Rencontres de Moriond EW 2010



ID de Contribution: 19 Type: Non spécifié

Tree Level Gauge Mediation

mardi 9 mars 2010 20:15 (5 minutes)

We propose a new scheme in which supersymmetry breaking is communicated to the MSSM sfermions by tree level gauge interactions. The constraints from the supertrace formula are avoided because the (positive) contribution to the supertrace of MSSM fields is automatically compensated by a (negative) contribution from heavy fields.

Sfermion masses are flavour universal, thus solving the supersymmetric flavour problem. The mass relations of the sfermions are different with respect to other supersymmentry breaking and flavour universal scenario scenario like mSugra or the usual one loop gauge mediation, thus making this framework testable at the LHC.

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Classification de Session: Young Scientist Forum 1