

## Performance of custom designed inverted coaxial HPGe detectors for GERDA and LEGEND

The newly formed LEGEND collaboration plans to deploy up to 200 kg of enriched germanium detectors in its first phase in the GERDA infrastructure at LNGS, Italy. The science goal is to search for the neutrinoless double beta (0nbb) decay of  $^{76}\text{Ge}$ . In the current GERDA and Majorana Demonstrator experiments, enriched HPGe detectors with excellent pulse shape discrimination (PSD) properties are being operated. Their masses are however typically below 1 kg. To reduce backgrounds from close by parts as cables and holders, larger mass detectors without compromising the PSD performance are required for LEGEND. A novel detector geometry, referred to as inverted coaxial, will be tested for the first time in the search for 0nbb decay in the GERDA experiment.

I will present the latest results about the performances of five new inverted coaxial detectors enriched in  $^{76}\text{Ge}$  which have been fully characterized at the HADES underground laboratory, Belgium.

### Authorship annotation

for the GERDA collaboration

### Session and Location

Monday Session, Poster Wall #109 (Auditorium Gallery Left)

### Poster included in proceedings:

yes

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**Track Classification:** Poster (participating in poster prize competition)