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Low-v Flux and Total Charged-current Cross Sections in MINERvA

The MINERvA measures neutrino and antineutrino interaction cross sections on carbon and nuclear targets which are of interest to ongoing and future accelerator oscillation experiments. Cross section measurements require accurate knowledge of incident neutrino flux. The low-v flux technique uses a standard-candle cross section for events with low energy transfer to the hadronic system to determine the incident flux. MINERvA will use low-v fluxes to tune production models in beam simulations and to extract total charged-current interaction cross sections. This poster will present the low-v flux technique adapted for the MINERvA data samples and present prospects for low energy total charged-current cross section measurements from MINERvA.

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