



Newsletter October 2022

Next Meeting: **Monday 24th October at 7pm**

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

**Topics: “Micro to Macro: Space Technologies at extremes of length and scale”
by Prof Colin McInnes**

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Presidents Word

I hope that you all enjoyed the talk last month by David Woods, it was most interesting, and if you managed to speak with him afterward, you will have noted his immense knowledge of the NASA space programme. Talking of which, you will no doubt have been watching with interest NASA'S attempts to launch its new moon rocket on the ARTEMIS series of missions. Not so good so far, but at least they are taking the prudent approach and I see that they have scheduled a further attempt on the 14 November. Let us hope that all goes well on the day as will be nice to see a “man “ on the Moon once more even though it is still some years away.

This month's speaker is Prof Colin McInnes. Colin has spoken to us a number of times in the past and is an excellent speaker. His topic this time is “Micro to Macro: Space Technologies at extremes of length and scale”, so have your thoughts and questions ready.

You may not be aware that the Society has a small library of astronomy related books and DVDs, both technical and fiction These are held by our librarian, Alex Baillie of “Alex's Space” fame, and he will be pleased to search out a book or DVD for you. The first step is to have a look on the website under the Resources where you will find a rather old but still current list. Once you have decided, just email to the president@ayrastrosociety.com and I will ask Alex to get the items ready for delivery at the next meeting.

Changing the topic slightly, have you been watching the BBC mini-series “The Elon Musk Show”? If not, you should, because if the first episode was anything to go by, it’s pretty interesting being essentially a “documentary” of his life and career to date. It is probably on part 3 of 3 by now (I recorded it just in case it was rubbish!) but no doubt it will be available on catch up – well worth a watch!

You will recall that I mentioned the possibility of a Christmas meal being arranged – a sheet will be sent round at the next meeting (October) to get an idea of numbers etc before we decide whether or not to take it forward as we need to move on it sooner rather than later.

Looking forward to seeing you at the meeting...



Member Articles

Alex's Space

PEGASUS – THE FLYING HORSE

The manner of Pegasus's birth was very unusual to say the least. His mother was Medusa the Gorgon who in her youth was famed for her beauty and long flowing hair. She had many lovers but the one who took her virginity was Poseidon who is both the god of the sea and god of horses. Unfortunately, the seduction took place in the temple of Athene. Outraged by having her temple defiled the goddess Athene promptly changed the beautiful Medusa into a snake-haired beast whose gaze could turn a man to stone.

The brave warrior Perseus killed Medusa and Pegasus sprang from her dead body. When he saw his mother he was terrified and flew away, eventually arriving at Mount Helicon, home of the Muses. Pegasus asked for some water, but there was none, as the well had dried up. Pegasus struck a rock three times and out gushed crystal clear spring water. The Muses were so grateful they named it Hippocrene which means horse fountain, curiously the name Pegasus is a Greek word meaning springs or waters! In the sky, only the top half of Pegasus is shown, even so it is the seventh largest constellation.

Finally:

How fortunate we live on a plane where the seasons change
Our climate has so much to with our weather's varied range
So now that winter looms ahead and autumn colours go
We see the sparking frost and perhaps the pure white snow

ALEX BAILLIE 2022



September-October Observing

General

November is a good time to photograph the Milky Way, though it does begin to sift towards its winter configuration, particularly as Orion makes its appearance. Cygnus is well placed in the sky for viewing, as is Lyra, though Hercules is beginning to get low in the sky. The constellations more associated with winter come into view mainly Pegasus, Cassiopeia, Perseus, Auriga and Taurus (with Mars being its guest at the moment). Orion follows on later giving plenty to see in the late autumn night sky.

Planets

The location of the inner planets remains poor, Mercury is initially low in the morning sky before moving back towards the sun making it impossible to see, and Venus is far too close to the sun in the sky for it to be seen in this period. It remains a good time to observe the outer planets which are all well placed to see. Mars will be moving further into the evening sky it continues to brighten as it heads to its opposition on the 8th December. Jupiter reached opposition the 26th of September and is ideally placed for observation in the early to late evening and is reasonably high in the sky as it passes the meridian (34°). Saturn reached its opposition earlier on the 14th of August and only reaches 18° in the sky, it is best viewed early in the evening as it tracks west. Uranus will reach opposition on the 9th of November so is well placed in Aries for observation. Neptune also passed opposition on the 17th of September and is just south west of Jupiter making it easy to find and observe.

Comets

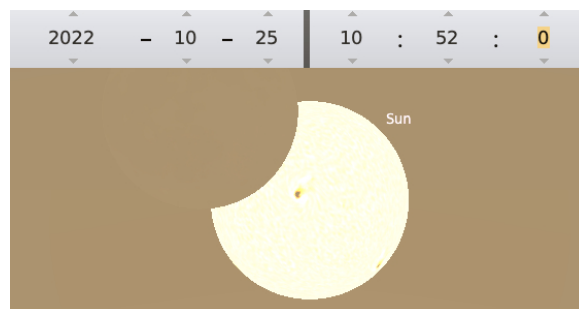
There is no easily observable comets for this period, however there is one that can be seen with modest optics that promises to put a show in January/February, namely C/2022 E3 (ZTF). It is currently visible in Coma Borealis until mid-January (it reaches perihelion on 12 Jan), when it then moves rapidly higher in the sky passing next to Ursa Minor. Its closest approach to Earth is on the 2nd of February at 0.29 AU or 43M km. It is possible it will reach 6th magnitude or brighter.

Meteor Showers

There are two minor meteor showers, the Taurids on the 4th and 5th of November, though these will be affected by a bright moon, whereas the Leonids on the 17th and 18th of November will be less affected.

Partial Solar Eclipse

There is a partial solar eclipse on the 25th of October, from Scotland and the UK we will see a notch taken out of the sun weather permitting. First contact at about 10:04, midpoint at 10:52 and last contact at 11:45.



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.



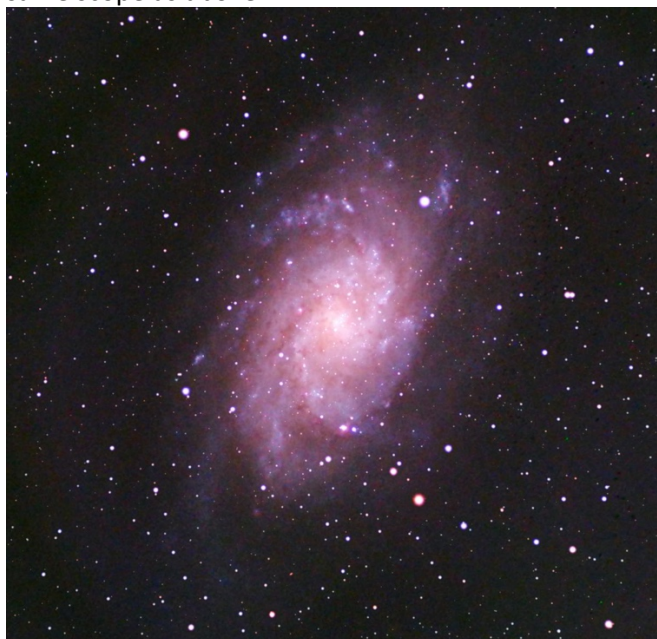
Member Images

Images by Allan Vint

Allan has provided some brilliant images the first is two views of Andromeda one as we see it from Earth, the other as it might look when viewed outside of our galaxy (stars removed). Taken with Skywatcher Evostar 72ED refractor.



Here is a view of the Triangulum Galaxy taken with the same scope as above



View of Iris Nebula taken with Skywatcher 200PDS



Allan uses an HEQ5 mount directed by ASI AIR, a ZWO ASI533MC camera and a ZWO ASI 120 mini guide scope for off axis guiding. The stacking has been done in Deep Sky Stacker and the images processed in Pixinsight. He generally takes about an 1 to 1 ½ hours of data for each image, with exposures at 180 seconds each. All images were taken from his backyard in Mauchline, which has Bortle 4/5 seeing.

Two more from Allan:

The Flaming Star Nebula (200PDS)



The Bubble Nebula (200PDS)



Images by Marc Charron

The moon taken two days apart with TMB 130/1200 taken on 19th and 21st of October



The North American Nebula taken with TS 86/460 refractor



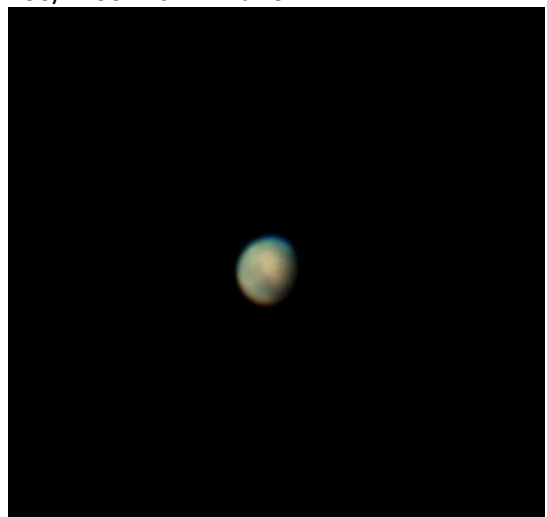
Fireworks Galaxy and Ghost Bush Cluster



Comet C/2022 E3 (ZTF) taken with TS 86/460mm scope on 14th and 18th resp. as it passed δ Corona Borealis (lower left)

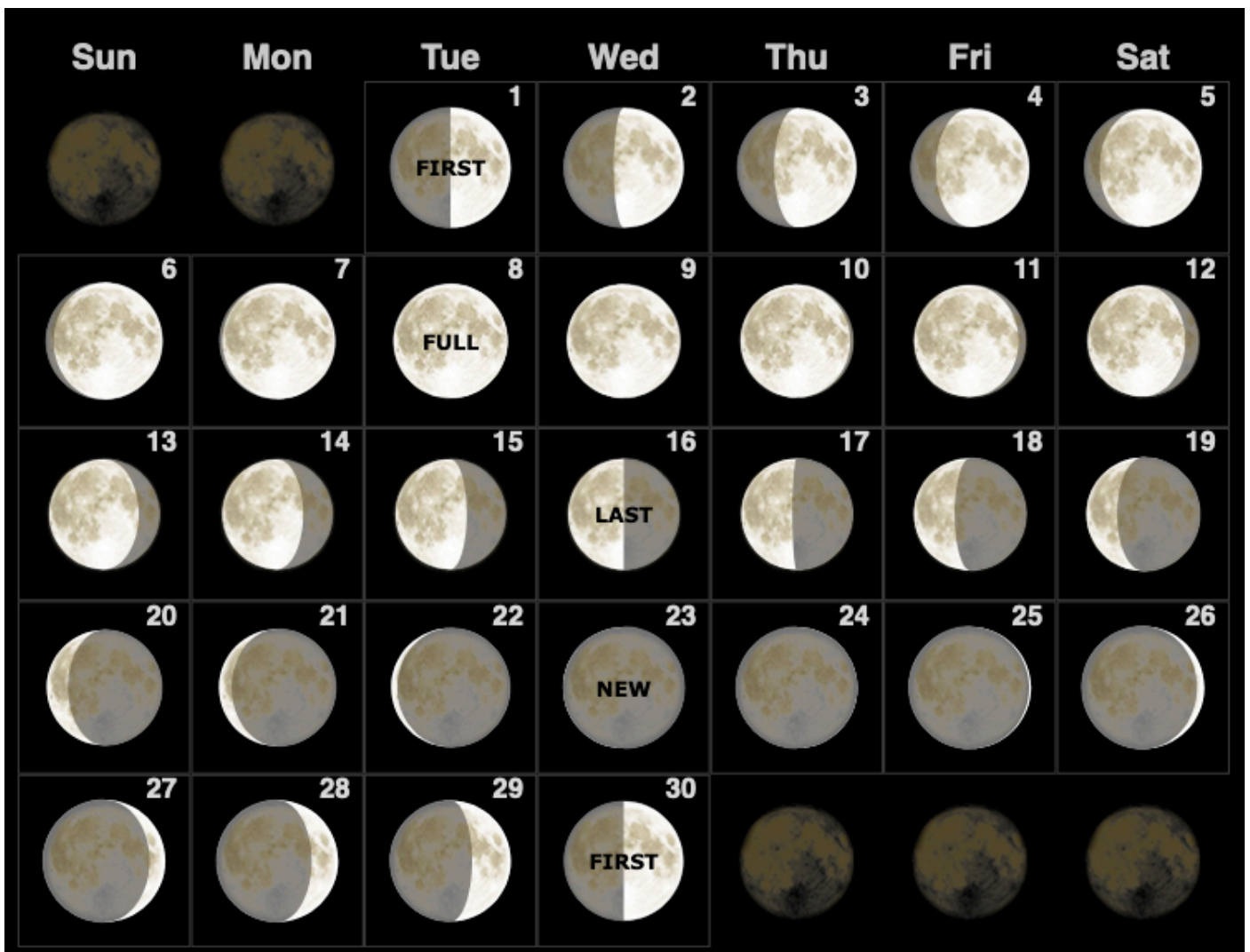


Lastly, Mars taken on 21st Oct with TMB 130/1200 with 2x Barlow.



Moon Phases

November 2022



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



November 2022 Sky Chart



Taken from: Stellarium

