

## Low-mass dark matter search with CRESST-III

*Saturday, 30 June 2018 09:30 (30 minutes)*

CRESST (Cryogenic Rare Event Search with Superconducting Thermometers) is a direct dark matter search experiment located in the underground site of the Laboratori Nazionali del Gran Sasso (LNGS) in Italy. It uses scintillating  $\text{CaWO}_4$  crystals operated as cryogenic calorimeters at mK temperatures optimized for the detection of nuclear recoils of 100eV and below. The experiment in its current stage, CRESST-III phase 1, is leading the field of low-mass dark matter detection and has recently extended the sensitivity of nuclear-recoil based direct searches to dark matter masses of below  $500\text{MeV}/c^2$ . In this contribution, we will review the experimental technique of CRESST-III and report in detail about the most recent dark matter results. We will conclude with a discussion on future challenges and prospects of this experimental approach

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