

# SPECTRUM

Northern Cross Science Foundation Newsletter

January, 2019

## Looking Up

### January 3, Thursday

#### General Meeting

7:00 p.m. - Astronomy 101

7:30 p.m. - Main Program

Business Meeting Follow

### January 17, Thursday

#### Board Meeting

7:30 p.m.

House of Jeff Setzer

### January 19, Saturday

#### Ski & Hike

6:00 p.m.-9:00 p.m.

Horicon Marsh

### January 31, Thursday

#### NCRAL Meeting

7:30 p.m.

Home of Rick Kazmierski

### February 2, Thursday

#### Ski & Hike

5:30 p.m.—9:00 p.m

Henry Reuss Visitor Center

### February 7, Thursday

#### General Meeting

7:00 p.m. - Astronomy 101

7:30 p.m. - Main Program

Business Meeting Follow

### February 9, Saturday

#### Ski & Hike

6:00 p.m.—9:00 p.m.

Pike Lake Beach Area

## Observatory News *By Dan Bert*



The Observatory now has 3 new exterior doors with no-maintenance frames thanks to Harrington Beach State Park. The existing doors were over 11 years old and beginning to rot, the worst being the south east door. Thru the efforts of property manager Ken, additional funding was acquired and the doors were 100% paid for by the state. New locks were also installed, however the key pad and lock box remain unchanged. Please note in early 2019 the observatory door code will be changing,

all members that are operators will be given the new code.

In addition, please note the red LED counter rope lights are in the process of being rewired and are out of order until further notice. Also, all 6 roof tie downs have been marked, be sure to count them as you unbuckle them. Finally, the Panarusky dec brake has been adjusted and now locks correctly, if further issues are encountered please let the director know. Clear Skies!

## 2019 Membership Dues *by Gene DuPree*

Your "2019 Dues Invoice" is included with this Newsletter. Members receiving electronic mailing can download the Dues Invoice from the Club website or print the attached pdf file. Additional copies of the Invoice will be available at the January Membership Meeting.

Sky & Telescope Magazine and Astronomy Magazine are available at a discount with your Club membership.

\* If you have an existing Astronomy magazine subscription, you are encouraged to renew online when you receive a notice from Kalmbach. Go to [www.astronomy.com/promo](http://www.astronomy.com/promo). When asked for a promotion code, type in "RCLUB099" then click,

"get offer". Select 1 @\$34.00), 2 @ \$60.00 or 3 @ \$85.95 per year option. Add name address and credit card info complete the transaction. (no need to enter the promotion code again when asked). After you click "submit", you will immediately receive a confirmation page that you can print for your records. For questions call customer service at 1-800-533-6644.

\* If you have an existing Sky & Telescope magazine subscription, continue to renew it on your own whenever you receive their standard notice. A club discount rate should automatically be offered when brought to their attention.

## December Meeting Minutes

By Kevin Bert

The December 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 7:30pm and welcomed 20 members and guests. He noted that this was the one required meeting per year to take care of club business and has traditionally included a holiday party. Jeff then asked for standard reports.

Treasurer Gene Dupree tells the membership that the checking balance is \$11,810.92 and the Observatory balance remains at \$418.49. He reminded the membership that 2019 membership dues are due and could be paid anytime soon. A dues invoice will be included in the next newsletter.

Secretary Kevin Bert reports that the membership was unchanged and he had the official list of members for the upcoming elections. Under Astronomical League activities 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. Jeff added that the recently elected League president Bill Bogardus had passed away after a long illness.

The observatory Director Dan Bert reports that the Rope light dimmer switch above the main counter will be replaced over winter. Otherwise it is open for member's activity over winter with no disruption from park visitors. Be sure to contact him if you intend to schedule an evening there.

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 reviewed the status of the elections and asked if Dan Bert was willing to run for another term on the board of directors because he was nominated and not in attendance at last months meeting. He said he was willing to serve if elected. Kevin Bert had already been nominated and willing to run. Jeff then opened

the floor for additional nominations to the board. With no other members being nominated, Chris Grenda motioned that nominations be closed. Joyce Jentges seconded that nomination and it passed. Chris then motioned that the two board vacancies be filled by the two running candidates by voice acclamation. Charlotte Dupree seconded the motion. All members in attendance were in favor of the motion with none opposed. Congratulation to Dan and Kevin Bert on another term on the Board.

Under 101 news Kevin Bert asked If members are willing to participate to please send him an email or bring a list of your personal top 6 binocular objects to the next meeting for a future class.

With no new business Jeff reminded members that the public viewing would be at Horicon on January 19th.

With no further business Jeff closed the meeting at 7:50 pm.

## Harrington Beach Imaging Report *By Ernie Mastroianni*

Comet 46P/Wirtanen was near its closest approach to earth at about 7 million miles while also passing near the Pleiades star cluster on a very frosty Saturday, Dec. 15. To the naked eye, it was barely visible in a clear sky illuminated by a half moon, but an unusual ice fog coated everything with thick layer of frost about 45 minutes into the evening, putting a quick end to further photography. This photo is a 2-minute exposure, taken through a Nikon DSLR camera with a 300mm telephoto lens at Harrington Beach State Park. The comet reached perihelion, its closest point to the sun, on Dec. 12.

With binoculars, it appeared as a fairly large and diffuse circular object, distinct from the background stars with no visible tail. It will travel through the northern skies and the constellations Lynx and Ursa Major through the end of February. The University of Maryland offers finder charts for the comet at link; I

[http://wirtanen.astro.umd.edu/46P/46P\\_finder\\_charts.shtml](http://wirtanen.astro.umd.edu/46P/46P_finder_charts.shtml)

The comet was discovered in 1948 by US astronomer Carl Wirtanen, who spotted it on a photographic plate during stellar motion research for the Lick Observatory. It has a period of 5.4 years and was initially a target for the Rosetta spacecraft until a launch delay made a new target necessary (Comet 67P/Churyumov-Gerasimenko).

This second photo show the comet's motion among the background stars on Dec. 9, as seen through a 500mm telephoto lens on an equatorial mount as it tracked the comet for about 35 minutes.



**Images in the Newsletter are best viewed in full color and high resolution in the digital format members receive by e-mail.**



## January General meeting

### Astronomy 101 - Kevin Bert

#### "The Observatory Interpretive Signs"

Next time you are out at Harrington Beach spend some time exploring the interpretive signs posted around the Observatory. There are many learning opportunities to be found for the naked eye observer. Our 101 class will briefly check out what sign's are on display at the Park.

The Constellation of the month is;

#### Auriga



### Main Program -

#### "Our Annual Show and Tell"

We will have a Show and Tell session for members to display and describe purchases and/or gifts received this Holiday Season or during the year. Have you acquired some recent Astronomy related item you think might be of interest to fellow members? Bring it to the January meeting.

#### "Chicago Backstage Pass" DVD

Discover the incredible science happening at **Fermilab**, where miles of underground instruments are being put to the test as neutrino detectors in a race to discover the properties of elementary particles and dark matter. You will finally get your own private tour. *(As time allows)*

### Star Trails with StarStaX By Mike Borchert

A type of astrophotography that has intrigued me, but have not tried, is "Star Trails". On the technical level, this seems to me a very easy challenge to accomplish. And compared to some of the other photographs that I have attempted it is. On the other hand I believe star trails opens the door to more artistic composition. Your background, foreground, and any highlighted objects make up a large portion of the picture. Go online; look at some of the compositions that are out there.

The technical side consists of either one long exposure, at least 30 minutes, or, a series of 30-60 second exposures that are then combined using software. You need is a camera that you can control the ISO, f-stop, and exposure time and you can save to a simple JPG format. The strange part of this technique is that it can be the opposite of deep sky picture taking. I tried the long exposure, I thought it was a little tricky. The one shortcoming is that as with all long exposures, hot pixels abound, and if a plane flies through you shot, and you do not want it, you start all over. For long exposure use low ISO, high f-stop, and then expose to get the length of star trails desired.



Single 60 second exposure.

I had better success using (see the before and after photos), 35 exposures of 60 second, f2.8, and 400 ISO. The process is made much easier

using "StarStaX", a free software, which is compatible with Mac, Microsoft, or Linux computers. The software learning curve is very easy; there is a tutorial on YouTube, which is all you need if any. Load your 35 exposures into the 'drop here' portion of the main window of "StarStaX" and click the process button, sit back, let your computer do the work, and be prepared to amaze yourself. Along with the sky, your creativity is the limit.



35 exposures of 60 seconds combined in StarStaX.

### January Planets by Gene R. DuPree

The New Year starts out with Mars high in the South at sunset. Neptune is West, and Uranus is East of Mars. On a clear, and stable, night they show a nice disk in my 12.5 inch scope. Comet 46 P/Wirtanen was nice the last time I viewed it. I hope a clear night comes up soon. A waning Moon will help with the view of the comet, which is North of Capella. For you early risers, Jupiter and Venus are easy to spot in the Southeast. I don't have a good eastern view, so finding Mercury wasn't possible. By 8:00 pm, the Orion nebula is well placed in the sky to view, and it's looking good. There are many other objects to see that rival the summer objects every year. So get out there and do some star gazing. Keep Looking Up.

## Related Info

### NCSF Welcomes New Member

#### Winter Events 2019

##### January 19, Saturday

Horicon Marsh

DuPrees

##### February 2, Saturday

Ice Age Center

DuPrees

##### February 9, Saturday

Pike Lake

DuPrees

##### March 23, Saturday

Swap and Sell

Heritage Center, Sheboygan

### Star Parties 2019

#### **NCRAL**

**May 3 - 5**

Moline, IL.

2019NCRALInfo@gmail.com

#### **WOW**

**May 30 - June 2**

Hartman Creek State Park

WWW.new-star.org

#### **Northwoods**

**August 1 - 4**

Hobbs Observatory

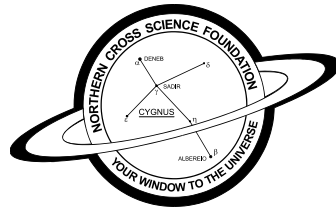
Beaver Creek Reserve

Fall Creek, WI.

### **Jim & Gwen Plunkett OBSERVATORY**



SPECTRUM  
5327 Cascade Drive  
West Bend, WI 53095



### 2019 Board of Directors

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2019 Holiday Party at GSC Photo by Dan Bert

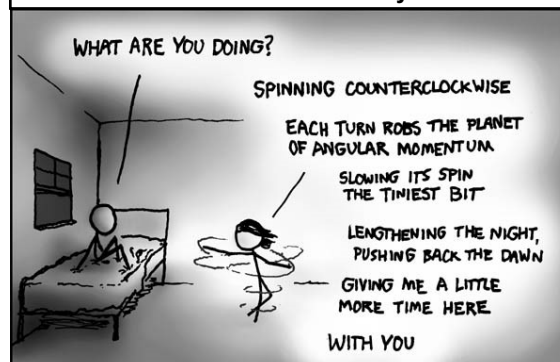
### Reminder

#### January Total Lunar Eclipse.

Begins Sunday, January 20th - Ends Monday, January 21st

Eclipse start—8:36 p.m.  
Partial Begins—9:33 p.m.  
Totality Begins - 10:41 p.m.  
Maximum Eclipse - 11:12 p.m.  
Totality Ends - 11:43 p.m.  
Partial Begins - 12:50 a.m.  
Eclipse Ends - 1:48 A.M.

### Practical Astronomy



### 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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