

TAAA Desert Skies Bulletin

Observing Our

Desert Skies

Since

1954



April 2025

www.tucsonastronomy.org

Membership Meeting

Friday, April 4, 2025 6:30PM

TAAA's next general member meeting will be held on **Friday, April 4, 2025**. The Main Presentation will start at 6:30 P.M. This will be a hybrid meeting (both in person and on social media). TAAA members will receive a Zoom link should they wish to attend remotely. The public may attend in person at the **Steward Observatory Lecture Hall (Rm N210), 933 N Cherry Ave, Tucson** or stream from the TAAA [YouTube](#) page.

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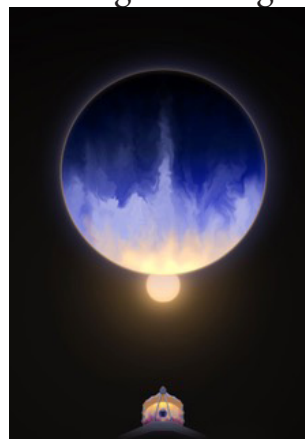
Main Presentation at 6:30PM AZT

Title: Making Sense of Strange New Exoplanets

Presentation: The number of known exoplanets (planets outside the Solar System) grows daily. Over the past few decades, dedicated missions using both ground and space telescopes have discovered over 5,000 exoplanets, many of which seem unlike anything in our own Solar System. While such discovery missions aren't new, our ability to study these worlds in detail has only recently been enabled by the launch of the James Webb Space Telescope (JWST) in late 2021. Over the past four years, JWST has opened powerful new windows into the atmospheres of extra-solar worlds, yielding unexpected findings and a richer understanding of the diversity of planets in the Milky Way Galaxy. Matthew Murphy will share a few of the most exciting recent discoveries about exoplanet atmospheres by JWST, led by a world-wide team of researchers, including Murphy and others at the University of Arizona. These include what appears to be a new class of planet, nonexistent in our own Solar System. In addition to these discoveries, JWST's unique power enables researchers to peer into exoplanet atmospheres along new

dimensions, and better comprehend their complexity. Matthew will tell the exciting story of how this works, and the discovery his team made as a result on a planet (WASP-107b) considered 'strange' to us.

Biography: Matthew Murphy is a PhD candidate at the University of Arizona's Steward Observatory. His work is dedicated to observing and studying the atmospheres of planets beyond our Solar System. Matthew is an expert in using the largest and most powerful telescopes around the world and in space, including the Hubble Space Telescope and James Webb Space Telescope. He has published several scientific articles reporting new discoveries about exoplanets. Matthew will be graduating with his PhD later this year. He earned his Bachelor's degree from Stony Brook University in 2020.



Artist's illustration of exoplanet WASP-107b

Artist: Rachael Amaro/
University of Arizona

March 2025

by Mae Smith

Today I will share some updates with you regarding the GCSP, the Tucson City Plan, and the Pima County Plan.

GCSP: TAAA's largest event is the Grand Canyon Star Party. This year's event is scheduled for June 21-28, with the free campsite program beginning the night of June 20th. Each year, the TAAA GCSP Organizing Committee starts meeting six months prior to the event and continues regular meetings until the event, as well as, often, a de-brief meeting after the event. The six months of pre-planning fosters great cooperative efforts between National Park Service (NPS) Rangers with their support employees and our array of TAAA leader volunteers.

March is a pivotal time for GCSP. Registration for the event and for free campsites opens March 1st each year. Our Grand Canyon Star Party team this year includes Bernie Sanden (GCSP Manager), Rader Lane (GCSP Head Ranger), Gary Wells (Registrar), Marilyn Unruh (Social Director), Chuck Schroll (Constellation Tours), and Mae Smith (Campground Director and t-shirts). As you probably noted, the General TAAA Registration Form and Campground Registration Form were posted and available by March 1st. In addition, this year the former paper registration form for NPS Volunteers has now been posted on-line so that volunteers can complete all of it except details of their volunteer hours prior to the event. Thus, there is no longer a need to rush through all those long pages standing at the Ranger desk at the event.

Please note that the title of the Star Guide position has been changed to "**Volunteer Assistant**". We have upgraded this position to one for which training will be provided at the event. The Volunteer Assistants are very valuable in assisting visitors in participating in the event and in crowd flow management. This year, we will be providing training for

the Volunteer Assistants. They, complete the same volunteer form as astronomers, just identifying their job differently, and **MUST** complete the volunteer forms **PRIOR TO** actually volunteering at the event. We will provide training for the Volunteer Assistants each night at 5:00pm when Rader Lane also provides information about that night's events to the Rangers and Ranger Assistants who will be working that night. Volunteer Assistants will receive any special instructions for that particular evening each day at the 5:00pm meeting.

The free campsite program has been expanded as NPS has provided five additional campsites this year. Four of the five new campsites will be managed in the same, traditional manner. The fifth new campsite will be used to try a new program in which Professional Astronomers may spend 1 or 2 nights. Professional Astronomers are working during the event and may not be able to be gone from their jobs more than a night or two.

Please note on the Social Events Flyer that we can no longer establish special parking spaces in the campground for persons with disabilities who are attending social events in the campground. If you would like disability assistance, contact Mae Smith 520 850-7137 prior to the social event and she will work with people who are staying in the campground to provide you a ride from Camper Services to the campground social event and then back from the event to Camper Services. Visitors to the campground, in general, should park in Camper Services as we are only those who camp in the campground may park in the campground. This is a policy that does NOT depend upon how many cars are or are not in the campground. It is a general policy that we were asked to follow. Our GCSP use of the campground results in many more vehicles parking in the campground than is typical for normal use. This policy is designed to reduce

extra stress on the campground due to our presence.

Note: The **Tucson City Plan**, latest version will stop receiving input on the present draft at the City Council meeting on Wednesday, March 26th. The City has been very responsive to our input.

Note: The **Pima County Climate Plan** was released for an update on March 21, 2025. Ten public meetings have been scheduled between April 3rd and June 10th to discuss and review suggestions for changes. The County Climate Plan is about 200 pages shorter than the current version of the City Plan. It does focus on Climate but, so far, I have found no information in it mentioning astronomy or dark skies. Since the County Plan is much shorter to review than the City Plan and the County Plan, and it governs a much greater amount of land, your time (if you wish to contribute) could be well-used and valuable in requesting attention to astronomy needs and support for dark skies within the County Plan. Also, Davis Monthan Air Base, with its documented increase in light

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@tucsonastronomy.org) 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.

levels that are influencing Tucson skies and are visible from Kitt Peak, is not being claimed by the City but is definitely located in the County map.

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<p>Desert Skies Bulletin Contributions to Editor: David Rossetter by the 24th. Astro-Images to our Image Editor: Gregg Ruppel Proofreaders: Terri Lappin, Jeff Rothstein, Jim Knoll</p>

TAAA News & Activities



The **TAAA Leadership Election** will be conducted online this year, from early evening on **April 25th to 7:00 pm May 2nd**. Offices to be decided include President, Vice President, Board of Directors Member-At-Large (MAL) and 2 members of the Nomination and Volunteer Resource Committee. The NVRC will present the candidates at the April member meeting. If you miss the regular deadline at the end of March for nominations, you can still nominate yourself (or nominate someone else with their permission) as a “write-in” candidate up to one week before the election begins for any office. The nominee’s name will be put on the ballot.

We will be using an online service, OpaVote, to conduct the election as we have done for the past 4 elections. Voting will be online only. The voting procedure details will be provided again in the May newsletter.

NVRC - Pete Hermes ([Chair](#)), John Christensen, and Dave Pass

TAAA Ladies' Night Out

by Susan O'Connor

Ladies' Night Out is a social interest group for women members of the club. The group meets once a month at a local restaurant for fellowship and conversation.

Thursday April 17, 6:30

Eclectic Cafe

7053 E Tanque Verde
(NE corner of Tanque Verde and Sabina Canyon)

Preview the [menu](#).

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

Astronomy Classes

by Doug Smith

Learn how to Record Observations and Sketch Objects Workshop

Open For Enrollment

Place: TIMPA **Date:** Thursday, May 22, 2025 **Time:** 7:00 PM until completed

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

If interested: 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.

Happenings at TIMPA

April 2025

In March, the TIMPA team started working on refurbishing the 14” shed, cutting a foot and a half off the top to make it possible to see Polaris from the telescope, replacing the roof and the doors, and repainting the whole structure. We hope to have the entire project finished by the beginning of May so that we can allow member access to the 14” telescope.

We are also in the process of replacing the old electronic focuser on the telescope and are working to make the scope camera-compatible. We are also working to make the telescope communicate with outside hardware and software so that it can be controlled by phone and/or PC. This is another part of the project that we hope to have finished by May.

Thanks to everyone who has worked and continues to work on the project!!!



The TIMPA 16” is now open for training. We plan to offer training to any club member who is interested in using the telescope. Please check out the club website for the form, or [email](#) Stephen Ferris for information. You can find the registration form under the classes section of the TAAA website.

TIMPA is now open two weekends a month, weather permitting. Please remember to fill out the registration form on the Members Only section of the website if you plan to attend, or contact [Stephen](#) if you have any difficulties with the form.



Unfortunately, our observation of the Lunar Eclipse from TIMPA on March 13 was spoiled by clouds and a bit of rain.

We hope to see everyone this Spring at TIMPA!

Stephen Ferris
TIMPA Director

Observing Sites

TIMPA

by TIMPA Planning Group

TIMPA (Tucson International Modelplex Park Association) is TAAA's dark sky site west of the Tucson Mountains.

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

TIMPA Star Party Dates this month (Friday - Saturdays)

March 28-29; April 18-19; April 25-26

The TIMPA Planning Group will be offering assistance with telescope usage and observing during the monthly TIMPA Star Parties. You are invited to bring your equipment and questions to TIMPA on Star Party dates for assistance. Be sure to register using the link below.

The TIMPA site is only partially improved. There are no inside buildings provided other than restrooms. TAAA provides very limited seating (members are welcome to bring folding chairs). Please note that members visiting the TIMPA site may encounter things commonly found in partially improved desert areas such as desert creatures and/or their remnants (such as gopher holes or ant hills), uneven terrain, weeds, and desert pollens. Members using the site are encouraged to bring red lights and to move cautiously taking appropriate safety measures. The



site does not have potable water, so bring your own non-alcoholic drinks.

Reservations for the TIMPA Site are made on the TAAA website at [TIMPA DARK SITE RESERVATIONS](#). Please fill out the form completely and be sure to indicate the date you desire to visit TIMPA.

Questions? Contact the TIMPA Director: [Stephen Ferris](#)

Upcoming CAC Weekend Dates (Thursday - Sunday)

March 27 - 30 (New Moon March 29)

April 24 - 27 (New Moon April 27)

Chiricahua Astronomy Complex (CAC) is the club's dark sky observing site, located in Cochise County approximately 100 miles southeast of the center of Tucson. We have many large telescopes ranging from a 40-Inch, 25-Inch and 18-Inch Dobsonians, a 9-Inch Folded Refractor, a soon to be completed 32-inch Cassegrain, and quite a few Schmidt-Cassegrain Telescopes (SCTs) of various sizes. The telescopes are configured for either visual observing or imaging. You can get trained to operate any of these and observe or image from a dark Bortle 1-2 site only two hours from Tucson. We also have ten sleeping rooms with heat and air conditioning, a Learning Center/ Classroom, seven RV sites with electricity, and a large tent camping area.



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

If it is your first visit to CAC, you need to attend on a CAC weekend when other members are present. Unless you are qualified to open and close the site, dates will be limited to those around the New Moon and are listed below and 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' 2025 (1st Half) Star Party Dates

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

TAAA Astronomy Equipment For Sale

TAAA has an assortment of astronomy related equipment for sale. This equipment is available for members only at this time.



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



Homemade 8 inch Newtonian telescope. Sturdy GEQ mount. Solid tripod. 2-inch focuser (with 1.25" adaptor), 6x30 crosshair finder. \$100



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



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

TAAA Astronomy Equipment For Sale (continued)



We have numerous **tripods**. Celestron, Meade and others. Heavy duty, light duty, etc. If interested please inquire.



Telrads. All tested. Mounting plate not included (available on e-bay, etc.). **\$20**



Several full aperture **white light solar filters**. Most are 'film type'. We have one 'glass type'. Various sizes. All checked out okay. If interested please inquire for available sizes and prices.



Small camera tripods - \$10

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

April 2025 Star Party Volunteer List

Thank you for volunteering your time and talents for our extremely important outreach mission. **Below is the current status of the Public/School Star Party list for April, 2025.**

Please let me know in via email if you are interested in volunteering for any of the events listed below. First come – first served. I will let you know in return if you are on it or that it was already filled. Some events go fast!.

If you are new to Star Party outreach, let me know and we'll be sure to help you get started. It is important you sign up for star parties if you plan to attend, whether you bring a scope or help in other ways, so I can manage who from TAAA will be on-site and for you to be included in any reminder or weather emails.

The PUBLIC Astronomy Events are also listed on the TAAA (tucsonastronomy.org) and Night Sky Network (NSN) (nightsky.jpl.nasa.gov) calendars. Also, all PUBLIC star parties will be listed on the TAAA Facebook events page and will be updated based on weather, etc. in real-time. You can follow any of these events and get a notification when I update each event but this is only for PUBLIC star parties listed on Facebook.

The requests have been updated as of March 24th. **The first section, in RED, is a list of events where we still need volunteers.** If you can help out please contact me at:

astronomy-events@tucsonastronomy.org

Thank you,

Bernie Stinger.

TAAA Public/School/Non-Profit Star Party Manager

April Events still in need of Volunteers

Saturday – April 5 -- NORTHEAST TUCSON
Pima County Natural Resources Parks & Recreation (NRPR) @ Agua Caliente Park
Agua Caliente Park is located at 12325 E Roger Rd.
Age Group: All Ages
Estimated # Participants: 75 – 100
1 Additional Scope needed
Setup Time: 6:30–7:00 pm
Start Time: 7:30 pm End Time: 9:30 pm

Friday – April 18 -- NORTHWEST TUCSON -- CATALINA
Catalina State Park
11570 N Oracle Road
Age/Grade Level: All Ages.
Participants: 150+
2 Additional Scopes Needed
Setup Time: 6:30–7:00 pm.
Start Time: 7:30 pm. End Time: 9:30 pm.

Events still in need of Volunteers - Continued

Wednesday – April 23 -- WEST TUCSON
Cooper Center for Environmental Learning

5403 W Trails End Rd

Age/Grade Level: Grade 2/3

Participants: 18

1 Additional Scope Needed

Setup Time: 7:00 pm.

Start Time: 7:30 pm. End Time: 9:00 pm.

Friday – April 25 -- EAST TUCSON

Saguaro National Park – EAST

Saguaro EAST is located at 3693 S Old Spanish Trail.

Age Group: All Ages

Estimated # Participants: 100+

1 Additional Scope needed

Setup Time: 6:30–7pm

Start Time: 7:30 pm End Time: 9:30 pm

Thursday – April 24 -- WEST TUCSON

Cooper Center for Environmental Learning

5403 W Trails End Rd

Age/Grade Level: Grade 5

Participants: 60

1 Additional Scope Needed

Setup Time: 7:00 pm.

Start Time: 7:30 pm. End Time: 9:00 pm.

Saturday – April 26 — ORACLE AZ

Oracle State Park

3820 E Wildlife Dr, Oracle AZ

Age/Grade Level: All Ages

Participants: 125 – 150

2 Additional Scopes needed

Setup Time: 7:00 pm.

Start Time: 7:30 pm. End Time: 9:30 pm.

April Events Filled—No Volunteers Needed

Friday – April 11 -- EAST TUCSON

Desert Christian Elementary School

9415 E Wrightstown Rd

Age/Grade Level: 2nd Grade

Participants: 50 – 100

0 Scopes Needed

Setup Time: 7:00 pm.

Start Time: 7:30 pm End Time: 9:30 pm

Saturday – April 12 -- Tree Ring Research

Lab @ University of Arizona – Solar Viewing

1215 E Lowell St

Age Group: All ages, mostly adult

of Participants: 200?

0 Scopes Needed

Setup Time: 9:30 am

Start Time: 10:00 am End Time: 2:00 pm

Saturday – April 12 -- MARANA AZ

Ora Mae Park – Town of Marana Parks & Recreation

13250 N Lon Adams Rd, Marana, AZ

Age Group: All Ages

Estimated # Participants: 50 – 100

0 Scopes needed

Setup Time: 7:00 pm

Start Time: 7:30 pm End Time: 9:30 pm

Tuesday – April 15 -- WEST TUCSON

Cooper Center for Environmental Learning

5403 W Trails End Rd

Age/Grade Level: Grade 5/6

Participants: 55

0 Scopes Needed

Setup Time: 7:00 pm.

Start Time: 7:30 pm. End Time: 9:00 pm.

Events Filled - Continued

Wednesday – April 16 -- WEST TUCSON
Cooper Center for Environmental Learning
5403 W Trails End Rd
Age/Grade Level: Grade 8
Participants: 25
0 Scopes Needed
Setup Time: 7:00 pm.
Start Time: 7:30 pm. End Time: 9:00 pm.

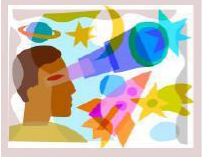
Tuesday – April 22 -- WEST TUCSON
Cooper Center for Environmental Learning
5403 W Trails End Rd
Age/Grade Level: Grade 6
Participants: 30
0 Scopes Needed
Setup Time: 7:00 pm.
Start Time: 7:30 pm. End Time: 9:00 pm.

Friday – April 25 -- EAST TUCSON
Academy of Tucson Elementary School
9209 E Wrightstown Rd.
Age/Grade Level: 2nd to 5th Grades
Participants: 60 – 100
0 Scopes Needed
Setup Time: 7:00 pm
Start Time: 7:30 pm End Time: 9:00 pm

Monday – April 28 -- WEST TUCSON
Cooper Center for Environmental Learning
5403 W Trails End Rd
Age/Grade Level: Grade 7
Participants: 30
0 Scopes Needed
Setup Time: 7:00 pm.
Start Time: 7:30 pm. End Time: 9:00 pm.

Wednesday – April 30 -- WEST TUCSON
Cooper Center for Environmental Learning
5403 W Trails End Rd
Age/Grade Level: Grade 6
Participants: 45
0 Scopes Needed
Setup Time: 7:00 pm.
Start Time: 7:30 pm. End Time: 9:00 pm.

Special Interest Groups



Starry Messengers Special Interest Group

Opening Minds to the Universe

Thank you to all our volunteers! With their help, we had several successful events in March. Todd Hansen, Terri Lappin, and Karen Liptak served as judges at the **70th SARSEF Regional Science and Engineering Fair** where the TAAA awarded three astronomy related projects. For two days, we had an exhibit and solar telescopes at the **Tucson Festival of Books**, making over 4500 interactions with the public. Volunteers were Ed Foley, Pete Hermes*, Ardis Herrold, Jeff Johnston, Susan Knoll, Jim Knoll, Terri Lappin*, Kay Lehman, Rich Loper, Brian O'Connell, Jim O'Connor*, Susan O'Connor*, Tom Sarko, Chuck Schroll, Bernie Stinger, Mason Sugarman*, Vance Tanner*, Vanessa Thomas, and Gary Wells (* means they were there both days). The very next weekend, we held our **12th Annual Tucson Astronomy Festival** at Brandi Fenton Memorial Park where volunteers made over 2000 interactions with the public. For both events, individuals were counted multiple times. Our total attendance at the Tucson Astronomy Festival was estimated at about 200 individuals, not counting TAAA members. TAAA volunteers were Miguel Carrion, William Clarke, Stephen Farris, Pete Hermes, Connor Justice, Jeff Johnston, Jim Knoll, Susan Knoll, Terri Lappin, Kay Lehman, Jim Long, Rich Loper, Michael Martin, Jim O'Connor, Chuck Schroll, Douglas Smith, Larry Stepp, Bernie Stinger, Mason Sugarman, Vance Tanner, Mike Weasner (representing Oracle State Park), and Gary Wells. In addition to Oracle State Park, we were joined by Catalina State Park and the UofA Arizona Astrobiology Center.

All photos from the Tucson Astronomy Festival



Jim Knoll discussing differences in sizes of stars.
Photo by Terri Lappin



Solar observing with activities under the ramada.
Photo by Jim Knoll



Model solar system from "Exploring the Solar System" toolkit. *Photo by Terri Lappin.*

SMSIG Continued



TAAA member Mason with materials from the “Our Magnetic Sun” toolkit. *Photo by Terri Lappin.*



Night sky viewing around Jim O'Connor's telescope. *Photo by Jim Knoll.*



Kay Lehman ready to help kids make sundials. *Photo by Terri Lappin.*



Mike Weasner, representing Oracle State Park, with their Dark-Sky designation awards. *Photo by Terri Lappin.*

The SMSIG will meet by Zoom on Monday, April 14th at 7pm. The Zoom link will be emailed to TAAA members. Everyone is invited, especially those who volunteered at our two March events.

We have the following requests for astronomy education toolkits:

- April 2 4pm – 7pm Pueblo High (Ajo Way & 12th Ave), Supernova/Blackhole toolkits, Pete Hermes
- April 9 5:30pm – 7pm Senita Valley Elem (Houghton & Bilby), any toolkit, **UNFILLED**
- April 9 6pm – 7pm St Marks Methodist Church (La Canada & Magee), Exploring the Solar System, **UNFILLED**
- April 26 Noon – 5pm Sonoran Science Academy (River & La Cholla), any toolkit, **UNFILLED**
- May 2 5pm – 8pm NW Pima Community College (Shannon & Magee), any toolkit, **UNFILLED**

If you have questions about the Starry Messengers SIG or any of these volunteer opportunities, contact Terri Lappin: [Email](#) or 520-977-1290.

Astronomy Fundamentals SIG

by Connor Justice

Come join us for a presentation on the fundamentals of amateur astronomy. Learn your way around the night sky to add to your observing enjoyment. Meetings are on the second Thursday of each month.

The next AFSIG meeting is on **Thursday, April 10, 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 [YouTube Channel](#) [AFSIG on the Web](#)

Astro-Imaging SIG

by Gregg Ruppel

The next AISIG meeting will be **Monday, April 21 at 7:00 pm** via ZOOM.

Topics:

Beginners' Corner - Ask a Question

Guiding for Beginners - Terminology to Techniques Gregg Ruppel

Image Sharing - Discussion

Email [Gregg Ruppel](#) for the ZOOM link or any other information. Gregg and the AISIG folks are very active on the [TAAA groups.io](#) forum. Check out all the helpful advice and amazing images there. For more information or instructions on how to join the forum, [click here](#).

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

Astronomical League

by Doug Smith

What's Up in April - May 2025

Many of the Astronomical League observing programs can be done from our backyards. The following is a list of objects visible in April and May for the more common observing programs.

Constellation Hunter Program – Northern Sky

The following constellations are well placed for observing for April and May: Cancer, Canes Venatici, Coma Berenices, Leo, Leo Minor, Sextans, Ursa Major

Messier Observing Program - The following Messier objects are well placed for observation in April and May (ascending RA): M81, M82, M95, M96, M105, M108, M97, M65, M66, M109

Urban Observing Program

The following **deep sky objects** good for observing in April and May: M81, M82, NGC 3242.

The following **double stars** are well placed for observing in April and May: Gamma Leo

[Astronomical League Continued](#)

Astronomical League Continued

Lunar and Observing Program

The following is a list of dates for lunar phases in April and May:

New Moon: April 27, May 27	10 days old: April 7, May 7
40 Hours waxing: April 29, May 29	Full (14 days old): April 13, May 12
72 hours waxing: April 1, 30, May 30	Gibbous: April 20, May 20
4 days old: April 2, May 1	72 hours waning: April 24, May 24
7 days old: April 5, May 4	40 hours waning: April 25, May 25

Solar System Observing Program

The following is a list of planets that can be observed during March, April and May.

Mercury is an early morning object for April and May. It reaches greatest elongation and greatest brightness on April 20.

Venus is an early morning object during April and May. It rises earlier each day and reaches greatest brightness on April 27.

Mars is well placed for evening observation during April and May. On April 1 it transits just after sunset and does not set until around 2:30 AM. On May 31 it does not set until midnight.

Jupiter is still visible in the early evening sky during April and May but it is setting earlier each day. On April 1 it sets around 11:30 PM but by May 31 it is setting around 8:30 PM.

Saturn is now visible in the early morning sky, rising earlier each day. On April 1 it rises around 30 minutes before sun rise. By the end of May it is rising around 1 AM.

Uranus is still visible in the early evening sky during March and April. It sets around 11:30 PM on March 1 and around 8 PM on April 30.

Neptune is an early morning object in April and May. On April 1 it rises about 30 minutes before sunrise. By the end of May it rises around 1:30 AM.

SPECIAL EVENTS: April and May are good months for observing Saturn's moons involved in mutual events (occultations and eclipses)

Mutual Saturn satellite events:

April 1, 2025:	Mimas eclipses Enceladus. Start: 2:51:49 UT, End: 2:52:54 UT
April 8, 2025:	Mimas eclipses Enceladus. Start: 7:36:39 UT, End: 7:37:57 UT
April 9, 2025:	Mimas eclipses Tethys. Start: 8:01:14 UT, End: 8:02:35 UT
April 11, 2025:	Mimas eclipses Tethys. Start: 5:17:50 UT, End: 5:19:18 UT
	Mimas eclipses Dionne. Start: 9:58:04 UT, End: 9:59:25 UT
April 13, 2025:	Mimas eclipses Tethys. Start: 2:34:28 UT, End: 2:35:53 UT
April 16, 2025:	Mimas eclipses Enceladus. Start: 4:42:14 UT, End: 4:43:23 UT
April 18, 2025:	Dionne eclipses Tethys. Start: 12:20:59 UT, End: 12:23:19 UT
April 26, 2025:	Mimas eclipses Enceladus. Start: 3:08:41 UT, End: 3:12:38 UT
May 1, 2025:	Mimas eclipses Enceladus. Start: 6:32:28 UT, End: 6:33:34 UT
May 4, 2025:	Dionne eclipses Rhea. Start: 3:14:02 UT, End: 3:21:23 UT
May 12, 2025:	Mimas eclipses Rhea. Start: 11:55:26 UT, End: 11:57:09 UT
May 14, 2025:	Tethys eclipses Dionne. Start: 5:56:33 UT, End: 5:58:35 UT
May 16, 2025:	Mimas eclipses Enceladus. Start: 8:22:31 UT, End: 8:23:28 UT
May 21, 2025:	Dionne eclipses Rhea. Start: 9:57:48 UT, End: 10:01:03 UT
	Enceladus eclipses Rhea. Start: 10:35:14 UT, End: 10:37:42 UT
May 26, 2025:	Dionne eclipses Tethys. Start: 12:57:28 UT, End: 12:59:32 UT
May 30, 2025:	Dionne eclipses Rhea. Start: 2:26:08 UT, End: 2:33:20 UT
May 31, 2025:	Mimas eclipses Enceladus. Start: 10:12:16 UT, End: 10:13:11 UT

Also during April and May several **transits of Saturn's moon Titan** occur. During these events Titan may be difficult to see. The dates and times listed below are for the transit of Titan's shadow:

April 29, 2025.	Start: 10:35 UT, End: 16:34 UT
May 15, 2025.	Start: 09:49 UT, End: 15:44 UT
May 31, 2025.	Start: 09:05 UT, End: 14:53 UT

Member Astro-Images



M78

Exposures 60 x 4min. (Total 4h)

Paul Lorenz

Astro-Tech AT152EDT Triplet refractor
with WO 0.8x field flattener.

NGC 3521

Exposures 60 x 4min. (Total 4h)



**Alan
Rockowitz**

Arp 104

iStar optical
140 mm
F/6.5 scope.
It's about
27 hrs total
integration
time.



**Randy
Smith**

**NGC
4395**

Sky-
Watcher
Quattro
250P /
10-S,
ZWO
ASI585MC
Pro,
Optolong
L-Pro 2"
Starizona
Nexus
0.75x
Newtonian
Focal
Reducer/
Coma
Corrector
(NEXUS-
075),
ZWO
ASIAIR
Pro.



[Astrobin](#)



Mare Crisium
 2025 03 05 0115UT
 Colongitude 334.7°
 Phase 111.4°
 Lunation 5.01 days
 Illum. 31.8%
 TEC 8" f/20 Mak-Cass
 Camera: SKYRIS 236M
 Scale 0.25"/pix
 Filter: 665nm
 Seeing: 8/10
 North Up

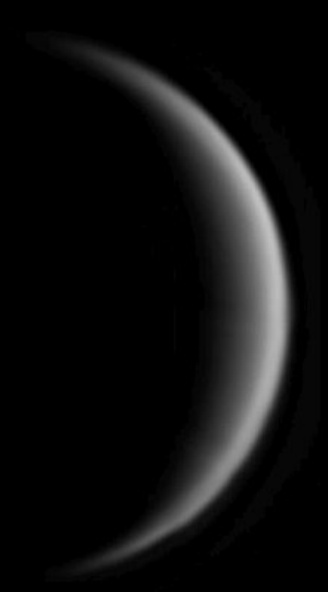
Blue Ghost
 landing spot
 marked with
 "O"

Mare Crisium
 (Blue Ghost landing site)

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

Rik Hill

VENUS
 2025 02 28
 8"f/20 Mak-Cass
 Cam: SKYRIS 236M
 Scale 0.25"/pix
 Seeing: 7-8/10
 Dia= 48.1"
 Mag.= -4.6
 Elong. 31.7°
 Illum.= 0.155
 North Up



Venus 2/28/2025

Richard "Rik" Hill ©2025
 Loudon Obs. Tucson
 rhill24@cox.net

0125UT
 665nm filter
 CMI=320.7°
 CMII=024.0°



**Jeff
Rothstein**

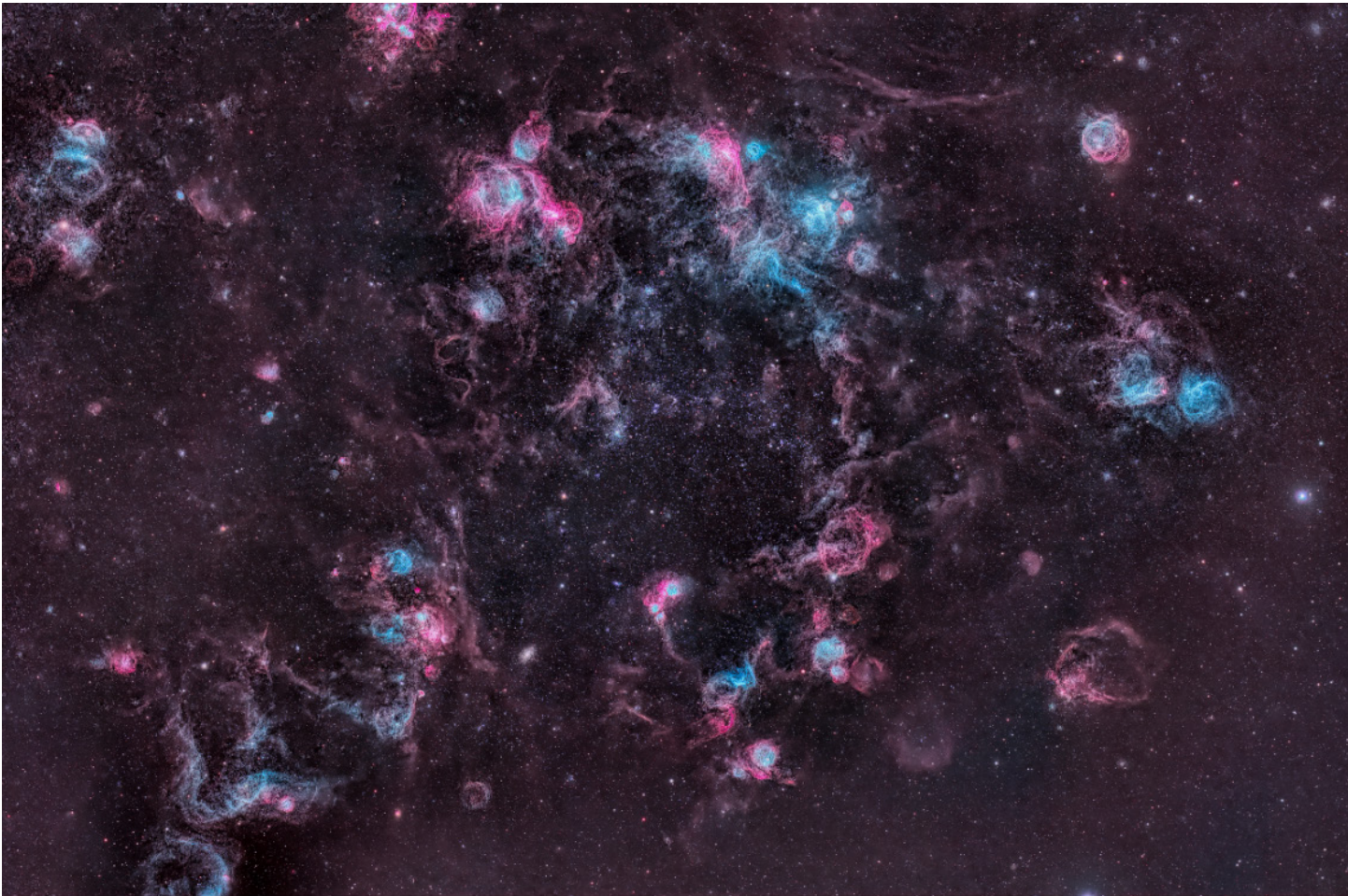
Abell 31

[Astrobin](#)

**Edward
Beshore**

M53

Thirty
2-minute
exposures in
each of R, G
& B (Total
of 3 hours).
Astro-Physics
155mm
Refractor and
Mach2 mount.



NGC 2004
and 50 other
NGC objects.

[Astrobin](#)

**Alex
Woronow**

RCW 104

[Astrobin](#)



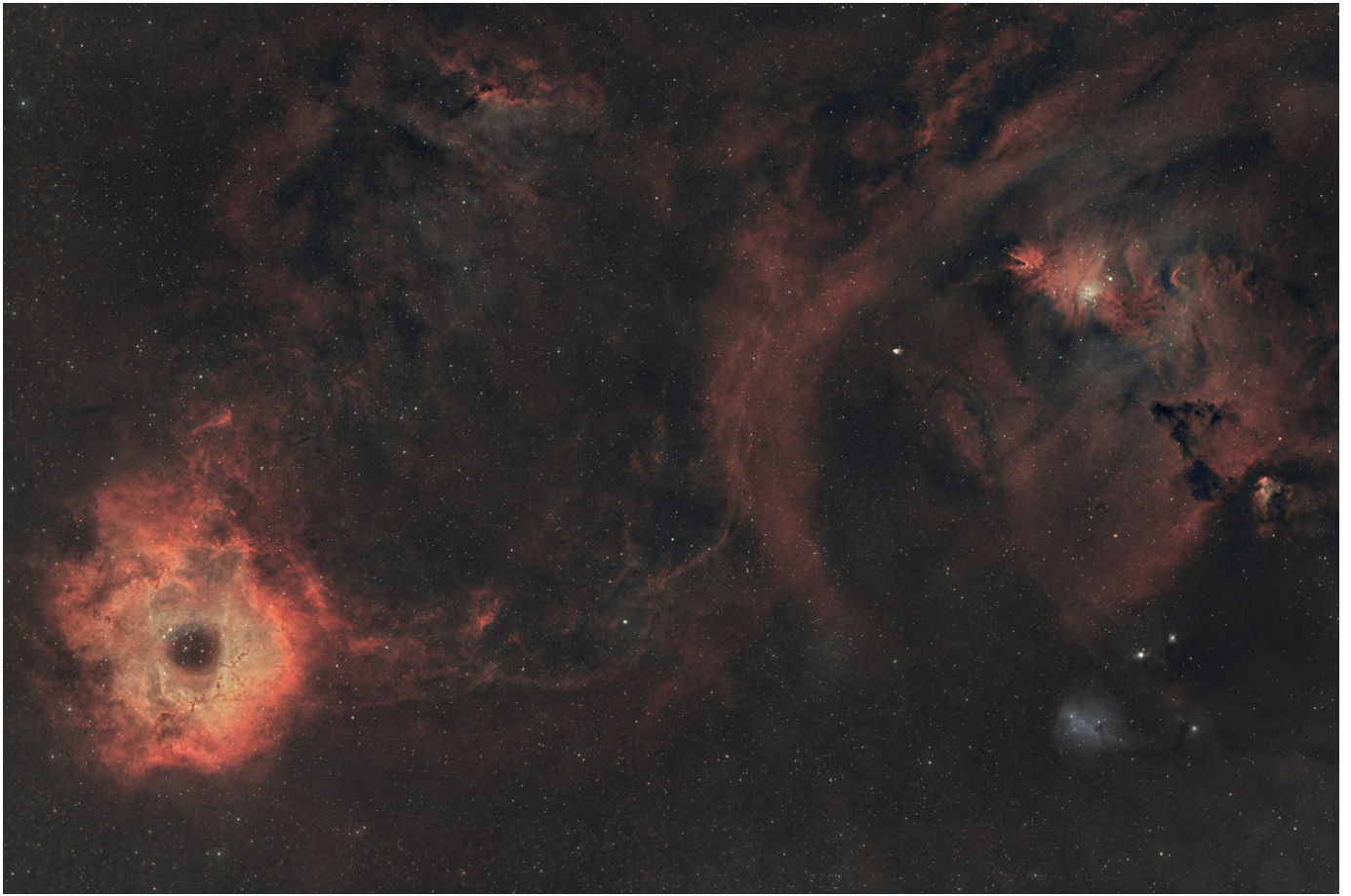


Sh2-223 & 224 - RASA 8" f/2 400mm fl /
Idas NBZ II highspeed Ha-OIII duoband
filter/ CEM70ec mount/ Scale 0.97 "/px /7.5h
exposure.

Tom Eby

Sh2-261 Lower's Nebula - RASA 8" f/2/
ZWO 2600mc pro Gain 100 Offset 40 -3C/
CEM70ec mount unguided/no filters/5.5hr
exposure/Scale = 0.97"/px.

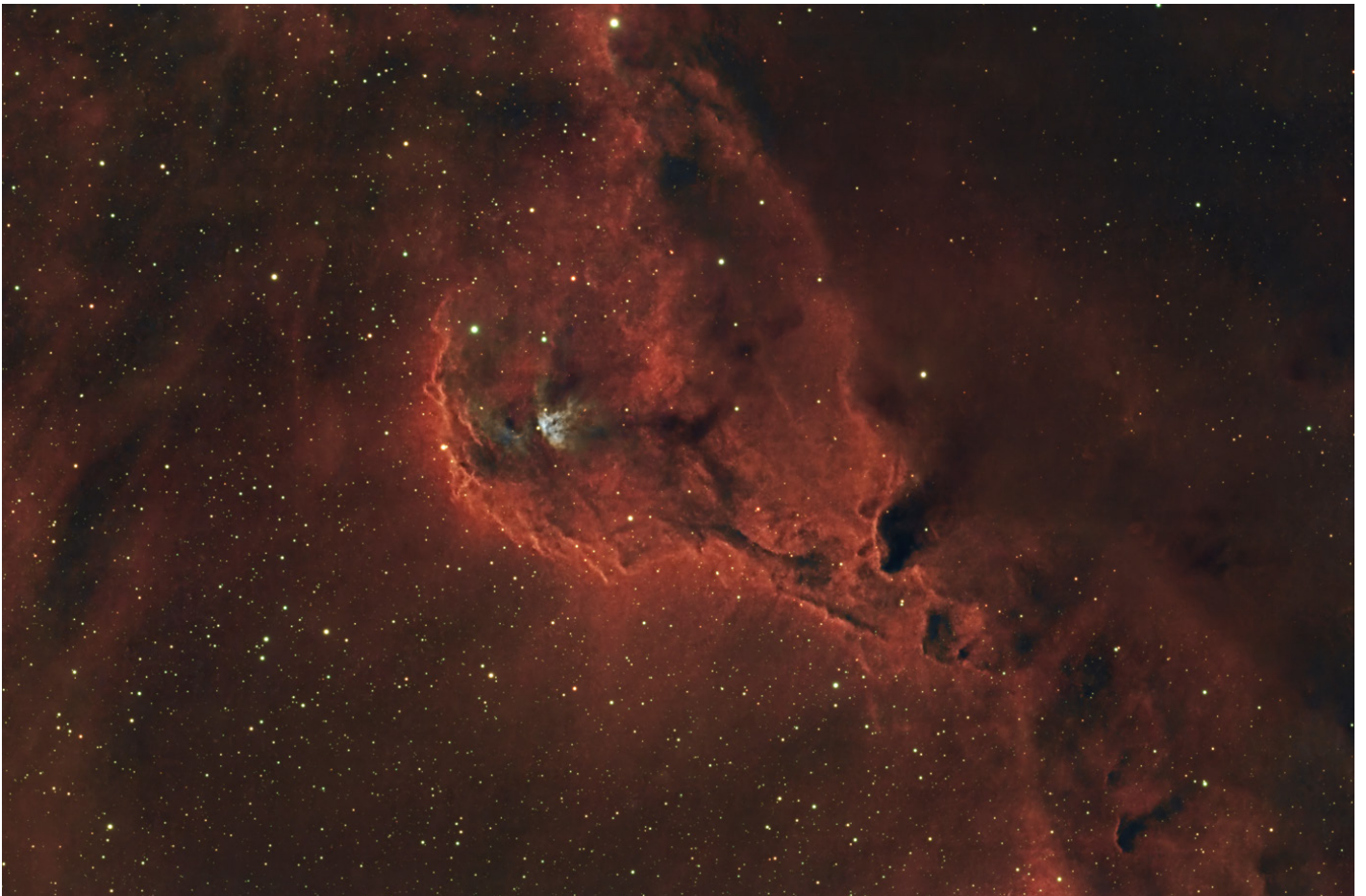




LDN 1584 [Astrobin](#)

Allen Force

Rosette and Cone [Astrobin](#)



NGC 2170

Mike
Mulcahy

Witch
Head
Nebula





David Stearn - Rosette Nebula [Astrobin](#)

Public Astronomy Events



DarkSky

SOUTHERN ARIZONA

See Christopher Nolan's Oscar-winning epic **Interstellar** at The Loft, presented on the big screen in stunning 70mm!

Co-presented by DarkSky International as part of International Dark Sky Week. For details please [here](#).

April 24

Emilio E. Falco, PhD

Chair

DarkSky International, Southern Arizona Chapter





College of Science

2025 Lecture Series

[Web Site](#) [Recordings](#) of this Spring's Lectures

Emily Bray and Evan MacLean

Sit, Stay, Speak: Unleashing the Science of Dog-Human Communication

Genesis Arizmendi

Two Languages, One Mind: What Science Reveals About Bilingual Communication

Ellen Riloff

Following Your Heart: Recognizing Emotions in Human-Computer Communication

Daniel Apai and Chris Impey

Cosmic Conversations: Communicating with the Unknown



DEPARTMENT OF ASTRONOMY
AND STEWARD OBSERVATORY

Public Evening Lecture Series
Spring 2025

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

Mar. 31 Dr. Jacob Isbell Steward Observatory

“Science with Extremely Large Telescopes: Direct Imaging of Active Galactic Nuclei”

Apr. 14 Dr. Mathieu Renzo Steward Observatory

“The Explosive Life of Massive Stellar Binaries”

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



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

Thursday, April 24 @ 9am

Amy C. Oliver, FRAS

Public Affairs Officer - Fred Lawrence Whipple
Observatory Smithsonian Astrophysical Observatory
Principal Investigator - Dark SkyNet Project
GLOWWORM



[Watch Livestream](#)

New Vistas [Landing Page](#) with links to past lectures.

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

Skyward

By Dr. David H. Levy

March 2025

Sleep, my child, and peace attend thee
All through the night;
Guardian angels God will send thee
All through the night.
Soft the drowsy hours are creeping,
Hill and vale in slumber sleeping,
I my loving vigil keeping,
All through the night.

While the moon her watch is keeping
All through the night;
While the weary world is sleeping
All through the night.
Over thy spirit gently stealing,
Visions of delight revealing,
Breathes a pure and holy feeling,
All through the night.

Ar Hyd y Nos (All Through the Night), , Edward Jones' Musical and Poetical Relics of the Welsh Bards (1784).

I learned about this gorgeous hymn at Twin Lake Camp during the Summer of 1956. I was 8 years old. During one of the three summers I spent at Twin Lake I sang that hymn at least once at a camp assembly. The older campers were extraordinarily patient with my unfortunate voice. My favourite line, "While the moon her watch is keeping" surfaced more recently. There is a singular magic to being out of doors on a clear night and looking at the Moon. There is a sense of delight, and the result for me is indeed "a pure and holy feeling."



The idea of the Moon keeping a watch follows from the idea that the Moon rises at a specific time and sets at a specific time. And when a lunar eclipse begins at a specific time and ends at another time, the Moon fits the concept of a timepiece well. On the night of March 13/14, 2025, Jean Mueller and I enjoyed a spectacular total eclipse of the Moon. In the days ahead of the event the weather forecast steadily deteriorated, and until the event was actually starting, we had no idea whether we would see anything at all. Our first check of the condition of the sky changed everything. With large breaks in the clouds we saw the Moon with a subtle darkening on its lower side. More than an hour later, the dark, reddish-brown central shadow of the Earth made its obvious first bite of the Moon. By the time the

Moon was completely embalmed in the Earth's central shadow, the umbra, the sky had darkened considerably and we were treated to one of Nature's most stunning displays. As beautiful and artistic as the Moon appeared that night, the event followed the calculated times precisely.

“This is the most amazing, beautiful eclipse I have ever seen,” Jean said of her experience. It was electrifying for me too. Eclipses are not just events in the sky. They are awe-inspiring ruses of Nature. They do not just occur; they are inspiring, poetic. Eclipses prove that the sky is not just there; it happens. The shadow of the Earth darkens the entire face of the Moon pointed toward Earth. While an eclipse of the Sun is visible over a small area on Earth, the Moon’s eclipse can be seen over the entire side of the Earth that is going through night.



Jean was also moved by the idea of the Moon as a watch, that the starting and ending times of an eclipse can be accurately predicted. Decades ago, my Dad was also exhilarated when the solar eclipse of July 20, 1963, began, to the second, on time. Fascinated with history, he said that the ancient Greeks in Aristotle’s time calculated, to the second, when an eclipse so far in the future would begin. Dad was overwhelmed by that thought.

The always welcome eclipses will continue; another will be visible from my home, and from San Diego, on March 3, 2026. It will be a happy event to which I can really look forward. If the sky be cloudy that night, we will still detect a noticeable darkening around us. If it is clear, Nature will again demonstrate that just as planets form and stars die over billions of years, the eclipses start and end in periods of time measured by a few seconds.

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

