

## Energy calibration of the GERDA experiment

GERDA has been designed to search for neutrinoless double beta decay of  $Ge76$ .  $Ge76$  decays with the emission of two electrons and two antineutrinos, with a  $Q$ -value of 2039 keV. If neutrinos are Majorana particles, the two emitted antineutrinos can annihilate, with the signature of the decay being a sharp peak at the  $Q$ -value, whose width is determined by the detectors energy resolution. The sensitivity of the experiment to this hypothetical decay depends on the exposure, background rate and energy resolution. The energy resolution is estimated from the regular calibrations of the experiment. Thus, to ensure reliable physics results, a precise energy scale calibration is required. In this poster we will present the analysis of the energy calibration, from which the energy scale, resolution and their uncertainties are determined.

### Authorship annotation

for the GERDA collaboration

### Session and Location

Monday Session, Poster Wall #59 (Auditorium Gallery Right)

### Poster included in proceedings:

yes

**Primary author:** Ms MINGAZHEVA, Rizalina (University of Zurich)

**Presenter:** Ms MINGAZHEVA, Rizalina (University of Zurich)

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