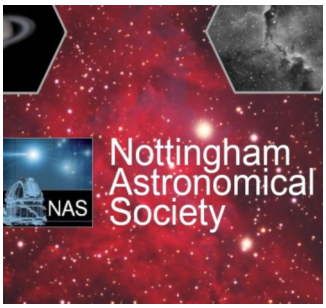
Journal

of the

Nottingham Astronomical Society

May 2026



In this issue

Thursday, May 7th
Nottingham Emmanuel School
Gresham Park Road,
West Bridgford,
Nottingham, NG2 7YF

7:45pm (doors open at 7:15pm)

This evening we welcome

Cesca Willcocks
of the University of Leicester

who will be speaking on

Time capsules from our Solar System – a story preserved in meteorites

Chairman's Message, May 2026

Dear Members,

The weather is improving and there have been some lovely clear nights. It's annoying that I always seem to have something else on my calendar - but its nice to do constellation spotting while driving. We had a couple of interesting meetings. The swampland talk from Ben certainly provoked some interesting discussion, from "I've no idea what any of this means" to questions I didn't really understand! Then we had a great talk on the sodium tail (or tale?) of Mercury - some cutting edge observations by James.
Coming up we have a talk on meteorites and Mars by Cesca from Leicester on her research. Also there is the pick-a-star collection of talks by members at the next Plumtree meeting. Also don't forget the 80th anniversary party at the observatory on the 23rd May, 2pm!

Best wishes,

Julian
NAS Chair

Sky Notes
May 2026

Compiled by Roy Gretton

All times given below are in British Summer Time

PHASES OF THE MOON

Phase	Date
Full Moon	May 1st and 31st
Last Quarter	May 9th
New Moon	May 16th
First Quarter	May 23rd

This month the Moon is closest to Earth on the 17th, and furthest on the 4th.
As there are two Full Moons this month, the second one will be termed a 'Blue Moon' according to some traditions.

THE PLANETS

Mercury will be unobservable in the first half of May, as it passes through superior conjunction on the 14th. Thereafter it moves into the evening sky and will be at a solar elongation of 18 degrees by the close of the month. Greatest eastern elongation will occur in mid-June.

Venus is becoming more prominent in the evening sky, and at the end of May will be above the horizon until midnight, shining at magnitude -4.

Mars, angular diameter 4.2 arcseconds, is still swamped by the pre-dawn glow, and even at the end of May won't be rising until 4 am.

Jupiter, still in Gemini, will be setting about midnight in mid-May. By then its equatorial diameter will have diminished to about 34 arcseconds.

Saturn will be rising about 4 am in a bright sky in mid-May.

Uranus and **Neptune** are unobservable this month.

METEORS

The **Eta Aquarids** reach maximum activity (40 meteors per hour under ideal conditions – not here but at latitudes well to the south of the British Isles) on May 6th, with a 19 day-old Moon.

DIARY DATES 2026

Monthly Meetings of the Nottingham Astronomical Society

1. Meetings at
Nottingham Emmanuel School
Gresham Park Road,
West Bridgford,
Nottingham, NG2 7YF

Held on the **FIRST Thursday** of each month **(unless otherwise stated)**
except **August**

Doors open at 7:15pm for 7:45pm start.

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

Date	Topic	Speaker
7th May	**Time capsules from our Solar System – a story preserved in meteorites**	**Cesca Willcocks** University of Leicester
4th June	**Atmospheres of the Solar System**	**Paul Money**
2nd July	***To be announced***	

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

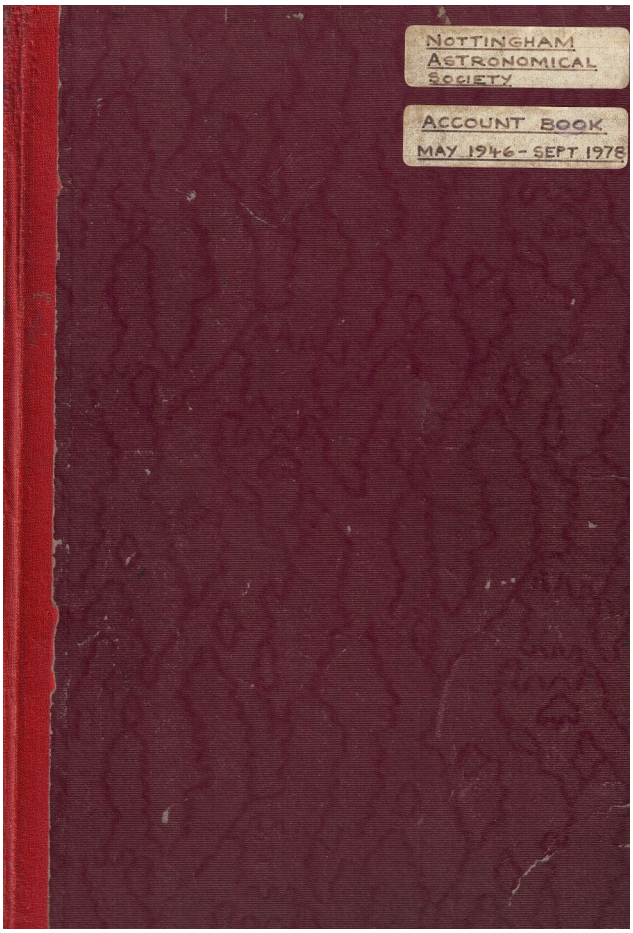
Church Hill, Plumtree, Nottingham, NG12 5ND
Held on the **THIRD Thursday** of each month from **7:30pm**

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 or discussion

The next meeting will be on **May 21st**

NAS 80th Birthday Celebrations - Saturday 23rd May

On Saturday 23rd May Nottingham Astronomical Society will celebrate the 80th anniversary of the Society's formation.
The oldest known surviving document of the society is the Account Book. The first entry is a donation and subscription from Mr A K Bennett (the first President of NAS) on 23rd May 1946, marking the formation of the Society.



The committee will be organising a celebration of this significant anniversary at the Society observatory on **Saturday 23rd May at 2pm**.

Join us for a celebratory drink and birthday cake between 2pm and 4pm.

I am also planning to create a small exhibition of photographs and historical documents to display in the observatory dome. If members are in possession of any photographs of society events over the years or any interesting documents, I would very much like to hear from you. If you are in contact with any former members please spread the word. Any photos can be emailed to me at this address or if they are too large to email, upload them to the society drive using the link

Upload file – Nottingham Astronomical Society

Richard Severn

Social and Practical Astronomy, Plumtree, April 2026

The **April** Plumtree was a ridiculously long talk on the exosphere of Mercury, and its sodium tail, by me (right, pictured with chairman Julian Onions) to whom I'm grateful for helping out with the technical questions.

I failed to appreciate how much information needed to be passed on to the audience to build up the story leading to why planet Mercury has a sodium tail, hence far too many slides and far too many digressions. But we got there in the end. My images of the sodium tail can be found here amongst some of my other astrophotography: https://britastro.org/observations/user.php?user=645

An article on the sodium tail by myself and fellow amateur astronomer Chris Hooker will appear in the BAA Journal in due course as it has been written and accepted, just waiting for publication.

Chris made a gorgeous coffee cake (which I am cutting here under the watchful eye of Sam Boote), and Marcus brought some of his wife's gluten free and lacto-free chocolate cookies which were also divine.

The **May** Plumtree meeting will be 5-minute talks by members on individual stars and this is promising to be a wonderful event.

James Dawson
helpdesk@nottinghamastro.org.uk

Cleomedes

The crater Cleomedes (in the centre) on the northeast part of the Moon, just to the north of Mare Crisium (which can be seen as the smooth area to the lower right). Imaged on 21.3.26 at 18:47 on a three-day old Moon just under 10% illuminated. A pretty crater about 130km in diameter and about 3km deep with an interesting central peak and some smaller, younger craters in the smooth floor. Not an especially good image, but I like the shadows cast on the crater floor from the Sun rising over the mountains on its eastern rim, and also the proximity to Mare Crisium, and the almost foot like prominences of the ridge mountains on the mare which appear to dip their toes under the water, or rather solidified lava which forms the sea-like appearance of Mare Crisium's floor. The other interesting aspect of this image for me is the crater to the upper left of Cleomedes, called Burckhardt which makes you think you've got double vision, but the two massive ear-like features on either side are older craters. These low angle views of features nearer the edge of the Moon really do depict the terrain and the shadows reinforce this. Technical details about the image can be found here: https://britastro.org/observations/observation.php?id=20260322_211047_dff9a886f545a134

Upcoming events for the amateur astronomer

2nd May 2026	Back to Basics	Cornwall
9th May 2026	BAA Historical Section Meeting	Mansfield
22nd May 2026	BAA Spring Meeting	Leicester
3rd June 2026	BAA Meeting	London
20th June 2026	Webb Deep Sky Society	Cambridge
27th June 2026	FAS Annual Meeting	Cardiff
25th July 2026	SPA Meeting	London
18th September 2026	BAA Meeting	Liverpool
3rd October 2026	Radio Astronomy Section Day	Mansfield
28th October 2026	BAA Meeting	London
31st October 2026	SPA Meeting	London
12th December 2026	BAA Christmas Meeting	London

James Dawson
helpdesk@nottinghamastro.org.uk

Photons have momentum!

At the Society's last Plumtree meeting, James presented a talk on the planet Mercury, including some explanation and discussion about its "sodium tail". This is a comet-like tail of yellow light caused by the action of photons from the Sun exerting radiation pressure on sodium atoms in Mercury's extremely light atmosphere. The pressure has this effect through the momentum of photons pushing on the sodium atoms and having a tiny, though detectable, effect on their motion.

A photon is a mass-less and charge-less particle with wave-like properties travelling at the speed of light. It is the means by which all electromagnetic radiation, including radio waves, visible light and gamma rays, is propagated. Photons have energy depending on their wavelength, with the shorter wavelengths having higher levels of energy.

Photons have momentum too, and therein lies a mystery. The momentum of an object is equal to its mass multiplied by its velocity, and it is a vector quantity depending on the object's direction of motion. This is different from energy, which is a scalar quantity independent of direction. If two objects collide, whether they are snooker balls or road vehicles, momentum is transferred from one object to another depending on their relative mass and velocity.

You might think (as I did at the meeting) that a mass-less object such as a photon cannot have momentum. But it does ! The momentum of a single photon is equal to Planck's constant divided by the wavelength of the radiation being propagated by the photon - this is a consequence of special relativity and quantum mechanics, by which the energy of the photon can only exist in discrete amounts.

Planck's constant is a fundamental physical constant with a very small value - about 6.6×10^{-34} in SI units. So, considering that visible light from sodium emissions has a wavelength of about 6×10^{-7} metres, the momentum of a photon is about 10^{-27} in SI units - hardly enough to trouble a snooker ball, but enough to have an effect in outer space, where there is no atmospheric drag and where a large number of photons can have a detectable effect over a period of time.

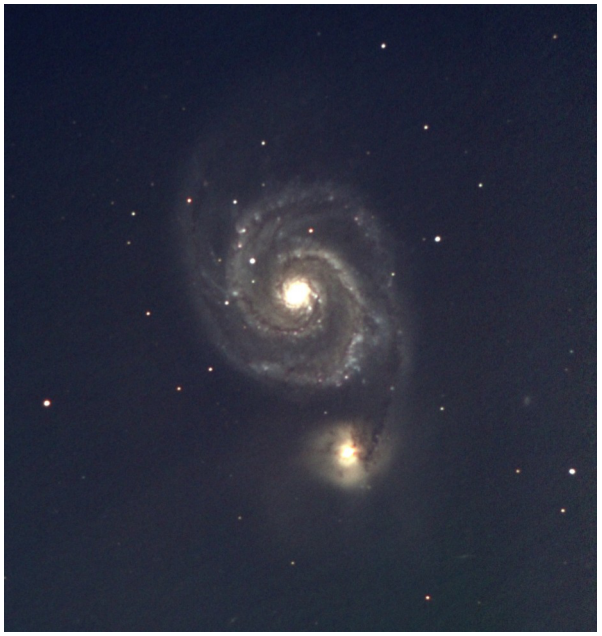
Sam Boote

Spring Spirals

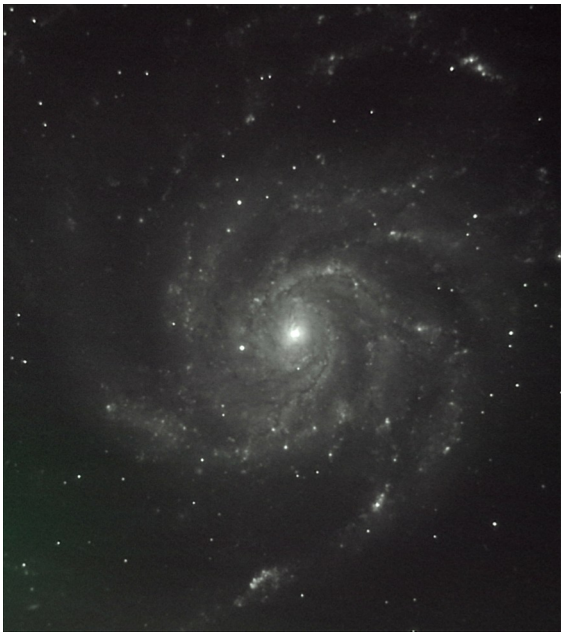
Among the variety of deep-sky objects, spiral galaxies are arguably the most pleasing to the eye. Spring in the northern hemisphere is known as the galaxy season, as the galaxy-rich constellations of Leo, Virgo, Coma Berenices and Canes Venatici are well-placed for observation in this season. The following images were captured using a Canon 700Da camera at the f/10 focus of a Celestron C11 SCT.

M81 in Ursa Major 332 min of data
Bode's Galaxy

NGC5906 in Draco 85 min of data
The Splinter Galaxy



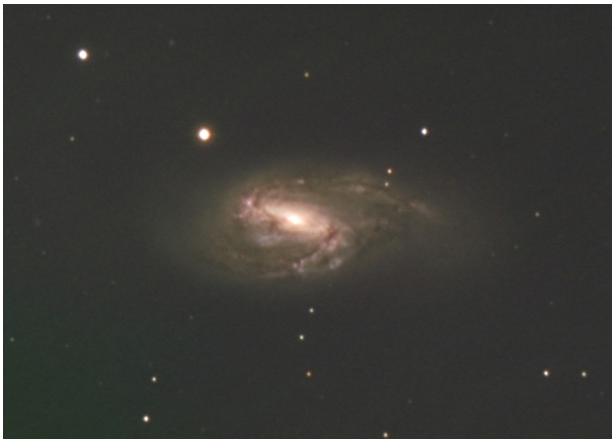
M51 in Canes Venatici 109 min of data
The Whirlpool Galaxy



M101 in Ursa Major 270 min of data
The Pinwheel Galaxy

M63 in Canes Venatici 170 min of data
The Sunflower Galaxy

NGC4565 in Coma Ber. 76 min of data
The Needle Galaxy



M66 in Leo 87 min of data
Largest member of the Leo Triplet

Note: After a dreary winter of mainly cloudy nights, this spring seems to have excelled in sunny days and clear nights!

Roy Gretton

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

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 X
The Society has an X account at https://twitter.com/NottinghamAstro

NAS Journal e-mailing list
To register for your monthly e-mailed link to the NAS Journal, just e-mail
membership@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 membership@nottinghamastro.org.uk

Nottingham Astronomical Society

Affiliated to the **B**ritish **A**stronomical **A**ssociation
Member of the **F**ederation of **A**stronomical **S**ocieties
Supporters of the **C**ommission **f**or **D**ark **S**kies

CHAIRMAN:
Julian Onions
email: chairman@nottinghamastro.org.uk

VICE CHAIRMAN:
James Dawson
email: vicechairman@nottinghamastro.org.uk

SECRETARY:
Chris Sneddon
email: secretary@nottinghamastro.org.uk

TREASURER:
Richard Severn
email: treasurer@nottinghamastro.org.uk

JOURNAL EDITOR:
Roy Gretton
email: journal@nottinghamastro.org.uk

MEMBERSHIP SECRETARY
Richard Severn
email: membership@nottinghamastro.org.uk

WEBMASTER:
Leigh Blake
email: leigh@nottinghamastro.org.uk

OBSERVATORY DIRECTOR:
James Dawson
email: observatory@nottinghamastro.org.uk

LIBRARIAN:
Holly McNiven

Aniket Mahapure

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

Nottingham Emmanuel School
Gresham Park Road,
West Bridgford,
Nottingham, NG2 7YF

Doors open	7:15pm
Meetings start	**7:45pm**
Meetings end	9:15 pm

These meetings are open to the public, and visitors are welcome to attend, subject to a charge of £5 per meeting for adults (£1 for concessions).

Annual subscriptions 2026

Individual	£40
Family (maximum of two adults, and children/students living at the same address)	£55
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 membership@nottinghamastro.org.uk or speak to any NAS committee member at one of our regular monthly meetings.

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 are not necessarily endorsed by the Nottingham Astronomical Society, its Committee or members.