

Gauge Mediation beyond Minimal Flavor Violation

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We discuss a minimal modification of Gauge Mediation in which the messenger sector couples directly to the MSSM matter fields. These couplings are controlled by the same dynamics that explain the flavor hierarchies, and therefore are parametrically as small as the Yukawas. This setup gives rise to an interesting SUSY spectrum that is calculable in terms of a single new parameter. Due to large A-terms, the model can easily accommodate a 125 GeV Higgs with a relatively light SUSY spectrum. The flavor structure depends on the particular underlying flavor model, but flavor-violating effects arise dominantly in the up-sector and are strongly suppressed in $\Delta C = 2$ observables. This structure allows to account for the recent observation of direct CP violation in D-meson decays.

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