

Abstract Submitted
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The status and initial results of the MAJORANA DEMONSTRATOR XIAOYU ZHU, Los Alamos National Laboratory, MAJORANA COLLABORATION — The MAJORANA DEMONSTRATOR is an ultra-low background experiment searching for neutrinoless double-beta decay in ^{76}Ge at the Sanford Underground Research Facility. The search for neutrinoless double-beta decay could determine the Dirac vs Majorana nature of neutrino mass and provide insight to the matter-antimatter asymmetry in the Universe. The DEMONSTRATOR is comprised of 44.8 kg (30 kg enriched in ^{76}Ge) of high purity Ge detectors separated into two modules. Construction and commissioning of both modules completed in Summer 2016 and both modules are now acquiring physics data. In my talk, I will discuss the initial results of the first physics run utilizing both modules focusing primarily on the studies of the background and projections to a ton-scale experiment. This material is based upon work supported by the U.S. Department of Energy, Office of Science, Office of Nuclear Physics, the Particle Astrophysics Program of the National Science Foundation, and the Sanford Underground Research Facility. We acknowledge the support of the U.S. Department of Energy through the LANL/LDRD Program.

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