

# SPACEWATCH

the newsletter of the Abingdon Astronomical Society

## Talks Postponed

## EDITORIAL

Welcome to the last Spacewatch for the 2019/2020 session (truncated although it has been) I hope that you have been able to make use of the clear nights and astronomical events that have happened. Unfortunately, the two comets we had hoped were going to give us a show, C/2020 F8 SWAN and C/2019 Y4 ATLAS, both disintegrated on the way into perihelion so that did not happen. There was a nice conjunction of Venus and Mercury in the same field of view using a small telescope and that was worth watching. Some of you may also have seen the Dragon capsule chasing down the ISS after its launch. Unfortunately I missed this as I did see the last Shuttle trip to the ISS 8 years or so ago.

As I write this we still have no ideas when any semblance of normality is likely to return so based on this and after the last (Zoom 😊) committee meeting we are going to try a number of new things. The 2019/20 session is now over as we cannot restart meetings as our hall is not open yet. Given the likely state of affairs we are going to look into holding Zoom meetings in September and October and hope that some form of normality returns in November. These meetings will include the AGM in October so we will have to send out instructions on voting etc. before that. For this reason, it is important that you make sure Chris has your e-mail details so we can send out invitations with the Zoom information on. We are also going to try the beginner's meetings via Zoom in September and October as well. The planning session for the beginner's meetings will take place in mid-July so if there are any topics you would like us to cover then please let myself or any other member of the committee know. If the church hall is likely not to be useable for the remainder of this year we are looking at possible temporary alternative venues and will endeavour to communicate where that is going. I understand that many people will also feel reluctance to come back to meetings whilst the COvid-19 situation remains amongst us so if you have strong feelings either way about physical meetings again please let a member of the committee know. Unfortunately it is not yet clear to us how we are going to hold the observing sessions next session either as we are assuming that some social

distancing measures are still going to be in place for the early part of the season and sanitising an eyepiece after it has been used is probably not going to work either for the eyepiece or the operator. As such we are going to look into seeing if we can do some live viewing session of say Jupiter, Saturn and Mars and we will look into seeing how that will work out over the summer. We are also looking into the possibility of a socially distanced Perseid watch as the Perseids will have no moon issues this year. Information about this will be put out via the aas list.

We are going to hold an earlier committee meeting than normal in August to see what the situation looks like so again if there are concerns that you may have please let a member of the committee know. We have the National Astronomy Week events planned for November and at this time again we do not know if these are likely to go ahead or not but we are keeping placeholders open for that. I know the Marlborough Dark Skies festival for this year in October has already been postponed until next year.

We are still hoping to have a social event in November but that will depend on how the hospitality industry returns and again on what restrictions are put in place.

It is also worth noting that Gwyneth Hueter has taken over from Ian Smith as the talks organiser so again if you have ideas for what kind of topics you would like to see covered in the main meetings then please let her know.



Jupiter, Saturn and the Milky Way – Steve Creasey

I will try and get another Spacewatch out at the beginning of September to keep you up-to-date with what the society is doing so let's get those imaging rigs running over the summer so I have something for it.

The editor of "SpaceWatch" is Owen Brazell, who would very much appreciate your stories & contributions. In particular whilst many fine images are being posted on the discussion group it would be nice to have some in the SpaceWatch. Please send any news, observations, photos, etc. to:

Mail: Owen Brazell, 15 Spinage Close,  
Faringdon, Oxfordshire SN7 7BW or  
[owen@online.rednet.co.uk](mailto:owen@online.rednet.co.uk)

## THE NIGHT SKY FOR JUNE 2020

By Steve Creasey & Cristina Garcia Pozuelo Sanchez

Well the good weather has continued along with the lock down, giving plenty of opportunities to look at the night sky. For me May has been a bit frustrating, technical issues with my mount have meant I missed out on the last month of imaging deep sky objects before the nights of no astronomical dark started on the 22 of May. It has meant that I have been practicing the basics of night time photography again, widefield Milky Way shots and getting to grips with my i-Optron star tracker. The other disappointment was the fading of comet F8 SWAN, it had looked so promising at around mag 5 just before being visible to us in the northern hemisphere. I did manage to get an image in the morning twilight of the 20<sup>th</sup> around 02:45, looking through lots of atmosphere very low in the NNE as the comet passed through the constellation of Perseus, but it wasn't the blazing naked eye comet with a huge tail I was hoping for.

Still plenty to look out for through June though, including Noctilucent Clouds and an occultation of Venus by the moon on the morning of the 19<sup>th</sup>.

### The Planets

**Mercury** – Mercury is at greatest elongation east of the Sun ( $24^\circ$ ) on the 4<sup>th</sup>. thereafter it moves in towards inferior conjunction, which takes place on July 1<sup>st</sup>. The best chance to view Mercury is during the first half on June, where it may be seen in the twilight of the NW sky. The planet sets 2 hours after the Sun during the first few days of June, but this rapidly decreases as the month

progresses.

In mythology, Hermes carried Apollo on his chariot through the night. The planet in its morning apparition was called Apollo, the harbinger of sunrise. The evening apparition of the planet is called appropriately Hermes, the Greek equivalent of Mercury.

**Venus** – The reign of Venus as the 'Evening Star', Hesperus, has come to an end and inferior conjunction with the Sun takes place on the 3<sup>rd</sup>. Thereafter the planet slowly emerges into morning twilight as the brilliant 'Phosphorus' ('Morning Star'), rising one and three-quarter hours before the sun at the end of the month. On the 19<sup>th</sup>, Venus is occulted by the thin waning crescent Moon at 07:42h (UT). In the UK this is a very difficult occultation to observe because of the proximity of the Sun, in a daylight sky. In order to observe this event practice extreme caution! If you can find the moon before sunrise with a scope, you can then track it until the occultation happens.



### Mercury and Venus and the Folly – Steve Creasey

**Mars** – Mars rises at 01h at the beginning of June, but by astronomical midnight at the end of the month. It continues to brighten from magnitude 0.0 on June 1<sup>st</sup>, to -0.5 on the 30<sup>th</sup>. As the month progresses Mars moves eastwards through the constellation of Aquarius and is in conjunction with Neptune on the 13<sup>th</sup>, passing  $1.6^\circ$  south of the remote planet. During the early morning of the same day the last quarter Moon passes  $2.5^\circ$  south of Mars.

**Jupiter** – Jupiter dominates the early morning sky and culminates (crosses the south meridian) at 03h. It lies in the eastern part of Sagittarius with Saturn, the dimmer of the two, less than  $10^\circ$  to the east in Capricornus. The difference in magnitude is

noticeable; Jupiter, the brighter of the two, is at magnitude minus 2.7, whereas Saturn is at magnitude +0.2. Jupiter rises before midnight as June starts and rises soon after sunset at the month's end. During the early morning of the 9th, the gibbous waning Moon may be seen passing a couple of degrees south of the two planets as the trio rises at 0h. It is worth looking through binoculars or a small telescope to observe the dance of the Galilean satellites, which change position on a nightly basis.

**Saturn** – Saturn, in the constellation of Capricornus the Sea Goat, also rises before midnight during June, and, as has been mentioned earlier, lies to the east of Jupiter. The northern surfaces of the rings are still favourably placed for observation through a small telescope, although they are beginning to 'close' now. You may also try to spot the planet's largest satellite Titan, visual magnitude +8, through a telescope at this time. The greatest eastern elongation of Titan, (200 seconds of arc from Saturn) is on the 3rd and the 19th, and greatest western elongation is on the 11th and 27th. At 03h on the 9th, the gibbous waning Moon passes 2.6° to the south of Saturn.

**Uranus & Neptune** – Uranus in the constellation of Aries is best looked for at the end of the month, when it rises at 01h. However, it is a magnitude +6 object and increasing morning twilight may prove to be a barrier to observation of this remote world.

Neptune in Aquarius rises slightly earlier than Uranus during this month, and at the dimmer magnitude of +8 is a difficult object to observe during June.

### Meteor showers

On June 27th, 1998, northern sky watchers were surprised when meteors suddenly began to stream out of the constellation Bootes. Observers saw as many as 100 meteors per hour during the 7-hour-long outburst. It wasn't the first time: similar outbursts from Bootes had been recorded in 1916, 1921 and 1927. Astronomers call these unpredictable meteors the June Bootids.

The source of the June Bootids is comet 7P/Pons-Winnecke, which orbits the Sun once every 6.37 years. The comet follows an elliptical path that carries it from a point near the orbit of Earth to just beyond the orbit of Jupiter. Pons-Winnecke last visited the inner solar system in 2014/2015. When our planet passes through a dense spot in the debris stream, a meteor shower erupts.

### Comets

C/2017 T2 (PanSTARRS) mag of 8.8, well positioned in

the constellation of Ursa Major  
T2 PanSTARRS passes close to M106 on 24<sup>th</sup> June, both should be visible in small scope.

C/2019 Y1 (ATLAS) mag 12.9, in the constellation of Ursa Major. This comet has become very difficult for smaller telescopes and I lost it even through the 15" earlier last month.

C/2019 Y4 (ATLAS) Still visible (mag 11) in the constellation of Taurus. Although technically this comet is still around the disruption event has meant that all that is now left is a very faint trail of dust and it will be difficult to see visually although imagers will still pick it up.

C/2020 F8 (SWAN) mag 7.2 and fading, in the constellation of Auriga. Again F8 did not live up to its initial hype and was disrupted on the inbound. It is unclear whether there is a real nucleus left anymore or just a trail of debris. Steve and I tried for this one (socially distanced of course 😊) and Steve's image is given below. I just about managed to pick it up in a 7" Mak-Cass but it was very hard and pretty much required averted vision. I did not try again.

<https://skyandtelescope.org/astronomy-news/comet-swan-song/>



Comet Swan – Steve Creasey

See later page for current comet orbit positions

We also possibly have another brightish comet coming along in late July in C/2020 F3 (NEOWISE). This could reach 4/5<sup>th</sup> mag when it appears after

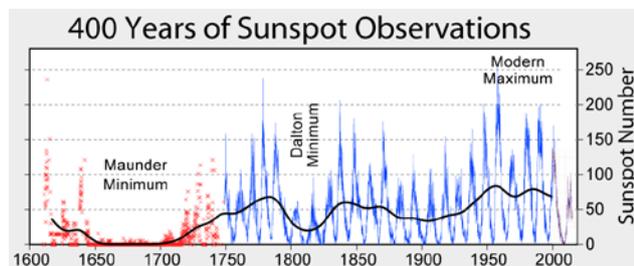
perihelion in late July. A chart is provided later in the magazine.

## Noctilucent Clouds

Come summer comes the Noctilucent cloud (NLC) season and this year they have appeared earlier than ever before in the Arctic. There has already been a display as far south as northern France (which I managed to miss) so it is worth keeping an eye out on the northern sky to see if they appear again.

## Sun

The Sun has been going through one of its deepest minima in the space age and has been sun spotless for 79% of the year so far, compared to 78% last year. There have however been a few signs of it waking up and there has been some prominence activity for those equipped with H-Alpha scopes and even some very small sunspots from the new cycle 25. Unfortunately these don't tend to last long.



## Deep Sky Objects

June deep sky targets

A few of low ones to start with

M83 The Southern Pinwheel galaxy in the constellation of Hydra. This is very challenging from UK skies

NGC 5897 Globular cluster in Libra

IC 4592 The Blue Horsehead Nebula in Scorpius

M5 The Rose cluster, Globular cluster in Serpens

IC 4593 The White Eyed Pea, Planetary nebula in Hercules

IC 4665 The Summer Beehive cluster, open cluster in Ophiuchus

NGC 6572 The Blue Racquetball. Planetary nebula in Ophiuchus

NGC 6229 Globular cluster in Hercules

IC 1138 Lenticular galaxy in Corona Borealis

NGC 6420 An Ultra luminous infrared galaxy in Ophiuchus

For those interested in finding out what is up in the deep sky Thomas Pflieger has released his planning software Eye and Telescope 3.3.1 as freeware. It can be downloaded at

<https://eyeandtelescope.com/eandt.asp%3Fcontent=final.html>

It is not perhaps the best of those out there but it is free.

## LAST MONTHS TALK

With the meetings currently in abeyance there are a number of places setting up virtual astronomy meetings, mostly via Zoom.

The Virtual Astronomy Club:

<https://www.star-gazing.co.uk/WebPage/virtual-astro-club/> who are offering free 7 pm Zoom meetings on a Tuesday and Thursday. PDFs of recent talks are here:

<https://www.dropbox.com/sh/9k7medirj1gkwt/AAC4dqakRuUiYIJJHgz0KKqma?dl=0>

The BAA are also doing virtual webinars which are open to all at

<https://www.britastro.org/meetings>

Look for the webinars page. They are also doing some presentations via Zoom as well which can be seen on their web page. If you miss them then they are available on their YouTube channel afterwards

There are a number of other organisation such as the RASC (Royal Astronomical Society of Canada) who are also putting presentations up on their YouTube channels and YouTube is also a library for an awful lot of other astronomical

presentations so there is no excuse not to get your fill over the summer.

If you are interested in the dark sky movement the dark sky meeting for 2020 was done virtually and the presentations can be found at <https://www.youtube.com/playlist?list=PLwHEmqG4ZaZq6AzTNtzc0yQyUIFaDtWqa&eType=EmailBroadcastContent&eId=ac9ec4ff-250f-4545-85fe-791cea66d6c3>

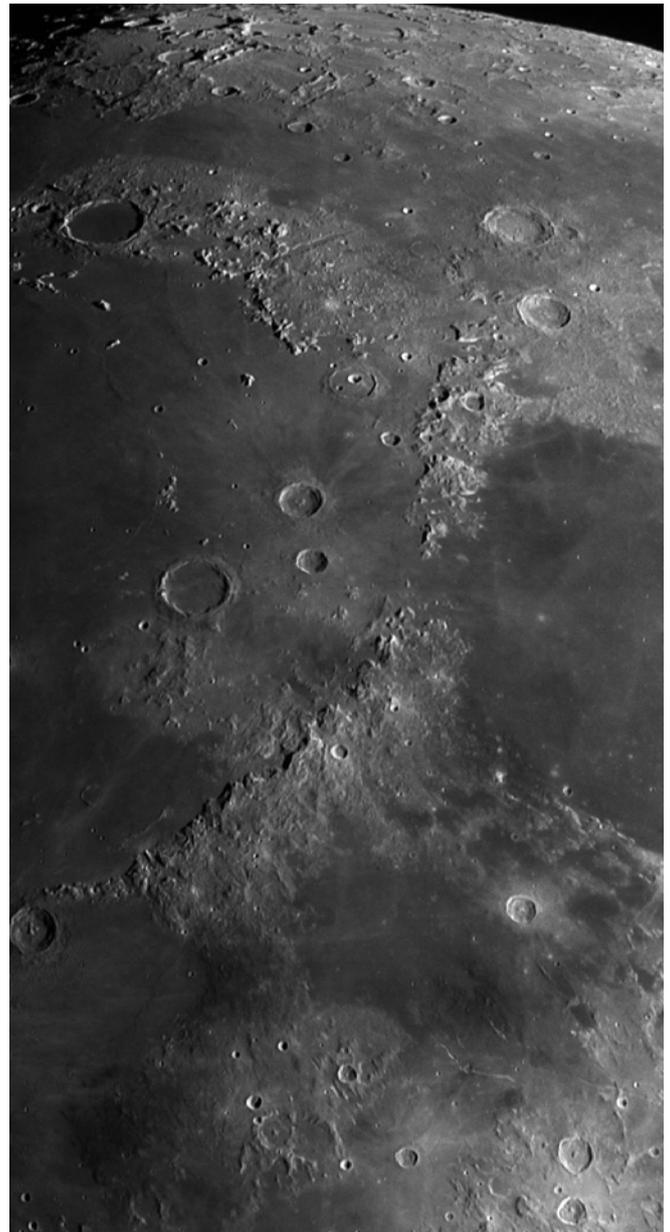
It also includes presentations on lost constellations and dark skies around the world

**Observing evening: There are no further Observing evenings this session. This is due to the fact that it is now too light and not to Covid-19, we hope to restart these in the next session.**

#### NEW MAILING LIST

If you have not already done so, why not subscribe to our new email mailing list. The list is called 'aaslist'. Members use the list to alert each other about celestial events and to chat about amateur astronomy. The list is quite active, with several messages most weeks. To subscribe to aaslist and to read through previous messages click on: <http://lists.abingdonastro.org.uk/mail.cgi/list/aaslist>

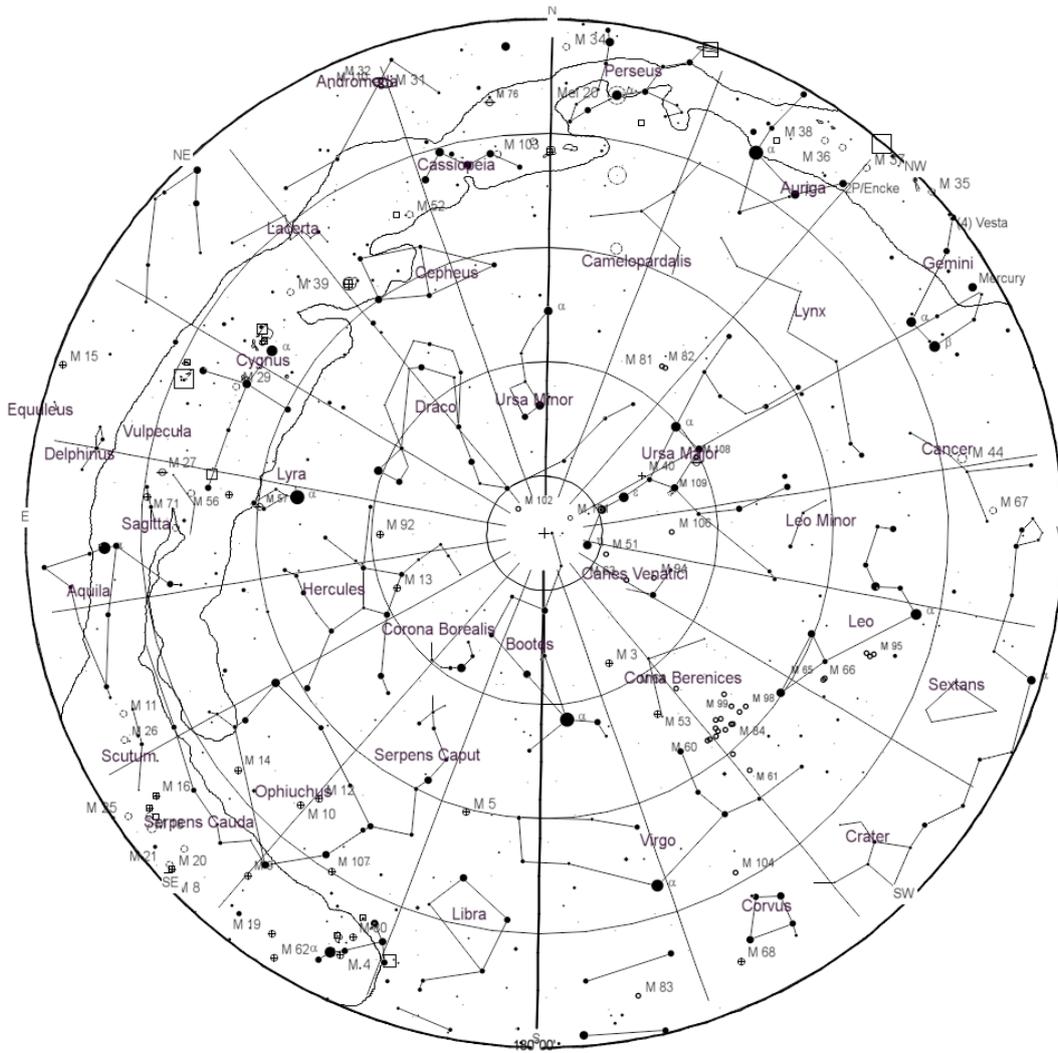
**Practical Astronomy Show – This is still scheduled for Kettering on September 26<sup>th</sup> , although I can't see it going ahead but details are at <https://practicalastroshow.com/>**



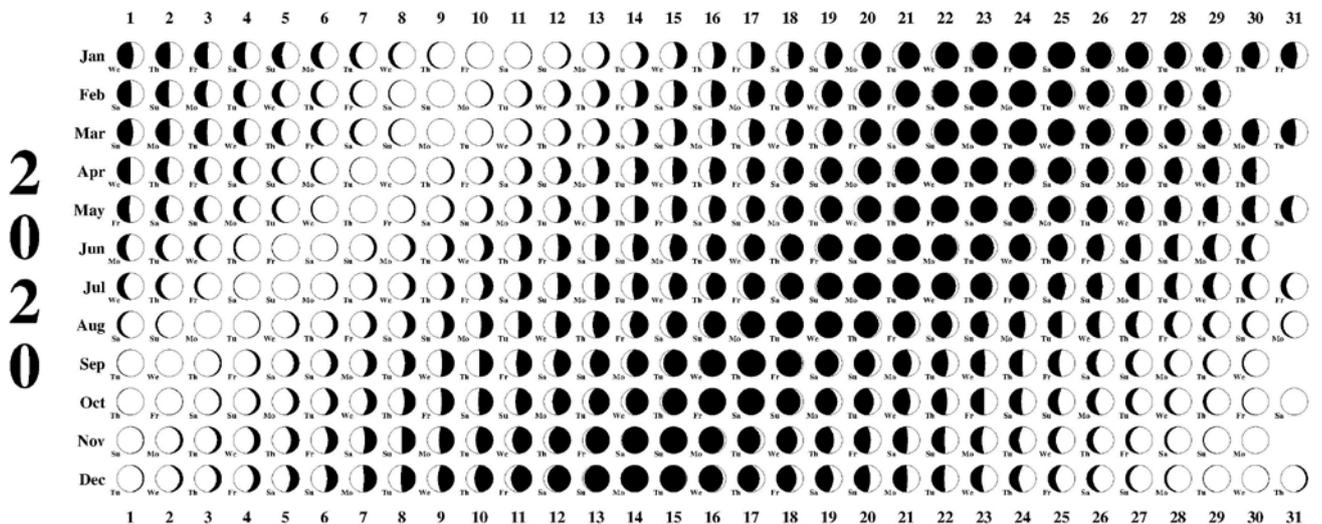
Moon Montes Apennines, Caucasus and Alpes. Mares Frigoris, Imbrium and Serenitatis and craters Plato, Cassini and Archimedes – Steve Creasey

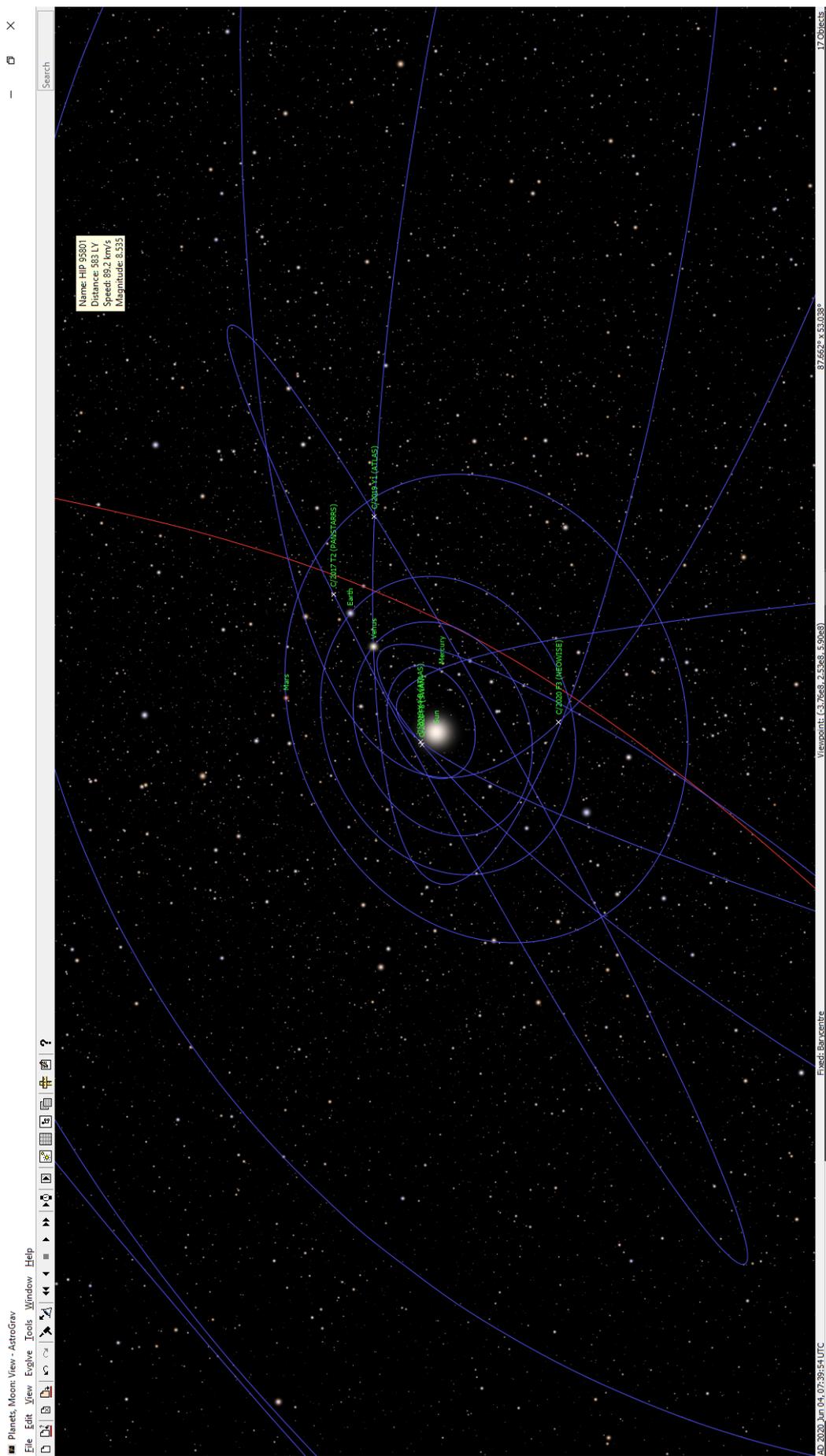
# STAR CHART

The night sky at 22:00 (BST) Monday 15<sup>th</sup> June 2020



## MOON PHASES: 2020







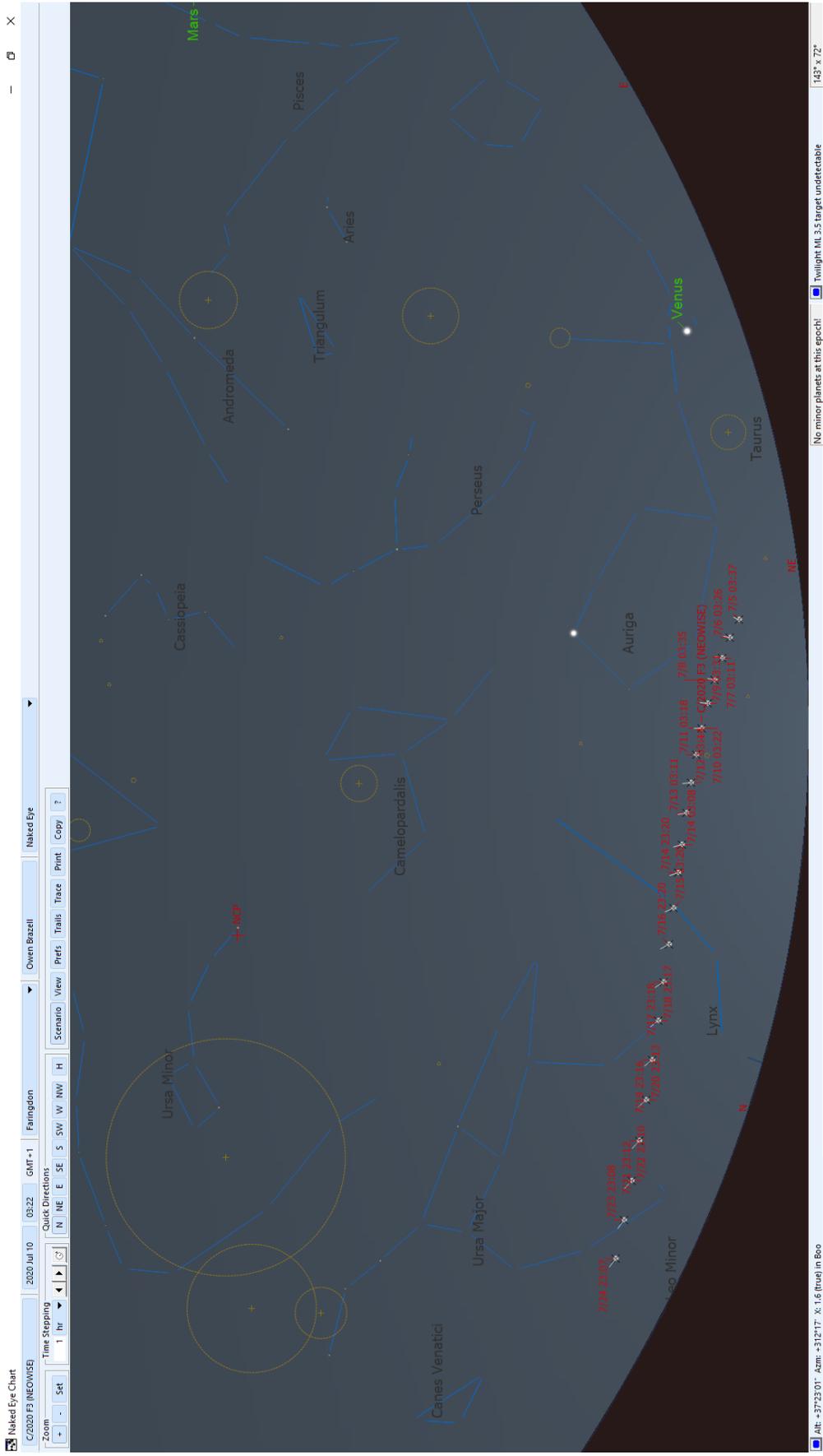
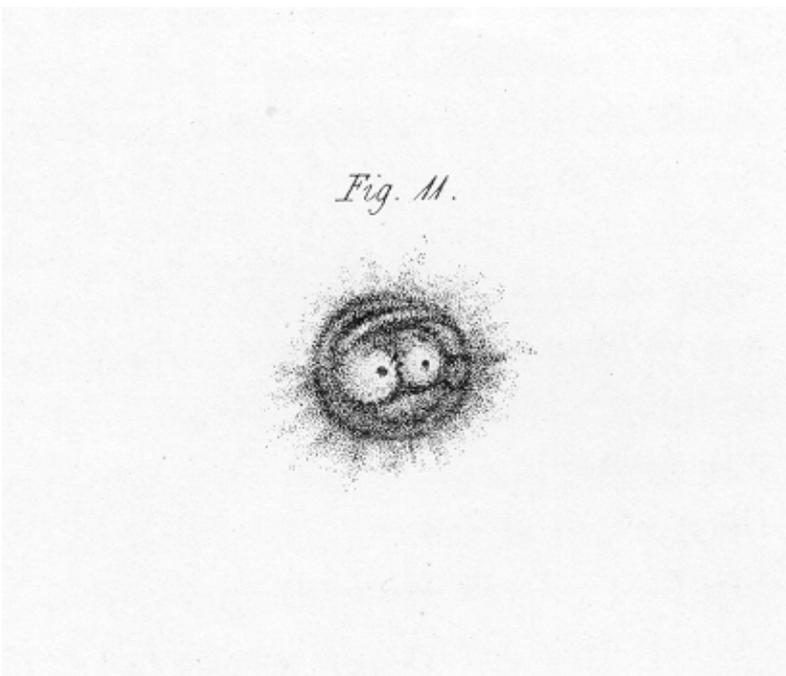


Chart for C/2020 F3 (NEOWISE) for July from SkyTools 4



M97 by Ian Smith showing the outer halo. This is a particularly nice nebula that is visible in small telescopes and does benefit from the use of a UHC type filter to see the eyes. I particularly like the comparison here with a rather startled looking nebula drawn in the 19<sup>th</sup> Century using the 72" at Birr Castle in Ireland



Some Summer planetaries From John Napper



M57



M27



NGC 6781