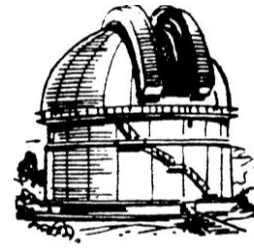


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# Journal

of the



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## Nottingham Astronomical Society

February 2009

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### Inside this issue

- Sky Notes for February (*highlight: Comet Lulin*)
- E-services
- Diary Dates
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- Society Information

**Thursday 5<sup>th</sup> February**

at the

**British Geological Survey**

Nicker Hill, Keyworth

**8 pm** (doors open at 7.30pm)

**Tonight we welcome**

**Dr Paul Roebuck**

whose talk is entitled

**‘The time has come..!’**

### **IBEX**

The Interstellar Boundary Explorer (IBEX) is a NASA spacecraft that has begun building the first maps of the edge of the Solar System. IBEX uses energetic neutral atom (ENA) imaging to create images of the interactions between the million kilometre-per-hour solar wind emitted in all directions by the Sun, and the low-density material that lies between the stars (the interstellar medium). The solar wind blows out a bubble, called the heliosphere, into the medium. The boundary where the heliosphere meets the medium is considered to be the end of the Solar System environment, and the beginning of interstellar space. The interactions at the boundary create neutral atoms, some of which rebound back towards Earth, and it is these that IBEX detects. Each ENA sensor uses a charge-exchange process that converts incoming neutral atoms into charged ions, enabling them to be analyzed. IBEX's sensors look out from opposite sides of the spacecraft, perpendicular to the craft's Sun-orientated spin axis. As IBEX spins at four revolutions per minute, the incoming ENAs gradually build a circular swath that appears as a crescent on the map. As the spacecraft's spin axis tracks the Sun, the swaths move across the sky and thus complete the image.

# Sky Notes

## February 2009

Compiled by Roy Gretton



### PHASES OF THE MOON

First Quarter occurs late in the evening of February 2<sup>nd</sup>  
Full Moon occurs on the afternoon of the 9<sup>th</sup>  
Last Quarter occurs in the evening of the 16<sup>th</sup>  
New Moon occurs in the early hours of the 25<sup>th</sup>

### THE PLANETS

**Mercury** is a difficult target for observation this month. Although the planet reaches greatest western elongation, 26 degrees from the Sun, on February 13<sup>th</sup>, it will be less than 8 degrees above the southeastern horizon at sunrise. Thereafter it moves back closer to the Sun.

**Venus** is at her best this month, reaching greatest brilliance (magnitude -4.5) on February 19<sup>th</sup>. The planet appears as an unmistakable white star in the southwest in the late afternoon, and remains visible until after 8 p.m. Even in small telescopes the crescent shape will easily be visible. But make the best of this opportunity, as Venus will have disappeared completely before the end of March.

**Mars** continues to be unobservable this month.

**Jupiter**, too, is virtually unobservable.

**Saturn** rises at about 8.30 p.m. at the beginning of February, and then is visible for the rest of the night as a first-magnitude object in the constellation of Leo. Telescopic observation will be interesting, with the ring-system appearing almost edge-on as viewed from Earth, and difficult to detect in small telescopes.

**Uranus** and **Neptune** are too close to the Sun to be observable this month.

### METEORS

There are no notable meteor showers in February.

### VARIABLE STAR: Algol

There are **five** minima of this **eclipsing binary** visible from the UK this month. They occur on February 3<sup>rd</sup> (5.20 am), the 6<sup>th</sup> (2.05 am), the 8<sup>th</sup> (10.55 pm), the 11<sup>th</sup> (7.50 pm) and the 26<sup>th</sup> (3.50 am). The star dims from its normal brightness (magnitude 2.1) to magnitude 3.4 over a period of 4.8 hours.

**COMET 2007 N3 (Lulin)** is expected to reach maximum brightness in the final week of this month. At magnitude 6 it will (theoretically) be on the fringe of naked-eye visibility, but in practice you will need binoculars or a telescope to find it. The comet's hyperbolic orbit suggests that this could be its first visit to the inner solar system, and so unpredicted outbursts are always possible. The closest approach to Earth (0.41 AU) occurs on February 24<sup>th</sup>, when the comet may brighten to 5<sup>th</sup> magnitude. Several factors conspire to make this a good opportunity for northern-hemisphere observers:

1. At its brightest, the comet will be well away from the Sun (132 degrees).
2. Maximum brightness more or less coincides with the New Moon.
3. The comet will be moving northwestward from Virgo into Leo, passing south of Saturn on February 23-24<sup>th</sup>, and just south of Regulus on the 27-28<sup>th</sup>, potentially making it an easy target to find.

By March 11<sup>th</sup> the comet will be climbing high into Gemini, but will be fading by then, and sharing the sky with the Full Moon... so let's hope for clear skies in late February!

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## **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](mailto: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.*

## DIARY DATES 2009

### 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 5 February 2009

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

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

#### Thursday 5 March 2009

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

Talk: **'A Long Time Ago in Galaxies Far, Far Away'**  
**Dr Amanda Bauer**  
of the School of Physics & Astronomy, University of Nottingham

#### Thursday 2 April 2009

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

Talk: **'The Little Engine That Could: How Black Holes Shape Our Universe'**  
**Dr Olivia Johnson**  
of the School of Physics & Astronomy, University of Nottingham

#### Thursday 7 May 2009

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

Talk: **'The Lost Gardens of Fireside:  
Where did James Nasmyth live?'**  
**Kevin Kilburn FRAS**

#### 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 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

<p><b>Thursday 1 October 2009</b>  British Geological Survey, Keyworth  8.00pm (Doors open 7.30pm)  Talk: '<b>Sounding out the Sun</b>'  <b>Dr Roger New</b>  Sheffield Hallam University</p>
<p><b>Thursday 5 November 2009</b>  British Geological Survey, Keyworth  8.00pm (Doors open 7.30pm)  <b>Annual General Meeting 2009</b>  please see the Agenda in this issue of the Journal</p>
<p><b>Thursday 3 December 2009</b>  British Geological Survey, Keyworth  8.00pm (Doors open 7.30pm)  Topic to be confirmed</p>
<p><i>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</i></p>

### **ADVANCE NOTICE**

The Mansfield and Sutton Astronomical Society and the Nottingham Astronomical Society will be presenting an astronomical event at Wollaton Hall, Nottingham, on Saturday, 14<sup>th</sup> March as part of the International Year of Astronomy celebrations. Further details in next month's Journal.

### **A message from Ken Willoughby concerning the planned visit of Captain Eugene Cernan, Commander of Apollo 17 & the Last Man to Set Foot on the Moon**

Unfortunately we have to postpone the visit of Cernan until March 2010. Due to a really hectic schedule it would mean him catching a later flight than I want him to. This means he would not have time to visit the 2 schools on Thursday afternoon (no school visits = no education grants = increase cost of tickets.) The whole point of these visits is to give schoolchildren the chance to meet and talk to Apollo Astronauts. I can return your money or you can use it as a deposit for Lovell on October 2<sup>nd</sup>, which is a definite.

## Small Advertisements

### **Equipment for sale**

Celestron 90-degree erecting diagonal £10  
Orion 9x50 erect-image finder (without mounting rings) £10

**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](mailto:j_aitken@hotmail.co.uk)

## 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: Normal £25.00

Concession £12.50

Half-year\* £12.50

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

## **ORDINARY COMMITTEE MEMBERS:**

**Joe Sowerby**

**Dorothy Sowerby**

**Kevin Greally**

**David Anderson**

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## **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**

Adult	£25
Junior (under 18 years)	£12.50
Concessions	£12.50

Subscriptions become due on 1 October. Half-price subscription is charged if joining after 1st April. Please make cheques payable to: Nottingham Astronomical Society.

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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](mailto: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.

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