Analysis of the nuclear dependence of the ν_μ charged current inclusive cross section with MINERvA[1] RONALD RANSOME, Rutgers University, MINERVA COLLABORATION — Neutrino experiments use heavy nuclei (Fe, Pb, C) to achieve necessary statistics. However, the use of heavy nuclei exposes these experiments to the nuclear dependence of neutrino-nucleus cross sections, which are poorly known and difficult to model. The MINERvA (Main INjector ExpeRiment for ν-A), a few-GeV neutrino nucleus scattering experiment at Fermilab, seeks to remedy the situation by directly studying the A-dependence of exclusive and inclusive channels. The MINERvA detector contains an 8 ton fully active fine-grained scintillator tracking core and targets of carbon, iron, lead, water and liquid helium which sit upstream of the tracking core. We present results from our analysis using the nuclear targets: ratios of the ν_μ charged-current inclusive cross section in carbon, iron, lead and plastic scintillator (CH).

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