Contribution ID: **89** Type: **Parallel Talk**

GERDA Phase II: recent results in the search for neutrinoless double beta decay

Friday, 7 July 2017 15:30 (15 minutes)

The GERDA (GErmanium Detector Array) experiment, located at the Laboratori Nazionali del Gran Sasso, is searching for neutrinoless double beta ($0\nu\beta\beta$) decay of ^{76}Ge. Since the end of 2015, in Phase II of the experiment, 35 kg of enriched high-purity germanium detectors are operated in liquid argon, that serves as cooling for the detectors as well as active shield against external radiation. The aim is a sensitivity on the $0\nu\beta\beta$ decay half-life larger than 10^{26} yr with about 100 kg·yr exposure and the lowest background level in the field of about 10^{-3} cts/(keV·kg·yr). In this talk, an overview of the analysis of the data collected so far will be presented with an emphasis on the background rejection techniques and their performance together with the half-life limit.

Experimental Collaboration

GERDA

Primary author: ZSIGMOND, Anna Julia (Max Planck Institute for Physics)

Presenter: ZSIGMOND, Anna Julia (Max Planck Institute for Physics)

Session Classification: Neutrino physics

Track Classification: Neutrino Physics