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Status and Development of nEXO's Charge Readout System

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The nEXO detector, a 5-tonne liquid xenon time projection chamber enriched to 90% in Xe-136, will search for the hypothetical decay process known as neutrinoless double beta decay with a half-life sensitivity $> 10^{28}$ years. As part of this search, the nEXO collaboration is developing a radiopure charge readout system which will help reach nEXO's sub-percent energy resolution goal and its requirement for positional reconstruction and topological discrimination. In this talk I will outline nEXO's design for the charge readout system, which consists of an array of fused silica tiles with a specially designed electrode pattern, as well as share results from prototype tiles and readout electronics.

Early Career

No

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