

We are now sufficiently past mid-summer to notice that the Sun is setting earlier and is reaching the horizon before it reaches north west and, at the beginning of August, will have a declination of around $+18^\circ$. It will rise around 5.40 am British Summer Time and set around 9.00 pm BST.

By the end of the month it will have sunk to a declination of around $+8^\circ$ 50 minutes when it will rise around 6.15 am BST and set around 8 pm BST.

The Moon will be new on August 1st and will be at first quarter on August 7th. It will be full on August 15th and will reach last quarter on August 23rd.

During the night of August 23rd/24th the Moon will occult 3 stars in the constellation of Taurus.

As the Moon moves along its orbit being at last quarter, the left-hand half of the moons face will be Sun lit and thus will be leading. At each occultation the star will disappear behind the sunlit limb and will reappear from the dark limb. At around 3.40 am BST the star, Delta 1 Tauri, disappears behind the Moon. A good pair of binoculars will show the event and will show Delta 2 Tauri a little to the south. The Moon will approach Delta 2 and will engulf it at around 4.25 am BST. To the north Delta 3 Tauri is approached by the Moon. At around 4.50 am BST, before Delta 3 is occulted, Delta 1 will re-appear from the dark limb of the Moon. Delta 3 then disappears at around 5.20 am BST. Dawn approaches while the occultations are in progress so that the lightening sky will prevent the viewing the reappearance of Deltas 2 and 3.

The Planets

During August, Mercury is expected to put on a particularly good show in the morning sky. By August the 4th, pulling away from its conjunction with the Sun, it will be above the horizon around 40 minutes before sunrise. It will be shining at magnitude +1.2 and, through a telescope, display a thin crescent.

Warning: It is vitally important that, if you are attempting to see the planet either through a telescope, binoculars or even the naked eye, make sure that you do not risk catching a glimpse of the Sun.

Damage to the eye can be instantaneous and permanent. It is particularly dangerous in the morning sky as you need to find the planet before sunrise but at a time when sunrise is imminent. Do not attempt to scan around.

Start early to give yourself as much time as possible before sunrise and use a planetarium program such as Stellarium to determine the position of the planet at the time you are observing. Use a compass to find its azimuth and a protractor to find its altitude. If you can, try to find the planet with the naked eye before using any optical aid. I find a homemade astrolabe to be invaluable for this exercise. Stop observing as soon as the Sun begins to rise.

Mercury will continue to be visible in the morning sky as it continues to pull away from the Sun. By the 13th August at around 5 am BST you will have about half an hour to find the planet. It will have an altitude in the order of 8° and will be shining at -3.6 . It will be displaying a disc resembling the Moon at last quarter. It will be 6.9 arc seconds in diameter. This will be the most favourable time to view.

By the beginning of the last week of August Mercury will be too close to the Sun to view.

Venus and Mars are also too close to the Sun to observe this month

Jupiter is to be found in the south among the stars of Ophiuchus. It is normally moving towards the east but recently has been appearing to move to the west due to the Earth moving faster than Jupiter. This makes it look as if it is moving backwards and is known as retrograde motion. The retrograde motion comes to an end on 11th August when Jupiter will return to its easterly movement. Jupiter will be best seen at the beginning of the month as it will soon be too low in the sky for good viewing. On the evening of August 9th and 10th the Moon will pass close to Jupiter.

Saturn will be found low in the southern sky as darkness falls among the stars of Sagittarius. It will be shining at magnitude $+0.2$.

Uranus is to be found among the stars of Aries shining at magnitude + 5.7. It is an easy target for large binoculars. It is well placed in the sky reaching an altitude of 50° in the south as the night wears on.

Neptune is to be found among the stars of Aquarius shining at magnitude +7.8 and is another candidate for large binoculars. It will be at opposition next month and so will be in the south at midnight.

The Perseid Meteor Shower is with us this month and is arguably the best shower of the year.

The Perseids can be seen throughout August but things tend to 'hot up' from the night of August 8th/9th, peaking on the night of the 12th/13th when 50 to 70 meteors per hour can be seen under ideal conditions. Needless to say, things are rarely ideal and the shower can be marred by adverse weather conditions and a bright Moon. The Moon this year will be 94% full at the time of the peak and, from Britain, the centre of the peak is also during daylight hours, around 8 pm BST on August 13th. Despite this, the shower is always worth viewing as it is likely to produce some bright meteors which the Moon cannot drown out. Viewing will be enhanced if you can find a dark site.

The radiant of the shower, the point on the sky from which the meteors appear to be coming, is near the double cluster in Perseus. Concentrate your watch 30 to 40 degrees either side of the radiant and with patience you should see something.

Until next month, clear skies.