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Quasi-Elastic Neutrino Interactions in MINOS NATHAN MAYER, University Of Indiana, MINOS COLLABORATION — The Main Injector Neutrino Oscillation Search (MINOS) is a two detector, long baseline neutrino oscillation experiment that uses the Neutrinos at the Main Injector (NuMI) beam. The MINOS near detector is located at the Fermi National Accelerator Laboratory near Chicago Illinois. The MINOS far detector is located at the Soudan Mine State Park in Soudan Minnesota. Both MINOS detectors are iron-scintillator tracking/sampling calorimeters. The MINOS near detector has recorded the worlds largest dataset of neutrino interactions in the 0-10 GeV region. This high statistics data set can be used to make high precision measurements of neutrino interaction cross-sections. The Q^2 dependence in quasi-elastic scattering probes the axial structure (form factor) of the nucleon/nuclear target, and nuclear effects in neutrino scattering. There are curious discrepancies between recent measurements and older ones taken during the bubble chamber era. Two distinct methods for selecting quasi-elastic enhanced neutrino interactions in the MINOS near detector are presented with the resulting selection efficiency and purity.

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