

Abstract Submitted  
for the DNP06 Meeting of  
The American Physical Society

**Measuring the Neutrino Mixing Angle  $\theta_{13}$  with Reactor Antineutrinos at Daya Bay** KARSTEN HEEGER, LBNL and University of Wisconsin, Madison, DAYA BAY COLLABORATION — The observation of neutrino flavor change and mixing in recent experiments has provided compelling evidence for neutrino mass and oscillation. Two of the three neutrino mixing angles have been measured but the coupling of the electron neutrino flavor to the third mass eigenstate is not yet known. Its corresponding mixing angle  $\theta_{13}$  is a fundamental parameter of the new Standard Model and critical for future CP violation searches in the lepton sector. This talk will describe the proposed precision measurement of  $\theta_{13}$  with the Daya Bay reactor antineutrino experiment and report on its recent progress and status. Using multiple liquid scintillator detectors at distances between 0.3 and 2 km from the Daya Bay-Ling Ao nuclear power plant the experiment plans to measure the subdominant  $\bar{\nu}_e$  oscillation with a sensitivity of  $\sin^2 2\theta_{13} \leq 0.01$ .

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Date submitted: 02 Jul 2006

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