## Abstract Submitted for the SES09 Meeting of The American Physical Society

Daya Bay Reactor Neutrino Experiment<sup>1</sup> YUENKEUNG HOR, Virginia Polytechnic Institute and State University, DAYABAY COLLABORATION — The Daya Bay reactor neutrino experiment, currently under construction in China, will be the most sensitive experiments in the world searching for the yet unknown neutrino mixing parameters, theta- $13(\theta_{13})$ . With a thermal power of 17.4GW by 2011, the Daya Bay site provides an intense electron antineutrino flux, which together with 3 years of data taking from 4 pairs of identical detectors at far and near locations, optimized baseline with large rock overburden and active water shielding, up to 80 tons total target mass comprising Gd-doped liquid scintillator and comprehensive, redundant calibration measures, will lower the upper bound on  $\sin^2 2\theta_{13}$  to 0.01 or better.

<sup>1</sup>On behalf of the Daya Bay collaboration.

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