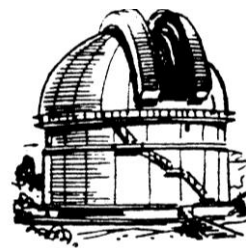


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# Journal

of the



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## Nottingham Astronomical Society

October 2015

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### *In this issue*

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- Membership application form

**Thursday, 1<sup>st</sup> October**

British Geological Survey

Nicker Hill, Keyworth

8 pm (doors open at 7.30pm)

Tonight we welcome

**Dr Chris Lintott**

of Oxford University and the

BBC *Sky at Night* programme

who will be speaking on

**“How Our Galaxy Came to be”**

### **TOTAL ECLIPSE OF THE MOON, 28<sup>th</sup> September 2015**

As we go “to press”, images of the “supermoon” total eclipse have started to become available. Here is one taken by NAS member James Dawson at 3:29 am BST, showing the fully eclipsed Moon.



## **An Open Letter to all members of the Nottingham Astronomical Society**

*October 2015*

Dear NAS Member,

I am writing to you to thank you for being part of the astronomical community in Nottinghamshire, and to ask you to consider providing a little of your time in order to help with the running of the Society.

The NAS was founded in 1946, so next year we shall be celebrating our 70<sup>th</sup> anniversary. Back in 1946 the Society had about 50 members. Over the years this number has fluctuated, even dropping below 30 at times, but in 2014 our membership reached an all-time high of over 100, and this year we have a similar number, so interest in our hobby continues to be strong.

Even in the lean years there have always been sufficient volunteers to fill the essential posts on our committee, but this year, in spite of having a strong membership, we are in danger of struggling to meet the minimum requirements. The situation is not yet critical, as the existing committee of five members will continue to run the Society until the Annual General Meeting in November, when a new committee will have to be elected.

Hence I am asking you to consider offering to serve on the committee. Nominations for committee posts will be required before the AGM, which will be held on November 5<sup>th</sup>. Appointment at the AGM is usually a formality, as volunteers are not normally opposed, but warmly welcomed.

A full list of committee posts required by our Constitution is given at the foot of this letter. Some of these functions are standard to most societies; but by way of further explanation, the Curator of Instruments is mainly concerned with looking after our observatory and large telescope, while the Director of Observing draws up an observing programme for members.

A further job not included in the official list is that of Outreach Coordinator: someone to oversee the Society's presence at village shows, etc, and to liase with the BBC when they see fit to invite us to participate in *Stargazing Live*.

Please do consider thoughtfully the contents of this letter, and have a chat with any of the present committee members if you would like to know more.

Thank you.

**Dr Roy Gretton**

Acting President, NAS

*Committee posts listed in the NAS Constitution:*

President

Secretary

Treasurer

Vice President

Journal Editor

Campaign for Dark Skies Representative

Curator of Instruments

Director of Observing

...plus up to three ordinary members, making 11 members when at full strength.

# Sky Notes

## October 2015

Compiled by Roy Gretton



*All times given below are in British Summer Time (BST) unless otherwise stated*

**British Summer Time** ends on Sunday, October 25<sup>th</sup>. Clocks should be set back one hour at 2 am on that date.

### PHASES OF THE MOON

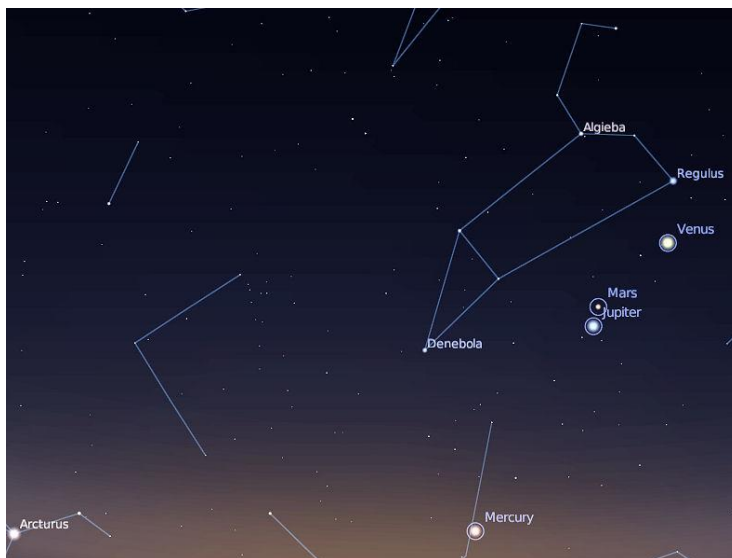
<i>Phase</i>	<i>Date and time</i>	<i>Moonrise</i>	<i>Moonset</i>
Last Quarter	10:06 pm on Oct 4 <sup>th</sup>	11:20 pm	2:15 pm
New Moon	1:06 am on the 13 <sup>th</sup>	7:35 am	6:35 pm
First Quarter	9:31 pm on the 20 <sup>th</sup>	2:15 pm	11:35 pm
Full Moon	12:05* pm on the 27 <sup>th</sup>	5:05* pm	6:20* am

(\* Greenwich Mean Time, GMT)

This month the Moon is closest to the Earth on the 26<sup>th</sup> and furthest on the 11<sup>th</sup>.

### THE PLANETS

**Mercury** begins October as a morning object, moving away from the Sun until it reaches greatest western elongation (18 degrees) in the constellation of Virgo on the 16<sup>th</sup>, becoming part of a “planetary spectacular” including Venus, Jupiter and Mars. For northern hemisphere observers, this will be the best morning apparition of Mercury during the whole of 2015. Thereafter Mercury moves back toward the Sun and disappears from view by the close of the month.



*Four planets in the pre-dawn sky*

Looking east  
at 6:30 am  
on October 14<sup>th</sup>

**Venus** is a strikingly brilliant object in the morning sky throughout the whole of this month. At magnitude  $-4.5$  it outshines all celestial objects other than the Sun and Moon. Through a telescope it appears as a thickening crescent as October begins, and reaches 50 percent phase on the 25<sup>th</sup>, thereafter appearing gibbous. Greatest western elongation occurs on October 26<sup>th</sup>, when Venus will be 46 degrees from the Sun.

At magnitude 1.8, **Mars** is least conspicuous of our early morning quartet of planets, and also the one with the smallest angular diameter (4 arcseconds), so don't expect to see any surface detail through a telescope.

**Jupiter**, in the constellation of Leo, rises about four hours before the Sun in mid-October, when the planet will be 32 arcseconds across and shining at magnitude  $-1.8$ .

**Saturn**, very low in the southwest after sunset, is virtually unobservable as it moves toward conjunction with the Sun in November.

**Uranus** reaches opposition to the Sun on October 12<sup>th</sup>, so will be at its best position for observation in 2015 this month. It is about seven degrees north of the celestial equator in the constellation of Pisces, shining at magnitude 5.7, and having an angular diameter of 3.7 arcseconds.

**Neptune** is in the constellation of Aquarius, shining at magnitude 7.8, and having an angular diameter of 2.4 arcseconds.

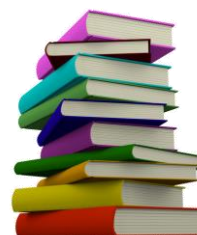
## **METEORS**

October's main shower is the **Orionids**, which are fast-moving meteors with a tendency to leave trails that can remain visible for a second or two. This year their maximum activity (up to 25 events per hour) occurs between October 21<sup>st</sup> and the 24<sup>th</sup>. Conditions this year are reasonably favourable, with a crescent-to-gibbous Moon present in the evening sky. The radiant doesn't rise until after 10 pm, so don't expect to see much activity before this time.

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## **NAS Library**

The library is going to be run by Richard Severn this month; Richard has kindly stepped in whilst Lorraine is away enjoying a well-deserved break. Richard will have various books from the collection on show, so come and have a look through them, and if you are a member you are welcome to borrow them.



We've now got a copy of the library's catalogue on the Society's webpage. On the right of the homepage there is a link to the "[NAS Library Catalogue](#)" which takes you to a list of all the books in the catalogue and a brief description about them; in addition there are hyperlinks to Amazon where reviews can be found as well as options to buy the books yourself, new or second hand. If there are specific books you are interested in but which we don't have listed in the catalogue, let us know as someone in the Society may have a copy, else we could help you find a copy online through the various search engines.

The full list of books in our collection can be found here: [NAS Library Collection](#)

If there is a specific book you want to be brought along to the meeting, email the librarian as even in Lorraine's absence we can hopefully arrange this for you.

To email the librarian, please use the email address: [NASlibrarian@hotmail.com](mailto:NASlibrarian@hotmail.com)

# DIARY DATES 2015

## Monthly Meetings of the Nottingham Astronomical Society

Our programme for this year is shown below. Check our website: [www.nottinghamastro.org.uk](http://www.nottinghamastro.org.uk) for the latest information about the Society's meetings and for further information about the talks and speakers.

Our meetings are held on the **FIRST THURSDAY** of the month, at the British Geological Survey, Keyworth, Notts, NG12 5GG

(except **August**, when we meet at our observatory site, between Cotgrave and Cropwell Bishop)

Doors open at 7:30pm for 8pm start.

<u>Date</u>	<u>Topic</u>	<u>Speaker</u>
October 1 <sup>st</sup>	"How our Galaxy came to be"	Dr Chris Lintott, University of Oxford, and <i>BBC Sky at Night</i>
November 5 <sup>th</sup>	Annual General Meeting	
December 3 <sup>rd</sup>	"New Horizons : Pluto and the Kuiper Belt Objects"	Dr Chris Arridge, <i>University of Lancaster</i>

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Follow this link for a Rosetta event at Nottingham Trent University:

<https://www.iopconferences.org/iop/frontend/reg/thome.csp?pageID=387798&eventID=783&eventID=783>

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## 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](http://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 now 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](mailto:secretary@nottinghamastro.org.uk)

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

## BAA Observers' Workshop: Comets and Meteors

Saturday 26th September 2015, London

A joint meeting for comet and meteor observers was held at Burlington House in London, home to the British Astronomical Society (BAA) within the building of the Royal Astronomical Society. The programme of the day can be found [here](#).

The meeting attracted a varied audience, and some people had travelled significant distances to attend. Burlington House has all the facilities one would expect of a modern conference venue (WiFi, lecture theatre, meeting rooms etc), but with the architecture and style of a bygone era which oozes charm and history.

The morning was occupied by informal lectures mostly about meteor topics. The use of video detection systems for collecting meteor observations was described and is something I aim to write about in the Journal at a future date as I now have one of these systems. The processes by which data from these systems are analysed was outlined, as it is quite easy to ascertain the origins and orbits of specific meteors. Another speaker talked about the use of Raspberry Pi hardware to make a meteor detection system which can easily be assembled in schools and colleges and be used to contribute to wider meteor detection projects. A fascinating



talk by Richard Fleet, Newbury Astronomical Society, described work he had undertaken in combining video and radio meteor detection techniques. I suspect this is something which will become a significant area of study and the results of which will especially appeal to the radio scatter astronomers; it will start to allow them to relate the different components of their radio scatter observations to both precise co-ordinates in the sky and in the timing of meteor paths through our atmosphere. The morning finished with two talks about comet magnitude analysis and the importance of amateur observations (both visual and CCD), and a review of the 2015 European Comet Conference held in the Czech Republic; great beer apparently!

After lunch the group was divided into two workshops; one for comets, one for meteors. In the meteor workshop which I attended we shared experiences of hardware set up and configuration, then had an interactive tutorial on data capture and data analysis software; a really great hands-on session.

It was a superb day out; good to learn more about meteor detection, but also good to meet other people.

The meetings arranged by the British Astronomical Association are always very informative and it is a great way to meet people from elsewhere who have similar interests. A list of the past and future BAA events can be found [here](#), and information on how to join the BAA [here](#).

James Dawson

[Nottingham Astronomical Society](#)

[NAShelpdesk@hotmail.com](mailto:NAShelpdesk@hotmail.com)

## NAS Helpdesk



The September meeting was a great success, with various telescopes and equipment on show, and lots of interest at the Helpdesk from people new to the society and from long-standing members. It is great to see such interest, and even if we don't have time to chat at the meeting, please do feel free to drop us an email if there is something you want to ask about, or a tip or a resource you've got to share and which others might be interested in.

The Helpdesk folder of "useful articles for the practical astronomer" has now been made electronic, in response to feedback from members, and all of the documents in the folder can now be access via hyperlinks from the Society's webpage. To access these, go to the webpage (<http://nottinghamastro.org.uk/>), then the "Publications" tab, then "Member's Articles" and the link is called "[NAS helpdesk documents](#)". If any of the links don't work, please do let us know and we will get them fixed. Equally, if you identify any other documents you think would be useful to others, send us the link or tell us about it at the meeting.

We will be at the October meeting and on hand should anyone have any questions, or just want to chat. If there is any specific equipment you would like to see or talk about let us know in advance and we can see if we can bring it along.

James Dawson and Bob Richardson

[NAShelpdesk@hotmail.com](mailto:NAShelpdesk@hotmail.com)

## NAS on Facebook

We now have over 200 followers on Facebook. The summer has been busy and we've posted some images of the country shows we've attended, and highlighted some of the important astronomical events which have been reported in the astronomy press.

As the days get shorter and it is easier to get outside and do some observing and astrophotography, we hope that you will start sharing your images, observing reports, sketches and the like with us on Facebook.

We are also using Facebook to share the activities of local societies and groups within the East Midlands, and hope to form better bonds with them through this.

Our Facebook page can be found here: <https://www.facebook.com/nas.org.uk>

If you do not have a Facebook account but would like to, or just want to talk about it, speak to a member of the committee or catch me at the Helpdesk.

James Dawson

NAS Facebook administrator

[NAShelpdesk@hotmail.com](mailto:NAShelpdesk@hotmail.com)

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### **Advertisement**

**FOR SALE**

**MARS FILTER**

(by Orion Telescopes)  
1.25-inch fitting

£10

Sam Boote [s.boote@bcs.org](mailto:s.boote@bcs.org)  
or at Society meetings

# 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 Campaign for Dark Skies  
Registered Charity No: 1066645

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e-mail: [vicepresident@nottinghamastro.org.uk](mailto:vicepresident@nottinghamastro.org.uk)

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John Hurst

email: [observatory@nottinghamastro.org.uk](mailto:observatory@nottinghamastro.org.uk)

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

## **ORDINARY COMMITTEE MEMBERS:**

Kevin Greally

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### Meetings

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

**The British Geological Survey  
Nicker Hill  
Keyworth  
Nottingham NG12 5GG**

Doors open                    7.30pm  
**Meetings start                8.00pm**  
Meetings end                10.00pm

Meetings are open to the public, and visitors are always welcome to attend.

### Annual subscriptions 2015

Full	£30
Concessions	£15
Joint rate for partners living at the same address	£45

Subscriptions become due on 1<sup>st</sup> January. Half-price subscription is charged if joining after 1<sup>st</sup> July. Please make cheques payable to:

Nottingham Astronomical Society.

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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](mailto: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.

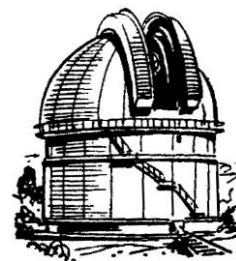
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### The Nottingham Astronomical Society

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# NOTTINGHAM ASTRONOMICAL SOCIETY



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Affiliated to the British Astronomical Association  
Member of the Federation of Astronomical Societies

Registered Charity No. 1066645  
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## Membership application and Gift Aid declaration

**Title:**

**Full name:**

**Full home address:**

**Postcode:**

**Telephone:**

**e-mail address:**

<b>Subscription rate:</b>	Full	£30.00	(year)	£15.00	(half year)
	Concession	£15.00		£7.50	
	Partnership	£45.00		£22.50	

Concession = under-18 / full-time student / unemployed and receiving benefits

Partnership = two members living together as a couple at the same address

I wish my subscriptions to be eligible for Gift Aid

**Yes / No**

## Gift Aid declaration

**(HMRC reference XR32048)**

I want Nottingham Astronomical Society to treat all subscriptions and donations that I make from the date of this declaration as Gift Aid donations, until I notify you otherwise.

I pay an amount of UK Income Tax and/or Capital Gains Tax at least equal to the tax that Nottingham Astronomical Society reclaims on my donations in the appropriate tax year.

**Signature:**