

Abstract Submitted
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First data of the Majorana Demonstrator CLARA CUESTA, University of Washington, MAJORANA COLLABORATION — The MAJORANA Collaboration is constructing a system containing 44 kg of HPGe detectors to demonstrate the feasibility and potential of a future tonne-scale experiment capable of probing the neutrino mass scale in the inverted-hierarchy region. To realize this, a major goal of Majorana Demonstrator is to demonstrate a path forward to achieving a background rate at or below 1 cnt/(ROI-t-y) in the 4 keV region of interest around the Q-value at 2039 keV. This goal is pursued through a combination of a significant reduction of radioactive impurities in construction materials with analytical methods for background rejection. The analysis tools are based on run ranking, data reduction, pulse shape analysis, event coincidences, and time correlations. The first data corresponding to the commissioning of the DEMONSTRATOR analyzed using these techniques will be presented. The cuts developed to reject delayed charge recovery and multisite events will be described.

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