

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

Issue 4 2025 November



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 summer and autumn.

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 January 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!

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On the cover: Jeremy Shears carries out solar outreach at Jodrell Bank (see p.9)

Dates for your diaries:

E&O Section Zoom get together – **19:30 GMT Thursday 15th January 2026**

Next deadline for article inclusion in the winter newsletter **31st January 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>

Grants Update

The Schools Observatory has recently assembled a comprehensive list of the most current grant opportunities <https://www.schoolsobservatory.org/teach/get-inspired/grants-and-Opportunities>

Welcome from the Section Director



Helen Usher

Welcome to our 4th Newsletter of 2025. We've been very encouraged by the positive feedback we've received on the newsletters so far. I think we have another great edition for you. Thank you to those who have submitted articles, it is great to see new contributors in each

edition. Please keep them coming!

I'm pleased to report that our Section membership is now over 50. We had a very interesting Section Zoom on 16th October when we discussed what we might do to encourage people to get engaged in the partial solar and lunar eclipses in August 2026 and 2027. We considered ways of making the engagement longer and deeper, so that people learnt more about the Sun and the Moon, and astronomy too, and were encouraged to take their interest further. You can read about the initial ideas later in the newsletter.

We are also starting to think about a face-to-face Section meeting next year too, so let us know what you might like us to include on the agenda – maybe some training sessions? We could also arrange some

ad hoc online training if there was enough interest. Just let us know what we can do to help you deliver more effective education and outreach activities!



Section Online Get Together

The next Section get together via Zoom will be **19:30 GMT Thursday 15th January 2026** we look forward to seeing you again, so remember to add it to your diary. Join the Section mailing list to get the Zoom link which will be issued nearer the time.

https://britastro.org/section_information/join-the-education-outreach-mailing-list ☐



Sun watching at Newquay Tretherras School

What would happen if you fed spaghetti into a black hole?



Observing the Sun with Kernow Astronomers at Carnewas National Trust Site in North Cornwall

Dr Nigel Price and Kernow Astronomers

When I joined my local astronomy club, I didn't realise that I was setting myself up to lead astronomy outreach within my local group of schools and beyond. Kernow Astronomers in the south west of the UK are my astronomy heroes...and I wouldn't be enjoying the astronomy journey of my life without them. They are constantly my mentors and my inspiration.

I grew up in a village with dark skies and a beautiful Milky Way. This inspired me to study physics and subsequently a PhD in astrophysical fluid dynamics completed back in 1995 when the Hubble Constant was poorly defined, we weren't sure if the universe was closed, flat or open, Dark Matter had been identified as an issue but Dark Energy had yet to rear its head. I busily pursued a career in finance after academia but returned to teaching state school physics in 2010. I taught Physics up to A level, but didn't think much about my background in astronomy until my youngest daughter picked up an interest in 2022 and bought a Celestron introductory telescope on an equatorial mount. At the same time, I moved to my current school - Newquay Tretherras and I foolishly expressed an interest in starting and running a school astronomy club. What follows is a journey through me falling in love again with astronomy outreach.

School Astronomy Clubs

Like all schools, budgets are tight, and so I applied to the Ogden Trust who came through for us with a good chunk of funding that allowed us to purchase a Skywatcher Mak 127, StellaLyra 8 inch Newtonian

with Skywatcher HEQ5 Pro mount, a Coronado personal solar telescope (PST), various binoculars, a couple of ZWO planetary cameras and some nicer lenses – educational organisations don't pay VAT so your grant goes a little further. BUT the real joy of all of this was I met my local astronomy club who contacted me as I was teaching the grandson of Frank Johns a club guru. Frank should be a national astronomy icon. Frank guided me through what equipment to buy with our precious grant, and came in and taught me and the students how to use it. Ever since, Frank has been a bit of a mentor to me and it never ceases to amaze me how much time and enthusiasm he still gives to astronomy outreach as he approaches 90 years of age. If you are a teacher considering running an astronomy club, please reach out to your local astronomy club and find your Frank. I am really lucky as my local club has a number of Frank-like characters who can coach you patiently on how to polar align, star-hop, image the planets or deep sky image and post-process the resulting images into young-person-inspiring images. They can tell you the best dates for running an outreach evening with regard to the Moon and planets (a crescent Moon/first quarter is best) and what the cloud cover is likely to be on an hour-by-hour schedule. If you are lucky, then they are likely to be super patient, knowledgeable, time-generous individuals who go out of their way to inspire and educate the next generation of astronomers.

I run two school clubs including a lunchtime key stage 3 club with year 7 and 8 students (11-13 years old). These students mostly want to ask questions about multi-dimensional universes and what happens to you if you fall into a black hole, while pressing

you about whether the Apollo Moon landings really happened. I once told a year 5 student (9-year-old) about black hole spaghettification and they promptly asked me what would happen if you fed spaghetti into a black hole – the best student outreach question ever. At the school clubs we periodically cover the solar system objects and look at images produced from a now expanded suite of school scopes. We discuss the objects in the images and the physics behind them. We usually have more questions than answers but I do my best to answer them all. Quite often it comes down to deciding what shaped animal the highly detailed astro-photo most closely resembles. This club is oftentimes filled with more girls than boys, making the lie that girls may not choose physics as much as boys. We observe the Sun in hydrogen alpha on sunny days through a Coronado 70mm double stack dedicated hydrogen alpha telescope bought from a grant awarded by the Worshipful Company of Glass Makers of London who thought that students should also enjoy daytime astronomy if they couldn't attend in the evenings. I find that astronomy is the gateway science at school with nearly everybody in school having an interest and an opinion. People are constantly stopping me to discuss something they have seen or heard in the news. Did I recently see or hear about the amazing this or that. Before I started the astronomy club I frequently felt like I was teaching in a subject silo but now everyone sees my chosen vocation as fair game for a corridor conversation and life has become filled with interesting astronomy interludes.

Our key stage 4 to 5 club (years 9 to 13, ages 13 to 18) runs afterschool once per week. We also enjoy observing the sun in hydrogen alpha when available despite the British maritime climate. We do some image processing which has become my twilight passion. I take photos with the school kit and prepare it for the students to process the stacked images into glorious technicolour images using Photoshop which is freely available at school, marvellously, for all the students in my school. I find that if I process as far as linear images and separate the stars and background then the students can have a great time stretching and choosing the colour schemes. Afterwards we can talk about all the fascinating objects contained within.

The school's key stage 4/5 club has recently also dallied with some astronomical student competitions and the students are keen to do some more similar academic contests this coming year including the British Astronomy and Astrophysics Olympiad. We have recently applied for and been successful for a grant with the Royal Society. We have built and

learned to operate a spectroheliograph to image the Sun in a variety of narrow wavelengths. We are being supported by our academic partner: Professor Matthew Browning of Exeter University astronomy department who attends school one day each term and teaches the students about stellar physics and exoplanets. Each event sees 90+ self-selected students attend talks and practical hands-on experiences of astronomy without having to travel – so zero expense. This is very levelling for all cross sections of the student population. We have acquired and built a spectroheliograph using a Christian Buile 3-D printed model attached to a 108mm diameter 420mm focal length astrograph, using a Sheliak Sol'ex kit modified with a Doug Smith quartz slit (details included for anyone who wishes to repeat the experience). The images of the Sun are stunning and inspirational (images attached). We are hoping to use the doppler shift of the solar hydrogen alpha lines between the two limbs of the Sun to directly measure the solar rotation rate but may have to switch the project to use a spectroscopic solution to measure the doppler shift of the sodium D lines relative to the telluric lines from absorption in the atmosphere (watch this space). We've all learnt a lot about how the Sun and solar imaging works along the way. The grants provided by the Royal Society are sufficient to allow some cool science to be done and the input of the academic support has been amazing and caused some of the year 10 and 11 students to consider careers in astronomy / physics. Over the last 2 years, in which we have run our astronomy extracurricular programme, our A level class numbers have jumped from 16 to 22 and growing. We have increasing numbers of students joining us from other nearby secondary schools. Correlation is not causation but it is very encouraging.





Sun watching at Newquay Tretherras School

Knockbacks- we have been lucky to have succeeded with approximately 2 out of every 3 grant applications. We haven't been successful with the National Lottery yet or some others that won't be mentioned here but we haven't given up on them yet either. Some awarding bodies seem to move their goal posts each time you apply and they deny that there is even deprivation in coastal towns in the UK (...simply not supported by the statistics). But, we continue to hold the faith that they will eventually come through and support the essential physics / astronomy outreach that their grants would facilitate. These grants provide much needed Physics and Astronomy CPD for the secondary school staff involved, and greatly engages them in their teaching.

Community participation

The school kit, the school, and links with Kernow Astronomers enable me to facilitate a significant amount of extra-curricular outreach, particularly with Kernow Astronomers. Each term we run either a night time or solar astronomy session on the school site. These are open to everyone from the community, parents, grandparents etc. We advertise on local radio stations (BBC Radio Cornwall and Newquay Radio) who have been very supportive and we often see numbers attending in the 100 or so depending on the weather. In March we observed the partial solar eclipse and we were joined by the local BBC spotlight even making Newsround on the next day.

With the Kernow Astronomers, I regularly attend local primary schools (typically 5 to 6 visits per year). We take our scopes and observe the crescent Moon or Saturn and Jupiter if available. Afterwards we usually give a talk with astro-images and answer imaginative questions, and the students might camp in school in the hall or similar with their teachers and we are all usually out of school by around 8:30pm. If the weather is poor, we set up the scopes to point down a hallway at an image of Saturn or similar to give the idea of how the telescopes works. I am constantly amazed at the willingness of my fellow volunteer astronomers to attend these events and how engaging they are with the students.



Observing the stars with Kernow Astronomers at Carnewas National Trust Site in North Cornwall.



The Bubble Nebula captured with school kit – these are the sorts of images we process and discuss and in our schools' clubs.

Wider Community

My local club runs monthly meetings (through the darkish months) at a local National Trust site – called Carnewas (also known as Bedruthan steps). This is very popular with walkers and sees a lot of foot traffic that like to look through the scopes. We are constantly doing outreach to increase public knowledge and boost membership. I have learnt a great deal attending these events as members swap tips for observing, imaging and processing that I wouldn't collect if I

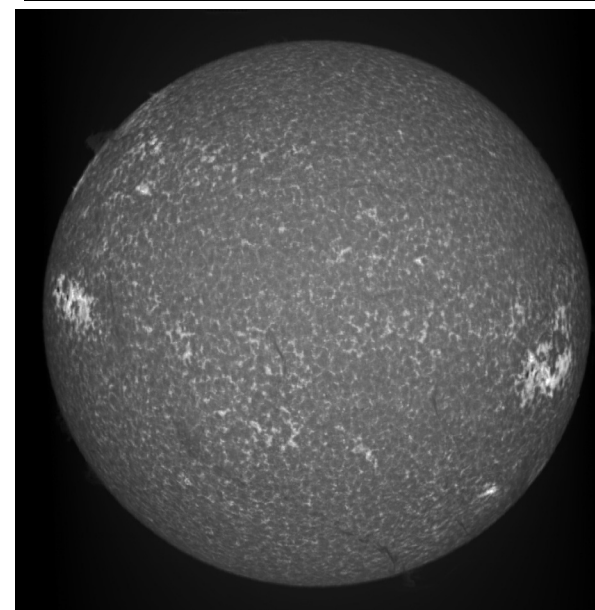
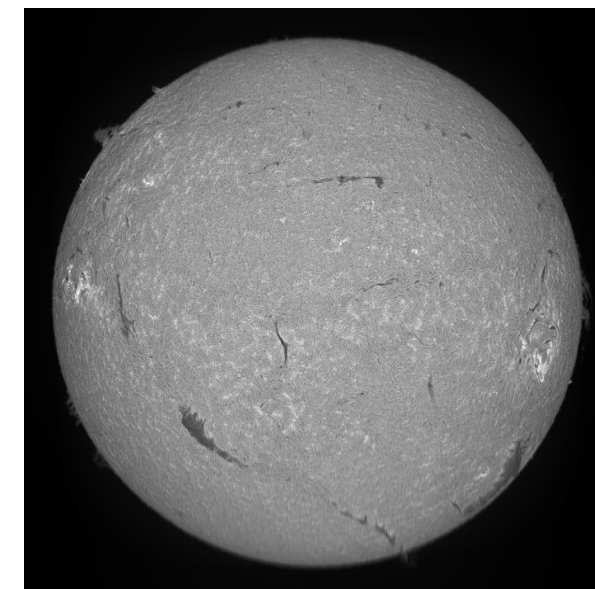
stayed at home. Genuinely the public has a thirst for the astronomy. This year we are also proposing outreach at other nearby National Trust sites and running regular group Milky Way imaging sessions that frequently attracts public interest.

We seem to have something on every week. If you want to find out more about Kernow Astronomers activities please visit KernowAstronomers.com. Between twenty and thirty of us meet every third Thursday of the month at Summercourt Village Hall in the middle of Cornwall for talks with a cup of tea and plenty of astronomy chat.

Thanks for reading. Please feel inspired to offer some outreach.

Dr Nigel Price

Astronomy Lead for CELT/Newquay Tretherras School and Outreach Officer for Kernow Astronomers



Images of the Sun taken with the school's spectroheliograph - hydrogen alpha 656.28nm (top) and Calcium H line at 396.8nm (bottom). □

Would you like to be a STEM Ambassador linked to the BAA?



receive an email with a verification link - simply click the link to confirm your email address. After verifying your email, you can log into your account on the STEM Ambassadors platform to begin your induction. This includes:

- A short safeguarding test
- Agreeing to the STEM Ambassadors Code of Conduct
- Filling out your profile information

The induction should take around 30 minutes in total. Within 2 working days of completing your induction, you'll receive a link to begin your DBS application. The time this takes can vary depending on the documents you have available. Part of the process involves verifying your documents through a secure online app. Once submitted, your DBS certificate typically arrives within 2 weeks.

The BAA E&O Team have contacted the STEM Ambassador programme team who have agreed to add the BAA as an option for ambassadors to assign themselves to. This can be found under an individual's profile, employment and schemes tab and then the institution memberships section. This facility should be accessible on the updated website by November 2025. As the entire website has just been updated, November is a really good time to join. If we have more than 10 registered STEM Ambassadors under BAA, we get access to our volunteers' activity data. This unlocks a dedicated reporting dashboard, enabling more informed decisions, highlighting success stories, and evidencing a strong commitment to STEM outreach. I have found becoming a STEM Ambassador very straightforward and I'd really encourage you to do the same. Together, as a team, we could gain so much more from the STEM Ambassador programme. □

Nic Spencer

You may already know that the STEM Ambassador programme supports a network of thousands of volunteers to bring real-life examples of STEM careers into schools, colleges and universities across the UK. They help to break stereotypes and offer engaging activities to inspire the next generation into the infinite possibilities of STEM pathways. Their remit however, extends much further than this. I have learned that I have their support in delivering solar outreach sessions in many other contexts such as the Women's Institute, church groups, village fetes and Scouts. When an outreach session is arranged, it must be registered on the STEM Ambassador website in advance of the session and then their insurance will cover you. Because I often do solar outreach independently, this is an extremely important advantage. I have found entering my outreach sessions on the database quite addictive. It is satisfying to see e.g. the numbers of hours completed and audience reached, growing quickly. This is very motivating.

If you would like to join, simply go to the Frequently Asked Questions section at <https://www.stem.org.uk/faqs-stem-ambassadors>. Here you will find out exactly what is required and how to become a STEM Ambassador. The registration process takes approximately 5 minutes. Once completed, you'll

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. While the BAA does not officially endorse individuals listed on the site, it provides a useful resource to begin your search. We encourage you to do your own due diligence when selecting a speaker.

If you're a speaker yourself and would like to be included, please consider adding your name to the list—let's work together to make this a fantastic resource for the community! □

Solar outreach at Jodrell Bank



Getting the solar scopes ready for the public next to the Lovell telescope

Jeremy Shears

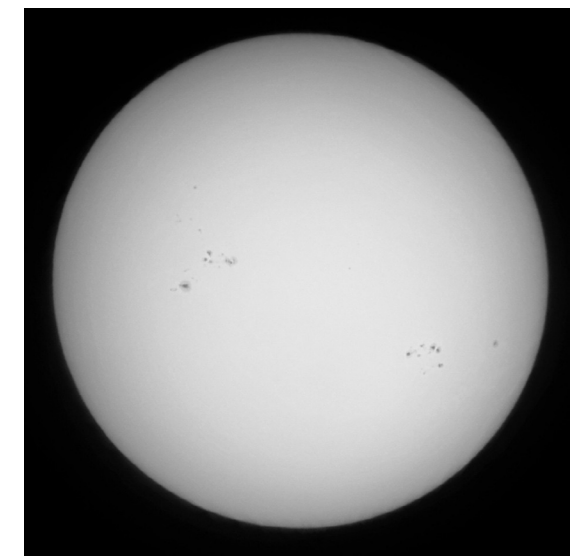
When I retired in the Summer, someone advised me that it's important to take up a new activity. One of those new activities is to volunteer at the Jodrell Bank Centre for Engagement. We were blessed with several clear days during Summer and Autumn, so I took the opportunity to take out the Centre's solar scope: a Celestron C8 with white light filter and a Coronado 60mm Hydrogen alpha telescope. The telescopes are rarely used as the staff don't have time, so they welcome volunteer help though most don't know how to use the telescopes.

With lots of solar activity, the Sun has put on an impressive show for visitors. People of all ages have had their first view of the Sun. The biggest reward has been hearing their "wows". One afternoon I had 90

nine year old school children viewing. One girl couldn't see the Sun and she walked away saying she would never be able to see it. I called her back and helped her position her eye correctly: "now I can see it - thank you!" she exclaimed. Priceless!

Sometimes people stay around for quite a time wanting to know more. This is a great opportunity to talk about what sunspots are, how they change and their connection with the aurorae (one of the days was preceded by an auroral display that was seen up and down the country). Quite a few come back for a second view later in the day.

At lunchtimes, we generally get a few scientists from the adjoining Square Kilometre Array headquarters visiting to stroll around the Jodrell site during their break. They like to look too. One of them, Hari, took several photos with his smart phone and emailed one back to me the next day. He has become a regular. □



White light image taken by one of the visitors with his smart phone, Hari

Orkney Adventure and BAA Autumn Meeting September 2025



Ring of Brodgar, Orkney

Alexandra Hart

We took the beautiful drive up through the Scottish Highlands to Thurso and then caught the ferry from Scrabster to Stromness the week before the BAA Autumn Meeting. From the moment we arrived in Orkney, we were blessed with clear blue skies by day and dark, star-filled skies by night.

We stayed in a small converted chapel on the shores of Scapa Flow, on South Ronaldsay. On the night of the 1st/2nd of September, we witnessed an aurora low on the northern horizon. It was then we realised that the light pollution from the Flotta Oil Terminal was a bit intrusive, but I still enjoyed taking photos of the Milky Way and aurora. On the 2nd/3rd of September, we were treated to a second, more active aurora outburst. Although fast-moving clouds hampered the view, we were still able to witness some beautiful rays.

Callum Potter did a marvellous job organising the BAA Autumn Meeting (5-7th September 2025) in Orkney. On the Friday evening, we enjoyed an excellent opening talk by Dr Adam Carnall of Edinburgh University, titled Hunting the First Stars and Galaxies, held in a local church in Kirkwall. Afterwards, we caught up and chatted with friends and fellow BAA members who had travelled especially to Orkney.

The Autumn Meeting coincided with Orkney Science Festival week, so at each talk over the weekend there was a mix of attendees; roughly half BAA members and half local people and science festival-goers. This interaction made the meeting especially

good for both educational reasons and for outreach, and rewarding too.

On Saturday, Kirkwall Theatre became our base for the day. We enjoyed talks on the green flash, aurorae, solar cycle 25, sky notes, and the Sloan Digital Sky Survey. Unfortunately, the weather turned, and these were the only two cloudy days we experienced during our time in Orkney. I had brought my Sky-Watcher Heliostar, and together with Steve Knight, who also brought his solar telescope, we had planned to set up during lunchtime to show people the Sun. It had been sunny most of the morning, but by lunchtime, clouds rolled in. Nevertheless, I had fun showing a few people the Fraunhofer lines using my pocket spectroscope instead, so all was not lost, even though the Sun was hidden!

On Sunday, we braved 50 mph winds during the Skyscape Archaeology Tour, managing just about to stay on our feet as we enjoyed a guided tour of Cuween Chambered Cairn, the Stones of Stenness, and the Ring of Brodgar. The wonderful Dave Craig, who has studied the solar alignments of Maeshowe, gave us fantastic insights into the astronomical alignments of the stones, sharing what to believe and what to take with a grain of salt when it comes to theories surrounding these monuments. Professor Mark Edmonds, one of Orkney's leading archaeologists, gave us a unique tour of the Ness of Brodgar and even allowed us to handle ancient Stone Age artefacts.

The trip was a fabulous experience and will remain a lifelong memory. It's just a pity the weather didn't quite hold up for the solar telescope outreach event on the Saturday lunchtime—but aside from that, it was a perfect trip. □

WTWAS visit to Royal Rise Primary School

Brian Mills

On the evening of 12th September, four members of Wadhurst and Tunbridge Wells Astronomical Society (WTWAS) John Lutkin, Darren Edwards, Adam Snelgrove and Brian Mills, visited Royal Rise Primary School in Tonbridge, Kent to speak to year 6 pupils. During the last academic year pupils had studied a unit on space and visited the Science Museum.

The plan for the evening was to give a talk of around 1 hour to include time for questions, and there were plenty of those! We began with defining what astronomy was and went on to some questions that you get asked when people know you're an astronomer. These included what the difference is between stars and planets, is there any other life in the universe, how far away things are and what units do we use for measurement. Finally, in that section we discussed what practical use astronomy is.

Then came a section on basic astronomy, the Sun, Moon and planets as well as other solar system bodies.

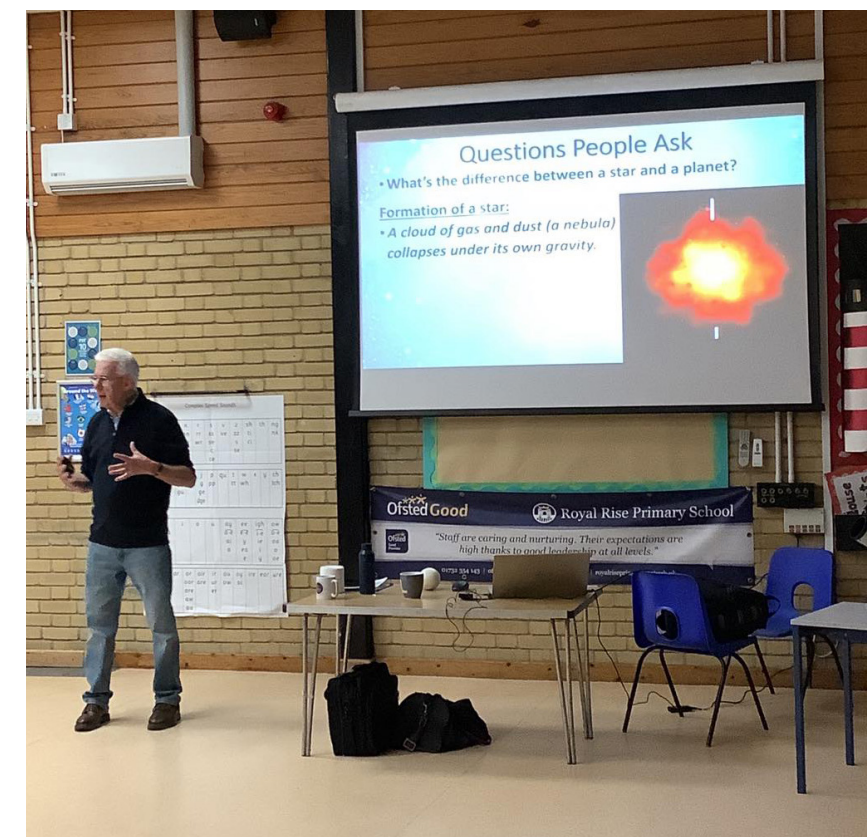


We looked at eclipses, Moon phases and tides.

By now it was clear that the talk would overrun due to the large number of questions being asked so we briefly adjourned outside to observe a pass of the International Space Station (ISS). Then we came back in for the last part of the talk which dealt with the size of our galaxy, comparing it to M31 as well as the likelihood of life on other planets.

We went back outside with the hope of seeing Saturn through a variety of members telescopes but were unlucky. However, the chance to view stars through a telescope was enough excitement for the children who hadn't had that opportunity before. We had a small screen so that a number of pupils could "observe" at once with computer aided astronomy.

We had a wet weather plan ready which consisted of a "toilet roll solar system" plus some glow in the dark stones that could be used to form constellation patterns. We also planned to demonstrate the patterns using Stellarium on the projector screen. However, these backup plans weren't required and we left the children to experience their first school sleepover. □



Setting up a Wales Schools Meteor Observing Network

Part of the DeepSpace2DeepImpact Project (DS2DI)

Sarah Llewellyn-Davies (Education Resources Lead, DS2DI) and Edward Cooper (Meteor Camera Build and Installation Lead, DS2DI and Cardiff Astronomical Society)

Castell Alun High School in Hope, North Wales is the latest school to be engaged in the Wales Schools Meteor Camera Network. They are quite excited about it:

'Castell Alun is proudly working with Cardiff University to help students explore the wonders of space. Together, we're part of a Curriculum for Wales STEM project called Deep Space to Deep Impact, which focuses on comets, meteors, asteroids, and potential threats to Earth.'

The school has just installed a new Meteorcam, which has already captured its first live data through the UK Meteor Network. This camera records meteors, fireballs, and meteor showers across the night sky above Castell Alun.

The data gives students a fascinating, hands-on way to apply science. They can help calculate meteor trajectories, predict impact sites, and find the radiant points of meteor showers. These real-life examples make physics and maths more exciting and meaningful.

Both Castell Alun and Cardiff University are eager to use new classroom resources built from this live data.'

The History of the Wales Meteor Camera Network

December 2023 saw the installation of two UK Meteor Observation

Network (UKMON) / Global Meteor Network (GMN) cameras at a school in Bridgend (St. Mary's Catholic Primary School) as a pilot / feasibility study in response to an initiative from GMN to establish an outreach / education project. Six countries were selected to contribute or volunteered to be involved, these being USA (Washington State), South Africa, Scotland, Germany, Austria and Wales. The building of the cameras, and guidance on installation, was carried out by Edward Cooper from Cardiff Astronomical Society.

The results from the St. Mary's pilot were positive (including a fabulous night on 10 May 2024 when they caught meteors, a fireball and the aurora!).

https://globalmeteornetwork.org/weblog/UK/UK008J/UK008J_20240510_203230_409850_detected/UK008J_20240510_203230_409850_timelapse.mp4

It was decided to include the distribution of further cameras across Wales as part of a wider educational resource project "Deep Space to Deep Impact" funded

by the Science and Technology Facilities Council (STFC) and managed by the Department of Physics and Astronomy at Cardiff University.

The Deep Space to Deep Impact Project

The Deep Space to Deep Impact (DS2DI) project is delivered through a partnership including Cardiff University, Swansea University, National Museum of Wales, Open University Wales, Institute of Physics Wales, Cardiff Council, British Astronomical Association, AstroCymru, Thompson STEM Engagement (TSE) and First Light Optics (FLO).

It works with professional and amateur astronomers (from the BAA) to engage schools in gathering data in support of scientific projects e.g. through the Comet Chasers programme. It combines exciting deep space observing opportunities (e.g. live solar imaging, planetary imaging, monitoring asteroids and comets using remote telescopes supporting pro-am research), with the deep impact aspects of meteorites, impacts, craters, mass extinctions and climate catastrophe. DS2DI particularly supports the new Curriculum for Wales - engaging school students and teachers in a thematic, skills-based educational programme covering ages 8-14.

The project builds on previous projects including Down2Earth which included an impact calculator.

<https://education.down2earth.eu/>

This allows students to create a virtual impact on Earth, the Moon or Mars, by changing the size, speed and composition of an approaching asteroid or comet. https://down2earth.eu/impact_calculator/planet.html?lang=en-GB

It has been extending these meteor-related activities by setting up a Wales Schools' Network of meteor cameras, as part of larger national and international networks, and developing associated educational resources.

The UK and Global Meteor Camera Networks (GMN)

In a short article it's not possible to explain in full detail the roles and activities of GMN and UKMON. In many ways the approaches are identical; the camera systems are the same, the data is all transferred, analysed and contributes to the GMN database for academic research, creating a decentralized science-grade instrument which observes the night sky every night of the year from as many locations around the world as possible. The UKMON is focused on the UK with its own database, but meteors know no boundaries and events are frequently matched with observations from Northwest Europe and the Republic of Ireland.

Daily UKMON produce and update a number of reports on meteor activity over the previous night. The main report being what is termed the "Daily Latest Match Report" which identifies all the camera stations that have witnessed the same event, the report classifies the meteor origin and provides a url to drill down for more detail on the event. The analysis and report presentation by UKMON is world leading and not available to many around the globe.

Further details on GMN: <https://globalmeteornetwork.org/>

Further details on UKMON: <https://archive.ukmeteors.co.uk/>

A shared aim of GMN and UKMON is to identify meteors that might become potential meteorite droppers for collection and professional analysis. Using the camera recorded data with data collected from multiple camera stations it is possible to calculate a strewn field (an area) of potential meteorite samples. Once a strewn field is calculated, a search given suitable ground conditions can be organised and undertaken to retrieve the freshly arrived space material. This happened successfully in 2021 when fragments from a meteorite were located in the Winchcombe area. The recovery of the fragments was within hours of their fall, which meant the specimens were pristine. Their study is providing insights into the formation of the early solar system 4.6 billion years ago.

Schools' Camera Installation

Although the lead time has been longer than envisaged, the project is really pleased that three schools (St. Mary's Catholic Primary School, Bridgend [x2], Montgomery School [x2], Castell Alun High School, Hope [x1]) and the education centre at the National Botanic Garden of Wales, Carmarthenshire [x2] now have operational camera systems. These are not only being used to contribute data streams to UKMON and the GMN databases for the more professional aspects of meteor science, but also to aid with the education of pupils in the host schools and centres. Two more schools have expressed an interest in hosting a camera, and work is in hand to bring those on board too.

Where other countries have provided system kits of component parts for the students to build from scratch, in Wales the approach has been to provide fully built systems, but where the school is responsible for the local installation and network configuration. Calibration and maintenance is then done remotely. Guidance is provided on both aspects needed to finalise an operational system. The approach of providing fully built systems has allowed the adoption



Perseids Peak recorded at St. Mary's Catholic School

of systems and therefore access to the educational materials to younger pupils than would have been possible if kits of components had been provided. To clarify, the pupils have no direct involvement with the hardware or software of the camera systems but the schools have access to the data which becomes available every morning.

The GMN have generated a specific webpage for the project which is repopulated every morning with the data collected from the Wales Schools cameras over the previous night. It is easy for participants and partners to access data, including time lapses and composite images of the previous night's activity. Given the prevailing weather in Wales, there is a lot of cloud watching – but even short gaps in cloud can provide useful data. As well as capturing meteors and fireballs, and satellites and aircraft, the timelapses can be very useful for showing students how the stars, planets and Moon change position over the night, and even aurora.

<https://globalmeteornetwork.org/weblog/camera-groups/wales-schools/index.html>

The Camera Hardware



Image of camera housing including the drilling template



RPi enclosure contents

A camera system consists of a camera in an external housing like a security camera but it is pointed toward the sky at 45 degrees and an enclosure that houses a Raspberry Pi (RPi) computer and associated power units for the RPi and cabled link to the camera. Each system has a Wi-Fi connection to the internet via the school network and the system requires a standard 240v outlet for power.

Opportunities for Engagement

The project is able to support a few more schools, so if you know of a school who might be interested in participating in the project then please get in touch. The project is also more than willing to share its experience of installing equipment in schools and getting it linked to education IT networks (which can prove tricky). So please get in touch for that too. The project lead contact is Professor Paul Roche rochepd@cardiff.ac.uk □

CAS 50th Anniversary - Museum of Cardiff Exhibition & Private Event

Tiffany Kew

Cardiff Astronomical Society (CAS), based in South Wales, is a thriving community of stargazers and science enthusiasts. Founded in 1975, it has grown to become one of the largest amateur astronomical societies in the UK. In 2025, CAS proudly celebrates

its 50th anniversary.

To mark its golden jubilee, CAS Social Secretary Tiffany Kew collaborated with the Museum of Cardiff to present a bilingual exhibition honouring the society's rich history. Running from July to the end of October 2025, the exhibition showcased members'

astrophotography alongside displays celebrating the society's 50-year history. Visitors could explore highlights from CAS's public outreach, talks and events, society trips, contributions to the UK Meteor Network and the Global Meteor Network, and the story of its observatory at Dyffryn Gardens. The exhibition also featured objects such as the historic telescope from the former Penylan Observatory, Cardiff's city Observatory, which closed in 1979.



A historic telescope from the former Penylan Observatory, which closed in 1979



CAS member, Stephen Webber, stands next to his astrophotography on display at the CAS Exhibition



CAS members enjoy their free gift bags commemorating the 50th anniversary of their astronomical society



Social Secretary Tiffany, Treasurer Mike and Chair Phill with a luxuriant 50th anniversary cake



CAS members and volunteers enjoying the festivities

CAS offers a range of facilities for both society members and the wider public, including a bimonthly programme of Thursday evening talks at Cardiff University's Physics and Astronomy Department. The society also hosts regular night sky observing sessions, and occasional solar observing, at its own observatory at Dyffryn Gardens. We welcome astronomy enthusiasts of all ages and experience levels. You don't need any specialist knowledge to join us, and you certainly don't need to own a telescope or binoculars! For more information, please visit our website.

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

Social Secretary Tiffany and volunteer Theresa looking glamorous amongst the CAS exhibition (right) □



E&O News

Lunar Parallax Project

Dear friends of school astronomy, I invite you to participate in the International Lunar Parallax Project. In this small school project, students from different countries can determine the distance to the moon together!

What is the Lunar Parallax Project?

In this project, school groups simultaneously photograph the Moon with two background objects from different locations on Earth. By comparing the recorded lunar positions (parallax), the lunar distance can be calculated using real measurement data – just as astronomers have done for centuries!

Project Goals:

- Students experience true international research collaboration.
- To teach astronomical and mathematical fundamentals (geometry, triangulation, data analysis).
- To promote intercultural communication and scientific curiosity.

Who can participate?

All schools worldwide are invited – regardless of previous experience or technical equipment. A camera with a telephoto lens and a tripod is sufficient. A telescope is not required.

Process:

- Register your group at this email address organisation@fsg-we.de by 1st December 2025. You will then receive instructions on how to conduct the event.
- The date is the night of 7-8th December 2025.
- Conduct the observations, exchange data, and jointly evaluate the results.
- If desired, we can hold a joint online presentation of the results.

We look forward to your participation and to many exciting observations around our Earth's satellite!

Together we will demonstrate how science connects across borders. Feel free to forward this email to other interested parties.

Best regards,

Mario Koch, Teacher

Friedrich-Schiller-Gymnasium Weimar

Thomas-Mann-Str. 2

D-99423 Weimar Germany

Students observe the Moon, sharing observing data internationally, allowing them to work out how far away it is.

- **Requires registration by 1st December**
- **Requires observations the night of 7-8th December**
- **A camera with a telephoto lens and a tripod is sufficient. A telescope is not required.**

Eclipse Resources – Volunteer request



At the E&O Section Zoom meeting on Thursday, 16 October 2025, we discussed preparing resources for the partial eclipses taking place in August 2026 and August 2027. We would like to ask if anyone is interested in helping us develop these resources or in providing constructive feedback on ideas and drafts. Input from teachers would be particularly valuable.

In August 2026 and 2027, there will be **two total solar and lunar eclipses** visible from parts of Europe. Although, sadly, the UK is not on the path of totality for either of the solar eclipses, the whole country will still experience a **partial solar eclipse**—with over **90% obscuration in 2026** and between **35% and over 50% in 2027**. These will be notable events and excellent opportunities to engage the public with astronomy.

While there are likely to be many on-the-day events offering people the chance to view the eclipses safely and enjoy the excitement of the moment, eclipses also present an opportunity to build **longer-term and deeper engagement with astronomy**.

We thought it would be useful to explore ways to:

- **Give people a deeper understanding** — of the Sun, Moon, eclipses, and wider areas of astronomy. What publications and resources could we produce, collate, and make available?
- **Encourage longer-term engagement** — how might we work with groups (schools, clubs, U3A, WI, Guides/Scouts, etc.) before and after the eclipses to encourage sustained interest and involvement?
- **Widen participation** — how can we make the eclipses accessible to the widest possible range of people, including those with disabilities or who are typically less engaged? Drawing on the wide experience and knowledge

of all Section members, if you would like to volunteer to help develop resource materials, have existing materials you could share, or would simply like to participate in any way, please contact us at EandO@britastro.org □

Shadow the Scientists Initiative presents 'Exploring Comet 3I/ATLAS: The Re-emergence'

Date & Time: Nov 25, 2025, 02:00 PM GMT (but recorded and posted online afterwards too)

This is an opportunity to get one of the closest looks yet of the enigmatic interstellar visitor Comet 3I ATLAS, through the Shadow the Scientists initiative (which is offered by a team at the University of California Santa Cruz (UCSC)). This is what they say:

"Join us for an exciting special event as Bryce Bolin (Eureka Scientific), Laura-May Abron (Griffith Observatory), and Matthew Belyakov (Caltech) use the Gemini Observatory North to observe comet 3I/ATLAS, a rare interstellar object passing through our solar system! As only the third confirmed visitor from beyond our solar neighbourhood, 3I/ATLAS offers an extraordinary opportunity to study material that formed around another star. Ejected from its original system millions, or even billions, of years ago, the comet has journeyed through interstellar space and recently entered our solar system from the direction of the constellation Sagittarius, near the Milky Way's galactic centre. In this special observing session, astronomers will attempt to capture some of the first post-perihelion observations of comet 3I/ATLAS, following its reemergence from behind the Sun. Building on data collected with the Gemini South telescope in August, before the comet disappeared from view, the team aims to detect chemical signatures in the gas it emits. These observations will shed light on the comet's composition and physical state, and allow scientists to compare its current properties with those observed prior to its closest approach to the Sun. The effort will be supported by the Gemini North science and outreach staff, alongside leading experts in comets and interstellar visitors."

Sign up here: <https://ucsc.zoom.us/join/register/GHKxrZt7RcWVZIfM2Cr6oQ#/registration>

(If you do attend then why not submit an article for the next Newsletter to tell us all about it!) □

Lunar Impact Flashes: The Geminid Observing Campaign

This campaign is something that might be good for schools and young astronomers, as well as amateur astronomers more generally. The BAA's Lunar Section Director Tony Cook is closely involved. Here are the details from the campaign website https://lif.mi.imati.cnr.it/home_page.php?status=start

Lunar impact flashes (LIFs) are generated when a meteoroid, a solid object in the Solar System (typical sizes are centimetres to decimetres in diameter), hits the lunar surface at many kilometres per second and makes a small crater. Part of the energy of the impact is converted into a short flash, which can be observed with telescopes and a video camera.

The aim of this project is to gather observations of lunar impact flashes around the time of the maximum of the Geminid meteoroid stream, from 12 to 14 Dec 2025. This will help train amateur astronomers in the skills of observing Lunar Impact Flashes. It will prepare them for a citizen science programme to support the ESA LUMIO CubeSat mission, due to launch in 2028 https://www.esa.int/Enabling_Support/Space_Engineering_Technology/Shaping_the_Future/LUMIO_New_CubeSat_Illuminating_Lunar_Impacts

LUMIO will observe LIFs against the lunar far-side, whilst orbiting around the so-called Lagrange point, L2, of the Earth-Moon system. Earth-based telescopic observations are needed during the LUMIO mission to help compare and calibrate near and far-side impact flash rates. But it is important that we start forming observing teams now to be ready for the mission in 2 years' time.

We would like as much video coverage of the night or earthshine portion of the Moon as possible from around the world, to demonstrate the useful capabilities of amateur astronomers to contribute to scientific studies.

Of course, professional observers are very welcome too!

Because of issues with false flashes from cosmic rays, artificial objects sun glint etc., we strongly encourage simultaneous observations from widely geographically separated observers. This is an excellent way to discriminate true flashes from the noise.

If you wish to contribute to this campaign, please register via the top right button on https://lif.mi.imati.cnr.it/home_page.php?status=start

The study of these impact flashes will help us to better constrain the impact rate of these small objects on the Moon. This is relevant for future human exploration of the Moon - we will want to know how many objects, and more importantly impact ejecta, might hit a Moon

base, lander, rover, or a spacecraft orbiting the Moon. It is also important for science as newly formed craters have and will be discovered, that are linked to specific impact flashes.

Observing these impact flashes can be done with equipment that many amateur astronomers have access to. Impact flashes have been observed with telescopes as small as 13 cm aperture. Of course, larger aperture scopes, permit fainter (and more frequent) flashes to be detected. Successful recordings have been done with analogue Wattec or digital ASI type cameras capable of videoing the night side of the Moon at least 10 frames per sec and capable of recording stars down to magnitude 10 at these frame rates. The typical time between detectable impact flashes is a few hours but as there is a strong meteor shower on during 12-14 Dec, we would expect to capture a few impacts during this time.

If you try it let us know how you get on! □

Job: The Schools' Observatory: Project Manager: Liverpool, 1 year, full-time, Closing Date 9/12/25

An exciting opportunity at the Schools' Observatory:

<https://jobs.ljmu.ac.uk/vacancy/the-schools-observatory-project-manager-maternity-cover-599938.html>

We're looking for a maternity cover for our project manager. It is an interesting and unusual role as it brings together astronomy, public engagement, education, project management, marketing and a broad cross-STEM approach, so if you think you could bring some of that to the project it may be an excellent opportunity to develop in other areas.

The Schools' Observatory is a successful, mature, online education resource that engages with many teachers, students and independent learners around the world, and we are at a particularly special time as we have the opportunity and resources to expand considerably. If that sounds like a stimulating challenge to you, then you should consider applying.

The role is full time, for up to 1 year, Liverpool-based, and with a salary at UK university Grade 7 (£47,389 - £58,225 p.a.). If you have questions, I'd be delighted to hear from you a.newsam@ljmu.ac.uk

Andy Newsam
(Schools' Observatory Director) □

'My Other Scopes are the Hubble and the James Webb Space Telescopes!'

Helen Usher

One message that I always try to convey to students and amateur astronomers is that every observation made and added to a data set could be important. I recently had a perfect example of this, which has led to an incredibly exciting opportunity that I could not have anticipated.

In August there was a post on the comet mailing list about a possible outburst of centaur/comet C/2023 RS61. As our Comet Chasers' students already make great contributions to the study of the centaur/comet 29P, I thought it might be another good target for the project. So, I quickly scheduled an observation with a 2m Faulkes Telescope in Hawaii to test parameters before putting out the alert to educators. The 2m telescopes in the worldwide LCO network run observations with 4 (SDSS/SLOAN) filters simultaneously. This is particularly useful for moving objects like comets/centaurs, as it allows colour analysis without the complication of the object's position changing between filters.

Our Comet Chasers' data are routinely analysed as part of the international collaborative LOOK project <https://iopscience.iop.org/article/10.3847/PSJ/ac7a31>

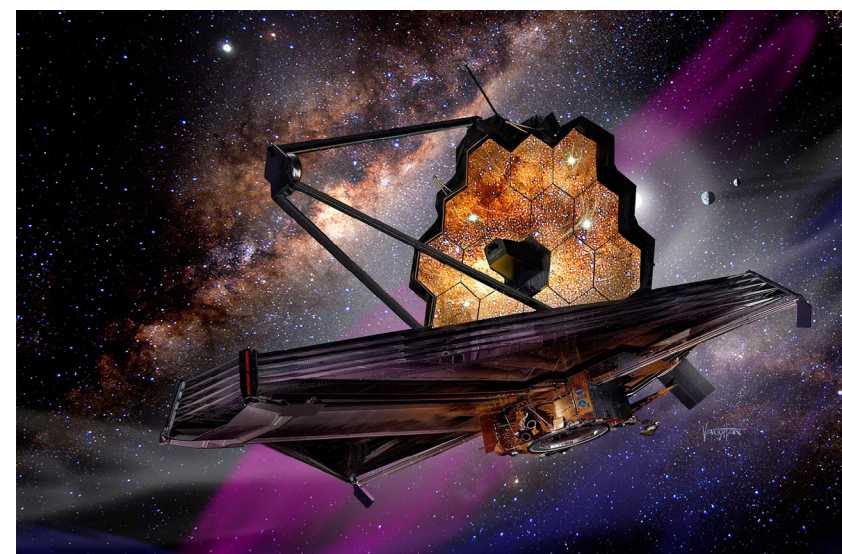
The analysis of colour showed the object to be unusually red and an Astronomer's Telegram giving details of the outburst and colour was published (<https://www.astronomertelegram.org/?read=17360>).

I was then contacted by another researcher who

asked if I would mind if my observation was used as part of a submission for Directors' Discretion time on both the James Webb Space telescope and Hubble Telescope - and would I be ok with my name being added to the proposal as a co-investigator. That was obviously a nano-second decision! The reason for inclusion was that the team had twice before tried to get time on both space telescopes, but had been rejected with feedback that they could not demonstrate that the centaur was still in outburst. Our data showed that the centaur was indeed still in outburst at the time of submission and so the observations would be meaningful. I'm told it was sufficient to tip the balance, and the observing time on both telescopes was awarded. I'm very excited to be part of the team that has controlled JWST and Hubble to make observations of this very unusual object.

It is only 5km in size, which is an order of magnitude smaller than 29P. It appears that it is in the process of transitioning from being a Trans-Neptunian orbit into eventually becoming a Jupiter Family Comet. Studying it through this transition will provide valuable insights into the formation and evolution of such bodies, and more generally of solar system formation and evolution. There is a paper in preparation based on the data from observations and also from ongoing observations from ground-based telescopes too. The Comet Chasers' students and team (including the BAA's Richard Miles and the BAA's work experience students) continue to make valuable observations for this campaign, and we look forward to the important science which can be derived from the data.

I think I now need a sticker for the side of my Seestar which says 'My other telescopes are Hubble and JWST'! □



Artist's illustration of NASA's James Webb Space Telescope. James Vaughan/ Science Photo Library/Alamy Stock Photo

BAA Work Experience Pilot Project



Helen Usher

Back in February 2025, three A level students visited the BAA stand at Astrofest and asked whether there were any opportunities for them to do work experience or volunteering with the BAA. A week's activity, at the end of the summer term, was a requirement for school and they had tried and failed to find anything astronomy based. As the BAA has no offices, we couldn't provide a physical work experience but, given the students' obvious enthusiasm, we agreed to consider whether we might be able to run something virtually (which would also be easier from a safe-guarding perspective for under 18s).

After discussions within BAA and with their school teachers, we were able to construct a 'virtual work experience' pilot project, where the students would attend their school and we would deliver the various activities online. The aim was to give the students both an appreciation and practical experience of the main elements of the scientific research process: undertaking independent research, making and analysing observations, presenting results and understanding the peer review process.

The development and delivery team was led by Helen Usher, supported by Prof Paul Roche (Cardiff University and E&O Section member) with other members drawn from the Solar, and Education and Outreach Sections. The school's physics teacher provided input and feedback on proposals. There was

also some input from the Cardiff University admissions officer.

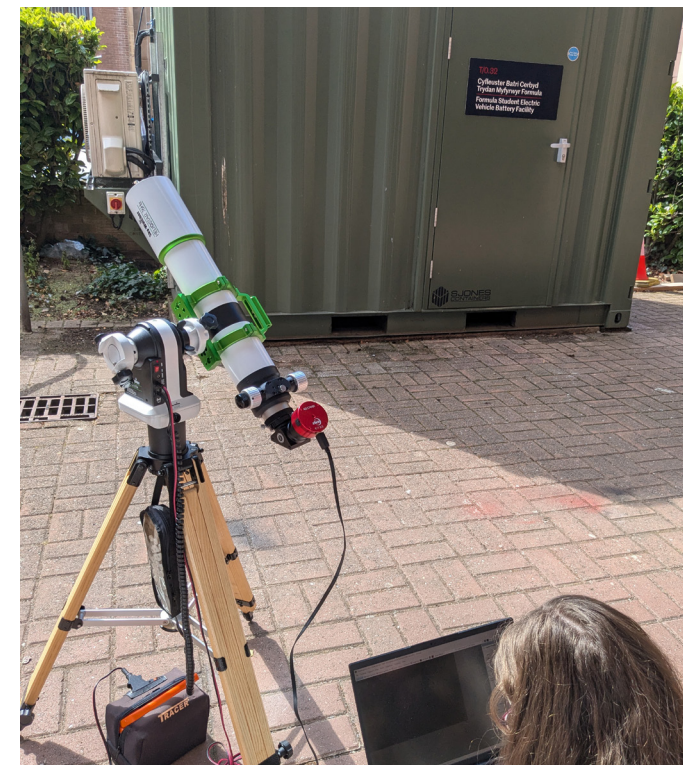
Eight students signed up – seven in Upminster, and one in Cardiff. The Cardiff student attended Cardiff University to avoid her working alone. This proved a useful touch point during the week. All the students were a pleasure to work with, engaging enthusiastically in all elements during the week.

The key programme elements:

- Sessions run on Zoom, with discussion taking place on Slack.
- The main area for study for the week was the Sun. Students were given a brief overview of the Sun, but then asked to undertake their own background research.
- The importance of considering the reliability of sources of information, and of citing those sources, was stressed.
- Students presented their findings to the group.
- Students had the opportunity to make their own solar observations, either directly with small hydrogen alpha and white light telescopes (weather permitting) or remotely through two facilities in Spain.
- Sunspot data was provided for students to plot activity levels and consider the elements of the solar cycle (e.g. from the Solar section archive).
- The main analysis exercise, devised and developed by Peter Meadows from the Solar Section, was to use SDO data to derive the differential rotation rates for the Sun.
- A session about scientific writing and the scientific publication process was presented by the BAA Journal Editor Philip Jennings.
- Another session included information on applying to University for Astronomy or Astrophysics

courses, and a Q&A session with recent graduates. The importance of collaboration within research was stressed, and joint problem solving was encouraged.

- Students presented their research at the end of the week.



An early challenge was that students didn't all have access to headsets and cameras on their school computers. That was partially resolved on day one, but ensuring 1-1 cameras for future sessions would make two-way communication much more effective (and provide better real-time feedback for presenters).

We were keen to get students engaged in observations early, and so at the end of the first morning we held a live solar viewing session with Andy Devey in Spain. Andy talked through his equipment and explained how viewing in different wavelengths allowed different solar features to be studied. He emphasised the huge scale of the features being observed. Students were surprised at the level of activity on the Sun, and how dynamic and rapidly changing it was. Andy provided data from the observations that students worked on later in the week. Students were each asked to choose a particular solar phenomenon, and to research that over the week ready to present on the final day.

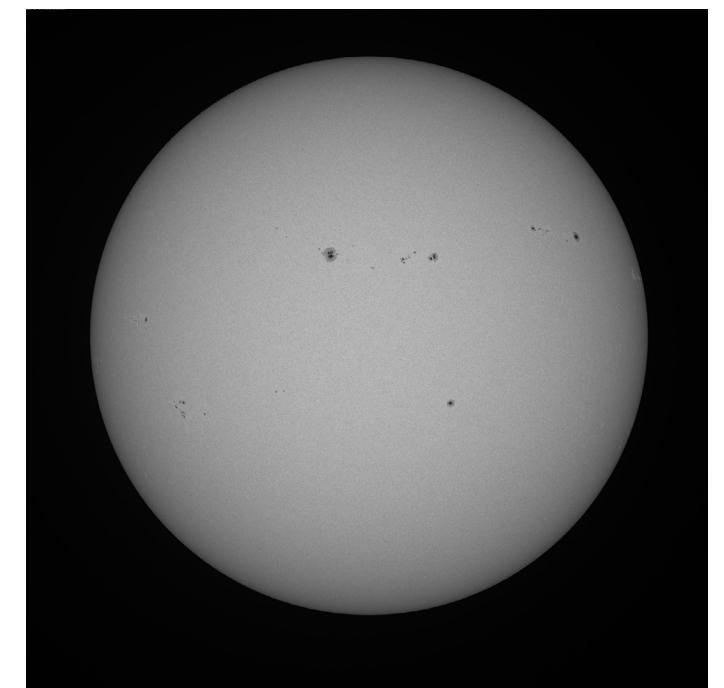
In both Upminster and Cardiff there were some short opportunities to observe directly during the day too, and students enjoyed learning to use the Seestars and getting their own images. (There were a few times during the week where we amended the timetable to make the most of gaps in clouds and allow the students

to make as many observations as possible!). Students also directly controlled the First Light Optics solar telescope in Spain to gather their own high resolution hydrogen alpha data.

Students were given the task of researching sunspots: what they were, what caused them, how they were categorised and numbered. They then applied this to analysing the data from the remote observations, and later presented that to the group. They used data on sunspot numbers, and plotted solar cycle charts, for both total activity and by hemisphere. They were provided with links to daily solar images so that they could choose a period and see how the recorded sunspot numbers related to the actual activity visible on the Sun. They were surprised by long periods of no activity. We deliberately gave them some challenges in these data (e.g. dates which were before 1900, which meant they had to problem solve the way excel cannot handle this directly!).

We included sessions on scientific writing and the publication process, and on effectively presenting data. This was new to most of the students, and got them thinking differently.

The Director of Recruitment and Admissions for the Cardiff University School of Physics and Astronomy ran a session giving guidance to students on the application process, and their personal statements, and answered questions. Two recent graduates, along with the physics teacher in Upminster, then did a Q&A session about university and career opportunities.



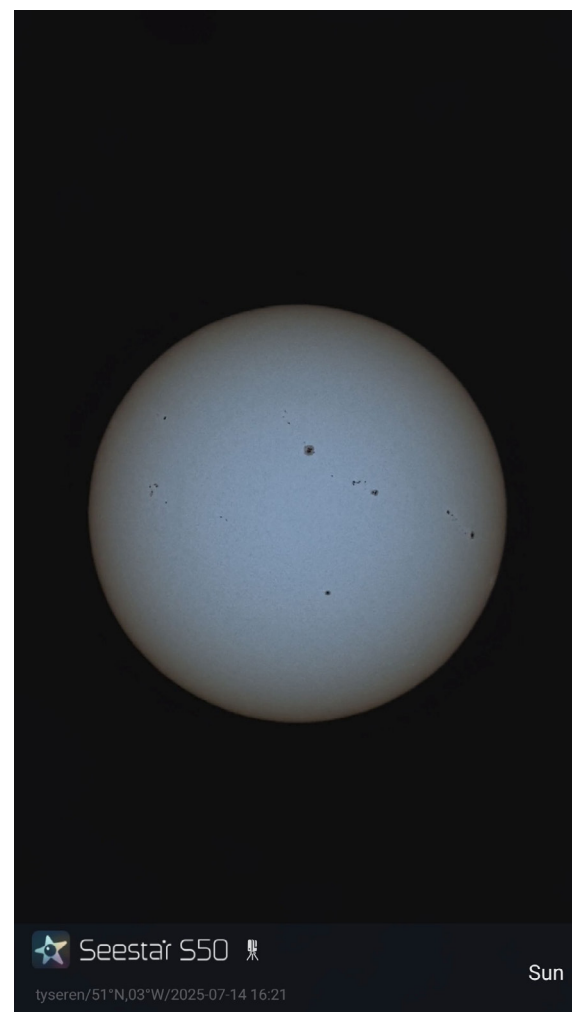
White light image from Andy Devey in Spain.

The main analysis exercise for the week was

calculating differential solar rotation (how the rotation period varies by solar latitude, due to the Sun not being a solid body). Peter Meadows had developed this exercise, providing guidance, data sets and prepopulated Excel spreadsheets (thank you Peter!). The exercise proved challenging for the students, with the guidance needing to be followed very carefully. But it proved an excellent way of building collaboration as the students quickly began to help each other, comparing data, and then were comfortable enough to ask for help when stuck. We jointly problem-solved a few issues. All the students completed the exercise and demonstrated the differential rotation of the Sun.

There were also many great conversations about the challenges of obtaining good measurements, why different observers might obtain slightly different measurements (e.g. how to choose the centre of a non-symmetrical sunspot), and how combining the measurements from many people could improve the robustness of the analysis. All the students enjoyed it, and some were keen to understand/research more about the underlying calculations within the spreadsheet. We'll be using their feedback to refine the exercise and to then make it available more widely.

The students asked if they could also make observations of the newly discovered interstellar comet 3I ATLAS. Our 'Comet Chasers' project was already making observations (with the Las Cumbres



Seestar images taken by students on 13 and 14th July showing sunspot rotation and development.

Observatory network of research-grade telescopes) of the new comet. In particular, we had just received a request for observation data using the 2m telescopes to help refine the comet's orbit for a team who were looking to make observations with the James Webb Space Telescope (JWST). JWST has a relatively small field of view, and so knowing the comet's precise orbit was vital to ensure its observations would actually have the comet in the field of view! The students each scheduled multiple observations. Their observations were then analysed by Tim Lister (Las Cumbres Observatory, and part of the LOOK project that the Comet Chasers Project regularly collaborates with) and positional measurements submitted to the Minor Planets Center. They contributed to the orbit being refined sufficiently for the observations to proceed. The students were very excited to see their names in the resultant research paper <https://iopscience.iop.org/article/10.3847/2041-8213/ae0647#Acknowledgments>.

Additionally, their observations were used by a team led by a researcher in Barcelona University for another paper looking at the key characteristics of the comet <https://www.aanda.org/articles/aa/full>

<http://html/2025/10/aa56717-25/aa56717-25.html>. This was a great result – but does perhaps set the bar quite high for any future years!

All the students made excellent presentations on their chosen solar topics on the last day of the work experience. We learnt a lot from them too.

Feedback

As this was a pilot scheme, we were particularly keen to get feedback from participants.

Teacher feedback included:

- This was an excellent introduction into academic research, and scientific observation, that benefitted the students significantly.
- The following were particularly useful: taking observations onsite and remotely; processing data to obtain meaningful results; doing some research and creating presentations to feedback results; and seminars on academic work and also life at university.
- The level of difficulty of tasks and information was well pitched – the tasks were challenging, but not impossible!
- The session on careers and courses was particularly useful, as this provided something which is not normally available to students.
- The school astronomy club has since continued to grow.
- It would be good to continue to work with BAA, including on observational elements in the A level syllabus.
- It was great that the students were able to see their observations immediately being used for research, and then to have the school and their individual names included in research papers.
- The school would very much like to be involved again.

Student feedback included:

- The opportunities and insights into research were interesting and useful.
- It was really helpful learning new skills.
- It was great to participate in current time-sensitive observations of interstellar comet 3I.
- I now understand much better how much data analysis is needed.
- It has motivated me for the work I can do during and after university.
- It was extremely useful for putting in my university application personal statement.
- I have a better understanding of how professionals use telescopes and schedule observations.

- It would be good to add some in person sessions/visits if possible. Also, problem solving of live telescope issues.
- The solar rotation exercise was challenging, but enjoyable. It was good to work collaboratively and help each other solve problems. It would have been good to re-do the exercise with our own data if we'd gathered sufficient.
- Having speakers talk about different areas of astronomy (writing papers, telescopes, university) was brilliant.
- Working on a current research issue was great.
- It was really beneficial to have time on the telescopes.
- It was really cool to get mentioned in a research paper.
- Thank you for the continuing opportunities to make observations and contribute to current research.
- I'm so glad we got to talk with you at Astrofest!

Ongoing Engagement

We are delighted that four of the students have chosen to carry on making comet observations remotely (this is straightforward to do and not tied to UK weather!). They are contributing to observing campaigns for comets 29P (working with Richard Miles, BAA); C/2023RS61 (alongside observations by JWST and Hubble), 3I (with LOOK Project), and C/2025 K1 (a comet which is breaking into pieces, working with Nick James, BAA).

Next Steps

As deliverers we are very happy with the outcomes of this pilot project – not only the contributions to active research, but more importantly the positive feedback from students and teachers. We learnt a great deal too about how we could refine the programme, and we will be drawing on that experience to draft a proposal for future programmes which will be presented to the BAA Council for consideration. □

Image from FLO equipment in Spain.

