

XeSAT2023 - International Workshop on Applications of Noble Gas Xenon to Science and Technology



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Status and Results from the LUX-ZEPLIN Experiment

mardi 6 juin 2023 11:30 (25 minutes)

LUX-ZEPLIN (LZ) is a direct dark matter detection experiment currently operating at the Sanford Underground Research Facility (SURF) in Lead, South Dakota. It uses the world's largest dual-phase xenon time projection chamber, with 7 tonnes of active xenon, primarily to look for dark matter in the form of Weakly Interacting Massive Particles (WIMPs). LZ has released its first results last year, setting new limits on spin-independent and spin-dependent WIMP-nucleon cross-sections for WIMP masses above $9 \text{ GeV}/c^2$. This talk will provide an overview of the LZ detector, describe these first results and discuss the broad science programme that is now accessible.

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Classification de Session: Direct Dark Matter - session 1, Chair Elisabetta Luigia Barberio