Contribution ID: **464** Type: **Poster 0vbb**

Upgrade of the GERDA experiment

The GERDA (GERmanium Detector Array) experiment at the Laboratori Nazionali del Gran Sasso of INFN, Italy, is designed to search for neutrinoless double beta decay of ^{76}Ge. In GERDA for the first time ever detectors are directly immersed in liquid argon which works as a cooling medium and as an additional active shield against external radioactivity. Phase II data taking started in December 2015. The desired background index of 0.001 counts/(keV kg yr) has been reached and the sensitivity of 10^{26} years has been recently achieved. The sensitivity of GERDA can be further improved by reducing the background index and by adding more enriched Ge detectors of a novel design, that seem to be good detector candidates for future tonne-scale experiment LEGEND. Such an upgrade of the GERDA experiment is planned to be accomplished at the time of the Conference. It is expected to reduce contaminations close to the detectors and improve the active liquid argon veto system.

Authorship annotation

for the GERDA collaboration

Session and Location

Monday Session, Poster Wall #77 (Auditorium Gallery Right)

Poster included in proceedings:

yes

Primary author: Dr GUSEV, Konstantin (JINR)

Presenter: Dr GUSEV, Konstantin (JINR)

Track Classification: Poster (participating in poster prize competition)