

## CAS Sky Notes for December 2024

### Planets

#### Mercury

Mercury passes through inferior conjunction on the 6<sup>th</sup> December and reaches greatest western elongation on the 25<sup>th</sup>. It is then a morning object. However, its southerly declination of  $-20^{\circ}$  will make it hard to see in the northern hemisphere.

#### Venus

Venus remains an evening object with a magnitude of  $-4.3$  and its elongation increases to  $47^{\circ}$ , with a phase dropping to around 60%, and a diameter of  $20''$ . As with Mercury, its southerly declination also makes it hard to view as it is low in the sky after sunset, but can be seen if you have a good western horizon.

#### Mars

This is in Gemini and near Castor and Pollux. It rises about 7pm and so is well placed before midnight now. Its magnitude increases to  $-1.1$  throughout the month and its diameter increases to 14 arcsec during the month. Its approximate position is RA 8h 30m, Dec  $+22^{\circ}$ , but is easy to see in the south-east as its red colour will make it easy to identify.

#### Jupiter

Jupiter reaches opposition on 7<sup>th</sup> December and is therefore observable throughout the night. It is unmistakable, with a magnitude of  $-2.8$ , making it a great telescope object, so do get observing!

#### Saturn

Saturn is well past opposition but still visible throughout most of the evening. The rings have a tilt of about  $4^{\circ}$ . This could make a nice photo. It is still a bit low in the sky. Look for Titan, its brightest and biggest satellite which orbits every 16 days. **On 8<sup>th</sup> December Saturn is  $0.3^{\circ}$  South of the Moon.**

#### Uranus

Uranus is observable throughout the night (RA: 3h 28m, Dec  $+18.5^{\circ}$ ). It reached opposition in November. Its magnitude is  $+5.6$  and diameter  $3.8''$ .

#### Neptune

Neptune reached opposition in September, with a diameter of  $2.4''$  and mag.  $+7.8$ . Its approximate position is RA 23h 50m, Dec  $-2.4^{\circ}$ . **On the 9<sup>th</sup>, Neptune is about  $0.8^{\circ}$  south of the Moon.** This should make it easier to find.

Anyone wishing to Uranus and Neptune, and who would like more details, should contact me at [coord@cotswoldas.org.uk](mailto:coord@cotswoldas.org.uk)

### Moon

**30<sup>th</sup> December:** New Moon

**15<sup>th</sup> December:** Full Moon

**8<sup>th</sup> December:** Moon is at First Quarter

**22<sup>nd</sup> December:** Moon is at last quarter

## **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 **Geminid** meteor shower occurs between 4<sup>th</sup> and 17<sup>th</sup> of this month, reaching their maximum around the 13<sup>th</sup>. Unfortunately, that is just before full Moon, making this display less favourable. The ZHR can reach 100. You may still get to see the brighter ones.

The **Ursid** meteor shower is from the 17<sup>th</sup> to 26<sup>th</sup> of December and is therefore more favourable. Although the typical ZHR is only around 10, the shower does produce some outbursts, the last being in 2000 and 2014.

## **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 will soon be visible in the evening skies.