TAAA Desert Skies Bulletin

Observing Our Desert Skies Since 1954

August 2025

www.tucsonastronomy.org

Membership Meeting

Friday, August 1, 2025 6:30PM

TAAA's next general member meeting will be held on **Friday, August 1, 2025**. The Main Presentation will start at 6:30 P.M. This will be a hybrid meeting (both in person and on social media). TAAA members will receive a Zoom link should they wish to attend remotely. The public may attend in person at the **Steward Observatory Lecture Hall (Rm N210), 933 N Cherry Ave, Tucson,** or stream from the TAAA YouTube page.

Inside this issue:

Main Presentation at 6:30PM AZT

Title: TAAA Outreach, Inspiring Future Generations.

Presentation: Bernie Stinger, Jim Knoll, and Terri Lappin will share the TAAA Outreach program and how you can become involved to educate our youth and community residents about the astronomical wonders of the universe. The team will then outline a new volunteer outreach award program.

Presenters' Biography: Bernie Stinger manages the School and Public program leading a team of over 60 volunteers and averaging15-20 events/month. Jim Knoll manages the Tucson Stargazing Adventures private event program with a team of around 15 and averaging around 10 events/month. Terri Lappin leads the Starry Messenger Special Interest Group (SMSIG) supporting TAAA involvement in the Tucson Festival of Books and hosting the TAAA Astronomy Festival. Her team of about ten volunteers also provides Night Sky Network Toolkits for an average of three school events/month during the school year.

Tucson Astronomy Festival 2025
Credit: Jim Knoll

Desert Skies Bulletin

Contributions to Editor: David Rossetter by the 24th.

Astro-Images to our Image Editor: Gregg Ruppel

Proofreaders: Terri Lappin, Jeff Rothstein, Jim Knoll

Notes From The President

August 2025

by Ed Foley

Our organization has a mission which is twofold. First is to provide resources and opportunities for our members to learn and enjoy astronomy. Second, to support opportunities for the community to be exposed and inspired by the science. We do this through outreach across Arizona from star parties as far north as the Grand Canyon, to supporting library telescopes as far south as the border counties, to providing hands-on activities for youngsters. This month of August we will be celebrating the great work of TAAA volunteers in their communities. At our August monthly meeting, our presenters will describe and highlight the countless hours our members have donated to sharing the sky at schools and parks, participating in festivals for Astronomy Day and the Tucson Festival of Books, and hosting the community and school groups at our dark sites.

We are blessed with members of many talents. Many are experts who we can learn from, some are teachers who can interpret the science for us, and some simply like to be around to support TAAA efforts while enjoying the company of the group. No matter what your inclination is to participate, either giving or receiving the latest news in Astronomy, you should be proud of the accomplishments of TAAA as we expand the knowledge of our members and the greater community.

Ed Foley

President Ed Foley:
president@tucsonastronomy.org

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vice-president@tucsonastronomy.org

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Immediate Past President: Mae Smith
past-president@tucsonastronomy.org

TAAA Board: taaabod@tucsonastronomy.org

The TAAA Board of Directors meets the second Wednesday of every month at 6:30pm. Members are welcome to attend Board meetings. If you would like to attend, you may email Ed Foley to receive a Zoom link for that meeting. Please send your email to Ed the Monday prior to the meeting (by 5:00pm) and you will receive an email with the link on either Tuesday evening or Wednesday. ALL MEMBERS ARE WELCOME.

TAAA News & Activities

TAAA Ladies' Night Out

by Susan O'Connor

Ladies' Night Out is a social interest group for women members of the club. The group meets once a month at a local restaurant for fellowship and conversation.

Thursday, August 21, 6:30 pm

Del Cielo Tamal

3073 N Campbell Ave
(SW corner of N Campbell and E Hedrick
1 block S of Ft Lowell)

Preview the menu

RSVP Susan 520-780-0136

Astronomy Classes

by Doug Smith

Astronomical League Workshop

Open for enrollment

Place: Woods Memorial Library, 3455 N. First Ave. Tucson
Date: Saturday September 6, 2025; **Time:** 10 AM until 1 PM

Synopsis: This workshop is designed for anyone who may be interested in pursuing one of the Astronomical League observing programs for the first time or anyone interested in learning about these observing programs. The workshop will cover how the various observing programs work, program requirements, selection of an appropriate program, recommended equipment, resources, logging requirements, and much more.

If interested, you can email or call the TAAA Astronomical League Correspondent (ALCOR) Doug Smith 520-396-3233 or sign up using the signup page on the website. There will also be a signup sheet available at the July and August General Member meetings.

Constellation Locating and Identification Workshop

Open for enrollment

Place: TIMPA; **Date:** Thursday, October 16, 2025; **Time:** 6:00 PM until completed

Synopsis: This is another workshop in the practical astronomy workshop series. Students will be taught how to locate and identify the constellations without having to memorize the night sky. Each student will use the supplied equipment to locate several constellations. Students will learn how to use a planisphere and star atlas. This program provides the methodology for the observing requirements of the Astronomical League's Constellation Observing Program (Northern and Southern).

PLEASE NOTE: due to equipment limitations there is a strict limit of 20 students for this workshop.

If interested, you can email or call the instructor: Doug Smith 520-396-3233

BRAND NEW WORKSHOP!!!

Space Weather Workshop

Open for enrollment

Place: Woods Memorial Library, 3455 N. First Ave. Tucson
Date: Saturday September 20, 2025; **Time:** 10 AM until 1 PM

Synopsis: This workshop will teach the student how to construct a simple magnetometer out of commonly available household materials that will be used to monitor solar activity and how it affects the Earth's magnetic field. The Astronomical League's Space Weather Observing Program will be discussed. The student can use the magnetometer to complete the required observations for this program.

PLEASE NOTE: due to equipment limitations there is a strict limit of 15 students for this workshop.

If interested, you can email or call the instructor: Doug Smith 520-396-3233

Learn how to Record Observations and Sketch Objects Workshop

Open For Enrollment

Place: TIMPA; **Date:** Thursday, October 2, 2025; **Time:** 6:00 PM until completed

Synopsis: This is another workshop in the practical astronomy workshop series. Students will learn how to record observations and how to sketch objects. The students will be taught proper recording techniques, what information to record, what sort of forms to use, etc. In addition, students will be taught techniques for sketching objects. The students will view, using a telescope, several different types of objects and perform recording activities and sketch different objects.

If interested, you can email or call the instructor: Doug Smith 520-396-3233

Star Hopping Workshop

Open for enrollment

Place: TIMPA; **Date:** Thursday, September 25, 2025, **Time:** 6 PM until completed

Synopsis: This is another workshop in the practical astronomy workshop series. It will teach Star Hopping. The students will be taught the proper star hopping technique and equipment usage. Each student will use the supplied equipment to locate at least two targets (maybe more if time permits). By the end of the workshop the student will know what equipment to use and how to use it in order to locate targets using star hopping.

PLEASE NOTE: due to equipment limitations there is a strict limit of 20 students for this workshop.

If interested, you can email or call the instructor: Doug Smith 520-396-3233

School/Public Star Party Requests

by Bernie Stinger

No star parties scheduled for August

Next month's bulletin will have the star party events for September, the start of our next star party season.

Bernie

The Blinking Planetary Nebula, Better Seen Than Imaged

Matthew Ota, Phonecian Amateur Astronomer

NGC 6826, known as “The Blinking Planetary”, is located 2,200 light years away in the constellation Cygnus. It is one of the best known planetary nebula to amateur astronomers.

Discovered by William Herschel on July 6, 1793, it was cataloged as part of his extensive survey of nebulae and star clusters using his powerful telescopes in the late 18th century.

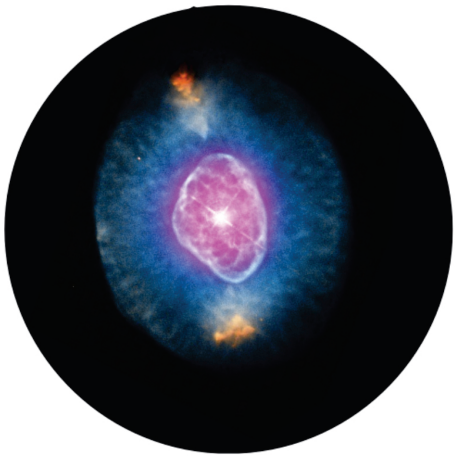
It is an object that demonstrates the physiology of the human eye. In the center of your retina lie your cone cells, which detect full color RGB vision. On the periphery lie the rod cells which detect fainter light in grayscale. When you look straight at the nebula though an eyepiece with your cone cells, it looks like an ordinary star. When you use averted vision with your rod cells, the faint gray nebulosity suddenly appears.

Talented astroimagers take CCD images of the nebula, and although the central star is not as prominent as viewed at the eyepiece, colors are recorded in the nebulosity and even some peripheral detail can be captured.

EYEPIECE VIEW

EYEPIECE VIEW
AVERTED VISION

ASTROIMAGE



HUBBLE SPACE TELESCOPE

Of course, the Hubble Space Telescope takes much more detail with its Wide Field Planetary 2 camera. The image at lower right, oriented to match the other images, was taken on Jan. 27, 1996. NGC 6826's eye-like appearance is marred by two sets of blood-red "fliers" that lie vertically across the image. The surrounding faint green "white" of the eye is believed to be gas that made up almost half of the star's mass for most of its life. The hot remnant star (in the center of the green oval) drives a fast wind into older material, forming a hot interior bubble which pushes the older gas ahead of it to form a bright rim. (The star is one of the brightest stars in any planetary.)

In my opinion, this famous planetary nebula is more appreciated by looking at it in the telescope, than by taking astroimages of it.

Observing Sites

TIMPA

by TIMPA Planning Group

TIMPA (Tucson International Modelplex Park Association) is TAAA's dark sky site west of the Tucson Mountains.

Location: The TIMPA observing site is located a few miles beyond the Desert Museum (3250 N. Reservation Road, Tucson, AZ 85743).

TIMPA Star Party Dates this month (Friday - Saturdays)

Monsoon Season: No Dates Scheduled

Stay Tuned for Pop-up Observing Announcements!

The TIMPA Planning Group will be offering assistance with telescope usage and observing during the monthly TIMPA Star Parties. You are invited to bring your equipment and questions to TIMPA on Star Party dates for assistance. Be sure to register using the link below.

The TIMPA site is only partially improved. There are no inside buildings provided other than restrooms. TAAA provides very limited seating (members are welcome to bring folding chairs). Please note that members visiting the TIMPA site may encounter things commonly found in partially improved desert areas such as desert creatures and/or their remnants (such as rodent holes or ant hills), uneven terrain, weeds, and desert pollens. Members using the site are encouraged to bring red lights and to move cautiously taking appropriate safety measures. The site does not have potable water, so bring your own non-alcoholic drinks.

Reservations for the TIMPA Site are made on the TAAA website at TIMPA DARK SITE RESERVATIONS. Please fill out the form completely and be sure to indicate the date you desire to visit TIMPA.

Questions? Contact the TIMPA Director: Stephen Ferris

Chiricahua Astronomy Complex

by Jim Knoll

Upcoming CAC Weekend Dates (Thursday - Sunday)

August 21–24 (New Moon August 22); Monsoon Season

During Monsoon (July-August) we do not plan to have hosts on-site, but if weather permits there may be members observing that will open the site. If you want to observe, contact Conrad Stolarski at cac-reservations@tucsonastronomy.org to check site status or use the standard reservation process on the reservations web page.

Chiricahua Astronomy Complex (CAC) is the club's dark sky observing site, located in Cochise County approximately 100 miles southeast of the center of Tucson. We have many large telescopes ranging from 40-Inch, 25-Inch and 18-Inch Dobsonians, a 9-Inch folded refractor, a soon-to-be completed 32-inch Cassegrain, and quite a few Schmidt-Cassegrain Telescopes (SCTs) of various sizes. The telescopes are configured for either visual observing or imaging.

You can be trained to operate any of these and observe or image from a dark Bortle 1-2 site only two hours from Tucson. To request training, please complete the request form here. We also have ten sleeping rooms with heat and air conditioning, a Learning Center/Classroom, seven RV sites with electricity, and a large tent camping area. We will discontinue allowing overnight sleeping in the Reynolds-Mitchell Observatory (RMO). Overnight accommodations will need to use the sleeping rooms, RV sites, or in the tent area. Members can also sleep in their vehicle if desired and the conditions permit.

TAAA members are welcome to attend our monthly Planning and Operations Zoom meeting, normally on the first Monday of the month at 6:30 pm. Email for the link.

If you would like to observe, you must make a reservation on the CAC Web page at CAC Reservations.

If it is your first visit to CAC, you need to attend on a CAC weekend when other members are present. Unless you are qualified to open and close the site, dates will be limited to those around the New Moon and are listed below and on the CAC web page. Hosted personnel are generally on site a few days before and after these dates. Those qualified to open & close the site can use it anytime but still need to reserve through the CAC Reservations process.

CAC Director: Jim Knoll CAC on the Web

Observing Sites' 2025 Star Parties Dates

TIMPA	New Moon	CAC
Monsoon: No Dates	August 22	August 21–24 (Monsoon) September 13 – *Evening Under the Stars – Public Event*
September 19-20 October 17-18	September 21	September 18–21
October 24-25 November 14-15	October 21	October 16-19
November 21-22 December 12-13	November 19	November 20-23
December 19-20	December 19	December 18-21

Starry Messengers Special Interest Group

Opening Minds to the Universe

The Starry Messengers group provides age-appropriate hands-on activities at school star parties. These short duration activities, suited for small groups, teach astronomy principles typically at a 4th grade level, but adaptable to a wide range of ages. Activity requests for the fall have already started coming in. The two activities requested so far are Dark Skies Education Kit and Telescopes-Eyes on the Universe. The Dark Skies kit demonstrates light pollution and methods to control it. There's also a demonstration for radio noise pollution. The Telescopes - Eyes on the Universe Toolkit demonstrates observing principles such as using averted vision and why we can't see colors in telescopes or the US flag on the moon. There's also an explanation for false color representation of images taken outside visual wavelengths. Both toolkits are best done in darkened conditions, so it may be best to do them near the area where the TAAA is providing telescopes rather than indoors with booths from other organizations. Training on the use of these kits is available by contacting Terri Lappin (see below), or looking for the training videos on-line.

These are the three scheduled events so far this fall:

- 8/23/25 10am – 2pm Wilcox Community Center (I-10 & Rex Allen Dr in Wilcox, AZ), any toolkit, 250 expected
- 10/23/25 6:30pm – 8pm Wakefield Middle School (44th St and 6th Ave), Light Pollution Toolkit, 300 expected
- 11/7/25 6pm – 8pm Esmond Station K-8 (Mary Anne Cleveland and Atterbury Wash Way), Telescopes - Eyes on the Universe, 300 expected

SMSIG takes a hiatus from our monthly meetings over the summer months. Our next meeting will be on Monday, September 8th.

Questions about Starry Messengers SIG can be directed to Terri Lappin email or 520-977-1290.

Astronomy Fundamentals SIG

by Connor Justice

Come join us for a presentation on the fundamentals of amateur astronomy. Learn your way around the night sky to add to your observing enjoyment. Meetings are on the second Thursday of each month.

The next AFSIG meeting is **Thursday, August 14, 6:30pm to 8:30pm.** Topics to be determined.

Contact Connor Justice for Zoom link and more information.
Access videos of previous meetings in the TAAA YouTube Channel AFSIG on the Web

Radio Astronomy SIG (RASIG)

by Sandy Nichols

RASIG is a new Special Interest Group centered on radio astronomy. RASIG participants will meet on the third Wednesday of each month from 7-8 pm MST via ZOOM.

The next RASIG meeting will be **Wednesday, August 20th at 7:00 pm** via ZOOM.

Topics: To Be Announced

Email Sandy Nichols for the ZOOM link or any other information about the new SIG.

Astro-Imaging SIG

by Gregg Ruppel

The next AISIG meeting will be **Monday, August 18 at 7:00 pm** via ZOOM.

Topics:
Beginners' Corner - Ask A Question
A Conversation with Brian Valente
Brian is a noted amateur astronomer who runs five rigs a night, some robotic and one in Chile, and contributes data to the Deep Sky Collective. He previously worked on the support team at Losmandy and now plays a similar role at Astro-Physics.
Q/A - Discussion

Email Gregg Ruppel for the ZOOM link or any other information. Gregg and the AISIG folks are very active on the TAAA groups.io forum. Check out all the helpful advice and amazing images there. For more information or instructions on how to join the forum, click here.

View previous AISIG meetings on the TAAA YouTube Channel.

Astronomical League

by Doug Smith

Observing Programs - What's Up List for August and September 2025

Many of the Astronomical League observing programs can be done from our backyards. The following are objects visible in August and September for the more common observing programs.

Constellation Hunter Program – The following constellations are well placed in the Northern sky for August and September: Aquila, Cygnus, Delphinus, Equuleus, Hercules, Lyra, Sagitta, Serpens Caput, Serpens Cauda, Vulpecula.

Messier Observing Program - The following Messier Objects are well placed for observation during August and September (listed in ascending RA): Sagittarius is in prime location! M62, M19, M92, M9, M14, M6, M7, M23,M20, M8, M21, M24, M16, M18, M17, M28, M69, M25, M22, M70, M26, M11, M57, M54, M56, M55, M71, M27.

Urban Observing Program
The following **deep sky objects** are good for observing in August and September: M62, M92, M6, IC 4665, M7, NGC 6520, M8, M17, NGC 6633, M22, IC 4756, M11, NGC 6709, M57, Cr 399, NGC 6818, NGC 6826, M27
The following **double stars** are well placed for observing in August and September: Epsilon Lyra, Beta Cygnus

Lunar and Binocular Observing Program
The following is a list of dates for lunar phases in August and September:

New Moon: August 23, September 21
40 Hours waxing: August 25, September 24
72 hours waxing: August 26, September 25
4 days old: August 27, September 26
7 days old: August 30, September 29
10 days old: August 4, September 3
Full (14 days old): August 9, September 7
Gibbous: August 16, September 14
72 hours waning: August 20, September 18
40 hours waning: August 21, September 19

Solar System Observing Program

The following is a list of planets that can be observed during August and September:

Mercury is a morning object during August and the first two weeks of September. During the remainder of September it is an evening object, but too close to the Sun to be visible.

Venus is an early morning object during August and September.

Mars is still visible in the early evening during August and September. However it sets earlier and earlier. On August 1 it sets around two hours after sunset. By September 30 it sets just one hour after the Sun.

Jupiter is rising earlier each night. It rises around 3 AM on August 1 and around midnight by the end of September.

Saturn is becoming better placed for observation each night. On August 1 Saturn transits around 3:30 AM. On September 30 it transits around 11 PM. Saturn reaches opposition on September 21. This makes it easier to observe some of the special events involving Saturn's satellite's (see below).

Uranus is a late evening object during August and September. It rises around 11:30 PM on August 1, and around 8 PM on September 30.

Neptune is a late evening object. On August 1 it rises around 9:30 PM and on September 30 it rises before sunset, transiting around 11:30 PM.

SPECIAL EVENTS: During August and September it is still possible to observe Saturn's moons involved in mutual events (occultations and eclipses). These events won't occur again until the next ring plane crossing in 2038.

Mutual Saturn satellite events:

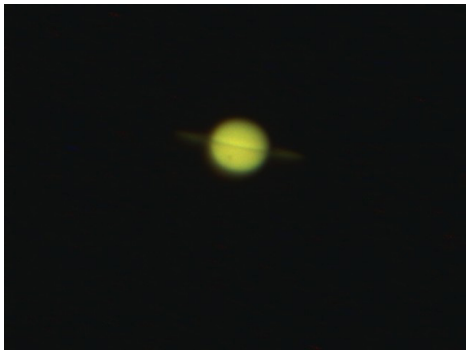
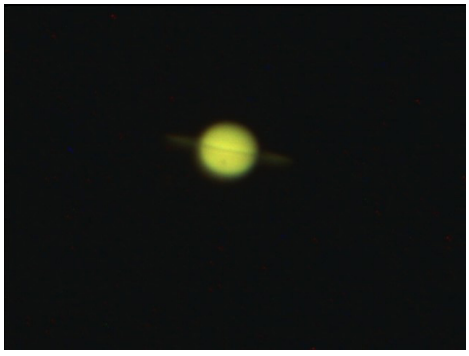
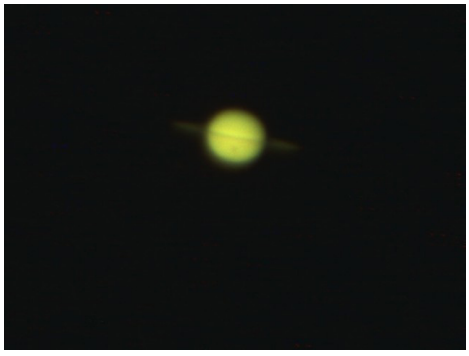
August 9, 2025: Mimas eclipses Enceladus, Start: 6:27:14 UT, End: 6:29:46 UT
There are just 3 more mutual satellite events later in the year.

Also during August and September several transits of Saturn's moon Titan occur. During these events Titan may be difficult to see in front of Saturn. Note: these are the last 4 Titan transits until 2038! The dates and times listed below are for the transit of Titan's shadow:

August 3, Start: 6:24 UT, End: 11:04 UT
September 4, Start 5:25 UT, End: 8:51 UT
August 19, Start: 5:52 UT, End: 10:00 UT
September 20, Start: 5:09 UT, End: 7:36 UT

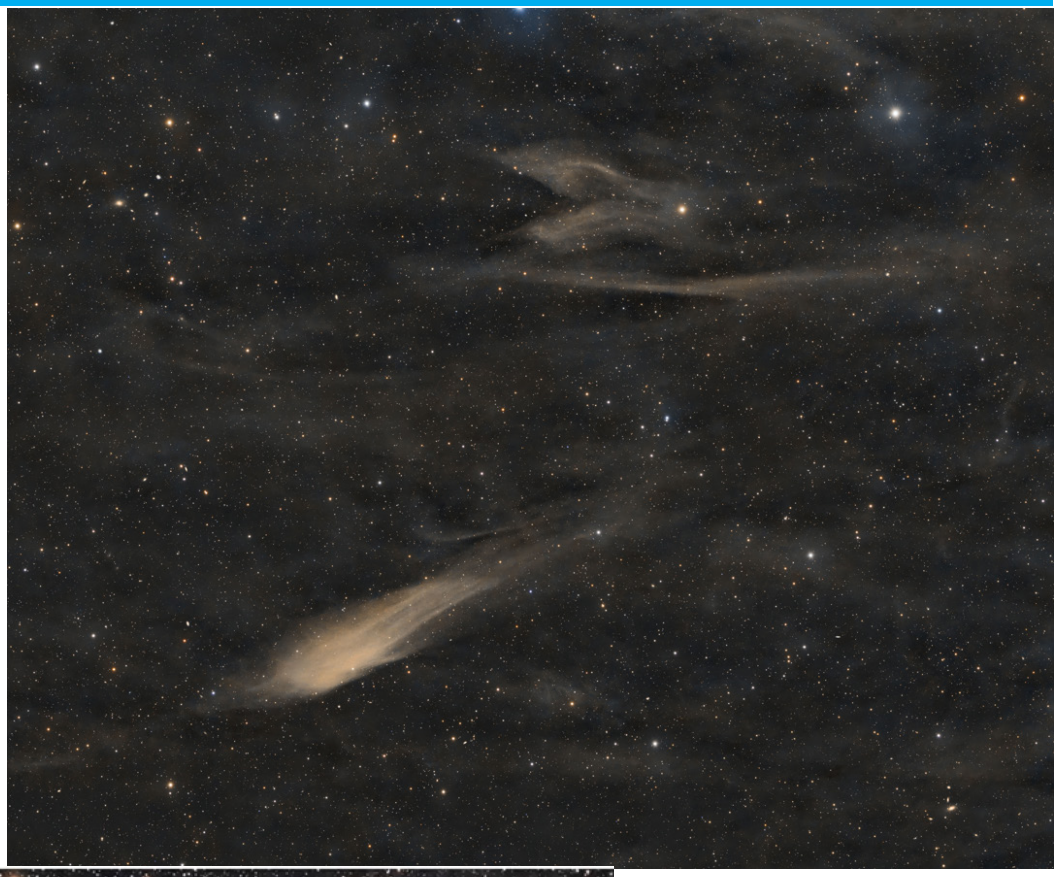
The Astronomical League has created a 'Special Observing Challenge' certificate for this event. Contact Douglas Smith or search the AL website for 'Huygens' for further details.

These three images were recorded during the July 18 Titan transit. The times of the images were 09:00 UT, 09:30 UT and 10:00 UT. Each of these images was made using a Celestron planetary camera on a 8" f 10.0 SCT. The exposure of each frame was 1/13 second and I stacked 100 frames for each image.

Member Astro-Images

All images are from the 2025 Monsoon Challenge.



Sh2-23 and 24

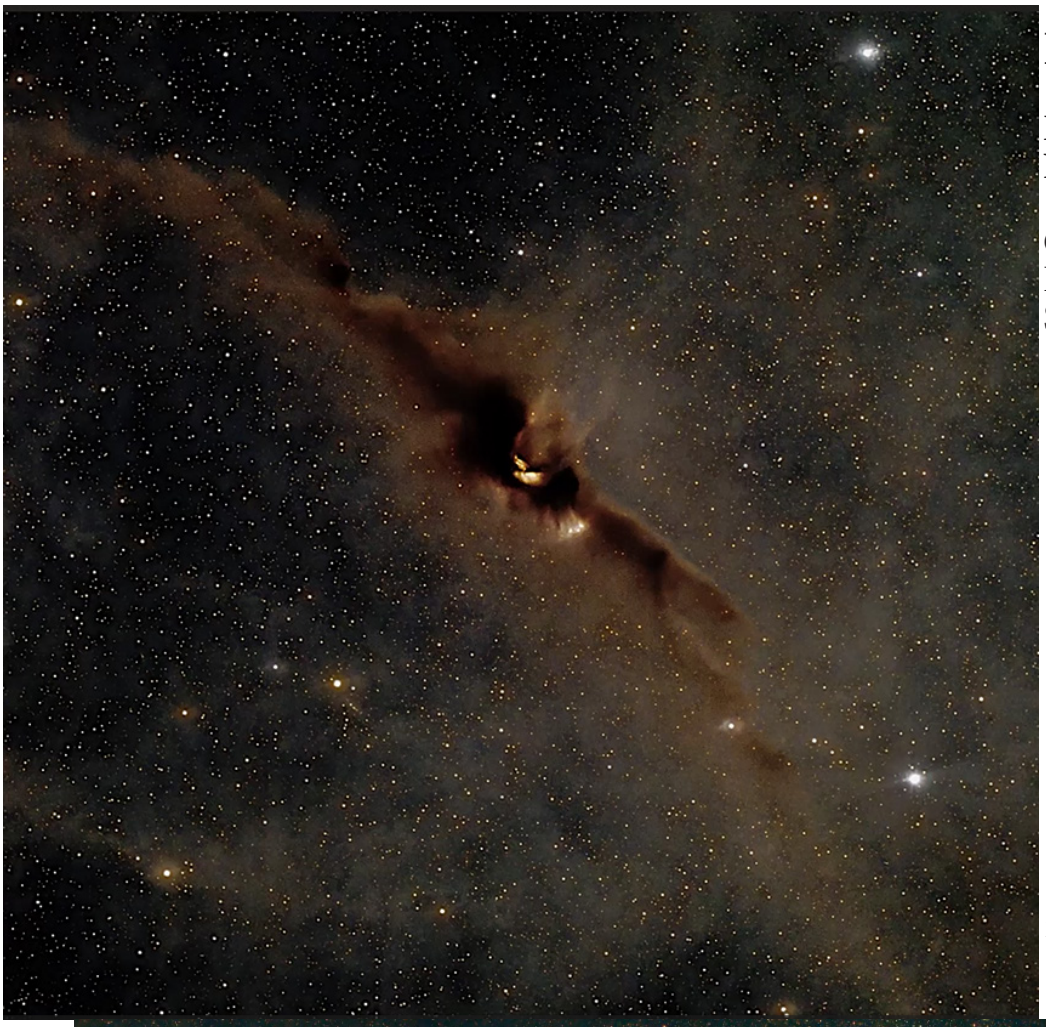
Tom Eby

Sh2-70

Palomar 15 Globular Cluster - LRGB 180:55:60:60 (6 hours), STL11000M with AstroDon Gen II filters, ASA 10N f/3.7.

Gregg Ruppel

vdB 109 Reflection nebula
LRGB 790:180:180:180 (22.2 hours), ASA 10N, STL11000M with AstroDon Gen II filters.



David Gale

LDN 43 Cosmic Bat Nebula

C8 Hyperstar, ASI533MC Pro, ASIAir, processed in Siril.

Sean Shifflette

LDN 57 Ink Spot Nebula

Williams Optics RedCat 51, 4.3 hours of imaging, with 137 exposures at 120 seconds. ASI 183 MC Pro, iOptron Skyhunter mount, ZWO guide scope, ASI174 guide camera.

Randy Smith

rho Ophiuchi

Total integration: 16h 27m.
Integration per filter:- LP: 16h 27m (329 × 180”)
Equipment:
- Telescope: Askar FMA180
- Camera: ZWO ASI2600MC Pro
- Mount: Sky-Watcher CQ350 Pro
- Filter: Optolong L-Pro 2”
- Accessories: ZWO ASIAIR Pro, ZWO EAF

David Stearn

M4

Seestar S50. 118 20 second subs in EQ mode.

TAAA Astronomy Equipment For Sale

TAAA has an assortment of astronomy related equipment for sale. This equipment is available for members only at this time.

Celestron 8" CPC
(No Photo)

Dual fork arm mount, 9x50 finder, 2 eyepieces, telrad, finder rings, hand controller, user manual, tripod, diagonal. Basically new in original box. **$1600**

Celestron 6 NexStar
3 of these.
Some are black tube some are orange. All come with Tripod, eyepieces, finder. All are single fork rail mount, NexStar (tested), 1.25" visual back, 1.25 diaganol, 2 1.25" eyepieces. One comes with 6x30 crosshair finder, one comes with a telrad and one come with red dot finder. **$600**

Celestron 8
Single Fork Arm rail mount, NexStar, Tripod, 1.25" visual back, 1.25" diagonal, 1.25" eyepiece (25mm), crosshair finder, carrying case for optical tube. **$1000**

Homemade 8 inch Newtonian telescope. Sturdy GEQ mount. Solid tripod. 2-inch focuser (with 1.25" adapter), 6x30 crosshair finder. **$100**

12" Dobsonian
Another great deal!
Very large, Homemade.
Crosshair finder. **$500**

12-inch Skywatcher Collapsible Dobsonian scope.
2" focuser, large 8x50 finder, and 2 eyepieces. **$900**

16 inch Meade Lightbridge Truss Tube Dobsonian. 2" focuser (with 1.25" adaptor), crosshair finder, mirror cooling fan, shroud, dust cover. A steal at **$1100!**

TAAA Astronomy Equipment For Sale (continued)

Celestron 5" Omni XLT Tripod, Celestron CG4 GEQ mount, 6x30 finder, diagonal, 1 eyepiece, user's manual. **$500**

We have numerous **tripods**. Celestron, Meade and others. Heavy duty, light duty, etc. If interested please inquire.

Small camera tripods - $10

Several full aperture **white light solar filters**. Most are 'film type'. We have one 'glass type'. Various sizes. All checked out okay. If interested please inquire for available sizes and prices.

Wide variety of eyepieces and filters, mostly 1.25". Inquire for availability and pricing

We also have an assortment of other items available at this time including: Finder rings, focusers, telescope rings of various sizes, mirror blanks of many sizes, a 6-inch Newtonian mirror set mounted in cells, several large mirrors and more.

To make inquiries about what is available or to express a desire to purchase one of items please contact: Douglas Smith; 520-396-3233

Skyward

By Dr. David H. Levy

August 2025

Dr. David H. Levy is a long-time member and former President of the TAAA. He is a well-known astronomy writer and discoverer of comets. He writes this monthly "Skyward" column for the Vail Voice and generously allows us to publish it here.

The 2025 version of the Adirondack Astronomy Retreat, now in progress, may (or may not) be our last one. It is a chance for star gazers to gather, enjoy the fabulous Adirondack sky, and rediscover why we fell in love with the sky in the first place.

We have already had two fabulous nights. Tuesday night, July 22, was a bit hazy but David Cotterell photographed some apparent haze in the north northeast that turned out to be a faint glow of the aurora borealis. Then visually, I detected a faint greenish glow for some time thereafter. This event reminded me of my first major auroral display. That one happened right here, at this same site, on 8 July 1966. That was the night that twilight never ended. The twilight glow moved over towards the north, evolved into a bright auroral glow, a rayed arc, and lasted all night with a flaming beautiful light. Tuesday's glow was weak, but I did see several rays pop out. I did 3.6 hours of comet hunting that night.

As wonderful as Tuesday night was, it is difficult to compare it to Monday night. That might be the best sky, or surely one of the best, that I have ever seen anywhere. Not only did Messier 31, the Andromeda Galaxy, appear visible to the unaided eye, but also Messier 33 in Triangulum, became easier and easier to see as it arose out of the small microclimate cloud that was hovering over nearby Lake Champlain to our east. Later, that cloud covered most of the sky. But when it dissipated later in the night, the Triangulum galaxy was clearly a naked eye object. I completed 3.1 hours of comet searching that night.

I began my search for comets long ago on the night of 17 December 1965. That brief 10-minute search between Pollux and Castor in Gemini did not last long, but it was the start of a lifetime search that continues to this day. I no longer expect to find another new comet, but I enjoy the search itself as much as I ever did.

My comet search, that culminated in the discovery of Periodic Comet Shoemaker-Levy 9 by Gene and Carolyn Shoemaker and me, was clearly the highlight of my career. But it was only the second highlight of my life. Meeting and marrying Wendee was the first, and it will always be.

The week at our 2025 Adirondack Astronomy Retreat is one I shall never forget. The group of people here, including Mark Zdziarski, David Rossetter, Peter Jedicke, and the others, are by far the smartest bunch I have ever had the privilege of knowing. With the coming of darkness each night, I used Tranquilitatis, a lovely 20 cm. reflector that Mark Zdziarski brought with him. Particularly on Monday night, I used it to spot a cacophony of galaxies in and near the Big Dipper, galaxies I cannot see from my Vail, Arizona home because of the glow from Tucson to my northwest. As attractive as all these galaxies are, their beauty pales before the truly exquisite appearance of Messier 51, the Whirlpool, and perhaps even more so with the miracle of Messier 81, that attractive spiral in Ursa Major, and its enigmatic neighbor Messier 82. With these three galaxies, and later the Moon and Venus gently rising over nearby Ferguson Mountain and Horseshoe Ledge, my night comes to an unforgettable conclusion.

Doveed with Cupid the Questar at Twin Valleys Camp the year before the first retreat.