Abstract Submitted
for the APR10 Meeting of
The American Physical Society

Calibration of the LUX Dark Matter Detector LOUIS KASTENS[1], Yale University, LUX COLLABORATION — Calibration strategies for LUX (Large Underground Xenon), a liquid xenon time projection chamber designed to directly detect dark matter, will be explored. The introduction of external gamma and neutron sources into a water tank containing the detector will be discussed. Large liquid noble detectors achieve very low backgrounds through self-shielding of the fiducial volume, however this same shielding inhibits the use of external gamma ray sources to calibrate the fiducial volume detector. To mitigate this effect, research on novel calibration strategies using radioactive ^{83m}Kr and ^{3}He doped into the detector to efficiently calibrate the fiducial volume of these detectors will be reported upon. LUX will be deploying to Davis Cavern at SUSEL (Sanford Underground Science and Engineering Laboratory), future site of DUSEL (Deep Underground Science and Engineering Laboratory), in the first half of 2010.

[1]Talk complimentary to David Malling and Adam Bradley's LUX talks.

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Date submitted: 29 Oct 2009 Electronic form version 1.4