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A Low Energy Rare Event Search with the Majorana Demonstrator[1] CLINT WISEMAN, University of Washington, INWOOK KIM, Los Alamos National Laboratory, JOS MARIANO LPEZ-CASTAO, University of South Dakota, MAJORANA COLLABORATION — The MAJORANA DEMONSTRATOR is an array of ultra-low background, P-type point contact (PPC) high-purity germanium (HPGe) detectors, with excellent energy resolution, keV-scale thresholds, and low cosmogenic activation. In addition to the primary search for neutrinoless double beta decay, we are searching for new physics beyond the Standard Model in the low-energy region under 100 keV, including bosonic dark matter and solar axions. Significant progress has been made in developing new data filters to automatically extract physics events at low energy, across the multi-year operational period of the DEMONSTRATOR. In this talk, we present a review of our rare event searches, and an update on new results.

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