

6th International Workshop on Neutrino-Nucleus Interactions in the Few-GeV Region (NUINT 09)

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Neutrino interactions with nuclei

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We present a model for neutrino-nucleus scattering in the energy region relevant for present and forthcoming neutrino oscillation experiments.

The model is based on the RPA treatment of the nuclear responses in the quasi elastic and delta region. It includes also in a phenomenological way nucleon knock-out.

It aims at the description in an unique framework of several final state channels i.e. quasi elastic one, incoherent

and coherent one pion production and two or several nucleon knock-out.

It allows to compare easily effects in different nuclei through a local density approximation treatment.

We compare our model results with the recent data from K2K and MiniBooNE discussing the sensitivity on the hadron physics input parameters.

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