

Abstract Submitted
for the DNP07 Meeting of
The American Physical Society

The Daya Bay Reactor Electron Anti-neutrino Oscillation Experiment¹ JIANGLAI LIU, California Institute of Technology, DAYA BAY COLLABORATION — The phenomenon of neutrino flavor oscillations is now well-established. Mixing among the three flavors is characterized by three mixing angles, with θ_{13} being the only presently unknown angle. A precise measurement of θ_{13} using nuclear reactors as a source of electron anti-neutrinos requires high electron anti-neutrino flux, ~ 2 km baselines, as well as good shielding to reduce cosmogenic backgrounds. The Daya Bay nuclear reactor complex located in south China is an ideal site to perform such a measurement. We have proposed an experiment at Daya Bay utilizing multiple baselines (between 0.3 and 2 km) and multiple liquid scintillator detector modules. Since the formal physics proposal in 2006, much progress has been made by the collaboration in the design of the experiment. The civil construction of the experiment will begin this year. In this talk, I will give an overview of the experiment, and report on the recent progress and the project status.

¹for the Daya Bay Collaboration

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Date submitted: 02 Jul 2007

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