



SPACE

St. Petersburg Astronomy Club **Examiner**

August 2024

Editor – Guy Earle

The St. Petersburg Astronomy Club has been the center of family astronomy in the Tampa Bay Area since 1927. Our 372 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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Milky Way Starscape from St. Georges Island by Jamie Kenas

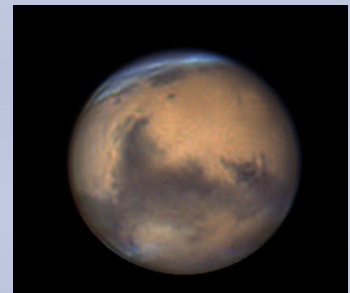


September Preview

September's general meeting will be an open format with no set presentation. This is done to promote member input and discussion, so bring some gear that you'd like to talk about or anything else that you'd like to share.

August General Meeting Synopsis

We are heading into planetary season as well as the general observing months (the two don't always line up), so I will be showcasing when it will be best to see the planets through the spring of 2025, where you can find them in the night sky, and what to expect when you look at them in a moderate telescope or if you try to image them.



August General Meeting

This month's general meeting will take place on **Thursday, August 22nd** at **7:30 PM.**

The meeting will be **at St. Petersburg College**, Gibbs Campus, 6605 5th Avenue North, Social Arts Building, **Classroom 322**, 3rd floor, and **also virtual.**

This month, the presentation will be by SPAC member, **Guy Earle**, on "**Observing Mars & the Outer Planets.**"

Observing Mars & the Outer Planets

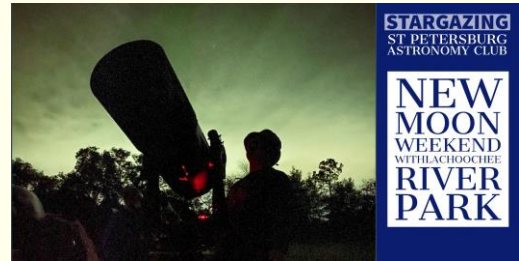


Join Zoom Meeting [HERE](#)

Meeting ID: 852 9687 2152

Passcode: 111992

The club's **New Moon observing weekend** will be by August 30th-31st at [Withlacoochee River Park](#) east of Dade City.



New SPAC Members

We would like to welcome Richard & Michelle Newman, Jose & Mary Torres, and Glynis Dilaire 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



Well, here we are nearing the end of August and two months away from the opening of the 2025 OBS registration. This year's reservation form will have something new. Now, when you register, you can select whether you need 30 AMP, 20 AMP, tent camping, camping in the park's camp ground or dry camping on the field. Once the selections are sold out, they will no longer show as available. Hopefully, this will be a new improvement for our annual star party. We will be sending out an early registration link for those of you who attended OBS 2024 about a week before October 1st. Please remember, camping and power assignments are based on availability.

September will begin our new observing season and hopefully, the weather will cooperate this year. We have a new moon weekend at the Withlacochee on the weekend on August 30th (BONUS!) and then again on the weekend of September 27th. Hopefully by then, the oppressive summer heat and rain will begin to abate by then. I don't know about you, but I am Jonesing for a good new moon weekend.

Our September general meeting at the St Petersburg College will be something new. The meeting is on Thursday, September 26th and we will have an open forum/discussion for astronomy. The focus will be the upcoming observing sessions and things we can do to improve our club. Please come out and participate. We will also have our annual pot luck dinner and club officer elections next month in October. Our club is many things and we all have ways to contribute. One club need is for us to become more active with both Pasco County and Dade city in order to work towards protecting our dark sky site from light pollutions. This summer, we learned that both Chiefland and Kissimmee Prairie Preserve are facing new housing developments which will affect the quality of the night sky at these locations. We face the same challenges at Withlacochee River Park. Next week, Guy and myself will meet with park officials to review future plans for our club at the park, including OBS.

Clear Skies.

SPAC New Moon Weekend Field Report August 2nd-4th, 2024

By Intrepid Field Reporter

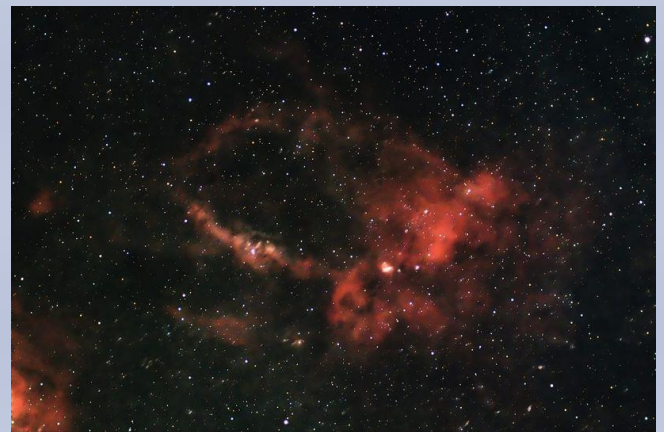
Summer is still here! The good news is that temperatures throughout the weekend weren't as high as we experienced the last two New Moon Weekends. The bad news is that the cooler temps were caused by consistent cloud cover and frequent rain showers, which, of course, made it mostly lousy for viewing astronomical wonders. Still worse news, Hurricane Debby was looming. It's hurricane season ... Season's Greetings!



As per usual, Joe Canzoneri and Bob & Rita Mizel arrived on Thursday. Later that evening your Intrepid Field Reporter also showed up, but too late to set up any astronomy equipment. Nonetheless, it was great to be back in WRP after missing the last two sessions. Welcoming our little group of optimists that afternoon was a double rainbow. Pretty nifty, eh?

Temperatures after sundown were moderate and the intermittent light rain had gone elsewhere, but clouds remained until breaking up about 11:00, improving to mostly clear by 1:00 Friday morning.

On Friday we were joined by Tim Harris in his ginormous motor home. That afternoon a prospective new member, William Livaudais, arrived to learn about astronomy in general and our Club in particular. Sadly we were unable to show him anything through a telescope but clouds, but we can always talk a lot about our favorite hobby. Clouds that night obligingly broke into large holes about midnight clearing nearly completely shortly thereafter. Not a total loss for those of us who didn't mind staying up 'til the wee hours.



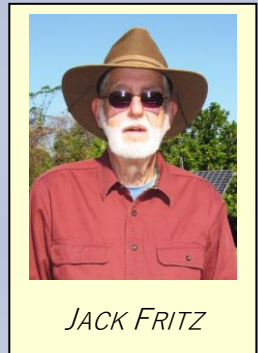
1- SH2-157 "Lobster Claw Nebula" by Joe

With Debby crashing the party we vacated Withlacoochee River Park early Saturday to get home before the nasty weather descended. Maybe your Intrepid Field Reporter ain't so intrepid after all?

Our next New Moon Weekend is August 30 – September 1 followed by September 27-29. I guess technically that's two New Moon Weekends in both August and September.

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.

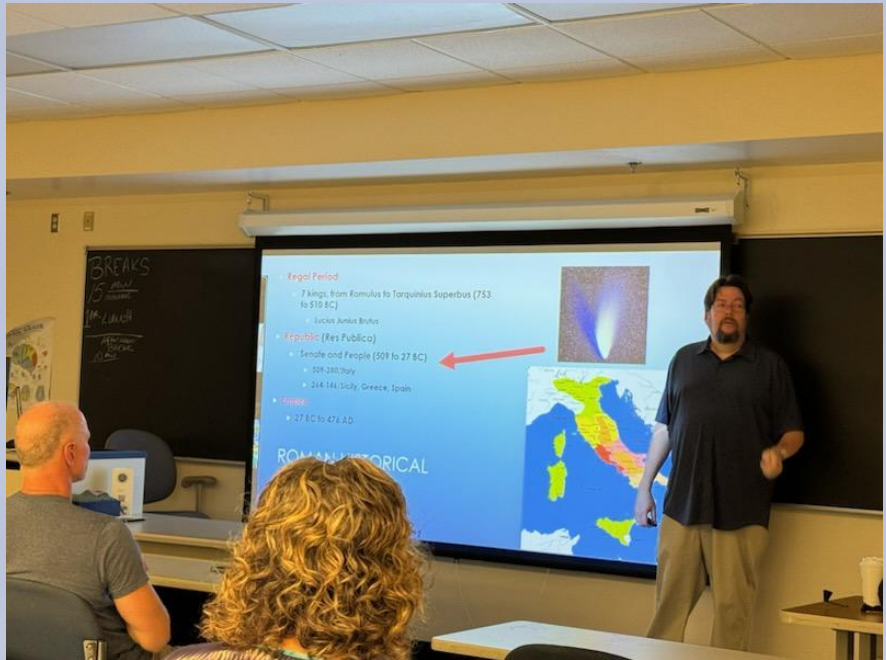


July General Meeting and tech updates

It feels a bit narcissistic to talk about me yapping away at the general meeting, even if I was the one doing the presentation (buckle up, buttercup, because you get to hear me one more time this month!). I hope you enjoyed the talk about Caesar's comet. For those unfamiliar with my lecture method, and that'd basically be everyone since none of you were my students, random side discussions actually are done to lead back to the main point of the lecture. I loathe one-sided discussions and prefer interactions with attendees, as that typically peaks interest and topics. I learned long ago that having a deep voice is not enough to make a lecture work, otherwise I'll be saying, "Bueller...Bueller?" Variation and engagement work for me as a presentation method.



That being said, a couple technical things came out of last month. We recently started posting video recordings of the lectures as well as PDF's of the presentations, if applicable, for anyone who may have missed the meeting or want to go back and rewatch it. We are using our own laptops rather than using the SPC desktop at the classroom station, since we frequently
































go to our SPAC Facebook page, our Zoom account, and other sensitive sites where we don't want our passwords typed in a public station. We use the ethernet cable's connection for a strong feed for those on Zoom, but we then had issues with audio, both for Zoom attendees being heard and for hearing the presentation. I was relying on the laptop itself for sound and my own loud voice to be heard, even when I walked away from the laptop. That did not work.

SPAC has since purchased a couple wireless microphones so the presenter's voice should be loud and clear to those online. We will also be using a very nice speaker so we can hear those online asking any questions or commenting. That should, hopefully, solve two big issues. Lastly, Allen Maroney ordered for SPAC a new slide laser pointer. I used my own last month, which worked great to advance the Powerpoint presentation remotely, but the red dot doesn't show up well for those online. The new pointer will broadcast a pointer icon like those on any pc, so when one points to an object, you'll be able to clearly see where.

Lastly, please remember that we have changed the format for one meeting in the fall and one in the spring, that being an open-format style without a general presentation. Next month's September general meeting is such a month. I think it's important for members to just get together to share general information, new equipment, observing tips, and just general socializing. The post presentation recently at one of the general meetings showed how viable that option can be, with some energetic discussions.

September Lunar Calendar

September 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 					

New Moon September 2

September 4, Mercury will be at greatest elongation, 18.1° west of the Sun

September 5, the Moon will cross the celestial equator going southward at the Descending Node

September 5, Venus will be 1.2° north of the Moon

September 6, Spica will be .6° south of the Moon

September 7 Saturn will be at opposition, max angular size 19 arcseconds

September 8, Mercury will be .4° north of Regulus

September 10, Antares will be .1° north of the Moon

First Quarter September 11

September 17, Saturn will be $.3^\circ$ south of the Moon occultation visible from [Western US to Australia](#)

Full Moon, September 17, the Full Harvest Moon

September 17, [partial lunar eclipse](#), mag .085, umbral starts 22:12:58, ends 23:15:38

September 17, Venus will be 2.2° north of Spica

September 18, the Moon will be at Perigee: 357,284 km from Earth

September 18, the Moon will cross the celestial equator going northward at the Ascending Node

September 20, **Neptune will be at opposition** maximum angular size 2.4 arcseconds

September 22, The Pleiades will be $.2^\circ$ south of the Moon

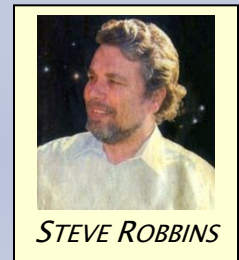
September 24 is the Autumnal Equinox

Third Quarter September 24

September 26, Pollux will be 1.6° north of the Moon

September 29, Regulus will be 3.0° south of the Moon

Space Exploration News



ESA's Gaia probe, my personal favorite observatory, has proven to be useful for far more than astrometry of stars. In its course of monitoring 1.8 billion mostly Milky Way stars, Gaia has also spotted more than 180,000 asteroids.

Already 500 binary asteroids have been known, and Gaia's survey identified another 352 candidates, increasing our count of binary asteroids to ~850 of the million asteroids identified so far in our solar system. They were identified by the same wobble used to detect exoplanets around stars. Researchers expect just under $\frac{1}{6}$ of asteroids to be binary, so 850 out of a million leaves a tremendous number to be found if theories are correct.

On Mars, Perseverance has spent 3 weeks scrutinizing a single rock found in Jezero Crater, a vein filled slab showing unmistakable signs of long-standing water activity. Perseverance left this rock in a feature called Bright Angel, but returned a week later after geologists found the feature

that made this slab the most important site found so far in Jezero Crater. Anomalous brown spots were seen between the veins in this mudstone deposited by running water and it was time for Perseverance to take samples and do spectroscopic analysis with its Ramen spectrometer. For the first time on Mars [clear indications of organic molecules](#) were obtained. The Internet went



wild with speculation and even declarations of life discovered on Mars. But as Mars Guy, Arizona State University associate research professor Dr. Steve Ruff, a Mars geologist with decades of experience exploring the red planet, issued in a necessary proviso: “A detection like this always comes with the caveat that organics are in all life as we know it but not only in living things. Plastic is just one example of non-living organic matter.” So this is exciting, but not as exciting as many hope.



Sometimes astronomical discoveries don't happen light-years or astronomical units away. Sometimes they happen at the bottom of Earth's oceans. In the peer reviewed publication *Nature Geoscience*, Dr Andrew Sweetman of the Scottish Association for Marine Science has published a paper “Evidence of dark oxygen production at the abyssal seafloor.” The ocean is divided into two

realms, the surface pelagic zone, where water is highly oxygenated by plant life and wave gas interchange with the atmosphere, and the benthic zone near the bottom, where little or no light penetrates, oxygen rates are very low and life struggles to live. Sweetman and collaborators found the bottom of the Pacific Ocean littered of polymetallic nodules. Any time you immerse dissimilar metals in salt water, the ocean acts as an electrolyte and induces electrical flow between closely associated nodules. Voltage potentials of up to .95 volts were measured between nodules, enough to execute electrolysis on the water, producing hydrogen and oxygen. This oxygen dissolves in the water, producing something life can breathe.

The importance of this discovery for astronomy and astrobiology is that this is a process that makes oxygen dissolved in water which is not dependent on life existing to produce it. Similar processes could happen in the undersea oceans of Enceladus, Mimas, Ganymede, Europa and possibly Ceres.

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.



Nebula



Images from GA by Philip Roey
Left: NGC6888 Crescent Nebula
Below: M20 Trifid and M8 Lagoon Nebula

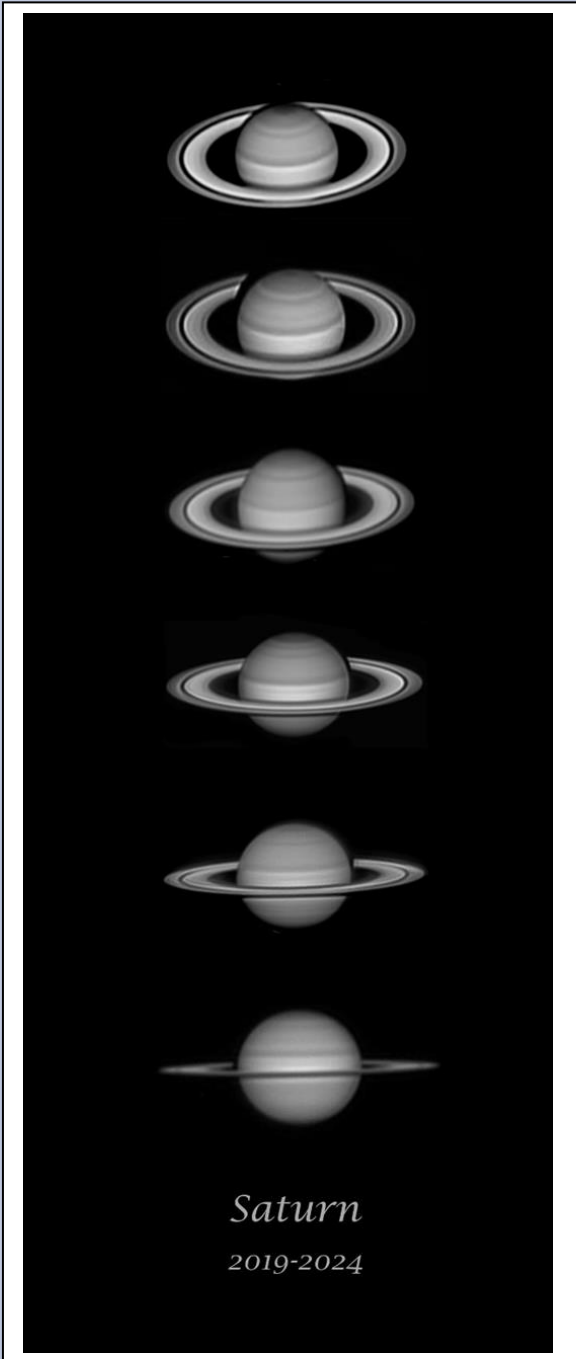


IC5146 Cocoon Nebula from Chiefland Astro Ranch
By Jamie Kenas



M17 Swan Nebula from Marriotsville, MD
by Jaime Corrigan

Planetary – Lunar - Solar

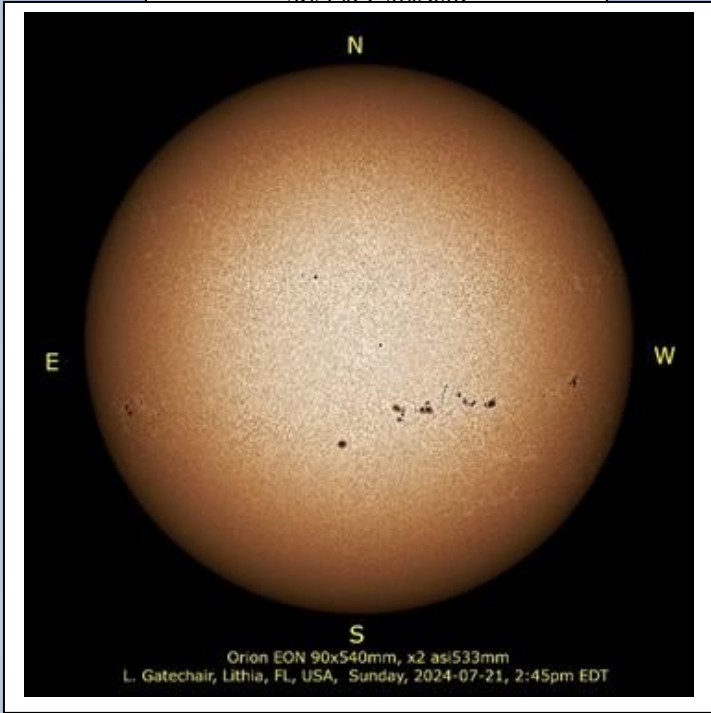


Saturn 6yr Ring Rotation
By Guy Earle

Solar Photo Bomber
By Bruce Sobut



Solar Sunspot Activity 7/21/2024
From Lithia, FL
By Les Gatechair

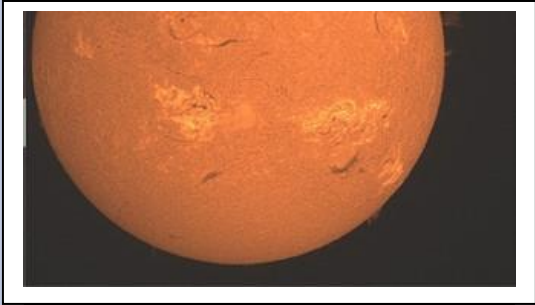


Planetary-Lunar-Solar

*Claire-Obscure X and V along the lunar limb 8/11/2024.
Captured by Gregory Shanos.*



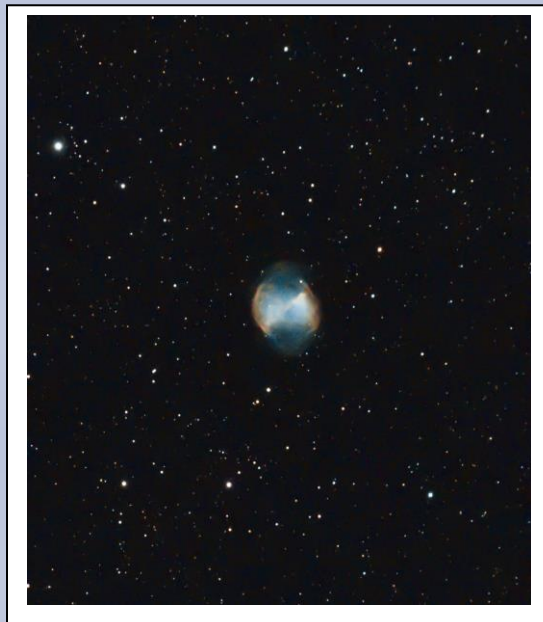
*Mars and Jupiter w/Hyades Cluster
Captured by Tod Markin
w/ Iphone 15 camera*



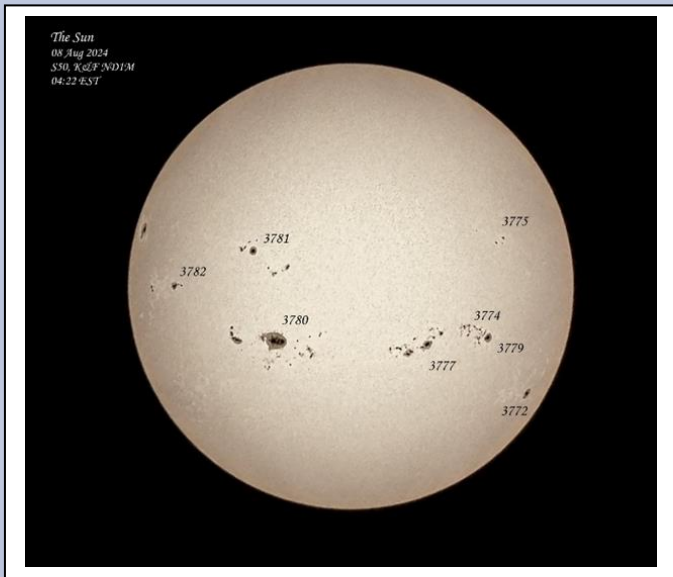
*Solar Activity 8/9/2024 from the Villages
by Steve Maiaroto*

Smart Telescope

Solar Sunspot Activity 7/24/2024
By Guy Earle



M27 Dumbbell Nebula
With Seestar
By Guy Earle

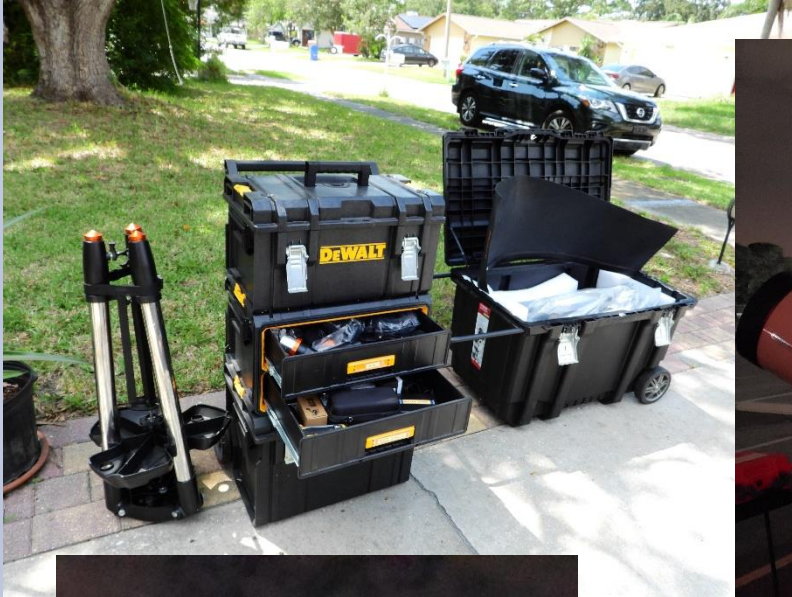


For Sale

****REDUCED**** 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. \$1000. Contact Steve @ steve.robbins13@gmail.com



Listing #2: Damon Rath has a Celestron SCT 1100 HD fork mount for sale. “I am asking \$3,500.00 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.”



SPAC Business Meeting

Our next business meeting is **Wed., Sept. 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 [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

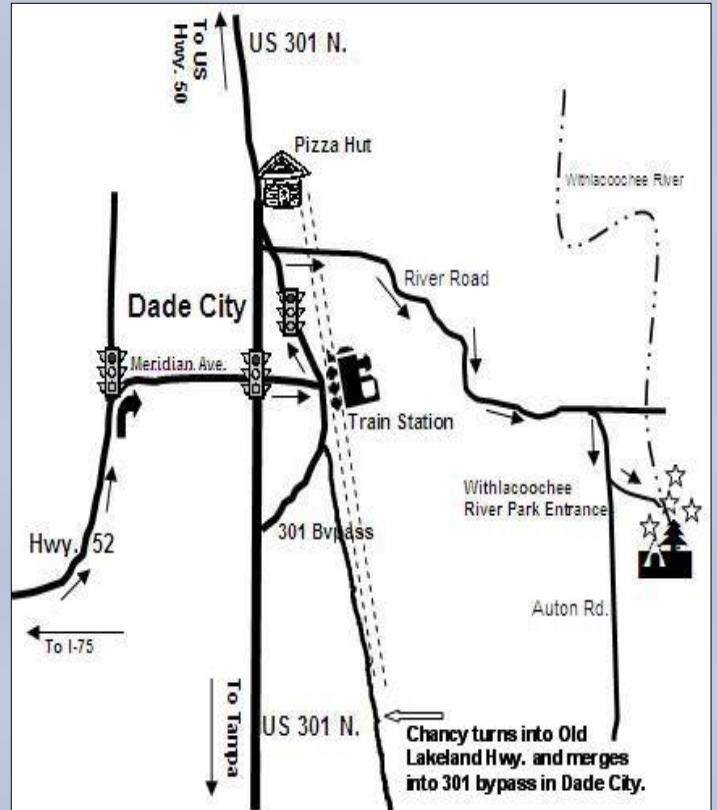
Withlacoochee New Moon Weekends

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.



Reservations are not necessary. Please print and display our [Friends-Of-The-Park Pass](#) on your dashboard.

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.



Withlacoochee River Park - Dade City, FL
Detailed directions can be found at:
www.StPeteAstronomyClub.org



St. Petersburg Astronomy Club

Recognition of Patrons & Benefactors

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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.