



ID de Contribution: 49

Type: Non spécifié

## Sneutrino dark matter in extended MSSM models

*mercredi 5 mars 2008 17:35 (5 minutes)*

A thorough analysis of sneutrinos as dark matter candidates is performed, in different classes of supersymmetric models, as is typically done for the neutralino dark matter. First in the Minimal Supersymmetric Standard Model, sneutrinos are marginally compatible with existing experimental bounds, including direct detection, provided they compose a subdominant component of dark matter. Then supersymmetric models with the inclusion of right-handed fields and lepton-number violating terms are presented. Simple versions of the lepton-number-violating models do not lead to phenomenology different from the standard case when the neutrino mass bounds are properly included. On the contrary, models with right-handed fields are perfectly viable: they predict sneutrinos which are compatible with the current direct detection sensitivities. I am going to show the indirect detection signals for such successful models: predictions for antimatter and neutrino fluxes are provided and compared with existing and future experimental sensitivities.

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**Classification de Session:** Young Scientist Forum 2