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## Probing Majorana neutrinos via double- $\beta$ decay with GERDA

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A discovery of neutrinoless double beta ( $0\nu\beta\beta$ ) decay would establish neutrinos as Majorana fermions and imply a violation of lepton number conservation. The GERDA collaboration searches for  $0\nu\beta\beta$  decay by operating germanium detectors enriched in  $^{76}\text{Ge}$  in a cryostat filled with liquid argon. Instrumenting the cryostat with photosensors to enable read out of scintillation light from the argon, an unprecedented low background in the region of interest is reached, rendering the experiment effectively background free up to its design exposure of 100 kg yr. With the latest data release in mid 2018, GERDA was the first experiment to surpass a half-life sensitivity of  $10^{26}$  yr for  $0\nu\beta\beta$  decay. The experiment was recently upgraded, deploying a new type of germanium detector and improving the liquid argon instrumentation for the last stretch of its runtime until the end of 2019.

We will summarize the latest results and report on the performance since the upgrade.

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