# The Prairie Astronomer

June, 2025 Volume 66, Issue #6


IN THIS ISSUE:



THE NEWSLETTER OF THE PRAIRIE ASTRONOMY CLUB

*The Prairie Astronomer*

Next meeting: Nearest Star Party, June 24th 6pm at Hyde Observatory

## NEXT MEETING

We will not have a regular meeting in June but will instead have our annual "Nearest Star Party" for solar observing at Hyde Observatory, **starting at 6pm.**

## CONTENTS



*Cover: Double Rainbow at Hyde Observatory, by John Reinert.*

*M31 by Brett Boller*


*Most of our club meetings are held at Hyde Memorial Observatory in Holmes Park.*

*The Observatory is owned and maintained by the City of Lincoln Parks and Recreation Department, but is operated by volunteers, many of whom are also members of the Prairie Astronomy Club.*

# CALENDAR

*June PAC Meeting*
*Tuesday, June 24, 6:00pm, Hyde Observatory*
*Nearest Star Party*

*Nebraska Star Party*
*July 20-25, Merritt Reservoir*

*July PAC Meeting*
*Tuesday July 29th, Hyde Observatory*
*Program: Nebraska Star Party Review*

*August PAC Meeting*
*Tuesday, August 26th, Hyde Observatory*

*PAC Google calendar:*
*https://www.prairieastronomyclub.org/event-calendar/*

## 2025 STAR PARTY DATES

| | Date | Date |
|---|---|---|
| January | 24 | **31** |
| February | 21 | **28** |
| March | 21 | **28** |
| April | 3/18 | **25** |
| May | 16 | **23** |
| June | 20 | **27** |
| July | 18 | **25** |
| NSP | 7/20 | 7/25 |
| August | 15 | **22** |
| September | **19** | 26 |
| October | 17 | **24** |
| November | 14 | **21** |
| December | 12 | **19** |

Dates in BOLD are closest to the New Moon.

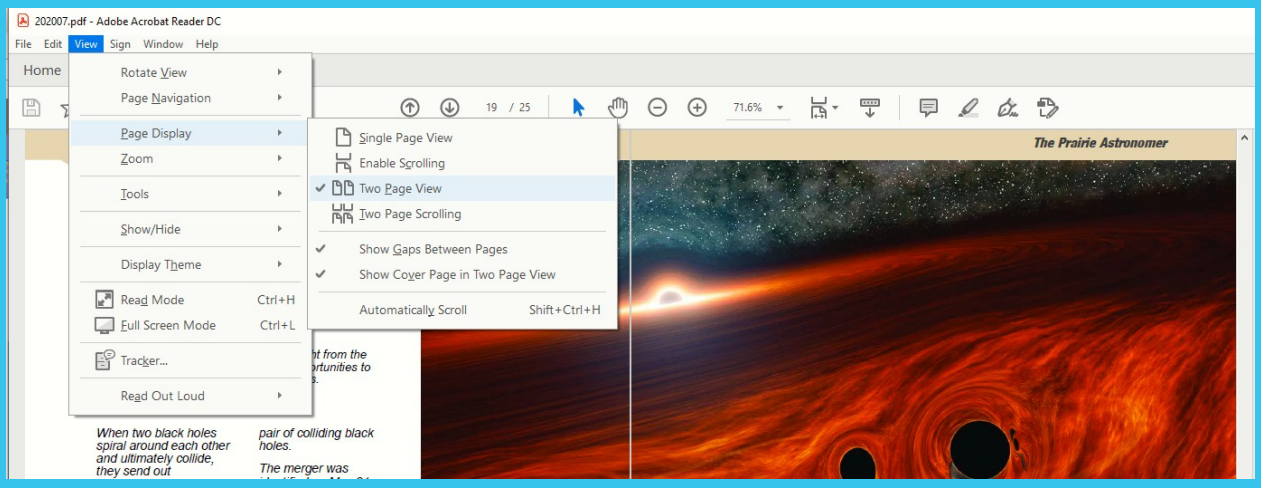
## CLUB OFFICERS

| | |
|---|---|
| President | Jason O'Flaherty<br>jflaher@gmail.com |
| Vice President | Brett Boller<br>proboller86@yahoo.com |
| 2nd VP (Program Chair) | Lee Taylor<br>otaylor88@gmail.com |
| Secretary | Jim White<br>jrwhite2188@gmail.com |
| Treasurer | John Reinert<br>jr6@aol.com |
| Club Observing Chair | Jim Kvasnicka<br>jim.kvasnicka@yahoo.com |
| Outreach Coordinator | Don Hain<br>dhain00@gmail.com |
| Website and Newsletter Editor | Mark Dahmke<br>mark@dahmke.com |

# NOTICES

## Newsletter Page View Format

### How to Adjust Adobe Acrobat Settings for Two Page View




*To view this newsletter in magazine spread format in Acrobat, select View ->Page Display->Two Page View. Acrobat will then show two pages side by side. Also make sure the checkboxes "Show Cover Page in Two Page View" and "Show Gaps Between Pages" are checked. If you have it setup correctly, the cover page will be displayed by itself and subsequent pages will be side by side with the odd numbered pages on the left.*

## Pay Dues Online

*https://www.prairieastronomyclub.org/pay-dues-online/*
*If you're already a member and are renewing within 30 days of your anniversary date, select the early renewal option for a discount.*

## PAC-LIST

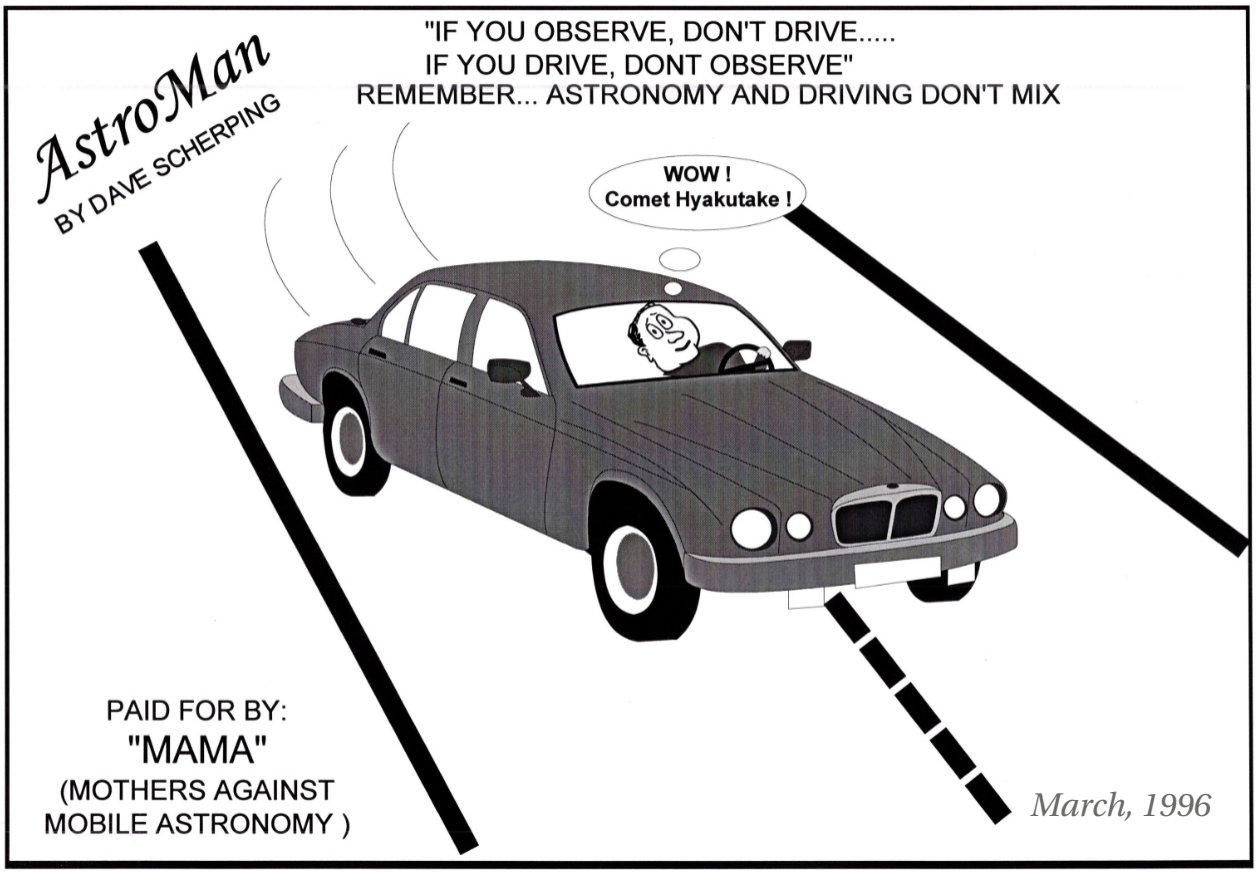
*Subscribe through GoogleGroups or contact Mark Dahmke to be added to the list. You'll need a Google/ gmail account, but if you want to use a different email address, just associate that address with your google account to access Google Groups. Once subscribed, you can view message history through the GoogleGroups website. To post messages to the list, send to this address: pac-list@googlegroups.com*

# The President's Message

Dear PAC Members,

I hope this message finds you well and enjoying the start of a great summer. I look forward to seeing you all at our next meeting, which is our Solar Observing party. Please bring any safe solar viewing equipment you'd like to share, and we'll meet on the lawn of Hyde at 6:00 on Tuesday, June 24. We'll have ice cream to help keep us cool.

Clear Skies,
Jason O'Flaherty



# Meeting Minutes

*Jim White*

Jason O'Flaherty started the meeting at 7:33 pm. There are no new members this month but we do have a couple of guests in attendance. Tonight's meeting is being held at Hyde Observatory and online via Zoom.

At 7:34 Jason turned the meeting over to Jim Kvasnicka, PAC's Observing Chair, for his monthly observing report. Star parties for June will be on 6/20 and 6/27 at the Clatonia Recreation Area. Planets for the month of June, Venus is a morning planet, Mars is a morning planet but is very low and difficult to see, Saturn is a morning planet but is very low and difficult to see, Neptune is very low and difficult to see, Uranus is not visible, Jupiter is an evening planet is close to the sun and reaches solar conjunction on June 24th, Mercury is an evening planet but is best seen at the end of the month. Jim's complete observing report can be found in the newsletter. Jim completed his observing report at 7:38 and turned the meeting back over to Jason. There was a short discussion about Charles Messier and the Messier objects in between Jim's observing report and John's monthly treasurer's report.

At 7:41 Jason turned the meeting over to John Reinert for his monthly treasurer's report. John displayed a slide in the PowerPoint display showing the club's current account balances including the club's checking account, CD's, PayPal etc. If you would like to pay your dues by cash or check you can see John or you can pay them online through the club's website. John's report ended at 7:43 and turned the meeting back over to Jason.

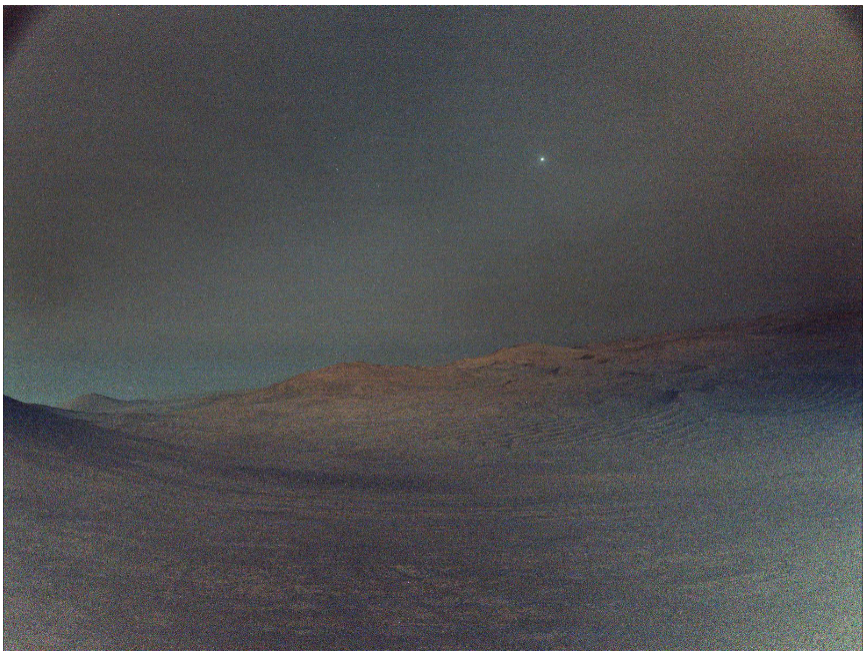
Club business for the upcoming month, our June meeting will be on the 24th and is our annual solar observing event so there will be no formal meeting. The plan for the 24th is to meet on the lawn outside Hyde Observatory with dedicated solar telescopes if you have one or a regular telescope equipped with a safe solar filter to share views of the sun with fellow members of the club and any visitors that may stop by. If it happens to be cloudy or inclement weather we will meet inside Hyde Observatory but will not be having a formal club meeting. There will also be no Zoom meeting for June. There will be ice cream treats at the June meeting.

We will be having a July meeting this year because NSP is the week before the last Tuesday of the month. At the July

# Meeting Minutes, continued

meeting the program will be to show pictures from NSP or any other astronomy related photos that you would like to share with the group. If you do have pictures that you would like to share please get them to Jason so that he can include them in the program. MSRAL is coming up in June on the 13th thru the 15th in Little Rock Arkansas. The Rocky Mountain Star Stare is the 25th thru the 29th at 7600 feet of elevation. The 32nd Annual Nebraska Star Party (NSP) is July 20th thru the 25th at Merritt Reservoir in the Nebraska sandhills. Jason had a PowerPoint slide to show the layout of the area where NSP is held and what a person can expect at the event. Jason also reviewed the daily schedule for each day at NSP. Before the formal meeting adjourned we took a few minutes for people to ask astronomy related questions to the group. Tonight's formal meeting ended at 7:56.

Tonight's program is "Psyche: Journey to a Metal World". We will be watching a webinar that is about a month old that was put on by the Western Society of Astronomy. Our own Solar System Ambassador, Bob Kacvinski, has arranged for us to watch portions of the webinar and will lead a discussion and give us some background information on this mission.



*NASA's Perseverance rover captured this view of Deimos, the smaller of Mars' two moons, shining in the sky at 4:27 a.m. local time on March 1, 2025, the 1,433rd Martian day, or sol, of the mission. Credit: NASA/JPL-Caltech*

# ARP 81

## The Mantrap Skies Image Catalog

Arp 81 is NGC 6621 and NGC 6622. Arp put it in his category of spirals with large, high surface brightness companions. While many he considered companions are now known just to be line of sight galaxies that are unrelated. That's not the case here. This pair is located in Draco about 280 million light-years distant. The small southern galaxy is NGC 6621. It is classified as Sa by NED, Sbc by the NGC project and (R)SBa? pec by Seligman. It is thought to be orbiting NGC 6622 and has dawn out the large plume running around NGC 6622. It was discovered by Lewis Swift on June 2, 1885.

Note that more than a couple sources claim NGC 6622 is the southern rather than northern galaxy. Dreyer noted however it was the northern one. Why this puts them out of Right Ascension order I don't know but this isn't the only pair with this issue.

NGC 6622 is the large galaxy with the huge plume drawn out by NGC 6621. It is classed as Sb: pec HII;LIRG by NED, Sb/P by the NGC Project and Sb? pec by Seligman. It was discovered by Edward Swift the same night as his father is said to have found NGC 6621. Did dad let son have credit for this one? Edward was only 14 at the time. Edward is credited with finding 25 NGC objects and 23 IC objects. All were when he was 13 to 20 years of age. Why nothing after that?

The Hubble Space Telescope has studied this pair. Rather than retype it here's the link: http://www.astr.ua.edu/gifimages/ngc6621.html . For those wanting a deeper discussion see: http://arxiv.org/PS_cache/astro-ph/pdf/0309/0309674v1.pdf .

## Rick Johnson

***Rick Johnson, a founding member of the Prairie Astronomy Club, passed away in January, 2019. His legacy lives on through his comprehensive catalog of over 1600 images at www.mantrapskies.com.***

# Focus on Constellations

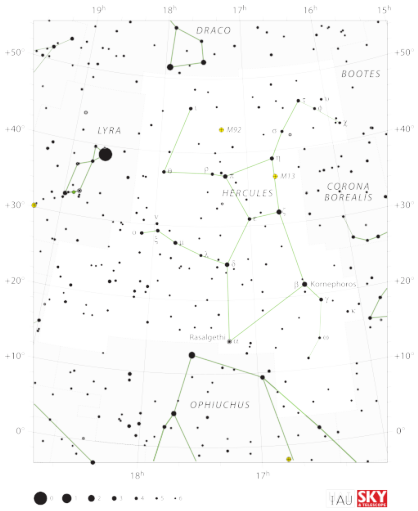
*Jim Kvasnicka*

Hercules, the Strongman is the fifth largest constellation covering 1,225 square degrees. It's best known by its Keystone asterism making it easy to spot. On the western side of the Keystone is the constellations finest object, the Great Hercules Cluster M13, the best globular cluster in the northern hemisphere. Hercules contains a second outstanding globular cluster in M92 which is often overlooked. The constellation has a number of colorful double stars, planetary nebulae, and a number of galaxies. The constellation Hercules is best seen in June.

**Showpiece Objects**
**Globular Clusters:** M13, M92
**Multiple Stars:** Alpha Herculis (Ras Algethi), Delta Herculis, Mu Herculis

**Mythology**
Hercules was the son of Zeus by a mortal woman and hated by Zeus's wife Hera. He began his life of heroic violence by strangling two serpents in his crib as an infant. The serpents were sent by Hera to kill Hercules. As a man Hera made Hercules insane by burning down his house and killing his wife and children. When he recovered his sanity he sought the help from the oracle of Delphi. The oracle told Hercules he must serve his cousin Eurystheus, King of Argos. Hoping to kill Hercules, Eurystheus gave him 12 supposedly impossible tasks to do. These were the 12 labors of Hercules and included strangling the Nemean Lion and striking off the many heads of the Hydra. After he completed the 12 labors Hercules took part in the voyage of Jason and the Argonauts to find the Golden Fleece. Hercules died when his second wife accidentally poisoned him. Zeus honored his son by making him a god and placing him in the sky forever.

**Number of Objects Magnitude 12.0 and Brighter**
**Galaxies:** 8
**Globular Clusters:** 3
**Planetary Nebulae:** 4




*Hercules Constellation Map:*
*IAU and Sky & Telescope magazine (Roger Sinnott & Rick Fienberg), CC BY 3.0 <https://creativecommons.org/licenses/by/3.0>, via Wikimedia Commons*

# July Observing

*Jim Kvasnicka*

This is a partial list of objects visible for the upcoming month.

**Planets**

**Mercury:** Evening planet, poorly located for viewing.
**Mars:** Evening planet poorly positioned.
**Venus:** Morning planet.
**Jupiter:** Morning planet may be visible starting mid-July.
**Saturn:** Morning planet.
**Uranus:** Conjunction with Venus on July 4th.
**Neptune:** Morning planet close to Saturn.

**Messier List**

**M3:** Class VI globular cluster in Canes Venatici.
**M4**: Class IX globular cluster in Scorpius.
**M5:** Class V globular cluster in Serpens Caput.
**M53:** Class V globular cluster in Coma Berenices.
**M68:** Class X globular cluster in Hydra.
**M80:** Class II globular cluster in Scorpius.
**M83:** Galaxy in Hydra.

**Last Month:** M58, M59, M60, M84, M86, M87, M88, M89, M90, M91, M98, M99, M100
**Next Month:** M6, M7, M8, M9, M10, M12, M19, M20, M21, M23, M62, M107

**NGC and other Deep Sky Objects**

**NGC 6210:** Blue colored planetary nebula in Hercules.
**NGC 6229:** Class IV globular cluster in Hercules.
**NGC 6302:** The Bug Nebula in Scorpius.
**NGC 6309:** Planetary nebula in Ophiuchus.
**NGC 6369:** The Little Ghost Nebula in Ophiuchus.
**NGC 6543:** The Cat's Eye Nebula in Draco.
**IC 4703:** The Eagle Nebula in Serpens, M16 is the open cluster embedded in the nebula.

**Double Star Program List**

**Nu Draconis:** Equal pair of white stars.
**Psi Draconis:** Pair of light-yellow stars.
**40/41 Draconis:** Equal pair of light-yellow stars.
**Xi Scorpii:** Yellow primary with a light blue secondary.
**Struve 1999:** Two yellow-orange stars.
**Beta Scorpii:** Bluish white primary with a light blue secondary.
**Nu Scorpii**: Yellow and light blue pair.
**Delta Serpentis:** Light yellow stars.
**Theta Serpentis:** Two blue-white stars.

**Challenge Object**

**NGC 6144:** Faint Class XI globular cluster just 40' NW of Antares.

# Club Outreach

*Don Hain*

## Kinesthetic Astronomy: The Meaning of a Year

Prairie Astronomy Club provides a way for folks from the community to reach out to us via the contact link on our website. That link provided us the opportunity on the Tuesday morning of June 10th to meet with kids at the Willard Community Center here in Lincoln as part of their STEM week. Three groups of about 25-30 students each were introduced to concepts of size, distance and motion as it relates both to the earth's relation to the sun and motions around it (both the earth's rotation, as well as its orbit around the sun.

There was not time to get into discussions about the signs of the zodiac, but the fact that we see the summer triangle in the summer and Orion in the winter was brought out vividly by a walk around an imaginary sun of about 14cm in size. With the earth being 100x smaller, it was seen to be the size of the tip of a ballpoint pen (1.4mm). Since a sun of 14cm is about 10 billion times smaller than the actual sun, the corresponding distance scale caused a march around the model sun to take place on the circumference of a circle about 15 meters away from the model sun. Swimming pool "noodles" (cut to 10" in size with one color for east and another color for west) provided a visual clues about the earth rotating. Children were able to turn around and experience a simulation of the sun "coming up" as their left side turned more and more toward our model sun. Continuing around, they would "see" the model sun set to their west, and the stars rise in the eastl. Sandwich board body billboards

## Outreach, continued

allowed the kids to grasp that folks in China are seeing stars while us folks in this hemisphere are experiencing daylight, with a map of the Western hemisphere on their front; one of the Eastern hemisphere on their back.

The size comparison of the earth to a pen-point allowed for a bit of talk about "a person's a person no matter how small" from the Dr. Seuss book Horton Hears a Who. The kindergarten-1st grade group requested a reading of the entire book, getting a bit of time to contemplate that though earth may be small in comparison to the vast universe we exist in, we should not take the fact of our existence lightly … and that we should treat each other with care and respect.

## Outreach Calendar

There was continued movement toward closer connections with the cub scout packs in Lincoln. A couple pairs of binoculars and some books on astronomy were checked out to a family that reached out individually. At least one of the troops in town is hoping some of us can visit them at a camping/astronomy nighttime activity later this year. Let me know if you are interested in getting involved ( dhain00@gmail.com or by phone to 402 440 5318).

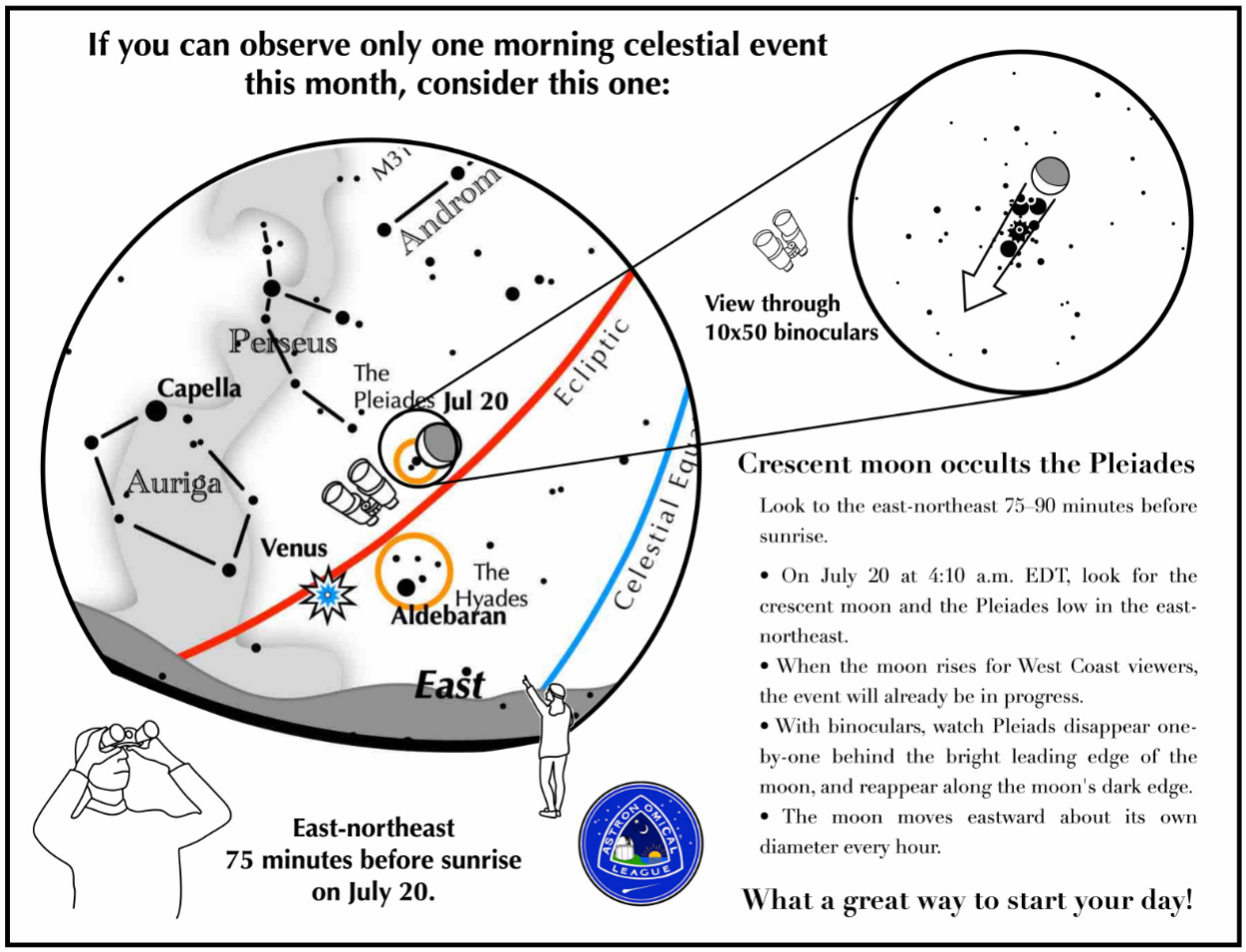
Upcoming event(s):
Camp Erin - Youth Overnight Camp
When: September 27-29, 2025 (exact night still to be determined)
Where: Carol Joy Holling Center- 27416 Ranch Rd, Ashland, NE 68003
Sponsored by: Mourning Hope
PAC Co-ordinator for this event: Bob Kacvinsky

Hoot 'n Howl - Spring Creek Prairie
When: usually in October (date won't be set until sometime later in June)
Where: Spring Creek Prairie Audubon Center - 11700 SW 100th St Denton, NE 68339
Sponsored by: Spring Creek Prairie
Needs: 2 or more volunteers are hoped for -

# Outreach Calendar, continued

Crete Public Library - Intro to Astronomy presentation and viewing of the night sky
When: planning for early November (after Daylight Savings Time ends)
Where: Crete Public Library, 1515 Forest Ave, Crete NE 68333
Sponsored by: Crete Public Library
Needs: 5 or more are hoped for to bring scopes for the night sky viewing - contact dhain00@gmail.com

Hyde Observatory: OPEN
When: Saturday nights
Where: Hyde Observatory
Sponsored by: Lincoln Parks and Rec / Hyde Board of Directors
Needs: volunteers willing to work out on the deck or manage the shows in the classroom about one Saturday per month
see https://www.hydeobservatory.info/volunteer/ for more information



# Astronomical League Outreach

The Astronomical League OC Open Cluster Program

## M6 & M7

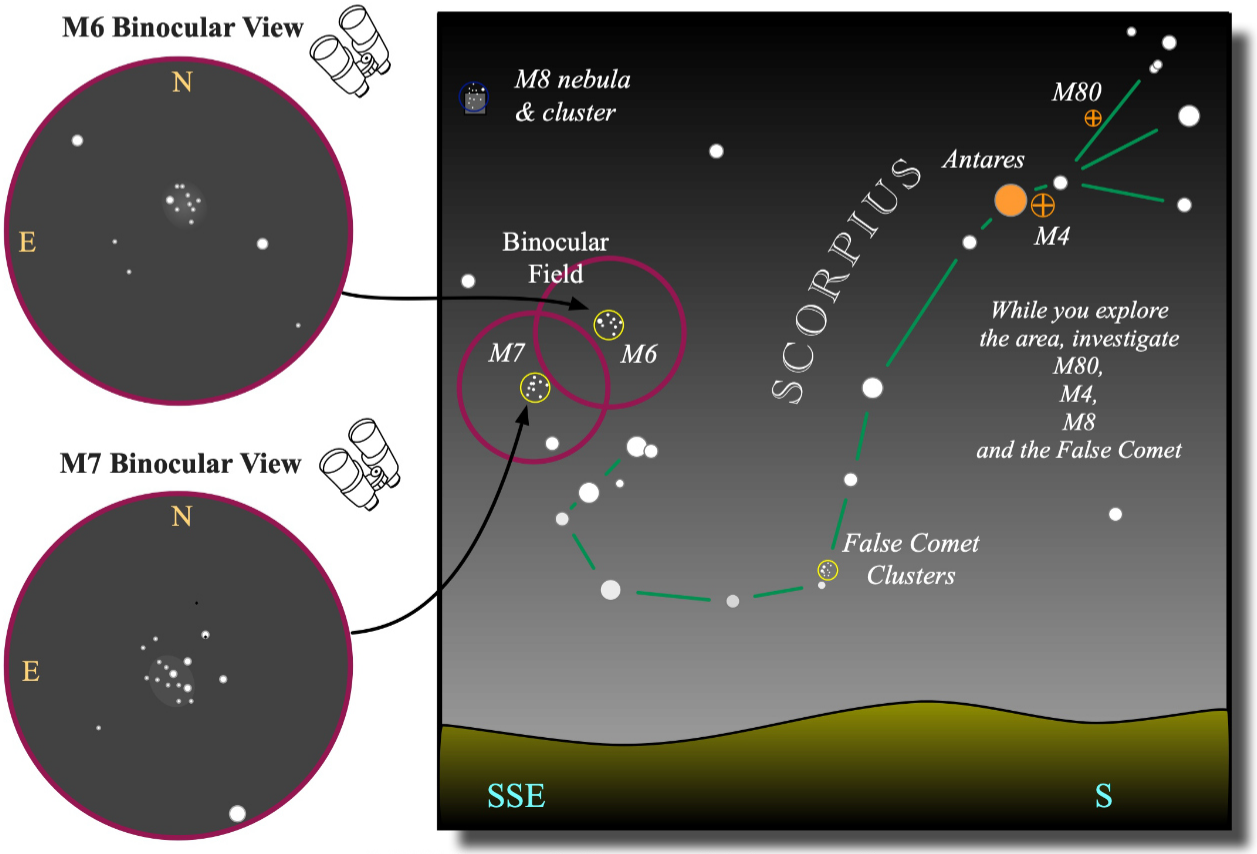
*When these two big, bright, and beautiful open star clusters appear in the early evening in mid June, summer is not far behind.*

If you have recently begun your journey under the stars, why not whet your appetite by exploring southeastern Scorpius and its two wonderful open star clusters, M6 & M7. You will return to them year after year!

While they are visible to the unaided eye from a dark location, binoculars help greatly.
1. Identify Scorpius standing low in the south-southeast on a late spring or early summer evening. As summer proceeds, it is found low in the south, then low in the southwest in the early fall.
2. From red Antares, direct your gaze southward down the scorpion's back, then turn eastward.
3. When its tail hooks northward, continue the length of that hook.
4. M6 and M7 should be plainly visible in the binocular field.

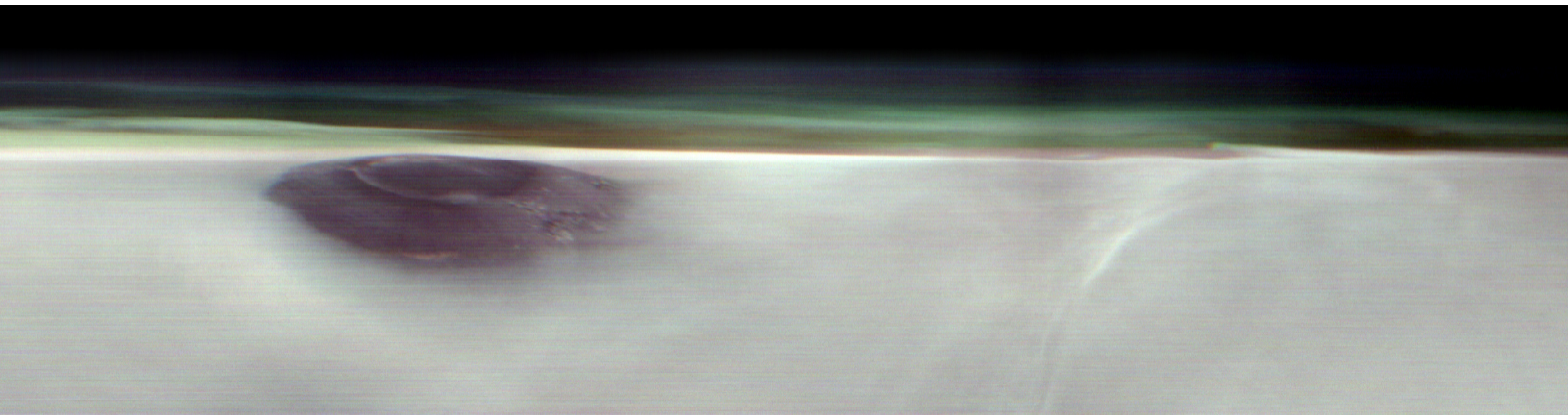
**M6:**
A faint hazy glow is seen by the unaided eye from a dark, clear site. Two dozen stellar lights can be discerned with 10x50 binoculars.

**M7:**
A glittery glow is easily spotted off the scorpion's tail by the unaided eye. Binoculars reveal many faint stars.



# NASA Mars Orbiter Captures Volcano Peeking Above Morning Cloud Tops

**The 2001 Odyssey spacecraft captured a first-of-its-kind look at Arsia Mons, which dwarfs Earth's tallest volcanoes.**



*Arsia Mons, an ancient Martian volcano, was captured before dawn on May 2, 2025, by NASA's 2001 Mars Odyssey orbiter while the spacecraft was studying the Red Planet's atmosphere, which appears here as a greenish haze. Credit: NASA/JPL-Caltech/ASU*

A new panorama from NASA's 2001 Mars Odyssey orbiter shows one of the Red Planet's biggest volcanoes, Arsia Mons, poking through a canopy of clouds just before dawn. Arsia Mons and two other volcanoes form what is known as the Tharsis Montes, or Tharsis Mountains, which are often surrounded by water ice clouds (as opposed to Mars' equally common carbon dioxide clouds), especially in the early morning. This panorama marks the first time one of the volcanoes has been imaged on the planet's horizon, offering the same perspective of Mars that astronauts have of the Earth when they peer down from the International Space Station.

Launched in 2001, Odyssey is the longest-running mission orbiting another planet, and this new panorama represents the kind of science the orbiter began pursuing in 2023, when it captured the first of its now four high-altitude images of the Martian horizon. To get them, the spacecraft rotates 90 degrees while in orbit so that its camera, built to study the Martian surface, can snap the image.

The angle allows scientists to see dust and water ice cloud layers, while the series of images enables them to observe changes over the course of seasons.

"We're seeing some really significant seasonal differences in these horizon images," said

# Mars Orbiter, continued

planetary scientist Michael D. Smith of NASA's Goddard Space Flight Center in Greenbelt, Maryland. "It's giving us new clues to how Mars' atmosphere evolves over time."

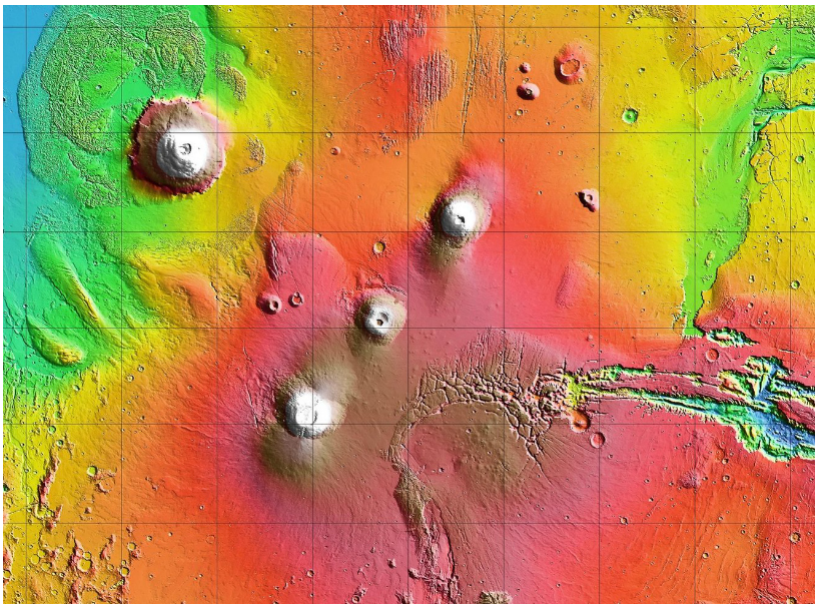
Understanding Mars' clouds is particularly important for understanding the planet's weather and how phenomena like dust storms occur. That information, in turn, can benefit future missions, including entry, descent and landing operations.

Volcanic Giants

While these images focus on the upper atmosphere, the Odyssey team has tried to include interesting surface features in them, as well. In Odyssey's latest horizon image, captured on May 2, Arsia Mons stands 12 miles (20 kilometers) high, roughly twice as tall as Earth's largest volcano, Mauna Loa, which rises 6 miles (9 kilometers) above the seafloor.

The southernmost of the Tharsis volcanoes, Arsia Mons is the cloudiest of the three. The clouds form when air expands as it blows up the sides of the mountain and then rapidly cools. They are especially thick when Mars is farthest from the Sun, a period called aphelion. The band of clouds that forms across the planet's equator at this time of year is called the aphelion cloud belt, and it's on proud display in Odyssey's new panorama.

"We picked Arsia Mons hoping we would see the summit poke above the early morning clouds. And it didn't disappoint," said Jonathon Hill of Arizona State University in Tempe, operations lead for Odyssey's camera, called the Thermal Emission



*Arsia Mons is the southernmost of the three volcanoes that make up Tharsis Montes, shown in the center of this cropped topographic map of Mars. Olympus Mons, the solar system's largest volcano, is at upper left. The western end of Valles Marineris begins cutting its wide swath across the planet at lower right.*
*Credit: NASA/JPL-Caltech*

## Mars Orbiter, continued

Imaging System, or THEMIS.

The THEMIS camera can view Mars in both visible and infrared light. The latter allows scientists to identify areas of the subsurface that contain water ice, which could be used by the first astronauts to land on Mars. The camera can also image Mars' tiny moons, Phobos and Deimos, allowing scientists to analyze their surface composition.

More About Odyssey

NASA's Jet Propulsion Laboratory, a division of Caltech in Pasadena, California, manages the Mars Odyssey Project for the agency's Science Mission Directorate in Washington as part of NASA's Mars Exploration Program portfolio. Lockheed Martin Space in Denver built the spacecraft and collaborates with JPL on mission operations. THEMIS was built and is operated by Arizona State University in Tempe.

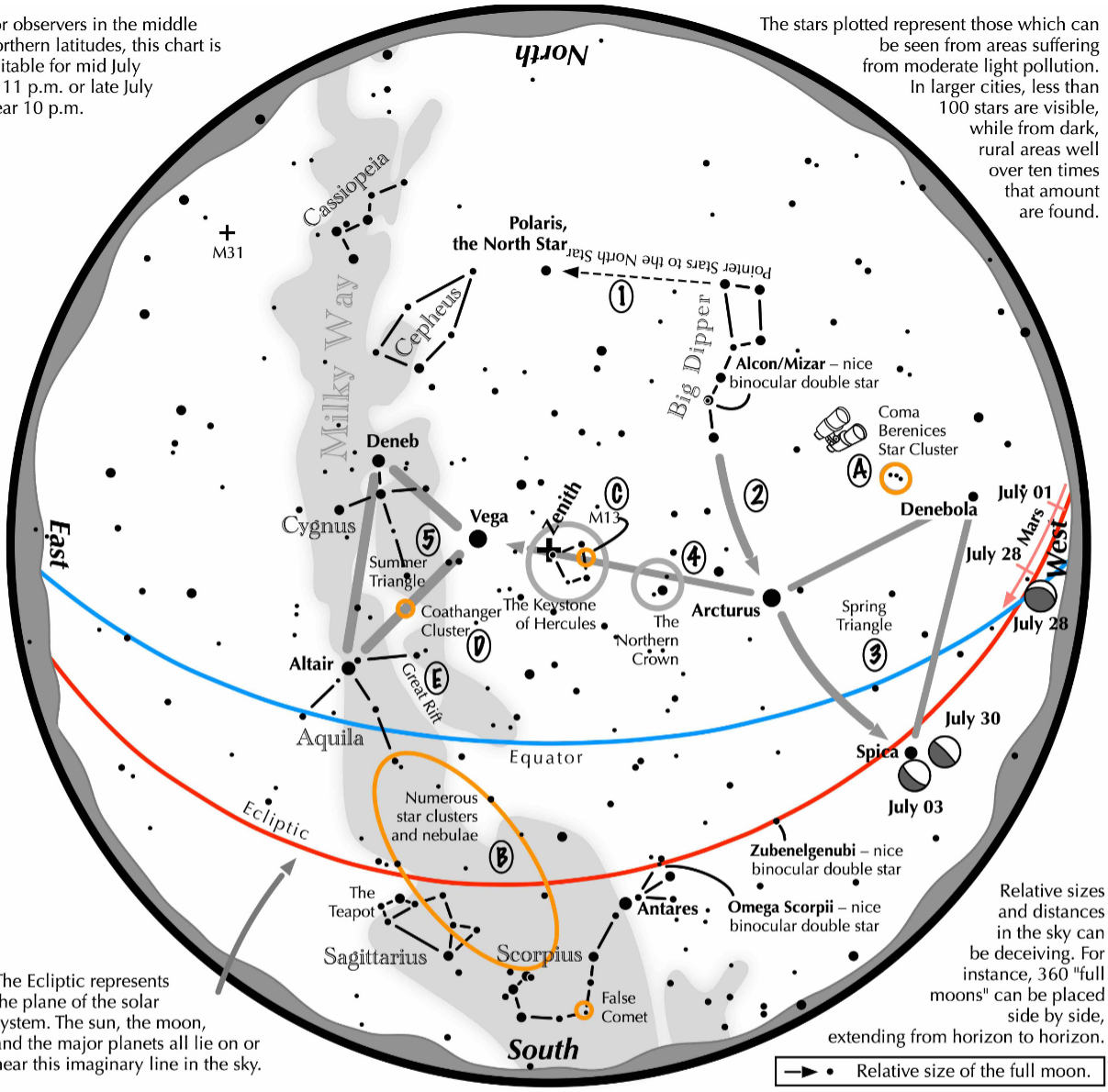

THIS NEW SUNSPOT CLUSTER HAS RAISED CONCERN AMONG ASTRONOMERS

xkcd.com

# Navigating the mid-July Night Sky

For observers in the middle northern latitudes, this chart is suitable for mid July at 11 p.m. or late July near 10 p.m.

The stars plotted represent those which can be seen from areas suffering from moderate light pollution. In larger cities, less than 100 stars are visible, while from dark, rural areas well over ten times that amount are found.




The Ecliptic represents the plane of the solar system. The sun, the moon, and the major planets all lie on or near this imaginary line in the sky.

Relative sizes and distances in the sky can be deceiving. For instance, 360 "full moons" can be placed side by side, extending from horizon to horizon.

→ • Relative size of the full moon.

**Navigating the mid July night sky: Simply start with what you know or with what you can easily find.**

1. Extend a line north from the two stars at the tip of the Big Dipper's bowl. It passes by Polaris, the North Star.
2. Follow the arc of the Dipper's handle. It first intersects Arcturus, the brightest star in the July evening sky, then continues to Spica. Arcturus, Spica, and Denebola form the Spring Triangle, a large equilateral triangle.
3. To the northeast of Arcturus shines another star of similar brightness, Vega. Draw a line from Arcturus to Vega. It first meets "The
4. Northern Crown," then the "Keystone of Hercules." A dark sky is needed to see these two dim stellar configurations.
5. High in the East lies the Summer Triangle stars of Vega, Altair, and Deneb.

**Binocular Highlights**

**A:** Between Denebola and the tip of the Big Dipper's handle, lie the stars of the Coma Berenices Star Cluster.
**B:** Between the bright stars Antares and Altair, hides an area containing many star clusters and nebulae.
**C:** On the western side of the Keystone glows the Great Hercules Cluster, containing nearly 1 million stars.
**D:** 40% of the way between Altair and Vega, twinkles the "Coathanger," a group of stars outlining a coathanger.
**E:** Sweep along the Milky Way for an astounding number of faint glows and dark bays, including the Great Rift.

# Astrophotography

*Whirlpool Galaxy, by Brett Boller.. 10 minute live stack images taken from BOO plus dark frames on May 19th. 300mm FRC Takahashi and ZWO ASI 2600. 20 Images at 30 sec each. Images captured by Brett Boller. Processing curtesy of Jim White via PixInsight.*

# Astrophotography

*Crescent Nebula by Brett Boller. 28 - 30 second images taken from BOO plus dark frames on May 25th. 300mm FRC Takahashi and ZWO ASI 2600. Images captured by Brett Boller. Processing curtesy of Jim White via PixInsight.*

# Astrophotography



*M64 by Bob Kacvinsky. 120 minutes exposure. Black eye galaxy. 5/4/25. Urban skies. Spiral galaxy 17 million light years away. In Coma Berenices.*
*Right: M104 by Bob Kacvinsky. Sombrero Galaxy. 14 minutes. Light polluted urban setting. 5/17/2025. BOO @ Raymond.*

# Astrophotography

*M42 by Russ Genzmer. 5 hours of 3 minute exposures with post processing via Pixinsight software. Askar 103mm apochromatic triple lens refractor, Skywatcher 72mm guide scope, ZWO ASI 294 color astro camera, ZWO ASI Air controller.*

# From the Archives, June, 1995

The June PAC meeting generated quite a bit of discussion about the shielding of obtrusive lighting at the Atlas Site and at the 2nd Annual Nebraska Star Party site at Merritt Reservoir. Dave Scherping and Tom Miller reported that a new light is in place by the dirt road west of the Atlas Site and the house that has been under construction for several months nearby is also structurally complete. Furthermore, the house has five alternately spaced half levels with several windows on the side facing the observing pad. Pine trees that were recently planted in the yard could someday provide a natural light shield, but it will be years before they are grown and the house is rather large anyway. A motion was proposed and carried for PAC to offer to shield the bright light so that the Atlas Site would be useful again. The shield is to be the same or similar to those that have already been approved by the Game and Parks Commission authority for use at the Merritt Reservoir.

Weeds that are growing in the concrete pad will be chemically dealt with in the near future to avoid the potential for more cracks in the concrete.

Treasurer John Bruce reported that "We still have money". He provided the balances of the checking account, money market account, and N.S.P. checking account.

There are about 60 N.S.P. registrants so far as of May 30th and a few more are expected since advertising has appeared in Sky & Tel and Astronomy magazines recently. There is still a lot to be done for the N.S.P. Organizational meetings are held at Miller Seed Company, 1600 Cornhusker Highway. For the next scheduled date and time, look elsewhere in this newsletter. There are quite a few registrants and non-registrants that haven't ordered N.S.P. T-shirts. Since the shirts are multi-colored with a "white Nebraska positioned inside a photographic quality North American Nebula" the opinion is out that there may be a trend of purchases during or after the star party. A second order of T-shirts is planned very soon, so it isnt too late to order, but don't wait or you might miss your chance. If you want to order contact either Dave Scherping or John Bruce ASAP!

The club (13" Dobsonian) scope is frequently available for any club member to use. Interested? Call Dave (477-2596) for available times and check out details.

The new club librarian... that's me...Bryan Schaaf (438-4285) has many astronomy books and magazines available for

# From the Archives, continued

check out. Call or leave a message, if you're interested. A listing of all the library materials appeared in last month's newsletter. The books "Entering Space", "The Cambridge Atlas of Astronomy", and "LIFE in Space" were presented at the meeting. June 23-25 are the dates for the Mid-States Convention in Arkansas. Contact Dave if you need a registration form.

Mahoney Star Party ads have been distributed at locations in the Mahoney State Park, so we can expect a good showing each month when the weather is nice. We need continued telescope and volunteer support. If you don't attend the monthly public star party, you are missing out on a lot of fun! Regarding Astronomy Day last month Jack Dunn expressed thanks for all the help to those that participated. It was probably one of the best, if not the best Astronomy Days we have had in a long time. Jack requests that anyone that might have pictures of last month's event, please let him know. He would appreciate a chance to have copies made for his Mueller planetarium archives. The PBS show entitled "Apollo 13...To the Edge and Back", which aired last July just prior to the Jupiter-comet collision event, was the featured program after the meeting. It was about the failed 1970 mission to the moon that endangered the lives of the three man crew after the explosion of an oxygen tank inside the service module. A new movie "Apollo 13" directed by Ron Howard and starring Tom Hanks is due to be released at thé end of this month.

# ADDRESS

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The Prairie Astronomer is published monthly by the Prairie Astronomy Club, Inc. Membership expiration date is listed on the mailing label. Membership dues are: Regular $30/yr, Family $35/yr. Address all new memberships and renewals to: The Prairie Astronomy Club, Inc., PO Box 5585, Lincoln, NE 68505-0585. For other club information, please contact one of the club officers listed to the right. Newsletter comments and articles should be submitted to: Mark Dahmke, P. O. Box 5585, Lincoln, NE 68505 or mark@dahmke.com, no less than ten days prior to the club meeting. The Prairie Astronomy Club meets the last Tuesday of each month at Hyde Memorial Observatory in Lincoln, NE.


# MEMBERSHIP INFO

REGULAR MEMBER - $30.00 per year. Includes club newsletter, and 1 vote at club meetings, plus all other standard club privileges.

FAMILY MEMBER - $35.00 per year. Same as regular member except gets 2 votes at club meetings.

STUDENT MEMBER - $10.00 per year with volunteer requirement.

If you renew your membership prior to your annual renewal date, you will receive a 10% discount.

Club members are also eligible for special subscription discounts on Sky & Telescope Magazine.

# CLUB TELESCOPES

To check out one of the club telescopes, please contact a club officer. Scopes can be checked out at a regular club meeting and kept for one month. Checkout can be extended for another month if there are no other requests for the telescope, but you must notify a club officer in advance.
100mm Orion refractor: Available
10 inch Meade Starfinder Dobsonian: Available.
13 inch Truss Dobsonian: Needs repair.
10 inch Zhumell: Needs mount.

*Buy the book! The Prairie Astronomy Club: Fifty Years of Amateur Astronomy. Order online from Amazon or lulu.com.*