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The Majorana Demonstrator Neutrinoless Double-Beta Decay Experiment

Neutrinoless double-beta decay searches play a major role in determining the nature of neutrinos, the existence of a lepton violating process, and the effective Majorana neutrino mass. The Majorana Collaboration is assembling an array of HPGe detectors to search for neutrinoless double-beta decay in Ge-76. The Majorana Demonstrator is currently being constructed at the Sanford Underground Research Facility in Lead, South Dakota. The goals are to demonstrate the required background and scalability of a Ge-based, tonne-scale experiment. The status and potential physics reach of the Majorana Demonstrator experiment is presented.

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