

Abstract Submitted
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Estimating Neutrino Oscillation Parameters Sensitivities with GLoBES¹ MATTHEW BASS, Colorado State University, LBNE COLLABORATION — In planning the next generation of neutrino oscillation experiments it is critical that the discovery potential for neutrino oscillation parameters be understood. This understanding facilitates the optimization of the design parameters for the experiment, such as detector size, detector type, and the amounts of ν - $\bar{\nu}$ beam running. General Long Baseline Experiment Simulator (GLoBES) is a software package that allows the simulation of various types of neutrino experimental setups. In this work GLoBES is used to calculate the sensitivity for $\sin^2(2\theta_{13})$, δ_{CP} , and $\text{sgn}(\Delta m_{13}^2)$ for the proposed Long Baseline Neutrino Experiment (LBNE); the times spent running in neutrino and anti-neutrino modes are varied. Both Water Cerenkov and Liquid Argon detector technologies are considered.

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