Contribution ID: **240** Type: **not specified**

υMSSM+3 singlets+1 gauge field: A model for inflation, neutrino mass and mu-problem solution.

Friday, 27 August 2010 16:46 (15 minutes)

I look at the MSSM augmented by righthanded neutrinos and 3 new singlets. In addition a new U(1) gauge symmetry, with a Fayet-Iliopoulos term, under which two of the singlets are (oppositely) charged is added. Rather than breaking supersymmetry, the F-I term will be balanced by a MSSM flat direction vacuum expectation value during inflation. Thus "all MSSM fields vanishes"is not a minimum, even at tree order. Loop corrections break the huge degeneracy between flat directions. We have Anomaly Mediated Supersymmetry Breaking and cosmic strings.

The model contains an inflaton candidate, an elimination of the mu-problem, and a neutrino mass generating mechanism.

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Session Classification: Astro 27-2 Chair: M. Drees

Track Classification: Astro