

## Keck Interferometer Status and Plans

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2  
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Keck Interferometer is a NASA-funded project to combine the two 10 m Keck Telescopes for high sensitivity near-infrared fringe visibility measurements, nulling interferometry at 10  $\mu\text{m}$  to measure the quantity of exozodiacal emission around nearby stars, and differential-phase measurements to detect "hot-Jupiters" by their direct emission. Recent activity has included visibility mode commissioning and shared-risk science, and we will briefly review some of the significant technical aspects. We have also been completing laboratory development and summit preparations for the nuller. The nuller uses two modified Mach-Zehnder input nullers, a Michelson cross combiner, and a 10  $\mu\text{m}$  array camera, to produce background-limited null measurements. To provide required temporal stability for the nuller, the system incorporates end-to-end laser metrology with phase referencing from two 2.2  $\mu\text{m}$  fringe trackers. We will discuss the status of nuller commissioning. After the nuller installation, the differential phase camera will be deployed, which uses a 2-5  $\mu\text{m}$  fringe detector in combination with a precision path length modulator and a vacuum delay line for dispersion control, and we will discuss its current status and plans.