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A search for bosonic dark matter with the MAJORANA DEMONSTRATOR

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The MAJORANA Collaboration is assembling an array of high purity Ge detectors to search for neutrinoless double-beta decay in Ge-76. The experiment consists of 44 kg of HPGe detectors (30 kg enriched in Ge-76) with a low-noise p-type point contact (PPC) geometry. They are operated deep underground within a compact shield constructed from lead and high purity copper. These technical specifications make it favorable to extend the measurement to low energies to open up the experiment's sensitivity to dark matter and axion searches. The first of two modules of detectors has been operating since June of 2015 and the second is under construction at the Sanford Underground Research Facility in Lead, SD. We present the results of searches for bosonic dark matter and other rare event searches using data from the commissioning and first physics runs that improve upon existing limits.

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