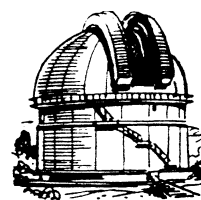

Journal

of the

Nottingham Astronomical Society

April 2017



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Thursday,
British Geological Survey
Nicker Hill, Keyworth

8 pm (doors open at 7.30pm)

Tonight we give a warm welcome to

Prof. Ian Morison
of Manchester University



who will be speaking on

The Art of Astrophotography

**PLEASE NOTE THAT THIS MEETING IS
FOR MEMBERS OF THE NOTTINGHAM
ASTRONOMICAL SOCIETY ONLY**

SPRING AT THE OBSERVATORY

On the day that the clocks went forward, two members of the Society did sterling work with mowing machines at our observatory site...



Sky Notes

April 2017

Compiled by Roy Gretton



All times given below are in British Summer Time

PHASES OF THE MOON

<i>Phase</i>	<i>Date and time</i>
First Quarter	7:39pm on April 3 rd
Full Moon	7:08am on the 11 th
Last Quarter	10:19am on the 19 th
New Moon	1:16pm on the 26 th

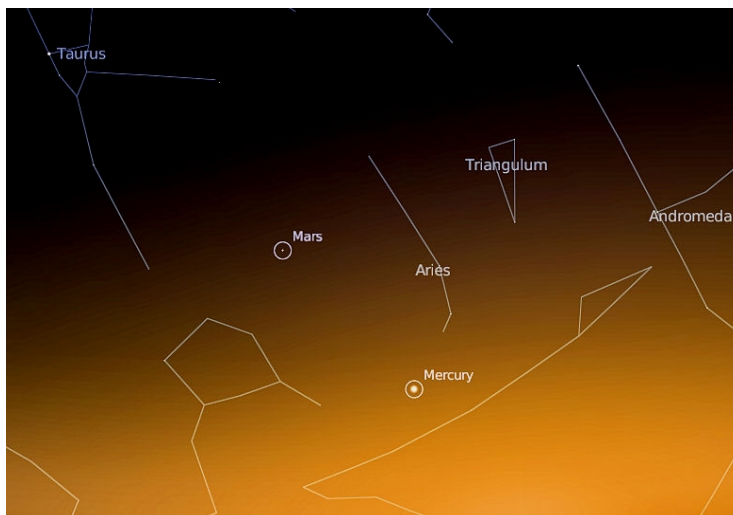
This month the Moon is closest to the Earth on the 27th, and furthest on the 15th.

THE PLANETS

As April begins, **Mercury** is better placed for observation in the evening sky than it will be for the rest of this year, being at greatest eastern elongation, 19 degrees from the Sun and 13 degrees north of the celestial equator. By the end of the first week of April, Mercury will be fast disappearing as it heads for inferior conjunction on the 20th.

Venus has now disappeared from the evening sky, but may be glimpsed in the morning twilight early in the month, provided you have an unobstructed eastern horizon. By the close of April Venus will be about 40 degrees from the Sun, and so will be rising in a dark sky.

Mars, now a long way from Earth, may still be seen against the background stars of Aries, continuing to fade and shrink in angular size. By the end of April it will be less than 4 arcseconds across, and shining no brighter than magnitude 1.6.



*Looking west one hour
after sunset on April 1st*

Jupiter, at magnitude -2.4 is now a prominent object in the constellation of Virgo, rising as darkness falls, and is by far the best planet to observe this month. It reaches opposition to the Sun on April 7th, when it will be due south at 1 am, at an elevation of about 30 degrees (so not as well placed for UK observers as it was four or five years ago). Its equatorial diameter will be greater than 44 arcseconds for most of the month.

Saturn, still more than 22 degrees south of the equator in the constellation of Sagittarius, will be rising at about 2 am as April begins, so very much an object for early morning observers. By the close of the month the ring system will appear more than 40 arcseconds across, and the overall magnitude will be 0.3.

Uranus reaches conjunction with the Sun on April 14th, and so is unobservable this month.

Neptune, too, must be regarded as unobservable.

METEORS

The **Virginids** reach their maximum activity (up to five events per hour) on the night of April 11th-12th, very close to Full Moon, so observing conditions are unfavourable this year.

The **Lyrids** reach their maximum activity on April 22nd, with the Moon a waning crescent, and so conditions will be favourable this year. About 10 events per hour are expected under ideal circumstances.

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

DIARY DATES 2017

Monthly Meetings of the Nottingham Astronomical Society

1) Meetings at the British Geological Survey, Keyworth

Nicker Hill, Keyworth, Nottingham, NG12 5GG

Held on the **FIRST** Thursday of each month except **August**

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

*These events are normally centred around a talk by a visiting speaker, except Opening Evenings, when NAS members provide the activities. Normally we have a **Library** and a **Helpdesk** open at each meeting.*

DUE TO CIRCUMSTANCES BEYOND OUR CONTROL, WE CAN ADMIT NAS MEMBERS ONLY TO THESE MEETINGS UNTIL FURTHER NOTICE. PLEASE BRING YOUR MEMBERSHIP CARD WITH YOU, AND ARRIVE NOT LATER THAN 8 pm

<u>Date</u>	<u>Topic</u>	<u>Speaker</u>
April 6 th	The Art of Astrophotography	Prof Ian Morison University of Manchester
May 4 th	Juno: Exploring the Mysteries of Jupiter	Prof Emma Bunce University of Leicester
June 1 st	Charles Messier	Dr Allan Chapman, FRAS
July 6 th	Gravitational Waves	Dr Ed Daw University of Sheffield
August 5 th (SATURDAY)	BBQ at the Observatory (members and guests only)	
September 7 th	Galaxy Evolution revealed by the Hubble Space Telescope	Dr Clive Tadhunter University of Sheffield
October 5 th	Space Stations from Salyut to the ISS	Dr Mike Leggett, FRAS
November 2 nd	Annual General Meeting	
December 7 th	Voyager 40 Years On (Part 1)	Paul Money, FRAS

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.

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.

*Members and their guests are welcome. Membership cards **not** required.*

The next meeting will be on April 20th

Social and Practical Astronomy, Plumtree

The March meeting at Plumtree concentrated on the Moon. We had four fascinating talks on different aspects of the Moon and hopefully these encouraged interest in our nearest celestial neighbour. Richard Severn had a display of books and maps on the missions to the Moon and had prepared a short video of footage from the Apollo missions.

The **April** meeting is entitled *"Ask an Astrophysicist"* and we will be joined by Professor Mike Merrifield and Dr Julian Onions both from The University of Nottingham. Mike and Julian will be taking questions and attempting to clarify some of the more theoretical aspects of astronomy and astrophysics for us. So do bring along any questions you have for them.

The next meeting is on Thursday 20th April; the doors will open at 7:30pm for tea and coffee and the question and answer session will start at 8pm. If it is clear bring your binoculars and we can try and do some observing.

The **May** meeting (Thursday 18th May) will be an opportunity to informally share your images and sketches. Please let me know if you have any you are happy to share with the rest of the group.

James Dawson

NAS Helpdesk

helpdesk@nottinghamastro.org.uk

THE GALAXIES OF SPRING

April arguably is *the best time of year for observing galaxies*. The nights are still long enough to provide several hours of dark sky (which disappears before May is out), and gazing upward from the UK we are looking away from the plane of our own Milky Way with its obscuring clouds of dust and gas. As darkness falls the constellation of Leo is on the meridian, and by midnight Virgo, Coma Berenices, Canes Venatici and Ursa Major are all culminating. All of these constellations are rich in galaxies (particularly Virgo and Coma), and a number of these are visible (as misty patches) through binoculars or small telescopes. Larger amateur instruments will reveal many more, and coupled with a camera these will show hundreds of galaxies of various types. Some of them were known well before the invention of photography, and were included in Charles Messier's catalogue:

In **Leo**: M65, M66, M95, M96 and M105

In **Virgo**: M49, M58, M59, M60, M61, M84, M86, M87, M89, M90, and M104

In **Coma Berenices**: M64, M85, M88, M91, M98, M99, M100

In **Canes Venatici**: M51, M63, M94, M106

In **Ursa Major**: M81, M82, M101, M108

The night of March 25th-26th brought clear skies to Nottinghamshire, so I decided to quickly image some of the non-Messier galaxy groups in the constellation of Leo.



NGC 3227 and NGC 3226
(a spiral galaxy interacting with a dwarf elliptical galaxy)

surrounded by
numerous fainter galaxies

Canon 450D at prime focus of
a 30-cm Newtonian reflector

Total exposure 18 minutes at ISO 1600



NGC 3605 (centre of image), **NGC 3607**
(left of centre) and **NGC 3608**

together with
numerous fainter galaxies

Canon 450D at prime focus of
a 30-cm Newtonian reflector

Total exposure 22 minutes at ISO 1600

Roy Gretton

ADVERTISEMENTS

For Sale

1. Celestron Starbright C8 XLT OTA (black tube). As new (with original box), complete with finderscope, 1.25inch diagonal and 25mm eyepiece. Price includes a high quality Antares adaptor for 2inch diagonals and Celestron dewshield, £700.

2. Skywatcher ED100 DS Pro refractor (black diamond tube), complete with 9x50 finderscope, 2 inch diagonal and 28mm eyepiece. Supplied in aluminium carry case, all in excellent condition £500.

Enquiries to Dave Mattison (tel 0115 9260873, Email dave.mattison@btinternet.com)

FOR SALE

Set of four 1¼-inch coloured filters (red, yellow, green, blue)	£20
Celestron lens pen	£2
Micro-fibre cleaning cloth	£2

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 Commission for Dark Skies
Registered Charity No: 1066645

PRESIDENT:

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CURATOR OF INSTRUMENTS:

Robert Bush

e-mail: curator@nottinghamastro.org.uk

DIRECTOR OF OBSERVING:

(vacant post; Acting Director: John Hurst)

email: observatory@nottinghamastro.org.uk

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

ORDINARY COMMITTEE MEMBERS:

Barrie Chacksfield

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:

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

Doors open 7.30pm

Meetings start 8.00pm

Meetings end 10.00pm

These meetings are open to the public, and visitors are welcome to attend.

Annual subscriptions 2017

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.

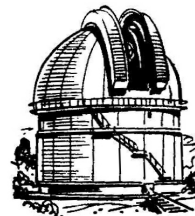
The Nottingham Astronomical Society

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NOTTINGHAM ASTRONOMICAL SOCIETY

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Affiliated to the British Astronomical Association
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Membership application and Gift Aid declaration

Title:

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e-mail address:

Subscription rate:	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: