

Event and Energy Reconstruction in the NOvA Experiment

Tuesday 26 August 2014 14:00 (30 minutes)

The NOvA experiment is a long baseline neutrino oscillation experiment utilizing the NuMI beam at Fermilab. The experiment will measure the oscillations of the primarily muon neutrino beam using two functionally-identical, liquid scintillator tracking calorimeter detectors placed 810 km apart and 14 milliradians off-axis to the NuMI beam. The cellular detector design allows for multiple sampling of particle energy depositions. These measurements provide input to particle identification and neutrino signal selection algorithms. Additionally, the precise energy measurement of neutrino interactions increases the sensitivity to the oscillation parameters measured. The methods used in energy estimation and their impact on neutrino event reconstruction will be presented.

WG3: Accelerator Physics (Yes/No)

No

WG2: Neutrino Scattering Physics (Yes/No)

Yes

WG4: Muon Physics (Yes/No)

No

WG1: Neutrino Oscillation Physics (Yes/No)

Yes

Type of presentation

Oral presentation

Author: RADDATZ, Nicholas

Presenter: RADDATZ, Nicholas

Session Classification: WG1: Neutrino Physics