

Dilaton domination in the MSSM and its singlet extensions

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We study the phenomenological implications of a string-motivated scenario in which supersymmetry breaking is triggered by the Dilaton field. We show that for the MSSM there is a tension between the expected Higgs mass and the dark matter relic abundance. This constrains the parameter space and thus leads to testable predictions for LHC-14. We also present examples within the general singlet extension of the MSSM where the aforementioned tension is relaxed and all constraints can be easily accommodated.

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