

# Federation of Astronomical Societies



Editor: Michael Bryce  
Member of Carolian Astronomy Society  
Member of Bromsgrove Astronomical Society

## Newsletter

[www.fedastro.org.uk](http://www.fedastro.org.uk)

No 128: October 2022

*Note: The FAS Council Reserves the Right to publish articles, events and reports submitted to the FAS Newsletter*

**We have all been saddened by the death of Her Majesty Queen Elizabeth II. The FAS thanks her for her devoted, selfless service and offers our sincere condolences to all members of the Royal Family. Our wishes for good health, fortune and happiness go to His Majesty King Charles III.**



### President's Spot: Dr Paul A. Daniels FRAS

After August's Newsletter reporting the passing of our colleague Graham Bryant, my friend and mentor David Hughes and Paul "Suthers" Sutherland, astronomy writer, professional journalist (The **Sun**'s Spaceman) and SPA stalwart, I'd hoped to be able to headline with something lighter this month – sadly, no.

My wife, Trish, and I are in our late 60's and are recently 'with child' or, rather, 'with puppy'. At my age I thought the days of coping with the bladder and bowel activities of a youngster long past; but no, here I am, dealing with the aftermath of 'Mr Darcy' (Darcy for short) our newly acquired poo-machine and I'm (sort of) loving it! The picture shows him as an eight week-old Fox Red Labrador and already quite the character. We've *only just* started training him so, one word from me and... he does what he likes!

I got to thinking about dogs in astronomy: they've been a part of human life in cultures all around the world for millennia and it's only natural that, along with other animals significant to our ancestors, they've found their way into our night skies and calendars.

In our Western sky culture, of course, there are the three 'dog' constellations:

- Canis Major, the 'Big Dog', hosts *Sirius* ( $\alpha$  CMa), 8.6 light years (ly) distant, blue-white and, at a visual magnitude  $m_{vis} = -1.46$ , is the brightest star in the sky.
- Canis Minor, the 'Little Dog', hosts *Procyon* ( $\alpha$  CMi), 11.4ly, yellow-white and, at  $m_{vis} = +0.34$ , is the eighth brightest star in the sky. The name *Procyon* comes from the ancient Greek word *Antecanis* or 'Before Dog' as it rises about 20 minutes or so before *Sirius* at European latitudes. In the time of the ancient Greeks the appearance of the dog stars presaged the arrival of the hottest days of Summer – the 'dog days' of Summer. Precession of the equinoxes means that the term isn't as correct now as it was then because the seasons have shifted by several weeks.

*Continued ...*

**President**  
Dr Paul A Daniels  
Rose Hill  
High Green, Bradenham  
Thetford, Norfolk  
IP25 7RD  
[president@fedastro.org.uk](mailto:president@fedastro.org.uk)  
07802 324 697

**Treasurer**  
Pat McEvoy  
17 Severn Close  
Paulsgrove  
Portsmouth  
PO6 4BB  
[treasurer@fedastro.org.uk](mailto:treasurer@fedastro.org.uk)



**Secretary**  
Richard Stebbing  
01372 750 644  
[secretary@fedastro.org.uk](mailto:secretary@fedastro.org.uk)

**Newsletter Editor**  
Michael Bryce  
49 Cortland Way  
Stourport-on-Severn  
Worcestershire  
DY13 8NZ  
[newsletter@fedastro.org.uk](mailto:newsletter@fedastro.org.uk)  
07821 896 304

- Canes Venatici, the 'Hunting Dogs', has the two titular stars: *Cor Caroli* ( $\alpha^2$  CVn), 114ly, a blue-white double star,  $m_{\text{vis}} = +2.89$  and *Chara* (or *Asterion*) ( $\beta$  CVn), 27ly, yellowish and  $m_{\text{vis}} = +4.24$ . *Cor Caroli* means 'the Heart of Charles', and was originally thought to refer to King Charles II, but it seems the star's original full name was *Cor Caroli Regis Martyris* which refers to the execution of King Charles I.



There's also asteroid 1865 *Cerberus*, a near-Earth object, discovered in 1971 by the astronomer Luboš Kohoutek (yes, he of Comet Kohoutek fame). In Greek mythology Cerberus was the multi-headed dog guarding the gates to Hades, the underworld. Not to be confused with *Cerberus* is the fourth moon of dwarf planet Pluto, *Kerberos*, which orbits 57,783km from Pluto with an orbital period of just over 32 days – Pluto was also Disney's cartoon dog.

Also, not strictly astronomy, but there's the meteorological phenomena of *Parhelia* (Sun Dogs) and *Paraselenae* (Moon Dogs) which are bright spots that sometimes appear either side of the Sun (or Moon) as part of a surrounding 22° halo that's caused by the refraction of light through atmospheric ice crystals.

In the Chinese culture there's a 'Dog' constellation (near what we call Sagittarius) and a 'Celestial Dog' constellation (near what we call Vela) as well as several 'Celestial Dog' stars. The Chinese also have the Dog as one of their signs of the Zodiac.

In Norse mythology the Hyades Cluster in Taurus is *Ulf's Kept* (Dog's Mouth or Wolf's Mouth) whilst in Inuit tradition they are dogs in the constellation *Qimmiit* chasing the *Spirit of a Polar Bear* (Aldebaran,  $\alpha$  Tau).

About 8° West of the Pleiades is the *Davis' Dog Asterism*, in Cassiopeia, at  $m_{\text{vis}} = +6.5$ , there's the colourful Heart Nebula (also known as the *Running Dog Nebula*) and, in Canis Major, at  $m_{\text{vis}} = +3.5$ , there's the *Tuft in the Tail of the Dog Cluster*.

So, plenty of astro-canines to keep Mr Darcy company! Labradors are supposed to be an intelligent breed – he'll probably be wanting his own telescope soon!

Don't forget to put the date of the FAS AGM in your diaries – Sunday, 23<sup>rd</sup> October 2022 at 14:30.

Also, don't forget the FAS' *Women in Astronomy* in-person convention on Saturday, 12<sup>th</sup> November 2022 in the Martin Wood Lecture Theatre, Oxford (off Parks Road, opposite the North-East end of Keble College).

Stay safe and clear skies  
Paul

## HAPP: "Symmetries in Physics" One-Day Conference 19th November 2022

I'm pleased to let you know that we are able to once again hold our termly one-day HAPP Centre for the History and Philosophy of Physics (HAPP) events conference next term in-person and as last time this will also be livestreamed online for those unable to come to Oxford or based overseas.

The conference will be on "**Symmetries in Physics**" on Saturday 19th November from 10.30 am until 5 pm in the Mathematical Institute and will review the role of symmetries from classical physics to the heart of modern fundamental theory including some still unproven (such as supersymmetry) which could open dramatic new vistas in our understanding of the Universe.

### Confirmed speakers are:

**Professor Klaus Mainzer** (Technical University of Munich) - The Emergence of Symmetries in Classical Physics

**Professor Raffaele Pisano** (University of Lille) - The Symmetries in the History of Physics: Phenomena and Ideas in Noether, Maxwell and Einstein

**Professor Themis Bowcock** (University of Liverpool) - An ABC of CPT - A Look Through the Mirror

**Professor Maria Clara Nucci** (University of Messina) - In Search of Hidden Symmetries

**Professor Cristina Lazzeroni** (University of Birmingham) - Broken Symmetries in Physics

Registration to attend this conference is free but booking is required to attend the conference as below with two separate booking weblinks, one to attend in person and one to join online.

### In-Person Attendance and the Conference Dinner

<https://www.oxforduniversitystores.co.uk/conferences-and-events/st-cross-college/events/symmetries-in-physics-oneday-conference>

### Online Live Streaming via YouTube

<https://www.oxforduniversitystores.co.uk/product-catalogue/st-cross-college/events/symmetries-in-physics-oneday-conference>

### The full programme is available at:

<https://www.stx.ox.ac.uk/event/symmetries-in-physics>

We do hope you'll be able to attend.

With all best wishes,

Dr Jo Ashbourn  
Director of HAPP Centre,  
Senior Tutor (Academic Affairs & Programmes)  
St Cross College,  
Oxford OX1 3LZ

# FAS Convention

## Saturday 12<sup>th</sup> November 2022

# Women In Astronomy

Following our convention at the National Space Centre, and our online events, here is a chance to get together in-person with other astronomy enthusiasts.

**We are delighted to announce our Keynote Speaker:**

**Dame Jocelyn Bell Burnell**

**Professor of Astrophysics**

Discoverer of Pulsars in the 1960s. She is founder of the Bell Burnell Graduate Scholarship Fund.

## Lectures:

**Dame Jocelyn Bell Burnell**

"Discovering Pulsars" and "The Bell Burnell Graduate Scholarship Fund"

**Grace Burthom**

**A secondary school student**

"A Young Person's Guide to the Universe"

**Mary McIntyre FRAS**

**Amateur Astronomer and Astrophotographer:**

"A History of Women in Astronomy — Part 1"

**Dr Becky Smethurst**

**Astrophysicist, Science Communicator and Author:**

"A History of Women in Astronomy — Part 2"

**Venue: the Martin Wood Lecture Theatre, Clarendon Laboratory,**

**Parks Road, Oxford OX1 3PU.**

**Doors open to attendees at 9:15am, with the programme running from 10am to 5pm.**

During the lunch break there will be time to visit the Museum of the History of Science or the Natural History Museum.

### Tickets:

	<b>FAS Member Societies</b>	<b>Public</b>
Adults	£10.00	£12.50
Family	£15.00	£25.00
Under-16 / Student	£ 5.00	£ 5.00

*Note that the event will **not** be live-streamed. **You need to be there!***

For full details, go to <https://fedastro.org.uk/fas/convention/>





## Dr. Jenifer Millard Accepts role of Honorary President of Barry Astronomical Society

In July the chairman of Barry Astronomical Society, Dave Powell MBE, announced that Dr Jenifer Millard had agreed to represent the society and take on the role of Honorary President.

Jenifer, who grew up and lives in Barry, studied for a MPhys degree at Cardiff University, graduating with First Class Honours in 2016. She also received numerous awards for academic attainment and science communication. During her undergraduate studies she secured a summer internship at the then Anglo-Australian Observatory for three months, where she worked on the Huntsman Telescope, a southern hemisphere counterpart to the northern hemisphere Dragonfly Telephoto Array.

Between finishing her MPhys degree and starting her PhD she worked on analysing transiting exoplanets, and in the first year of her PhD visited South Africa for observations. Her PhD thesis is titled "The Stuff Between the Stars: On the Evolution of the Interstellar Medium in the Real and Simulated Universe." She graduated in 2021. Jenifer described the career path she has chosen since graduating in 2021: "In my mind, I always wanted to be a researcher, but I found the realities of research somewhat different to the way they are portrayed. During my PhD I realised my true passion and talent is science communication, which is now the direction I'm crafting my career".

She is Managing Editor for Fifth Star Labs "Sky Guide" App, writer and host of the Awesome Astronomy Podcast, BBC Space Contributor (radio/TV e.g. BBC World News, BBC Breakfast, Radio 5 Live, BBC Radio Wales, Radio 4), BBC 1 Wales Weatherman Walking presenter, Cardiff University Associate, and a public speaker, including lecturer for an astronomy course for adults led by Cardiff University.

Asked about her inspiration for pursuing a career in astronomy she said: "It's a pretty classic story really. It's all my dad's fault - when I was a kid, perhaps 7 or 8, he showed me the Moon through his old telescope. I was completely enthralled. I had to learn everything there was to know about space. I flitted a little from this goal as most kids do - paleontologist, archaeologist, vet, teacher - but by and large, it was space for me from there out. I discovered the name of someone who studies space: an astrophysicist. That's what I wanted to be, and that's what I became. I am honoured that my passion, my calling, is to understand the cosmos, the Universe we inhabit. Now I'm an astrophysicist who essentially translates complex scientific works so that



anyone can understand them and share in my love of space. I truly love what I do, and I'm not quite sure how I ended up here, but I feel very lucky."

Jenifer was pleased to accept the invitation and is honoured to be President. She hopes to contribute as much as she can depending on work commitments, and hopes to bring something special to the society, and help it grow and flourish.

Barry Astronomical Society was originally founded in 1910, the first local astronomy society in Wales. Activities declined during and after the First World War. In 2016 the society was relaunched by Dave Powell following discussions with residents in and around Barry who expressed interest in learning about astronomy. The society meets on alternate Monday evenings in Barry Island Community Centre and also holds monthly meetings online.

**Tom Easton, Secretary, Barry Astronomical Society**  
[barryastronomical.wordpress.com](http://barryastronomical.wordpress.com)

# Photographing Noctilucent Clouds with a Compact Camera

## Peter Davis—Stratford-upon-Avon Astronomical Society

Thanks to Peter for sending the photos reproduced below. Peter says the camera used is Sony DSC-WX350 compact camera. Peter set the camera on a predetermined “Night scene” mode which shoots night scenes clearly.

Peter took the photos at home in Whitnash, Warwickshire from a spare upstairs bedroom. The camera was mounted on a small tripod (legs 4” or 10cm) perched on the outside window sill, precariously – but it worked with a 10 second delay to keep the camera steady.

Your Editor has captured the camera settings from the file data and these are reproduced next to the respective image, and enhanced the brightness slightly using Adobe Photoshop Elements.

An image of the camera is reproduced on the right.

Courtesy Sony Corporation



Camera maker	SONY
Camera model	DSC-WX350
F-stop	f/5
Exposure time	4 sec.
ISO speed	ISO-80
Exposure bias	0 step
Focal length	17 mm
Max aperture	4.640625
Metering mode	Pattern
Subject distance	
Flash mode	No flash, compulsory
Flash energy	
35mm focal length	

**Date taken:** 5 July 2022 at 03:45 BST. Venus can be seen by the tree



Camera maker	SONY
Camera model	DSC-WX350
F-stop	f/4.5
Exposure time	4 sec.
ISO speed	ISO-80
Exposure bias	0 step
Focal length	10 mm
Max aperture	4.3359375
Metering mode	Pattern
Subject distance	
Flash mode	No flash, compulsory
Flash energy	
35mm focal length	

**Date taken:** 15 July 2022 at 03:03 BST.



# **The International Astronomy Show**

**14th & 15th October 2022**

**Stoneleigh Park Warwickshire CV8 2LH**

**The Universe Under One Roof**

**Lecture Programme**

**Friday**

**Melissa Gillone, Prof Michael Merrifield,  
Gary Palmer, Prof Martin A Barstow,  
Prof Leigh Fletcher.**

**Saturday**

**David Harland, Michael Morris,  
Peter Jenkins FRAS, Prof Nial Tavis,  
Prof Allan Chapman.**

**Day Admission And Lecture Tickets  
On Sale On Our Website**

**[WWW.UKASTROSHOW.COM](http://WWW.UKASTROSHOW.COM)**





## Meetings Programme

Meetings at Bredhurst Village Hall. Hurstwood Rd, Bredhurst, Gillingham ME7 3JZ. From 8:00 pm.

### Friday 14 October

MKAS Tribute to Peter Parish and Chris Sherwood.

### Friday 28 October

Family Space Night

### Friday, 11 November

Jan-Peter Muller: Mapping the surfaces of Mars and the Moon from orbit, and from the surface.

### Friday, 25 November

Will Joyce: Interstellar Travel

Website: [midkentastro.org.uk](http://midkentastro.org.uk)



## Meetings Programme

Our meetings take place on the 2nd Wednesday of each month from September to June, and are now held at The Lindop Building Lecture Theatre at the University of Hertfordshire.

### Wednesday, 12 October

Richard Westwood: Solar Eclipses

### Saturday, 29 October

"My Telescope Doesn't Work" - Help with viewing the night sky

### Wednesday, 9 November

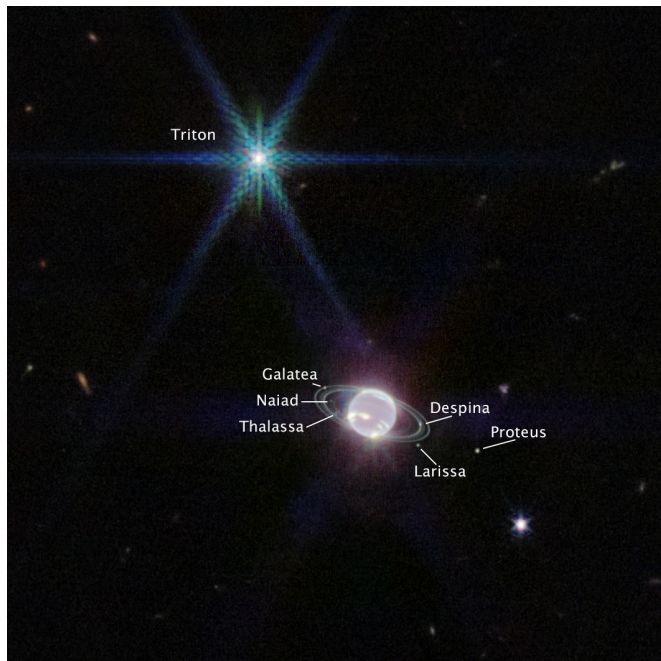
Peter Goodhew: Discovering and Imaging Planetary Nebulae

### Wednesday, 14 December

Jerry Stone: The Last Men on the Moon - For Now

Website: [hertsastro.org.uk](http://hertsastro.org.uk)

## New Webb Image Captures Clearest View of Neptune's Rings in Decades



The NASA/ESA/CSA James Webb Space Telescope is showing off its capabilities closer to home with its first image of Neptune. Not only has Webb captured the clearest view of this peculiar planet's rings in more than 30 years, but its cameras are also revealing the ice giant in a whole new light.

Most striking about Webb's new image is the crisp view of the planet's dynamic rings — some of which haven't been seen at all, let alone with this clarity, since the Voyager 2 flyby in 1989. In addition to several bright narrow rings, the Webb images clearly show Neptune's fainter dust bands. Webb's extremely stable and precise image quality also permits these very faint rings to be detected so close to Neptune.

Neptune has fascinated and perplexed researchers since its discovery in 1846. Located 30 times farther from the Sun than Earth, Neptune orbits in one of the dimmest areas of our Solar System. At that extreme distance, the Sun is so small and faint that high noon on Neptune is similar to a dim twilight on Earth.

This planet is characterised as an ice giant due to the chemical make-up of its interior. Compared to the gas giants, Jupiter and Saturn, Neptune is much richer in elements heavier than hydrogen and helium. This is readily apparent in Neptune's signature blue appearance in [NASA/ESA Hubble Space Telescope](https://www.nasa.gov/mission/hubble/news/20190801a) images at visible wavelengths, caused by small amounts of gaseous methane.

Webb's Near-Infrared Camera (NIRCam) captures objects in the near-infrared range from 0.6 to 5 microns, so Neptune does not appear blue to Webb. In fact, the methane gas is so strongly absorbing that the planet is quite dark at Webb wavelengths except where high-altitude clouds are present. Such methane-ice clouds are prominent as bright streaks and spots, which reflect sunlight before it is absorbed by methane gas. Images from other observatories have recorded these rapidly-evolving cloud features over the years.

European Space Agency (ESA)  
[esawebb.org/news/weic2214](https://esawebb.org/news/weic2214)

# Blue Plaque for Southampton Astronomer

On 26th August 2022 a blue plaque was unveiled at 14 Stoney Lane, Winchester, Hampshire. The former home of the late Alfred Curtis FRAS. Alf was a founder member of the Southampton Astronomical Society. Alf joined the British Astronomical Association in 1920 and in November 1923 a letter was printed in the Southampton Daily Echo from Jas Blackhall suggesting that an Astronomical Society be formed.

Then followed a second letter from Frank Acfield (latter Newcastle Astronomer) and Edgar Roberts. The Rev W A Haslam MA, FRAS arranged a meeting at his home in Southampton on the 1st January 1924 and the Society was founded. President, Rev Haslam. Chairman, Jas Blackhall, Editor/Librarian, Frank Acfield. Secretary/Treasurer, Edgar Roberts. Committee members, A C Curtis, E W Mason, A M Parkin & J S Burge. Further meetings were to be held at the Oddfellows Hall, St Mary Street, Southampton. Alf was on the Society committee for most of his lifetime and holding the post of President for many years until his death 28th June 1976.

When Alf moved to Winchester, he was the owner of a 3 3/4" (95mm) refractor and a 5" (124mm) Comet Seeker refractor that he mounted in his garden. He then started building an observatory, with an 11ft diameter, that he called "Nath". Named after the 1.78mag star on the tip of the horns of Taurus the bull. Inside he put a 12" (300mm) Linscott-Wildey Newtonian reflector on an equatorial mount. This telescope was on loan from the BAA. In 1961 Alf became a fellow of the RAS. In 1964 he joined the BAA council. In 1966 Alf started the BAA "Observational Astronomy" Winchester Week-End, and was Director of the event. The Friday night lecture is now named after him, The Alf Curtis Memorial Lecture. 1970 -1974. Alf was one of the BAA Secretaries. He was then elected as BAA Vice-President. Alf also had a number of papers published by the BAA.

A life long astronomer, he also played the violin in a small Winchester chamber music group on Sunday mornings.

**Michael Hobbs**  
President  
Southampton Astronomical Society  
<https://sas-astro.co.uk>





# Herschel 200 Exhibition

**Herschel Museum of Astronomy, 19 New King Street, Bath. BA1 2BL**

***Saturday 16<sup>th</sup> July until 31<sup>st</sup> December 2022***

The Herschel Museum of Astronomy is exhibiting some incredible artefacts on loan from the Royal Astronomical Society and Herschel Family Archive which will showcase William's achievements. The exhibition also acknowledges the important contributions of those working with William, including his sister Caroline Herschel.

On Thursday 25 August this year, the 200th anniversary of William Herschel's death, a new piece of stonework for the garden was unveiled.

This commemorates the anniversary and marks the location where the planet Uranus was discovered, also acting as a level platform for telescopes in the garden.

This aspect of our project enables us to work with a local artist-maker and support an independent creator based in Bath.

For more details about the 200th Anniversary Exhibition, please visit the website:

[herschelmuseum.org.uk](https://herschelmuseum.org.uk)



All images on pages 6 and 7 courtesy Michael Hobbs.



# British Interplanetary Society



## Space Day 2022



### The UK's Biggest Free Space Event

**Astronomers, Space Authors, Rocket Scientists. Meet them all at Space Day 2022.**

**Saturday 8th October 2022**

**The Hive, Sawmill Walk, The Butts, Worcester WR1 3PD. 10.30 to 16.00.**

**FREE ADMISSION**

### A WORLD SPACE WEEK EVENT

Since its United Nations declaration in 1999, World Space Week has grown into the largest public space event on Earth. "The General Assembly declares 4 to 10 October World Space Week to celebrate each year at the international level the contributions of space science and technology to the betterment of the human condition". United Nations General Assembly resolution, 6 December 1999.



[www.gospacewatch.earth](http://www.gospacewatch.earth)



**GoSpaceWatch Online Lectures Present:  
Space Sustainability – The Time to Act is Now  
By Andrea Stewart of AstroScale**

**Thursday 6 October 2022 at 20:00 hrs BST**

**Admission Free. Register at <https://astroscale.eventbrite.co.uk>**

## FAS Newsletter Copy Deadline:

Deadline for items for inclusion in the next FAS Newsletter, No 129 December 2022 is  
**15<sup>th</sup> November 2022**