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**Systematic Effects on Pulse Shape Analysis in HPGe Detectors for  $0\nu\beta\beta$  Searches** VICTOR M. GEHMAN, Los Alamos National Laboratory, MAJORANA COLLABORATION — The MAJORANA Project will endeavor to provide direct limits on the effective Majorana mass of the electron neutrino through the measurement of neutrinoless double-beta decay in  $^{76}\text{Ge}$ . One of the techniques that the MAJORANA experiment will implement to separate single-site energy depositions (such as  $0\nu\beta\beta$  or  $2\nu\beta\beta$  events) from multi-site events (such as multiply scattering  $\gamma$  rays) is pulse shape analysis. We present work performed at Los Alamos National Laboratory using a “CLOVER” detector (a close-packed array of four 800g, two-fold segmented natural germanium detectors) to characterize systematic uncertainties in the survival probabilities of double-escape, Compton continuum and full-energy  $\gamma$  ray events under two-moment parametric pulse shape cuts.

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