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An Overview of and Latest Results from the LUX-ZEPLIN Experiment

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The LUX-ZEPLIN (LZ) experiment has been searching since 2021 for a form of dark matter known as weakly-interacting massive particles (WIMPs). LZ consists of a time projection chamber containing 7 tonnes of liquid xenon and is surrounded by a multi-layer veto to help reject backgrounds, and is located at the Sanford Underground Research Facility in South Dakota. Recently, using a 5.7 tonne-year exposure, LZ has placed stringent limits on the spin-independent WIMP-nucleon cross section in the 3-9 GeV/c^2 WIMP mass range in the presence of coherent elastic neutrino-nucleus scattering (CEνNS) from ^{8}B solar neutrinos. In this talk, I will review the LZ experiment and report on our recent science results. In particular, I will discuss the challenges associated with a near-energy-threshold search.

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