Journal

of the

Nottingham Astronomical Society

November 2025

In this issue

Thursday, November 6th

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

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

This evening we welcome

Professor Omar Almaini

University of Nottingham

who will be speaking on

Supermassive Black Holes

Chairman's Message, November 2025

Dear members,

The nights are getting much darker, but also wetter! We hope to do some observing at some point, when the weather allows. We had a useful maintenance day a week or two ago, thanks to the members that came along to help out with various jobs.

We had a great review of Paul's observatory journey, with some clever repurposing of a shed. Before that a great talk by Dave Sarras on interstellar visitors and what and where they were doing. In November we have Professor Omar Almaini from Nottingham come to talk to us on supermassive back holes. So we will see if they are going to destroy us all, or what they are busy doing all day!

Julian
NAS Chair

Sky Notes
November 2025

Compiled by Roy Gretton

All times given below are in Universal Time

PHASES OF THE MOON

Phase	Date
Full Moon	November 5th
Last Quarter	November 12th
New Moon	November 20th
First Quarter	November 28th

This month the Moon is closest to Earth on the 5th ***(in fact it will be closer than at any other time in the whole of 2025)*** – so expect the Full Moon on Bonfire Night to be celebrated as a ***supermoon***. After this, the Moon will be at its furthest from Earth on the 20th.

THE PLANETS

Mercury begins the month as an evening object, difficult to observe, then passes through inferior conjunction on the 20th, before emerging as a morning object well to the south of the celestial equator.

Venus remains bright in the morning sky, but increasingly difficult to observe as it ends November less than 10 degrees from the Sun.

Mars is unobservable, and will remain so until well into the New Year.

Jupiter, with its northerly position in the constellation of Gemini, will be the stand-out planet throughout the coming winter. It will be rising soon after 9 pm at the beginning of November, and before 7:30 pm at the end of the month, when it will be unmissable, shining at magnitude -2.6.

Conditions are still favourable for observing **Saturn**, magnitude +0.9, as it remains above the horizon until midnight even at the end of November. At the start of the month it will be 32 degrees above the southern horizon at 9 pm, and won't be setting before 2 am.
On the night of November 6th-7th there will be a transit of Saturn's largest moon, **Titan**, from 20:33 until 02:28, and again on the night of the 22nd-23rd from 18:50 to 00:51.

Uranus, now in the constellation of Taurus, will be at opposition to the Sun on November 21st, when it will be shining at magnitude 5.6 and have an angular diameter of 3.8 arcseconds.

Neptune is a magnitude 8 object in Pisces, about 4 degrees northeast of Saturn.

METEORS

Though not expected to produce a meteor storm for another 7 years, the **Leonids** will be well worth looking out for this year as their maximum on the night of November 17th-18th coincides with a waning crescent Moon that won't be rising until 6 am. 15 events per hour may be seen under ideal conditions.

DIARY DATES 2025

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
6th November	**Supermassive Black Holes**	**Professor Omar Almaini** University of Nottingham
4th December	**Unlocking the Secrets of the Universe with Binary Stars**	**Dr Connor Byrne** University of Warwick

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

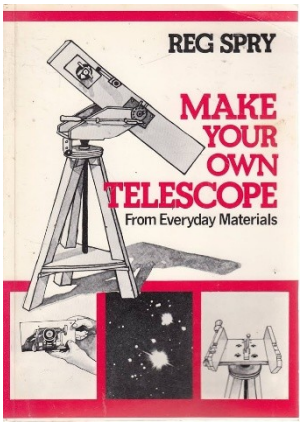
Church Hill, Plumtree, Nottingham, NG12 5ND
Held on the **THIRD Thursday** of each month from **7:30pm**

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 **November 20th**

Social and Practical Astronomy, Plumtree, October 2025

Our **October** Plumtree talk was by member **Paul Carpenter** on his home-built roll on/off roof observatory, which has been a work in progress for several years. Paul took us on a journey of how he got interested in astronomy and how his father-in-law, a retired mechanical engineer, built him a reflecting telescope from a book by Reg Spry, *Make your own telescope from everyday materials*. The mirror was obtained from none other than Henry Wildey, the renowned optical engineer. Paul brought several letters he had from Wildey.



Paul brought in the telescope and talked about the various components of it and after the talk it attracted a lot of attention and investigation by members. The focuser looked like a Crayford-style which was first described by John Wall in the 1960s but not popularised until much later, so Paul's father-in-law really was at the cutting edge.

The rest of Paul's talk was about how he gradually converted more and more of his aviary into an astronomical observatory, initially with a flip open roof and over time this evolved into a roll off roof made from polycarbonate sheeting, very light but strong and opaque to sunlight. Paul told us about his telescopes and his subsequent plans to start dabbling with astrophotography. We look forward to seeing his images. Thanks, Paul, for a fascinating talk and sharing your story with us. I hope this stimulates others to offer similar styled talks for our Plumtree meetings.

Chris made a special cake which Paul cut, and then everyone else devoured. Thank you, Chris.

I'm not sure what the **November** Plumtree meeting will be yet. Let me know if you have a talk, long or short, you'd be happy to give at Plumtree.

James Dawson
helpdesk@nottinghamastro.org.uk

Further notes from Paul:

At the last Plumtree meeting I talked about my telescope, made 40-plus years ago from everyday materials by my father-in-law John Shenton, being a Reg Spry version and still in working order.

In 1981 I had no idea of the significance at the time, that the 6 inch mirror, the flat secondary mirror and the Barlow lens were made by the very well respected Henry Wildey, whom I still have letters from regarding this. I feel very privileged to still own them.
In 2003 when he died a tribute was written by the Hampstead Scientific Society, where he was Astronomical Secretary for many years. As one of the last old school of home craftsmen in optical instrument making, his optical work was revered not only by amateurs but equally by professional institutes, for which he produced high quality lenses and mirrors for university apparatus and space research. He was also curator of instruments for the B.A.A.
As stated, a lens or mirror made by Henry Wildey was ' Its Own Quality Assurance.'
It appears he was still making and grinding mirrors and lenses up to the months before he died at the age of 90. So it is very fitting that the following poem was written in his honour for the Hampstead Scientific Society and named 'The Craftsman':

The craftsman labours at his task in the still of night.
He spares no pain to grind the glass and get the curves just right
To bend the rays from distant suns far across the void,
And reflect them from the surface of a true paraboloid,

To concentrate their brightness and magnify their size,
To show undreamed of wonders unseen by naked eyes:
The spiral form of galaxies, the craters on the Moon,
The surfaces of planets will be revealed quite soon.

And when his work is finished he can at last take rest,
The mirror now quite perfect has passed the strictest test.
What wonders it will show you, and this will come to pass
By skilfully reshaping a simple piece of glass.

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

Mutterings of the Lunar Eclipse, 2025 September 7

The lunar eclipse coincided with a walking holiday down in Cornwall, staying at a B&B in Porthcurno (near Land's End).

The eclipse would be total but from the UK, depending on your location, the total phase would be nearly over (if not finished) by the time the moon rose (and by inference, it would be at sunset).

From RedShift6 the eclipse details were as follows:

End of Totality: 18h 52m UT

From Nottingham	Lat 52deg 58m N		Long 1deg 14m W
	Moon rise	18h 39m UT	(ie just before end of totality)
	Azimuth	100deg	

From Porthcurno beach	Lat 50deg 1m N		Long 5deg 38m W
	Moon rise	18h 57m UT	(ie just after end of totality)
	Azimuth	100deg	

From Porthcurno beach the prominent headland Treryn Dinas lies to the east.

Treryn Dinas is the backdrop to the Minack Theatre (the world famous outdoor theatre built into the side of the cliffs near Porthcurno). Treryn Dinas also has the Logan Rock, a 64-tonne granite rock that can be rocked from side to side by hand!

A quick check indicated that the moon would rise near the end of Treryn Dinas and to the right of the Logan Rock if my observing point was on Porthcurno beach near the shore-line. I decided to view the eclipse from Porthcurno beach (the tide would be about 2hours after high tide) - if the sky was clear. A low tide would have moved the moon to nearer the end of Treryn Dinas because of the effect of parallax.

The early morning of September 7 in Porthcurno was wet (heavy rain) and a sea mist. The forecast was for an improving weather outlook with some sunshine from about mid-day.

My itinerary for the day was to drive to Falmouth, catch the Falmouth to St Mawes ferry, spend some time at St Mawes and visit St Mawes Castle before returning to Porthcurno in time for the eclipse. The outward journey was in heavy rain at times (the road verges were like rivers) and the visibility was down to 200yards in places. By the time I got to Falmouth the rain had virtually stopped. I bought my return ferry ticket (but two ferry crossings were cancelled because of the sea conditions at St Mawes). I lost about 1hr of my time at St Mawes, but the good news was that the rain had stopped and there was blue sky by the time I arrived at St Mawes.

I arrived back in Porthcurno in good time for the eclipse where the weather was not ideal (there were large areas of blue sky, but down near the horizon, in the east, were some ribbons of cloud). I decided to view the eclipse from the west side of Porthcurno beach, as close to the shore-line as possible without getting wet from the waves. A convenient rock was found where I could sit comfortably, and waited. This rock was close to the concrete steps that form part of the cliff path leading from the beach up to the Minack Theatre.

The time was just before 7:30pm BST (18h 30m UT). I had my camera ready (a DSLR Canon D750D fitted with a 18-135mm lens)

There was still some cloud right on the horizon as the sun set, and as time went by it became very difficult to distinguish cloud from the rising Earth's shadow.

I had nearly given up hope of seeing the eclipsed moon rising very low down when (at about 19h 08 UT) a spike of vertical light caught my eye just to the right of the Logan Rock. This was the upper cusp of the eclipsed moon rising behind Treryn Dinas.

Up until this point I had been taking hand-held test shots of Treryn Dinas with the lens set at 135mm. The initial shots were at 800ISO and f/14 to keep the exposure as short as possible without incurring camera shake. As twilight deepened I was at 12800ISO and f/5.6! I also took some shots at different lens focal length settings from different locations whilst on the beach.

By around 19h 20m UT (20h 20m BST) the light was fading fast and I had run out of options regarding ISO and lens f/ settings. All that were left were smaller focal length lens settings and/or longer exposures to bring out the headland (and risk camera shake, or call it a day. I chose to call it a day.

When I got back to the B&B I took a shot from the bedroom window.

Fig 1

Fig 2

Fig 3

Fig 4

Fig 5

Fig 6

Details of the images are as follows:

Fig 1	IMG5724	19h 08m UT	6400ISO	1/200s	f/5.6	135mm lens
Fig 2	IMG5725	19h 09m UT	6400ISO	1/160s	f/5.6	135mm lens
Fig 3	IMG5726	19h 10m UT	12800ISO	1/250s	f/5.6	135mm lens
Fig 4	IMG5730	19h 16m UT	12800ISO	1/100s	f/5.6	50mm lens
Fig 5	IMG5734	19h 20m UT	12800ISO	1/50s	f/5.6	83mm lens
Fig 6	IMG5735	19h 34m UT	12800ISO	1/160s	f/5.6	135mm lens

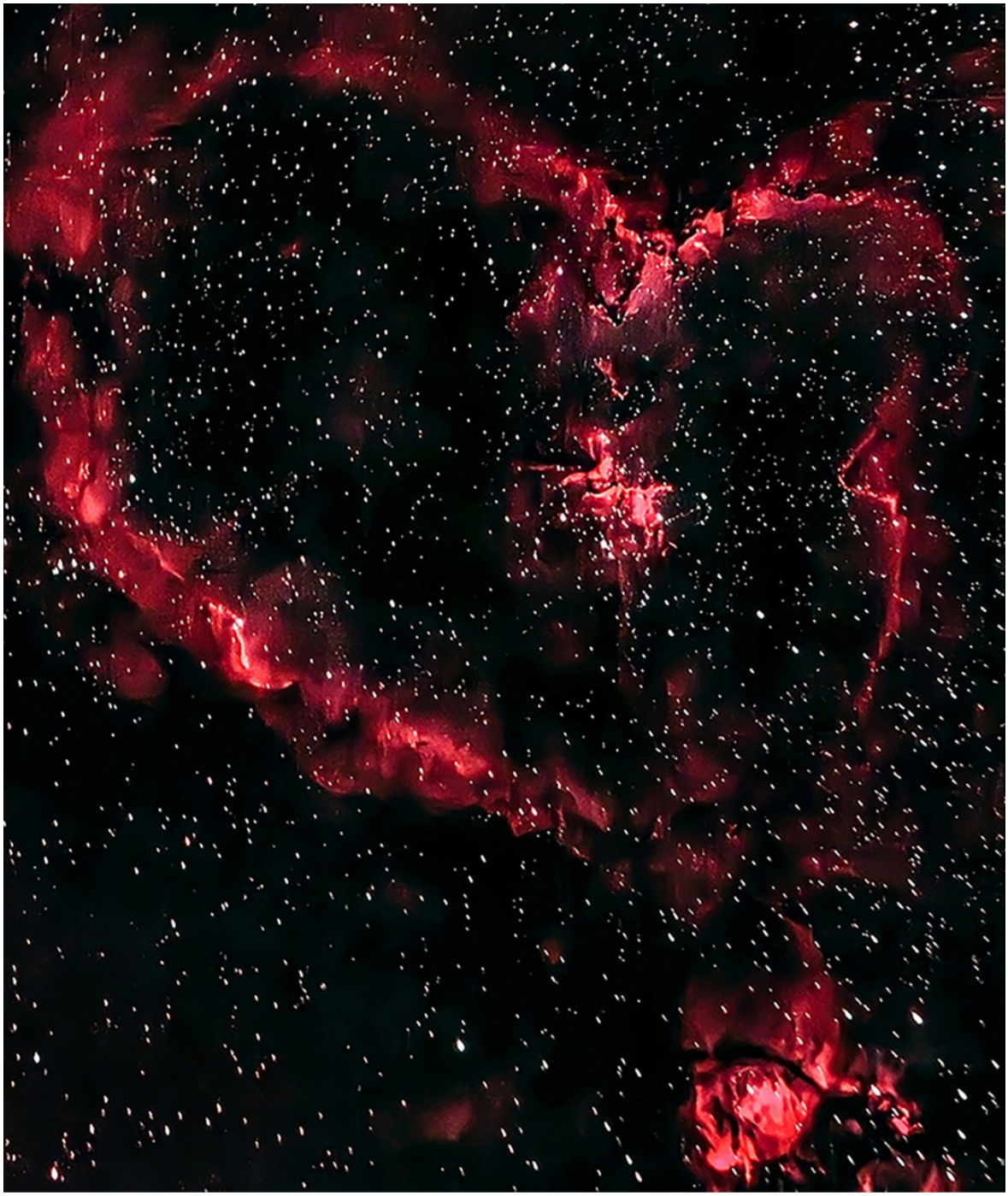
Additional notes:

In Figs 1 to 3 the Logan Rock is the large rectangular rock just left of centre.
Figs 1 to 4 were taken sitting on a large rock just out of range of the incoming waves on Porthcurno beach
Fig 5 was taken from beside the lifeguard hut at Porthcurno beach (note the difference due to parallax of this location compared to Figs 1 to 4)
Fig 6 was taken from my B&B bedroom window in Porthcurno

None of the images have been cropped and no image manipulation has taken place.

Brian Griffin

Three Autumn Nebulae



The Heart Neb.in Cassiopia 22nd Sept'25 at 23:38 Canon DSLR prime focus of Meade 80 mm with Optolong filter ISO 1250 1200 seconds of data

Crescent Nebula Cygnus
21st Sept '25 at 23 36 hours
Canon DSLR prime focus of 300 mm
Newtonian with optolong Quad filter
ISO 1000 720 seconds of data

Skull Nebula in Cetus 29thSeptember '25 at 00:05 Canon DSLR 60Da with Meade 80mm at prime focus Iso 1000 with 300 seconds data using Optolong L-enhance filter

Marcus Stone

Advertisements

FOR SALE

Celestron Astro Fi **5**” Schmidt-Cassegrain telescope

Excellent condition. **£285** ono.

Also have a selection of eyepieces which could be included, and a Celestron NexYZ 3-axis universal smartphone adapter.

Seller lives in Bottesford but could deliver to the Nottingham area.

Contact Roger on 07960911804 or rbrogerblackburn@gmail.com

FOR SALE

Dew Shield for 11-inch Schmidt-Cassegrain Telescope
by Lynx Astro

Unused.
With built-in heating element, which would require a 12v supply.

£20 (list price £62)

Meade Series 4000 Super-Plossl Eyepieces
Standard 1.25-inch diameter. Both in mint condition

15 mm focal length **£20** (list price £34)
40 mm focal length **£35** (list £65)

Contact **Roy Gretton**, 07483868162
journal@nottinghamastro.org.uk

Telescope for Sale

Genuine reason for sale, due to shoulder injury I find it difficult to cope with this large scope. Price are negotiable , but comes as a complete package, delivery can be arranged. I am based near Burton on Trent.

£200 ono

Sky Watcher D=200mm F=1000mm Parabolic Reflector(200PDS)
Crayford dual speed focuser with electric control
35mm extension eyepiece tube and Coma corrector
Bahtinov Mask
Dew Shield
Finder scope
Telrad Base and Telrad
Kendrik Baader film solar filter
Seymour glass solar filter
Celestron collimating eyepiece, Next Gen Laser Collimator.

Contact Pete Hill at peter_j_hill@hotmail.com

For Sale

Celestron focus motor #94155-A

Fits all Celestron SCTs 6-14 inch made since 2006.
Excellent condition, works perfectly, gets a perfect focus without shaking the scope.
Includes packaging, instructions, cable for connecting to Celestron handset and all bits and pieces. Price **£120**.

Sam Boote sam@boote.myzen.co.uk or at Society meetings

Nottingham Astronomical Society

Affiliated to the **B**ritish **A**stronomical **A**ssociation
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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 2025

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.
