

CAS Sky Notes for January 2025

Happy New Year to all Members

Planets

Mercury.

Mercury is a morning object. However, its southerly declination of -21° will make it hard to see in the northern hemisphere.

Venus

Venus reaches **greatest eastern elongation of $+47^{\circ}$ on the 10th** and its increasing northerly declination may make it a little easier to see after sunset. Its phase will then be 50% and its magnitude increases to -4.6. Its diameter increases to around 30".

Mars

Mars reaches **opposition on the 16th January** and is observable for most of the night. It is a prominent reddish object of magnitude -1.4 and diameter of 14.6". It is now very well placed for observation. **On the 14th, the Moon will be just 0.2° North of Mars.** Some photo opportunities for sure!

Jupiter

Jupiter reached opposition in December and is therefore still well placed for observing throughout the night. It is unmistakable, with a magnitude of -2.7, making it a great telescope object, so do get observing!

Saturn

Saturn is well past opposition but still visible during the early evening in the south west.

On the 4th January the Moon occults Saturn.

It disappears at the dark limb at 17.21UT and reappears at the bright limb at 18.30UT.

The times are for Greenwich and may be a few minutes different in Cheltenham.

The rings have a tilt of about 3° . **On 18th Venus is 2.2° north of Saturn.**

Uranus

Uranus is observable throughout the night (RA: 3h 24m, Dec $+18.5^{\circ}$). It reached opposition in November. Its magnitude is +5.6 and diameter 3.8".

Neptune

Neptune is well past opposition and observable only in early evening. It has a diameter of 2.4" and mag. +7.8.

Its approximate position is RA 23h 50m, Dec -2.4° .

Anyone wishing to observe Uranus and Neptune, and who would like more details, should contact me at coord@cotswoldas.org.uk

Moon

The winter Moon is well placed for observation and photography.

Phases:

6th January: Moon is at First Quarter

21st January: Moon is at last quarter

13th January: Full Moon

29th January: New Moon

Sun

The Sun remains active currently, so watch out for large Sunspot groups. Remember to **never look at the Sun directly without a proper solar filter**.

Aurora

The Sun is around its maximum activity and may produce more aurorae. I suggest you download an aurora alert App, such as *Aurora Pro*. The darker nights mean that there is a much better chance of seeing them.

Meteors

The **Quadrantid** meteor shower reaches its peak on the 3rd January, though may be visible a few days either side of this.

Dark Sky Objects

The long dark nights make deep sky objects much more accessible – if only the clouds get out of the way!

The Milky Way is well placed for photography and the Andromeda Galaxy (M31) is high in the sky, making it a good target for photography. A wide angle shot could take in the Milky Way as well. The Perseus Double Cluster is also high in the sky. The Pleiades and Taurus are getting well-placed for observing and photography, and Orion is now visible in the evening skies.