$$-e_0 = \frac{1}{g_s} = D$$

$$e_1 - e_0 = \frac{R_1}{g_s} = wD = D/\mathbb{T}$$

$$e_1 + e_2 - 2e_0 = \frac{R_1 R_2}{g_s^2} = \text{ NS}$$

$$e_1 + \cdot\cdot + e_k - 2e_0 = \frac{R_1 \cdot\cdot R_k}{g_s^2} = \text{ w..wNS}$$

$$-e_d = \frac{1}{R_d} = wF$$

$$\frac{g^{-1} \mid g^{-1}B}{-Bg^{-1} \mid g - Bg^{-1}B} \in \frac{SO^{\mathbb{R}}_{k:k}}{SO^{\mathbb{R}}_k \times SO^{\mathbb{R}}_k}$$

IIA spinor states

D particle $\frac{1}{g_s \ell_s}$

D string $\frac{R_i}{g_s \ell_s^3}$

D instanton $\frac{R_i}{g_s \ell_s}$

IIB spinor states

D particle $\frac{R_i}{g_s \ell_s^2}$

D string $\frac{1}{g_s \ell_s^2}$

D instanton $\frac{1}{\ell_s}$

KK=vector states

T duality=exchange of spinor rep