

Pulsar high-energy emission models

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Ground-based Air-Cherenkov telescopes have detected pulsations at energies above 50 GeV from a growing number of Fermi pulsars. These include the Crab, Vela, PSR B1706-44 and Geminga, with the first two having pulsed detections above 1 TeV. There appears to be VHE emission that is an extension of the Fermi spectra to high energies as well as additional higher-energy components that require a separate emission mechanism. A variety of models for emission from rotation-powered pulsars at gamma-ray energies invoke different combinations of mechanisms. They also assume different emission locations in the magnetosphere including outer gaps, extended slot gaps and the current sheet outside the light cylinder. I will review the most recent models for VHE emission in light of the present data and their predictions for observations by existing and future telescopes.

Abstract field

Author: HARDING, Alice (Los Alamos National Laboratory)

Presenter: HARDING, Alice (Los Alamos National Laboratory)

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