Contribution ID: **6** Type: **not specified**

The Argon Response to Ionization and Scintillation (ARIS) experiment

Saturday, 2 December 2017 15:20 (20 minutes)

The Argon Response to Ionization and Scintillation (ARIS) experiment was constructed to characterize the response of single-scatter nuclear and electronic recoils in liquid argon in support of experiments with a liquid argon target. A 0.5 kg active volume scintillation cell of liquid argon was exposed to the highly collimated and quasi-monoenergetic LICORNE neutron source at the Institute de Physique Nuclaire Orsay in Orsay, France. An array of liquid scintillator detectors was used to tag scattered neutrons and select nuclear recoil energies, with average energies between 7.14 and 117.78 keV measured. The relative scintillation efficiency of nuclear recoils was measured to high precision for both zero field and a range of applied electric fields. Results from the experiment will be presented.

Session

Works in Progress (15+5 min)

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Session Classification: Works in Progress