



SPACE

St. Petersburg Astronomy Club **Examiner**

January 2026

Editor - Guy Earle

The St. Petersburg Astronomy Club has been the center of family astronomy in the Tampa Bay Area since 1927. Our 364 adult members are dedicated to promoting and sharing the wonders and science of astronomy. We host a dark-sky star party each New Moon at Withlacoochee River Park, along with local star parties, telescope-making workshops, science lectures, astronomy lectures, educational outreach sessions and much more.

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Messier 78, Ghost Nebula, Ha + LRGB captured from Chiefland Astro Ranch, FL with a Celestron EdgeHD 9.25 on a CEM70 and a Player One Poseidon-m CCD camera, by Jamie Kenas



February Preview

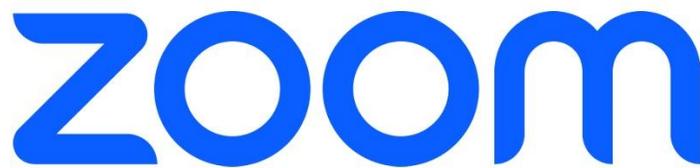
Next month, We'll be recapping OBS 2026, with our intrepid field reporter, Kelly Anderson, doing his star party recap video.

This month we had our big, annual Orange Blossom Special star party, and we're all still recovering. It's traditional that we don't have a general meeting the same month as OBS, so we'll get back together via Zoom next month.

Remember, as we go into 2026, our monthly general meetings will be held via Zoom, with a get-together every quarter. For example, March will be our Spring Picnic at WRP and we'll meet at another location in May, whether that will be more of a general meeting in a conference hall or more social like back in August, that's still TBA.



This photo was taken just prior to the raffle prize drawing and is about ½ of the participants at OBS, some were still at their campsites and some did not show for the event. We had quite a few unclaimed packets and have talked to a few people who weren't able to make it unfortunately.



January General Meeting

There is no general meeting this month due to the Orange Blossom Special. Our next general meeting will be via Zoom on February 26th.

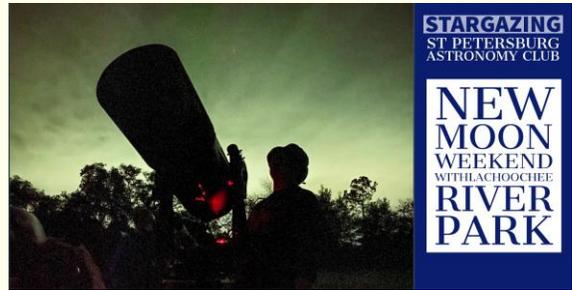


Join Zoom Meeting [HERE](#)

Meeting ID: 834 8435 3027

Passcode: 092807

The club's **New Moon observing weekend** is on February 13th and 14th at [Withlacoochee River Park](#) east of Dade City.



New and Renewed SPAC Members

We would like to welcome Candiss Pitts, Kristy & Tony Prioli, Hal Edwards & Trinka Tansley, Daniel Keller, Maricelis Pagan & Jose Fuentes, Ashia Uchhana, David & Dana Hervig, Edward & Genevieve Chesky, Neal Ekengren, Gary & Judy Opalewski, Heather Alford & Cbass McIntosh, Robert Woycheese, Ron & Rebecca Moore, Wes & Betsy Turner, Bennet & Rose Cecil, and Dave Beebe to our family of members.

Examiner Staff

Editor	Guy Earle
Space News	Steve Robbins
Field Reporter	Kelly Anderson
Mirror Lab	Ralph Craig
Image Gallery	Peter McLean
Mirror Lab	Mike Davis
	Allen Maroney

President's Message

Greeting and a burr January to everyone!

Last week we held our 33rd annual Orange Blossom Special star party at Withlacoochee River Park in Pasco County.

It was a blast and cold! Saturday ended up the best night of the weekend with moderate temperatures and steady clear skies until just after midnight. We had lots of door prizes and a great keynote speaker, retired NASA astronaut Nicole Stott. The winner of the OBS Dwarf 3 raffle scope was Luke Galloway, who frequently attends the Boyd Hill outreach. Congrats, Luke!

The board also held a brief meeting and set the dates for OBS 2027 at March 3rd-7th. I had announced Jan 6-10 on Friday, but we elected to change the dates due to conflict with the holiday season.

We will have a recap of OBS at our next general meeting via ZOOM in February. Until then, stay warm and clear skies.

Clear Skies,

Mike Partain



December General Meeting Recap

This truly feels like ages ago at this point, as I started to reflect on what the last meeting was and it was, in fact, our holiday party. Anyone else feel like this was last year? Oh, wait...

We had a great time and SPAC member generosity was on full display. The hall was decorated and festive music was playing, and everyone was stuffed by the time we called it done.

This was our last time at SPC as we move to online meetings with quarterly get-togethers. What we'll do for the 2027 holiday party is still TBA but one way or another we'll find a way or a place to get together and ring in the new year.



Solving the Seestar s50 cord wrap

I saw a post recently on the [Seestar group Facebook page](#) that caught my attention. Anyone who owns a Seestar s50 knows that if you leave it plugged in via the USB-C cable, it will invariably strangle itself over the course of the night, especially when it goes to shut down.

My Dwarf 3 cleverly has the USB-C connect in the base, which does not move compared to the telescope itself, while the Dwarf Mini does have the charging port on the main body, however, I have never had it wrap when using my 10ft. USB cable. I don't know the Seestar s30, so I can't make a judgement on that, but anyone who owns an s50 has likely bought or 3D printed a lithium battery holder to keep it going throughout the night, since the internal battery lasts about 5 or six hours of active shooting. I was going to use this at OBS, but the extreme cold naturally zaps any battery's energy, so when using the dew heater function on the s50, even the lithium battery isn't enough to keep it charged all night long.

This is where Tom Goss' invention caught my eye, called "Painless Power," as it solves the cord-wrap issue. It allows the s50 to rotate freely, plugged in, so you can run the dew heater all night long and never lose a charge. I have not purchased a unit yet myself, so I cannot provide feedback on it yet, but next month I plan on ordering one as I'm tired of the ongoing issue when imaging here and at the WRP. I asked Tom to send an article with information on pricing:





Painless Power™ is a purpose-built slip ring charging mount designed specifically for Seestar telescopes, delivering continuous, reliable power while completely eliminating cable wrap. A multi-point slip ring with gold-plated contacts transfers power from the stationary supply side to the rotating telescope side, allowing true infinite rotation during tracking and imaging. The integrated slip ring is designed for durability and environmental resilience, featuring:

- Wide operating temperature range: $-20\text{ }^{\circ}\text{C}$ to $60\text{ }^{\circ}\text{C}$ ($-4\text{ }^{\circ}\text{F}$ to $140\text{ }^{\circ}\text{F}$)
- Protection class: IP53, offering protection against dust ingress and water spray
- Working life: $\geq 5,000,000$ revolutions, ensuring long-term reliability for continuous tracking applications

The system is offered in two flexible configurations.

AC Power Version



The AC configuration accepts a wide-range input of AC 100–240 V, 50/60 Hz (0.6 A) and supplies power through a commercially available USB fast-charging cube mounted on the rotating side. Charger output supports DC 5 V / 3.0 A, 9 V / 2.0 A, and 12 V / 1.5 A, providing ample power.

DC Power Version



The DC configuration accepts 12–24 V DC input and delivers power via a dual-port USB automotive-style charging adapter mounted on the scope side. Total output is 36 W, featuring a USB-C PD 3.0 port rated at 20 W and a USB-A QC 3.0 port rated at 18 W, providing flexible, high-efficiency charging options for all Seestar models.

Both configurations safely support all Seestar models, including the new S30 Pro.

Proven real-world performance

Demonstrated to maintain 100% battery charge on the Seestar S50, even during long imaging sessions with anti-dew heating enabled.

By using readily available USB charging adapters on the output side, Painless Power™ is inherently user-serviceable—if a charger ever fails, it can be replaced easily without tools or proprietary parts.

The structural core is machined from **6061 aluminum** and secured with stainless steel hardware, creating a rigid, durable mounting platform that maintains alignment and supports accurate tracking over long imaging sessions.

Painless Power™ delivers uninterrupted power, unrestricted movement, and long-term reliability—engineered specifically for Seestar owners who demand hassle-free operation.

www.painlesspower.com

Eliminating Cable Wrap: A New Power Solution for Seestar Telescopes

Astronomy enthusiasts who use automated telescopes often encounter a surprisingly common problem: power cables that twist, snag, or limit motion during long imaging sessions. A new mounting system called **Painless Power™** aims to eliminate that issue entirely by allowing telescopes to rotate freely while remaining continuously powered.

Developed specifically for Seestar telescopes, the Painless Power™ system integrates a rotary electrical slip ring directly into the telescope mount. This allows power to be transferred from a stationary base to the rotating telescope without the need for external cables that can tangle or fatigue over time. The result is uninterrupted movement during tracking and imaging.

At the core of the system is a multi-point slip ring with gold-plated contacts, designed for long-term reliability. The slip ring is rated for more than **5 million revolutions**, operates across a wide temperature range from **-20 °C to 60 °C (-4 °F to 140 °F)**, and carries an **IP53 protection rating**, offering resistance to dust and water spray. These specifications make the slip ring part of the system reliable for as long as you own it.

Two power configurations are offered. The AC version accepts standard household power from **100 to 240 volts at 50 or 60 hertz** and uses a commercially available USB fast-charging cube mounted on the rotating side of the system. This charger provides multiple output voltages (known as PD charging), including **5 volts at 3 amps, 9 volts at 2 amps, and 12 volts at 1.5 amps**, both versions support **ALL** Seestar models.

A second configuration supports **12 to 24 volts DC input**, using a dual-port automotive-style USB charger. This version delivers a combined output of **36 watts**, with a **USB-C Power Delivery (PD) port rated at 20 watts** and a **USB-A Quick Charge (QC) port rated at 18 watts**, offering flexibility for different charging needs.

An important design choice is the use of readily available USB charging adapters on the telescope side. Rather than relying on proprietary electronics, the system allows users to easily replace the readily available charger if one fails, making the mount user-serviceable and reducing long-term maintenance concerns.

Structurally, the mount is built around a machined **6061 aluminum center shaft**, secured with stainless steel hardware with standard 3/8-16 threading. This rigid construction maintains alignment and stability, helping ensure accurate tracking during long exposure imaging.

By addressing cable management, power reliability, and long-term durability in a single integrated design, Painless Power™ offers a practical solution to a problem familiar to many telescope users. For Seestar owners, it represents a way to simplify setup and focus more on the night sky—and less on managing cords.

The Astronomical League: Master Outreach Award

by Gregory Shanos



GREG SHANOS

Greg Shanos became a member of the St Petersburg Astronomy Club back in October 1990 when he relocated from Warwick, Rhode Island to Sarasota, Florida with his wife Denise. Since that time Greg has been an active speaker presenting at least one lecture a year during the club's monthly meetings. Greg has also participated in several public outreach events at the Pinellas Science Center during the 1990's and early to mid-2000's. In 2001, Greg enrolled in the Solar System Ambassadors Program. This program funded by JPL/NASA works with motivated volunteers across the nation to communicate the excitement of astronomy and space exploration with people in their communities. Volunteers must perform at least four "events" per year. An event can be a public talk on an astronomical topic or NASA mission, virtual webinar presentation, hands-on STEM activity, a published article, as well as telescopic skywatching activities. [Solar System Ambassadors - NASA Science](#)

The St Petersburg Astronomy Club is a member of the Astronomical League which is an organization encompassing over 330 amateur astronomy clubs in the United States. The Astronomical League (AL) offers over 70 different observing programs ranging from beginner to advanced. Members earn awards by completing specific tasks within these programs culminating in a certificate and pin. Examples of AL observing programs focus on various objects such as Messier, Double Stars, Lunar, and Deep Sky targets. The Reflector is a quarterly publication sent to members via digital PDF as well as a hardcopy. [Home - Astronomical League](#)

Peter McLean is the current Astronomical League Correspondent for the St. Petersburg Astronomy Club. During the last Christmas party in December 2025, Peter encouraged me to complete one of the Astronomical League's observation programs. Since I have been documenting all my events in the Solar System Ambassadors online database, I decided to apply for the Astronomical League's Outreach Award. There are three levels to the Outreach Award; Basic, Stellar and Master. The Basic level requires five events lasting at least two hours each for a

certificate and lapel pin. The Stellar level requires an additional 50 hours to earn a participant certificate. The Master level requires a minimum of 100 hours culminating in a certificate and pin.

Since all my events are well documented in the Solar System Ambassador database, I simply went online and highlighted only those events that were outreach in nature. Each event was well documented as to Date, time, place, featured astronomical objects, and number of people that looked through the eyepiece of my telescope.

To date, I have clocked in 87 outreach events from Feb 22, 2002 through Dec 5, 2025 totaling 240.55 hours and reaching a total of 6,987 participants! I was awarded the Stellar and Masters level certificates and pin on January 6, 2026. (See figure 1).

My outreach events occurred locally in Tampa, St Petersburg, Bradenton and Sarasota. Museums included Museum of Science and Industry (MOSI) in Tampa, the Pinellas Science Center in St. Petersburg and the Bishop Museum of Science and Nature in Bradenton. Parks included Robinson Preseve in Bradenton, Celery Fields Audubon Society and The Bay in Sarasota.

I used a Meade LX6 and a Meade 2080 8-inch clock-driven telescopes for these events. Typically, the moon as well as the planets were the featured astronomical objects. I used low power (50X) and a polarizing filter so that participants would view the entire surface of the moon comfortably through the eyepiece. For the planets, I used high power (143X) so that details on the disk of the planet would be visible. A few of the brighter deep sky objects such as the Orion nebula and the Andromeda Galaxy were also observed.

Some of my outreach events featured a meteorite display. (See figure 2) I have fifteen representative specimens including a Lunar and Martian meteorite. Participants also held an iron and stone meteorite in their hands. On occasion a 31-pound iron meteorite was also available.

I have also completed and received certificates and pins from several other astronomical league awards including the Insight Mission to Mars, Mars Observing Program, Parker Solar Probe, Solar System Observers Program, Meteor Club, Outreach Award, and Hubble 35th Anniversary Observing Challenge (see figure 3)

I encourage all SPAC members to check out the Astronomical Leagues Observing programs. Whether you are a beginner or seasoned amateur astronomer, there is an observing program tailored to you. I guarantee it will be an incredibly rewarding experience. [Observing Program Division - Astronomical League](#)

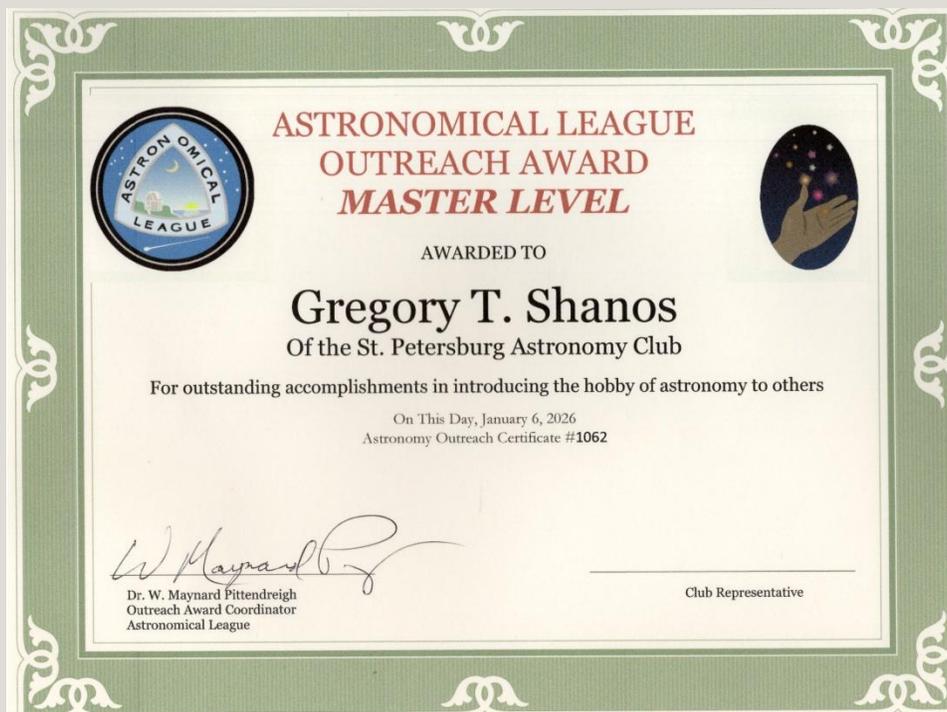


Figure I: Astronomical League Award Certificates presented upon completion of the activity.



Figure 2: The author with his outreach meteorite display at the Bishop Museum of Science and Nature in Bradenton, Florida on October 19, 2019.



Figure 3: Astronomical League pins from previous Awards

SPAC New Moon Weekend

Field Report

December 19th-21st, 2025

By Intrepid Field Reporter

We were able to celebrate our last New Moon Weekend of the year with fairly comfortable temperatures (for Winter) and with fairly clear skies. Thursday began with the usual list of early arrivers, Joe Canzoneri, Ron



KELLY ANDERSON

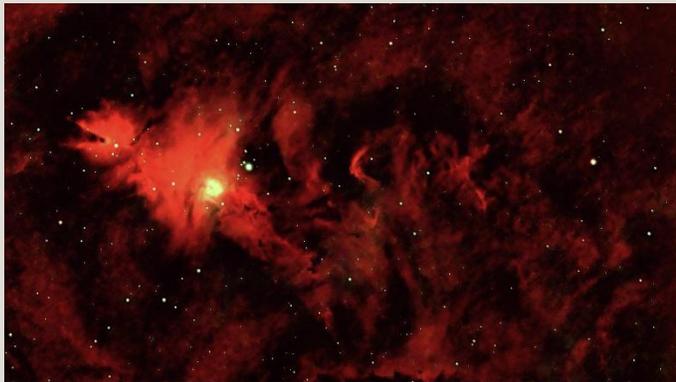


Figure 1 Cone Nebula – Joe Canzoneri

Collins, and Bob & Rita Mizell. Temperatures climbed to the upper 70s and a couple of hours after sunset all the daytime fair weather cumulus had gone somewhere else. Seeing was diminished somewhat with high-level moisture, made evident with nearly horizon-to-horizon contrails. But after this past Summer we'll take what we get and enjoy the cosmos as it reveals itself.

Mid-Friday revealed the arrival of your Intrepid Field Reporter, followed closely by Tim Harris and Peter McLean in their respective behemoths. A little later we welcomed Mike Reese, Bob Stelmock, Les Davis, Craig McDougal, and Christian Rubach.

It warmed up a bit that afternoon all the way up to the low 80s but a steady, light breeze helped to keep it comfy. Scattered clouds started early but steadily improved throughout the day and into the night. By 8:00 pm we had clear skies and good seeing for most of the night until our little village was encased in a radiation fog up to about 10 feet or so. Kinda pretty. I kept hearing Don McLean's famous song "Vincent" in my head. For those who may not be familiar with the tune, it begins with the lilting lyrics "Starry, starry night."

In my imagination the tune seemed to be perfectly appropriate to the occasion. It made the night seem to be just a little bit magical. It happens to those of us who gaze at the stars late into the night and dream.

Those of us who emerged from our portable shelters early the next morning were given another treat of a beautifully frosted field. Temperatures in the mid-30s helped to restore us to full consciousness.

Later that morning we welcomed Jim Rutenbeck, Ed Sanborn, and Ronda & Rick Kyler. Also landing were Tom & Chris Spano in their more modest-sized but still impressive motor home. All through the

day clouds gradually increased until, shortly after sunset we were challenged with mostly covered skies and dynamically evolving sucker holes. But at least the temperature moderated to a more reasonable 50 degrees at dawn. Also the clouds had morphed into a high-level combination of stratus and cirrus which helped moderate the sunshine just a bit.

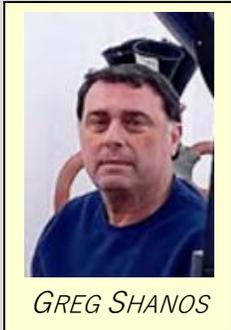
I'm looking forward to seeing everyone at the Orange Blossom Special 2026, January 14 – 19. As usual, clear skies and comfortable weather are guaranteed.



Figure 2 Flame & Horsehead Nebulae – Kelly Anderson

A Series of Shadow Transits of Titan in 2025

by Gregory T. Shanos



GREG SHANOS

Saturn's rings were edge-on in 2025 which afforded the opportunity for shadow transits of various moons. I have imagined shadow transits of Dione, Rhea, Tethys which were difficult to see and rather unimpressive. An online article from Sky & Telescope indicated that a series of 11 shadow transits would occur from April 30, 2025 to Oct 6, 2025. See <https://skyandtelescope.org/astronomy-news/observing-news/titan-shadow-transit-season-underway/> These shadow transits were visible only from the Western Hemisphere. This event is unique because another Shadow Transit of Titan would not occur until the 2040's! Since Titan's orbital period is 15 days 22 hours a shadow transit occurred on Saturn's disk every 16 days. I learned in the first week of May about this series of Titan shadow transits. Therefore, I was unaware of the first event on April 30th. Upon further inspection, this transit occurred during the daytime from my location, and the shadow was directly on the ring plane and virtually unobservable. Therefore, I did not really miss this event.

Once I became aware of the ten remaining Transits of Titan, I made it my mission to image ALL of them. This series of shadow transits will surely be historic since there are 11 in a row each 16 days apart. The odds of that happening are astronomical- pun intended! Figure 1 shows the first set of six shadow transits from May 15th through August 3, 2025, taken under adverse observing conditions. All were taken under cloud cover which thickened and thinned as the night progressed. Most planetary imagers would not have attempted to observe on an evening with such poor transparency. Fortunately, the seeing was above average through the cloud cover which resulted in a higher resolution image.

The second set of images are from August 19th through Oct 6, 2025. The September 4th event was quite memorable since it rained at 11:30pm local time on September 3rd. By 1:00am on Sept 4th, it was still completely overcast. Then by 1:30am local time the clouds began to clear, and I was able to align my GO TO scope on Polaris and Fomalhaut. I started imaging Saturn at 1:52 am local time. The weather conditions kept improving throughout the night with clear, steady seeing with only a slight haze and humidity. Then at 4:07 am the weather took a turn for the worst with a few passing cloud banks. By 4:22 am it was completely overcast and remained that way through sunrise. I was able to image approximately 90% of the transit. I only lost 37 minutes from the beginning and 37 minutes from the end. The other moon that appears in the image is Tethys. If you look closely just above the rings, you can see a shadow transit of Tethys just about to start. Had it not clouded over, I would have continued

imaging this transit once the shadow of Titan left the disk. Overall, a very successful imaging session. The months June 1st thru Nov 30th are Hurricane season in Florida. In 2025 we were fortunate not to have had any tropical storms or hurricanes hit Florida.

All the Saturn images were taken using a Vernonscope 1.25x Barlow and a ZWO ASI 462MM monochrome camera, therefore, the image scale remained constant. See figure 3 You can clearly see that the disk of Saturn is increasing in angular diameter and thus appears larger with each imaging run. The angular diameter of Saturn increased from 16.4" on May 15, 2025 to 19.4" on October 6, 2025. The September 20th transit occurred one day prior to Saturn's opposition. Note how the shadow of Titan began just above the ring plane on May 15th and rose higher on the disk of Saturn with each passing transit. On Sept 20th, the moon Titan was just below its shadow which was impressive. The final shadow transit occurred on Oct 6th were the shadow "grazed" the disk of Saturn. The Shadow Transits from August 19th through Oct 6th were under clear skies and I was able to record each event from beginning to end. I therefore was able to make animations of these transits. All these images were taken after midnight and into the early morning hours prior to sunrise. I had to stay awake all night as to not miss these events. This sacrifice was well worth the loss of sleep.

In conclusion, the mission was complete. I was able to successfully image ALL ten remaining shadow transits of Titan and submitted my results to the Association of Lunar and Planetary Observers (ALPO) <https://www.alpo-astronomy.org/> Planetary Virtual Observatory and Laboratory (PVOL) <http://pvol2.ehu.eus/pvol2/images/by?uid=gshanos> and to hstjupitergroups.io for archive and research. I await the next shadow transit of Titan in 2040.

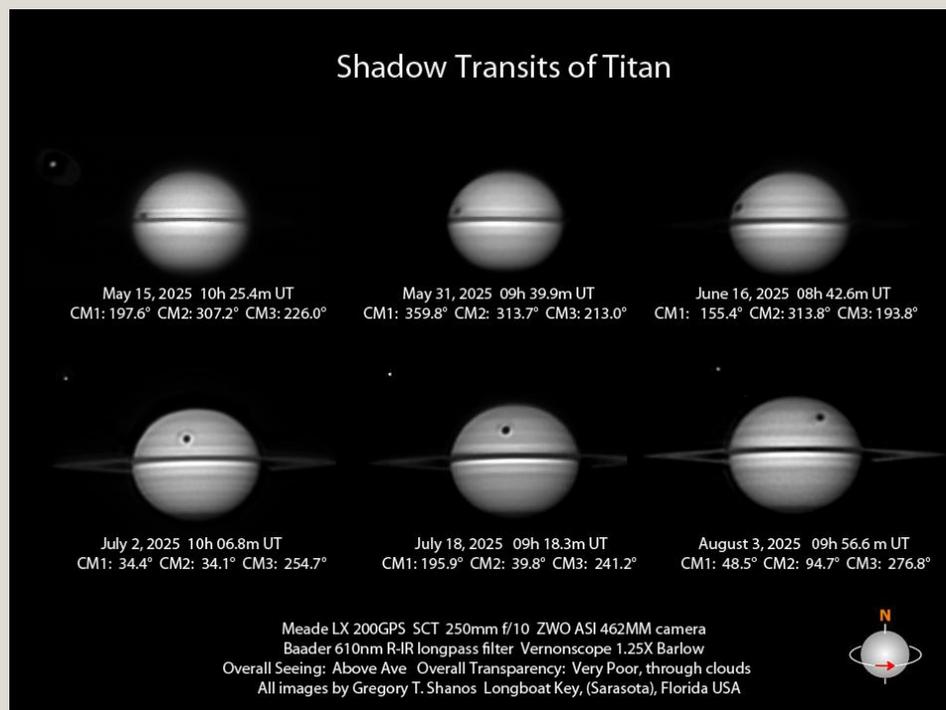


Figure 1: A series of Shadow Transits of Titan. All images were taken in the infrared which greatly reduces atmospheric scintillation. The angular diameter of Saturn increased from 16.4" on May 15, 2025 to 18.7" on August 3, 2025. The shadow of Titan began just above the ring plane on May 15th and rose higher on the disk of Saturn with each successive transit. The "halo" around the shadow is an artifact of processing. CM1 refers to the central meridian longitude at the equator, CM2 refers to the N and S temperate regions and CM3 is the internal magnetic field rotation. Central meridian longitudes were obtained using WinJupos.

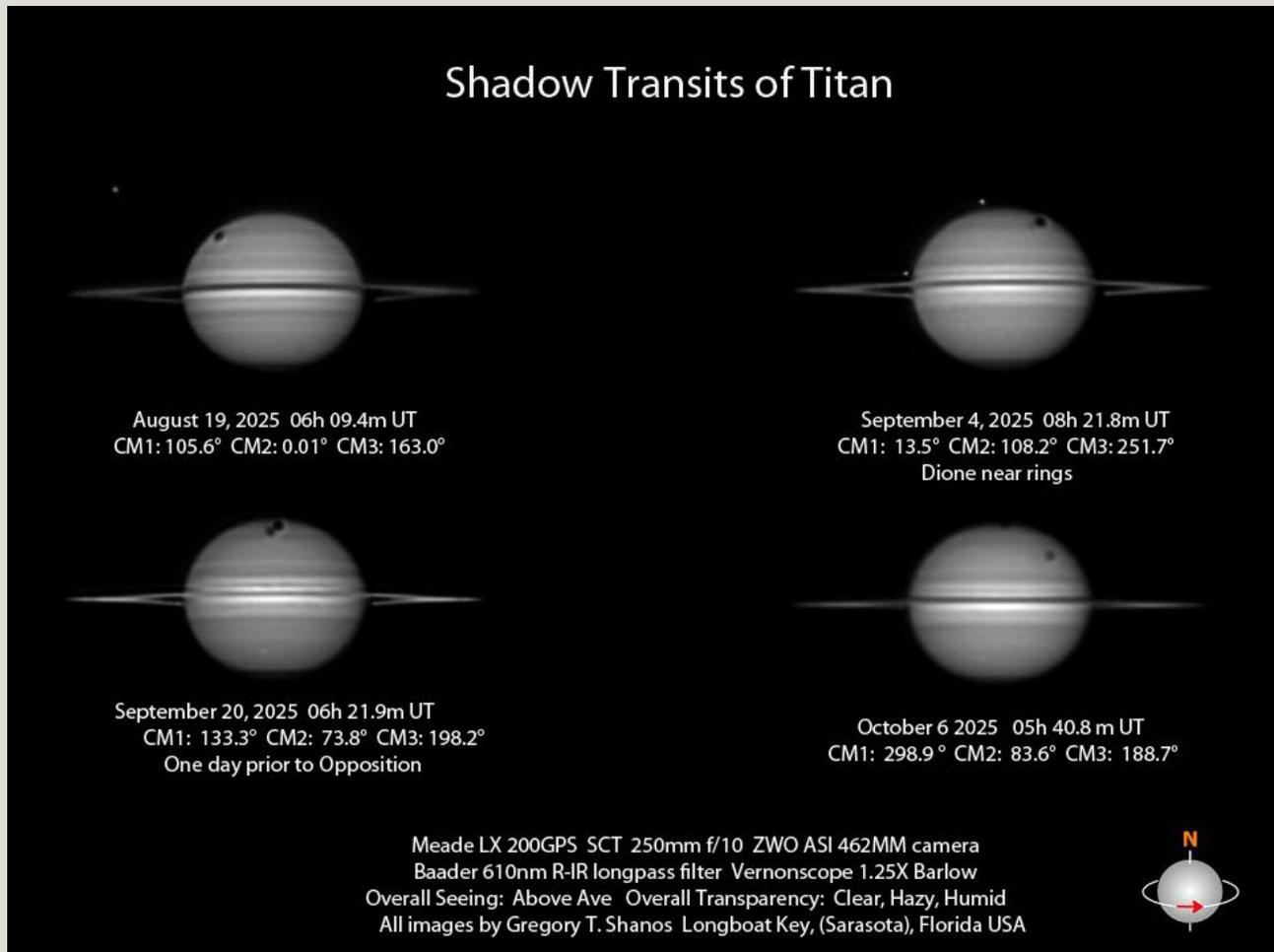


Figure 2: The series continues. The angular diameter of Saturn increased from 19.1" on August 19, 2025 to 19.4" on October 6, 2025. On Sept 20th, the moon Titan was just below its shadow with the final shadow transit occurring on Oct 6th were the shadow "grazed" the disk of Saturn.



Figure 3: The author with his imaging setup. A Meade LX200GPS 10-inch 2500mm at f/10 with a ZWO ASI 462MM monochrome camera, Vernonscope 1.25X Barlow, and Baader 610nm R-IR longpass filter. An MSI GF65 i7 six-core 12-thread upgraded to 40GB of RAM gaming computer greatly reduces video processing time. Firecapture 2.7.0.15 captured the 75 second SER videos which were aligned & stacked with Autostakkert 4.0.13, sharpened and with Registax 6.1.0.8. Slight deconvolution with AstralImage 5.2.3.0 and additional processing in Photoshop CS4.

Software utilized:

Firecapture: <https://www.Firecapture.de> FREE
- to acquire the uncompressed AVI or SER video

OR

Sharpcap: <https://www.sharpcap.co.uk/> FREE Pro version \$18/year
- to acquire the uncompressed AVI or SER video

Autostakkert 4: <https://www.autostakkert.com/wp/download> FREE
- aligns & stacks each individual frame from the uncompressed video

Registax 6: <https://www.astronomie.be/registax/> FREE
- wavelets for initial sharpening of aligned & stacked video.

Astralmage: <https://astraimage.com> costs \$79.95 one time
- deconvolution (use version 5.2.3.0 no AI)

GIMP: <https://www.gimp.org/downloads> FREE
alternative to Photoshop for post-processing

Photoshop CS4: <https://www.adobe.com/photoshop> Subscription based
- high pass filter for additional sharpening & final touches

WinJupos: <https://jupos.org/gh/download.htm>
- simulations & derotation

Astronomical League Correspondent



PETER McLEAN

The St. Petersburg Astronomy Club (SPAC) renewed its affiliation with the Astronomical League as a society member in August 2025. This relationship provides all SPAC members with automatic membership in the Astronomical League, a subscription to the League's periodical Newsletter "The Reflector", and access to all League observing programs. In December, several SPAC members completed the requirements of the Astronomical League's Outreach Program and were formally recognized for their achievements with a Certificate and Lapel Pin.

Gregory Shanos – Outreach Stellar and Master Level

Greg Simpson – Outreach Basic and Stellar

Liz Simpson – Outreach Basic and Stellar

Peter McLean – Outreach Basic

This recognition is a formal acknowledgment by both the Astro League and SPAC for the valuable time and effort contributed toward sharing knowledge and enthusiasm about astronomy with interested individuals. Engaging in Outreach programs offers significant rewards, as the knowledge imparted through these efforts can have long-term impacts. Several additional Outreach awards are currently under consideration, and there are numerous members actively participating who equally

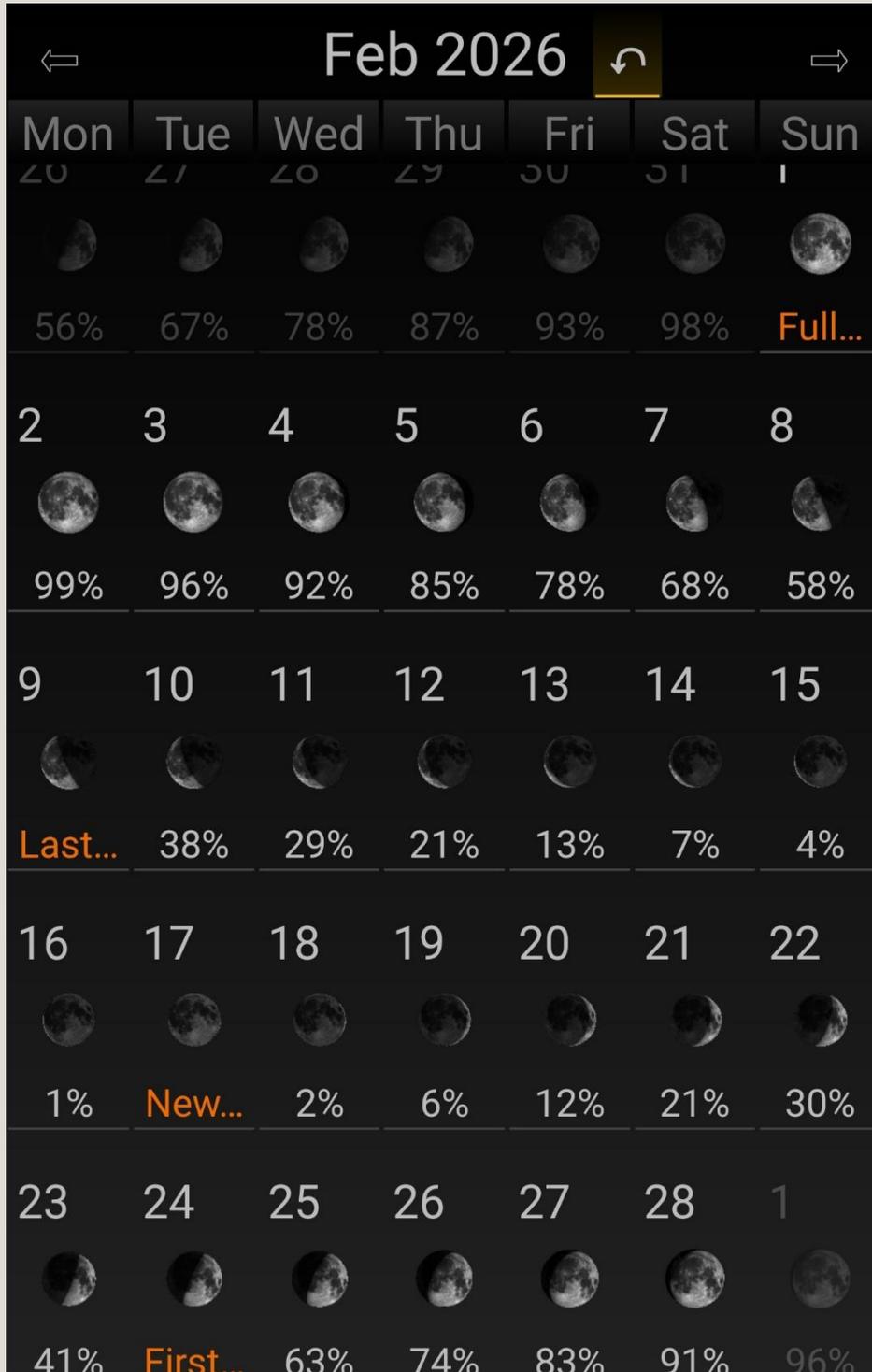
merit recognition. Those interested in participating are encouraged to begin their involvement and may contact Peter McLean, the SPAC society Astro League Correspondent, via email for further information and guidance on completing one of the many available programs.



Greg and Liz Simpson Astro League Basic Lapel Pins and Stellar Outreach Awards

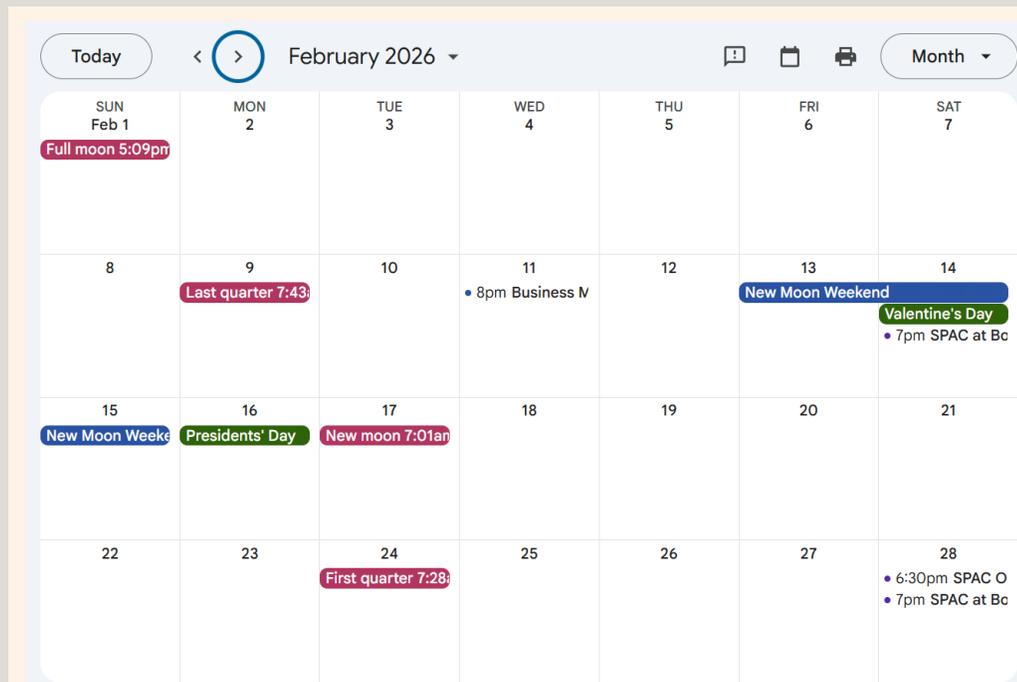
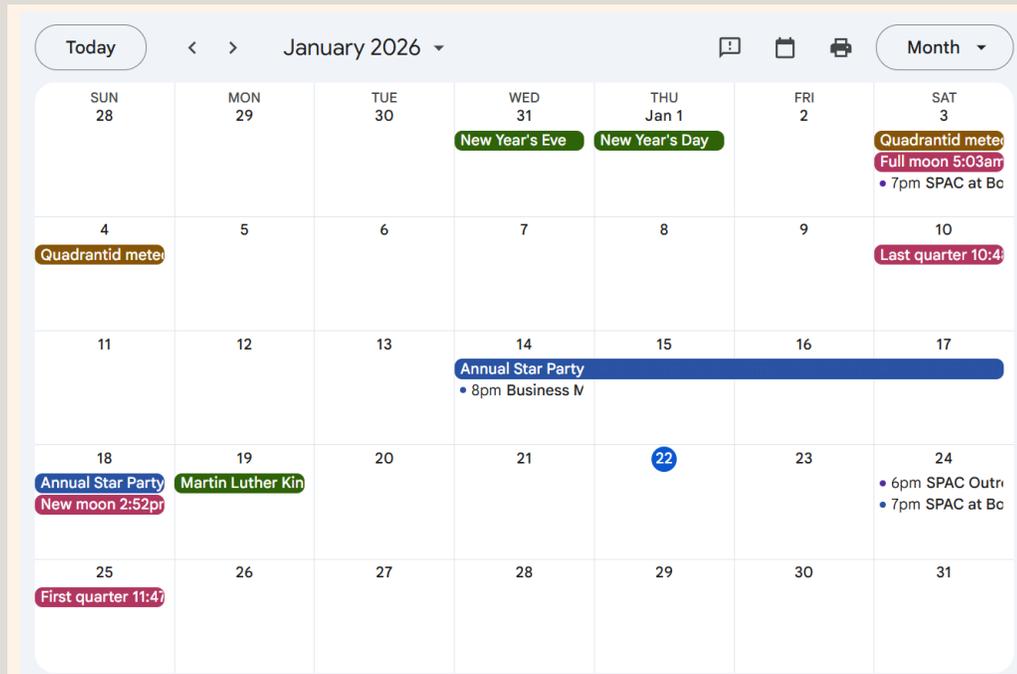
February Lunar Calendar

calendar credit to Moon Phase Calendar app



Outreach calendar

*****Here's a quick glimpse of [SPAC calendar events](#) for December and January*****



SPAC Image Gallery

★ Here are some excellent astrophotography photos from our fellow SPAC membership, shot from various locations and divided into categories similar to our annual star party imaging competition. If you would like to share your work, I encourage you to [email Peter](#) your image or share them on our SPAC Facebook page.



Deep Space (Galaxies, Star Clusters, Comets)



*Messier 51 and Companions
by Allen Maroney
from Pinellas Park, FL*

*Messier 81 Bode's and Messier 82 Cigar
Galaxies
by Peter McLean
from Dade City, FL*



Nebula

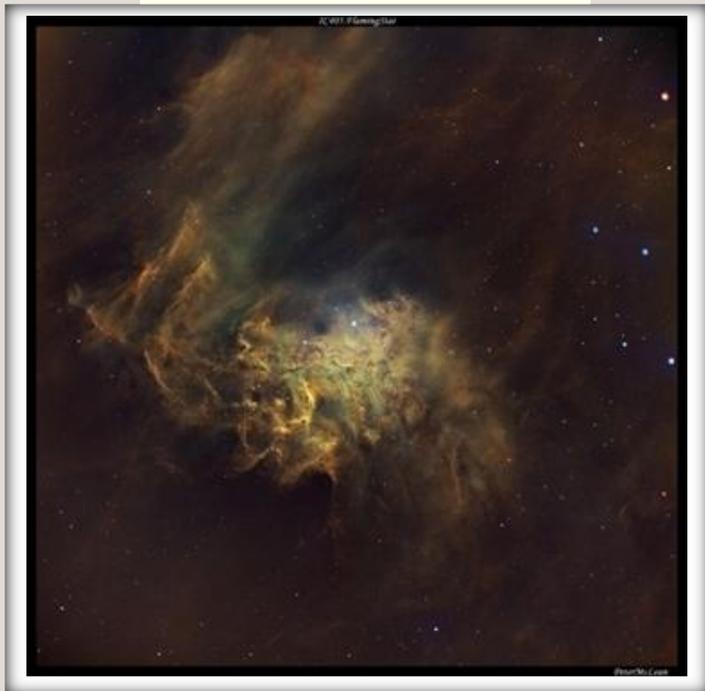
*NGC2244 Rosette Nebula
by Brad Ashbrook
from Homosassa, FL*



*Helix Nebula
by Janusz Kwasny
from Palm Harbor, FL*



*Flaming Star Nebula
by Peter McLean
from Willow Oak, FL*



*Orion Region
by Yervant Parnagian
from Hudson, FL*



Planetary-Lunar-Solar



Jupiter
by Paul Smith
from Oldsmar, FL

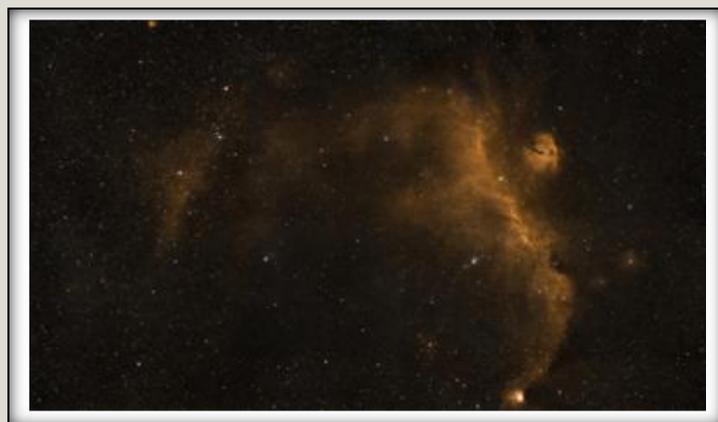


Saturn
by Guy Earle
from Riverview, FL

Smart Telescope



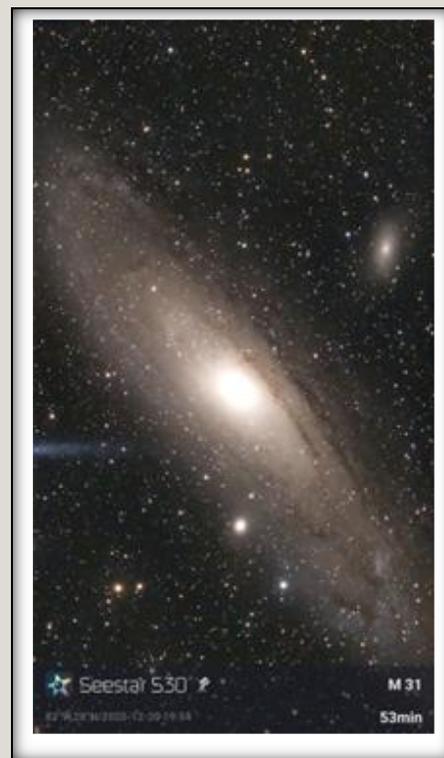
*by Jonathon Stewart
from St. Petersburg, FL*



*Above
Dwarf III Image
Seagull Nebula*

*Below
Messier 35
Dwarf Mini*

*By Guy Earle
From Riverview,
FL*



*by Bob Stelmock
from Port Richey, FL*

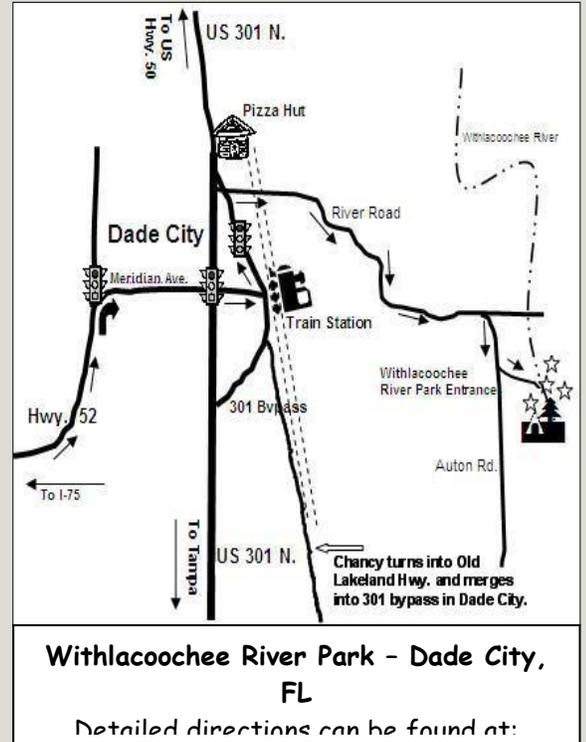
SPAC Business Meeting 

Our next business meeting is **Wed., Feb. 11th at 8:00 PM** via conference call; details upon request. All interested members are invited to attend. All club business decisions are made at the business meeting so as not to encumber the general meeting.

Officers & Directors

President	Mike Partain
Vice Pres.	Guy Earle
Secretary	Peter McLean
Treasurer	Christian Rubach
Dir.-at-Large	Allen Maroney
Dir.-at-Large	Steven Gaber
Dir.-at-Large	Brad Perryman
SPACE Editor	Guy Earle
Public Relations	John O'Neill
Membership Chair	Peter McLean
Mirror Lab Chair	Paul McNabb
Outreach Chair	Steven Gaber
Star Party Chair	Mike Partain
Librarian	Ralph Craig
Club Webmaster	Allen Maroney
Dark Sky Chair	OPEN

Click on the name to send email



Withlacoochee New Moon Weekends

There's no need for reservations. However, the park closes at sundown, so you will need to arrive before then. The park rangers will give you the gate-code once you're inside the park. Please do not call for the gate code as they are not allowed to give it out over the phone.



Please join us! All astronomy enthusiasts are welcome. You do not need to be a club member to attend. Please refer to our [Club Calendar](#) for details and scheduled dates. There is a small fee to the park for using electricity, reduced even further for club members, which you can pay on our club website [HERE](#).

SPAC Recognition of Patrons & Benefactors

Heather Alford & Cbass McIntosh	Benefactor		
Steven Balke	Benefactor	Peter & Jaclynn Dimmit	Patron
Walter Brinkman	Benefactor	Guy & Kelly Earle	Patron
Bennet & Rose Cecil	Benefactor	Joseph & Pamela Faubion	Patron
Jack & Roni Fritz	Benefactor	Darla & Peter Flynn	Patron
Matt Hughes & Manuel Ordonez	Benefactor	Steve & Cindy Fredlund	Patron
Valerie Hyman	Benefactor	Steve Gaber & Karen Sell	Patron
Craig & Roberta Jameson	Benefactor	Richard & Mary Garner	Patron
Jamie Kenas	Benefactor	Timothy & Mary Ann Harris	Patron
David Knowlton	Benefactor	Michael Haworth & Melanie Otte	Patron
Laura & Roy Lanier	Benefactor	Charlie & Linda Hoffman	Patron
Gregory Legas	Benefactor	Eric Houghton	Patron
Tod Markin	Benefactor	Joe & Shirley Litton	Patron
Kelly McGrew	Benefactor	Dave & Mary MacKenzie	Patron
Kevin & Karen Mulford	Benefactor	Steve & Jeri Maiaroto	Patron
David & Kathryn Musser	Benefactor	Allen Maroney & Tracee Elliott	Patron
Gary & Judy Opalewski	Benefactor	Joseph & Susan Miller	Patron
Mike Rozycki	Benefactor	Chris Noto	Patron
Christian & Wendy Rubach	Benefactor	Stephen Oros	Patron
Doug and Teri Sliman	Benefactor	Yervant & Jo-Ann Parnagian	Patron
Garrison & Ruth Smith	Benefactor	Michael & Carli Partain	Patron
Michael Strand	Benefactor	Brad & Lisa Perryman	Patron
Jim & Robin Sumner	Benefactor	Alan Polansky	Patron
Aleksandar Trajkovic	Benefactor	Thomas & Leslie Salinas	Patron
Andrew & Bonnie Watts	Benefactor	Tom Spano	Patron
Johnny White	Benefactor	Jonathan Stewart	Patron
*****		Tom & Michelle Sweet	Patron
Bill & Norma Amthor	Patron	Skip & Kim Walker	Patron
Kelly & Natalie Anderson	Patron	Richard White	Patron
Brad & Jamie Ashbrook	Patron	Shawn Wilson	Patron
Bruce & Donna Berger	Patron	Elizabeth Wood	Patron
Michael Callahan	Patron	Pete Zapadka & Amy Johns	Patron
Ralph & Christine Craig	Patron		
Glynis Dilaire	Patron		



St. Petersburg Astronomy Club Membership Form

Membership in St. Petersburg Astronomy Club, Inc. (SPAC) is open to anyone, regardless of age, who is interested in astronomy. Benefits of membership include a monthly subscription to the SPAC Examiner newsletter, reduced camping rates and use of the club's bunkhouse at our dark sky site at Withlacoochee River Park, the ability to serve on the SPAC board and voting privileges. Dues are considered donations and are non-refundable. Membership options are available as listed below.

You are now able to choose how you wish to renew your membership:

Preferred On-line Website Option: New instructions as our website has been updated.

Go to https://www.stpeteastronomyclub.org/Sign_In.php on the SPAC website where you can view and update your membership profile, provide payment, and print your membership card.

Adult 1: _____ Adult 2: _____

Street: _____

City, State, Zip: _____

Home Phone: _____ Cell Phone: _____

Email Address: _____

Number of Children under 18: _____

Memberships:

Single: \$ 30.00/YR. Includes one adult, minor children, the "SPACE" newsletter, and all the rights and privileges of membership.

Family: \$ 35.00/YR. Includes two adults, minor children and the above rights and privileges.

Patron: \$ 50.00/YR. A Patron member is entitled to the above rights and privileges.

Benefactor: \$100.00/YR. A Benefactor member is entitled to the above rights and privileges.

Student: FREE. SPAC offers free membership to full time high school and college students.

Expected date of graduation: _____

Total Submitted: \$ _____

Your SPAC Membership Card is required for reduced fees at the campground.