Poster session 2 – Tuesday 5 July

P2.071 **Precise measurement of reactor antineutrino flux and spectrum**

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The RENO(Reactor Experiment for Neutrino Oscillation) experiment is to measure the smallest neutrino mixing angle theta13 using anti-neutrinos emitted from the Hanbit nuclear power plant in korea. It is essential to compare the observed and expected fluxes of reactor antineutrinos for determining the neutrino disappearance probability. The expected reactor neutrino flux is calculated from the reactor thermal power and the fission rate of individual fuel isotope. Time-dependent fuel composition changes not only neutrino fluxes but also it distort the antineutrino spectrum. In this presentation, we describe how to derive the expected reactor neutrino fluxes and spectrum at both near and far detectors and report an excess in the observed spectrum near 5 MeV at RENO.