



Contribution ID: 7

Type: **Contributed Parallel Talk**

# Latest Results from the CUORE experiment

*Wednesday, 25 October 2023 11:30 (20 minutes)*

The Cryogenic Underground Observatory for Rare Events (CUORE) is the first bolometric experiment searching for  $0\nu\beta\beta$  decay that has successfully reached the one-tonne mass scale. The detector, located at the LNGS in Italy, consists of an array of 988 TeO<sub>2</sub> crystals arranged in a compact cylindrical structure of 19 towers. CUORE began its first physics data run in 2017 at a base temperature of about 10 mK and has been collecting data continuously since 2019, reaching a TeO<sub>2</sub> exposure of 2 tonne-year in spring 2023. This is the largest amount of data ever acquired with a solid state cryogenic detector, which allows for further improvement in the CUORE sensitivity to  $0\nu\beta\beta$  decay in <sup>130</sup>Te. In this talk, we will present the new CUORE data release, based on the full available statistics and on new, significant enhancements of the data processing chain and high-level analysis.

**Presenter:** RESSA, Alberto (CUORE collaboration)

**Session Classification:** Neutrino Properties

**Track Classification:** Neutrino Properties