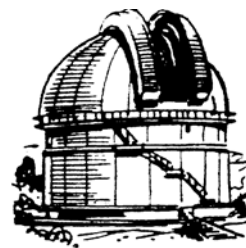

Journal

of the

Nottingham Astronomical Society

June 2015



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Thursday, 4th June

British Geological Survey

Nicker Hill, Keyworth

8 pm (doors open at 7.30pm)

Tonight we welcome

Dr Clive Dickinson

of the Jodrell Bank Centre for Astrophysics

who will be speaking on

“The Microwave Universe”

SUMMER: An Opportunity to Observe Noctilucent Clouds

Noctilucent clouds are pale blue filamentary clouds, lying far above the normal clouds we associate with the weather. They are a relatively recently discovered phenomenon, as there is apparently no record of their observation dating before 1885. Some theorists have speculated that their advent was connected with the industrial revolution, and that they may be considered as evidence of climate change.



Image from NASA website

Typically, noctilucent clouds are formed about 50 miles above the Earth's surface, and become visible when illuminated by the Sun when it is well below the horizon. They are most commonly observed in the summer months (chiefly June and July in the northern hemisphere) at latitudes between 50° and 70° north and south of the equator. They are still poorly understood, but their “electric blue” appearance is quite distinctive.

If you wish to see noctilucent clouds, look toward the north or northwest on a clear evening after 10.30 pm. You might like to try imaging them with a digital camera, in which case use a tripod if you have one, and find the best exposure setting by trial and error.

Sky Notes

June 2015

Compiled by Roy Gretton



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

The **Summer Solstice** this year occurs on the afternoon of June 21st.

PHASES OF THE MOON

Full Moon	5:17 pm on June 2 nd
Last Quarter	4:42 pm on the 9 th
New Moon	3:05 pm on the 16 th
First Quarter	12:03 pm on the 24 th

This month the Moon is closest to the Earth on the 10th and furthest on the 23rd.

THE PLANETS

Mercury begins the month very close to the Sun, and then moves out into the morning sky, reaching greatest western elongation on June 24th. It will, however, be extremely difficult to observe from the UK due to its low elevation in our sky.

Venus begins June as a brilliant object (magnitude -4.3) in the constellation of Gemini, and reaches greatest eastern elongation (45 degrees) on the 6th. As the month progresses it will become even brighter, reaching magnitude -4.5 by the close of the month, but its elevation above our horizon will be diminishing. Through a small telescope its phase will look similar to that of the Moon at First Quarter.

Mars is unobservable this month.

Jupiter, whose appearance has delighted us for many months now, will be setting only two hours after the Sun by the end of June. Meanwhile its brightness will fade to -1.8 , and its equatorial diameter will shrink below 33 arcseconds. However it will be interesting to watch Jupiter and Venus moving closer together in the sky, becoming less than half a degree apart at the beginning of July – quite a spectacle! Venus will, of course, be much the brighter of the two.



Looking WNW
at 11 pm
on June 19th

Saturn continues to hang low in the constellation of Scorpius, being only about 17 degrees above our horizon when it is due south in the late evening. For a brilliant view of the planet, with its rings magnificently displayed to earthbound observers, you could take a quick trip to just south of the equator, where Saturn will appear almost overhead!

Uranus is a morning object in Pisces, rising about three hours before the Sun.

Neptune is also a morning object. Still located in the constellation of Aquarius, it will be rising about three hours before the Sun.

METEORS

With its lack of true darkness, June is not the best time of the year for observing meteors, and there are no major showers during the month.

NAS Helpdesk: June Update



At the May meeting we faced our biggest challenge to date - a very stubborn Skywatcher handset that refused to let us update its firmware. Through perseverance, sweat and toil (and a lot of internet searching) it finally succumbed. The handset has been returned to its owner who has also had one-on-one tuition in their own home on how to use it. A good outcome all round.

Bob again had his equatorial mount set up at the last meeting and was able to chat with members and visitors about it. Damian ran a demonstration of the free software "[Stellarium](#)" which again attracted some interest; a new version of Stellarium was released at the end of April which fixes some of the bugs in older versions.

As always, if there is some specific equipment you'd like to see or ask about, drop us an email in advance of the meetings. If you need help with your own equipment then again email us or bring it along to a meeting; we can also come and visit you at your home at a mutually convenient time as long as live reasonably close to one of us.

James Dawson and Bob Richardson
NAShelpdesk@hotmail.com

ASTRONOMY MAGAZINE

Would you like to read the American magazine *Astronomy* on-line and free of charge? You can if you have a Nottinghamshire County Library Card.

Sign up for the free online magazine service at
<http://www.nottinghamshire.gov.uk/learning/libraries/librarymembership/emagazines/>

Don't despair if you don't live in the county, you can also join the library if you live in Nottingham city or one of the surrounding authorities/counties. This can even be done online.

There are lots of other magazine titles in the collection, although they can sometimes disappear without warning. Currently (30th April) the June edition of *Astronomy* is available, together with a number of back issues.

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>
June 4 th	"The Microwave Universe"	Dr Clive Dickinson <i>Jodrell Bank Centre for Astrophysics</i>
July 2 nd	"Rosetta - close ups of a comet"	<i>A scientist from the Open University</i>
August 6 th	Society BBQ at the observatory, plus solar, radio and night time observing	
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.

NAS Library: June Report

Following Professor Ian Morison's talk at the Society in May, the library has obtained a copy of one of his recently published books, [An Amateur's Guide to Observing and Imaging the Heavens](#).

If you would like to borrow this book, please contact Lorraine the Librarian.

The full catalogue of books we have for loan can be found [here](#).



Featured book:

[The Backyard Astronomer's Guide](#), Dickinson and Dye

If you are getting into astronomy and looking for a place to get started this is a good book. It contains plenty of information and lots of photographs for illustration. It gives a good solid understanding of the basics of this hobby.

It's easy to read and understand, with lots of recommendations for telescopes and accessories and is not afraid to recommend brands or even models (a lot of books like this are); this is very helpful as there are endless opportunities to spend money on a mistake when you're just getting into the hobby and are overwhelmed by the equipment available. I would certainly recommend reading this book before buying any equipment for this reason; while there is a great deal of information freely available on the internet about astronomical equipment, having it all in one place and logically arranged as it appears in this book is very convenient.

Although the book shows the beginner most things they need to know about astronomy, from equipment to nebulae and satellites, it doesn't show you how to find anything in the sky. The book has some beautiful charts of the Milky Way in the back but no indication of how to use them or what the good targets are. As a beginner it would be nice to have a few pages describing what targets to search for and how to find them.

Overall I am glad I borrowed this book and would now be happy to purchase a copy.

Gary Southgate

[If you want to borrow this book, contact Lorraine the [Librarian](#)]

When borrowing a book, it would be expected to be returned at the next meeting, unless no one else had requested it; please discuss with Lorraine the Librarian.

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

BOOK REVIEW

Philip's Astrophotography With Mark Thompson: The Essential Guide to Photographing the Night Sky by TV's Favourite Astronomer

Mark Thompson

Philip's (2014). Paperback, 160 pages. ISBN-13: [978-1849073141](#)

This is an up to date (2014) 160 page paperback, in which the author, an experienced astrophotographer, takes us through the uses and applications of DSLR cameras, webcams and astronomical CCD cameras in some depth but in an easily understood style free from ponderous equations.

Starting with DSLRs and simple tripods we are soon looking at various telescopes, mounts and cameras suitable for solar system and deep sky imaging. Mark does not assume previous knowledge on the part of the reader. He explains everything from balancing and polar aligning telescope mounts through to capturing and processing digital images in a straightforward manner accompanied by many photographs. In fact there are few pages without at least one photograph.

The use of accessories such as Barlow lenses, field flatteners, filter wheels, RGB and narrowband filters and guide cameras is covered and flat, bias and dark frames explained.

[Registax](#), the free download for processing webcam videos is featured including a brief tutorial. Eighteen pages are devoted to processing deep sky images with [Maxim DL](#) (£300) and [Photoshop](#). No mention of [GIMP](#), the free basic alternative to Photoshop, or [Deep Sky Stacker](#) which is also a free download though not in the same league as Maxim DL.

The book concludes with a step by step journey through a typical night's imaging run including some of the pitfalls encountered when darkness and a confusion of cables conspire to confound the would-be deep sky astrophotographer.

All in all this is a genuinely informative and practical book for both beginners and those wishing to delve deeper into this subject.

Bryan Lilley

[Ed: This book is available to borrow from the NAS [Librarian](#)]

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

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

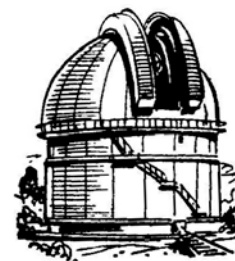
Nottingham Astronomical Society.

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
Member of the Federation of Astronomical Societies

Registered Charity No. 1066645
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Membership application and Gift Aid declaration

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	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

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(HMRC reference XR32048)

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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.

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