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Development of internal calibration sources for the nEXO experiment BRIAN LENARDO, Stanford Univ, NEXO COLLABORATION — The nEXO experiment is a proposed next-generation search for the neutrinoless double beta decay (NDBD) of Xe-136. The primary detector will be a 5-ton, monolithic liquid xenon time projection chamber (TPC) with a target enriched to 90% in the isotope of interest. To optimize the energy resolution and event reconstruction, calibrations are needed to map the spatial- and time-dependent detector response. While this is possible using conventional external radiation sources, the strong self-shielding of liquid xenon motivates the development of radiation sources which can be dissolved into the liquid xenon and injected into the detector. In this talk, I will describe recent simulations and experimental tests of two such sources, Rn220 and Xe127, which are being studied for use in nEXO.

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