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Searching for Fast Radio Burst Counterparts with VERITAS

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Imaging atmospheric Cherenkov telescopes are uniquely suited to searching for transient astrophysical sources of both gamma-ray and optical emission. One promising class of targets for such searches are fast radio bursts (FRBs) - bright flashes of radio emission lasting just a few milliseconds and originating from outside of the Milky Way. The origin of these mysterious outbursts is unknown, but their high luminosity, high dispersion measure and short duration requires an extreme, high-energy, astrophysical process. The discovery of repeating FRBs, coupled with the commissioning of new wide-field radio telescopes such as CHIME, dramatically improves the prospects for finding prompt counterparts to the radio emission at other wavelengths. We present the status of the VERITAS FRB observing program, both for repeating and non-repeating FRBs, and the results of these observations.

Primary authors: HOLDER, Jamie (University of Delaware); FOR THE VERITAS COLLABORATION; LYNCH, Ryan S.

Presenter: HOLDER, Jamie (University of Delaware)

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