

S. de Alwis: "Supersymmetry breaking models and String theory constraints"

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A consistent theory of supersymmetry breaking must have a hidden sector an observable sector and must be embedded in a locally supersymmetric theory which arises from string theory. For phenomenological reasons it must also transmit supersymmetry from the hidden to the visible sector in a dominantly flavor neutral manner. Also any such theory of supersymmetry breaking has to take into account the problem of quadratic divergences which arise once the theory is embedded in supergravity. A model which incorporates all these features with just the bare minimum of necessary supergravity/string theory moduli fields coupled to the minimally supersymmetric standard model, is presented. Every other model has either an extra sector or more fine-tuning or both.

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