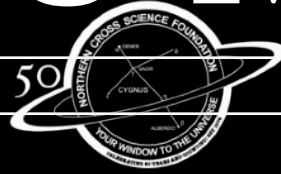


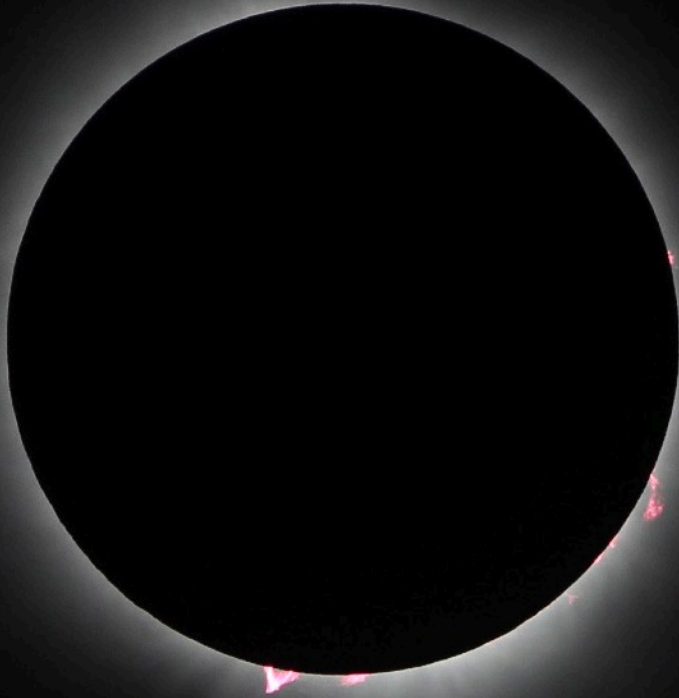
SPECTRUM

Northern Cross Science Foundation Newsletter



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May 2024



Cross Country Spectacle - NCSF board member James Neal traveled to his home town of Martinsville, Indiana to get this detailed photo of totality (left). He used a Canon DSLR with a Sigma 150-600mm lens. Mark Weber viewed the partial eclipse from Saguaro National Park in Arizona, using a Nikon Z7II and a 100-400mm lens (top right). Ginny Kohlmann captured the crescent sun emerging from fast-moving clouds using her iPhone 15 Pro from Texas. See the story and photos starting on Page 2.

Milwaukee Cub Scouts Earn Merit Badges at Plunkett Observatory

By Mike Borchert

Since I was not traveling for the eclipse, I decided to take on a public outreach request. Lindsay Stevens of the Milwaukee German Immersion School had reached out to Jeff Setzer and I followed up. About 10 first graders and their parents showed up to the Plunkett Observatory at 8 pm April 6, fulfill requirements for their Cub Scout Pack 147 merit badge.

Outreach
Report

Requirements ran the gamut from purely observing the night sky, to looking at distant objects through a telescope, to checking out constellations and making up your own constellation. It was a rough night for public viewing, but with the excellent help of Jim Macak, we were able to

See page 5

April General Meeting Minutes

President Jeff Setzer opened the meeting with a welcome message to members and guests who attended to get information about how to view the upcoming solar eclipse on April 8. There were about 15 to 20 persons present.

Jeff launched into his solar eclipse presentation which covered a wide variety of eclipse related topics, including a description of what causes a solar eclipse, why it changes location each time, where to view totality, how an eclipse helped verify the curvature of space-time as predicted by

See page 5

Coming Up

Thursday, May 2, 6 pm
General Meeting
[Jackson Community Center](#)
N165 W20330 Hickory Lane

May program

Our guest speaker for May 2 is Bob Bonadurer, director of the [Daniel Soref Planetarium](#) at the Milwaukee Public Museum. His talk is titled "Lights Out! Eclipses — Whys, Wonders and Wows"

May 17-18,
Friday and Saturday
[NCRAL 2024 Convention](#)
See page 5 for more info

NCSF Members Traveled Near and Far for Eclipse Views



Visibility of the total eclipse was fleeting when Ernie Mastroianni took this photo from Concan, Texas through a 1000mm lens and a Nikon Z6. Exposure was three seconds long, due to heavy clouds filtering out much of the light.

Arizona, Texas, Indiana, Ohio, Wisconsin Among the Viewing Sites

Many NCSF members made plans to view totality in Texas, Indiana, Ohio, and the partial eclipse visible at the Pike Lake state forest here in Wisconsin and at Saguaro National park in Arizona. The largest contingent camped at Lake Buchanan, (northwest of Austin), where fairly clear skies prevailed at eclipse time. In Concan, Texas, (west of San Antonio) a smaller cluster of members and their families saw mostly cloudy skies, with dramatic breaks that revealed partial and totality phases. Weather was favorable for a couple members who made the shorter trip to Indiana.

Joyce Jentges

My journey to get to Texas was filled with problems, but the trip was worth it. We were kept worrying about cloud cover and it did affect how much totality we saw. I estimate that we saw maybe two minutes of totality. We did get to see the stages of totality through annoying clouds, but it was so good to see totality again! I did not use any other equipment other than solar glasses. I did take several pictures of the eclipse through Gene's scope. We had a great group of people to enjoy the eclipse with.

Gene DuPree

Watching the weather for days before the big day, it didn't look good. But, on April 8, the weather was totally different. I used an Orion 80mm, 600mm F-7.5 refractor, and my Samsung S22 to take pictures, through a 20mm eye piece on a tripod. It was fantastic, did more watching than picture taking. I couldn't believe how dark it got.

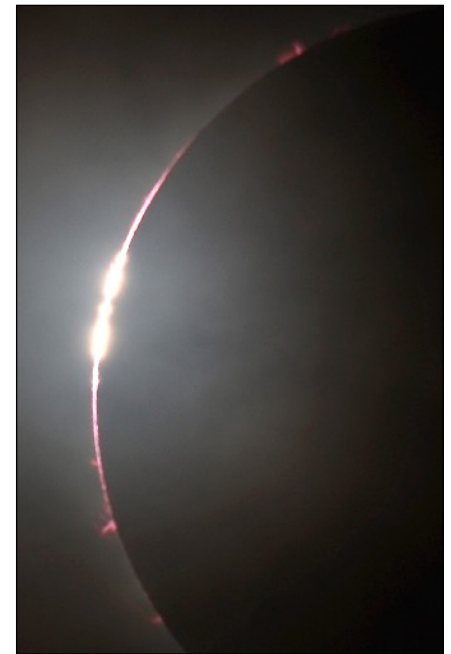
Charlotte DuPree

Gene learned of the 2017 and 2024 eclipse over 40 years ago. Thanks to Dan Raasch, for finding Buchanan Lake in Texas. The day started with clouds hiding the Sun off and on. By totality, the clouds stayed thin enough to watch the eclipse full time, and it got extremely dark. With the clouds acting as a filter, it was amazing, to watch and to see the red coronal mass

See next page...



Kevin Bert shoots the eclipse through a 70mm refractor from Lake Buchanan, Texas, capturing Bailey's Beads and many solar prominences (right).



NCSF members (from left) Gene and Charlotte DuPree, Joyce Jentges, Mike and Donna Potter, Mark and Kathy Zellner, Dan and Debbie Raasch, and Kathy and Kevin Bert gather after the eclipse at Lake Buchanan, Texas. Photo courtesy of Kathy Zellner



Left: Totality approaches during a clear stretch as seen from Concan, Texas, photographed by NCSF member Jerry Kohlmann with a Canon DSLR and a 400mm lens with a 2x tele-extender and a Thousand Oaks solar filter.



No Filter Needed - Short breaks in choppy clouds revealed an eclipsed sun approaching totality in Concan. Nancy Barnett (who traveled with the Mastroiannis and Kohlmanns) used her iPhone 14 Pro without a filter to capture the slender sun just six minutes away from totality.

From page 2. Ejections. We had been told years ago to only watch and enjoy the experience. So that is what we did.

Ernie Mastroianni

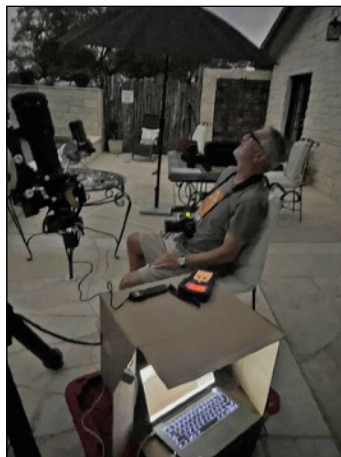
A year before totality, we joined two other couples, including member Jerry Kohlmann and his wife Ginny, and rented a large house near the eclipse centerline in Concan, Texas. Weather prospects there seemed to have the best odds. In the days and nights preceding the eclipse we witnessed remarkably clear skies and starlit nights free of light pollution. But on eclipse day, heavy clouds rolled in, parting occasionally to reveal dramatic views of the crescent sun. We all cheered and clapped every time the sun broke through. We did see totality for a few brief moments and the sky was dark as night. Despite the less-than-ideal weather, we thoroughly enjoyed the experience.

James Neal

I was in Martinsville, Indiana where I grew up with my wife, mother, and sister. I shot from a stationary tripod with a Canon EOS Rebel T5 with a Sigma 150-600mm lens. This was my first attempt at photographing an eclipse so I took a lot of bracketed images at various focal lengths. There were scattered very thin and high transparent clouds that did not obstruct the visual observation and did not appear to disturb my photos either.

Mike Borchert and Don Woelz

The skies were very clear and temperature in the mid-60s at Pike Lake state forest. There were five volunteer telescopes including two Newtonian reflectors, the club's Coronado solar telescope, and a mirror that reflected a pinhole image to a projection screen in one of the park shelters.



Darkness descends as Ernie Mastroianni (left) and James Neal view totality from Texas and Indiana respectively. Photos by Jim Barnett and Neal's sister, Suzanne.



Mike Borchert, Don Woelz, Al Steinberg, Steve Schowalter, and Rick Dusenbery were on hand for the partial solar eclipse. Crowds estimated to be up to 150 showed up and we almost sold out of the 100 eclipse glasses. A big shout out to Beth Schowalter and Charlotte's mom, Carol, for helping to sell glasses. People coming from the Hartford area reported no eye glasses in town.

A few clouds threatened, but none ever came across the sun during the 3-hour period. Park rangers were there

enjoying the club's Coronado solar scope. Al set up a reflected image for those that did not want to look directly through a scope. Rick and Steve set up reflectors with filters. Mike manned the Coronado, with help from Al and Steve setting it up. There were many ooh's and ah's at the views of the solar prominences along with sunspots, and roiling sun's surface. At the maximum part of the eclipse, the moon covered 88 percent of the sun. There was a home school teacher whose students were eager to view, and I was thanked for giving her some ideas on studies. The club got lots of thank-you's for being there. All in all, an enjoyable way to spend a Monday afternoon.

Kevin Bert

The mount I used is an old Orion Sky View model with a clock drive.

I spent half of the 4 minutes of totality at the camera screen and the other half visually. Binoculars gave the best view. The eye alone spotted Venus easily, Jupiter was obscured in clouds. There were plenty of openings between clouds prior to totality. Very thin clouds through most of totality that did not hinder viewing or imaging. *See next page...*

Tim Burrus:

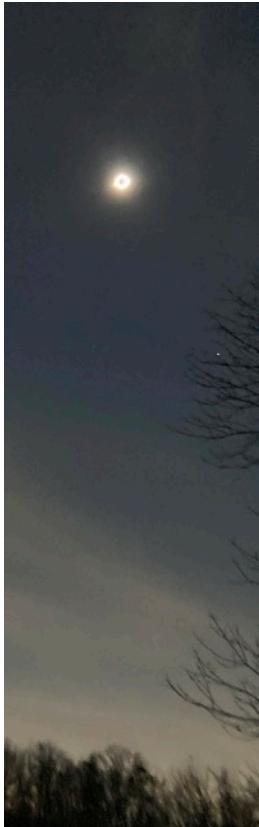
From page 3. On my way home from Concan Texas (where I was for the eclipse), I stopped by Telephone, Texas where my grandmother lived in near the Red River on the Texas, Oklahoma border. They have a Bortle 1 sky there. You can read the paper by star light alone outside.

Mark and Marie Weber along with **Matt Luedke** viewed the eclipse from Saguaro National Park in Arizona during a public event. The moon covered 75 percent of the sun during the eclipse maximum. Mark and Marie later toured the observatories at Kitt Peak.

Penny Siperly traveled with friends to view the eclipse from Fowler Park near Terre Haute, Indiana. The park is much like Old World Wisconsin, with re-enactors and pioneer displays, but not as large. Clear skies allowed great views of totality. "Admission was free," writes Siperly. Volunteers opened the park which usually does not open until the Memorial Day weekend. "They could have charged \$10 a car and people still would have paid it!"

- Compiled by Ernie Mastroianni

The total eclipse and the planet Venus were visible in this photo taken by Penny Siperly from Fowler Park near Terry Haute.



Above: At Pike Lake, a line forms behind the Coronado solar telescope as Steve Schowalter explains the view of the April 8 solar eclipse. The sun was 88 percent obscured at maximum coverage.

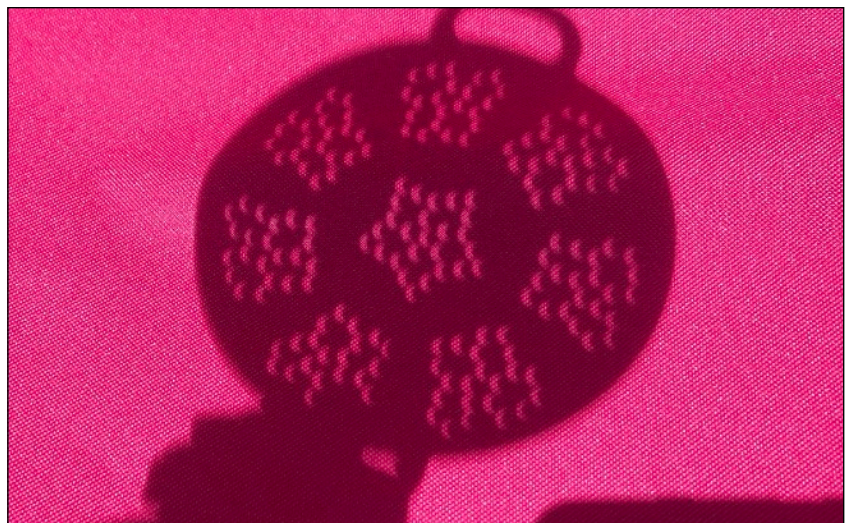


Left: Rick Dusenbery checks the view through a Dobsonian reflector at Pike Lake. - Don Woelz photos.

Below: A colander acts as a pinhole camera. Look closely and you can see dozens of crescent-shaped suns. - Joyce Jentges photo



Mark Weber (foreground) and Matt Luedke aim their Nikons toward the partial eclipse from Saguaro National Park in Arizona. Photo by Mark Weber.



Outreach for Cub Scouts

From page 1 zoom in on Jupiter before it set. Scouts were able to see the rings and storm on Jupiter, along with four moons.

From there we hopped over to Orion and its nebula, along with the Dog Star, Sirius. From there the next target was the globular cluster M3, a large globular cluster in Canes Venatici.

We were able to identify the Big Dipper and then use it to point to Polaris. Cassiopeia was visible and we identified the W-shape of the constellation.

There were also two satellites that crossed over. We also discussed the Milky Way and Andromeda. We spoke on refractor and reflector scopes.

All in all, the troop was very attentive and polite. We discussed some reference media, podcasts, library books, the NASA channel, citizen science, and of course our club. Jim was generous to show me the new controller on the 20". It is fairly intuitive and that is a welcome addition. A huge thank you to Jim. - *Mike Borchert*



Ready to Blow - Known as the *Blaze Star*, 10th magnitude recurrent nova *T Coronae Borealis* is expected to brighten from 10th to 2nd magnitude between now and September. The star lies in the constellation *Corona Borealis*. It last erupted in 1946.

[Read more at this NASA link.](#)

Chart adapted from Stellarium

NCRAL 2024 Convention Information

NCRAL Members,

We are in the process of gathering the speakers' bios for [NCRAL 2024](#) on May 17-18. We are planning on getting registration up in late January. People can currently register for rooms at the Kress Inn, located in DePere, Wisconsin. Mention the NCRAL Convention when you do so. Room rates are \$104.00 per night. The phone number is (920) 403-5100.

Rooms include a nice continental breakfast in the mornings. The convention will be held at the Bemis Center located on the St. Norbert's College Campus right across the street from the hotel. Friday night will include a Swap and Sell meet in the Bemis Center. Also, a display area will be for anything unusual in astronomical equipment, books or other items that may be of interest.

I will be bringing some unusual telescopes, and other rare items of interest for example. The cost of the convention will be set at \$120.00 per person which will include the banquet dinner. I'll keep you posted as things get finalized. [See the schedule on the NCRAL website](#) - *Gerry Kocken, Neville Public Museum Astronomical Society*

Convention Schedule

Friday Afternoon, May 17

3:00 – 9:00 – Registration Open

3:00 – 8:00 – Parmentier

Observatory Tour

4:00 – 8:00 – Display Area Open

6:00 – 8:00 – Social Hour

6:00 – 8:00 – Swap Meet

If Sky Is Clear, Viewing At The

Observatory (Sun Sets At 8:19)

Saturday, May 18

8:00 – Registration Opens,

Display Area Opens

8:30 – 8:50 – Opening Remarks

8:50 – 9:40 – Jerry Schaefer,

“3-D Printing Introduction And What

It Can Do For You”

9:40 – 10:00 Break

9:55 – Door Prizes

10:00 – 10:50 – Richard

Jacobsen, “30 Inches, No Ladder,
No Trailer”

10:50 – 11:40 – Dick Francini, “Astro

Sketching: Not As Intimidating To Do
As You Might Think”

11:45 – Group Photo

12:00 – Lunch (On Your Own)

1:30 – 2:15 – Alison Klesman,

Multi-Wavelength Survey

2:15 – 2:40 – Break

2:35 – Door Prizes

2:40 – 3:30 – Rodrigo Roesch, “Deep

Sky Imaging With Cmos Sensor”

2:30 – Deadline For Trivia Contest

And Astrophoto Ballots

3:00 – Registration Closes

3:30 – Ncral Council/Business

Meeting

4:35 – Door Prizes/Announcements

4:40 – Afternoon Session Ends

6:30 – Social Hour

7:30 – Banquet Dinner

8:30 – Bob King (Banquet

Speaker), “What Causes The Aurora’s

Different Colors And Why Are They

So Difficult To See?”

9:30 Awards And Door Prizes

April Meeting Minutes

From page 1

Einstein, what devices to use to record an eclipse experience, and what the eclipse might look like in partial eclipse areas.

Travel suggestions and experiences from previous eclipse events were discussed with several NCSF members adding some of their own experiences to augment Jeff's presentation. Eclipse glasses purchased by the NCSF for fund raising and safe viewing were sold at the meeting.

- The program for the May 2 Member Meeting will be Bob Bonadurer, Director of the Daniel Soref planetarium at the Milwaukee Public Museum. His talk is titled “Lights Out! Eclipses – Why's, Wonders, and Wows.”
- We will be hosting an Eclipse Viewing event at Pike Lake State Park in the area of the beach parking lot on April 8. Volunteers will have telescopes and eclipse glasses for any viewing public that attend. - *Don Woelz, Secretary*

What's Happening in 2024

Public outreach is one of the most important things we do as a club. Please volunteer your time, astronomy expertise and enthusiasm for at least one public viewing event each year. Starting times are approximate for volunteers. You can also see many of these NCSF scheduled events on the club's website: <https://ncsf.info/upcoming-events/>

**May 10 and 11, Friday and Saturday:
8 pm to 11 pm**

Public viewing, Plunkett Observatory,
Harrington Beach State Park

May 11, Saturday 8 pm

Telescope viewing, Kettle Moraine State Forest - Pike Lake
Unit 3544 Kettle Moraine Rd, Slinger ([map](#))

May 17-18, Friday and Saturday

[NCRAL 2024 Convention](#)

DePere, WI

Presented by the Neville Public Museum
Astronomical Society

[Bemis Center](#) located on the St. Norbert's College Campus
(See page 3 for more information)

June 1, Saturday 1 pm - 4 pm

Pike Lake Discovery Day

Safe solar telescope viewing

June 6-9, Thursday to Sunday

Wisconsin Observer's Weekend

The annual Wisconsin Observer's Weekend (WOW) will be held at Hartman Creek State Park near Waupaca, WI. Sponsored by NCRAL member society [NEWSTAR](#). Details and registration forms can be found on the club [website](#).

June 14, Friday, 8 pm

Public viewing, Plunkett Observatory,
Harrington Beach State Park

June 15, Saturday, 8 pm

Public viewing, Plunkett Observatory,
Harrington Beach State Park

June 15, Saturday, 8 pm

Telescope viewing, Kettle Moraine State Forest - Pike Lake
Unit 3544 Kettle Moraine Rd, Slinger ([map](#))

July 13, Saturday, 8 pm

Public viewing, Plunkett Observatory,
Harrington Beach State Park

July 17-20, Wednesday to Saturday
Astronomical League Convention

Doubletree By Hilton, Overland Park, Kansas

The national organization for amateur astronomy clubs holds its annual convention. Details here:

<https://www.astroleague.org/alcon-2024-kansas-city/>

August 2-4, Friday to Sunday

[Northwoods Starfest 2024](#)

The annual Northwoods Starfest will occur on August 2-4 at Hobbs Observatory in Fall Creek, Wis. See the Chippewa Valley Astronomical Society [website](#) for details.

August 9, Friday, 8 pm

Public viewing, Plunkett Observatory,
Harrington Beach State Park

August 10, Saturday, 8 pm

Public viewing, Plunkett Observatory,
Harrington Beach State Park

Telescope Viewing Kettle Moraine State Forest - Pike Lake
Unit 3544 Kettle Moraine Rd, Slinger ([map](#))



August 24, Saturday, 7:30 pm

Telescope Viewing: Henry Reuss Ice Age Center ([map](#))

September 6, Friday, 8 pm

Public viewing, Plunkett Observatory,
Harrington Beach State Park

September 7, Saturday, 8 pm

Public viewing, Plunkett Observatory,
Harrington Beach State Park

September 7, Saturday, 8 pm

Telescope viewing, Kettle Moraine State Forest - Pike Lake
Unit 3544 Kettle Moraine Rd, Slinger ([map](#))

October 11, Friday 7 pm

Public viewing, Plunkett Observatory,
Harrington Beach State Park

October 12, Saturday, 7 pm

Public viewing, Plunkett Observatory,
Harrington Beach State Park

October 12, Saturday, 7 pm

Telescope viewing, Kettle Moraine State Forest - Pike Lake
Unit 3544 Kettle Moraine Rd, Slinger ([map](#))

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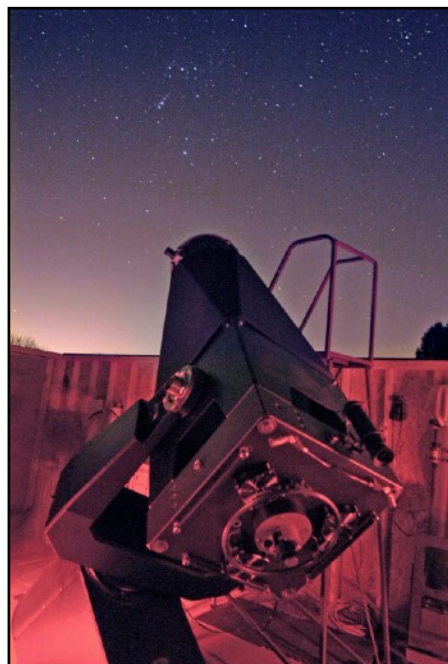
NCSF is a member of the [North Central Region of the Astronomical League](#)



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

Imaging Report

Dark Texas Skies - Prior to the viewing the total eclipse from Concan, Texas, members Jerry Kohlmann and Ernie Mastroianni used their gear to image the Leo Trio (above) and the open cluster M41, taking advantage of clear skies free of light pollution. Ernie shot the Trio with a Nikon Z6 and Sigma 500mm lens and a 2x teleconverter. Jerry shot M41 with a Canon 5D Mark III and 400mm lens with a 2x TC. The M41 sub-exposures were just 32 seconds, stacked in Affinity software. Ernie shot 4-minute sub-frames, processed and stacked with Nebulosity and Photoshop software.

**Spectrum newsletter**

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