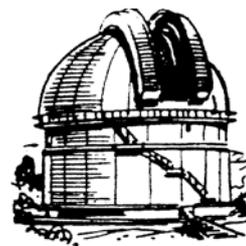

Journal

of the



Nottingham Astronomical Society

September 2015

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Thursday, 3rd September

British Geological Survey
Nicker Hill, Keyworth

8 pm (doors open at 7.30pm)

Tonight we are holding an

Open Evening

with opportunities to make new acquaintances over coffee and biscuits, and to find out more about all aspects of local amateur astronomy

The Elan Valley International Dark Sky Park

The *International Dark Sky Association* (IDSA) currently recognises twenty-six International Dark Sky Parks worldwide, of which the Elan Valley in mid-Wales, best known for its series of reservoirs built to supply water to Birmingham, is the latest. It joins Galloway Forest Park in Scotland and Northumberland National Park in England, which already have this status. This means that Wales is now the world leader in terms of the country with the greatest fraction of its land area subject to dark skies protection. (The Brecon Beacons National Park had already been designated an International Dark Sky Reserve).

All the work for the Elan Valley IDSA application was carried out by two local amateur astronomers. In excess of 200 light readings were taken at 13 sites over a period of nearly two years.

Dark Sky Parks have statutory protection against the spread of light pollution within their areas. This latest development in Wales provides those of us who would like to see some sort of dark sky reserve in the East Midlands with a glimmer of hope!

(Change of name: On the same theme, the British Astronomical Association has recently renamed its CfDS, which had long been known as the Campaign for Dark Skies. It is now officially the *Commission for Dark Skies*.)

Sky Notes

September 2015

Compiled by Roy Gretton



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

The **Southward Equinox**, also known as the Autumnal Equinox in the northern hemisphere, occurs at 9:20 am on September 23rd. The Sun will be exactly over the equator at this time.

PHASES OF THE MOON

<i>Phase</i>	<i>Date and time</i>	<i>Moonrise</i>	<i>Moonset</i>
Last Quarter	10:54 am on Sept 5 th	11:45 pm	2:30 pm
New Moon	7:41 am on the 13 th	6:40 am	7:20 pm
First Quarter	9:59 am on the 21 st	2:45 pm	11:45 pm
Full Moon	3:51 am on the 28 th	7:05 pm	7:10 am

This month the Moon is closest to the Earth on the 28th (so expect a **LARGE** eclipsed Full Moon) and furthest on the 14th.

TOTAL ECLIPSE OF THE MOON, 28th SEPTEMBER

There will be a total lunar eclipse, visible from the British Isles, in the early morning of September 28th. The umbral phase will begin at 2:07 am and end at 5:27 am, with totality lasting from 3:11 am to 4:23 am. (*Yes, these are unsocial hours, but think of the double reward: as well as watching the eclipse, you will have well over an hour of darkened sky available to observe deep-sky objects!*)

THE PLANETS

Unless you happen to be an early riser, this autumn will not be a good time for observing bright planets. Saturn, although not in conjunction with the Sun until the last day of November, is so far south that it is an extremely challenging target from the latitude of the British Isles. Meanwhile Venus will be a brilliant object in the pre-dawn sky, gradually being joined by Jupiter and a relatively faint Mars.



Three pre-dawn planets

Looking east
at 5:30 am
on September 23rd

Mercury is practically unobservable this month, reaching inferior conjunction on September 30th.

Venus passed through inferior conjunction (between the Earth and the Sun) on August 15th, and is now moving out from the Sun to become a very prominent object in the pre-dawn sky. By the end of September it will be rising about 4 hours before the Sun, and be shining at magnitude -4.5 .

Mars, slightly brighter than magnitude 2, passes close by the (brighter) star Regulus in the constellation of Leo. Having the same tiny apparent diameter as Uranus, Mars is unsuitable for telescopic examination, and even by the end of the year will be only 5 arcseconds across.

Jupiter, having passed through solar conjunction on August 26th, is unobservable as September begins, but by the end of the month will be rising nearly two hours before the Sun. We shall, however, have to wait until next spring for Jupiter to reach it best during this apparition.

Saturn, very low in the southwest after sunset, is becoming very difficult to observe.



Looking southwest
at 9 pm on
September 4th

Uranus, about seven degrees north of the celestial equator in the constellation of Pisces, is well placed for observation, being visible through a telescope for most of the night. Its magnitude is 5.7, and its angular diameter 3.7 arcseconds.

Neptune, in the constellation of Aquarius, is at opposition on September 1st, and therefore at its best for observation during 2015. Magnitude 7.8, angular diameter 2.4 arcseconds.

METEORS

September isn't a great month for meteor showers, although there is usually a feeble "drizzle" of meteors close to the plane of the ecliptic at this time of year. Some of these are characterised as **Piscids**, which typically give a handful of events per hour at maximum on September 9th.

DIARY DATES 2014-2015

Monthly Meetings of the Nottingham Astronomical Society

Our programme for this year is shown 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.

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>
September 3 rd	Open Evening	<i>Organised by John Hurst</i>
October 1 st	"How our Galaxy came to be"	Dr Chris Lintott, University of Oxford, and <i>BBC Sky at Night</i>
November 5 th	Annual General Meeting	
December 3 rd	"New Horizons : Pluto and the Kuiper Belt Objects"	Dr Chris Arridge, <i>University of Lancaster</i>

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 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

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

Loan scope

One of our members, David Dunford, has very kindly donated an Orion Optics EQ5 mount to The Society for members to borrow. We have paired this with a Vixen A80Mf refractor; 80mm aperture and 910mm focal length.

This is a non-motorised equatorial mount and will work best if it can be polar aligned; the Helpdesk can help you with this if needed – it's not half as daunting as you might imagine! If you are interested to know more about this loan equipment, or interested in borrowing it, contact James Dawson via the Helpdesk email address below, or come and talk to us on the Helpdesk at the September meeting where the mount and telescope will be on show.



James Dawson

NAShelpdesk@hotmail.com

NAS Library

Have you recently, or maybe not so recently, read an astronomy-related book, fact or fiction, which you really enjoyed? We would love to hear about any astronomy-related books which have inspired or educated our members, whether current or from the distant past. If so, email Lorraine.

The Society library now contains over 50 books (and one planisphere) which members are free to borrow. The full catalogue of books can be found via the hyperlink below, else email Lorraine the Librarian (address below) and she will forward you a copy of it:

[Link to library catalogue](#)

If there is a specific book you would like to look at and/or borrow, let Lorraine know so she can bring it along to the next meeting as she is unable to bring all of the books to every meeting.

To email Lorraine, please use the email address: NASlibrarian@hotmail.com

NAS Helpdesk

We will be at the September meeting as usual 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.



We've also put together an astronomy-related crossword which members might like to have a go at; it can be found on the [Facebook](#) page.

James Dawson and Bob Richardson

NAShelpdesk@hotmail.com

Survey of Astronomical History: Nottinghamshire

The [Society for the History of Astronomy](#) (SHA) was founded in 2002 and one of its main aims was to rediscover local and forgotten history of astronomy by running a [Survey of Astronomical History](#). Each county is listed in the survey and since it commenced much work has been undertaken to catalogue and explore people and places connected with astronomy in the UK. [Nottinghamshire](#) is listed in the survey and most of the research carried out for the county was conducted by the late [Madeline Cox](#). Madeline was still undertaking this research when she sadly passed away in January 2015, but there is much more to discover about the history of astronomy in Nottinghamshire. Madeline



had worked closely with the librarian at the subscription library in Nottingham, [Bromley House Library](#), accessing the various archives available there. Interestingly, the library itself was established in 1816, in part, by a local amateur astronomer, the [Rev Robert White Almond](#) (1786-1853).

During the nineteenth century several astronomical observatories were built in Nottinghamshire; amongst these was one in Beeston near the Railway Station (image above, courtesy of www.picturethepast.org.uk). This octagonal tower had been commissioned by [Alfred Lowe](#) (1789-1856) for both meteorological and astronomical work. The peculiar shape of the building attracted local attention and it was nicknamed the "Beeston Lighthouse" and "Pepperbox Hall" by locals; the observatory was demolished in 1963. A [blue heritage plaque](#) was put up in 2011 at the site of one of Lowe's other observatories in Beeston, in honour of Alfred's son, [Edward Joseph Lowe](#) (1825-1900), also an astronomer,

as
well



as

botanist and a founder member of the Meteorological Society.

If you are interested in finding out more about the history of astronomy, or in helping to conduct research into this, then please contact the [Society for the History of Astronomy](#) or contact me using the Helpdesk email (below). The SHA held a summer picnic at the birthplace of Isaac Newton, [Woolsthorpe Manor](#), Lincolnshire in July 2015 and a report of that event can be found on our [Facebook](#) page on July 5th. The next SHA event is their AGM on 31st October in Birmingham.

James Dawson, NAShelpdesk@hotmail.com

Editor's Note: Madeline Cox, FRAS

As James noted in the above article, Madeline Cox, a founder member of the Society for the History of Astronomy, passed away earlier this year. I recall three of her visits to the NAS since the turn of the century.

On 7th November 2002 she gave us a talk on the *History of the Constellations*,

on 4th March 2004 she spoke on *William Herschel's Telescopes*,

on 5 April 2007 spoke on *Women in Astronomy*.

Advertisement

FOR SALE

MARS FILTER

(by Orion Telescopes)
1.25-inch fitting

£10

Sam Boote 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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Kevin Greally

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

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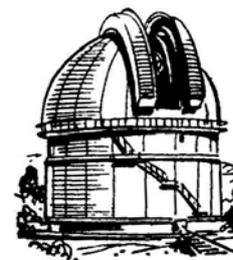
Nottingham Astronomical Society.

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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NOTTINGHAM ASTRONOMICAL SOCIETY



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