

The Universe

What Exactly IS out there . . . An introduction to
space

Astronomy

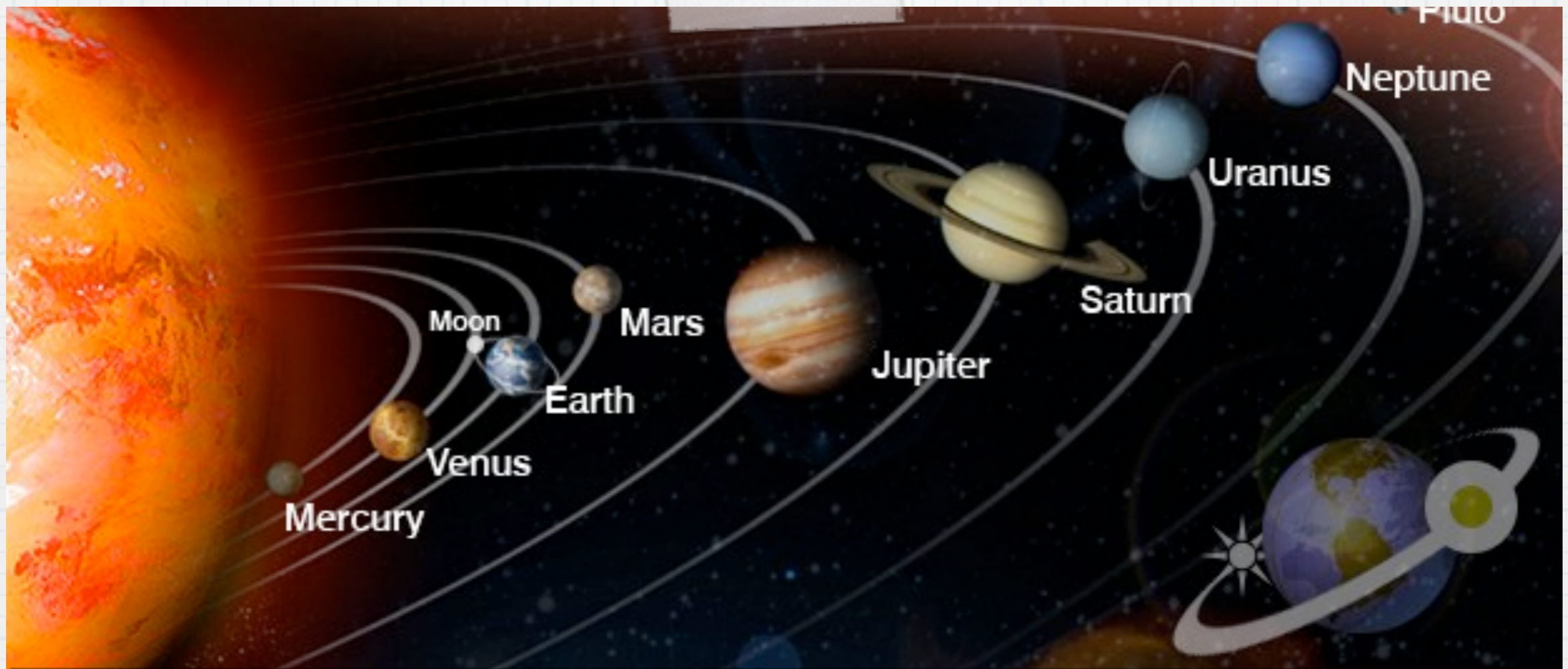
- * **Astronomy: the study of the universe and the objects in it.**

Celestial Objects

- * Objects we can see in the sky are called celestial objects.

Celestial Objects

- * Celestial objects can be luminous (objects that light themselves) or non-luminous (objects that reflect light from another source)



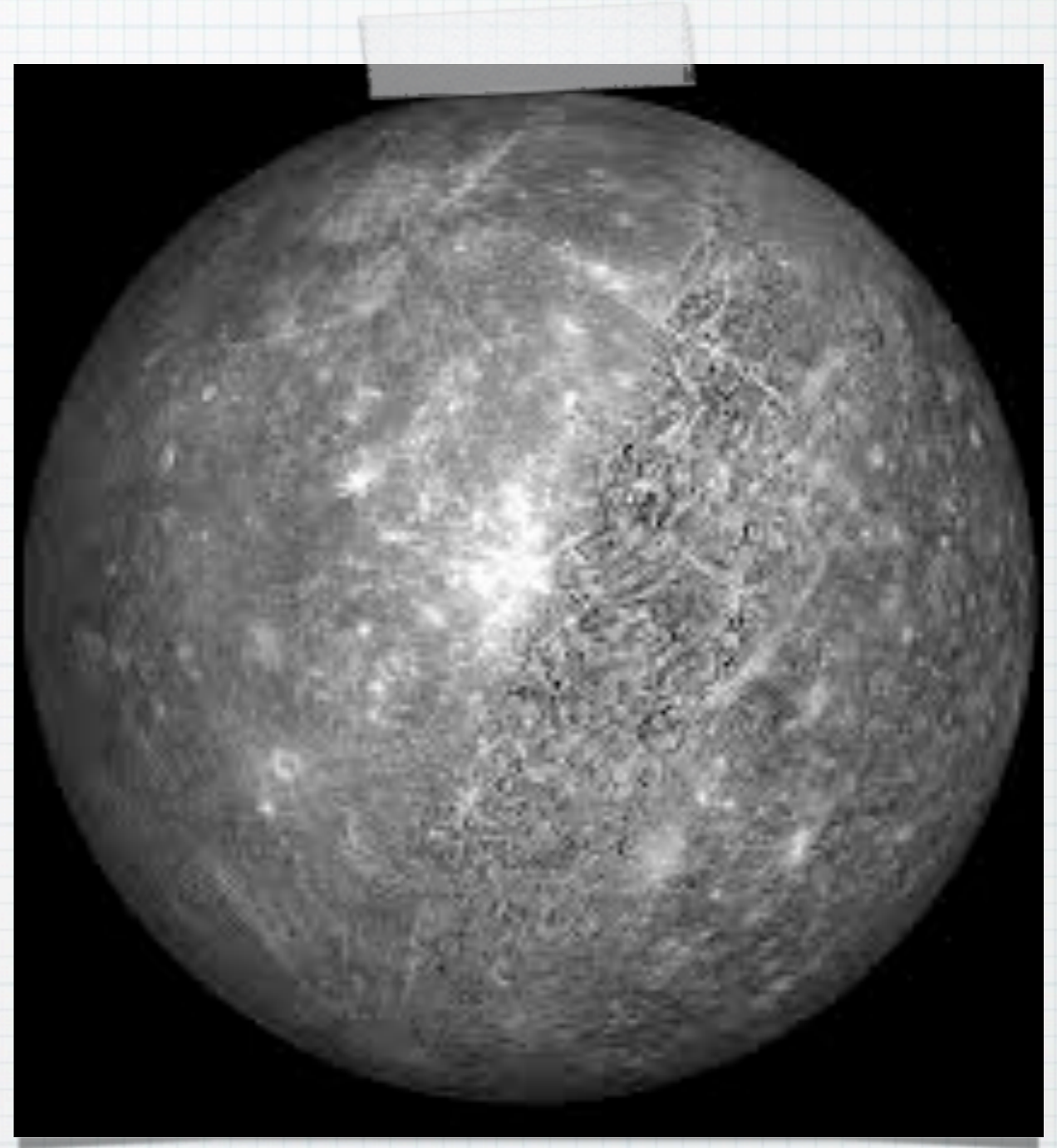
Planets

To Be A Planet

- * 1. Be in orbit around a star (such as the Sun)
- * 2. Have enough mass to be pulled into a stable sphere shape by gravity
- * 3. Dominate its orbit (ie - its mass must be greater than anything else that crosses its orbit)

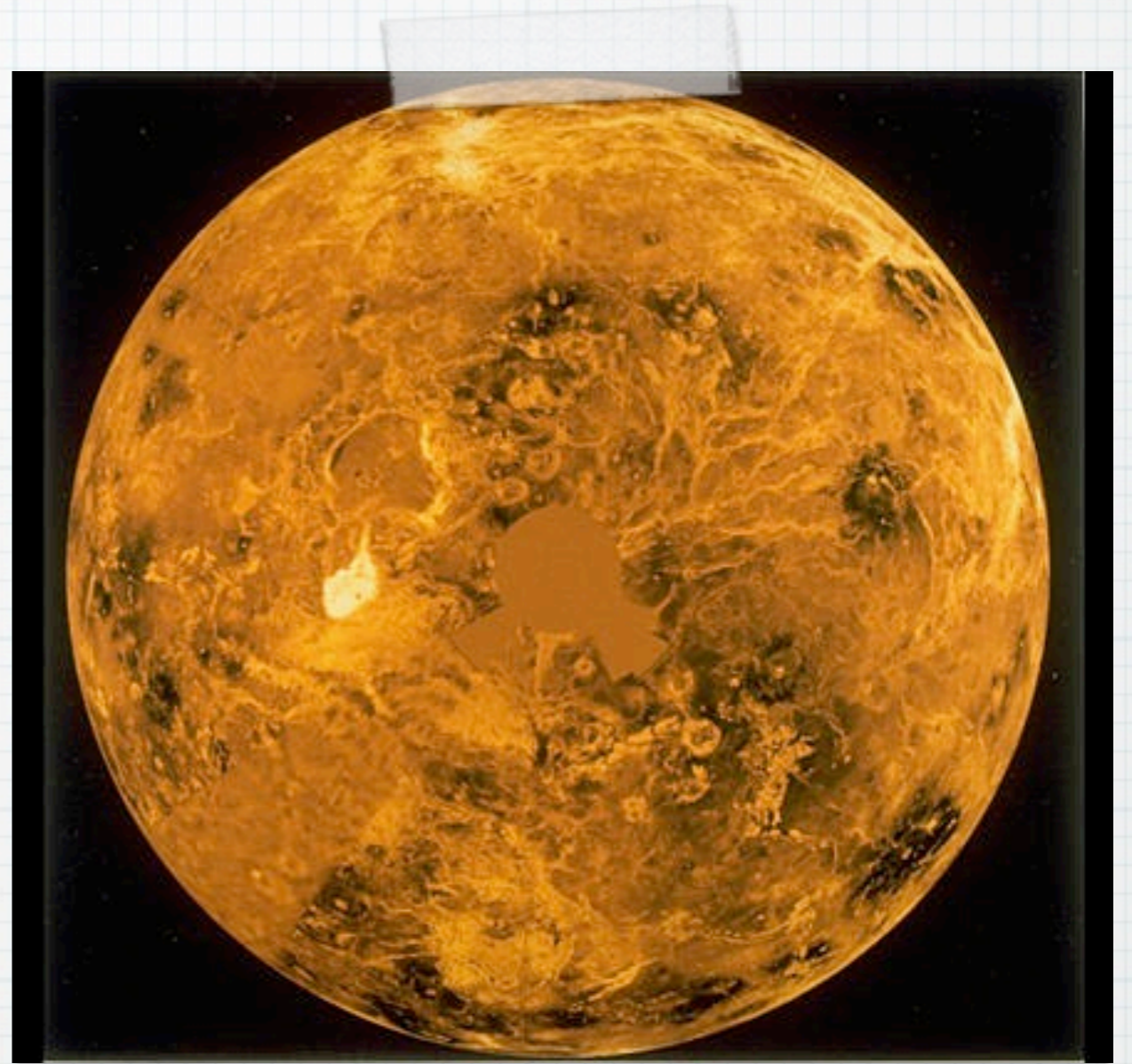
Mercury

Small, hot and very close to
the Sun



Venus

- 'Sister' to the Earth.
- Close to same size
 - Same density
 - Similar chemical make up

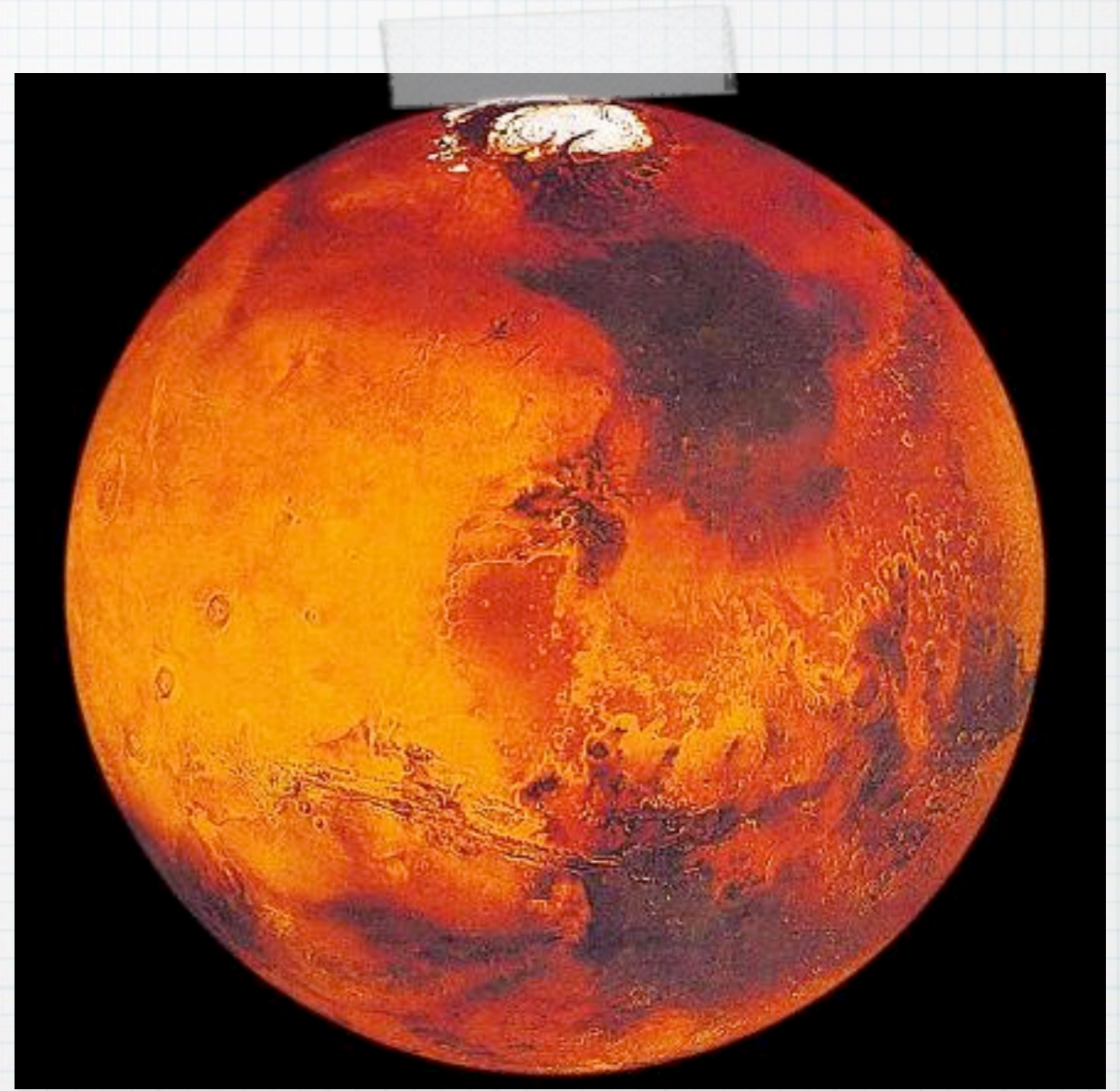


Earth



Mars

The Red Planet...
because there is so much
iron



Jupiter

The Failed Star with the
Great Red Spot



Saturn

The ringed planet



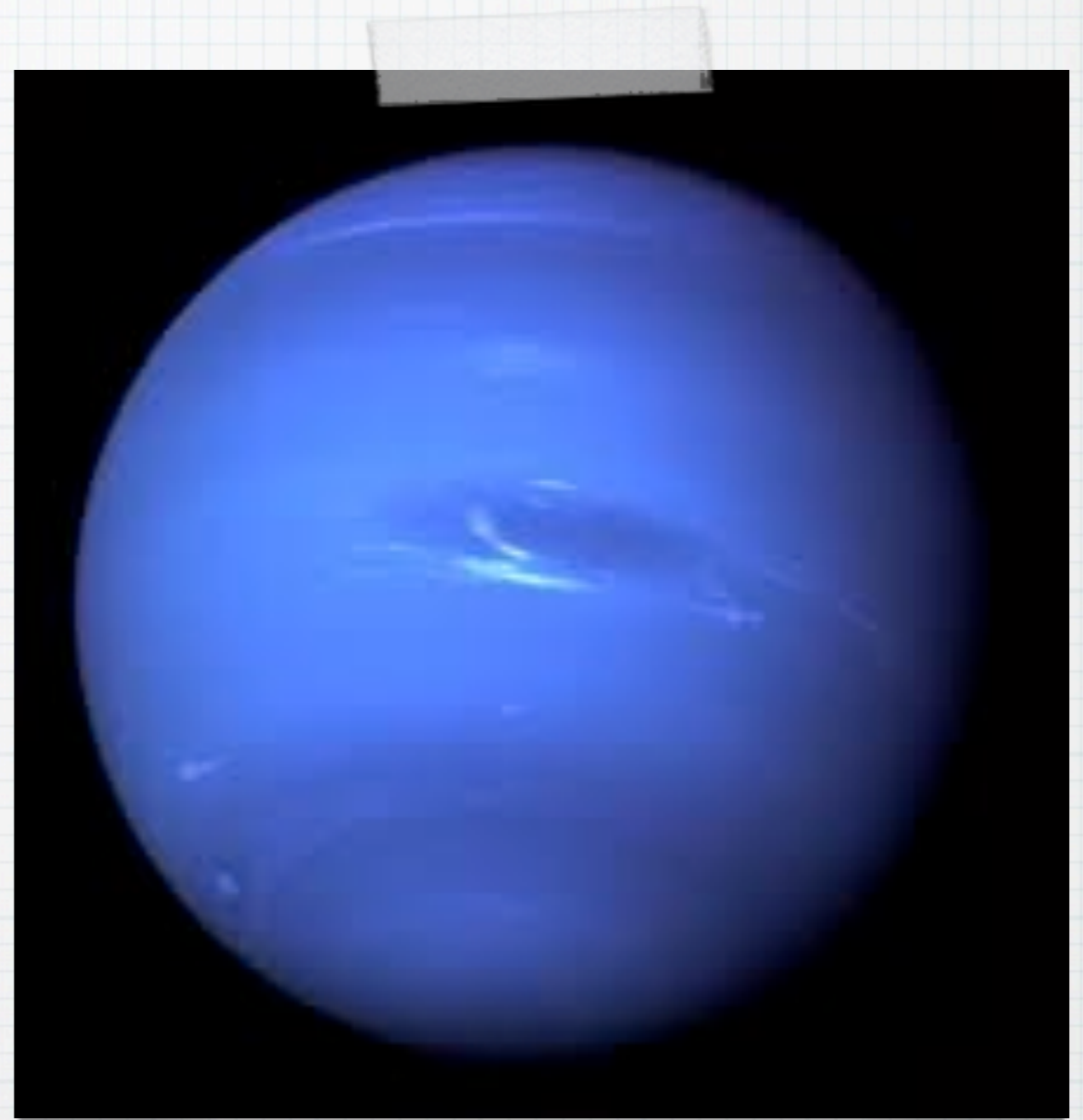
Uranus

It's tilted (compared to the other planets), it flies through space on its side.



Neptune

The Great Dark Spot

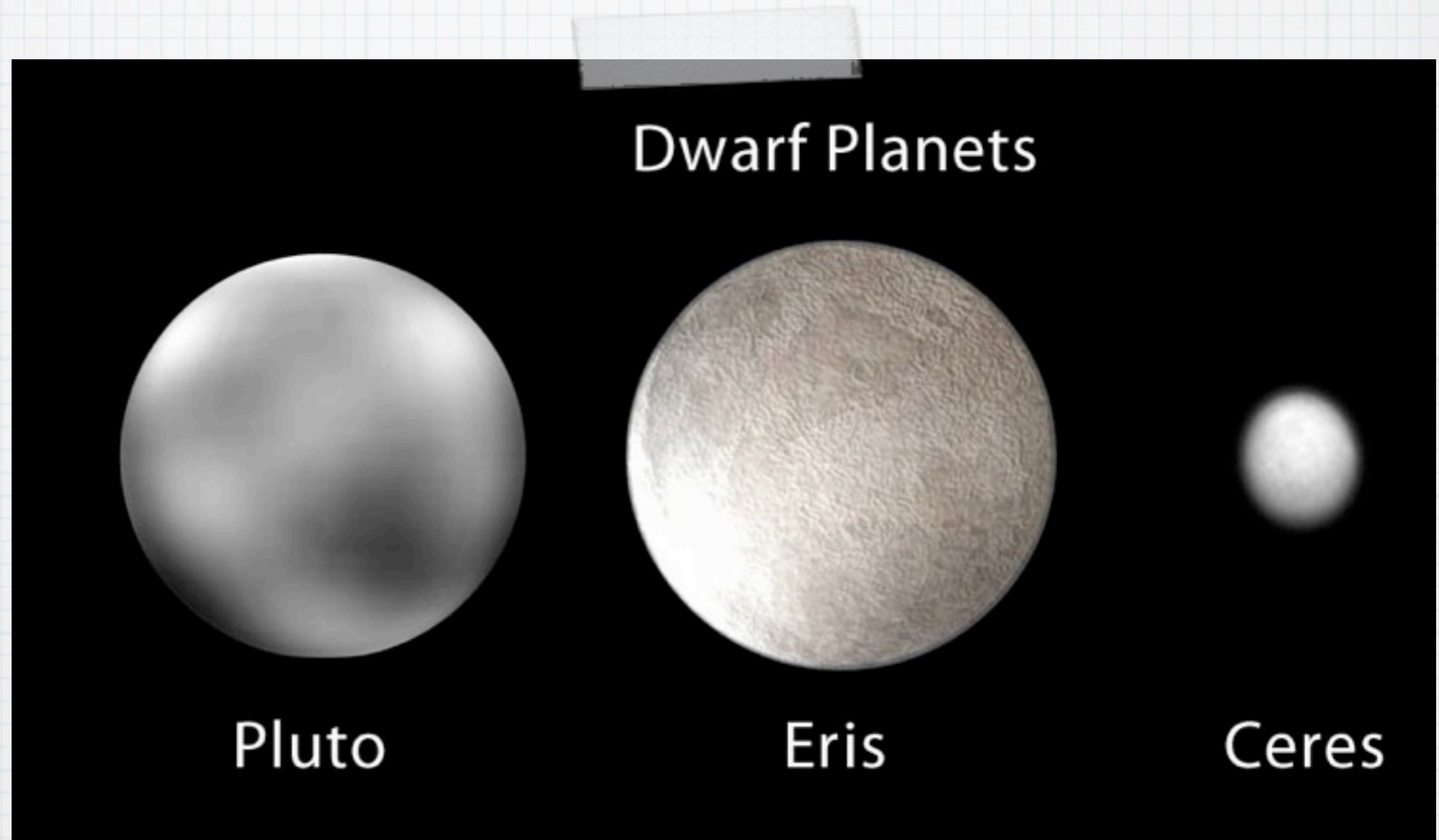


The Dwarf Planets

* Ceres

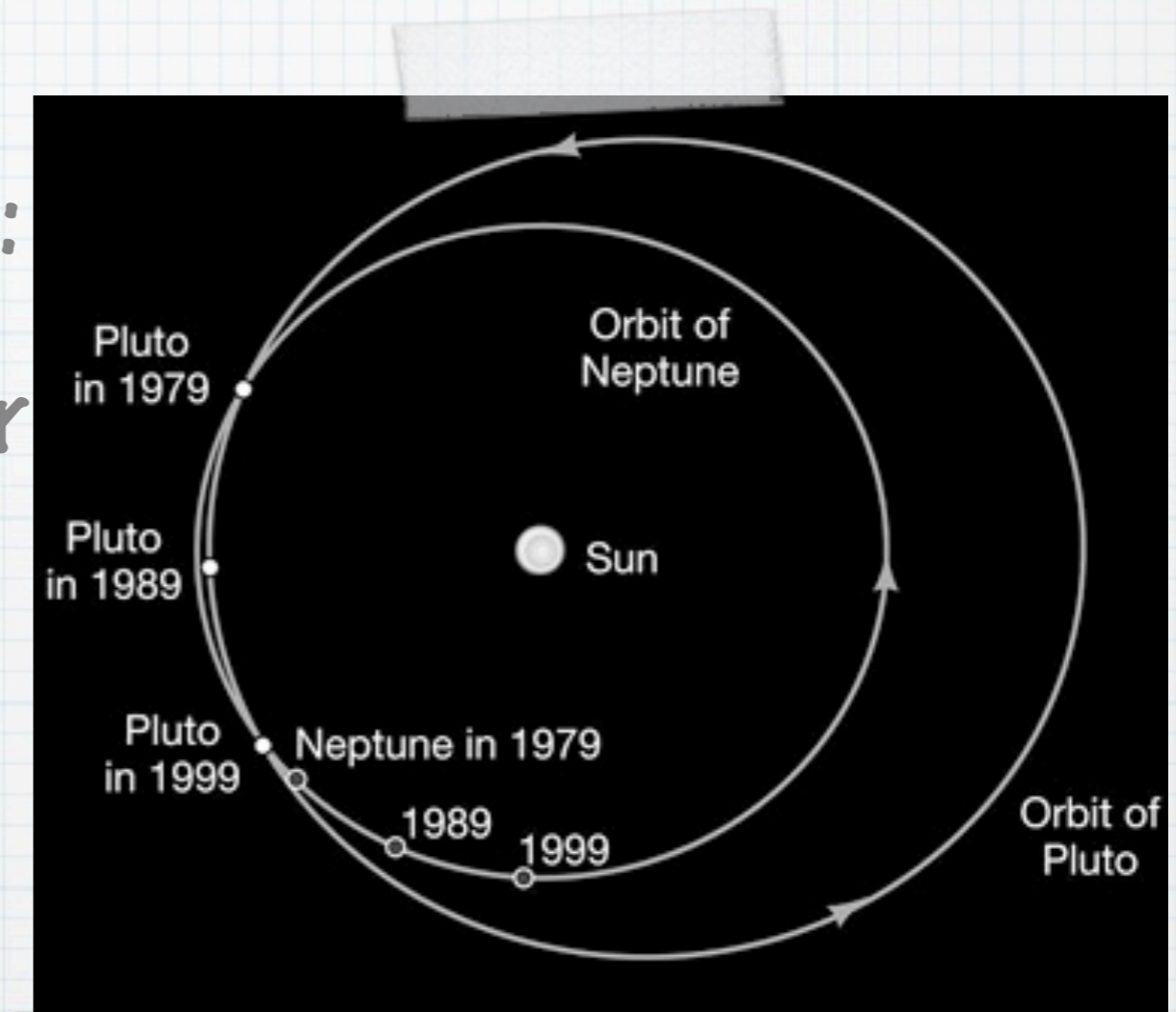
* Pluto

* Eris



Dwarf Planets

- * They are objects that:
 - * Orbit around a star
 - * Have enough mass that they are spheres
 - * Do not dominate their orbit



* They are objects that:

* Orbit around a star

* Have enough mass that they are spheres

* Do not dominate their orbit

Other Celestial Bodies

Moons



Asteroids

Composed of rock and metal.

Most are found in the Asteroid Belt, between Mars and Jupiter.

They can be as small as a pebble and as large as 1000 km across.



Meteors

Each streak is a piece of rock or dust burning up as it enters our atmosphere. The rock is a meteoroid. If it hits Earth it is called a meteorite.



Comets

Big Dirty Snowballs

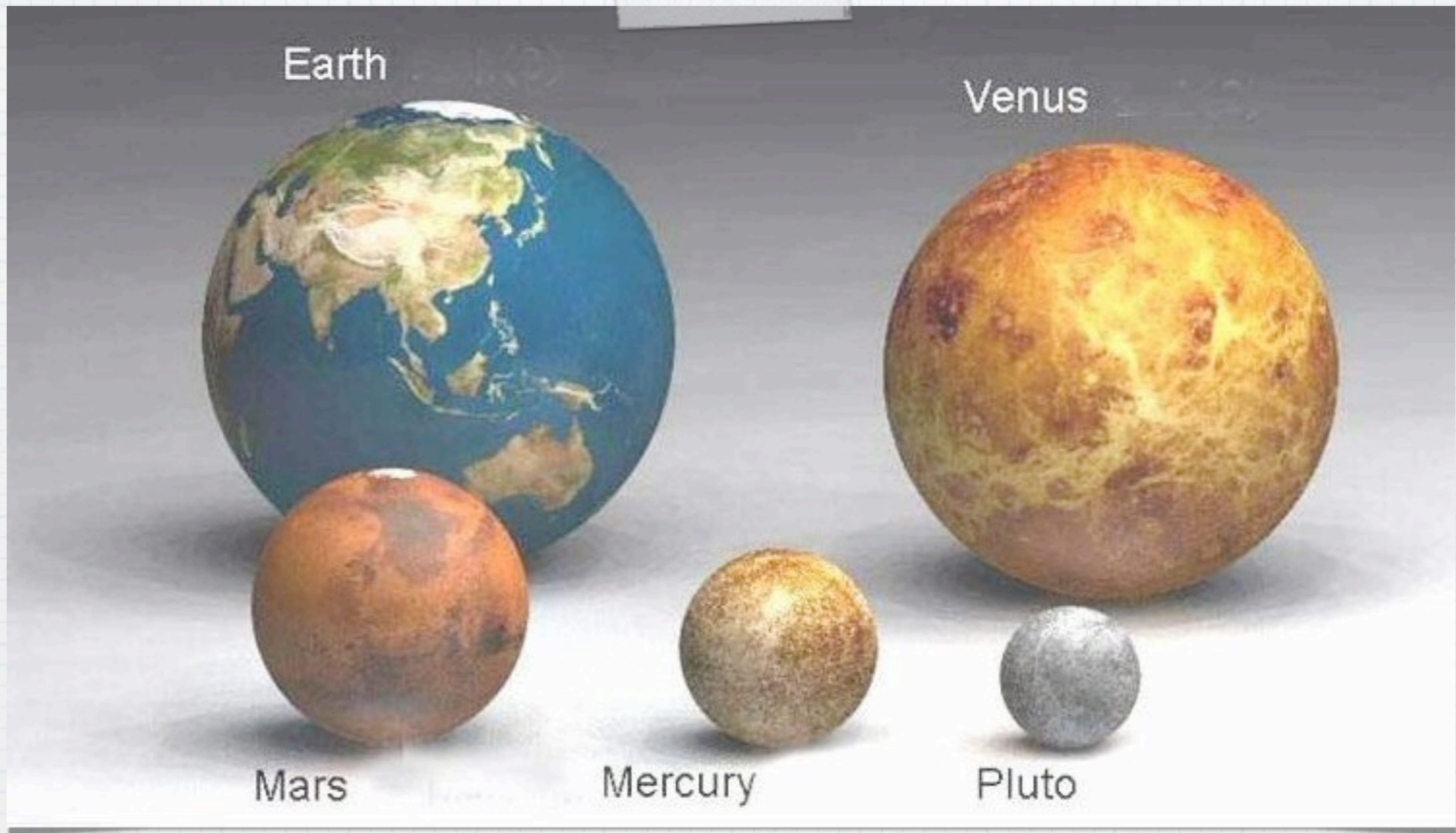
Comets actually have two tails. The dust tail (yellow) and the ion tail (blue)



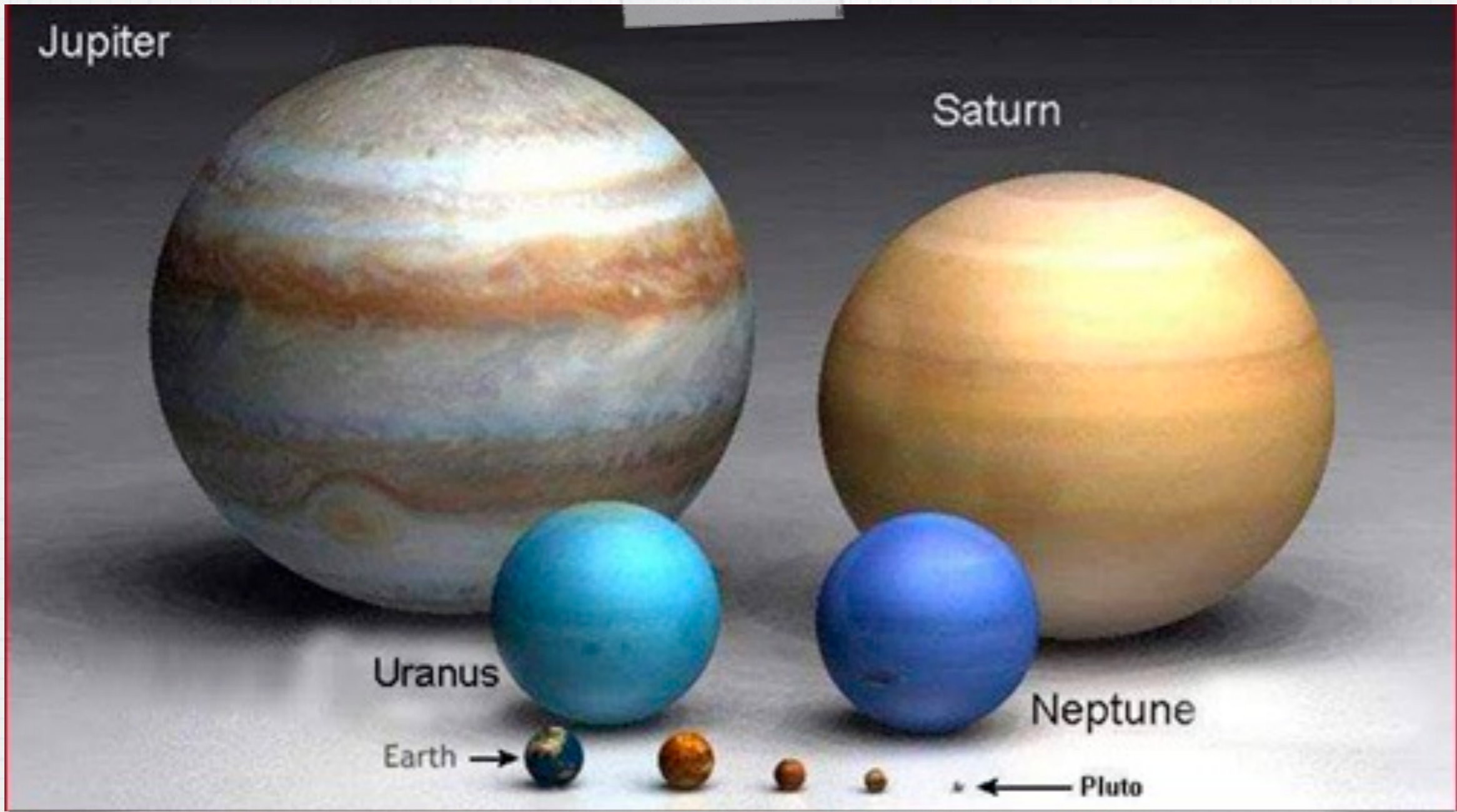
Stars

- Massive collection of gases
- Emitting huge amounts of energy





The rocky planets



The Gas Giants