

Abstract Submitted
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Charge trapping correction in natural and enriched high-purity Ge detectors for the MAJORANA DEMONSTRATOR¹ THOMAS GILLISS, University of North Carolina at Chapel Hill, MAJORANA DEMONSTRATOR COLLABORATION — A correction for the degradation of pulse height due to trapping of charge carriers in p-type point contact Ge detectors is described. The correction uses approximate time constants characteristic of trapping (and re-emission) in a detector that lead to exponential decay of charge during drift. As such, the correction can be conveniently implemented during offline analysis in the same manner as a digital pole-zero correction. The MAJORANA DEMONSTRATOR has implemented this correction and a study reveals improvements to energy resolution of detectors. By extending this study to compare the effects of trapping in various experimental configurations of the DEMONSTRATOR, some insight may be gained into the temperature and field dependence of charge trapping in detectors

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