

Abstract Submitted
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A Cryostat for the Development and Testing of Detector Read-out Electronics in the Majorana Demonstrator ERIN HANSEN, Rensselaer Polytechnic Institute, ALAN POON, JAMES LOACH, Lawrence Berkeley National Laboratory — The MAJORANA DEMONSTRATOR will search for neutrinoless double beta decay in the isotope Ge-76 using a large array of germanium detectors deployed underground in ultra-low-background cryostats. The demands on the material radio-purity and the performance of the readout electronics are substantial. A novel vacuum cryostat has been constructed to house prototype MAJORANA front end electronics boards, simulating their interactions with a Ge detector and allowing measurements to be made of their performance at variable cryogenic temperatures. The cryostat will be used to refine the electronics design and to characterize the finished boards. The cryostat allows the boards to be tested rapidly, in realistic conditions and in an ultra-clean environment.

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