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Poster Session Submission of Abstract

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Title of the Poster:

The Large Enriched Germanium Experiment for Neutrinoless $\beta\beta$ Decay (LEGEND)

Abstract Text:

The LEGEND collaboration is pursuing the search for $0\nu\beta\beta$ decay in ^{76}Ge with a tonne scale experimental setup. A first 200kg stage is being prepared at LNGS. The existing infrastructure of the GERDA experiment will undergo major changes and the detectors currently installed in the MAJORANA demonstrator will be shipped to LNGS. Additional enriched germanium has already been procured and detector production will start in spring 2019. Radio-pure and low-noise solutions for front-end electronics and structural components are being tested. Also, the expected background for possible detector array arrangements are intensively studied in simulations. The presented poster is giving an overview of the status and expectations in terms of background and sensitivity projections of the LEGEND experiment.

Summary:

keywords: neutrino, double beta decay, Ge76, germanium detectors