Cosmic Story of Pluto and Charon

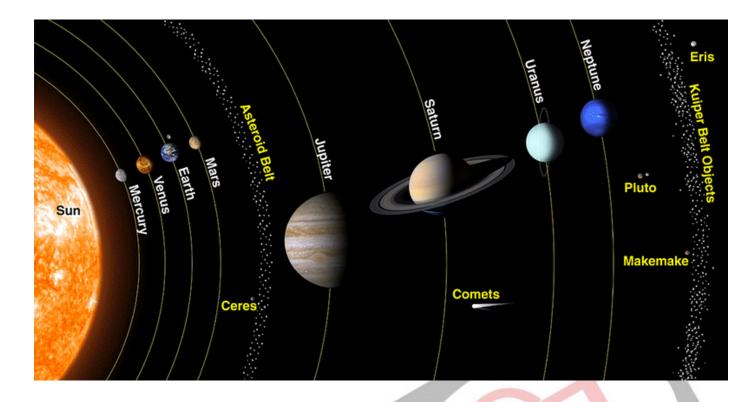
Source: IE

A recent study suggests that <u>Pluto</u>'s largest moon, Charon, was formed after a violent collision between Pluto and another celestial body. This was followed by a "kiss-and-capture" event, where the two began orbiting each other.

- Unusual Orbit: Unlike Earth, whose moon orbits the planet, Pluto and Charon are considered a "binary system" where they orbit around a common center of mass, essentially orbiting each other, within the <u>Kuiper Belt</u> making their relationship unique in the solar system.
 - The **Kuiper Belt**, beyond Neptune's orbit, is a **cold region housing icy objects**, similar to the **asteroid belt** but farther from the Sun.
- Pluto's Planetary Status: Pluto, once the ninth planet, was reclassified as a "dwarf planet" in 2006 by the <u>International Astronomical Union</u>.
 - <u>NASA's New Horizons mission</u> revealed surprising features on Pluto, such as ice mountains, nitrogen glaciers, and a heart-shaped region called <u>Tombaugh Regio</u>, changing its image from a barren rock to a dynamic, complex world.
- Moons of Pluto: Charon (largest in size), Nix, Hydra, Kerberos, and Styx.

Pluto:

- Discovered by Clyde Tombaugh in 1930.
- Diameter: 1,400 miles, smaller than Earth's Moon.
- A year on Pluto lasts 248 Earth years; a day lasts 153 hours (about 6 Earth days).
- The atmosphere consists of nitrogen, methane, and carbon monoxide, with a blue tint and haze layers.
- Surface temperature ranges from -228°C to -238°C, too cold to support life.



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