



Contribution ID: 321

Type: **Poster**

## Event Reconstruction with the NOvA Experiment

The NOvA experiment is a long baseline neutrino oscillation experiment based out of Fermilab that uses the newly upgraded NuMI beam line and two functionally identical detectors to measure the neutrino rates at a near location, and 810 km away at a far location. The detector at the far location has a target mass of 14 kton and is composed of 344,064 cells filled with liquid scintillator each of which is 4 cm x 6 cm x 15 m, which presents a solution to the problem of achieving high granularity with a large target mass. This poster will present the algorithms used to identify particle tracks and showers, locate interaction vertices, and assign particle types and momenta to the final-state particles resulting from neutrino interactions in the detector. The poster will also present performance metrics based on simulations and examples drawn from NuMI neutrino beam events.

**Primary author:** Mr BAIRD, Michael (Indiana University)

**Presenter:** Mr BAIRD, Michael (Indiana University)

**Track Classification:** Long Baseline Oscillations