

TAAA Desert Skies Bulletin

Observing Our

Desert Skies

Since

1954



February 2024

www.tucsonastronomy.org

Membership Meeting

February 2 @ 6:30 pm - 9:00 pm

TAAA's next general member meeting will be held on **Friday, February 2, 2024**. The Main Presentation will start at 6:30PM, followed by Mary Turner's Seasonal Night Sky Presentation. 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 at the TAAA [Facebook](#) page.

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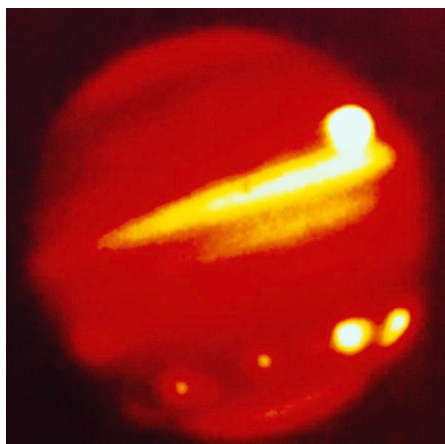
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Main Presentation at 6:30PM AZT

Title: Comet Shoemaker-Levy 9 and Jupiter after thirty years: A retrospective of what happened and what we learned.

Presentation: On March 23, 1993, Carolyn and Gene Shoemaker and David H. Levy discovered a comet that had been fragmented into more than 21 pieces. Two months later they learned that the comet would collide with Jupiter. The collision happened between July 16 and July 21, 1994, thirty years ago. David H. Levy's presentation will offer a retrospective of what happened, and what humanity learned about comets, about Jupiter, and about the origin of life.

Biography: TAAA member, **Dr. David H Levy**, is arguably one of the most enthusiastic and famous amateur astronomers of our time. Although he's never taken an astronomy class, he has written over three dozen books, written for three astronomy magazines, and appeared on television programs featured on the Discovery and the Science Channels.



Comet Shoemaker-Levy9 Collision

Among David's accomplishments are 23 comet discoveries, (the most famous being Shoemaker-Levy 9), a few hundred shared asteroid discoveries, an Emmy for the documentary *Three Minutes to Impact*, five honorary doctorates in Science, and a PhD from the Hebrew University of Jerusalem (2010) which combines astronomy and English Literature. Currently, he is the editor of the web magazine *Sky's Up!* and has a monthly column, *Skyward*, in the local *Vail Voice* newspaper. David continues to hunt for comets and asteroids, and lectures worldwide.

January 2024

SOMETHING THAT WARRANTS OUR ATTENTION AND ENERGY: NEW PLANNING EFFORT BY THE CITY OF TUCSON

The City of Tucson develops 10-year plans. The last City of Tucson plan was enacted for 2013 and ran 2013-2023. The city is now actively seeking input on its next City Plan which it expects to be ratified in time to take effect in 2025. The city is actively seeking input from citizens regarding the content of the future plan. I was involved in two of these input sessions last week. The plan is broken into four sections. I was concerned that although water and energy are being included, transportation is included, and land use is included, there is absolutely no mention of lighting anywhere in the plan. Also, the **city representatives managing the meetings were TOTALLY unaware of existence of the Tucson Lighting Code and of any reason that lighting should be a consideration in the future of Tucson.**

I have interfaced with DarkSky on this. We are working on preparing a document to use as talking points in an effort to add lighting into the proposed new City Plan, especially in sections dealing with water and energy, transportation, or with living spaces. I hope as Tucson citizens or neighbors, some of you will be able to be involved in the important effort to foster the inclusion of “lighting” in this 10-year Tucson City Plan. Once the word “lighting” is placed in the official plan anywhere, we create leverage for “lighting” to be a variable that is considered in future management and development of the city, and this can be used to prevent the city from ignoring the Tucson City Lighting Code.

IMPORTANT TAAA SCHEDULE CHANGES FOR APRIL 2024

Due to eclipse commitments and travel of TAAA Leaders and Members, the TAAA

by Mae Smith

Board has **CANCELED** the following regular meetings:

1. The **April First Friday General TAAA Member Meeting** originally scheduled for Friday, April 5th is **canceled**.
2. The **April TAAA Board Meeting** originally scheduled for Wednesday April 10th is **canceled**.
3. The **April TAAA Executive Committee Meeting** originally scheduled for Thursday April 4th is **canceled**.
4. **NOTE:** Various sections of TAAA that hold monthly, or other regular meetings will make their own decisions regarding whether they wish to meet in April or cancel. For information, check with the TAAA person normally in charge of that particular group.
5. It is suggested that any groups considering canceling April meetings, make decisions and communicate them to participants as early as possible.

COMMENTS REGARDING RECENT AND CURRENT ACTIVITIES:

1. **MINOR POLICY TRAINING:** Thank you very much to everyone who participated in the recent minor policy training efforts. We had 70 TAAA members participate in the Fundamentals training and 17 participate in the Advanced Training. We appreciate your participation in these important activities and hope that you found the training helpful. Thanks to the Minor Policy Committee for the great organization of all the training activities. Please let me know of any suggestions or input that you have for future minor policy courses.
2. **OVERNIGHT EDUCATION PROGRAM FOR YOUTH AT CAC:** We are getting close to the first weekend in February when our overnight teen group from Pusch Ridge is scheduled at CAC. A great deal of attention has been paid to the organization of this program and to the quality

astronomy experience that will be offered for the group. It is exciting to be able to start using our two new buildings at CAC to facilitate our youth education efforts. We owe thanks to Ed Foley, our Education Organizer, the CAC Education Committee, and to all TAAA members who have facilitated this effort for assisting us in being able to actualize the long-term TAAA dream of having facilities to enhance our support of overnight education of youth at CAC.

3. Efforts are still being made to coordinate with the TIMPA flying group regarding content of a future TIMPA user agreement, but the process is going very slowly in getting responses.

Mae Smith, TAAA President
president@tucsonastronomy.org

SOME OTHER BOARD ACTIVITIES

1. We are in the process of conducting an in-depth review of our Member Planet member management service that enrolls members and provides us with a member email system. This particular program has been challenging for some time and we have been working with it in order to save expenses that accompany many other programs. However, the Board is currently considering/reviewing other programs.
2. The TAAA Board is currently working with a consultant in organizing/conducting a strategic planning process. We were able to get a grant that will pay for the strategic planning effort. We hope that you will take time to participate by responding to the member questionnaire.

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:
Suzanne Bailey, 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 Editor - David Rossetter Ken Bertschy - Graphics Terri Lappin & Jim Knoll - Proofreading Gregg Ruppel - Image Editor

Fundamentals of Astronomy Class Open for enrollment

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

Date: Three consecutive Saturdays: February 24, March 2, March 9, 2024; Time: 9 AM to 4 PM each day

Synopsis: This class covers all the basic topics 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. This 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.

Contact Instructor – Douglas Smith; Phone: 520-396-3233, [E-mail](#), or sign up using the sign-up sheet available at all General Members meetings through February, 2023. Enrollment is strictly limited to 20 students and is on a first come basis. If there is sufficient interest the class may be offered again in the fall/winter 2024 time frame.

Practical Astronomy Workshop 3 **Learn how to Record Observations and Sketch Objects** Open for enrollment

Place: TIMPA; Date: Thursday, February 1, 2023; Time: 6:30 PM until completed

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

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

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

Practical Astronomy Workshop 4 **Using Setting Circles** Open for enrollment

Place: TIMPA; Date: TBD; Time: 6:30 PM until completed

Synopsis: This is the fourth 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 SCT's 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.

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

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.

Astronomy Globes for CAC Learning Center

The Chiricahua Astronomy Complex (CAC) will begin hosting school and youth groups to learn about astronomy and get hands-on experience observing the wonders of the night sky. We would like to have most of the globes produced by Astronomy Magazine in the learning center for visual aids and in-depth study. Our intent is to purchase all the 12-inch globes plus a couple 6-inch versions (18 total). You can help sponsor one or more of these globes. The list below are all 12-inch globes unless otherwise specified. Cost for each globe is \$100. If you want to participate, email [Jim Knoll](mailto:jim.knoll@tucsonastronomy.org) with your request to participate and which globe(s) you want to sponsor from the below list (preference is on a first come/first serve basis). Jim will let you know if your preference(s) is still available or what the alternatives are. Then you can make your donation through the website or mail in a check.



Jim Knoll
CAC Director
cac-director@tucsonastronomy.org

Globes Available to Sponsor:

- | | | |
|---------|-------------|---------------------|
| Mercury | Ganymede | Enceladus |
| Venus | IO | Pluto |
| Earth | Europa | Sun (6") |
| Moon | Callisto | Day/Night Globe |
| Mars | Saturn (6") | Milky Way (6") |
| Jupiter | Titan | Constellation Globe |

TAAA 2024 Calendar

The 2024 TAAA Calendar will be available for sale at the general meetings. The cost is \$15 per calendar. Please contact Susan OConner to make alternate arrangements. [Email](mailto:susan@taaa.org); 520-780-0136

Tucson Amateur Astronomy Association



2024



The NVRC is **seeking potential candidates for elected leader positions this upcoming May. Positions to be voted on include Secretary, Treasurer, two Board Members-At-Large and two members of the NVRC; all are 2-year terms that will commence June 1, 2024.** The NVRC is aware that our current Treasurer will not be seeking re-election, and would appreciate hearing from potential candidates at the earliest so that we can brief the critical duties and responsibilities of that position and arrange for meetings with our Treasurer, so that candidates fully understand the nature and vital work of this office.

The NVRC is also **seeking potential candidates for TIMPA Director** 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 [web page](#), 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 “MEMBER 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 at nvrcchair@tucsonastronomy.org for the full description and additional information if interested or if you have questions pertaining to this 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.

Information Technology Committee

The IT Committee will meet on **February 13th, 7:30 – 8:30pm.** This will be a Zoom meeting. We’ll touch on these following topics: reaffirming our purpose and scope; centralization of tech related services, licenses, and software; and how TAAA can best track the time and talent contributions by our members. If you want to join this meeting, contact [Terri Lappin](#) for the Zoom link.

Tucson Stargazing Adventures (TSA)



Interested in doing Astronomy Outreach and help raise funding for TAAA and CAC? We can use additional members to help with the TSA program. Provided you are familiar with your equipment and the night sky, and have experience doing astronomy outreach, we could use your help.

Please contact [Jim Knoll](#) for help getting started. Thanks!

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. This month's meeting is:

Thursday, February 15, 6:30pm

Tamarind

7265 N La Cholla Blvd
(NW corner of La Cholla and Ina)

<https://www.tamarindoftucson.com/>

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

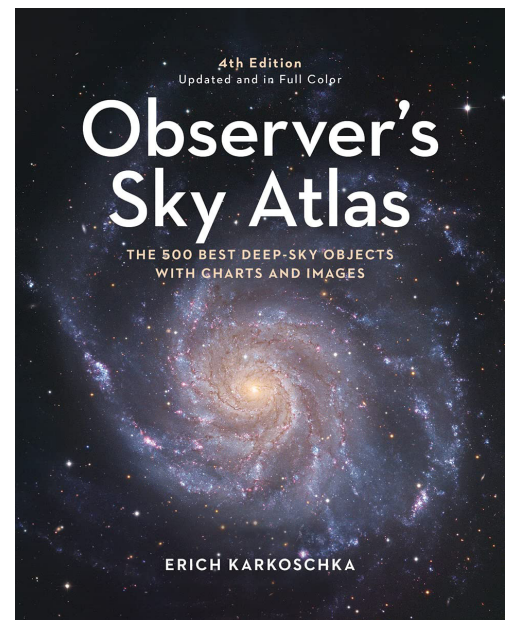
Book Of The Month Review

by Douglas Smith (TAAA Librarian)

Book: *Observer's Sky Atlas: The 500 Best Deep-Sky Objects With Charts and Images* (4th Edition)

Author: **Erich Karkoschka** (TAAA member)

This book is a delightful change from the usual sky atlas. The book is small in size (7.5" x 10" x 0.75"), only 145 pages, yet contains data that would normally take up a number of larger volumes. It is well organized. It contains star charts appropriate for locating 500 of the finest deep sky splendors. It also contains tables of various other astronomical data, such as planetary oppositions, lunar phases, binary star data (separation and position angle), etc, out to 2060. It has data about the brightest stars, meteor showers and a wealth of other information. The finder charts are easily readable under red light illumination. I would highly recommend this book as a welcome addition to any amateur astronomer's library, either as a reference or as a source to be used during observation sessions. This book is in print and sells for around \$35.



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 list for February, 2024.** February is the busiest month with seventeen events scheduled, mostly school events but a few public events at State, County & National Parks in the area. Cooper Center is picking up again and we also have the Tucson Star Party.

Please let me know in return email if you are interested in volunteering for any of the events listed below. First come – first served. 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 those events and get a notification when I update the event. Again, this is only for PUBLIC star parties listed on Facebook.

The requests have been updated as of January 24th. **The first section 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

Saturday –February 3 –SOUTHEAST TUCSON
Tucson Star Party @ Pima Community College

8181 E Irvington Rd
Age/Grade Level: All Ages
Participants: Day: 50 Evening: 100+
Setup Time: Daytime: 1:30 pm.
Start Time: 2:00 pm. End Time: 5:00 pm.
Evening: 6:00 pm.
Start Time: 6:30 pm. End Time: 9:00 pm.

1 Scope Needed

Saturday – February 10 — ORACLE AZ
Oracle State Park

3820 E Wildlife Dr, Oracle AZ
Age/Grade Level: All Ages
Participants: 150
1 Scope needed
Setup Time: 6:30 pm.
Start Time: 7:00 pm. End Time: 9:00 pm.

School/Public Star Party Requests - Continued

Saturday – February 17 –FAR EAST TUCSON
Tanque Verde Foundation – Solar viewing
Nerdy Derby racing day
10801 E. Valencia Rd.
Age/Grade Level: All Ages
Participants: 75–100
2 Solar Scopes Needed—Whitelight or H-alpha
Setup Time: 12:30 pm.
Start Time: 1:00 pm. End Time: 4:00 pm.

February Events Filled—No Volunteers Needed

Friday – February 2 -- 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. End Time: 8:00 pm.

Friday – February 2 -- Mountain Vail
(Esmond Station Middle School
9400 S Atterbury Wash Way
Age/Grade Level: 6 – 8th Grade (AstroClub)
Participants: 40
0 Scopes Needed
Setup Time: 6:30 pm.
Start Time: 7:00 pm. End Time: 8:30 pm.

Tuesday – February 6 –SOUTHWEST TUCSON
Cholla High School
2001 W Starr Pass Blvd
Age/Grade Level: High School Students
Participants: 100
0 Scopes Needed
Setup Time: 5:45–6:00 pm.
Start Time: 6:30 pm. End Time: 8:00 pm.

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

Friday – February 9 --NORTHWEST TUCSON
Catalina State Park
11570 N Oracle Road
Age/Grade Level: All Ages.
Participants: Day: 50 Evening: 100+
0 Scopes Needed: 0 Solar Scopes (daytime)
0 Scopes (evening)
Setup Time: Daytime: 1:30 pm.
Start Time: 2:00 pm. End Time: 4:00 pm.
Setup Time: Evening: 6:30 pm.
Start Time: 7:00 pm End Time: 9:00 pm

Sunday – February 11 -- FAR WEST TUCSON
UA Astronomy Program – ASTR 203
Redhills Visitor Center @ Saguaro National
Park -- WEST.
2700 N Kinney Rd.
Age/Grade Level: College
Participants: 25–30
0 Scopes Needed
Setup Time: 6:30 pm.
Start Time: 7:00 pm. End Time: 9:00 pm.

School/Public Star Party Requests - Continued

Wednesday – February 14 -- WEST TUCSON
Cooper Center for Environmental Learning
5403 W Trails End Rd
Age/Grade Level: 4th Grade
Participants: 30
0 Scopes Needed
Setup Time: 6:30 pm.
Start Time: 7:00 pm. End Time: 8:30 pm.

Saturday – February 17 –FAR WEST TUCSON
Pima County Natural Resources Parks & Recreation (NRPR) – Juan Santa Cruz Picnic Area
2000 N Kinney Road
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.

Tuesday – February 27 -- EAST TUCSON
Academy of Tucson Middle School
7310 E 22nd St
Age/Grade Level: 6th Grade
Participants: 50
0 Scopes Needed
Setup Time: 6:30 pm Start Time: 7:00 pm
End Time: 8:30/9:00 pm.

Wednesday – February 28 -- WEST TUCSON
Cooper Center for Environmental Learning
5403 W Trails End Rd
Age/Grade Level: 4th Grade
Participants: 50
0 Scopes Needed
Setup Time: 6:30 pm.
Start Time: 7:00 pm. End Time: 8:30 pm.

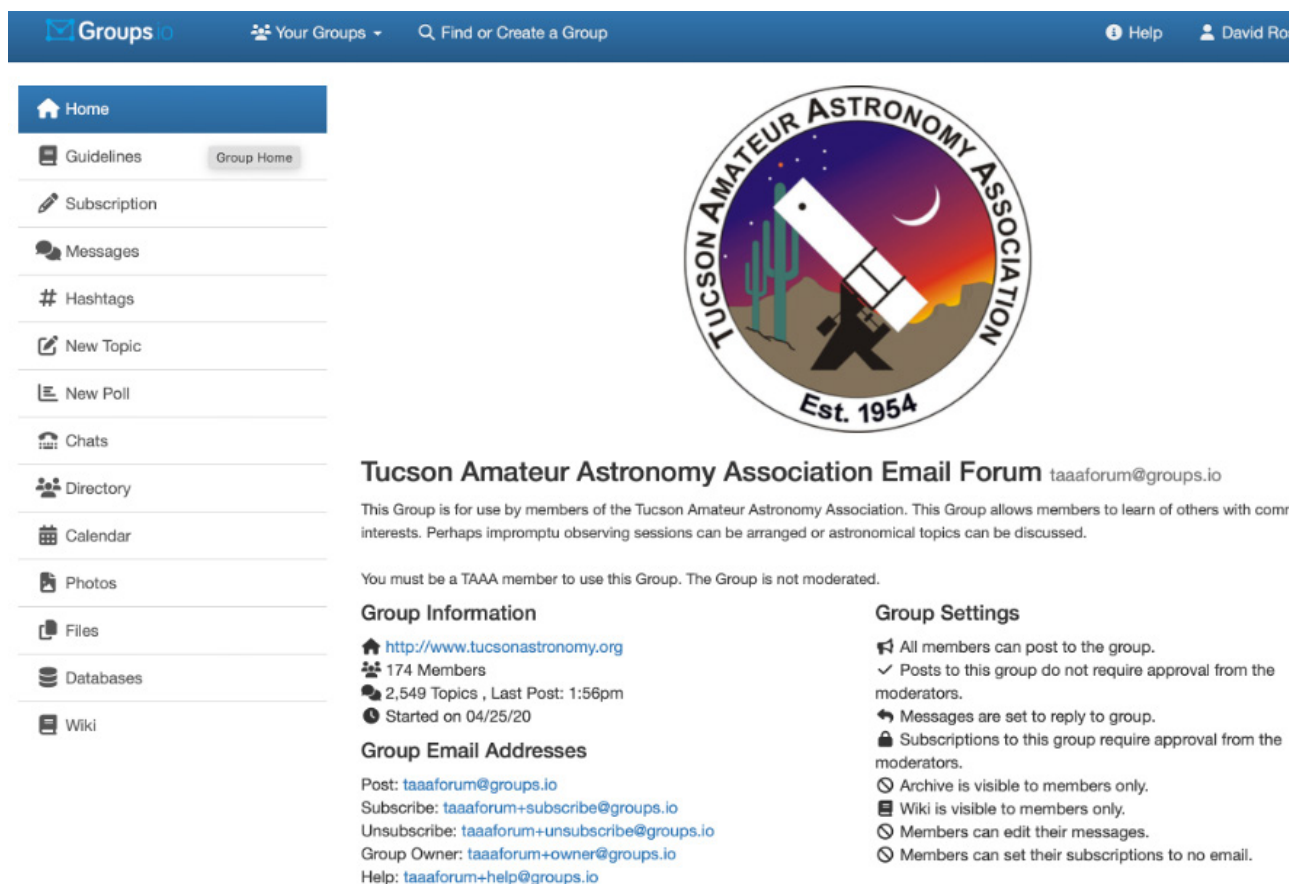
Thursday – February 15 -- NORTH TUCSON
Amphitheater Middle School
315 E. Prince road
Age/Grade Level: 6 – 8 Grade
Participants: 100+
0 Scopes Needed
Setup Time: 6:00 pm.
Start Time: 6:30 pm. End Time: 7:30 pm.

Monday – February 19 -- WEST TUCSON
Cooper Center for Environmental Learning
5403 W Trails End Rd
Age/Grade Level: 4th Grade
Participants: 50
0 Scopes Needed
Setup Time: 6:30 pm.
Start Time: 7:00 pm. End Time: 8:30 pm.

Wednesday – February 28 -- DAVIS-
MONTHAN AFB – SOLAR VIEWING
Borman Elementary K–8 School
6630 E Lightning Dr (AFB Pass required)
Age/Grade Level: K – 8th Grade
Participants: 100+
0 Solar Scopes Needed – H-alpha or
Whitelight (Knoll scheduled)
Setup Time: 3:30 pm.
Start Time: 4:00 pm. End Time: 6:00 pm.

Friday - February 16 -- EAST TUCSON
Saguaro National Park EAST
Saguaro EAST is located at 3693 S Old
Spanish Trail.
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

TAAA Forum



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Tucson Amateur Astronomy Association Email Forum taaforum@groups.io

This Group is for use by members of the Tucson Amateur Astronomy Association. This Group allows members to learn of others with common interests. Perhaps impromptu observing sessions can be arranged or astronomical topics can be discussed.

You must be a TAAA member to use this Group. The Group is not moderated.

Group Information

- <http://www.tucsonastronomy.org>
- 174 Members
- 2,549 Topics, Last Post: 1:56pm
- Started on 04/25/20

Group Email Addresses

Post: taaforum@groups.io
Subscribe: taaforum+subscribe@groups.io
Unsubscribe: taaforum+unsubscribe@groups.io
Group Owner: taaforum+owner@groups.io
Help: taaforum+help@groups.io

Group Settings

- All members can post to the group.
- Posts to this group do not require approval from the moderators.
- Messages are set to reply to group.
- Subscriptions to this group require approval from the moderators.
- Archive is visible to members only.
- Wiki is visible to members only.
- Members can edit their messages.
- Members can set their subscriptions to no email.

One service the TAAA offers that hasn't been utilized to its fullest by our members is the **TAAA Forum**. This is an online discussion and files forum hosted by the Groups.io service.

The forum has become a center of the club's astro-photographers and has lots of great information about imaging the sky. However, there are a lot of other potential subjects that members could ask questions about and participate in.

How do you join? Go to the [TAAA web site](#), click on the "TAAA RESOURCES" tab, then "TAAA Forum" in the sub-menu or just click [here](#). You will find information and instructions on that page. The club's forum can be found [here](#). If you are not a member of groups.io, they will walk you through the joining process. Or go to the group.io [web page](#) and click the "Sign Up" link on the upper right. There is no charge, and you only need to give an email and password. Then just click the "Find groups" link and type TAAA in the search box.

From the TAAA's forum "Home" page, you can explore all the menu items on the left. "Messages" lets you explore the discussions in progress. "New Topic" lets you start your own message subject. "Files" has member uploaded information stored in files you can download and/or open. Under "Subscription" you can select whether you want the messages and announcements delivered by email. This is convenient but may clutter your email inbox. I find a daily summary is easiest. There are several other options. You can also set many other preferences and set up a signature line.

One of the best features is the ability to participate in discussions without going to the site. All message activities can be done from email. The "Home" page (above) has the email addresses.

So, join up and look around. Jump into the discussions if you feel you want to participate or just lurk and learn. Feel free to ask questions or start a new subject – even if it is not imaging-oriented! We look forward to "seeing" you there.

32 inch Cassegrain Construction – Fundraising



This summer TAAA was given the wonderful gift of a 32 inch research grade telescope. In August we formed a committee to begin sharing that news with the purpose of gaining support of the membership to build an observatory to house the telescope. In September we kicked off the “32 inch Eye on the Galaxy” fundraising campaign with the goal of raising \$75,000 for the construction of the building.

I am pleased to announce, we have exceeded that goal. Between the generosity of TAAA members and the sale of the 16.5 foot Ash Dome which was also donated to TAAA, we have now raised \$87,305 for the project.

The plans for the building are being drawn and should be delivered to us by the end of January. In February we will begin the search for a contractor with the objective to begin construction as soon as the project can be worked into the contractor’s schedule.

Thanks to the TAAA members who financially supported the effort.

Special Interests Groups



Starry Messengers Special Interest Group

Opening Minds to the Universe

The Starry Messengers will meet on February 17th at the Eckstrom-Columbus Library, from 2pm to 4:30pm. This will be a practice session for our spring events including the Tucson Festival of Books (TFOB) and the Tucson Astronomy Festival (TAF).

Anyone planning to volunteer for the exhibits at the TFOB or the TAF should try to attend this meeting. With the April 8th solar eclipse coming up, our theme for these events will be eclipses and solar astronomy. We’ve ordered 500 solar eclipse glasses that we’ll be giving out to the public at these events. The exhibit materials will demonstrate eclipses, sunspots, solar magnetic storms, and other solar astronomy topics.

We’re always looking for volunteers for the TFOB. The TFOB attracts well over 100,000 people during the two-day event. Between our exhibit and the solar telescopes, we typically have over 5000 interactions at the TFOB. The TFOB takes place on the weekend of March 9 & 10 at the University of Arizona.

Fewer people attending the TAF, but this is “our” event. The TAAA has hosted this event which is now in its eleventh year. It grows in visitors each year. Last year, attendance was about 250 and we could easily top 300 this year. The Tucson Astronomy Festival takes place on Saturday, March 30th at the Brandi Fenton Memorial Park located at Alvernon and River Roads.

Please email Terri Lappin if you want to volunteer for the booth exhibits for either of these outreach events. (Telescope volunteers will be handled by Bernie Stinger.)

We continue to receive requests for hands-on activity toolkits that explain astronomical concepts. This is a very rewarding experience for both our volunteers and the students and their families. To learn how rewarding this can be, speak with Pete Hermes about how much fun he's had. If this is your kind of thing, we could really use your support. There are several training options available. Email Terri Lappin for details.

Here's a list of our upcoming events. We prefer to have two volunteers for each event listed below. Along with the dates and locations, you'll see the name of the toolkit requested. You can learn more about these toolkits at the Night Sky Network [website](#)

- February 27 (Tues) 6 – 8:30pm; Academy of Tucson Middle School; Black Hole Survival Toolkit; Kolb & 22nd
- March 7 (Thurs) 7 – 8:30pm; Henry Elementary School; suggest Space Rocks; Speedway & Harrison
- March 2-7 Southern Arizona Regional Science Fair, three TAAA members (Karen Liptak, Suzanne Bailey, Todd Hansen) will judge astronomy projects
- March 9 & 10 (Sat & Sun) Tucson Festival of Books, see above information
- March 30 (Sat) Tucson Astronomy Festival, see above information

SMSIG on the [Web](#)

Questions? Contact [Terri Lappin](#) or call 520-977-1290.

Astronomy Fundamentals SIG

by Connor Justice

Come join us for a presentation from 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 AFSIG meeting is on **Thursday, February 8, from 6:30pm to 8:30pm.**
Topics to be determined.

Contact [Connor Justice](#) for more Zoom link and 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 is **Monday, February 19 at 7:00 pm** via ZOOM.

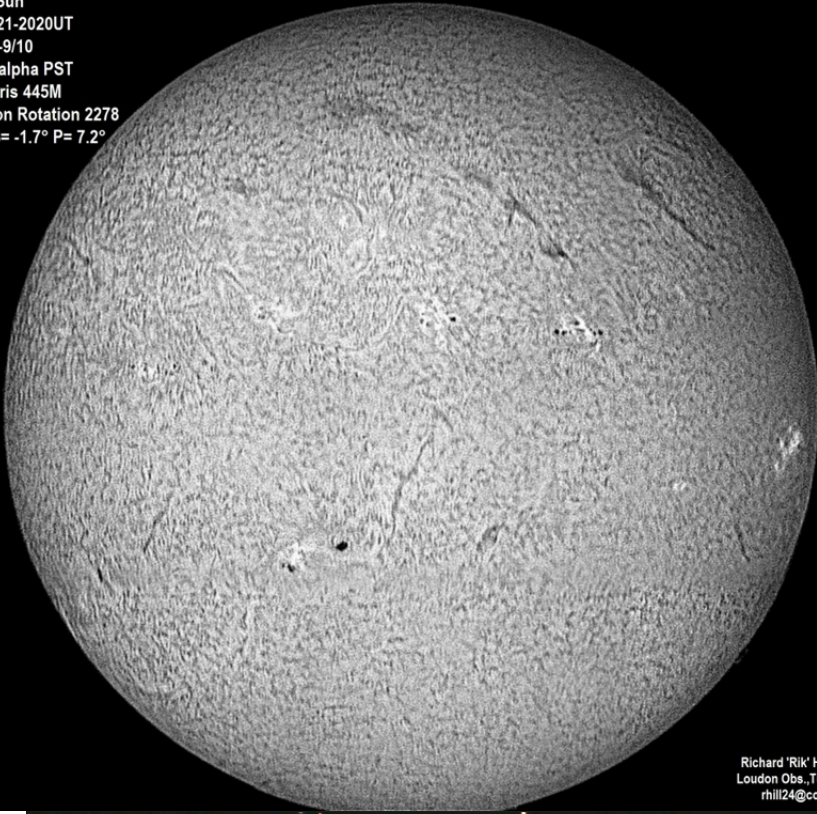
Topics: Unguided Imaging using Astro-Physics Sky Modeling and Tracking Correction - Tom Eby

Astronomical League Foundations of Imaging - Gregg Ruppel

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, check out the [TAAA Forum](#). Look for previous AISIG meetings on the [TAAA YouTube Channel](#).

Highlights from the Astro-Imaging SIG

H-alpha Sun
2023-12-21-2020UT
Seeing 8-9/10
40mm H-alpha PST
Cam:Skyris 445M
Carrington Rotation 2278
L= 1.8° B= -1.7° P= 7.2°
north up



Richard 'Rik' Hill ©2023
Loudon Obs., Tucson, AZ
rhill24@cox.net

Rik Hill

Alan Rockowitz **NGC 4236**

My version is about 35 hrs of integration time--a record for me.

This image consists of 478 x 60s Blue, 484 x 60s Green, 471 x 60s Red, 701 x 60s Lum, for a total of about 2124 subs. Imaged mostly from my backyard on the east side of town, with about an hour of data at Catalina Stata Park.

Taken with my iStar 140mm scope on my 10 micron mount with a ZWO ASI 6200 camera.





C 2177 Seagull Nebula

[Astrobin](#)

David Stearn

M42

[Astrobin](#)





M78 and Barnard's Loop; Sharpstar 94edph with reducer (415mm focal length and f/4.5), ASI2600mc Pro with IDAS NBZ filter, 60mm/240mm focal guide camera, AM5 mount, ASIAir

Craig Harding

IC 1805 Heart and Soul nebulae; This is about 50 images at 3 minutes each taken on my Askar FMA230 f/4.6 scope with an ASI2600MC. This was on a ZWO AM5 mount. Since I was in my bortle5/6 yard, I used an IDAS NBZ filter.





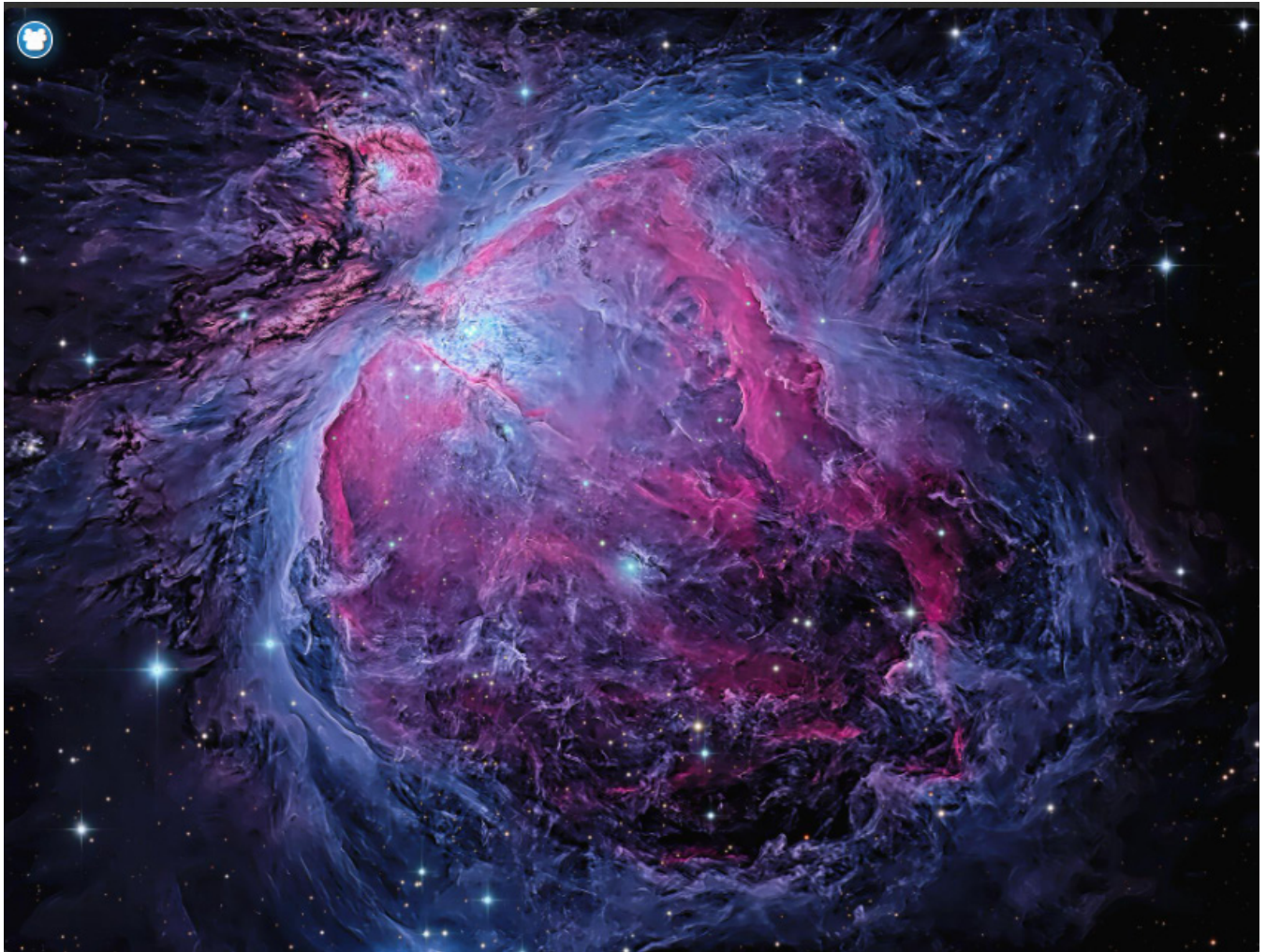
Randy Smith
NGC 2170
Angel Nebula

Skywatcher 200P
w/Nexus reducer/
corrector 2600
MM Optolong
RGB filters 58x120
R, 74x120 G,
75x120 B. Almost
7 hours total.



John Tsantes
C 1848
Soul Nebula

160, 90sec subs
(IDAS NB filter)



M42

[Astrobin](#)



Alex Woronow

Cometary globule 12

Despite it's name, it has no relationship to a comet, other than the coincidental shape.

[Astrobin](#)



Tom Eby

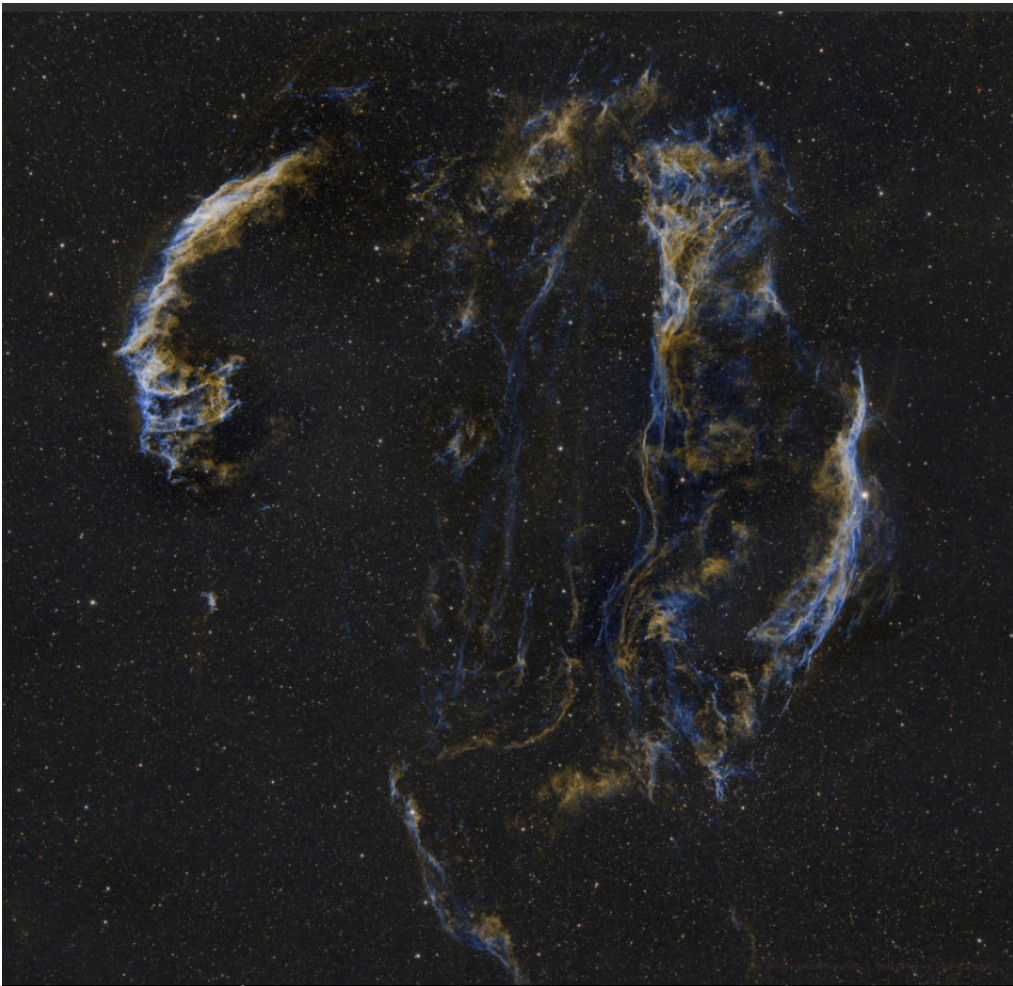
Barnard 30, 31, and 32

This is a complex nebular region with a variety of emission and blue reflection nebulae as well as Barnard dust clouds. The reflection nebula near center is Cederblad 51. RASA 8" f/2.0 / ZWO2600mc pro / AP Mach2GTO unguided, 38 pt tracking model / 3.5 h exposure / no filters / 1/9, 1/10 2024.



Comet 62P Tsuchinshan

RASA 8" f/2.0 / ZWO2600 mc pro / no filters / 40 x 45s exposures / ~2:30am local 1/11/2024



Jeff Rothstein
Veil Nebula

[Astrobin](#)

David Hamory
Milky Way

More of a sky and ground
creation.

"Shooting the Lagoon"
Canon SL3, ISO 1600, f/5, 20"



NGC 2174 Monkey Nebula
in SHO

Mike Mulcahy



Sh2-115 Emission Nebula
in Cassiopeia shown in the Hubble Palette.



Observing Sites

TIMPA

by **TIMPA Planning Group**

TIMPA (Tucson International Modelplex Park Association), 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: **February 9-10.**

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**

CAC Weekend Dates coming up (Friday/Saturday): **February 9-10 (New Moon 9).**

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](#).

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](#) [CAC on the Web](#)

Observing Sites Star Party Dates 2024

TIMPA

February 9-10
March 8-9
April 5-6
May 3-4
June 7-8

CAC

February 9-10 (New Moon 9)
March 8-9 (New Moon 10)
April 5-6 (New Moon 8).
Total Solar Eclipse April 8.
May NOT be any Hosts onsite

April 13 Evening Under the Stars
May 3-4 (New Moon 7)
June 7-8 (New Moon 6)

What's Up list for February 2024 - March 2023

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

Constellation Hunter Program – Northern Sky

The following constellations are well placed for observing for February and March: Auriga, Camelopardis, 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 the lunar phase when observations should be made in February and March:

New Moon: February 9, March 10	10 days old: February 19, March 20
40 Hours waxing: February 11, March 12	Full (14 days old): February 24, March 25
72 hours waxing: February 12, March 13	Gibbous: February 2, March 3
4 days old: February 13, March 14	72 hours waning: February 6, March 7
7 days old: February 16, March 17	40 hours waning: February 7, March 8

Solar System Observing Program

The following list describes the various solar system objects and their visibility during February and March:

Mercury is an early morning object in February. It becomes an early evening object during March, reaching greatest elongation on March 24.

Venus is an early morning object during February and March, rising later (closer to the Sun) each day, until by the end of March it rises only about 30 minutes before the Sun.

Mars is difficult to observe during February and March. It's an early morning object, rising only about an hour before the Sun during most of February and March.

Jupiter is still well placed for evening observation. It sets around midnight in early February and around 9:30 PM by the end of March.

Saturn is still visible in early February as an early evening object, setting around 1.5 hours after the Sun on February 1. By the end of February it's lost in the Sun's glare. It reemerges as an early morning object in early March and by the end of March it rises about 1 hour before the Sun.

Uranus is well placed for evening observation. On Feb 1 it sets around 11:30 PM. On March 31 it sets around 9:30 PM.

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.

Special Event: Total Solar Eclipse - April 8

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 for observation during February and March: Trapezium, Beta Monoceros

Public Astronomy Events



DEPARTMENT OF ASTRONOMY AND STEWARD OBSERVATORY

Public Evening Lecture Series Spring 2024

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.**

All of the lectures and the use of the telescope are free of charge and open to the general public.

For more information, contact Dr. Thomas Fleming at 621-5049 or taf@arizona.edu or check out the [Web Page](#).

You can watch each lecture live on [ZOOM](#). To stream recordings of previous lectures, [click here](#).

January 22	Dr. Christopher Walker Steward Observatory	<i>What's up with GUSTO? A Status Report</i>
February 5	Dr. Sean Linden Peter A. Strittmatter, Fellow Steward Observatory	<i>A Cosmic Odyssey: The Epic Journey of our Milky Way Galaxy</i>
February 19	Dr. Marcia Rieke Elizabeth Roemer Chair Regents Professor Steward Observatory	<i>JWST: Two Years of Operations Are Changing Astronomy!</i> A Lecture to Celebrate Dr. Rieke's Winning of the A.S.P.'s Catherine W. Bruce Medal
March 4	Dr. J. Roger Angel Regents Professor, Steward Observatory	<i>My 50 Years at Steward Observatory</i>
March 11	Dr. Jeffrey Bennett Univ. of Colorado	<i>Pathway to a Post-Global Warming Future</i> Co-Sponsored by The Arizona Environment Program Book-signing after the lecture
March 25	Dr. Andras Gaspar Steward Observatory	<i>Forty years of debris disks: From IRAS to JWST</i>
April 1	Dr. Kathryne Daniel Steward Observatory	<i>Galactic Symphony: The Harmonic Evolution of Our Milky Way Galaxy</i>
April 15	Dr. Christopher Cokinos Dept. Of English, University of Arizona	<i>Still as Bright: An Illuminating History of the Moon from Antiquity to Tomorrow</i> Book-signing after the lecture

Surprise Twists That Transformed Science

2024 College of Science Lecture Series

All lectures begin at 7:00pm in Centennial Hall on the University of Arizona campus. [Web Page](#)

February 7, 2024 | Sam Gralla

Surprised By Gravity: Black Holes and Their Shocking Implications

February 14, 2024 | Charlotte Pearson

Put A Ring On It: Dating Trees, Volcanoes, and the Sun

February 21, 2024 | Sarah Moran

Strange New Worlds: Steamy Planets, Crystal Clouds, and the Seeds of Life

February 28, 2024 | Jeff Pyun

From Acid Rain to Next Generation Plastics: The Curious Case of Elemental Sulfur

Skyward

By Dr. David H. Levy

January 2024

This month I have a story to tell. A few nights ago two close friends from Plattsburgh, Ed Guenther and Wendy Gordon, enjoyed a very pleasant wintertime visit with me. During that time another close friend, David Rosseter, drove us to the Chiricahua Astronomy Complex in southeastern Arizona. Although the weather was clear and cold when we left, dense clouds formed quickly and within a few minutes it began to rain heavily. There was thunder, lightning, and a giant tornado that lifted our car into the stratosphere and then gently set it down back on the highway. It was frightening and we thought the car was going to crash, but when it gently came back to the highway, we drove on.



By the time we arrived at our dark site, The sky was beautifully dark. The stars hung like baseballs from the sky. But it was so cold that our observing pad was covered with tons of ice. Yard-long icicles hung from our telescopes and from us. We needed and used cigarette lighters to free our frozen hands whenever they touched the eyepieces. I discovered 47 comets that night but forgot to report any of them. Ed disproved the theory of relativity by recalling how time always slows down when you are with your relatives. We finally needed to call 911 so that they could free our frozen forms and place them into makeshift crematoria. Three hours later they opened the doors of the crematoria and found all of us happy as clams to have warmed up as much as we did. We thanked them, treated them to a giant banquet meal, and then headed home. There was a 95-piece symphony orchestra on hand, but since we were approximately 95 pieces short, we just sang an aria or two. (I think that line comes from Victor Borge.)

Dear readers, if you believe a word of what I just wrote, I have a bridge that I could sell you. It is true that I have two very dear friends named Ed and Wendy. It is also true that I have two other dear friends, David and Pam Rosseter. And David did drive us, plus telescopes, to the dark site and back. And now for a few corrections: Although it was cold that evening, we did enjoy a beautiful night of observing. Our first object was Jupiter, long my favorite planet. Although Comet Shoemaker-Levy 9 would make Jupiter an obvious choice for that, it is not why Jupiter is my favorite planet. On September 1, 1960, my parents and I looked through my first telescope, Echo. I wanted to look at the brightest thing in the sky that evening. It was hanging in the south. When I finally found it, I was looking at Jupiter. I saw the disk of the planet, his four bright moons, and darker bands across the disk. I have never forgotten that night, and that is why Jupiter is my favorite planet.

We then caught a good glimpse of Saturn's exquisite rings. As I began a two-hour visual comet search in the cold and lovely sky, the others enjoyed views of some lovely deep sky splendors. At last, I stumbled across Messier 15, that absolutely gorgeous globular cluster I now call Wendee's cluster.

As we warmed up on our way home, we placed into our memories a sparkling night none of us will soon forget. We had a clear sky, star-filled views, beautiful deep sky objects, and enough sky treasures to gladden our hearts and minds. Despite my continuing deep sense of loss, the exquisite night sky always warms my soul.



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

TAAA Astronomy Equipment For Sale

TAAA has an assortment of astronomy related equipment for sale at this time. This equipment is available for members only, at this time. The following list is just a sample of what is available.



Celestron tripod

This is a standard Celestron tripod. Looks like it's for an 8 or 11 inch scope. In the image it is just the tripod, not the two black bags.

TAAA Member Price: \$185



6 Inch Newtonian Optical Tube Assembly

6 inch f 8.0 primary mirror.

Comes with an 8x50 finder.

TAAA Member Price: \$100



Cave Astrola Pedestal German Equatorial Mount

This is the large model of the Astrola mount. Has 3 roller legs with elevation screws to get wheels off ground. Clock drive has been refurbished, cleaned and works fine. Has large setting circles and counterweight. Cradle looks to be able to hold 12" diameter tube or larger.

TAAA Member Price: \$375

Note that these prices are exclusive for TAAA members and after 45 days these items will be offered to the general public at a higher price. 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 inquire about what is available or to express a desire to purchase, please contact: [Douglas Smith](mailto:Douglas.Smith@taaa.org); 520-396-3233

TAAA Equipment Loaner Program

The following inventory represents the current list of instruments contained in the Tucson Amateur Astronomy Association Equipment Loan Program as of September 04, 2022. A photograph of each item is included with the description. This equipment is for TAAA members to checkout and use. Email Ralph Means for information or to schedule time for pick up.



Celestron 11" CPC series
Alt-Az fork mounted, with tripod and GOTO. We have 2 of these telescopes.



Orion SkyQuest 10"
Dob with Telrad and 8x50 finder and 8x50 finder.



Orion SkyWatcher 12"
Collapsible Dobsonian with 8x50 finder



Orion SkyWatcher 10"
Dobsonian with Telrad



Meade LX200 10" SCT, Fork Mount, GOTO, with 8x50 finder, in case. With tripod. Training required for this telescope.



NOTE from the Equipment Loan Coordinator:

I am looking for eyepieces for the loaner program. We do not have enough for an eyepiece kit for each telescope. If you have any sitting around that you are not using. Would you consider making a donation to the Club and the loaner program.

Thank you, Ralph Means

TAAA Equipment Loaner Program (Continued)



Orion 10" Dobsonian
black tube 8x50 finder 25



Celestron 6" SCT
single fork mount, GOTO



Meade 4" SCT
in case, with tripod, battery
pack, diagonal, and 2 eyepieces



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



Celestron Nexstar 6" SCT
diagonal, and eyepiece



Celestron 8" SCT
Single Fork mount, GOTO



Stellar Vue 85mm Refractor

TAAA Equipment Loaner Program (Continued)



Eye Piece Case #1: Black Orion Case
5 1.25-inch Celestron Multi Coated X-Cell LX eyepieces: 25mm, 18mm, 12mm, 9mm, 7mm focal lengths. 6x30 finder and diagonal.



Eye piece case No. 2
Black Orion Case contains a 2" Hyperion-Aspheric 72-degree 36mm and 1.25" Hyperion eyepieces: 8mm, 13mm, 17mm, 21mm, and 24mm.



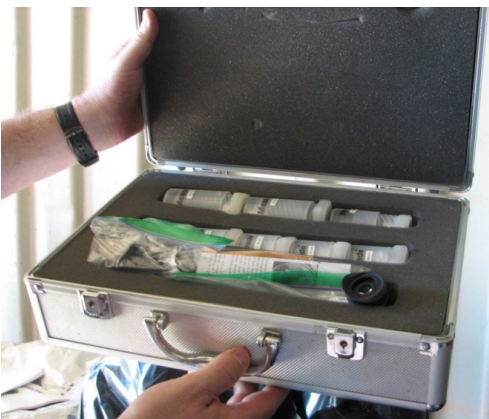
Eye Piece Case #3
1.25" AstroTech Paradigm in 8mm, 12mm, 15mm, and 25mm



Eye Piece Case #4:
Black Case. 5 Celestron X-Cell 1.35" eyepieces. Focal Lengths: 25mm, 18mm, 12mm, 9mm, 7mm



Eye piece Case #5:
Black case, Eyepieces: 2" Celestron E-Lux 40mm, Meade 2" QX 26mm, 1.25" VLW 13mm, VLW 17mm, Orion 9mm Plossl, Orion 6mm Kellner, Unknown 32mm, Unknown 25mm, Ortho, 20mm Kellner 20mm, Unknown crosshair, 1.25", Kellner .965", Other: 2" Extension Tube, 1.25" extension tube, 2" Nebula filter,



Eye piece Case #6.
Small Silver case 8 Meade Super Plossl 1.25" eyepieces. Focal Length: 40mm, 32mm, 26mm, 20mm, 15mm, 12mm, 9.7mm, 6.4mm, 12mm Illuminated reticle, 1.25" eyepiece 1.25" diagonal.



Case #7
Silver Case. Misc. A couple of eyepieces and numerous filters. Will get this sorted and inventoried shortly.