Abstract Submitted
for the APR16 Meeting of
The American Physical Society

The LUX-Zeplin Dark Matter Detector JEREMY MOCK, University at Albany, LUX-ZEPLIN (LZ) COLLABORATION — The LUX-ZEPLIN (LZ) detector is a second generation dark matter experiment that will operate at the 4850 foot level of the Sanford Underground Research Experiment as a follow-up to the LUX detector, currently the worlds most sensitive WIMP direct detection experiment. The LZ detector will contain 7 tonnes of active liquid xenon with a 5.6 tonne fiducial mass in the TPC. The TPC is surrounded by an active, instrumented, liquid-xenon skin region to veto gammas, then a layer of liquid scintillator to veto neutrons, all contained within a water shield. Modeling the detector is key to understanding the expected background, which in turn leads to a better understanding of the projected sensitivity, currently expected to be 2e-48 cm^2 for a 50 GeV WIMP. I will discuss the current status of the LZ experiment as well as its projected sensitivity.

Jeremy Mock
University at Albany

Date submitted: 08 Jan 2016 Electronic form version 1.4