

The TeV Cosmic-Ray Anisotropy from Local Dark Matter Annihilation

Wednesday, 28 August 2013 17:30 (20 minutes)

Several experiments have reported regions in the TeV sky with an excess of cosmic rays. I will discuss the consistency of these cosmic-ray excesses with dark matter annihilations in a nearby subhalo. The dark matter explanation of the TeV cosmic-ray excess naturally explains both its spatial and spectral features. I will show that the dark matter annihilation rate needed to produce the excess is consistent with current measurements of antiprotons, positrons, and gamma-rays. Additionally, I will show the predicted signatures from the dark matter subhalo in several cosmic-ray channels, several of which are measurable by the next generation of experiments.

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Session Classification: Indirect searches for dark matter