

Abstract Submitted
for the HAW09 Meeting of
The American Physical Society

Designing Electronics and PMT Housing for a Liquid Scintillator Detector to be Used for Measuring Muon-Induced Processes at Hometown BRIAN WOLTMAN, PATRICK DAVIS, DONGMING MEI, CHAO ZHANG, CUBED TEAM — Understanding the backgrounds produced by muon-induced processes is important to the success of experiments searching for rare event physics such as neutrinoless double-beta decay, dark matter, or neutrino oscillations, which require extremely low backgrounds. Measuring these muon-induced processes is vital for the low background experiments planned for the Sanford Lab. We have designed a detector to measure the muon-induced backgrounds produced underground. Our detector consists of a 10.8 liter scintillator joined with two PMT's. We will present our design for housing the PMT's, including their attachment to the scintillator and necessary magnetic shielding. We will also present our design for a voltage divider that was constructed and tested for use on each of the PMT's.

Brian Woltman

Date submitted: 29 Jul 2009

Electronic form version 1.4