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First results from the CUORE experiment

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 and commissioning started in fall. The experiment has completed the pre-operation phase and data taking is commencing. In this talk, we will present the achievements of the CUORE construction phase, the performance of the detector during pre-operation and the first results from the full detector run. Physics results from CUORE-0, the first CUORE-style tower operated in 2013-2015, will also be updated.

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