

# SPACEWATCH

the newsletter of the Abingdon Astronomical Society

## THE NIGHT SKY FOR NOVEMBER 2019

**Next Talk**  
**9<sup>th</sup> December 2019**  
**Observing the Herschel 400**  
**Jon Gale**  
**Wiltshire AS**

### EDITORIAL

On society business note there will be no beginners meeting this month as we are holding a trial social meal at the Packhorse Inn in Milton Hill. Details and menu's from Steve Creasey. By the time you receive this we will also have had the Mercury Transit. The weather forecasts looked so grim that the planned session to observing it was called off. I hope that if any clear spells arrive despite the forecast that you will get to see it, after all this is the last one until 2032 and many of us will not see that one.

As Steve points out in his piece the weather recently has not been great and even the imagers are struggling to get anything so I am also short of images for Spacewatch. Hopefully the next few months might be better but it is not looking good so far.

I am still looking for after tea speakers as it is a struggle from one month to the next to get one. I would say though you have a maximum of 35 minutes which is surprisingly short when you get going. I could also use short contributions for Spacewatch to fill up an extra spaces. We have are restricted to four pages for the print edition but the web edition can be as long as we like.



Planetary nebula K 1-16 – Ian Smith 7 hours each in Ha, O3 and N2 for the nebula itself plus 30 minutes each for the red, green and blue filters. Edge HD11 and QSI6120 camera.

By Steve Creasey & Cristina Garcia Pozuelo Sanchez

Well the last month has been rubbish for getting out in the observatory, sods law on the few nights we got that weren't cloudy, I was either unable to make use of the clear night, due to other commitments or plagued with technical issues.

To be honest though, the weather hasn't been kind to us through October, forcing us to abandon the Observing evening, which is always frustrating. Hopefully with the clocks going back and the colder weather we will start to get some decent clear nights.

### The Planets

**Mercury** Following its transit of the Sun on the 11th - see Highlight above - Mercury rises rapidly into the pre-dawn sky, increasing in brightness by half a magnitude each day and rising about 7 minutes earlier as the days progress. The rates slow until Mercury reaches greatest western elongation some 20 degrees in angle from the Sun on the 28th. By then, it will have brightened to magnitude -0.5 and will rise one and a quarter hours before the Sun. It will then have an elevation of some 11 degrees before being lost in the Sun's glare.

**Venus** may just be glimpsed in the west south-west setting an hour after the Sun at the start of the month, but will be difficult to see due to the fact that the ecliptic is at a shallow angle to the horizon and so Venus will have a very low elevation. By month's end, the Sun sets just before 4 pm and Venus an hour and a quarter later but it will still be hard to spot with an elevation of just 6 degrees as darkness falls. Its magnitude remains at about -3.8 and its, almost fully illuminated disk, is 11 arc seconds across. Binoculars and a very low horizon will be needed to spot Venus, but please do not use them until after the Sun has set.

**Mars**, which passed behind the Sun (superior conjunction) on September 2nd, can be seen in

the pre-dawn sky at the start of its new apparition. It might just be glimpsed just south of east at the start of the month but will then only have an elevation of 11 degrees at sunrise. Then, binoculars could well be needed to spot its +1.8th magnitude, 3.7 arc second disk - but please do not use them after the Sun has risen. However, by the end of the month, Mars rises some two and a half hours before the Sun remaining at magnitude -2.8 with disk still less than 4 arc seconds across. It will have risen to 12 degrees elevation before being lost in the Sun's glare.

**Jupiter**, shining on the 1st at magnitude -1.9 and falling to -1.8 during the month, can be seen very low in the southwest as darkness falls. As the month progresses, its angular size drops from 33.4 to 32.1 arc seconds but, by the end of the month, will be lost in the Sun's glare. Jupiter lies in the South eastern part of Ophiuchus and is heading towards the southernmost part of the ecliptic so, as it appears in the twilight, will only have an elevation of 8 degrees. With its low elevation, atmospheric dispersion will take its toll and an atmospheric dispersion corrector would greatly help to improve our views of the giant planet and its four Galilean moons.

**Saturn**, will be seen just west of south as darkness falls at the start of the month. Then, its disk is 16 arc seconds across and its rings - which are still, at 25.2 degrees, nicely tilted from the line of sight - spanning some 39 arc seconds across. During the month its brightness remains +0.6 whilst its angular size falls to 15.4 arc seconds. Sadly, now in Sagittarius and lying on the south-eastern side of the milky way, it is at the lowest point of the ecliptic and will only reach an elevation of 13 degrees. As with Jupiter, an atmospheric dispersion corrector will help improve the view.

**Uranus**, is visible most of the night near the intersection of the borders between Aries/Cetus/Pisces. It is currently in Aries, some 10° south of Hamal (alpha Arietis). Although the planet's magnitude is +5.7, and is theoretically visible to the unaided eye, it is far better to locate it using binoculars or a small telescope. Through a telescope the planet presents a tiny greenish-blue disc 3.7 seconds of arc in diameter.

**Neptune** lies in the constellation of Aquarius with a visual magnitude of 7.9 and so requires binoculars or a telescope. With adequate magnification, it is possible to see this distant world as a tiny bluish grey disc. The angular diameter of the planet is just 2.3 seconds of arc. By the end of November, Neptune sets at astronomical midnight.

## Meteor showers

There are two interesting meteor showers this month, the first of these is the **Taurid** meteor shower consisting of slow moving shooting stars associated with Encke's comet and peaking overnight on the 5<sup>th</sup>/6<sup>th</sup> and again overnight on the 12<sup>th</sup> to the 13<sup>th</sup>. The Taurid shower is noted for producing bright, slow moving events.

The **Leonid** shower peaks on the 18<sup>th</sup> at 23h, and so will be best seen in the hours before dawn on the 19<sup>th</sup>. Expect to see about 35 meteors an hour if conditions are favourable. The next Leonid 'storm' is due to take place towards the end of the 2020's. The parent body of this shower is comet Temple-Tuttle, which visits the earth about every 33 years.

## Comets

C/2017 T2 (PanSTARRS) – Mag 11 and brightening, visible all through November

C/2018 N2 (ASASSN) – Mag 11.5 and visible through November

## Deep Sky Objects

November deep sky, lots of open clusters and galaxies this month.

M34 Open Cluster in Perseus

NGC 956 OC in Andromeda

NGC 957 OC in Perseus

M76 Little Dumbell nebula, Planetary Nebula in Perseus

NGC 891 Spiral Galaxy in Andromeda

NGC 1023 Barred lenticular Galaxy in Perseus

NGC 936 Barred lenticular Galaxy in Cetus

M33 The Triangulum Galaxy in Triangulum

M45 The Pleiades OC in Taurus

NGC 1647 OC in Taurus

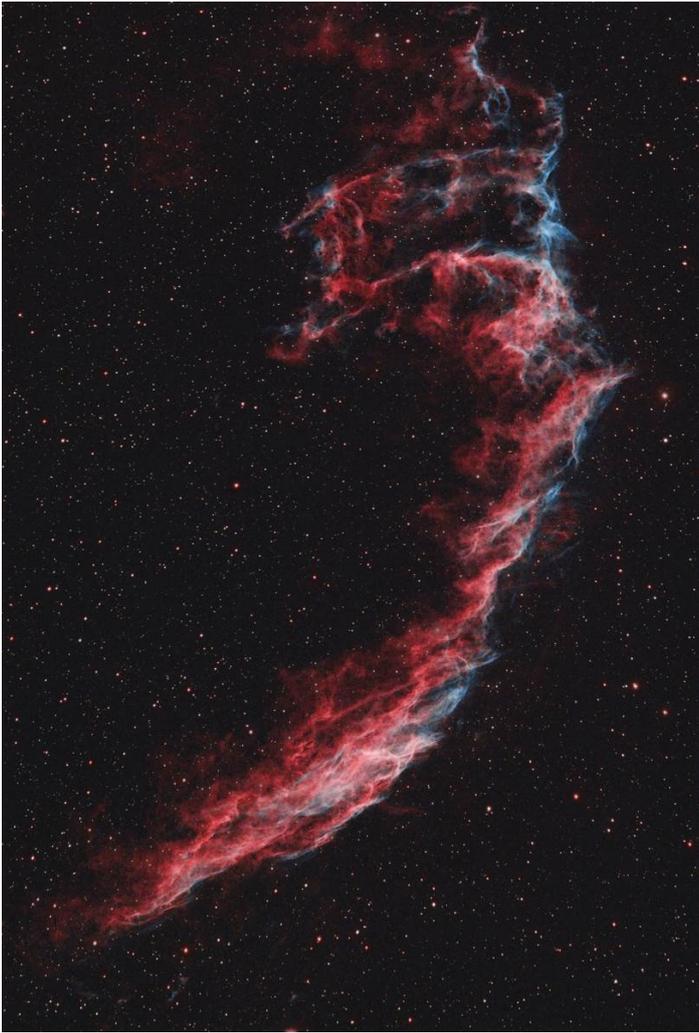


Image of Western Veil by Tony Boer

### HAW WOOD STAR PARTY

I was lucky enough to go to the Haw Wood Star party in Suffolk 27 Oct- 3<sup>rd</sup> Nov. This is one of the smaller star parties with perhaps 30 people there in total. It is held in a camp site with excellent southern horizons and an eastern horizon looking over the North Sea. Given the weather forecast I only took my 15" Obsession UC with me but also a driven iOptron iEQ45Pro and a Mirage STF 7 to play with as I had not had much chance to use this scope. Although the weather was variable we did manage to get a few sessions in and more importantly for me managed to get the mount and STF working. We did manage to see the morning Zodiacal light on three occasions which was pretty good, mainly because the East looked out over the sea. As well as the main interest in deep sky objects we did track down three comets in C/2017 T2, C/2018 N2 and 260P/McNaught. Unfortunately the computer pointing system we use which was the Argo Navis has issues with some comets and 260P was one of these and it never pointed to the

right spot and we had to search around to find it.. We were lucky in that over that time period C/2017 T2 was passing very close to the cluster M36. Something we did not realise until we put a wide field eyepiece in and found the cluster there. We also were lucky enough to see Uranus and four of its moons (maybe) with a friends 18". I could only see 2 with my 15 and Neptune and Triton. We never really had a whole night and although there were claims of looking through the eyepiece on six nights out of seven two of those were mainly equipment test and you would not have got the main telescopes out and the other sessions were short slots ff mainly two-three hours. As suspected however the winds on Saturday were too much for one of the telescopes (I had taken mine down) and a 20" Obsession was blown through 90 degrees and deposited on its side. Luckily no major damage was done. The ground was also somewhat boggy for a few days and there was concern that we might not get the caravans out. The lack of transparency also meant that galaxies were seen poorly and we concentrated on planetary nebulae an diffuse nebula along with globular clusters. Fine view were had of Thors helmet though and it was interesting to see Leo riding high in the dawn sky as I normally associate that with the Spring viewing, although light pollution from the Zodiacal light meant we did not chase of its galaxies 😊

### DATES FOR YOUR DIARY

**18<sup>th</sup> November AAS Social event. At the PackHorse Inn Milton Hill. This replaces the beginners meeting for November as a trial option. If you are interested in going please see Steve Creasey**

**Observing evening: Observing evening: The next observing session will be on the FCN 25<sup>th</sup> Nov - 27<sup>th</sup> Nov at Frilford Heath Tubney Golf driving range, note that this is a new location and maps will be on the website. This will be the last Observing session for 2019 and we will start again in Jan 2020. As always go/no go notes will be posted on the newsgroup as well as the Facebook page so please look there for more info or contact Steve Creasey for details.**

**International Astronomy Show 15-16<sup>th</sup> November (Warwick) for more details see <https://www.ukastroshow.com/>**

