

SPECTRUM

Northern Cross Science Foundation Newsletter

November, 2018

Looking Up

NOTICE

November Meeting Date Change

The November General Meeting will be held on the second Thursday this month,

November 8 th.

This is a one time schedule change. We will continue our first Thursday General Meeting schedule in December.

November 8, Thursday

General Meeting

7:00 p.m. - Astronomy 101

7:30 p.m. - Main Program

Business Meeting to Follow

November 15 Thursday

Board Meeting

7:30 p.m.

House of Jeff Setzer

"NCRAL 2020" Meeting

Next meeting scheduled for January, 2019

December 6 Thursday

General Meeting

7:30 p.m.

Business Meeting

(Nominations for Open Board Positions)

Annual Holiday Party

White Elephant Exchange

Boy Scouts Merit Badge *By Mike borchert*



Friday night, Saturday and Sunday morning, October 12-14, Boy Scout Troop 63 and NCSF teamed up at Harrington Beach to earn an astronomy merit badge. Rick Wandsnider lead the event, Rick Dusenberry and Mike Borchert assisted. While the weather forecast did not call for rain, it was going to be hit and miss with clouds. Rick W did have a program that did not need entirely clear skies, while

keeping the scout busy. They arrived under clouds, but as soon as they were set up the skies opened up and Rick D gave a fantastic star hopping demonstration for about an hour. As the skies eventually closed, the scouts moved back to camp and constructed a Planisphere.

Saturday started with a talk on the moon, progressed to a sun program, complete with viewing in the club's Coronado. The afternoon continued with a presentation by Rick D on telescopes; and continued with "The earth is a peppercorn", a program designed to show the size and scale of the solar system. The quarter moon was visible enough to observe in the afternoon, so the observatory roof came off and we were able to look at something through the 20" reflector. Saturday night was sketchy, dodging the clouds; Mars and Saturn along with the Moon were tough at best to capture. Sunday morning the scouts were presented with Rick W's merit badge evaluations. A dry weekend, all in all, troop 63 can be proud of their efforts and attention.

Astronaut Samantha Cristoforetti Wears 'Star Trek' Uniform in Space

By Calla Cofield



Star Trek fandom has gone orbital: European astronaut and Trekkie Samantha Cristoforetti, who is currently aboard the International Space Station, tweeted a photo of herself in a uniform from the one of "Star Trek" TV series.

"There's coffee in that nebula' ... ehm, I mean... in that #Dragon," Cristoforetti wrote in a Twitter post last Friday, as she looked out the window of

the orbiting outpost at the Dragon space capsule that arrived carrying 4,300 lbs. (1,950 kilograms) of food, scientific experiments and other supplies.

In the photo, Cristoforetti appears to be wearing a uniform similar to those worn by actors on "Star Trek: Voyager," the fourth live-action TV series in the venerable science fiction franchise.

The quote, "There's coffee in that nebula," comes from the early episode "The Cloud" and was uttered by Kathryn Janeway, captain of the USS Voyager, who was well known for her love of coffee: black.

Cristoforetti's choice of words has a second meaning, because the Dragon spacecraft, built and operated by SpaceX, delivered a load of cargo to the space station that included the first-ever space espresso machine. Prior to the coffee machine's arrival, the only java option aboard the orbiting laboratory was powdered instant coffee. *(Con't. Pg-4)*

October Meeting Minutes

By Kevin Bert

The October 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 8:55pm and welcomed 21 members and guests. He noted that this was the last month of scheduled public events for the year. Jeff then asked for standard reports.

Treasurer Gene Dupree tells the membership that the checking balance is \$12,478.88 and the Observatory balance remains at \$418.49.

Secretary Kevin Bert reports that the name-tags were updated. Membership packets were available for new members. Under the Astronomical League the regional convention will take place in the Quad Cities in 2019 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 have all been replaced with quality exterior doors. The lock combination will remain the

same for the remainder of the year. The dimmer control for the red rope lights will be replaced after a repair job on the control did not hold up. Dan informed the park superintendent of our encounters with latenight DNR wardens questioning why we were there after 11:00pm.

Planners for the 2020 Regional Convention meeting did not meet last month. The last Thursday in October will be the next meeting. Contact Jeff Setzer or Mike Borchert for time and location if you are interested in attending.

With no new business Jeff reminded members of the upcoming events. October 5th is telescope viewing at The Bog in Cedarburg. The 6th is the members Binocular Star Party at Harrington Beach. The 12th & 13th are public viewing nights at Harrington Beach. The 13th is also a telescope night in conjunction with the Lac Lawrann Luminary Walk. October 20th is a viewing night at Pike Lake Campground.

With no further business Jeff closed the meeting at 9:00 pm.



Venus at High Noon *By Ernie Mastroianni*



. When Venus passed through inferior conjunction relative to earth on October 26, I wanted to capture the slender crescent of the planet as it passed just below the sun. With crystal clear skies on Sunday, October 21, I had opportunity and free time to photograph the planet shortly after noon from my back yard.

Even at noon, the sun was just 36 degrees above the horizon and Venus was nearly 30

degrees further south and lost in the sun's glare.

So with a solar filter over my Questar 3.5, I leveled my mount, pointed it north and set the wedge to 43 degrees. I adjusted the telescope to a declination (DEC) of -10 degrees and 45 minutes, sun's position at that time.

The sun was in the field but off center. With some small altitude and azimuth tweaking, I felt I was reasonably polar aligned and ad-

justed the right ascension (RA) setting circle to match the sun's position.

While shading the scope with my body, I removed the solar filter and pointed the telescope to the RA and DEC that Venus was supposed to be. It was not visible, but with a bit of searching, I found it just outside the 54x field of view.

The seeing was terrible. Venus bubbled and wobbled, making focusing difficult, but the slender crescent was a sight to behold during brief moments of steadiness. A dry transparent sky often brings turbulence, and this day was no exception. And its low position, just 26 degrees above the horizon, made things worse.

So using an Imaging Source monochrome camera, I took 1300 frames over the course of a few minutes. Most were not usable, so I hand picked the best and stacked about 100 or so to create the final image, using image stacking software. I included a few single frames as insets to show the effect of the atmospheric turbulence on that day. For the final photo, I colored the sky blue, based on color values taken that same day with a digital SLR.

I used Stellarium, the free planetarium program, to find the proper RA and DEC settings for the sun and Venus on that day

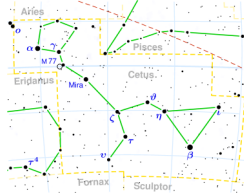
November General meeting

Related Info

Astronomy 101 - Kevin Bert

"Binoculars for Astronomy"

Too often a beginner is in a rush to purchase a telescope & does not consider binoculars as a worthy first step. Get the basics on binoculars for astronomy with good reasons to consider them.



Constellation of the Month:

Cetus

Main Program - Mike Borchert

"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. With the new Astronomy Backstage Pass: Chicago DVD, you will finally get your own private tour.

Jim & Gwen Plunkett OBSERVATORY



October Public Viewing Events

Cedarburg Bog October 5

By Jeff Setzer

"The event at the Cedarburg Bog was rained out on its original date, and the postponed date was overcast. Jeff Setzer waited with their organizer inside the building for an hour, and after nobody else showing up they decided it was time to go home and watch the rest of the Brewer's game."

Harrington Beach October 12

By Charlotte DuPree

It had been cloudy all day, and so it was as we went to the observatory. We did not open the roof, because we could only see the Moon, very briefly at times. Some of the visitors that stopped by found our activity on the DNR web site.

Harrington Beach October 13

By Mike Borchert

The skies finally dried for the last Public Viewing of the year at Harrington Beach Saturday 10/13. While the week, as well as the month had been wet, Saturday night was going to be dry but cloudy. While the roof was off during the afternoon for the Boy Scout merit badge viewing, there were a lot of campers stopping by to see what was going on. The campers were told to come back when the sun went down if they could see any stars between the clouds. While there was really only Mars, Saturn, and the Moon partially visible, that was all that was needed to bring approximately 50 visitors to the observatory through the night. Rick Wandsnider, Al Steinberg and Mike Borchert did their best to entertain between the clouds, while chasing the sky objects as they opened and clouded. There were 3 telescopes set up for viewing until

they gave up around 9 pm. There were still some oohs and ahhs as Saturn and the Moon gave a few glimpses. It was not too cold, no mosquitoes, and no rain to wrap up the public viewing season. Looking forward to next year already.

Lac Lawrann October 13

By Rick Kaz

The Lac Lawrann "Luminary Walk" was held on Saturday, October 13th. Jeff S, Rick D, and myself were present with telescopes. I was told by Lac Lawrann staff that over 700 people attended the event. Clouds were heavy for most of the night, but the waxing crescent moon did show itself from time to time. When it did, we were flooded with people wanting to view. People sure get excited when seeing the moon through a telescope. Saturn was viewed several times during the evening, but it faded in and out without warning. The event ran from 6:00 to 9:00 pm.

Pike Lake State Forest October 20

By Charlotte DuPree

When we arrived at Pike Lake there was a clear sky with wind and a chilly temperature. We set-up the scopes and waited for people to come, but no visitors. Leaving Al, and the bright Moon, watching the scopes, Charlotte and I drove through the campground. We told the campers to come over to see Saturn, Mars and the Moon. About ten minutes later, we had over 30 people, grateful to us for being there. And a few of them stayed long enough to look at the great objects we showed them. Again thanks to Al for his assistance.

November Sky

By Gene DuPree

In the southwest, Jupiter and Mercury are pairing up nice in late October and early November. Saturn and Mars are still the main planets but Neptune and Uranus are out there for the challenge. Comet 46PWirtanen, around Christmas they are saying it could be naked eye. It visits us every 5.4 years. It resides in Fornax right now.

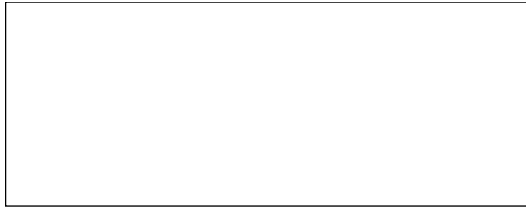
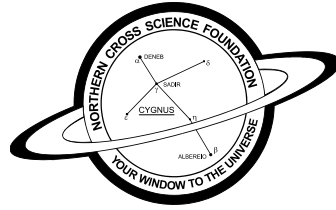
2018 Public Viewing

The 2018 Public Viewing schedule for Northern Cross science Foundation ended in with the month of October. It was a great year for public outreach and the Board of Directors wishes to thank everyone who participated.

However, the Observatory continues to be available throughout the winter for events, both public and private. Also, check this newsletter as winter events are added.

It may be getting colder, but the nights are longer and winter brings some really fantastic sky jewels.

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(Con't. from Pg-1)

Cristoforetti has expressed her Star Trek fandom before — she tweeted a photo of herself giving the Vulcan salute shortly after Leonard Nimoy passed away on Feb. 6. Nimoy was best known for portraying Spock on the original "Star Trek" TV series and many subsequent movies.



Accompanying that photo Cristoforetti wrote, "Of all the souls I have encountered.. his was the most human," quoting a line from the movie "Star Trek II: The Wrath of Khan," that referenced Spock. "Thx @TheRealNimoy for bringing Spock to life for us."

SPECTRUM

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