Atmosphere

Earth

For nearly 500 million years after its formation, the Earth had a constant temperature of 874.68 degrees Celsius (2000 degrees Fahrenheit). Composed mainly of iron and silicates, it also contained small amounts of radioactive elements, mainly uranium, thorium and potassium. As they decayed, these elements produced radiation that gradually heated the surface, melting the iron and silicates. The iron sank toward the center, forcing the lighter silicates to come to the surface and causing the powerful process that formed the Earth's surface as we know it today, and as it continues to evolve.

The Earth's atmosphere is more than () high. From sea level to an altitude of, it is composed of 78% nitrogen and 21% oxygen, the rest being a combination of argon, carbon dioxide, neon, helium, krypton, xenon and other gases in small proportions. Most of the atmosphere is concentrated.640 kilometres400 miles100 kilometres.

Venus

Shrouded in mystery, Venus, our closest neighbour, is named after the Roman goddess of love. For some unknown reason, Venus rotates on its axis in the opposite direction, that is, in the opposite direction of its rotation around the Sun. Venus' veil of mystery consists of an impenetrable layer of clouds of sulphuric acid covering an atmosphere composed of 96% carbon dioxide.

Sunlight entering Venus' atmosphere is converted into heat and cannot escape due to carbon dioxide. This phenomenon is called the "greenhouse effect". The surface temperature reaches 341.33 degrees Celsius (800 degrees Fahrenheit), and the atmosphere seems to be permanently disturbed by lightning.

The weight of the atmosphere on Venus is comparable to the pressure that someone would experience walking on the ocean floor at a depth of 800 meters.

Mercury

Mercury is named after the winged-footed messenger of the Roman gods. It orbits its orbit at a dizzying speed of 48 kilometers per second, making a year on Mercury only 88 Earth days. On the other hand, a rotation around its axis – one day – lasts 59 Earth days.30 miles

Mercury does not have what we call an atmosphere, which is a gaseous envelope that produces clouds and changes in precipitation or protects the planet's surface from solar radiation. Mercury's weak magnetic field captures very few charged particles from the Sun.

Mars

It was because of its blood-red color that the Romans named Mars after their god of war. This color comes from the iron oxide accumulated on the surface of the planet. Canal-like configurations have long led to speculation that it may be possible to find water on Mars, which could indicate the existence of some form of life on the planet.

Mars likely developed its atmosphere by expelling gases from the planet's interior, like Earth. But Mars, whose mass is just 10% that of, has insufficient gravity to hold lighter gases. Today, Mars' atmosphere consists mostly of carbon dioxide.la Terre

Jupiter

Jupiter is the largest planet in the solar system. Its name comes from that of the king of the Roman gods. It is not considered a terrestrial planet because its "surface" is made up of a swirling mass of liquid hydrogen and an iron-composed core that is about the same size as Earth.

In addition to hydrogen, the atmosphere contains helium, methane and clouds of frozen ammonia that can be seen passing across the planet's surface. The surface of Jupiter has a moving spot measuring 2800 x 1300 km that is thought to be a whirlpool that has been raging for thousands of years. The dark red color of the spot suggests that this vortex could be thousands of kilometers above the lighter cloud cover.

Saturn

Saturn is the second largest planet in the solar system, but it is also arguably the lightest, because it is the least dense. In fact, the size-to-weight ratio is such that Saturn would probably float in water if there were a vessel large enough for the experiment to be attempted. Just like Jupiter, Saturn is formed from a ball of gas and liquid and perhaps also a solid core that would be about the same size as Earth.

Saturn's atmosphere, like Jupiter's, is disturbed by incessant violent storms. Some of these storms can cover areas larger than Europe and Asia combined. The entire atmosphere is enveloped in a layer of hydrogen. Underneath this layer, the atmosphere is essentially composed of hydrogen and helium; It also contains some methane and frozen ammonia crystals.

Uranus

Uranus is the seventh planet in the solar system, and the most surprising of these planets. Uranus forms an angle of approximately 90 degrees with the Sun, so that one of its poles is always pointed towards the Sun during the planet's rotation. Strangely, the temperature is almost the same at both poles of the planet.

Uranus is a non-terrestrial planet, whose surface is formed by an ocean of superheated water. It is from the dense atmosphere, mainly composed of hydrogen and helium, that comes the pressure that brings the temperature of the water to thousands of degrees and at the same time prevents it from evaporating. High temperatures, on the other hand, prevent pressure from solidifying the water.

Just like Saturn, Uranus is surrounded by rings. It was during the observation of an occultation (eclipse of a star by a planet) that astronomers made this discovery in 1977. They noticed that the light emitted by the star began to flicker 35 minutes before the star was occulted by Uranus. Then, after Uranus passed in front of the star, the light emitted by the star began to flicker again before becoming fully visible again.

Neptune

It was the color of this huge blue planet that gave the ancients the idea of naming it after the god of the sea. Despite the new information gathered by Voyager 2, Neptune remains the most mysterious of the planets in the solar system.

Pluto

Pluto is the ninth planet in the solar system and, as far as we know, the last. It was Percival Lowell who predicted its existence when he noticed that the orbits of Uranus and Neptune had unexplained irregularities. In 1930, Clyde Tombaugh did indeed discover Pluto, at the exact location that Lowell had predicted. This planet was named Pluto for two reasons: we wanted to keep the tradition of names inspired by Roman mythology, and in that sense, this name is quite appropriate — Pluto was the god of the underworld, and the planet is dark and icy — but we also chose this name because its first two letters are based on the initials of Percival Lowell.

Geology

Earth

Between the iron core and the crust, made of solid rocks, lies a mantle of silica 2880 kilometers thick (). The crust floats on this mantle, which is neither solid nor liquid, with a viscous and thick consistency. The crust is not a uniform solid mass, but rather a series of plates, along which geological activity continues to shape the planet's surface.1800 miles

Venus

Geologically, Venus has similarities to Earth. Its crust is probably made of granite and covers a mantle of basalt and a core of iron and nickel. The geological activity we know about on Earth does not seem to exist on Venus, apart from the presence of two volcanoes on a fault. Most of its geological features appear to be as old as the solar system itself. One of these features is a break caused by a landslide following an earthquake that spawned the largest collapse valley in the solar system. Unlike Mercury, the surface of Venus has been eroded and the old craters caused by the impact of the original particles have faded.

Mercury

The Mariner 10 spacecraft provided us with information when it approached the planet in 1974 and 1975. Since Mercury has no water and virtually no atmosphere, its surface has not suffered any erosion. We see her pretty much as she was right after her training.

She told us that Mercury has a very weak magnetic field, which could indicate a very hot metallic core, such as molten iron. Geologists believe that Mercury may be the most iron-rich planet in the solar system.

Its crust appears to be made of silicate, like that of the Earth.

The surface of the planet, first discovered through Mariner's cameras, is covered in craters. These formed as a result of the bombardment that occurred early in the solar system's existence when particles clumped together to form planets.