Abstract Submitted
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The HAWC GRB and gravitational-wave follow-up program[1] ISRAEL MARTINEZ-CASTELLANOS, University of Maryland, College Park, HAWC COLLABORATION — The recent detection of GRB 180720B and GRB 190829A by HESS, and GRB 190114C by MAGIC, show that at least in some cases the emission of Gamma-Ray Bursts (GRBs) continue in the Very-High-Energy (VHE) range (>100 GeV). Observations during the prompt emission, still undetected at VHE, are crucial to answer important remaining questions. The High-Altitude Water Cherenkov Observatory (HAWC), with its large field of view (∼2 sr) and high duty cycle (>95%), is well suited to study these and other rapid transients. This contribution presents an overview of the efforts of HAWC in the search for short bursts: an untriggered monitoring of the entire overhead sky; the follow-up of GRBs detected by Fermi and Swift; and the search for emission coincident with gravitational-wave events. The results of recent improvements in the reconstruction and analysis of sub-TeV events will be shown, which significantly increased the HAWC sensitivity to these type of phenomena.

[1]https://www.hawc-observatory.org/support/

Israel Martinez-Castellanos
University of Maryland, College Park

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