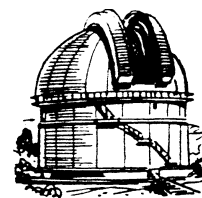

Journal

of the

Nottingham Astronomical Society

February 2020



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Thursday, February 6th

Gotham Memorial Hall
Gotham, NG11 0HE

8pm (doors open at 7pm)

This evening we welcome

Dr Nigel Bannister

Senior Lecturer, University of Leicester



who will be speaking on

APOLLO 13 – Ingenuity & Survival

13 factors that saved 3 brave astronauts

COMET C/2017 T2 (PANSTARRS)



Image taken by Marcus Stone on 2019 October 27, as the magnitude 11 comet
was passing the open cluster M36

(See Skynotes for more details of this potentially naked-eye comet)

Sky Notes

February 2020

Compiled by Roy Gretton



All times given below are in Greenwich Mean Time

PHASES OF THE MOON

<i>Phase</i>	<i>Date</i>
First Quarter	February 2 nd
Full Moon	February 9 th
Last Quarter	February 15 th
New Moon	February 23 rd

This month the Moon is closest to Earth on the 10th, and furthest on the 26th.

THE PLANETS

Look out for the tiny “spark” that is **Mercury** in the evening sky (west-south-west) in the second week of this month, as it will reach greatest eastern elongation (18 degrees) on February 10th. Although the planet will be very low down in our sky, this will be the second-best evening apparition of Mercury in 2020. After this it rapidly moves back toward the Sun, reaching inferior conjunction on the 26th.

Venus is “the gift that keeps on giving” as it grows ever more prominent in the evening sky. For the whole of February it will be more than 40 degrees from the Sun, and will be climbing ever higher in the western sky with every passing day. On the 9th it will cross the celestial equator into the northern hemisphere, and by the close of the month its declination will be +10 degrees. A waxing crescent Moon will be nearby on the 27th.



**Looking WSW
at 6pm on
February 10th**

*Three planets in
the evening sky*

This month **Mars** will be moving eastward through the constellation of Sagittarius, and hence will be very low in the morning sky, rising 2 to 3 hours before the Sun. At magnitude +1.3 it is still not a particularly prominent object. On the morning of February 18th a waning crescent Moon will be nearby – something to look out for if you happen to be up at about 5 am on that date.

This month **Jupiter**, also in the constellation of Sagittarius, will be slowly emerging from the glare of the Sun, and by the close of February will be rising nearly two hours before sunrise. Its brightness will be approaching magnitude –2, so it will be unmistakable as the brightest “star” in that part of the sky.

Saturn, yet another planet in Sagittarius, will be difficult to spot in the brightening pre-dawn sky this month. As recently as mid-January it was in conjunction with the Sun, and so a few more weeks will need to pass before it is suitably placed for observation, and even then it will be about 20 degrees south of the celestial equator.

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 in the constellation of Aquarius, is now extremely difficult to observe it sets little more than one hour after the Sun.

METEORS

There are no notable meteor showers in February.

COMET C/2017 T2 (PANSTARRS)

During February and March this circumpolar comet will be moving northward to the east of the ‘W’ of Cassiopeia, and will pass through the bowl of the Plough during the first week of June, when it may be at naked-eye visibility. It is currently about magnitude 9, so a good photographic object. *(Please send in your images for inclusion in the Journal).*

Visit www.heavens-above.com for daily updates on its position. **See also Page 8 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

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.*

Date	Topic	Speaker
February 6th	APOLLO 13 - Ingenuity & Survival 13 factors that saved 3 brave astronauts	Dr Nigel Bannister Senior Lecturer, University of Leicester
March 5th	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 2nd	EXTREMOPHILES Why there must be life elsewhere in the Universe	Dr Martin Braddock FRAS
May 7th	Wonders of the Southern Sky	Professor Ian Morison Emeritus Gresham Professor of Astronomy
June 4th	VENUS - why so different? New insights from our closest earth sized planet	Dr Richard Ghail Royal Holloway, University of London
July 2nd	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 3rd	The Plumes of Enceladus	Dr Chris Arridge Reader, University of Lancaster
October 1st	<i>Speaker and title to be confirmed</i>	
November 5th	Annual General Meeting followed by a Wine and Cheese Buffet	
December 3rd	The Vikings at Barsoom - Part 1 Orbital Operations	Paul Money

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 February 20th (see further details below)

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).

Richard Severn
Membership Secretary

Social and Practical Astronomy, Plumtree, December 2019

The January meeting at Plumtree was devoted to website and apps for the amateur astronomer. James, Leigh, Gareth and Richard all pitched in to talk about some of the many resources out there for the amateur astronomer. Most of these are free, but some need to be purchased or additional features are available when the user pays a fee. Readers are advised to check the small print.

Here are the apps Gareth talked about:

[NASA](#)

[Sky Safari](#)

ISS Tracker

[Met Office](#)

Rise

Phases of the Moon

[PS Align](#)

[AuroraWatch Uk](#)

Light Pollution Map

Here are the websites Leigh talked about:

Astrometry: plate-solving software

<https://nova.astrometry.net/>

Field of view calculator

<https://www.12dstring.me.uk/fovcalc.php>

Here are the apps Richard spoke about (apps of most of these are available):

Sat24: visible and Infrared satellite images of cloud coverage past 2 hours

<https://en.sat24.com/en/eu/infraPolair>

Met Office

<https://www.metoffice.gov.uk/weather/maps-and-charts/surface-pressure/>

Polar jet stream and wind speed forecast

<https://earth.nullschool.net/#2020/01/18/1800Z/wind/isobaric/250hPa/orthographic=-27.57,44.81,1024/loc=-1.089,52.892>

Augmented reality Apollo's moon shot by Smithsonian

<https://www.smithsonianchannel.com/shows/apollos-moon-shot/1005833>

And the websites James demonstrated:

Free astronomy magazine

https://www.astropublishing.com/all_FAM.htm

Astrobin – astrophotography gallery

<https://www.astrobin.com/welcome/>

Stargazers Lounge – astronomy forum

<https://stargazerslounge.com/>

Quickmap – lunar topography

<https://quickmap.lroc.asu.edu/>

Online astronomy course

<http://www.astronomynotes.com/index.html>

AstrobuysellUK

<https://www.astrobuysell.com/uk/>

We found a number of other websites which readers may find interesting and want to explore at their leisure, shown in the table below:

Website	Topic
https://agenaastro.com/articles/guides	astronomy articles and guides
https://telescopus.com/	astronomy planning
https://astronomy.tools/	astronomy tools
https://www.cctvcameraworld.com/cameras-for-stargazing-beginners-guide.html	astrophotography
https://aurorawatch.lancs.ac.uk/	aurora watch
http://www.binocularsky.com/	binocular astronomy
https://www.skyatnightmagazine.com/advice/buying-your-first-telescope/	buying a first telescope
https://www.skyandtelescope.com/astronomy-equipment/types-of-telescopes/	buying a first telescope
https://spacecentre.co.uk/blog-post/how-to-buy-a-telescope/	buying a first telescope
https://www.cloudynights.com/	forum
http://physicsdatabase.com/free-astronomy-books/	free books
https://apod.nasa.gov/apod/astropix.html	images
https://www.skyandtelescope.com/astronomy-resources/image-animation-links/	images and animations
https://www.skyandtelescope.com/observing/celestial-objects-to-watch/the-lunar-100/?c=y	lunar 100
https://www.google.com/moon/	lunar topography
https://www.imo.net/	meteor reporting
http://www.jb.man.ac.uk/astronomy/nightsky/nskyjan20.html	monthly sky guide
https://www.space.com/16149-night-sky.html	monthly sky guide
https://photojournal.jpl.nasa.gov/	NASA images
https://www.space.com/	news
https://britastro.org/	news, forum
https://stellarium-web.org/	online planetarium
https://staratlas.com/	online planetarium
https://in-the-sky.org/	online planetarium, observing calendar
https://www.telescope-optics.net/index.htm#TABLE_OF_CONTENTS	optics (advanced)
http://www.astronomyasylum.com/telescopeopticstutorial.html	optics (basic)
https://www.heavens-above.com/main.aspx	satellite tracking
https://www.spaceweatherlive.com/en/solar-activity	solar activity
https://www.skyandtelescope.com/astronomy-resources/equipment-telescope-making-links/	telescope making links

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

...and as we go to “press”, just time to fit in the latest NAS image of
Comet 2017 T2 PANSTARRS



The comet, moving northward through the constellation of Perseus,
imaged by the Editor at 10:20pm on January 18th.
17 x 30sec frames taken at ISO800

Advertisements

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

FOR SALE

Two Newtonian reflecting telescopes by Fullerscopes

10-inch aperture and 8-inch aperture £5 each

Both are in good working order optically.
The 10-inch instrument is on an old mount powered by a 240 volt motor.
Both could be re-mounted as Dobsonians.

Contact **David Buxton** on david.buxton1@ntlworld.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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(vacant post)

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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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