TAAA Desert Skies Bulletin

Observing Our Desert Skies Since 1954

November 2025

www.tucsonastronomy.org

Membership Meeting

Friday, November 7, 2025 6:30PM

TAAA's next general member meeting will be held on **Friday, November 7, 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.

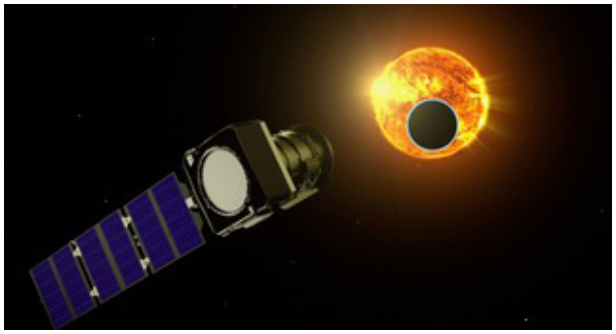
Inside this issue:

Main Presentation at 6:30PM AZT

Title: Exploring New Worlds in Space: From Clay Tablets to the Pandora Space Telescope and Beyond

Presentation: Modern science is opening a fascinating window on worlds around other stars. Ground- and space-based telescopes are now discovering new planets at an accelerating pace. Careful, high-precision observations now provide important clues on the atmospheric compositions of many extrasolar planets. Dr. Daniel Apai and colleagues completed the assembly, integration, and testing of NASA's latest exoplanet telescope, Pandora, which is now scheduled for launch in January, 2026. In this talk, Dr. Apai will review the search for new worlds in the solar neighborhood and report on the goals and progress on Pandora. He will also explore the potential of the Nautilus Deep Space Observatory, with its constellation of large-diameter, lightweight space telescopes that offer a bold vision for the future of exoplanet exploration.

Biography: Daniel Apai is Professor of Astronomy, Planetary Sciences, and Optical Sciences at The University of Arizona. His primary research interests lie in the fields of exoplanets, astrobiology, and innovative optical systems and architectures for space observatories. Dr. Apai earned his Ph.D. in Astrophysics from Heidelberg University. He worked in the Space Telescope Science Institute's Science Policy Group on the Hubble Space Telescope mission before joining the University of Arizona faculty in 2011. At UA, Dr. Apai leads the NASA-funded Alien Earths astrobiology project that focuses on understanding the formation and habitability of nearby planetary systems. He leads a team that characterizes exoplanet and brown dwarf atmospheres, with particular emphasis on understanding the connections between the properties and evolution of clouds and atmospheric circulation. Dr. Apai is leading the Nautilus Deep Space Observatory (NDSO) concept, and he is co-leading the technology development program that enables NDSO's innovative design.



Artist's concept of Pandora Telescope observing an exoplanet. Credit: NASA Goddard Space Flight Center

Notes From The President

November 2025

by Ed Foley

There are many qualities that make TAAA a great organization. At the heart of our success is the tremendous level of member volunteerism. We are a group of over 700 members. In the group there are over 200 members who volunteer on a regular basis to make the organization work. Our mission is twofold – to support the education and interests of our members, and to share the sky with the community. To operate, we have a cadre of leaders and volunteers who organize meetings, workshops, and classes from fundamentals of astronomy to astro-imaging. We also have volunteers who serve as club officers, committee members, managers of our equipment, and who maintain our lending library of books and telescopes plus more. This collaboration has built a strong, well-functioning group that has stood the test of time, all springing from the spirit of volunteerism.

In addition to the administrative efforts, we have members who are active in the community. Recently, many of our members earned Astronomical League awards for their outreach efforts. The number earned by TAAA members was the second largest in the nation, demonstrating the dedication of these volunteers and leaders. They serve a critical role in the community, sharing and educating at school star parties, private events, and parks.

This volunteer spirit is recognized in the community and good things have come our way because of our reputation. We have gained support from professionals, business leaders, and numerous local foundations. Due to this reputation, TAAA has been the benefactor of significant donations of funds and equipment.

I am proud of the volunteer efforts this organization displays. On November 22 we are going to celebrate the fruit of that reputation and amazing display of volunteerism as we unveil the new addition to our portfolio of telescopes - the 32-inch DFM telescope in its observatory at our eastern dark site, CAC. I hope you will join us to acknowledge the volunteers and donors who made the assembly and installation of this telescope possible.

Ed

President Ed Foley:
president@tucsonastronomy.org

Vice-President: David Rossetter
vice-president@tucsonastronomy.org

Secretary: Bob Reynolds
secretary@tucsonastronomy.org

Treasurer: Michael McDowell
treasurer@tucsonastronomy.org

BOD Members-At-Large:

Stephen Ferris mal1@tucsonastronomy.org
David Eicher mal2@tucsonastronomy.org
John Kalas mal3@tucsonastronomy.org

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 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.

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

Chiricahua Astronomy Complex (CAC) Open House and 32-Inch Telescope Dedication

We will be having a Chiricahua Astronomy Complex (CAC) Open House and 32-Inch Telescope Dedication Saturday November 22, 2025. This is our normal CAC November weekend. **If you are driving yourself to CAC, no reservation is required, just come on out.**

We will also have a Charter Bus to CAC departing at 2:00 PM from the Walmart in SE Tucson in Rita Ranch and returning at 10 pm. **A Reservation is required for the bus.** The Walmart address is: 9260 S Houghton Rd. Members will be responsible to getting to/from the bus. **There is a nominal fee of $20/person for the bus.** The CAC address is 9315 E Perseus Way, Pearce, AZ.

We will have observing through the new 32-Inch, 40-Inch Big Boy, 9-Inch Folded Refractor, 14-Inch Wally Rogers, plus other telescopes.

Schedule of Events for November 22, 2025.

2:00 PM Bus departs Walmart in Rita Ranch (9260 S Houghton Rd).
4 PM Bus arrives CAC.
4:00 - 6:00 PM CAC Open House and site tours.
5:00 PM 32-Inch Dedication.
6:00 - 8:00 PM Observing through CAC telescopes.
8:00 PM Bus departs back to Tucson.
10:00 PM Bus arrives at Walmart in Rita Ranch.

We will have some munchies and drinks available at CAC.

For Reservations or if any questions, Email Jim Knoll, CAC Director.

The 32 inch DFM Installation

By Ed Foley


Using a crane to place the tube

In 2023, TAAA received a donation of a .8 meter DFM research grade telescope. The assembly of the telescope in its observatory at CAC was completed by a TAAA team of volunteers in October. The assembly over ten days included TAAA members Jeff Buzek, Ed Foley, Joe Jakoby, Jim Knoll, Tom Melsheimer, Larry Stepp, Bernie Stinger, Tom Rolfsmeyer, Bob Rose, and Phil Yehle. Software updates to the telescope operating system are being done by Bob Rose with the help of DFM. A number of operational issues are being worked out for safe operations by members. We will have the telescope available for viewing at its November 22 open house when it will be operated by designated commissioning staff. We expect to be able to open training to general members in January 2026.


Placing the tube

This telescope was one of three originally funded by a National Science Foundation grant through the Small Business Innovation Research program. The concept the telescope tested revolved around servo motor control of telescopes. It also introduced the DFM Engineering Inc. thin mirror line of telescopes in this .8 meter size. These telescopes have a primary mirror pneumatically supported by unique air bags. They also have their focus at the secondary mirror, thermally stabilized by invar rods. This classical Cassegrain has an f/3 primary mirror and an effective focal ratio of f/13. Its mount has a 30-inch diameter friction drive in RA and a 28-inch diameter friction drive in DEC. The telescope was designed to be able to carry instrument payloads of up to 220 pounds with its mirror cell having multiple 12 bolt patterns in the KPNO standard. DFM has a specialty in design of telescopes to perform satellite tracking. Once fully commissioned, it is designed to have pointing accuracy better than 30 arc seconds. It will slew 4 degrees per second. It is quite impressive to watch such a large instrument move so accurately and gracefully.


Bob Rose with the assembled telescope

Its sister telescopes are at Appalachian State University in Boone, NC and at the Schrorringen Telescope Science Institute observatory east of Cologne in Germany. These sister telescopes are used both for research and for training young scientists. With their long focal lengths, these two telescopes are dedicated to three primary areas – high resolution astro-imaging, eclipsing binary research, and spectroscopy.

Astronomical League Observing Awards for October 2025 - by Doug Smith

Below is a list of Astronomical League members who earned AL Observing awards during the month of October 2025:

Nelsey Toner – Binocular Messier Observing Program
David Sharp – Messier Observing Program – Silver Award
Douglas Smith – Space Weather Observing Program

TAAA Holiday Party

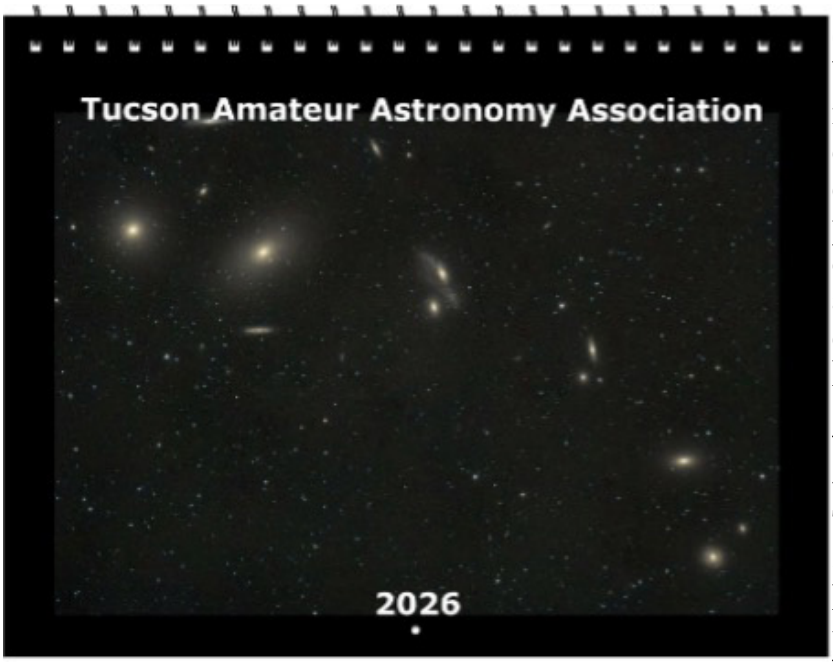
Christmas Tree Cluster
NASA Chandra X-Ray Observatory

Save the date

It's that time again! The TAAA holiday party will be at the home of Ed and Janet Foley on Saturday December 13th for the 10th year.

The event is a potluck dinner. Each attendee is encouraged to bring a lightly used Astronomy item to place in the raffle that is held at the end of the evening. There will also be a silent auction throughout the evening for telescopes.

TAAA Calendar Available Starting in October



They are finally here! The 2026 TAAA Calendar will be available to members beginning in October. It will be packed full of information about TAAA, our events, and significant astronomy events throughout the year. The picture portion of the calendar will be 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.

Thursday, November 20, 6:30 pm

True Food Kitchen

2905 E Skyline Dr, Suite 298,
(La Encantada, Skyline and Campbell)

Preview the menu

RSVP 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 scope. The observatory facility will be identical to the current Wally Rogers 12'x14' observatory and it 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 $40,500! We are just $9,500 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!

Tuscon Residents can Vote for Control of Light Pollution

Plan Tucson 2025 is Proposition 417 on your November 4th ballot

If you would like to learn more about Plan Tucson 2025, please explore the following materials:

Overview of Proposition 417 – A summary and background on what Plan Tucson 2025 covers.
Plan Tucson 2025 Document – The full approved document available for review.

All new and updated materials can be found at plantucson.tucsonaz.gov.

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 the 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 520-396-3233.

Fundamentals of Astronomy Class

Open for enrollment

Place: Randolph Center, 200 S. Alvernon, Tucson
Date: 3 consecutive Saturdays: January 10, January 17, January 24, 2026
Time: 8:30 AM until 3:30 PM

Synopsis: This course is designed for anyone interested in learning the basic concepts of amateur astronomy. Topics covered include (but are not limited to) the solar system, deep sky objects, stars, telescopes, eyepieces, mounts, star hopping, observation techniques, plus much more. This course is highly recommended for novice amateur astronomers and for anyone who may have just purchased a first telescope. Taking this class will also aid the student in understanding the more advanced lectures often given during general membership meetings.

Enrollment is strictly limited to 20 students and is on a first-come basis.

If interested, you can email or call the instructor: Doug Smith 520-396-3233. Or sign up using the signup sheet at General Member Meetings through January 2026.

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)

November 14-15
November 21-22

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

by Jim Knoll

Upcoming CAC Weekend Dates (Friday - Saturday)

November 21-22 (New Moon November 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, 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 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 the Chiricahua Astronomy Complex? 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 4 new member-leased pads at CAC this Fall. If you are interested in having a leased pad available for your use with your equipment, please email me. 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 *32-inch Dedication* *November 22*
November 14-15		
November 21-22	November 19	November 21-22
December 12-13		
December 19-20	December 19	December 19-20
	January 18	January 16-17
	February 17	February 13-14
	March 18	March 20-21

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, November 13, 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)

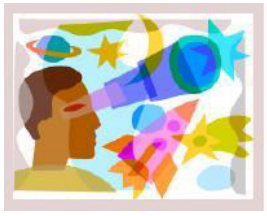
by Sandy Nichols

The next RASIG meeting will be **Wednesday, November 19th** 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: Numerous free software packages exist for amateur radio astronomy. At our next meeting Gary Steffans will discuss how he uses the Virgo package.

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, November 10th at 7:00 PM by Zoom. A link will be emailed to all TAAA members. If you enjoy broadening the public's understanding of astronomy, we look forward to seeing you at this meeting. We'll discuss upcoming outreach activities.

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. This will

take you to a page where you'll find a sign-up link. 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.

- 11/7/2025 (Fri) 6 PM - 8 PM Esmond Station K-8 (Mary Anne Cleveland/Atterbury Wash) Telescopes Eyes on the Universe Toolkit, 300 expected. Volunteers: Susan O'Connor, and one more volunteer
- 11/13/2025 (Thurs) 5 PM - 6:30 PM Myers-Ganoung Elementary (29th/Rosemont) any toolkit. Volunteers: OPEN (two volunteers needed)
- 11/19/2025 (Wed) 3 PM - 4 PM Santa Rosa Library (I-10/22nd St) other activity, 10 expected. Volunteers: Susan O'Connor, and one more volunteer
- 1/22/2026 (Thurs) 5 PM - 7 PM Hermosa Montessori (Ft Lowell/Soldier Trail) any toolkit, 200 expected. Volunteers: Pete Hermes, and one more volunteer

I'm delighted that more TAAA members are taking an interest in supporting these types of events. I believe this is the first time I'm able to list non-telescope outreach events that are FILLED. Thank you to all who are volunteering!

- 11/5/2025 (Wed) 5:30 PM - 7PM DeGrazia Elementary (Camino De Oeste/Cortaro Farms) Black Hole Survival Toolkit, 150 expected. Volunteers: Pete Hermes & Nelsey Toner
- 11/12/2025 (Wed) 5:30 PM - 7:30 PM Senita Valley Elementary (Houghton/Irvington) any toolkit. Volunteers: Susan O'Connor & Vincent Verna
- 11/18/2025 (Tue) 5 PM - 6:30 PM Erickson Elementary (Golf Links/Wilmot) Space Rocks Toolkit, 110 expected. Volunteers: Tom Sarko & Nelsey Toner
- 12/6/2025 (Sat) 10 AM - Noon Hendricks Elementary (Thornydale/Orange Grove) Shadows & Silhouettes Toolkit, 200 expected. Volunteers: Pete Hermes & Susan O'Connor

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, November 17, at 7:00 pm** via ZOOM.

Topics: Beginners' Corner - Ask A Question
How To Use Bill Blanshan's PixelmathUI "Scriptlets" in PixInsight. - David Stearn
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

November 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 November, 2025.**

Please let me know by 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

November Events still in need of Volunteers

Wednesday – November 5 -- FAR NORTHEAST TUCSON
Hermosa Montessori School
12051 E. Fort Lowell Rd
Age/Grade Level: 7 & 8
Participants: 40+
1 Additional Scope Needed
Setup Time: 5:30 pm.
Start Time: 6:00 pm. End Time: 8:00 pm.

Friday – November 7 -- Mountain Vail (East of Rita Ranch)
Esmond Station Elementary/Middle School
9400 S Atterbury Wash Way
Age/Grade Level: K – 8th Grade
Participants: 150 – 200
1 Additional Scope Needed
Setup Time: 5:30 pm.
Start Time: 6:00 pm. End Time: 8:00 pm

November Events still in need of Volunteers

Friday – November 14 -- VIRTUAL EVENT
TAAA Virtual Star Party – Online Zoom
Event will be streamed live to TAAA Social Media. Volunteers need to use camera to stream ob-servations through zoom to Social Media. Age/Grade Level: All
Zoom viewers: 50 – 100
2 Additional Volunteers/Scopes Needed – **Jim Knoll is Moderator**
Online Setup Time: 5:00 pm.
Start Time: 6:00 pm. End Time: 8:00 pm

Friday – November 21 -- NW TUCSON (PCC NW Campus) – SOLAR AZ STEM Adventure
7600 N Shannon Rd
Age/Grade Level: 4th to 8th Grades
Participants: 150 – 200
2-3 Additional Solar Scopes needed (H-alpha or Whitelight filter)
Setup Time: 8:00 AM.
Start Time: 9 AM. End Time: 1:00 PM

Saturday – November 15 -- EAST TUCSON
Saguaro National Park – EAST
Saguaro EAST is located at 3693 S Old Spanish Trail.
Age Group: All Ages
Estimated # Participants: 100+
2 Additional Scopes needed
Setup Time: 5-5:30pm
Start Time: 6:00 pm End Time: 8:00 pm

Saturday -November 22 -Chiricahua Mountains
Chiricahua National Monument
12856 E Rhyolite Creek Rd, Willcox, AZ
Age/Grade Level: All Ages
Participants: 75
2 Additional Scopes Needed
Setup Time: 6:00 pm.
Start Time: 6:30 pm. End Time: 8:30 pm.

November Events Filled—No Volunteers Needed

Saturday – November 1 — ORACLE AZ
Oracle State Park
3820 E Wildlife Dr, Oracle AZ
Age/Grade Level: All Ages
Participants: 125 – 150
0 Scopes needed
Setup Time: 6:00 pm.
Start Time: 6:30 pm. End Time: 8:30 pm.

Wednesday -November 5-FAR NORTH TUCSON
DeGrazia Elementary School
5051 W. Overton Road
Age/Grade Level: K – 6th Grade
Participants: 100
0 Scopes Needed
Setup Time: 5:30 pm.
Start Time: 6:00 pm. End Time: 7:00 pm.

Tuesday – November 4 -- SE TUCSON
Ford Elementary School
8001 E Stella Rd.
Age/Grade Level: K – 5th Grade
Participants: 100
0 Scopes Needed
Setup Time: 5:30 pm.
Start Time: 6:00 pm. End Time: 7:00 pm.

Wednesday – November 12 -- WEST TUCSON
Cooper Center for Environmental Learning
5403 W Trails End Rd
Age/Grade Level: Grade 4
Participants: 45
0 Scopes Needed
Setup Time: 6:30 pm.
Start Time: 7:00 pm. End Time: 8:30 pm.

Thursday – November 13 --FAR EAST TUCSON
Henry Elementary School
650 N. Igo Way
Age/Grade Level: K – 6
Participants: 80 – 100
0 Scopes Needed
Setup Time: 5:30 pm.
Start Time: 6:00 pm. End Time: 8:00 pm.

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Thursday – November 20 -- SW TUCSON
Lynn/Urquides Elementary School
1573 W Ajo Way
Age/Grade Level: K-6
Participants: 100+
0 Scopes Needed
Setup Time: 6:00 pm.
Start Time: 6:30 pm. End Time: 7:30 pm.

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Friday – November 21 -- SOUTHWEST TUCSON
Pistor Middle School
5455 S Cardinal Ave
Age/Grade Level: 6th to 8th Grades
Participants: 75
0 Scopes Needed
Setup Time: 6:30 pm.
Start Time: 7:00 pm. End Time: 8:30 pm.

Wednesday – November 19 -- NE TUCSON
Sabino High School
5000 N. Bowes Rd.
Age/Grade Level: K – High School students + families
Participants: 150 – 200
0 Scopes Needed
Setup Time: 5:30 pm.
Start Time: 6:00 pm. End Time: 8:00 pm.

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Friday – November 21 -- NORTHEAST TUCSON
Pima County Conservation Lands & Resources (CLR) @ Agua Caliente Park
12325 E Roger Rd.
Age Group: All Ages
Estimated # Participants: 75 – 100
0 Scopes needed
Setup Time: 6:00 pm
Start Time: 6:30 pm End Time: 8:30 pm

by Doug Smith

Observing Programs - What's Up List for November - December 2025

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

Constellation Hunter Program – The following constellations are well placed for observing in November and December: Andromeda, Aquarius, Aries, Cassiopeia, Cepheus, Lacerta, Pegasus, Pisces, Triangulum.

Messier Observing Program - The summer Milky Way is setting early. The winter Milky Way is not rising until late. We are looking away from Milky Way, so objects are more sparse. The following Messier Objects are well placed for observation during November and December (listed in ascending RA): M52, M110, M31, M32, M103, M33, M74, M76

Lunar and Binocular Observing Program

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

New Moon: November 20, December 20
40 Hours waxing: November 22, December 22
72 hours waxing: November 23, December 23
4 days old: November 24, December 24
7 days old: November 28, December 27
10 days old: November 1, December 30
Full (14 days old): November 5, December 4
Gibbous: November 12, December 11
72 hours waning: Nov 17, December 17
40 hours waning: Nov 18, December 18

Solar System Observing Program

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

Mercury is an early evening object during the first two weeks of November. It then becomes an early morning object for the remainder of the year. It reaches greatest elongation and greatest brightness on December 8.

Venus is an early morning object for the remainder of 2025. However it is getting closer to the Sun with each day and by year's end will rise just a few minutes before the Sun.

Mars is an early evening object for the remainder of 2025. However it sets less than one hour after the Sun on November 1 and just ten minutes after the Sun on December 31, so it is basically lost in the twilight during this period.

Jupiter is well placed for evening viewing during November and December. It rises around 9:30 PM on November 1 and around 5:30 PM on December 31.

Saturn is still well placed for early evening observation during November and December. It transits around 9 PM on November 1 and around 5:15 PM on December 31. The rings are still nearly edge-on but they are opening up now so they will provide a better view as time goes on.

Uranus is well placed for evening observation during November and December. It transits around 1 AM on November 1 and around 9 PM on December 31. It reaches opposition on November 20.

Neptune is well placed for evening observation during November and December. It's relatively close to Saturn. It transits just 10 minutes behind Saturn during these two months.

Urban Observing Program

The following **deep sky objects** are well placed during November and December: NGC 7662, NGC 7789, NGC129, M32, M31, NGC457, NGC663, Cr 463, NGC 752.

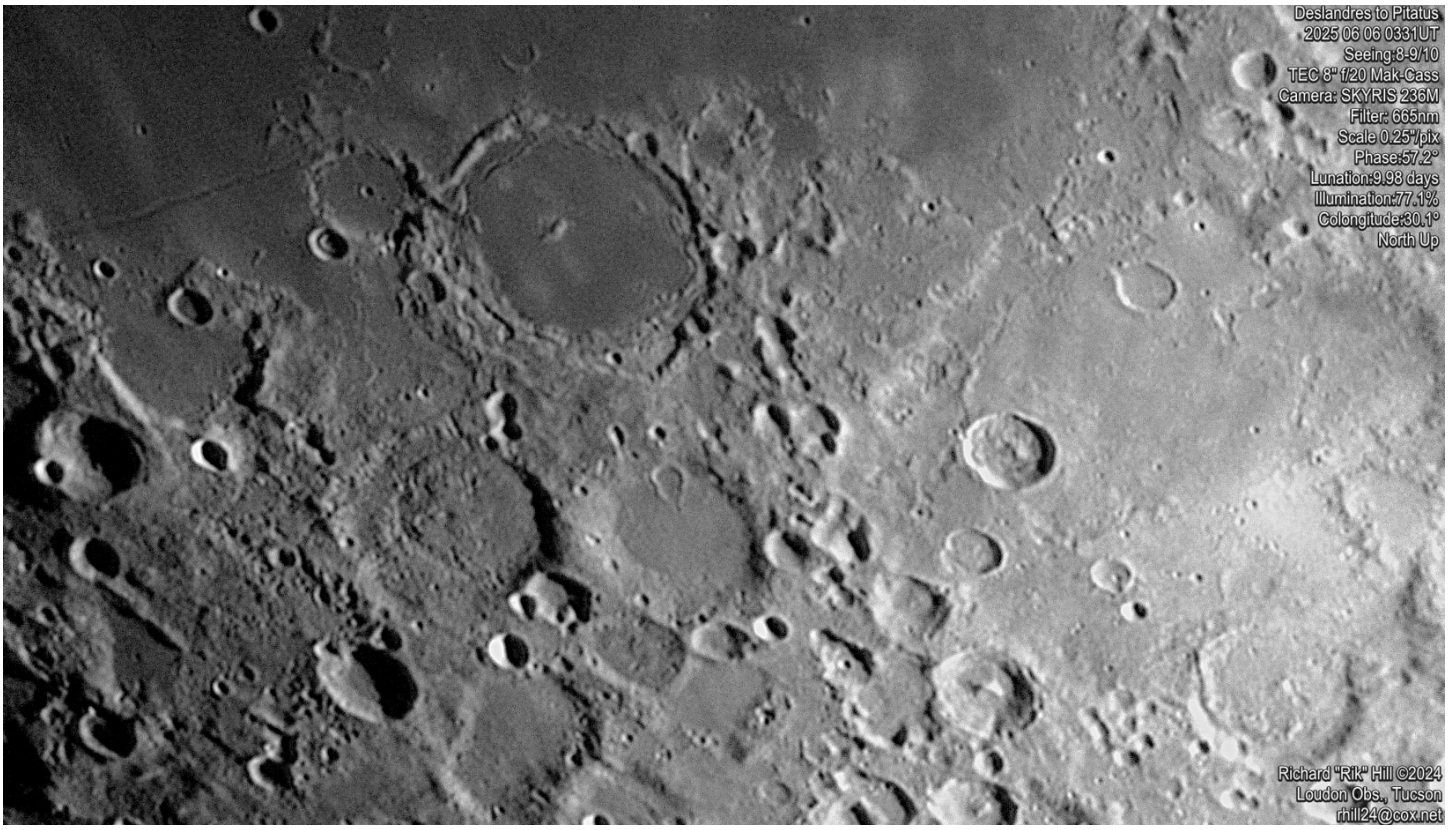
The following **Double Stars** are well placed for observation during August and September: Eta Cassiopeiae, Gamma Arietis.

Member Astro-Images

NGC 253

Rik Hill

South shore of Nubium



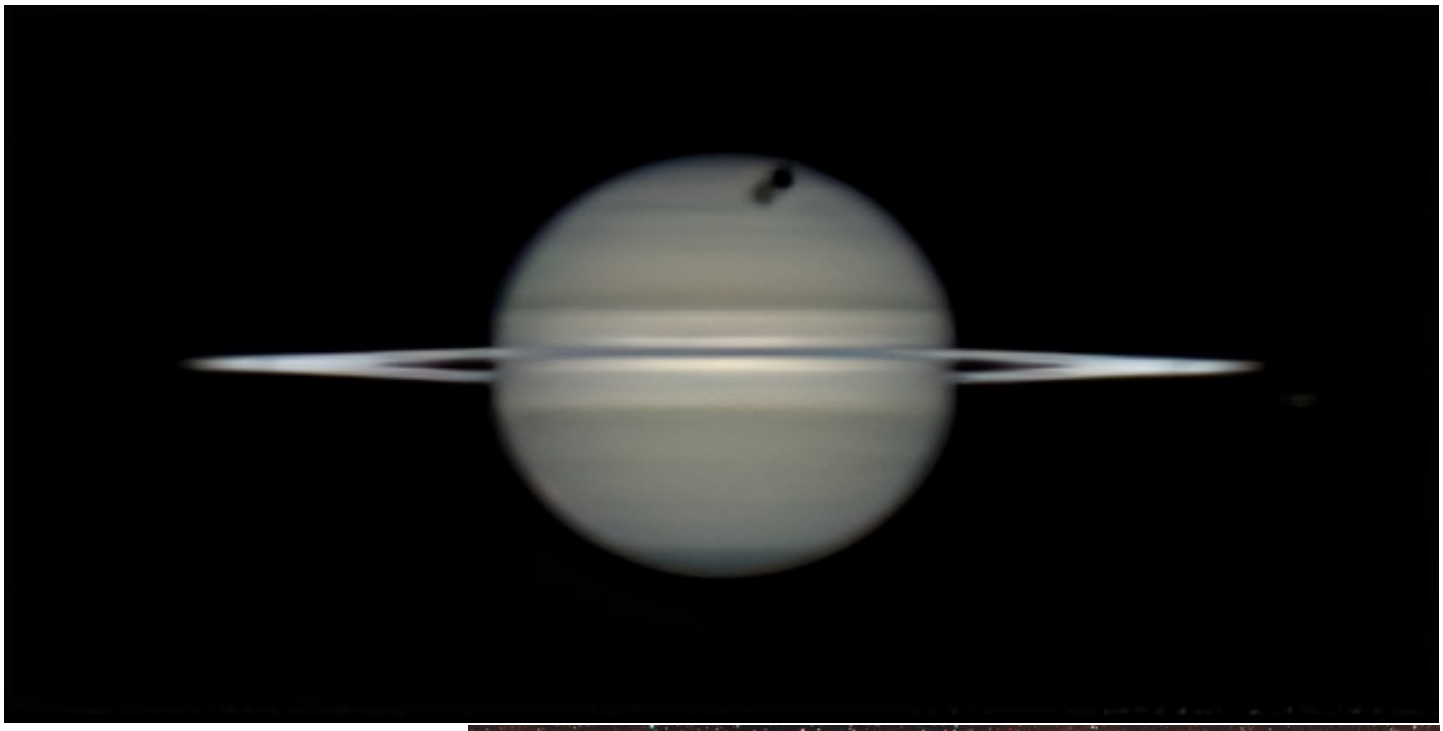
Arp 282

GSO RC 8” @f/8, ZWO 2600MC Pro, AP Mach2, unguided using Dec Arc tracking model, no filters, 3.8 hr exposure.

Tom Eby

NGC 7771 Galaxy Group

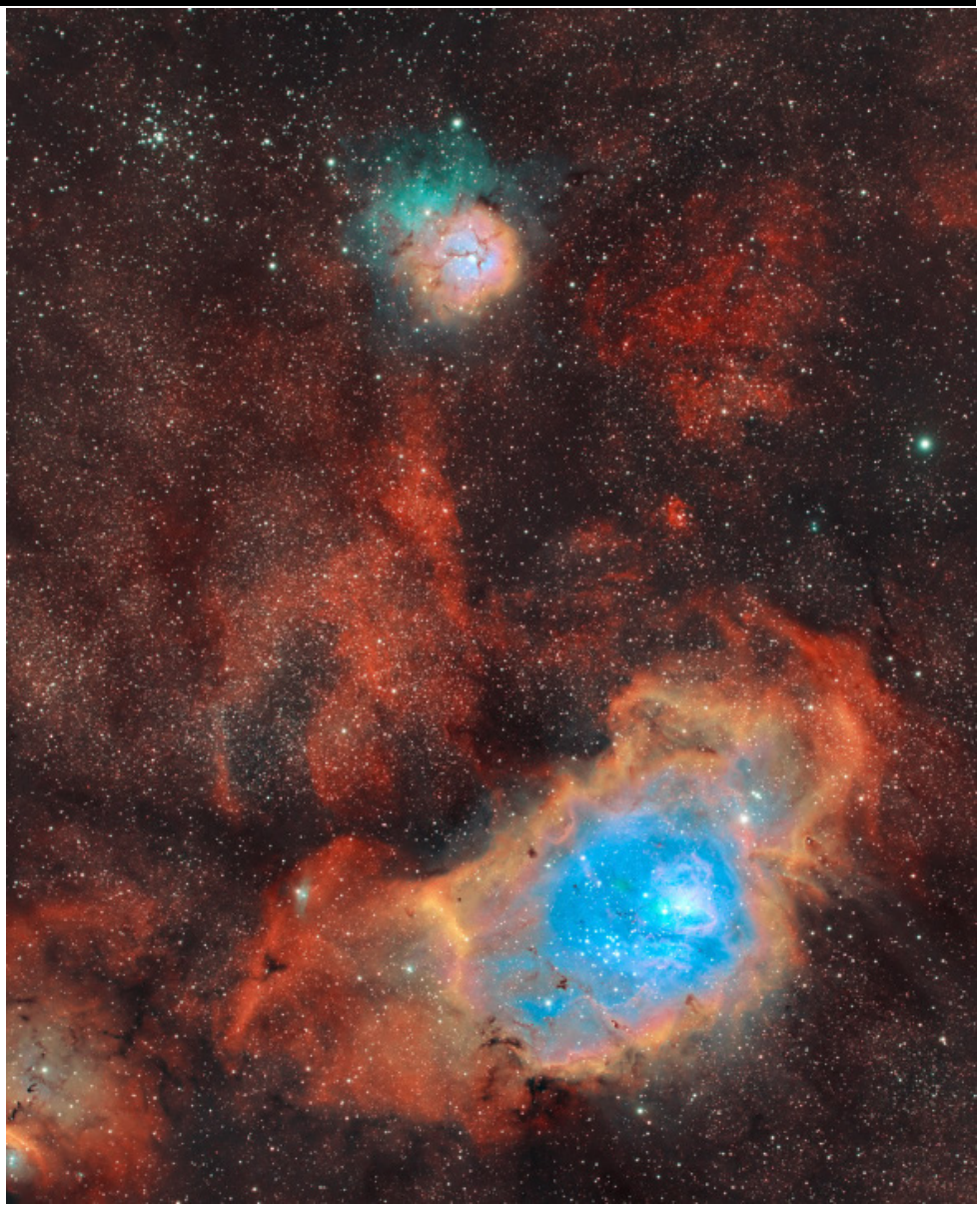
RC 8” @ f/8, ZWO 2600MC Pro, CEM70ec mount PhD2 bump guided with Askar OAG + asi174mm mini guidecam, no filters, 5.0 hour exposure.



Gary Steffans

Saturn and Titan transit 9/20/2025

16” f/8 Ritchey–Chrétien , 2.5x barlow, ASI120MC, ZWO atmospheric dispersion corrector. Stacked the best 5% of 4013 images.



Deb Mohan

M8 and M20

Telescopius

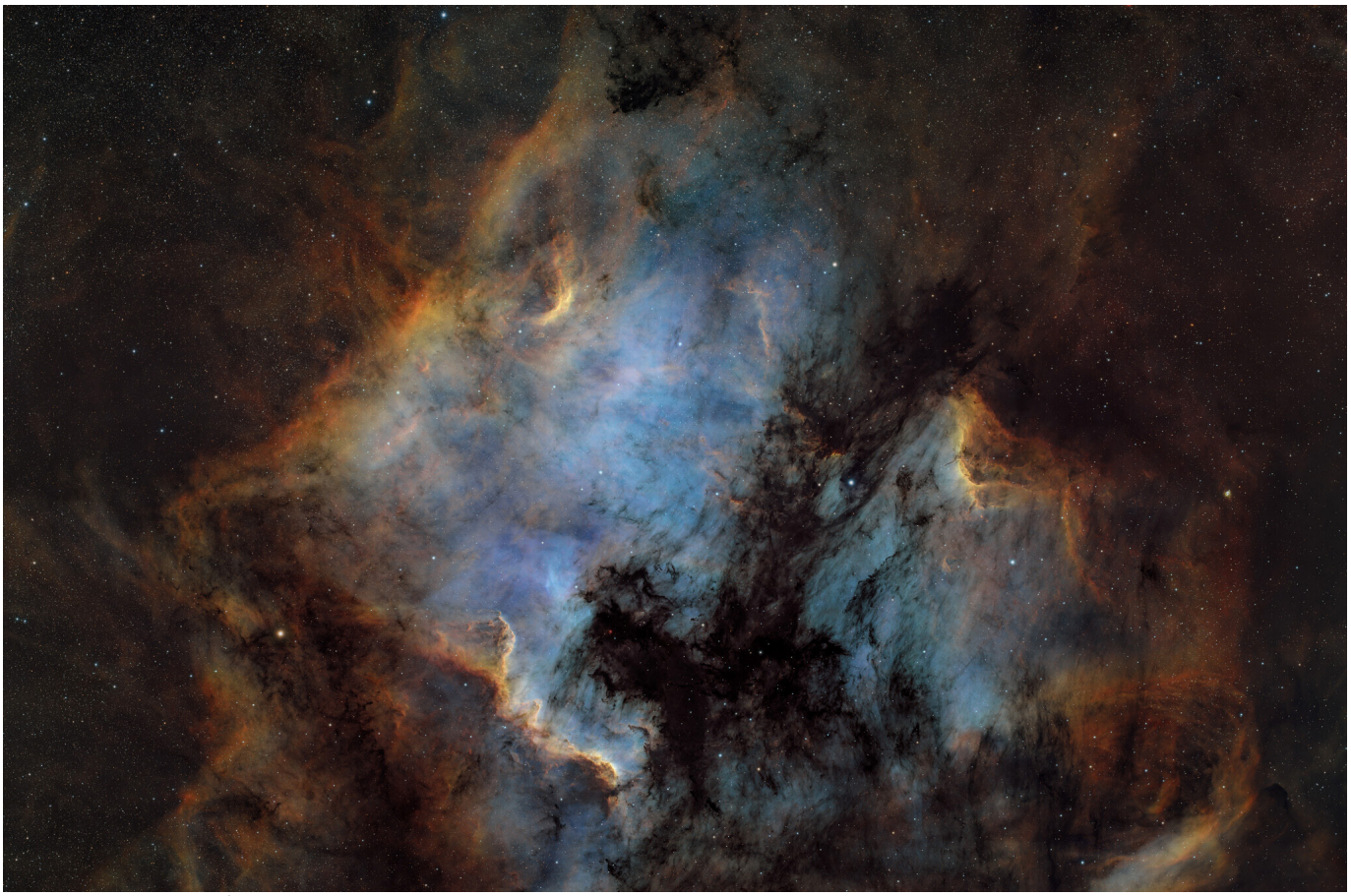
Craig Harding

LBN 682 and CE Camelopardalis. 8 hours of integration, Astro-Tech 130edt with 0.80 reducer/flattener, ASI2600MC Pro with IDAS NBZ filter, ASIAir on an AM5N mount.

Ed Beshore

Comet c2025 A6 Lemmon

23 minutes in RGB tracked at cometary rate.



NGC 7000 and IC 5070 Astrobin

David Stearn

Comet c2025 A6 Lemmon Astrobin

NGC 253 Astrobin

Alex Woronow

NGC 6822 Astrobin

M 45 - 21 subframes using 3 minute exposures.

Connor Justice

William Optics Pleiades 111 with ZWO Duo.

NGC 7023 - 21 subframes using 3 minute exposures.

IC5070 Pelican Nebula

Sky-Watcher 200p telescope, ASI 2600 MC Pro camera, 6.5 hours integration.

John Tsantes

NGC 7380

Sky-Watcher 200p telescope, ASI 2600 MC Pro camera, 18 hours integration.

LDN 576

Total integration: 8h 15m, Ha: 4h 21m (87 × 180”), OIII: 3h 54m (78 × 180”), Sky-Watcher Quattro 200P ZWO ASI2600MM Pro, Sky-Watcher CQ350 Pro, Antlia 3nm Narrowband H-alpha 2”, Antlia 3nm Narrowband Oxygen III 2”

Randy Smith

LDN 1235 and 1251

Total integration: 5h 45m, LP: 5h 45m (115 × 180”), Askar FMA180, ZWO ASI2600MC Pro, Sky-Watcher Wave 150i Strainwave Mount, Optolong L-Pro 2”

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

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.

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

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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; 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 $1650.00
Celestron CGX mount, complete with HD Tripod, NexStar+ Hand Controller, and counterweights (3). Carrying bags for counterweights and tripod included. Saddle will accept either Losmandi or Vixen OTA Dovetail bar.

My back can't handle the carrying weight any longer and I need to downsize. Bernie Stinger 612-396-8839

For Sale
Sky-Watcher Esprit 120ED APO
Original owner less then two years old NOT used much because of health issues **$3300**

Sky-Watcher EQ6-Pro GOTO mount Original owner less then two years old NOT used much because of health issues **$2000**

Special note: If someone wants **both it's $4500 package deal**
FREE Accessories with the package deal ONLY and pickup
- Extension Pier
- QHY Polemaster with Polemaster Adapter
- Sky-Watcher Synscan GPS Module
- 7.5 pound Counterweight

Wheeley Bar NOT included
Contact: Joe Gianninoto, Email or 520-908-3393 (this is a land line).

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

Planetary Science Institute Event

Spooky Star Party!

More Information

Amanda Hendrix, Ph.D.
Director & CEO
Planetary Science Institute

COLLEGE OF SCIENCE
LUNAR & PLANETARY LABORATORY

LPL Evening Lecture Series 2025

All Lectures are in Kuiper 308 on the U of A Campus or Zoom

November 19, 7-8PM
From Lava to Life: Microbial Colonization in Volcanic Environments
Dr. Solange Duhamel
Associate Professor, Molecular and Cellular Biology, University of Arizona
Register for Zoom

ARIZONA
DEPARTMENT OF ASTRONOMY AND STEWARD OBSERVATORY

Public Evening Lecture Series Fall 2025

Monday, November 10
The Modern Search for Potential Habitats of Extraterrestrial Life in the Solar System and Beyond
Dr. Daniel Apai, Steward Observatory

Monday, November 24
Dead Planets Around Dead Stars
Dr. Laura Rogers, National Optical/IR Lab

Monday, December 8
Latest News from the Vera Rubin Observatory
Dr. Charles Claver, Vera Rubin Observatory

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

November 2025

What can happen when you are in a bad mood

Most of the story that follows is true, although I admit possibly to a few exaggerations.

It was an August evening, in 1863, at the U.S. Naval Observatory in Washington, D.C., and Asaph Hall, who was observing with the 9.6-inch refractor, was not in a good mood. The night was not going particularly well. To add to his stress, there was a knocking at the observatory's front door. Planning to vent his unease at whoever was knocking, Hall descended the stairs and thrust the front door open. At the door were two gentlemen. According to George William Hill's Biographical Memoir of Asaph Hall, 1829-1907, one was likely Edwin Stanton, the Secretary of War. The other was Abraham Lincoln, the 16th President of the United States. Lincoln explained that they were out walking and wanted to know if they could have a brief look through the telescope, the wonderful refractor. Hall's bad mood vanished instantly, and the three proceeded to enjoy a look at the Moon, and the star Arcturus.

Two nights later there was another knock at the door. This time Hall, in a far better mood, was ready. Lincoln was alone this time. (In those days, Lincoln thought he could get away with walking alone without protection; he was sadly wrong about that.) He wanted to ask some questions. He was puzzled that the telescope view was upside down. Hall explained that astronomical telescopes do not have correcting lenses.

A not too dissimilar event happened 131 years later. On the evening of July 19, 1994, the Vice President of the United States, Al Gore, strolled across the vice-presidential property to the Naval Observatory, where Geoff Chester, then public affairs officer at the United States Naval Observatory, was observing with the giant 26-inch refractor. He showed the Vice President the latest impact spots decorating the southern half of Jupiter. I know this because the very next day at a White House ceremony celebrating the 25th anniversary of the Apollo 11 landing and walk on the Moon, Mr. Gore told me.

It was wonderful when Gene and Carolyn and I got to meet and chat with Al Gore. He was interesting, personable, and smart. He also told us how he

enjoyed the impact sites on Jupiter the previous evening. He did not want to discuss politics; he just wanted to share SL-9 stories.

In the darkest days of the U.S. Civil War, Asaph Hall enjoyed two delightful evenings with the President of the United States. I know of a few other Presidents who were interested in the night sky. One was John Quincy Adams, who in 1825 signed a bill into law establishing what he wanted to call a national observatory, and which evolved into the Naval Observatory. Adams had a keen interest in astronomy. Another was John F. Kennedy, who once claimed that he had no interest in astronomy. But in an address to the American University in June 1963 he said, "For in the final analysis, our most basic common link is that we all inhabit this small planet. We all breathe the same air. We all cherish our children's futures. And we are all mortal."

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.