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First results on neutrinoless bb decay from GERDA experiment

Saturday, 20 July 2013 09:00 (25 minutes)

Since November 2011, GERDA is operating with its novel technique, about 18 kg of enriched Ge detectors searching both for neutrinoless and two neutrino accompanied double beta decay of Ge-76. In this talk first results on neutrinoless decay and the recently published results on two neutrino accompanied decay will be reported, as well as the background interpretation model. The apparatus performances and the GERDA project major milestones will be also reviewed, as well as a critical comparison with the results and the background index of completed or ongoing experiments.

Finally the forthcoming GERDA experimental program, to double within end of 2013 the exposed mass adding new enriched Ge detectors with improved pulse shape discrimination features, and to implement the liquid argon scintillation light readout will be outlined.

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