

Abstract Submitted  
for the 4CF12 Meeting of  
The American Physical Society

**On the temperature dependence observed in the scaler rates of a water Cherenkov detector** FRED SCHUCKMAN II, MIGUEL MOSTAFA, Colorado State University, HAWC COLLABORATION — The High Altitude Water Cherenkov (HAWC) Observatory is under construction in Sierra Negra, Mexico. The Observatory will consist of 300 Water Cherenkov Detectors (WCDs). The only full-size WCD outside the high altitude site (14,000 ft) is at Colorado State University (CSU). The main purpose of the CSU prototype is to test every component of the WCDs. The prototype is equipped with seven upward facing photomultiplier tubes (PMTs), and has been operational since March 2011. Dedicated data runs are regularly taken to study the laser calibration system, the HAWC DAQ, and the scalers. Five temperature probes constantly monitor the outside temperature as well as the temperature of the electronics. Scaler rates were found to be strongly correlated with the temperature of the electronics of the DAQ system. This temperature dependence will be described, and the corrected scaler rates will be shown in this presentation. The CSU prototype and the calibration methods will be described in two other presentations.

Fred Schuckman II  
Colorado State University

Date submitted: 24 Sep 2012

Electronic form version 1.4