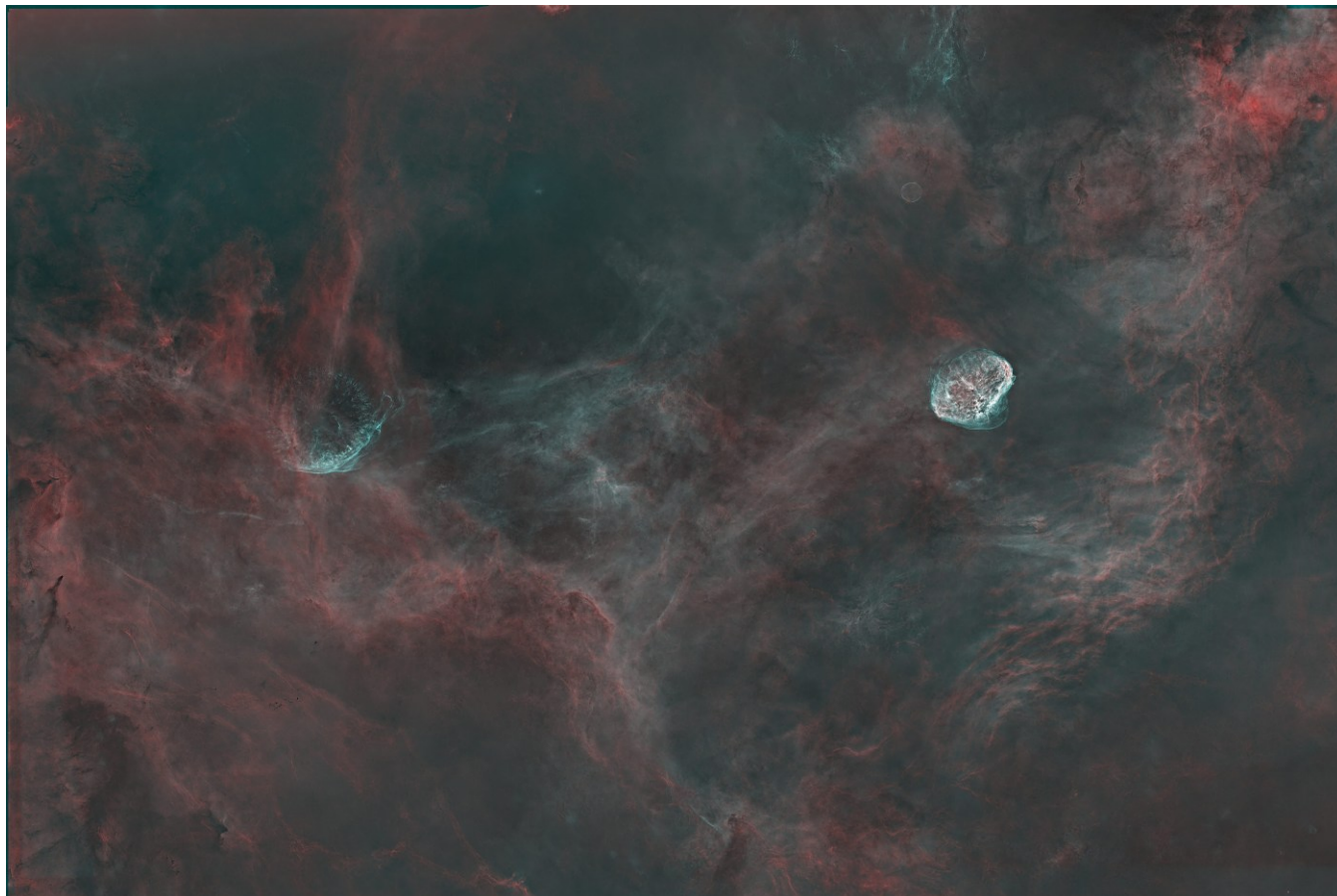


Sky WAATCH

The Newsletter of Westchester Amateur Astronomers

November 2025



The Crescent and the Soap Bubble

Bill Caspe removed the stars from this image of the Crescent Nebula, NGC 6888 in Cygnus. Above it, at the lower edge of a puff of hydrogen gas, is a faint planetary nebula known as the Soap Bubble, Ju 1 (also known as PN G075.5+01.7). It was discovered in 2007 by Dave Jurasevich. It has a central star of magnitude 19.45. You can enlarge the image to see it but we'll give you a blow-up on page 17.

At the center of NGC 6888 is the Wolf-Rayet star WR 136, a massive (21 $M_{\odot}$), luminous (600,000 $L_{\odot}$), hot (surface temperature 70,000 K) star whose stellar winds are colliding with previously ejected gas from the rapidly aging star, forming the nebula.

The bluish object on the left is emission surrounding another Wolf-Rayet star, WR 134, also catalogued as HD 191765. Peculiarly, the HD catalog as implemented in Cartes du Ciel, gives the distance to this 8th magnitude star as 81539.1 light years. That can't possibly be right. Gaia data release 3 gives 1905 parsecs (6210 LY).

Our club meetings are held at the David Pecker Conference Room, Willcox Hall, Pace University, Pleasantville, NY, or on-line via Zoom (the link is on our web site, www.westchesterastronomers.org).

WAA November Meeting

Friday, November 14 at 7:30 pm

GREAT COMETS OF THE PAST

Joe Rao

Contributing Editor, *Sky & Telescope*

Comets come in two varieties: "common" comets, which are visible in telescopes, binoculars and dimly with the naked eye, and "great" comets, which stand above all of the other comets appearing in a given year as being stupendously bright and/or fantastically structured. Unfortunately, such celestial showpieces only appear on an average of about once in 20 to 25 years. Over the past few centuries there have been some truly amazing comets that have adorned our skies. Joe will be with us at Pace for a live presentation.



Joe Rao has been an assiduous amateur astronomer for nearly 60 years. He was a broadcast meteorologist for over 40 years holding the Seals of Approval of the American Meteorological Society (AMS) and National Weather Association (NWA). He still serves as an associate and guest lecturer at New York's Hayden Planetarium. He also writes about astronomy for the online news service, space.com, as well as *Natural History* magazine, *Sky & Telescope*, and other publications. Asteroid 20009 Joerao is named in his honor. Joes is a long-time friend and member of WAA.

Starway to Heaven

Ward Pound Ridge Reservation,
Cross River, NY

Date	Sunset (EST)	Moon	
11/15	4:33 PM	15%	Rises 3:15 AM
11/22	4:28 PM	7%	Sets 5:58 PM
Weather permitting. Check email, WAA phone, Facebook.			

There are no scheduled star parties in December, January or February.

The Table of Contents is on page 4.

WAA December Meeting

Friday, December 12 at 7:30 pm

THE HISTORY OF PLANETARIUMS

Sam Storch

Former Lecturer, Hayden Planetarium/AMNH and
Professor of Astronomy, Nassau Community College



New Members

Robert Breda	Not provided
Tristan Camacho	Port Chester
Susan Carroll	Chappaqua
Alexander Gelfand	Jackson Heights
Jeff Gerson	Pelham
Babyann Hernandez	Yonkers
Claire Huffman	Stony Brook
Taro Ietaka	Cold Spring
Matthew Kushner	Yorktown Heights
Adriana Larroche	Greenwich
Francis McFadyen	Croton on Hudson
Jeffrey Morata	Stamford
Cole Rosado	Cortlandt Manor
Talal Saleem	Yonkers
Kevin Shea	Carmel Hamlet
Madhu Goel Southworth	Pelham

Renewing Members

Bill Caspe	Scarsdale
Anthony Chang	Ridgewood
Daniel Cummings	Croton-On-Hudson
Edgar S Edelman	Ossining
Larry Faltz	Larchmont
William Forsyth	Hartsdale
Sharon and Steve Gould	White Plains
Christopher Plourde	New Rochelle
Daniel R. Poccia	Cortlandt Manor
Richard Segal	Chappaqua
Maryellen Sinclair	Cross River
James Steck	Wilmington, NC
Woody Umanoff	Mount Kisco
Thomas Venditto	Somers
Cathleen Walker	Greenwich

ALMANAC for November 2025

Bob Kelly, WAA VP of Field Events



Bob
Kelly



Full
11/5



3Q
11/12



New
11/20



1Q
11/28

Largest Full Moon of the Year!

The largest full Moon of 2025 occurs on the 5th, just nine hours before the Moon's closest approach to Earth during the month. It's likely to cause at least minor coastal flooding for the days following the full Moon. If we get a strong coastal storm with a larger-than-normal tidal flow, it could cause extensive coastal flooding.

Turn Your Clocks Back!

At 2 a.m. Sunday, November 2, we go back to Standard Time in much of the USA. We'll lose viewing the wonderful morning sky without getting up super-early in the morning. Venus will still be super bright and super low in the east. There goes Jupiter, high and mighty in Gemini and near the realm of Taurus and the Pleiades. However, we'll have sunrise before 7 a.m. EST. The daylight-time-affected sunrise on November 1st will be the latest of the fall/winter season, as the latest sunrises during standard time are not as late as on November 1st.

Giants of Our Solar System

Jupiter rises earlier this month, assisted by the change to Standard Time. By Thanksgiving, Jupiter will be up by 8 p.m. Jupiter's four Galilean moons are always wonderful to observe and may be visible even in binoculars as long as you hold them steady by leaning against a solid object (or spending the money on stabilizer binocs). Double moon shadow transits on Jupiter occur around 12:12 a.m. on the 5th and 8:33 p.m. on the 20th. They can be observed with moderate-sized telescopes.

Saturn will be up in the evening, setting after 1 a.m. Titan is the star of Saturn's lunar retinue in a telescope. However, its fellow travelers are easier to see than usual. The rings look extremely thin now, tilted 0.6 degrees or less toward Earth this month, meaning that their minimal brightness allows the fainter moons to show up well in telescopes. Iapetus sticks out from the other moons since its orbit is tilted from the angle of Saturn's rings. It is at its brightest, west of Saturn, around the 16th. *Sky & Telescope's* online app showing Saturn's moon doesn't include Iapetus,

but the iPhone app does. (Cute trick: The app also shows nearby stars in Saturn's sky, if you zoom out far enough.)

Uranus comes to opposition on the 21st. It is four degrees due south of the Pleiades cluster. You should be able to make out the planet's color in a telescope. This is also the best time to add this planet to your "observed-with-the-unaided-eye" list at magnitude +5.6. To see its brightest moons, Titania and Oberon, you'll likely need a 12-inch telescope. Use high power to get the moons out from the planet's glare.

Neptune is also in the evening sky at magnitude +7.8. Look for it near Saturn and near the circle of stars in Pisces. Compare its color to Uranus'. A very large telescope might show its largest moon Triton.

Mercury Fades Away

Mercury slides down further into the solar glare after its not-very-great elongation into the evening sky late last month (see the image on page 23). This is much better viewed from the Southern Hemisphere. Mercury passes Mars on the 13th on its way out, both hard to see without optical aid deep in evening twilight.

Comets

C/2025 A6 (Lemmon) and C/2025 R2 (SWAN) have been sooooo close to being seen without optical aid in the evening sky. They may still be in range of taking a snapshot with phone cameras early this month. They will be fading rapidly. Your on-line star chart or phone app should give good directions to these objects. Skymaps.com's chart for October included their paths in the evening sky for that month. Perhaps they will for November.

SWAN goes through the Circlet of Pisces, near Saturn and Neptune, at mid-month. Lemmon drops out of the evening sky while traversing the southern part of Ophiuchus.

Be wary of comet reports on-line. Facebook does not reject the false reports of signs of space-ship-like activity on our interstellar interloper 3I/ATLAS or

paranoid predictions of a comet smashing into Earth in less than a day from now.

Meteor Showers

Recent years' Leonid showers were a drizzle compared to the heavy downpours of some past years. There are still likely to be perhaps a dozen extra meteors an hour over background. Visibility of these crumbs of 55P/Tempel-Tuttle on the 17th, the night with the highest rates after midnight, is not affected by the crescent Moon's glow.

This year's Taurids may only have a few meteors an hour, but there is an increased chance of fireballs from 2P/Encke on and around November 5th.

Space Station Overflights

View the International Space Station in the pre-dawn hours through the 5th, and in evenings starting the 10th through the rest of the month.

Tiangong overflights occur in the evening through the 15th and in the mornings starting on the 26th.

Solar Activity is Waning

The active Solar Cycle 25 is on its expected decline. We had a stronger level of solar activity than predicted, with some epic views of aurora borealis. Keep an eye on daily predictions for solar activity, since some days we've come close to getting aurorae this far south again. Some may be visible in cameras before we see them with our eyes.

Also In This Issue

3	Almanac (Bob Kelly)
4	The Astronomer in the Closet
5	DSO of the Month
6	Al Nagler
8	Rocket Research (Mark Maiello)
9	Another Movie Telescope
10	From the Editor: Arsenic and Al
12	September 20 Star Party
13	October 3 Star Party
14	International Observe the Moon Night
15	Images by Members
25	Research Finding of the Month
26	Member Equipment Classifieds

The Astronomer in the Closet: Lick Observatory



Similar to the gift shops at other major astronomy facilities, the shop at Lick Observatory carries a range of tee shirts, sweatshirts, books about astronomy and the observatory (for adults and children), puzzles, toys, plates, glasses, photographs, and similar gift items. Many of the objects are not branded, so we have little interest in those.

On a visit in September, which will be the subject of a future SkyWAAatch article, I picked up a Lick baseball cap. I didn't want another tee shirt (but why did I get another cap to add to my collection of 20+ astronomy caps?). I was happy to come upon a pair of socks with constellation diagrams, branded "Lick Observatory".

I have a tee shirt with labelled constellation diagrams, but it uses their English names: Little Bear for Ursa Minor, Dragon for Draco, Poop for Puppis, and so on. At least these socks use the proper astronomical names for the fourteen constellations shown. —LF

WAA members: There must be a cornucopia of astro-stuff in your closets! Send in photos of your astronomy souvenirs for inclusion in the "The Astronomer in the Closet." Please!

Deep Sky Object of the Month: NGC 925

NGC 925 is a Magellanic galaxy, which by definition has a single dominant spiral arm, the Large Magellanic Cloud being the prototype for this morphology. Formally, NGC 925 is classified as a SB(s)d galaxy, which means it's a spiral with a central bar, loosely wound arms and no ring, with the bar offset from the center.

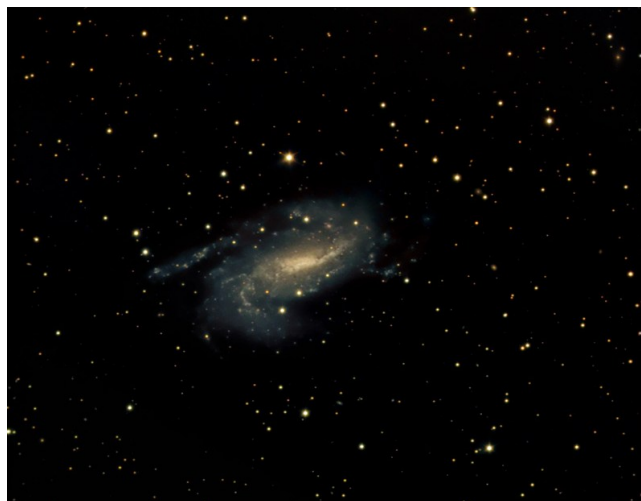
The disturbed structure suggests gravitational interactions, most likely with other members of the NGC 1023 Group, which are distributed in the region between Algol in Perseus, Almach in Andromeda, and Triangulum.

Further evidence for interaction comes from the presence of a cloud of neutral hydrogen (H I) gas connected to NGC 925.

Using the Very Large Array, Pisano, et al. reported that

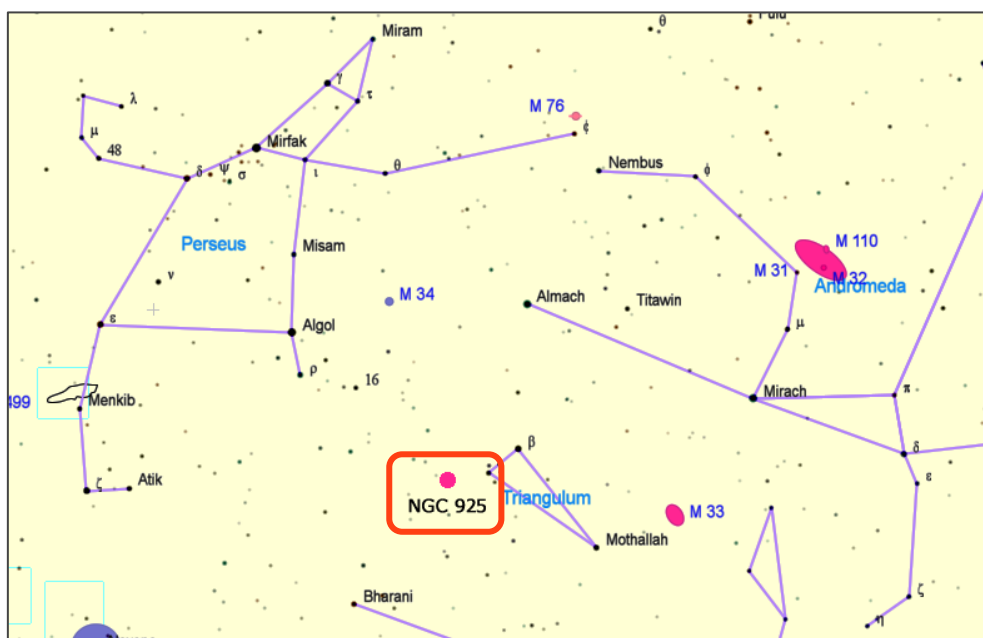
NGC 925 is a very asymmetric galaxy with a strong spiral arm in the south and flocculent arms in the north. The rotation curves of the east and west sides of the galaxy are consistent with this asymmetry as well. In addition, NGC 925's dynamical center may be slightly offset (21.5" or ~1 kpc) from its optical center. The ratio of the HI to optical diameter of NGC 925 is small compared with other galaxies. We detected a ~10⁷ Mo H I cloud and streamer, with little or no stellar component, apparently interacting with NGC 925. While the interaction between NGC 925 and the cloud may be responsible for the observed asymmetries, given the weakness of the interaction we postulate that NGC 925 has suffered other gravitational encounters over the past few gigayears. [Pisano, DJ, Wilcots, EM, Elmegreen, BG, The H I Distribution and Dynamics in Two Late-Type Barred Spiral Galaxies: NGC 925 and NGC 1744, *Astronomical Journal*, 115: 975-999 (1998)]

The surface brightness of NGC 925 is listed as 14.40, so it will be a real challenge in a moderate scope in a dark sky.



NGC 925	
Constellation	Triangulum
Object type	Barred spiral galaxy
Right Ascension J2000	02h 27m 16.913s
Declination J2000	+33° 34' 43.97"
Magnitude	10.7
Size	10.5' x 5.9'
Distance	30.3 million LY
Discovery	W. Herschel, 1784

Visibility for NGC 925			
2200	11/1	11/15	11/30
Altitude	69° 29'	81° 35'	72° 31'
Azimuth	103° 46'	207 38'	250° 08'



Al Nagler 1935-2025

We were saddened to receive this message just prior to putting the November issue of SkyWAAtch to bed:

It is with the most profound sense of loss, a broken heart, and tears in my eyes, that I tell this beloved community of amateur astronomers that I lost my father today. As I write, it's painfully hard to look over at the empty chair in our office we shared for the last 23-years. He passed suddenly and unexpectedly. Thankfully, it happened here at Tele Vue, a place he loved, with people he loved, and even with a telescope in hand.

My father was a naturally joyous person. It was just his nature. No matter what was happening around him or to him personally or professionally, he always saw the bright side of any situation. Not having that gift myself, I was both in awe and jealous of how he could let things go and just be a grateful, happy person. Maybe that's because my father always had the stars to look up to and, with that, felt comfortable with his little place in the Universe. Now he's among his beloved stars and I'm sure he loves the view.

I could not have wished for or been blessed with a more loving, caring, and nurturing father. I hope that every time that first day of the weekend comes, you'll please just spare a moment to think of him on "SaturnDay."

— David Nagler

Al Nagler was a talented optical designer whose eyepieces set standards for innovation and quality. He was always reaching for a higher level of eyepiece performance: wider fields, flatter fields, better eye relief, less inherent color, more tractable size. He designed high-quality accessories like the Starbeam, Paracorr, and Powermates. His refractors (60, 76, 85, 101, and 127-mm apertures) helped pave the way for the small scope revolution that dominates astronomy today, particularly for imaging.

A warm, kind and gentle man, Al was a frequent presence at astronomy events, especially at NEAF, where the Televue booth was always a hive of activity. People lined up to talk to Al more than they wanted to see the Televue goods. Al traveled to star parties all over the country and spoke at many astronomy club meetings. His club home was the Rockland Astronomy Club, where he was involved since the early 1970s and served as a Senior Director. He was the speaker at WAA's April 1992, December 2006 and March 2016 meetings. I recall that he brought some TeleView products to the 2006 meeting at the Andrus Planetarium, one of the first WAA meetings Elyse and I attended.

Many WAA members had the pleasure of chatting with Al, who always made himself available to astronomy enthusiasts. At the World Science Festival in 2013 in Brooklyn, Claudia and Kevin Parrington ran into Al and his wife Judi. Claudia wrote, "Kevin and I were able to meet Al Nagler who was with his wife, viewing with his TeleVue 85-mm. Just meeting him made our night. I had never met him, and he was just so down to earth." A month or two later, the Parringtons met him again, this time at the RAC Summer Star Party in the Berkshires. Claudia wrote, "One of our favorite lectures was by Al Nagler. He had come up on Thursday because he was going to Stellafane that weekend. It was an engaging talk about how eyepieces work. It wasn't too technical but it was more understandable for people new to astronomy. Al even signed Kevin's original 13 mm Nagler. We considered him a celebrity, but after



At the World Science Festival, 2013



Kevin and Claudia with Al at SSP 2013

the lecture he just talked with everyone and answered any questions we had. He knew so many people that were at the SSP that he and his wife stuck around for movie night.”

Bill Caspe told me that at the Winter Star Party in Florida Al was always surrounded by a swarm of attendees eager to discuss astronomy, eyepieces, or telescopes, or just to spend time in his mellow, knowledgeable presence. He never seemed to run out of patience, information, or enthusiasm.

Dede Raver bumped into Al at Stellafane a few years back. She wrote “I am not someone who knew him well, yet Al personally showed me his latest eyepiece that hadn't been sold yet. He spent a lot of time with me, probably 45 minutes, just to show me his handiwork and how it looked through one of several scopes placed on the top of the hill. His entire clan was there. I hope all of them realize how much we appreciated Al.”

Eli Goldfine interviewed Al at Stellafane this summer and posted the interview on his Substack, Magnitude Zero. You can read it at <https://magnitudezero.substack.com/p/from-stellafane-to-ethos-eyepieces>.

Astronomy magazine carried a biography of Al Nagler in its April 2013 issue. It's available online at <https://is.gd/naglerbio>.



Al lecturing to WAA in 2016



NEAF 2023 with Mike Cefola



NEAF 2024 with Steve Bellavia

At Stellafane in 2024, Al Nagler made these comments, which can stand as an epitaph for someone who gave so much of himself to our stargazing community.

I've found that first-time views of Saturn through a telescope typically elicit gasps of delight followed by inquisitive questioning.

Saturn's startling beauty can open the door to wonders and knowledge about the universe that can inspire a love and appreciation of all the arts, sciences and history.

Understanding something of the vastness and nature of the universe, and our unique position as the only species possessing such knowledge, suggests we commit to fostering the best in us: love, kindness, respect for learning, and for all the amazing life-forms we're so fortunate to share on this wonderful planet.

So let's use Saturn as a means to enrich our future and help preserve our earthly paradise.

Spread the word to change Saturday to Saturday through all media, contacts, and in every social venue to start dialogs that can open minds and hearts of our earthling friends. Caring for our precious planet and it's lucky inhabitants will make future generations proud of our time here.

Saturday can change the world with your help!

Al Nagler was laid to rest at the Beth El Cemetery in Paramus, NJ on October 29th.

—LF

90th Anniversary of Rocket Experiments in Westchester

Mark L. Maiello, PhD

Few know that Westchester was the home of two visionaries who, with like-minded colleagues, persistently pursued rocket experimentation in the 1930s in Westchester County. Gawain Edward Pendray and his wife, Leatrice Gregory Pendray, journalists, partners in life (and in their own public relations firm), and self-taught rocket experimentalists, lived on Westchester Avenue in Yonkers from 1932 to 1967.

Ed and Lee, along with several science fiction writers and their editor David Lasser from the New York City based magazine *Science Wonder Stories*, formed the American Interplanetary Society (AIS) in 1930 to galvanize public interest in space flight, then considered a “fringe science.”

Because the physicist Robert Goddard was deliberately working in seclusion in Roswell, New Mexico, Ed and Lee were forced to look elsewhere for technical help and found it in Berlin, Germany while on vacation in 1931. They met the science author and rocket enthusiast Willy Ley, who had helped form the German Rocket Society. They took back to America what they had observed and started an experimental rocket committee within the AIS. The society was renamed the American Rocket Society (ARS) in 1934.



Leatrice Pendray

Starting with the flight testing of hand-built rockets on the beaches of Staten Island in 1933, the ARS began safer and more efficient “static testing” of rocket

motors on undeveloped property adjacent to the Pendrays’s home in the Crestwood neighborhood of Yonkers between April and October of 1935. Some 20 years later, this area would encompass Schultze Field, still in use as a recreational park. A test stand was used to hold the motors rigidly in place upside down with the rocket plume pointed upwards into the sky while data was collected and the motor firings filmed.



G. Edward Pendray (L) & rocket engineer Hugh Franklin Pierce

Other ARS members tested aerodynamics using solid fuel rockets in Pawling, NY in 1936. Another member and an observer of the Crestwood tests, a Princeton University-trained engineer named James Wyld, developed the regenerative rocket motor, testing it in New Rochelle in 1938. That design concept is still used today. Wyld crater on the moon’s limb is named in recognition of his contributions to space flight.

The Pendrays continued to support rocket development and science education in the U.S. for many years. The Westinghouse Talent Science Search, now sponsored by Regeneron in Tarrytown, was one of Ed Pendray’s innovations. The Pendrays’ alma mater, the University of Wyoming, still honors them with a scholarship as does the American Institute of Aeronautics and Astronautics, with both a scholarship and the Pendray Aerospace Literature Award. Sadly, there is no historical marker to celebrate their “Crestwood Test Site” experiments but the history books have recorded their pioneering efforts and that of their colleagues right here in Westchester County. ■

Another Movie Telescope: *Jupiter Ascending*



Everybody's happy at the end of the sci-fi film *Jupiter Ascending*. The bad guys are defeated and humanity is saved (but they don't know it), Mila Kunis, as the heroine Jupiter Jones, finds love and finally gets a telescope.

Ms. Jones is a poorly paid housekeeper of Russian parentage living in Chicago with her family. Interested in astronomy, she doesn't have enough money to buy a telescope, so perhaps like many amateur astronomers she sells her eggs at an IVF clinic. I mean, I hear that story all the time at star parties, don't you? As we know, the only reason Galileo built his own telescope was that there were no IVF facilities in 1609 at which his common-law wife Marina Gamba, with whom he had three children, could sell her obviously fertile ova. Anyway, while she is on the table, aliens try to kidnap her, but she is saved by Channing Tatum as a genetically engineered half-man, half-wolf soldier (but he looks all Channing Tatum, except his ears) working for one of the three evil sibling bad guys. During the film, he flies around with what looks like jet-propelled Adidas running shoes, something like the winged sandals (*talaria*) that Hermes gave Perseus to battle Cetus. The strange, complicated plot was written and directed by the Wachowskis, the pair of brothers (who transitioned and are now sisters) who gave us *The Matrix* and its spin-offs. Adding to the overall weirdness of the film is a hyper-creepy Eddie Redmayne.

Even with the extremely silly plot and peculiar fantasy characters (Sean Bean plays a half human-half honeybee, although he looks all Sean Bean), the movie is kind of stupid fun and the visual effects and art design are pretty good. However, the gift telescope could have been something more useful than an alt-az brass refractor, primarily a decorative object. Its alt-az mount probably does not reach the zenith.

Wikipedia calls this movie a "space opera," and provides the following definition:

Space opera is a subgenre of science fiction that emphasizes space warfare, with use of melodramatic, risk-taking space adventures, relationships, and chivalric romance. Set mainly or entirely in outer space, it features technological and social advancements (or lack thereof) in faster-than-light travel, futuristic weapons, and sophisticated technology, on a backdrop of galactic empires and interstellar wars with fictional aliens, often in fictional galaxies.

There are at least four real operas with plots set at least partly in outer space. Karl-Birger Blomdahl's *Aniara*, a Swedish work from 1959, is about passengers on a doomed spaceship. The one-act opera *Man on the Moon* by Jonathan Dove, which relates the story from Buzz Aldrin's perspective, was shown on the BBC on Boxing Day 2006. Jacques Offenbach's *Le voyage dans la Lune* (1875) is loosely based on Jules Verne's novel, and *The Astronaut's Tale* by Charles Fussell (2016) involves the first Space Shuttle launch.

From the Editor: Arsenic vs. AI

Larry Faltz

I started contributing to SkyWAArch in late 2009 with some short pieces, and within a few months was sending in more substantial essays for then-editor Tom Boustead to fill out each issue. The first article in which I discussed a new scientific finding was "Please Pass the Arsenic," in the February 2011 SkyWAArch. Felisa Wolfe-Simon, a researcher at the NASA Astrobiology Institute, and her colleagues had collected a strain of *Halomonas* bacteria, which they labeled GFAJ-1, from the salty waters of Mono Lake in California. They managed to grow it in a solution containing arsenic. The experiments were interpreted as showing that arsenic had substituted for phosphorus in the bug's nucleic acids. Arsenic sits directly below phosphorus in the periodic table, and like phosphorus, it can make three or five covalent bonds.

Science published the paper on-line in December 2010. NASA held a press conference claiming that "arsenic life" had been found. A press release from NASA trumpeted that the work "broadens our thinking about the possibility of life on other planets, and begs a rewrite of biology textbooks." If true, it would enlarge the range of cosmic environments in which life might evolve.

The bulk of the astrobiology and life chemistry communities reacted with skepticism. Many critiques about the methodology and interpretation of results were offered, including vehement on-line exchanges that became personal. Eventually, *Science* published the full paper in its 3 June 2011 issue, accompanied by eight technical comments, a response to those by the authors, and an explanatory note from the journal's Editor.¹ The Astrobiology Institute team then made the organism, GFAJ-1, available to other scientists. On 27 June 2012, *Science* published two papers that could not confirm the original conclusion. It appeared that GFAJ-1 is arsenic-tolerant, but not arsenic-utilizing.

And so the matter rested, an academic/scientific tussle seemingly in limbo after 2012, until 24 July 2025,

when *Science* formally retracted the original paper. The editors wrote that "*Science* believes that the key conclusion of the paper is based on flawed data." The main concern is that nucleotide samples were not sufficiently purified before analysis and therefore could have been contaminated.

If this was the status of the controversy after the two rebuttal papers in 2012, why is the retraction coming in 2025? The *Science* editors note that the original paper "caused a media sensation and a firestorm in the scientific community that has continued for years." I searched NASA/ADS for "arsenic" and "astrobiology" together during the period 2012 to the present. It yielded 132 papers, almost all of them about arsenic in groundwater or its toxic effects on humans. Only two reviews, from 2012 and 2013, were relevant to Wolfe-Simon's work. A search on "GFAJ-1" during the same period gives 12 references, none of them after 2013 relevant to the astrobiology controversy. So where is the "firestorm?"

Scientific papers may be retracted by the authors when they discover a flaw in their experiments or in the interpretation of the data. To do so may be embarrassing, but it is honorable (if it doesn't happen too often). Journal editors will retract papers when fraud is discovered, but they will also retract when the work contains errors in methodology or interpretation that were not picked up on initial peer review. *Science* these days is complicated and subtle. Almost always the original authors are permitted to file a rebuttal, as is the case for Wolfe-Simon, et al. H. Holden Thorp, *Science's* editor, explicitly noted that,

At no point has there been any discussion or suggestion at *Science* of research misconduct or fraud by any of the authors.

Wolfe-Simon and her colleagues provided strong counterarguments in support of their original conclusions. But they did not convince the editors.

The reawakening may have been due to a profile of Wolfe-Simon in the *New York Times* on 11 February

¹ The original paper, technical responses, the two rebuttal papers from 2012 and the formal notice of retraction

from 2025 are available at <https://www.science.org/doi/10.1126/science.1197258>.

2025, reporting on her return to science after a hiatus of a dozen years.² During that time she moved to the west coast, raised two children, and played the oboe professionally. She described her move away from NASA as the result of personal attacks on social media that went beyond scientific critique.

The formal notice of retraction says that,

Over the years, *Science* has continued to receive media inquiries about the Wolfe-Simon Research Article, highlighting the extent to which the paper is still part of scientific discussions.

But media inquiries, even from the *Times*, are not scientific discussions, however informed, persistent, or irksome they might be.

I think an important reason for the retraction happening now was not stated in the formal notice, but did appear in the magazine. It tells us something about today's world and where it is heading.

The retraction was accompanied by a news story in *Science* by journalist Catherine Offord³ who reports,

Retractions by *Science* and other journals have become more common for papers blighted by major errors, not just the more serious charge of misconduct, Thorp says. The rise of artificial intelligence (AI)-powered literature searches makes this formal act especially important for correcting the scientific record, he argues. "Until you put the word 'retracted' in the title, you don't trigger all of the [AI] tools."

With more intellectual effort being ceded to ChatGPT and its fellow AI engines, the likelihood that erroneous information will be accepted as true—already a huge problem—will increase. I detailed some of this in my conversation with an early version of ChatGPT in the [April 2023 SkyWAAtch](#). Mistakes are one thing—diligent scholarship should take care of that—but scholarship requires effort and it seems that avoiding effort is what makes AI so attractive. Think of the increasingly common practice among students, whose minds need to be molded through effort, to toss their assignments or college entrance essays to AI. They learn little if anything in the

process and fail to develop their reasoning faculties and communication skills. We'll be dumbing down for sure. But that's not the worst AI brings.

Lately, shocking AI-generated deep-fake videos that look and sound real have proliferated online. Some are obviously humorous or satirical, but many are designed to mislead, or worse. Unwitting (maybe the better word is witless) individuals circulate them as true, increasing their pernicious impact. As visual "evidence" they can impress the credulous no matter how outrageous or ridiculous the claim. Anonymity on social media makes it easy to lie and insult. Deep-fakery dulls the ability of citizens to understand the issues, obscuring reality and making it difficult to craft informed personal and social choices. On September 5th, the *Times* published an article on how deep fakes with images and voices of real physicians make it appear that they are promoting phony healthcare products. It cheats the gullible patient and could potentially be harmful, and it's an attack on the physician's professionalism. I fear we will soon see deep-faked images and voices of prominent scientists giving messages contrary to their actual positions on climate change, vaccines, medical advances, UFOs, and other "hot" topics as part of the drive to disrupt, obscure the truth, and demean expertise so common in public discourse today. It would be nice if the AI engines were smart and honest enough to resist making untrue deep fake videos or at least label them as manipulated. Clearly they are not.

Nullius in verba! If ChatGPT, Grok, xAI or even Copilot gives you some information, check the original source and think about it critically. (I'm glad to see that in 2011 I was skeptical enough in my analysis of the original arsenic paper to point out some of its limitations.) Do the math yourself. Question any obviously non-satirical image or video if it doesn't come from a credible publication or organization or an individual willing to stand up in public for it. And write the story with your own words, as I do. ■

² <https://www.nytimes.com/2025/02/11/science/arsenic-life-felisa-wolfe-simon-retraction.html>

³ <https://www.science.org/content/article/fifteen-years-later-science-retracts-arsenic-life-paper-despite-study-authors>

September 20 Star Party

Jordan Webber

The September 20th star party was the most successful so far this year, by far. We finally had a night with nice clear skies right from sunset until around 11:30 p.m. or so, when some high clouds started coming in. I brought the Bob Davidson Telescope (WAA's 20" f/5 Obsession Dobsonian) to the star party. Mike Lomsky and I both arrived early to get the big scope assembled well ahead of sunset. Even before dark, the 20" drew attention and questions from casual park goers ("What is that thing?" "How far can it see?" "How did you get it here!?"). I was able to get M57 in the scope not long after sunset, and went on to show a variety of objects, including M13, M81/M82, M31, M57 again, and of course, Saturn. Visitors who had

viewed M57 early in the evening remarked how much better it looked once the skies were properly dark. Near the end of the night, as Saturn got higher in the sky, I'm convinced I was able to make out the thin rings as an actual circumferential torus instead of just a line—something I was really hoping the 20" of aperture would allow. Folks who stuck around until past 11 p.m. also enjoyed a terrific view of the Western Veil Nebula through the 20" using an OIII filter. We had around 20 scopes and 80 or so attendees with a good mix of newcomers and long-time members.

Thanks to David Parmet for the images.



Aperture rules!



Mike Lomsky and Jordan Webber



Early line-up of scopes, waiting for Polaris

Somers Outreach, October 3rd**Larry Faltz**

WAA has been doing an outreach for the Somers Children's Library for more than a decade. This year, the weather was perfect, with a 100% clear sky. As is usual for the Somers event, there were many families with young children. In addition to scopes ranging from 3 to 8 inches, there were three large Dobsonians on the field: Mike Lomsky's 14-inch, Tom Venditto's 16-inch and Mitch Feller's 22-inch. The 89% illuminated Moon and Saturn were the primary objects, of course. Eli Goldfine brought a Seestar 50 and showed the Veil Nebula.



Mitch Feller



Mike Lomsky

These iPhone 16 images look like they were taken in daylight, but in fact they were all made in the dark between 8:15 and 8:30 p.m. Shadows were made by the Moon!



Tom Venditto

International Observe the Moon Night, October 4th

Larry Faltz

WAA had a spectacular pop-up event in Mamaroneck on a lovely night. Eli Goldfine and his mother, Lisa, Karen Seiter, and I set up three scopes on the corner of Mamaroneck and Palmer Avenues. Over the course of almost three hours we think at least 150 people stopped by. Many families with children couples of all ages, young men and women going to and from restaurants, the movies, or local abodes. A friendly Mamaroneck policewoman got a look just after we set up. There were distinct phases: Early in the session people were carrying pizza boxes from Sal's, but later there were plenty of cups of ice cream as the dinner hour reached the dessert stage.



We had WAA signs and gave out club information. We were under some very bright lights but for solar system observing that wasn't a problem, and it made interactions much more social.

Eli's 10" Dob and my 3" f/6 Stellarvue were both on non-tracking mounts, showing the full-lunar disc at low power. The Dob was perfect for small children. I put my 5" Celestron SCT on an AZ-GTI mount for tracking. Early on there was high haze, but by 8 p.m. it had cleared. I showed details at 138x along the lunar terminator in the southern highlands and around Aristarchus and Schroter's Valley. But once Saturn came up, I turned the scope to it. In the last hour I popped in a 5-mm Nagler T6 to give 250x. The seeing was excellent and supported the higher magnification. The disc and rings were sharp, Titan was easily visible, and there was even a little color on the disc. I coached a lot of people, including many children, through the viewing process, not easy with a small exit pupil (0.5 mm) at that magnification. A few people failed to see the planet, but for most, when they gasped with delight when they finally got the planet and its bright, if narrow, rings onto their retinas.

A fellow who is a stringer for Channel 12 news came by and took some video that he was going to submit to the channel. Eli made an extemporaneous speech that was extremely poised. How many astronomy clubs have a dynamic and well-spoken 13 year-old "Outreach Director"?

Karen took some photos. Referring to the NO sign seen in the middle and right-hand images below, she noted "The sign says all the things you can't do, but nothing about telescopes!" Late in the session, a group of pre-teen girls emerged from the Mamaroneck Theater after seeing the Taylor Swift film and posed in front of the telescopes.

Paul Alimena and Bob Kelly showed the Moon and Saturn to about two dozen people in Rye Town Park using two 8" Dobs. Eva Andersen hosted an event with a small group on the roof of an apartment building in Greenwich.

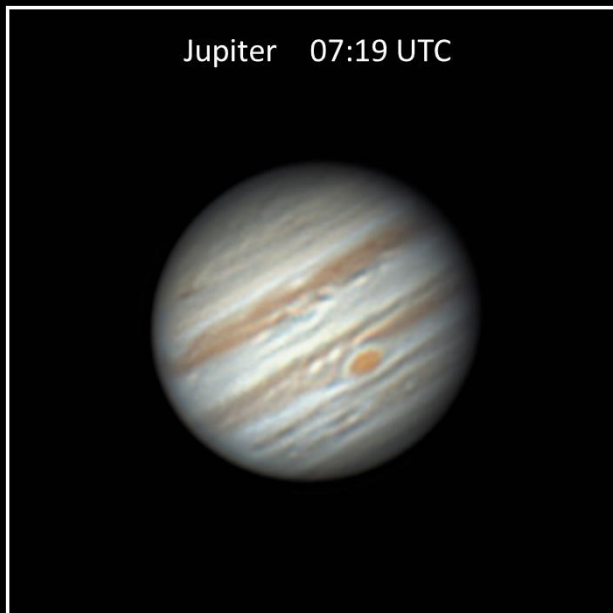


Images by Members

The Four Gas Giants October 05, 2025

©2025 S. Bellavia

Jupiter 07:19 UTC



Uranus 07:26 UTC



Neptune 01:27 UTC



Saturn 01:22 UTC



The night of October 4–5 was clear along the entire East Coast. From his Virginia backyard, Steve made the Saturn and Neptune images before midnight and the Jupiter and Uranus images well after midnight. He used a 152-mm Explore Scientific Maksutov. Technical details at <https://app.astrobin.com/i/3ow33i>.

NGC 253 in Sculptor by Olivier Prache

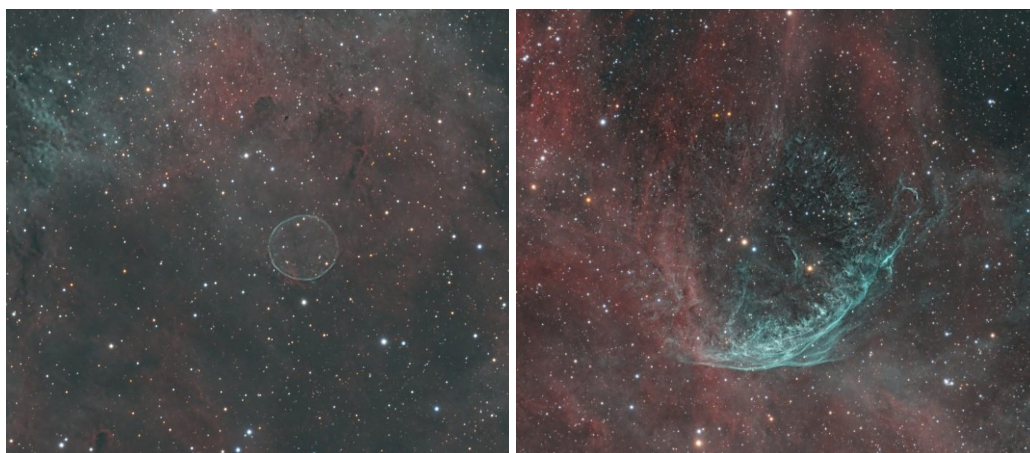


Twelve hours of exposure from with an AP130 refractor and ASI6200MM camera. The scope is located at the Star Front Observatory in Texas. There are many small, faint galaxies on the image. Two examples are given below. The red markers on the main image triangulate to PGC 779422, a magnitude 17.77 spiral galaxy, shown in the left enlargement below (red border). The brightest star is Gaia EDR3 2345337746057522816, mag_G 10.85, color index 0.68. The blue markers triangulate to PGC 779737, a magnitude 17.73 galaxy, the left-most object in the right inset (blue border). The spiral galaxy on the right is PGC 779773, magnitude 18.48. The object in the middle is a star, Gaia EDR3 2344026058749851648 mag_G 16.530, color index (B-V) 0.78. The red star is Gaia EDR3 2344025856887363840, mag_G 21.122, color index 1.6.



More on the Cover Image of the Bubble, this time with Stars, by Bill Caspe

Bill added back the stars (albeit at a lesser intensity than the original image). That allowed astrometry.net to return a field measurement of 4.48×3.0 degrees, with a resolution of 2.58 arcseconds per pixel. Bill made this image over six nights at the Medomak Astronomy Retreat with a William Optics Redcat61, a ZWO 2600MM camera, an AM5 mount, an ASI AIR Plus controller and 3-nm Ha and OIII filters, obtaining thirty 300-second Ha subs (2.5 hours), and ninety-eight 300-second OIII subs (8.16 hours) for a total of 10.6 hours. The stars were converted from narrowband to RGB and then added back to the image. The image was processed with Pixinsight using SETI astro plug-ins to convert and process the stars.



Left: Detail showing the Soap Bubble.

Right: Nebulosity around WR 134.

IC 1318a by Leo Bento

The vast area of hydrogen emission around the star Sadr, the heart of the swan Cygnus, is known as the Gamma Cygni Nebula. The brightest concentration of hydrogen gas in the region is NGC 1318, which is sometimes referred to as the Butterfly Nebula. NGC 1318a is the “wing” of the butterfly farther from Sadr. The more familiar Crescent Nebula, NGC 6888 (see the cover image and page 17) is an outlying member (2° 45′ from Sadr) of this cosmic structure. The appellation “Butterfly Nebula” is also applied to the planetary nebula NGC 6302 in Scorpius, but northern hemisphere astroimagers will use the name more often to refer to NGC 1318.

Stephen James O’Meara, in *The Secret Deep*, describes the area around Sadr as “one of the most dramatic in the Northern Milky Way.” It is an area of intense star formation and soft X-ray emission called the Cygnus Superbubble, although the source of this radiation is more distant than Sadr itself.

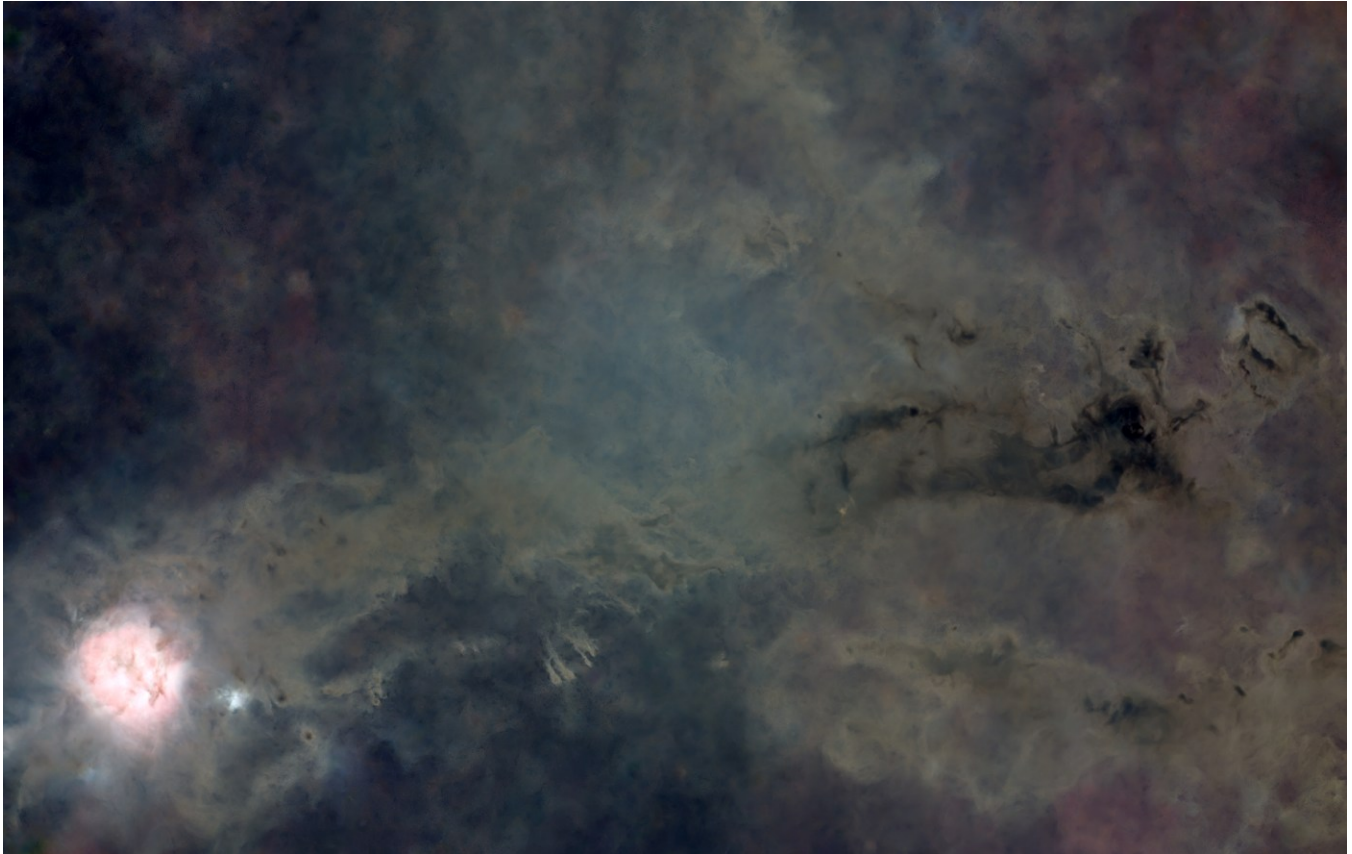
Three Views of The Cocoon Nebula by Robin Stuart



The Cocoon Nebula (Caldwell 19) in Cygnus, the swan, lies at a distance of 2,500 light years and is a combination H α emission and reflection nebula. The milky white light of the latter softens the bright red hydrogen emission, producing its delicate pinkish shade. Wisps of the reflection nebula are seen surrounding and extending beyond the emission region. This is a stellar nursery. The emission nebula is energized by the bright central star, BD +46°3474, which is 14 ± 4 solar masses and a mere 100,000 years old. The Cocoon is enveloped by a cloud of dust and gas that extends about 2° to the west, blotting out the stars beyond. This can be seen in the wide-field view which looks a lot like a Portuguese man o' war. When the stars are removed (next page) with the PixInsight plugin StarNet2 and additional stretching applied, the complex furls of the gas and dust cloud are revealed.



The image was taken with a ZWO ASI2600MC through a TeleVue NP127 refractor from Eustis, Maine. It is a stack of 33 x 10 minute subframes, for a total exposure of 5½ hours over four nights in August.



Along the Lunar Terminator by Steve Bellavia

Steve wrote,

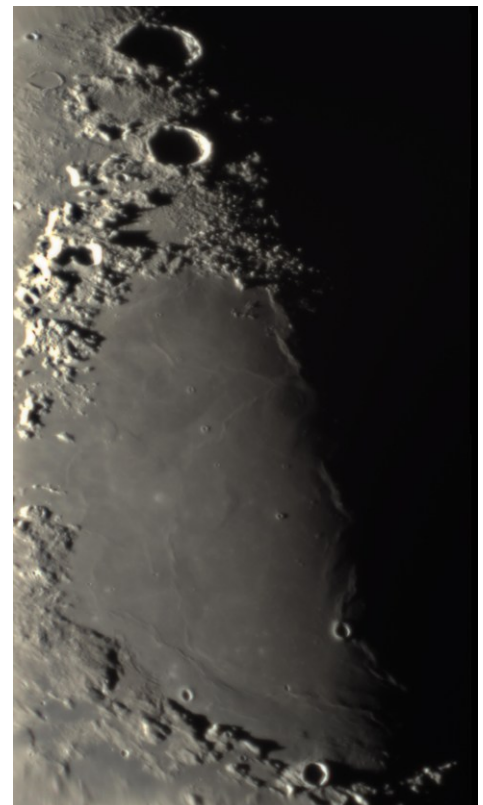
While I had the scope out to try to image a Dione shadow transit on Saturn, I pointed it towards the Moon before retiring for the night (morning).

Mare Serenitatis, Caucasus Mountains, and craters Eudoxus and Aristoteles, on the edge of the terminator line, from a 20.9 day-old waning moon at 62.2% illumination. September 13, 2025, 1:55 AM EDT (5:55 UTC).

Explore Scientific 152-mm Maksutov, ASI290MC camera.

I would have liked to have grabbed more of the moon, but it is a tiny chip on that camera. I would like a larger sensor planetary/lunar camera. I might treat myself to one, now that planet season has returned (and the Moon is always in season).

A bit more on lunar imaging is at the bottom of page 24.



The Lagoon (Messier 8) by Olivier Prache

Made in July at Star Front in Texas (via remote) with AP130 and ZWO ASI6200. Twenty-seven hours through RGB filter. The full frame also has M20 but Olivier felt there was a “gaping hole” in between the two so he decided to split them. We’ll show M20 next month.

The Heart and Soul Nebulas by Gary Miller

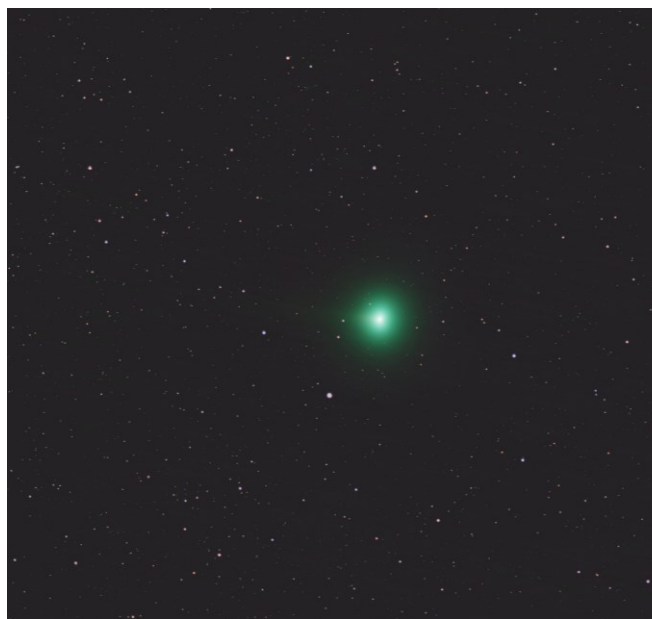


We're looking through the local arm of the Milky Way into the outlying Perseus arm to see these two areas of intense star formation and gas molded by the winds from newborn stars. The clouds are 6,000 light years away from us. Gary made this image at Ward Pound Ridge with a 127-mm refractor.

Celestial Goings-on on October 20



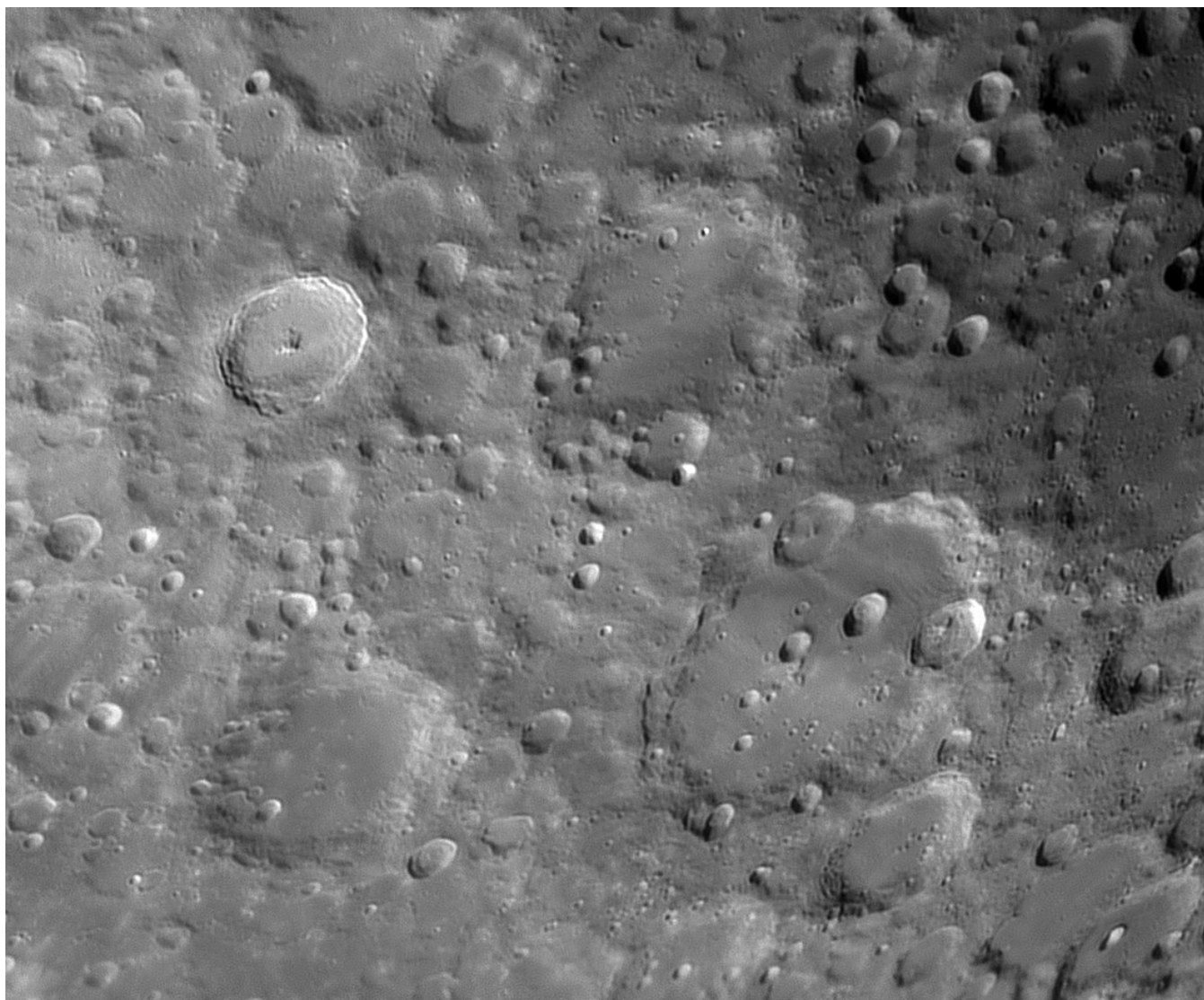
Comet C/2025 A6 Lemmon was in Boötes when **Steve Bellavia** imaged it on October 20th from Surry, Virginia. The field is over 3 degrees wide.



On the same evening, Steve captured **Comet C/2025 R2 SWAN** near the borders of Sagittarius, Scutum and Aquila. No tail was visible.



Larry Faltz's iPhone 16 image of the conjunction of Mercury (mag -0.2) and Mars (mag +1.5) from San Pedro de Atacama, Chile, located at 22° 55' South latitude. The planets were 2 degrees apart, 9 degrees above the horizon 1 hour after sunset.

Tycho and Clavius by Larry Faltz

A view of the southern highlands through an Orion Apex 127 Maksutov (1540-mm focal length) and ASI290MM camera on September 12, 2025 around 1 a.m. from Larchmont. The Moon was near 3rd quarter. The flat crater below Tycho is Longomontanus. To Tycho's right and above Clavius is flat, low-walled Manginus. The oval crater below Clavius is Blaucanus. The small crater on the upper rim of Clavius is Porter, named for amateur telescope impresario, artist and arctic explorer Russell Porter, founder of Stellafane. The brightly illuminated crater on Clavius' right rim is Rutherford, named for lawyer and pioneering astrophotographer Lewis Rutherford. The observatory atop Columbia's Pupin Hall (at Broadway and 120th Street) is also named for Rutherford.

WAA members are encouraged to "shoot the Moon" and submit your images to *SkyWAAatch*. It's easy and you don't need very dark skies or an expensive, cooled camera. Single shots of the full lunar disc don't need a tracking mount. For higher magnification shots, almost any telescope on a tracking mount (alt-az is fine) can be used. Lunar and planetary cameras, either monochrome or color, are relatively inexpensive. All the software you need for processing is free. ZWO provides a free suite of capture and processing software for its ASI cameras under the name "ASI Studio." AutoStakkert!3 and WaveSharp can also be used for "lucky imaging" and Registax has powerful wavelet processing capabilities, which need to be used judiciously. Other than the absence of clouds, seeing is the most important factor for lunar photography. Seeing is reported on the Astrospheric and ClearSkyChart apps. If you are using a Newtonian or SCT, make sure the collimation is as good as you can get it.

Research Highlight of the Month

Pease, BS, Gilbert, NA, Light pollution prolongs avian activity, *Science* 389: 818-823 (2025)

Abstract:

Light pollution disrupts light-dark cues that organisms use as timetables for life. Although studies—typically focusing on individual species—have documented earlier morning onset of bird vocalization in light-polluted landscapes, a synthesis of light pollution effects across species, space, and season is lacking. We used a global acoustic dataset of more than 60 million detections, representing 583 diurnal bird species, to synthesize effects of light pollution on avian vocalization. On average, light pollution prolonged vocal activity by 50 min. Light pollution responses were strongest for species with large eyes, open nests, migratory habits, and large ranges and during the breeding season. Prolonged activity may confer negative, neutral, or positive fitness effects; documenting these fitness effects and curbing light pollution are challenges for 21st-century conservation.

There is no question that light pollution has major biologic and health impacts. Artificial light at night is growing by 10% a year, and 23% of the Earth's surface is now considered polluted. Impacts, most of which are detrimental, have been demonstrated in nearly every major biological phylum.

Previous studies of bird behavior tended to focus on one species, but advances in technology can help collect and sort data on many bird species based on their vocalizations. Perhaps you've used the Merlin app on your smartphone. This free program from Cornell University identifies birds from their calls using an artificial neural network that recognizes vocalizations of nearly 6,000 species, known as BirdNET. The BirdWeather device is a weather-proof acoustic recording unit with an onboard neural engine and environmental sensors, controlled by a RaspberryPi computer. Each avian vocalization detection is a 3–6 second digital recording of a bird sound that includes a timestamp, precise geographic coordinates, and a BirdNET confidence score for the species detection. Data was collected from March 2023 to March 2024 from over 200 locations worldwide. Vocalizations were correlated with Visible Infrared Imaging Radiometer Suite (VIIRS) data.

The impact across species was consistent, but the actual biological impact isn't clear. Might prolonged vocalization have an adaptive benefit (more reproduction, better protection from predators)? It seems unlikely but this question must be answered with more science, which is not easy to do and for which funding is limited.

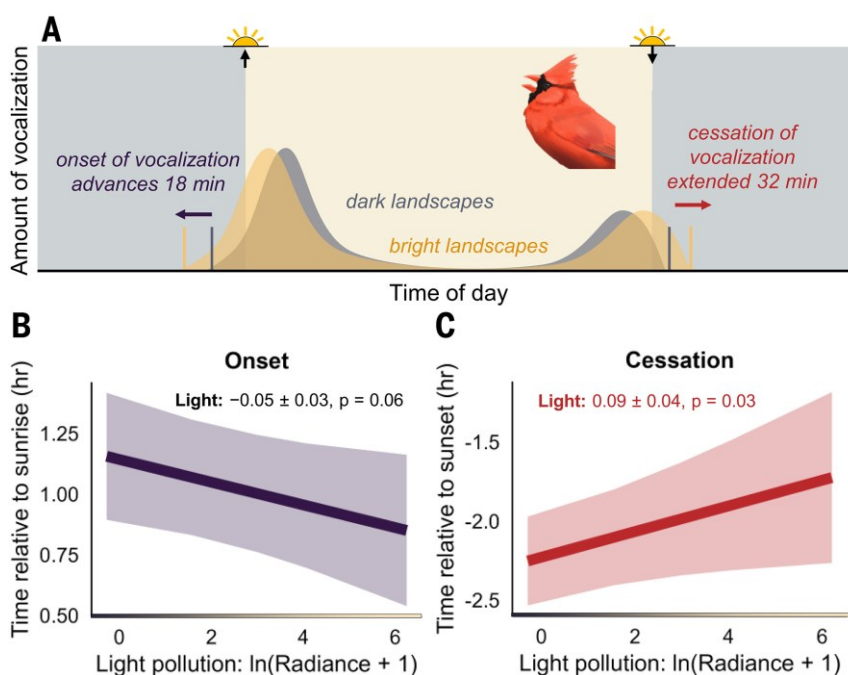


Fig. 2. Light pollution prolongs avian vocal activity by nearly an hour.

(A) Most diurnal bird species show bimodal vocalization patterns with peaks in the morning and evening; in light-polluted landscapes (yellow shading), the first vocalizations occur earlier in the morning and the last vocalizations occur later in the evening. (B) Globally—averaged across species, space, and season—onset of morning vocalization shifted 18 min earlier in the brightest landscapes versus the darkest landscapes. (C) Similarly, evening cessation was delayed by an average of 32 min. In (B) and (C), lines are means and shaded regions are 95% confidence intervals (CI) of model predictions.

Member & Club Equipment for Sale			
Item	Description	Asking Price	Name/Email
NEW LISTING Orion Apex 102-mm Maksutov OTA	25-mm eyepiece, 6x30 finder scope. 1.25" 45-degree erect image diagonal , carrying bag.	\$155	Anthony Maida LVAM1521@yahoo.com
NEW LISTING Celestron C90 Spotting Scope	A new-condition orange-tube C90 Maksutov spotting scope from the early 1980s. 1000-mm focal length, f/11.1. The optics are perfect. Focuses by turning the large ring on the barrel. Includes 3 0.965" eyepieces, 5x24 finder, original documentation. One hinge on the case is damaged but seems repairable. A similar scope is pictured here . Current version of this instrument (with 1.25" eyepieces) lists for \$279.95. Get a 0.965" erecting prism and use for birding, or a 0.965"-to-1.25" hybrid diameter diagonal and use standard eyepieces. Donated to WAA.	\$75	WAA ads@westchesterastronomers.org
8-inch f/5 reflector optical tube	Celestron-branded Newtonian OTA with tube rings and Vixen style dovetail plate. Can take 1 1/4 or 2" eyepieces. Like new condition. Donated to WAA.	\$100	WAA ads@westchesterastronomers.org
6-inch f/5 reflector optical tube	Orion-branded scope. 1.25" rack and pinion focuser. Excellent condition optically and mechanically. New 6" f/5 OTAs cost over \$300. Donated to WAA.	\$90	WAA ads@westchesterastronomers.org
1.25" Filters	Thousand Oaks LP-3 Oxygen III (2 available)	\$50	Eugene Lewis genelew1@gmail.com
	Astronomic UHC (2 available)	\$75	
	High Point Neutral Density (2 available)	\$10	
Want to list something for sale in the next issue of the WAA newsletter? Send the description and asking price to ads@westchesterastronomers.org . Member submissions only. Please offer only serious and useful astronomy equipment. WAA reserves the right not to list items we think are not of value to our members. All receipts for items owned by WAA goes to support club activities.			
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Call: **1-877-456-5778** (toll free) for announcements, weather cancellations, or questions. Also, don't forget to visit the new and improved [WAA website](#).

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