



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

STARLITE

Spring, 2023

WHAT'S IN THIS ISSUE?

List of Board of Officers & Directors

Editor's Notes

Address/email changes

New Members

Meteor Showers

Presidents Ramblings

25 & 50 years ago

General PAS information

Caterpillar Matching Gifts

Reflector Magazine & NCRAL info

Members Monthly Programs Schedule

The Planetarium Report

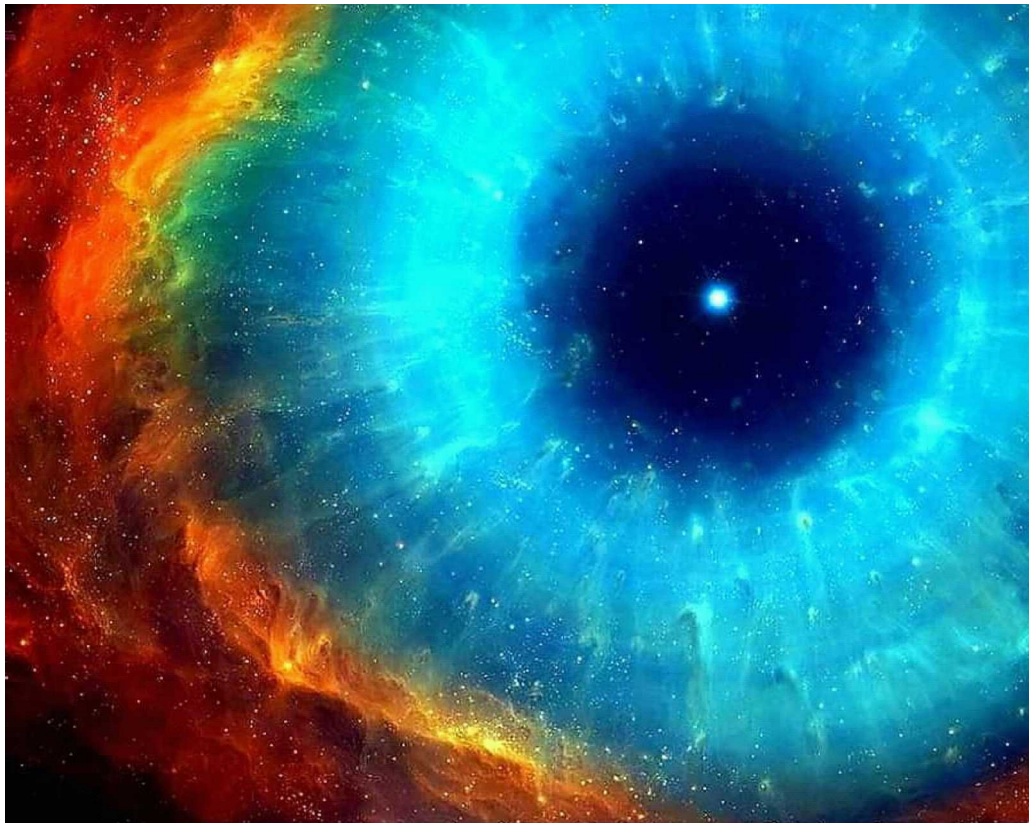
Photos from members

Photos from Space

Northmoor Hosting Schedule

Jubilee Maintenance Schedule

**Helix
Nebula
JWST**



Officers:

President: Dan Son, sonshine1992@gmail.com
Vice-President: Brian Bill
Secretary: Phil Burroughs
Treasurer: Dave Monroe, dave.monroe@comcast.net

Directors:

Parliamentarian: Dave Monroe, dave.monroe@comcast.net
Nominating Chairman:
Legal Agent: Rodney Nordstrom
Northmoor Chairman: Dan Son, sonshine1992@gmail.com
Jubilee Chairman: Jesse Hoover

PEORIA ASTRONOMICAL SOCIETY IS NOW ON FACEBOOK:

www.facebook.com/PeoriaAstronomicalSociety

Update your address, phone or email changes

Please notify Dan Son at 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: Matt Dutton, Nicholas Aranda and Brian Ulrich

2023 Meteor Shower Schedule:

The Lyrids meteor shower peaks the night of April 21-22 of 2023. The moon will only be 9% full so get to a dark site and enjoy.



Presidents Ramblings:

Spring is hopping around the corner and things are getting very busy. I hope you watched the dance of Jupiter & Venus, saw a comet passing through the night sky and enjoyed this mild winter we have had. I hope I find everyone doing well and a big **Thank You** to those key holders and helpers at Northmoor as the public viewing season is coming up fast. We are looking for more volunteers at Northmoor and need members to step up and let me know they want to help.

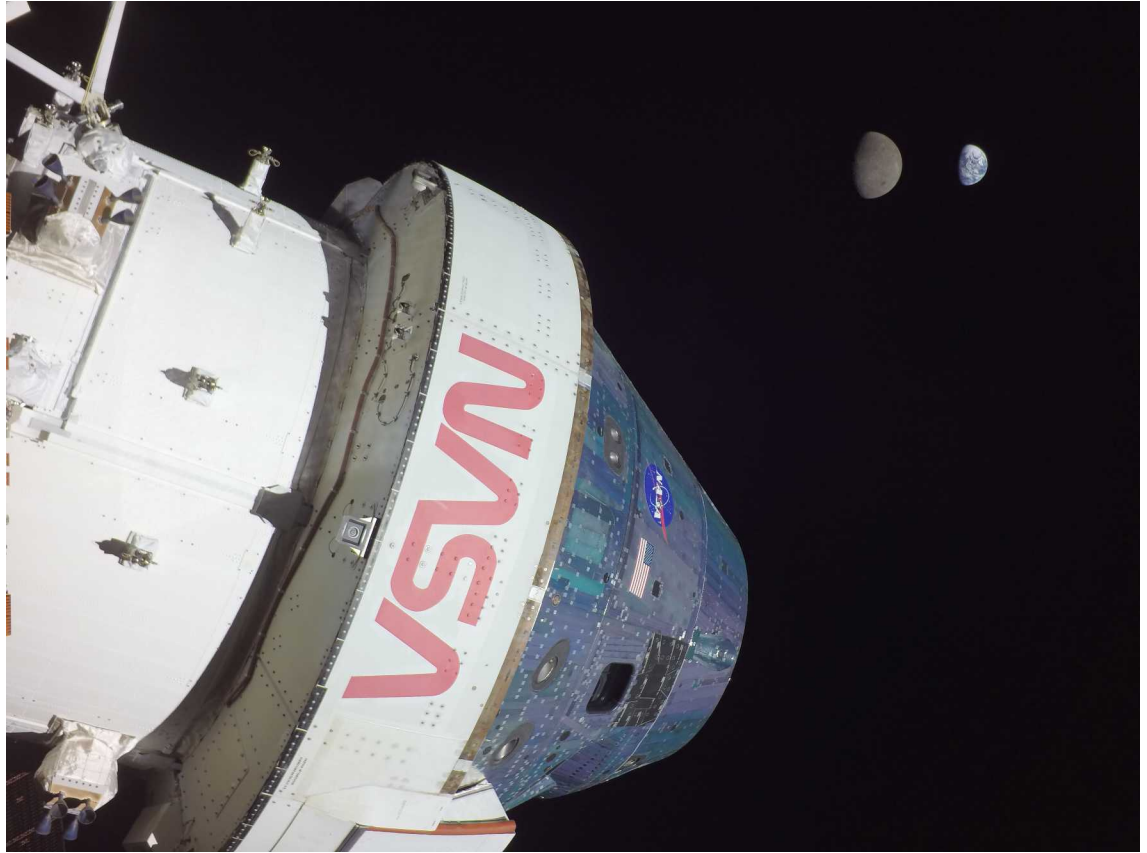
We have some great star gazing opportunities this spring to observe and I hope when you read about members going out to Jubilee you come out also. We have scopes out there you can use and if you have your own scope, bring it along and if you need help someone is always willing to lend a hand. I do love finding the galaxies in the Virgo Cluster or doing the Messier Marathon in March.

I want to thank **John Nowack** for his February members meeting on his experience with Astrophotography. I am starting to get an itch to try this but will need a happy wife to agree with this to buy the equipment. Well spring cleaning is in the air and I must get to work so I will leave this rambling short and hope everyone has clear skies and a clean objective!

We are looking for you, yes you! We need more members to volunteer along with other PAS members to help get the job done. What is the job you say, we have a few like helping at Northmoor on Saturday nights with the public. We have 3 people on each Saturday and we need more volunteers to lesson the load on everyone. We can use a Starlite assistant editor, you like writing articles or finding astronomy information we can share, then we need you. This job is quarterly...perfect for everyone. We need a few people willing to help on the board. We have 7 members and need ma few more, meetings a zoom so you can stay at home. Without more help we cant do for the public and each other what we would like to do. Please consider volunteering!

Dan Son

**Artemis 1
Moon & Earth**



J Armstrong Comet ZTF near Mars

Tips for the Messier Marathon

by John Barra

Here are a few tips for those participating in the Messier Marathon:

1. **BE PREPARED:** The Boy Scout motto is a good one for a twelve-hour marathon. Have a good plan of attack; one suggested order is on the facing page. Study the star charts you'll be using. Don't forget to bring the extras you'll need; a red flashlight, extra batteries for your Telrad or other battery-operated equipment, and a dew zapper. If you don't have this last item, bring a hair dryer and a long extension cord.

2. **GET THERE EARLY:** Get to the site as early as you can, at least by 6:30 p.m. The first object viewable will be M45, the Pleiades, at 6:45 p.m. If you are set up by then you can get a few of the brighter objects out of the way fast, even though they are lower on the list.

3. **PLAN FOR THE TOUGH EARLY OBJECTS:** You won't have much time between the first signs of darkness, around 7:00 p.m., and the time several of the first tough objects on your list will set in the west. M74 and M77 will be particularly hard to locate. M74, a faint galaxy in Pisces, will undoubtedly be the toughest to find all night. It has a low surface brightness; I have trouble finding it when it is high in the sky if seeing conditions are not excellent. You will need to find a target star nearby and find it quickly after 7:00 p.m. M77, a galaxy in Cetus, can be located first because it is brighter.

4. **VIEW AS MANY AS YOU CAN AS EARLY AS YOU CAN:** Once you've completed the first ten, you can slow your pace a little. But since you'll have the most energy early, you'll want to move across the sky at a fairly good pace. You may need the extra time on the dreaded Virgo Cluster. You should be able to get through the first 48

by 10:30 or 11:00 p.m. By then the Virgo Cluster will be in a good position in the sky to attack.

5. **TAKE A BREAK BEFORE THE VIRGO CLUSTER:** Now is a good time to take a break. Go inside. Rest your feet. Have some coffee and a snack. After 15-30 minutes, you'll be ready to go again.

6. **PREPARE FOR VIRGO CLUSTER:** You'll need a good plan to wind your way through the Virgo Cluster, comprised of 14 galaxies in Virgo and Coma Berenices. I recommend you follow the path suggested in the chart on pages 42-43 of the May 1994 issue of *Sky & Telescope*. It starts on the eastern edge at Epsilon Virginis and goes toward the west rather than following the west-to-east, right ascension order from the list opposite. If you have *Uranometria 2000*, copy the charts on pages 192-193 and highlight the path suggested in the *S&T* article. If you get halfway through the path and get lost, don't panic. Start over again and the second time you will be able to quickly get back to the last galaxy you had observed.

7. **VIEW ALL THE OBJECTS DOWN TO THE EASTERN HORIZON:** Continue to view as many objects as you can as you cross the sky to the eastern horizon. If you've been successful so far, by about 1:30 a.m. you should have completed 90 of the 110 objects. No others will be high enough above the eastern horizon to view now.

8. **TAKE A LONG BREAK OR NAP:** At this point there is a natural break in the marathon. Rather than wait outside for only a few objects, you might as well rest for 1½-2 hours while a larger number rise sufficiently above the horizon. You may even want to take a nap in the warming shed. But make sure someone wakes you at 3:00 or 3:30 a.m. You don't want to over-

sleep and miss the end!

9. **GO AT A LEISURELY PACE DOWN THE STRETCH:** You will have a couple of hours to locate the next fifteen objects, so take extra time to view these objects. Enjoy the beauty of the Lagoon and Swan Nebulae. You're almost done.

10. **HAVE A PLAN FOR THE LAST TOUGH OBJECTS:** Just as you had to hurry at the beginning to catch the early objects before they set, you will have to hurry to catch the last few objects when they rise shortly before dawn. M72, a faint globular cluster, and M73, a faint four-star asterism, are both in late-rising Aquarius and will be difficult to find. Have your route carefully marked on your chart. M30 in Capricornus is not supposed to be viewable at our latitude during mid-March marathons. Since our marathon is later in the month, M30 may be visible but M74 and M77 may not be. If we are delayed to the late April dates, 5 or 6 objects at the beginning of our list may not be visible.

11. **PRACTICE AHEAD OF THE TIME:** If you have the time and the weather permits, you might want to try a dry run on the tough twilight objects and the Virgo Cluster. Practice might make the difference on whether or not you view all those objects during the marathon. I won't be so presumptuous to suggest that you do a dry run on the early morning objects. Even I won't go out to Jubilee at 4:30 a.m. to do that.

12. **HAVE FUN:** Last and most important, have fun. You don't have to view them all. The competition is friendly. Messier Marathons, while a challenge, are designed to improve your viewing skills rather than being an end in themselves. Finally, if you do come after sunset, don't forget to turn on your parking lights and turn off your headlights when you drive up the hill. ✨

50 Years ago:

WATCHERS OF THE HEAVENS - Jean Johnson

Two of the four Royal Stars or Watchers of the Heavens of ancient Chaldean astronomers are now visible in the south, visible if the weather clears, that is. They are visible before midnight, which is good for those of us who turn into a pumpkin at midnight.

The four Royal Stars, Aldebaran, Regulus, Antares, and Fomalhaut, marked the equinoxes and solstices near the end of the fourth millenium, B.C. Aldebaran, (R.A. 4 hrs. 34 min., Dec. $+16^{\circ}27'$) was called the Watcher of the East and marked the vernal equinox. Regulus, (R.A. 10 hrs. 06 min., Dec. $+12^{\circ}07'$) was the Watcher of the North and marked the summer solstice. Antares (R.A. 16 hrs. 27min., Dec. $-26^{\circ}22'$) was the Watcher of the West and marked the autumnal equinox, and, finally, Fomalhaut (R.A. 22 hrs. 56 min., Dec. $-29^{\circ}47'$) was the Watcher of the South, marking the winter solstice. These stars were also used in India for the same purpose.

Aldebaran is a bright red star, the brightest of the Hyades, known to us as the Eye of the Bull. In India it is Rohini, the Red Deer, so lovely that although the moon had 27 star-wives to choose from, he loved only Rohini. Her own father, the giant Praja-pati, (Orion) creator of the universe and man, fell in love with her and pursued her across the heavens in the guise of a stag. He had almost caught Rohini when a hunter, Lubdhaka (Sirius) came along and shot the giant with a magic three-jointed arrow, which can still be seen sticking from his side.

Regulus marks the Heart of the Lion (Roman name - Cor Leonis) as well as the handle of the Sickle formed by the stars in the head of Leo. It was extensively used as a reference point and its position carefully noted. Several ancient observations of its longitude are known, including a Babylonian one in 2120 B.C., its longitude then being $92^{\circ}30'$. It is said that Hipparchos, by comparing these earlier observations of Regulus and Spica with the positions they occupied in his time, first came to an understanding of precession. Regulus was in longitude $119^{\circ}50'$ in Hipparchos' time. It is now about 150° .

Submission of photos / article content for the Starlite: Jesse Hoover

If you have a photo that you would like to submit for the Starlite, please send these to Jesse Hoover hooveje@gmail.com or Dan Son 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. 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:

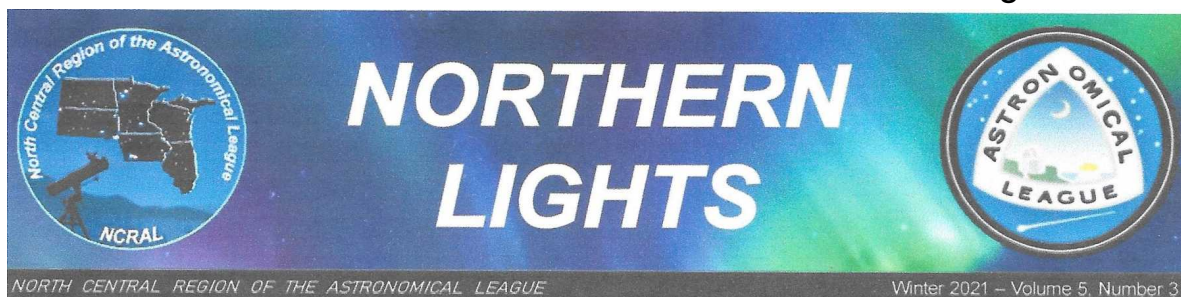
<https://www.astroleague.org/reflector>

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/1FAIpQLSdGCQJiekrrqVV3SY4BGrQdow5N7Elxv3VbX2YmFPA4AJZ2iag/viewform>

Program Schedule 2023 – All speakers confirmed

Meeting Time 7:00 p.m. CST/CDT (note new time)

Meeting in the Dome Planetarium at the Peoria Riverfront Museum (Some speakers via Zoom) Again please note the new time we will be starting..7pm.

| | |
|---------------|---|
| April 5, 2023 | The October 14, 2023 Eclipse + Sharing of members' plans to observe |
| May 3, 2023 | Astro-Jeopardy II Brian Bill |

Inclement 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.

Riverfront Planetarium Museum:

Congratulations to Renae Kerrigan for being a member of the 40 Under Forty selection. Arguably the most dynamic and influential science educator in the Peoria region today as noted by our local Peoria Magazine. We at PAS think she is very special and wish to congratulate her on this wonderful accomplishment.

Donovan Park:

Friends of Open Space at Donovan Park are offering a free family fun day and night. Times will be 3pm till 6pm with walking tours, food truck and low key live music. Evening hours will be sky tour, Orienteering and listening for nocturnal owls. Look for more details.

Photos from Members



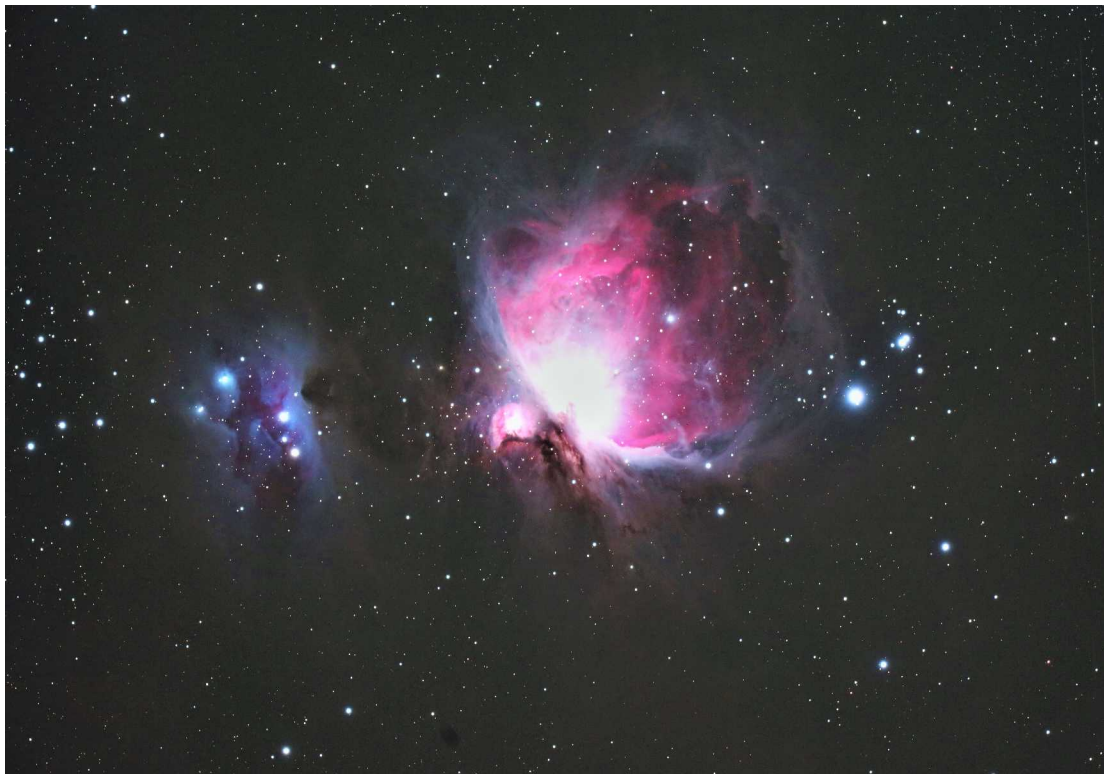
J Armstrong M45



J Armstrong Horsehead and Flame Nebula



John Manney Comet ZTF

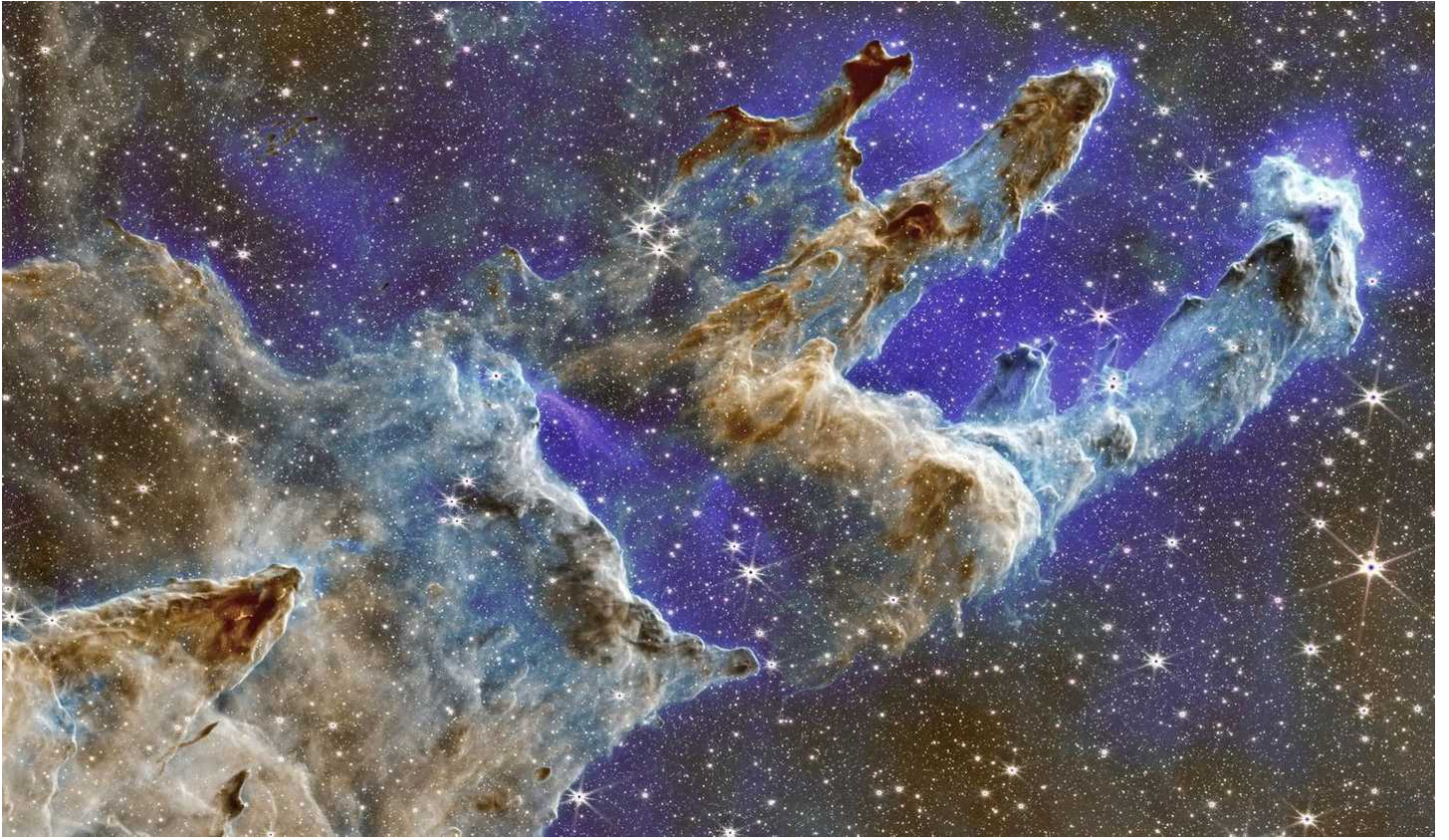


James Armstrong M42 and Running Man Nebula



Dr James Dire 2022/12/07 Moon & Mars

Photos from Space



Pillars of Creation JWST



NGC 1850 Hubble

Northmoor Hosting Schedule Dates for 2023

| Date: | Keyholder | Helper 1 | Helper 2 |
|----------------|-----------------|------------------|------------------|
| May 20 | Sheldon Schafer | Brian Austin | Shannon Wiltz |
| May 27 | Dan Son | Brandt Beschold | Trent Widmer |
| June 03 | Phil Burroughs | Brian Bill | Sheldon Schafer |
| June 10 | Sheldon Schafer | John Crow | Rodney Nordstrom |
| June 17 | Gerald Horst | Jesse Hoover | Shannon Wiltz |
| June 24 | Dave Grebner | John Manney | Brian Austin |
| July 01 | John Lyle | Rodney Nordstrom | John Crow |
| July 08 | Dan Son | Trent Widmer | Phil Burroughs |
| July 15 | Nick Rae | Shannon Wiltz | Brian Bill |
| July 22 | Phil Burroughs | Brian Austin | Brandt Bechtold |
| July 29 | Gerald Horst | John Lyle | Dan Son |
| Aug 05 | Dave Grebner | Nick Rae | Jesse Hoover |
| Aug 12 | John Lyle | Dan Son | Gerald Horst |
| Aug 19 | Sheldon Schafer | Brian Austin | Rodney Nordstrom |
| Aug 26 | Nick Rae | Brandt Bechtold | John Manney |
| Sept 02 | Phil Burroughs | Brian Bill | Trent Widmer |
| Sept 09 | Dan Son | John Crow | John Manney |
| Sept 16 | Gerald Horst | Dave Grebner | Sheldon Schafer |
| Sept 23 | Sheldon Schafer | Jesse Hoover | Brandt Bechtold |
| Sept 30 | Dan Son | John Manney | Dave Grebner |
| Oct 07 | John Lyle | Rodney Nordstrom | Dave Grebner |
| Oct 14 | Nick Rae | Trent Widmer | John Crow |
| Oct 21 | Dan Son | Shannon Wiltz | Brian Bill |

Observe The Moon Night with Peoria Library is October 21st, everyone is welcome to join.

If you have a conflict with any dates, let me know as early as possible and ask the Northmoor group via PeoriaAstro@groups.io for help to switch dates with another member. PAS is down to 7 keyholders and 11 helpers. Thanks Everyone.

2023 Jubilee Maintenance Schedule

(May 6th 2023 to Sep 30th 2023)

| | | |
|-----------|-----------------|-----------------|
| | | |
| May 6th | Jesse Hoover | Brandt Bechtold |
| May 13th | Eric Clifton | Dan Son |
| May 20th | Steve Russell | Jon Crow |
| May 27th | Jesse Hoover | Gary Bussman |
| | | |
| June 3rd | Brian Bill | Dan Son |
| June 10th | Eric Clifton | Brandt Bechtold |
| June 17th | Jesse Hoover | Jon Crow |
| June 24th | Steve Russell | Dan Son |
| | | |
| July 1st | Jesse Hoover | Gary Bussman |
| July 8th | Eric Clifton | Brian Bill |
| July 15th | Dan Son | Brandt Bechtold |
| July 22nd | Jon Crow | Steve Russell |
| July 29th | Jesse Hoover | Eric Clifton |
| | | |
| Aug 5th | Jesse Hoover | Gary Bussman |
| Aug 12th | Brian Bill | Dan Son |
| Aug 19th | Brandt Bechtold | Steve Russell |
| Aug 26th | Jon Crow | Eric Clifton |
| | | |
| Sept 2nd | Jesse Hoover | Gary Bussman |
| Sept 9th | Brian Bill | Dan Son |
| Sept 16th | Jon Crow | Steve Russell |
| Sept 23rd | Jesse Hoover | Gary Bussman |
| Sept 30th | Brandt Bechtold | Brian Bill |

Responsibilities:

- * Check each building to ensure security of equipment.
- * Sweep floors, mow lawn and trim around buildings, blow or sweep off grass clippings from walkways.
- * Mowing once a week will help prevent clumping and the need to sweep up clumps.
- * Bring gas to top off mower tank. Currently there is no line trimmer at Jubilee.
- * Since only two people are scheduled each week, it is imperative they ensure that someone goes to Jubilee and perform scheduled tasks.
- * Please notify me of any schedule conflicts or problems with the equipment.

Jesse Hoover: 309-258-0343