



SPACE

St. Petersburg Astronomy Club Examiner

October 2020

Editor – Guy Earle

The St. Petersburg Astronomy Club has been the center of family astronomy in the Tampa Bay Area since 1927. Our 279 adult members are dedicated to promoting and sharing the wonders and science of astronomy. We host dark-sky and local star parties, telescope-making workshops, science lectures, astronomy lectures, educational outreach sessions and much more.

President's Message



It's already the middle of October. The nights are beginning earlier each day. There is a blue moon on Halloween this year. A natural light for the children to walk under while trick-or-treating, hopefully not too late into the evening.

Last year, Halloween fell on a beautiful evening. My wife and I setup a table outside. To her embarrassment, I brought out my telescope so that everyone could have a treat with their candy. To my wife's surprise, the telescope was a sensation. It was a great way to meet the neighbors and inspire interest in astronomy. In the end, everyone had a great time and the best part of the night was receiving high praise from my wife for being myself.

I hope everyone has a safe and Happy Halloween.

Clear skies.

Brad Perryman

Astronomy Image of the Month:



NGC 281, the Pacman Nebula by SPAC member Omar Rahman on 10/9/20

Inside this Issue:

November Astronomical Events	2
Space Exploration News	3
Field Report	4
Annual Elections	5
Telescope Raffle and T-shirt	6
OBS Star Party Update	7
The Space Art of Jack Coggins	8-9
SPAC Astrophotography	10-12
Mirror Lab Report	13
Intl Dark Sky Association	14-15



Brad Perryman, SPAC President

New SPAC Members

We would like to welcome Ronnie & Ryan McAlister, Robert Rutledge, Michael & Michelle Podlusk, Dinesh & Vinita Yemul, Tanya & Naomi Ensell, Mallory Horton, Keith & Vicky Carman, and Todd Vogt & Brittany MacDonald to our family of members.

September General Meeting

This month's general meeting will take place on Friday, October 23rd at **8:00 PM**. The main program will be by Guy Earle, who will be presenting, "**There and Back Again: A Look Back at Vintage German Equatorial Mount (GEM) Telescopes**" and will include the following topics:

- The history of Cave, Criterion, and Meade GEM Telescopes
- The rise of Schmidt-Cassegrain and Dobsonian telescopes
- A visual tour of some examples
- Combining vintage telescopes with modern imaging

This meeting will be held virtually with **GoToMeeting.com**.

Please join from your computer, tablet or smartphone by clicking [here](#).

You can also dial in using your phone.

United States: +1 (786) 535-3211

Access Code: 192-720-429

November Astronomical Events

STEVE ROBBINS



Thursday, November 5, is the South Taurid Meteor Shower.

On the same day the Moon is at greatest northern declination, 24.8° north. This has a ZHR of only 10 and is very close to the full Moon. Catch up on your sleep.

Tuesday, November 10, Mercury will be at greatest elongation, 19.1° west of the Sun. That means it rises before the Sun.

Thursday, November 12, is the North Taurid Meteor Shower with a ZHR of about 15. With the Moon rising just after midnight, this little observed shower might be worth a look.

Saturday, November 14, the Moon is at perigee, 357,800 km from Earth.

Tuesday, November 17 is the Leonid Meteor Shower, ZHR ~15 and very dark skies. This is the main attraction this month.

Wednesday, November 18, the Moon will be at greatest southern declination, 24.9° south.

Thursday, November 26 the Moon will be at apogee, 405,900 km from Earth.

Monday, November 30, will be a penumbral eclipse with peak 4:42 am. The darkest limb of the Moon will be about 2/3 of the way into the penumbra toward the umbra. Some darkening of one side of the Moon may be visible.

November's full Moon is called the Full Beaver Moon.

The Moon

Third Quarter – November 8

New Moon – November 15

First Quarter – November 21

Full Moon – November 30



The club's next **New Moon observing weekend** will be held November 13th-15th at [Withlacoochee River Park](#).



Space Exploration News

STEVE ROBBINS



OSIRIS-Rex reports that Asteroid Benu seems to have picked up some pieces

of Asteroid Vesta, which was famously visited by NASA's Dawn. Benu is what is called a "rubble pile" of loosely bound fragments of asteroid collisions. Some of those fragments, 5 to 14 feet in diameter, as scattered all over Benu's southern hemisphere and equatorial area. Read the full story [here](#):

Black holes are not the popular meme of a voracious maw, eating everything in surrounding space and destroying galaxies. In fact, the evidence is that galaxies nearly all have a mega solar mass black hole at their nucleus. Stars in the vicinity merely orbit it as they would any other mass. But sometimes a star's orbit is perturbed by nearby stars into an orbit that passes inside the event horizon of the black hole. This is called a tidal disruption event (TDE) in a most restrained manner. In the end of October, the nearest TDE observed was directly observed by several observatories. AT2019qiz is the nearest TDE ever observed at only 66 megaparsecs distance. Read the entire story [here](#).

Tianwen-1, China's Mars rover mission launched July 23, literally tossed a camera into space, which took photos, including two of the Tianwen-1 Mars orbiter, its solar arrays and the aeroshell containing China's Mars rover. This orbiter is solar powered. Shortly afterward, the probe performed a course correction to match Mars' orbital inclination. The rest of the story is at <https://www.space.com/china-tianwen-1-mars-spacecraft-selfie-deep-space>.

September New Moon Weekend

GUY EARLE

★ I know I'm speaking for many of us in the club, but a few nights of clear skies really isn't that much to ask for, is it? It feels like we haven't really had a stretch of clear—and steady—seeing since back in April. I've gone whole lunar cycles and not even seen the Moon once.

So, when I was deciding whether or not to go observing on Friday the 18th, desperation for any skies pushed me to quickly throw the old Meade 826 in the car. Saturday looked very likely to be a bust for observing, so I closed the laptop, called it an early Friday, and loaded the car. However, I wasn't about to pack the 16" Dobsonian reflector, as there was still a modicum of sanity running around in my head, and I knew the skies would not be THAT good. Pack light, that was the plan.

A handful of SPAC members were there that Friday night, Joe Canz, Jamie Kenas, who was sporting his new "A frame" observing residence, Tom Spano, and new member and first-time visitor to Withlacoochee River Park, Les Gatechair.



Tom was representing the Dobsonian bovine contingent of amateur astronomy, while all the other members were quickly setting up their Schmidt-Cassegrain telescopes, anti-mosquito tents, and tech, hopeful of at least a few hours of observing.



I contented myself with my vintage 8" f/6 reflector on the German equatorial mount, and hoped to image Jupiter, Saturn, Neptune, Mars, and Uranus before heading home later that night. Paul Smith also joined us shortly before sunset for a couple hours, getting equipment and image ideas, as he had made a return to the hobby after many years.



Things looked very promising for a good evening's observing session—until dusk. The temperature was mild, even pleasant, and you could see squadrons of dragon flies going over the field, clearing the skies of mosquitoes. So, after sunset the clouds

started gathering and the imagers started grumbling. I myself was having tracking issues, so I spent a great deal of my time tightening and loosening the clock drive motor, trying to get it to work properly. I did, albeit briefly. By the time I was making any progress the skies were closing up rapidly. At midnight, Mars was high enough in the east to image, I was again having motor issues and called it a night in frustration. I don't believe any of my deep sky imagers had any luck either, but it was great to see SPAC members again, some of whom it had been many months.



I believe most members packed up Saturday and headed home due to the weather deteriorating. As our true Intrepid Field Reporter, Kelly Anderson, would say, "clear skies are assured next month." And given that's in two days, I believe he may be right.

Annual Elections

STEVE GABER



This year's elections will be conducted online via the club website on the day of our general meeting, **October 23rd until 9 PM.**

You will need to go to the club website and sign in. Once signed in, you will see a green button, "Annual Elections."

The election for Club offices and board members is to be held this October.

Here are the current officers and Directors at Large:

President, *Brad Perryman*

Vice President, *Paul Krahmer*

Secretary, *Shirley Vuille*

Treasurer, *Jim Hunter*

2020 Director, *Steven Gaber*

2019 Director, *Kyle Brinkman*

All the above officers have agreed to continue to serve in their respective positions.

The 2021 Director position is vacant and open for nominations. **Jack Fritz has been nominated for this position by Steve Gaber.**

The Club thanks David Richmond for faithfully serving as a Director since 2018.

The Board of Directors invites members to submit new nominations for these positions. Any Club member who wishes to submit a nomination is encouraged to do so by the September general meeting. If you nominate a person for a position, be sure to ask that person if he or she is willing to serve in that position.

Annual Telescope Raffle

The St. Petersburg Astronomy Club **mirror lab** would like to present our 2021 raffle scope to be awarded at our club's 2021 New Moon Super Weekend, February 10th through 14th, 2021. The raffle scope is a tradition here at SPAC and this year's telescope is a club refurbished 12-inch Meade Lightbridge. Tickets are **\$10** donation/each or 3 for \$25. All donations go to the St. Petersburg Astronomy Club.

The raffle will be conducted on **February 13th** and the winner will be announced via email to all participants.

[Online Raffle](#)



Star Party Apparel

Star Party Apparel: We would like to take a moment to recognize **Doug Sliman**, who was the winner for the 2021 OBS logo design. We instituted a new process involving the club membership and a club vote for a logo design. We will not be taking orders for the t-shirt since the OBS is cancelled, however, Doug has provided us with a link to order a shirt for those who want this ultra-cool design!

T-Shirts must be ordered by January 4th.

Click on this link to order: [Apparel Order](#)



2021 Orange Blossom Special Cancellation

MIKE PARTAIN

★ It is with a heavy heart that I write to announce that we will not hold our 28th annual OBS Star Party scheduled for February 2021. As most of you are all well aware, this year has been a challenge with the on-going COVID-19 pandemic. In light of the continued spread and danger of the virus, the board has decided it is in the best interests of the club to cancel our annual OBS Star Party. The Withlacoochee River County Park remains open for club use subject to park rules and guidelines.

The club has previously reserved the week of Feb 7-14th for the now cancelled OBS. Club Members (only) may still utilize the park for the new moon week subject to park guidelines and regulations. Note, this situation may change based on the progression of the pandemic and there still remains a possibility the park could shut down again. There will be no reservations for camping taken and it will be a first come first serve bases with the usual \$10 for sites with electric service and \$5 for camping without electric service. Our clubhouse will be closed and we will not be providing any club amenities usually provided at OBS. Please feel free to contact me if you have any questions.

I would like to take a moment to recognize Doug, who was the winner for the 2021 OBS club logo design. We instituted a new process involving the club membership and a club vote for the logo design. I am very pleased with the voter turnout and participation. We will not be taking orders for the t-shirt, but Doug has provided us with a link to order a shirt for those who want this ultra-cool design! Click [HERE](#) to order.

Lastly, we still have the mirror lab's OBS raffle scope. Normally our raffle scope is one of the highlights of OBS. One of the things instilled into me by my father was the attitude of "adapt and overcome". Well, we have placed our raffle scope on line at the SPAC website and it is now active. We will notify the winner by email and announce it on the SPAC and Facebook websites. Here is a photo of our 12-inch SPAC Raffle scope and link to purchase tickets. Please support our club with a ticket purchase today. See above for details.

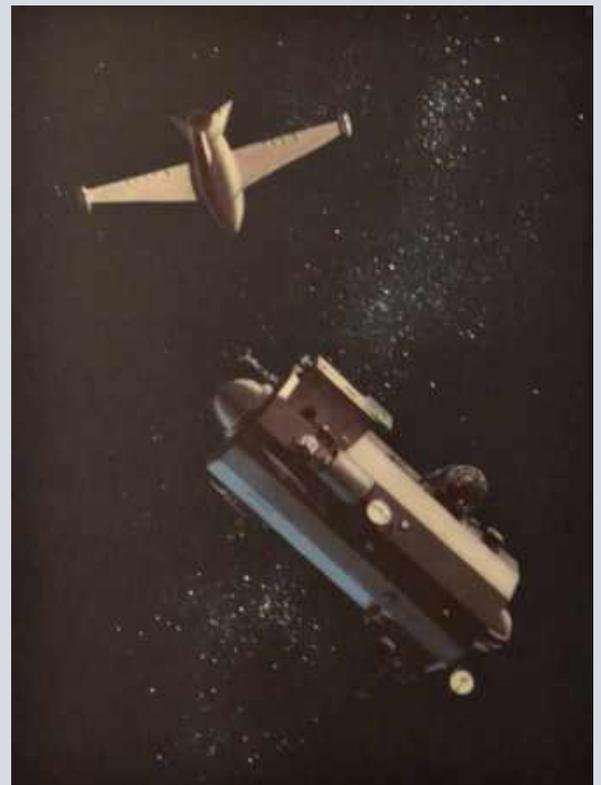


The Art of Jack Coggins

GUY EARLE

★ While strolling with my wife and mother through an antique shop in the picturesque downtown section of Plant City early last March, shortly before COVID 19 changed everything, I saw an old sci-fi book propped up on the top shelf of a display case. The artwork on the cover caught my eye, and while leafing through the pages I was struck by how much it reminded me of typical early science fiction imagery from the 1950's, where imagination was as boundless as the science that propelled it. There was a sleekness to the rocket ships, which looked more like rockets and less like spaceships. The shapes of Enterprises, X-Wings, and Battlestars was a generation or more away at that point, whereas this art could have been dreamed up by Goddard or von Braun.

I later purchased the book and got a closer look at the artwork by Jack Coggins, who was a prolific artist, author, and illustrator until he passed away in 2006, aged 91. Born in London in 1911, Jack would become best know for his naval illustrations. However, between 1941 and 1983 he wrote or illustrated 44 books, covering areas historical and education themes to various sci-fi magazines and books. It was this 1952 book, *By Space Ship to the Moon*, which I found in the antique store that Saturday afternoon, that I would like to share with you now.





SPAC Astrophotography

GUY EARLE



Here are some fantastic astrophotography highlights from our fellow SPAC members. Anyone who would like to share his or her work, I encourage you to [email the editor](#) to submit for future newsletters or share them on our [SPAC Facebook page](#).



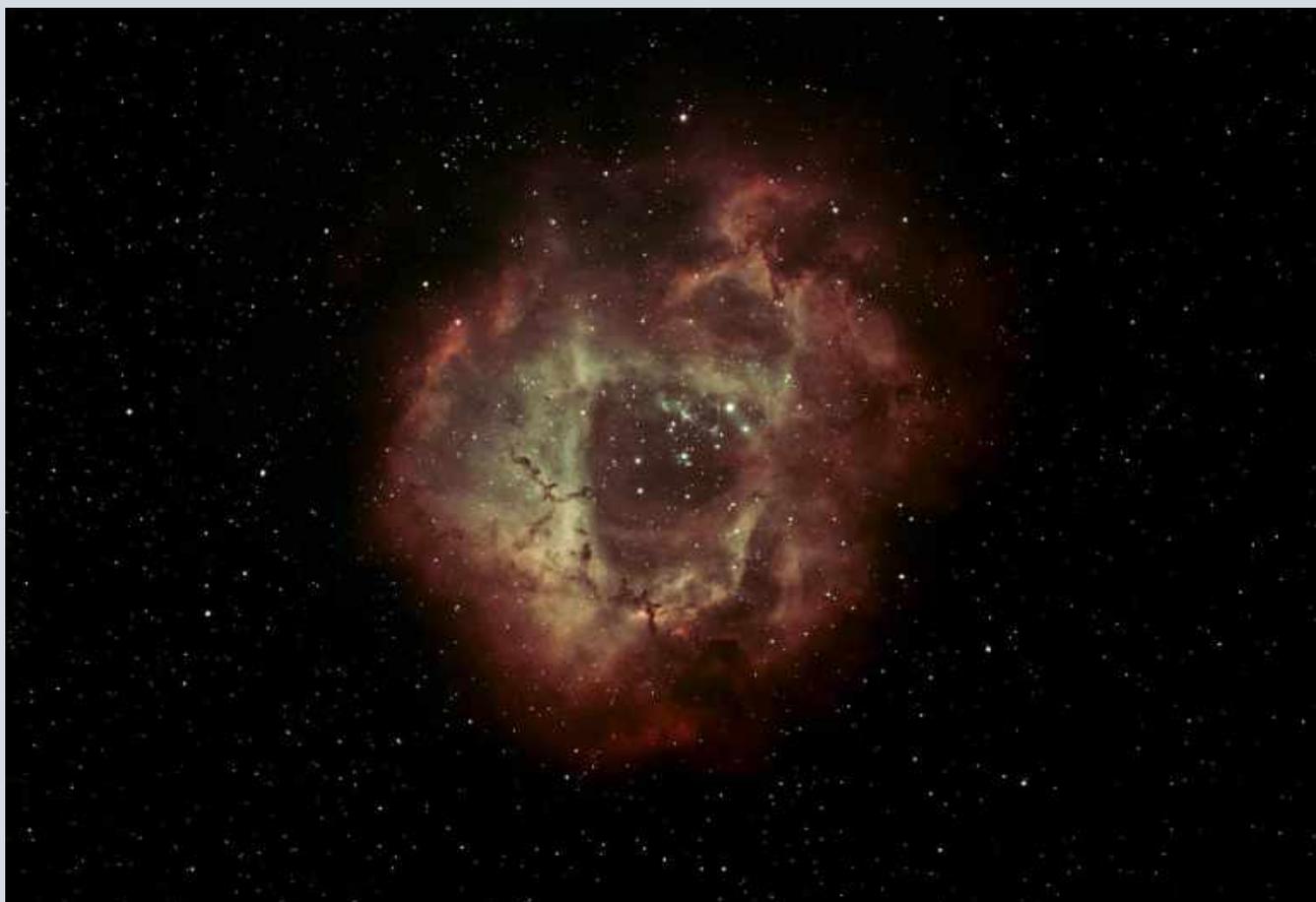
Right:
**Neptune
and Triton**
by the
editor



Above: Target: NGC 7635 The
Bubble Nebula
Dates: 2020-10-9,10
Location: My house, St Pete
OTA: Celestron RASA 11
Mount: Celestron CGX
Camera: ZWO ASI 2600MC
Exposures: 180s x76
Filters: Optolong I-enhance. — by
Jamie Kenas



Left: **Crater Clavius.**
Celestron C-14,
Canon 5D Mark II, 30
second video
processed with
Registax6 by **Tod
Markin**



Right: Telescope: RASA 8, Camera: ZWO ASI294MC Pro, Mount: Celestron CGX
Location: Riverview, Filter: Optolong L- Extreme, 34x180s subs @ 120 gain, stacked in
DSS and processed in Photoshop and Lightroom by **Todd Vogt**



Above: The Andromeda Galaxy M31 by Allen Force



Above: 1968 Ford Galaxie by the editor

Right: The Bubble Nebula taken last night from my light pollution home in Zephyrhills the bubble nebula. enjoy. 60sec x one hour exposure by Joe Canz



SPAC Mirror Lab Report

RALPH CRAIG

★ Several of the people in the club (and the OBS raffle scope) are patiently waiting for their mirrors that have gone over to Paul Zacharius at Spectrum Coatings to be ready for pickup so they can start putting them to use when the weather finally breaks. Hopefully they will be ready in the next week or two as we have a courier waiting to go to Deltona for them. Brad and Ron are doing star testing as a final QC check on Brad's 16" mirror he made before it gets to go over for coating. Ron has put together a bare bones star testing "Frankenscope" to use to give it the final stamp of approval. Richard Suiter's book "Star Testing Astronomical Telescopes" is an excellent read on the subject.

Mike P and Brad are continuing to work on building their 16" Dobs. They are working on building the mirror cells and secondary cages this month. Brad is getting the family involved by getting help from his granddaughter Keira with assembling some of the parts. It's nice to him see passing down the interest in amateur telescope making to the next generation. More pictures are on the mirror lab webpage at <http://www.telescopelab.com>. Also photos on Allen Maroney's web page at; <http://www.knology.net/amaroney/> and Mike Davis's web page at; <http://www.mdpub.com/>.



International Dark Sky Association: LIGHTS OUT for Migration!

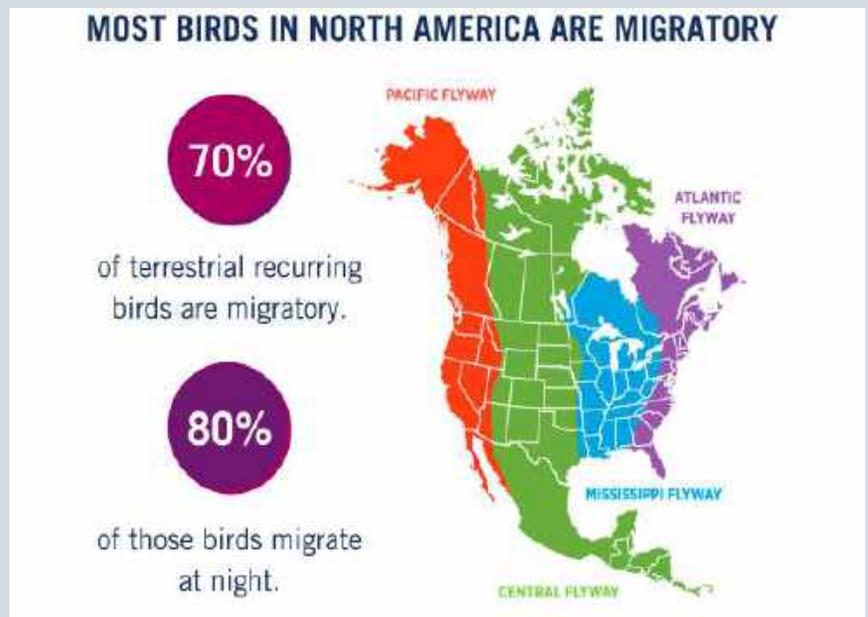
LEEANN MUSZYNSKI

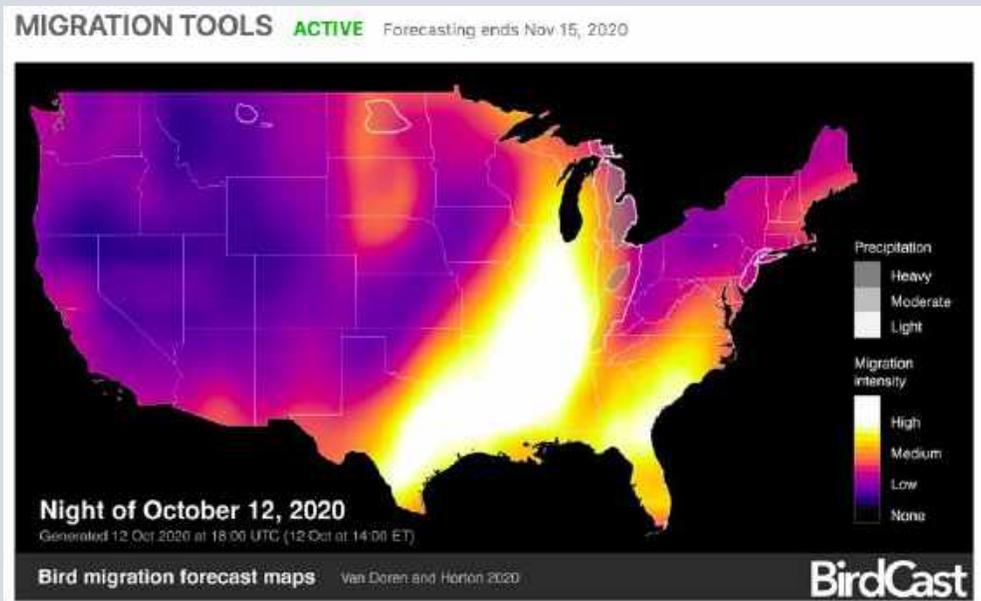
★ The International Dark Sky Association recently announced its new partnership with the National Audubon Society. Audubon’s mission to conserve critical habitat that protects birds, including the sky, created a natural intersection with IDA’s focus on protecting the night from light pollution.



One of the first collaborative projects seeks to protect millions of migratory birds as they head south this fall to their wintering grounds. LIGHTS OUT programs across the U.S.

Many songbirds like warblers, thrushes and sparrows are nocturnal migrators. They use the moon and stars to navigate during their long journeys, which can span thousands of miles and transverse continents. Artificial light at night can disrupt bird migration in many ways. Disoriented birds are prone to collision with buildings, resulting in millions of bird fatalities each year.





Bird migration forecast maps show predicted nocturnal migration 3 hours after local sunset and are updated every 6 hours. Colorado State University and the Cornell Lab of Ornithology currently produce these forecasts.

International Dark Sky Association’s Annual General Meeting and Conference is being held VIRTUALLY this year, and it’s FREE!

What You Can Do?

- 

Turn off unnecessary lights.
- 

Keep indoor light indoors.
- 

Install motion sensors & timers to control light so it's turned off when not needed.
- 

Down shield exterior lights so they don't spill beyond where they are needed.

Registration is required www.darksky.org

SPAC Business Meeting 

Our next business meeting is Wednesday, November 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	Brad Perryman	727 420-1957
Vice Pres.	Paul Krahmer	727 535-5827
Secretary	Shirley Vuille	727 864-2624
Treasurer	Jim Hunter	813 507-8415
Dir.-at-Large	Kyle Brinkman	727 455-6931
Dir.-at-Large	Steven Gaber	727 215-0464
Dir.-at-Large	David Richmond	727 692-9831
SPACE Editor	Guy Earle	813 785-1972
Public Relations	John O'Neill	727 637-5945
Membership Chair	Shirley Vuille	727 864-2624
Mirror Lab Chair	Paul McNabb	727-345-5713
Outreach Chair	Jim Hunter	813 507-8415
Star Party Chair	Mike Partain	859 339-0828
Librarian	Ralph Craig	727 384-2086
Club Webmaster	Jack Fritz	813 508-5680
Dark Sky Chair	Leeann Muszynski	813-601-0986

Click on the name to send email

Recognition of Patrons & Benefactors:

Clifford B. Benham	Benefactor
Walter Brinkman	Benefactor
Andy Demartini	Benefactor
Jack & Roni Fritz	Benefactor
Hosn, Ricky & Hala	Benefactor
David Knowlton	Benefactor
David & Tara Pearson	Benefactor
Rath, Damon & Jean Futch	Benefactor
Doug & Teri Sliman	Benefactor
Todd Vogt & Brittany MacDonald	Benefactor
Bruce Berger	Patron
Tim Cannedy	Patron
Michael Coate	Patron
Ralph & Christine Craig	Patron
Peter & Jaclynn Dimmit	Patron
Joseph & Pamela Faubion	Patron
Steve & Cindy Fredlund	Patron
Richard & Mary Garner	Patron
Valentino Hernandez	Patron
Charlie & Linda Hoffman	Patron
Scott & Beth Irwin	Patron
Matt Labadie	Patron

Laura Lanier	Patron
Corey Lynch	Patron
Robert Myers	Patron
Stephen Oros	Patron
Antonio Paris	Patron
Brad & Lisa Perryman	Patron
Alan Polansky	Patron
David & Rusty Richmond	Patron
Anthony Staiano	Patron
Wally & Ramona Vazquez	Patron

Examiner Staff

Editor	Guy Earle	813 785-1972
Reporter	Kelly Anderson	813 672-2751
In the News	Steve Robbins	386 736-9123
Mirror Lab	Ralph Craig	727 384-2086

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



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.