



science for a changing world

<http://astrogeology.usgs.gov>

Orbit

39.5 astronomical units (AU) from the Sun
Earth is 1 AU from the Sun

Length of year

248 Earth years

Length of Day

6.39 Earth days

Tilt of Rotation Axis

122.5 degrees versus 23.5 degrees for Earth

Size

Diameter: 0.2 of Earth's diameter

Surface Gravity

0.08 of Earth's gravity

If you weigh 80 pounds on Earth, you would only weigh about 6.4 pounds on Pluto.

Mass

0.0022 of Earth's mass

Surface Temperature

Mean temperature: -375 degrees Fahrenheit

Atmosphere

Little is known about Pluto's atmosphere, but it probably consists primarily of nitrogen with some carbon monoxide and methane. It is extremely tenuous, the surface pressure being only a few millionths of the Earth's surface pressure. Pluto's atmosphere may exist as a gas only when Pluto is closest to the Sun; for the majority of Pluto's year, the atmosphere is frozen.

Surface

Pluto's composition is unknown, but its density indicates that it is probably a mixture of 70% rock and 30% water ice, much like Triton. The bright areas of the surface seem to be covered with ices of nitrogen with smaller amounts of (solid) methane, ethane and carbon monoxide. The composition of the darker areas of Pluto's surface is unknown but may be primordial organic material or the result of photochemical reactions driven by cosmic rays.

Moons

Charon, the single moon of Pluto, has a diameter half that of Pluto.

Past Missions:

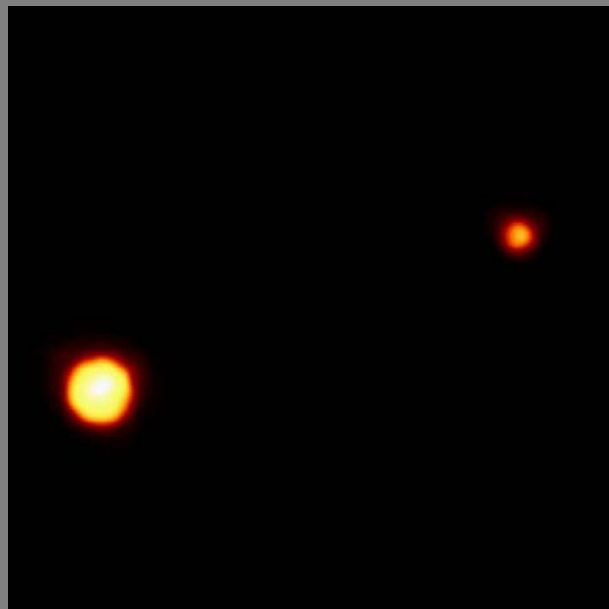
Much of what we know about Pluto we have learned since the late 1970's from Earth-based observations, the Infrared Astronomical Satellite (IRAS) and the Hubble Space Telescope.

Future Missions

The New Horizons Pluto-Kuiper mission is in development. New Horizons is scheduled to launch in January, 2006 and reach Pluto and its moon, Charon, in July, 2015. Then the spacecraft would head deeper into the Kuiper Belt to study one or more of the icy mini-worlds in that vast region, at least a billion miles beyond Neptune's orbit.

Pluto

Ninth planet from the Sun



Hubble Space Telescope PIA00827

Pluto was discovered at Lowell Observatory in Flagstaff, Arizona, during a systematic search for a trans-Neptunian planet predicted mathematically by Percival Lowell and William H. Pickering, and found in 1930 by Clyde Tombaugh, a young apprentice at Lowell Observatory.

Pluto was named after the Greek god of the underworld who was able to render himself invisible. Charon, the only moon of Pluto, is named after the mythological boatman who ferried souls across the river Styx to Pluto for judgment.

Charon was discovered in 1978 by Jim Christy on photographs taken at the U.S. Naval Observatory in Flagstaff, Arizona. Prior to that it was thought that Pluto was much larger since the images of Charon and Pluto were blurred together.

A current controversy is whether Pluto should be called a planet, or the largest of the Kuiper belt objects (asteroids which circle the Sun beyond the orbits of Neptune and Pluto). The International Astronomical Union has decided that Pluto will continue to be classified as a planet.