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Background Rejection through Pulse Shape Discrimination in the Majorana Demonstrator[1] NICHOLAS RUOF, University of Washington, MAJORANA COLLABORATION — The Majorana Demonstrator is an experiment searching for neutrinoless double-beta decay in ^{76}Ge. The experiment consists of two modular arrays with 44.8 kg of high purity Germanium detectors operating at the 4850' level of the Sanford Underground Research Facility in Lead, South Dakota. P-type point contact detector technology allows for the identification and rejection of specific background event populations through an analysis of pulse shape characteristics. Relating the amplitude (A) of the current pulse and the total energy(E) collected defines an AvsE pulse shape parameter. We present the performance and improvements to our multi-site Compton-scattered gamma background rejection with the AvsE cut parameter, systematics concerning the cut, and show its influence on the sensitivity of the experiment.

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