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Recent Cross-section Results from the T2K Experiment

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One of the largest systematic uncertainties affecting neutrino oscillation measurement comes from present limited knowledge of (anti-)neutrino-nucleus interactions. Neutrino scattering understanding is crucial for the interpretation of neutrino oscillation since it affects background estimation and neutrino energy reconstruction. Thus, precise (anti-)neutrino-nucleus cross section measurements are vital for the present and future long-baseline neutrino oscillation experiments. The T2K long-baseline neutrino oscillation experiment, in addition to its contributions to neutrino oscillation measurement, has a wide program of neutrino interaction cross-section measurements using its near detector complex. With multiple targets (carbon, water, argon, iron), and with on- and off-axis detectors which sample different neutrino spectra from the same beamline, T2K is able to investigate atomic number and energy dependent behavior in a single experiment. In this talk an overview of the T2K neutrino cross sections, focusing on the latest results is presented.

I read the instructions

Secondary track (number)

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