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New Measurement of Muon Neutrino Disappearance with IceCube-DeepCore

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The IceCube Neutrino Observatory is a Cherenkov detector instrumenting over a cubic kilometer of Antarctic ice. The main IceCube array can detect high-energy neutrino emissions from astrophysical sources, while the denser-configured subdetector (DeepCore) can observe down to GeV-scale neutrinos, which improves the sensitivity to measure the disappearance of atmospheric muon neutrinos. For precise and rapid reconstructions, machine-learning techniques are employed. This talk presents a new measurement of Δm_{32}^2 and $\sin^2(\theta_{23})$ using 9.3 years of atmospheric neutrino data compared to existing results from other experiments.

Submitted on behalf of a Collaboration?

Yes

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