

NuMAID: reggeized isobar model for pion neutrinoproduction with unitarity

We present a new model for electroweak pion production that is an extension of MAID, the unitarized isobar model for pion photo- and electroproduction on the nucleon. At low energy the model includes the most prominent nucleon and Δ resonances, as well as the non-resonant contributions that are unitarized in each partial wave by the respective πN -phase. At high energy we account for dominant Regge trajectory exchanges, and connect the two regimes smoothly at intermediate energy. We compare our new model to the existing ones, and discuss how it contributes the upcoming neutrino oscillation experiments.

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