

Abstract Submitted
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Geant4 simulation of backgrounds in a p-type point contact Ge detector array M. BOSWELL, UNC/TUNL, ON BEHALF OF THE MAJORANA COLLABORATION — Plans are currently underway to construct an array of P-type Point Contact (PPC) Ge detectors for the MAJORANA neutrinoless double beta decay experiment. An important aspect of any ultra-low background detector design is estimating the background due to the detectors, associated small parts and cables, and the cryostat components. To this end, the current detector array design has been implemented in Geant4, and a detailed analysis of these backgrounds is underway. In the simulation, the individual components are activated with normal levels of impurities. The response of the detector array to these components provides an estimate of background contributions to the region of interest. Furthermore, analyzing the individual detector response to these various components will provide useful information for background cuts.

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