

M. Cvetič: "A string theoretic model of gauge mediated supersymmetry breaking"

Wednesday 30 July 2008 10:30 (30 minutes)

Guided by modern String Theory We propose a robust supergravity model of dynamical supersymmetry breaking and gauge mediation. The Polonyi field (and its mirror) is a chiral field, charged under "anomalous" $U(1)$'s, with hierarchical Polonyi-term which can be generated by string instantons, and quartic superpotential terms which arise naturally as a tree-level decoupling effect of massive string states. A stable supersymmetry breaking minimum allows for the realisation of gauge mediation with soft supersymmetry breaking masses at the TeV scale which we realise for a globally consistent $SU(5)$ GUT model of Type I string theory, with an D1-instanton inducing the Polonyi term.

Track Classification: W2