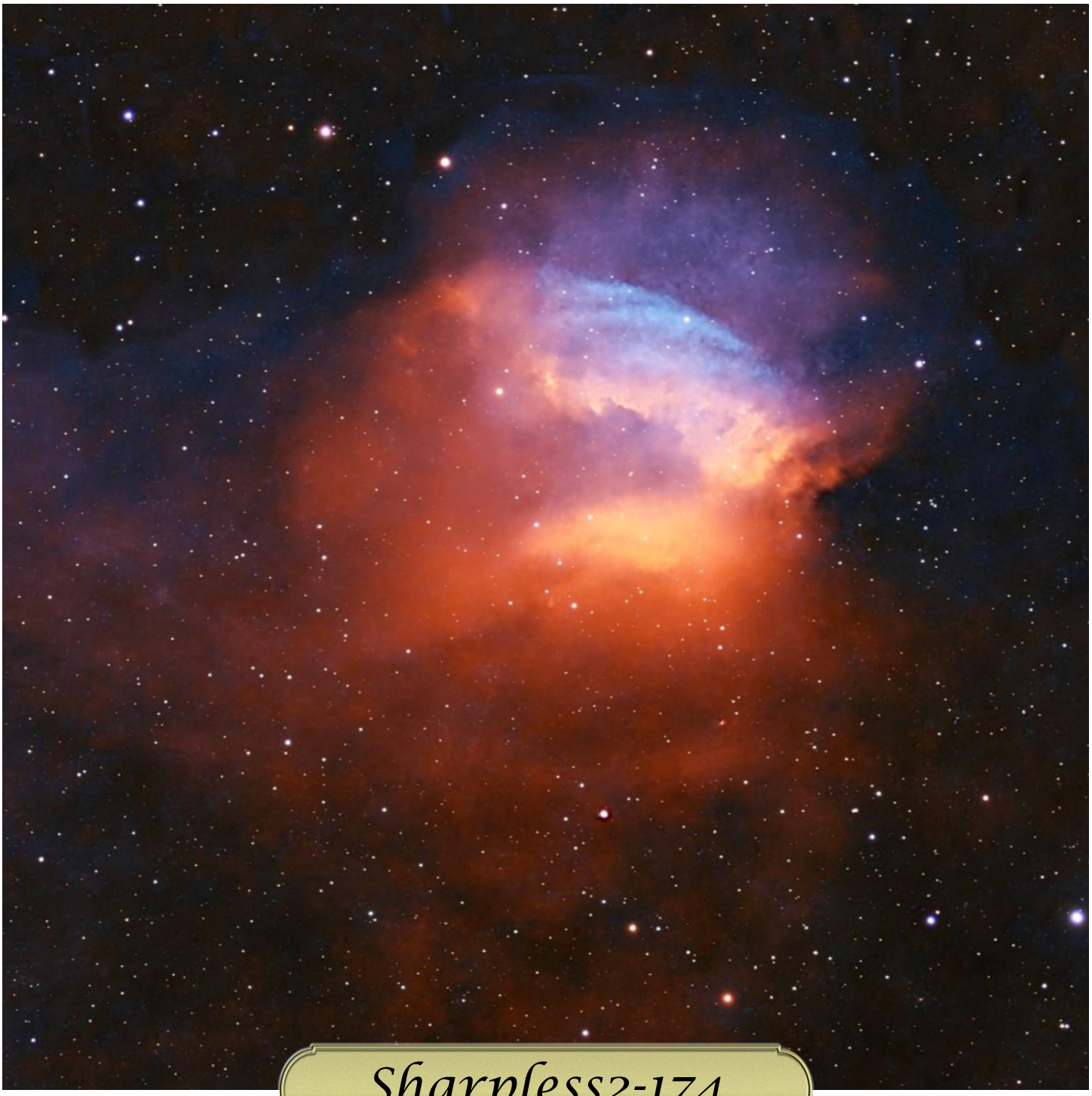
The W.A.S.P.

Volume 57 Issue 10

October 2025

The Warren Astronomical Society Publication



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The WASP

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

Dale Thieme, Editor

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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) $9.00

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

Bob Berta is a member of an online ZWO Community for users of their gear. Thousands of members from all over the world post their images there. Bob's image of Sharpless2-174 was picked in July for the ZWO Community "Picture of the Day".

Bob noticed that his account had a trophy badge on it and found out his image was awarded. Evidently the award is based on member votes.

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.

Astronomy at the Beach a Success!

As usual, the club tent got busy after about 6:30 PM. Brother Guy's talks spilled out into the path between the tents. I crewed the WAS table both nights, and Connie came with me Saturday. Connie was just amazing - she was non-stop from open to close, but she knew that going in!

Jeff was non-stop with his Gemini Simulator - he got a wireless call system - like the ones used in restaurants - it worked great to eliminate the huge line he always had. He also installed an air conditioner this year - a welcome addition for the passengers.

I saw a very positive comment on Facebook from a friend about the smart telescope lecture. Well... positive in that the lecture was good, but it was going to put a dent into his fun-money allocation.

Glen Swanson, a retired NASA historian, author and someone who worked at the Keweenaw Rocket Range got a table for Saturday, and sold out of all the books he brought. He and his wife, Deana Weibel - who spoke to the WAS in the spring, said they'd return next year. Glen is going to be our keynote speaker for the winter banquet!

I was told by Tim Campbell that we sold more raffle tickets Friday night, than we did last year! I don't have a final count, but there's a good chance that the event will be paid for next year!

Next year will be AATB's 30th year! I came up with a bunch of ideas for it and sent them off to the GLAAC board, but I wanted to bring up a couple here: I'd like to see just a couple WAS members volunteer to help setup on Thursday before the event, and stay late on Saturday to help with teardown. I'd also like to see a couple volunteers helping with the Information Table - in the middle of the club tent where Arica was sitting.

I'd also like to see Astronomy at the Beach T-shirts. GLAAC has a logo, but AATB itself doesn't have one. I suggested a contest run by GLAAC, but we can always present some cool concepts.

Image: Bob and Connie Trembley with Br. Guy wishing a mutual friend a happy birthday.
Credit: Kim Tangalan

In Memoriam
Gerald Persha
1948-2025

Warren Astronomical Society member Jerry Persha, founder of Optec, Inc., passed away at his home in La Luz, New Mexico September 4, 2025, at the age of 76.

Gerald Christopher Persha was born September 23, 1948, in Detroit, Michigan, the son of Nickolas and Rheta Persha. Jerry had an inquisitive mind and a love for science and astronomy in particular. As a teenager, Jerry was often found designing power supplies, electro-mechanical instruments and a unique Tri-Schiefspiegler telescope. He started DOAA Enterprises (Detroit Observational and Astrophotographic Association) in his parents' basement while in college. After earning a degree in Physics at Oakland University, Jerry relocated his company to Lowell, Michigan to be near the James C. Veen Observatory and the Grand Rapids Amateur Astronomical Association (GRAAA). In April 1979 Jerry incorporated the company as Optec, Incorporated.

Throughout his life, Jerry was active in local astronomy clubs including Warren Astronomical Society (WAS), Detroit Observational and Astrophotographic Association (DOAA), Grand Rapids Amateur Astronomical Association (GRAAA) and his most recent association with amateur astronomers in Mayhill, New Mexico. Always willing to help his fellow astronomers with a custom adapter or telescope repair, Jerry was always happy to share his vast knowledge with anyone.

He moved to southern New Mexico in 2017 for better skies, building two observatories. The first was dedicated to photometry; the second was dedicated to spectroscopy, instruments of his design and fashioning. His final project involved Wolf-Rayet stars for the American Association of Variable Star Observers (AAVSO). In 2023-2024, he submitted over 29,000 variable star observations to AAVSO, far more than any other observer.

Gerald Persha was preceded in death by his parents, Nickolas and Rheta Persha, and his brother, Thomas Persha. He is survived by his son, Ryan Persha of Michigan; his sister, Shirley Coker (John) of Macomb, Michigan; his daughters, Diana Yarusinsky (Mike), Dawn Dunigan (Mike), and Dana Guthrie (Michael), who became part of his family. Jerry will be missed and remembered as a mentor and friend to many.

From Gary Ross

The "Henry Ford" of amateur astronomy, and the principal figures in Michigan ranking with Mike Simonsen. In 1970's one of the regular "Warrenbillies". Degree in physics from Oakland University, where he took over as lab gear manager even as under-graduate, and was the primary force behind the University's observatory. Founder and owner of Optec Incorporated, begun in his parents' basement making drive correctors, then moving to Lowell in 1978. Jerry had no training in business, nor did he come from business class, but achieved world recognition for products of his research and manufacture, even microscope accessories. His invention of the telephotometer led to field trips to the west under the aegis of the Visibility Research Institute of at Boulder, Colo. Optec's production of his infra-red/ far red detector invited amateur astronomers to observing at low cost. Calibration of his tool was performed at the Veen Observatory. After selling the business he removed to southern New Mexico for better skies, building two observatories. The second was dedicated to spectroscopy, instruments of his design and fashioning. The final project involved Wolf-Rayet stars for the Association of Variable Star Observers. Survived by Ryan, b. 1991.

Continued on page 5

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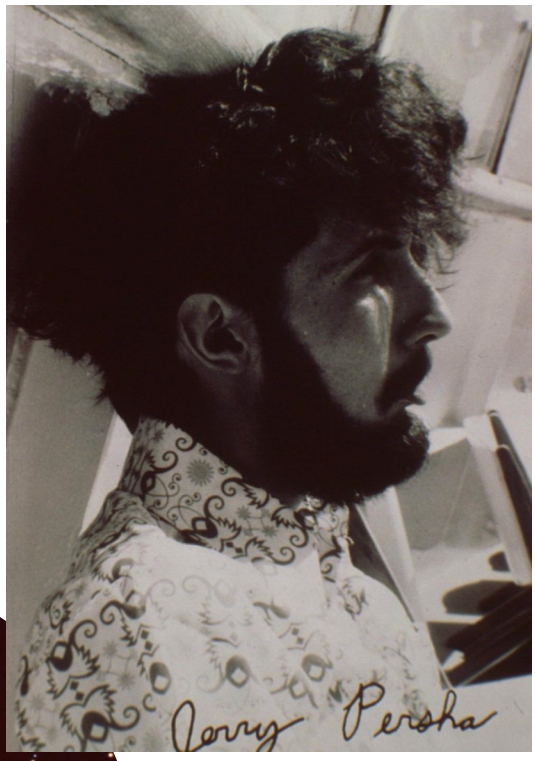
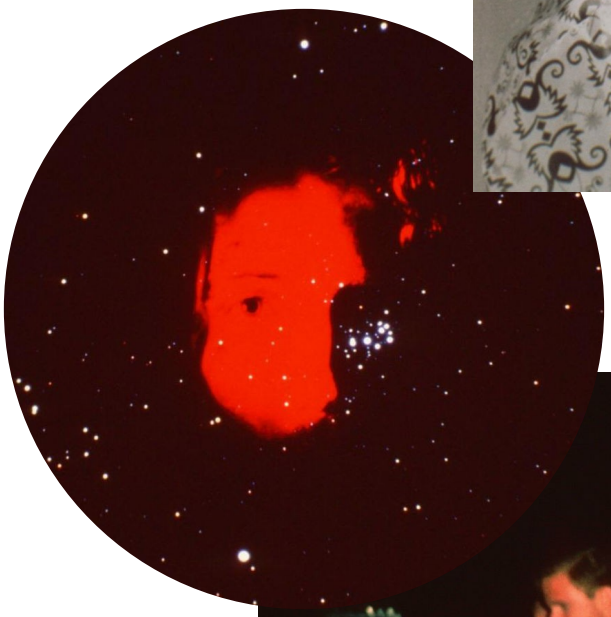


Bottom left: *Facing the camera in this photo (L to R) Roger Civic (designer of our logo), Gary Morin, Gerald Persha, and Larry Kalinowski.*

Below center: *Jerry's face and M45 Face taken while figuring the secondary for the Oakland Univ Observatory instrument circa 1968.*

Bottom right: *Ray Rhea, Gary Ross and Jerry (under blanket) while observing meteor shower.*

Right: *Jerry's credit picture from the 'Hour Before Dawn' slide show picture taken 1973 aboard the Canberra.*



Astronomy at the Beach 2025

Friday

The calm before...everything.

The clear skies were very promising

Photo: Tina Wong

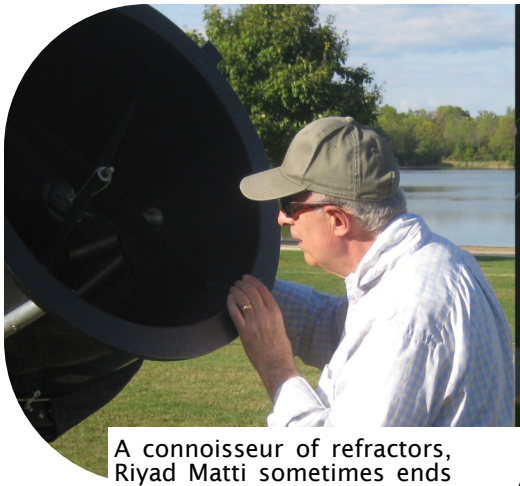
The WAS table was set with a variety of stickers, trading cards, handouts and issues of Astronomy Magazine to give away.

Stepping up the ante this year, Jeff MacLeod built a TV mount and put a big flat screen TV on it for Bob Trembley to demonstrate on. Once we figured out all the connection issues, it worked a treat. We had a constant crowd around the table at Bob's section and the TV was high enough- and large enough, for all to get a good view.

During setup, this editor did get a chance to met Brother Guy Consolmagno.

Below: Connie Trembley working the crowd on Saturday with the Trembley meteorite collection.

Photo: Bob Trembley



A connoisseur of refractors, Riyad Matti sometimes ends up looking in the wrong end of reflectors.

Aha, found the eyepiece!

Photo: Tina Wong

Above: Our Big Dob brain trust, Riyad and Mark Kedzior work on the collimation of the Big Dob in preparation for the evening's viewing.

Above Right: Mike O'Dowd, at right in the picture, surveys the telescope field. This editor offers a big thanks to Mike for fetching the pizza slices (while they were still hot) for the WAS members manning the table. Much appreciated.

Right: Guy Consolmagno spoke to a standing room only crowd. Estimates are 2800 visitors over the two nights.

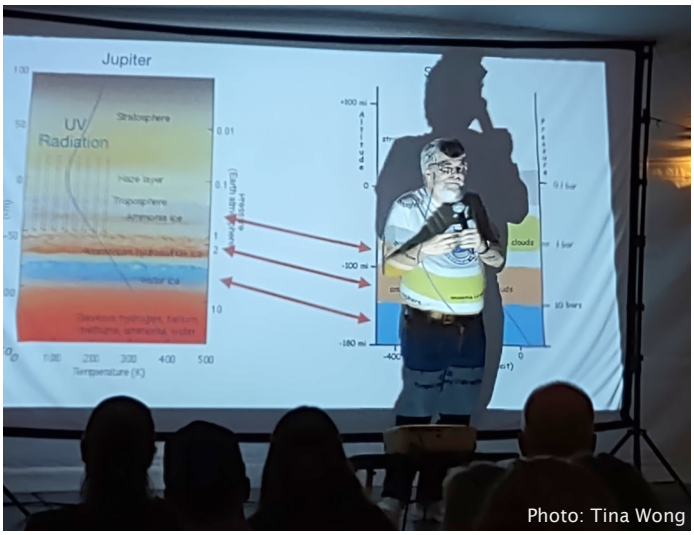


Photo: Tina Wong

The Big Dob Crew

Left to right: Greg Nizio, Mark Kedzior, Riyad Matti, and Ken Lord


Photo: Tina Wong

In the Field

Sharing their telescopes were Dave Noble (below), Jim Lawlis (below, bottom) and (right) a newcomer, Mefi Barrera, who had a great time at the event and Tina Wong is working hard to recruit him to our club.


Photo: Tina Wong


Photo: Tina Wong


Photo: Tina Wong

As a donation to the raffle (GLAAC was making a metal picture to raffle off), Dale Hollenbaugh volunteered his image of IC 1396 - The Elephant's Trunk Nebula, which was chosen and duly transformed into 20x30 inch work of art.

Volunteers

A big thanks to the volunteers who worked the table, shared their telescopes and assisted with the Gemini ride (apologies if we missed any):

Ken Bertin
Marija Bognar
Vatshalya Dandibhotla+
Brenda Eaton
Mark Jakubisin
Mark Kedzior
Jim Lawlis
Pete Lemere
Ken Lord
Jeff MacLeod
Riyad Matti
Greg Nizio
Dave Noble
Mike O'Dowd
Dale Partin
Eduardo Saluzzo
Dale Thieme
Bob Trembley
Connie Trembley
Laura Wade
Tina Wong

And thank you, Brother Astronomer

Photo: Marija Bognar

WAS Merchandise

Available at Cranbrook and Macomb meetings

WAS Logo Stickers

$1.00 ea.
$5.00 for 7

WAS Pins

$2.50 Each

WAS Bandana

$5.00 Each

Endorsed by the Unicycle Cowboy!

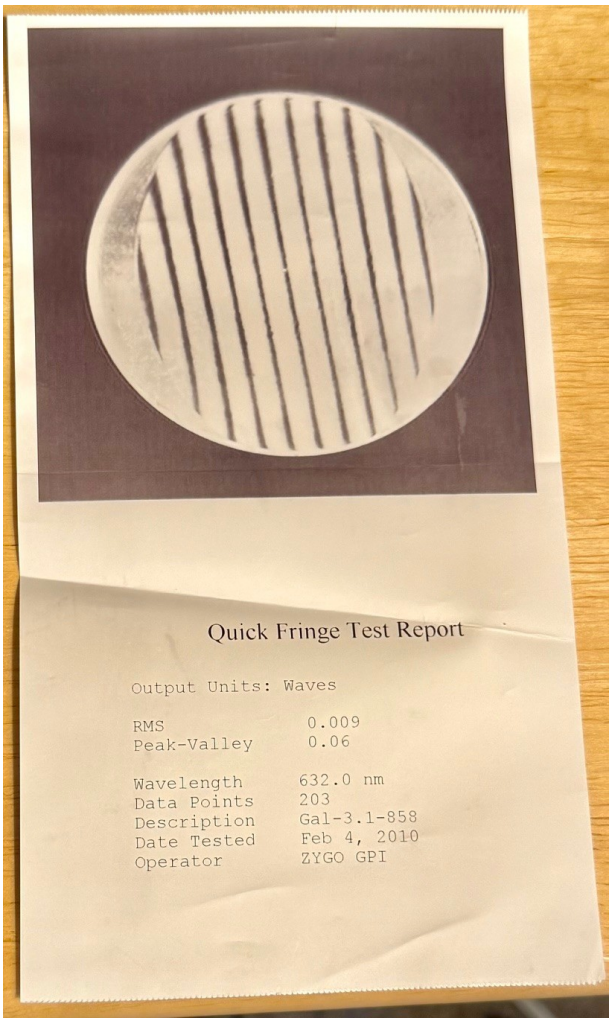
Astronomical Bandanas at an astronomically low price, just $5! featuring 33 Glow in the dark constellations and a WAS logo.

For Sale

I have an Obsession 18” f4.2 Ultra compact for sale. I am selling due to having hernia surgery again. The telrad, dew buster, filter slide, nexus WiFi box and wheely bars are included. $5500 or best offer. The telescope is setup at my house for your inspection any day or night. You can use the scope all night and camp if needed.

Email: bilkipp@gmail.com

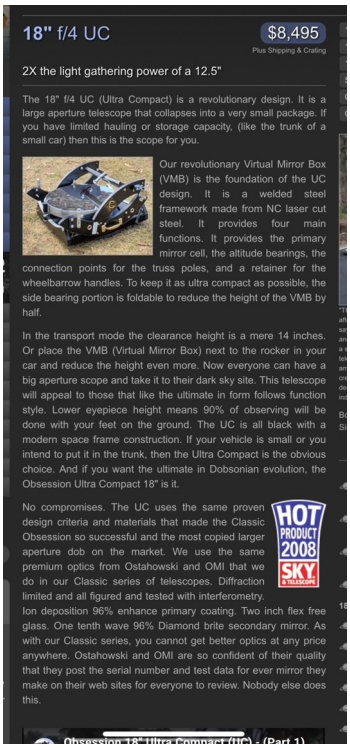
Bill Kippen



Quick Fringe Test Report

Output Units: Waves

RMS	0.009
Peak-Valley	0.06
Wavelength	632.0 nm
Data Points	203
Description	Gal-3.1-858
Date Tested	Feb 4, 2010
Operator	ZYGO GPI



18" f/4 UC $8,495

Plus Shipping & Crating

2X the light gathering power of a 12.5"

The 18" f/4 UC (Ultra Compact) is a revolutionary design. It is a large aperture telescope that collapses into a very small package. If you have limited hauling or storage capacity, (like the trunk of a small car) then this is the scope for you.

Our revolutionary Virtual Mirror Box (VMB) is the foundation of the UC design. It is a welded steel framework made from NC laser cut steel. It provides four main functions. It provides the primary mirror cell, the altitude bearings, the connection points for the truss poles, and a retainer for the wheelbarrow handles. To keep it as ultra compact as possible, the side bearing portion is foldable to reduce the height of the VMB by half.

In the transport mode the clearance height is a mere 14 inches. Or place the VMB (Virtual Mirror Box) next to the rocker in your car and reduce the height even more. Now everyone can have a big aperture scope and take it to their dark sky site. This telescope will appeal to those that like the ultimate in form follows function style. Lower eyepiece height means 90% of observing will be done with your feet on the ground. The UC is all black with a modern space frame construction. If your vehicle is small or you intend to put it in the trunk, then the Ultra Compact is the obvious choice. And if you want the ultimate in Dobsonian evolution, the Obsession Ultra Compact 18" is it.

No compromises. The UC uses the same proven design criteria and materials that made the Classic Obsession so successful and the most copied larger aperture dob on the market. We use the same premium optics from Ostahowski and OMI that we do in our Classic series of telescopes. Diffraction limited and all figured and tested with interferometry.

HOT PRODUCT 2008 SKY & TELESCOPE

Ion deposition 96% enhance primary coating. Two inch flex free glass. One tenth wave 96% Diamond brite secondary mirror. As with our Classic series, you cannot get better optics at any price anywhere. Ostahowski and OMI are so confident of their quality that they post the serial number and test data for ever mirror they make on their web sites for everyone to review. Nobody else does this.

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

HOODIE W/Pockets

Black Only (at this time) – one imprint

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

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

LOGO COLOR SCHEMES:

Black background with gold/yellow artwork and lettering

Black background with blue lettering and gold/yellow artwork

Choose when placing order

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

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IMPRINT ON YOUR OWN CLOTHING ITEM: Logo + Imprint Charge

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

LOGO COLOR CHOICES

Gold/Blue

Gold-3D

Legacy

WAS Astrophotos

Giving Pluto some more love

Here's an imaging composite from late July into August that Rik Hill captured.

Pluto 7/27-8/04

W.A.S.P. Photo and Article Submissions

We'd like to see your photos and articles in the W.A.S.P. Your contribution is ESSENTIAL! —
This is YOUR publication!
Send items to: publications@warrenastro.org
Documents can be submitted in Microsoft Word (.doc or .docx), Open Office (.ods), or Text (.txt) formats, or put into the body of an email. Photos can be embedded in the document or attached to the email and should be under 2MB in size. Please include a caption for your photos, along with dates taken, and the way you'd like your name to appear.

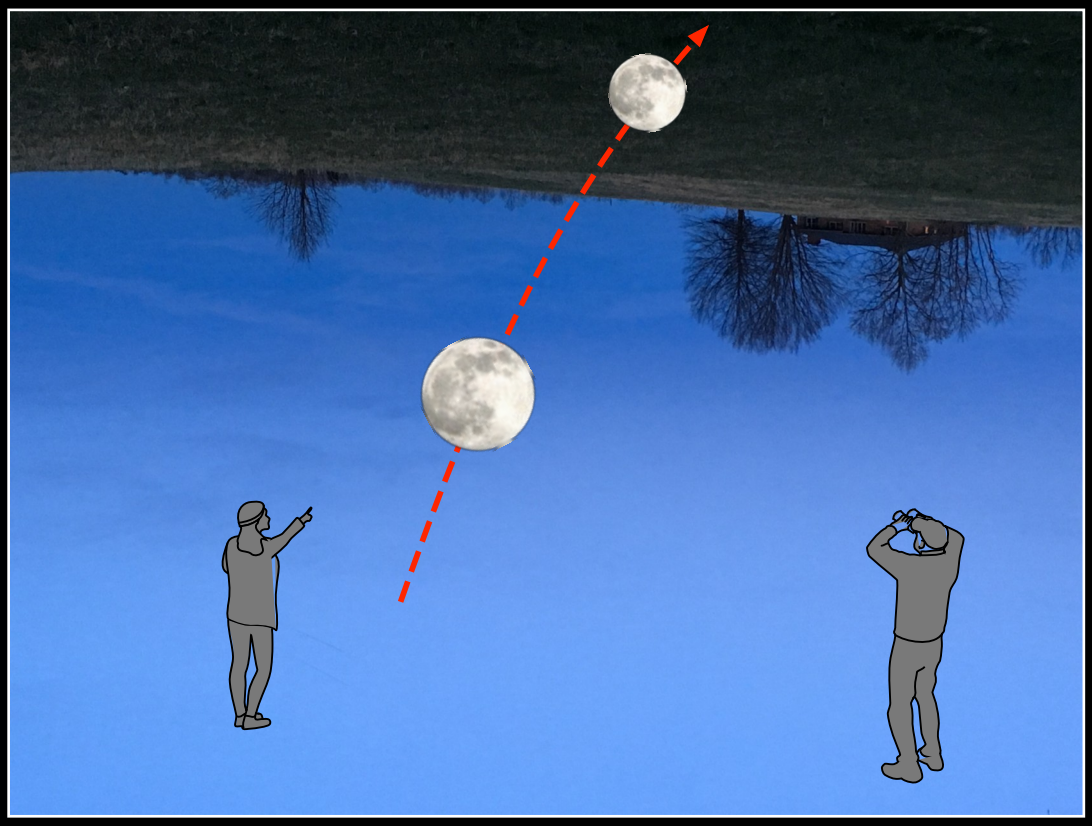
From Dale Hollenbaugh

Top: NGC 7635 - Bubble Nebula

Bottom: SH2-157 Lobster Claw Nebula

C. would be the most correct. The psychological effect is not well understood.

Big Moon Rising: Is it real?



When the full moon rises, it seems to be unusually large. Later, when it has climbed higher in the sky, it returns to its expected apparent size. Why is this the case?

A. When the moon is close to the horizon, its apparent size can be compared to those of distant landscape objects. So, it seems larger than it is.
B. When it is near the horizon, it is closer to us than when it is overhead. So, it appears bigger.
C. It is an unconscious psychological effect. The same effect occurs over a featureless sea.

Look at the moon through a drinking straw when it is rising, and later, when it has climbed a good distance above the horizon. Does the apparent size of the moon through the straw appear to change?

Presentations

Cranbrook
7:00 pm, October 6, 2025

Main Talk

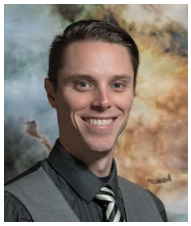
Pizza Party & Astro Quiz

Emceed by Jeff MacLeod

Come enjoy a pizza party! Pizza and pop will be provided free. Bring a side dish (cookies, etc.) if you are so inclined.

This will be followed by an astronomy quiz led by Jeff MacLeod. Come and see how much you know and don't know. No one else needs to find out how you do on the quiz unless you tell them. But bragging is allowed! There may be some hilarious moments. Come give it a try, and enjoy.

About the Emcee



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 (the rest is classified). Nowadays most of his free time is spent working on his spaceflight simulator, a life size recreation of a Gemini spacecraft you can actually fly in.

Macomb
7:00 pm, October 16, 2025

Feature

New Digital Telescopes

By Dr Gary Nichols

From the initial Kickstarter projects to the entry into mainstream Consumer devices, "Smart Telescopes" seem here to stay. But what are they capable of doing for us? Are they simply the combination of what can be purchased separately? Do they offer any advantages over standard astronomy? Can they compete in the astrophotography realm? Technical advances and decreasing prices have brought these devices from the small circles of innovators and the pockets of the wealthy to mass marketing and the general public, but just what are they capable of doing and what can you expect from these devices.

About the Speaker

Gary is a self taught astrophotographer with experience with both OSC and mono setups. He has been doing EAA before the initial Kickstarters of Unistellar and Vaonis. He started down this round in 2017 with Unistellar and followed up with Vaonis in 2020. Gary has a substantial amount of time invested in these devices as well as Dwarf Lab and ZWO. Most recently he moved to Celestron's recent entry into this space. He has used these devices in his astrophotography and for outreach and loves to share his experiences and learning path.

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.

Next Month

Cranbrook

Topic

Solar Cycle 25

Election of officers

Macomb

Topic

TBD

Skyward

David H. Levy

It was late in the afternoon of 19 July, 1963. I was a 15-year-old patient at the time at the Jewish National Home for Asthmatic Children in Denver, Colorado, and had begun my association with the Denver Astronomical Society. The people running the Asthma Home had generously granted permission for me to return home for a week in order to see a total eclipse of the Sun that would occur on Saturday, July 20.

Late that afternoon the day before the eclipse, Dad awoke from a nap in a terrible mood. He turned towards Mom and said, "All David cares about are his damned stars."

Obviously I was upset to overhear his words but I let them pass. His mood improved, and the next day we three saw a spectacular total eclipse of the Sun. Having a lifelong curiosity about history, Dad was flabbergasted when the eclipse, which had been predicted millennia earlier by the ancient Greeks, began right on time, to the second. The saros goes all the way back to the Chaldean astronomers in the centuries BCE, and was understood by Ptolemy, Pliny, and Hipparchus.

The only issue we had was at the start of totality. I took off my eclipse glasses, and my parents had fits telling me to put them back on. I had a choice. I could spend the sixty seconds of totality arguing with them that it is perfectly safe to witness the total phase without protection, or I could just put my glasses back on.

I put my glasses back on. Then I turned away, took them off, and enjoyed the total eclipse.

Years later, Dad and I were walking together. "Do you remember," he inquired, "when I awoke from my nap and said that all you care about are your damned stars"

I admitted that I did remember. "May I take those words back"

"Why? You were right. That was all I cared about back then."

"But if I had had the faintest idea what you were going to do with your damned stars, I would have been so much more supportive." (And he said that to me before I found my first comet.).

In the 41 years since I found that comet, I have had more joy that I can imagine. Never have I gone out to my observatory to look at the stars, and not felt better, far better, when I went back inside. My parents, and my wife, are gone, but I have a daughter, a son-in-law, two grandchildren, and a great grandson. When they ask me a question—even for a second, the charisma intensifies. And it is not just observing. My relationship with many astronomy societies, including the Denver Astronomical Society, which has continued over the years, has recently intensified. I am their poet laureate and get to share a poem at the start of their meetings.

Whether I am alone or with a group of people, for me, nights under the stars are an indescribable thrill.

Left to Right:
Ken Wiener, David Levy, Ken's Mom, David's parents

Wendee, David's daughter, two grandchildren, and his Mom

That's How It Works

By Brad Young, Astronomy Club of Tulsa

... Hear the voices in my head
I swear... it sounds like they're snoring
But if you're bored, then you're boring
– "Flagpole Sitta" by Harvey Danger

I've been having a bit of a writer's block lately for new material. Part of this is the unrelenting heat and humidity here in Oklahoma which makes everything, even indoors, seem harder. I haven't been able to observe much at all, even just satellites at home, due to the heat. The only time that is bearable is before dawn. The other part is I'm working on finalizing my NGC project (sketching them all) and a book on that. I'm close to finishing so I've been spending most of my time on it. That and bothersome repairs of my car and telescope have diminished my summer observations.

It struck me that I often go through a similar situation with astronomy, a sort of observer's block. Sometimes, especially if it's very hot or cold, it seems there is nothing worth looking at. Or at least there's nothing worth going outside in the unrelenting elements for. And then, just when you least expect it, there are all kinds of events, star parties, new satellites, nova, or just several nice nights in a row. Much like the general cycles of life, often things tend to clump together with amateur astronomy such that there may be some times when things seem boring, and other times when it seems like you can't get to everything there is to look at. I liken it to the old saying, when it rains it pours (although, sort of the opposite...).

But That's Okay

Wind the clock, for tomorrow is another day. E.B. White

Many of the things that we can look at will always be there, even though some of them may be harder to catch because they're best in winter or some other weather-related issue interferes. So, we try to catch the new stuff or things that we are interested in right now. Then, when the new naked eye comet (which we're all breathlessly waiting for incidentally), has dimmed and there's not much going on, we can return to the stars and the deep sky. Whenever there is not much going on or the weather is inclement, there may be other things we can do as I've mentioned before such as solar astronomy, radio astronomy, or using remote telescope systems to observe where it is clear.

It's really up to us; modern amateur astronomy provides many options for fun views, new types of objects, serious deep sky projects, even scientifically important citizen science and discoveries. Part of the issue of breaking through the "sophomore slump" that can occur after the initial thrill of easy, bright objects is to find some part of the hobby that moves you personally. Remembering it is a hobby and supposed to be fun helps – if it becomes a chore, take a break. No need to remind me that this philosophy also applies to writing.

Just When You Think You Have Figured It Out

Shew mercy to those that are shipwrecked, for the sea, like fortune, is a fair but fickle mistress.

The Republican (1825) - (supposedly attributed to Phocylides, approx. 540 BC)

All in all, astronomy is indeed a fickle mistress. I give a perfect example from the other day when Venus and Jupiter were having a conjunction. It was also time for the helical rise of Sirius, indicating the end of the dog days of summer, and the Perseid meteors were just starting to build up to their maximum. So, it was, of course, the first morning we had had clouds and rain in over a month. Two days later it was back to intense heat with clear skies but so muggy the sky looked almost like milk during the daytime. Other parts of the country are layered in forest fire smoke right now, a seemingly endless summer threat to the sky recently.

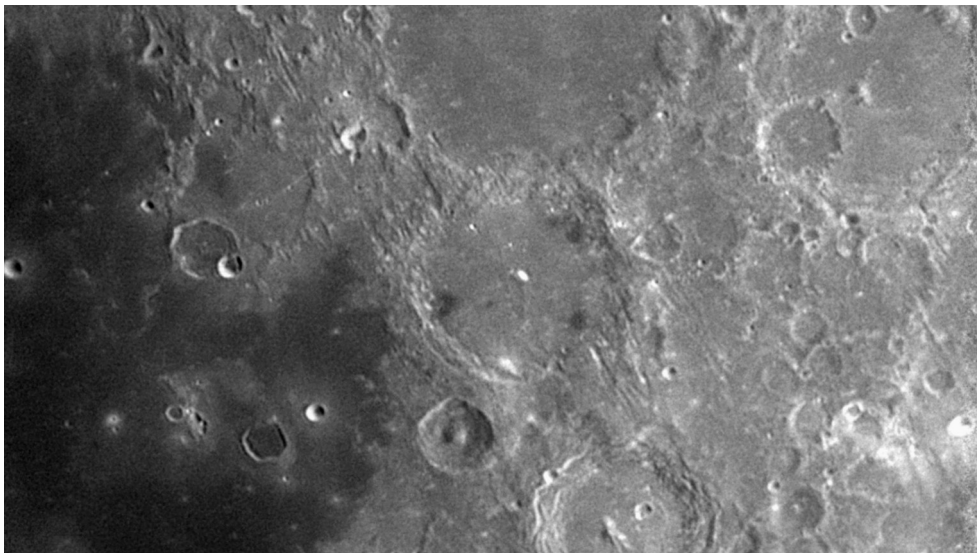
Well, there will be other days or nights when things are much better, the sky clear and another nice conjunction or event will occur. That's just the way things work with amateur astronomy, and it takes some getting used to. Of course, September ushers in the most comfortable, and often clearest time of year, with blue skies and calm nights. Many public events and star parties are coming or going on now, and the Milky Way is still a glorious sight arching overhead and off to the northeast. Our club in Tulsa has a big event at Hunter Park on Aug 30 and begin our new year of indoor meetings at the Jenks Planetarium after Labor Day.

Remember there's always something to see, you just may have to bundle up or stand around with some water and an ice bucket to see it. Don't forget the bug spray.

Over the Moon

With Rik Hill

Alphonsus Under High Sun



We see this region often when it's on the terminator. But what about a few days later? It's still very interesting.

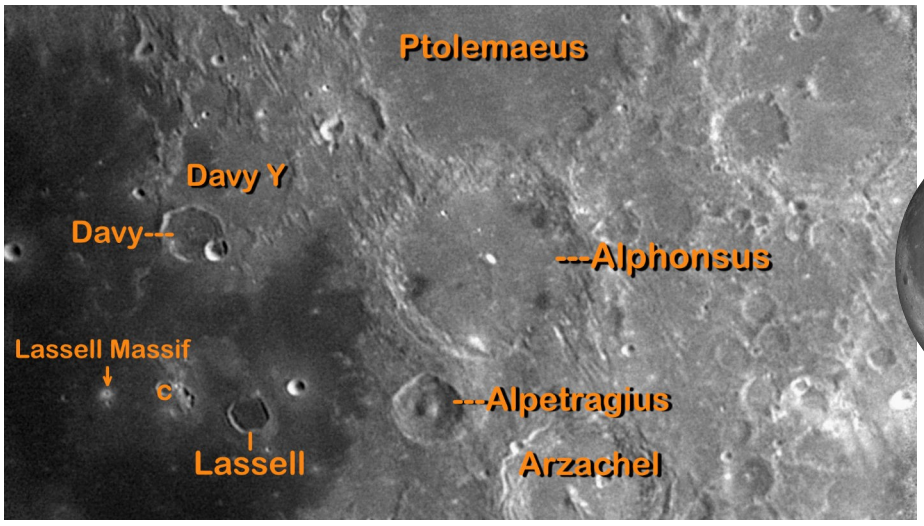
This image is centered on the great crater Alphonsus (diameter 121km) south of the center of the visible disk, with the even bigger "walled plain" crater Ptolemaeus (158km) above and a strongly terraced crater Arzachel (100km) below. Between Alphonsus and Arzachel is the crater Alpetragius (41km) well known for its unusual central peak, often compared to an egg in a basket. Compare it to the central peak in the two aforementioned craters. This rounded central peak takes up nearly a quarter of the crater diameter and rises to 2km above the floor of the crater compared to 1.5km height of the central peak of Alphonsus.

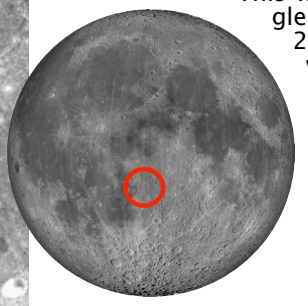
Notice the three large dark patches on the floor of Alphonsus up against the inside of the crater wall. These have been the subject of much study ever since Kozyrev reported spectral evidence of gas emissions seen in Alphonsus, and since Ranger 7 crashed into this crater sending back over 4,000 images many of these dark spots. Today with 60 years of lunar satellite imaging culminating with Lunar Reconnaissance Orbiter (LRO) we have seen that each of these spots contain what appear to be volcanic vents connected by rilles so undoubtedly they are linked to volcanic process.

To the left or west of Alpetragius is a shallow ring crater, Lassell (24km). Farther west is a cluster of craters, another smaller ring crater and what looks to be an isolated mountain. The smaller ring is Lassell C (9km) the smaller craters are Lassell G (6km) to the north and Lassell K to the south which consists of at least 2 merged craters each about 3km diameter. The mountain is called the Lassell Massif. These craters have been the subject of intense scrutiny and are now hypothesized to be collapsed calderas based on the observations from LRO!

Before leaving this area look just to the west of Ptolemaeus at the small bright elongated crater. Notice a string of tiny craters that stretch to the west across the smooth crater floor of Davy Y (70km). This is a string of small craterlets called Catena Davy formed from the impact of a disintegrating comet or asteroid. These features are small. The largest two craters on the left end are 2.7 and 1.9km and the one in the middle is 2.4km and the one on the right end is 3.2km. All the rest are 1km and under. They are better seen at low sun angle as in my image in my article "At the Catena" on the Vatican Observatory website on 24 Sep. 2019: (https://www.vaticanobservatory.org/sacred-space-astronomy/at-the-catena/)

This was made from a single AVI from my Skyris 236M camera stacked with AviStack2 and further processed with Gimp and IrfanView.





Location Maps by Ralph DeCew

History S.I.G.

October 1992

Since I had no copy of an October 1995 issue, I thought I'd go back to the nearest prior October issue that hasn't been covered and here we are at October 1992. The issue opens with what appears to be a dewy Hawthorn Hollow "Star Party Notes" by Scott Jorgensen. Next up is "Computer Chatter" by Larry Kalinowski, where he is getting excited about the display possibilities of Intel's proposed integration of VGA/XGA to the core processor. He also covers the Armchair Astronomer award, something of great interest to me.

We import news from NASA Space Links with these articles: "Hubble Telescope Sky Survey Reveals Embryonic Galaxies"; "Compton Discovers 'Gamma Ray Afterglow' on the Sun"; "Hubble Space Telescope Monthly Status Report August 1992"; "Hubble Closes in on the Cause of Solar Flares"

Ed Cressman does a bit on "Sun Spots".

NASA news continues: "Tether Investigation Status Report 1" by Mark. Hess, Headquarters, Washington, D.C.; "Call for Next Generation of Small

Explorers Announced"; and, "Voyager Status Report" September 1, 1992.

October 2005

Getting back on track with the decade (something ending in 5), we have "Astro Chatter" by Larry Kalinowski, plus his "Swapshop". Ken Bertin talks about eclipses and astronomy outreach in "Note from the President".

We have an announcement, "Earth Science Week 2005 Contrail Count-a-Thon" and, from NASA Space Place, "Improbable Bulls-Eye" by Dr. Tony Phillips.

From the Scanning Room

At this year's picnic, Rick Gossett regaled Mark Kedzior and me with a tale about the Big Dob. At the Astronomy at the Beach event where David Levy spoke, Rick was involved in the transport of the Big Dob. He said that Dave Levy was intrigued by our scope, mentioning that it was similar to the one he used to co-discover Comet Shoemaker-Levy 9 and went on to autograph our scope.

Later, Rick was alarmed to hear drilling coming from the direction of the scope as it was under his care (and responsibility). It turned out to be Bob Watt, installing a clear piece of acrylic to protect the signature.

Dale Thieme,
Chief Scanner

WASP

WARREN ASTRONOMICAL SOCIETY PAPER

Volume 24, Number 10 — $1.00 for non-members — October 1992

Star Party Notes

By Scott Jorgensen

Dew or no dew, August 22nd was quite a night for a star party. For those who couldn't make it, here is what went on while I was there.

As with most any Warren Astronomical Society event, people straggled in for hours. This time I was one of them, being delayed by other commitments for the afternoon and early evening. But several members and their families were already hard at it when I arrived at 9 p.m., just after sunset. They had enjoyed the socializing and cookout Jeff Bondono had arranged for us.

Of course, by getting there on time, they had also scouted out the prime spots to set up. A little swale between the two hills was chosen on the north side of the drive, roughly 70 meters from the trees to the north and maybe 50 meters from the drive: a wise choice since we stragglers continued to show up until after 11 p.m.! Even with headlights dimmed in courtesy to those already viewing, people unloading from cars can be hard on dark-adapted eyes. Those who came for dinner also set up in the daylight, a luxury we seem to get very seldom.

While I set up my scope, others were hard at play. Fred had already corralled M22 in his 16-inch Newtonian and Jeff was hunting for objects mentioned in the literature but not listed in catalogs or on star charts. (You can tell really experienced people by the challenges they chose!) At least a couple of people were shooting photos and several others were wandering from scope to scope, looking at sights ranging from Saturn to obscure open clusters.

The night was reasonably steady but very moist. Only moments after I arrived I heard the first buzz in a night-long series of hair drier blasts banishing the dew from corrector plates and finder scopes. The near-saturation humidity also made the night sky a lot brighter than it often is at Hawthorn Hollow. However, judicious use of UHC filters brought back the dark background in the Lagoon nebula and other non-stellar objects. Extra brownie points were awarded to Nancy, Jeff and Ryiad for managing to realign Nancy's secondary in the dark and the wet at about 11 p.m.

Several people started to work on Messier certificates. Now is a great time to do so because there are literally dozens of "M" objects strung out along the Milky Way, currently running almost straight overhead. That gives you a fine view, undistorted by ground heat and unblocked by pesky trees and

means you have plenty of time to hunt for them before they set. In only 3 1/2 hours I was able to spot 10 — even though I was not trying to collect them — and spent lots of time viewing NGC objects not on Uncle Charles's list.

But the highlight of the night would center around a star that had already set. About 9:45, someone noticed the first dim "clouds" of the aurora. By 10:30, a few of the characteristic curtains had formed. But it was not until after 11 that the show really started. All of the sudden, the whole northern sky started to pulse with very rapid waves running from horizon to zenith in under one second, with even less time between waves. Each wave of light lit up exactly the same pattern in the sky. It was as if the existing curtain pattern were being intensified as the wave passed through it and the dark sky in between was unaffected. If you saw the late night part of the Ultimate Aurora last November, it was much like that. The color palette was limited to primarily green-white with only hints of red at edges of the display. It was magnificent!

The aurora would settle down for a while and people went back to viewing stars. Then it would come back in time and most of us would stand happily mesmerized by the solar wind lighting up our northern sky. By 2 a.m., most of the dozen-odd cars had departed. But four or five dedicated viewers, all of whom were there before sundown (it should be mentioned), continued to photograph, watch and sketch the wonders of the night sky. It was quite a night for a star party. ☆

Star Party at Imlay City Site

Friday, October 23 or Saturday, October 24

6:30 p.m. – 8:00 a.m.

All club members and their guests who wish to attend are welcome to join us at our first Star Party at the Imlay City observing site. No sign-up sheet is necessary for this site. Be sure to get a map from Jeff Ba... Come out and help evaluate this potential observing... the fall skies. The Star Party will be held... nights looks most promising... find out which...

The W.A.S.P. newsletter

October 2005

The Warren Astronomical Society Paper

The Warren Astronomical Society
P.O. Box 1505
Warren, Michigan 48090-1505
www.warrenastronomicalsociety.org

Volume 37, Number 10 // October, 2005

2005 WAS OFFICERS

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Marty Kunz	Director, Public Relations	email: solarmartykz@aol.com

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: cliffordj@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

The Ninth Annual, Astronomy On The Beach, gala at Kensington MetroPark, was a huge success. Officials estimated at least 2,000 attended, with at least 1,000 on Friday night and over 1,000 on Saturday night. Both nights were cloudless and observing was darn good in all directions. The lecture area was jammed to the hilt and table sales by the different clubs and businesses were having brisk sales. There seemed to be more kids involved in our star party this year too. A superb display of Northern lights made a lot of people gasp Saturday night. Thanks to the many clubs that helped, this year's event will long be remembered.

The photo shows three members of the Liftport Group Inc., adjusting the "climber", a device that will be used to send objects into orbit via the carbon nanotube Space Elevator. Believe it or not, nanotube technology is getting closer to the dream of creating a ribbon of nanotubes, strong enough to reach above Earth's atmosphere to transport material into space after climbing all the way to the top of the ribbon. A "pipedream" just a few years ago, it's getting closer to reality.

The Giant Magellan Telescope (GMT) is also closer to reality. This proposed telescope would

CRANBROOK INSTITUTE OF SCIENCE

Michigan's Museum of Natural History

OCTOBER 2025

Notable Sky Happenings

Oct. 1 - 7

The Moon is above Saturn on the 5th (ESE evening). The Full Moon on the 6th is the Hunter's Moon and is the first of three Supermoons this year.

Oct. 8 - 14

Moon is above Jupiter on the 13th and at the lower left on the 14th (ESE morning). Pollux is above the Moon and Castor is above Pollux.

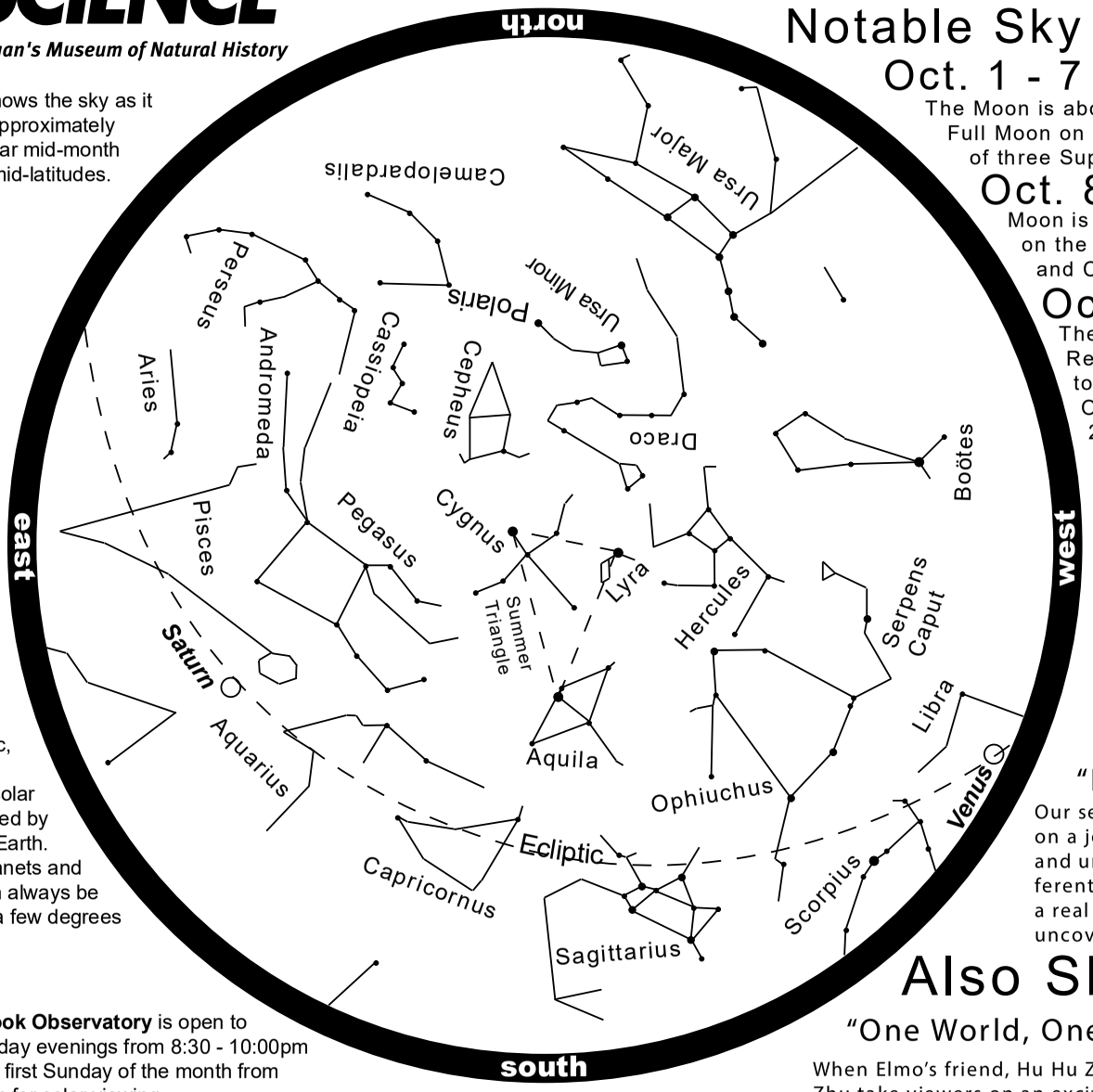
Oct. 15 - 21

The bright star below the Moon on the 16th is Regulus, the "heart" of Leo (E morning). Moon is to the right of Venus on the 19th (E predawn). Orionid Meteor Shower peaks the night of the 21st-22nd. Dust grains left behind by Comet Halley produce about 20 meteors per hour.

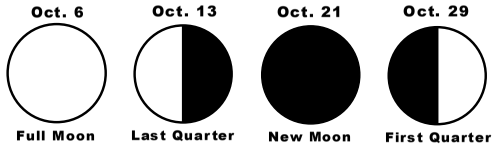
Oct. 22 - 31

The bright star in the E before sunrise on the 22nd is Venus. Regulus is at the upper right.

This chart shows the sky as it appears at approximately 8pm 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.



Now Showing

"Lamps of Atlantis"

Our search for the lost continent of Atlantis takes us on a journey through the astronomical knowledge and understanding of the ancient Greeks. What different patterns did ancient cultures see? Was Atlantis a real place? Did it really sink into the sea? We will uncover clues to help us solve this age-old mystery.

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.

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

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

Ken Heilig - Public Outreach at Cranbrook

October

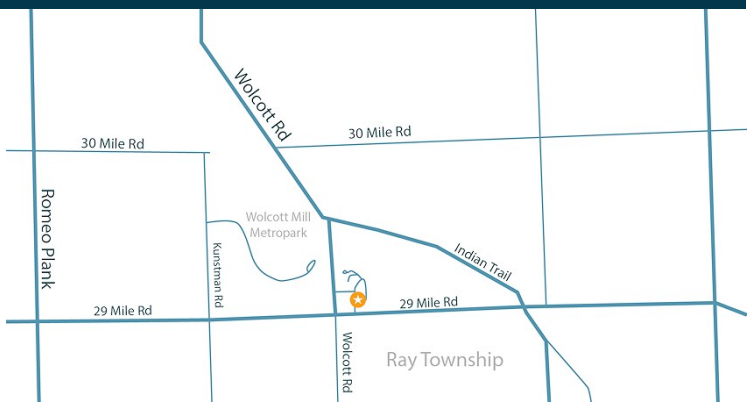
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
			1	2	3	4
5	6 Cranbrook FULL MOON	7	8 Moon at Perigee: 359819 km	9	10	11
12	13 Columbus Day Thanksgiving (Canada) LAST QUARTER MOON	14	15	16 Macomb	17	18
19	20 Diwali/Deepavali	21 Orionid Meteor Shower NEW MOON	22	23 Moon at Apogee: 406445 km	24	25 Stargate
26	27	28	29 FIRST QUARTER MOON	30	31 Halloween	

Stargate Observatory

Monthly Free Astronomy Open House and Star Party
7:30 PM, October 25th
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

September Open House

The Observatory was opened at 6:25 pm. The sky was partly cloudy and became clear at sunset. Roughly 35 people attended the open house, including members and visitors. Other members were supporting the Astronomy At The Beach event at Island Lake State Park. We used the 8-inch refractor to observe the Moon, deep sky objects, double stars, Saturn, and Neptune. A few telescopes were set up near the observatory as well.

The open house event and observatory closed at 11:30 pm after everyone left.

October Open House

The next open house is scheduled to start at 7:30 pm on Saturday October 25th.

Riyad I. Matti
2025 WAS 2nd VP
Observatory Chairperson

Treasury Report

Report for September 30, 2025

BOA Checking/cash

Balance $22,399.33

Income

snacks 33.00

merch 2.00

Expenses

snacks 20.00

Big Dob Hardware 38.00

Credit Card

Balance 20.00

Charge: State of Mich. 20.00

PayPal

Balance $524.60

No Activity

Membership

Members: 120

Reminder

Don't forget to renew your membership. Also, anyone joining the club from July on are good until December 31, 2026. So if you know anyone thinking about joining, now would be a good time.

Dave Baranski,
Treasurer

Astronomical Events For October 2025

Add one hour for Daylight Saving Time

Source:

http://astropixels.com/almanac/almanac21/almanac2025est.html

Day	Time (h:m)	Event
2	6:00	Venus at Perihelion
5	4:20	Moon at Ascending Node
5	21:46	Saturn 3.8°S of Moon
6	22:47	FULL MOON
8	7:36	Moon at Perigee: 359819 km
10	0:20	Pleiades 0.9°S of Moon
13	13:13	LAST QUARTER MOON
13	17:31	Jupiter 4.3°S of Moon
13	18:31	Pollux 2.5°N of Moon
16	11:56	Regulus 1.3°S of Moon
17	23:34	Moon at Descending Node
19	15:00	Mercury 2.0°S of Mars
19	16:37	Venus 3.7°N of Moon
21	7:00	Orionid Meteor Shower
21	7:25	NEW MOON
23	11:15	Mercury 2.3°N of Moon
23	18:31	Moon at Apogee: 406445 km
24	19:15	Antares 0.5°N of Moon
29	11:21	FIRST QUARTER MOON
29	17:00	Mercury at Greatest Elong: 23.9°E

Meeting Minutes

Warren Astronomical Society
Board Meeting
August 25, 2025

Officer Reports

President: Bob reminded the board that elections in November is near. Mark Kedzior said he would officiate.

First VP: Dale Partin noted he just received an email from Sandra at the Ford club. She forwarded Dale a list of some of the people who've spoken to that club. Dale has started contacting some of them. He still needs two presentations at the end of this year and has five or six scheduled for next year. He often needs short presentations.

2nd VP: Riyad Matti spoke about the Perseids event at Stargate. It went awesome, except for the few clouds and a little rain. There were many people there.

Treasury Report: Dave Baranski reported that there is $22,000 in the checking account, about $500 in PayPal and a little over $200 in the cash box. Jeff MacLeod and Mark Kedzior have been paid for picnic expenses. We got an insurance statement from West Bend. They say it's not a bill, but they've given a lot of statements or coverage, and for some reason, they mentioned Commercial Auto coverage and inland marine coverage. So Dave is going to write back and ask him what that's about. The board needs to determine our insurance requirements. Bob added it under new business to check if the driver's insurance will cover the Dob trailer. Do we need the insurance? Do we have the insurance?

Secretary Report: Ongoing correspondence with Dave Siebert from the parks.

Outreach Report: Jeff reports on hosting events at Metropark Nature Center. Picnics done. So it's ALL astronomy at the beach. We've assembled a decent list of volunteers, so he thinks this will probably be one of the best years we've had in a while, in terms of both presence and managing all the simultaneous activities that occur during Astronomy at the Beach.

Jeff requested astronomy promotional materials through Sky and Telescope.

Old Business

GLAAC $500 Fee, Dave reports he emailed Arica of GLAAC before the last meeting and also followed up on that.

Dale Thieme and David Baranski met with Comerica. Need accounting software… of some sort. Dale Thieme shared his experience with the apps.

We discussed the need to address snack volunteer issues at both venues. (We need volunteers) We explored some ideas.

Pizza Social and Astro Quiz Night: The club discussed introducing a pizza option for meetings. Since no special permissions are required, members could order from a local pizzeria, bring the food and drinks, and serve them before the meeting begins. This would avoid disruptions during the meeting itself, following the example of the Ford Club, which starts with pizza to streamline the schedule.

To make the event more social, the group suggested hosting one meeting without a lecture, focused instead on food and fellowship. A similar "socializing meeting" was held earlier this year, without the use of Zoom, and could be repeated in the coming year.

Another idea was to revive the popular "Astro Quiz" (formerly "Astro Ball"), where teams compete to answer astronomy questions. Pizza could easily be incorporated into this event, making it both fun and engaging. Jeff volunteered to MC the quiz, provided that members contribute questions. Possible formats include a straightforward Q&A or a simplified quiz rather than a Jeopardy-style game, which has proven too complicated in the past. Members and the board can be asked via email to submit questions at various levels—beginner, intermediate, and advanced—ensuring everyone can participate.

The club agreed that a Pizza and Quiz Night would be an enjoyable change of pace, offering food, camaraderie, and friendly competition.

Board member fee waived - needs to be added to the Bylaws

Certificates for board member service (motion by Charlie). Approved by all. Charlie to mock up a few designs complementary to past club standards and present them to the October Board Meeting. Discussed giving past board members certificates.

Stargate Update Sub-committee recommends coming out for International Observe the Moon Night - Saturday, October 4

New Business

Stargate, the sub committee going to have another meeting. Riyad expresses concern that we make certain we don't ask for too much from the Metro Parks.

We need officer candidates for next year.

Existing Officers and the elections are discussed. There will be at least three positions open. Bob recommends that we send an email to the membership a month early (in October), as the elections are approaching. Here are the positions that will be open, along with their corresponding responsibilities.

Dave pointed out that if you send out that email, you should note that we made some changes this year: if you become a board member, membership is included. Discussion on writing that into the bylaws. Jeff offers that changing the bylaws requires a simple majority of the membership. We need to finalize the verbiage and send it out to the membership ahead of the voting.

A discussion of a SE Michigan Astronomy Night hosted by WAS was held.

7:41 PM Everyone called to adjourn,

Respectfully Submitted

Charles Strackbein,

WAS Secretary 2024, 2025

Warren Astronomical Society

Cranbrook Meeting

September 8, 2025

Bob Trembley called the meeting to order at 7:03 PM.

We had 40 at Cranbrook, 12 on Zoom, and 1 on YouTube.

Announcements

Bob asked for Astrophotography Calendar submissions (send to publications), Bob relayed Gary Ross's note about the passing of Gerald "Jerry" Persia, a former member who founded an astronomical optics business near Grand Rapids, rejoined remotely in 2023, and contributed several newsletter articles; a memorial page will appear in the October WASP. Bob previewed Astronomy at the Beach (AATB) on Sept. 26–27 at Island Lake State Park

He noted the recent picnic was fun but lightly attended, and reminded members that elections are coming in November. Some board members are term-limited; open roles include President, First Vice President, and Treasurer, and a proposed free membership for board members requires updated language and will be addressed at the election.

Officer Reports

President: Bob requested Astrophotography Calendar submissions (to be sent to publications) and suggested restarting the pre-COVID discussion group in late October, contingent upon hosts stepping forward. He flagged that September is the application window for NASA Solar System Ambassadors and offered to refer interested candidates. Looking ahead, he announced that pizza would be served at the next meeting at Cranbrook, along with optional sides, in a potluck-style format. He then turned to programming: Diane Hall will speak Sept. 18 at Macomb on "Spark of a New Sun: A Visit to Kaali Crater (Estonia)," and at the following Cranbrook meeting, Jeff MacLeod will run a lighthearted "astronomy exam/quiz" alongside the pizza. Bob asked members to help advertise AATB; he'll circulate a printable 8.5×11 flyer for libraries and schools.

1st VP: Dale Partin reports he still needs both short- and main-talk speakers

2nd VP: Riyad recapped the Aug. 23 open house that began during the picnic under mostly cloudy skies, followed by heavy rain, a clear patch around 10:30 PM, and successful views with the 10-inch Dob (deep-sky targets, double stars, Saturn). Jeff MacLeod's Gemini capsule simulator drew a crowd. The team wrapped a little after midnight. The next open house is Saturday, Sept. 27, overlapping with AATB to give the public two options; weather will determine duration (short indoor hours if cloudy; longer if clear).

Treasurer: David Baranski reported on our balances, posted in the newsletter. David reported $22,218 in checking, $0 new on the credit card, $524 in PayPal, and $204 in the cash box before a payout to Dale; funds are also owed to Mark. He thanked everyone for their contributions to the picnic food.

Secretary: Charles Strackbein reported that the Newsletter Meeting Notes are in progress—no new mail. We're working with the Metroparks about upgrade ideas for Stargate. Currently, we're focusing first on sidewalk repairs/replacement.

Outreach: Jeff Macleod reported on outreach events. He is heavily involved with planning AATB. Jeff confirmed a driver for the 22 "Big Dob" to AATB (thanks to Greg Nizio) and celebrated major upper truss mount upgrades (credit to Mark Kedzior), with lower work to follow post-AATB. He promoted voting in "Michigan's Coolest Thing" to support PlaneWave (members can vote daily), noted that PlaneWave's open house may be scaled back. He encouraged everyone to attend AATB, even if they are not volunteering. Regarding International Observe the Moon Night (Oct. 4), the club isn't running an official event, but scouts will be at Stargate that evening, so there will be activity on site.

A special guest segment featured David Levy, who offered a welcoming poem excerpted from Byron's "Manfred" with a playful astronomy twist.

Astronomy In the News

Drawing from Spaceweather.com, Bob reported that a total lunar eclipse the prior night wowed observers across Asia, Africa, Europe, and Australia; one observer in China remarked how the Milky Way brightened during totality. JWST imaged interstellar comet 3I/ATLAS, reportedly showing an 8:1 CO_2:H_2O ratio—far above typical values.

Asteroids

- ~1.4 million discovered;
- NEOs at ~39,083; 2025 RM1 passed within 0.27 lunar distance on Sept. 3 (inside the geosynchronous ring).

Exoplanets

- 5,989 confirmed (11 shy of 6,000) with ~7,600 candidates
- This week's 11 new planets include BEBOP-3 b, a circum-binary planet discovered through radial velocities, which makes it the first radial velocity exoplanet detection of a previously unknown circum-binary system.

Special Interest Groups

Solar: A faint CME expected Sept. 7 was a miss or too weak; a late arrival Sept. 8 could bring a G1 geomagnetic storm (possible aurora watch).

Arctic Aurora Season has begun: As summer comes to an end, skies are darkening around the Arctic Circle--and aurora season has already started. A solar wind stream on Aug. 19-20 sparked the first easily visible Northern Lights in months.

Bob invited special interest groups (radio astronomy, tech, education, light pollution, and podcasting) and opened

Observing Reports.

Doug Bock shared a set of Astro photos taken with a Seestar S50 in May–June at his Boon property, including the Crescent Nebula, Eastern Veil, Iris, Dumbbell, Trifid, M51, M81/82, and the Elephant's Trunk, with impressive detail for such a compact rig and hints of an upcoming Seestar S70.

Short talk

Dale Thieme presented a short history of Stargate Observatory

Main Talk

After the break, Dale Partin introduced Jim Shedlowsky,

who gave a talk on the beginning of our current understanding of the universe in "The Way We Found the Universe."

The meeting concluded at 9:15 pm.

Respectfully submitted

Charlie Strackbein
WAS Secretary 2024, 2025

Warren Astronomical Society

Macomb Meeting

September 18, 2025

Bob Trembley called the meeting to order at 7:00 PM.

We had 14 at Macomb, 10 on Zoom, and five on YouTube.

Announcements

Bob previewed Astronomy at the Beach (AATB) on Sept. 26-27 at Island Lake State Park, mentioning a club table, his plan to assist at the VOF table, and a request to place the tables adjacent. He reminded members that elections are coming in November. Some board members are term-limited; open roles include President, First Vice President, and Treasurer. A proposed free membership for board members requires updated language and will be addressed at the election. We are hosting a pizza party at Cranbrook during our next meeting on Monday, October 6. Be prepared for pizza. Nature's perfect food.

Officer Reports

President: Bob suggested restarting the pre-COVID discussion group in late October, contingent upon hosts stepping forward.

Treasurer: David Baranski reported on our balances, posted in the newsletter. David reported $22,216 in checking, $0 new on the credit card, $524 in PayPal, and $181 in the cash box.

Secretary: Bob Trembley reported in Charlie's absence that we've been engaging in ongoing correspondence with the Metro Parks regarding the enhancement of Stargate into an educational and warming center by adding a new structure, possibly featuring a covered deck and an open patio area for firm-footed observing. We're focusing on the concrete around the existing building first, as it's deteriorating.

Astronomy In the News

A comet impact may have led to the demise of the Clovis culture. New research suggests that a swarm of debris from an exploding comet left its mark by triggering the Younger Dryas period of abrupt cooling around 12,000 years ago. The researchers say that the touchdown air burst and resulting younger dry as led to the extinction of megafauna and the disappearance of the Clovis culture, which was a proto Indian culture down in the Mexico area around there, but looking at the article that said that they found shocked quartz and that kind of stuff, so that that I would actually like to see a whole presentation on that. A rare triple conjunction at dawn tomorrow morning, before sunrise, we'll have a very thin crescent Moon, Venus, and Regulus right near it.

Comet Swan-25b could put on a show late September early October.

NASA debunks "alien" 3I/ATLAS theories.

Bob's Exoplanet Update

- 60071 Confirmed (5,000-exoplanet milestone reached in March 2022)
- 7,668 Candidates - up a few
- The newest 1,000 planets have helped NASA expand the parameter space of known planets, and dramatically increase the number of planets they can characterize in detail.

Asteroid Update

- Total: 1,457,773
- NEOs: 39,430

Special Interest Groups

Solar: Stay tuned for more sunspots.

Bob invited special interest groups (radio astronomy, tech, education, light pollution, and podcasting)

Observing Reports.

Diane Hall shared her experience with their 24-inch reflector up near Alpena/Oscoda.

Following the break, Diane Hall spoke on a trip she and Jonathan took to Estonia in "Spark of a New Sun: a visit to Kaali crater".

The meeting concluded 8:38 pm.

Respectfully submitted

Charlie Strackbein
WAS Secretary 2024, 2025

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.

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 https://science.nasa.gov/skywatching/night-sky-network/ to find local clubs, events, and more!

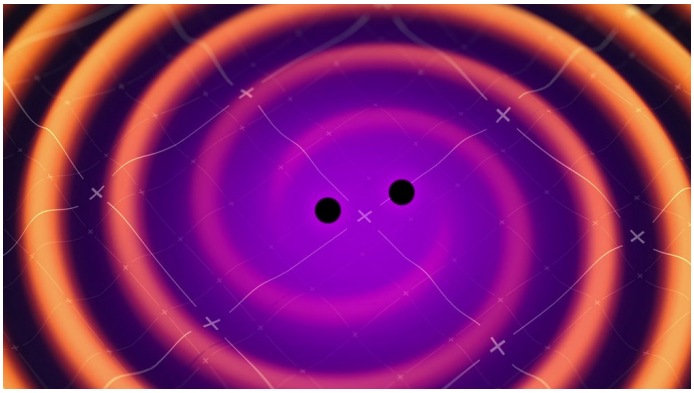
Let's Go, LIGO!

By Kat Troche

September 2025 marks ten years since the first direct detection of gravitational waves as predicted by Albert Einstein's 1916 theory of General Relativity. These invisible ripples in space were first directly detected by the Laser Interferometer Gravitational-Wave Observatory (LIGO). Traveling at the speed of light (~186,000 miles per second), these waves stretch and squeeze the fabric of space itself, changing the distance between objects as they pass.

Waves In Space

Gravitational waves are created when massive objects accelerate in space, especially in violent events. LIGO detected the first gravitational waves when two black holes, orbiting one another, finally merged, creating ripples in space-time. But these waves are not exclusive to black holes. If a star were to go supernova, it could produce the same effect. Neutron stars can also create these waves for various reasons. While these waves are invisible to the human eye, this animation from NASA's Science Visualization Studio shows the merger of two black holes and the waves they create in the process.

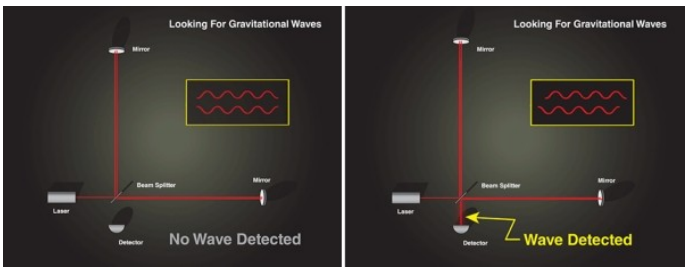


Two black holes orbit around each other and generate space-time ripples called gravitational waves in this image. Credit: NASA's Goddard Space Flight Center Conceptual Image Lab

How It Works

A gravitational wave observatory, like LIGO, is built with two tunnels, each approximately 2.5 miles long, arranged in an "L" shape. At the end of each tunnel, a highly polished 40 kg mirror (about 16 inches across) is mounted; this will reflect the laser beam that is sent from the observatory. A laser beam is sent from the observatory room and split into two, with equal parts traveling down each tunnel, bouncing off the mirrors at the end. When the beams return, they are recombined. If the arm lengths are perfectly equal, the light waves cancel out in just the right way, producing darkness at the detector. But if a gravitational wave passes, it slightly stretches one arm while squeezing the other, so the returning beams no longer cancel perfectly, creating a flicker of light that reveals the wave's presence.

The actual detection happens at the point of recombination, when even a minuscule stretching of one arm and squeezing of the other changes how long it takes the laser beams to return. This difference produces a measurable shift in the interference pattern. To be certain that the signal is real and not local noise, both LIGO observatories — one in Washington State (LIGO Hanford) and the other in Louisiana (LIGO Livingston) — must record the same pattern within milliseconds. When they do, it's confirmation of a gravitational wave rippling through Earth. We don't feel these waves as they pass through our planet, but we now have a method of detecting them!



Still images of how LIGO (Laser Interferometer Gravitational-Wave Observatory) detects gravitational waves using a laser, mirrors, and a detector. You can find the animated version here. Image Credit: NASA

Get Involved

With the help of two additional gravitational-wave observatories, VIRGO and KAGRA, there have been 300 black hole mergers detected in the past decade; some of which are confirmed, while others await further study.

While the average person may not have a laser interferometer lying around in the backyard, you can help with two projects geared toward detecting gravitational waves and the black holes that contribute to them:

Black Hole Hunters: Using data from the TESS satellite, you would study graphs of how the brightness of stars changes over time, looking for an effect called gravitational microlensing. This lensing effect can indicate that a massive object has passed in front of a star, such as a black hole.

Gravity Spy: You can help LIGO scientists with their gravitational wave research by looking for glitches that may mimic gravitational waves. By sorting out the mimics, we can train algorithms on how to detect the real thing.