

Exploring the Solar System

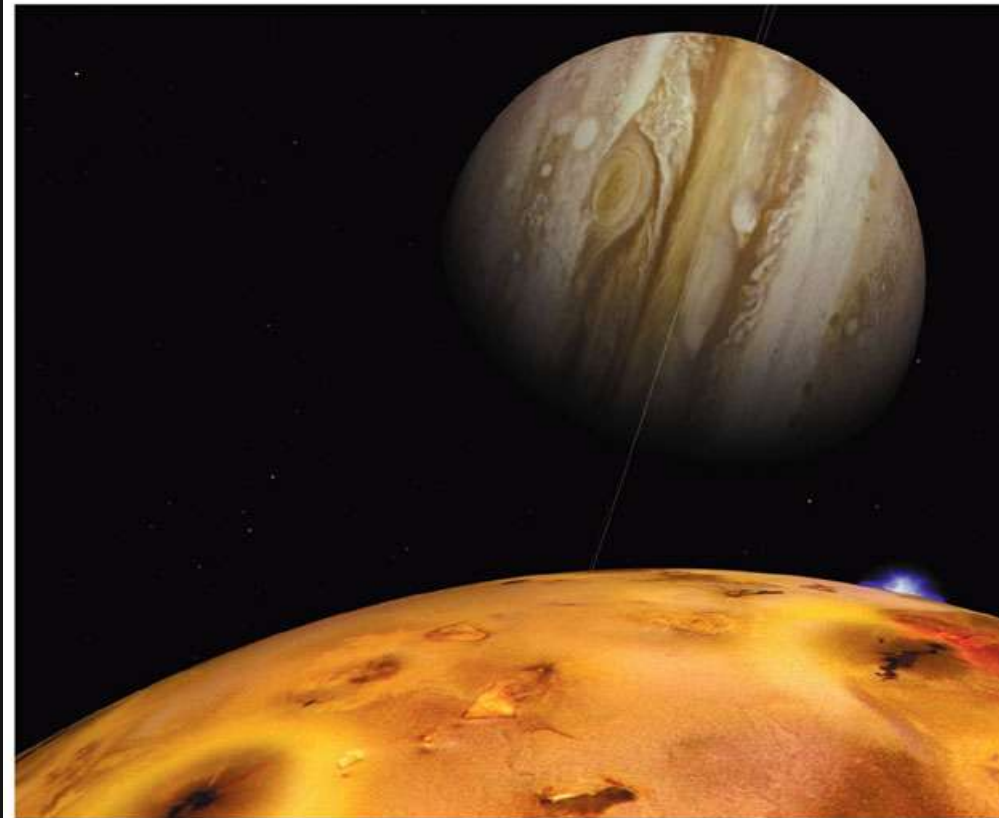
10-12-2005

Opening Discussion

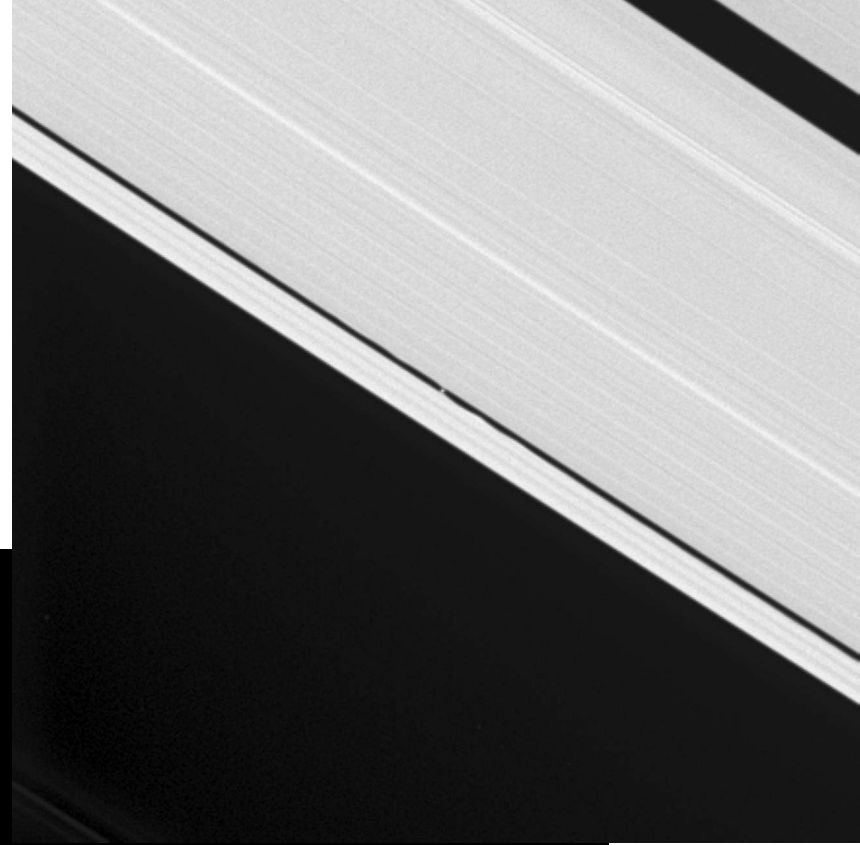
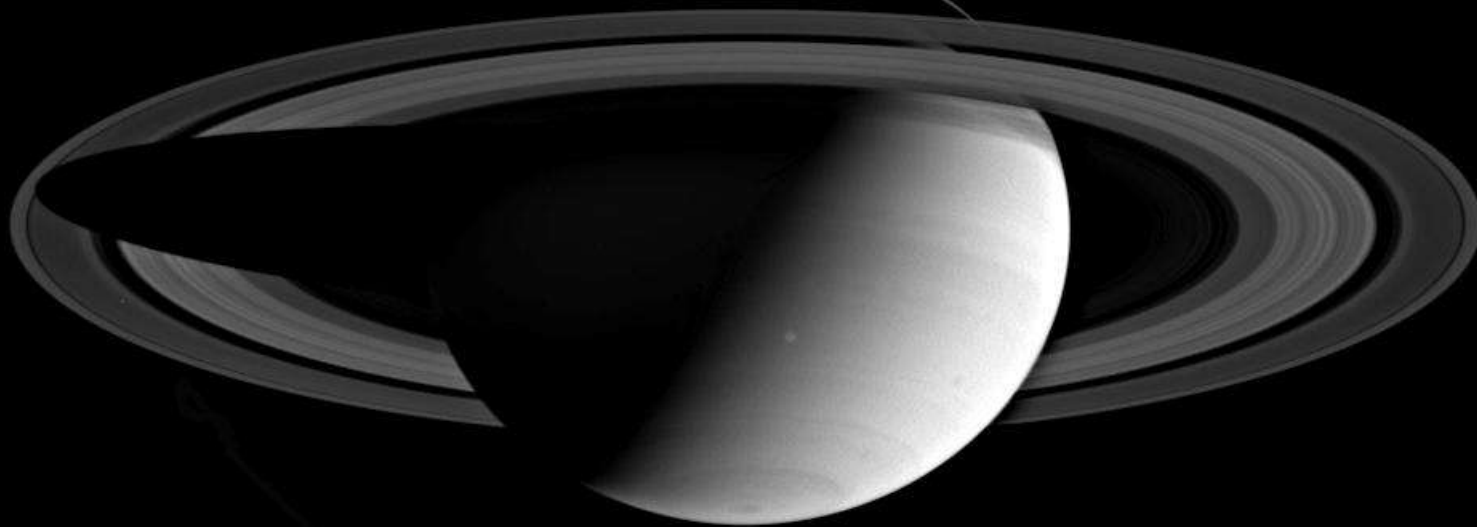
- Have you seen anything interesting in the news?
- Apsidal precession of Mercury and General Relativity.

Jupiter (5.2 AU, 71492 km, $317.9M_E$)

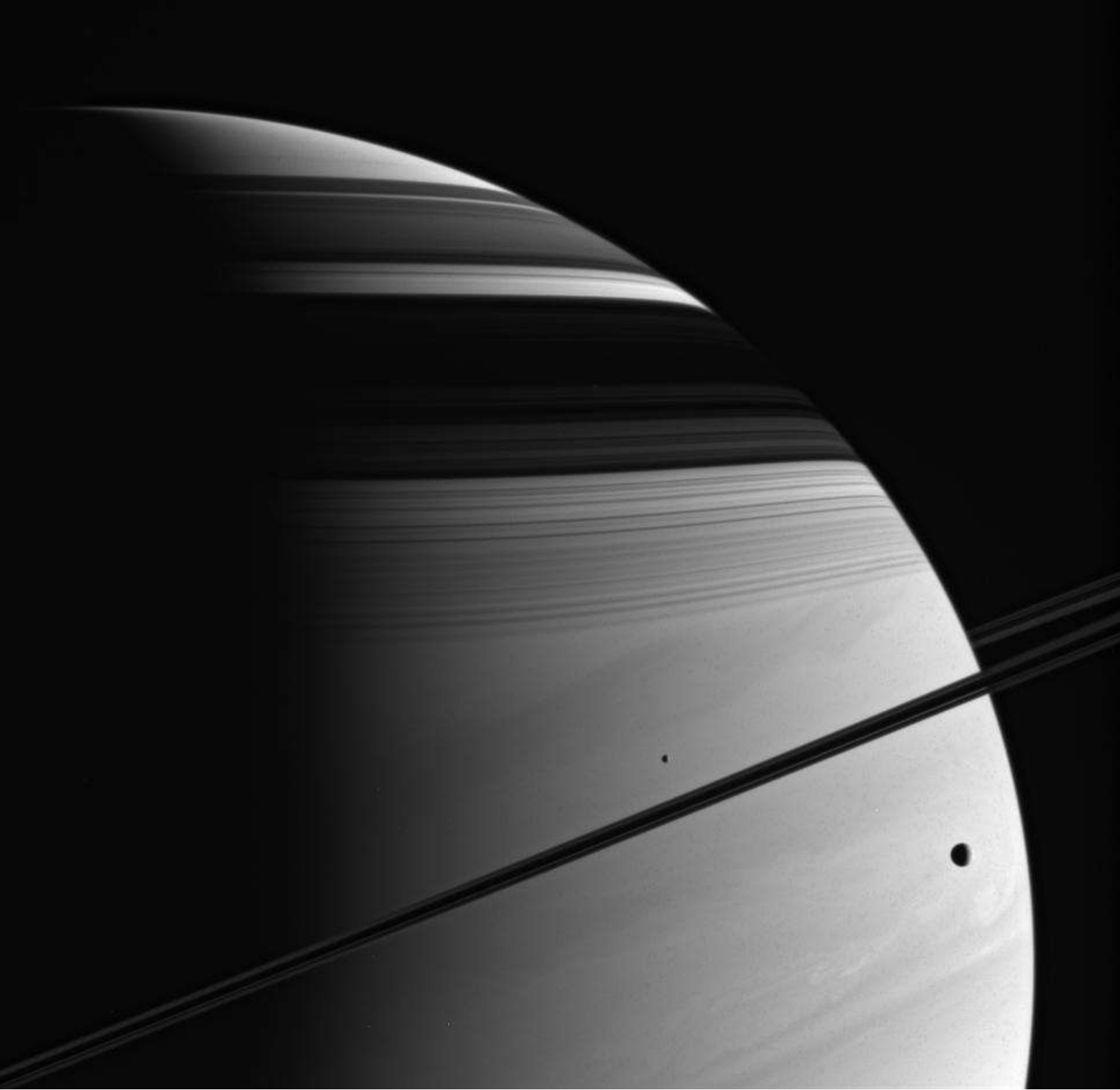
- Largest planet has a 300 year old storm, 4 large moons with many smaller ones, and thin rings.



Saturn (9.54 AU,
60268 km, $95.18M_E$)

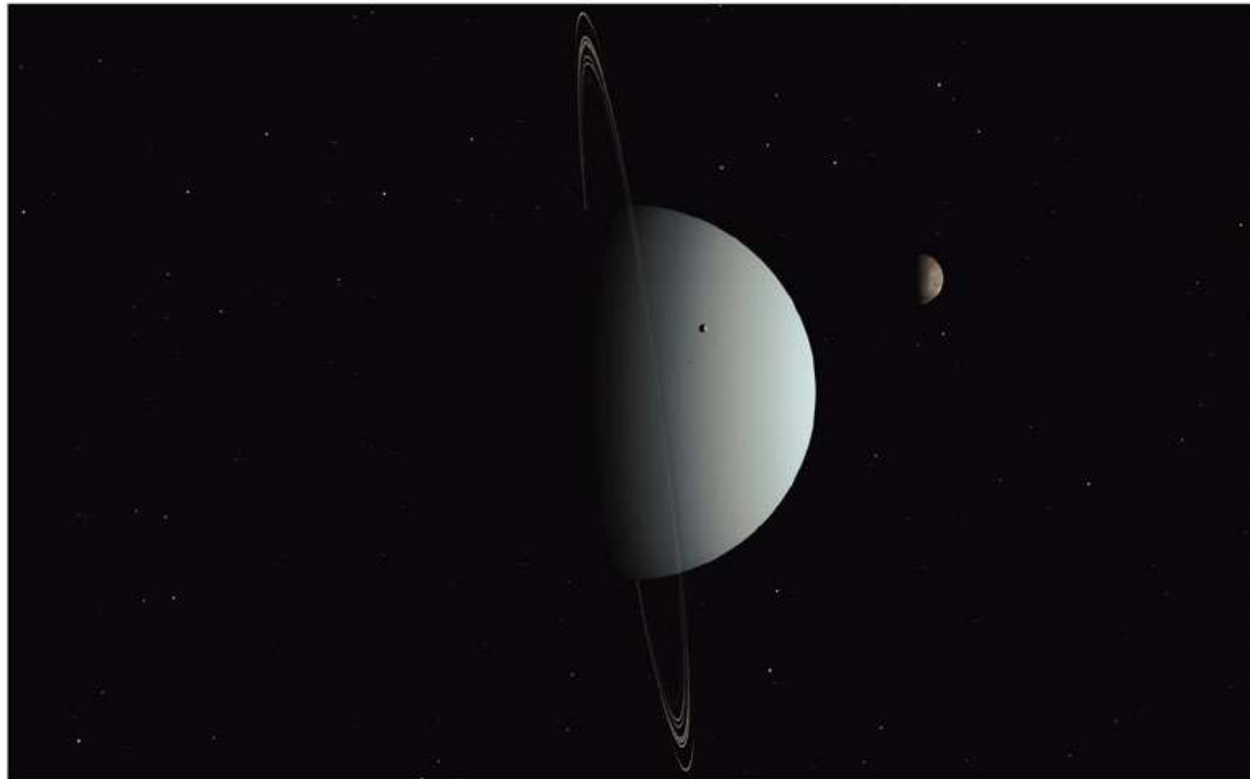






Uranus (19.19 AU, 25559 km, 14.54M_E)

- Uranus is tipped on its side.
- It has a collection of narrow rings.
- The blue-green color comes from significant amounts of methane in the atmosphere.
- Has only been visited by Voyager 2.



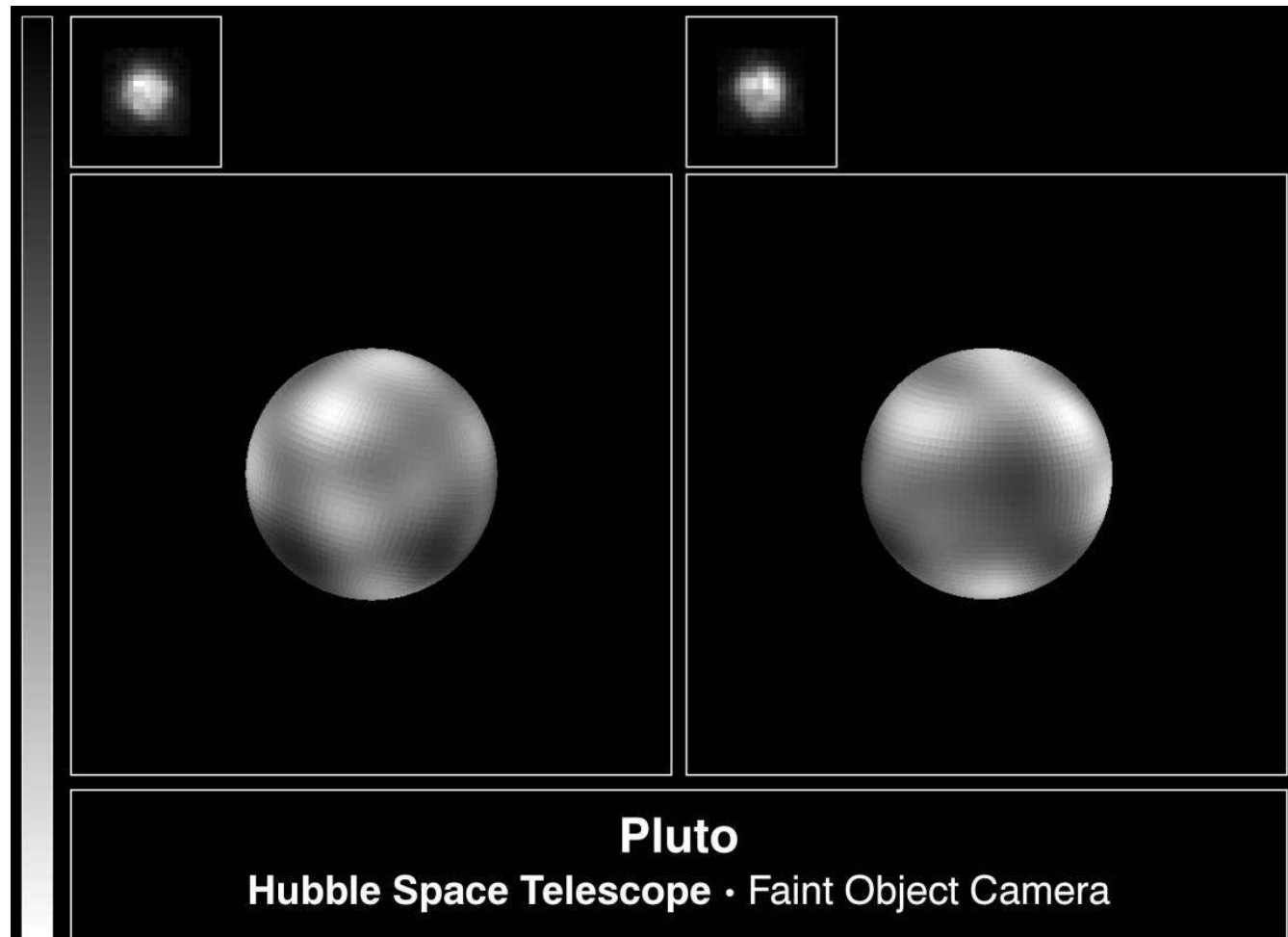
Neptune (30.06 AU, 24764 km, 17.13M_E)

- Twin to Uranus, including color from methane in atmosphere.
- Has a large storm called the great dark spot.
- Largest moon, Triton, orbits backwards.
- Has ring arcs.
- Also has only been visited by Voyager 2.



Pluto (39.54 AU, 1160 km, 0.0022 M_E)

- *This slide for historical purposes only.



Space Missions

Spacecraft come in 4 basic styles.

- Flybys simply go zooming past the planet taking as many pictures and other data as they can on the way. They can visit multiple planets as well.
- Orbiters go into orbit around a planet.
- Landers/probes actually go to the planet/body. If it has a solid surface, they land. Otherwise they send back information as they plunge to their doom.
- Sample return missions are landers/probes that return to the Earth and bring us a piece of the distant object.

Minute Essay

- Should we send orbiters to Uranus and Neptune? Support your answer.
- Have a good fall break.