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A search for dark matter annihilation in the newly discovered dwarf galaxy Reticulum 2

Tuesday, 4 August 2015 16:00 (15 minutes)

I will present results from a search for gamma-ray emission in nine Milky Way satellites recently discovered in the Dark Energy Survey. The nearest of these, Reticulum 2, shows evidence for a signal in public Fermi data. The detected emission is consistent with annihilating dark matter with a particle mass less than a few hundred GeV. Different ways of treating the background yield different significances – ranging from 2.3 sigma to greater than 3.7 sigma (after trials) – and I will discuss the caveats involved. I will discuss tests that any dark matter interpretation must pass.

Oral or Poster Presentation

Oral

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Session Classification: AstroParticle, Cosmology, Dark Matter Searches, and CMB

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