
An Interferometric view of Exoplanets

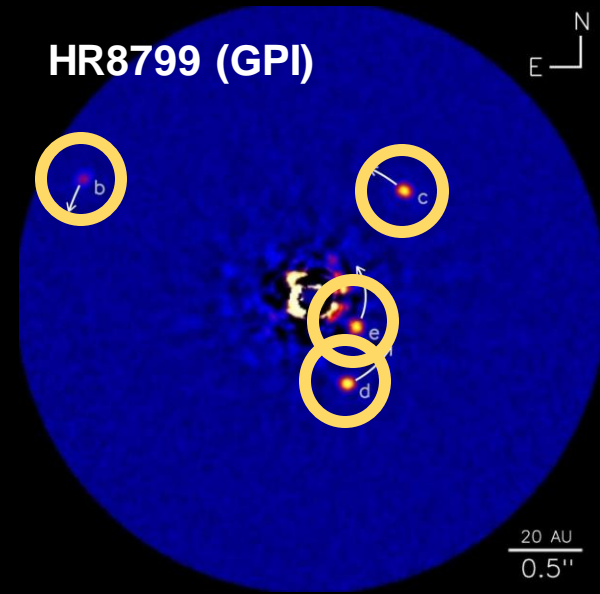
Mathias Nowak

Gavin Boyle Fellow in Exoplanet Science

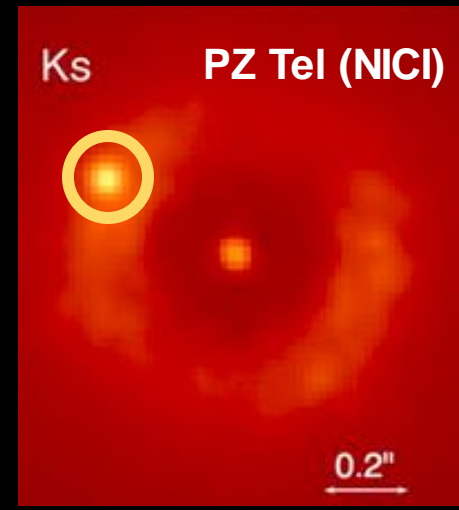
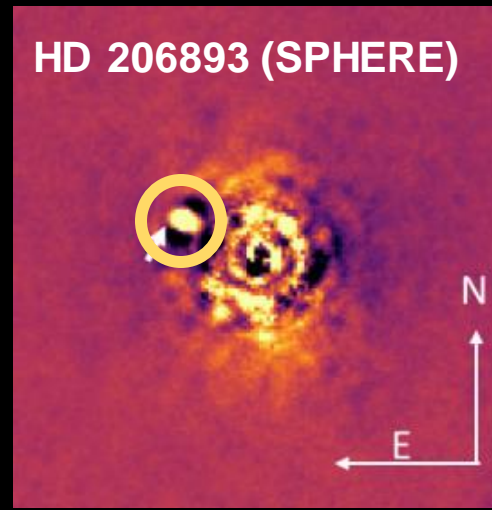
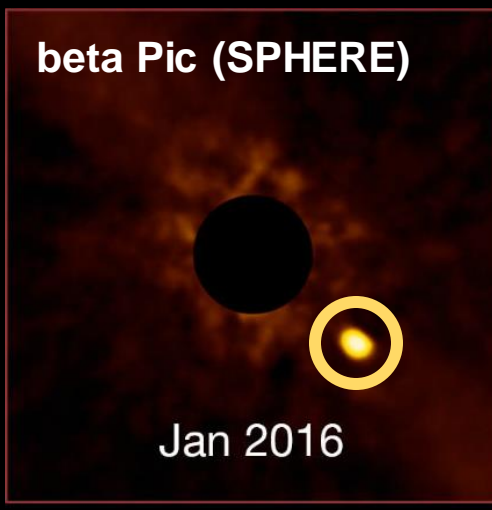
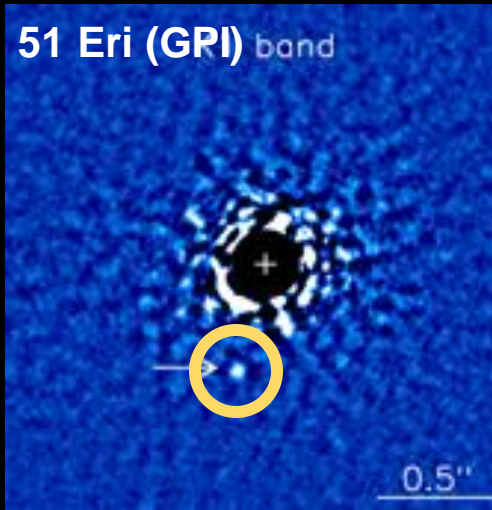
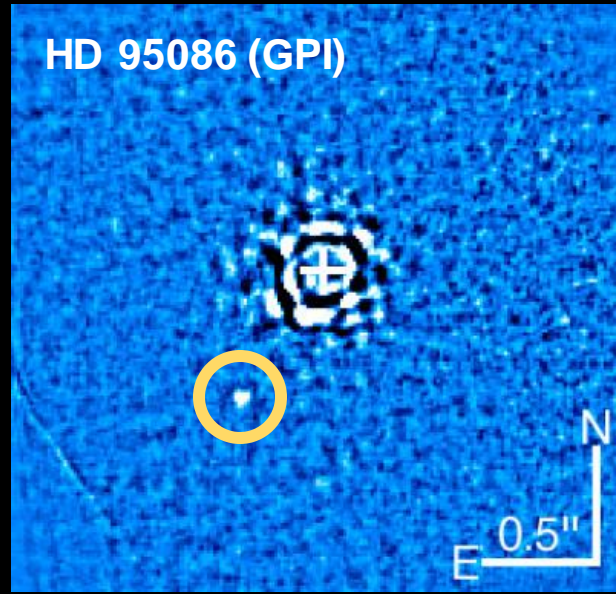
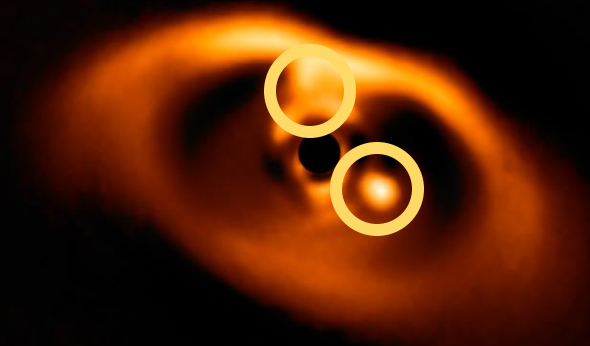
KICC, Cambridge

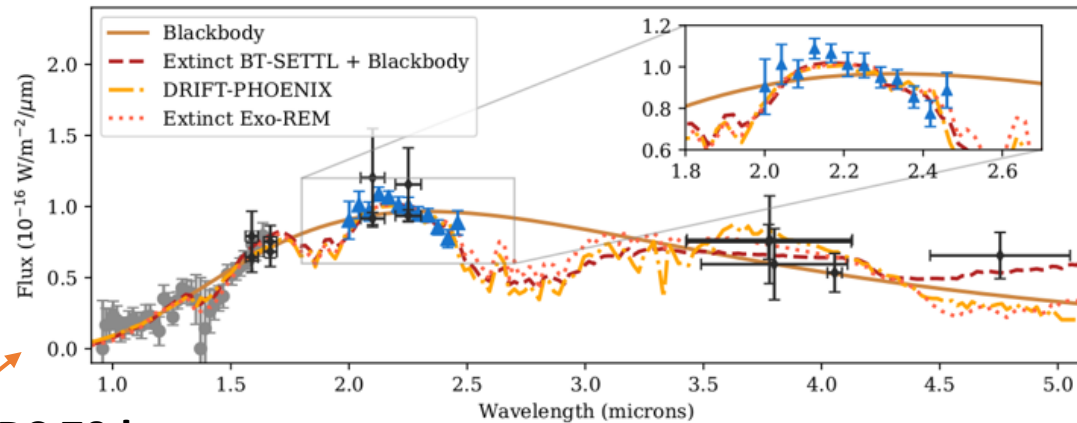
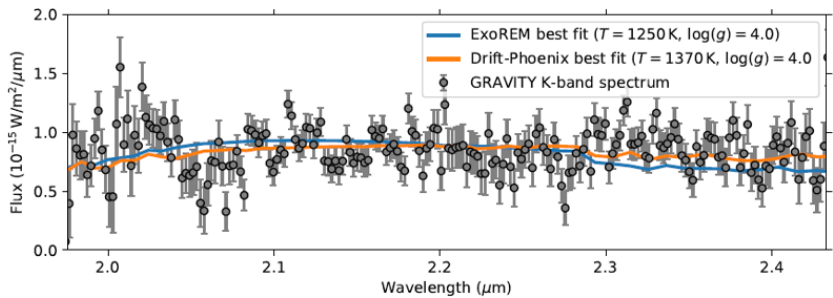


The ExoGRAVITY Large Program: follow-up observations of previous detections

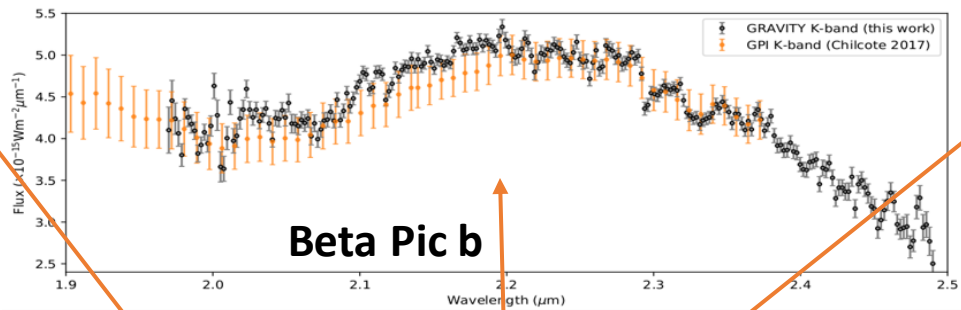


PDS 70 (SPHERE)

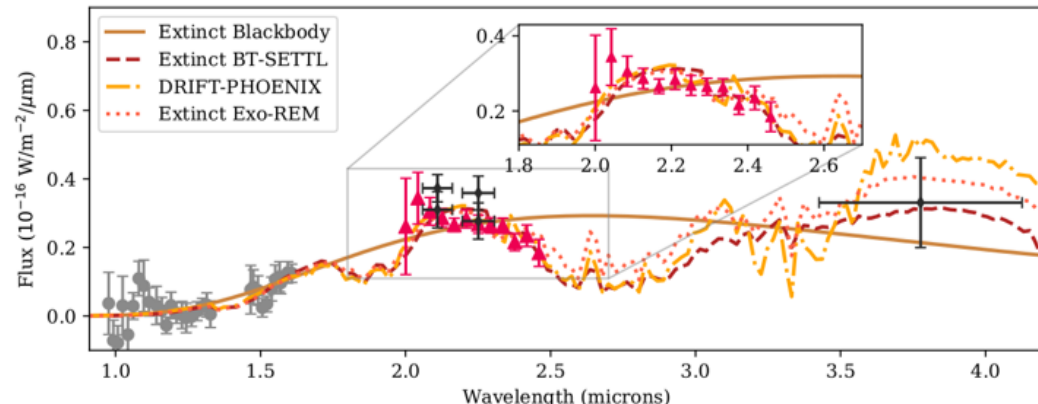




Beta Pic c

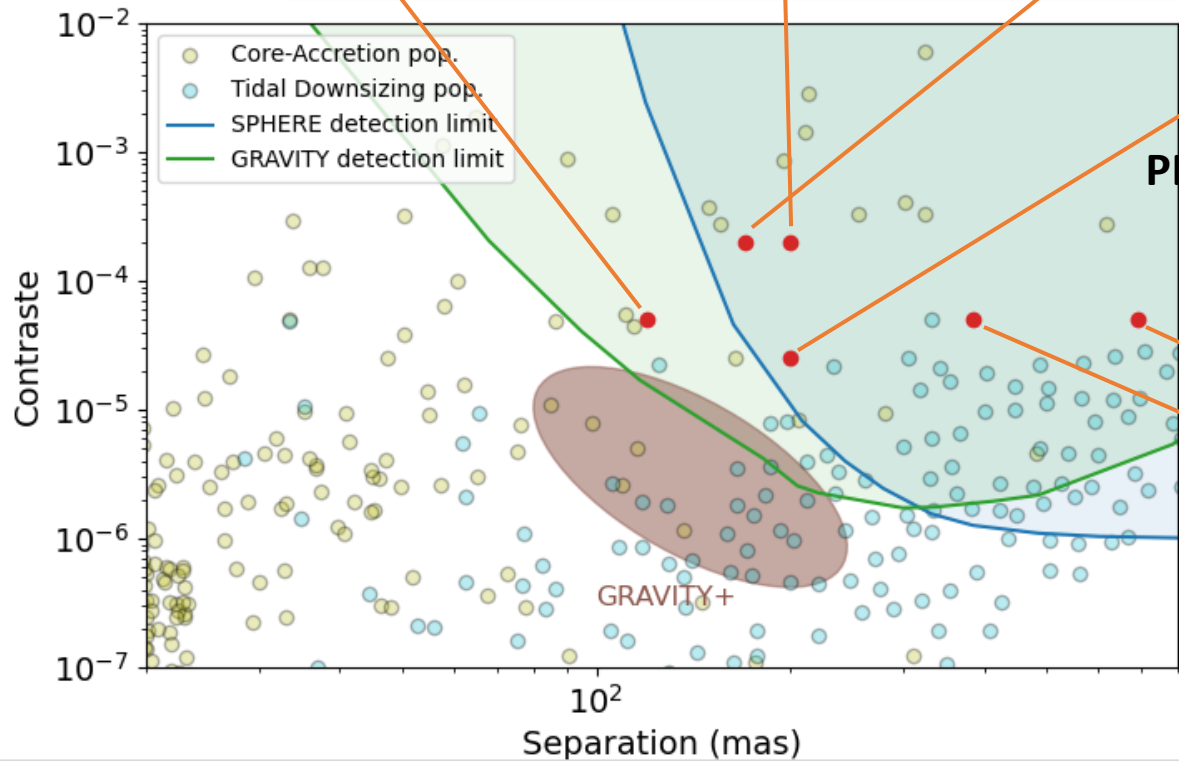


PDS 70 b

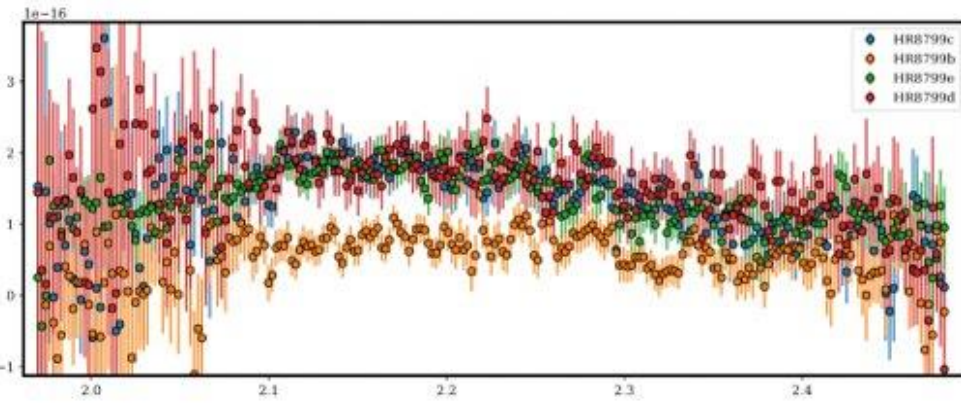


Beta Pic b

PDS 70 c



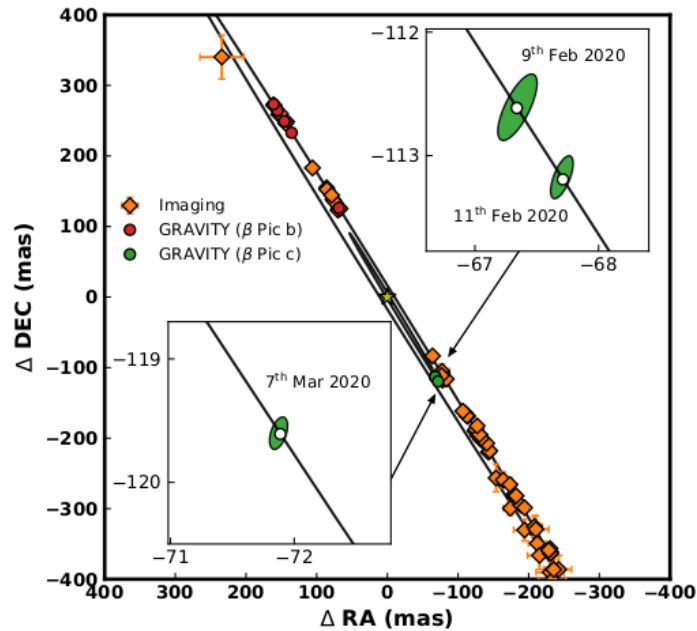
HR 8799



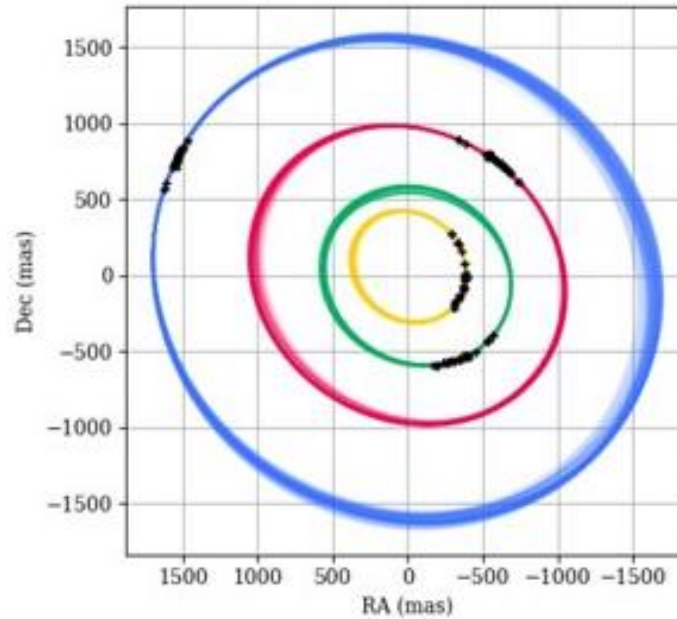
High precision astrometry



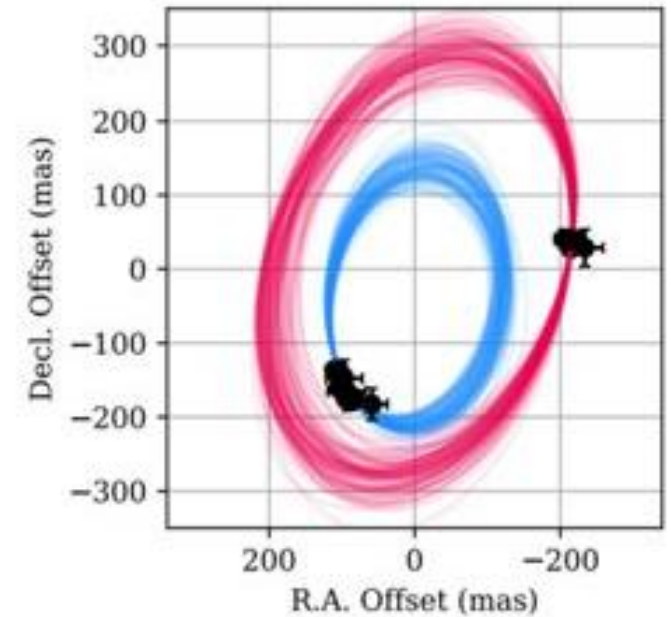
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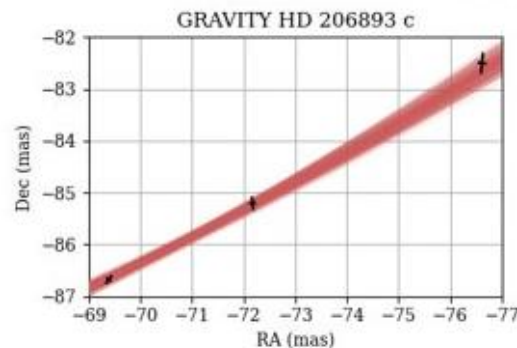
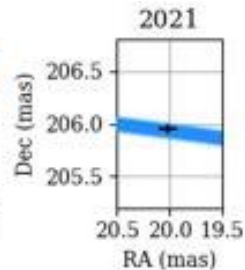
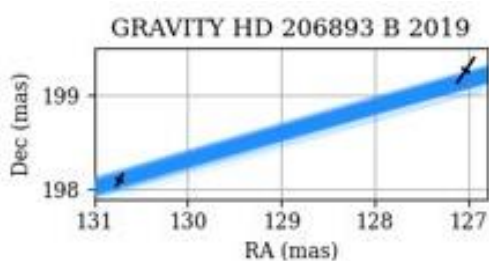
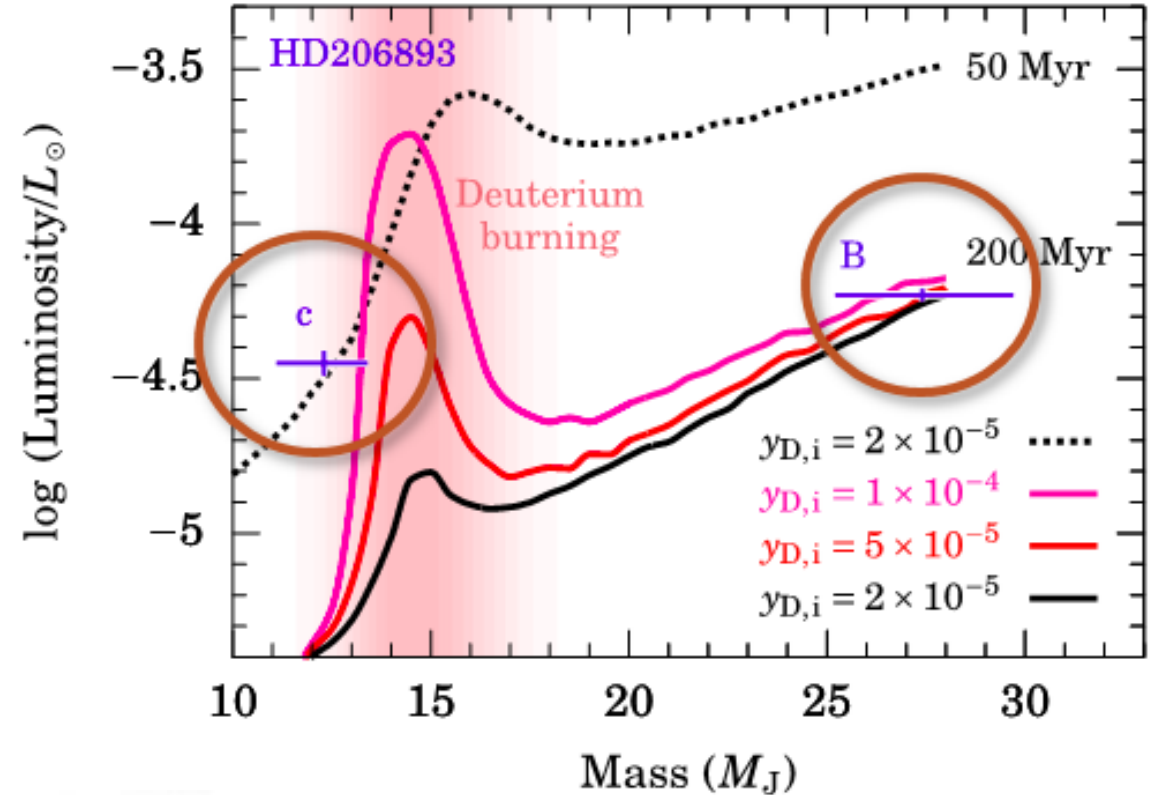
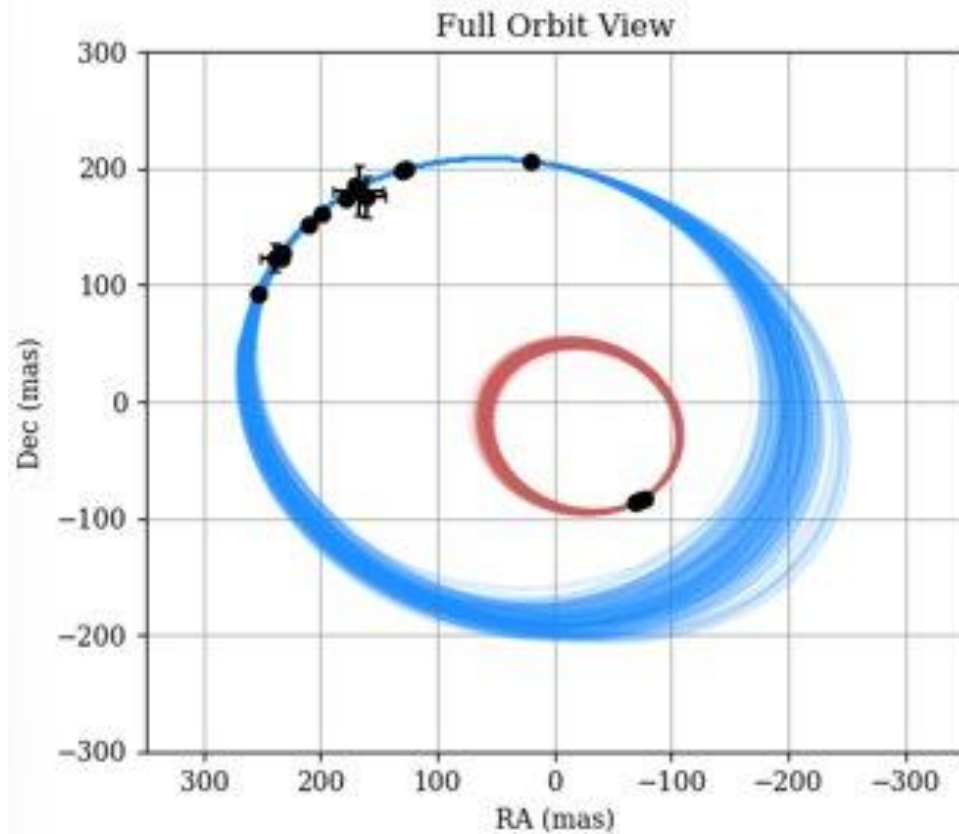


PDS 70 bc



- Typical precision on the astrometry: 50 μ as
- Long-baseline interferometry will remain a reference for astrometric measurement, even in the ELTs era

Deuterium burning in HD 206893 c



- HD 206893 c found with a RV+Gaia guided search (RV candidate from Grandjean et al. 2019)
- $M_b = 24 M_{Jup}$; $M_c = 12 M_{Jup}$
- Contrast: $C_b = 1.6e-4$; $C_c = 8.2e-5$

Interested in Exoplanet Science?

A variety of departments are working on exoplanet-related research: IoA, Cavendish astro, DAMTP, Earth Sciences, ...

Many different topics are covered: detection, atmospheric characterization, disks, instrumentation, radial velocity, planet formation, biosignatures, chemistry, etc.

Best way to see what is going on in Cambridge is to join us at:

- Exoplanet Seminar, Tuesday 13h-14h, Ryle Seminar room, term time only (Emily Sandford, Jess Rigley, Mathias Nowak)
- Exoplanet journal club -- Monday, 10:30am HCR (Amy Bonsor)
- Coffee "Life in the Universe" -- Tuesday, 11-12, Battcock or Clare College (Paul Rimmer)

- Exoplanet list (contact me)