

Massive II A flux compactifications with dynamical open strings

We consider massive type IIA compactifications down to 4 dimensions in presence of O6 planes and D6 branes parallel to them, in order to preserve half-maximal supersymmetry in 4D. The dynamics of open strings living on the spacetime filling branes is taken into account, in the gauged supergravity description, by adding extra vector multiplets and embedding tensor components. The scalar potential gets new terms that can be matched with contributions coming from dimensional reduction of the non-Abelian DBI and WZ brane actions. In this setting, we analyze the vacuum structure of the theory and find novel AdS_4 vacua, both supersymmetric and non-supersymmetric ones.

Furthermore, we address their perturbative stability by computing their mass spectra. Some of the vacua are found to be perturbatively stable, despite their being non-supersymmetric.

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