

Abstract Submitted  
for the CAL12 Meeting of  
The American Physical Society

**Cal Poly Contributions to the CUORE Experiment** DAVID MILLER, SAMUEL MEIJER, MICHAEL HASKIN, THOMAS GUTIERREZ, California Polytechnic State University, CUORE COLLABORATION — CUORE (Cryogenic Underground Observatory for Rare Events) is a multinational experimental collaboration searching for the lepton-violating neutrinoless double beta decay ( $0\nu\beta\beta$ ) in  $^{130}\text{Te}$ . The detection of  $0\nu\beta\beta$  would indicate the neutrino is a Majorana fermion and also set the absolute mass scale of the electron neutrino. The experiment is currently being built in stages at the Gran Sasso National Laboratory in Assergi, Italy. CUORE-0 is a detector array expected to go online this year consisting of 52 bolometric crystals in a single tower, which is equivalent to 1/19th of the full mass of CUORE. We will describe our recent contributions to activities associated with CUORE-0 deployment, background reduction efforts, and the CUORE crystal verification runs as the collaboration works towards bringing CUORE online in 2014.

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Date submitted: 28 Sep 2012

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