Abstract Submitted
for the DNP15 Meeting of
The American Physical Society

A status update on the MAJORANA DEMONSTRATOR[1] IAN GUINN, Univ of Washington, MAJORANA COLLABORATION — The MAJORANA Collaboration is seeking neutrinoless double-beta decay ($0\nu\beta\beta$), a lepton number violating process that would indicate that the neutrino is a Majorana fermion, in ^{76}Ge. An array of P-type point contact (PPC) high-purity germanium (HPGe) detectors isotopically enriched in ^{76}Ge will be used to perform this search. For inverted hierarchy neutrinos, a tonne-scale array with backgrounds of < 1 ct/ROI-t-y in the 4 keV region of interest (ROI) around the 2039 keV Q-value for double-beta decay in ^{76}Ge will be sensitive to $0\nu\beta\beta$ decay. In order to demonstrate the feasibility of such an experiment, the MAJORANA DEMONSTRATOR is being constructed at the 4850' level of the Sanford Underground Research Facility (SURF). The DEMONSTRATOR will consist of an array of 40 kg of PPC HPGe detectors, 30 kg of which will be enriched to 87% in ^{76}Ge, housed in two separate modular cryostats inside of a compact shield. The background goal for the DEMONSTRATOR is < 3 cts/ROI-t-y, which is expected to scale down to < 1 ct/ROI-t-y for a tonne-scale experiment. This presentation will contain a status update on the MAJORANA DEMONSTRATOR.

[1]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.

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Date submitted: 01 Jul 2015 Electronic form version 1.4