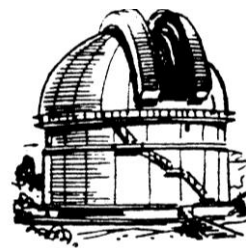

Journal

of the



Nottingham Astronomical Society

October 2009

Inside this issue

- Sky Notes for October
- E-services
- University Event at Nottingham Castle
- Diary Dates
- Lincoln AS Convention
- Advertisements
- Membership application form
- Society Information

Thursday, 1st October

at the

British Geological Survey

Nicker Hill, Keyworth

8 pm (doors open at 7.30pm)

Tonight we welcome

Dr Roger New

of Sheffield Hallam University

who will be speaking on

“Sounding Out the Sun”

The LCROSS Crash into the Moon

The American space agency NASA has a spacecraft that is poised to smash into the Moon next week, as part of a programme to find water on the lunar surface. The target chosen for the LCROSS lunar impactor is a crater called Cabeus, situated near the south pole. The floor of the crater never receives direct sunlight, and hence is permanently at a very low temperature. The impact is scheduled to occur at approximately 12.30 BST on Friday, October 9th.

The vehicle that will crash into the Moon is actually the top stage of the Atlas 5 launch vehicle, called Centaur. The function of the LCROSS spacecraft is to shepherd the Centaur through space and release it a few hours before impact. LCROSS will then move away to observe the explosive collision, which will also be watched through Earth-based telescopes. The spacecraft will then fly through the plume of lunar dust, streaming live data back to Earth about the composition of the material, before itself smashing into the lunar surface.

Scientists hope to confirm that the debris thrown up by the Centaur collision contains water ice. There is good reason to expect that this will be the case, as hydrogen has already been detected spectroscopically in permanently-shadowed craters near the pole.

Sky Notes

October 2009

Compiled by Roy Gretton



British Summer Time ends on October 25th. Clocks go back one hour at 2 a.m. on that date.

PHASES OF THE MOON

Full Moon occurs close to sunrise on October 4th

Last Quarter occurs in the morning of the 11th

New Moon occurs in the early morning of the 18th

First Quarter occurs shortly after midnight on the 26th

THE PLANETS

Mercury reaches greatest western elongation on October 6th, and the first two weeks of this month provide the best opportunity for observing the planet in the morning sky in 2009, although at best, Mercury will be only 18 degrees from the Sun. Look for a bright “spark” rising in the east as the sky begins lighten prior to dawn. On the morning of October 8th, Mercury (magnitude -0.7) will be only a third of a degree away from Saturn (magnitude 1.1), a spectacle that should be observable with binoculars if the eastern sky is clear.

Venus has been a brilliant object in the morning sky throughout the summer, but is now drawing closer to the Sun, and fading. At the start of October it will still be 22 degrees above the eastern horizon at sunrise, 25 degrees from the Sun, and shining at magnitude -3.8 .

Mars continues to move away from the Sun in the morning sky, and now rises before midnight. It can be found in the constellation of Gemini. In mid-October it will be shining at magnitude $+0.6$, and have an apparent diameter of seven arcseconds.

Jupiter continues to dominate the evening sky, appearing as a bright off-white object low in the south. A small telescope will reveal the cloud-belts, and the four Galilean satellites performing their constant movements around the planet.

Saturn has emerged as a morning object after passing through conjunction with the Sun last month. It will be far too low in the sky for detailed examination for some time yet, but the appulse with Mercury on October 8th (see above) may be of interest.

Uranus is fairly well-placed for observation this month. It is about three degrees south of the celestial equator, in the constellation of Pisces. At magnitude 5.8 it is an easy binocular object.

Neptune is a much fainter target (magnitude 7.9) in the constellation of Capricornus, 14 degrees south of the celestial equator.

METEORS

The **Orionids** reach their maximum activity on October 20th in very favourable circumstances, with the Moon having just passed New. Look for these fast moving meteors, which often leave visible trails, in the early mornings between the 19th and 22nd of October.

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.

Nottingham University Event

Dr Amanda Bauer of the Nottingham Astronomy Group, Nottingham University, has invited NAS members to take part in their "**Space Day and Moon Watch**" at Nottingham Castle by bringing telescopes. There is room for 2 or 3 more telescopes at the event.

This will take place on the 31st October, from 3pm to 10pm.

Further details for the event can be found at

<http://nottsiya2009.pbworks.com/Space-Day-and-Moon-Watch>.

If you are interested please send a reply to nottinghamastro@yahoo.co.uk or let a committee member know at the 1st October meeting.

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 1st October 2009

British Geological Survey, Keyworth
8.00pm (Doors open 7.30pm)
Talk: '**Sounding out the Sun**'
Dr Roger New
Sheffield Hallam University

Thursday 5th 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 3rd 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 7th January 2010

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

Thursday 4th 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 4th March 2010

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

Thursday 1st April 2010

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

Thursday 6th May 2010

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

Thursday 3rd June 2010

British Geological Survey, Keyworth

8.00pm (Doors open 7.30pm)

Talk: **'Is there or has there been Life on Mars?'**

Prof. Mark Sims

Physics and Astronomy Department

University of Leicester

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

Lincoln Astronomical Society are holding a convention on 10th October to celebrate their 50th anniversary

The speakers are:

Paul Money FRAS. The subject of his talk is 'Space Observatories Roundup'.

Mark Hurn of the University of Cambridge . The subject of his talk is 'Failed to find Neptune '

Peter Rea of Cleethorpes Astronomical Society. The subject of his talk is 'Panoramic Moon'.

Dr Andy Longmore of the Royal Observatory Edinburgh . The subject of his talk is 'Astronomical Adaptive Optics (Taming Atmospheric Seeing)'

Professor Barrie Jones of the Open University. The subject of his talk is 'Pluto Sentinel of the Solar System'

Lincoln AS are hoping to have members of all the nearby societies at the event. Admission is by ticket only, price £10 per person. Please see their website www.lincolnastronomy.org for more details.

Please email Phil Norton if you wish to buy tickets.

phil@lincolnastronomy.org

Editor's Note: I attended the convention for Lincoln's 40th anniversary, along with several other members of the NAS. It was an enjoyable, well-organised event, held at the Lincoln Astronomical Society's observatory and adjacent lecture room.

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

Vixen single-axis (Right Ascension) drive motor and hand controller to fit Great Polaris or GP-DX equatorial mount.

Also battery case for use with the above.

£28

Email the Editor: roygretton@hotmail.co.uk

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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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

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) 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.
