



Newsletter April 2020

Next Meeting: **ZOOM Meeting 8pm Monday April 27th**

Details to follow in separate email.

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President's Word

I hope you all had a very Happy Easter and have been enjoying the time off, maintaining your gardens, houses and enjoying your various hobbies while on lockdown.

I managed to get some quite good views of various nebulae, clusters and studied a crescent Venus using a borrowed reflector telescope. I had forgotten how beautiful some of the brighter nebulae were even through a small telescope - obviously the clear skies helping with this!

Sadly, I had to return the telescope but I have since been enjoying viewing through my 10x50 binoculars and also just spending some time viewing the night sky unaided. This previous weekend, I managed to get out to view the Lyrid Meteor Shower, which wasn't quite as spectacular as was advertised in much of the media. However, I did manage to see two Lyrids from the radiant, and a very nice bolide on the evening before the peak, travelling from East to West, which was very bright indeed and lasted beyond eyesight. So while the peak evening was a bit of a disappointment for me, the bolide made up for that.

As I mentioned in the last newsletter, it is our plan to hold virtual meetings of the AAS so that this dreaded virus does not beat us and we can all stay in touch. So, I'm pleased to announce that the first virtual meeting of the AAS will take place on Monday 27th April where our own astronomical expert, Dr. Nicholas Martin will be giving a talk on recent events in the Constellation of Orion. I look forward to this virtual meeting and hope that you will be able to attend.

Best wishes to you all and keep looking to the stars!

Roger Harman



A bolide (library photo)



Member Articles

Alex's Space

The Constellation: CASSIOPEIA

Cassiopeia was the vain and boastful wife of KING CEPHEUS, who lies beside her in the sky. They are the only husband wife couple among the constellations. While combing her long hair, she dared that she was more beautiful than the sea nymphs called the 'NEREIDS.' Such boasting could not go unpunished and the NERIEDS went in search of revenge. There were 50 NERIEDS, all daughters of NEREUS, the so-called old man of the sea!! One of the daughters AMPHRITRITE was married to POSEIDON, the sea god. She appealed to POSEIDON to punish Cassiopeia for her vanity. Bowing to her request he sent a monster to destroy Cepheus's kingdom and devour Cassiopeia. This monster is commemorated in the constellation CETUS.

To appease the monster Cepheus and Cassiopeia chained their daughter ANDROMEDA to a rock as a sacrifice, but the local hero PERSEUS saved the damsel in distress and killed the monster.

In the sky CASSIOPEIA is shown sitting on her thrown. She is condemned to circle the celestial pole forever. Her face is contorted in agony and stretches out of her hands as if appealing for Andromeda's forgiveness. Gosh – it is all happening there!

Next month the spotlight will be on PEGASUS, and finally –

Here are some genuine car accident claims:

1. I started to slow down the traffic was more stationary than I thought.
2. My car was legally parked as backed into another vehicle.
3. The indirect cause of the accident was a little guy in a small car with a big mouth.

More next month.

April/May Observing

General

The days are starting to get marketed longer, and we will lose full astronomical darkness around the 3rd of May, though astronomical twilight will still be available until the start of June, when nautical twilight becomes the norm. In the sky, the spring constellations are now in full view. Orion sets at the beginning of the evening and Leo starts to tilt down to the west. Virgo and Boötes dominate the evening southern sky, with Coma Berenices appearing between them. There are plenty of galaxies to see in this region, including the Virgo Cluster, which includes Markarian's Chain. Meanwhile, Ursa Major - the Plough, appears nearly overhead. It is a good time to view the galaxies M51 and M101, which are now high in the sky.

Planets

Mercury – for much of this period it is too close to the sun to be observed, but by the middle of May it will be in the evening sky and will come close to Venus on the 22nd of the month when the two will be just over a degree apart.

Venus – is now a crescent as it heads to its inferior conjunction on the 3rd of June.

Mars, Jupiter and Saturn - remain grouped together in the morning sky, Mars will be to the left of Capricornus, while Jupiter and Saturn will be to its right and relative close to each other.

Uranus – is now lost in the solar glare.

Neptune – is in Aquarius close to Pisces and is lost in the dawn sky during this time.

Meteors

The main meteor shower after the Lyrids in April is the Eta Aquariid's which peak on the 5-6th of May, the radiant only rises above the horizon at 3am at this time so the best time to see them is just before dawn.

ISS

The International Space Station is visible through much of May, at first in the morning, then later in the evening as the month wears on. Consult <https://www.heavens-above.com> for specific times and locations.

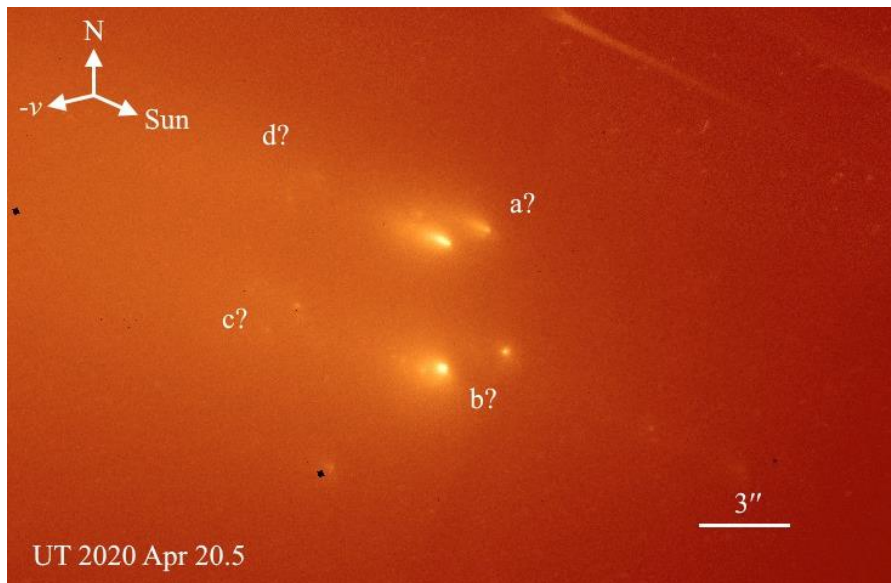
Noctilucent Clouds

With any luck we should be able to see some noctilucent clouds from mid-May until at least July. When visible, they appear north after sunset or before sunrise

Comets

Comet C/2017/T2 PanSTARRS is still visible and will be heading to Ursa Major. On the 22nd it passes close to M81-82. The big disappointment is C/2019 Y4 Atlas, which might have become a bright comet, but instead, it has broken up and is not expected to put on much of show unless it surprises. There is a new comet, C/2020 F8 SWAN, which may put on a bit of a surprise, and will be visible from Scotland pre-dawn from mid to late May until early June, when it gets lost in the dawn sky. The best time to observe it is early in the morning (3-3:30am) around the 25th of May give or take a few days. More later in the newsletter.

View C/2019 Y4 ATLAS taken with the Hubble Space Telescope:



Near Earth Asteroid Pass

NEA (52768) will make a close pass to the earth on the 29th of April, coming to within about 16 times the distance to the moon from the earth. The asteroid is fairly large at 2km in diameter, and while it doesn't present an immediate risk to us, it might do so in the distant future. Unfortunately, in Scotland it won't be visible at its closest, as it will be too far south, however, it should be visible from now (April 24th) until the 26th or 27th.

Here is its location at 10pm on the 24th.





Member Images

Dave Hancox



M108 and M97 300sec x 15 exposures With 102mm Triplet and QHY8L main cam. Guided with QHY miniguider with QHY511L cam. processed in DSS and Photoshop. — in [Dalmellington](#).



Single 15 min image of M81 & M82



2018 Dave Hancox

Noctilucent Cloud 2020

Nlc's usually appear from mid-May to mid-August.

They are a very interesting subject to view in the night sky and a great subject for photography.

There is a specific range of latitude they are visible from normally 50-65° North and about 82km in height

Noctilucent (Night Shining is a loose Latin Translation)

An indication of the formation of NLC's is when the Mesosphere temperature drops to about -140°C at about 82KM altitude

Types of NLC's Clouds

Type 1: Veil – A simple structureless sheet, sometimes as background to other forms.

Type 2: Bands – Lines or streaks, parallel or crossing at small angles.

Type 3: Waves – Fine herring-bone structure like the sand ripples on a beach at low tide. Very characteristic of NLC.

Type 4: Whirls – Large-scale looped or twisted structures.

Type 5: Amorphous – Isolated patches of NLC with no definite structure

Photography

ISO 200-400, 10-20 secs F2.8/3.5

The above settings are a rough guide only and experimentation is recommended

Marc Charron



Messier 3 – 70mm f6 triplet at f9.6 – used 0.8x reducer + 2x teleconverter
15 frames at 15 sec each at ISO 12,800

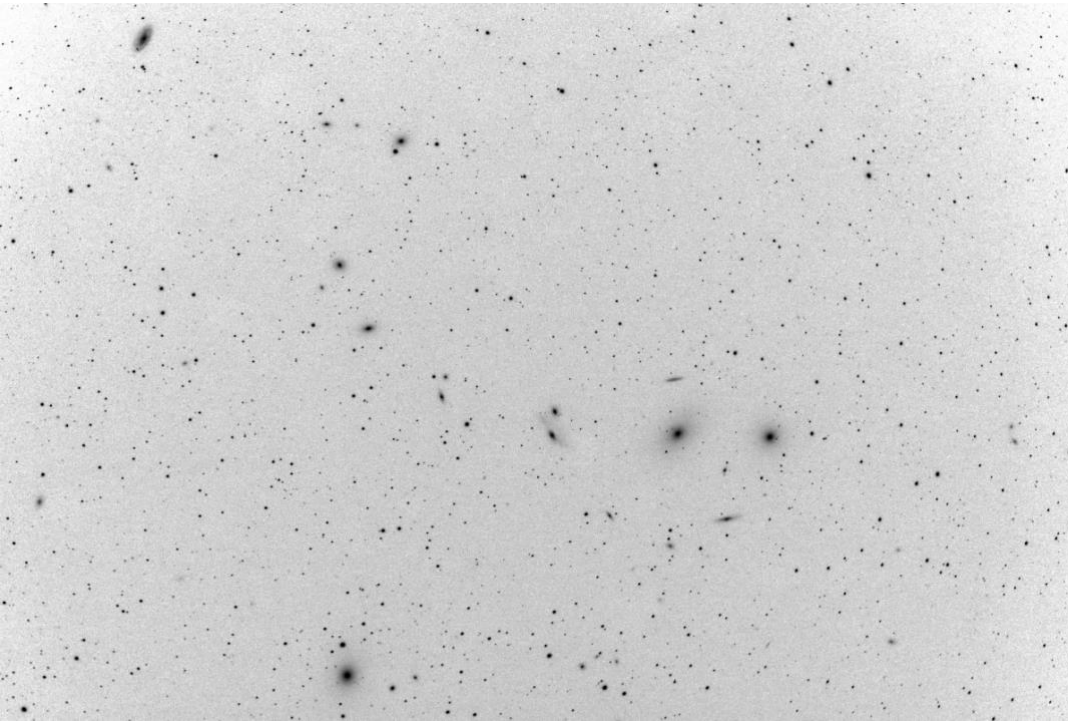
The cluster is located in Canes Venatici, it is about 34 thousand light years away and contains about half a million stars.



Messier 104, the Sombrero Galaxy

70mm f6 triplet at f4.8, 31 frames, 8 sec each at ISO 25,600.

The galaxy is about 31 million light years away and is classified as a lenticular galaxy. It is approximately 50kly in diameter, or about a third that of the Milky Way. The dark band is not a shadow, but a dust ring circling the galaxy.



Markarian's Chain (inverted)

70mm at f4.8, 32 frames, 20 sec each at ISO 12,800

The galaxies in the chain are on the order of 50-60 million light years away and all are part of Virgo cluster. The galaxy at the top left is M88, at the bottom centre/left is M87, the Virgo Galaxy which is at the centre of the cluster. M86 and M84 (left to right) mark the start of the right hand side of the chain.

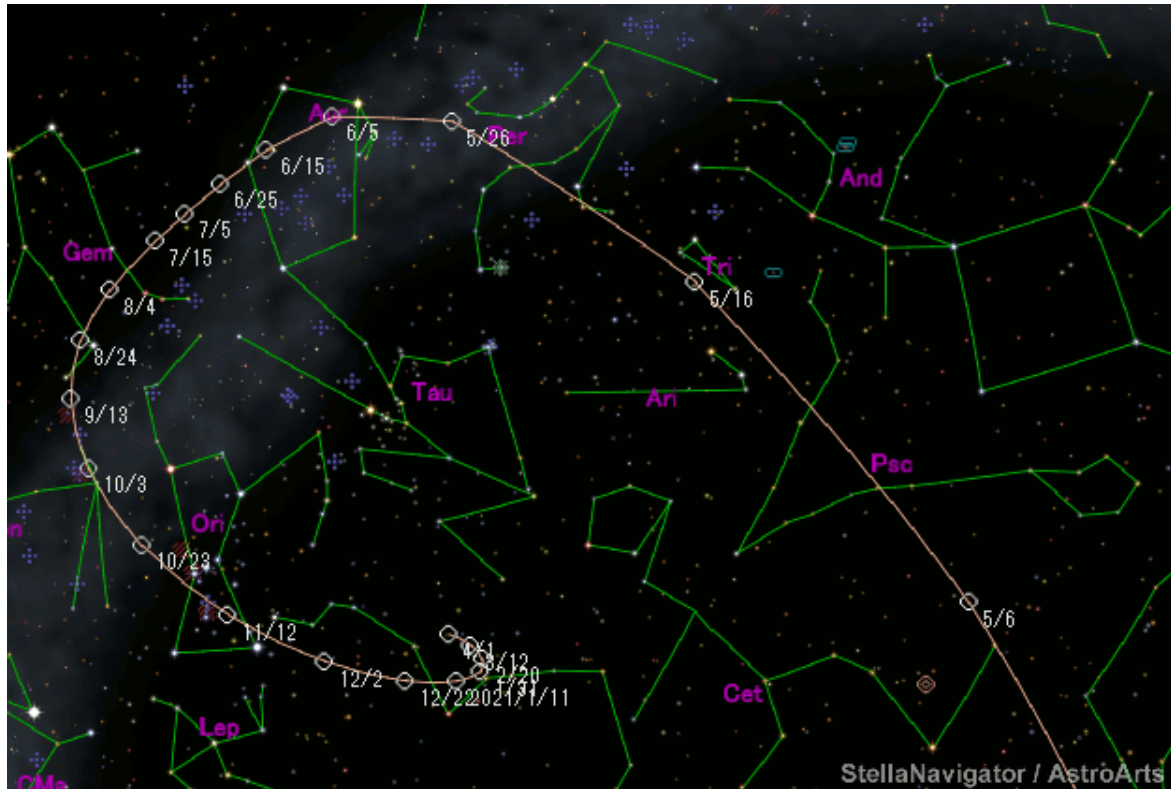


Comet C/2019 Y4 ATLAS taken on the 17th of April. As stated earlier the comet has broken up and will likely fade, stay tuned if it surprises.



COMET C/2020 F8 SWAN

Comet Track



<http://aerith.net/comet/catalog/2020F8/2020F8.html>

It is hard to know how bright the comet will become, but it is possible it will be visible to the naked eye and should make for an interesting photographic target.

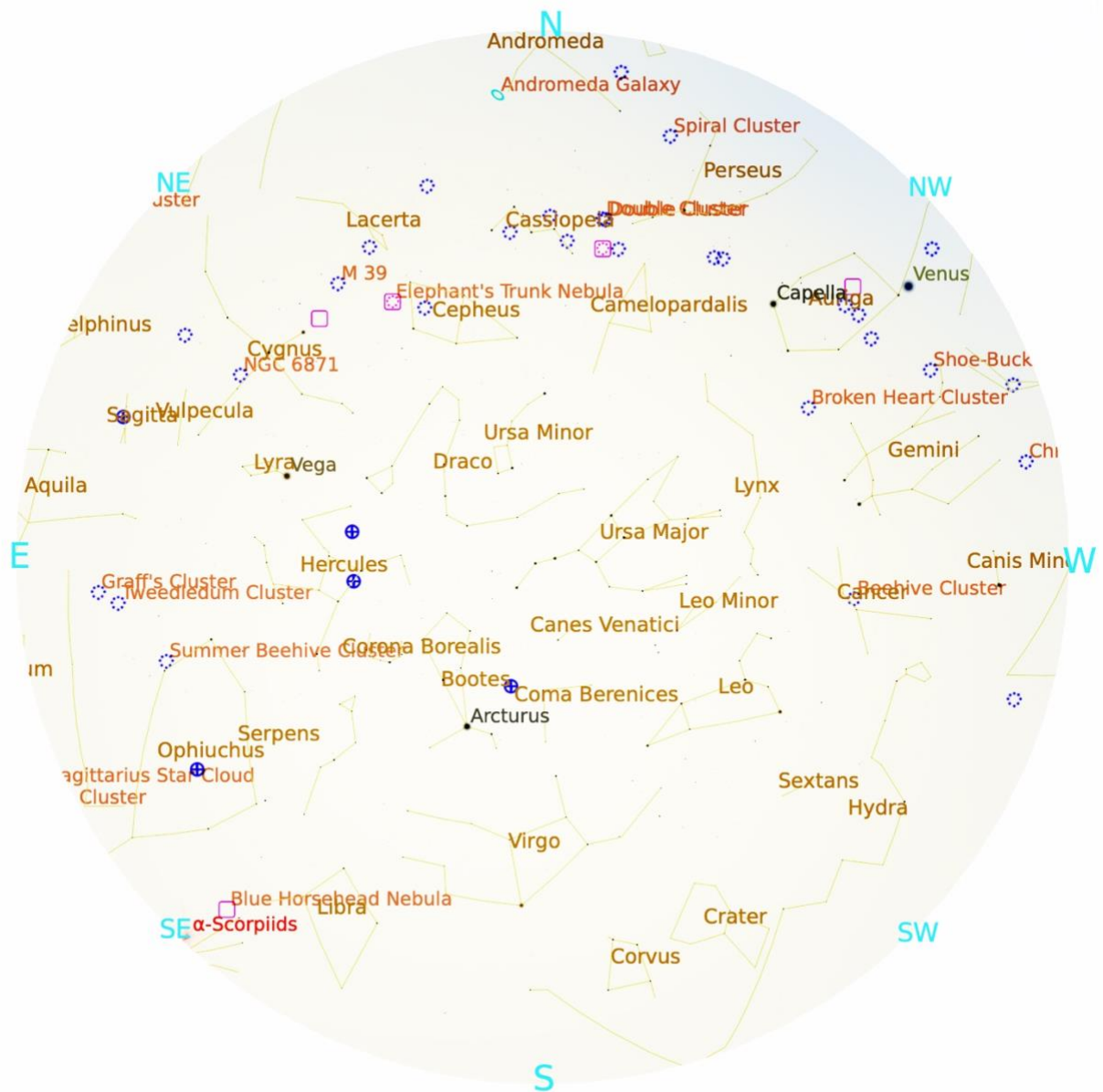


Moon Phases

May 2020



May Sky Chart



FOV 191° 15.8 FPS 2020-05-14 23:00:00 UTC+01:00

