

# Recent Results from the Large Underground Xenon Experiment

*Monday, September 12, 2016 5:10 PM (20 minutes)*

A brief introduction to two-phase xenon TPCs, the details of the LUX project, illustration of how signals are reconstructed, details of calibrations, analysis and background estimates, and presentation of the most recent results

## Summary

Direct searches for dark matter stand as one of the main pillars of particle astrophysics research today. Between early 2013 and mid 2016, the Large Underground Xenon (LUX) experiment operated at the Sanford Underground Research Facility in South Dakota, performing the most sensitive searches to date for weakly interacting massive particles. This sensitivity has been enabled by dedicated in-situ calibrations of both electron and nuclear recoil responses, detailed measurement and understanding of backgrounds, and innovative data acquisition and analysis techniques. Recent results and the status of the project will be presented.

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