

Searches for Cosmic Ray Electron Anisotropies with the Fermi Large Area Telescope

Saturday, 29 October 2011 09:00 (20 minutes)

The Large Area Telescope on board the Fermi satellite detected more than 1.6 million cosmic-ray electrons/positrons with energies above 60 GeV during its first year of operation. The arrival directions of these events were searched for anisotropies of angular scales from $\sim 10^\circ$ up to 90° , and of minimum energy extending from 60 GeV up to 480 GeV. Two independent techniques were used to search for anisotropies, both resulting in no detections. Upper limits on the anisotropy level for different energy ranges and angular scales were set. The analysis methods and the implications of the upper limits on the existence of nearby CRE sources and on some classes of dark matter models will be discussed.

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Session Classification: Leptonic CR anisotropy, propagation models, and ISM