Contribution ID: **195** Type: **Poster**

The LBNE Fast Monte Carlo

The LBNE Fast MC offers a simulation of accelerator-neutrino interactions using the official LBNE flux predictions, the GENIE neutrino event generator, and a parameterized detector response and reconstruction. Analysis samples used to estimate measurements of ν_μ-disappearance and ν_e-appearance are identified, and used to predict the sensitivity of LBNE to the neutrino oscillation parameters of the PMNS matrix. Detailed flux, cross section, and detector response systematic uncertainties are propagated to these sensitivity estimates allowing for detailed studies of design optimizations in order maximize the experimental capabilities of LBNE.

Primary author: Dr CHERDACK, Daniel (Colorado State University)

Co-authors: WORCESTER, Elizabeth (Brookhaven); GRAN, Richard (University of Minnesota - Duluth); Dr TIAN, Xinchun (Univeristy of South Carolina)

Presenters: WORCESTER, Elizabeth (Brookhaven); Dr TIAN, Xinchun (Univeristy of South Carolina)

Track Classification: Long Baseline Oscillations