

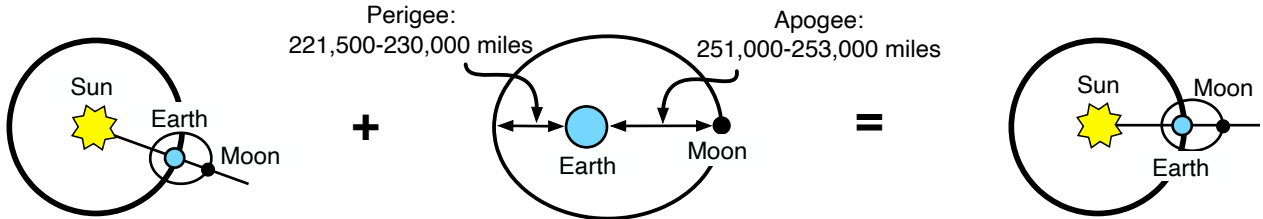


Mini-moon!



What is it? How "mini" is it?

The Moon revolves around our planet in an ellipse. Consequently, at times it lies farther away, while at other times, it lies closer. Its farthest point is called apogee – on average 252,000 miles away – and its nearest point is perigee – averaging 222,000 miles distant. The values of perigee and apogee vary from month to month primarily due to the gravitational influence of the Sun.



Full Moon:

When the sun, Earth, and the moon, in that order, lie in a line.

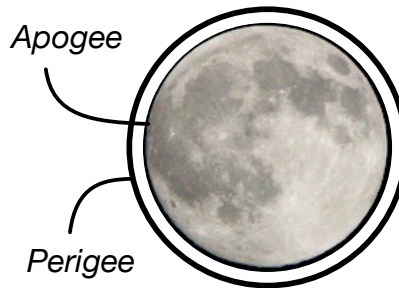
Apogee:

The point in the moon's orbit when it lies farthest from Earth.

Mini-moon!

When the Full Moon occurs at or near apogee.

When the dates of the Full Moon and apogee coincide, the Full Moon appears up to 8% narrower in the sky than during an average full Moon. It is also almost 16% dimmer.



Relative apparent sizes of the Moon when at minimum perigee and at maximum apogee.

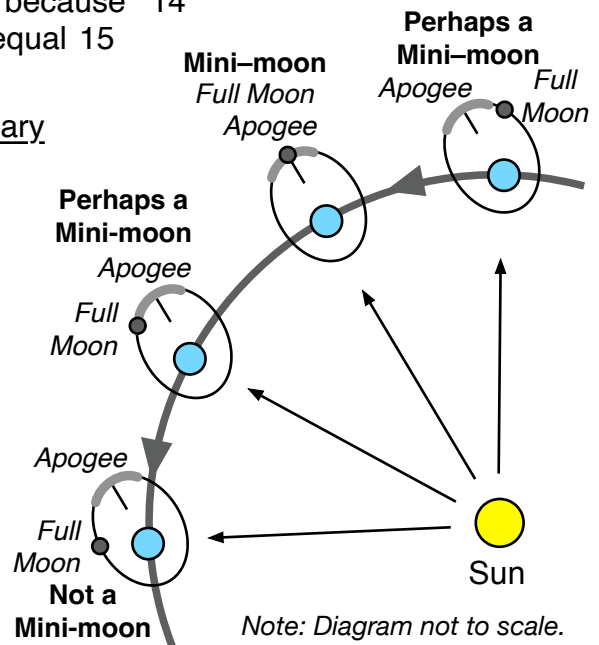
Why doesn't a Mini-moon occur every month? How rare is it?

• In most months, the moment of when the Moon reaches its full phase doesn't coincide with when it reaches apogee. The time between Full Moons (= 29.5 days) doesn't equal the time between apogees (= 27.5 days). The farthest Full Moons – i.e., the **true Mini-moons** – recur **about every 13 months 18 days** (= 413 days) because 14 consecutive Full Moons (= 413.4 days) almost exactly equal 15 returns to apogee (= 413.3 days).

• The definition of what constitutes a Mini-moon is arbitrary – it all depends on what maximum distance between the full Moon and Earth is chosen. If the Full Moon falls beyond the arbitrarily specified distance, then a Mini-moon occurs.

• If it is defined as occurring when a Full Moon lies outside 251,700 miles (405,000 km) of Earth, then it can happen in two or three consecutive months centered about every 13 months 18 days.

It is occasionally called "micro-moon" and "apogean full moon."



Note: Diagram not to scale.

Duplication allowed and encouraged for all free distribution.