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Phenomenology of Dirac Scotogenic Model

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The Dirac scotogenic model provides an elegant mechanism which explains small Dirac neutrino masses and neutrino mixing with a single symmetry simultaneously protecting the ''Diracness" of the neutrinos and the stability of the dark matter candidate. In addition to exploring the phenomenology of dark matter, we will also investigate the implications for lepton flavor violation, the muon anomalous magnetic moment and electroweak vacuum stability within this theoretical framework. These collective observations provide us with a set of predictions for lepton flavor-violating processes that can be readily tested in the near future. Additionally, the remaining parameter space yields predictions that are experimentally verifiable in relation to neutrino masses.

Reference publication/preprint

Designation

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