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# First CUORE Results

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*Abstract*

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 TeO<sub>2</sub> crystals arranged in a cylindrical compact structure of 19 towers. After the completion of the experiment construction, CUORE 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 CUORE cryogenic setup and the system performances will be reported. Moreover the first physics results of CUORE, as well as a summary of the initial detector performances will be presented.

**July 28, 2017 - 11:30 am**  
**LNGS - "B. Pontecorvo" room**