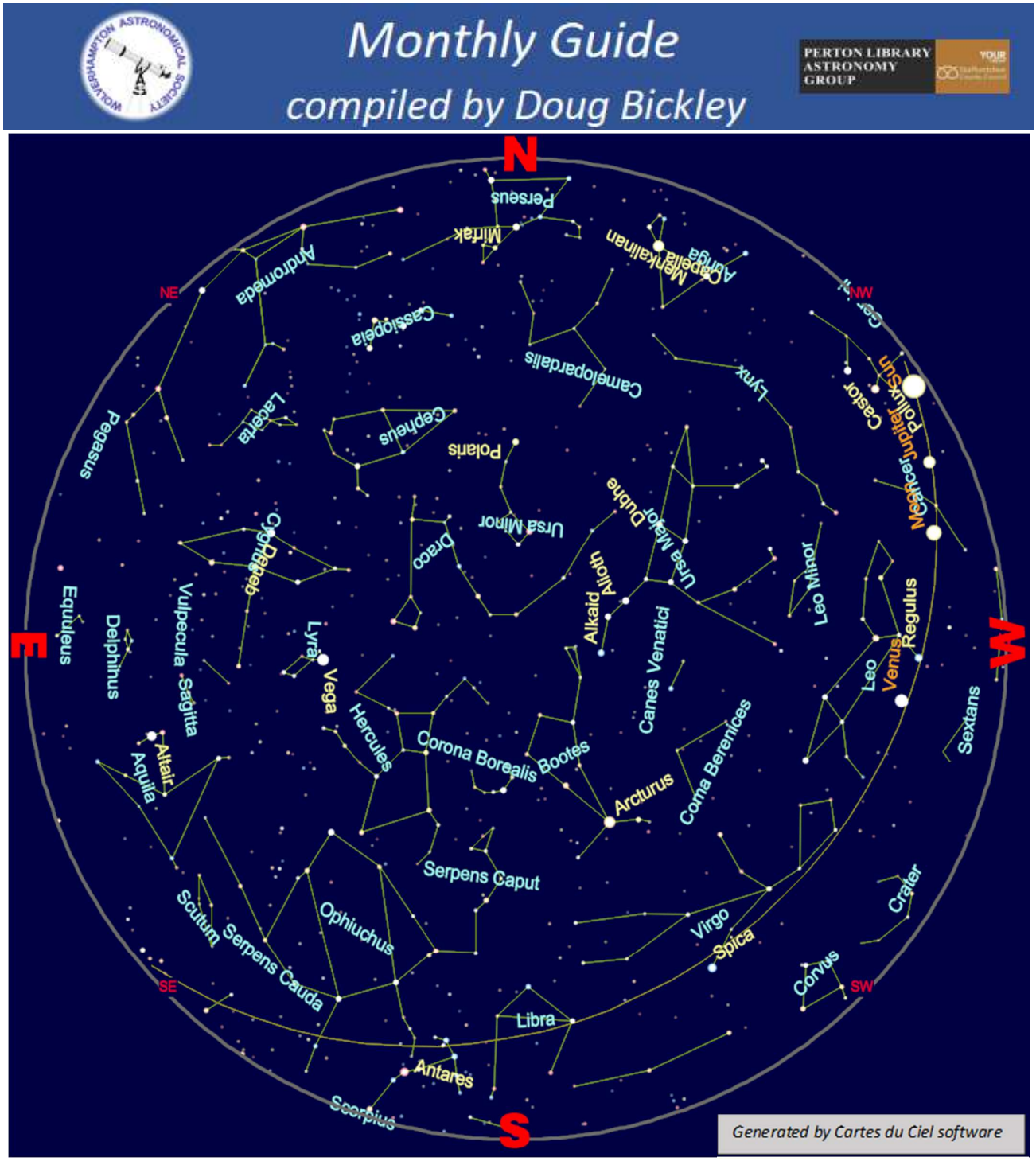
# The Night Sky in July 2026




*The chart is based on location 52.6° N, 2.2° W (Perton, Wolverhampton) @ 21:00 on 15/07/2026.*
*The orange line is the ecliptic.*
*We are looking SOUTH (as shown at the bottom of the chart) at the constellations Scutum, Ophichius, Libra, Virgo and Crater, with the constellations Delphinus, Hercules, Corona Borealis, Bootes, Coma Berenices and Leo overhead.*

***TO USE THE CHART - hold it so that the direction you are facing is at the bottom** – the lower part of the chart shows the sky ahead of you and the centre of the chart shows the sky directly over your head.*

## Events summary to look out for this month:

8 Moon near Saturn (morning)
9 Venus near Regulus
11 Moon near M45 Pleiades (morning twilight)
14 New Moon
17 Conjunction of Moon and Venus
16 Perton Library Astronomy Group meeting 7pm
29 Full Moon

## The phenomena of the month : July 2026

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

| Date | Hour | Description of the phenomenon |
|---|---|---|
| yyyy mm dd | hh:mm | |
| 2026 07 01 | 11:00 | Mercury at its aphelion (distance to the Sun = 0.46670 AU) |
| 2026 07 04 | 07:11 | Close encounter between Mars and Uranus (topocentric dist. center to center = 0.1°) |
| 2026 07 06 | 19:00 | The Earth at its aphelion (distance to the Sun = 1.01664 AU) |
| 2026 07 07 | 20:29 | LAST QUARTER OF THE MOON |
| 2026 07 09 | 23:30 | Close encounter between Venus and Regulus (topocentric dist. center to center = 1.0°) |
| 2026 07 11 | 04:53 | Close encounter between the Moon and Uranus (topocentric dist. center to center = 4.6°) |
| 2026 07 13 | 02:19 | Close encounter between Mars and Aldebaran (topocentric dist. center to center = 5.3°) |
| 2026 07 13 | 02:26 | INFERIOR CONJUNCTION of Mercury with the Sun (geoc. dist. center to center = 4.8°) |
| 2026 07 13 | 08:50 | Moon at perigee (geocentric dist. = 359112 km) |
| 2026 07 14 | 10:44 | NEW MOON |
| 2026 07 17 | 14:09 | Close encounter between the Moon and Venus (topocentric dist. center to center = 2.3°) |
| 2026 07 21 | 12:05 | FIRST QUARTER OF THE MOON |
| 2026 07 24 | 22:45 | Close encounter between the Moon and Antares (topocentric dist. center to center = 1.4°) |
| 2026 07 25 | 17:45 | Moon at apogee (geocentric dist. = 405548 km) |
| 2026 07 29 | 13:18 | CONJUNCTION between Jupiter and the Sun (geoc. dist. center to center = 0.5°) |
| 2026 07 29 | 15:36 | FULL MOON |
| 2026 07 31 | 01:00 | Meteor shower : S. Delta Aquarids (25 meteors/hour at zenith; duration = 43.0 days) |
| 2026 07 31 | 01:00 | Meteor shower : Alpha Capricornids (5 meteors/hour at zenith; duration = 43.0 days) |

## Noctilucent cloud season

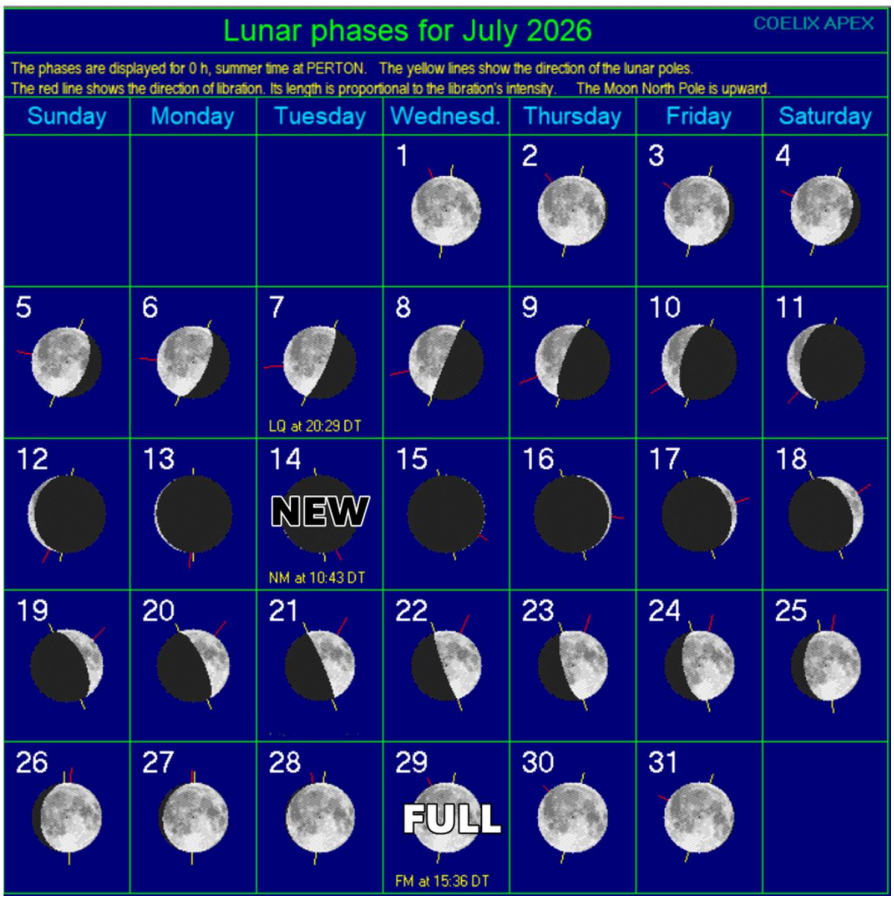


Noctilucent clouds (NLC's) are thin, wispy clouds that glow with a blue or silvery hue at night when illuminated by sunlight from below the horizon.

They are the highest clouds in our atmosphere, forming in the layer known as the Mesosphere around 80 kilometres (50 miles) above the Earth's surface, and are formed of ice crystals. In the summer the Mesosphere becomes cold enough (below -125C) to allow ice to form on suspended dust particles floating in the atmosphere. NLCs only appear during the summer months, and only at latitudes between about 45 and 80 degrees north from about late May to mid August, with a peak around the first week of July.

# THE MOON

## Lunar Phases this month




The Full Moon has been integral to tracking the change of months and seasons since ancient times as it was important to farming practices. Most of the names you see commonly used are English interpretations of Native American names as these were adopted into their calendars, but you will less commonly see Celtic, Anglo-Saxon and medieval English names.

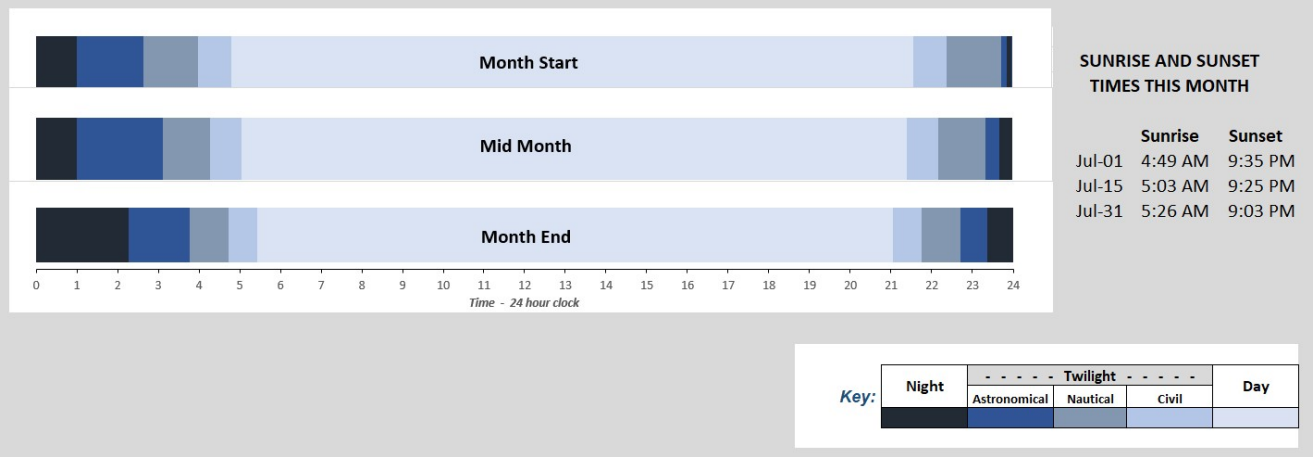
The Full Moon in July is generally called the Buck Moon, because at this time of year new antlers started to emerge on deer buck's foreheads. Other Native American tribes call it Salmon Moon, Raspberry Moon, and Thunder Moon. In Celtic, this Moon was known as the Claiming Moon, Wyrt Moon, Herb Moon, and Mead Moon. The Anglo-Saxons called it the Hay Moon.

# METEOR SHOWERS

There are no major meteor showers in July, but the **Perseid meteor shower** is active from **mid-July to mid-August**, reaching its peak on 13 August. During this spectacular celestial event you could see up to 100 meteors per hour! And as always there is a chance of a sporadic meteor, so if you are sitting outside on a balmy summer evening don't forget to look up!

## 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.*




Now that we have passed the Summer Solstice days will steadily shorten in duration. The Earth will reach aphelion *(from the Greek words apo meaning away, off, apart)* when it is at the farthest point from the sun for the year on 6 July at 12pm.

We usually say that our distance from the sun is about 93 million miles (150 million km), but of course that is an average. Our distance from the sun changes by about 3% dues to the Earths not quite circular orbit. Its greatest distance from the sun for this year this year will be 94,502,961 miles (152,087,774 km) from the sun. We are about three million miles (five million km) farther from the sun than we were be six months ago

## FUN FACT FOR JULY

57 years ago on 20 July 1969 Apollo 11 landed on the Moon at Tranquility Base in the Sea of Tranquility (Mare Tranquillitatis). Neil Armstrong and Buzz Aldrin became the first humans to walk on the moon whilst Michael Collins remained in orbit in the command module above the Moon.

Nearly seven hours later at 2:56 UTC after completing checks, putting on their spacesuits, setting up their life-support backpacks and depressurising the cabin, Neil Armstrong took the first step on the moon. More than a billion people throughout the earth were watching and listening to the live broadcast.

There remains a question about exactly what he said, or didn't say! Armstrong later claimed he said: "That's one small step for a man, one giant leap for mankind." But what was heard was "one small step for man" not "one small step for ~a~ man".
It makes a difference, because without the "a" he was talking about all of mankind. But with the "a" he was referring to himself as an individual. Armstrong always claimed that he said "a man", but when you listen to the audio you can't hear it (but give NASA a break, we're talking about 60 year old tech transmitting audio and video over a distance of 240,000 miles!). There may have been a blip in the audio transmission from the Moon to the Earth – but who knows?
Either way it is still one of the greatest moments in history.
What's your theory?

# PLANETS THIS MONTH

Here's my usual summary table showing planetary observation opportunities based on mid-month data. As always "good visibility" doesn't necessarily mean that views will be easy. As I said last month summer is not our best time for planetary observations. Most of them are struggling with the low ecliptic angle and the Sun's glare in difficult dawn skies.

| | Planetrise/Planetset, Wed, 15 Jul 2026 | | | |
|---|---|---|---|---|
| Planet | Rise | Set | Meridian | Comment |
| Mercury | Thu 05:11 | Thu 20:26 | Thu 12:48 | Extremely difficult to see |
| Venus | Wed 09:10 | Wed 23:06 | Wed 16:09 | Good visibility |
| Mars | Wed 02:04 | Wed 18:28 | Wed 10:16 | Average visibility |
| Jupiter | Wed 06:01 | Wed 21:53 | Wed 13:57 | Slightly difficult to see |
| Saturn | Wed 00:12 | Wed 12:54 | Wed 06:33 | Perfect visibility |
| Uranus | Wed 01:42 | Wed 17:48 | Wed 09:45 | Difficult to see |
| Neptune | Tue 23:49 | Wed 11:59 | Wed 05:54 | Difficult to see |

*Data from timeanddate.com*

**Mercury** is in Gemini very low in the ENE at an altitude of 5° and shining at mag -0.6. On 13 July the planet is at inferior conjunction, lining up with the Sun on the Earth side of its orbit. After that it will emerge into the morning sky so that easier observations can be made later in the month.

**Venus** is in the W in Leo, shining brightly at mag -4.0 at a maximum altitude of only 10° but unmissable in the evening sky. It will reach greatest eastern elongation next month on 15 August, 46° from the Sun but its altitude is becoming lower. On 17 July it will be close to the NW of a 15%-lit waxing Moon.

**Jupiter** is too close to the Sun for observations this month and is at solar conjunction on 29 July. We will not see the King of Planets until later in the year.

**Mars** is in the ENE in Taurus at a maximum altitude of 18°, shining at mag +1.3 and still a morning planet slowly moving away from the sun. On the morning of 4 July it will be close to mag +5.8 Uranus but this conjunction will be difficult to see in the bright morning twilight. On 11 July a 15%-lit waning crescent Moon and M45 the Pleiades will be a close grouping. On 13 July Mars will be close to the bright star Aldebaran.

**Saturn** is in the SE in Pisces shining at mag +0.7 at a maximum altitude of 30°, still a morning planet and difficult to spot, but this will improve over the month. The rings are not edge on but are still tilted at less than 10° and their best view (27°) won't be until 2032 as they have a 15 year tilt cycle. On 7 and 8 July a half lit last quarter Moon will be close.

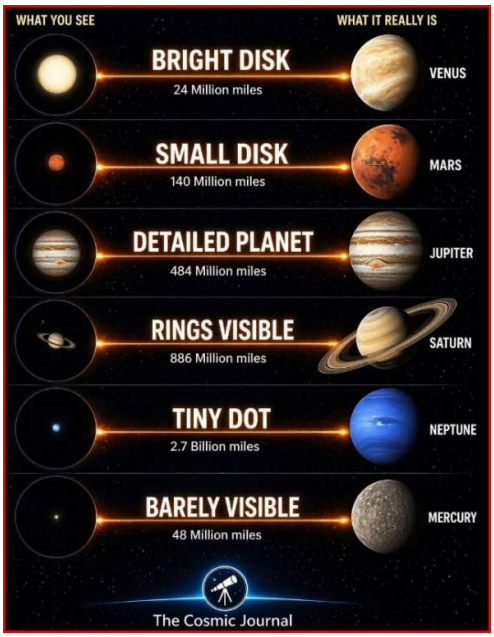
**Uranus** is in the E in Taurus at a maximum altitude of 17° and shining at mag +5.8. There will be a close conjunction with Mars 4 July in the bright morning twilight.

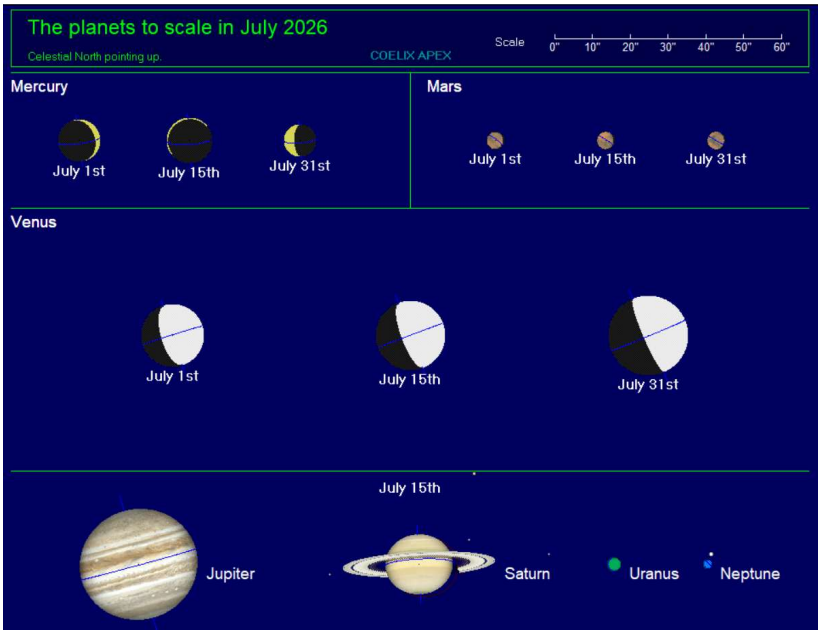
**Neptune** is in the SE in Pisces at a maximum altitude of 30° shining at mag +7.8 in the morning sky, and observation opportunities are improving.

**Plantetary Viewing expectations**

Of course for any of our planets the difference between their visual appearance through a telescope (even when using a fairly large aperture instrument) and the images we see printed in magazines is a learning curve you have to accept.

**eg:** **what you will see** - compared to - **actual plant sizes**




## International Space Station (ISS)

**Forecast times for visible passes this month**
*You can use these apps to check for ISS passes:*

**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. |
|---|---|---|---|---|---|---|---|---|---|
| 01-Jul | -2.1 | 01:56 | 01:05 | 19° | SE | 19° | 01:07 | 10° | E |
| 02-Jul | -1.3 | 00:14 | 00:19 | 11° | ESE | 11° | 00:19 | 10° | ESE |
| 14-Jul | -1.3 | 00:16 | 01:53 | 10° | WSW | 11° | 01:53 | 11° | WSW |
| 15-Jul | -2.1 | 01:49 | 01:04 | 10° | W | 20° | 01:06 | 20° | WSW |
| 18-Jul | -1.8 | 01:52 | 00:17 | 10° | W | 17° | 00:18 | 17° | SW |

There are a lot of visible passes this month in the early hours from 3am tp 6am. I haven't listed these only the evening passes and up to 2am.
Check the Heavens-Above website to see the passes that I haven't show and for the latest forecasts.
*[source: https://www.heavens-above.com/]*

## PERTON LIBRARY ASTRONOMY GROUP




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 is currently 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 last lecture of the 2025/26 series was on 8 June with a talk by Paul Fellows.
We now have a summer break but we have some excellent talks lined up for next year, beginning with one on 14 September by Dr Megan Argo.

**Save the date:**
On **Saturday 26 September** we invite you to join us from 10am to 5pm at the Wolverhampton Science Park Glaisher Drive, Wolverhampton WV10 9RU, where we will host a public event celebrating our 75th Anniversary.

A day of events, talks and exhibits to celebrate the Society and also providing information on astronomy and associated equipment. Further details to follow - add the date to your diary and check our website for updates.

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.