

Abstract Submitted
for the APR07 Meeting of
The American Physical Society

Study of KamLAND Liquid Scintillator response to low energy electrons with Compton Spectrometer OLEG PEREVOZCHIKOV, University of Tennessee , KAMLAND COLLABORATION — The measurement of the liquid scintillator non-linearity plays an important role for the low threshold scintillator detectors. Direct measurements of such non-linearity is very difficult and sometime is not possible, especially for neutrino detectors like KamLAND. UT group has built high resolution Compton Spectrometer to study the non-linear response from liquid scintillator to low energy electrons. Our focus is the characterized KamLAND scintillator non-linearity for the incoming solar phase of the experiment. In my presentation I would like to explain the procedure of the measurements and present obtained results. I will present Monte-Carlo results of Cherenkov light contribution to the KamLAND Liquid Scintillator Response as well.

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Date submitted: 15 Jan 2007

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