

Neutrinoless double beta decay search using CUORE dual-Site events

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The Cryogenic Underground Observatory for Rare Events (CUORE) is a ton scale experimental search for $0\nu\beta\beta$ decay on ^{130}Te . The CUORE detector consists of 988 TeO_2 crystals operating as cryogenic bolometers at the Gran Sasso National Laboratory (LNGS) in Italy. While simulations suggest that about 11% of $0\nu\beta\beta$ decay events deposit energy in more than one crystal, the standard CUORE analysis considers only single-site events. In this talk we present the preliminary results of the search using dual-site events in CUORE, including the analysis techniques used to reconstruct the energy, suppress backgrounds, and estimate future sensitivity.

Poster prize

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