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The measurement of the inclusive electron-neutrino charged-current cross-section using the NOvA near detector

NOvA is a long-baseline neutrino oscillation experiment hosted by Fermilab. NOvA utilizes two functionally-identical detectors that lie 14.6 mrad off-axis from the NuMI beam line. Positioned 1km from the beam target, the near detector provides an excellent platform to perform high-statistics studies of neutrino-nucleus interactions. The measurement of charged-current interactions is of great importance to current and future oscillation measurements, as these interactions are the signal for these measurements. This poster details the techniques used to measure the first double-differential electron neutrino charged-current cross section using 8.01×10^{20} protons on target exposure from the NOvA near detector.

Mini-abstract

The measurement of the inclusive electron-neutrino cross section in the NOvA near detector.

Experiment/Collaboration

NOvA Collaboration

Primary author: JUDAH, Matthew

Presenter: JUDAH, Matthew

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