

Abstract Submitted
for the APR05 Meeting of
The American Physical Society

A Low-Background Front-End Electronics Package for Germanium Spectrometers¹ TODD HOSSBACH, Pacific Northwest National Laboratory, MAJORANA COLLABORATION — The Majorana project is a next-generation ^{76}Ge neutrinoless double-beta decay search, using 57 isotopically-enriched segmented germanium crystals mounted in each of 9 modular cryostats. This configuration provides physical granularity which should reject most expected backgrounds. Greater effective granularity is planned via pulse-shape analysis. This requires ~ 25 MHz bandwidth from the front-end electronics placed close to the crystals. Due to their proximity to the crystals, the front-end electronics must be radiopure. PNNL has developed a Low-background Front-end Electronics Package (LFEP) to support low-background spectrometer projects. The design and performance of the first LFEP boards is discussed, along with their potential application for Majorana.

¹This work was performed by the Pacific Northwest National Laboratory operated by Battelle for the US DOE under Contract DE-AC06-76RL01830.

Craig Aalseth
Pacific Northwest National Laboratory

Date submitted: 14 Jan 2005

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