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Galactic Sources in the Fermi Large Area Telescope

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In the past four years the Fermi Large Area Telescope (LAT) has detected a variety of Galactic sources of high energy gamma rays. Many of these source types were established or anticipated as gamma-ray emitters before the launch of Fermi, such as pulsars and their wind nebulae, supernova remnants, and high mass X-ray binaries. In these sources the LAT is revealing spectral details and for some sources resolving spatial features that clarify the origin of the gamma rays. As the LAT catalog grows, population studies provide further insight into the mechanisms and conditions giving rise to high energy emission. The LAT has also discovered new phenomena, including several Galactic novae, which were not generally expected to emit GeV gamma rays. Both the AGILE observatory and LAT have also observed surprising and extreme variability in the Crab nebula, formerly thought to be steady enough for use in calibrations. I will present the current LAT view of the Galaxy, focusing in particular on results relevant to studying particle content and acceleration in these regions.

Summary

A review of Galactic results, including the Crab nebula flares, from the Fermi Large Area Telescope.

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