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## Double-Differential $\nu_\mu$ Charged Current Quasi-Elastic Cross Section on Plastic Scintillator in Muon Momentum from MINERvA

Long baseline neutrino oscillation experiments rely on charged-current quasi-elastic (CCQE) neutrino interactions to reconstruct the characteristic energy dependence of oscillation probabilities. The MINERvA experiment at Fermilab tests models for processes that obscure neutrino energy and interaction channel reconstruction on a variety of nuclear targets. MINERvA's first CCQE measurement from the 6 GeV flux peak Medium Energy (ME) era tests model predictions for CCQE-like interactions on CH at the high end of the planned DUNE flux. This 2D test of neutrino interaction generators hints at data-model disagreements in interactions that strike groups of correlated nucleons. Increases in the NuMI beam's intensity since MINERvA's previous CCQE results enable measurements over a greater region of phase space in  $p_T^\mu$ ,  $p_{||}^\mu$ , and  $Q^2$ .

### Mini-abstract

MINERvA measures muon neutrino CCQE cross sections on plastic with improved statistics

### Experiment/Collaboration

MINERvA

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