

Federation of Astronomical Societies

Editor: Michael Bryce



Newsletter

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fedastro.org.uk

The Newsletter for Members of FAS Affiliated Astronomical Societies



Cover Image: M8 Lagoon Nebula/M20 Trifid Nebula (Sagittarius). See page 25.

Nick Williams. Loughton Astronomical Society
<https://las-astro.org.uk>

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President's Spot:

Clare Lauwerys



Image Left: The lecture theatre at Cardiff University.

Credit: Clare Lauwerys

I hope everyone has recovered from what was another fantastic FAS Convention in Cardiff.

A huge thank you goes to Jerry, the volunteers from Cardiff AS, our speakers, sponsors and stallholders, and, of course, everyone who came along. One of the best things about the Convention isn't just the talks – although they were excellent – it's seeing people catching up with old friends, making new ones and spending a day with people who understand why you can happily spend ten minutes discussing eyepieces or whether that faint fuzzy really was M101. The atmosphere throughout the day was wonderful and I think everyone went home having learned something new.

While I'm on the subject of recognising people who make amateur astronomy better, this is your reminder that nominations for the Graham Bryant Memorial Award are still open, but not for much longer. The award recognises someone who has made a significant contribution to amateur astronomy, often quietly and behind the scenes. Every society has those people who simply get on with making things happen year after year, and they deserve to be recognised. If someone sprang into your mind while reading that sentence, perhaps that's your sign to submit a nomination. Full details can be found on the FAS website, and the closing date is 15 August.

I also want to say a very heartfelt thank you to Steve Tonkin, who has decided to step down from his FAS role looking after Dark Skies matters. Steve has been a passionate advocate for protecting our night skies and has shared an enormous amount of knowledge and experience with both the FAS and our member societies over the years. Thankfully, he isn't disappearing altogether and will remain on Council as a general member, which means we still get the benefit of his wisdom and experience. Any comparisons about leaving the FAS Council and the Mafia have, of course, been greatly exaggerated!

Taking over the Dark Skies role is Val Russell, who many of you will already know through her long-standing involvement in astronomy outreach and public engagement. We're delighted that she's joining the Council in this role and I'm looking forward to working with her as we continue to support dark sky initiatives around the country. Protecting our skies is becoming ever more important, and with Val we have someone who connected to many different initiatives. Please read Val's introduction on page 4.

Finally, as I write this, we're looking ahead to the partial solar eclipse. There's something rather magical about an eclipse. Even when it's only partial, people who haven't looked up in months suddenly find themselves wandering outside, eclipse glasses in hand, wondering if the clouds will just behave themselves for a couple of hours. Of course, this is the UK, so statistically we'll either have glorious sunshine everywhere except where you live, or a cloud will drift across the Sun at precisely maximum eclipse. Still, optimism is one of the defining characteristics of astronomers, isn't it? We spend our lives waiting for gaps in the clouds. I hope wherever you are, you're lucky enough to catch a glimpse. And if like me you are travelling to get the full eclipse, I have fingers and toes crossed for a smooth passage through the EU's Entry/Exit System. Like I said, you have to be optimistic!

**Clear skies!
Clare**



Why Jodrell Bank Matters

Clare Lauwerys

The announcement that funding for Jodrell Bank's e-MERLIN radio telescope network is to be withdrawn has understandably caused concern across the astronomical community. Unless alternative funding can be secured, scientific operations are expected to end in 2028.

For many people, Jodrell Bank is best known for the iconic Lovell Telescope. It is one of Britain's most recognisable scientific landmarks and a UNESCO World Heritage Site. But it is important to understand what is really at stake. This is not about preserving a historic telescope for sentimental reasons. Jodrell Bank remains one of the world's leading centres for radio astronomy, carrying out internationally significant research and providing the UK with expertise in a field where we have long been recognised as a world leader.

The Federation of Astronomical Societies believes this is about much more than one observatory. It raises serious questions about the UK's commitment to fundamental scientific research and its place within the international scientific community.

The decision does not stand alone. Alongside the loss of funding for e-MERLIN have come reductions in UK participation in several major international astronomy projects. Individually, each decision may have been taken for understandable financial reasons. Collectively, however, they paint a worrying picture of the UK stepping back from major astronomical research at a time when new facilities around the world are beginning to transform our understanding of the Universe.

Perhaps the greatest concern is not the loss of one instrument, but the loss of capability. Facilities such as Jodrell Bank do far more than produce scientific papers. They train researchers, develop new technology, attract international collaboration and ensure that the UK has the expertise to contribute to the next generation of major scientific projects. The e-MERLIN network supports a large international research community, with thousands of scientists relying on its unique capabilities to study everything from star formation and distant galaxies to black holes. Once that expertise is dispersed, rebuilding it is neither quick nor easy.

This matters to amateur astronomers too

Professional and amateur astronomy have always enjoyed a close relationship. The discoveries discussed at our society meetings, the speakers who inspire us, the images we admire and the missions we follow all depend on a healthy research community. Many professional astronomers first discovered their passion through amateur societies, public observing events or visits to Jodrell Bank. The pipeline works in both directions.

FAS societies and their members play an important role in keeping that enthusiasm alive. Every outreach event, every beginners' evening and every school visit helps inspire the next generation of scientists, engineers and



Image Above: The Lovell Telescope at Jodrell Bank.

Credit: Michael Bryce

researchers. It becomes harder to make the case that science matters if the country appears to be retreating from supporting some of its own world-class research facilities.

There will always be difficult decisions about public spending, and no research budget is unlimited. However, investment in fundamental science should not be viewed as an optional luxury. Time and again, research driven by curiosity has led to advances in technology, computing, communications and engineering that benefit society far beyond astronomy itself.

The Federation of Astronomical Societies hopes that a way can still be found to secure the future of this vital research capability. Jodrell Bank has inspired generations of scientists and amateur astronomers alike, and has played a central role in establishing the UK's international reputation for excellence in radio astronomy. Heritage alone is not enough. If we wish to remain a nation recognised for scientific excellence, we must continue to invest in the people, facilities and research that make that possible.

Clare

Sign the Petition:

It would be a good idea to sign a petition which may help save Jodrell Bank. On [Change.org](https://www.change.org) there are already eight petitions. The one with the most signatures as of 30 July is **SAVE JODRELL BANK – Protect a national treasure of science, heritage and inspiration**. This petition has more than 9,000 signatures. The link is here: <https://www.change.org/p/save-jodrell-bank-protect-a-national-treasure-of-science-heritage-and-inspiration>

Michael Bryce

A message from Jodrell Bank Observatory

Posted 30 July 2026

As a result of the recent news, we have received an extraordinary number of messages, and it has been incredibly moving to read so many heartfelt expressions of support. It means a great deal to everyone at Jodrell Bank to know how deeply people care about this remarkable place.

The announcement that funding for the e-MERLIN radio telescope network will cease from the end of March 2028 is deeply disappointing. This is one element of a wider series of cuts to some areas supported by the Science & Technology Facilities Council. While these cuts are significant, Jodrell Bank remains a world-leading centre for science, culture and education, with an important role both nationally and within our local community.

The University of Manchester are very proud of Jodrell Bank and the Lovell Telescope as an active, high quality operating scientific facility. We are working closely with partners to explore alternative sources of funding for the Observatory and the e-MERLIN network, and discussions are already underway. We remain committed to doing everything we can to sustain the long-term future of this internationally significant scientific facility.

Many people have asked how they can help. We are enormously grateful for that support. Anyone who wishes to express their personal views may choose to write to their constituency MP. If you feel would like to support our work at Jodrell Bank with a financial gift, the University has set up a donation page here:

<https://donate.manchester.ac.uk/p/jodrellbank/>

Thank you again for your continued encouragement. The strength of feeling shown by so many people has been a powerful reminder of what Jodrell Bank means to so many people across the UK and around the world.

Sincerely, from all at Jodrell Bank.

From Jodrell Bank website

<https://www.jodrellbank.net/explore/stories/a-message-of-thanks-from-jodrell-bank-observatory/>

Meet Our New FAS Council Member



As Steve Tonkin recently stepped down from the FAS Council, Val Russell has accepted to take on the role of FAS Dark Skies Adviser. As an advocate for dark Skies for many years Val seems the obvious choice to follow in Steve's footsteps.

Here is Val's Introduction:

I've been fascinated by astronomy for as long as I can remember, but only recently have I had the time to pursue it more seriously. As a long-standing member of Newbury Astronomical Society, I became increasingly aware of the growing impact of light pollution on our skies. That led me to join the Commission for Dark Skies.

After the sad loss of Bob Mizon, the CFDS lost its dynamic driving force, and it became clear to me that a fresh approach was needed. While raising awareness within the astronomy community was valuable, we were largely preaching to the converted. To make real progress, we needed to reach a much wider audience.

That's why I set up the Campaign for Dark Skies Network — free to join, open to everyone, and designed to bring together people who care about protecting our night skies. It works a bit like a petition, but with the added opportunity for members to become actively involved. Alongside our developing Sky Quality Project, we hope to build enough momentum that government and local authorities will finally take notice and act.

Val Russell



“Why the fight for Dark Skies?”

Sky glow, partly caused by light pollution, ruins our ability to enjoy the wonders of the night skies. Needlessly restricting people's access to the stars is an affront against our human rights and cultural heritage.

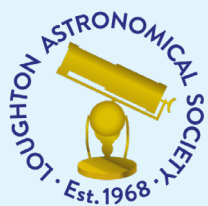
Extreme Satellite proliferation is threatening the global populace with a number of actual and potential harms.

Nature has evolved for millennia with natural darkness. It does not thrive under artificial light.

Excessive light at night also threatens human wellbeing.

Light pollution, caused by poorly controlled and inefficient artificial lighting, is a shameful waste of money and energy.”

The above extract is from the CfDS Network's website
<https://cfdsnetwork.org/home>



Loughton Astronomical Society

Discover the wonders of the universe with the LAS - West Essex's community for astronomy enthusiasts and sky watchers of all levels. Our society is dedicated to exploring the night sky, sharing knowledge, and igniting a passion for the cosmos. We offer a welcoming space for both novice stargazers and experienced astronomers to connect and grow.

LAS Meetings are held on Thursday evenings in Scout Hall, Theydon Bois. CM16 7JY.

01 August (Saturday)

LAS Members at Toot Hill Show

Join LAS Members at the Toot Hill Show for safe viewing of the Sun in white light and Hydrogen alpha.

06 August

Professor Susanne Schwenzer

13 Years and Counting: the Curiosity Mars Rover's journey though Gale Crater

12 August

LAS Members observing partial eclipse

Join LAS Members observing the 91% partial eclipse from 18:15 to 20:10.

Locations to be advised.

13 August

LAS Members Perseid Watch

27 August

Nick James
Interstellar Comets

03 September

LAS Members

Titbits and miscellany: Automating an Observatory plus other topics

10 September

LAS Members

Join LAS members looking at the night sky through binoculars and telescopes.

Scope Doctor: bring your scope to get the best out of it. Alternative programme if cloudy.

11 September

AstroKyds

AstroKyds is the junior astronomy group of the LAS. 6:30-8 pm at St Mary's Church Hall

17 September

Professor Steve Schwartz
Shocks in Space

19 September (Saturday)

LAS Members at Loughton Day

Join LAS Members at the Loughton Day for safe viewing of the sun in white light and Hydrogen alpha.

24 September

Professor Ian Robson
Confessions of an Astronomer

Society Website:

<https://las-astro.org.uk/>

JOIN US FOR AN EVENING OF

Stargazing

AT BODENHAM ARBORETUM



**SAT 17TH OCT 6:00- 8:00 PM &
MON 26TH OCT 5:00 - 7:00PM***

Join us for a fascinating Stargazing / Astronomy Evening
and discover the wonders of the night sky!

Using sophisticated and state-of-the-art telescopes, you'll have the chance
to observe the Moon, planets, stars, and other amazing celestial
objects while learning about the universe from experienced stargazers
- the Carolian Astronomy Society.

Whether you're a complete beginner or a keen
astronomy enthusiast, everyone is welcome for an enjoyable
and inspiring evening under the stars!

Tickets: £12.50 (includes hot drink / soup)
Book online - www.ticketsource/bodenhamarboretum

**Times may be adjusted dependent upon weather*



www.bodenhamarboretum.co.uk 01562 852444
Bodenham Arboretum, Wolverley, Kidderminster DY11 5TB



An Astronomical Day Out

Michael Bryce

Bromsgrove Astronomical Society



Image Above: Members and friends of Bromsgrove Astronomical Society gather in front of the iconic Lovell Telescope for the obligatory group photo!

Image Credit: John Briggs

On Saturday the 13 June 2026 Members and friends of Bromsgrove Astronomical Society enjoyed a fantastic out of this world day out at Jodrell Bank. We gathered at Bromsgrove Railway Station for an 8:30 start. We had a full coach and promptly headed up the M5/M6 towards Cheshire. Just under two hours later we arrived at Jodrell Bank, home of the world-famous Lovell Telescope.

For generations, people have looked to the Sun, Moon, planets and stars in a quest to understand our place on Earth. From the mid-20th Century, Jodrell Bank has been central to our search for understanding, driving groundbreaking discoveries and world-leading astronomical research. Jodrell Bank's story spans revolutionary scientific discoveries, remarkable engineering achievements, the dawn of the Space Age and the creation of the Grade I listed Lovell Telescope, an icon of science and engineering. Today, the University of Manchester owns and manages Jodrell Bank Observatory as a world-leading research institute, where scientists work at the forefront of modern astrophysics.

In 2019, Jodrell Bank was recognised for its Outstanding Universal Value and added to the UNESCO World Heritage Site list.

Having disembarked the coach and collected our site information sheets, we headed to a new facility, the First Light Pavilion. Designed by Hassell Architects, the striking grass-topped dome

spans 76 metres and echoes the shape and scale of the iconic Lovell Telescope.

This new state-of-the-art building officially opened to the public on 4 June 2022. The architecturally stunning building is at the heart of a £21.5m project to open the awe-inspiring heritage of Jodrell Bank to even more people.

Continuing the ancient tradition of structures that reflect our connection to the sky, the building echoes ancient monuments such as Stonehenge and Newgrange through its alignment with the Sun. A meridian line cuts through the dome's entrance, where a narrow south-facing window admits a shaft of sunlight that moves across the foyer during the day, creating the effect of a giant sundial.

Inside the first Light Pavilion, visitors can discover the stories of Jodrell Bank's pioneering scientists, travel through space in an immersive planetarium, and take in arboretum views from the First Light café terrace. The excellent First Light Café, where a variety of food and drinks are available, was a welcome stop after our coach trip.

Members enjoyed a vivid Dome Show in the custom-built immersive auditorium, featuring a curved projection screen and nine digital projectors and very comfortable reclined seats.



Image Above: The iconic Lovell Telescope at Jodrell Bank.

Image Credit: Michael Bryce

The state-of-the-art space delivers an immersive audio-visual experience through a specially commissioned short film telling the story of Jodrell Bank with narration by Professor Brian Cox. Other 30-minute sessions are also available created by NSC Creative Films.

Although food and drinks are available from either of the two cafes on site, there are many benches dotted around the site to enjoy a picnic. The new First Light facility is a much welcome addition to Jodrell Bank.

We had cloudy, and a little windy, but dry weather for our visit. Jodrell Bank is a fantastic opportunity to get up close and personal to an historic iconic radio telescope. I strongly advise that if you haven't been to Jodrell Bank, or it's been many years since you have, it's well worth another visit.

Jodrell Bank is open to the public from Tuesday to Sunday weekly. Tickets may be booked online. And Annual free return tickets are available. See website for details.

As Jodrell Bank is in the countryside, access by public transport is difficult. Taxi services are limited, and there is no access by bus. The nearest train station is Goostrey, which is about 2 miles away with no walking route from there to Jodrell Bank. The nearest mainline train station is in Macclesfield, 10 miles away.

Bromsgrove Astronomical Society

Bromsgrove Astronomical Society meetings take place on the first and third Monday of the month at Bromsgrove Rugby Football Club, Finstall Park on Finstall Road. The first Monday is an informal observing meeting with formal lecture meetings taking place on the third Monday of the month.

Since the society was formed in 2008 we have enjoyed a wide range of talks both from visiting speakers and club members. Our membership now stands at a healthy 70+ making Bromsgrove AS one of the largest astronomical societies in the country.

Useful Links:

Jodrell Bank
<https://www.jodrellbank.net>

NSC Creative
<https://nssctest.co.uk>

Michael Bryce
Bromsgrove Astronomical Society
<https://broms-astro.org.uk>

Society for the History of Astronomy International Summer Picnic to Ireland June 12th – 15th

Report by Meeting Secretary Mike Frost

During the month of June, a small group of SHA members and guests travelled to several astronomical sites within Ireland as part of its "Summer Picnic" event for 2026. Following the suggestion of meeting secretary, Mike Frost we held the first day of the visit at Birr Castle, in County Offaly, near Limerick in central Ireland.

Birr Castle – June 12th

For seventy years, from 1845 to 1914, it was home to the world's largest telescope, the Leviathan of Parsonstown (the old name for Birr). The telescope fell into disrepair during the twentieth century, but in the 1990s, with the advocacy of Sir Patrick Moore, it was restored.

Birr Castle is still lived in by the Parsons family, so it is usually closed to the public, but guided tours of the castle are available, and the SHA group had booked one. Gerard Gilligan, our ex-chair, had written to Lord and Lady Rosse, and was allowed to spend time in the archives, looking at letters from William Lassell to the Victorian Lord Rosse. He met Lady Rosse during his visit.

In 1839, the third Lord Rosse, William Parsons, built a thirty-six-inch diameter reflecting telescope. This was a success, and Lord Rosse decided on a more ambitious follow-up – a huge reflecting telescope, with a speculum mirror 72 inches in diameter, located at the bottom of a tube, which was mounted between two large brick

walls running north-south. The 36-inch telescope was repurposed with a thermocouple to measure the temperature of the Moon.

The observing program for the 72 inch was a re-examination of the objects in Messier's and Herschel's catalogues. When Lord Rosse observed M51 in Bootes, he saw a spiral structure which had not been previously observed. Perhaps he was influenced by the eddies in the river as it flowed past the castle? The spiral structure was genuine, and so Lord Rosse was the first person to identify spiral galaxies.

Toward the southern end the walkway is one final scientific treat. Ireland was hoping to build a radio telescope array to be part of LOFAR, the Low Frequency Array of radio telescopes which stretches across seven European countries. It was suggested that Birr, with its long and distinguished astronomical history, would be a suitable location, and the current Lord and Lady Rosse agreed. I-LOFAR (the I stands for Ireland) is the Irish contribution to the array, which is a pathfinder array for the future Square Kilometre Array. The site started with a radio telescope in 2012, 98 years after observing ended on the Leviathan, and I-LOFAR opened in 2017.

Newgrange and Knowth – June 14th

On a long bend of the River Boyne, there is a campus of neolithic sites – in particular the barrows of Newgrange, Knowth and Dowth, although excavations have revealed many other sites (at least 90)



Image Left: The picnic party, in front of the restored Leviathan

including tree henges, standing stones and enclosures. Dowth is not in good repair at present and not open to visitors, but Newgrange and Knowth are popular with tourists. We had signed up for a tour of both sites.

Our first port-of-call was the visitor centre at Bru na Boinne, from where the tour departed. There is an excellent set of immersive displays on the history and archaeology of the sites. The neolithic sites date from around 3200 B.C.E., were rediscovered in the seventeenth century, placed under government ownership from 1882 onwards and excavated by archaeologists from the 1960s onwards.

Knowth is a large passage tomb, which is to say that there is an internal chamber, which can be reached through a stone passage. In fact, Knowth has two such chambers at the end of two such passages, although neither of them are open to the public at present. The central barrow is surrounded by eighteen smaller satellite tombs. To protect the remains, the site can only be accessed as part of a guided tour.

Perhaps the most interesting feature of Knowth is a series of 127 large kerbstones, which line the exterior of the barrow. Many of these kerbstones carry carved designs. This neolithic artwork is an extraordinary resource – it is claimed that about a third of all known neolithic artworks in Western Europe can be found at Knowth. There has been a lot of speculation as to what the carvings mean. At least two have been suggested to be representations of solar eclipses, and one bears a resemblance to the lunar mare visible to the naked eye.

The tomb passage entrance at Newgrange is impressive, a wall of white quartz. At Knowth, the archaeologists have decided that the quartz found there formed a pavement on the floor in front of the tomb. At Newgrange, the interpretation is that the quartz decorated the tomb walls. It's still debated which interpretation is correct, but Newgrange is visually more impressive. There is also a stone barrier in front of the tomb entrance, featuring striking spiral artwork.

Unlike Knowth, Newgrange does allow visitors to enter the tomb. Newgrange barrow used to be surrounded by 38 standing stones,

of which 12 remain. The passageway was low, so you must duck at several places and hold your hand over my head to avoid unexpected bumps. It was also very narrow, so that at two points you have twist your body to get through a narrow gap back at this point as they felt unable to progress. The passageway is 19m long and slopes gently upwards.

Newgrange is world-famous for its solar alignments. Above the entrance is a box which allows in sunlight when the Sun is at a particular position in the sky, which only happens shortly after sunrise on the winter solstice and for a few days either side. If it's not a cloudy day, the rays of the rising Sun pass through the box, and into the inner chamber, illuminating it with natural light for up to seventeen minutes. The passageways at Knowth align east-west so there are possible astronomical alignments with equinox sunrises and sunsets, but at Knowth the passageway entrances have been modified since the barrow was built so alignments can only be speculative.

The two tombs of Newgrange and Knowth are fascinating, but also contrasting, perhaps offering different ideas as to how they were built. Our SHA chair, Carolyn Kennett, worked on the excavations at Knowth, so was able to give us some insights into the work which goes on to reconstruct what the tombs looked like in 3200 BC. The whole area is worth a visit.

Dunsink Observatory – June 15th

By a roundabout route, we had managed to organise a trip to Dunsink. And so on Monday June 15th, our coach drove west out of Dublin, past Phoenix Park, and took a side road just before reaching the Dublin ring road.

The observatory is still, just about, in a rural location, although there is a large landfill site to the north, and plans to build houses to the south. The site consists of a gatehouse, a larger observatory building with a dome on top, and a smaller standalone dome.

We were welcomed to the observatory by Sadhbh and by the current director, Professor Peter Gallagher. We were shown into the meridian room, where the shutters were still in place,

Image Right: SHA Group at Dunsink Observatory. The Dome houses the 12 inch South telescope



although there has been no telescope there in over a century; it's now a lecture room. Peter started by giving us a history of the observatory. It was founded in 1774 by a bequest of £3000 from Francis Andrews of Trinity College – Andrews' family weren't happy with their inheritance being squandered on astronomy, and sued, but lost. The first director was Revd Henry Ussher, who spent his time building the observatory; the second director, and first Royal Astronomer of Ireland, Revd John Brinkley, who calculated the longitude of the observatory, and made observations to try to find stellar parallax, for which he developed mathematics which were a precursor of the least-squares techniques.

The third director was William Rowan Hamilton, who was selected, in 1821, at the age of 21, ahead of future Astronomer Royal George Biddell Airy. Hamilton is revered in Ireland as their greatest scientist. Physicists know him for the Hamiltonian, a formulation for solving problems in mechanics and quantum mechanics. Mathematicians know him for the discovery of quaternions, a generalisation of complex numbers which has modern-day uses in computer graphics. Hamilton first visualised the fundamental equations of quaternions ($i^2 = j^2 = k^2 = ijk = -1$, which appear, incompletely, on an Irish stamp) whilst walking into Dublin from the observatory, along the Royal Canal. Scared that he would forget, he carved these equations into the stonework of a bridge over the canal. The Broom Bridge is now a tourist attraction for nerds. Every year, on the anniversary of the carving, a procession sets off from Dunsink to visit the bridge and honour their former director. Hamilton also predicted the phenomenon of conical refraction through a biaxial crystal. This was a theoretical prediction, not observed in the laboratory until a few months later. Sadhbh brought in a piece of apparatus to demonstrate conical refraction to us.

For all his undoubted genius, Hamilton was not a great success as observatory director. He was accused, a little unfairly, of not doing enough observing. He employed his sisters as observing assistants (shades of the Herschel family). He died in office in 1865 and was replaced by Franz Brunnnow. Robert Stawell Ball took over eight years later. Later in his career, Ball was a famous populariser of astronomy, the Patrick Moore of his day, but in his time at Dunsink his major contribution to science was a treatise on the theory of the screw. Peter showed us a copy of it – it looks dreadfully boring.

After the second world war, renaissance came from an unlikely direction. Eamon de Valera, the president of Ireland, wanted to establish a Dublin Institute for Advanced Studies (DIAS), concentrating on subjects dear to his heart. Fortunately, these included astronomy, and so Dunsink became part of DIAS, where it remains today. A chance meeting of de Valera and Harlow Shapley at Shannon airport led to the setting up of the Harvard-Dunsink-Armagh telescope in South Africa – a good chance to encourage cross-border scientific collaboration in Ireland but hamstrung by the rise of apartheid in South Africa.

These days Dunsink houses offices for DIAS researchers. Peter Gallagher leads a team of solar researchers, and one of the instruments he uses to study the Sun is the I-LOFAR array at Birr, of which he is also director. There are also groups studying star formation, planetary magnetospheres and high-energy astroparticles. Peter is also directing the renovation of the observatory building, with the eventual aim of applying for world

heritage site status for Birr, Dunsink and Armagh, once again encouraging cross-border co-operation. It helps that the design of the Dunsink observatory, with a dome on top of the building, was innovative – but the dome was not very successful, with vibration problems.

There is much history in the building. Petre and Sadhbh showed us the mirror from the Harvard-Armagh-Dunsink telescope, and the coelostat which the Sobral party used to observe the 1919 solar eclipse and take the pictures which verified the predictions of Einstein's Theory of General Relativity.

These days the only observing that takes place on the site is public observing sessions in the smaller dome. These use the James South telescope, a 12-inch refracting telescope on a mounting by Grubb. The lens is a Cauchoix, which originally belonged to Sir James South, a leading observer from the mid-nineteenth century and one of the founders of the Royal Astronomical Society. It was meant to be part of a major telescope for South, but he got into a damaging legal dispute with Edward Troughton, and the telescope never came to fruition.

Peter and Sadhbh demonstrated the telescope to us, opening the dome and engaging the clock drive (of course, it was daytime, so no actual observing was possible). The telescope is well-balanced and moves easily; the dome moves smoothly.

The Society would like to thank staff and guides at all three sites, for their kind assistance and hospitality, John the trip bus driver and special appreciation to SHA Meeting secretary Mike Frost for planning, organisation and making arrangements.

Mike Frost
Meeting Secretary
Society for the History of Astronomy
<https://societyforthehistoryofastronomy.com>

Leicester Astronomical Society

Ann Bonell



Image Left: LAS members at Lenchwood Observing Weekend

The Leicester Astronomical Society (LAS) meets on the 2nd and 4th Tuesdays of most months at the National Space Centre (NSC) in Leicester. On these occasions we have talks by professionals, well-known amateurs and indeed our own members. As well as in-person at the NSC, a Zoom link is available for those who are unable to attend for whatever reason. Everyone is welcome at our meetings but non-members are asked to pay £3 on the door.

For 2026 we produced a calendar showing members' images. This was received very well and a 2027 edition is already in planning. Many of the images were winners in our twice-yearly astrophotography competitions. These always attracts many high quality entries. What the amateur can produce these days is on a par with what the professionals were rightly proud of only a few decades ago!

A very strong side of LAS is our outreach. We go along to schools, cub etc groups armed with telescopes and meteorites as well as providing observing at the NSC's Space Lates events.

Society observing weekends away are held twice a year. LAS members go to the Lenchwood Trust site near Evesham in Worcestershire. Accommodation is in very comfortable, well equipped lodges surrounded by dark 'big' skies.

We are looking forward to participating in the August 12 Eclipse Event at the National Space Centre. This will be followed by our Perseid Meteor Watch at a location in the countryside. Fingers crossed that the clouds have not been informed about these back-to-back events!

Coming up:

All meetings start at 7.30pm

18 August

Annual Members Evening

8 September

Steve Louth: 'Astrophotography'

Including some general astronomy history, including Lord Rosse's Leviathan, Isaac Roberts' photos and Hubble's Cepheid variables, as well as the faulty Hubble Space Telescope

22 September

ONLINE ONLY

Sandra Brantingham, British Astronomical Association
The Aurora and NLC's

13 October

Dr Julian Onions, Nottingham University:
Black Holes - are they really that bad?

Ann Bonell

Leicester Astronomical Society

<https://www.leicesterastronomicalsociety.co.uk>

<https://www.facebook.com/Leicester.Astronomical.Society>

145 years of astronomy in Liverpool

Supported by Liverpool Astronomical Society
18th & 19th September

Featuring talks by:

PROF. ANDY NEWSAM

Friday 18th, Quaker Meeting
House L1 3BT

**MIKE FROST, MARTIN CROW,
DR PAUL ABEL, JIM LATHAM**

Saturday 19th, Liverpool Central
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Suggestions for those wanting to Photograph an Eclipse

Owen Gwynne (Mid Cheshire Astronomical Group)

At the end of this article, there is a general piece of advice that is very commonly given to people going to their first total eclipse.

On the evening of 12th August, there will be a Solar Eclipse that tracks from Iceland, down the North Atlantic and across the Spanish mainland and the Balearic Islands.

Solar Eclipses have separate phases - but most people will only see one of them.

The **Partial** phase is when only part of the Sun's disc is covered by the Moon.

The **Total** phase is when the Moon fully covers the Sun's disc and the sky goes dark.

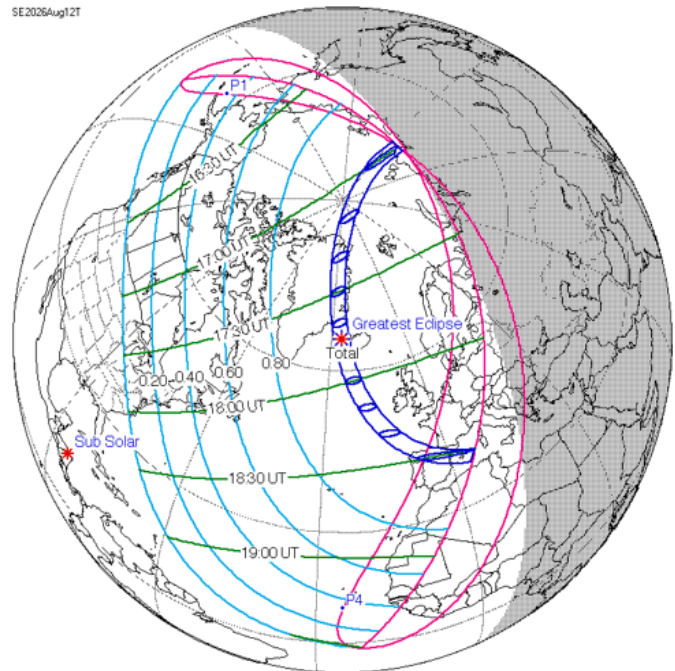
Visibility of the Partial phase covers a much wider area on the Earth's surface, and lasts a lot longer in time as well, so most of your photographic opportunities will be for Partial eclipses - and if you're not fortunate enough to be on the path of Totality, this is the **ONLY** type of photography you'll be able to achieve.

Two points:

- For the Partial phase of the eclipse, you must use a suitable filter, and ensure it is firmly attached to your camera
- Even if you are on the path of Totality, you will only have a short time to be able to take the photographs.

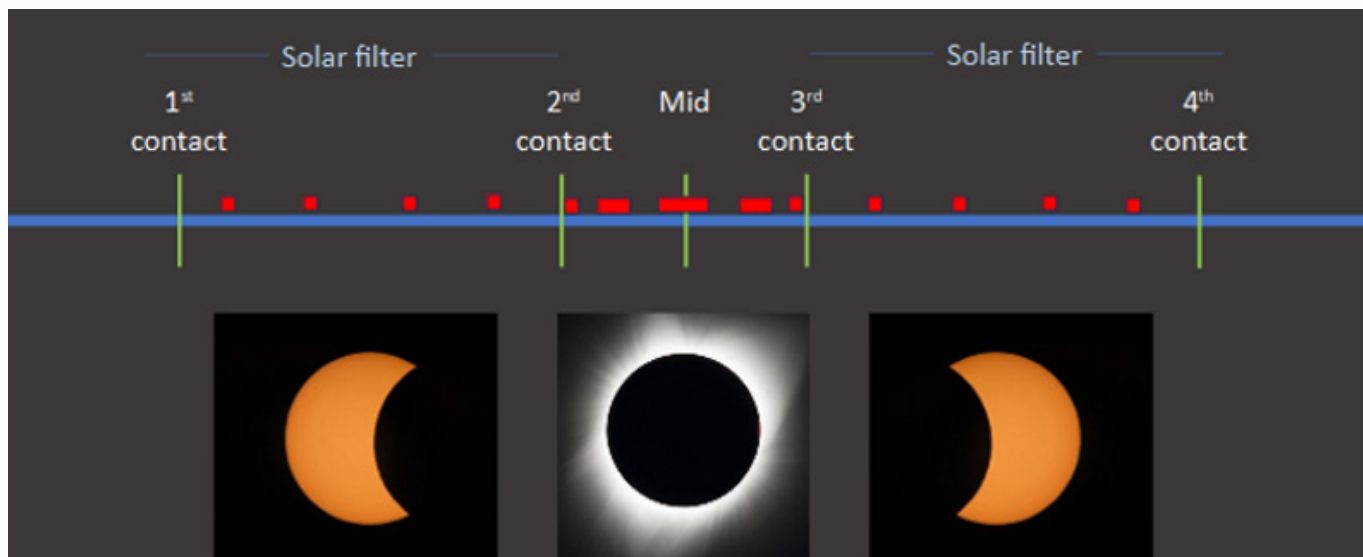
For people on the path of totality, the observer will see a partial eclipse before and after the period of totality, so there are two periods when the partial phase can be captured.

SE2026Aug12T



There are four key times associated that need to be determined for an observer in a specific location

- 1st Contact is when the Moon first encroaches on the disc of the Sun – this will be at the right hand edge of the Sun (for people in the Northern Hemisphere) and the start of the partial eclipse.
- 2nd Contact marks the beginning of totality – this is when the Sun's Corona may be visible
- 3rd Contact marks the end of totality
- 4th Contact is when the Moon finally leaves the Sun's disc



A comprehensive summary of the options available for eclipse photography can be found at Alex Conu's article <https://www.photographingspace.com/photograph-total-solar-eclipse/>

Additionally, there are software tools to help you with imaging eclipses - though many will only work with specific camera brands

Eclipse Orchestrator (free version) – laptop + Canon/Nikon

<http://www.moonglowtechnologies.com/products/EclipseOrchestrator/index.shtml>

SETnC – laptop + Canon

https://robertnufer.ch/06_computing/setnc/setnc_page.htm

Eclipse Droid - Android phone + Canon/Nikon

<https://www.strickling.net/eclipsedroid.htm>

Eclipse Maestro – Mac + large range of cameras

Despite what is said elsewhere this software does not run on iPhone/iPad

http://xjubier.free.fr/en/site_pages/solar_eclipses/Solar_Eclipse_Maestro_Photography_Software.html

Basically, using the software you plan what image settings you want at each stage of the eclipse (aperture, ISO, exposure time) and block them out beforehand.

With the eclipse details loaded alongside your plan - on the day you enter your location and time as accurately as you can, and the software makes the camera follow your plan via a suitable cable connection (hence the need to use a compatible camera brand).

The piece of advice that I mentioned

If this is your first total eclipse - be aware that most people say it's more important that you experience the eclipse than that you get the best images of it.

Very likely you will not be getting the best ever images - so concentrate on enjoying it.

Maybe use a video camera (with a filter) to capture the progression of the partial phase, and then scan around during totality to capture the responses of the people around you.

The press next day will be full of really excellent images that will remind you of the day itself.

What you can do though is capture the pinhole effects of the Sun during the partial phase like the images on the right.



This was imaged during the Mexico 2024 Solar Eclipse by my sister in law, taken by casting the shadows from a perforated leather jacket

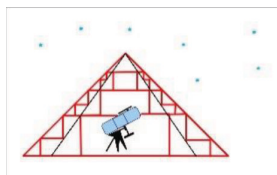


Another option is to use tiny mirrors to cast pinhole images of the Sun during partial phase. I found these in Poundland recently

Owen Gwynne
Mid Cheshire Astronomical Group
https://www.facebook.com/groups/243183369351766/?locale=en_GB

Milton Keynes Astronomical Society

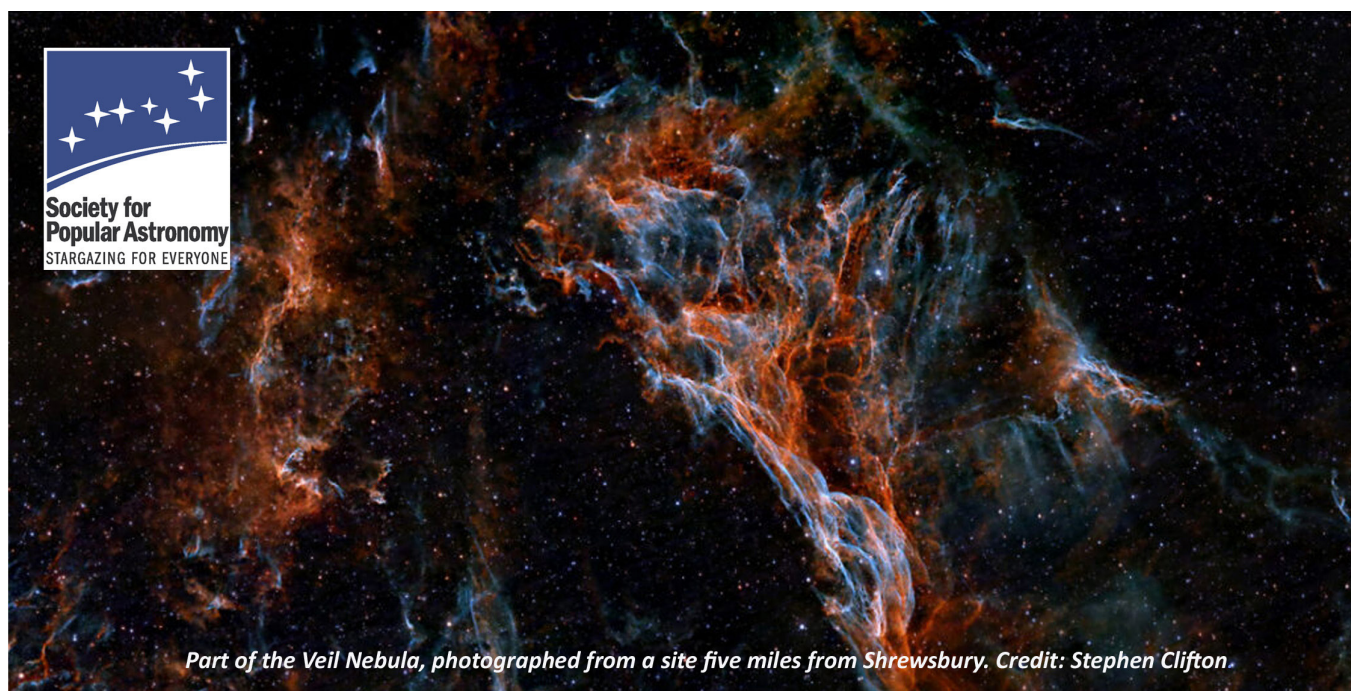
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Programme 2026

Date	Meeting	Programme Event
16 January 30 January	Astrodome Guest Speaker	By members Dr. Mike Leggett Astronomy & Exploration
13 February 27 February	Astrodome Astro Quiz	By members Mark Hurn
13 March 27 March	Astrodome Guest Speaker	By members Sheridan Williams Eclipses
10 April 24 April	Astrodome Oscars	By members By members
8 May 22 May	Astrodome Guest Speaker	By members Mark Hurn via Zoom History of the Sun
5 June 19 June	Astrodome Guest Speaker	By members Mary McIntyre General Astrophotography of Meteors
3 July 17 July	Astrodome Guest Speaker	By members Paul Fellows Northern Lights & Space Weather
31 July	Astrodome	By members
14 August 28 August	Short Talks Astronomers Question time	By members By members
11 September 25 September	Astrodome Guest Speaker	By members Dr. Matt Bothwell Update on James Webb Telescope
9 October 23 October	Astrodome Guest Speaker Richard Lambert Memorial Lecture	By members RLML Mike Frost Who's who in the Moon?
6 November 20 November	Astrodome AGM	Annual General Meeting + Election of New Committee
4 December 18 December	Astrodome Christmas Social Members & invited Guests Event	



Part of the Veil Nebula, photographed from a site five miles from Shrewsbury. Credit: Stephen Clifton.

Viewing and Photographing Deep-Sky Wonders

Residential Weekend Course: Friday 13 to Sunday 15 November 2026
Preston Montford Field Centre, near Shrewsbury

Come for a weekend learning about Astronomy in the Shropshire countryside. Our team of experts will be covering all aspects of visual and photographic observing of the amazing objects in the autumn skies.

We will cover:

- Choosing a telescope and its mounting, including smart telescopes
- What you can see, from galaxies to star clusters and nebulae. How to locate them and what they are
- How to observe them both visually and using imaging techniques, including with smart telescopes. Sketching at the eyepiece
- Choosing the right filter and observing method
- Image processing methods, and software choice

The weekend is fully residential, and is open to all, whether an SPA Member or not. The cost of full board and accommodation is £275 for a single room. Some shared rooms are available for families etc at a cost of £255 per person.

For more information and to book, please go to popastro.com/deep-sky-wonders

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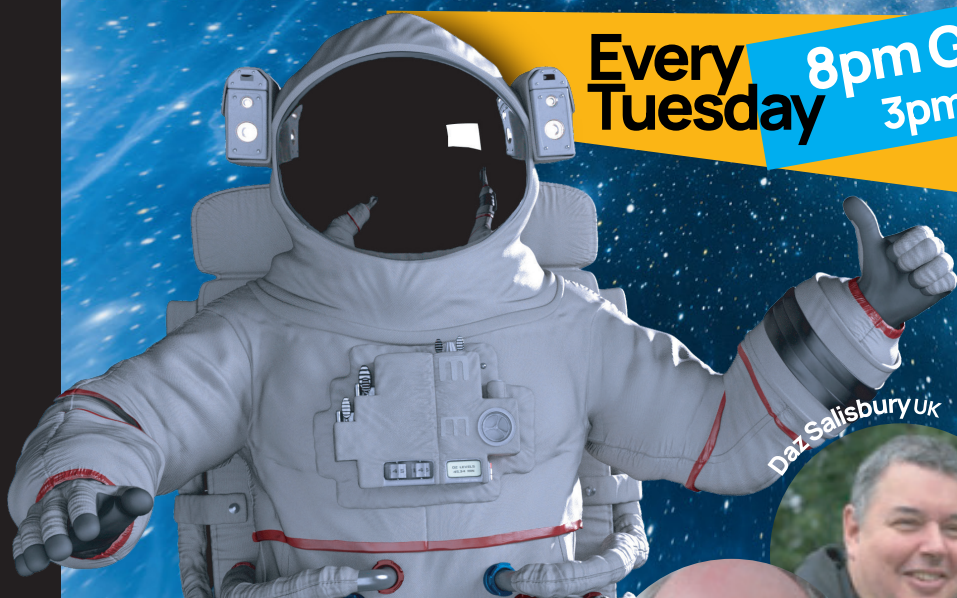
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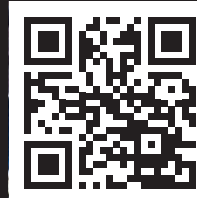
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Preseli Astronomy Group

In the very west of Wales

By Peter Sharp



Preseli Astronomy Group members are keen amateur astronomers, from absolute beginners to lifelong astronomers, some of whom produce publication quality images.

Our meetings are held monthly in Letterston Memorial Hall. We have a variety of topics for presentations also, when the clouds clear and weather permits, we bring out the scopes to ensure we all get the chance of a practical hands on experience.

These telescopes are also made available for hire by any group members and there is plenty of helpful advice for those new to astronomy.

New Developments

We have had a very active year with numerous engagements involving Outreach Activities in the Pembrokeshire area and the new arrival of a Fripon Meteor Detection Camera, meaning that we are now part of a world wide network for meteor detection.

Outreach

Early last year everything kicked off with us when we were invited to be involved with Dark Sky Week held each year by Pembrokeshire Coast National Park.

This involved a series of activities at the end of August to promote the idea of reducing light pollution and all the advantages this brings.

We were active in two locations - Skrinkle Haven near to Manorbier on the South Pembrokeshire Coast, with its wonderful Dark Skies and Oriel y Parc, and the Pembrokeshire Coast National Park Visitor Centre in the beautiful and much visited city of St Davids.

Our astronomy presentations were very well received and were delivered by us to nearly one hundred people. It was also possible to undertake some Solar Imaging and night viewing/imaging as the skies were clear in Skrinkle Haven.

We have been invited back to St Davids again this year and will be delivering two new presentations to the public on the 27th of August at Oriel y Parc. As well as these presentations, it is our intention to include solar imaging and night astro viewing for the public, subject to weather conditions, of course.

As a spin off from the Dark Sky involvement we are now presenting Introductions to the Night Sky on a regular basis to numerous WI groups in the county. Additionally, we have just spent a very successful afternoon with an Over 60s Group at Wolfscastle as well as doing presentations and holding astronomy discussions with the

Community Coffee Morning and Day Groups organised by St Davids City Council in the City Hall.

We are now developing our involvement with youth activities in the area as well as a Special Needs Group where we hope to inspire young people who are facing substantial challenges in life.

Solar eclipses, such as the one on the 12th August 2026, also offer great opportunities for us to engage with the public.

Meteor Camera for St Davids

After some negotiations with Manchester University, we are now hosts to a Meteor Detection Camera (Fripon) fitted to a member's houses close to St Davids. This has been organised by the University in conjunction with The National History Museum in London.

Preseli Astronomy Group is very proud to be part of a world wide network of cameras produced by Fripon in France and operated by SCAMP in the UK. Any meteorites that we are able to track, along with other stations, will be easier to locate on the ground and of immense value to space science.

We have already had a number of small contacts, but nothing as yet coming to Earth.

Membership and Profile

Living where we do in Pembrokeshire, at the very Western limit of Wales we have a limited population from which to source new members. In addition to individual membership at £20 per year, we offer family membership for a small additional cost and a remote membership for half price, allowing those members, who cannot attend regular meetings, to follow us, and interact on WhatsApp etc. Our most distant member to date lives in Sheffield.

Our meetings are held on the first Tuesday of each month except August and small groups of us meet in different coastal locations when the skies look really promising.

For more details please visit: preseliastromygroup.org

Or email us at: preseliastromygroup46@gmail.com

PeterSharp
Preseli Astronomy Group, Letterston, Pembrokeshire
preseliastromygroup.org



Image Above: Crescent Nebula, NGC 6888 taken in only 8 minutes, on the occasion at Skrinkle Haven, using a Seestar S50

Rob Jones

Images Left from the top:

Presenting 'What to see in our Pembrokeshire Skies' at Oriel y Parc

Fish Head Nebula, IC 1795

Steve Richards

Rosette Nebula, NGC 2237

Steve Richards

Setting up for Solar Imaging and Viewing at Skrinkle Haven

Rich Davies

Preseli Astronomy Group, Letterston, Pembrokeshire
preseliastronomygroup.org

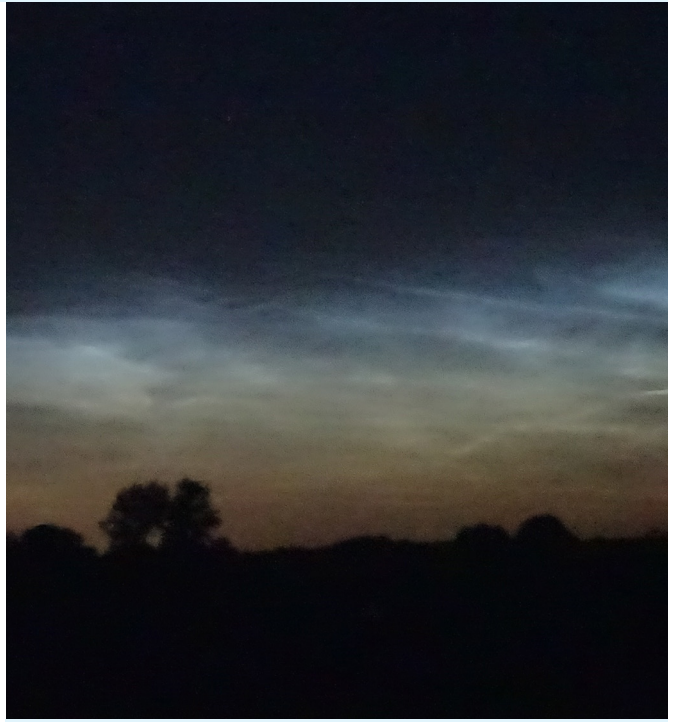
Reader's Images

Peter Davis



The Moon, Jupiter, Venus and Mercury

Taken on 18th June, 2026 at around 2130 local time (8 hours behind BST) when I was staying in Pinnacles National Park, California, USA, with my family. The latitude was 36.491508, and the longitude was -121.197243 (according to Dr Google!) The image was taken using my Sony DSC-WX500 digital camera. It was perched on the top of a fence with a ten second delay so that I didn't get "shutter-shake."



Noctilucent Clouds

Taken on 29th June, 2026 at around 0230, using my Sony DSC-WX500 camera on a small 4" tripod perched on a bedroom windowsill at my home in Whitnash, Leamington Spa. Again with a ten second delay to prevent "shutter-shake."



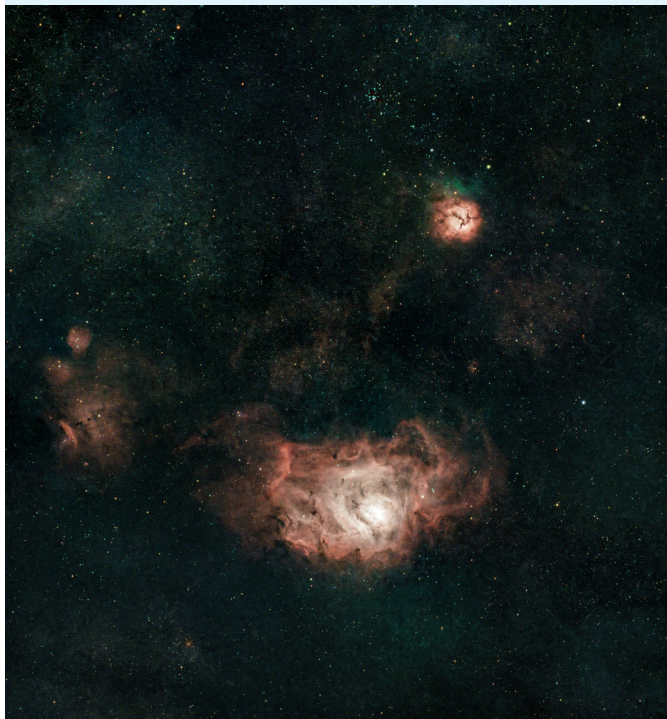
Sunspots

This photo show some recent huge sunspots projected onto white card through binoculars. Taken on my iPhone around 0700 on the 2nd July, 2026 at my home in Whitnash, Leamington Spa. Not especially distinct, but it shows how an amateur with minimal equipment can do some solar observation.

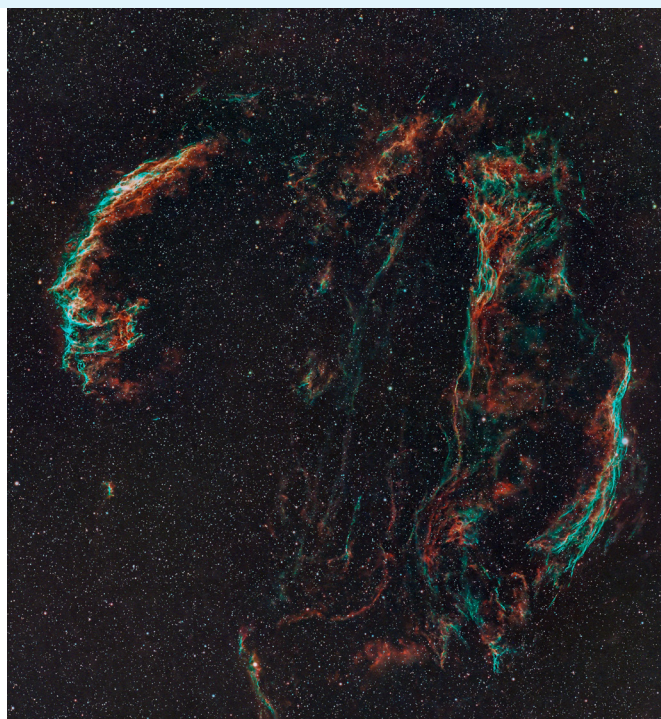
Peter Davis
Stratford-upon-Avon Astronomical Society

Reader's Images

Nick Williams



M8 Lagoon Nebula/M20 Trifid Nebula (Sagittarius)



Veil Nebula complex (Cygnus)

Both targets above were imaged in July 2026 from Chingford, NE London, using my Askar FMA180 telescope & ZWO 533MC camera with Optolong L-Extreme dual narrowband filter. I'm particularly pleased to have been able to image the Lagoon Nebula, as it's always quite low in the sky so the imaging window is quite limited.

Nick Williams
Loughton Astronomical Society
<https://las-astro.org.uk>



Stratford-upon-Avon Astronomical Society

The Stratford-upon-Avon Astronomical Society meets every first and third Tuesday at 8pm (doors open at 7.30pm) at Alderminster Village Hall. Everyone is welcome, especially beginners and those wanting to learn more. The first Tuesday is a Club Night; in August Club Night will be on 4th August.

On the third Tuesday, 18th August the speaker will be Martin Jones with a talk called 'Cosmic Coincidence or Stellar Siblings'. Please note that the speakers usually start quite promptly at 8pm.

Club Nights offer more information on what to look out for each month. If it is clear we do some observing just outside the Village Hall, so please join us. There is no charge initially to come along and find out more, but if you do want to become a member then the fee is just £20 a year and it's free if you are in full-time education.

For more details go to the website <http://www.astro.org.uk>
or contact the Chair, John Waller, john.waller@astro.org.uk or on 07703 192188.

Happy Observing!

Mid-Kent Astronomical Society



Forthcoming Events

11 September:

MKAS 50th Anniversary Observing Evening **ALL WEATHER EVENT**

Join us for the first of our MKAS 50th Anniversary meetings at Bredhurst Village Hall. There will be a few short presentations before we head out to the field for some September sky observing with a range of our MKAS telescopes.

Light refreshments will be available during the evening along with plenty of helpful advice and information about telescopes and observing.

Please feel free to bring along your own telescopes to set up in the field.

We keep our fingers crossed for clear skies but if the weather is not favourable, please still come along for a chat and a pre-recorded presentation.

PLEASE NOTE: Those bringing their own telescopes do so at their own risk. MKAS accepts no liability for loss or damage to such equipment.

25 September:

MKAS 50th Anniversary

Prof. Jan-Peter Muller:

Computer vision and AI applied to planetary surface exploration

Computer vision and AI applied to planetary surface exploration from orbit & rovers including interactive VR exploration.

Meeting Information

Our meetings are open to members and visitors. Fees are £2 members / £5 non-members payable on the door. Unless otherwise stated, meetings normally open at 7:40pm for an 8pm start, finishing around 10pm. The meetings are held at Bredhurst Village Hall, Hurstwood Road, Bredhurst, Gillingham, Kent ME7 3JZ. Speakers may change at short notice. Please check our website for the latest event details and other information, at

www.midkentastro.org.uk/events

Rebecca Whentringhame
Press Secretary, Mid-Kent Astronomical Society
making astronomy accessible to all