

Abstract Submitted
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Calibration of CUORE-0 and CUORE JEREMY CUSHMAN, Yale University, CUORE COLLABORATION — The Cryogenic Underground Observatory for Rare Events (CUORE) is a ton-scale cryogenic experiment designed to search for neutrinoless double beta decay ($0\nu\beta\beta$) of ^{130}Te . The experiment consists of 988 ultracold TeO_2 bolometric crystals arranged into 19 towers, which act as both the $0\nu\beta\beta$ sources and detectors. CUORE-0, an experiment using a single CUORE-like tower, recently completed physics data-taking and set a new limit on the $0\nu\beta\beta$ half-life of ^{130}Te . A good understanding of the detector energy scale through regular calibration is crucial for observation of $0\nu\beta\beta$ and other rare processes. The CUORE-0 detector is calibrated with low-activity ^{232}Th sources placed outside the cryostat. For CUORE, due to the large number of crystals and extensive shielding around the detector, calibration sources will need to be placed inside the cryostat. I will present analysis results from the calibration of CUORE-0 and discuss the commissioning of the CUORE calibration system.

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