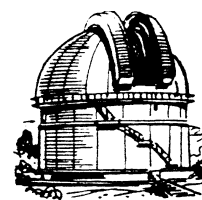

Journal

of the

Nottingham Astronomical Society

June 2019



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Thursday, 6th June

**Gotham Memorial Hall
Gotham, NG11 0HE**

8 pm (doors open at 7 pm)

**Tonight we welcome
Dr Allan Chapman**
FRAS



who will be speaking on

From Tycho to Newton
Foundations of modern astronomy

The Moon in May



An image captured by NAS member **Brendan Scoular** on 12th May using a ZWO camera and a 127mm f7.5 refractor

Sky Notes

June 2019

Compiled by Roy Gretton

All times given below are in British Summer Time



The northern **Summer Solstice**, when the Sun reaches its most northerly declination of the year, occurs in the afternoon of June 21st. At the latitude of Nottingham (approximately 53 degrees north) the altitude of the Sun at midday on that date will be about $90 - 53 + 23.5 = \mathbf{60.5 \text{ degrees}}$ above the southern horizon.

During the whole of June, the sky is ***never astronomically dark*** at the latitude of the British Isles. True astronomical darkness, when stars as faint as magnitude +6 become visible overhead, doesn't occur unless the Sun is at least 18 degrees below the horizon. At midnight on June 21st at the latitude of Nottingham the Sun will be approximately $90 - 53 - 23.5 = \mathbf{13.5 \text{ degrees}}$ below the northern horizon.

PHASES OF THE MOON

<i>Phase</i>	<i>Date</i>
New Moon	June 3 rd
First Quarter	June 10 th
Full Moon	June 17 th
Last Quarter	June 25 th

This month the Moon is closest to Earth on the 7th and furthest on the 23rd.

THE PLANETS

Mercury is an evening object throughout this month, reaching greatest eastern elongation on June 23rd. By then it will be 25 degrees from the Sun, and 21 degrees north of the celestial equator, making this the best evening apparition of the planet in the whole of 2017. Even so it will be very low down in the northwest as the Sun is setting, and you will need an unobstructed horizon to be able to spot it.

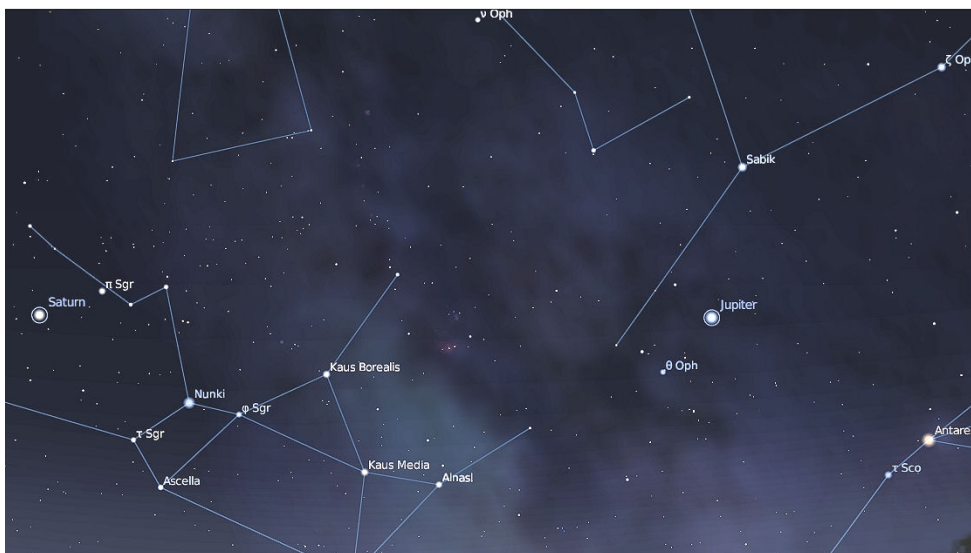
Venus, a morning object, moves to within 13 degrees of the Sun before the end of this month, and so this apparition is drawing toward its close.

Mars is now rapidly disappearing into the sunset glow as it heads toward conjunction with the Sun in early September.

Jupiter reaches opposition to the Sun on June 10th, and therefore will be due south close to 1 am on this date. However, this will be a very unfavourable opposition for UK observers, with the planet more than 22 degrees south of the celestial equator. At magnitude -2.6 it will certainly be a bright object, unmissable in a clear sky.

Saturn, shining at magnitude +0.2, is low down in the southern constellation of Sagittarius as it heads toward opposition early next month.

Uranus (in Aries) and **Neptune** (in Aquarius) are both early morning objects. They will not reach opposition until the autumn.



Looking south at 2 am on June 10th, the night of the opposition of Jupiter

METEORS

With its lack of true darkness, June is not the best time of the year for observing meteors, and there are no major showers during the month.

ATTENTION LUNAR PHOTOGRAPHERS!

*We have received this message from the **Astronomical Society of Malta**:*

In commemoration of the 50 year anniversary of Apollo 11 and the first human landing on the moon, the Astronomical Society of Malta is organizing an international collaboration entitled “Moon For All Mankind - 50”. Anyone from around the world can join this collaboration by filling in the following Google Form and submitting their best photo of the moon.

<https://www.maltastro.com/moon-for-all-mankind>

The submissions will be pinned on the globe on the same page at the location provided in the Google Form. Partial lunar photos are encouraged as they will be more unique; however any moon photo will be accepted.

The best moon photo from each country will eventually be selected for a 2D Map poster.

If you are interested in this collaboration we would greatly appreciate it if you disseminate this message to your members.

We hope to hear from you; thank you for your time.

Best Regards

Andrew Finch
Secretary
Astronomical Society of Malta

DIARY DATES 2019

Monthly Meetings of the Nottingham Astronomical Society

1. Meetings at Gotham Memorial Hall

Nottingham Road, Gotham, NG11 0HE

Held on the **FIRST Thursday** of each month except **August**

Doors open at 7pm for 8pm start.

*These events are normally centred around a talk by a visiting speaker, except Open Evenings, when NAS members provide the activities. Normally we have a **Library** and a **Helpdesk** open at each meeting.*

<u>Date</u>	<u>Topic</u>	<u>Speaker</u>
June 6 th	From Tycho to Newton <i>Foundations of modern astronomy</i>	Dr Allan Chapman FRAS
July 4 th	Metal Detecting <i>What are metals to astronomers?</i>	Dr Julian Onions University of Nottingham
August 3 rd (Saturday)	Annual Barbecue at the Observatory <i>(Members and their guests only)</i>	
September 5 th	Where Are the Aliens? <i>Might we be alone?</i>	Prof Brad Gibson University of Hull
October 3 rd	The 200 at 70 <i>The Hale Telescope</i>	Dr Steve Barrett University of Liverpool
November 7 th	Annual General Meeting with a Wine and Cheese Social	
December 5 th	Voyages to the Sun <i>Probing our nearest star</i>	Prof Lucie Green University College London

2. Social and Practical Astronomy Meetings at the Burnside Memorial Hall, Plumtree

Church Hill, Plumtree, Nottingham, NG12 5ND

Held on the **THIRD Thursday** of each month from **7:30pm**

These meetings are of a more informal nature, providing opportunity for members and guests to share their hobby over a cup of tea or coffee, as well as listening to a short talk.

The next meeting will be on June 20th (see further details below)

Social and Practical Astronomy, Plumtree

The **May** meeting at Plumtree saw NAS member Dave Hilton talk on “first steps in radio astronomy”.

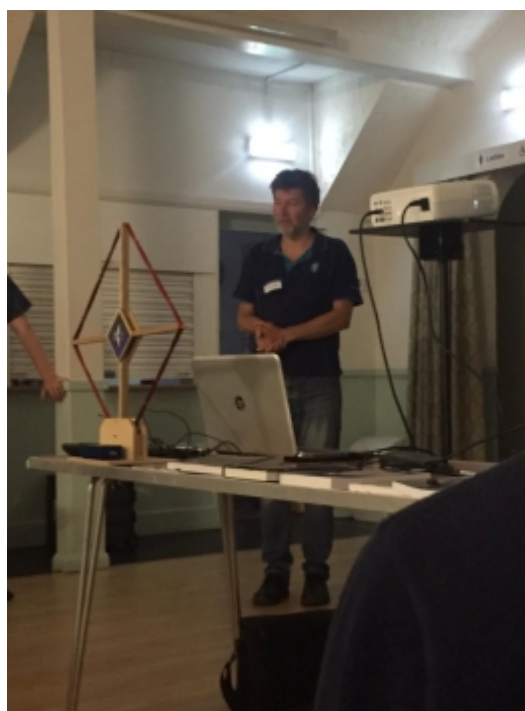
Dave is relatively new to radio astronomy himself, but has had a life-long interest in both astronomy and electronics, building his first radio in his early teens. The first part of Dave’s fascinating talk was on his journey in amateur astronomy and how a talk at NAS last year by Ian Morison opened a door into radio astronomy for him.

We were given a tour of the electromagnetic spectrum and shown how the transmission of different wavelengths of this through our atmosphere varies. We also learnt about the how little “energy” there is in the radio signals we receive here on earth from outer space. The basics of a radio receiver were then explained as well as some of the common sources of radio waves in the Universe.

Dave then went on to talk about the various projects amateurs can get involved with, either on their own or as part of a larger network of amateur astronomers, from detecting meteors in Earth’s atmosphere, to monitoring the activity of the Sun and mapping the galaxy using hydrogen to much more specialised projects involving larger and more complicated equipment.

The talk generated lots of interest and discussion. If members are interested in being involved in a potential radio astronomy group, please contact John Hurst, the NAS Chairman president@nottinghamastro.org.uk

I am really grateful for Dave giving up his time to prepare and deliver this talk. It was excellent and it is exciting to see the enthusiasm it instilled amongst members.



The topic of the **June** Plumtree meeting is yet to be finalised; I will email out details in due course. Whatever the topic though, as the June meeting will be near midsummer’s day, Chris Sneddon will be putting on some Pimm’s and a non-alcoholic version for the drivers. The **July** Plumtree meeting will be related to the 50th Anniversary of the epic mission to walk on the Moon.

If you have any ideas of topics you would like us to discuss at Plumtree, please do let me know; this doesn’t commit you to helping out, but I do need to know what kind of topics you all want. Equally, if you have a topic you would like to share with others, even if it is just lasts 5 minutes, I’d love to hear from you.

James Dawson, NAS Helpdesk
helpdesk@nottinghamastro.org.uk

A lifetime of astronomical observations

Alan Heath gave a talk at Nottingham Trent University's Open Dome Event on Wednesday 24th April 2019, on "a life time of astronomical observations".

Alan gave a fascinating account of his early life and how he first became interested in astronomy and a potted history of some of the memorable moments during his life in amateur astronomy. These included observations predominantly of our solar system, as well as numerous tours abroad, and encounters with many great names in astronomy.

It was enchanting to listen to Alan speak, and so inspiring to see how devoted to amateur astronomy he has been and how many others he has educated and helped over the years. A truly wonderful evening.

Many thanks to Dr Dan Brown, NTU, for inviting Alan to share his stories and some of the many drawings, photographs and other observations he has made over the years.

James Dawson, NAS Helpdesk



TWO MEN WHO FELL TO EARTH

By Bernie Besnard

Twelve Men (all American) have walked on the Moon. The first two were on the legendary Apollo 11 on 20 July 1969. The fiftieth anniversary of this historic landing is approaching on 20 July 2019, and this is what happened to them after they returned to Earth.

Neil Armstrong – first Man to walk on the Moon.

Armstrong resigned from NASA in 1971. After Apollo 11 he shied away from being a public figure and confined himself to academic and professional endeavours. From 1971 to 1979 he was professor of aerospace engineering at the University of Cincinnati (Ohio). After 1979 Armstrong served as chairman or director for a number of companies, among them Computing Technologies for Aviation from 1982 to 1992 and AIL Systems (later EDO Corporation), a maker of electronic equipment for the military, from 1977 until his retirement in 2002.

He also served on the National Commission on Space (NCOS), a panel charged with setting goals for the space program, and on the Presidential Commission on the Space Shuttle Challenger Accident, the group appointed in 1986 to analyze the safety failures in the *Challenger* disaster. He was awarded the Presidential Medal of Freedom in 1969, the Congressional Space Medal of Honor in 1978, and the Congressional Gold Medal in 2009.

The corporate directorships enabled him to live comfortably but not extravagantly. Beyond that, he never exploited his fame. He donated many personal items to the museum named after him, and which teems with visitors, but rarely visited the place himself – and on the occasions he did, always unannounced. His greatest regret is that he did not spend more time with his family, especially when his two sons were growing up. When his infant daughter died, Armstrong's response was to throw himself even more fully into his work.

Sadly he died on 25th. August 2012 – 82 years of age after complications from heart surgery – always remembered as the man who took the “first small step”.

Buzz (real name Edwin Eugene) Aldrin – second Man to walk on the Moon.

Upon returning from the moon, Buzz was decorated with the Presidential Medal of Freedom and numerous awards all over the world. Named after Buzz are Asteroid “6470 Aldrin” and the “Aldrin Crater” on the moon. In 2011 along with his Apollo 11 crewmates Neil Armstrong and Michael Collins, he received the Congressional Gold Medal. Most recently, he was named a member of the Space Advisory Committee by the Vice President of the United States.

Buzz is the author of 9 books, most recently his children's book, “Welcome to Mars: Making a Home on the Red Planet”, and his newest NY Times and Washington Post Bestseller, “No Dream Is Too High: Life Lessons from a Man Who Walked on the Moon”. Both published by National Geographic.

Buzz's vision finally has come to past with the creation of the supreme think-tank, Human SpaceFlight Institute which will fully launch later in the year.

Since retiring from NASA and the U.S. Air Force, Col. Aldrin is a Global Statesman for Space and has remained a tireless advocate for human space exploration.

After Apollo 11, Aldrin found it difficult to readjust to life on Earth. His marriage of 21 years soon broke up, he remarried in haste and was divorced for a second time within two years. His military career ended after an unhappy stint as commandant of the USAF test-pilot school. (He had been a fighter pilot, with 66 combat missions over Korea in the early Fifties, but never a test pilot.) He began to suffer acutely from depression, and finally confronted the fact that he was an alcoholic.

It is a measure of how much his life changed, and how quickly, that within eight years of the tickertape parades and being feted around the world as a hero of our times, he ended up working at the Cadillac dealership in Beverly Hills. Not that he sold a single car in the six months or so he spent there.

Then came an ignominious encounter with the police after he drunkenly broke down the door of his girlfriend's apartment.

Fortunately, within a couple of years, Aldrin regained control of his life. He stopped drinking in 1978 and has been sober ever since. He and his third wife, Lois, celebrated their 21st wedding anniversary on Valentine's Day this year.

Nevertheless, he is still troubled by the demands of worldwide celebrity and the many ways in which he feels he has been exploited since Apollo. He has had a long-running dispute with Omega over the use of pictures of him wearing one of their watches on the Moon, for which he has never been paid. "How could they do that?" he asks, infuriated.

More recently, he was exasperated when Disney appropriated his name for the character Buzz Lightyear in the hit movie *Toy Story*. He could sue, but knows it would reflect badly on him: "You don't want to tangle with Disney, the friend of children. You don't want to challenge their lawyers – for sure, you're going to lose."

So, knowing what he knows now about all the anguish that was to follow, would he still have chosen to go to the Moon? "Absolutely, yeah. I have gained so much by facing adversity. I had a shrink who said, 'Buzz, you are so lucky that you had to change, to grow. You are a better person now.'"

Buzz is alive at 89 years of age.

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 on Twitter

The Society has a Twitter account at <https://twitter.com/NottinghamAstro>

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.

If you happen to change your email address, please remember to inform the Society by emailing us at treasurer@nottinghamastro.org.uk

Nottingham Astronomical Society

Affiliated to the **British Astronomical Association**
Member of the **Federation of Astronomical Societies**
Supporters of the **Commission for Dark Skies**

CHAIRMAN:

John Hurst

e-mail: president@nottinghamastro.org.uk

VICE CHAIRMAN:

Roy Gretton

e-mail: vicepresident@nottinghamastro.org.uk

SECRETARY:

(vacant post:)

e-mail: secretary@nottinghamastro.org.uk

TREASURER:

Mike Provost

e-mail: treasurer@nottinghamastro.org.uk

JOURNAL EDITOR:

Roy Gretton

e-mail: journal@nottinghamastro.org.uk

MEMBERSHIP SECRETARY

Richard Severn

e-mail: membership@nottinghamastro.org.uk

CURATOR OF INSTRUMENTS:

Leigh Blake

e-mail: curator@nottinghamastro.org.uk

DIRECTOR OF OBSERVING:

David Buxton

e-mail: observatory@nottinghamastro.org.uk

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

Meetings

Our formal meetings, often with an illustrated talk by a guest speaker, are held on the first Thursday of each month (except in August) at:

Gotham Memorial Hall

Gotham

Nottingham NG11 0HE

Doors open 7.00pm

Meetings start 8.00pm

Meetings end 10.00pm

These meetings are open to the public, and visitors are welcome to attend.

Annual subscriptions 2019

Full £30

Joint rate for partners living at the same address £45

Under-18s and full-time students £5

Subscriptions become due on 1st January. Half-price subscription is charged if joining after 30th June (minimum subscription £5).

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

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