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Studies of energy losses in the lithiated layer of p-type point contact germanium detectors in the MAJORANA DEMONSTRATOR project¹ RYAN MARTIN, Lawrence Berkeley National Laboratory, MAJORANA DEMONSTRATOR COLLABORATION — P-type point contact (PPC) high purity germanium detectors are an emerging technology for neutrinoless double beta decay searches and direct dark matter detection. Understanding their properties is of critical importance for these experiments. This talk will start with a short overview of the PPC detectors in low radioactive background experiments, particularly in the context of the MAJORANA DEMONSTRATOR experiment. A special class of events that take place near the lithiated n+ contact of these detectors will then be discussed. It is shown that there is a partially dead layer near the n+ contact in which gamma-ray interactions can mimic low energy depositions in the crystal. Understanding this source of backgrounds has a direct impact on the sensitivity of these detectors at low energies.

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