

# Triple Differential Muon Antineutrino Charge Current Inclusive Cross Section Measurement in NOvA

*Thursday 18 July 2024 17:30 (15 minutes)*

NOvA is a long-baseline accelerator-based neutrino experiment based in the USA. For its physics goals, NOvA uses two functionally-identical detectors. The Near Detector is situated at Fermilab, 1 km from the neutrino target and the Far Detector is located at Ash River, MN, a distance of 810 km from the neutrino source. The ND sees high intensity of the neutrino beam due to its close proximity to the neutrino target, giving us a unique opportunity to do high-precision neutrino cross-section measurements. In this talk, we present our latest results of the muon antineutrino charge current inclusive cross section measurement in the NOvA ND. The new measurement is a triple differential cross section in antimuon kinematic phase-space and in the total energy of all observable final state hadrons. We also compare our data results to various neutrino generator predictions, for example, comparisons to GENIE, NuWro, GiBUU and NEUT neutrino generators are presented.

## Alternate track

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