

New Results from the CRESST Experiment

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The CRESST (Cryogenic Rare Event Search with Superconducting Thermometers) experiment aims at the direct detection of WIMPs. The recent Dark Matter run was operated for 2 years with a total target mass of 5kg. With respect to previous measuring campaigns the intrinsic radiopurity of CaWO₄ crystals and the capability to reject recoil events from alpha surface contamination has been significantly improved. We analyzed the data acquired by two CaWO₄ detectors which combine an unprecedented background level with a trigger threshold as low as 300eV. In this talk, we present a new detector design and the results of a low-threshold analysis which set stringent limits for the spin-independent WIMP-nucleon cross section, in particular for low-mass WIMPs. The status of the currently ongoing preparations towards the next phase of CRESST and the strategy beyond will be discussed.

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