

TeV and GeV emitting supernova remnants: radio observations

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TeV and GeV gamma-ray emissions from supernova remnants have been recently discovered using high energy instruments, including Cerenkov air shower experiments such as H.E.S.S. and Veritas, and space missions, primarily Fermi. The origin of the GeV and TeV emission in most SNRs is not known yet- it could be high energy electrons or high energy protons. In either case, TeV and GeV supernova remnants show great promise to increase our understanding of cosmic rays.

We study TeV and GeV emitting SNRs utilizing recent neutral hydrogen (HI) 21 cm line surveys of the Galactic plane. For example, HI absorption spectra allow kinematic distances to be determined. Additionally, we use Galactic plane surveys in the CO line to measure molecular clouds, their kinematic distances and their relation to the TeV/GeV SNRs.

Presenter: LEAHY, Denis

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