



## Newsletter November 2022

Next Meeting: **Monday 28<sup>th</sup> November at 7pm**

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

**Topic: "Solar Observing with the BAA Solar Section"  
by Lyn Smith BAA Solar Director**

### **Contents**

President's Word	p. 2
Member Articles	p. 3
Nov/Dec Observing	p. 4
Member Images	p. 5
Moon Phases	p. 8
Sky Chart	p. 9
C/2022 E3 Location	p. 10



## Presidents Word

Christmas Meal – you should all have had an email with details of the Christmas Meal. If you didn't then please speak to Stephen, Angela or myself to check that we have your current email.

Anyway, a room at Chestnuts in Ayr has been booked for the 7<sup>th</sup> December. and we will be taking the Festive Menu, which can be found on the Chestnuts website. There is the option of two or three courses and a selection of meals. I have confirmed with the venue that they can cater for vegans with a separate menu which will be available by request on the night. Drinks are extra so beware!

Previous experience has shown that it works better if everyone pays their own bill to the restaurant after the meal rather than the treasurer collecting the cost and paying in bulk. **HOWEVER TO SECURE YOUR PLACE YOU MUST PAY A £5 DEPOSIT TO THE TREASURER AT THE NOVEMBER MEETING.** This is because we have had to pay a deposit to secure the booking!

Places are still available, so, if you want to come, bring your deposit to the meeting and get your name on the list. It's usually a very good night out and in previous year Chestnuts has provided a good meal.

This month's speaker is Lyn Smith who is the Director of the British Astronomical Association Solar Section. Lyn has given us talks a number of times before and is an excellent speaker. This time though it will be an experiment as we will be using Zoom and a mobile phone data link – so fingers crossed. She will be talking to us on how to observe the Sun the BAA way, that is so that you can record some useable data. It will be interesting and, if you follow it through, you can enter your data in the BAA database and contribute to Citizen Science.

No doubt you will have been following the NASA launch of Artemis on the 17<sup>th</sup> of this month. A great success as far as the launch went and now we have to wait the 26 days or so for it to circle around the Moon and return to splashdown. At last we are on our way back to the Moon with astronauts! The next question is when will SpaceX launch their Starship?

I spoke with our librarian, Alex Baillie of “Alex's Space” fame earlier this week , and he informed me that he is updating the Library listing which he should complete for January. In the meantime the current listing works and he will be pleased to search out a book or DVD for you. Just check the website under the “Resources” where you will find the current list, then just email to the [president@ayrastros.com](mailto:president@ayrastros.com) and I will ask Alex to get the items ready for delivery at the next meeting.

As usual I look forward to seeing you (and perhaps even having time to chat) at the meeting.....



## Member Articles

### Alex's Space

Also Known As...

Another name for Universe is Cosmos, but do the members of our solar system have an alternative name --- indeed they do. Let's start with the sun, it could also be Sol, and outward from Sol are the Planets...

Mercury - is named after the Roman messenger god, his mate in Greece is called Hermes.

Venus - is he Roman goddess of beauty and love. Her friend in Greece is known as Aphrodite.

Earth - is the god of gardeners and farmers!

Mars - is the Roman god of war, his ally in Greece is Ares.

Jupiter – being the larges planet is named after the leader of the Roman gods, the Greeks preferred to call him Zeus.

Saturn – is the second largest planet and is named after Jupiter's father, his crony in Greece is Cronos.

Uranus – the Romans know him as the father of the Titans, in Greece they call him as Ouranos.

Neptune – the Roman god of the sea, the Greeks call him Poseidon.

Pluto – is so far away it takes 248 Earth years to make one orbit around the sun. He is the Roman protector and guardian of the underworld or Hades as the Greeks call it. This dark and gloomy place is inhabited by the souls of the dead.

Finally: A woman arrives home soaking wet and says to her husband "The car won't start, there is water in the carburettor." Her husband bursts out laughing and says "you don't even know what a carburettor is." His wife says "I'm sure that is the trouble." Still laughing her husband says "OK, let's have a look at it, where is the car?" His wife replies "It's in the swimming pool."

Merry Christmas to everyone, and clear skies in 2023.

ALEX BAILLIE December 2022



## November/December Observing

### General

The Milky Way is taking on its winter configuration, which, while not as spectacular as it is in the summer and autumn, it is still wonderful to look at. The moon will be bright for much of the first two weeks of December perhaps limiting deep sky viewing. Pegasus is well placed for viewing over the next month and the Andromeda Galaxy (M31) should be easy to see. The little nearby constellation of Triangulum hosts the Triangulum Galaxy (M33) which is also an interesting target, though it is dimmer and smaller than M31 (see p5 and 6 for images). The coming winter sky hosts numerous open clusters running from Cassiopeia to Gemini, with perhaps the best residing in Auriga (M36,37,38), photo top p5. The Double Cluster (C14 or NGC 869,884) in Perseus is an interesting target, and if all else fails there are the Pleiades, or Seven Sisters, in Taurus which are magnificent in binoculars or in a small telescope. And, if you wait up for it Orion will make its appearance in the eastern sky, which is a sign that winter is almost here.

### Planets

Mercury and Venus move into the evening sky but are fairly close to the horizon until about mid-December when they rise enough to perhaps be seen after sunset. Meanwhile the outer planets remain well placed for viewing. Mars moves further into the evening sky as it heads to its opposition on the 8<sup>th</sup> December. Jupiter reached opposition the 26<sup>th</sup> 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 14<sup>th</sup> of August and is moving further west, it is best viewed early in the evening. Uranus reached opposition on the 9<sup>th</sup> of November so is well placed in Aries for observation. Neptune also passed opposition on the 17<sup>th</sup> of September and is about 6 degrees due west of Jupiter making it easy to find. *Three cheers to Alex for admitting Pluto back as a planet!*

### 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 2<sup>nd</sup> of February at 0.29 AU or 43M km. It is possible it will reach 6<sup>th</sup> magnitude or brighter. See the location chart for it in December on P. 10.

### Meteor Showers

The main meteor shower is the Geminids which run from the 4<sup>th</sup> to the 17<sup>th</sup> of December, peaking on the 14<sup>th</sup> at 13:00 GMT, meaning the best time to view them is before dawn or after dusk on the 14<sup>th</sup>. The moon will cause some interference as it is about 66% illuminated at dawn on the 14<sup>th</sup>.

A somewhat neglected meteor shower, the Ursid's run from the 17<sup>th</sup> to 26<sup>th</sup> of December and peak on the 22<sup>nd</sup>. Given its point of origin is in Ursa Minor, it is visible all night, it is expected to peak at about 22:00 GMT on the 22<sup>nd</sup>. Because of the new moon this meteor shower won't be affected by it.

### Lunar Occultations

The moon will occult Uranus on the 5<sup>th</sup> of December from about 16:59 to 17:18 and more spectacularly it will occult Mars on the morning of December the 8<sup>th</sup> at 04:52 to 05:52, timings as observed from Ayr.

### 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

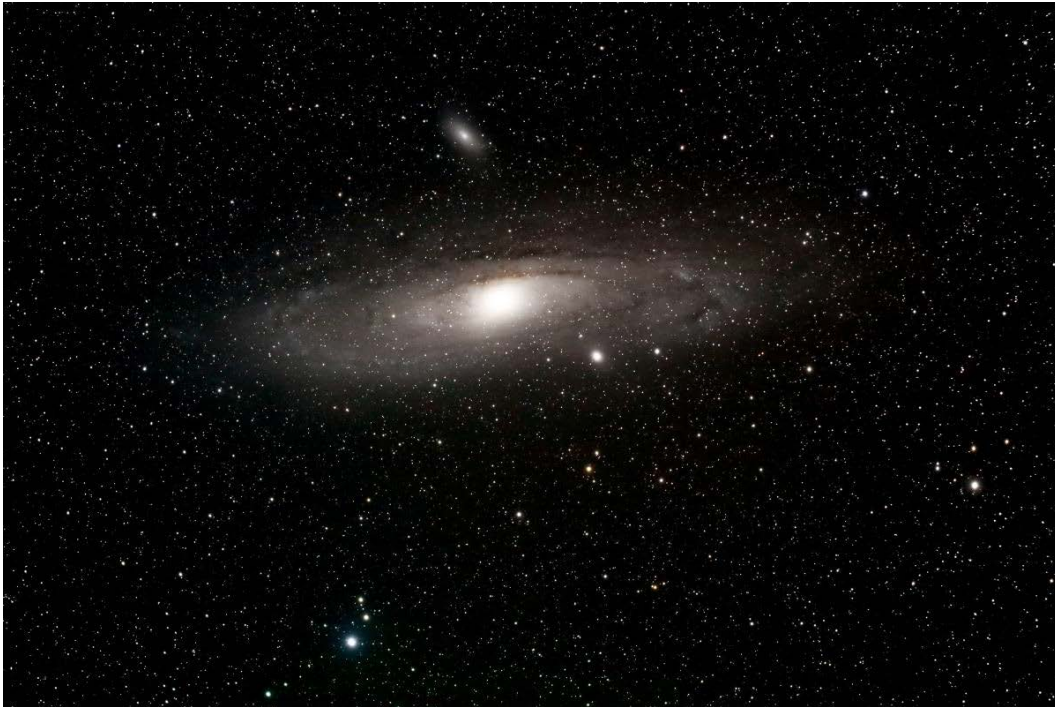
### Images by Marc Charron

Clusters in Auriga, from left to right: M37 (top left), 36 (bottom right off centre) and 38 (lower right), taken in Feb 2019, 70mm with 0.8x reducer.



Two of images of M31 showing the difference in scale between two telescopes

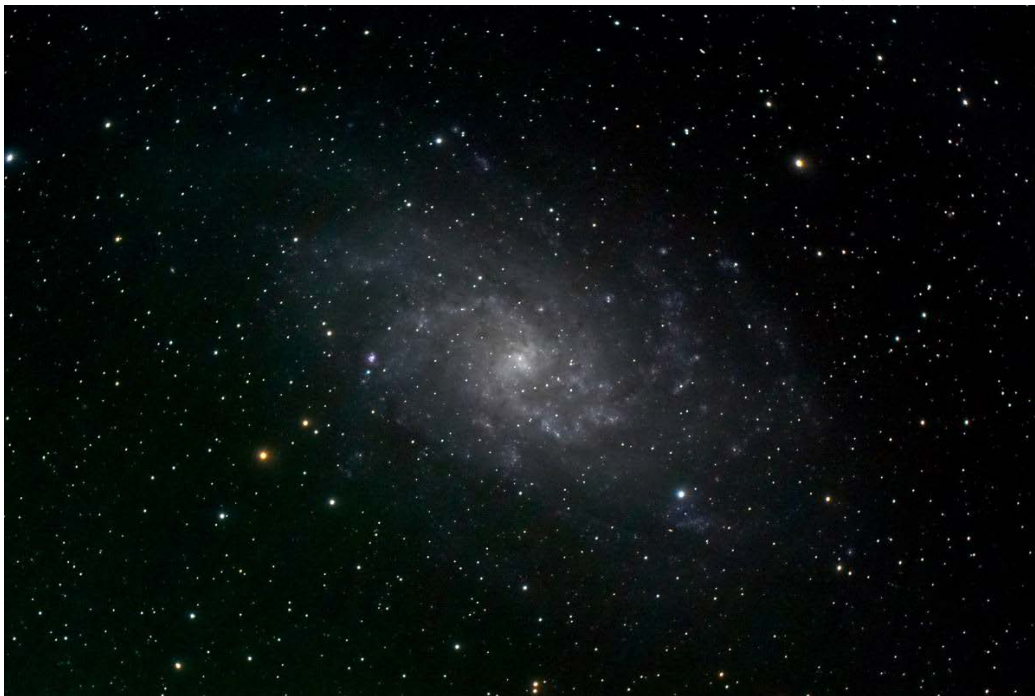
M31 taken with 70mm f6 APO refractor with 0.8x flattener/reducer (336mm effective focal length)



M31 taken with TMB 130/1200 with 0.6x reducer (720mm effective focal length)



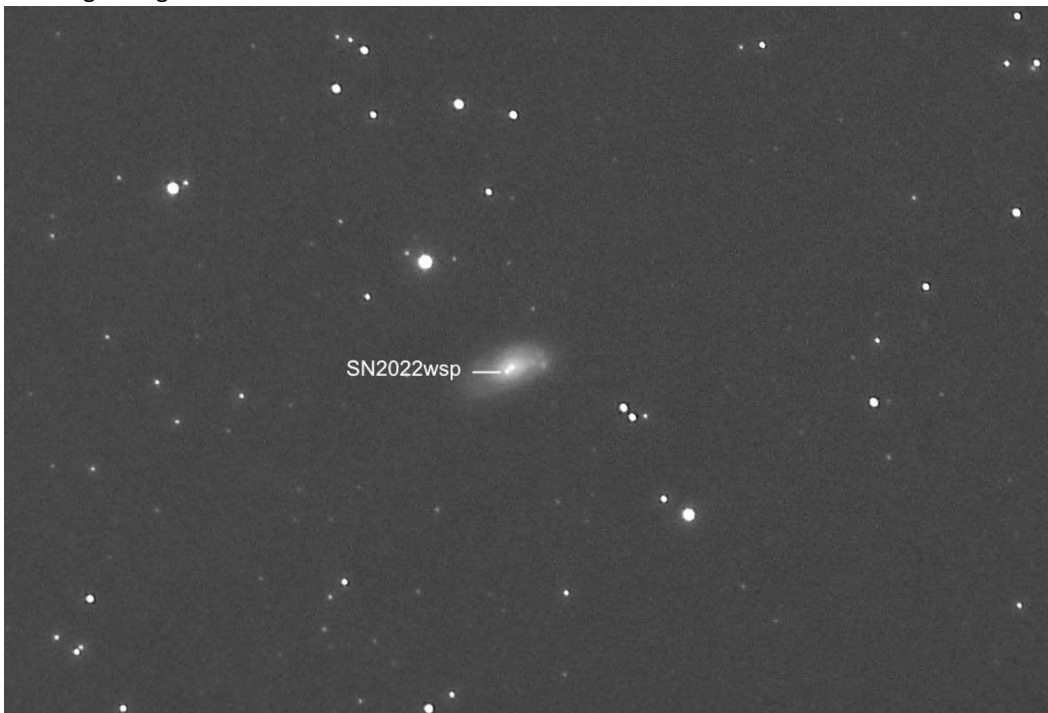
M33 taken with TMB 130/1200 with 0.6x reducer (720mm effective focal length)



This is a strange one, what looks like a tumbling satellite passing beneath M13, taken on 03 Nov. The satellite was moving right to left, each exposure was for 13 seconds and the satellite flashed 11 times in each of those periods. (TMB 0.6x reducer)



Supernova SN2022wsp in NGC 7448 taken with TMB 130/1200 with 0.6x reducer. The galaxy is about 80M light years distant, meaning the light left when T-Rexes still ruled the Earth!



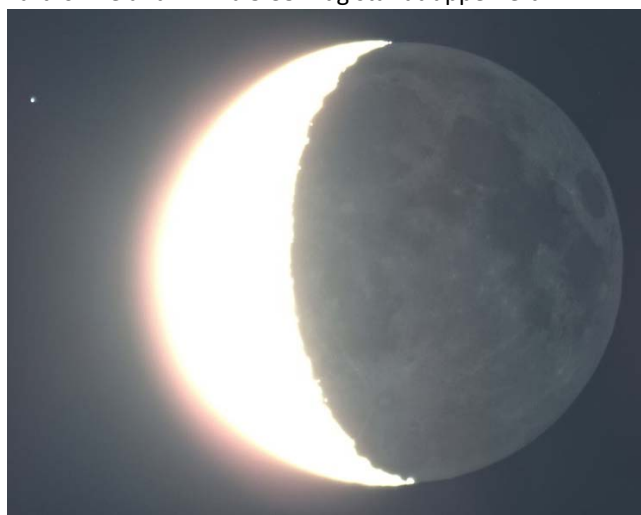
North America Nebula (NGC 7000) taken with TS86/460 SDQ scope



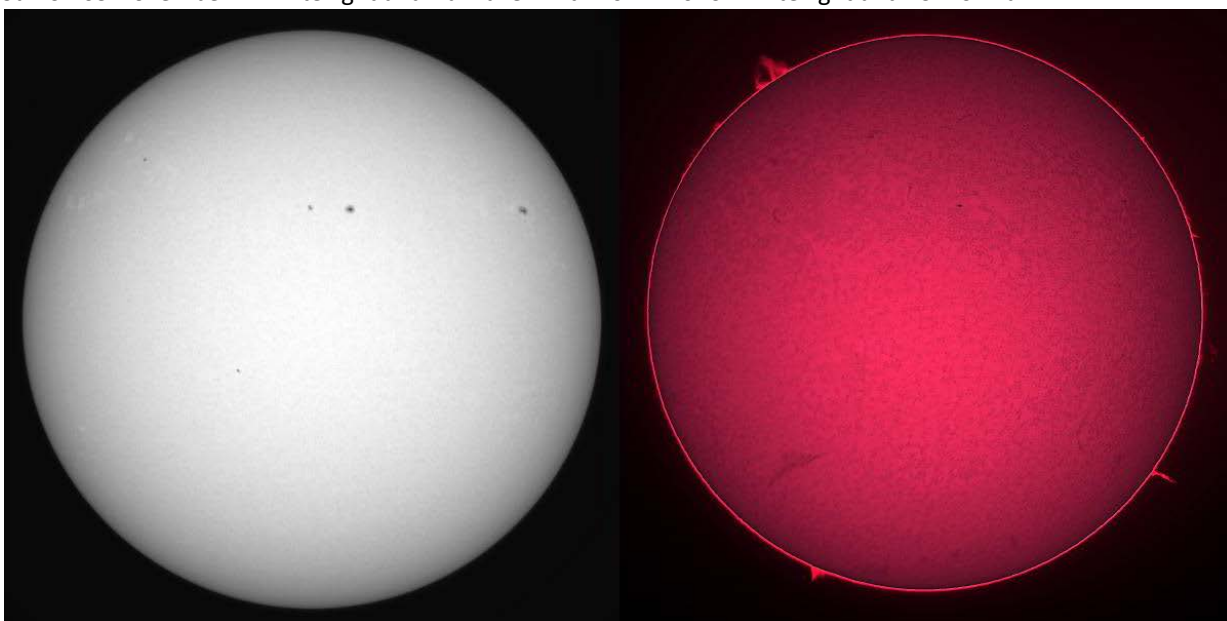
Moon shot with TS86/460 SDQ on 19 Nov



Earthshine and 7 Vir a 5.35 mag star at upper left.

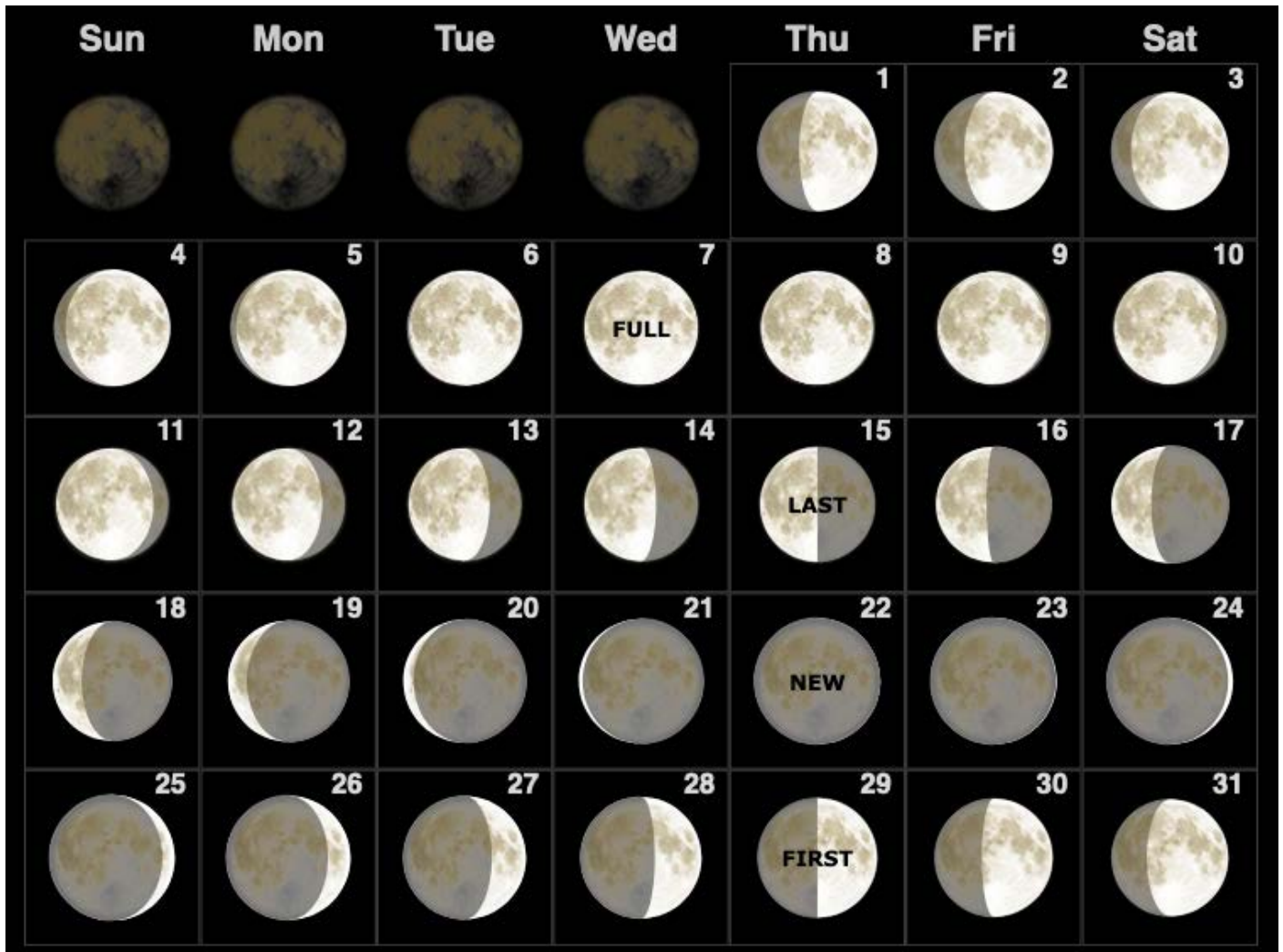


Sun on 03 November in white light and Ha. Taken with 70mm f6 for white light and PST for Ha.



## Moon Phases

December 2022

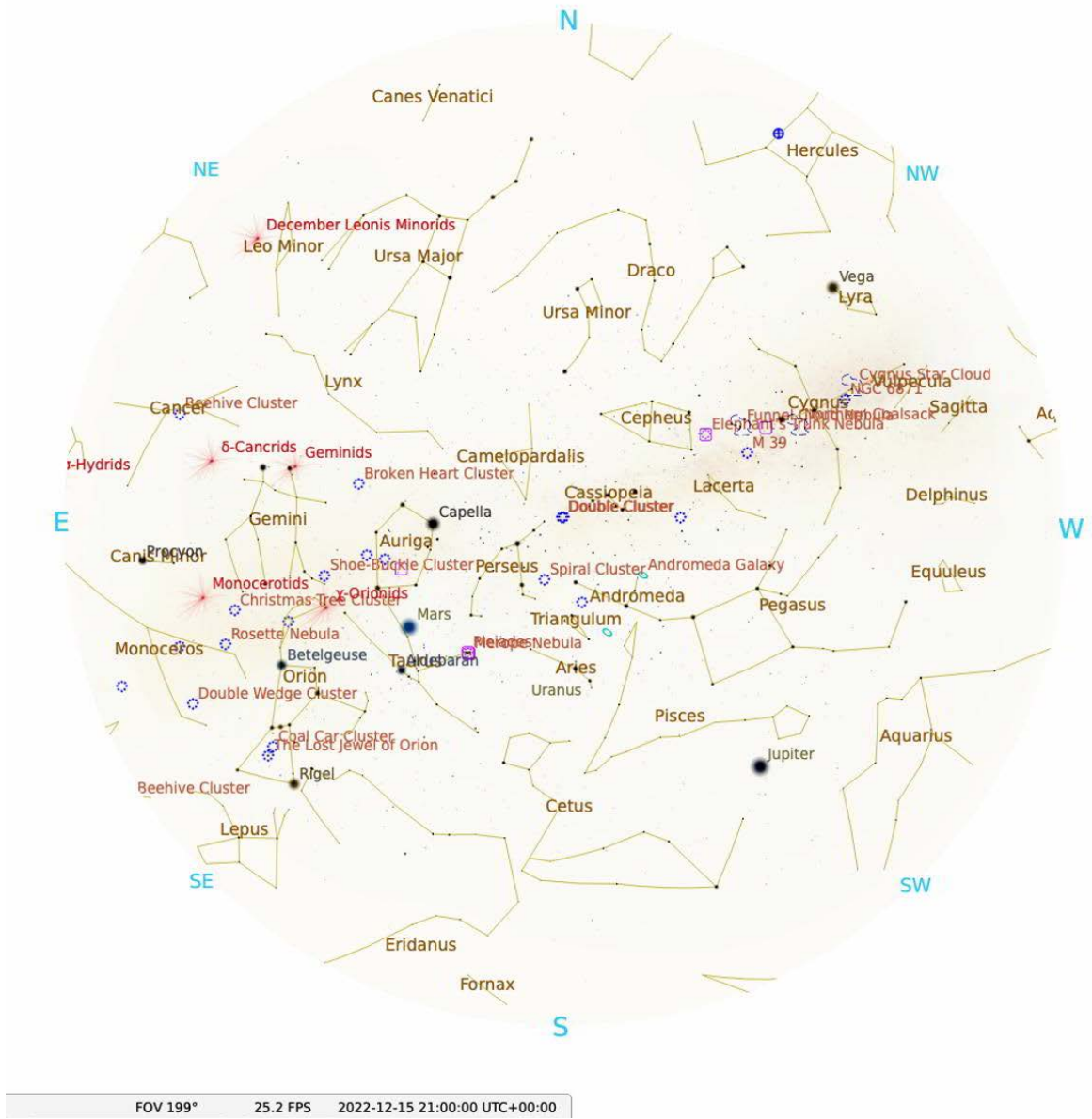


Credit: <https://www.moongiant.com/calendar/>





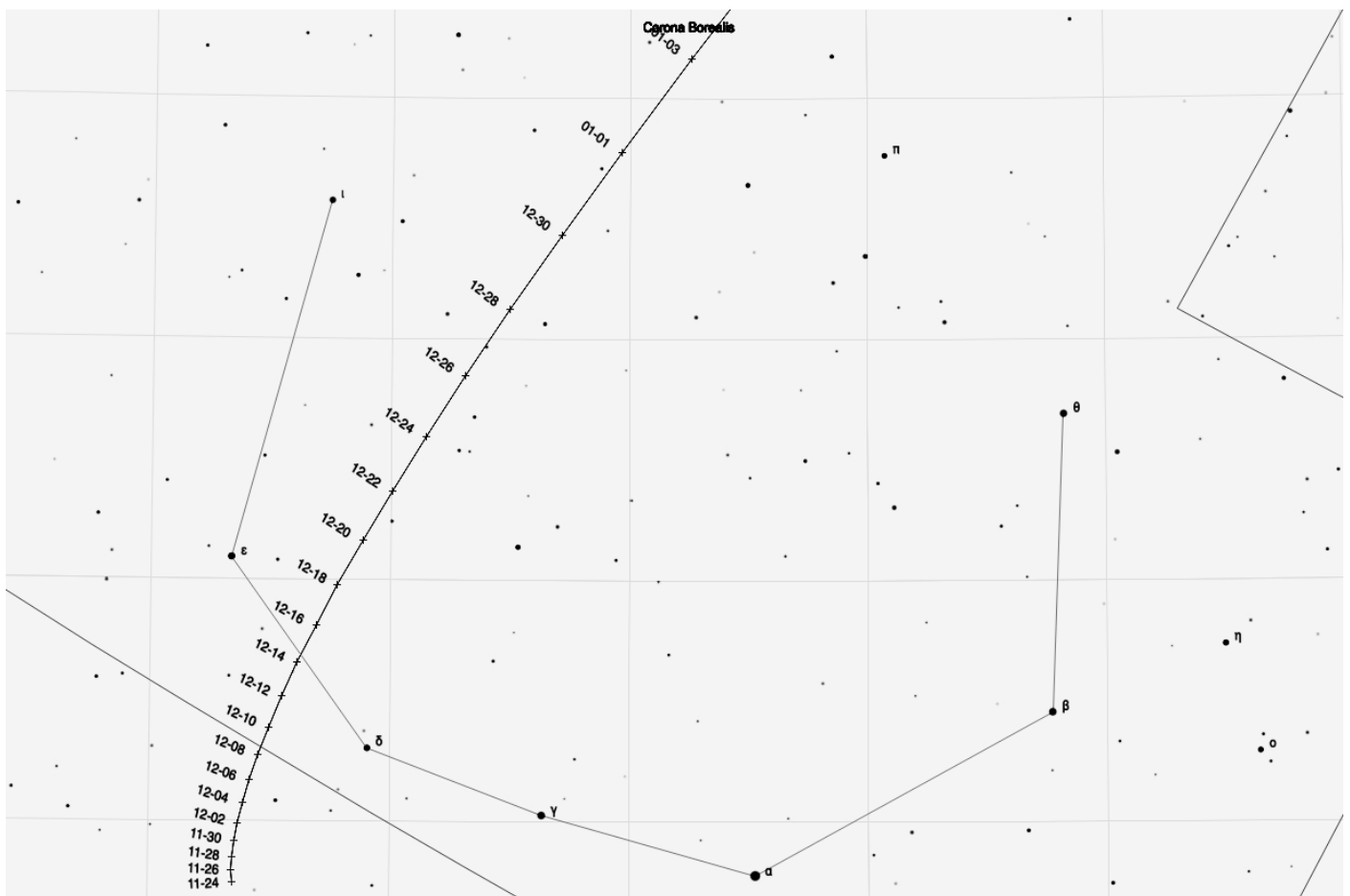
# December 2022 Sky Chart



Taken from: Stellarium



## Comet C/2022 E3 (ZTF) Location in December



Taken from: Stellarium

