The W.A.S.P.

Volume 56 Issue 05 May 2024

The Warren Astronomical Society Publication

Totality!

April 8, 2024

Image: Adrian Bradley

The WASP

Published by
Warren Astronomical Society, Inc.
P.O. Box 1505
Warren, Michigan 48090-1505

Dale Thieme, Editor

The Warren Astronomical Society, Inc., is a local, non-profit organization of amateur astronomers. The Society holds meetings on the first Monday and third Thursday of each month, starting at 7:00 p.m.

First Monday meeting:	Third Thursday meeting:
Cranbrook: Institute of Science	Macomb Community College
1221 North Woodward Ave	South campus, Bldg. E, Room 208
Bloomfield Hills, Michigan	14600 Twelve Mile Rd.
	Warren, Michigan

Membership and Annual Dues

Student	Individual	Senior Citizen	for families
$17.00	$30.00	$22.00	add $7.00

Astronomical League (optional) $7.50

Send membership applications and dues to the treasurer:

c/o Warren Astronomical Society, Inc.
P.O. Box 1505
Warren, Michigan 48090-1505

Pay at the meetings

Also via PayPal (send funds to treasurer@warrenastro.org)

- Among the many benefits of membership are
- Loaner telescopes (with deposit). See 2nd VP.
- Free copy of each WASP newsletter.
- Free use of Stargate Observatory.
- Special interest subgroups. See chairpersons.

The Warren Astronomical Society Publication (WASP) is the official monthly publication of the Society.

Articles for inclusion in the WASP are strongly encouraged and should be submitted to the editor on or before the end of each month. Any format of submission is accepted. Materials can either be transmitted in person, via US Mail, or by email (publications@warrenastro.org)

Disclaimer: The articles presented herein represent the opinion of their authors and are not necessarily the opinion of the Warren Astronomical Society or this editor. The WASP reserves the right to edit or deny publication of any submission.

Stargate Observatory is owned and operated by the Society. Located on the grounds of Camp Rotary on 29 Mile Road, 1.8 miles east of Romeo Plank Road, Stargate features an 8-inch refractor telescope under a steel dome. The observatory is open according to the open house schedule published by the 2nd VP.

In This Issue

About the Cover

Many of our members went all over the country in pursuit of this year's solar eclipse. Quite a few, Like Adrian Bradley went down to Ohio. The cover shows his capture of the prominences during totality.

Check out the other images from the event in the pages of this issue.

Field of View

Ups and Downs

April has been a month of elation and sadness. I viewed the total solar eclipse with my wife, daughter and granddaughter - we all had a wonderful time at the Museum of the U.S. Air Force near Dayton, Ohio. There were over 17k people through the doors of the museum, and over 20k people outside! I saw a couple WAS members there, and told a lot of people about the WAS and other astronomy clubs in Michigan.

We were set up indoors at the museum under the wing of a B-52! Connie had a continuous line for hours which then fed over to me. Outdoors, there were more porta-potties than I have ever seen in one location. The event coordinator would LOVE to have WAS members come back and present and do workshops!

Marty Kunz passed last week, and I'm still numb about it. Marty was one of the first people I met when I joined the WAS, and he was usually always at Cranbrook meetings, enthusiastically telling us what the Sun has been up to lately. I saw Marty frequently at Stargate and Astronomy at the Beach. I remember doing an outreach event at Cranbrook for some scouts, and getting so excited talking about Jupiter I used the word "fricking;" Marty told me to please hold back on the expletives!

I visited Marty just a few days before he passed; Marty was asleep for a majority of my visit due to some painkillers he'd been given, and I spoke with a relative of Marty's who was also visiting. I'd like to thank everyone who visited Marty when he was in the hospital, I'm sure he appreciated it.

And then there's tax season, which I'm sure topped everyone's list of "fun ways to spend time."

In other news, Connie posted another article on the Vatican Observatory website: It's Only Seven Light Years Away! Musings from a Middle School Science Teacher, where she discusses how words used in public media to describe astronomical discoveries or events can mislead the public.

Images credit: Amanda Trembley

In Memoriam

Marty Kunz
1956-2024

With heavy hearts, we note the passing of our great friend and colleague, Marty Kunz. A very active member of our club since 1987, he has served as an officer in many capacities, helped out at Stargate and other outreach efforts, promoted our club at every opportunity -including his programs on Astronomy.fm: "The Event Horizon" and "Space Pirate Radio". At Cranbrook, he served as our liaison with the management. As his username, “solarmarty”, indicates he led the Solar Special Interest Group at WAS and deeply involved with the McMath-Hulbert club at the McMath-Hulbert solar observatory while there was still access to the facilities.

Marty would never trumpet his achievements. That is left to us, here is what the WASP reveals about his involvement with the club:

1987 - Librarian

1989 (June-December) - President, finished out term for prior president

1990-1991 - President

1993-1994 - 1st Vice President

2000-2001 - 1st Vice President

2002-2003 - President

2005-2007 - Outreach

2008-2009 - 2nd Vice President

Marty, with a 50lb piece of meteorite.

Marty's WAS Awards:

Recipient of the Blaine McCullough Award:
"'Steadfast Colleague' Marty Kunz, a long time member, is recognized for his many years of service to the society. He has in the past served as our president. On the internet radio station, Astronomy.fm, Marty frequently promotes the Warren Astronomical Society. Most especially, we recognize Marty in his service as our liaison to Cranbrook which provides the group with superb meeting facilities."

A Special Award:
"for his ability to keep the club solid during a major stressful series of events during the last couple of years. The award plaque featured a gavel signifying the strength of his judgemanship."

A Super Special Award:
"a set of solar eclipse binoculars and observing hat, given for his dedicated leadership of the society, over the past year and a half. The award was presented by Bill Beers, on behalf of the society."

And the first of his Special Awards:
"for taking over the club, after the resignation of most of our club officers during the year."

Members of the Space Pirate Radio crew.

From left to right: Doug Bock (Doug_NCO), Dale Thieme (plaidmac), Diane Hall (Skyguide_Diane), Joan Ferrier (PlaidJoan), Marty Kunz (SkyGuide_Marty), and Lynn Czarniawski (PlaidSis).

At the time of publication, no details of arrangements are known, they will be sent out via email announcement when received.

We Remember Marty

O Captain My Captain

a remembrance

Once upon a time, there was an internet radio show called Event Horizon. It broadcast from a room in the basement of Cranbrook Institute of Science, and the hosts were Michael Narlock and Marty Kunz of CIS. Sometimes they had live guests in the studio, like a pair of young astronomy enthusiasts, one a former student of Narlock's at Lawrence Technological University and the other a transplant from California. Let's call them Jonathan and Diane.

And one day, when Jonathan and Diane felt a little less precarious in the world than they had on leaving university, they cast about for some sort of social endeavor they could join outside of mere work. Something with a mission. Then Diane said something along the lines of "What about that astronomy club of Marty's?"

It's been eighteen years or so since that sentence first came into being. Eighteen years, a transit of Venus, several transits of Mercury, two annual solar eclipses, two total solar eclipses, a couple of lunar eclipses, a complete rebirth of Stargate Observatory, about ten W.A.S. administrations, and nearly a decade of a second internet radio show called Space Pirate Radio. In the Warren Astronomical Society, Marty was forever "Solar Marty," the head of the Solar Special Interest Group and the go-to man for reports on the sun. In my world, he was Captain Marty, master of the fanciful ship Argo Navis, and I was the Mate lucky enough to steal his captain's hat every now and again.

For ten years we sailed the seas of internet radio on the Argo, accompanied by our intrepid engineers Michael and Rob, and by a faithful crew of online listeners and accomplices headed by this august Society's own Dale Thieme. Ten years of the annual "Dark Space" Halloween special wherein Marty gleefully recounted all the ways that space can kill you. Ten years of news round-ups, little skits where we pretended to be a space salvage crew, of observing feats and of barbs thrown the way of NASA's administrators. Ten years of grog references and jokes to make the eyes roll. Ten years of connections with people from the West Coast to Argentina to the UK.

Ten years of learning from Marty, who was himself a young member of the W.A.S. before I was even born. And ten of teaching him in turn, or trying my best— generation gap and all that. We each had our little spheres of mastery. When COVID-19 shut down physical meetings and in-person outreach, Space Pirate Radio became a lifeline for me, something that gave me a reason to stir every Wednesday… but less than two years later, illness and a new work schedule meant I needed a break. By autumn of last year, Cap'n Marty and Engineer Rob both faced health crises, and Space Pirate Radio as I'd known it was over. I think the Argo is in the hands of another crew these days, but that's no concern of mine. For me, Argo has one captain only.

On Wednesdays as nine o'clock approaches, I sometimes still feel the urge to download a few last news stories, to log into Skype and the chat room and set sail with Marty and the crew. Old habits and all that. Those old habits, sadly, outlast the old friends that helped form them.

Sail on, Marty. Neither you nor I have much expectation of a meeting on another plane, but who knows… it's a strange universe out there. Sail on at the helm of the good old Argo, Cap'n. I'll raise a toast to you tonight.

-Diane Hall

From Dave Harrington

It's difficult to lose my long time (very long time), friend and fellow amateur astronomer, Marty Kunz. We shared many good memories of joint activities over the decades, and had much in common.

I am so glad that I had the chance to have a long phone conversation with him from my current residence in Missouri about eight weeks ago, discussing the good times that we had. I knew at that time that it could be my last long conversation with him, and we both used it wisely. We spoke of our chasing total eclipses, comets and WAS field trips together, and enjoyed recalling, and even laughing, about humorous things that had occurred. I believe that it did cheer him up to remind him of them.

I met Marty when he joined the WAS, long ago, and welcomed him in as the president at that time. As it turned out, we both had "dark sky" property in northern Michigan, with mine being about 10 miles north of Evart and Marty's being only about 20 miles further north. We would meet for stargazing at these locations.

One of our nicest total eclipses was in the Caribbean in 1998, and the very best was in 1994 in Bolivia. Marty and I were the only WAS members to go to the 94 Bolivia Eclipse, and shared 11 days touring Bolivia, with three of those in Cochabamba at 8000 feet, getting our bodies prepared for the extreme altitude of the upcoming eclipse, which was at 15,000+ feet in the Alti Plano. We endured a 20 hour round-trip train ride to the Eclipse in the high salt desert, with the president of Bolivia riding with us! The photo from 30 years ago shows Marty and I setting up our telescopes to photograph the eclipse. We were rewarded with a fantastic total eclipse at that dry and high elevation.

In closing, Marty was a true gentleman, knowledgeable astronomer, and good friend for many decades. He will not be forgotten.

(A very much younger) Marty and Dave Harrington
Photo courtesy Dave harrington.

From Ken Bertin:

I just learned that my dear friend and fellow astronomy buff, Marty Kunz has passed away. Marty was President of the Warren Astronomical Society and I was his VEEP 20 years ago. We took over when the club was in turmoil due to the sitting president suddenly resigning due to difficulties caused by another member's harassment and personal threats. We straightened the situation by throwing that member out of the club and other acts. WAS returned to normalcy and continued as a top club in Michigan due to our efforts. Marty was a brilliant amateur astronomer and a fine individual whom all who had met him will miss greatly. I am, as are many others, deeply saddened by his passing!

From Bill Beers

Marty will be missed-

It was sad to hear Marty Kunz passed away. I have known Marty for 24 years. He was undoubtedly one of the smartest and greatest teachers that we had in our club. When it came to any astronomy subject, Marty could explain it so everyone could understand. He was always willing to step in and help out with any situation that came up in the club. He was always a good and loyal friend to me. Fortunately I had a chance to express my thoughts to him about 3 weeks ago.

Rest in peace Solar Marty!

From the Editor

It was a particular pleasure to work with “Martay” and Diane on the good ship Argos as the chronicler of the links in the chat room. While he and Diane discussed the astronomical news events, they would post the links in the chat room for us listeners in the chat so we could follow along. I would then copy the links and post the list on Facebook so that anyone listening to the replay could follow along then as well. Looking in my folder, I started doing that in 2016.

Marty was one of those gentle giant souls that come along way too seldom. He is missed

-Dale Thieme
"plaidmac"


Image: Dale Thieme


Image: Dale Thieme

Letters

FOR (once) AWARD WINNING W.A.S.P.

Provenance:

Message from **Terry M. Ross**, close relative of G. M. Ross. T.M.R.'s first solar eclipse was at the Astronomical League convention, 1963, Orono, Maine. This event caused son Jonathan (like his father) ran hell-bent to Vermont, at different locations. The discourse below is of great philosophic import, but little astronomical. The "Ascent of Man" per Kenneth Clark.

-GM Ross

-------- Original Message --------

Subject: family eclipse viewing
Date: 2024-04-12 20:26
From: "T. Ross"
To: G M Ross, Raymond Rea, Rusesky T Michael, Joe McBride

Jonathan Ross, while viewing the eclipse near Newport VT, overheard the following interchange between a dad and his son:

Dad: That's the moon's shadow in front of the sun. Or is it the earth's shadow?

Son: Dad, we're on the earth!

WAS PRESENTATIONS

If you would like to present either a short talk (10-15 minutes) or a full-length talk (45-60 minutes) at a future meeting, please email Dale Partin at:

firstvp@warrenastro.org.

WAS Apparel Price List

T-SHIRTS

Black – Navy – Gray (Pink or Yellow if desired) – one imprint

Small – XL $15.00
2XL $18.00
3XL $19.00

LONG SLEEVE T-SHIRTS

Black – Navy – Gray - one imprint

Small – XL $19.00
2XL $21.00
3XL $22.00

CREW NECK SWEATSHIRT

Black – Navy – Gray - one imprint

Small – XL $22.00
2XL $24.00
3XL $25.00

ZIPPER HOODIE W/Pockets

Black Only (at this time) – one imprint

Small – XL $27.00
2XL $33.00
3XL $34.00

HATS

Black – Blue 2 ½" logo $15.00

LOGO COLOR SCHEMES:

Black background with gold/yellow artwork and lettering

Black background with blue lettering and gold/yellow artwork

Choose when placing order

IMPRINT LOCATIONS:

Front left chest (3 ¼" logo)

Front or back (9" or 10" logo)

Back (12" logo for jackets or sweater)

Combination front left chest (3 ¼" logo) and back (9", 10" or 12" logo) – add $7.00

Choose when placing order

IMPRINT ON YOUR CLOTHING ITEM: Logo + Imprint Charge

3 ¼" Logo - $8.00 **9" – 10" Logo – $12.00** **12" Logo - $15.00**

HOW TO ORDER:

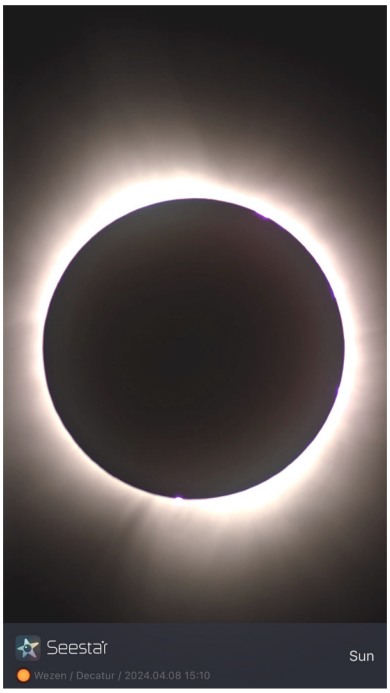
Place order at the Cranbrook meeting on the first Monday of month –
Select garment type - color of garment – logo imprint and color scheme –
Pay in full for order to be placed –
Your order will be ready for pickup at next Cranbrook meeting –
(Your order may possibly be ready for the Macomb meeting following the Cranbrook meeting of that month – you will be notified if that is the case)
Contact Mark Kedzior @ bazonga952@hotmail.com with any questions

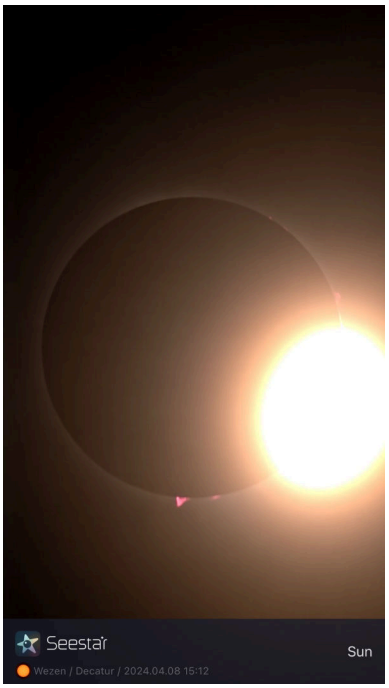
LOGO COLOR CHOICES

Gold/Blue

Gold-3D

Eclipse WAS ~~Astro~~photos





WAS members headed out all over the US, from Texas to Ohio for the April 8th eclipse. Here are the images captured along the way.

Above is from Brian Wezensky, taken with his Seestar from Decatur, IL.

The eclipse itself first made its US appearance in Texas. This editor was going to watch it there but life intervened, more on that in the History SIG article. But, Publications Director Vatshalya Dandibhotla did make it to Texas and sent these photos:

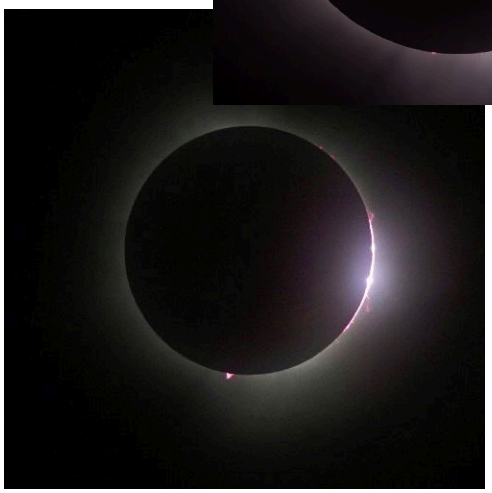
In a reversal of weather expectations, Texas fell under an extensive cloud cover, but there was successful moments captured.

Ohio was very reachable for WAS members and they took advantage of it.

Adrian Bradley reports:

This is a composite photo of what it's like to view a #total-solareclipse naked eye. Although this is a composite, this recreates what I saw at @perrysburgohio on the #maumeeriver. Yes it gets that dark. And the people started howling and yelling out whatever came to their blown minds!!

To the right are some images he captured during the eclipse



Jonathan kade and Diane Hall made their way to Ohio, as well, and set up shop with their Coronado PST (H-alpha filtered scope) and got the image at left. Jonathan also took these shots of the crowd at the site and totality (below).

And this from Ray Bosshard

Left: The sun appears to smile (or look like a banana) after totality.

Below left: An impressionistic solar eclipse.

Right: The sun, with sunspots visible near the upper middle section, near the end of the eclipse.

He continues:

I wish to thank fellow Warren Astronomical Society member Robert (Bob) Schneider, for his encouragement, transportation, and camaraderie, without which none of these pictures would have been possible. I therefore dedicate these photos to Bob.

Ray Bosshard

Closer to Home-
Cranbrook Institute of Science

Dale Partin reports:

Here are a few comments about WAS participation at Cranbrook for the eclipse on April 8, 2024. WAS participants were Dale Partin, Ken and Laurie Heilig, Tina Wong, and Robert Bolton. We had three telescopes set up. LOTS of people, including kids, looked through our telescopes. The sky was mostly clear. At one point, a man introduced himself to me (Dale) as the Director of Cranbrook Institute of Science. I forget his name. I introduced myself as the Vice President of WAS (simplified from 1st VP). He said, "We are VERY pleased with our relationship." I said, “We are, too!”. That was about the extent of the conversation, but he looked very happy. It felt like a very "formal" or “official” conversation. I was interviewed by WJR, and managed to get into it where and when our meetings are. I wished we had some handouts to give to people with meeting times of WAS. Some people wrote down the info. Here is a link to a short Fox2 video at the event. Mike Narlock, who is in charge of the astronomy program at Cranbrook, is speaking in some of it. A couple of pictures are attached, taken by Laurie Heilig. I was too busy to remember to take any!

Fox2 video:
https://www.fox2detroit.com/video/1438017

WJR Interview:
https://www.wjr.com/jr-afternoon/
(Scroll down the listing to E831 Live from Cranbrook…- Dale’s part is around the 27 minute mark.)

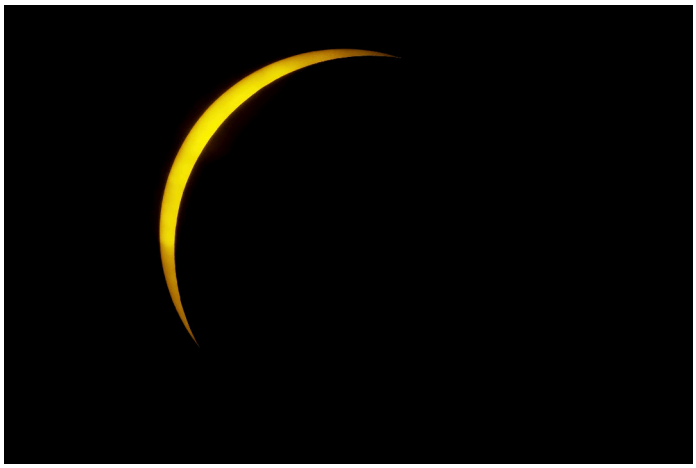
Photos by Laurie Heilig

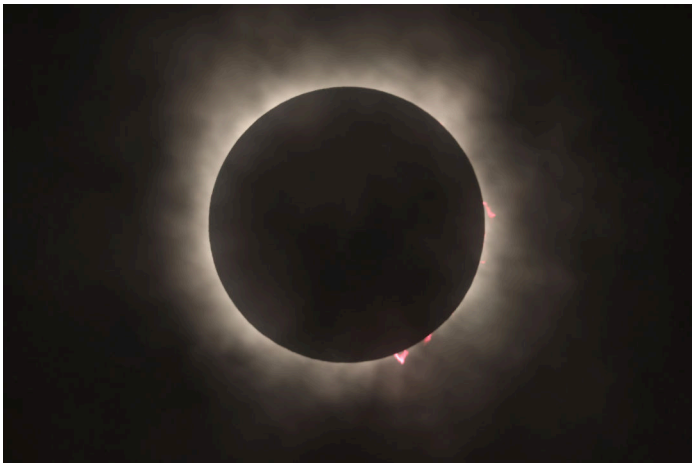
From Uvalde, TX

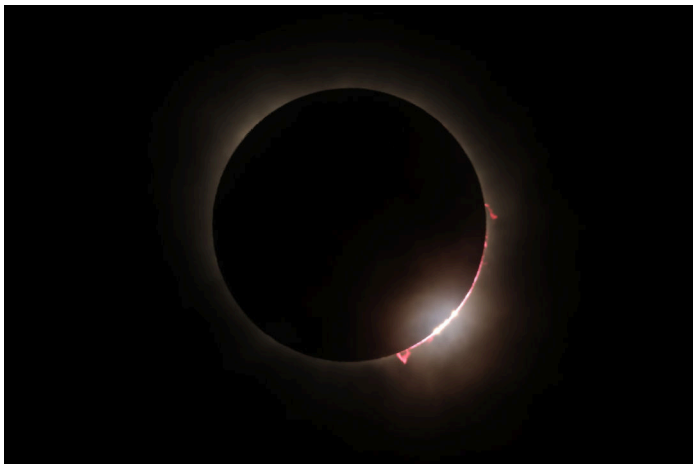
Dale Hollenbaugh journeyed down to Texas for the eclipse. Here are some of his captures, taken in Uvalde, TX through the clouds.

Photos taken with Canon R7 camera and Canon RF 200-800mm lens @ 800mm F10.

All images on this page: Dale Hollenbaugh







The Eclipse With a Different Angle

WAS member, Valeriy Sterligov shares his experience with the eclipse:

According to preliminary information, a 99% solar eclipse was expected near Ann Arbor, but we were intrigued by the possibility of its total version and attempting to photograph the solar corona. This led us to choose the Toledo, Ohio, area, where a 100% eclipse was predicted. The journey was filled with anticipation, as the road was almost completely filled with cars of those who shared our passion for this celestial event. We arrived at a commercial center, where we found many of our colleagues, all eager to capture this eclipse.

Unfortunately, the weather was not very favorable. We observed the eclipse through a veil of not very dense but still present clouds. They were the main reason why, during the moment of the total eclipse, the Moon appeared not black but gray: scattering on the clouds reduced the overall contrast and, I suspect, hid a significant part of the corona. Well, only one star or planet was visible. But it was what it was. We had no other option.

For shooting, I planned to use the camera of my iPhone, paired with small Pentax binoculars of 10x28 on a tripod, and as an alternative, I set up a Canon 500D with a Canon 70-300mm telephoto lens. Unfortunately, I had to trigger the Canon by pressing the shutter button, which naturally caused vibrations... Well, the result was as expected: only a small number of final frames were without strong vibration traces. And there was another additional problem - the Canon did not focus on the corona at the moment of the eclipse, apparently its intensity was below some threshold. It was an unpleasant surprise, so I had to focus manually, which also spoiled the final image quality.

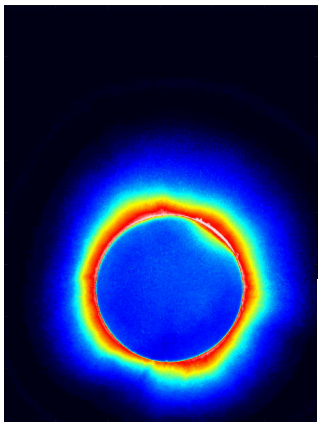
I am attaching several frames that I processed as follows. Since the obtained originals were practically gray, without significant color information, I removed them from the frame, converting the image to gray scale. Then, I used my gray scale to color conversion palette: minimum intensity — black, gray, blue, cyan, green, orange, yellow, red, pink, and maximum intensity —white. This sequence seemed logical to me, and I colored the gray scale image with this palette.

Upon reviewing the processed images, a surprising discovery awaited us. In the next version, I colored not the linear dependence of intensity, but its logarithm. This dramatically expanded the visible, colored volume of the corona, and to our amazement, at the boundary of the colored zone, a narrow blue ring emerged, clearly distinct from the main body of the corona. This unexpected finding added a new dimension to our observations.

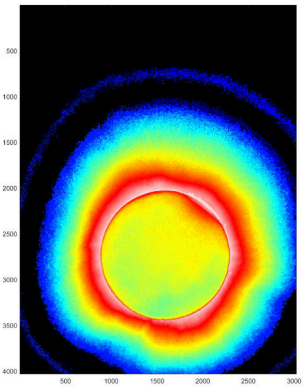
What could it be? It is very similar to scattering on monodisperse particles, apparently, droplets of those very clouds that spoiled the contrast of the corona. However, there is a very clear angular reference in this picture - the angular diameter of the Sun and the Moon is 33.5 minutes. This means that it is easy to calculate the angular radius of this ring and, assuming an average wavelength of 0.5 micrometers, calculate the size of the particles that scattered light: I got 39.7 ± 0.6 micrometers, and because the diameter spread of the ring, and consequently the sizes of the particles, was quite narrow, the deviation from this size was not very insignificant.

However, the disadvantage of the logarithmic representation was that, while making the intensity distribution in the area of small values well visible, it compressed the information in the area of maximum brightness, where there were prominences and other bright details, well visible in linear intensity mapping. Then I decided to try a combined representation: I determined the maximum intensity level for the logarithmic representation, normalized the linear representation to this value, and summed them up. Thus, some combined encoding was obtained, where both small and large intensity ranges were visualized.

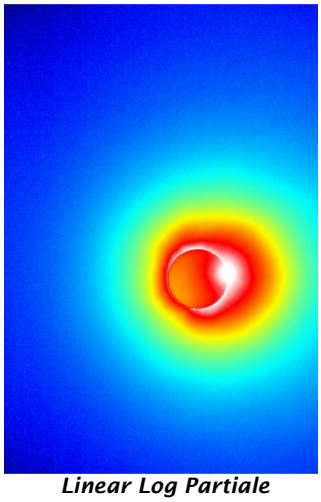
Well I also attached another representation option, where I summarized the doubled linear and logarithmic components.



Eclipse Intensity Coding Images by Valeriy Sterligov



Eclipse Log Intensity Coding



Linear Log Partiale

The View From
C.W. Sirius Observatory

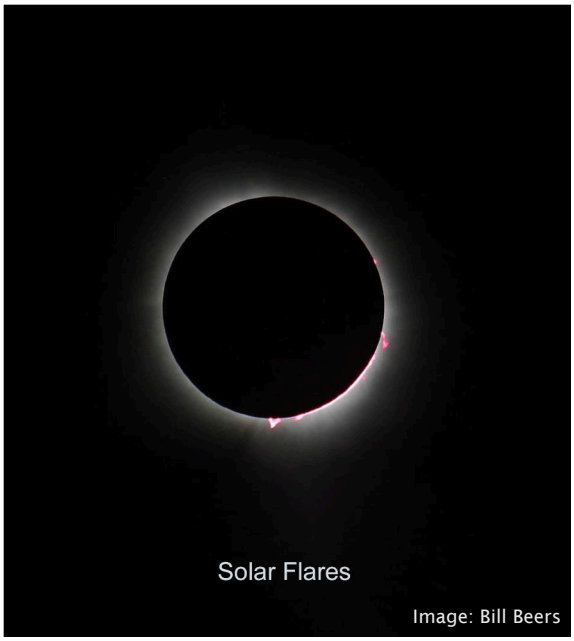
Chasing the Total Solar Eclipse of 2024

It was another great experience for the Beers/Turnbull (my sister) Eclipse Chaser Team. We drove to Poplar Bluff, Missouri on Saturday where we stayed a few nights in anticipation of Monday afternoon. Come Monday morning looking at all of the satellite tools, there appeared to be a cloud front coming up from Texas along the path. So we packed up and drove 1 1/2 hours north to Marion, Illinois. Marion is very close to Carbondale in southern Illinois. Southern Illinois appeared to be cloud free so we set up in a Walmart parking lot with about 30 other eclipse watchers. This location was a totality success. We arrived about a half hour before the eclipse started. As the very last speck of sunlight went away for totality, it was like someone turned off the light switch. The people started cheering, the surrounding building lights had come on, the temperature dropped, and there was a sunset around the entire horizon. The planets Jupiter and Venus were visible as well. The naked eye flares/prominence's surrounding the moon were amazing. It was the shortest 4 minutes of my life! After the whole eclipse was finished, we drove back to Poplar Bluff to spend the night and celebrate. We then drove back to Michigan on Tuesday which helped eliminate the traffic. These are photos of what we saw. Another amazing experience! So just like in 2017, it wouldn't be an eclipse if you didn't have to chase it! Hope you all got to see it.


Image: Bill Beers


Image: Bill Beers

Bill's eclipse images on next page.



About CW Sirius Observatory

C.W. (Cadillac West) Sirius Observatory is located 15 west of Cadillac Michigan. Owned and operated by WAS member Bill Beers. The dome is an 8' Clear Skies Inc dome which houses an 11" f/10 SCT telescope, a 102mm f/7 refractor telescope, Celestron CGEM DX mount, and uses an ASI ZWO 071 color CMOS camera, as well as a QHY8L color CCD camera. The telescope can be remotely operated from inside Bill's house.

Anyone interested in learning about astrophotography, or any questions regarding equipment, or how to take astrophotos using your iPhones, or any related questions, can contact Bill at: BEEZOLL@AOL.COM

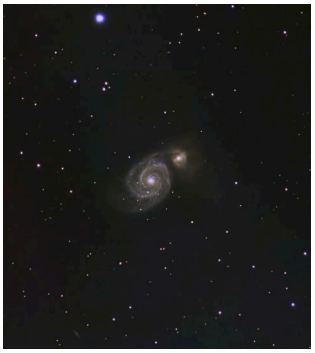
More Astrophotos

Above

Moon from April 22 and Sun from April 24. Sun photo with Baader SolarLite ND5.0 white light filter instead of the one that comes with the Seestar. D. Hollenbaugh

Below

Taken with Dale Hollenbaugh's new ZWO Seestar S50 smart telescope. This little thing is a lot of fun and the images are better than he imagined. He did some light post processing on these.
M81 – Bode's Galaxy, 1582x10sec = 4hr 24min integration
M82 – Cigar Galaxy, 1558x10sec = 4hr 20min integration



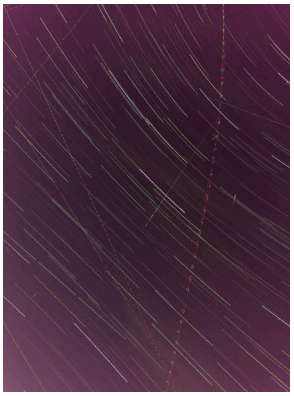
From Dale Hollenbaugh

Left

M51 - Whirlpool Galaxy
1125x10sec = 3hr 8min integration
Image- Dale hollenbaugh

Below

M101 - Pinwheel Galaxy
806x10sec = 2hr 14min integration
Image- Dale hollenbaugh



Right:

The Stargate open house weather last night 4/27, was the best of the year. We were able to get a nice picture of M100 Blow dryer Galaxy though the light pollution and photo bombers that appeared at an average interval of 3.7333 minutes. The Seestar combined images for a total of 71 minutes of exposure and threw out about 30 minutes of the data. The light trails photo was 56 minutes of exposure pointed in the M100 direction and contains 15 bombers.

What is the correct astronomy vocabulary word for a photo bomber? UAP.... UFO... extraterrestrial.... terrestrial....

Photos: Brian Wezensky

Presentations

Cranbrook
7:00 pm, May 6, 2024

Main Talk

Building an Apollo Mission From Scratch

By Jeff MacLeod

In 1962 when John F Kennedy said "we choose to go to the Moon" NASA was still very unsure of how to make that a reality. In this talk Jeff Macleod will go through the necessary steps that guide the decision making process of designing a trajectory to the Moon, and the rocket to get there. He will show several alternatives to the Apollo plan (including SpaceX) and show where those plans fall short. . His aim is to illuminate some of the history of Apollo and why the Saturn V was the way it was. But also inspire people to investigate and calculate what they are interested in.

About the Speaker

Jeff MacLeod is a former WAS president, Observatory Chair, and now Outreach Chair. During his time at Wayne State, he was a presenter in their Planetarium while getting a bachelor's in physics and another in astronomy. Jeff recently started work in the aerospace sector simulating missiles. Nowadays, most of his free time is spent working on his space-flight simulator, a life size recreation of a Gemini spacecraft you can actually fly in.

Short Talk

Our Day at the Eclipse

By John Dumar's Students

Bianca Cicchetti and Brandon Avery, high school seniors at Lutheran North High School had their first experience of viewing a total solar eclipse. They will describe their trip to Lima, Ohio, how they spent the day, and the thrill of seeing a total eclipse with their own eyes.

About the Speakers

Bianca Cicchetti
Bianca is a senior at Lutheran North High School in Macomb. She was a member of the Cross-Country and Track teams at North as well as the National Honor Society. She also likes to volunteer at her local church. Bianca is one of five valedictorians this year and plans on attending Detroit Mercy College and plans on studying Mechanical Engineering.

Brandon Avery
Brandon is a senior at Lutheran North High School. Brandon was a member of the soccer and basketball teams at North. He enjoys reading and chess. Brandon is one of five valedictorians this year and plans on attending Michigan Tech and plans on studying Mechanical Engineering.

Macomb
7:00 pm, May 16, 2024

Feature

Working as a National Park Astronomy Volunteer

By Gary Dietz

In this presentation, Gary will share information about his 2023 summer adventure vacation, where he and his wife Lorie worked as assistant ranger astronomy volunteers at Bryce Canyon National Park, Yosemite National Park, and Lassen Volcanic National Park in the western United States. In his presentation, he will outline the process of preparing, applying, interviewing required to work as a national park volunteer ranger in astronomy. He will also discuss and answer questions on the qualifications, responsibilities, working environment, rangers and staff, attendees, and the fun and enjoyment of such an opportunity. This experience was special for him as he was able to blend his passion for astronomy with his love for visiting and giving back to the national parks.

About the Speaker

Gary is the current President of the Oakland Astronomy Club and a NASA/JPL Solar System Ambassador. He is a retired Management Consultant. He and his wife, Lorie, are avid outdoor enthusiasts who enjoy hiking, cycling, and travel. When their two kids were little, their vacations were called Dietz Family Adventures, where they primarily explored National Parks and tent camped. Gary and Lorie have already visited 44 of the 63 national parks in the US and hope to visit them all. They have also ridden on 19 and counting of the 33 Hall of Fame Rail to Trails across the US.

WAS PRESENTATIONS

If you would like to present either a short talk (10-15 minutes) or a full-length talk (45-60 minutes) at a future meeting, please email Dale Partin at: firstvp@warrenastro.org.

Skyward

David H. Levy

A Total Eclipse of the Sun

This is a story, not a report on observations.

On April 8, a total eclipse of the Sun tracked across Mexico, the United States, and Canada. Most of the United States enjoyed clear weather, and most of Canada did too.

We were in Texas. We did not have clear weather.

Admittedly, we knew we might be in for bad luck a week out. But when my friends David and Pam Rossetter came by Friday morning at 5:45 a.m., we knew we would be in for quite an adventure. We arrived at the home in which we planned to stay early Friday evening. Dena McClung, former president of the Denver Astronomical Society, was an important part of our group. It appeared that the house had been vacant for months or years. Although we decided to grin, bear it, and make do, by the next afternoon Scott Roberts, our host, had put us up in a wonderful hotel.

The afternoon before the eclipse, a new report predicted clearing during the eclipse. We were heartened, but that prediction was wrong.

Eclipse day dawned cloudy with drizzle. We arrived at the Explore Scientific site near Leakey, Texas. We did see the Sun for a few seconds now and then. The eclipse began right on time—to the second, even though it may first have been predicted by astrologers in ancient Greece. I remembered how happy Dad was when the 1963 eclipse began the same way. We did get several brief views of the incoming partial. But as the Moon advanced inexorably, the clouds thickened. And as totality neared, it became pretty obvious we would miss the total phase.

About ten minutes before the total phase began, someone in our group asked me to share a poem at the start of totality. The one I had in mind was Ross's speech after Macbeth murders King Duncan:

By th' clock 'tis day,
And yet dark night strangles the travelling lamp.
Is 't night's predominance, or the day's shame
That darkness does the face of Earth entomb
When living light should kiss it?

Short and sweet, and so Shakespeare. But two minutes before the onset of the total eclipse, I thought of Wendee's favorite poem, The closing lines of "The Song of Honour" by Ralph Hodgson. I suddenly missed Wendee more than I can write. During the 2017 eclipse my wife opined that she hoped still to be alive to see this one. I understood that this eclipse I would have to appreciate for both of us. The idea of her not being here, at this moment, hit me like a clap of thunder.

The sky was darkening fast. The temperature was falling like a stone. It grew much colder. And still the sky grew darker. It was past noon and it was night. We were silent.

It was the moment of total eclipse.
I stood and faced the group. I said:
I stood and stared; the sky was lit,
The sky was stars all over it,
I stood, I knew not why,
Without a wish, without a will,
I stood upon that silent hill
And stared into the sky until
My eyes were blind with stars, and still
I stared into the sky.

The group listened with rapt attention. When I was done, there were smiles and some applause. We would not see a total eclipse but we had a poem. Then there was silence.

Twenty seconds passed.

And then, the Sun appeared in total eclipse. Just like that.

Continued on page 20

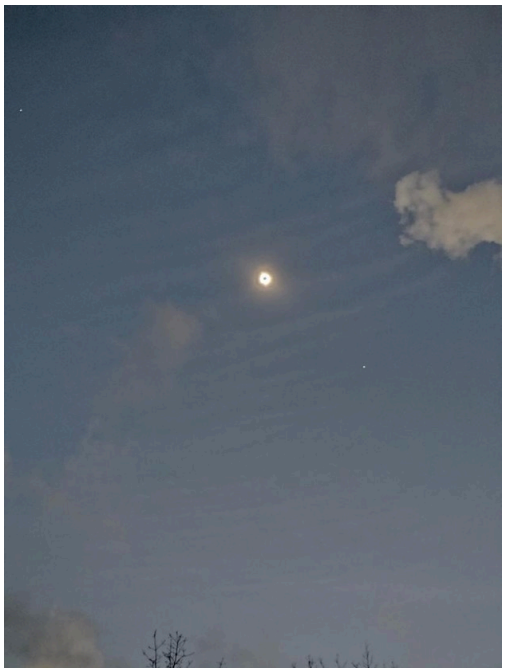
Eclipse Report

By Brad Young, Astronomy Club of Tulsa

We left at 6 a.m. instead of 5:30 with the caravan. We also stopped further north than they, at 3 Sticks Monument (the bottom pic shows why it is named that) along with 50 new friends. We only had our cell phones, and only got unfiltered, unmagnified pics. But we still had a blast! A rogue purplish cloud threatened to ruin the first diamond ring but didn't and then all was good the whole totality. My pic is by cell phone, it shows Venus lower right and Jupiter upper left edge; we didn't spot anything else.

One reason I did not use any equipment or try to image better is that it was paramount to me that my wife enjoyed this, her first total solar eclipse. I saw an eclipse in 2017, using the same tactic there and really found it rewarding. The sudden gloomy darkness, the red prominences all around the moon (especially west and south edges), and the spiky corona was jaw dropping. This time, we had over 4 minutes, but it was still over way too soon. And this time was much more special, shared with my wife.

The only bad part was that on the way home, the highway department that had sworn to keep all lanes open closed all but one lane on Interstate 40, resulting in 10 miles of 10 mph traffic. This spot was a bottleneck for anyone returning to Oklahoma City, Tulsa, Wichita, or anywhere west and north. When interviewed, the director said it was due to a crash a few weeks ago. https://www.newson6.com/story/661606ed63fa30182a2e904c/closed-i-40-lane-in-sequoyah-county-causes-traffic-jam-after-eclipse



Continued from page 19

I could not believe it. For about half a minute; for 30, maybe 45 seconds, we watched Sun's corona, the centerpiece of a total eclipse of the Sun. I did not notice the big prominence at the bottom of the Sun but I did not care. The Sun's corona, circular because this was near the maximum of the sunspot cycle, smiled at us. (At other parts of the cycle the corona would be more oval.) It was the most dramatic thing I have ever seen.

After that unforgettable, precious, sight, clouds came in again. We did get to glimpse the corona on and off a few times after that. I noticed the sky starting to brighten as the end of totality approached. Suddenly it was over.

Only it wasn't.

For one delicious moment the Sun's photosphere appeared. The Sun was shining through valleys at the edge, or the limb, of the Moon. It was a magnificent, stunning view of Baily's beads. First described by Francis Baily after he observed them during the eclipse of May 15, 1836, the effect bears his name. However, the first person to describe this effect was actually Edmond Halley,(of comet fame) who recorded them 121 years earlier during the total eclipse of May 3, 1715. What we saw was splendid. And then we got to see a large portion of the ending partial phase. Clouds again obscured the very end of the eclipse.

I sat in my chair, alone. I thought of Wendee. I missed her so much. I could not stop crying. Scott Roberts sat with me and put his hand on my shoulder. Even as I write these words, I am not quite over it.

This eclipse, by far the most dramatic I ever saw, was my twelfth total eclipse, and the 101st eclipse I have seen since October 2, 1959.

Book Review

By Ed Bas

The Asteroid Hunter

by Dante S. Lauretta

The first time, I wondered. I read the first pages and I thought maybe it is not worth it reading a full book for just one subject. I was mistaken! Asteroids are cool!

The author is the Principal Investigator for NASA's asteroid sample return mission. He is a professor of Planetary Science and Cosmochemistry at the University of Arizona. He is a science writer and he is a thoughtful person–and imaginative also.

His first sentence: "The most dangerous rock in our solar system is Bennu." Dangerous? Did you read the book?

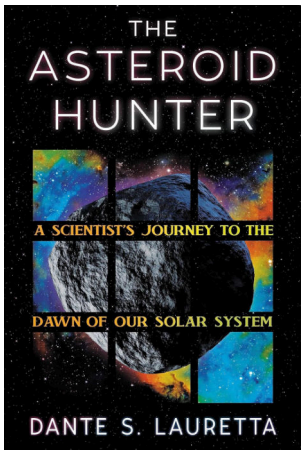
This is a new book published March 2024. The description: A scientist's journey to the dawn of our solar system. His writings are easy for laymen (or laywomen). It's more literate because it was a good poetic thriller. Not dry or not boring, another chapter reminds me of the launch of Apollo 11– and other rocket launches. Shiver me timbers!

"Everyone was camped out in our science operations area, a glorified conference room with cubicles lining the walls–" More than interesting, it was a dramatic and exciting story to tell.

He paints asteroid Bennu, "... the full extent of the surface roughness came into focus, with towering boulders resembling abandoned skyscrapers scattered across a desolate and ancient landscape."

Once we called it dirty snowballs (well, defined by comets but it was close). We know a little bit about asteroids, of the outer and inner materials, thanks to NASA. Samples about sandy regolith and nickel/iron metals: "Bennu kept us on our toes."

"It was a journey filled with trial and tribulation, overcoming all through endless experimentation." Indeed! You can see his eyes, wondering and wandering. His interlude, named Carbon Calling, is the first study to WASP readers. The carbonaceous chondrites definition will be "fascinating and logical" by Mr. Spock. "The carbon atom journeyed through the biosphere for billions of years, participating in biology's greatest inventions."

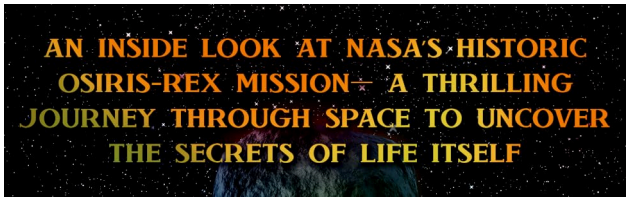


Two advantages reading this book; 1) no footnotes!; 2) pictures, a few photos by the author. This was more personable, not a textbook. You can say, I think he is a good guy.

He mentioned extraterrestrial intelligence and radio telescopes but he doesn't dawdle around his favorite subject. He mentioned Omni, a nice science and science fiction magazine but alas, it has an early death. And, from my recollection, nobody remembers that. He mentioned his mentor and his friend, Mike during his death, and he wrote about his wife. He was married to Kate, with "a pair of hockey skates over her shoulder."

It doesn't have an introduction or a preview. Good! I hate reading 20-pages to page one! It bugs me. I don't read short drafts or galleys on pre-publishing. I read the whole book. I like the mechanics and the smell of ink-and-paper. It has a helpful 17-page index to the readers and a compact 281 pages for a readable book.

$30/Grand Central Publishing



Over the Moon

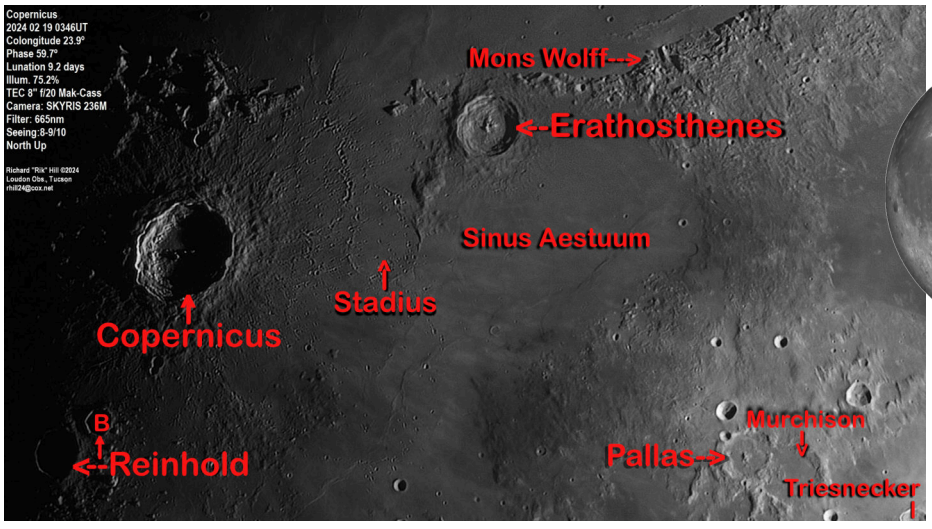
With Rik Hill

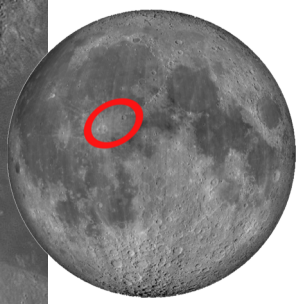
Sinus Aestuum

Nine days after new moon the great crater Copernicus (diameter 95km) and its little brother Eratosthenes (60km) are on the terminator giving one of the more spectacular views the lunar observer can see. Younger observers have related how they can see Copernicus when it is on the terminator, but I never have though I have looked many times over the years. Both craters are known as "terraced" craters for the obvious reason that the interior walls appear terraced as if it were a farming project. In the lower left corner can be seen two shadow filled craters. The largest is Reinhold (49km) and the smaller polygonal one is Reinhold B (26km).In the opposite corner are two good sized craters, Pallas (51km) and Murchison (60km) which are usually seen in images of Triesnecker (27km) that is peeking in the extreme lower right corner and its rimae system.

Heading to the northeast (upper right) from Eratosthenes is the southern end of the Montes Apenninus including Mons Wolf (3500m high). Between Copernicus and Eratosthenes you can see a clustering of craters all roughly the same size. Notice they are laid out rather concentric to the walls of Copernicus and not all are round. These are "secondary" craters formed in low velocity impacts of the ejecta thrown out during the Copernicus impact that occurred in the last billion years, rather recent on the moon. In fact, this is the basis for the Copernican Period in the lunar geologic timescale while Eratosthenes defines the Eratosthenean Period that goes from 1.1 to 3.2 billion years ago. This is why you don't see any ejecta blanket features on the side of that crater facing Copernicus. Secondary craters can be seen all over Sinus Aestuum, the plain below Eratosthenes to the east of Copernicus. Also on this plain you can see the rays from Copernicus as delicate shadings on the surface. During high sun, like full moon, these become overwhelmingly bright and dominant.

Lost in the secondary craters between the two great craters you can see a outline of a circle. This is Stadius (71km) a once great crater every bit as glorious as Eratosthenes when it was formed over 3.85-3.8 billion years ago (the Imbrium Period) but now buried in the flooding that created Sinus Aestuum and then overlain by ejecta from both the more recent craters. Oddly enough, all these secondary craters created from Copernicus ejecta are named as satellite craters of Stadius!





Location Maps by
Ralph DeCew

History S.I.G.

May 1994

We are introduced to the Math Group by John Herrgott, followed by "Computer Chatter" by Larry F. Kalinowski and "Journal Roundup" by Scott Jorgensen. A "Word Find" puzzle rounds out the edition.

May 2004

"Astro Chatter" by Larry F. Kalinowski leads off this issue, while the activities of the club were chronicled by Bob Watt in the meeting minutes. "Curved Collectors" by Vince Chrisman covers sharing knowledge among the members, this month was filters. The issue finishes with the NASA contribution, Space Place.

From the Scanning Room

The eclipse was a mixed bag this year, going from originally making plans to drive to my niece's house in Texas from Florida back in 2017, to purchasing plane tickets now that we moved to Michigan (same destination), finally to canceling everything because we caught Covid. So, the day of the eclipse, I tuned in to the weather channel and followed the event as it developed. When it was reported starting in the middle states, I grabbed a colander and checked the progress for our area and saw that moon had made contact. We went out on our patio and watched the moon slowly cover the sun. When it reached maximum coverage I took some pictures of the filter effect through the pine trees- the pattern of hundreds of crescents was pretty neat. We also noted the drop in temp and the strange color cast of twilight (lower) lighting without the warmth (gold cast). We went back inside and noted the eerie darkening of the rooms, even the living room which boasts two skylights with a view of a brilliant blue sky.

At least we were able to be there for the 2017 eclipse, which is some consolation.

-Dale Thieme,
Chief Scanner

WASP

Warren Astronomical Society Paper

Volume 26, Number 5 $1.00 for non-members May 1994

From The Math Group
By John Herrgott

The mathematics group has held meetings for several months now, and a report to the general membership is long overdue. This writer will attempt to correct that.

Six or seven of us have gotten together every other Tuesday for the sole purpose of looking at the universe in a quantitative sort of way. Why do we do this ? Well, there are as many reasons as there are participants. Some like physics, some like problem solving, another might just want to retain his / her mathematical skills. As for myself I am much taken in by Galileo's plan for extracting knowledge from nature. I will write more about Galileo's method in future articles.

You might be wondering at this point just what exactly have we accomplished. Well, we have hopped around quite a bit. Our lectures have explored Maxwell's equations for moving electromagnetic waves, the Michelson-Morley interferometer experiment and Newton's conjecture on the force that causes the Moon to depart from a straight line motion and instead fall around the Earth. We also examined Fizeau's scheme for calculating the velocity of light, calculated the mass of the Sun and derived the mathematical constant for Kepler's proportionality: $K = R^3$ in the future we hope to look at cosmological models (big bang) and the Schrodinger Equation.

Perhaps now that you know what we are up to you may want to join us. That is good because the math group wishes to extend an invitation to you to join us. To further encourage wider participation by the general membership we have amended the group's charter by deleting any reference to educational requirements. For those of you " not into math " there is plenty of free-wheeling discussion and deeper insights to be gained into Astronomy.

Our purpose in using mathematics is to stay focused on modern and generally accepted interpretations of the phenomena under discussion. What brings us together is our common love for Astronomy.

So come join us as we see how a little mathematical reasoning can disclose secrets which nature may never have intended to reveal.

Computer Chatter
By Larry F. Kalinowski

Next month should produce the event of the year the annular solar eclipse. Look for a rise in public awareness to astronomy. In fact, take advantage of it. Invite all those that show any interest to one of our meetings. Let them know they're welcome to continue their interest with us. Hand out a club circular with meeting times, places and phone numbers. If they live near you, offer to pick them up and drive them to their first meeting.

I picked up an April 94 newstand copy of Sky and Telescope and found an article on Focault testing that made my mouth drool. It was Focault testing twenty-first century style with the aid of a video camera, a nineteen inch television set and an XT computer. Just the pictures were enough to convince me that someone had rejuvenated a grand old process and improved it tenfold, maybe a hundred fold. Gone are the backbending and squinting, I remember, trying to knock out a couple of mirrors. Parabolizing was a tedious process. The big screen makes shadow measurement so much easier and Lotus 123 makes zone calculations so automatic, this improved method of Focault testing may even bring back amateur telescope mirror making again.

The biggest pain in the you know what about CD -ROM discs is the lack of standardization in up sequence.

The W.A.S.P. newsletter

MAY 2004

Warren Astronomical Society Michigan

The Warren Astronomical Society Paper

P.O. Box 1505
Warren, Michigan 48090-1505
www.boonhill.net/was

Volume 36, Number 5 // May 2004

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The WASP (*Warren Astronomical Society Paper*) is the official monthly publication of the Society. Each new issue of the WASP is mailed to each member and/or available online www.boonhill.net/was. Requests by other Astronomy clubs to receive the WASP, and all other correspondence should be addressed to the editor, Cliff Jones, email: clifford@ameritech.net

Articles for inclusion in the WASP are strongly encouraged and should be submitted to the editor on or before the first of each month. Any format of submission is accepted, however the easiest forms for this editor to use are plain text files. Most popular graphics formats are acceptable. Materials can be submitted either in printed form in person or via US Mail, or preferably, electronically via direct modem connection or email to the editor.

Disclaimer: The articles presented herein represent the opinions of the authors and are not necessarily the opinions of the WAS or the editor. The WASP reserves the right to deny publication of any submission.

Astro Chatter
by Larry Kalinowski

Thanks to Bill Koren and Paul Strong, the members that attended the Macomb meeting, in April, were treated to the demonstration they've been waiting for, for over two years. In the physics lab next door, Bill and Paul performed the speed of light experiment. Very similar to the Michaelson setup in the late 1800's, you could see and hear the spinning mirror and watch the laser beam reposition itself on a video screen as the spinning mirror reflected the beam back to the source. Bill's well given lecture, that explained how the measurements were made, made the demo seem quite simple. To top it off, the measurements revealed about a one percent error. Quite accurate for a lab setup, considering that the laser beam was restricted to a travel length of about forty feet in one direction. The results were about 300,000 kilometers per second. Many thanks and a tip of the LFK hat to Bill and Paul.

The GLAAC (Great Lakes Amateur Astronomy Clubs) group has announced who the speakers will be for the Kensington Metro-Park "Astronomy On The Beach" star party on May 21 and 22. Friday evening the speaker will be Astronaut Tony England, from NASA and Saturday's speaker will be Dr. Patricia Santy, also from NASA. She is a crew surgeon for the astronauts. The main featured astronomical object, on both days, will be Comet Neat, along with Jupiter, Saturn, Venus, Mars and Mercury. The comet will be projected on a large screen so that many can see it all at once in the viewing area, just as Mars was projected, last year, during its close approach to Earth. The speakers will be there, talking, rain or shine, under the protective canopy of the pavilion at The Martindale Beach site. Hot food and drinks will be sold at the usual park prices. The usual park entrance fee may be charged, however, it never has been, in the past. The last few years have drawn over a thousand people each night, with the highest total attendance occuring last year, nearing 5,000 each night. Mars was the

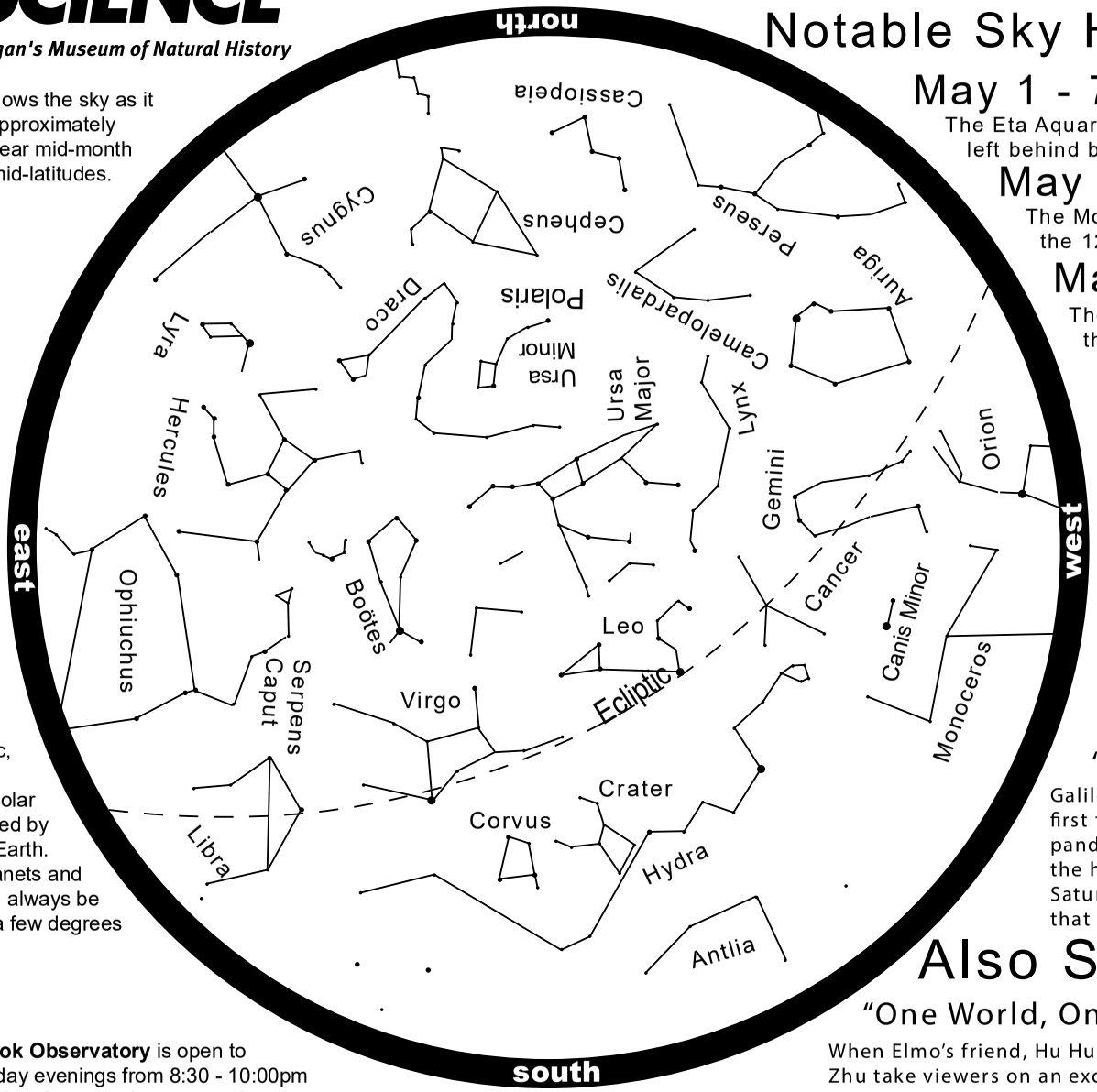
CRANBROOK INSTITUTE OF SCIENCE

Michigan's Museum of Natural History

MAY 2024

Notable Sky Happenings

This chart shows the sky as it appears at approximately 10pm EDT near mid-month at northern mid-latitudes.



What is that dashed line? It's the ecliptic, the reference plane of the solar system, defined by the Sun and Earth. The major planets and the Moon can always be found within a few degrees of this plane.

The Cranbrook Observatory is open to the public Friday evenings from 8:30 - 10:00pm EDT, and the first Sunday of the month from 1:00 - 4:00pm for solar viewing.

For observatory information visit http://science.cranbrook.edu/explore/observatory

May 1 - 7

The Eta Aquarid meteor shower, produced by dust particles left behind by Halley's Comet, peaks the night of May 6.

May 8 - 14

The Moon is to the left of Pollux on the evening of the 12th, Castor is to the right (W evening).

May 15 - 21

The Moon is above and to the left of Regulus on the 15th (SW evening) and to the upper right of Spica on the 19th (S evening).

May 22 - 31

22nd: Apollo 10 tested the Lunar Excursion Module 55 years ago in preparation of the first manned Moon landing. The Moon is to the left of Antares on the 24th (S predawn) and below Saturn on the 31st (SE predawn).

Now Showing

"Two Small Pieces of Glass"

Galileo did not invent the telescope, but he was the first to use it to examine the sky. Telescopes have expanded our knowledge of the cosmos. We'll learn about the history of telescopes, explore the Galilean Moons, Saturn's rings, the structure of galaxies and view images that were made through our observatory telescope.

Also Showing

"One World, One Sky: Big Bird's Adventure"

When Elmo's friend, Hu Hu Zhu, visits from China. Big Bird, Elmo and Hu Hu Zhu take viewers on an exciting discovery of the Sun, Moon, and stars. They learn about the Big Dipper and the North Star and take an imaginary trip to the Moon where they learn that the Moon is a very different place.

For astronomy information visit http://science.cranbrook.edu

Ken Doing Outreach with His Vintage Telescope - Ken Heilig

May 2024

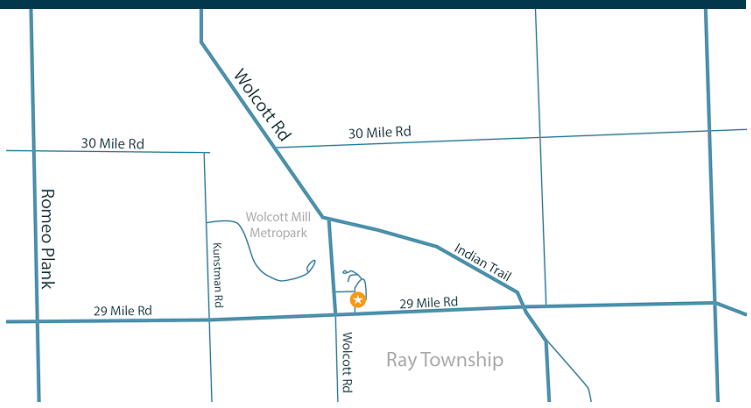
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
			1	2	3	4 Eta-Aquarid Meteor Shower
5 Cinco de Mayo Moon at Perigee: 363166 km	6 Cranbrook	7 NEW MOON	8	9	10	11
12 Mother's Day	13	14	15	16 Macomb	17 Moon at Apogee: 404641 km	18 Astronomy Day
19	20	21	22	23 FULL MOON	24	25 Stargate
26 Arbor Day	27 Memorial Day	28	29	30	31	

Stargate Observatory

Monthly Free Astronomy Open House and Star Party
8:30 PM, 4th Saturday of the Month
Wolcott Mill Park - Camp Rotary Entrance

Advisory: Concerns are circulating in the amateur astronomy community about a possibility of COVID-19 being passed from one person to another via contact of different persons' eyes with a telescope eyepiece. Sharing telescopes may be considered by some to be high-risk due to the possibility of eyes touching eyepieces. Masks are encouraged, mandatory for children.

- Sky tours.
- See different telescope types in operation.
- Get help with your telescope.
- We can schedule special presentations and outings for scouts, student or community groups.
- Contact: outreach@warrenastro.org
- Find us on Meetup.com



20505 29 Mile Rd (1.8 miles east of Romeo Plank Rd) Ray, MI 48096
82° 55'04" West Longitude, 42° 45'29" North Latitude

Observatory Rules:

- Closing time depends on weather, etc.
- May be closed one hour after opening time if no members arrive within the first hour.
- Contact the 2nd VP for other arrangements, such as late arrival time. Call 586-909-2052.
- An alternate person may be appointed to open.
- Members may arrive before or stay after the scheduled open house time.
- Dates are subject to change or cancellation depending on weather or staff availability.
- Postings to the Yahoo Group and/or email no later than 2 hours before starting time in case of date change or cancellation.
- It is best to call or email the 2nd VP at least 2 hours before the posted opening with any questions. Later emails may not be receivable (secondvp@warrenastro.org).
- Generally, only strong rain or snow will prevent the open house... the plan is to be there even if it is clouded over. Often, the weather is cloudy, but it clears up as the evening progresses.

Stargate Report

Open House Report for April 27, 2024

The observatory opened just after 7 pm. The sky started as partly cloudy then gradually cleared.

More than 50 people attended the open house including club members, scouts, and new visitors interested in joining the WAS.

The 8-inch refractor was used to observe several objects including Deep Sky Objects such as M65 and M51 galaxies and M13 globular clusters. In addition, we viewed several double stars.

there were a few telescopes set up outside the observatory used for observing and astrophotography.

The observatory was closed after all visitors left close after 11 pm.

May Open House

The next open house is scheduled for 8:30 pm, Saturday, May 25.

Riyad I. Matti
2024 WAS 2nd VP,
Observatory Chairperson

Astronomical Events For May 2024

Add one hour for Daylight Saving Time

Source:

http://astropixels.com/almanac/almanac21/almanac2024est.html

Date	Time (h:m)	Event
1	6:27	LAST QUARTER MOON
3	17:26	Saturn 0.8°N of Moon: Occn.
4	15:00	Eta-Aquarid Meteor Shower
4	21:26	Mars 0.2°S of Moon: Occn.
5	16:54	Moon at Ascending Node
5	17:11	Moon at Perigee: 363166 km
6	3:25	Mercury 3.8°S of Moon
7	22:22	NEW MOON
8	6:00	Mars at Perihelion:
9	16:00	Mercury at Greatest Elong: 26.4°W
12	17:17	Pollux 1.6°N of Moon
13	6:00	Uranus in Conjunction with Sun
15	6:48	FIRST QUARTER MOON
15	13:43	Regulus 3.5°S of Moon
17	14:00	Moon at Apogee: 404641 km
18	13:00	Jupiter in Conjunction with Sun
19	11:35	Moon at Descending Node
20	4:20	Spica 1.4°S of Moon
23	8:53	FULL MOON
23	21:31	Antares 0.4°S of Moon
30	12:13	LAST QUARTER MOON
31	3:01	Saturn 0.4°N of Moon: Occn.

Treasury Report

May 2024 Treasurer's Report

Current Account Balances

Checking : $26,012.51

PayPal : $1,005.78

Bills coming Due on Credit Card Account (payment in process)

We are caught up on the IRS form 991-N filing.

$500.00 – Reservation at Ukrainian Cultural Center – End of Year Banquet

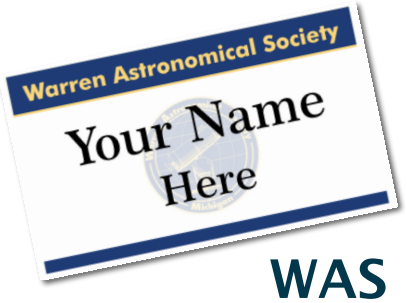
$113.08 – Amazon purchase of new cash box & briefcase

Membership

We have 94 current members.

The Society would like to welcome new members John Buckert, Thomas Cervenak, Joe Gildner, and Michael Jurban.

Dave Baranski,
Treasurer



WAS Name Tags

Name tags are back. If you wish to have one and are a dues paying member, contact publications@warrenastro.org and we'll get one printed up for you.

Outreach

April started with a mad dash of eclipse events and travel. If you would like to share your eclipse outreach/experience please email outreach@warrenastro.org. We had several other events as well and are now gearing up for the big event at Selfridge in early June.

April:

Bob Trembley was interviewed by a local newspaper about the upcoming eclipse.

Bob Berta was interviewed by a local news channel about the upcoming eclipse.

4/3 Mark Kedzior was at Grosse Pointe Library

4/8 Dale Partin was at Cranbrook institute of Science along with Ken Heilig and his wife Laurie, Tina Wong and Robert Bolton for the partial eclipse. Ken got on a local news piece for the event.

4/8 Bob Trembley was down in Dayton OH at the Air Museum with his wife, manning a WAS table during the eclipse.

4/13 Bob Trembley, Mark Kedzior and myself were at the Belle Isle Nature Center for their Statewide Astronomy Night event. I had over 100 people at my scope, Bob had similar numbers indoors at the WAS table.

4/13 Riyad had scout at Stargate

Upcoming:

Selfridge Open House Air Show Steam Expo - June 8-9 Free Admission

https://teamselfridge.com/

Meeting Minutes

Board Meeting
April 29, 2024

Meeting starts 7:00pm sharp.

Officers and Reps present

President: Bob Trembley, 1st VP: Dale Partin, 2nd VP: Riyad Matti, Treasurer: David Baranski, Secretary: Charlie Strackbein, Outreach: Jeff Macleod, Publications: Vatshalya Dandibhotla, Newsletter Editor and publisher: Dale Thieme

President reports he was at the Belle Isle - Statewide Astronomy Night on Apr. 12 indoors, at a table across from the inflatable planetarium. Bob reports speaking with countless children and their families. One young man knew the difference between an asteroid and a comet, and how a comet can turn into an asteroid… but he'd never heard the word "exoplanet."

First VP reports that he has booked with speakers up to early October, Observatory Chair Riyad, Notes that scouts continue to come out, they stay in the small buildings camping, the scouts actively participate in discussions with lots of questions, last Saturday, clear skies, many scouts along with guides. The next open house is on the 25th of May, Riyad is expecting 80 scouts and guides. Treasury Reports health amounts of funding including PayPal $1043 and the transferred funds from the credit card account to the checking account and filed 991-N Tax form. Reports everything's there, lots of cash to do stuff. The Secretary Reports improved record keeping and getting more proficient in role. Jeff Macleod of Outreach Reports the BIG event at Selfridge - June 8 & 9th - we need more info. There are lots of spring and summer events coming up. Discovery Learning Center for kids in Mt Clemens is opening on Saturdays and need meeting set-up support and other help, Jeff will be doing our feature WAS Lecture on May 6th and we need more info for the Air Show Expo.

The board discussed Vista Print and printing 1000 more of our brochures.

Publications has received some photos for the Newsletter to use.

The board discussed PO Box Authorized Users for 2024 and a need for new individuals to update document on file at Warren PO Mark Kedzior maybe. Bob T. has the mailbox key. Bob T. needs to meet with Jeff M. about NASA Night Sky Network. Jeff M. suggests they have it during his 1 hour car ride home from work Its noted that Jeff Macleod now has an NSN account The combined meeting with MMS at Cranbrook on Jul 8 - needs follow-up by Bob T. Coordination to advertise it and figure out what we are going to do together, It was suggested that this was not the time for each group to have a general meeting. More information is needed about the meteor guy. Bob T. reports he still needs ideas for best practices doc. The board reflected on Marty Kunz Passing and some recognition and honor with a Solar Observing Accolade.

Riyad notes the observatory needs money to fix it up. Bob T. discussed a need for a Gmail account for WAS laptop. Officer reports due was mentioned. Important dates: August - Research Banquet Speaker, Aug 12 - Perseids with Wolcott Mills, Aug 24 - Annual picnic at pavilion by Stargate - 4:00 PM (4th Sat. in Aug), Sept 20 & 21 - AATB at Maybury State Park, November: Book Macomb room through spring, Dec. 5 - WAS Banquet, Jan '25 - Send Macomb $$$ for Paul Strong Scholarship

501C3 Documentation was discussed with Dale playing a leading role.

Stargate Dome - needs Motor and gear box on Dome - motor is good, gear box is worn out completely. 6 inch x 6inch x2 inch, ~19 rpm, torque = 100 lb-ft (conveyor-belt - like) 220v single phase (110v preferred). Banquet Speakers were discussed Dale P. suggested Nicole Zellner about the moon lunar samples, and several suggested a special guest from NASA, Bob T. would look further into it. Dale P motioned for adjournment and Charlie seconded it, meeting closed at 7:51pm

Respectfully Submitted by:

C. Strackbein
WAS Secretary 2024

General Cranbrook Meeting April 1, 2024.

The Monday, April 1st at Cranbrook meeting did not have a long presentation but featured **a group Social with "Astronomy Entertainment" by 1st VP Dale Partin**. Our social was held in the space by the gift shop in the lower-level lobby; members brought snacks and munchies; the board provided drinks, cups, plates, and such. A variety of snacks was on hand from deviled eggs to Lasagna. About 20 members attended as well as approximately 10 new attendees.

Respectfully Submitted by:

C. Strackbein
WAS Secretary 2024

General Macomb Meeting April 18, 2024

Attendance: President Bob Trembley, 1st VP Dale Partin, 2nd VP Riyad Matti (online), Treasurer, David Baranski (Online), Secretary Charlie Strackbein, Outreach Jeff Macleod, Publications Vatshalya Dandibhotla (Online and March 2024 Newsletter editor and publisher Dale Thieme. Also in attendance was Bob Berta, Mike O'Dowd, Mark Kedzior, and 4 or 5 long time members that I'm just getting to know including Dale, Mike a few others. Online attendance accounted for were 9 in Zoom, 2 on YouTube and 15 overall n the room. Meeting started on time at 7:00pm. YouTube went live with introduction by W.A.S. President Bob Trembley followed by a round of introductions of (previously named) board members present. President Bob Trembley initiated the Roll Call and recognized first-time attendees and asked where they heard about us? There were no new members in the room and a few online who's names can be found in the online You Tube record of the meeting. President Bob Trembley noted to attendees that it's easy to join or renew your membership via PayPal on our website, If anyone wants a lanyard-ready WAS badge, let the either the secretary or Publications know (publications@warrenastro.org). Your badge will be available at a future meeting. There were several announcements. A couple of 2024 WAS photo Calendars may still be available for $15 as well as WAS wearables and they are purchasable from Mark Kedzior - you can check what's available elsewhere in this newsletter (or with Mark if he's in attendance) Bob called attention "if you haven't figured out what you are going to do for the April 8th total solar eclipse - you need to" President Bob Trembley and his wife will be representing the WAS at the National Museum of the USAF. Bob made an appeal for those who are NOT going to see the total eclipse, we could really use help at Cranbrook to help people see the partial eclipse there. Please let Dale Partin know if you can help with this. Thank you, Dale Partin, for leading this outreach to Cranbrook and satisfying their interest in us helping them put. We need Stargate Message board use ideas and related things to put in it. The Monday, April 1st at Cranbrook meeting did not have a long presentation but featured a group Social with "Astronomy Entertainment" by 1st VP Dale Partin. -Our social was held in the space by the gift shop in the lower-level lobby; members brought snacks and munchies; the board provided drinks, cups, plates and such.

Officers' reports were made by President Bob Trembley, 1st VP Dale Partin, 2nd VP Riyad Matti, Treasurer, David Baranski, Secretary Charlie Strackbein, Outreach Jeff Macleod, Publications Vatshalya Dandibhotla and Newsletter editor and publisher Dale Thieme. Report details can be found in the WAS Meeting recordings on our You Tube Channel. If you need to contact the board, you can email us at: board@warrenastro.org. About 7 WAS members attended the standing room only audience presentation by Br. Guy at Cranbrook Sunday March 17th. The Overflowing attendance were treated to a very special presentation of Br. Guy speaking as a Jesuit scientist, examining how Galileo's work challenged, and was challenged by the science of the day in presenting "A Vatican Astronomers View of Galileo,". President Bob Trembley and his wife took him out to dinner afterwards - he had a Vernors and a Coney Dog! Of note: Brother Guy J. Consolmagno is a Detroit native with several curved ties to Detroit. Brother guy has written some of astronomy's most popular and influential books including "Turn Left at Orion" and "Would you Baptize an Extraterrestrial and other questions from an Astronomers email box at the Vatican Observatory and other several other that you can find on Amazon.

Special Interest Groups were led by Bob Trembley with some Solar - SDO Images and Double Stars / Perseids observations by Riyad and notes of a large group of visiting stargazers at Stargate. An invitation to get more involved with the club was put forth by Bob Trembley to start a special interest group. Radio, Computers and Technology, Education, Light Pollution, Podcasting were suggested,

Feature talk was introduced by First VP Dale Partin Featuring a highly informative "Solar Imaging" by Bob Berta discussing what it takes to get into solar astrophotography and how to image our nearest star. Bob noted that there are more clear days than nights in Michigan .... and you don't have to travel any farther than your house to get fantastic photos. Bob said the equipment is generally a lot less expensive than deep sky gear and light pollution is not necessarily an issue, and the best part.... no mosquitoes! Bob showed some of his best photos and noted the sun is moving into "Solar Max" part of its 11-year cycle which means a lot of dramatic activity and potentially GREAT photos. Our April star party and open house at Stargate Observatory was on Saturday April 27th. Look for details of that in the May Issue. Our next General meeting will be at our May Cranbrook Meeting on Monday, May 6th.

The meeting was called at 9:07pm

About 7 members met afterwards at the National Coney Island on Groesbeck

Respectfully Submitted by:

C. Strackbein
WAS Secretary 2024

The Warren Astronomical Society is a proud member of the

Great Lakes Association of Astronomy Clubs

GLAAC is an association of amateur astronomy clubs in Southeastern Michigan who have banded together to provide enjoyable, family-oriented activities that focus on astronomy and space sciences.

Club Name and Website	City	Meeting Times
Astronomy Club at Eastern Michigan	University Ypsilanti/EMU	Every Thursday at 7:30PM in 402 Sherzer
Capital Area Astronomy Club	MSU/Abrams Planetarium	First Wednesday of each month 7:30 PM
Farmington Community Stargazers	Farmington Hills	Members: Last Tuesday of the month Public observing: 2nd Tuesday of the month
Ford Amateur Astronomy Club	Dearborn	Fourth Thursday of every month (except November and December) at 7:00 PM
McMath-Hulbert Astronomy Society	Lake Angelus	Board and paid members-First Sunday of the month
Oakland Astronomy Club	Rochester	Second Sunday of every month (except May)
Seven Ponds Astronomy Club	Dryden	Monthly: generally the Saturday closest to new Moon
Sunset Astronomical Society	Bay City/Delta College Planetarium	Second Friday of every month
University Lowbrow Astronomers	Ann Arbor	Third Friday of every month
Warren Astronomical Society	Bloomfield Hills/Cranbrook & Warren/MCC	First Monday & third Thursday of every month 7:30 PM

Club and Society Newsletters

Warren Astronomical Society: http://www.warrenastro.org/was/newsletter/
Oakland Astronomy Club: http://oaklandastronomy.net/
McMath-Hulbert Astronomy Club http://www.mcmathhulbert.org/solar/newsletter/
Ford Amateur Astronomy Club: http://www.fordastronomyclub.com/starstuff/index.html
University Lowbrow Astronomers: http://www.umich.edu/~lowbrows/reflections/

WAS Member Websites

Steven Aggas: http://apache-sitgreaves.org/

Jon Blum: Astronomy at JonRosie

Doug Bock:

Facebook: Northern Cross Observatory: https://www.facebook.com/NorthernCrossObservatory

Boon Hill and NCO Discussion https://www.facebook.com/groups/369811479741758

Flickr (astrophotography album): https://www.flickr.com/photos/141833769@N05/

YouTube channel: https://www.youtube.com/channel/UC-gG8v41t39oc-bL0TgPS6w

Bob Trembley:

https://www.vaticanobservatory.org/profile/rtrembley

Vatican Observatory Foundation Blog

This article is distributed by NASA's Night Sky Network (NSN). The NSN program supports astronomy clubs across the USA dedicated to astronomy outreach. Visit nightsky.jpl.nasa.gov to find local clubs, events, and more!

Stargazing for Beginners

By Kat Troche

Millions were able to experience the solar eclipse on April 8, 2024, inspiring folks to become amateur astronomers – hooray! Now that you've been 'bitten by the bug', and you've decided to join your local astronomy club, here are some stargazing tips!

The Bortle Scale

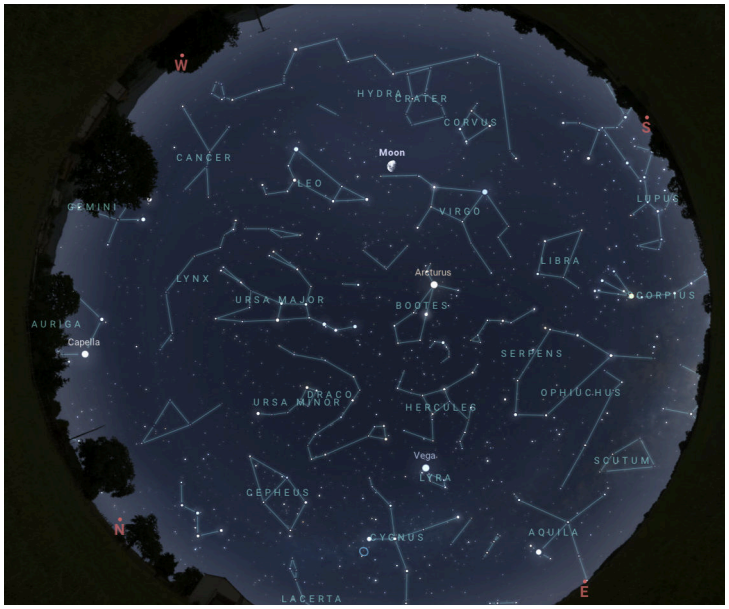
Before you can stargaze, you'll want to find a site with dark skies. It's helpful learn what your Bortle scale is. But what is the Bortle scale? The Bortle scale is a numeric scale from 1-9, with 1 being darkest and 9 being extremely light polluted; that rates your night sky's darkness. For example, New York City would be a Bortle 9, whereas Cherry Springs State Park in Pennsylvania is a Bortle 2.

Determining the Bortle scale of your night sky will help narrow down what you can expect to see after sunset. Of course, other factors such as weather (clouds namely) will impact seeing conditions, so plan ahead. Find Bortle ratings near you here: www.lightpollutionmap.info

No Equipment? No Problem!

There's plenty to see with your eyes alone. Get familiar with the night sky by studying star maps in books, or with a planisphere. These are great to begin identifying the overall shapes of constellations, and what is visible during various months.

Interactive sky maps, such as Stellarium Web, work well with mobile and desktop browsers, and are also great for learning the constellations in your hemisphere. There are also several astronomy apps on the market today that work with the GPS of your smartphone to give an accurate map of the night sky.

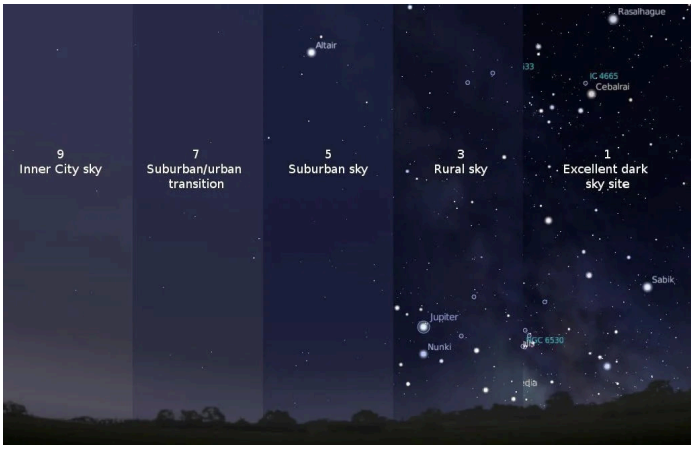


Keep track of Moon phases. Both the interactive sky maps and apps will also let you know when planets and our Moon are out! This is especially important because if you are trying to look for bright deep sky objects, like the Andromeda Galaxy or the Perseus Double Cluster, you want to avoid the Moon as much as possible. Moonlight in a dark sky area will be as bright as a streetlight, so plan accordingly! And if the Moon is out, check out this Skywatcher's Guide to the Moon: bit.ly/MoonHandout

Put On That Red Light

If you're looking at your phone, you won't be able to see as much. Our eyes take approximately 30 minutes to get dark sky adapted, and a bright light can ruin our night vision temporarily. The easiest way to stay dark sky adapted is to avoid any bright lights from car headlights or your smartphone. To avoid this, simply use red lights, such as a red flashlight or headlamp. **The reason:** white light constricts the pupils of your eyes, making it hard to see in the dark, whereas red light allows your pupils to stay dilated for longer. Most smartphones come with adaptability shortcuts that allow you to make your screen red, but if you don't have that feature, use red cellophane on your screen and flashlight.

Up next: why binoculars can sometimes be the best starter telescope, with Night Sky Network's upcoming mid-month article through NASA's website!



The Bortle scale helps amateur astronomers and stargazers to know how much light pollution is in the sky where they observe. Credit: International Dark Sky Association