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LUX-ZEPLIN (LZ) status

Tuesday 19 July 2022 17:20 (20 minutes)

LUX-ZEPLIN (LZ) is a dark matter direct detection experiment located at the Sanford Underground Research Facility in Lead, South Dakota. The experiment consists of a dual-phase xenon Time Projection Chamber with an active volume of 7 tonnes (5.6 tonne fiducial), shielded by an active liquid xenon skin region, an active gadolinium-loaded liquid scintillator veto, and an ultrapure water veto. LZ is projected to achieve a sensitivity of 1.4 x 10ˆ-48 cmˆ2 for the spin-independent WIMP-nucleon cross section at 40 GeV/cˆ2 in 1000 live days. This talk will provide an overview of the LZ experiment and report on its status.

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