Contribution ID: **716** Type: **Poster**

Spectral measurement of sinSq(2theta13) via neutron capture on hydrogen at Daya Bay

Friday 6 July 2018 20:15 (15 minutes)

The Daya Bay experiment has measured sinSq(2theta13) and Delta(mSq32) with better than 4% precision using an IBD sample tagged via neutron capture on gadolinium (nGd). A precise and independent measurement of the oscillation parameters can be done with IBDs tagged via neutron capture on Hydrogen (nH), a statistically distinct sample with largely different systematic uncertainties. Effort has gone into developing an energy model that properly handles the extra energy leakage in nH events and that enables a spectral measurement of reactor antineutrino disappearance with this sample. Data-driven methods to precisely estimate the backgrounds and to better control the systematic uncertainties have also been developed. This work will be presented in this poster,alongside the latest nH oscillation results from Daya Bay.

Author: Mr LI, Chao (Shandong University)

Presenter: Mr LI, Chao (Shandong University)

Session Classification: POSTER

Track Classification: Neutrino Physics