

Abstract Submitted
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Performance of the Beamforming Elevated Array for COsmic Neutrinos (BEACON) Prototype¹ DANIEL SOUTHALL, University of Chicago, BEACON COLLABORATION — Indicators of extragalactic neutrino production, ultra-high energy tau neutrinos play an important role in the field of multi-messenger astrophysics. The Beamforming Elevated Array for COsmic Neutrinos (BEACON) is novel concept that searches for radio emission from upgoing tau leptons produced by tau neutrino interactions in the Earth using a compact antenna array on a high elevation mountain. The prototype design is based on an interferometric trigger that coherently sums the signals from 4 dual-polarized antennas operating in the 30-80 MHz range located at the White Mountain Research Station. The array was upgraded in Fall 2019 to use custom electrically short dipole antennas and longer baselines. We present the current performance of the array, which has a goal of triggering on impulsive transients such as cosmic rays to demonstrate the performance of a full scale BEACON instrument.

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