

Winter Solstice

Shortest Day Of The Year

Why In News

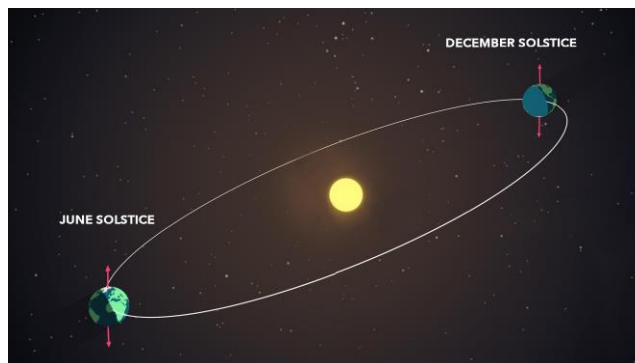
- People in the **northern hemisphere** will experience the **shortest day of the year**, known as the winter solstice, on 22nd December.



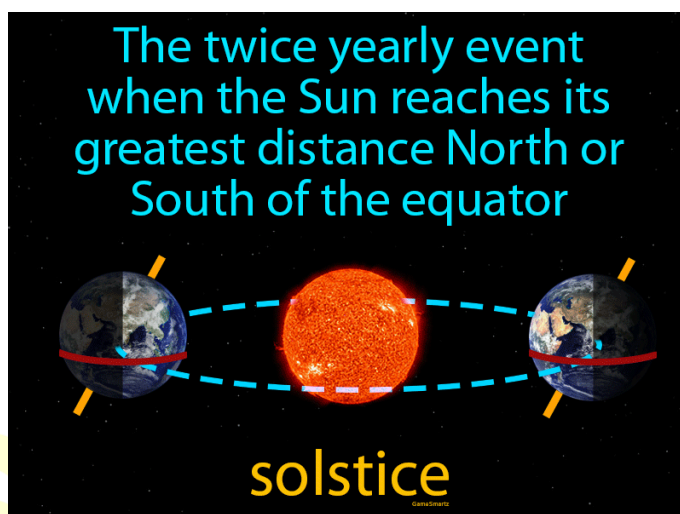
- As the world bids farewell to longer days and ushers in the magic of winter, India prepares for the **longest night of the year** a phenomenon known as **Winter Solstice**. Observed on December 22 every year, the event marks a major seasonal transition.

Solstice Definition

- Origin of the word: The word **solstice is derived** from the Latin word for sun called **sol**, and **sistere**, which means **“to come to a stop or make stand”**.



- A solstice is a phenomenon that occurs when the **sun reaches its lowest or highest point** in the sky during the year as a result of the Earth's axis tilting to or away from the sun.
- Although the winter solstice itself lasts only for a moment, the term usually refers to the day on which it occurs. It also known as **hibernal solstice**, marks the official onset of winters in the Northern Hemisphere when Earth's northern axis faces away from the sun.



- The effect of which is **shorter days and longer nights** in the Northern Hemisphere. Similarly, the **winter solstice for the southern hemisphere** occurs in June while the northern hemisphere experiences summer solstice.
- Each polar region **experiences a period of long darkness or twilight** during its winter solstice.
- In temperate areas, the winter solstice is seen as the middle of winter, while in some countries and calendars, it is seen as the beginning of winter.

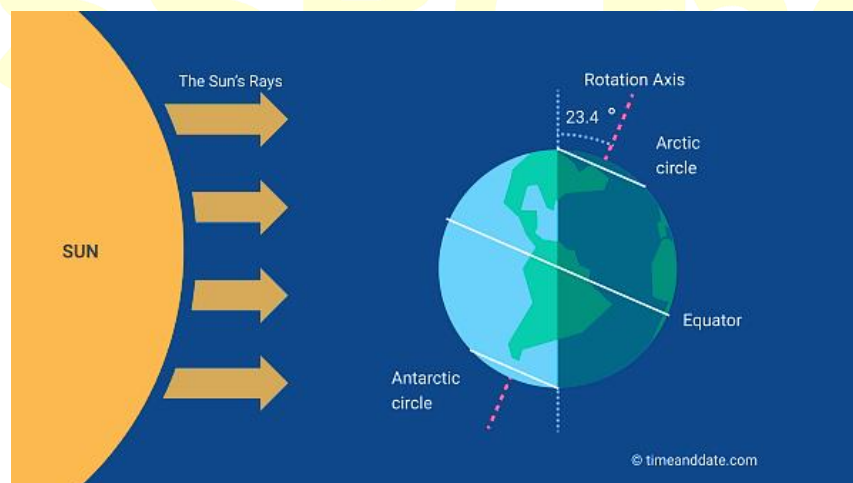
Winter Solstice 2023

- The winter solstice will be observed in India on **December 22 at 8:57 AM**. The shortest day of the year will occur in the Northern Hemisphere during the day, with roughly **7 hours and 14 minutes of daylight**.
- Then, on December 22, Earth's axis will be designated as the one that is furthest from the sun. This indicates that compared to the summer solstice, the **winter solstice's day is 8 hours, 49 minutes shorter**.



Mechanism of Occurrence

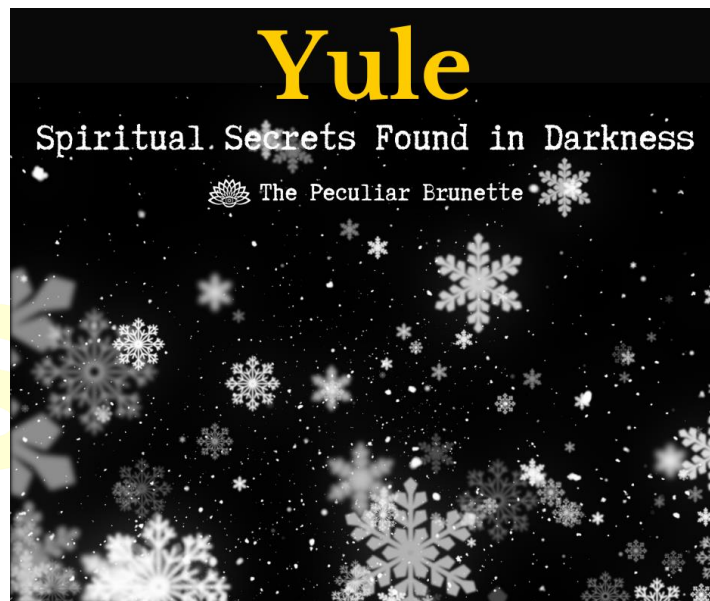
- The Winter Solstice is a phenomenon that occurs annually when the **Northern Hemisphere is tilted furthest away from the sun**, resulting in the longest night and the shortest day of the year.
- The **Earth is tilted 23.4 degrees on its axis**, so if the Earth's pole is pointing towards or away from the Sun during the day, the arc the Sun travels through will rise and fall during the year.



- The northern hemisphere minimum, or when the **sun is at its lowest point** in the sky, is the winter solstice.
- Planet **Earth not only revolves but also rotates** around the sun which results in a change of seasons and day and night, respectively.
- During the winter solstice, the part of Earth containing the northern hemisphere, **leans farthest away from the sun**.
- Due to this phenomenon, the **temperature of Earth gets colder**, and we experience shorter days and longer nights.

Significance Of Winter Solstice

- In Northern Europe, encompassing the Faroe Islands, Estonia, and Germany, the **occasion is known as Yule**.
- **Yule was observed by Norse communities** and Anglo-Saxon pagans. Christian traditions have since adopted customs like Yule logs and tree decorations.
- In India, the **Makar Sankranti festival** signifies the end of the month containing the winter solstice, heralding longer days.
- **Iranians commemorate** the winter solstice through **Yalda night**, the year's longest and darkest night.



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