

Inclusive Antineutrino Nucleus Scattering Analysis at MINERvA

The MINERvA experiment at Fermilab uses ≈ 3 GeV(LE) and ≈ 6 GeV(ME) NuMI neutrino and antineutrinos beams interacting on different nuclear targets (He, C, Fe, Pb, Water and CH) located throughout the detector. Reported here is the ME antineutrino measurement of the inclusive double differential charged current cross section as a function of Bjorken x and four momentum transfer squared (Q^2) on several of these targets. By measuring the cross sections on these targets in the same beamline, the cross sections can be compared with reduced flux and detector uncertainties to determine nuclear effects. This measurement will ultimately help future neutrino experiments on heavy nuclear targets by benchmarking models that may be used by those experiments.

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