

Effective Action for D_p -Brane in Large RR $(p - 1)$ -Form Background

Chen-Te Ma

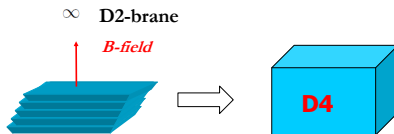
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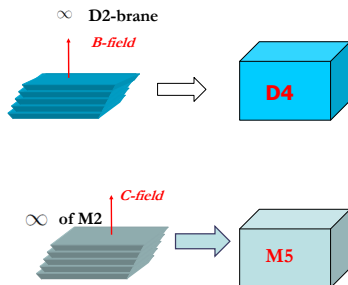
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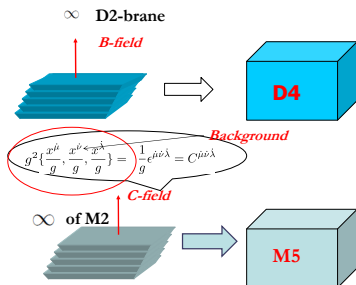
From M2 to M5



From M2 to M5



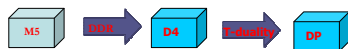
From M2 to M5



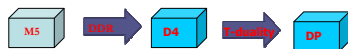
From M5 to Dp



From M5 to Dp



From M5 to Dp



$$\{A_1, A_2, A_3\} \longrightarrow \{A_1, A_2, \dots, A_{p-1}\}$$

Action

$$\mathcal{L} = \mathcal{L}_1 + \mathcal{L}_2,$$

where

$$\mathcal{L}_1 \equiv -\frac{1}{2}(\mathcal{D}_\alpha X^I)^2 + \frac{1}{2g}\epsilon^{\alpha\beta}\mathcal{F}_{\alpha\beta} + \frac{1}{2}\mathcal{F}_{\alpha\dot{\mu}}^2$$

and

$$\mathcal{L}_2 \equiv -\frac{1}{2} \sum_{n,m,l \in S} \frac{g^{2(p-2-m)}}{(n!)(m!)^2(l!)}$$

$$\{X^{\dot{\mu}_1}, \dots, X^{\dot{\mu}_n}, a_{\dot{\nu}_1}, \dots, a_{\dot{\nu}_m}, y^{\dot{\nu}_1}, \dots, y^{\dot{\nu}_m}, X^{l_1}, \dots, X^{l_l}\}^2.$$

$$S \equiv \{(n, m, l) \mid n, m, l \geq 0; n + 2m + l = p - 1\}.$$

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- This theory also has **SUSY Algebra** for $p \leq 4$.