

## Search for neutrinoless double beta decay with GERDA

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The GERmanium Detector Array (GERDA) experiment for the search of lepton number violating neutrinoless double-beta decay of  $^{76}\text{Ge}$  is located at the Laboratori Nazionali del Gran Sasso (LNGS). GERDA operates bare, enriched Ge diodes in liquid argon. The BEGe detectors used in GERDA provide an excellent background discrimination from the analysis of the time profile of the detector signals, while the instrumentation of the cryogenic liquid volume surrounding the germanium detectors acts as an active veto to further suppress the external background. With a total exposure of  $82.4 \text{ kg} \times \text{yr}$  GERDA remains in the background free regime and has achieved a median sensitivity on the half-life of  $T_{1/2} > 1.1 \times 10^{26} \text{ yr}$  (90% C.L.). The non observation of any signal allowed to derive a lower limit of  $T_{1/2} > 0.9 \times 10^{26} \text{ yr}$  (90% C.L.). This contribution will focus on the basic concept of the GERDA design, the data taking and the physics results obtained in Phase II.

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