

The CUORE bolometric detector for neutrinoless double beta decay searches

Friday, 1 September 2017 16:55 (20 minutes)

The Cryogenic Underground Observatory for Rare Events (CUORE) is the first bolometric experiment reaching the 1-ton scale. The detector consists of an array of 988 TeO₂ crystals arranged in a cylindrical compact structure of 19 towers. The construction of the experiment and, in particular, the installation of all towers in the cryostat was completed in August 2016: the experiment is now in pre-operation phase and data taking is commencing. In this talk, we will discuss the technical challenges of the construction and pre-operation phases, the design choices and measured performance of its electronic instrumentation and the first results from the full detector runs.

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Session Classification: Neutrino physics

Track Classification: 3) Neutrino physics