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New results from RENO

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The Reactor Experiment for Neutrino Oscillation (RENO) started data-taking from August, 2011 and has successfully measured the smallest neutrino mixing angle θ_{13} in 2012 using 220 days of data by observing the disappearance of reactor antineutrinos. Antineutrinos from the six reactors at Hanbit Nuclear Power Plant in Korea are detected and compared by the two identical detectors located in the near and far distances from the reactor array center. In 2016, RENO has published an updated value of θ_{13} and its first measurement of Δm^2_{ee} based on energy dependent disappearance probability using 500 days of data. As of today, RENO has accumulated roughly 2000 days of data. In this talk, we present precise measurement of θ_{13} and Δm^2_{ee} using more data and improved systematic uncertainties. In addition, the recent results on the absolute reactor antineutrino flux, the 5 MeV excess of reactor neutrino spectrum, and the search for sterile neutrinos will be reported.

Experimental Collaboration

RENO

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