Abstract Submitted for the APR15 Meeting of The American Physical Society

Monitoring TeV Gamma-ray Sources for Flaring States with HAWC IAN WISHER, THOMAS WEISGARBER, Univ of Wisconsin, Madison, HAWC COLLABORATION — The flux of many TeV gamma-ray emitters exhibits time variability. Detection of these flaring states across multiple wavelengths will lead to a better understanding of the acceleration processes occurring in the source. The High-Altitude Water Cherenkov (HAWC) Observatory is an extensive air-shower detector located near Pico de Orizaba in Mexico which is sensitive to TeV gamma rays. Designed as a survey instrument, the HAWC detector has a large field of view and nearly 100% uptime. This makes HAWC an ideal instrument to monitor sources for transient flaring states. We will present a method of monitoring sources using a Bayesian blocks algorithm to detect changes in the flux and report on the sensitivity of the method. We also discuss results from several bright AGN flares which occurred during the construction phase of HAWC.

> Ian Wisher Univ of Wisconsin, Madison

Date submitted: 06 Jan 2015

Electronic form version 1.4