ICRC2015

ICRC
The Astroparticle Physics Conference
34th International Cosmic Ray Conference
July 30 - August 6, 2015
The Hague, The Netherlands

Contribution ID: **1299** Type: **Oral contribution**

Search for new supernova remnant shells in the Galactic plane with H.E.S.S.

Thursday 30 July 2015 12:15 (15 minutes)

Amongst the population of TeV gamma-ray sources detected with the High Energy Stereoscopic System (H.E.S.S.) in the Galactic plane, clearly identified supernova remnant (SNR) shells constitute a small but precious source class. TeV-selected SNRs are prime candidates for efficient cosmic-ray acceleration. In this work, we present new SNR candidates that have been identified in the entire H.E.S.S.-I data of the Galactic plane recorded over the past ten years. Identification with known SNR shells from other wavebands are rare but were successful at least in one case. In a few other cases, TeV-only shell candidates are a major challenge for identification as SNR objects due to their lack of detected non-thermal emission in lower frequency bands. We will discuss how these objects may present an important link between young and evolved SNRs, since their shell emission may be dominated by hadronic processes.

Collaboration

H.E.S.S.

Registration number following "ICRC2015-I/"

1212

Primary author: PUEHLHOFER, Gerd (IAAT)

Co-authors: DJANNATI-ATAI, Arache (Laboratoire de Physique Corpusculaire); DONATH, Axel (Max Planck Institute for Nuclear Physics, Heidelberg); DEIL, Christoph (MPIK Heidelberg); GOTTSCHALL, Daniel (Universität Tübingen); BRUN, Francois (CEA Saclay); LAFFON, Helene (CENBG); VINK, Jacco (University of Amsterdam / GRAPPA); OAKES, Louise (HU Berlin); Dr SASAKI, Manami (IAAT); RENAUD, Matthieu (LUPM); EGER, Peter (MPIK Heidelberg); TERRIER, Regis (C); CHAVES, Ryan (Montpellier University); Dr MARANDON, Vincent (MPIK Heidelberg)

Presenter: PUEHLHOFER, Gerd (IAAT)

Session Classification: Parallel GA02 GAL

Track Classification: GA-EX