STARLIGHT JOURNAL

DECEMBER 2025

The "**Christmas Tree Cluster**," or NGC 2264, is a cluster of young stars between one and five million years old. (For comparison, the Sun is a middle-aged star about 5 billion years old—about 1,000 times older.) NGC 2264 is about 2,500 light-years from Earth.

X-ray: NASA/CXC/SAO; **Optical:** T.A. Rector (NRAO/AUI/NSF and NOIRLab/NSF/AURA) and B.A. Wolpa (NOIRLab/NSF/AURA); **Infrared**: NASA/NSF/IPAC/CalTech/Univ. of Massachusetts; **Processing**: NASA/CXC/SAO/L. Frattare & J.Major

SAVE THESE DATES NOW!

Saturday, December 6 DMAS Holiday Party – at Altoona Hy Vee 6:00 p.m.
Saturday, January 3 Next Member Meeting – at Drake Observatory

Des Moines Astronomical Society
Holiday Party Update

LAST DAY TO RSVP IS MONDAY DECEMBER 1

The 2025 Holiday Party is scheduled for Saturday, December 6 at the upstairs conference room of Altoona Hy-Vee. Guests are invited to arrive at 6:00 p.m., with dinner being served at 6:30 p.m. The conference room can be found upstairs to the right of the main entrance and is accessible via elevator or stairs.

Menu:

- Entrées: herb-roasted chicken & roast beef
- side dishes: garden salad and oven-roasted red potatoes
- large fruit platter
- assorted cookies
- Soft drinks, water and coffee

Your portion of the meal and party is only $5. Please bring your payment to the party on December 6.

- **2025 Awards Ceremony**
- **Review of 2025 Activities – Slide Show**
- **Dinner**
- **White Elephant Gift Exchange for those who bring a wrapped gift (optional)**
- **Door Prizes**

December 2025 – President's Report

I am very excited to see everyone at this year's DMAS Holiday Party and want you to enjoy a great evening. Last year we had to cancel our party due to icy weather, but I am keeping my fingers crossed for good weather this year!

Norm has received the payment check from the tree harvester for the Timberline property trees that are to be harvested and has given permission for the work to begin as soon as possible. Thank You Norm for your continued endeavors to keep this project on track.

Talking about weather, remember we do not meet at Ashton Observatory for our January and February DMAS member meetings. Once again, Herb Folsom will host our meetings at the Drake Observatory as in years past. We appreciate the generosity of Herb, the Drake Observatory, and the City of Des Moines for allowing us to use their facility.

As I reflect on this past year, I am very appreciative of the many contributions by DMAS members to our organization and the many events we completed! Thank You Everyone!

- JoAnn

Observatory Committee Report

December 2025

Greg Woolever, Observatory Director

The cyclical nature of the cosmos can grab our attention as we approach the conclusion of the year: Sunrise and sunset never fail as our planet does its daily rotation. The monthly lunar phases progress as our Moon circles Earth, while Earth does her seasonal changes each year. Planets of our solar system do their dance of crossing paths and moving near and far as they pass through opposition positions. New technologies provide us new images of the distant past and distant objects.

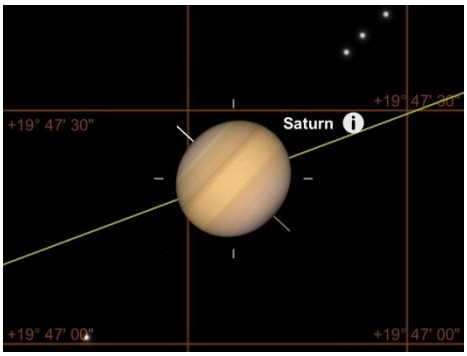
We on the ground here in Central Iowa gaze with curiosity and pleasure at all these comings and goings. Perhaps I only speak for myself, but being mindful of the night sky above us helps to shape my perspective on the mystery of creation and our humble place in it. Most of the time this tends to point me at thoughts about "the big picture" as opposed to "daily humdrum." That might generate more questions than answers, but for me that delight is energizing.

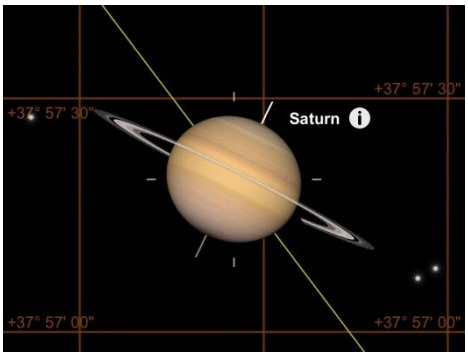
Winter slumber is the basic reality for Ashton Observatory at the moment, so nothing dramatic to report. Yes, a sidewalk has been added. Plans are to add ceiling lights in the classroom to provide spotlight illumination on the astrophotos on display there, courtesy of J.R. Paulson. And plans to replace the telescope in the east dome continue, now that a generous donation has been received from the family of David Hohbach in his memory.

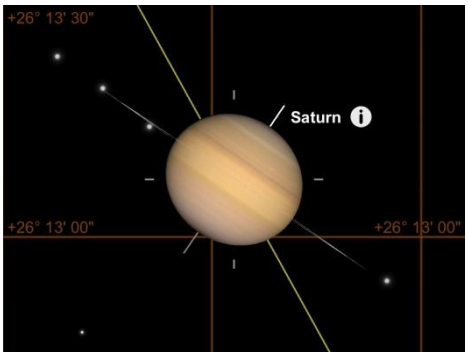
Several months ago, I wrote about the rings of Saturn being on edge in March, as viewed from here on Earth. That's a normal cycle of change driven by Saturn's 30-year orbit. But what I noticed this month was a surprising variation to what I had expected. Rather than the edge-on moment passing and the rings just becoming ever wider apart, they have now reclosed to nearly edge-on again this November. What is going on?! I've asked around a bit, and haven't found an explanation yet, but there is no doubt that there has been a regression of the tilt for some reason. I'm pretty sure some orbital dynamics can explain, but I invite you to share your answer if you have one. It's always a delight to learn something new as we journey around the many cycles of our lives together.

Thanks - Greg Woolever & the Observatory Committee: Dave Heck, Norm Van Klompenburg, Jim VandeBerg, Greg Woolever.

Shown: March 23, 2025, July 1, 2025, November 25, 2025:







The Night Sky for Decembet 2025

By JoAnn Cogil

December is not a busy month for planets this year. The best viewing opportunities for planets will be near the constellations of Gemini, Orion and Taurus this month. Many planet views may include the Moon as well. *(Image credit: Stellarium)*

Mercury - has its greatest western elongation on the 7th which provides the best time to view this tiny planet as it will be at its highest point above the horizon in the eastern morning sky. On the 17th, it will be near the Moon.

Venus – begins the month very low in the east before sunrise. But it becomes harder to see as the month continues as our Morning Star planet gets lost in the Sun's glare.

Earth – Happy Winter Solstice on the 21st at 9:02 AM CST. Which means the first day of winter in the Northern Hemisphere. Brrrrr!!

Mars – our red planet fades quickly as it too becomes lost in the Sun's glare.

Jupiter – can be found near the Moon on the 7th with the bright stars Castor & Pollux nearby.

Saturn – the ringed-planet continues its nightly journey with Neptune nearby. The Moon meets with these two planets in the night sky on the 26th.

Uranus – in Taurus this month and joins the Moon near the Pleiades in the evening sky on the 3rd.

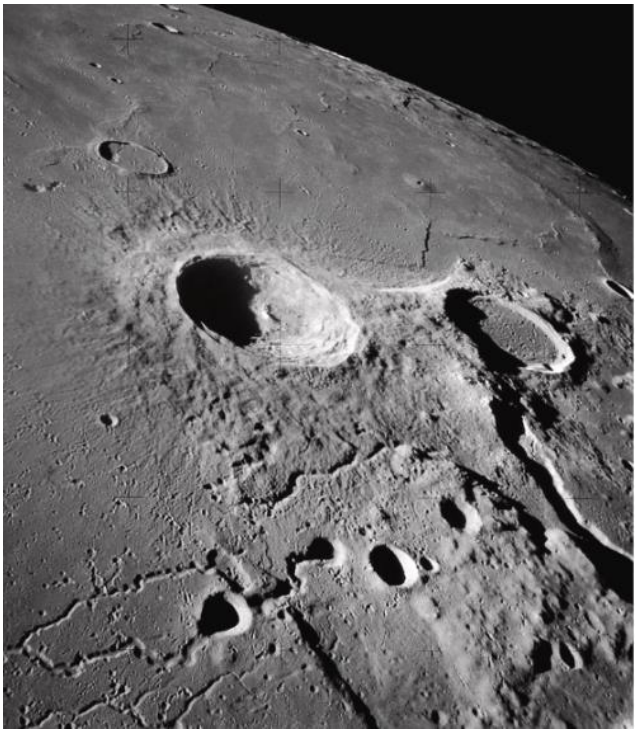
Neptune – stays near its friend, Saturn.

Moon

4 – FULL Supermoon at 5:15 PM CST
11 – Last quarter
19 – NEW at 7:45 PM CST
27 – First quarter

This month's full moon is called the 'Cold Moon' as December's cold winter air settles in with our nights becoming long and dark, which contributes to its name. Some folks call this full moon the 'Long Nights Moon' and 'Moon Before Yule'.

On the 3rd- 4th and again on the 31st, enjoy the Moon as it will be near the Pleiades Cluster, M45.



Meteor Showers

Geminids – this is the King of all meteor showers and the most reliable to enjoy. It runs from December 7th – 17th and peaks on the night of the 13-14. It is possible to see up to 120 meteors per hour with some being multi-colored. There will be a 2nd quarter moon which could block some of the fainter meteors but with so many predicted, there should still be a good showing! These meteors are produced by debris from the Asteroid 3200 Phaeton, which was discovered in 1982. I am hoping for some impressive fireballs from this one!!

Ursids – this is a minor meteor shower with only 5-10 meteors an hour predicted. It runs from the 17th- 25th and peaks on the night of the 21st. This night has only a thin crescent Moon which provides more favorable viewing. These meteors are produced by dust grains left from the Comet 8P / Tuttle, discovered in 1790.

Comet Watch

210P / Christensen – was discovered in 2005 with a periodic orbit of about 6.5 years. Best seen with binoculars or telescopes; although current thinking is that the comet has possibly disintegrated, and the tail is fading which makes it uncertain if we will see much.

24P / Schaumasse – rises about midnight with predicted best viewing on the nights of December 12th through 14th with a magnitude of 9-12. The tail may be difficult to see due to the moonshine that weekend. It was discovered in 1911.

Want to know even more about The Outer Planets ?!

Dean Regas is **an astronomer, public speaker, author, and podcaster** who brings the complicated universe down to Earth for audiences of all ages.

Dean is an honorary member of the Des Moines Astronomical Society.

If you couldn't attend live or want to watch it again, it is available for you at:
https://drive.google.com/file/d/1CS1n_yRB4QxaX0soV5doc0oYnHxJM7zL/view

Visit Dean at his astronomy website: https://astrodean.com/

Astronomical League

Explore these Rewarding and Educational Observing Programs

The **Astronomical League** is an umbrella organization of amateur astronomy societies. Currently their membership consists of over 330 organizations across the United States, including the **Des Moines Astronomical Society.**

Word – A monthly article by DMAS member Bruce Mumm

Every specialty has a specific jargon to describe unique conditions in the field; Astronomy is no different.

Young Moon – the few day period after the New Moon when the moon appears low in the western sky shortly after sunset.

Old Moon – the few day period before the New Moon when the moon appears low in the eastern sky shortly before sunrise.

DES MOINES ASTRONOMICAL SOCIETY
PLEASE WELCOME THESE NEW MEMBERS!

January – Chris Conmy
January – John Moreland
February – Cindy Cunningham
February – Peter Steier
February – Teddy Collis (Associate)
April – Doug Duval
May – Kyle Wright
June – David Olsgaard
June – Katie Price
July – Chris Bailey
July – John Hawkinson
August - William Kullander
August – Stephanie Reynolds
September – Stephanie Phippen

This Month in DMAS History

From the StarLight Journal 25 Years Ago, December 2000

Doug Rudd and I had a very nice chili dinner at the domes ...then Michael Tew and his son Ryan showed up and also ate some of Doug's wife's sweet chili. Brian Ritchey came along later and also enjoyed eating from the pot. The skies were fairly clear at 10:00 PM, but the frigid temps took their toll. Went home around 11:00 PM without seeing one meteor.

Maybe next year ... Bryan Butcher

2 friends and I went south of Des Moines last night at 12:30 and saw the Leonid Meteor shower. Not very spectacular but I saw some real nice ones. We were out for about 45 minutes; lost count as to how many we saw. Hope the party at Ashton went well!!!!

Joanne Hailey

We went out around 1 a.m. west of Des Moines and saw some nice Leonids - we figure about 1 a minute for about an hour, including some very nice ones! Sorry we missed the chili dinner tonight!

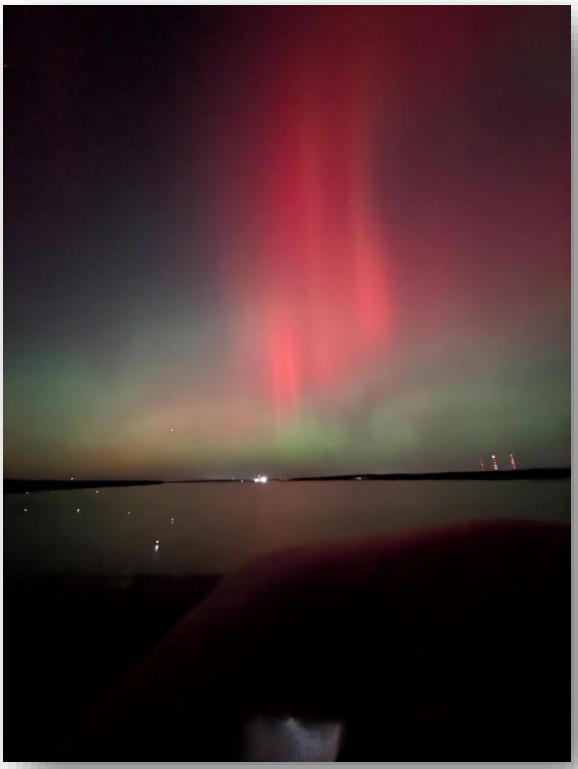
Tom and Kathy Bailey

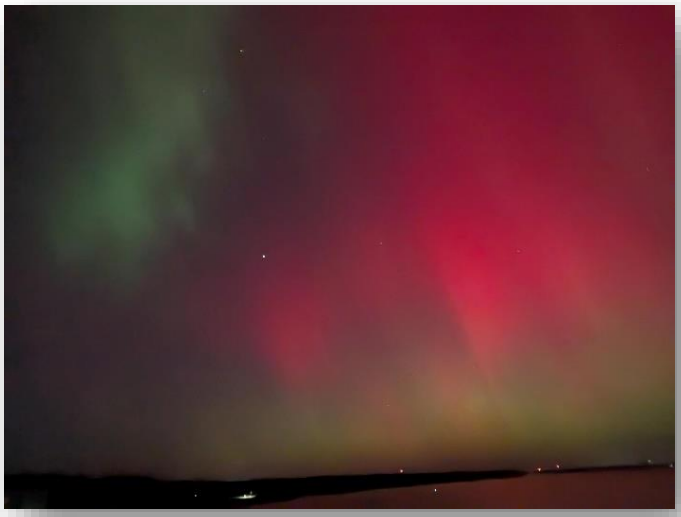
From the StarLight Journal 10 Years Ago, December 2015

TOTAL SOLAR ECLIPSE COMING OUR WAY IN 2017

In August of 2017 a Total Solar Eclipse will be visible very close to Iowa. If you have not experienced your first Total Eclipse, it will be a once in a lifetime thrill.

The Des Moines Astronomical Society is right now making plans to attend this event and any members who have not heard of this coming event and would like to see and photograph this eclipse are urged to contact any of the officers and have your name added to the list of those wishing to accompany the group to this event. If you miss this one, the next time a Total Solar Eclipse will occur this close to Iowa will be 136 years from now.





Northern lights photos, taken at Saylorville Lake, just north of Des Moines, Iowa. The photos were taken on November 11, 2025 with my Smartphone, handheld. This aurora display was at Kp8 (G4) severe storm. They were seen in more than 45 states and far south !!! The best so far this year.

L. Allen Beers

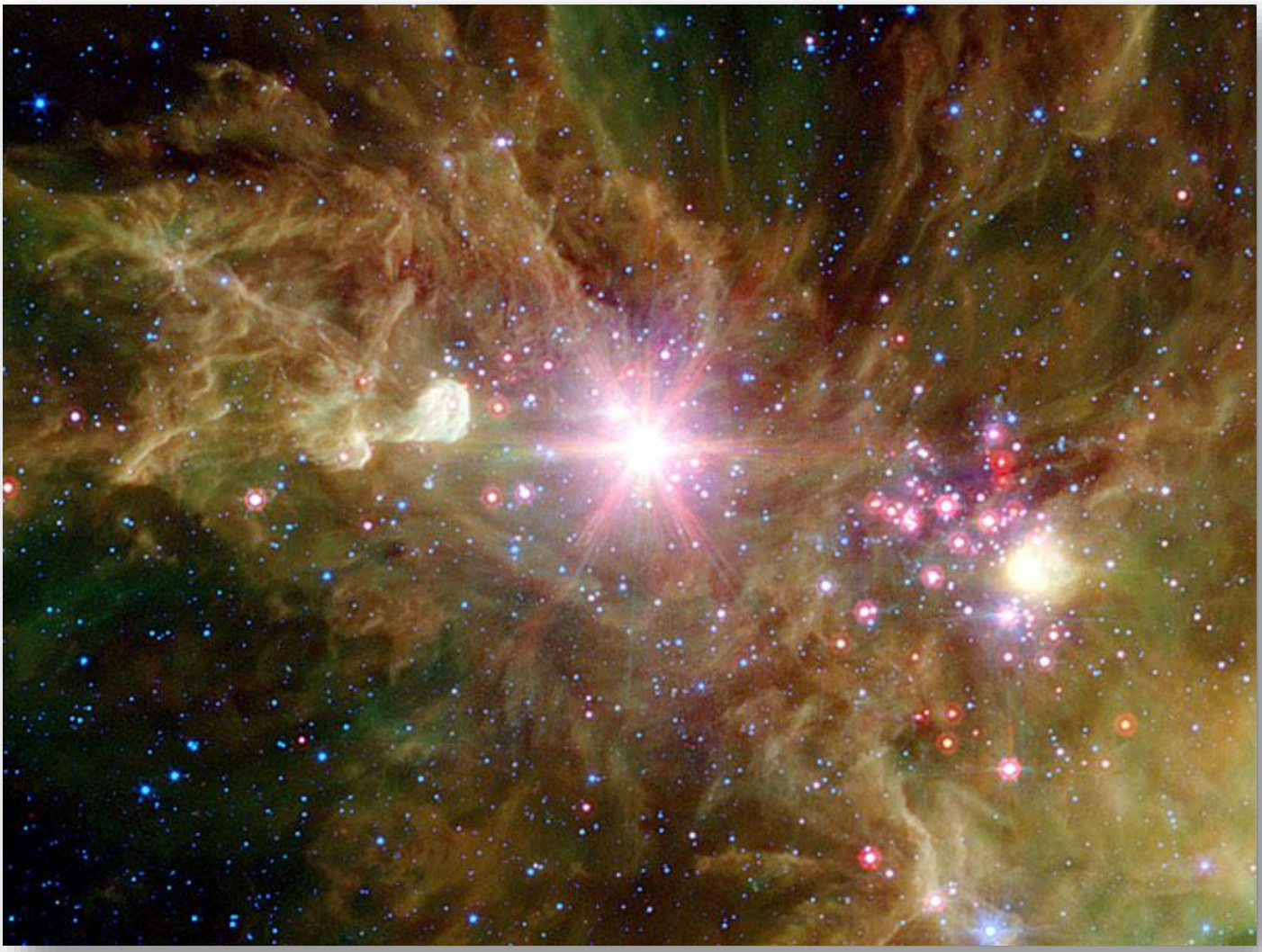
A great northern lights show last night in Iowa on November 11th. All the action began about an hour after sunset. I had been monitoring some of my aurora apps and decided to drive up to Saylorville Lake, just north of Des Moines, IA. Most all of the parking spaces were filled up already when I got there. I spent 3 hours taking photos of the display with both my Smartphone and Canon Rebel digital camera. Most all of the visitors there were also using their smartphones to capture photos of the aurora display. At times, the red aurora spikes were reaching overhead beyond Polaris.

This geomagnetic storm had reached Kp8 (G4) severe storm level and was reportedly seen in over 45 states and beyond !!! Quite a show to behold of God's magnificent beauty of the universe. There's another chance of seeing the aurora again tonight, but the weather forecast calls for cloudy skies here in Iowa.

We really lucked out last night of seeing the aurora with clear skies. **These are some of my best photos of the aurora. I have more on my smartphone.

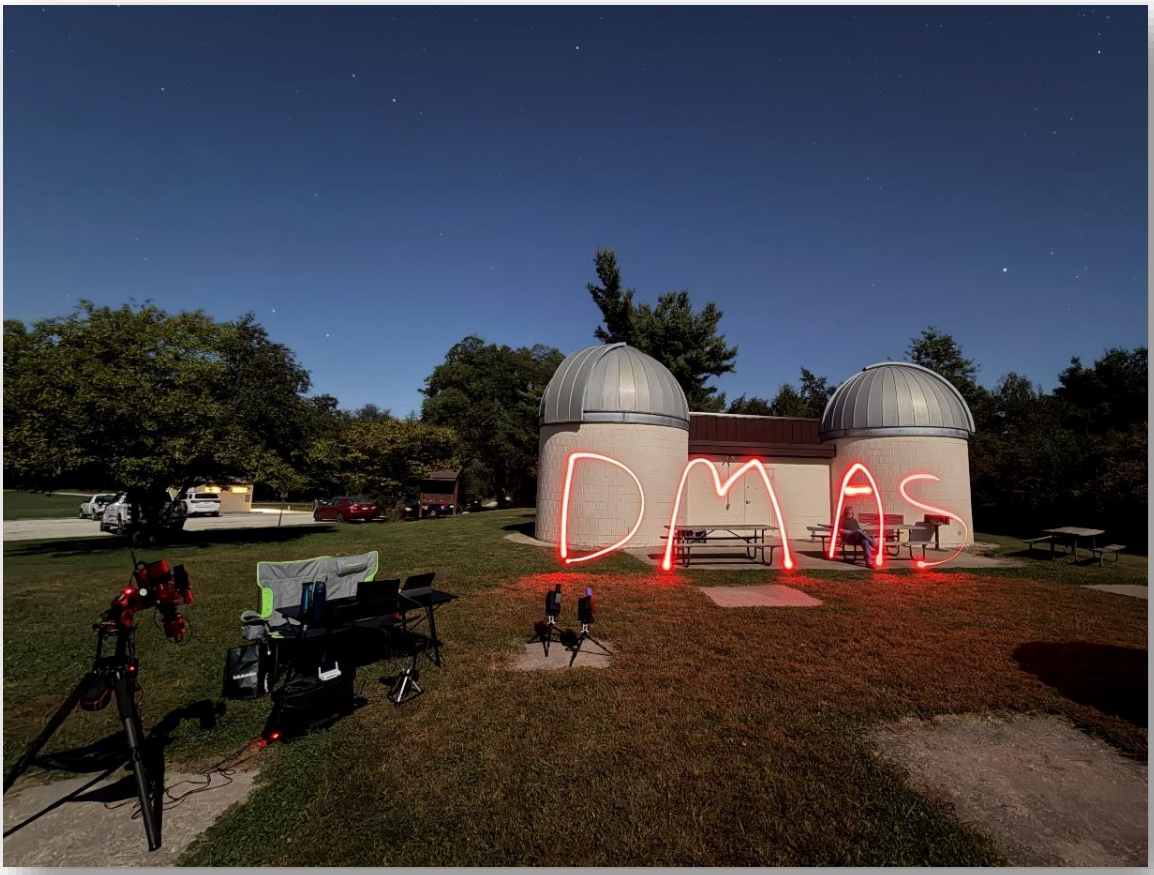
L. Allen Beers
Des Moines, IA.

I got some good cell phone pictures from Grimes last night. Naked eye you could see some good red streaks, a lot of grey, and no green. Images from DMAS member Wade Johnson on November 12, 2025.



The **Snowflake Cluster** is a young open cluster located in the constellation Monoceros. It is one of the objects found within the designation NGC 2264,

Image Credit: NASA/JPL-Caltech/P.S. Teixeira (Center for Astrophysics)



Another use for red headlights! With a cell phone camera set to night mode, DMAS members Cole Skinner and Katie Price created this imaginative light show!

Jasper County Conservation
October 30 at 11:10 AM ·

Ashton Observatory now has a handicap accessible sidewalk! A generous donation from Dale Gibson helped pay for the installation. Dale has been a member of the Des Moines Astronomical Society for 42 years! He became interested in astronomy in elementary school and listened to programs about space. He loved TV programs and movies like Star Trek and Star Wars. We are so very thankful for Dale and all he has done for the observatory!

Ways to give before the end of the year!

Ten Ways to Give with Purpose!

Would you like to support the community-enriching programs at Ashton Observatory?

1. Make a donation – Mail a check to: DMAS P.O. Box 111 Des Moines, Iowa 50301
2. Ask your employer if they have a matching gift program to double your donation
3. Donate appreciated assets like stocks and mutual funds – these can provide tax benefits
4. Donate an IRA – for older individuals, this donation may count toward your Required Minimum Distribution
5. Put a bequest to DMAS in your Will or Trust
6. Donate your tax refund to DMAS
7. Make a Tribute Gift or Memorial Gift in memory of a friend
8. Make DMAS a beneficiary in your Life Insurance

9. Name DMAS to receive a percentage of your Estate
10. Donate your Birthday – ask friends to donate to DMAS as an alternative to gifts

The **Snow Angel Nebula**, also known as Sharpless 2-106, is an emission nebula located approximately 2,000 light years away in the constellation Cygnus. It features a young, massive star at its center that emits jets of hot gas, creating a bipolar structure resembling the wings of a snow angel. The nebula is about 2 light years across and is known for its striking appearance, with hot gas glowing blue and cold dust obscuring the star's light.

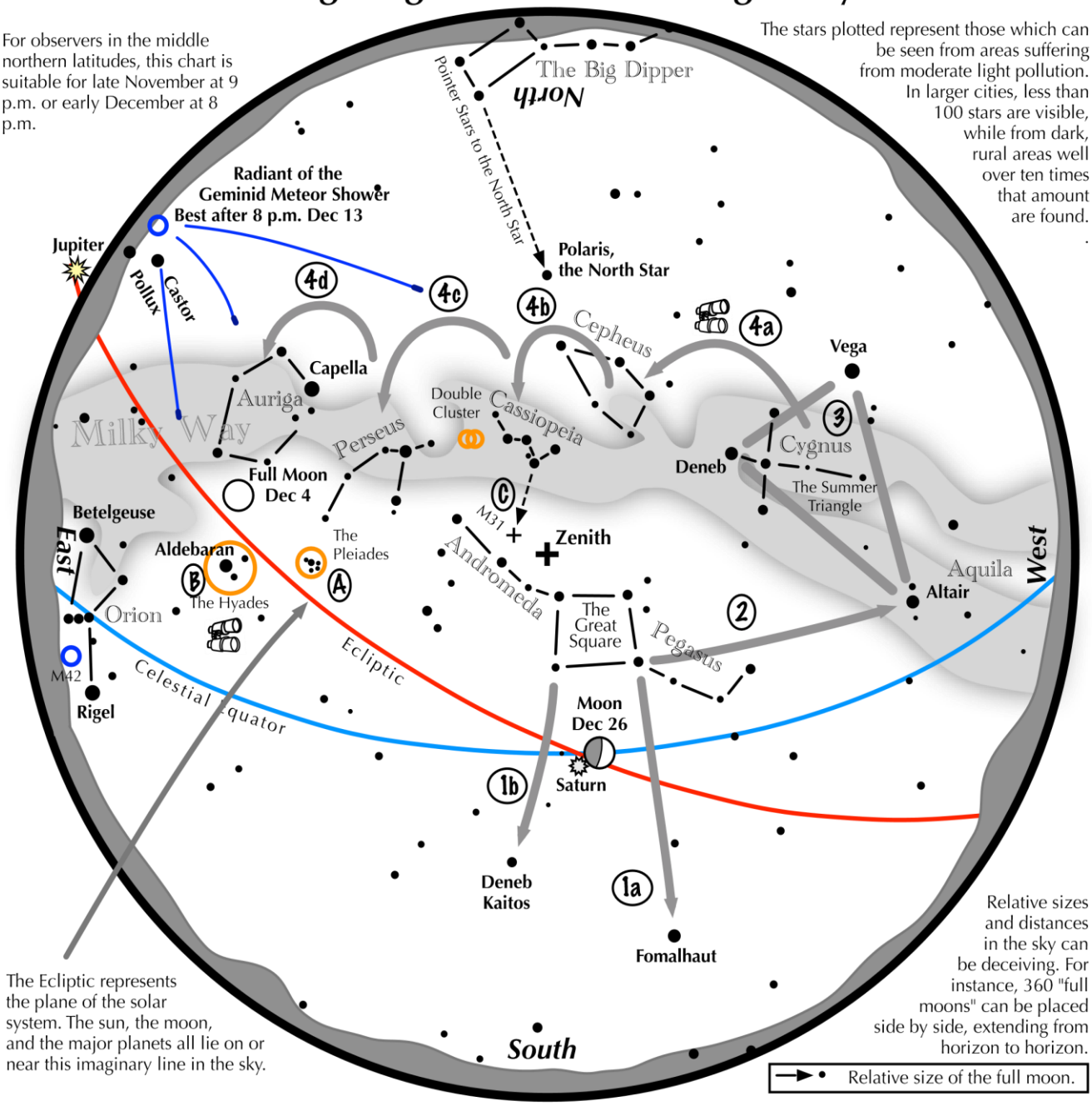
NASA - Hubble Space Telescope

Navigating the December Night Sky

2025

For observers in the middle northern latitudes, this chart is suitable for late November at 9 p.m. or early December at 8 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 December night sky: Simply start with what you know or with what you can easily find.

1. Face south. Almost overhead is the "Great Square" with four stars about the same brightness as those of the Big Dipper. Extend an imaginary line southward following the Square's two westernmost stars. The line strikes Fomalhaut, the brightest star in the southwest. A line extending southward from the two easternmost stars, passes Deneb Kaitos, the second bright star in the south.
2. Draw another line, this time westward following the southern edge of the Square. It strikes Altair, part of the "Summer Triangle."
3. Locate Vega and Deneb, the other two stars of the "Summer Triangle. Vega is its brightest member while Deneb sits in the middle of the Milky Way.
4. Jump along the Milky Way from Deneb to Cepheus, which resembles the outline of a house. Continue jumping to the "W" of Cassiopeia, to Perseus, and finally to Auriga with its bright star Capella.

Binocular Highlights

A and B: Examine the stars of the Pleiades and Hyades, two naked eye star clusters.
C: The three westernmost stars of Cassiopeia's "W" point south to M31, the Andromeda Galaxy, a "fuzzy" oval.
D: Sweep along the Milky Way from Altair, past Deneb, through Cepheus, Cassiopeia and Perseus, then to Auriga for many intriguing star clusters and nebulous areas.

Our 2025 Des Moines Astronomical Society Officers, Directors & Observatory Committee

President: JoAnn Cogil
Vice-President: Pat Meade
Secretary/ALCor: Jim VandeBerg
Treasurer: Bruce Mumm
Observatory Director: Greg Woolever
At Large Director: Norm Van Klompenburg
At Large Director: Jessica Weinreich
At Large Director: Dave Bailey
Observatory Committee: Greg Woolever, Norm Van Klompenburg. Dave Heck, and Jim VandeBerg

Contact us at:

info@DMastronomy.com

The *Starlight Journal* is the monthly newsletter of the **Des Moines Astronomical Society, Inc.** P.O. Box 111, Des Moines Iowa 50301-0111. Our Observatory is located in Ashton Wildwood Park, 8755 West 122nd Street North. Founded in 1970, we are a non-profit, 501(c)(3) organization. Our website is DMastronomy.com. More information and photos can be found on our Facebook page.

Article Deadline: Before the 21st of the month, please send your articles, photos, sketches, poems, cartoons, and news to Jim VandeBerg (FinePineCabin@gmail.com) Articles may be edited to fit the allotted newsletter space. Copyrighted material must have permission from the copyright holder. Views and opinions expressed within submissions are those of the author and not necessarily those of the Des Moines Astronomical Society, Inc.

The Purpose of our Society

- Secure the pleasure and benefits of an association of persons interested in amateur astronomy
- Promote the science of astronomy
- Encourage and promote activities of an astronomical nature
- Foster observational, computational, technical, and creative skills in various fields of astronomy
- Pursue activities with other amateurs and professionals
- Educate the public

Des Moines Astronomical Society
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