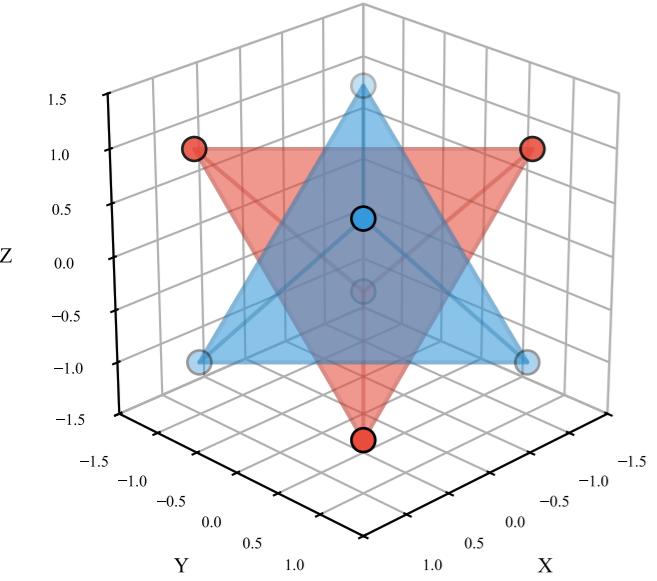
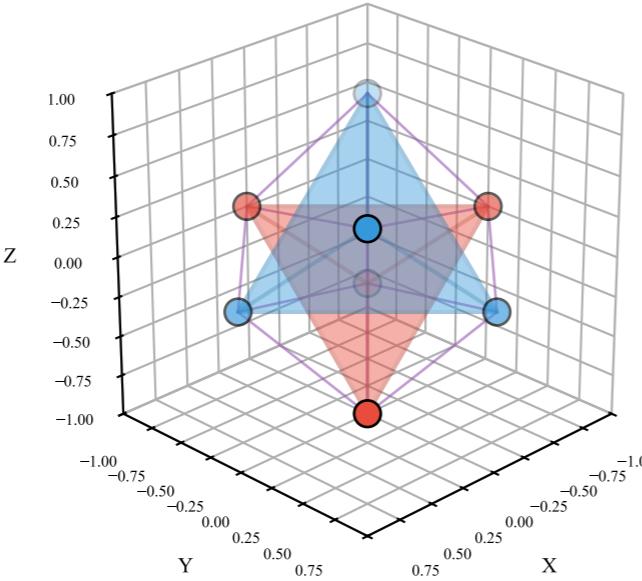


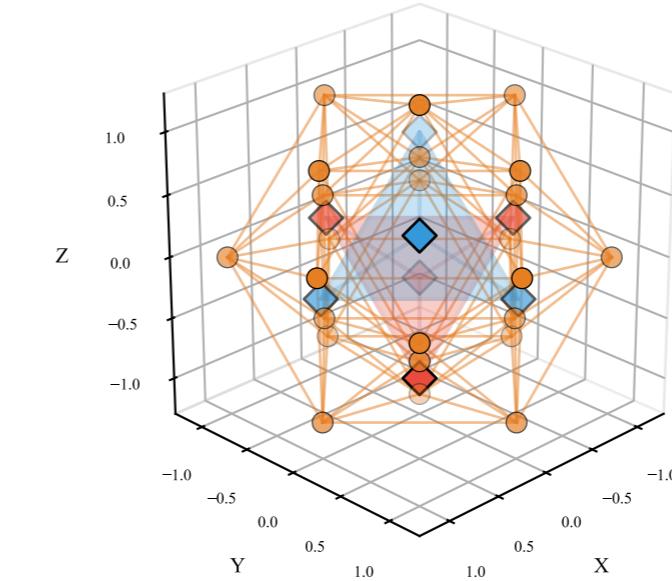
(a) Stella Octangula
 T_+ (blue) $\cup T_-$ (red)



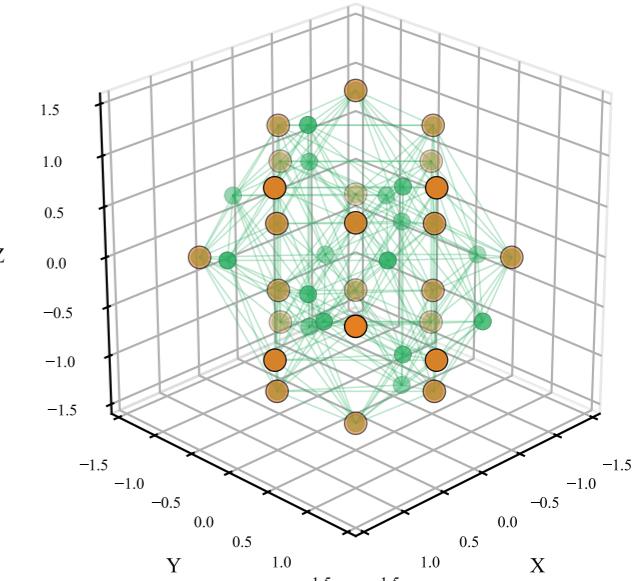
(b) 16-cell (B_4)
 $\phi: T_{\pm} \rightarrow \pm e_i$



(c) 24-cell (D_4)
16-cell $\subset D_4$ roots



(d) $\mathfrak{so}(10)$ (D_5)
 $D_4 \subset D_5$ (40 roots)



(e) GUT Embedding Chain

\subset

\subset

\subset

\supset

break

Stella
 $S_4 \times \mathbb{Z}_2$



16-cell
 B_4



24-cell
 D_4



$\mathfrak{so}(10)$
 D_5



$SU(5)$



$SU(3) \times SU(2) \times U(1)$

$$\sin^2 \theta_W = 3/8 \text{ at GUT scale}$$