

New results from CUORE-0: double beta decay to excited states and low energy rare event searches

CUORE (Cryogenic Underground Observatory for Rare Events) is an array of 988 TeO₂ bolometers to search for the neutrinoless double beta decay (NDBD) of ¹³⁰Te. CUORE-0, the first CUORE-style detector with 1/19 of the mass was taking data from 2013 to 2015. Besides producing the world-leading ¹³⁰Te NDBD half-life limits, CUORE-0 is also suitable for searching for ¹³⁰Te double beta decay to excited states and low energy rare events, such as solar axions or WIMP dark matter in the galactic halo. In this poster, results from those analyses will be presented and its implication to CUORE will be discussed.

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