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Detector Response in CUORE VIVEK SHARMA, Virginia Tech, CUORE COLLABORATION — CUORE is one of the leading searches for neutrinoless double beta decay, a process which if discovered would show that lepton number conservation is violated and neutrinos are Majorana particles. CUORE uses an array of 988 individual TeO_2 crystals operated at approximately 11 mK as both the source material and as bolometric detectors to look for this process in ^{130}Te. It is necessary that we understand the energy response of each bolometer thoroughly to maximize the sensitivity of the experiment. In this talk we describe the challenges of calibrating a large array of cryogenic detectors while minimizing the background. We also discuss the calibration procedures and the results used to establish the detector performance parameters for the neutrinoless double beta decay search.

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