Improving Models of Neutrino Nucleus Interactions in Generators

- Fermilab held a generator workshop from Jan 8-10, 2020 to discuss strategies for implementing common tools aimed at providing easier access by experiments of up-to-date models into generators https://indico.fnal.gov/event/22294/
  - We heard detailed presentations from GENIE, NuWro, GIBUU and NEUT generators, modern theory calculations, flux drivers…
- The workshop focused on discussing a plan to implement common tools for:
  - Common flux and geometry driver, generator output format, separation of hard scattering from FSI and interfaces for adding models to each neutrino event generator
- A white paper containing details of the workshop and the planning will be out soon
- Different working groups are being formed to create a common flux driver, generator output format and develop interfaces for adding models into generators
- A survey was carried out to collect details about 13 models that are not currently implemented in neutrino event generators https://indico.fnal.gov/event/24164/sessions/7454/attachments/127928/154529/Survey.pdf
- This is a community effort: we need more support to develop proper tools to allow rapid implementation of modern calculations in the event generators

Minerba Betancourt

Fermilab