

Detecting reactor antineutrinos with a liquid argon scintillating bubble chamber

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Nuclear reactors offer a great opportunity to study neutrinos due to their high antineutrino flux, but their detection through coherent elastic neutrino-nucleus scattering (CEvNS) is challenging given the need for sub-keV thresholds and great background identification.

In this talk we will discuss the physics potential of a liquid argon scintillating bubble chamber, a novel CEvNS reactor detector currently under construction by the SBC collaboration. With a one-year exposure, a 100 kg chamber placed at 30 m from a 2 GWth power reactor has the potential to achieve world-leading sensitivities.

Working group

WG2

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