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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, $\sigma_{SI}=2.2\times10^{-48} {\rm cm}^2$ at 43 GeV/c², 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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