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## LHC constraints on Mini-Split anomaly and gauge mediation and prospects for a future 100 TeV pp collider

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Stringent experimental constraints have raised the lower limit on the masses of squarks to TeV levels, while compatibility with the mass of the Higgs boson provides an upper limit. This two-sided bound has led to the emergence of Mini-Split theories where gauginos are not far removed from the electroweak scale while scalars are somewhat heavier. This small hierarchy modifies the spectrum of standard anomaly and gauge mediation, leading to Mini-Split deflected anomaly and gauge mediation models. In this paper, we study LHC constraints on these models and their prospects at a 100 TeV collider. Current constraints on their parameter space come from ATLAS and CMS supersymmetry searches, the known mass of the Higgs boson, and the absence of a color-breaking vacuum. Prospects at a 100 TeV collider are obtained from these same theoretical constraints in conjunction with background estimates. As would be expected from renormalization group effects, a slightly lighter third generation of squarks is assumed. Higgsinos have masses similar to those of the scalars and are at the origin of the deflection.

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