

Federation of Astronomical Societies



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

Newsletter

www.fedastro.org.uk

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

President's Spot: Dr Paul A. Daniels FRAS



We live in very sad times!

Lenin once said "There are decades where nothing happens; and there are weeks where decades happen". Putin's invasion of Ukraine was a world-changing, watershed '911 moment' that has triggered events and consequences that will affect us all. I'm sure my thoughts are with most of you in our support for brave Ukraine, in wishing them victory in Putin's war and for the *people* of Russia in the hope that they can be free.

On a more prosaic, anti-climactic note, an appeal to members over whether the FAS Newsletter should continue in this PDF format or should revert to printed copies produced a small response but those that did reply were almost unanimous in preferring the PDF format. We shall, therefore, continue with the newsletter in this digital format only unless there's a strong call from our members to change. I know that some of you derived income from selling the printed copies but, without in-person meetings over the past couple of years, opportunities to distribute those copies have faded. Some advantages of the digital format are that we're less constrained on the number and layout of pages, distribution is easier and cheaper and links in the PDF file can be made 'clickable'.

As the cost and effort producing the newsletters will be lower than before, the FAS is pleased to announce that, starting with this issue of the newsletter, we're moving from four issues a year to six issues a year! The new format of the newsletter has proved very popular with articles provided by many contributors (thank you all!) but the FAS Council decided that it would be better for you to know about upcoming events more promptly and that, with the growth we've seen, it justified a move to more frequent newsletters. The copy deadline is generally going to be *around* the middle of the month preceding each newsletter, e.g. the next copy deadline is 15th May. There's now even more space for your

meeting notices, images and articles to be shared so it's over to you to send those into the Editor.

Megaconstellations Webinar

The FAS is organising a free, two-day, international Zoom webinar, *The Challenge of Megaconstellations*, on **7th and 8th May 2022**. Instead of an academic convention where professional astronomers and the space industry talk to *each other* on mitigating the upcoming problems of satellite megaconstellations for astronomy and the space industry, this webinar will be an opportunity for them to talk to amateurs, undergraduates and early-career post-docs.

We're hoping for 22 speakers giving talks of 25 minutes each with two Q&A sessions each day. Details are still being finalised and, soon after you read this, those details will be available on the FAS website.

As well as the above, we've got another FAS Zoom webinar on *ProAm Astronomy* in early development for **28th May**, an in-person convention on *Women in Astronomy* in Oxford on **12th November** and another in-person convention on *New Equipment and Techniques* planned for Spring next year.

As you can see, the FAS is now confidently organising some of its meetings in-person with the worst of the Covid pandemic now (hopefully) firmly behind us. I see that many of our members are now tentatively returning to regular in-person meetings; some of those with a hybrid in-person/online aspect to them. Societies should continue to take precautions for at least a few months yet and I thoroughly recommend you review [the FAS webinar on YouTube](#).

Stay safe and clear skies
Paul

President
Dr Paul A Daniels
Rose Hill
High Green, Bradenham
Thetford, Norfolk
IP25 7RD
president@fedastro.org.uk
07802 324 697

Treasurer
Pat McEvoy
17 Severn Close
Paulsgrove
Portsmouth
PO6 4BB
treasurer@fedastro.org.uk



Secretary
Richard Stebbing
01372 750 644
secretary@fedastro.org.uk

Newsletter Editor
Michael Bryce
49 Cortland Way
Stourport-on-Severn
Worcestershire
DY13 8NZ
newsletter@fedastro.org.uk
07821 896 304

Somerset Levels Stargazers



Dark Skies on the Somerset Levels

Somerset Levels Stargazers to hold 10th Anniversary Celebration Meeting on 24th April 2022

Somerset Levels Stargazers are based in the village of Othery on the Somerset Levels on the A361, between Taunton and Glastonbury. We meet in the village hall on the last Wednesday of each month with meetings commencing at 7.30pm.

The Group was formed in 2012 when two of the present committee members, Paul Adamson and John Martin, started observing from the village hall carpark. The weather was not always kind and a decision was made to move indoors and promote talks in addition to observing. Sowy Stargazers, as it was then known, was formed. I went to one of the early meetings, found myself the only novice, and by the time I left I was on the committee!! It was agreed we would hold 11 monthly meetings per year and arrange observing evenings when practical.

The meetings slowly attracted members from a wide area. Membership reached the mid 30s with 25-30 attending regularly. Links with Bob Mizon, Co-ordinator of Commission of Dark Skies and Jo Richardson, Space Detectives and a UK Space Ambassador, were formed and they now both regularly contribute to meetings.

In addition to meetings, trips have been organised to Sidmouth Astronomical Festival, Hershel Museum in Bath, Charterhouse Observatory on the Mendips and a presentation by Will Gater at the theatre in Taunton. On two occasions we have held week-end exhibitions. The initial event was to promote astronomy from the Somerset Levels and the second, in July 2019, to celebrate the 50th anniversary of Apollo 11 and the first Moon landing. In addition, we have been invited to give talks at Scout groups, schools and WIs and in 2017 led a very well attended public observing evening at Hestercombe House near Taunton. We also offer help and last year we were asked to advise a couple who had just moved into their new house and wanted to know what to do with an observatory (including a 12in telescope) in their back garden.

The format of our evenings has evolved into three sections. The initial talk looks at the following month's night sky and recent space news then the main talk followed by a shorter talk which for the last two years has looked, each month, at a famous astronomer.

Included in our programme of main talks we are looking at the Apollo Missions 50 years on from each launch.

For several years we have maintained our membership and as funds rose we were able to invite speakers from further afield.

When we were hit by the pandemic in 2020 we missed one month before resorting to Zoom, a new technology for most of us. We have

become used to the technology and I must admit, the meetings became very proficient. Although our numbers dropped slightly we still had a regular attendance of 15-20. Imagine our surprise when we opened up the link for our February 2021 meeting to find the waiting room was almost full and by the time the meeting commenced, we had 96 people linking in. It is amazing what a little bit of advertising can do!! Over 20 clubs joined us, stretching from Caithness to East Sussex. We have continued providing the link and although we did not reach such a high figure again we have always had over 35 participants. Thank you to you all for linking in. We have had invitations back to club meetings and one club has asked if a talk presented by two of our members could be repeated, on-line, at one of their meetings. Being on-line also enabled us to have speakers from South Wales, Moffat and Wimborne. We may curse Zoom at times but it does have its positives.

In September 2021, the reduction in the Covid restrictions allowed us to return to having meetings in the hall but we do not want to lose our new "friends". The technical "whizz kids" in our committee came to the rescue and our remaining meetings in 2021 were both "live" in the hall and on -line. These meetings are still proving popular with 56 participating in our recent January meeting.

2022 will be our 10th anniversary and arrangements, in collaboration with Bob Mizon, Co-ordinator for the Commission for Dark Skies, are underway to have an all day event on **Sunday April 24th**. Being located in the Somerset Levels, where light pollution is minimal, it is appropriate the theme of the event is "Dark Skies". It will be held in Othery Village Hall with the main presentations also being on-line. Speakers include Bob Mizon MBE FRAS, Jo Richardson FRAS ESERO-UK founder of The Space Detectives and Resident Astronomer for Exmoor Dark Sky Reserve, Josh Dury filmmaker, conservationist, delegate of the Dark Skies Association and founder of Space4all and James Paterson who led the campaign to make Moffat, in Dumfriesshire, the first town in Europe to be designed a "Dark Sky Town".

If you wish to join us to celebrate our 10th anniversary, or any of our monthly meetings, email somersetlevelsstargazers@hotmail.com and the link will be forwarded.

Further details of the event together with our programme for 2022 are on our website, somersetlevelsstargazers.co.uk

Ian Campbell
Somerset Levels Stargazers



Federation of Astronomical Societies

The Challenge of Megaconstellations

Saturday 7th and Sunday 8th May 2022

A free, two-day, international Zoom webinar organised by the FAS,
on **7th and 8th May 2022.**

Instead of an academic convention where professional astronomers and the space industry talk to *each other* on mitigating the upcoming problems of satellite megaconstellations for astronomy and the space industry, this webinar will be an opportunity for them to talk to amateurs, undergraduates and early-career post-docs.

Registration and Joining Instructions will be sent out in April but please monitor our website at www.fedastro.org.uk for updates

UK National Astronomy Meeting



The University of Warwick, 11th - 15th July 2022

The [Royal Astronomical Society](http://www.raa.org.uk) is proud to present the next National Astronomy Meeting, NAM 2022, to be hosted by the [University of Warwick](http://www.warwick.ac.uk) from **Monday 11th July to Friday 15th July, 2022.**

In addition to the UK's astronomy community, the meeting includes the UK Solar Physics (UKSP), and the Magnetosphere Ionosphere and Solar-Terrestrial (MIST) communities.

Abstract submission for the UK National Astronomy Meeting 2022 is now open – please see the following website for details <https://nam2022.org/science/abstract-submission>

We welcome abstracts from all members of the community who wish to contribute to one of the many parallel sessions at the conference. A [full list of the sessions](#) is available on the NAM2022 website. We welcome abstracts for both in-person and remote presentation (in keeping with the hybrid nature of our conference). The deadline for abstracts is 23:59 on Thursday 14th April 2022. Late abstracts will not be accepted.

For more information about the conference, please see <https://nam2022.org/>. If you have further questions, please [contact the LOC](#).

Many thanks,

The NAM2022 LOC

Astrophotography with Automated Telescopes: Stellina and Vespera

By Richard Field

Member of Nottingham Astronomical Society (NAS); Mansfield & Sutton AS (MSAS) and Cambridge University AS (CUAS)

The two automated telescopes, Stellina, an 80mm ED doublet, f5 refractor and Vespera, a 50mm Apochromatic quadruplet, f4 refractor are both made by Vaonis, a French firm set up by ex-professional astronomers. Both are operated by an app, Singularity, available on Apple and Android platforms.

They are not cheap! Stellina costs €3999, but this includes postage, by UPS, and import duties. Vespera costs €1499, though I am not sure about import costs etc. on this, as I got mine through the Kickstarter scheme. Stellina weighs in at 11.2kg without a battery (a rechargeable one comes with it and fits inside a side compartment where two USB thumb drives can also be added). It can be carried in an optional rucksack, but at 48.5x38.5x12.6cm, it is bulky for long distance carrying! Vespera weighs in at 5kg, including a fixed internal rechargeable battery, and at 40x20x9cm is easily portable – I keep it in a Peak Design 15L Everyday Backpack Zip bag, which can also hold its tripod and charger. Stellina comes with a Gitzo low level tripod, but I avoided paying for that and use my own Gitzo Series 4 carbon fibre tripod, which I usually use with two sections extended for height.

You will probably have noticed by now that both are on alt-az mounts! However, they also have GPS receivers internally to get your latitude and longitude, local time etc. Stellina has a hardware field de-rotator and Vespera has a software enabled de-rotator, so that with 10s, or 20s for sub images there is little movement and no star images rotate into open circles – they are perfect small circular images, but without diffraction spikes!

Stellina has a levelling spirit level bubble built into its tripod mount, but Vespera has a magnetic one, which fits into its charging point (same type used in Apple Mac portable computers). They both require levelling for accurate observations.

The Singularity app allows you to open your tablet's wifi settings to link by Bluetooth to the telescopes once the side button has been pressed. This displays a bright blue circle which goes on and off until linked, when it stays on. You can then initialize the telescope and it opens-up, aims for a star pattern, which it can recognize and then it goes to autofocus, which takes a short while. All completed, you can now select an object to image from a comprehensive library of solar system, galaxies, nebulae, star clusters etc. Once selected, the telescope spins around on both axes until the body is recognised and properly in the field of view. Then it starts building up the image. Various interesting facts display as you wait, then a series of bright "stars" move from the periphery of your screen to a central blue ring, which when complete, changes to your image as it builds up 10s subs at a time. This time is adjustable, but more than 20s subs are not advised. A gauge on the bottom right of the screen indicates the total number of subs and these can be saved to your tablet photos, or as TIFFS, or FITS. On Stellina, these are saved to the external thumb drives, Vespera uses its internal memory only.

I have used the editing available on my ipad to adjust focus and saturation, exposure etc. I have not yet stacked the Tiffs, or Fits separately.



Notice the wider field of view with Vespera and the HD, 1920x1080 format from its Sony 2.1 megapixel, 1/2.8" colour CMOS sensor. Stellina uses a 3096x2080 pixel format from its 6.4 megapixel, 1/1.8" colour CMOS sensor. Stellina has an integrated anti-pollution filter, whereas Vespera has optional filters available.

For full specification and other details please visit

<https://vaonis.com/>



A nice comparison is shown by the Moon, taken a week apart, but in similar conditions. **Image Left:** Taken with Stellina and adjusted in iPad photos Editing Controls. **Image Right:** With Vespera and again adjusted with iPad Editing Controls.

Image below: Orion Nebula with Stellina – around 30 minutes total in JPEG.





Image above: M51 The Whirlpool Galaxy taken with Vespera.

Image below: M101 The Pinwheel Galaxy taken with Vespera.



Yearbook of Astronomy Convention

Saturday 29 October 2022

On Saturday 29th October 2022 the famous **Yearbook of Astronomy** will hold its first ever Convention. The event will take place at:

The Idle and Thackley Conservative Club

Idle

Bradford

West Riding of Yorkshire

BD10 8PY

a venue which has excellent facilities – including a licensed bar.

Speakers include:

David Harper *The Meandering Moon and the Calendar*

Many ancient calendars were based on the phases of the Moon. Lunar cycles still govern the lives of billions of people. In this talk, we explore the role of the Moon in the major religious calendars of the world.

Mary McIntyre *Ladies of the Night: Female Astronomers Before and Including Caroline Herschel*

We often hear that Caroline Herschel was the first female astronomer, but we can trace back female involvement in astronomy much further back in history. This talk tells their story.

Peter Rea *How it Began: The Origins of Solar System Exploration - 1961 to 1981*

In this talk Peter will discuss the origins of solar system exploration by the USA and what was then the USSR. The talk focuses on the period 1961 to 1981 – when we were able to view the planets up close for the first time – and was inspired by the words of Oran W.

Nick, NASA's Director of Lunar and Planetary Programs in the early 1960s, following the successful Mariner 2 mission to Venus in 1962: "There will be other missions to the planets, but there will never be another first mission to them."

Rod Hine *Radio Astronomy Around the World*

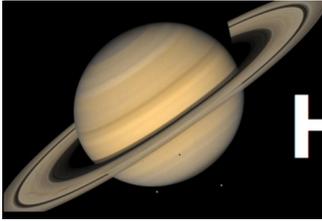
The last decade has seen a great rise in the number and scope of projects in radio astronomy and a number of major observatories, mostly with arrays of many antennas, have been built or are being built in diverse locations. Observations have reached for ever-shorter wavelengths and ever more sensitivity. Major collaborations using Very Long Baseline Interferometry have resulted in observations of exquisite detail of phenomena such as black holes. In addition, the study of radio astronomy in developing countries has been advanced by novel projects and the conversion of redundant satellite dishes to radio telescopes. This talk will give an overview of the current state of some of these projects and the challenges that radio astronomers are now tackling.

The convention is organized by Yearbook of Astronomy Editor Brian Jones and tickets can be purchased via his website at

<https://www.starlight-nights.co.uk/yearbook-of-astronomy-convention-2022/>

The ticket/admission price is £17.50 per person which includes a buffet lunch.

Yearbook of Astronomy 2022 Convention.



Hertford Astronomy Group

Hertford Astronomy Group is now holding live meetings, and at a new venue!

The Hertford Astronomy Group is one of the larger societies in the UK, but they welcome anyone! Their first question is not “Do you have a telescope?”, but simply “Are you interested in astronomy?”, as they do not require any specific level of knowledge of the subject. Nor do you need to own a telescope. Many of their members do have binoculars or telescopes, but if you are a beginner, they are happy to give advice. For those interested in photographing the sky, they also have an excellent astrophotography group.

Hertford Astronomy Group offers

- Fascinating talks from excellent speakers, suitable for all ages, whatever your knowledge of astronomy.
- Telescopes and equipment loan for members.
- Help in all fields of amateur astronomy.

They have been holding online meetings for the last year, but now they have re-started in-person meetings, which are taking place at a new venue. They often had 80-100 people at their meetings, to the point of reaching the limit for their previous venue.

They were delighted to be offered a 250-seat lecture theatre by the University of Hertfordshire, and the first meeting at this new venue was in March. The meetings take place in the Lindop Building at the main campus in College Lane, Hatfield.

Although face masks are not obligatory, there is a separate area for those who would prefer to wear a mask. In addition, there is some social spacing in the seating.

Do note that places are limited, and attendees must book in advance - It will not be possible to just turn up on the night.

Details can be found at www.hertsatro.org.uk

Entry is free to members, under-18s and full-time students, and £2 to others. With 3 meetings remaining in the current programme, you can save by becoming a member, as this will only cost £5.

Under-16s must be accompanied by an adult.

The guest speaker on April 13 is Jerry Stone, well known as an expert on space exploration. He will be celebrating the 50th anniversary of Apollo 16, with a highly visual presentation that will look at the exploration of the lunar highlands.

The meetings are still being offered on Zoom, so if you prefer, you can watch the event online. Again, a link to register can be found on the society's home page at www.hertsatro.org.uk

The remaining meetings are:

- **Wednesday 11 May:** Mike Dworetzky - Former Director of the University of London's Mill Hill Observatory
- **Wednesday 8 June:** Martin Hardcastle - Head of the Department of Physics, Astronomy & Mathematics at The University of Hertfordshire

For further information, please contact the Publicity Officer and Programme Secretary, Jerry Stone: jerry.stone2001@gmail.com

www.hertsatro.org.uk

Friends of Pershore Abbey Astronomy Lecture



**by Professor Belinda Wilkes
At Pershore Abbey WR10 1BB
29th April 2022 at 7.00pm**

Views of the Universe through the sharp X-ray eyes of NASA's Chandra Observatory

Royal Society Wolfson Visiting Fellow, School of Physics, University of Bristol, UK
Senior Astrophysicist & Former Director, Chandra X-ray Center,
Smithsonian Astrophysical Observatory, Cambridge MA USA

Doors open 6.00pm Refreshments Free

Entry £15. Students Free.

For tickets apply to helen_seaside@yahoo.co.uk

In aid of The Friends of Pershore Abbey.

NASA's Chandra X-ray Observatory was launched on 23 July 1999 by the Space Shuttle Columbia. Now in its 22nd year of operations, Chandra continues to be an indispensable tool for expanding the frontiers of knowledge throughout astrophysics. Chandra's uniquely high (sub-arcsec) spatial, and spectral resolution have facilitated the deepest and sharpest images of the X-ray sky and the highest quality X-ray spectra to date. Its broad capabilities allow continuous expansion of its science based on new discoveries and facilities e.g. the Event Horizon Telescope, NASA/ESA's JWST ("Webb", launched 25 Dec 2021). I will review Chandra's launch and unique capabilities, and take us on a tour of some of the most spectacular discoveries across the whole range of celestial sources. These include the birth and death of stars, supermassive black holes, the first quasars, clusters of galaxies, dark matter, merging neutron stars, and more. Website: chandra.si.edu

Dr. Belinda Wilkes is a Senior Astrophysicist at the Center for Astrophysics Harvard & Smithsonian. She served as Director of the Chandra X-ray Center, which operates NASA's Chandra X-ray Observatory on contract with NASA. She is currently a Royal Society Wolfson Visiting Fellow at the School of Physics, University of Bristol. Dr. Wilkes received her BSc (Hons) in Astronomy and Physics from St. Andrews University, Scotland in 1978 and her PhD in Astronomy from Jesus College, University of Cambridge, England in 1982. She spent two years as a NATO postdoctoral fellow at the University of Arizona's Steward Observatory, and moved to CfA's High Energy Astrophysics Division in 1984. She is a Fellow of the Royal Astronomical Society,

American Astronomical Society, American Physical Society, American Association for the Advancement of Science, and Cambridge Philosophical Society, and a member of the International Astronomical Union, and the European Astronomical Society. She has received numerous awards, including many SI Exceptional Accomplishment Awards, 5 NASA Group Achievement Awards, and a NASA MSFC Director's Commendation. In 2018 she was elected an Honorary Fellow of Jesus College, Cambridge University.

Dr. Wilkes' research involves X-ray and multi-wavelength studies of active galaxie: super-massive black holes in galaxy nuclei. She is author and co-author of over 470 science publications, including 166 refereed papers (11,700 citations, H-index 58), two books, several book chapters, and multiple articles and interviews in the public media.

The Society for the History of Astronomy

2022 Spring Welcome Back Conference

Saturday, 12th March

“Lockdown but not shut down”

The Society for the History of Astronomy (SHA) has successfully held a face to face membership meeting for the first time since October 2019, when fifty members plus honoured guest gathered at the Birmingham Midland Institute, Birmingham in March. The meeting was however conducted with covid-19 infection prevention measures in place, and in use on the day. Social distance requirements were helped by the meeting being staged in the large Lyttelton lecture theatre, enabling delegates to spread out in the seating safely, and as required.

The Society and this particular meeting were sadly not immune to the effects of the pandemic or the sad events taking place in the Ukraine. Thus certain speakers were forced to miss the meeting and have arranged to speak at a future SHA event. Nonetheless those members and guests who had made the journey to Birmingham were treated to a broad range of very informative lectures and presentations, from a group of accomplished historians and academics from both the SHA and BAA.

Following morning refreshments and a warm welcomed to the meeting by SHA chairperson Gerard Gilligan, and after certain housekeeping notices, plus announcements, the first speaker for the day was introduced. Dr. Emily Winterburn FRAS, teacher, historian and author was recently appointed as a Vice-President of the SHA and was one of many instrumental in the Society being established in 2002, serving on the first SHA council as its first Chairperson. Her presentation concerned the launch and introduction to a major project in collaboration with a group of academics to seeking out lost women and helping researchers & educators to find and locate archives, objects needed to tell their stories. Dr Winterburn explained the information and details requested and the overall aims of what it is hoped to be a major resource for historians of not just astronomy but also all associated sciences.



A project the SHA will support and assist with during the next few months, and perhaps years. Dr Winterburn’s presentation generated several questions and also additional lines of enquire which were discussed during the rest of the day. Next on the speakers timetable was Bill Barton FRAS, a SHA member but also recently appointed Deputy Director of the British Astronomical Association (BAA) Historical Section. For many years Bill has been researching astronomical history linked to his home country of Suffolk. In 2017 and 2019 I was awarded the Society for the History of Astronomy Roger Jones Award for contributions to the SHA County Survey of Astronomers. He recently had two papers published, one the BAA Journal and the other in the SHA’s Antiquarian Astronomer.

His presentation to-day entitled “Beer, Bread and Bolides” concerned local astronomer Alice Grace Cook FRAS (1877 – 1958),

from Stowmarket, Suffolk. A highly skilled and dedicated observer. Ms Cook became a prominent member of the BAA from 1911 and in 1916 one of the first female fellows of the Royal Astronomical Society. She became an accomplished meteor observer, comets and of novae. She also took an interest in the study of atmospheric phenomena, for example zodiacal light and aurora. She served as the Director of the BAA’s Meteor Section from 1921-23. Bill’s presentation was a fine and excellent example of local research, using a person’s own time and resources, but also sharing that researches either in written form or in this case via an excellent and well received spoken presentation.



Image above of Alice Grace Cook in her Observing chair © 1928 Daily Mirror & BAA archives.

During the lunch break delegates were able to purchase second hand astronomy books, and also visit the recently relocated SHA library, situated within the BMI building. The Library still regarded as one of the largest single subject libraries in Europe houses over 3,000 books and many other astronomical history related articles, publications and leaflets, both from the UK and all over the world. Mid-day Refreshments were taken in the small but well-appointed BMI cafeteria, which was opened specially for the spring meeting and its delegates.



Image above: The SA Library by James Dawson.



Image above: Delegates are welcomed to the 2022 Spring Conference. Image by Richard Severn



Image Above: Guest speakers for the SHA March 2022 Conference. Left to Right: Bill Barton FRAS, Ms Hilary Forbes, Dr Emily Winterburn FRAS, & Dr Lee Macdonald FRAS. Image by Gerard Gilligan.

Once the delegates were refreshed, watered, and rested the first speaker after the lunch break was SHA member Dr Lee Macdonald

FRAS. Lee is yet another renowned historian and author. Previously a deputy director of the BAA historical section, Lee is one of two Sackler Research Fellows working with Royal Museums Greenwich, researching the twentieth-century history of Greenwich Observatory. His well-researched and presented talk asked why the Royal Observatory was not moved away from London earlier than the 1940's and also discussed proposals to move the observatory back in the nineteenth century. Lee also explained problems encountered by the RGO astronomers and scientists was not just governmental red tape, but also the ever changing London skyline overlooking the River Thames, and the expansion of the city and it's many docks, plus the smoke from numerous industrial and domestic chimneys.



Image Above: The Royal Greenwich Observatory: Surface.View

The next to speak was Hilary Forbes, another SHA member. Hilary's background is in teaching astronomy at GCSE level for thirteen years in further education, and another twenty four years teaching mathematics in schools and later in HE. Hilary has recently become

increasingly fascinated with astronomers of Ancient Greece and Rome, and following a Master degree in Classical Studies with the OU.

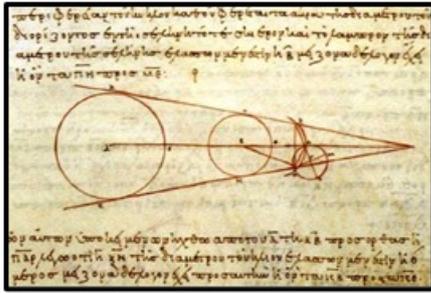


Image right: Hilary Forbes by Gerard Gilligan.

Her presentation was a review of her MA dissertation about Aristarchus of Samos 310 c – 250 BC and his own heliocentric proposal for our own solar system, which may have been overlooked in many history articles and books. Aristarchus involvement has been re-evaluated by Hilary with reference to much evidence and the significance of that evidence. Aristarchus calculations of Sun, Earth and Moon relative sizes. Image Wikipedia

Following a much welcome tea and coffee break, with associated cake to refresh the brain cells, the final speaker for the day was Gerard Gilligan, the current Chairperson of the SHA. Gerard, (a late replacement for SHA President Allan Chapman), has been closely associated with Liverpool Astronomical Society as a member for almost forty years, serving on the Society council in the past as Hon. Secretary and President. He has a particular interest in researching local astronomical history individuals, observatories and perhaps local long forgotten astronomy clubs and groups. His presentation and talk was the story of a telescope and two local school/seminary astronomical observatories run and maintained by staff and students at St. Edwards RC College, Liverpool and later at the larger RC seminary at Upholland Lancashire. The talk was an excellent example of the information compiled from local libraries and archives, and later with the help of other SHA members and experts the present location of the associated 7.5 inch OG. Cooke telescope. Sadly Gerard also explained and illustrated the sad end of the observatory at Upholland once the seminary was forced to close

due to falling student numbers and increased school running costs. Gerard then brought the very enjoyable day's events and lectures to an end, thanking all involved.



Image above: SHA President Dr Allan Chapman, with SHA Chairperson Gerard Gilligan © 2017 Liverpool AS

This spring meeting of the SHA may have been regarded as poorly attended, but was viewed as an experiment and part of the society coming out of the pandemic restrictions during its twentieth year. So that face to face events can be organised again, and members can decide for themselves to meet once again and catch-up. The SHA council therefore would like to thank everyone involved in making the welcome back conference a great success. In particular our appreciation to the BMI venue staff for their tremendous assistance and cooperation. The meeting was also well received by delegates, but special thanks go to all those delegates, SHA members who gave their support and travelled from all parts of the UK to attend. Proof if needed that the society may have been in lock down for two years, but was never shut down. We now look forward to the autumn conference to take place once again at the BMI on 22nd October 2022. See you there!

Gerard Gilligan
(Society for the History of Astronomy and Liverpool Astronomical Society)

GoSpaceWatch Online Lectures are proud to present:

An Evening with Commercial Astronaut Scott "Kidd" Poteet: Mission Pilot for the Polaris Dawn Commercial Spaceflight Mission

Wednesday 4th May at 19:30 BST

Polaris Dawn is a commercial crewed spaceflight mission with a SpaceX Crew Dragon spacecraft taking place towards the end of 2022. The mission will feature a number of firsts including the first commercial space-walk. For more information about Polaris Dawn please visit:

<https://polarisprogram.com/dawn/>

Scott "Kidd" Poteet is a retired United States Air Force Lieutenant Colonel who served 20 years in various roles that include Commander of the 64th Aggressor Squadron, USAF Thunderbird #4 Demonstration Pilot, USAF Weapons School Graduate, Operational Test & Evaluation Pilot, and Flight Examiner. Kidd is a command pilot with over 3,200 flying hours in the F-16, A-4, T-38, T-37, T-3, and Alpha Jet. Kidd has logged over 400 hours of combat time during Operations Northern Watch, Southern Watch, Joint Guardian, Freedom's Sentinel, and Resolute Support.

For tickets please visit www.gospacewatch.co.uk

18.5" Newtonian with fork mount – available to a good home

A past member of the Loughton Astronomical Society, Bob Langley, began an observatory build in 1982 and eventually installed a self-built 18.5" Newtonian reflector (of about f/5). The optics were ground originally by Henry Wildey and subsequently tweaked with a polishing by Es Reid, so they have impressive pedigree.



As a friend of Bob, Iain Nicolson visited Bob's observatory on its completion to give it an official grand opening, attended by many notables, including Henry Wildey.

It was in use for many years, but sadly, Bob died about three years ago and the dome and telescope was mothballed. Unfortunately, his wife has now died and their daughter must clear the house for sale. Consequently, there is now an urgent need to find the instrument a new home before the house is sold.

The scope is a massive skeleton frame construction on a fork mount. The pictures hardly do it justice but gives a general idea. Not sure how much of the massive fork and base is transferable but the skeleton frame of the OTA and its trunnions can be lifted out of the fork in one piece. Bob was a professional engineer who in a long career contributed designs to both subsea engineering and (I think in a small way) to the space shuttle. The structure is therefore well designed and immensely stable.

Although the optics have already been removed for safe keeping, it would be nice, naturally, to preserve as much of the instrument as possible as a complete set up.



Interested parties should please get in touch asap, as unfortunately time is of the essence. The location is at Dassels, near Puckeridge, Hertfordshire. This will need a van or similar to transport, but additional manpower will be available from LAS members to help dismantle.

Please note that although this fine telescope is being given away at no cost, so it may be given a new life, donations to a recognized charity would be encouraged. For more information please contact Steve Ringwood steveringwood@btinternet.com to arrange a discussion.

Mid-Kent Astronomical Society



Dave Merrall, Press Secretary, Mid-Kent Astronomical Society has sent the following meeting details which will also be available via Zoom.

13th May — 20:00 to 22:00

Nik Syzmanek - New Adventures with Robotic Imaging

Popular presenter Nik Syzmanek returns to Bredhurst with his latest talk which is suitable for everyone and contains lots of interesting and beautiful images. The talk will cover remote imaging from Nik's home, his private observatory in Spain and the use of the Telescope Live resources in Chile, Spain and Australia.

27th May — 20:00 to 22:00

Stuart Clark – The science of parallel universes.

10th June — 20:00 onwards

Roy Easto - The Dynamic Universe.

Enjoy some refreshment and general chit chat during the evening with members and guests. An observing session may follow this event should weather permit.

24th June— 20:00 onwards

Prof David Southwood CBE - The Trials, Tribulations and Triumphs of Mars Exploration.

Members and guests may enjoy refreshments, social interaction with possibly an observing session later in the evening, should weather permit.

Meetings take place at Bredhurst Village Hall, Gillingham, Kent. ME7 3EJ. Please visit our website: www.midkentastro.org.uk/events as certain conditions may apply at these events.



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New Book: Imaging Our Solar System

Author Bernard Henin launched his new book at the 10th February 2022 Member Evening of Mansfield & Sutton Astronomical Society Member Evening held at Sherwood Observatory, Sutton in Ashfield, Nottinghamshire

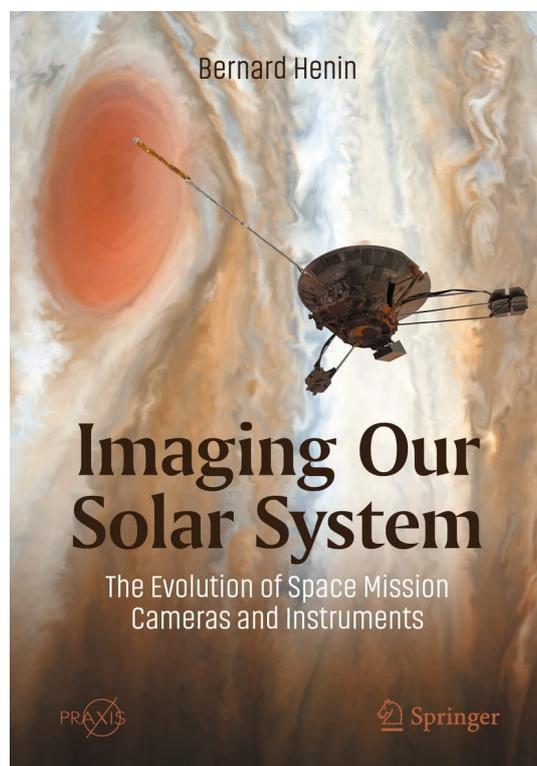
By Neil Mudford, Mansfield & Sutton Astronomical Society



Bernard Henin, a long-standing member of our Society, made a well-attended book launch of his latest publication on how imaging the solar system objects has developed since 1946 when captured V2 (A4) German rockets were first sent skywards with off the shelf cameras and film stock right up to the present day entitled **"Imaging Our Solar System"** which is (more or less) a chronological history of each camera equipped probe launched with varying degrees of complexity (and success).

The book charts the technology advances made in the quest for visual knowledge about our Solar System during last three-quarters of a century from the days immediately post World War II when exposed film had to be returned to Earth before being processed through onboard developing prior to being transmitted via a crude (by current standards) television type arrangement until the whole process could be digitised with better and better results post millennium requiring significant telemetry equipment development and technique advancements which, today, are taken for granted.

By far the most visited planet is Mars which the traffic has reach the point that one probe, which did excellent survey work of its own, was designed to be used as high-capacity relay station for contemporary & subsequent orbiters and their landers, frequently outliving their designed sell-by date by a considerable margin. Unfortunately, our other close planetary neighbour Venus is such a troublesome place to visit where, due its very harsh climate, life expectancy of landers gets measured in hours if not minutes at best. NASA's well documented frugality gets a special mention



as some probes are made up from parts raided from the spare-part locker or unused spacecraft.

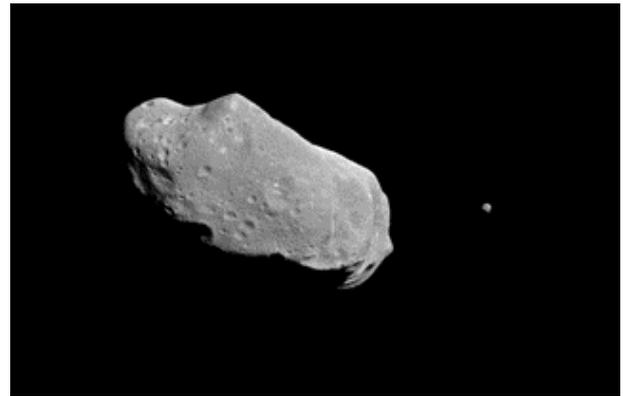
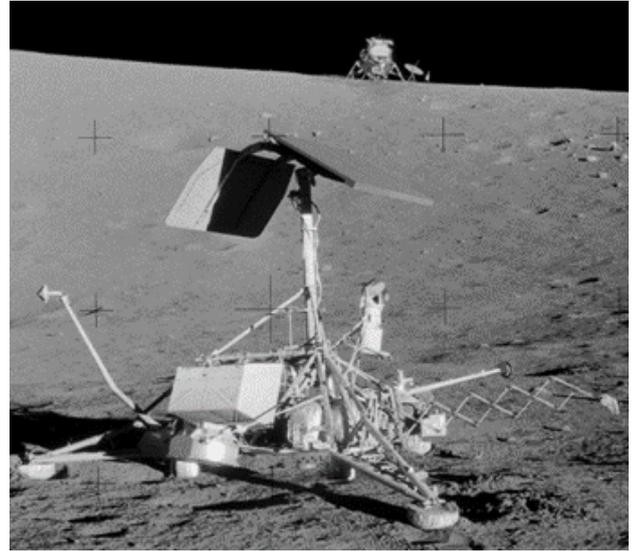
Missions within the Apollo series get special photographic mention where the context is appropriate, 8 for the Earthrise sequence, 11's image taken by Armstrong of Aldrin is rather unique because two horizons are captured in the same photograph (one behind Aldrin and the other as a reflection behind Armstrong in Aldrin's face visor), 12 for the image of the LEM seen near Surveyor 3 (which is something of a rarity for two spacecraft from different programs to be imaged together 'in the field') and 17 for the Blue Marble shot.

Mercury has not been exempted from attention but to get there with a reasonable chance of getting the probe into a Mercurial orbit is a bit convoluted involving several fly-bys of Earth, Venus and the Sun - the flight dynamists are very much the unsung heroes of space exploration.

Of course, the outer part of the Solar System has had its fair share of hardware over the years – Voyage I & II, Cassini, New Horizons to name four of many - sent to explore what undiscovered phenomenon there are. Perhaps the most unexpected discovery came in 1993 when asteroid Ida was photographed with its attending moon Dactyl (see right) (the current count now stands at 237) amongst many close images expanding our knowledge of that part of our Solar System.

The finished publication is a nice read, full of informative background & photographs (where available), well researched and worth the highish purchase price given the limited potential audience for the book.

Neil Mudford, Mansfield & Sutton Astronomical Society
28th February 2022



NASA Artemis I Wet Dress Rehearsal

The countdown is underway for the Artemis I wet dress rehearsal test for NASA's Artemis I mission. The countdown started at approximately 5 p.m. EDT on April 1 and will conclude on April 3. The Wet Dress Rehearsal is the final major milestone in preparing the Space Launch System and Orion Space Capsule for flight

Once the Wet Dress Rehearsal is complete, the Artemis 1 Rocket Stack will be transported back to the Vehicle Assembly Building where it will be prepared for flight to the Moon.

For more details about Artemis 1 and NASA's plan to return Astronauts to the Moon, please visit www.nasa.gov. Image courtesy NASA.



FAS Newsletter Copy Deadline:

Deadline for items for inclusion in the next FAS Newsletter, No 126 June 2022 is
15th May 2022