


# OBJECTS IN THE SKY: THE SOLAR SYSTEM

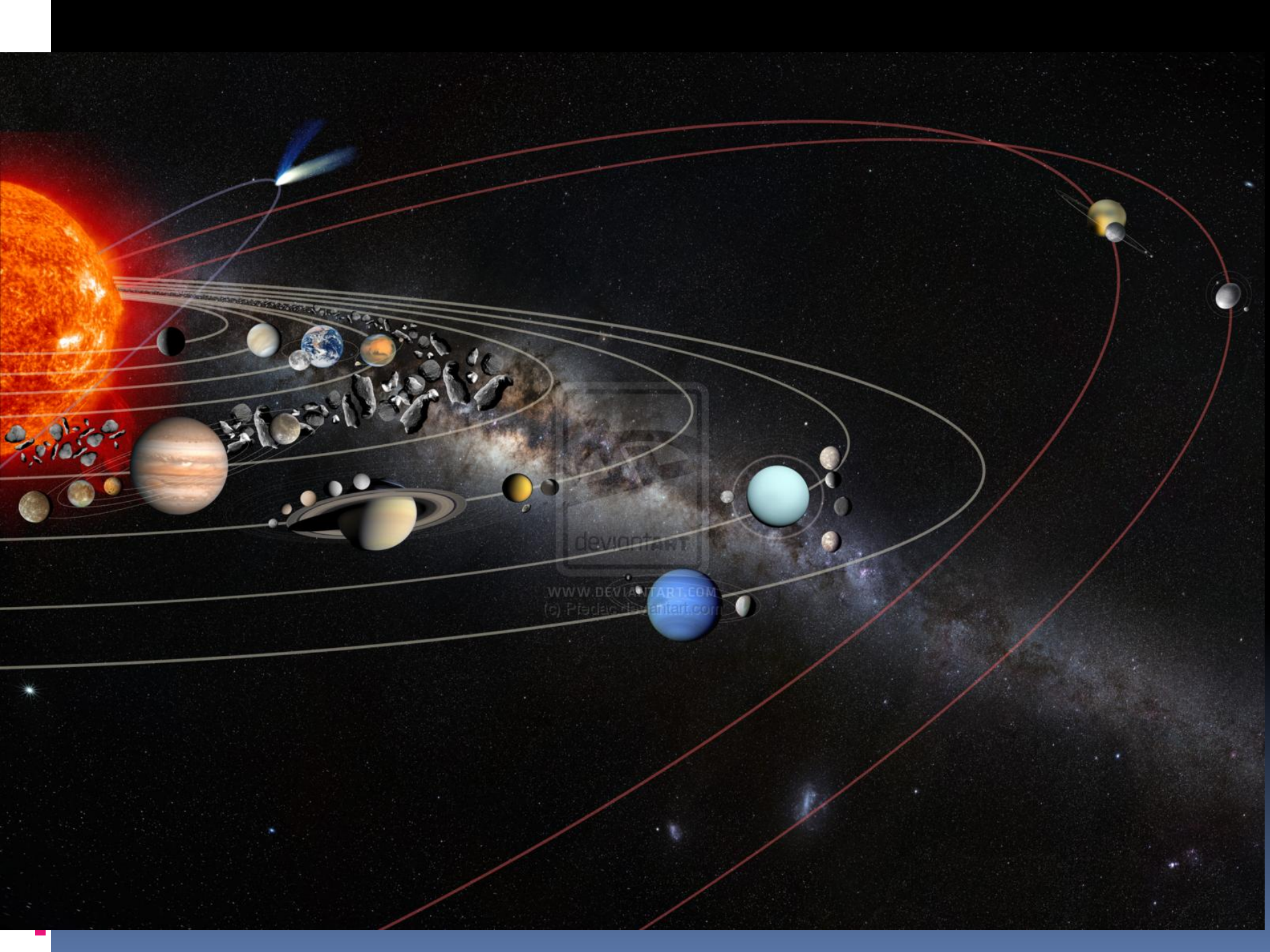
# Structure of the Universe

- Earth is one of the eight planets in the Solar System
- Our sun is a star
- Stars cluster to form galaxies
- Our sun is one of over 300 billion stars in the Milky Way galaxy
- Milky Way is one of 100 billion galaxies in the visible Universe
- Most galaxies look like stars to us



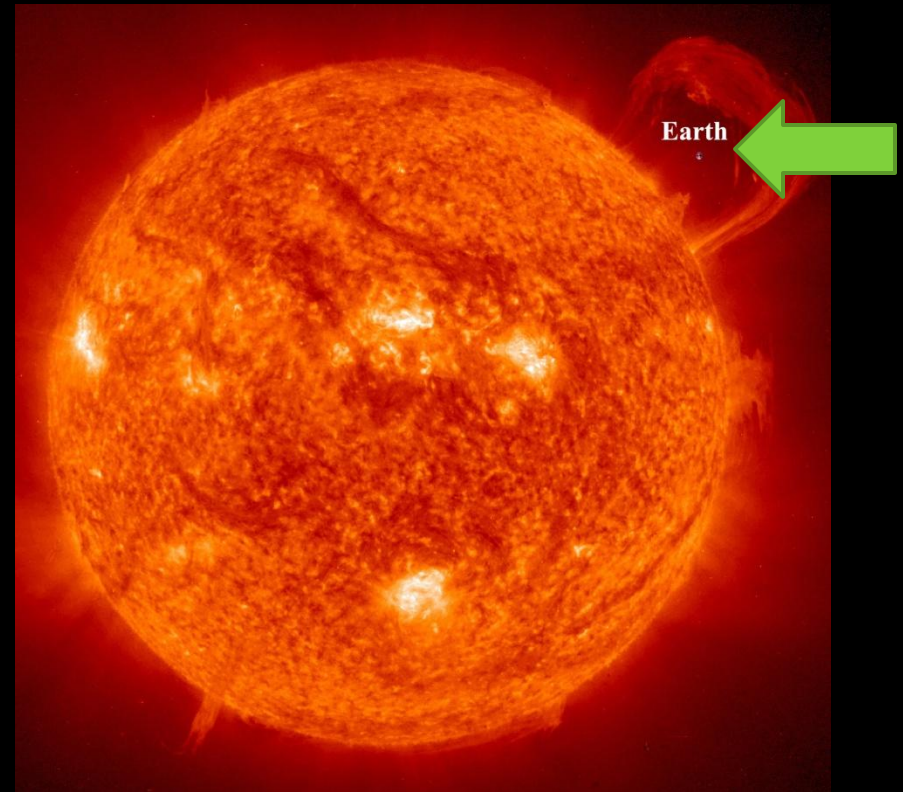
# The Solar System

- The Sun
  - 8 Planets
  - Moons of planets
  - Other objects
    - Asteroids
    - Meteoroids
    - Comet
- 



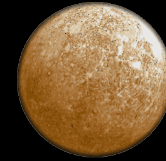


# The Sun



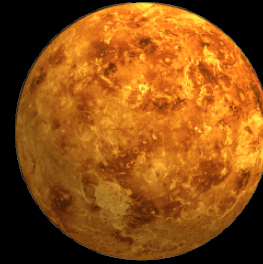
- The star at the center of the Solar System
- Diameter of ~109 times that of Earth
- Surface temperature: ~5505 C

# Mercury



- Closest planet to the Sun
- Smallest planet in the Solar System

# Venus



- Earth's "sister planet" or "twin" – similar size
- Hottest planet in the Solar System
- Has many volcanoes and craters
- Atmosphere is consisted of mostly carbon dioxide

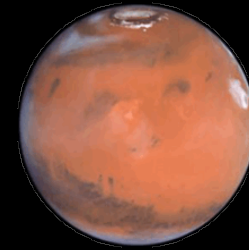
# Earth



- Surface: 70% water
- Atmosphere: 78% nitrogen, 21% oxygen
- Ozone layer blocks UV light
- Permits life

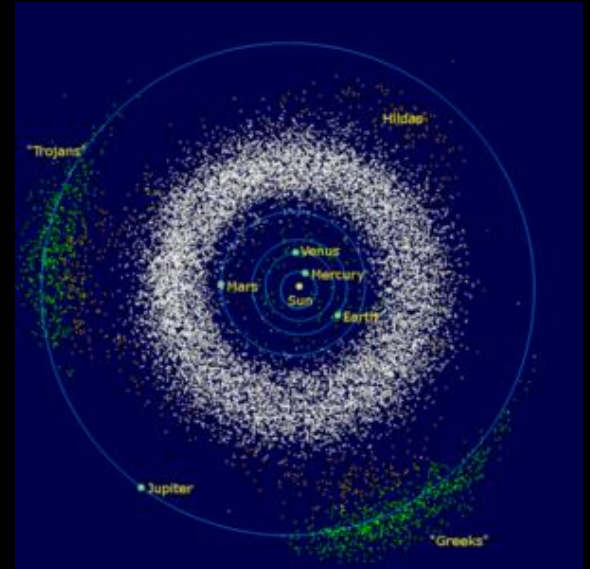


# Mars



- Second smallest planet in the Solar System
- The “Red Planet” – iron oxide (gas) gives the surface a reddish appearance

# Asteroid belt



- Located roughly between the orbits of Mars and Jupiter
- Asteroids - small bodies in orbit around the Sun

What it might look like if  
an asteroid hit Earth:

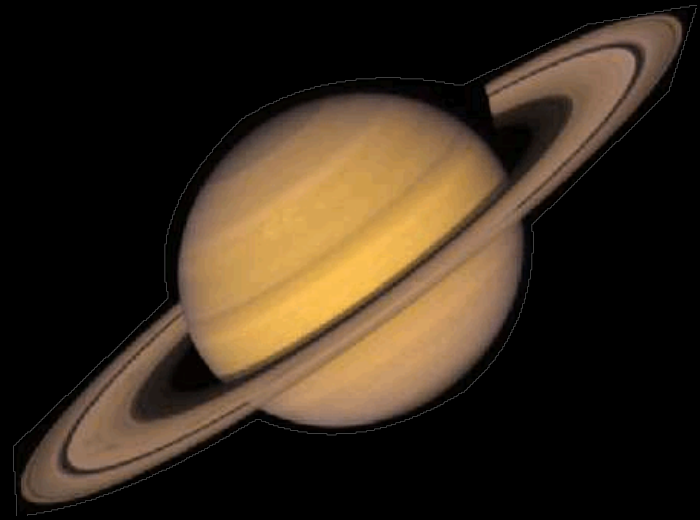


# Jupiter



- Largest planet in the Solar System
- Has the most moons in the Solar System
- Gas giant, composed primarily of gas & liquid
- Giant Red Spot – storm

# Saturn



- Second largest planet in the Solar System
- Pale yellow
- Visible rings of particles, mostly water ice

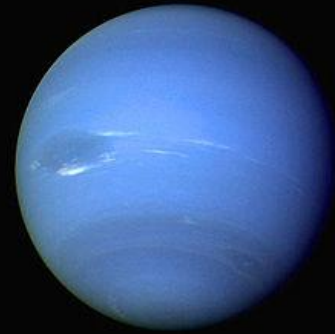
# Uranus



- The coldest planetary atmosphere in the Solar System



# Neptune



- Farthest planet from the Sun
- Active & visible weather patterns

# Comet



- Icy small Solar System body
- When close enough to the Sun, displays a visible coma tail
- Tail is always pointed away from the Sun

# Meteoroid, Meteor, Meteorite?

- Meteoroid: A small particle from an asteroid or comet orbiting the sun.
- Meteor: A meteoroid that is observed as it burns up in the Earth's atmosphere (also called a shooting star).
- Meteorite: A meteoroid that survives its passage through Earth's atmosphere and impacts the Earth's surface.

# Meteoroids might look like:



# Meteors might look like:



# Meteorites might look like:





# Evidence of a meteorite hitting Earth: (Meteor Crater, AZ)

