STARLIGHT JOURNAL

JUNE 2025

Milky Way Image by DMAS member Heather Johnson

This is one of Heather's spectacular images from her astrophotography class that she presented at Ashton Observatory on May 10. These are the Sandstone Teepees located near the Utah/Arizona border Coyote Buttes South in October 2023 (Class 1 Bortle Sky Conditions)

SAVE THESE DATES NOW!

Saturday, June 7 Member Meeting 6:30 p.m.
Saturday, June 14 Classroom Program **"The Milky Way – There's More to it than You See"** by JoAnn Cogil
Saturday June 28 Classroom Program **"Draco's Realm"** by Derryl Barr
Saturday July 12 Annual Summer Picnic

June 2025 – President's Report

Our first DMAS Astrophotography Class was a great success with 10 DMAS members in attendance!! Heather Johnson, DMAS Member, gave a presentation called "Astrophotography Using a DSLR Mirrorless Camera". She shared images of the Moon, Milky Way, auroras, comets and star trails and included camera settings she used to obtain the images. We hope to have Heather present the next class providing information on post-processing and programs to use.

Norm has stayed in contact with the logger/timber buyer who has contracted to cut our walnut trees at our Timberline property. However, the logger has been busy with spring planting and has concerns about the current (lower) global price for walnut timber which has slowed his getting to our timber to harvest. Hopefully he will get to our timber as soon as possible.

The Radio Telescope Team is planning this summer/fall to attempt to catch Sagittarius, which is the center of the Milky Way Galaxy and has the strongest H1 region. Vern Naffier said they would like to point the dish at Sagittarius when it is visible, which would be September-October. There was wind damage to the PVC cable conduits attached to the dish pedestal earlier this year, so they are working to repair this first.

The Globe at Night organization has selected 2 constellations for their June challenge. They are Boötes and Hercules. Dates for observing are June 16-25, 2025. Learn more about this wonderful challenge at www.globeatnight.org.

Time to enjoy summer sun and fun but please be safe!
JoAnn

The Des Moines Astronomical Society
Monthly Members' Meeting Agenda
June 7, 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
  - Radio Telescope
- Member comments
- Other Business
  - Photography Class
  - Summer Picnic – Saturday, July 12th
- Adjourn
- Upcoming Membership Meetings
  - Summer Picnic July 12th
  - August 2nd at 6:30 P.M.

Next Meeting Date: June 7th at 6:30 PM

Observatory Committee Report June 2025

Greg Woolever, Observatory Director

As I write this, it's Memorial Day. The seasons are rolling along, and June is about to begin, which is entering the high point of summer observation of the night sky for most of us. The weather is accommodating, and favorite targets are coming into view.

Visitors to Ashton have been large, even when the skies were not ideal. Our classroom programs have been well attended. People are excited with their experience visiting the Observatory, and chatting with us, their hosts.

Two programs are scheduled for June Public Nights. On 2nd Saturday (June 14), JoAnn Cogil will present "The Milky Way – There's More To It Than You See." On 4th Saturday (June 28), Derryl Barr will present "Draco's Realm." Come enjoy. Come support your fellow members.

Two large private groups came in May, and two more are scheduled for June. Additions can happen at any time. I greatly appreciate the volunteer help for hosting large private groups.

Our facility continues to function well. As I mentioned before, we do, however, need more trained operators to cover our efforts to host visitors. We also need members to be hosts when we have large groups waiting their turn to go into the domes. Contact any Observatory Committee member to find out how you might contribute.

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

Astronomical League

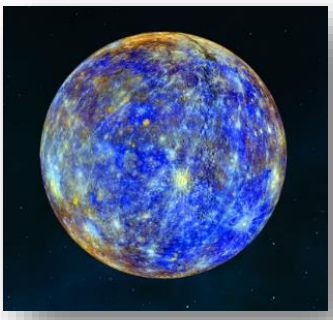
Explore these Rewarding and Educational Observing Programs

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.**

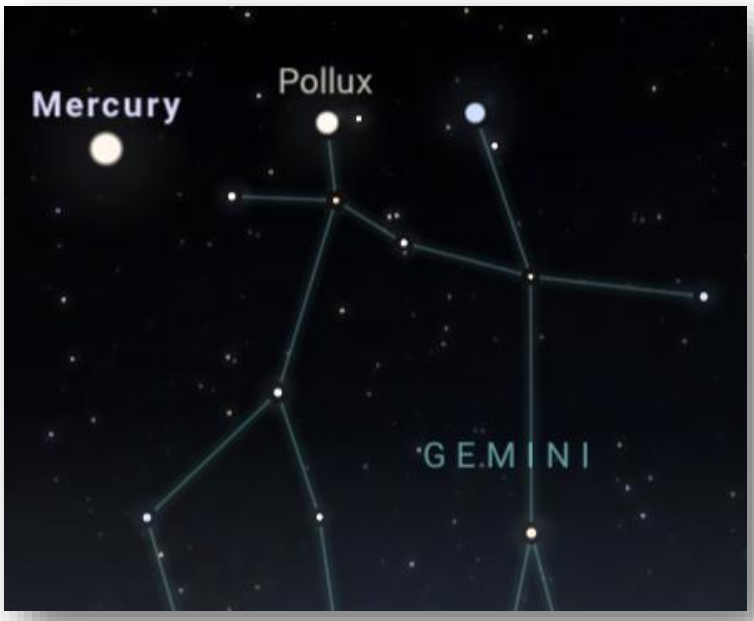
The Night Sky for June 2025

By JoAnn Cogil

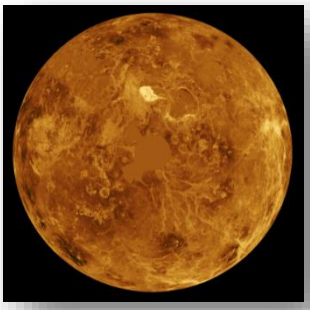
Summer is just around the corner with longer days and shorter nights. Enjoy your iced tea or lemonade while waiting for darkness to arrive.



Mercury – may provide nice binocular viewing this month. On the 24th after sunset we will see Mercury in line with Pollux & Castor, but they will be low on the western horizon. (Image credit: Stellarium)



Venus – shines brightly in the pre-dawn hours of our eastern sky.



Earth – **Happy Father's Day on June 15th!!!**

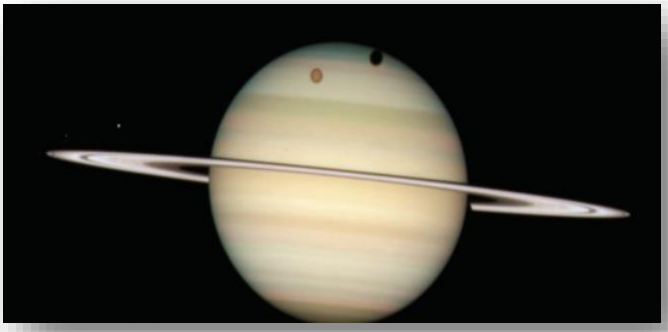
Summer Solstice / First day of Summer on June 20th at 21:40 P.M.

Mars – – this red gem is near the constellation Leo the Lion in our night sky this month. Find our Moon near Mars on the 30th about 10 P.M. for a lunar occultation with less than 1° apart above the west horizon.

Jupiter – will not be visible after the 1st week of the month as it heads for its conjunction with the Sun on the 24th. We will see Jupiter again when it reappears in the morning sky in July.

Saturn - for the next 13 years we will view the southern face of the rings as it moves through its 30-year cycle. (Image credit: Astronomy Magazine)

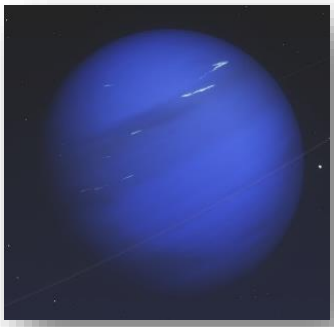
On the 16th we may view a nice transit of



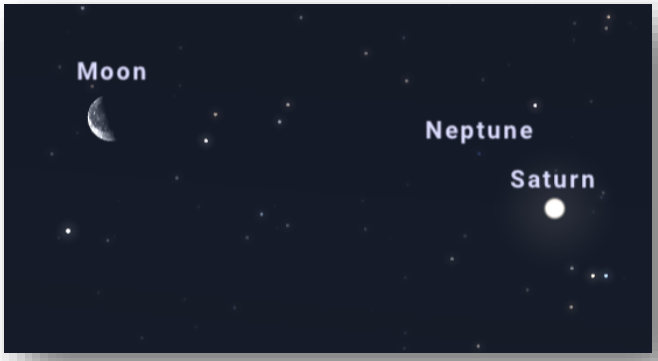
Titan's shadow across Saturn beginning about 3 A.M. CDT.

Image credit: Astronomy Magazine June 2025

Uranus – is back in our morning sky before dawn. Try using binoculars before dawn's twilight for a nice view of the planet.



Neptune – – on the 19th, the blue planet joins Saturn and the Moon in our early ESE morning sky.



June Moon

2nd – 1st quarter
11th – FULL moon at 2:45 A.M. CDT
18th – 3rd/Last quarter
25th – NEW moon at 5:33 A.M. CDT

Our June's Full Moon is known as the 'Strawberry Moon', which signals the time of year for gathering the ripening fruit with the peak of strawberry harvesting season. Other names are the 'Rose Moon' for the roses that bloom this month and the 'Honey Moon' for the honey that is ready for harvesting, making June the 'Sweetest' month.

Noctilucent Clouds

Image credit: Wikipedia

While waiting for summer's dark skies to show, check out this beautiful phenomenon known as noctilucent clouds. These are rare high-altitude clouds and appear after sunset across the sky. They are located in the mesosphere, Earth's third layer of atmosphere, and are formed about 50 miles above Earth's surface. This makes them Earth's highest clouds.

For these clouds to form, they require water vapor, dust and very low temperatures. During summer months, the mesosphere is at its coldest at the poles. These cold temps allow water vapor to freeze

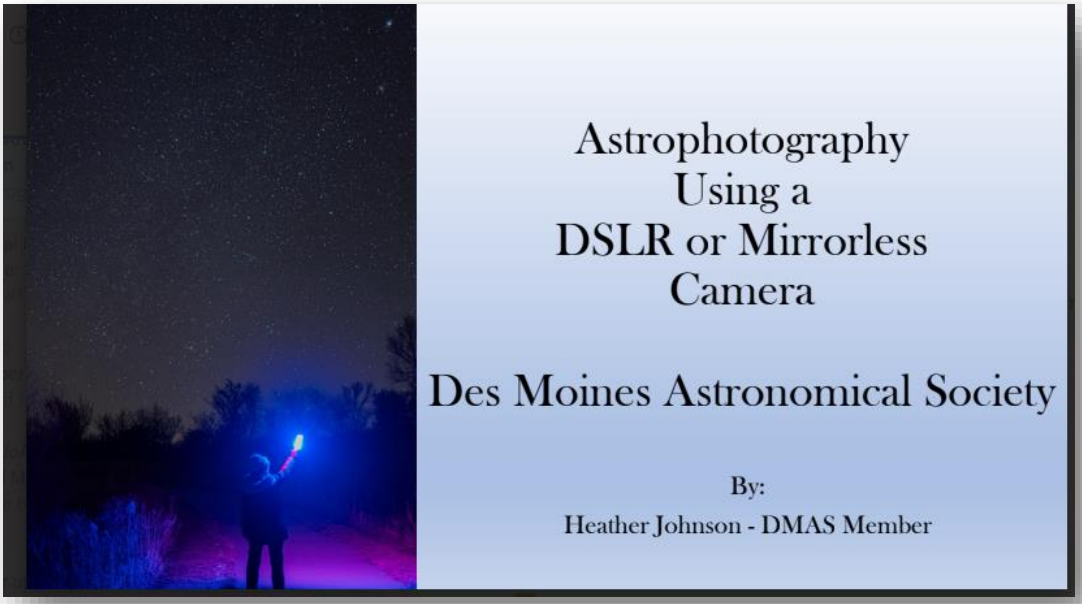
onto dust particles and form ice crystals. The Sun then illuminates the ice crystals from below and reflect the sunlight which allows the clouds to appear as bright blue wispy clouds in the night sky.

Scientists think the dust particles originate from space as tiny meteors or from volcanic eruptions on Earth. In fact, these noctilucent clouds were first mentioned in 1885, two years after the Krakatoa volcanic eruption, which was one of the deadliest and most destructive volcanic events in recorded history. The explosion from this volcano eruption was heard almost 2,000 miles away.

The noctilucent name is derived from the Latin words “nocto” and “lucent” which translates to “night” and “shining”. They are also sometimes referred to as polar mesospheric clouds. Hopefully we will have an opportunity to see these clouds this summer.

Astrophotography Class by Heather Johnson - May 10

DMAS member Heather Johnson provided a very interesting and comprehensive program on astrophotography. Some of the topics that she covered were:



- Equipment Basics
- DSLR vs. Mirrorless
- Shooting Basics
- Aperture / ISO / Shutter Speed
- RAW Format
- White Balance
- Bortle Scale
- Stacking / DMAS
- Astro-Modified Camera
- Planets
- Moon
- Wide Field Astrophotography
- Comets
- Aurora Borealis /Northern Lights
- Sun / Solar AP
- Star Trails
- Deep Sky Objects (DSOs) Galaxies, Nebulae, Star Clusters
- Calibration Frames
- Focus Methods
- Challenges / Problems
- Helpful Apps / Tools – My Favorites
- Post Processing
- International Dark Sky Places

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:

Solstice – The June solstice is when the sun appears farthest north and the December solstice is when the sun appears farthest south.

On May 10, DMAS Member Paul Caligiuri provided his program called "Types of Objects in the Universe." The program was comprehensive and well organized!

Subscribe to the North Central Region Astronomical League newsletter and download archived issues at
https://ncral.wordpress.com/newsletter-archive/

DES MOINES ASTRONOMICAL SOCIETY
PLEASE WELCOME THESE NEW MEMBERS!

January – Chris Conmy
February – Cindy Cunningham
February – Peter Steier
February – Teddy Collis (Associate)
April – Doug Duval
May – Kyle Wright

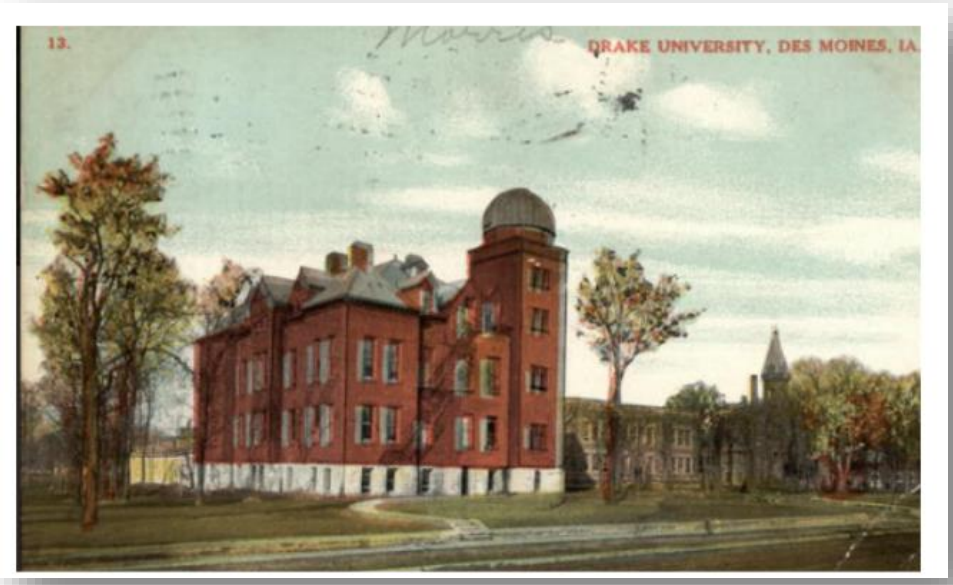
On May 24, Observatory Director, Greg Woolever presented the program **"FIRST TELESCOPE What Should I Get?"** Greg and other DMAS volunteers demonstrated nine different telescopes and several different finder scopes. The guests were enthusiastic and asked many good questions.

Drake Observatory Spring 2025 Lecture Series Schedule

Visitors can expect an Astronomy lesson followed by stargazing with expert guidance. **Lectures begin at 9:30 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!**

Please note that public events in the summer start at 9:30 PM, with the gates opening at 9:00 PM

June 13th	Ghost Astronomer of Patricroft
June 20th	William Herschel: Musical Astronomer
June 27th	*Mystery Presentation???*



The Drake Observatory was originally built on top of Science Hall which was constructed in 1893. It was located on University Ave, where the old trolley route used to run.
Science Hall was one of the two original buildings that made up Drake University, the other being Old Main. The Observatory moved to Waveland Golf Course when sky conditions deteriorated in the Drake area.

This Month in DMAS History

From the StarLight Journal 25 Years Ago, June 2000

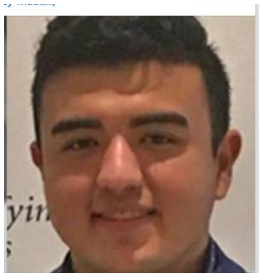
Yes, the rumors are true. You know, that nasty rumor that the club has a new 12-1/2" telescope coming and being installed in the east dome. We finally heard from the builder that it will be shipped during the first week of May. Once this new telescope is in and properly installed, this will complete most of the updating we started in the winter of 98-99. We will also tweak the mount a touch to make it absolutely polar aligned and then we will have not only a beautiful observing instrument but a great photographic one as well. There is still the problem with our back ordered solar viewing telescope we ordered. It seems that the company is having trouble getting the necessary parts to complete it. Maybe Y2K is alive and well after all.

From the StarLight Journal 10 Years Ago, June 2015

Congratulations to Luis Martinez, member of DMAS, on his recent graduation from Lincoln / Central Academy ...
[Luis] was recently featured in a Des Moines Register article highlighting seven 2015 graduates from Des Moines High Schools. Here are a few highlights. After graduation he will major in physics and math at Harvey Mudd College in California, and pursuing a doctorate degree. He decided to turn down an appointment to the U.S. Naval Academy to pursue his goals of working in a lab. "Ideally, I would like to become an astrophysicist," perhaps at NASA, a private aerospace company or at a university. He followed a rigorous academic schedule. "I didn't get formal recognition for it," but taking advance classes was about challenging himself. In math, for example, he went up through linear algebra and differential equations. Luis' favorite website is Astronomy Picture of the Day and NPR. A favorite activity was building a Rube Goldberg machine, a complex, multi-step machine that performs a simple task. "It's a lot of trial and error, and it goes back to what science is really about. Even though there's a theory it doesn't always work that way, and you have to go into the lab and figure out what the truth behind it is." All the best to Luis.

Update on Luis Martinez:
Martinez Receives Chambliss Astronomy Award

January 30, 2019



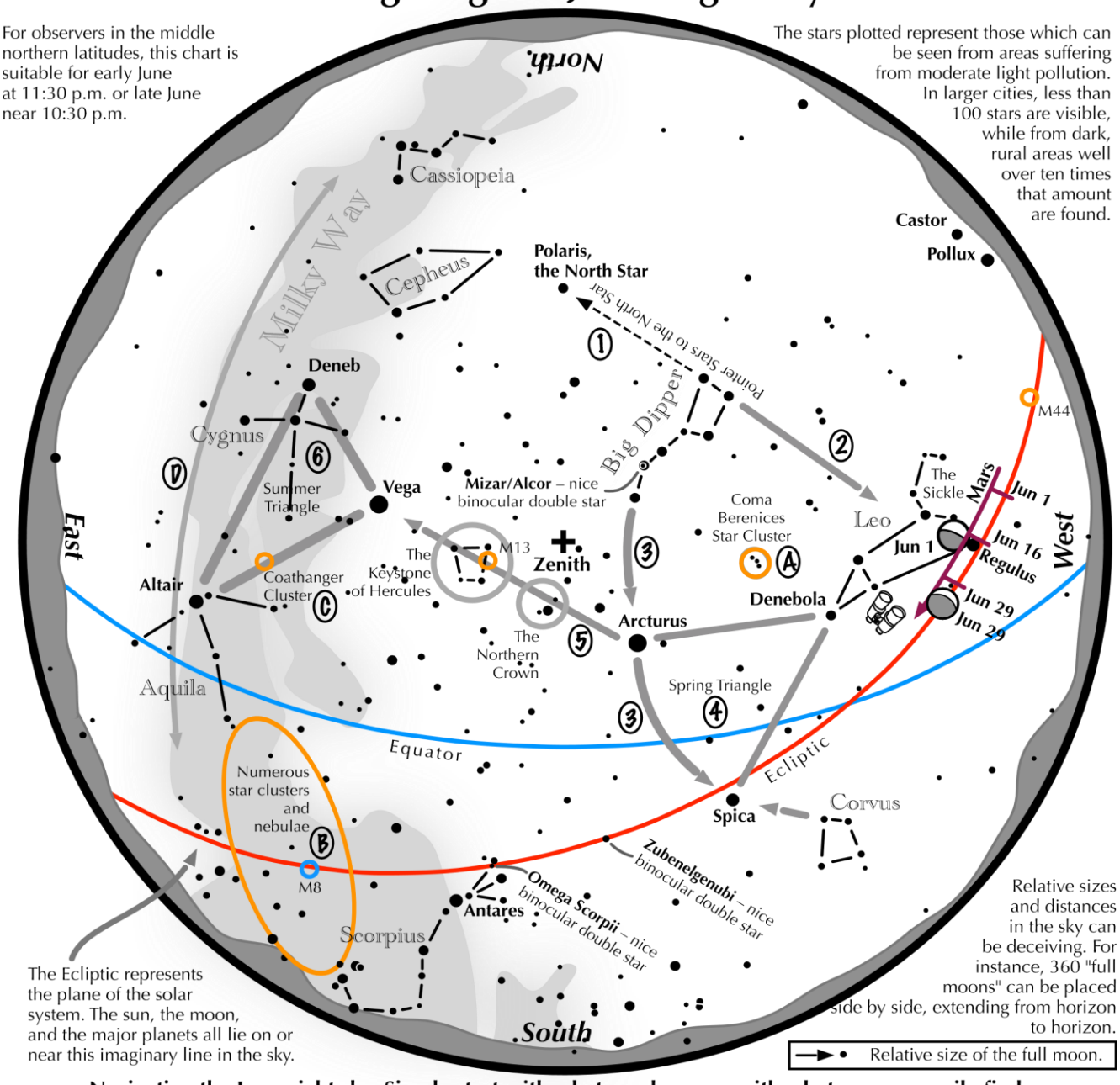
Luis Martinez ’19, a Harvey Mudd College physics major, received the Chambliss Astronomy Achievement Student Award for his exemplary undergraduate research presented during a poster session at the 233rd Meeting of the American Astronomical Society in Seattle.

The January meeting was attended by a record number of participants, including 360 students in the competition: 214 undergraduates and 146 graduate students. Martinez was recognized for his research in astrophysics with Jorge Moreno, an assistant professor of physics and astronomy at Pomona College. Martinez’s research, “What Lights up a Galaxy Bridge,” focuses on simulating galaxy merges to gain a better understanding of star formation in galaxy bridges. He started the research project last summer at the Harvard-Smithsonian Center for Astrophysics and received a SACNAS Student Presentation Award in November. He and Moreno are continuing their work through this academic year and anticipate publishing their research this year.

“We are looking at galaxies and how they merge, but we’re not doing observations, we’re doing computational simulations of merging galaxies, so we’re using large-scale realistic simulations,” Martinez says. “In order to do this, I developed an algorithm that would go through the simulation and identify a bridge. That was part of the project, and then once I did that, I was able to apply the algorithm that I developed to the 27 different simulations.”

Martinez plans to attend graduate school after Harvey Mudd.

Navigating the June Night Sky



Navigating the June 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. Draw another line in the opposite direction. It strikes the constellation Leo high in the west.
3. Follow the arc of the Dipper's handle. It first intersects Arcturus, the brightest star in the June evening sky, then Spica.
4. Arcturus, Spica, and Denebola form the Spring Triangle, a large equilateral triangle.
5. 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.
6. High in the east are the three bright stars of the Summer Triangle: 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 of Antares and Altair, hides an area containing many star clusters and nebulae.
C: 40% of the way between Altair and Vega, twinkles the "Coathanger," a group of stars outlining a coathanger.
D. Sweep along the Milky Way for an astounding number of faint glows and dark bays.

Your 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 that 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
PO BOX 111
Des Moines, Iowa 50301