Contribution ID: **229**   Type: **Poster accelerator**

Neutrino Interaction Model Tuning at NOvA

The NOvA neutrino oscillation experiment uses the GENIE event generator to predict neutrino interactions in its detectors. Recent data, recent reanalysis of extant data, and continued development of theoretical models have brought to light deficiencies in the default GENIE cross section model, which in turn impact the predicted spectra used to infer oscillation parameters. We discuss modifications to GENIE version 2.12.2, motivated by these various sources, which culminate in a tune using NOvA near detector muon neutrino scattering data. This tuned version of the generator is used for the predictions in NOvA's far detector oscillation analyses.

Authorship annotation

for the NOvA Collaboration

Session and Location

Wednesday Session, Poster Wall #60 (Auditorium Gallery Right)

Poster included in proceedings:

yes

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Track Classification: Poster (not participating in poster prize competition)