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**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)

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# *STARLITE*

*WINTER, 2019*

## ***WHAT'S IN THIS ISSUE?***

- List of Board of Officers and Directors
- Editor's Notes
- Address/email changes
- Future Editions of the Starlite
- New Members
- 2019 Meteor Shower Schedule plus Comets
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- Remembering Gene Hodel
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- From Starlite 50 years ago...
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- Northmoor Observatory Blog Post
- Reflector
- NCRAL Newsletter (how to sign up)
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- Board Meeting Information and Minutes
- 2020 Dues Notice

## ***Officers:***

President: Brian Hakes, [bhakes02@comcast.net](mailto:bhakes02@comcast.net)  
Vice-President: Jesse Hoover, [hooveje@gmail.com](mailto:hooveje@gmail.com)  
Secretary: Phil Burroughs  
Treasurer: Dan Son, [sonshine1992@gmail.com](mailto:sonshine1992@gmail.com)

## ***Directors:***

Acting Parliamentarian: Dave Monroe, [dave.monroe@comcast.net](mailto:dave.monroe@comcast.net)  
Nominating Chairman: Tatiana Johnson, [2gsheps@gmail.com](mailto:2gsheps@gmail.com)  
Legal Agent: Dave Monroe, [dave.monroe@comcast.net](mailto:dave.monroe@comcast.net)  
Northmoor Observatory Chairman: Open  
Jubilee Observatory Chairman: Robert Pauer, [sbpauer@winco.net](mailto:sbpauer@winco.net)

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

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

## **Editor's Notes:**

Thanks everyone for supporting the PAS!

Take the opportunity to get out there and do some winter observing... Winter provides us long nights and a sky more transparent than usual, in that cold air cannot hold as much moisture as warm air can. Check out Orion's Nebula with binoculars = )

-Jesse Hoover

## **PLEASE NOTE:**

Please notify Scott Swords at [sswords3@comcast.net](mailto:sswords3@comcast.net) 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. He would also like to receive any changes to your e-mail address as this is part of his database.

If you would like to join the Peoria Astro e-group or if you have changed your e-mail address, please notify Mike Frasca at [mfrasca@att.net](mailto:mfrasca@att.net) with your e-mail address (for in-club use only – not given out to other sources). He does not need your mailing address or phone number. If you are not a member of the e-group, you may want to consider joining. A great deal of club activity information is sent via the e-group. And by the way, it is free to join!!!

## **FUTURE EDITIONS OF THE STARLITE NEWSLETTER**

### **New delivery method for the Starlite:**

Starlites will be emailed to our Yahoo Email Group, and a copy will be posted online for download on our website.

Benefits from joining the email group include the electronic Starlite and also receiving up to date information for star parties and other important communications from the PAS.

**New Members:**

The Peoria Astronomical Society welcomes new members:

Sarah Wheeler – Canton

**2019 Meteor Shower Schedule: Scott Swords**

Over the years I have used many meteor shower schedules. Below is by far the best one I have used.

<http://skytour.homestead.com/met2019.html>

Scott

<http://cometchasing.skyhound.com/>

Great web site that has finder charts for visible comets.

Dan

**Presidents Message:**

Before I introduce myself as the latest president of the Peoria Astronomical Society, I would like to first recognize the commitment of Dan Son, my predecessor, as PAS president. Not only did Dan fulfill his original term length of 3 years but he also acted as the interim president the following year when the position was left unfilled. He then generously accepted the nomination for president for the following year. He did this while working full time and volunteering his time to both the boy scouts and on the governing board of his church. We all can be thankful for his leadership of the PAS.

As for myself, I have been a member of the PAS for the past thirty years. For half of that time, I have been on the board of directors as treasurer. I also spent two years as the nominations chairperson. Prior to moving to Peoria and joining the PAS, I was a member of the Indiana Astronomical Society. Before that, I attended meetings of Astronomical Society of Kansas City and in my youth, I joined the Rockford Amateur Astronomers. But my interest in astronomy began in my youth with the space race when I observed Echo racing across the night sky.

Before the PAS, I was pretty much an armchair amateur. The demands of school, work, rehabbing an older home, starting a family combined with living in an urban setting just did not appeal with driving a distance to observe. After relocating to Peoria, I drove on North Knoxville where I saw the Northmoor dome in Donovan Park. After several Saturday nights, I came to my first Wednesday night general meeting. Scott Swords was one of the first members I met and he was very welcoming and encouraged me to join and take advantage of the society telescopes. After that, I met Eric Clifton and Barry Redenbo. All of these Gentlemen were seasoned observers and willing to share. Later Mike Frasca introduced me to photography. Then I learned the society had a EMI Starlight Photometer and with the help of Jerry Gunn, Chuck Lamb and Don Ware I was doing photoelectric photometry. I was no longer an arm chair observer. No longer do I use the photometer, but I continue to observe and make brightness estimates of variable stars.

The PAS has a lot of resources - the excellent refractor at Northmoor, the serious telescopes at our dark sky site and Sheldon Schafer's excellent agenda of programs in a world class planetarium. But to develop the interest of others we must continue to provide the encouragement and expertise to foster the individual's interest in astronomy.

Brian Hakes

*Star cluster NGC7380 : Dr. James Dire*

This was a 160 minutes of data collected on the nights of September 24 and October 27, 2019 at the Jubilee Observatory, 8-inch f.6.4 Ritchey Chretien Reflector using an SBIG ST-2000XCM CCD camera. Mag. 7.1 star cluster and nebula in the constellation Cepheus. 20 arcmin in diameter. Nebula and cluster carry NGC7380 designation.



### *Remembering Gene Hodel*

Gene was an active member of the PAS for many decades and he frequently attended Jubilee star parties with his 8" Meade. He also served on the board of directors as secretary of the society. Subsequently he was diagnosed with multiple sclerosis but in spite of his ailment, Gene stayed involved in the PAS.

Gene asked for the responsibility for the annual PAS program of Astro-Jeopardy. Since Gene was a retired Roanoke Benson high school teacher, researching the answers suited him well. Even when in a wheelchair, he continued to prepare the program and act as the MC with the help of a former student.

Everyone who participated in an Astro-Jeopardy program agrees that he had too much time on his hands to think of his variety of categories. All who attended one of Gene's programs appreciated his creativity, wit and great sense of humor.

Of course Gene had other interests, but once I asked him what he did during the summer break from teaching. I expected him to say that he was going to help with the farm or just ride his BMW motorcycle... but Gene said that summer he was working at Fermi lab in Batavia.

Gene had a way of understating things. Gene always had a positive attitude and his presence will be missed.

Brian Hakes

### *Remembering Jerry McElyea*

This past summer the PAS lost long time member Jerry McElyea. His tenure with the PAS was over a span of 6 decades. Members who knew him, Calene Fleming, Scott Swords and Eric Clifton, commented on how friendly and congenial Jerry was to society members and guests alike. These traits suited him well as he had a number of different roles within the society.

Over the years Jerry served on the board of directors, helped with PAS monthly general meeting by coordinating the refreshments for the social gathering after the program. For many years he was the chairperson of Northmoor Observatory. Not only did he coordinate the Saturday night viewing program, he was also a steady user of the 9" telescope as he was very much involved with the timing of lunar occultations.

Astronomy was just one of his interests. He was also a life member of the Woodford County Historical Society and he was active in the Eureka Garden Club. He didn't limit his service to the PAS but he was also an Army veteran having served in the early 1960's and he was a member in several civic organizations including the Peoria Mohammed Shriners, the Scottish Rite and the Masonic Taylor Lodge #98 AF & AM.

His health limited his PAS involvement for the last two decades but he is remembered for his thoughtfulness and his considerate nature by those who knew him.

Brian Hakes

## THE WONDERINGS OF A LONELY STARGAZER

On a clear, dark, moonless night, I set up my 8-inch Odyssey Dobsonian on the concrete pad at the Jubilee Observatory. Alone, I quickly located eight or ten objects in Cygnus, part of my goal for the evening.

I decided to rest. I sat at the picnic table and just gazed toward the Milky Way. It seemed darker than usual. Even lonelier, but not necessarily quieter. My mind began to wander, and I began to wonder.

Hypnotized by the diamonds in the sky and occasionally brought to reality by the not too infrequent howls in the night, I began to ask myself questions.

*What came first, the proton or the electron?*

*Could all they say happened really have happened during the first  $10^{-34}$  second after the Big Bang?*

*If there happens to be a lot more matter in the universe to cause the eventual collapse, how many more people will die any sooner?*

*If the earth and our moon were in a globular cluster, would we see a solar eclipse every 25 seconds?*

*How much more space garbage would need to orbit the earth before it all began to be attracted together to form another moon?*

*If a tyrannosaurus rex, shortly before the big meteorite impact caused the extinction of its breed, looked up at the sky toward the Virgo cluster, might he have wondered whether any of his descendants would still be alive to see that light reach the earth which just then had started its path from the cluster?*

I hear those howls again. They seemed closer. I wondered more.

Into what part of the country did they say they released those wolves a short time ago?

Are coyotes meat eaters?

*Are the odds significantly greater of being hit by a stray deer while sitting in a moving car than while standing next to a stationary Dobsonian?*

*If a tree falls a few minutes after I leave, will it really make no noise?*

It was time to get back to viewing. I quickly aimed my Telrad at my next target in Cygnus. In the eyepiece, I gazed at the beautiful double star Albireo. Perhaps for too long. My mind began to wonder again.

*What if a planet orbited one of the pair?*

*What if it was inhabited by life more intelligent than we - people who could indeed build a spaceship that traveled faster than the speed of light?*

*And what if they sent such a spaceship directly toward us?*

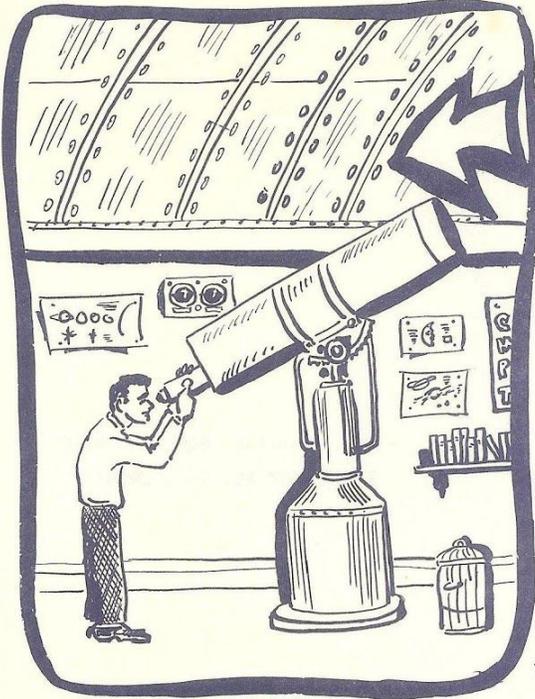
*Could I be lucky and be the first person to detect it?*

I quickly snapped back to reality. I knew it was time to pack up for home. But I wondered one last thought. If that spaceship was truly travelling toward us faster than the speed of light, would it not get here before we could even see it?

John Barra

*From Starlite 50 years ago...*

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**THIS  
NOT  
THIS  
SUPPORT**



**YOUR PEORIA ASTRONOMICAL SOCIETY**

**Book Review : John Manney**

**Road Atlas for the Total Solar Eclipse of 2024**

By Fred Espenak – Astropixels Publishing – 40 pages - \$19.95 (Color Edition)

On Monday, April 8, 2024, we will have the opportunity to experience a total solar eclipse in the continental US. Having enjoyed the eclipse of 2017, I am starting to plan for our next opportunity.

The heart of this book is three overview maps and 26 detail maps of the path of totality in Mexico, the United States, and Canada. The base map is the familiar Google Maps rendition of the towns, major roads, major parks, and bodies of water. This base is overlaid with northern and southern limits of totality, the centerline, and lines indicating duration of totality. For every 5-minute interval, the location of mid-eclipse is marked on the centerline, with a notation of the duration of totality and the elevation of the Sun.

This is the basic information needed to begin to select a place to view the eclipse.

When I was planning for the August 2017 total eclipse, I didn't buy the 2017 edition of this atlas. Since of the information in the atlas was available elsewhere, I didn't see the need to buy the book. I learned (the hard way) that planning is more efficient when all the basic information is on the *same sheet of paper*.

The print clarity of the maps was a disappointment. The major roads are easy to identify, but the secondary roads are almost invisible, especially in the path of totality, which is shaded light gray. To get to a location, better maps or navigation software would be needed.

In 2017, I had a good look at the eclipsed Sun, and enjoyed watching peoples' reactions to the whole experience. In 2024, I would like to watch the Moon's shadow as it appears to move across the ground. My "dream location" would include a high point overlooking a valley. I will be able to do the initial screening for possible sites with Espenak's atlas, combined with other resources.

I bought my 2024 atlas early, so I can combine site exploration with my other travels. My home is only a 3 ½ hour drive from Indianapolis, which is near the centerline. In the next four years, I hope to have a chance to visit some sites in this area. I would also like to identify some alternate locations further away; in case cloudy skies are predicted.

As eclipse day approaches, weather patterns may change suddenly, necessitating last-minute changes of plans. In this case, the eclipse road atlas could be worth its weight in gold.

*John Manney*

# Road Atlas for the Total Solar Eclipse of 2024

**COLOR  
EDITION**

**Fred Espenak**



**Submission of photos / article content for the website: Jesse Hoover**

If you have taken a nice photo that you would like to display on the PAS website, please send these to our webmaster Stan Pope [stan@stanpoppe.net](mailto:stan@stanpoppe.net). Photos can be anything relating to astronomy. Maybe you snapped a good photo from a star party, club event, personal viewing, etc. Any astrophotography is encouraged! Also, if you have educational content, tips, techniques, lessons learned, or how-to articles with photos, we encourage that material also for the website. Please send these to Stan for addition to the website. Content is not limited to the website, and is encouraged in Facebook. If you have articles or pictures, we can also add them to [www.facebook.com/PeoriaAstronomicalSociety](http://www.facebook.com/PeoriaAstronomicalSociety)  
Note: Content posted on the website and Facebook will be made accessible to the general public.  
Thanks!

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

As of July 1, 2012 the Cat matching gifts program changed. 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.

**Northmoor Observatory blog post: Renae Kerrigan**

Hi Everyone,

Like last year, I wrote a blog post about Northmoor Observatory and how people can visit. It was very popular on our museum's Facebook page – it was viewed by 16,700 people so far, and liked 200 times! That is just since it was posted on Monday at 11 am.

You can read the post here: <http://starsoverpeoria.blogspot.com/2016/05/visit-northmoor-observatory-this-summer.html>

Hopefully it will help let more people know about PAS and the observatory.

**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 **Winter 2020** issue is now available to read on their website can be found here:

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

As members of the NCRAL, we are allowed to submit our content to their newsletter as well. So if you have really cool articles appropriate for the viewing of the larger regional society audience mentioned above... please send these to Carl.

### **NCRAL Northern Lights Newsletter**

Carl J. Wenning, Editor in Chief

NCRAL Regional Representative

Twin City Amateur Astronomers

Bloomington-Normal, Illinois

Email: [carlwenning@gmail.com](mailto:carlwenning@gmail.com)

### **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://goo.gl/gS8SF>

## Peoria Astronomical Society

### Program Schedule 2020 (final)

January 1, 2020      No Meeting this month

February 5, 2020      Getting started with CCD & CMOS Cameras (tent. or, Part 1 from his 2 part program this past year)  
James Dire PhD. – <http://astrojim.net/>

March 4, 2020      Lunar and Planetary Institute (exact title TBD)  
Dr. Allan H. Treiman, Associate Director of Science  
[treiman@lpi.usra.edu](mailto:treiman@lpi.usra.edu)      Phone: 281-486-2117

Dr. Allan Treiman studies planetary materials, particularly Moon rocks and martian meteorites. From these rocks, he teases out the early histories of the terrestrial planets (including large asteroids), emphasizing their volatiles — water, halogens, carbon, etc. His background is in chemistry, and he approaches planetary sciences from both geological and thermochemical perspectives. Allan's current work emphasizes: Mars mineralogy (as a co-I with the CheMin instrument on the MSL rover), volatiles in the lunar crust, the origins of martian magmas, and serpentinization in relation to astrobiology. Earlier work includes diverse topics like: groundwater in Mars, as revealed by clay and carbonate minerals in martian meteorites; crust-atmosphere interactions on Venus; metamorphism in large water-rich asteroids; and water-deposited minerals on the asteroid Vesta. This research core has spun off work in other fields of planetary science. Work on the martian meteorite ALH 84001 led to studies of terrestrial analogs, the AMASE expeditions to Spitzbergen Island, and astrobiology. Work on water in martian meteorites led to investigations of possible surface manifestations of Mars water, the martian gullies.

Allan Treiman is active in science education. He has worked in many teacher-training field experiences on volcanology (central Oregon, Yellowstone, Cascade Mtns.), extreme environments (Owens Valley, CA; Yellowstone), and general geology (northern Arizona & New Mexico).

April 1, 2020      New Horizons and Beyond (tentative title)  
Dr. Harold Weaver, New Horizons Project Scientist  
Johns Hopkins Applied Physics Lab – Space Exploration Sector

May 6, 2020      The All New Astro-Jeopardy  
Brian Bill

Suggested topics for future:      Amateur Radio Astronomy – Tutorials from YouTube  
IOTA (Occultation Timing Asscn.)  
ALPO (Asscn. Lunar & Planetary Observers)

I invite further additions to this list. Please e-mail me directly

**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. If we host an event and you feel the weather or road conditions are questionable, please take the safest actions and do not attend the event.

**Location for Board Meetings on the third Wednesday of every month at 7:30 PM**

Proctor Place, Third Floor Conference Room  
2724 W Reservoir Blvd, Peoria, IL 61615

**Board Meeting Minutes**

**Peoria Astronomical Society September 14, 2019 Banquet**

The Peoria Astronomical Society held their annual banquet on Saturday, Sept. 14, 2019 at Bernardi's North restaurant. Nineteen members and guests attended. The slate of officers was presented and voted on. The slate passed as presented. Dan Son talked about future events. Friday, Sept. 20 is the ICC Star Party at Jubilee. Oct. 5 is "Observe the Moon Night" at Northmoor Observatory. Both these events are weather dependent. The Oct. members Meeting Program will be the Argentina Eclipse. Jim Beard talked about his role on the Planetarium Advisory Committee. Sheldon Schafer is also on that committee.

**Peoria Astronomical Society October 2019 Minutes**

Meeting called to order at 7:45 pm, Proctor Place third floor conference room, October 16, 2019

**Attendees:** Jesse Hoover, Dave Monroe, Bill Cole, Phil Burroughs, Brian Hakes

**Minutes:** (Phil Burroughs) The minutes of the August Board Meeting were approved. The minutes of the September PAS Banquet were approved.

**Treasurer's Report:** (Dan Son) – None

**Jubilee:** (Bob Pauer) – Bob reported that the center of the drive is eroding. Jesse trimmed overhanging branches around the perimeter. Bob plans on servicing the mower once the mowing season is over.

**Northmoor** - Brian reported that Sheldon would like hosts to come for at least half an hour on Saturday nights even if it is cloudy. Sheldon said guests show up on cloudy nights just to see the scope. No one else had heard any complaints on this topic. There will be future discussion on this at later meetings.

**Nominating:** (Tatiana Johnson) – None

**Legal Agent:** (Dave Monroe) – None

**Membership/Alcor:** (Eric Clifton/Scott Swords) – None

**Starlite** (Jesse Hoover) – Jesse is going to update Starlite on PAS web page. He uses Google Docs for Starlite. Deadline for the Winter Starlite is the November Board Meeting.

**Program:** (Sheldon Schafer). – Sheldon has made the sixth draft for programs for next year.

**Peoria Academy of Science:** (Bill Cole) – Bill will attend the next meeting, Oct. 17.

**Light Control:** (Jesse Hoover) – None.

**Observing Report:** (Gary Bussman) - None

**Website:** (Stan Pope) – None

**Old Business:** - Canton Star Party was cancelled.

**New Business:** - Brian made the motion to donate \$50 to Eureka Christian Church in memory of deceased PAS member, Jerry McElyea. Dave seconded the motion and it passed. PAS is using Yahoo Groups to get their announcements to members. Yahoo groups is ending uploads Oct. 28. Mike Frasca recommends switching to Google Groups. Jesse is going to talk to Mike about saving our content and transitioning to Google Groups.

Meeting adjourned at 8:45 pm.

Minutes taken by Phil Burroughs, PAS Secretary

### **Peoria Astronomical Society November 2019 Minutes**

Meeting called to order at 7:40 pm, Proctor Place third floor conference room, November 20, 2019

**Attendees:** Dan Son, Dave Monroe, Bill Cole, Phil Burroughs, Brian Hakes, Eric Clifton

**Minutes:** (Phil Burroughs) The minutes of the October Board Meeting were approved.

**Treasurer's Report:** (Dan Son) – Dan gave both the August 2019 and the September-October 2019 Treasurer's Report. The August checking account beginning balance was \$4,276.63. Receipts were \$453.00 and disbursements were \$586.51. Ending balance was \$4,143.12. The September- October checking account beginning balance was \$4,143.12. Receipts were \$89.00 and disbursements were \$895.68. The October ending balance was \$3,336.44.

**Jubilee:** (Bob Pauer) – Eric installed a new focuser cable on the 24" scope. He has 2 additional focuser cables which will be stored at Jubilee. He also reported that Dr. Hal Gardner died who at one time lived in the house at Jubilee.

**Northmoor** - Sheldon's suggestion that hosts come for at least half an hour on Saturday nights even if it is cloudy was discussed. It was determined that Dan will email keyholders and get their input before any further action is taken. Eric will contact a couple who requested having their wedding at Northmoor Observatory on Jan. 4. On Oct. 12, at the public viewing a couple Taylor Coltrim and Erica Mallard got engaged.

**Nominating:** (Tatiana Johnson) – None

**Legal Agent:** (Dave Monroe) – None

**Membership/Alcor:** (Eric Clifton/Scott Swords) – Rachael Wheeler was a new member in September.

**Starlite** (Jesse Hoover) – Starlite articles for Winter edition are due now.

**Program:** (Sheldon Schafer). – No changes in the program. No meeting Jan. 1.

**Peoria Academy of Science:** (Bill Cole) – Bill will attend the next meeting, Nov. 21.

**Light Control:** (Jesse Hoover) – None.

**Observing Report:** (Gary Bussman) - None

**Website:** (Stan Pope) – Jesse uploads Starlite to website. There needs to be future discussion on improving web site and getting volunteers to work on it.

**Old Business:** - Brian is going to talk to Jesse to see if he has talked to Mike Frasca about replacing Yahoo Groups with Google Groups or some similar group.

**New Business:** - No board meeting Dec. 18. Dave made the motion to make a \$50 donation to the Roanoke Benson Education Foundation in memory of Gene Hodel, who recently passed away. Dan seconded the motion and it passed. Eric had suggested changing the name of Astro Jeopardy to Gene Hodel Astro Jeopardy Night. There was discussion on possibly selling donated scopes which PAS has.

Meeting adjourned at 8:50 pm.

Minutes taken by Phil Burroughs, PAS Secretary



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**Peoria Astronomical Society, Inc.**

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# 2020 DUES NOTIFICATION

Your support of the **Peoria Astronomical Society** has been greatly appreciated!! Please select the membership of your choice for your 2020 dues.

- Regular Membership - \$30.00
- Patron Membership - \$50.00 or greater \*\* \*\*\*  
(Regular Membership status and the sincere gratitude of the Society)

AS ALWAYS MEMBERSHIP ENTITLES YOUR ENTIRE FAMILY TO THE PRIVILEGES OF  
THE SOCIETY PLUS MEMBERSHIP IN THE PEORIA ACADEMY OF SCIENCE

***Payment is due by January 15, 2020***

***Please make checks payable to PEORIA ASTRONOMICAL SOCIETY, INC and mail to:***

Peoria Astronomical Society, Inc.  
P O Box 10111  
Peoria, IL 61612-0111

You may also bring your dues to the general meeting.

If you have a new email address or want to add an email address please let Scott Swords know at: [sswords3@comcast.net](mailto:sswords3@comcast.net).

THANK YOU AGAIN FOR YOUR CONTINUED SUPPORT OF THE PEORIA  
ASTRONOMICAL SOCIETY!! WE LOOK FORWARD TO SEEING YOU AT MONTHLY  
MEETINGS AND AT OUR STAR PARTIES.

Dan Son  
Treasurer

\*\* Any amount over \$30.00 is deductible on your income tax as a charitable contribution.

\*\*\* If your place of work has a **Matching Gift Program**, please give consideration to taking advantage of it to multiply your gift.

## **2020 Dues Notification**

This is the 5<sup>th</sup> year the initial dues notification embedded in the electronic newsletter.

You are welcome to mail your dues payment but it may be more convenient to bring it to the December general meeting in the planetarium, since we will not have a January general meeting please mail it to PAS.

As always, there will be subsequent follow-up mailings of dues reminders. The only exception to the mailing will be members who recently joined the society within the past two quarters, their dues are considered paid through 2020.

By mailing your dues payment or bringing it to a PAS meeting in the planetarium will defray the expense of postage associated with these follow up reminder mailings.

Once again, thank you for your continued support of the PAS,  
Dan Son - Treasurer