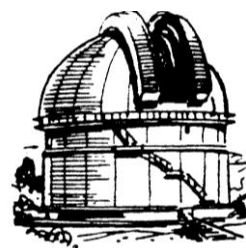

Journal

of the



Nottingham Astronomical Society

June 2009

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Thursday, 4th June

at the

British Geological Survey
Nicker Hill, Keyworth

8 pm (doors open at 7.30pm)

Tonight we welcome

Dr Mike Leggett FRAS

who will be speaking on

'The Search for Extraterrestrial Intelligence'

THE NEARBY SUPERNOVA FACTORY

The *Nearby Supernova Factory* is a collaborative research project led by Greg Aldering, designed to collect data on more Type Ia supernovae than have been studied in a single effort before. The term "nearby" is used because the targets of the research are supernovae with redshifts of 0.03 to 0.08, corresponding to distances of only 400 million to 1100 million light-years. (Other projects search for supernovae at much greater distances). According to results published within the past month, the project has come up with a simple method of estimating cosmic distances to a far greater degree of accuracy than ever before, by measuring the ratio of the optical brightnesses of the supernovae between wavelengths of 642 and 443 nanometres. By measuring this ratio it is possible to calculate the absolute magnitude of a supernova explosion, and by comparing that with its apparent magnitude, the distance can be worked out to an accuracy of within six percent. This can be done with just a single night's observations, and it works for all type Ia supernovae independent of the properties of their host galaxy or any intervening dust that might redden their light. The physical mechanism that determines this ratio in the supernova's emission is still unknown, but the improved distance measurements that will result from this discovery should enable more accurate measurement of the expansion of the universe, and the effect of dark energy on that expansion.

Sky Notes

June 2009

Compiled by Roy Gretton



The Summer Solstice, when the Sun reaches its most northerly position in our sky, occurs on the morning of June 21st, making this month the least useful for the observation of faint astronomical objects from the UK.

PHASES OF THE MOON

Full Moon occurs in the early evening of the 7th
Last Quarter occurs in the late evening of the 15th
New Moon occurs in the early evening of the 22nd
First Quarter occurs close to midday on the 29th

This month the Moon is closest to Earth (358,000 km) on the 23rd, and furthest from Earth (406,000 km) on the 10th.

THE PLANETS

Mercury is a morning object this month, reaching greatest western elongation on June 13th, when it will be 24 degrees from the Sun. However, the planet will not be well placed for observation from Britain, due to its low altitude in the pre-dawn sky.

Venus is also a morning object, shining brightly but never against a truly dark sky. It can be found about 45 degrees from the Sun. Venus will be only two degrees south of Mars on June 21st.

Mars, another morning object, is much fainter than Venus, but is slowly pulling further away from the Sun, so that by the end of June it will be rising at about 2.30 a.m. BST, and will have reached 24 degrees above the horizon by sunrise.

Jupiter, also a morning planet this month, will be rising shortly before midnight by the end of June. At magnitude -2.6 it is an easy naked-eye object, but its southerly declination in the constellation of Capricornus means that telescopic observation will be difficult from our latitude.

Saturn can be observed in the west for two or three hours after sunset, but is now well past its best as it moves closer to the Sun as viewed from Earth.

Uranus is a magnitude 5.8 morning object close to the border of Aquarius and Pisces, and will be about twenty degrees above the horizon before dawn. **Neptune** is a fainter magnitude 8 object in Capricornus, and situated fairly close to Jupiter as June begins.

METEORS

To be observed in June, meteors need to be bright ones due to the lack of true darkness. Consequently there are no worthwhile showers for northern hemisphere observers this month.

DIARY DATES 2009/2010

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 4 June 2009

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

Talk: **'The Search for Extraterrestrial Intelligence'**
Dr Mike Leggett FRAS

Thursday 2 July 2009

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

Talk: **'Edwin Hubble'**
Dr Ann Bonell

August - Summer break

Thursday 3 September 2009

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

Talk: **'The time has come...!'**
Dr Paul Roebuck

Thursday 1 October 2009

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

Talk: **'Sounding out the Sun'**
Dr Roger New
Sheffield Hallam University

Thursday 5 November 2009

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

Annual General Meeting 2009

please see the Agenda in the November issue of the Journal

Thursday 3 December 2009

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

Talk: **'The Magnetic Solar System - an unfolding tale of plasma, planets and probes'**

NAS member Dr Jon Woodcock
from the Astronomy Unit at Queen Mary, University of London

Thursday 7 January 2010

British Geological Survey, Keyworth
8.00pm (Doors open 7.30pm)
Topic to be confirmed

Thursday 4 February 2010
British Geological Survey, Keyworth
8.00pm (Doors open 7.30pm)
Talk: '**Observatories without Telescopes**'
Dr. Daniel Brown
from the School of Science & Technology
Nottingham Trent University

Thursday 4 March 2010
British Geological Survey, Keyworth
8.00pm (Doors open 7.30pm)
Talk: '**Observing Orion**'
Paul Money

If you know of anyone who is willing to give an astronomy or science-related talk at one of our monthly meetings, please let the Secretary (or any committee member) have their contact details

Special Event at BGS, Keyworth

The Nottingham Astronomical Society is hosting a special public astronomical evening on 26th September at The British Geological Survey site in Keyworth, as part of the IYA2009 celebrations.

More details will be published in the July/August edition of this Journal.

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

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Small Advertisements

Equipment for sale

Celestron 1 ¼" visual back	£5
Celestron 1 ¼" star diagonal (prism)	£10
Celestron 2" star diagonal (mirror)	£20

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

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

For Sale

Meade Telescope with GOTO control system £100

4.5" (114mm) equatorial reflecting telescope, with Starfinder
Electronic Hand Controller
910mm focal length, f/8
precision polished 4.5" aluminized mirror
5x24mm viewfinder

Contact John Aitken

Tel: 01476 577599

Email: j_aitken@hotmail.co.uk

NAS Members may submit private advertisements for inclusion free of charge in the Journal. Please email the Editor.

NAS Membership application 2008/09

If you would like to join the Nottingham Astronomical Society, please complete the form below. Hand the slip and payment (cheque or cash) to the Treasurer at any of the Society's meetings.

If paying by cheque, please make it payable to **Nottingham Astronomical Society**. Alternatively, you may post the slip and your cheque (*not cash*) to

Sam Boote, Treasurer
Nottingham Astronomical Society
17 Rannock Gardens
Keyworth
Nottingham NG12 5FQ

Title: _____ Name: _____

Address including postcode: _____

Telephone: _____

e-mail: _____

please tick one box

Subscription rate:	Full	£25.00	<input type="checkbox"/>
	Concession	£12.50	<input type="checkbox"/>
	Half-year*	£12.50	<input type="checkbox"/>
	Concession half-year*	£6.25	<input type="checkbox"/>

**Half-year is available from 1 April to 30 September*

Gift Aid

Do you pay Income Tax and/or Capital Gains Tax? If so, would you like to register for Gift Aid? Please ask the Treasurer for a Gift Aid declaration form. You need to fill it in only once. As a registered charity, the Society will get £6.25 from the taxman for each £25 subscription. You have to be a UK tax payer in order to participate in Gift Aid.

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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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

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 & 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 2008-09

Full	£25
Concessions	£12.50

Subscriptions become due on 1st 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 nottinghamastro@yahoo.co.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.
