

Gamma-ray emission from Crab pulsar and the nebula: paradigm shifts?

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The detection of Crab pulsar by VERITAS collaboration as well as Agile and Fermi results on gamma-ray pulsars imply the dominance of the Inverse Compton scattering over the curvature radiation and signify an important shifts in our understanding of pulsar high energy emission.

Recent observations of flares in the Crab nebula call into question the prevalent model of particle acceleration in relativistic astrophysical environments, the stochastic shock acceleration. Magnetic reconnection is likely to play an important, and perhaps a dominant role.

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