

# Journal Club

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## **KamLAND-Zen: Results, Status, and Prospects**

The search for neutrinoless double-beta decay is the most sensitive probe of lepton number violation. The observation of this process would prove that neutrinos are Majorana particles - that they are their own antiparticles. The decay rate would provide information on the absolute mass scale of neutrinos. Majorana neutrinos, along with CP violation in the lepton sector, are critical to exploring whether leptogenesis can explain the baryon asymmetry of the Universe.

KamLAND-Zen is a new phase of the KamLAND experiment, searching for neutrinoless double-beta decay of Xenon 136. I will describe the experiment, present our results to date, and discuss the status and future prospects of KamLAND-Zen.



**Friday**

**Mar. 28, 2014, 12:30pm**

301 Physical Sciences Building