

THE NIGHT SKY ABOVE YORK FOR SEPTEMBER & OCTOBER 2015

This chart is orientated for 10pm 16th September, 9pm 30th September and 8pm 14th October but can be used at any time.

To use the chart, hold it up to the sky. Turn the chart so that the direction you are looking is at the bottom of the chart. If you are looking to the South then have the 'South Horizon' at the bottom edge. As the Earth turns the stars appear to rotate anti-clockwise around the North Celestial Pole, marked by the star Polaris. Stars rise in the east and set in the west just like the Sun. The sky makes a small westward shift every night as we orbit the Sun.



PLANET WATCH

Our evening sky is to be void of visible planets for a few months. You may catch Venus, Jupiter and Mars in the early morning though if you are up early!

In the meantime I want to devote the rest of this space to a familiar friend - the Moon! Although not a planet, we think moons are beneficial, if not necessary, for life. So maybe it is time we learnt more about our nearest world.

The Moon orbits the Earth every 27.5 days or so and has been a companion of ours for a very long time. So long that it is now tidally locked in orbit around the Earth. This means the rotation rate of the Moon is also 27.5 days and as a consequence we can only see one half of the lunar surface from Earth.

But where did it come from? The leading theory is a surprisingly violent one. The Giant Impact Hypothesis suggests another object about the size of Mars called Theia collided with Earth smashing creating a great ring of material, like one of Saturn's rings. This material eventually came together to form the Moon. Most evidence for this theory comes from the measurement of rare elements and their ratios - which are nearly identical on Earth and the Moon.

CONSTELLATION WATCH

Perseus was a son of Zeus and was a heroic monster-slayer in Greek mythology. In the sky he is immortalised carrying the head of the gorgon Medusa. She has a famous star for an eye - Algol.

Algol is the second brightest star in Perseus and has monstrous or demonic connotations in many cultures. It varies in brightness by a factor of three over 2.8 days. This variation was measured by York Astronomer John Goodricke from what is now Treasurer's House.

John hypothesised the variable was the result of an eclipsing binary. This is when two stars orbit one another. In this case a large but fainter star crosses in front of the brighter star, causing a drop in brightness.

Goodricke received the Copley medal from the Royal Society for his work but sadly died of pneumonia three years later, aged only 21.

