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## Searching for Dark Matter and Astrophysical Signals at the LUX-ZEPLIN Experiment

*Wednesday, 18 December 2024 21:00 (20 minutes)*

In this poster, I will present the LUX-ZEPLIN experiment and how its world-leading sensitivity is being used to search for a variety of dark matter candidates and other astrophysical signals, such as coherent elastic neutrino nuclear scattering from Boron 8 solar neutrinos. Having already set the best limit on WIMP cross section,  $\sigma_{SI} = 2.2 \times 10^{-48} \text{cm}^2$  at  $43 \text{ GeV}/c^2$ , we look at how LUX-ZEPLIN's results can help constrain the parameter space of theories and support our understanding of the Standard Model.

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