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Comparison of MAJORANA DEMONSTRATOR calibration data with simulation. ZHENGHAO FU, University of Washington, MAJORANA COLLABORATION — The MAJORANA project aims to detect the neutrino-less double-beta decay of ^{76}Ge using an ultra-low background array of enriched HPGe detectors. Observation of this process would indicate that lepton number is violated, with implications for nuclear and high-energy theory as well as the matter asymmetry of the universe. In this work, a comparison of simulation and real calibration data is presented. Through this comparison, we can modify and improve the model of the spectrum, giving a more complete understating of the detector's response to neutrino-less double-beta decay. The detector resolutions were determined, along with their energy dependence due to electronic noise, charge collection statistics, and charge trapping. I will show different methods we used to determine the scaling constant and calibrate the stimulated data, and will also display the comparison of the real spectrum and the stimulated spectrum after scaling.

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