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# Journal

of the

## Nottingham Astronomical Society

May 2022

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**Thursday, May 5<sup>th</sup>**

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

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

**This evening we welcome**

**Dr Matt Nicholl**

**of the University of Birmingham**

**who will be speaking on**

**Supernovae**

### **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)*

## Chairman's Message, May 2022

Hello everyone,

I hope you had a good Easter.

We are still tracking the chicken farm developments that we told you about last time and at the last meeting. There are currently 288 objections and three in support, but it still hangs in the balance as the planning regulations seem pretty complicated and what can be done to stop things. Anyway - onwards and upwards!

We managed to get some work done at the observatory, now that it is drying out a bit, and we are starting to look at observing nights. With the grass cut it does look good in the sun (see below)!

I hope you all enjoyed Professor Ian Morison's talk on the milky way, and next time it is Dr Matt Nicholl from Birmingham telling us about exploding stars - supernovae! So not to be missed!

We also found that they have upgraded the equipment at the Plumtree Hall, and there is now a fitted screen, projector and full PA system with a hearing loop - so that will make meetings there much easier to set up! Hope to see you all there.

Best wishes

**Julian,**  
NAS chair



# Sky Notes

## May 2022

Compiled by Roy Gretton

*All times given below are in British Summer Time*



### PHASES OF THE MOON

<i>Phase</i>	<i>Date</i>
First Quarter	May 9 <sup>th</sup>
Full Moon	May 16 <sup>th</sup>
Last Quarter	May 22 <sup>nd</sup>
New Moon	May 30 <sup>th</sup>

This month the Moon is closest to Earth on the 17<sup>th</sup>, and furthest on the 5<sup>th</sup>.

### Total Eclipse of the Moon, May 16<sup>th</sup>

The whole of the eclipse will be visible from South America and from eastern parts of Canada and the USA. In the UK, totality begins before moonset, but ends with the Moon below the horizon. The Moon will begin to enter the umbra (the dark part of Earth's shadow) at 3:27 am. Totality begins at 4:29 am, by which time the Moon will be very low in the west, so you will need a clear horizon to be able to see it. Moonset will be at 5:09 am, and totality will end at 5:53 am, with the Moon completely below our horizon.

### THE PLANETS

**Mercury** continues to be visible in the evening sky during the first week of May, following greatest eastern elongation on April 29<sup>th</sup>. Thereafter it dives in toward inferior conjunction which will take place on May 21<sup>st</sup>.

**Venus** continues to be a brilliant object (magnitude -4.2) in the morning sky, rising about one hour before the Sun, but it will be very low down in a bright sky.

**Mars** continues the slow journey toward opposition that will occur in December. By the end of May it will be rising at 2:30 am, and its apparent diameter will have grown to 6.4 arcseconds. On the morning of May 29<sup>th</sup> it will come into conjunction with Jupiter, passing just 0.6 degree south of the gas giant, affording an interesting spectacle with the naked eye, binoculars or a small telescope.



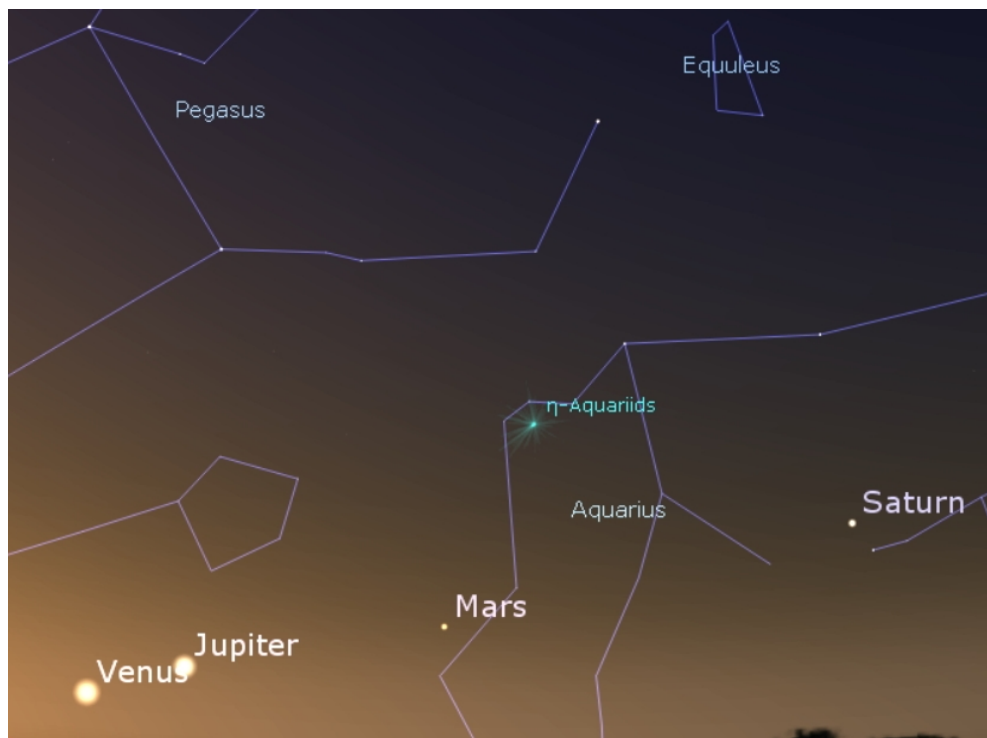
Jupiter and Mars as they might appear through binoculars or a small telescope before dawn on May 29<sup>th</sup>

**Jupiter**, in the constellation of Pisces, rises an hour and a half before the Sun in mid-May. Moving northward, it crosses the celestial equator in the last week on the month, when it will be shining at magnitude -2.2 and have an angular diameter of 37 arcseconds.

**Saturn** will be rising shortly after 2 am in mid-May. By then it will be shining at magnitude 0.8, with the ring system appearing 38 arcseconds across.

**Uranus** is unobservable this month.

**Neptune** will be rising at 3 am in mid-May.



**Looking ESE at 4:45 am on May 6<sup>th</sup>**  
showing the positions of four planets and the Eta-Aquariids radiant

## METEORS

The Eta-Aquariids reach maximum activity on May 6<sup>th</sup>, when 40 events per hour may be expected under ideal conditions.



## DIARY DATES 2022

### 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 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
May 5 <sup>th</sup>	Supernovae	Dr Matt Nicholl University of Birmingham
June 9 <sup>th</sup> *	Imaging from light polluted sites	Peter Jenkins FRAS
July 7 <sup>th</sup>	Mars	Richard McKim Director of the BAA Mars Section
August 6 <sup>th</sup>	Summer Barbecue at the Observatory	
September 1 <sup>st</sup>	(Topic to be confirmed)	Dr Steve Barrett
October 6 <sup>th</sup>	The Cosmic Web	Prof Alfonso Aragon- Salamanca

\* June 2<sup>nd</sup> is a national holiday

## **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 19<sup>th</sup>**

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### **Social and Practical Astronomy, Plumtree, April 2022**

Our April Plumtree meeting consisted of two parts. Both parts were interactive and required audience-participation.

Holly, one of our members, is studying for a Masters in Cultural Astronomy with the University of Wales Trinity Saint David and is conducting a research project about how amateur astronomers maintain a connection to the night sky in and around Nottingham. Holly had previously circulated a questionnaire to members of the Society and conducted some online interviews, and this was an opportunity for Holly to explain her project. Many interesting comments came out of the meeting and Holly will report back to us with the findings of her project in due course.

The second part of the meeting was to test the new audio-visual set-up at the Burnside Memorial Hall. A large drop-down projector screen and ceiling mounted projector have been installed along with speakers and a hearing-loop. I'd prepared a short quiz and played a video to explain about the Lagrange Points. I also demonstrated the software package Stellarium.

It was a very different evening but a most enjoyable one.

James Dawson

[helpdesk@nottinghamastro.org.uk](mailto:helpdesk@nottinghamastro.org.uk)

### **At the March 2022 Plumtree meeting**

members were asked to prepare two sentences about a photograph. I've now collated most of these sentences and put them next to the photographs. See below. Thanks to everyone who contributed.

## Horsehead Nebula

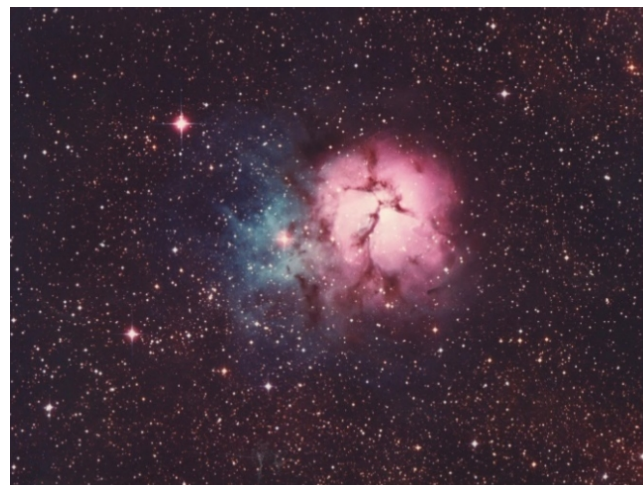
Discovered in 1888 by Scottish astronomer Williamina Fleming, the Horsehead Nebula is situated in Orion's belt 1375 lightyears from Earth. The pink colour of the nebula comes from ionised hydrogen and it measures 7 light years in diameter.

Holly



## Trifid Nebula

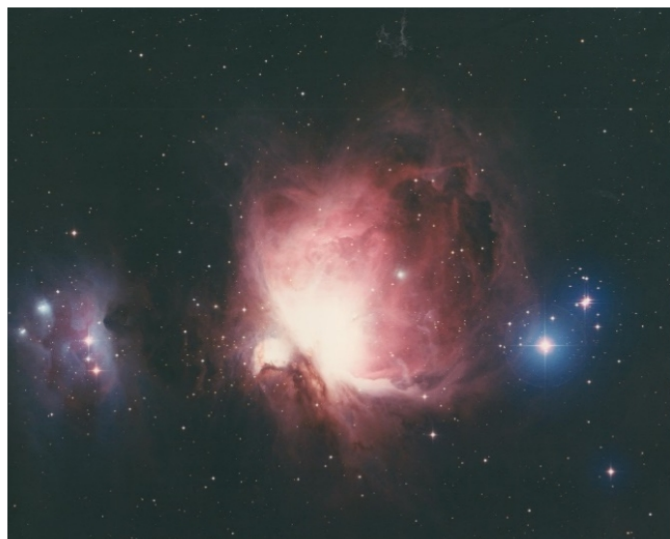
The nebula is an interesting one, as it comprises an open cluster (comprising 3100 young stars), an emission nebula (an ionised Hydrogen region, which appears reddish-pink), a reflection nebula (which appears bluish-white) and a dark nebula (which appears as the dark lanes which give the trifurcated appearance).



Leigh

## Orion Nebula

**The Orion Nebula** is a colourful maelstrom of star birth, great clouds of gas and dust which have been forming stars for about 12 million years; radiation from the hot stars causes hydrogen to glow pink. It is studded with celestial marvels, ranging from turbulent new, hot stars to lightweight brown dwarfs. Seen with the naked eye as a hazy patch of light, it was first reported by Galileo in his 1610 book, 'The Starry Messenger'

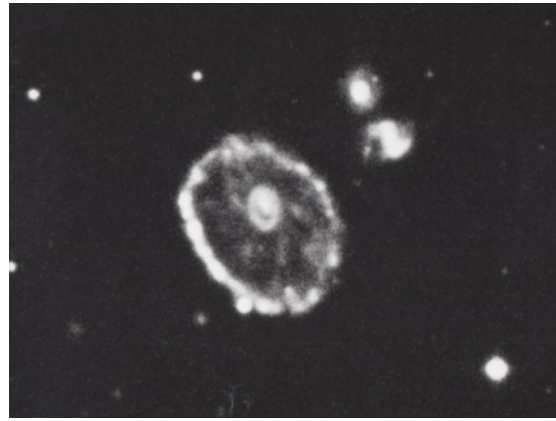


Chris

### Cartwheel Galaxy

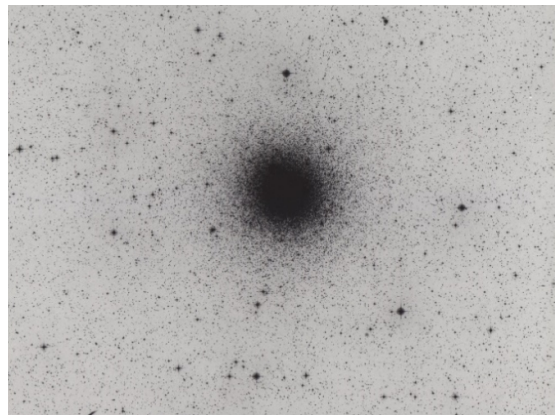
Outer ring contains unusually high number of black hole binary x-ray sources , following supernovae of massive stars formed in the gas/dust ring, compressed by Gravitational shock wave from collision. Probably created as a result of bullseye collision of nearby smaller galaxy (member of local group of 4) with larger spiral.

Paul



### NGC 6752

NGC 6752 is the third brightest globular cluster 13,000 light years away in the southern constellation of Pavo, the peacock, with an estimated 500,000 stars. There is a bright blue star in the foreground contrasting with the red and white stars in the cluster that are among the oldest known in the Milky Way at about 10 billion years old.

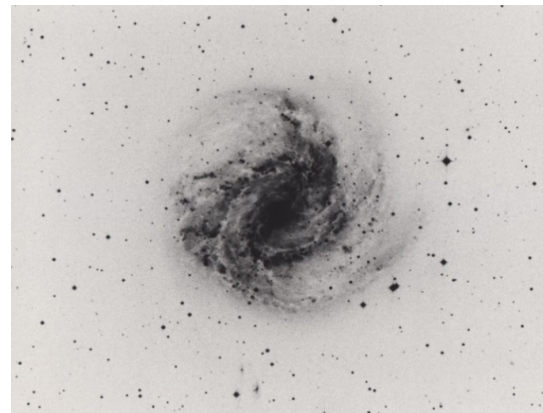


Graham

### Messier 83 (NGC 5236)

Is a barred spiral galaxy in the constellation Hydra. It is one of the closest and brightest (7th magnitude) spiral galaxies in the sky, and sometimes called the “Southern Pinwheel”.

Mark

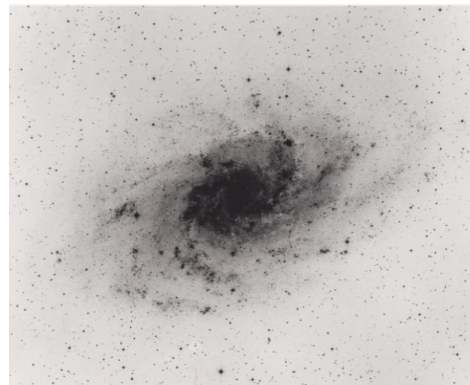


### M33

M33 is situated in the constellation of Triangulum which is east of the Andromeda constellation.

According to current estimates it lies 2.73M light-years from our Milky Way Galaxy which is slightly further than the Andromeda Galaxy at 2.54M light-years. M33 is considered part of the Local Group of galaxies.

Ian





### 13. Comet West

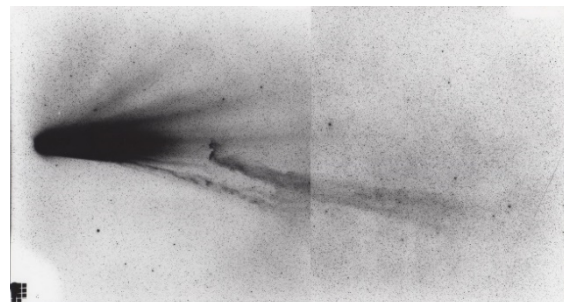
The photograph is of a comet and tail called comet West in fact and was visible during 1995/6. It is roughly  $3^\circ$  in length so a full moon occupies about  $\frac{1}{6}$  of its length making this a substantial object in the sky.



Stewart

### 16. Comet Halley

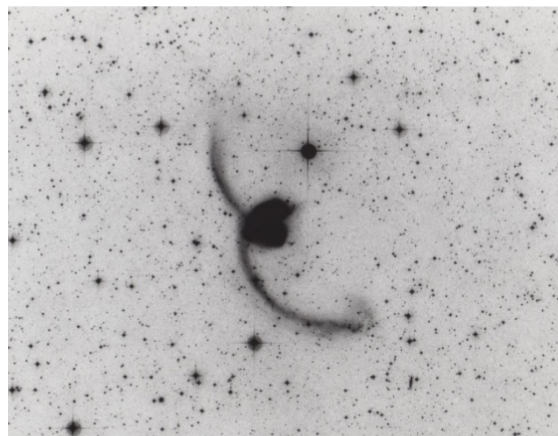
Halley's periodic returns to the inner Solar System every 76 years have been observed and recorded by astronomers around the world since at least 240 BCE, but it was not until 1705 CE that the English astronomer Edmond Halley understood that these appearances were reappearances of the same comet, and, as a result of this discovery, the comet is now named after Halley.



Detailed observations by spacecraft of the 1986 apparition of Halley's Comet supported a number of longstanding hypotheses about comet construction, particularly Fred Whipple's "dirty snowball" model, which correctly predicted that Halley would be composed of a mixture of volatile ices such as water, carbon dioxide, ammonia, and dust, and it is now understood that the surface of Halley is largely composed of dusty, non-volatile materials, and that only a small portion of it is icy.

Sam

### NGC 4038; The Antennae



### NGC 6752; Centaurus A

This galaxy has long been identified as a radio galaxy, but more recent observations show that it has an 'active galactic nucleus' (AGN), due to a supermassive black hole at its centre. The blue parts of the jets in this composite photo are X-ray emissions. These are due to the very high energy and speed of gas collisions in the jets close to the AGN. The orange areas are microwave radio emissions, where the gas has slowed and has less energy. The jets are thousands of light years long. The characteristic shape of this galaxy shows that it is a collision of two (or more) former galaxies.

It is the 5th brightest galaxy in the sky, and can be viewed from the southern hemisphere. It is a local galaxy about 13 million light years from earth. It is not visible from the UK.

**Rob**

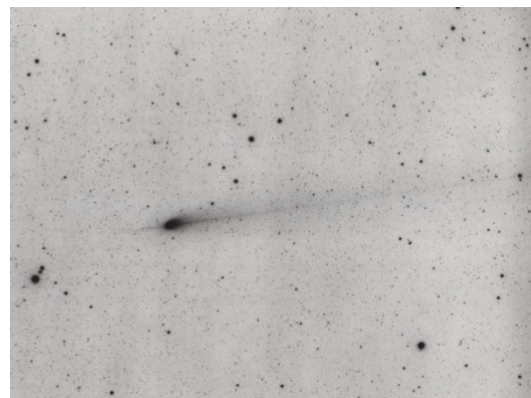


### Comet Hale-Bopp

During 1997, the long period comet Hale-Bopp (discovered independently by Alan H. Hale and Thomas Bopp July 1995, nr M70 when it was between Jupiter and Saturn) graced the skies for over 18 months (approx May 96-Dec 97) reaching an absolute magnitude of -1 (i.e. similar to Sirius), it was best seen in the Northern Hemisphere, and was probably the most watched with the naked eye comet ever, being according to NASA 1000x times

brighter than Halley's Comet at the same distance. Hale-Bopp was approx 50-60km diameter and in 1997 had 2 primary tails, blue and white, with a faint sodium one, and with its period (around 2500 years) being so long that its next due to visit the inner solar system in around 4385AD, the perihelion date (+/- a few years) not able to be predicted exactly given the impact of gravitational perturbations by various bodies on such distant Oort Cloud comets during their orbit, HOWEVER suspect that nobody will be around to quibble!!!!

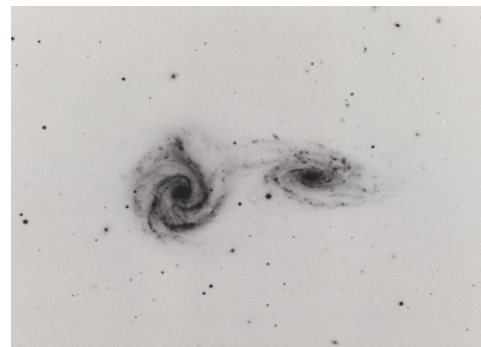
**Andrew G**



### NGC 5426 & NGC 5427

These are NGC 5426 and NGC 5427, collectively known as ARP 271. They are colliding spiral galaxies that are merging in the same way our Milky Way and Andromeda will merge in a few million years' time.

They were discovered by William Herschel in

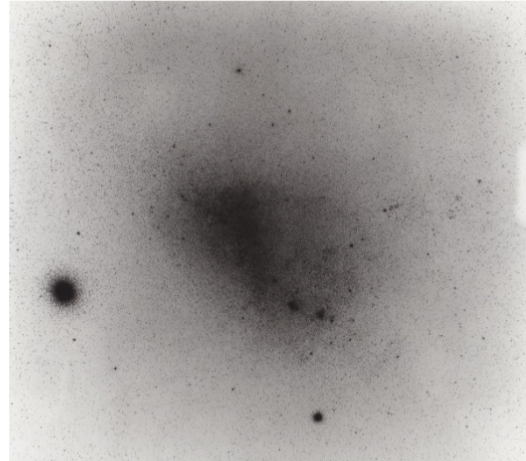


1785 which is quite impressive as these objects are over 130 million light years away, are 130,000 light years across both, and are very faint objects indeed.

Brian

### Small Magellanic Cloud

The Small Magellanic Cloud is a 'Disrupted Barred Spiral galaxy' and is the smaller of a pair of 'dwarf galaxies' called the Magellanic Clouds located in the Southern Hemisphere. The Magellanic Clouds are naked eye objects about 200,000 light years away and form the nearest of the 'Local Group' of satellite galaxies of our own Milky Way. Also visible is the spectacular globular cluster 47 Tucanae (NGC104) which is the second brightest globular cluster in the Milky Way

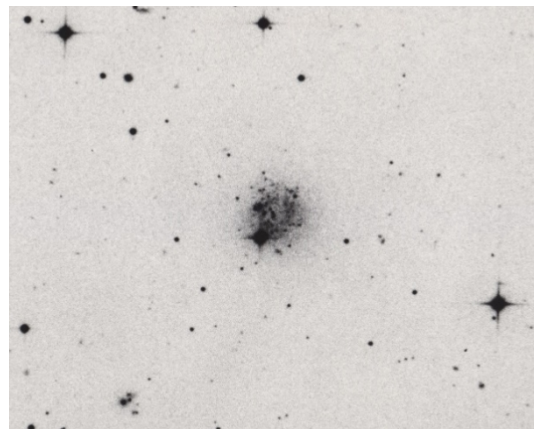


Baz

### The Measles Galaxy

The Measles Galaxy, an irregular dwarf galaxy that you won't have heard of, as neither has the internet. You can find it under the name UKS 2323-326 - not even a Wikipedia page!

It is somewhere between our local group of galaxies and the Sculptor group, and no one is quite sure which one it belongs to. Other than that, it is wholly unremarkable!



Julian

### NGC 6744

My galaxy is NGC 6744, otherwise known as Caldwell 101, and it is a barred spiral galaxy 30 million light years away. It is also a Milky-way lookalike, meaning its morphology is similar to that of the Milky Way. It has a magnitude of 10.6, being one of the biggest barred spirals in its group, the Virgo supercluster.



Oliver



## NGC 2070; Tarantula Nebula

The Tarantula Nebula hosts a 'starburst' region R136, where massive stars have formed in close proximity, within an area of 1 light year across there are more than 40 stars each containing at least 50x the mass of the sun.

On the outskirts of the nebula is the 1987A supernova, a star which exploded with the power of 100 millions suns, observed for months in 1987, and in which the dust contains silicates which are a key ingredient for rocky planet formation.



Dane

## Anglo-Australian Observatory

The Anglo Australian Telescope (AAT) is a 3.9 meter equatorially telescope operated by the Australian Astronomical Observatory and situated at the Siding Spring Observatory, New South Wales, Australia at an altitude of a little over 1,100m.

It was one of the last largest telescopes built with an equatorial mount, and one of the first telescopes to be fully computer controlled and set new standards for pointing and tracking accuracy.



Andrew B

## The 1.2m Schmidt Telescope

The UK 48" Schmidt telescope was built at Siding Spring Observatory in New South Wales in 1973 and was initially operated by staff of the Royal Observatory, Edinburgh to construct a photographic survey of the entire southern sky. It is now wholly operated by Australia and, having been fitted with large CCD detectors, is mainly used for spectroscopic surveys.

David







## Essential Facts

- The Andromeda Galaxy is the closest galaxy to the Milky Way
- It's name comes from the constellation of Andromeda which is where it is located in the sky
- It can be seen with the naked eye and is the brightest of the Messier objects (M31)
- It is a barred spiral galaxy in shape

### **Fun fact:**

The Andromeda Galaxy has 1 trillion stars and has the same mass as the Milky Way



### **SCARY NEWS:**

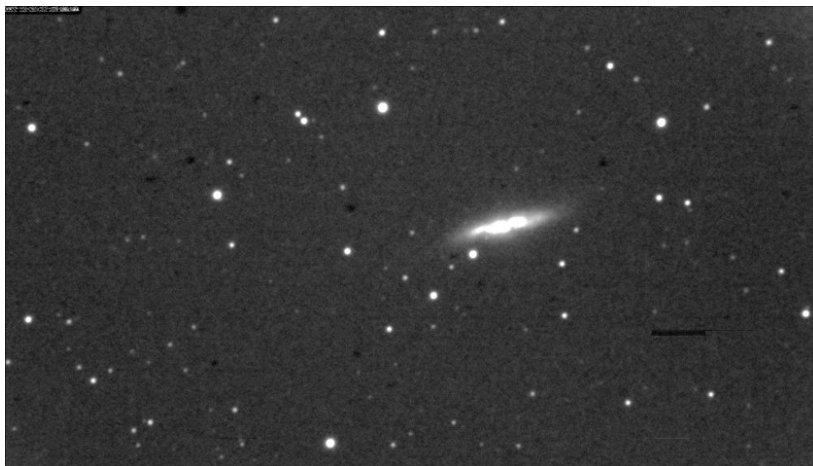
The Milky Way and the Andromeda galaxy are due to collide in 4½ billion years

## Images of Galaxies from Herbel Pabla

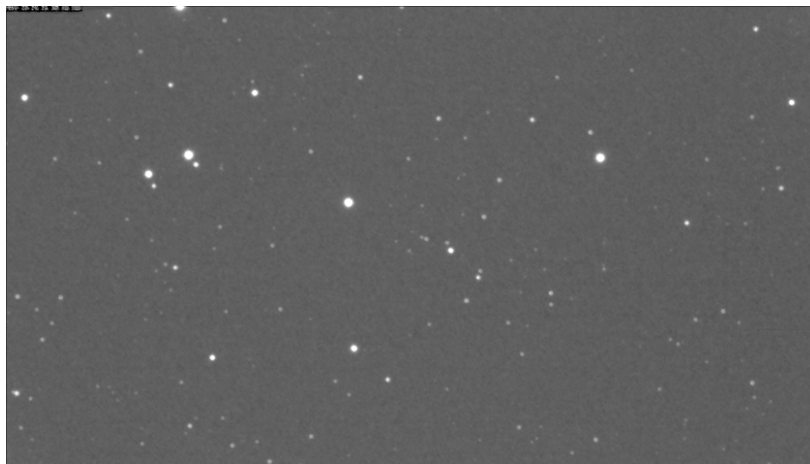
Taken on 26<sup>th</sup> March with his new William Optics GT 71 triplet ED refractor. No filters were used. He was using a ZWO ASI462 MC colour camera attached through a WO 2 inch diagonal. The mount was polar aligned with good accuracy using SharpCap polar alignment software and the one star alignment with the Synscan hand controller.



M81



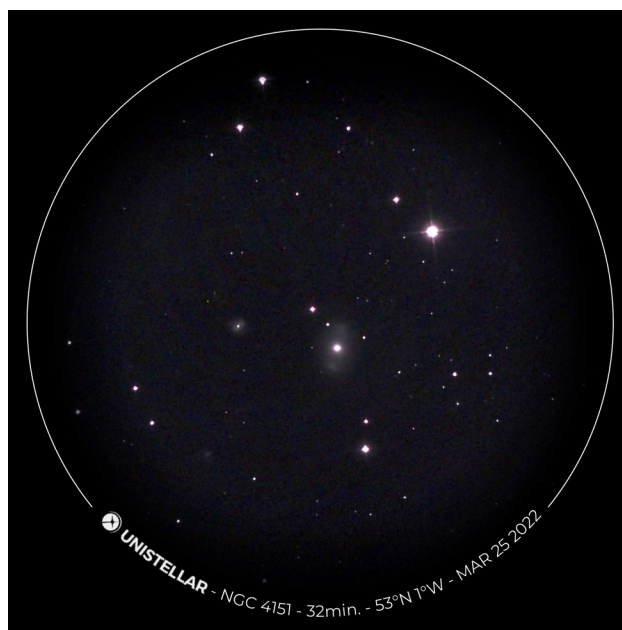
M82



## Seyfert Galaxies with my eVscope by Mark Fairfax

Unistellar eVscope Classic. Bortle 5ish with dew shield, no filter & moderate seeing.

**NGC 4151** Seyfert 1 Spiral Galaxy in Canes Venatici. This is an interesting spiral Seyfert galaxy, magnitude +11.4, with a weak inner ring structure. It is one of the nearest galaxies to Earth which contains an actively growing supermassive black hole at its centre. Some astronomers have nicknamed it the “Eye of Sauron” for its appearance.



**NGC 3079** Seyfert 2 Barred Spiral Galaxy in Ursa Major is another Seyfert Galaxy with a supermassive black hole at the core. Also known as the Phantom Frisbee Galaxy, magnitude +10.8, is about 50 million light-years away. A prominent feature of this galaxy is the “bubble” forming in the very centre.



I wasn't familiar with the term 'Seyfert' so looked it up. In 1943 the American astronomer Carl Seyfert drew attention to a handful of spiral galaxies that had unusually bright point-like nuclei.

Seyfert galaxies account for about 10% of all galaxies and are some of the most intensely studied objects in astronomy. They are thought to be powered by the same phenomena that occur in quasars, although they are closer and less luminous than quasars. These galaxies have supermassive black holes at their centres which are surrounded by accretion discs of in-falling material.

Seen in visible light, most Seyfert galaxies look like normal spiral galaxies, but when studied under other wavelengths, it becomes clear that the luminosity of their cores is of comparable intensity to the luminosity of whole galaxies the size of the Milky Way.

### **Image of the Owl Nebula from David Dunford**

David says: I took the plunge (into a deep pocket) last month and bought a Unistellar Equinox. I'm still learning ... haven't even checked the collimation yet!

The image of the Owl Nebula was taken from my back garden in West Bridgford. The light pollution is so bad that I can't even make out Polaris to set up my other telescope. But, after an 11 minute wait, I could see three stars in the nebula which Stellarium tells me go down to magnitude 16.63.





## **Buying your first telescope**

**by Neil Mudford**

Before committing yourself to a significant and continuing expenditure, not only in the telescope but all the ancillary items that you will inevitably buy after purchase, you should think very carefully about what you want from the acquisition and the limitations & compromises that must be settled in your mind before you commit to the probable depletion of your pension pot.

Telescopes need plenty of time to setup, acclimatise to being outside and align before use and put away at the end even if you have an observatory of some description with an openable roof which easily adds a couple of hours (minimum) to each observing session – if the fickle British weather does not prematurely terminate your observing programme for the night.

Whilst we are on the subject, there are relatively few nights throughout the year, mainly in the winter months, in which you can make full use of a telescope in the evening rather than being restricted to the ‘small hours’ as between Easter and the end of September the darkest part of the night is short to non-existent. Once set-up, remote control from a more convivial place inside is achievable, but you still will have to go back outside to pack up before getting to bed.

With internet speeds creeping towards instant throughout the globe the possibility of accessing and, in some cases, controlling the larger or more suitably located telescopes at reasonable fees is opening the practicality of not needing your own equipment to capture raw data or viewing objects beyond your local horizon negating the need to travel (with your kit) to that part of the world. Another source of celestial data is the large image banks held (primarily) by governmental space agencies which permit royalty-free access to their images including those sourced from satellites such as the Hubble or XMM–Newton which have the benefit of being outside the atmosphere and therefore free from atmospheric distortion.

Very recently a new type of telescope has been marketed direct from a couple of French companies that are probably best described as ‘all-in-one’ devices having the advantage of being highly portable, very easy to setup and use with an internal swappable battery pack that are not much bigger than a jeroboam of champagne that produce a very creditable image of your chosen deep-sky object even in marginal weather conditions. The cost of these is roughly equivalent to a decent traditional ‘scope without the need for additional accessories (as there is nowhere to connect to them excepting by Wi-Fi and the internet!)

Absolute beginners, or those not confident in setting up a telescope, are best advised to buy a complete ‘scope package from a reputable brand to maximise the chances of getting everything to work together ‘out of the box’, though your local astronomy society/club is very a good place to source help should it be needed.

Telescope optical performance is based on two basic factors – lens diameter and focal length. Magnification comes from the ratio of the objective lens’ focal length and the eyepiece’s focal length. Aperture, or the ability to gather light, is based on the objective lens’s diameter and its focal length. In theory, there is no limit to the length and width of a telescope tube but in practice cost and handling practicalities constrain the obtainable performance.

For guidance and simplicity, tubes are categorised into one of three viewing capabilities: planetary, solar system & deep sky.

With a planetary ‘scope you will be able to see the Moon, Mars, Saturn, Jupiter and the Galilean moons of Jupiter in reasonable detail but both Uranus & Neptune will only be visible as hazy disks. Looking at Venus and Mercury is not generally recommended nor possible because of their orbits’ closeness to the Sun causes them to be mostly ‘hidden’ in

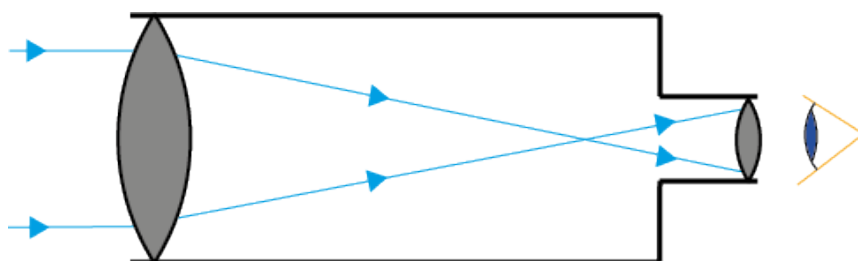
the daylight. However, these two inner planets become viewable when seen as morning or evening stars and the Sun is out of sight beneath the horizon. Due to Pluto's distance from the Sun there is insufficient reflected light to actually see it but it can be observed by the obscuring of light sources behind the dwarf planet (Pluto wasn't found until 1930 but suspected to exist before that – see [here](#)).

With a Solar System 'scope the aperture is a bit wider so dimmer objects can be seen at the cost of overexposing the brighter planetary objects (such as the Moon) so hiding detail – Uranus and Neptune are seen with better detail along with more planetary moons.

Deep Sky objects, everything outside the Solar System, are dim in comparison to those inside therefore need a wide aperture and more magnification which makes viewing planetary objects rather bright and restricted due to a narrower field of view.

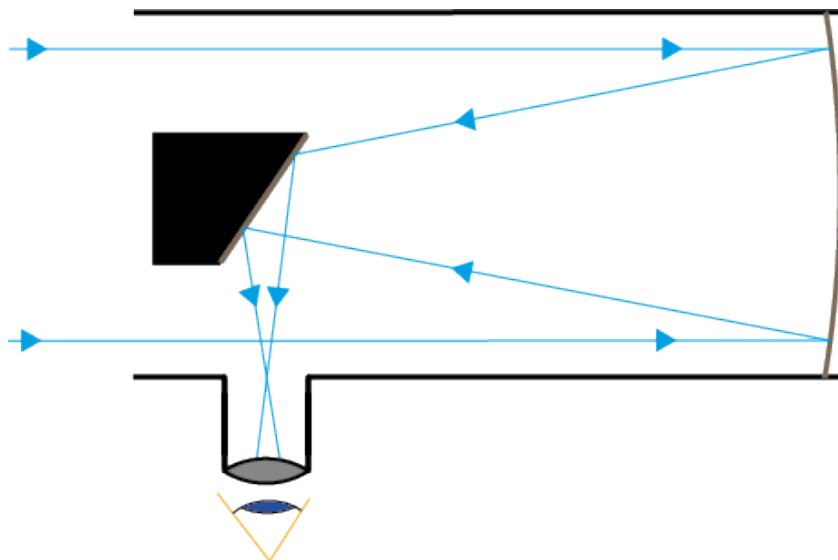
There are three basic types of optical tube: refractor, Newtonian & Cassegrain.

The refractor, in basic form is the simplest of tubes and can be referred to as a 'seafaring' telescope having, in basic form, a lens at either end hence its popularity at the cheaper end (and not so cheap either!) of the market but many Astro photographers use highly modified refractors that have specialist intermediary lenses to remove aberrations in the light-path.



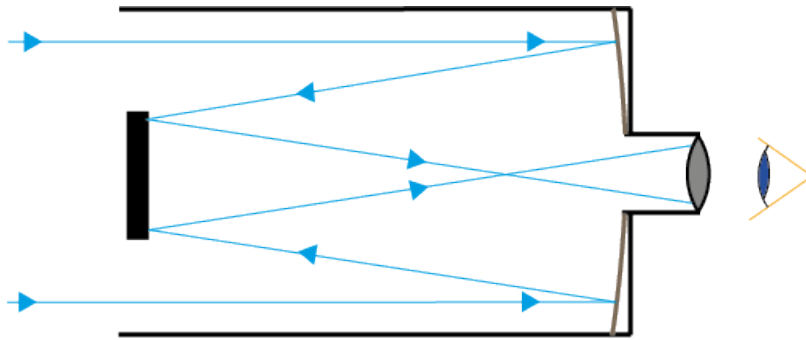
*A refractor telescope's basic arrangement.*

A Newtonian tube, named after Isaac Newton (knighted a few years later after presenting his working model to the Royal Society) is one that has a mirror mounted at the base of the scope to reflect light back up to the tube to bring it to focus in front of a side-mounted eyepiece via a secondary mirror near the open front. Usually wider than a refractor and has usage disadvantages but popular for its simplicity.



*A Newtonian telescope's basic arrangement.*

A Cassegrain replaces the front mirror of a Newtonian with convex one that sends the light back down the tube and through a hole in the primary mirror to the eyepiece mounted centrally on the rear casing. this type's main advantage is that it shortens the tube required for the longer focal length and wider aperture achieved.



*A Cassegrain telescope's basic arrangement.*

Pointing the telescope is done by what is called a mount which, again has three basic constructions; manual, German Equatorial Mount (GEM) and Alt-Az (altitude (up/down) – azimuth (left/right)).

Manual mounts, though made in slightly different formats rely on the observer to re-align their tube as required and track the target whilst observing it.

German Equatorial Mounts are rather large, heavy, cumbersome and need a large amount of space due to use of counterbalancing arms and weights but can carry heavy tubes with their accessories. Setting them up requires the vertical axis to be manually aligned parallel to the Earth's North-South axis. Early models, pre microcontrollers, used a clockwork motor to rotate the tube round the equatorial plane leaving the observer to manually move the tube up or down in declination to keep the tube pointing towards the tracked object. Later models used electronics to align with and track the target. This type is being phased out due to Alt-Az mounts being marketed that can equal if not better their weight bearing capacities.



*A German Equatorial Mount (this example made by Celestron).*

Most modern mounts available these days are of the Alt-Az variety due to their compactness, comparative lightness (to GEMs) and ease of use with their electronics well capable of tracking the requested target – alignment is usually confined to ensuring that the tube is level and pointing North-South when the electronics are switched on, though fine tuning can be carried out afterwards.



*A lightweight Alt-Az mount (marketed by Sky Watcher).*

Lastly, but not least, there is the support that sits beneath the mount which is either a portable tripod or prepositioned pier (essentially a monopod that is set into the ground, see image below).





Beginners should not dismiss the Dobsonian lightly (essentially a Newtonian ‘scope mounted on a base that sits on the ground) as they are very simple to set up. They might not have the cache of a full-blown telescope, but I can assure you that they have the performance of one (see image below).



Whatever telescope you do buy with a driven mount, it will come with an electronic handheld controller which are being phased out in favour of an inbuilt Wi-Fi connection to the manufacturer's app on your mobile phone or tablet. Connection to a PC or Mac laptop is possible, but the tendency there is to require the use of Stellarium (a freeware program downloadable from the web) with the help of other interfacing software.

Finally, a very strong warning not to let your telescope wander anywhere near the Sun as doing so when looking through either the main scope or a finder will seriously damage your eyesight permanently – use specialist filters or blocking devices and even better use cameras (which still need filters on the object lens(es)).

## ADVERTISEMENTS

A seller called Scotty has two items for sale, located at Leicester, near Junction 21 of the M1. He is open to offers for each of the items. Contact: [bigman00008@hotmail.com](mailto:bigman00008@hotmail.com)

### 1. An Observatory







## 2. A Skywatcher EQ3-2 mount





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### **FOR SALE**

Set of four coloured 1.25-inch filters £35

1.25-inch oxygen-III filter £35

1.25-inch 13% Moon filter £15

Please contact Sam Boote

**[sam@boote.myzen.co.uk](mailto:sam@boote.myzen.co.uk)** or at **Society meetings**



## Telescope for Sale

I'm trying to find a home for a Sky-Watcher Mak 90EQ/TA telescope that a friend is passing along due to it not being used. It's mounted on a short tabletop mount, and all the parts are present.

Open to sensible offers. Contact me for more information.

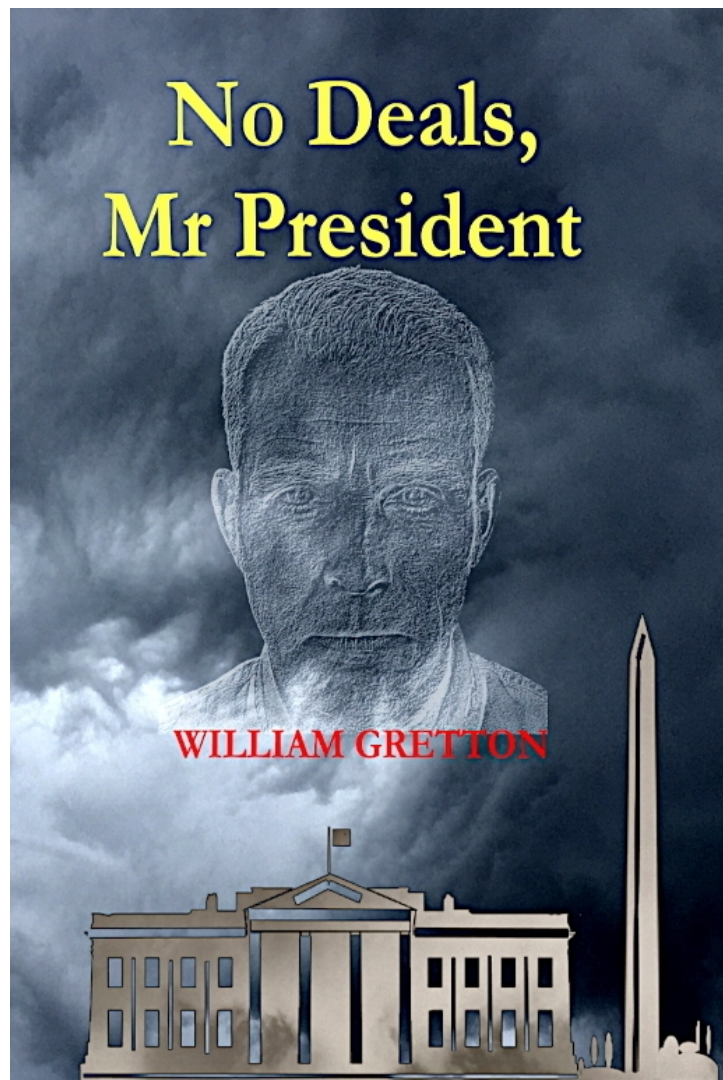


Thank you,

Michelle Barnett  
[michellesbarnett@hotmail.com](mailto:michellesbarnett@hotmail.com)

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**Meetings**

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:

**Nottingham Emmanuel School  
Gresham Park Road,  
West Bridgford,  
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Meetings end 9:15 pm

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

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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.

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**The Nottingham Astronomical Society**

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