



Contribution ID: 148

Type: **Parallel Contributed Talk**

A Compact Air-Shower Imaging System for Ultrahigh-Energy Neutrino Detection

Wednesday, 24 February 2021 18:10 (20 minutes)

The Trinity Observatory is a proposed ultra high energy (UHE) neutrino detector with a core-energy range of 10^6 GeV- 10^{10} GeV, bridging the observational gap between IceCube and radio UHE detectors like GRAND. It is a system of air-shower imaging telescopes that detect Earth-skimming tau neutrinos from multiple mountain tops. The telescopes have a novel-design 10×60 -degree rectangular wide field of view optics each, that image air-shower onto a 3,300-pixel curved-profiled SiPM camera. Trinity's primary science objectives are the extension of the IceCube measured neutrino flux to UHE and the detection of cosmogenic neutrinos. In this contribution, we focus on the current design of Trinity and discuss its performance.

Collaboration name

Trinity

Primary authors: OTTE, Nepomuk (Georgia Institute of Technology); MARIOTTI, Mose' (PD); Dr BROWN, Anthony (Durham University); SPRINGER, Wayne (University of Utah); KIEDA, David (University of Utah); TABOADA, Ignacio (Georgia Institute of Technology); AMBROSI, Giovanni (PG); GIORDANO, Francesco (BA); LAUREN, Stewart (Georgia Tech University)

Presenter: DORO, Michele (PD)

Session Classification: New Facilities

Track Classification: Neutrino Telescopes and Multimessenger