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Measurement Of The Absolute Reactor ν_e Flux And Spectrum At Daya Bay

The Daya Bay reactor ν_e experiment has provided the most sensitive measurement of the neutrino mixing parameter θ_{13} , $\sin^2 2\theta_{13} = 0.089 \pm 0.09$, by measuring relative differences in neutrino interaction rates between near and far detectors. In addition, the Daya Bay experiment can make a high-statistics measurement of the absolute reactor ν_e flux and spectrum with its near site detectors. Daya Bay's first absolute flux and spectral measurement results are presented in this poster along with comparisons to predictions based on reactor antineutrino models and knowledge of the Daya Bay reactor cores and detector responses. This measurement provides a check on the existence of the 'reactor anomaly', as well as a high-precision test of existing reactor models.

Primary authors: DAYA BAY COLLABORATION, - (-); Mr LITTLEJOHN, Bryce (University of Cincinnati)

Presenter: Mr LITTLEJOHN, Bryce (University of Cincinnati)

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