

Abstract Submitted
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Characterization of PPC Detectors for the MAJORANA DEMONSTRATOR Using a Scanning Collimated Source JAMIN RAGER, Univ of NC - Chapel Hill, MAJORANA COLLABORATION — The MAJORANA DEMONSTRATOR is a ^{76}Ge double-beta decay experiment located at Sanford Underground Research Facility (SURF) that boasts cutting edge sensitivity and low backgrounds. I report on recent work measuring how charge drift-times vary with respect to the vertical and azimuthal position of physics events within a single-crystal HPGe detector used in the DEMONSTRATOR. Understanding these variations will allow for position reconstruction of physics events and identification of the detector's crystal axis, the latter of which will increase the detector's sensitivity to coherently-scattered Primakoff solar axions. Drift-time data was collected with an automated scanning station located at SURF, which used a ^{133}Ba source to create a beam of collimated 81keV gamma-rays. Maximum likelihood analysis was used to fit the data to a set of models for comparison to ongoing work in pulse-shape simulations. This material is based upon work supported by the U.S. Department of Energy, Office of Science, Office of Nuclear Physics, the Particle Astrophysics and Nuclear Physics Programs of the National Science Foundation, and the Sanford Underground Research Facility.

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