



Newsletter January 2024

Next Meeting: **Monday 22th January at 7pm**

Location: **Kyle Academy,
Overmills Road,
Ayr KA7 3LR**

Venue Change: The meeting will be moved to a classroom due to exams taking place in the main hall, please follow directions.

Topic: Talks by: Graham Longbottom – Constructing a 2m Dome, and Marc Charron – Stellarium Tutorial

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Presidents Word

Well here we are in 2024 and like me, you are probably wondering how we got here so soon! No idea, but we might as well make the best of it so Happy New Year to you all and may you have good health and clear skies. Talking off the latter, I note that last year didn't do too well with clear skies with us managing to miss most of the astronomical events. This year, on the other hand, has started off with a few nice clear nights when, if you were so inclined, you could have had several hours of decent observing. Let's hope that the trend continues.

Looking forward to coming year we are looking for the Society continuing to grow and develop. Since COVID we have returned to our pre pandemic membership numbers but with an influx of new and younger members. This gives us a great opportunity to change and improve by encouraging everyone to get involved. How? Well at a simple level, just join in at the meetings. Chat to the people around you, write a paragraph or two for the newsletter or give a short talk. Better still form a sub group for example a solar group, a photography group or a lunar group. You could also join the committee as an ordinary member or stand for one of the so called " officer" posts of President, Vice President, Treasurer or Secretary. This year at the AGM we will be changing our President and as a consequence our Treasurer and we are looking for a Vice President and a Secretary. So if you would like to help move the Society forward, put your name in the hat.

A good way of "advertising" the Society and keeping it healthy is by doing public outreach events, something we haven't been doing a lot of since the start of the pandemic. It doesn't require any special skill to help out at a typical public event apart from being able to chat to people. This is something we look forward to doing more of this year but it needs people so if you want to have some fun put your name down. We also do selective schools outreach. That takes more planning and practice and often requires those involved to be STEM ambassadors, but there is always a need for help and it is very rewarding. School outreach stalled completely during COVID, but we are expecting requests to increase this next year and we can only become involved if we have sufficient people interested. So there is another opportunity if you would like to take astronomy to the youngsters - you may be surprised at their knowledge and interest.

Finally, you may have seen in the technical news that we have a European Space Agency satellite currently doing close solar fly-bys and that this month on the 8th, NASA launched a Vulcan rocket to the moon carrying amongst other things a robotic lander as part of the Artemis program to return man to the moon. This is the first mission to the moon's surface since the end of the Apollo program; both are worth looking into, and perhaps we can arrange some related talks.

Hope to see you at the meeting.



Alex's Space

More Space Please.....

Computer users generate enormous amounts of data that has to be stored for access when needed.

Astronomers and scientists hope to replace current methods of storage by producing an artificial system based on a system found in nature – so what is this panacea which will cure all the storage problems?

It is something called Deoxyribonucleic acid, fortunately better known as DNA. One gram of artificial DNA could store the data of 3,000,000 – yes! Three million---CD's and that data could be preserved for thousands of years and still be in perfect condition when retrieved. Surely this must be the ultimate hard drive --- unless there is something better out there.....

Hurrah! We have arrived.....

Where would we be without signposts to help us get to our destination? SATNAV is useful but sometimes it leads us up the garden path, you can't beat the good old road map. Signposts in the sky are also useful to help navigate our way to interesting objects. Pegasus is a great signpost, although it is not the brightest constellation, it is easy to find and it will help us find the fainter constellations of Aquarius and Pisces The “official “ name for Pisces is “The Fishes” although the plural of “Fish” is”Fish”. Well that's astronomy for you !

Finally – A poem for all seasons

How fortunate we live on a planet
where seasons change
for Earth has so much to give
with weather varied range
now Winter is here and Autumn colours go
we will see the sparkling frost
and perhaps the pure white snow

Alex Baillie



January/February Observing

General

The winter sky is now truly in place, with Orion dominating the southern sky. The Orion Nebula (Messier 42 or M42) in the Sword of Orion can be seen with a wide variety of optics from binoculars to large aperture telescopes. Aside from that, there are the usual open clusters in Cassiopeia (M52, M103), Perseus (M34, NGC 884/869 Double Cluster), Auriga (M36-38), Taurus (M45 and Hyades) and Gemini (M35). The Andromeda Galaxy (M31) is still well placed for viewing but is heading west. For those who are early risers, Leo and Virgo are prominent in the early morning, but will be shifting towards the late evening sky, preparing the way for galaxy season in the late winter and early spring. It also a good time of year to view M1, the Crab Nebula, because of its compact nature it can be seen with modest equipment despite being magnitude 8.4.

Moon

On February the 16th the moon will come to within almost half a degree of the Pleiades, and best seen with binoculars.

Planets

Mercury and Mars remain lost in the sun's glare, and Venus has started its slide towards and the sun in the morning sky. Jupiter reached opposition on the 2nd of November and is very well placed for observing, also being high in the sky in Ares, where it is joined by Uranus to its upper left. Saturn is moving further to west and is observable early in this period, but will be lost in the twilight in early February, so last chances to see it for a while! Neptune is following Saturn and will suffer the same fate with a small delay.

Comets

There have been some surprise comets about lately. Comet 12P/Pons-Brooks is in Cygnus and will be travelling south east so avoiding being lost in the twilight, at least for a while, it will be visible at least until April. Comet 62P/Tsuchinshan is the brightest comet in the sky presently, at mag 7.8, and is visible in a relatively small telescope, light pollution and the moon notwithstanding, and is traveling east through Virgo where it will pass under Markarian's Chain in late January to early February, it will, however, fade rapidly. A more difficult target is 144P/Kushida at 11th magnitude in Taurus, but it is probably best seen or captured with large apertures.

To find out more about observable comets you can visit Seiichi Yoshida's weekly update on observable comets, which can be found here: <http://aerith.net/index.html>.

Supernovae (temporary category!)

There is a fairly bright supernova (relatively speaking, at mag 13.2), SN2024gy in NGC 4216, the Silver Streak Galaxy in Virgo. It can be imaged with fairly modest equipment, but to see it would require an 8 inch or larger scope. Information on current supernovae can be found on Rochester Academy's list of bright supernovae at: <https://www.rochesterastronomy.org/snimages/>.

Meteor Showers

There are no major meteor showers for this period.

ISS

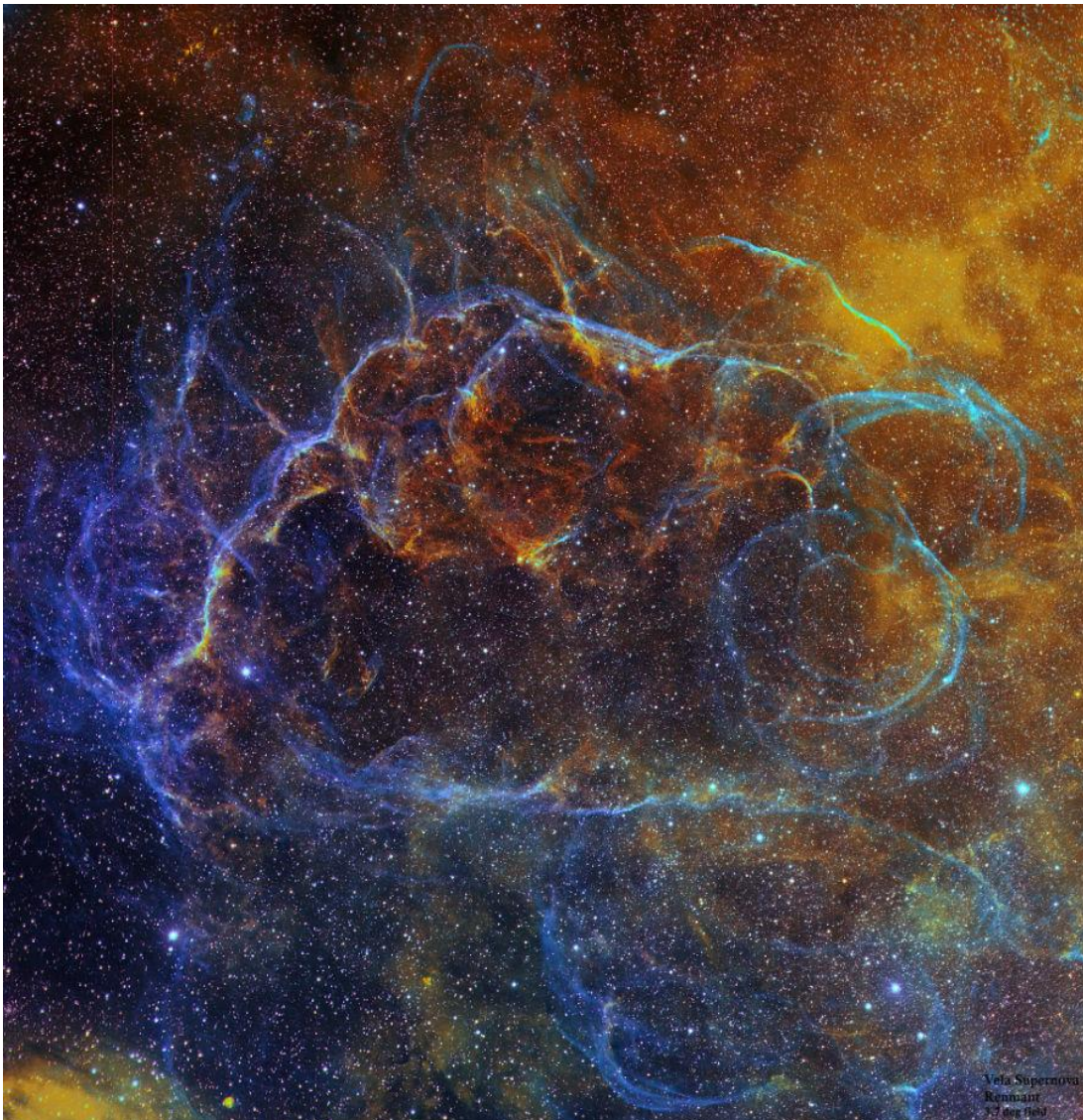
Consult <https://www.heavens-above.com> for specific times and location. Check out <https://transit-finder.com/> for details and any possible solar and lunar transits.



Member Images

Nick Martin

Nick sends us this image taken with iTelescope showing the Vela supernova remnants in the Hubble palette. The oldest and most widespread is from a supernova that occurred 11,000 years ago while the youngest is just 1000 years. To make the image three wavelengths were used, the red channel is light from sulphur ions (sii), the green channel is from hydrogen - the H alpha line, while the blue is from doubly ionized oxygen the blue Oiii line. The Oiii has the highest excitation energy and is concentrated in the shockwaves, where the debris from the supernova explosion is being blasted into the surrounding interstellar gas.



Allan Vint

Allan passed on three superb images taken with his SkyWatcher 200 Newtonian, each made with stacks of 30-40 exposures at 180 seconds per frame.

The Cone Nebula (NGC 2252) in Monoceros at about 2,700 light years distant



The Fish Nebula (IC 1795) which is a star forming region in Cassiopeia, at about 6,000 light years distant.

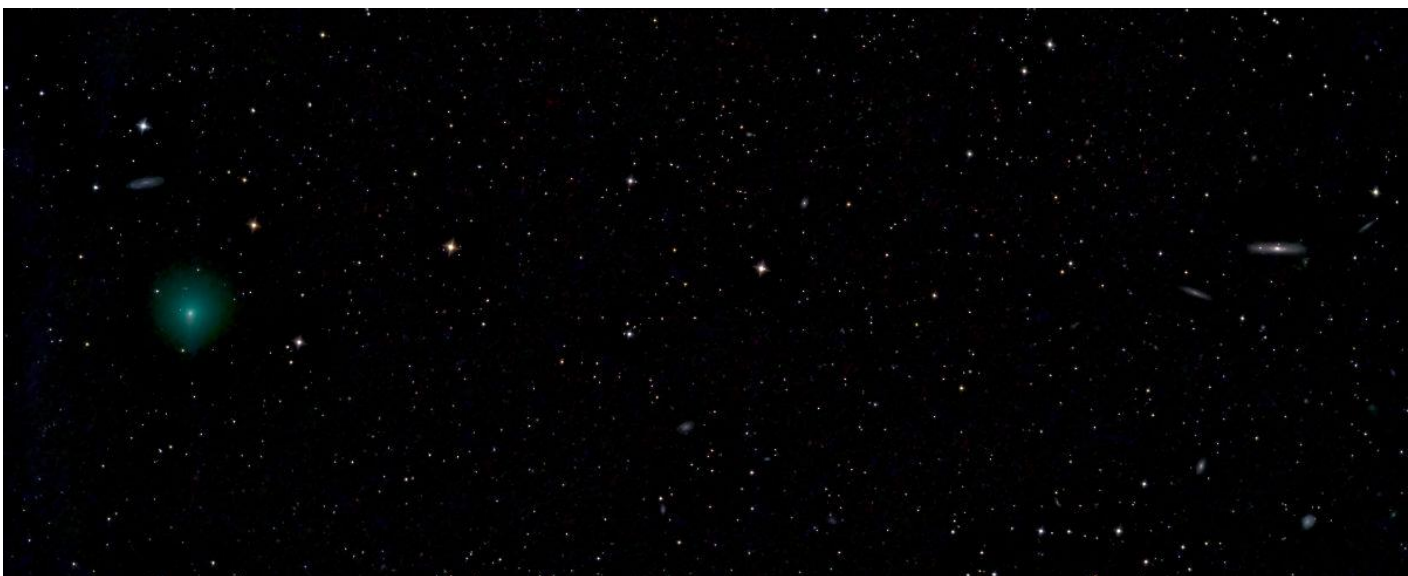


The Hidden Galaxy (IC 342) in Camelopardalis which is partially hidden by dust from our galaxy. Estimated to be 7-11 million light years away, it could be visible to the naked eye if it wasn't so obscured.



Marc Charron

Comet 62P/Tsuchinshan and SN2024gy in NGC 4216 in a single capture. The comet is obviously on the left, below a the galaxy (NGC 4178) and the supernova is the star to the left of the core in The Silver Streak Galaxy (NGC 4216), the brightest galaxy at the right of the image. The galaxy is estimated to be about 55 million light years distant. The supernova was discovered by Koichi Itagaki in Japan, on the 4th of January, at the time it was mag 16.3, when I captured it on the 17th of January it had brightened to at least mag 13.2. The comet on the other hand is much brighter at mag 7-8. Image taken with StellaLyra 6 inch f4 Newtonian, with TS Superflat GPU coma corrector, and Nikon Z7ii; 30 exposures, 15 seconds each at ISO 5,000. Stacked and processed in Affinity Photo 2.



Other Astro News

HOORAY, AYRSHIRE ASTRONOMICAL SOCIETY WILL BE GOING INTO SPACE!

Now for the fine print: or more precisely, our name, which will be heading to Jupiter on the Europa Clipper - a special thanks to Jemas Torley for arranging this.



More information can be found here: <https://europa.nasa.gov/message-in-a-bottle/join-us/>

And here: <https://europa.nasa.gov/message-in-a-bottle/check-in/?hash=ubcjDqanom96G1EIJlMO7Po%3D--GjRRXM3Efl4B2EeR--k2giZLwWWvplfo1HPiA01w%3D%3D>

Star Count 2024

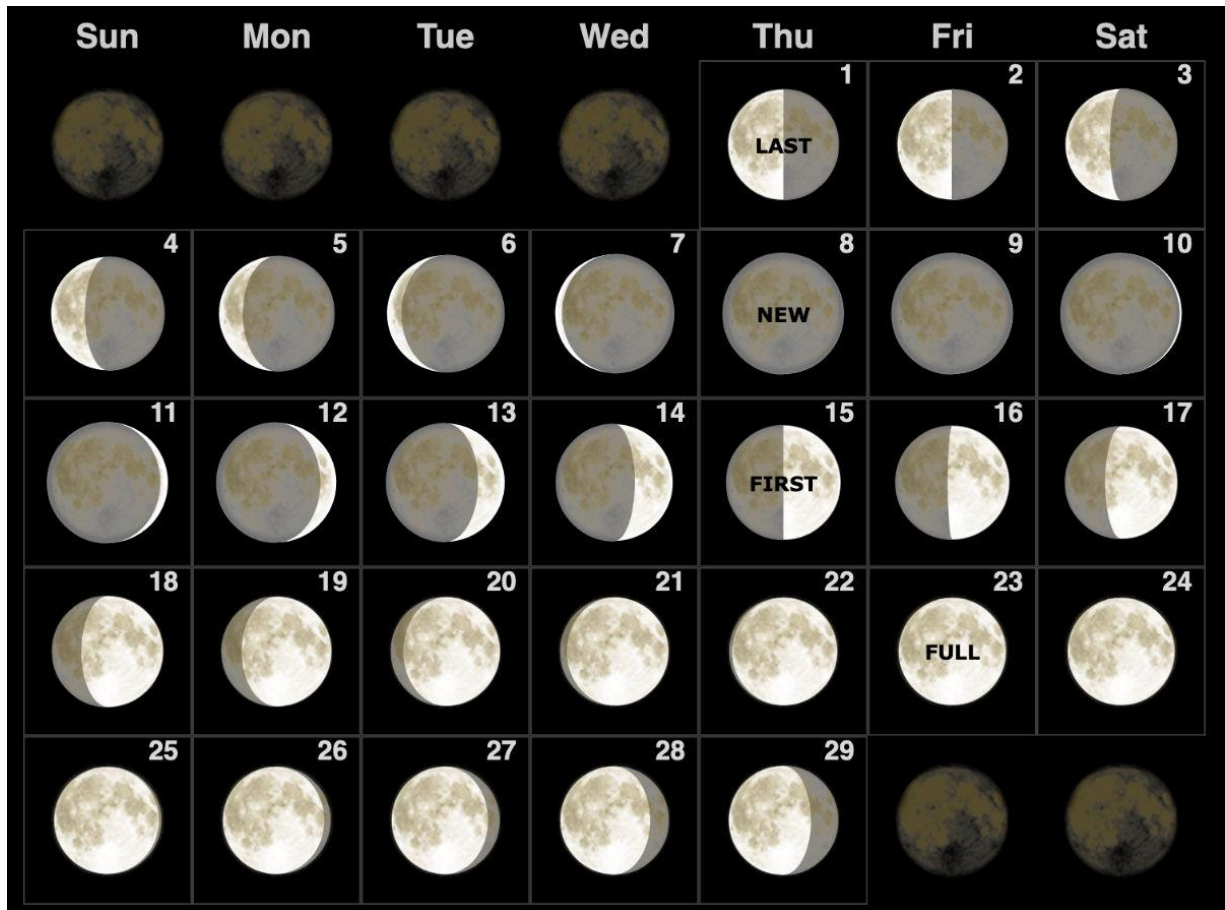
Sadly, Star Count 2024 has been cancelled, but will be back in 2025. This is to enable the organisers time to try to influence our politicians of the importance of dark skies in this election year.

See: <https://www.cpre.org.uk/news/star-count-is-paused-for-2024/>



Moon Phases

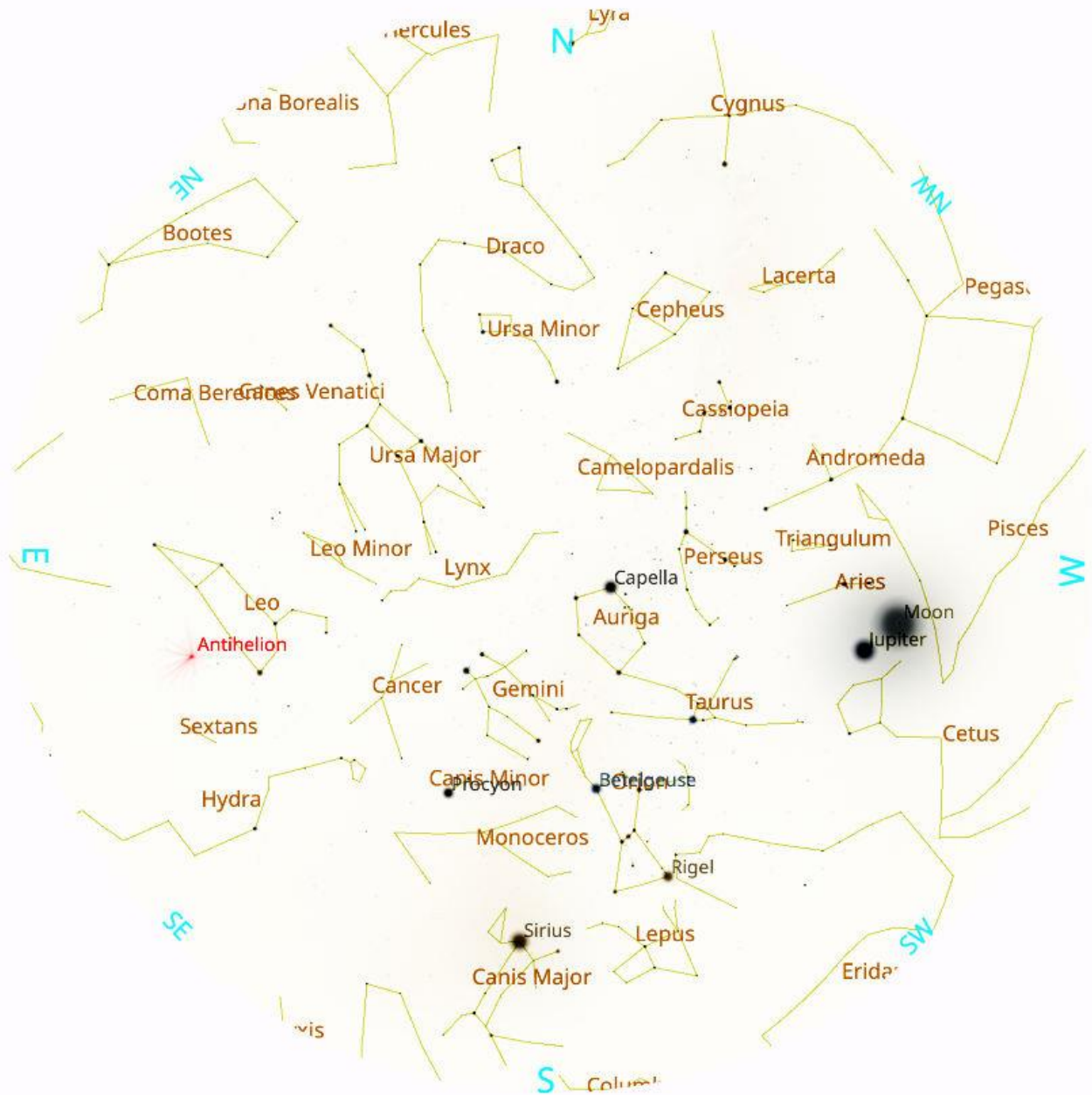
February 2024



Credit: <https://www.moongiant.com/calendar/>



February 2024 Sky Chart



FOV 189° 26.5 FPS 2024-02-14 21:00:00 UTC+00:00

Taken from: Stellarium

