

Abstract Submitted  
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**Observations of Gamma-ray Binaries with VERITAS** TYLER WILLIAMSON, Univ of Delaware, VERITAS COLLABORATION<sup>1</sup> — Gamma-ray binaries, rare binary systems consisting of a massive star orbiting with a compact object, have in recent years been shown to be capable of efficient particle acceleration up to multi-TeV energies. These systems are characterized by non-thermal emission from radio up to very high energy gamma rays (VHE;  $E \gtrsim 100$  GeV) which can be variable on timescales ranging from days to years. While little is known for sure about the underlying mechanisms driving emissions from these systems, much progress has been made in recent years by coordinated multi-wavelength observations led by Imaging Atmospheric Cherenkov Telescopes (IACTs), which are well-suited to observe these systems at very high energies where their emission is often the most powerful. Here we present results of recent VERITAS observations of gamma-ray binaries, including the detection of the 50-year period, pulsar-driven binary PSR J2032+4127, a ten-year X-ray and TeV light curve of HESS J0632+057, and potential super-orbital variability from LS I +61 303. We discuss the implications of these results together with contemporaneous multi-wavelength observations.

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