



Ningaloo Eclipse

Why in News?

The **Ningaloo Eclipse** was witnessed on April 20, 2023. It is a rare '[hybrid solar eclipse](#)', caused by the curvature of the earth's surface and a shift from annular to total eclipse.

- The last one was seen in **2013**, and the next one will appear in **2031**.

What are the Major Points Related to Hybrid Solar Eclipse?

- A total solar eclipse was visible in **Australia, Timor-Leste and Indonesia (West Papua and Papua)**.
 - At the same time, a partial solar eclipse was visible in **southeast Asia, East Indies, Australia, Philippines and New Zealand**. It was not visible in India.
- Its uniqueness is such that it has already been named as **Ningaloo, a part of western Australia from which the eclipse was most visible**.
 - The Ningaloo region is also designated as a [UNESCO World Heritage Site](#).

What is a Solar Eclipse?

- **About:**
 - A solar eclipse is a **natural phenomenon that occurs when the Moon passes between the Sun and the Earth**, casting a shadow on the Earth's surface, **resulting in a temporary darkening of the Sun**.
 - The moon's shadow has two parts: **a central region (umbra)** and an **outer region (penumbra)**.
- **Types of Solar Eclipse:**
 - **Total Solar Eclipse:** A total eclipse happens when the **Moon completely blocks out the Sun** while passing between the Earth and the Sun.
 - The **Baily's Beads effect**, also known as the diamond ring effect, is a phenomenon that occurs during a total solar eclipse or annular solar eclipse.
 - **Annular Eclipse:** It happens when the **Moon is at its farthest point from the Earth**.
 - The sun is covered in such a way that **only a small ring-like sliver of light is seen from the sun's disc**. This ring is known as the ring of fire.
 - **Partial Eclipse:** It occurs when the **Moon passes between the Earth and the Sun but is not perfectly aligned**.
 - Hence, only a part of the Sun appears covered.
 - **Hybrid Eclipse:** A hybrid solar eclipse occurs when the **eclipse is total from some locations on Earth and annular from others**, due to the viewer's position relative to the Moon's shadow.
 - It means that for some observers, the **Moon appears to fully cover the Sun, resulting in a total solar eclipse**, while for others, the Moon only **partially covers the Sun, resulting in an annular solar eclipse**.

SOLAR ECLIPSE

Things to know about this astronomical event

TYPES OF SOLAR ECLIPSE



TOTAL

The Moon completely blocks off the Sun's rays and casts a shadow over the Earth



ANNULAR

The Moon covers the Sun fully but due to its relatively small size the outer ring of the Sun is completely visible from Earth. This is also known as the Ring of Fire



PARTIAL

The Moon covers a part of the Sun and casts only the outer part of its shadow, the penumbra, on Earth

HYBRID: A rare form of solar eclipse which changes from an annular to a total solar eclipse, and vice versa, along its path. During a Hybrid Solar Eclipse you could see any of the three forms of eclipses, depending on exactly where you stand

WHAT IS A SOLAR ECLIPSE?

During a Solar eclipse the Sun, Moon and Earth are in a straight line and the Moon comes between the Sun and Earth. This blocks the rays of the Sun from reaching the Earth causing a solar eclipse

FACT

A solar eclipse usually occurs around two weeks prior or after a lunar eclipse

Source: timeanddate.com, news reports

Source: [ET](#)

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