

Recent results and future plans for the MAJORANA DEMONSTRATOR

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The MAJORANA DEMONSTRATOR (MJD) is a 44-kg array of low-background germanium detectors of which 30kg is made from detectors enriched to 88% in ^{76}Ge . MJD is operating a mile underground in the Sanford Underground Research Laboratory in Lead, SD. Its main purpose is to search for the neutrinoless double-beta decay of ^{76}Ge and to demonstrate the technical feasibility of a tonne-scale Ge-based neutrinoless double-beta decay experiment. It is also capable of direct searches of a variety of dark matter candidates and other physics beyond the Standard Model. In this talk I will review the motivation, design and construction of the MJD, as well as recently published results for a the search for bosonic dark matter using commissioning data taken in 2015. I will also discuss the current status of MJD and conclude with a discussion of future plans for MJD and a proposed tonne-scale Ge-based experiment, LEGeND.

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