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## First Simultaneous TeV Observations of Non-Repeating Fast Radio Bursts with VERITAS

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The origin of Fast Radio Bursts (FRBs) remains a longstanding and intriguing mystery. Discovering their progenitors will increase our knowledge of compact objects in extreme environments and will improve the use of these sources to probe cosmology and the structure of galaxies. A key discriminator between various models is the presence of multiwavelength counterparts. Although previous non-detections of TeV emission around several distant repeating FRBs have been reported, non-repeating FRBs appear to be emerging as a distinct source class where models predicting simultaneous high-energy emission remain viable. Investigating non-repeating sources is extremely challenging, as the transient nature of these events often precludes timely multiwavelength follow-up observations. Here, we present the first simultaneous TeV observation of a non-repeating FRB with VERITAS and place deep constraints on gamma-ray burst (GRB) models using a coincident FRB. We discuss the implications of these observations on FRB models and the challenges in improving these results with next-generation imaging atmospheric Cherenkov telescopes.

### Collaboration(s)

VERITAS

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