

TAAA Desert Skies Bulletin

Observing Our

Desert Skies

Since

1954



December 2025

www.tucsonastronomy.org

Membership Meeting

Friday, December 5, 2025 6:30PM

TAAA's next general member meeting will be held on **Friday, December 5, 2025**. The Main Presentation will start at 6:30 PM. 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.

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Main Presentation at 6:30PM AZT

Title: How Robotic Telescopes Revolutionized Binary Star Research Presentation

Presentation: Astronomer Russ Genet will talk about the advances in robotic telescope imaging. Fairborn Observatory, founded by Dr Genet, installed their first robotic telescopes in a fully automated observatory on Arizona's Mt. Hopkins in 1985. By 1989, a "farm" of seven robots was remotely accessible via 9600 baud modems. The Alt-Az Initiative explored whether the technology of large mountaintop alt-az, direct drive, research telescopes could be scaled down to improve smaller robotic telescopes. This led to the development of the PlaneWave Instrument's 0.7-meter CDK-700 robotic research telescope now used by Astronomy Research Seminar teams. Seminar students, supported by amateur astronomers, obtain and analyze original data on a binary star and publish the results. More than 200 team papers have been published. Observations have evolved from using astrometric eyepieces on 6-inch telescopes, to remote observations using speckle interferometry on robotic telescopes such as the CDK-700. Gila Community College currently offers introductory and advanced astronomy research courses where several student teams collaborate in their research and paper writing. TAAA members would be most welcome to become team members. With the proper equipment, the TAAA's 0.8-meter (32") DFM telescope, recently installed at CAC, could be a major contributor to similar amateur and student published research.

Biography: Russell (Russ) Genet is an Astronomy Instructor at Gila Community College. He has a BS in electrical engineering and a PhD in astronomy. Russ founded the Fairborn Observatory in 1979, pioneered the development of robotic telescopes in the 1980s, was the 52nd President of the Astronomical Society of the Pacific (1993-1995), and initiated the Astronomy Research Seminars in 2007. He is a member of the American Astronomical Society, the International Astronomical Union, and the Tucson Amateur Astronomy Association. An active instrument-rated pilot, Russ lives in Payson, Arizona with his wife, Cheryl, who teaches philosophy and world religions. Russ is the author or coauthor of many books and papers. See [here](#) and [here](#).

Photo credit: Russ Genet



Young students and amateur astronomer mentors pose near historic 100-inch Hooker telescope at Mt. Wilson Observatory during speckle interferometry observations of binary stars.

November 2025

Periodically, TAAA has organized a meeting of members and leaders to engage in planning for the future. In February of 2026 we will hold such a meeting to look out five years into the future of our organization and its needs to accomplish our dual missions of service to our members and to the community. We will look for ways to improve our members' experience and provide value to the community while effectively engaging our membership in volunteering to meet those ends. At the same time, we must find ways for the organization to effectively recruit new volunteers and leaders, while remaining on a solid financial footing when meeting those objectives.

In the planning exercise we will use the survey of members completed last year as well as a survey of our leaders yet to be administered as primary tools. These surveys are a key source of feedback we can use to understand members' expectations.

The membership 2024 survey had responses from 124 members, 66% of those who opened the email request. 100 of those respondents lived in Arizona with the remainder from other states as well as four from Canada and one from Switzerland. The respondents were members for an average of 3.29 years, and 45 (36%) said they had volunteered for TAAA in the past year.

The questions were focused on the value of the TAAA membership, the quality of TAAA communications, and general questions about what should be prioritized at TAAA in the future. While the overwhelming response to "Would you recommend TAAA to your friends?" was 'yes' (97%), members were not shy making suggestions for improvements. Comments particularly focused on communication, leadership, and member benefits. Common themes in the comments included the need for clearer communications (especially email and website/MemberPlanet functionality), concerns about leadership

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](mailto:Ed.Foley@tucsonastronomy.org) to receive a Zoom link for that meeting. Please send your email to Ed by 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.

by **Ed Foley**

effectiveness and priorities, requests for more social events, and focused activities for both new and experienced members. The overall survey results reveal a desire for the TAAA to balance its focus on education and its facility projects (CAC and TIMPA) while increasing member participation and volunteerism. Interestingly a number of comments suggested we hire professional leaders to run certain programs. While not fiscally possible for TAAA presently, this is something we can aspire to.

For those who are interested in learning more about the results, the complete survey can be reviewed [here](#). There is a wealth of input in the survey that will be reviewed during our planning. Take a look and see what your fellow members said about the organization.

Ed

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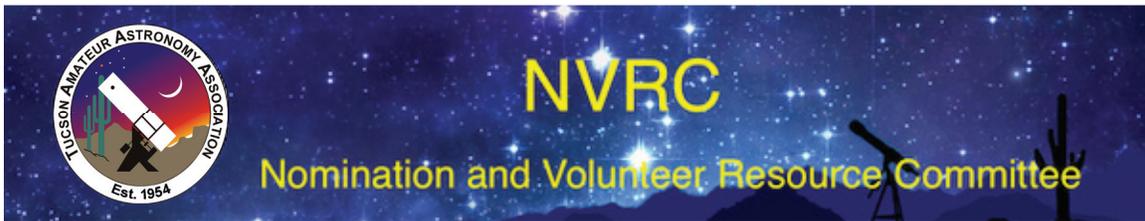
TAAA Board: taaabod@tucsonastronomy.org

Desert Skies Bulletin

Contributions to Editor: [David Rossetter](mailto:David.Rossetter@tucsonastronomy.org) by the 24th.
Astro-Images to our Image Editor: [Gregg Ruppel](mailto:Gregg.Ruppel@tucsonastronomy.org)
Proofreaders: Terri Lappin, Jeff Rothstein, Jim Knoll

New Member Packet Information

Traditionally, when new members join TAAA our Welcome Coordinator will send them a letter and a PDF document we call the New Member Packet that summarizes information about TAAA and acts as a guide to the activities available for members. This is a step in helping new members get oriented to TAAA. However, in an organization as dynamic as TAAA, that information can get stale over time. An update was needed so Susan O'Connor, Terri Lappin, and Nelsey Toner have taken some time to update the most recent Packet. The November 2025 version will be distributed to new members going forward, but we thought even experienced members might be interested in seeing a summary of what TAAA is all about in 2025. The New Member Packet PDF can be accessed at this [link](#).



Recognition Committee Looking for Leader

The TAAA Board of Directors is looking to ramp up member recognition and service awards. As a result, they have asked the Nominating and Volunteer Resource Committee to look for an experienced member to head up the Recognition Committee.

This person should be familiar with past awards and have ideas for future recognitions. They will need to track past records and work with the committee to determine future awardees.

The Recognition Committee already exists. They have met and recorded some ideas of how to move forward. As might be expected, they are some of the busier leaders in the club. They are looking for someone to head the committee's efforts.

If you are interested, please contact the NVRC Chair, [Pete Hermes](#).

TAAA 32-Inch Telescope and B.G. Stinger Observatory Unveiling Ceremony

The TAAA unveiled its new 32-inch DFM research-grade telescope at the Chiricahua Astronomy Complex (CAC). Attending was a gathering of 75 TAAA members at the site and a livestreamed audience.

Ed Foley, president of TAAA, described the telescope's history and the efforts of volunteers and donors to transport, reassemble, and house it. Foley highlighted the teamwork and dedication of volunteers like Bob Rose, Larry Stepp and Tom Melsheimer. He also spoke of the financial support from various donors, primarily TAAA members, but including corporate donors Arete Associates, DFM Engineering Inc., and General Dynamics Mission Systems necessary to complete the observatory.

The roll-off roof observatory structure has been named the B.G. Stinger Observatory. The background behind the name was explained by Bernie Stinger, a major donor for the project. He is the son of Bob and grandson of Glen, two great influences on his life and career. The ribbon was cut, the doors opened, and members had a chance to visit the telescope in the observatory. Despite the weather hindering observing, members enjoyed exploring the observatory and touring the CAC facility. Foley encouraged TAAA members and the public to visit the site for future observing opportunities.

Thanks to CAC Director Jim Knoll for orchestrating the event.



Aerial View of the B.G. Stinger Observatory
and 32" telescope.

Bernie Stinger and Ed Foley

TAAA Holiday Party



Christmas Tree Cluster
NASA Chandra X-Ray Observatory

It's that time again! The TAAA HOLIDAY PARTY will be at the home of Ed and Janet Foley (10th year!) on Saturday, December 13th. Directions to the house in the Catalina Foothills are below. Each guest will need to RSVP so the gatehouse can be informed to admit you.

Please RSVP by December 7th - [email](#) or by phone or text at (520)329-2209.

The party starts at 5:00 while it is still light. We will use both the house and poolside for gathering. The patio heaters will be going if it is on the chilly side.

The event is a potluck dinner. You can bring something that will feed at least three such as:

Hors d'oeuvre - Entrée - Bread - Dessert - Vegetables

Soft drinks, coffee, tea and hot chocolate will be available.
We will have disposable plates, utensils and cups.

THE RAFFLE: We will have the RAFFLE again featuring lots of donated astronomy goodies. Please bring any new or lightly used items you think other members might enjoy winning in the Raffle.

THE AUCTION: We will also have a silent auction of at least two telescopes: a 6-inch Celestron SCT and an 8-inch Celestron SCT with proceeds going to the TAAA Endowment.

DIRECTIONS: The Address is: 4790 N Via De La Granja, Tucson, AZ 85718
We are in the foothills in Catalina Foothills Estates. The entrance to the community is off Hacienda del Sol Road – 1 mile north of River Road on the right, or 1 mile south of Sunrise Dr on your left.

Pass through the gate at Catalina Foothills Estates and continue one half mile along Entrada del Sol down the hill, going straight ahead at a stop sign (road becomes Circulo Sobrio) and up over the next hill to the end of that road.

Turn right at the stop sign onto N. Camino Sumo for one tenth mile.

Turn left onto E. Sumo Quinto.

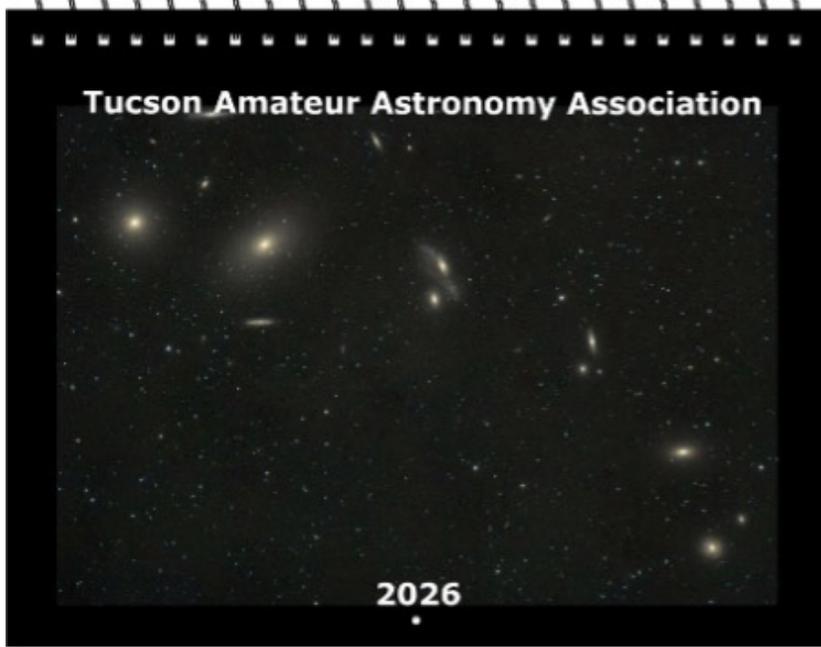
Go up the hill to the end of that road. Our house is straight in front of you up the hill. Turn left and our driveway with mailbox 4790 is the first one immediately on your right.

Parking will be along the side of the road of Via De La Granja.

If you have any questions, please give me a call or send an email.

Happy Holidays! We'll see you then.

TAAA Calendar Now Available



They are here! The 2026 TAAA Calendar is available to members. It is packed full of information about TAAA, our events, and significant astronomy events throughout the year. The picture portion of the calendar has been formatted differently to emphasize TAAA events as well as astro-images and to more easily find significant astronomy events happening during the month.

You can order on the [website](#) or get them at the Friday General Meetings. The calendars are only \$15 each (plus \$5 if you want them mailed to you). So, help support our association and get a useful calendar to use throughout 2026. Your support and donation is deeply appreciated.

The Calendar Team

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.

There is no meeting in December Due to the Holidays.

See you in 2026!

[Susan](#) 520-780-0136

Dean Ketelsen Observatory (DKO) Status

As was mentioned in the October Bulletin, the TAAA is planning to construct a roll-off roof observatory to house Dean's favorite telescope, his Celestron C-14. The observatory facility will be identical to the current Wally Rogers 12'x14' observatory and will be located nearby.

The selected construction contractor, Randy Maddox, has helped the TAAA build most of the facilities at CAC. Randy's current work schedule should allow him to start work on the DKO by the end of the year.

In October, the club initiated a funding campaign seeking \$50,000 to complete this project. To date, cash and pledges have been received totaling over \$45,000! We are about \$5,000 away from the goal to honor this longtime champion of outreach. Please consider supporting this worthwhile project in Dean's memory. You can donate specifically to the Dean Ketelsen project using the donate link below or on the website and selecting the Dean Ketelsen Observatory.

Sincerely,
John Kalas
DKO Project Coordinator



Member Meetings - We Need Your Help!



If you typically attend the monthly Friday General Meeting in person, we could use your technical help. We currently monitor and comment for our YouTube guests, operate camera(s) for in-person attendees, moderate Zoom, and do a live stream to YouTube. Right now, there are only a few of us to manage the technical requirements for the meetings. It would be helpful to have a team so we don't feel obligated to make every meeting and can spread the requirements and share the tasks. We will provide training in whichever area you want to specialize. If you want to help, contact [Jim Knoll](#) or [Terri Lappin](#). Thank you for your consideration!

Happenings at TIMPA Fall 2025

Stephen Ferris

The TIMPA committee and several members of the club have been busy at work at TIMPA this fall. Early in November, Ben Bailey, Gus Gomez, Pete Hermes and Stephen Ferris spent an afternoon doing a deep cleaning of the shed belonging to the 14" Gila Monster telescope. The shed had a packrat infestation during the pandemic, and our local neighbors left every kind of dropping stuck to the shed floor. The four members listed above washed and scrubbed it with water and bleach and had a good deal of luck in getting almost all the grime off of it. Unfortunately, two weekends of bad weather prevented a planned painting of the newly cleaned floor, but a painting session is expected in the next couple of weeks.



Meanwhile, Gary Steffens was of enormous help in repairing and upgrading both club scopes on site at TIMPA. He was able to patch a major software glitch that had temporarily prevented use of the new TIMPA 16", and that scope is now fully functional. Further, Gary was able to open the panels on the 14" Gila Monster, clean the electrical leads, and clean up most of the open spaces on the mount. Thank you to Gary for all your help!

Astronomy Classes (Free!)

by Doug Smith

Star Hopping Workshop

Open for enrollment

Place: TIMPA **Date:** Thursday, December 11, 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 proper star hopping technique and equipment usage. Each student will use the supplied equipment to locate at least 2 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

If interested, you can email or call the instructor: [Doug Smith](mailto:Doug.Smith@timpa.org) 520-396-3233.

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 - Saturday)

December 12-13
December 19-20

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.

Chiricahua Astronomy Complex

by Jim Knoll

Upcoming CAC Weekend Dates (Friday - Saturday)

December 19-20 (New Moon December 19)

Chiricahua Astronomy Complex (CAC) is the club's eastern dark sky (Bortle 2) 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, our new (soon to be commissioned) 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 most of these telescopes. 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.

If you would like to observe, you must make a reservation on the CAC Web page at [CAC Reservations](#).

Family Holiday Observing at CAC

Got family in town over the Holidays? Want to treat them to an observing session at CAC? We will have an observing session Saturday, December 27, 2025, from 6 - 8 pm. Fee is only \$50/ adult or \$25/youth under age 15. Here is the link to [reserve](#).

Additional Member-Leased Observing Pads Planned for CAC

We are planning to build four new member-leased pads at CAC this Spring. If you are interested in having a leased pad available for your use with your equipment, please [email](#) Jim Knoll. Although we use leased pads for overflow during our normal CAC weekends, you would have priority on your pad. You would fund the pad initial lease (cost to build the pad with electricity) and have priority use during your lease.

CAC Director: [Jim Knoll](#) [CAC on the Web](#)

Observing Sites' Upcoming Star Party Dates

TIMPA	New Moon	CAC
December 12-13		
December 19-20	December 19	December 19-20
January 9-10		
January 16-17	January 18	January 16-17
February 6-7		
February 13-14	February 17	February 13-14
February 20-21		
March 13-14		
March 20-21	March 18	March 20-21
April 10-11		
April 17-18	April 17	April 17-18

Special Interest Groups

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, December 11, 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

The next RASIG meeting will be **Wednesday, December 17th** at 7:00 pm via ZOOM.

Are you wondering what radio astronomy is all about? Come join us for an inside view as we discuss member projects.

Topics: At our December meeting we will discuss equipment scams and member DIY projects. We will also view a presentation by Dr. Wolfgang Hermann titled “Radio Astronomy Possibilities and Limitations – Do’s and Don’ts”.

[Email](#) Sandy Nichols for the ZOOM link or any other information about the new SIG.



Starry Messengers Special Interest Group

Opening Minds to the Universe

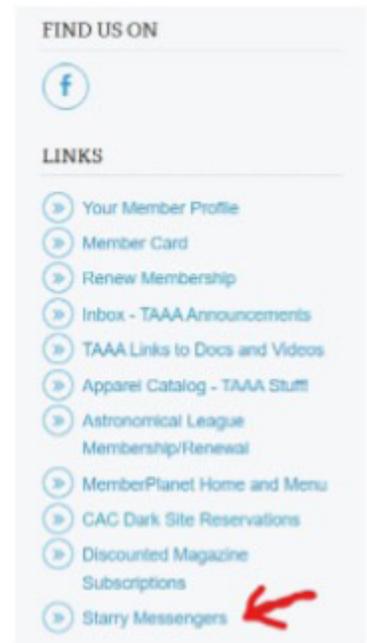
The Starry Messengers group contributes to the TAAA outreach program by providing age-appropriate hands-on activities at school star parties and community events. We differ from the TAAA Star Party outreach program in that most of our activities can be performed indoors, and do not require telescopes or clear skies.

The next SMSIG meeting will be held on Monday, December 8th, 7pm to 8:30pm at the home of Terri Lappin and Gary Rosenbaum. The address will be sent to members by email. At this meeting, we'll be trying out the hands-on activities under consideration for the Tucson Festival of Books to be held in March. Many of the activities come from the Life in the Universe Night Sky Network toolkit, but we're also thinking up some other fun things to do that go along with our Life in the Universe theme.

Opportunities to volunteer are listed below. To sign up for an event, log into MemberPlanet and use the Starry Messengers link in the right-hand menu on the Member's Page (see the menu pictured on this page). This will take you to a page where you'll find sign-up links for 2025 and 2026 events. This page includes links to learn more about the toolkits that we use and to submit your report following an event.

To become involved in this community service, it's recommended that you sign up for an event that already has a volunteer so you can see how to present the activity. Volunteering for an event does not obligate you to attend our monthly meetings, though you may enjoy hearing from others doing this type of outreach.

- **12/6/2025 (Sat) 10 AM - Noon** Hendricks Elementary (Thornydale/Orange Grove) Shadows & Silhouettes Toolkit, 200 expected. Volunteers: Susan O'Connor, Pete Hermes
- **12/11/2025 (Thu) 5:30 PM - 7:30 PM** Lulu Walker Elementary (La Canada/River) Glass and Mirrors Toolkit, 150 expected. Volunteers: Susan O'Connor, Sharon Lilja
- **1/22/2026 (Thu) 5 PM - 7 PM** Hermosa Montessori (Ft Lowell/Soldier Trail) any toolkit, 200 expected. Volunteers: Pete Hermes, Tom Sarko
- **1/22/2026 (Thu) 5:30 PM - 7 PM** Douglas Elementary (Miracle Mile/Flowing Wells Rd) Light Pollution Education Kit, 150 expected. Volunteers: **OPEN**
- **1/27/2026 (Tue) 6:30 PM - 8 PM** Soleng Tom Elementary (Houghton/Broadway) PlanetQuest Toolkit, 400 expected. Volunteers: **OPEN**
- **2/5/2026 (Thu) 6:15 PM - 7:45 PM** La Paloma Academy-Central (Grant/Wilmot) Exploring the Solar System Toolkit, 250 expected. Volunteers: Susan O'Connor **and one more person.**
- **2/21/2026 (Sat) 10 AM - 9 PM** SE Pima Community College (Kolb/Irvington) Life in the Universe Toolkit, 80 expected. Volunteers: Susan O'Connor **and one more person**
- **4/23/2026 (Thu) 5:30 PM - 7 PM** Donaldson Elementary (Ina/La Cholla) Space Rocks Toolkit, 150 expected. Volunteers: Susan O'Connor **and one more person.**



Questions about the Starry Messengers SIG and our hands-on outreach toolkits can be directed to Terri Lappin ([email](#) or 520-977-1290).

Astro-Imaging SIG

by Gregg Ruppel

The next AISIG meeting will be **Monday, December 15, at 7:00 pm** via ZOOM.

Topics: **Beginners' Corner - Ask A Question**
Why I Have More Than One Scope - R. Smith, C. Harding, T. Eby
Image Sharing, Q/A

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](#).

We offer a mentoring program for beginning astro-imagers. For details, see the AISIG [Web Pages](#).

by Bernie Stinger

December 2025 Star Party Volunteer List

Thank you for volunteering your time and talents for our extremely important outreach mission. **Below is the current status of the Public/School Star Party list for December 2025.**

Please let me know in return email if you are interested in volunteering for any of the events listed below. First come – first served. I will let you know in return if you are on it or that it was already filled. Some events go fast!

If you are new to Star Party outreach, let me know and we'll be sure to help you get started. It is important you sign up for star parties if you plan to attend, whether you bring a scope or help in other ways, so I can manage who from TAAA will be on-site and for you to be included in any reminder or weather emails.

The PUBLIC Astronomy Events are also listed on the TAAA (tucsonastronomy.org) and Night Sky Network (NSN) (nightsky.jpl.nasa.gov) calendars. Also, all PUBLIC star parties will be listed on the TAAA Facebook events page and will be updated based on weather, etc. in real-time. You can follow any of these events and get a notification when I update each event but this is only for PUBLIC star parties listed on Facebook.

The requests have been updated as of November 24th. **The first section, in RED, is a list of events where we still need volunteers.** If you can help out please contact me at: astronomy-events@tucsonastronomy.org

Thank you,
Bernie Stinger

December Events still in need of Volunteers

Saturday – December 13 -- NW TUCSON --
CATALINA
Catalina State Park
11570 N Oracle Road
Age/Grade Level: All Ages.
Participants: 100+
3 Additional Scopes Needed
Setup Time: 5 – 5:30 pm.
Start Time: 6:00 pm. End Time: 8:00 pm.

Sunday – December 14th -- N TUCSON
Tohono Chul Gardens
7366 N Paseo del Norte (Near Oracle and
Ina Rd)
Age/Grade Level: All Ages
Participants: Possibly 100's
3 Additional Scopes Needed
Setup Time: 5:30pm
Start Time: 6:00pm End Time: 9:00pm

December Events still in need of Volunteers

**Saturday –December 20 – Chiricahua Mountains
Chiricahua National Monument**

12856 E Rhyolite Creek Rd, Willcox, AZ

Age/Grade Level: All Ages

Participants: 75

1 Additional Scope Needed

Setup Time: 6:00 pm.

Start Time: 6:00 pm. End Time: 8:00 pm.

Sunday – December 21st -- N TUCSON

Tohono Chul Gardens

7366 N Paseo del Norte (Near Oracle & Ina Rd)

Age/Grade Level: All Ages

Participants: Possibly 100's

1 Additional Scope Needed

Setup Time: 5:30pm

Start Time: 6:00pm End Time: 9:00pm

December Events Filled—No Volunteers Needed

**Thursday – December 4 -- NORTH TUCSON Rio
Vista Elementary School**

1351 E. Limberlost Dr.

Age/Grade Level: K – 5

Participants: 100

0 Scopes Needed

Setup Time: 5:30 pm.

Start Time: 6:00 pm. End Time: 7:30 pm.

– Thursday – December 11 – SOUTH TUCSON

Borton Magnet Elementary School

700 E 22nd Street

Age/Grade Level: K – 5th Grade

Participants: 75

0 Scopes Needed

Setup Time: 5:30 pm.

Start Time: 5:30–6:00pm End Time: 7:00pm

– Friday – December 12 -- FAR WEST TUCSON

**Pima County Conservation Lands and Re-
sources (CLR) – Juan Santa Cruz Picnic Area**

2000 N Kinney Road

Age/Grade Level: All Ages

Participants: 75–100

0 Scopes Needed

Setup Time: 7:30 pm.

Start Time: 6:00 pm. End Time: 8:00 pm.

Saturday – December 20 -- PICACHO AZ

Picacho Peak State Park

15520 Picacho Peak Rd, Picacho, AZ

Age Group: All Ages

Estimated # Participants: 100+

0 Scopes needed

Setup Time: 6:00 pm

Start Time: 6:30 pm End Time: 8:30 pm

**Saturday – December 6 – NORTH TUCSON –
SOLAR VIEWING**

Hendricks Elementary School

3400 W Orange Grove Rd

Age/Grade Level: K – 6

Participants: 150

0 Solar Scopes Needed (H-alpha or Whitelight)

Setup Time: 9:30 am.

Start Time: 10:00 am. End Time: 12 Noon.

**Thursday – December 11 -- NORTH TUCSON
Lulu Walker Elementary**

1750 W Rollercoaster Road

Age/Grade Level: K – 5

Participants: 100

0 Scopes Needed

Setup Time: 5:30 pm.

Start Time: 6:00 pm. End Time: 7:30 pm.

Friday – December 19 -- EAST TUCSON

Saguaro National Park – EAST

Temporary location to be determined.

Age Group: All Ages

Estimated # Participants: 100+

0 Scopes needed

Setup Time: 5–5:30pm

Start Time: 6:00 pm End Time: 8:00 pm

Monday – December 29 -- BIOSPHERE AZ

High School Group @ Biosphere2

32540 S Biosphere Rd

Participants: ~10

Age/Grade Level: High School + Adults

0 Scopes Needed

Setup Time: 6:00 pm.

Start Time: 6:30 pm. End Time: 8:00 pm.

by Doug Smith

Observing Programs - What's Up List for December 2025 to January 2026

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

Constellation Hunter Program – The following constellations are well placed for observing in December and January:

Andromeda, Aries, Auriga, Cassiopeia, Orion, Perseus, Pisces, Taurus and Triangulum

Messier Observing Program - The summer Milky Way is setting early. The winter Milky Way is not rising until late. Now we are looking away from the Milky Way so objects are sparse. The following Messier Objects are well placed for observation during December and January (listed in ascending RA):

M103, M33, M74, M76, M34, M77, M45

Lunar and Binocular Observing Program

Here is a list of dates for lunar phases in December and January:

New Moon: December 20, January 18	10 days old: December 30, January 28
40 Hours waxing: December 22, January 20	Full (14 days old): December 4, January 3
72 hours waxing: December 23, January 21	Gibbous: December 11, January 10
4 days old: December 24, January 22	72 hours waning: December 17, January 15
7 days old: December 27, January 25	40 hours waning: December 18, January 16

Solar System Observing Program

The following is a list of planets that can be observed during December and January:

Mercury is an early morning object for all of December and the first half of January. It reaches greatest elongation and brightest on December 8. It moves to an early evening object for the last two weeks of January.

Venus is an early evening object during December. It becomes an early evening object for January. It will be difficult to see during this entire period, being lost in either morning or evening twilight.

Mars is an early evening object during December. However, it is completely lost in the evening twilight setting less than 30 minutes after sunset. In January Mars is technically an early morning object but it is way too close to the Sun to observe rising just a few minutes ahead of the Sun.

Jupiter is well placed for evening observation during December and January. It rises around 7:30 PM on December 1, transiting around 3 AM. On January 30 it rises before sunset and transits around 10:30 PM. It reaches opposition on January 9.

Saturn is well placed for evening observation. It transits around 7 PM on December 1, setting around 1 AM. On January 30 it sets around 9 PM. The rings are still nearly edge on during this period, but they are gradually opening.

Uranus is still well placed for evening observation. It transits around 11 PM on December 1 and around 7 PM on January 30.

Neptune is still relatively close to Saturn. Neptune transits around 10 minutes behind Saturn for this entire period.

Urban Observing Program

The following **deep sky objects** are well placed for observing during December and January: NGC457, NGC663, Cr 463, NGC 752, Stock 2, NGC 869, NGC 884, Tr 2, M77, Tr 3, Stock 23, Mel 20, NGC 1342, M45

The following **Double Stars** are well placed for observation during August and September: Gamma Aries, Gamma Andromeda

Member Astro-Images



Jeff Rothstein

M31

Two-panel mosaic in HaLRGB captured with 105mm refractor, ASI 6200MM Pro and Antlia Pro V filters, about 24.5 hours total exposure.

[Astrobin](#)



NGC 7293

ES127 triplet, ASI2600MM,
HOO, Total exposure: 8hrs
20min

[Astrobin](#)

Mike Mulcahy

**Sh2-274 Medusa
Nebula**

ES127 triplet,
ASI2600MM, HOO,
Total exposure: 8 hrs

[Astrobin](#)



Ardis Herrold

Comet A6 Lemmon

2.5 minutes exposure, 11/15



Comet C/2025 A6 Lemmon
2025-10-29-0139UT
exp. 20m
eVscope eQuinox1
Seeing: 8/10



Rik Hill

Comet A6 Lemmon

Richard "Rik" Hill ©2025
Loudon Obs., Tucson
rhill24@cox.net

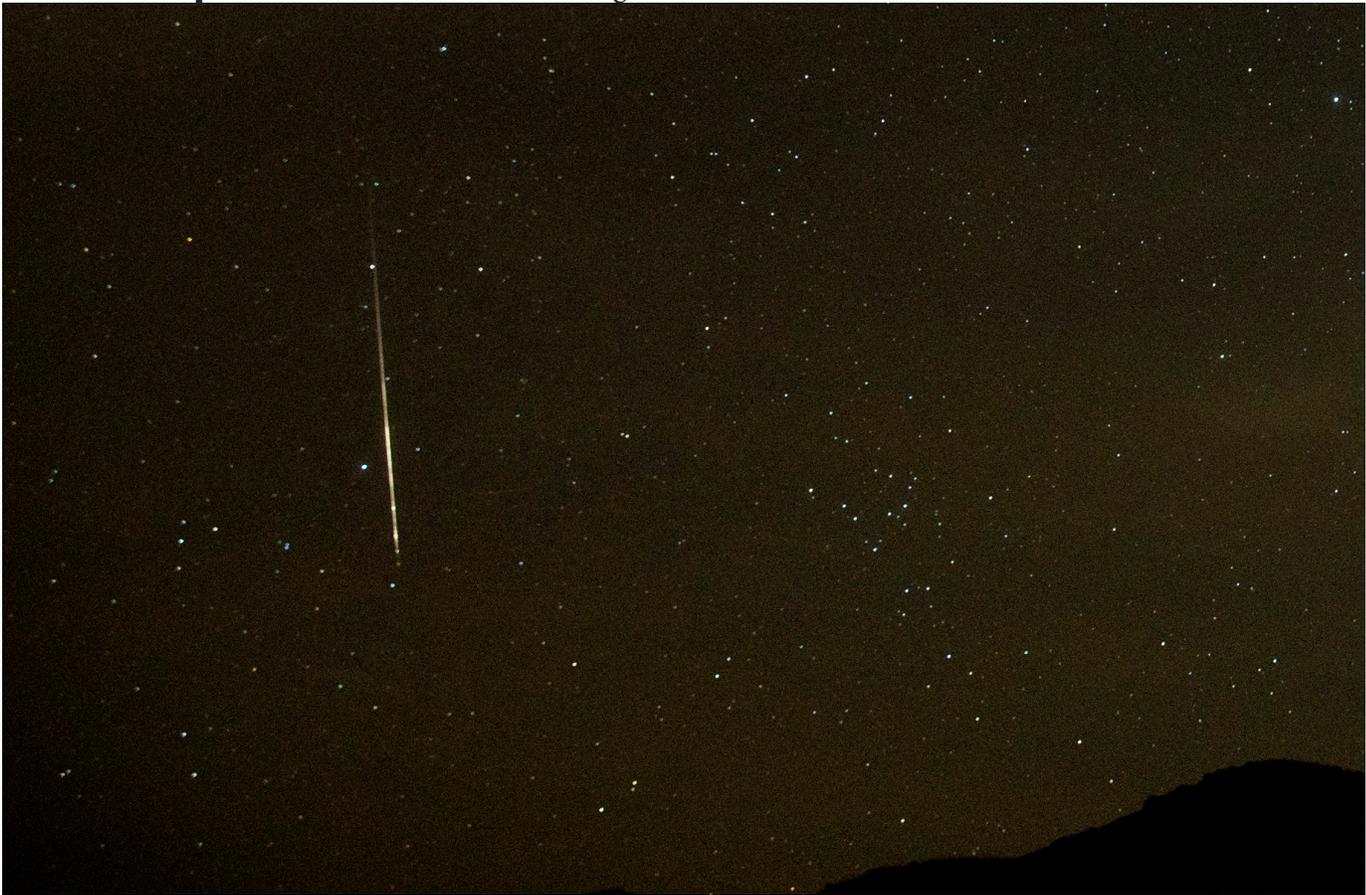


**John
Tsantes**

NGC 7625

Total exposure
9h 39min.
ZWO
2600MC
Pro camera,
Sky-Watcher
Quattro 200p
telescope
with coma
corrector.

Richard Spitzer Leonid meteor caught around 3:00 am, November 17, 2025



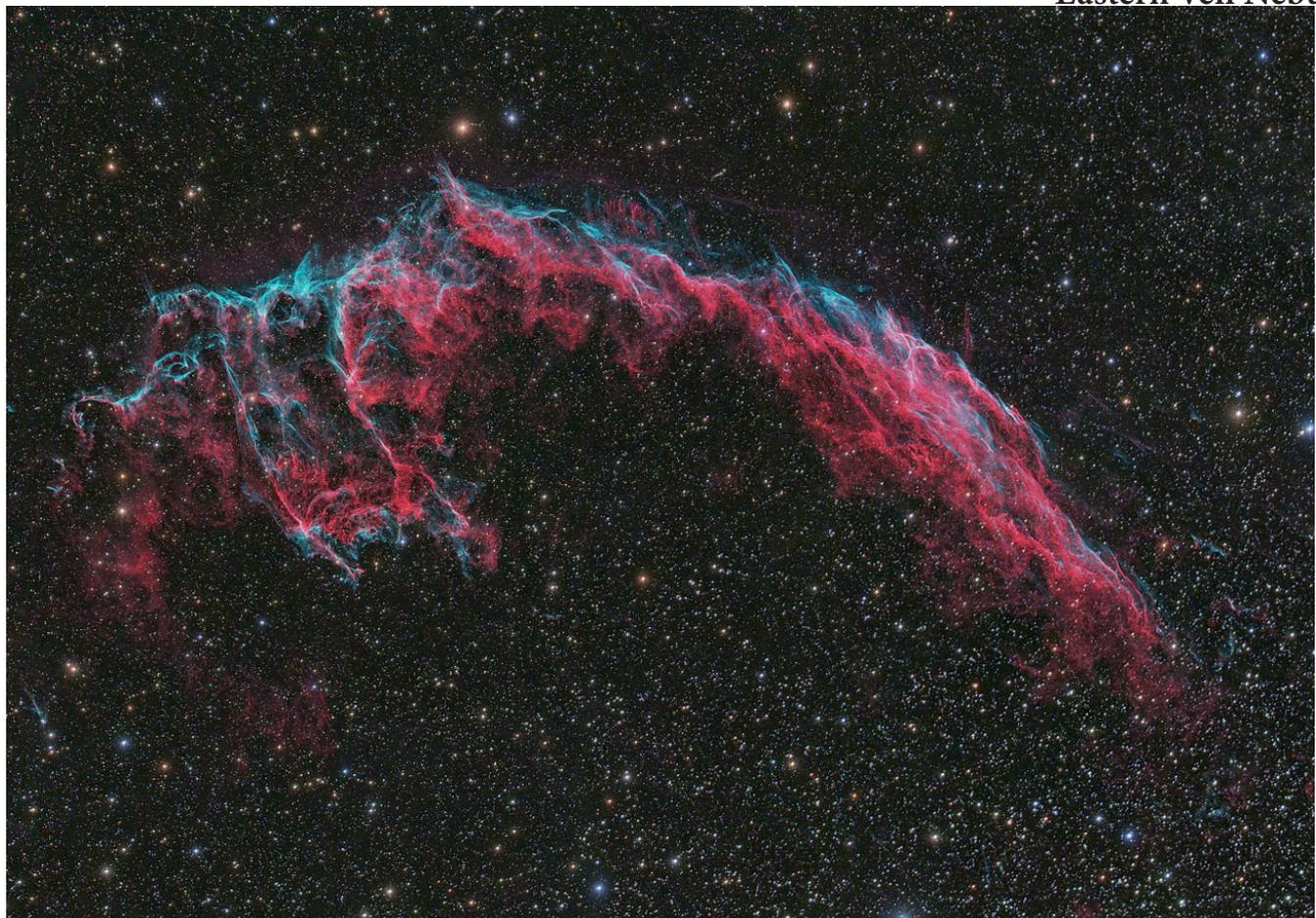


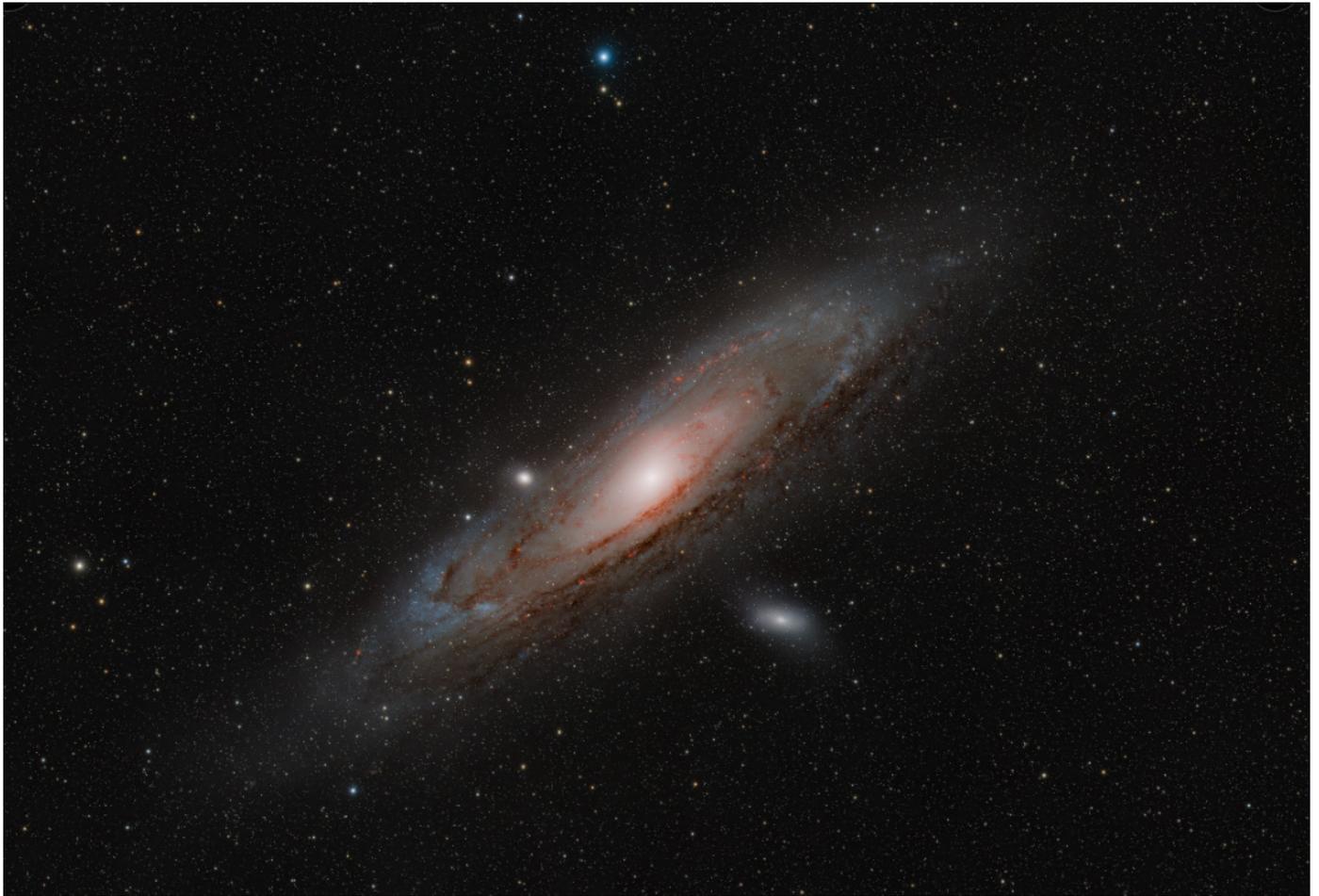
NGC 6960 (above)
Western Veil Nebula

Paul Lorenz

Astro-Tech AT152EDT f/6.4; ASI6200MC Pro

NGC 6992 (below)
Eastern Veil Nebula





M31 [Astrobin](#)

David Stearn

M45 Askar SQA55, ASI 2600 MC Pro,
AM5N Mount, 4hrs total exposure. (below)





M74

GSO RC 8"
f/8 / ZWO
2600MC Pro
/ AP Mach2
mount,
unguided
using
multiple Dec
Arc tracking
models /
no filters /
6.4 hour
exposure

Tom Eby

**Comet
c2025 R2
SWAN**

22.5 min
exposure
10-27-2025
04:00 UT
/ RASA
8 ZWO
2600MC Pro
/ AP Mach
2 mount
+ APCC
Horizons.





Abell 7 [Astrobin](#)

Alex Woronow

M17 [Astrobin](#)



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. **\$1400***



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" diagonal, 2 1.25" eyepieces. One comes with 6x30 crosshair finder, one comes with a telrad and one comes with a red dot finder. **\$500 each**



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. **\$750***



16 inch Meade Lightbridge Truss Tube Dobsonian. 2" focuser (with 1.25" adapter), crosshair finder, mirror cooling fan, shroud, dust cover. A steal at **\$1000!**

TAAA Astronomy Equipment For Sale (continued)



Celestron 5" Omni XLT Tripod, Celestron CG4 GEQ mount, 6x30 finder, diagonal, 1 eyepiece, user's manual. \$400*



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



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.



Small camera tripods - \$10



EYEPIECE CLEARANCE SALE!!!

50+ eyepieces and filters for sale at rock bottom prices! Mostly 1.25". Inquire for availability and pricing

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

To make inquiries about what is available or to express a desire to purchase one of the items please contact: [Douglas Smith](mailto:Douglas.Smith@taaa.org); 520-396-3233

Member Equipment for Sale

- All advertisements are for member-owned equipment. Members may not place ads for non-members.
- Advertisements are for one month. If you would like to run the ad for a longer period you must resubmit the ad each month.
- If you would like to show the item as sold in a following issue, you must send the sold notice to the editor.
- Each member may submit up to two ads per month.
- There are no formal ad restrictions. Please keep them relatively brief. A small photo or two may be submitted. The editor has total discretion as to the formatting of the ads.

Buyers: The TAAA does not assume responsibility for the products sold or offered. It is the responsibility of individuals who posted the ad to reply to your message and confirm the legitimacy. There are risks which you assume when dealing with people who might be acting under false pretenses; all these risks are borne by you. The TAAA does not control the products offered by and to members. But please, let's all be honest with each other!



For Sale: 14" Meade LX200 ACF with goodies.
No Tripod. Excellent condition optically and mechanically. Includes superwedge, Lepus focal reducer, heated dew shield, counterweights, updated firmware, RA/Dec drive tune-up, documentation. Send email for more details.

Asking **\$6000**.

Contact: [Gary Steffens](#)

In need of a new home: **Celestron NexStar Evolution 9.25"**

Celestron Heavy Duty Tripod #93493; Celestron NexStar Carrying Case #94004

Celestron Vibration Suppression Pads #93503

Celestron Accessory Kit with Five 1.25" Plossl Eyepieces, 2X Barlow and Filter Set

Celestron Accessory Kit with Five 1.25" Plossl Eyepieces, 2X Barlow and Filter Set (second set for BinoViewer)

Orion BinoViewer 1.25"

Telrad Finder Sight

Celestron StarSense Autoalign

List prices total well in excess of \$4K, for a TAAA member only asking **\$1200** cash for the lot. All have unfortunately only been used a few times. I will be happy to deliver to their new home in the Tucson area. Contact [Al Frasch](#).

Member Equipment for Sale (continued)

Selling my used **Celestron CGX-L (75lb capacity) Equatorial Mount & Tripod for \$2900**. The unit is in good condition, with original packing & manuals included. New price for this mount/tripod/22lb counterweight combo is \$4800.

If desired, I'm willing to sell the **mount head only for \$2400** (no tripod).

I also have **2 extra counterweights for sale (22Lb @ \$145, and 11lb @ \$100)**.

The mount has a well-modeled PEC curve already downloaded. I used this mount semi-regularly at CAC for 3 years; it performs well. I would prefer to show / deliver at CAC, but can work other arrangements. If interested, contact [Doug Summers](#).

Meade 10" LX200 on Meade Field Tripod in very good shape. Includes the George Dudash LX 200 Autostar upgrade so the system has fresh electronics and is WiFi-capable. Sale includes Autostar controller, power supply, finder scope without lens caps, visual back, mirror diagonal, Meade 26mm Super Plössl eyepiece, Telrad. A great visual scope but I've gone solely to imaging.

Too heavy to ship so must sell locally. Priced to sell: **\$650**.

Contact [Jeff Rothstein](#) or (520) 305-9956 for further details.



Public Astronomy Events



DEPARTMENT OF ASTRONOMY
AND STEWARD OBSERVATORY

Public Evening Lecture Series
Fall 2025 to Winter 2026

Monday, December 8, 2025

Latest News from the Vera Rubin Observatory
Dr. Charles Claver, Vera Rubin Observatory

Monday, January 26, 2026

Dead Planets Around Dead Stars
Dr. Laura Rogers

Lectures are in-person or Watch via [ZOOM](#).

Location: Steward Observatory N210; Parking 2nd Street or Cherry Ave Garage
Open at 7:00PM, Lectures begin at 7:30PM; Telescope viewing 8:30PM Weather Permitting
[More Information](#)

Skyward

By Dr. David H. Levy

December 2025

As tho' a star, in inmost heaven set,
Ev'n while we gaze on it,
Should slowly round his orb, and slowly grow
To a full face, there like a sun remain
Fix'd--then as slowly fade again,
And draw itself to what it was before;
So full, so deep, so slow, ...
As tho' a star, in inmost heaven set,
Ev'n while we gaze on it,
Should slowly round his orb, and slowly grow
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Tennyson -- Eleanore, circa 1830.

This Christmas article begins with an excerpt from Eleanore, one of the early poems written by Alfred Tennyson. It is one of the finest pieces of verse I have ever encountered. The poem tells a story about a youthful Eleanore, who falls in love. But at a point in the final third part of this poem, he turns his tale into a sermon about variable stars. How could young Tennyson possibly know anything about stars that change in brightness? The American Association of Variable Star Observers, better known by its famous acronym AAVSO, would not be founded for 81 years, in 1911.

Young Tennyson was almost certainly familiar with the work of Friedrich Wilhelm Argelander, who today is accredited with launching the study of variable stars. It is probably that familiarity that led the young poet to insert his little lecture on variable stars.

Some of Tennyson's early poetry, published in the early 1830s, was reviewed in the *Journal Quarterly Review*: It went badly:

“We pass by two – what shall we call them? – tales, or odes, or sketches, entitled “Mariana in the South” and “Eleanore”, of which we fear we could make no intelligible extract, so curiously are they run together into one dreamy tissue – to a little novel in rhyme, called “The Miller’s Daughter”. Miller’s daughters, poor things, have been so generally betrayed by their sweethearts, that it is refreshing to find that Mr Tennyson has united himself to his miller’s daughter in lawful wedlock, and the poem is a history of his courtship and wedding.”

Apparently, Tennyson was sensitive to this sarcastic and negative criticism, and he was so affected and hurt by this review that he stopped publishing for almost a decade. His colleagues and friends feared that he had given up writing, and possibly his life, but, as he later told his son Hallam, he was busy revising his older poems, and “in silence, obscurity, and solitude he perfected his art.”

I believe that the 1830s review was grossly unfair. It was mean. I suspect that these reviewers were using poetry they didn't like to demonstrate how brilliant they were. These reviewers are all long

forgotten; I know of nobody who has not heard of Tennyson. I know of many people, besides me, who are just as sensitive to criticism as he was. (By the way, partly as a result of this, I am not an objective reviewer. I think that if someone has the guts to write for publication, she or he deserves every possible encouragement.)

When I recited this extract to my friend Jean Mueller, a well-known discoverer of 15 comets and 107 supernovae during the 29 years she worked at Palomar Observatory, she noticed the variable star connection the minute I read it to her. She agrees: “Was there a specific variable star that he might have had in mind?” These lines teach their readers about variable stars, stars that change in brightness. Such a star does “slowly grow/To a full face” (its maximum brightness) and then “fade again/And draw itself to what it was before” (its minimum).

I have been an active observer of variable stars for many decades. As Leslie Peltier wrote on page 69 in his autobiography *Starlight Nights*, “A variable star was a completely new experience; it was not just something that was THERE, it was something that was HAPPENING!” On the evening of 30 August, 1975, my interest in variable stars entered a new high when I independently discovered Nova Cygni, a 1.6 magnitude exploding star, and then three years later a second Nova Cygni. Variable stars are magical to me, but this little poem from Tennyson is the first one I have found that directly addresses the observation of stars that regularly change in brightness.



Telescopes at the Adirondack Astronomy Retreat. Many are of similar size to what Tennyson used as an accomplished amateur astronomer.

In a way I wish I had known Tennyson. But I am glad I do not, because that would mean that I am at least 175 years old. But I do know the famous and highly regarded astrophysicist Jonathan Tennyson, Alfred’s great great grandson, and we have been friends since I met him at University College London a number of years ago. The Tennyson family is warm and friendly, and I think the poet from long ago would have enjoyed that, and that an appreciation for science still runs in his family. Alfred Lord Tennyson had the ability to take a scientific fact, that some stars vary in brightness, and turn it into a verse that etches itself forever into our hearts.



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.