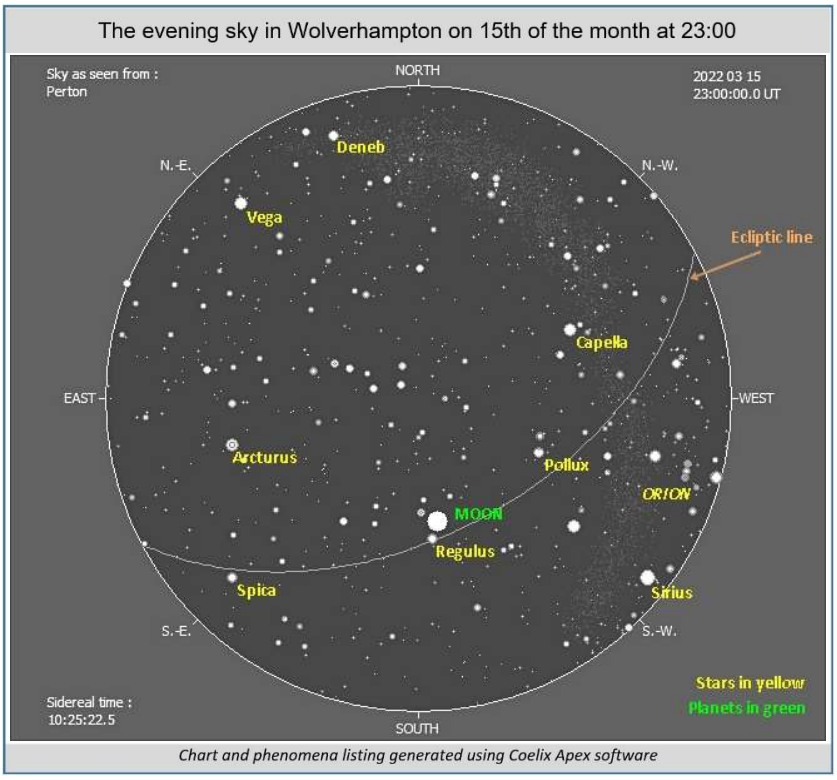
The Night Sky in March 2022
- a quick and easy guide



PERTON LIBRARY ASTRONOMY GROUP

YOUR LIBRARY Staffordshire County Council

Monthly Guide Compiled by Doug Bickley

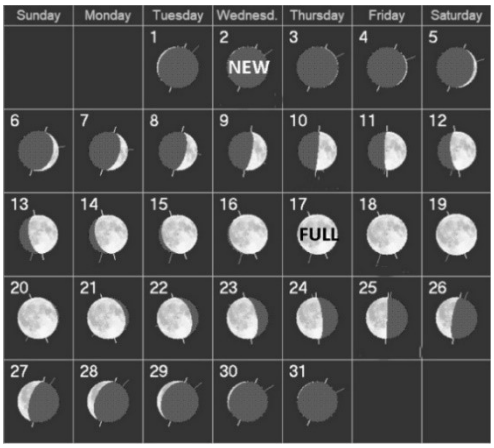
MOON PHASES	
New Moon	2 Mar
First quarter	10 Mar
Full Moon	18 Mar
Third (last) quarter	25 Mar

Space Diary
Events this month to look out for:

8 Moon below Pleiades M45 with Aldebaran to the left (early evening)
9 Moon forms a triangle with Aldebaran and Pleiades (evening)
11 Venus and Mars at their closest in Capricornus (morning twilight)
12 Moon forms a triangle with Castor and Pollux (evening)
13 Venus above Mars (morning twilight)
20 Vernal Equinox - first day of spring in the Northern Hemisphere
20 Possible launch of NASA's Space Launch System (SLS) Artemis 1 first test flight
24 Mars and Uranus in conjunction right of the Moon (evening)
27 British Summer Time starts (clocks go forward 1 hour)
28 Crescent Moon below right of Mars, with Venus and Saturn to the left (morning twilight)

Moon

On the right is my usual schematic of the Moon phases over the month of March.
Full Moon is on the 18 March, New Moon is on 2 March.



Different cultures around the world have given names to the full moon of each month. Most of the names used today come from Native American culture, and they called this last full moon of winter the Worm Moon 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.

Why is it the last full moon of winter and when does spring start?

Here is a light-hearted definition of spring!

Astronomers and Spring

As I was starting to plan this issue I was watching the news this morning (17 Feb) and the British Museum is putting on display the Nebra Sky Disc which is believed to be 3,600 years old, dating from the Bronze Age and they were discussing the significance of weather to the ancients.
That got me thinking about spring.

Astronomers say that spring will begin this year on March 20 based on the vernal equinox when day and night have equal lengths (defined by the angle of Earth's tilt toward the sun). Astronomers said it - so it's official.

Ever since the Stone Age, and maybe even before that, mankind has known all about equinoxes; that's the two times a year that day and night have equal lengths, usually around March 21 and September 22. Spring is generally considered the period between the spring equinox and the summer solstice.

Meteorologists noticed the shortcomings with the astronomical seasons, so they came up with their own definitions (but what do they know?). They called summer the three hottest months of the year, winter the three coldest, and spring and autumn get what's left over. So according to meteorologists, spring begins on March 1, and if you are a tomato grower this calculation is even worse than the one the astronomers came up with.

Other cultures have determined different times for the spring season, the ancient Chinese had the equinox as the middle of the season, not the beginning, and in Ireland, spring begins on St. Brigid's day, which is February 1.

All very confusing, which is the best definition? Obviously the Astronomers one!

Spring Constellations

You'll notice a shift in the sky this month. The brilliant winter constellations, such as Orion and Canis Major, are slipping westwards and setting earlier. They're being replaced by the spring star patterns.

The three biggest constellations are Ursa Major, Virgo and Hydra and together with Boötes, Leo and Cancer these are the most prominent in spring. Ursa Major of course is visible all year round from the UK but is highest in the night sky through spring. Virgo is the second largest constellation in the sky, the only one larger in size is Hydra, sometimes difficult to recognise because of its size.

If you are a fan of Orion get your observations fast, because those stars will be all but gone by the April. However Capella, Procyon and Gemini are reasonably high up and Ursa Major is practically overhead. Cassiopeia is low in the northern sky, with Vega in the east. The southern sky is dominated by the constellation of Leo, while the brightest star on view is the glorious orange coloured Arcturus, in the constellation of Boötes.

Planets this month

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

Spring is on its way and on 20 March we have the vernal equinox. After that date the days become longer than the nights. This is followed on the 27 March when British summer times starts and it will be around 8 pm before it becomes dark, so make the most of March for observations.

Jupiter reaches solar conjunction on 5 March and is out of view from mid-northern latitudes like the UK.

Saturn is in the ESE in Capricornus at an altitude of 3°, and is a morning planet emerging pre-dawn close to Mars. It's place in the sky isn't very good at present because it's altitude is quite low. If you have a view towards the SE horizon look out for mag +0.9 Saturn, mag +1.1 Mars and mag -4.2 Venus together between 22-31 March. An 18% waning crescent Moon sits below the trio on the morning of the 28th.

Mars is in the SE in Capricornus at an altitude of 3°, shining at mag +1.3 and rising about an hour and a half before the sun at the start of the month, but continues to get brighter reaching mag 1.1 by month end. At the start of the month Mars and Venus converge around the 12th and then around the 24th these two plus Saturn form a triangle.

Venus is the SE in Sagittarius still low at an altitude of 10° and is a morning planet rising a couple of hours before the Sun and shining at mag -4.4 at the start of the month. Visibility is declines towards month end

Mercury is still a morning planet shining at mag -0.1 rising 30 minutes before the Sun but is not a good target this month and is unlikely to be seen with the naked eye. It is heading towards superior conjunction early next month.

Uranus is in the WSW in Aries at an altitude of 33°, shining at mag +7.9. A 17% waxing crescent Moon sits 6.5" to the SW of Uranus on the evening of the 6th, and to the E on the 7th. The planets altitude falls to 8° by month end and so you will only have a short time for observations, March is probably the end of the current observational window.

Neptune is in conjunction with the Sun on 13 March and so farthest planet from the sun (that we know of so far!) is not visible this month.

Venus, Mars, Saturn and waning Moon around 5.15 UT on 28 March 2022 (generated using Stellarium software)

Meteor Showers

No meteor showers this month.

International Space Station (ISS) forecast time for evening passes visible this month.

There are lots of evening passes in March and some with long transit times which I have marked with a shaded box. As mentioned before if you want to take a long exposure get your camera set up early, it's quite surprising how quickly the ISS appears.

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

Date	Mag	Transit time	Start			High point	End		
			Time	Alt.degs.	Az.		Time	Alt.degs.	Az.
17-Mar	-1.5	00:40	19:35	10°	SSE	12°	19:35	12°	SSE
18-Mar	-2.0	01:38	20:21	10°	SW	22°	20:22	22°	SSW
19-Mar	-2.4	03:42	19:33	10°	SSW	24°	19:36	21°	ESE
19-Mar	-1.2	00:50	21:08	10°	WSW	16°	21:09	16°	WSW
20-Mar	-3.5	03:04	20:20	10°	WSW	51°	20:23	51°	S
21-Mar	-3.2	05:08	19:31	10°	SW	40°	19:36	20°	E
21-Mar	-1.9	01:40	21:08	10°	W	27°	21:09	27°	W
22-Mar	-3.9	03:46	20:19	10°	WSW	71°	20:23	61°	ESE
23-Mar	-3.7	05:46	19:30	10°	WSW	61°	19:36	17°	E
23-Mar	-2.3	02:02	21:07	10°	W	34°	21:09	34°	W
24-Mar	-3.9	04:02	20:18	10°	W	77°	20:22	54°	ESE
24-Mar	-0.6	00:12	21:55	10°	W	11°	21:55	11°	W
25-Mar	-3.8	05:59	19:30	10°	W	76°	19:35	16°	E
25-Mar	-2.4	02:11	21:06	10°	W	35°	21:08	35°	WSW
26-Mar	-3.7	04:08	20:17	10°	W	67°	20:22	47°	SE
26-Mar	-0.6	00:08	21:54	10°	W	11°	21:54	11°	W
27-Mar	-3.7	06:05	20:29	10°	W	75°	20:35	15°	ESE
27-Mar	-2.2	02:12	22:05	10°	W	29°	22:08	29°	WSW
28-Mar	-3.2	04:11	21:17	10°	W	46°	21:21	35°	SSE
29-Mar	-3.4	06:10	20:28	10°	W	58°	20:34	13°	ESE
29-Mar	-1.7	01:59	22:05	10°	W	19°	22:07	19°	SW
30-Mar	-2.3	04:12	21:16	10°	W	28°	21:20	21°	S
31-Mar	-2.7	06:17	20:27	10°	W	37°	20:33	10°	SE
31-Mar	-1.0	00:35	22:06	10°	SW	10°	22:06	10°	SW

Phenomena of the month of March *(generated using Coelix Apex software)*:

	Date	Hour	Description of the phenomenon
	yyyy mm dd	hh:mm	
1	2022 03 02	10:43	Close encounter between Mercury and Saturn (topocentric dist. center to center = 0.7°)
2	2022 03 02	12:35	NEW MOON
3	2022 03 03	04:07	Close encounter between Mars and Pluto (topocentric dist. center to center = 1.0°)
4	2022 03 03	17:59	Close encounter between Venus and Pluto (topocentric dist. center to center = 5.7°)
5	2022 03 05	09:08	CONJUNCTION between Jupiter and the Sun (geoc. dist. center to center = 1.0°)
6	2022 03 06	05:59	Close encounter between Venus and Mars (topocentric dist. center to center = 4.5°)
7	2022 03 10	05:45	FIRST QUARTER OF THE MOON
8	2022 03 10	18:05	Moon at apogee (geocentric dist. = 404268 km)
9	2022 03 13	06:45	CONJUNCTION between Neptune and the Sun (geoc. dist. center to center = 1.1°)
10	2022 03 16	00:58	Close encounter between the Moon and Regulus (topocentric dist. center to center = 3.7°)
11	2022 03 18	02:18	FULL MOON
12	2022 03 20	10:33	SPRING EQUINOX
13	2022 03 20	18:00	GREATEST WESTERN ELONGATION of Venus (46.6°)
14	2022 03 23	18:28	Moon at perigee (geocentric dist. = 369760 km)
15	2022 03 25	00:37	LAST QUARTER OF THE MOON
16	2022 03 28	17:59	Close encounter between Venus and Saturn (topocentric dist. center to center = 2.1°)

PERTON LIBRARY ASTRONOMY GROUP (PLAG)

The group meets on the third Thursday of every month of the year at Perton Library (WV6 7QU), from 7pm to 9pm. As we come out of lockdown, when numbers in the room had been limited, we are trying to re-launch the group. A very relaxed and friendly gathering, 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 try to do some observing from an area at the rear of the building.
Just turn up, no need to book and membership is free.

WOLVERHAMPTON ASTRONOMICAL SOCIETY LECTURES

Whilst we are now planning and hoping that we can recommence in person meetings and lectures from September, we are continuing with our programme of online lectures and will supplement these with "in person" meetings for astronomical events, so keep an eye on our social media for announcements. We also have regular Monday evening chat nights on Zoom throughout the year, the first 30 minutes for beginners to ask questions, in these sessions we give basic astronomy advice and swap tips, sometimes with a short talk.

Invitations to all talks are emailed to members. For the coming year Wolvas subscription remains a bargain at £10 per annum and you can sign up now our website www.wolvas.org.uk and pay your subscription by bank transfer or other means (see website).

Lectures online will only be available to paid-up members of Wolverhampton Astronomical Society. We continue to try and bring you some of the best speakers around and we have an exciting line up for the coming season. Our programme of speakers for the remainder of the 2021/22 season is shown below and plans are well under way for the next season. We are looking for a suitable venue for "in person" meetings for our 2022/23 lecture programme starting in September, and we are may combine this with a hybrid streamed service – watch this space and our website.

Lectures for the 2021/22 season:

21/02/22	Mike Frost	Against the Odds: A Patagonian Eclipse
07/03/22	Prof Fran Bagenal	NASA's mission to Juno – Extended! Annual free public Paul Pope Lecture, from the University of Colorado
21/03/22	Pete Williamson	The Moons of our Solar System
11/04/22	Paul Fellows	Fire & Ice: The Volcanic Worlds of the Solar System
16/05/22	Damian Hardwick	The Life of Albert Einstein
13/06/22	Katrin Raynor-Evans	Exploring Astronomy & Space through Philately

Watch out for updates

As well as our webpage www.wolvas.org.uk we will be posting details of events on social media, so keep an eye on our Facebook (https://www.facebook.com/wolvasuk) and Twitter (https://twitter.com/wolvasuk) accounts for the latest updates and news.