

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

Issue 5 2026 February



# 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 autumn and winter.

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](mailto:EandO@britastro.org) with "Newsletter" in the subject line before **30th April 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: Dave Eagle shows the aurora to passengers on a northern lights cruise** (see p.18)

## Dates for your diaries:

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

Next deadline for article inclusion in the spring newsletter **30th April 2026**

Many thanks to the Charlie Bates Solar Astronomy Project for donating a subscription to Zoom for the next year to help keep us connected.

## 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>

# Welcome from the Section Director



## Helen Usher

Is it too late to wish everyone a Happy New Year?

I'm looking forward to another year of community and collaboration, and hearing all about your activities in our newsletters. (So please keep the articles coming.)

This year a big priority for us is preparing for the eclipses in August 2026 (and the ones in 2027 and 2028 too). While the UK will not experience a total solar or lunar eclipse, all of the UK and Ireland will experience very significant (over 90%) partial eclipses.

I'm pleased to say we are making good progress on many fronts. Neill Sanders from Go Stargazing and Grant Bowskill from First Light Optics are working on a core website for the eclipses. It will be a one-stop-shop, with the UK and Ireland astronomy communities working together to provide material for the site. This will include links to events, guides, activities, and educational resources. Our next Section get together is timed for when the initial website should be up and running and there will be an opportunity to check it out and make suggestions for the later developments.

The next **Back to Basics** event, on **2nd May 2026**, will be hosted by the **Kernow Astronomers in Newquay Cornwall**. We are making that an 'Eclipse Special' where we'll cover the Moon, Sun, why eclipses occur, eclipses in history, how to safely observe them and things to look out for. We'll also have lots of hands on activities too, including lunar and solar sketching, building pinhole cameras, handing pieces of the Moon, Mars and meteorites, and given the link to Artemis Moon exploration, even some rocket launching fun! And we'll be providing free eclipse glasses too.

<https://britastro.org/event/back-to-basics-cornwall>

There are a few other BAA and astronomy events coming up in the next few months too. You can find out more details on our website <https://britastro.org/events/future-events>

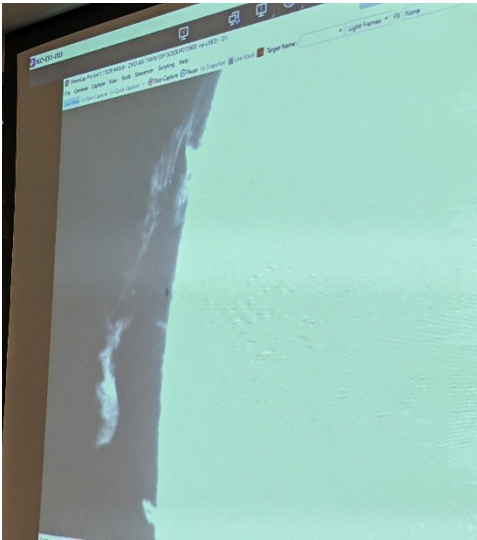
If you are attending the Practical Astronomy Show on 7th March, then why not pop along to the BAA

stand and say hello. Better still, if you are not already a BAA member, why not take the opportunity of the show membership discount and sign up?

## The Sun, Live in Your Classroom?

Would you like the opportunity to view the Sun in high resolution, in multiple wavelengths, live in your classroom or lunchtime/afterschool club? The DeepSpace2DeepImpact project is looking for schools who would be interested in trialling a free activity which provides access to specialist solar equipment in a remote observatory in Spain. Educators and students would work with experts remotely controlling the telescope, seeing the Sun change in real time, taking images, and then processing their images. The experts would talk them through what they were seeing, what caused the features, how big they were etc. The resultant data and pictures would be available to the school/students. A session would usually be up to an hour long, and could be a one-off or part of a series of a few sessions to maybe monitor changes on the Sun over time or allowing working with multiple groups. All the project asks is that you provide some feedback afterwards to allow them to make the sessions as useful as possible.

The sessions would take place from March onwards (the weather is generally more reliable then). If you would like to get involved or know more then please contact us at [eando@britastro.org](mailto:eando@britastro.org)



## Section Online Get Together

The next Section get together via Zoom will be **19:30 GMT Thursday 19th March 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](https://britastro.org/section_information/join-the-education-outreach-mailing-list) ☐



# E&O News

## Volunteer opportunity: E&O Membership secretary wanted

Would anyone be willing to spare a few hours each month to help manage the E&O mailing list?

This role involves contacting new members who have expressed an interest in joining the Section when completing the BAA membership form. The main tasks would be to send a friendly welcome, provide information about how to join the Section mailing list, and handle any brief follow-up correspondence.

If you would be happy to help, please let us know by contacting us at [EandO@britastro.org](mailto:EandO@britastro.org)

## Grants Update

Grants and Opportunities information provided by our friends at the Schools Observatory [www.schoolsobservatory.org/teach/get-inspired/grants-and-Opportunities](http://www.schoolsobservatory.org/teach/get-inspired/grants-and-Opportunities) Note: the next deadline for Royal Astronomical Association Grants is 20th February 2026.

Later in this newsletter you can read about how a RAS grant is helping work with refugees (see p.16).

## 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!

You can also consider joining the STEM Ambassador programme. It's a great way to get involved in outreach and inspire the next generation of scientists. Learn more and sign up here: [www.stem.org.uk/stem-ambassadors](http://www.stem.org.uk/stem-ambassadors)

## One-day RASreach event for Education and Outreach

The Royal Astronomical Society (RAS) is pleased to invite RAS Fellows, local astronomical societies, science communicators, educators, and students to

attend — and contribute to — this **one-day** RASreach event for Education and Outreach, taking place in Manchester and co-led with the University of Manchester's Department of Physics and Astronomy on **Friday, 27 March 2026**.

This year's conference will focus on the **Current Landscape for Science Communication in the UK and beyond**, with particular attention to the challenges and shifts facing education and outreach professionals.

Across the sector, severe budget constraints are impacting education and outreach activity at universities, research institutes, museums, and learned societies. Declining international student numbers — influenced by political and policy changes — have reduced income streams that have traditionally supported public engagement work. At the same time, the rapid emergence of AI tools is reshaping communication workflows and raising questions around job security, authorship, and opportunity, particularly for freelancers.

We are especially keen to hear from **Science Communicators** who can speak to:

- ▶ How funding and staffing pressures are affecting education and outreach work
- ▶ How individuals and organisations are adapting to reduced budgets
- ▶ Freelancers' experiences of the current climate, including access to work and sustainability
- ▶ Whether AI is acting as a support, a disruption, or a barrier to opportunities
- ▶ Practical strategies, solutions, or new models emerging in response

This conference aims to provide a **shared space for honest discussion**, reflection, and idea-sharing — bringing together Fellows, practitioners, students, and local groups to explore how education and outreach can remain **resilient, relevant, and impactful** in a rapidly changing environment.

Whether you are an established professional, an early-career communicator, a student considering a future in science communication, or part of a local group engaged in outreach, we warmly encourage you to attend and take part in the conversation.

### RASreach Team

Lucinda Offer (RAS), Adam Boal (RAS), and Soheb Mandhai (UoM)

For any queries or further information, please contact: [outreach@ras.ac.uk](mailto:outreach@ras.ac.uk)

## Royal Astronomical Society – Moon Palace

The Royal Astronomical Society is thrilled to announce that we will be hosting the 'Moon Palace' in the Burlington House courtyard in February 2026.

This school bus-turned mobile observatory promises to treat families, art lovers and astronomy enthusiasts to an out-of-this-world experience – and we need your help and support in making it a day they will never forget.

If you would like to volunteer to help out at some point between **Friday 20th and Saturday 21st February 2026** we would greatly appreciate it. The Moon Palace will be open to visitors from 10am-4pm each day. Please register your interest here <https://fellows.ras.ac.uk/civicrm/mailling/url?u=5802&qid=1683881>

The observatory is equipped with a powerful optical telescope for stargazing at planets, distant stars and galaxies, plus a rooftop radio telescope which allows visitors to listen to sounds of the universe.

It also features a lunar map on board, plenty of sculptures and cosmic artwork of planets and stars, cosy blankets to keep warm and "cosmic tea" served in mugs resembling an alien head.

**The Moon Palace** was designed by artists Heather Peak and Ivan Morison and supported by The National Lottery Heritage Fund.

Expert advice was also provided by the School of Physics and Astronomy at the University of Leeds and Leeds Astronomical Society.

The bus, which is covered in colourful nebulae, was inspired by the legacy of Leeds-born John Smeaton, a keen astronomer who is seen as the father of civil engineering.

It has been described as a "collision of creativity, art and science" and is aimed at facilitating engaging discussions, encouraging teamwork and innovative thinking.

The Moon Palace made an appearance at Durham University for the National Astronomy Meeting in July this year.

There will be no booking required to visit the mobile observatory while it is stationed in the Burlington House courtyard – visitors are welcome to turn up on the day and come and have a look around.

To find out more about it, visit: <https://eastleedsproject.org/moon-palace/>

## Volunteers wanted!

First Light Optics are looking for volunteers to help with solar outreach at the **Birmingham NEC Photography and Video show 14-17th March 2026**.

There are usually around 20,000 people who visit during the event and help with solar outreach outside would be very welcome. Please contact Grant Bowskill at [grant@firstlightoptics.com](mailto:grant@firstlightoptics.com) if interested.

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

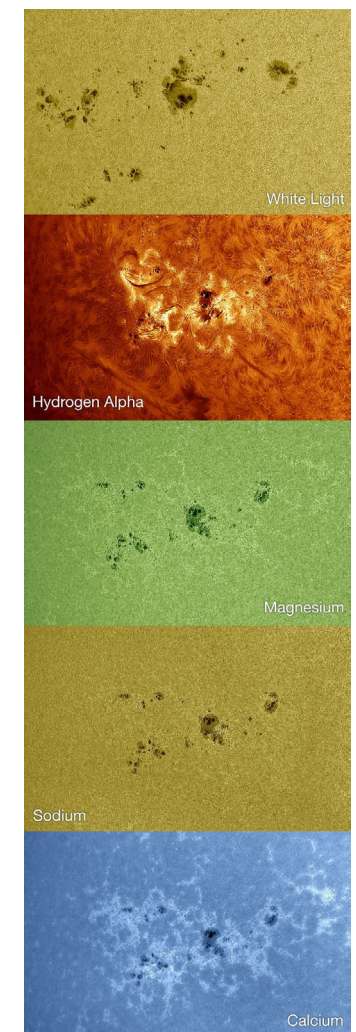
## Occultations – survey for A Level student

Hello. I am interested in occultations and for my Computer Science A Level coursework I'm writing a program to help astronomers study occultation timings by helping them handle the observation data. It will be a desktop app that will allow the user to explore a relational database of minor planets, occultations, and observations. If you have a few moments to complete my survey I would be very grateful. Thank you.

**Thomas Crawford**

<https://us15.list-manage.com/survey?u=f-4d49d9526f92114880cb9a2d&id=573ee65ec0&tribution=false>

<https://britastro.org/forums/topic/occultations-survey-for-a-level-student> □



**The Sun live in your classroom?** contact us at [eando@britastro.org](mailto:eando@britastro.org) for more details.



# Comet Chasers: Keeping watch on bizarre comet 29P/S-W1

**Richard Miles**

**Director, Asteroids and Remote Planets Section, British Astronomical Association**

Of the 471 known periodic comets in our Solar System, one stands out as being very different – the comet in question is 29P/Schwassmann-Wachmann, also known as Comet Schwassmann-Wachmann 1. The reason is that it has the largest nucleus of all those known, measuring a little over 60 km across, but more particularly it is the behaviour of the solid body that matters – it undergoes quasi-periodic eruptions. As to why it does this, astronomers do not know for sure. Personally, I am rather surprised that the professionals have not recognised an important opportunity here. If they cannot account for its behaviour then there must be something lacking in our understanding, and cometary science has something to learn from Comet 29P/S-W1. This is where amateur astronomers, citizen scientists and the Comet Chasers group are important in that between them, they are helping to push back the frontiers of science.

**Comet Chasers** is an education and outreach project, which uses robotic telescopes owned and operated by the Las Cumbres Observatory through support from the Dill Faulkes Education Trust/Schools' Observatory (formerly The Faulkes Telescope Project). A key objective of the Project is to engage students, including primary school children, to do "real science". My role has been to try and maximise the science yield through the Comet Chasers collaboration and so Comet 29P has been a prime target for us.

Prior to 2014 it was thought that 29P's eruptions, also called outbursts,

happened about 7–8 times per year on average, which is largely the case. These events cause the comet to suddenly brighten within a few hours by somewhere between 1 and 5 magnitudes. However, thanks in part to observations by amateurs and schools using the 2.0-m Faulkes Telescopes, it was discovered that another class of outburst was also taking place but had been previously missed because their low intensity meant they had remained below the radar – until then that is. Since 2014, an on-going monitoring programme has detected lots more outbursts with many contributions from Comet Chasers. The harvest from the 2024–2025 apparition of the comet resulted in a record 42 eruptions detected. Comet Chasers contributed 30% of all observations scheduling and clocking up more than 400 successful observing runs! We have a dozen dedicated people and schools scheduling images – they are part of the 32-strong members of the FT-Comet-Observers Group. Last year we also joined forces with The Schools' Observatory, which also has access to the 2.0-m Liverpool Telescope on La Palma in the Canary Islands.

Another important success in recent years has been the use of the 2.0-m telescopes to measure exact positions of 29P as it orbits the Sun every 15 years or

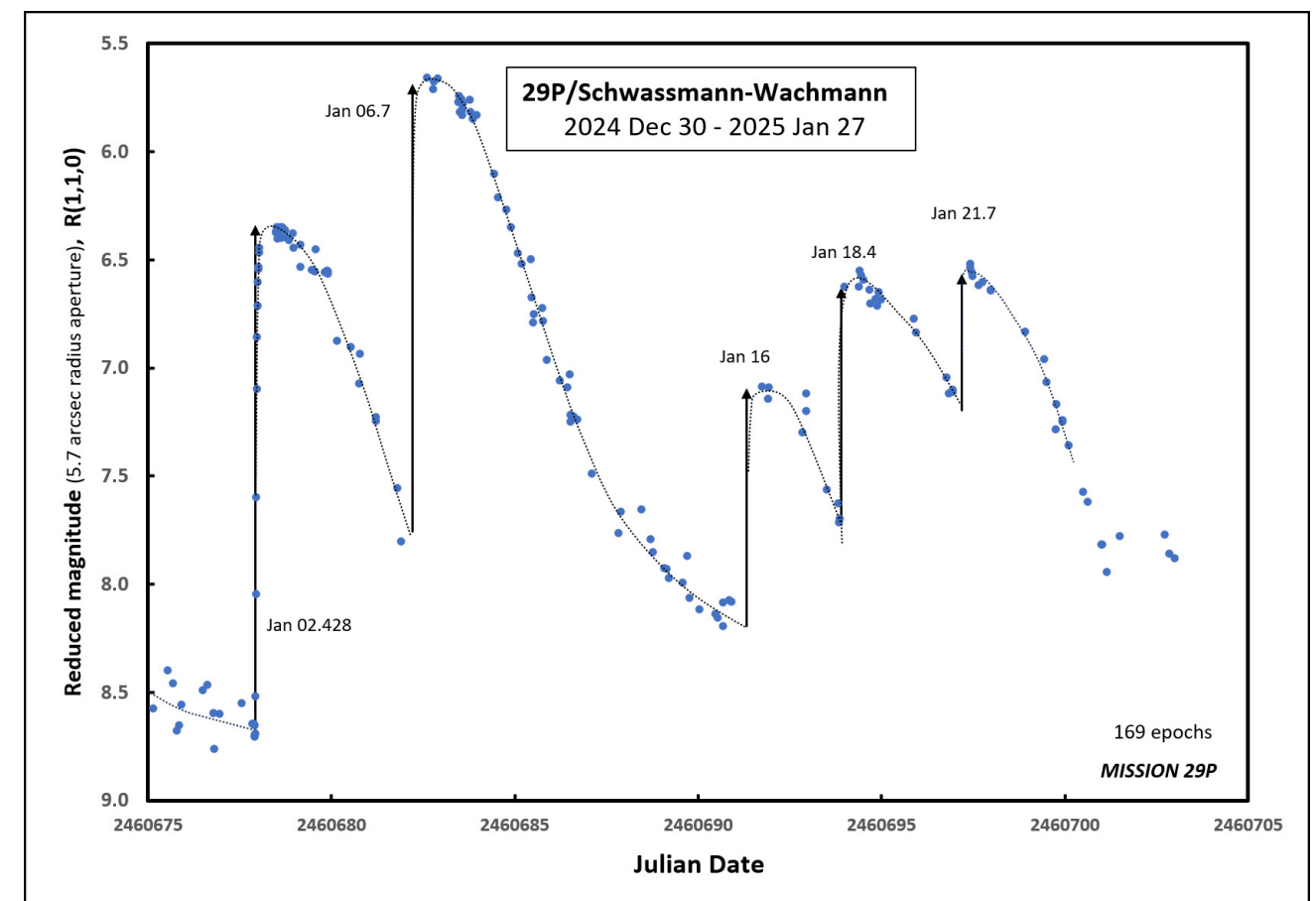
so. We found that all previous astrometry over several decades had the position of the comet nucleus 1350 km from where it really was. Shortly after the revised orbit became available in late 2022, the first stellar occultations by the 60-km nucleus were observed including one event seen from the UK in 2023. Prior to 2022, no comet nucleus had ever been seen to fully occult a star. One job now for Comet Chasers and The Schools' Observatory is to obtain more images of 29P using the Faulkes and Liverpool Telescopes so that we can refine the astrometry. The Jet Propulsion Laboratory in Pasadena uses our astrometry exclusively to track the comet.

Dr Marcelo de Oliveira Souza (Explore Alliance Ambassador, Brazil) and José-Manuel Pérez Redondo (Institut Alcarràs, Spain) work with their students to make observations, and pulled off a first when they

each scheduled the Faulkes Telescope North to image this bizarre object. The scheduler happened to take images about 2.7 hours apart and it turns out that after the first pair of 90-sec exposures were taken, the 'comet' underwent a strong outburst possibly within a few minutes. By the time a later image was obtained, the innermost coma had brightened by a factor or ten and remained at this maximum light for at least the next 10 hours. The lightcurve below shows five outbursts within the space of a month. Marcelo and José-Manuel's students imaged the fourth event shown in the plot.

We'd love to engage with more schools, home schoolers, groups, clubs and local societies too. So please get in touch if you would like to know more.

[https://britastro.org/section\\_information/contact-the-asteroid-section](https://britastro.org/section_information/contact-the-asteroid-section) □

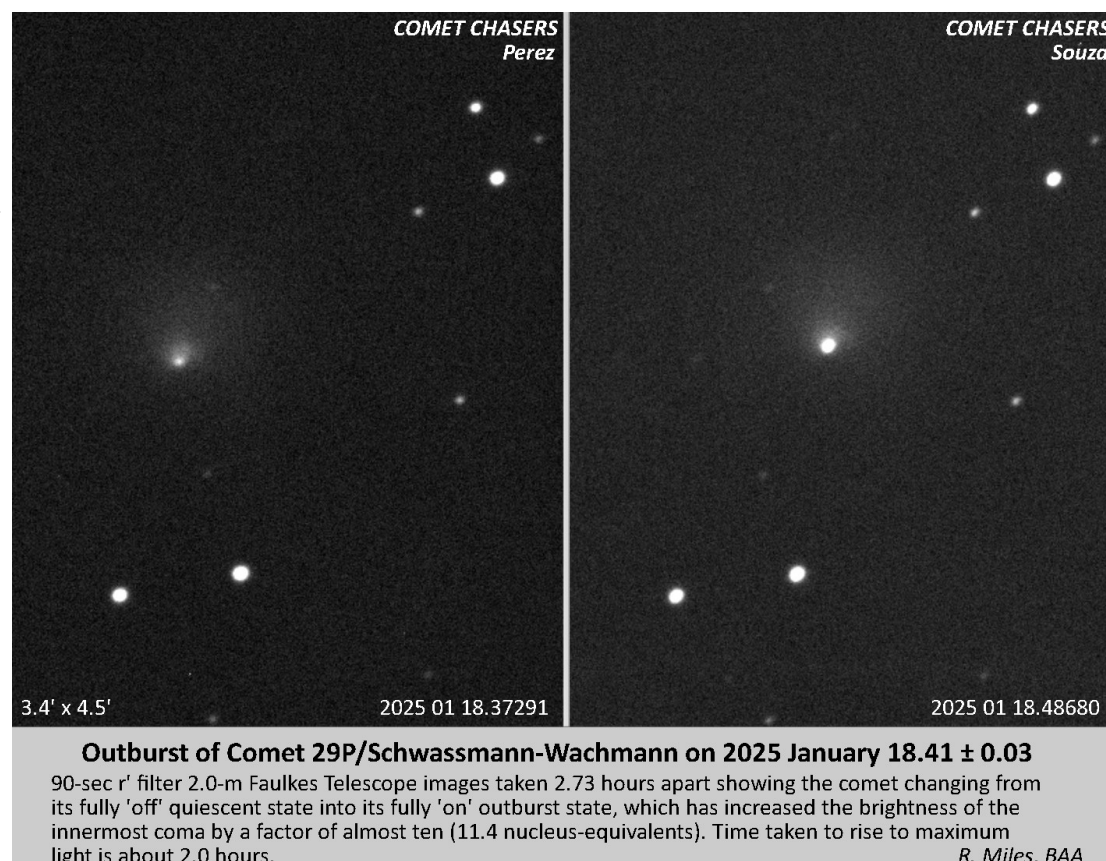


## Comet Chasers: Interstellar Comet 3I and the BBC (but no aliens)

**Ben Wooding**

**St Mary's Catholic Primary School, Bridgend, Wales**

St. Mary's Roman Catholic Primary School, Bridgend, has always encouraged staff to develop their hobbies and pastimes in school, where appropriate. When an invite to join Comet Chasers came along, we jumped at it. Comet Chasers is a

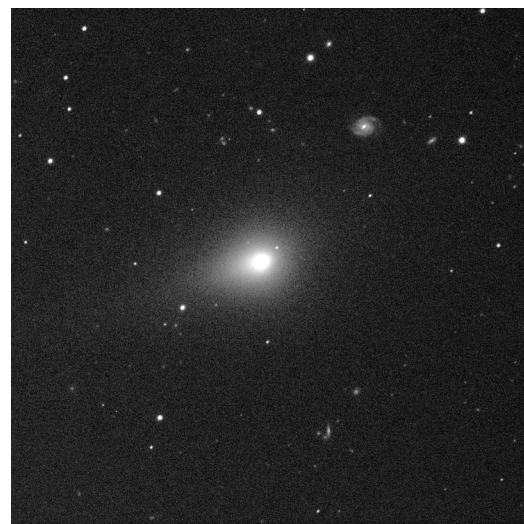






substantial part of Helen Usher's PhD in collaboration with the Open University, Cardiff University and the BAA. Along with children from all over the world, our children get to use research grade telescopes to make observations of comets.

Why are we involved in Comet Chasers? It gives us opportunities to get involved in real science and produce real data. The children also learn about comets; their composition, origins, importance as the possible origins of water on the Earth and the building blocks of life, the importance of tracking for possible impacts with the Earth and their similarities and differences to galaxies (Messier's catalogue).



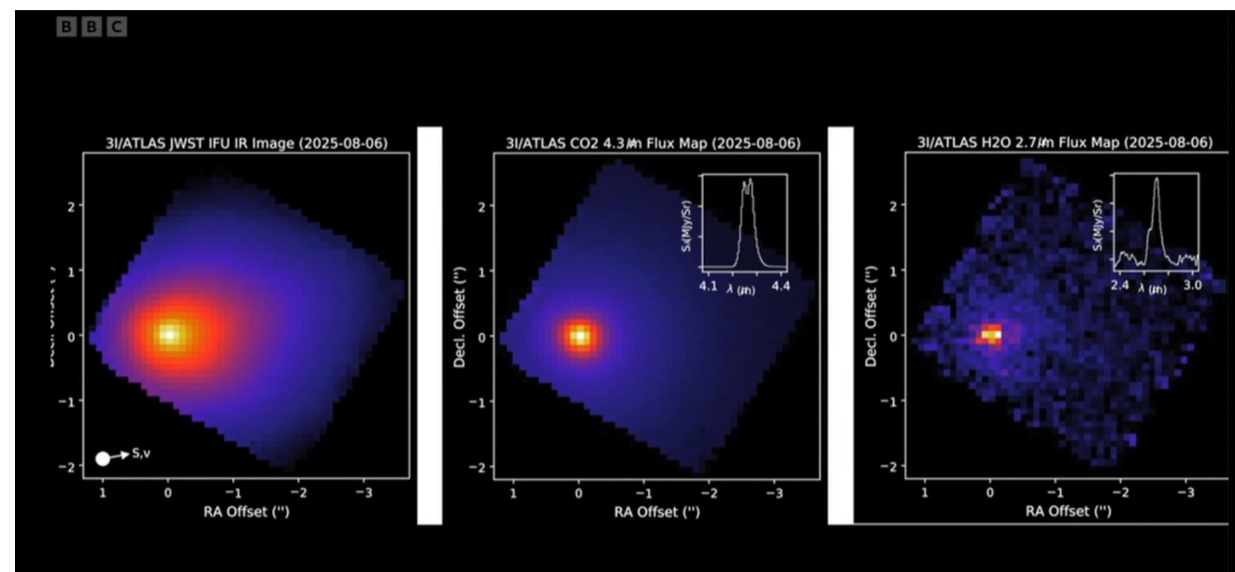
### Comet 3I

Not only are the children able to use the data themselves, to produce light curves and measure changes in the brightness of the comets, but they also work with researchers from around the world. Professional astronomers, comet research scientists, provide missions for the children to make observations of comets. This gives the astronomers additional time on telescopes that they might not have access to, providing added data for research. In return, the children's work appears in scientific research papers, and the school appears in the credits.

In the past we have been involved in several exciting missions such as NASA's DART Impact mission. Most recently, of course, we provided data on 3I ATLAS that helped to accurately point the James Webb Space Telescope. The children were excited to be part of something attracting so much attention and as the comet was only the third ever interstellar comet to have been observed. It's age, size and speed



We also produce our own observations. As part of the Faulkes Telescope Project/ Schools' Observatory, we use the Las Cumbres Observatory network of telescopes from around the world. The children set up the observations themselves, choosing the size of the telescope (0.4m-2m), the exposure time and number of exposures and any filters they might need. Once they have located the comet and set up a time frame, the observation is added to the queue and images are usually available by the next lesson.



fascinated them.

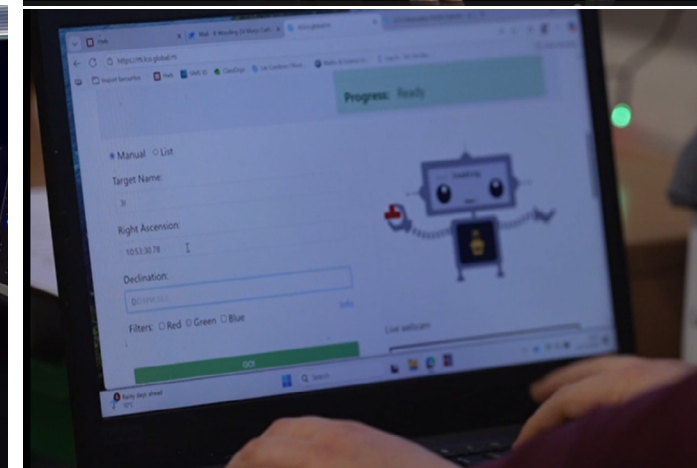
Our work on 3I ATLAS led to a phone call from the BBC! That was a bit of a surprise. The timing wasn't great, with arrangements needing to be made for filming in the last week of term before the Christmas holidays. However, the children were very excited and the top comet chasers were selected and consent sorted out. The day was a great excuse for Helen Usher to visit the school again and bring us bang up to date with what was happening to the data we were collecting. Thankfully, the BBC News Science and Climate Correspondent, Georgina Rannard, was super. Having been very chatty all afternoon, as soon as the cameras appeared, the children clammed up completely. Georgina was patient and very good at getting the children to open up about Comet Chasers and their work on 3I ATLAS, and also what they thought of the suggestion that 3I was actually a spaceship sent by aliens (they were clear it was not aliens, but just a comet like the other ones they study).

The piece appeared on the BBC Breakfast and Lunchtime TV news programmes, the Radio 4 Today Programme, Radio Wales, and Radio Oxford and Berkshire on 19th December 2025, the day the comet was closest to earth. The children said they were very excited to appear 'on the news' and to be 'famous'.



To be a small part of a science topic of international interest is very inspiring for them. Sometimes it can be difficult to convey the important contribution that the children are making, but this certainly made a big difference.

The allure of Comet Chasers is that the children are part of something bigger. On the DART mission one child memorably said, "This is for NASA, I'm working for NASA!". The project is fun, enjoyable and engaging for the pupils. They also learn a variety of new skills. Hopefully, some of the children will be inspired to take up and enjoy science later in their education or employment and maybe even go on to become the next generation of astronomers. □





# BAA Back to Basics, Pontefract



## Alexandra Hart & Helen Usher

The Back to Basics (Curious about the Cosmos) event was held on 8th November 2025, hosted by the West Yorkshire Astronomical Society (WYAS) <https://www.wyas.org.uk/> at the Carleton Grange Community Centre, adjacent to the WYAS Observatory. The event was organised by the BAA, with help from the Society for Popular Astronomy (SPA) <https://www.popastro.com/> and particularly WYAS who were excellent hosts, taking responsibility for the local arrangements and publicity (and ensuring an endless supply of hot drinks!). First Light Optics (FLO) <https://www.firstlightoptics.com/> provided sponsorship in the form of handouts, and particularly some very cool raffle prizes – thanks FLO!

Over fifty people attended. The audience spanned a wide age range, from members of the WYAS Young Astronomers' Club through to U3A (University of the Third Age) members. More than ten were under the age of 18, including several attending with their grandparents. The gender balance was also encouraging, with around half of attendees being female. All participants were fully engaged in both the talks and the hands-on activities throughout the day.

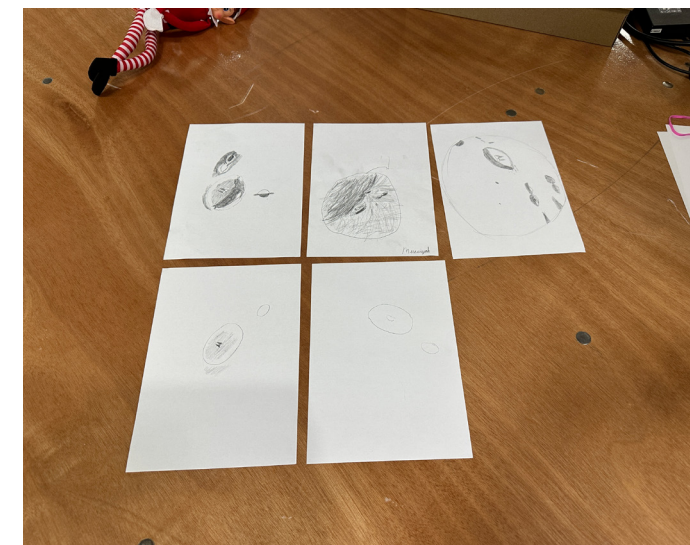
Everyone involved—both organisers and attendees—clearly enjoyed the event. There were stands from the BAA and SPA offering books, observing guides, Moon maps, and other merchandise. Andy Newsam from the Schools Observatory was on

hand to talk about all the great resources available on their website <https://www.schoolsobservatory.org/>, how you can access big telescopes from home, and generally talk enthusiastically about all things astronomical. First Light Optics (FLO) provided an impressive display, featuring a full range of SMART telescopes, along with solar telescopes, refractors, and Dobsonians. Grant Bowskill (CEO of FLO) and Garry Palmer were on hand throughout the day to answer questions, offer advice on telescope choices, and distribute a wealth of informative astronomy leaflets.



During refreshment breaks and lunchtime, attendees were able to explore a wide variety of hands-on displays. These included investigating comets and asteroids, handling meteorites, fossils, and samples of lunar and Martian material, trying out different

types of telescopes, getting advice on setting up an equatorial mount, sketching the Sun and Moon, setting up observations with remote telescopes, exploring impact craters using a simulator, discussing astrophotography with experts, and investigating light curves. Particularly popular were the infrared camera—allowing participants to detect warm objects hidden from view—and activities involving UV beads, inks, and torches.



At lunchtime, we were fortunate to catch a brief but welcome glimpse of the Sun using the Heliostar 76 and several Dobsonians set up behind the hall. A small break in the cloud cover appeared just in time, prompting a rapid call of “come now if you want to see the Sun!” We also enjoyed observing Fraunhofer lines using a pocket spectroscope. On a personal note, I particularly enjoyed chatting with a young attendee about science; we bonded over a shared love of science lessons at school, and I was able to show her images from my day job and explain how closely it relates to my hobby of astronomy.



We had some fantastic lectures presented:

- **Introduction to the night sky**  
Robin Scagell, Vice President, Society for Popular Astronomy (SPA)
- **The Solar System**  
Nick James, BAA Comet Section Director
- **Observing the Sun**  
Dr Stuart Green, BAA Solar section
- **Observing the Moon**  
Philip Jennings, BAA Journal Editor, BAA E&O
- **Photographing the Night Sky**  
Mark Redburn, West Yorkshire Astronomical Society
- **Revealing the Mysteries of Deep Space**  
Dr Jeni Millard, Sky Guide App Editor, BAA E&O
- **Try this at home!**  
Prof Andy Newsam, Schools Observatory, Liverpool, John Moores University
- **Be part of something bigger**  
WYAS

These are available here <https://britastro.org/section-information/pontefract-back-2-basics-event-follow-up>

As a grand finale, the ever-popular raffle made a welcome return, with a range of fantastic prizes generously donated by First Light Optics. These included books, Solarcans, and even pieces of lunar and Martian material, all eagerly received by the lucky winners. The event concluded on a high note, with plenty of smiles all round.

With clear skies in the evening, a number of attendees took the opportunity to visit the neighbouring WYAS Observatory after the event. They were able to tour the facility and enjoy views of the Moon and planets through the Society's telescopes.

## Feedback

Feedback from participants was overwhelmingly positive, with almost all respondents reporting that they were extremely satisfied with the event. Attendees had discovered the event through a variety of channels,



including social media, websites, Go Stargazing, and the SPA magazine.

In terms of experience level, most attendees described themselves as having little or no prior experience of astronomy, while others had some background but considered themselves beginners or returning to the subject. When asked how they might continue their astronomy journey, responses included attending further events, engaging with online resources, beginning regular observing, purchasing a telescope, joining an astronomical society, building on the knowledge gained during the day, attending WYAS observing sessions, undertaking more deep-sky photography, and submitting observations to the Deep Sky Section.

Additional comments from attendees highlighted the event as “well organised and informative,” with many expressing a desire to return in future. Several remarked on the welcoming community and environment, with one attendee noting that the event had “re-ignited a childhood passion,” while another summed up the day by saying they had “had a stellar day.” Many encouraged the organisers to continue running similar events in the future.

WYAS Feedback

“We all at the Society would like to extend our gratitude and appreciation to the many people that made today’s “Back to Basics” event an overwhelming success.

I’m sure you will all agree that it was a fantastic day of astronomy learning with the members of the British Astronomical Association and The Society for Popular Astronomy, and all of the people who have worked really hard to put together and present their talks on a wide variety of interesting subjects.

Also thank you to everyone who attended, we all love astronomy in all of its forms, and your interest and curiosity is the reason these events come together.”

Follow-up

Following the event, the presentation materials were made available, along with links included in the slides providing information on how to join the BAA, SPA, and WYAS <https://britastro.org/section-information/pontefract-back-2-basics-event-follow-up>

Five participants scheduled comet observations during the event itself, with several producing scientifically valuable results:

- O (a young attendee) scheduled observations of Comet C/2025 K1. Shortly afterwards, the comet began fragmenting, and his data have since been

included in a dataset contributing to a paper linked to Hubble Space Telescope observations <https://arxiv.org/pdf/2511.19707> This work also incorporates ongoing observations by work experience students.

- Q (a young attendee) scheduled observations of the centaur/comet C/2023 RS61. These data have been added to a dataset for a forthcoming Nature paper, linked to JWST and HST observations. She also got a thank you email from the lead researcher Eva Lilly in which **Eva explained\*** how the observations were helping scientists to better understanding this strange object.
- Peter scheduled observations of Comet 29P. His data have been used by Richard Miles and are featured on the BAA Mission 29P campaign website <https://britastro.org/section-information/comet-section-overview/mission-29p-2/mission-29p-centaur-comet-observing-campaign>
- Chris scheduled observations of Interstellar Comet 3I. These data have been processed and submitted to the Minor Planet Center (MPC), with Chris credited as the observer. Chris commented that, while he enjoyed the entire day, scheduling observations of 3I was a particular highlight for him.
- L (a young attendee) also scheduled observations of Interstellar Comet 3I, and her data have already been processed and submitted to the MPC.

Discussions are now underway with WYAS regarding ways to follow up with attendees, particularly members of the U3A, to encourage people to continue on their astronomical journey of discovery.

*\*“Hi Q, this is Eva Lilly, the lead researcher on the active centaur C/2023 RS61. I wanted to thank you for the observations, they are very helpful for me and my team, because they show us this object is now likely persistently active before it passes its closest orbital point from the Sun. Your observations helped us to decide that we will ask for another round of observations with JWST. It turns out this object is very special indeed, it has drifted very fast from the furthest parts of the Kuiper belt beyond Neptune, and it bears traces of the original composition of the protoplanetary disc from which all planets in the Solar system were made, and in extension also the life on Earth, including you and me. It has a lot of interesting organic molecules on it including ammonia and methane, so if we put a piece of it in the room, it would stinky like dirty socks and cat pee.”*

Team Effort

Our thanks go to all the speakers for delivering

engaging, accessible, and well-timed presentations. Volunteers from the BAA, SPA, and WYAS were friendly, helpful, and efficient throughout the day, and support from the BAA office was, as always, excellent. The success of the event was very much the result of a strong collaborative effort.

Next Event

The next **Back to Basics** event is scheduled for **2nd May 2026**, hosted by Kernow Astronomers in Cornwall. □



Above: Observation of Comet C/2025 K1 with a 0.4m telescope in Hawaii on 11.11.2025 at 14:03 UTC. Observation scheduled by O (young attendee) at the Pontefract Back to Basics Event



# Raw Sky



## Mike Frost Director, Historical Section, British Astronomical Association

Mark Tweedie is well-known to members of the Coventry and Warwickshire Astronomical Society for his outstanding images, which he regularly presents at meetings or to our Whatsapp group. But there is more to him. In July, Mark announced that he was exhibiting many of his photographs and sketches, and some of his poetry, at an exhibition, “Raw Sky”, in Rugby’s Floor 1 Art Gallery. Mark was co-exhibiting with Coventry artist Clint Hamilton, whose specialities are collage and painting.

The exhibition ran from August 19th to September 6th. There was a launch party of Saturday August 23rd and Mark gave an informal talk about his work on Saturday August 30th. I was able to attend the launch party and the very first people I met as I entered the library were two old friends, Mark and Mary McIntyre, who I’m sure will be well known to members of the Association, as Mary has given us several talks. Mark Tweedie is an alumnus of one of Mary’s sketching classes and the two are good friends.

Floor One Gallery is a smallish exhibition space on (guess!) the first floor of Rugby’s library. Mark had around twenty works on display, and Clint five or six larger works. Clint’s collages were astronomically-themed works built up from discarded waste

(sometimes clearly branded), raising themes of what we are doing to the natural world, and even the space junk in Earth orbit and on the Moon. “Ejecta blanket”, for example, played on the astronomical concept of debris ejected from meteor impacts such as that which created lunar craters, but was a literal blanket of discarded items.

Mark’s contributions fell into several categories. There were a number of exquisitely-detailed images – for example, a series of images of the Moon, over several nights, which show the lunar phases. Each of these images was a mosaic compilation, so the detail really was fine, and Mark provided a magnifying



glass to allow more detail to be seen. There were also a series of sketches of lunar features, arranged in a linear display, separated by lines of a poem, “A Song for Night”, and bookended by to-scale images of the Earth and Moon.

The most impressive exhibits, to my mind, were a series of black-and-white photo-gravure deep sky images – the Elephant’s Trunk nebula, globular cluster M10, the Moon and Pleiades, Horsehead nebula and several others. These were evocative images. Mark explained that he chose black-and-white to try to convey something of how these objects appear visually through a telescope, or perhaps to an interstellar traveller visiting them in person.

I was intrigued to see what people would make of the images. Aside from Mark, the McIntyres and myself, there were no other astronomers at the launch, but plenty of people from Rugby’s art community, who were appreciative and encouraging. I discussed the Elephant’s Trunk nebula with one lady, who said that she saw not a trunk, but a female figure, somewhat ethereal – just as legitimate an interpretation of the image, of course.

I enjoyed the launch event (free Prosecco helped!) and thought I wouldn’t be able to attend the second event, a week later, at which Mark explained the motivations for his work, and the techniques he used to produce the works; however, a cancellation meant that I was able to attend. Photogravure is something

of a throwback to the early days of photography, when there was a need to be able to reproduce photographs. One technique was to take a negative image, shine light through it onto a photo-sensitive surface and produce a 3-D version of the image, with grooves which could be filled with ink, and then pressed onto paper to produce multiple prints. The prints are very impressive and popular with the visitors. Mark also spoke about his desire to connect to the universe, and to convey a sense of scale of the universe.

I was very impressed with the exhibition. Mark is doing a great job of bringing astronomy to a new audience. And the images are outstanding. Well done! ☐

<https://www.ragm.co.uk/floor-one-gallery>  
<https://www.marktweedie.co.uk/blog/2025-07-11-raw-sky-exhibition/>





# Astronomy for Refugees and Autistic Students in South East London



## Srilakshmi Ramakrishnan

There is something truly special about seeing a child's face light up when they explore the Moon for the first time or watch a rocket launch into the sky. Over the past few weeks, we have been lucky enough to share this sense of wonder through three astronomy outreach sessions across South London.

These sessions were a major milestone for us. They were made possible by our first-ever grant from the Royal Astronomical Society, whose support has helped us move closer to our goal: making astronomy accessible to all children, especially those from underrepresented and underserved communities.

## Who We Worked With

We worked with two inspiring groups of young people:

- Around 30 young people from CASPA (Children on the Autism Spectrum Parent's Association) in Orpington
- 35 students from NASCIC, a refugee support

organisation

We delivered **two sessions for NASCIC**, both of which included **rocket launching and virtual reality (VR)** activities. These sessions took place at **Charlton Community Centre, Clockhouse Community center, Greenwich** and **CASPA Orpington**. We also ran one session for CASPA in Orpington, which focused on the same immersive astronomy experiences as before.

## Rocket Launches and Hands-On Science

During the NASCIC sessions, we began with rocket launching - an activity that immediately captured everyone's attention. Students helped prepare the rockets, counted down together, and cheered as each one soared into the sky.

Alongside the excitement, we introduced simple ideas about forces, motion, and how rockets travel beyond Earth. The students were eager to ask questions and keen to take part, with many volunteering for the next launch.

## Virtual Reality: The Moon and the Solar



## System

The highlight across all three sessions was the VR experience. We are incredibly grateful to Julie Swift from mixed reality for learning, who brought her VR headset initiative and ran the sessions with enthusiasm and care.

## Students took part in two virtual experiences:



- **The Apollo Moon landing**, where they could stand on the Moon, see Earth from space, and understand the scale of this historic mission
- **An interactive solar system**, allowing students to move planets, fly through space, and explore the cosmos in a hands-on way

Some students were completely silent with awe, while others excitedly talked about everything they were seeing.

## Why This Matters

What stood out most was how meaningful these experiences were for the young people. For students at CASPA, the structured and immersive activities created a comfortable and engaging way to explore science. For students at NASCIC, many of whom are settling into a new country, astronomy offered something universal - a shared sense of wonder that goes beyond language and background.

Feedback from both staff and students has been overwhelmingly positive, and both organisations have already invited us back. Many young people have asked for more VR sessions and hands-on activities.

## Looking Ahead

These sessions reminded us why astronomy outreach matters. Science should not be limited by background, disability, or circumstance. Every child deserves the chance to look up at the night sky and feel connected to the universe.

Thanks to the **Royal Astronomical Society**, we have been able to take meaningful steps toward making astronomy more inclusive. This grant allowed us to bring exciting, hands-on science directly to young people who face barriers to accessing science education.

We are now planning return visits to both CASPA and NASCIC and exploring ways to expand these programmes even further.

If you are involved in astronomy outreach or know young people who might benefit from similar sessions, please get in touch. And if you know **Julie Swift**, do thank her - her VR work helped make these sessions truly unforgettable.

For more information about these outreach programmes or to discuss potential collaborations, please contact [STELLARINSPIREUK@GMAIL.COM](mailto:STELLARINSPIREUK@GMAIL.COM) <https://www.stellarinspire.com/> □



# Northern Lights Cruise Astronomer

## Dave Eagle

In November 2025, I was assigned as an astronomer on a cruise to Norway in search of the northern lights. It is a real honour to represent Go Stargazing on Fred Olsen's ship Balmoral. The ship accommodates around 1,000 passengers, and my "job", alongside Mark Hardaker, was to give three presentations and lead a number of stargazing / aurora-spotting sessions.

I was surprised that two astronomers were assigned to this cruise, as I had been on a previous cruise on my own to Madeira, Canary Islands and Tangier a year before. But forgot that passengers had paid to hunt for the northern lights, so I should not have been surprised by how popular our talks and observing sessions would be and how busy we would both be.

Our talks, delivered in the main Neptune Lounge, went down very well, and we made a nice double act. Adding a bit of banter and silliness, we made learning the facts more fun. The subjects were, of course, Beginners' Guide to the Night Sky, The Northern Lights, and, towards the end of the cruise, the Scale of the Solar System. Trying to wrap a string 10x around an Earth globe to get the Earth-Moon distance was entertaining to say the least. At the end of our presentations, we were inundated with passengers asking for guidance and lots of questions.

We managed to organise five star-gazing / aurora sessions. These were due to start at 9:45pm, so for our first session on the third night, when we were well north of Scotland and approaching Norway, I got kitted out in my warm gear and wandered onto the

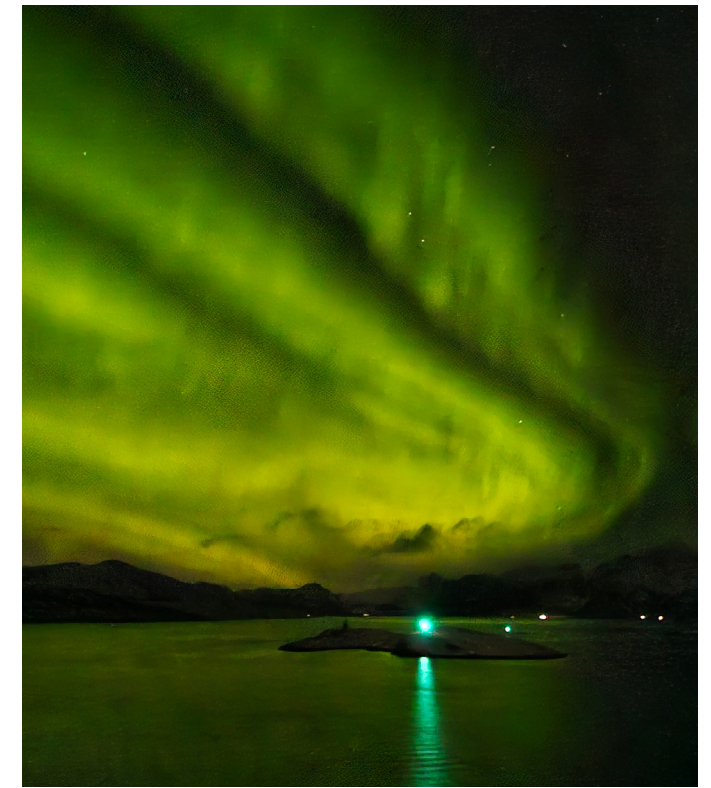
upper deck into a white-out blizzard. I was hoping to get there before the passengers arrived, so I could wander around and get oriented. Despite the snow, the whole ship seemed to be present as passengers were so keen to spot the northern lights, the upper deck was already heaving. The ship had a TV system (which our room did not have) that alerts passengers when the crew spots the northern lights, and it had gone off beforehand. As soon as I arrived, people gathered around me, asking how to set their phones and cameras to best capture the northern lights. Within an hour, the snow stopped, the sky cleared, and we started to give a tour around the night sky, before the northern lights kicked in BIG TIME!! We were treated to a fantastic, colourful, rapidly moving display, spellbinding until nearly 1am, when it started to die down. Our first observing session was marked as a great success. At breakfast, word soon got around that the elusive Lady Aurora had made a spectacular appearance. Those who went back inside the ship earlier during the blizzard felt disappointed that they had missed out.



We made a stop in Norway, then carried on all the way to Alta. At this latitude, the Sun rose at 09:52, setting at 12:32, just skirting the southern horizon at its highest. We also stopped at a few more ports on the way back, sailing through the spectacular Norwegian Fjords and taking in a fabulous husky sledge ride in the snowy landscape with snow-laden trees, resembling something from Narnia.

Following the success of our first observing session, the next couple were even busier. We had quite a few clear skies, giving everyone some nice tours and stories, and saw lots more aurora, though the displays were still amazing, they were not quite as spectacular or as fast-moving as previously.

By this time, Mark and I were easily recognised as we cruised, being approached by many passengers, having great discussions. Sailing further south, the



last two observing sessions were affected by cloud, and the number of passengers joining us dwindled as the northern lights were ticked off their list. Despite this, we were still joined by quite a few passengers who asked great questions to test our combined knowledge. The penultimate morning before we docked back in Southampton, while walking about on deck, I finally caught a glimpse of the elusive green flash at sunrise. I've been trying to catch this so many times, so this was a big tick in a box for me!

All in all, it was a fantastic experience, and I was proud to encourage so many Fred Olsen passengers, on behalf of Go Stargazing, to guide folks around the stars, identify and learn the stories of the constellations and planets, and view and capture their own images of the beautiful northern lights. Our outreach efforts gave so many of our passengers extremely happy memories. □





# Towpath Tales



## Alexandra Hart

Between August and November 2025, opportunities for towpath encounters during solar-observing sessions were limited. A number of circumstances contributed to this: essential maintenance work on the boat required a return to the boatyard, I was away for the Orkney Adventure and BAA Autumn meeting, and suitable weather was often lacking.

One sunny day did occur on 17th August 2025. While positioned near Bridge 5A (Venetian Mile) on the Middlewich Branch of the Shropshire Union Canal, I was preparing the Heliostar and waiting for it to reach operating temperature under clear, calm skies. During this time, a lady walking along the towpath with her dog paused to chat and asked to see the Sun.

She mentioned that she had previously owned several telescopes but had sold them prior to moving aboard her narrowboat. I explained that modern compact instruments such as the Seestar, Dwarf 3 and the Heliostar can be accommodated even in the limited space available on a boat. Her dog, who was delighted to receive attention, was named Hershey—after Caroline Herschel, not the chocolate bar as I initially assumed. Her former dog, who had since passed away, had been named Newton.

This brief encounter provided a welcome moment of conversation and a reminder of the widespread

interest in astronomy found along the waterways.

## Friday 26 December 2025 – Boxing Day

Hurleston Reservoir greeted us with a clear blue sky, still air, and a frozen landscape that morning. I set up the Heliostar and, quite unexpectedly, around twenty people viewed the Sun for the first time. There were many families out enjoying their Boxing Day walks, and the response was wonderfully enthusiastic.

We had set off from Venetian Marina on Christmas morning, but strong winds led us to find a sheltered mooring for the night. From dawn to dusk, there was a superb, uninterrupted view of the Sun near Hurleston Reservoir. Earlier that week, a breach on the Llangollen branch of the Shropshire Union Canal at Whitchurch had reduced water levels by around six inches. As a result, the Hurleston lock flight was closed and the canal lay dry.

The area was unusually quiet, broken only by the sound of pumps transferring water from our section of the canal up to the reservoir, rather than it being supplied naturally from the Llangollen branch. We had never known it so peaceful—normally this junction is busy with holidaymakers aboard hire boats. Sitting on the bow in the low winter sunshine, we enjoyed a simple Christmas dinner of cold turkey sandwiches and sausage, soaking up the calm and tranquillity.

Our plan had been to continue on to Audlem

the following day, Boxing Day, but we awoke to find ourselves completely frozen in. This provided the perfect excuse to bring the Heliostar 76 out onto the towpath instead. I set up around 11 a.m. and was amazed by the number of people walking past—large family groups enjoying their traditional Boxing Day stroll. Many stopped to ask what I was doing, and around twenty people had their first-ever view of the Sun that morning. They were captivated by the striking prominences and filaments on display. It was tremendous fun and led to some memorable conversations.

One conversation, however, was particularly unexpected. I met my first flat-earther—something I had never seriously thought I would encounter. His opening question, “Can you prove to me the Earth is round?”, caught me completely off guard. I realised I had never truly considered how I might explain something I had always taken for granted. After a rather stony minute of silence, I stumbled into an awkward discussion about weather satellite imagery before he moved on.

Afterwards, I reflected that I should be better prepared next time. There were so many clear and

simple points I could have made. Standing beside my telescope, for instance, I could demonstrate that the Sun—clearly spherical—rotates, something I can also show through animations. I might have invited him back later to observe Jupiter, another rotating sphere, or mentioned that Venus shows phases like the Moon, revealing its spherical shape through reflected sunlight. Why, after all, would Earth be the only flat disc in an otherwise round solar system?

There are also everyday observations we all recognise: ships appearing mast-first over the horizon, as though rising over a hill; the increased distance one can see from an aircraft compared to ground level; photographs taken by countless astronauts aboard the International Space Station; and the curved shadow of the Earth during a lunar eclipse. None of these fit comfortably with a flat Earth.

If anyone has additional clear or compelling explanations, I would love to hear them. I’m determined to be a little better prepared—and a little less lost for words—should such a conversation arise again. □












**Quiz - Test your family and friends and chat to them about the answers'**  
Click [here](#)

Questions for the Stargazer

- What is the brightest star in the night sky?  
a. Sirius  
b. Vega  
c. Altair  
d. Arcturus
- What constellation is this?  
a. Orion  
b. Taurus  
c. Gemini  
d. Cancer
- From a dark country location, about 2000 stars can be seen by the unaided eye. How many stars can be seen from a typical major city?  
a. Less than 100  
b. Between 100 and 1000  
c. About 1000  
d. More than 1000
- How far above the Earth does the International Space Station orbit?  
a. 200 miles  
b. 250 miles  
c. 300 miles  
d. 350 miles
- What is the name of the red giant star closest to Earth?  
a. Sirius  
b. Vega  
c. Altair  
d. Arcturus
- Which of these statements are part of the "Copernican Revolution"?  
a. The Earth is at the center of the universe.  
b. The Earth is not at the center of the universe.  
c. The Earth is a planet.  
d. The Earth is a star.
- What star pattern is this?  
a. Orion  
b. Taurus  
c. Gemini  
d. Cancer
- Why is Venus so hot?  
a. It is a gas giant.  
b. It is a rocky planet.  
c. It has a thick atmosphere.  
d. It has a thin atmosphere.
- What is the most important parameter of a telescope or pair of binoculars?  
a. Aperture  
b. Magnification  
c. Weight  
d. Mount
- How far from Earth was the first image of a black hole taken?  
a. 42 million light years  
b. 42 billion light years  
c. 42 trillion light years  
d. 42 quadrillion light years

How is your knowledge of astronomy and stargazing?

Arrange these celestial objects in order of their distance from Earth.

 Saturn	 Galaxy M51	 Our moon
 Orion Nebula	 Jupiter	 Center of the Milky Way Galaxy
 Galaxies revealed in the Hubble Deep Field	 Hubble Space Telescope	 The Sun

Answers: 1. Sirius, 2. Orion, 3. About 1000, 4. 300 miles, 5. Sirius, 6. b, c, d, 7. Orion, 8. c, 9. Aperture, 10. 42 million light years



# Museum of the Moon suspended in Cardiff

Edward Cooper

Landing on the 10th March and on display until the 12th April 2026, Luke Jerram's sculpture of the Moon will be in the Grand Hall at the National Museum Cardiff.

There are a number of events being run alongside the Museum of the Moon exhibit, these include 'Quiet Sessions' aimed at those who prefer a calmer environment with less people, no background music, and other accommodations for sensory comfort.

Cardiff Astronomical Society will have a stand alongside the exhibit on Saturday 4th April where

amongst other astronomical / space related material there will be items loaned from the Science and Technology Facilities Council (STFC) lunar sample collection.

Unable to make it on the 4th April? you can still see a piece of Moon rock from the Apollo 12 mission (November 1969), it is on loan from NASA, and on display as part of the exhibition The Evolution of Wales' at the National Museum Cardiff. □

<https://museum.wales/cardiff/whatson/12839/Museum-of-the-Moon/>



The Moon at Delapré Abbey

## Amazing Free Resources

Helen Usher

The Science and Technology Facilities Council (STFC) has as one of its activities Public Engagement. As part of this it provides grants for delivering outreach and educational activities, but also produces excellent resources. I was delighted to find that these are now available via the STFC website again.

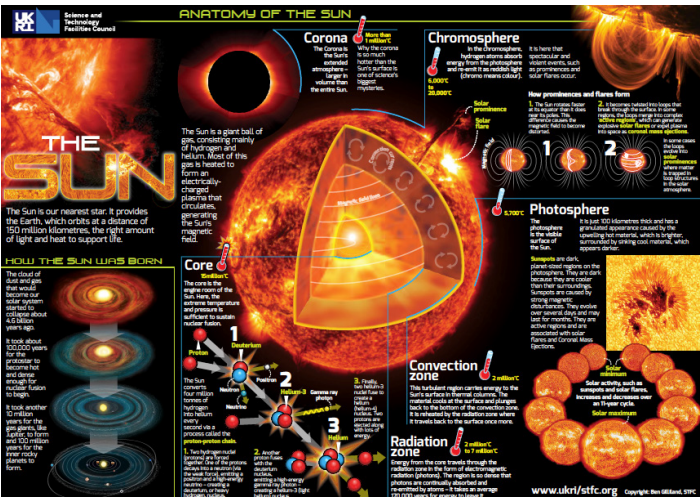
<https://www.public-engagement.stfc.ac.uk/resources/search-our-resources/>

The resources can be sorted by age, topic and resource type. The Booklets and Posters are absolutely

brilliant – colourful, engaging and of course scientifically accurate. They can be downloaded from the website and some can also be ordered in print too (for free!).

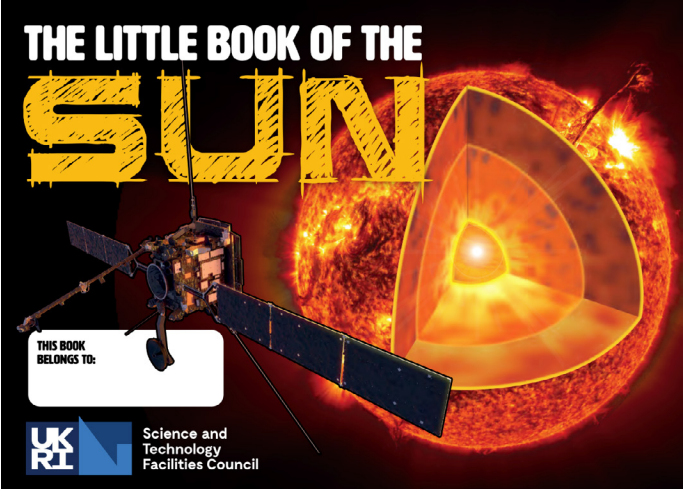
The 'Little Book of...' and 'Little Poster of...' series are a great example. The topics include: the Sun, the Moon, stars, planets, exoplanets, space rocks, gravity, big bangs, big telescopes, and extreme universe. Here's an example of the poster of the Sun. The book includes this information and more in a similarly attractive and engaging format. Hard copies of the booklet can be ordered, or it can be downloaded as a pdf. The

PDF works really well as a flipbook too.



This booklet contains curriculum-linked information about the Sun. Topics explored include: what is the Sun made of and what makes it so hot, its connection to Earth, including the aurora and solar eclipses, and how we study the sun.

It can be downloaded or ordered from here: <https://www.public-engagement.stfc.ac.uk/the-little-book-of-the-sun/>



There is also a set of 'Hands On...' booklets which titles include: Universe, the Moon, Planets, and Little Big Bangs.

They are curriculum matched by age, and include some teacher guides, but would be great for individuals or groups too. I think they could be particularly useful for home schooling and young astronomer groups. □

## Obituary – Peter Drew

It is with great sadness that we learned in January of the passing of Peter Drew, a much-respected figure in British amateur astronomy.

Peter was one of the founding forces behind what became the Astronomy Centre near Todmorden, established in November 1982 alongside Linda Simonian and Rob Miller. From the unlikely beginnings of a disused clay pipe factory high in the Pennines, Peter helped transform the site into a remarkable resource for both public and amateur astronomy. Drawing on his background as a professional telescope maker – including his earlier work running Astro Systems with Rob Miller during the 1970s and 1980s – Peter devoted more than three decades to developing the Centre. His vision and practical skills were evident everywhere, from the design and construction of some twenty observatory domes to the impressive 30-foot main dome that remains the heart of the site.

Under Peter's guidance, the Astronomy Centre grew into the largest dedicated amateur astronomy facility in the UK, rooted firmly in the idea of shared equipment, learning, and outreach rather than commercial gain. Its remote moorland setting was carefully preserved for its dark skies, while educational features such as the camera obscura and specialist solar telescopes were added. Over the years, countless visitors – from school groups and members of the public to experienced amateurs – benefited from Peter's quiet encouragement, technical expertise, and generosity with his time.

Peter will be sorely missed by all who had the pleasure of knowing him. However, his legacy lives on in the Astronomy Centre itself, and in the many people whose enthusiasm for astronomy was nurtured by his dedication and vision.

<https://stargazerslounge.com/topic/441817-peter-drew/> □



# You can help: Join the Search for Hidden Black Holes



Adam McMaster



there should be millions, or maybe tens of millions, of stellar black holes in the Milky Way.

## Should be

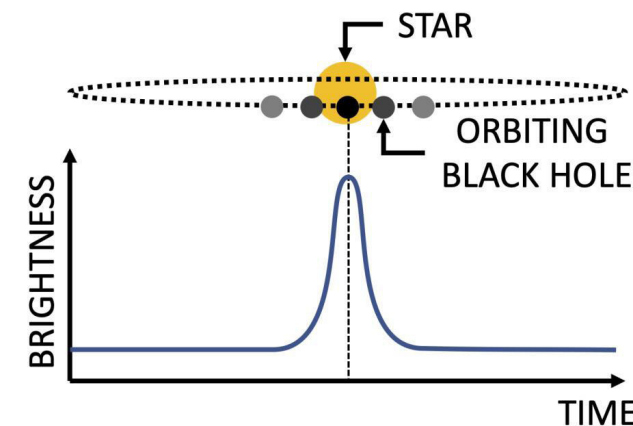
In reality, we have only found about twenty stellar black holes in the Milky Way, with another 50 or so unconfirmed candidates. For each black hole we know about, there could be another million lurking,

The Milky Way is teeming with stellar black holes. These ultra-dense, ultra-mysterious objects form at the ends of the lives of the largest stars. We know how old the Galaxy is, and we know how long stars live before they die. From this, we know

unseen and waiting to be discovered. Actually finding them will not be easy (they are *black*, after all), but recent advances in large-scale astronomical surveys have given us a fighting chance. Even with the best technology, we're going to need your help. You might not think it, but you already have all the skills you need to uncover the Galaxy's hidden black holes. The search is happening now on my Black Hole Hunters project.

So why are black holes so tricky to find? Why have we managed to find 70 of them, while millions go undetected? The key is that the ones we've found are mostly in a special class of black holes which happen to be in very close orbits around stars. These are known as X-ray binaries: "binaries" because there are two objects orbiting each other, and "X-ray" because these black holes are emitting very bright X-ray radiation. That's what makes them so easy to spot. The X-rays come from stellar matter which is being siphoned off the black hole's companion star, due to their proximity, and heated by the extreme forces as it falls into the black hole. Most black holes are not in such close orbits with stars and therefore do not emit X-rays. Those black holes are essentially invisible.

Lucky for us, even invisible black holes affect



their surroundings, due to the thing black holes are most famous for: their gravity. There are a few ways we can use black holes' gravity to find them, but they mostly come down to looking for the way their gravity influences the stars near them. A star whose position wobbles a little might be orbiting an unseen companion. A star whose brightness changes in a certain way might be getting stretched and distorted by a companion. And so on.

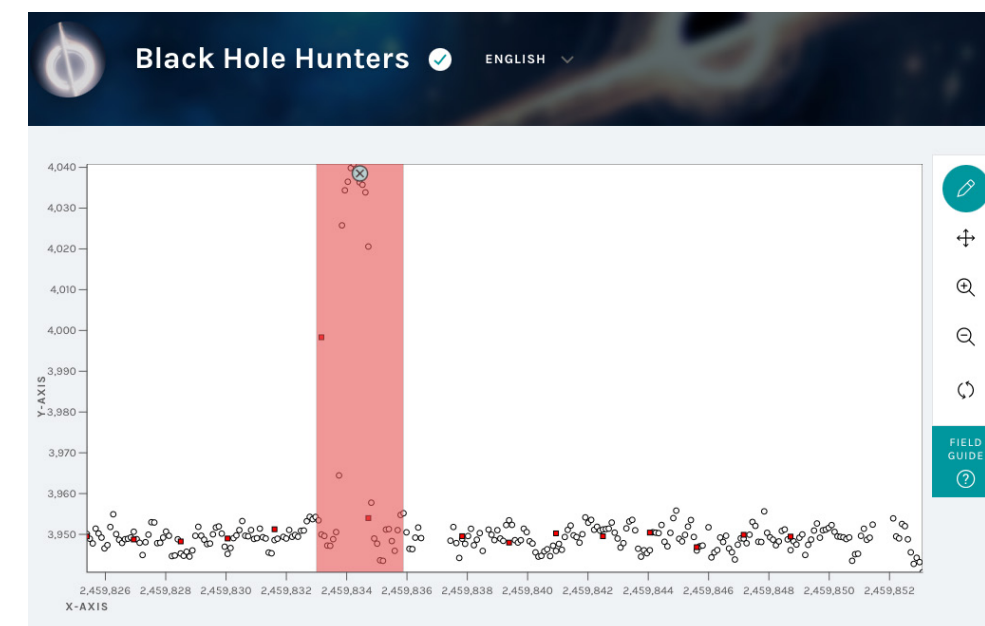
There is also one technique that can let us discover black holes not by how they influence stars, but by what they do to the stars' light. You might have heard of gravitational lensing. It's the phenomenon where the immense gravity of large galaxy clusters can focus and magnify the light from much more distant galaxies. It's not just galaxies and clusters of galaxies which can cause lensing. Individual objects, such as stars, planets, and black holes, can do the same thing in a phenomenon called *microlensing*. With microlensing, the focused images are too small for us

to see, but we do see a brief increase in the brightness of the background star. Studying this magnification can tell us about the foreground object, the "lens". The lens and the background object can be very far apart, even in different parts of the galaxy. The microlensing effect happens by chance when a distant object and a closer one happen to line up from our perspective as they move through space.

In *Black Hole Hunters*, we're looking for a special kind of microlensing called *self-lensing*. This is where the lens and the background source are in orbit around each other, rather than being separated by a great distance. Unlike normal microlensing, self-lensing causes a repeating magnification (once per orbit) which makes it quite distinctive. Because of the way the geometry works out, self-lensing can only be caused by black holes, neutron stars, and white dwarfs, not normal stars or planets. That makes it a potentially great way of finding black holes. So far, a few self-lensing white dwarf systems are known, but we're hoping to be the first to find self-lensing black holes and neutron stars.

By taking part in the project, maybe you could be the first one to spot a self-lensing black hole! All you need to do is look at graphs showing the brightness of stars over time, and tell us if you see anything that looks like microlensing. We'll show you some examples so you know what to look for, and there is an active community of other volunteers who are always happy to help if you're unsure of anything. Myself and other members of the research team also try to be as active as we can, and we're always happy to answer questions about how to do the project and about the scientific background.

Check it out at [black-hole-hunters.org](https://black-hole-hunters.org) and let's see what we can find!



This is an example of what you'll be asked to look at. It shows brightness on the y axis, plotted against time on the x axis. You can see that the brightness spikes in the red area. It is those spikes that you will look for and highlight for the team. This is a straightforward example - but a real data set is far more messy, and that is why the project needs real people who can spot less obvious patterns than automated systems. □