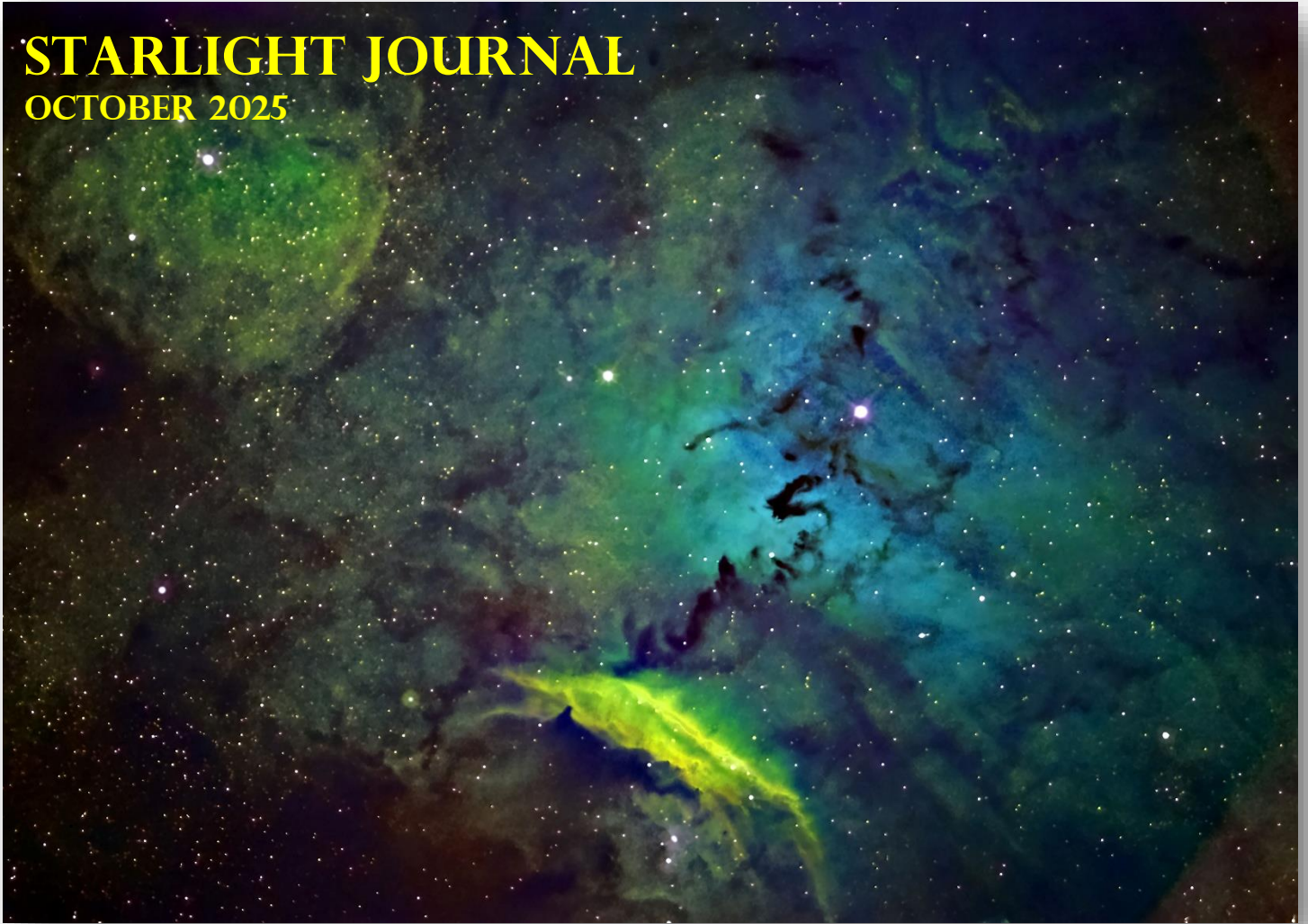


STARLIGHT JOURNAL

OCTOBER 2025



Dragon Nebula (NGC 6559) Image by DMAS member JR Paulson

NGC 6559 is a star-forming region, 5,000 light-years distant, in the constellation of Sagittarius. It is very near the more famous and well-known Lagoon Nebula. It is rarely seen or imaged but has much to offer.

When stars form, pandemonium reigns. A textbook case is NGC 6559. Visible in this image are glowing emission nebulae of hydrogen, blue in this false color imaged with the Hubble narrow-band filters, although appearing red through wide-band filters. Dark snake-like absorption nebulae of dust, and the stars that formed from them are prominent throughout the image. The first massive stars that formed from the dense gas will emit energetic light and winds that erode, fragment, and sculpt their birthplace. And when some of them explode, the resulting morass can be as beautiful as it is complex. After tens of millions of years, the dust boils away, the gas gets swept away, and all that is left is a bare open cluster of stars.

Saturday, October 4 – Member Meeting 6:30 p.m.

Saturday, October 11 – Program **“Solar System Safari – Looking for Life”** by Jim VandeBerg at 8:00 p.m.

October 16-19 - Iowa Star Party – Whiterock Conservancy

Saturday, October 25 – Program **“Annie Cannon: American Astronomer”** by Herb Folsom at 8:00 p.m.

Saturday, December 6 DMAS Holiday Party!

SAVE THESE DATES NOW!

OCTOBER 2025 – President’s Report

October 4th is International Observe the Moon Night!! DMAS will not be hosting a special event for this, but you can enjoy it for yourself. Who doesn’t like viewing the moon? The Astronomical League has information about the International Observe the Moon Challenge for anyone who is interested. Check out their website at [International Observe the Moon Night Observing Challenge – 10/4/2025 - Astronomical League](#)



I find good astronomy viewing information on both Astro League’s website and their Facebook page. AL posts many viewing guides and information-type sheets on their FB posts and can be printed for later reading. Some of the recent post topics include: *What nebula has the largest angular size?, Retrograde Motion of Saturn, Hydrogen-Solar Observing, Observing Galaxies, Magnitude Scale, M6 & M7, Mars & the long goodbye*, to name a few.

Attendance at recent Saturday evening programs at Ashton has been wonderful with both public and DMAS members enjoying the presentations. Thank You to our presenters for sharing their knowledge and passion for astronomy!

- JoAnn

**The Des Moines Astronomical Society
Monthly Members' Meeting
October 4, 2025 at 6:30 P.M.
at Ashton Observatory**

- **Call to order – Introductions**
- **Secretary's Report – Minutes**
- **Treasurer's Report**
- **Observatory Director's Report**
- **Timberline Update**
- **Committee Reports**
- **Nominating Committee**
 - **Present list of nominees for Board positions**
- **Member comments**
- **Other Business**
- **Holiday Party**
- **Adjourn**
- **Next Meeting Date: November 1st at 6:30 P.M. at Ashton Observatory**

Observatory Committee Report October 2025

**Greg Woolever, Observatory
Director**

The final Saturday of September surprised us with a clear sky! It's been a rough year for getting good views, so it was wonderful to finally see improvement. And Saturn has worked its way into evening "prime time," and is clearly the main feature on stage right now. Our Public Night visitors are enthused about their experiences here.

We had no private groups during September, but currently have four scheduled for October. Let me know if you want to help host.

Date	Day	Adults	Children
2025-10-03	Fri.	15	30
2025-10-12	Sun.	5	10
2025-10-17	Fri.	15	30
2025-10-31	Fri.	2	0

Research by the Observatory Committee continues on a possible upgrade of the telescope in the east dome. No definite decision has been made.

In the past, October has usually ended with the Halloween Trail of Terror in Ashton Wildwood Park. I just learned that the event is not happening this year. It was a popular event, and their visitors were sometimes our visitors as well, but it will be good to have darker skies without the flood lights they needed for parking.

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



The Night Sky for October 2025

By JoAnn Cogil

"Give me nights perfectly quiet...and I am looking up at the stars." – Walt Whitman

Mercury - reaches greatest eastern elongation (farthest distance from the Sun) on the 29th. This provides the best time for viewing as the little planet is at its highest point above the evening horizon sky, just after sunset, but it can be tough to see.

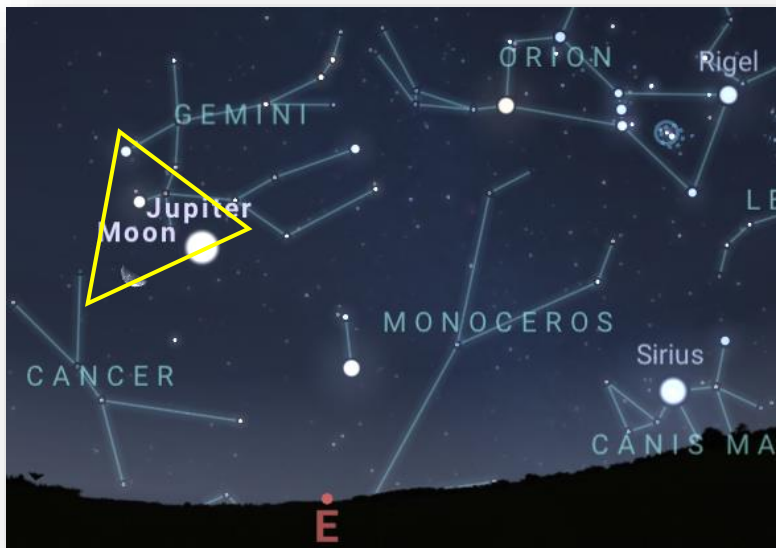


Venus – is making its way toward its January 2026 solar conjunction when this bright planet will be found between the Earth and the Sun. Until then, it remains a beautiful object to greet us each morning, as it rises before sunrise with the Moon close by.

Earth – We welcome Fall and cooler temperatures!!

Mars – is still found low in the west, setting right behind the Sun, and is also heading towards a solar conjunction in January 2026. On October 19th, Mars and Mercury are close to each other as they set in the west.

Jupiter – is now rising just after midnight until the end of the month when it will then rise before midnight. On the 14th look for a triangle in the night sky formed by Jupiter, the Moon and Pollux, again after midnight. What a sight to see!!



Saturn – We began to enjoy the ringed planet in September as it rose in the late evening sky and now in October, we won't have to wait so long for it to clear the trees east of the domes!! Saturn will have a close encounter with the Moon on the evening of the 5th, in the E-SE sky. This is the Moon's closest pairing with any planets all month. The rings are still quite edge-on, but we have been able to see

them with telescopes, which has pleased our Ashton visitors and DMAS members.



Uranus – now rises about 2 hours after sunset and enjoys close quarters with the *Pleiades* this month.

Neptune – will stay close to the northeast of Saturn and is visible all month. Lately, this has been a much-requested object and favorite view for Ashton visitors.

Moon

6th – **FULL** moon at 10:47 P.M. CDT

13th – 3rd / last quarter

21st – **NEW** moon at 7:25 A.M. CDT

29th – 1st quarter

This month's full moon is known as the *Hunter's Moon* when game is fat and ready to be hunted. Some say the October full moon is also called a *Harvest Moon*, as October's full moon is closest to the September Equinox. This name coincides every 3 years with both the September & October full moons. Other names are *Falling Leaves Moon*, *Freezing Moon* and *Drying Rice Moon*.

On the 9th, our Moon has a special trip through the *Pleiades*, in the constellation Taurus the Bull. The show begins about 9:00 P.M. CDT and continues for a few hours. Get out your hot chocolate and a comfy chair for this performance!!



Meteor Showers

Draconids – is a minor meteor shower with about 10 meteors per hour. It runs from October 6-10 and peaks on the 7th. Best viewing for this meteor shower is early evening, which is better timing than most meteor showers. The full moon on the 6th will create lots of glare and will impact viewing. These meteors are from dust grains left behind by Comet 21P Giacobini-Zinner which was first discovered in 1900.

Orionids – is an average meteor shower with about 20 fast-moving meteors per hour. Meteors can be seen from October 2nd through November 7th and will peak on the night of October 21st-22nd with best viewing after midnight. This is an excellent year to observe Orionids meteors as the Moon is new on peak night!! Oh, love those dark nights! These meteors are from dust grains left by Comet Halley, which has been seen/observed since ancient times.

Comet Watch

47P/Ashbrook-Jackson – is a periodic comet (which are comets with orbital periods of 200 years or less) and was discovered in 1956. It is set to appear in our skies about October 29th and may be visible to the naked eye. Guess we will have to wait and see!!

Comet C/2025 A6 (Lemmon) – its path will bring it closest to Earth on October 20th on its inbound orbit towards the Sun, but it is questionable if it will be bright enough to be seen by the naked eye. Best advice is to find a location with the darkest skies possible. The comet was discovered by Mount Lemmon Survey, using their 60-inch Cassegrain reflecting telescope, equipped with a 10560 x 10560-pixel camera. This telescope is located at the Mount Lemmon Observatory which is northeast of Tucson, Arizona; operated by the Steward Observatory, the research arm of the Department of Astronomy at the University of AZ.

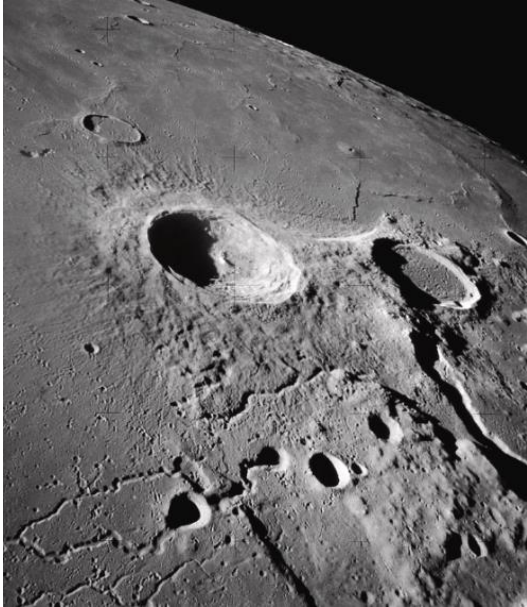


Mount Lemmon Observatory

Fun Space Fact

October 4, 1957, was the start of the SPACE AGE, when the Soviet Union launched the first satellite into orbit. It was known as *Sputnik*, which means satellite in Russian. And thus began the SPACE RACE between the USA and The Soviet Union.

Want to Know Even More About the Inner Planets?!



Join our Honorary Member and astronomer Dean Regas for his online class. DMAS members are invited to this next online class for free.



The Inner Planets

October 7, 7:00 pm Eastern

Mercury, Venus, Earth, and Mars. Explore our four closest planets to the Sun with Your Astronomer Dean Regas.

Link for Oct 7:

<https://us06web.zoom.us/j/88185767580?pwd=1dxBGd99a1VTaAVu4u8MIA4rAU69bl.1>

Passcode:323565

Please share with DMAS members only.

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

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. This month's word is:

Celestial equator – the line around the map of the sky showing the plane in which the earth rotates (equator).



**Bruce Mumm –
DMAS Treasurer**

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**.



INTERNATIONAL ASTRONOMY DAY

On Saturday, September 27th, it was the 2025 Fall International Astronomy Day held at the Science Center of Iowa. It was a great day, weather-wise, under clear skies. Joe Foarde, Linda Wilkinson and myself were there for the event.

Joe had his stamps and coins displayed, and Linda had some solar system stuff displayed, along with handouts. Allen had his cool astro photos displayed. We had 88 visitors stop by our tables and got information about DMAS and Ashton Observatory.

It was a fun event and the visitors seemed to enjoy our displays. Dale Gibson and his nephew Peter and 2 sons dropped by to visit.

– L. Allen Beers





On Saturday, September 13, Wade Johanson gave a great program to a full house!
The program was **“The Apollo Landing.”**



The **Crescent Nebula** (NGC 6888) is a popular photographic target in the summer months. This 9 minute stacked image with a SeeStar 50 showcases the capability of this little scope. The stars are nice and round out to the edges and the contrast is respectable. The wispy colors in the nebula are lovely. This is an alt-az, unprocessed image from August 25 at Lake Anita, Iowa. – Jim and Lin VandeBerg

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

Drake Observatory Fall 2025 Lecture Series Schedule

Visitors can expect an Astronomy lesson followed by stargazing with expert guidance. **Lectures begin at 8:00 PM** regardless of weather. **Sky Viewing begins at dark if sky conditions are favorable.** Children 15 and younger must be accompanied by an adult. **Admission is free and open to all!**



September 26: Drake Municipal Observatory: A Century of Public Astronomy

October 3: The Herschels: A Remarkable Family

October 10: Are We Inside a Gigantic Black Hole?

October 17: The Hubble Tension: Why is Hubble So Tense?

October 24: The History of Spectroscopy: Guest Speaker Dr. Robinson Yost

October 31: Open Topic Night

November 7: Extraterrestrials: Where Are They?

DMAS had an interesting program on Saturday, September 27 called **“Carl Sagan: More Stars than Grains of Sand?”** by DMAS member Jim VandeBerg

“Meanwhile the Cosmos is rich beyond measure: the total number of stars in the universe is greater than all the grains of sand on all the beaches of the planet Earth.”





The Fireworks Galaxy (NGC 6946) Imaged by DMAS member JR Paulson

The *Fireworks Galaxy* is a grand design, face-on, intermediate spiral galaxy with a small bright nucleus. Its location in the sky straddles the boundary between the northern constellations of Cepheus and Cygnus. The galaxy was discovered by William Herschel on 9 September 1798. Its distance from Earth is about 25.2 million light-years, making it outside our local group of galaxies and part of the great Virgo cluster of galaxies.

Due to its prodigious star formation, it has been classified as an active *starburst galaxy*. The red-magenta-colored areas are highlighted when imaged with a hydrogen-alpha narrowband filter, in addition to the usual clear, red, green, and blue palette. They show areas of highly ionized hot hydrogen gas, where new star formation is occurring.

However, the moniker *fireworks* comes from its extraordinary production of super-novae. Over the last century it has produced ten times the rate observed in our Milky Way galaxy, even though the Milky Way has twice as many stars. The Fireworks Galaxy has hosted 10 supernovae over the last century, more than any other known galaxy. The Fireworks Galaxy is a popular target for astronomers studying the evolution of massive stars, as well as for amateur astronomers looking for bright targets for small and medium telescopes. It is truly a rare, spectacular heavenly body.

This Month in DMAS History

From the StarLight Journal 25 Years Ago, October 2000



The DMAS gang at AstroFest 2000! From left to right: Jodi and Jim Holloway, Annie and Harry Wood, Laurie Breman (sitting on ground), Thai Luong, Joel and Kathy Gannon, Dave Lynch, Dale Gibson, Fred Hoffman, and Allen Beers.

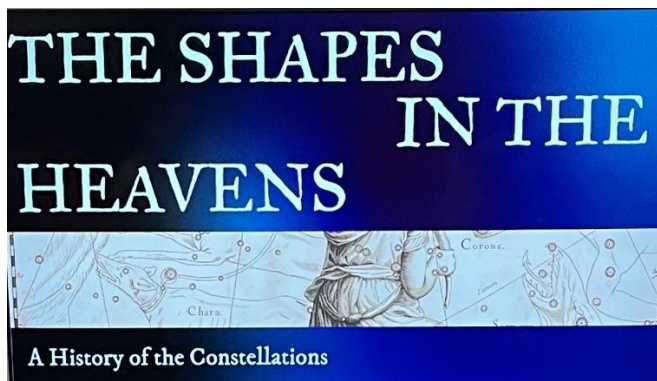
From the StarLight Journal 10 Years Ago, October 2015

All Things Eclipse: DMAS at the Science Center on Autumn Astronomy Day

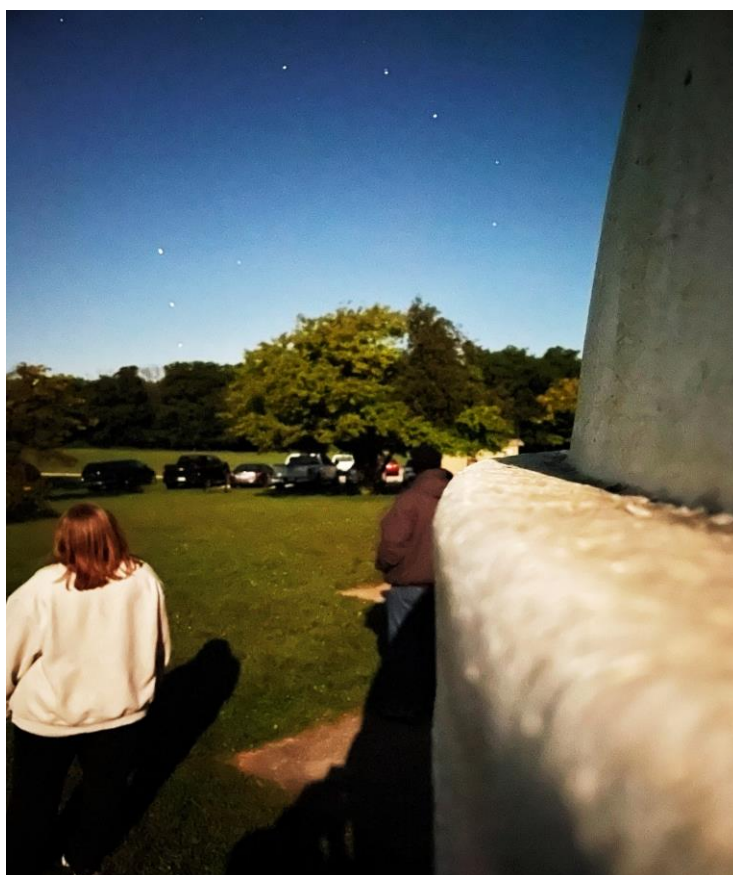
Many hands make light work. We had a DMAS group of eleven volunteers at the Science Center on Saturday, September 19. L. Allen Beers had many photos including lunar eclipse prints. Keith Harrod had two telescopes for viewing which provided much interest among visitors. Handouts and detailed space calendars from NASA SpacePlace Outreach were given to visitors. Linda Wilkinson and grandson Tyler shared a "What is an Eclipse" poster with questions and a model of the solar system especially for visiting children. They distributed to the interested visitors paper models of how an eclipse happens. We told them to look for the lunar eclipse on Sunday September 27 in the southeast sky. We had about 75 adults and children come to our table.



Astronomy Day DMAS volunteers. Keith Harrod, Joyce Naffier, Dale Gibson, Linda Wilkinson, Rod Williams, Alice Musselman, Joe Foarde, L. Allen Beers, Larry Musselman, and Vern Naffier.



On August 30, Jon Voisey gave an in-depth presentation about the **History of the Constellations**



Starlink satellites at Ashton Observatory

This image was captured on Saturday, September 6 at 10:09 p.m. with a 5 year old iPhone 12 using night-mode. The camera was steadied on the edge of the south observatory dome and the time was 3 seconds. The only ambient light was the Moon. The satellites can be seen on the left, just above the horizon. The handle of the Big Dipper can be seen at the top center. – Jim VandeBerg

ISS: 25 Years of Habitation Is Arduous

Spaceflight is hard. Complacency is deadly.

Two simple truths that are easy to forget when I look up at the night sky and see the International Space Station (ISS) silently orbiting overhead. But its presence is no accident. The ISS was designed to pass over 90% of the world's population⁽¹⁾ a constant reminder that "We are up here."

I grew up in the 1960s, fortunate enough to witness the live broadcast of Neil Armstrong's first steps on the Moon, July 20, 1969. NASA has been a part of my vocabulary since I was five years old. So, decades later, standing at NASA's press site to cover a space launch, I felt like I'd come full circle.

The launch in question was NASA's Northrop Grumman Commercial Resupply Services 23, or CRS-23 for short. On paper, it was "just" a resupply mission. In person, it was anything but.

Being at the Kennedy Space Center's press site, a place I'd only ever seen on television or online, was surreal. The nostalgia, the triumphs, the tragedies... it's all part of the history here. I felt honored. Humbled. But I was also there to work, to cover the launch from Space Launch Complex 40 (SLC-40).

Before this experience, I might have thought: "It's only a resupply mission." But not anymore. These missions are the lifeblood of the ISS. Without them, the station would soon become uninhabitable. Every launch is critical. Every payload matters. Every person involved is part of something extraordinary.

After 25 years of continuous human presence aboard the ISS it's easy to forget just how hard it is to keep people alive in space. It takes constant effort, vigilance, and an unwavering belief in the mission. Complacency is not an option. Not when the stakes are this high.

A bit of back history before I dive in too deep. The first component of the ISS was launched by Russia. The Functional Cargo Block (FGB) was

deployed November of 1998⁽²⁾. It took two more years of construction before the permanent habitation of the ISS started in October of 2000⁽³⁾. This year we are celebrating the 25th anniversary of habitation on the ISS.

But how do you keep, on average, six people happy for months at a time while they live and work on the ISS? You give them what they need. First and foremost: air, water, and food.

Keep reading, there's more on that coming up.

On September 14th, 2025, I observed the launch of the NG-23 Cygnus Resupply Mission to the ISS from SLC-40 at Cape Canaveral Space Force Station. The launch vehicle was a SpaceX Falcon 9, carrying the Cygnus XL spacecraft. The mission delivered over 4,911 kilograms (approximately 10,828 pounds) of scientific investigations, research materials, and cargo to the ISS.

Liftoff occurred at 6:11 PM EDT, precisely on schedule. The skies around Kennedy Space Center (KSC) were mostly clear, with only a few cumulus clouds in the distance. It was a beautiful Florida day, with the temperature at a comfortable 83°F (28°C).

This was my first time attending a Falcon 9 launch from the official NASA Press Site, which is located on KSC, not on Cape Canaveral. Standing approximately 6.2 miles (9.98 km) from the pad, I wasn't quite sure what to expect, particularly in terms of launch trajectory and booster return.

Fortunately, the rocket's direction was easy enough to follow visually, but the booster's reentry burn proved harder to track. In front of me, a tracking camera, belonging to a major online platform, was already aimed at the sky. Following its guidance, I looked up just in time to see what resembled a bright firework at the zenith. A large, fiery bloom marked the Falcon 9's reentry burn, used to slow its descent back through Earth's atmosphere.

Moments later, a collective murmur spread through the press observers: "There it is!" The Falcon 9 booster became visible as it descended gracefully toward Landing Zone 2 (LZ-2).

Then came the telltale sound: three sharp sonic booms echoed across the flat landscape, followed by the bright visual of the booster

lowering itself behind the tree line for a precise, controlled landing.

While the visual spectacle was stunning, what stood out most was the intensity of the sonic booms, which felt louder than the initial launch sound. I heard three sonic booms in quick succession, a rapid triple report that echoed sharply across the press site. The sensation was physical as well as auditory, it felt like someone lightly pounding on your chest, each boom delivering a soft, percussive thump that you could feel. Then came the echoes off the Vehicle Assembly Building (VAB). It felt like the sound would never stop, bouncing and rolling across the landscape. These booms were generated by different parts of the booster, typically the engine section, interstage, and grid fins, as they broke the sound barrier during descent.

This observation aligns with research by Mark C. Anderson and Kent L. Gee, who found that: "For observers farther than 2 km from the launch and landing locations, the sonic boom peak overpressure exceeds the peak pressures experienced during the launch."⁽⁴⁾ This was certainly my experience. Although individual perception varies depending on atmospheric conditions and terrain, their data support the idea that sonic booms can register more forcefully than launch acoustics at certain distances—particularly in open areas like the NASA Press Site.

Words like "wow," "amazing," and "spectacular" only begin to describe how I felt witnessing this launch. The weather was perfect, the countdown proceeded without delay, and ignition occurred precisely on time. Most importantly, the launch was not "scrubbed," a dreaded word around Kennedy Space Center.

As thrilling as it was to see the Falcon 9 lift off in person, it's essential to remember the purpose behind it. The ISS, is only as valuable as the international crew that lives aboard it, conducting research, maintaining systems, and representing a global effort in space exploration.

For more than 25 continuous years, humanity has maintained a presence on the ISS. Expedition 1, launched in 2000, began with just three crew members. As of this writing, Expedition 73 consists of 10 astronauts, a significant increase

in both personnel and capability. When was the last time you had 10 people living in your house?

Thankfully, the ISS is equipped with three toilets to accommodate that many residents.⁽⁵⁾ But life aboard the station involves more than just work, although, what a place to work. Everything we take for granted on Earth, such as breathable air, clean water, and tasty food, must be transported or produced onboard. Most of these essentials are delivered via uncrewed resupply missions, including Northrop Grumman's "Cygnus," SpaceX's "Cargo Dragon," JAXA's "HTV," and Russia's "Progress" spacecraft.

These launches are not just about rockets, they are lifelines to the low Earth orbiting ISS.

As Sergeant Joe Friday from the classic TV series *Dragnet* would say, "Just the facts, sir." So here are some facts that might just baffle your mind.

All of the following figures are documented on NASA and related agency websites⁽⁶⁾ though the data is spread across multiple sources.

Total cargo flown to the ISS: 453,512.50 kilograms.

This includes consumable supplies such as air, water, food, and fuel. This figure does not include six launches for which I could not find data, nor does it account for launches that failed to deliver their cargo to the ISS. It also excludes manifest items not intended to be brought inside the ISS, such as satellites and special scientific investigations.

For those more comfortable with imperial units, that's **999,822.73 pounds**—just shy of one million.

To help visualize this: imagine a fully loaded Boeing 747 jet, complete with passengers, luggage, and yes, even the kid kicking the back of your seat.

That's the scale we're talking about.

Let's break it down further (first in kilograms, then in pounds):

- **Total unmanned cargo flights:** 169
- **Failed missions:** 5
- **Fuel delivered:** 57,426.5 kg (126,597 lbs.)
- **Air delivered:** 3,830.00 kg (8,443.69 lbs.)
- **Water delivered:** 26,602.50 kg (58,648.40 lbs.)
- **Food:** Not listed separately in most sources, but rest assured—they're not starving up there.

Now, for a fun visual.

Imagine you're floating through the ISS and decide to visit the newly opened (and entirely fictional) *ISS Star Hop Bar*. You secure your feet in the stirrups on the floor and ask for a whiskey and Coke. The bartender smiles. You follow up with, "What's the house wine?" Again, just a smile. Finally, you ask for something simple—just some water.

He brings you a small bag containing about 8 ounces. Then he slides you the bill.

You gasp. **\$680 for a bag of water?** The bartender sees the look on your face. The bartender shrugs and says, "That's our SpaceX special price. It used to be higher."

You both laugh.

As history reminds us, spaceflight is not easy. It is dangerous. It is expensive. It can be deadly.

So next time the ISS passes overhead, step outside—whether with a telescope, binoculars, or just your own eyes—and take a moment to reflect. If you're lucky, you might even catch it transiting the Sun or Moon.⁽⁷⁾

But remember: the ISS is more than a piece of hardware orbiting Earth. It is **humanity, science, life**, and above all, **hope**, circling above the only home we have.

References:

1. [NASA, Station Facts](#)

2. NASA, 2015, "Reference Guide to the International Space Station", 78
3. NASA, 2015, "Reference Guide to the International Space Station", 89
4. [Acoustical Society of America, February 2025, "Why does the Falcon-9 booster make a triple sonic boom during flyback?"](#)
5. [Guinness World Records, 2021, Most Toilets in a Space Station](#)
6. [Wikipedia, Uncrewed Spaceflights to the International Space Station](#)
7. [NASA, Spot the Station](#)

Additional Resources:

[NASA Northrop Grumman CRS-23 SpaceX Falcon 9](#)

[Launch](#)

[Flyback sonic booms from Falcon-9 rockets: Measured data and some considerations for future models](#)

[NASA, Partners Adjust Next Cygnus Resupply Launch](#)

[NASA, Northrop Grumman Assessing Cygnus XL Engine Burn Plan](#)

By Line: Timothy Milligan *Freelance Reporter* is an avid Astrophotographer and a Member of the Astronomical League. Awarded the "Imaging - Messier Observing Program" on 09-12-2025

The 2025 Iowa Star Party

Whiterock Conservancy - Coon Rapids, Iowa

The 2025 Iowa Star Party will be held **October 16th to October 19th** at Coon Rapids Iowa, hosted by Ames Area Amateur Astronomers and co-sponsored by the Des Moines Astronomical Society. Join us for a weekend of dark skies, stargazing and conversation.

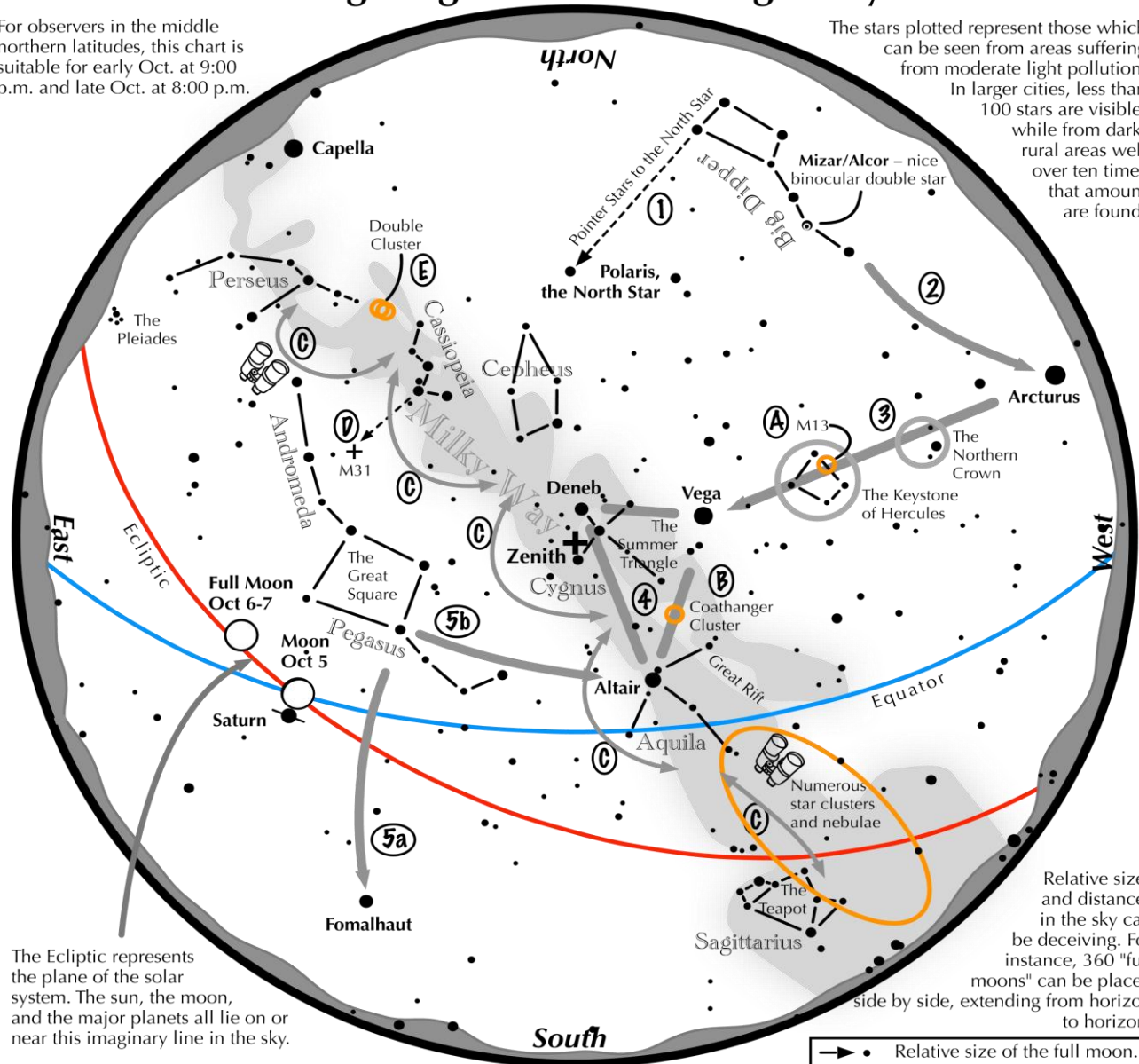
<https://www.iowastarparty.com>

There will be free public viewing on Saturday, October 18th starting at 5:30 PM at the Whiterock Conservancy Star Field. Sun sets at about 6:00 PM. Civil Twilight ends at 6:30 PM, and Astronomical Twilight ends at 7:30 PM. After a short introduction to the night sky, members of the public are welcome to look through various telescopes. If the weather is clear, visitors will have the chance to see galaxies, nebulae and stars millions of light years away, as well as some of the planets in our cosmic backyard, the Solar System. All ages are welcome, and appropriate attire for the weather, as well as a blanket, are recommended. If weather is cool, participants should dress more warmly than they might think is needed, in order to maintain comfort.

Navigating the October Night Sky

For observers in the middle northern latitudes, this chart is suitable for early Oct. at 9:00 p.m. and late Oct. at 8:00 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.



Navigating the October 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 intersects Arcturus, the brightest star in the early October evening sky.
- 3 To the northeast of Arcturus shines another star of the same brightness, Vega. Draw a line from Arcturus to Vega. It first meets "The Northern Crown," then the "Keystone of Hercules." A dark sky is needed to see these two dim stellar configurations.
- 4 Nearly overhead lie the summer triangle stars of Vega, Altair, and Deneb.
- 5 High in the east are the four moderately bright stars of the Great Square. Its two southern stars point west to Altair. Its two western stars point south to Fomalhaut.

Binocular Highlights

A: On the western side of the Keystone glows the Great Hercules Cluster, a ball of 500,000 stars. **B:** 40% of the way between Altair and Vega, twinkles the "Coathanger," a group of stars outlining a coathanger. **C:** Sweep along the Milky Way for an astounding number of fuzzy star clusters and nebulae amid many faint glows and dark bays, including the Great Rift. **D:** The three westernmost stars of Cassiopeia's "W" point south to M31, the Andromeda Galaxy, a "fuzzy" oval. **E:** Between the "W" of Cassiopeia and Perseus lies the Double Cluster.





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

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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

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