

Abstract Submitted
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Low Background Phase of KamLAND GREGORY KEEFER, The University of Alabama, KAMLAND COLLABORATION — The KamLAND collaboration operates a 1 kton liquid scintillation detector in the Kamioka mine in Japan. KamLAND's main scientific results are the precision measurement of the solar Δm^2 utilizing reactor anti-neutrinos and first evidence for the observation of geologically produced anti-neutrinos. The KamLAND collaboration has been working toward upgrading the detector for a low background phase. During the spring of 2007, we performed the first phase of purification by circulating 1.3 kttons of KamLAND liquid scintillator through a newly developed distillation and purging system. The ultimate goal of purification is to allow for a direct measurement of the 862 keV, ^7Be neutrinos originating from the Sun. A description of the purification process, liquid scintillator quality control measures, and detector monitoring will be presented. The achieved background reduction after this first phase of purification and planned future work on KamLAND will be discussed.

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