Abstract Submitted
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Searching For Fast Radio Burst Counterparts with Swift's Burst Alert Telescope[1] JAMES DELAUNAY, DEREK FOX, Pennsylvania State University, AMON TEAM — Fast Radio Bursts (FRBs) are millisecond-long bursts of GHz-frequency emission [1-2] with Dispersion Measures large enough to be of a cosmological origin. There has yet to be a non-radio counterpart or high-confidence host galaxy detected for any FRB, leaving their true nature to be very mysterious. Using sub-threshold archival data from Swift's Burst Alert Telescope (BAT; [3]) we searched for evidence of a gamma-ray counterpart to any of the FRBs. In this talk I will present the details and results of our search. If real-time FRB alerts are integrated into the Astrophysical Multimessenger Observatory Network (AMON; [4]), sub-threshold FRBs can be detected through real-time spatial and temporal coincidences with other messengers. I will also talk about the real-time AMON analysis that's currently running.
[1] Lorimer, D. R. et al. 2007, Science, 318, 777
[2] Thornton, D. et al. 2013, Science, 341, 53
[3] Barthelmy, S. D. et al. 2005, Space Sci. Rev., 120, 143
[4] Smith et al. 2013, Particle Astrophysics 45, 5670

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