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Status of the Trinity PeV Neutrino Observatory

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The Trinity Neutrino Observatory aims to cover an energy range from 1 PeV to 1 EeV using imaging atmospheric Cherenkov telescopes (IACTs) located at various sites to detect Earth-skimming neutrinos. The development of Tinity is organized into three phases.

The first phase, which involved the successful operation of the Trinity Demonstrator—a small Cherenkov telescope deployed on Frisco Peak in Utah—is complete. The Demonstrator saw its first light on October 3, 2023, and has since recorded several hundred hours of data. The insights gained from operating the Demonstrator and analyzing its data have informed the design of Trinity One, the next phase towards the full Trinity Observatory.

Trinity One will be the first telescope of the Trinity Observatory, capable of observing neutrino point sources across fifty percent of the sky with unprecedented sensitivity. I will report on the status of the Trinity Observatory, highlighting the lessons learned from the Demonstrator along with the current status and design of Trinity One and its expected performance.

Neutrino Properties

no

Neutrino Telescopes & Multi-messenger

This one

Neutrino Theory & Cosmology

no

Data Science and Detector R&D

no

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