

$$\begin{cases} D4 \\ N2 \end{cases}$$

$$\text{IIA/Y3} : \quad \mathbb{4} \frac{1}{5} \boxminus \frac{1}{5} = \mathbb{4} \frac{0}{0}$$

$$\text{H/K3T2} : \quad \mathbb{4} \frac{1}{5} \boxminus \frac{01}{41} = \mathbb{4} \frac{0}{0}$$

$$\text{N=4 SUSY field} \quad \begin{bmatrix} \mathbb{4} \\ 3 \end{bmatrix} \begin{matrix} \xleftrightarrow{\epsilon^0} \\ \xleftrightarrow{m^0} \end{matrix}$$

$$\mathbb{X}^{1:9-d} \underset{\text{IIA}}{\times} Y^d$$

$$\mathbb{X}^{1:3} \underset{\text{IIA}}{\times} Y^6 (K3) \sim X^{1:3} \underset{\text{HET}}{\times} \underline{K3 \times \mathbb{T}^2}$$

$$\text{Tr Ric}_G * 1 - \frac{1}{2} dC \wedge \left(*dC + \frac{1}{3} dC \wedge C \right)$$

$$C = A^i \wedge \omega_i \text{ vector fields}$$

$$A^0 \text{ graviphoton}$$

$$J = \varphi^i \omega_i \text{ scalar fields}$$

$$\varphi^0 \text{ dilaton}$$