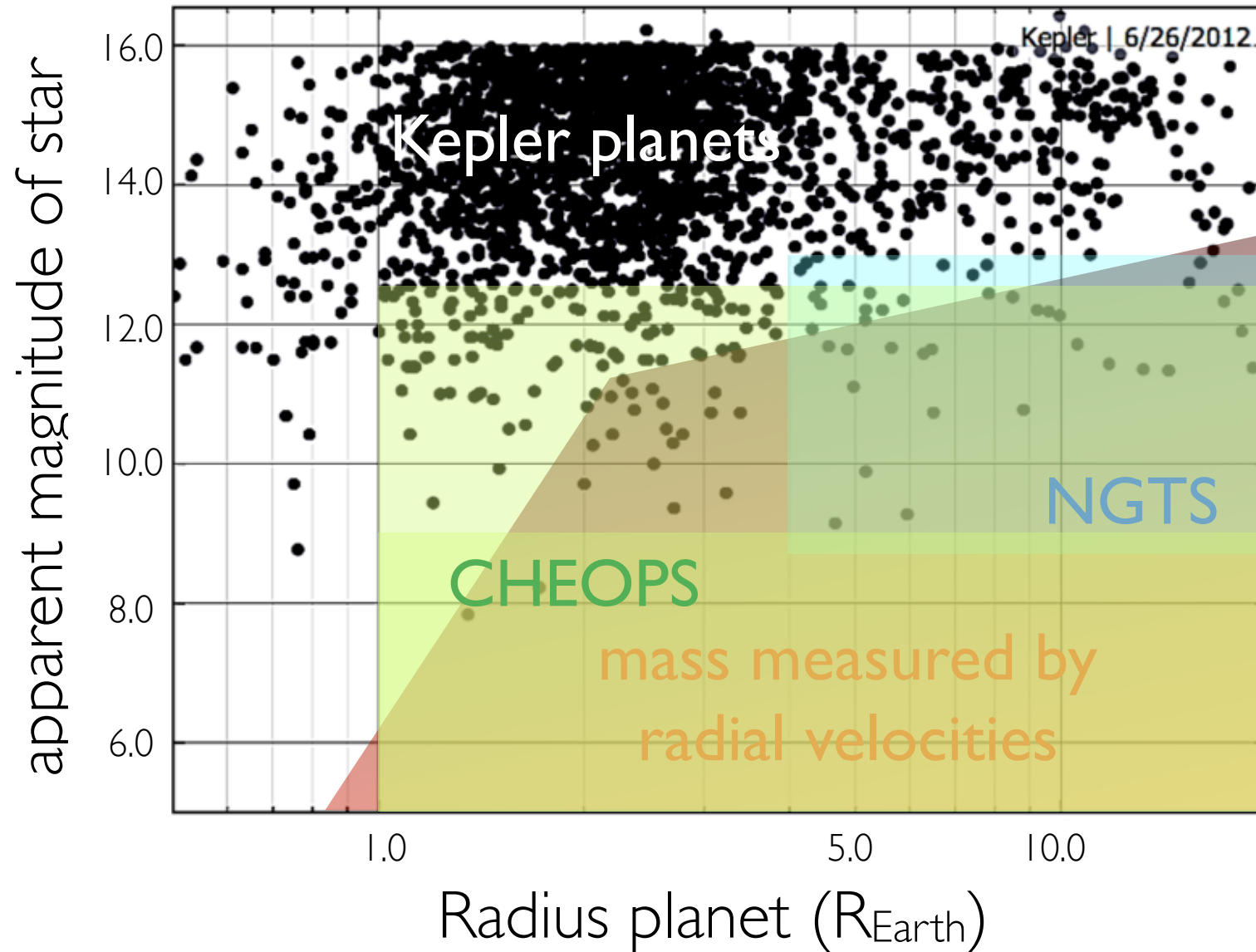
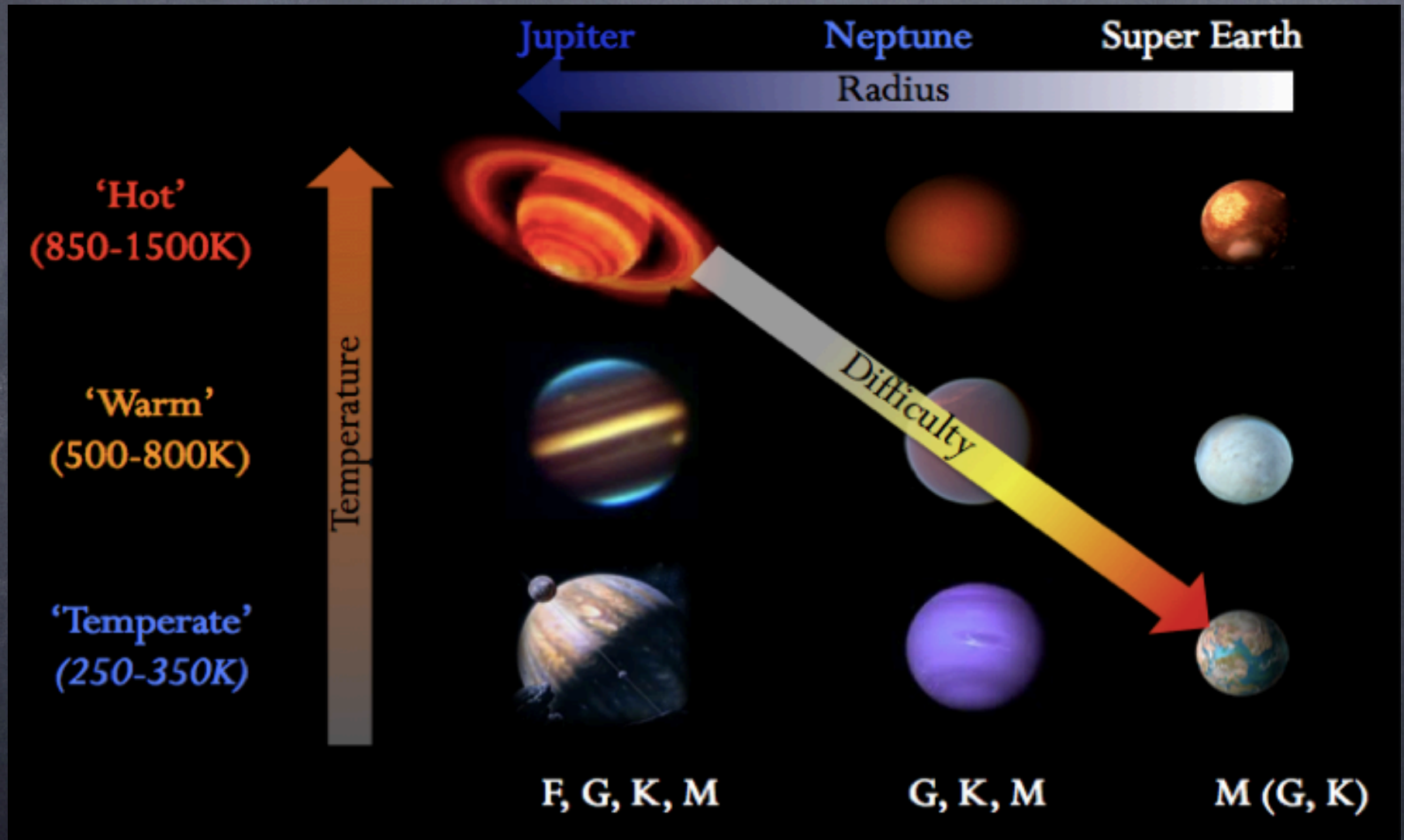


Targets: Bright stars



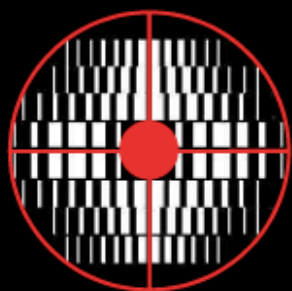


Planets that will be observed with EChO

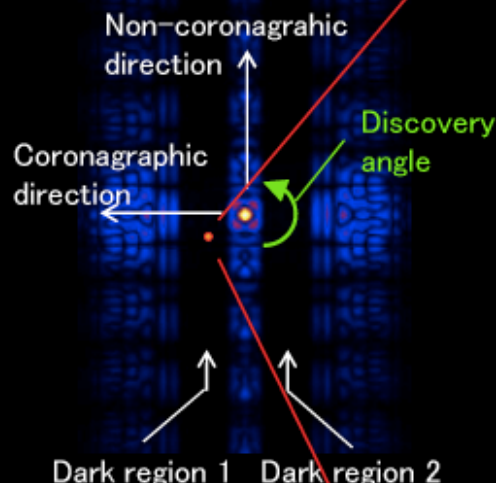


Coronagraph for exo-planet characterisation

Pupil mask
(design)

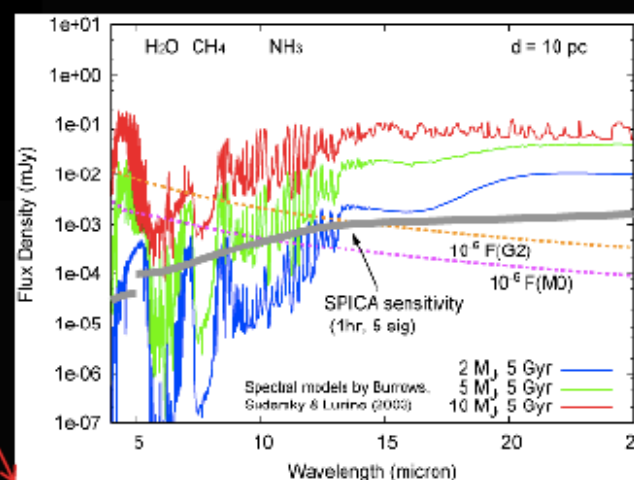
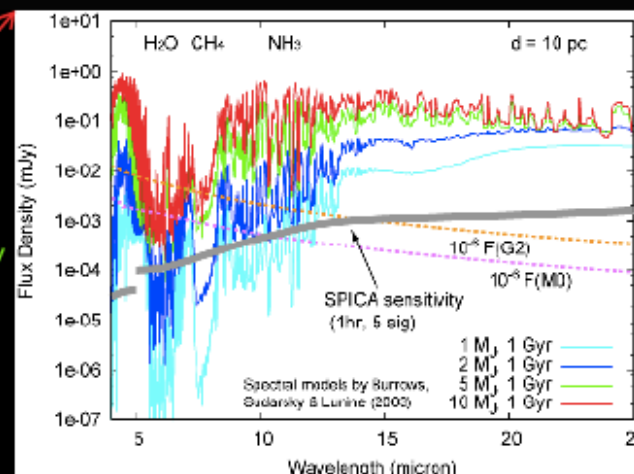


PSF (simulation)



Binary mask gives 10^{-6} suppression to 1 arcsec @ 5 μm

Allows **direct** MIR spectroscopy of gas giant exo-planets



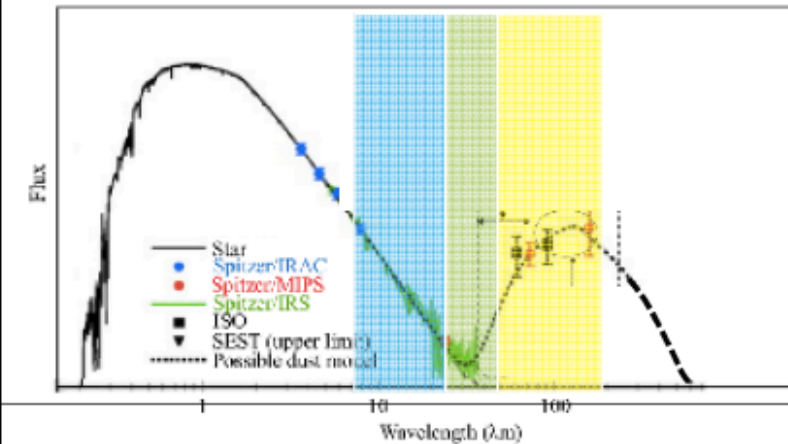
Adapted from Burrows et al ()

Taken by B. Swyniarski 2009 Paris Presentation

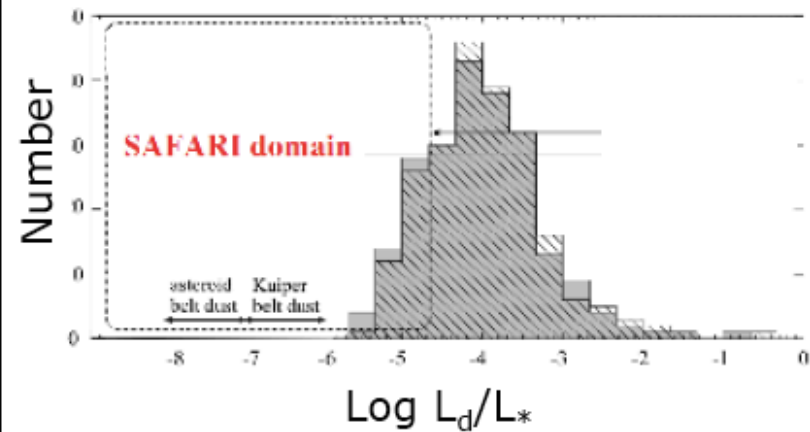
Detecting Kuiper and Asteroid Belt analogs in distant extrasolar systems

- Little MIR emission implies clearing of inner disk
- MIR→FIR SED necessary to constrain the disk inner radius
- FIR will constrain shape and peak of SED → cold dust
- Dust implies continuing collision and accretion
- First systematic survey for Solar type KB and AB type dust mass

Adapted from Meyer et al. 2008



Moro-Martin 2009



... when the going get thought ... the
thought get going...



... the future out of there will be
really exciting with a lot of
possibility to understand the nature
of low and very low mass
companions, eventually ... some
where we'll be able to recognize
also life signatures...