

Abstract Submitted
for the APR13 Meeting of
The American Physical Society

Techniques in Extracting Spectral Signals of Neutrino Oscillation at Daya Bay MICHAEL MCFARLANE, University of Wisconsin - Madison, DAYA BAY COLLABORATION — The Daya Bay Reactor Neutrino Experiment recently produced the leading measurement of neutrino mixing parameter θ_{13} from the observation of electron antineutrino disappearance. The experiment operates functionally identical detectors at sites near to and far from the Daya Bay nuclear reactor complex, which provides a powerful measurement of antineutrino oscillation over a distance of about 2km. The next phase in the analysis is to exploit spectral distortions caused by the energy dependence of neutrino oscillations. This talk will discuss techniques for fitting Daya Bay's spectral data against a flux prediction incorporating systematic uncertainties to measure $\sin^2 2\theta_{13}$ and Δm_{ee}^2 .

Michael McFarlane
University of Wisconsin - Madison

Date submitted: 11 Jan 2013

Electronic form version 1.4