, 0, 0, 1, 0, 1, 0} Not Flipped Triad fpi=17 D_8 R fp_sm=8→21H {{1, 5, 2}, {1, 3, 7}, {1, 4, 6}, {2, 3, 4}, {2, 6, 7}, {3, 6, 5}, {4, 5, 7}} flat triad/mask bits {1, 5, 2, 3, 7, 4, 6} {1, 0, 0, 0, 0, 1, 0}
211	$\overline{c}_{gm}^{2/3\to -1/3}\,\overline{L}$		{D8, D7, snubH4 8–1, ring5}	$0apggsscc_{2}$ 001101010	Bn{ 0 1 0 0 1 0 1 0 } E8{ 1 0 0 0 0 0 $-\frac{1}{\sqrt{3}}$ $-\frac{1}{\sqrt{2}}$ $\frac{1}{\sqrt{6}}$ } Ph{ 1 0 0 0 0 0 0 0 }	Rt{ 1 1 1 1 0 0 1 1 } Wt{ 1 0 0 0 0 −1 0 1 } Ht 6	Mo 42	Flipped Triad fpi=20 D_8 R fp_sm=1→2AH {{1, 2, 6}, {1, 4, 3}, {1, 5, 7}, {2, 7, 3}, {2, 4, 5}, {3, 6, 5}, {4, 6, 7}} flat triad/mask bits {1, 6, 2, 4, 3, 5, 7} {0, 1, 0, 1, 0, 1, 0} Not Flipped Triad fpi=18 D_8 R fp_sm=6→23H {{1, 5, 2}, {1, 7, 3}, {1, 4, 6}, {2, 3, 6}, {2, 4, 7}, {3, 5, 4}, {5, 6, 7}} flat triad/mask bits {1, 5, 2, 7, 3, 4, 6} {1, 1, 0, 0, 0, 1, 0}
212	$\overline{c}_{bm}^{2/3\to -1/3}\,\overline{L}$		{D8, snubH4 8–1, ring4}	$0apggsscc_{2}$ 001101011	Bn{ 0 1 0 0 1 0 1 1 } E8{ 1 0 0 0 0 0 $-\frac{1}{\sqrt{3}}$ 0 $-\sqrt{\frac{2}{3}}$ } Ph{ 1 0 0 0 0 0 0 0 }	Rt{ 2 3 4 5 2 4 6 3 } Wt{ 1 0 0 0 0 0 0 0 } Ht 29	Ubn 120	Flipped Triad fpi=21 D_8 R fp_sm=6→23H {{1, 6, 2}, {1, 5, 3}, {1, 4, 7}, {2, 3, 4}, {2, 5, 7}, {3, 7, 6}, {4, 5, 6}} flat triad/mask bits {1, 2, 6, 5, 3, 4, 7} {1, 1, 0, 0, 0, 1, 0} Not Flipped Triad fpi=22 D_8 R fp_sm=6→23H {{1, 6, 2}, {1, 5, 3}, {1, 4, 7}, {2, 3, 7}, {2, 4, 5}, {3, 6, 4}, {5, 6, 7}} flat triad/mask bits {1, 6, 2, 5, 3, 4, 7} {1, 1, 0, 0, 0, 1, 0}
213	$\overline{s}_{mm}^{1/3}\,\overline{R}$		{D8, E7(56), snubH4 8–3, ring5}	$0apggsscc_{2}$ 010101111	Bn{ 0 1 0 0 1 0 1 1 } E8{ 1 0 0 0 0 0 $\frac{1}{\sqrt{3}}$ 0 $\sqrt{\frac{2}{3}}$ } Ph{ 1 0 0 0 0 0 0 0 }	Rt{ 0 −1 −2 −3 −2 −3 −4 −2 } Wt{ 1 0 0 0 −1 0 0 0 } Ht 17	$\overline{Bk}$ 97	Flipped Triad fpi=21 D_8 L fp_sm=6→45H {{1, 6, 2}, {1, 3, 5}, {1, 7, 4}, {2, 3, 4}, {2, 5, 7}, {3, 6, 7}, {4, 6, 5}} flat triad/mask bits {1, 2, 6, 3, 5, 7, 4} {1, 0, 1, 0, 0, 0, 1} Not Flipped Triad fpi=22 D_8 L fp_sm=6→45H {{1, 6, 2}, {1, 3, 5}, {1, 7, 4}, {2, 3, 7}, {2, 4, 5}, {3, 4, 6}, {5, 6, 7}} flat triad/mask bits {1, 6, 2, 3, 5, 7, 4} {1, 0, 1, 0, 0, 0, 1}
214	$\overline{s}_{cm}^{1/3}\,\overline{R}$		{D8, E7(56), D7, snubH4 8–4, ring5}	$0apggsscc_{2}$ 010101110	Bn{ 0 1 0 0 1 0 1 0 } E8{ 1 0 0 0 0 0 $\frac{1}{\sqrt{3}}$ $\frac{1}{\sqrt{2}}$ $-\frac{1}{\sqrt{6}}$ } Ph{ 1 0 0 0 0 0 0 0 }	Rt{ 1 1 1 1 0 1 1 0 } Wt{ 1 1 0 0 −1 1 1 −1 } Ht 6	Tc 43	Flipped Triad fpi=20 D_8 L fp_sm=1→4CH {{1, 2, 6}, {1, 3, 4}, {1, 7, 5}, {2, 7, 3}, {2, 4, 5}, {3, 5, 6}, {4, 7, 6}} flat triad/mask bits {1, 6, 2, 3, 4, 7, 5} {0, 0, 1, 1, 0, 0, 1} Not Flipped Triad fpi=18 D_8 L fp_sm=6→45H {{1, 5, 2}, {1, 3, 7}, {1, 6, 4}, {2, 3, 6}, {2, 4, 7}, {3, 4, 5}, {5, 7, 6}} flat triad/mask bits {1, 5, 2, 3, 7, 6, 4} {1, 0, 1, 0, 0, 0, 1}
215	$\overline{s}_{om}^{1/3}\,\overline{R}$		{D8, E7, E7(56), D7, D6, snubH4 8–2, ring4}	$0apggsscc_{2}$ 010101101	Bn{ 0 1 0 0 1 0 1 0 } E8{ 1 0 0 0 0 0 $\frac{1}{\sqrt{3}}$ $-\frac{1}{\sqrt{2}}$ $-\frac{1}{\sqrt{6}}$ } Ph{ 1 0 0 0 0 0 0 0 }	Rt{ 1 1 1 1 0 1 1 1 } Wt{ 1 0 0 0 −1 1 −1 1 } Ht 7	In 49	Flipped Triad fpi=19 D_8 L fp_sm=3→4EH {{1, 2, 6}, {1, 4, 3}, {1, 7, 5}, {2, 5, 3}, {2, 4, 7}, {3, 6, 7}, {4, 6, 5}} flat triad/mask bits {1, 6, 2, 4, 3, 7, 5} {0, 1, 1, 1, 0, 0, 1} Not Flipped Triad fpi=17 D_8 L fp_sm=8→47H {{1, 5, 2}, {1, 7, 3}, {1, 6, 4}, {2, 3, 4}, {2, 6, 7}, {3, 5, 6}, {4, 7, 5}} flat triad/mask bits {1, 5, 2, 7, 3, 6, 4} {1, 1, 1, 0, 0, 0, 1}
216	$\overline{\nu}_{\mu wm}^{0}\,\overline{L}$		{D8, E7, E7(56), D7, E6, D6, D5, H4cell16, ring1}	$0apggsscc_{2}$ 001101000	Bn{ 0 1 1 0 1 1 1 1 } E8{ 1 0 0 0 0 0 0 0 } Ph{ 1 0 0 0 0 0 0 0 }	Rt{ 1 1 1 1 0 1 2 1 } Wt{ 1 0 0 −1 −1 0 1 0 } Ht 8	Cs 55	Flipped Triad fpi=15 D_8 R fp_sm=3→28H {{1, 2, 5}, {1, 3, 6}, {1, 4, 7}, {2, 4, 3}, {2, 6, 7}, {3, 7, 5}, {4, 5, 6}} flat triad/mask bits {1, 5, 2, 3, 6, 4, 7} {0, 0, 0, 1, 0, 1, 0} Not Flipped Triad fpi=16 D_8 R fp_sm=3→28H {{1, 2, 5}, {1, 3, 6}, {1, 4, 7}, {2, 7, 3}, {2, 4, 6}, {3, 5, 4}, {5, 6, 7}} flat triad/mask bits {1, 2, 5, 3, 6, 4, 7} {0, 0, 0, 1, 0, 1, 0}
217	$\overline{e}_{S}\phi_{r_l}^{0\to -1}\,\overline{R}$		{D8, E7, E7(56), D7, E6, D6, E5, D5, D4, F4s, snubH4 8–4, ring4}	$0apggsscc_{2}$ 011000101	Bn{ 0 1 1 0 0 1 1 1 } E8{ 1 0 0 0 0 0 0 0 } Ph{ 1 0 $-\frac{1}{\sqrt{2}}$ $\frac{1}{\sqrt{2}}$ 0 0 0 0 }	Rt{ 1 1 1 2 0 1 2 1 } Wt{ 1 0 −1 1 −1 0 2 0 } Ht 9	Sm 62	Flipped Triad fpi=1 D_8 R fp_sm=5→6EH {{1, 2, 3}, {1, 5, 4}, {1, 7, 6}, {2, 6, 4}, {2, 5, 7}, {3, 7, 4}, {3, 6, 5}} flat triad/mask bits {1, 3, 2, 5, 4, 7, 6} {0, 1, 1, 1, 0, 1, 1} Not Flipped Triad fpi=2 D_8 R fp_sm=8→6DH {{1, 3, 2}, {1, 4, 5}, {1, 7, 6}, {2, 7, 4}, {2, 5, 6}, {3, 6, 4}, {3, 7, 5}} flat triad/mask bits {1, 3, 2, 4, 5, 7, 6} {1, 0, 1, 1, 0, 1, 1}
218	$e_{S}\phi_{rm}^{0}\,\overline{L}$		{D8, E7, E7(56), D7, E6, D6, E5, D5, E4, D4, F4s, snubH4 16–2, D3, ring1}	$0apggsscc_{2}$ 001001001	Bn{ 0 1 1 0 0 1 1 1 } E8{ 1 0 $\frac{1}{\sqrt{2}}$ $\frac{1}{\sqrt{2}}$ 0 0 0 0 } Ph{ 1 0 0 0 0 0 0 0 }	Rt{ 1 1 2 2 0 1 2 1 } Wt{ 1 −1 1 0 −1 0 0 0 } Ht 10	Er 68	Flipped Triad fpi=2 D_8 R fp_sm=8→21H {{1, 3, 2}, {1, 4, 5}, {1, 6, 7}, {2, 4, 7}, {2, 5, 6}, {3, 6, 4}, {3, 5, 7}} flat triad/mask bits {1, 2, 3, 4, 5, 6, 7} {1, 0, 0, 0, 0, 1, 0} Not Flipped Triad fpi=1 D_8 R fp_sm=5→22H {{1, 3, 2}, {1, 5, 4}, {1, 6, 7}, {2, 4, 6}, {2, 5, 7}, {3, 7, 4}, {3, 5, 6}} flat triad/mask bits {1, 2, 3, 5, 4, 6, 7} {0, 1, 0, 0, 0, 1, 0}
219	$\overline{W}_{bm}^{0}\,\overline{R}$		{D8, E7, E7(56), D7, E6, D6, E5, D5, E4, D4, F4s, snubH4 8–3, D3, D2, ring4}	$0apggsscc_{2}$ 001001111	Bn{ 0 1 1 0 0 1 1 1 } E8{ 0 0 1 0 0 0 0 0 } Ph{ 0 0 1 0 0 0 0 0 }	Rt{ 1 2 2 2 0 1 2 1 } Wt{ 1 0 1 0 −1 0 0 0 } Ht 11	W 74	Flipped Triad fpi=9 D_8 R fp_sm=6→3DH {{1, 4, 2}, {1, 3, 6}, {1, 7, 5}, {2, 5, 3}, {2, 7, 6}, {3, 7, 4}, {4, 5, 6}} flat triad/mask bits {1, 2, 4, 3, 6, 7, 5} {1, 0, 1, 1, 1, 1, 0} Not Flipped Triad fpi=6 D_8 R fp_sm=6→3DH {{1, 3, 2}, {1, 4, 7}, {1, 6, 5}, {2, 6, 4}, {2, 7, 5}, {3, 5, 4}, {3, 6, 7}} flat triad/mask bits {1, 3, 2, 4, 7, 6, 5} {0, 1, 1, 0, 0, 1, 0}
220	$\overline{u}_{r_l}^{-2/3}\,\overline{R}$		{BC8, E7, 6Cube, C4, snubH4 16–1, ring4}	$0apggsscc_{2}$ 011010101	Bn{ 1 1 1 1 1 1 0 0 } E8{ 1 1 1 1 1 1 −1 −1 } Ph{ 2 2 2 2 2 2 −1 −1 } 0 $\frac{1}{\sqrt{2}}$ 2 $-\frac{1}{2\sqrt{3}}$ $-\frac{1}{\sqrt{2}}$ $-\frac{1}{\sqrt{6}}$ }	Rt{ 1 2 3 4 1 3 5 3 } Wt{ 0 0 0 0 −1 0 0 1 } Ht 22	Rg 111	Flipped Triad fpi=8 BC_8 R fp_sm=2→67H {{1, 4, 2}, {1, 5, 3}, {1, 7, 6}, {2, 3, 7}, {2, 5, 6}, {3, 6, 4}, {4, 7, 5}} flat triad/mask bits {1, 2, 4, 5, 3, 7, 6} {1, 1, 1, 0, 0, 1, 1} Not Flipped Triad fpi=10 BC_8 R fp_sm=5→6EH {{1, 2, 4}, {1, 6, 3}, {1, 7, 5}, {2, 7, 3}, {2, 5, 6}, {3, 5, 4}, {4, 7, 6}} flat triad/mask bits {1, 2, 4, 6, 3, 7, 5} {0, 1, 1, 1, 0, 1, 1}

pascalRow@7

221	$\overline{u}_{9l}^{\,-2/3}\,\tilde{R}$	{BC8, 6Cube, snubH4 8–1, ring5}	$0apggsscc\,011010110_2$	Bn{ 1, 1, 2 } E8{ 1, 1, 1 } Ph{ 1, 1, 2 }	E8{ 1, 1, 2 } Ph{ 1, 1, 2 }	E8{ 1, 1, 2 } Ph{ 0 }	E8{ 1, 1, 1/√2 } Ph{ 1/2 }	E8{ 1, 1, 2 } Ph{ 1/2 }	E8{ 0, −1/(2√3) } Ph{ −1/(2√3) }	E8{ 1, 1, 2 } Ph{ 1/√2 }	E8{ 0, −1, 2/√6 } Ph{ −1/√6 }	Rt{ 1 2 3 4 1 3 5 2 } Wt{ 0 0 0 0 −1 0 1 −1 } Ht 21	Mt 109	Flipped Triad fpi=11 BC_8 R fp_sm=1→66H {{1, 2, 4}, {1, 7, 3}, {1, 6, 5}, {2, 3, 5}, {2, 6, 7}, {3, 6, 4}, {4, 7, 5}} flat triad/mask bits {1, 4, 2, 7, 3, 6, 5} {0, 1, 1, 0, 0, 1, 1}	Not Flipped Triad fpi=12 BC_8 R fp_sm=4→65H {{1, 4, 2}, {1, 7, 3}, {1, 6, 5}, {2, 3, 6}, {2, 5, 7}, {3, 5, 4}, {4, 7, 6}} flat triad/mask bits {1, 4, 2, 3, 7, 6, 5} {1, 0, 1, 0, 0, 1, 1}
222	$\overline{u}_{bl}^{\,-2/3}\,\tilde{R}$	{BC8, snubH4 8–1, ring4}	$0apggsscc\,011010111_2$	Bn{ 1, 1, 2 } E8{ 1, 1, 2 } Ph{ 1/2 }	E8{ 1, 1, 2 } Ph{ 1/2 }	E8{ 1, 1, 2 } Ph{ 0 }	E8{ 1, 1, 1/√2 } Ph{ 1/2 }	E8{ 1, 1, 2 } Ph{ 1/2 }	E8{ 0, −1, 2 } Ph{ −1/(2√3) }	E8{ 0, −1, 2 } Ph{ 0 }	E8{ 1, 1, 2/√3 }	Rt{ 0 0 0 0 −1 0 0 } Wt{ 0 0 0 0 −1 −1 1 0 } Ht 2	Na 11	Flipped Triad fpi=14 BC_8 R fp_sm=7→6CH {{1, 2, 5}, {1, 3, 4}, {1, 7, 6}, {2, 7, 3}, {2, 4, 6}, {3, 6, 5}, {4, 7, 5}} flat triad/mask bits {1, 5, 2, 3, 4, 7, 6} {0, 0, 1, 1, 0, 1, 1}	Not Flipped Triad fpi=13 BC_8 R fp_sm=6→6FH {{1, 5, 2}, {1, 4, 3}, {1, 7, 6}, {2, 6, 3}, {2, 4, 7}, {3, 7, 5}, {4, 6, 5}} flat triad/mask bits {1, 5, 2, 4, 3, 7, 6} {1, 1, 1, 1, 0, 1, 1}
223	$\overline{d}_{md}^{\,-1/3}\,\tilde{L}$	{BC8, 6Cube, snubH4 8–2, ring1}	$0apggsscc\,000010011_2$	Bn{ 1, 1, 2 } E8{ 1, 1, 2 } Ph{ 1/2 }	E8{ 1, 1, 2 } Ph{ 1/2 }	E8{ 1, 1, 2 } Ph{ 0 }	E8{ 1, 1, 2 } Ph{ 1/√2 }	E8{ 0, −1, 2 } Ph{ −1/2 }	E8{ 1, 1, 2 } Ph{ 1/(2√3) }	E8{ 1, 1, 2 } Ph{ 0 }	E8{ 0, −1, 2 } Ph{ −√(2/3) }	Rt{ 1 2 3 4 1 3 4 2 } Wt{ 0 0 0 1 −1 1 −1 0 } Ht 20	Hs 108	Flipped Triad fpi=14 BC_8 L fp_sm=7→0AH {{1, 2, 5}, {1, 4, 3}, {1, 6, 7}, {2, 7, 3}, {2, 4, 6}, {3, 5, 6}, {4, 5, 7}} flat triad/mask bits {1, 5, 2, 4, 3, 6, 7} {0, 1, 0, 1, 0, 0, 0}	Not Flipped Triad fpi=13 BC_8 L fp_sm=6→09H {{1, 5, 2}, {1, 3, 4}, {1, 6, 7}, {2, 6, 3}, {2, 4, 7}, {3, 5, 7}, {4, 5, 6}} flat triad/mask bits {1, 5, 2, 3, 4, 6, 7} {1, 0, 0, 1, 0, 0, 0}
224	$\overline{d}_{cd}^{\,-1/3}\,\tilde{L}$	{BC8, snubH4 16–3, ring4}	$0apggsscc\,000010010_2$	Bn{ 1, 1, 2 } E8{ 1, 1, 2 } Ph{ 1, 1, 2 }	E8{ 1, 1, 2 } Ph{ 1, 1, 2 }	E8{ 1, 1, 2 } Ph{ 0 }	E8{ 1, 1, 1/√2 } Ph{ 1/2 }	E8{ 0, −1, 2 } Ph{ −1/2 }	E8{ 1, 1, 2 } Ph{ 1/(2√3) }	E8{ 0, −1, 2 } Ph{ −1/√2 }	E8{ 1, 1, 2 } Ph{ 1/√6 }	Rt{ 0 0 0 0 −1 −1 −1 0 } Wt{ 0 0 0 1 −1 0 −1 1 } Ht 3	$\overline{Cl}$ 17	Flipped Triad fpi=11 BC_8 L fp_sm=1→00H {{1, 2, 4}, {1, 3, 7}, {1, 5, 6}, {2, 3, 5}, {2, 6, 7}, {3, 4, 6}, {4, 5, 7}} flat triad/mask bits {1, 4, 2, 3, 7, 5, 6} {0, 0, 0, 0, 0, 0, 0}	Not Flipped Triad fpi=12 BC_8 L fp_sm=4→03H {{1, 4, 2}, {1, 7, 3}, {1, 5, 6}, {2, 3, 6}, {2, 5, 7}, {3, 4, 5}, {4, 6, 7}} flat triad/mask bits {1, 4, 2, 7, 3, 5, 6} {1, 1, 0, 0, 0, 0, 0}
225	$\overline{d}_{od}^{\,-1/3}\,\tilde{L}$	{BC8, E7, snubH4 16–4, ring1}	$0apggsscc\,000010001_2$	Bn{ 1, 1, 2 } E8{ 1, 2, 1 } Ph{ 1, 1, 2 }	E8{ 1, 1, 2 } Ph{ 1, 1, 2 }	E8{ 1, 1, 2 } Ph{ 0 }	E8{ 1, 1, 1/√2 } Ph{ 1/2 }	E8{ 0, −1, 2 } Ph{ −1/2 }	E8{ 0, −1, 2 } Ph{ 1/(2√3) }	E8{ 1, 1, 2 } Ph{ 1/√2 }	E8{ 1, 1, 2 } Ph{ 1/√6 }	Rt{ 0 0 0 0 −1 −1 −1 −1 } Wt{ 0 0 0 1 −1 0 0 −1 } Ht 4	$\overline{V}$ 23	Flipped Triad fpi=8 BC_8 L fp_sm=2→01H {{1, 4, 2}, {1, 3, 5}, {1, 6, 7}, {2, 3, 7}, {2, 5, 6}, {3, 4, 6}, {4, 5, 7}} flat triad/mask bits {1, 2, 4, 3, 5, 6, 7} {1, 0, 0, 0, 0, 0, 0}	Not Flipped Triad fpi=10 BC_8 L fp_sm=5→08H {{1, 2, 4}, {1, 3, 6}, {1, 5, 7}, {2, 7, 3}, {2, 5, 6}, {3, 4, 5}, {4, 6, 7}} flat triad/mask bits {1, 2, 4, 3, 6, 5, 7} {0, 0, 0, 1, 0, 0, 0}
226	$\overline{b}_{mm}^{\,-1/3\to 2/3}\,\tilde{R}$	{BC8, 6Cube, H4cell8, ring1}	$0apggsscc\,000111111_2$	Bn{ 1, 1, 2 } E8{ 1, 1, 2 } Ph{ 1/2 }	E8{ 1, 1, 2 } Ph{ 1/2 }	E8{ 1, 1, 1/√2 } Ph{ 0 }	E8{ 0, −1, 2 } Ph{ 1/2 }	E8{ 1, 1, 2 } Ph{ 1/2 }	E8{ 1, 1, 2 } Ph{ 1/(2√3) }	E8{ 1, 1, 2 } Ph{ 0 }	E8{ 0, −1, 2 } Ph{ −√(2/3) }	Rt{ 1 2 3 3 1 3 4 2 } Wt{ 0 0 1 −1 −1 1 0 0 } Ht 19	Db 105	Flipped Triad fpi=30 BC_8 L fp_sm=6→3AH {{1, 2, 7}, {1, 6, 3}, {1, 4, 5}, {2, 5, 3}, {2, 6, 4}, {3, 7, 4}, {5, 6, 7}} flat triad/mask bits {1, 7, 2, 6, 3, 4, 5} {0, 1, 0, 1, 1, 1, 0}	Not Flipped Triad fpi=28 BC_8 L fp_sm=3→31H {{1, 7, 2}, {1, 3, 5}, {1, 4, 6}, {2, 3, 6}, {2, 5, 4}, {3, 7, 4}, {5, 6, 7}} flat triad/mask bits {1, 2, 7, 3, 5, 4, 6} {1, 0, 0, 0, 1, 1, 0}
227	$\overline{b}_{cm}^{\,-1/3\to 2/3}\,\tilde{R}$	{BC8, snubH4Φ 8–4, ring7}	$0apggsscc\,000111110_2$	Bn{ 1, 1, 2 } E8{ 2, 1, 2 } Ph{ 1, 1, 2 }	E8{ 1, 1, 2 } Ph{ 1, 1, 2 }	E8{ 1, 1, 2 } Ph{ 1, 1, 2 }	E8{ 0, −1, 1/√2 } Ph{ 0 }	E8{ 1, 1, 2 } Ph{ 1, 1, 2 }	E8{ 1, 1, 2 } Ph{ 1/(2√3) }	E8{ 0, −1, 2 } Ph{ −1/√2 }	E8{ 1, 1, 2 } Ph{ 1/√6 }	Rt{ 0 0 0 −1 −1 −1 −1 0 } Wt{ 0 0 1 −1 −1 0 0 1 } Ht 4	$\overline{Mn}$ 25	Flipped Triad fpi=27 BC_8 L fp_sm=4→30H {{1, 2, 7}, {1, 3, 5}, {1, 4, 6}, {2, 3, 4}, {2, 6, 5}, {3, 7, 6}, {4, 5, 7}} flat triad/mask bits {1, 7, 2, 3, 5, 4, 6} {0, 0, 0, 1, 1, 1, 0}	Not Flipped Triad fpi=29 BC_8 L fp_sm=7→39H {{1, 7, 2}, {1, 3, 6}, {1, 4, 5}, {2, 4, 3}, {2, 6, 5}, {3, 7, 5}, {4, 6, 7}} flat triad/mask bits {1, 7, 2, 3, 6, 4, 5} {1, 0, 0, 1, 1, 1, 0}
228	$\overline{b}_{om}^{\,-1/3\to 2/3}\,\tilde{R}$	{BC8, E7, snubH4 16–3, ring3}	$0apggsscc\,000111101_2$	Bn{ 1, 1, 2 } E8{ 2, 1, 2 } Ph{ 1, 1, 2 }	E8{ 1, 1, 2 } Ph{ 1, 1, 2 }	E8{ 1, 1, 1/√2 } Ph{ 0 }	E8{ 0, −1, 2 } Ph{ 1/2 }	E8{ 1, 1, 2 } Ph{ 1/2 }	E8{ 0, −1, 2 } Ph{ 1/(2√3) }	E8{ 1, 1, 2 } Ph{ 1/√2 }	E8{ 1, 1, 2 } Ph{ 1/√6 }	Rt{ 0 0 0 −1 −1 −1 −1 −1 } Wt{ 0 0 1 −1 −1 0 1 −1 } Ht 5	$\overline{Ga}$ 31	Flipped Triad fpi=25 BC_8 L fp_sm=5→3BH {{1, 7, 2}, {1, 4, 3}, {1, 5, 6}, {2, 5, 3}, {2, 6, 4}, {3, 7, 6}, {4, 5, 7}} flat triad/mask bits {1, 2, 7, 4, 3, 5, 6} {1, 1, 0, 1, 1, 1, 0}	Not Flipped Triad fpi=26 BC_8 L fp_sm=8→38H {{1, 2, 7}, {1, 3, 4}, {1, 5, 6}, {2, 6, 3}, {2, 5, 4}, {3, 7, 5}, {4, 6, 7}} flat triad/mask bits {1, 2, 7, 3, 4, 5, 6} {0, 0, 0, 1, 1, 1, 0}
229	$\overline{\overline{t}_{ym}}^{\,+}\,\tilde{R}$	{BC8, E7, E6, snubH4Φ 8–1, ring8}	$0apggsscc\,010111100_2$	Bn{ 1, 1, 2 } E8{ 2, 1, 2 } Ph{ 1/2 }	E8{ 1, 1, 2 } Ph{ 1/2 }	E8{ 1, 1, 1/√2 } Ph{ 0 }	E8{ 0, −1, 2 } Ph{ −1/2 }	E8{ 0, −1, 2 } Ph{ 1/2 }	E8{ 1, 1, 2/√3 } Ph{ √3/2 }	E8{ 1, 1, 2 } Ph{ 0 }	E8{ 1, 1, 2 } Ph{ 0 }	Rt{ 0 0 0 −1 −1 −1 −2 −1 } Wt{ 0 0 1 0 −1 1 −1 0 } Ht 6	$\overline{Rb}$ 37	Flipped Triad fpi=23 BC_8 L fp_sm=2→4DH {{1, 6, 2}, {1, 3, 7}, {1, 5, 4}, {2, 4, 3}, {2, 5, 7}, {3, 5, 6}, {4, 7, 6}} flat triad/mask bits {1, 2, 6, 3, 7, 5, 4} {1, 0, 1, 1, 0, 0, 1}	Not Flipped Triad fpi=24 BC_8 L fp_sm=3→4EH {{1, 2, 6}, {1, 7, 3}, {1, 5, 4}, {2, 5, 3}, {2, 4, 7}, {3, 4, 6}, {5, 7, 6}} flat triad/mask bits {1, 2, 6, 7, 3, 5, 4} {0, 1, 1, 1, 0, 0, 1}
230	$\overline{b}_{mm}^{\,-1/3}\,\tilde{L}$	{BC8, 6Cube, snubH4 16–4, ring4}	$0apggsscc\,000111011_2$	Bn{ 1, 1, 2 } E8{ 1, 1, 2 } Ph{ 1/2 }	E8{ 1, 1, 2 } Ph{ 1/2 }	E8{ 0, −1, 2 } Ph{ −1/√2 }	E8{ 1, 1, 2 } Ph{ 0 }	E8{ 1, 1, 2 } Ph{ 1/2 }	E8{ 1, 1, 2 } Ph{ 1/(2√3) }	E8{ 1, 1, 2 } Ph{ 0 }	E8{ 0, −1, 2 } Ph{ −√(2/3) }	Rt{ 1 2 2 3 1 3 4 2 } Wt{ 0 1 −1 0 −1 1 0 0 } Ht 18	No 102	Flipped Triad fpi=30 BC_8 L fp_sm=6→24H {{1, 2, 7}, {1, 3, 6}, {1, 5, 4}, {2, 3, 5}, {2, 4, 6}, {3, 7, 4}, {5, 6, 7}} flat triad/mask bits {1, 7, 2, 3, 6, 5, 4} {0, 0, 1, 0, 0, 1, 0}	Not Flipped Triad fpi=28 BC_8 L fp_sm=3→2FH {{1, 7, 2}, {1, 5, 3}, {1, 6, 4}, {2, 6, 3}, {2, 4, 5}, {3, 7, 4}, {5, 6, 7}} flat triad/mask bits {1, 7, 2, 6, 3, 5, 4} {1, 1, 1, 1, 0, 1, 0}
231	$\overline{b}_{cm}^{\,-1/3}\,\tilde{L}$	{BC8, H4cell8, ring1}	$0apggsscc\,000111010_2$	Bn{ 1, 1, 2 } E8{ 2, 1, 2 } Ph{ 1/2 }	E8{ 1, 1, 2 } Ph{ 1/2 }	E8{ 0, −1, 2 } Ph{ −1/√2 }	E8{ 1, 1, 2 } Ph{ 0 }	E8{ 1, 1, 2 } Ph{ 1/2 }	E8{ 1, 1, 2 } Ph{ 1/(2√3) }	E8{ 0, −1, 2 } Ph{ −1/√2 }	E8{ 1, 1, 2 } Ph{ 1/√6 }	Rt{ 0 0 −1 −1 −1 −1 −1 0 } Wt{ 0 1 −1 0 −1 0 0 1 } Ht 5	$\overline{As}$ 33	Flipped Triad fpi=27 BC_8 L fp_sm=4→2EH {{1, 2, 7}, {1, 5, 3}, {1, 6, 4}, {2, 4, 3}, {2, 5, 6}, {3, 7, 6}, {4, 5, 7}} flat triad/mask bits {1, 7, 2, 5, 3, 6, 4} {0, 1, 1, 1, 0, 1, 0}	Not Flipped Triad fpi=29 BC_8 L fp_sm=7→27H {{1, 7, 2}, {1, 6, 3}, {1, 5, 4}, {2, 3, 4}, {2, 5, 6}, {3, 7, 5}, {4, 6, 7}} flat triad/mask bits {1, 7, 2, 6, 3, 5, 4} {1, 1, 1, 0, 0, 1, 0}
232	$\overline{b}_{om}^{\,-1/3}\,\tilde{L}$	{BC8, E7, snubH4Φ 16–2, ring2}	$0apggsscc\,000111001_2$	Bn{ 1, 1, 2 } E8{ 2, 1, 2 } Ph{ 1, 1, 2 }	E8{ 1, 1, 2 } Ph{ 1, 1, 2 }	E8{ 0, −1, 2 } Ph{ −1/√2 }	E8{ 1, 1, 2 } Ph{ 0 }	E8{ 1, 1, 2 } Ph{ 1/2 }	E8{ 0, −1, 2 } Ph{ 1/(2√3) }	E8{ 1, 1, 2 } Ph{ 1/√2 }	E8{ 1, 1, 2 } Ph{ 1/√6 }	Rt{ 0 0 −1 −1 −1 −1 −1 −1 } Wt{ 0 1 −1 0 −1 0 1 −1 } Ht 6	$\overline{Y}$ 39	Flipped Triad fpi=25 BC_8 L fp_sm=5→25H {{1, 7, 2}, {1, 3, 4}, {1, 6, 5}, {2, 3, 5}, {2, 4, 6}, {3, 7, 6}, {4, 5, 7}} flat triad/mask bits {1, 2, 7, 3, 4, 6, 5} {0, 1, 0, 1, 0, 1, 0}	Not Flipped Triad fpi=26 BC_8 L fp_sm=8→26H {{1, 2, 7}, {1, 4, 3}, {1, 6, 5}, {2, 3, 6}, {2, 4, 5}, {3, 7, 5}, {4, 6, 7}} flat triad/mask bits {1, 2, 7, 4, 3, 6, 5} {0, 1, 1, 0, 0, 1, 0}
233	$\overline{\overline{v_r}_{wm}}^{\,0}\,\tilde{R}$	{BC8, E7, E6, snubH4Φ 16–1, ring7}	$0apggsscc\,011111100_2$	Bn{ 1, 1, 2 } E8{ 2, 1, 2 } Ph{ 1/2 }	E8{ 1, 1, 2 } Ph{ 1/2 }	E8{ 0, −1, 1/√2 } Ph{ 0 }	E8{ 0, −1, 2 } Ph{ −1/2 }	E8{ 1, 1, 2 } Ph{ 1/2 }	E8{ 1, 1, 2 } Ph{ 1/(2√3) }	E8{ 1, 1, 2 } Ph{ 0 }	E8{ 1, 1, 2 } Ph{ 0 }	Rt{ 0 0 −1 −1 −1 −1 −2 −1 } Wt{ 0 1 −1 1 −1 1 −1 0 } Ht 7	$\overline{Rh}$ 45	Flipped Triad fpi=24 BC_8 R fp_sm=3→49H {{1, 6, 2}, {1, 3, 7}, {1, 4, 5}, {2, 5, 3}, {2, 4, 7}, {3, 4, 6}, {5, 7, 6}} flat triad/mask bits {1, 2, 6, 3, 7, 4, 5} {1, 0, 0, 1, 0, 0, 1}	Not Flipped Triad fpi=23 BC_8 R fp_sm=2→4AH {{1, 2, 6}, {1, 7, 3}, {1, 4, 5}, {2, 4, 3}, {2, 5, 7}, {3, 5, 6}, {4, 7, 6}} flat triad/mask bits {1, 2, 6, 7, 3, 4, 5} {0, 1, 0, 1, 0, 0, 1}
234	$\overline{\overline{e}_{yl}}^{\,+}\,\tilde{R}$	{BC8, E7, E6, E5, snubH4Φ 8–1, ring7}	$0apggsscc\,010010100_2$	Bn{ 1, 1, 2 } E8{ 2, 1, 2 } Ph{ 1/2 }	E8{ 1, 1, 2 } Ph{ 1/2 }	E8{ 0, −1, 2 } Ph{ 0 }	E8{ 0, −1, 2 } Ph{ −1/√2 }	E8{ 1, 1, 2 } Ph{ 1/2 }	E8{ 1, 1, 2 } Ph{ √3/2 }	E8{ 1, 1, 2 } Ph{ 0 }	E8{ 1, 1, 2 } Ph{ 0 }	Rt{ 0 0 −1 −2 −1 −1 −2 −1 } Wt{ 0 1 0 −1 −1 1 0 0 } Ht 8	$\overline{Te}$ 52	Flipped Triad fpi=7 BC_8 L fp_sm=3→63H {{1, 4, 2}, {1, 5, 3}, {1, 6, 7}, {2, 3, 6}, {2, 5, 7}, {3, 7, 4}, {4, 6, 5}} flat triad/mask bits {1, 2, 4, 5, 3, 6, 7} {1, 1, 0, 0, 0, 1, 1}	Not Flipped Triad fpi=4 BC_8 L fp_sm=3→63H {{1, 3, 2}, {1, 6, 4}, {1, 5, 7}, {2, 4, 7}, {2, 3, 6}, {2, 5, 6}, {3, 5, 4}, {3, 7, 6}} flat triad/mask bits {1, 3, 2, 6, 4, 5, 7} {1, 1, 0, 0, 0, 1, 1}
235	$\overline{b}_{ml}^{\,-1/3}\,\tilde{R}$	{BC8, 6Cube, snubH4Φ 8–3, ring7}	$0apggsscc\,000110111_2$	Bn{ 1, 1, 2 } E8{ 2, 1, 2 } Ph{ 1/2 }	E8{ 0, −1, 2 } Ph{ −1/2 }	E8{ 1, 1, 2 } Ph{ 0 }	E8{ 1, 1, 2 } Ph{ 1/√2 }	E8{ 1, 1, 2 } Ph{ 1/2 }	E8{ 1, 1, 2 } Ph{ 1/(2√3) }	E8{ 1, 1, 2 } Ph{ 0 }	E8{ 0, −1, 2 } Ph{ −√(2/3) }	Rt{ 1 1 2 3 1 3 4 2 } Wt{ 1 −1 0 0 −1 1 0 0 } Ht 17	Cf 98	Flipped Triad fpi=30 BC_8 L fp_sm=6→17H {{1, 7, 2}, {1, 6, 3}, {1, 5, 4}, {2, 3, 5}, {2, 6, 4}, {3, 4, 7}, {5, 6, 7}} flat triad/mask bits {1, 2, 7, 6, 3, 5, 4} {1, 1, 1, 0, 1, 0, 0}	Not Flipped Triad fpi=28 BC_8 L fp_sm=3→1CH {{1, 2, 7}, {1, 3, 5}, {1, 6, 4}, {2, 6, 3}, {2, 5, 4}, {3, 4, 7}, {5, 6, 7}} flat triad/mask bits {1, 2, 7, 6, 3, 5, 4} {0, 0, 1, 1, 1, 0, 0}
236	$\overline{b}_{cl}^{\,-1/3}\,\tilde{R}$	{BC8, snubH4 8–2, ring1}	$0apggsscc\,000110110_2$	Bn{ 1, 1, 2 } E8{ 2, 1, 2 } Ph{ 1/2 }	E8{ 0, −1, 2 } Ph{ −1/2 }	E8{ 1, 1, 2 } Ph{ 0 }	E8{ 1, 1, 2 } Ph{ 1/√2 }	E8{ 1, 1, 2 } Ph{ 1/2 }	E8{ 1, 1, 2 } Ph{ 1/(2√3) }	E8{ 0, −1, 2 } Ph{ −1/√2 }	E8{ 1, 1, 2 } Ph{ 1/√6 }	Rt{ 0 −1 −1 −1 −1 −1 −1 0 } Wt{ 1 −1 0 0 −1 0 0 1 } Ht 6	$\overline{Nb}$ 41	Flipped Triad fpi=27 BC_8 L fp_sm=4→1DH {{1, 7, 2}, {1, 3, 5}, {1, 6, 4}, {2, 4, 3}, {2, 6, 5}, {3, 6, 7}, {4, 5, 7}} flat triad/mask bits {1, 2, 7, 3, 5, 6, 4} {1, 0, 1, 1, 1, 0, 0}	Not Flipped Triad fpi=29 BC_8 L fp_sm=7→14H {{1, 2, 7}, {1, 3, 6}, {1, 5, 4}, {2, 4, 3}, {2, 6, 5}, {3, 5, 7}, {4, 6, 7}} flat triad/mask bits {1, 2, 7, 3, 6, 5, 4} {0, 0, 1, 0, 1, 0, 0}

237	$b_{o_l}^{-1/3}\,\bar{R}$	{BC8, E7, H4cell8, ring5}	$0apggsscc_{2}$ 000110101	Bn{ 1/1, 0/−1, 1/1, 1/1, 1/1, 0/−1, 1/1, 1/1 } E8{ 2/1, 2/1, 2, 2, 2/1, 2/1, 2/1, 2/1 } Ph{ 1/2, 1/2, 0, 1/√2, 2, 2/(2√3), 2/(√2), 2/(√6) }	Rt{ 0 −1 −1 −1 −1 −1 −1 −1 } Wt{ 1 −1 0 0 −1 0 1 −1 } Ht 7	$\overline{Cd}$ 48	Flipped Triad fpi=25 BC_8 L fp_sm=5→16H {{1, 2, 7}, {1, 4, 3}, {1, 6, 5}, {2, 3, 5}, {2, 6, 4}, {3, 6, 7}, {4, 5, 7}} flat triad/mask bits {1, 7, 2, 4, 3, 6, 5} {0, 1, 1, 0, 1, 0, 0}	Not Flipped Triad fpi=26 BC_8 L fp_sm=8→15H {{1, 7, 2}, {1, 3, 4}, {1, 6, 5}, {2, 3, 6}, {2, 5, 4}, {3, 5, 7}, {4, 6, 7}} flat triad/mask bits {1, 7, 2, 3, 4, 6, 5} {1, 0, 1, 0, 1, 0, 0}
238	$\overline{v_r}_{w_d}^{0}\,\bar{L}$	{BC8, E7, E6, snubH4Φ 8−1, ring7}	$0apggsscc_{2}$ 011110000	Bn{ 1/1, 0/−1, 1/1, 1/1, 0/−1, 1/1, 1/1, 1/1 } E8{ 2, 2, 2, 2, 2, 2, 2, 2 } Ph{ 1/2, 1/2, 0, 1/√2, 1/2, √3/2, 0, 0 }	Rt{ 0 −1 −1 −1 −1 −1 −2 −1 } Wt{ 1 −1 0 1 1 −1 1 0 } Ht 8	$\overline{I}$ 53	Flipped Triad fpi=24 BC_8 R fp_sm=3→7AH {{1, 2, 6}, {1, 7, 3}, {1, 4, 5}, {2, 5, 3}, {2, 7, 4}, {3, 6, 4}, {5, 7, 6}} flat triad/mask bits {1, 6, 2, 7, 3, 4, 5} {0, 1, 0, 1, 1, 1, 1}	Not Flipped Triad fpi=23 BC_8 R fp_sm=2→79H {{1, 6, 2}, {1, 3, 7}, {1, 4, 5}, {2, 4, 3}, {2, 7, 5}, {3, 6, 5}, {4, 7, 6}} flat triad/mask bits {1, 6, 2, 3, 7, 4, 5} {1, 0, 0, 1, 1, 1, 1}
239	$\overline{v_e}_{w_m}^{+}\,\bar{L}$	{BC8, E7, E6, E5, snubH4Φ 16−1, ring6}	$0apggsscc_{2}$ 010011000	Bn{ 1/1, 0/−1, 1/1, 0/−1, 1/1, 1/1, 1/1, 1/1 } E8{ 2, 2, 2, 2, 2, 2/√3, 2, 2 } Ph{ 1/2, 1/2, 1/√2, 0, 1/2, √3/2, 0, 0 }	Rt{ 0 −1 −1 −2 −1 −1 −2 −1 } Wt{ 1 −1 1 −1 −1 1 0 0 } Ht 9	$\overline{Pr}$ 59	Flipped Triad fpi=7 BC_8 L fp_sm=3→50H {{1, 2, 4}, {1, 3, 5}, {1, 6, 7}, {2, 3, 6}, {2, 7, 5}, {3, 4, 7}, {4, 6, 5}} flat triad/mask bits {1, 4, 2, 3, 5, 6, 7} {0, 0, 0, 0, 1, 0, 1}	Not Flipped Triad fpi=4 BC_8 L fp_sm=3→50H {{1, 2, 3}, {1, 4, 6}, {1, 5, 7}, {2, 4, 7}, {2, 6, 5}, {3, 4, 5}, {3, 7, 6}} flat triad/mask bits {1, 2, 3, 4, 6, 5, 7} {0, 0, 0, 0, 1, 0, 1}
240	$\overline{v_e}_{w_m}^{0}\,\bar{L}$	{BC8, E7, E6, E5, E4, snubH4Φ 8−1, ring8}	$0apggsscc_{2}$ 011011000	Bn{ 1/1, 0/−1, 0/−1, 1/1, 1/1, 1/1, 1/1, 1/1 } E8{ 2, 2, 2, 2, 2, 2/√3, 2, 2 } Ph{ 1/2, 1/2, −1/√2, 0, 1/2, √3/2, 0, 0 }	Rt{ 0 −1 −2 −2 −1 −1 −2 −1 } Wt{ 1 0 −1 0 −1 1 0 0 } Ht 10	$\overline{Tb}$ 65	Flipped Triad fpi=4 BC_8 R fp_sm=3→57H {{1, 3, 2}, {1, 6, 4}, {1, 7, 5}, {2, 4, 7}, {2, 6, 5}, {3, 4, 5}, {3, 7, 6}} flat triad/mask bits {1, 2, 3, 6, 4, 7, 5} {1, 1, 1, 0, 1, 0, 1}	Not Flipped Triad fpi=7 BC_8 R fp_sm=3→57H {{1, 4, 2}, {1, 5, 3}, {1, 7, 6}, {2, 3, 6}, {2, 7, 5}, {3, 4, 7}, {4, 6, 5}} flat triad/mask bits {1, 4, 2, 5, 3, 7, 6} {1, 1, 1, 0, 1, 0, 1}
241	$b_{m_d}^{-1/3}\,\bar{L}$	{BC8, 6Cube, snubH4 8−1, ring3}	$0apggsscc_{2}$ 000110011	Bn{ 0/−1, 1/1, 1/1, 1/1, 1/1, 1/1, 1/1, 0/−1 } E8{ 2, 2, 2, 2, 2, 2, 2, 2 } Ph{ −1/2, 1/2, 0, 1/√2, 1/2, 1/(2√3), 0, −√(2/3) }	Rt{ 0 1 2 3 1 3 4 2 } Wt{ −1 0 0 0 −1 1 0 0 } Ht 16	Np 93	Flipped Triad fpi=30 BC_8 L fp_sm=6→09H {{1, 7, 2}, {1, 3, 6}, {1, 4, 5}, {2, 5, 3}, {2, 4, 6}, {3, 4, 7}, {5, 6, 7}} flat triad/mask bits {1, 2, 7, 3, 6, 4, 5} {1, 0, 0, 1, 0, 0, 0}	Not Flipped Triad fpi=28 BC_8 L fp_sm=3→02H {{1, 2, 7}, {1, 5, 3}, {1, 4, 6}, {2, 3, 6}, {2, 4, 5}, {3, 4, 7}, {5, 6, 7}} flat triad/mask bits {1, 7, 2, 5, 3, 4, 6} {0, 1, 0, 0, 0, 0, 0}
242	$b_{c_d}^{-1/3}\,\bar{L}$	{BC8, snubH4 8−1, ring1}	$0apggsscc_{2}$ 000110010	Bn{ 0/−1, 1/1, 1/1, 1/1, 1/1, 1/1, 0/−1, 1/1 } E8{ 2, 2, 2, 2, 2, 2, 2, 2 } Ph{ −1/2, 1/2, 0, 1/√2, 1/2, 1/(2√3), −1/(√2), 1/(√6) }	Rt{ −1 −1 −1 −1 −1 −1 −1 0 } Wt{ −1 0 0 0 −1 0 0 1 } Ht 7	$\overline{Sn}$ 50	Flipped Triad fpi=27 BC_8 L fp_sm=4→03H {{1, 7, 2}, {1, 5, 3}, {1, 4, 6}, {2, 3, 4}, {2, 5, 6}, {3, 6, 7}, {4, 5, 7}} flat triad/mask bits {1, 2, 7, 5, 3, 4, 6} {1, 1, 0, 0, 0, 0, 0}	Not Flipped Triad fpi=29 BC_8 L fp_sm=7→0AH {{1, 2, 7}, {1, 6, 3}, {1, 4, 5}, {2, 4, 3}, {2, 5, 6}, {3, 5, 7}, {4, 6, 7}} flat triad/mask bits {1, 2, 7, 6, 3, 4, 5} {0, 1, 0, 1, 0, 0, 0}
243	$b_{o_d}^{-1/3}\,\bar{L}$	{BC8, E7, snubH4 16−1, ring1}	$0apggsscc_{2}$ 000110001	Bn{ 0/−1, 1/1, 1/1, 1/1, 1/1, 0/−1, 1/1, 1/1 } E8{ 2, 2, 2, 2, 2, 2, 2, 2 } Ph{ −1/2, 1/2, 0, 1/√2, 1/2, 1/(2√3), 1/(√2), 1/(√6) }	Rt{ −1 −1 −1 −1 −1 −1 −1 −1 } Wt{ −1 0 0 0 −1 0 1 −1 } Ht 8	$\overline{Ba}$ 56	Flipped Triad fpi=25 BC_8 L fp_sm=5→08H {{1, 2, 7}, {1, 3, 4}, {1, 5, 6}, {2, 5, 3}, {2, 4, 6}, {3, 6, 7}, {4, 5, 7}} flat triad/mask bits {1, 7, 2, 3, 4, 5, 6} {0, 0, 0, 1, 0, 0, 0}	Not Flipped Triad fpi=26 BC_8 L fp_sm=8→0BH {{1, 7, 2}, {1, 4, 3}, {1, 5, 6}, {2, 6, 3}, {2, 4, 5}, {3, 5, 7}, {4, 6, 7}} flat triad/mask bits {1, 7, 2, 4, 3, 5, 6} {1, 1, 0, 1, 0, 0, 0}
244	$\overline{v_r}_{w_l}^{0}\,\bar{R}$	{BC8, E7, E6, H4cell8, ring5}	$0apggsscc_{2}$ 011110100	Bn{ 0/−1, 1/1, 1/1, 1/1, 0/−1, 1/1, 1/1, 1/1 } E8{ 2, 2, 2, 2, 2, 2/√3, 2, 2 } Ph{ −1/2, 1/2, 0, 1/√2, −1/2, √3/2, 0, 0 }	Rt{ −1 −1 −1 −1 −1 −1 −2 −1 } Wt{ −1 0 0 1 −1 1 −1 0 } Ht 9	$\overline{Pm}$ 61	Flipped Triad fpi=24 BC_8 R fp_sm=3→64H {{1, 2, 6}, {1, 3, 7}, {1, 5, 4}, {2, 3, 5}, {2, 4, 7}, {3, 6, 4}, {5, 7, 6}} flat triad/mask bits {1, 6, 2, 7, 3, 5, 4} {0, 0, 1, 0, 0, 1, 1}	Not Flipped Triad fpi=23 BC_8 R fp_sm=2→67H {{1, 6, 2}, {1, 7, 3}, {1, 5, 4}, {2, 3, 4}, {2, 5, 7}, {3, 6, 5}, {4, 7, 6}} flat triad/mask bits {1, 6, 2, 7, 3, 5, 4} {1, 1, 1, 0, 0, 1, 1}
245	$\overline{v_e}_{w_m}^{+}\,\bar{R}$	{BC8, E7, E6, E5, snubH4Φ 16−2, ring6}	$0apggsscc_{2}$ 010011100	Bn{ 0/−1, 1/1, 1/1, 0/−1, 1/1, 1/1, 1/1, 1/1 } E8{ 2, 2, 2, 2, 2, 2/√3, 2, 2 } Ph{ −1/2, 1/2, 1/√2, 0, 1/2, √3/2, 0, 0 }	Rt{ −1 −1 −1 −2 −1 −1 −2 −1 } Wt{ −1 0 1 −1 −1 1 0 0 } Ht 10	$\overline{Ho}$ 67	Flipped Triad fpi=7 BC_8 L fp_sm=3→4EH {{1, 2, 4}, {1, 5, 3}, {1, 7, 6}, {2, 6, 3}, {2, 5, 7}, {3, 4, 7}, {4, 6, 5}} flat triad/mask bits {1, 4, 2, 5, 3, 7, 6} {0, 1, 1, 1, 0, 0, 1}	Not Flipped Triad fpi=4 BC_8 L fp_sm=3→4EH {{1, 2, 3}, {1, 6, 4}, {1, 7, 5}, {2, 7, 4}, {2, 5, 6}, {3, 4, 5}, {3, 7, 6}} flat triad/mask bits {1, 2, 3, 6, 4, 7, 5} {0, 1, 1, 1, 0, 0, 1}
246	$\overline{v_e}_{w_m}^{0}\,\bar{R}$	{BC8, E7, E6, E5, E4, snubH4Φ 8−3, ring6}	$0apggsscc_{2}$ 011011100	Bn{ 0/−1, 1/1, 0/−1, 1/1, 1/1, 1/1, 1/1, 1/1 } E8{ 2, 2, 2, 2, 2, 2/√3, 2, 2 } Ph{ −1/2, 1/2, −1/√2, 0, 1/2, √3/2, 0, 0 }	Rt{ −1 −1 −2 −2 −1 −1 −2 −1 } Wt{ −1 1 −1 0 −1 1 0 0 } Ht 11	$\overline{Ta}$ 73	Flipped Triad fpi=4 BC_8 R fp_sm=3→49H {{1, 3, 2}, {1, 4, 6}, {1, 5, 7}, {2, 7, 4}, {2, 5, 6}, {3, 4, 5}, {3, 7, 6}} flat triad/mask bits {1, 2, 3, 4, 6, 5, 7} {1, 0, 0, 1, 0, 0, 1}	Not Flipped Triad fpi=7 BC_8 R fp_sm=3→49H {{1, 4, 2}, {1, 3, 5}, {1, 6, 7}, {2, 6, 3}, {2, 5, 7}, {3, 4, 7}, {4, 6, 5}} flat triad/mask bits {1, 4, 2, 3, 5, 6, 7} {1, 0, 0, 1, 0, 0, 1}
247	$\overline{v_e}_{w_d}^{0}\,\bar{L}$	{BC8, E7, E6, E5, E4, snubH4Φ 8−4, ring7}	$0apggsscc_{2}$ 011010000	Bn{ 0/−1, 0/−1, 1/1, 1/1, 1/1, 1/1, 1/1, 1/1 } E8{ 2, 2, 2, 2, 2, 2/√3, 2, 2 } Ph{ −1/2, −1/2, 0, 1/√2, 1/2, √3/2, 0, 0 }	Rt{ −1 −2 −2 −2 −1 −1 −2 −1 } Wt{ 0 −1 0 0 −1 1 0 0 } Ht 12	$\overline{Au}$ 79	Flipped Triad fpi=4 BC_8 R fp_sm=3→7AH {{1, 2, 3}, {1, 6, 4}, {1, 5, 7}, {2, 7, 4}, {2, 6, 5}, {3, 5, 4}, {3, 7, 6}} flat triad/mask bits {1, 3, 2, 6, 4, 5, 7} {0, 1, 0, 1, 1, 1, 1}	Not Flipped Triad fpi=7 BC_8 R fp_sm=3→7AH {{1, 2, 4}, {1, 5, 3}, {1, 6, 7}, {2, 6, 3}, {2, 7, 5}, {3, 7, 4}, {4, 6, 5}} flat triad/mask bits {1, 2, 4, 5, 3, 6, 7} {0, 1, 0, 1, 1, 1, 1}

Seq #	Symbol	2D/3D Shape	Groups	Particle Quantum Bits	Binary / E8 / Physics Coordinates	Algebra Root Weight / Height / Rt#=Atomic Element Number -->	Ele #	Octonions Flipped	Octonions Not Flipped
248	$\overset{0}{\underset{R}{Ex_2}}$		{8Ortho}	$0apggsscc$ 001001100_2	Bn{ 1 1 1 1 1 1 1 0 } E8{ 1 0 0 0 0 0 0 0 } Ph{ 1 0 0 0 0 0 0 0 }	Rt{ 1 1 1 1 0 $\frac{1}{2}$ 1 $\frac{1}{2}$ } Wt{ 1 0 0 0 $-\frac{1}{2}$ 0 0 0 } Ht 6	Exc 1	Flipped Invalid octonion Fano plane not defined! Invalid octonion Fano plane not defined!	Not Flipped Invalid octonion Fano plane not defined! Invalid octonion Fano plane not defined!
249	$\overset{0}{\underset{L}{Ex_2}}$		{8Ortho}	$0apggsscc$ 001001000_2	Bn{ 1 1 1 1 1 1 0 1 } E8{ 0 1 0 0 0 0 0 0 } Ph{ 0 1 0 0 0 0 0 0 }	Rt{ 0 1 1 1 0 $\frac{1}{2}$ 1 $\frac{1}{2}$ } Wt{ −1 1 0 0 $-\frac{1}{2}$ 0 0 0 } Ht 5	Exc 1	Flipped Invalid octonion Fano plane not defined! Invalid octonion Fano plane not defined!	Not Flipped Invalid octonion Fano plane not defined! Invalid octonion Fano plane not defined!
250	$\overset{0}{\underset{R}{Ex_2}}$		{8Ortho}	$0apggsscc$ 001000100_2	Bn{ 1 1 1 1 1 0 1 1 } E8{ 0 0 0 0 0 0 0 0 } Ph{ 0 0 $\frac{1}{\sqrt{2}}$ $\frac{1}{\sqrt{2}}$ 0 0 0 0 }	Rt{ 0 0 1 1 0 $\frac{1}{2}$ 1 $\frac{1}{2}$ } Wt{ 0 −1 1 0 $-\frac{1}{2}$ 0 0 0 } Ht 4	Exc 1	Flipped Invalid octonion Fano plane not defined! Invalid octonion Fano plane not defined!	Not Flipped Invalid octonion Fano plane not defined! Invalid octonion Fano plane not defined!
251	$\overset{0\to-1}{\underset{L}{Ex_2}}$		{8Ortho}	$0apggsscc$ 001000000_2	Bn{ 1 1 1 1 0 1 1 1 } E8{ 0 0 0 0 0 0 0 0 } Ph{ 0 0 $-\frac{1}{\sqrt{2}}$ $\frac{1}{\sqrt{2}}$ 0 0 0 0 }	Rt{ 0 0 0 1 0 $\frac{1}{2}$ 1 $\frac{1}{2}$ } Wt{ 0 0 −1 1 $-\frac{1}{2}$ 0 0 0 } Ht 3	Exc 1	Flipped Invalid octonion Fano plane not defined! Invalid octonion Fano plane not defined!	Not Flipped Invalid octonion Fano plane not defined! Invalid octonion Fano plane not defined!
252	$\overset{0}{\underset{R}{Ex_1}}$		{8Ortho}	$0apggsscc$ 000001100_2	Bn{ 1 1 1 0 1 1 1 1 } E8{ 0 0 0 0 1 0 0 0 } Ph{ 0 0 0 0 1 0 0 0 }	Rt{ 0 0 0 0 0 $\frac{1}{2}$ 1 $\frac{1}{2}$ } Wt{ 0 0 0 −1 $-\frac{1}{2}$ 0 1 0 } Ht 2	Exc 1	Flipped Invalid octonion Fano plane not defined! Invalid octonion Fano plane not defined!	Not Flipped Invalid octonion Fano plane not defined! Invalid octonion Fano plane not defined!
253	$\overset{0\to1/3}{\underset{L}{Ex_1}}$		{8Ortho}	$0apggsscc$ 000001000_2	Bn{ 1 1 0 1 1 1 1 1 } E8{ 0 0 0 0 0 0 1 0 } Ph{ 0 0 0 0 0 $\frac{1}{\sqrt{3}}$ $-\frac{1}{\sqrt{2}}$ $-\frac{1}{\sqrt{6}}$ }	Rt{ 0 0 0 0 0 $\frac{1}{2}$ 0 $\frac{1}{2}$ } Wt{ 0 0 0 0 $-\frac{1}{2}$ 1 −1 1 } Ht 1	Exc 1	Flipped Invalid octonion Fano plane not defined! Invalid octonion Fano plane not defined!	Not Flipped Invalid octonion Fano plane not defined! Invalid octonion Fano plane not defined!
254	$\overset{0\to1/3}{\underset{R}{Ex_1}}$		{8Ortho}	$0apggsscc$ 000000100_2	Bn{ 1 0 1 1 1 1 1 1 } E8{ 0 0 0 0 0 0 1 0 } Ph{ 0 0 0 0 0 $\frac{1}{\sqrt{3}}$ $\frac{1}{\sqrt{2}}$ $-\frac{1}{\sqrt{6}}$ }	Rt{ 0 0 0 0 0 $\frac{1}{2}$ 0 $-\frac{1}{2}$ } Wt{ 0 0 0 0 $-\frac{1}{2}$ 1 0 −1 } Ht 0	$\overline{\text{Exc}}$ 1	Flipped Invalid octonion Fano plane not defined! Invalid octonion Fano plane not defined!	Not Flipped Invalid octonion Fano plane not defined! Invalid octonion Fano plane not defined!
255	$\overset{0\to1/3}{\underset{L}{Ex_1}}$		{8Ortho}	$0apggsscc$ 000000000_2	Bn{ 0 1 1 1 1 1 1 1 } E8{ 0 0 0 0 0 0 0 1 } Ph{ 0 0 0 0 0 $\frac{1}{\sqrt{3}}$ 0 $\sqrt{\frac{2}{3}}$ }	Rt{ −1 −2 −3 −4 −2 $-\frac{7}{2}$ −5 $-\frac{5}{2}$ } Wt{ 0 0 0 0 $-\frac{1}{2}$ 0 0 0 } Ht 23	$\overline{\text{Exc}}$ 1	Flipped Invalid octonion Fano plane not defined! Invalid octonion Fano plane not defined!	Not Flipped Invalid octonion Fano plane not defined! Invalid octonion Fano plane not defined!

pascalRow@9

Seq #	Symbol	2D/3D Shape	Groups	Particle Quantum Bits	Binary / E8 / Physics Coordinates	Algebra Root Weight / Height / Rt#=Atomic Element Number -->	Ele #	Octonions Flipped Triad fpi=4 BC_8 R fp_sm=3→64H	Octonions Not Flipped Triad fpi=7 BC_8 R fp_sm=3→64H
256	$\overset{0}{\underset{R}{\overline{\nu_e}}}$ $\overline{w_1}$		{BC8, E7, E6, E5, E4, H4cell8, Hamming, Idempot, ring4}	$0apggsscc$ 011010100_2	Bn{ 1 1 1 1 1 1 1 1 } E8{ 2 2 2 2 2 2 2 2 } Ph{ $\frac{1}{2}$ $\frac{1}{2}$ 0 $\frac{1}{\sqrt{2}}$ $\frac{1}{2}$ $\frac{\sqrt{3}}{2}$ 0 0 }	Rt{ 0 0 0 0 −1 0 0 0 } Wt{ 0 0 0 0 −2 1 0 0 } Ht 1	$\overline{\text{Be}}$ 4	{{1, 2, 3}, {1, 4, 6}, {1, 7, 5}, {2, 4, 7}, {2, 5, 6}, {3, 5, 4}, {3, 7, 6}} flat triad/mask bits {1, 3, 2, 4, 6, 7, 5} {0, 0, 1, 0, 0, 1, 1}	{{1, 2, 4}, {1, 3, 5}, {1, 7, 6}, {2, 3, 6}, {2, 5, 7}, {3, 7, 4}, {4, 6, 5}} flat triad/mask bits {1, 2, 4, 3, 5, 7, 6} {0, 0, 1, 0, 0, 1, 1}