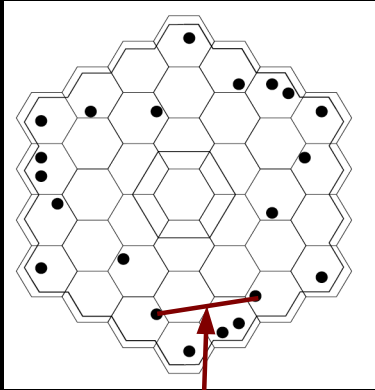


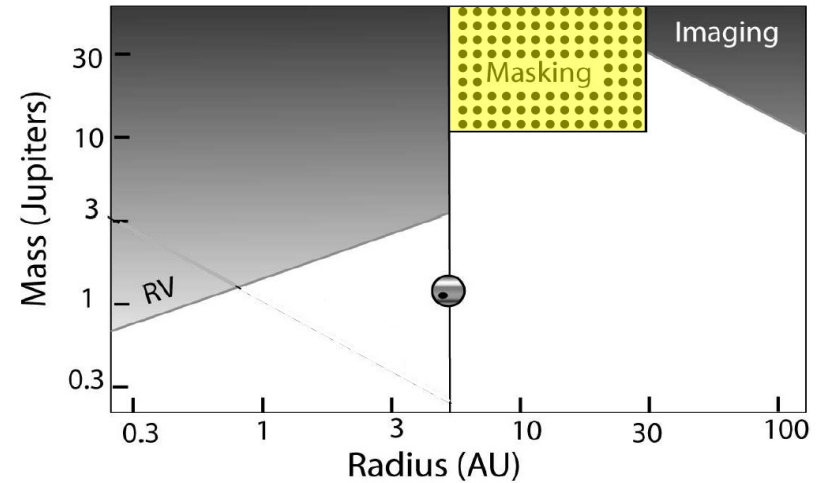
# Searching for Substellar Companions Below the Diffraction Limit



Interferometric Baselines (Young's Double Slit)

## Aperture Masking Interferometry:

- \*\* Conducting a survey of ~80 young, nearby stars
- \*\* Using aperture masking on Keck and VLT to search for substellar companions
- \*\* Sensitive down to 5M<sub>J</sub> companions, but more like ~40M<sub>J</sub> for most of the sample currently. Hope to improve in near future.
- \*\* Obtaining resolutions half the telescope diffraction limit → 3-30AU
- \*\* Radial Velocity < 5AU
- \*\* Coronagraphy > 30AU



Target is assumed to be a 2.5M<sub>⊙</sub> star in the 5Myr old Upper Sco association at ~145pc. Radial velocity precision of 20m/s is assumed, typical for a star of this mass. Imaging limits assume no speckle suppression.

