

## Quantifying systematic uncertainties in GENIE FSI models

Neutrino-nucleus scattering becomes complex within the nuclear environment due to re-interactions of initially produced particles with other nucleons at the initial neutrino-nucleon interaction vertex. This leads to variable final state products and thus limit our understanding of fundamental neutrino-nucleus scattering. Neutrino-nuclei interactions and understanding neutrino physics from different neutrino event generators rely on the modeling of the nucleus and final state interactions (FSI). It is critically important to have accurate nuclear and FSI models to achieve precision results. Different neutrino event generators use different models that depend upon different theoretical approximations. We present a comparative analysis of the two FSI models viz. hA and hN used in GENIE.

### Working group

WG2

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