Abstract Submitted
for the APR14 Meeting of
The American Physical Society

Low energy threshold analysis of LUX data JEREMY MOCK, University of California, Davis, ON BEHALF OF THE LUX COLLABORATION — LUX, a dual phase xenon time projection chamber with fiducial target mass greater than 100 kg, is currently the most sensitive direct dark matter search experiment. The initial null result limit on WIMP-nucleon cross section was released in late 2013. Signals from this type of detector include the primary scintillation light (S1) and a follow-up charge response (S2). In the initial analysis of the data, S1 pulses were required to have a signal in at least two PMTS and a total area larger than 2 photoelectrons. Additionally, the S2 size was required to have an area larger than 200 photoelectrons. If these thresholds are lowered, the sensitivity of the detector is expected to change. Here we present the investigation of lowering the thresholds.

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Date submitted: 10 Jan 2014 Electronic form version 1.4