

The Quarterly Newsletter of the Education and Outreach
Section of the British Astronomical Association

Issue 6 2026 May



E & O



From the Editor

Alexandra Hart

Coming up in this edition of the newsletter, we have an incredible selection of articles showcasing everything you've been doing this winter and spring.

It has been wonderful reading about what everyone has been up to, and I encourage you to keep sending in your updates. Please email EandO@britastro.org with "Newsletter" in the subject line before **31st July 2026** to be included in the next edition.

The newsletter not only helps us learn about each other's activities but also serves as a valuable record of our collective successes. If everyone wrote a short diary of the events they held, how many people attended, stories from the day—and submitted it to the newsletter, we'd have a fantastic archive of our work.

So please, write up your event diaries as you go, and submit them before the next deadline. That way, everyone can read about the joy you're spreading and feel inspired to keep going.

If you have any other articles you'd like to contribute, such as how-to guides, educational content, event advertisements, volunteer requests, or anything else others could benefit from; please send them in!

Coming up in this newsletter we have:

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On the cover: Helen Usher helps young attendee at the Back to Basics Newquay launch the rocket he made earlier (see p.6).

Dates for your diaries:

E&O Section Zoom get together – 19:30 BST Thursday 2nd July 2026

Next deadline for article inclusion in the summer newsletter **31st July 2026**

Enjoying the newsletter and being part of the Section, but not yet a BAA member?

Why not take the next step and join the British Astronomical Association!

As a member, you'll gain access to a vibrant community of observers, talks, and resources that help you deepen your interest in astronomy, education and outreach — and your support helps expand the work we do together.

Join today: <https://britastro.org/join>

Need a Speaker for Your Event?

Looking for an engaging speaker for your next astronomy-related event? Be sure to check out <https://astro-speakers.org>. It's a great starting point for finding speakers with a passion for astronomy and space science.

Welcome from the Section Director



Helen Usher

Welcome to another edition of the E&O Section newsletter. Thank you again to all our contributors and Alexandra Hart for pulling it all together. It has been another busy few months.

I enjoyed catching up with lots of people at Astrofest in February, signing people up for

the BAA, talking about the section, encouraging new members (we have 66 members now) and talking about how we might work with groups who have barriers to engagement in astronomy (for example visual impairments, the deaf community). We have started exploring how we might use 3D modelling and printers to produce tactile models of the sun and eclipses for visually impaired people, and it has been very useful to follow up some collaboration opportunities which were suggested at the last section meeting.

I attended the South West Spacefest in Bristol in March (see p.15) and loved doing our hands on demonstrations in the shadow of Concorde! As well as interacting with lots of attendees of all ages and backgrounds, it was really useful to be able to network with other education and outreach groups (and sign up section members). I have a few opportunities to follow up later in the year – including looking at the possibilities for getting visitors to the Herschel Museum in Bath and Aerospace Bristol to engage with the Comet Chasers project, making observations of comets, building on the work of pioneers like Caroline Herschel and the scientists on the Giotto Mission. (Giotto was built by British Aerospace in Bristol). I really enjoyed the day.

The end of March involved a trip to Manchester to attend RASReach – a good day networking with other astronomy groups, both professional and voluntary (see p. 14).

And the final event was the BAA's Back to Basics Eclipse Special in Newquay on the May Bank Holiday weekend – maybe with hindsight expecting weather suitable for solar observing on a bank holiday weekend in the UK was a bit

optimistic!! But as you can read later (p. 6), we still had a great day (and the weather on the Bank Holiday Monday was wonderful for a walk along the coast path).

I'll be on the BAA stand at the Federation of Astronomical Societies (FAS) conference in Cardiff on 30th June, so if you're there please come and have a chat. We're keen to build more links with local societies, particularly education and outreach officers, to see how we can best work together to make our limited volunteer time achieve more/deeper engagement.

I'm pleased to say that the Eclipse website



developed by Go Stargazing and First Light Optics is now live! www.ukeclipse.com. The core content is excellent, and the plan is for partners (including the BAA) to provide more content and links between now and the eclipse date. If you are running events then don't forget to let Go Stargazing know and they will add to the database of events, which will allow people to search for events close by.

The site has a link to how to get solar glasses for events at very, very low cost (£25 for 200 pairs) <https://gostargazing.co.uk/solar-glasses-for-the-august-2026-partial-eclipse/>

If you have any outreach material for the eclipses that you would be happy to share, then just let us know and we'll arrange for it to be uploaded to the site.

The next three months will be busy in preparation for both the BAA's next Work Experience project in July (details p.22) and of course the eclipses in August. □

Astronomy for Education Workshop

The International Astronomical Union (IAU) Office of Astronomy for Education is running another conference on Astronomy for Education from 17-20th November 2026.

More details about the event, including deadlines for submitting abstracts for talks, and registration, can be found at <https://www.astro4edu.org/workshops/iau-oe-conference-2026/>. The workshop is fully online and there is no cost to submit abstracts or attend.

The abstracts, talks and summary of proceeding are made available after the event too. The proceedings for the 2025 Workshop have just been made available.

The 7th Shaw-IAU workshop on Astronomy for Education was held from 18 - 21st November, 2025. The theme was astronomy education in schools in practice (primary and secondary schools) and topics included:

- Astronomy education research
- Teaching methods and tools
- Science focus session on galaxies

Education focus session on teaching with authentic data.

The full proceedings, detailing all the talks, are available at <https://zenodo.org/records/19111022>. There is a great deal of excellent material contained in the document.

One talk which might be particularly interesting for those who organise observing sessions is included as the next article.

Observations of the Sky as Family and Community Practices: Insights from Naturalistic Research

Speaker: Joana B. V. Marques, The Instituto de Astrofísica e Ciências do Espaço (IA), Portugal
Talk link: <https://youtu.be/N637cIUyT68>



Observations of the sky are very popular activities of astronomy education and communication, reaching thousands of people all over the world. In these activities, guides (professional and amateur astronomers, educators and science communicators) show the sky to all types of audiences.

These informal observations are many times the first contact people have with astronomy and the astronomy community, but there is a lack of research systematically analysing them (Marques, Carlin, Moutinho, 2020). In response, a study to characterise observation of the sky was conducted. Data were collected in different institutions and from different events in Portugal.

Observations with the public were recorded with minimal disturbance for the participants. In total, 15 hours of video and audio recordings were analysed using ethnomethodology and conversation analysis (Garfinkel, 1967; Sacks,

1992), a naturalistic approach that is sensitive to interactional practices that occur in these activities.

The analysis of these events of observation of the sky revealed a group of interactional characteristics and practices that are central to these educational activities. Namely, they are “equipmentally mediated” (Marques, Carlin, Moutinho, 2020); guides show the celestial objects through techniques of “seeing by proxy”, that is, methods of facilitating the viewing at the eyepiece indirectly (Marques, Carlin, Moutinho, 2020); interactions around the telescope are “emotionally charged” (Marques, Carlin, 2025); and observations of the sky are shared activities (Marques, Carlin, 2025).

Furthermore, by closely observing the dynamics that unfold during these observations, it becomes clear that these activities are highly informal and, in most cases, are not conducted individually but rather in small groups of family or friends who participate together in these observations. These constitute family / friends learning units, or clusters, with unique characteristics.

To study and understand these educational activities and the learning that happens during observations of the sky we should focus on these family learning clusters. The analysis shows that learning circulates within these clusters, whether about astronomy, telescope manipulation, or information about what and how to observe, as illustrated by the example in Figure 1. Different members of the family/friends clusters have different challenges and also different skills. These group members mobilize in different ways to encourage and help each other, tailoring explanations to specific group members and drawing on their unique knowledge and experiences. Within these small clusters, multiple observations occur, with people taking turns and returning to observe more than once, for example, to see some other details discussed within the group. Within these groups, skills learned at the telescope are exchanged with others, and reports of what is observed are discussed. Within these groups, emotions, experiences and enthusiasm are shared. Within these groups help, encouragement and connection occurs. Within these groups, learning happens and the experience of observing the sky is shared.

Research on family learning is a growing field

of enquiry (Ellenbogen et al., 2004). The results of this study show that family and friend groups are central to the unfolding of observations of the sky and to the learning that occurs in these activities and should be taken into account when analysing, understanding and planning these activities.

ESA Teach with Space Online Conference 2026

Building on the success of [previous editions](#), registrations are now open for the **6th European Space Agency (ESA) Teach with Space Online Conference**, taking place on Wednesday 8th and Thursday 9th July 2026. This international event by [ESA Education](#) invites teachers and educators to discover how space can be used as a powerful and inspiring context for teaching STEM subjects.

https://www.esa.int/Education/Teachers_Corner/Join_the_ESA_Teach_with_Space_Online_Conference_2026

Through inspiring talks by ESA experts on topics such as searching for life beyond Earth and space technologies shaping the future, hands-on educational activities, and interdisciplinary projects based on real space missions, participants will gain practical ideas and classroom-ready resources to engage their students. The programme also offers the unique opportunity to meet an ESA astronaut, exchange experiences with fellow educators, network with peers, and connect with representatives from national [ESEROs](#), fostering collaboration across the European education community.

Over the course of the two days, teachers and educators will explore different Science, Technology, Engineering and Mathematics (STEM) topics through the context of space activities and missions, by hearing directly from space experts. They will discover inspiring ways to use space as a context for teaching STEM in the classroom, explore interdisciplinary projects, experience demonstrations offering engaging classroom activities, and learn about potential career paths in the space sector to share with their students. The conference also offers an overview of the ESA Education programme, including new didactic resources and interdisciplinary projects, and keynote speakers from different ESA activities. □

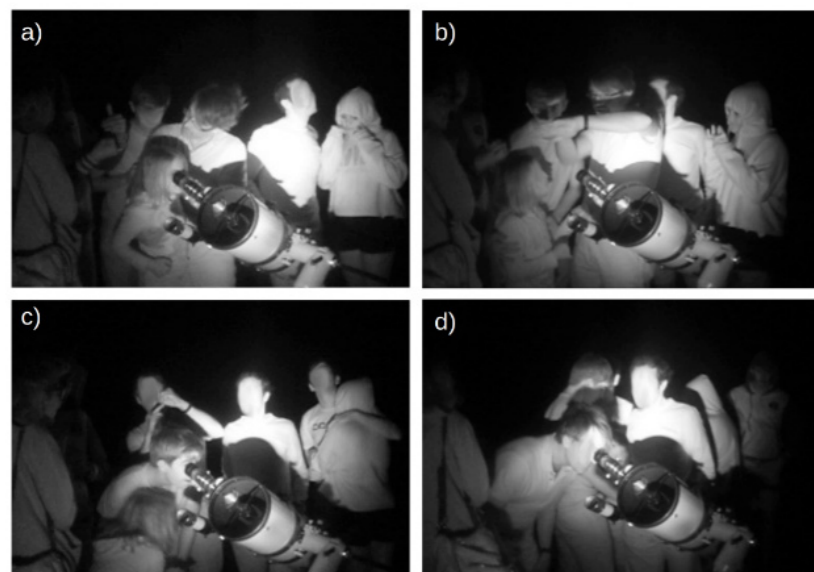
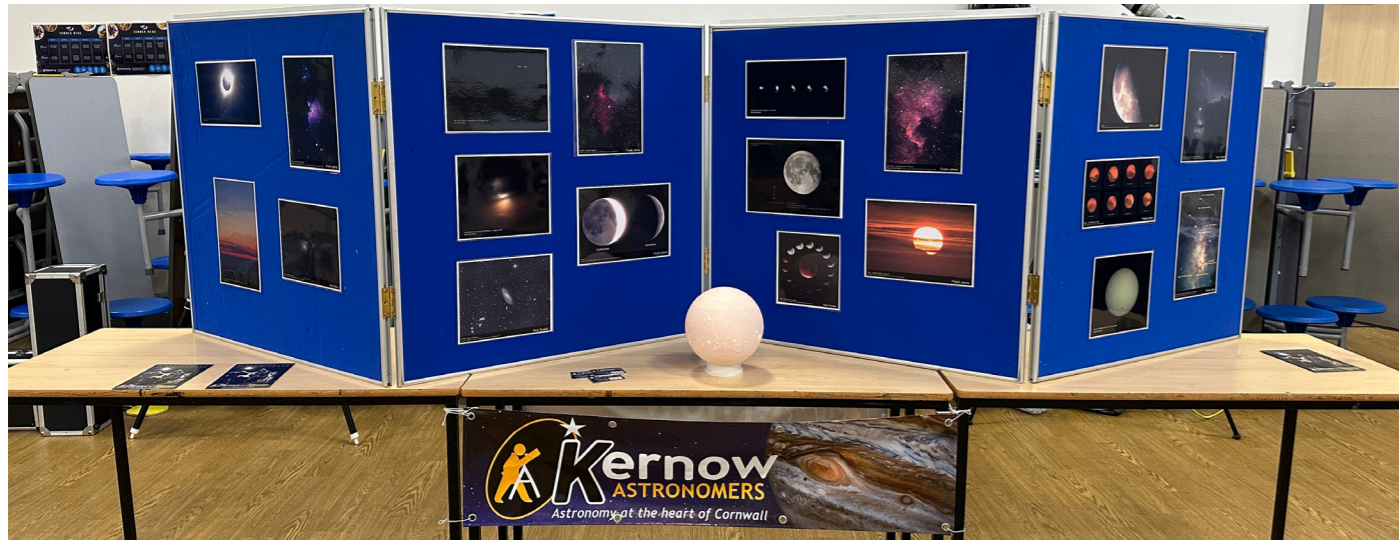


Figure 1:

Family cluster observing Saturn. The mother, to the left of the screenshots, cannot understand well what she is observing and just sees an oval form. All the family gets mobilised to help her distinguish the planet from the rings. Each member of the family tries to help in a different way. In these screenshots the father can be seen: a) listening to her description of her problem; b) gesturing to represent the tilt of the rings as they are visible through the eyepiece; c) gesturing that the planet is a sphere in the middle and the ring is around it; d) observing again to better describe the sight to the mother.

Back to Basics Newquay



Alexandra Hart

On Saturday 2nd May 2026, the BAA, together with its partners, the Society for Popular Astronomy (SPA), First Light Optics, and Kernow Astronomers, hosted a successful “Back to Basics” event in Newquay. Our hosts, Kernow Astronomers, were exceptional, organising an excellent venue at Tretherras School, Newquay, which included a large lecture hall and adjoining exhibition area.

The exhibition space featured an extensive stand from First Light Optics (FLO), where attendees were able to view and handle a variety of telescopes, as well as speak with Grant and Rob about their individual equipment requirements. Additional stands were hosted by the BAA, SPA, and Kernow Astronomers, alongside Carolyn Kennett of Archaeoastronomy Cornwall, who showcased the many historical astronomy sites of interest across Cornwall. Visitors could also enjoy displays from Comet Chasers, opportunities to handle genuine meteorites, and a rocket-building area, with launches taking place at lunchtime.



The day featured a full programme of excellent talks, including:

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excellent talks, including:

- **Introduction to the Night Sky** — Cath Adams, Society for Popular Astronomy (SPA)
- **Observing the Sun** — Nigel Price, Kernow Astronomers
- **Observing the Moon** — Tony Cook, BAA Lunar Section (remote presentation)
- **Introduction to Telescopes** — Frank Johns, Kernow Astronomers
- **Ancient Sun, Moon and Eclipse Observations** — Carolyn Kennett, Archaeoastronomy Cornwall
- **Solar and Lunar Eclipses** — Mike Frost, BAA Historical Section and eclipse chaser
- **Eclipses in the Solar System** — Philip Jennings, BAA E&O Section and Journal Editor
- **Imaging and Astronomy with a Seestar** — Mark Godwin, Kernow Astronomers
- **To the Moon: Modern Lunar Exploration** — Jeni Millard, Sky Guide App Editor and BAA E&O Section

Refreshment breaks provided an excellent opportunity for attendees to chat and ask questions of speakers, explore the various stands, speak with exhibitors, and try a range of telescopes with the support of FLO and Kernow Astronomers. Visitors also enjoyed learning about comets and asteroids, and exoplanet transits, with Comet Chasers, handling meteorites, and taking part in sketching activities. A particular highlight of the day was the rocket launching, which proved tremendous fun for all ages and fortunately took place just before the rain arrived. The event concluded with a raffle featuring a number of excellent prizes generously provided by the BAA, SPA, and FLO.

Over 60 people attended the event, including three participants under the age of 18. Despite the very wet weather preventing any solar observing sessions, attendees greatly enjoyed the day, with the additional time allowing for even more rocket-launching activities.

One young attendee used the opportunity to schedule observations of Comet 29P, for the BAA’s Mission 29P Observing Campaign, using the 2m Faulkes Telescope in Hawaii through Comet Chasers. Remarkably, the resulting images captured the comet during an outburst, producing very useful data for analysis of the evolution of the outburst. As it was also the attendee’s birthday, this made for a memorable birthday treat.

Feedback from the event was overwhelmingly positive, with the majority of attendees reporting that they were either very satisfied or satisfied with the experience. A small number of comments

noted that the seating became somewhat uncomfortable over the course of a full day, and a microphone issue. One particularly popular suggestion for future improvement was simple: “pasties for everyone!” That said, the Kernow refreshment team worked really hard all day to ensure everyone was set up with drinks and biscuits – so a big ‘Thank you’ to them!



Many attendees commented on the knowledge, enthusiasm, and friendliness of all those involved — precisely the welcoming atmosphere the organisers had hoped to create. Mike Frost, in particular, received special mention for his enthusiastic presentation and chats through the day.

Encouragingly, quite a few people said they would be taking their interest further and may now join an astronomy club.

A huge thank you to everyone who helped to organise and participated in this event. It was a great success, and it was wonderful to see so many happy faces throughout the day. □





Liverpool Astronomical Society (LAS)



Russell Parry is welcomed by LAS members on 20th February Credit: Wendy Taylor

Astronomy Public Outreach - Wirral Country Park. Thurstaston Visitor Centre, Saturday 21st February 2026

Despite the forecast of poor weather, the Liverpool Astronomical Society held another successful public outreach event at the local Wirral Country park. Society members had various telescopes available for short views of the crescent Moon, and the planet Jupiter within the stars of the constellation Gemini. However, the society provided displays and demonstrations of telescope, and how images are recorded of distant galaxies, plus deep sky objects which are millions of light years away. There were estimated fifty members of the public, young and old, who enjoyed a series of lectures on astronomy subjects, including what can be seen in the night sky for the coming spring months. The visitor centre very kindly opened its "Whistle Stop Café" which was open for the evening to serve hot drinks and some light refreshments.

The society is planning similar public outreach events later in the year but in the meantime the Society's Leighton Observatory, at Pex Hill, Cronton WA8 5QW is open for visitors' every Wednesday from 7pm during spring and summer months. Please contact: dobs@liverpoolas.org

Gerard Gilligan

The society continues to celebrate its 145th year since formation with membership meetings and public outreach events.

On February 20th the Liverpool Astronomical held its lecture meeting in memory of 17th Century Lancashire astronomer Jeremiah Horrocks (c1618 – 1641). The guest speaker was Russell Parry, who told the spellbinding story the of Apollo 14 Command Module pilot Stuart "Stu" Roosa, his life, and military service and career with NASA.

On Apollo 14, he spent 33 hours in solo orbit around the Moon, conducting an extensive series of experiments. As part of a joint U.S. Forest Service/NASA project, he carried seeds from Loblolly pine, sycamore, sweet gum, redwood, and Douglas fir trees. The seeds were germinated on his return and planted throughout the United States, becoming known as the "Moon Trees".

Some of these seedling trees were sent around the world and some to the UK, but the location of any British planted "Moon Trees" is a mystery, and if any have survived. However, a second-generation tree has been located by the Royal Astronomical Society.

Russell concluded his lecture with a special personal video message to the members of the society from Stuart Roosa son Joe. During the Q&A, the possible location of "Moon Trees" in the UK was discussed, and the possible application for Seeds taken around the Moon by the uncrewed Artemis I mission in 2022.

The Society meets monthly every third Friday at the Quaker Meeting House, 22 School Lane Liverpool, L1 3BT commencing at 7pm.

For more information, and membership details please visit the Society web site at: <https://liverpoolas.org/>

Text with thanks to Russell Parry, Phil Williams and Wendy.



Wirral Star Party - Public viewing Live images.



Wirral Star Party - Public using telescopes to view the Moon.

Credit: Steve Stix and David Galvin.

Astronomy Outreach at an "Earth Hour" Event 28th March 2026 by Phil Williams

Members of Liverpool Astronomical Society participated in an organised "Earth Hour" event with an astronomical outreach session at Kindling Farm, Tarbock Green near Liverpool on Saturday 28th March 2026 on the cusp of British Summer Time. The lead event organiser at the farm was Hayley Greggs and the farm was established under the Kindling Trust, a non-profit organisation focused on improving food production systems making them fairer, healthier and more environmentally sustainable. Earth Hour is a global environmental event organised by the Worldwide Fund for Nature. It is an annual event usually taking place on the last Saturday in March when the public, businesses, cities and towns are urged to switch off non-essential lighting for one hour from 8.30pm to 9.30pm local time. The purpose of Earth Hour is to raise awareness about climate change and environmental issues generally, to

encourage people to act for the planet and to show symbolic support for energy conservation.

Visitors to the event enjoyed two astronomy talks by LAS. members. The first talk was entitled "A meteoric fireball over Liverpool" and dealt with the fireball observed by many hundreds of people across Liverpool in 1914 which exploded with a flash of bright light to the north of the city sending a 15kg space rock crashing to the ground at Appley Bridge near Wigan. The second talk was entitled "The Moons of the Giants" which examined the Jovian moons Io, Europa, Ganymede and Callisto and several of the Saturnian moons.

The LAS meteorite collection was displayed and Society members talked with visitors about the various space rocks that were exhibited. A display of LEGO incorporating a variety of models including an impressive Artemis mission rocket model was particularly popular with the younger visitors. Society members also demonstrated the Society Infra-red camera and talked about the use of infra-red astronomy by the James Webb telescope. Between the two main talks and to coincide with Earth Hour visitors were accompanied to the observing field where a group of enthusiastic experienced LAS astronomers with their telescopes assisted in observation of the Moon and Venus during breaks in the cloud cover.



The outreach event was a great success



and was supported by fifteen members of the Society helping with the talks, demonstrations, exhibits and telescope observations in the observing field. The team at the farm also did an excellent job in organising what was such an interesting and enjoyable event.

Photos credit : Anne Smith / Dave Galvin / Jim Lawler

Young Astronomers Meeting

The Liverpool Astronomical Society held its latest Young Astronomers (YA's) meeting. The theme of the evening was "Searching for Life" in the Universe. It was mostly cloudy, but local landmarks substituted for celestial objects. David Galvin showed the YA's his meteorite collection and they discussed what they are made of. □



Images Credit: Philip Williams



If you want to master something, teach it!

David Gwynn

I am a retired Head of Science / physics teacher and now a nationally registered STEM Ambassador. I have recently stepped down from being the chairman of a very proactive amateur astronomical society to concentrate fully on STEM outreach. <https://www.stem.org.uk/STEM-ambassadors>

I discovered astronomy late in life, in fact well into retirement. I have learnt that relying on clear skies to use telescopes can be a very hit and miss experience and often ends in disappointment, so my main concentration is now the **science of the stars and galaxies**. I cannot recall that any topics are off limits! A successful observing session is a bonus.

"If you want to master something, teach it". This is a quote attributed to Richard Feynman and I am fully on board with this approach. I have many times stepped outside of my comfort zone and treat the exercise as an opportunity for **ME** to learn. As a registered STEM Ambassador, I offer exclusively astronomical topics and not engineering or other STEM subjects. This takes into account my interests, the motivation that astronomy can have across all the sciences, mathematics, and engineering in the space industry. I will insist on meeting / talking to the person requesting my visit to ensure that I am not just used on a 'tick list' for OFSTED purposes. But, I am delighted if I hear at a later date that OFSTED have visited and are pleased with the schools' / pupils' / staff new found interest in astro topics.

I am happy to engage with children and adults of all ages. The only requirement that I ask for is that they show an interest in astronomy and I will take note of what they would like and what I can deliver. I will help with Science National Curriculum requirements if necessary but I much prefer to add to their knowledge with "extras" that is often far more challenging and interesting.

Given the opportunity, I will engage with all schools – I get most interest from primary schools as well as adult library groups, U3A groups, science fairs, National Trust, RSPB, Henham Steam Rally, village fetes, nature reserves, village community events, free pupil mentoring (parents must be present).

I am an active member of a team from Dash-Astro <https://www.dash-astro.co.uk/> that have hydrogen alpha telescopes. We also have a very effective homemade 'Sun Spotter' for good white light views of sun spots. We sometimes arrange to go to public places at the last minute when we know viewing is good. Other times it's organised in advance with an accompanying lecture on the Physics of the Sun, aurora etc. So, in the event of poor weather the audience is not too disappointed.

Topics that I can offer:

- Our solar system and near neighbours (emphasising scale of size and distance)
- Nebulae (including the well-known "nebula in a jar" U tube video)
- Life Cycles of Stars
- Galaxies (what are they and the different types)
- Monsters of the Universe – Black Holes (pupils try to make a black hole!)
- You are Star Dust (how elements we are made of are made in stars)
- The Big Bang
- Galaxies and the Cosmic Web
- Cosmology
- The James Webb Space Telescope (looking back in time and why it explores in the infra-red)
- Gamma Ray astronomy (from FERMI to the Cherenkov Telescope Array)
- Professional Telescopes used by ESA/NASA/CSA
- The Invisible Universe
- An Introduction to the Hertzsprung-Russell (H-R) diagram
- Stars and Spectroscopy
- The Crazy world of Quantum Physics and Galaxies
- The Moon
- The Sun (our Star)
- Practical Solar Observing.

I must emphasise that I am an amateur astronomer and my only professional qualifications are a Physics Degree and Masters in Education. □



Outreach at Sherwood Observatory



Clive Butcher

Mansfield and Sutton Astronomical Society (now Sherwood Observatory) had its inaugural meeting in February 1970. The enthusiastic founders subsequently purchased land owned by Central Notts Waterboard for £50.00 in an ideal location, being one of the highest points in Nottinghamshire. In the following years the Observatory and its 24-inch Newtonian Reflector were constructed. First light was in 1978, the target being M42.

When I joined the Society, the Observatory building was bordered by a grassy mound, which covered a disused brick built Victorian Reservoir that had supplied the local town of Sutton in Ashfield. When the Reservoir became available in 2014 the Society decided to purchase it. The primary concern was to avoid development that might increase local light pollution but soon there was the vision of a Science Centre with Planetarium. This became a reality thanks to dedicated members not least our current chairman Steve Wallace. Over 6 million pounds were raised from various sources including the National Lottery Heritage Fund, levelling up funds, local businesses and outreach events.

In November 2024 the Centre was opened and proved a great success. I am primarily involved with Schools Outreach with a dedicated team, but it has enhanced our Monthly Open Days/ Evenings, our various group visits and

members meetings. Public Planetarium Shows are held regularly which include a visit to our exhibitions within the old Reservoir (now free of water!).

We have had 34 school visits since the new Centre opened in November 2024. The majority are Year 5s, on average numbering in the twenties but varying from fifteen to forty-eight. Content is adjusted according to age. We have had several special educational needs (SEN) students ensuring we meet any special requirements. The schools are mainly from our local area although we have had a visit from a



school as far away as Lytham St Annes!

The Planetarium is a huge bonus for visits, it seats up to 59 and we begin with a 'show', usually 'The Great Solar System Adventure', which is a lighthearted introduction to the Solar System but full of facts. The presentation can be changed to meet specific interests. We follow this with a question-and-answer session using the Planetarium to demonstrate the night sky, for example how to find Polaris. We can show them their favourite planet, nebula or even a black hole.

This is followed by a craft activity. We have rover bases with wheels and challenge the children in teams to use the materials we provide to build a rover that can explore a planet, no design is the same. This proves very popular and messy!

Breaking out from the craft activity we have activities in rotation, demonstrating one of the observatory's telescopes looking at a distant radio mast or church steeple, unless obscured by mist (as is usually the case). We have programmable rovers courtesy of TTS (suppliers of educational material) which the children are challenged to guide around obstacles.

In our reservoir exhibition space, we demonstrate crater formation using pebbles and a flour / cocoa filled tray. A member of our Observatory has provided us with 3D printed models of lunar craters for discussion.

The visit finishes with the use of James Webb resources, a talk (in the Planetarium)

about telescopes and the James Webb Space Telescope followed by use of an infra-red (IR) camera. Finally, we show our main telescope with the opportunity to open the aperture and move the one-and-a-half-ton scope. Button pressing is always a highlight!

The feedback that we have received has been amazing, one visit described the children as buzzing with excitement as they left.

We are planning an upgrade to our Observatory building and to develop activities for older students who are studying Astronomy for examinations.

It is a privilege to be able to use our new Centre and Planetarium to inspire a new generation. The Observatory was awarded the King's Award for Voluntary Service for 2025. □

<https://sherwood-observatory.org.uk/>



An Introduction to the Physics of Black Holes

Adam Fairhead

In March, Adam Fairhead, from Wadhurst and Tunbridge Wells Astronomical Society, and also a committee member of the Education & Outreach Section, spoke on 'An Introduction to the Physics of Black Holes' to the maths and physics sixth formers at Weald of Kent Grammar School, Tonbridge.

His presentation covered the different types of astrophysical black holes (core collapse and super massive) and also the theoretical types of black holes (Schwarzschild and Kerr rotating black holes), as well as the importance of General

Relativity in black hole physics. He aimed to debunk three popular myths surrounding black holes (that they are cosmic vacuum cleaners, that they are black, and that all black holes are super dense).

If interested, Adam would be similarly available to other schools and organisations in the south of England. □

Contact EandO@britastro.org

RASReach 2026

Helen Usher

On 27th March I attended RASReach 2026, organised by the Royal Astronomical Society and held at the University of Manchester. This brought together science communicators, educators, researchers, and practitioners for a thought-provoking and engaging day. The event explored important topics including funding, outreach, diversity and inclusion, STEAM Education (Science, Technology, Engineering, Arts, Mathematics), and the growing role of AI in science communication. Above all, it was an opportunity to connect with other people working in astronomy education and outreach, both the professional and voluntary sectors, to share ideas and build collaborations.

We all know that funding for science is being squeezed. This creates challenges for those employed in the sector, whether freelancing or within institutions, as well as impacting on the amount of funding available for supporting other smaller education and outreach projects. This means collaboration becomes even more important, and the role of voluntary bodies, such as the BAA, could become even more important.

There was a wide range of presentations, covering everything from the large-scale development of Jodrell Bank and the Kielder Observatory, through university funded projects looking at gamifying astronomy/science learning, to small scale community projects designed to meet a specific local need. As well as some on the developments in AI and the challenges for science and science communicators. All were inspirational, and provided food for thought.

The session on AI explored the risks and rewards of AI. Does science communication become even more important in the age of AI and social media? Who do people trust? How can we use AI without risking our integrity? We all know that AI can produce false information (including references to research papers which actually don't exist!). If we use AI indiscriminately then any resulting misinformation damages our credibility. But AI can have benefits too. One presentation described how they used AI to translate a podcast into other languages – using the original presenters' voice patterns so that the interviews sounded natural and were identifiable as the original presenters. They had

spent a lot of time debating the ethics of this, but decided that as funding was limited this would be only way to reach a wider audience. They did however decide that the original language podcast would still be produced with humans, so not replacing the contributors and production team just extending the reach and impact of the resulting podcast.

One presentation stood out for me – Dr Niamh Shaw talking about the concept of a 'Town Scientist' (is that the opposite of the village idiot?) who brings science and astronomy to people in a local area who might not otherwise have the opportunity to engage with those subjects. If the expert is local then they better appreciate the local 'culture and customs' and so can help adapt activities, messages, and language accordingly. I particularly liked the idea of cross-generational learning. Astronomy can be a very effective tool for this – I've had a few parents comment at outreach events that it has been great to be able to experience/learn something alongside their children. And we've had a few cases at our Back to Basics events where grandparents and grandchildren have come together – I'm not sure who brought who! - but all enjoyed the experience of learning and exploring astronomy together. This clearly links with the presentation at the IAU Shaw Astronomy for Education Workshop too.

There was also the opportunity to chat to people, including those from Kielder Observatory who were interested in expanding their hands on activities to be more accessible for people with sensory loss, and we agreed that I would let them know how our project to produce 3D tactile models of solar features and solar eclipses developed.

Overall, a very worthwhile trip to Manchester. Thanks to RAS for organising such an interesting day. □

Wales & West Spacefest - Saturday 7th March



This was an all-day event which was hosted by The Aerospace Bristol Museum, Hayes Way, Patchway, Bristol and organised jointly by Bristol Astronomical Society, Bath Astronomers, Cardiff Astronomers.



Talks were given in the John James Theatre

John Henn

In the morning, we had talks about the region and various space activities.

We started with a talk from Jonathan Hall of the Herschel Museum about the discovery of Uranus from Herschel's back garden. This was followed by talks from Dr. Nigel Wright about Filton's involvement with the solar arrays on the Hubble space telescope; and Professor David Parker's reminisces on Filton to European Space Agency (ESA) and the planets. The final session in the morning was by Dr Rosie Cane of Space Wales and Matthew Wills of Space West who detailed what activities relating to space were taking place in the region NOW.

The lunchtime slot in the lecture theatre was taken by Dr Jane Clark, aimed at a general

introduction to space for the general public.

In the afternoon we had the "symposium" on Exoplanets:

Dr Ingrid Pelisoli and Dr Thomas Wilson from Warwick University talked on exoplanets and binary stars. This was followed by a talk from Dr Gordon Yip of King's College, London on how can lessons learnt from AI help us with building a space mission?

After a short break, Ailsa Campbell and Daniel Valentine PhD research students from Hannah Wakeford's research group at Bristol University talked about the atmospheres of Exoplanets using results from the Hubble and James Webb telescopes.



Ailsa Campbell and Daniel Valentine from Bristol University



The Bristol Astronomical Society Stand



Finally, Giovanna Tinetti of King's College London rounded off the day with a talk on Space missions, particularly the Ariel Space telescope.

Other Activities

As well as the talks we had Space Detectives with 3D virtual reality headsets:

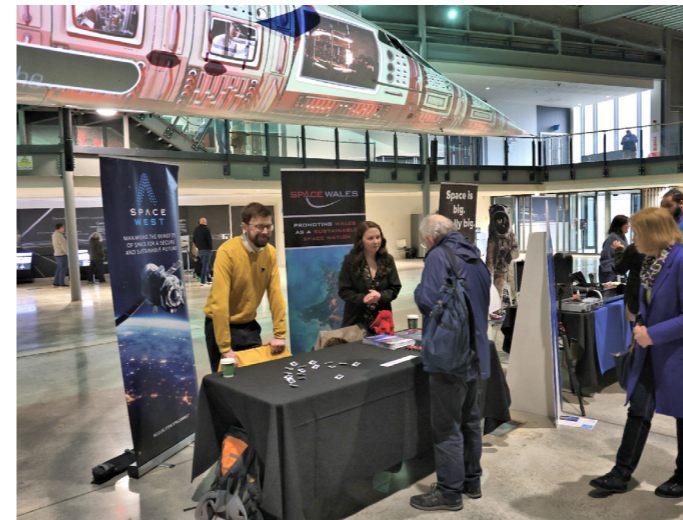


and Bath Astronomers provided a planetarium.

A further part of the event was the exhibitor stands next to the Concorde, a superb background / backdrop. There were 'spotlight talks' throughout the day on 'Filton in Space' and 'Giotto to Halley's Comet', by Aerospace Bristol visitor-services volunteers in front of the spacecraft exhibits in the museum's galleries.

Three astronomical societies had stands as did the University of Bristol physics society – CHAOS.

The Herschel Museum and Space West and Space Wales had stands.



Space West and Space Wales joint stand



The British Interplanetary Society had a stand including the docking simulator.

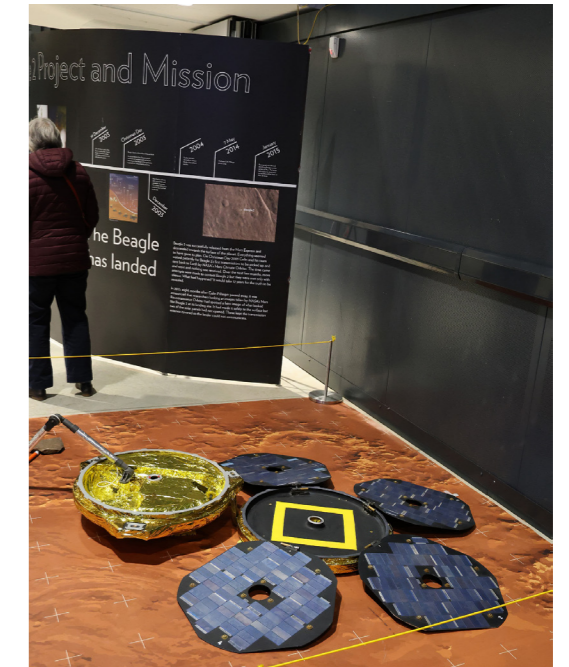


View from the British Astronomical Association stand.

I think this is probably the first time Concorde and a rotating penguin have been in such close proximity!!

Terry Ransome, a volunteer with Aerospace Bristol set up his full-sized replica of the Beagle 2 Mars lander of 2003. Terry was the last human

being to see and touch Beagle 2!



The photograph above shows: On the left is Nigel Wright, in red jumper is John Davies from the BIS stand, and on the right is Simon Lewis of ESR in Warrington.

The object on their stall is a Hubble Telescope solar array deployment mechanism that had actually flown and operated in space on Hubble, until returned to Earth when a replacement array was installed on a servicing mission.

It was a great day, enjoyed by all. The Museum welcomed 739 visitors that day – very well received by museum management!

Thanks

Aerospace Bristol for their hospitality and help, providing all the facilities free of charge, covering the costs of the speakers, the Space Detectives and the planetarium. We would also like to thank them for the volunteers' food and drink vouchers.

Speakers: We would like to thank our 12 speakers for 10 very interesting and diverse presentations, enjoyed by all.

Exhibitors: Thanks for coming and providing both interesting and interactive items to look at and “play” with.

Volunteers and organisers: Thanks to the people who helped out on the day, the volunteers manning the stands and those helping with the various activities. We mustn't forget the team organising the event especially those from Bristol Astronomical Society with help from Bath Astronomers, Cardiff Astronomical Society and Terry Ransome and the volunteers from Aerospace Bristol.

Comments

Helen Usher - BAA

Just to say thanks for inviting us to Saturday - we had a great day!

It was lovely to be able to talk to so many people of different ages. It was also a great networking opportunity with the other organisations who have a similar passion for engaging and inspiring people with astronomy.

One particularly potentially exciting opportunity is to link our Comet Chasers project with the Herschel Museum's education activities. They are keen to do more Comet activities to link with Caroline Herschel, as her brother gets more attention given his planet discovery.

Richard Miles - BAA

Speaking on behalf of the BAA, I shall recommend the event to the Council and events organisers if it is staged again in future.

The exoplanet talks were splendid and you did very well to attract the speakers particularly Giovanna Tinetti, who as we saw is a very busy lady.

Robin Brand - BIS

Many thanks for accommodating the BIS stand, and your help beforehand. I thought the Spacefest event went very well, although not as many visitors were browsing the stands as perhaps, we hoped; however, the half-dozen BIS volunteers provided very useful cover and enjoyed meeting each other, and our ISS docking simulator was a very popular 'hands-on' attraction, busy all day with young and old! I think having the BIS there was appreciated, and I certainly made some useful contacts and acquired a feel of the interest in the BIS in the area - which has allowed me to explore re-

starting a BIS West/Bristol branch, so thank you for that.

Joe Middleton – Herschel Museum

Many thanks - it was a very enjoyable day and I'm glad so many people attended. It was great to talk to the public and members of the other societies contributing to the event. Thank you for organising and letting us be involved.

Many thanks for organising the event, we all felt it was a great success. Just a few feedback points;

- The location was great, including the layout of the stands.
- Being able to drop off/pick up and park by the site was very helpful.
- The vouchers for food and drink for the team were appreciated.

Thanks for all your time and effort in making Spacefest a success.

Simon Holbeche – Bath Astronomers

We had a Coordination Team meeting at Bath Astronomers last night and the feedback about the Wales & West Spacefest was all good.

BA volunteers thought it was a great event and very busy. Good networking opportunity.

Terry Ransome

'Twas fantastic'!

See you at the next Spacefest!

Websites

Aerospace Bristol: <https://www.aerospacebristol.org>

Bristol Astronomical Society: <https://bristolastro.org.uk>

Bath Astronomers: <https://bathastronomers.org.uk>

Cardiff Astronomical Society: <https://www.cardiff-astronomical-society.co.uk>

Herschel Museum: <https://www.herschelmuseum.org.uk>

British Interplanetary Society: <https://www.bis-space.com>

British Astronomical Association: <https://www.britastro.org>

Space West: <https://www.nccuk.com/sectors/other-sectors/space/space-west/>

Space Wales: <https://spacewales.co.uk>

Speakers

Professor David Parker: <https://www.southampton.ac.uk/people/662mtp/doctor-david-parker>

Dr Ingrid Pelisoli and Dr Thomas Wilson:

<https://warwick.ac.uk/fac/sci/physics/research/astro/>

Dr Gordon Yip: <https://www.kcl.ac.uk/people/gordon-yip>

Ailsa Campbell and Daniel Valentine are members of Dr Hannah Wakeford's research group at Bristol University:

<https://www.bristol.ac.uk/physics/research/astrophysics/people/academic-staff/hannahwakeford/>

Dr Giovanna Tinetti: <https://giotin.org> □



Towpath Tales

Alexandra Hart

This time, I thought I would tell you more about NB Stardust and what drew us to narrowboat life. I suppose it all started during lockdown; like many people, we found ourselves reflecting on life during those long months spent at home.

We are fortunate to have a beautiful garden on the edge of a town estate, with wonderful east- and south-facing views over farmland, one of the main reasons we moved to the house in the first place. It was absolutely ideal for my hobby of solar astronomy, as the early mornings provided excellent atmospheric “seeing” conditions for high-resolution solar imaging. I was achieving very good results using a Celestron C11 with Baader solar film, as well as my SolarSpectrum 0.3A.

However, all of this changed during lockdown when 150 houses were built on the neighbouring land. What had once been fields of potatoes and barley became rows of rooftops and increasing light pollution. At the same time, many of our neighbours transformed their gardens into outdoor living spaces, each installing garden lighting that remains on throughout the night, all year round.

During this period, we also began thinking more carefully about what we truly enjoyed and what we wanted for the future. We had spent our lives walking along our local canals, living as we do in an area where the canal network is extensive, linking the historic industrial centres of Manchester, Stoke-on-Trent and Birmingham with Ellesmere Port via the Shropshire Union Canal.

The real turning point came one day while walking along our local canal, when we saw a changeover day taking place at a nearby canal

boat hire company. Looking at the boats, we suddenly wondered why we had never taken a canal holiday before. Within a week, we had booked a holiday aboard the 50-foot NB Roheryn from Chas Hardern Boats. It seemed rather amusing when people asked where we were going on holiday and we replied, “Cheshire” the very county where we already lived, only 30 minutes away by car. It was certainly one of the easiest holiday commutes we have ever had.

I must admit that, as captain, I was absolutely terrified on that first holiday. Learning the rules of navigation within a week felt daunting, although the hire company was excellent and gave us a comprehensive two-hour lesson before allowing us to set off on our own.

It was then that we discovered our little piece of heaven. We could stop almost anywhere in the countryside along the canal and enjoy beautiful views, something we could never have afforded with a house. If we did not like the neighbours, we could simply move on. The night skies were incredibly dark and beautiful, and in some places we enjoyed uninterrupted horizon-to-horizon views of the stars. We could also watch spectacular sunrises and sunsets.

Everyone we met was friendly, and the boating community was wonderfully welcoming. Nature was all around us: swans with their cygnets, ducks, warblers, herons, moorhens and countless kingfishers. It felt magical.

Of course, it was not all plain sailing. I initially struggled with controlling the boat and constantly worried about crashing it. We therefore decided to test whether we truly enjoyed the lifestyle by spending two weeks aboard and attempting the Four Counties Ring — a journey of around 110 miles and approximately 100 locks through

Cheshire, Shropshire, Staffordshire and the West Midlands.

The following March and April, we completed the challenge and loved every minute of it. I learned a tremendous amount about boat handling and we returned home absolutely buzzing with excitement. It was at that point that our family began asking, "So, when are you buying one?" We paused and realised that, strangely enough, we had not even considered owning a boat before then.

We returned to Chas Hardern and asked whether weekend hire might be possible, but unfortunately the minimum hire period was one week.

That became our turning point. We both work in Manchester five days a week with limited annual leave, so we began to consider whether buying a boat to use at weekends might make sense. It suited my husband perfectly because of his interest in engines, while it would allow me to pursue both night time and solar astronomy once again.

We attended the Crick Boat Show, learned as much as possible from the free seminars, carried out extensive research and eventually chose a local boat builder just five miles away. That was how NB Stardust was born.

The build took ten months, but it was well worth the wait. She was named Stardust because she is made from iron formed in the core of a star. She entered the water in July 2024, officially became ours on 9th August 2024, and we have never looked back.



After nearly two years of weekend boating and annual holidays aboard, I have discovered another unexpected joy. Whenever I set up my astronomy equipment along the towpath, other towpath users — whether dog walkers, hikers, holidaymakers on hire boats or liveboard boaters — are invariably friendly and curious. Hardly anyone passes without stopping to ask, "What are you looking at?" or "May I have a look?"



It is such a pleasure to share views of the Sun and talk about astronomy. I have met some truly extraordinary people, and astronomy has proved to be a wonderful conversation starter. Sharing these experiences with both adults and children has been one of the most unexpected pleasures of owning the boat.

During our holiday in April, while we were rising in a lock, a gentleman passed by and excitedly called out, "Hello! Aren't you the lady with the solar telescope?" He stopped to chat, and I was completely taken aback. He was a liveboard boater who remembered meeting me the previous summer. It was a lovely moment.

Unfortunately, the weather during that holiday was often cloudy and we also had to contend with Storm Dave. However, on 19th April we awoke to beautifully clear skies, allowing me to set up the Heliostar 76 and observe the Sun in excellent seeing conditions.

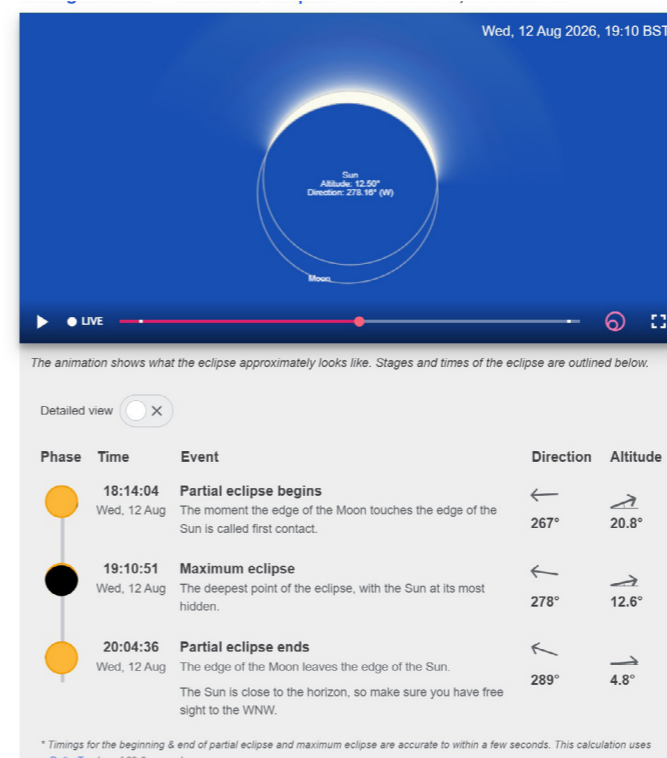
That morning, I met two gentlemen on holiday who had been working the lock and were walking on to the next one. Both enjoyed views of the Sun and we chatted about eclipses. They were particularly interested to hear about the eclipse taking place on 12th August 2026, easy for one of them to remember because it coincides with his mother's birthday.

This brings me to the eclipse of 12th August 2026. It will be an evening event here in the UK, and I plan to be at our usual mooring spot on

the Middlewich Branch of the Shropshire Union Canal, just beyond Bridge 5A. From there, I have an excellent horizon view of the setting Sun, and I intend to set up my solar telescopes. Anyone would be very welcome to join me.

I also plan to advertise the event at the local marina. My only hope is for favourable weather and clear skies, although this may be optimistic, as the Time and Date website suggests that average cloud cover for this location on that date has been around 87% since 2000.

At maximum eclipse, at 19:10:51 BST, the obscuration at my location will reach 91.78% of the Sun.

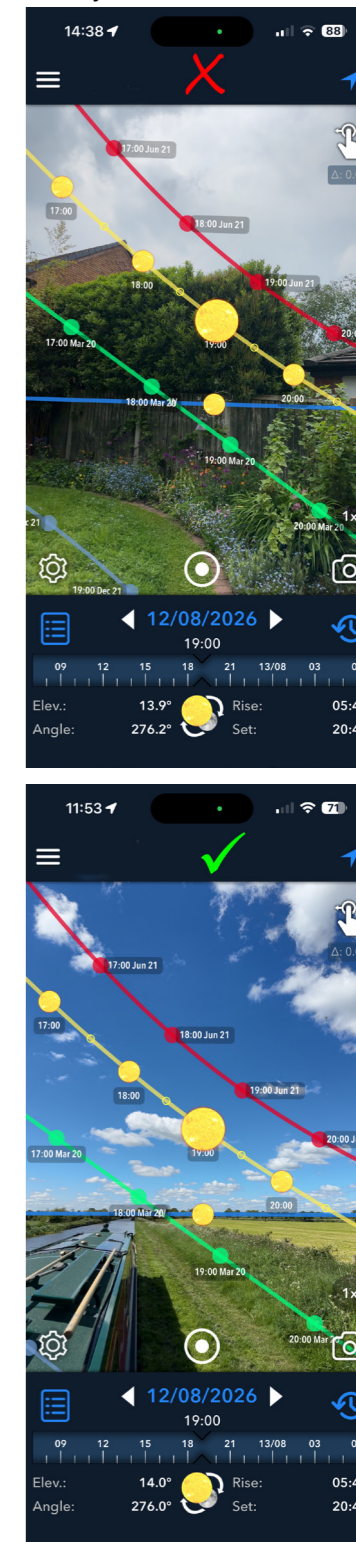


The August 2026 eclipse will be an excellent event for observers in the UK, offering a very large partial eclipse. However, it will also present challenges because the Sun will be low in the evening sky. <https://www.timeanddate.com/eclipse/solar/2026-august-12>

For anyone planning eclipse outreach events, I have found a very useful free iPhone app called Lumos Sun and Moon Tracker, available from the Apple App Store. Using its "Augmented View" feature, you can set the date and time to see the Sun's projected path across the sky. By holding up your phone, you can determine exactly where the Sun will appear from your chosen observing location.

It is an excellent way to assess potential observing sites in advance. For example, I quickly discovered that my garden at home

would not provide a good view, whereas my regular canal mooring offers an ideal horizon (weather permitting). It is a very useful tool for avoiding disappointment and planning outreach events effectively.



<https://apps.apple.com/fr/app/lumos-sun-and-moon-tracker/id725106192>

Other similar apps are available for android phones but I have not tried them:

<https://www.sunsurveyor.com/>

Work Experience

Helen Usher

I'm delighted to say that the BAA Council has again agreed to us running a Work Experience / Summer School for Year 12 students. The programme will build on the experience from last year's pilot (read about it in the November 2025 newsletter <https://britastro.org/wp-content/uploads/2025/11/2025-Issue-04.pdf>). While keeping the core content the same (observing and studying the Sun) we will be splitting into smaller groups this year, which will allow us to deliver to more students while keeping the personal touch of active collaboration. Last year we had 8 students, this year we can take 16 or 18. Students will again join remotely from their schools, be part of whole group briefing sessions, but then work independently in small groups supported by BAA mentors. The feedback from last year was excellent – from both students and teachers. One said “The research opportunities and equipment we used were unbelievable! “ Since the newsletter article we have had two more research papers using students' data, and students have told us that

the experience has really helped them in their University application processes (both their submissions and at interview).

So if you know someone of the right age who is looking for an opportunity to explore astronomy research in a friendly, encouraging environment, with access to high level equipment for making observations and contributing to research, then encourage them to get in touch with us. There are only two prerequisites – the ability to work from school with IT equipment which includes a camera and microphone, and have sign-off on the arrangements (including safeguarding) by the school. The feedback from last year does however suggest that students find it better if they can work collaboratively in the same location with at least one other student. So ideally we would like to work with two or more students in any one location.

We're looking forward to encouraging more students to get involved in practical observation and research – hopefully resulting in more citations in research papers too!

Contact: eando@britastro.org ☐



Student taking part in the Work Experience week last summer 2025

**Year 12?
Interested in Astronomy?
Looking for something a bit different
for Work Experience?**

The British Astronomical Association will be running a Virtual Work Experience Project in Astronomical Research during the week July 13th – 17th



You will join remotely from your school, ideally 2 or more of you. The remote delivery and support team (which includes amateur and professional astronomers) will provide briefing for research tasks and ongoing online support during each day.

The main research topic is the Sun, including making your own observations, analysing them, deducing solar properties such as solar cycle and rotation periods, and presenting results.

You will work in small teams.

You will also get the opportunity to use large remote telescopes (up to 2m) to make observations of comets to contribute to current professional research. Last year's group contributed to observations by the James Webb Space Telescope – and got their names in the resultant research paper!

Last year's students have told us that they enjoyed the week, the opportunities they had for research and learning new skills, and using research-grade equipment. They said that it was particularly useful for university applications and interviews.

This is a small programme, with a maximum of 18 students, to ensure a high quality experience.

If you would like to apply, or would like more information, please contact Helen Usher from the BAA Education and Outreach Section:
eando@britastro.org

You can read more about last year's pilot in the E&O newsletter <https://britastro.org/wp-content/uploads/2025/11/2025-Issue-04.pdf>