

First Measurement of the Charged Current Electron Neutrino Pion Production Cross Section on a Carbon Target at T2K

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The T2K experiment was commissioned with the primary task of measuring neutrino oscillation parameters. The near detector site has the purpose of measuring the neutrino beam composition close to the source, as well as constraining the main sources of systematic uncertainty on the oscillation fits such as the interaction cross section. The near detectors are capable of measuring neutrino-nucleus cross sections with remarkable precision on a variety of targets. This poster will present new results for electron neutrino charged-current pion production cross section measured using the off-axis near detector, ND280. The cross section results presented also represent the world's first measurement of this process on a carbon target. Although a sub-dominant interaction, this channel is of importance at T2K, as the far detector sample which measures this process shows a statistically significant event excess. This process will also continue to be of relevance at future long-baseline neutrino experiments.

Poster prize

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