Abstract Submitted
for the APR15 Meeting of
The American Physical Society

Measurement of Mixing Parameters and Sterile Neutrino Search at Daya Bay EN-CHUAN HUANG, JIAJIE LING, JEN-CHIEH PENG, University of Illinois at Urbana-Champaign — The Daya Bay reactor neutrino experiment reported the observation of electron antineutrino disappearance from reactors using six antineutrino detectors (ADs) in early 2012. Two ADs were added later in the summer of 2012, completing the designed configuration. We have measured the mixing parameters θ_{13} and $|\Delta m^2_{ee}|$ based on data collected with the 6AD + 8AD configurations. A search for a fourth (sterile) neutrino has also been performed for the mass-squared difference between 0.001 and 0.3 eV^2. Both the overall rates and the spectral shapes of the detected antineutrino events have been taken into account in the analysis. Results from this analysis will be presented.

En-Chuan Huang
University of Illinois at Urbana-Champaign

Date submitted: 09 Jan 2015 Electronic form version 1.4