



PAStimes

A Publication of the Phoenix Astronomical Society

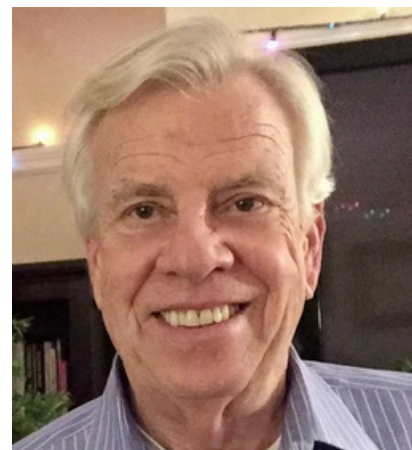
Stu's Views • Stu Brackney, President PAS

Great news. The heat is starting to leave us, and our night skies are looking great. Today I have only one issue to discuss with all of you. The need for a PAS social event. A potluck. As you can see from our PAS Event Calendar and Registration Site, we have all kinds of lectures, star parties and telescope workshops scheduled for the entire year. We now need your help to schedule a potluck social event. But where and when?

Do you know of a location that can host our event for 30-50 people? If so send me the details. I am suggesting that

PAS may cover the cost of pizza. Get back to me, stuartbrackney@pasaz.org. We need to spend some time together just chatting and sharing. I lied! One other issue. If you have a topic you want presented during our "Monthly Lecture Series," send it to our vice president:

Paulfacuna@pasaz.org.



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October's Events

Thu. 10/5 – Speaker Meet and Greet Dinner

Thu. 10/5 – Monthly Lecture

Sat. 10/14 – 2023 Annular Solar Eclipse

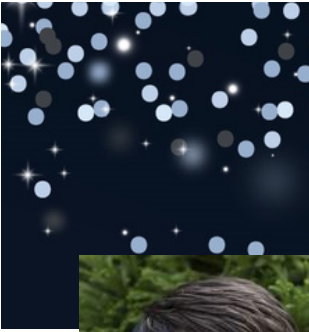
Thu. 10/19 – Telescope Workshop 101 – "What to Buy"

Thu. 10/19 – Telescope Workshop 201 – "How to Operate"

Sat. 10/21 – International Observe the Moon Night

For more details, please visit [PAS Event Calendar and Registration Site](#)

OCTOBER LECTURE & DISCUSSION



The speaker for our meeting on Thursday October 5, 2023, is Dr. Rhonda Stroud. The title of her presentation is: *"Diamond Dust and Other Relicts of the Dawn of the Solar System"*

Dr. Stroud is a Professor in the School of Earth and Space Exploration at Arizona State University, and the Director of the Buseck Center for Meteorite Studies. Dr. Stroud will be presenting in person. There will be a "Meet and Greet the Speaker" dinner before the meeting.

For more information and to register for the meeting go to the PAS Event Calendar and Registration Site: [PAS Event Calendar and Registration Site](#)

It is important to register for events. In case of event changes or cancellations you will be notified.

May 2023 Lecture - Shock Effects in Meteorites

Our wonderful guest speaker on May 4th at PVCC or through Zoom for those who could not make it, was the amazing **Tom Sharp** with his tale of *"Shock Effects in Meteorites."*

If you missed this presentation, pop on over to the location on the PASaz.org website and sneak a look at the recording here: <https://www.pasaz.org/lecture-series-videos>. This was a presentation you should not have missed. So, go view it now! ***



September 2023 Speaker - Jaquiline Do

Our guest speaker for the hybrid lecture (PVCC classroom and via Zoom) event on September 7th, is the project leader for the "Nationwide Eclipse Ballooning Project" team from ASU.

Jacqueline's presentation covered the conception, the grant writing, the planning, and the scientific design of this interesting project. One key element of the presentation was the risk management and mitigation planning required.



The planned balloon launch is later this month and will gather data from the Annular Solar Eclipse.

Classroom video problems prevented the recording of this lecture, but Jacquelin's PowerPoint presentation is available for download from our <https://www.pasaz.org> website.

JULY 20, 2023 FREE TELESCOPE WORKSHOP



It was a super-hot day! Phoenix reached a record high for this summer of 119F degrees, and the low for the night before had reached a record high, only cooling down over night to 97F degrees. It was miserable for temperature. However, the Telescope Workshop was a great success.

Students for this event were: Charlie, Mike and Cait. The PAS teachers were Mason Klenklen, Roger Anzini, Calvin Vance, Richard Sauerbrun, Joe Sandy, William and Terri Finch.

For two hours the three students received input from the teachers and had their questions answered and it was a very successful and fun event. Everyone seemed to be pleased with the information they got.

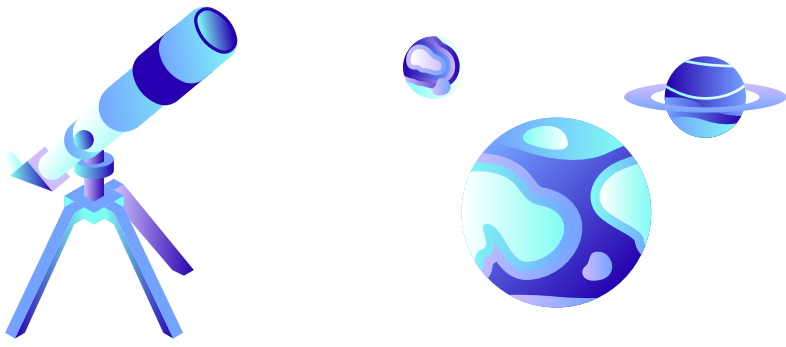
Many thanks to PVCC for lending us the use of room G-147 for this event. The whole event was indoors, and it was "Telescope Workshop 101" which is designed to help those who want to know what telescope to purchase. Many thanks to the PAS Telescope Teachers. We're looking forward to the next telescope workshops in September.

September Outreach Events

The PAS outreach program had a busy month in September with three successful events. Due to cloudy conditions, Telescope Workshop 201 was combined with Telescope Workshop 101 at PVCC. Each workshop had two students that were taught by Joe Sandy, Stu Brackney, Mason Klenklen, and Richard Sauerbrun.

John and Diane Donnelly (on the left with Joe) were interested in a telescope purchase, and Joe and Stu helped them decide.





Jamie and Charles Kennedy brought their Celestron 114EQ which had never worked for them. Mason and Richard helped them properly set up the EQ mount, realign the finder scope and properly focus the scope. Here is Jamie enjoying “First Light” when she excitedly said, “I can see the craters on the moon”.



PAS also participated in the International Astronomy Day by holding a public star party at the Apache Wash Trailhead Park in North Phoenix. Our first star party of the fall season was very well attended by both PAS members and the public. We had a grand time enjoying clear skies, and cool (mild) temperatures. The parking lot in our area of the park was almost full as 40+ people with 11 telescopes enjoyed an evening of star gazing. Mason Klenklen, Ted Blank, and Don Boyd provided very interesting demonstrations of their astronomical skills.

Here is a quote from members Terry and Marcia Lenhardt following the event:

“We had a great time last night, astronomically, esthetically, and socially! Thanks to everyone who went to so much trouble to share gear, expertise, and friendship with us newcomers. We look forward to future events like this one and to other PAS activities.”





PAS Awards Ceremony May 2023



Prior to the awards ceremony, held at PVCC (Paradise Valley Community College) a group of PAS members gathered for a mini pizza party. Many thanks to Jenny Hall, the PAS Liaison at PVCC who invited PAS to use the Teachers' Lounge for our pizza party.

Our first honoree to receive awards was Jenny Hall, our PAS/PVCC liaison, for her constant help arranging the current contract for PAS to use PVCC classrooms for our events and always available to assist with these matters.

Attending this event were twenty PAS members: Ted Blank and his wife Peggy, Don Boyd, Stu Brackney, Paul Facuna, William and Terri Finch, Damon Finell and his wife, Mason Klenklen, Matthew Ota, Andrew Rodzilsky, Joe Sandy, Richard Sauerbrun, Patrick Searls, Alex and Diane Vrenios, Cheryl White, Bruce Wurst, and Ed Wurst.

President Stu and Terri Finch handed out the awards as a team. The awards for those who weren't present at this ceremony were announced as a group by Stu.

In addition to various certificates to members for all they do to help PAS, our organization participates in the NSN (Nigh Sky Network). The NSN provides awards to active Astronomy Clubs around the world. To stay active in NSN, PAS must post a minimum number of events on to the NSN site , and then after the events happen, do a survey that shares the demographics of that event. This year's pin is themed with the International Space Station:. Eighteen PAS Members received this pin for attending and helping out at public events held in 2019, and eight were present on May 18th at this Awards Ceremony. The winners were Bruce Wurst, William Finch, Don Boyd, Ted Blank, Paul Facuna, Cheryl White, Terri Finch, and Stu Brackney.

The ceremony closed with awards to those who help make our PAsTimes Newsletter. All four members of the Newsletter production team were present to receive this award: Don Boyd (Editor), Terri Finch (Assistant Editor), Cheryl White (Proofer), and Alex Vrenios (Proofer).

Stu Brackney in closing noted, "tonight's pizza party and awards ceremony was organized by the ever-efficient retired Event Manager Terri Finch. This year we had a lot of awards to deliver due to COVID, as we presented awards to our volunteers for over four years of activities. PAS is headed in the right direction because our membership cares about our mission, sharing and learning about our cosmos."

My Week at the Grand Canyon Star Party by Mark Johnston

I took my night and solar scopes to the Grand Canyon for the Grand Canyon Star Party June 10-15. There were about 50 telescopes set up behind the visitor center. Each evening guests would attend a lecture by a guest astronomer in the visitor center, then walk out to the field and see the telescopes. There was a small EAA area where I set up. I showed color live images of M27, M57, M101 with its supernova, M51, Venus, NGC4565, M13, M22, M8, M20, the Stargate Cluster, and Albireo.

During the day I would set up my solar scope at the rim and show the Sun for a couple of hours. In total I had 2,459 guests. It was a great experience. The skies were dark (SQM 21.6) and while we did battle with a few clouds on some days, it was generally clear, especially well after the sun had set.

If you haven't been to a GCSP you should plan to check it out in future years. It's run the week of the new Moon every June on both rims. Volunteers get in free and have access to free camping if you register soon enough. The next event is the first week of June 2024.



Night Sky Training Session - May 13, 2023

We wish to thank you all for attending the Night Sky Training Session on May 13th at Apache Wash Trailhead Park. It was a very successful event. We didn't get as far as I would have wanted to, but we did a lot. And we learned a lot. Plus, we enjoyed each other's company, which hasn't happened in a long time due to Covid.

Many thanks go to our wonderful teachers: Richard Sauerbrun, "Plate Solving," Richard Pipkin, "Filters," Joe Sandy, "Affordable Scope," Calvin Vance, "Binoculars," Terri Finch, "Planisphere and Sky Tour," and a surprise appearance by Mark Johnston who shared with the class how his EAA set up works.

In attendance were these PAS Members: Sara Rogers, Cheryl White, Paul Facuna, Don Boyd, Stu Brackney, Terri and William Finch.

We are all looking forward to the next NSTS!

Two new Appointments by Stu Brackney, President

I am happy to report to the general membership of PAS (Phoenix Astronomical Society) that two men have stepped forward to fill two especially important leadership vacancies. After being interviewed by the Board of Directors, and with their approval, I have appointed both to their respective positions.

Secretary: Mason Klenklen is our new secretary, filling a vacancy of over six months. Since the age of four this man has been searching the heavens with telescopes. Do not be fooled, he has many other interests such as robotics and cycling. A graduate of Missouri University of Science and Technology, this young man is enthusiastic about his new volunteer job and PAS.

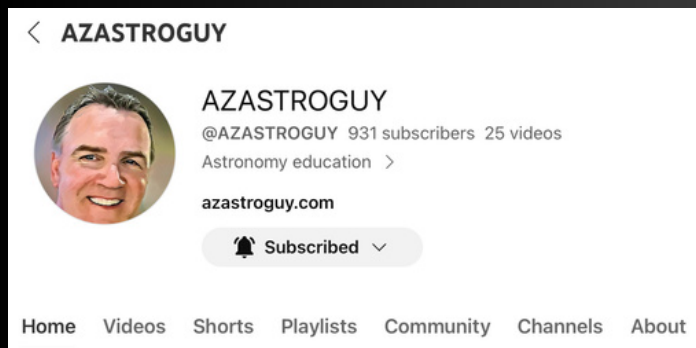
Star Tours Manager: Andrew Stone is filling the position of Star Tours Manager, previously occupied by Terri Finch. Married with a two-year-old daughter, this man knows our Arizona sky. When he was twelve his dad and he, from their back yard in Buxton, Maine, observed the Hale-Bopp comet. From that day, he knew he had found a passion. Deep-sky objects steal a lot of his time when he is not working or now volunteering for PAS.

Please welcome both men as they help steer PAS into the future, and of course the cosmos.

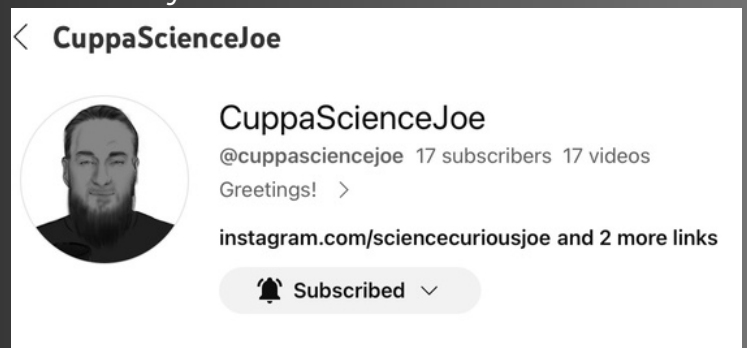
PAS Members on YouTube

Two of our PAS members have recently launched YouTube channels focused on astronomy education.

Mark Johnston



Joe Sandy



Congratulations to both Mark and Joe for the successful launch of their YouTube channels.

We suggest you visit and SUBSCRIBE to both. Not only will you learn something more about astronomy, but you will also have FUN!

PAS Call to Arms aka Star Tours by Andrew Stone, Star Tours Manager

PAS has some very exciting events coming up for the 2023/2024 season. We have a lot of opportunities to share our love of the night sky with the public. This includes not only our local youth, and fellow membership, but also private events.

Amateur astronomy is a unique science where you yourself can have a major impact by simply walking out to your backyard with your favorite telescope. There are countless subjects you can study from binary stars, to quasars, to galaxy collisions. You could discover the next comet that many will observe in awe. This is your opportunity to get involved in a fantastic outreach program and earn a little extra income for your efforts. You never know if an image through your telescope will spark the next Brian Cox or Neil Degrasse Tyson of our future.

If you have a telescope, a passion for astronomy, and would like to share your knowledge of the night sky with others, please reach out to startours@pasaz.org for more details.

7 Telescope Targets for October

Each month we feature 7 good targets for small telescopes that should be visible in the evening

31 Cygni – Also known as Omicron Cygni - easy orange, blue, and white triple star



Delta Cygni – one side of the Northern Cross. Tight double star of uneven magnitudes

NGC7000 North America nebula – large emission nebula near Deneb. Try with binoculars from a darker site away from the city (see next page)

NGC6992 Eastern Veil nebula – beautiful supernova remnant, opposite from Delta Cygni on other side of the constellation (see next page)

NGC6960 Western Veil nebula – also known as the Witch's broom, part of the same supernova complex

Mu Cephei Garnet star Red supergiant star in Cepheus. If it were in our solar system all planets up to Jupiter would be inside it



Delta Cepheus Beautiful blue/yellow binary. One of the closest Cepheid variable stars to Earth

Member Astrophotography

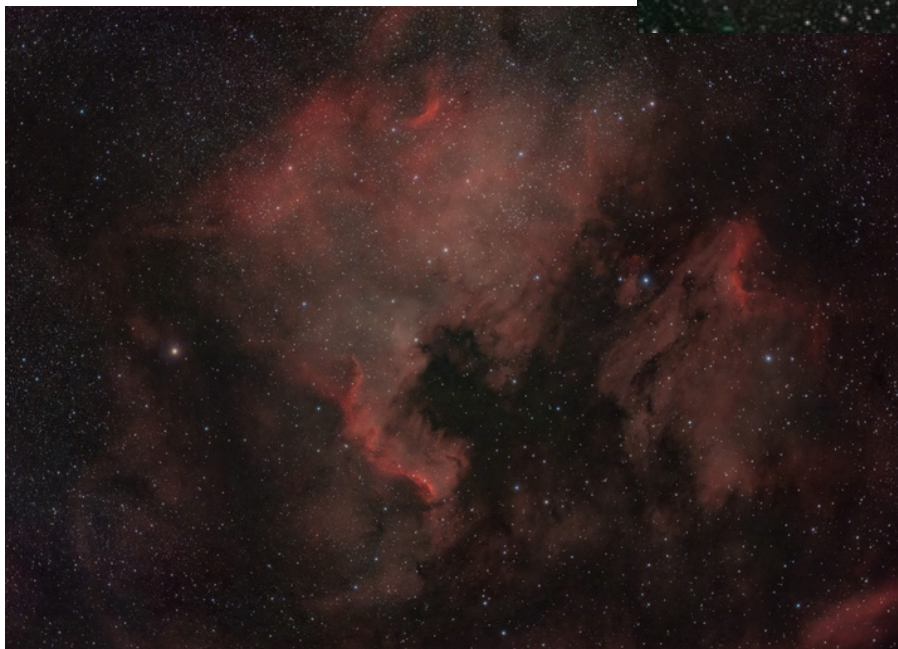


Moon Over Picket post

Composite Image by
Mark Johnston

Veil Nebula

Richard Sauerbrun



North American & Pelican Nebulas

Kris Mlak

Nightfall Star Party Invitation from Riverside Astronomy Club

We are sending this invitation out to clubs and groups near Southern California asking you to spread the word about Nightfall Star Party and Imaging Conference in Borrego Springs on November 9-12.

The Star Party includes observing in the very dark skies of Borrego Springs, California, at an RV/Hotel resort with hot tubs, pools, a restaurant and bar, presentations on visual astronomy and (let's mention again) very dark skies. The Imaging Conference includes both free and paid workshops on various aspects of astroimaging, and a field trip to the metal statues spread around the local desert for night time imaging. Imagers will be especially interested in the paid (\$90) workshop with one of the recognized leaders in the field, Ron Brecher. That requires a separate registration.

Information about registration for an RV space or hotel room, or for the Brecher workshop is available at nightfallstarparty.com.

Note that there is space in the Brecher workshop, but it is filling. There is very limited space remaining in the hotel/RV park (reservations at 805-691-8086 or 805-295-8505). They will have a "wait list" and you can find other places to stay in town, including a state park half a mile away.

2024 Solar Eclipse Star Party



Texas Star Party, Inc. (TSP) is hosting a TSP total solar eclipse and star party event to view the 2024 total solar eclipse. TSP has selected Latham Springs Camp and Retreat Center, Aquilla, Texas, as its event location. Latham Springs is located just west of the centerline with the duration of totality being 4 minutes and 23.5 seconds.

TSP's event venue location is 25 miles southwest of Hillsboro, Texas (ranked the 7th best location to view the solar eclipse by Astronomy magazine).

Booking an event pass will give participants five days and four nights (4/5-4/9/2024) of accommodations and meals (RV and Campers - meals are not included but meal plans are available for purchase) to prepare for and view the solar eclipse, as well as enjoy a casual star party deep in the heart of Texas!

TSP has numerous volunteer opportunities available, and participating volunteers will have added benefits provided by TSP that the nonvolunteering attendee will not receive with their "Event Pass" purchase.

For additional information regarding TSP's eclipse and star party offering and volunteer opportunities, please visit our website by searching on Texas Star Party.

Helpful Astronomy Websites by Mark Johnston

The following websites are great free resources to help you plan and enjoy your astronomy adventures

Astromart - astromart.com/ - This is one of the top two sites for buying and selling used astronomy gear, product reviews, and forums where you can discuss any aspect of astronomy with other enthusiasts. A small fee is required.

Astrometry.net - <https://nova.astrometry.net/> - This site will take any astronomy image you send it (galaxy, starfield, nebula, etc) and then tell you what it is and where it is in the sky.

Astronomy Tools - astronomy.tools/calculators/field_of_view/ - This site has a lot of capabilities but I use it primarily to figure out how a target (e.g. the Helix nebula) will look in my eyepiece or astronomy camera. You pick your scope, camera, eyepiece and target and the site does the rest.

Astrospheric - astrospheric.com/ - Probably the best short term astronomy weather forecasting tool, providing predictions of clouds, transparency and seeing. (available on the PAS website)

Clear Sky Charts - www.cleardarksky.com/ - Excellent source of astronomy seeing conditions forecast. Also a great tool for finding observing sites with lower light pollution.

Cloudynights - www.cloudynights.com/ - This is one of the top two sites for buying and selling used astronomy gear, product reviews, and forums where you can discuss any aspect of astronomy with other enthusiasts. Free.

Dark site finder - darksitefinder.com/map/ - Great website for finding a dark observing location.

Heavens above - heavens-above.com/ - Top site for predicting naked eye observations of satellites. See when the ISS is visible in your neighborhood!

Jupiter transits - shallowsky.com/jupiter/ - For anyone with a small telescope, this is a great site. You can find out when the Great Red Spot and Jupiter's satellite transits are visible.

Solar Dynamic Observatory (SDO) - <https://sdo.gsfc.nasa.gov/data/> - Find out how the Sun looks right now, at various wavelengths. If you own a solar telescope, this site coupled with Astrospheric is all you need to plan fabulous solar observing!

Telescopius - telescopius.com/ - This site is very helpful in planning an observing evening. It will tell you when any particular target is rising and setting and when is the best time to observe it. This allows you to sequence your observing in a planned manner.