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Latest Fast Radio Burst Observations with VERITAS

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The search for multi-wavelength counterparts to fast radio bursts (FRBs) remains critical for understanding the underlying emission mechanisms of these interesting cosmological probes. The deepest limits come from telescopes with the fastest sampling rates in every band, meaning Imaging Atmospheric Cherenkov Telescopes (IACTs) are some of the most effective instruments to investigate these systems. VERITAS continues to monitor in parallel with radio instruments interesting new burst storms from repeating sources of FRBs like FRB 20220912A and provide the deepest observations in both the optical and the very high energy (VHE; >100 GeV) bands for measured FRBs. We will present simultaneous radio and gamma-ray observations from the burst storm of FRB 20220912A and present our observations in the context of previously unprobed emission models. We will also briefly discuss the general optical program of VERITAS and ongoing upgrades that serve as a prototype for parasitic optical observations for the next generation of IACTs.

Primary author: LUNDY, Matthew (McGill University)

Presenter: LUNDY, Matthew (McGill University)

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