

TUCSON AMATEUR ASTRONOMY ASSOCIATION

Observing Our
MONTHLY EVENTS BULLETIN
Since



Desert Skies

1954

WWW.TUCSONASTRONOMY.ORG

July 2023

www.tucsonastronomy.org

Membership Meeting

July 7 @ 6:30 pm - 9:00 pm

TAAA's next general member meeting will be held on **Friday, July 7, 2023**. 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 online at the TAAA [Facebook](#) page.

Inside this issue:

Notes from the President - [Page 2](#)

TAAA News & Activities - [Page 3](#)

Special Interest Groups - [Page 7](#)

Astro Images - [Page 8](#)

Observing Sites and Updates - [Page 12](#)

Astronomical League Observing Programs - [Page 14](#)

Public Astronomy Events - [Page 15](#)

Skyward - By David Levy - [Page 16](#)

TAAA Equipment for Sale and Loaner Program - [Page 17](#)

Main Presentation at 6:30PM AZT

Title: The Shocking History of A Giant Lens!

Presentation: Walking through your high school or college hallways you're likely to find tchotchkes, curios, and relics of the past. Good chance you've passed them every day and never given a second glance. In this presentation, Max Lipitz asks the question: what if you did take that second look? And what if that curio was a giant camera lens that for the past decade sat unassuming on the 3rd floor, of the northwest corner, of the Rochester Institute of Technology, (RIT) Carlson Center for Imaging Science Building (CIS)? The scuttle bug around the center was that it was built in support of the U-2 (Dragon Lady) spy plane program begun in 1955. However, that is far from the truth and the reality is far more astounding...as Max's talk will reveal.

Biography: Maxmillian (Max) Lipitz could best be described as a strange amalgamation of NASA obsession, photographic prowess, and insatiable curiosity. In his attempt to acquire empirical knowledge, he has accumulated thousands of useless facts over a period of decades. This has led him to be an oddball graduate of the

Rochester Institute of Technologies Imaging Science Program; a highly interdisciplinary field that combines physics, math, computer science, and engineering. Whether it's developing image processing algorithms to turn people into Simpsons characters or restoring a 31-year-old digital camera just because, Max puts his whole heart into everything he does. In the past he's worked with Dr. Robert Kremens to develop next-generation probes ("Kremboxes") to monitor wildfires in the thermal and visible spectrum, providing valuable data that could save thousands of lives. Currently Max works as a scientist at Tucson-based GEOST, developing ground and space based electro-optical systems.



Imaging scientist Max Lipitz
Credit: Max Lipitz

June 2023

As many of you know, we are recently back from the 2023 (33rd) Grand Canyon Star Party. Since it was early in June this year, the weather was chilly to cold. Most evenings started with some clouds and sometimes a little rain, but most of the time resolved into a nice observing experience for the evening. Attendance was higher than last year, and we had numerous great volunteers. Conservation tours were reorganized this year and went exceptionally well. We worked on free campground participation and, I think, the donated campground spaces were more fully utilized than ever before. Currently, we are collecting data from volunteers. If you have not turned in your data, please do so within the next week so that it will be added to this year's total count, which is reported by Rader, our Ranger, in an official report to DC. Thanks so much for the hundreds of dedicated volunteers who contributed so much to this effort and added to the astronomy experiences of so many, many Grand Canyon visitors.

You may have noted that there was an interesting article published during the GCSP regarding dark skies and the National Parks. If you saw it, you may have noted that TAAA was specifically mentioned 3 times in the article.

As I write this, our 32" telescope project volunteers are beginning to return from their various assignments in retrieving the telescope and its parts from Colorado and delivering them to the CAC area. As you know, the 32" scope donated to TAAA needed to be retrieved from its prior home in Colorado prior to a July deadline. We have had a team of 9 people placed in charge of retrieval of all parts associated with the telescope and of storing them on or near the CAC site. The next stage of this project will focus on careful exploration of the future use of the instrument. Thank you to the many TAAA members who are contributing to the work, thought, and planning on this involved project.

We have begun our TAAA New Board year. Members of the new TAAA Board include Barbara Whitehead,

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 or Tuesday (By 5:00pm) and you will receive an email with the link on either Tuesday evening or Wednesday. ALL MEMBERS ARE WELCOME.

by Mae Smith

Bob Reynolds, John Kalas, David Rossetter, Ed Foley, Suzanne Bailey, and myself. Please feel free to contact any of us to make comments or suggestions or to explore questions. Members are welcome to attend Board meetings which are regularly scheduled to occur via zoom on the second Wednesday of the month at 6:30pm. To obtain the zoom link, please contact me by the Monday prior to the meeting.

TAAA, of course, does not "shut down" during the summer. We are continuing to have a number of events throughout the summer. Your volunteer assistance in support of these programs is always appreciated. Even though it is summer and getting hot during the day, requests for astronomy education events still come in and offer opportunities for us to experience our mission of "sharing the sky."

Please also note the resurgence of dark sky interests in Tucson. TAAA members, of course, have contributed effort toward promoting dark skies from the very beginning of the dark-sky organized effort. Dark skies and astronomy (as almost every science area) work in tandem to support each other in actualizing our common interests in diminishing and controlling light pollution. I hope that everyone interested in the environment and in maintaining the quality of our lives in Tucson will carefully consider how she/he might contribute to current efforts to reduce light pollution in Tucson and in Arizona.

A worker at Glen Canyon National Recreation Area has volunteered to make reservations for a TAAA group wishing to camp over night at Glen Canyon for the October 14th eclipse. If you wish to make a reservation with her send me your name and contact information no later than Thursday June 29th. That date is the ABSOLUTE closing of that opportunity. I have no other information about this opportunity except that she indicates parks are filling up fast.

President [Mae Smith](#)

Astronomical League Workshop Open for Enrollment

Place: Woods Memorial Library, 3455 N. First Ave. Tucson

Date: Saturday, July 15, 2023

Time: 10 AM until 1 PM

Synopsis: This workshop is designed for anyone who may be interested in pursuing one of the Astronomical League observing programs for the first time or anyone interested in learning about these observing programs. The workshop will cover how the various observing programs work, program requirements, selection of an appropriate program, recommended equipment, resources, logging requirements, and much more.



If interested, you can contact the TAAA Astronomical League Correspondent (ALCOR) via the information listed below or sign up using the signup sheet that will be available at the July General Members meeting.

TAAA ALCOR – Douglas Smith

Phone: 520-396-3233

E-mail: alcor@tucsonastronomy.org

Upcoming Workshops Open for Pre-enrollment

Several workshops are being planned for the fall 2023/winter 2024 time frame.

- The Star Hopping workshop that was offered earlier this year will be repeated.
- A Sketching/Logging workshop will be offered.
- A Constellation identification/locating workshop will be offered.

Dates/Times are still TBD. Dates/Times will be announced in the bulletin as soon as they are set.

If you are interested in enrolling in any of these workshops or would like additional information contact the TAAA Astronomical League Correspondent (ALCOR) at the information listed below.

TAAA ALCOR – Douglas Smith

Phone: 520-396-3233

e-mail: alcor@tucsonastronomy.org

Solar Filter Workshop Announcement

With the upcoming Annular Solar Eclipse this October and the Total Solar Eclipse in April 2024, AFSIG will be hosting two workshops to build your own solar filter. The filters are purpose built to your camera lens, telescope, or binoculars and you can choose from one of two films for the filter: Seymour (which produces an orange sun) or Baader film (which produces a whitish sun).



Baader Film on the lower right and Seymour film on a 63mm lens on the left.

The **first** workshop is tentatively planned for the first or second weekend of August 2023 in Tucson so you can have the filters ready for the October Annular Solar Eclipse. The second workshop date is TBD but expect it to be December 2023 or January 2024. If you are interested in the August workshop, please email fundamentals@tucsonastronomy.org with the following information **by July 15th, 2023**

- Your Name
- The aperture size of the camera lens, binocular, or telescope you would like to build a filter for
- If you prefer the first or second weekend of August

Common Questions

- Will I have to be a club member to participate?
 - Yes, you will need to be a member. The workshop will not be open to non-members.
- How much will the filters cost?
 - \$15 per filter, maximum 4 per person
- When will I have to pay?
 - The fee will be due on the time of the workshop. Payment method TBD.
- Will I need to buy 2 filters if I am making them for binoculars?
 - For safety reasons this is strongly encouraged, but you can choose to build only one filter but will have to leave a lens cap on the non-filtered lens to prevent eye injury.
- Can I get one each of Baader and Seymour film?
 - Yes
- Is there a limit on the size of the filter?
 - Please limit the aperture size of your optics to 4 inches / 100mm to ensure we have enough material for both workshops.

School/Public Star Party Requests

by Bernie Stinger

There are no School/Public Star Parties for July. See you after the monsoon!

TAAA 2024 Calendar

It's again time to request submissions of images and photos for next year's TAAA calendar.

We always hope to include many different kinds of subjects.



Images of deep sky and solar objects need not be recent. Post processing is optional.



We can also use "landscape" photos - pictures of astronomical objects against local terrain



And we welcome pictures of club events.



The calendar software requires the images and photos to be in JPEG format.

TAAA Members who attended this year's Grand Canyon Star Party

Please send any photos taken at the activities

For possible inclusion in the 2024 club calendar

Submissions can be made through July 20 to my email: [Susan OConnor](mailto:SusanOConnor)

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, July 20, 6:30pm

Bazil's

4777 E Sunrise
(NE corner of Sunrise and Swan)

Preview the menu at: www.bazilstucson.com

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

Book Of the Month

By Douglas Smith (TAAA Librarian)

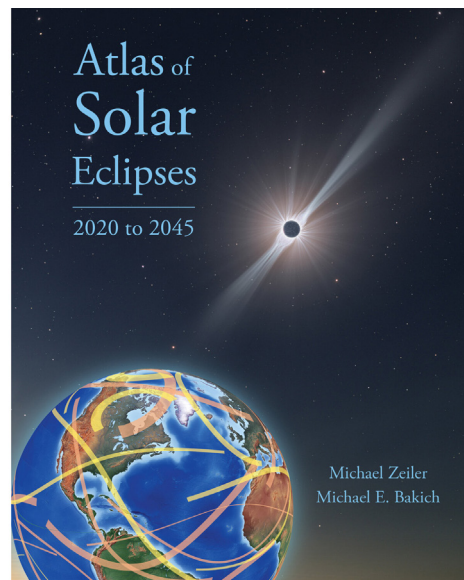
Book: Atlas of Solar Eclipses 2020 to 2045

The authors are Michael Bakich (TAAA member) and Michael Zeiler.

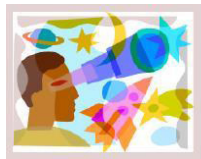
The book is well written and well organized. It does a very comprehensive job of covering all the eclipses from 2020 to 2045. There are numerous charts and maps for each eclipse. Each eclipse has written paragraphs about each nation the eclipse is visible in which describes the local circumstances and expectations for that area. A great deal of explanatory information for each eclipse is included.

This book is a fine edition to any eclipse chasers arsenal. It is perfect for planning in advance for eclipse chasing and I would recommend this book for anyone who is into eclipse chasing. I would say however I found the maps not quite detailed enough for specific route planning for a specific eclipse. Also the book does not cover weather issues for the eclipse paths.

This book retails for \$75.



Special Interests Groups



Starry Messengers Special Interest Group

Opening Minds to the Universe

The Starry Messengers group is taking a break from monthly meetings over the summer.

The summer lull in toolkit activity requests allows SMSIG members to brush up on how to use our outreach toolkits. TAAA members can borrow a toolkit for a month at a time to learn these activities on their own time. The Shadows & Silhouettes Toolkit might be of interest to TAAA members. It includes a simple activity that can be used to explain lunar and solar eclipses. Over the next year, two partial solar eclipses will be visible from Tucson and in March 2025 we'll have a nice total lunar eclipse. This simple activity may help you demonstrate the difference between solar and lunar eclipses, and why one is more common than the other.

If you have questions about the Starry Messengers SIG, contact [Terri Lappin](#) or call 520-977-1290.

Astronomy Fundamentals SIG

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 next meeting is on **Thursday, July 13th at 6:30 pm - 8:00 pm**. 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 is **Monday, July 17th @ 7:00 pm** via ZOOM.

Topics: Monsoon Challenge 2023 - M92 and/or M27

Share your images of these two targets, with a brief description of how you acquired and processed the data.

Email me privately if you plan to participate (optional). This helps to keep things organized.

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



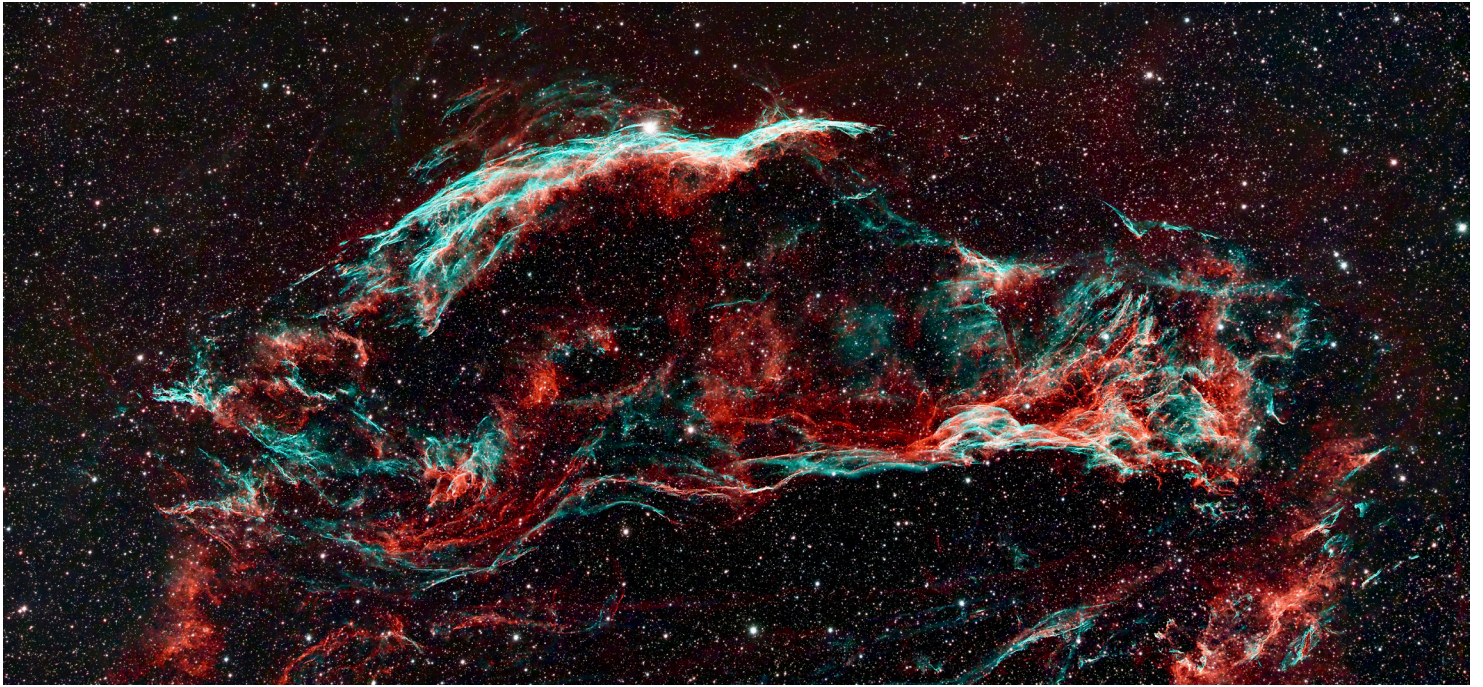
Matt Penn - NGC 3184; 254mm f/5 Newtonian, Player1 Artemis-C @ -10C, EQ6R-Pro, 364 x 20s frames in SharpCap Pro, Siril processing.



Mike Mulcahy - M101

[Astrobin](#)

Copyright Mike Mulcahy



David Stearn
M20

400 30s subs with
the C8 Hyperstar
and IDAS NBZ
UHS .



Jeff Rothstein - M51
[Astrobin](#)



Tom Eby - M101; SN is around mag 11 now. Its bright enough to get its own diffraction spikes. RC8 inch@f/8 / asi2600mc / CEM60ec mount / 4.35 hrs / 3min subs / scale 0.48"/px / 5-21-2023



Randy Smith - M101

This was taken on 5/21/23 and the supernova had brightened enough to make a diffraction spike. Skywatcher 8" Newtonian with Starizona Nexus reducer/corrector at 600 mm. EQ 6 R pro, 2600 MM with Optolong LRGB set 30x60 for RGB and 60x30 for L.

Observing Sites

TIMPA

by TIMPA Planning Group

TIMPA (Tucson International Modelplex Park Association), dark sky site west of the Tucson Mountains.

TIMPA Star Party Dates this month: **Monsoon Season - No dates set**

Location: The TIMPA observing site is located a few miles beyond the Desert Museum (3250 N. Reservation Road, Tucson, AZ 85743).

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.

Member Reservations for May should be sent to jmead@SIU.edu. Make sure to clearly include your name and contact information and date and time you plan to be on site.

Chiricahua Astronomy Complex

by Jim Knoll

CAC Weekend Dates coming up (Friday/Saturday): **July 14-15 (New Moon 17) Monsoon**

During Monsoon, members should be qualified to open/close the site if they want to observe as there may NOT be any hosts on-site. Pre-Coordinate with the Reservations Manager for current status.

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](#). The reservations page has been enhanced with cancellation links. This allows members to more easily cancel a previous space or telescope reservation.

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.

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



Observing Sites Star Party Dates 2023

TIMPA

No Monsoon dates set

CAC

July 14-15 (New Moon 17) Monsoon

August 18-19 (New Moon 16) Monsoon

September 15-16 (New Moon 14) Monsoon

Learning Center Update

Ed Foley

July 2023

In 2017 the board approved the formation of the Gateway to the Galaxy capital campaign. This campaign was to both satisfy a TAAA need for a place to stay and gather, but to also build on the outreach work with students being done at our Chiricahua Astronomy Complex. We had been hosting high school students for overnight and longer observing and exploring sessions at the site despite very rudimentary conditions. In the early days, there was not even a protective ramada to shade them from the sun. Despite the conditions on the ground, students were enthralled by the night sky at our wonderful location, and were led by our members through tours of objects they could only see under these dark skies.

The board formed a fundraising committee to outline the project and begin telling the story of how the plans would add to our capability to meet the needs of members and further our educational outreach. The response from the community and our members enabled us to begin construction in 2019 of two buildings and a large telescope pad. I am pleased to announce we have passed our final inspection on the buildings this June. We have thus opened the buildings for activities. Beginning with the June hosted star party weekend, we were able to take reservations on the website for members to stay in the buildings.

The buildings have a classroom, a kitchenette with refrigerator and microwave, 10 sleeping rooms, and 4 restrooms with showers. Just outside the buildings is a 60 foot telescope pad with three roll off shed observatories - a 9.25 inch Celestron SCT, an 11 inch Celestron SCT, and a 12 in Meade SCT. These telescopes will be available for training in the near future. Trained members will be able to reserve nights to use these telescopes, and of course, as the original donor Wally Rogers dreamed, we will use them with our student groups.

The work of the Learning Center has only just begun. We will be looking again to our members to begin planning school programs, with curriculum, staffing, planning and school engagement to reformulate our CAC overnight programs – now with facilities!

The vision of a Learning Center has become a reality due to the generous donors who shared Wally's dreams of inspiring youth and the tireless efforts and time of TAAA volunteers who worked the committees and on the ground at CAC. Those volunteers have included: Ross Carnes, Janet Foley, Ed Foley, Michael Foley, David Foley, Ryan Foley, Tim Hunter, Joe Jakoby, John Kalas, Jim Knoll, Susan Knoll, Bill Lofquist, Sam Maiorano, Mike McDowell, Bob Rose, Mae Smith, Conrad Stolarski, Phil Yehle. Thanks to all who made it happen!



Learning Center Buildings and Pads



What's Up list for July 2023 – August 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 July and August for the more common observing programs.

Constellation Hunter Program – Northern Skies

The following constellations are well placed for observing for July and August: Aquila, Bootes, Corona Borealis, Draco, Hercules, Lyra, Sagitta, Serpens Caput, Serpens Cauda, Ursa Minor, Vulpecula

Messier Observing Program

The following Messier Objects are well placed for observation during July and August (listed in ascending RA): M5, M80, M4, M107, M13, M12, M10, M62, M19, M92, M9, M14, M6, M7, M23

Lunar and Binocular Observing Program

The following is a list of the dates for the lunar phase when observations should be made during July and August:

New Moon: July 17, August 16
40 Hours waxing: July 19, August 18
72 hours waxing: July 21, August 19
4 days old: July 22, August 20
7 days old: July 25, August 24
10 days old: July 28, August 26
Full (14 days old): July 3, August 1, August 31
Gibbous: July 10, August 8
72 hours waning: July 14, August 13
40 hours waning: July 15, August 14

Solar System Observing Program

The following list describes the various solar system objects and their visibility during July and August:

Mercury is an early morning object for during July and August.

Venus is an evening object during July. It becomes an early morning object in mid-August and will remain in the morning sky for the remainder of the year.

Mars is setting earlier each day during July and August. On July 1 it sets around 2.5 hours after sunset. On August 31 it sets about 1 hour after sunset.

Jupiter is a late evening object during July and August. On July 1 it rises around 1 AM. On August 31 it rises around 9:30 PM.

Saturn is now well positioned for evening viewing. On July 1 it rises around 10:30 PM. By end of August it is well up by sunset, transiting around 11:30 PM.

Uranus is an evening object in July and August, rising earlier each day. Uranus is relatively close to Jupiter during this period, rising only 15 minutes after Jupiter.

Neptune is an evening object in July and August. It rises around 11:30 PM on July 1 and around 7:30 PM on August 31.

Urban Observing Program

The following deep sky objects are well placed for observing during July and August: M5, M4, M13, NGC 6210, M12, M10, M62, M92, M6, IC 4665, M7

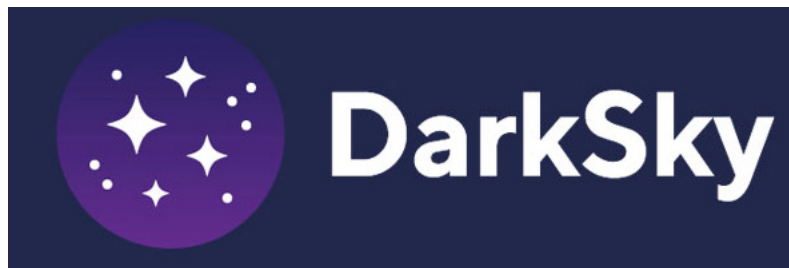
The following **Double Star** is well placed for observation during July and August: Beta Scorpius

Annular Solar Eclipse Help

Greetings from Northern Arizona. Glen Canyon National Recreation Area is looking ahead to the annular solar eclipse on Saturday, October 14. We are planning for potentially a lot of visitors who may come for this event and tentatively hosting a solar viewing event at the Carl Hayden Visitor Center. There will also be an evening Star Party at the Navajo Bridge Interpretive Center near Marble Canyon which is coordinated by our partner Glen Canyon Conservancy.

Would any members of your group be interested in volunteering to help with these activities? I know that your members have expertise in sharing their knowledge of astronomy with the public such as at Grand Canyon National Park's annual Star Party. This would be a smaller but unique event.

Libby Schaaf
Program Manager for Interpretation, Education and Partnerships
Glen Canyon National Recreation Area/ Rainbow Bridge National Monument
691 Scenic View Road, Page, AZ 86040
928-608-6351 Office, 928-640-0509 Cell
Libby_Schaaf@nps.gov



Did you know? The International Dark Sky Association is now DarkSky!

[DarkSky](#) is in the process of re-invigorating the Tucson Chapter which had been moribund over many years. I attended a recent meeting at DarkSky's headquarters for getting the chapter going again. We had four or five TAAA members in attendance. There was a great deal of enthusiasm at what we might accomplish.

(From a recent email from Bettymaya Foott, the DarkSky Director of Engagement): "We had some great discussion about next steps and direction for the chapter. We talked about opportunities to be involved in updating public policy, supporting International Dark Sky Places, education and outreach, and measurement and monitoring of the sky quality."

My discussion with DarkSky leaders indicated they would like to re-establish a close relationship with the TAAA. I would like to identify club members who might want to participate in such a program. We especially need someone to lead the effort. Please contact me (link below) if you are interested.

You can also directly contact DarkSky via their [form here](#) to express your interest.

[David Rossetter](#)

Skyward

By Dr. David H. Levy
July 2023

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.

A little religion, but not too much.

As an undergraduate student at Acadia University, in the Canadian maritime province of Nova Scotia, my geology professor was trying to teach us about the water cycle. Despite reams of published evidence, the best document he could come up with was this beautiful line from Ecclesiastes:

"All the rivers run into the sea,
Yet the sea is not full,
Unto the place whither the rivers go,
Thither they go again."
--Ecclesiastes 1.7.

Dr. George Stevens's comment had a profound impact on me. First, as a budding young scientist, it opened my mind to the relationship between the night sky and Scripture, and second, later as my passion for the arts grew, it reminded me of how ancient peoples viewed the night sky. From the "11 stars" symbolizing Jacob's brothers, to the line in Amos about "the seven stars" of the Pleiades, to his aggressive tone with Job (9:5-8): "Who removeth the mountains, and they know it not, (possibly referring to the evolution of the Earth); Who maketh the Bear, Orion, and the Pleiades? Who shaketh the Earth out of her place (a big earthquake or a major comet impact), Who commandeth the Sun, and it riseth not (if it rises during an eclipse like the event I saw in 1999 when only a thin crescent of sunlight rose). This is not to mention Joseph's dream "the Sun and the Moon and eleven stars bowed down" (Genesis 37:9-10.) It must have been a very cloudy or hazy night if all he saw was 11 stars instead of the 2500 to four thousand stars he should have seen from his obviously dark location.

After a lecture I gave in 1994 at my childhood synagogue, The Shaar Hashomayim in Montreal, the associate Rabbi pointed out how the ancient Israelites followed astrology, right from the line "And let there be lights in the heaven, to divide the day the day from the night; and let them be for signs, and for seasons, and for days and for years." (Genesis 1.14) He went on to emphasize that these people never worshipped the stars, but they followed astrology out of interest and fun. (Full disclosure: like most people who observe the night sky, I do not follow astrology, but perhaps unlike most of them, I do appreciate that were it not for the thousands of years of meticulous records kept by ancient astrologers, we would probably have no real astronomy, nor a Webb telescope, this evening in 2023.)

I did promise not too much, so I shall end here with a quotation from Psalm 19: with a new line added for fun, courtesy Peter Collins:

The Heavens declare the glory of God,
And the firmament showeth his handiwork.
Day unto day uttereth speech,
And night unto night revealeth knowledge
(So long as the sky is clear.)



Two of the telescopes I use in the observing at Jarnac Observatory. The telescope on the right is used for astrophotography (which I don't do much of anymore) and the telescope on the left is Pegasus. It is used for visual observation. It is the highest quality telescope I have. The mirror was made by Aleka Herring, one of the most prominent telescope makers in the last century. Photo by Wendee Levy

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.



Criterion pedestal equatorial mount with clock drive. This is a classic pedestal German Equatorial Mount. Very sturdy. Can handle up to 8 inch Newtonian scope. Clock drive tested and is in excellent condition. Mount is fully functional.

TAAA Member Price: \$50



6 Inch Newtonian Optical Tube Assembly;
6 inch f8.0 primary mirror.
Comes with an 8x50 finder.
TAAA Member Price: \$100



Beyers Drive Gear Set

Large unused Beyers drive gear with matching worm gear and stepper motor. The main drive gear is 14.5 inches in diameter and has a $4\frac{7}{8}$ inch diameter central hole. Motor has been tested and works fine. Note worm gear and motor not shown.

TAAA Member Price: \$900

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 make inquiries about what is available or to express a desire to purchase one of items please contact:

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



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

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 SkyWatcher 12" Collapsible
Dobsonian with 8x50 finder



Orion SkyWatcher 10" Dobsonian
with Telrad



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



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



TAAA Equipment Loaner Program (Continued)



Orion 10" Dobsonian black tube
8x50 finder

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](#)



Celestron 6" SCT, single fork mount, GOTO
with tripod.



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



Celestron 8" SCT, Single Fork
mount, GOTO



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



Celestron Nexstar 6" SCT, diagonal, and eyepiece



Stellar Vue 85mm Refractor

TAAA Equipment Loaner Program (Continued)



Eyepiece 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.



Eyepiece 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



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



Eyepiece 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, 3x Barlow, 1.25" Orion diagonal dielectric mirror



Eyepiece 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" diagnol.



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