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**KamLAND: Studying Neutrino Oscillation with Reactors**

MICHAL PATRICK DECOWSKI, UC Berkeley, KAMLAND COLLABORATION

— Since the 1950's physicists have been using nuclear reactors to study the properties of anti-neutrinos. In 1956, one of the first such experiments, at the Savannah River Reactor Plant, proved the existence of anti-neutrinos. The original experiment was located only a few meters away from the reactor core, the source of the anti-neutrinos. In the years since, reactor neutrino experiments have steadily increased their baselines, with the goal to test and ultimately establish neutrino disappearance. That goal was reached in 2002, when KamLAND, a one kiloton liquid scintillator detector, reported the first observation of reactor anti-neutrino disappearance at an effective baseline of  $\sim 180$  km. KamLAND uses 53 Japanese commercial power reactors as the source of anti-neutrinos. I will discuss KamLAND and present the results of a recently completed analysis of KamLAND data, showing evidence for spectral distortion. Spectral distortion in the neutrino energy is 'smoking gun' evidence for neutrino oscillation. I will show that the KamLAND data further solidifies the case for oscillation as the mechanism for neutrino disappearance and give an outlook on future activities at the experiment.

Michal Patrick Decowski  
UC Berkeley

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