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The SBC Liquid Argon Bubble Chamber for Dark Matter and CEvNS from reactors

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The SBC Collaboration is constructing a 10-kg liquid argon bubble chamber with scintillation readouts. The goal is to achieve 100 eV nuclear recoils detection with near-complete discrimination against electron recoil events. In addition to a dark matter search, SBC targets a CEvNS measurement of MeV-scale neutrinos from nuclear reactors. A high-statistics, high signal-to-background detection would enable precision searches for physics beyond the standard model. In this talk, I will present the physics reach of the SBC detectors and the advantages of using such technology. I will also discuss the progress towards the construction at Fermilab to test the sub-keV threshold performance and at SNOLAB for the search of dark matter.

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