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Probing Bino Contribution to Muon g-2

Monday 2 December 2013 16:50 (25 minutes)

We study SUSY models in which Bino contributions solve the muon g-2 anomaly. The contributions are enhanced by large left-right mixing of the smuons. However, it is constrained by the vacuum stability condition of the slepton Higgs potential. Therefore, there are upper bounds on masses of sleptons and Bino. When the slepton soft masses are universal, the upper bound on the smuon mass becomes 330 (460) GeV in order to solve the g-2 anomaly at the 1 sigma (2 sigma) level. It is within the reach of LHC and ILC. If the stau is heavier than the smuon, the bound can be as large as 1.4 (1.9) TeV. Such non-universal slepton mass spectrum generically predicts too large LFV/CPV. We show that the models are expected to be probed by LHC/ILC and LFV/CPV complementarily in future.

- Reference:: 1309.3065, 1310.4496

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