Abstract Submitted
for the APR14 Meeting of
The American Physical Society

A Search for VHE Emission from GRBs using the HAWC Observatory Air Shower Data KATHRYNE SPARKS WOODLE, Pennsylvania State University, HAWC COLLABORATION — At an altitude of 4100 m near the peak of Sierra Negra in Mexico, the High Altitude Water Cherenkov Observatory (HAWC) is a second generation water Cherenkov detector that primarily looks for very high-energy gamma-rays from the galaxy and beyond. Due to its wide field of view ($\sim$2 sr) and high duty cycle, this extensive air shower detector can observe the beginning of the prompt phase of GRBs occurring overhead. HAWC is sensitive to showers in the sub-TeV to TeV energy range and will be able to help constrain the shape and cutoff of high-energy GRB spectra, especially in conjunction with observations from other detectors such as Fermi. With the design improvement and higher elevation than its predecessor Milagro, HAWC will be almost two orders of magnitude more sensitive to GRBs at 100 GeV when complete. Existing instruments identify about 5 GRBs within HAWC's field of view per month. The detector has been operated throughout construction, and we will present a search for high-energy emission from GRBs, triggered by existing instruments, using HAWC directional air shower data.

Kathryne Sparks Woodle
Pennsylvania State University

Date submitted: 10 Jan 2014 Electronic form version 1.4