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Commissioning and calibrating the CUORE neutrinoless double beta decay experiment JEREMY S. 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, which act as both the source and detector of this decay. We have completed the CUORE detector construction, and commissioning of the CUORE cryostat is ongoing, with the cryostat having reached a stable base temperature below 10 mK. Due to the large number of crystals and extensive shielding around the detector, calibration sources will need to be placed inside the CUORE cryostat during calibration periods to uniformly irradiate the detectors. We have verified that we can deploy room-temperature calibration sources into the cryostat, cool them to this base temperature, and extract them, all with minimal effects on the cryostat. I will present the status of the cryostat commissioning and the commissioning of the CUORE Detector Calibration System, including the results of the first calibration string deployment to 10 mK.

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