

The VERITAS-Stellar Intensity Interferometry (VSII) survey of Stellar Diameters

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The VERITAS Imaging Air Cherenkov Telescope (IACT) array was augmented in 2019 with high-speed focal plane electronics to allow the use of VERITAS for Stellar Intensity Interferometry (SII) observations. Since January 2019, VSII recorded more than 127 hours of moonlit observations on 22 different bright stars and binary systems ($m_V < 3$). The observations resulting in the measurement of the diameters of several stars at an effective optical wavelength of 417 nm with better than 5% resolution. This talk will describe the results of selected VSII observations, and discuss the sensitivity of these results to stellar phenomena such as limb darkening, rapid rotation, and other astrophysical effects.

Keywords

Intensity Interferometry; stellar diameters; IACT arrays; stellar envelopes; limb darkening

Collaboration

VERITAS

other Collaboration

Subcategory

Experimental Results

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