



Length of a Day on Each Planet

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Why in News

Recently, the research was undertaken to calculate the **accurate length of a day on Venus and Saturn which has been changing since 1963.**

- **Venus:**

The recent observation of the **Magellan spacecraft's observations (1991)** concluded that the **rotation period for Venus** has an uncertainty of about 9 seconds.

- **Saturn:**

The recent, the **Cassini spacecraft** showed that there is an uncertainty of **6 minutes** with a rotation period of Saturn.

The Solar System

The Solar System consists of the Sun and eight **planets.**

It also consists of bodies such as **comets, asteroids, and meteors.**

Planets vs Dwarf Planets

- The definition of a planet was adopted by the **International Astronomical Union** in 2006. A planet must:
 - Orbit a star (in our system, it is the Sun).
 - Be big enough to have enough gravity to force it into a spherical shape.
 - Be big enough that its gravity cleared away any other objects of a similar size near its orbit around the Sun.
- On the other hand, **dwarf planet** is a celestial body orbiting a star that is massive enough to be rounded by its own gravity but has **no clear orbit (Gravitationally not dominant in its orbit).**



Planets Facts

- Mercury**
- It is **the nearest to the Sun** and also the **smallest planet** in our solar system.
 - It has **no satellite** of its own.
 - It takes **1408 hours** to complete a rotation.
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- Venus**
- It is called **morning or an evening star**, although it is not a star.
 - Sometimes it is called as **Earth's twin**.
 - Venus has **no moon or satellite** of its own.
 - It rotates from **east to west** while the **Earth rotates from west to east**.
 - It takes **5,832 hours** to complete a rotation.
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- Earth**
- The Earth is the only planet in the solar system on which life is known to exist.
 - The axis of rotation of the Earth is 23.5 degrees relative to the orbital plane – the plane of Earth's orbit around the sun. The tilt is responsible for the **change of seasons** on the Earth.
 - The Earth has **only one moon**.
 - The Earth takes **24 hours** to complete a rotation.
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Mars

- It appears slightly **reddish** and, therefore, it is also called the **red planet**.
- Mars has **two small natural satellites**.
- It takes **25 hours** to complete a rotation.

Jupiter

- Jupiter is the **largest planet** of the solar system.
- Jupiter has **53 named satellites** and another **26 awaiting official names**.
- It also has **faint rings around** it.
- It takes only **10 hours** to complete a rotation.

Saturn

- The Saturn is **yellowish** in colour.
- It has an icy ring around it.
- It has more than **60 known moons**.
- It takes **11 hours** to complete a rotation (**second-shortest day in the solar system**).

Uranus

- Uranus also **rotates from east to west** (like Venus).
- It has a **highly tilted rotational axis**.
- It takes **17 hours** to complete a rotation.

Neptune

- It is the eighth and most distant planet in our solar system.
- The Neptune is dark, cold and has a presence of supersonic winds.
- It takes **16 hours** to complete a rotation.

Source: IE