



Contribution ID: 608

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## Status and Results from the LUX-ZEPLIN (LZ) Experiment

*Tuesday 22 August 2023 09:10 (20 minutes)*

LUX-ZEPLIN (LZ) is a direct detection dark matter experiment hosted in the Davis Campus of the Sanford Underground Research Facility in Lead, South Dakota. LZ's central detector is a dual-phase time projection chamber utilizing 7 active tonnes of liquid xenon (LXe) and is aided by a LXe "skin" detector and liquid scintillator-based outer detector to veto events inconsistent with dark matter particles. LZ recently reported its first results on Spin-Independent and Spin-Dependent interactions between nucleons and Weakly Interacting Massive Particles (WIMPs) with an exposure of 60 live days with a fiducial mass of 5.5 tonnes, setting world leading limits on the exclusion of spin-independent WIMP-nucleon scattering with WIMP masses  $> 9 \text{ GeV}/c^2$ .

This talk will provide an overview of the experiment and details of the recent LZ results, as well as projections for LZ's full exposure consisting of 1000 live days.

### Collaboration / Activity

LUX-ZEPLIN

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