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# Analysis update to the 2013 data from the Large Underground Xenon project

*Wednesday 16 December 2015 14:00 (25 minutes)*

The Large Underground Xenon (LUX) project is a direct dark matter detection experiment using a dual-phase Xenon time projection chamber. The analysis has been improved for the first 90 live days of 2013 data while LUX collects another 300 live days of exposure. The enhancements include photon counting of S1, total charge measurements of S2, more calibration data, new background and signal models, and better position reconstruction. These upgrades allow for a lower energy threshold and better discrimination between signal and background events. The improved analysis still gives a null result for both Spin Independent and Spin Dependent WIMPs, therefore limits on the interaction cross sections were set. The resulting sensitivity to low mass WIMPs improved by more than a factor x100 compared with the original analysis, and the sensitivity to high mass WIMPs increased by about x1.5.

## Collaboration

Large Ungerground Xenon Project

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