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Measurement of ER Fluctuations in Liquid Xenon with the LUX Detector Using a Tritium Calibration Source ATTILA DOBI, Lawrence Berkeley National Laboratory — The LUX WIMP search limit was aided by an internal tritium source resulting in an unprecedented calibration and understanding of the electronic recoil background. The source allows for a check of energy scale calibration and the extraction of fundamental properties of electron recoils in liquid xenon. Recombination probability and its fluctuation have been measured from 1 to 1000 keV, using betas from tritium and Compton scatters from an external ¹³⁷Cs source.

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