
Journal

of the

Nottingham Astronomical Society

July-August 2022



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Thursday, July 7th

**Nottingham Emmanuel School
Gresham Park Road,
West Bridgford,
Nottingham, NG2 7YF**

7:45pm (doors open at 7:15pm)

This evening we welcome

**Dr Richard McKim
Director of the BAA Mars Section**

who will be speaking on

Mars

**(in an exciting year for observers of
the Red Planet)**

The Nottingham Astronomical Society: E - SERVICES

Whether or not you are a NAS member, you can keep up to date with details of the Society's meetings and other events by visiting the NAS website: www.nottinghamastro.org.uk

NAS on Facebook

You are welcome to connect with other members and friends of the NAS on Facebook by going to: <http://www.facebook.com/nas.org.uk>

NAS on Twitter

The Society has a Twitter account at <https://twitter.com/NottinghamAstro>

NAS Journal e-mailing list

To register for your monthly e-mailed link to the NAS Journal, and a copy of our SkyNotes, just e-mail secretary@nottinghamastro.org.uk

You don't have to be a Society member to take advantage of this service.

If you happen to change your email address, please remember to inform the Society by emailing us at treasurer@nottinghamastro.org.uk

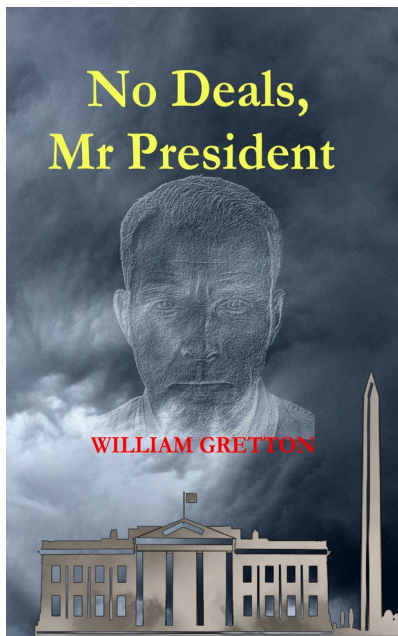
Chairman's Message, July-August 2022

Hello everyone!

I hope you are enjoying the summer weather and it is not too hot, when the Sun attempts to shine at least! I also hope everyone enjoyed the last talk by Peter Jenkins about imaging from light polluted skies. I was sorry to miss it as I know what wonderful images he produces. We had a great time at the BAA meeting at Nottingham University with some great speakers, and our own James Dawson giving a great history of the NAS. We hope to be able to publish the video of this for members to watch.

In July we have Dr Richard McKim, the BAA Mars Section director, giving us a talk about, you guessed it, Mars. I'm afraid I can't make this one either as I'm at a research conference in Madrid - yes I know it's a tough life! However I will be at the barbecue on Saturday 6th August where we hope everyone will be able to join us for a social event, some food, drink and good company. It will be the usual sort of event starting at 5pm. We will provide the barbecue grill, some snacks, salads and rolls and soft drinks/tea/coffee. Bring your own meat/veg to put on the barbecue and get to relax at the observatory. Bring your friends and family too. I'll see some of you at the next Plumtree meeting hopefully, otherwise at the BBQ!

Julian,
NAS chair



Book Signing

The Editor will be on hand at our Summer Barbecue on August 6th to sign copies of his novel, *No Deals, Mr President*, a story based on the Cuban Missile Crisis of 1962.

Copies of the book will be available at the discounted price of £6. If you think you might wish to purchase a copy, please remember to bring cash.

Sky Notes

July & August 2022

Compiled by Roy Gretton

All times given below are in British Summer Time



Earth will be at **aphelion**, its furthest distance from the Sun this year, at 8:11 am on July 4th. The centres of the two bodies will then be 152,098,455 km apart. By comparison, back on January 4th the distance was only 147,105,052 km.

PHASES OF THE MOON

<i>Phase</i>	<i>July</i>	<i>August</i>
First Quarter	7 th	5 th
Full Moon	13 th	12 th
Last Quarter	20 th	19 th
New Moon	28 th	27 th

In July the Moon is closest to Earth on the 13th, and furthest on the 26th. In August the corresponding dates are the 10th and the 22nd.

THE PLANETS

Mercury is an evening object from mid-July through to the end of August, but will always be setting less than an hour after the Sun, and so will be extremely difficult to spot for observers at our latitude,

Venus continues to lurk low down in the morning sky, rising about an hour before the Sun at the end of August.

Mars will be rising at midnight as July gives way to August, and will grow to an angular diameter of almost 10 arcseconds by the end of August, allowing surface features to be seen through modest-sized telescopes. By then it will be nearly 20 degrees north of the celestial equator, and shining at magnitude zero.

Jupiter will be rising before 11 pm in late July, and before 9 pm by the end of August. There should be no mistaking this bright (magnitude -2.8) planet as it rises due east in the constellation of Pisces. Exciting prospects for the owners of telescopes of almost any aperture!

Saturn, in Capricornus, comes to opposition in early August, when it will be shining at magnitude 0.3, but will still be more than 15 degrees south of the celestial equator. The ring system is now closing when viewed from Earth, so more of the southern hemisphere will become visible.

Uranus, in the constellation of Aries, will be rising at midnight in early August.

Neptune, close to the border between Aquarius and Pisces, will be rising at 1 am as July gives way to August.

METEORS

The **Perseid** shower, reaching maximum activity on August 13th, is usually a highlight of this season, but 2022 is almost the worst year for observing them, as the Moon will be Full on the previous night.

NOCTILUCENT CLOUDS

The NLC season continues throughout July. Noctilucent clouds are pale blue filamentary clouds, formed about 50 miles above the Earth's surface, far above the normal clouds we associate with the weather, becoming visible when illuminated by the Sun when it is well below the horizon. They are still poorly understood, but their pale blue-white appearance is quite distinctive. If you wish to see noctilucent clouds, look toward the north on a clear evening after 10pm.

John Hurst captured this fine image of a display at 2:23 am on the night of the summer solstice, June 21st this year, from his home in East Leake.



The camera used was a Nikon D700, with an exposure of 1/3 sec at f/2, ISO 800.
The bright star is Capella

DIARY DATES 2022

Monthly Meetings of the Nottingham Astronomical Society

**1. Meetings at
Nottingham Emmanuel School
Gresham Park Road,
West Bridgford,
Nottingham, NG2 7YF**

Held on the **FIRST Thursday** of each month except **August**
Doors open at 7:15pm for 7:45pm start.

*These events are normally centred around a talk by a visiting speaker,
except Quiz Nights, etc, when NAS members provide the activities.
Normally we have a **Helpdesk** open at each meeting.*

Date	Topic	Speaker
July 7 th	Mars	Richard McKim Director of the BAA Mars Section
August 6 th 5 pm	Summer Barbecue at the Observatory	
September 1 st	(Topic to be confirmed)	Dr Steve Barrett
October 6 th	The Cosmic Web	Prof Alfonso Aragon-Salamanca

2. Social and Practical Astronomy Meetings at the Burnside Memorial Hall, Plumtree

Church Hill, Plumtree, Nottingham, NG12 5ND

Held on the **THIRD Thursday** of each month from **7:30pm**

*These meetings are of a more informal nature, providing opportunity for
members and guests to share their hobby over a cup of tea or coffee,
as well as listening to a short talk or discussion*

The next meeting will be on July 21st

Social and Practical Astronomy, Plumtree, June 2022

The **June** Plumtree Meeting saw Mark Fairfax bring along his Unistellar eVscope and talk about how it operates and show some of the results he has been getting with it (image below of Mark and his eVscope). Mark is one of a handful of members who now have one of these smart telescopes. Mark gave a most comprehensive overview of the telescope and the audience asked a number of questions and enjoyed looking at the telescope first hand afterwards. Many thanks to Mark for preparing the talk.



Our treasurer, Mike Provost, talked about his eVscope with Richard Severn when our meetings were online and to watch that again follow the link to our YouTube Channel: <https://www.youtube.com/watch?v=Rp72vRChaco> This is the most watched video we have on YouTube with over 4500 views to date.

The topic for the July meeting is yet to be decided and the August meeting will be held at the Observatory unless the weather doesn't allow.

James Dawson

helpdesk@nottinghamastro.org.uk

The British Astronomical Association comes to Nottingham... again

We think the last time that the British Astronomical Association (BAA) held a meeting in Nottingham was on 24th April 2004. The write up of that meeting which subsequently appeared in the BAA Journal is reproduced, with permission, on a following page, and a short account of the event appeared in our own Journal in the May 2004 edition (below) <
<https://nottinghamastro.org.uk/currentjournal/Journal-May-2004.pdf>>.

A successful BAA Workshop meeting in Nottingham

Last month's British Astronomical Association "Observers' Workshop" meeting in Nottingham (which the NAS helped to organise) was a big success. There were about 70 people there and the hall was full for each of the five talks during the day. All of the talks were informative and entertaining and an excellent lunch was provided free by the BAA. We even had sunny weather for the group photograph taken outside in the afternoon!

It was good to see a number of NAS members at the meeting and I hope everybody had as good a time as I did. I am glad that we were able to bring the BAA to Nottingham – it was the first such meeting of theirs to be held here. The BAA were very pleased with the venue of Nottingham High School for Girls, and I have thanked the School for preparing everything so well. The day really did run like clockwork.

The BAA have thanked the NAS for our help and would like to come to Nottingham again. So I hope this event really has helped to "put us on the map".

The meeting had been planned for 2020, but the COVID-19 pandemic put a stop to that. The meeting originally had been planned to be held in Radcliffe on Trent, but Julian used his



British Astronomical Association

Spring Meeting

Saturday 25th June 2022

<u>Programme Times for BAA Spring Meeting Saturday 25th June 2022</u>		
10:00	Registration	
10:30	David Arditti	Welcome and Medal Award
10:40	Prof Frazer Pearce	Adventures in the Goldilocks Zone: the search for other Earths
11:30	Refreshment Break	
11:50	Prof Christopher Conselice	"Origins: The universe to intelligent life and everything in between"
12:40	Lunch	
14:00	James Dawson	Nottingham Astronomical Society
14:30	Prof Ofer Lahav	"AI for exploring the dark universe"
15:20	Refreshment Break	
16:00	Julian Onions	"Galaxies - One Gigayear at a time"
16:50	Nick James	BAA Comet section update
17:10	Mike Frost	BAA Historical section update
17:30	David Arditti	Closing remarks

Details correct at time of printing

influence at the University of Nottingham and the meeting was held in the School of Physics and Astronomy on the main University campus site. The meeting coincided with an open day for prospective students and the campus was alive with activities and people.

Hazel Collett from the BAA, in conjunction with Julian arranged the speakers and Julian's wife Cath and daughter Rachel organised refreshments, signage and lunch for the speakers.

The programme for the day can be seen above.

Despite there being a Railway Strike on the day of the meeting, about 40 people attended, some travelling from as far as Wales and Suffolk. We also had a number of members from NAS attend.

As the host astronomical society, we had been requested to give a 30 minute talk about our society. As Julian was already on the speaker list, I was tasked with delivering this talk. I had thought it would be difficult to fill 30 minutes, but once I started putting ideas down about our history and more recent activities I soon realised I had got too much information, especially when I also included several of Brian Griffin's excellent photographs of the building of the Observatory.

Julian gave a talk on galaxies which I'd not heard before and greatly enjoyed. The sheer scale of the solar system, the galaxy, the Universe still astounds me. Photograph here of the BAA's President Dr David Arditti (left) introducing Julian (right) prior to his talk:



Due to the rail strike, David Arditti was stranded in Nottingham for 24 hours after the meeting had closed, so we offered to take him for Sunday lunch and then give him a tour of the Observatory.

We think David Arditti is the first President of the BAA to visit the observatory, and he was most impressed with the location, the building, and everything past and present volunteers had done at the site. He was most impressed with the mechanism we are still building to automatically rotate the dome, especially without having any mains electricity on site. Tea and coffee and cake were put on, and given I had a car boot full of second hand books I pulled these out and sold a few too.

So in all, a most enjoyable weekend with the BAA in Nottingham and a great opportunity for us to show off all what we do and show off our observatory. Photograph below taken inside the observatory showing (from left to right) David Arditti, Mike Provost (treasurer), Chris Sneddon (secretary), Leigh Blake (website), Julian Onions (chair), Richard Severn (membership and prestigious vice-chair), James Dawson (observatory).



The report of the 2004 BAA meeting in Nottingham, that appeared in the BAA Journal the following year

Meetings

Ordinary Meeting and 5th Observers' Workshop, 2004 April 24

held at the Nottingham High School for Girls, Arboretum Street, Nottingham

Tom Boles, *President*
Ron Johnson, Nick Hewitt & Nick James, *Secretaries*

Nick Hewitt opened the fifth BAA Workshop at Nottingham Girls School. He welcomed the 75 delegates and gave an introduction to the day's programme of talks.

Martin Taylor started the day with an excellent talk on 'Webcam imaging of the planets'. He explained how you could achieve very good results by using an unmodified webcam that could be bought off the shelf in any of the major electrical stores. He then went on to explain about eyepieces and the software required to download the images, and showed us some of his stunning results. The talk was easy to understand and encouraged anyone whether beginner or more advanced astronomer to have a go.

The next talk was by Bob Marriott on 'Drawing the Moon'. Bob took the audience back to the pre-computer days and showed us how easy it is to draw objects by using an HB pencil, a piece of paper and an eraser whilst looking through a simple small telescope. He emphasised it was unnecessary to try and do complicated drawings and that keeping them simple and drawing just one feature at a time will easily give the observer satisfactory results from the beginning.

Following a break for lunch and a chance to look at the display boards and BAA sales stand, the afternoon session began with a short Ordinary Meeting introduced by the President, Mr Tom Boles. Dr Hewitt read the minutes of the previous meeting which were approved by those of the audience who had been present, and signed by the President. The 59 new members proposed at the earlier meeting were formally elected, and a further 17 new members were proposed for membership. Mr Boles emphasised that if there were any new members here whom he had not met before, they should make a point of coming forward later so that he might have an opportunity to meet them and welcome them to the BAA.

Mr Nick James said that two papers had been approved by Council for publication in the *Journal*:

The Geminid meteor shower in 1999 by Neil Bone
Notes on the phase anomaly and markings of Venus by Alan Heath



Attendees at the Nottingham meeting. (Photo courtesy Jonathan Silverlight)

The President then gave details of the next Ordinary Meeting, to be held in London on May 26, and the CCD Photometry Symposium being organised by the Variable Star Section and the Instruments and Imaging Section at Northampton on May 15/16. Jonathan Shanklin then described Comet Bradfield, which was currently moving into the northern sky, and comet 2001 Q4 (NEAT) which should become visible soon and will remain so throughout the summer, possibly becoming as bright as 2nd magnitude.

Mr Boles then introduced Roger Dymock for his Workshop talk on 'Observing Near Earth Asteroids', which is reproduced elsewhere in this *Journal*. Gary Poyner then gave a very enlightening talk on 'Faint variable stars observed from the City'. Gary showed us that it is possible to observe faint objects from a heavily built-up site such as Birmingham. He squashed the excuses about not being able to observe in such areas because of light pollution. Gary's talk covered some of the techniques of overcoming stray light problems with shielding on the telescope, baffle boards on fencing, talking to neighbours and even the council about street light shielding. The images he displayed during his talk, together with the readings of low magnitude variable stars should

have given all delegates the encouragement to try for themselves.

Following a break for tea, Mike Foulkes finished off the day's programme of lectures. Mike gave a detailed talk on observing and studying the features on Jupiter, which he has been doing for many years, using both small and larger aperture instruments. His enthusiastic talk encouraged delegates to go away and have a go themselves.

Overall the comments from the delegates on all of the five talks, indicated they were interesting to amateur astronomers of all levels and that any of these projects were within the level a beginner could easily start with. The speakers' aims were to encourage others to try and this appears to have been successful. Many of the delegates said they would make the effort to attend the next workshop so they could learn more.

Hazel Collett

The TREFACH MARCH 2005 Star Camp

The TREFACH COUNTRY PUB AND CARAVAN PARK presents the March 2005 Star Camp on Friday March 4.

In the day, talks will be given on astronomy and the Preseli area. Also there will be the opportunity to purchase equipment etc.

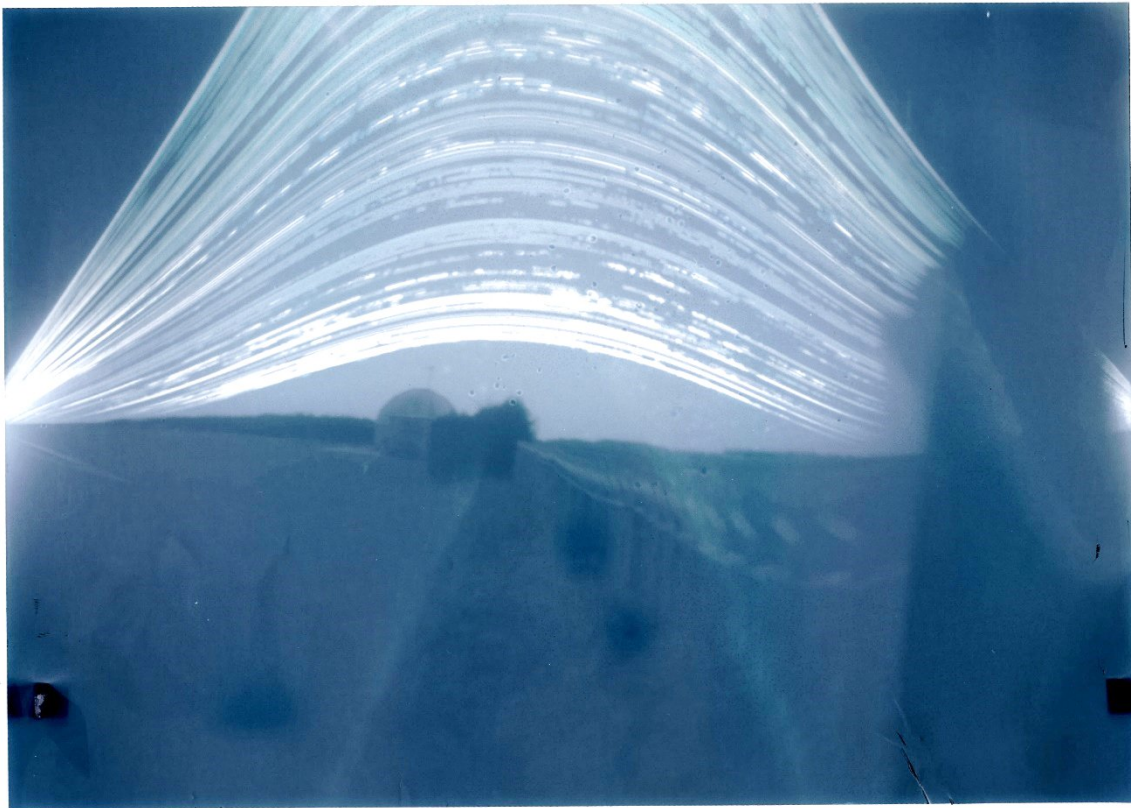
We provide accommodation in caravans or tourer and tent pitches and have a bar and restaurant.

We are taking bookings for the weekend, Friday through to Sunday. More information is on our website at <http://astronomy.crysania.co.uk>, or e-mail astro@trefach.co.uk.

Trefach is one of the darkest sites in the UK and we are also open for bookings throughout the year.

Solargraphy

We talked about how to make a solargraph some months ago, and I set up a commercially available solarcan (like the one on the right) at the observatory on the shortest day of the year back in December 2021. It has been there ever since. Two days after the longest day of the year in June 2022 I took the can down and have processed the film. This is the first solargraph taken of the observatory as far as we know. If anyone knows otherwise, please get in touch.



A solargraph with the observatory in the middle of the image, with east on the left and west on the right.

It is unfortunate that the top of the solargraph is cut off, but we've talked about this and worry that if we angled the can pointing higher in the sky that rain water may be more likely to get inside the can. Again, if anyone has any good ideas let us know.

James Dawson

helpdesk@nottinghamastro.org.uk

June's Plumtree meeting - a thank you from Mark Fairfax

I'd just like to say a big thank you to everyone who attended my talk on the eVscope - you were a very receptive & welcoming audience.

I went on a bit longer than expected so if anyone had any questions I didn't get to on the night please feel free to email me at

fairf77@icloud.com



A Thank You from Holly McNiven

I want to note a big thank you to everyone in the Society for their support and participation in my research paper on how amateur astronomers who live around light-polluted cities maintain a relationship with the sky. I got an 'A' on my paper and I owe a huge thank you to all those who shared their opinions and experiences. If anyone would like a copy of the paper to read, I would be happy to send it to whoever wants to read. My email is hgonzalez8432@gmail.com.

Thank you!

Holly McNiven

ADVERTISEMENTS

Interstellar Studies Summer Course *Human Exploration of the Far Solar System and on to the Stars*

The Limitless Space Institute has commissioned the Initiative for Interstellar Studies to create a new course to educate and inspire the next generation to explore and travel beyond our solar system. Based on the inaugural class in 2021 the second class will also incorporate material previously delivered to the International Space University and i4is' own 'Starship Engineer' courses. The second summer course will be administered via Zoom Webinar format from Monday July 25, 200 through Friday July 29, 2022.

The course provides a fundamental appreciation and basic knowledge of principal subjects, from setting the background and context through to advanced propulsion, systems, concepts, and designs. The course is predominantly (but not exclusively) a STEM-based course and specifically targets the level of freshman/first year STEM university students. Attendees will need a suitable background but will have a particular interest in the most ambitious opportunities for human exploration of space.

If you would like to know more, you should register your interest with i4is at, info@i4is.org or checkout Eventbrite here;

<https://www.eventbrite.com/e/second-interstellar-studies-summer-course-tickets-348011721427>

Best wishes,

Tam O'Neill,

i4is Outreach Team

FOR SALE

Atik 460EX Monochrome Cooled CCD, with original box and cables - £700

Starlight Express Lodestar X2 guide camera, with original case and cables - £200

More details and pictures available on request.

Contact leigh@xanthic.co.uk

FOR SALE

Set of four coloured 1.25-inch filters £25

Please contact Sam Boote
sam@boote.myzen.co.uk or at Society meetings

FOR SALE

Celestron Astro Fi 5" (125mm) Schmidt-Cassegrain telescope £350

With easy to use Wi-Fi GoTo technology that can be controlled with your smart phone or tablet, using the free Celestron SkyPortal app.

INCLUDED IN THE BOX

Telescope

Tripod with accessory tray (includes rubberized smartphone holder)

Mount Type Single Fork Arm Computerized Altazimuth

10 & 25mm eyepieces

StarPointer red dot finderscope

Mirror Star Diagonal 1.25"

Battery pack

(Extras: Set of anti-vibration pads)

Optical Coatings Fully-Coated XLT

Aperture 125mm

Focal Length 1250 mm

Focal Ratio f/10

4.5 out of 5 stars review in BBC Sky at Night Magazine

Other

Celestron deluxe tele-extender (#93643) £60

Do eyepiece projection photography with your 5 to 14-inch Celestron SCT to take magnified images of the Solar System.

Celestron Neximage 10 Solar System Colour Imager (#93708) £250

Easy to use color camera, provides live video for quick focusing

Celestron 18774-CGL PowerTank 7, 12V -7Ah, Black £80

Mobile power station with spotlight

Contact **Mark Fairfax** at fairf77@icloud.com

Nottingham Astronomical Society

Affiliated to the **British Astronomical Association**
Member of the **Federation of Astronomical Societies**
Supporters of the **Commission for Dark Skies**

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Mark Fairfax

Meetings

Our formal meetings, often with an illustrated talk by a guest speaker, are held on the first Thursday of each month (except in August) at:

Nottingham Emmanuel School
Gresham Park Road,
West Bridgford,
Nottingham, NG2 7YF

Doors open 7:15pm

Meetings start 7:45pm

Meetings end 9:15 pm

These meetings are open to the public, and visitors are welcome to attend, subject to a charge of £3 per meeting for adults.

Annual subscriptions 2022

Full £30

Joint rate for partners
living at the same address £45

Under-18s and full-time students £5

Subscriptions become due on 1st January. Half-price subscription is charged if joining after 30th June (minimum subscription £5).

Please make cheques payable to:
Nottingham Astronomical Society.

If you would like more information about the **Nottingham Astronomical Society**, or would like to become a member, please contact the Secretary secretary@nottinghamastro.org.uk or speak to any NAS committee member at one of the regular monthly meetings.

The Nottingham Astronomical Society

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