

Neutrino cross-section results from T2K

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T2K is a long-baseline experiment for the measurement of neutrino oscillations. The neutrino flux and neutrino-nucleus cross-sections are measured by a suite of near detectors, including ND280, an off-axis multipurpose magnetised detector, WAGASCI, featuring a water-enriched target at a different off-axis angle, and INGRID an on-axis detector composed of sandwiched layers of iron and scintillator.

The near detectors perform a wide variety of neutrino-nucleus cross-section measurements on different targets and for different final states. Such a program, to control systematic uncertainties for T2K and beyond, provides high-quality data to benchmark improved models of neutrino-nucleus scattering.

We will review the most relevant cross-section results, including Charged Current (CC) interactions on water, Neutral Current interactions (NC) and electron-neutrino CC interactions with pions in the final state.

Alternate track

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Yes

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