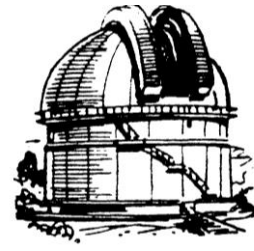

Journal

of the



Nottingham Astronomical Society

March 2007

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Thursday 1st March

at the

British Geological Survey

Nicker Hill, Keyworth

8 pm (doors open at 7.30pm)

Tonight we welcome

Dr Darren Baskill

of the University of Leicester

who will be speaking on

**Light Pollution:
the Problem and Solutions**

AN EXTRAORDINARY OBSERVATION

In October, Akihiko Tago, an amateur astronomer who hunts for novae (“new stars”) made a remarkable discovery with his digital SLR camera. He imaged a bright “variable star” in Cassiopeia that had suddenly increased in brightness. Subsequent examination showed that the object is an ordinary spectral class A star about 3000 light-years away – definitely not the sort of star expected to show wild variability. Yet apparently it had temporarily brightened from magnitude 11 almost to naked eye visibility, before returning to its original brightness. The best explanation seems to be that it was a gravitational microlensing event: an amplification of the light by bending of the rays by an invisible mass that happened to pass directly between the star and Earth. This interpretation is consistent with the recorded light-curve, and with the fact that the star showed no significant colour change. There are, of course, implications for theories of interstellar dark matter.

Sky Notes

2007 March

Compiled by Roy Gretton



The **Vernal Equinox**, when the Sun is exactly overhead at Earth's equator, occurs on March 21st. After this, the hours of daylight will exceed the hours of darkness in the northern hemisphere.

British Summer Time will begin at 2 a.m. on 25th March, which is the earliest possible date, as the current rules require BST to begin on the last Sunday in March.

PHASES OF THE MOON

Full Moon occurs in the late evening of the 3rd
Last Quarter occurs in the early morning of the 12th
New Moon occurs in the early morning of the 19th
First Quarter occurs early in the evening of the 25th

This month the Moon is closest to Earth on the 19th, and furthest from Earth on the 7th. At this time of the year the ecliptic (the path of the Sun) is steeply inclined to the western horizon as the Sun sets, and so the crescent Moon is observable for some hours after sunset. For example the 4-day old crescent Moon doesn't set until after midnight in March, making this a good time of year for exploring the lunar surface (in the evening rather than the early morning) with telescope or binoculars.

TOTAL ECLIPSE OF THE MOON

On March 3rd there will be a total lunar eclipse, all six hours of which will be visible from Britain, as well as from Europe and Africa. The first penumbral contact (when the brilliance of the Full Moon just begins to fade) will occur at 8.18 pm. The first umbral contact (when the Moon starts to go into the full shadow) will be at 9.30 pm, and totality will start at 10.44 pm and last until three minutes before midnight. The eclipse will finally end at 2.24 am on March 4th. At mid-eclipse the Moon will be about 41 degrees above the southern horizon. The appearance of the fully-eclipsed Moon is always of interest; it can vary from a ghostly grey to a dull copper colour. And of course, if the sky is clear, the eclipse provides deep-sky observers with a chance to see faint objects without the glare of the Full Moon. On this occasion the Moon will be in the constellation of Leo.

THE PLANETS

Mercury is a morning object this month, but very poorly placed for UK observers. Even on March 22nd, when it will be at greatest western elongation, it will be difficult to observe due to its low altitude.

Venus looks better week by week, becoming more prominent in the southwest after sunset. By the end of March the planet will be 35 degrees east of the Sun, setting 3½ hours after sunset, and shining at magnitude -4.

Mars continues to be inconspicuous in the morning twilight, and hardly worth observing this month.

Jupiter is a morning object in Scorpius, and slowly pulling away from the Sun, so that it rises about 2 a.m. at the beginning of the month. It is a bright object in the southeast in the early morning, but low down so that atmospheric conditions are likely to degrade the view of the planet through a telescope at our latitude.

Saturn is undoubtedly the best planet to observe this month, hanging high in the sky in the late evening, a few degrees west of the star Regulus in Leo. Saturn's largest moon, Titan, will be four ring-spans due west of the planet on March 13th and 24th. At magnitude 8, Titan should be easy to locate in a modest telescope or good binoculars. On March 2nd, Saturn is occulted (or not!) by the Moon; see details below.

Uranus in the constellation of Aquarius, and **Neptune** in the constellation of Capricornus, continue to be unobservable this month.

OCCULTATION OF SATURN

In the early hours of March 2nd, the Moon will pass in front of the planet Saturn – or at least it will do so for observers in the whole of Nottinghamshire and Lincolnshire, but not for all those in Derbyshire. Observers to the west of Derby will experience a grazing occultation, in which the planet will bump along the Moon's limb, partly disappearing behind lunar mountains along the way. The line of the grazing occultation passes through the islands of Lewis and Skye, Glasgow, the Lake District, Preston, Chester, Birmingham, Oxford, Reading and Brighton. As the Moon will be nearly Full it will create a lot of glare, so you may find that binoculars are helpful in following the progress of the occultation.

There is a second occultation of Saturn by the Moon on March 29th, but it will not be visible from the Midlands.

METEORS

Meteor-shower activity continues to be poor in March, although there should be some activity from the Virginids toward the end of the month. However, you will be lucky to see as many as three meteors per hour from this source.

VARIABLE STAR: Algol

There are just two minima of this star visible from the UK this month. They occur on March 18th at 1 a.m. and March 20th at 10 p.m.

DIARY DATES 2007

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 1 March 2007

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

Light Pollution: The problem and solutions

Dr Darren Baskill
University of Leicester

Thursday 5 April 2007

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

Women in Astronomy

Madeline Cox FRAS
Society for the History of Astronomy

Saturday 28 April 2007 (provisional date)

NAS Annual Dinner

Please see next page for details

Thursday 3 May 2007

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

Speaker & topic to be arranged

Thursday 7 June 2007

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

Speaker & topic to be arranged

Thursday 5 July 2007

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

Members' Evening:

A visit to the BGS 3D Immersion Suite

NAS Annual Dinner 2007

The NAS committee has provisionally set Saturday evening, 28th April, as the date & time for the Society's annual dinner.

The venue is **The Rose & Crown** at Cotgrave.*

The annual dinner is a friendly, informal event. All NAS Members, their families and friends are welcome.

We'll have more details at our Keyworth meeting on 1st March.

**There is a frequent bus service between Cotgrave and Nottingham.*

OTHER EVENTS

**National Space Centre
Exploration Drive
Leicester, LE4 5NS**

Yuri's Night

12 April 2007 – 7.30pm

Yuri Gagarin was the first human to go into space on April 12th, 1961. The US Space Shuttle first launched on April 12th, 1981. Yuri's Night is like the St Patrick's Day for space. It is one day when all the world can come together and celebrate the power and beauty of space and what it means for each of us.

The National Space Centre and Leicester Astronomical Society will be hosting an astronomy night, for people to come and look at the night sky, learn how to use telescopes and understand all about our little bit of space and beyond.

This event is suitable for adults and children. Cost is £3 per person including refreshments.

For more information or to book your place (booking is essential) please call 0116 258 2111

A REQUEST

Does anyone have a copy of the January 2006 edition of *Sky at Night* magazine? Joe Sowerby would like to borrow the magazine briefly in order to consult an article therein. If you can help please contact Joe on (0115) 8335720.

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**

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.

NAS Observatory Group

A web group page and message service (for NAS members only) is available at

<http://uk.groups.yahoo.com/group/nottinghamastronomicalsociety/>

It is used for circulating information to members about work at the observatory and use of the large telescope. If you are a member of the Society, you can join this online group by visiting the website and clicking on "Join this Group".

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, Hon. 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

(please tick appropriate box)

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

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.
