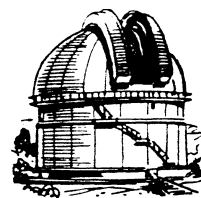

Journal

of the

Nottingham Astronomical Society

January 2020



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Thursday, January 2nd

Gotham Memorial Hall

Gotham, NG11 0HE

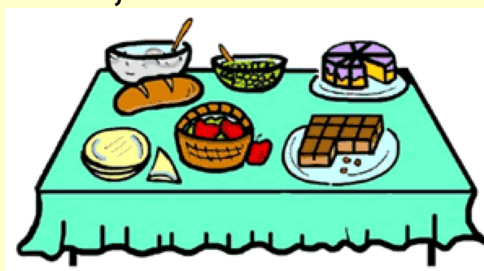
8pm (doors open at 7pm)

This evening will be our

New Year Quiz Night

with

buffet, wine & soft drinks



**We wish all Members and friends of the NAS
a very happy and prosperous New Year**

Astronomical Highlights of 2020

- A **brilliant evening apparition of Venus**, lasting throughout the Spring, but being at its most spectacular in March and April.
- A **possible naked-eye comet**, C/2017 T2 (PANSTARRS), observable from the UK for the first half of the year, and reaching perihelion in May.
- **Near-ideal conditions** for the richest of our annual meteor showers, the **Geminids**, which peak on the night of December 13th-14th.

Sky Notes

January 2020

Compiled by Roy Gretton



All times given below are in Greenwich Mean Time

Earth's **perihelion**, when the planet is closest to the Sun, will occur in the morning of January 5th, when the centres of the two bodies will be 91,398,200 miles apart (which happens to be about 5 miles closer than they were a year ago – but I don't suppose this winter will be noticeably warmer as a result!)

PHASES OF THE MOON

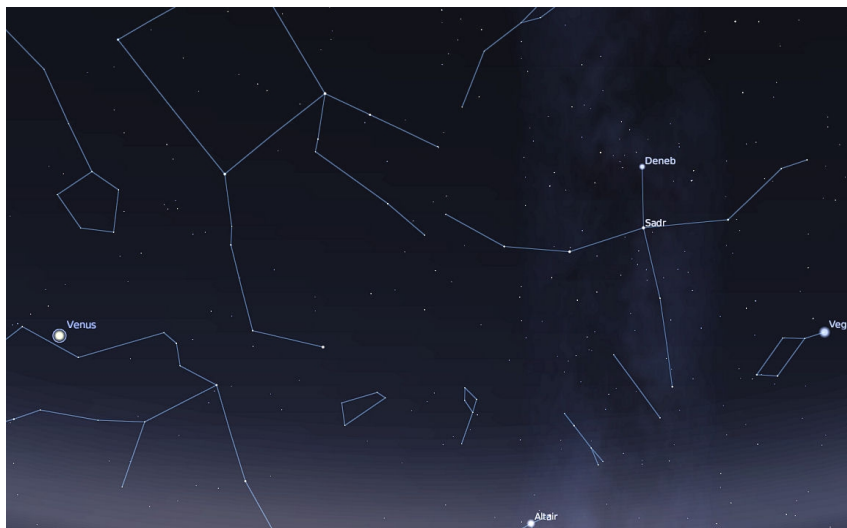
<i>Phase</i>	<i>Date</i>
First Quarter	January 3 rd
Full Moon	January 10 th
Last Quarter	January 17 th
New Moon	January 24 th

This month the Moon is closest to Earth on the 13th, and furthest on the 29th.

THE PLANETS

Mercury must be regarded as unobservable for most of this month, as it passes through superior conjunction on January 10th, to emerge as a challenging evening object thereafter.

Venus will really begin to make its presence felt in the evening sky this month, after lurking low in the southwest since the start of November. As January begins it will still be 18 degrees south of the celestial equator, but this improves to only 4 degrees south by the end of the month, by which time the planet will be a striking magnitude -4.1 object, 25 degrees in elevation as the sky darkens.



*Looking west
at 6pm on
January 25th*

Mars (magnitude $+1.5$) is a relatively inconspicuous object moving from the constellation of Libra into Scorpius this month, and ending January almost 23 degrees south of the celestial equator. So a difficult object, less than 5 arcseconds across, for observers at our latitude.

Jupiter passed through conjunction with the Sun on December 27th, and is now a morning object. By the end of January it will have returned to visibility, very low in the southeast before sunrise, magnitude -1.9.

Saturn passes through conjunction with the Sun on January 13th, and hence is unobservable this month.

Uranus is an evening object about 13 degrees north of the celestial equator in the constellation of Aries, and shining at magnitude 5.8.

Neptune is also an evening object, about 6 degrees south of the celestial equator in the constellation of Aquarius, and shining at magnitude 7.9. It will be setting about three hours after the Sun by the end of January.

METEORS

If you want give yourself the best chance of observing the **Quadrantids**, the time to be outside will be between midnight and dawn on January 4th, when the 8-day old Moon will have set, and maximum activity is anticipated. These meteors appear to radiate from a point in the north of the constellation of Boötes, not far from the handle of the Plough, and can be as prolific as the better-known Perseids of August.

Nottingham Astronomical Society 2020 Membership

Membership subscriptions for 2020 are now due for renewal.

All current members should have received their renewal forms by email detailing your membership rate.

Individual £30, Partnership £45, Concessions £5

To renew your subscription please either:

- 1) Complete the renewal slip sent via email and return with a cheque (payable to Nottingham Astronomical Society) to the Membership Secretary, Nottingham Astronomical Society, 16 Maygreen Avenue, Cotgrave, Nottingham, NG12 3SH, **or**
- 2) If you bank online then payment may be made direct into the Society's bank account as follows: Bank: NatWest, Sort Code: 56-00-61, Account: 44992254. Please quote the following reference: your name and membership number if known in the bank transfer reference. Please confirm by email to membership@nottinghamastro.org.uk that you have made an online bank transfer, **or**
- 3) Bring the renewal slip to a Gotham or Plumtree monthly meeting. Payment may be made by either cheque or cash. (If you are paying by cash it would be helpful if you could bring the correct change).

Looking forward to seeing you at our 2020 meetings

Richard Severn
Membership Secretary

DIARY DATES 2020

Monthly Meetings of the Nottingham Astronomical Society

1. Meetings at Gotham Memorial Hall

Nottingham Road, Gotham, NG11 0HE

Held on the **FIRST Thursday** of each month except **August**

Doors open at 7pm 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 **Library** and a **Helpdesk** open at each meeting.*

<u>Date</u>	<u>Topic</u>	<u>Speaker</u>
January 2 nd	NAS New Year Quiz with Buffet, Wine & soft drinks	
February 6 th	APOLLO 13 - Ingenuity & Survival 13 factors that saved 3 brave astronauts	Dr Nigel Bannister Senior Lecturer, University of Leicester
March 5 th	FIAT LUX 3 - The LSST Jedi The Large Synoptic Survey Telescope, the greatest survey yet	Dr Steve Barrett Senior Research Fellow, University of Liverpool
April 2 nd	EXTREMOPHILES Why there must be life elsewhere in the Universe	Dr Martin Braddock FRAS
May 7 th	Wonders of the Southern Sky	Professor Ian Morison Emeritus Gresham Professor of Astronomy
June 4 th	VENUS - why so different? New insights from our closest earth sized planet	Dr Richard Ghail Royal Holloway, University of London
July 2 nd	Live Long and Prosper The search for Vulcan and other hypothetical Solar System objects	Dr Ann Bonell Leicester Astronomical Society
August 1st (Saturday, 5pm)	NAS Annual BBQ at the Observatory	
September 3 rd	The Plumes of Enceladus	Dr Chris Arridge Reader, University of Lancaster
October 1 st	The Vikings at Barsom - Part 1 Orbital Operations	Paul Money
November 5 th	Annual General Meeting followed by a Wine and Cheese Buffet	
December 3 rd	<i>Speaker and title to be confirmed</i>	

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.

The next meeting will be on January 16th (see further details below)

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

Advertisement

FOR SALE

Kendrick 8-inch solar filter with custom-made box
£40

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

Social and Practical Astronomy, Plumtree, December 2019

The **December** meeting at Plumtree was organised by Julian Onions. Julian had invited our patron, Professor Mike Merrifield from the School of Physics & Astronomy, University of Nottingham, to come and talk on “what astronomers do”.

Julian asked Mike a number of questions and we learnt how Professor Merrifield first became interested in astronomy as a child, and how his education and training through various institutions and continents led him to eventually become a professor in Nottingham.

Mike also talked about the work he has done, and continues to undertake with his own research group and with wider organisations and projects, including his involvement in the [European Extremely Large Telescope](#) project.

It was fascinating to hear some of the technical aspects of Mike’s job, the changes he has seen over the years, and the opportunities he has been exposed to.

We were all very grateful to him, and to Julian for the evening.

Chris made a wonderful Christmas cake which Mike had the honour of cutting (right), and Chris also put on mulled wine which was heavenly. Li and Leah brought some festive muffins which didn’t last long, and John brought mince pies. It was a great evening, and one of the best attended at Plumtree. Thank you all who helped out.



The topic of the **January 2020** meeting at Plumtree has yet to be finalised, and the **February 2020** meeting at Plumtree is again organised by Julian who is bringing along some research students from the University of Nottingham to talk about their research.

James Dawson

NAS Helpdesk & Plumtree Meetings

helpdesk@nottinghamastro.org.uk

NAS Library - Librarian Wanted: CAN YOU HELP?

Our successful library service has been running for several years at our Gotham and Plumtree meetings. We are looking for a member to run the library as our current librarian Lorraine is leaving Nottingham in a month’s time.

The role involves ensuring the books are brought to our society meetings, and signing in and out the library books loaned to members. You must be able to arrive at the meetings by 7:30pm to put out the books. Other than that you just need a friendly smile!

Please help us to keep this service running at our meetings, and volunteer to help out with the library. If you are interested speak to **Richard Severn** at one of our meetings or email membership@nottinghamastro.org.uk

Lucie Green at Gotham, 5th December 2019

The December meeting at Gotham was a fascinating talk by Professor Lucie Green, University College London.

Lucie is probably best known for her television and radio appearances as a science communicator, but is a solar physicist, research lead, teacher and project scientist.

The subject of the talk was “Voyages to the Sun, probing our nearest star” and was a summary of our current understanding of our nearest star, and discussion about the current and planned missions and projects to study the Sun further.

Lucie has written a [book](#) on the Sun, “15 Million Degrees: A journal to the centre of the Sun” and anyone who missed the talk, or who wants to know more should be encouraged to get hold of a copy. We do have a copy in the NAS Library which members can borrow.

This was my favourite talk of the year for me, and I look forward to reading the book.

Lucie pictured here with John Hurst, NAS Chairman, and Julian Onions.



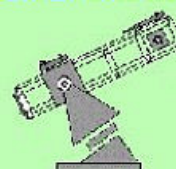
James Dawson

NAS Helpdesk & Plumtree Meetings

helpdesk@nottinghamastro.org.uk



Are you new to Astronomy?



Then the BAA "Back to Basics" Workshop is for YOU!

Saturday March 7th 2020

The Civic Hall, 1 Market Green, Cottingham HU16 5QG

The **British Astronomical Association** has designed a programme of talks and practical sessions to help you learn basic techniques and develop your interest to its full potential. Experienced people will be on hand to answer your questions. We will cover what equipment you need to get started, and an introduction to lunar and planetary observing. For those already doing some observing we will have beginner sessions on Aurora hunting and Imaging for beginners.

There will also be a chance to visit St Mary's Church to see the clock which has an astronomical connection. It was manufactured by Cooke of York, who also made telescopes, and was installed into the Church after being in the Vienna Exhibition of 1873 and the York Exhibition of 1880. It has been described as one of the 5 best turret clocks in the country. On the hour, the clock strikes on the twenty-one hundredweight tenor bell which was cast in 1795 by James Harrison of Barton-Upon-Humber, brother of John Harrison of Longitude fame.

**The cost for the meeting is £5.00 BAA Members & children under 16.
£6.00 for non-members. Price includes refreshments but not lunch.**

Space is limited so please book on line at www.britastro.org/cottinghamb2b
Or contact The British Astronomical Association, Office by phone: 020 7734 4145
By 18th February 2020



Full detailed directions and map can be found on: -
The BAA web site www.britastro.org/cottinghamb2b
Or the Hull & East Riding Astronomical Society web site www.heras.org.uk

Event Organisers: Mrs Hazel Collett: Email meetings@britastro.org Tel: 07944 751277
Local Contact: Mrs Helen Marshall: Email secretary@heras.org.uk Tel: 0779 1183 569

Retailers attending will be BAA Sales, PAE Precision Astro Engineering
and Barry Cooke & Sons

Please note: this is an image, so the apparent hyperlinks are not active

The Witch's Broom Nebula, imaged by Marcus Stone

Last summer NAS member Marcus Stone obtained these delightful images of the Witch's Broom nebula, the western segment of a supernova remnant known as the Veil Nebula, located about 1400 light-years away in the constellation of Cygnus. The first image was captured using an 80mm Meade refractor with Astronomik UHC filter attached:



The second image was obtained at the prime focus of a 300mm aperture reflecting telescope:



(The bright star in the field of view is 52 Cygni, but it is unrelated to the supernova remnant).

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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(vacant post)

email: observatory@nottinghamastro.org.uk

Observatory line: 07726 940700 (line open during observing sessions)

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:

Gotham Memorial Hall

Gotham

Nottingham NG11 0HE

Doors open 7.00pm

Meetings start 8.00pm

Meetings end 10.00pm

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

Annual subscriptions 2020

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. A membership application form is inside this issue of the Journal.

The Nottingham Astronomical Society

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