

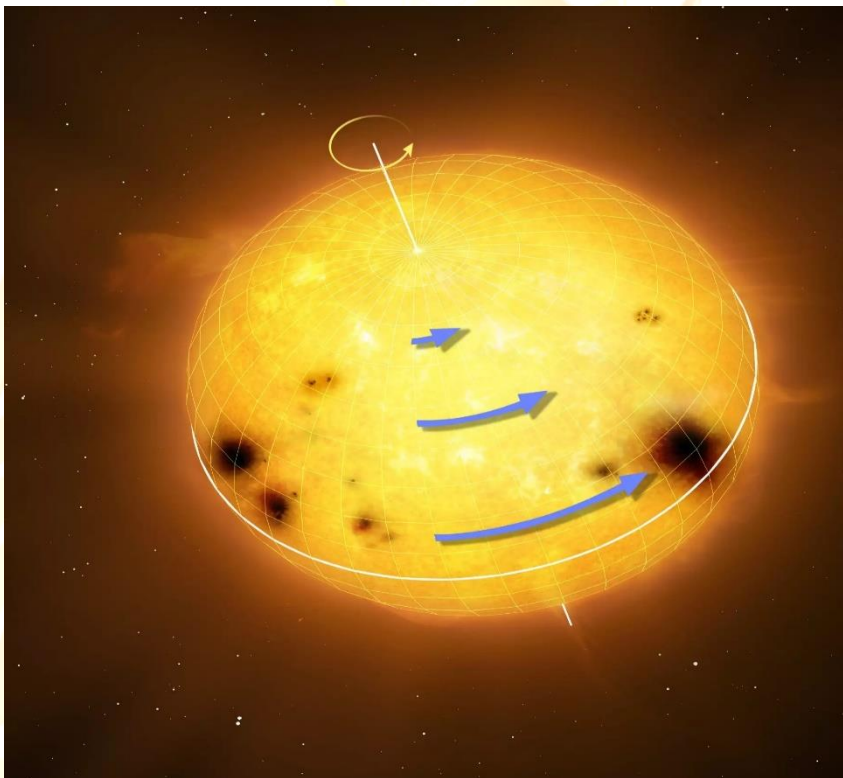


ROTATION OF SUN: SCIENCE & TECHNOLOGY

NEWS: Does the Sun rotate?

WHAT'S IN THE NEWS?

The Sun shows differential rotation, meaning its rotation period varies across different latitudes, unlike Earth's uniform rotation. Although studied extensively, the cause of this unique phenomenon remains an unsolved mystery for solar physicists.



Rotation of the Sun

- **Differential Rotation:** The Sun rotates at varying speeds across different latitudes.
 - **Equator:** Rotates approximately every 26.5 days.
 - **Poles:** Rotation period extends to about 31.1 days.
- **Observation:** Differential rotation is studied by tracking sunspots and other solar features, helping calculate sidereal rotation periods.

Unsolved Mystery

- The exact cause of the Sun's differential rotation remains unknown, posing a challenge for solar physicists.



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Temperature and State

- **Core Temperature:** Around 15 million K.
- **Surface Temperature:** About 6,000 K.
- **Plasma State:** Due to extreme temperatures, the Sun is in a plasma state, where gases are highly energized and ionized.

Source: <https://www.thehindu.com/sci-tech/science/does-the-sun-rotate/article68832128.ece#:~:text=A%3A%20Yes.,the%20same%20period%20of%20rotation>

