

The CUORE experiment: current status and road ahead

Monday 25 August 2025 14:20 (20 minutes)

After collecting more than five years of continuous data and accumulating over 2.8 tonne-years of TeO_2 exposure, CUORE has firmly established itself as a leading cryogenic calorimeter experiment for rare-event searches. We present a summary of our latest results which, along with our unprecedented cryogenic performance, demonstrate our readiness to tackle a different set of new challenges. After reaching our target exposure of 3 tonne-years TeO_2 in 2026, “CUORE Run-2” will follow a targeted cryogenic upgrade that will improve our low-energy analysis performance. We will describe how this initiative, associated analysis techniques, and results will largely benefit CUPID as the next-generation experiment continues to unlock the full potential of this detection technique.

Collaboration you are representing

CUORE

Author: CAMPANI, Alice (Università degli studi di Genova - Istituto Nazionale di Fisica Nucleare sezione di Genova)

Co-authors: SCHMIDT, Benjamin (CEA IRFU/DPHP); SPEAKERSBOARD, CUORE

Presenter: CAMPANI, Alice (Università degli studi di Genova - Istituto Nazionale di Fisica Nucleare sezione di Genova)

Session Classification: Neutrino Physics and Astrophysics

Track Classification: Neutrino Physics and Astrophysics