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Testing of the integrated electronics and low-mass front-end board for the Majorana Demonstrator SARAH BENNEDSEN, Cornell University, RYAN MARTIN, ALAN POON, Lawrence Berkeley National Laboratory, MAJORANA COLLABORATION — The MAJORANA DEMONSTRATOR experiment will search for neutrinoless double beta decay in ^{76}Ge . If this decay is observed, it will indicate that the neutrino is its own antiparticle—a Majorana particle—and reveal information about the mass of the neutrino. Along with a brief summary of the MJD experimental design, this poster will focus on the electronics developed by the group at Lawrence Berkeley National Laboratory (LBNL) to read out data from the experiment. A low-mass front-end board (LMFE) provides the first stage of signal processing. It is a fused silica board with a printed circuit designed for low background and low electronic noise performance. Mechanical studies of the LMFE were performed in addition to characterizations of the low noise behavior of the integrated electronics. These studies improve the performance and reliability of the LMFE.

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