

Abstract Submitted  
for the APR15 Meeting of  
The American Physical Society

**Development of the LUX detector's CH<sub>3</sub>T calibration source and ER response** RICHARD KNOCHE, University of Maryland, LUX COLLABORATION — The LUX dark matter search experiment is a 350 kg two-phase liquid/gas xenon time projection chamber located at the 4850 ft level of the Sanford Underground Research Facility in Lead, SD. I will discuss the development and deployment of an internal tritium calibration source for use in the LUX dark matter experiment. This source allows us to characterize the electron recoil band, which is the dominant population of background events, throughout the bulk of the LUX detector. It is also useful in determining important detector characteristics such as the fiducial volume and the detector threshold. After calibration is complete we remove the long lived radioisotope from our detector using the results of our R&D efforts.

Richard Knoche  
University of Maryland

Date submitted: 08 Jan 2015

Electronic form version 1.4