Abstract Submitted
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Development of Low Background Components for the MAJORANA DEMONSTRATOR IAN GUINN, University of Washington, MAJORANA COLLABORATION — The MAJORANA collaboration will search for neutrinoless double beta decay ($0\nu\beta\beta$) of ^{76}Ge using high purity germanium detectors. In order to achieve a sensitivity of up to 10^{28} years in the $0\nu\beta\beta$ half-life, background contributions in the 4 keV region of interest around the 2039 keV Q-value of the decay will need to be below $\sim$1 count per tonne-year. Radio-purity constraints require novel designs for many components of the detector and the development of improved assay capabilities. I will present some of the design challenges and solutions of the MAJORANA experiment, with a focus on the signal cables developed at the University of Washington.

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