



Contribution ID: 804

Type: Poster

Sterile Neutrino Search from Daya Bay

Along with other experiments, the Daya Bay Reactor Neutrino Experiment has searched for light sterile neutrino mixing, using electron antineutrino disappearance. Through comparing a 1230-day sample to prediction, assuming a 3+1 neutrino model, Daya Bay set the most stringent limits to date on the mixing of sterile neutrinos for $2 \times 10^{-4} < \Delta m_{41}^2 < 0.3 \text{ eV}^2$. A joint analysis with the Bugey-3 short-baseline reactor experiment and MINOS/MINOS+ accelerator experiments resulted in the world-leading limits on the $\theta_{\mu e}$ mixing angle for over five orders of magnitude in the sterile mass-squared difference Δm_{41}^2 . These results exclude the LSND and MiniBooNE allowed regions at 90% for $\Delta m_{41}^2 < 5 \text{ eV}^2$, weakening the sterile neutrino explanation of their observations. The Daya Bay results, as well as the combined results, will be presented in this poster.

Collaboration / Activity

Daya Bay collaboration

First author

Email

Primary author: DALAGER, Olivia (University of California, Irvine)

Presenter: DALAGER, Olivia (University of California, Irvine)

Session Classification: T04: Neutrino Physics

Track Classification: Neutrino Physics