

SPECTRUM

Northern Cross Science Foundation Newsletter

May 2021



Double selfie The Mars helicopter Ingenuity (left) sits near its mothership, the robot rover Perseverance, during non-flight downtime. The first vehicle to fly in the atmosphere of another planet has had four successful flights so far. Ingenuity's managers have extended its mission for another 30 days with more extensive flights in the works. Read more at <https://mars.nasa.gov/technology/helicopter/>

April General Meeting notes, pandemic still affects amateur astronomy

By Ernie Mastroianni

With no fooling whatsoever, the Northern Cross Science Foundation General Meeting was held via zoom on April 1. President Jeff Setzer reminded everyone that the dues deadline had arrived. Anyone who had not paid would be removed from the mailing list, newsletter list, and not allowed observatory access or other membership privileges.

Noted by Setzer was the long shadow that the COVID pandemic has cast, including the cancellation of this year's North Central Region Astronomical League's convention at St. Norbert College, as well as the national Astronomical League's ALCON gathering in Albuquerque. Planning is underway to make ALCON a virtual meeting.

While the [Wisconsin Observers Weekend](#) at Hartman State Park for June 10-13 is officially confirmed by the sponsoring Northeast Wisconsin Stargazers club, there was some discussion among club members about the status of registrations.

Member Charlotte DuPree said that Pre-WOW will be June 7 to 10. "If WOW is cancelled and you still want to camp and stargaze that weekend, we have group camp site #5 reserved to June 13," she said.

"Just let us know so we have a headcount. It would also help us to save parking spaces for WOW if you can tell us you will be attending."

Also discussed was status of Plunkett Observatory at Harrington Beach State Park. Unfortunately, the observatory will

remain closed for now. The DNR will meet again on June 1 to review their COVID policies.

Gene DuPree reported \$11,740.48 in the club's account and paid a \$16.42 observatory electric bill and \$50 membership dues to the International Dark Sky Association.

The evening's program, by Setzer, was a richly-detailed account of Charles Messier's life, the famed French astronomy observer and comet hunter. His enduring legacy is his list of Messier objects. Virtually all amateur stargazers are familiar with the galaxies, clusters and nebulae on this list.

Setzer traced Messier's life from his birth in Badonviller, France in 1730 to his burial in 1817 at the famed Pere Lachaise cemetery in Paris.

May program

The main speaker for the May meeting will be [Anne Holland](#). Anne is a fellow Solar System Ambassador. She is the Community Engagement and Exhibits Manager at the Space Science Institute in Boulder CO, where she works with museums and libraries on

STEM activities. Her topic is Cosmic Messengers.

This program will be about comets, asteroids and meteorites. Please join us for this fascinating topic.

- Joyce Jentges



May 6, 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

Observing Report: Numerous NGC galaxies crowd the sky around Ursa Major

Editors note:

In last month's observing column I featured some of the brighter Messier galaxies around Ursa Major, which are a visual treat, fairly easy to find, and viewable with a small scope or binoculars. But I was unaware that many more galaxies were in the same area. Though smaller and dimmer than Messier objects, many are viewable with a scope of modest aperture from a dark sky site. Veteran observer and NCSF treasurer Gene DuPree outlines some of his favorites below. - Ernie Mastroianni

May is a good month to get out the big scope to view some of the NGC galaxies around the Big Dipper. Mine is an 18" Obsession which I usually use with a 24mm Tele Vue Panoptic eyepiece. It has Sky Commander digital setting circles which are a great help. Many in this list are bright enough to see with a much smaller telescope as well, though viewing away from city lights is recommended. None are dimmer than about magnitude 11.5. For reference, I use *Astronomy* magazine's *Atlas of the Stars 2018*.

In the Big Dipper's pot are galaxies NGC 3610, 3642, 3898, 3998. All are between magnitude 10.4 and 11.3. Just outside the pot are 3953, at 9.6 magnitude, and 3718, and 3631, which are at about 10.5.

On a line to M81 and M82 you can find NGC 3359, 3077, 2976, and continuing from there is 2985. None are dimmer than magnitude 10.5. In a south direction is 2787, 2805 (dimmiest of these at magnitude 11.1), also nice is IC 2574.

Continuing south to NGC 2768, 2685 (dimmiest at magnitude 11.2), 2681, and 2841 (brightest at magnitude 9). Then go west to find NGC 3079, 3310, 3448. All these glow at about 10.5.

Above the Big Dipper double of Mizar and Alcor is 5322, 5308 (a sliver at 11.3), and 4605.

Most of these objects I have viewed at Hartman Creek State Park during the Wisconsin Observer's Weekend (WOW) which is June 10-13 this year.

Keep Looking Up -
Gene R. DuPree

DuPree uses *Astronomy* magazine's *Atlas of the Stars* to search for viewable galaxies. The atlas plots 1,200 carefully-selected deep sky objects. Nearly all can be seen with scopes down to six inches in aperture at a dark sky location. It's a valuable reference for \$10 in print or digital versions.



NCSF treasurer Gene DuPree views the northern sky from Harrington Beach State Park through his 12.5-inch Dobsonian telescope. An E-Z UP canopy extends from the back of his vehicle to shield his gear from dew. Below is the 18-inch Obsession telescope that he and Charlotte used during the Pike River Starfest in Amberg, Wis. last May. Ernie Mastroianni photo above, Gene and Charlotte DuPree photo below.

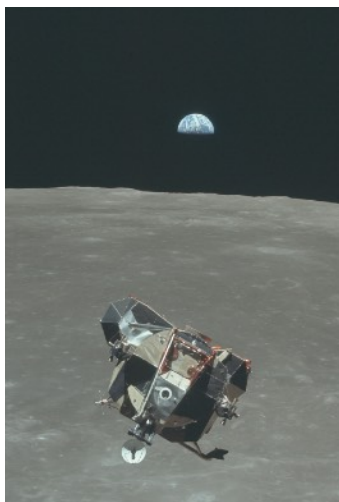


NASA Notes: Michael Collins passes away, ISS hosts a crowd



Apollo 11 astronaut Michael Collins (above, during training) passed away on April 28 at the age of 90. He was the command module pilot for the first moon landing in July 1969, remaining alone in orbit while Neil Armstrong and Buzz Aldrin explored the moon's surface. Collins snapped this iconic photo of the lunar module's return, lined up with the distant earth in the background.

On April 27, 11 astronauts packed the galley for a meal in a crowded International Space Station. Crews from three different missions crossed paths for a few days: [SpaceX Crew-1](#), [SpaceX Crew-2](#), and [Soyuz MS-18](#). On May 2, Crew-1 left the ISS for a [rare night spalshdown](#) near Panama City. Crew-1 had been on the ISS since November 16.



Looking ahead

May 3, Monday

Schlitz Audubon Center, 7-8:30 pm

NCSF member Jim Hahn will use liquid nitrogen to demonstrate some of the physics of our cold universe. Tickets for non-members are \$20. More information at this link:

<https://www.schlitzaudubon.org/event/astronomy-cold-universe-2/>

June 3, Thursday

General Meeting

Online via Zoom

Wisconsin Observers Weekend

Pre-WOW June 7-10

WOW June 10 - 13, 2021

Hartman Creek State Park, Wis.

Contact Charlotte and Gene DuPree for more information.

262-675-0941

grdupree@charter.net

<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/>

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

Astronomy and spaceflight links

Any comprehensive list of online astronomy links could fill dozens of pages, and as such, this list is selective and is subject to change. Many are well known to members, others might be new. Please email me with any more suggestions that you feel would be useful to NCSF members. - *Ernie Mastroianni, editor*

Astronomy clubs, newsletters and websites

NCSF: <https://ncsf.info>
 Astronomical League: <https://www.astroleague.org/>
The Reflector magazine: <https://www.astroleague.org/reflector>
 Milwaukee Astronomical Society:
<http://milwaukeeastro.org/index.asp>
 North Central region of the AL: <https://ncral.wordpress.com/>
 NCRA newsletter archive:
<https://ncral.wordpress.com/newsletter-archive/>
 US list of astronomy clubs:
<https://www.astroleague.org/astronomy-clubs-usa-state>

Astronomy gear, vendors and online sellers

<https://www.bhphotovideo.com/>
<https://www.highpointscientific.com/>
<https://optcorp.com>
<https://www.telescope.com/>

Astrophotographers

Astrobin (a paid site for astrophotography uploads):
<https://welcome.astrobin.com/>
 Rogelio Bernal Andreo <http://www.deepskycolors.com>
 Chad Andrist <https://www.astrobin.com/users/SparkyHT/>
 Bob Franke <http://bf-astro.com/>
 Harrington Beach Imagers Group (Ernie Mastroianni and Tom Schmidtkunz)
https://www.astrobin.com/users/Harrington_Beach_Imagers_Group/
 Trevor Jones <https://astrobackyard.com/>
 Rick Kazmierski <http://skyhawkobservatory.com>
 Jerry Lodriguss <http://www.astropix.com/index.html>
 Gabe Shaughnessy: <https://www.astrobin.com/users/AstroGabe/>
 Babak Tafreshi <https://babaktafreshi.com/>

Classifieds

<https://astromart.com/>
<https://www.cloudynights.com/>

Clear sky forecasts

Astrospheric <https://www.astrospheric.com/>
 Clear Dark Sky <https://www.cleardarksky.com/csk/>
 Clear Outside <https://clearoutside.com/forecast/50.7/-3.52>

Digital star atlases

Cartes du Ciel <https://www.ap-i.net/skychart/en/start>
 Stellarium <https://stellarium.org/>
 Sky Safari <https://skysafariastrometry.com/>

Magazines and online astronomy news

Sky & Telescope <https://skyandtelescope.org/>
Astronomy <https://astronomy.com/>
Astronomy Now <https://astronomynow.com/>
 Skynews <https://skynews.ca/>
The Reflector <https://www.astroleague.org/reflector>
Sky at Night <https://www.skyatnightmagazine.com/>
 Astronomy Picture of the Day
<https://apod.nasa.gov/apod/astropix.html>



This image of spiral galaxy M106 in Ursa Major is a collaboration between NASA, ESA, the Space Telescope Science Institute and noted astrophotographer Robert Gendler, who combined his own data with that from the Hubble Space Telescope. This image is on hubblesite.org.

NASA images and missions

Hubble telescope <https://hubblesite.org/>
 NASA JPL Curiosity <https://www.jpl.nasa.gov/missions/mars-science-laboratory-curiosity-rover-msl>
 NASA JPL Juno at Jupiter <https://www.jpl.nasa.gov/missions/juno>
 NASA JPL Mars 2020 <https://www.jpl.nasa.gov/missions/mars-2020-perseverance-rover>
 NASA Johnson Space Center on Flickr
<https://www.flickr.com/photos/nasa2explore/>
 NASA Images
<https://www.nasa.gov/multimedia/imagegallery/index.html>
<https://images.nasa.gov/>
 NASA International Space Station
https://www.nasa.gov/mission_pages/station/main/index.html
 NASA Kennedy on Flickr
<https://www.flickr.com/photos/nasakennedy/>
 NASA Project Apollo Hasselblad scans:
<https://www.flickr.com/photos/projectapolloarchive/albums>

NASA Research Centers

Ames Research Center <https://www.nasa.gov/ames>
 Armstrong Flight Research Center
<https://www.nasa.gov/centers/armstrong/home/index.html>
 Jet Propulsion Laboratory
<https://www.nasa.gov/centers/jpl/home/index.html>
 White Sands https://www.nasa.gov/centers/wstf/index_new.html
 Johnson Space Center
<https://www.nasa.gov/centers/johnson/home/index.html>
 Marshall Space Flight Center
<https://www.nasa.gov/centers/marshall/home/index.html>
 Michoud Assembly Facility
<https://www.nasa.gov/centers/marshall/michoud/index.html>

Astronomy and spaceflight links



The Lockheed Martin Orion spacecraft undergoes a jettison test of the service module fairings on June 1, 2020 at a Lockheed facility near Denver. This and other Orion photos can be seen at [Lockheed Martin's Flickr website](#).



A laser beam projects an artificial guide star into the sky above the European Southern Observatory's VLT facility in Chile's Atacama desert. Adaptive optics systems analyze the beam to cancel out atmospheric turbulence for sharper photos. See this and other photos at the [ESO website](#).

NASA Research Centers (continued)

Stennis Space Center

<https://www.nasa.gov/centers/stennis/home/index.html>

Glenn Research Center

<https://www.nasa.gov/centers/glenn/home/index.html>

Plum Brook Station <https://www.nasa.gov/centers/glenn/about/testfacilities/index.html>

Katherine Johnson IV&V facility

<https://www.nasa.gov/centers/ivv/home/index.html>

Goddard Space Flight Center <https://www.nasa.gov/goddard>

Mary W. Jackson NASA headquarters

<https://www.nasa.gov/centers/hq/home/index.html>

Wallops Flight Facility

<https://www.nasa.gov/centers/wallops/home>

Langley Research Center <https://www.nasa.gov/langley>

Kennedy Space Center

<https://www.nasa.gov/centers/kennedy/home/index.html>

Observatories

UW Astronomy <http://www.astro.wisc.edu/>

Gemini <http://www.gemini.edu/>

WM Keck <http://www.keckobservatory.org/>

European Southern Observatory <https://www.eso.org/public/>

ESO images <https://www.eso.org/public/images/>

National Optical Astronomy Observatory

https://www.noao.edu/image_gallery/

National Radio Astronomy Observatory <https://public.nrao.edu/>

Lowell Observatory: <https://lowell.edu/>

Observing

Clear Skies Observing Guides <https://clearskies.eu/csog/>

Current comets: <http://www.aerith.net/comet/weekly/current.html>

Fred Espanek's eclipse guide <http://mreclipse.com>

Upcoming and seasonal events <https://in-the-sky.org/>

ISS transits transit-finder.com

Outreach organizations

Planetary Society <https://www.planetary.org/>

Night Sky Network from JPL/NASA <https://nightsky.jpl.nasa.gov>

Citizen science participation <https://cosmoquest.org>

NASA Solar System Ambassadors <https://solarsystem.nasa.gov/solar-system-ambassadors/events/>

Sky calendars

<https://skyandtelescope.org/observing/sky-at-a-glance/>

<https://astronomy.com/observing>

Upcoming and seasonal events <https://in-the-sky.org/>

Spaceflight news, blogs, commercial and foreign space agencies

Earth and Sky: <https://earthsky.org/>

NASA blogs: <https://blogs.nasa.gov>

NASA Spaceflight <https://www.nasaspaceflight.com/>

NASA Watch <http://www.nasawatch.com>

Spaceflight Now <https://spaceflightnow.com/>

Spaceflight Insider: <https://www.spaceflightinsider.com/>

Space News: <https://spacenews.com/>

Space Weather <https://spaceweather.com/>

Space Journal of Asgardia (a borderless nation of space enthusiasts) <https://room.eu.com/>

Universe Today <https://www.universetoday.com/>

Spaceflight: commercial and foreign space agencies

Blue Origin <https://www.blueorigin.com/>

Boeing <https://www.boeing.com/space/>

China National Space Agency : <http://www.cnsa.gov.cn/english/>

European Space Agency <http://www.esa.int/>

India space agency: <https://www.isro.gov.in/>

Lockheed Martin Space

<https://www.lockheedmartin.com/en-us/capabilities/space.html>

Roscosmos (Russian space agency): <http://en.roskosmos.ru/>

Sierra Nevada Corp. <https://www.sncorp.com/space-systems/>

SpaceQ Canada <https://spaceq.ca/>

SpaceX: <https://www.spacex.com/>

United Launch Alliance <https://www.ulalaunch.com/>

Board of Directors, 2020**President - Jeff Setzer**

1418 Trillium CT
West Bend, WI 53095
262-338-8614
astrosetz@hotmail.com

**Vice President -
Joyce Jentges**

336 N Main Street, Apt.3
Cedar Grove, WI 53013
262 483- 4270
joycejentges@hotmail.com

Secretary - Kevin Bert

2292 Ridgewood Road
Grafton, WI 53024
262-674-0610
kevin.bert@hotmail.com

Treasurer - Gene DuPree

6219 Jay St.
West Bend, WI 53095
262-675-0941
grdupree@charter.net

**Observatory Director -
Dan Bert**

1517 Green Valley Rd.
Grafton, WI 53024
262-357-1973
dbert64@gmail.com

Mike Borchert

3656 Willow Creek Rd.
Colgate, WI 53017
262-628-4098
gmborchert@gmail.com

Rick Kazmierski

5327 Cascade Dr.
West Bend, WI 53095
262-305-1895
rickerkaz@charter.net



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



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

Imaging Report: Space station transit almost clouded over

Sooner or later at any point on earth between about 63 degrees north or south latitude, the International Space Station can be seen as it crosses the sun while orbiting the earth. A handy website, transit-finder.com, tells when and where this will happen, down to the second. After consulting the site, I learned that a favorable ISS transit could be seen on April 22 from a Mequon park.

I set up my gear in the parking lot and aligned on north using a compass and a level. Mount software helps me refine my aim. At transit time, 21 seconds after 1:03 p.m., a single cloud also approached. Fortunately, the station beat it by just a fraction of a second. - *Ernie Mastroianni*

SPECTRUM newsletter

Published monthly by the Northern Cross Science Foundation, Inc. (NCSF), a nonprofit amateur astronomy organization based in southeastern Wisconsin. <https://ncsf.info>

NCSF On Facebook

Members:
<https://www.facebook.com/groups/284397465372797/>

Public:

<https://www.facebook.com/NCSFAstronomy/>

Slack: ncsfastro.slack.com

Editor: Ernie Mastroianni
5821 N. Santa Monica
Whitefish Bay, Wis 53217
ernie.mastroianni@gmail.com

