

Latest results of LUX dark matter experiment

Wednesday, August 29, 2018 4:45 PM (0:15)

Abstract content

The Large Underground Xenon (LUX) detector was a dual-phase xenon Time Projection Chamber with an active mass of 250 kg searching for Weakly Interacting Massive Particle (WIMP) dark matter via direct detection. It operated at the Sanford Underground Research Facility (SURF) in Lead, South Dakota from 2012 to 2016. LUX has published three previously world leading limits on the spin-independent cross section for the WIMP-nucleon scattering. Since the Fall of 2016 when the detector was dismantled, efforts have been focused on additional analyses with the existing science and calibration data sets. This talk will report results from several recent analyses and describes new work that improves our understanding of radiogenic backgrounds and detector performance.

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Session Classification : Dark Matter

Track Classification : Dark Matter