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Model independent extraction of the axial mass parameter in CCQE anti neutrino-nucleon scattering[1] HEATHER GREBE, Middle Tennessee State University — Neutrino oscillation studies depend on a consistent value for the axial mass. For this reason, a model-independent extraction of this parameter from quasielastic (anti)neutrino-nucleon scattering data is vital. While most studies employ a model-dependent extraction using the dipole model of the axial form factor, we present a model-independent description using the z expansion of the axial form factor. Quasielastic antineutrino scattering data on C-12 from the MiniBooNE experiment are analyzed using this model-independent description. The value found, $m_A = 0.85^{+0.13}_{-0.06} \pm 0.13$ GeV, differs significantly from the value utilized by the MiniBooNE Collaboration, $m_A = 1.35$ GeV.

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