PLUTO

mass / 10^{24} kg	0.01303
radius / km	1188
distance / 10^{6} km	5906
eccentricity	0.2488
rotation period/ hrs	153
orbital period / days	90,560 [1]

Pluto was the first dwarf planet to be discovered when Clyde Tombaugh observed it in 1930. It is loved across the world for its distinctive heart shaped feature which you can see in the enchanced colour image[2] taken by the New Horizons spacecraft above.

Located past Neptune, over 5.9 billion km from the Sun, Pluto is a cold icy planet with temperatures near -240 °C.

Pluto has a solid rocky core surrounded by a frozen mantle of water ice. It's crust is mainly nitrogen ice!

A Tenuous Atmosphere

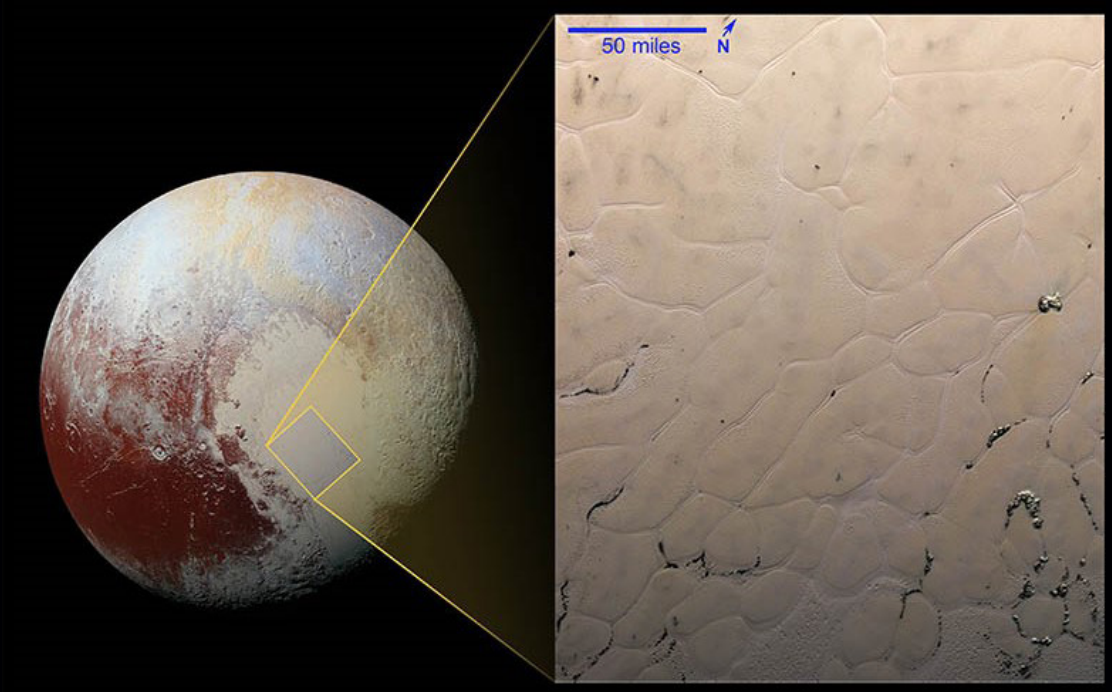
99% N_2 - .5% CH_4 - .05% CO [1]

~13 mbar surface pressure- 1000x less than Earth's!

Pluto's hazy atmosphere was captured by New Horizons as it travelled away from Pluto. The icy plain in the centre is the top of Pluto's 'heart' called Sputnik Planum. [3]

A Fine Surface

Pluto's surface has a variety of icy features from Mountains to icy plains.



This zoomed in image[4] from the New Horizons spacecraft shows a region of the Sputnik Planum. There are lots of ice 'cells' visible. The centres of each cell contain warmer ice which is rising, cooling, then moving towards the cell edges.

Pluto's surface is also covered in craters, mountains, and tectonic features like scarps. [5]

A Friend named Charon

Pluto was once though to be a planet. Nowadays we know Pluto is a dwarf planet since there are other objects like it. Infact Pluto has a moon called Charon which you can see in the image to the right. [6] Charon is roughly 2/3 the size of Pluto and together both are members of a group of objects called Plutinos. These objects orbit in similar paths to Pluto but most are much smaller. Charon is only 1 of 5 named moons of Pluto. The others are: Nix, Hydra, Styx, and Kerberos.

References

[1] NASA Pluto Factsheet (2020) D. R. Williams
[2] The Rich Color Variations of Pluto (2018) NASA/JHUAPL/SwRI
[3] Pluto's Majestic Mountains, Frozen Plains and Foggy Hazes (2017) NASA/JHUAPL/SwRI
[4] Intricate Surface Patterns Revealed on Pluto's Sputnik Planum (2017) NASA/JHUAPL/SwRI
[5] The Pluto system: Initial results fromits exploration by New Horizons (2015) S. A. Stern et al. Science
[6] Charon in Enhanced Color (2017) NASA/JHUAPL/SwRI