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# Journal

of the

## Nottingham Astronomical Society

### July-August 2021

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**Thursday, July 1<sup>st</sup>**

**8pm: ONLINE**

This evening we welcome

**Dr Chris Arridge**  
of Lancaster University



**The JUICE Mission**  
*Exploring Jupiter's icy moons*

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### Current Arrangements for our monthly “Gotham” meetings

These meetings, held on the first Thursday of each month (except August), are intended for members of the Society only. “Plumtree” meetings – those held on the third Thursday of each month – will continue to be freely accessible to the public via YouTube.

Until further notice, our main meetings will be held on YouTube and will be for **members only**. Members will be emailed a link to the live stream on YouTube about 20 minutes before the meeting commences at 8pm. You will not be able to search for the meeting in YouTube, access is via the link provided in the email only.

For non-members wishing to watch our meetings, please email [membership@nottinghamastro.org.uk](mailto:membership@nottinghamastro.org.uk) before the meeting and we will send you a link to your first two meetings before requesting you join the society to join future online meetings.

## Chairman's Message – July-August 2021

Hello everyone,

I hope you are all doing well. We are now into noctilucent cloud season, and there have been reports of them from all around the country. So keep an eye out for those!

It is feeling a bit more summery, but then the weather changes, and the other night when people were seeing them, all I could see was the bottom of regular clouds!

Our next talk is by Dr Chris Arridge from the University of Lancaster, and he will be talking about The JUICE Mission: Exploring Jupiter's icy moons, so that should be very interesting.

Work continues at the observatory, and we had hoped to invite you all there for a meeting in July, but unfortunately the restrictions aren't being lifted in time. So we will try and do a live link up there so you can all see the progress together with the history of the site.

In August we have our barbecue, and I hope you will all come along and we can meet up, see the progress, share food and drink and generally be sociable. Maybe some observing too although the long days are against us.

We hope to start in person meetings in September if we can, but these may be hybrid meetings so you will be able to attend in person or online if we can work out how to do this. For this to be successful we really need some help with the techy bits, so if you are a bit techy, or want to learn please get in contact so we can get up to speed in time and have a good team who can manage this.

Best wishes to all

**Julian**

Chair, NAS

### 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](http://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](mailto: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](mailto:treasurer@nottinghamastro.org.uk)*

# Sky Notes

## July & August 2021



Compiled by Roy Gretton

*All times given below are in British Summer Time*

**Earth's aphelion** occurs on July 5<sup>th</sup>, when we shall be 152,100,500 km from the Sun.

### PHASES OF THE MOON

<i>Phase</i>	<i>July</i>	<i>August</i>
Last Quarter	1 <sup>st</sup> & 31 <sup>st</sup>	30 <sup>th</sup>
New Moon	10 <sup>th</sup>	8 <sup>th</sup>
First Quarter	17 <sup>th</sup>	15 <sup>th</sup>
Full Moon	24 <sup>th</sup>	22 <sup>nd</sup>

In July the Moon is closest to Earth on the 21<sup>st</sup>, and furthest on the 5<sup>th</sup>. In August the corresponding dates are the 17<sup>th</sup> and the 2<sup>nd</sup>.

### THE PLANETS

**Mercury** begins July as a morning object, passing through greatest western elongation (22 degrees) on the 4<sup>th</sup>. It then moves in toward the Sun, reaching superior conjunction on August 1<sup>st</sup>. Thereafter it is an evening object, but poorly placed for observation.

**Venus** (magnitude -4) lurks low in the evening sky after sunset throughout July and August. It is very easy to spot if your view is not obstructed by nearby objects.

**Mars**, just visible in the evening sky as July begins, disappears into the sunset glow in August, as it heads toward conjunction with the Sun in early October.

**Jupiter**, in the constellation of Aquarius, comes to opposition on August 20<sup>th</sup>, and will therefore be due south at approximately 1 am on that date. Shining at magnitude -2.9, it will be by far the brightest "star" in that part of the sky. Viewed from Earth, Jupiter will be drifting southward throughout July and August, and will end this period 14 degrees south of the celestial equator.

**Saturn**, in Capricornus, will be at opposition to the Sun on August 2<sup>nd</sup>, when it will be more than 18 degrees south of the celestial equator. Its magnitude will be +0.2.

At the beginning of August, **Uranus** will be rising shortly before midnight in the constellation of Aries, will be rising at 2 am. It is now more than 15 degrees north of the celestial equator.

**Neptune**, a magnitude +7.9 object in the constellation of Aquarius, will be rising at 10 pm at the beginning of August.

## METEORS

August is the month of one of our best meteor showers, the **Perseids**, which reach their maximum activity this year on the evening of the 12<sup>th</sup>; so the night of August 12<sup>th</sup>-13<sup>th</sup> is the time to be out looking for them. We have favourable conditions this year, with a 4-day-old Moon well out of the way before midnight. Also bear in mind that the Perseids are active for a number of days either side of this night, so you can hope to see some on these dates, too.

## NOCTILUCENT CLOUDS

Noctilucent clouds are pale blue filamentary clouds, formed about 50 miles above the Earth's surface, far above the normal clouds we associate with the weather. They are best observed in June and July, becoming visible when illuminated by the Sun when it is well below the horizon. They are still poorly understood, but their "electric blue" appearance is quite distinctive. If you wish to see (and possibly photograph) noctilucent clouds, look toward the north or northwest on a clear evening after 10pm.

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## The Partial Solar Eclipse of June 10<sup>th</sup>

**Marcus Stone** captured this image of the eclipse at 12h 07m 16s, which he describes as a tantalising glimpse through the clouds, taken at the prime focus of a 120mm refractor using a solar filter. The camera was a Canon 60Da set at ISO1000 and an exposure of 0.2 sec. Everything was set up to grab a shot when the clouds thinned for a few moments.



## DIARY DATES 2021

### Monthly Meetings of the Nottingham Astronomical Society

**There will be no meetings at  
Gotham or Plumtree until further notice**

*We nevertheless continue to display our pre-arranged programme of speakers  
in the hope that it may be possible to livestream these talks.*

***Members of the Society will receive further updates  
each month from the Chairman***

Date	Topic	Speaker
July 1 <sup>st</sup>	The JUICE Mission <i>Exploring Jupiter's icy moons</i>	Dr Chris Arridge Lancaster University
August 7 <sup>th</sup> <i>(Saturday)</i>	Annual Barbecue at the Observatory <i>(Members and their guests only)</i>	
September 2 <sup>nd</sup>	The Vikings at Barsoom Part 2: The Search for Life	Paul Money FRAS, FIBS
October 7 <sup>th</sup>	Fiat Lux 3 <i>The Large Synoptic Survey Telescope</i>	Dr Steve Barrett University of Liverpool
November 4 <sup>th</sup>	Annual General Meeting with a Wine and Cheese Social	
December 2 <sup>nd</sup>	The NAS Christmas Lecture <i>to be confirmed</i>	

### Advertisement

#### For Sale

#### Celestron NexStar 8SE telescope

Complete with tripod, two finder scopes, dew shield and solar filter.

£650 ono

Contact Roger Blackburn in Bottesford

07960911804

## Social and Practical Astronomy, Plumtree, July 2021

The main topic of our June 2021 online Plumtree meeting was noctilucent clouds.



The evening started with Jeremy Shears, Director of the British Astronomical Association's Variable Star Section, giving us an update on the recently identified nova in the constellation of Hercules. A star in the order of 20<sup>th</sup> magnitude brightened to 6<sup>th</sup> magnitude very quickly and then over the course of the following days has dimmed again, but it is still being watched very carefully. Read more about this on the [BAA website](#).

Next there was a talk on noctilucent clouds by myself and Sandra Brantingham, also from the BAA, but Sandra is the Director of the Aurora and Noctilucent Cloud Section. Sandra has a wealth of experience of observing and talking about noctilucent clouds so I invited her along to help. We've had some talks in the past about noctilucent clouds so I wanted to concentrate on some of the more technical side of these amazing summer time visitors. We are still learning more about them and as with many areas within amateur astronomy, observations by amateurs really does help the scientific community gain greater understanding about these, and other phenomena. In particular, it is unclear why the latitudes from where noctilucent clouds can be seen is changing, and observations of when they are observed from further south on certain occasions helps to tie in to other data on climate and atmospheric conditions. There is an article on NLC by Sandra on the [BAA website](#). Below is a panoramic image I took of noctilucent clouds from our own observatory site on 11<sup>th</sup> July 2020 at 02:20am (BST).



The noctilucent cloud season extends from mid-May to mid-August so there is still chance to observe them this summer.

If you missed the talk or want to watch it again, it, along with all our past Plumtree meetings since April 2020 are on our YouTube channel:

<https://www.youtube.com/watch?v=OhWkoHpXnBg>

**James Dawson**

[helpdesk@nottinghamastro.org.uk](mailto:helpdesk@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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## **ORDINARY COMMITTEE MEMBER:**

**Andrew Green**

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## **Meetings**

**Under normal circumstances** 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 2021**

Full	£30
Joint rate for partners living at the same address	£45
Under-18s and full-time students	£5

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

Please make cheques payable to:  
*Nottingham Astronomical Society.*

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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](mailto: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.

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## **The Nottingham Astronomical Society**

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