

Abstract Submitted
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Improved Description of Charged Current Pion Production in the MiniBooNE Detector JAROSLAW NOWAK, Louisiana State University, MINIBOONE COLLABORATION — The MiniBooNE experiment has collected an enormous sample of about 46k events of positive pions production via the charged current (CCPiP). The purity of the CCPiP sample is at a level of 87% and it the purest sample observed in the MiniBooNE detector. The average neutrino energy in the MiniBooNE beam is about 700 MeV, which give us an opportunity of doing detail study of the resonant and coherent pion production. A long-standing problem of a discrepancy of the CCPiP production as a function of the four-momentum transfer and scattering angle between Monte Carlo prediction and observed events will be discussed. The attempts to address this problem will be presented. The Rein-Sehgal model of the resonant and coherent production has been extended to include the muon mass in the final state. Also a new form of the vector and axial vector form factor were used.

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