

What is a Supermoon?



Photos courtesy of Robbie Murphy

Above is the Supermoon of 10th August 2014 compared to an average moon of 5th April 2014 - as seen from Sherkin Island.

The Moon is approximately 384,400 km from the Earth. That distance can vary, depending on the orbiting of the Moon and the Earth in relation to each other and to the Sun. The diameter of the Moon is 3,476 km but this does not change, whether it is closer to or further from the Earth. Though the physical size of the Moon does not change, every now and then a full moon will seem larger and brighter in the night sky. This happens when the full moon is at its closest point to Earth during its elliptical orbit. On these occasions, the Moon is known as a 'supermoon'. A supermoon can appear to be 14% bigger than the usual Full Moon and up to 30% brighter.

A supermoon occurs more often than we realise - every 13 months and 18 days. Weather conditions may not be good enough to see it however.

The supermoon effect is best seen when the moon rises just above the horizon and when the moon is near a landmark. The landmark gives it scale. On the right is a picture of Spain Tower, Baltimore, Co Cork, taken by Robbie Murphy on 8th September 2014.

Ireland had three supermoons in 2014. According to Astronomy Ireland, these three moons were closest to the Earth on 13th July at 2:10 am (356,088 km), on 11th August at 1:38 am (354,157 km) and 8th September at 12:27 am (355,392 km).



© Robbie Murphy 2014

The Scientific Name

The scientific name for a supermoon effect is a Perigee Moon. 'Perigee' is when the moon is at its closest point to the Earth. When a moon is at its furthest point from the Earth and this event coincides with a full moon, then the full moon is known as a Apogee Moon. 'Apogee' is when the moon is at its furthest point from the Earth.

When a moon is in perigee or in apogee, it is not always a full moon, so a supermoon may not occur.

A Harvest Moon

A Harvest Moon is actually a supermoon occurring around the autumn equinox (between the 21st & 24th September each year). Farmers gave it that name as the light from the moon helped them with their work.



A Giant Reflector!

The Moon itself does not produce light. The brightness of the moon is due to the light of the sun being reflected off the moon's surface - like a mirror. It is this reflected light that we see from Earth. The amount of moon surface that is reflected at any one time depends on where the Earth and Moon are in their various orbits and in relation to the Sun. This is the reason why sometimes we see a full moon or fractions of a moon or even no moon.

