

TAAA Desert Skies Bulletin

Observing Our

Desert Skies

Since

1954



January 2025

www.tucsonastronomy.org

Membership Meeting

Friday, January 3, 2025

TAAA's next general member meeting will be held on **Friday, January 3, 2025**. The Main Presentation will start at 6:30 P.M. This will be a hybrid meeting (both in person and on social media). TAAA members will receive a Zoom link should they wish to attend remotely. The public may attend in person at the **Steward Observatory Lecture Hall (Rm N210), 933 N Cherry Ave, Tucson** or stream from the TAAA [YouTube](#) page.

Inside this issue:

Notes from the President - [Page 2](#)
TAAA News & Activities - [Page 4](#)
Observing Sites and Updates - [Page 7](#)
Equipment for Sale & Loan - [Page 9](#)
Public/School Star Parties - [Page 10](#)
Special Interest Groups - [Page 13](#)
Astro Images - [Page 14](#)
Public Astronomy Events & Announcements - [Page 20](#)
Astronomical League Programs - [Page 22](#)
Skyward - By David Levy - [Page 23](#)

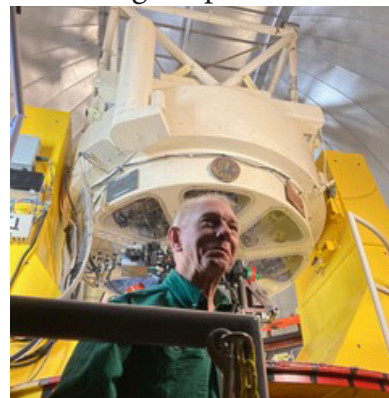
Main Presentation at 6:30PM AZT

Title: The Vatican Observatory in Arizona

Presentation: This talk's title may seem an odd juxtaposition of words until Father Christopher Corbally runs through the 440-year history of the Vatican Observatory. Learn about the Papacy's long-standing interest and support for astronomical research, including Pope Leo XIII's 1891 formal re-founding of an earlier papal observatory into The Vatican Observatory in Vatican City. In 1935, with urban growth brightening Rome's sky too much, the Observatory was officially moved to the Papal Summer Residence at Castel Gandolfo, southeast of Rome. But Rome's population kept growing, making the skies above the Observatory still too bright. In 1981, the Observatory founded the Vatican Observatory Research Group (VORG) in Tucson. Father Corbally will discuss how VORG has grown, including its construction in collaboration with Steward Observatory of the Vatican Advanced Technology Telescope (VATT) on Mt. Graham, AZ. The VATT, now 31 years old, recently became robotic. Father Corbally will explore the new era of observations this update can bring.

Biography: Father Christopher Corbally is a Jesuit priest and research astronomer. Born near London, England, he entered the Society of Jesus

(Jesuits) in 1963, and holds degrees in philosophy (Licentiate 1968, Heythrop College, a Pontifical Academy in England), physics (B.Sc. 1971, U of Bristol, England), astronomy (M.Sc. 1972, U of Sussex), and theology (B.A. 1976, Heythrop College, London Univ., with a Pastoral Diploma in 1977). In 1983, he obtained a PhD in astronomy at the University of Toronto (Canada). Since then, Father Corbally has been based at the Vatican Observatory Research Group, UA, where he was its Vice Director until 2012. His primary interest is probing the personalities of stars via their spectra, and with an anthropologist-biologist colleague, investigating the challenges to humans of traveling and living in space.



Father Corbally at the Vatican Advanced Technology Telescope (VATT)

Credit: Vatican Observatory

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

December 2024

by Mae Smith

Tucson 2025 City Plan Latest Draft: Sections related to Outdoor Lighting and How you May Become Involved

On Tuesday, December 17th, the City of Tucson released its newest draft of a 2025 Ten-Year Tucson City Plan. This latest version of the Plan is open for public comment through January 20, 2025. Various events have been scheduled (some online and some in-person) as opportunities for Tucson citizens to learn about and/or give input on this particular draft. The first of these meetings was held online on Thursday December 19th. To learn how you may participate in this process, you may go to www.tucsonaz.gov and access the Plan Tucson 2025 Preliminary Draft which is available for review. There is an itemized list of ways in which Tucsonans may learn about and/or give input on this particular draft. There are scheduled online meetings, in-person meetings, opportunities for you to set up your own meeting, and copies of the entire current draft, which is about 300 pages if you wish to read it all or just specific sections of it.

Specific individuals in the astronomy and dark skies communities have been participating in development of prior drafts developed as early as 2023 when the process began. The current version is very significant in that it is the next to last version. Public input on the current draft is being collected through **January 20, 2025**. Public input will be closed on that date and the City team will use that input to develop a final draft that will be **voted on by Tucson citizens in November 2025**. There has been considerable concern expressed about the lack of inclusion in prior drafts of the importance of outdoor lighting.

I have reviewed all of the December Plan 2025 document that was released to the public on December 17, 2024. And I have documented

below the statements in this latest document that refer to “lighting”. As mentioned previously, the document is long and I found it tedious to continually look for references to lighting so I thought that providing a list of the statements might be of assistance in getting people to give feedback to the City of Tucson. It is, of course, understood that reading more of the document will assist in absorbing the contexts and meanings of these statements.

The following are the statements related to “lighting” that I found in the current (December 2024) draft of the Tucson City Plan:

Page 114:

“Pollutants,” as used in this section, focuses on solid and hazardous waste, potentially contaminated sites (brownfields), air quality, noise, light pollution, and water quality issues.”

“The Planning and Development Services Department ensures that outdoor lighting complies with the Dark Skies ordinance ...”

Page 122: Section title: Light Pollution

“The City of Tucson and Pima County have been at the forefront of preventing light pollution through a jointly developed Outdoor Lighting Code passed in 1994 and updated in 2012 to ensure the continuation of Tucson’s reputation as a dark skies destination and economy. Amateur astronomers, local residents, and visitors enjoy the unique desert environment where stars and constellations are visible at night. When lighting is poorly planned and designed, it can obliterate the ability to view the night skies. This is particularly important for the retention of the astronomy industry in Southern Arizona, which supports about four thousand jobs and brings about a quarter of a billion dollars per year into the local economy.”

Page 123: Plan Tucson Policies

“Environment 8

Support Programs that help the community be in compliance with the City of Tucson/Pima County Outdoor Lighting Code.”

“Environment 9

Protect dark skies from light pollution through enforcement of City of Tucson/Pima County Outdoor Lighting Code.”

Page 152:

“Economy 17

Promote our City’s dark skies to foster astronomical research, education, and astro-tourism as a sustainable economic driver.”

Page 179:

“Environment 9

Protect dark skies from light pollution through enforcement of City of Tucson/Pima County Outdoor lighting Code.”

I hope that you will take time to review these statements and provide feedback to the City of Tucson about the statements. Again, the City is closing input on January 20th. The challenges at present include decisions regarding: (1) keeping the statements above

that are included in the current draft “as is” in the final draft, (2) crafting needed changes and submitting them to the City for consideration for the next draft, (3) determining if something of significance should be added to the current draft.

Thank you for your attention to light quality/ quantity for the future of the City of Tucson and of Southern Arizona.

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 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.

From the Editor - David Rossetter

Another year of observing, imaging, outreach, education, building, maintenance, and lots and lots of volunteering is behind us at the TAAA. Only an activity like astronomy can motivate us to do so much. And astronomy is not nearly as much fun without the camaraderie of our fellow astronomers. You all are the reason this club is so successful.

As Editor of the Desert Skies Bulletin, the heroes are the contributors, the proofreaders (Jeff Rothstein, Terri Lappin, and Jim Knoll), and our Image Editor (Gregg Ruppel). Thank you to the TAAA Board of Directors, Officers, and Leaders for their support. And thanks to all of you for reading this publication.

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 OConnor](#) 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 restaurant for fellowship and conversation.

Thursday January 16, 6:30

Teresa's Mosaic Cafe

2456 North Silver Mosaic Drive
(NW corner of W Ironwood Hill Dr and N Silverbell Dr
Enter off W Ironwood Hill r – behind McDonalds)

Preview the [menu](#).

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

Fundamentals of Astronomy Class Open for Enrollment

Place: Armory Park Center, 220 S. 5th Ave, Tucson

Date: Three consecutive Saturdays: January 11, January 18, January 25, 2025

Time: 9 AM until 4 PM each day

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

If interested: Contact Douglas Smith: 520-396-3233, [Email](#) or use sign-up sheet available at the

Constellation Locating and Identification Workshop Open for enrollment

Place: TIMPA

Date: Thursday, March 20, 2025

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](#)

Using Setting Circles Workshop

Open for Early Enrollment

Place: TIMPA

Date: TBD (early 2025): The date will be set when a sufficient number of people have signed up.

Time: 7:00 PM until completed

Synopsis: This is another workshop in the practical astronomy workshop series. It will teach students how to use manual setting circles for locating objects in the night sky. Many SCTs and older scopes have manual setting circles. This workshop is highly recommended for students who have telescopes that are not goto or pushto and have manual setting circles.

PLEASE NOTE: due to extreme equipment limitations there is a strict limit of 10 students for this workshop. If additional properly equipped equipment becomes available the limit may be increased. Also, because we have a very small group signed up so far, if this date is not convenient for the current list of enrollees the date may be adjusted to better suit the people enrolled.

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. 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 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. The students will be taught proper recording techniques, what information to record, what sort of forms to use, etc. In addition students will be taught techniques for sketching objects. 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](#)

TAAA Holiday Party

The holiday season was the cause for another TAAA Holiday Party. The event is a potluck affair held at the Foley's house for the 9th year. There was lots of food with 43 attendees bringing entrees, salads, deserts and more! In addition, members brought lightly used astronomy items to contribute to the evening's raffle, giving everyone a chance to take home a new astronomy toy for the coming season.

In addition to the raffle, there were two telescopes auctioned that evening. They both went to the high bidder, new member Bob Ray.

The event is always lots of fun and a chance to meet members, their significant others, and talk about astronomy etc. and plans for the new year.

Ed Foley



Bill & Celeste Peters, John & Ardis Herrold



Ross Carnes, Bernie Stinger



Holiday Party Raffle



Pam & David Rossetter, David Eicher

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 24 - 25, January 31 to February 1

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.

Chiricahua Astronomy Complex

by Jim Knoll

Upcoming CAC Weekend Dates (Thursday/Saturday)

January 30 - February 2 (New Moon January 29)

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](#).

Chiricahua Astronomy Complex (CAC) Telescope Training. We have quite a few telescopes that members can get trained and certified to use at CAC. They include: The Wally Rogers 14" Celestron, the Reynolds-Mitchell 9" Folded Refractor and the 40" Big Boy, and on the Stinger Pad, the Celestron 9.25" & 11", the Meade 12", and the 18" Obsession. We also have some small dobs and an 8" Celestron members can use. For more information and to get on the training list, contact [Joe Jakoby](#).



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.

CAC Director: [Jim Knoll](#)

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

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

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.

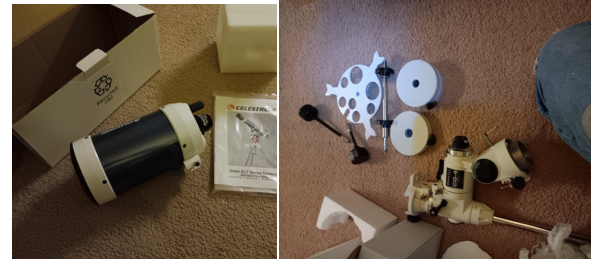


Celestron 8" CPC
Dual fork arm mount, 9x50 finder, 2 eyepieces, telrad, finder rings, hand controller, user's manual, tripod, diagonal. Basically, new in original box.

\$1,600

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

\$500



Celestron 8" XLT with NexStar
Comes with a couple of eyepieces, barlow, red dot finder, instruction manuals.

\$950



12" Dobsonian
Very large, Homemade. Crosshair finder

\$500



Zhumell 12" Dobsonian
Comes with 2" focuser plus 1.25" adaptor, 1 eyepiece, cooling fan, 8x50 finder, telrad, 5 eyepiece filters

\$800

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

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

TAAA Equipment Loaner Program

The TAAA has a terrific Equipment Loaner Program. This gives you access to fine telescopes including computerized Schmidt Cassegrains from Meade and Celestron, Dobsonians from Orion, mounts, tripods, and cases full of fine eyepieces. Check out the [full list](#) with descriptions and photos.

This equipment is for TAAA members to checkout and use. Email [Ralph Means](#) for information or to schedule time for pick up.

Orion SkyQuest XT-10 classic
10" Dobsonian, f 5.0, 1.25 focuser, 8x50 finder, push-to.

Featuring



School/Public Star Party Requests

by Bernie Stinger

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 January, 2025.**

Please let me know in 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 December 28th. **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

January Events still in need of Volunteers

Wednesday –January 22 -- WEST TUCSON
Cooper Center for Environmental Learning
5403 W Trails End Rd
Age/Grade Level: Grade 4
Participants: 50

1 Additional Scope Needed

Setup Time: 6:30 pm. **Start Time:** 7:00 pm.
End Time: 8:30 pm.

Friday – January 24 -- SOUTHWEST TUCSON
Vesey Elementary School
5005 S. Butts Road
Age/Grade Level: K – 6
Participants: 150

1 Additional Scope Needed

Setup Time: 5:30 pm. **Start Time:** 6:15 pm
(or sooner if planets visible) End Time: 7:30 pm

January Events still in need of Volunteers - Continued

Saturday – January 25 -- NORTHWEST
TUCSON -- CATALINA

Catalina State Park

11570 N Oracle Road

Age/Grade Level: All Ages.

Participants: 100+

3 Additional Scopes Needed

Setup Time: 5:30–6:00 pm.

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

Tuesday – January 28 -- FAR EAST TUCSON

Soleng Tom Elementary School

10520 E. Camino Quince

Age/Grade Level: K – 6th Grade

Participants: 100+

1 Additional Scope Needed

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

End Time: 8:00 pm.

Tuesday – January 28 – NORTHEAST TUCSON
Whitmore Elementary School

5330 E Glenn St.

Age/Grade Level: K–6

Participants: 100

1 Additional Scope Needed

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

End Time: 7:30 pm.

Friday – January 31-- SOUTHWEST TUCSON

Grijalva Elementary School

1795 W Drexel Rd

Age/Grade Level: K – 5th Grade

Participants: 100

1 Additional Scope Needed

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

End Time: 8:00 pm.

January Events Filled—No Volunteers Needed

Thursday – January 2 -- NORTHEAST TUCSON

Sabino Springs Nature Club @ Arizona

National Golf Club

9777 E Sabino Greens Dr

Age/Grade Level: All Ages

Participants: 50+

0 Scopes Needed

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

End Time: 8:30 pm.

Saturday – January 4 — 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.

January Events Filled - Continued

Wednesday – January 8 -- 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.

Wednesday – January 15 -- 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.

Friday – January 17 -- NORTHEAST TUCSON
Pima County Natural Resources Parks & Recreation (NRPR) @ Agua Caliente Park

Agua Caliente Park is located at 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

Friday – January 31-- EAST TUCSON

Saguaro National Park EAST

Saguaro EAST is located at 3693 S Old Spanish Trail.

Age Group: All Ages

Estimated # Participants: 100+

0 Scopes needed

Setup Time: 5:45 pm Start Time: 6:30 pm

End Time: 8:30 pm

Wednesday – January 15 – NORTHEAST

TUCSON – Solar viewing

Sunrise Drive Elementary School

5301 E Sunrise Drive

Age/Grade Level: K – 5

Participants: 200 (small groups rotating)

0 Solar Scopes Needed/shift. 2 shifts

Setup Time: Shift 1: 8:00am.

Start Time: 8:30am. End Time: 11am.

Setup Time: Shift 2: 11am.

Start Time: 11:30am. End Time: 2:30pm.

Friday – January 17 -- FAR WEST TUCSON

Redhills Visitor Center @ Saguaro NP -- WEST

2700 N Kinney Rd.

Age/Grade Level: All ages

Participants: 100+

0 Scopes Needed

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

End Time: 8:00 pm.

Wednesday – January 29 -- WEST TUCSON

Cooper Center for Environmental Learning

5403 W Trails End Rd

Age/Grade Level: Grade 3 – 5

Participants: 25

0 Scopes Needed

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

End Time: 8:30 pm.

Thursday – January 30-- NORTH TUCSON

Amphitheater Middle School

315 E. Prince road

Age/Grade Level: 6 – 8 Grade

Participants: 50

0 Scopes Needed

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

End Time: 7:30 pm.



Opening Minds to the Universe

The SMSIG will meet by Zoom on Monday, January 13th. The meeting begins at 7pm and will finish no later than 8:30pm. The Zoom link will be mailed to TAAA members.

Our spring events, the Tucson Festival of Books (March 15 & 16) and the Tucson Astronomy Festival (March 22) are shaping up well. We'll be going over the plans for the Tucson Astronomy Festival at our January meeting.

We have a few astronomy activity toolkit requests but more are likely to come in once classes begin after the holiday break. Below are the current requests for toolkit activities. I've included the name of the volunteer committed to the event. It's helpful to have two people at each event. Pairing up with an experienced volunteer is an excellent way to get into this type of astronomy outreach that doesn't require a telescope or clear skies.

- Jan 28 (Tues) 6:30pm – 8pm Soleng Tom Elem (Houghton/Broadway) Space Rocks, Tom Sarko
- Jan 28 (Tues) 6pm – 7pm Whitmore Elem (Glen/Craycroft) Exploring the Solar System, Susan O'Connor
- Mar 4 (Tues) So AZ Science & Engineering Fair Judging, TAAA Judges are: Karen Liptak, Todd Hansen, Terri Lappin
- Mar 6 (Thur) 7pm – 9pm Wright Elem (Pima/Columbus), PlanetQuest, **UNFILLED**
- We'll need many volunteers for the Tucson Festival of Books and the Tucson Astronomy Festival. An online signup sheet will be made available.

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, January 9, 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, January 20 at 7:00 pm** via ZOOM.

Topics:

Beginners' Corner - Ask a Question

What's the Craziest, Stupidest Thing You've Done (in Astro-Imaging)?

This will be an open discussion to share your goof-ups, foibles and expensive mistakes!
(5 minutes each, with pictures if you have them)

Image Sharing, Discussion

[Continued](#)

AISIG Continued

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](#).

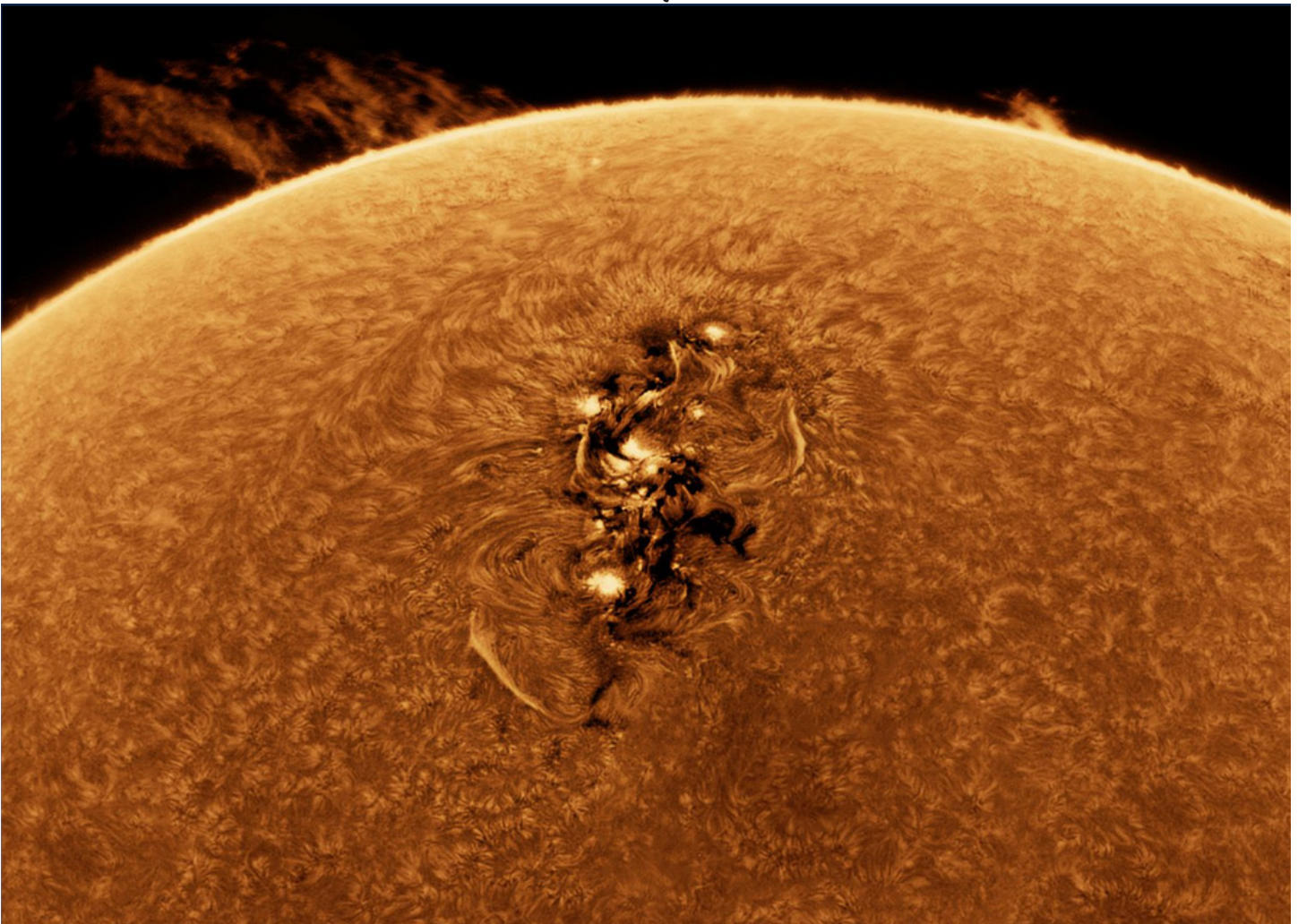
View previous AISIG meetings on the [TAAA YouTube Channel](#). Also, we now offer a mentoring program. For details, see the AISIG [Web Pages](#).

TAAA 2024 Imaging Contest

We are pleased to announce the top three finishers in each category of our 2024 Imaging Contest.

Through the generosity of [Starizona](#), each first place winner will receive an Outdoor Adventures portable power bank, retail price \$279. This 96000 mAh power station provides multiple outlets with a variety of voltages, and it can power some rigs all night. Thanks to all who participated!

Solar System

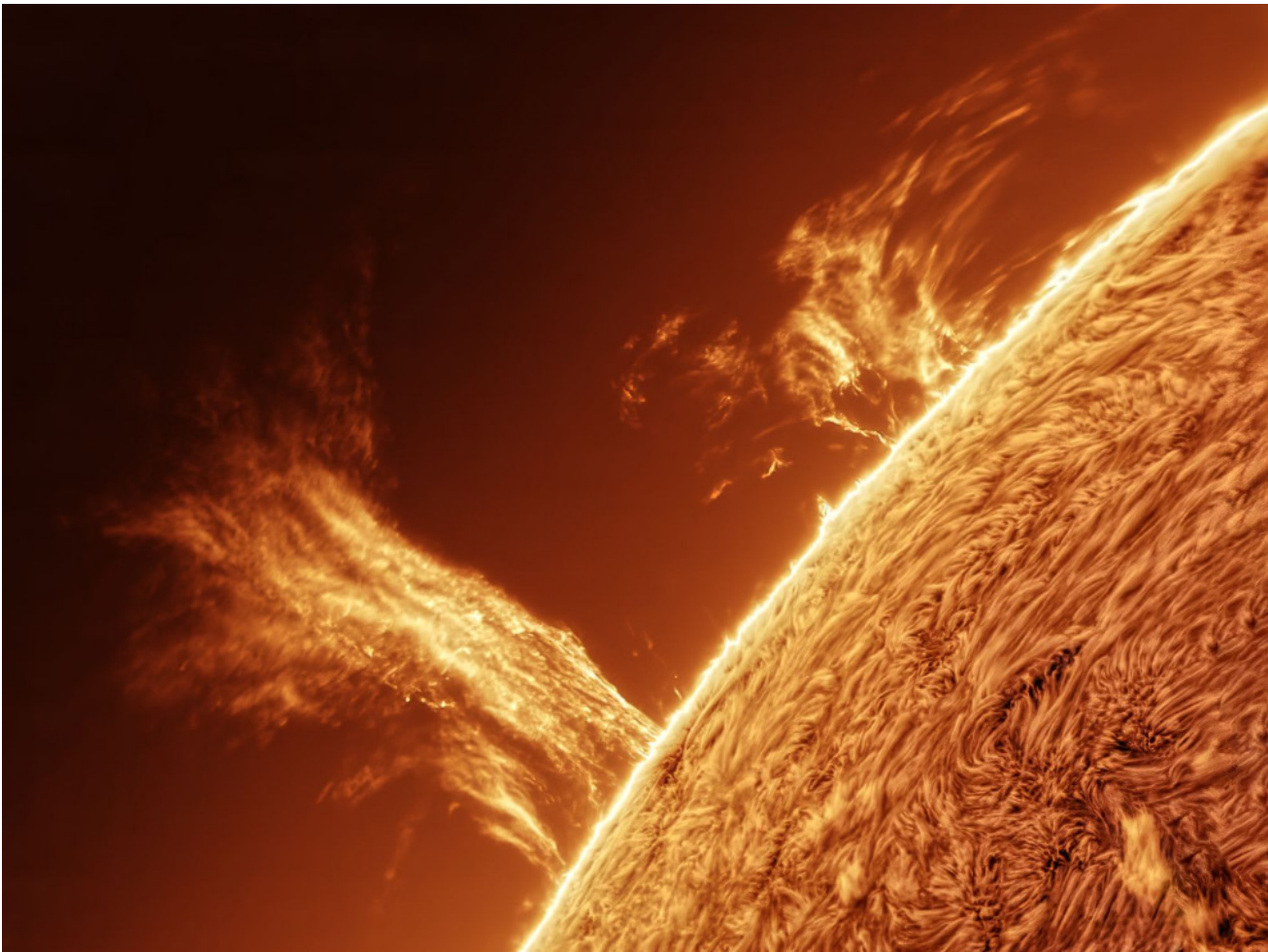


FIRST PLACE

Mike Mulcahy - Sunspot AR3664

Astro-Tech AT72ED, ASI174MM mini, Daystar Quark filter, 300 frames stacked.

AR3664 was a giant sunspot that was 15 times wider than Earth and released several solar flares and coronal mass ejections (CMEs) in May 2024.



SECOND PLACE

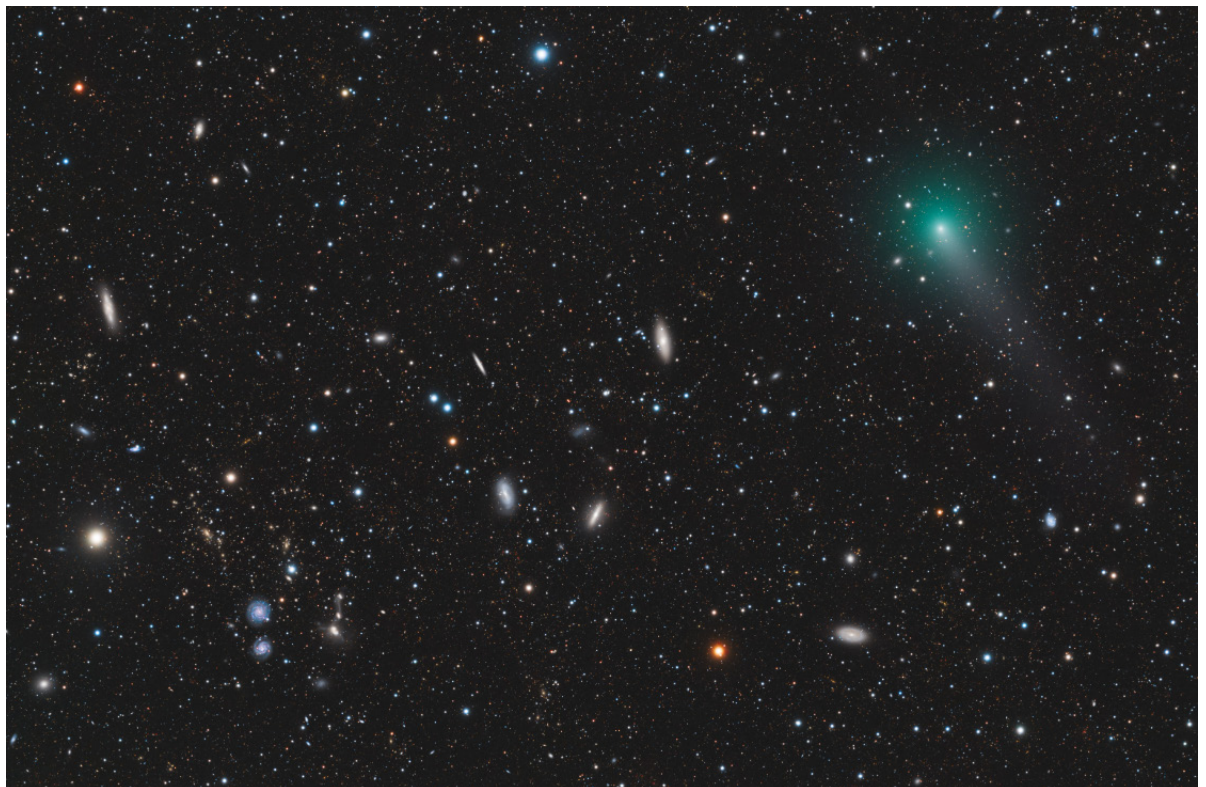
Mark Johnston -15541 Solar Fury; TEC160FL with ERF, Lunt and Quark etalons. 200 frames, ZWO174M camera. The prominence shown is over 100,000 miles high, and there is a lot of interesting surface activity on the Sun.

THIRD PLACE

Charles Hagen
Comet 62P and
Galaxy Field

QHY268M
Camera-
Skywatcher Esprit
100ed Telescope-
Antlia 36mm
LRGB + Ha
(3nm).

Comet 62P just so happened to be passing by a lovely little rarely imaged galaxy field.



Deep Sky Objects

FIRST PLACE

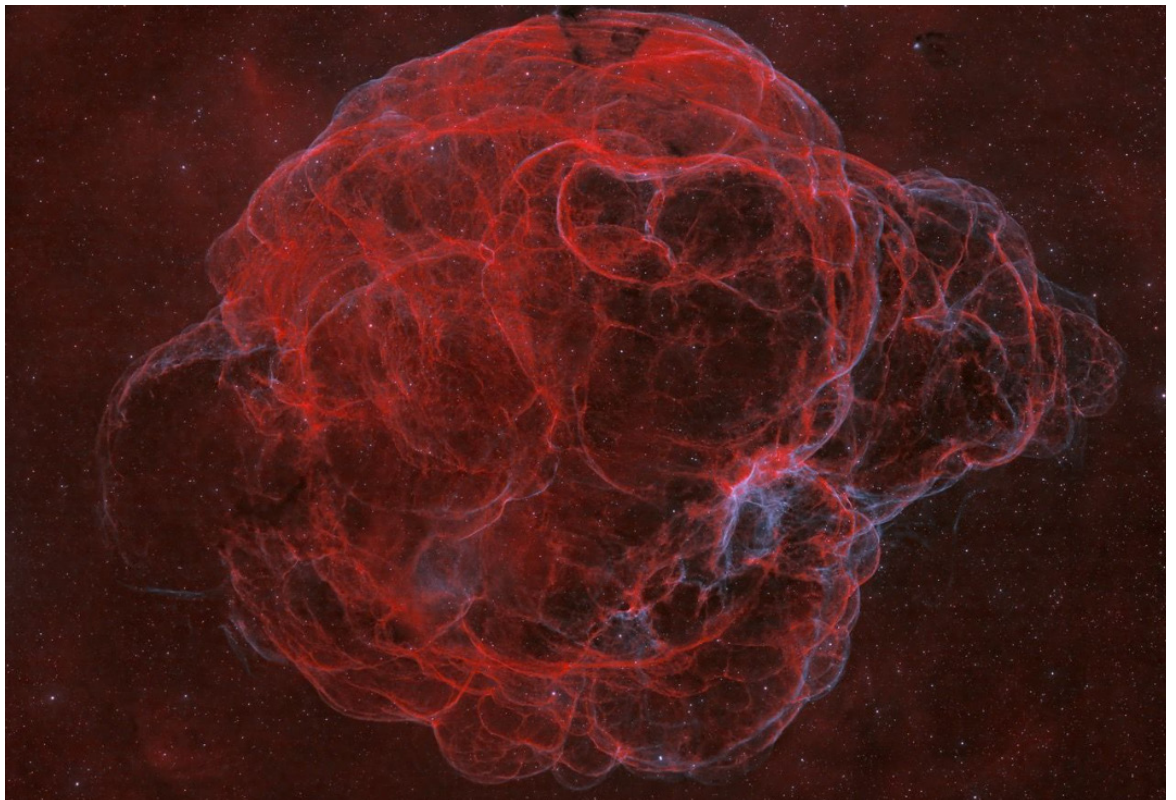


Charles Hagen - NGC 1333; QHY268M Camera- Skywatcher Esprit 100ed Telescope- Antlia 36mm LRGB + Ha (3nm). After a couple months of gathering data and many weeks of processing and refining, I had been wanting to do this target justice for years and I was very happy with the rarely seen faint structures that I was able to reveal in the final image.

SECOND PLACE

Antonio Flores
Sh2-240
Spaghetti
Nebula

Telescope-
FSQ106EDXIII,
Camera-
QHY600M, Filters-
Astrodon E Series
5mm Ha , 3mm
OIII.





THIRD PLACE

Randy Smith
M78

ZWO ASI
2600 MM Pro,
Skywatcher
200P, Starizona
1.0 Corrector,
Antlia V-Pro
RGB and Antlia
3nm Ha filters
Total
integration time
13 hours.

I chose M78
because I like
reflection
nebulae,
especially the
dark ones.

HONORABLE MENTION

Gina Knight
Elephant Trunk Nebula

ZWO ASI2600 MCPro, Celestron
9.25" Edge HD, Celestron OAG, ZWO
ASI174mm mini.

The image is a close up of part of the
Elephant Trunk Nebula (IC 1396A) and
consists of dark and dense clouds of gas
and dust. It shows the glowing core of the
trunk surrounded by interstellar gas near
the bright blue star HD 239710.



Nightscapes

FIRST PLACE

Casey Good Milky Way Over The Great Arch, Utah

Canon Ra, Sigma Art
40mm f/2.8, single
untracked 15 second
exposure.

I'm submitting this one
from a trip to Arches
National Park in June
2024, after hiking at night
with the camera gear, this
shot was definitely worth
it.



SECOND PLACE

Mike Weasner Aurora Over Desert

Camera: iPhone
15 Pro Max,
Camera app in
Night Mode
(3 seconds
exposure, 1X lens,
handheld).





THIRD PLACE

Mark Savan - Milky Way Over Kiripotib; [Video Here](#); Rokinon 14mm f/2.8 lens on Sony A7III (modified); no filters. Acquired June 6-7, 2024 at Kiripotib Astrofarm in Namibia;



HONORABLE MENTION

**Mike Mulcahy
Milky Way Over
Madera Canyon**

Canon EOS 6D, Rokinon 14mm f/2.8 Series II.

This was taken from near Madera Canyon which is south of Tucson half way to Mexico. The foreground is a 25 sec shot at f8 and ISO 1600. The sky is a stack of 6 guided 57 sec exposures at f4 and ISO800.

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!](#)

Looking for Longtime Sunspot Counters

I am looking for your daily raw sunspot counts, mostly from before the year 2000. I am hoping that you active AAVSO sunspot counters will still have your original raw daily data back in your old logbooks or records, and that you can pass them along. This is a data-rescue or data-recovery operation.

The goal is to recover as much long-runs as possible, ideally with measures going back before the year 2000, with the aim of putting out a data paper in ApJ, which contains an on-line-only, full data table (with about half-a-million observations) of every recovered daily measure. I want to include every observation for every AAVSO observer for every day. The minimum for each day would be YEAR, MONTH, DAY, OBSERVER, the observed G (group count), the observed S (spot count), and the observed Wolf number (10G+S). This must be only for observers who have contributed their data to the AAVSO, back in the day. I am mainly looking for the raw daily counts for before the year 2000.

The problem is that much of the raw-daily-data in the AAVSO archives from roughly 1976 to 1999 has been lost. We have the processed data over the entire AAVSO record from 1944 to 2024, but we are ambitiously trying to reprocess the original observed data, and for this we need the original raw sunspot counts. We have a complete record of raw data from 2000 to present. And I have rescued the data from 1945 to around 1976 (with some months missing), from a complete photocopy of the AAVSO Headquarters records that I made in 1995 (for which all this has been subsequently lost by the HQ). And we have recovered a variety of special case observations collected for various individual observers based on their original logbooks. But this leaves us with big gaps, mostly 1976–1999.

TAAA is one of the best clubs in the world, with many of the world's best observers, so I expect that there are perhaps half a dozen of you >20-year observers in the TAAA. Many of you long-term AAVSO observers might have your own personal archival records of your data going back to before the year 2000. You might have it as old data scattered in your logbooks, or you might have it in copies of your original monthly report sheets. Or you might have put your old data into some electronic summary listing. I'll take whatever you conveniently have. Even if you do not have such, maybe you know someone who might have the needed data, and if so then please pass along my request.

My heartfelt plea is for you to send along to me your pre-2000 daily raw data. The preferred format would be electronic and in EXCEL. But any format is fine, from handwritten lists, up to photocopies of logbooks or monthly report sheets, up to any spreadsheet listing. Please use my [private email address](#), as my LSU email makes occasional stupidities of returning or dropping emails from non-academic addresses. Or you can postal-mail it to <Brad Schaefer, 1434 E. Seneca St., Tucson AZ 85719 USA>.

The goal here is to rescue as much old AAVSO data as possible.

Bradley E. Schaefer
Professor, Department of Physics and Astronomy
Louisiana State University
Baton Rouge, Louisiana 70803, USA
[email](mailto:schaefer@lsu.edu) [schaefer@lsu.edu]

January - February 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 January and February for the more common observing programs.

Constellation Hunter Program – Northern Sky

The following constellations are well placed for observing for January and February: Auriga, Camelopardis, Canis Minor, Gemini, Lynx, Monoceros, Orion, Perseus, Taurus.

Messier Observing Program - Prime time for the winter Milky Way. The following Messier Objects are well placed for observation during January and February (listed in ascending RA): M45, M79, M38, M1, M42, M43, M36, M78, M37.

Lunar and Binocular Observing Program

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

New Moon: January 29, February 28	10 days old: January 9, February 7
40 Hours waxing: January 1, January 31	Full (14 days old): January 13, February 12
72 hours waxing: January 2, February 1	Gibbous: January 21, February 20
4 days old: January 3, February 2	72 hours waning: January 26, February 25
7 days old: January 6, February 5	40 hours waning: January 27, February 26

Solar System Observing Program

The following planets are visible during December and January:

Mercury is an early morning object during January. It becomes an evening object during the last 3 weeks of February, brightest on February 27.

Venus is an early evening object during January and February. On January 1 Venus sets more than 3 hours after sunset. On February 28 it sets around 2.5 hours after sunset. Greatest elongation occurs on January 9. Brightest occurs on January 14.

Mars is well placed for evening observation during January and February. Mars reaches opposition on January 15. Mars transits at 1:30 AM on January 1. On February 28 it transits around 8:30 PM.

Jupiter is still well placed for evening observation. It is well up at sunset. It transits around 10 PM on January 1 and around 6 PM on February 28.

Saturn is still visible in the early evening sky, setting around 10 PM on January 1. But by late February it gets lost in the twilight, setting around 6:30 PM on February 28. Saturn is now entering its rings edge-on period. This means we will start seeing interesting events with its moons (eclipses, occultations). See below for upcoming events.

Uranus is well placed for evening viewing. Sets around 3:30 AM on January 1 and around midnight on February 28.

Neptune is still visible in the early evening sky. But by late February it will be lost in the twilight. It sets about 30 minutes after Saturn during the entire period.

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

Urban Observing Program

The following **deep sky objects** are well placed for observing during January and February: Tr 3, Stock 23, Mel 20, NGC 1342, M45, Hyades, NGC 1647, NGC 1807, NGC 1817, M38, M36, M42, NGC 1981, M37.

The following **Double Stars** are well placed in January and February: Trapezium

The following Variable Star is well placed for observation during January and February: Algol

Skyward

By Dr. David H. Levy

December 2024

A letter to my great grandson.

Last November, David Rossetter and I drove to Albuquerque so that I could meet Beau, my new great grandson. A generation has passed when I did this before - a welcome letter to my granddaughter Summer as part of the column I had at the time in Sky & Telescope. On March 15, 2024, it became Beau's turn.

You are a child of my grandson Matthew, and Cierra, and Beau, you were in top spirits to meet me. It was unforgettable. As an infant, you speak more with your eyes than with your mouth. And your eyes spoke volumes to me.

At first I thought your eyes wanted to know “What do we do next, Grampa?” But then those eyes told me about the mighty comet you did sort of see, but which made its grand appearance last fall. Gramps asked a group of high school students last October to look above the large metal structure that was blocking out our view of the comet's head. That structure also blocked some of the lights on the distant western horizon, but in so doing it allowed a clear view of the comet's long tail. It brought me back to my own first view of a comet, Ikeya-Seki in 1965. Beau, you will not remember comet Tsuchinshan-ATLAS at the start of your life, but I like to imagine it depositing some surreptitious insight into your young mind.

Beau, I know that every one of your days will not be filled with sunshine. There will be cloudy days. But I have found that those cloudy times had more to teach me than an unbroken record of sunny times would have. As you discover your world in the years to come, you will learn about different countries, different faiths, and possibly most important of all, different ideas.

By far my favorite part of my visit with you was when your Grandma Nanette suggested that I crawl across the floor with you. Despite knowing that I would never be able to stand up again without assistance, I went down anyway and enjoyed a lovely time following you about, letting you take me to where you wanted to go. I will never forget our wonderful first meeting. You have wonderful parents and terrific grandparents. And although your Grama Wendee never got the chance to enjoy your company, we think she will live on in your heart. And from a distance, I will be watching too.

On the way home we stopped at our astronomy club's dark site, the Chirichuaha Astronomy Complex, where I did a half hour of comet hunting on a very chilly evening. As I followed my passion that night, I suspected that I was beginning to appreciate the sky through your eyes. May the peace of the evening sky, “Pacem de Caelo Vesperi”, always brighten your life.



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.

