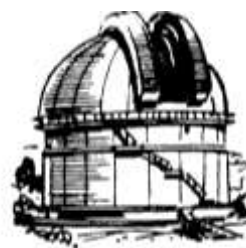

Journal

of the

Nottingham Astronomical Society

September 2014



Inside this issue

- Sky Notes for September
- Comet Jacques image
- NAS e-Services
- Diary Dates
- NAS Summer BBQ
- Vermin of the Skies?
- Advertisement
- Society Information

Thursday, September 4th

British Geological Survey

Nicker Hill, Keyworth

8 pm (doors open at 7.30pm)

Tonight we are holding a

Members' Evening

(open to all members and friends)

A New Observing Season is Under Way!

Conditions should be good for observing deep sky objects in the second half of this month (and at the very start of the month, before the Moon reaches First Quarter). September evenings tend to be mild, and darkness falls noticeably earlier night-by-night.

Some old favourites to be visited before they sink too low in the west are the two prominent globular clusters in Hercules (M13 and M92), and the Ring Nebula (M57) in Lyra. To the east of these lies the constellation of Cygnus, with its abundance of rich star fields. Here it can be difficult to pick out clusters of stars from the general background of the Milky Way. At the foot of the Cross of Cygnus lies the lovely double star Albireo, with its blue and gold components – always worth a visit, even with a small telescope. Close to Albireo lies the small constellation of Vulpecula with its most famous deep sky object, the Dumbbell Nebula (a planetary). Looking further east is Pegasus, with another outstanding globular cluster, M15. And as the evening wears on, Andromeda climbs steadily until its most famous galaxy, the giant spiral M31, is high in the southeast...

...and **Comet Jacques** is currently heading from Cassiopeia into Cepheus, having reached its closest approach to Earth (just over 52 million miles) on August 29th (*see Skynotes and image taken by the Editor*).

Sky Notes

September 2014

Compiled by Roy Gretton



All times are given in British Summer Time

The **Southward Equinox** (Autumnal Equinox for northern hemisphere observers) occurs on September 23rd. On this date the Sun will be directly over Earth's equator at half-past three in the morning.

PHASES OF THE MOON

First Quarter	12:11 pm on September 2 nd
Full Moon	2:38 am on the 9 th
Last Quarter	3:05 am on the 16 th
New Moon	7:14 am on the 24 th

This month the Moon is closest to the Earth on the 8th, and furthest on the 20th.

THE PLANETS

From time to time we pass through a period when there is a dearth of bright planets to be seen in our skies, as is true at present. Even the Moon is poorly placed in the evening (although the opposite is true as she wanes in the morning). We can however look forward to another great apparition of Jupiter throughout the coming winter, and in the meantime there are some wonderful deep sky objects to be observed.

Mercury is an evening object throughout September, reaching greatest eastern elongation (26 degrees) on the 21st. But, as is typical of evening apparitions of inferior planets in the autumn, Mercury will not be well placed for observation from the latitude of the UK, due to the shallow angle that the ecliptic makes with our horizon at this time of year. Hence Mercury will be setting only 30 minutes after the Sun on September 21st.

Venus is a morning object, but very difficult to observe this month as it moves toward the Sun. By mid-month its elongation will be only 10 degrees.

Mars, an evening object, is becoming increasingly difficult to observe, being well south of the celestial equator. On September 13th it moves from Libra into Scorpio, and by the close of the month its apparent diameter will have diminished to a mere 6 seconds of arc.

Jupiter, in the constellation of Cancer, will be rising nearly three hours before the Sun as September begins, and by the end of the month this will have increased to almost five hours, so for early risers it will become a prominent object in the eastern sky, shining at magnitude -1.9.

Saturn, in the constellation of Libra, is now well past its best during the present apparition. It hangs low in the southwest after sunset, having faded to magnitude +0.6, and by the close of September will be setting barely an hour and a half after the Sun.

Uranus is approaching its best position for observation this year, as it will reach opposition on October 7th. It is to be found in the constellation of Pisces, shining at magnitude +5.9 and having an angular diameter of 3.6 arcseconds.

Neptune is also well placed for observation, being due south soon after midnight, in the constellation of Aquarius. Its magnitude is +7.8, and its diameter a tiny 2.3 arcseconds.

METEORS

September isn't a great month for meteor showers, although there is usually a feeble "drizzle" of events close to the plane of the ecliptic at this time of year. Some of these are characterised as **Piscids**, which typically give a handful of meteors per hour at maximum.

COMET JACQUES (C/2014 E2) is a roughly 9th magnitude object, moving through Cassiopeia and into Cepheus in late August-early September. It is visible in good binoculars or a small telescope, and a suitable target for astro-imagers. The best advice is to consult a website such as www.heavens-above.com to find the position of the comet from night to night.



Comet Jacques imaged
by the Editor
at 10 pm BST
on 2014 August 19

*Canon 450D at the
prime focus of a 30-cm
f/5.3 Newtonian reflector*

Single exposure of
30 seconds at ISO 1600

The Nottingham Astronomical Society: E - SERVICES

Whether or not you are a NAS member, you can keep up to date with details of the Society's meetings and other events by visiting the NAS website: www.nottinghamastro.org.uk

NAS on Facebook

You are welcome to connect with other members and friends of the NAS on Facebook by going to: <http://www.facebook.com/nas.org.uk>

NAS Journal e-mailing list

To register for your monthly e-mailed copy of the NAS Journal, just e-mail secretary@nottinghamastro.org.uk

You don't have to be a Society member to take advantage of this service.

DIARY DATES 2014-2015

Monthly Meetings of the Nottingham Astronomical Society

Our programme for this year is shown below. Don't forget to check our website:

www.nottinghamastro.org.uk

for the latest information about the Society's meetings and for further information about the talks and speakers.

Our meetings are held on the **FIRST THURSDAY** of the month,
at the British Geological Survey, Keyworth, Notts. NG12 5GG

doors open at 7:30pm for 8pm start.

Thursday 4th September

Members' Evening – Non-members welcome

Thursday 2nd October

The Latest on the Sun

Dr Lucie Green

Thursday 6th November

2014 Annual General Meeting

Thursday 4th December

Into the Cosmic Ocean
The Dream of Travel to the Stars

Thursday 8th January

“It's Time for Astronomy!”

Dr Roy Gretton
Vice President, NAS

Invitation: Nottingham Astronomical Society Summer BBQ

Nottingham Astronomical Society will be hosting a BBQ at our Observatory Site on the weekend of the 6th/7th of September. As the event is weather dependent, we will select the day based on the weather forecast closer to the time. The start time will be 3pm.

We intend to have the following items at the observatory in order that you can take a look:

- The Outreach plan for 2015
- The Speakers schedule for 2015
- Solarscope views of any solar activity
- Various telescopes on display
- The Observatory & Large Telescope
- Radio Telescope set-up for detecting Meteors
- A display of the Observatory Upgrade plan marked out on the site for discussion
- Telescope collimation and advice service
- BBQ facilities and Refreshments (*inc. tea & coffee*)
- Temporary bathroom facilities onsite.

We would ask you all wherever possible to bring the following with you:

- A blanket or camping chairs to sit on
- Any food that you would like to BBQ (*please do not bring alcohol*)
- Any telescopes that you would like to demonstrate or receive some assistance with
- Additional clothing for cool/wet weather or night time observing
- A red torch if you have one to navigate in the dark

We look forward to seeing you, so **please email:** secretary@nottinghamastro.org.uk and let us know if you are coming (including numbers) as soon as possible by providing the following information. This will let us know how many of you to expect and we will send a confirmation (based on weather forecast) and details of how to find us and where to park a day or two before.

Please let us know:

- Your Name:
- Names of any guests accompanying you (supervised children are welcome):
- Availability Sat 6th September (Yes/No):
- Availability Sun 7th September (Yes/No):
- Astronomical Equipment you intend to bring for collimation or advice:
- Astronomical Equipment you would like to set up to show to other members (you may need to come earlier to help set this up for the day).
- We are also looking for volunteers to help your committee set up and run this event, if you are interested in helping please say so (Yes/No)

Regards and Clear Skies

The Committee

Nottingham Astronomical Society

MODERN “VERMIN OF THE SKIES”?

Walter Baade (1893-1960) famously called asteroids the “vermin of the skies”, because their appearance on photographic plates could interfere with the study of deep sky objects of greater interest. If this indictment is true, I suspect that it is even more true of artificial satellites, which constantly criss-cross our skies and have a frequent habit of turning up on digital images.

As a recent example from my own experience, a satellite managed to cross through the centre of M13 as I was imaging it at 10:52 pm BST on August 19th. Curious to know the identity of the culprit, I consulted the Heavens-Above website, and decided that the satellite was Cosmos 1743, launched by Russia on 15th May 1986.



The globular cluster M13 traversed by
an artificial satellite at 10:52pm
on 2014 August 19
(30-second exposure at ISO 1600 at the
prime focus of a 30-cm reflector)

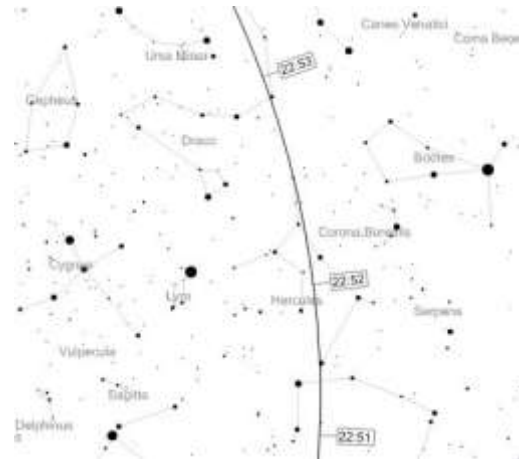


Chart from Heavens-Above showing the
track of Cosmos 1743, viewed from my
observing site at the relevant time, and
passing through the area of Hercules
containing M13

Editor

Advertisement

Meade DS10" Reflector

Imported from the US in 1983.

Manufacturer's specification:

10" Reflector. Null-figured, diffraction limited Pyrex parabolic primary mirror and matching (2.60" M.A.) 1/10-wave flat elliptical secondary; 67 toothed rack-and-pinion focuser at convenient observing position; Kellner 25mm (46x) eyepiece; Sonotube 12" I.D x 46" long, sealed and attractively Zolaton coated; all metal, precision-machined Equatorial Mount, with ultra-smooth nylon bearings and 1" solid steel shafts; rock-solid, low profile pier and tripod legs, locks on both axes.

Additional items:

Meade OR 9mm eyepiece

Weights for use on equatorial mount

Rings for use on an EQ5/6 mount

Meade Spotting Scope with 9mm eyepiece

Storage bag

New laser collimator

Original manual

The mirrors were re-silvered by Orion Optics in 2013

More information and photos - tony@raban.plus.com. (Nottingham)

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:

Chris Jackson

e-mail: president@nottinghamastro.org.uk

VICE PRESIDENT:

Roy Gretton

e-mail: vicepresident@nottinghamastro.org.uk

SECRETARY:

Victoria Jolly

e-mail: secretary@nottinghamastro.org.uk

TREASURER:

Sam Boote

e-mail: treasurer@nottinghamastro.org.uk

JOURNAL EDITOR:

Roy Gretton

e-mail: journal@nottinghamastro.org.uk

OBSERVATORY DIRECTOR:

John Hurst

email: observatory@nottinghamastro.org.uk

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

CAMPAIGN FOR DARK SKIES

REPRESENTATIVE:

Barrie Chacksfield

Email: darkskies@nottinghamastro.org.uk

ORDINARY COMMITTEE MEMBERS:

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 2014

Full	£25.00
Concessions	£12.50
Joint rate for partners living at the same address	£37.50

Subscriptions become due on 1st January. Half-price subscription is charged if joining after 1st July. 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 secretary@nottinghamastro.org.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.

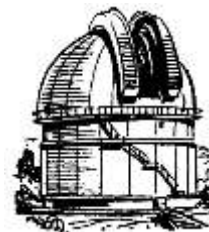
The Nottingham Astronomical Society

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 ASTRONOMICAL SOCIETY

Founded in 1946 for all interested in astronomy
Affiliated to the British Astronomical Association
Member of the Federation of Astronomical Societies

Registered Charity No. 1066645
Member of the Society for Popular Astronomy
Supporter of the Campaign for Dark Skies



Membership application and Gift Aid declaration

Title:

Full name:

Full home address:

Postcode:

Telephone:

e-mail address:

Subscription rate:	Full	£25.00	(year)	£12.50	(half year)
	Concession	£12.50		£6.25	
	Partnership	£37.50		£18.75	

Concession = under-18 / full-time student / unemployed and receiving benefits

Partnership = two members living together as a couple at the same address

I wish my subscriptions to be eligible for Gift Aid **Yes / No**

Gift Aid declaration

(HMRC reference XR32048)

I want Nottingham Astronomical Society to treat all subscriptions and donations that I make from the date of this declaration as Gift Aid donations, until I notify you otherwise.

I pay an amount of UK Income Tax and/or Capital Gains Tax at least equal to the tax that Nottingham Astronomical Society reclaims on my donations in the appropriate tax year.

Signature:

Date: