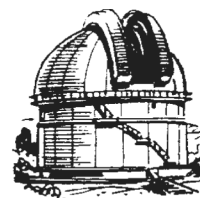

Journal

of the

Nottingham Astronomical Society

December 2021



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Thursday, December 2nd

Nottingham Emmanuel School
Gresham Park Road,
West Bridgford,
Nottingham, NG2 7YF
8pm (doors open at 7:30pm)

This evening we welcome

Pete Williamson

Astronomer, Educator, Broadcaster

who will be speaking on

“Herschel to Hawkwind”

Astronomy and Music



Chairman's Message – December 2021

Dear all,

Here we are coming to the end of the year. We hope to go out with a bit of a bang with a talk from Pete Williamson, Astronomer and Rock Star! He will be talking about the harmony between astronomy and music in his talk *Herschel to Hawkwind* (the band he has been associated with). It should be a good end to the year, and we hope to have a bit of festive spirit as we enter December.

In other news, the observatory roadway was getting rather bogged down in the wetter weather, and we have made several investigations into getting a roadway to the area where we park, but all the quotes we had were out of our scope. So with the aid of some very generous donations we have managed to lay some grass reinforcement panels (over 300 of them!) to allow a less hazardous route to drive along, hopefully making the observatory accessible all year round. We are very thankful to the volunteers to gave their time to spend their weekend sorting this all out (see pictures below). So with a more leak-proof dome, a toilet, parking, and even some basic tea/coffee making possibilities, it is a much nicer place to be! We hope to have an evening up there soon for all to view.

Julian,
NAS chair





Sky Notes

December 2021

Compiled by Roy Gretton



All times given below are in Universal Time

The Winter Solstice on the afternoon of December 21st, when the Sun will be 23.44 degrees south of the celestial equator. The earliest sunset will occur around December 13th, and the latest sunrise around December 29th.

PHASES OF THE MOON

<i>Phase</i>	<i>Date</i>
New Moon	December 4 th
First Quarter	December 11 th
Full Moon	December 19 th
Last Quarter	December 27 th

This month the Moon is closest to Earth on the 4th, and furthest on the 18th.



The winter sky, looking south at 10pm on Christmas Eve
(one planet visible!)

THE PLANETS

Mercury is an evening object throughout December, but being more than 24 degrees south of the celestial equator, it will be practically unobservable from our latitude.

Venus reaches its greatest brilliance, an impressive magnitude -4.7, on December 9th, but it will still be more than 23 degrees south of the celestial equator, and therefore extremely low in the south-western sky after sunset. The thin crescent continues to get thinner, but larger in diameter (pole to pole), which increases to 60 arcseconds (1 arcminute) by the close of the year.

Mars will be rising at 3 am by the end of December, by which time it will be 22 degrees south of the celestial equator, but it will still be less than four arcseconds across.

Observing opportunities for **Jupiter** diminish markedly this month. At the beginning of December it will be setting at 10 pm, but by the end of the month this will have moved to before 8:30 pm.

Opportunities for observing **Saturn** are also rapidly diminishing, as the planet, low in the southwest, will be setting at about 7 pm in mid-December.

December will be a good month for observing **Uranus**, in the constellation of Aries, as it will be above the horizon throughout the hours between sunset and 4 am in mid-month.

Neptune, a magnitude +7.9 object in the constellation of Aquarius, will be setting before midnight in mid-December.

METEORS

2021 is not an ideal year for observing our best meteor shower, the **Geminids**. Peak activity (over 100 events per hour under optimum conditions) will occur soon after midnight on December 14th, when there will be a 10-day-old Moon (waxing gibbous). However, Geminids can be very bright, and you may well be able to see some of them in spite of the moonlight. It's worth a look if the sky is clear.

JUPITER

An image of Jupiter obtained using the C-14 telescope in the NAS observatory on 29th October.



DIARY DATES 2021-2022

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 7:30pm for 8pm 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
December 2 nd	Herschel to Hawkwind	Pete Williamson
January 6 th	Annual General Meeting with possible Quiz and Buffet	
February 3 rd	Astronomy.... without light? The new field of multi-messenger astronomy	Dr Phil Evans University of Leicester
March 3 rd	Exoplanets	Prof Don Pollacco University of Warwick
April 7 th	Our Island Universe: the Milky Way, its place in time and space	Prof Ian Morrison Emeritus Gresham Professor of Astronomy
May 5 th	Supernovae	Dr Matt Nicholl University of Birmingham
June 2 nd	Imaging from light polluted sites	Peter Jenkins FRAS

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 December 16th

Mulled Wine and Mince Pie Star Party

To celebrate the building of the new track to the NAS Observatory we are holding a **Mulled Wine and Mince Pie Star Party** on Thursday 9th December at 6pm to 10pm.

We will be holding the event regardless of weather conditions. If the forecast is cloud or rain we will still hold the event inside the dome as a members social event. Hopefully if skies are clear we will have the event outside with members invited to bring their own telescopes as well as operating the society Celestron 14" SCT inside the observatory.

It's winter so make sure you bring plenty of warm clothing and suitable footwear.

Regards

Richard

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

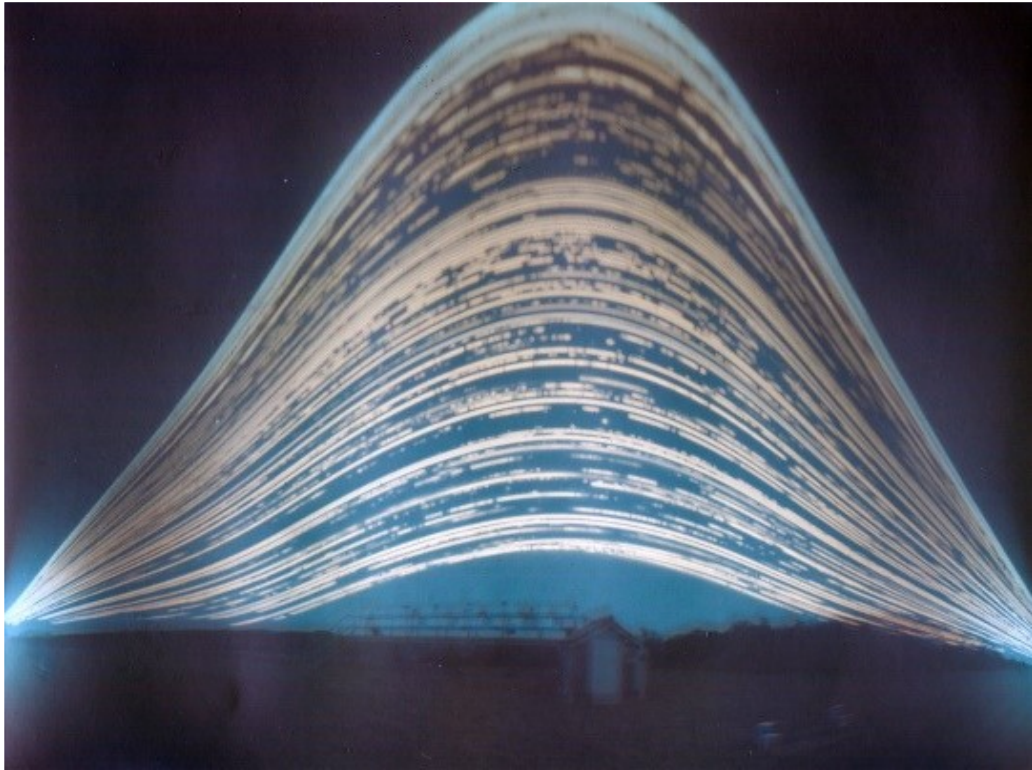
To register for your monthly e-mailed link to the NAS Journal, and a copy of our SkyNotes, just e-mail secretary@nottinghamastro.org.uk

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

Social and Practical Astronomy, Plumtree

The **November** face to face meeting was delivered by myself and Richard Severn and the topic was [solargraphy](#).



Solargraphy is taking a very long-exposure image of the Sun's path across the sky over many days, weeks or months using a pin-hole camera which can either be built at home or purchased. An example of a solargraph can be seen to the right.

The pin-hole camera should point towards the southern horizon and the "shutter" left open for several weeks or months, day and night. The light from the Sun scorches lines on the photosensitive paper inside the camera which when developed or processed shows the changing altitude of the Sun in the sky over the time period of the exposure. The best solargraphs are taken over six months, from the shortest day to the longest day (or vice versa), showing the differing altitude of the Sun throughout the year.

We talked about the principles of the Sun's apparent movements in the sky and why this occurs, and we watched a [short video](#) on how to make a suitable pin-hole camera at home. Photosensitive paper was given out to those in attendance who wanted some. I still have more so if you want some, or want more, please do let me know.

I hope people will make their own pin-hole camera or purchase one online; there are several retailers but we have found this company to be reliable:

<https://solarcan.co.uk/>



Richard talked about the importance of measuring sunshine in meteorology and can be seen to the left talking about the sunshine recorder he brought along from the *National Museum of Hydrometry* at the Environment Agency¹. This instrument is called a [Campbell-Stokes](#) sunshine recorder.

It was a really fun and informative evening. Thanks to all who attended and participated especially Chris for sorting out refreshments.

James Dawson

NAS Helpdesk

helpdesk@nottinghamastro.org.uk

The *National Museum of Hydrometry* is apparently not a formal institution but a collection of instruments and bibliographical material Richard has collected and keeps in his office at work.

Advertisements

For Sale

- **Celestron Omni Plössl eyepiece (1.25") 9mm £25**
- **Celestron Omni Plössl eyepiece (1.25") 15mm £25**
- **Celestron Omni Plössl eyepiece (1.25") 32mm £50**

Celestron's 4-element Plossl eyepiece features include blackened lens edges to minimise internal reflection and maximise contrast, fully multi-coated optics for maximum light transmission. All offer 50° field-of-view plus threaded barrel accepts 1.25" filters and features a 'safety undercut' to prevent the eyepiece falling out of the focuser.

- **Celestron Omni 2x Barlow lens (1.25") £50**

The two-element optics are fully multi-coated and the edges of the lenses are blackened to cut down on internal reflections.

***All boxed & nearly new.**

Contact Mark Fairfax in Newark 07855 833119

FOR SALE

Now that I have sold my telescope and gone over to electronically assisted observing, I still have some bits and pieces for sale.
The following are currently available:

Tele Vue solar finder
set of four coloured 1.25-inch filters
1.25-inch oxygen-III filter
1.25-inch 13% Moon filter
2-inch 13% Moon filter
2-inch broad-band light pollution filter
2-inch narrow-band light pollution filter
Geoptik variable artificial star for collimation

By the time you read this, some items may have been sold via my adverts on astrobuysell.com.

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

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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Andrew Green

Rob Bush

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 7:30pm

Meetings start 8:00pm

Meetings end 9:30 pm

These meetings are open to the public, and visitors are welcome to attend.

Annual subscriptions 2021

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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