

Abstract Submitted  
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**The T2K Long Baseline Neutrino Beam Experiment** JOSHUA ALBERT, Duke University, T2K COLLABORATION — T2K is a long baseline neutrino beam experiment scheduled to begin operation in 2009. The energy of the  $\nu_\mu$  beam from JPARC and the distance (295 km) to the far detector (Super-Kamiokande) have been chosen to maximize sensitivity to  $\nu_e$  appearance through neutrino oscillation. The expected sensitivity is an order of magnitude better than current experiments. Observation of  $\nu_\mu \rightarrow \nu_e$  oscillations in the T2K beam would provide a non-zero measurement of  $\theta_{13}$ .

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