

Asteroids

- (a) What are the different major classifications of asteroids?
- (b) What are orbital resonances?
- (c) Jupiter's period is a little under 12 Earth years — so the Earth's period is about 1/12 of Jupiter's period. Would you expect the Earth to experience the same orbital resonance issues that asteroids do in the asteroid belt due to Jupiter? Might we feel some analogous effect due to Mars?

Comets

- (a) Describe the “anatomy” of a comet.
- (b) Should comets follow Kepler's third law? Why or why not? Would they if they lost some of their mass?
- (c) How can comets change over time?
- (d) How was the Oort cloud made?

Challenge questions

(a) Would you expect planetary systems around other stars to have “Oort clouds”? Would they be easy to detect?

(a) What type of asteroid might be the hardest to detect?