

SPECTRUM

Northern Cross Science Foundation Newsletter

December 2020



This rendering from the Stellarium planetarium software shows the relative positions of the planets at 4:19 pm on December 21. Note the field of view indicator: just .161 degrees, or 10 arc-minutes.

Earth, Milwaukee, 220m FOV 0.161° 59.1 FPS 2020-12-21 16:19:07

Rare alignment of Jupiter and Saturn arrives for the holidays

On December 21 (clear skies of course) you'll be able to see a rare pairing of Jupiter and Saturn in the same high-power telescope field. They'll be separated by just six minutes of arc, about 1/5 the diameter of the full moon. Such a close conjunction has not occurred since July of 1623.

The planets will be low in the sky, so you'll need an unobstructed southwestern view. As the sun sets, the planets

will hover just 18 degrees above the horizon. Saturn is much dimmer, so in early twilight, binoculars will help bring the ringed planet into view. Sunset is early (4:20 pm) giving you time to view the planets before they set two hours later.

With a telescope, 120x will show them both. Even at 200x, they'll be well within the field, but the atmospheric turbulence will make them appear

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November General meeting, plans for December's meeting and board report

By Mike Borchert

During November's General Meeting, nominations were solicited for the those seeking a seat on the NCSF Board of Directors. Voting on the position takes place during the December meeting. Mike Borchert currently holds the seat that ends this year. Mike was renominated for a second term and the motion was seconded. Mike accepted the nomination. Newsletter editor Ernie Mastroianni was also nominated for the seat, but declined, saying that editing the newsletter was commitment enough for him at this time. Additional nominations can be made by members for this seat during December's meeting.

In new business, member Rob Powell said he has a 10-inch Dobsonian telescope that

he no longer needs. It is a commercially-made telescope with a black tube. Contact Rob Powell if interested.

Vice President Joyce Jentges presented the main program talk, highlighting the 20th anniversary of the International Space Station's continual occupation. Her highly detailed account covered the international station's history, told of the many astronauts who have visited, and elaborated on the many scientific and engineering highlights of its construction and function.

The meeting welcomed new member Steve Sweeney of Hartford, who attended the meeting via Zoom. Sweeney and Mastroianni were colleagues at Kalmbach Media prior to Ernie's retirement last year.

Gene D. reported

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**December 3, Thursday
General Holiday Meeting**
Online via Zoom
7:30 pm

**General Meeting
Post-pandemic**
7:00 p.m. Astronomy 101
7:30 p.m. Main Program
Location:
GSC Technology Center
W189 N11161 Kleinmann Dr.
Germantown, WI

Please email editor Ernie Mastroianni with dates and times of any upcoming NCSF events:
ernie.mastroianni@gmail.com

from page 1 blurred and bubbling, so don't expect razor sharp
----- views at high power.

The year's pairing offers better conditions than those of 1623. Back then, the pair was just 11 degrees from the sun and only 8 degrees above the horizon at sunset (as viewed from the northern hemisphere).

A more favorable conjunction would have been in early March, 1226. If you could time travel to Australia that year, you'd see both planets high in the east a couple hours before sunrise, much closer than they are this year. With sharp eyes, they'd still appear to be a distinct but close pair. Venus would be

another bright beacon a few degrees to the south. If you brought along a good telescope, even a 300x field would easily contain both planets. Jupiter's moon

Ganymede would appear closer to Saturn. And stepping away from the scope, you'd see the Milky Way stretching high across the middle of sky just to the north of the planetary spectacle.

Observing Report



This rendering, made with Sky Safari, shows the hypothetical view of the March, 1226 conjunction at 297x through a Celestron 9.25 and an 8mm eyepiece.

A similar event happens on March 14, 2080 and the ideal place would be, again, somewhere in Australia or the southern hemisphere. I'm booking my tickets now.

- Ernie Mastroianni

Board meeting notes on observatory, return to public viewing, holiday party

from page 1 \$11,806.43 in the main bank
----- account. There was a \$17 electric bill.

Jeff S. reported nothing new from NCRAL. At this point, and very much subject to change, the 2021 convention is still on.

Gene D. reports that the Pike River Starfest is scheduled for July 7-11.

Observatory update

Dan B. reports nothing has changed at the observatory. As long as the state park keeps its buildings closed, the observatory status remains as closed. The status will be reviewed and updated as changes occur. Club members occasionally stop inside, but visits are limited to such things as setting mouse traps, disconnecting batteries and making sure nothing catastrophic has taken place.

Returning to public viewing

Discussion did center around methods to return to holding public viewing nights in light of Covid-19. One suggestion was to use a small paper cup, such as a Dixie cup, with a hole cut into the bottom. When placed upside down over eyepiece, the viewer can still look through the telescope, but the paper cup would be thrown away and replaced with a new one for the next viewer. It could be a way to keep eyepieces sanitary for the observing public.

At this time, socially-distant observing can take place in the parking lot for club

members, but no private or public use of the observatory is permitted.

Discussion then moved to the December meeting. It was decided that it was pretty late to get a guest speaker at this time. The annual mandatory business meeting will take place. There is one election up for the board in 2020. The club votes on a general board position. The board then meets later to decide and vote on positions. It is still not too late for any club member in good standing, to step up, or be nominated for that open board position.

Astronomy interest on the rise

Discussion did open up concerning the huge interest in astronomy now. It is probably the best time in a long time for anyone remotely interested in astronomy to jump in. The social distancing and solidarity that astronomy can offer lends itself to the hobby. Jeff S. was going to ask Kevin B. if there were any telescopes that needed to be liberated. It was noted that there were several club members looking for one. If there was a surplus, it was noted that this would be a good time to sell. At this time there is very little inventory out there. Mike B volunteered to help list and sell that surplus if needed. Mike B. had a current account on the website *Cloudy Nights*. Mike B. has bought and sold several pieces on that site recently

January program

There was discussion on the presentation for the January meeting.

Tom Schmidtkunz's name came up for a possible presentation on the virtual observing that he has done in the past. Any club members with leads or ideas for guest presentation on a virtual meeting, please get a hold of a board member. If there is nothing forthcoming for January, Mike Borchert would discuss the road he has taken on the trip to astrophotography. We hope to gear that presentation to anyone thinking about pointing a camera to the skies.

Holiday meeting update

The board then went on to discuss ideas for the December meeting. The meeting will take on a holiday flavor. Mike B. will organize an astronomy-related trivia game. Teams in their Zoom windows can be organized. Teams will score themselves. There will be discussion of the questions as they are asked, so club members should not be worried if they have no idea of possible answers. This will be a fun event, no actual monetary prizes awarded, just bragging rights going forward. Joyce J. asked Ernie to send out an email asking club member to send her pictures reflecting their favorite stargazing experience. The pictures then will be put on the Zoom screen and a word or two will be said by the owner of those pics. The meeting then as usual will open up to talk and discussion among members. Club members should please feel free to share their meeting food and drink, any holiday recipes, holiday plans, let's have a social event.

The meeting was then adjourned.

Help with reviving an older telescope

By Gene R. DuPree

Jeff gave me the name of a man (Matt) in West Bend who received a Celestron NexStar 11 GPS Schmidt-Cassegrain telescope from a co-worker. Her husband, who owned the scope, had passed away. She knew Matt had young children and thought he'd be interested. So Matt contacted Jeff for some help.

After four years of having it in his basement, Matt wanted to learn how to use it. I went to his home several times in September and early October but had no success in getting the go-to mount operational.

A club member from the Wehr Astronomical Society has the same scope so I gave him a call. He had several suggestions, but ultimately, he deforked it and put it on an equatorial mount.

Matt and I had been trying to call Celestron, but they do not answer the phone and leaving a message was not an option. I tried to call five of the Celestron vendors listed in the *Astronomy Magazine* advertising. If they did answer, I was told no one would be able to help him. Matt finally received an email response from Celestron. They gave him some options to try but told him they no longer carried parts that would need to be replaced for the older NexStar 11 GPS scopes.

I then remembered [Camera Concepts and Telescope Solutions](#) in New York. We've bought many products from him over the years. They were at many of the star parties we attended in the 1990's. So I gave them a call. **The sales person I talked to was able to answer all of my questions!** Matt has been told by several people the best solution for that scope is to defork it and put it on an equatorial mount. I decided to call Camera Concepts for prices on mounts. This time I talked to the owner (Jeff) who was happy to hear a voice from the past.

After asking me a few questions he offered different options on equatorial mounts. So from now on Camera Concepts will be our go-to place for astronomy products.



Matt's NexStar GPS dates to the early 2000s.

Trying again for the Sheboygan Swap-n-Sell

Hello fellow amateur astronomers,

We at the Sheboygan Astronomical Society are hoping that 2021 will be a return to normalcy. With that, we have set a tentative date for the 2021 Swap-n-Sell for Saturday, March 27th, being held at the Aviation Heritage Center, Sheboygan Airport.

If things are not returning to normal at the beginning of March, we will be cancelling the event in order to keep everyone safe. We sure hope to be able to host the event again, as we all missed not having it occur this year. As always, if you would have any questions, please do not hesitate to reach out to me.

Diane Van Minsel, President
Sheboygan Astronomical Society



Buyers and sellers look over a wide variety of astronomy gear at a recent Sheboygan Swap-n-sell.

Looking ahead

January 7, Thursday

General Meeting

Online via Zoom

7:30 pm

Sheboygan Swap-n-Sell

March 27, 2021

Aviation Heritage Center,
Sheboygan Airport

NEAF

Northeast Astronomy Forum

April 10 and 11, 2021

The twice-canceled conference will try for the third time. Rockland Community College, Suffern, NY

<https://www.neafexpo.com>

NCRAL convention

May 7-8, 2021

St Norbert College Bemis Center,
De Pere, Wis.

Hosted by the Neville Public Museum
Astronomical Society

See the [NCRAL autumn 2020](#)

[newsletter](#), page 3

Pre-WOW

June 4-9 2021

Hartmann Creek State Park

IMPORTANT NOTE:

If anyone is thinking of attending Pre-WOW, June 4-9 2021, please let us know. We will release the early weekend dates if no one interested in camping. You would not have to come for all of the pre-dates. You can camp and leave anytime during if you cannot attend WOW on June 10 - 13. Contact: 262-675-0941 or grdupree@charter.net
Gene and Charlotte DuPree

Wisconsin Observers Weekend

June 10 - 13, 2021

Hartmann Creek State Park

[http://www.new-star.org/index.php?](http://www.new-star.org/index.php?Itemid=82)

[Itemid=82](http://www.new-star.org/index.php?Itemid=82)

Pike River Starfest

July 7-11

Amberg, Wis.

Contact Gerry Kocken

gerryk@kockenwi.com

Nebraska Star Party

August 1 - 6, 2021

Merritt Reservoir Snake Campground

<https://www.nebraskastarparty.org/>

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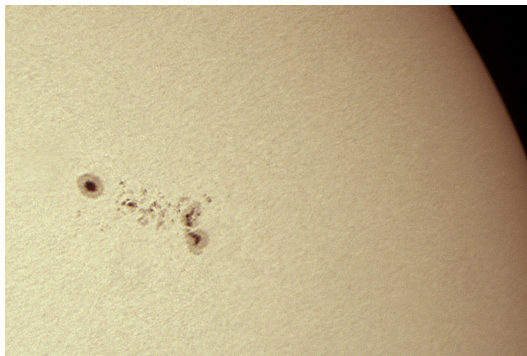
NCSF is a member of the [North-Central Region of the Astronomical League](#).



NCSF supports the [International Dark Sky Association](#)

Imaging Report

Bubble Nebula/NGC 7635: The distinct bubble is visible against a background of glowing hydrogen alpha gas in this photo by Rick Kazmierski, taken with a Meade ACF telescope from his home observatory. His total exposure time was about an hour. The Bubble Nebula, about 7,200 light years away, was discovered in 1787 by William Herschel. It is in the constellation Cassiopeia.



Sunspots Return: The large sunspot group named AR 2781, seen on Nov. 7, was one of the largest so far of Solar Cycle 25, which experts say began in December 2019. The sun cycles through active and quiet periods every 11 years. Ernie Mastroianni took this photo from his backyard through a 3.5- inch Questar telescope, equipped with a solar filter.

SPECTRUM newsletter

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