

Beyond-Standard-Model Neutrino Oscillations Studies in IceCube

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The IceCube Neutrino Observatory has detected hundreds of thousands of atmospheric neutrinos at propagation baselines from 100 to 12,800 km and energies from a few GeV to 100 TeV. Above 100 GeV where ordinary oscillation effects become vanishingly small, this data sample offers the opportunity to search for and set constraints on a wide range of beyond-standard-model oscillation mechanisms. These include the effects of sterile neutrinos, non-standard interactions, anomalous decoherence, and Lorentz violation. In this presentation I will update on the latest IceCube results and ongoing searches for Beyond-Standard-Model oscillation physics at high energy, with a particular focus on recent studies of neutrino nucleus non-standard interactions.

Working group

WG5

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