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Radiation-damage of single-crystal diamond detectors in swift heavy ion beams ANDREAS STOLZ, National Superconducting Cyclotron Laboratory, Michigan State University, AYAN BHATTACHARYA, TIMOTHY A. GROTJOHN, Department of Electrical Computer Engineering, Michigan State University — Single-crystal diamond detectors fabricated by Chemical Vapor Deposition were irradiated with swift heavy ion beams in the energy range of 100-150 MeV/u at the National Superconducting Cyclotron Laboratory at Michigan State University. The degradation of the detector performance was monitored during irradiation by the output signal amplitude. After exposure to a particle fluence of $10^{13}/\mathrm{cm}^2$, the diamond samples were characterized by the Transient Current Technique to understand the effect of the beam induced damage in the charge transport properties.

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