

Monthly Night Sky Guide – August 2013

New Moon: 6th August (22:51 BST)

First Quarter: 14th August (11:57 BST)

Full Moon: 21st August (02:45 BST)

Last Quarter: 28th August (09:36 BST)

This month, I want to talk a little bit about our Moon. The bright light from the Moon that we see is the reflected light from the Sun. As the Moon travels round our planet Earth, the part of the Moon we see as illuminated varies, depending on its position relative to the Earth and Sun. Half of the Moon is always in sunlight, unless during a Lunar Eclipse when the Earth gets in the way between the Sun and Moon.

New Moon is when the Sun is illuminating the other side of the Moon. We cannot see the reflection from Earth, as no light from the Moon is being reflected in our direction.

Full Moon is the opposite, where the Earth is in line with the Sun. The light is reflected back towards the Sun, and the Earth. First Quarter and Last Quarter are when exactly half the Moon is visible. The Sun is still illuminating 50% of the Moon, but we are seeing the Moon to one side or the other of the Earth, and so only see the nearest half of the Moon brightly.

This leads me neatly onto the Ashen Light, or Earthshine. Because our own planet is also reflecting light from the Sun, some of that light hits the Moon, and is reflected back to us. It is most obvious around the time of the New Moon, when the Earth is nearly fully lit by the Sun as viewed from the Moon.

So have a look at the Moon around the time of the New Moon, and see if you can see the 'dark side' of the Moon in the sky. The light you are seeing has been reflected from the Earth to the Moon and back again to your eyes!

Incidentally, you may wonder why the Earth does not block out the light from the Sun from reaching the Moon. The answer is that it does, but only at special times. The distance between the Earth and Moon is so great, and size of the Earth and Moon so small that the Earth only casts a shadow on the Moon a couple of times a year, when the Sun, Earth and Moon are lined up.

Another thing to look out for this month is the Perseid Meteor Shower. This shower is caused by the dust from the comet Swift-Tuttle which has been left behind as it orbits the Sun. The Earth hits this stream of dust orbiting the Sun, and as the dust burns up in our atmosphere, we see beautiful meteors. The dust particles are very small, so there is no danger of anything actually reaching the ground.

You can see Perseid Meteors from 17th July all the way through to 24th August, but the peak this year is on the evening of the 12th August, which is good, as the light from the Moon will not be around to spoil the view. The peak of the shower is expected to reach 60 meteors per hour, but this assumes that the sky is completely dark, so don't expect to see that many!

Don't forget that you can learn more about South Common Observatory, see the pictures I have taken from Chailey, or order my Astronomical Greetings cards from my website: <http://nebul.ae>.

Richie Jarvis

South Common Observatory

Email: richie@nebul.ae

Website: <http://nebul.ae>

Twitter: <http://twitter.com/richiedeepsky>

Facebook: <http://www.facebook.com/richiedeepsky>