Status of the CUORE experiment

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CUORE (Cryogenic Underground Observatory for Rare Events) is an array of 988 TeO2 bolometers arranged in 19 towers with a total active mass of 742 kg located at the Laboratori Nazionali del Gran Sasso (LNGS) in Italy. The primary purpose of CUORE is to search for the neutrinoless double beta decay of 130Te, which if observed, would establish the Majorana nature of neutrinos as well as providing information on the absolute mass scale of the neutrino. The CUORE detector reached a base temperature below 10 mK in early 2017 and is currently undergoing commissioning with the anticipated start of physics data-taking happening very soon. We will discuss the status of the CUORE experiment, review the installation and commissioning phases, and present the most recent results from CUORE-0, a single-tower array of 52 bolometers, operated at LNGS between 2013-2015.

Primary author: FUJIKAWA, Brian (Lawrence Berkeley National Laboratory)
Presenter: GLADSTONE, Laura (o=research,ou=Institutions,dc=icecube,dc=wisc,dc=edu)
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