

Abstract Submitted
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Development of Stellar Intensity Interferometry techniques using twin 3 meter telescopes at *StarBase-Utah* NOLAN MATTHEWS, DAVID KIEDA, STEPHAN LEBOHEC, Univ of Utah — The emergence of large air Cherenkov telescope arrays have opened up the potential for high-resolution imaging of stellar surfaces using Intensity Interferometry techniques. Stellar Intensity Interferometry (SII) allows coverage into the optical and ultraviolet frequency bands which are traditionally inaccessible to classical Michelson interferometry. The relative insensitivity to atmospheric turbulence allows for unprecedented angular resolution scales as the baselines between telescopes can be made very large ($>100\text{m}$) without the need for precise spatial resolution as required by Michelson interferometry. In this talk I will illustrate the science capabilities of the SII technique and describe the progress achieved in developing a modern Stellar Intensity Interferometry system with a pair of 3 m diameter optical telescopes located at *StarBase-Utah*. In particular, observations of the optical Crab pulsar are being performed as a proof-of-concept for intensity interferometry measurements.

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