

Total lunar eclipse woos sky watchers

January 21 2019



A composite photo shows all the phases of the so-called Super Blood Wolf Moon total lunar eclipse

An unusual set of celestial circumstances came together over Sunday night and the wee hours of Monday for sky watchers in Europe, Africa and the Americas, where the moon was fully obscured before lighting up

again with a faint red glow.

In the streets of Mexico City, Los Angeles and Paris and in the Moroccan desert, [moon](#) gazers turned to the sky to observe the phenomenon, around midnight in the Americas, and shortly before dawn in Europe and Africa.

The eclipse lasted about three hours: during the first hour the [full moon](#) was gradually swallowed up by the shadow of the Earth, then an hour of total eclipse where it was not invisible but instead appeared tinted in hues of red, orange and pink, followed finally by its full reemergence, bright and shining.

The full Moon appeared bigger than normal because it was closer to the Earth—about 222,000 miles (358,000 kilometers) away—earning it the nickname "super Moon."

Other monikers include a "Wolf Moon," a traditional way of coining an eclipse in the month of January, and a "Blood Moon" because of its rusty, red color. Hence the name for this year's event: a "super blood wolf Moon."

At its peak, where night skies were clear of clouds, Venus and Jupiter shone brightly in the night sky.

Not everyone was fortunate: in London, for example, astronomy enthusiasts hopes were dashed by a cloudy night.



A man taking pictures of the Super Moon during the start of the total lunar eclipse, at the Angel de la Independencia in Mexico City

Why red?

During a lunar eclipse, the Moon appears red because the light of the Sun no longer directly illuminates it, since Earth is passing in between the Moon and Sun.

"The color is due to Rayleigh scattering—where the Sun's blue light is scattered off molecules in Earth's atmosphere—which also happens at sunsets," explained the Royal Astronomical Society of Britain.

"The Sun's red light is scattered much less by air, and is bent by Earth's

atmosphere in a process called refraction, traveling all the way through it to light up the Moon's surface."



The Earth's shadow almost totally obscures the view of the so-called Super Blood Wolf Moon during a total lunar eclipse

Last eclipse this decade

Total or partial lunar eclipses happen at least twice a year on average, Florent Deleflie, an astronomer at the Observatory of Paris-PSL told AFP. It's just that they are not visible everywhere.

It's a rare event when a [total lunar eclipse](#) is visible on so many parts of the Earth's land mass, as is the case Monday.

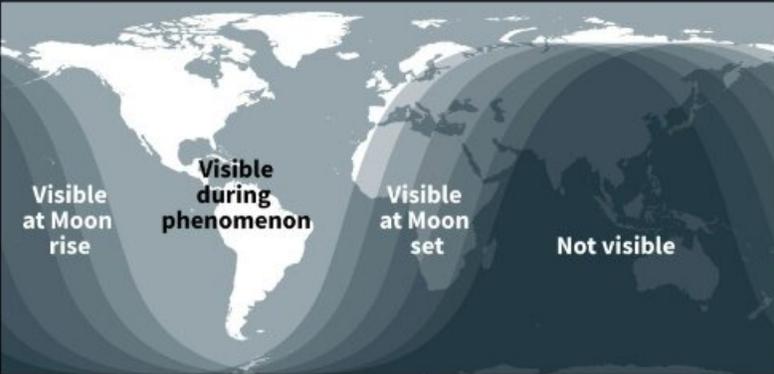
Europeans last saw a total lunar eclipse in July 2018. The next chance for a glimpse at a lunar eclipse will be in 2022, but the entire continent won't be able to see the totality of a lunar eclipse again until 2029.

North Americans may get their next glimpse of a blood moon in 2021 along the West coast and 2022 on the East coast.

Lunar eclipse

62-minute total eclipse on January 21

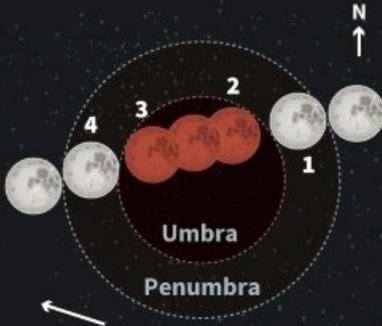
Visibility



Visible at Moon rise Visible during phenomenon Visible at Moon set Not visible

How it happens

Sunlight filtered through the Earth's atmosphere makes the Moon appear red



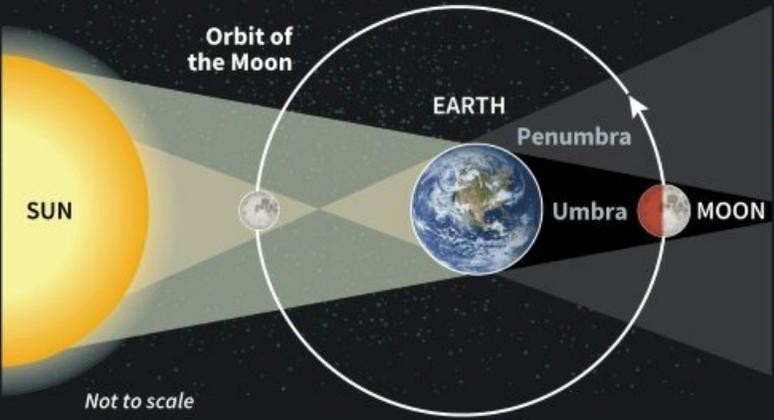
Umbra
Penumbra

Movement of the Moon in the sky

Stages of eclipse

Times in GMT

0334	①	partial phase begins
0441	②	total eclipse starts
0543	③	total eclipse ends
0651	④	partial phase ends



Orbit of the Moon

SUN EARTH Penumbra Umbra MOON

Not to scale

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Description of the total lunar eclipse on January 21

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