UK Astronomy Sky Notes February 2018 by Mary McIntyre

Moon:

Last Quarter: 7th February 15:53
New: 15th February 21:05
First Quarter: 23rd February 08:09
Full: 2nd March 00:51

The Lunar "X" and "V" are visible for about 4 hours starting at around 17:00 GMT on 22nd February. The "X" is visible to the left of the terminator on the shadow side about a third of the way up from the bottom of the Moon. The "V" is visible to the right of the terminator about a third of the way down from the top. You will need binoculars or a telescope to see them.

Lunar conjunctions & occultations:

Note: When the Moon is waxing it is visible in the western sky after sunset. When near Full Moon it is visible most of the night. When it is waning, it is visible in the eastern sky before sunrise

1st February Waning Gibbous Moon lies close to Regulus (occultation from Northern Scotland)
5th February Waning Gibbous Moon lies close to Spica
8th February Waning Crescent Moon lies close to Jupiter & Gamma Lib
9th February Waning Crescent Moon lies close to Mars, Antares & Vesta
11th February Waning Crescent Moon lies close to Saturn & Mu Sgr
12th February Waning Crescent Moon lies in the Teaspoon asterism
16th February Slim 1 day old Waxing Crescent Moon lies close to Venus
22nd February Waxing Crescent Moon lies near M45 & the Hyades cluster
23rd February First Quarter Moon lies very close to Aldebaran (daytime occultation)
27th February Waxing Gibbous Moon lies close to Ceres
28th February Waxing Gibbous Moon lies close to Regulus

Planetary Observations:

Mercury – located in Aquarius, Mercury is not observable during most of February, however, during the last few days of the month, it joins Venus very low in the west at sunset. At mag -1.4 it is ten times fainter than brilliant Venus

Venus – located in Aquarius, during the 2nd half of February Venus becomes visible low in the west after sunset, rising each day until it remains visible for an hour after sunset by the end of the month. It is unmistakable at mag -3.9. On 16th February the very slim 1 day old Waxing Crescent Moon lies very close to Venus and presents an excellent photo opportunity

Mars – moving through Scorpius, Mars rises at around 3am and lies to the lower left of Jupiter in the pre-dawn sky. On 9th February the Waning Crescent Moon lies close to Mars. From 10th – 16th February it lies close to the red giant star Antares. This will be an interesting observation as both are similar in magnitude at +1.0 and they are both very similar in colour!

Jupiter – located in Libra, Jupiter now rises at around 1am and remains visible until dawn. At mag -2.1 it will be easy to spot! On the mornings of 6th – 8th February, the Last Quarter/Waning Crescent Moon lies near to Jupiter. On 13th February there is a shadow transit of Europa whilst the Great Red Spot is visible so this will make an excellent photo opportunity. There are many transit and shadow transit events throughout the month so take a look at either Sky at Night or Astronomy Now for more information about these

Saturn – rising at around 5am, you will find Saturn located in Sagittarius and to the lower left of Mars. At mag +0.6 it isn't particularly bright, but binoculars or a telescope will reveal its rings

Neptune – located in Aquarius, Neptune is visible in the evening skies after sunset during the first half of the February. At the beginning of the month it sets at around 7pm, but by the second half of the month it will become lost in the twilight glare. At mag +7.9, you will need binoculars or a small telescope to observe it

Uranus – located in Pisces, Uranus is visible in the evening sky, setting at around 11pm. At mag +5.8 you will need binoculars or a small telescope to observe it. On 20th February the Waxing Crescent Moon lies close to Uranus

Pluto – is not easily observable this month

Ceres – located in Cancer, Ceres is visible all night long this month. At approximately mag +6.5 you will need binoculars or a

telescope to observe it. On 27th February the Waxing Gibbous Moon lies close to Ceres

Vesta – located in Ophiuchus & above Mars, Vesta rises at around 3am and is visible until dawn. At approximately mag +7, you will need binoculars to observe it. On 9th February the Waning Crescent Moon lies very close to Vesta & Mars

Other Observations:.

NEO and Large Asteroid Close Passes – we have 2 close passes by objects this month. First is NEO 276033, an object thought to be around 800 metres across, which will pass within 11 lunar distances (4.2 million km) of Earth on the night of 4th/5th February. It moves rapidly from a point below Spica in Virgo, and along a line towards Regulus in Leo. At 1am on 5th February it will lie 3 degrees west of M101. At a magnitude of +13 it will be a challenge to many observers, but if you can locate it, the rapid movement will be very apparent against the background stars.
On the night of 19th/20th February we have another fly by, this time by 3752 Camillo, which will pass within 55 lunar distances of Earth (20.6 million km). Camillo is larger, with a diameter of approximately 2.km. This will also be a mag +13 object and it will pass along the eastern edge of Orion. Although further away, the motion of 18 arcminutes per hour will be easy to detect

Binocular Tour – This month's Sky at Night Binocular Tour by Stephen Tonkin is focused on the sky around Auriga, Taurus, Perseus and Triangulum. As usual there are 4 targets suitable for 10 x 50 binoculars and 2 suitable for 15 x 70 binoculars. These objects include 2 asterisms, several clusters, an eclipsing binary star system and a challenging nebula. For full details on how to find these objects, look at this month's edition of Sky at Night Magazine

Deep Sky Tour – This month's Sky at Night Deep Sky Tour is centred on the area around Leo. The objects this month are all galaxies, 5 of them from the Messier Catalogue plus an NGC. For full details of where to find these objects and how best to see them, pick up the current issue of Sky at Night magazine

Astronomy Now Object of the Month – Astronomy Now's object of the month is NGC 2403, a circumpolar galaxy located in Camelopardalis which is said to look like M33. For more information on how to observe and image this object, take a look at the current edition of Astronomy Now magazine

Astronomy Now Sky Tour – Astronomy Now's February sky tour focuses on the northern circumpolar region of sky which encompasses Ursa Major, Lynx, Camelopardalis, Cassiopeia and Cepheus. This area is rich in deep sky objects and features open clusters, several nebulae, galaxies, planetary nebulae and multiple star systems. For more information about the objects you can see in this part of the sky, take a look at the current edition of Astronomy Now magazine

International Space Station – there are some stunning evening ISS passes during the first 2 weeks of February, then it leaves our skies until 27th February, when it returns for some dawn passes. For the exact timings of the passes from your location, visit www.heavens-above.com You can also check the Iridium flare times for your location at Heavens Above. Flaring Iridium satellites are being replaced with new, non-flaring satellites during the coming months, so by the end of 2018 Iridium flares will be a thing of the past; make sure you observe them while you still can!

Comets Visible This Month:

Comet 185P/Petriew – moving through Pisces during February, this comet is visible in the western sky after sunset, setting between 9pm and 10pm. It is predicted to brighten to around mag +11 during this month, but you will need binoculars or a telescope to observe it. Click here to view the finder chart
C/2016 R2 (PanSTARRS) – moving through Taurus, this comet is visible from sunset though until around 3am when it sets. It spends the beginning of the month close to M45. Currently at mag +11.5 and fading, you will need binoculars or a telescope to observe it. Click here to view the finder chart
There are several other comets in the mag +11 to +15 range. Details of these can be found in the links below.
For up to date information about the fainter comets which are visible, please visit: https://in-the-sky.org/data/comets.php, the BAA Comets Section: https://www.ast.cam.ac.uk/~jds/ or Seiichi Yoshida's home page: http://www.aerith.net/index.html

NB: All of the information in this sky guide is taken from Night Scenes 2018 by Paul L Money, Philips Stargazing 2018 by Heather Couper and Nigel Henbest, Astronomy Now Magazine, Sky at Night Magazine, Stellarium, the BAA Comets Section website https://www.ast.cam.ac.uk/~jds/, www.inthesky.org, https://www.timeanddate.com/moon/phases and www.heavens-above.com Information collated by Mary McIntyre https://www.marymcintyreastronomy.co.uk/index.html. For regular updates about the events happening in the sky this month, follow the Nightscenes Monthly Night Sky Facebook page at www.facebook.com/AstrospacePublications