

Neutrino Cross Sections for Shallow Inelastic Scattering at MINERvA

Monday, 16 September 2024 16:05 (1 hour)

In this poster, we shall report neutrino cross sections for the kinematic region defined as Shallow Inelastic Scattering ($1.5 < W < 2.0$ GeV) at MINERvA, located at Fermilab. These cross sections will be on the hydrocarbon central tracker exposed to the NuMI ME beam with neutrino energy peaked at around $E_\nu = 6$ GeV. The SIS region has never been specifically studied, and thus the results we report will provide stringent tests for neutrino event generators contributing to the refinement and reducing systematic uncertainties of models describing this less explored kinematic region. Moreover, the presenter will discuss future prospects for making two-dimension cross sections with the MINERvA data set, such as for Q^2 , Bjorken x and muon variables.

Working Group

WG 2: Neutrino Scattering Physics

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