Abstract Submitted
for the APR18 Meeting of
The American Physical Society

Results and Status of the MAJORANA DEMONSTRATOR IAN GUINN, University of Washington, MAJORANA COLLABORATION — Neutrinoless double-beta decay ($0\nu\beta\beta$) is a hypothetical lepton-number violating process that would indicate that neutrinos are Majorana fermions. The MAJORANA DEMONSTRATOR is searching for $0\nu\beta\beta$ in ^{76}Ge using a modular array of high purity Germanium (HPGe) detectors with support and shielding constructed out of low-background materials and housed at the '4850 level of the Sanford Underground Research Facility. The experiment contains two modules, totaling 44.8 kg of p-type point contact HPGe detectors, 29.7 kg of which are enriched in ^{76}Ge. Both modules have been in operation since August 2016, and with 10 kg yr of unblinded exposure have achieved a limit of $> 1.9 \times 10^{25}$ yr on the decay half life. The DEMONSTRATOR has achieved an excellent energy resolution of 0.1% FWHM at the 2039 keV ROI, and has among the lowest ROI backgrounds of current generation $0\nu\beta\beta$ searches. This talk will contain an overview of this result and the current status of the experiment. This material is based upon work supported by the U.S. Department of Energy, Office of Science, Office of Nuclear Physics, the Particle Astrophysics and Nuclear Physics Programs of the National Science Foundation, and the Sanford Underground Research Facility.

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Date submitted: 12 Jan 2018 Electronic form version 1.4