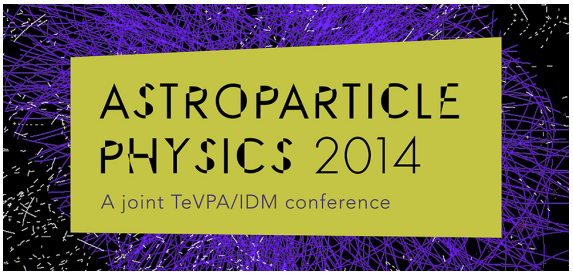

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The Incredible Bulk

Monday, June 23, 2014 3:40 PM (15 minutes)

Recent experimental results from the LHC have placed strong constraints on the masses of colored superpartners.
Additionally, direct dark matter searches put a strong upper limit on cross sections of interactions between the WIMP and quark sectors.
However, leptophilic versions of the MSSM can potentially survive these constraints while explaining the observed abundance of dark matter. We consider a scenario in which the requirements of minimal flavor violation and vanishing CP-violation are relaxed, and find that the lightest neutralino can achieve a cosmologically viable thermal relic abundance via light slepton exchange, analogously to the original bulk region. We find that these leptophilic models are constrained by measurements of the magnetic and electric dipole moments
of the electron and muon, and that they may lead to interesting signatures at a variety of indirect detection experiments.

Primary author: Ms SANDICK, Pearl (University of Minnesota)

Co-authors: KELSO, Chris (University of Utah); KUMAR, Jason (University of Hawaii); FUKUSHIMA, Keita (University of Hawaii); YAMAMOTO, Takahiro (University of Utah)

Presenter: Ms SANDICK, Pearl (University of Minnesota)

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