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Noble liquid observatories for dark matter and astrophysical neutrinos

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Over the past two decades, noble liquid detectors located deep underground have made remarkable advancements, significantly enhancing their ability to explore a diverse parameter space for dark matter particles. These increasingly sensitive detectors are now evolving into versatile particle astrophysics observatories. Notably, xenon-based detectors are beginning to see solar neutrino-nucleus elastic scattering, a phenomenon often referred to as the "neutrino fog." In this talk, I will provide an overview of recent developments in noble liquid observatories, and highlight their potentials to address fundamental questions in particle physics in the decades to come.

Collaboration you are representing

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