Contribution ID : **1091** Type : **Oral**

New VHE emitting middle-aged pulsar wind nebula candidates in the extended H.E.S.S. Galactic plane survey data

Friday, 6 July 2007 08:42 (0:12)

Abstract content

The H.E.S.S. 2004-2005 survey of the Galactic Plane at energies above 200 GeV had revealed a number of pulsar wind nebulae candidates, including the remarkable source HESS J1825-137. Spatially resolved spectral measurements of this source gave the first evidence of an energy-dependent morphology which was interpreted as being due to the cooling of relic electrons cumulated throughout pulsar's history. Also for a few number of sources the asymmetry of the pulsar with respect to the nebula could be attributed to an asymmetric reverse shock from the associated supernova remnant due to inhomogneities in the interstellar matter. Subsequently a class of large offset and relic nebulae emerged as an outstanding new type of VHE gamma-ray source.

We will discuss the cases of such nebulae in the extended H.E.S.S. Galactic Plane survey data through an energetic criterion taking into account earlier epochs of pulsar injection as well as through investigation of CO and HI data where relevant to search for inhomogeneities.

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

HESS collaboration

Summary

Reference

Proceedings of the 30th International Cosmic Ray Conference; Rogelio Caballero, Juan Carlos D'Olivo, Gustavo Medina-Tanco, Lukas Nellen, Federico A. Sánchez, José F. Valdés-Galicia (eds.); Universidad Nacional Autónoma de México, Mexico City, Mexico, 2008; Vol. 2 (OG part 1), pages 831-834

Primary author(s) : Dr. LEMIERE, anne (Center for Astrophysics Smithonian/Harvard Observatory)

Co-author(s) : Dr. DJANNATI, Arache (Laboratoire APC, Paris); Prof. DE JAGER, Okkie (Potchefsroom university); Dr. TERRIER, Regis (Laboratoire APC, Paris); Ms. CARRIGAN, Svenja (mpi Heidelberg); Dr. KHELIFI, Bruno (LLR Ecole Polytechnique); Dr. GALLANT, Yves (LPTA Montpellier); Dr. FUNCK, Stefan (HELP Stanford)

Presenter(s) : Dr. LEMIERE, anne (Center for Astrophysics Smithonian/Harvard Observatory)

Session Classification : OG 2.2

Track Classification : OG.2.2