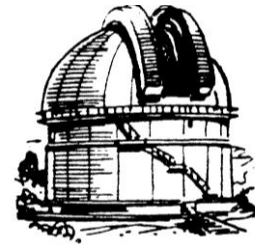

Journal

of the



Nottingham Astronomical Society February 2008

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Thursday 7th February
at the

British Geological Survey
Nicker Hill, Keyworth

8 pm (doors open at 7.30pm)

‘Simple Sums for Astronomers’

is the title of tonight’s talk given by

Dr Roy Gretton
NAS Vice President

EVIDENCE FOR A NEARBY SUPERNOVA

Evidence presented to the Geological Society of America in November suggests that about two million years ago the Earth was blasted with radiation and debris from a supernova situated between 60 and 300 light-years away. The main evidence comes in the form of high levels of radioactive iron-60 in sea-floor sediments dating from the Pliocene epoch. A minor biological extinction event, known as the Pliocene-Pleistocene marine extinction, is thought to have been caused by the supernova. The star that exploded was probably a member of the Scorpius-Centaurus OB association, a group of several thousand stars that passed through our galactic neighbourhood at that time, and have now drifted further away.

Sky Notes

2008 February

Compiled by Roy Gretton



PHASES OF THE MOON

The Moon's principal phases all occur in the early morning (between 2 a.m. and 4 a.m.) this month:

New Moon on the 7th
First Quarter on the 14th
Full Moon on the 21st
Last Quarter on the 29th

This month the Moon is closest to Earth on the 14th, and furthest from Earth on the 28th.

TOTAL ECLIPSE OF THE MOON

The Moon will pass into the Earth's shadow in the early hours of February 21st. Totality will be visible over the Americas, Europe, Africa, and western Asia. The penumbral stage (harder to see) begins at 12.35 a.m. and ends at 6.16 a.m. The umbral stage (easy to see) lasts from 1.43 a.m. to 5.09 a.m. Totality will last for about 50 minutes, from one minute past three to 3.51 a.m. with the moment of greatest eclipse at 03:27 a.m. For the duration of totality the Moon will not be far inside the Earth's shadow, and the bottom-right limb of the eclipsed Moon will probably look less dark than the top-left.

THE PLANETS

Mercury reaches inferior conjunction on February 6th, and thereafter becomes a morning object, but will not be well placed for observers in the UK.

Venus, having put in a brilliant appearance in the morning sky throughout the winter thus far, becomes less easy to see as February progresses. An interesting conjunction occurs on February 1st, when Venus is one degree north of Jupiter.

Mars continues to be prominent in the evening sky, as a reddish star high in the south. But its distance from Earth is increasing steadily, and before the end of February its apparent diameter will have diminished to less than ten arcseconds, making useful telescopic observation difficult.

Jupiter is a morning object in the constellation of Sagittarius. It will not be easy to spot this month, as it will be very low in the pre-dawn sky.

Saturn, in the constellation of Leo, is visible throughout the night, and reaches opposition to the Sun on February 24th. By then it will be 49 degrees above the southern horizon at midnight, and will be shining at magnitude 0.3. It is by far the most rewarding planet to observe through a telescope this month.

Uranus and **Neptune** are unobservable this month.

METEORS

February is typically the quietest month of the year for meteor activity. There are no notable meteor showers this month.

VARIABLE STARS:

Algol: There are six minima of this **eclipsing binary** visible from the UK this month. They occur on February 2nd (4.50 am), the 5th (1.35 am), the 7th – *the evening of our monthly meeting* – (10.25 pm), the 10th (7.10 pm), the 25th (3.20 am) and the 28th (12.05 am). The star dims from its normal brightness (magnitude 2.1) to magnitude 3.4 over a period of 4.8 hours.

Mira: This **long period variable** (known as “Wonderful” to the ancients) should reach maximum brightness in the first week of February. Mira, in the constellation of Cetus (the Sea Monster), typically varies between magnitudes 9.3 and 3.4 over a period of about 332 days, but can sometimes be brighter than expected. This was true at its last peak in March 2007, when it reached second magnitude.

Wanted: Good home for a telescope

The **Royal Astronomical Society** has been bequeathed a telescope by the late Mr Eric Northrop of Cheam, who made the telescope with his brother David. The telescope is a 10.5 inch reflecting telescope (f/8-10?). It sits in its observatory dome in the back garden.

The telescope is on a massive, rugged English cross-axis mount. Its optics are good. The telescope is electrically driven through a gear box by a worm and gear wheel drive. There are finding telescopes but no setting circles. The open-work tie-frame tube is nicely made. The telescope was finished about 1978 by the two men and has not been used for a decade, but is dry, moves freely and is well preserved. The brothers were technical staff in the Science Museum and the V&A respectively and their workmanship is good. It is however not a modern telescope.

It is thought that the telescope could be disassembled into half a dozen main pieces and carried (or wheeled) through a garage to the street. It would need a day's work by people who can handle large metal pieces and a suitable vehicle (e.g. large van). It would need to be re-erected on a solid foundation and covered by a building or dome. The existing 15 ft dome is more than a hemisphere on a rotating frame with an up and over shutter. It is made of segments of galvanized steel sheet, pop-riveted together. It is in working order but needs maintenance. It would be difficult to cut it up and remove it from the site; reassembling it would be even more problematic.

The RAS is looking to make arrangements for this telescope to go to a good home.

Contact the Treasurer RAS for further details or expressions of interest. Treasurer@ras.org.uk

More details:

http://www.ras.org.uk/index.php?option=com_content&task=view&id=1360&Itemid=1

(On a local note, David Northrop was one of the founding members of the Nottingham Astronomical Society, and is thought to have made at least one visit to the Society for our 50th Anniversary.)

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 7 February 2008

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

Talk: 'Simple Sums for Astronomers'

Dr Roy Gretton
NAS Vice-President

Thursday 6 March 2008

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

Our guest speaker is

Terry Scholey

Nottingham's local long-range weather forecaster
who will speak on

The effect of the Sun and Moon on Earth's weather

Thursday 3 April 2008

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

[Topic/speaker to be announced nearer the date]

Thursday 1 May 2008

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

Talk: 'Caroline Hershel'

Our guest speaker is

Madeline Cox

Librarian, Society for the History of Astronomy

Thanks Ted!

Many thanks are due to NAS member Ted Bletcher, for his excellent short talk about "The Big Bang Theory Modifiers" at our Members' Evening in January.

The committee agreed that Ted did a great job in researching this topic which he presented in an interesting and entertaining way. It was a perfect example of what Members' Evenings are all about!

OTHER EVENTS

Scarborough and Ryedale Astronomical Society

Starfest 2008

Friday August 8th to Monday August 11th

Every year, Scarborough and Ryedale Astronomical Society organises a weekend camp for amateur astronomers in Adderstone Field, an elevated site within the stunning Dalby Forest, in the North York Moors National Park. The camp starts on Friday and finishes on Monday morning, to give three nights possible observing under a dark sky.

The site is within easy reach of Pickering and the [North York Moors steam railway](#) and the seaside towns of Scarborough, Whitby and Filey. There are many beautiful walks in the area both within the forest itself and further afield.

The recreational attractions of Dalby Forest include two cafe/restaurants, mountain bike hire at [Purple Mountain](#) and a [Go-Ape](#) attraction high in the trees!

The event is opened with a Wine and Nibbles event where people can get to know each other.

On the Sunday morning a water rocket competition for the children is organised by one of our number, and this is always an exciting event for them since the rockets often achieve great heights! Sometimes of course, there are spectacular 'flops'.

To finish there is a not-too-serious 'Astromind' competition, held outdoors or inside the marquee depending on the temperature.

Cost:

£18 per adult (age 16 and above) age 11-15 years £10, age 5-10 years £5 under 5s free of charge.

There is a limit to the number of guests, so please book early to avoid disappointment.

Telephone enquiries: 01653 691128 (Mell) or 01723 500389 (Sheila).

E-mail: mell@mjeffrey.freeserve.co.uk

Website: <http://www.scarborough-ryedale-as.org.uk/>

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

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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CURATOR OF INSTRUMENTS**

John Hurst

email: jmhurst@hotmail.co.uk

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

ORDINARY COMMITTEE MEMBERS:

Joe Sowerby

Dorothy Sowerby

Kevin Greally

Robert Bush

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 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.

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.
