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Joint Neutrino Oscillation Analysis of Atmospheric and Beam Data in the Super-Kamiokande Detector

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In my talk, I will present the motivation that stands for the joint oscillation analysis using both: atmospheric neutrino data collected by the Super-Kamiokande detector and T2K beam neutrino data. T2K is a long-baseline neutrino experiment designed to study neutrino oscillations, particularly the appearance of electron neutrinos in a muon neutrino beam and the disappearance of muon neutrinos, providing crucial insights into neutrino mixing parameters and the potential CP violation in the lepton sector. The analysis incorporates a broad range of neutrino interactions to provide a comprehensive assessment of neutrino oscillation parameters. The results would give refined constraints on oscillation parameters and pave the way for advanced analyses in next-generation detectors.

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