

Abstract Submitted
for the DNP13 Meeting of
The American Physical Society

The Majorana Demonstrator: Design and Prospects JOHNNY GOETT, Los Alamos National Laboratory, MAJORANA COLLABORATION — The continuing search for neutrinoless double beta decay, a rare process that may inform the absolute mass scale of the neutrino, is challenged by a persistent continuum background at energies below 5 MeV. The goal of the Majorana Demonstrator is to show the feasibility of reducing these backgrounds below 1 count/tonne*year in the 4keV ROI around the Q-value at 2039 keV. The demonstrator will field an array of highly purified point contact germanium detectors to demonstrate the effectiveness of a suite of materials assay, construction and analysis techniques. We provide an overview of the experimental requirements, design and expected sensitivity.

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Date submitted: 01 Jul 2013

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