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(A)dS solutions from type II Scherk-Schwarz toroidal orbifold

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Metastable de Sitter vacua are widely explored in the classical corner of string theory and notoriously difficult to realise. In addition, metastable de Sitter vacua in the parametrically controlled region have been conjectured to be in the Swampland. In this talk we explore a non-supersymmetric corner of string theory given by type II Scherk-Schwarz toroidal orbifolds, where supersymmetry is broken at the compactification scale and the 1-loop vacuum energy can be computed. We provide no-go theorems for (quantum) de Sitter solutions in d=8,9. We also show that any de Sitter solution in d=4 or bigger is unavoidably perturbatively unstable. Finally, we comment on the difficulty of realising such de Sitter solutions in the weakly coupled/large volume regime as in accordance with de Sitter Swampland conjectures. In contrast, AdS solutions under parametric control can be easily realised.

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