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The cosmogenic induced background estimation for the MAJORANA DEMONSTRATOR enriched ^{76}Ge.[1] BRANDON WHITE, Los Alamos National Laboratory, MAJORANA COLLABORATION — Neutrino-less double beta ($0\nu\beta\beta$) decay experiments probe for such rare events that the suppression of backgrounds are major experimental concerns. Cosmogenic induced isotopes have the potential to be a major background for such experiments. For the MAJORANA DEMONSTRATOR Experiment ^{76}Ge isotope is used as both detector and source. The isotope ^{68}Ge is cosmogenically produced when the Ge is on the Earth's surface. The decay of this isotope can mimic events in the region of interest. The experiment is located at the 4850 foot level at the Sanford Underground Research Facility in Lead, South Dakota to suppress cosmogenic activation. In this talk I will present the calculations of cosmogenic background for the enriched ^{76}Ge materials used in the MAJORANA DEMONSTRATOR HPGe detectors. The activation is determined by the surface exposure from the time of production, storage, and delivery of the enriched Ge detectors to the underground experimental site.

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