

*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



▲ Cocoon Nebula  
◀ M27

Telescope: Amanda Austin Processing: Tom Gwilym

## MONTHLY MEETING

**JULY 11, 7:00 PM**

**PROGRAM:**

**“The Chemistry of the Universe”**

**Featuring retired chemistry teacher and DPAS Member Todd Rockway**

If the Big Bang produced hydrogen, then how were additional elements like Helium, Carbon, Nitrogen, Oxygen, Iron and organic compounds formed in the universe? Chemical reactions describing the formation of these chemical entities will be presented. If the sky is clear, the meeting will conclude with an Open Dome Night.

**Free and open to the public.**

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



**JULY 15**

**VIEWING NIGHT** starting at **9:00 PM**

Explore the beautiful night sky with members of the Door Peninsula Astronomical Society. If skies are overcast, come anyway and enjoy a planetarium show. “There are no clouds and no smoke in the planetarium.”

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

## OUTREACH IN JUNE

### JUNE 12–15

#### St. Peter’s School Bible School

As a part of the “Stellar” theme, Dave Lenius and Amanda Austin offered a daily planetarium show through the week, reaching 85 kids and adult leaders each of five days.

### JUNE 7 & 10

#### Crossroads Program: Astronomy for Kids

Outreach Chair Tom Minahan and Intern Amanda Austin offered planetarium shows and pinhole camera sun viewing at the Astronomy Campus.

### JUNE 10

#### Sturgeon Bay Kick-off to Summer

Amanda, Tim and Jenny Austin set up the Hydrogen-Alpha Filtered Telescope/DPAS information Booth in Sunset Park. 75 people were able to safely view the Sun between clouds.



### JUNE 14

#### DPAS Monthly Meeting

Dave Lenius presented a timely program on Auroras for 40 members and visitors.



### JUNE 17

#### Solar Telescope Viewing at Potawatomi State Park

Jenny and Amanda Austin set up the Hydrogen-Alpha telescope at Potawatomi State Park where 80 hikers and campers observed the Sun.

## MEETING HIGHLIGHTS

DPAS President Dave Lenius presented a timely lecture called “Auroras-What Makes the Sky Glow”. Using stunning images—many of which were taken last month right here in Door County—he shared a bit of history, and then explained what causes the mysterious wavering glow we call the Northern Lights.

He explained the fluctuating light begins in the Sun, the result of the churning motion of plasma which changes the magnetic field. This results in sunspots, flares and coronal mass ejections.

He then described the Earth’s magnetic fields, explaining why the “solar wind”—high energy particles—are best able to penetrate our atmosphere in the polar regions. He also, using gorgeous slides, explained why solar particles interacting with molecules of various elements and at various altitudes result in different colors.

Finally, Dave pointed out that Solar Maximums (the periods when magnetic fields on the Sun are strong and disordered) are cyclic, peaking every eleven years. We seem to be entering a solar maximum predicted to peak soon. Consequently, we may have more Auroras over the next few years, but perhaps, also disruptions to our energy infrastructure.

Alas, the planned “open dome” portion of the meeting was cancelled when, predictably, clouds rolled in. Curses, Foiled again!

## FUNDS FROM WISCONSIN SPACE GRANT CONSORTIUM

This year Crossroads at Big Creek, in collaboration with DPAS, received a grant from the Wisconsin Space Grant Consortium for an effort called “Making Astronomy Accessible”. Funds from this grant were used to underwrite a portion of the salary of our Summer Intern and to fund our outreach activities.

While we are thrilled to have guests visit the Astronomy Campus, we have spent this year taking our programs into the community—youth groups, schools, libraries, summer camps, street fairs, and theaters. Look for DPAS volunteers popping up everywhere—we are reaching out!!



### JUNE 17

#### Viewing Night despite smoky skies

30-40 people attended our June Viewing Night. Jim Gallit had his 8” scope outside while Amanda and Tim Austin presented their custom show, “Life of Stars” in the Planetarium.

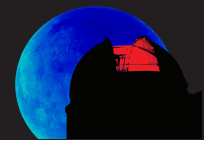


### JUNE 29

#### DPAS Outreach

Chair Tom Minahan presented a pre-performance lecture at Peninsula Players.





M20 Trifid Nebula.  
Processing by Amanda Austin:

June 19 was a good night imaging the Sagittarius region of the sky. It's surprising how well the telescope worked despite the smoke.



## LETTER FROM THE PRESIDENT

It is hard to believe that we are halfway through the year. Things at DPAS have been moving at an amazing pace this year and for the most part, everything is going according to plan except for the wildfires in Canada that have caused some challenging viewing conditions.

I am happy to report that the new full frame camera has arrived, and we are beginning the learning curve with it to get the best images DPAS has ever been able to acquire. Our intern, Amanda, has been very busy doing outreach with the Planetarium to hundreds of people in the community as well as daytime events with

the solar telescope at various locations. DPAS is getting more visibility than we have ever had.

The Planewave telescope and mount is continuing to amaze us with the ability to locate and track deep sky images with accuracy beyond our most optimistic hopes when we placed the order for it. Several of our members have been trying out a new processing software called PixInsight to combine the images our telescope has taken to produce stunning final images. Please check out the images on our Facebook page to see what we have been able to image. The images really are from our observatory, not stolen from the internet.

I would like to thank the volunteers who have been putting in untold hours of time in getting the observatory to operate as flawlessly as it is so the rest of us can enjoy the amazing images that are coming from our equipment. I also want to thank the members that have put in time to make presentations and do Planetarium shows.

We are continuing to plan additional events to increase the exposure of DPAS in the community. If you are interested in helping, please contact one of the board members and they will take your name and we will let you know how we can use your time to benefit DPAS. If you have ideas for events, topics for meetings, or a dream for the future, I would like to hear from you. Let's keep things moving forward. The sky is the limit for DPAS.

Dave Lenius  
President of the Door Peninsula  
Astronomical Society

### BOARD OF DIRECTORS

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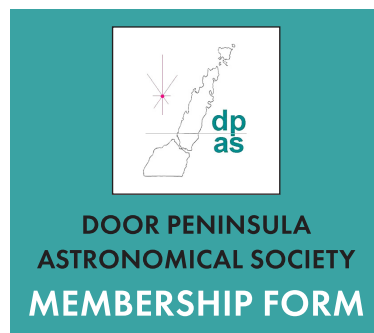
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**Dennis Sundin**  
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**Ray Stonecipher**  
IN SPIRIT

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.



#### Please print to complete:

ADULTS' NAME (S)

CHILDRENS' NAME (S)

ADDRESS

CITY

STATE

ZIP

PHONE

EMAIL (REQUIRED TO RECEIVE NEWSLETTER)

**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**



# SUMMER

## ASTRONOMY OUTREACH



**JULY 4**  
3:00–5:00 PM

**POTOWATOMI STATE PARK**  
3740 Park Drive, Sturgeon Bay

**AUGUST 1**  
3:30 PM

**PLANETARIUM SHOW**  
Sturgeon Bay Library  
107 S. 4th Ave., Sturgeon Bay

**JULY 15**  
3:00–5:00 PM

**POTOWATOMI STATE PARK**  
3740 Park Drive, Sturgeon Bay

**AUGUST 7**  
2:00 PM

**PLANETARIUM SHOW**  
Sister Bay Library  
2323 Mill Rd., Sister Bay

**JULY 15**  
Starting at 9:00 PM

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

**AUGUST 11-12**  
Starting at 9:00 PM

**PERSEIDS METEOR SHOWER NIGHT**  
Astronomy Campus  
2200 Utah St., Sturgeon Bay

**JULY 28**

**DOOR SHAKESPEARE**  
Presentation by Tom Minahan

**AUGUST 19**  
Starting at 9:00 PM

**VIEWING NIGHT**  
Astronomy Campus  
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](http://WWW.DOORASTRONOMY.ORG)

**FREE**  
OPEN TO  
THE PUBLIC