
Journal

of the

Nottingham Astronomical Society

May 2021

In this issue

- A Message from the Chairman
- Sky Notes for May
- E-Services
- Diary Dates for 2021
- Social and Practical Astronomy: meeting report
- Tracking an Asteroid
- Lunar Images
- Image of M53
- Advertisement
- Society Information

Thursday, May 6th

8pm: ONLINE

Tonight we welcome

Dr Martin Braddock

FRSB, FRAS



**of the Mansfield & Sutton
Astronomical Society**

who will be speaking on

Extremophiles

***Why there must be life elsewhere
in the Universe***

Current Arrangements for our monthly “Gotham” meetings

These meetings, held on the first Thursday of each month, 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 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 – May 2021

Hello everyone,

I hope you are all enjoying the weather and the let-up in restrictions. It's great to see people again, even if only in small groups! We took the opportunity of the warm weather and the relaxation for a small party to go to the observatory and spruce up the grounds a little. We are meeting with Severn Trent who own the land in the near future to discuss what options we have going forward for the observatory site, so we want it to look at it's best.



There have been a couple of changes on the Committee. Olwen Brant has stepped down as secretary as they are planning on moving away, and has been replaced by Chris Sneddon. Olwen did some brilliant work chairing the Observatory Site Development Group and gathering all the opinions and options for the site. So I would like to publicly thank her for all her work. I'm also enormously grateful to Chris for stepping in at short notice to fill the gap. We are continuing with our virtual meetings for now, but are now starting to think about meeting in public, and looking at locations that might work. If anyone knows of good venues with facilities for our main meetings please let us know!

Best wishes,
Julian

Sky Notes

May 2021



Compiled by Roy Gretton

All times given below are in British Summer Time

PHASES OF THE MOON

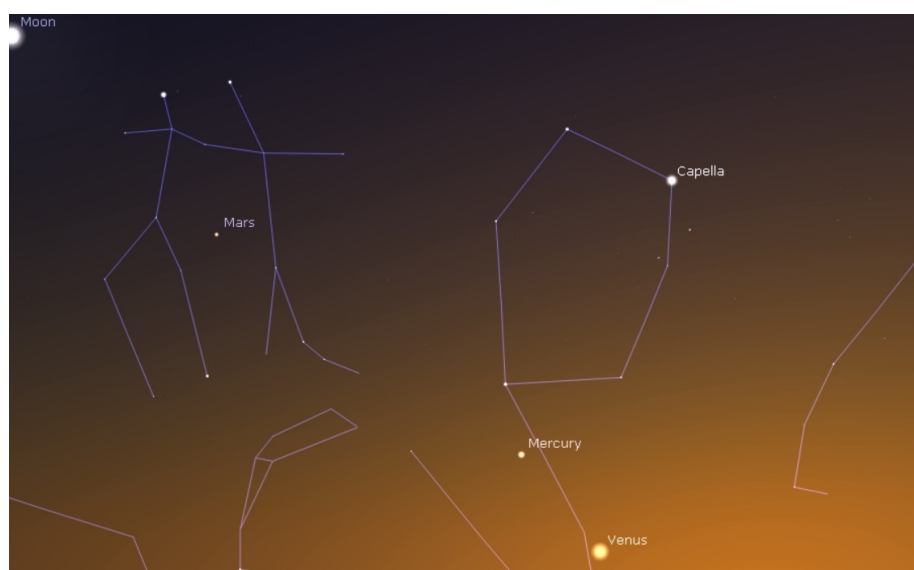
<i>Phase</i>	<i>Date</i>
Last Quarter	May 3 rd
New Moon	May 11 th
First Quarter	May 19 th
Full Moon	May 26 th

This month the Moon is closest to Earth on the 26th, and furthest on the 11th. So, as with last month, expect to see an unusually large Full Moon, particularly when it is close to the horizon when rising or setting.

THE PLANETS

The middle of this month provides the best opportunity for observers in the northern hemisphere to observe **Mercury** in the evening sky in 2021. Greatest eastern elongation (22 degrees) occurs on May 17th, when the planet will be setting two hours after the Sun. It will have an apparent diameter close to 8 arcseconds.

Venus, bright though it will be, will be extremely difficult to spot in the evening sky as it very slowly moves away from the Sun. Even at the end of May it will be setting only an hour after sunset.



**Looking
WNW
at 9:45pm
on
May 17th**

*Mercury at
greatest
eastern
elongation*

Mars this month continues to move through the constellation of Gemini as it fades to magnitude +1.7, and its angular diameter diminishes toward 4 arcseconds.

In mid-April **Jupiter** will be rising an hour and a half before the Sun, and shining at magnitude -2.1. It will close the month less than 13 degrees south of the celestial equator.

Saturn remains more than 17 degrees south of the celestial equator throughout April, as its magnitude brightens to +0.7. It will be rising more than two hours before the Sun in mid-month.

By the end of May, **Uranus**, in the constellation of Aries, will be rising about one hour before the Sun.

Neptune, in the constellation of Aquarius, will be rising about two hours before the Sun in late May.

METEORS

The **Eta-Aquarids** are expected to peak on May 6th, when up to 40 events per hour may be observed under ideal conditions. This year the maximum coincides with a 25 day-old Moon with the potential to hamper observations in the morning sky.

(Next month we shall be looking forward to an eclipse of the Sun that will take place on June 10th)

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

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***

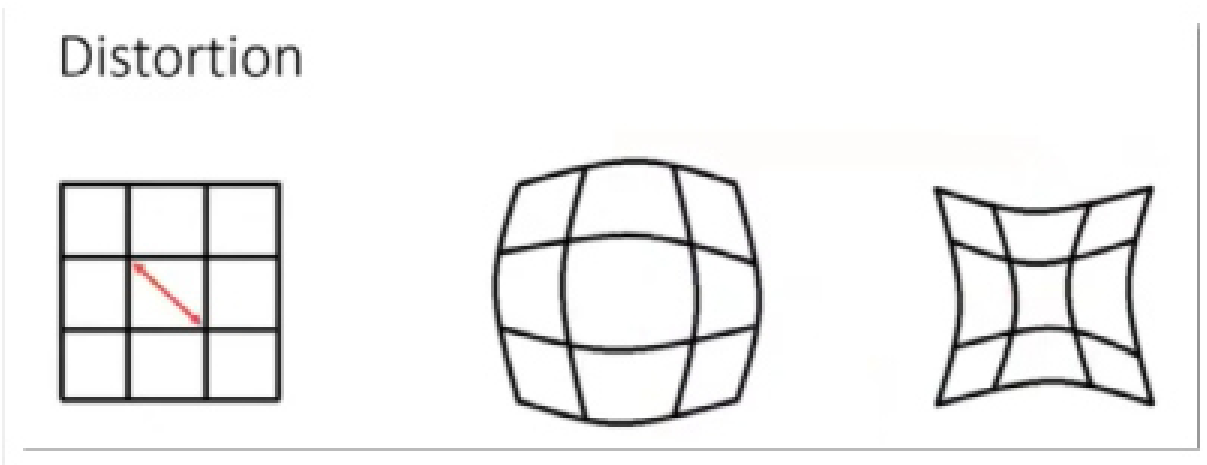
Date	Topic	Speaker
May 6 th	Extremophiles <i>Why there must be life elsewhere in the Universe</i>	Dr Martin Braddock Mansfield & Sutton AS
June 3 rd	Harbingers of Doom? Comets	Prof Ian Morison Emeritus Gresham Professor of Astronomy
July 1 st	The JUICE Mission <i>Exploring Jupiter's icy moons</i>	Dr Chris Arridge Lancaster University
August 7 th <i>(Saturday)</i>	Annual Barbecue at the Observatory <i>(Members and their guests only)</i>	
September 2 nd	The Vikings at Barsoom Part 2: The Search for Life	Paul Money FRAS, FIBS
October 7 th	Fiat Lux 3 <i>The Large Synoptic Survey Telescope</i>	Dr Steve Barrett University of Liverpool
November 4 th	Annual General Meeting with a Wine and Cheese Social	
December 2 nd	The NAS Christmas Lecture <i>to be confirmed</i>	

Social and Practical Astronomy, Plumtree, May 2021

Our **April 2021** online Plumtree meeting was devoted to “aberrations, artefacts and other optical issues in amateur astronomy”, and delivered by James and Leigh. The talk and the questions afterwards can be viewed on the Society YouTube channel:

<https://www.youtube.com/watch?v=cqgGS5-MVzE>

There are many different types of optical aberrations which affect reflecting and refracting telescopes, some of these can be improved by making adjustments to the telescopes, or by using dedicated correctors, but others are less easy to correct, or the user just has to live with them. If your stars are not nice and sharp or have tails or halos then you may be suffering with some kind of aberration and if this is the case let us know and we can try and help you identify the problem and potentially find a solution.



There are lots of resources online if you want to do more reading about aberrations, including an excellent resource by the University of Sheffield which is free to access:

<http://slittlefair.staff.shef.ac.uk/teaching/phy217/lectures/principles/L01/index.html>

A list of the lecture notes available appears in the top right in a drop down box.

See you all online on **May 20th** for the next Plumtree Meeting which Richard and Mike Provost are arranging and will showcase Mike's Unistellar [eVscope](#). I'm really looking forward to that one.

James Dawson

helpdesk@nottinghamastro.org.uk

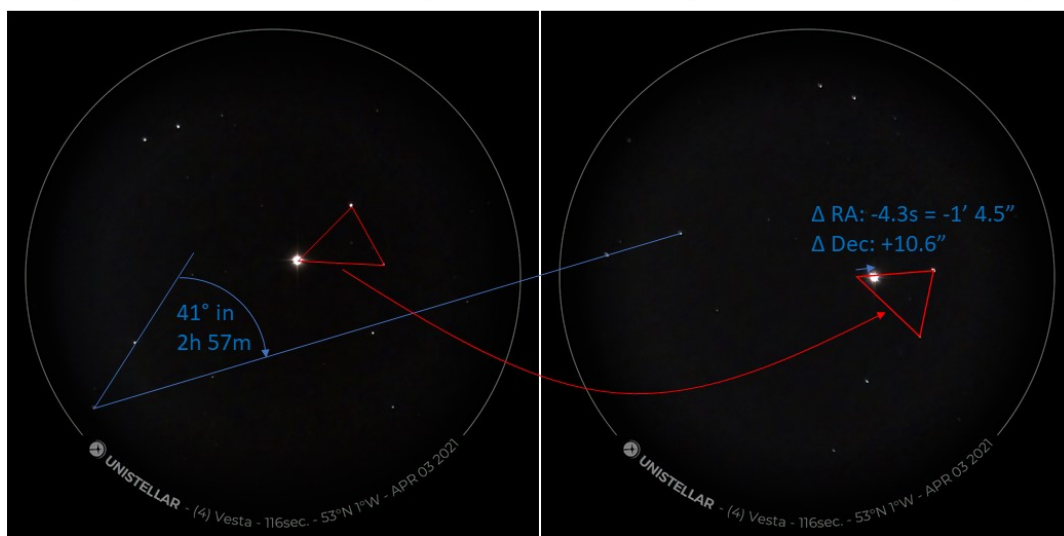
Tracking an Asteroid: Vesta in April 2021

Mark Fairfax imaged the asteroid Vesta from his back garden on April 6th using an eVscope (the first time he had observed an asteroid). Vesta was a +6.8 magnitude object in the constellation of Leo, and was then at a distance of 219 million km:



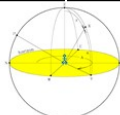
Mike Provost also imaged Vesta with an eVscope on April 3rd, capturing two pictures nearly 3 hours apart, from which the movement of Vesta can be discerned:

Movement of Vesta: 3rd April 2021 19:55 UTC/GMT to 22:52 UTC/GMT



Vesta: 3rd April 2021, 19:55 UTC/GMT

Altitude: 46° 47' 28.8", Azimuth: 129° 37' 56.2"
Right Ascension: 10h 54m 39.2s, Declination: +18° 33' 52.8"
Hour Angle: 21h 44m 47.6s



Vesta: 3rd April 2021, 22:52 UTC/GMT

Altitude: 54° 39' 15.9", Azimuth: 197° 31' 11.1"
Right Ascension: 10h 54m 34.9s, Declination: +18° 34' 3.4"
Hour Angle: 0h 42m 21.0s

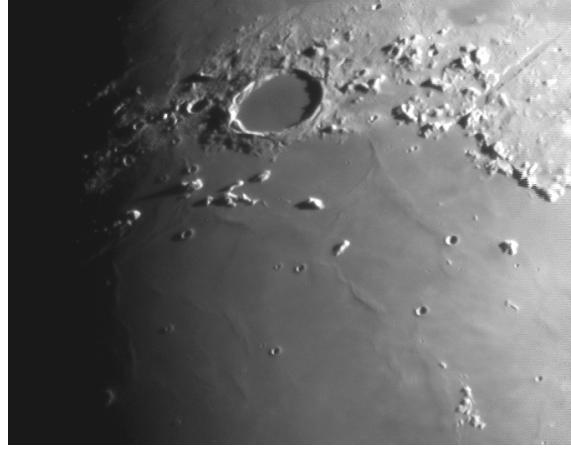
Earth rotation during this time period (2h 57m) = $(177 / (24 \times 60 - 4)) \times 360^\circ = 44.4^\circ$

Lunar Images from Marcus Stone

Marcus reports that these images were taken on an exceptionally clear night, March 22nd this year. The jet stream was well to the north of the UK making atmospheric conditions very stable. Visually, Marcus enjoyed some of the best viewing he'd had for many months. All the lunar pictures were taken with a Meade DSI Pro 2, and consist of 50-60 frames per picture. The internal guidance on the camera helped to keep things nice and sharp.



Clavius



Plato and the Alpine Valley

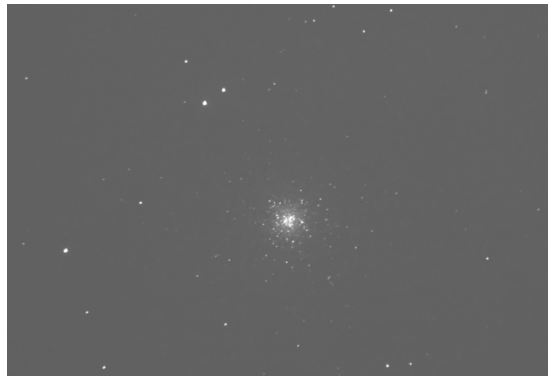


Copernicus



Tycho

Marcus also imaged the globular cluster **M53** (NGC5024), a beautiful deep sky object well worth viewing through a medium sized telescope. This is the first time he had actually observed this cluster. Probably because of concentration on the Como-Virgo galaxy cluster, this particular object is often overlooked. The image was taken at prime focus of a 300mm Newtonian telescope. It is a 3-minute guided exposure with Canon 60Da set at ISO1600.



Advertisement

Telescope for Sale

Celestron Astromaster 130EQ-MD - Model #31051

Purchased in 2012

It has remained indoors for 9 years and has barely been used

£75

If interested and happy to collect, please contact

Mrs Adele Pattie, Newton, Nottingham, NG13 8HJ
Tel: 01949 21310



Nottingham Astronomical Society

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

CHAIRMAN:

Julian Onions

email: chairman@nottinghamastro.org.uk

VICE CHAIRMAN:

Richard Severn

email: vicechairman@nottinghamastro.org.uk

SECRETARY:

Chris Sneddon

email: secretary@nottinghamastro.org.uk

TREASURER:

Mike Provost

email: treasurer@nottinghamastro.org.uk

JOURNAL EDITOR:

Roy Gretton

email: journal@nottinghamastro.org.uk

MEMBERSHIP SECRETARY

Richard Severn

email: membership@nottinghamastro.org.uk

CURATOR OF INSTRUMENTS:

Rob Bush

email: curator@nottinghamastro.org.uk

WEBMASTER:

Leigh Blake

email: leigh@nottinghamastro.org.uk

DIRECTOR OF OBSERVING:

James Dawson

email: observatory@nottinghamastro.org.uk

ORDINARY COMMITTEE MEMBER:

Andrew Green

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 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

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