

THE NIGHT SKY ABOVE YORK

FOR JANUARY & FEBRUARY 2016



To use the chart, hold it up to the sky. Turn the chart so that the direction in which you are looking is at the bottom of the chart. 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.

SKY WATCH

The constellation of Orion is a great one to spot in the East in the evening. See if you can see the difference in colour between Rigel (blue) and Betelgeuse (red). Rigel is a blue giant star 80 times bigger than the Sun. Betelgeuse is a red giant star at the end of its life. It too is huge at about 1000 times the size of the Sun. Betelgeuse is expected to explode soon - sometime in the next 100 000 years!

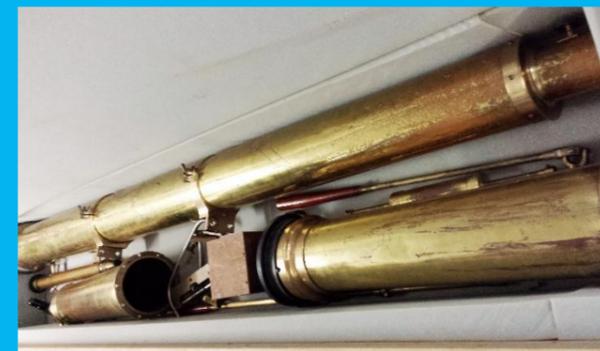
A bit later at night, after about 9pm, Jupiter starts to rise in the sky. With a telescope we can see a giant red spot in the clouds on Jupiter. To keep it simple this is known as The Great Red Spot! In fact it is a giant storm that has been raging for at least 350 years! Even more amazing is it is about three times the size of Earth - that is one powerful storm!

Mad about planets? There are currently 5 together in the morning sky. Around an hour before sunrise Mercury, Venus, Mars, Jupiter and Saturn will appear in a line running from North to the East. All planets orbit in the same plane as the Earth causing the line in the sky. Mercury is the closest to the rising Sun and pretty tricky to spot, but the bright Jupiter and Venus should be easy to find.

With binoculars you can also spot some of the moons of Jupiter and the reddish colour of Mars. The last time all were visible was in 2005. After a second chance in summer, the next alignment will not be until 2018.

COOKE TELESCOPES RETURN TO YORK

For about one hundred years, Thomas Cooke and Sons of York were one of the most important optical instrument manufacturers in the world and made a complete range of instruments. The firm was justifiably famous for their extensive range of refracting telescopes, the largest being 'The Newall' (made for a wealthy industrialist in Gateshead and ordered on 2nd March 1864 but not delivered till 1871). This instrument had a 25 inch object glass and was for a time the largest telescope in the world (see image below). It is now at Mount Panteli Astronomical Station just north of Athens where it is still in use today. Apart from large telescopes, there were many smaller ones ranging in size from 4 inches to 12 inches or more. Most of these instruments were made to order and many are still in use all over the world.



The telescopes arrive at York from Edinburgh in September 2015 after being in storage for more than 10 years.

Nichol died within months of the telescope being delivered and it may then have been used by Robert Grant who succeeded Nichol as Regus Professor of Astronomy following Nichol's death. David Clarke of the University of Glasgow has suggested that the telescope may then have been installed in the Horselethill Observatory in Glasgow. David Gavine (OU PhD thesis) points out that a 6 inch Cooke triple object glass (OG) refractor was at the City Observatory on Calton Hill, Edinburgh which was presented by William McEwan in 1896 when the new Royal Observatory was built on Blackford Hill and the Calton Hill building was given over to the City. It is known that Charles Frank overhauled this telescope and possibly at a later date purchased it.



The historic 25-inch Gateshead Telescope.

The Department of Physics has recently become the custodian of a pair of 'six inch' Cooke refracting telescopes made in York in c1859, and which have been donated to us by Charles Frank of Glasgow. Although the University has an extensive archive of the Cooke papers, in the early days of the firm the records of the orders and dispatches are not as complete as one might like. It has thus proved difficult to trace the origins of these particular telescopes and research is ongoing.

It is not uncommon for large and expensive telescopes to have many homes and our one is no exception. In fact its exact date of manufacture, its first and subsequent owners and its places of residence are somewhat uncertain. The system we have consists of one 6.25 inch (six French inch) and one 5.5 inch refractors mounted so that an experienced astronomer and a 'learner' can use the instrument together and observe the same patch of sky, rather like a dual control car used for driving instruction.

The timeline we have attempted to construct suggests that the 6.25in telescope and its mount were made in York in 1859 for John Pringle Nichol, Regus Professor of Astronomy in the University of Glasgow.

Frank loaned the pair of telescopes to the University of Edinburgh for their public viewing programme where they were mounted side-by-side and these are the telescopes we have in our possession. Thus the last forty or so years of the telescopes' life are clear but it is the previous one hundred years about which there is considerable uncertainty.

We are currently restoring the telescopes and hope to put them to use as part of the extensive range of instruments available to the public for night sky viewing and for our undergraduate astrophysics programme.

Dr Richard Keesing
Hon Fellow

The Cooke Telescopes are now assembled in the Department of Physics.

