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Development of a Stellar Intensity Interferometry System at StarBase Utah DAVID KIEDA, STEPHAN LEBOHEC, PAUL NUNEZ, BENJAMIN ADAMS, RYAN PRICE, University of Utah Department of Physics and Astronomy, Salt Lake City, Utah — The Intensity Interferometry technique (II) has the potential to open up high-resolution stellar imaging into frequency bands which are traditionally inaccessible to classical Michelson Interferometry (such as UBV). The II technique requires use of very large area optical dishes (3-10 meter diameter or greater), distributed over baselines of tens to hundreds of meters, in order to reconstruct high resolution images of stellar disks. Next generation ground-based gamma-ray telescope arrays (such as CTA and AGIS) involve kilometer scale telescope arrays of up to one hundred large light collectors (8-20 m diameter), allowing development of a modern implementation of the Intensity Interferometry technique pioneered by the Narrabri Stellar Intensity Interferometer nearly fifty years ago. In this talk I will describe the science capabilities of the Stellar Intensity Interferometer technique, and describe the progress achieved in developing a modern Stellar Intensity Interferometry System with a pair of new 3 m diameter optical telescopes located at StarBase Utah.

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