



Contribution ID : 3

Type : **Poster**

Probing the Birth Period of Pulsars through GLAST/LAT Observations of their Wind Nebulae.

Abstract content

HESS observations of the galactic plane have revealed several confirmed and candidate pulsar wind nebulae (PWN), which show that pair production in pulsars is significant and that many of these PWN are particle dominated to give a detectable signal via IC scattering on the CMBR. The lifetimes of electrons from the low energy (uncooled) spectral tail, scattering soft photons into the GLAST/LAT domain are long enough so that we observe the cumulative total of leptons since the birth of the pulsar. Since we are observing E^{-2} injection lepton spectra, we find that the predicted flux in the GLAST/LAT domain scales mainly with the birth period and distance to the pulsar, which allows this new instrument to probe the birth periods of pulsars, which are otherwise difficult to establish. Complementary VHE Ground-Based observations of the same PWN will allow us to identify associated pulsars and their dispersion based distances, leading to a unique determination of the birth period.

If this papers is presented for a collaboration, please specify the collaboration

Summary

Reference

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