



Contribution ID: 45

Type: **not specified**

Indirect Searches for Dark Matter with the Fermi Large Area Telescope

Monday, 13 May 2013 14:00 (18 minutes)

There is overwhelming evidence that non-baryonic dark matter constitutes $\sim 27\%$ of the energy density of the universe. Weakly Interacting Massive Particles (WIMPs) are promising dark matter candidates that may produce gamma rays via annihilation or decay detectable by the Fermi Large Area Telescope (Fermi LAT). A detection of WIMPs would also indicate the existence of physics beyond the Standard Model. I will present recent results from indirect WIMP searches by the Fermi LAT Collaboration. I will focus on our recent search for gamma-ray spectral lines from WIMP annihilations with 3.7 years of data. There has been recent excitement with the report of a line-like feature localized in the Galactic center around 130 GeV. I will be discussing what our search finds and some of the systematic checks we've performed on potential signals.

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Session Classification: Dark Matter Theory / Experiments I

Track Classification: Dark Matter (Theory/Experiment) Parallel