

March is here, bringing with it the spring equinox together with the beginning of British Summer Time.

On March 1st the Sun will have climbed to about 6° below the celestial equator but by the end of the month it will have crossed the equator and be about 4° above it. The Sun will cross the equator on March 20th at 10 pm after which, here in the northern hemisphere, our nights will be shorter than our days. The day that the Sun crosses the equator is known as the equinox which means equal night. All over the world night and day will be the same length. From then on, in the north, the day length will increase until midsummer when the Sun will begin to retrace its path southwards. It will re-cross the equator at the autumnal equinox on September 23rd.

British Summer Time begins, technically, in the early hours of the morning of April 1st when we advance our clocks by one hour, there by losing an hour of sleep. I mention it this month as the notification for the clock change is given on March 31st in our diaries.

The Planets

As February ends Mercury is putting on a good evening show, low in the west just after sunset. I have found it easy to locate using the alt azimuth data from the Stellarium program together with a homemade altitude pointer and a hiking compass.

On March 1st at 6pm Mercury should be found at about 11° altitude on a compass bearing of 257° . This should put the planet within the field of view of a pair of 8 by 42 binoculars. Make sure the Sun has set before you view!

By March 5th at 6pm Mercury should be found at about 10° altitude on a compass bearing of about 261° .

Venus is a morning object and is drawing closer to the Sun causing it to become lost in the glow of the rising Sun.

Mars is an evening object in Aries. It is shining at magnitude +1.3 and is still drawing away from us. It will remain visible in the evening sky for about two hours mid-month.

Jupiter is still a morning object but is moving further away from the Sun as it moves towards opposition at the beginning of June. It is shining at magnitude -2.1, low in the constellation of Ophiuchus.

Saturn can be seen for a short time before sunrise shining at magnitude +0.6 in the constellation Sagittarius. It is pulling away from the Sun moving towards opposition in July.

Uranus can be found low in the west shining at magnitude +5.9. It runs into twilight by mid-month.

Neptune is not visible this month.

Messier Objects

Some AAA members are busy tracking down Messier objects so I have included some in this month's podcast. Lying in the constellation of Auriga, three of my favourite open clusters are well placed for viewing this month. They are M36 M37 and M38. They are all easy and rewarding targets for binoculars and I would recommend that you locate them with binoculars before going for a telescopic view.

M36 is to be found at Right Ascension 5 hours 36 minutes, Declination +34°. This cluster is estimated to be 3,700 light years away and shines at magnitude +6.3.

M37 is to be found at Right Ascension 5 hours 52 minutes, Declination +32° 33 minutes
The cluster is estimated to be 3,600 light years away and shines at magnitude +6.2.

M38 is to be found at Right Ascension 5 hours 28 minutes, Declination +35° 51 minutes.
The cluster is estimated to be 2750 light years away and shines at magnitude +7.4.

Compare these open clusters to some Messier globular clusters:

M3 is to be found in Canes Venatici. It is to be found at Right Ascension 13 hours 42 minutes, Declination $+28^{\circ} 22$ minutes. It is estimated to be 34,000 light years away and shines at magnitude +5.9

M5 is to be found in the constellation Serpens at Right Ascension 15 hours 18 minutes, Declination $+02^{\circ} 05$ minutes. It is estimated to be 26,000 light years away and shines at magnitude +5.7. At the moment this cluster will not be visible until the early hours of the morning but will be presenting itself at a more civilised hour as the year progresses.

M53 is to be found in Coma Berenices at Right Ascension 13 hours 13 minutes, Declination $+18^{\circ} 10$ minutes. It is estimated to be 63,000 light years away but despite its immense distance manages to shine at magnitude +7.7.

So far we have looked at clusters, and you may have noticed that the globular clusters are much further away than the open clusters. The open clusters live in our galaxy whereas the globulars' tend to inhabit the galaxy's halo and are thus further away. We will now look at a quartet of Messier's that are further away still. They are galaxies and all live in Leo the Lion.

M65 is an edge-on spiral galaxy lying at a distance of 33 million light years. It is to be found at Right Ascension 11 hours 19 minutes, Declination $+13^{\circ} 5.5$ minutes. It shines at magnitude +9.3.

M66 is to be found at Right Ascension 11 hours 20 minutes, Declination $12^{\circ} 59$ minutes. It shines at magnitude +8.9 and, like M65, is also estimated to be 33 million light years away. It is a spiral galaxy which is almost face on so compare its appearance to that of M65.

M95 is to be found at Right Ascension 10 hours 44 minutes, Declination $+11^{\circ} 42$ minutes It is a face on spiral, shining with a magnitude of +9.7.

Its companion in the sky M96, also a face on spiral, is to be found at Right Ascension 10 hours 47 minutes, Declination $+11^{\circ} 49$ minutes. The pair can be seen in the same large binocular field of view and are thought to be 38 million light years away from us.

That is all the telescopic targets for this month. Happy Messier Hunting!