

The First Catalog of Fermi-LAT sources below 100 MeV

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Previous analyses of point sources in the gamma-ray range were done only below 30 MeV (COMPTEL) or above 100 MeV (Fermi-Large Area Telescope). Below 30 MeV, the imaging Compton telescope (COMPTEL) detected 26 steady sources in the energy range from 0.75 to 30 MeV. At high energy, the LAT detects more than three thousand sources between 100 MeV and 300 GeV (3FGL). Since the Fermi-LAT detects gamma rays down to 20 MeV, we create a list of sources detected in the energy range between 30 MeV and 100 MeV, using PGWave, a background independent tool that makes use of a wavelet-based method. This closes a gap of point source analysis between the COMPTEL catalog and the Fermi-LAT catalog. We present the Fermi-LAT low energy catalog (1FLE) of sources detected in the 30 MeV - 100 MeV range, based on 8 years and 9 months of Fermi-LAT data.

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