

The Sun

At the beginning of August the Sun will rise around 5.25 BST and will set around 20.50 BST, giving a day length of 15 hours 25 mins.

At the end of the month it will rise at around 6.10 BST and set around 19.50 BST, giving a day length of 13 hours 40 mins.

Over the month the day will shorten by 1 hour 25 mins. The rate of change of daylight will increase as we approach the Autumn Equinox on September 22nd.

The Moon

The Moon will be new on 8th August and will reach first quarter on the 15th. It will be full on August 22nd and will reach last quarter on the 30th.

The Planets

Two planets reach opposition this month, Saturn on the second and Jupiter on the 20th. Both planets show surface details when viewed through a small telescope.

At opposition they will be at their closest to us and thus will be favourably placed for viewing and imaging.

When at, or close to, opposition Saturn's rings can appear brighter than usual because of the angle that light reflects from them. Unfortunately, Saturn will be fairly low in the sky during this apparition, nevertheless it will be worth taking the opportunity to view it through a telescope while it is relatively close to us.

Jupiter will be a little higher in the sky than Saturn and will be displaying some interesting movements of the Galilean moons. Specifically, Ganymede will pass in front of Europa. This event will begin on 1st August, around 11am BST when Ganymede will move close to the smaller Europa. At 12.02 August 2nd, part of Europa will be covered by Ganymede and the two will finally separate at 1.04 am.

On August 13th at 1.10am BST the shadow of Io, followed by Io itself, will be visible on Jupiter's disc. On August 28th at 11.20 pm BST the shadow of Io will be visible again, but this time Io will be leading the way.

Prior to opposition the Sun will be positioned so that sunlight will throw Io's shadow ahead of it. After opposition the Sun will be positioned to throw Io's shadow behind it. On the night of opposition, the shadow will be thrown directly below Io. This can be seen on August 20th at 2.52am if you are keen and it is clear!

The rest of the planets are as follows:

- Mercury and Mars are too close to the Sun to be visible this month.
- Venus is visible in the evening throughout the month but is low in the sky and will require a flat western horizon to view.
- Uranus will be shining at magnitude +5.8 among the stars of Aries. It will be visible in the early hours of the morning before dawn.
- Neptune will be shining at magnitude +7.8 from the borders of Pisces and Aquarius. It is close to opposition. This occurs on the 14th September when it will show a disc of diameter 2.4 seconds of an arc.

Perseid Meteor Shower

The big solar system event this month is the Perseid meteor shower which peaks on the night of August 12/13th and is not affected by moonlight. The centre of the peak is predicted to be between 8pm and 11pm BST. Unfortunately, we will have to wait for darkness to fall before we will be able to see meteors.

The radiant is in the north part of the constellation of Perseus. It will be low in the north when darkness falls but will gradually gain more altitude as the night progresses.

Remember when watching for meteors, don't focus on the radiant, look 30° to 40° off the radiant where the meteor trains are likely to be longer. The British Astronomical Society Handbook describes it as being a "Rich shower of fast meteors. High proportion of rich events leaving persistent trains."

The particles that provide the shower come from the periodic comet 109 P Swift-Tuttle. It has a period of 133 years and is due back in 2126.

When comets come close to the Sun they become more active and shed particles which continue to orbit the Sun. When the Earth crosses the path of the orbit some of the particles collide with the Earth's atmosphere at high speeds. The particles vaporise giving off light which we see as meteors. Let's hope for a clear night on 12th, it could be a good show.

Constellations

On the southern horizon in the late evening is to be seen a constellation which bears a curious resemblance to a teapot. This is the Zodiac constellation of Sagittarius the Archer. It is another Zodiac constellation that never completely leaves the horizon from our latitudes. It is usually depicted as a man or a centaur shooting an arrow to the right.

Some 40° above Sagittarius is Altair the star marking the lowest point of the Summer Triangle. Directly above this is the small constellation of Sagitta the Arrow. Sagitta looks like the object it represents and consists of a line of three stars the first of which is faint. Completing the line is a pair of stars forming the flight feathers. The arrow is flying to the left so if Sagittarius shot it, he must have shot backwards, a manoeuvre perfected by the Parthians and thought to have given rise to the expression "the parting shot".

There are several smaller constellations in this part of the sky. Below and to the left of the arrow is Delphinus the Dolphin. This is a constellation resembling what it depicts. However, the constellation to the left of the Dolphin - Equuleus the small horse (possibly a seahorse) - is an example of a constellation that bears no resemblance to its naming. It is about the same size as the Dolphin and consists of 4 main stars forming a distorted rectangle. Have a look and see what you think.

Next month contains the Autumnal Equinox so the nights will be really 'drawing in'. in the meantime wishing you clear skies for viewing.....

