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# Investigating Neutrino-Nucleus Interactions: Inclusive Cross-Sections Across Various Materials at MINERvA

*Wednesday 9 April 2025 11:30 (15 minutes)*

The MINERvA experiment is a high-statistics, scintillator-based neutrino-scattering experiment located within the intense NuMI beamline at Fermilab. Designed with multiple nuclear targets—including iron, lead, water, graphite, plastic scintillator, and helium, MINERvA is able to directly compare neutrino interactions across different nuclear environments in the same neutrino beam.

MINERvA has produced and continues to produce a wealth of results that are beneficial to the wider neutrino physics community, helping refine neutrino interaction models and reducing uncertainties to the levels required for the success of next-generation neutrino experiments, such as DUNE and Hyper-Kamiokande.

This talk covers an ongoing study of inclusive neutrino-nucleus interactions across all nuclear targets, excluding helium, with a peak beam neutrino energy $E_\nu$ of approximately 6 GeV. This study aims to provide new insights into neutrino interactions in a relatively unexplored energy regime and contribute to ongoing efforts to improve understanding of neutrino-nucleus scattering.

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