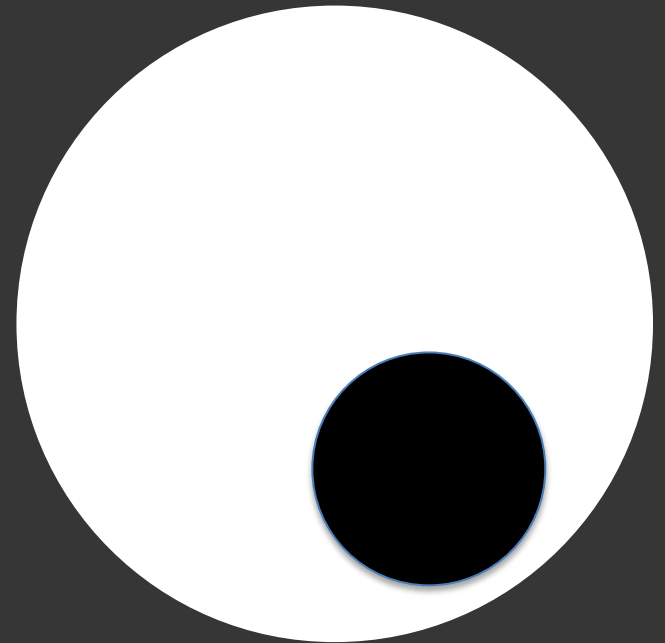
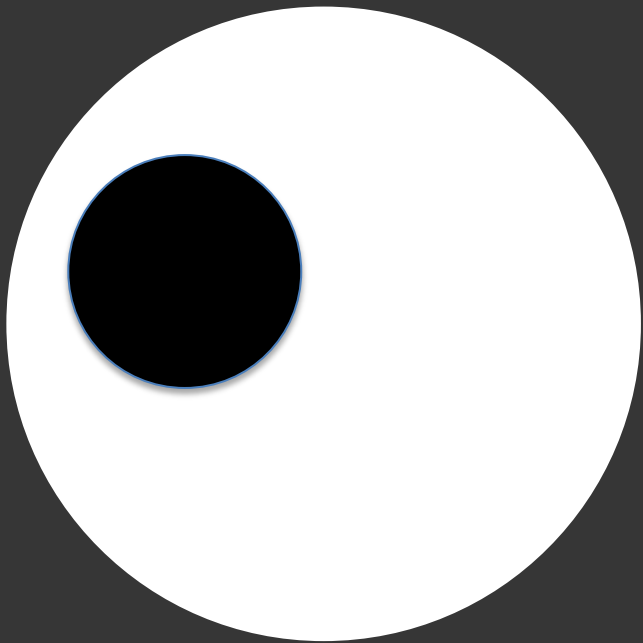


Wall-Eyed Pointing with the LBT



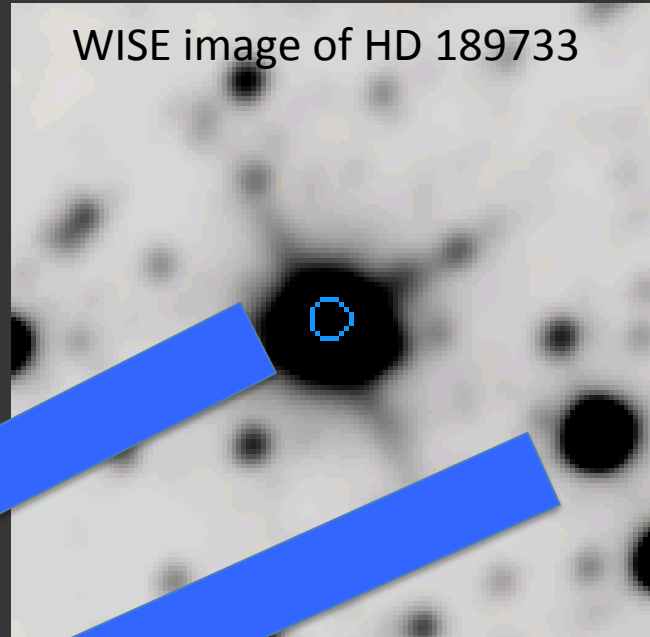
The Problem

- Longward of K-band, the brightness of the sky background limits your FOV (need small enough pixels so that they don't saturate).

LMIRCam and NOMIC both have ~10" FOVs

- The high-sky background also limits work to very bright stars, which makes it difficult to find a suitable calibrator in such a small FOV.

Solution: A Binocular Telescope



3'



On-sky test suggests ~ 2 arcminute limit—but depends on temp, elevation, etc.

New and Unique Observing Modes

Precise photometric calibration in the infrared

- From 3-5 microns errors go from ~5%→2%
- From 8-13 microns errors go from ~10%→2%

Precise photometric monitoring in the infrared

- ~0.003 relative error/minute on a 9th magnitude star
- ~300 ppm relative error during a typical 90 minute exoplanet transit.
- Not as precise as Warm Spitzer, but more suitable filters

Wall-Eyed Pointing

Sep on Detector--3"

Sep on Sky--40"

BD+32_1747

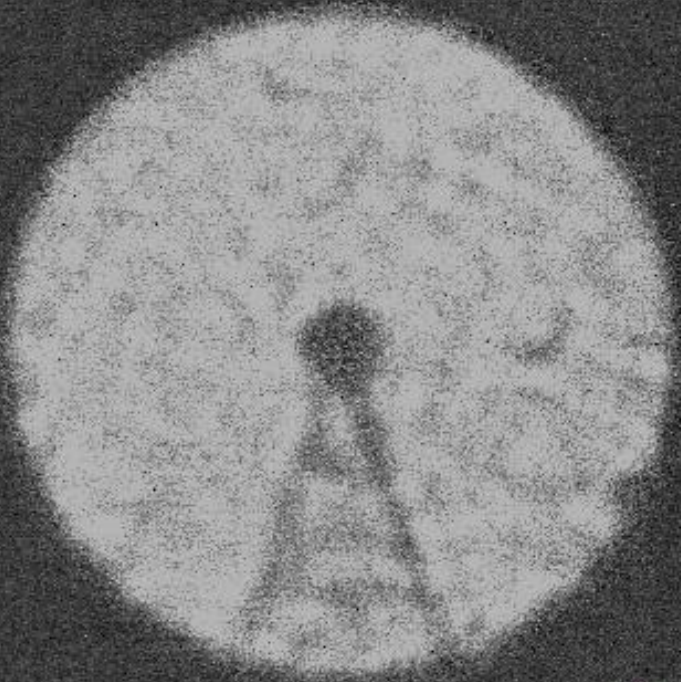


BD+32_1746

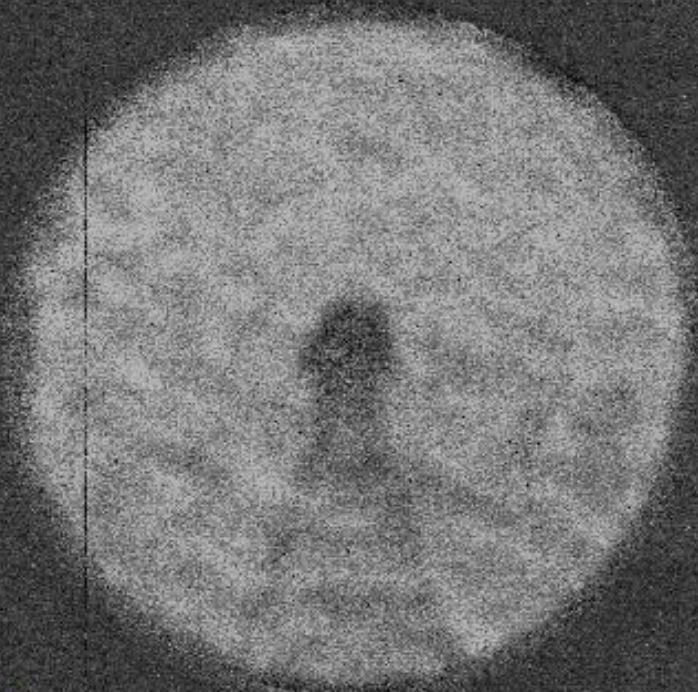


Pupil Wall-Eyed Pointing

Star A



Star B



Separated by 60" On-Sky

Aperture for Pupil Wall-Eyed Pointing

