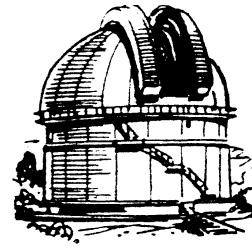

Journal

of the



Nottingham Astronomical Society

October 2012

Inside this issue

- Sky Notes for October
- Diary Dates for 2012
- NAS e-Services
- Small advertisements
- Society Information
- Membership application form

Thursday, October 4th

British Geological Survey
Nicker Hill, Keyworth
8 pm (doors open at 7.30pm)

Tonight we welcome
Professor Michael Merrifield
University of Nottingham
who will be speaking on

**“The Centre of our Galaxy -
Black Holes, Rare Stars and
Cosmic Mayhem”**

OUR MOST DISTANT SPACECRAFT

Now and then it's worth remembering those far-flung outposts of human invention, the most distant spacecraft launched from Earth. The current record-holder is **Voyager 1**, launched on 5th September 1977, which is now over **122** astronomical units (AU) from us, and still receding at 17 km per second. Next comes **Pioneer 10**, launched on 3rd March 1972, which is nearly **107** AU away, followed by **Voyager 2** (launched 20th August 1977, now nearly **100** AU away) and **Pioneer 11** (launched 6th April 1973, now **86.4** AU away).

Of these four probes, only the two Voyagers are still functioning. Signals from Voyager 1 take nearly 17 hours to reach us from its position in the constellation of Ophiuchus, and every year it recedes from us by a further 3.5 AU.

The Voyagers are, of course, carrying messages from humankind to whoever might find them...the ultimate long shot!

Sky Notes

October 2012

Compiled by Roy Gretton



British Summer Time ends on Sunday 28th October. Clocks should be turned back one hour at 2 am on that date.

PHASES OF THE MOON

Last Quarter occurs on October 8th

New Moon occurs on the 15th

First Quarter occurs on the 22nd

Full Moon occurs on the 29th

This month the Moon is closest to the Earth (360,660km) on the 17th, and furthest from the Earth (405,180km) on the 5th.

THE PLANETS

Mercury reaches greatest eastern elongation (24 degrees) on October 26th, when it will be shining at magnitude -0.1 . However, as is usual in the autumn, it will be an extremely difficult target for observers in the northern hemisphere.

Venus, having put on a brilliant display in the morning sky since August, is now fading and moving steadily toward the Sun. By the end of October it will be 35 degrees west of the Sun, and shining at magnitude -3.9 (still the brightest object in the sky, other than the Sun and Moon).

Mars is now at a declination of -21 degrees and still moving southward, and so is very difficult to locate in the evening sky.

Jupiter will be the king of the night sky from now until the end of the year. Unmistakable in its brilliance as it rises in mid-evening in the constellation of Taurus, its magnitude will reach -2.7 by the end of October, when its equatorial diameter will be 47 arcseconds.

Saturn reaches conjunction with the Sun on October 25th, and consequently is unobservable this month.

Uranus, shining at magnitude 5.7, is an evening “star” in the constellation of Pisces, about half a degree southwest of 44 Piscium.

Neptune, in the constellation of Aquarius, is due south in the late evening. The planet is 2.4 arcseconds across, and shines at magnitude 7.8.

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 (more than 10 events per hour) occurs between October 20th and 22nd. Conditions will be favourable, as the Moon doesn’t reach First Quarter until the 22nd, and so will be out of the way after midnight. The radiant doesn’t rise until 10 pm, so don’t expect to see any activity before this time.

VARIABLE STAR: Algol

There are **four** minima of this **eclipsing binary** visible from the UK this month. They occur on October 7th (4.35 am **BST**), the 10th (1.25 am **BST**), the 12th (10.15 pm **BST**) and on the 30th (02.05 **UT**). The star dims from its normal brightness (magnitude 2.1) to magnitude 3.4 over a period of 4.8 hours, and then returns to its normal brightness in a similar length of time.

DIARY DATES 2012

Monthly Meetings of the Nottingham Astronomical Society

Our programme for this year is shown below. Don't forget to 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

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

Thursday 4th October 2012

Talk: **"The Centre of our Galaxy - Black Holes, Rare Stars and Cosmic Mayhem "**

Prof Michael Merrifield
University of Nottingham

Thursday 1st November 2012

2012 Annual General Meeting

Thursday 6th December 2012

Talk: **" Climate Change and the Sun-Earth Connection"**

Dr Jim Wild
Space Plasma Environment and Radio Science Group
Lancaster University

The Nottingham Astronomical Society: E - SERVICES

Whether or not you are a NAS member, you can now keep up to date with details of the Society's meetings and other events by visiting the NAS website:

www.nottinghamastro.org.uk

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.

Could you write a short piece for this Journal?

The Editor always welcomes contributions to these pages. Perhaps there is a topic of astronomical interest that you could write briefly about, perhaps you've done some observing that others would enjoy reading about, or taken some interesting photographs, or have other memories worth sharing with members – such as how you first became fascinated by astronomy.

If so, please email the Editor: roygretton@hotmail.co.uk

ADVERTISEMENTS

FOR SALE

- **Orion** (USA) 6x26 correct image **finderscope**, complete with bracket **£15**
- **Telescope Optics Book** by Rutten and van Venrooij (hardback), in excellent condition **£12**

Contact **BARRY WINSTON**

Home tel no 0115 989 4239 mobile no. 07507 863 689.

Email barrywinston@yahoo.com

SKYWATCHER TELESCOPE FOR SALE

SKYWATCHER telescope, 114mm aperture, 1000mm focal length, catadioptric Newtonian reflector, used only once and as new.



The owner reports a new instrument of the same type for sale on Ebay at about £130, but would be willing to accept £60 or near offer in this case.

Contact

Michael Neal
Nottingham Road
Keyworth

Tel: 0115 9375695

WANTED: Eyepieces

I am currently looking for 2nd hand Televue eyepieces to compliment my TV 101.

I am looking for mainly Nagler eyepieces but would be interested in other models in the Televue too.

I am situated close to Alfreton, Derbyshire. Thank you.

Paul Davies
Email: paul@graphic.demon.co.uk

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

PRESIDENT:

Fred Hopper

e-mail: fred.w.m.hopper@googlemail.com

VICE PRESIDENT:

Roy Gretton

e-mail: roygretton@hotmail.co.uk

SECRETARY:

Victoria Jolly

e-mail: secretary@nottinghamastro.org.uk

TREASURER:

Sam Boote

e-mail: s.boote@bcs.org

JOURNAL EDITOR:

Roy Gretton

e-mail: roygretton@hotmail.co.uk

OBSERVATORY DIRECTOR:

John Hurst

email: jmhurst@hotmail.co.uk

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

CAMPAIGN FOR DARK SKIES

REPRESENTATIVE:

Barrie Chacksfield

email: b.chacksfield@bgs.ac.uk

ORDINARY COMMITTEE MEMBERS:

Joe Sowerby

Dorothy Sowerby

Kevin Greally

David Anderson

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 2012

Full	£25
Concessions	£12.50
Joint rate for partners living at the same address	£37.50

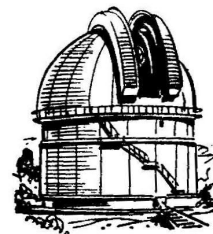
Subscriptions become due on 1st January. Half-price subscription is charged if joining after 1st July. Please make cheques payable to: Nottingham Astronomical Society.

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

The Nottingham Astronomical Society, and/or the Editor accept no responsibility for any errors that may occur within this publication. Any views expressed in the **NAS Journal** are those of the individual authors and not necessarily endorsed by the Nottingham Astronomical Society, its Committee or Members.

NOTTINGHAM ASTRONOMICAL SOCIETY



Founded in 1946 for all interested in astronomy
Affiliated to the British Astronomical Association
Member of the Federation of Astronomical Societies

Registered Charity No. 1066645
Member of the Society for Popular Astronomy
Supporter of the Campaign for Dark Skies

Membership application and Gift Aid declaration

Title:

Full name:

Full home address:

Postcode:

Telephone:

e-mail address:

Subscription rate:	Full	£25.00	(year)	£12.50	(half year)
	Concession	£12.50		£6.25	
	Partnership	£37.50		£18.75	

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:

Date: