

A Search for Cosmic-ray Proton Anisotropies with the Fermi Large Area Telescope

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In eight years of operation, the Fermi Large Area Telescope (LAT) has detected a large sample of cosmic-ray protons. The LAT's wide field of view and full-sky coverage make it an excellent instrument for studying anisotropies in the arrival directions of protons at all angular scales. These capabilities enable the LAT to make a full-sky 2D measurement of cosmic-ray proton anisotropy complementary to many recent TeV measurements, which are performed by projecting onto right ascension. Any detected anisotropies probe the structure of the local interstellar magnetic field or could indicate the presence of a nearby source. We will present initial results from the Fermi LAT Collaboration on the full-sky proton anisotropy from approximately 100 GeV - 10 TeV.

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