

Abstract Submitted
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Comparison of Neutrino DIS Structure Functions Using the Nuclear NCTEQ PDFS BENJAMIN CLARK, FRED OLNESS, SMU — Deep inelastic scattering (DIS) of leptons off protons has been used extensively to constrain standard model (SM) parameters and determine the nucleon structure functions. Neutrinos are a unique probe for DIS as they put the tightest constraints on the strange quark distribution within the proton. Heavy nuclear targets are essential for neutrino-induced DIS due to The neutrino's small cross-section. Nuclear parton distribution functions (NPDFS) contain significant nuclear corrections to the free proton PDFS and are essential for accurate predictions of SM cross-sections in current-generation neutrino experiments like Minerva and Minos. Experimentally measured structure functions and NPDFS from the neutrino DIS experiments are compared to the NCTEQ NPDFS to learn about both the strange quark distribution and the corresponding nuclear correction factors.

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