

## Direct Dark Matter Search with the CRESST-III Experiment

### Authorship annotation

for the CRESST collaboration

### Session and Location

Wednesday Session, Poster Wall #131 (Hölderlin-Room)

### Abstract content

The CRESST-III (Cryogenic Rare Event Search with Superconducting Thermometers) experiment located in the Gran Sasso underground laboratory (LNGS, Italy) aims at the direct detection of dark matter (DM) particles. The experiment employs scintillating CaWO<sub>4</sub> single-crystals as the target material for dark matter interactions and aims to probe the low-mass parameter space of elastic dark-matter - nucleon scattering with unprecedented sensitivity. The key to achieve this sensitivity are specially optimised detector modules that are operated at a temperature of  $\sim 10\text{mK}$  and consist of a  $\sim 25\text{g}$  CaWO<sub>4</sub> target crystal and a silicon-on-sapphire light detector. Using this approach, a nuclear recoil energy threshold of less than 100eV is achieved.

Phase I of the CRESST-III experiment has been taking data since August of 2016 and in this contribution recent results of the experiment will be presented and the perspectives of future stages of the experiment will be discussed.

### Poster included in proceedings:

yes

**Primary author(s) :** Mr. WILLERS, Michael (LBL)

**Presenter(s) :** Mr. WILLERS, Michael (LBL)

**Session Classification :** Poster Session Wednesday

**Track Classification :** Poster (not participating in poster prize competition)