

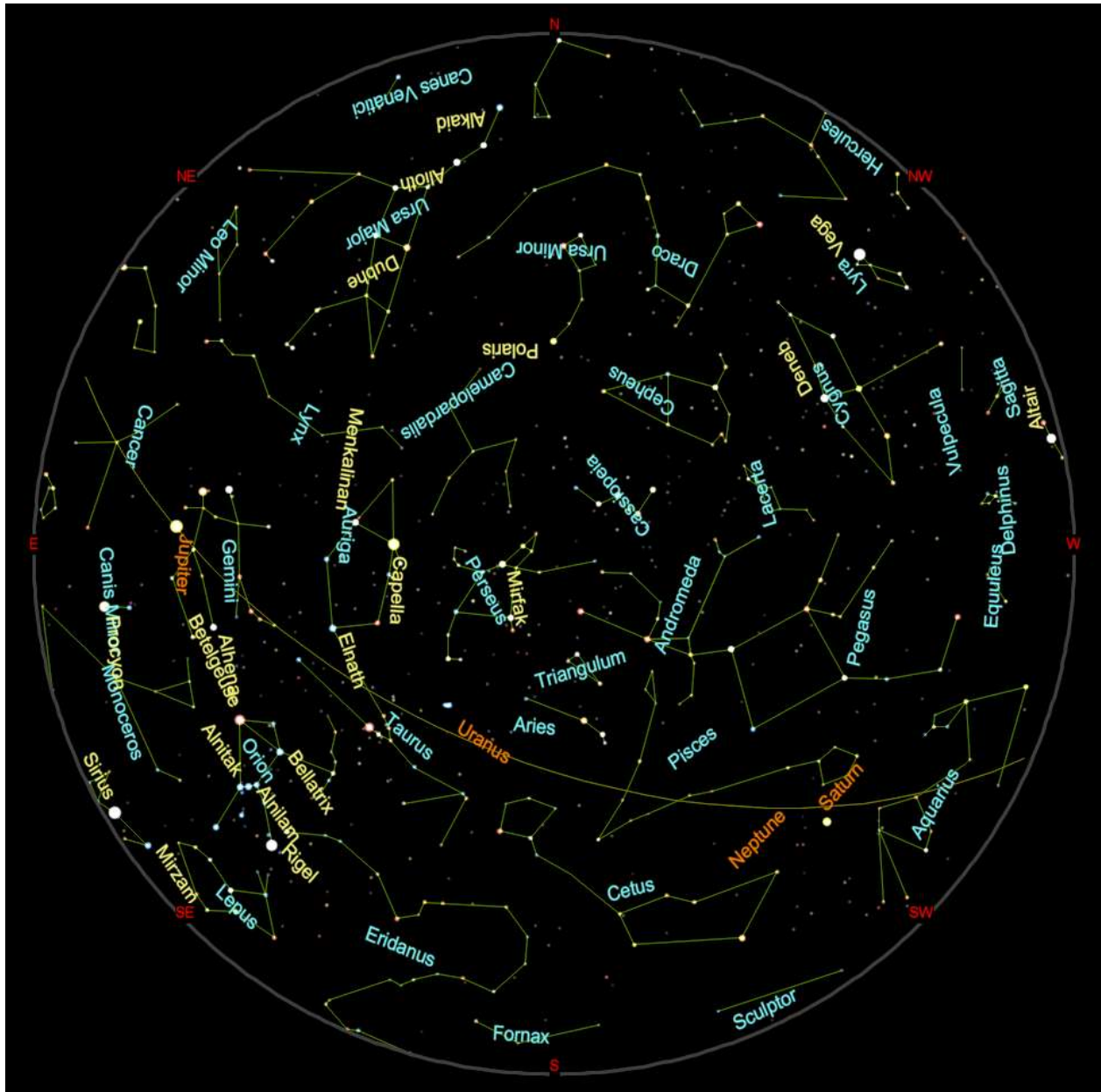
# The Night Sky in December 2025

An early very Happy Christmas to all my readers



## Monthly Guide compiled by Doug Bickley

PERTON LIBRARY  
ASTRONOMY  
GROUP



- The chart is based on location 52.6° N, 2.2° W (Perton, Wolverhampton) @ 21:00 on 15/12/2025
- The orange line is the ecliptic
- **We are looking SOUTH** (as shown at the bottom of the chart) at the constellations Eridanus, Cetus and Aquarius then up towards Orion, Taurus, Aries and Pisces
- The centre of the chart is the point over your head (the zenith) and the edge is the horizon
- If you turn the chart upside down looking NORTH you'll be looking at the constellations Hercules and Canes Venatici then up towards Lyra, Ursa Minor and Ursa Major

## Events to look out for this month:

- 1 Mercury and Venus low in the SE (morning)
- 3 Moon forms a triangle with Pleiades and Uranus (evening)
- 4 Full Moon
- 4 Moon occults the Pleiades (morning)
- 4 Full Moon (supermoon) forms triangle with Pleiades and Aldebaran (evening)
- 7 Mercury at greatest elongation (morning twilight)
- 7 Moon left of Jupiter, Caster and Pollux above (evening)
- 14 Geminid meteor shower peak (early morning, favourable)
- 17 Crescent Moon right of Mercury (morning twilight)
- 18 Slim Crescent Moon below right of Mercury (morning twilight)
- 18 Perton Library Astronomy Group meeting 7pm
- 20 New Moon
- 21 Winter Solstice
- 22 Ursid meteor shower peak (favourable)
- 24 Early to bed, hang stockings ←
- 26 Half Moon right of Saturn and Neptune (evening)
- 27 First quarter Moon above left of Saturn and Neptune (evening)
- 31 Moon left of Pleiades and Uranus (evening)



## The phenomena of the month : December 2025

Times are given in UT for PERTON (2° 11' 53" W, 52° 35' 26" N, zone Z).

Date	Hour	Description of the phenomenon
yyyy mm dd	hh:mm	
1 2025 12 01	00:00	Meteor shower : Dec. Phoenicids (duration = 11.0 days)
2 2025 12 04	02:09	Close encounter between the Moon and Uranus (topocentric dist. center to center = 4.6°)
3 2025 12 04	04:25	Close encounter between the Moon and the Pleiades (topocentric dist. center to center = 0.2°)
4 2025 12 04	11:06	Moon at perigee (geocentric dist. = 356963 km)
5 2025 12 04	23:14	FULL MOON
6 2025 12 08	00:00	GREATEST WESTERN ELONGATION of Mercury (20.6°)
7 2025 12 08	02:30	Opposition of the asteroid 16 Psyche with the Sun (dist. to the Sun = 2.677 AU; magn. = 9.7)
8 2025 12 09	00:00	Meteor shower : Sigma Hydrids (7 meteors/hour at zenith; duration = 12.0 days)
9 2025 12 09	00:00	Meteor shower : Monocerotids (3 meteors/hour at zenith; duration = 20.0 days)
10 2025 12 10	07:55	Close encounter between the Moon and Regulus (topocentric dist. center to center = 0.1°)
11 2025 12 11	20:52	LAST QUARTER OF THE MOON
12 2025 12 14	07:59	Meteor shower : Geminids (150 meteors/hour at zenith; duration = 12.0 days)
13 2025 12 16	00:00	Meteor shower : Coma Berenicids (3 meteors/hour at zenith; duration = 11.0 days)
14 2025 12 17	06:09	Moon at apogee (geocentric dist. = 406322 km)
15 2025 12 19	11:59	Close encounter between Mercury and Antares (topocentric dist. center to center = 5.5°)
16 2025 12 20	01:43	NEW MOON
17 2025 12 21	15:03	WINTER SOLSTICE
18 2025 12 22	09:10	Opposition of the asteroid 10 Hygiea with the Sun (dist. to the Sun = 3.413 AU; magn. = 10.3)
19 2025 12 22	10:00	Meteor shower : Ursids (10 meteors/hour at zenith; duration = 9.0 days)
20 2025 12 27	19:10	FIRST QUARTER OF THE MOON

# THE MOON

## Lunar Phases this month

Full Moon is on 4 December.

New Moon is on 20 December.

The new Moon will be another Supermoon this month.



"What's in a name?" said Juliet (in Romeo and Juliet) except she was talking about love not the Moon. But we do love our Moon not only for its brilliance but also as evidenced by the names given it by various cultures. In December, winter begins for most people in the Northern Hemisphere, and here the December Full Moon is often called the Cold Moon.

The Old English and Anglo-Saxon names are the Moon-Before-Yule or the Long Night Moon, referring to the longest night of the year in the Northern Hemisphere: the December solstice. The Celts called it the Oak Moon or the Full Cold Moon.

Native American: Names like "Frost Exploding Trees Moon" (Cree), "Moon of the Popping Trees" (Oglala), and "Long Night Moon" (Mohican) reflect the cold and darkness of the season.

Colonial American: Names that reference winter activities like "Cold Moon," "Winter Maker Moon," and "Snow Moon".

# THE SUN

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



Key:

Night	Twilight			Day
	Astronomical	Nautical	Civil	

## PLANETS THIS MONTH

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

Planetrise/Planetset, Mon, 15 Dec 2025				
Planet	Rise	Set	Meridian	Comment
<a href="#">Mercury</a>	Mon 06:29	Mon 14:56	Mon 10:42	Average visibility
<a href="#">Venus</a>	Mon 07:48	Mon 15:32	Mon 11:40	Slightly difficult to see
<a href="#">Mars</a>	Mon 08:50	Mon 16:12	Mon 12:31	Extremely difficult to see
<a href="#">Jupiter</a>	Mon 18:01	Tue 10:17	Tue 02:09	Perfect visibility
<a href="#">Saturn</a>	Mon 12:34	Mon 23:59	Mon 18:16	Great visibility
<a href="#">Uranus</a>	Mon 14:20	Tue 06:08	Mon 22:14	Average visibility
<a href="#">Neptune</a>	Mon 12:34	Tue 00:24	Mon 18:29	Difficult to see

Data from [timeanddate.com](http://timeanddate.com)

Cold and dewy evenings are here. The shortest day of the year is on Sunday 21 December so we will have longer nights for some time now.

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

**Mercury** is still in the SE in Libra but at a reduced maximum altitude of  $8^\circ$ , now a morning planet after inferior conjunction on 20 November and shining at mag +0.4. It reaches greatest western elongation on 7 December and will stay in the morning sky until around 23 December.

**Venus** is currently a morning planet but so close to the Sun in the sky that observations are difficult.

**Mars** also is too close to the Sun to be seen properly this month.

**Jupiter** on the other hand, in Gemini in the S at a maximum altitude of  $60^\circ$  is magnificent, shining at a bright mag. -2.4 this month close to Castor and Pollux. With a small telescope or decent observing binoculars you might see the cloud belts and its four brightest moons: Io, Europa, Ganymede and Callisto.

**Saturn** is still in the S in Aquarius at a maximum altitude of  $33^\circ$  at the start of the month, shining at mag +0.6, an evening planet well placed for observations. On 26 December a 39%-lit waxing crescent Moon will be close by. Saturn's rings are still edge on so almost invisible.

**Uranus** is still in the S in Taurus, shining at mag. +5.6 at a maximum altitude of  $57^\circ$  just south of M45 Pleiades. It should be easily visible in a small telescope or binoculars.

**Neptune** is still in the S in Pisces at a maximum altitude of  $36^\circ$ , shining at mag. +7.9 and remains in the same part of the sky as Saturn, well placed for observations of both planets in the evening. It is close to the planet which give a good pointer to its location in the sky.

# 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.
01-Dec	-1.3	05:24	17:11	10°	W	23°	17:16	10°	SSE
03-Dec	-0.4	02:44	17:11	10°	WSW	12°	17:14	10°	SSW
12-Dec	0.1	00:24	06:42	10°	SE	10°	06:43	10°	SE
13-Dec	-1.4	05:47	07:27	10°	SSW	27°	07:33	10°	E
14-Dec	-1.0	05:01	06:38	10°	SSW	20°	06:43	10°	E
15-Dec	-0.8	03:37	05:50	10°	S	14°	05:54	10°	ESE
15-Dec	-2.6	06:27	07:25	10°	SW	45°	07:32	10°	E
16-Dec	-2.2	06:10	06:36	10°	SW	34°	06:43	10°	E
17-Dec	-1.7	04:22	05:49	18°	S	25°	05:53	10°	E
17-Dec	-3.4	06:40	07:24	10°	WSW	66°	07:30	10°	E
18-Dec	-1.0	01:40	05:02	17°	SE	17°	05:04	10°	E
18-Dec	-3.2	05:54	06:35	15°	WSW	55°	06:41	10°	E
19-Dec	-2.9	03:36	05:49	40°	S	43°	05:52	10°	E
19-Dec	-3.6	06:42	07:22	10°	W	77°	07:29	10°	E
20-Dec	-1.1	01:22	05:02	20°	ESE	20°	05:03	10°	E
20-Dec	-3.6	05:16	06:35	23°	WSW	73°	06:40	10°	E
21-Dec	-3.5	03:10	05:48	63°	SSE	63°	05:51	10°	E
21-Dec	-3.6	06:40	07:21	10°	W	72°	07:27	10°	ESE
22-Dec	-1.0	01:10	05:00	19°	E	19°	05:02	10°	E
22-Dec	-3.7	04:57	06:33	28°	W	77°	06:38	10°	E
23-Dec	-3.5	02:58	05:46	65°	ESE	65°	05:49	10°	E
23-Dec	-3.2	06:33	07:19	10°	W	53°	07:26	10°	ESE
24-Dec	-0.9	01:01	04:59	18°	E	18°	05:00	10°	E
24-Dec	-3.6	04:47	06:32	30°	W	65°	06:37	10°	ESE
25-Dec	-3.3	02:51	05:45	59°	SE	59°	05:47	10°	ESE
25-Dec	-2.6	06:07	07:17	10°	W	33°	07:24	10°	SE
26-Dec	-0.8	00:54	04:57	17°	E	17°	04:58	10°	E
26-Dec	-3.1	04:27	06:30	29°	WSW	44°	06:35	10°	SE
27-Dec	-2.9	02:38	05:43	45°	SSE	45°	05:45	10°	ESE
27-Dec	-1.8	04:56	07:16	10°	W	19°	07:21	10°	SSE
28-Dec	-0.7	00:42	04:55	15°	ESE	15°	04:56	10°	ESE
28-Dec	-2.4	03:45	06:28	23°	WSW	27°	06:32	10°	SSE
29-Dec	-2.2	02:04	05:41	28°	SSE	28°	05:43	10°	SE
30-Dec	-0.5	00:12	04:54	11°	SE	11°	04:54	10°	SE
30-Dec	-1.6	02:12	06:27	15°	SW	15°	06:29	10°	S
31-Dec	-1.3	00:53	05:39	15°	S	15°	05:40	10°	SSE

can also install these apps to check for passes

**Android:**  
ISS Detector  
Satellite Tracker



**IOS:**



ISS Spotter

This month is for the Larks not the Owls amongst you - mostly early morning passes, just two evening passes marked in blue. There are a couple of decent magnitude passes on Christmas morning which you can check out before you open your presents.

As always check the Heavens-Above website for the latest forecasts.

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

# METEOR SHOWERS

## December Meteor Showers

With clouds recently dominating our skies in Wolverhampton lets hope for a few clear nights so that we can get out and do some meteor spotting. The following table shows meteor showers during December:

	BEGIN	END	PEAK	PEAK TIME	MOON DAYS	ZHR
					<i>new = 0 and 27</i>	
					<i>full = 14</i>	
Geminids	05/12/2025	17/12/2025	14/12/2025	07:59	24.1	150
Coma Berenicids	12/12/2025	23/12/2025	16/12/2025	00:00	25.7	3
Ursids	17/12/2025	26/12/2025	22/12/2025	10:00	2.3	10

### Geminid Meteor Shower

The Geminids in December are one of the best meteor showers of the year, usually reliable shower and this year active from 5 to 17 December, producing its peak rate of meteors around the evening of 13 December. With luck you might see one every couple of minutes with a dark sky. This year the Moon won't inter too much. The Geminids are remnants from asteroid 3200 Phaethon.

### Coma Berenicid Meteor Shower

This is a very minor shower and although known for fast meteors but the radiant is below the horizon until after 22:30 so meteors won't be visible until after that. ZHR is one meteor every 20 minutes.

### Ursid Meteor Shower

The Ursids always peak at the solstice and produces much lower rates than the Geminids and you'll need a dark sky. They originate from debris remnants comet 8P/Tuttle.

# COMETS

Something a bit different, there have been at least two comets in the news recently.



### Comet C/2025 A6 Lemmon

This comet was discovered by the Mount Lemmon Survey in Arizona on 3 January 2025 and was visible to the naked eye under ideal conditions. The image here was taken by the author near the constellation Boötes low in the northwestern sky heading towards Arcturus. It is now becoming more difficult to observe as it moves farther from Earth after its closest approach to the Sun on 8 November 2025.

### Comet 3i/Atlas

This was discovered on 1 July 2025 by the NASA-funded Asteroid Terrestrial-impact Last Alert System (ATLAS) survey telescope in Río Hurtado, Chile. It comes from outside of our galaxy so is an interstellar object, which in some media was described as being possibly an alien spacecraft, now refuted by NASA. It was formed around a star in another system beyond our own, so long ago and so far away that it's taken millions, perhaps billions of years to reach us. The image taken by the author in the SSE in Virgo didn't manage to capture the tails coming off the nucleus.



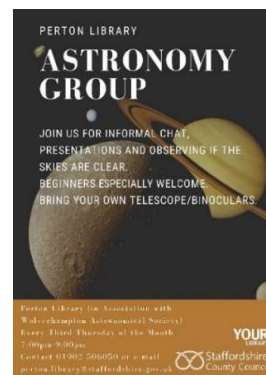
## PERTON LIBRARY ASTRONOMY GROUP

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 ///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](http://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 now resumed for the 2025/26 season.

Here is a list so far of the upcoming lectures, please keep an eye on our website for updates and also synopses of the individual talks:

01-Dec-25	Duncan Willis	The Space Shuttle; Past, Present & Future
12-Jan-26	Dr Steve Barrett	ABC of Stellar Evolution
19-Jan-26	Andrew Thornett	Getting started in radio astronomy: Equipment, software, projects
02-Feb-26	Gary Poyner	T Corona Borealis - The Jewel in the Crown
16-Feb-26	Kieron Nixon	Understanding Special Relativity (without the maths)
02-Mar-26	Fran Bagenal	NASA's Juno Mission to Jupiter (live from Colorado)
16-Mar-26	Simon Banton	The Astronomy of Stonehenge
13-Apr-26	TBA	TBC
11-May-26	TBC	TBC
08-Jun-26	Paul Fellows	Once around the moons of Pluto

As well as our website 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.