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Title:	Double-differential inclusive charged-current ν_μ cross sections on hydrocarbon in MINERvA at $E_\nu \sim 3.5$ GeV
Authors:	Jena, Satyajit (/jspui/browse?type=author&value=Jena%2C+Satyajit)
Keywords:	Neutrino interactions Particle interactions Nucleus-neutrino interactions Neutrinos
Issue Date:	2020
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Citation:	Physical Review D, 101(11)
Abstract:	MINERvA reports inclusive charged-current cross sections for muon neutrinos on hydrocarbon in the NuMI beamline. We measured the double-differential cross section in terms of the longitudinal and transverse muon momenta, as well as the single-differential cross sections in those variables. The data used in this analysis correspond to an exposure of 3.34×10^{20} protons on target with a peak neutrino energy of approximately 3.5 GeV. Measurements are compared to the GENIE, NuWro and GiBUU neutrino cross-section predictions, as well as a version of GENIE modified to produce better agreement with prior exclusive MINERvA measurements. None of the models or variants were able to successfully reproduce the data across the entire phase space, which includes areas dominated by each interaction channel.
Description:	Only IISERM authors are available in the record.
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