

Abstract Submitted
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Understanding Galactic Cosmic Ray Accelerators with VERITAS¹ BRIAN HUMENSKY, Columbia Univ, VERITAS COLLABORATION — The Galaxy carries a small but quite significant population of highly energetic denizens: supernova remnants with fast shocks, pulsars with powerful winds, intensely-interacting binary systems built from a compact object and a massive star. All of these environments conspire to generate nonthermal populations of particles, and radiation produced by these particles is gradually revealing the methods by which Nature accelerates cosmic rays, as well as the ways in which those cosmic rays escape and diffuse into the interstellar medium. In this talk, we discuss advances in our understanding of these environments and processes provided by recent results from VERITAS, an array of ground-based imaging air-Cherenkov telescopes located at the Whipple Observatory in southern Arizona and sensitive to gamma rays in the energy range from 85 GeV to \gtrsim 30 TeV. These results include studies of cosmic-ray acceleration in the supernova remnants Cassiopeia A and IC 443, as well as the remarkable Fall 2017 periastron passage of VER J2032+4127, the binary system containing PSR J2032+4127 and the Be star MT91 213 with a 50-year period.

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