The Balloon Experimental Twin Telescope for Infrared Interferometry (BETTII)

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The Balloon Experimental Twin Telescope for Infrared Interferometry (BETTII) is an eight-meter far-infrared interferometer designed to fly on a high altitude balloon. The long baseline permits subarcsecond angular resolution, a capability unmatched by other far-infrared facilities. The instrument is a double-Fourier Michelson interferometer, which allows simultaneous acquisition of both spatial and spectral information. With these two elements together, BETTII will have a unique capability for spatially-resolved spectroscopy. For BETTII's first flight, scheduled in 2015, we will focus on studying regions of clustered star formation, and will potentially provide the best picture to date of the evolutionary status of objects located in these regions. Here, we present the design capabilities of BETTII and discuss their application to star formation. We discuss the overall design of BETTII, and provide an update on the current status of the project.