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Highlights of Gamma-ray Astronomy with VERITAS

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The Very Energetic Radiation Imaging Telescope Array System (VERITAS) provides unprecedented flux sensitivity in the energy regime 100 GeV - 30 TeV to the northern hemisphere gamma-ray sky. The array consists of four 12 m class imaging atmospheric Cherenkov telescopes and is located at Whipple Observatory in southern Arizona. VERITAS addresses a wide range of astrophysical phenomena including searches for dark matter annihilation, the origin of cosmic rays, black holes and relativistic jets, and the extragalactic background light. VERITAS has been operating with a complete array since the fall of 2007. This talk will review some of the exciting new results from VERITAS, including detailed studies of galactic supernova remnants, discovery of variability in an unidentified TeV source (HESS J0632+057), establishment of a new class of very-high-energy emitting blazars, and evidence of particle acceleration associated with the central black hole in the radio galaxy M87. In addition, VERITAS has placed upper limits on the flux of gamma rays from the annihilation of dark matter in nearby dwarf galaxies.

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