



# SPACE

St. Petersburg Astronomy Club **Examiner**

May 2024

Editor – Guy Earle

The St. Petersburg Astronomy Club has been the center of family astronomy in the Tampa Bay Area since 1927. Our 386 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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**Super Aurora** in West Palm Beach taken with Iphone by **Mike Partain**



# June Preview

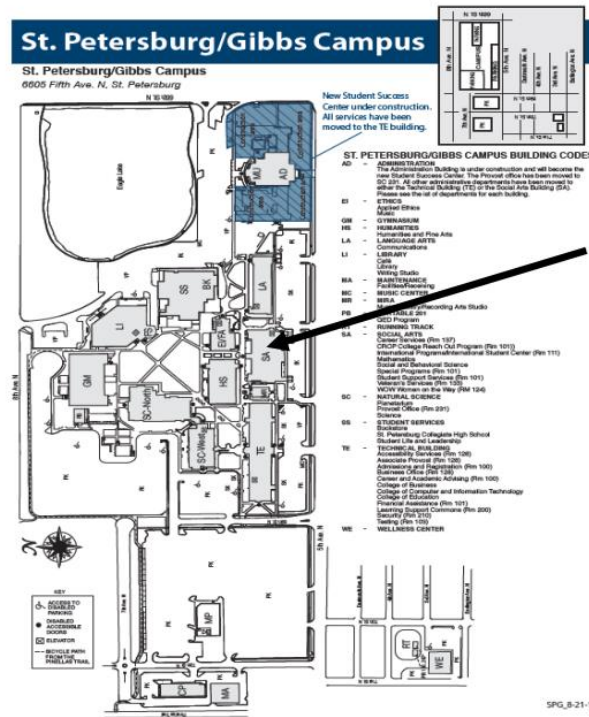
I had to delay my article on the upcoming planetary season for personal reasons, but I should have it in the June edition. I do plan on talking about the updates to the Dwarf II telescope and the recent announcement of the Dwarf III at the General Meeting on May 23<sup>rd</sup>. Please, some support your SPAC members and the club and join us for our meeting!

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Please, take note that the **General Meeting location** for both May and June has **changed** and will be located on the 3<sup>rd</sup> floor of the building off 5<sup>th</sup> Avenue where we hold our parties. The full resolution map is on the last page.



**SPAC May 23<sup>rd</sup> and June 27<sup>th</sup> Meetings Temporary Location change:**  
 Philip Benjamin Social Arts (SA) Bldg.  
 Room 322 (third floor).  
 Time: 7:30pm  
 This is due to construction scheduled in the Natural Science building.



## May General Meeting

This month's general meeting will take place on **Thursday, May 23<sup>rd</sup>** at **7:30 PM**. The meeting will be **at St. Petersburg College, Gibbs Campus, 6405 5<sup>th</sup> Avenue North, Social Arts Building, Classroom 322, 3<sup>rd</sup> floor**, and also be available **virtually**. This month, the presentation will be by SPAC member, **Christian Rubach**, on **"Beyond the Stars: Unveiling the Universe Using Data Visualization and Simulation."**

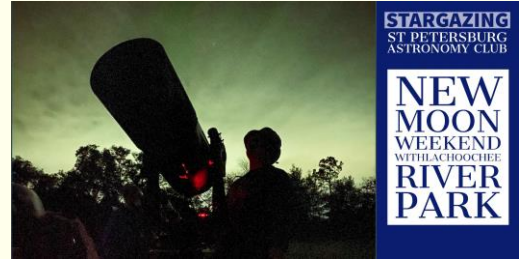


Join Zoom Meeting [HERE](#)

Meeting ID: 852 9687 2152

Passcode: 111992

The club's **New Moon observing weekend** will be by June 7<sup>th</sup>-9<sup>th</sup> at [Withlacoochee River Park](#) east of Dade City.



## New SPAC Members

We would like to welcome Robert & Liz Bryce, Stephan Szymanski, Steven Miller & Lisa Alessi, Matt Muskovac, and Willy & Beth Lebihan to our family of members.

## Examiner Staff

Editor	<a href="#">Guy Earle</a>
Space News	<a href="#">Steve Robbins</a>
Field Reporter	<a href="#">Kelly Anderson</a>
Mirror Lab	<a href="#">Ralph Craig</a>
Image Gallery	<a href="#">Peter McLean</a>
Mirror Lab	<a href="#">Mike Davis</a>
	<a href="#">Allen Maroney</a>

## President's Message

Our hobby is one of patience as our scale of time pales to the galactic clock. For example, those of you who missed the eclipse or wish to see the next one, have to wait a mere 21 years for it to happen in our neck of the woods again. Time is slow and it is never more apparent, than in our hobby.



Last Friday was one of the rare exceptions when something unexpected happened and it happened quickly...then it was gone. Carli and I traveled down to Jupiter and stayed with her daughter for a funeral. I had seen the G4 solar storm warnings and the talk of an aurora event in the South, but not here. The first and only time I saw an aurora was in 2003 at Kissimmee Prairie Plains State Park. What I saw then was a feint red glow on the Northern horizon and not much else. Even then Keith Koch and I were excited to have seen an aurora event in Florida!

Just after supper, I caught an update that the solar storm was upgraded to a G5 event and that it would reach Northern Florida. A front was just to the North of us and we were clear and dry. We were in a somewhat rural area and figured I'd give it a try.

At around 10:30PM I stepped outside and looked Northward. To my amazement, the sky had a feint purple/red hue to the naked eye. I took my iPhone 14 out and immediately took a picture on a three second delay. Almost immediately in the small preview window, I saw a pink and purple sky with light pillars, like nothing I have ever seen before in my life. I called for Carli and her daughter to come out. The sky just kept getting better and better as the aurora spread to the zenith, meaning it was visible well south of us. The light pillars became more pronounced and were memorizing to see. I took a ton of pictures that night, all in all, we saw aurora for about 2 and half hours before it dissipated and retreated northward.

Astronomy is not only an exercise in patience but in opportunity. Always look at the weather and what is going on that day, you never know when opportunity will knock.

*SPAC New Moon Weekend  
Field Report  
May 3 - 5, 2024*

By Intrepid Field Reporter

As usual several enthusiasts started the weekend early, with Joe Canzoneri, David Knowlton, Bob & Rita Mizell, Rich Tobin, Peter MacLean, Kathy Radner (our very own New York Snow Bird) and your Intrepid Field Reporter all arrived on Thursday.



We were treated to moderate temperatures but extensive fair weather cumulus clouds that didn't clear up until about 11:30 that evening. Skies stayed very clear until dawn.

On Friday we welcomed Tim Harris and Bob Stelmock to our little crowd of astronomers. Johnny White and Les Gatechair visited for the afternoon. Not so subtle was Les' arrival in his canary yellow Corvette. It is not possible to install a trailer hitch on a Vette. *Quelle dommage.*

Weather that day was much the same as Thursday, with cumulus scattered throughout until we approached sunset. Then clouds increased leaving only small and fast-moving sucker holes until gradually clearing by 11:30. Viewing was generally good for a couple of hours when the cloud gods decided we were done with astronomy for that night.

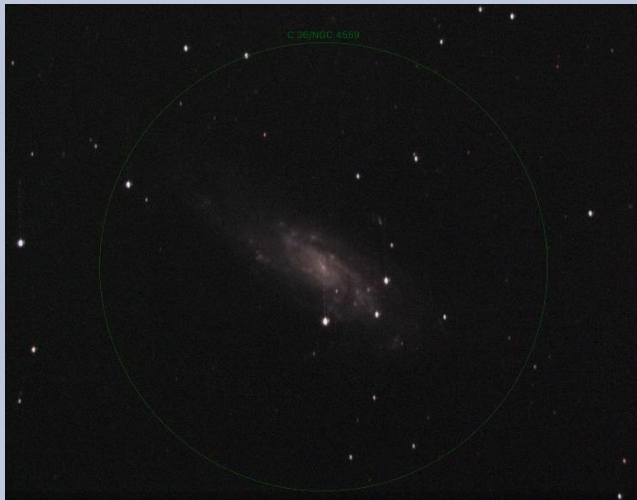
Saturday we were pleased to host about a half-dozen visitors who were curious about telescopes in particular and astronomy in general. Fortunately seeing was fairly good with just a few cloudy spots to dodge, so we had something to show our visitors. The highlight of things non-astronomical was Doug Sliman's appearance driving his slightly used Hummer straight out of the New Mexico desert. Somehow Doug had acquired an authentic Army "Humvee" (HMMWV – High Mobility Multipurpose Wheeled Vehicle)! Unfortunately the Army had removed the plate steel armor and the .50 caliber machine gun (more's the pity), but this is a really fun looking fix-em-up project. There were hardly any bullet holes.

The evening was cloudy enough to make imaging all but unlikely, so we were limited to bouncing back and forth from one clear spot to another.

Several hard cases stayed over Sunday night, but staring at the bottoms of clouds was the main activity that night.

Our next New Moon Weekend is scheduled for June 7 – 9 when the Moon is scheduled to not appear. Also, don't forget to remember our fallen heroes on Memorial Day, Monday, May 27<sup>th</sup>.



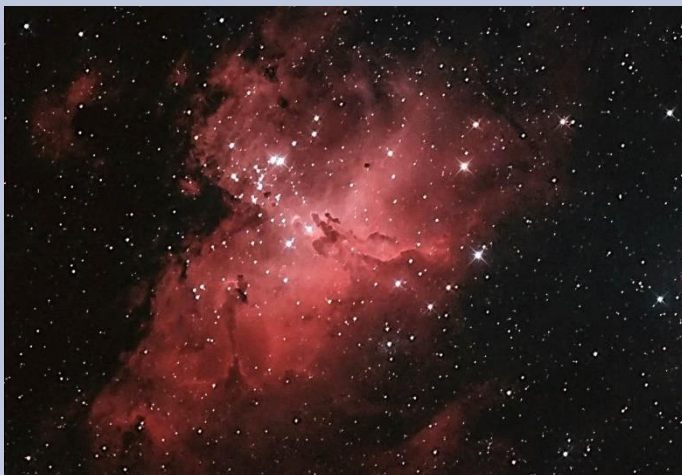


At New Moon Weekend I was experimenting with my new (to me) C11 and I managed to capture the Koi Fish Galaxy (no, really, that's its name) AKA NGC 3558. It's 30 MILLION light years distant. Wow, can we see far or what? And yes, I know guiding sucks on this one.

And on the right we have Peter MacLean's image of the War and Peace Nebula (NGC 6357, also called the Lobster Nebula). You can't say astronomers don't have a creative imagination.



And finally for this month we have a side-by-side comparison of Joe Canzoneri's Eagle Nebula (M 16 or NGC 6611) below left, and to the right is David Knowlton's version taken by his little robot with a 50mm eye (SeeStar). Pretty amazing on both counts, eh?



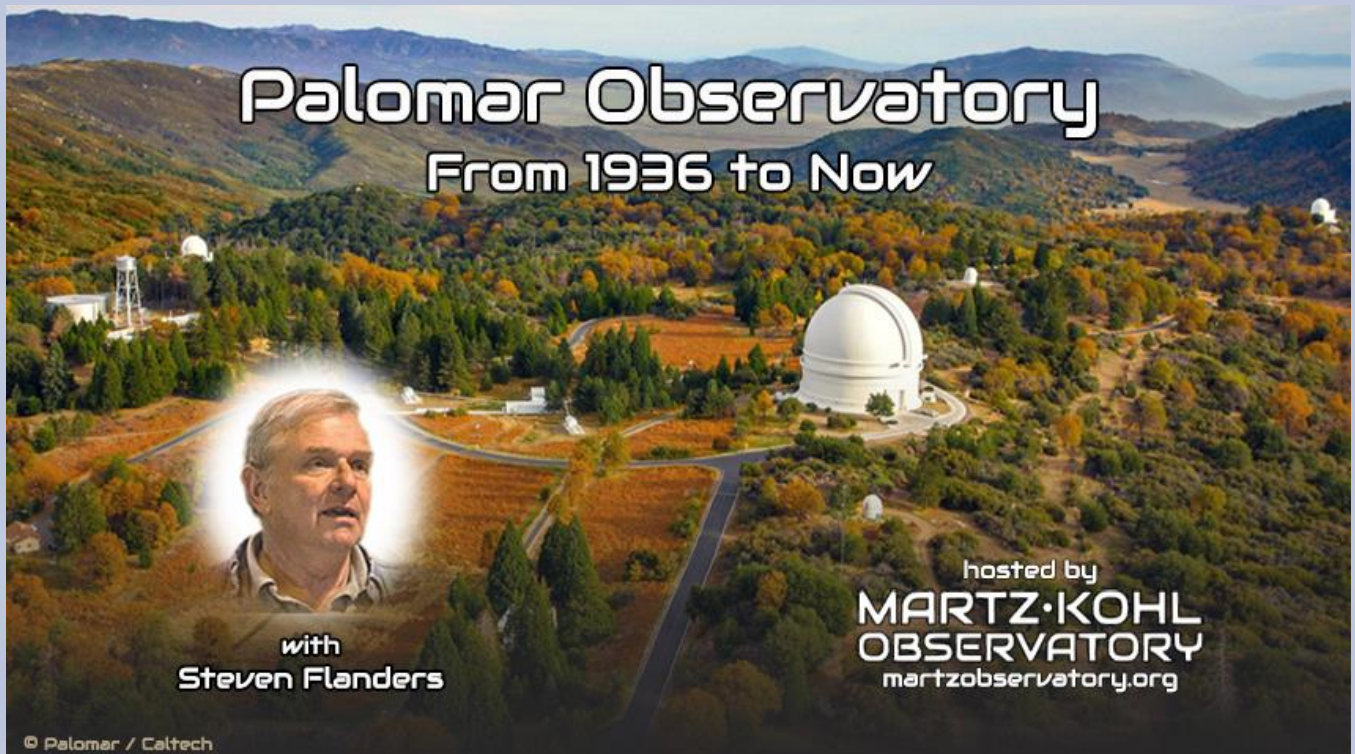
## *April General Meeting and beyond*

Unfortunately, Mike Partain was unable to get to the General Meeting for April and I had to attend virtually, so my thanks to Brad Perryman and Allen Maroney for assisting with the in-person events. We paid tribute to Nancy Huff, whom we recently lost, and then listened to the great presentation by Steve Flanders from Palomar Observatory.

Steve was very generous to volunteer for the presentation, showcasing the history of Palomar's construction and evolution up to this day. He had some really fascinating photos going back to the very start of the observatory.



GUY EARLE

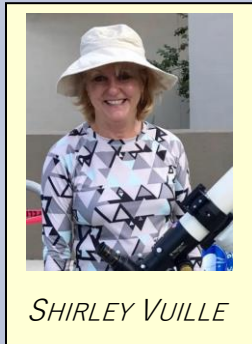


*I encourage each of you to try and attend our General Meetings, hopefully in person, as it really is easy to find the classroom on campus, or at least virtually. These presentations are all volunteers, whether from the outside or within the club itself. The next three months are all being done by SPAC members, with Christian Rubach this month, Carmen Manfredi next month, and myself in July, where I'll be doing a presentation on Caesar's Comet of 44 BC.*









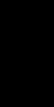

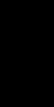
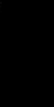
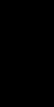
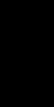

















# Interest in Weather Balloon Launch

The National Weather Service in Ruskin allows visitors to attend the balloon launch over the summer. SPAC is currently seeking a date over the summer, and we are asking the membership for interest. Our balloon spotting season begins a few weeks before the summer solstice. If you have an interest in attending, date and time to be announced once we finishing talking to the National Weather Service, please [email the editor](#) and I will compile an email list, which I will keep updated with new information.





*June Lunar Calendar*

June 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 						

June 1, the Moon will cross the celestial equator going northward at the Ascending Node

June 2, the Moon will be at Perigee: 368,108 km from Earth

June 2, Mars will be 2.4° south of the Moon

June 5, The Pleiades will be .4° north of the Moon

June 3, Saturn will be .8° north of the Moon occultation visible from Antarctica

**New Moon June 6**

June 9, Pollux will be 1.7° north of the Moon

June 11, Regulus will be 3.3° south of the Moon

**First Quarter June 14**

June 14, the Moon will be at Apogee: 404,078 km from Earth

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June 15, the Moon will cross the celestial equator going southward at the Descending Node

June 16, Spica will be  $1.2^\circ$  south of the Moon

June 20, Antares will be  $.3^\circ$  south of the Moon

June 20 is the Summer Solstice

### **Full Moon, June 21, the Full Strawbe Moon**

June 27, the Moon will be at Perigee: 369,292 km from Earth

June 31, Saturn will be  $.1^\circ$  south of the Moon occultation in the Pacific

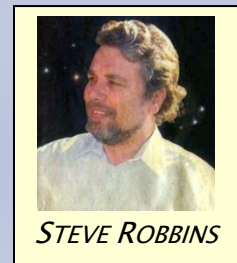
June 28, Mercury will be  $4.7^\circ$  south of Pollux

### **Third Quarter June 28**

June 28, the Moon will cross the celestial equator going northward at the Ascending Node

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## *Space Exploration News*



Defying predictions that Jupiter's radiation would cook it like a lobster, the Juno probe continues to astound. [Performing two flybys](#) of Jupiter's moon, Io this past month, Juno has returned the best science yet with its visible light and IR cameras. Among the features monitored were the 200 km long lava lake, Loki Patera, studded like islands in a terrestrial lake. Juno passed as close as 930 miles during the two close passes.

NASA has green lighted a special mission featuring a nuclear powered multicopter the size of an automobile to head to Saturn's moon Titan, launching in July 2028 and arriving at Titan in 2034. It is [called Dragonfly](#), and is scheduled to take one hop per Titan day, 16 Earth days, to hunt for organic compounds and identify geological processes on Titan. Titan is the only moon of any planet shown to have an atmosphere, clouds and lakes. In fact, although its gravity is only 1/7 Earth's its atmosphere is four times denser than Earth's, making flight MUCH easier on Titan than it is on Earth.

[NASA is still investigating](#) anomalies in the heat shield of Artemis 1 after its high speed plunge through Earth's atmosphere at the end of the Artemis I mission. Orion's heat shield is made with the same materials as the Apollo capsules of the 1960s, except that the installation procedure has been changed to cut the manufacturing time by three quarters. Apparently the ablation patterns were different than what the simulations predicted. The Orion Program Office at Johnson Space Center said "We expect the material to ablate with the 5,000 degrees Fahrenheit [2,760 degrees Celsius] the spacecraft encounters on a reentry through Earth's atmosphere, and to see charring of the material through a chemical reaction, but we didn't expect the small pieces that came off, versus

being ablated." They further stated there was a healthy margin remaining of virgin Avcoat, and temperature data inside the cabin remained at expected levels, so if crew were on board they would not have been in danger, the program office statement explained. This investigation is done in an abundance of caution.

One of amateur astronomy's [favorite galaxies is M-82](#), a galaxy with a tremendous headache that appears to be split in half by what looks like cataclysmic explosion of the nucleus. Well, JWST has taken its turn and in the infrared part of the spectrum, the red filaments appearing to split the nucleus in visible light extend the entire length of the galaxy! NASA characterized the phenomena as "lively conditions." Lively indeed! M-82 just got much more fascinating.

NASA and ESA employ [a fleet of spacecraft](#) solely for the mission of monitoring the Sun. Recently the whole fleet had a great workout with the [strong solar flare of May 10](#) and the subsequent space weather on Earth. This flare is classified as an X3.98 flare, "X" meaning it is of the most intense category, and 3.98 referring to the intensity of the flare within the "X" category. This flare was not only sunspot [AR3664's strongest flare to date](#), but the 4<sup>th</sup> most intense flare of Solar Cycle 25 so far. This resulted in radio blackouts in an oblate circle centered on India and extending from the eastern Mediterranean Sea to the coast of Japan. In the US, auroras were reported as far south as Florida.

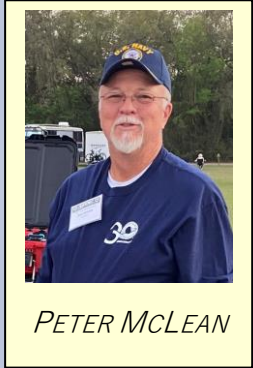
On May 26 there will be an ultra-rare transit of the Sun by the (Chinese Space Station, Tiangong, Tianhe. Please choose one.) at 08:28:32 for the central St Petersburg location. You can get specifics for other locations along the path at [transit-finder.com](#). The time may change a bit as the event nears. This looks like a job for Seestar!

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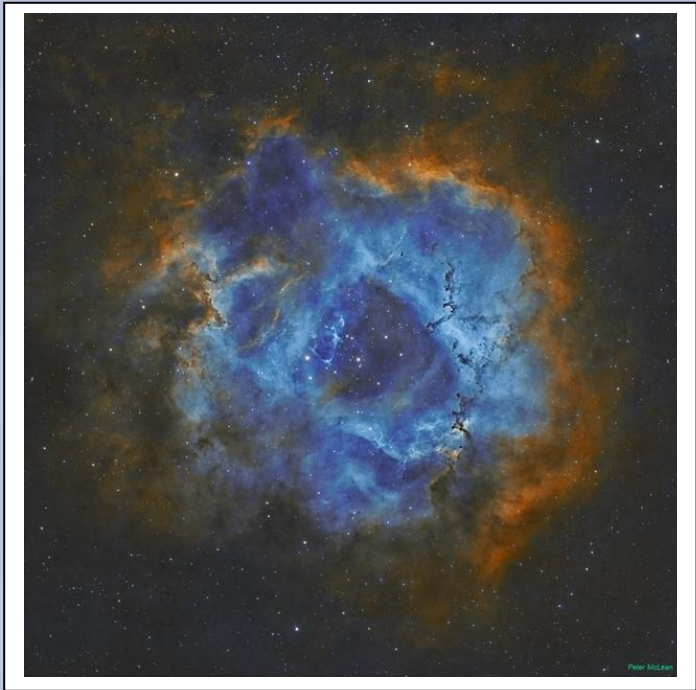


# SPAC Image Gallery

★ Here are some excellent astrophotography highlights from our fellow SPAC members, divided into categories like our at our annual star party imaging competition. If you would like to share your work, I encourage you to [email Peter](#) in order to submit for future newsletters or share them on our [SPAC Facebook page](#).

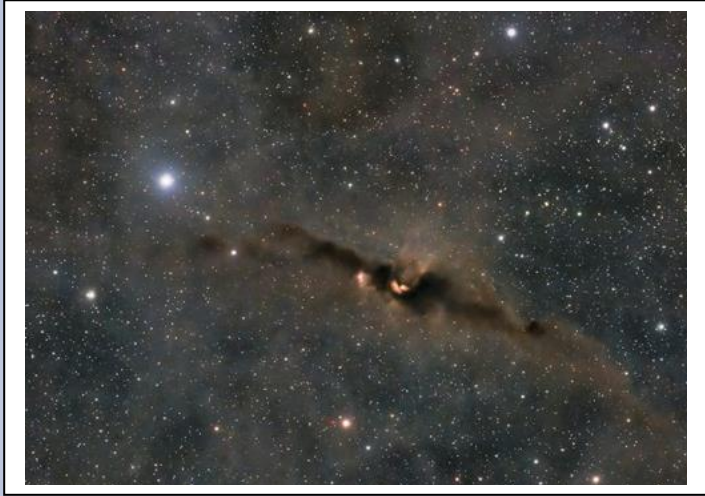


NGC 2237 Rosette Nebula by Peter McLean WO GT81 with ASI533MC



## Nebula

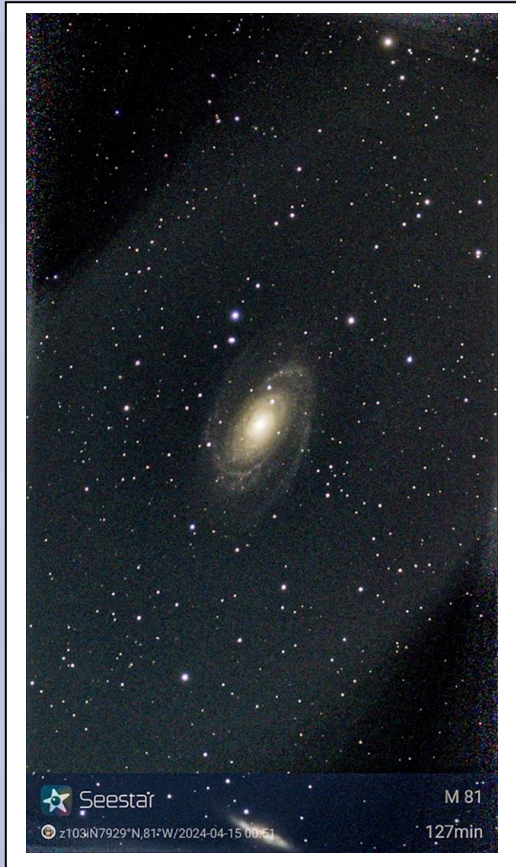
Steven Miller M16 Eagle Nebula Orion 10" Newtonian ASI533mm



Jamie Kenas LDN43 WO GT81 with ASI533mm

# Planetary, Lunar, and Smart Telescope

By Dave Robbins



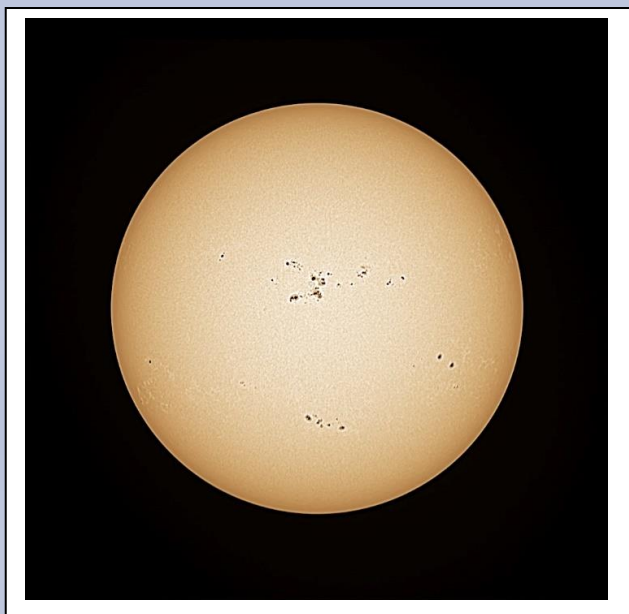
By Greg Shanos



By Guy Earle



## Planetary, Lunar, and Smart Telescope



By Les Gatechair  
AstroTech 50 x288mm,  
ASI533MM

By Joe Reichle  
Lunar Mountain Range Close Up  
Orion 10", QHY5III485C



By Bruce Sobut  
Sun Skin Issue  
Explore Scientific ED80, Nikon



## Deep Space (Galaxies, Star Clusters, Comets)

Johnny White M82 Cigar Galaxy  
Celestron 8" HD, ZWO ASI2600MC



Steven Miller M93 Sunflower  
Galaxy Orion 10" Newt,  
ASI533MM



Jamie Kenas NGC5139 Omega  
Centauri. Celestron 9.25Edge HD  
ASI2600MC



Joe Canz NGC4565 Needle Galaxy  
RC 8" ASI183MC

## For Sale

**Item 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. \$1200. Contact Steve @ [steve.robbins13@gmail.com](mailto:steve.robbins13@gmail.com)



## SPAC Business Meeting

Our next business meeting is **Wed., June 12<sup>th</sup>, 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	<a href="#">Mike Partain</a>
Vice Pres.	<a href="#">Guy Earle</a>
Secretary	<a href="#">Shirley Vuille</a>
Treasurer	<a href="#">Jim Hunter</a>
Dir.-at-Large	<a href="#">Peter McLean</a>
Dir.-at-Large	<a href="#">Steven Gaber</a>
Dir.-at-Large	<a href="#">Jack Fritz</a>
SPACE Editor	<a href="#">Guy Earle</a>
Public Relations	<a href="#">John O'Neill</a>
Membership Chair	<a href="#">Shirley Vuille</a>
Mirror Lab Chair	<a href="#">Paul McNabb</a>
Outreach Chair	<a href="#">Jim Hunter</a>
Star Party Chair	<a href="#">Mike Partain</a>
Librarian	<a href="#">Ralph Craig</a>
Club Webmaster	<a href="#">Jack Fritz</a>
Dark Sky Chair	<a href="#">Leeann Muszynski</a>

*Click on the name to send email*

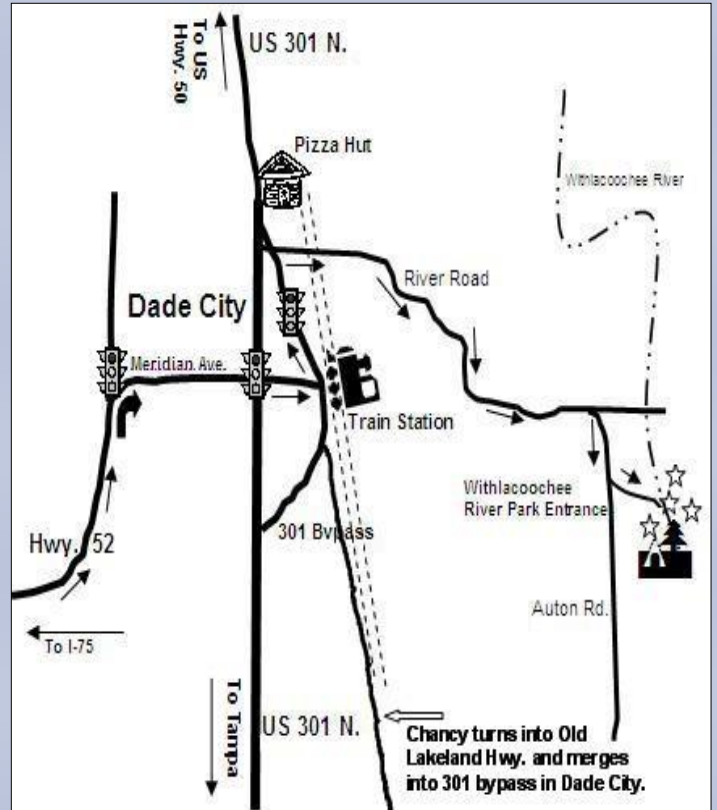
## Withlacoochee New Moon Weekends

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](http://www.StPeteAstronomyClub.org)





# St. Petersburg Astronomy Club

## Recognition of Patrons & Benefactors

Walter Brinkman	Benefactor	Christopher Bankston	Patron
Dave & Deborah Catalano	Benefactor	Jason & Margie Bedell	Patron
Stephanie Colon &		Kyle Brinkman	Patron
Ariel Grajales	Benefactor	Michael Callahan	Patron
Jack & Roni Fritz	Benefactor	Ralph & Christine Craig	Patron
Michael Haworth & Melanie Otte	Benefactor	London & Leslie Crosby	Patron
Valerie Hyman	Benefactor	Peter & Jaclynn Dimmit	Patron
Naseeb Nas Kaleel	Benefactor	Guy & Kelly Earle	Patron
Jamie Kenas	Benefactor	Joseph & Pamela Faubion	Patron
David Knowlton	Benefactor	Darla & Peter Flynn	Patron
Laura & Roy Lanier	Benefactor	Steve & Cindy Fredlund	Patron
Greg Legas	Benefactor	Steve Gaber & Karen Sell	Patron
Brenda Lorenz	Benefactor	Richard & Mary Garner	Patron
Dave Lorenz	Benefactor	Timothy & Mary Ann Harris	Patron
Tod Markin	Benefactor	Charlie & Linda Hoffman	Patron
Kelly McGrew	Benefactor	Matt Hughes & Manuel Ordonez	Patron
Kevin & Karen Mulford	Benefactor	Bruce King	Patron
Will & Jenni Nelson	Benefactor	Matt Labadie & Jennifer Willman	Patron
David & Tara Pearson	Benefactor	Dave & Mary MacKenzie	Patron
Rath, Damon & Jean Futch	Benefactor	Steve & Jeri Maiaroto	Patron
Vincent Risalvato &		Joseph Mandara	Patron
Tabitha Castillo	Benefactor	Allen Maroney & Tracee Elliott	Patron
Christian & Wendy Rubach	Benefactor	Steven Miller & Lisa Alessi	Patron
Doug and Teri Sliman	Benefactor	Herb Monroe & Martha Stewart	Patron
Jill & Robin Sumner	Benefactor	David & Kathryn Musser	Patron
Andrew & Bonnie Watts	Benefactor	Leeann Muszynski	Patron
*****			
Bill & Norma Amthor	Patron	Bill & Kim Northup	Patron
Jan Anschuetz	Patron	Stephen Oros	Patron
Steven Balke	Patron	Michael & Carli Partain	Patron
		Brad & Lisa Perryman	Patron

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Alan Polansky	Patron
John & Abbie Redmond	Patron
Mike Rozycki	Patron
Gregory Satchwell	Patron
Manny Sosa & Leslie Long	Patron
Anthony Staiano	Patron
Jonathan Stewart	Patron
Tom & Michelle Sweet	Patron
Wally & Ramona Vazquez	Patron
Alexie Velez & Yanira	
Hernandez-Velez	Patron
Shawn Wilson	Patron
Elizabeth Wood	Patron

**SPAC May 23<sup>rd</sup> and June 27<sup>th</sup> Meetings Temporary Location change:**  
 Philip Benjamin Social Arts (SA) Bldg.  
 Room 322 (third floor).  
 Time: 7:30pm  
 This is due to construction scheduled in the Natural Science building.

## St. Petersburg/Gibbs Campus

**St. Petersburg/Gibbs Campus**  
 6605 Fifth Ave. N, St. Petersburg

**New Student Success Center under construction.**  
 All services have been moved to the TE building.

**ST. PETERSBURG/GIBBS CAMPUS BUILDING CODES**

- AD - ADMINISTRATION  
 The Administration Building is under construction and will become the new Student Success Center. The Provost office has been moved to SC 231. All other administrative departments have been moved to either the Technical Building (TE) or the Social Arts Building (SA). Please see the list of departments for each building.
- EI - ETHICS  
 Applied Ethics  
 Music
- GM - GYMNASIUM
- HS - HUMANITIES  
 Humanities and Fine Arts
- LA - LANGUAGE ARTS  
 Communications
- LI - LIBRARY  
 Cafe  
 Library  
 Writing Studio
- MA - MAINTENANCE  
 Facilities/Receiving
- MC - MUSIC CENTER
- MR - MIRA  
 Music Industry/Recording Arts Studio
- PB - POSTAL PROGRAM
- RT - RUNNING TRACK
- SA - SOCIAL ARTS  
 Career Services (Rm 137)  
 CRCP College Reach Out Program (Rm 101)  
 International Program/International Student Center (Rm 111)  
 Mathematics  
 Social and Behavioral Science  
 Special Programs (Rm 101)  
 Student Support Services (Rm 101)  
 Veteran's Services (Rm 133)  
 WCVW Women on the Way (Rm 124)
- SC - NATURAL SCIENCE  
 Planetarium  
 Provost Office (Rm 231)  
 Science
- SS - STUDENT SERVICES  
 Bookstore  
 St. Petersburg Collegiate High School  
 Student Life and Leadership
- TE - TECHNICAL BUILDING  
 Accessibility Services (Rm 128)  
 Associate Provost (Rm 128)  
 Admissions and Registration (Rm 100)  
 Business Office (Rm 128)  
 Center and Academic Advising (Rm 100)  
 College of Business  
 College of Computer and Information Technology  
 College of Education  
 Financial Assistance (Rm 101)  
 Learning Support Commons (Rm 200)  
 Security (Rm 210)  
 Testing (Rm 105)
- WE - WELLNESS CENTER

**KEY**

- ACCESS TO DISABLED PARKING
- DISABLED ACCESSIBLE DOORS
- ELEVATOR
- BICYCLE PATH FROM THE PINELLAS TRAIL

SPG\_8-21-17





## 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](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.**