

# Cosmogenic Induced Backgrounds for the MAJORANA DEMONSTRATOR Experiment

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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  $^{76}\text{Ge}$  isotope is used as both detector and source. The isotopes  $^{68}\text{Ge}$  and  $^{60}\text{Co}$  are cosmogenically produced when the Germanium materials are near Earth's surface. The decay of these isotopes can mimic events in the  $0\nu\beta\beta$  region of interest. For this reason, the enriched materials were minimized and closely monitored for surface exposure time during detector production. Cosmogenic induced backgrounds, primarily tritium, also have a major impact for any low energy campaign for the MAJORANA DEMONSTRATOR. In this talk I will present the estimation of cosmogenic backgrounds for the enriched  $^{76}\text{Ge}$  detectors and the extraction of the low energy events from our early data sets.

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