

A first evidence of the CMSSM is appearing soon

Tuesday 3 December 2013 17:15 (25 minutes)

We explore the coannihilation region of the constrained minimal supersymmetric standard model (CMSSM) being consistent with current experimental/observational results.

The requirements from the experimental/observational results are the 125GeV Higgs mass and the relic abundances of both the dark matter and light elements, especially the lithium-7.

We put these requirements on the calculated values, and thus we obtain the allowed region.

Then we give predictions to the mass spectra of the SUSY particles, the anomalous magnetic moment of muon, branching fractions of the B -meson rare decays, the direct detection of the neutralino dark matter, and the number of SUSY particles produced in a 14TeV run at the LHC experiment.

Comparing these predictions with current bounds, we show the feasibility of the test for this scenario in near future experiment.

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