Contribution ID: **236** Type: **Poster 0vbb**

First Result on the Neutrinoless Double Beta Decay of 82Se with CUPID-0

CUPID-0 is the first large mass experiment based on cryogenic calorimeters (bolometers) which implements the dual read-out of light and heat for background rejection. The detector, consisting of 24 enriched Zn ^{82}Se crystals (5.28 kg of ^{82}Se), is taking data in the underground LNGS (Italy) from March 2017.
In this poster we will present the analysis that allowed to set the most stringent limit on the half-life of neutrino-less double beta decay of ^{82}Se.
We will show how the particle identification, enabled by the simultaneous read-out of heat and light, provides an unprecedented background level for cryogenic calorimeters of 3.6×10^{−3} counts/keV/kg/y.

Authorship annotation

for the CUPID-0 Collaboration

Session and Location

Monday Session, Poster Wall #47 (Auditorium Gallery Right)

Poster included in proceedings:

yes

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Track Classification: Poster (participating in poster prize competition)