The W.A.S.P.

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The Warren Astronomical Society Publication

The WASP

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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

Taking a last look at this year's Astronomy at the Beach. The photo, taken by Vatshalya Dandibhotla, shows our Big Dob on Saturday's viewing with a proper beach in the background. Accompanied by Mark Kedzior and Ken Lord. Well done to everyone involved in a very successful event.

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.

Field of View

What teachers love to hear!

"Mrs. Trembley, I LOVED your science class! You inspired me to go into aerospace engineering!"

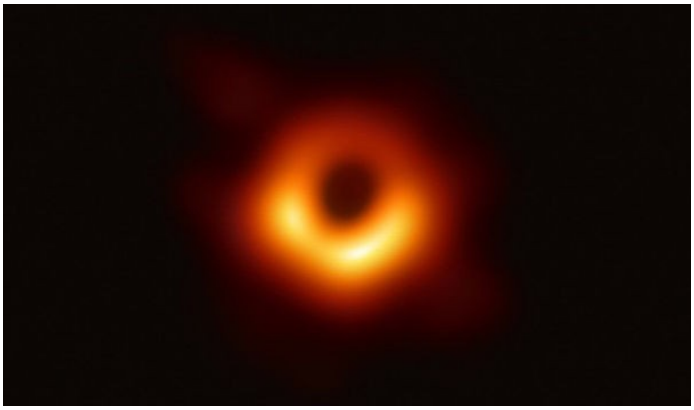
Connie was at a Halloween event at an elementary school in her former school district, eight of her former middle-school students were there - with THEIR kids… and sporting beards! They all hugged her, told her how much they liked her science class, and lamented that their kids would not get the opportunity to learn from her.

I had a similar occurrence years ago when the daughter of my wife's BFF told me I had inspired her to become a climate scientist at NASA… although under the current circumstances, I'm not sure I did her any favors…

When did the change happen?

When we were looking to go to college to become astronomers, both Ken Bertin and I were told something like "There's only 6 positions in astronomy available each year - you'll *never* get a job;" both Ken and I went into some other field. Today, I see scientific papers related to all sorts of fields of astronomy with dozens of researchers listed - for instance, the paper covering the first image of a black hole from the Event Horizon Telescope (EHT) Collaboration.

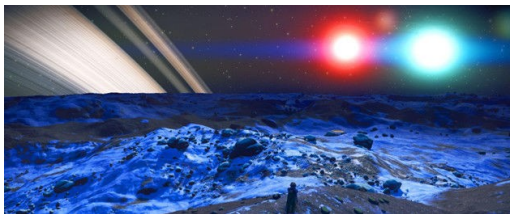
Working for the Vatican Observatory Foundation, I've had the opportunity to meet numerous researchers, both veteran and fresh out of grad school doing amazing research. I think "astronomy" is now a viable field to go to college for. Just be aware, you *will* have to publish… a *lot*. That hasn't changed in decades.



The first image of a black hole from 2017. Credit: Event Horizon Telescope Collaboration

What ship would YOU build?

I play a space-based survival/crafting game called No Man's Sky (NMS) - its astronomy is right out of a comic book, and its recognition of orbital mechanics is non-existent. But it's *fun*, and the developers have been releasing free content updates continuously for *years*.



Night scene on a ringed planet with multiple stars. Credit: Bob Trembley

A recent update allows you to build your own custom corvette starship from a wide variety of individual parts; the NMS gaming community went *absolutely nuts*, and people have been posting pics of some amazing starship builds - many of them from familiar science fiction franchises. I'm still having problems with *my* starship looking like a big shipping container.

Bob Trembley,
President

Custom-built Klingon Bird-of-Prey in No Man's Sky. Source: Facebook

Letter

October 4, Stargate

Last night was a very enjoyable evening at Stargate. We were a small group gathered for a scout troop that didn't show.

Riyad, Mark, Bob, Dale, Tina, Jamey from the Ford club, with his astrophotography equipment, Ken, and my brother Paul. We were few, so there was plenty one-on-one conversations. Tina was able to show us Saturn on her DOB, I got the Andromeda Galaxy again. Jamey was photographing a nebula in mosaic.

It was a lot of fun and it would be nice if we could go stargazing impromptu, rather than wait for the last Saturday of the month when the weather tends to be uncooperative.

Marija Bognar

WAS Elections

It's that time again, the WAS Annual Officer Elections

This year, there are three vacancies with four members returning to their positions for another year (but, anyone can run for any position.)

This year's positions:

President ..... Open

1st Vice-president ..... Open

2nd Vice-president ..... Riyad Matti (returning)

Treasurer ..... Open

Secretary ..... Charles Strackbein (returning)

Outreach ..... Jeff MacLeod (returning)

Publications ..... Vatshalya Dandibhotla (returning)

Elections will be presided over by Mark Kedzior

Additionally, a proposal for a by-laws amendment will be presented to the membership. This will be voted on at the December Cranbrook meeting.

By-Laws Amendment Proposal in Section 7.05

Current section:

Section 7.05.

Compensation of Employees.

The Directors of the Corporation shall serve as such without salary, but the Board may authorize the payment of reasonable expenses incurred by Directors in the performance of their duties and reasonable compensation for special services rendered by any Director. Except as provided in this Section no Officer or Trustee of the Corporation shall receive directly or indirectly, any salary, or other compensation from the Corporation.

Proposed Amendment:

Section 7.05.

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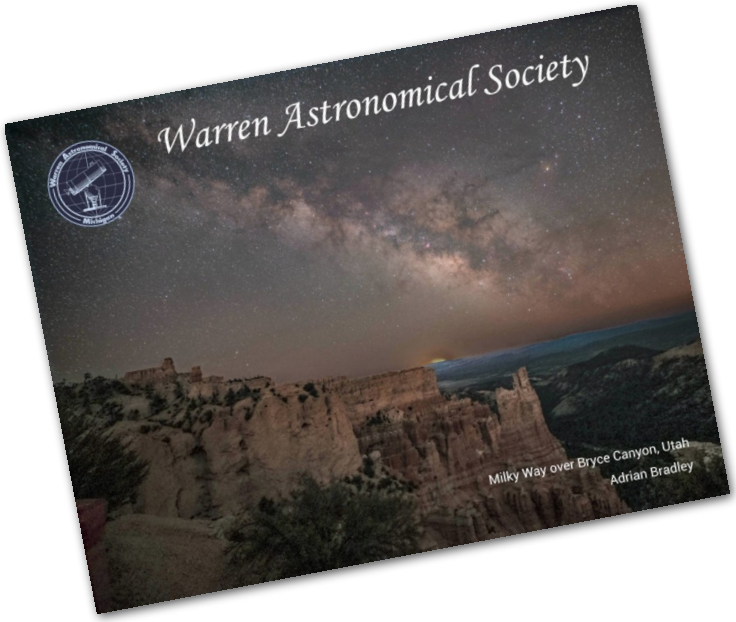
Section 7.05a

Waving of Directors Membership Fees

In recognition of the time, effort, and services rendered by members of the Board of Directors in carrying out the purposes of the Corporation, the Corporation shall waive the annual membership dues for each Director during their term of office. This waiver shall be considered a form of reasonable, non-monetary compensation for services rendered, consistent with Section 2.02 of these By-Laws and applicable provisions of Section 501(c)(3) of the Internal Revenue Code. Such waiver shall not affect any other rights or privileges of membership, and Directors shall be considered members in good standing for all purposes of these By-Laws.

2026 Calendars

Want to keep track of W.A.S. meetings and exciting astronomical events next year?



Order your 2026 Warren Astronomical Society calendar now, supplies are limited!

These beautiful calendars feature W.A.S. member astrophotography photos, including:

- **Elephant's Trunk Nebula by Dale Hollenbaugh**
- **Thor's Helmet by Bob Berta**
- **Horsehead Nebula by Doug Bock**
- **Solar Eclipse sequence by Vatshalya Dandibhotla**
- **IC 342 by Rik Hill**
- **Comet C 2023 A3 by Steven Tennenberg**
- **Computer Generated Galaxy Formation by Jeff MacLeod**
- **M8 (Lagoon Nebula) by Rik Hill**
- **Aurora by Vatshalya Dandibhotla**
- **NGC6946 (Fireworks Galaxy) by Steven Tennenberg**
- **The Moon by Peter LeMere**
- **SH2-174 (Sharpless 174) by Bob Berta**

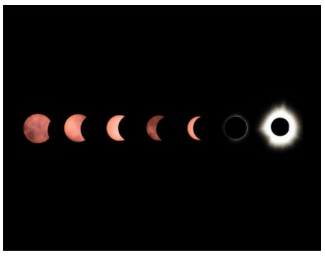
And the Milky Way over Bryce Canyon taken during the Astronomical League convention by Adrian Bradley on the cover.

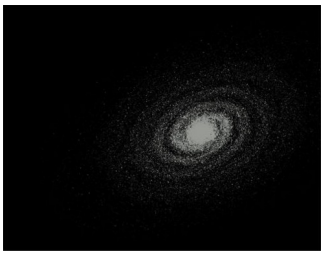
Two ways to get your calendars

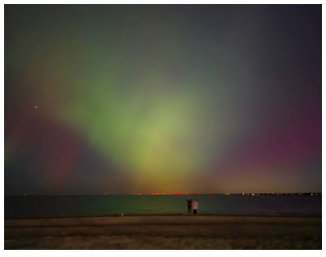
If you can pick up your calendar at a Cranbrook or Macomb meeting, you can pre-order on PayPal (send to treasurer@warrenastro.org) or pay by check or cash at the meeting for **$20** each.

If you need your calendars mailed, then the cost is $20 + $5 flat rate shipping per order (regardless the calendar count) via PayPal or by sending a check to Treasurer, Warren Astronomical Society, PO Box 1505, Warren MI, 48090. Be sure to include your mailing address so we can get them to you.






Warren Astronomical Society Annual Awards Banquet

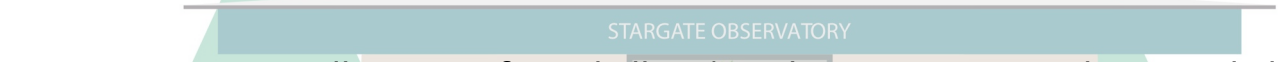
Thursday, December 4th, 2025

from 6:30 PM to 11PM.

Ukrainian Cultural Center
26601 Ryan Road
Warren, MI

Prices

By December 2nd (Cranbrook meeting): $35.00.
At the door: $40.00.
Cash Bar
Door Prizes



Dinner will consist of Meatballs w/ Mushroom Sauce, Boneless Breaded Chicken w/ Lemon Piccata Sauce, Roast Baron of Beef Au Jus, Green Beans w/ Almonds, Normandy Blend(Broccoli, Carrots, Cauliflower, Yellow Squash, Zucchini), Rosemary Roasted Redskin Potatoes, Seasoned Whipped w/Gravy, Salad w/ Relish Tray, Mostaccioli w/ Marinara Sauce, Rolls/Butter, Apple Pie.

A minimum of 35 attendees needed to ensure we have a banquet

Special guest speaker: Glen E. Swanson

"The Making of an Enterprise:
How NASA and the Aerospace Industry Helped Create Star Trek"

Pre-orders payable by check
(To Warren Astronomical Society, PO Box 1505, Warren MI 48090)
or
PayPal (send to treasurer@warrenastro.org)

Observe the Moon Night
at the Detroit Public Library

Tina Wong, Field Reporter

For us diehards that stayed beyond the closing of the Library, we enjoyed the Moon, its craters, and got to experience a real treat. The International Space Station (ISS) flew directly in front of the Moon! What timing. The scope is a very familiar friend to Mark Kedzior - it was part of the library donation program. Jennifer has taken very good care of it through the years.

Above: Jeff fine tuning the telescope w/the Moon in the eyepiece.

Below left:
From left to right: Marija Bognar, Vincente Day, Jennifer Dye (Manager, Detroit Public Library - Knapp branch), Jeff MacLeod

Below right: Maimoona Ali looking thru a telescope pointed at the Moon at the Knapp branch of the Detroit Public Library on Sept. 30th just after 8pm.

Photos by Tina Wong

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

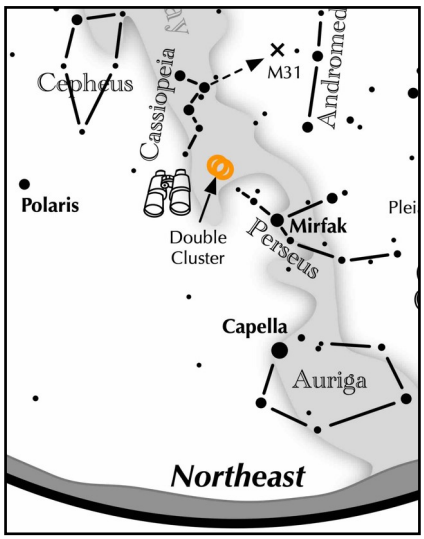
Gold-3D

Legacy

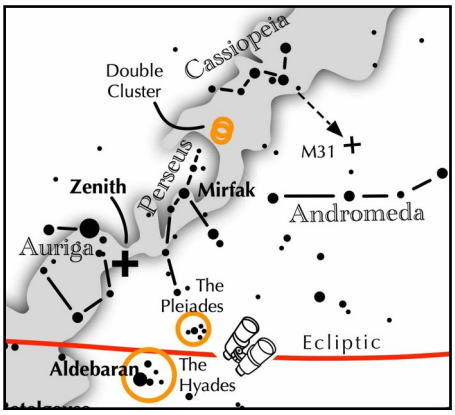
Can you easily find this open cluster showpiece?

Every Curious Skywatcher should know how to find the Double Cluster

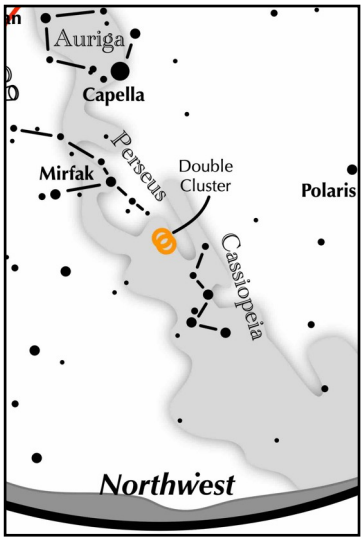
Visible in the early evening sky from late October through late March.



November in the northeast



January facing south looking past the zenith

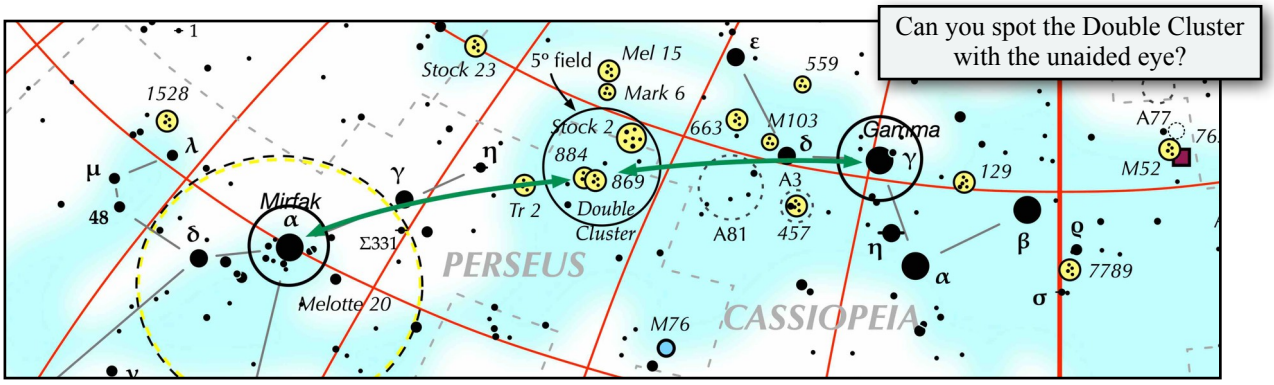


March in the northwest

The **Double Cluster** can be spotted with unaided eye from a dark sky as a dim glow in the Milky Way between Perseus and Cassiopeia. Through 10x50 binoculars, it is an obvious sight, revealing its brighter glittering lights. The neighboring cluster, **Stock 2,** can be seen as a much dimmer and more spread out grainy glow.

How to find the Double Cluster (aka NGC 869 & 884, and Caldwell 14):

1. Find the "w" shaped constellation Cassiopeia and the neighboring constellation to its southeast, Perseus. Identify Perseus' brightest star, 1.8 magnitude Mirfak.
2. Mid way between the center star of Cassopeia's "w" (Gamma Cas) and Mirfak lies a soft glow.
3. Binoculars aimed at the glow reveal the famous Double Cluster, also called NGC 869 and 884, Caldwell 14, and h Persei and Chi Persei.
4. Place the Double Cluster near the southern edge of the field. Near its center lies Stock 2, the Muscleman Cluster, which appears as a large, dim grainy glow.

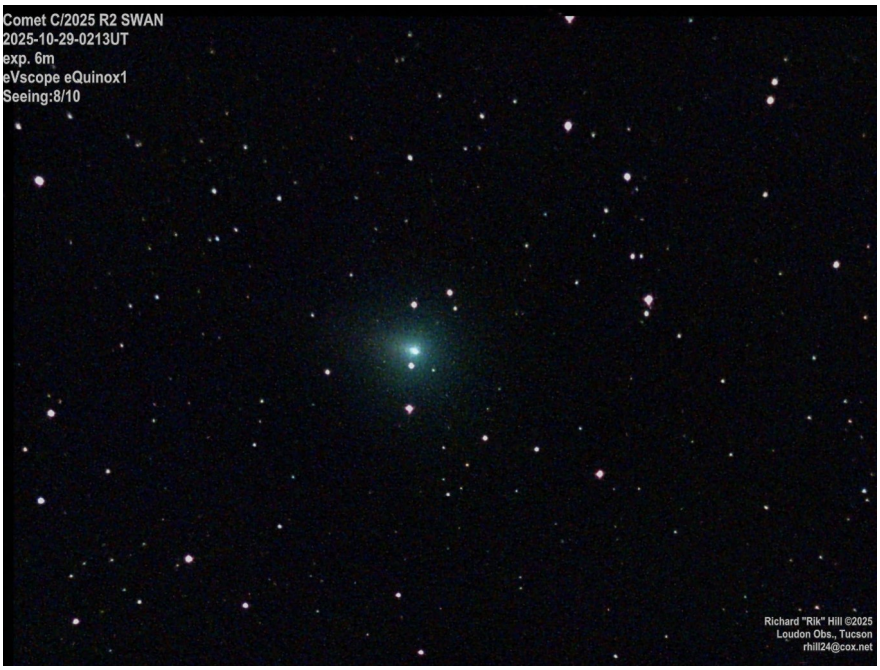


WAS Astrophotos

Comets!

Right
C/2025 R2 (SWAN), imaged by Dale Hollenbaugh

Below
C/2025 R2 (SWAN), imaged by Rik Hill



Presentations

Cranbrook
7:00 pm, November 3, 2025

Main Talk

Solar Cycle 25

By Rik Hill

Solar Cycle 25 - Where we've been, where we are, and where we hope to go.

About the Speaker

Rik was born on June 10, 1949, shortly after Antares was obscured by a nearly full moon. His first astronomical observation took place on May 6, 1957, during a Mercury transit. He continued observing through the 1960s, first with a 2.4" refractor and later with a Criterion RV-6, which he bought with money earned from mowing lawns and washing cars. In the Navy as a radar technician, he helped navigators identify stars and participated in the Atlantic backup recovery for Apollo 8. After his discharge, he sold his RV-6 to a local high school girl, who later invited him to help establish an astronomy club. They married in June 1974 and have been together for over 50 years. Rik got involved with ALPO (founded the Solar Section) and AAVSO, co-founded The Sunset Astronomical Society in Midland with his wife, Delores. He worked at Kitt Peak for 12 years. He worked at the Lunar & Planetary Lab at the University of Arizona and on the Catalina Sky Survey, discovering thousands of asteroids and 27 comets before retiring in October 2015. Now, he focuses on astronomy from his home observatory while caring for bonsai trees and fostering rescue cats.

Short Talk

Annual Election

Presided by Mark Kedzior

Vacant positions on the Board

President

1st Vice President

Treasurer

And an amendment proposal for the By-laws will be presented for membership consideration.

Macomb
7:00 pm, November 20, 2025

Feature

Interplay of Science Fiction and Astronomy

By Bob Trembley

Bob will talk about how ancient sky watchers wondered if there were beings among the stars, to how modern scientists are looking for biosignatures in the atmospheres of exoplanets. There has been a lot of science fiction published in pulp, audio, film and games over the decades - some of them actually get astronomy, physics and space science right. Bob will discuss some of the gems, and some of the stinkers.

About the Speaker

Bob is the president of the Warren Astronomical Society, a volunteer NASA/JPL Solar System Ambassador, a podcast host and factotum for Vatican Observatory Foundation, and he's on the board of the Great Lakes Association of Astronomy Clubs which hosts the amazingly successful Astronomy at the Beach event.

Next Month

Cranbrook

Main Talk
Brahe and Kepler

Short Talk
Some telescope basics

Annual Banquet

The Making of an Enterprise: How NASA and the Aerospace Industry Helped Create Star Trek

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.

Beware of Space Lasers

By Brad Young, Astronomy Club of Tulsa

> "You know, I have one simple request, and that is to have sharks with frickin' laser beams attached to their heads". Dr. Evil, Austin Powers: International Man of Mystery

I don't like to be an alarmist, but we have a situation like something I thought was like a crazy conspiracy theory postulated by a lady Representative from Georgia with a fondness for shooting things. If you are lucky enough not to know what I'm talking about:

"In 2018 Congresswoman Marjorie Taylor Greene took to social media to share her suspicions that the California wildfires were started by 'space solar generators' which were funded by powerful, mysterious backers. Instantly, thousands of people rallied around her, blaming the fires on 'Jewish space lasers' and, ultimately, the Rothschild family." Jewish space lasers: the Rothschilds and 200 years of conspiracy theories, Mike Rothschild (2023)

Who could have thought that would ever come to fruition. We are all aware of the Starlinks and other mega constellation satellites that have been and are continuing to be launched. If you've been outside at night or taken an image, you've almost certainly seen them or had trails across your image from them. The unfortunate news of course is that they are continuing to add not only to the Starlink fleet, but several other fleets from both private companies and governments like China. This to me was bad enough and came up at least for me as a surprise when it began. I had no idea that many satellites had been licensed to fly or that other entities would join the fray. All of that will seem like a lone cloud in the sky if either of two other ideas, now being commercially developed, are able to achieve their goals.

One is the use of space to bring solar power to Earth by reflecting the sun's rays down to receiving stations, therefore concentrating the power derived from the system. Briefly, this sort of technology would use the same type of system that unfurled the heat shield on the James Webb Space Telescope. However, the solar reflectors would be much larger and would present a very bright object indeed in the sky.

These satellites would have to orbit in sun synchronous orbit, so that they would only be affecting the night sky on certain passes near the sunset or sunrise line to reflect the sunlight when it is available. However, especially in summer at mid-latitudes, they would be able to reflect sunlight deep into the night and early in the morning and would appear for several hours at every interval of the constellation, crossing the sky as a bright object possibly rivaling the Moon. There are two companies currently commercially developing this technology and both are at the point where there is a real possibility of launch.

Even more chilling [pun intended] is the idea of injecting aerosols into the upper atmosphere to mitigate carbon dioxide and possibly refreeze the polar ice caps. This too is being seriously developed, led by the Applied Physics Department at Harvard, and would have a devastating effect on ground astronomy across the world. All nighttime skies would be always hindered, and the daytime sky would forever appear as the milky white that we have are most humid days in the summer with terrible transparency rivaling some of our most polluted cities.

https://www.popularmechanics.com/science/environment/a41281408/stratospheric-aerosol-injections-refreeze-polar-ice/

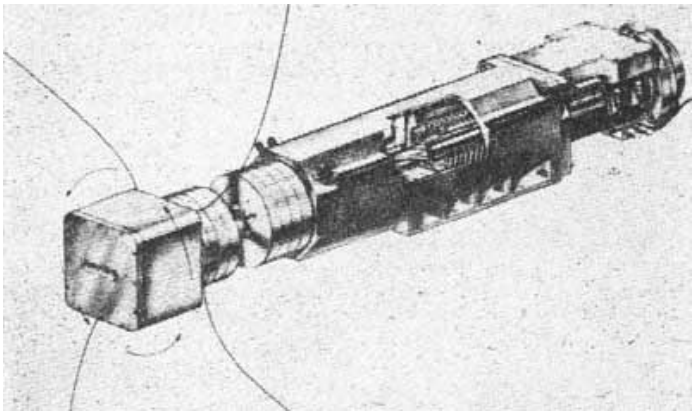
I can't understand how either one of these ideas is being allowed. But they had been previously predicted in several books including "The Next 100 Years: A Forecast for the Future" by George Friedman. Friedman wrote in 2009 that by 2080 solar power from space would be a major source of energy. He quotes a 2007 Defense Department study that makes the case that the technology exists, has been fundamentally available for decades, and will be necessary soon. Worst of all, that study prefers geosynchronous orbits for the solar collectors, so that they can continuously beam energy down day and night. Obviously, having highly reflective solar collectors like these, constantly sunlit throughout the night, would be a devastating blow to ground based astronomy. If there is any good news in the current plans, it is that the collectors would be low earth orbit and not interfere all night every night.

"No, I expect you to die, Mr. Bond" – Auric Goldfinger, "Goldfinger"

Even as far back as in 1941, science fiction writer (one of my favorites) Isaac Asimov published the science fiction short story "Reason", in which a space station transmits energy collected from the Sun to various planets using microwave beams. The SBSP concept, originally known as satellite solar-power system (SSPS), was first described in November 1968 by Peter Glaser in "Power from the Sun: Its

Future", in the journal Science. Although the source of transmitted power was patented to be microwaves, the collectors will still certainly reflect huge amounts of visible light. When you have a sixty year old movie that describes some of the world-shattering problems that can occur when you beam power down from space (see above), it might be time to scrap the idea.

In the 2022 book "Under a White Sky" by Elizabeth Kolbert, she describes the ongoing research in the aerosol debacle. The aerosols are designed to remove CO2 from the atmosphere and are dispersed by large aircraft flying at 60,000 feet called SAIL (Stratospheric Atmospheric Injection Lofter) and $2.5 billion is being invested in developing the system and aircraft. There are real companies, backed by investors and government grants, developing these ludicrously dangerous systems that will certainly irrevocably change our sky, our air, and damage the environment in ways perhaps much worse than climate change.



Westford Needle dispensing spacecraft

In the sixties, the U.S. injected 480 million of tiny needles in low earth orbit in a ring around the Earth to, supposedly, improve long distance radio transmissions and facilitate weapons tracking. These Westford Needles did not accomplish the goal, and ultimately most of them reentered the atmosphere and burned up. However, there are still unknown numbers of them up there. We already have a bad situation with low earth orbit filling with satellites that may ultimately collide and start the Kessler Effect, where debris begets debris until the whole orbital area becomes unusable. Let's not increase our odds of disaster by injecting aerosols, beaming sunlight, or continuing to launch uncontrolled numbers of satellites.

There is no way to predict what the effect of either of these weird ideas might be on astronomy, other than they will be bad. Not only visual light, but perhaps radio and infrared ground-based astronomy would be severely curtailed. And the ecological effects are mind boggling. Areas where the beams from space are shone would be dangerous to man and beast, and with the prospect of building thousands of receiving stations, the effect on migration patterns and other wildlife needs would be threatened, perhaps damaged beyond repair.

The aerosol idea is so much worse. It is thought humans, and many other species, nearly went extinct or did with the Toba super volcano eruption 74,000 years ago. For comparison, Vesuvius dropped 3 square kilometers of ash, Mt. St. Helens, 1. Toba dropped 2800, and the gas emissions were almost certainly commensurate. During these events, the air is filled with poisonous vent gas and later aerosol effluvia that dim the sun, withering crops and killing off animals who starve. Sound familiar? We have risk of such volcanic eruptions now, that we cannot control. Why introduce another, similar situation to increase our odds of devastation?

We have issues with climate change and the need for clean renewable power, and we do need solutions as time is not our friend. But these are not solutions we can tolerate, either as amateur astronomers or humans. Now is the time to make sure we take action to prevent either one of these horrible ideas from being licensed or commissioned. I will work with the IAU committee I'm on (Center for the Protection of the Dark and Quiet Sky) to figure out how to put the kibosh on the solar power satellites if possible. The aerosol idea, though less likely soon as it's not as far along, should be addressed immediately with our legislators to make sure nothing like this ever occurs in Earth's atmosphere otherwise we can say goodbye to ground-based astronomy, both professional and amateur. Starlinks snuck up on astronomy – don't let solar collector and white skies do the same.

Over the Moon

With Rik Hill

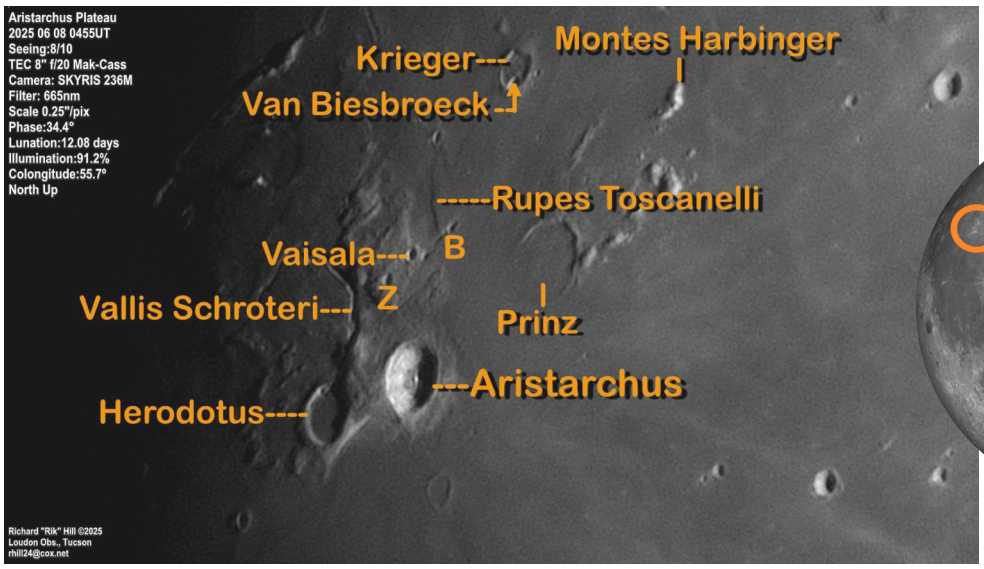
Aristarchus Plateau Emerging

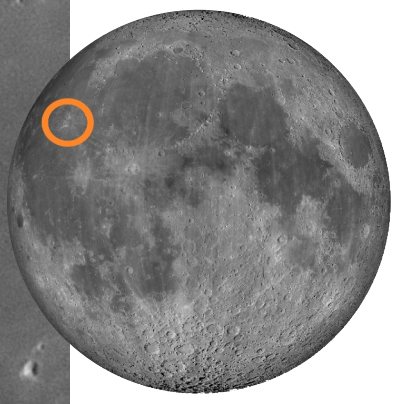
When the moon is about 12 days past new a dramatic region can be found on the terminator just north of the equator emerging from its long night. It is a collection of features marked by the bright crater Aristarchus (41km diam.) with it's strongly terraced walls crossed by radial bands stretching out from the center of the crater. In fact, this is considered the brightest large formation on the Moon. The tiny central peak, see as a bright dot in this image, only 300m tall, which is rather small. To the northeast is the slightly larger and half flooded crater Prinz (49km) with Montes Harbinger behind it. To the left of these montes, and a little farther north is the crater Krieger (32km) near the top of this image, with the little crater Van Biesbroeck on its southern interior wall.

Due north of Aristarchus are two small craters Aristarchus Z (7km) on the left and Vaisala (8km) on the right. Just south of Vaisala is a small unnamed shallow crater of about 6km diameter. It has a short rima that extends farther to the upper right (northeast) and connects with another crater, Aristarchus B (7km). Just before connecting with the crater it appears to form an "X" with another elongated depression to the south and a short wrinkle ridge to the north, Rupes Toscanelli. The depression appears to be the shallow elongated merge of two craters. It's an interesting set of small features for a good night of steady seeing.

To the west of Aristarchus is a similar diameter but shallower crater Herodotus (36km) it has an interesting southeastern wall that in this image looks like a running deer. But the most exciting feature is just north of this, Vallis Schroter the jagged upside down "U" shaped feature. It has a rill that runs most of its length. I have imaged portions of this under higher sun but not, of course, when it's full of shadow.

The next good opportunity to see this collection of lunar wonders will be on Sept. 3 and 4 which will also be a favorable libration for this region on the Moon.





Location Maps by Ralph DeCew

History S.I.G.

November 1995

Getting back on track with the decadal look-backs, we lead off in this November issue with "Dating the Cosmos" Hubble eyes aging stars from Science News, Vol. 148, September 2,1995 submitted by Lorna Simmons. Then "Computer Chatter" by Larry Kalinowski leans heavily into astronomy news (you can feel the transition coming.) Also, in this issue, is "Book Reviews" by Louie Namee, featuring *Planet Earth* by Jo Nathan Weiner. We round out the issue with "Masterpieces Messier Missed" with Jeff Bondono talking about NGC 752 at 01h58m +37_41'

November 2005

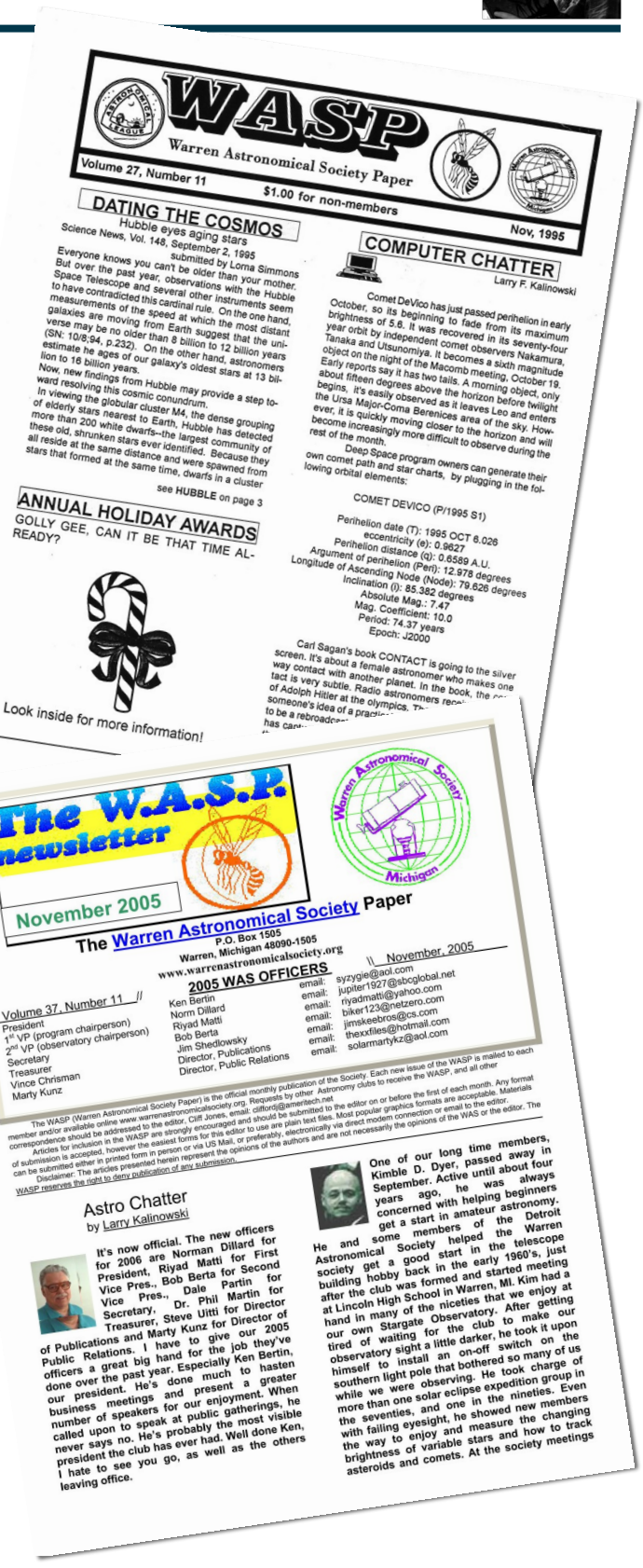
Front page in this issue, of course, "Astro Chatter" by Larry Kalinowski, where he covers everything but "Astro". He congratulates the new WAS officers, marks the passing of Kim Dyer (*whose WASP collection greatly expanded our archive, in fact, the November 1995 issue came from his collection-Ed.*), and looks forward to the approaching annual banquet. Ken Bertin writes about his solar eclipse trips in "Note from the President", Stephen Uitti reviews a book, *The First Three Minutes* by Steven Weinberg. Bob Berta provides the Board Meeting minutes of 10/2/05. And, finally, NASA Space Place: "A Wrinkle in Space-Time" by Trudy E. Bell.

From the Scanning Room

As I was taking another look at the November 2005 issue, I gave Larry's Astro Chatter a more thorough look, particularly the election of officer results, prompting me to go back to the masthead to check the prior officer list. Lo and behold, way back then, the Director of Publications and Editor of the Newsletter were two different people (Vince Chrisman, publications; Cliff Jones, editor.)

I went back to my chart of WAS officers over the years and reworked some of the entries. From the outset, Editor wasn't an elected position. In 2005 Publications Director became an elected position, apparently beginning in February, according to the masthead. So now we have the editorship of Cliff Jones spanning 6 years (2003-2008). In 2009, Larry Phipps merged the two and became Publications Director/editor and the position remained that way until I got the bright idea to split them again in 2019.

Dale Thieme,
Chief Scanner



CRANBROOK INSTITUTE OF SCIENCE

Michigan's Museum of Natural History

NOVEMBER 2025

Notable Sky Happenings

Nov. 1 - 7

Moon is at the upper right of Saturn on the 1st (SE evening). Daylight time ends at 2:00 AM on the 2nd. Set clocks back one hour. The S Taurid Meteor Shower peaks the evening of the 4-5th. This weak shower produces only 5-10 meteors per hour. The Full Moon interferes this year.

Nov. 8 - 14

The Moon is at the upper left of Jupiter; Pollux is at the upper right on the 10th (SSW morning).

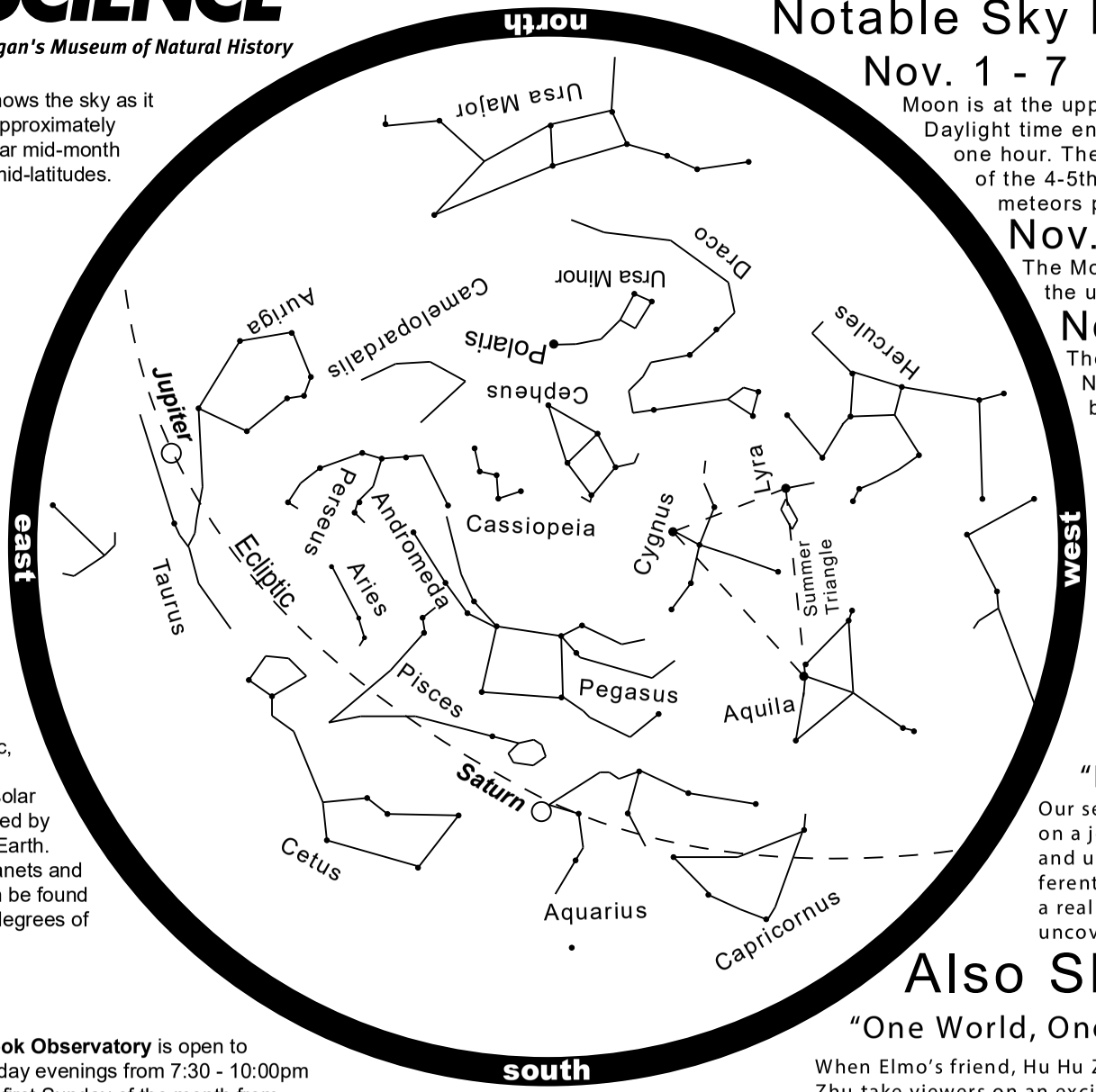
Nov. 15 - 21

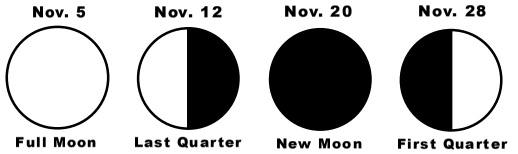
The Leonid Meteor Shower peaks the night of Nov. 17-18. The "shooting stars" are produced by debris left behind by Comet Tempel-Tuttle. This is a another weak shower producing only about 15 meteors per hour.

Nov. 22 - 30

Moon is at the upper left of Saturn on the 29th (S evening).

This chart shows the sky as it appears at approximately 8pm EST 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 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 7:30 - 10:00pm EST, 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

Steven Tennenberg - Solar Cycle 25 Sunspots

November

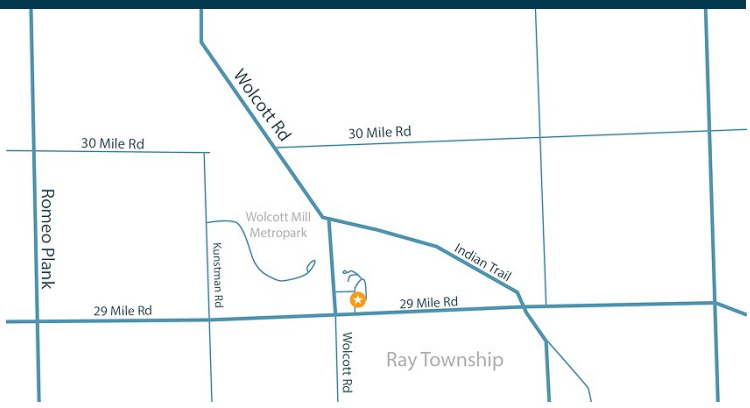
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
						1
2 Daylight Saving Ends	3 Cranbrook	4 Election Day	5 S Taurid Meteor Shower FULL MOON Moon at Perigee: 356833 km	6	7	8
9	10	11 Veteran's Day	12 N Taurid Meteor Shower LAST QUARTER MOON	13	14	15
16	17 Leonid Meteor Shower	18	19 Moon at Apogee: 406693 km	20 Macomb NEW MOON	21	22 Stargate
23	24	25	26	27 Thanksgiving	28 FIRST QUARTER MOON	29
30						

Stargate Observatory

Monthly Free Astronomy Open House and Star Party
5:30 PM, November 22
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

October Open House

The Observatory opened at 6:23 pm, October 25, 2025. The sky was mostly cloudy and started to clear up just after sunset. In attendance were WAS members, Scouts Pack 135 from Port Huron, and visitors. A few visitors are planning to join the WAS.

Bob Berta gave a presentation to the scouts. Ken Lord used the 10" Dob to look at Comet C 2025 A6 (Lemmon) and deep sky objects. Tina Wong helped with the scouts and visitors and handed out printed observing tools. We used the 8" refractor to observe the Moon, Saturn, Uranus, Neptune, deep sky objects, and double stars. A few telescopes were set up outside the observatory, including a DIY radio telescope using an SDR receiver to observe the hydrogen line at 21 cm.

Thanks to all who attended and provided support. The observatory closed at 11:50 pm after everyone left.

November Open House

The next open house is scheduled to start at 5:30 pm on Saturday, November 22nd.

Riyad I. Matti
2025 WAS 2nd VP,
Observatory Chairperson

Treasury Report

Report for October 31, 2025

BOA Checking/cash box

Balance	~$20,389

Expenses

Calendar printing	62.16
Insurance	1,647.00
Credit Card Payment	20.00
Cash Box	200.00

Credit Card

Balance	$0.00

PayPal

Balance	$54.32

Income

Memberships	80.85
Calendar sales	62.72

Expenses

Calendar printing	667.61
Postage	8.40

Membership

Members:	121

We welcome Peter Richards to our membership.

Astronomical Events For November 2025

Add one hour for Daylight Saving Time

Source:

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

Day	Time (h:m)	Event
1	12:46	Moon at Ascending Node
1	20:02	Venus 3.3°N of Spica
2	5:46	Saturn 3.7°S of Moon
5	8:00	S Taurid Meteor Shower
5	8:19	FULL MOON
5	17:29	Moon at Perigee: 356833 km
6	10:26	Pleiades 0.8°S of Moon
8	21:41	Mercury 2.6°N of Antares
10	1:40	Pollux 2.7°N of Moon
10	2:56	Jupiter 4.0°S of Moon
12	0:28	LAST QUARTER MOON
12	7:00	N Taurid Meteor Shower
12	17:51	Regulus 1.1°S of Moon
12	23:00	Mercury 1.2°S of Mars
14	1:38	Moon at Descending Node
17	5:11	Spica 1.2°N of Moon
17	13:00	Leonid Meteor Shower
19	21:48	Moon at Apogee: 406693 km
20	1:47	NEW MOON
20	4:00	Mercury at Inferior Conjunction
21	8:00	Uranus at Opposition
23	6:00	Mercury at Perihelion
28	1:59	FIRST QUARTER MOON
28	16:33	Moon at Ascending Node
29	14:08	Saturn 3.7°S of Moon

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.

Outreach

Past Events

Sept 29th Detroit Public Library, Knapp Branch: Jeff gave a presentation on the Moon for their 'Observe the Moon' program.

See page 7 for story

October 28th Detroit Public Library, Knapp Branch: Mark Kedzior (At right)

Upcoming Events

November 8th: Macomb Reads event at MISD education center. 44001 Garfield Rd #1100, Clinton Township, MI 48038

We are looking for someone to help at a WAS table. Contact Jeff at outreach@warrenastro.org.

November 15: Leonid Meteor Shower event at Cranbrook Institute of Science. We could use another telescope or two. Contact Jeff at outreach@warrenastro.org.

Detroit Public Library Knapp Branch

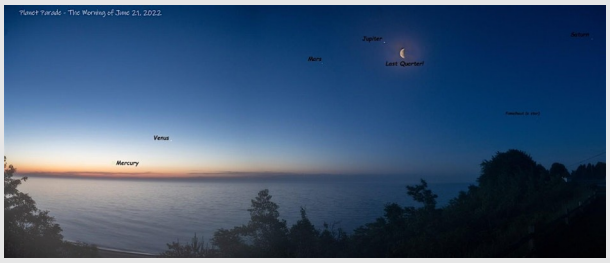
October 28, 2025

Tina Wong, Field Reporter

Mark Kedzior gave a presentation, "Getting Started in Astronomy", to five (5) in person attendees. Unfortunately, due to a lengthy technical delay, we lost all the Zoom attendees. Another reason for the light attendance, is the topic had to be changed last week due to a speaker change.

To help attendees relate, Mark's presentation started with the size of planets & stars and their scale to one another. He covered the different types of telescopes & how they work. He spoke about the most popular items to look for in the night sky and gave some tips for viewing. Lastly, he talked about beginner telescopes & how much they cost.

DETROIT PUBLIC LIBRARY



Knapp Branch
13330 Conant
Detroit, MI

Battling Astronomy Misinformation

Dec 16 from 6pm to 7:30pm EST

In other words, it's OK if you missed the planetary lineup!

Adrian Bradley, amateur astronomer and writer, will discuss recognizing astronomical misinformation and countering it effectively.

We will discuss the following topics:

- Understanding misinformation in the astronomy space (without going into a rage, or falling for it)
- How to determine if a headline, image, or video is actually misinformation (and yes we will discuss A.I.)
- How to use misinformed postings in the media to direct people to authentic astronomy.

As usual, the presentation will be available on Zoom, but Adrian will be presenting from the Knapp Branch of Detroit Public Library. You are welcome to join us in person or online.

Zoom link will be sent to registrants before program. We routinely initiate Zoom auto-transcription.

Register

www.detroitpubliclibrary.org

Meeting Minutes

Warren Astronomical Society
Board Meeting
10/2/2025

Bob Trembley brought the meeting to order at 7:00

Officer Reports

President: Bob Trembley mentions the postponement of the September 29 board meeting. States that no successor for the president position was identified or confirmed during this meeting. Stated he would look for a successor. He discussed the success of the Astronomy at the Beach and the high sales of raffle tickets. Bob Trembley suggests having volunteers available to help with tasks like relieving field workers and assisting at the info table.

First VP: Dale Partin stressed the need for short talks as they are the hardest for him to fill.

Observatory Chair Riyad Matti said that Stargate would be open as usual during Saturday's AatB.

Treasury Report Dave Baranski reported about $20000 in checking, $500 in PayPal with $400 in the cash box. Our yearly insurance was due, which was a $1,600 payment. Dave also withdrew cash to help pay for the pizza party and any other bills. There were some other bills from the Astronomy at the Beach. He mentioned an email from Comerica regarding availability dates and asks whether it was responded to.

Secretary Report Charles Strackbein is continuing to take the notes here and get them to Dale, so he has a few days at least to edit them.

Outreach Report: Jeff MacLeod reported that on Oct. 4, scouts would be at Stargate for International Observe the Moon Night. Discussed advertising it to with the club? Also we will be at "Macomb Reads!" At the MISD, Bob T. will be there. And finally, Metroparks has a Night of the Dragon Moon planned.

Publications Report: Calendar submissions are closed. Need a proofreader to check the dates to be printed. Bob will look at the dates.

Old Business

Calendar discussion. Submissions are closed, we need eyeballs to look at dates. When is AatB 2026 scheduled? Discussed the help the Calendar committee will need.

Square/credit card reader - Bank switch and card reader put on hold.

Board membership fee waiver needs to be added to the Bylaws. Jeff MacLeod will look into verbiage needed.

Certificates for board member service (suggestion by Charlie) Any ideas what these should look like? What about giving past board members certificates?

AL Observing programs - Bob suggested we need to start them. Several members could be eligible for the AL Outreach award. This would fall under the purview of the Outreach officer, but could be a sub-committee run by another member.

Stargate Update Sub-committee: It could use more members and more support for the project. This is for the club and needs the members' input. Could use recommendations for Architects and Grant Writers with connections.

Need officer candidates for next year. Is an announcement in the newsletter?

New Business

Pizza for the Cranbrook meeting. The pizza party is a social meeting. There's no long talk. There's no short talk. We're going to do the quiz bowl as a fun activity for 15-20 minutes. Dale P. will bring 10 pizzas. Bob T. is going to get the drinks, the plates, and napkins. We will set up the tables outside the auditorium. Bob T. contacted Cranbrook - they OK'd it

Banquet: Glen Swanson has agreed to be the keynote speaker. We need to follow up via email. The banquet will be Thursday, Dec. 4, 2025, at the Ukrainian Cultural Center.

Newsletter: Bob T stressed that Oct. reports for Dale T. need to be sent in. He also asked can we advertise the Michigan Gem and Mineral Show - 2nd weekend in October and Macomb Community College?

7:20 pm Jeff motioned to adjourn, Dale P 2nd.

Warren Astronomical Society
Cranbrook Meeting
October 6, 2025

Canceled

Warren Astronomical Society
Macomb Meeting
October 16, 2025

Bob Trembley began the meeting at 7:00pm. There were 15 at Macomb, 11 on Zoom, and 4 on YouTube.

Announcements followed featuring a report on Astronomy at the Beach: We had 2800 attendees over the weekend (park estimates), the raffle made $280O, which nearly paid for the event.

Bob then pointed out that three positions on the board needed to be filled for the coming year: President, 1st Vice President, and Treasurer.

Astronomy in the News

Record-breaking neutrino: Astrophysicists have observed the most energetic neutrino ever. The particle — which probably came from a distant galaxy — was spotted by the Cubic Kilometre Neutrino Telescope (KM3NeT), a collection of light-detecting glass spheres on the floor of the Mediterranean Sea, on 13 February 2023. Researchers monitoring the telescope did not notice the detection until early 2024, when

they completed the first analysis of their data. The neutrino had 30 times the energy of any previously recorded.

Bob's Exoplanet Update

6028 Confirmed

7,703 Candidates

NASA's System Overview pages now include Gaia DR3 aliases for exoplanet targets (when available),

Asteroid Update

Total: 1,469,797

NEOs: 39,723

Special Interest Groups

Solar Bob reported that Multiple CMEs could spark auroras that night: All week long, active sunspot 4246 has been puffing CMEs toward Earth--at least three of them. Although the CMEs are individually faint and relatively slow, they could combine to cause a G2-class geomagnetic storm when they arrive on Oct. 16th. If such a storm materializes, auroras could descend into a dozen or more northern-tier US states.

Bob mentioned that a radio astronomy SIG may be starting up soon.

Observing Reports

Marija Bognar and Dale Hollenbaugh showed off images they captured of the moon and comet C-2025 A6(Lemmon).

Jeff MacLeod reported on the experience of Observe the Moon Night at the Detroit Library Knapp Branch.

7:30 PM: Snack Break (brought by Bob & Connie)

Feature Presentation

Dale Partin introduced Gary Nichols, who spoke on "How Smart are They?" A comparison of the capabilities and costs of the new smart telescopes offered by Celestron, DwarfLab, Unistellar, Vaonis, Spectrum Optics and ZWO.

The meeting concluded at 8:43pm

Charles Strackbein
Secretary

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.

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