



July Newsletter 2025

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LAS - Upcoming Events



Harvey's Brewery Tour

4th July 2025

Harvey's Brewery, Lewes BN7 2JW

Following the sell-out success of this social event last summer, we have arranged another evening tour at Harvey's Brewery in Lewes. Steeped in tradition, Harvey's is the oldest independent brewery in Sussex. Experience an engaging 90-minute private guided tour around the wonderful historic building and then enjoy tasting a variety of beers to conclude the evening, all included with your ticket.

£12 for members, £15 for non-members.

Adults only. See our Harvey's Brewery Tour [webpage](#) for full details.



June's Annual General Meeting Part 1 - Thank You

- Dr Kate Land and Jane Penny



Our Annual General Meeting was held on Wednesday 4th June 2025 at the Subud Centre, before our monthly astronomy lecture.

As ever, it was an informal and friendly occasion during which we sadly said goodbye to two committee members and welcomed a few new ones. Tony Gwyther, our outgoing Treasurer, was given a lifetime membership of the LAS in thanks and recognition for his eight years of service looking after our association's finances. We also sadly said goodbye to Olivia James, the outgoing Secretary. We were delighted that Prof Robert Massey agreed to stand as our Chair for another year, and Dr Kate Land also re-elected as Vice-chair and Outreach Officer. For a full list of our committee members, please go to our website.

Brief reports from the Chair, the Treasurer and Outreach Officer confirmed that the society continues to thrive in its social, community and educational reach.

We thank all the committee members for their hard work and for generously sharing their time and talents over the past year. We remain a thriving society with our membership at an all-time high, when other astronomy societies are struggling to maintain membership numbers. We thank our members for their ongoing commitment and support, and for embracing changes and providing invaluable feedback as we settle into our new venue.

Finally, a special acknowledgement of our thanks to our Chair, Prof Robert Massey. His indefatigable energy, enthusiasm and generosity of his time at the helm of our organisation is reflected in its ongoing success as a diverse, friendly and exciting community organisation.

June's Annual General Meeting Part 2 - New Committee Members

Jane Penny

Jane joins as the LAS Secretary, and will also support our outreach events. She re-joined the society in 2023 having been a member many years ago. "I'm definitely one of the less experienced members, but I have more time now to enjoy and participate in the society's activities with a particular love of our stargazing events, where sharing the joys of the sky with others is wonderful."



Catherine Jackson

Catherine joins as our Treasurer, and is a retired accountant who has many interests. She said "Astronomy is my first love, having followed the stars for many years. I joined the LAS last year after the Lewes STEM festival and have never looked back, only up!"

Jason Wye

Jason joins the committee as general support. He has taught physics, engineering, and electronics for many years. While he has a background in engineering, he has a passion for astrophysics, cosmology and particle physics. He enjoys observing and, more recently, dabbling in astrophotography.



We hope that you will join us in offering a warm welcome to all three of our new members!



Summer Solstice Event - June 21st

Every year, the LAS hosts an event on the Summer Solstice and invites all willing members of the public on a venture up the South Downs to observe the sun setting on the longest day of the year.

This event has been blessed with excellent weather conditions since we first clambered up the steep, winding, sheep infested paths to the Malling Down Nature Reserve, and this year may have been the warmest yet.

Located high up on the South Downs, the reserve grants incredible views of the surrounding Ouse valley and of the western horizon, with a full view of the setting sun.

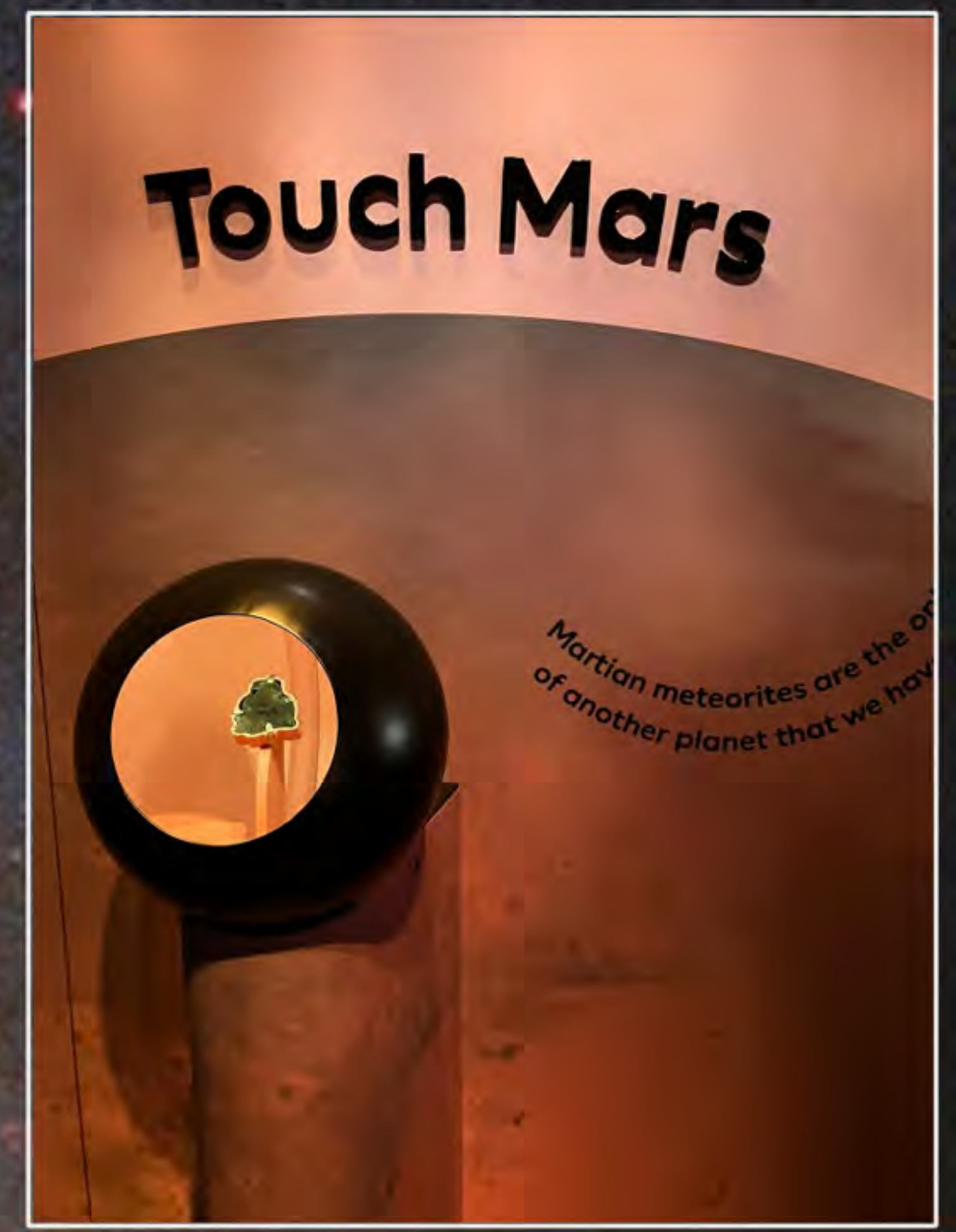
All were welcome to attend, including dogs, and there was an excited energy as we counted down to the moment of nightfall.

Here, we have included some of the best pictures from the night, all of which were uploaded to our WhatsApp group by members.



Could Life Exist Beyond Earth?

Dr Robert Massey



One of the central scientific questions of our time is whether we are alone in the universe, or whether our fragile home planet is the only haven for life in the cosmos. The new exhibition at the Natural History Museum, *Space: Could Life Exist Beyond Earth?*, takes visitors through that quest.

LAS Vice-Chair, Dr Kate Land and I were lucky enough to be on the guest list for the opening night in May, mingling, sipping prosecco and eating canapes with leading figures in astronomy and planetary science, including Professor Caroline Smith, who has the probably unique job title of Principal Curator of Meteorites, and who put the exhibition together.

This eclectic show has a mixture of artefacts covering space missions, interactive displays, and materials from space. You can see a prototype Mars rover, find out how Venus and Mars smell, hold meteorites from the Moon and from other planets – the closest most of us will get to walking on another world – and see samples from asteroids.

One of the quirkiest pieces is the blackened tarmac from driveway from Winchcombe where a meteorite famously landed in 2021, generously donated along with the samples by the Wilcock family. And looking further afield is a component of the Search For Extraterrestrial Intelligence (SETI) network, which searches for radio signals from planets around other stars.

Kate and I are probably very generous critics, given both of us have professional training in astronomy, but we came away genuinely excited by our experience. The Museum is only a bit over an hour from Lewes, and a great way for families to find out more about the search for life.

Space: Could Life Exist Beyond Earth? runs until 22 February 2026, and has a range of discounts. Click [here](#) to book your tickets now!



Vera C. Rubin Observatory First Images Released

Part 1: Who was Vera C. Rubin?

Throughout her childhood, Rubin's parents encouraged her to pursue her fascination with space, with her father helping her to build a cardboard telescope to help her in photographing the motion of stars.

After graduating from High School in Washington D.C., Rubin majored in astronomy at Vassar College in New York. During this time, she met her husband, Bob Rubin. After receiving her degree from Vassar, she applied for graduate school at Princeton but was rejected due to being a woman. She went to join her husband at Cornell, where she earned a master's degree in astronomy. After her husband received his PhD, the pair returned to Washington DC, having already had one child and with another on the way.

Vera was accepted into the Georgetown University's astronomy PhD program, which offered night courses that suited her busy schedule as a mother.



Rubin posing at Vassar College Observatory in 1948
Credit: Carnegie Science



Rubin, aged 14, with her cardboard telescope.
Credit: Carnegie Science

In 1950, Vera Rubin presented her master's thesis "Rotation of the Universe", at the American Astronomical Society, receiving largely negative feedback but attracting attention from renowned physicist, George Gamow, who asked Rubin a key question about the scale length in galaxy distribution, inspiring her doctoral research. Gamow became Rubin's thesis advisor and Rubin earned her PhD in 1954 with a thesis on the extragalactic universe.

After completing her PhD, Rubin was hired by Georgetown University to teach and conduct research, a position she held for 10 years.

In 1964, Rubin was invited by Allan Sandage to observe at Palomar Observatory and, in 1965, Rubin joined the Carnegie Institution's Department of Terrestrial Magnetism as its first female scientist.

Rubin experienced persistent sexism throughout her career. Her master's thesis was considered controversial, and her PhD work was, initially, ignored. Her reputation grew after partnering with astronomer Kent Ford, who had developed a highly sensitive spectrometer.

Vera C. Rubin Observatory First Images Released

Part 1: Who was Vera C. Rubin?



Rubin measuring spectra in 1974 Credit: NOIRLab/NSF/AURA

Using Ford's spectrograph at Lowell Observatory, the pair were able to detect previously unseen astronomical objects, marking the beginning of a significant scientific collaboration. They published nine papers based on their joint astronomical research, building on Fritz Zwicky's 1933 theory of "dark matter", proposed after he observed galaxies in the Coma Cluster moving in ways that visible matter couldn't explain.

While Zwicky's findings were largely ignored due to a lack of supporting evidence, Ford and Rubin made pivotal discoveries by tracking the rotation of stars in distant galaxies. Contrary to expectations, they found that stars on the outskirts of galaxies rotated as fast as those near the centre, leading them to conclude that an unseen mass must be influencing the rotation.



Vera Rubin and Kent Ford (white hat) setting up the spectrograph at the Lowell Observatory in Flagstaff, Arizona. Credit: The Carnegie Institution



Vera Rubin using Kitt Peak National Observatory's 36-inch telescope. Credit: KPNO/NOIRLab/NSF/AURA, CC BY 4.0

This discovery caused Rubin's career to flourish. She published research throughout her entire life, authoring over 100 scientific papers, and received numerous honours, including the National Medal of Science in 1993, the highest scientific honour in the United States; and a Gold Medal of the Royal Astronomical Society, the highest award of the RAS in the UK, which had previously only been awarded to one other woman: Caroline Herschel in 1828.

Rubin worked to provide the first conclusive evidence for dark matter and was a trailblazer for women in science, standing as an advocate for future generations to value diversity, to fight injustice, and to lead better than her own generation. She died in 2016 at the age of 88, leaving behind a legacy of scientific brilliance and revolutionary astronomical achievements.

Vera C. Rubin Observatory First Images Released

Part 2: The Long Awaited Telescope

The NSF-DOE Vera C. Rubin Observatory is an \$800 million US-funded telescope located atop Cerro Pachon in central Chile and has been more than two decades in the making. This monumental new telescope has now been switched on, after completing initial engineering tests in October 2024, and is set to revolutionise the way in which we explore the cosmos.

The telescope houses the largest digital camera in the world at 3,200 megapixels, with each exposure covering an area of the sky equal to 45 full moons. To put it into perspective, to view one image taken by the telescope in full detail, you would need to stack together 400 4k high-definition television screens.



A drone view of NSF-DOE Vera C. Rubin Observatory during the First Look observing campaign.
Credit: RubinObs/NOIRLab/SLAC/NSF/DOE/AURA/T. Matsopoulos



The LSST Camera; the largest digital camera in the world, undergoing a bit of a clean.
Credit: RubinObs/NOIRLab/SLAC/DOE/NSF/AURA

The telescope can also cover the entire sky extremely fast, capturing full images of its view of the southern hemisphere every three or four days. The first full science-grade images were unveiled on June 23rd, 2025, and the observatory is scheduled to begin its full 10-year Legacy Survey of Space and Time (LSST) later this year.

The extraordinary power of the Vera C. Rubin Observatory will allow us to collect more data than ever before, producing trillions of measurements of billions of objects, including asteroids, comets, pulsating stars, and supernova explosions. It will record the changing sky and, over the course of 10 years, build the most detailed time-lapse view of the cosmos ever generated.

Click [here](#) for a video and a more in depth look at the telescope.

So, let's have a look at some of these images!

Vera C. Rubin Observatory First Images Released

Part 3: Revolutionary Images Revealed

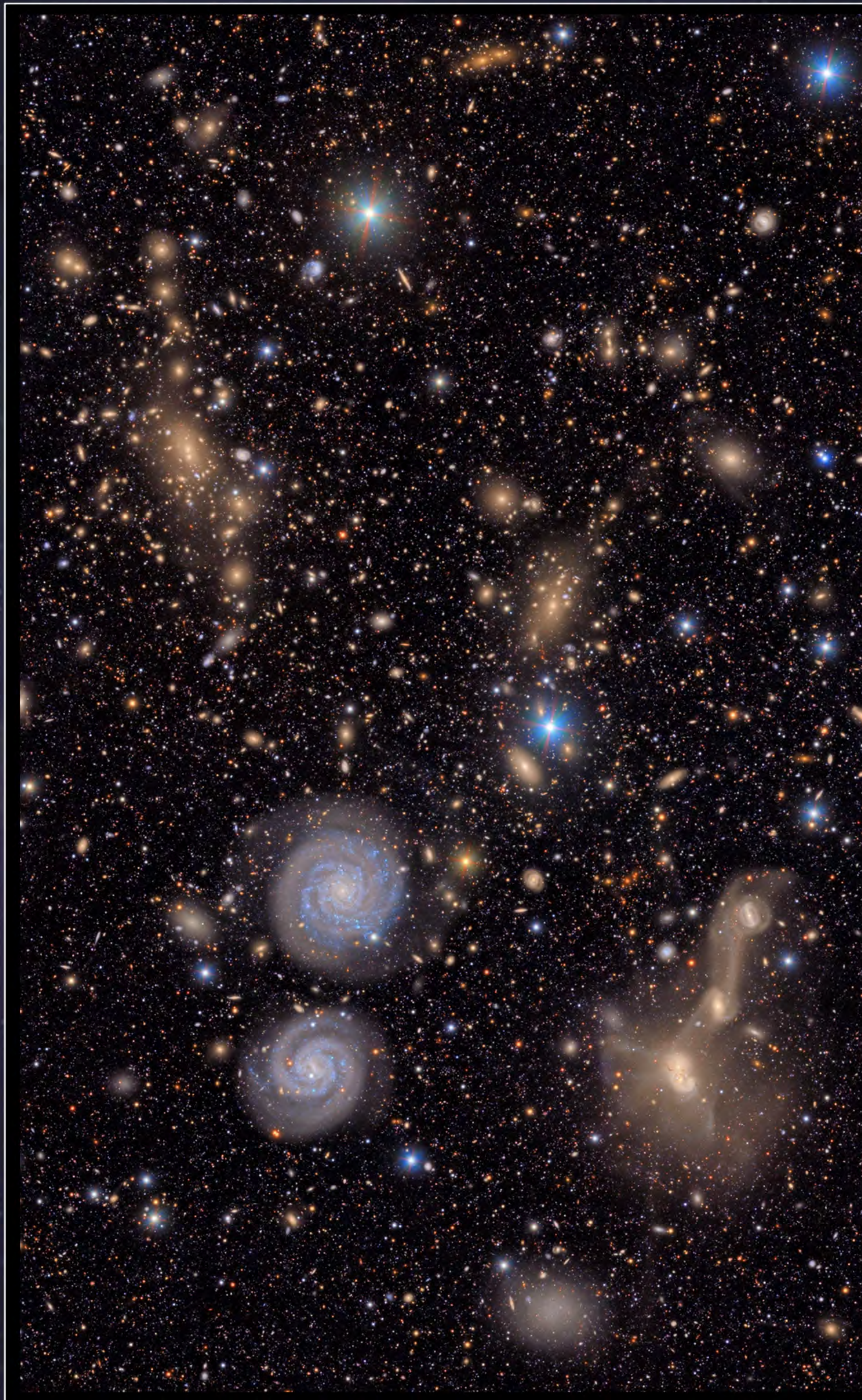


A composite of 678 exposures taken over seven hours of The Trifid Nebula and the Lagoon Nebula, stellar nurseries within our Milky Way, several thousand light-years from Earth, seen in unprecedented detail, revealing previously faint or invisible features.

Credit: NSF-DOE Vera C. Rubin Observatory

Vera C. Rubin Observatory First Images Released

Part 3: Revolutionary Images Revealed



This image captures a small section of NSF–DOE Vera C. Rubin Observatory's view of the Virgo Cluster, offering a vivid glimpse of the variety in the cosmos. Visible are two prominent spiral galaxies, three merging galaxies, galaxy groups both near and distant, stars within our own Milky Way, and much more.

Credit: NSF–DOE Vera C. Rubin Observatory

Vera C. Rubin Observatory First Images Released

Part 4: Look to the Future

The anticipation of future discoveries and the unveiling of grand cosmic landscapes will surely keep us all checking the web for updates time and time again, as the majesty of the images we have so far been treated to is certainly intoxicating. Click [here](#) to take a look at an in-depth video about the images, as this can truly demonstrate how remarkable the capabilities of the Vera C. Rubin Observatory are.

Imagine how proud and excited 14-year-old Rubin would have been to know that her cardboard telescope would aid her on her way to becoming an inspiration for one of the most awe-inspiring observatories of our time.



NSF–DOE Vera C. Rubin Observatory is seen here beneath the southern sky that it will image for ten years during the Legacy Survey of Space and Time. The Milky Way arcs overhead, and the Large Magellanic Cloud (LMC) can be seen on the left.

Credit: RubinObs/NOIRLab/SLAC/NSF/DOE/AURA/P. Horálek (Institute of Physics in Opava)

July Star Map

The chart depicts how the night sky will appear at midnight at the start of July, 11pm in mid-July, and 10pm at the end of July. The position and phase of the Moon are given for the 4th, 7th and 10th July.

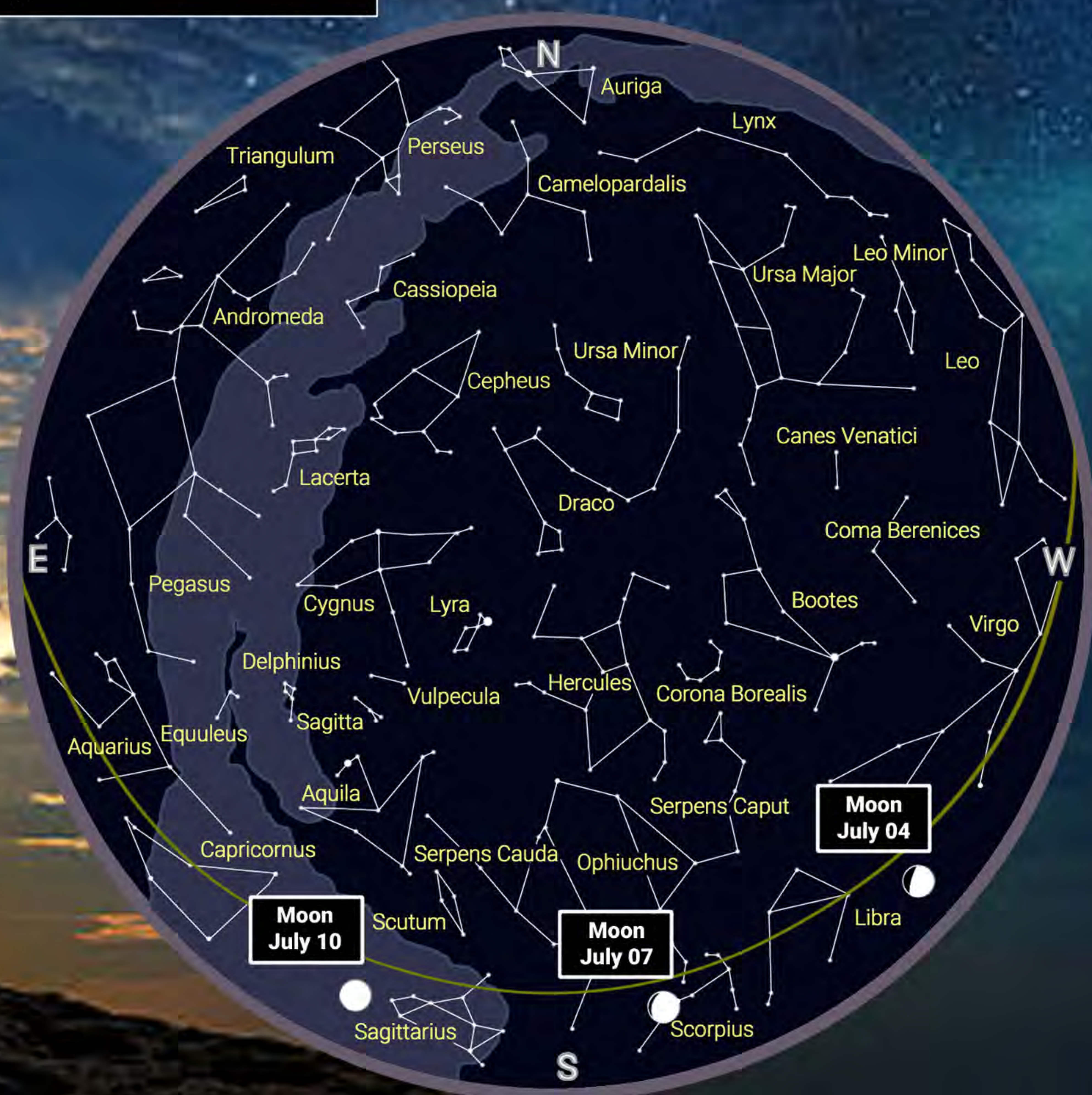
The evening sky is still very bright, although by the end of the month the stars start to grace the earlier evening skies. The Summer Triangle is a well-known asterism made by three of the brightest stars in the sky Deneb, Vega and Altair. They are located in the constellations Cygnus the Swan, Lyra the Lyre and Aquila the Eagle.

Two meteor showers bring us a show at the end of July. On the 30th the alpha-Capricornids meteor shower reaches a maximum and will bring slow moving colourful meteors. Then, a day later, the peak of the southern delta-Aquarids adds many faint meteors to the show.

By the end of the month, if you can get away from the town lights, you might see a mist of light running up from Altair to Deneb. You are looking along the line of sight of the arms of our galaxy, the Milky Way, which contains billions stars.

For early risers, the planets Jupiter and Venus return to the pre-dawn skies. They are joined by a thin crescent moon on the 21st – 23rd in the east-northeast.

Continue to keep an eye out after sunset for electric blue noctilucent clouds in the northern sky, 80 km up in the mesosphere.



LAS Gallery

The Black Swan Cluster - Messier 18

Captured with the SeeStar S50 at 5h27m total exposure



By Paul Whitmarsh

LAS Gallery

The Eagle Nebula: M16
Captured separately by two LAS members



432x10 Credit: Richie Jarvis



240x10 Credit: Gerard Fox

Adverts

Ever thought of volunteering for LAS? We're looking for members who are willing to contribute to the monthly newsletter.

At the LAS, we are very much for encouraging the growth of community, and this means providing open discussion and promoting the voice of our valued members.

We believe that a newsletter should be about more than just news. Your contribution could be about any topic within astronomy that you find interesting, such as a closer look at a news topic that has caught your attention, or advice for other members on how to buy the right telescope and begin their stargazing adventures.

If you're interested in making a monthly, one-off, or an "every now and then" contribution, please contact Sarah at sarah.carson@lewesas.org.uk, or speak to us in person at one of our events or monthly meetings.

