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WHY IS TODAY'S LUNAR ECLIPSE SPECIAL?

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The lunar eclipse on May 26 is going to be a special event, because not only is it the first lunar eclipse of 2021, but also a supermoon and a red blood moon.

Combined to be called the super "blood" moon, it will be visible across the Pacific, as well as the western half of North America, bottom of South America and eastern Asia. However, only few places in India will be able to see a partial eclipse close to the eastern horizon after moonrise. The partial eclipse will be visible in some parts of West Bengal, some coastal parts of Odisha and Andaman & Nicobar Islands. But you can catch the total eclipse from other parts of the world live online.

Better look quick: The total eclipse will last about 15 minutes as Earth passes directly between the moon and the sun. But the entire show will last five hours, as Earth's shadow gradually covers the moon, then starts to ebb.

"Hawaii has the best seat in the house and then short of that will be California and the Pacific Northwest," said NASA's Noah Petro, project scientist for the Lunar Reconnaissance Orbiter. New Zealand and Australia also will have prime viewing.

The Lunar Reconnaissance Orbiter, which circles the moon, will measure temperature changes on the lunar surface during the eclipse. Telescopes atop Hawaii's Mauna Kea also will monitor the moon, Petro said.

Everyone everywhere, though, can still soak in the brighter than usual moon, weather permitting.

Unlike a solar eclipse, there's no harm in looking at an eclipsed moon.

The next total lunar eclipse will be in May 2022. The last one was in January 2019.

The moon's orbit around the earth is distinctly elliptical. The point when the moon is closest to the earth is called Perigee and the point when it is farthest from it is called Apogee. When a full moon occurs at its perigee, it is called a supermoon. It is a rare event, as it has to satisfy two conditions – the moon must be closest to the earth and it should be a full moon. At this point, the moon is observed to be 30% brighter and appears 14% larger.

During totality, the moon may turn red or coppery. This happens because some light from the sun passes through earth's atmosphere and is bent towards the moon. While other colours in the spectrum are blocked and scattered by the atmosphere, red makes it through. And people call it blood moon.

When the Moon is completely covered by Earth's shadow it will darken, but doesn't go completely black. Instead, it takes on a red color, which is why total lunar eclipses are sometimes called red or blood moons.

Sunlight contains all colors of visible light. The particles of gas that make up Earth's atmosphere are more likely to scatter blue wavelengths of light while redder wavelengths pass through. This is called Rayleigh scattering, and it's why the sky is blue and sunrises and sunsets are often red.

In the case of a lunar eclipse, red light can pass through the Earth's atmosphere and is refracted

– or bent – toward the Moon, while blue light is filtered out. This leaves the moon with a pale reddish hue during an eclipse.

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