

Abstract Submitted
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High Voltage Tests in the LUX-ZEPLIN System Test THOMAS WHITIS, Case Western Reserve Univ, LUX-ZEPLIN COLLABORATION — The LUX-ZEPLIN (LZ) project is a dark matter direct detection experiment using liquid xenon. The detector is a time projection chamber (TPC) requiring the establishment of a large electric field inside of the detector in order to drift ionization electrons. Historically, many xenon TPC designs have been unable to reach their design fields due to light production and breakdown. The LZ System Test is scaled so that with a cathode voltage of -50 kV, it will have the fields that will be seen in the LZ detector at -100 kV. It will use a fully instrumented but scaled-down version of the LZ TPC design with a vessel set and gas system designed for quick turnaround, allowing for iterative modifications to the TPC prototype and instrumentation. This talk will present results from the high voltage tests performed during the first runs of the LZ System Test.

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