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Title:	Measurement of inclusive charged-current $\nu \mu$ cross sections as a function of muon kinematics at $\langle E \nu \rangle \sim 6$ GeV on hydrocarbon
Authors:	Jena, Satyajit (/jspui/browse?type=author&value=Jena%2C+Satyajit)
Keywords:	Neutrino interactions Particle interactions Nucleus-neutrino interactions
Issue Date:	2021
Publisher:	American Physical Society
Citation:	Physical Review D, 104(9).
Abstract:	MINERvA presents a new analysis of inclusive charged-current neutrino interactions on a hydrocarbon target. We report single and double-differential cross sections in muon transverse and longitudinal momentum. These measurements are compared to neutrino interaction generator predictions from GENIE, NuWro, GiBUU, and NEUT. In addition, comparisons against models with different treatments of multinucleon correlations, nuclear effects, resonant pion production, and deep inelastic scattering are presented. The data recorded corresponds to $10.61 \times 10^{20}$ protons on target with a peak neutrino energy of approximately 6 GeV. The higher energy and larger statistics of these data extend the kinematic range for model testing beyond previous MINERvA inclusive charged-current measurements. The results are not well modeled by several generator predictions using a variety of input models.
Description:	Only IISER Mohali authors are available in the record
URI:	<a href="https://doi.org/10.1103/PhysRevD.104.092007">https://doi.org/10.1103/PhysRevD.104.092007</a> ( <a href="https://doi.org/10.1103/PhysRevD.104.092007">https://doi.org/10.1103/PhysRevD.104.092007</a> ) <a href="http://hdl.handle.net/123456789/4542">http://hdl.handle.net/123456789/4542</a> ( <a href="http://hdl.handle.net/123456789/4542">http://hdl.handle.net/123456789/4542</a> )
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