

Abstract Submitted  
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**Development of the LZ High Voltage Grids** RYAN LINEHAN<sup>1</sup>,  
SLAC - Natl Accelerator Lab, LUX-ZEPLIN COLLABORATION — The LZ experiments hunt for dark matter relies on a set of electric fields to measure ionization signals from WIMP-xenon interactions, enabling precise 3D position reconstruction and nuclear/electron recoil discrimination. To establish these electric fields, LZ will construct four woven mesh high voltage grids and set them at different heights in the detector. Because of the large 1.5-meter diameter of these grids, the strong electric fields on the wire surfaces, and the importance of having spatial field uniformity in the detector, a considerable amount of RD is required to ensure that these grids are built in a way that satisfies LZs physics goals. This talk will discuss the grid development process and highlight current RD efforts for optimizing grid construction and treatment prior to installation into LZ. It will also present preliminary results of applying these development techniques to a full LZ-scale grid.

<sup>1</sup>presenting on behalf of the LUX-ZEPLIN Collaboration

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