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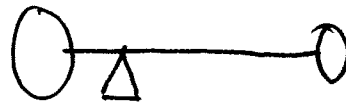
Exoplanet Study Guide

- How Hubble space telescope measured true planet masses.

Ans: Measures wobble of star.

- Center of Mass

- For stars and planets, CM is ^{usually} inside star.



- Ways to discover exoplanets
Radial velocity, transits.

Radial velocity

- Sine wave

- Red shift and blueshift of star

$$V_r = \frac{\Delta \lambda}{\lambda_0} c$$

↙ wavelength in the lab.

- Things that describe the orbit.

• eccentricity $(0 < e < 1)$, Mass of planet

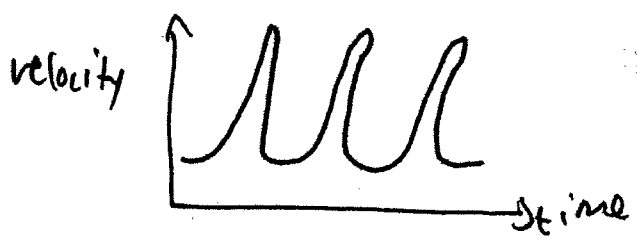
period, mean anomaly, longitude of periastron.



→ larger P



eccentric orbit!



- How planets migrate: Kozai cycles and gravitational influence of disk.
- Hot Jupiters
- transits (fraction of light blocked = $\frac{R_p^2}{R_*^2}$)
- Kepler spacecraft, what it is trying to do?
- what type of planets are easier to find.
(big planets, close to sun)
- Drake's Equation