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Scintillating Bubble Chamber (SBC) preparations for first calibration run.

Thursday, November 9, 2023 2:30 PM (20 minutes)

The Scintillating Bubble Chamber (SBC) Collaboration is developing noble liquid bubble chambers for the detection of sub-keV nuclear recoils, enabling both high-exposure GeV-scale dark matter searches and CEvNS measurements using reactor neutrinos. A 10-kg liquid argon bubble chamber is currently under construction at Fermilab in order to calibrate the nuclear recoil threshold in argon down to sub-keV levels. We have recently completed an engineering run, testing the cooling system and pressure control systems of the detector using liquid argon alone, and are now preparing the internal bubble chamber for the first calibration run that will take place in the MINOS tunnel at Fermilab. I'll be giving an update on the status of the detector construction, the results of our engineering run, and plans for the first calibration run at Fermilab.

Early Career

Yes

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