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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*

## *SUMMER, 2017*

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

- List of Board of Directors
- Editor's Notes
- Address/email changes
- Future Editions of the Starlite
- New Members
- Monthly's (June)
- 2017 Astronomy Events
- 2017 Meteor Shower Schedule
- From Starlites Past
- President's Ramblings
- Photos/Articles for Website
- Caterpillar Matching Gifts
- Programs for 2017
- PAS Banquet 2017
- Peoria Riverfront Museum -  
Upcoming Events
- ICC star party for Summer 2017 Classes
- CHA'AN KA'AN Observatory/Planetarium
- Astronomy Day
- Northmoor Observatory blog post
- PAS and the Great American Eclipse
- Eclipse Inquiries
- Eclipse Viewing at the Riverfront Museum  
Inquiry
- Nebraska Star Party
- NCRAL Newsletter
- ~~Jubilee Maintenance~~ Schedule
- ~~Northmoor Observatory~~ Hosting Schedule
- New location for Board Meetings
- ~~Board Meeting~~ Minutes

### ***Directors:***

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

*Have a great summer, thanks for all your work and contribution!*  
*-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:

Amy Ashley Peoria, IL  
Michael Belsly Washington, IL

### **June Monthly: Gary Bussman**

The weather is here to observe, and for those of you who are interested in to going out to Jubilee observatory to observe with your telescope, we go out on 3rd quarter and new moon weekends. For the month of June, 3rd quarter moon weekend is June 16 and 17th. The next weekend is New moon weekend, June 23 and 24th. Please communicate through the e-group if you are looking to go out. Clear sky's dictate, and make sure someone who is a key holder is going out. You don't want to go all the way out there and not get in.

Facts on summer constellations:

Scorpius, the scorpion is the 33rd largest constellation in the sky. Visible from June thru August. Antares, is one of the largest stars known. Some 200 times the diameter of the sun.

Hercules, the hero Heracles, is the 5th largest constellation in the sky. Visible from May thru September. The center of Hercules is called the Keystone. It also has the best northern globular star cluster in the night sky. M13!

Draco, the dragon is the 8th largest constellation in the sky. This constellation is visible throughout the entire year. Did you know some 5,000 years ago, the star Thuban was once the North Star. Now it is some 25 degrees from Polaris.

Ophiuchus, the serpent holder is the 11th largest constellation in the sky. No major stars in this constellation but it contains a lot of globular star clusters!

Look forward to seeing as many people out observing. Get your telescope out and use it! It doesn't want to sit in the closet!

### **2017 Astronomy Events: Dan Son**

Jupiter -

- June 19th Double shadows for 35 minutes starting at 9:04 CST.

Saturn -

- night of Opposition is June 15th. This year the rings appear at their widest.

### **2017 Meteor Shower Schedule: Scott Swords**

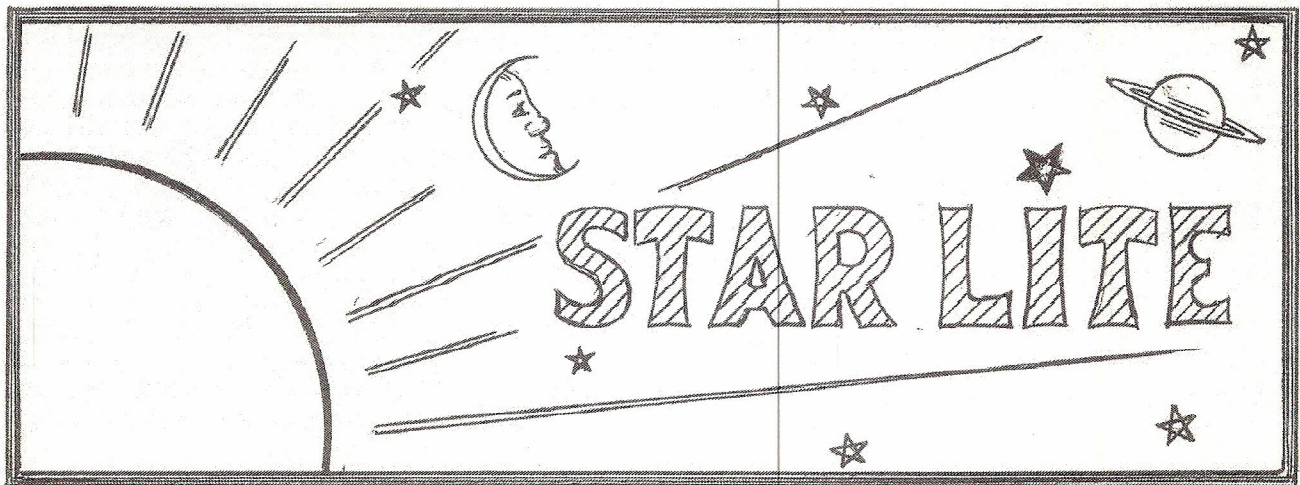
Over the years I have used many meteor shower schedules. Below is by far the best one I have used.

<http://skytour.homestead.com/met2017.html>

Scott

**From Starlites Past: (50 years ago 1967 and 25 years ago 1992)**





Peoria Astronomical Society  
Summer Issue-Newsletter  
May, 1967 #10 Star Lite

#### EDITOR'S MESSAGE

How much enthusiasm do you have? There are many who are enthusiastic for a short period of time; yes, indeed! However, there are few, very few, who are enthusiastic over a long, long period of time, who can remain determined and loyal to a cause through most any kind of obstacle. We think of the great men who have given the science of astronomy so much in the past because of their lifetime-extended 'enthusiasm'; without which, we would still be observing the skies with the same thoughts as the early cave dwellers. Now not all of us can be great in this field of astronomy, but one thing we can be with a force of 'will', if nothing else, and that is enthusiastic.

It should be extremely interesting to all of us as members of our Peoria Astronomical Society to keep track of all the latest discoveries of science in our field; then to follow through by 'observing' within a group, or privately, these new wonders and to eagerly await new miracles of discovery that are so easily obtained as gifts from these great men who are working even now to further our knowledge. It could be a 'fun-filled' game among us to exchange new knowledge. Perhaps, what one has read recently, the other has missed. We could form a 'new-discovery' club with the purpose of enlightening each other with talk (over coffee) and possibly 'observing' sprinkled in when the new knowledge warrants it. Sound good?

How about UFO's? Are you interested in having an 'observing team'? Whether or not you believe in UFO's, this might be a good idea. Contact Dean Eater, our president, or myself with your ideas on this. We need your enthusiasm!!

Sincerely,

Bernice Grebner





PEORIA ASTRONOMICAL SOCIETY  
SUMMER ISSUE #110, NEWSLETTER  
JUNE, 1992 "STARLITE"

Editor: George Nelson  
Asst. Editor: Calene Fleming

PRESIDENT'S MESSAGE

For many of us, astronomy knows no season. For many others, the spring and summer are periods of activity. Well, either way, it is time to get busy. Weather is much improved for observing. Indoor meetings are now held informally at the Northmoor Observatory. The Society is involved in two major projects that need people power. These are the Peoria Area Light Pollution Effort and the ALCON preparations for 1994. There is more work than people, so that means plenty of room for all. If you don't have keys to observatories, now is the time to get training. If you have your own scope, get it out and clean it up so you can grab it and go when the sky is clear. Bottom line -- head um up and move um out. Astronomy awaits.

Bill Aldrich  
President

**President's Ramblings: Dan Son**

Well Summer is almost upon us and the year seems to be moving too fast. We had a great ICC star party this spring and I want to thank all those who came out with their scopes and those who opened up the 24 telescope. We had a lot of college students and grade school kids out and everyone enjoyed themselves.

We had a semi successful Astronomy Day in April. Sheldon Schafer presented a wonderful list of programs for the 2016 thru 2017 season with a great program and discussion on the upcoming Solar Eclipse in August. Nick Johnson has Northmoor up and running every Saturday thru October with members giving their time to operate the scope and dome. Bob Pauer has Jubilee set up, the TMB scope is installed in the small dome and ready for members to use who are trained to use it. Mowing is an ongoing event at Jubilee and scheduled members are going out every weekend to keep it looking good and checking out the site.

It takes a lot of people to run all of the scopes, domes and grounds that PAS takes care of. I want to thank John Barra for donating his 12.5 inch Meade reflecting telescope to the Society to be used out at the Jubilee site. I hope all our members make plans to get their family and friends to go out to Northmoor on a Saturday night and enjoy the scope and sky. Have a great Summer and be safe.

Dan Son

**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@stanpope.net](mailto:stan@stanpope.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.



**Program Schedule for 2017 - 2018: Sheldon Schafer**

\*\*date confirmed and/or requested

\*speaker confirmed, date tentative, TBD

June, 2017	No program - Replaced with a Star Party!
July, 2017	No program - Replaced with a Star Party!
August, 2017	No program - Replaced with a Star Party! Note on Star Parties - Please check dates and weather updates on the E-Group, Facebook page, and Website
September 23, 2017	Annual Banquet and Election - 5:00PM at the Lariat Club (details below)
October 4, 2017	The Great American Eclipse – a recap Members of the PAS Review of individuals' experiences, photos, etc.
November 1, 2017**	Astro Jeopardy Gene Hodel
December 6, 2017	4 Decades of Astronomical Tourism Sheldon Schafer
January 3, 2018	Full Dome Show
February 7, 2018**	Meteorite Collecting Brian Poelker
March 7, 2018*	OSIRIS-REx Asteroid Sample Return Mission (via skype) Dante Lauretta NASA - OSIRIS-REx Principal Investigator Erin Morton, Communications Lead Office of the Principal Investigator OSIRIS-REx Asteroid Sample Return Mission Telephone: (520) 269-2493
April 4, 2018*	Arecibo (via skype) Mike Davis (son of Ed Davis, PAS member) Director of Arecibo (retired)
May 3, 2018*	The Science of Green Bank and Kitt Peak Observatories Rena Kerrigan

Hazardous weather notice: Monitor email (e-group), local radio stations or PAS Facebook Page if a program 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.

**PAS Banquet 2017:**

The Peoria Astronomical Society banquet will be September 23rd, 2017 and the Lariat Club restaurant in Peoria at 2232 W Glen Ave in Peoria. Time will be around 5:00 PM. Look for more information as we get closer to the date, we will need reservations and the meal you will eat. All this will be made available in late July or early August.

**Peoria Riverfront Museum - Upcoming Events**

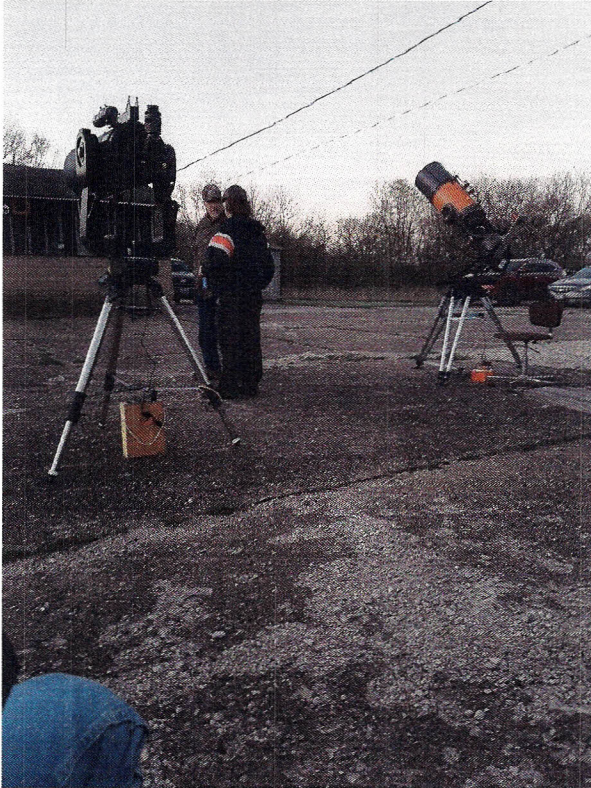
- Please see "Eclipse Viewing at the Riverfront Museum Inquiry" article below...



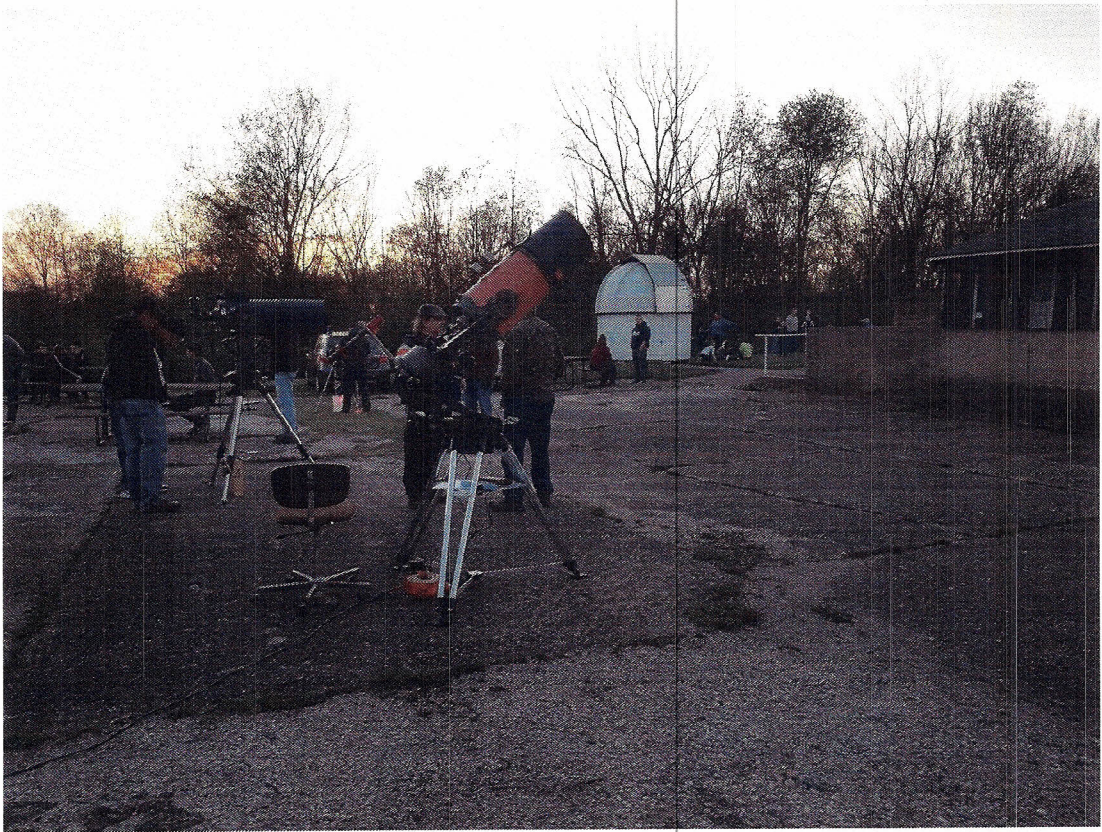
**ICC star party for Summer 2017 Classes:**

These are events where club members bring their scopes to Jubilee observatory for viewing session with students in Astronomy courses at Illinois Central College. Bradley OLLI students will also be invited at this time.

Note: The 2017 Summer Astronomy course at ICC has been cancelled due to low enrollment, so we will look forward to having the ICC students out from the 2017 Fall semester course! And here's an example of what kind of fun we have out at these events! Photos provided are compliments of Charity and Dave Monroe.









## CHA'AN KA'AN Observatory/Planetarium: Brian Hakes



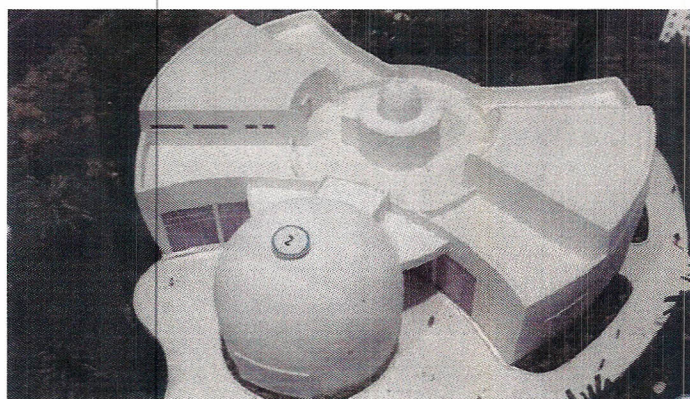
Recently my wife and I vacationed on the Mexican Island of Cozumel (Land of the Swallows) which is East of the Yucatan peninsula in the Caribbean Sea. There we found the newest planetarium, Observatory in that area of Central America.

The center's name is Cha'an Ka'an which is Mayan and loosely (my interpretation) meaning look to the sky. The character in the front of the name is the Mayan god representing the sun.

The ancient Mayans believed the First Father placed the Great Mother Ceiba (Yax IMix Che), a giant green ceiba tree, in the

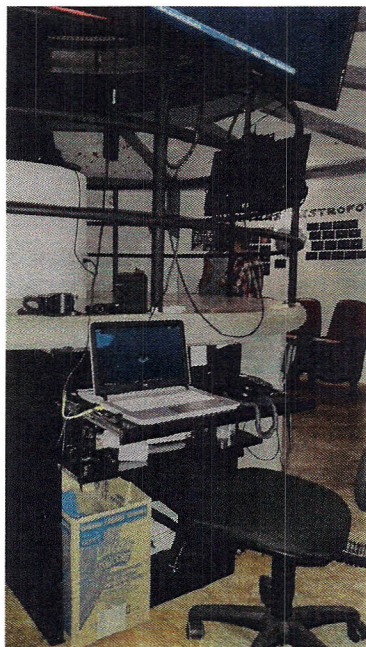
middle of the earth plane and whose axis was the center of the universe. The roots of the tree reached down into the underworld, the trunk crossed into the earth plane and the trees foliage rises and disperses into the celestial plane. It is here that the gods make their home among the stars. The Milky Way played an important role in the union of these three levels. As it stretches across the sky it was imagined as the umbilical cord that connected Heaven and the Underworld with the Earth.

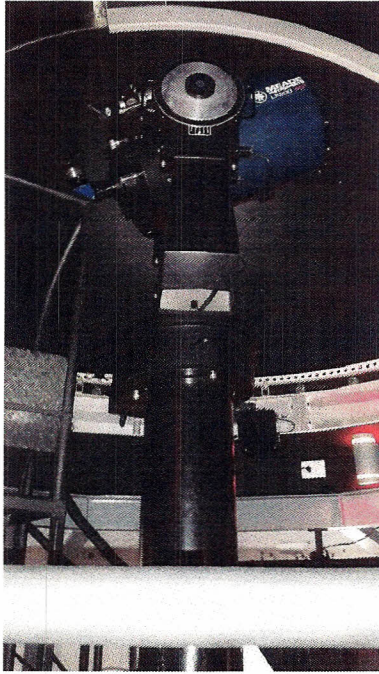
In the image of the building model, the main entrance is on the south (#2). On the roof and centered between the two wedges is a cylinder structure with a dome. This is the observatory and as you can see it is well above the trees. In addition to a planetarium and observatory there



is a museum, activity center and a large open area used for cultural activities. The circular shape and curves of the building are intentional. The architect and engineers designed the building to accommodate tropical storms and hurricanes.

Inside of the Observatory there are theater chairs around the perimeter walls. The walls and ceiling are home to astrophotos, posters and educational displays. In the center of the room is the raised platform floor which has the pedestal for a 16" Meade LX 200. In the image is a computer workstation. The computer image feed goes to three monitors suspended from the ceiling along the periphery of the observing platform.





Public observing is done at the 16" but there are a host of smaller Mead reflectors for use at group events. A nominal fee is collected at the main entrance for the observatory.

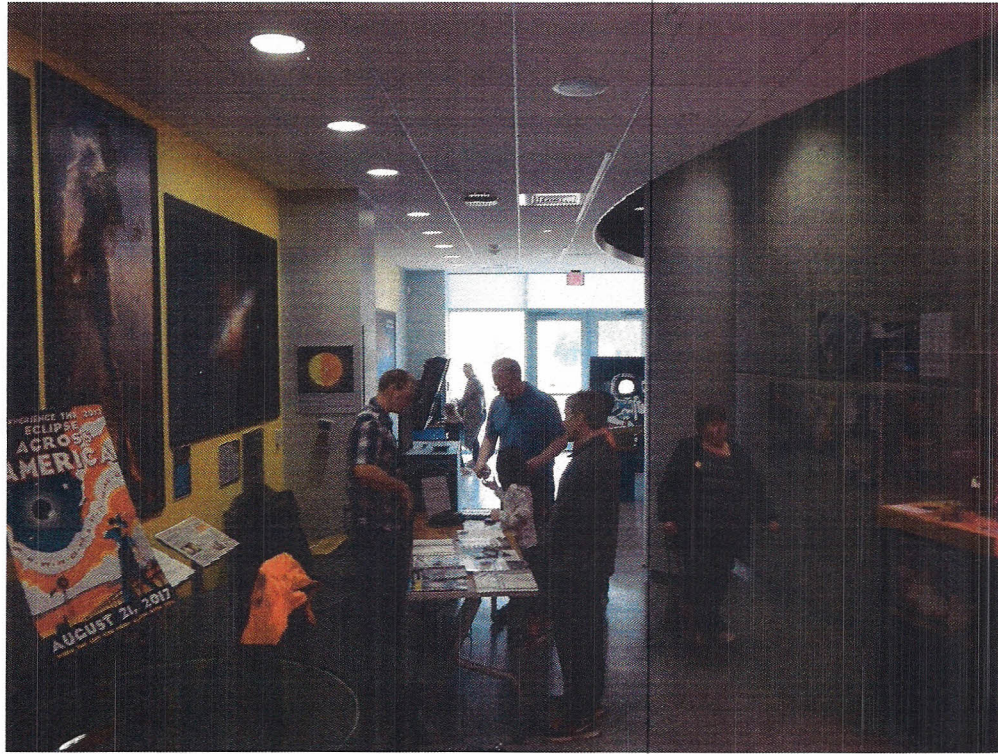
The observatory is located at the south end of the hotel zone on the west side of the island. So the viewing is pretty good to the east and south. Due west and less than a 1/2 mile away is the international boat dock. This is the dock that most cruise ships stop when visiting Cozumel. So there is some light pollution in that direction.

So if you take a western Caribbean Cruise, Cozumel will most likely be on your itinerary. The planetarium and observatory can be a very interesting side trip that would be inexpensive and one you could walk too. I doubt that many cruise destinations have such an attraction.

### **Astronomy Day: Dan Son**

I want to thank Renae Kerrigan for getting this year's event started. There was a large event going on at the Riverfront Museum and this was a perfect opportunity for PAS to show itself off to the public. Judd Isbell has a great Solar Scope and was planning to bring it to the Museum and other members had plans to attend and help, for this I thank you all. Illinois weather did it to PAS again... it rained all day Saturday April 29th and made for a no solar viewing day. Jesse Hoover and myself did make it down to the Museum and set up a table and talked to many people about the upcoming August 21st solar eclipse. I know we will try to do this again next year and hope for better weather.







**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.

*(Note: the following eclipse topics are reprinted from the Spring Starlite.)*

**PAS and the Great American Eclipse : Nick Johnson**

As you are aware, the premier astronomical event for 2017 is the Great American Eclipse on August 21. The eclipse will be total for a great portion of the United States including much of southern Illinois. In fact, the point of highest duration for eclipse totality is close to Giant City State Park near Carbondale, Illinois. For the Peoria area, the moon will cover about 90% of the sun. Many of you may be traveling to southern Illinois or other locations to view the total eclipse, while others will view in Peoria and still witness an exciting 90% eclipse. Here is how our Astronomical Society will provide eclipse information and participate in Great American Eclipse activities.

In preparation for the Great American Eclipse, we are partnering with both the Peoria Riverfront Museum Planetarium and the Peoria Public Library. Sheldon Schafer, our own eclipse aficionado, has volunteered to act as the PAS representative for this group effort. Sheldon, along with a small eclipse team, will coordinate the PAS roles and activities relating to what he calls “the eighth wonder of the natural world.”

**Eclipse Information:**

The Planetarium will act as “Eclipse Information Central” for all three organizations. An eclipse information page is located on the museum’s web page and can be accessed at <http://www.peoriariverfrontmuseum.org/dome-planetarium/total-solar-eclipse-of-2017>. This site contains information overview of the eclipse as well as links to additional sites featuring eclipse information. PAS will add a link to that site on our own website as well as on our Facebook page in the near future. The museum is also offering eclipse related items for sale in the museum gift shop. Included are a wall map of the eclipse path, a handbook on the Great American Eclipse, and eclipse viewing glasses (\$1.95 per pair).

We will also have Great American Eclipse information on display at Northmoor. Included will be an eclipse path map and an eclipse handout used jointly by all three organizations. Since our Treasure Hunt questions focus on the eclipse, we will also have displays that contain the answers to the eclipse Treasure Hunt questions. We will also provide information on the local eclipse day viewing event location and times.

**Pre-eclipse Activities:**

PAS will monitor and communicate activities and events leading up to eclipse day. Event information includes Planetarium eclipse show schedules, Planetarium eclipse lectures (2 are planned), and Peoria Public Library eclipse information programs. PAS also has one planned pre-eclipse activity. Our May members meeting will feature PAS members presenting their viewing plans, viewing tips, and locations. That meeting will be held at the Riverfront Museum Planetarium on Wednesday, May 3 at 7:30 PM. Don’t miss it.

As the eclipse nears, we also expect to receive requests from schools and various groups for presentations about the eclipse. Renae Kerrigan, PAS member and Planetarium Curator, will coordinate all requests of this nature. Renae will either direct the groups to existing eclipse information activities or try to arrange for a speaker to meet with the requesting group. Speakers will come from a pool of Planetarium and PAS resources. A few PAS members have already volunteered to be in this pool. If you have an interest in being added to the pool, please send a note to Nick Johnson through the contact option on our PAS website. Volunteering does not mean you are committing for an assignment. As requests come in, we will distribute to the pool to see if it fits into anyone’s personal schedule.

### **Eclipse Day Events:**

The main local viewing event will be held at the Peoria Riverfront Museum. We will suggest this location in all of our material and communications. In the event people show up on eclipse day at Northmoor, Bill Cole has volunteered to be at the Northmoor site. The Northmoor telescope, however, will not be utilized.

### **Informal Interactions:**

As the Great American Eclipse date approaches, you may get involved in discussions about the eclipse with friends and acquaintances. There are two key items you should stress. First, let people know that telescopes or binoculars are not needed to view the eclipse. Secondly, make sure people understand the dangers of trying to view the eclipse with telescopes or binoculars and the ramifications of viewing the eclipse without proper eye protection.

### ***Eclipse Inquiries: Nick Johnson***

Sheldon Schafer has agreed to serve as point person for eclipse coordination. He and I will be working together to coordinate PAS activities and participation in eclipse related events. If you receive any inquiries about the eclipse, please forward them to me or have the requester contact me at [johnsnl@comcast.net](mailto:johnsnl@comcast.net).

### **Eclipse Viewing at the Riverfront Museum Inquiry**

As you may be aware, the Peoria Riverfront Museum will be hosting a public viewing session at the museum for the Aug 21 eclipse. The sun will be approx. 90% blocked when viewing from Peoria. For those of you staying in Peoria, Renae Kerrigan, Planetarium Curator, would like to know if you think you may attend this gathering and if you might bring your solar viewing enabled scope. If you are thinking about attending this event and/or bringing your solar scope or any other viewing equipment (other than glasses), please send a note to Renae at: [rkerrigan@peoriariverfrontmuseum.org](mailto:rkerrigan@peoriariverfrontmuseum.org)



**Nebraska Star Party: Greg Neaveill**

Dates for this star party are: July 23-28, 2017

One of the featured speakers at the March 1st program was Tim McGrath talking about his family trip to a Nebraska Star Party.

If interested, go to these videos for a nice "overview".

2015:

<https://vimeo.com/133813886>

2016:

<https://vimeo.com/181211868>

**Registration:** To register, please visit: [www.nebraskastarparty.org/](http://www.nebraskastarparty.org/)

Note: the Nebraska Star Party will take walk-in registration at the door, however, for a \$10 discount you must meet the July 1st cutoff date.

**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 **Spring 2017** 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. Their summer publication should be coming up soon!

**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)