

SPECTRUM

Northern Cross Science Foundation Newsletter

August, 2017

Looking Up

August 3, Thursday

General Meeting

7:00 p.m. - Astronomy 101

7:30 p.m. - Main Program

Business Meeting to Follow

August 10, Thursday

Board Meeting

7:30 p.m.

House of Jeff Setzer

August 11, Friday

Public Viewing

7:00 - 11:00 p.m.

Harrington Beach

August 12, Saturday

Public Viewing

8:00 - 11:00 p.m.

Harrington Beach

August 12, Saturday

Public Viewing

7:00 - 11:00 p.m.

Pike Lake Campground

September 1, Friday

Public Viewing

8:00 - 11:00 p.m.

Harrington Beach

September 2, Saturday

Public Viewing

6:30 - 11:00 p.m.

Ice Age Visitor Center

September 7, Thursday

General Meeting

101 (To be Announced)

7:30 p.m. - Main Program

Business Meeting to Follow

Stargazing on the Beach *by Dan Bert*



With a family outing scheduled up north in door county around a new moon I made sure to pack up my telescope in hopes that I would have the opportunity to do some observing. Arriving late Friday night the skies were clear offering a preview of the dark sky conditions just northeast of Sturgeon Bay along the shores of lake Michigan. After 3 days past of golfing, hiking, boating and cooking, the skies finally gave the go-ahead June 27 for a great evening of stargazing on the beach. While I had never set up on sand or within yards of waves and water the only open area with unobstructed views of the sky was

the beach. An early crescent moon was enjoyed by the family followed by Jupiter and its 4 Galilean moons. Saturn appeared next with the rings tilted nicely for all to see before bed time. Once the sky finally got dark I took full advantage of the view we had to the south looking down the great lake. Like Rick mentioned last month unlike back home the milky way here over Sagittarius was a bright cloud and continued up and over to the northeast. Those that stayed up late enjoying the beach fire, beverages and waves also took in views of M17 the swan, M8 Lagoon, galaxies M51, M81&82, Hercules cluster M13, Ring and Dumbbell Nebula and later Andromeda. Using sky safari on the Kindle for the first time worked well and was a great aid in helping plan the viewing list that evening. Thin clouds later moved in from the west forcing a retreat from the beach around 1am. It was good not to leave anything on the beach however as the waves later that morning were huge and began to erode the grass and wash our boat out to sea. If one is looking for dark skies only 2-1/2 hrs. away consider a trip up to the door county peninsula. Stargazing on the beach is optional.

Joseph E. Reibold 1926-2017 *By Kevin Bert*



Joe Reibold 2011

It is with great sadness, that I report the passing of longtime member Joe Reibold on July 20th at the age of 91. He was laid to rest on July 25th with full military honors. He was part of the founding group of the Northern Cross in 1974. As a high school student, I joined shortly after that. He was my mentor in the early years, helping me

develop my telescope making skills. I enjoyed many astronomy activities with him throughout the years.



Joe and Kevin next to Joe's unique 6-inch Jagers Refractor.

July Meeting Minutes

By Joyce Jentges

The July meeting of the Northern Cross Science Foundation was held at GSC Technology Center in Germantown. President Jeff Setzer began the meeting at 9 pm. Twenty three people were present. He started the meeting with officer reports as usual.

Treasurer, Gene DuPree reported our checking account balance as \$12,491.98. The observatory account has \$762.43 in it.

In the absence of Kevin Bert, Secretary, Jeff updated the group on the Astronomical League annual convention (ALCON) in Casper Wyoming. It coincides with the solar eclipse. He reported that it is not too late to attend, but the nearest hotel rooms are 100 miles away! Setzer also mentioned that NCRAL 2018 will be hosted by Door Peninsula Astronomical Society. ALCON 2018 will be held in Minneapolis, MN.

The Observatory Director, Dan Bert was not present, so Setzer continued with a report on the observatory. He stated that leaders are still needed for the weekend of July 28 and 29 at Harrington Beach. He

reminded those attending that anyone who is trained to lead/use the observatory is asked to help lead or assist at an observing session. One other observatory note was mentioned: If you do use the observatory, make sure that you disengage all six of the turnbuckles that hold the roof to the building. Last year, two of the turnbuckles were damaged while someone tried to roll the roof off without disengaging all of the turnbuckles. Please report any problems or damage to Dan Bert.

Jeff Setzer noted that we are in the middle of summer and observing season. We have plenty of activities coming up at Harrington Beach and Pike Lake State Parks for you to satisfy your observing needs. He went on to give a list of upcoming events. The Small Scope Star Party is July 22nd at Harrington Beach. He noted that there is an aperture limit for this event: All scopes need to be under 6 inches in aperture. If you plan to come, please bring a dish or snack to pass. He also told everyone that no scope is necessary to attend. Setzer mentioned after our general meeting in August, there will be no more eclipse material presented at the beginning of the meeting, except pictures of the eclipse. He also mentioned that the Chipewa Valley Astronomical Society is hosting Northwoods Starfest the weekend after the

solar eclipse, August 25-27. Setzer, who is a past attendee, said that this is a good starparty to go to if you aren't sure about going camping. The property has a youth camp attached to it and it has cabins with bunks. All you need are a sleeping bag and pillow! The registration fee also includes all food except the Friday evening meal, but you can partake of their brat fry that evening for an additional fee.

Setzer asked the group if anyone had any other business to bring up. Gene DuPree mentioned that he was selling solar filter material for .15 cents per square inch. A question was asked about the light by the outhouses at the observatory. Apparently the person was at Harrington Beach observing and the light by the outhouses was on. Setzer said that they were not supposed to be on. With the old outhouse, we used to have a key so that we could turn off the lights at the shelter next to the observatory, but with the new outhouse, we need to check whether we still are able to do that. The electrical box was mounted on the old outhouse. Jeff Setzer will have Dan Bert look into this.

With no further questions, the meeting was adjourned at 9:18 pm.

Spectacular Juno images are intended for the public to process and post *by Ernie Mastroianni*

Back in late 2015, NASA posted an unusual news release. Photos taken by the JunoCam, on the Jupiter-bound Juno spacecraft, would be placed into the public domain, leaving much of the final imaging work for the public. The spacecraft, launched in 2011, reached Jupiter in 2016. Its camera, intended from the beginning to be a public outreach tool, features a 2-megapixel sensor and a fixed, wide-angle 58mm lens. Juno is spin-stabilized, rotating every 30 seconds, so the camera actually

makes a scan of the planet as it spins along during low approaches, which accounts for the unusual hour-glass shape of the unprocessed images.

Juno spends most of its time far from the planet in a 53-day elliptical orbit that takes it over the giant planet's poles. But its closest approach brings the solar-powered spacecraft just 3100 miles above the turbulent cloud tops, much closer than the Voyager fly-by missions or the orbiting Galileo probe. In July, the close pass aligned with the Great Red Spot, and pictures revealed more detail

that ever before seen in the centuries old storm that is larger than earth.

The public took an instant interest and many savvy image processors produced photos rich in unprecedented detail and color. In this age of social media and instant communication, the spectacular pictures were a hit.

Among the best pictures produced were by the duo Gerald Eichstädt and Sean Doran (a German mathematician and United Kingdom filmmaker, respectively) including this one of the Great Red Spot, showing swirls, festoons and even hints of earth-like clouds topping out over the dense and turbulent atmosphere.

I took a go at one image of the Great Red Spot, stretching the hourglass shape into a rectangle using Photoshop warping adjustments. I then balanced the color to match my impression of the planet that I've seen through many telescopes over many decades. But in the end, I enjoyed seeing everyone's versions. NASA's public outreach was successful, and it got many people to share their vision of the solar system's largest planet. You can see the all the raw images and finished results uploaded by citizen scientists at this link:

<https://www.missionjuno.swri.edu/junocam/processing>.

Images are best viewed in the digital version of the Newsletter.



August General Meeting

Astronomy 101 *by Kevin Bert*

"Night Sky at Mid-day"

The solar eclipse will be the focus of our attention on Aug 21st, especially for those on the path of the shadow's centerline. The short duration of totality offers little time to pay attention to other things but a quick survey of the surrounding sky will add to the overall event. Just what will be visible under these darkened conditions?

July Public Viewing Events

Harrington Beach - July 1

By Rick Wandsnider

The night sky was clear for most of the evening except when clouds came in around 10:40pm. (They did disappear after 11:15, however by then everyone had left.) We estimated that about 30 people came through, some returning several times. Most were campers. One camper commented after he, his wife, and son had viewed the moons of Jupiter and the rings of Saturn for the first time tonight and that "this was our best camping experience". We spent most of the time viewing the moon and planets Jupiter and Saturn. Since Jupiter (west) and Saturn (east) were so widely separated it took time to change the focus point and flip the secondary mirror so it was best to coordinate between two scopes. We did attempt to view the Ring nebula however that was a frustrating exercise since it was so high above the horizon and it was too difficult for me to focus the large telescope.

Pike Lake - July 1

By Charlotte DuPree

We had a nice clear night for viewing, and Jupiter was spotted early. Jeff had made an eye-piece adapter, for taking photos with a smart phone camera. He was inviting anyone that had a phone to take a picture of the Moon. Saturn was looking good and also many of the Milky Way objects. Thanks to Al, Rick, and Jeff for their assistance.

Horicon Marsh Library day - July 8

By Charlotte DuPree

The four county Library Consortium event was on a Saturday this year. There are many indoor and outdoor activities with solar viewing as our job. We were surprised by how many people knew about the coming eclipse, and their plans to drive to Illinois for the day. The Sun was active and there were many prominences and a very large sunspot

Harrington Beach - July 28

By Mike Schactner

What a night! Conditions were wonderful. Cool, dry, calm, and a clear dark sky had everyone at the Harrington Beach State Park Observatory anxious to explore. The parking lot was full of members, and the observatory was packed with

Main Program *by Jeff Setzer*

The Great American Eclipse

(Revised and Updated)

It's finally here; the Great American Eclipse! August 21st is the day we have all been waiting for. Jeff will be explaining everything we need to know to get the most out of this event. Don't miss this meeting!

guests. Well over fifty guests made the trip, mostly all for the first time. Mike Schactner lead the night, and Mike Borchert assisted. The two began the evening by showing Jupiter before it fell out of view. But the hit of the night was Saturn. Almost all guests were viewing Saturn for the first time. Thanks to the conditions the Cassini Division was clearly visible. Next was the Ring Nebula. With dozens of people in line to view, both Mike's educated guests on planetary facts, constellation navigation, planetary nebulas, and answered numerous questions from the intrigued crowd. Once the crowd began to thin we observed M11, M16, M13, and M31.

Special thanks to Gal for showing the Waxing Crescent Moon with the small reflector to the guests waiting in line.

Pike Lake - July 29

By Charlotte DuPree

Another good night for viewing. A first quarter moon led us to find Jupiter early. Visitors are always surprised that they can see Saturn's rings so well. The usual deep sky objects were seen. We started to pack up and then had another group of visitors and stayed until 11.00. Thanks to Rick, Jeff, and Al for helping.



"WELL, HOW ABOUT THAT, LLOYD,
MY WISH CAME TRUE!"

RELATED INFO

NCSF Welcomes New Member

Chris Fuchs



Leaders for Public Viewing

August 11

Harrington Beach
DuPrees

August 12

Harrington Beach
Leaders Needed

August 12

Pike Lake
DuPrees

September 1

Harrington Beach
Leaders Needed

September 2

Ice Age Center
Jeff Setzer



Great American Eclipse

August 21

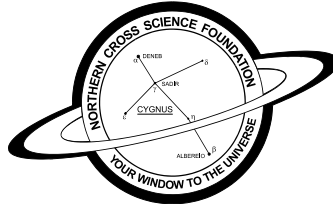
Pick your spot on the Center Line

Northwoods August 25 -27

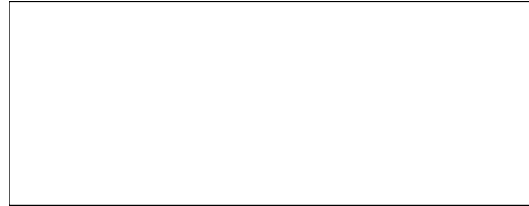
Hobbs Observatory
Beaver Creek Reserve
Fall Creek, WI.
www.cvastro.org



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**Jim & Gwen Plunkett
OBSERVATORY**



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Solar Eclipse Products at Best Buy *by Rick Dusenbury*

While cruising the aisles of our local Best Buy store recently, I noticed a display (in the camera department) of Celestron products highlighting the upcoming total solar eclipse. The first item of interest which I bought is the "2X Power Viewers" kit. As shown in one photo, this includes two 2X cardboard viewers (one folded and one open) along with a large heavy-duty paper map showing the path of totality and other information. The other photo shows the "Deluxe 3 Piece" kit that includes plastic solar glasses with cloth bag, a hand-held camera filter, and a 36-page eclipse guide booklet. There were also two models of solar binoculars offered; 10x25 and 10x42 of which I bought the former that also included a carrying case. All three of these items cost less than 53 dollars, but how well would they work?



Arriving home, I put the plastic glasses and 2X viewers to the test. The viewers must be held to the eyes, but the plastic glasses fit comfortably just like regular sunglasses. All showed the sun well with a pleasing orange color. Next up were the 10x25 roof prism solar binoculars which showed the sun in sharp focus with a natural white color. Finding the sun was a bit difficult though as they yielded nothing but black until pointed directly at the sun. By the way, there were no sunspots visible.

So I am happy to report that these solar items performed well and will be part of my eclipse observing kit for viewing the partial phases of the "Great American Eclipse" from southern Illinois on August 21st. And they will be useful along with my regular (filtered) telescope for sunspot viewing anytime.

SPECTRUM

Published by the Northern Cross Science Foundation, Inc. A non-profit organization based in South-eastern Wisconsin.

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



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
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