

## THE NIGHT SKY ABOVE YORK FOR SEPTEMBER & OCTOBER 2014

This chart is oriented for 9pm 18th September, 8pm 2nd October, 7pm 16th 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**

We are pretty low on planets at this time of year, although Mars still hovers close to the South-West horizon in the evenings.

In terms of non-visible planets though, Uranus will be passing overhead at night and can be seen as a small 'star' with binoculars. With a small telescope with 200x or more magnification you can start to see a tiny blue-green disk. The colour comes from its atmosphere which is mostly hydrogen, helium and ices such as water, ammonia and methane. This composition makes Uranus and Neptune known as the ice giants.

Uranus was an accidental discovery in our Solar System - the only planet to have been so. Sir William Herschel first observed it in 1781 from Bath and was puzzled by the fuzzy blob that moved. After excluding the possibility of it being a comet or a nebula, he determined it must be a new planet.



## CONSTELLATION WATCH

The Dragon Draco can be seen all year round but is easiest to spot in the summer sky. A large constellation, Draco is drawn as a huge serpent winding its way around the Little Bear, Ursa Minor. The star second to last in the tail is called Thuban and this used to be the North Star a few thousand years ago. Many pyramids built in ancient Egypt were designed to see Thuban from their entrance. We have to wait until 21 000 AD before this star lines up again and is the North Star. Also of interest in Draco is the Cat's Eye Planetary Nebula. This is a glowing cloud of gas shed by a small star, like the Sun, in its dying days and can be seen with a small telescope.

Aquarius is the best constellation of the Zodiac to spot in September and October but it is a tricky one to pick out. The constellation represents a water jar, usually pictured with the god Ea holding it. One of the most famous stars of Aquarius is far too tiny to see. Why is it famous then? Well the tiny cool star Gliese 876 may have up to six planets including one seven times the mass of Earth and one more than twice the mass of Jupiter. Another full Solar System!