

TMARTSCIENCE YOUTUBE

ASTRONOMY
INTRODUCTION TO THE
SOLAR SYSTEM
PLANETS

www.ADVENTUREEARTHSCIENCE.ORG

How many planets are
there in the solar system?

What is a Planet?

Definition:

πλανητης

(planetes)

A wanderer

So How many planets are in the solar system?

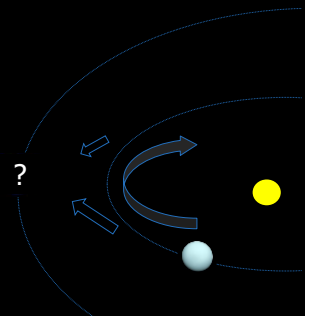
	Spanish	English
• Sun	Domingo	(Sunday)
• Moon	Lunes	(Monday)
• Mars	Martes	(Tuesday)
• Mercury	Miercoles	(Wednesday)
• Jupiter (Thor)	Jueves	(Thursday)
• Venus	Viernes	(Friday)
• Saturn	Sabado	(Saturday)

How Many Planets?

- Ancient view 7
- Post Copernicus (1600) 6
- 1781 (Herschel) 7
- 1865 83
- Early 20th century 8

Discovery of Neptune

- Inconsistencies detected in Uranus' orbit
- Le Verrier used mathematics to predict location
- Galle observed Neptune in 1846



What about Pluto?

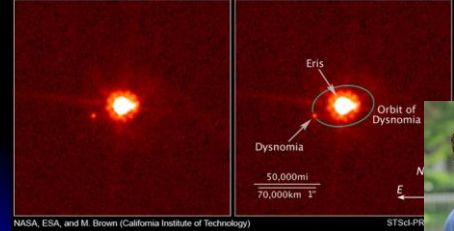


Clyde Tombaugh



2005 Discovery of Eris

Dwarf Planet Eris and Satellite Dysnomia • August 30, 2006 HST • ACS/HRC



Mike Brown

NASA, ESA, and M. Brown (California Institute of Technology)

STScI/PR

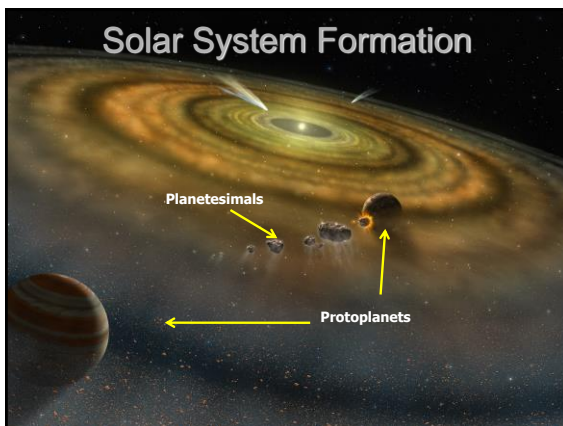
IAU 2006 Planet Definition

- A **PLANET** is a celestial body that :
 - (a) is in orbit around the Sun
 - (b) has sufficient mass for its self-gravity to overcome rigid body forces so that it assumes a hydrostatic equilibrium (nearly round) shape
 - (c) has cleared the neighborhood around its orbit.
- (2) A "**dwarf planet**" is a celestial body that:
 - (a) is in orbit around the Sun,
 - (b) has sufficient mass for its self-gravity to overcome rigid body forces so that it assumes a hydrostatic equilibrium (nearly round) shape
 - (c) has not cleared the neighborhood around its orbit
 - (d) is not a satellite.
- (3) All other objects except satellites, orbiting the Sun shall be referred to collectively as "**Small Solar-System Bodies**".

Simplified definition

- Orbits the sun
- Has enough mass to be round
- Has enough gravity to clear orbit of other bodies

Solar System Formation



The Terrestrial Planets



