

# SPECTRUM

Northern Cross Science Foundation Newsletter

April 2021

NCSF secretary Kevin Bert aims the Panarusky telescope at a summer target in 2018. Depending on DNR decisions, the long-idled observatory could see light again later this year.  
- Ernie Mastroianni photo

## Plans in place to open observatory and in-person meetings later this year; Northern Cross sets NCRAL convention dates for 2022

By Ernie Mastroianni

The NCSF General Meeting was held via Zoom for the twelfth consecutive month on March 4, marking a full year of virtual meetings due to the COVID pandemic. But as the pandemic fades and more people become vaccinated, NCSF president Jeff Setzer said that the board has plans in place for membership and public observing events to resume at the Plunkett Observatory this year, depending on what the Wisconsin Department of Natural Resources decides to do.

"Starting in 2021, people can rent shelters and other structures at Wisconsin state parks," Setzer said during the meeting. "We're hoping the observatory can fall into that category and we have an inquiry to them regarding that."

If the state DNR okays use of the observatory, Setzer said the NCSF board will consider opening the observatory up, initially for members-only use. He

stressed that some basic COVID-type rules would apply, such as wearing masks and limiting the number people allowed inside.

The NCSF board has also prepared a schedule for public observing nights, but it will not be released until the state parks decide when events for the general public can take place. No public events through April are allowed, but the DNR is holding a meeting later this month to decide what to do after April 30th. Setzer was hopeful that we can resume public activities by July or August, and sees autumn as being more likely. Again, COVID-related precautions would be in place.

Also noted was the cancellation of the 2021 NCRAL convention at St. Norbert College this May, due to unavailability of the space because of the pandemic. College classes are being held at the hall where the convention was to be held. Event chairman Gerry Kocken of the Neville Public Museum Astronomical

Society made the decision to cancel in conjunction with NCRAL chairman Carl Wenning.

Looking forward to 2022, the NCSF will host the annual convention in Port Washington on May 13-14. The plan is to



bring in the same speakers and activities that were planned for the canceled 2020 event and to hold it in the same place.

In new business, it was noted that the Port Washington Parks and Recreation Department will hold a public campout at a nature center north of the town on August 6. A parks official contacted our club to ask for volunteers to bring telescopes to view the moon and stars. Gene DuPree noted that the

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## April program, final deadline for paying club dues

The program for the April 1 General Meeting is "Charles Messier And His List" which I will present.

Description: "What are those "M objects" and why are they scattered all over the northern sky? Who made this list, and why? The answers to these questions, and more, will be revealed in this in-depth look at Charles Messier, the person, and the list of

celestial objects for which is is famously remembered."

In other news, members who have not renewed their dues by the April 1 meeting will be no longer be members of the NCSF; they will be dropped from the membership roster, removed from Slack, and no longer receive Zoom meeting invitations or other club emails. - Jeff Setzer

**April 1, Thursday  
General Meeting**  
Online via Zoom  
7:30 pm

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

## Easy objects with interesting names beckon in the Big Dipper neighborhood

By Ernie Mastroianni

Spring is galaxy season and though they're densely clustered through Virgo, Leo, and Coma Berenices, I'm more inclined to first view some outstanding Messier targets in Canes Venatici and Ursa Major (aka the Big Dipper).

During a couple March evenings this year at Harrington Beach State Park, I used a 9.25-inch Schmidt-Cassegrain and 20x77 binoculars to view an eclectic group of galaxies, a planetary nebula, and an intriguing triple star. Many come with delightful and compelling names.

Starting at the top of the Big Dipper, I'll begin with **M108** (the **Surfboard Galaxy**), an edge-on barred spiral that shows mottled markings at 125x and improves at 190x. Nearby is **M97** (the **Owl Nebula**) which appeared larger and brighter than I expected at 125x. Both dark spots (owl-like eyes) were evident. But M97 has low surface brightness and is tougher to see in smaller apertures. Through 20x77 binoculars, both were visible on opposite sides of a triangle of stars.

From here I dropped down to **M109** (dubbed the **Vacuum Cleaner Galaxy** in my Stellarium atlas), a barred spiral near the 2.5 magnitude star Phecda which anchors the bottom back of the Dipper's bowl. M109 appears oblong due to its bright bars. With averted vision I could make out part of a dimmer spiral arm. Take care to leave Phecda's bright glare out of your field of view.

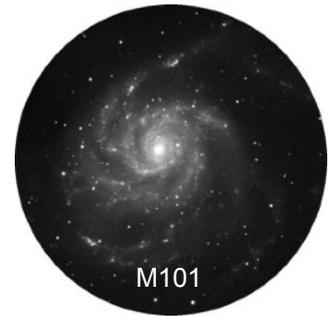
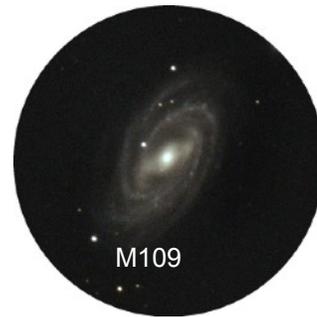
Heading south to Canes Venatici, my next view was of **M106**, an unusual galaxy with two bright arms, a bit brighter than M109, and some very faint outer spiral arms that I could not see. The brighter arms appear somewhat angular at 125x. It shows as an easy smudge in the binoculars.

In a fairly blank area of the sky lies **M63** (the **Sunflower Galaxy**), floating between the Big Dipper's handle and the two solitary stars of the diminutive Canes Venatici constellation. This is a rewarding galaxy for my 9-inch scope, displaying a mottled, seed-like texture across a fairly bright disk. A ninth-magnitude star sits jewel-like on the galaxy's edge, not too bright to overwhelm, but bright enough to add some stellar drama to the scene. M63 shows just a bit of texture in the 20x77.

A short hop brings you to **M94**, called the **Cat's Eye Galaxy**, though the name does not seem official. It's an intricate face-on spiral with a dimmer ring of outer arms, but viewed through my telescope looked more like an unresolved globular cluster. It's bright and quite easy to spot in the binoculars.

The tail end star of the Big Dipper's handle, named Alkaid, is the stepping off point to **M51** (the **Whirlpool Galaxy**). It's famous for its face-on spiral arms and a satellite galaxy at one arm's tip. I had trouble making out the arms on a hazy night with the 9.25 inch scope at Harrington Beach, but decades ago I saw them through 11x80 binoculars from the 13,400 foot elevation of Mauna Kea, Hawaii, as well as from a dark and dry sky at Custer State Park in South Dakota.

On the opposite side of the Dipper's handle is **M101** (the **Pinwheel Galaxy**), another face-on spiral that looks spectacular in photos, but more like a dull, low-contrast disk in the eyepiece, especially when I viewed it at about 75x on a



night that grew increasingly hazy. M101 is big: 24 arc-minutes across, which is just 20 percent smaller than the full moon. Its 7.7-magnitude glow is widely spread and low-contrast. A clear dry night and a wide-field refractor would do this better justice.

For something completely different in nearby Cancer, I turned my scope to an intriguing triple star, **Zeta Cancri**. At first glance, it's pair of 6th magnitude stars just 5 arc-seconds apart, but on closer look, one of the pair is also a double, separated by just 1.2 arc-seconds. It's a great high-power target and resolved cleanly at 195x in my 9.25 inch scope.

Because all these objects are clustered in the same general area of the sky, viewing them is quite comfortable. Your eyepiece and chair stay in the same place, and that means you can spend a good stretch of relaxing time as you track down these rewarding deep sky targets.

- All photos by Ernie Mastroianni, chart derived from Stellarium.

## Space station will see multiple arrivals and departures

By Joyce Jentges

The International Space Station will be a very busy place the next two months.

Currently, seven people live on the ISS. Sergey Ryzhikov, Sergey Kud-Sverchkov and Kate Rubins arrived at the ISS on October 14, 2020 via a Soyuz. They'll be leaving April 14, 2021.

Also on the ISS: the SpaceX Crew-1 mission, which launched on November 15, 2020. The four astronauts, Mike Hopkins, Victor Glover, Shannon Walker and JAXA astronaut Soichi Noguchi will be returning home in late April or early May. It's been a very busy six months for them, with research, space gardening and space walks

The next Cosmonaut crew (Oleg Novitskiy, Pyotr Dubrov and NASA astronaut Mark Vande Hei) is expected to launch April 9, 2021, closely followed by the [SpaceX Crew-2](#) on April 22. The astronauts on this mission will be NASA's Shane Kimbrough and Megan McArthur; ESA's Thomas Pesquet; and JAXA astronaut Akihiko Hoshide. It is interesting to note that Megan McArthur is the wife of NASA astronaut Bob Behnken, part of SpaceX's demo crewed mission in May 2020.

This upcoming traffic poses an interesting question: Where are all the astronauts going to sleep? There are only six sleeping compartments on board the ISS and there are seven people there now. Mike Hopkins sleeps on board the Crew-1 Dragon capsule he arrived in.

I'm speculating that they will find a way to anchor the sleeping bags to



NASA astronaut and Expedition 64 Flight Engineer Kate Rubins removes research hardware from inside the Combustion Integrated Rack on February 3 this year. NASA photo

different attachments on the walls inside the space station and spread out amongst the modules. Or will they sleep in shifts? We will have to see how this will all play out.

The next several months should be interesting with activity on board the station. We will be able to watch several launches/landings, dockings/undockings and welcoming/farewell ceremonies.

As always, to watch these events you can view on [NASA TV](#), [NASA.gov](#) or on [NASA's Youtube channel](#). Follow my NASA-space channel on Slack for updated information for dates and times.



From page 1 ..... date conflicts with the Northwoods Starfest and also

pointed out that there will be no visible moon on that night. If you are interested in volunteering, contact a board member.

NCSF board member Mike Borchert presented the main program about his journey into astrophotography. He discussed his beginnings from wide-field Milky Way images in the Arizona desert to his current setup: a 5-inch refractor and robust mount setup in his back yard. He described the gear he bought, the steep learning curve that came with it, and the many software programs he mastered.

Regarding Zoom meetings, Setzer said that the General Meetings might return in-person this year, depending on

many pandemic factors and requirements by the host company GSC. The meeting ended at 9:30.

### ALCon to be virtual in 2021

Because of the uncertainty caused by the pandemic, the [Astronomical League](#) will **not** hold an in-person ALCon this year. In late July or early August, ALCon 2021 will be held virtually, featuring speakers and the annual Youth and Recognition awards. More details will be announced in the near future. The Albuquerque Astronomical Society (TAAS) is now scheduled to host ALCon 2022. We're sorry for any inconvenience that this might cause.  
- John Goss, Astronomical League media officer and past president

### Looking ahead

#### May 6, Thursday

##### General Meeting

Online via Zoom

7:30 pm

#### NEAF

Northeast Astronomy Forum

April 10 and 11, 2021

Online only

<https://www.neafexpo.com>

#### NCRAL convention

May 7-8, 2021

**Canceled**

#### Wisconsin Observers Weekend

June 10 - 13, 2021

Hartmann Creek State Park

<http://www.new-star.org/index.php?Itemid=82>

#### Pike River Starfest

July 7-11, Amberg, Wis.

Contact Gerry Kocken

[gerryk@kockenwi.com](mailto:gerryk@kockenwi.com)

#### Nebraska Star Party

August 1 - 6, 2021

Merritt Reservoir Snake Campground

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

#### Northwoods Starfest

August 6-8 (pending COVID conditions)

Hobbs Observatory, Fall Creek, Wis.

<https://www.cvastro.org/northwoods-starfest/nwsf-information/>

#### Sheboygan Swap-n-Sell

October 23, 2021

Aviation Heritage Center,

Sheboygan Airport

#### NCRAL convention

May 13-14, 2022

Port Washington

Hosted by the Northern Cross Science Foundation

#### 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

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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: California dreaming**

While it's difficult to see visually because of its large size and low surface brightness, NGC 1499 (also known as the California Nebula) is a spectacular target for astrophotographers.

Board member Rick Kazmierski took this shot from his home observatory earlier this year, using a 70mm Stellarvue apochromatic refractor and a QHY 168c color camera.

Just 35 two-minute sub-exposures were enough to bring out the wispy details of this nebula which covers nearly a four-degree expanse in Perseus. It lies about 1800 light years away. At right is the 4th magnitude star Xi Perseus.

NCSF president Jeff Setzer has observed this nebula with an H-Beta filter on his 11" f/5.4 Starmaster (with a partial view), with his TeleVue 85, and through Gene DuPree's Astroscan.

"The California Nebula is one of the very few objects that works visually for an H-Beta filter. The Horsehead Nebula is another," says Setzer.

- Ernie Mastroianni

**SPECTRUM newsletter**

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