

## Measurements of Neutrino Interactions with Electrons in the Final State in the NOvA Near Detector

NOvA is a long-baseline accelerator neutrino experiment primarily designed to measure neutrino oscillations. NOvA utilizes two functionally-identical detectors that lie 14.6 mrad off-axis from the NuMI neutrino beam. The near detector, positioned 1 km downstream of the beam target, provides an excellent platform to perform high-statistics measurements of neutrino cross sections and associated physics. There are few measurements of electron neutrino and electron antineutrino charged current interactions at the GeV scale. Furthermore one of the dominant sources of systematic uncertainties in all neutrino cross section measurements arises from the flux prediction, for which the neutrino-electron elastic scattering can provide an in-situ constraint benefiting from its accurately calculated cross section. We present the first-ever measurement of a double-differential electron neutrino charged-current cross section, and the status of the measurement of the neutrino-electron elastic scattering in the NOvA near detector. Plans for future measurements with electron antineutrinos are also presented.

### Working group

WG2

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