

Abstract Submitted
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Search for PeV Gamma Rays with IceTop and IceCube¹

ZACHARY GRIFFITH, Univ of Wisconsin, Madison, HERSHAL PANDYA, University of Delaware, ICECUBE COLLABORATION — Gamma-ray induced air showers produce muons at a rate much lower than hadronic air showers. Therefore, air showers detected by the surface array IceTop that pass through the underground muon detector IceCube can be effectively separated into photons and hadrons by utilizing the presence of IceCube signal. As the threshold for muon detection in IceCube is around 500 GeV, this veto becomes effective at close to PeV primary energies. We present results of a search for PeV gamma rays with IceTop and IceCube, including a search for point sources, correlations with TeV sources detected by H.E.S.S., neutrino events from IceCube's high energy starting event sample, and the Galactic plane.

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Zachary Griffith
Univ of Wisconsin, Madison

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