TAAA Desert Skies Bulletin

Observing Our Desert Skies Since 1954

May 2024

www.tucsonastronomy.org

Membership Meeting

May 3, 2024 Online Meeting

TAAA's next general member meeting will be held on **Friday, May 3, 2024**. The meeting will start at 6:30 P.M. This will be a **zoom meeting only**. TAAA members will receive a Zoom link to attend. The public may attend via public media at the TAAA Facebook page.

Inside this issue:

Our May 2024 meeting features **TAAA members sharing presentations of astronomy interest**. Among these will be several April 8th eclipse experiences, (from the sublime to the disappointing), with visuals.

If you would like to participate, please contact Jim Knoll by April 30th at jimknoll@tucsonastronomy.org. Also, contact him with any questions.

At this meeting we will also have results of our 2024 Leadership Election (online ballots to be sent out on April 26).

Credit: Voxvine.com for NASA
April 8, 2024 Total Solar Eclipse

Don't Forget: General Membership Meeting Changes!

Due to UA Schedule and Grand Canyon Star Party.

May Meeting, Friday, May 3rd: **Zoom only:** Member's Presentations!
June Meeting, Friday, June 14: **Date change, Zoom only**.

Notes From The President

April 2024

by Mae Smith

I regret that TAAA has been "off" its regular meeting schedule recently. Please be patient with us as we continue to adapt to a few more limits with our in-person meeting options for our **General Monthly Meetings**. As is being noted elsewhere in this newsletter, due to life circumstances, our May and June Member Meetings will have some alterations from our standard procedures, but we hope to be "back to normal" after that.

Happy May Day!! I am very, very pleased to be able to make an announcement. We have a new TIMPA Director!!! Stephen Ferris will begin his role as TIMPA Director on Wednesday, May 1, 2024. As some of you will recall, Stephen previously very successfully served as TIMPA Director from 2015 to 2018. In 2018, due to some personal events, Stephen needed to discontinue his service as TIMPA Director. However, he has remained in touch with us, helped us when we needed it, and is now again available to serve. We are privileged to have him back on a regular basis.

The TIMPA Night schedule will continue to be advertised monthly in the TAAA Desert Skies Bulletin. Work on the 16" telescope installation will continue. If you have been out to TIMPA within the last week, you have likely noted that the space for the 16" has been cleared and leveled and concrete is beginning to be poured. John Mead is still heading the TIMPA 16 project. Ben Bailey continues as Chair of the TIMPA Planning Committee. Ralph Means continues to serve as the TIMPA Facilities Caretaker and the Loaner Program Coordinator.

Please note that Stephen is open to suggestions and ideas for TIMPA. You may contact him at Timpadirector@Tucsonastronomy.org. (Key cards are limited. To apply for a key card and relevant training contact Stephen.)

I also wanted to briefly mention the **Grand Canyon Star Party**. Remember the dates are early this year, **June 1-8th**. Volunteer applications are required and may be obtained through the TAAA website. Many applications are being received so looks like an exciting, active year!! Join us, even if you can only come one or two nights!

Mae Smith, TAAA President
president@tucsonastronomy.org

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 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

Practical Astronomy Workshop 4

Using Setting Circles

Open for enrollment

Place: TIMPA; **Date:** Thursday, May 30; **Time:** 7:00 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 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.

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 appropriate equipment becomes available the limit may be increased.

TAAA Ladies' Night Out

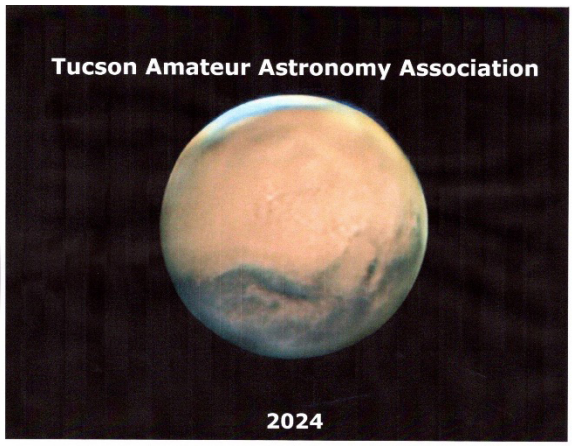
by Susan O'Connor

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, May 23, 6:30pm

Chef Alisah's
5931 N Oracle (W side of Oracle S of Rudasill)

Preview the menu at: https://www.alisahrestaurant.com/Menu/Menu.pdf
RSVP Susan ~ 520-780-0136



2025 TAAA Wall Calendar

We are looking for your images!

We are especially interested in images from the eclipse; both of the eclipse itself and of spectators who were with you during the event. Also of Comet 12P/Pons-Brooks. Any other images related to astronomy or club events are always welcome.

Please send your calendar images to Susan OConnor.

2024 Leadership Election Opened

The TAAA Leadership Election was opened this past Friday April 26th and will close a half hour into our membership meeting on May 3rd. If you are an eligible voting member, you should have received an email with a link to our online voting system (OpaVote) so that you may cast your ballot. Offices to be voted on include Secretary, two Board Members-At-Large, and two members of the NVRC; all are 2-year terms. Voting for uncontested positions is desired to show your support for those individuals committed to our club's sustainment and growth.

NVRC - Pete Hermes (Chair), John Christensen, Dave Pass, and Stephen Ferris
nvrcchair@tucsonastronomy.org

Chiricahua Astronomy Complex Tractor

On April 12, 2024, the TAAA Chiricahua Astronomy Complex (CAC) received a new tractor, a TYM T264 with a bucket, backhoe, box blade, and 40-gallon sprayer. We will likely consider a few more accessories to manage other aspects of the site. Now that the site has expanded the amount of developed acreage, it was necessary to upgrade from the small garden tractor one of our members had graciously loaned to CAC. The TYM tractor will make it much easier and more efficient to manage CAC and the access roads to the site.

During delivery, several members were trained on the tractor operation and maintenance. In addition to making it easier to spray pre-emergent and weed killer, we will use it to clear rocks, groom the site, accomplish new projects, and maintain S Price Ranch Road and E Perseus Way, the two access roads to CAC. By not having to contract out some work, it will save funding in the long-term. We already have a container to store the tractor at CAC, so it will be secure and out of the weather.

Thank you to the many very generous members that contributed to the tractor purchase! We will place a plaque on the tractor container listing those members.

Jim Knoll
CAC Director

2024 Tucson Astronomy Festival

Another great TAAA-Sponsored Tucson Astronomy Festival was held March 30, 2024 at Brandi Fenton Memorial Park. We had a great turnout despite the weather. The skies were mostly clear, but we had a lot of wind in the afternoon, which did settle down for evening observing. Over the course of the day, more than 300 participants attended the festival. Up to about 20 telescopes provided both solar and evening observing of the solar system and many deep sky objects. Throughout the afternoon, around 10 TAAA members provided information about the upcoming total solar eclipse and the kids had a chance to decorate paper plates to attach to solar glasses for observing the sun. Activities also included learning why and how solar eclipses happen. Members also helped any public bringing personal telescopes to learn how to use them. This is a valuable resource for TAAA to inspire the public to observe the universe themselves rather than having telescopes just gather dust. During dusk while we were transitioning from daytime to evening events, we had quite a few astronomy items to raffle to adults as well as youth. This included a 5-inch Newtonian donated to TAAA that a young boy won.

The festival was well advertised throughout the community to include most TV stations and print media as well as TAAA social media. This really helped get the word out. KGUN-9 sent a videographer to record the event and interview attendees. This annual event is a fantastic way to promote astronomy within the community and maybe inspire future astronomers. The 2025 event will be held in March next year.

Jim & Susan Knoll, Suzanne Bailey, Terri Lappin
Starry Messenger Special Interest Group (SMSIG)

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: **May 3-4.**

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): **May 3-4 (New Moon 7).** This is a good opportunity to view the Eta Aquariid Meteor Shower from CAC. This shower peaks May 5th but has a fairly broad maximum date, so observing them over the CAC weekend should be good as well. The Waning Moon will not interfere with the shower. This is a "Medium" shower, resulting from the debris left by Halley's Comet, which started its return to the inner solar system late 2023 (just beyond Neptune) and will visit the inner solar system again in 2061.

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

May 3-4
June 7-8
July 5-6*
August 2-3*
August 30-31*
* **Tentative – Monsoon**
Sept. 27-28
November 1-2
Nov. 29-30
December 27-28

CAC

May 3-4 (New Moon 7)
June 7-8 (New Moon 6)
July 5-6 (New Moon 5) *
August 2-3 (New Moon 4) *
August 30-31 (New Moon Sep 2) *
* **Monsoon Dates - no hosts available**
September 27-28 (New Moon Oct 2).
September 21 – Evening Under the Stars – Public Event
November 1-2 (New Moon 1).
November 29-30 (New Moon 30).
December 27-28 (New Moon 30).

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 Star Party list for May, 2024.** May events are starting to slow down now for the Summer with 11 star parties scheduled, most being at the beginning of the month.
Please let me know in return email if you are interested in volunteering for any of the events listed in red below.
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 April 27th. **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

May Events still in need of Volunteers

Friday - May 3 -- TUMACACORI AZ
Tumacacori National Historical Park
1891 E Frontage Rd, Tumacacori, AZ
Age/Grade Level: All Ages.
2 Additional Scopes Needed
Setup Time: 7:30 pm Start Time: 8:00 pm
End Time: 10:00 pm.

Friday - May 3 -- NORTH TUCSON
Casas Christian School
10801 N La Cholla Blvd
Participants: Hundred+
1 Additional Scope Needed
Setup Time: 7:00 pm. Start Time: 7:30 pm. End Time: 9:00 pm.

May Events Filled—No Volunteers Needed

Thursday – May 2 – SAHUARITA AZ – SOLAR
Sahuarita Unified School – Middle School
350 W Sahuarita Rd
Age/Grade Level: 8th Grade
Participants: 100+
0 Solar Scopes Needed (White light or H-alpha)
Setup Time: 7:30 am Start Time: 8:00 am
End Time: 12:15 pm.

Tuesday – May 7 -- FAR EAST TUCSON
Gridley Middle School
350 S Harrison Rd
Age/Grade Level: 6th Grade & up.
Participants: 300
0 Scopes Needed
Setup Time: 7:00 pm Start Time: 7:30 pm
End Time: 8:30 pm

Friday – May 10 -- 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: 7:30 pm Start Time: 8:00 pm
End Time: 10:00 pm

Tuesday – May 21 -- NORTHEAST TUCSON
Basis Tucson North
5740 E River Rd.
Age/Grade Level: 8 to 12 Grade
Participants: 35
0 Scopes Needed
Setup Time: 7:30 pm Start Time: 8:00 pm
End Time: 10:00 pm

Saturday – May 4 -- CATALINA AZ
Catalina State Park
11570 N Oracle Road
Age/Grade Level: All Ages
Participants: 100+
0 Scopes Needed
Setup Time: 7:30 pm. Start Time: 8:00 pm. End Time: 10:00 pm.

Wednesday – May 8 -- MARANA AZ – SOLAR
Dove Mountain K-8 School
5650 W Moore Rd
Age/Grade Level: K – 8th Grade
Participants: Hundred+
0 Solar Scopes Needed (White light or H-alpha)
Setup Time: 4:30 pm. Start Time: 5:00 pm. End Time: 7:00 pm.

Saturday – May 11 -- FAR WEST TUCSON
Pima County Natural Resources Parks & Recreation – Juan Santa Cruz Picnic Area
2000 N Kinney Road
Age/Grade Level: All Ages
Participants: 75-100
0 Scopes Needed
Setup Time: 7:30 pm Start Time: 8:00 pm
End Time: 10:00 pm.

Friday – May 24 -- SAHUARITA AZ
Sahuarita Parks & Recreation – Star Dazzle
17501 S Camino De Las Quintas – Sahuarita
Age/Grade Level: All ages
Participants: 100 – 200
0 Scopes Needed
Setup Time: 7:30 pm Start Time: 8:00 pm
End Time: 10:00 pm.

Saturday – May 25 -- VAIL AZ
Sycamore Canyon HOA @ Sycamore Canyon Park
17362 S Rustling Leaf Trail
Age/Grade Level: All Ages
Participants: 75
0 Scopes Needed
Setup Time: 7:30 pm Start Time: 8 pm
End Time: 9:30/10 pm

Special Interest Groups

Starry Messengers Special Interest Group

Opening Minds to the Universe

The Starry Messengers are wrapping up a very busy season before we go on a summer hiatus. We'll meet on Monday, May 13th, at 6:30pm at Barrio Brewing Company. You don't have to order food, but please don't bring outside food into the restaurant. We'll go over a few things we need to consider in the coming months including what we might do in 2025. Otherwise, this will be a time for socializing.

Jim and Susan Knoll and Suzanne Bailey headed up the Tucson Astronomy Festival at Brandi Fenton Memorial Park on March 30th. See Jim's report elsewhere in this newsletter. Thank you to everyone who participated in the event or helped behind the scenes. It was a huge success!

In April, there were six requests for hands-on activities at schools and community events. We canceled three events due to a lack of volunteers (Vail Academy, Drachman Montessori, and a community event at Ora Mae Harn Park in Marana). Susan O'Connor, Jeff Rothstein, and Vanessa Thomas supported the YMCA Healthy Kids event with 52 people learning about asteroids and meteorites from the Space Rocks Toolkit. Pete Hermes supported an event at Rio Vista Elementary where 50 kids and adults learned about black holes. Still to come on April 25th is an event at Donaldson Elementary where Pete Hermes and Susan O'Connor will use the Space Rocks Toolkit.

This brings us to May when we have two events, both on May 7th:

- May 7th Blenman Elementary: Pete Hermes & Vanessa Thomas will support this event using the Space Rocks Toolkit.

- May 7th Gridley Middle School: NEED TWO VOLUNTEERS; near Broadway & Harrison; 300 people expected; any toolkit, suggest Life in the Universe

Contact Terri Lappin or Pete Hermes if you'd like to learn about the Starry Messengers SIG and our toolkit activities.

NEXT MEETING OF THE STARRY MESSENGERS SIG: May 13th at 6:30pm at Barrio Brewing Company, 800 E 16th St (corner of Euclid and 16th St)., see https://barriobrewing.com/ for their menu.

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 next AFSIG meeting is on **Thursday, May 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

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Astro-Imaging SIG

by Gregg Ruppel

The next AISIG meeting is **Monday, May 20 at 7:00 pm** via ZOOM.

Topics: **Considerations for a Remote Observatory** - Ladd Lindsay
General Discussion, Q/A, Image Sharing

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 here.

Look for previous AISIG meetings on the TAAA YouTube Channel.

Highlights from the Astro-Imaging SIG

Craig Harding - M106

I took this image in March at CAC. I used my 130EDT and 0.8 reducer (727mm) with ASI2600MC Duo camera on a GEM45 mount. This is only 45 subs at 300sec each. There are quite a few faint galaxies buried in the image.

M81, M82, NGC 3077 and IFN

Here are the familiar M81 and M82 surrounded by the less-familiar integrated flux nebula that is visible toward our galactic poles. Astrobin

Jeff Rothstein

NGC 4631 and NGC 4656 - Here are the Hockey Stick and Whale galaxies. This image is a crop of about 40% of the original frame. Astrobin

Alan Rockowitz
M81

Here's a "quick and dirty" M81. It's only 2.5 hrs .

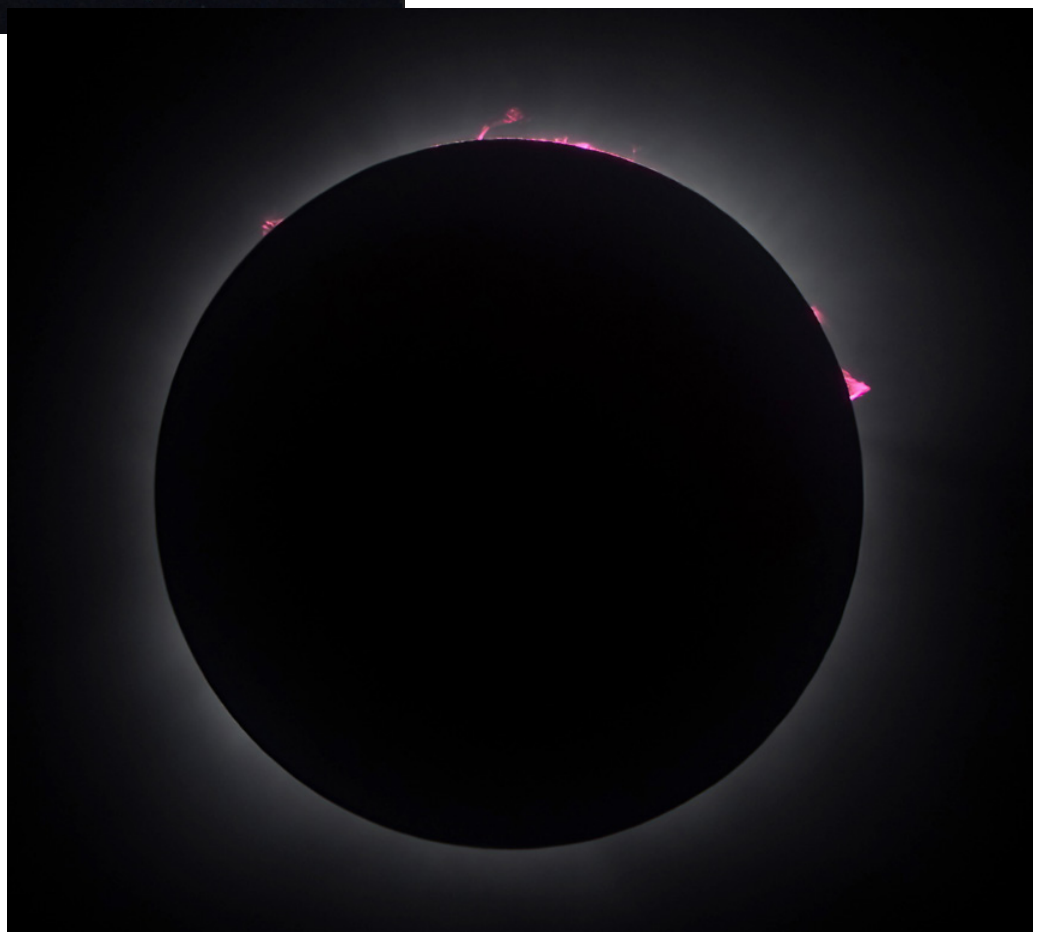
Allen Force
NGC 2467

Astrobin

NGC 3226 and 3227

Located just E of 2nd magnitude Algieba, this interacting pair is about 50-60 million LY away. NGC 3227 is SAB peculiar type, NGC 3226 is a dwarf elliptical peculiar. Arp categorizes the object as Spiral with elliptical companion on arm. NGC 3227 is a Seyfert type galaxy, mag 10.3. The unlabeled elliptical galaxy above (N) of Arp 94 is LEDA 3754593, an active galaxy nucleus candidate. RC10" @ f/8 / zwo 2400mc pro / AP Mach2 GTO unguided, 47pt dec arc tracking / 61 x 3min exposure / no filters / scale 0.61"/px / 4-3-2024.

Tom Eby



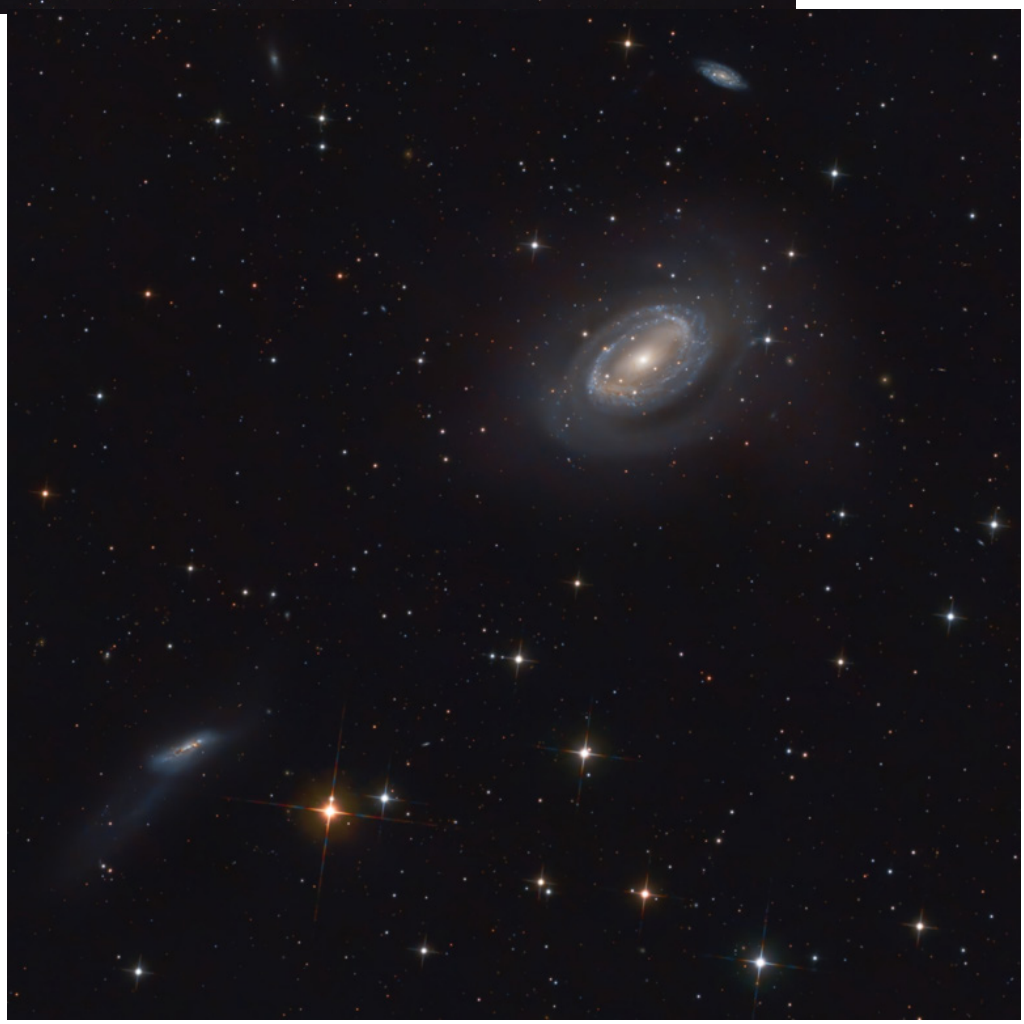
Eclipse 2024

Snapped these in Booneville AR using SV70T/Nikon D5500/CEM60ec mount.

Leo Triplet

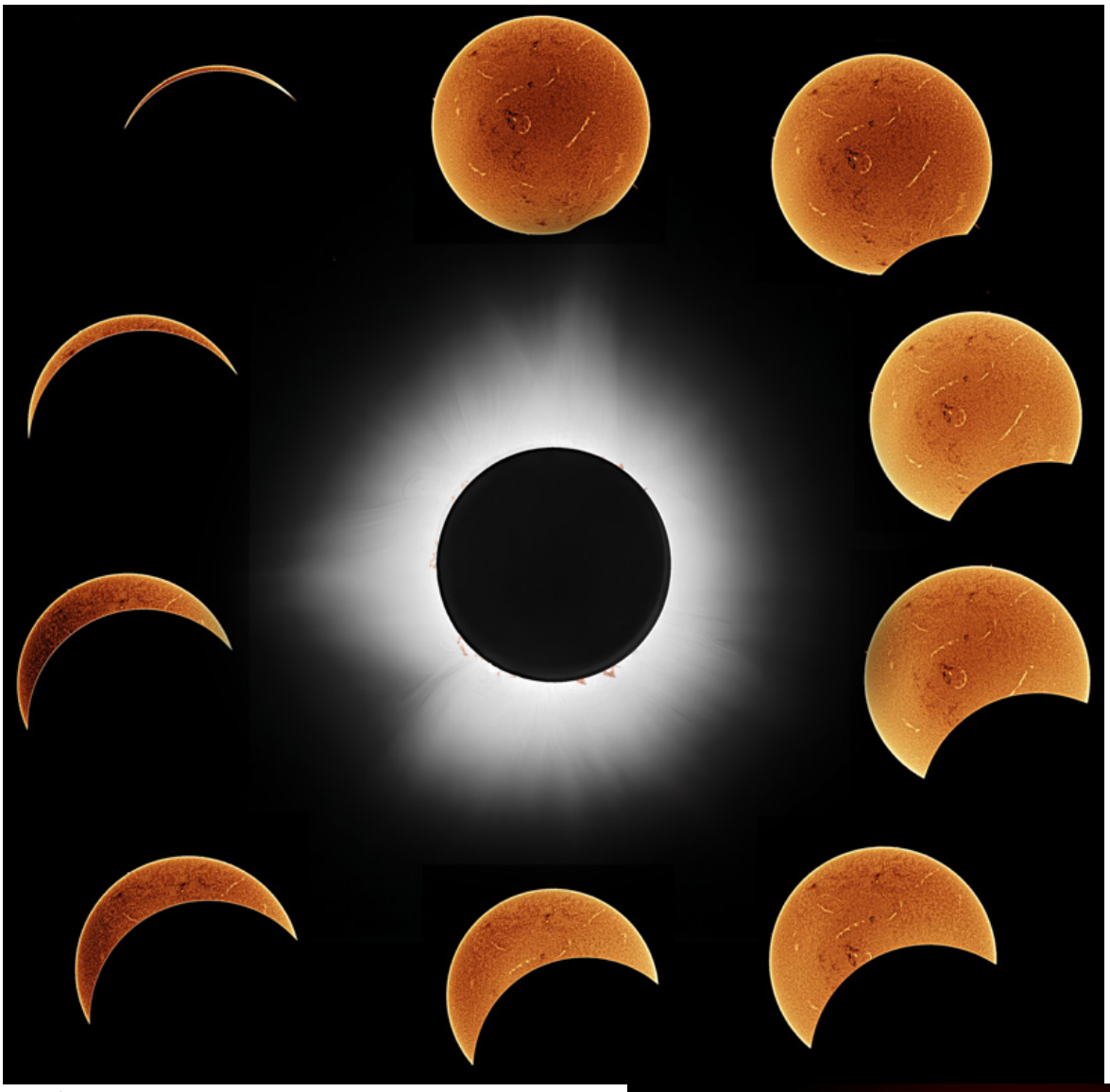
Skywatcher 200P with Starizona 1.0 Corrector L-Pro filter

Randy Smith



NGC 4725

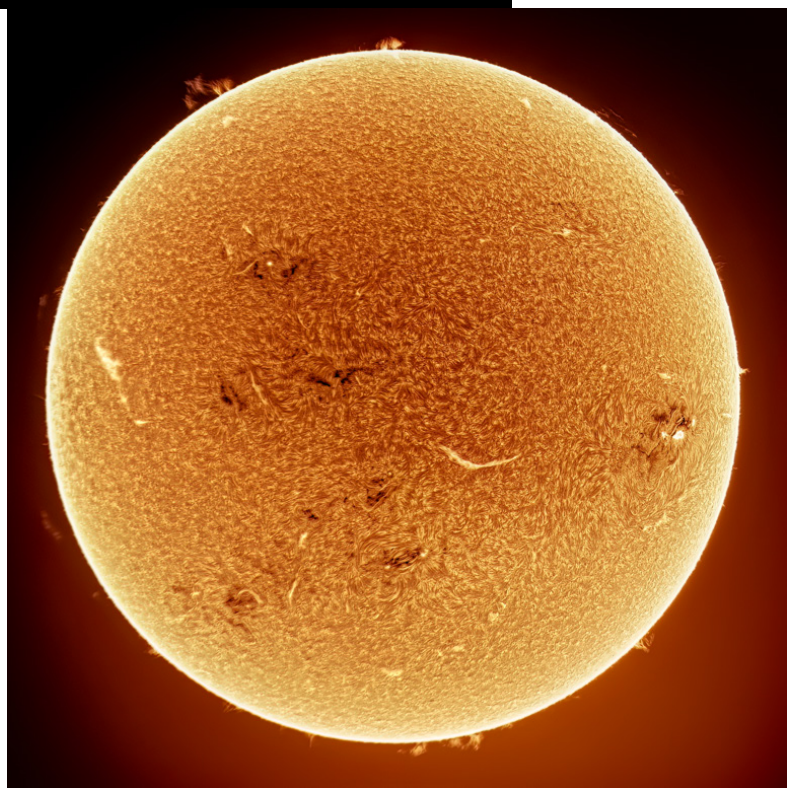
Skywatcher 200P with Starizona 1.0 Corrector L-Pro filter



Eclipse Montage

Montage of the eclipse taken in Hot Springs AR with a Lunt 100MT and Askar FRA400.

Mark Johnston



Sun FSD taken with Lunt 100MT and IMX174 camera

M 51

Astrobin

David Stearn

M104

Astronbin

Ardis Herrold

Comet 12P Pons-Brooks

Here's my image of Pons-Brooks from 4/13. I set up my telescope using ASI Air in live mode, and this was the result of stacking the images when done.

Public Astronomy Events

ARIZONA | 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 for this spring are over. But you can watch the recordings.

Check out the Web Page. To stream recordings of previous lectures, click here.

Get ready to illuminate your world and join us for the annual **International Day of Light celebration on May 19 at UA Flandrau Planetarium** in Tucson! Brought to you by Optics Valley, a committee of the Arizona Technology Council, this free STEM event is perfect for families, teachers and science enthusiasts of all ages.

Mark your calendars for an exciting day filled with interactive activities and captivating full dome shows that will spark your curiosity and ignite your imagination!

Don't miss out on this experience on May 19.

Web Site

by Doug Smith

What's Up list for May 2024 – June 2024

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 May and June for the more common observing programs.

Constellation Hunter Program – Northern Sky
The following Northern Constellations are well placed for viewing during May and June: Bootes, Canes Venatici, Coma Berenices, Corona Borealis, Draco, Leo, Leo Minor, Sextans, Ursa Major, Ursa Minor

Messier Observing Program
The following Messier objects are well placed for viewing during May and June (listed in ascending RA). Its galaxy time! M108, M97, M65, M66, M109, M98, M99, M106, M61, M100, M40, M84, M85, M86, M49, M87,
M88, M89, M91, M90, M58, M68, M104, M59, M60, M94, M64, M53, M63, M51, M83, M3, M83

Lunar and Binocular Observing Program
The following is a list of dates for the lunar phase when observations should be made in May and June:

New Moon: May 8, June 6
40 Hours waxing: May 10, June 8
72 hours waxing: May 11, June 9
4 days old: May 11, June 10
7 days old: May 15, June 14
10 days old: May 18, June 17
Full (14 days old): May 23, June 22
Gibbous: May 1, May 30, June 28
72 hours waning: May 5, June 3
40 hours waning: May 5, June 4

Solar System Observing Program
The following list describes the various solar system objects and their visibility during May and June:
Mercury is an early morning object during all of May and the first two weeks of June. Then it becomes an early evening object.
Venus is an early morning object, pretty much lost in the morning twilight during May. It then becomes an early evening object during June, setting later each day. By the end of June it is setting an hour after the Sun.
Mars is early morning object during May and June. On May 1 Mars rises around 3:30 AM. On June 30 it rises around 1:30 AM.
Jupiter moves from an early evening object, lost in the evening twilight, during May to an early morning object during June. On June 30 it rises around 2:30 AM.
Saturn is rising earlier each night during May and June. On May 1, it rises around 3 AM. By the end of June it is rising around 11 PM.
Uranus becomes an early morning object in mid-May. By the end of June it is rising around 1:30 AM.
Neptune is an early morning object in May and June, rising about 30 minutes after Saturn.

Urban Observing Program

The following **deep sky objects** are well placed for observing during May and June:
Mel 111, M84, M86, M87, M104, M94, M64, M3

The following **Double Star** is well placed for observation during May and June:
Zeta Ursa Major

Skyward

By Dr. David H. Levy

May 2024

A Total Eclipse of the Sun, Part Two

This is a story, not a report on observations.

On April 8, a total eclipse of the Sun tracked across Mexico, the United States, and Canada. Most of the United States enjoyed clear weather, and most of Canada did too.

We were in Texas. We did not have clear weather.

Admittedly, we knew we might be in for bad luck a week out. But when my friends David and Pam Rossetter came by Friday morning at 5:45 a.m., we knew we would be in for quite an adventure. We arrived at the home in which we planned to stay early Friday evening. Dena McClung, former president of the Denver Astronomical Society, was an important part of our group. It appeared that the house had been vacant for months or years. Although we decided to grin, bear it, and make do, by the next afternoon Scott Roberts, our host, had put us up in a wonderful hotel.

The afternoon before the eclipse, a new report predicted clearing during the eclipse. We were heartened, but that prediction was wrong.

Eclipse day dawned cloudy with drizzle. We arrived at the Explore Scientific site near Leakey, Texas. We did see the Sun for a few seconds now and then. The eclipse began right on time - to the second, even though it may first have been predicted by astrologers in ancient Greece. I remembered how happy Dad was when the 1963 eclipse began the same way. We did get several brief views of the incoming partial. But as the Moon advanced inexorably, the clouds thickened. And as totality neared, it became pretty obvious we would miss the total phase.

About ten minutes before the total phase began, someone in our group asked me to share a poem at the start of totality. The one I had in mind was Ross's speech after Macbeth murders King Duncan:

> By th' clock 'tis day,
> And yet dark night strangles the traveling lamp.
> Is 't night's predominance, or the day's shame
> That darkness does the face of Earth entomb
> When living light should kiss it?

Short and sweet, and so Shakespeare. But two minutes before the onset of the total eclipse, I thought of Wendee's favorite poem, The closing lines of "The Song of Honour" by Ralph Hodgson. I suddenly missed Wendee more than I can write. During the 2017 eclipse my wife opined that she hoped still to be alive to see this one. I understood that this eclipse I would have to appreciate for both of us. The idea of her not being here, at this moment, hit me like a clap of thunder.

The sky was darkening fast. The temperature was falling like a stone. It grew much colder. And still the sky grew darker. It was past noon and it was night. We were silent.

It was the moment of total eclipse.

I stood and faced the group. I said:

I stood and stared; the sky was lit,
The sky was stars all over it,
I stood, I knew not why,
Without a wish, without a will,
I stood upon that silent hill
And stared into the sky until
My eyes were blind with stars, and still
I stared into the sky.

My own weak image of the total eclipse as seen from Leakey, Texas.

The group listened with rapt attention. When I was done, there were smiles and some applause. We would not see a total eclipse but we had a poem. Then there was silence.

Twenty seconds passed.

And then, the Sun appeared in total eclipse. Just like that.

I could not believe it. For about half a minute; for 30, maybe 45 seconds, we saw the Sun's corona, the centerpiece of a total eclipse of the Sun. I did not notice the big prominence at the bottom of the Sun but I did not care. The Sun's corona, circular because this was near the maximum of the sunspot cycle, smiled at us. (At other parts of the cycle the corona would be more oval.) It was the most dramatic thing I have ever seen.

After that unforgettable, precious, sight, clouds came in again. We did get to glimpse the corona on and off a few times after that. I noticed the sky starting to brighten as the end of totality approached. Suddenly it was over.

Only it wasn't.

For one delicious moment the Sun's photosphere appeared. The Sun was shining through valleys at the edge, or the limb, of the Moon. It was a magnificent, stunning view of Baily's beads. First described by Francis Baily after he observed them during the eclipse of May 15, 1836, the effect bears his name. However, the first person to describe this effect was actually Edmond Halley, (of comet fame) who recorded them 121 years earlier during the total eclipse of May 3, 1715. What we saw was splendid. And then we got to see a large portion of the ending partial phase. Clouds again obscured the very end of the eclipse.

I sat in my chair, alone. I thought of Wendee. I missed her so much. I could not stop crying. Scott Roberts sat with me and put his hand on my shoulder. Even as I write these words, I am not quite over it.

This eclipse, by far the most dramatic I ever saw, was my twelfth total eclipse, and the 101st eclipse I have seen since October 2, 1959.

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; 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 tube8x50 finder25

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)

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.

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.

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,

Eyepiece Case #6.
Small Silver case8 Meade Super Plossl 1.25" eyepieces. Focal Length: 40mm, 32mm, 26mm, 20mm, 15mm, 12mm, 9.7mm, 6.4mm, 12mm Illuminated reticle, 1.25" eyepiece1.25" diagnol.

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