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Neutrino Nucleus Deep Inelastic Scattering at MINERvA

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Neutrino-nucleus charged-current deep inelastic scattering (DIS) provides a complementary probe to charged lepton-nucleus DIS in the study of nuclear and hadronic structure. The MINERvA experiment is a dedicated neutrino scattering experiment located on the NuMI beamline in Fermilab. With multiple nuclear targets of Pb, Fe, CH, and C in the same beam, MINERvA has the capability to add to the world knowledge of DIS that still contains poorly understood nuclear effects. The recent change of the NuMI beam line to the Medium Energy configuration has increased both the intensity and average neutrino energy thereby greatly improving the projected sensitivities for nuclear and hadronic structure analyses utilizing MINERvA's multiple nuclear targets. The measurements of nuclear cross section ratios C, Fe, Pb to CH using the MINERvA low energy data set will be discussed as well as the current DIS analysis with the medium energy data set

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