

Abstract Submitted  
for the DNP08 Meeting of  
The American Physical Society

**Status of the EXO-200 double beta decay experiment** DEREK MACKAY, University of Maryland, EXO COLLABORATION — The EXO collaboration is presently constructing and commissioning the world's largest search for neutrinoless double beta decay. The centerpiece of this experiment, known as EXO-200, is 200 kilograms of xenon enriched to 80% in Xenon-136. The xenon is cooled to 170 K, where it liquefies, and is held in a thin copper vessel inside several layers radioactive shielding. Ionizing events in the liquid xenon produce a charge signal which we observe on a segmented anode and a scintillation signal which is collected by array of avalanche photodiodes (APDs). The detector measures the three dimensional event location and the energy of the individual charge deposits, and it can distinguish between multiple-site Compton scattering events and single-site signal candidates. The experiment is located underground at the WIPP facility in Carlsbad, New Mexico, and is currently undergoing final commissioning in preparation for physics data taking. We will present in this talk the current status of our preparations and our expected neutrino mass sensitivity.

Carter Hall  
University of Maryland

Date submitted: 16 Oct 2008

Electronic form version 1.4