

Quasi-elastic neutrino scattering off ^{12}C : effects of the meson exchange currents and large nucleon axial mass

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The quasi-elastic scattering of muon neutrino and electrons on a carbon target are analyzed using the relativistic distorted-wave impulse approximation (RDWIA). We also evaluate the contribution of the two-particle and two-hole meson exchange current (MEC) to electroweak response functions. The nuclear model dependence of the neutrino cross sections is studied within RDWIA+MEC approach and RDWIA model with large nucleon axial mass. It was shown that the results for the squared of momentum transfer distribution as well as for invariant mass of final hadronic system distribution obtained within these models are substantially different.

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