



Contribution ID: 531

Type: Poster

## Daya Bay's Latest Oscillation Results Using Neutron Captures on Gadolinium

The Daya Bay Reactor Neutrino Experiment was designed with the primary goal of precisely measuring the neutrino mixing parameter,  $\theta_{13}$ . Eight identically-designed gadolinium-doped liquid scintillator detectors located in three underground experimental halls measure the reactor antineutrino flux at different distances from six nuclear reactors. Daya Bay has acquired nearly 4 million inverse beta decay candidates using neutron capture on gadolinium, the largest reactor antineutrino sample in the world to date. In this poster, I will present a brief overview of the experiment and discuss the recent improvement of systematic uncertainties pertaining to the absolute energy response, cosmogenic background and spent nuclear fuel. I will show the latest oscillation results that include the most precise measurement of the  $\theta_{13}$  neutrino-mixing angle in the world.

### Mini-abstract

Daya Bay's latest measurement and improved systematic uncertainties of  $\theta_{13}$ .

### Experiment/Collaboration

Daya Bay Collaboration

**Primary author:** DALAGER, Olivia

**Presenter:** DALAGER, Olivia

**Session Classification:** Poster session 4