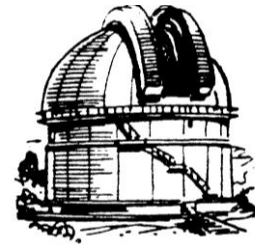

Journal

of the



Nottingham Astronomical Society

June 2007

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Thursday 7th June

at the

British Geological Survey

Nicker Hill, Keyworth

8 pm (doors open at 7.30pm)

Tonight

**Build Your Own Aurora
Detector**

with our President

Fred Hopper

KEEPING AN EYE ON VENUS

As we gaze at the *bright evening star* or more correctly, the planet Venus this spring, it is worth noting that Venus Express, the European spacecraft, has now been orbiting the planet for over a year, and continues to send a wealth of data back to Earth. Venus Express was launched from Kazakhstan on 9th November 2005 on board a Starsem Soyuz-Fregat rocket, arrived at Venus on 11th April 2006, and began its scientific mission on 4th July last year. The probe has instruments designed to study both the atmosphere and the surface features of Venus in the most comprehensive and systematic way thus far attempted.

Sky Notes

2007 June

Compiled by Roy Gretton



Throughout June astronomical twilight lasts all night, as the Sun, at its lowest, is always less than 18 degrees below the horizon during this month. The summer solstice, when the Sun is overhead on the Tropic of Cancer, occurs at 7 pm BST on June 21st.

PHASES OF THE MOON

There are two Full Moons this month, making the second a “Blue Moon”. So if there is something that you do *only once in a blue moon*, this is the month to do it!

Full Moon occurs very early on June 1st, and again on the afternoon of the 30th
Last Quarter occurs around midday on the 8th
New Moon occurs around midday on the 15th
First Quarter occurs on the afternoon of the 22nd

This month the Moon is closest to Earth on the 12th, and furthest from Earth on the 24th.

THE PLANETS

Mercury will be at its greatest eastern elongation on June 2nd, when it will be 23 degrees from the Sun. However the planet will be very low down by the time the sky is dark enough to see it with the naked eye (after 10.30 pm BST). Once the first week of June has passed, Mercury moves quickly back toward the Sun and reaches inferior conjunction on the 28th.

Venus will be at greatest eastern elongation on June 9th, when it will be 45 degrees from the Sun, and shining at magnitude -4.3. At this stage Venus, when viewed through a telescope, will look like a first quarter Moon. Thereafter the phase will decrease to become a thick crescent as the planet brightens even further, approaching magnitude -4.4 by the close of the month. However, the best part of the current apparition will be over, as Venus will by then be only 14 degrees above the horizon at sunset.

On the afternoon of June 18th there will be a **daylight occultation of Venus**. The planet will disappear behind the dark limb of the crescent Moon at about 3 pm BST, and reappear from behind the bright limb at about 4.20 pm. Venus should be visible through binoculars, and might even be discernable with the naked eye to some keen-sighted observers (not something you would expect just after lunchtime in midsummer, but you will have the Moon to guide you!)

But however you attempt to observe this event, take precautions not to direct your eyes or instrument directly at the Sun.

On the evening of June 30th Venus will be less than one degree from Saturn, so the two planets should be visible in the same binocular or low power telescopic field, a potentially beautiful sight.

Mars is a morning object, low in the southeast before sunrise, and still struggling to pull clear of the pre-dawn glow. However, by the end of the month it will be rising before 2 am BST and will be 27 degrees above the horizon at sunrise.

Jupiter is at opposition (due south at midnight) on June 6th when it will be shining at magnitude -2.6, and will have an equatorial diameter of 46 arcseconds. However it will be barely 16 degrees above the southern horizon at best, so telescopic observation will be hampered by Earth's thick atmosphere.

Saturn is an evening object, a few degrees west of Regulus, and still a prominent object at the start of June. However, by the end of the month the current apparition will be in its late stages, as the planet will by then be only 45 degrees east of the Sun, and starting to be lost in the sunset glow.

Uranus (magnitude 5.9) in the constellation of Aquarius, and **Neptune** (magnitude 7.9) in the constellation of Capricornus, are both morning objects.

METEORS

With its lack of true darkness, June is not a very promising month for observing meteors, and no major showers are predicted.

DIARY DATES 2007

Meetings of the Nottingham Astronomical Society

Our programme for 2007 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 7 June 2007

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

'Build an Aurora Detector'

Fred Hopper

NAS President

(Please see the notice on the next page for more details.)

Thursday 5 July 2007

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

The BGS 3D Immersion Suite

An opportunity to view images of the surface of Mars in 3D

August – summer break, no meeting

Thursday 6 September 2007

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

Talk: 'How Galaxies are Formed'

Christopher Conselice

University of Nottingham

Thursday 4 October 2007

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

Talk: 'Beneath the Shadow of the Moon'

Mike Frost

Thursday 1 November 2007

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

Annual General Meeting 2007

Thursday 6 December 2007

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

Talk: 'Simple Sums for Astronomers'

Dr Roy Gretton

NAS Vice-President

‘Build an aurora detector system’

NAS Meeting

Thursday 7 June

8.00pm

The British Geological Survey

Keyworth

At this month’s meeting NAS President Fred Hopper will talk you through the construction of a basic aurora detector.

We will construct these in small teams during the meeting - there will be the full kit available for 3 complete aurora detector systems.

However, you may wish to build your own detector system to use at home. If so, please bring along the following items:

- a clean 1 litre plastic pop bottle with top. (The bottle label should be removed.)
- a straight bar magnet (1-1/5 inch) – these are available from Maplin Electronics
(shops in Lower Parliament Street and at Castle Retail Park Radford Boulevard).

There will be enough spare kit at the meeting for the rest of what is needed.

Observing sessions at the NAS Observatory, near Cotgrave

NAS Director of Observing, John Hurst, operates a mailing list for messages about observing sessions with the society’s 24 inch aperture telescope. It is summer now and the light evenings are with us. But come the autumn, we’ll be starting a new series of observing sessions on Saturday evenings (and possibly some weekday evenings too).

So if you are a NAS member who is **not** yet on the observatory mailing list and you would like to be informed of the dates of observing sessions, please e-mail: nottinghamastro@yahoo.co.uk We’ll add your e-mail address to John’s list.

We want to make the observatory available to all members of the Society. So if you don’t drive and need transport to and from the observatory, please mention this in your e-mail. We’ll then do our best to arrange a lift on observing evenings.

Small Advertisements

For Sale

Celestron Nexstar 5 telescope

(Schmidt-Cassegrain)

with 26 mm Plossl eyepiece, red-dot finder, standard and erect-image diagonals, aluminium tripod, padded carry-case, Nexstar user's guide.

Excellent condition. Very robust, fully computerised with easy set-up and GOTO operation with large database. Free delivery within 50 miles of Nottingham.

Only £600

**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

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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Joe Sowerby

Dorothy Sowerby

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 & 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.

Annual subscriptions 2006-07

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.

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.
