

Abstract Submitted
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The MAJORANA DEMONSTRATOR, a ^{76}Ge -based neutrinoless double-beta decay experiment¹ JACQUELINE STRAIN, University of North Carolina at Chapel Hill, MAJORANA COLLABORATION — The observation of neutrinoless double-beta decay would confirm the Majorana nature of the neutrino, show lepton number is not conserved, and would provide a value for the effective Majorana neutrino mass. The goal of the MAJORANA collaboration is to develop a tonne-scale ^{76}Ge -based neutrinoless double-beta decay experiment. Currently, efforts are underway to construct the MAJORANA DEMONSTRATOR, a 40-kg array of germanium crystals, located at the 4850' level of the Sanford Underground Research Facility (SURF) in Lead, SD. The goal of the DEMONSTRATOR is to demonstrate the ability to construct a detector composed of an array of germanium crystals while maintaining an unprecedented low background that is essential for the observation of neutrinoless double-beta decay. The past and current efforts in the construction of the DEMONSTRATOR and its predecessor, the Prototype Cryostat, will be presented.

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