

APR12-2012-000214

Abstract for an Invited Paper
for the APR12 Meeting of
the American Physical Society

Physics with Reactor Neutrinos: The Show has Begun!

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The next generation of reactor neutrino experiments started with the first Double Chooz result earlier this year and will continue with the RENO and Daya Bay experiments. The main goal of these experiments is the search for the last unknown mixing angle governing neutrino oscillations θ_{13} . The results of these experiments will complete our picture of neutrino oscillations and are key for planning searches for CP violation. Along the way, they may teach us something about sterile neutrinos and the application of neutrinos to issues of nuclear non-proliferation. The physics and design of reactor neutrino experiments will be discussed, especially as it relates to the Double Chooz measurement of θ_{13} .