

Abstract Submitted
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Characterizing germanium detectors fabricated from self-grown crystals at USD MITCHELL WAGNER, JING LIU, DONGMING MEI, Univ of South Dakota — Several cryostats were established to characterize Ge detectors fabricated from self-grown crystals at the University of South Dakota (USD). The cryostats include: 1. an ultra-high vacuum (UHV) chamber that can be dipped into liquid nitrogen for quick cooling, 2. a portable liquid nitrogen cooled cryostat that can be operated in an arbitrary orientation, and 3. a surface scanning station that can be used to study detector surface properties in detail. We have successfully operated a planar Ge detector with amorphous semiconductor surfaces, made at LBNL from USD grown crystal, in the UHV chamber. Together with the existing crystal growth and detector fabrication facility, this marks the completion of the entire Ge detector development chain at USD.

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