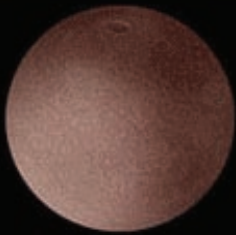


# Comparing Pluto and Earth

Makemake



Dysnomia



Eris



Luna

Charon

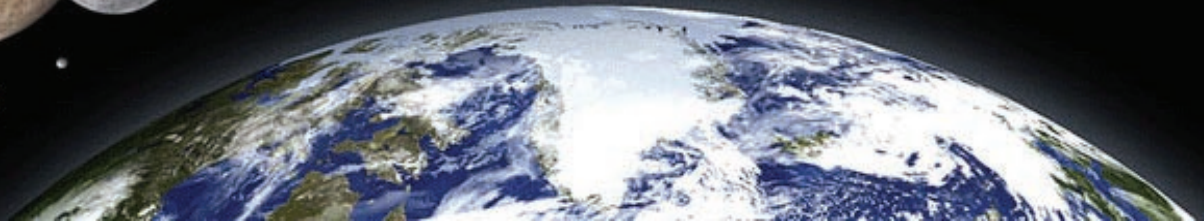


Pluto

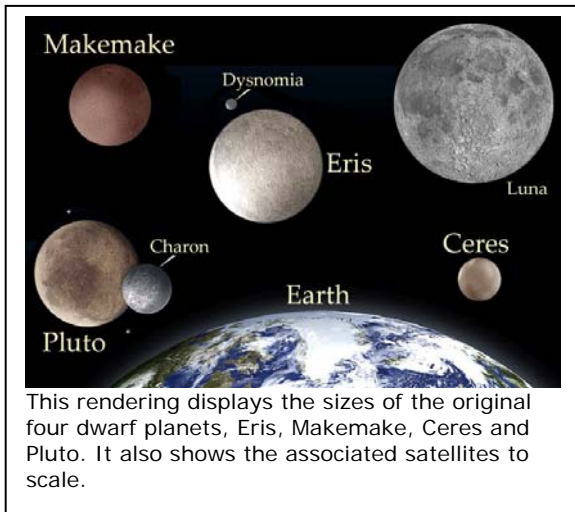
Ceres



Earth



# Comparing Pluto and Earth



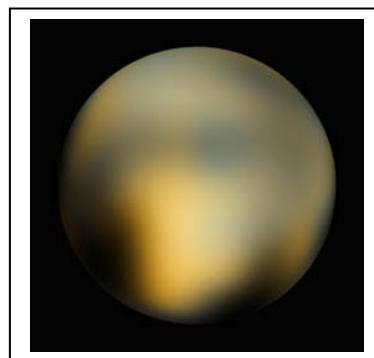
Ever since Clyde Tombaugh discovered Pluto in 1930, astronomers and the general public alike have wondered whether there are more planet-like objects to be found in the outer solar system. For decades this has been a 'back-burner' project among many groups because of the enormous scientific value though extreme difficulty in finding such objects.

- What do they look like?
- How did they form?
- Is there a limit to the planet-forming zone around a star.

## Size Estimates for Pluto

Year	Proposed size (km)
1950	5750 (Kuiper et al)
1965	< 6800 (Halliday)
1971	3200 (Duncombe et al)
1975	> 2000 (Abell)
1993	2390 (Millis et al)
2006	2306 (Buie et al)
2011	2360 (Zalucha et al)
2014	2368 (Lellouch et al)

The diameter of Earth is 12,742 kilometers, making Pluto a very small object indeed! Even estimating its true diameter has not been easy because at its great distance it is about 1/12 arcsecond in diameter. Only the Hubble Space Telescope has been successful in resolving its disk and at least showing its main bright and dark areas. As seen from Pluto, however, our Earth would have a disk with a diameter of about 1/2 arcsecond. This is six times larger than Pluto's disk, which would be enough to see major continents with the Hubble near Pluto!



**Things to think about:** From the diameters of Pluto and Earth, how many Pluto's could you fit inside the volume of Earth?