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## Observation of the Supernova Remnant IC 443 with VERITAS

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### Abstract content

Shell-type supernova remnants (SNRs) accelerate particles at the shock front between the expanding remnant and the swept-up interstellar medium. If these particles include protons and nuclei, very-high-energy gamma-ray emission may result from the decay of pions produced in interactions between cosmic rays and the local interstellar medium. For SNRs that are interacting with a nearby molecular cloud, such as IC 443, the enhanced matter density provides a target medium that can amplify the gamma-ray emission. IC 443 also contains the pulsar wind nebula (PWN) driven by the pulsar CXOU J061705.3+222127. PWNe are the most plentiful galactic sources of very-high-energy gamma rays, which are produced in the shock formed at the collision of the pulsar wind with the ambient medium.

VERITAS is an array of four 12-m telescopes dedicated to gamma-ray astronomy in the energy band above 100 GeV. Located on Mt. Hopkins in southern Arizona, VERITAS operated during the 2006-2007 season in 2-, 3-, and 4-telescope observation modes. In this talk, results from three-telescope observations of the composite supernova remnant IC 443 during the 2006-2007 season are discussed.

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

VERITAS

### 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 835-838

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