

Abstract Submitted
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Time-dependent Search for Spatially Coincident TeV Gamma-ray and Neutrino Emission with HAWC and IceCube ALISON PEISKER, MEHR NISA, Michigan State University, HAWC COLLABORATION — Emission of both neutrinos and gamma rays from the same source indicates a hadronic production mechanism. Here we describe a time-dependent search for gamma-ray emission from HAWC spatially correlated with neutrino emission from IceCube's alerts. The IceCube Neutrino Observatory, a neutrino detector located at the South Pole, detects a flux of high-energy astrophysical neutrinos of unknown origin. IceCube issues alerts to the multi-messenger community when it detects neutrinos likely to be of astrophysical origin. The High Altitude Water Cherenkov (HAWC) Observatory is a gamma-ray detector located in Puebla, Mexico. With a wide instantaneous field of view and a high duty cycle, it is well-suited to perform a search for transient sources. We present recent results from this search using four years of HAWC data looking at locations from ten years of IceCube alerts.

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