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Title:	Measurement of inclusive charged-current $\nu \mu$ scattering on hydrocarbon at $\langle E_\nu \rangle \sim 6$ GeV with low three-momentum transfer
Authors:	Jena, Satyajit (/jspui/browse?type=author&value=Jena%2C+Satyajit)
Keywords:	Measurement charged-current $\nu \mu$ hydrocarbon three-momentum transfer
Issue Date:	2022
Publisher:	American Physical Society
Citation:	Physical Review D, 106(3), 32001.
Abstract:	The MINER ν A experiment reports double-differential cross-section measurements for $\nu \mu$ - carbon interactions with three-momentum transfer $ \vec{q} < 1.2$ GeV obtained with medium energy exposures in the NuMI beam. These measurements are performed as a function of the three-momentum transfer and an energy transfer estimator called the available energy defined as the energy that would be visible in the detector. The double-differential cross sections are compared to the genie and nuwro predictions along with the modified version of genie which incorporates new models for better agreement with earlier measurements from MINER ν A. In these measurements, the quasielastic, resonance, and multinucleon knockout processes appear at different kinematics in this two-dimensional space. The results can be used to improve models for neutrino interactions needed by neutrino oscillation experiments
Description:	Only IISER Mohali authors are available in the record.
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