

Abstract Submitted
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Searching for neutrinoless double beta decay of Te-130 with CUORE bolometers¹ KE HAN, Yale University, CUORE COLLABORATION — The CUORE (Cryogenic Underground Observatory for Rare Events) experiment will search for neutrinoless double beta decay of Te-130. CUORE large-mass bolometer array will consist of 988 tellurium oxide bolometer modules and a total of 206 kg of Te-130 in one single cryostat at 10 mK. It will be sensitive to an effective Majorana neutrino mass of 50-130 meV and is one of the most sensitive experiments under construction. The detector and the cryostat are in an advanced stage of installation and is expected to start operation by the end of 2015. Recent results from CUORE-0, a prototype experiment to CUORE, have validated the performance and background predictions of TeO₂ bolometer arrays. In this talk, we will present the latest results from CUORE-0, the construction status, as well as sensitivity projection of CUORE.

¹On behalf of the CUORE Collaboration

Ke Han
Yale University

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