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GERDA Highlights: Probing the Majorana Neutrino Mass at 100 meV

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Since 2010, the GERDA project has been operated at Laboratori Nazionali del Gran Sasso (LNGS), searching for the neutrinoless double beta decay (0νββ) of Ge-76 to Se-76. GERDA is nowadays completing its mission, having attained 100 kgy exposure and, as first experiment, surpassed the goal sensitivity of 10^26 yr on the half-life of the searched process. Since its beginning in 2010 GERDA has increased its sensitivity for the measurement of the decay by almost a factor of 5, thanks to excellent passive shield setup, operating procedures, energy resolution, and implementation of active background suppression strategies. The GERDA results allow to directly probe the Majorana neutrino mass down to about 100 meV scale.
In this talk, the GERDA setup, technological features and operation will be summarized, and the above outlined results, based on an exposure of about 85 kgy, will be reviewed in the framework of results from other 0νββ players. The Ge-76 two neutrino double beta decay half-life measured by GERDA, the main detected background sources, the performances and background indexes for the different detector types, the data analysis flow and algorithms will be discussed as well.
The perspectives of the final GERDA data release and the transition to the LEGEND project will be addressed.

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