



Fun with Xenon

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Liquid Xenon Time Projection Chambers are at the forefront of direct dark matter searches. The XENON1T experiment may or may not have released its first results in time for this seminar, and so the current status from this experiment will be presented to the extent possible. Looking forward, ideas will be presented to broaden the reach of these experiments to both higher dark matter masses (possibly up to the Planck mass) as well as lower masses (below a GeV). Future detectors will be discussed for their capabilities of probing lower cross-sections, their sensitivity to signals from solar neutrinos, as detectors for a potential galactic supernova, and as competitive experiments to search for neutrinoless double-beta decay.

Tuesday

May 1

4:00 P.M.

Rm 415 NSH