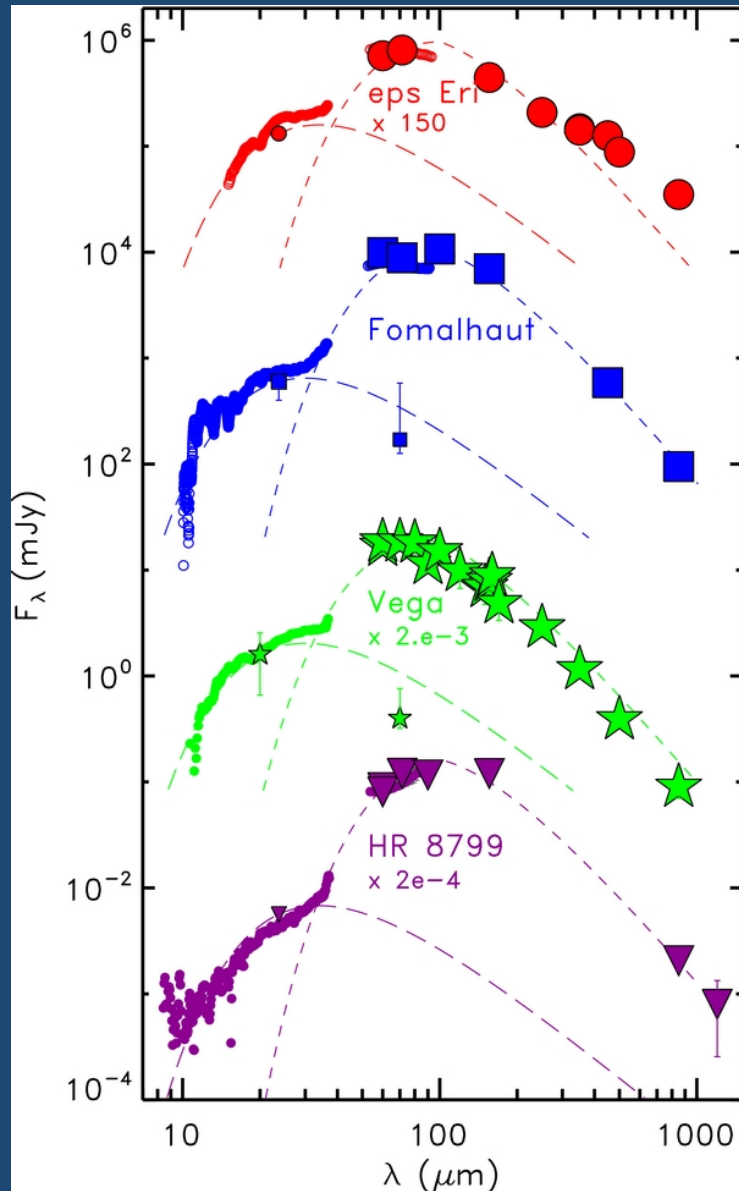


# Filling in the Gaps in “Holey Disks”

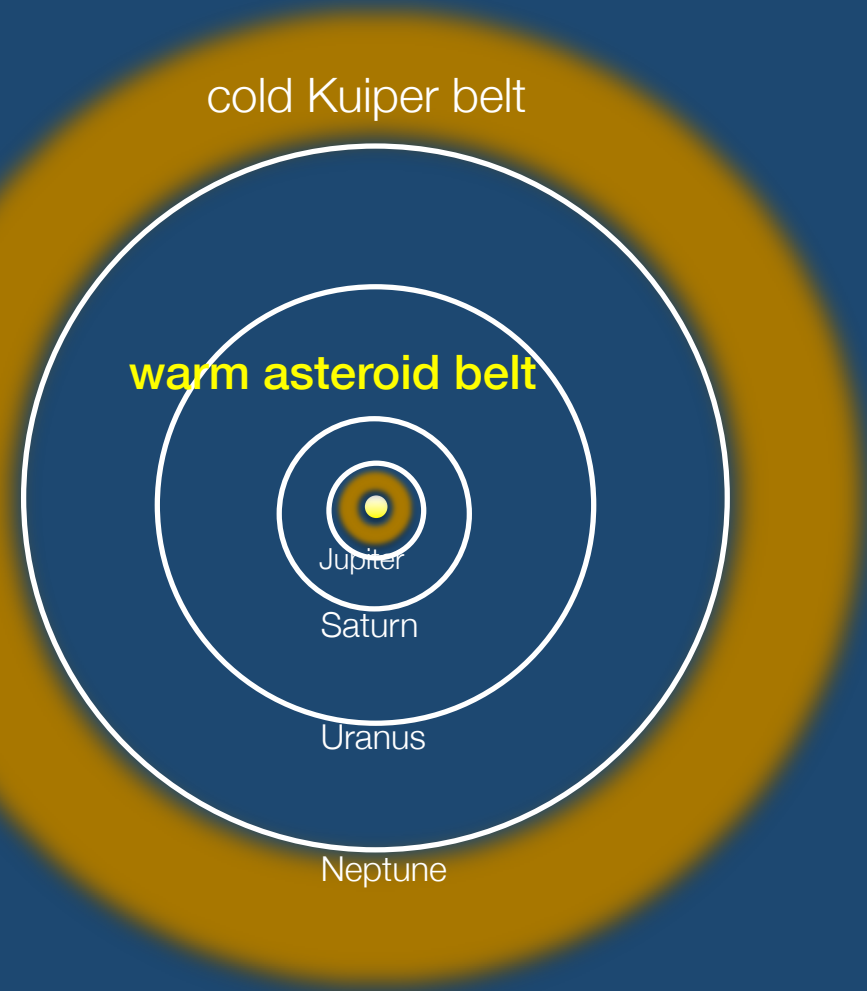
Tiffany Meshkat, M. Kenworthy, V. Bailey,  
K. Y. Su, P. Hinz, E. Mamajek  
In Prep

# Signposts for planets

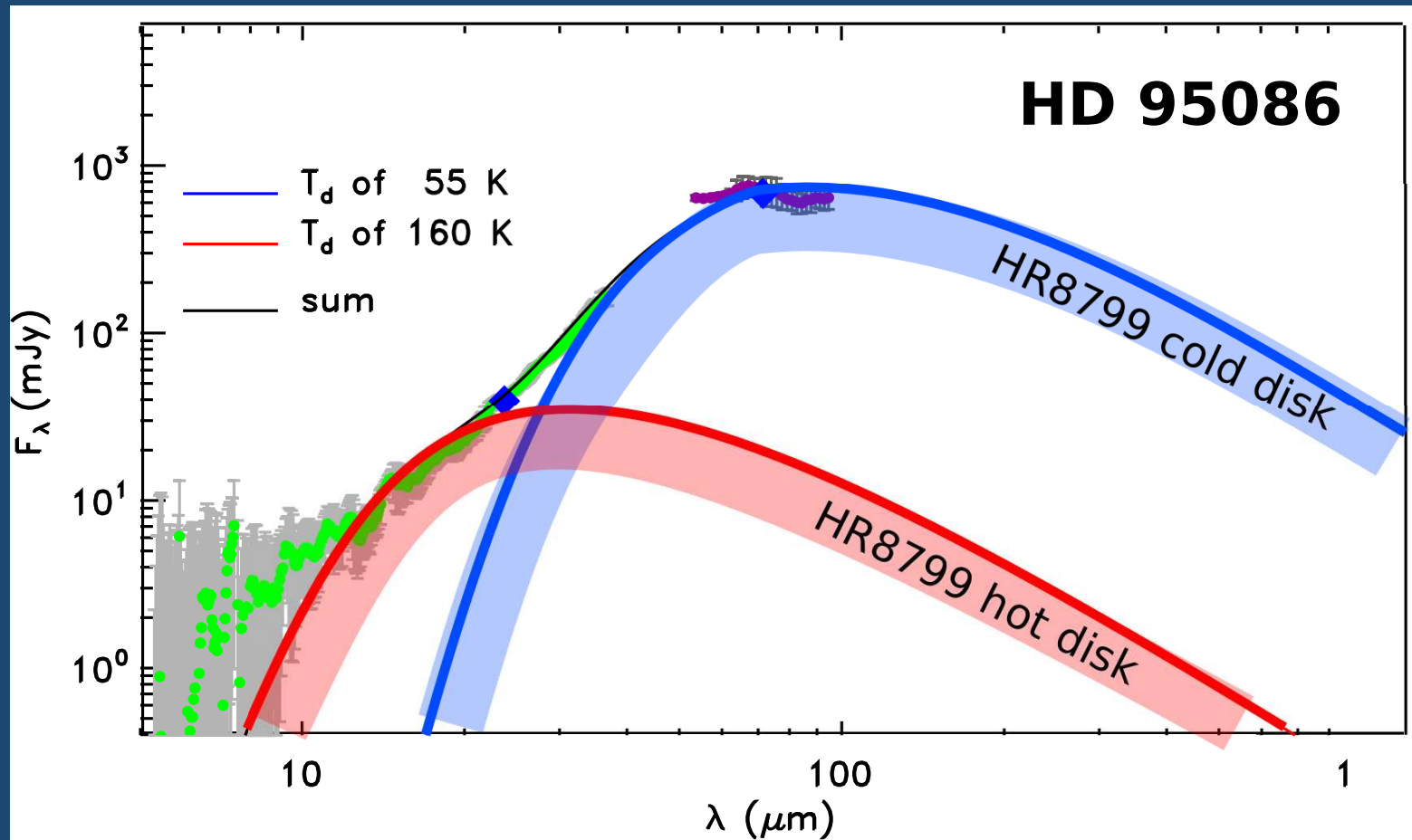


Su et al. 2013

## Our Solar System



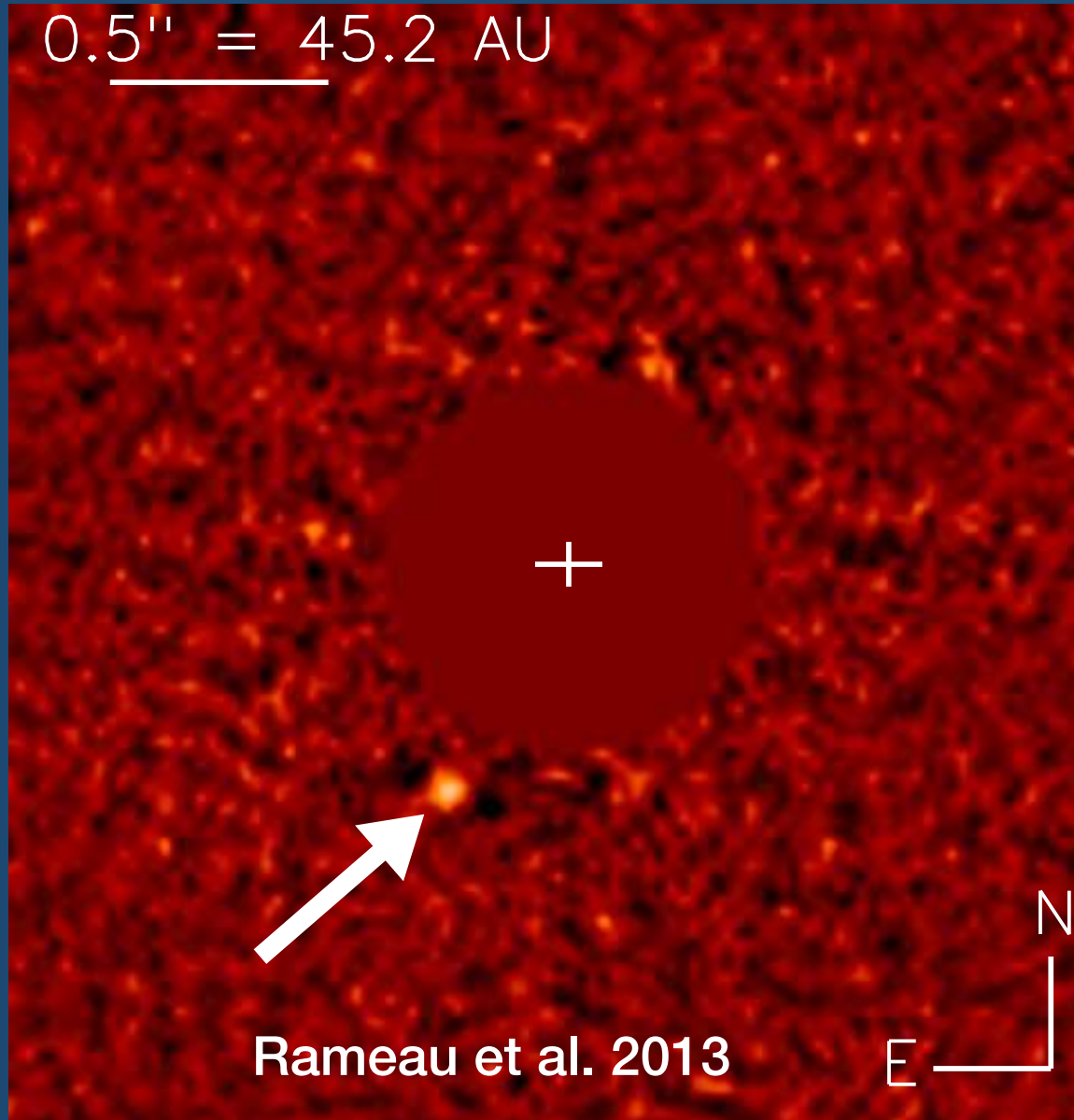
# “Holey Disks” Project



Two planets detected!

# HD 95086 b

0.5'' = 45.2 AU

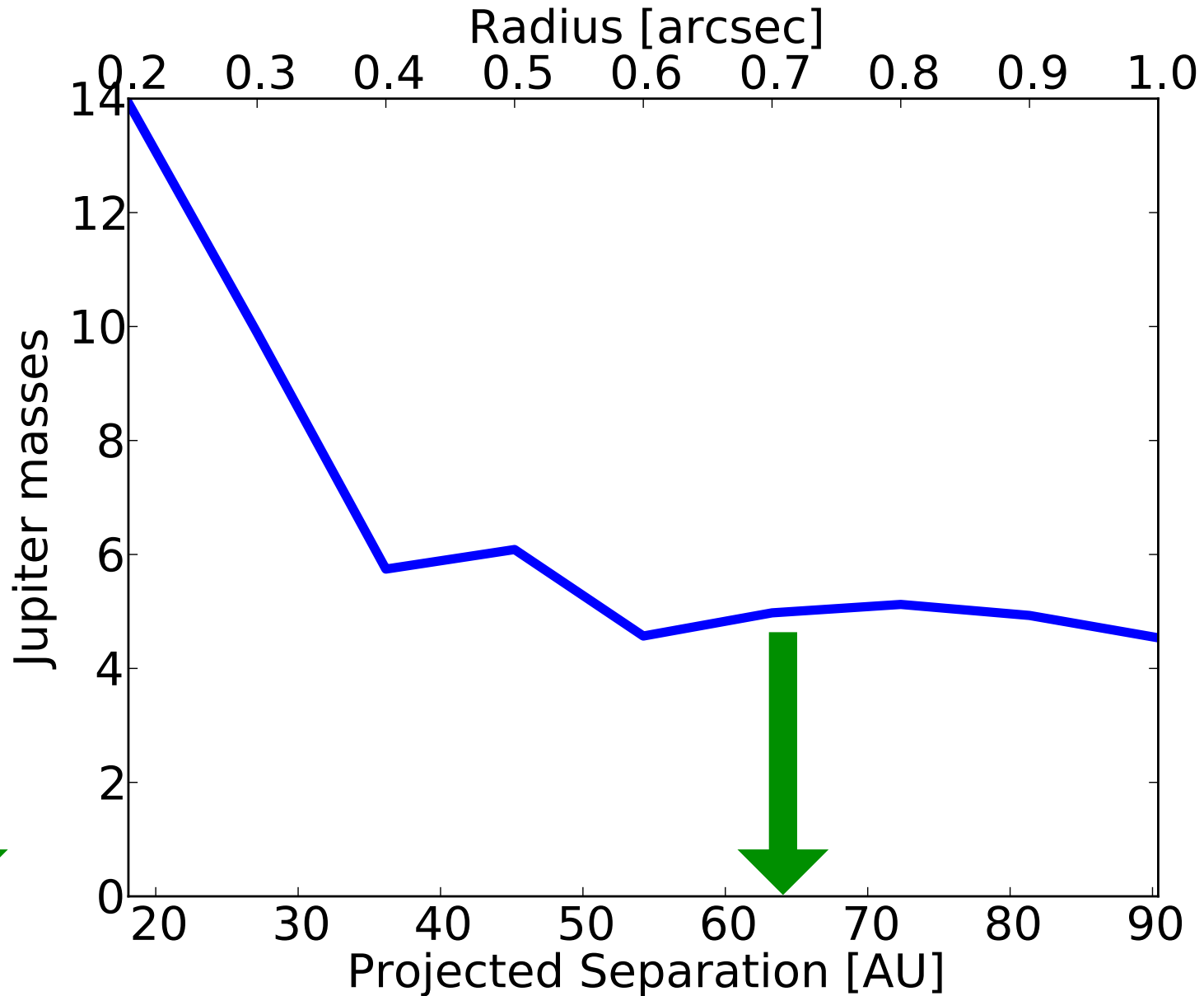


Rameau et al. 2013

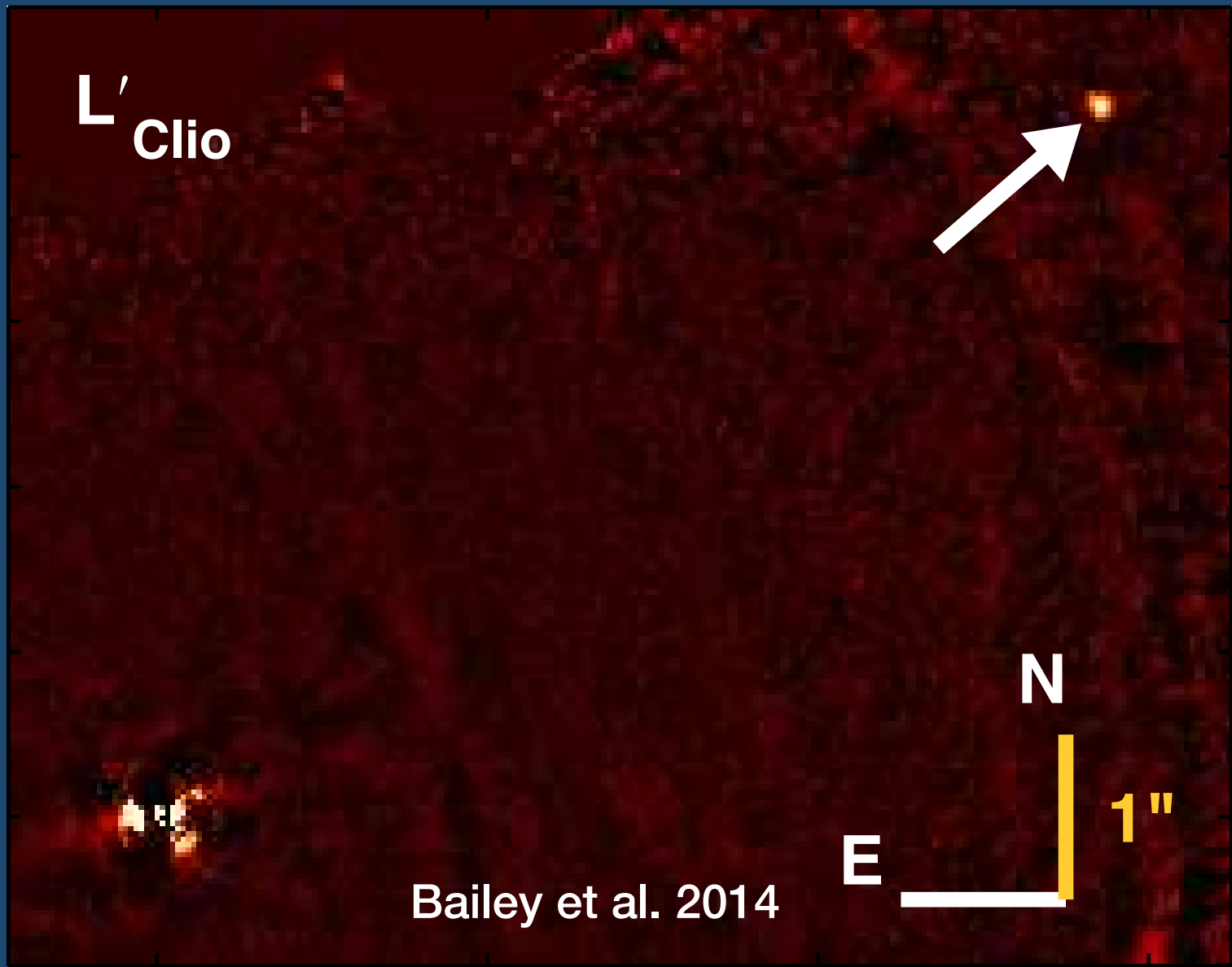
# HD 95086 disk structure



# HD 95086 $L'$ Mass Limit



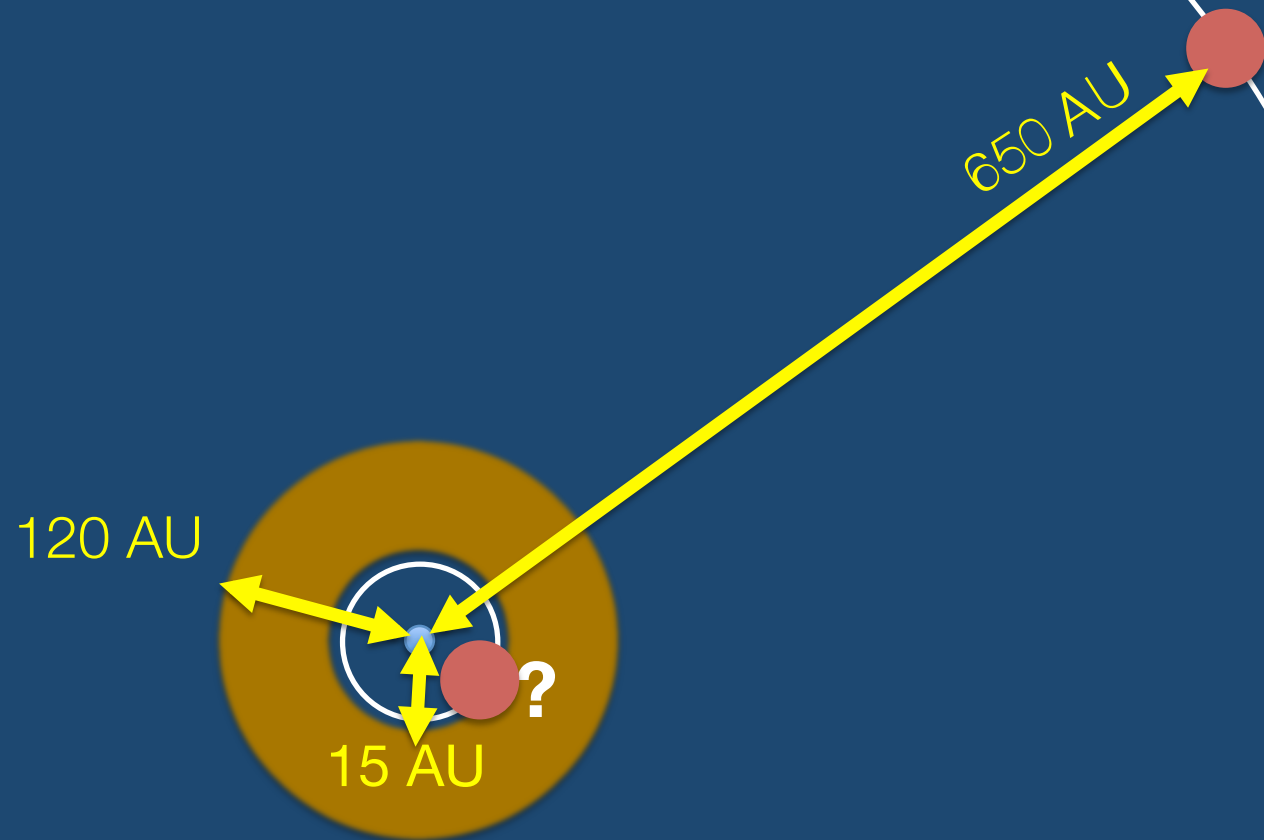
# HD 106906 b



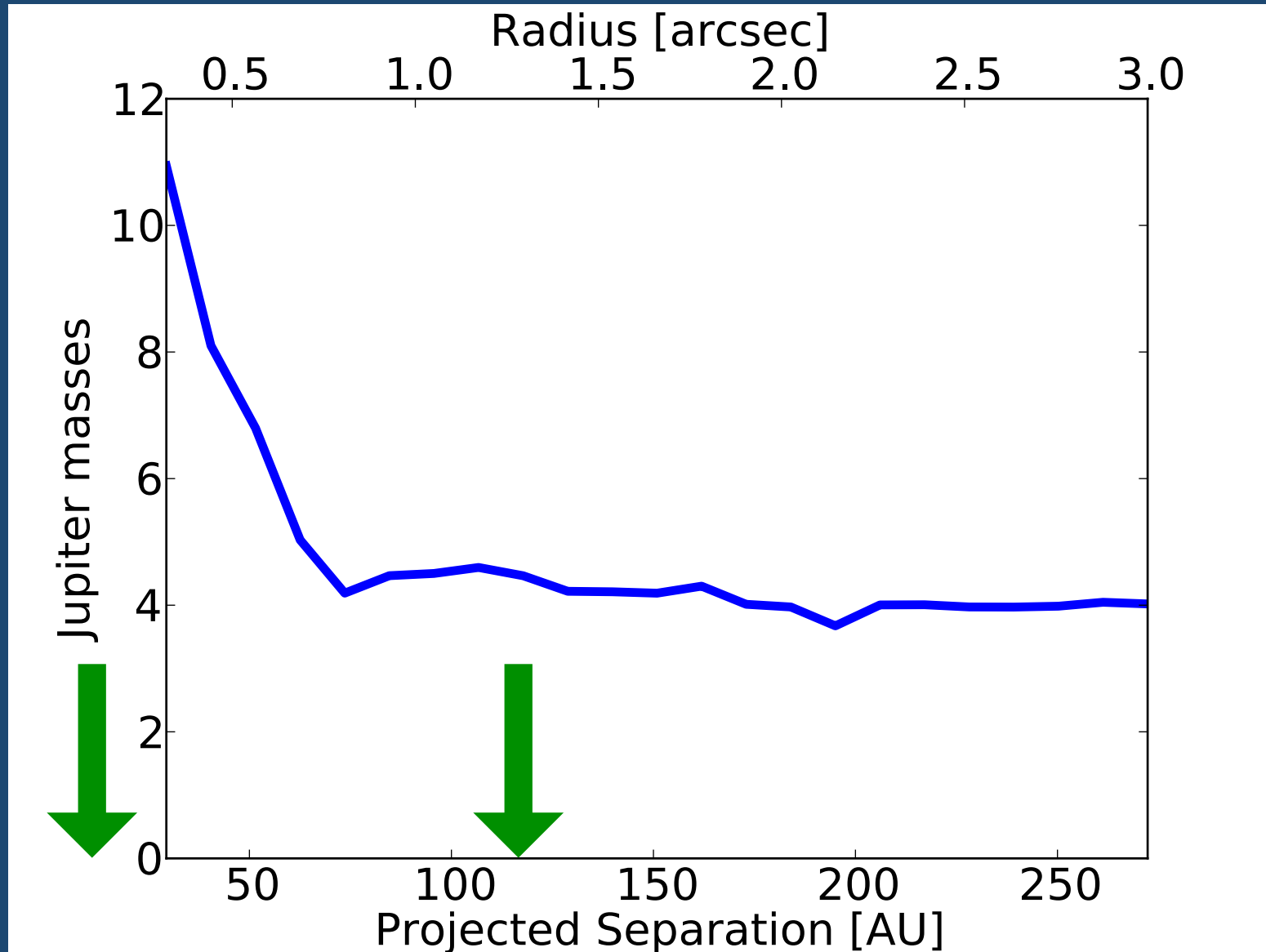
Bailey et al. 2014



# HD 106906 disk structure

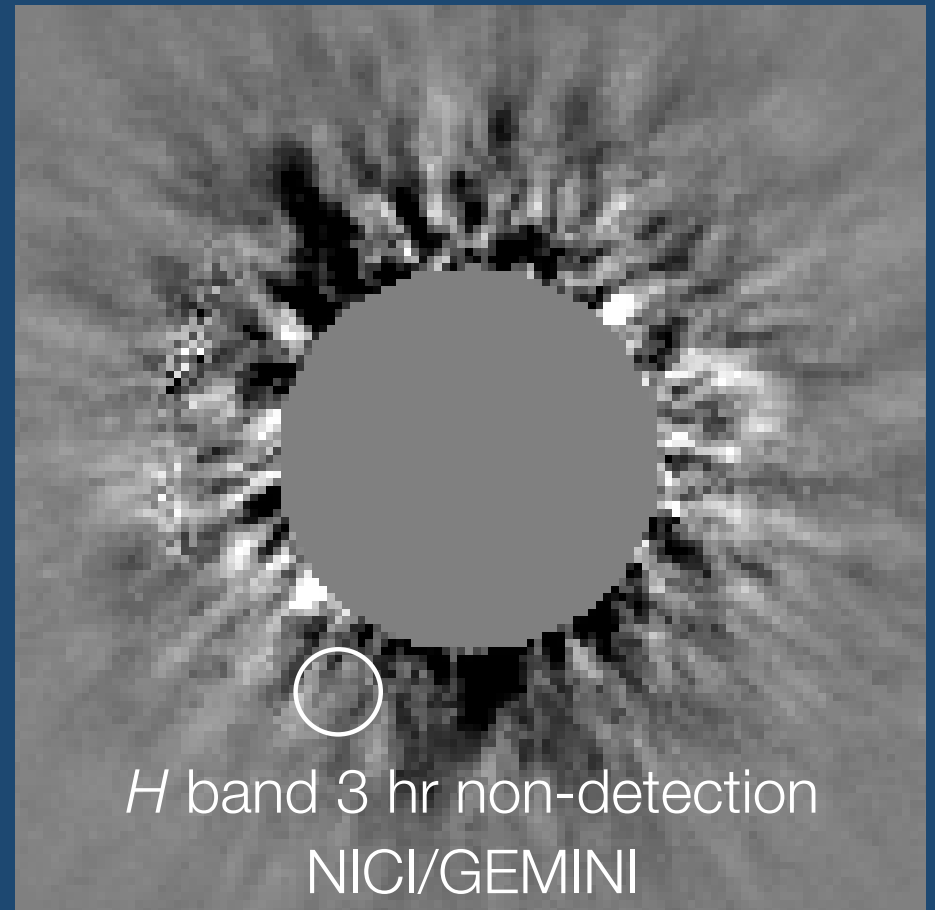
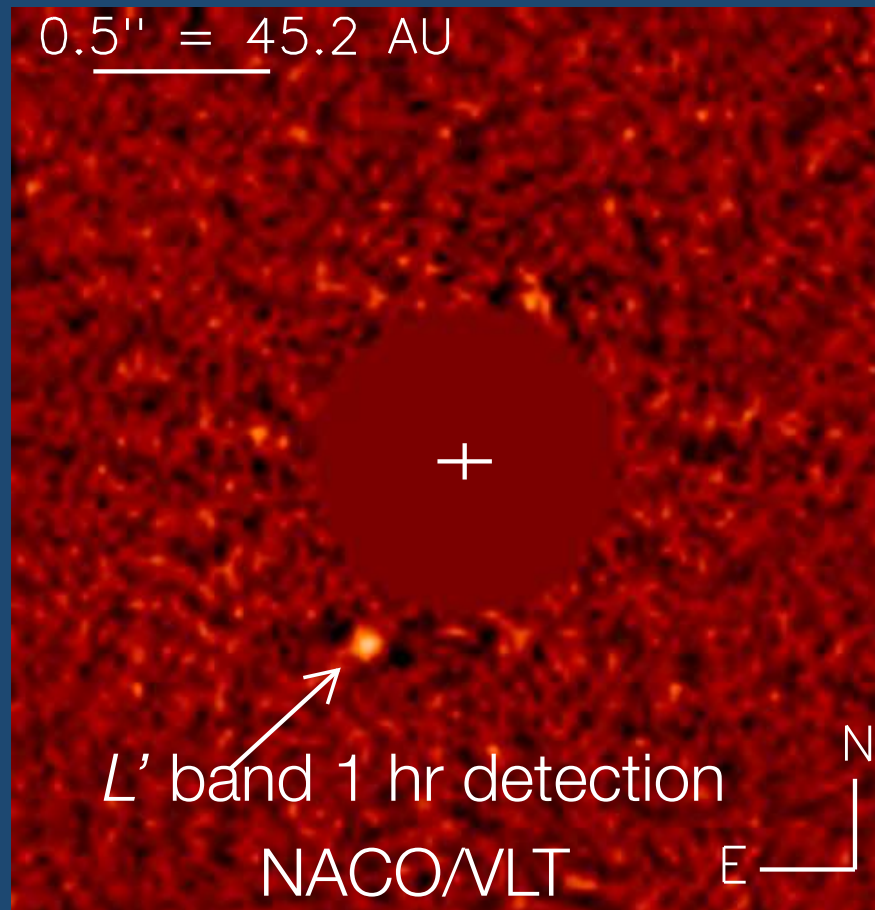


# HD 106906 $L'$ Mass Limit

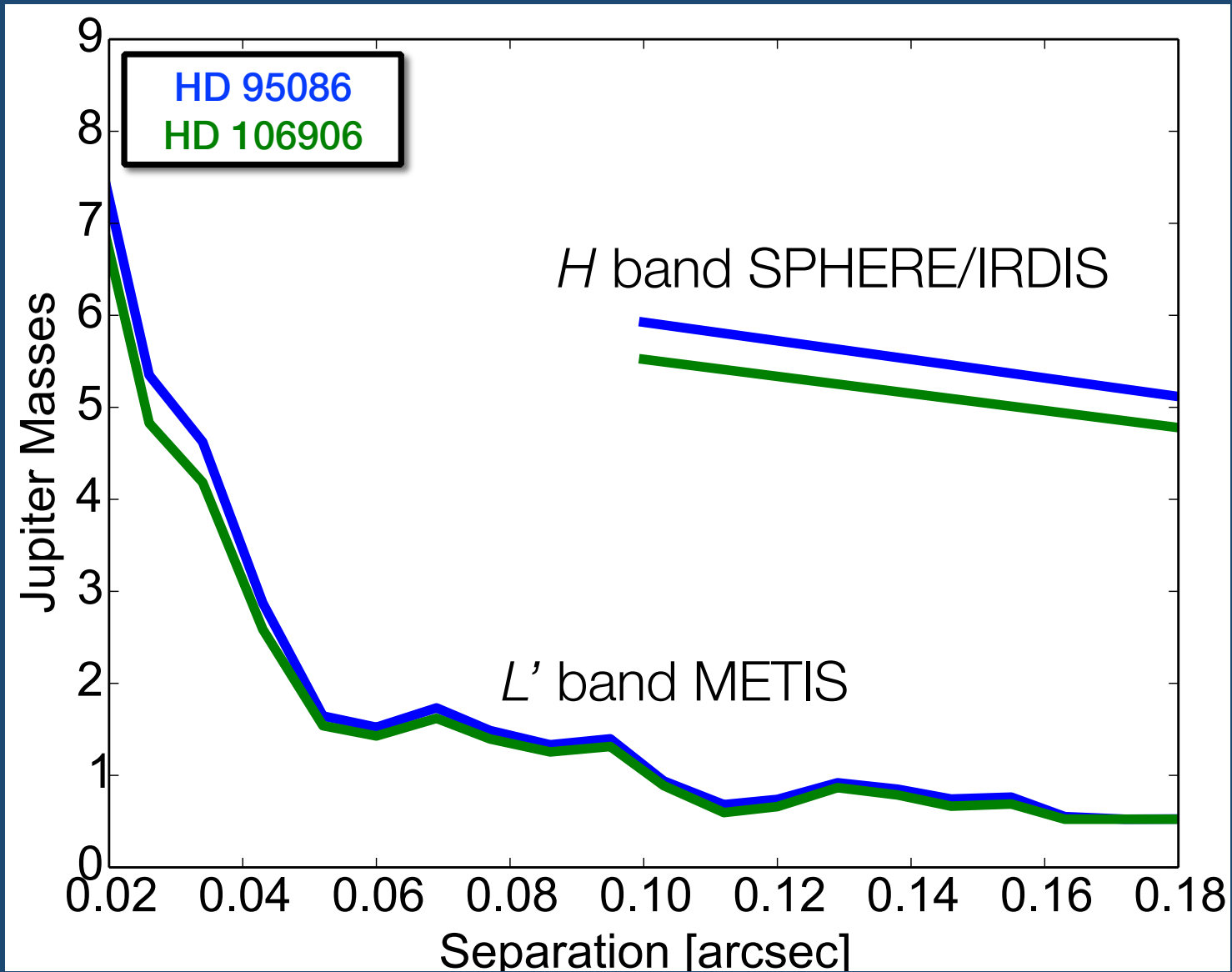


# $L'$ band

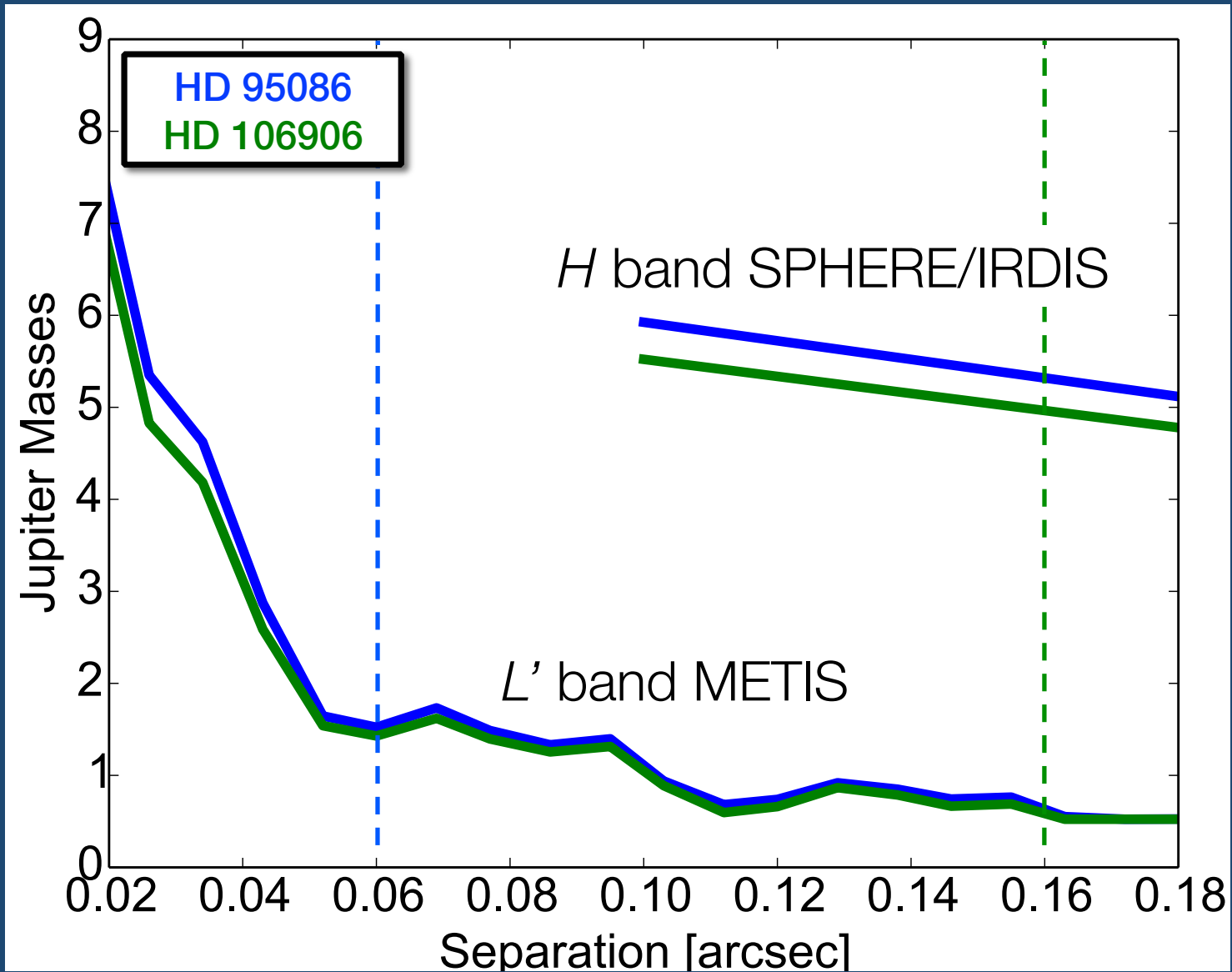
HD 95086 b



# How to detect inner planets?



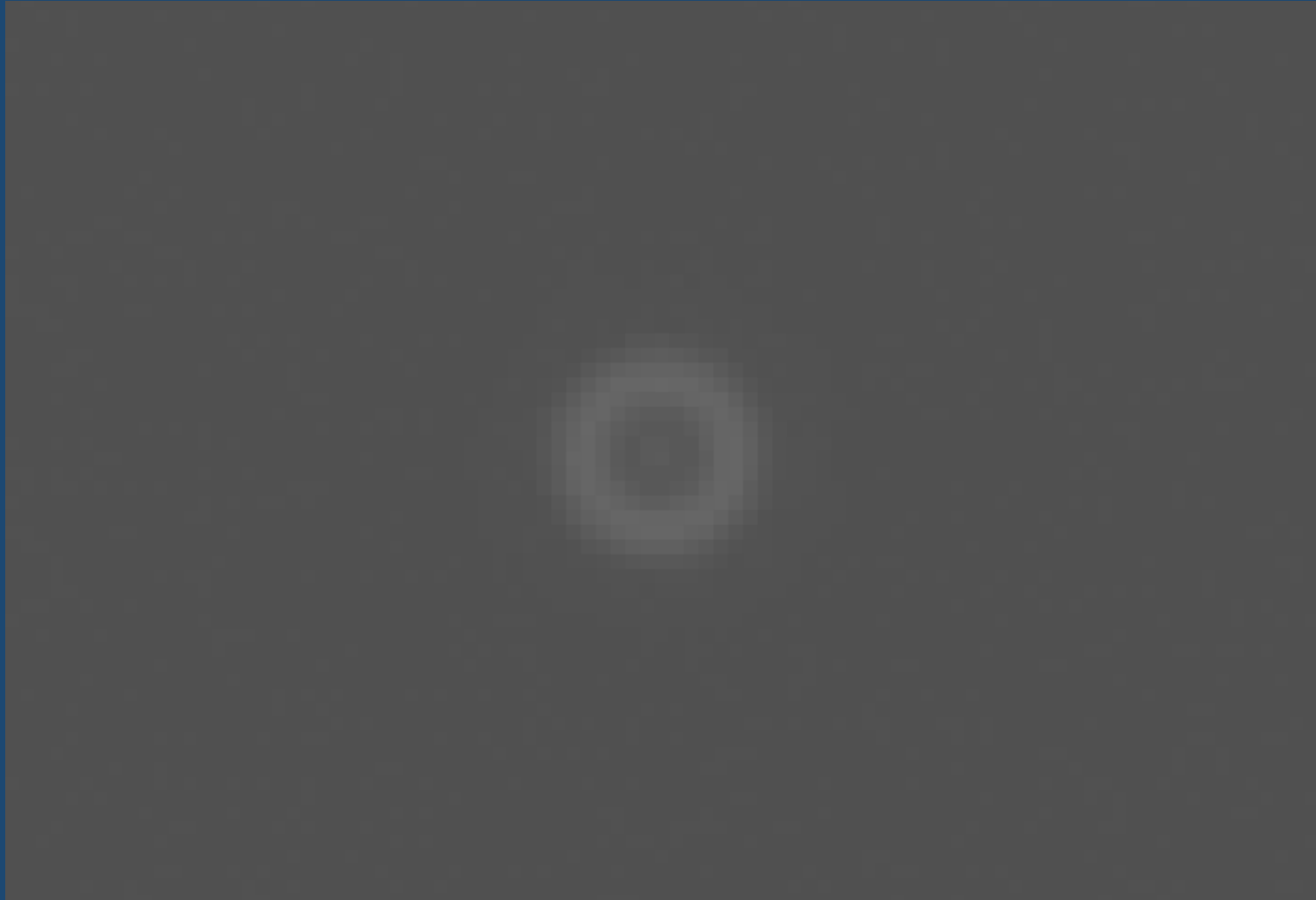
# How to detect inner planets?



# Simultaneous $L'$ and $N$ - band



# Simultaneous $L'$ and $N$ - band



# Conclusion

- Hard to find planets – especially if you don't know where to look!
- Holey Disk targets are great candidates for the future E-ELT imagers.
- Chance to resolve the inner disk with METIS.