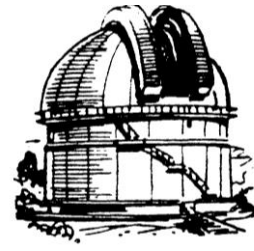

Journal

of the



Nottingham Astronomical Society

July 2005

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Thursday 7th July

at the Djanogly City Academy

Doors open from 7.30pm

This evening we welcome

Dr Roger New

of Sheffield Hallam University

who will be speaking on

Extra-Solar Planets

SHALLOW IMPACT?

NASA's Deep Impact mission reaches its climax this month. On July 4th at about 06.00 UT (7 a.m. BST) a one-metre wide 370 kg copper "bullet" fired from the spacecraft is scheduled to strike Comet Tempel 1 at a speed of over 10 km per second. It is expected to make a crater up to 100 metres across in the 14 km long nucleus of the comet.

Some amateur observers are hoping to be able to see (or image) the results of the impact. This will not be possible from Britain as the Sun will have risen long before the event, and the comet will be below our horizon at the crucial time. Ideally you need to be on the opposite side of the Earth! There is just the outside chance that the impact will cause the comet to brighten sufficiently to become visible in modest sized telescopes, so UK observers may be in with a chance about 18 hours later.

Comet Tempel 1 is currently a few degrees north of Spica in the constellation of Virgo, and moving south-eastwards. It was discovered by Wilhelm Tempel in 1867, and orbits the Sun every five and a half years.

Sky Notes

2005 July

Compiled by Roy Gretton

All times quoted are U.T.



THE SUN

Earth will be at aphelion on July 4th, when we shall be 5 million kilometres further from the Sun than we were on January 2nd. *However this doesn't preclude the possibility that we shall have a hot summer!*

PHASES OF THE MOON

New Moon occurs at noon on July 6th.
First Quarter occurs in mid-afternoon on the 14th.
Full Moon occurs in the late morning of the 21st.
Last Quarter occurs in the early hours of the 28th.

Perigee occurs this month on the *same date* as Full Moon, which will consequently appear relatively large – even larger than it did last month.

THE PLANETS

July is a poor month for observing due to the lack of true darkness, and this year it is particularly lacking in good opportunities for seeing the planets. However, if you happen to be in a location with a low western skyline and a clear sky on July 8th, you might like to take the opportunity to spot Mercury, Venus and the crescent Moon (in that order from the horizon) soon after sunset. The three will be close together in the WNW on that date.

Mercury reaches greatest eastern elongation (26°) early on July 9th, and so will be observable low in the northwest after sunset in the first half of the month.

Venus is much easier to spot than is Mercury, due to its greater brightness and increasing elongation later in the month. However you will still need a fairly unobstructed western skyline for observation.

Mars is a morning object in the constellation of Pisces, and at last it is beginning to be an easier object to observe. By the end of the month it will be a prominent object in the pre-dawn sky, with a magnitude of -0.4 and an apparent diameter of 11 arcseconds.

Jupiter is rapidly sinking into the evening twilight, but can be observed for a short while after sunset in the first part of the month. On the 13th the planet will be joined by the half-Moon to make a nice pairing in the evening sky.

Saturn is unobservable this month, reaching conjunction with the Sun on July 23rd.

Uranus and **Neptune** can be observed in the morning sky, but this will not be easy. Uranus (magnitude 5.7) is close to Lambda Aquarii, and Neptune (magnitude 7.8) is in the same area of sky, close to Iota Capricorni.

METEORS

Best to wait till next month!

Astronomy Magazines Review

By Fred Hopper

As you may all know the BBC 'Sky at Night' program published a new magazine to compliment the program (in June) and this prompted me to go down to the bookstore and get one of all the Astronomy magazine I could see. As I am a relative newbie amateur astronomer, I jotted down what I expected from these magazines (in no particular order!):

1. Advertises (about the latest telescopes) to drool over!
2. A second hand column
3. Articles about what the big boys, professional astronomers were up to
4. Early bird alerts regarding upcoming astronomically related events
5. Educational pieces for amateur astronomers
6. Local events and club news
7. Nice pictures of exiting astronomical objects (e.g like Eta Carinae, Hoag's Object and black holes) with plain English explanations.
8. How to guides for amateur astronomers
9. Star charts, moon & planet map pullouts
10. Tips about telescopes for armatures
11. *A good read and value for money*

Having read all the magazines, here are my subjective feelings about how they lived up to my expectations.

Astronomy (USA) £2.95

1. OK but in \$ - (seems to have more 'new' stuff than the UK magazines!)
2. US magazine not relevant to UK
3. Rather sparse in this area although it did cover the Temple 1 impact project
4. Rather run of the mill.
5. This area was very well covered with articles on Galaxy Evolution, Galaxy Clusters Collisions, the Sun Cycle mechanisms, how and where stars form heavy elements - enjoyed this!
6. Not applicable to UK
7. Nothing really grabbed my attention
8. This was a bit sparse
9. A very good guide to the moon supplement was included (which I will keep!)
10. There was a good section on telescopes and basic imaging

Sky & Telescope £2.95

1. OK but in \$ (seems to have more 'new' stuff than the UK magazines!)
2. US magazine not relevant to UK
3. The Temple 1 impact project article was very good but overall, the layout of the magazine did not point up what was going on clearly.
4. This area was quite comprehensive and went into a lot of useful detail to help the amateur.

5. The magazine seemed to be aimed at observers rather than including astrophysics theory.
6. Not applicable to UK
7. Nothing really grabbed my attention
8. Being observationally orientated this magazine did have good information to assist the amateur astronomer to observe things.
9. A rather poor sky chart was included
10. This area was there, but for me it seemed rather superficial. (I expect the normal clientele of this magazine would know what they were doing already!)

Astronomy Now £2.95

1. Great, as a UK Magazine, all prices were in £ (but I thought the exchange rate was \$1.83 to the £ - not 1 for 1) – products also seem to be available later than in the US.
2. There is a modest classifieds section
3. This magazine had a wide variety of articles on what the professionals were doing, ranging from neutrino detector telescopes in the Antarctic, the Swift and Hubble space telescopes, ESA's future plans, the future of Voyager, ideas for a pinhole camera space telescope, to gamma ray bursts emanating from thunderstorms on earth. This was a good read!
4. There was a sizable section covering what to look for (and how) in our summer sky. There was also a useful article giving detailed background information about some of the deep space objects one could observe which made for added interest.
5. The magazine contained a very good supplement about history of telescope and observatory development over time and how man has used them (and space ship observatories) to explore space.
6. There is a Society news section and a good article on a place you can go to stay and stargaze in Norfolk
7. There were some good Hubble birthday Images that got my attention and good pictures of Europa's surface that caused me to read on.
8. This area was there but I found it treated in a rather superficial manner
9. A clear sky chart was included
10. There was a slim article on Focal ratios that I thought was a little confusing but the supplement had a good section on the various telescope designs.

Night Sky £2.95

1. OK but in \$ (my impression was that there were slightly fewer than in the other US magazines).
2. US magazine not relevant to UK
3. This magazine did not seem to provide content in this area although there was a good article on how to track the space station.
4. I could not see any content that particularly covered this area although there was information scattered in other articles.
5. This magazine is written to be educational, the whole content and layout is designed to inform a young (and newbie) astronomer (e.g. how to star hop). There were articles on the Whirlpool Galaxy, Jupiter and its moons, how stars were named and the difference between astronomy and astrology. A good read!
6. Not applicable to UK
7. To me the magazine was weak in discussing exciting objects; the Whirlpool Galaxy article was the best offering in this area.
8. This magazine has 'how to observe' for each of May and June very well explained and documented, it then goes on to deal with the detail of Draco, followed by an introduction where/how to look for globular clusters. A side note about the nature of Arcturus was very informative (– did you know it is quite large and old, not moving as part of the spiral arm but passing though the galaxy so fast that in ½ a million years will no longer be visible from earth!)
9. The star charts used in (8) are clear and well annotated.
10. There was a very good article on how to choose a scope for kids and how to master an Equatorial Mount – reminded me somewhat of fighting bagpipes!

BBC Sky at Night (+DVD) £4.25 (Note this is the first edition of this magazine)

Note: the magazine came with a DVD (I presume they all will) on which there were software updates for telescope controllers, a virtual planetarium, April's episode of the 'Sky at Night' the Cassini-Huygens mission images etc. Also in places in the magazine there were indications where more details could be found on the DVD.

1. Great, as a UK Magazine, all prices were in £
2. There did not seem to be a classified section perhaps this will be added as the magazine matures and gains a readership.
3. There were a number of well written, readable articles on astronomical and astrophysical subjects provided covering observation of the Sun and solar physics, the Isaac Newton Group of Telescopes, the Cassini Mission and Nebulae – all a good read!
4. There is a good 'News' section which covers what is going on what's and up-and-coming in the astronomical world.
5. The whole layout of the magazine provides an educative journey for the reader and there is a particular 'Masterclasses' section which, in this issue, dealt with the theory and place of Black Holes in our universe.
6. There is a whole section both on the DVD and in the Magazine on UK Clubs and events.
7. There are loads of nice pictures of astronomical objects well scattered though all the articles. No one portion can be pulled out, the standard seems very high and draws the eye into well written, understandable explanations that leave the reader keen to know more on the subjects covered. (e.g. high energy gamma emitters at the Galactic centre, the universe's oldest stars, transient Lunar Phenomena)
8. The magazine provides well written guides for what to observe in the June sky but this pales in comparison to the information provided and explained in the DVD's Virtual Planetarium – this is very good indeed and provides a lot of ancillary information – (e.g. on the Rho Cassiopeia hyper giant star)
9. The magazine contains a supplement which was on one side a large picture of the moon and on the other an annotated diagram of the features to be seen - of the two moon pullouts in the magazines, I think this was the best.
10. There were superb articles on how to align a telescope mount, how to clean a telescope mirror (if you had to) and a good review of starter scopes and imagers.

I was going to do a table here ranking all the magazines, but on reflection I felt that this would be a little trite. As amateur astronomers it is obvious that we have a range of superb magazine literature available to us, targeted at the various needs and interests we have. In many respects therefore all these magazines complement each other and it was surprising just how little content overlap there was (apart from the big event coverage e.g. Cassini).

For me a UK magazine is more pertinent to my needs than a US magazine and of the two UK publications, (with its DVD add on), the BBC Sky at Night would be my choice. However there is quite a large price discrepancy with Astronomy Now and to keep my loyalty the future content and quality of the BBC magazine will have to match this first issue.

@Fred Hopper's articles are licensed under a [Creative Commons License](#).

DIARY DATES

Meetings of the Nottingham Astronomical Society

Our programme of meetings onward into 2006 is below.

Don't forget to check our website: <http://beehive.thisisnottingham.co.uk/nottinghamastro>
for the latest updates.

Thursday 7 July 2005

Djanogly City Academy 7.30pm

"Extra-Solar Planets"

Dr Roger New, Sheffield Hallam University

August: Summer break, no meeting

Thursday 1 September 2005

Djanogly City Academy 7.30pm

"Why galaxies look the way they do: The origin of galaxy morphology"

Dr Alfonso Aragon-Salamanca

University of Nottingham

Thursday 6 October 2005

NAS Observatory site from 7.30pm

Observatory Evening

All members and guests are welcome. For directions please e-mail

nottinghamastro@yahoo.co.uk

(There is **no** Society event at Djanogly this evening.)

Thursday 3 November 2005

Djanogly City Academy 7.30pm

NAS Annual General Meeting 2005

Thursday 1 December 2005

Djanogly City Academy 7.30pm

"Cosmic Collisions"

Dennis Ashton

Director, Sheffield Hallam University Star Centre

Thursday 5 January 2006

Djanogly City Academy 7.30pm

[Topic to be arranged]

Thursday 2 February 2006

Djanogly City Academy 7.30pm

"The Discovery of Pluto"

Martin Lunn MBE

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

DIARY DATES (2)
Other Forthcoming Events

4 July 2005
TV: BBC One & Two
Stardate: Deep Impact

The popular Open University & BBC Two series returns on **Monday 4 July 2005** to cover **NASA's Deep Impact** mission. <http://deepimpact.jpl.nasa.gov/>

The programme is being hosted by Dr Brian Cox, particle physicist (at CERN in Switzerland, Manchester University, and Fermilab in the USA) and former member of the rock-band D:ream - along with Dr Lucie Green, who co-hosted prior Stardate programmes.

There will be two programmes on the day - one during the day-time on BBC One (likely to be 11.45am), which will broadcast the mission's first images, and one in the evening on BBC Two (likely to be 8pm), which will detail the days events. **Please check TV listings for details & times.**

9, 10 & 11 September 2005
The Herstmonceux Science Centre
Astronomy Festival 2005

"THE BIGGEST ASTRONOMY WEEKEND IN THE UK"

Includes viewing through the historic telescopes on Friday & Saturday evening (weather permitting), daily programme of lectures, tours around the telescopes, solar telescope, trade stalls & over 90 hands-on science exhibits.

Herstmonceux Science Centre, East Sussex.
Details: www.the-observatory.org/

Saturday, 12 November 2005
Leeds Astromeet

Doors open 9.00 am

First speaker 10.00 am, Last speaker 5.10 pm

Tickets on the door: £8.00

Venue: **Rupert Beckett Lecture Theatre, Leeds University**

see <http://tldynamic.leeds.ac.uk/leisure/detail.asp?ID=193>

The 10th Anniversary of the 'Leeds Astromeet', which is justly regarded as one of the premier events in the national amateur astronomy calendar.

Speakers: Professor John Dyson "Starburst Galaxies"

Professor Lionel Wilson "Recent findings on the Interaction between Volcanoes and Water on Mars"

Professor Sir Arnold Wolfendale "Albert Einstein: a Scientific Genius"

Professor Clive Ruggles - topic to be announced

Dr Allan Chapman "Thomas HEC Espin (1858-1934): Grand Amateur Astronomer, Philanthropist and Eccentric"

Further details can be found on the Leeds Astronomical Society website:
<http://www.leedsastronomy.org.uk>

Many thanks, Carl!

I would like to thank Carl Brennan for continuing to maintain the e-mailing list for the NAS Journal, after he had stepped down from his other duties as NAS Secretary and committee member. Carl set up the mailing list for the Journal, and I'm sure everyone in the Society appreciates this service.

From this month's issue onwards, Carl has handed over the mailing list to me - I will try to keep up the same high standard of service! The Journal will now be sent out to our e-mail subscribers from: nottinghamastro@yahoo.co.uk

This is a free service (please see later), so if you are reading this on paper and haven't yet subscribed to the e-Journal, just send me an e-mail. The electronic version of the Journal is a "Word" document, so you will need to have MS Word on your computer in order to read it.

Paul Stocks
NAS Secretary

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**

The Widescreen Centre

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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 £24
- Junior (17 years or under) £12
- Concession (*full time student, UB40, etc*) £12

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:

Greg Eisenhauer

Tel: 01949 875857

e-mail: greg.eisenhauer@ntlworld.com

HONORARY VICE PRESIDENT

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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

CAMPAIGN FOR DARK SKIES:

Greg Eisenhauer

ORDINARY COMMITTEE MEMBERS:

Joe Sowerby

Dorothy Sowerby

Fred Hopper

email: fwmh@nerc.ac.uk

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

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, 2004-05

Full Adult:	£24
Junior (<i>17 years or under</i>)	£12
Concessions	£12

(*Full time student, UB40, etc*)

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.
