

Abstract Submitted  
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**Calibrating Arrays of Germanium Detectors for Double-Beta Decay** VICTOR GEHMAN, Los Alamos National Laboratory/University of Washington, 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  $^{76}\text{Ge}$ . Our goal is an experiment sensitive to the effective neutrino mass at the level of a few hundred meV with the option of scaling up to a sensitivity of approximately 50 meV. The experiment will consist of several modules, each a close-packed array of many (tens to hundreds) of germanium detectors in a single cryostat enriched to 86% in  $^{76}\text{Ge}$ . A major technological challenge in constructing such a large array of detectors is calibrating them all in a systematic, reproducible manner (particularly those on the inside of the array). We present a report on several possible calibration schemes as well as current efforts to implement and test them at Los Alamos National Laboratory using a “Clover” detector (a close-packed array of four 800g, two-fold segmented natural germanium detectors).

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