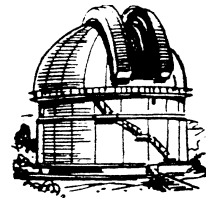

Journal

of the

Nottingham Astronomical Society

July and August 2018



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Thursday, July 5th

Gotham Memorial Hall
Gotham, NG11 0HE

8 pm (doors open at 7 pm)

This evening we welcome

Dr Phil Sutton



of Lincoln University

who will be speaking on

Cassini's Final Science:
10 years of triumph at Saturn

James Dawson's shiny new telescope



Leigh Blake demonstrates James' new Bresser 150 telescope

Sky Notes

July and August 2018



Compiled by Roy Gretton

All times given below are in British Summer Time (BST)

PHASES OF THE MOON

<i>Phase</i>	<i>July</i>	<i>August</i>
Last Quarter	8:52 am on the 6 th	7:19 pm on the 4 th
New Moon	3:49 am on the 13 th	10:59 am on the 11 th
First Quarter	8:53 pm on the 19 th	8:50 am on the 18 th
Full Moon	9:22 pm on the 27 th	12:57 pm on the 26 th

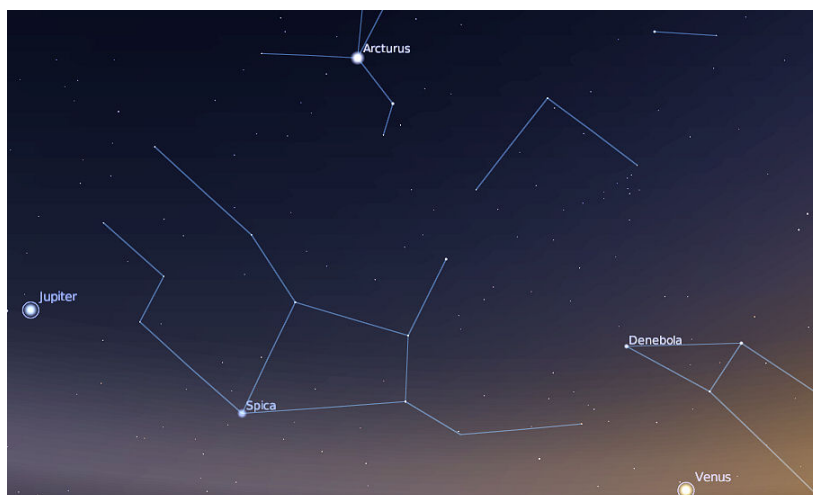
TOTAL ECLIPSE OF THE MOON, July 27th

The Moon will begin to enter Earth's penumbral shadow at 6:14pm, long before it rises in our part of the world. By the time that the Moon is rising over Nottinghamshire, shortly before 9pm, it will be totally eclipsed, making for an interesting spectacle (and possible photo-opportunity). Maximum immersion will occur at 9:22pm, with the Moon finally leaving the umbra at 11:19pm. [See further details on Page 5.](#)

THE PLANETS

Early July provides an opportunity to observe **Mercury** in the evening sky. It will be at greatest eastern elongation on July 12th, when it will be 26 degrees from the Sun, but the planet will be easier to spot a week or two prior to this, as it will be a little higher in the sky after sunset, and shining more brightly (magnitude zero on July 1st). It will spend the whole of August unobservable, as inferior conjunction occurs on the 9th.

From the point of view of a naked-eye observer, the current evening apparition of **Venus** will be past its best as July progresses, and by the end of the month the planet will be only 12 degrees above the horizon at sunset. However it will still be increasing in brightness and in elongation from the Sun. Greatest eastern elongation (46 degrees) occurs on August 17th, when Venus will be shining at magnitude -4.3 , and it will continue to be visible in the evening sky throughout September.



*Looking WSW
at 10:30 pm
on July 22nd*

Mars reaches opposition to the Sun on July 27th, by which time it will be brighter (magnitude -2.8) than Jupiter (magnitude -2.2), and of course much redder. Its angular diameter will grow to a very respectable 24.3 arcseconds, making it a great target for amateur telescopes. It's just a pity that, for northern hemisphere observers, Mars will be about 25 degrees south of the celestial equator (almost as bad as it gets!). We shall no doubt be treated to some stunning images captured from southern latitudes.



*Looking south
at 10 pm on
August 12th
(the night of
the Perseid
maximum)*

Jupiter is easy to spot in the evening sky after sunset. Although the gas giant and Venus appeared on opposite sides of the sky during the spring, they have since then moved closer together, with Venus appearing roughly west and Jupiter roughly south as darkness falls in early July. The apparent size of Jupiter will be diminishing throughout this period, falling to 38 arcseconds by the end of July, and to 35 arcseconds by the end of August.

Saturn will have just passed through opposition as July begins, so now will be the best time in 2018 for observing this planet, with its glorious ring system. The planet's north pole will be tilted toward Earth, so the rings will be particularly well placed for viewing. But similar remarks apply as were noted in the case of Mars: that the best results are likely to come from observers in the southern hemisphere, since Saturn is more than 20 degrees south of the celestial equator. By the end of August, Saturn will be setting shortly after midnight.

Uranus has now moved from Pisces into the constellation of Aries, and will be observable in the morning sky from late July.

Neptune, in the constellation of Aquarius, will be observable with a suitable telescope in the late evening and early morning sky.

METEORS

There are three meteor showers visible in August: the **Alpha Capricornids**, which peak on the night of the 2nd-3rd, with a 20-day old Moon, so conditions will be rather unfavourable; the **Iota Aquarids**, which peak on the 6th (with a 24-day old Moon, so conditions will be favourable); and of course the **Perseids**, which this year **will peak under near-ideal conditions**, with a 2-day old Moon on the night of August 12th-13th!

Let's hope for clear sky on that (usually warm) night, so that we can enjoy the spectacle! Also bear in mind that the Perseids are active for a number of days either side of this night, so you can hope to see some on these dates, too.

DIARY DATES 2018

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 Open Evenings, 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>
July 5 th	Cassini's Final Science	Dr Phil Sutton <i>University of Lincoln</i>
August 4 th (Saturday)	Annual Society BBQ at the Observatory	
September 6 th	The Adventures of Curiosity on Mars	Prof Sanjeev Gupta <i>Imperial College, London</i>
October 4 th	Juno – the Answers	Prof Emma Bunce <i>University of Leicester</i>
November 1 st	Annual General Meeting	
December 6 th	Transient Events in Astronomy or <i>Things that go bump in the night</i>	Prof Dame Jocelyn Bell Burnell DBE, FRS, FRSE, 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.

The next meeting will be on July 19th (see further details below)

Check our website: www.nottinghamastro.org.uk
for the latest information about the Society's meetings
and for further information about the talks and speakers

Not just one, but TWO barbecues for NAS members and their guests!

Our Chairman, John Hurst, sends the following invitations to all members:

1. The Lunar Eclipse at the Observatory

Dear Member,

On **Friday July 27th** there will be a total eclipse of the Moon, half of it is visible from the UK. The Moon rises in total eclipse at 9pm and the totality ends at 10:13pm. So we will see a rising 'Blood Moon' as the sun sets. The totally eclipsed Moon will become more and more prominent as the twilight deepens. Bright Mars will be just below the Moon, while Saturn and Jupiter are in the south and the west.

We're opening the observatory at **7pm** (weather permitting - keep an eye on Facebook) for members and guests. We'll be firing up the BBQ for a pleasant evening in the sun. If you wish, you will need to bring something to cook on the BBQ, something to sit on, and something to drink. We will provide bread rolls, sauces and cups. There will be a portable toilet on site and hand washing facilities.

In the event of awful weather, the event will be cancelled and we will post this on the Facebook page and email out on the afternoon.

You are welcome to bring your own telescope along if you wish.

Please let us know, if you've not already done so, at: observatory@nottinghamastro.org.uk if you plan to come.

2. The NAS Annual BBQ

Dear Member,

The annual BBQ is going to be held on **Saturday 4th August** for NAS members and their guests. The event will run from 1pm to 5pm at the observatory.

If you wish, you will need to bring something to cook on the BBQ, something to sit on, and something to drink. We will provide bread rolls, sauces and cups. There will be a portable toilet on site and hand washing facilities.

In the event of awful weather, the event will be cancelled or postponed and I we will post this on the Facebook page and email out on the morning.

If you wish to bring a telescope or other equipment along for help, please feel free. The observatory and large telescope will be available

Please let us know, if you've not already done so, if you plan to come, at: observatory@nottinghamastro.org.uk

Thank you.

John

Events in the coming months open to everyone
(follow the hyperlinks for more information and how to book)

7-8 July	BAA Summer Meeting , Coventry
28 th July	The planet Mercury and the BepiColombo mission . Society for Popular Astronomy, London
7-9 September	BAA Weekend Meeting , Christchurch
29 th September	BAA Variable Stars, Photometry and Spectroscopy Workshop , London
6 th October	BAA Back To Basics Workshop , Bexleyheath
12-13 October	International Astronomy Show , Stoneleigh, Warwickshire
27 th October	Society for the History of Astronomy, Autumn Conference , Birmingham

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 copy of the NAS Journal, 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

At the **June** meeting at Plumtree, Alan Heath gave a talk on planetary observing and what work the amateur astronomer can undertake. Alan has been observing the planets since the 1950s and continues to submit regular observations to the British Astronomical Association and other organisations. Alan brought along some of his observations, sketches, photographs and charts which generated a great deal of interest and discussion – pictured. We experimented with filming the talk and a brief extract can be found on the NAS [Twitter feed](#). Alan gave reference several times to the BAA's Observing Guide which he highly recommended to anyone who wants to make meaningful observations. This can be purchased [here](#) from the BAA.



After Alan's talk several of us went outside and using binoculars and Fred's portable 5" reflecting telescope we looked at Jupiter, the Moon and Venus. Julian is pictured here looking at Jupiter. I was so impressed with Fred's portable telescope I looking at getting one myself.

The **July** meeting will focus on The Sun. We'll have some solar observing equipment on hand, we'll look at what kind of observations the amateur can make of the Sun and also get an insight into the physics and chemistry of what is happening on the Sun to cause the features we see.

I do need ideas for future meetings, so please do me know what topics you would like to be discussed or what techniques or equipment you would like to know more about.



am

and

let

James Dawson

NAS Helpdesk

helpdesk@nottinghamastro.org.uk

Nottingham Astronomical Society

Affiliated to the British Astronomical Association
Member of the Federation of Astronomical Societies
Member of the Society for Popular Astronomy
Supporters of the Commission for Dark Skies

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Roy Gretton

e-mail: vicepresident@nottinghamastro.org.uk

SECRETARY:

(vacant post:)

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David Buxton

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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 2018

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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