



## Newsletter September 2023

Next Meeting: **Monday 18<sup>th</sup> September at 7pm**

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

Topic: **"Royal Institution Video Lecture"  
by Professor Max Tegmark**

### **Contents**

President's Word	p. 2
Alex's Space	p. 3
GJ Monthly Blog	p. 4
Sept/Oct Observing	p. 5
Member Images	p. 6
Moon Phases	p. 11
Sky Chart	p. 12



## Presidents Word

Hi All and welcome to our 2024 - 25 session. We are starting off with a Royal Institution video talk by professor Max Telemark. This is to allow us additional flexibility to collect subscriptions which are due at the September meeting. It is important that we gather in subscriptions early in the season as it allows us to plan the number of sessions and speakers.

Our subscription has been held at £20 for several years now and represents excellent value, however our relaxed and welcoming meeting style has, of late, been taken advantage of by a few who have been slow to pay or have not paid at all. We do not want to change our welcoming approach but on the other hand we must look to the overall viability of the Society and fairness to the vast majority of our members who do pay on time. I would mention at this point that none of the Society's Officers or Committee receive any payment for their efforts and all of our outreach activities are funded by those taking part. All subscriptions go into the running of the Society meetings. So please come prepared to pay your subscription at our September meeting.

Our policy of welcoming newcomers by making their first attendance free will continue, but joining will be required at the second visit. The same approach will be applied to renewing members, who will be required to have paid their subscription no later than the second meeting. After that entry will be refused until payment is made. A blunt approach but unfortunately necessary.

Moving on, we will be holding a beginner's night at the October meeting with a view to helping anyone who is struggling, and with a partial lunar eclipse coming up on the 28th of October, a viewing night (speak to Stephen). In December we are planning to organise a Christmas meal in Ayr so look out for the booking list which will be circulating nearer the time. The New Year will be opened by a new speaker, professor Victoria Martin of Edinburgh University who will be speaking to us about particle physics and cosmology. At some point next year we will be looking to organise an observing night or weekend plus of course more interesting talks.

Jumping to the end of our session in May when we hold our AGM, it is my intention to step down from the Office of President, after an aggregate of some twenty plus years, and we therefore need a new President. Our current Treasurer Stephen Wolahan has agreed to step up but of course that means that we will require a new Treasurer. So if you would like to serve in that, or any other post, please put your name forward asap. Previous experience is not necessary as training and help will be given, all that is required is enthusiasm. Remember, the Society is made up of its members and they make it what it is. If the members do not make the Society it will cease to exist. After in excess of 30 years as the most successful Astronomical Society in the area, that would be a shame.



## Alex's Space

To see or not to see that is the question?

How many galaxies are visible to the naked eye? The answer is three, this is rather disappointing considering there are more than two billion in the known universe. In the Northern Hemisphere you can see Andromeda (M31) and in the Southern Hemisphere The Large and Small Magellenic Clouds can be seen, Some people with exceptional eyesight claim that they can see more – M33 in Triangulum, M81 in Ursa major and M83 in Hydra, but this is hard to prove.

The number of stars visible to the naked eye varies wildly but the accepted number is between eight and nine thousand. At the Canadian website [www.starregistry.com](http://www.starregistry.com) you can have a star named after you for about £200 complete with a framed certificate!

What man-made objects can be seen on Earth from the Moon with the naked eye? No! You cannot see The Great Wall of China or the Tallest Buildings, But if the question had been “seen from space”, you would be spoilt for choice because space starts at about sixty miles above the Earth. From there you could see many man-made objects such as motorways, railways, tall buildings and towers and of course The Great Wall of China despite Trivial Pursuit telling you otherwise!

Planet Earth is said to be the “cradle of life”, perhaps so but you can't live in a cradle all your life, someday man will slip the bonds of Earth and venture to the stars, this may become a reality sooner than we expect.

Finally ....

A man buys his wife an electric typewriter; he is now looking for and electric chair to match!

Alex Baillie



**New Feature**  
**Gordon Jenkins Monthly Blog**  
**(August)**

Hi all, simply out of interest and because I'm a bit of a science geek, at the tender age of 68 (69 by the time the term starts), I'm going back to university to undertake an undergraduate degree in Physics with Astrophysics at the University of Glasgow. (At my age I do hope the word undertake has no further connotations). Anyhoo, I thought it might of interest to members if I wrote a short, light-hearted summary in our newsletter of what my classmates and I have been studying each month and how I'm getting along.

Lectures don't start until 18<sup>th</sup> September; fresher's week starts on the 11<sup>th</sup> September but my wife says I can't go on the pub crawls with the 18-year-olds, so I won't start till the 18<sup>th</sup>.

Some background might help set the scene. I'm not new to studying as I have a Ph.D. in Chemistry (University of Edinburgh) from 1983. And I worked in Further Education, first as a lecturer and then Head of Science and finally Principal, before I retired in 2014.

Last year I did an access program, studying Maths (none of that Math nonsense here!) and Physics, through the University of Glasgow, which has led to them accepting me onto the degree.

So here we are. Next month I'll let you know how the first few weeks have gone....



## September/October Observing

### General

Isn't nice to have our dark skies back, now only if it would stay clear! The Milky Way is the star of the show that this time of year as it is high in the sky in the early to late evening. There are numerous Messier objects to see, though some very close to the horizon from Scotland, along with the old stalwarts like M13, M57 and M33 which are well placed in the sky.

### Planets

Mercury and Venus appear in the morning sky, Venus in particular is well placed for viewing, Mercury on the other hand is close the horizon and difficult to see, a later in this period it moves around the sun but remains invisible due to the sun's glare. Mars is setting in the west but is close to the horizon and lost in the twilight. On the other hand Jupiter and Saturn are well placed for viewing, Saturn having reached opposition on the 26<sup>th</sup> of August, but is fairly low in the sky at 21 degrees as it passes the meridian, though not unreasonably for observation, and Jupiter which will be reaching opposition on the 2<sup>nd</sup> of November is higher in the sky as it passes the meridian at 49 degrees. Uranus also reaches opposition in November on the 13<sup>th</sup>, and is to less than 10 degrees to the left of Jupiter in Ares. Neptune reaches opposition on the 19<sup>th</sup> of September and is visible in the constellation Pisces and passes the meridian at about 31 degrees.

### Comets

Comet C/2023 P1 Nishimura discovered by Hideo Nishimura on the 12<sup>th</sup> of August has put on a bit of show in the morning sky, unfortunately for viewers it has now moved into the evening sky but is very close to the sun, possibly visible until the 17<sup>th</sup> or 18<sup>th</sup> of September. After that the comet will be lost in the sun's glare. The comet has an orbital period of 435 years, so it will be a while before it is back. Interestingly, though it was initially thought this was the comet's first foray into the inner solar system, it now looks like it has been here before and may be associated with a faint weak meteor shower, the Sigma-Hydrids (3-7 ZHR) that peaks around December 7<sup>th</sup>.

### Meteor Showers

There are two meteor showers in this period. The Draconids peaking on 8-9 October with ZHR around 10, and is best seen before midnight. It can surprise some years when its parent comet 21P/Giacobini-Zinner is near its perihelion, next in 2025, its orbital period is about six and a half years. The other is the Orionids on the 21-22<sup>nd</sup> of the month with a ZHR of 20 and is best seen after constellation of Orion has risen and also before midnight. The parent body for this meteor shower is the Halley's comet due back in 2061.

### 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.

### Definitions

ZHR: Zenithal Hourly Rate, the number of meteors an observer in a hour at the peak of the shower, assuming perfect seeing conditions (no moon, cloud or light pollution).



## Member Images

### Allan Vint

Here are three magnificent deep sky photos taken by Allen with his Skywatcher 200DPS on an HEQ5 mount with ZWO ASI533MC Pro camera. Total integration time for each of the images was about one and a half hours.

Cocoon Nebula (IC 5146) in Cygnus at about 2,500 light years away



The Dumbbell Nebula (M27) in Vulpecula at a distance of 1,360 light years

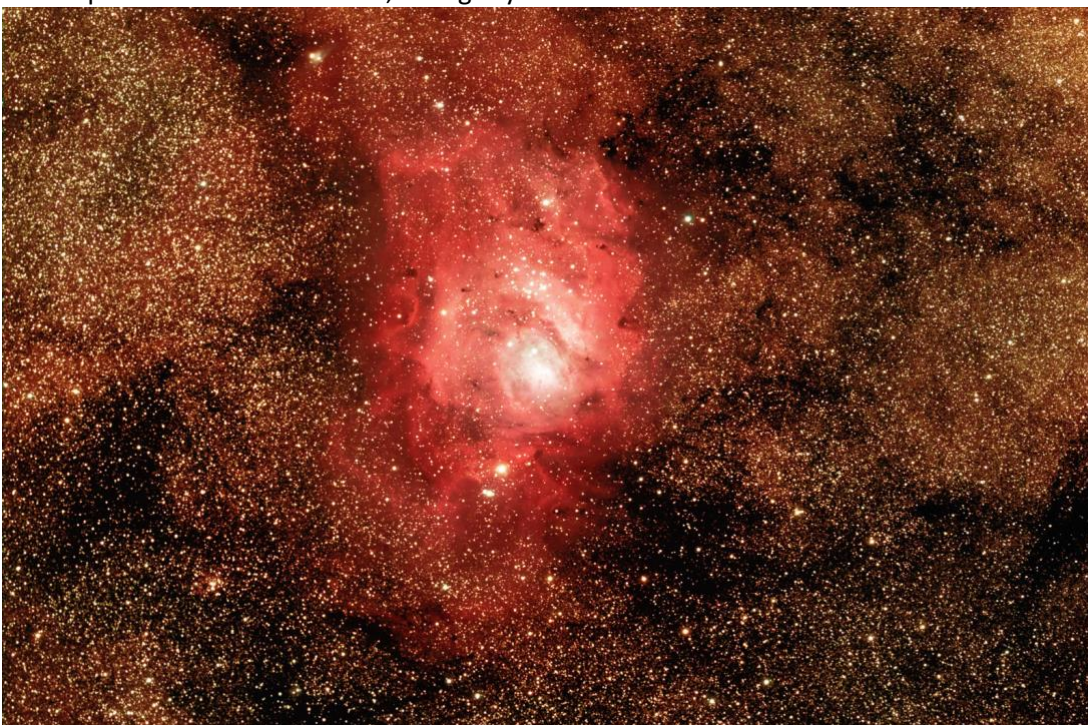


The Tulip Nebula (Sharpless 101) in Cygnus at about 6,000 light years away and which is the home of Cygnus X-1, a black hole whose accretion disk is one the brightest sources of X-rays in the night sky.



**Nick Martin**

Here is an image of the Lagoon Nebula (Messier 8) in Sagittarius taken with a remote 11 inch f2.2 Newtonian telescope. The nebula is about 4,100 light years distant.



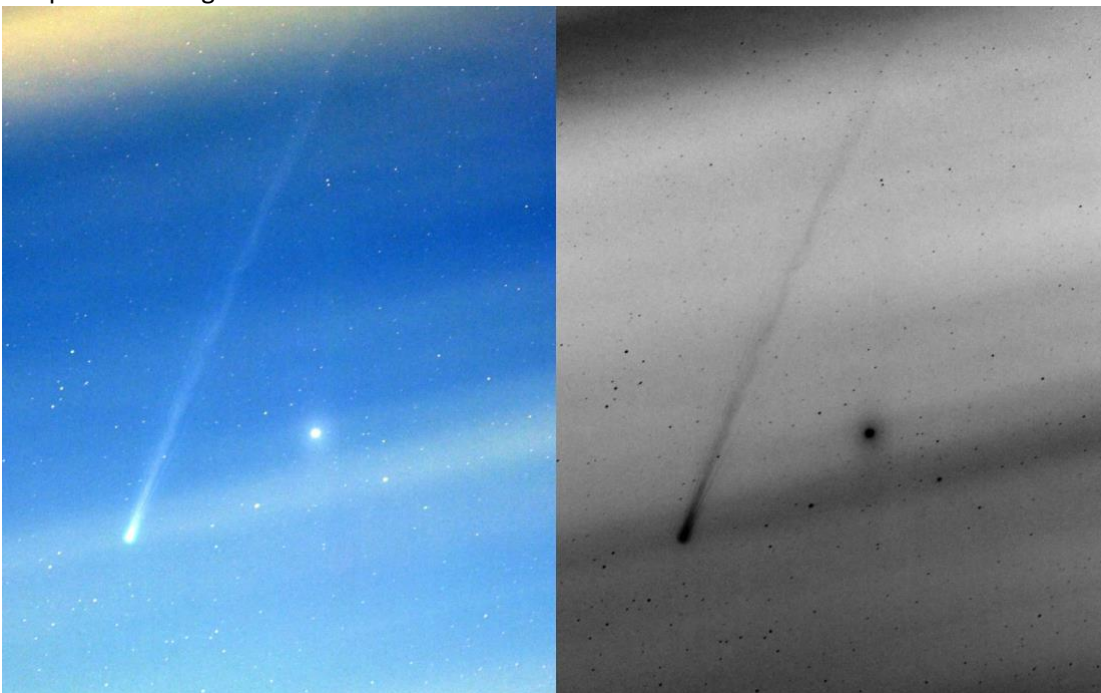
## Marc Charron

As mentioned Comet 2023 P1 Nishimura put on a bit of show in the early morning sky in late August and early September. Here are some images

Comet on the 5<sup>th</sup> of September in Leo, taken with TS86/460SDQ with Nikon Z7ii on AZEQ6 mount, stack of 32 exposures, 13 seconds each at ISO 2,500. Stacked in Deep Sky Stacker and processed in Affinity Photo 2.

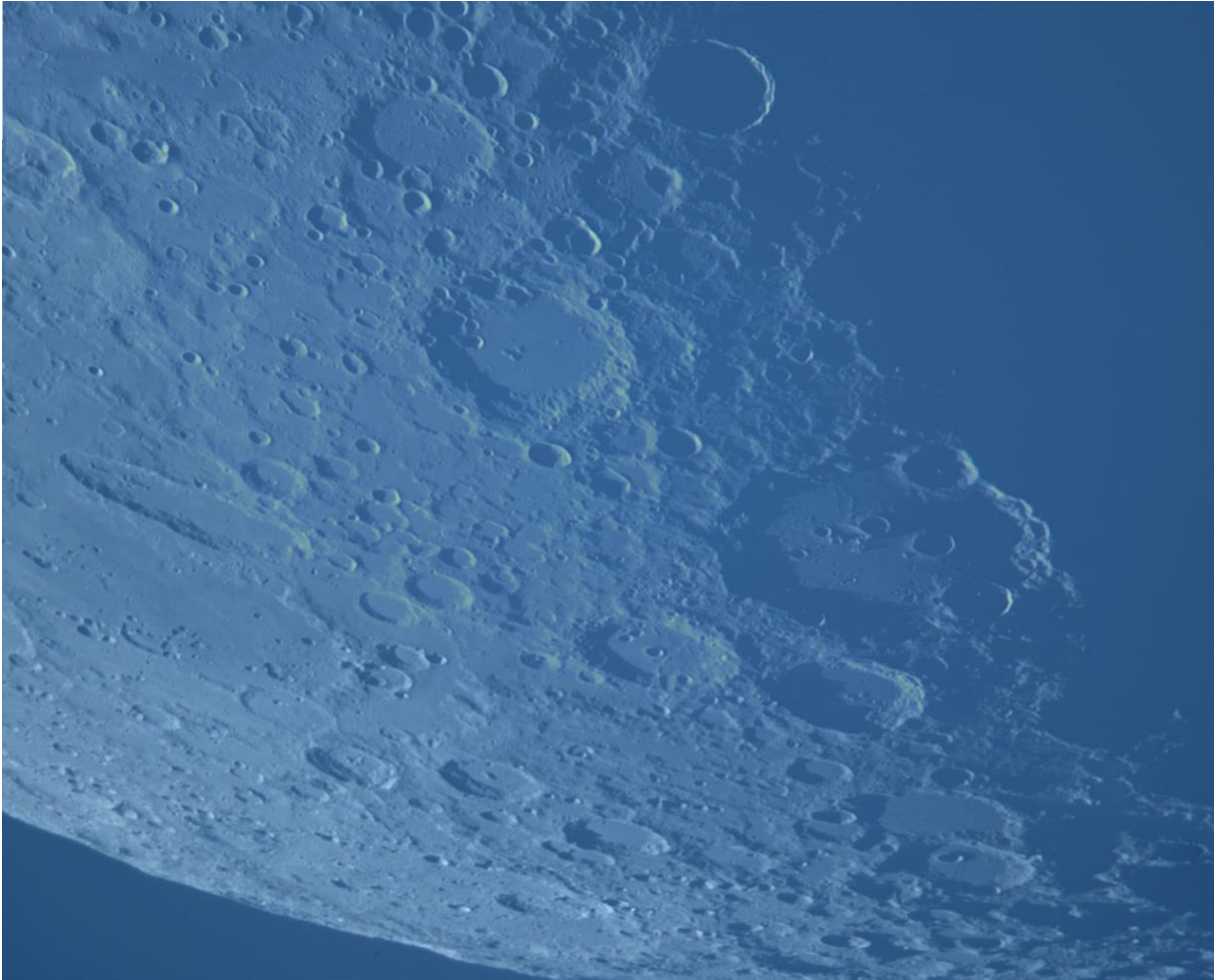


Here is a view of the comet two days later. Taken with TS86/460SDQ with Nikon Z7ii on AZEQ6 mount. Stack of 16 frames, 13 seconds each at ISO 4,000. Apart from the fact I was probably out about a half hour late, hence the bluish sky, there was quite a bit of cloud about causing streaking across the image. The bright star to the right of the comet is Algenubi ( $\epsilon$  Leo). By this point the tail had been disrupted by the solar wind so kinks can be seen in it compared to the previous image where it is much smoother.

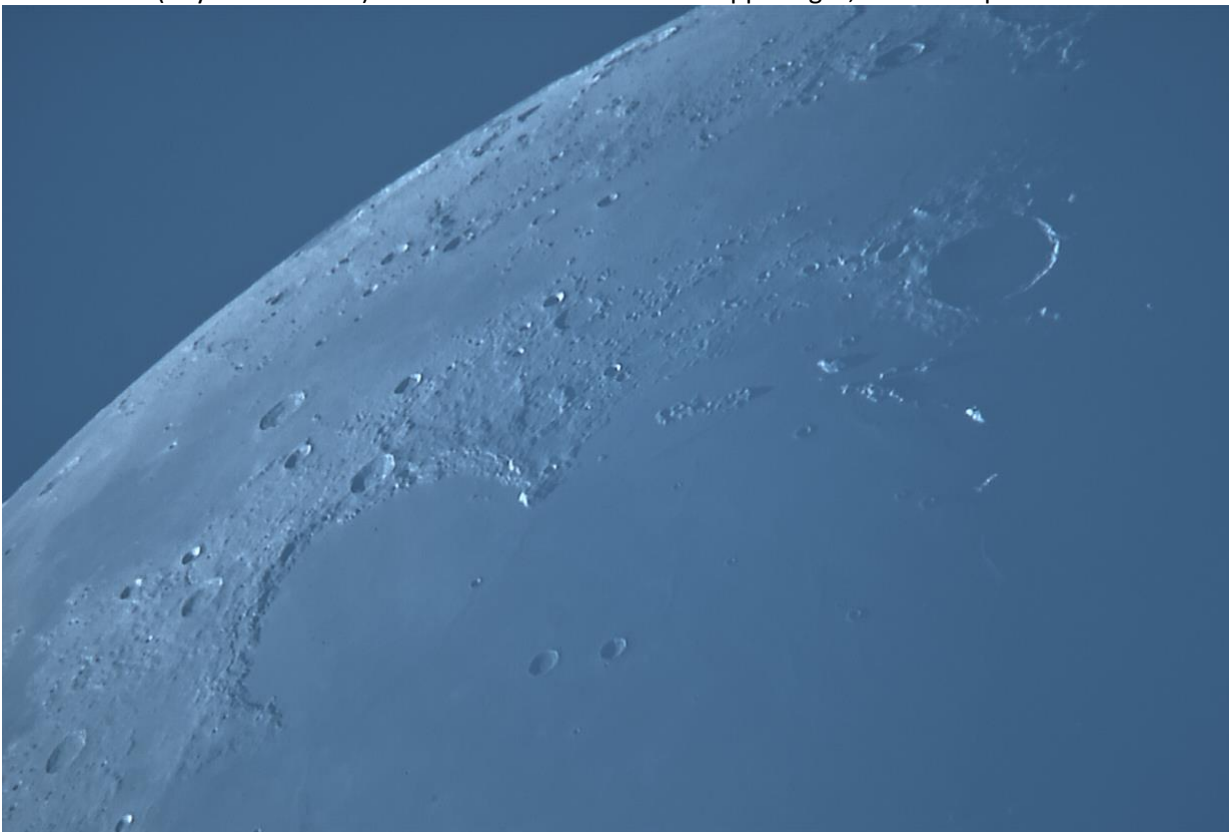




And getting back to the more prosaic here is a close-up of the moon in daylight (hence blue) taken on the 8<sup>th</sup> of September with the TMB 130/1200 with 2.5x barlow and AA178C camera.



Sinus Iridum (Bay of Rainbows) and Plato from lower left to upper right, same setup as above



And in case anyone missed the blue moon on the 30<sup>th</sup> of August here it is again:

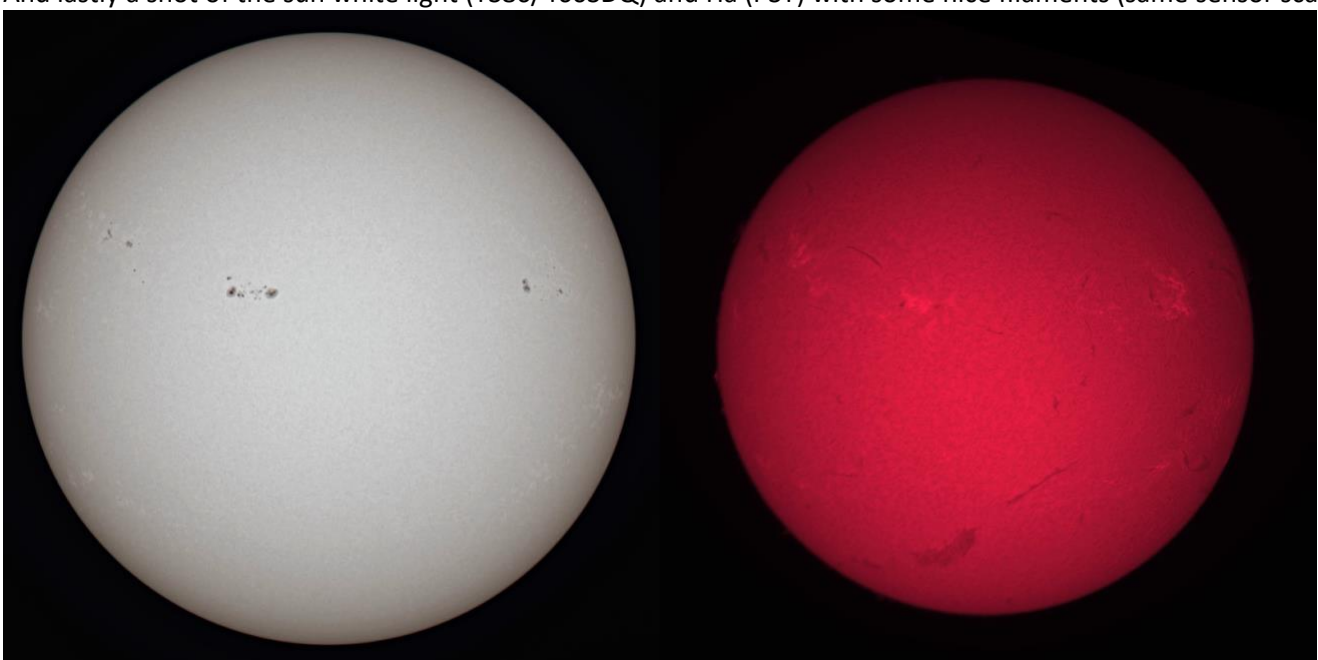
Taken with Nikon Z7ii with 200-500mm lens at 500mm, and use of a colour slider!



A shot of Jupiter with the shadow of Io falling on it. Taken with TMB 130/1200 with 2.5x barlow and AA178C camera.

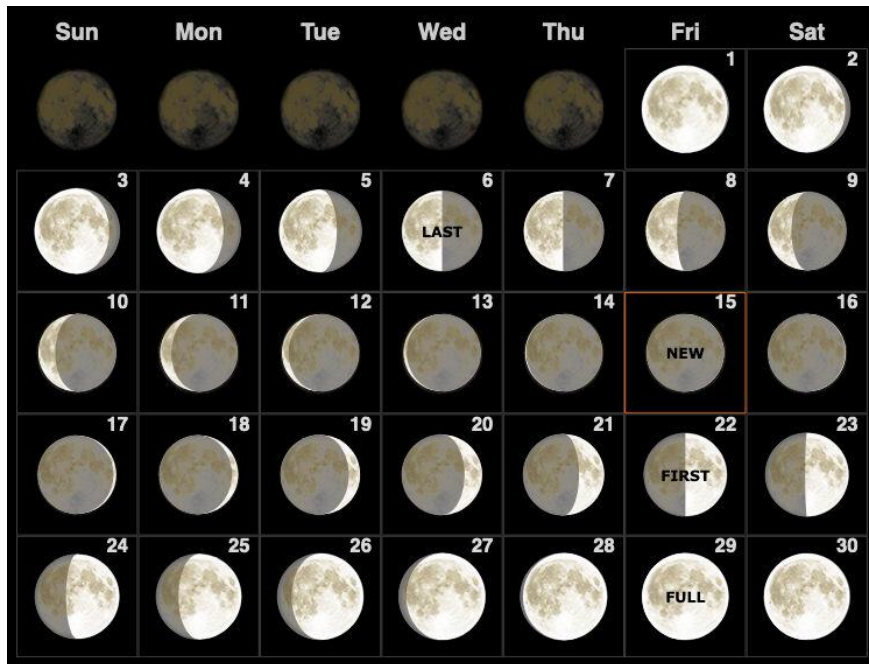


And lastly a shot of the sun white light (TS86/460SDQ) and Ha (PST) with some nice filaments (same sensor scale)

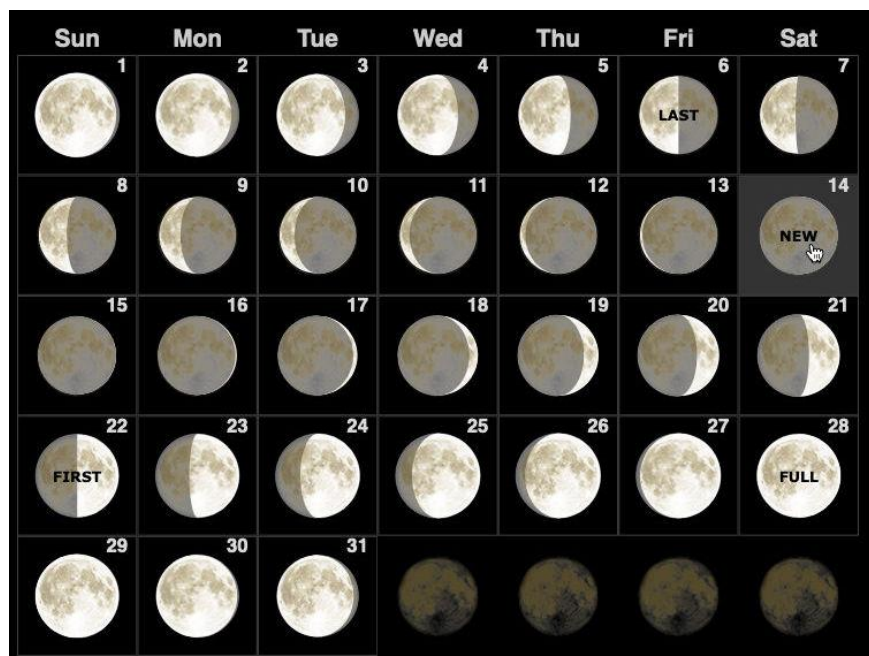


## Moon Phases

### September 2023



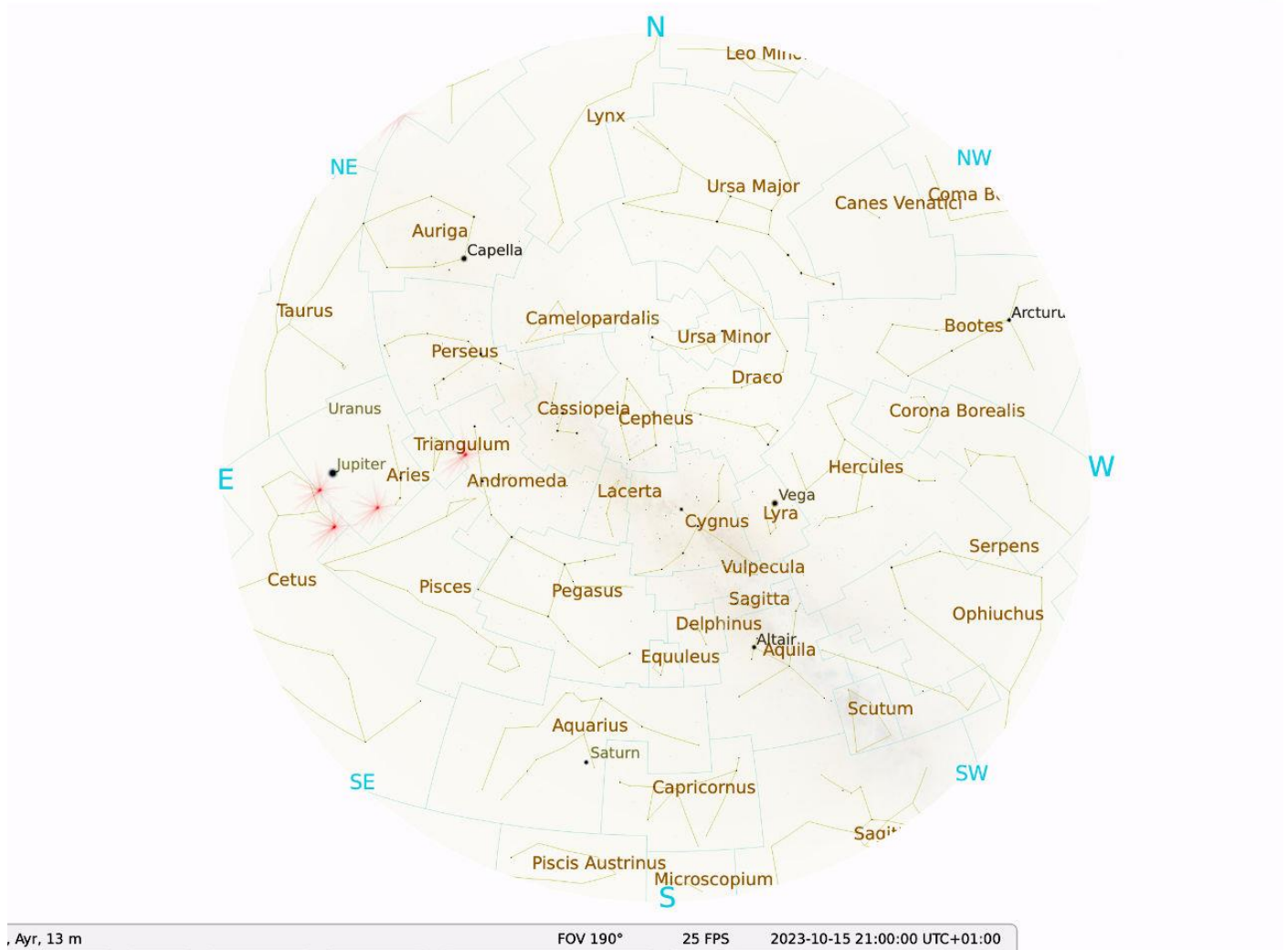
### October 2023



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



# October 2023 Sky Chart



Taken from: Stellarium

