

## When is Eid? A New Moon, two meanings

**Summary:** To use the new moon (i.e as calculated by NASA) to calculate the start of a new Islamic month, add 2 days, given the “Islamci new moon” is defined differently than the “astronomical new moon” of modern day astronomy.

NASA’s “astronomical new moon” (also referred to as the dark moon) represents a point in time when the moon is least visible to the human eye. In Islam, the new moon is defined by the sighting of a sliver of light or crescent or hilal.

To provide some historical context, it is believed that the Tabular Islamic calendar (an example is the Fatimid or Misri calendar) was first created by Ali ibn Abi Talib, the prophet’s son in law. It was based on the Islamic New Moon. However, what is certain is that today Tabular calendars have adopted the astronomical new moon unwittingly.

The unwitting adoption of the wrong new moon has led to confusion across the globe. Inshallah this brief will assist in unifying the Ummah on Eid-ul Fitr and further highlight the linking of science to hadith.

### Hadiths affirm the definitions are different

The following hadiths (and many others) affirm the need to see the new moon, implying visibility, which is the opposite to the astronomical definition of a new moon which defines the moon at a time that cannot be seen with the human eye.

- The Messenger of Allah (peace\_be\_upon\_him) made a mention of the new moon and (in this connection) said: Observe fast when you **see it** (the new moon) and break fast when you see it (the new moon of Shawwal), but when (the actual position of the month is) concealed from you (on account of cloudy sky), then count thirty days. [SAHIH MUSLIM]
- The Messenger of Allah, may Allah bless him and grant him peace, once mentioned Ramadan and said, “Do not begin the fast until you **see the new moon**, and do not break the fast (at the end of Ramadan) until you see it. If the new moon is obscured from you, then work out (when it should be).” [AL-MUWATTA]

### Example of Calculation

Gregorian (Solar) Calendar	May 11, 2021	May 12, 2021	May 13, 2021
Astronomical new moon	yes		
Islamic new moon		Yes, seen after maghrib and/or 29 or 30 days since last sighting	Eid
Gregorian (Solar) Calendar	May 22, 2020	May 23, 2020	May 24, 2020
Astronomical new moon	yes		
Islamic new moon		Yes, seen after maghrib and/or 29 or 30 days since last sighting	Eid

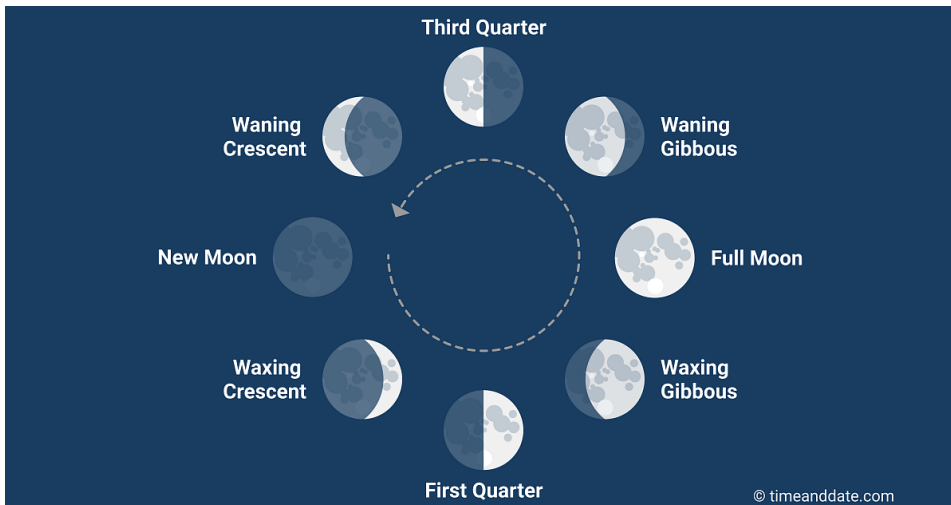
## Islamic New Moon vs Astronomical New Moon

Do not confuse the “**Islamic**” new moon with the “**astronomical**” new moon.

The **Islamic new moon** is when that first little sliver of the moon (**the crescent or “hilal”**) is first visible. That night starts a new Islamic month, and the following day [day defined as the solar day that starts at midnight] would be considered the first day of the new Islamic month.<sup>1</sup>



The **astronomical new moon**, as referenced in newspapers and most astronomical sites (such as the US Naval Observatory site), is when conjunction occurs, and **the moon is dark**; the age of the moon starts from this point. [diagram below: read counter clockwise from the New Moon]



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<sup>1</sup> <https://www.alislam.org/articles/sighting-of-moon-crescent/>