

Abstract Submitted
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A testing system for CUORE preamplifier production XIAOHUA LIU, CUORE COLLABORATION¹ — A testing system has been developed for the quality control of the production of the preamplifier for CUORE experiment. There are a total of 988 channels for the readout of CUORE TeO₂ crystal bolometers. The preamplifier has a JFET pair at input stage, a gain of 202V/V, very low noise, adjustable common mode rejection ratio, a circuit for the compensation of the detector bias and the offset of JFET pair. The testing system can verify the functions and measure the characteristics to ensure the preamplifiers meet the specifications. The testing system consists of a test carrier board, a bandpass filter board, low noise power supplies, digital control adapters, a data acquisition(DAQ) system and test software based on MATLAB. A test procedure has been developed to configure the devices and test circuits, to control DAQ board to generate the stimulus signal and to acquire the response signal, to analyze the acquired data and store the test result. A web database has also been developed to store the test result. We will present the CUORE electronics testing system and discuss test result from the preamplifier production.

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