

# SPECTRUM

Northern Cross Science Foundation Newsletter

June, 2018

## Looking Up

June 7, Thursday

### General Meeting

7:00 p.m. - Astronomy 101

7:30 p.m. - Main Program

Business Meeting Follow

June 15, Friday

### Public Viewing

9:00 p.m.—11:00 p.m.

Harrington Beach State Park

June 16, Saturday

### Public Viewing

9:00 p.m.—11:00 p.m.

Harrington Beach State Park

June 16, Saturday

### Public Viewing

9:00 p.m.—11:00 p.m.

Pike Lake Campground

June 21, Thursday

### Board Meeting

7:30 p.m.

House of Jeff Setzer

June 28, Thursday

### NCRAL 2020 Meeting

7:30 p.m.

House of Rick Kazmierski

June 30, Saturday

### Sunday on Saturday

{See Page 4}

July 5, Thursday

### General Meeting

7:00 p.m. - Astronomy 101

7:30 p.m. - Main Program

Business Meeting to Follow

"When It Rains, It Pours But There Is Always A Silver Lining." *by Nolan Zadra*

I have been trying to image this new year at the observatory but have had no success. Having installed a new solid state drive in my laptop but with cloned software, I have had one failure after another. Not fun spending 6 to 7 hours in the bitter cold and not ending up with any images. SO to make up for it, I thought I would attend the Winter Star Party in Florida as it had moved to North Central Florida because of the hurricane in the Keys. But several days of rain and clouds caused me to give up on that attempt. Then I headed with my wife to Arizona for 2 weeks and arranged a night with an astronomer to do imaging on the top of Mt Lemmon - but high clouds came in at 1 AM. I felt cursed.

Photo by Nolan Zadra



But not all was lost in FL and AZ. While in Florida, I kept checking on when tickets for a launch would occur at Cape Canaveral and was fortunate to purchase 2 tickets for my wife and me for the Atlas 5 rocket launch of a GOES West satellite at 5:02 PM on March 1st. Having been to several shuttle launches, I knew this launch would not be as momentous but we were going to be only 2 1/2 miles away from this launch. Usually for the public, launches are 7 or more miles away from the pad.

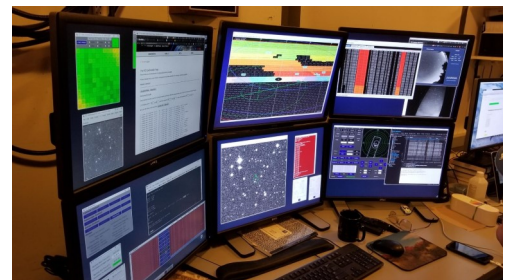
The day started clear as we headed to Kennedy Space Center (one must also buy a separate ticket to the Space Center in order to get launch tickets). We had been to Kennedy Space Center many times with our children but it has been over 10 years since last there and the changes were substantial. It is so worth it but I recommend an extra day because if you are going out to a special launch site, you need to line up for a bus a few hours ahead of time. And if you want to photo-

graph it, you need to get in line an extra hour early because photographer spots are limited. So that meant I had to head to a spot to wait in the hot sun already at 1:30 PM. So much for seeing much of the Kennedy Space Center.

Although mostly clear, the winds were quite strong which threatened the launch. But it launched with a great roar. A beautiful site although one big cumulous cloud ruined our view of the booster separations. And now the West Coast has a new improved GOES satellite watching down on them.

Back in AZ, before attempting to image, we watched the sun set from 9100 feet and saw with binoculars the "green rim", not the "green flash" that people rarely ever see. Evidently at this altitude, they regularly see such an effect and let me say, it was really cool! A bright green rim formed around the last 1/20th of the setting sun and then there was a flat green band at the last top of the setting sun.

But as mentioned, skies got worse as the night progressed. That is really depressing when you design and pay for a trip around such an opportunity. But when we basically gave up on imaging, the astronomer took me over to the 61 inch dome warming room where I was introduced to a 75 year old gentleman who was looking for Earth - heading asteroids. Attached is a picture of his multiple screens showing some of the 800,000 asteroids astronomers from Hawaii and Mt. Lemmon have identified.



Well, that night, this fellow had already found 2 new ones (one being circled in green in the bottom middle screen of the attached image). Although he guessed both discovered objects were just moving within the asteroid belt, he put out the word of his discoveries and then tracking stations throughout the world would ultimately determine their orbits.

So although deep sky imaging has been a big disappointment for me this year, other experiences made up for it

## May Meeting Minutes

By Kevin Bert

The May 2018 Business meeting of the Northern Cross Science Foundation was held at the GSC Technology Center in Germantown. President Jeff Setzer called the meeting to order at 8:35pm and welcomed 18 members and guests. Jeff then asked for standard reports.

Treasurer Gene Dupree tells the membership that the checking balance is \$13,297.41 and the Observatory balance remains at \$418.49.

Secretary Kevin Bert reports that the membership total is at 54. Due to technical difficulties the 2018 roster did not make it to the newsletter. He hopes to have it in the next newsletter. A discussion followed on paying membership dues. In 2019 all members' dues will be paid for a full year in January. This eliminates the pro-rated pay scale. This applies to any new members in 2018 as well. The new members that do pay have the option to defer their official start of membership to the end of the year to avoid paying a full membership twice.

Under Astronomical League news the 2018 Regional Convention will be held in Sturgeon Bay on May 4th and 5th. For details visit the link in the Spectrum to the Door Peninsula Astronomical Society.

Observatory Director Dan Bert reports that the Property Manager hopes to have the south doors replaced before our Astronomy Day on May 27. Gene and Charlotte Dupree are Observatory Leaders for Astronomy Day but Dan is looking for other Observatory operators to step up as leaders or assistants for future 2018 dates. Contact him if a scheduled night is clear on your calendar. We are only asking for one night from each of the Observatory Operators.

Jeff Setzer informed the membership that organizational meetings for the 2020 NCRAL Convention will be held every month on the last Thursday. Possible door prize contributors and speakers were discussed at the last meeting. Any Northern Cross members that want to get involved are welcomed to attend. Contact Jeff for time and location.

## Observatory Plaque

After finalizing the membership roster for 2018 the board has updated the observatory plaque that recognizes the Supporting Members that voluntarily pay higher dues to support the activities of the Northern Cross. The board of Directors would like to thank all the supporting members for their generosity toward the club and encourage all members to check out the plaque next time they are out at the Observatory at Harrington Beach.

Jerry Kohlmann Jr.  
William Large  
Rob Powell  
John Raffensparger  
Lana Raffensparger  
Rich Sauve  
Thomas Schmidtkunz  
Alan Steinberg  
Dave Wierzba  
Gail Wierzba

## Astronomy Cast By Jeff Setzer



Ever wish you could learn more about the science of astronomy, but you don't have time to take extra classes, read giant textbooks, or scour the Internet every week for the latest and greatest information? Have I got an online resource for you — and it's called Astronomy Cast.

Frasier Cain (the publisher of Universe Today), and Dr. Pamela Gay (Director Of Technology And Citizen Science at the Astronomical Society of the Pacific, and the director of Cosmoquest) take you on a "weekly, facts-based journey through the cosmos, where we not only tell you *what* we know, but *how* we know what we know."

Every week since 2006, this dynamic duo of astronomy new media has posted a 30-minute podcast absolutely chock-full of the latest information on all things astronomy. It's a topical show, so one week it might be "dark matter update" and the next week the topic could be "all about transfer orbits."

Frasier essentially interviews Dr. Gay on the subject, asking questions and followups more-or-less on behalf of the audience. The chemistry between these two long-time friends is evident through the ease of the conversation and the quality of the light banter.

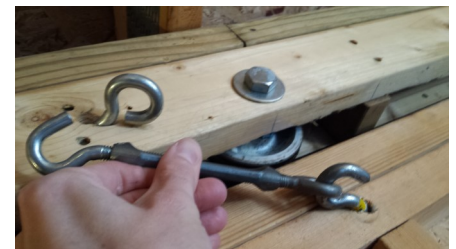
Despite the sometimes-heavy subject matter, Astronomy Cast is very accessible to beginners, and great effort is made to explain difficult concepts in a familiar way. There is NO math, although Dr. Gay will often point out when the math behind something, should the listener wish to investigate on their own, is "straightforward" or "painful."

How do you get Astronomy Cast? If you're an Apple user, you can just go into the Podcast app on your iPhone or iPad, or find it on iTunes on the MacOS desktop. Android and Windows users can use whatever podcasting app they normally use, and in any event, Astronomy Cast can stream directly from its own multi-platform mobile app, or the website ([www.astronomycast.com](http://www.astronomycast.com)).

Astronomy Cast is incredible useful and engaging, but very easy to listen to. I'll binge for days with it playing around the house, in the car, or in my earphones as I mow the lawn. There are 493 episodes as of this writing, and I've listened to the cycle once through and am on my second go-around. I find myself gleaning insights and learning tidbits every time I listen, and even once in a while something comes out during a club outreach event. I encourage NCSF members to give it a try, even if you've never listened to a podcast before — I'm happy to help anyone get started!

## Observatory Update By Dan Bert

Greetings NCSF members, with the start of another viewing season here are a few reminders and observatory updates. For observatory operators, please sign up for a public viewing night, our event calendar is now posted so hopefully there is an evening or two you can help lead or assist with, thank you. Remember to log your volunteer hours with the event leader, they will complete the event forms and estimate public attendance. These forms are located on the clip boards hanging on the side of cabinets above the north counter. It is important to fill these out accurately as these get submitted to the park each year. PLEASE be careful to unhook all six roof turnbuckles before opening the roof, they will soon each be numbered for you to do a mental count. For the second year in a row now we had an unreported bent turnbuckle that needed replacement, (see photo insert) thankfully there was no major roof damage. The red LED rope light above the



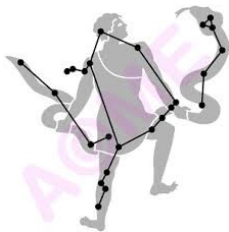
north counter has also been repaired. If there are further issues encountered with the dimmer switch for these lights or anything else with the observatory please do not hesitate to contact me. Finally, we are looking for help weeding and trimming the observatory grounds, if interested in helping with this please let me know. Thanks and clear skies.

## June General meeting

### Astronomy 101 - Kevin Bert

#### "The Moon"

The Universe Sampler chapter 10 "The Moon." There is a tremendous amount of detail to discover when looking at the moon. It becomes a favorite of many newcomers to the hobby when they purchase a telescope. Learn some moon facts and the features of our nearest celestial neighbor.



#### Constellation of Month:

**Serpens**

### Main Program - Mike Borchert

#### "Meteor Crater Arizona"

On a recent trip to Arizona, traveled up to the Northern area of Flagstaff/Winslow. At June's meeting I will talk about my visit to the Meteor Crater.



Photo by Mike Borchert

## May Public Viewing Events

### Port Days By Mike Borchert

The beginning of the astronomy season opened with the Port Washington Street Festival on Sunday, May 27. Summer made up for the late arrival with temperatures around the 90's. The day started out with a beautiful lake breeze cooling things off. As the day progressed the clouds did fill in and around 3 o'clock the rain did come down. We saw it coming and guessed right that it was time to pack up. The Festival was finally called. Those left enjoyed dinner at a nearby restaurant.

### Astronomy Day By Charlotte Dupree

We held our National Astronomy Day, at the observatory, on Sunday, May 27. We had around 75 visitors. The Moon was two days before full, so it was very bright. The sky had off and on again thin clouds. Venus was the first object to be seen, and of course the Moon. Jupiter was not far from the Moon, and it was the most popular object to view. When we closed the observatory the sky had cleared. Thanks to the volunteers that helped in the observatory and out in the parking lot.

### June Planets By Gene R DuPree

June starts out with Venus high in the western sky at sunset, look to see how early you can spot it. Jupiter is well placed in the southeast and is up all night. Look to see if you can find the great red spot. Saturn rises at 11:00 and Mars follows about 1:00. July through September will be the best for Mars this year. So get out and do some planet watching.

## Astronomy, Astrophotography, and Traveling.

With a chance to spend some time in the Phoenix area I was encouraged to experiment with some astrophotography. Of all the choices that are available in astrophotography what are the type of pictures am I interested in? Of course, all of them, eventually. Some of the general possibilities are the moon, the planets, wide format or the Milky Way, Deep Space or Nebulas and Galaxies. To start, I have decided the Milky Way. There is a little less equipment needed to take these types of pictures, and I have decided to take it easier on myself starting out. First off, I need to control my camera, a Canon DSLR with a software program, like Canon Utilities (which is a free download, and runs on PC's or Mac's), as most cameras do not take the long exposures needed, as well as other control features that I can control remotely, no bumping the camera once exposures start.

I will need to guide my camera with maybe an Equatorial mount, as the earth moves during these longer exposures. Also, stacking software such as Nebulosity will enhance the exposures. And last but not least, a software program like Photoshop or Gimp (which is a free download and runs on PC's or Mac's) will help finish the exposure and/or put the finishing touches along maybe with some creativity.



Now I am ready to experiment with exposure times, f-stops, film speeds, number of exposures, backgrounds, foregrounds, times of

the year, moon or no moon, constellations, asterisms, satellites, shooting stars, and anything else creative to spark interest in the exposure. There are also Dark Frames, Bias Frames, Light Frames, and Flat Frames, to be taken, to get a clean, finished picture. After some considerable time the finished product. Not a perfect picture, as someone with more experience might produce. The picture does show more detail than I could pick up with the naked eye. Then that is the challenge.

## Related Info

### Leaders for Public Viewing

#### June 15, Friday

Harrington Beach State Park

Leaders Needed

#### June 16, Saturday

Harrington Beach

Leaders Needed

#### June 16, Saturday

Pike lake

DuPrees

## ALCON

July 11 - 14

Minneapolis/St. Paul, Minnesota

Minnesota Astronomical Society

[alcon2018.astroleague.org](http://alcon2018.astroleague.org)

## Star Parties 2018

### Pre-WOW

July 7—11

NCSF—Jeff Setzer

### WOW

July 12 - 15

Hartman Creek State Park

[WWW.new-star.org](http://WWW.new-star.org)

## Northwoods

August 17 - 19

Hobbs Observatory

Beaver Creek Reserve

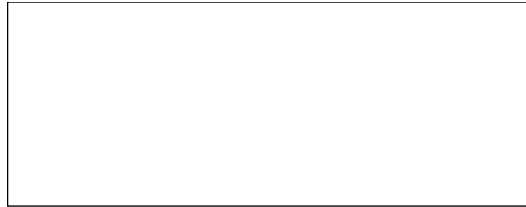
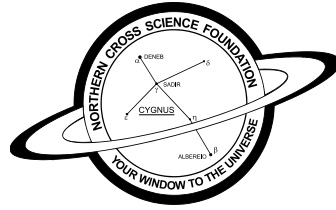
Fall Creek, WI.

[www.cvastro.org](http://www.cvastro.org)



CoolClips.com

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## Sun-Day on Saturday

By: Kevin Bert

June 30th is the date set for this year's Sun-Day on Saturday members' event at my home in the town of Grafton. This relaxed setting away from the public gives members a chance to spend time conversing while enjoying the sights of our nearest star. Solar activity is low but there can always be a surprise. This will be an opportunity to view through the Coronado and a variety of the members' sun viewing telescopes. I will give a demonstration on how to set up and operate the club's Coronado for those that are interested in using it in the future, at 2:30. The event will start at 2:00 pm and you can park on the lawn as in other years to set up your own telescopes any time after 2:00 pm.

This is a member's family event that combines leisurely solar viewing with a picnic type atmosphere. I will provide soft drinks and snacks throughout the day. Feel free to come and go as you please, as we will view into the evening if there is an interest. Those that plan to be here at 5:00 pm. and would like to stay and eat you should bring a dish to pass. I will provide soft drinks and your choice of sloppy Joes or brats. Please bring a lawn chair too.

If it is raining, the event will be cancelled. If cloudy, you can still come to eat and talk astronomy as I will still give the Coronado demo. My address is on the back cover of the Spectrum. If in doubt of conditions or in need of directions, call me at 262-674-0610. I hope to see you there.

## SPECTRUM

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NCSF is a member of the North-Central Region of the Astronomical League.



NCSF supports the **International Dark Sky Association**

This Issue, along with back Issues of SPECTRUM, can be found on the NCSF Web Site.

### Monthly Meeting Information

**7:00 p.m. Astronomy 101 Mtg.**  
**7:30 p.m. Main Program**  
Location at the -

**GSC Technology Center**  
**W189 N11161 Kleinmann Dr**  
**Germantown, WI 53022**

**Spectrum Newsletter**  
**5327 Cascade Drive**  
**West Bend, WI 53095**

**Please send your Questions, Suggestions, Articles, and photos to:**  
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