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The MAJORANA DEMONSTRATOR **Neutrinoless Double Beta Decay Experiment** RALPH MASSARCZYK, Los Alamos National Laboratory, MAJORANA COLLABORATION — Neutrinoless double beta decay searches play a major role in determining neutrino properties. The MAJORANA Collaboration is constructing an ultra-low background, modular high-purity Ge detector array to search for this decay in ^{76}Ge. Located at the 4850-ft level of the Sanford Underground Research Facility, the DEMONSTRATOR detector assembly has the goal to show that it is possible to achieve background rates necessary for future ton-scale experiments. The talk will give a short introduction to the experiment, an overview of the achievements made in detector construction, data analysis and simulation. After the first commissioning phase last year with more than half of the detectors in their final configuration, the current status of the DEMONSTRATOR will be presented in this talk as well as plans for the future. 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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