

Abstract Submitted
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Targets of Opportunity with POEMMA¹ TONIA VENTERS, NASA Goddard Space Flight Center, MARY RENO, University of Iowa, JOHN KRIZMANIC, CRESST UMBC/NASA GSFC, LUIS ANCHORDOQUI, CUNY/AMNH, CLAIRE GUPIN, USRA UMCP/NASA GSFC, ANGELA OLINTO, University of Chicago, POEMMA COLLABORATION — Cosmic-ray accelerators capable of reaching ultra-high energies are expected to also produce very-high energy neutrinos via hadronic interactions within the source. Many of the candidate astrophysical source classes are either transient in nature or exhibit flaring activity. Leveraging the Earth as a neutrino converter, the Probe of Extreme Multi-Messenger Astrophysics (POEMMA) will be able to detect cosmic tau neutrinos at energies ~ 10 PeV and above. As a space-based mission, POEMMA will have orbital characteristics and slewing capability that will ensure full-sky coverage and enable rapid follow up, making it uniquely suited for searching for neutrinos from astrophysical transient events. We present the latest results of a study exploring the prospects of detecting tau neutrino events with POEMMA from a variety of astrophysical transient source classes.

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