

After LUX: The LZ Experiment

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The fundamental nature of dark matter is one of the key open questions that is currently being probed at underground sites worldwide. The LZ experiment is a next generation liquid Xenon detector that will continue this search, building upon the expertise and experience provided by the LUX experiment. The proposed LZ detector will be a 7-ton liquid Xe TPC that will use the current infrastructure for LUX at the Sanford Underground Research Facility (SURF) and will be installed once LUX has finished taking data. Using a fiducial mass of over 5-tonnes, the experiment can reach WIMP-nucleon cross sections down to $2 \times 10^{-48} \text{ cm}^2$ in 3 years of operation.

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