

Gamma-ray observations of Galactic cosmic-ray sources

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Gamma rays allow us to probe the cosmic-ray acceleration sites in the Galaxy, and in particular to search for PeVatrons through the detection of the pion bump feature and an energy reached by particles up to PeV energies. Although supernova remnants (SNRs) have long been thought to be the most likely sources of Galactic cosmic rays, gamma-ray analyses show that even the youngest SNRs do not seem to act as PeVatrons. Recent results from Imaging Atmospheric Cherenkov Telescopes and Extensive Air Shower experiments revealed a list of PeVatron candidates with different associations. I will review the latest observational results on Galactic sources at gamma-ray energies and discuss the potential outcomes from future observations and experiments that will help understand the origin of Galactic cosmic rays.

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