

SKYNOTES for December 2017

An easily printable version to encourage active observing among members of the Nottingham AS

All times given below are in Universal Time (UT)

The northern hemisphere **Winter Solstice**, when the Sun reaches its most southerly declination of the year, occurs at 4:29pm on December 21st.

PHASES OF THE MOON

<i>Phase</i>	<i>Date and time</i>
Full Moon	3:47pm on December 4 th
Last Quarter	7:51am on the 10 th
New Moon	6:30am on the 18 th
First Quarter	9:20am on the 26 th

This month the Moon is closest to the Earth on the 4th (so look out for a BIG Full Moon as it rises on that date), and furthest on the 19th.

THE PLANETS

Mercury is virtually unobservable this month, as it passes through inferior conjunction on the 13th December.

Venus, too, is unobservable this month, as it approaches superior conjunction in the New Year.

Mars continues to draw away from the Sun in the morning sky, but unfortunately for UK observers is also moving southwards, ending 2017 about 15 degrees south of the celestial equator, with it's angular diameter still short of 5 arcseconds. Near the end of December Mars will be getting very close to Jupiter, as the two planets head toward a very close conjunction on the morning of January 7th, when they will be only one-fifth of a degree apart.

Jupiter, also drawing away from the Sun in the morning sky, will be rising at about 4:30am by the end of December. Like Mars, it is about 15 degrees south of the celestial equator, but at magnitude -1.8 will be shining much more brightly than the Red Planet.

Saturn is unobservable this month, as it passes through conjunction with the Sun on December 21st.

Uranus, about 10 degrees north of the celestial equator in the constellation of Pisces, is now an evening object, passing due south at 7pm at the end of December. If you have never seen Uranus before, this month might be a good time to go looking for it. At magnitude 5.8 it is theoretically within the limits of naked eye visibility, but realistically you will need binoculars in order to find it. Through a telescope it appears as a pale greenish disk, a little over three arcseconds across. Take a look!

Neptune is nearly 8 degrees south of the celestial equator in the constellation of Aquarius. Shining at magnitude 8, this distant member of the Solar System is considerably harder to find than Uranus.

METEORS

The **Geminids** are unrivalled as the most abundant meteor shower of the year, producing over 100 events per hour under ideal conditions. Furthermore, the radiant of the shower, close to the star Castor, is above the horizon for the whole night in December, so Geminids may be seen at any time after darkness falls (although the radiant doesn't reach its highest point until after 1 am, so a midnight vigil should yield greater rewards). This year conditions are very favourable, with maximum meteor activity expected on the night of the **13th-14th**, just four days prior to the New Moon...but note that Geminids may be seen on any night between December 8th and 17th.

Of course there is the small matter of the weather! December nights can be **cloudy** (for which we have no remedy) and if clear may be **cold** (the remedy for which is to wear sufficient layers of warm clothes as you settle into your recliner and gaze skywards).

Enjoy!