

Status of the LUX-ZEPLIN (LZ) Experiment

Friday, May 13, 2022 11:40 AM (30 minutes)

LUX-ZEPLIN (LZ) is a direct detection dark matter experiment located at the Sanford Underground Research Facility in Lead, South Dakota. It features a two-phase xenon time projection chamber, surrounded by an instrumented xenon “skin” and liquid scintillator active vetoes. The active region of the xenon TPC contains 7 tonnes of liquid xenon with a 5.6 tonne fiducial volume, allowing us to reach a WIMP-nucleon spin-independent cross section sensitivity of $1.4 \times 10^{-48} \text{ cm}^2$ for a 40 GeV/c² mass in 1000 live days. This talk will provide an overview of the experiment and report on its status.

Primary author: CARMONA-BENITEZ, Carmen (Pennsylvania State University)

Presenter: CARMONA-BENITEZ, Carmen (Pennsylvania State University)

Session Classification: Plenary - Dark Matter

Track Classification: Dark Matter