



**Peoria Astronomical Society, Inc.**

P.O. Box 10111 Peoria, IL 61612-0111  
Section of Peoria Academy of Science  
Affiliate of the Astronomical League  
[www.astronomical.org](http://www.astronomical.org)

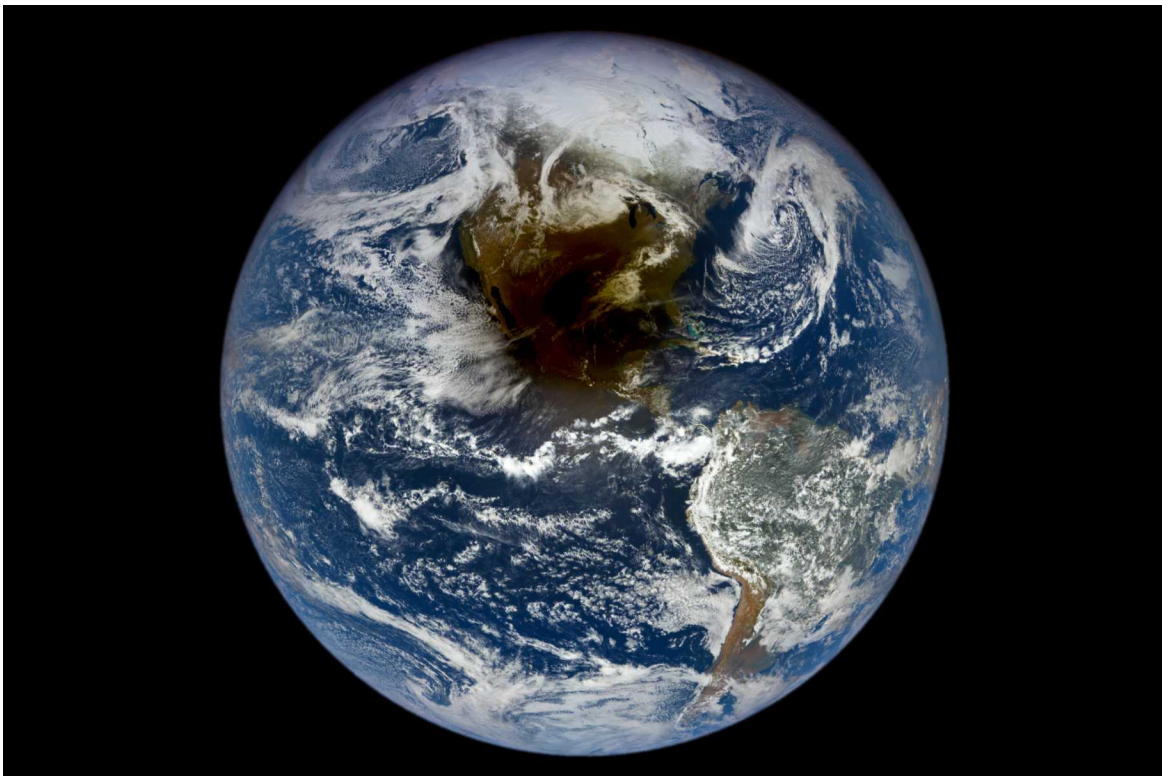
# STARLITE

*Summer, 2024*

**WHAT'S IN THIS ISSUE?**

List of Board of Officers & Directors  
Address/email changes  
New Members  
Meteor Showers  
Proposed By-Law Changes  
Presidents Ramblings  
Fun Facts  
General PAS information

Caterpillar Matching Gifts  
Reflector Magazine & NCRAL info  
Monthly Programs Schedule  
Photos from members  
Dome Planetarium  
Photos from other Telescopes  
25 years & 50 years ago



April 8, 2024

**Officers:**

President: Dan Son, [sonshine1992@gmail.com](mailto:sonshine1992@gmail.com)

Vice-President: Jesse Hoover

Secretary: Linda Groezinger

Treasurer: Dave Monroe, [dave.monroe@comcast.net](mailto:dave.monroe@comcast.net)

**Directors:**

Parliamentarian: Dave Monroe, [dave.monroe@comcast.net](mailto:dave.monroe@comcast.net)

Nominating Chairman: Open

Legal Agent: Open

Northmoor Chairman: Dan Son, [sonshine1992@gmail.com](mailto:sonshine1992@gmail.com)

Jubilee Chairman: Jesse Hoover

**PEORIA ASTRONOMICAL SOCIETY IS NOW ON FACEBOOK:**

[www.facebook.com/PeoriaAstronomicalSociety](http://www.facebook.com/PeoriaAstronomicalSociety)

**Update your address, phone or email changes**

Please notify Dan Son at [sonshine1992@gmail.com](mailto:sonshine1992@gmail.com) if you will be getting a new mailing address, email address and/or phone number. It is important that he has your personal information correct so you will continue to receive the Starlite and the Reflector.

**NEW MEMBERS:**

The Peoria Astronomical Society welcomes new members: Jason Wilcox, Mark Mills

**2024 Meteor Shower Schedule:**

Perseids will peak on August 12 & 13<sup>th</sup> with a 1<sup>st</sup> quarter Moon setting around 1am that is about the time that Perseus is rising in the east. Comet Swift-Tuttle is the source of the meteorites and has an orbit of 133.3 years.

**Changes to the By-Laws Proposal:****Existing text:**

The Annual Dinner Meeting of the Society is held in September, as determined by the Board of Directors. Officers and Directors are elected at this meeting, along with other such business which requires a vote of the members.

**Proposed change:**

The Annual Meeting of the Society is held in September, at which Officers and Directors are elected, along with other such business which requires a vote of the members.

This was passed by the Board and will be voted on at the September Banquet.

## Presidents Ramblings:



Well hasn't the last few months been fun for Astronomy. April was a Solar Eclipse to remember for a long time. Planning and getting everything ready for this event by a lot of members and the public as well. The weather was not looking promising getting close to the event and then the curtain was lifted, clouds left a lot of the center line areas and the show started. Not to be outdone is the unexpected, an Aurora that covered most of the United States. My daughter in Montana had the kids sleeping on the trampoline all night so they could watch it. We are in the peak of solar activity and this year did not disappoint. Will we get another Aurora, only time will tell.

Some of you might know that PAS has received a Lunt Solar scope and a Solar Quest mount to track the sun. Eric trained myself and my wife (she loves looking at the sun) on how to set up and use the equipment. We will finalize where the equipment will be housed and how to train others to use it. Look for more info later.

You will be reading more on the changes coming to our members/public meeting for the 24/25 season. I hope with this new program more members will give the time to show up and enjoy the program.

I would like to thank those who volunteer for PAS at Northmoor and Jubilee sites. To keep our Public viewing Saturdays manned and the mowing and maintenance at Jubilee takes many persons. We have positions for a 10 person board and are running it with 7 people right now. Today I learned that the Board is in need of a Secretary, it is an important job and takes only about 2 hours a month (1 to 1 ½ hour meeting and typing them up on a word program and emailing them to the board members). Please consider joining us, if not without a board can PAS continue...I hope we will never need to know. I worry about the board as it runs everything else and I am the 2<sup>nd</sup> youngest at 63. Life seems to always work out but it needs you to make that

happen. Consider volunteering at Jubilee and/or Northmoor, mowing and meeting the public on Saturday nights is easy. Even the board is easy...I try to keep the Zoom meeting to about an hour and aim for a meeting every other month. No position on the board need an expert for the position, I started as a secretary(learned writing software) then moved on to Treasurer(used Quicken..Thanks to Eric) and now am President. Did I make mistakes...you bet, I made a lot of corrections as treasurer...nobody would fire me!

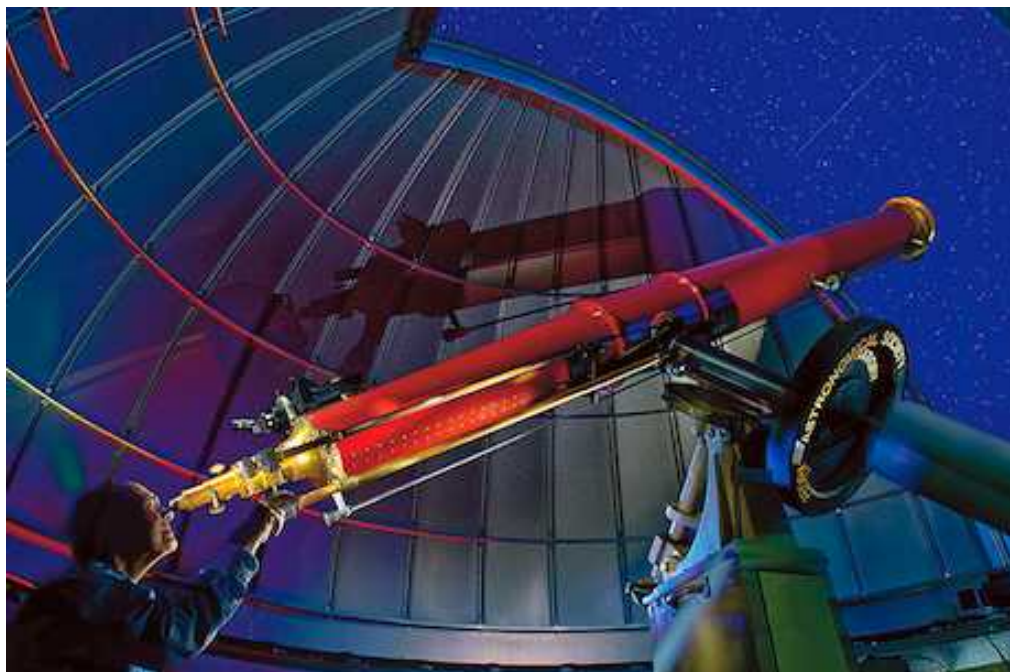
**Look at the Program Schedule for September & November. September is our Potluck at Jubilee and November is a Banquet with a Great Speaker.** Well time to wrap this up and I hope everyone makes it out to Jubilee Observing site and Northmoor on Some Saturday evening.

Dan Son  
President

### **Facts..just the Facts..**

Olympus Mons is the largest volcano in the entire Solar System, but it doesn't actively produce lava. Jupiter's moon Io has the Solar System's most active volcano, Loki, which is topped with a lava lake 202 kilometers (126 miles) in diameter.

Green is the most common aurora color, mostly caused by excited atomic oxygen in lower parts of the atmosphere. More intense solar activity is needed to excite atomic oxygen at higher altitudes (causing red hues) or molecular nitrogen at lower altitudes (causing purplish hues).



Northmoor is OPEN!

### **Submission of photos / article content for the Starlite: Dan Son**

If you have a photo that you would like to submit for the Starlite, please send these to Dan Son [sonshine1992@gmail.com](mailto:sonshine1992@gmail.com) along with a little write-up about the photo. Photos can be from star parties, club events, personal view, etc. Astrophotography is encouraged. Also, if you have educational content, tips, techniques, lessons learned or how-to articles with photos, we encourage that material for the Starlite. We can also put these on our Facebook page if you so desire.

<https://www.facebook.com/PeoriaAstronomicalSociety>

### **The Caterpillar Matching Gifts Program: Brian Hakes**

Employees/Retirees are asked to submit matching gift forms electronically via the Caterpillar Foundation website, [www.caterpillar.com/foundation](http://www.caterpillar.com/foundation). The process is easy. Once you made your gift to the PAS you can go online to the Cat Foundation website and complete the electronic form, there is no paper involved. Once the form is registered with the foundation they will notify the PAS and the treasurer will then verify the gift has been received. Because there will be no mailings, the turnaround time for the whole process will be negligible. This is especially advantageous at the end of the calendar (tax) year. This is an excellent way to support the PAS. If you can, please participate in this generous program. This is a great way to help the society and the promotion of astronomy in the greater Peoria area.

### **Reflector:**

Reflector Magazine digital edition is available for download. You may access an archive of digital issues from the AL website by visiting:

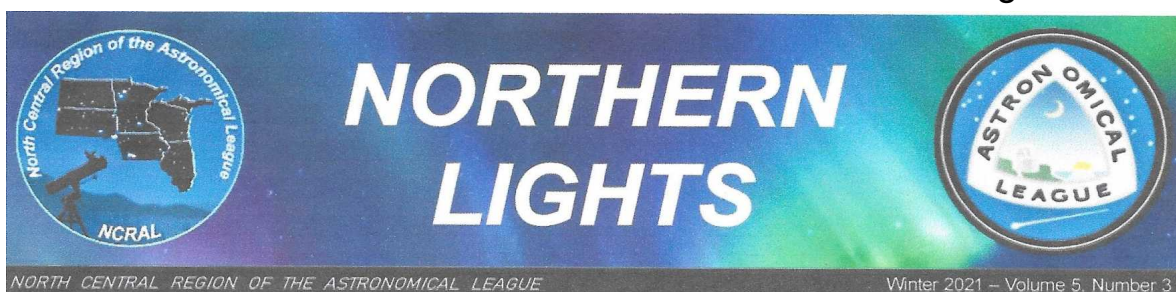
<https://www.astroleague.org/reflector>

### **NCRAL Newsletter:**

The North-Central Region of the Astronomical League (NCRAL) is made up of member societies... the six states commonly thought of as the Upper Midwest of the USA, plus the Upper Peninsula of the state of Michigan. The PAS is a member of the NCRAL. Their Region Newsletter, also named "Northern Lights", has been resurrected and is better than ever! The latest issue's can be read on their website can be found here:

<https://ncral.wordpress.com/newsletter-archive/>

You can access the current issue and all other back issues through this link.



## **Add Your Email Address to NCRAL Member Database**

Add your email address to the NCRAL member database now so that you can get direct mailings of NORTHERN LIGHTS and important and timely announcements about Regional conferences, star parties, and so forth. Your email address will never be shared with or sold to outside entities. Sign-up takes only about a minute. You'll need to provide your name, email address, astronomy club affiliation (including at-large), and indicate if you hold particular positions within your club. Go to the following case-sensitive URL to add your information to our database:  
<https://docs.google.com/forms/d/e/1FAIpQLSdGCQJiekqrqVV3SY4BGrQdow5N7Eixv3VbX2YmFPA4AJZ2iag/viewform>

## **Program Schedule 2024 – 2025 Final Draft**

### **September 4 Meet at Jubilee Observatory (including the elections of officers). 6:00 pm**

Potluck – bring a covered dish, dessert or snack  
Get to know all about our Dark Sky Observatory  
Learn all there is to know about our club observatory, including the history, and general elements of the telescopes' operation.

### **October 2 Meet in the Dome at the Peoria Riverfront Museum. 7:00 p.m.**

Members' Social and Sharing Session  
Sharing of anything astronomical: astrophotography, new equipment, places visited or plans for visiting, internet sites found or videos viewed, books read, etc. Current Sky Summary and Planetarium show (if needed as time allows)

### **November 9. (Saturday evening) Meet at the Lariat Club Fall Social and Banquet**

**5:30 Social,**

**6:15 Dinner. (order individually (separate checks) from a limited menu, tbd)**

**7:30 Featured speaker: Dr. Carl Wenning**

Talk Title: Fire and Ice: The Pending Collapse of Earth's Magnetic Field?

Talk Abstract: Earth's magnetic field last reversed itself 780,000 years ago, and the next reversal is long overdue. Earth's magnetic field is now both on the move and rapidly weakening. The consequences could be profound if Earth's magnetic field

entirely collapse during the next reversal. What might we expect in future years? To answer this question, the speaker will tie together such diverse topics as the auroras, plate tectonics, paleomagnetism, African tribal customs, and his recent visit to Iceland's Mid-Atlantic rift valley in Þingvellir National Park.

About our Speaker: Dr. Carl Wenning is a well-known Central Illinois astronomy educator hailing from Normal, Illinois. He holds a B.S. in Astronomy from The Ohio State University, an M.A.T. in Planetarium Education from Michigan State University, and an Ed.D. in Curriculum & Instruction with a specialization in physics teaching from Illinois State University. He was planetarium director at Illinois State University from 1978 to 2001. From 1994 through 2008, he directed the Physics Teacher Education Program at Illinois State University. After retiring in 2008, he continued to teach physics part-time for 14 years. He recently co-authored a three-volume work *Teaching High School Physics*. He serves as a physics teaching consultant worldwide, having spoken and taught in Chile, Indonesia, Mexico, and Brazil. Dr. Wenning is a 44-year member of the Twin City Amateur Astronomers. He is currently president of that group. He is also a member of its G. Weldon Schuette Society of Outstanding Amateur Astronomers. Carl was Chairman of the Astronomical League's North Central Region (NCRAL, 2017-2023). He is an Astronomical League (AL) Master Observer, received the 2007 NCRAL Region Award in 2007, and the AL's Mabel Stern's Newsletter Editor Award in 2017.

**March 5 Meet in the Dome at the Peoria Riverfront Museum. 7:00 p.m.**

Members' Social and Sharing Session

Sharing of anything astronomical: astrophotography, new equipment, places visited or plans for visiting, internet sites found or videos viewed, books read, etc. Current Sky Summary and Planetarium show (if needed as time allows)

**May 7 Meet at Northmoor Observatory, Donovan Park, 7:00 p.m.**

Get to know - all about Northmoor Observatory

Get ready for the start of our public observing season in May

Learn all there is to know about our historic public observatory, including the history, and the operation of the telescope

**Incident weather notice:** Monitor email (e-group), local radio stations or PAS Facebook Page if a program, board meeting, viewing, or star party may be canceled due to weather. If we determine a risk in the weather, the Society will cancel the event.

**Photos from Members:**



S Russell 20240510 Aurora & Eclipse  
from 20240408





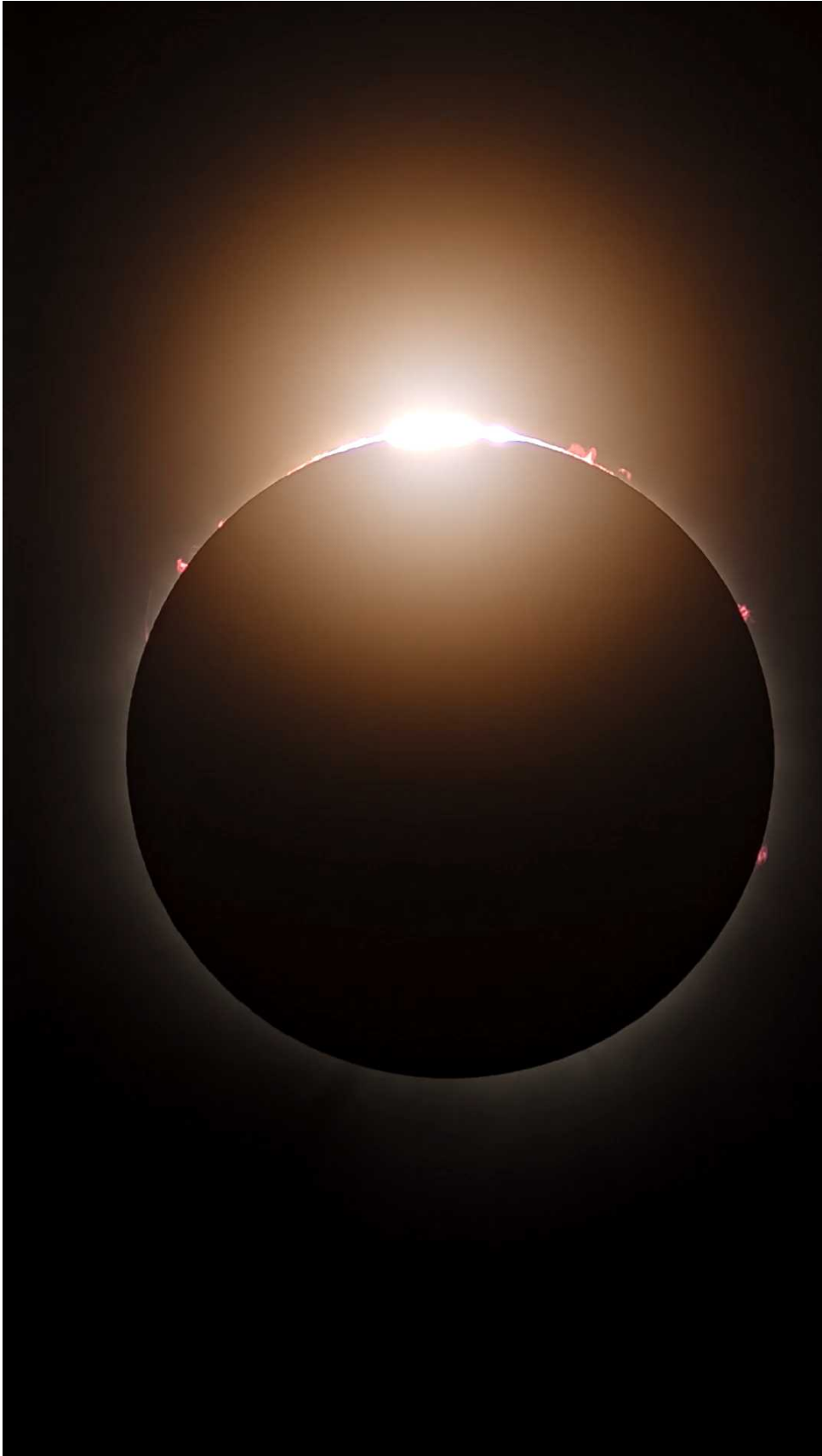
Moon by Linda Groezinger Skywatcher EQ6-R mount, Quattrp 250p scope, ZWO ASI585MC camera



M1 J Dire 132mmf7 APO, SBIG ST-4000XCM camera 100 min exposure



Eclipse on 2024/04/08 J Carroll



M Frasca Eclipse 20240408 SeeStar S50 Telescope

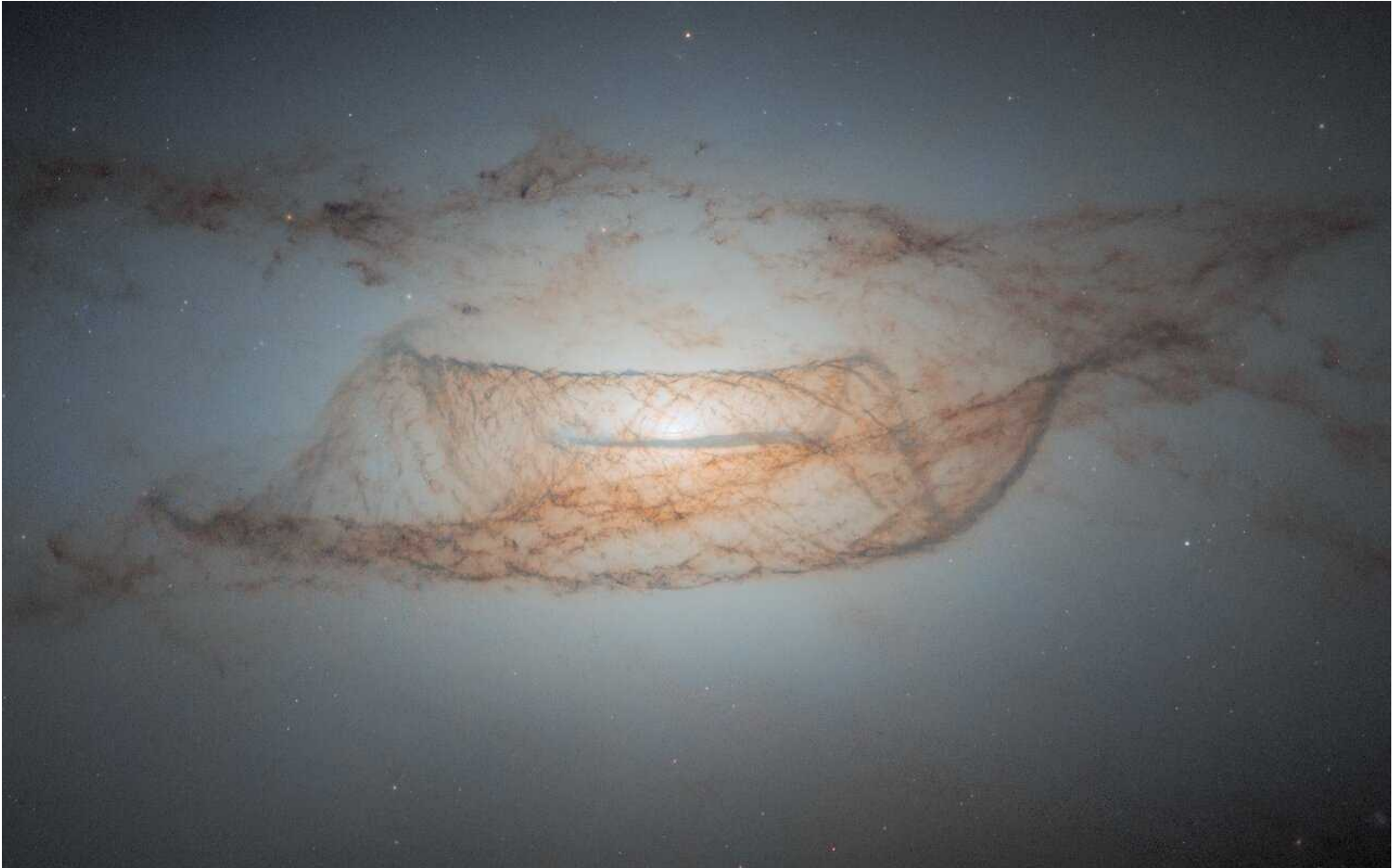


M51 Linda Groezinger Skywatcher EQ6-R mount, Quattrp 250p scope, ZWO ASI585MC camera

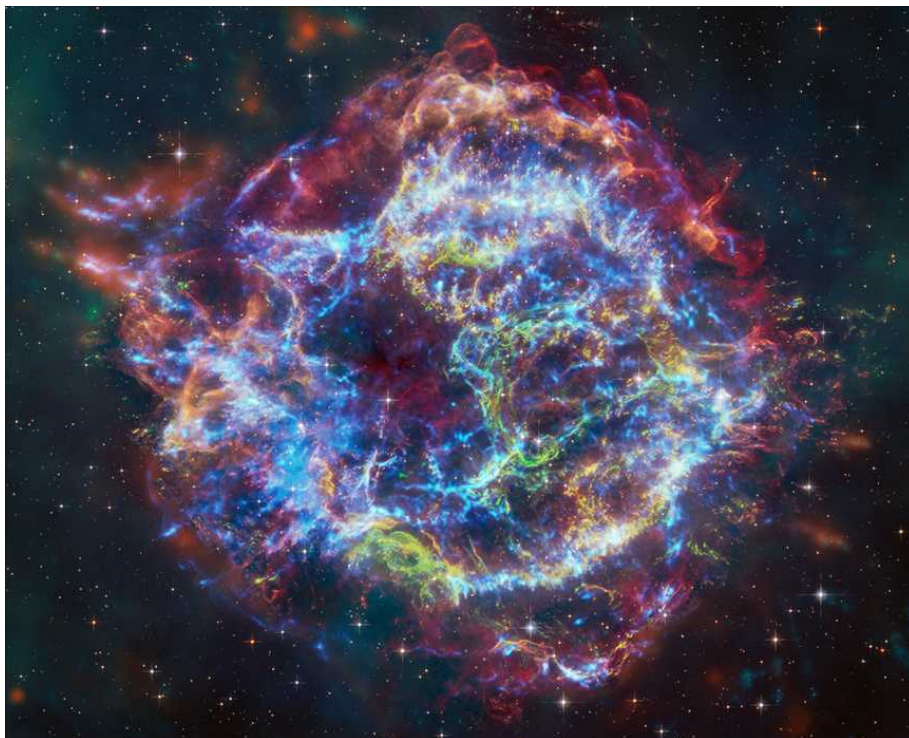
### **Dome Planetarium:**

Dean Regas will be giving a talk on July 14<sup>th</sup>. The time has yet to be determined. Deans talk will be "How to teach Grownups about Pluto". This will be his 2<sup>nd</sup> time at the Planetarium. This is on a Sunday so grab the kids and come on out.

**And from other Instruments:**



NGC 4753 from Hubble released on May 13<sup>th</sup>, 2024 is a lenticular galaxy. These galaxies have an elliptical shape and ill-defined spiral arms.



A composite of Cassiopeia A (supernova remnant) from JWST & Chandra X-ray Observatory 2023.



Euclid's view of the Perseus cluster of galaxies

# 25 Years ago:

## AstroJeopardy! 5 Answers

	Name the Constellation	Solar System	Starts with "R"	The Greatest	It's The Law
\$10	Mizar and Alcor	Planets with no moons	The trails of a meteor shower intersect here	This star has the largest proper motion	$D=0.4+0.3N$ , where $N=0,1,2,4,8$
\$20	M65 and M66 galaxies	Surface temperature of the sun in degrees Kelvin	Alpha Leonis	The planet with the highest density	$F= Gm_1m_2/d^2$
\$30	M10 and M12 globular clusters	Only planet, other than Earth, where vulcanism has been observed	The ability of a telescope to discern small details	This planet has the longest synodic period of 780 days	$p1^2/p2^2-a1^3/a2^3$
\$40	Albireo and the North American Nebula	The year that Halley's Comet will next be at perihelion	Relative velocity along a line of sight	The moon that is closest to its planet	$E=at^4$

## Double AstroJeopardy! 5 Answers

	Plants and Planets	It Takes Two	Names in Common	Birds	Starts with "S"
\$20	NGC 2237-2239 in Monoceros	Gemini	A comet's atmosphere, an optical aberration, or a constellation	Cygnus	The "arrow" constellation
\$40	NGC 7009 in Aquarius	Epsilon Lyrae	M17 or the largest globular cluster	Aquila	Eclipse cycle of 18 years, 11.3 days
\$60	NGC 3242 in Hydra	NGC 894 is in it	The third brightest star in a constellation or the highest frequency of electromagnetic radiation	M11	Right ascension of an object on the meridian
\$80	M63 in Canes Venatici	The type of star system to have this light curve	Darkest part of a shadow or the center of a sunspot	IC 5067-5070 in Cygnus	Distance from a singularity to its event horizon

## Final AstroJeopardy! 5 Answers

Constellations (Novice)	Cosmology (Expert)
This constellation is the source for an abbreviation for a common unit of weight	The age of the universe is a reciprocal of this



\$80	What is the Sunflower Galaxy?	What is an eclipsing binary?	What is an umbra?	What is the Pelican Nebula?	What is its Schwarzschild radius?
\$60	What is the Ghost of Jupiter?	What is the Double Cluster?	What is gamma?	What is the Duck Cluster?	What is its time?
\$40	What is the Saturn Nebula?	What are the Double-Double?	What is omega?	What is an eagle?	What is a Saros Cycle?
\$20	What is the Rosette Nebula?	What are the Twins?	What is a comet?	What is a swan?	What is Sagitta?
	Plants and Planets	It Takes Two	Names in Common	Birds	Starts with "S"

### Double AstroJeopardy! 5 Questions

\$40	What is Cygnus?	What is 2061-62?	What is radial velocity?	What is Phobos?	What is Stefan's Law?
\$30	What is Ophiuchus?	What is Io?	What is its resonance?	What is Mars?	What is Kepler's Law?
\$20	What is Leo Major?	What is 6000 degrees Kelvin?	What is Regulus?	What is Earth's Gravity?	What is The Law of Gravity?
\$10	What is Ursa Major?	What are Mercury and Venus?	What is its radial-velocity?	What is Barnard's Star?	What is Bode's Law?
	Name the Constellation	Solar System	Starts with "R"	The Greatest	It's The Law

### AstroJeopardy! 5 Questions

## 50 Years ago:

PEORIA ASTRONOMICAL SOCIETY  
SUMMER ISSUE # 38 NEWSLETTER  
MAY, 1974, "STAR LITE"

### PRESIDENT'S MESSAGE

With the return of spring it's time for star-gazers to unlimber their telescopes, binoculars and star-charts and look to the heavens! In our dismal climate only about 40% of the nights are clear, so let's take advantage of the clear ones. The observatory opens to the public on Saturday nights, beginning in May; why not encourage your friends and acquaintances to take advantage of it? And don't forget that the observatory is basically for the members -- it's your facility, your opportunity. If you don't have a key, contact a keyholder (listed on the membership roster) and arrange a stargazing session. Or see the keyholder chairman (the writer) and take instruction for becoming a keyholder yourself. Remember also that the Messier Club is active again at Art Grebner's observatory.

"Van" told me that he and Russ Dunlap have gotten the dome drive back in shape so that it now works in both directions, after being unidirectional all winter. Seems it was an electrical rather than a mechanical problem: a microswitch was wrongly wired. Van has got the right angle eyepiece holder ("star diagonal") for the nine-inch refractor back in "good-as-new" condition. He is using much of his time since his retirement March 21 for needed repairs on our facilities.

I want to add a personal appeal: we need people to volunteer for jobs -- especially people who have not served before. Every viable organization needs transfusions of new blood. Right now we need a calling chairman to assemble a calling committee for telephoning members when quick communication is required. We need a Special Events scheduling chairman to arrange for groups wishing to visit the observatory. We also need an assistant editor for Star Lite. Please don't hold back -- offer your services, We need YOU.

George Nelson, President

### LIBRARY REPORT - Georgia Sutherland

We are reviewing our books and would appreciate it if all books not being read could be returned to the library or to the librarian. We could also use some help in this project. Any volunteers please contact Georgia Sutherland, 691-8177.

### MESSIER DATES - Art Grebner

The Messier Club will meet at Grebner Observatory, Metamora, on the following dates:  
May 17, June 14, July 12, August 9, September 6, October 4  
In case of inclement weather, the first rain date will be the following Saturday. The second and third rain dates will be the following Friday and Saturday. A short Constellation Study Class, conducted by George Triff, precedes every Messier session. On May 14, at dark, George will hold a Constellation Study Class at Detweiller Park (near the model airplane field). This will be free and open to the public.

I added this because 50 years ago we needed volunteers as much as we still do today. Do you know PAS has its own library? Come out to Jubilee and we can show you messier objects and how to find them.