

## Lecture 2: August 25, 2010

- Estimation
- How much money does the US spend per public K-12 student per year, on average?

# 1. Our Place in the Universe



**Hubble Deep Field**

ST ScI OPO January 15, 1996 R. Williams and the HDF Team (ST ScI) and NASA

**HST WFPC2**

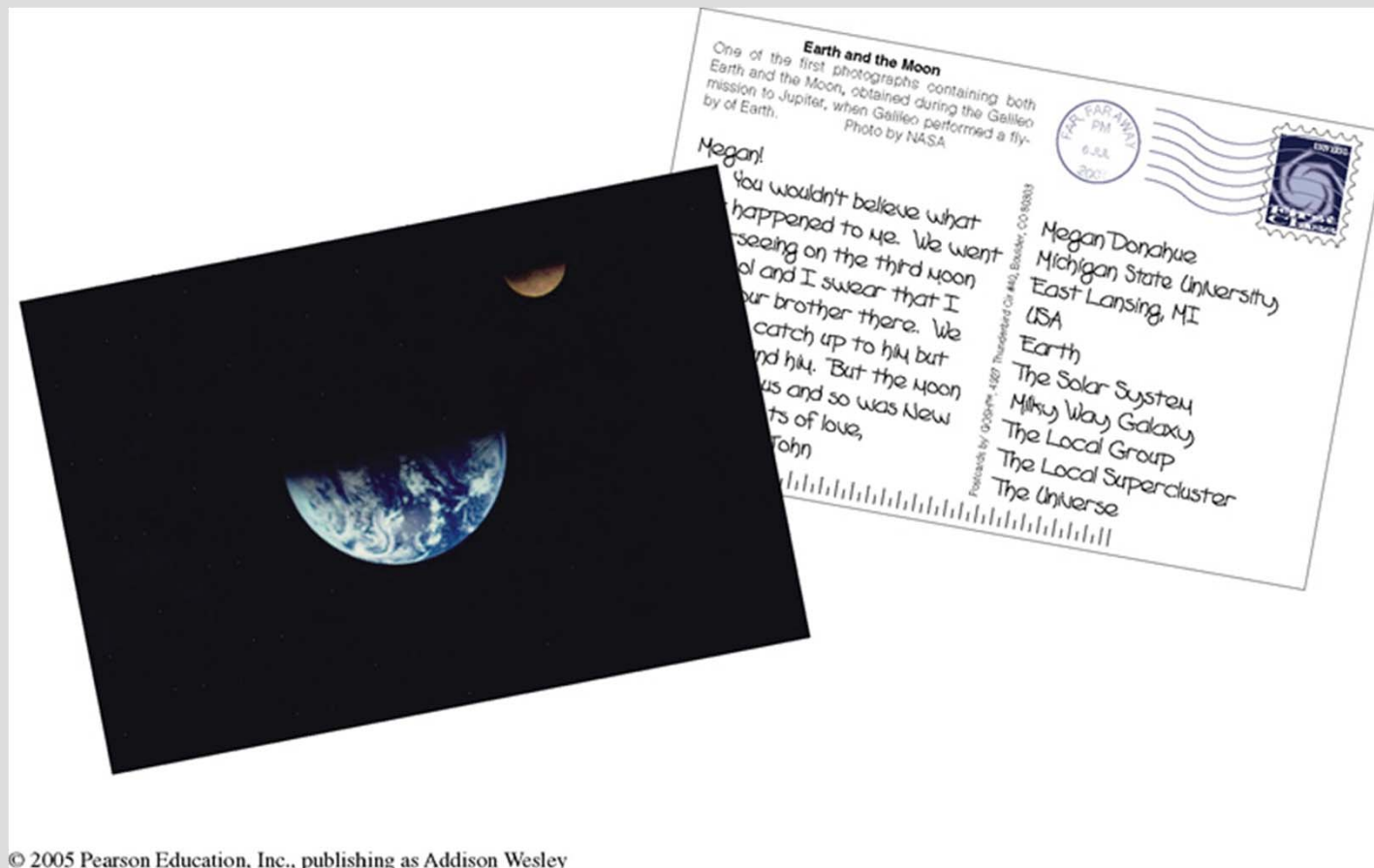
# 1.1 A Modern View of the Universe

Our goals for learning:

- What is our physical place in the Universe?
- Describe our cosmic origins and why we say that we are “star stuff.”
- Why does looking into space mean looking back in time?

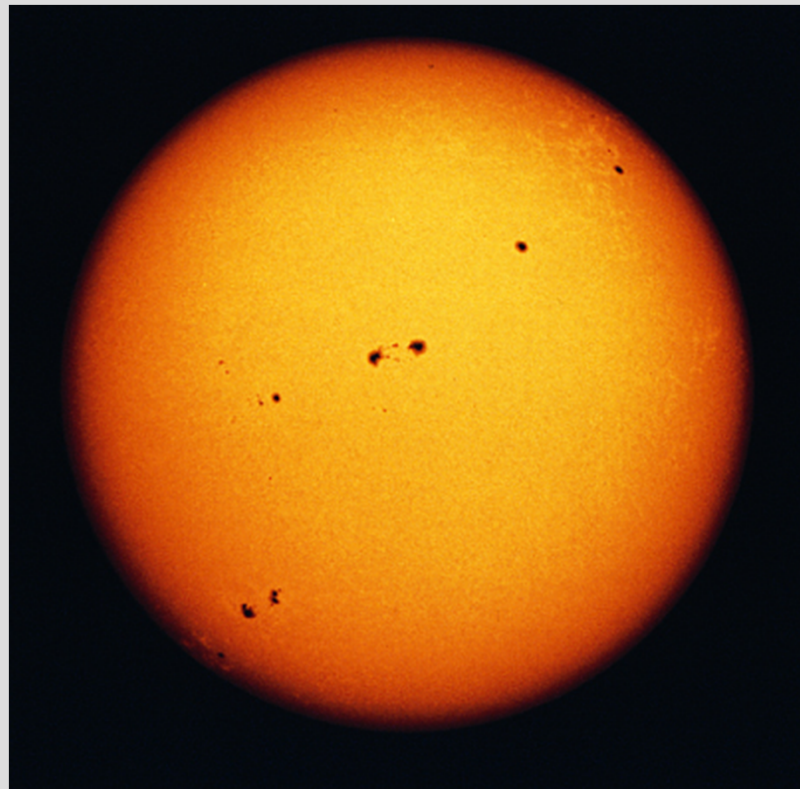
# Address: Earth

- How would the Universal post office find us?

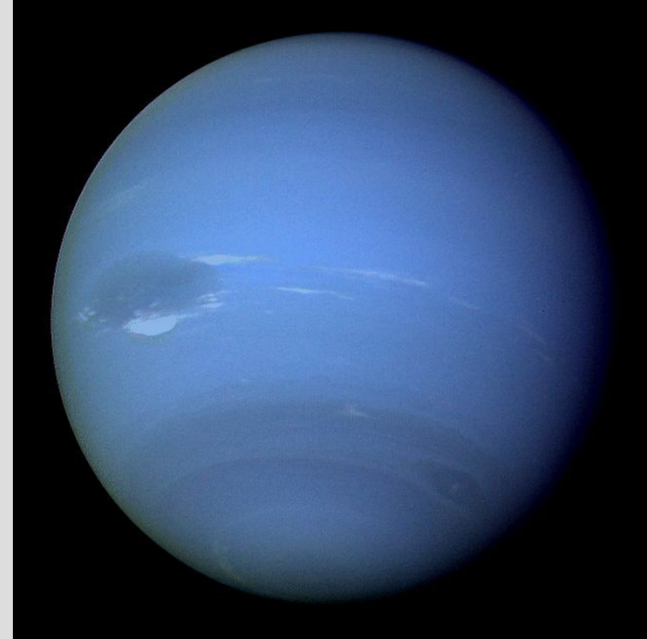


# Star

A large, glowing ball of gas that generates heat and light through nuclear fusion



# Planet



A moderately large object which orbits a star; it shines by reflected light. Planets may be rocky, icy, or gaseous in composition.

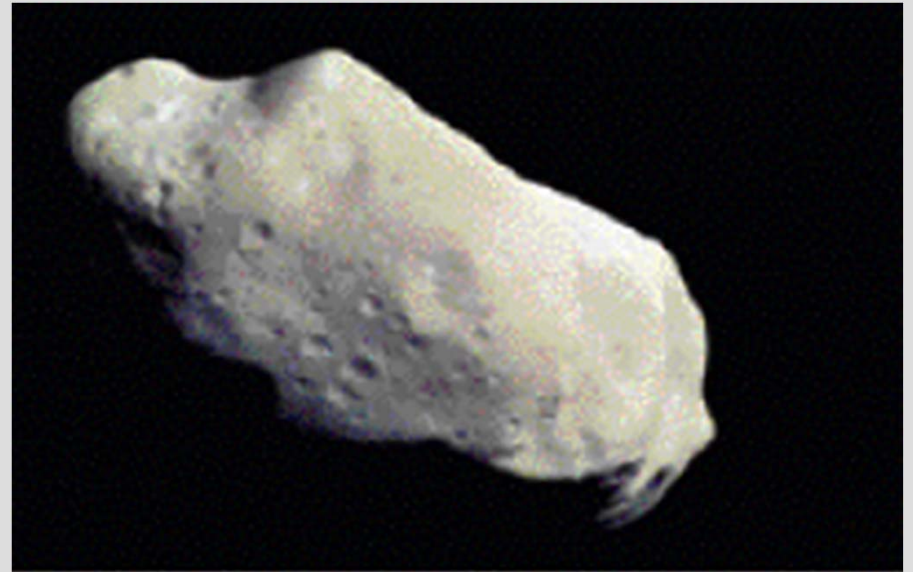
# Moon



An object which orbits a planet.

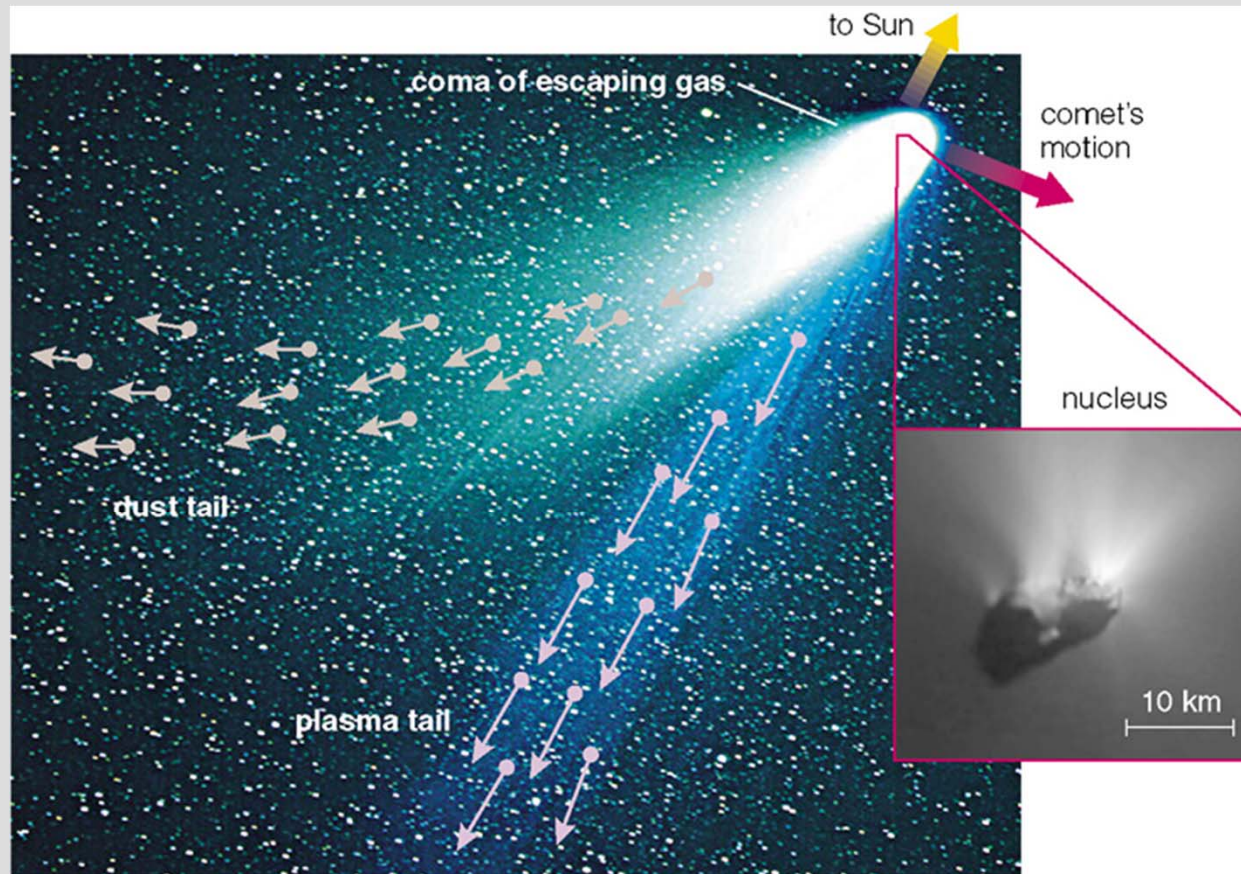
# Asteroid

A relatively small and rocky object which orbits a star.





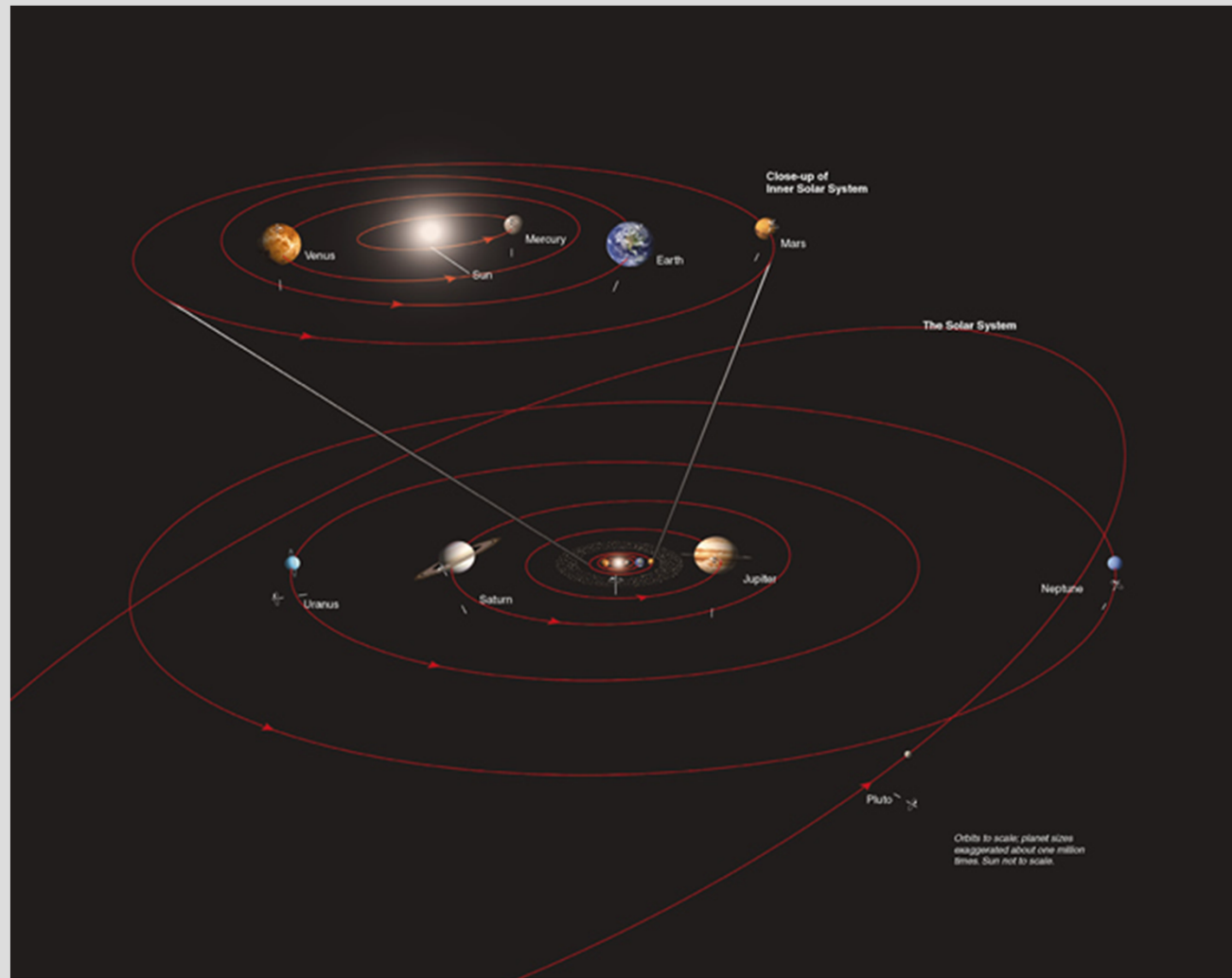
# Comet



A relatively small and icy object which orbits a star.

# Solar (Star) System

A star and  
all the  
material  
which orbits  
it, including  
its planets  
and moons



# Nebula



An interstellar cloud  
of gas and/or dust

# Galaxy

A great island of stars in space, all held together by gravity and orbiting a common center

