

Abstract Submitted
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Very High Energy Blazars and Optical Astronomy TRENTON ROSENQUIST, California State University, East Bay — A blazar is a type of active galactic nucleus (AGN) that emits a relativistic jet oriented towards the observer. At the very high energy range (VHE; >100 GeV), blazars emit gamma rays from the region of the relativistic jet. These gamma-ray emissions come from the most energetic processes in the entire universe. By using the Kast Spectrometer coupled with the Shane 3-meter telescope at the Lick Observatory, we measure the optical emission lines from the VHE blazar sources with variable gamma-ray flux in an attempt to collect information on the cosmological distance to each source through the measurement of source redshift. Doing so will allow us to ascertain the distance of each source to the Earth, which is needed in order to determine the source luminosity, and how much of the source photon flux has interacted with the extragalactic background light (EBL) on its voyage to Earth. By determining the intrinsic gamma-ray flux of the sources, researchers hope to utilize that information to better understand the mechanism driving the gamma-ray emissions from VHE blazars.

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