

Abstract Submitted
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Recent Results from the Daya Bay Experiment OLIVIA DALAGER, University of California, Irvine, DAYA BAY COLLABORATION — This talk will provide an overview of the latest results from the Daya Bay experiment, which is one of the leading experiments to study electron antineutrinos produced in nuclear reactors. Daya Bay has collected unprecedented statistics of nearly 4 million $\bar{\nu}_e$ inverse beta decay candidates over 1958 days of operation, with an additional 3 years of data under analysis. Eight functionally identical detectors in three experimental sites at different baselines from adjacent reactor cores allowed for the world's most precise measurement of the θ_{13} mixing angle. Together with the MINOS/MINOS+ and Bugey-3 experiments, Daya Bay searched for light sterile neutrino signatures. No signal was observed and the most stringent limits to date were set on the $\theta_{\mu e}$ mixing angle over five orders of magnitude in the sterile mass-squared difference Δm_{41}^2 , largely excluding the sterile-neutrino parameter space allowed by the LSND and MiniBooNE experiments. The large data sample made possible an extraction of the isotopic reactor $\bar{\nu}_e$ energy spectra from ^{235}U and ^{239}Pu , a first with commercial reactors. The status of a new analysis providing a model-independent, data-driven method to predict the antineutrino spectrum will also be reported.

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