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# Journal

of the

**Nottingham Astronomical Society**  
**October 2016**

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**Thursday, October 6<sup>th</sup>**

**British Geological Survey  
Nicker Hill, Keyworth**

**8 pm (doors open at 7.30pm)**

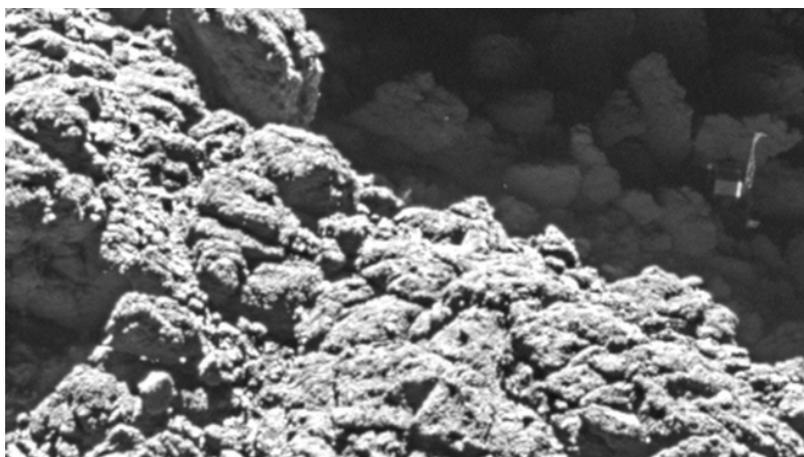
**Tonight we will be holding an**

**Open Evening**

***which will include a  
Telescope Surgery***

### **Rosetta's End**

As this issue of the Journal is being sent out, ESA engineers are preparing to crash the Rosetta spacecraft on to the surface of Comet 67P/Churyumov-Gerasimenko, where it will join the Philae lander that touched down in November 2014. Remarkably, on 2<sup>nd</sup> September this year, Rosetta's cameras were able to find and image Philae from a distance of only 1.7 miles.



**PHILAE FOUND!**

Rosetta's crash on to the comet is scheduled for September 30<sup>th</sup>.

# Sky Notes

## October 2016

Compiled by Roy Gretton



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

**British Summer Time ends** on Sunday, October 30<sup>th</sup>. Clocks should be moved backwards by one hour at 2am on that date.

### PHASES OF THE MOON

<i>Phase</i>	<i>Date and time</i>
New Moon	1:11am on October 1 <sup>st</sup> & 5:38pm <b>UT</b> on the 30 <sup>th</sup>
First Quarter	5:33am on the 9 <sup>th</sup>
Full Moon	5:23am on the 16 <sup>th</sup>
Last Quarter	8:14pm on the 22 <sup>nd</sup>

This month the Moon is closest to the Earth on the 16<sup>th</sup> (so expect a fairly large Full Moon – although by far the biggest Full Moon of 2016 will appear *next* month), and furthest on the 4<sup>th</sup>.

### THE PLANETS

**Mercury** begins this month very well placed for observers in the northern hemisphere, having passed through greatest western elongation (18 degrees from the Sun) on the 28<sup>th</sup> September. Look for a bright “spark” above the eastern horizon about an hour before sunrise during the first half of October.

**Venus**, although prominent in the western sky after sunset for observers in the southern hemisphere, is very difficult to spot from UK latitudes. By the end of October it will be shining at magnitude  $-4.0$ , very low in the southwest as the sky begins to get dark.

**Mars**, also an even more challenging object for northern hemisphere observers by virtue of being considerably dimmer (magnitude  $+0.3$ ) than Venus. As October begins it will be moving eastward through the constellation of Sagittarius, very low in the southwest after sunset.

**Jupiter** is unobservable this month, having passed through conjunction with the Sun on September 26<sup>th</sup>.

**Saturn** is extremely difficult to observe, as it remains well to the south (declination always more negative than  $-20$  degrees), and will be setting before 8pm in mid-October.

**Uranus** reaches opposition in the constellation of Pisces on October 15<sup>th</sup>, when it will have an angular diameter of 3.7 arcseconds and be shining at magnitude 5.7 (so theoretically a naked-eye object, although realistically you will need binoculars in order to find it). At midnight Uranus will be about 45 degrees above the southern horizon, and it will be visible throughout the hours of darkness.

**Neptune**, in the constellation of Aquarius, rises before Uranus but is lower in the sky and much dimmer (magnitude 7.8), and thus is a much more challenging object to find.

## 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 third-quarter Moon in the morning sky. The radiant doesn't rise until after 10 pm, so don't expect to see much activity before this time.

## DIARY DATES 2016

### 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 6 <sup>th</sup>	Open Evening <i>including a Telescope Surgery</i>	
November 3 <sup>rd</sup>	Annual General Meeting 2016	
December 1 <sup>st</sup>	Galactic Monsters: Seyfert Galaxies, Radio Galaxies and Quasars	Dr Marek Kukula <i>Greenwich Observatory</i>

### Some astronomy-related events and meetings held locally and further afield

Fri & Sat 14&15.Oct 2016  	<b>International Astronomy Show, Stoneleigh Park, Warwickshire</b> This event houses all the main astronomy retailers in the country under one roof who are happy to give advice and to sell items, small and large. There are also has various well known speakers on both the Friday and Saturday talking on a number of different topics. Well worth a day out. For further information and to book tickets use this <a href="#">link</a> .
Saturday 15.10.2016	<b>British Astronomical Association Back to Basics Workshop, Chichester</b> The BAA regularly runs workshops for people new to astronomy or for those who want to try and get more out of the hobby; you don't have to be a member of the BAA to attend. For further information on the programme or to book tickets use this <a href="#">link</a> .
Saturday 22.10.16  	<b>Federation of Astronomical Societies Annual Convention, Birmingham</b> The annual convention of the FAS is a day of lectures and also a brief AGM. There are usually some trade stalls and displays by other groups and societies and it is a good day out. We usually have a few NAS members who go along. For further information and to book tickets use this <a href="#">link</a> .
Saturday 29.10.2016  	<b>Society for the History of Astronomy, Autumn Conference, Birmingham</b> If you are interested in the history of astronomy, then you may be interested in this meeting. For further information on the programme or to book tickets use this <a href="#">link</a> .

### Society for Popular Astronomy (SPA)

Many people will be aware of the existence of the SPA, and even be members. Many of their past lectures from their meetings are available free online and can be found using this [link](#).



### Webb Deep-Sky Society



If you are interested in imaging and observing deep sky objects, then you may be interested to learn more about, or join the Webb Deep-Sky Society; they hold an annual meeting and have various online resources and a quarterly journal. For further information use this [link](#)

### The William Herschel Society



THE  
WILLIAM  
HERSCHEL  
SOCIETY

If you are interested in the Herschel family, then you may want to look at the William Herschel Society. Membership gives you discounted entry into the museum in Bath, and a twice yearly publication called The Speculum. Membership is only £10 per year and the money goes towards the upkeep of the museum so is all for

a good cause. For further information use this [link](#).

### NAS Library

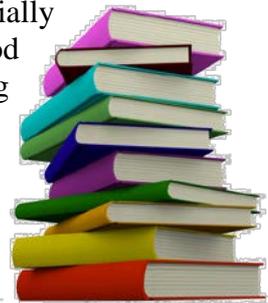
Read any good Astronomy books lately? If so, tell us about them, especially if you think they would be of interest to other members and make a good addition to our ever-expanding library. We're pretty adept at sourcing copies (well, James D is!)

Unfortunately I will be away for the October meeting but Richard S. has once more stepped up to the mark and will be running the library session.

Hope you all enjoy the open evening.

The full list of books in our lending collection can be found here:

[NAS Library Collection](#).



Lorraine [NASlibrarian@hotmail.com](mailto:NASlibrarian@hotmail.com)

### NAS Helpdesk

Have you got some new kit you want help with or just to bring along and show us? Or do you have some plans for the new observing season and want to sound them out? Come and see us at the open evening. As always, we'll have some astronomy magazines looking for a good home, and if you have any you no longer want, bring them along as someone else will probably take them away to read.



**James Dawson, Bob Richardson and Richard Severn**

[helpdesk@nottinghamastro.org.uk](mailto:helpdesk@nottinghamastro.org.uk)

## Social and practical astronomy

### 3rd Thursday meeting trial



Many other local astronomical societies meet more often than once a month, and in response to feedback from the survey and from talking to members we are running a trial and holding a second monthly meeting on the third Thursday of the month. There is no threat to the regular monthly lecture programme which is held on the first Thursday of the month at the British Geological Survey, so don't worry. The focus of the additional meeting will be on practical astronomy and allowing members of the society to socialise and get to know one another better. These meetings are going to be held in Plumtree at the Burnside Memorial Hall. We held the first of these meetings on Thursday 15th September.

The venue has no formal car park though the road outside (Church Hill) is wide enough for cars to safely park on the southerly side of the road against a high brick wall. We have access to the main hall where we can set up a projector screen and projector and there are toilets and a kitchen.

At the first meeting we had about 25 attendees. Lorraine the Librarian had a table with some of her books on display and I believe business was brisk. Lynda ran the kitchen and made sure there was plenty of hot water for tea and coffee. For the first half hour or so people chatted and mingled over a drink.

I gave a talk on the basics of the DSLR camera and touched upon how to use a DSLR camera in astronomy. The talk was interactive with plenty of questions and discussions. After the talk we had more time for socialising and John Hurst set up a telescope outside and allowed people to view the Moon which was about 98% full. In all it was an enjoyable evening.

The trial will run for four months. These meetings will rely on members volunteering to give short talks or presentations or demonstrations, or running skills classes. We also need to receive feedback from the membership about these meetings to know if this is something you want us to continue to host.

Despite saying these meetings will be on the third Thursday of the month, in November, due to prior bookings at the hall, the meeting will be held on Monday 14th November.

At the October meeting, David Weightman has kindly volunteered to give a talk titled "Light After Dark - An Introduction to DSLR Astrophotography". If anyone else has a talk they wish to give, or topics for potential practical demonstrations please do let me know.

**James Dawson**

[helpdesk@nottinghamastro.org.uk](mailto:helpdesk@nottinghamastro.org.uk)

#### **Dates of coming 3rd Thursday meetings:**

- Thursday 20th October, 2016
- Monday 14th November, 2016
- Thursday 15th December, 2016

Doors open at 19:30; a talk / demonstration will commence at 20:00; we'll lock the venue up at 22:00. Members are free to arrive and leave when they want, as these meetings are designed to very informal and flexible.

## The View from Rio

Looking south from Rio de Janeiro in the early evening a few days ago, Alpha and Beta Centauri were prominent to the naked eye, with the Southern Cross, closer to the horizon, needing binoculars to find it through the light pollution. Due to this, there was no chance of finding the fainter deep-sky objects, but under the circumstances what I found most striking was the prominence of three planets that are currently difficult or impossible to observe from northern latitudes. **Venus** was the first “star” to become visible as the Sun set, followed later by **Mars**, which formed a triangle high in the southwest with **Saturn** and Antares.



Looking SW from Rio in the early evening

With the Sun about 5 degrees *north* of the equator, and Rio being 23 degrees *south*, the midday Sun was in the north, which made navigation around the city on foot slightly non-intuitive (e.g. the beach was to the south, so we had to walk *away* from the Sun to get to it). During my stay in Rio, I had no opportunity to escape the light pollution, so I missed seeing one of the main attractions of those latitudes, the southern Milky Way. However, for one grandfather, there was a golden star that shone brighter than all the rest:



**Ellie Robinson, Paralympic champion,  
50 metre butterfly**

*Roy Gretton*

## 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 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.

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## NOTE to NAS Members and Journal Subscribers

If you happen to change your email address, please remember to inform the Society by emailing us at [treasurer@nottinghamastro.org.uk](mailto:treasurer@nottinghamastro.org.uk)

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## Advertisement

### FOR SALE

Set of four 1¼-inch coloured filters (red, yellow, green, blue)	£20
Mars filter 1¼-inch	£10
Moon filter 1¼-inch (25% transmission)	£10
Filter case (holds up to four 1¼-inch filters)	£2
Celestron lens pen	£2
Micro-fibre cleaning cloth	£2

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

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# 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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## **PRESIDENT:**

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**Roy Gretton**

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

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## **TREASURER:**

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**Robert Bush**

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## **DIRECTOR OF OBSERVING:**

**(vacant post; Acting Director: John Hurst)**

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

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

## **ORDINARY COMMITTEE MEMBERS:**

**Sam Boote**

**Barrie Chacksfield**

**James Dawson**

**Lynda Foot**

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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 welcome to attend.

## **Annual subscriptions 2016**

Full	£30
Joint rate for partners living at the same address	£45
Under-18s and full-time students	£5

Subscriptions become due on 1<sup>st</sup> January. Half-price subscription is charged if joining after 30<sup>th</sup> June (minimum subscription £5).

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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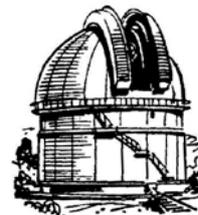
### **The Nottingham Astronomical Society**

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# NOTTINGHAM ASTRONOMICAL SOCIETY

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## 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)
	Partnership	£45.00	(year)	£22.50	(half year)
	Under-18 and full-time students	£5			

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:**

**Date:**