

# SPECTRUM

Northern Cross Science Foundation Newsletter

December, 2018

## Looking Up

December 6, Thursday

### General Meeting

7:30 p.m.  
Business Meeting  
(Open Board Elections)  
Annual Holiday Party

### Holiday Potluck Party!



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(Bring a dish)

### White Elephant Gift Exchange!

(See Pg 3)

December 20 Thursday

### Board Meeting

7:30 p.m.  
House of Jeff Setzer

### "NCRAL 2020" Meeting

Next meeting scheduled for  
January, 2019

January 3, Thursday

### General Meeting

7:00 p.m. - Astronomy 101  
7:30 p.m. - Main Program  
Business Meeting Follow

## Woodpeckers and my Observatory *By Rick Kazmierski*

In the October 2017 newsletter, I wrote an article about my backyard Observatory and trouble I was having with moisture. Over years there had been significant rotting to the dome's base ring from water leakage. I resealed every seam, but it still leaked. For a while I thought the problem might be heavy condensation settling on the inside of the dome and making its way down to the base ring. However, the problem turned out to be subtler and easier to address than I'd imagined.

I found that nails in the flashing around the outside of the base ring had pulled out slightly, allowing a channel of water to follow some nails into the base ring causing the rotting. I secured and sealed the nail heads which stopped all leaking.

Believing my Observatory Woes were a thing of the past, I turned my attention elsewhere until several weeks ago while bagging leaves in the backyard. Much to my horror, I saw holes all over the far side of the Observatory facing away from the house. The building is an octagon shape and five sides were damaged. Closer examination revealed a rogue woodpecker had been busy. He must have done his dirty work in a very short time because I would have seen such damage while cutting grass earlier in the summer.

Online I found a number of possible solutions, but none very satisfying. A common suggestion was to hang colorful balloons or shiny ribbons around the



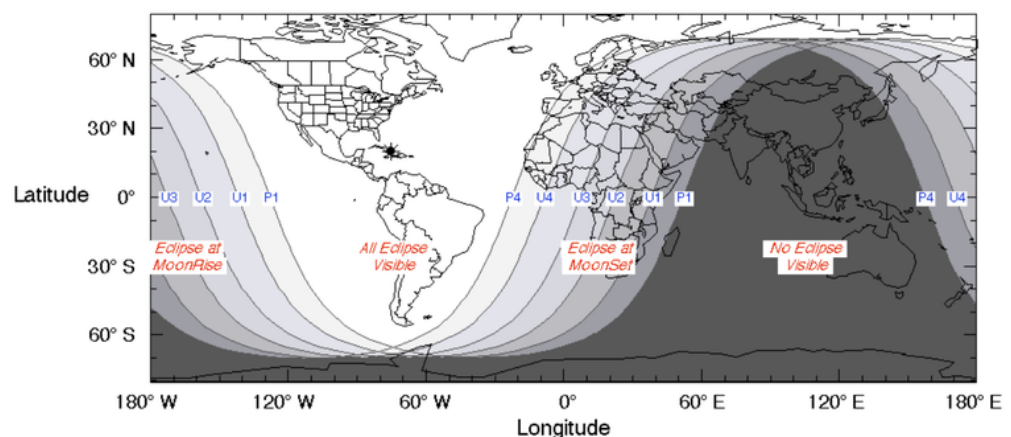
Woodpecker damage.

structure. Another was using some type of predator urine to scare the pests away. Then there was hunting the varmint, but woodpeckers are protected and require a special permit to hunt. Besides not being a hunter, I've actually never seen the culprit.

At least for now I haven't seen additional activity. I plan to fill the holes this Spring and possibly apply vinyl or aluminum siding to all exterior wood surfaces. This not only solves the woodpecker problem, but also relieves me from having to seal the exterior wood every couple of years.

Once the woodpecker problem is solved, I'll only need to worry about wasp nests, Japanese beetles, mice, ants, frogs falling through the dome slit, passing skunks, mosquitos, moths, bats, and the occasional ground bee nest under the building!

## January 20-21, 2019 Total Lunar Eclipse *Gene DuPree*



(Con't.—Pg 2)

## November Meeting Minutes

By Kevin Bert

The November 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 8:30pm and welcomed 18 members and guests. He thanked the membership for all the help in making 2018 another successful year of public outreach. Jeff then asked for standard reports.

Treasurer Gene Dupree tells the membership that the checking balance is \$11,973.33 and the Observatory balance remains at \$418.49.

Secretary Kevin Bert reports that the membership was unchanged. Under the Astronomical League the 2019 regional convention will take place in the Quad Cities on May 3&4. The 2019 national convention (ALCON) will be held at the Kennedy Space Center.

The observatory Director fill in, Kevin Bert, reports that the doors on the Observatory look great and the lock combination remains the same for now. Membership has

changed over the years and the combination is due for a change. The Observatory Operators will be contacted with the new combination when the change takes place in 2019.

Planners for the 2020 Regional Convention meeting will meet on the last Thursday in January. Contact Jeff Setzer or Mike Borchert for time and location if you are interested in attending.

Under new business Jeff Setzer said that two board members three year term are expiring at the end of the year. That would be Dan and Kevin Bert. Elections are held at the December meeting each year to select replacements for any outgoing board members. Any NCSF member can qualify for the board including outgoing board members. That being said he opened the floor for nominations. Aris Penikis nominated Kevin Bert and Chris Grenda seconded. Kevin accepted the nomination and was willing to serve if elected. Aris then nominated Dan Bert and was seconded by Mike Borchert. Dan was not in attendance but would be notified to give his response prior to the December election. With no additional names nominated Charlotte Dupree made a motion to close nominations and it was seconded by Joyce Jentges. The motion passed and Jeff said

that nominations will be open again prior to the election next month.

With no new business Jeff reminded members that the December 6th meeting is our annual Holiday Party and that details will be in the next Spectrum.

With no further business Jeff closed the meeting at 8:50 pm.

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## Your Chance to Vote

Kevin is looking for some membership feedback for a 2019 101 class. Binocular viewing interest seemed high at last months meeting and he would like to follow up with a list of top binocular viewing objects. He would like to include selections from NCSF members. If you are willing to participate please bring a list of your personal top 6 binocular objects to the December meeting. Limit your list of objects to ones visible from our latitude.

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## Astronomy and Astrophotography *By Mike Borchert*

Learning each time out, to take pictures, is baby step by baby step. This time I am trying some Milky Way photography. This is the easier type, I think. While I had limited success last time, hoping for a better outing this week. I keep reminding myself, location, location, location.

I pick a spot 50 miles east of Phoenix that a local astronomy club suggests. Picket Post is part of a National Park system, which the local astronomy club has an agreement with. Gayle and I set up on a warm summer night. Timing is also important. June is a great time, we are looking back into 75% of our Galaxy, rather than the 25% in winter.

Through some research, I find there are optimum exposure times for a camera, not on a slewing tripod. There is a 'Rule of 500' that says divide 500 by the size of your lens and this will give you a ballpark maximum, in seconds for exposure. (i.e. 500/ 24mm = 20-21 seconds. Using 3200-6400 ISO film speed, 10-40 seconds was a good ballpark start. Of course, it depends on what you want to use these pictures for, the amount of detail in them, and the amount of star trails.

Now it is comes down to patience. The moon goes down, the Milky Way comes up over the mountains, and the planets are putting on a beautiful show. The mountains frame Mars. The Milky Way frames Saturn. I go home a happy man.

## Comet 46P/Wirtanen

On December 16th, this comet will pass within 7 million miles of Earth and should brighten to about 3rd magnitude. During December it will move through Eradinus, Taurus, Perseus, Auriga, and Lynx.

When talking about comets, it is always best to keep expectations low. However, the close approach of this comet brings back memories of Comet Hyakutake's closet approach of 9.3 million miles and the show it put on!

No one is predicting a repeat performance with Comet 46P/Wirtanen, but I can watch and hope.



Milky Way Photos by Mike Borchert

## December General meeting

### NCSF Holiday Party

Please bring a dish, desert, appetizers to pass.

Beverages will be provided!



### Annual Board Nominations

At the December General Meeting each year NCSF completes nominations and has elections for open Board positions and elects new Board Members.

This year there are no open Board positions to fill as current Board Members are still serving all or part of their three year term.

### White Elephant Exchange



Entertainment at it's very best! Will this be your year to join in? The more the merrier!

A White Elephant gift is something lurking around in your astronomy closet gathering dust or the bookshelves loaded with books. Do you have drawers loaded with charts and maps?

Or... perhaps, in your travels, you see something funny or yummy, the imagination soars! This is for entertainment and not gain, so we all have a great time

1. Bring an \*astronomy-themed, wrapped gift!
2. When the gifts arrive we will have numbers attached to them with matching numbers in a hat.
3. One by one, each participant will draw their prize number and open it to the oohs and ahhs

### (Con't from Pg 1) January 20-21, 2019 total Lunar Eclipse

The eclipse is nicely positioned for late evening viewing or astrophotography. The entire eclipse will be viewable (clouds permitting) from all the Americas.

The eclipse starts at about 8:36 p.m. Central standard time on January 20th, when the first hints of the eclipse will start to hit the moon. This is called the penumbral eclipse, and involves a slight darkening of the moon's surface in preparation for the rest of the total eclipse. The first portion of the partial eclipse phase will begin less than an hour later, at 9:33 p.m. The total eclipse phase will begin at 10:41 p.m..

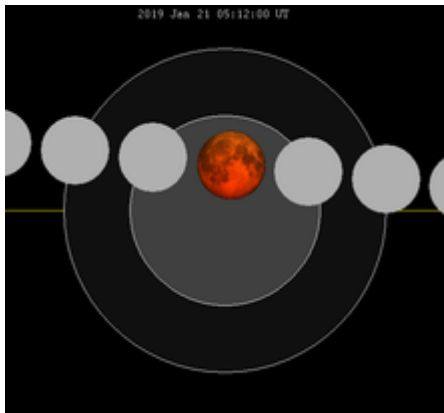
The Moon will be in a total eclipse for a little more than an hour, turning an orange-red thanks to the shadow cast by the Earth. It will reach "maximum eclipse" at 11:12 a.m. before ending at 11:43 a.m. It will then enter another partial phase, lasting until 12:50 a.m. If you're still up at this point, the last shadows will leave the moon at 1:48 a.m.

### December Sky

By Gene DuPree

December is here, and the cold cloudy nights too. But, when it does clear, there are great winter objects to view. Orion, Gemini and Auriga hold some really great objects. If you have the opportunity to get to a dark site, the winter Milky Way is really great, and many M objects you can see. We had a chance to visit the UP, a few weeks ago. On a moon less night, the dark sky was great! Speaking of that, now is a great time to plan a dark site vacation. Mars, Uranus, and Neptune are still visible, and a few comets are also out there to find.

Keep Looking Up



Path of the moon through the umbra, (Center circle)

## Related Info

### Winter Events 2019

#### January 19, Saturday

Horicon Marsh  
DuPrees

#### February 2, Saturday

Ice Age Center  
DuPrees

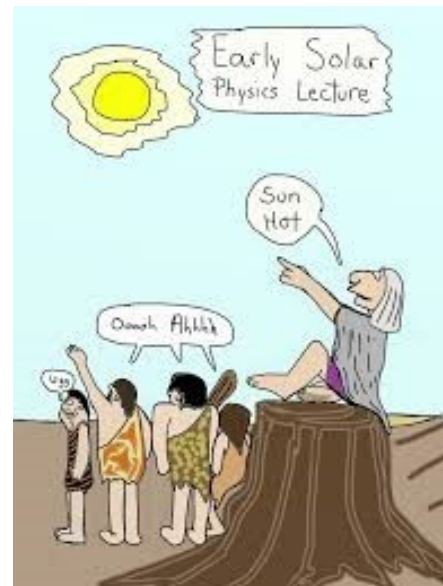
#### February 9, Saturday

Pike Lake  
DuPrees

### November Spectrum Correction

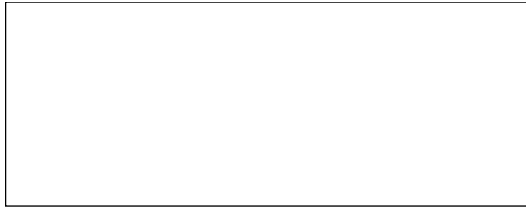
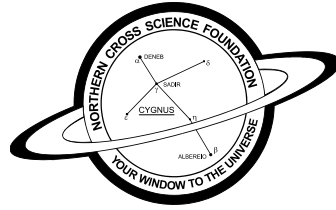
Ernie sent me the following correction after the November Spectrum article about Samantha Cristoforetti. Sorry for any confusion.

Just an FYI, Samantha Cristoforetti's International Space Station mission was from November 23, 2014 to June 11, 2015. She is not currently on the Space Station, although she is an active ESA astronaut and a crew representative for ESA in the Lunar Orbital Platform – Gateway project.





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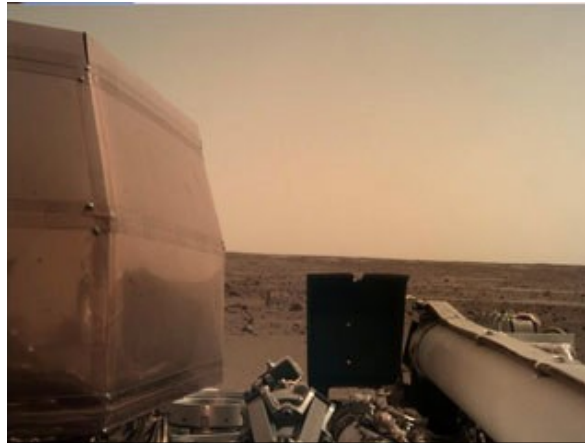
### 2018 Board of Directors

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### InSight is Safe and Sound on the Surface of Mars

*By Fraser Cain Universe today*

The big news this week, of course, was the successful landing by NASA's InSight Lander, touching down on Mars on November 26th. Its complicated landing systems deployed without a hitch, decelerating it from interplanetary velocity to a gentle landing in the Elysium Planitia region of Mars. This spot was chosen because it's safe, flat terrain.



InSight is Catching Rays on Mars NASA

The lander will spend a while calibrating itself and taking a few images of its surroundings before using an impact drill to sink a probe 5 meters down into the regolith. Then it will spend the rest of its mission, listening carefully to the interior of Mars, mapping out the internal structure of the Red Planet.

### 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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