

Abstract Submitted
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Status of the XENON Direct Dark Matter Detection Experiment

RICHARD HASTY, Yale University, XENON COLLABORATION COLLABORATION — The XENON collaboration is developing a dark matter detector using liquid xenon (LXe) as the target medium for detecting Weakly Interacting Massive Particles (WIMPs). The goal of the collaboration is to operate an array of LXe time projection chambers (TPCs) with 1000 times greater sensitivity to WIMPs than current direct dark matter detection experiments. Recent measurements by members of the XENON collaboration demonstrate the promise of the LXe TPC approach, particularly measurements of the scintillation efficiency and charge extraction from nuclear recoils in LXe. The collaboration is currently installing a 10 kg fiducial volume prototype in the Gran Sasso National Laboratory in Italy for low background operation.

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