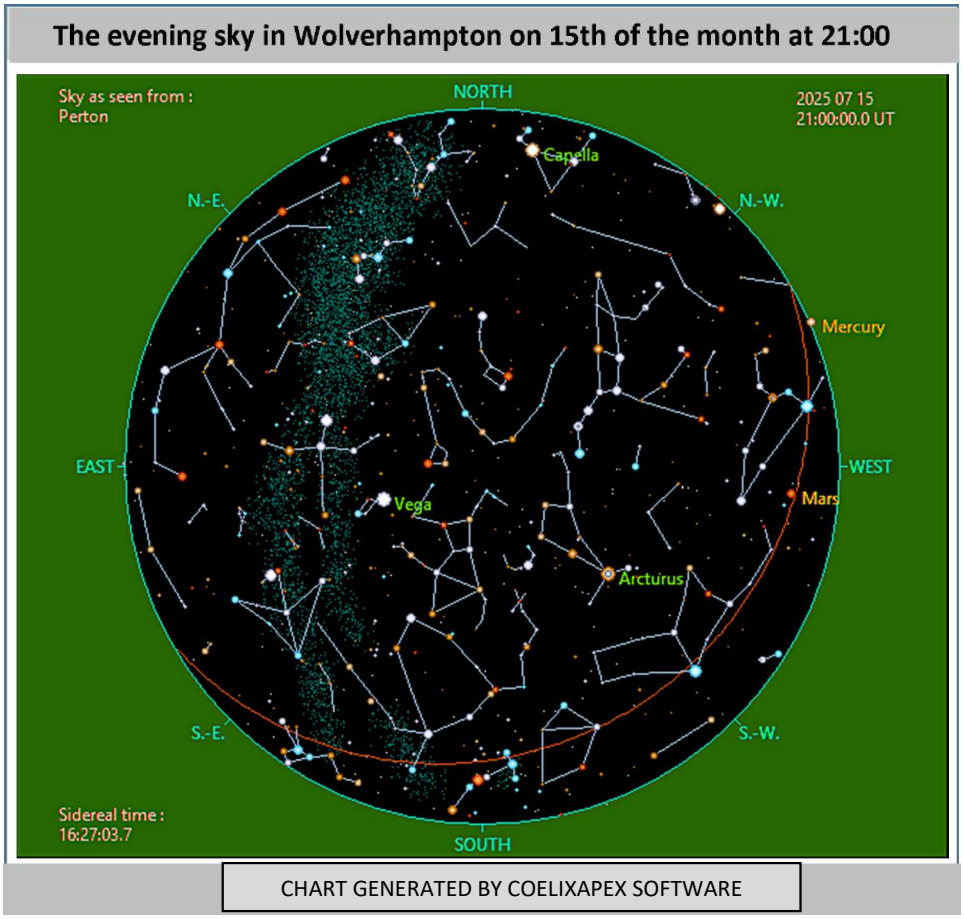
The Night Sky in July 2025

Monthly Guide
compiled by Doug Bickley

PERTON LIBRARY ASTRONOMY GROUP



Events to look out for this month:

4	Venus, Uranus and the Pleiades in a line (morning twilight)
4	Mercury at greatest elongation (evening twilight)
7	Venus above Aldebaran (morning twilight)
10	Full Moon
17	Perton Library Astronomy Group meeting 7pm
16	Moon right of Neptune and Saturn (evening twilight)
20	Moon forms triangle with Pleiades and Uranus (morning twilight)
21	Moon close to Pleiades, Aldebaran and Venus (morning twilight)
24	New Moon
23	Moon above left of Jupiter (morning twilight)
25	Pluto at opposition, visible all night
26	Crescent Moon next to Regulus (evening twilight)
28	Crescent Moon below left of Mars (evening twilight)
31	Southern Delta Aquarid meteor shower peak (unfavourable)

THE MOON

Lunar Phases this month

Full Moon is on 10 July.

New Moon is on 24 July.

July's Full Moon is often called the Buck Moon.

The most commonly used Full Moon names you will hear are English interpretations of Native American names. However there are also Celtic, Anglo-Saxon, medieval English, and Neo-Pagan names and I try to give you these as well.

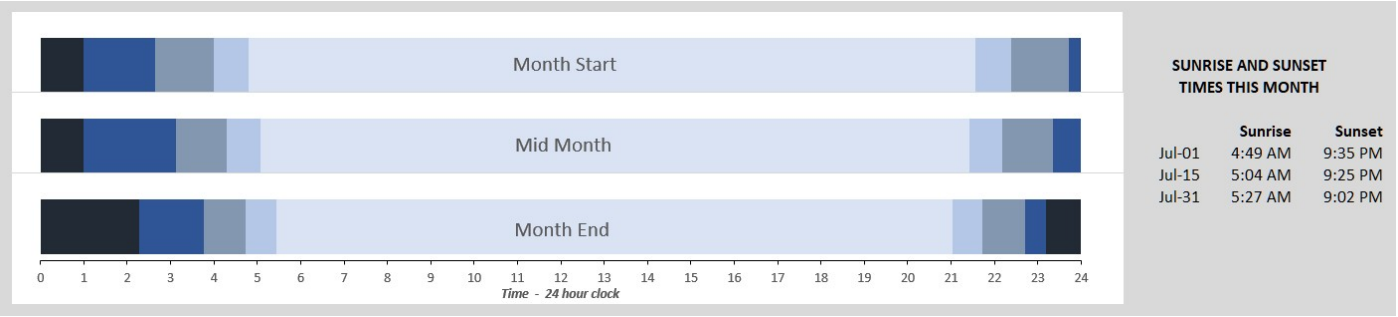
Male deer, which shed their antlers every year, begin to regrow them in July, hence the Native American name for July's full moon.

It was also often called the Full Thunder Moon, thunderstorms being now most frequent, and sometimes it is called the Full Hay Moon. Other Native American tribes call it Salmon Moon, Raspberry Moon, and Thunder Moon. In Celtic, this Moon was known as the Claiming Moon, Wyrt Moon, Herb Moon, and Mead Moon. The Anglo-Saxons called it the Hay Moon.

You'll find some information about this on the Royal Museum Greenwich website: *https://www.rmg.co.uk/stories/topics/what-are-names-full-moons-throughout-year*

THE SUN

Graphical format showing sun rising, setting and twilight linked to an online data source (time-ok.com) to show twilight zones more clearly. Location is set at Wolverhampton UK.



SUNRISE AND SUNSET TIMES THIS MONTH

	Sunrise	Sunset
Jul-01	4:49 AM	9:35 PM
Jul-15	5:04 AM	9:25 PM
Jul-31	5:27 AM	9:02 PM

Key:

Night	Twilight			Day
	Astronomical	Nautical	Civil	

For most of the month we won't see dark skies at all but as you can see they will start to reappear after month end.

PLANETS THIS MONTH

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

	Planetrise/Planetset, Tue, 15 Jul 2025			
Planet	Rise	Set	Meridian	Comment
Mercury	Tue 08:01	Tue 22:27	Tue 15:15	Very difficult to see
Venus	Tue 03:00	Tue 18:40	Tue 10:49	Good visibility
Mars	Tue 10:45	Tue 23:51	Tue 17:18	Average visibility
Jupiter	Tue 04:33	Tue 20:53	Tue 12:43	Slightly difficult to see
Saturn	Wed 00:20	Wed 12:12	Wed 06:16	Great visibility
Uranus	Tue 02:12	Tue 17:51	Tue 10:01	Difficult to see
Neptune	Wed 00:14	Wed 12:16	Wed 06:15	Difficult to see

Data from timeanddate.com

After a relatively poor period for observation being close to the Sun in both the evening and morning skies some planets are beginning to move into a better position.

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

Mercury is in Cancer in the WNW at a maximum altitude 4°, shining at mag +0.6 still an evening planet but tricky to spot because of its low altitude.

Venus is in the ENE in Gemini at a maximum altitude of 15°, a morning planet (often called the Morning Star) shining brightly at mag -4.0 and dimming slightly as the month progresses. On 4 July, Venus and Uranus are in conjunction close to the Pleiades M45 but Uranus will be difficult to see against the brightness of Venus. On 21 July a 9%-lit waning crescent Moon appears above Venus.

Mars is in Leo in the ESE at a low altitude, shining at mag +1.6 and poorly placed for observations. On 29 July it will be close to a 17%-lit waxing crescent Moon but a difficult target.

Jupiter is in Gemini in the ENE shining at mag. -1.7 but is just past solar conjunction and will be rising with and too close to the Sun to be seen easily this month.

Saturn is still in the SE in Pisces at an increased maximum altitude of 31° by month end but slightly tricky to see in the morning twilight. At that stage it will be shining at mag +0.5. On the morning of 16 July a 71%-lit waning gibbous Moon will be close to Saturn and also Neptune which is in the same general area of the sky. Saturn's rings will remain close to edge-on throughout the year – they are tipped open 27 degrees versus its orbit and from our viewpoint alternate from wide open, to edge on once every 14-15 years. They will open towards their widest once again in 2032.
The only upside is that the largest moon Titan will be more visible.

Uranus is in the NW in Taurus, a morning planet shining at mag. +5.8 and close to the Pleiades M45.

Neptune is in the SE in Pisces at a maximum altitude of 30°, shining at mag. +7.9 but will be difficult to see close to Saturn in the bright morning twilight.

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	2025 07 02	19:30	FIRST QUARTER OF THE MOON
2	2025 07 03	05:46	Close encounter between Mercury and M 44 (topocentric dist. center to center = 1.4°)
3	2025 07 03	12:33	Opposition of the asteroid 230 Athamantis with the Sun (dist. to the Sun = 2.390 AU; magn. = 10.5)
4	2025 07 03	20:00	The Earth at its aphelion (distance to the Sun = 1.01664 AU)
5	2025 07 03	21:22	Close encounter between the Moon and Spica (topocentric dist. center to center = 1.6°)
6	2025 07 04	06:00	GREATEST EASTERN ELONGATION of Mercury (25.9°)
7	2025 07 04	13:46	Close encounter between Venus and Uranus (topocentric dist. center to center = 2.4°)
8	2025 07 05	02:28	Moon at apogee (geocentric dist. = 404627 km)
9	2025 07 10	20:37	FULL MOON
10	2025 07 11	22:28	Close encounter between the Moon and Pluto (topocentric dist. center to center = 0.9°)
11	2025 07 13	17:46	Close encounter between Venus and Aldebaran (topocentric dist. center to center = 3.2°)
12	2025 07 14	13:00	Mercury at its aphelion (distance to the Sun = 0.46671 AU)
13	2025 07 18	00:38	LAST QUARTER OF THE MOON
14	2025 07 20	13:52	Moon at perigee (geocentric dist. = 368041 km)
15	2025 07 23	03:18	Close encounter between the Moon and Jupiter (topocentric dist. center to center = 4.2°)
16	2025 07 24	19:11	NEW MOON
17	2025 07 25	06:30	OPPOSITION of Pluto with the Sun
18	2025 07 30	22:08	Meteor shower : S. Delta Aquarids (25 meteors/hour at zenith; duration = 43.0 days)
19	2025 07 30	22:08	Meteor shower : Alpha Capricornids (5 meteors/hour at zenith; duration = 43.0 days)
20	2025 07 31	23:41	INFERIOR CONJUNCTION of Mercury with the Sun (geoc. dist. center to center = 4.9°)

International Space Station (ISS)

Forecast time for all visible passes this month

Date	Mag	Transit time	Start			High point	End		
			Time	Alt.degs.	Az.		Time	Alt.degs.	Az.
06-Jul	-2.6	05:28	23:22	10°	SSW	23°	23:27	10°	E
07-Jul	-2.2	04:26	22:33	10°	S	17°	22:38	10°	ESE
08-Jul	-3.4	06:20	23:20	10°	SW	40°	23:26	10°	E
09-Jul	-2.9	05:56	22:31	10°	SW	30°	22:37	10°	E
10-Jul	-3.8	06:38	23:18	10°	WSW	61°	23:25	10°	E
11-Jul	-3.6	06:30	22:29	10°	WSW	49°	22:36	10°	E
12-Jul	-3.9	06:42	23:16	10°	W	76°	23:23	10°	E
13-Jul	-3.8	06:40	22:27	10°	WSW	69°	22:34	10°	E
14-Jul	-3.9	06:42	23:15	10°	W	75°	23:22	10°	E
15-Jul	-3.8	06:42	22:26	10°	W	77°	22:32	10°	E
16-Jul	-3.7	05:49	23:13	10°	W	59°	23:19	16°	ESE
17-Jul	-3.8	06:39	22:24	10°	W	70°	22:31	10°	ESE
18-Jul	-3.1	04:51	23:12	10°	W	39°	23:16	22°	SSE
19-Jul	-3.4	06:25	22:22	10°	W	50°	22:29	11°	ESE
20-Jul	-2.3	03:54	23:10	10°	W	23°	23:14	19°	S
21-Jul	-2.7	05:41	22:21	10°	W	31°	22:26	12°	SE
22-Jul	-1.4	02:26	23:09	10°	WSW	12°	23:12	11°	SSW
23-Jul	-1.8	04:39	22:19	10°	W	18°	22:24	10°	S

You can also install these apps to check for passes

Android:
ISS Detector
Satellite Tracker

IOS:
ISS Spotter

Evening visible passes are shown, there are many for early risers, check the Heavens-Above website for this and the latest forecasts.
[source: https://www.heavens-above.com/]

METEOR SHOWERS

Delta Aquariids - 12 July to 23 August

Not a particulary good show in the UK, this shower is best seen in the Southern Hemisphere but you may be lucky. The shower peaks on 30 July but produces a low hourly rate of meteors over a long period. The radiant is in the constellation of Aquarius near the bright star Delta Aquarii above the southern horizon.

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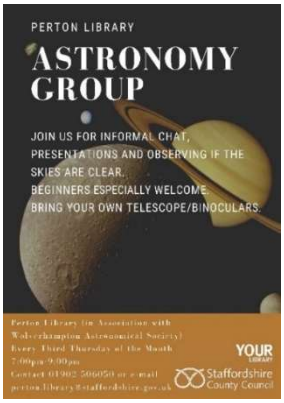

The group meets on the third Thursday of every month of the year at Perton Library from 7pm to 9pm. No subscription, no need to book, all free, just drop in at any time during the evening.
(Location WV6 7QU or on what3words ///saints.empty.stands)
The group is a relaxed and friendly gathering with the occasional talk.

We are particularly suited to beginners who very often bring their telescopes along for advice on how to set up, and we have experienced members who can help with this. If the skies are clear we do try to do some observing with library and member equipment.

WOLVERHAMPTON ASTRONOMICAL SOCIETY LECTURE PROGRAMME

The Wolvas annual 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.

We put together a yearly 16 lecture programme and some of this year's programme is shown below.

The host location for our live talks remains the University of Wolverhampton in the city centre. Access and facilities are excellent - details are available on the Wolvas website. Lectures in person or online will only be available to paid-up members of the Society. Members will receive regular emails with invitations to the Zoom sessions and reminders of the in-person lectures.
Non-members may attend the talks live for £2 on the door.

Our lecture season has finished for our usual summer break they will resume in September. Please keep an eye on our website 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.