

$$D = 8$$

$$E_8^5 = SL_2^{\mathbb{R}} \times SL_5^{\mathbb{R}}: \quad \text{scalar coset } SL_2^{\mathbb{R}} \times SL_5^{\mathbb{R}}$$

$$E_7^5 = GL_2^{\mathbb{R}}: \quad \text{scalar coset } GL_2^{\mathbb{R}}/O_2$$

$$E_6^5 = SL_2^{\mathbb{R}}: \quad \text{scalar coset } SL_2^{\mathbb{R}}/U_2^{\mathbb{R}} \ni i e^{-\varrho} + \vartheta \text{ dilaton/axion}$$

$$\begin{cases} \vartheta \\ \varrho \\ \mathcal{Z} \end{cases} = \boxed{\vartheta} + \overline{\varrho} - e^{2\varrho} \overline{\vartheta} + e^{-\varrho} \overline{\mathcal{Z}} - 2\vartheta \overline{\mathcal{Z}} = \overline{\vartheta^0} + \overline{e^{-\varrho/2} \mathcal{Z}} - 2 \overline{\vartheta^0} \overline{e^{-\varrho/2} \mathcal{Z}}$$

$$SL_2^{\mathbb{R}} \text{ doublet } \begin{cases} \mathcal{Z} \\ e^{-\varrho} \mathcal{Z}^* \end{cases}$$

$$E_5^5 = 1: \quad \text{impossible}$$

$$D_8^5 = O_{2:2} \times O_{1:1}: \quad \text{scalar coset } O_{2:2}/O_2 \times O_2 \times \mathbb{R}_>$$