



## Poster session 2 – Tuesday 5 July

### P2.070 Prompt energy calibration at RENO

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*on behalf of RENO collaboration*

RENO (Reactor Experiment for Neutrino Oscillation) has obtained the first measured value of effective neutrino mass difference from a spectral analysis of reactor neutrino disappearance. The measurement absolutely relies on the accurate energy calibration. Several radioactive sources such as Cs137, Mn54, Ge68, Zn65, Co60 Po-Be, Am-Be, and Cf-Ni, are used for the energy calibration of the RENO detectors. We obtained an energy conversion function from observed charges to prompt signal energy which describes a non-linear response due to the quenching effect in liquid scintillator and Cherenkov radiation. We have verified the performance of the energy calibration using copious betadecay events from radioactive isotopes B12 that are produced by cosmic-muon interaction.

The energy calibration was performed for the target and gamma-catcher regions separately due to their different energy responses. In this presentation we describe the methods and results of the energy calibration.