## Journal

of the

## Nottingham Astronomical Society October 2023



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## Thursday, October $5^{\text {th }}$

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

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

This evening we welcome

## Dr. Richard J. Goodrich <br> who will be speaking on

Fear and Loathing in the Heavens:
The 1910 Return of Halley's Comet

## Chairman's Message, October 2023

Hello Everyone,
Here we are in September, and as I write this there appears to be a biblical flood coming down from the heavens, and so we're past the equinox and summer is officially done, clearly!
It was good to see people at the observing evening where we saw many objects around the night sky. The rain isn't really helping observatory access, which I noticed was already getting very soggy on the last trip up there to do some maintenance. We've had some talks with our landlords, Severn Trent, and maybe there could be something there. I really hope so, otherwise we're going to have to look into renting airboats or something. We have most of the Autumn program put together now, just waiting on confirmation for December's speaker. So look forward to the darker nights and interesting topics coming up, and all the events in the sky that we will hopefully see.

Best wishes,
Julian
NAS Chair

## Sky Notes <br> October 2023

Compiled by Roy Gretton


All times given below are in British Summer Time unless otherwise stated
British Summer Time ends on Sunday, October 29 ${ }^{\text {th }}$. Clocks should be turned back one hour at 2 am on that date.

## PHASES OF THE MOON

## Phase

| Last Quarter | October 6 $6^{\text {th }}$ |
| :---: | :---: |
| New Moon | October 14 |
| First Quarter | October 22 |
| Full Moon | October 28 |

This month the Moon is closest to Earth on the $26^{\text {th }}$, and furthest on the $10^{\text {th }}$.
A partial lunar eclipse will occur on October $28^{\text {th }}$. Just over 12 percent of the Moon will be immersed in the Earth's shadow, so a small "bite" will appear to be taken out of the Moon's upper right, with the umbral phase beginning at $8: 35 \mathrm{pm}$ and ending at $9: 52 \mathrm{pm}$ (duration 77 minutes). The faint penumbral eclipse will be visible for an hour or so either side of the partial phase.

## THE PLANETS

Mercury will be practically unobservable this month, with superior conjunction occurring on October $20^{\text {th. }}$

Venus is an outstanding object in the morning sky, shining at magnitude -4.6 as it rises shortly after 3 am at the beginning of October, and reaching greatest western elongation (46 degrees) on the $23^{\text {rd }}$.

Mars, still technically an evening object, must now be regarded as unobservable as it heads toward conjunction with the Sun in November.

Jupiter is now the stand-out planet in the evening sky, rising at about 8 pm as October begins, and culminating at 2 am in mid-month, by which time it will be shining at magnitude -2.9.

## Phenomena of Jupiter's satellites

The disappearance of Jovian satellites into eclipse is the easiest type of phenomenon to observe with a small telescope (say, 50 mm aperture). As we are currently viewing Jupiter before opposition, satellites disappear into Jupiter's shadow on the west side of the planet (viewed from Earth). Next in ease of observation (with instruments of 100 mm aperture and above) are shadow transits. In this case, look for a dark spot crossing Jupiter's disk. Lists of eclipse disappearances and shadow transits visible in the evenings this month are given below.

| October $4^{\text {th }}$ $11^{\text {th }}$ $15^{\text {th }}$ $22^{\text {nd }}$ $23^{\text {rd }}$ $29^{\text {th }}$ $30^{\text {th }}$ $31^{\text {st }}$ | Disappearance into eclipse of <br> Europa 8:44 pm <br> Europa 11:21 pm <br> Io $8: 33 \mathrm{pm}$ <br> Io $10: 27 \mathrm{pm}$ <br> Ganymede 8:49 pm <br> Io $11: 22 \mathrm{pm}$ UT <br> Ganymede 11:50 pm UT <br> Io $5: 51 \mathrm{pm}$ UT |
| :---: | :---: |
| October $5^{\text {th }}$ $7^{\text {th }}$ $13^{\text {th }}$ $14^{\text {th }}$ $20^{\text {th }}$ $23^{\text {rd }}$ $27^{\text {th }}$ $30^{\text {th }}$ | Shadow transit of <br> Ganymede begins 10:55 pm <br> Io $9: 18 \mathrm{pm}$ to $11: 28 \mathrm{pm}$ <br> Europa 6:28 pm to $8: 48 \mathrm{pm}$ <br> Io begins 11:12 pm <br> Europa 9:04 pm to 11:23 pm <br> Io $7: 36 \mathrm{pm}$ to $9: 46 \mathrm{pm}$ <br> Europa begins 11:39 pm <br> Io $8: 31 \mathrm{pm}$ to $10: 41 \mathrm{pm}$ UT |

Saturn, shining at magnitude +0.6 in the constellation of Aquarius, will be due south at 10:40 pm as October begins, at 9:40 pm in mid-month, and at 7:40 pm UT on the $31^{\text {st }}$. At these times its elevation will be close to 25 degrees, making for better observing opportunities than we've had for some years.


The aspect of Saturn
on October $1^{\text {st }}$
(north at the top)

Uranus, a few degrees northeast of Jupiter in the constellation of Aries, will be due south at 2:45 am in mid-October.

Neptune, magnitude 7.8, now 3 degrees south of the celestial equator in the constellation of Pisces, will be rising at 7 pm as October begins.

## METEORS

The principal meteor shower in October is the Orionids, which put in a reasonably favourable appearance this year, peaking on the night of the $21^{\text {st }}-22^{\text {nd }}$, with the Moon at First Quarter. Twenty events per hour may be visible under ideal conditions.

## DIARY DATES 2023

## Monthly Meetings of the Nottingham Astronomical Society

\author{

1. Meetings at <br> Nottingham Emmanuel School <br> Gresham Park Road, <br> 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 \begin{tabular}{ccc}

October $5^{\text {th }}$ \& | Tear and Loathing in the Heavens: |
| :---: |
| The 1910 Return of Halley's |
| Comet | \& Speaker <br>

November 2 $^{\text {nd }}$ \& \begin{tabular}{c}
Stars and Sensationalism: <br>
Searching for the First Stars in <br>
the James Webb Space Telescope <br>
Era

 \& 

University of Nottingham
\end{tabular} <br>

\& \& <br>
\& \& <br>
\&
\end{tabular}

## 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 October $19^{\text {th }}$

## Social and Practical Astronomy, Plumtree, September 2023

The September Plumtree meeting was run by James and was part one of two talks on filters used in astronomy, covering the principle of what filters do and a quick tour of the common filters available to amateur astronomers. Everyone was given a piece of red and blue acetate and different colours were projected on the screen to show how these coloured acetate block or let through certain coloured light. I'm not sure it was totally successful but there was a lot of laughing and plenty of interaction and discussion.


Professor Jeremy Shears, Director of the British Astronomical Association's Variable Star Section is coming to talk at Plumtree in October on something variable-related!

James Dawson<br>Observatory Director<br>observatory@nottinghamastro.org.uk

## Extracts from the programme of John Hurst's funeral, celebrating his life



## Poem

Starlight
written and read by son, Edward
The stars reach out from times gone by, their photons lighting up the sky, they guide us, teach us, raise our sights, illuminating all our nights.

And even when their days are done, the light they shone lives on and on, still reaching out, still shining bright, still lighting up our sky each night.

You were my star, you were my guide, you taught me love, compassion, pride, and like each star that's burned it's last, your light shines bright from moments past.

For those you touched, whose lives you've altered, and wrapped in love that never faltered, we say goodbye, sweet dreams, goodnight, we hold your warmth, we carry your light.


James Dawson

## Astronomical Images from the Swiss Alps by Richard Field

Taken in early September in Saas Grund, at an altitude of approximately 1600 m


The imaging set-up


Planetary nebula


Saturn


Veil Nebula in Cygnus


## Orion slain!

Meteor strikes at the very heart of Orion in the early hours.


Not a particularly bright meteor but made me smile with the relative perspective of it.
From my UKMON meteor station on 21st September at 05:38 BST.
Sporadic meteor at visual magnitude -0.4

## Mark Fairfax

## Observatory Open Evening, September 9 ${ }^{\text {th }}$

30 members enjoyed an evening of stargazing at the NAS observatory on Saturday 9th September. Skies stayed clear despite a long lightning storm visible near the horizon to the north periodically lighting up the night sky, which made for an interesting sight whilst viewing through the eyepiece of the 24 " telescope.

Targets for the evening were


Thank you to all who attended and enjoyed a warm late summer evening at the Observatory.

## Richard Severn

## Advertisements

## FOR SALE

Celestron dovetail bar to fit C11 telescope. New, unused $£ 15$


Orion UK rack and pinion focusser £7

Celestron $9 \times 50 \mathrm{~mm}$ finderscope and mounting bracket. New, unused $£ 45$


2-inch and 1.25 -inch adapters to fit focusser £5 the pair


LENSES FOR TELESCOPE MAKING, ete

Achromatic object glass
50 mm diameter focal length approx 40 cm


Achromatic object glasses
43 mm diameter focal length approx 50 cm
£2 each or
£5 for all three


Achromatic doublets
40 mm diameter
focal length approx 10 cm
£1 each or
$\mathfrak{£ 3}$ for all four


British army brass telescope by Broadhurst Clarkson 42 mm aperture, with leather sling


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

## 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 link to the NAS Journal, and a copy of our SkyNotes, 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

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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

$\begin{array}{ll}\text { Doors open } & 7: 15 \mathrm{pm} \\ \text { Meetings start } & \mathbf{7 : 4 5 p m} \\ \text { Meetings end } & 9: 15 \mathrm{pm}\end{array}$

Annual subscriptions 2023
Full
Joint rate for partners
living at the same address
Under- 18 s and full-time students $£ 5$
Subscriptions become due on $1^{\text {st }}$ January.
Half-price subscription is charged if joining
after $30^{\text {th }}$ June (minimum subscription $£ 5$ ).

Please make cheques payable to:
Nottingham Astronomical Society.

These meetings are open to the public, and visitors are welcome to attend, subject to a charge of $£ 3$ per meeting for adults.

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.

## The Nottingham Astronomical Society

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