

Abstract Submitted  
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**Separating form factor and nuclear model effects in quasielastic neutrino-nucleus scattering**<sup>1</sup> JOSEPH WIESKE, Wayne State University — When studying neutrino oscillations an understanding of charged current quasielastic (CCQE) neutrino-nucleus scattering is imperative. This interaction depends on a nuclear model as well as knowledge of form factors. In the past, CCQE data from the MiniBooNE experiment was analyzed assuming the Relativistic Fermi Gas (RFG) nuclear model [1], an axial dipole form factor in [2], and using the the z-expansion for the axial form factor in [3]. We present the first analysis that combines a non-RFG nuclear model, in particular the Correlated Fermi Gas nuclear model (CFG) of [4], and the z expansion for the axial form factor. This will allow us to separate form factor and nuclear model effects in CCQE scattering. References: [1] R. A. Smith and E. J. Moniz, Nucl. Phys. B 43, 605 (1972). [2] A. A. Aguilar-Arevalo et al. [MiniBooNE Collaboration], PR D 81, 092005 (2010). [3] B. Bhattacharya, R. J. Hill, G. Paz. PR D 84, 073006 (2011). [4] O. Hen, B. A. Li, W. J. Guo, L. B. Weinstein and E. Piasezky, PR C 91, 025803 (2015).

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