Abstract Submitted
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Research and Development Supporting a Next Generation Germanium Double Beta Decay Experiment[1] KEITH RIELAGE, STEVE ELLIOTT, PINGHAN CHU, JOHNNY GOETT, RALPH MASSARCZYK, WENQIN XU, Los Alamos National Laboratory — To improve the search for neutrinoless double beta decay, the next-generation experiments will increase in source mass and continue to reduce backgrounds in the region of interest. A promising technology for the next generation experiment is large arrays of Germanium p-type point contact detectors enriched in 76-Ge. The experience, expertise and lessons learned from the MAJORANA DEMONSTRATOR and GERDA experiments naturally lead to a number of research and development activities that will be useful in guiding a future experiment utilizing Germanium. We will discuss some R&D activities including a hybrid cryostat design, background reduction in cabling, connectors and electronics, and modifications to reduce assembly time.

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