



February 2020

Editor – Guy Earle

The St. Petersburg Astronomy Club has been the center of family astronomy in the Tampa Bay Area since 1927. Our 289 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

BRAD PERRYMAN

★ OBS is just around the corner. I hope everyone has had a chance to sign up for this stellar event. We have a lot of activities and educational opportunities planned for the Star Party.



Bring your bike for the trail ride, a walking stick for the nature hike and finish off your tour of the park with the lazy hayride.

Our educational events include planetary imaging by Guy Earle and Astro imaging with Bob Stemlock. LeeAnn Muszynsk is bringing to light a topic that is important to all amateur astronomers, 'Dark Matters: The implications of light pollution and what we can do about it.' On Saturday, our keynote speaker Kevin McKay Ph. D, will provide an intellectual and entertaining presentation about gravity waves.

As in past years, Kyle Brinkman will host the social hour with snacks and music in the

lecture hall from 4 to 5 PM every day. Learn about the art of mirror making from the club's mirror lab members in the mirror lab tent. Find out about the equipment that makes your fellow astronomers stay up at night during the Telescope Walkabout. If you have equipment that hasn't been used in a while or looking for something new to add to you collection, then stop by the swap meet to buy/sell/or trade.

Of course, the whole reason we partake in the Star Party is for the views at night and socializing with friends. This year will be even more special thanks to Andy and Bonnie Watts. They provided a generous donation to the club. Because of them, the SPAC is now in possession of a 20 inch F/5 Obsession goto Telescope. We will set up the telescope in the 'Valley of the Dobs' for anyone who wants a larger than life view of the cosmos.

I hope everyone has a great and safe time at the OBS 2020.

New Members

We would like to welcome Omar Rahman, Robert Kanyok & Carmen O’Brien, Pat & Pam Devoid, John O’Berg, and Richard & Maricela Ortiz to our family of members.

General Meeting

This month’s general meeting will take place on Friday, February 28th at **8:00 PM**, at St. Petersburg College, Gibbs Campus, 6405 5th Avenue North.

Main Program

The January program is by Leeann Muszynski: *Dark Matters, The implications of light pollution and what we can do about it.*

March Astronomical Events

STEVE ROBBINS

★ Wednesday, March 4, the moon will be at its greatest northern declination +23.4°.

Friday, March 6, the Moon poses for its photo op 1.1° north of the Beehive Cluster

Sunday, March 8, Neptune is in conjunction with the Sun.

Tuesday, March 10, the Moon is at perigee, 357,100 km from Earth.

Tuesday, March 17, the Moon will be at greatest southern declination, -23.5°.

Wednesday, March 18, Mars is .8° north of the moon, with Jupiter 1.6° north of the Moon, AND Saturn 2.3° north of the Moon.

Thursday, March 19 is the Vernal (spring) equinox.

Friday, March 20, Jupiter will be .7° north of Mars.

Monday, March 23, Mercury is at greatest elongation, 27.8° west of the Sun.

Tuesday, March 24, the Moon is at apogee, 406700 km from Earth and Venus is greatest elongation 46.1° east of the Sun.

Tuesday, March 31 find Saturn .9° north of Mars.

March’s full moon is the Worm Moon as the springtime worms burrow upward toward the warmth of the sunlight.

The Moon

First Quarter – March 2

Full Moon – March 9

Third Quarter – March 16

New Moon – March 24



Space Exploration News

STEVE ROBBINS

★ In an amazing feat, NASA has restored full functionality to a spacecraft 11.5 billion miles from Earth, Voyager 2. January 28, Voyager 2 unexpectedly shut down, probably due to a power overload.

But now all systems are online and reporting science data once again. Communication one way is a 17 hour lag time with bidirectional data taking 34 hours per trip.

ISS crew American, Christina Koch, Italian, Luca Parmitano, and Russian, Aleksandr Skvortsov have safely returned to Earth using their Soyuz lifeboat. That craft is so small that the crew cannot wear pressure suits inside, and landing went off without a hitch, including the first Russian HD video of the descending parachute, which unfortunately reverted to potato camera for the invisible touchdown. Parachute video starts at 1:20:57.

January 30, a Rocket Lab Electron rocket executed its 11th flight for the National Reconnaissance Office, carrying a classified payload. This small booster is notable for having electric fuel pumps instead of the normal gas turbines. On launch, it expends one battery pack, hot switches to the second pack and then jettisons the expended pack to save weight. The last NRO launch was a year ago onboard the largest pre-Falcon Heavy booster, the Delta 4, with a weight of 1.6 million lbs, is 236 feet tall and produces 2.1 million pound-feet of thrust. The Electron, the smallest orbital rocket weighs 27,600 lbs, is 57 feet tall and produces 36,000 pound-feet of thrust.

January New Moon Weekend

KELLY ANDERSON



It's been a long, dry spell star-wise for many of us. The last time I had a decent

night of imaging was last June in West Texas, and that was only one night out of four. We finally broke our strings of lousy astronomy nights during the January, 2020 New Moon Weekend. It was a nice way to start the new decade.

Jack Fritz arrived on Thursday and actually set up his telescope! Apparently it still works. Your intrepid Field Reporter joined him mid-day on Friday and set up a 127mm refractor and a widefield camera, ever the optimist hoping that the drought would be broken. Also joining us on Friday were Allen & Betsy Force, Mark & Sharon Bruns, Tom & Chris Spano, Mike & Carli Partain, Franklin Matos, and Joe Canzoneri with his brand new but very slightly used travel trailer. Slightly smaller than his last trailer, but perfectly adequate for the task. Maybe we can talk him into bringing his telescope next time.

Viewing was intermittent but fairly good Friday evening, with sessions of clear skies and brilliant stars interrupted with bands of clouds. Not a good night for imaging, but pretty good for observing. Late that night a really bright meteor streaked across the sky, the brightest most of us have ever seen. That alone was worth the trip.

Arriving Saturday were Tim & Mary Ann Harris as well as Pat and Pam Devold. Also joining us for just the evening were Allen Maroney, Ralph Craig, and Guy Earle, as well as Jim & Penny Hunter. Several other people joined us after dark, but unfortunately I missed meeting them, so my apologies for being unable to include them in this blog. Next time I'll try harder.

Saturday morning was clear and bright after the last of the ground fog dissipated, and (*mirabile dictu!*) it stayed clear until the fog beast returned in the wee hours Sunday morning. Several of us were actually able to image a few of the heavenly offerings abounding to our wondering eyes. Our little star village had grown into a weekend happening (do we still have happenings? Or am I hopelessly out of date?). For those who missed it ... neener neener! But you can't miss our next New Moon event, the 2020 Orange Blossom Special. Well, maybe you can miss it, but rain or shine it's going to be a lot of fun. As usual, clear skies are guaranteed.

Astronomy Outreach

JIM HUNTER

★ For the last 5–6 years Kelly and I have been doing an event at Little Manatee River State Park. There was a great, very dark parking lot to set up on with a low tree line.

When Yatseka, the Ranger, asked for 1/11. We agreed. We went to dinner early and arrive in time to set up. There was no screen, etc. at the site. Kelly called Yatseka, who is now at Alafia State Park, a 35 minute drive back.

We arrived in the midst of her presentation and I set up next to the shelter with trees on the east and west. Venus was just over the tree during his presentation and required moving the scope later. It was very cloudy partly due to mosquitos. Penny only got a dozen bites. A few viewed during his talk and about 15 stayed. About 20

minutes later the full moon rose above the shelter, necessitating another scope move (thank you Dobson) about five people viewed it.

All in all, a 120 mile trip for a few people to see Orion and the moon.

Kelly and I will actually read the next request from Yatseka.

Public star parties are scheduled in February on:

1st – East Lake Library

28th – Weedon Island

29th – Brooker Creek Preserve

I did the Solar System presentation on February 1st at Little Lake Library to an audience of about 60.

Doug, Tom Wally and Steve set up scopes and viewed the moon and Venus. There were clouds periodically.

The library had a large variety of activities for kids of all ages, origami, scavenger hunt and wrist band –all astronomy related. The gave away a Tascoe 2" and a microscope.

They were very pleased with the event, in spite of the clouds and very appreciative of SPAC.

For my presentation, they gave me a rechargeable laser pointer, which I used.

SPAC Member Publication

Congratulations to SPAC member, **Greg Shanos**, who recently published an article in Meteorite Times Magazine, *Initial Identification of Extraterrestrial Amino*

Acids in the Aguas Zarcas CM2 Carbonaceous Chondrite.

Here's a summary from Greg: The fall of the Aguas Zarcas CM2 carbonaceous chondrite on April 23, 2019 commemorates the fiftieth anniversary of the Murchison CM2 carbonaceous chondrite which fell in Victoria, Australia on Sept 28, 1969. The Murchison meteorite contains a treasure trove of extraterrestrially produced molecules for the emergence of life that include amino acids, fatty acids, sugars, and nucleotides. Scientists were hopeful that Aguas Zarcas would also be rich in amino acids. An initial study by Glavin et al confirmed a total of 19 amino acids in the Aguas Zarcas CM2 carbonaceous chondrite. Murchison by comparison has a total of 96 amino acids to date. The amino acid abundance of the 19 amino acids in Aguas Zarcas was determined to be approximately one third the concentration of that found in the Murchison meteorite. Additionally, an excess of L-type amino acids in the Aguas Zarcas provides evidence of an early solar system formation bias towards L-amino acids prior to the origin of life. The identification and confirmation of extraterrestrial organic molecules in the Aguas Zarcas CM2 carbonaceous chondrite has just begun. Stay tuned for more discoveries on the horizon.

For further reading, please click [here](#) for a link to the full article.

Get Your 2020 RASC Merch

JIM HUNTER

★ The following calendars are available for SPAC members:

Royal Astronomy of Canada Handbook \$27
RASC Calendar is \$17

Please contact Jim Hunter at:

Hunters2178@verizon.net

17316 Oak Ledge Dr.

Lutz, FL 33549-7626

813-953 1821

813-507-8415 - cell

National Weather Service

SHIRLEY VUILLE

★ Happy birthday to the National Weather Service!

On February 9, 2020, the National Weather Service celebrated its 150th Birthday!



SPAC Astrophotography

GUY EARLE

Here are some outstanding astronomy photographs by our fellow SPAC members. I encourage members who wish to share their work to [email the editor](#) to submit for future newsletters or share them on our [SPAC Facebook page](#).

Additionally, if you are attending the OBS next week, I will be making an presentation titled, "An Introduction to Planetary Imaging" on Thursday the 20th at 2 PM.



Left: Target: NGC 2359 Thor's Helmet
Dates: 2020-01-29, 2020-02-08
Location: My driveway, St Pete.
OTA; Celestron Rasa 11
Mount: Celestron CGX
Camera: ZWO ASI 1600MM
Filters: Baader Highspeed HA, OII
Exposures: HA: 300s x20, OII: 300s x3 by
Jaime Kenas



Top: NGC6357 by John O'Neill

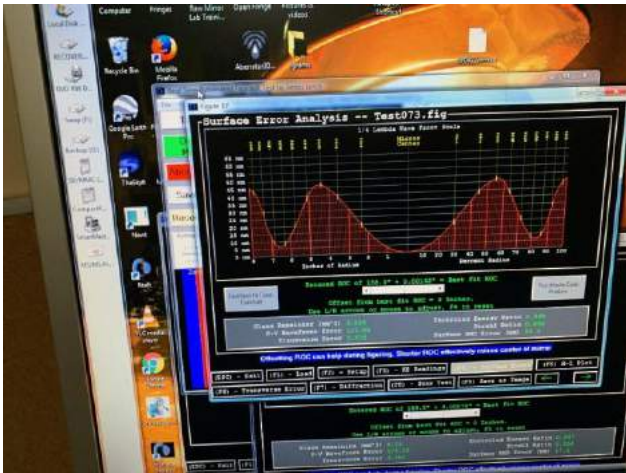
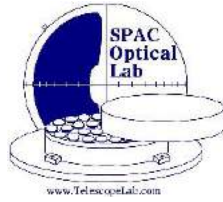


Left: M81 (Bode's Galaxy) and M82 (Cigar Galaxy). LRGB (60s subs) and H-alpha (120s), total 70 mins. ES ED102mm with 0.8 reducer, EXOS2 mount, ASI1600mm Pro, guided by **Omar Rahman.**

SPAC Mirror Lab Report

BRAD PERRYMAN

★ I finally finished figuring my 16 inch mirror (almost). It is approximately 1/6 wave on the focal tester, but since we now have interferometers in the club, I want to verify it with a 3-D map of the surface before it is sent off for coding.



Paul McNabb is working hard to have his 16" scope ready for the OBS. The whole crew is helping him as much as possible to achieve this goal. Over the weekend, we were able to attach the altitude bearings, make the ground board, paint, stain and seal all of the wood. Just a few more steps left to go and it will be ready for the OBS



SPAC Business Meeting 

Our next business meeting is Wednesday, March 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 |
| 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 |

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 |
| David Knowlton | Benefactor |
| David & Tara Pearson | Benefactor |
| John Stepanov | Benefactor |
| Ronald & Sterling Algieri | Patron |
| Bruce Berger | 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 |
| Robert Myers | Patron |
| Antonio Paris | Patron |
| Brad & Lisa Perryman | Patron |
| Alan Polansky | Patron |

| | |
|------------------------|--------|
| David & Rusty Richmond | Patron |
| Anthony Staiano | Patron |
| Wally & Ramona Vazquez | Patron |

Examiner Staff

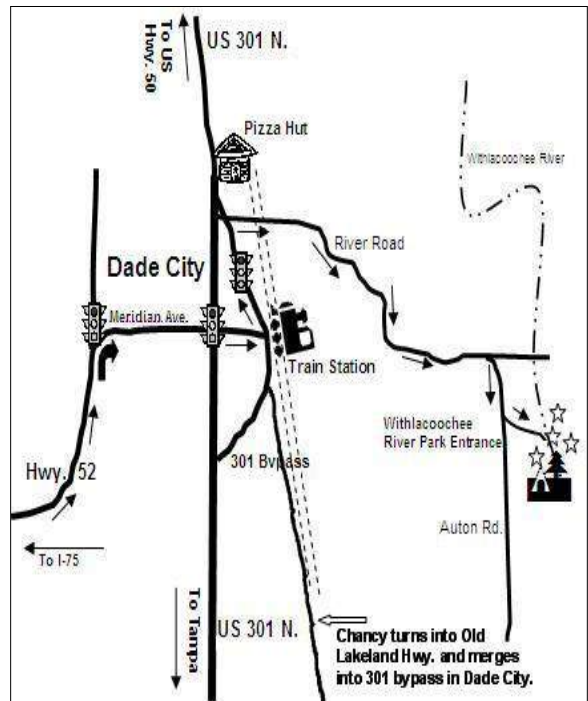
| | | |
|-------------|--------------------------------|--------------|
| Editor | Guy Earle | 813 785-1972 |
| Reporter | Kelly Anderson | 813 672-2751 |
| In the News | Steve Robbins | 386 736-9123 |
| Mirror Lab | Ralph Craig | 727 384-2086 |

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

Detailed directions can be found at:



SPAC, INC. MEMBERSHIP INFORMATION

Membership in St. Petersburg Astronomy Club, Inc. is open to anyone, regardless of age, who is interested in astronomy. Dues are considered donations and are non-refundable. Membership options are available as listed below:

To join or renew your membership:

Complete the following form and return it with your payment to: Jim Hunter - Treasurer, 17316 Oak Ledge Dr., Lutz, FL 33549-7626 - Telephone number (813) 909-7013 (checks should be made payable to SPAC, Inc.)

Name: _____ Telephone Number: _____

Spouse: _____ Children (*Under 18*): _____

Address: _____ City: _____ St. ____ Zip: _____

E-Mail address: _____

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.

Student: [] Free. Expected date of graduation: _____

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.