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First results from the CUORE experiment

Friday 28 July 2017 09:00 (20 minutes)

The Cryogenic Underground Observatory for Rare Events (CUORE) is the first bolometric experiment searching for neutrinoless double beta decay that has been able to reach 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 detector was then successfully cooled down to a base temperature below 8 mK by the beginning of 2017. After few months devoted to the initial detector commissioning, calibrations started in April 2017 followed by a physics run in May 2017. A new campaign of optimization of the detector performance is now ongoing to be followed by a new physics run during the summer. The first physics results of CUORE, as well as a summary of the initial detector performance will be presented.

Presenter: CREMOSI, Olivero

Session Classification: CUORE Results - Oliviero Cremonesi

Track Classification: Neutrinos