

ID contributo: 24 Tipo: Experimental part: Review of the latest results

Study of the gamma-ray emission from 3HWC J1928+178

The gamma-ray source 3HWC J1928+178, discovered by HAWC, is coincident with PSR J1928+1746, a 82 kyr pulsar located 4 kpc away. It has not been reported by any IACT, until the recent detection by HESS of emission from this region using an analysis adapted to extended sources.

No counterpart in GeV gamma-rays from Fermi-LAT data or from X-ray observations has been reported so far. In this poster, we give the multiwavelength context of the region surrounding 3HWC J1928+178 and present a multi-component model of the region derived using the Multi-Mission Maximum Likelihood framework (3ML). We explore the possibility to model the gamma-ray emission of 3HWC J1928+178 by an extended source originated from continuous particle diffusion.

From the gamma-ray luminosity, I derive an energy density slightly smaller than the one of the ISM. Together with the age of the pulsar and its extended nature, it may indicate a transition from a pulsar wind nebulae to a halo, where the electrons started to cool and diffuse away from their source.

Autori principali: JARDIN-BLICQ, Armelle (National Astronomical Research Institute of Thailand (NARIT)); Dr. ZHOU, Hao (Tsung-Dao Lee Institute & School of Physics and Astronomy); MARANDON, Vincent (MPI, Heidelberg)

Relatore: JARDIN-BLICQ, Armelle (National Astronomical Research Institute of Thailand (NARIT))