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## Neutrino masses and mixing angles in the context of Bilinear R-parity violating supersymmetry

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In this work, we have explored a highly motivated beyond the Standard Model scenario, namely, R-parity violating supersymmetry, in the context of light neutrino mass and mixing. The R-parity is broken by only the lepton number violating the bilinear term. We try to fit two non-zero neutrino mass square differences and three mixing angle values obtained from the global chi-square analysis of neutrino oscillation data. We have also taken into account the updated data of Higgs mass, low energy flavor violating constraints like rare b-hadron decays, and Higgs coupling strengths with various Standard Model particles from LHC RUN-II data. We have used Markov Chain Monte Carlo(MCMC) to scan the parameter space of our model. After a detailed scan of the parameter space, we found that this model can explain data for the Normal Hierarchy scenario. We also represent  $1\sigma$  and  $2\sigma$  contour plots of different correlated parameters like Bilinear R-parity violating coupling parameters( $\varepsilon_i$ ), corresponding soft coupling parameters( $B_i$ ),  $\mu$ ,  $\tan \beta$  etc.

### Session

Beyond the Standard Model

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