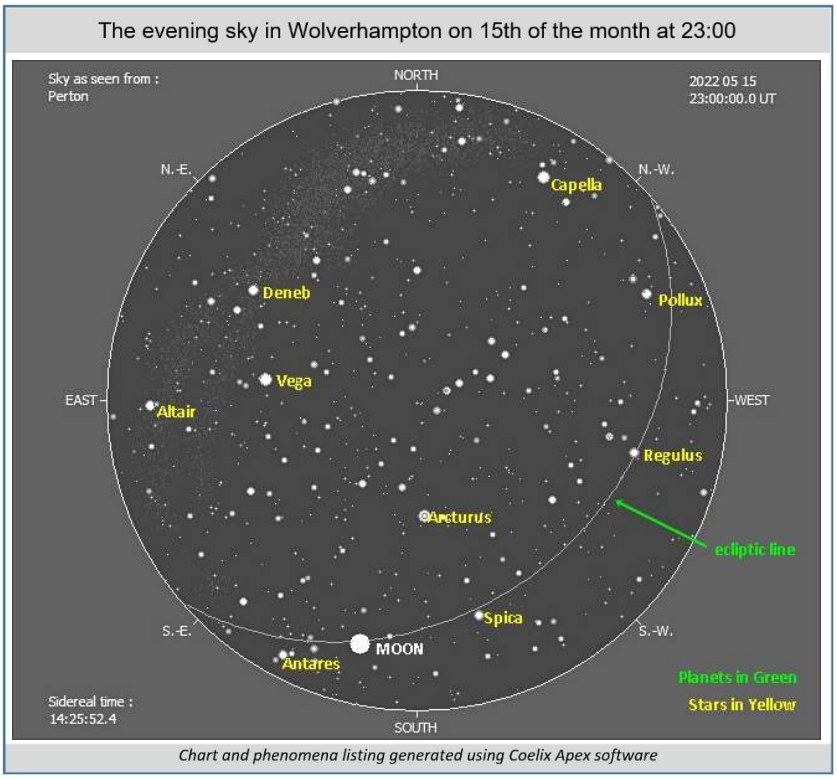
The Night Sky in May 2022
- a quick and easy guide



PERTON LIBRARY ASTRONOMY GROUP

Monthly Guide Compiled by Doug Bickley

MOON PHASES	
First quarter	9 May
Full Moon	16 May
Third (last) quarter	22 May
New Moon	30 May

Space Diary

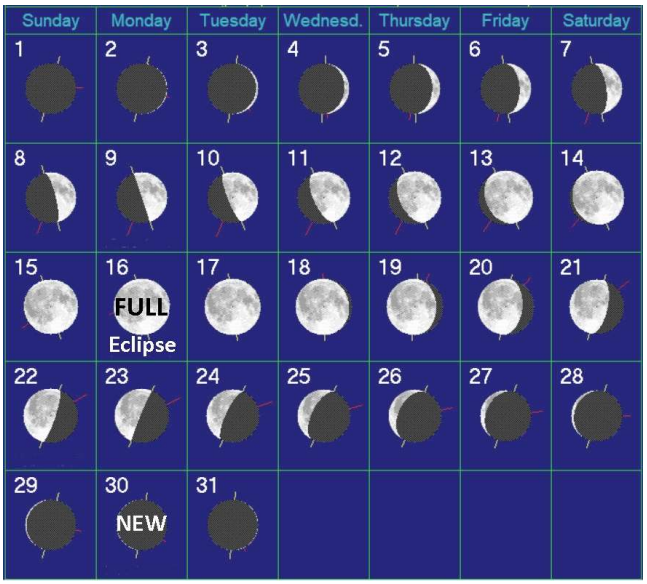
Events this month to look out for:

1 Venus close to Jupiter (morning twilight)
1 Mercury left of Pleiades M45 (evening twilight)
2 Slim Crescent Moon next to Mercury, left of Pleiades M45 (evening twilight)
6 Eta Aquariid meteor shower peak (favourable, morning)
6 Moon above Beehive cluster M44 (evening)
11 Neptune between Jupiter and Mars (morning twilight)
16 Full Moon
16 Total Lunar Eclipse
18 Mars and Neptune in conjunction right of Jupiter (morning twilight)
22 Moon below Saturn (morning twilight)
25 Moon, Jupiter and Mars close (morning twilight)
27 Crescent Moon close to Venus (morning twilight)
29 Jupiter and Mars in conjunction (morning twilight)

Moon

New moon is on 30 May and the Full moon is on the 16 May, this one is commonly called the Flower Moon because of the abundant blooming that occurs as spring gets going properly. Other names include the hare moon, the corn planting moon, and the milk moon.

As I've said before many of these names have come to us from the 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.

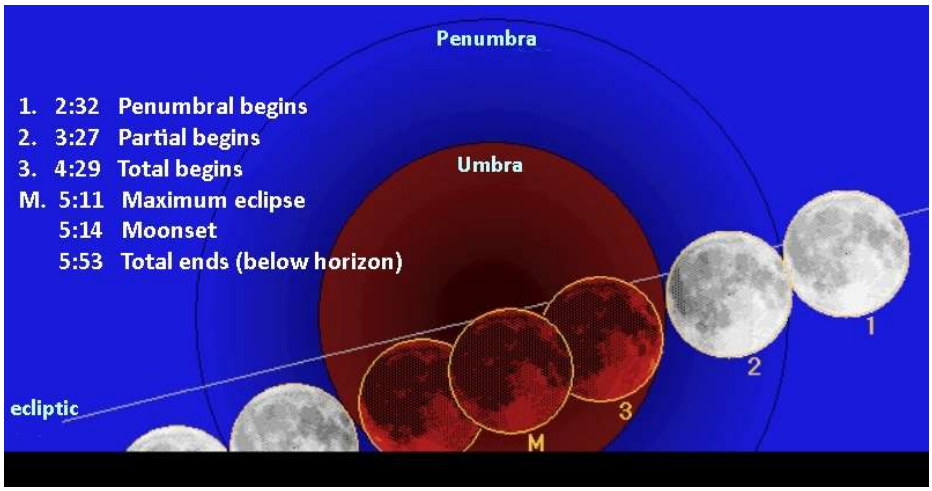


Lunar eclipse

Something different this month, there will be a total lunar eclipse visible from the UK on the morning of 16 May

The Moon will pass through the Earth's shadow creating a total lunar eclipse.

From the UK the Moon will set partway through the eclipse, and also low above the horizon when the eclipse starts.



Again for early risers, the eclipse will begin at 02:32, when the Moon first enters a region of the Earth's shadow called the penumbra. In this outer part of the Earth's shadow, an observer on the Moon would see the Earth partially obscuring the Sun's disk, but not completely covering it. As a result the Moon's brightness will begin to dim, as it is less strongly illuminated by the Sun, but it remains illuminated. At 03:27, the edge of the Moon's disk will enter the Earth's umbra. This is the region of space in which an observer on the Moon's surface would see the Earth completely obscuring the whole of the Sun's disk. As the fraction of the Moon's face creeps into the Earth's umbra, we see our planet's circular shadow sweep across the face of the Moon. Eventually the Moon will pass entirely within the Earth's umbra at 04:29, and totality will begin.

When the Moon's disk lies entirely in shadow, it often takes on a spectacular red-brown colour, as some of the Sun's red light is bent around the edge of the Earth's globe by its atmosphere, as shown in this picture taken at the last total lunar eclipse in 2019.

Eclipses of the Moon are easy to watch with the unaided eye. A modest pair of binoculars will give a superb view of the Moon's surface, but are not required. Unlike solar eclipses, lunar eclipses are entirely safe to look at without the need to look through any kind of filter.

Planets this month

Here is the usual run down of planetary movements for the month of May. The planets remain morning objects at this time of year and if you like planetary observing you need to wait until later in the year.

Jupiter is still in the East in Pisces low down in the morning sky. On 1 May shining at mag.-2.0 it will be close to mag.-4.0 Venus if you have a low Eastern horizon. Jupiter is joined later in the month by mag.+0.7 Mars

Saturn is still in the SE in Capricornus, at a fairly low altitude of 16°. At the start of the month it shines at mag+0.9 and remains at about this level through the month. It will be difficult to see the ring structure very well. At mid-month the rings will reach their minimum apparent tilt for the year, the north pole being the one tilted towards Earth. Views of Saturn from the UK have not been good recently because of the planet's low altitude but this will improve slightly later this year.

Mars is low in the East in Pisces at mag.+0.9, brightening to mag+0.7 by month end. It has a close encounter with mag.-2.1 Jupiter on 28, 29 and 30 May.

Venus is still in the E in Pisces, remaining very low all month, shining at mag.-4.0 at the start of the month and rising 1 hour before the Sun. At this time, it will appear close to the dimmer but still bright mag.-2.0 Jupiter. On the morning of 27 May look out for a 10%-lit waning crescent Moon only 1° SE of Venus. You will need a low eastern horizon to spot this pairing.

Mercury is fairly low at an altitude of 12° still in the WNW in Taurus. Following last month's appearance from superior conjunction, Mercury remains well placed at the start of May and on the evening of 1 May, shining at mag.+0.7 it will be close to the Pleiades cluster. During the month the planet dims, reaching mag.+0.7 by mid-month. Inferior conjunction (the planet is between the Earth and the Sun) occurs on 21 May and it will be a poorly positioned morning object after this date.

Uranus and Neptune are not visible this month.

Meteor Showers

I hope that you had a go at observing the Lyrids meteor shower.

I went out on a couple of evenings and saw quite a few, and the picture here was taken with my Canon D800 on a tripod on 22 April at around 22:30 with a nice one approaching the Pleiades cluster.

It's pure luck of course particularly with photographs whether you are successful in seeing any, but don't give up.

Eta Aquariids

There is another chance to try to see some meteors early in May.

This is the Eta Aquariid meteor shower which peaks on 6 May, a moderately active shower associated with the Comet Halley but it will be for early risers, peaking between midnight and dawn on 6 May. Unfortunately it will appear quite low in the sky in the early predawn hours, but have a look in the eastern sky, even when the radiant is below the horizon.

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

There are lots of passes this month but table below filters out just the evening passes, as always keep an eye on the Heavens-Above website.
[source: https://www.heavens-above.com/]

Or you can download one of the apps onto your smartphbone:

Android:
ISS Detector Satellite Tracker 

IOS:
ISS Spotter 

Date	Mag	Transit time	Start Time	Start Alt.degs.	Start Az.	High point	End Time	End Alt.degs.	End Az.
13-May	-2.1	02:00	22:11	10°	S	15°	22:13	15°	SE
13-May	-1.5	06:28	23:45	10°	SW	13°	23:52	10°	E
14-May	-3.3	06:13	22:57	10°	SW	36°	23:03	10°	E
15-May	-2.8	05:45	22:08	10°	SSW	27°	22:14	10°	E
15-May	-3.9	06:40	23:44	10°	WSW	68°	23:51	10°	E
16-May	-3.8	06:36	22:56	10°	WSW	57°	23:02	10°	E
17-May	-3.5	06:26	22:07	10°	SW	45°	22:13	10°	E
17-May	-3.9	06:05	23:43	10°	W	77°	23:49	15°	E
18-May	-3.9	06:42	22:54	10°	WSW	74°	23:01	10°	E
19-May	-3.8	06:39	22:06	10°	WSW	66°	22:12	10°	E
19-May	-3.9	05:09	23:42	10°	W	70°	23:47	24°	ESE
20-May	-3.9	06:40	22:53	10°	W	76°	23:00	10°	E
21-May	-3.8	06:42	22:05	10°	W	77°	22:11	10°	E
21-May	-3.6	04:21	23:41	10°	W	51°	23:46	34°	SE
22-May	-3.8	05:54	22:52	10°	W	63°	22:58	15°	ESE
23-May	-3.8	06:41	22:03	10°	W	72°	22:10	10°	ESE
23-May	-2.9	03:33	23:40	10°	W	31°	23:44	29°	S
24-May	-3.2	05:14	22:51	10°	W	41°	22:56	19°	SE
25-May	-3.5	06:33	22:02	10°	W	53°	22:09	10°	ESE
25-May	-2.0	02:34	23:39	10°	W	18°	23:42	17°	SSW
26-May	-2.4	04:31	22:50	10°	W	24°	22:55	16°	SSE
27-May	-2.8	06:07	22:01	10°	W	33°	22:07	10°	SE
28-May	-1.4	03:20	22:50	10°	WSW	13°	22:53	10°	S

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

	Date	Hour	Description of the phenomenon
	yyyy mm dd	hh:mm	
1	2022 05 05	07:22	CONJUNCTION between Uranus and the Sun (geoc. dist. center to center = 0.4°)
2	2022 05 05	12:46	Moon at apogee (geocentric dist. = 405285 km)
3	2022 05 06	07:59	Meteor shower : Eta Aquarids (50 meteors/hour at zenith; duration = 38.0 days)
4	2022 05 06	23:14	Close encounter between the Moon and Pollux (topocentric dist. center to center = 2.8°)
5	2022 05 09	00:21	FIRST QUARTER OF THE MOON
6	2022 05 09	23:59	Close encounter between the Moon and Regulus (topocentric dist. center to center = 4.0°)
7	2022 05 10	00:00	Meteor shower : Eta Lyrids (3 meteors/hour at zenith; duration = 11.0 days)
8	2022 05 14	01:46	Close encounter between the Moon and Spica (topocentric dist. center to center = 3.6°)
9	2022 05 15	10:00	Venus at its aphelion (distance to the Sun = 0.72821 AU)
10	2022 05 16	04:14	FULL MOON (total eclipse of the Moon partly visible in Perton)
11	2022 05 17	15:23	Moon at perigee (geocentric dist. = 360298 km)
12	2022 05 18	06:29	Close encounter between Mars and Neptune (topocentric dist. center to center = 0.5°)
13	2022 05 21	19:18	INFERIOR CONJUNCTION of Mercury with the Sun (geoc. dist. center to center = 1.2°)
14	2022 05 22	18:43	LAST QUARTER OF THE MOON
15	2022 05 27	02:43	Close encounter between the Moon and Venus (topocentric dist. center to center = 1.1°)
16	2022 05 27	22:00	Mercury at its aphelion (distance to the Sun = 0.46670 AU)
17	2022 05 29	10:32	Close encounter between Mars and Jupiter (topocentric dist. center to center = 0.6°)
18	2022 05 30	11:30	NEW MOON

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. No subscription, no need to book, all free, just drop in at any time during the evening.

As we come out of lockdown, we want to re-launch the group as it was, 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 LECTURES

After a very successful season of online lectures we are now planning for the 2022/23 season and have already booked speakers. Talks will now be in person probably also streamed to our YouTube channel, and we may combine this with a hybrid streamed service. Links to anything online will only be available to paid-up members.

The host location for our new live talks will be the University of Wolverhampton in the city centre. Access and facilities are excellent and car parking adjacent. We will send full details later.

Live lectures will be supplemented by the occasional online lecture, please keep an eye on our social media pages and the website for announcements. We will maintain Monday evening chat nights on Zoom, with again 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).

Remaining Lectures for the 2021/22 season:

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

Lectures in person or 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, plans are well under way.

Here is a taster for the next programme of speakers:

Lectures for the 2022/23 season:

12/09/22	Andrew Gascoyne	Solar Physics - The Coronal Heating Problem.....Solved?
26/09/22	Steve Wootton	'David Harris' Lecture - Planning an Observation Night
10/10/22	Phil Barnard	(post AGM) The Linscott Telescope
24/10/22	Gary Poyner	An Introduction to Variable Star Observing
07/11/22	Prof.Don Pollacco	The PLATO Mission - The Habitable Zone Explorer
21/11/22	Dr Jonathan Smoker	*TBA*
05/12/22	Mary McIntyre FRAS	A History of Women in Astronomy
17/04/23	Martin Lunn	Astronomy in the Mediterranean

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.