

Abstract Submitted
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The MAJORANA Neutrinoless Double-beta Decay Experiment VINCENTE GUISEPPE, Los Alamos National Laboratory, MAJORANA COLLABORATION — Neutrinoless double-beta decay searches play a major role in determining the effective Majorana neutrino mass, the Majorana nature of neutrinos, and a lepton violating process. The MAJORANA experiment proposes to assemble an array of HPGe detectors to search for neutrinoless double-beta decay in ^{76}Ge . Initially, MAJORANA aims to construct a prototype system containing 60 kg of Ge detectors to demonstrate the potential of a future 1-tonne experiment. The design and potential reach of the prototype system will be presented. This talk will also discuss material purity, detector optimization, background rejection, identification of rare backgrounds, and other key technologies to be utilized in the MAJORANA experiment.

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