

THE BLUE MOON OBSERVER

APRIL 2023
Volume 25, Number 4

DOOR PENINSULA ASTRONOMICAL SOCIETY



Promoting the science and public education of astronomy, encouraging observational participation in astronomy, and providing outreach at the Leif Everson Observatory.



The Door Peninsula Astronomical Society is a local club and a chapter of the Astronomical League.

DPAS operates and maintains the Stonecipher Astronomy Center and the Leif Everson Observatory, which is equipped with a PlaneWave Instruments 17 inch f/6.8 Corrected Dall-Kirkham Astrograph telescope on a L-500 mount for astrophotography and research. On a portable mount is a 102mm refractor with a hydrogen alpha filter for studying details of activity on the sun.

DPAS also owns and operates a portable planetarium with a state-of-the-art computer projection system which is used on cloudy nights, for daytime activities, and for public outreach in local schools and libraries.



Ray and Ruthie Stonecipher Astronomy Center,
Leif Everson Observatory,
and Star Garden
PO Box 331
2022 Utah Street
Sturgeon Bay, WI 54235

STATE of WISCONSIN



OFFICE of the GOVERNOR

Proclamation

WHEREAS, Wisconsin's star-filled skies are a part of the state's natural heritage and light pollution, which refers to excessive artificial light that brightens the night sky through glare, light trespass, sky glow, or overlighting, is a threat to the state's natural night environment; and

WHEREAS, Door County, in particular, is known for its dark skies, Milky Way views, opportunities to catch the aurora borealis, and diverse nocturnal and diurnal wildlife species, plants, and insects, which are all jeopardized by increasing light pollution; and

WHEREAS, the experience of standing beneath a dark, star-filled night sky can inspire feelings of wonder and awe and may even encourage interest in science and nature, particularly in young people; and

WHEREAS, Newport State Park at the far end of the Door Peninsula was designated as Wisconsin's first Dark Sky Park by the International Dark Sky Association in 2017 in recognition of its adherence to dark sky principles; and

WHEREAS, this week, the state of Wisconsin joins the International Dark Sky Association and vested individuals in Door County and across the state in celebrating the night sky, raising awareness of light pollution, and promoting the use of environmentally responsible lighting around the world;

NOW, THEREFORE, I, Tony Evers, Governor of the State of Wisconsin, do hereby proclaim April 15 – 22, 2023, as

INTERNATIONAL DARK SKY WEEK

throughout the State of Wisconsin and I commend this observance to all our state's residents.



IN TESTIMONY WHEREOF, I have hereunto set my hand and caused the Great Seal of the State of Wisconsin to be affixed. Done at the Capitol in the City of Madison this 24th day of March 2023.

Tony Evers
TONY EVERS
GOVERNOR

By the Governor:

Sarah Godlewski
SARAH GODLEWSKI
Secretary of State

MONTHLY MEETING APRIL 11, 7:00 PM



PROGRAM:
**Voyager 1–2
Space Probes**
Presented by DPAS President,
Dave Lenius

DPAS President Dave Lenius will share the amazing story of the twin Voyager 1 and 2 spacecraft are exploring where nothing from Earth has flown before. Continuing on their more-than-40-year journey since their 1977 launches, they each are much farther away from Earth and the sun than Pluto. If the sky is clear, the meeting will end in a Viewing Night. In-person only.

Free and open to the public.

**Meet at the Stonecipher
Astronomy Center
2200 Utah St., Sturgeon Bay**

INTERNATIONAL DARK SKY WEEK APR 15-22 2023

Discover
the
Night



EVENTS ARE FREE
AND OPEN TO THE PUBLIC.

APRIL 15, 2:00 PM

SATURDAY SCIENCE AT CROSSROADS Dark Skies and Wildlife

This family program is intended for school aged students and their families. It will focus on the effects (mostly negative) that artificial night light has on wildlife with videos, games and a take home craft project.

**Collins Learning Center
2041 Michigan St., Sturgeon Bay**

APRIL 22, 7:30 PM

DARK SKY WEEK Viewing Night

Night sky viewing if it is clear. Planetarium Show will feature a program on Dark Skies (and, because it is also Earth Day, show stunning views of Earth from space.)

**Astronomy Campus
2200 Utah St., Sturgeon Bay**

OUTREACH IN MARCH

MARCH 6

President Dave Lenius presented a program for the Jacksonport Women's Club

MARCH 11

Tom Gwilym presented a Zoom program on Dark Skies to the Sierra Club and Coggin Heeringa gave a program on Dark Skies and Plants for the Door County Master Gardeners.



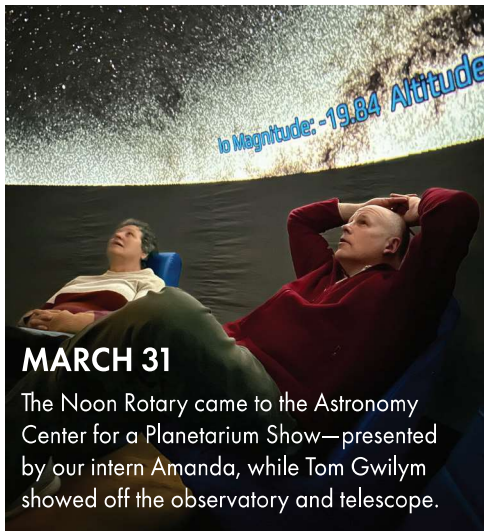
MARCH 23

Coggin Heeringa gave a presentation about DPAS to the Noon Rotary of Sturgeon Bay.



MARCH 25

Saturday Science at Crossroads featured Women in the Sky, using skits and myths to help families learn constellations.



MEETING HIGHLIGHTS

On March 14, Steve Ransom-Jones presented Newcomers Guide to Knowing Nebula during which he explained, "Nebulae represent some of the most stunning sights in the sky. Early observers typically classified celestial objects that were not distinct as a 'cloudy' object, or nebulous (from the Latin for fog or cloud). With the clarity of vision that came with the introduction and evolution of telescopes, our nebulous thinking became clearer as we identified galaxies and star clusters as distinct entities. We could also study the disperse nebulous clouds that could help to unlock the mystery of the formation of the very stars themselves?"

Diffuse nebulae are clouds of gas that are dense enough to 'encourage' and start the gravitational collapse of interstellar matter that allows stars to form.

Indeed, nebulae could be considered stellar nurseries. Energy from new stars, born out of the collapse of these interstellar gases can, in turn, reshape and ionize them, causing the hydrogen to glow with a distinctive red spectrum (known as emission nebulae). Less energetic stars may reflect light from dust in nearby clouds, so that these reflection nebulae have a similar light profile to their stars. We also see dark patterns in the stars that seem like gaps. These are actually dense clouds of gas that prevent light from passing through. Maybe these dark nebulae will become future stellar nurseries and begin to shine.

At the other end of the spectrum are the 'cosmic firework shows' of stars at the ends of their lives. Small spherical clouds, originally misnamed as planetary nebula, display the gases expelled from dying stars, lit and ionized by the stellar remnant. Even more spectacular, but rarer, are supernova remnants, such as the Crab Nebula, that are highly energized by the neutron stars at their core, expelling their matter to begin the stellar cycle again.



The "Three Nebula" pictures taken with "Ray" show three types of nebula in the same field: The red emission "Orion", the bluer "Running Man" reflection and dark "Horsehead" nebulae.

MARCH VIEWING NIGHT

The March Viewing night had a surprisingly good turnout despite the deep snow in the parking lot. Amanda did a couple of planetarium shows, Jim had his refractor out and gave a little tour of the sky. Later it cleared up nicely for some big scope observing.

A few of us stayed out until about 11:30pm, so for visitors to our viewings, if skies are clear, we don't shut down at any specific time.





AMANDA AUSTIN TAPPED AS SUMMER INTERN

Amanda Austin, seventeen-year-old senior at Southern Door High School has earned [by being amazing] the position of DPAS Summer Intern. She will be presenting planetarium shows, operating our telescope, helping visitors and sharing her love for astronomy throughout the months until she leaves her home near Dykesville to attend Michigan Technological University in the Upper Peninsula. She will major in electrical engineering with a minor in astrophysics.

Amanda is excited about "doing outreach so more people can share the wonders of astronomy."

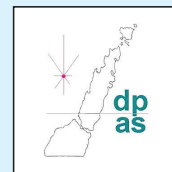
She and her parents are active members of DPAS, and she has already operated the telescope



during monthly Viewing Nights and has begun presenting planetarium shows, operating the computer/projector while offering narration.

In addition to science, Amanda loves music. She plays the trombone in school ensembles and is a member of the Peninsula Symphonic Band and the Swingin' Door Big Band. And oh, by the way, she was just named co-Valedictorian at Southern Door High School.

The intern position will be unwritten, in part, by a grant from the Wisconsin Space Grant Consortium.



BOARD OF DIRECTORS

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Amanda Austin
INTERN

Ray Stonecipher
IN SPIRIT

The business of the DPAS is largely conducted at the Board meetings to leave the general meetings open for programs. Members of DPAS are invited to attend Board meetings.



DPAS Vice President Tom Gwilym sees the northern lights at Frank Murphy Park, March 22.



DOOR PENINSULA ASTRONOMICAL SOCIETY MEMBERSHIP FORM

- ☐ **Family** \$25 per year
- ☐ **Student** \$5 per year
- ☐ I (we) wish to make a donation of _____ to help underwrite operation costs of the Society.

Mail payment to: DPAS, PO Box 331, Sturgeon Bay, WI 54235

Please print to complete:

ADULTS _____

CHILDREN _____

ADDRESS _____

CITY _____

STATE _____

ZIP _____

PHONE _____

EMAIL _____



M64 the Black Eye Galaxy

LEIF EVERSON OBSERVATORY & ASTRONOMY CAMPUS VIEWING NIGHTS

Explore the night sky

through "naked eye viewing" and modern telescopes and share the wonders of astronomy with members of DPAS.

If skies are overcast, planetarium shows will be offered in the Stonecipher Astronomy Center.

Dress for the weather.

SATURDAY, **April 22** AT 8:15 PM

SATURDAY, **May 20** AT 9:00 PM

SATURDAY, **June 17** AT 9:15 PM

SATURDAY, **July 15** AT 9:15 PM

SATURDAY, **August 19** AT 8:30 PM

SATURDAY, **September 16** AT 7:30 PM

SATURDAY, **October 14** AT 6:30 PM

At 11:13 AM on October 14, we will experience a partial eclipse of the Sun.

SATURDAY, **November 11** at 5:00 PM

SATURDAY, **December 16** at 4:45 PM

FREE OPEN TO THE PUBLIC

*Watch the DPAS website or
follow us on Facebook for
Special Astronomical Events*

2200 UTAH ST., STURGEON BAY



DOOR PENINSULA ASTRONOMICAL SOCIETY

Meetings of the Society are held on the second Tuesday of every month at 7:00 PM in the Stonecipher Astronomy Center. 2200 Utah Street in Sturgeon Bay

WWW.DOORASTRONOMY.ORG