Abstract Submitted
for the APR13 Meeting of
The American Physical Society

The LUX experiment - Overview and Status BLAIR EDWARDS, Yale University, LUX COLLABORATION — The LUX (Large Underground Xenon) detector is designed to directly detect the elastic scattering of WIMPs (Weakly Interacting Massive Particles) on xenon nuclei. The 350 kg (100 kg fiducial) two-phase liquid xenon TPC is sensitive to both scintillation and ionization signals. The ratio of these two signals provides discrimination between potential nuclear recoil signals and electronic recoils with a rejection efficiency of at least 99.5% (with 50% nuclear recoil acceptance). The detector was operated on the surface at the Sanford Underground Research Facility (SURF) from November 2011 until February 2012, before being installed 4850 feet underground. This talk will lay out the motivations for the LUX experiment, provide an overview of the detector, and discuss the underground installation, xenon handling and water tank systems.

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Date submitted: 14 Jan 2013 Electronic form version 1.4