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TAMBO: Searching for Tau Neutrinos in the Peruvian Andes

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The detection of high-energy astrophysical neutrinos by IceCube has opened a new window on our Universe. While IceCube has measured the flux of these neutrinos at energies up to several PeV, much remains to be discovered regarding their origin and nature. Currently, measurements are limited by the small sample size of astrophysical neutrinos and by the difficulty of discriminating between electron and tau neutrinos.

TAMBO is a next-generation neutrino observatory specifically designed to detect tau neutrinos in the 1-100 PeV energy range, enabling tests of neutrino physics at high energies and the characterization of astrophysical neutrino sources. The observatory will comprise an array of water Cherenkov and plastic scintillator detectors deployed on the face of the Colca canyon in the Peruvian Andes. This unique geometry will facilitate a high-purity measurement of astrophysical tau neutrino properties. In this talk, I will present the prospects of TAMBO in the context of next-generation neutrino observatories and provide an overview of its current status.

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