

Deep inelastic interactions simulation in NEUT

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The NEUT interaction generator is used by the T2K, Super-Kamiokande and Hyper-Kamiokande to simulate the interaction of neutrinos in their Monte-Carlo simulations produced to study neutrino oscillations or measure cross-sections. The generator uses a number of different models for the different types of interactions, and in this presentation we will focus on the 2 models related to deep-inelastic (DIS) interactions. We will quickly introduce the two models, and describe recent developments, in particular for neutral current events and implementation of new versions of the Bodek-Yang model, as well as on-going work on those topics and use of PYTHIA for neutrino DIS event generation. We conclude by a comparison of NEUT predictions to the ones of other generators commonly used by neutrino experiments.

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