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Cosmogenic Induced Background Estimation for the MAJORANA DEMONSTRATOR Experiment[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 and understanding 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 and pure electroformed copper is primarily used for detector housing. The isotopes ^{68}Ge and ^{60}Co are cosmogenically produced when the Germanium and Copper components are near Earth's surface. The decay of these isotopes 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 backgrounds for the enriched ^{76}Ge and electroformed Copper materials used in the MAJORANA DEMONSTRATOR. The activation is determined by the surface exposure time of materials.

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