Lewes Astronomical Society

November Newsletter

Guest Editor: Steven Ward

Welcome

By Steven Ward

A very warm welcome to our November 2025 newsletter.

In between the cloudy nights recently, many of our members have captured pictures of a couple of comets. The picture above of Comet Lemmon was taken by Richie Jarvis using a Seestar S50 on 25th October.

Another of our members, Regina Manso De Zuniga, captured the picture below of Comet Swan using her Seestar S50 on 23rd October.

Members of our society can enjoy viewing many more similar images on our thriving members-only WhatsApp group. Please note that former members who have failed to renew their membership this season will shortly be removed from the WhatsApp group.

4MOST First Light

By Behnood Bandi

On 18 October 2025, the **4-metre Multi-Object Spectroscopic Telescope (4MOST)**, installed on ESO's VISTA telescope at Paranal Observatory in Chile, achieved its long-awaited *first light*. This milestone marks the first time the instrument successfully collected spectra from celestial targets, signalling the start of its commissioning phase.

4MOST is designed to transform astronomical surveys by capturing the light of **2,400 objects simultaneously** through a network of optical fibres across a **2.5-degree field of view**, which is about five times the diameter of the full Moon. Unlike imaging cameras that take pictures of the sky, 4MOST disperses the light from each object into its component wavelengths, allowing astronomers to study the chemical composition, redshift, and motion of objects in unprecedented detail.

For its first observations, 4MOST targeted a region of sky containing the **Sculptor Galaxy (NGC 253)** and the **globular cluster NGC 288**. The images released by the consortium show the hexagonal field of view filled with thousands of coloured points, each representing an individual spectrum, alongside example spectra from a star, a nearby galaxy and a distant active galaxy. These initial results demonstrate the instrument's excellent performance and its ability to study a wide range of astronomical objects simultaneously.

The **University of Sussex** plays a key role within the 4MOST Consortium, contributing to both the scientific and commissioning efforts. Notably, two **members of the Lewes Astronomical Society**, **Behnood Bandi** (pictured above) and **Jessica Pilling**, who are doctoral researchers at the University of Sussex, are part of the 4MOST **commissioning and**

science teams. They are helping to test and calibrate the instrument, as well as contributing to its major extragalactic surveys that will begin once operations commence.

4MOST will begin full survey operations in 2026, embarking on a 15-year mission to map the southern sky in unprecedented spectroscopic detail. The project will advance our understanding of the Milky Way, distant galaxies and the large-scale structure of the Universe.

For more information, visit https://www.4most.eu/cms/news/2025/first_light/.

LAS Membership

By Judith Pyett

We are delighted to tell you that the Lewes Astronomical Society currently has 136 members. Our membership has grown from 7 members when we relaunched as a society after Covid to the impressive membership we have today.

49 members and 16 visitors attended our November monthly meeting which was held a week early on Wednesday 29th October to avoid the Lewes bonfire night celebrations. Members at that meeting received their complimentary copy of the **2026 Philip's Month-by-Month Star Guide** (RRP £6.99). If you're a member and haven't picked up your copy yet, don't worry — you can collect it from our stand at the Lewes STEM Fair on Saturday 29th November or at our next monthly meeting on Wednesday 3rd December. For more details of these events, please visit the Events page on our website at www.lewesas.org.uk

Not a member yet? We'd love you to join us! Visit the Membership page on our website to find out how to become a member of our community of both amateur and professional astronomers. For further information, please contact our Membership Secretary, **Judith Pyett**, at membership@lewesas.org.uk

The Night Sky

By Paul Whitmarsh & Sarah Carson

The chart depicts how the night sky will appear at 9pm at the start of November, 8pm mid-month, and 7pm by the end of the month. The position and phase of the Moon are given for the 1st, 4th and 8th of November.

November sees a Greek myth enacted in the stars, with the constellations representing King Cepheus and Queen Cassiopeia high in the sky, and the hero Perseus, accompanied by his flying horse Pegasus, rescuing Princess Andromeda from the sea monster Cetus.

This month has three meteor showers. These originate from comets, small bodies of ice and rock that spend most of their time far from the Sun. In their brief time in the inner solar system, comets heat up and gas and dust jets stream off their surface, before being swept back as tails by the pressure of sunlight and the wind of particles streaming off the Sun.

Particles from this material are left behind in trails, ranging in size from grains of sand to peas. When the Earth moves through these trails at particular times of year, the particles burn up in the Earth's atmosphere as a shower of shooting stars or meteors. The largest pieces of debris are much brighter – the so-called fireballs.

Meteor showers are named after the constellation from which the meteors appear to originate. If you spot a few meteors, then drawing lines back, they will appear to converge from a point in the sky, just as train tracks appear to converge at a point in the distance. The radiants of two of November's meteor showers are in the constellation of Taurus – the northern and southern Taurids peaking on the 5th and 12th respectively - and a third is in Leo, with its maximum on the 19th. That night the Moon is new, so it will be easier to see meteors under a dark moonless sky. None of the three showers are particularly strong, but they will combine to make a modest display.

There are multiple planets visible this month. Saturn is obvious in the evening, appearing in the south underneath the Square of Pegasus. Jupiter is bright and rising in the east. Neptune, the most distant planet, is visible in binoculars near Saturn. In the early morning sky Venus is still dazzling in the east before dawn.

Useful Apps

Stellarium

(computer & phone)

Free planetarium to download. Used to make the charts above. There's even a web version that just works on your browser, but has fewer features. You can set the time & date and see what's in the sky. You can also search for things and it will show you where they are.

Telescopius

(computer & phone)

Website that suggests what is good for observing on any given evening. You can even tell it what sorts of things you are interested in seeing. Finally, if you can only see in particular directions because of trees, buildings, etc., you can tell it that too.

Met Office Forecast

(computer & phone)

Not only will it tell you the weather, there is a useful map that shows you rain showers and cloud cover up to five days ahead.

Nightshift

(Phone)

Another weather app.

Sky Safari

(Phone)

Another planetarium app for navigating the night sky.

The Sky Live

(Phone)

A summary of 'tonight's best…' planets, constellations, meteors, etc.

Go Stargazing

(Phone)

A listing of local astronomy events, talks, society meetings, etc.

November Meeting

Lewes has a long-standing bonfire tradition that now attracts around 50,000 visitors and residents to the town each year on 5th November. As a result, the town is closed to traffic from 5pm, and visitors must travel by public transport to the outskirts and walk from there. To avoid the disruption caused by the celebrations, we brought our November meeting forward to Wednesday 29th October.

The talk was entitled “Chasing Shadows: How Scientists Hunt for Dark Matter” by Dr Cenk Turkoglu, one of our members. He explained that dark matter is one of the greatest mysteries in modern physics. Although it makes up most of the matter in the universe, it neither emits nor absorbs light, and its presence is detected only through its gravitational effects on galaxies and cosmic structures.

Dr Turkoglu explored what we know about dark matter, why we believe it exists, and how scientists around the world are developing ingenious experiments to detect it. From deep underground detectors to space-based instruments, he described the ongoing global effort to uncover the true nature of this invisible component of our universe and the challenges that make this quest one of the most fascinating frontiers in science today.

His presentation was richly illustrated with detailed slides showing what we currently understand about dark matter and how scientists are working to uncover its true nature. He spoke in great depth about the search for this elusive substance, discussing whether it might be a single type of particle or several interacting particles that together produce the effects we observe through gravity.

It was a highly technical talk — some attendees enjoyed the talk but admitted to leaving “none the wiser”, while others were still animatedly discussing the slides and theories during the refreshment break! Despite the change of date, we had an excellent turnout of 65 attendees.

Lewes STEM Festival

Although we are not holding a meeting in November, we are participating in the annual Lewes STEM Festival

The centrepiece of the festival is the STEM Fair **on Saturday 29th November**, from 11am until 3pm, at Lewes Town Hall. This free family-friendly event features interactive exhibits contributed by local universities as well as companies, charities, and other organisations.

Last year, the fair hosted over 30 diverse exhibits and welcomed more than 1,200 visitors, providing an inspiring experience for students, families, and the wider community. Come along and meet our friendly team on the LAS stand.

To learn more please visit https://curiositysussex.github.io/lewes/25 or contact our Outreach Officer, **Dr Kate Land**, at outreach@lewesas.org.uk

December Meeting

Our next monthly meeting is on **Wednesday 3rd December** at the Lewes Subud Centre. Dr Sian Prosser, Archivist and Librarian at the Royal Astronomical Society, will give a talk about **Historical Women in Astronomy**.

Women have long contributed to our understanding of the universe, though often without recognition. Sian will highlight pioneering women members of the RAS—beginning with Caroline Herschel and Mary Somerville—and explore the lives and legacies of other lesser-known but influential figures in astronomy and astrophysics.

Everyone is welcome. Non-members £4. Doors open at 7pm and the talk begins at 7:30pm. Complimentary refreshments included.

Contact

If you wish to find out more about our society, contact the LAS Secretary, **Jane Penny**, at secretary@lewesas.org.uk