What are the next best possible planets to investigate

Put together the literature comparison plot and individual plots for WASP 12b [struck out] and Kel[struck out]

↑

- do this first
- use as much data I can find as possible

Also do the theory vs observation again with better observations of Q on Q*

If we can make one more measurement e.g. with Cheops in 2 years, how will the measurement uncertainty change
→ plot arrows of where the points will go on the uncertainty plot
– the interesting ones are the ones that have the biggest decrease in uncertainty which are also most theorised to decay

Potential avenues:

- Work on individual planets to constrain their decay (tidal dissipation) better than the literature

- What planets should we focus on, which should we try getting new transits.

- Infer Q factors from decay rates. Plot Q factor against stellar radius, temperature

- Statistical interpretation of the Q^* histogram.
  - Is it a normal with a mean i.e. are all Q^* the same?
  - Or is it bimodal for main sequence vs. non-main sequence.

  If it's the same for all systems we can rerun the theory with the new Q^* value.

Can I statistically say constraints on Q^* for evolved stars are different from those.

- Assume everything is decay (no precession, no companion planets (moons), / every other phenomena should turn into noise.

- Q^* for short vs long period planets

- Given the fitted Q^* and model of what Q^* should be, ~~[illegible]~~ redo our theory simulation and see what the theory vs observation graph now looks like.

- Assumption: Companion planet effects hopefully do not overlap with those experiencing tidal decay. The rest (that do overlap) come out as noise.

Long-term idea:

- Apply all my statistical methods to other phenomena e.g. companion planet systems.

My main assumption: Everything in my sample is undergoing tidal decay of some strength and no other decay phenomena.

- First report:
  - What / why dental decay?
  - ~~My ortho~~
  - How do people fit TTVs
  - What does theory say
  - My orthodontic work

- Cheap proposal for a startup?
  Talk + Reach out to Filip [illegible]