Contribution ID: **129** Type: **Poster**

Study of Neutrino Quasielastic Scattering on Iron in the MINOS Near Detector

A sample of 1,400,000 charged-current interactions on iron has been extracted from exposures of the MINOS Near Detector to the NuMI low energy ν_μ beam. A sample of 220,000 events enriched in quasielastics is isolated using simple selections. Backgrounds are evaluated using other, independently selected reference samples.
We use a conventional Fermi gas model treatment of the nuclear medium and fit to the shape of the Q^2 distribution of the quasielastic enriched sample. In this way an effective axial-vector mass value for quasielastic ν_μ\,Fe^{56} scattering is determined.
Final results will be reported.

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Track Classification: Neutrino Interactions