

Status and plans for T2K neutrino oscillation analyses

Thursday 4 September 2025 16:15 (25 minutes)

T2K is a long-baseline neutrino oscillation experiment, measuring the oscillation of neutrinos and antineutrinos produced at J-PARC facility which then travel 295 km across Japan to its far detector, Super Kamiokande. T2K has been taking data since 2009 and sets world-leading constraints on many neutrino oscillation parameters within the standard PMNS three-flavour mixing paradigm, including offering hints that the CP-violating phase favours non CP-conserving values. In this talk, T2K's latest analysis of neutrino oscillations will be presented. This analysis includes the presence of new and improved event samples at the near and far detectors as well as a significant update to the treatment of systematic uncertainties on neutrino interactions as well as the near detector and far detector responses. Additional electron-neutrino appearance candidates have also been added into the analysis. The latest oscillation parameter constraints will be presented as well as the near future plans of the experiment including the upgraded near detector and the increased current in the focusing horns for the neutrino beam.

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Session Classification: WG1

Track Classification: NuFACT 2025: WG1 - Neutrino Oscillations