VERITAS follow-up observation of the blazar TXS 0506+056

Weidong Jin a.* on behalf of the VERITAS Collaboration and RileyAnne Sharpea

^aDepartment of Physics and Astronomy, University of Alabama, Tuscaloosa, AL 35487-0324, USA

E-mail: wjin4@crimson.ua.edu, rhsharpe@crimson.ua.edu

WHAT THIS CONTRIBUTION IS ABOUT

• VERITAS follow-up observation and an associated multiwavelength campaign of the potential neutrino blazar TXS 0506+056, collected between October 10, 2018 to March 1, 2021.

RELEVANCE

- TXS 0506+056 plays a key role in establishing connections between high- energy neutrinos and astrophysical sources.
- Studying the time evolution and spectral behavior of this blazar may help in identifying the sources of the diffuse neutrino flux observed by IceCube and the origin of energetic cosmic rays.

WHAT HAS BEEN DONE

 A multiwavelength light curve composed of very-high-energy gamma-ray data from VERITAS, high energy gamma-ray data from the *Fermi*- LAT light curve repository, X-ray data from the Neil Gehrels *Swift* Observatory X-ray telescope and optical data from the All-Sky Automated Survey for Supernovae Sky Patrol.

What is the result?

Integral flux upper limits.

WHAT WILL BEEN DONE

 Quantitative analysis including variability studies will be presented in an upcoming publication.