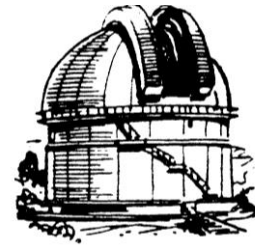


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# Journal

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## Nottingham Astronomical Society July-August 2008

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Inside this issue

- Sky Notes for July and August
- Diary Dates
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**Thursday 3<sup>rd</sup> July**

at the

**British Geological Survey**

Nicker Hill, Keyworth

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

Tonight we welcome

**Paul Money**

who will be speaking on

***Mars – the Next Generation***

### **PREPARING FOR THE FINAL HUBBLE MISSION**

As this edition of the Journal goes to press, two astronauts are beginning a weeklong rehearsal for a series of spacewalks planned for the final shuttle mission to the Hubble Space Telescope, scheduled to be launched on October 8<sup>th</sup>. The astronauts will carry out simulations of five spacewalks, using equipment in a 40-foot-deep water tank, in which they will spend ten hours for every one hour of planned spacewalking.

On the mission proper, the astronauts will attempt to remove the wide-field planetary camera (which is about the size of a baby grand piano) and replace it with the latest generation camera. They will also install the Cosmic Origins Spectrograph, together with new gyroscopes and batteries for the telescope. Additionally, repairs are to be carried out on the Advanced Camera for Surveys, and on the Space Telescope Imaging Spectrograph.

This will be a very challenging mission, but if it is successful it should extend the operational life of the HST by at least five years.

# Sky Notes

## 2008 July and August

Compiled by Roy Gretton



Earth will be at **aphelion**, its furthest distance from the Sun (152 million km), on July 4<sup>th</sup>.

### Solar Eclipse

On the morning of Friday, August 1<sup>st</sup>, there will be a total eclipse of the Sun along a narrow path that begins in Canada and extends across northern Greenland, the Arctic, central Russia, Mongolia, and China. A partial eclipse will be seen across a much wider area, including northeastern North America, most of Europe, and Asia. Seen from Nottingham, about a quarter of the Sun will be obscured by the Moon.

### Lunar Eclipse

A partial eclipse of the Moon will occur on the evening of August 16<sup>th</sup>. Seen from Britain, the eclipse will already have begun as the Moon rises. At maximum eclipse, which occurs at 10.10 pm BST, 80 per cent of the Moon will be immersed in shadow.

### PHASES OF THE MOON

#### July

New Moon occurs on the 3<sup>rd</sup>  
First Quarter occurs on the 10<sup>th</sup>  
Full Moon occurs on the 18<sup>th</sup>  
Last Quarter occurs on the 25<sup>th</sup>

#### August

New Moon occurs on the 1<sup>st</sup> and again on the 30<sup>th</sup>  
First Quarter occurs on 8<sup>th</sup>  
Full Moon occurs on the 16<sup>th</sup>  
Last Quarter occurs on the 23<sup>rd</sup>

### THE PLANETS

**Mercury** is at greatest western elongation on July 1<sup>st</sup>, when it will be 22 degrees from the Sun in the pre-dawn sky. Thereafter it moves back toward the Sun, passing through superior conjunction on July 29<sup>th</sup>, and becoming an evening object for the whole of August. However, the planet will at this stage be too far south for satisfactory observation from Britain.

**Venus** is now an evening object, but very poorly placed for observation from the UK, a situation that will not improve significantly until well into the autumn.

**Mars**, a fading object in the evening sky, is moving eastward through Leo, and on July 10<sup>th</sup> will pass two-thirds of a degree south of Saturn. Consequently, in early July, Regulus (magnitude 1.35), Saturn (magnitude 0.8) and Mars (magnitude 1.7) will occupy the same patch of sky. By the end of August, Mars will be setting barely one hour after the Sun.

**Jupiter** reaches opposition (180 degrees from the Sun) on July 9<sup>th</sup>. It will, however, be twenty-two and a half degrees south of the celestial equator, almost as badly-placed for observation from Britain as it possibly can be. (In fact, it reaches its most southerly position in mid-September, after which it will begin its slow progress northward again). Naked eye observation will be easy: look for a bright, off-white star (magnitude -2.7) almost due south in the late evening. But telescopic observation will be hampered by the thickness of our atmosphere at the low elevation of the planet.

**Saturn** is fast-disappearing into the sunset glow, and by the end of August it will effectively be lost from sight until it reappears in the morning sky later in the autumn.

**Uranus** (magnitude 5.9) is a binocular object in the constellation of Aquarius.

**Neptune** (magnitude 7.8) reaches opposition on August 15<sup>th</sup> in the constellation of Capricornus.

## **METEORS**

The **Delta Aquarids** reach maximum activity on July 29<sup>th</sup>, when 20 meteors per hour may be seen under ideal circumstances. With the Moon approaching New, observing conditions this year are favourable.

The **Perseids**, those summertime favourites of the meteor calendar, will this year suffer interference from a bright Moon, a few days from Full. Maximum activity is expected on August 12<sup>th</sup>.

## DIARY DATES 2008

### Meetings of the Nottingham Astronomical Society

Our programme for the coming months is below. Don't forget to check our website:  
<http://beehive.thisisnottingham.co.uk/nottinghamastro>  
for the latest information about the Society's meetings and observing sessions.

**Thursday 3 July 2008**

British Geological Survey, Keyworth  
8.00pm (Doors open 7.30pm)

#### **'Mars – The Next Generation'**

**Paul Money**

**August**

We take a Summer break!  
There is no meeting at BGS this month.

**Thursday 4 September 2008**

British Geological Survey, Keyworth  
8.00pm (Doors open 7.30pm)

#### **Members' Evening**

The theme will be 'Small Telescopes' – do please bring your own telescope along if you wish.

**Thursday 2 October 2008**

British Geological Survey, Keyworth  
8.00pm (Doors open 7.30pm)

***To be confirmed:***

#### **'Dr Plot and the Amazing Double Sunset'**

**Kevin Kilburn**

**Thursday 6 November 2008**

British Geological Survey, Keyworth  
8.00pm (Doors open 7.30pm)

#### **Annual General Meeting 2008**

**Thursday 4 December 2008**

British Geological Survey, Keyworth  
8.00pm (Doors open 7.30pm)

#### **The BGS 3-D Suite**

Another opportunity to view planetary images in 3D.  
**With thanks to Doug Tragheim of the BGS**

# Small Advertisements

## Various items of equipment for sale

Celestron Nexstar 5 telescope and tripod etc. (including nylon cover and power supply)	£395
Pop-up observatory tent	£95
Carl Zeiss 10x50 binoculars with leather case	£25
Meade 9.7 Super Plossl eyepiece	£25
Celestron 3.6 Plossl eyepiece	£10
Celestron 90-degree erecting diagonal	£10
sodium light pollution filter	£10

**Please contact Sam Boote  
s.boote@bcs.org  
0115 937 4644**

This advertising space is available  
free of charge to society members

### For Sale

10 inch reflector telescope, focal length 63 inches  
with RA Drive  
two eyepieces  
and storage shed

Any reasonable offer accepted

Phone **Mr Chambers**  
0115 914 1454

## The Nottingham Astronomical Society: E - SERVICES

### 'Beehive' Website

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 'Beehive' website:

<http://beehive.thisisnottingham.co.uk/nottinghamastro>

### NAS Journal e-mailing list

To register for your monthly e-mailed copy of the NAS Journal, just e-mail

[nottinghamastro@yahoo.co.uk](mailto:nottinghamastro@yahoo.co.uk)

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

#### 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.*

### APPLICATION FOR MEMBERSHIP

If you would like to join the Nottingham Astronomical Society, please complete and tear off this slip. Make your cheque/postal order payable to: **THE NOTTINGHAM ASTRONOMICAL SOCIETY**. Then send the slip and payment to Paul Stocks, Secretary, Nottingham Astronomical Society, 22 Killerton Park Drive, West Bridgford, Nottingham, NG2 7SB

Alternatively you may hand the slip and payment to the Secretary or Treasurer at one of the Society's regular meetings.

Your name \_\_\_\_\_

Full address \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_ Postcode \_\_\_\_\_

I wish to join the Nottingham Astronomical Society and enclose the membership fee for:

- Full Adult £25
- Junior (17 years or under) £12.50
- Concession (*full time student, UB40, etc*) £12.50

Please tick and enter your e-mail address if you wish to receive:

- the monthly **NAS Journal** (in 'Word' format) by e-mail
- e-mail notifications of dates & times of observing sessions using the large telescope at our observatory.

Your e-mail address: \_\_\_\_\_

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

**ORDINARY COMMITTEE MEMBERS:**

**Joe Sowerby**

**Dorothy Sowerby**

**Kevin Greally**

**Robert Bush**

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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 & October) 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.

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## Annual subscriptions 2007-08

Adult £25

Junior (under 18 years) £12.50

Concessions\* £12.50

(\*Full-time student, jobseeker's allowance, basic state pension)

Subscriptions become due on 1 October.

Half-price subscription is charged if joining after 1st April. 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, Paul Stocks, or speak to any NAS committee member at one of the regular monthly meetings. A membership application form appears inside this issue of the Journal.

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