Contribution ID: **631** Type: **Parallel**

Latest Reactor Antineutrino Oscillation Results from the Daya Bay

Thursday 5 July 2018 14:15 (15 minutes)

The Daya Bay experiment is designed to precisely measure the reactor electron-antineutrino oscillation utilizing eight functionally identical detectors placed at three underground experiment halls. The antineutrinos are generated from six reactor cores distributed with baselines from 500 m to 1600 m. In 2012, the Daya Bay experiment observed the reactor antineutrino disappearance and presented a measurement of $\sin^2 2\theta_{13}$ with a significance better than 5σ. Later in 2014, the collaboration reported an effective mass-squared difference $|\Delta m^2_{ee}|$. The Daya Bay collaboration are continuously improving the precision of $\sin^2 2\theta_{13}$ and $|\Delta m^2_{ee}|$ with higher statistics and better systematic uncertainties. In this talk, I will report the latest oscillation results of $\sin^2 2\theta_{13}$ and $|\Delta m^2_{ee}|$ with the neutron-gadolinium capture data sample and the results from another independent oscillation study with the neutron-hydrogen capture.

Author: Dr ZHAN, Liang (Institute of High Energy Physics)

Presenter: Dr ZHAN, Liang (Institute of High Energy Physics)

Session Classification: Neutrino Physics

Track Classification: Neutrino Physics