

Title: Long-baseline neutrino oscillations: searches for standard and non-standard physics

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Abstract:

Neutrino oscillations have revealed that neutrinos are massive, but the whole picture is still incomplete. Current and future neutrino oscillation experiments will aim to complete it through the discovery of leptonic CP-violation and the ordering of neutrino masses. I will review the general phenomenology of neutrino oscillations at long-baseline experiments, and their prospects to meet these goals in the standard three-family scenario. I will also discuss the possibility to test for new physics affecting neutrino propagation through matter, something for which the Deep Underground Neutrino Experiment (DUNE) is especially well-suited for.