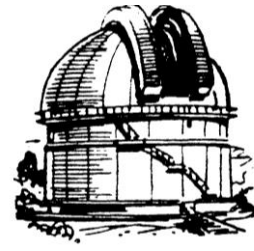

Journal

of the



Nottingham Astronomical Society

December 2005

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Thursday December 1st
7.45 p.m.

at the Djanogly City Academy
(doors open at 7.30 p.m.)

Tonight is a

MEMBERS' EVENING

one of the planned activities being a discussion on the regular use of our observatory, to be followed by a Quiz with Prizes

PLUTO'S NEW MOONS

On October 31st a team of astronomers who had been analysing images obtained by the Hubble Space Telescope announced the discovery of two previously-unknown satellites of Pluto. The discovery images were taken on May 15th 2005, and show both satellites at an amazingly faint magnitude 23. Their sizes are unknown at this early stage. Both of the new satellites have nearly circular orbits in the same plane as Pluto's large moon Charon, and are about 65,000 km and 49,000 km from the planet.

Sky Notes

2005 December

Compiled by Roy Gretton

All times quoted are U.T.



The **Winter Solstice** will occur on December 21st

The **earliest sunset** will occur on the 12th

The **latest sunrise** will occur on the 30th

*The times of sunrise and sunset change by only a matter of seconds
on the days either side of these dates*

PHASES OF THE MOON

New Moon occurs in mid-afternoon on December 1st

First Quarter occurs in mid-morning on the 8th

Full Moon occurs late in the afternoon of the 15th

Last Quarter occurs in the early evening of the 23rd.

This month the Moon is closest to Earth on the 5th, and furthest from Earth on the 21st.

THE PLANETS

Mercury reaches greatest western elongation on December 12th when it will be 21° from the Sun in the south-eastern sky before dawn. The planet will be 13° above the horizon by sunrise, and shining at magnitude -0.4, so it should be easy to spot through binoculars, provided that you have a low eastern skyline.

Venus was at greatest eastern elongation early last month, and is now moving closer to the Sun. In spite of this, the planet is getting progressively easier to observe in the southwest after sunset, because its altitude above the horizon is increasing. By the end of this month it will be 13° above the horizon at sunset (as compared to only 8° in early November). Venus will appear as a brilliant white star (magnitude -4.5) and through a telescope will be a thin crescent. On December 4th the crescent Moon will be just 3° south of Venus.

Mars has been delighting us recently, being visible as a bright orange-hued star for the whole of the night (meteorological conditions permitting). It is now getting past its best, but telescopic observers should still be having excellent views as December begins. At this time the angular diameter of the planet will be nearly 17 arcseconds, but by the end of the month this will have shrunk to

12 arcseconds. By then it will be due south as early as 20 hours, and be setting at about 03.30.

Jupiter will be passing from Virgo into Libra as December begins. At this stage it will be a fairly difficult pre-dawn object, but by the end of the month it will be rising before 04 hours, so it should be easy to spot in the southeast if you happen to be up at (say) 07 hours. By then its magnitude will be -1.8, and its angular diameter 33 arcseconds.

Saturn is now becoming an object of major interest in the sky around midnight, so after you have finished looking at Mars you might like to turn your attention further east into the constellation of Cancer, and take a look at this ringed planet. By the end of the month its equatorial diameter will have increased to 20 arcseconds, and its brightness will be close to magnitude zero.

Uranus appears as a pale greenish disc shining at magnitude 5.7 in the middle of the constellation of Aquarius, but the period during which it may be observed is diminishing, as it will be setting shortly after 21 hours by the end of the month.

Neptune lies about 23° west of Uranus, in the constellation of Capricornus. It will be almost unobservable by the end of December, as it will be only about 10° above the horizon at sunset.

METEORS

The **Geminids** are the most important meteor shower in December, and one of the best of the whole year. However this month conditions are unfavourable as there will be bright moonlight on the night of maximum activity (December 13th).

There are much better conditions for the **Ursids** which reach their maximum on December 22nd. However they are much less prolific than the Geminids.

A MESSAGE FROM OUR NEW PRESIDENT

Dear fellow NAS members, for my sins I was elected as your new president at last month's AGM. Pointedly when I agreed to stand at the committee meeting before the AG, our outgoing president (Greg) asked me what I thought I ought to achieve for the society! He was of course bang on target. I and your committee need to have a clear and agreed programme of work and at our last meeting your committee agreed that we had several targets for this year:

- This year the society celebrates its 60th anniversary
- We need to formally open our large telescope observatory
- We need to bring the observatory into regular use.
- We need to continue with our excellent program of society lectures
- We ought to see if we can expand the membership base a little
- We need to set ourselves our next society challenge.

The committee agreed that it was appropriate to combine the first two targets on a Saturday in May. For practical purposes the telescope opening will need to be an afternoon event in daylight and this will be followed by a formal dinner to celebrate our anniversary. As you will appreciate planning for this event is a large project and I would ask members to assist with it in any way they can. We are going to need more effort on this event than the committee can provide. Please contact me if you can help.

I am not sure how many of you have been up to the observatory to look through our new telescope but it is now fully functioning with new set of steps that makes the observing experience a stress-free activity. Hands-on experience with using the telescope points up that we need to do something about charging the batteries, that we may need a better focusing mechanism and that we all need to learn how to drive the 'Go To' computer. I am confident that our Directors of Instruments and Observing will address these issues. I see it as vital that our membership engages in regular, informal use of our telescope on clear nights, apart from formal society meetings held there.

I am confident that our secretary has in hand a great programme of lectures for the coming year. However, how important is our current society meeting venue to members? If it were possible to move the meetings to (say) Keyworth, would this inconvenience people? I suggest this because if society meetings were held nearer the observatory (and the skies were clear) one could then go on to do some observing. Please let the committee know what you think.

I understand the society membership currently stands at about 25. It is my view that the society would be healthier with slightly more members (say 40) and now we have our telescope, I think that we ought to try and attract more members. I am sure that our anniversary and the telescope opening will be opportunities to do this which we should not pass up.

For the future there are several targets we can set our sites on:

- We need to address how we rotate the Telescope Dome
- We need to improve the road from the Severn Trent's tarmac to the observatory.

Both these projects will probably require the society to seek grants for funding. Are there any other projects that the membership can suggest?

Fred Hopper

NAS Observatory and large telescope:

Observing Sessions

As noted in the President's message in this issue of the Journal, the new observing steps have been installed in the observatory dome. Many thanks are due to Joe & Dorothy Sowerby, who arranged for delivery of the steps to their home and (with help from relatives and friends) transported them to the observatory site on 19th November. John Hurst and Greg Eisenhauer then helped manoeuvre the steps through the opened dome shutter. Joe & Dorothy report that the steps are very suitable for the purpose of reaching the telescope eyepiece.

The way is now clear for observing sessions with the large telescope. John Hurst has agreed to be the society's Director of Observing and will help co-ordinate observing sessions.

So at this point, it's over to the membership! The NAS committee are keen to hear proposals for ways of organising the observing sessions.

Please bear in mind that

- members who wish to use the telescope will need training in how to safely operate the dome shutter and telescope controls, and on the security procedure with Severn Trent Water
- when using the observatory, we must have a minimum of two people at the site
- we can use our website(s) to notify members of observing session dates, but will need arrangements for unsuitable weather conditions.

We can discuss the use of the observatory when we meet for the "Members Evening" at Djanogly City Academy on 1st December. Do please come along and put forward your ideas.

Paul Stocks
NAS Secretary

DIARY DATES

The December meeting

Our meeting on Thursday 1st December was to have featured a talk about “Cosmic Collisions” by Dennis Ashton, Director of Sheffield Hallam University Star Centre. Unfortunately, Dennis has at short notice had to cancel due to personal circumstances which prevent him from travelling on the day. Dennis sends his apologies and hopes to come to Nottingham to give us the talk at a later date. So instead of the talk we shall have a **Members’ Evening** that will include a short quiz.

Meetings of the Nottingham Astronomical Society

Our programme of meetings over the coming months is below.
Don’t forget to check our website:
<http://beehive.thisisnottingham.co.uk/nottinghamastro>
for the latest updates and details of Observatory work sessions.

Thursday 1 December 2005

Djanogly City Academy 7.30pm
Members’ Evening including Astro Quiz

Thursday 5 January 2006

From 7.30pm
Observatory Evening
A chance to do some observing with the large telescope, weather permitting!

NAS observatory site
(No meeting at Djanogly this month)

Thursday 2 February 2006

Djanogly City Academy 7.30pm
“The Discovery of Pluto”
a talk by
Martin Lunn MBE

A selection of astronomy books will also be on display to browse and buy.

DIARY DATES (2)
Other Events

National Space Centre
Exploration Drive, Leicester, LE4 5NS

22 November 2005 to 8 January 2006

"This Christmas the Invasion Begins"

This Christmas come out from behind the sofa and meet Doctor Who Up Close at the National Space Centre. Meet Rose and the Doctor as they travel through time in the Tardis, see the destruction of Big Ben by a certain Space Pig, get the inside track on the awesome Slitheen and face all your fears as you confront the Daleks (it wouldn't be Doctor Who without the Daleks!) Doctor Who Up Close is free for all ticket holders to the National Space Centre.

10 and 11 December 2005

Dalek Invasion

The Dalek Builders Guild will be out in force with Daleks from the last 40 years invading the National Space Centre. Further details and admission prices: www.spacecentre.co.uk

Science Museum
South Kensington, London

The Science of Aliens

The Science of Aliens is a bold and exciting new exhibition exploring our fascination with aliens and the real science underlying the possibilities for alien life. Details: www.sciencemuseum.org.uk

11 January 2006

Scheduled launch date of NASA's New Horizons spacecraft to Pluto, on an Atlas 5 rocket from Cape Canaveral's Complex 41. The probe will travel through the solar system for ten years before it encounters Pluto.

Space.com has up-to-date details of the mission.

Small Advertisements

For Sale

Maksutov 6-inch by Drew. 2x2-inch finderscopes, equatorial tripod mount with circles, eyepiece tray, carry box. Selection of eyepieces, Barlow lens, star diagonals.

Buyer collects. **£495** for prompt sale.

**Telephone Peter Davison
on 0115 923 0040**

For Sale

**8¾-inch Newtonian telescope on
Dobsonian mount**

Built by David Lukehurst.
65x and 250x eyepieces, finderscope.
3 years old.
Hardly used, very good condition.

£375 or near offer

**Telephone Terry Naylor
on 0115 9815968**

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You are always made welcome at our shop or a telephone call to Lynda will bring you our latest catalogue

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

PRESIDENT:

Fred Hopper

e-mail: fwmh@nerc.ac.uk

HONORARY VICE PRESIDENT

Alan Heath (Ex. Dir. BAA Saturn Section)

VICE PRESIDENTS:

David Lukehurst

e-mail: gildor@ntlworld.com

website: www.dobsonians.co.uk

Dr Roy Gretton

e-mail: roy@gretton.surfonwater.com

HONORARY SECRETARY:

Paul Stocks

Tel: 0115 914 8185

e-mail: nottinghamastro@yahoo.co.uk

TREASURER:

Dr Mike Provost

e-mail: mike.provost@ntlworld.com

JOURNAL EDITOR:

Dr Roy Gretton

e-mail: roy@gretton.surfonwater.com

CURATOR OF INSTRUMENTS

David Lukehurst

e-mail: gildor@ntlworld.com

DIRECTOR OF OBSERVING

John Hurst

CAMPAIGN FOR DARK SKIES:

Duncan Collins

ORDINARY COMMITTEE MEMBERS:

Joe Sowerby

Dorothy Sowerby

Meetings

Formal monthly meetings, with speakers, are held on the first Thursday of each month (except August, and occasionally other months as announced) at

Djanogly City Academy, Room 105

Sherwood Rise, Nottingham NG7

Doors open	7.30pm
Meetings Start	7.45pm
Meetings end	10.00pm

Non-members are very welcome at our meetings and there is no charge for the first meeting. We make a small charge of £2.50 adults, £1.25 juniors to non-members after their first attendance. Invited guests are admitted free of charge.

Annual Subscriptions, 2005-06

Full Adult:	£25
Junior (<i>17 years or under</i>)	£12.50
Concessions	£12.50
<i>(Full time student, UB40, etc)</i>	

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 further information about the **Nottingham Astronomical Society**, or would like to become a member, please contact the Honorary Secretary, Paul Stocks, at the address given above, 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.
