

TAAA Desert Skies Bulletin

Observing Our

Desert Skies

Since

1954



February 2025

www.tucsonastronomy.org

Membership Meeting

Friday, February 7, 2025

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

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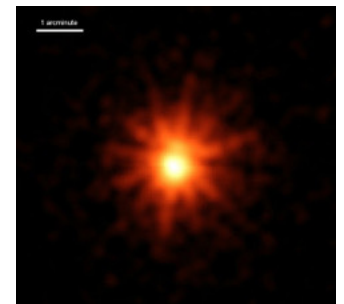
Main Presentation at 6:30PM AZT

Title: Superflares On Stars Just Like Our Sun

Presentation: On September 1, 1859, Richard Carrington discovered the all-time largest solar flare, which created huge electric sparks and beautiful aurorae around the world. Telegraph lines between the USA and Europe were knocked out in what came to be called The Carrington Event. If such an event happened today, with our dependence on satellites and power grids, power outages would take years to repair, and most satellites would be destroyed, causing millions of deaths and trillions of dollars in damage. Such a fate is inevitable within the next century or so, unless humanity succeeds in protecting our infrastructure. Up to the 1980s, rare solar flares had been seen on other stars, plus frequent small flares on low-mass faint-red Flare Stars. Then in 1989, tonight's presenter, Brad Schaefer, discovered and named the new phenomenon of 'Superflares', where ordinary stars of all types emit flares with energies >1000 Carringtons. Astronomers and the media got excited when he further discovered in 2000 that many of the closest Sun-twin stars have Superflares from a thousand up to 10-million Carringtons in energy. Thanks to Kepler and TESS spacecrafts, Schaefer has found roughly 10% of all solar-twins display Superflares, with a recently found solar-type star in a weird binary that has Superflares of 30-billion Carringtons! The implications for life on Earth, for the origin

of life throughout the galaxy, and the habitability of planets for future human colonization are all profound. In his talk, Schaefer will speak about the possibility of our own star, and nearby stars having a Superflare.

Biography: In his own words Brad Schaefer "has been a passionate amateur since 1969, now with seven total solar eclipses, running a gazillion public nights and star parties, eleven AL Observing Awards, 29 Sky & Telescope articles, and a specialization in large databases of naked-eye observations for historical applications. For my professional career path, I earned MIT degrees in 1978 and 1983, worked at NASA Goddard for a wonderful decade, then professorships at Yale and Louisiana State University. My science highlight is my work in the Supernova Cosmology Program, and as one of the discoverers of Dark Energy, this earned me a share of the 2007 Gruber Prize in Cosmology and the 2015 Breakthrough Prize in Fundamental Physics. For my whole career, I have been mainly working on exploding stars (recurrent novae, novae, supernovae, gamma-ray bursts), often with a strong history-of-astronomy and archival component, and using much data from 'small-telescope observers.'"



Caption: DG CVN's Superflare an hour after initial eruption.
Credit: NASA/SWIFT

January 2025

TAAA Strategic Planning Report #2: Strategic Planning Review and Activity Efforts from February 2024 through January 2025.

As was previously reported in the TAAA Bulletin, last fall TAAA submitted and received a grant to fund an expert to work with us in organizing a Strategic Planning Effort. Fourteen TAAA members (seven Board Members and seven Leaders) met with the strategic planning specialist in February 2024 to organize and begin the strategic planning effort. A result of that meeting was the following statement to which participants agreed: “By engaging in thoughtful strategic planning, TAAA can chart a course that honors its rich legacy while embracing innovation, inclusivity, and adaptability. This living document serves as a roadmap, outlining key objectives, initiatives, and actions to propel TAAA forward as a leading force in amateur astronomy for generations to come. Through collaborative visioning and strategic foresight, TAAA will navigate the celestial seas, charting a course towards a vibrant and enduring future.”

We should all keep in mind that **this Strategic Planning Effort is designed to support a five-year investment in TAAA.** Thus, we wanted to determine what steps to proceed with first and then to continually work on aspects of the plan in the rest of 2024 and 2025. But, we all realized that we wished growth and development via the Strategic Plan to continue, not only in that beginning time period, but also though 2026, 2027, and 2028.

In preparation for the strategic planning meeting activities in February, a membership satisfaction questionnaire was sent to members. Of the 557 emailed questionnaires there were 124 responses. Further investigation of the results was planned prior to the Strategic Planning workshop activities. The fourteen appointed TAAA participants in the two-day workshop were provided the results of the

by Mae Smith

questionnaire prior to the workshop. In general, the results indicated that most respondents to the questions were satisfied with their TAAA member experiences.

Since the February 2024 Strategic Planning meeting, the TAAA BOD has been following through with the strategic planning process. They devote a portion of every monthly TAAA Board meeting to either making changes or to conducting an in-depth review of areas identified through the Strategic Planning process as currently needed. Such reviews enable us to determine how we might better support the continuation of those programs as is, or what changes, might be helpful in furthering the mission and activities of that club area. As a part of these activities, we have also learned much more about the great accomplishments by TAAA leaders and programs that are enriching our members and our citizens, enhancing our accomplishments, and broadening our contributions to astronomy all the time.

In March 2024 and the months following, the Board worked on creating and filling an Assistant Treasurer Position, describing some duties of the position which would serve as support for the Treasurer, and local management of financial items. A tractor was purchased for use at CAC with rules of use established. Over the next few months, our insurance coverages were reviewed with new insurance being established for the new tractor. New safety procedures were also developed for activities such as working with pesticides and using the tractor. A TAAA member was appointed to the Maintenance Officer position which also included additional which also included additional responsibilities for Safety. The CAC Director was appointed as having responsibility for representing TAAA in matters related to water and the well sharing agreement.

Above decisions related to safety, allocation of increased responsibilities at CAC, and review

and reconsideration of financial responsibilities. All were planned activities that resulted from the strategic planning process. Due to Eclipse travel, the TAAA Board did not meet in April 2024.

Following up on **safety** as a part of strategic planning, \$500 for TIMPA and \$500 for CAC was allocated to be used for site safety to reduce trip hazards or other possible dangers. (June 2024)

The Strategic Planning effort to increase communication and knowledge of the Club resulted in a two-part review of materials on the **website** conducted by Ed Foley in the June and July Board meetings.

Another review of the **Member Planet system** was conducted looking at problems and how they have been fixed, checking its handling (which is not the best) of family memberships, surveys, volunteer tracking and apps. An alternate system, Club Express, was reviewed and compared (July).

A **tax software package** was purchased (July) to increase completeness of records.

As part of the effort to “facilitate the WOW” in strategic planning, Jim Knoll was approved to set up a TAAA **Instagram** account. (August 2024)

As part of the strategic financial planning, TAAA has implemented improved strategies to monitor its **reserve policies and endowment account** and to begin to encourage **legacy giving**. (July/August)

Improved Endowment Strategies were adopted: September/October 2024

To improve **BOD access to training**, information was provided to all BOD members regarding access to stored training materials at the library of the Center for Healthy Non-profits. (July/August)

To increase **liability compliance and coverage**, a review of all TAAA leaders was

conducted to ensure that all TAAA leaders are current in their TAAA membership. Leaders have no liability coverage if they are not current members (July/August).

Enhanced safety features (lights/ painting/ signage) were put in place at the TIMPA site (July/August)

As is evident in the above, some the first considerations in **Strategic Planning** were addressing areas of the club related to safety, financial management, leader training, organizational structure, and member services. The August Board addressed some club investment issues and changed some procedures related to the best financial management and planning.

In September, a review of **property insurance** was conducted, and coverage was increased.

The **990** was completed by the treasurer and presented to BOD in November 2024. For the first time our own Treasurer prepared the document, rather than an outside accountant.

Report on careful comparison of Club Express and the TidyHQ **membership programs** to our current Member Planet program (October 2024) by David Rossetter.

New, New Member strategies: an email welcome from the President and one from the TIMPA Director are being sent, new members are recognized at the end of the monthly member meetings, they are paired with a member with similar interests, and planning is underway for meetings for new members (September 2024).

A Comprehensive Review of Present and Possible Future Considerations for the TIMPA site was conducted in November 2024. TIMPA Director, Stephen Ferris, submitted a 14-page report regarding future considerations and possibilities for the TIMPA site. The BOD thoroughly explored this report which included possible City/County/State developments that might impact availability of the site. Some relevant factors included the

Proposed Interstate 11 Plan, the preservation or non-preservation of wildlife corridors, encroaching light pollution, factors related to water conservation, land-usage considerations for the area, other decisions beyond TAAA control made by City, County and State entities, and continuation of or changes in the Ranch environment across the road from the site. Many, many important and significant factors over which TAAA has no control have bearing on the future of the site. Some possible considerations of alternative sites were discussed. At this point in time, TAAA will continue use of the TIMPA site and increase the usefulness of that site to TAAA members. We will confirm the availability of the site from the entities that respond to our questions. However, we will be prepared for possible future changes beyond TAAA's control.

Reports from leaders for Reviews of specific programs as part of Strategic Planning:

Paid Star Party Participation/earnings
2012 -2024: Jim Knoll (October 2024)

Donor equipment Program Asset Acquisition last 10 Years: Doug Smith (December 2024)

Loaner Equipment Program Check out history 2018-present: Ralph Means (December 2024)

Non-paid Star Party Participation 2018-2024 Bernie Stinger (January 2025)

Future scheduled presentations:

For February 2025: Terri Lappin (SMSIG Activities for 10 years)
For March 2025: Connor Justice (AFSIG activities since 2018)
For March 2025: Gregg Ruppel (AISIG activities since 2018)

Mae Smith

Mae Smith, TAAA President
president@tucsonastronomy.org
(520 850-7137)

Other Elected Leader Contact Information:

Vice-President: Ed Foley
vice-president@tucsonastronomy.org

Secretary: Bob Reynolds
secretary@tucsonastronomy.org

Treasurer: Barbara Whitehead
treasurer@tucsonastronomy.org

BOD Members-At-Large:
Stephen Ferris, mal1@tucsonastronomy.org
David Rossetter, mal2@tucsonastronomy.org
John Kalas, mal3@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 [Mae Smith](mailto:Mae.Smith) to receive a Zoom link for that meeting. Please send your email to Mae 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](mailto:David.Rossetter) by the 24th.

Astro-Images to our Image Editor: [Gregg Ruppel](mailto:Gregg.Ruppel)

Proofreaders: Terri Lappin, Jeff Rothstein, Jim Knoll

Follow the Lighting Policies as included in the county development process. Currently, Davis-Monthan is regulated by Pima County and that is where the light pollution increase in the Tucson area is occurring.



Pima County Seeking Public Input to Guide County Development

PIMA COUNTY, Jan. 15, 2025 – Pima County’s Development Services Department is preparing to publish the 2025 update to the County’s Comprehensive Plan, Pima Prospers. The plan is the 10-year comprehensive land use document that provides guidance and policies for continued development in Pima County. The current plan, approved by the Board of Supervisors in 2015, is required by Arizona state statute to be updated every 10 years.

The preliminary draft includes a reduction of policy chapters, from four to three, and a reorganization of the 2015 plan with more emphasis on key topics. Those topics include:

- Increasing housing construction and supply following the recession and effects of the COVID-19 pandemic
- Accounting of all the regional water supplies including precipitation and reclaimed water
- Increasing energy generation and storage capabilities from renewable sources
- Mitigating or adapting to the effects of climate change including higher temperatures, reduced rainfall, and wildfires

Before publishing the 2025 update, Development Services is seeking [public comment](#) on the preliminary draft, which includes updated policies (chapters 1-4) and the draft Rezoning and Special Areas Policies. Links to the different chapters and an interactive map can be found below.

- [Chapter 1: Introduction \(PDF\)](#)
- [Chapter 2: Built and Social Environment \(PDF\)](#)
- [Chapter 3: Natural, Physical, and Cultural Environment \(PDF\)](#)
- [Chapter 4: Economic Environment \(PDF\)](#)
- [Rezoning and Special Area Policies Interactive Map](#)

After the preliminary draft phase, Development Services will take the feedback collected to create an updated Pima Prospers 2025 Comprehensive Plan. At that point, the public will have 60 days to review the plan again before it is submitted to the Board of Supervisors for approval.

[Connect with Pima County](#)

TAAA News & Activities



The 2025 TAAA Wall Calendars will be available at the general meetings.
The cost is \$15 each, cash or check made out to TAAA.
Please contact [Susan O'Connor](#) for alternative delivery.

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 February 20, 6:30

New Delhi Palace

6751 E Broadway Blvd

(N side of Broadway, half way between Wilmot and Kolb)

Preview the [menu](#).

RSVP [Susan](#)
520-780-0136



NVRC

Nomination and Volunteer Resource Committee

Coming Up: The TAAA Election Season

The NVRC is **seeking potential candidates for elected leader positions this upcoming May. Positions to be voted on include President, Vice President, 1 Board Member-At-Large and 2 members of the NVRC; all are 2-year terms that will commence June 1, 2025.**

The NVRC is also **seeking potential candidates for Apparel Coordinator** for presentation to the TAAA President for selection.

Members may review the position descriptions for both elected and appointed leader positions through their Member Planet accounts – from the main Tucson Amateur Astronomy Association webpage (<https://tucsonastronomy.org/>) select “Members Only” from the tabs located near the top just below the main search bar; then login with your email/username and password; then scroll down to the 6th item “TAAA Docs and Videos”; select/click, from the “MEMBERS ONLY INDEX” page, scroll down and select/click on the 6th item HANDBOOKS and REFERENCE MATERIALS; then finally, click or select on a specific “Job Position Descriptions – TAAA Board...” or immediately below, “TAAA Position Descriptions – Leader Descriptions”, which are the non-elected volunteer opportunities

Please contact the NVRC Chair (Pete Hermes) at nvrcchair@tucsonastronomy.org for additional information or if you have questions pertaining to a particular position.

The NVRC encourages all members to update their Member Planet profile particularly with respect to volunteer positions or activities they may be interested or seek to participate in.

Astronomy Classes

by Doug Smith

Constellation Locating and Identification Workshop

Open for enrollment

Place: TIMPA **Date:** Thursday, March 27, 2025 (New Date) **Time:** 6:30 PM until completed

Synopsis: This is another workshop in the practical astronomy workshop series. The 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. They will learn how to use a planisphere and star atlas to locate constellations without memorizing the sky. 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: Contact the instructor, Douglas Smith: 520-396-3233, [Email](#)

Star Hopping Workshop

Open for Enrollment

Place: TIMPA

Date: Thursday, February 20, 2025

Time: 6 PM until completed

Synopsis: This is another workshop in the practical astronomy workshop series. 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 for this workshop.

If interested: Contact the instructor, Douglas Smith: 520-396-3233, [Email](#)

Learn how to Record Observations and Sketch Objects Workshop

Open For Enrollment

Place: TIMPA

Date: Thursday, March 6, 2025

Time: 6:30 PM until completed

Synopsis: This is another workshop in the practical hands-on astronomy workshop series. 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. They will view, using a telescope, several different types of objects and perform recording activities and sketch different objects.

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

If interested: Contact the instructor, Douglas Smith: 520-396-3233, [Email](#)

Congratulations!

to the Graduates of the January, 2025 Fundamentals in Astronomy class.



Looks like they put the “fun” in fundamentals!

Happenings at TIMPA

On Saturday November 2, TIMPA celebrated the soft opening of the new TIMPA 16" telescope, recognizing donors, volunteers and Board of Directors members who were instrumental in completing the project. We have now finalized procedures for operators of the new telescope, and our first "class" of new operators and trainers should be certified by February 1. We are now offering training to any club member who is interested in using the telescope. Please check out the club website for the form under **TAAA CLASSES**, or email [Stephen Ferris](#) for information.

TIMPA has moved to being open two weekends per month starting in January 2025. This will allow greater access to the site and more options for all members to join us! Please remember to fill out the registration form on the Members Only section of the website if you plan to attend, or contact [Stephen](#) if you have any difficulties with the form.

March will be a busy month club wide as the weather warms up. Unfortunately, it is also good flying time, and we were just notified that the airplane club will be having an event on March 21 and 22, which will require us to close the site for the planned TIMPA nights on those dates. However, we will be opening instead on the night of **Thursday, March 13**, the night of the next total lunar eclipse. If you are not going to be on the Mall at the University, please come join us at TIMPA. We'll have the new 16" open, and some smaller scopes on site for general use, as well as some light refreshments!

We're also trying to organize a **Messier Marathon** on the night of **March 1**, which is also a TIMPA night. It's a little early, but it should be moonless and won't conflict with airplane club events. Email Stephen at the address listed above if you are interested and come prepared for cold morning weather. We'll stay either until dawn, or until the last person decides to call it quits! No experience required.

We hope to see everyone this Spring at TIMPA!

Stephen Ferris
TIMPA Director



TAAA's own Erich Karkoschka is credited with a NASA "Astronomy Picture of the Day"

Titan Touchdown: Huygens Descent Movie
Video Credit: [ESA](#), [NASA](#), [JPL](#), [U. Arizona](#), [E. Karkoschka](#)



[APOD Page](#)

[Video Link](#)

Explanation: What would it look like to land on Saturn's moon Titan? The European Space Agency's Huygens probe set down on the Solar System's cloudiest moon in 2005, and a time-lapse video of its descent images was created. Huygens separated from the robotic Cassini spacecraft soon after it achieved orbit around Saturn in late 2004 and began approaching Titan. For two hours after arriving, Huygens plummeted toward Titan's surface, recording at first only the shrouded moon's opaque atmosphere. The computerized truck-tire sized probe soon deployed a parachute to slow its descent, pierced the thick clouds, and began transmitting images of a strange surface far below never before seen in visible light. Landing in a dried sea and surviving for 90 minutes, Huygen's returned unique images of a strange plain of dark sandy soil strewn with smooth, bright, fist-sized rocks of ice.

David Levy contributes "Obadiah" to the *Astronomical Lyceum*

As part of his recent efforts to find new homes for some of his historical equipment, David Levy agreed to donate his comet hunting Schmidt Camera, "Obadiah", to the Astronomical Lyceum in Magdalena, New Mexico. While he never discovered a comet with this scope, it spent many hours searching from Jarnac Observatory in Vail, AZ.

The Astronomical Lyceum is a telescope museum started by John Briggs. John has been a fixture in the Antique Telescope Society for many years. The Lyceum resides in a WPA era school gymnasium in Magdalena. I visited it with David last fall. It is quite a place and collection. While it does not have a website, there is a lot written about it on [Cloudy Nights](#). Do look it up!



Helping take apart and load "Obadiah" are TAAA's David Eicher, David Rossetter, and David Levy and the Astronomical Lyceum's Eric Toops and John Briggs. Photo by Nicole White.

-David Rossetter

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):
January 31 to February 1, February 21 to 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 gopher 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)

January 30 - February 2 (New Moon January 29)

February 27 - March 2 (New Moon February 27)

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

Come join us for some observing at CAC. If it has been awhile since you have been to CAC or if you have never been out to CAC, now is a perfect time. We would love to share your

company under some incredibly dark skies. You can bring your own telescope or share views with others observing. Most evenings during a CAC weekend, we have a few of the CAC telescopes operating. You can spend the night in one of the rooms, bring your own RV, pitch a tent, or drive an out and back from Tucson, Willcox, or Benson. There are also overnight accommodations not too far from CAC if desired. Come over a CAC weekend listed below to experience the wonderful camaraderie under our dark AZ skies. We do require reservations though. They are easily made on the [CAC webpage](#). For a first-time visit, we will make sure you have a wonderful experience. **After all, this is your astronomy complex, one of the best in the country!!**



Unless you are qualified to open and close the site, dates will be limited to those around the New Moon and are listed 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.

Observing Sites' 2025 (1st Half) Star Party Dates

TIMPA	New Moon	CAC
January 31-February 1	January 29	January 30-February 2
February 21-22		
February 28-March 1	February 27	February 27-March 2
March 13 (Lunar Eclipse)		
March 28-29	March 29	March 27-30
April 18-19		
April 25-26	April 27	April 24 - 27
May 16-17		
May 23-24	May 26	May 22 - 25
June 20-21		
June 27-28	June 25	June 26 - 29

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 6" NexStar SE Tripod,
eyepiece, finder, carrying case for
scope and tripod. **\$825**

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



Steal of the Month!

12" Dobsonian
Very large,
Homemade.
Crosshair finder
\$500

Celestron 8" CPC
(no photo)
Dual fork arm mount, 9x50 finder, 2
eyepieces, telrad, finder rings, hand
controller, user's manual, tripod,
diagonal. Basically, new in original box.
\$1,600

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](mailto:Douglas.Smith@taaa.org); 520-396-3233

by Bernie Stinger

February 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 February, 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 January 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

TAAA Public/School/Non-Profit Star Party Manager

February Events still in need of Volunteers

**Thursday –February 13 -- WEST TUCSON
Cooper Center for Environmental Learning**

5403 W Trails End Rd

Age/Grade Level: Grade 6

Participants: 50

1 Additional Scope Needed

Setup Time: 6:30 pm. **Start Time:** 7:00 pm.

End Time: 8:30 pm.

Friday – February 21 -- VIRTUAL EVENT

TAAA Virtual Star Party – Online Zoom

Event will be streamed live to TAAA Social Media.

Volunteers need to use camera to stream observations through zoom to Social Media.

Age/Grade Level: All

Zoom viewers: 50

1 Additional Volunteer/Scope Needed –

Jim Knoll is Moderator

Online Setup Time: 6:00 pm.

Start Time: 7:00 pm **End Time:** 9:00 pm.

January Events still in need of Volunteers - Continued

Thursday – February 27—ORO VALLEY
Simple life abundant life Homeschool Co-Op
9200 N Oracle Rd.
Age/Grade Level: Elementary to Adult
Participants: 40+
1 Additional Scope Needed
Setup Time: 7:00 pm. **Start Time:** 7:30 pm.
End Time: 9:00 pm.

February Events Filled—No Volunteers Needed

Wednesday – February 5 -- NORTH TUCSON
Harelson Elementary
826 W. Chapala Drive
Age/Grade Level: K–6
Participants: 200
0 Scopes needed
Setup Time: 6:00 pm. **Start Time:** 6:30 pm.
End Time: 7:30 pm.

Friday – February 7 -- CENTRAL TUCSON
Carrillo Magnet School
440 S. Main Ave
Age/Grade Level: K–5
Participants: 85
0 Scopes Needed
Setup Time: 6:00 pm. **Start Time:** 6:30 pm
or earlier if possible. **End Time:** 7:30 pm.

Friday – February 14 -- PICACHO AZ
Picacho Peak State Park
15520 Picacho Peak Rd, Picacho, AZ
Age Group: All Ages
Estimated # Participants: 75 – 100
0 Scopes needed
Setup Time: 6:30 pm **Start Time:** 7:00 pm
End Time: 9:00 pm

Wednesday – February 5 -- WEST TUCSON
Cooper Center for Environmental Learning
5403 W Trails End Rd
Age/Grade Level: Grade 4
Participants: 60
0 Scopes Needed
Setup Time: 6:30 pm. **Start Time:** 7:00 pm.
End Time: 8:30 pm.

Friday – February 7 -- ORO VALLEY
Wilson Elementary/Middle School
2330 W. Glover Road
Age/Grade Level: K – 8
Participants: 500?
0 Scopes Needed
Setup Time: 5:30 pm. **Start Time:** 6:00 pm
End Time: 7:30 pm.

Friday – February 14 -- TUBAC AZ
Tubac Presideo Historical Park
1 Burruel St., Tubac, AZ
Age/Grade Level: Adults
0 Scopes Needed
Setup Time: 6:30 pm. **Start Time:** 7:00 pm
End Time: 9:00 pm.

January Events Filled - Continued

Monday –February 17 -- WEST TUCSON

Cooper Center for Environmental Learning

5403 W Trails End Rd

Age/Grade Level: Grade 4

Participants: 40

0 Scopes Needed

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

End Time: 8:30 pm.

Saturday – February 22 — ORACLE AZ

Oracle State Park

3820 E Wildlife Dr, Oracle AZ

Age/Grade Level: All Ages

Participants: 125 – 150

0 Scopes needed

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

End Time: 9:00 pm.

Tuesday –February 25 -- WEST TUCSON

Cooper Center for Environmental Learning

5403 W Trails End Rd

Age/Grade Level: Grade 5

Participants: 56

0 Scopes Needed

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

End Time: 8:30 pm.

Friday – February 28 – Organ Pipe, AZ

Organ Pipe Cactus National Monument

Age/Grade Level: All ages

Participants: 75 – 100

0 Scopes Needed

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

End Time: 9:00 pm.

Saturday –February 22 –WEST TUCSON –SOLAR

University of Arizona, Lunar & Planetary Lab

1629 E University Blvd

Age/Grade Level: All Ages

Participants: 100

0 Solar Scopes needed (White Light or H-alpha)

Setup Time: 1:30 pm. Start Time: 2:00 pm.

End Time: 4:00 pm.

Sunday –February 23 –WEST TUCSON – SOLAR

University of Arizona, Lunar & Planetary Lab

1629 E University Blvd

Age/Grade Level: All Ages

Participants: 100

0 Solar Scopes needed (White Light or H-alpha)

Setup Time: 1:30 pm. Start Time: 2:00 pm.

End Time: 4:00 pm.

Thursday – February 27 -- SW TUCSON

Cholla High School

2001 W Starr Pass Blvd

Age/Grade Level: High School Students

Participants: 75

0 Scopes Needed

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

End Time: 9:00 pm.

Special Interest Groups



Starry Messengers Special Interest Group

Opening Minds to the Universe

The SMSIG will meet in person on Monday, February 10th in the Applied Research Building located on the UofA campus near Speedway and Cherry. Free parking is very near to the building. We'll use this meeting to make sure we're ready for the Tucson Festival of Books (TFOB) (March 15 & 16) and the Tucson Astronomy Festival (March 22). Volunteers for both events are encouraged to attend to get an overview of the materials we'll have on display and to work with them as needed.

[Continued next page](#)

To volunteer for these events, use the following links:

[Stary Messengers Continued](#)

<https://volunteersignup.org/A7DL8> for TFOB on Saturday, UofA campus

<https://volunteersignup.org/3HF3C> for TFOB on Sunday, UofA campus

<https://volunteersignup.org/MA38D> for Tucson Astronomy Festival, Brandi Fenton Park

Past TFOB volunteers may have received an email from TFOB requesting them to sign up as a volunteer. However, we've been told volunteers for organizations (like TAAA) are NOT to sign up as TFOB volunteers.

We have several requests for astronomy toolkit activities. These two events in Febraury haven't been filled yet. Please visit <https://volunteersignup.org/HRW9J> to volunteer for these events.

- Feb 7 (Fri, TAAA Meeting night) 4:30pm – 7pm Wilson K-8 (La Cholla/Naranja) Supernova, UNFILLED
- Feb 13 (Thurs) 5pm – 6:30pm Prince Elem (Prince/Stone) Telescopes – Eyes on the Universe, UNFILLED

The Supernova toolkit activities cover stellar evolution and blends well with the Black Hole Toolkit. Telescopes – Eyes on the Universe activities are about telescopes and observing.

If you want to help with any of these events, or have questions about the Starry Messengers SIG, contact 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 on **Thursday, February 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's [YouTube Channel](#) [AFSIG on the Web](#)

Astro-Imaging SIG

by Gregg Ruppel

The next AISIG meeting will be **Monday, February 17 at 7:00 pm** via ZOOM.

Topics:

Beginners' Corner - Ask a Question

Everybody Stretch! - This will be an opportunity to see the same image stretched by different volunteers, to ask questions, and discuss comments. Details soon on the Forum.

Image Sharing - 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](#).

Also, we now offer a mentoring program. For details, see the AISIG [Web Pages](#).

February - March 2025

Fellow amateur astronomers, many of the Astronomical League observing programs can be done from our backyards. The following is a list of objects visible in February and March for the more common observing programs.

Constellation Hunter Program – Northern Sky

The following constellations are well placed for observing for February and March: Auriga, Camelopardalis, Cancer, Canis Minor, Gemini, Lynx, Monoceros, Orion, Taurus.

Messier Observing Program - The following Messier Objects are well placed for observation during February and March (listed in ascending RA): M79, M38, M1, M42, M43, M36, M78, M37, M35, M41, M50, M47, M46, M93

Lunar and Binocular Observing Program

The following is a list of dates for lunar phases in February and March:

New Moon: February 28, March 29	10 days old: February 7, March 9
40 Hours waxing: March 1, March 31	Full (14 days old): February 12, March 14
72 hours waxing: February 1, March 2	Gibbous: February 20, March 22
4 days old: February 2, March 3	72 hours waning: February 25, March 26
7 days old: February 5, March 6	40 hours waning: February 26, March 27

Solar System Observing Program

The following planets are visible during February and March:

Mercury is an early evening object in February and March. It reaches greatest elongation on March 8 and is at its brightest on February 28.

Venus is an early evening object during February and most of March, moving into the morning sky on March 23. It grows in size becoming a skinnier crescent with each day.

Mars is well placed for evening observation during February and March. Transits around 10:30PM on February 1 and around 7PM on March 31.

Jupiter is still well placed for evening observation during February and March. Jupiter sets around 3AM on February 1 and around midnight on March 31.

Saturn is still visible in early February as an early evening object, setting around 2.5 hours after sunset on February 1, but is lost in the twilight by the end of February. It moves behind the Sun and becomes an early morning object on March 10.

Uranus is well placed for evening observation. On Feb 1 it sets around 1:30AM. On March 31 it sets around 10:00PM.

Neptune is an early evening object in Feb and the first two weeks of March. It goes behind the Sun and becomes an early morning object in mid-March. On March 31 it rises about 30 minutes before the Sun.

Mutual Saturn satellite events:

February 18, 2025: Enceladus eclipses Mimas. Start: 07:32:09 UT, End: 07:36:43 UT

February 27, 2025: Tethys occults Dionne. Start: 02:42:01 UT, End: 02:48:00 UT

March 30, 2025: Dionne eclipses Tethys. Start: 11:51:46 UT, End: 11:54:39 UT

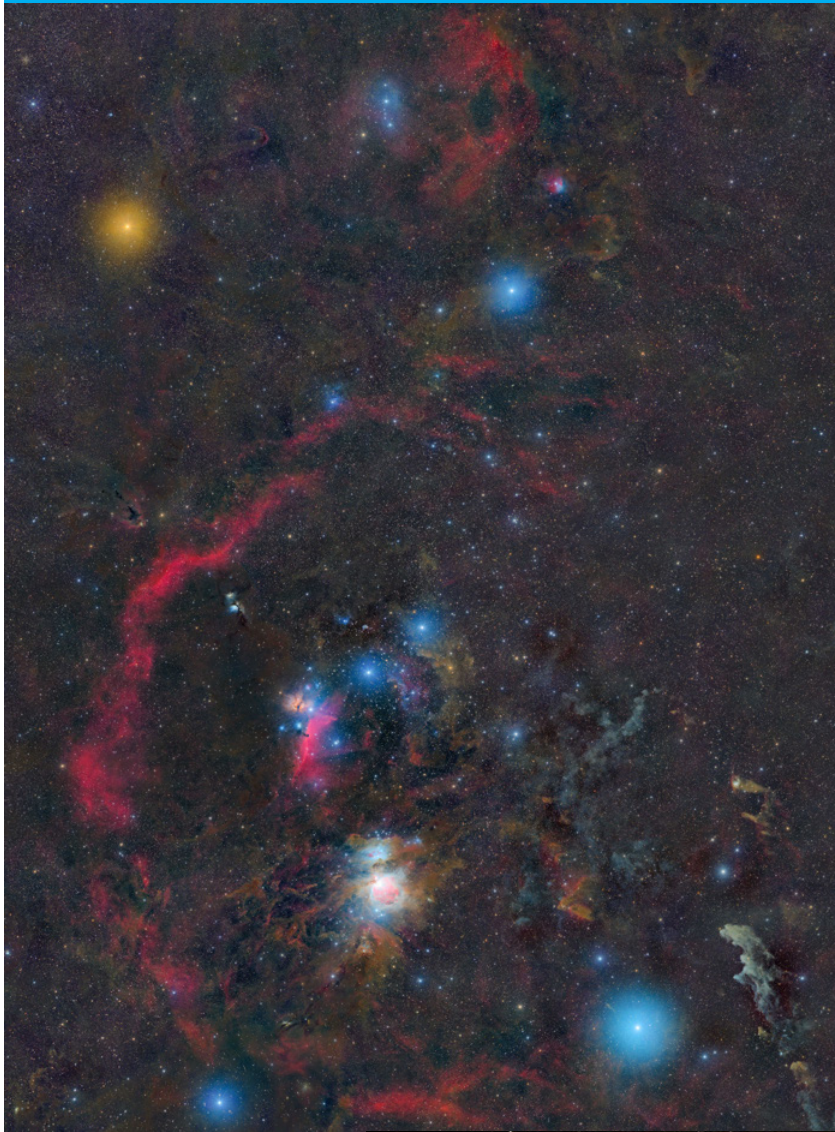
Urban Observing Program

The following **deep sky objects** are well placed for observing during February and March:

NGC 1807, NGC 1817, M38, M36, M42, NGC 1981, M37, M35, NGC 2169, NGC 2232, NGC 2244, NGC 2264, NGC 2281, M41, NGC 2301, M50, NGC 2392

The following **Double Stars** are well placed in February and March: Trapezium, Beta Monoceros

Member Astro-Images



Casey Good

Orion Mosaic

Rokinon 135 and 2600mc.

[Astrobin](#)

Richard Spitzer

Quadrantid Meteor Shower

January 3, 2025 between
2:00 am and 5:00 am
MST looking northeast.





Paul Lorenz
NGC 2237
(Rosette Nebula)

AT152EDT Triplet
refractor with WO
0.8x reducer/flattener,
working at f/6.4. ZWO
ASI6200MC Pro.
Exposure: 20 x 5 min.

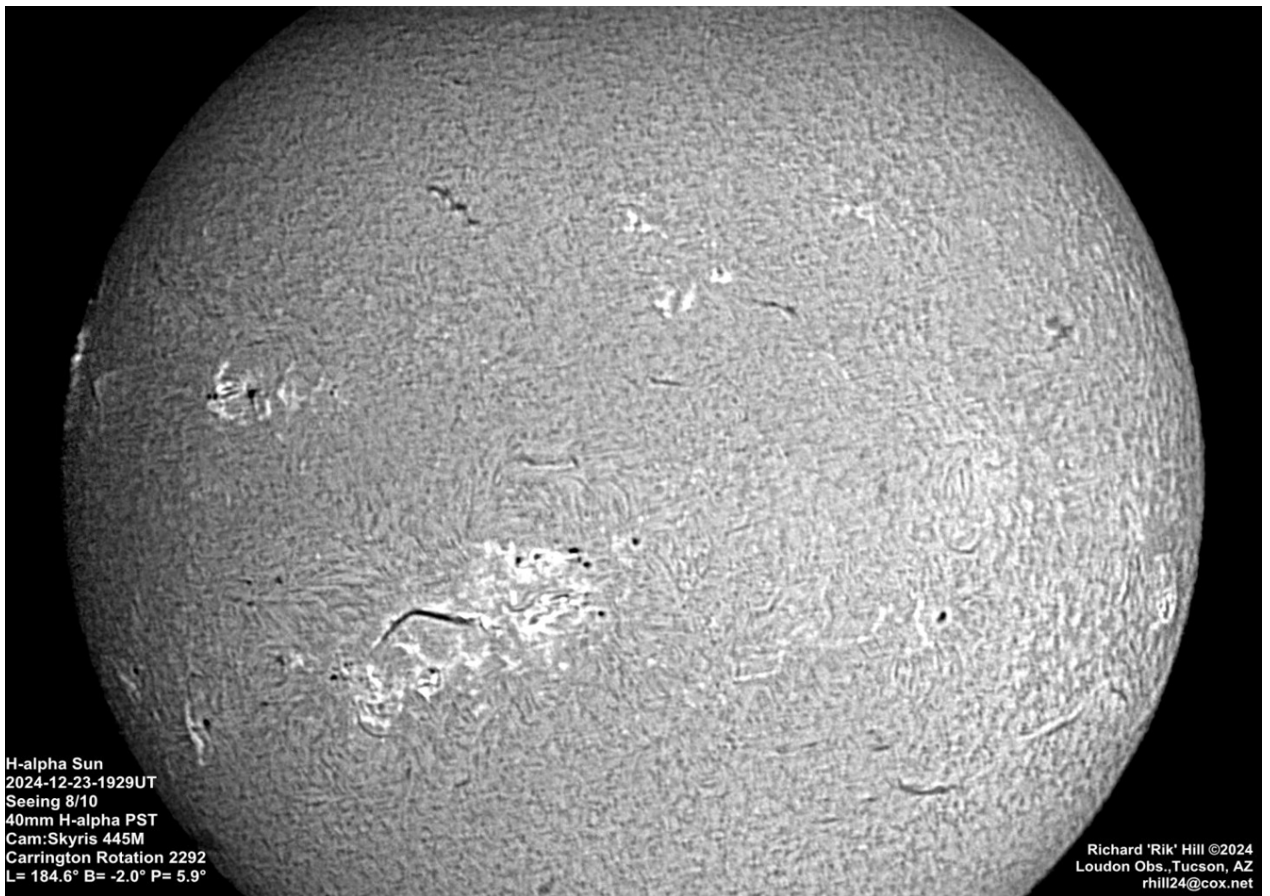


John Tsantes
NGC 2244 (Open
cluster in the Rosette
Nebula)

Sky-Watcher Quattro
200p telescope mounted
on a EQ6 mount and
a ZWO 2600MC Pro

Rik Hill

**H alpha
Sun**



H-alpha Sun
2024-12-23-1929UT
Seeing 8/10
40mm H-alpha PST
Cam:Skyris 445M
Carrington Rotation 2292
L= 184.6° B= -2.0° P= 5.9°

Richard 'Rik' Hill ©2024
Loudon Obs., Tucson, AZ
rhill24@cox.net



Ed Jacoby

**Tadpoles
Nebula**

[Astrobin](#)



David Stearn - Horsehead nebula IDAS NBZ filter with the C8 Hyperstar.

Jeff Rothstein - M45 6200MM, 1:45:00 luminance and :30 each of R, G and B.





M42 and Barnard 33
134x180sec Antlia V-Pro RGB

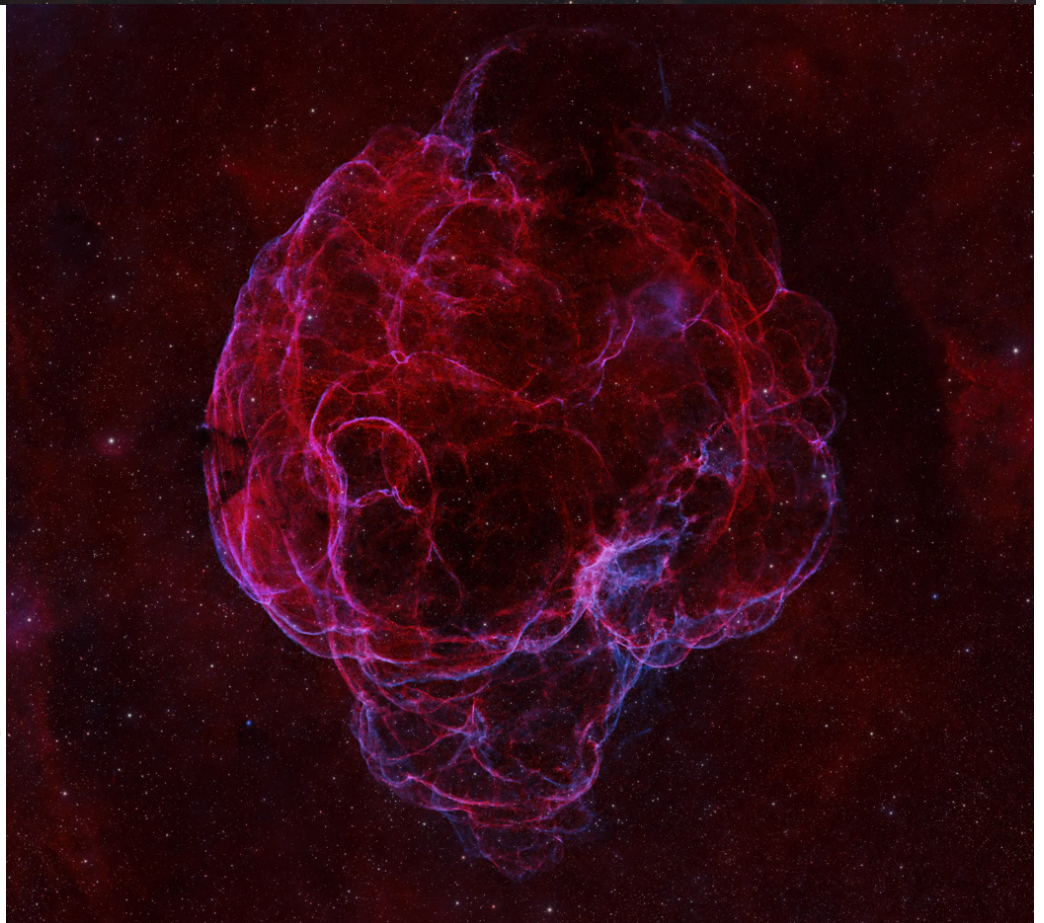
Randy Smith

Askar FMA 180 mm F4.5 scope
and its riding on top of my
200P and my CQ350 mount.

Sh2-240

2600 MM Antlia 3 hm Ha and
Oiii filters 276x180 (13.8 hours)

[Astrobin](#)





North America Nebula

Canon 200mm f2.8 DSLR and ASI294MC

Allan Force

NGC 7293 [Astrobin](#)





M42 & NGC 1977

Mike Mulcahy

IC 434 Horsehead Nebula





NGC 7741

RC10" f/6.4 /
ZWO 2400mc
pro / Mach2
unguided Dec
Arc / no filters /
Scale 0.38"/px

Tom Eby



Arp 227

RC10" f/6.4 /
ZWO2400mc
pro G140 Offset
50 -3C / Mach2
unguided, dec
arc tracking / no
filters

Public Astronomy Events



 College of Science
College of Science Lecture Series
Can We Talk?
The Science of Communication
2025 Lecture Series

Join us for the 20th annual College of Science Lecture Series at Centennial Hall! [Web Site](#)

This four-part series will run throughout the month of March as we explore various aspects of communication — from dog-human communication, to bilingual communication, to A.I. and computer communication, and what extraterrestrial communication from the cosmos might look like. Learn more about our four lectures below.

All lectures are free and open to the public. Doors will open at Centennial Hall at 6:15 p.m. The lecture presentation begins at 7:00 p.m. **The lectures will also be livestreamed on YouTube.**

We look forward to seeing you at opening night on Thursday, March 6, 2025!

March 6, 2025 | Emily Bray and Evan MacLean
Sit, Stay, Speak: Unleashing the Science of Dog-Human Communication

March 13, 2025 | Genesis Arizmendi
Two Languages, One Mind: What Science Reveals About Bilingual Communication

March 20, 2025 | Ellen Riloff
Following Your Heart: Recognizing Emotions in Human-Computer Communication

March 27, 2025 | Daniel Apai and Chris Impey
Cosmic Conversations: Communicating with the Unknown



February 21-23: The Art of Planetary Science 2025

An annual art exhibition run by UArizona's Lunar and Planetary Laboratory that celebrates the beauty and elegance of science.

Check out the [Web Page](#) [Watch the Video!](#)



DEPARTMENT OF ASTRONOMY AND STEWARD OBSERVATORY

Public Evening Lecture Series Spring 2025

We are thrilled to celebrate over 100 years of presenting lectures on astronomy & telescope viewing to the public.

Public Evening Lectures will begin at 7:30 p.m. in Steward Observatory Room N210 or on [Zoom](#).

Spring 2025 Lectures

- Feb. 3 Maria Mutz Dept. of Physics
“The Discovery of Pulsars: A Guide to Unidentified Blinking Objects”
- Feb. 17 Dr. Wesley Tucker Lunar & Planetary Laboratory
“Volcanoes, Coronae, and the Dynamic Surface of Venus”
- Mar. 6 (Th) Dr. Bharat Ratra Kansas State University
“The Accelerating, Expanding Universe: Dark Matter, Dark Energy, and Einstein’s Cosmological Constant”
- Mar. 17 Dr. Irina Panyushkina Laboratory of Tree Ring Research
“Using Tree Ring Data to Find Solar Explosions”
- Mar. 31 TBA
TBA
- Apr. 14 Dr. Mathieu Renzo Steward Observatory
TBA

Public Evening Lecture Series [Page](#)
[Videos](#) of Previous Public Evening Lectures



New Vistas Returns January-April 2025

Whipple Observatory's immensely popular New Vistas in Astronomy lecture series returns for its 56th year with a tribute to the groundbreaking science happening right here in Arizona. From Mt. Hopkins to Mt. Graham, and how light pollution impacts not only the night sky but everything (and everyone) living on the ground, this year's series will uncover the wonders of the night.

New Vistas in Astronomy occurs at Green Valley Rec Center West but is FREE AND OPEN TO THE PUBLIC.

LECTURE SCHEDULE FOR 2025

Thursday, January 30 @ 9am

Dr. Wystan Benbow, PhD
 Associate Director, Facilities & Technology, CfA Director, Very Energetic Radiation Imaging Telescope Array System (VERITAS)

VERITAS: Twenty Years of Extreme Astrophysics

Thursday, February 27 @ 9am TBA
 Thursday, March 27 @ 9am TBA
 Thursday, April 24 @ 9am TBA

Location:
 Green Valley Rec West, 1111 So. GVR Dr. in Green Valley, Arizona

Lectures start promptly at 9am. Please arrive 10-15 minutes early to get seated.

Skyward

By Dr. David H. Levy

February 2025

A New Dawn at the Lowell Observatory

Last November 16, the Lowell Observatory opened its new Marley Foundation Astronomy Discovery Center. I think this center represents the most significant advance in inspiring young people to enjoy astronomy in the last 44 years, since Carl Sagan's Cosmos in 1980. Perched atop Mars Hill at the famous Lowell Observatory, this wonderful building is a dream. If you live in or near any part of Arizona, please plan to take your family to see this. A girl or a boy entering it is treated to a personal tour of the Universe. It begins with our small home planet, the Earth, and then moves outward past Mars, past Jupiter, and onward past the outermost planets. On the roof are telescopes, and an open-air planetarium from which one can see the real sky. Because Pluto was discovered just a few hundred meters away at this observatory, and because Lowell remains a busy center for work on Pluto, this Discovery solar system easily features nine planets.



One of the first things I wanted to see was the solar exhibit that Tim and Carol Hunter provided. It was way up on the building's third floor, and it was stunning. The Sun, which in earlier times was studied only in its own "white light" and in later decades in the 20th century through the light of hydrogen alpha, is now visible by spacecraft in almost too many ways to mention. From big sunspots marching slowly across the surface of the Sun, to coronal streamers and filaments sighted by spacecraft, Tim's exhibit gives us a look at our home star we have never seen before.

I was mentioning all this at a recent meeting of the Denver Astronomical Society. One of the DAS members attending it that evening was Brad Schafer, professor emeritus at LSU but who now lives in Tucson. Casually that evening I mentioned that I had been monitoring the Sun since 1963, and he wrote to tell me that if all this is true, then I may have the longest record of solar observations of anybody in the world. More about this in a different article.

As exciting as the Sun display was, I did want to get another look at my favorite telescope, the 13-inch astrograph telescope that Clyde Tombaugh used to discover Pluto. Where the Discovery Museum showcases the Universe as we see it now, the 13-inch brings us back to an earlier time at Lowell, where Clyde Tombaugh looked out at the solar system, opened his eyes in wonder, and discovered a new world.

It is impossible for me to visit Flagstaff without letting the passions, the emotions of a city of discovery, travel through me. Flagstaff is alive with history, and even its streetlights are shaded at night to allow views of the sky. This is the place where V.M. Slipher discovered the red shift that led to Edwin Hubble's revealing the expanding universe. And who knows what youngster, with a first look at the Discovery Center, might return some day to make a further detection of a cosmic secret whose essence we cannot even imagine?

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

