

## **New results from GERDA and prospects for LEGEND: background-free search for neutrinoless double beta decay of $^{76}\text{Ge}$**

*Wednesday, 4 July 2018 09:00 (30 minutes)*

The GERDA collaboration searches for  $0\nu\beta\beta$  decay of  $^{76}\text{Ge}$  by operating bare high-purity germanium detectors, enriched in the isotope  $^{76}\text{Ge}$ , in liquid argon. We will report the latest results of GERDA Phase II. The potential of an essentially background-free search for  $0\nu\beta\beta$  decay motivated the foundation of the new LEGEND collaboration. The LEGEND collaboration pursues a staged implementation with the ultimate goal to operate one ton of enriched germanium detectors. In its first stage, we plan to operate up to 200 kg of germanium detectors in the GERDA infrastructure at LNGS.

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