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Sparticle and Higgs boson masses from the landscape: dynamical vs. spontaneous SUSY breaking

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models of dynamical SUSY breaking (DSB)– with a hidden sector gauge coupling g² scanned uniformly– lead to gaugino condensation and a uniform distribution of soft parameters on a log scale. Then soft terms are expected to be distributed as m_{soft}^{-1} favoring small values. A scan of DSB soft terms generally leads to m_h« 125 GeV and sparticle masses usually below LHC limits. Thus, the DSB landscape scenario seems excluded from LHC search results. An alternative is that the exponential suppression of the weak scale is set anthropically on the landscape via the atomic principle.

Summary

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