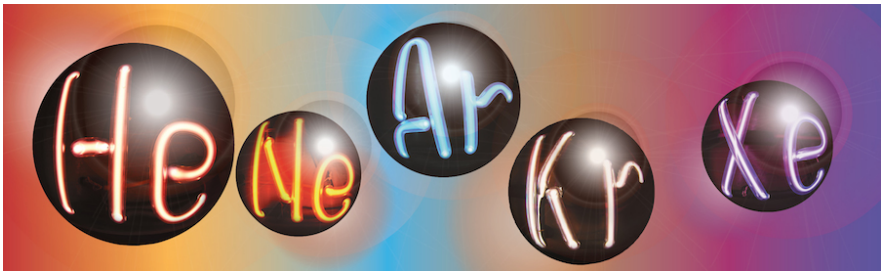

Contribution ID: **18** Type: **Oral Presentation**

Latest results from the LUX-ZEPLIN (LZ) experiment

Tuesday, 21 October 2025 13:40 (20 minutes)

The LUX-ZEPLIN (LZ) experiment is a direct detection dark matter experiment that utilises a dual-phase time projection chamber (TPC) with 7 tonnes of active xenon at the Sanford Underground Research Facility in Lead, South Dakota. The experiment is primarily designed to detect interactions of dark matter in the form of weakly interacting massive particles (WIMPs), a well-motivated class of dark matter candidate. After continuously acquiring data since 2021, LZ has placed the most stringent limits on the spin-independent WIMP-nucleon cross section down to 2.1×10^{-48} cm^2 for a 36 GeV/c^2 WIMP mass. In this talk, I will present the latest results from LZ' s dark matter search, in addition to other new physics signatures that are being explored.

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Session Classification: Applications

Track Classification: Applications (dark matter, neutrino, precision frontier, medicine, etc.)