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Welcome to the AAA Podcast for October 2021

## The Sun

As I'm sure you've noticed the nights are drawing in and the hours of daylight are getting less, even though we are still working in British Summer Time (BST).

On October 1<sup>st</sup> the Sun will rise around 7am BST and will set around 18.40 BST giving a day length of 11 hours 40 mins.

On October 30<sup>th</sup> the Sun will rise around 7.50am BST and will set around 17.36 BST giving a day length of 9 hours 46 mins.

British Summer Time ends at midnight on October 30<sup>th</sup> so on October 31<sup>st</sup> the Sun will rise around 6.52am Greenwich Mean Time (GMT) and will set at around 16.34 GMT giving a day length of 9 hours 42 mins.

## The Moon

The Moon will be new on October 6<sup>th</sup> and will reach first quarter on the 13<sup>th</sup>. It will be full on October 20<sup>th</sup> and will reach last quarter on the 28<sup>th</sup>.

## The Planets

*Mars* is the only planet not visible this month.

*Mercury* is pulling away from the Sun and will be visible as a morning object. It will be visible from the middle of the month low in the east-south-east before dawn. However, its appearance, both in magnitude and altitude, improves as the month wears on.

Between October 20<sup>th</sup> and the end of the month it will be between 9° and 10° in altitude, some three quarters of an hour before sunrise. The reason it remains in the same part of the sky for so many days is that it reaches greatest western elongation of 18° on October 25<sup>th</sup>.

Prior to this Mercury will be moving away from the Sun as seen from Earth. After this it will be moving back towards it.

On the 1<sup>st</sup> of November it will be a similar angular distance from the Sun as it was on October 20<sup>th</sup>.

*Venus* is an evening object, continuing to hug the horizon after sunset. It is near that part of the ecliptic that contains Scorpius. On October 29<sup>th</sup> it will reach greatest eastern elongation from the Sun of 47°. It will present itself at a more favourable altitude after mid-month.

*Jupiter* and *Saturn* remain close to each other as seen from Earth, among the stars of Capricornus. Jupiter will be shining at -2.6 and thus is easily spotted in the southern evening sky. Saturn is in the order of 15° ahead of Jupiter along the ecliptic and will be shining at approximately magnitude +0.4.

*Uranus* will be shining at +5.8 making it an easy binocular target. It is to be found approximately  $5^{\circ}$  north of the circle of stars which form the tail of Cetus the Whale.

*Neptune* is to be found about  $5^{\circ}$  south of the circlet of Pisces. It will be shining at magnitude +7.8 and will be in range of a small telescope or large binoculars. This part of the sky is the celestial water feature as there is a concentration of constellations that are associated with water.

The first of these is Aquarius the Water Bearer, a very old constellation named by Ptolemy and associated with Ganymede, cup bearer to the Olympian Gods.

Next in line along the ecliptic is Pisces the Fish. A large “v” shaped constellation with a circle of stars at the lower end of the “v”. This is known as the “Circlet” and currently acts as a signpost to Neptune.

Below Pisces is Cetus the Whale, currently acting as a signpost to Uranus. This constellation is in two parts - the body and the tail. In between the body and tail you can find the star Mira referred to last month. Mira is a long period variable star which spends most of the time below naked eye visibility but for a few weeks each year brightens enough to be visible. With any luck Mira should be visible this month and could reach magnitude +1.7. Look for a red star about halfway between the body and tail.

Above Aquarius is the small but conspicuous constellation of Delphinus the Dolphin. It is conspicuous because it is bright and looks reasonably like the creature it is meant to depict.

Finally, there is a small faint constellation called Equuleus - the Little Horse. Some people call it the sea horse to be in keeping with the water theme.

And that's all for this month. 'Till November wishing you clear skies.