

Physics 102
Astronomy of Planets
Jupiter HW assignment
Due: Mar 26

Questions to turn in:

1. Sagan argues for the benefits of open-mindedness and exploration by describing what society?
2. Perhaps the leading scientist of this culture was who?
3. Spacecraft to other planets are controlled from what facility?
4. What is the largest moon of Jupiter?
5. What are Jupiter's white clouds made of?
6. According to Cosmos, what are the volcanoes on Io made of?
7. Who is the imaging scientist Carl speaks to about Europa?
8. What kind of feature does he find?
9. What is the vision Sagan says that NASA offers?
10. What type of spacecraft (from CP) were Voyagers 1 & 2?
11. Approximately, how large are these spacecraft?
12. What is Voyager's power source?
13. What is the atmosphere of Jupiter made mostly of?
14. Which Solar System object does Jupiter most resemble?
15. Define differential rotation.

Questions for discussion:

1. Sagan states that the terrestrial planets "huddle about the Sun". How does this description compare to your own experience with a scale model of the Solar System?
2. In Cosmos, Huygens is quoted as saying "The world is my country, science my religion". What does he mean by this and do you agree?
3. What were Huygens' planetary accomplishments?
4. How does a picture of the outer solar system get to us?
5. What are the dark lines on Europa?
6. Discuss the achievements and failures of NASA missions.
7. Why does Sagan consider their missions so important?
8. Describe the major malfunctions of Voyager 2 and how they were fixed.
9. Contrast the sizes, densities and interiors of the Jovian planets.
10. Compare the Voyager spacecraft and mission to the Galileo spacecraft and mission.
11. Describe what you see when you look at Jupiter (through a telescope, or in a photo) and why it looks like that (color, morphology, etc.).
12. If the Jovian planets are so similar, why do they look so different?