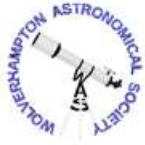
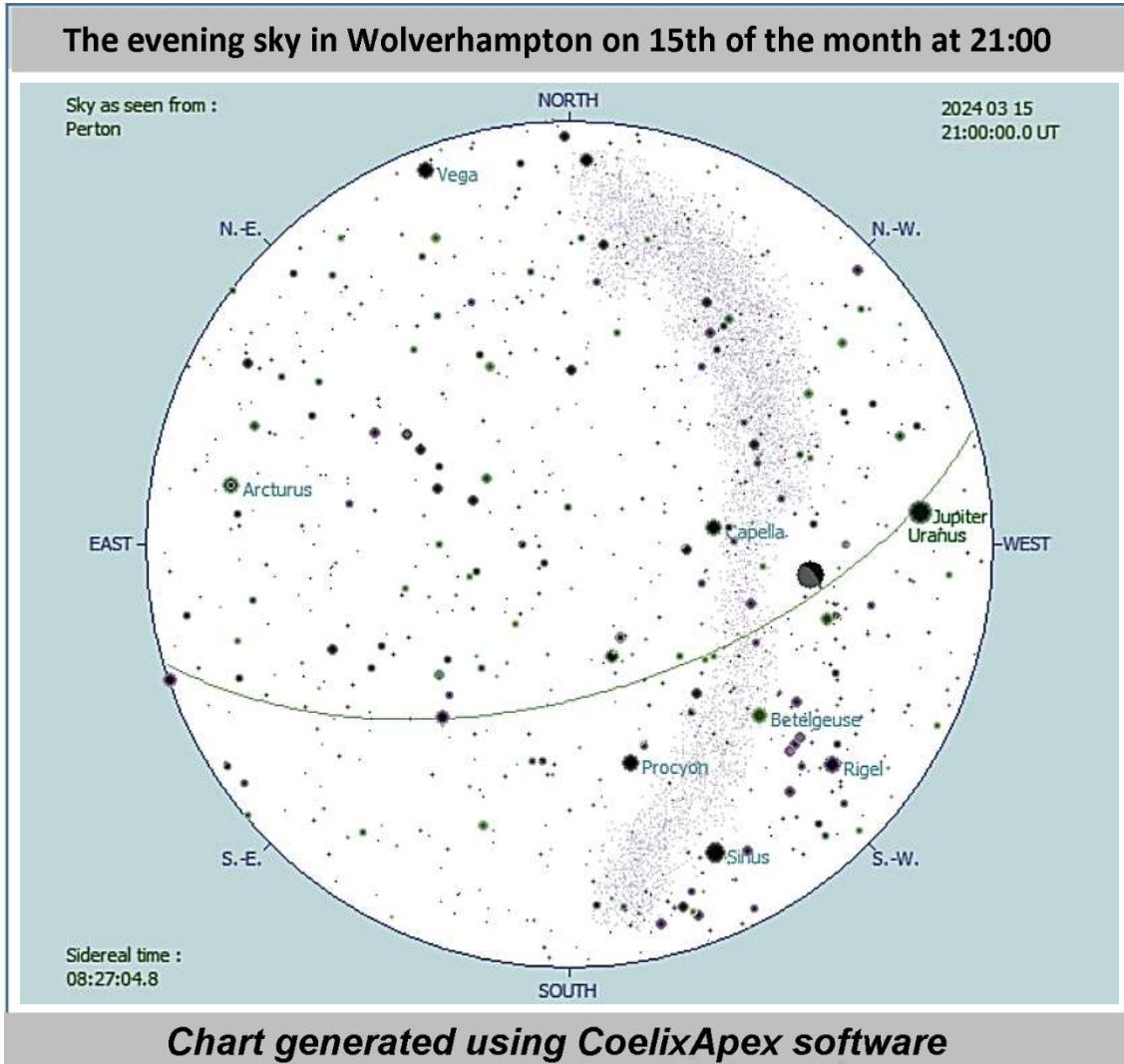


The Night Sky in March 2024



Monthly guide compiled by Doug Bickley

PERTON LIBRARY
ASTRONOMY
GROUP



Diary of events to look out for this month:

- 3 Crescent Moon occults globular cluster M4 (morning twilight)
- 10 New Moon
- 11 Crescent Moon above left of Mercury (evening twilight)
- 13 Crescent Moon right of Jupiter (evening)
- 14 Crescent Moon forms triangle with Pleiades M45 and Uranus (evening)
- 15 Moon forms triangle with Pleiades M45 and Aldebaran (evening)
- 18 Moon forms triangle with Castor and Pollux (evening)
- 20 Spring, or Vernal Equinox 3:07 GMT
- 21 Perton Astronomy Group meeting 7pm
- 22 Moon left of Regulus (evening)
- 24 Mercury at greatest eastern elongation (evening twilight)
- 25 Full Moon (and penumbral Lunar Eclipse see below)
- 31 British Summer Time, BST, clocks go forward 1 hour at 1am

THE MOON

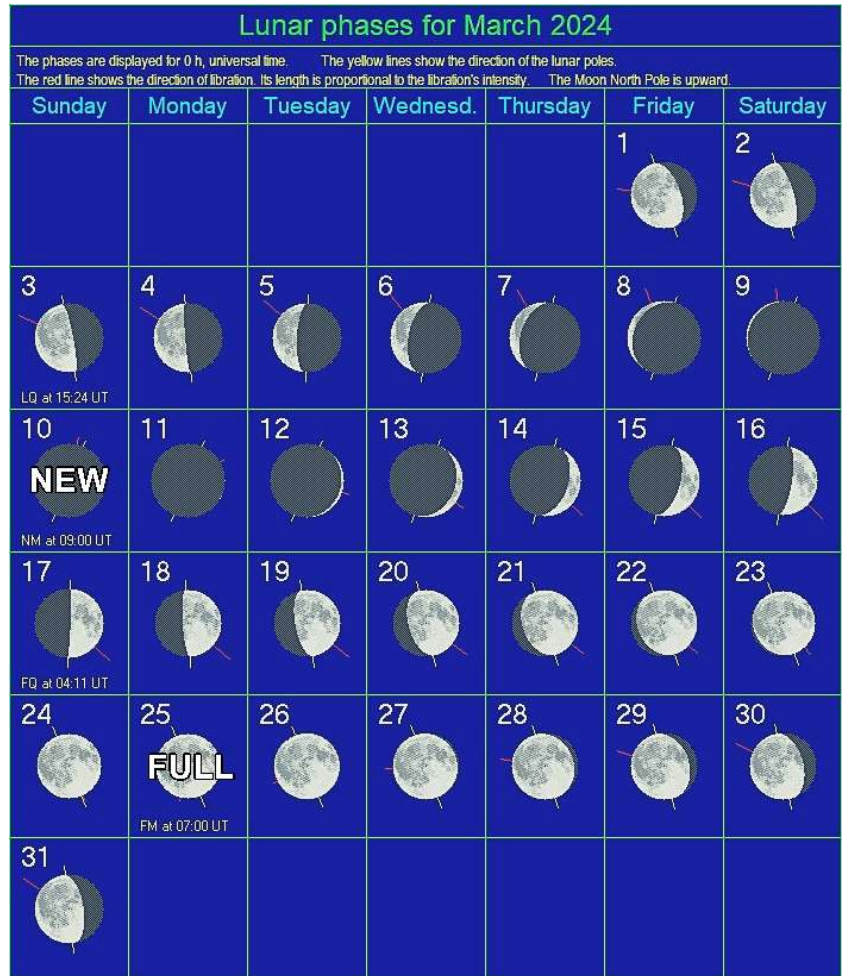
Lunar Phases this month

New Moon is on March 10 and Full Moon is on March 25.

This month's Full Moon is called amongst other names the Worm Moon.

As I've mentioned before many of the Moon's nicknames have come to us from Native American culture because for their way of life - the cycles of the lunar phases were just as important a method of timekeeping as the longer solar cycle of the year (from which the modern Gregorian calendar is derived). The March Full Moon is the last one of winter after the worm trails that would appear in the newly thawed ground. Other names include chaste moon, death moon, crust moon and sap moon, after the tapping of the maple trees.

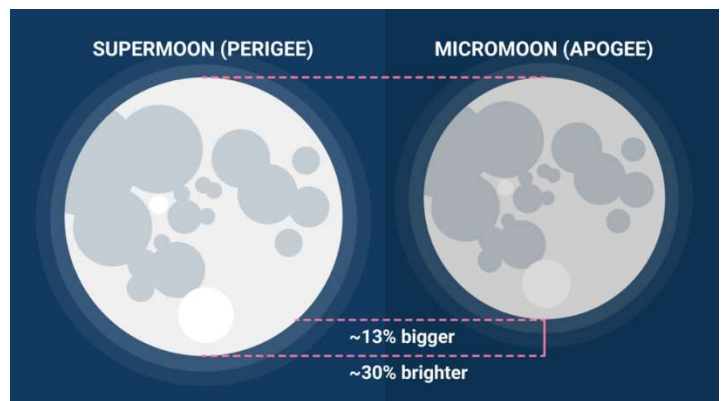
March marks the end of the cold winter months and the beginning of spring. It also means that nights are lighter and targets potentially more difficult.



[Graphic generated by Coelix Apex software]

The New Moon on 10 March will occur near the Moon's closest approach to Earth, its perigee, and often this is called a Supermoon. As for a normal New Moon this of course is not visible from Earth.

The Full Moon on March 25 will be a Micromoon, occurring when a Full Moon coincides with apogee, the point in the Moon's orbit farthest away from Earth. Because a Micromoon is further away, it looks approximately 14% smaller than a Supermoon and 30% dimmer.



On March 25 there will be a Penumbral Lunar Eclipse partially visible from Wolverhampton. A penumbral lunar eclipse occurs when the Moon travels only through the outer, fainter part of the Earth's shadow, or 'penumbra'. It happens when the Earth moves between the Sun and Moon but the three do not form a perfectly straight line. Don't get too excited because there won't be a noticeable changes to the Moon, which also sets before the maximum eclipse at 07:12 GMT.

THE SUN

Chart of sunrise and sunset times in Wolverhampton:

Date	2024	Sun			Day length		Astronomical Twilight		Nautical Twilight		Civil Twilight	
		Sunrise	Sunset	Solar Noon	Lenth	Difference	Start	End	Start	End	Start	End
Mar-01	Fri	6:53 AM	5:47 PM	12:20 PM	10:54:29	+4:04	4:59 AM	7:41 PM	5:39 AM	7:01 PM	6:19 AM	6:22 PM
Mar-03	Sun	6:48 AM	5:51 PM	12:20 PM	11:02:40	+4:05	4:55 AM	7:45 PM	5:35 AM	7:05 PM	6:14 AM	6:25 PM
Mar-10	Sun	6:32 AM	6:04 PM	12:18 PM	11:31:29	+4:09	4:38 AM	7:58 PM	5:19 AM	7:18 PM	5:58 AM	6:38 PM
Mar-17	Sun	6:16 AM	6:16 PM	12:16 PM	12:00:23	+4:07	4:20 AM	8:12 PM	5:02 AM	7:31 PM	5:42 AM	6:50 PM
Mar-24	Sun	5:59 AM	6:29 PM	12:14 PM	12:29:19	+4:07	4:01 AM	8:27 PM	4:44 AM	7:44 PM	5:25 AM	7:03 PM
Note: clock change forward 1 hour												
Mar-31	Sun	6:43 AM	7:41 PM	1:12 PM	12:58:07	+4:06	4:41 AM	9:43 PM	5:26 AM	8:58 PM	6:08 AM	8:16 PM

Data credit: time-ok.com

PLANETS THIS MONTH

Here's my usual summary table showing planetary observation opportunities based on mid-month data:

Planetrise/Planetset, Fri, 15 Mar 2024				
Planet	Rise	Set	Meridian	Comment
Mercury	Fri 06:43	Fri 19:38	Fri 13:09	Slightly difficult to see
Venus	Fri 05:56	Fri 16:06	Fri 11:01	Slightly difficult to see
Mars	Fri 05:37	Fri 15:06	Fri 10:21	Very difficult to see
Jupiter	Fri 07:54	Fri 22:47	Fri 15:20	Fairly good visibility
Saturn	Fri 06:12	Fri 16:46	Fri 11:29	Extremely difficult to see
Uranus	Fri 08:04	Fri 23:24	Fri 15:44	Difficult to see
Neptune	Fri 06:34	Fri 18:17	Fri 12:26	Extremely difficult to see

Data from timeanddate.com

Planetary observations remain difficult this month with the exception of Jupiter, and as I said in the last issue this situation will remain for a few months, some planets having very low altitudes, some lost in the Sun's glare or some so low in the morning sky as to be unobservable.

Be patient as things will gradually improve as the year goes on.

Here is my usual run down of planetary movements for the month of March:

Mercury is in the W in Pisces, with a maximum of 10° shining at mag -1.4 but dimming slightly during the month won't be visible low on the western horizon until mid-month. At that point it should be possible with good seeing conditions to spot the planet.

Venus is in the ESE in Capricornus, rising very low an altitude of only 3° although shining at mag. -3.8 at the start of the month but getting more difficult to see.

Mars is not visible this month.

Jupiter is still in Aires in the SW, at a maximum altitude of 42° shining at mag -2.0 but losing altitude so that at month end it appears only 16° high. Still a good target for observations this month, and on 13 March a 16%-lit Moon will appear close by.

Saturn is in Aquarius in the E at a very low altitude of 8° and is too close to the Sun to be seen properly. The planet reaches opposition in September when observation opportunities will improve..

Uranus is in the WSW in Aries at a maximum altitude of 40° shining at mag +5.8, but as Jupiter the planet will lose altitude and at the end of the month it will appear only 16° high. If you want to see Uranus make sure that you try early in the month.

Neptune is not visible this month.

PHENOMENA OF THE MONTH

(Table generated using *Coelix Apex* software):

Times are given in UT for Perton (2° 11' 0" W, 52° 35' 0" N, zone R).

Date	Hour	Description of the phenomenon
yyyy mm dd	hh:mm	
1 2024 03 03	15:24	LAST QUARTER OF THE MOON
2 2024 03 08	06:38	Close encounter between the Moon and Mars (topocentric dist. center to center = 4.3°)
3 2024 03 08	20:13	Close encounter between the Moon and Venus (topocentric dist. center to center = 3.4°)
4 2024 03 10	07:06	Moon at perigee (geocentric dist. = 356895 km)
5 2024 03 10	09:00	NEW MOON
6 2024 03 17	04:11	FIRST QUARTER OF THE MOON
7 2024 03 17	11:24	CONJUNCTION between Neptune and the Sun (geoc. dist. center to center = 1.2°)
8 2024 03 17	17:00	Mercury at its perihelion (distance to the Sun = 0.30750 AU)
9 2024 03 19	22:00	Venus at its aphelion (distance to the Sun = 0.72821 AU)
10 2024 03 20	03:06	SPRING EQUINOX
11 2024 03 21	23:17	Close encounter between Venus and Saturn (topocentric dist. center to center = 0.3°)
12 2024 03 23	15:44	Moon at apogee (geocentric dist. = 406294 km)
13 2024 03 25	07:00	FULL MOON (penumbral eclipse of the Moon partly visible in Perton)
14 2024 03 31	00:00	EASTER DAY

CONSTELLATIONS AND GENERAL

Spring will begin this year on 20 March based on the vernal equinox when day and night have equal lengths (defined by the angle of Earth's tilt toward the sun), the word Equinox coming from the Latin words 'aequi', which means 'equal', and 'nox', which means 'night'.

The seasons start to change as the northern hemisphere begins to tilt towards the sun, our days getting longer and nights shorter.

Make the most of the observation opportunities this month (as usual weather permitting) before the skies start to lighten. The winter constellations, such as Orion and Canis Major, are slipping westwards and setting earlier, and are being replaced by the spring star patterns. These include Ursa Major, Boötes, Cancer, Leo, Coma Berenices, Virgo, and Hydra.

A very good plan is to join your local astronomical society who will advise about all this and tell you about books and equipment that might be useful.

International Space Station (ISS)

Forecast time for visible passes this month

I've included all forecast visible passes this month in the table. Check for the highest mag and longest transit time, and if you use a camera with a long exposure you can get a long trail. Plenty of evening passes this month and I have marked the ones which are particularly bright and lasting for a decent time.

Date	Mag	Transit time	Start			High point	End		
			Time	Alt.degs.	Az.		Time	Alt.degs.	Az.
14-Mar	-1.8	01:20	19:56	10°	SSW	17°	19:57	17°	S
15-Mar	-1.8	03:04	19:07	10°	S	14°	19:10	13°	ESE
15-Mar	-1.6	01:10	20:42	10°	SW	19°	20:43	19°	SW
16-Mar	-3.1	03:23	19:52	10°	SW	35°	19:56	34°	SE
17-Mar	-2.5	05:19	19:03	10°	SSW	26°	19:08	12°	E
17-Mar	-2.7	02:18	20:39	10°	WSW	40°	20:41	40°	WSW
18-Mar	-3.6	04:26	19:49	10°	WSW	55°	19:54	34°	ESE
18-Mar	-1.0	00:46	21:26	10°	W	16°	21:27	16°	W
19-Mar	-3.2	06:23	19:00	10°	SW	43°	19:06	10°	E
19-Mar	-3.5	02:52	20:36	10°	W	61°	20:39	61°	WSW
20-Mar	-3.8	04:56	19:46	10°	WSW	72°	19:51	28°	E
20-Mar	-1.3	01:10	21:23	10°	W	20°	21:24	20°	W
21-Mar	-3.6	06:37	18:57	10°	WSW	63°	19:03	10°	E
21-Mar	-3.8	03:12	20:33	10°	W	70°	20:36	70°	SW
22-Mar	-3.8	05:12	19:43	10°	W	77°	19:48	24°	E
22-Mar	-1.5	01:21	21:20	10°	W	21°	21:21	21°	W
23-Mar	-3.6	03:22	20:30	10°	W	55°	20:33	55°	S
24-Mar	-3.7	05:23	19:40	10°	W	66°	19:45	21°	ESE
24-Mar	-1.4	01:23	21:17	10°	W	19°	21:18	19°	WSW
25-Mar	-2.8	03:31	20:27	10°	W	35°	20:30	34°	S
26-Mar	-3.1	05:36	19:37	10°	W	47°	19:42	16°	SE
26-Mar	-1.1	01:01	21:14	10°	WSW	13°	21:15	13°	WSW
27-Mar	-1.9	03:34	20:23	10°	W	21°	20:27	18°	S
28-Mar	-2.3	05:53	19:33	10°	W	29°	19:39	10°	SSE
29-Mar	-1.0	02:10	20:21	10°	WSW	11°	20:23	10°	SSW
30-Mar	-1.3	04:26	19:30	10°	WSW	17°	19:34	10°	S

As always check the Heavens-Above website also if you want to see the latest forecasts.

[source: <https://www.heavens-above.com/>]

As usual have a quick check with one of these apps:



Android:
ISS Detector Satellite Tracker



IOS:
ISS Spotter

METEOR SHOWERS

No meteor showers this month.

The next shower to watch will be the Lyrids which peak on 22 April 2024.

PERTON LIBRARY ASTRONOMY GROUP

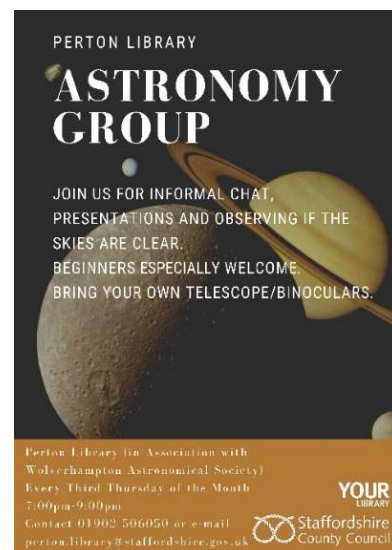
The group meets on the third Thursday of every month of the year at Periton Library from 7pm to 9pm. No subscription, no need to book, all free, just drop in at any time during the evening.

(Location WV6 7QU or on what3words the entrance is //saints.empty.stands)

The group is a relaxed and friendly gathering with the occasional talk.

We are particularly suited to beginners who very often bring their telescopes along for advice on how to set up – we have experienced members who can help with this.

If the skies are clear we do try to do some observing from an area at the rear of the building.



WOLVERHAMPTON ASTRONOMICAL SOCIETY LECTURE PROGRAMME



Here is a list of upcoming lectures:

Date	Speaker	Title of Talk
04/03/24	Damian Hardwick	Sir Bernard Lovell & His Telescope
18/03/24	Steve Tonkin	Right Light At Night
15/04/24	TBC	
13/05/24	John Thatcher	The James Webb Space Telescope At Work
17/06/24	Paul Pope Lecture	Chris Lintott

The host location for our live talks remains the University of Wolverhampton in the city centre. Access and facilities are excellent and car parking adjacent. Details are available on the Wolvas website. Lectures in person or online will only be available to paid-up members of the Society.

The exciting exception is the talk by Prof Chris Lintott, which Chris has had to move to 17 June. This will be our annual free-to-the-public lecture, so anyone will be able to see this not just members. It should be a memorable evening so please spread the word, we will have plenty of seats available!

The Wolvas subscription remains a bargain at £10 per annum and you can still sign up now our website www.wolvas.org.uk and pay your subscription, preferably by bank transfer (see website).

Watch out for updates

As well as our webpage we will be posting details of events on social media, so keep an eye on our Facebook (<https://www.facebook.com/wolvasuk>) and X [Twitter] (<https://twitter.com/wolvasuk>) pages for the latest news.