

LZ experiment for dark matter search

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The LUX-ZEPLIN (LZ) experiment is a direct dark matter search experiment that is under construction at the Sanford Underground Research Facility (SURF) in South Dakota (USA). It is based on dual-phase xenon technology and contains 7 tonnes of active liquid xenon in the time projection chamber (TPC). The active xenon volume is surrounded by the instrumented xenon skin, a liquid organic scintillator and water that will help in reducing backgrounds from environment and detector components. LZ is expected to start taking data in 2020 and achieve a sensitivity of about $1.6 \cdot 10^{-48} \text{ cm}^2$ at $40 \text{ GeV}/c^2$ WIMP mass after 1000 days of live time. This talk will review the status of the LZ project and expected sensitivity.

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