

## Measurement of $\theta_{13}$ in the reactor neutrino events with neutron captures on Hydrogen at RENO

### Authorship annotation

### Session and Location

Monday Session, Poster Wall #178 (Ballroom)

### Abstract content

RENO has been taking data since August, 2011 and successfully measured the smallest neutrino mixing angle,  $\theta_{13}$ . The measurement values are obtained from the observed reactor antineutrino events with neutron captures on gadolinium (n-Gd) in the target detector region. In addition, RENO has successfully measured the mixing angle as well, using an independent sample with neutron captures on hydrogen (n-H). Because of a large accidental background in the n-H sample, the analysis requires additional reduction of backgrounds. This independent measurement provides a valuable systematic cross-check of the  $\theta_{13}$  measurement using the n-Gd sample. In this talk, we will present the results from the 1500 days of n-H data sample.

### Poster included in proceedings:

yes

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**Session Classification :** Poster Session Monday

**Track Classification :** Poster (not participating in poster prize competition)