

Contribution ID: 157

Type: Parallel talk

Constraining sleptons at the LHC in a supersymmetric low-scale seesaw scenario

Tuesday 9 January 2018 17:40 (20 minutes)

We consider a scenario inspired by natural supersymmetry, where neutrino data is explained within a lowscale seesaw scenario. We extend the Minimal Supersymmetric Standard Model by adding light right-handed neutrinos and their superpartners, the R-sneutrinos, and consider the lightest neutralinos to be higgsino-like. We consider the possibilities of having either an R-sneutrino or a higgsino as lightest supersymmetric particle. Assuming that squarks and gauginos are heavy, we systematically evaluate the bounds on slepton masses due to existing LHC data.

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Session Classification: Parallel Session 3