

Abstract Submitted
for the DNP16 Meeting of
The American Physical Society

Search for WIMP-Induced Annual Modulation with the CUORE-0 Experiment¹ KYUNGEUN LIM, Yale University, CUORE COLLABORATION — CUORE-0 was a cryogenic detector that uses an array of tellurium dioxide bolometers with the primary physics goal of searching for neutrinoless double-beta decay of Te-130. CUORE-0 was assembled using new low-background techniques developed for CUORE, which will consist of 19 CUORE-0-like arrays. The first results on the search for neutrinoless double-beta decay with CUORE-0 combined with Cuoricinio, a predecessor to CUORE-0, set the most stringent limit on the half-life of Te-130. Successful background mitigation, along with continuous data acquisition make CUORE-0 also suitable for other low-energy, rare event searches such as dark matter. In this talk, I will present the status and results of the low-energy analysis of CUORE-0.

¹DOE-NP

Kyungeun Lim
Yale University

Date submitted: 29 Jun 2016

Electronic form version 1.4