

circle comp

$$\begin{array}{c} \text{Pioline} \\ +\frac{10}{\mathbb{T}} = +9 \times \mathbb{T} \\ x^k y^1 \end{array}$$

${}^x\mathbb{Q}$ = fluctuating radius of compactification

${}^x\mathbb{X}$ = KK gauge field from isometry along ${}^x\mathbb{T}$

$$\underline{xy} \overset{xy}{+} \overset{x}{\mathbb{X}} \overset{y}{\mathbb{X}} = \underline{x} \overset{x}{\mathbb{X}} \overset{\pm}{\mathbb{X}} \underline{x} + \overbrace{\underline{y} + \underline{x} \overset{x}{\mathbb{X}}}^{\pm} \overset{x^2}{\mathbb{Q}} \overbrace{\underline{y} + \underline{x} \overset{x}{\mathbb{X}}}^{\pm} = \begin{bmatrix} x & y \end{bmatrix} \frac{\overset{x}{\mathbb{X}} + \overset{x}{\mathbb{X}} \overset{x^2}{\mathbb{Q}} \overset{x^+}{\mathbb{X}}}{\overset{x^2}{\mathbb{Q}} \overset{x^+}{\mathbb{X}}} \left| \begin{array}{c|c} \overset{x}{\mathbb{X}} \overset{x^2}{\mathbb{Q}} & \overset{\pm}{\mathbb{X}} \\ \hline \overset{x^2}{\mathbb{Q}} & \underline{y} \end{array} \right. \begin{bmatrix} \pm \\ \underline{x} \end{bmatrix}$$

$${}^{xy}\mathcal{Z} = {}^x\mathcal{Z} + {}^x\mathcal{Z} \wedge \underline{y}$$

$${}^{xy}\boxed{\overset{x}{\mathbb{X}}} = {}^x\boxed{\overset{x}{\mathbb{X}}} + \frac{{}^x\overline{d\overset{x}{\mathbb{Q}}}}{x\overset{x^2}{\mathbb{Q}}} + \frac{{}^x\overset{x^2}{\mathbb{Q}}}{x\overline{d\mathbb{X}}}$$

$${}^{xy}\overline{d\mathcal{Z}}^2 = {}^x\overline{d\mathcal{Z}}^2 + \frac{{}^x\overline{d\mathcal{Z}}^2}{x\overset{x^2}{\mathbb{Q}}}$$

$$\begin{aligned} {}^x \left\{ \begin{array}{l} \mathbb{X} \mathbb{Q} \mathbb{X} \\ \mathcal{Z} \mathcal{Z} \end{array} \right. &= \frac{{}^x\mathbb{Q}}{\ell^9} \frac{{}^x\boxed{k}}{\ell^9} + \frac{{}^x\overline{d\overset{x}{\mathbb{Q}}}}{x\overset{x^2}{\mathbb{Q}}\ell^9} + \frac{{}^x\overset{x^3}{\mathbb{Q}} \overline{d\mathbb{X}}}{\ell^9} + \frac{{}^x\overset{x^2}{\mathbb{Q}} \overline{d\mathcal{Z}}}{\ell^3} + \frac{\overline{d\mathcal{Z}}^2}{x\overset{x^2}{\mathbb{Q}}\ell^3} + \mathcal{Z} \wedge d\mathcal{Z} \wedge d\mathcal{Z} \\ &\quad (M/\mathbb{T}) = \mathbb{R}_>^2 \ni \ell | \mathbb{Q} \end{aligned}$$

$$\ell_{11}| \mathbb{Q}_{11} \in (M/\mathbb{T}) \rightarrow (\text{IIA}) \ni \frac{\ell_{11}^{3/2}}{\mathbb{Q}_{11}^{1/2}} | \frac{\mathbb{Q}_{11}^{3/2}}{\ell_{11}^{3/2}} = \ell_{10}| \mathbb{Q}_{10}$$

$$\underline{xy} \overset{xy}{+} \overset{x}{\mathbb{X}} \overset{y}{\mathbb{X}} = {}^x\mathbb{Q}^{-2/3} \underline{x} \frac{{}^x\mathbb{X}}{\ell_{10}^2} \overset{\pm}{\mathbb{X}} + \overbrace{\underline{y} + \underline{x} \overset{x}{\mathbb{X}}}^{\pm} \overset{x^4/3}{\mathbb{Q}} \overbrace{\underline{y} + \underline{x} \overset{x}{\mathbb{X}}}^{\pm}$$

$$\mathfrak{e}^{-2\phi/3} \underline{xt}^2 + \left(\mathfrak{e}^{2\phi/3} \overline{s + xt\mathbb{X}_\mu} \right)^2$$

$$\Sigma_{+10}^{+2} = \Sigma_{+9}^{+1} \times \mathbb{T}$$