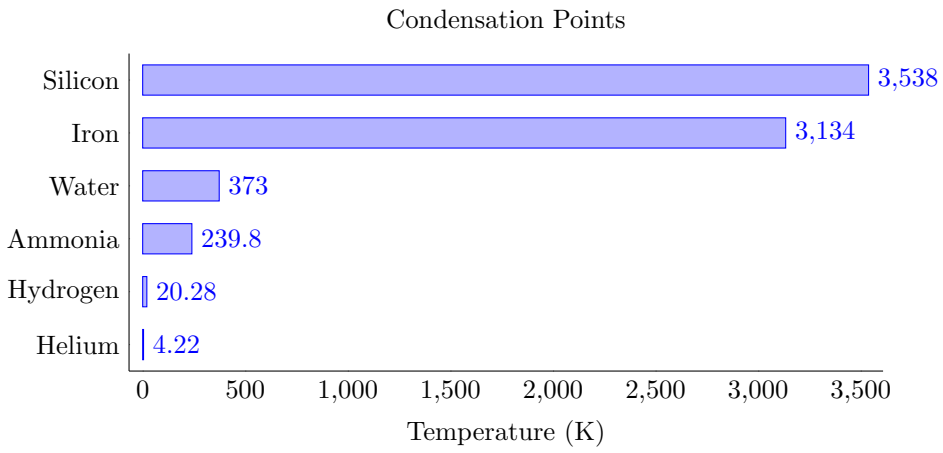
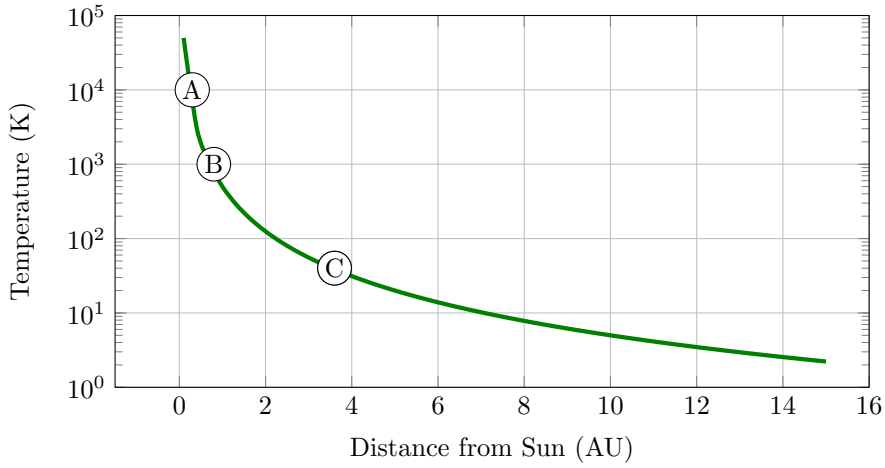
The following should give you a bit of a sampling of the types of test questions I may ask and serve as a review for the topics we've discussed so far this semester. On the test I will supply you with any tables of data, equations, or constants that you could need to complete the questions. For the sake of this review, I'm assuming you can use your book to look these types of things up. You'll likely want to work these through on your own paper except where you need to draw on an image, as I didn't leave you much room...

1. Dwarf planets generally fail to meet one of the requirements for a planet. Which requirement do they fail?
   A. Orbiting the Sun
   B. Gravitationally squished into a sphere
   C. Clearing the neighborhood of debris
   D. Having a molten core
2. Explain (simply) why dust clouds heat up as they contract due to gravity.
3. List all the planets in order of increasing distance from the Sun, and indicate one interesting feature or characteristic of each.
4. The below plot shows the condensation points of various elements.



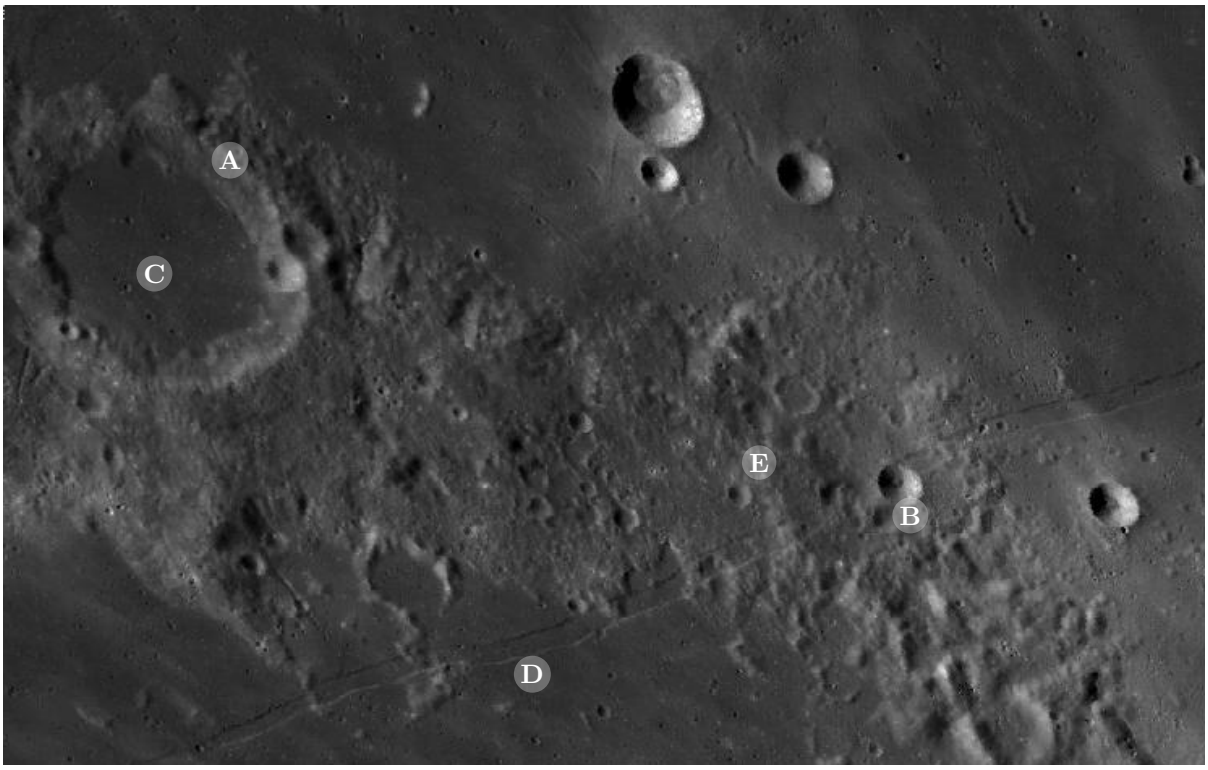
Given the plot below (which is not for our Solar System!), would a planet be able to start forming at the given locations? If so, their cores would be comprised largely of which of the given elements?



5. An earthquake occurs on Planet A and on Planet B at the same time (oh the chances!). The planets are the same size, and largely comprised of the same material. The one difference is that one of the planets has a solid, dense core, and the other doesn't. Monitors on the opposite of Planet A detect the earthquake waves 30 s later, while monitors on the opposite of Planet B detect the earthquake waves 45 s later. Which planet has the dense core and why?

6. Order the below labeled features in the below image from oldest to newest.

   A. Large Crater
   B. Small Crater
   C. Lava Flows
   D. Narrow Depression
   E. Mountain Ridge



7. What causes the high winds of Jupiter?

   A. The Great Red Spot propagates storms outwards
   B. The short length of Jupiter's day
   C. The many gravitational pulls from asteroids in the asteroid belt
   D. The distance of Jupiter from the Sun

8. Identify two of your favorite Galilean moons and interesting fact about each.

9. The moons of the Jovian planets still show signs of geologic activity. Which of the following is NOT a possible reason why?

A. Hydrocarbons melt and boil at lower temperatures than rock and metal

B. Forces from nearby planets or moons stretch and squeeze the moon

C. "Ice Geology" is possible at lower temperatures than "Rock Geology"

D. The moons are not as old and thus still warm enough for geologic activity

10. True or False? Saturn is the only planet in the Solar System with rings.

◯ True

◯ False

11. The asteroid belt was formed by:

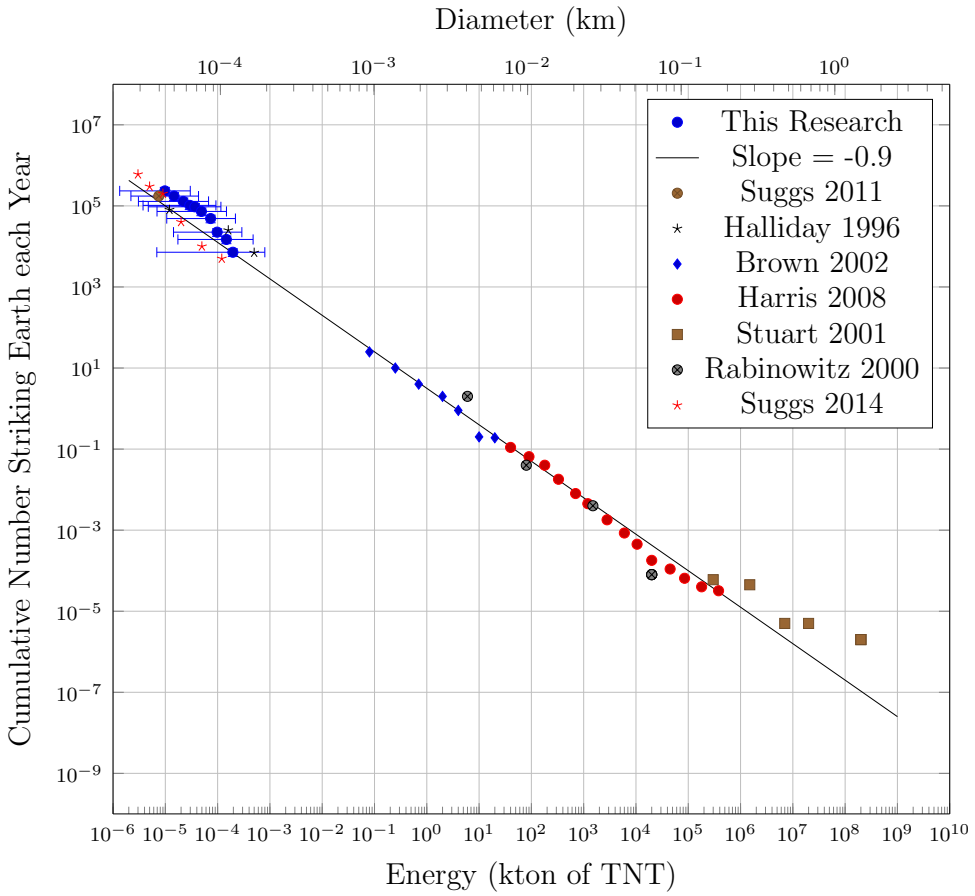
A. Jupiter's gravity interfering with planet formation in that region

B. A large asteroid smashed one of Jupiter's moons early on in the Solar System's evolution

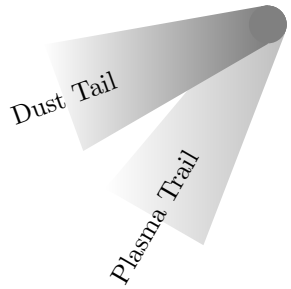
C. A region of the Solar System that didn't have enough total mass to collect and form a planet

D. Comets and asteroids from beyond the Solar System being caught in the Sun's gravity

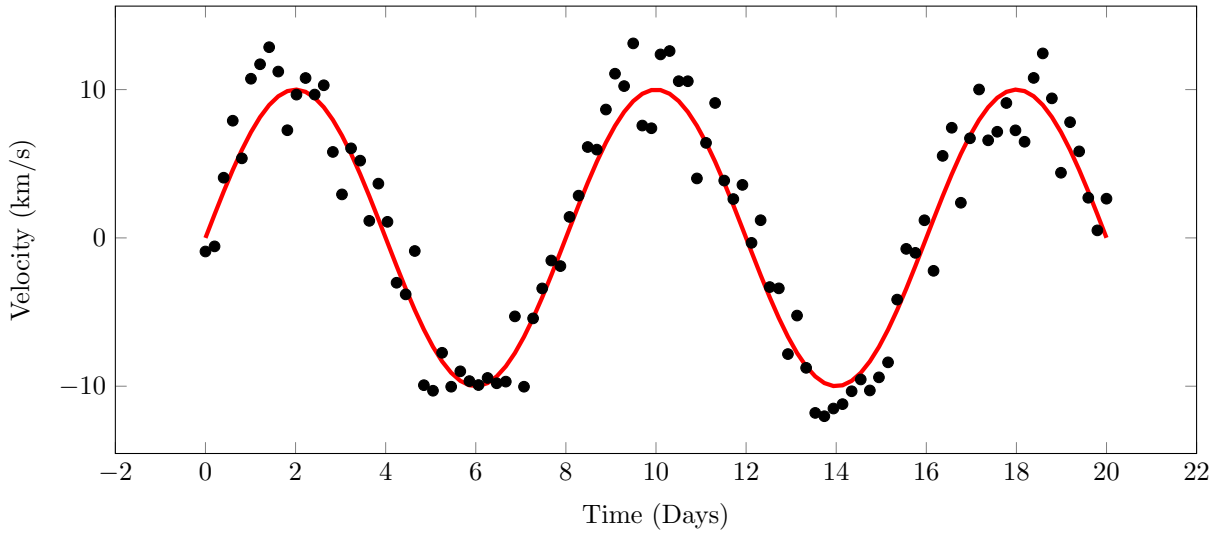
12. The Tunguska event occurred on June 30, 1908 and was the result of a small asteroid exploding in the area over the Siberian forest. An estimated 2000 km^2 of forest was leveled by the 10,000 kton explosion. Given the plot below, in approximately what year should we expect another asteroid of a similar size to impact the Earth?



13. In the below image of a comet, indicate the direction toward the center of the Solar System. In what direction is the comet traveling?



14. You've received the below doppler data for a newly discovered exoplanet. What is the period of the exoplanet's rotation about its star?



15. You've also received the below transit data for a different exoplanet orbiting a star. If the star's radius is 800,000 km, what is the radius of the planet? How does it compare to the size of Jupiter?