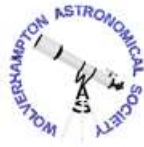


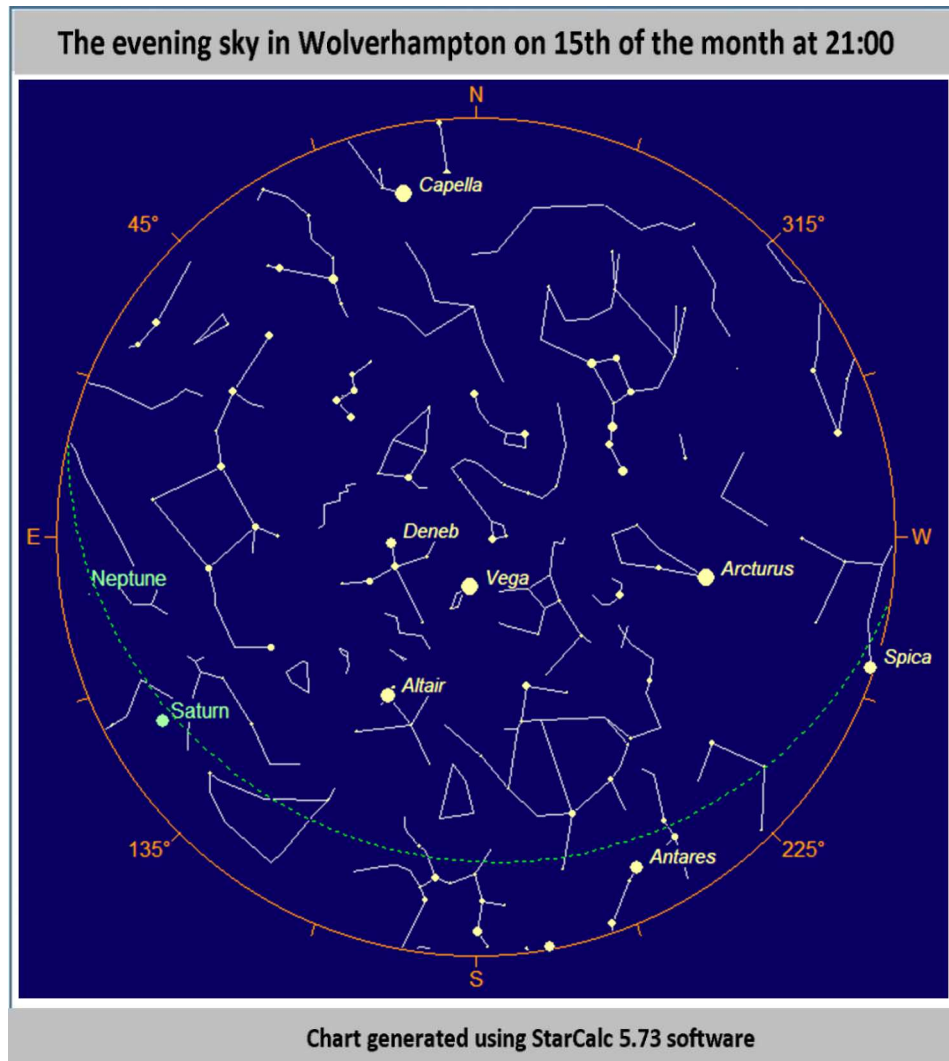
The Night Sky in August 2023



Monthly guide compiled by Doug Bickley

PERTON LIBRARY
ASTRONOMY
GROUP

YOUR
LOCAL
Staffordshire
County Council

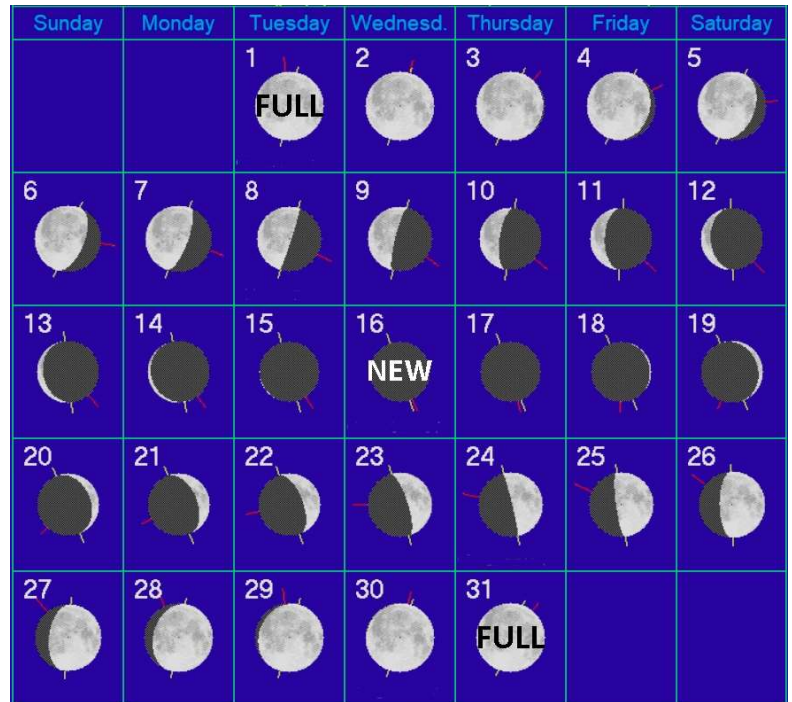


Diary of events to look out for this month:

- 1 Full Moon
- 2 Saturn right of Moon (around midnight)
- 8-10 Pleiades, Jupiter, Uranus and Moon close (after midnight)
- 10 Mercury at greatest eastern elongation (evening twilight)
- 13 Perseid meteor shower peak (morning, favourable)
- 16 New Moon
- 17 Periton Astronomy Group meeting 7pm
- 18 Mars left of crescent Moon (evening twilight)
- 21 Crescent Moon left of Spica (evening twilight)
- 27 Saturn at opposition
- 31 Full Moon

THE MOON

Phases	
Full Moon	1 August
Third (last) quarter	8 August
New Moon	16 August
First quarter	24 August
Full Moon	31 August



[Graphic generated by Coelix Apex software]

New Moon is on 16 August, and this month there will be two Full Super Moons, 1 August and 31 August.

The first will be on 1 August 1 at 18:31 UTC and it will be followed by a Super Blue Moon on August 31. This is a “monthly” Blue Full Moon which means the second one in the month, and no, it will not turn blue. For a monthly Blue Moon to take place, a Full Moon must occur right at the beginning of the month. This is because the time between two successive Full Moons is approximately 29.5 days, just short of most months (so February can never have a Blue Moon).

This month’s Full Moon is sometimes called the Sturgeon Moon and the second of course the Blue Sturgeon Moon. North American fishing tribes called August's full moon the sturgeon moon since the species appeared in great numbers during this month. Other names include the green corn moon, the grain moon, and the red moon for the reddish hue it often takes on in the summer haze.



THE SUN

Chart of sunrise and sunset times in Wolverhampton:

Date		Sun			Day length Lenth	Astronomical Twilight		Nautical Twilight		Civil Twilight	
		Sunrise	Sunset	Solar Noon		Start	End	Start	End	Start	End
Aug-01	Tue	5:27 AM	9:01 PM	1:14 PM	15:34:07	2:20 AM	12:09 AM	3:48 AM	10:41 PM	4:45 AM	9:43 PM
Aug-08	Tue	5:39 AM	8:49 PM	1:14 PM	15:10:14	2:53 AM	11:34 PM	4:05 AM	10:23 PM	4:58 AM	9:29 PM
Aug-15	Tue	5:50 AM	8:35 PM	1:13 PM	14:44:47	3:19 AM	11:06 PM	4:21 AM	10:04 PM	5:11 AM	9:14 PM
Aug-22	Tue	6:02 AM	8:20 PM	1:11 PM	14:18:15	3:42 AM	10:40 PM	4:37 AM	9:45 PM	5:25 AM	8:57 PM
Aug-29	Tue	6:14 AM	8:04 PM	1:09 PM	13:50:56	4:01 AM	10:17 PM	4:52 AM	9:26 PM	5:37 AM	8:41 PM
Aug-31	Thu	6:17 AM	8:00 PM	1:08 PM	13:43:02	4:07 AM	10:10 PM	4:56 AM	9:20 PM	5:41 AM	8:36 PM

This month I have included astronomical twilight as the days are getting shorter.

PLANETS THIS MONTH

Here is the usual run down of planetary movements for the month of August. Again not a great month for planetary viewing particularly taking into account the lack of proper darkness at this time of year. However Saturn will be worth a watch (it always is!) if you have a reasonable view to the south.

Mercury is in the W in Leo at a maximum altitude of 2° . Still an evening planet poorly placed for observation, it reaches greatest eastern elongation on 9 August shining at mag. +0.4 and setting 40 minutes after sunset. Its position will only get worse as the month progresses.

Venus is in the E in Cancer at a maximum altitude of only 8° and still an evening planet during early August. It reaches inferior conjunction on 13 August when it lines up with the Sun, passing 8° south of the Sun's centre so is visible during the day with the correct equipment – please don't try unless you know what you are doing. At month end the planet re-emerges into the morning sky and should become visible again.

Mars is still in the W in Leo, very difficult to see at a maximum altitude of only 2° above the western horizon, shining at only mag. +1.8. A thin 5%-lit crescent Moon sits just to the right on 18 August and both will be difficult to see unless you have a very low horizon.

Jupiter is still in Aires in the S, a morning planet shining at mag. -2.1 at a maximum altitude of 51° after being a little lower at the start of the month. The last quarter Moon appears nearby on the morning of 8 August.

Saturn is still in Aquarius in the S with a maximum altitude of 25° shining at mag +0.3 at opposition on 27 August, so this month viewing is excellent given clear skies. The planet's ring will appear quite thin but will be visible all night long. On 2 and 3 August an almost full Moon sits close by, and on the evening of 31 when the Blue Moon occurs this will also appear close by.

Uranus is in the SE in Aries reaching a maximum altitude of almost 50° by month end, and shining at mag +5.7. At the start of the month it appears close to mag. -2.2 Jupiter with a 44%-lit crescent Moon close by at midnight. Jupiter and Uranus will be close all month.

Neptune is the S in Pisces at a maximum altitude of 35° shining at only mag +7.8 from mid-month.

METEOR SHOWERS

One of the best celestial events of the year (given clear skies of course) is the annual Perseid shower, which will be active from 17 July to 24 August, producing its peak rate of meteors around 13 August. The shower will peak close to the 16 August New Moon, and so moonlight will present minimal interference for a change.

The shower is expected to reach peak activity at around 09:00 BST on 13 August 2023, and so the best displays might be seen before dawn on 13 August, but it is well worth looking a day or so before or after this. At its peak, the shower is expected to produce a nominal rate of around 150 meteors per hour (ZHR). Of course this zenithal hourly rate is calculated assuming a perfectly dark sky and that the radiant of the shower is situated directly overhead, and in reality you will see a lower number of meteors.

The shower's radiant point in the constellation Perseus is above the horizon and from Wolverhampton is circumpolar, which means it is always above the horizon and the shower will be active throughout the night.

The parent body responsible for creating the Perseid shower is comet 109P/Swift-Tuttle.

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

I have included all visible from Wolverhampton passes forecast this month. None until later in the month and then early in the morning only, but all listed included here for the insomniacs amongst us. As always check the Heavens-Above website also if you want to see the latest forecasts.

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

Date	Mag	Transit time	Start			High point	End		
			Time	Alt.degs.	Az.		Time	Alt.degs.	Az.
25-Aug	-1.7	04:58	05:05	10°	SSW	19°	05:10	10°	E
26-Aug	-1.4	02:55	04:18	12°	SSE	14°	04:21	10°	ESE
27-Aug	-2.7	05:36	05:04	13°	SW	34°	05:09	10°	E
28-Aug	-2.3	03:33	04:16	23°	S	25°	04:20	10°	E
29-Aug	-1.4	01:20	03:29	16°	ESE	16°	03:31	10°	E
29-Aug	-3.4	05:39	05:02	17°	WSW	54°	05:08	10°	E
30-Aug	-3.2	03:43	04:15	38°	S	42°	04:19	10°	E
31-Aug	-1.9	01:45	03:28	23°	ESE	23°	03:29	10°	E
31-Aug	-3.8	05:41	05:00	18°	WSW	72°	05:06	10°	E

A good quick way to check passes is to use one of these excellent apps:



Android:
ISS Detector Satellite Tracker



IOS:
ISS Spotter

PHENOMENA OF THE MONTH

(Table generated using Coelix Apex software):

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

	Date	Hour	Description of the phenomenon
	yyyy mm dd	hh:mm	
1	2023 08 01	13:31	FULL MOON
2	2023 08 02	00:52	Moon at perigee (geocentric dist. = 357311 km)
3	2023 08 04	17:59	Close encounter between the Moon and Neptune (topocentric dist. center to center = 2.3°)
4	2023 08 08	05:28	LAST QUARTER OF THE MOON
5	2023 08 08	17:54	Close encounter between the Moon and Uranus (topocentric dist. center to center = 1.5°)
6	2023 08 10	05:41	Opposition of the asteroid 10 Hygiea with the Sun (dist. to the Sun = 3.053 AU; magn. = 9.7)
7	2023 08 11	20:34	Close encounter between the Moon and M 35 (topocentric dist. center to center = 2.9°)
8	2023 08 12	13:14	Meteor shower : Perseids (100 meteors/hour at zenith; duration = 38.0 days)
9	2023 08 13	06:16	INFERIOR CONJUNCTION of Venus with the Sun (geoc. dist. center to center = 7.7°)
10	2023 08 16	04:38	NEW MOON
11	2023 08 16	06:55	Moon at apogee (geocentric dist. = 406635 km)
12	2023 08 17	18:06	Meteor shower : Kappa Cygnids (3 meteors/hour at zenith; duration = 22.0 days)
13	2023 08 20	20:59	Comet 322P SOHO at its perihelion (dist. to the Sun = 0.050 AU; magn. = 6.0)
14	2023 08 24	04:57	FIRST QUARTER OF THE MOON
15	2023 08 27	02:11	Opposition of the asteroid 8 Flora with the Sun (dist. to the Sun = 2.005 AU; magn. = 8.4)
16	2023 08 27	03:28	OPPOSITION of Saturn with the Sun
17	2023 08 30	10:51	Moon at perigee (geocentric dist. = 357181 km)
18	2023 08 30	20:35	FULL MOON

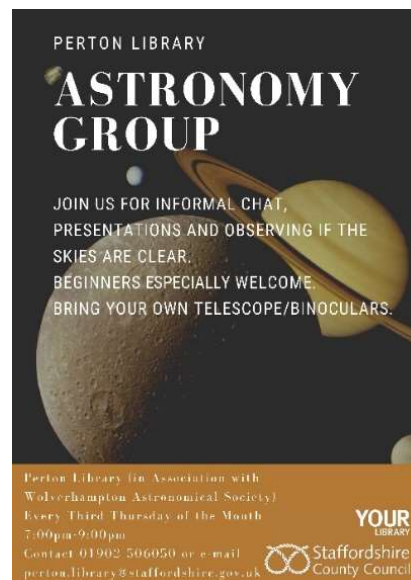
PERTON LIBRARY ASTRONOMY GROUP

The group meets on the third Thursday of every month of the year at Periton Library (WV6 7QU or on what3words the entrance is ///saints.empty.stands), from 7pm to 9pm. No subscription, no need to book, all free, just drop in at any time during the evening.

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 LECTURES

The 2022/23 lecture season has come to an end but speaker bookings for next year's 2023/24 program is already well planned and here is a taster:

Date	Speaker	Title of Talk
11/09/23	President.	'David Harris' Lecture
25/09/23	Keaton Stone	Adventures in Space and Telly
09/10/23	AGM	Phil Barnard – Science Fact or Science Fiction
23/10/23	Richard Goodrich	Comet Madness
06/11/23	TBC	
20/11/23	Martin Griffiths	To be decided by Council
04/12/23	Gary Palmer	Astro Imaging
08/01/24	Steve Barrett	End Of Everything
22/01/23	Mark McIntyre	Meteors
05/02/24	Paul Money	To be decided by Council
19/02/24	Dr Megan Arr	
04/03/24	Paul Pope Lecture	TBC
18/03/24	Steve Tonkin	Right Light At Night
15/04/24	Damian Hardwick	Sir Bernard Lovell & His Telescope
13/05/24	John Thatcher	JWST
10/06/24	Members Evening	Members talks or discussion tables



The host location for our new 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.

The 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 preferably by bank transfer (see website).

Lectures in person or online will only be available to paid-up members of Wolverhampton Astronomical Society.

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>) pages for the latest updates and news.