

Abstract Submitted
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Measurement of the Field-Dependent Response of Liquid Xenon to Low-Energy Electronic Recoils¹ LUKE GOETZKE, MATTHEW ANTHONY, ELENA APRILE, PATRICK DE PERIO, ZACH GREENE, QING LIN, MARCELLO MESSINA, GUILLAUME PLANTE, ALFIO RIZZO, YUN ZHANG, Columbia University — The search for the direct detection of dark matter continues to be led by experiments employing liquid xenon (LXe) as the detection medium. Still, few measurements have been made of the response of LXe to low-energy interactions as a function of energy and electric field. The neriX detector at Columbia University is a dual-phase time projection chamber optimized for simultaneous measurements of light and charge from low-energy interactions in LXe. In this talk, we will present the results of measurements of the light and charge yield of electronic recoils in LXe using neriX. The Compton coincidence technique is employed to extract the yields as a function of energy deposited at different electric fields.

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