



SPACE

St. Petersburg Astronomy Club **Examiner**

September 2024

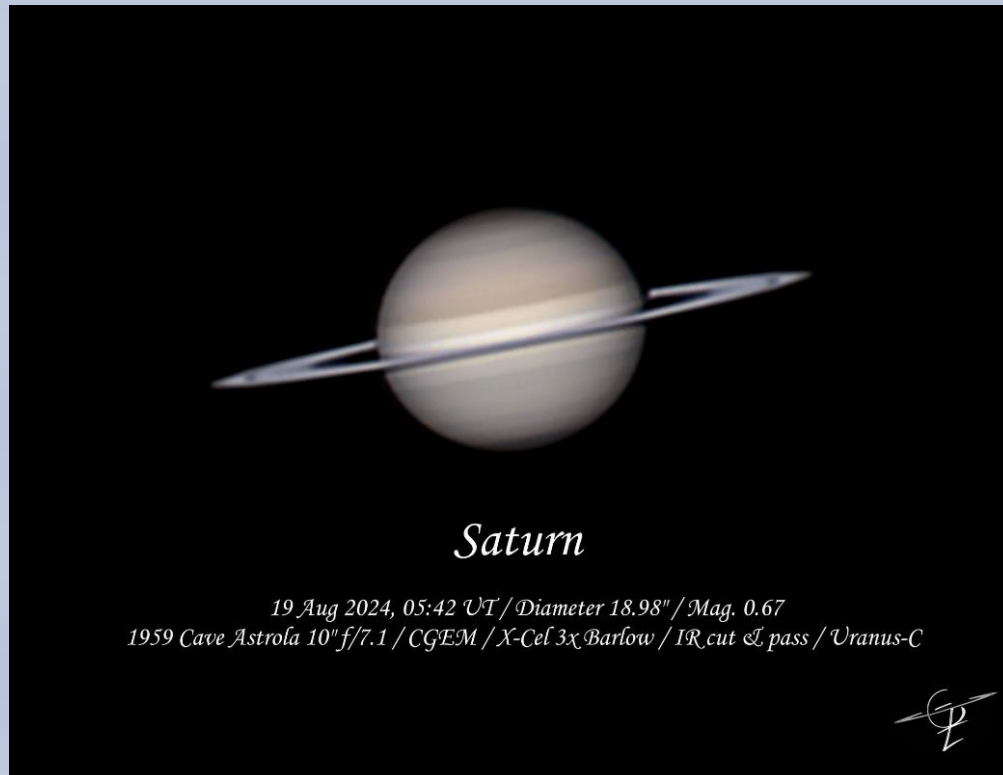
Editor – Guy Earle

The St. Petersburg Astronomy Club has been the center of family astronomy in the Tampa Bay Area since 1927. Our 366 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.

Inside this Issue:

Oct. Examiner preview	2
General meeting info.	2-3
President's Message	4
Recognizing Ron Wayman	5
SPAC Outreach	6
Aug.-Sept. New Moon WRP	7-9
SPAC Officer Elections	9
August meeting in review	10
A few OBS thoughts	11
Lunar Calendar	12-13
Space Exploration News	13-14
SPAC Image Gallery	15-18
For Sale	19-21

Beautiful Saturn Image, Captured with the 10" Cave Astrola and Uranus-C Camera with X-Cel 3X Extender at Riverview, FL by Guy Earle



October Preview

We're back!

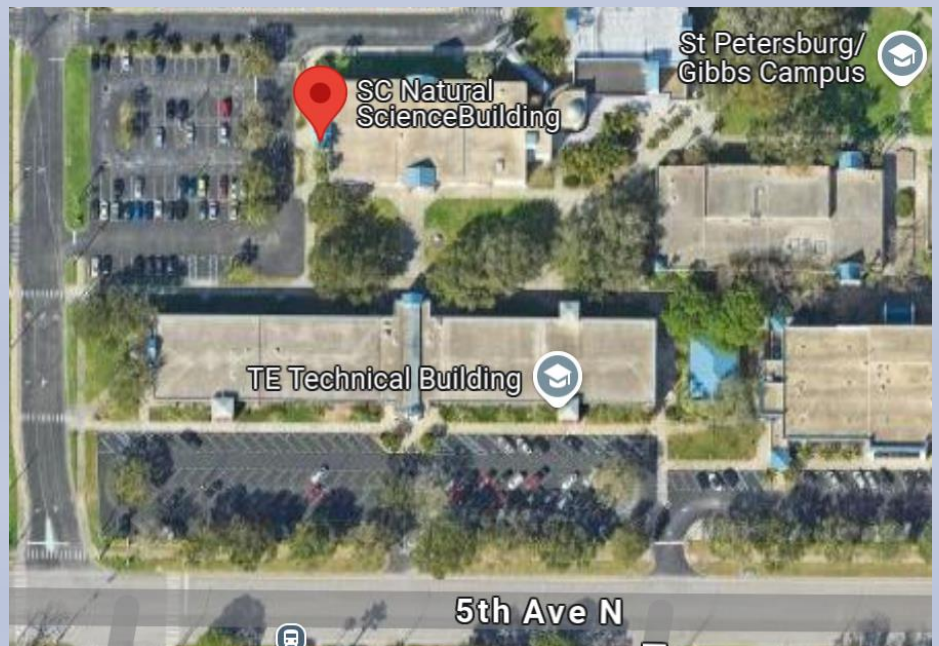
Also, at our **October General Meeting** we will be doing our SPAC annual club officer elections, which is our excuse to do a great pot luck dinner and socialize.

September General Meeting Synopsis

You all have heard my voice enough, for two months in a row, and likely need a break. A few months ago, we had a lively post-presentation discussion over a variety of topics, and both Mike and I agreed that such a format itself could be a general meeting, allowing members to share things of interest, whether these are events, equipment, observing activities,

PLEASE NOTE

We're back to our original meeting location in the **Natural Science Building, 2nd floor**. The room was going through renovations the past few months, so hopefully all will be set for our return to the much bigger and better equipped classroom.

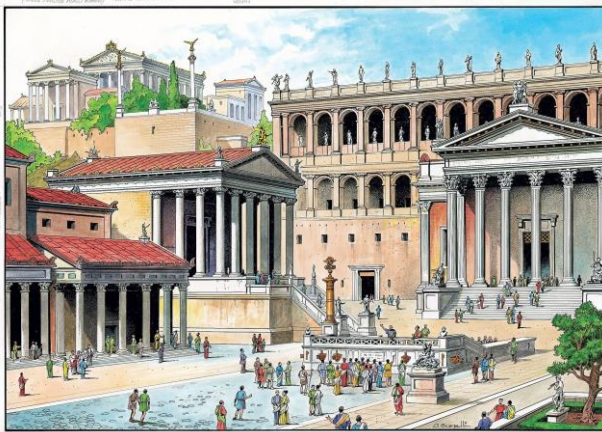


September General Meeting

This month's general meeting will take place on **Thursday, September 26th** at **7:30 PM**.

The meeting will be at **St. Petersburg College**, Gibbs Campus, 6605 5th Avenue North, **Natural Science Building, Classroom 236**, 2nd floor, and **also virtual**.

This month, the presentation will be an OPEN FORUM format with no designated speaker. This is to promote general questions, discussions and comradery with other members in an informal and friendly atmosphere.

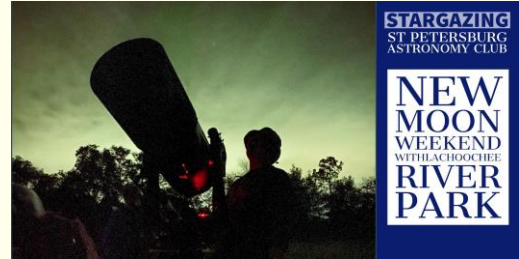


Join Zoom Meeting [HERE](#)

Meeting ID: 852 9687 2152

Passcode: 111992

The club's **New Moon observing weekend** will be by September 27th– 29th at [Withlacoochee River Park](#) east of Dade City.



New SPAC Members

We would like to welcome Shawn Blagg and Ben & Sage Thomas 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

Greetings,

Astronomy season is upon us and with it, the promise of cooler temperatures and less bugs. The registration for our annual Orange Blossom Special opens November 5th. It is a month later than normal so please save the date. Our returning attendees will have early registration the week before on October 29th. I am pleased to spread rumors from the mirror lab that we will have our annual raffle scope available for OBS. It will be a Dobsonian 12.5-inch with vintage Enterprise optics mirror. Unfortunately, this will be the last raffle scope constructed/refurbished by our mirror lab until we can solve the "home" problem for them.

Our club has long benefited from our home-grown mirror lab. The history of the mirror lab stretches will beyond my involvement in the club. The mirror lab has a wealth of institutional and practical knowledge that is unsurpassed by any other club here in Florida. We can optically test mirrors, refigure mirrors, manufacture mirrors, and build our own telescopes. Sadly, we lost the mirror lab's home base at the Science Center in 2019. I'd like to take the time to tip my hat to them as I graciously owe my 16-inch telescope to the lab crew and their dedication to our hobby. With that being said, we could use some help from our membership to help them find a home. If you or anyone you know has access to a building to re-home the mirror lab and its' equipment, please feel free to reach out to me. I would hate to see the hard earned skills and knowledge slip away from our club.

I would also like to request for any member of our club who is interested in assisting with public outreach to contact myself or Guy to volunteer. Starkey Park holds regular events in the Fall and Winter. We also have routine requests from schools and other parks throughout the year for members to bring their telescopes out and show the public. Our latest request was from Alafia River State Park. They intend to hold several viewing events at the park later this year and in 2025.

Our next general meeting will be in October which means pot luck dinner and club elections. I hope to see many of you there!

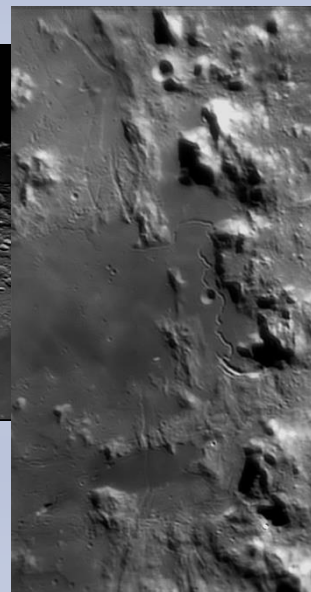


MIKE PARTAIN

SPAC recognizes its best, Ron Wayman

At a recent SPAC board meeting, the members decided to recognize long-time member, Ron Wayman and his wife, Darlene with a lifetime SPAC membership. Ron has always been a staple of New Moon weekends at Withlacoochee River Park, zipping around the field on his bicycle. He is a genuinely nice guy, always with a smile on his face and happy to talk to me about our cats and the importance of cat rescues. He is the epitome of kindness. However, Ron's had some health issues lately and hasn't been able to come to WRP, and his absence has been clearly felt. If there's any constant in a New Moon weekend, it's Ron and fellow member Joe Canzoneri on the field already by the time I or any other member rolls up with their gear.

If not at WRP, Ron has had a presence on our [Facebook page](#), sharing his photos of supernova in galaxies, the planets, or commenting on our love of the Apollo 15 landing site or the smiley face that Mare Crisium makes in the young Moon, both seen below. I hope this makes you smile, Ron. You deserve it.



SPAC Outreach



Sharing our love of the night sky is a big part of this hobby for many of us. There are a core group of SPAC volunteers who share their time and telescopes with the public, and I encourage our membership to donate a modicum of time towards outreach events. With that said, here are some events that are in process, both those that SPAC itself is hosting and also those that we share with other clubs and parks. The president and I are firm in our belief that sharing the night sky has no borders. I personally have seen and interacted with people in the past who had the attitude, “if you belong to this club you can’t belong to another.” That type of attitude can go where the Sun does not shine. I feel that cooperation with other clubs, other members, is key to not only club growth but a general happiness in this hobby. Enjoy the hobby wherever you please, talk, share, and show the public what we love about astronomy.

Here are some events coming up (you can also check our club calendar [HERE](#)):

- Friday, **October 4th** will be at **Gulfport** for sidewalk astronomy and Cracker Country on the 19th
- Saturday, **November 16th at Boyd Hill** in St. Petersburg, every two weeks through mid-February.
- Also on **November 16th will be Cats in Space IV** with **First Ladies Farm and Sanctuary** in Riverview, an awesome event held annually at the farm to promote animal rescue. SPAC volunteers show up to combine food, drink, and raffle fundraisers with views through the telescope. SPAC donates a telescope for their main raffle, the proceeds of which all go to the rescue. This year, we have an 8” Orion on a Sky View EQ Pro mount. The raffle is open to anyone (the event itself just sold out of tickets on Wednesday the 11th—for a November event!), and you can find the scope and place a bid [HERE](#).
- The **Pasco Astronomy group** brings their telescopes, and any of the public are invited to do so as well, to **Starky Park** from 6-8. Their first event will be **Saturday, December 21st**.
- Saturday, **January 4th at Alafia River State Park** east of Riverview. This is the beginning of a new partnership with the park, where SPAC used as a dark sky site in the early 2000’s. This first event will only be for those staying at the campground that night, but in the future we will be expanding it to the general public. There will be a few other outreach events before the summer of 2025.

SPAC New Moon Weekend
Field Report
August 30th – Sept 1st, 2024

By Intrepid Field Reporter

The late August/early September New Moon Weekend was (*quelle surprise!*) another hot and stormy one but with an eerily quiet hurricane season thus far, especially for one widely forecast to be a record busy one. But I ain't complainin'!

Daytimes tended to be challenging, weather-wise, but calmed down to become fairly comfortable after sunset. Clouds continued well into the wee hours but nonetheless gave us some opportunities to witness astronomical wonders. Did I mention there were mosquitoes?

Thursday saw the arrivals of Rich Tobin, Joe Canzoneri, and Bob & Rita Mizell. Also joining our little group was Alicia Tomiszewski for her first time braving the mosquitoes and stormy weather and other challenges of our beloved dark site. She brought her new Celestron 6" SCT sitting atop an AVX computer-controlled mount ... what a great choice for a first telescope! Because it was first light for her new rig naturally something had to go wrong. We discovered on Friday that her declination cable had gone south ... a simple fix.

Thursday night mostly cleared close to midnight and stayed that way 'til Friday afternoon, when, shortly after my arrival, the heavens opened up along with a few nasty gusts. No casualties were reported, and we had widely scattered clouds with lots of sucker holes after sunset. Clouds gradually worsened after about 2:00 o'clock Saturday morning, so we gave up and retired to our mobile tiny homes for the night.

Chris and Lisa Foster rounded out our little star village on Saturday. William Livaudis joined us for just the night. This made his second visit working on astro-imaging with his 3-inch refractor and iPhone. That night was pretty much a repeat of the previous, but we did get enough clear areas to sneak in some images, as you can see from the examples included below for your viewing pleasure.

Absent any tropical disturbances, our end of September New Moon will bless our observing site from the 27th to the 29th. Because our calendar system doesn't jibe well with the rest of the universe, we won't have a new moon weekend in October, but we will have our Membership Meeting at 7:30 on Thursday, the 24th. This will be our Election Night so THERE WILL BE FOOD! Bring a little something to share. The next New Moon will happen the following weekend beginning on November

1st. But ... Halloween happens the night before. What a great excuse to begin the New Moon Weekend a day early! Think about it. Clear skies and cool temperatures are guaranteed.

Key to Images below (not bad for a cloudy weekend, eh?):

Figure 1 – Crescent Nebula (NGC 6888) – Joe Canzoneri

Figure 2 – Western Veil Nebula (NGC 6960) – Joe Canzoneri

Figure 3 – Eagle Nebula (NGC 6611) - Kelly Anderson

Figure 4 – Elephant Trunk Nebula (IC 1396) – Joe Canzoneri

Figure 5 – Messier 15 (NGC 7078) - Kelly Anderson

Figure 6 – Triffid Nebula (NGC 6514) – Kelly Anderson

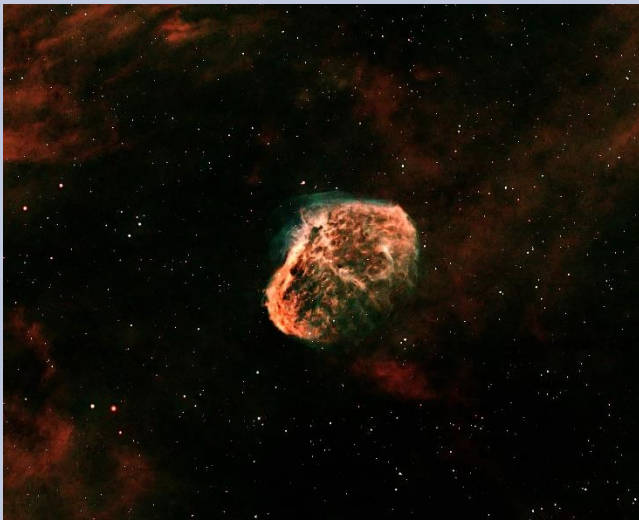


Figure
1

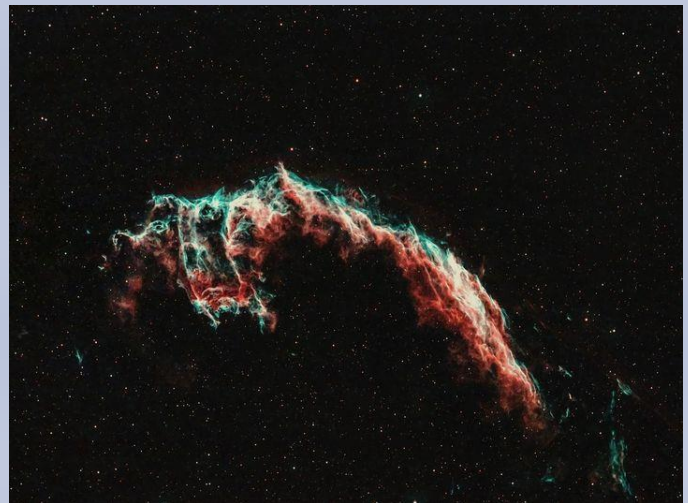


Figure
2



Figure
3



Figure
4



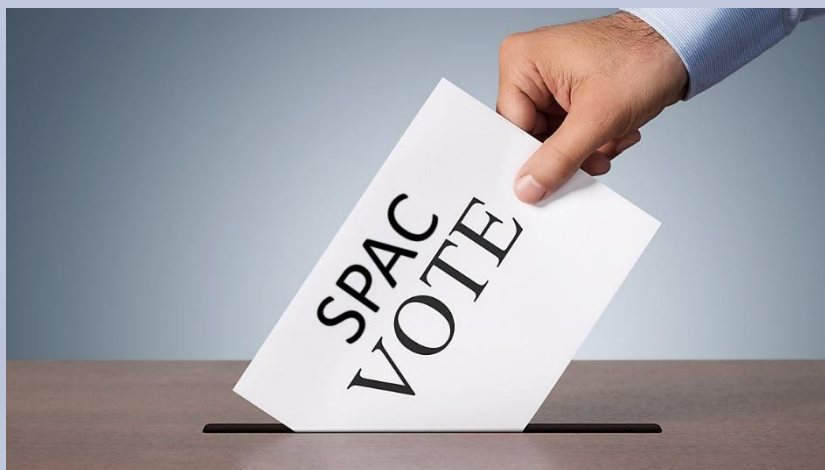
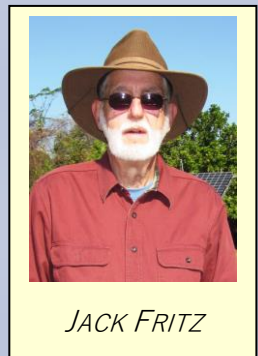
Figure
5



Figure
6

SPAC Officer Elections

We currently have a full slate of candidates for 2025. **Mike Partain for President, Guy Earle for Vice President, Peter McLean for Secretary, Christopher Rubach for Treasurer, and Allen Maroney for 2025 Director-At-Large.** However, we will accept nominations until October 1, 2024. Please email me at Jack.Fritz99@gmail.com if you would like to be considered for nomination



August General Meeting

I had great fun talking about the planets at our August meeting, and I hope the attendees enjoyed it. I was always aware of the planets but never really paid too much attention to our solar neighbors until I started imaging them in 2019. Imaging the planets creates an awareness of them that you, as a result, become fascinated by them. The more you learn, the more you want to know and the better you want your photos to be. It's a vicious but fun Sisyphus problem that I'm happy to tackle each season. Taking pictures is a sort of validation of what you're learning. But last month it was great fun talking about my love of the planets and imaging as we get into high gear for the observing season. The video and PDF of the August presentation is available, as they are each month, on the club website [HERE](#).



The screenshot shows a presentation slide on the left and a video call interface on the right. The slide is titled "Pluto" and contains the following text:

- Nearly due south at midnight in August
- Angular size, 0.06" to 0.11"
- Magnitude 15.4
- Take two photos a week apart, look for the dot that moved or...

Below the text is a small image of Pluto with a yellow arrow pointing down to it. The main part of the slide shows a star field with "PLUTO" labeled in yellow and a yellow arrow pointing to a small dot. At the bottom of the slide, it says "Seestar S50" and "Pluto 21min".

The video call interface on the right shows a grid of participants. The top participant is Michael Patten. Below him is Peter McLean. Below that is Paul. Below that is Kelly Anderson KEAS. Below that is Gregory Shanos. At the bottom right, there is a small icon of a person with a speech bubble.

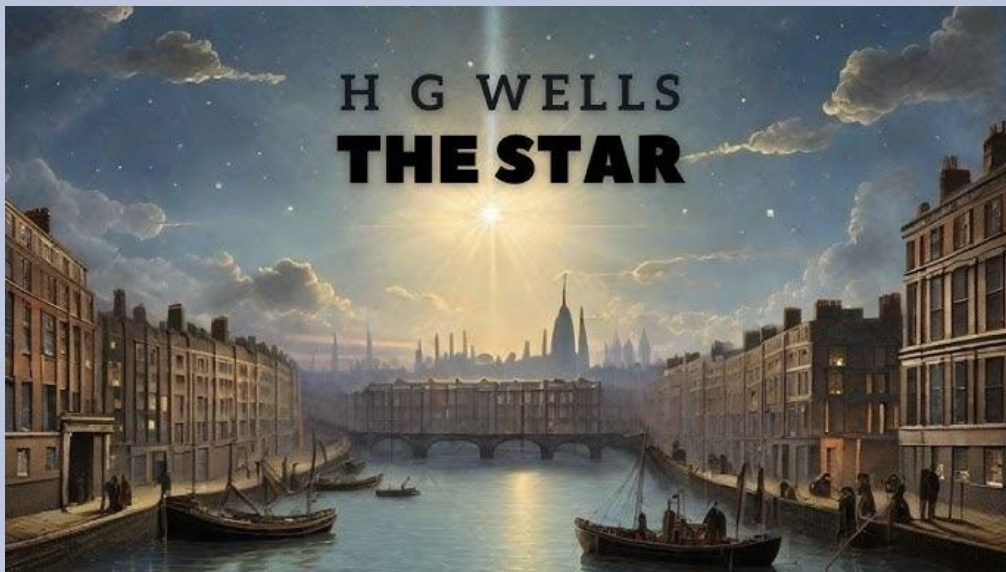
I'm hoping that we'll start getting some clear skies as we move towards the fall season and Jupiter and Mars' oppositions. That room we were using temporarily was a bit cramped, but thankfully we're going back to our larger, dual-screen room in the Natural Science building starting this month.

A few OBS thoughts...

We're always trying to improve our annual star party, the Orange Blossom Special, which has been a club tradition for over 30 years now. I think moving the swap meet to Friday and changing the format of the raffle prizes were a success, as well as the updated format to the imaging contest. All of these will continue to evolve, and for 2025 there's two other things that I wish to introduce.







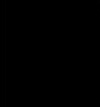


























I'm a huge fan of H.G. Wells, most especially his short story, *The Star*. Written in 1897, it's about the approach of a comet/star that appears in the solar system and wreaks havoc. Wells' writing is full of vivid imagery, both an insight to the late 1800's but also the newness of certain aspects of astronomy. After all, the planet Neptune was only mathematically discovered 51 years before he wrote *The Star*, as Neptune was confirmed visually afterwards. There's a particular audio rendition that I enjoy and wish to share at the annual star party. So, on the Friday night at OBS, as twilight is approaching, I'll invite anyone who wishes to grab a chair, bring their beverage of choice, and come sit in our observing area and listen to the 32-minute short story, looking up from time-to-time to see the stars that Wells talks about in *The Star*. If you would like to hear it before February, click [HERE](#).



The other thing I plan on doing, drawing inspiration from a post I saw online, is to create a group called the **Very Large Seestar Array**. I think it would be fun for Seestar owners at OBS to take an hour on one of the nights to image the same target. The data could be downloaded to my Dropbox and shared, so that one object would have a huge stack of combined Seestar images to process. We could start with one object and if it's a hit, expand it from there. I'll be making a list for participants as OBS nears.

October Lunar Calendar

October 2024						
Sun	Mon	Tue	Wed	Thu	Fri	Sat
		1 	2 	3 	4 	5 
6 	7 	8 	9 	10 	11 	12 
13 	14 	15 	16 	17 	18 	19 
20 	21 	22 	23 	24 	25 	26 
27 	28 	29 	30 	31 		

New Moon October 2

October 2, the Moon will cross the celestial equator going southward at the Descending Node

October 2, Annular Solar Eclipse visible from southern Chile and Argentina

October 2, the Moon will be at Apogee, 406,517 km from Earth

October 5, Venus will be 3° north of the Moon

October 7, Antares will be .2° north of the Moon

First Quarter October 10

October 14 Saturn will be .1° south of the Moon, occulted for viewers W of the Mississippi only

October 16, the Moon will cross the celestial equator going northward at the Ascending Node

October 16, the Moon will be at Perigee: 357,173 km from Earth

Full Moon, October 17, the Full Hunters' Moon

October 19, The Pleiades will be $.1^\circ$ south of the Moon

October 21 is the Orionid Meteor Shower ZHR in dark sky, no moon: 10-20 per hour YEMV

October 23, Mars will be 3.9° south of the Moon

Third Quarter October 24

October 25, Venus will be 3.0° north of Antares

October 25, Antares will be $.1^\circ$ north of the Moon

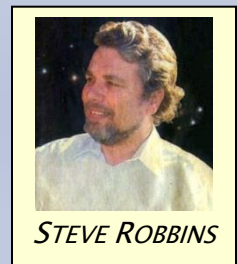
October 23, Pollux will be 1.7° south of the Moon

October 26, Regulus will be 2.9° south of the Moon

October 29, the Moon will cross the celestial equator going southward at the Descending Node

October 29, the Moon will be at Apogee, 406,164 km from Earth

Space Exploration News



SpaceX just can't wrest free of FAA oversight.

Now, the FAA says that there have been allegations from outside the FAA that SpaceX is using industrially contaminated water in its deluge system, unlawfully impacting area wildlife. SpaceX says it uses potable, drinkable water from city supplies and never adds any chemicals of any kind to the water. The FAA delayed the next test of Starship until at least November, saying "A final license determination for Starship Flight 5 is not expected before late November 2024." Naturally, SpaceX is not amused, responding "Unfortunately, instead of focusing resources on critical safety analysis and collaborating on rational safeguards to protect both the public and

the environment, the licensing process has been repeatedly derailed by issues ranging from the frivolous to the patently absurd."

During an interview with space reporter Fraser Cain of Universe Today, Dr Gerard van Belle, astronomer and Director of Science at Lowell Observatory, said some important and astonishing



things which have escaped the attention of even the scientific media. Dr van Belle has been an expert in the field of optical interferometry for the past 30 years. “The catch with an interferometer is that you start to have a lot of space between the actual glass, where there is just falling on dirt, and so you get resolution, you often sacrifice sensitivity.” And so, particularly in the optical frequency range, interferometry works best with objects bright enough to see visually with the unaided eye, and he proposes

to leverage that restriction into an aggressive opportunity: the search for life in the Milky Way.

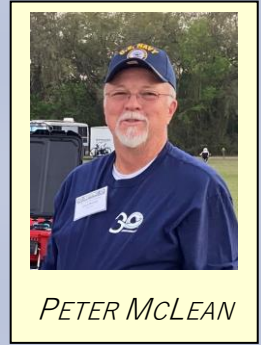
“If you want to know thy planet, you have to know thy star and it's because so often you detect the planet by what it does to the star...You want to do that by looking at the star, and so we want to do surface mapping of these stars with say 10 by 10 or even 30, by 30 pixels across the face of the star and by so doing we'll be able to see spots moving across the surface of the star, like we can with our sun... Cain concludes, “Are we alone in the universe? This is a scientific question. We are building the tools to be able to find out the answer, and in our lifetimes we will either know the answer or know that we seem to be alone. Either one is terrifying, but also interesting.”

The interview is long and meandering. It's worth your effort to see.

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.



PETER MCLEAN

Deep Space (Galaxies, Star Clusters, Comets)



*M33 Triangulum Galaxy
With the Asqar71 and ASI2600MC
From Copper Breaks State Park, Quanah, TX
by Philip Roey*



*IC1342 Hidden Galaxy
With the Celestron Edge 9.25HD and the ASI 2600MM
From Copper Breaks State Park, Quanah, TX
by Philip Roey*

Nebula

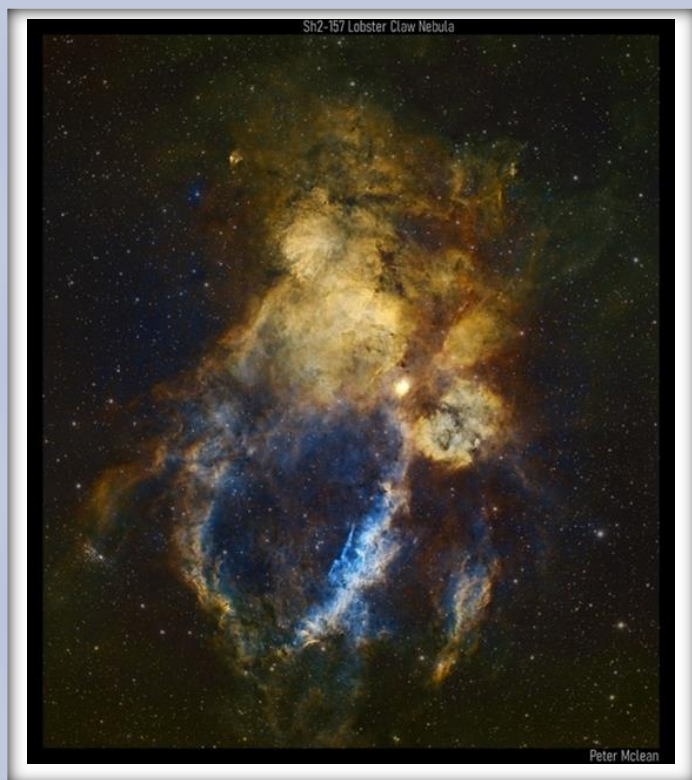
*M8 Lagoon Nebula
With Celestron Edge 9.25HD and PlayerOne Poseidon-M Pro
From Chiefland Astro Ranch, FL
By Jamie Kenas*



*Sh2-119 Clamshell Nebula
From Zephyrhills, FL
By Johnny White*



*Sh2-157 Lobster Claw Nebula
With WO GT81 and ASI533MM
from Mulberry, FL
By Peter McLean*



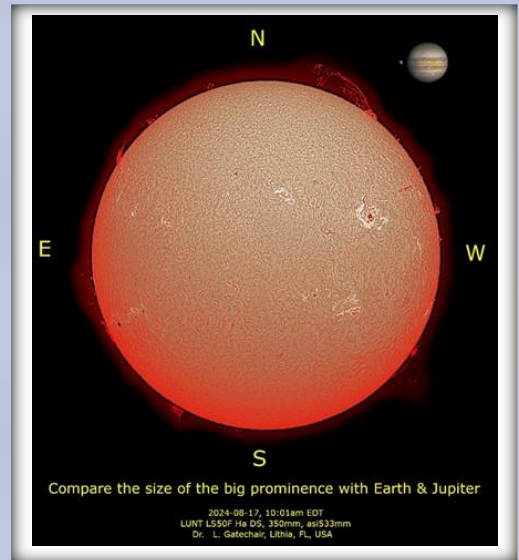
*IC1318 Butterfly Nebula
From Lakeland, FL
By Steven Miller*



Planetary-Lunar-Solar



*Saturn at Opposition 8Sep24
With Meade LX200GPS and ASI462MC
From Sarasota, FL
By Gregory Shanos*



*Solar Prominences Size Comparison
With Lunt and ASI533MM
From Lakewood Ranch, FL
By Les Gatechair*

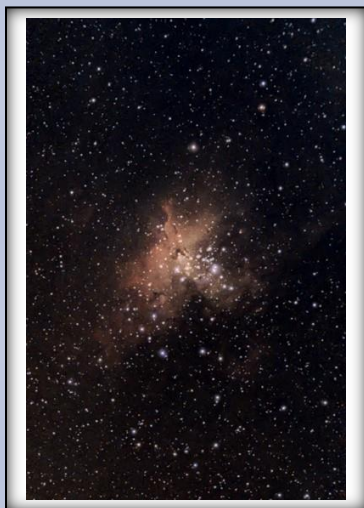


*Setting Crescent Moon Followed by Venus
from Quanah, TX
By Philip Roey*



*Mercury Rising from Blowing Rock, NC
By Bruce Sobut*

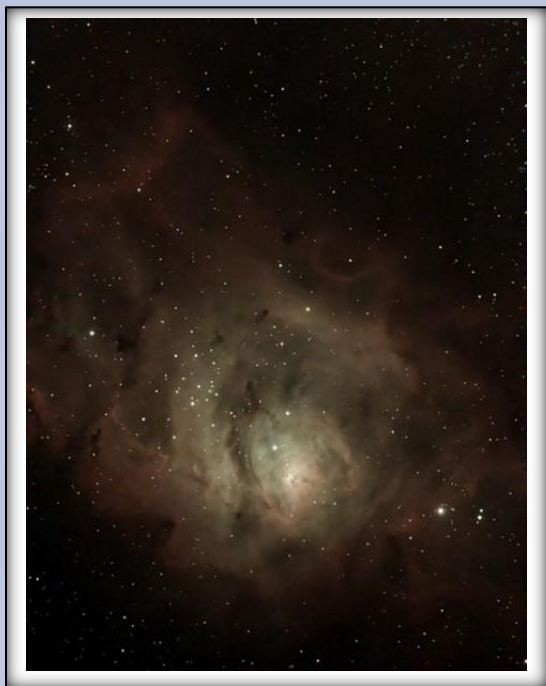
Smart Telescope



*M16 Eagle Nebula
From Riverview, FL With Seestar S50
By Guy Earle*



*M27 Dumbell Nebula
With Seestar S50
Processed with Siril & Lightroom
by Guy Earle*



*M45 Pleiades Open Cluster
With Seestar S50 and
Diffraction Filter
From Cortez, FL
By Peter McLean*

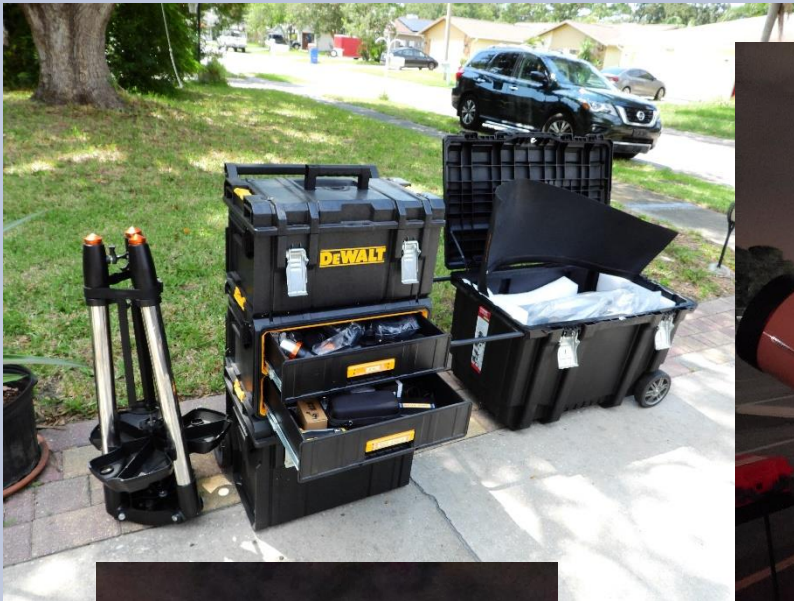


For Sale

****FINAL REDUCED PRICE**** Listing #1: Steve Robbins is selling his **mid-1980s Coulter 13.1" Odyssey Dobsonian telescope**. I've just had Spectrum Coatings recoat the primary, It is in original condition but has a Novak mirror cell, aftermarket dielectric coated secondary, a Telrad and Tektron 2" focuser. I'm including a Televue 35mm Panoptic eyepiece and a Televue Nagler Type II 20mm. \$900. Contact Steve @ steve.robbins13@gmail.com



******REDUCED PRICE****** **Listing #2:** Damon Rath has a **Celestron SCT 1100 HD** fork mount for sale. "I am asking \$3,000.00 for the complete telescope with the Husky carrying case for the body. I have other components if the buyer wants more frills like solar filter (Baader OD 5.0), StarSense autoalign accessory, various good quality objective lenses, cell phone holders, DeWalt field carriers etc. I can be contacted by email at scrqqge1@verizon.net for questions and viewing. I live in the Largo area."



Listing #2: Vaonis 80mm 6.2 meg Stellina SmartScope with flight case and all original accessories. Chosen by Astronomy Magazine in their 2024 best new products. Asking \$1800.00, if interested, please contact Garrison Smith at smith.garrison@gmail.com



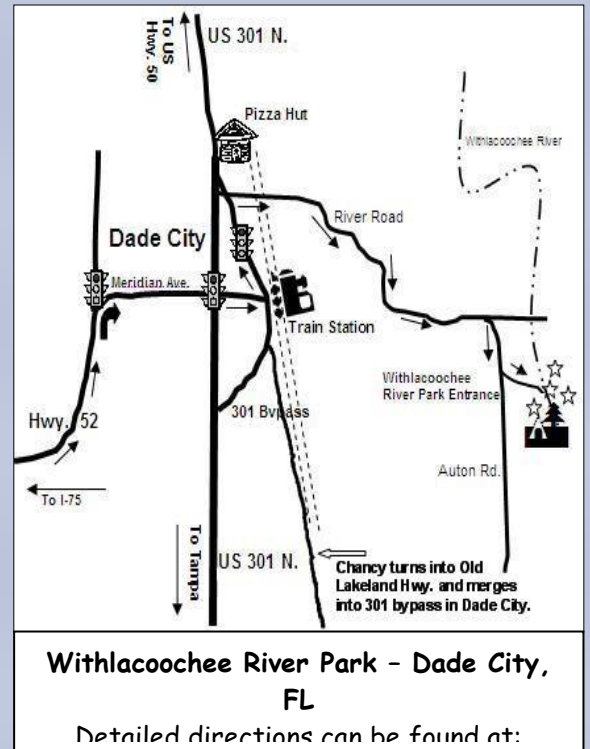
SPAC Business Meeting

Our next business meeting is **Wed., Oct. 9th, 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	Shirley Vuille
Treasurer	Jim Hunter
Dir.-at-Large	Peter McLean
Dir.-at-Large	Steven Gaber
Dir.-at-Large	Jack Fritz
SPACE Editor	Guy Earle
Public Relations	John O'Neill
Membership Chair	Shirley Vuille
Mirror Lab Chair	Paul McNabb
Outreach Chair	Jim Hunter
Star Party Chair	Mike Partain
Librarian	Ralph Craig
Club Webmaster	Jack Fritz
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](#).



St. Petersburg Astronomy Club

Recognition of Patrons & Benefactors

Walter Brinkman	Benefactor	Ralph & Christine Craig	Patron
Dave & Deborah Catalano	Benefactor	Glynis Dilaire	Patron
Stephanie Colon &		Peter & Jaclynn Dimmit	Patron
Jack & Roni Fritz	Benefactor	Guy & Kelly Earle	Patron
Michael Haworth & Melanie Otte	Benefactor	Joseph & Pamela Faubion	Patron
Valerie Hyman	Benefactor	Darla & Peter Flynn	Patron
Naseeb Nas Kaleel	Benefactor	Steve & Cindy Fredlund	Patron
Jamie Kenas	Benefactor	Steve Gaber & Karen Sell	Patron
David Knowlton	Benefactor	Richard & Mary Garner	Patron
Laura & Roy Lanier	Benefactor	Timothy & Mary Ann Harris	Patron
Tod Markin	Benefactor	Charlie & Linda Hoffman	Patron
Kelly McGrew	Benefactor	Eric Houghton	Patron
Kevin & Karen Mulford	Benefactor	Matt Hughes & Manuel Ordonez	Patron
David & Kathryn Musser	Benefactor	Matt Labadie & Jennifer Willman	Patron
David & Tara Pearson	Benefactor	Willy & Beth Lebihan	Patron
Rath, Damon & Jean Futch	Benefactor	Dave & Mary MacKenzie	Patron
Vincent Risalvato &		Steve & Jeri Maiaroto	Patron
Tabitha Castillo	Benefactor	Joseph Mandara	Patron
Christian & Wendy Rubach	Benefactor	Allen Maroney & Tracee Elliott	Patron
Doug and Teri Sliman	Benefactor	Ralph & Molly Merritt	Patron
Garrison & Ruth Smith	Benefactor	Steven Miller & Lisa Alessi	Patron
Jill & Robin Sumner	Benefactor	Herb Monroe & Martha Stewart	Patron
Andrew & Bonnie Watts	Benefactor	Leeann Muszynski	Patron

Bill & Norma Anthor	Patron	Bill & Kim Northup	Patron
Jan Anschuetz	Patron	Stephen Oros	Patron
Steven Balke	Patron	Michael & Carli Partain	Patron
Christopher Bankston	Patron	Brad & Lisa Perryman	Patron
Jason & Margie Bedell	Patron	Alan Polansky	Patron
Kyle Brinkman	Patron	John & Abbie Redmond	Patron
Michael Callahan	Patron	Mike Rozycki	Patron
		Gregory Satchwell	Patron

Manny Sosa & Leslie Long	Patron	Alexie Velez & Yanira	
Anthony Staiano	Patron	Hernandez-Velez	Patron
Jonathan Stewart	Patron	Skip & Kim Walker	Patron
Tom & Michelle Sweet	Patron	Shawn Wilson	Patron
Jose & Mary Torres	Patron	Elizabeth Wood	Patron
Wally & Ramona Vazquez	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 join or 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 join, view and update your membership profile, provide payment, and **print your membership card.**

- **US Mail Option: Takes more time to process manually because we are all volunteers.**

Complete the attached membership form and send it along with your payment to:

Jim Hunter
17316 Oak Ledge Drive
Lutz, FL 33549.
(Checks should be made payable to SPAC, Inc.)

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.