

The status of Reactor Experiment for Neutrino and Exotics

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We report the status of Reactor Experiment for Neutrino and Exotics (RENE), which primarily aims to search for the sterile neutrino oscillation at $\Delta m_{41}^2 \sim 2eV^2$. The joint study of RENO and NEOS experiments showed a hint for the sterile neutrinos at $\Delta m_{41}^2 \sim 2.4eV^2$ and $\sim 1.7eV^2$, which overlap with the allowed region by the Reactor Anti-neutrino Anomaly. This experiment can also take precise measurements of the flux and spectrum of reactor electron antineutrino, and separate the reactor neutrino spectrum into those from ^{235}U and ^{239}Pu . In this presentation, the detector concept, physics cases, and the status of the experiment will be reported.

Abstract title

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