



October 2017

Editor -Jack Fritz

The St. Petersburg Astronomy Club, has been the center of family astronomy in the Tampa Bay Area for decades. Its 254 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

KYLE BRINKMAN

★ There is gold in them there stars! That is the latest news from a collision of two neutron stars. Perhaps you've seen the news about this. As you may know already, nuclear fusion is the mechanism that keeps stars bright. That process will start by combining hydrogen to form helium. Next, the helium will fuse into carbon, oxygen and so on until the star creates iron. The fusion process of a star stops at iron. The higher elements are created upon the star's collapse and subsequent supernova. Now we know that the elements are also created when two neutron stars collide.



Neutron stars, like black holes, are massively dense objects. Unlike black holes, neutron stars are not massive enough to trap light. This means that they can be observed across the light spectrum. These two massive and dense stars collided and were observed producing many of the higher elements including gold. While this may seem like a rare event, it isn't. Anything that is possible in the universe will happen, and it will happen often. Need proof? Check out the number of wedding bands made of gold.

There are reports of asteroids much closer to Earth that are loaded with diamonds, gold, and other rare earth elements. Some people are already trying to find a way to get out there and pick them up. This is an exciting prospect since it would make the minerals available to us in abundance without the corresponding pollution that comes from mining on Earth. Once again, research leads to discovery, discovery to application and application to prosperity. All through the power of science.

New Members

We would like to welcome Jose & Sherry Valiente to our family of members.

Annual Meeting

This month's meeting will take place on Friday, October 27th, at 7:00 PM, at the Science Center of Pinellas County, 7701 22nd Ave. N, St. Petersburg.

Main Program - Annual Meeting, Election of Officers, Fall Picnic, and Sidewalk Astronomy. Please remember that our Annual Meeting begins at 7:00 PM, one hour earlier than normal.

Upcoming Programs

- November: TBD.
- December: Christmas Party.

Orange Blossom Special

Our annual star party will be February 7th - 11th, 2018. We do not have a food vendor this year, so you need to be prepared to provide all your own food.

We are planning a potluck picnic with the club providing meats and attendees bringing a covered dish for Saturday night and will have coffee, hot cider, and cocoa available in the hospitality tents all day and night.

We only have a limited number of campsites on the field with electricity, and they are assigned on a first-come, first-serve basis so you may want to register early. Go to www.OrangeBlossomSpecial.org/ for more information.

Club Meeting Hurricane Policy

Hurricane season is upon us. We may cancel the meeting if a hurricane is threatening Pinellas County. If that happens, we will send a cancellation notice via email. Alternatively, you may call Allen Maroney at 727 867-4781 or Jack Fritz at 813 508-5680 to check on the status of the meeting.

National Weather Service

SHIRLEY VUILLE

★ The Atlantic hurricane season lasts from June to November and peaks between August and October. Everyone should make plans how to deal with these severe storms now before the season begins.

Click this link to view and print their booklet, [How to Prepare for a Hurricane](#).

November Astronomical Events

STEVE ROBBINS

★ Sunday, November 5th, just one day after the Full Moon, the South Taurid Meteor

Shower peaks with a ZHR of about ten. You might be able to skip this one safely. But you can find the moon only .7° south of Aldebaran. Saturday, November 11th, find the Moon .4° south of Regulus.

Sunday the 12th, the North Taurid Meteor Shower peaks, ZHR about 15 with a waning crescent Moon in the early morning.

Friday, November 17th, the Leonid Meteor Shower peaks, ZHR of 15 the day before the new Moon.

November's Full Moon is the Full Beaver Moon. Beavers were busy building their dams for the winter, and Native Americans hunted them during this month.

October Moon Phases:

- 4th - Full Moon
- 10th - Moon at Third Quarter
- 18th - New Moon
- 26th - Moon at First Quarter

NASA News

STEVE ROBBINS

★ Now THAT's more like it! [Roscosmos and NASA](#) have jointly announced that in the next ten years a new space station will be built, orbiting the Moon. European, Canadian and Japanese space agencies have also signed on for this exciting program. If they orbit, who can prevent them from again landing on the Moon?

The most exciting thing I saw during the eclipse was Destin of You Tube's [Smarter Every Day](#) channel. In concert with some photographers and a farmer good enough to let them observe from his property, Destin and company set up shop where they could see a lunar transit of the ISS across a partially eclipsed Sun. With high-speed video equipment, they [let us participate](#) in their incredible feat.

And on Mars, Curiosity is finally exploring Gale Crater, finding that it was once a giant lake, larger than Lake Superior, and which existed for at least 500 million years. [Unmistakable photos](#) from the Kimberly Formation leave no doubt that this was indeed a giant lake. If there is a place on Mars to concentrate the search for [historical or present life](#), this is it!

Mirror Lab

RALPH CRAIG

★ The last few months have been a busy time for the mirror lab. Five mirrors were completed and delivered to Spectrum Coatings to be aluminized. The completed mirrors include Mike's 12½-inch, 4th generation hex-back mirror; Allen's thin 16-inch, Brad's 10-inch, my thin 12-inch and the Mirror Lab's 12-inch Zerodur® glass mirror completed by Allen.



Brad proudly display his handiwork

We are currently working on two more mirrors. Paul is in the final polishing phase on his 14-inch re-melt of a 12-inch blank that Mike made for him. Dimitri is also polishing his thin 12-inch. Maybe these will be done in time to drop off at Spectrum when we pick up the other ones.



Allen displays the Zerodur® Glass mirror.

Editor's Note: What, you haven't heard of Zerodur®? Well, neither had I. ZERODUR®, is an extremely low expansion glass ceramic from SCHOTT. It is designed to minimize changes in geometrical shape with shifts in temperature. Read more on their [website](#).

More pictures are available on the mirror lab's website, www.telescopelab.com, Mike Davis's website, www.mdpub.com and Allen's web page, www.knology.net/amaroney/.

Outreach

JIM HUNTER

★ Our outreach season is just beginning. Please refer to our calendar on the website for information on events near you.

I set up at Lutz Lake Crossing, my favorite light-polluted spot, for September's first quarter Moon. Our view was limited to Saturn and the Moon as Antares was in the parking lot lights. I had about 30 viewers, including three rookies, so it was okay.

The annual International Observe the Moon night is October 28th. Members are encouraged to do some sidewalk astronomy in their neighborhoods.

SPAC Business Meeting 

Our next business meeting is Wednesday, November 8th, at 8:00 PM at the Science Center. 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:	Kyle Brinkman	727 455-6931
Vice Pres.:	Jack Fritz	813 508-5680
Secretary:	Shirley Vuille	727 864-2624
Treasurer:	Jim Hunter	813 909-7013
Dir.-at-Large:	John O'Neill	727 637-5945
Dir.-at-Large:	David Pearson	727-215-1526
Dir.-at-Large:	Allen Maroney	727 867-4781
SPACE Editor	Jack Fritz	813 508-5680
Public Relations	John O'Neill	727 637-5945
Membership Chair	Shirley Vuille	727 864-2624
Outreach Chair:	Jim Hunter	813 909-7013
Librarian:	Ralph Craig	727 384-2086
Club Webmaster:	Chris Curran	813 653-2604

Click on the name to send email

Recognition of Patrons & Benefactors:

Clifford B. Benham	Benefactor
Jack & Roni Fritz	Benefactor
Andy Demartini	Patron
Anthony Staiano	Patron
Brad & Lisa Perryman	Patron
Gustav J. Waffen	Patron
Joe & Diane Ortiz-Bradley	Patron
Kyle Brinkman	Patron
Matt Labadie	Patron
Robert Myers	Patron
Wally & Ramona Vazquez	Patron

Examiner Staff

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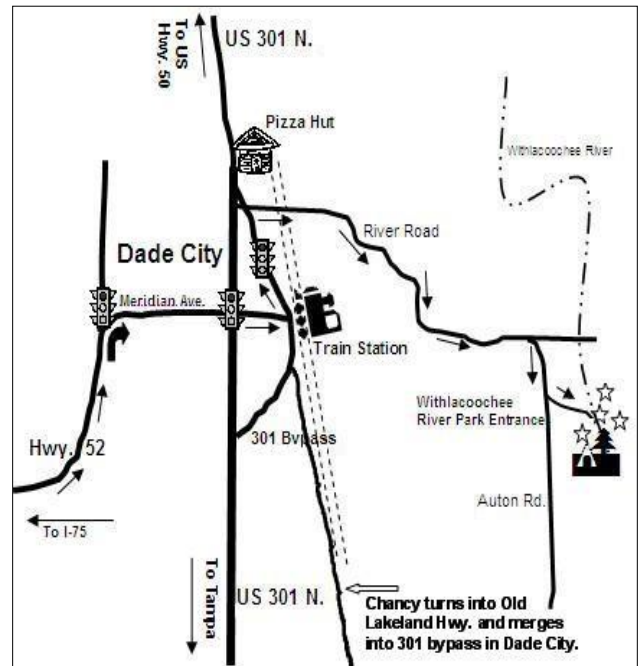
Withlacoochee New Moon Weekend

Our next New Moon Weekend falls on November 17th and 18th and coincides with the peak of the Leonid meteor shower.

The park gate is locked at Sundown, so you will need to arrive before then. The year-

round camping fee with electrical use is \$10/night for club members and \$20 for non-members. Tent camping without electric is \$5/night.

Be reminded that if you are not camping, you must pay the \$2/vehicle fee. Vehicles displaying the handicap parking tag are exempt. For further information, contact Bill or Nancy Huff. starhopr3@msn.com or 813 621-3606.



Withlacoochee River Park - Dade City, FL

Detailed directions can be found at:

www.StPeteAstronomyClub.org



15406 Stonecreek Lane
Tampa, FL 33613

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: _____ Newsletter Preference: Email [] US Mail [] \$25

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.

US Mail: [] \$ 25.00/YR. Please include \$25 if you choose to have the newsletter via US Mail.