

# SPECTRUM

Northern Cross Science Foundation Newsletter

November 2015

## Looking Up

November 5 Thursday

### General Meeting

7:00 p.m. - Astronomy 101

7:30 p.m. - Business Meeting

November 19, Thursday

### Board Meeting

7:30 p.m.

Home of Jeff Setzer

December 3, Thursday

### General Meeting

7:30 p.m.

Annual Holiday

Potluck Party

And

White Elephant

Gift Exchange!



Scheduled Public Viewing for 2015 ended in October. **We have Winter Public Viewing** (see below). We may still have impromptu observing events, so check the Spectrum or our website at [www.NCSF.info](http://www.NCSF.info) for the latest updates

January 16, Saturday

### Candlelight Ski & Hike

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

Horicon Marsh

February 6, Saturday

### Candlelight Ski & Hike

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

Harrington Beach

February 13 Saturday

### Candlelight Ski & Hike

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

Pike Lake State Forest

## White House Hosts Second Astronomy Night *Excerpts from Kelly Beatty*

President Obama hosted his second star party on the South Lawn of the White House. The event brought together "scientists, engineers, and visionaries from astronomy and the space industry to share their experiences with students and teachers as they spend an evening stargazing."

The first White House Astronomy Night occurred in October 2009, in conjunction with the International Year of Astronomy. That night President Obama and his wife, Michelle, greeted about 150 middle-school students and gave special attention to 14-year-old Caroline Moore, who had discovered a supernova the previous year, and to high-school sophomore Lucas Bolyard, who discovered a pulsar in archived radio-telescope observations. Then the Obamas peered into the eyepiece of a carefully prepositioned telescope to view something cosmic, the Double Double in Lyra.

This year's target was a lovely first-quarter Moon — something observable despite downtown Washington's pervasive light pollution.

Before and during his brief stint at the eyepiece, the President got some pointers from Agatha Sofia Alvarez-Bareiro, a Paraguayan student attending Brooklyn International High School in

New York City. The scope, by the way, was an 11-inch Celestron Schmidt-Cassegrain on an Orion Atlas Pro mount. I'll give the president credit: he commented that the telescope's optics had inverted the Moon's image (mirror-reversed it, actually).



In any case, President Obama seemed to enjoy his time at the eyepiece. "I love astronomy night," the president said last night while addressing the crowd. "This is some of the most fun I have on this job."

The intent of the event was to try coax more young Americans toward careers in STEM (science, technology, engineering, and mathematics).

Watch a replay of the White House Astronomy Night below (the president's remarks start about 16½ minutes after the beginning):

- See more at: <http://www.skyandtelescope.com/astronomy-news/white-house-astronomy-night-10202015/#sthash.r3Rz5uxl.dpuf>

## Growing - a hobby within a hobby...By Jaime Hanson

This marks two first for me. This is the first article I have written for the Spectrum and the first time I have made any modifications to Plunkett Observatory. Specifically, I have added a small fold-out desk along the south wall of the observatory. It is designed to be a work station for laptop and other items during the course of an imaging session and folds away to save space when not in use.



When accompanying Ernie on several test runs of the new imaging scope, I noticed that he was carting in storage bins along with his astro gear. I learned that they had no other purpose than to create a makeshift table top for his laptop and gear. It became clear that we needed to carve out a small work area for imagers who don't happen to carry empty bins in their cars. So, I found a small piece of counter-top, hinges and brackets. With Dan and Kevin's blessing, I installed a small folding desk pictured.

One small step, as they say.

I would like to segue this article into an opportunity to showcase a few of the many contributions made by members of the club to get the imaging system off the ground. Some highlights: Wally Gersmehl donated a very nice wide field refractor to use for guiding and imaging, Chad donated a 50mm guide scope, and a bahtinov mask, Ernie donated several cables and adaptors for club members to attach their own dslr cameras. Nolan deserves thanks for his generous contribution to the mount and herding the group of cats charged with assembling components. In every discussion every interaction, we have all expressed the common goal to bring imaging abilities to all members of the club. Anyone with an interest in imaging is invited to participate. Our goal is to assemble all of the required hardware, software and instructions for acquiring and processing an image, whether members have any experience or equipment of their own. To that end, I recently installed some instruction software on the *Continued on Pg 4*

## October Meeting Minutes

By Secretary Kevin Bert

The October Business meeting of the Northern Cross Science Foundation was held at Unitarian Church North. President Jeff Setzer opened the meeting at 7:50pm and welcomed 21 members and guests. He noted that the public observing season would finish up this month and only 2 more meetings remain for 2015. He then asked for standard reports.

Treasurer Gene DuPree tells the membership that the regular accounts balance is \$8,883.89 and the observatory account balance at \$1,042.01. He says that 2016 calendars are still available for \$8.00. Gene was happy to say that renewals for Astronomy magazine are now on line and can save additional money by going for three years.

Secretary Kevin Bert reports that there were no changes in the club roster. The league newsletter, The Reflector, has a nice tribute to the Hubble's 25 years of service and a follow-up of the national convention ALCON. The league also introduced a paperless version of the Reflector that members can elect to receive. It was announced that Twin Cities of Bloomington & Normal Illinois will host next years North

Central Regional Convention of the Astronomical League. April 29th is the date to save in 2016.

Speaking for the Observatory Director, Kevin Bert says the 17th Public Viewing Night was in need of an operator and assistant. The varieties of binoculars are now being stored in the lower cabinets of the observatories countertop. The old club computer is now in the Observatory for the imaging scope. An observatory training session will be held on the 9th for those members that would like to operate the Panarusky telescope or for a refresher.

Jeff Setzer covered upcoming events for October. This upcoming Saturday, the 3rd, is "The Binocular Star Party. October 10th is a night at Lac Lawrann Conservancy in West Bend. The 16th and 17th are Public Viewing Nights at Harrington Beach State Park with the 17th the Halloween Hike. The 17th is also a viewing night at Horicon.

With no further business Jeff closed the meeting at 8:20 pm.

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### "Library Telescope Presentation"

Jeff Setzer and Kevin Bert gave brief presentations on the history and operation of the Library Telescope on October 28<sup>th</sup> at

the Grafton Public Library. Leslie Jochman from the library explained the checkout procedure and gave those in attendance first chance to sign up for the two week periods set to start next month. Cloudy skies kept participants from getting views through the scope.

A valid library card and signed agreement is all that is needed to pick up at the adult circulation desk. Patrons 10-17 must have a legal guardian sign the agreement. A photographer from the local News Graphic was there to capture an image of the presentation of the scope to the library that was made possible through the Astronomical League's Horkheimer Charitable Fund. This is the start of a popular outreach attempt that is growing across America and is the first of its kind in Wisconsin. If successful, look for more libraries and telescopes to join the program.

### Friends of Mine

*The stars are friends of mine. To lofty height,  
When falls the somber canopy of night*

*Upon a slumbering world, my spirit flies,*

*And treads with them the highway of the  
skies.*

- Richard Herbert Mann

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## Things to See in the November 2015 Night Sky...By Don Miles

**Pluto, Neptune, & Uranus:** Pluto continues to sink lower in the south-western sky, but is still technically possible to observe. It's at (mag 14.2), and sets around (9:45/8pm). Neptune is the next object to view, and thankfully is up high in the sky at sunset. It actually transits about (7:45/5:45pm) and won't set until about (1:15am/11:30pm). It's at (7.9 mag), has a grayish color to it, and is in the constellation Aquarius. Uranus is the next in line, and trails Neptune by about 3 hours the whole month. It transits about (10:30/8:30pm), and sets about (4:45/2:45am). It's in the constellation Pisces at (5.7 mag), so is much easier than Neptune to spot, and the blue-green color also helps.

**Jupiter, Mars, & Venus:** Mercury has left the group this month, but the remaining close trio all begin the month in the constellation Leo rising at about 2:30am. By the end of the month, they will have split up with Jupiter rising first, then Mars, and finally Venus. Jupiter is at (-1.9 mag), and continues to distance itself from the Sun, but remains in the constellation Leo, and will rise by 12:30am by the end of the month. Mars will also distance itself from the trailing Sun, but not nearly as quickly as Jupiter. It's at (1.7 mag), and slowly works its way eastward into the heart of the constellation Virgo. By the end of the month, it will rise by about 2am. Venus is still brilliant (-4.3 mag), and

remains about the same distance ahead of the Sun for the whole month.

**Mercury & Saturn:** Mercury, as mentioned above, is on it's own this month as it stays close to the Sun. Very early in the month, Mercury (-1.0 mag) may be seen, but quickly slips towards the following Sun as it passes around the "back side" of the Sun. By the end of the month, it will be an evening object as it then closely trails the setting Sun. Saturn also starts the month closely following the setting Sun, and it too will pass around the "back side" of the Sun. By mid-December, it will become a morning object and will continue to rise earlier as winter progresses.

### **Moon:**

November 3rd: Last Quarter

November 11th: New Moon

November 19th: First Quarter

November 25th: Full Moon

### **Special Events:**

**Meteor Showers:** Watch for both the Taurid and the Leonid meteor showers this month.

The Taurids have two peaks...the 5th and the 12th (Southern Taurids and Northern

Taurids respectively, which are like two bands of denser debris in the main stream), and can be seen about a week before and after their peaks. Their source is debris from Comet Encke, and predicted rates are only about 7/ hour. These are relatively slow movers (17 miles/second), but the particles are larger than average, making the few that are observed slow and bright. As the name implies, look in the general direction of Taurus. The Moon won't be an issue for either date as it sets around 2pm on the 5th, and 5:30pm on the 12th.

The Leonids peak around the night of the 17th. These also can be seen for a couple of days before and after the peak. Their source is debris from Comet Temple-Tuttle, and predicted rates vary greatly, and could be anywhere from 10-100/hour. Unlike the Taurids, these are fast movers (44 miles/second). These will generally appear to originate from the constellation Leo. The Moon won't be an issue here either as it sets around 10pm.

Don't let the low predicted rates discourage you from going out. These are only predictions, and have been known to be wrong. As always, the darker skies the better, and watching after midnight (if possible) puts you on the "front" side of the Earth as it passes thru the debris. Dress warmer than you think you'll need, get comfortable, enjoy.

## November General Meeting

### 101 Class...By Kevin Bert

**“Dealing with Dew.”** At one time or another, stargazers have run into the problems of dew or frost. At times it can be so bad that an otherwise good evening can be cut short. Get a better understanding of this common problem and find out things that you can do to minimize or eliminate dew. **Constellation of the month: Aquarius**

### Main Program

**“Getting to know the Observatory Refractor and Imaging System.”** Join Imaging team members Ernie Mastroianni and Jaime Hanson as they go over the Observatory equipment and give some basics on what it will take to capture and process images. They have some wonderful examples of what results are possible.

### October Public Events

#### Harrington Beach, September 19th

By Kevin Bert

Ernie Mastroianni was leader for the September 19th PVN at Harrington Beach with Kevin Bert as assistant. Close to 80 people were treated to clear skies and views through the Panarusky and imaging telescopes. Thanks to the dedicated members and their personal scopes in the parking lot that helped treat guests to views of our universe.

#### Lac Lawrann, West Bend, October 10th

By Rick Dusenbery

Our club was asked to provide telescope viewing for the annual Luminary Walk as in past years. This is a hugely popular event with hundreds of people participating, and after completing the walk, they look forward to some stargazing. I arrived there early and met up with Jeff Setzer who showed me a discouraging weather report on his smart phone. Although the sky was fairly clear at first, a huge cloud mass was approaching, we set up one telescope and aimed it at Alberio double star in Cygnus. Crowds gathered around for a look just as the clouds moved in, about 50-75 got to see mostly through holes or thin areas of the clouds. A couple of people got to view NGC-457; the Owl or ET Cluster, through a cloud hole before it closed up.

#### Harrington Beach, October 16th

By Charlotte DuPree

Friday, October 16th, public viewing night. The sky was clear all day. Therefore, everyone was surprised to find the park cloud covered. Gene was able to line-up the 20 inch so we could see a few objects through the clouds. An hour later, with a clear sky and a dozen visitors, we were able to move around and look at more than a few objects. After everyone had left around 9:00, we had one couple arrive, so we were able to give them a private show. Gene showed them the comparison between the 20-inch and the imaging refractor of the same objects. Around 9:30, there was a group of a 30 students from the Moody Bible Institute of Chicago. They were camping for the weekend and one of the students was from Port. Most of them only stayed around long enough to see one or two objects. Thanks to Rick Dusenbery for setting-up in the parking lot.

#### Harrington Beach, October 17th

By Kevin Bert

The October 17<sup>th</sup> Public Viewing Night coincided with the parks Halloween Hike this year. A clear night completed the recipe for a big turnout at the

Observatory. Jeff Setzer assisted me as leader in this busy evening. Members with telescopes entertained the early crowd with great views of the moon as they waited for views in the Observatory under darker skies. I started with the favorite Ring nebula in the 20-inch and explained what they were about to see. There was much eagerness by the children in particular as they waited their turn up the ladder to reach the eyepiece. I always enjoy the reactions of people at the eyepiece. I was too busy at the 20-inch to see how Jeff was doing at the Refractor. It must have been pretty good as I did hear a number of oohs and aahs coming from the refractor as people looked at the Wild Duck Cluster.

Long lines grew behind the 20-inch Panarusky and 5 -inch refractor until they extended out the door. The M15 globular cluster in Pegasus provided a much better viewing position for the ladder than the Great Hercules cluster that was just too far to the west. The Andromeda Galaxy was a nice object to finish with as the crowd started to thin out. At the close of the evening Jeff and I estimated that there were over 200 people getting views that evening. It was a nice ending to the scheduled viewing season for 2015.

#### Horicon Marsh, October 17th

By Charlotte DuPree

This was the Horicon Marsh 2nd Annual Sandhill Crane Watch. We were invited to move public viewing from the Education Center to the DNR building, since the third Saturday is no longer "Movie night on the Marsh."

We then volunteered to do solar viewing. The birding club was hosting the event and the afternoon started with watching the Bald Eagle flying around. It then spent most of the afternoon sitting in a tree near the nest. There was a Sandhill count of 84, which was more than last year. There was one large group of sunspots and three smaller ones. Most of the birders stayed around after dark to look at some deep sky objects. Most of the visitors that came after dark were very interested in learning more about the night sky and information about buying a telescope. Thanks to Rick Dusenbery for his help in the afternoon and evening.

#### WOW2, Waupaca, September 11-13th

By Rick Dusenbery

WOW, can mean several things. Often, the first word spoken by someone who has never seen Saturn or the Moon before and now viewing through one of our telescopes through one of our outreach events. For us in the NCSF, WOW stands for *Continued on Pg 4*

## RELATED INFO

### Leaders for Public Viewing

#### January 16

Horicon Marsh

Gene and Charlotte DuPree

#### February 6

Harrington Beach

Gene and Charlotte DuPree

#### February 13

Pike Lake

Gene and Charlotte DuPree

### “Nominations Notice”

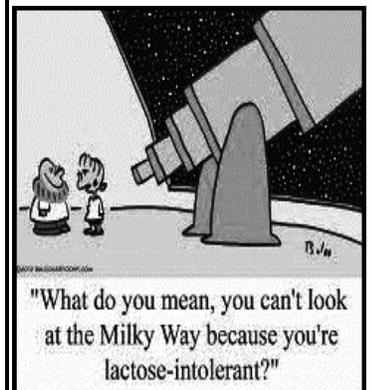
The November General Meeting will include nominations for several board members whose term of office end in December. Elections will be held at the December Meeting.

### For Sale

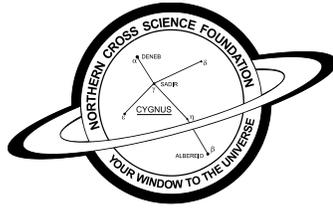
13” Astrosystems Dobsoni-an. \$995 O.B.O

Contact Rob Powell at:

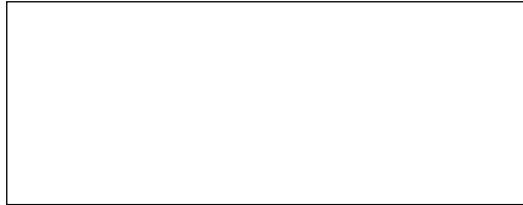
archerychampi-on@gmail.com



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Jim & Gwen Plunkett  
OBSERVATORY



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Rick & Mickey Kazmierski

*Continued from Pg 1 (Growth)*

imaging laptop that walks the user, step-by-step, through a night of imaging. The user simply clicks next through each of the steps including stowing the scope at the end of the night. I included an edit button so that other imagers can add their own notes and alter steps as necessary. There is an additional Word document on the laptop that walks the user step-by-step through data reduction including stacking and processing in Photoshop. On behalf of the imaging committee, we look forward to growing this hobby-within-a-hobby and expanding the club's outreach mission through dazzling color photos



*Photograph taken on the ES127  
by Jaime Hanson and Nolan Zadra*

*Continued from Pg 3 (WOW)*

Wisconsin Observers Weekend hosted by the NewStar Astronomy Club, Menasha, WI. This weekend event is held annually in early summer at Hartman Creek State Park, near Waupaca. This is where we take over the entire group camping area. Unfortunately, clouds and rain have spoiled this for the past several years. So NewStar has a new approach. Enter WOW2; a second WOW event which was September 11-13th also at Hartman Creek State Park, using only one of the five group campsites. Jeff Setzer and I attended this along with a smaller group of about 15 amateur astronomers from Eastern Wisconsin. On my drive up, it started out clear, but (of course) clouds soon moved in. We still set up our telescopes, but kept them covered, then socialized around supper and music provided by guitar, banjo, and stand-up bass. When darkness fell and the clouds remained, I retired to my sleeping bag. Someone got a campfire going, but soon I heard a voice proclaiming "Hey, the sky is clearing! I scrambled out of my bag and exited my tent – and looked up at a beautiful night sky complete with a brilliant Milky Way! The covers came off the scopes and for the next several hours, we had wonderful observing conditions. Besides looking at the old favorites, I saw the Veil Nebula for the first time through my eight-inch (the UHC filter I had recently purchased really helped!) at midnight clouds rolled back in. Saturday started out mostly cloudy, but by nightfall, the sky cleared again for a second great observing session. So WOW2 was a success, beating out the regular WOW's of past years. By the way next year, WOW is scheduled for June 2nd thru 5th, with information and registration coming out in February. Plan on coming next year!

**SPECTRUM Newsletter -**

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**NCSF Monthly Meeting**  
7:00 p.m. Astronomy 101  
7:30 Main Program  
Unitarian Church North  
Lower Level  
13800 N. Port Washington Rd.  
Mequon, WI 53097

The NCSF Supports the



International Dark Sky Association

Send Newsletter Inquiries to:

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