

The MINERvA Neutrino Experiment at Fermilab

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MINERvA (Main INjector ExpeRiment ν -A) is a neutrino scattering experiment using the high intensity neutrino beam (NuMI) produced by the Main Injector at Fermilab. MINERvA will make precision cross-section measurements of neutrino interactions with various nuclear targets (He, C, H₂O, Fe, Pb) at low and medium energy to study nuclear medium effects with a clean weak probe. The first round of measurements using a low energy neutrino beam (few GeV) has been carried out between 2009 and 2012. The next round of measurements with a medium energy beam (5 to 10 GeV with a tail extending up to 20 GeV) will start this summer and continue for several years. Preliminary charged current inclusive and quasi-elastic neutrino scattering measurements of different nuclear targets (C, Fe, Pb) will be presented. Various methods to estimate the neutrino flux will be also discussed.