

The Prospects of Solar Neutrino Detection in a Liquid Xenon Experiment

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As liquid xenon dark matter detectors advance, they become increasingly more sensitive to neutrino sources. In particular, they will obtain sensitivity to solar neutrinos through both elastic electron scattering and coherent elastic nuclear scattering. While these solar neutrinos constitute the ultimate background in the search for dark matter, they will also afford us an opportunity to study the Sun. In this presentation, we will explore the physics reach of a tonne-scale liquid xenon experiment, the expected sources of background, and the ongoing R&D efforts for DARWIN.

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