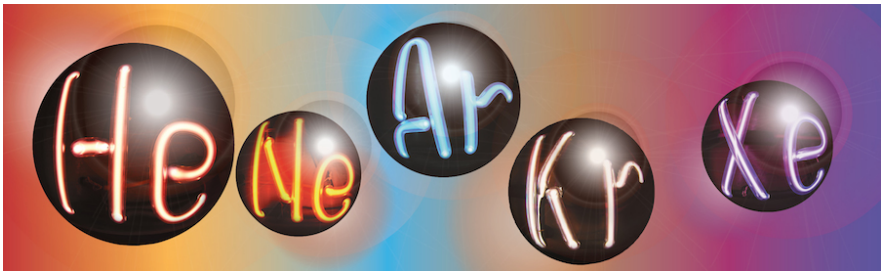

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Status and Prospects of the Scintillating Bubble Chamber Liquid Argon 10 kg (SBC-LAr10) Detector

The Scintillating Bubble Chamber (SBC) collaboration is developing liquid noble bubble chambers as a technology for the detection of low energy (sub-keV) nuclear recoils. Identifying recoils at this energy would enable searches for light dark matter (˜GeV mass), as well as the observation of coherent elastic neutrino nucleus scattering (CEvNS) at low neutrino energy (˜MeV, such as from a reactor source). The SBC-LAr10 detector at Fermilab, in the MINOS underground facility, has taken data to demonstrate the operation and characterize the performance of the detector. In this talk, I will show some of the first results from this operation, demonstrating the capability of the detector to observe bubble-nucleating events through multiple coincident channels. I will also discuss the future prospects for the program. A twin chamber will soon be deployed at SNOLAB in Canada to enable a sensitive, low-background search for dark matter. Furthermore, a future deployment of the detector at a reactor neutrino source would enable novel measurements through the CEvNS process.

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