

Antiproton Limits on Decaying Gravitino Dark Matter

Wednesday, September 11, 2013 4:20 PM (20 minutes)

The nature of dark matter is one of the greatest mysteries of modern cosmology and particle physics. In this talk I will introduce a theory with broken R-parity where the gravitino forms a well-motivated candidate for unstable dark matter. After a brief review of the cosmological motivation for the scenario I will discuss its phenomenology with respect to indirect dark matter searches using observations of cosmic rays. In particular, I will elaborate on lower limits on the gravitino lifetime derived from antiproton data and the impact on the parameter space of the model.

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