

VILLAGES STAR

Newsletter of The Villages Astronomy Club

Volume 7, Number 3
March 2026

Club Website:

<http://vlgastroclub.org/>



Facebook:

<https://www.facebook.com/groups/vlgastroclub/>

UPCOMING EVENTS

Observers Workshop, March 2nd, 6:30pm,
Truman Rec Ctr Pavilion, 2705 Canal St.

Join us at our monthly workshop for observers to get assistance with their instruments, learn their way around the sky, and share tips and tricks with their fellow observers.

We will also assist you with Astronomical League observing programs. Choosing a program that suits you, or specific assistance with the requirements once you've started a program (and read the materials online at astroleague.org.)

Location & time: Truman Recreation Center Picnic Pavilion, 2705 Canal Street, 6pm-8:30pm. The picnic pavilion is behind the recreation center, behind the pool.

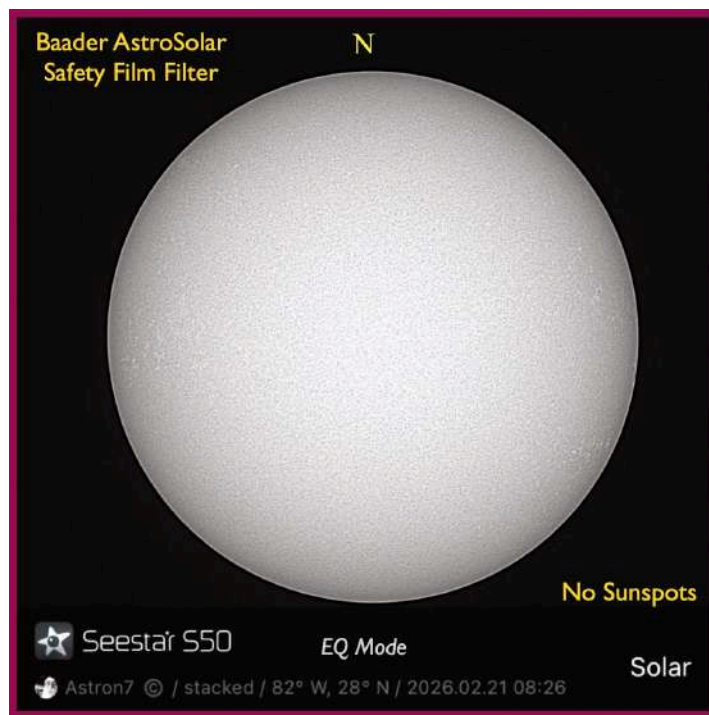
Space Academy, Mar 2nd, 6:30pm
Truman Rec Ctr, 2705 Canal St.

This month's space academy we will be getting updates on the latest news from the James Webb Space Telescope, as well as a NASA presentation on the giant space telescope and its work.

Executive Directors' Meeting, Mar 6th,
11am-12pm, Fishhawk Rec Center,
2318 Buttonwood Run

All members welcome to our monthly planning meeting. This month we'll be planning

for March's Astronomy Day and April's Earth Day at CEMEX.



The Sun, imaged by member John Keller, seen without any sunspots, the first time since June 8th, 2022. I guess solar max really is ending!

General Meeting, Mar 17th, 6:30pm:
Ron Cullum, "The Life & Death of Stars"

Join us at Laurel Manor Rec Center, 1985 Laurel Manor Drive, at 6:30pm for a presentation by member Ron Cullum about the lifecycles of stars, how they change over time, which ones last the longest, and how different types of stars end their lives as different sorts of stellar remnants like neutron stars, white dwarves, and black holes.

Smart Scope Meeting, Homestead Astronomy Park, Mar 18th, 5pm, 6227 Meggison Road

Our Smart Scope meeting is focused on using smart telescopes, telescopes with smart controllers, and astrophotography both traditional

and live-stacking. If you want to know more about how smart controllers can put your astronomy in “easy mode”, come and see what current devices can do!

Visual observers are also welcome!

Fruitland Park Astronomy Group, Mar 21st, 5pm, 300 Shiloh Rd, Fruitland Park

Join us for an evening of observing and astronomy talk with the Fruitland Park Astronomy Group! Come to Cales Soccer Field in Fruitland Park, 300 Shiloh Road (at the corner of Shiloh Road and Dixie Avenue, north of the Fruitland Park water tower.) Enter on Shiloh Road (some GPS’s will guide you to the Dixie Avenue entrance.) Gate opens at 5pm. We will stay as late as conditions permit and people are interested in observing. Bring power if required. You can set up off your tailgate.

Public is welcome to this event, no Villages ID required! Bring family and friends to view the evening sky with our astronomers!

Astronomy Day, March 28th

We will have solar scopes, our solar walk model of the solar system, and informational displays out for Villages residents and guests with ID from 10am to 1pm. Setup 9am.

Your Club Officers & Directors

President	Mark Graybill
Vice President	Ken Katta
Secretary	Randy Gilbert
Treasurer	Linda Meng
Space Academy	Toni Graybill
Public Relations	Jeffrey Kahler, Sr.
Directors	Craig Henry John Roarke

Newsletter Contact:saundby@gmail.com

See Calendar at End of Newsletter, before star chart.

Club Calendar Online:

<https://vlgastroclub.org/calendar/>

NEWS

Artemis II Gets Clean WDR and New Delays from Helium System Problems

Following January’s Wet Dress Rehearsal (WDR) for Artemis II’s launch, NASA carried out a successful WDR in February with the troublesome hydrogen seals keeping their leak rates well within acceptable parameters. Unfortunately, shortly after that success, another problem cropped up with the helium pressurization system in the SLS upper stage, the Interim Cryogenic Propulsion Stage (ICPS.)



Moon Rising Behind Artemis II prior to rollback. The access hatches are visible as two gray circles in the light orange cone below the capsule and service module in white. NASA image.

Fully checking out and clearing the helium system will require crews to access to top of the ICPS through access hatches in the adapter section between the SLS and the Orion capsule and its service module. The only place these hatches can be accessed is from work platforms inside the Vehicle Assembly Building (VAB) in Bay 3, where SLS was stacked initially.

The issues with the helium system may be in the service tower, but NASA is determined to examine all possibilities and eliminate them, as the helium system is critical to the upper stage’s ignition in space. Pending weather conditions, the vehicle is expected to roll back into the VAB on Tuesday, Feb. 24th. The time for rollback,

checkout, then return to the pad with the following checks that will be necessary will cause SLS to not be ready for launch until after the early March launch window. The Artemis crew has been released from quarantine as of Feb. 21st, and NASA is now targeting an April launch.

April has two launch windows, one early in the month as we've seen in February and March, and another that opens on April 30th.



Full story:

<https://www.nasa.gov/blogs/missions/2026/02/22/nasa-to-rollback-artemis-ii-rocket-spacecraft/>

NASA Artemis News and Updates on X:

<https://x.com/NASAArtemis>



Boeing Starliner at the ISS during the Crewed Flight Test. NASA image.

New Report Rules Boeing Starliner CFT as Most Serious Type of Mishap in Human Spaceflight

A new NASA report pulls no punches on the severity of the problems that resulted in problems during the Boeing Starliner Crewed Flight Test. During that test, which followed two uncrewed flight tests that each had their own problems, multiple issues with the spacecraft caused near disaster during the flight up to the ISS. It also experienced an issue that caused a loss of redundancy to its return systems on its way back from the ISS.

NASA administrator Jared Isaacman wrote a letter to NASA personnel giving them his perspective prior to the revelation of the contents of the report from the Aerospace Safety Advisory Panel that will be presented to Congress, as well as NASA's own review that will be released publicly soon.

Administrator Isaacman's letter contains the following statements:

"There is no expectation of perfection in missions as challenging as those we are entrusted to undertake. Even with our best efforts and programs, like CCP [Commercial Crew Program--ed.] that have seen great success, mistakes will occur. What defines us is whether we learn from them, improve because of

them, and strengthen confidence across this workforce and the nation we serve. That requires transparency and accountability, neither of which can be selectively applied.

In this letter, I will summarize the timeline, the organizational root causes, and the actions we are taking to restore trust and move forward. Let me begin with the most important point. Starliner has design and engineering deficiencies that must be corrected, but the most troubling failure revealed by this investigation is not hardware. *It is decision making and leadership that, if left unchecked, could create a culture incompatible with human spaceflight.*” (emphasis added.)

The NASA report will classify the severity of the mishaps in the Starliner test as Type A, the same level of severity as the Challenger, Columbia, and Apollo 1 events. This is not only through the hardware issues that the flight test revealed, but the flawed decision-making process that allowed the flight to occur when problems with the Starliner had not been properly addressed.

Boeing, for their part, gave the following statement to NasaSpaceFlight, a spaceflight-focused news organization: ““We’re grateful to NASA for its thorough investigation and the opportunity to contribute to it. In the 18 months since our test flight, Boeing has made substantial progress on corrective actions for technical challenges we encountered and driven significant cultural changes across the team that directly align with the findings in the report. NASA’s report will reinforce our ongoing efforts to strengthen our work, and the work of all Commercial Crew Partners, in support of mission and crew safety, which is and must always be our highest priority. We’re working closely with NASA to ensure readiness for future Starliner missions and remain committed to NASA’s vision for two commercial crew providers.”

Jared Isaacman Post:

<https://x.com/NASAAdmin/status/2024558806135689354>

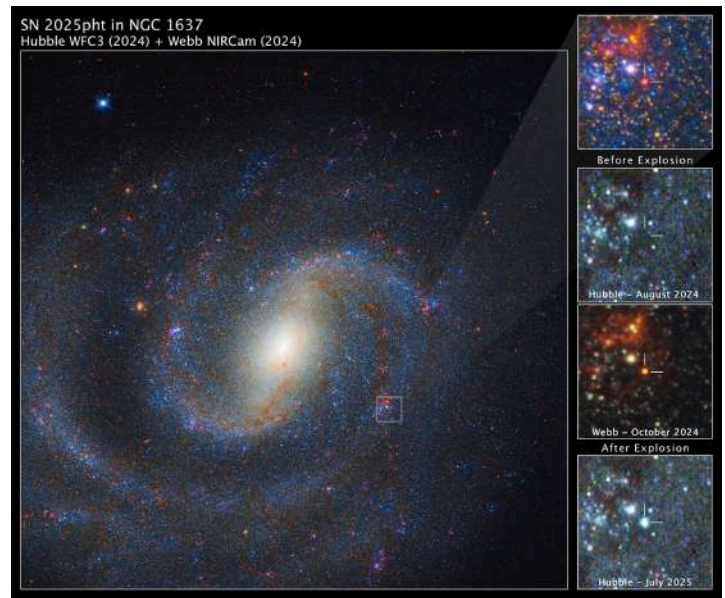
NasaSpaceFlight Post:

https://x.com/_jaykeegan_/status/2024576524028989565

Full Story:

<https://www.nasa.gov/news-release/nasa-release-s-report-on-starliner-crewed-flight-test-investigation/>

JWST Sees Star Both Before & After Supernova



View from JWST & Hubble Both Before & After Supernova. JWST is able to see the star while dust hid it from Hubble’s view before. Image: NASA, ESA, CSA, STScI, Charles Kilpatrick (Northwestern), Aswin Suresh (Northwestern); Image Processing: Joseph DePasquale (STScI)

For the first time, the progenitor star of a supernova has been identified thanks to pre-supernova images taken by the James Webb Space Telescope. Both Hubble and JWST had imaged the nearby galaxy where the supernova occurred prior to the explosion, but only JWST’s infrared cameras were able to pierce the dusty region surrounding the star in the before images to see it directly.

The star was shrouded in a dense carbon-rich cloud of dust that hid it in visual wavelengths. But JWST's cameras were able to see the infrared light, providing observations of the star itself. After the supernova, Hubble was able to observe the supernova remnant along with JWST.

Full Article: [NASA's Webb Telescope Locates Former Star That Exploded as Supernova](#)



The Egg Nebula by Hubble Space Telescope. The high resolution of Hubble's image provides information about the dynamics of this object.

Hubble Reveals Secrets of the Egg

At the end of our Sun's life, it will have expanded to become a red giant, then, when its core collapses the outer atmosphere of the red giant will be wafted off into space to become a planetary nebula.

A nearby star is reaching that stage now, as we watch. The red giant has not yet had a core collapse, nor has it formed a planetary nebula. We know the generalities of the path the star follows at these stages, but not much about the details. In the Egg Nebula, we're seeing those details play out.

The star at the center of the Egg Nebula is

hidden from direct view by a dense cloud of gas and dust. It has already started pushing parts of its atmosphere off in waves. We can see details in those waves thanks to the interplay of light and shadow in Hubble's images of this star, only about 1000 light years away.

What we see is a *proto-planetary nebula*, a nebula that forms before the actual planetary nebula has been formed by the star's core collapsing into a white dwarf.

The light streaming out on each side is caused by openings at the poles of the cloud around the star where the light can escape freely to illuminate the surrounding outer clouds. Denser clouds at the equator of the star confine the light.

Full Article: [NASA's Hubble Captures Light Show Around Rapidly Dying Star](#)

Starry Starry Night Greeted Over 600



Member Jeffrey Kahler Shows the Sky Through His Binocular Telescope.

Our winter Starry Starry Night event was a great success with about 650 attendees braving the cold evening to join us under the stars. The

evening was far less cold than recent evenings had been, making it far more comfortable for our guests and the astronomers and volunteers who were out in it for the duration of the event. President Mark Graybill, positioned on the soccer field with his home-built Dobsonian telescope, reports that he didn't even don his jacket until the last half hour of our time there, but he did admit to wearing thermal underclothes the whole time.



An early evening look at Saturn through a Schmidt-Cassegrain telescope.

Though Saturn was not as bright as last year, its rings were more open and easier to view this year. Jupiter was big and bright, being only days away from superior opposition, where it is directly opposite the Sun in the sky, and at its brightest from Earth.

The crowd enjoyed views through all of the instrument types we had on site, including binoculars, smart telescopes, traditional astrophotography telescopes, and of course visual telescopes including a row of Dobsonians.

The sky was clear and sharp with very little haze, reducing the effects of local light pollution. Stars down to magnitude 4.5 were visible by eye,

which is quite good for our area.



Introductory Talk at the Pavilion by Toni Graybill & Frank Bridge

We had no problems with parking and no incidents at the event to mar the pleasant evening.

The club appreciates the efforts of all the volunteers in making this Starry Starry Night a great success!

Images for this article were provided by Jeff, Kathy, and Jeff jr Kahler.



Sharing the Night Sky and its Wonders at Everglades Recreation Center.

IN THE SKY THIS MONTH

Also refer to the sky map on the last page.



Lunar Eclipse, Morning March 3rd

Early on the morning of March 3rd (after midnight of the 2nd) the Moon will experience a total lunar eclipse, passing into the shadow of the Earth. From The Villages, we will be able to see the Moon go into the shadow, but it will set before it comes out.

At 3:45 am the Moon will enter the *penumbra*, the faint outer shadow of the Earth. This will likely not be visible by eye until the Moon has entered more deeply into the shadow.

At 4:50 am, the Moon will enter eclipse by Earth's *umbra*, the darker central shadow that it casts. Because of the refraction of the Sun's light by Earth's atmosphere, the Moon will usually not go into full darkness (unless volcanic eruptions have placed lots of obscuring dust into Earth's atmosphere, which has caused some very dark eclipses in the past.

At 6:05 am the Moon will be fully eclipsed. It will begin to set before it begins to re-emerge from the umbra at 7:03 am.

Find a site with a clear horizon to the west to see as much of the eclipse as you can. Post your pictures on the Facebook group if you get some!

NASA Eclipse page: [March 2026 Total Lunar Eclipse: Your Questions Answered](#)

THE MOON

Full Moon, Mar 3rd
Last Quarter, Mar 11th
New Moon, Mar 18th
1st Quarter, Mar 25th
Full Moon, April 1st

THE PLANETS

March 1, 2026

Planet	Rise	Transit	Set
Mercury	6:35 am	12:05 pm	5:35 pm
Venus	6:20 am	11:50 am	5:20 pm
Mars	10:21 pm	4:36 am	10:36 am
Jupiter	8:51 am	2:51 pm	8:51 pm
Saturn	1:51 am	7:51 am	1:51 pm

March 15, 2026

Planet	Rise	Transit	Set
Mercury	7:05 am	12:35 pm	6:05 pm
Venus	6:50 am	12:20 pm	5:50 pm
Mars	9:21 pm	3:36 am	9:36 am
Jupiter	7:51 am	1:51 pm	7:51 pm
Saturn	12:51 am	6:51 am	12:51 pm

March 30, 2026

Planet	Rise	Transit	Set
Mercury	7:39 am	1:09 pm	6:39 pm
Venus	7:24 am	12:54 pm	6:24 pm
Mars	8:12 pm	2:27 am	8:27 am
Jupiter	6:42 am	12:42 pm	6:42 pm
Saturn	11:42 pm	5:42 am	11:42 am

Jupiter began retrograde motion last November as Earth moved to lap it in our motion around the Sun. The result has been Jupiter rapidly moving into the constellation Gemini from its outskirts well into its center. On March 10th,

that retrograde motion will end and Jupiter will resume prograde motion across the sky. It will retrace its path, more or less, back out of Gemini toward Cancer. We will miss seeing Jupiter near the Beehive Cluster later this year, however, as it will be too near the Sun in August to observe.

For March, however, Jupiter will continue to rule the sky at mag. -2.3, a bit dimmer than last month. It will also be a little smaller, at just over 40 arcsec of apparent diameter. This is still very large, larger than the apparent diameter of Saturn's rings at their largest. So continue to enjoy the clear views of Jupiter this month.

Jupiter observing information:

<https://in-the-sky.org//data/object.php?id=P5>

Mercury departs our evening sky early this month, headed for its inferior conjunction with the Sun (passes behind the Sun) on March 7th. It will reappear in the early morning sky with earliest visibility on the 15th, though the 17th and later will give a better opportunity for viewing. It will be at its highest altitude in the morning sky on March 30th, a bit further from the Sun than Mars, which lies nearby.

Mercury online viewing chart:

<https://in-the-sky.org//data/object.php?id=P1>

Venus sits low in our evening sky at the start of the month, rising a little higher each night. It will have a conjunction with Saturn on the nights of the 7th and 8th, where they will trade places for which is higher in the sky just after sunset, with Saturn dipping lower while Venus rises higher.

The 7th also marks a close conjunction of Venus with planet Neptune. If you have not yet observed Neptune in a telescope, this will be a perfect opportunity to let Venus guide you to the dimmer planet. Neptune will be magnitude 7.8, bright enough to show in binoculars, but it will take a telescope to show the disk of Neptune at 100-150x or more.

Neptune will appear almost directly below Venus, whereas Saturn will be farther away in a 10 o'clock direction. The main problem will be how low in the sky they will be, and the residual sunlight. Best time to look will be between 6:45pm and 7pm.

Venus online finder chart:

<https://in-the-sky.org//data/object.php?id=P2>

Mars is in the early morning sky, at magnitude 1.2, and will rise a little higher each morning. Its apparent diameter, 4.1 arc sec. is 1/10th that of Jupiters and will only show the largest surface features under medium to high powers of magnification (200-350x).

Observing information for Mars:

<https://in-the-sky.org//data/object.php?id=P4>

Saturn will leave the evening sky early this month, so enjoy it while you can. It will cross paths with Venus, rising into the evening sky, on the 7th and 8th. They will be 1-2 degrees apart from each other, so they will be visible together in the same low-power field of view on a telescope. Enjoy this last hurrah from Saturn before it disappears into the Sun's glare.

Saturn finder chart:

<https://in-the-sky.org//data/object.php?id=P6>

Uranus is visible in the evening sky in Taurus southwest of the Pleiades (The Seven Sisters). At mag 5.6, it's too dim to see by eye in our skies, but it can be seen in binoculars or a telescope.

Uranus finder chart:

<https://in-the-sky.org//data/object.php?id=P7>

Neptune is low in the early morning sky, near Saturn. It has a conjunction with Venus on the 7th and 8th of this month.

Neptune finder chart:

<https://in-the-sky.org//data/object.php?id=P8>

Messier Marathon Month

In the third and fourth weeks of March each year, it is possible to see all of the Messier objects in a single night. It starts right at sunset and continues until the light of dawn robs the sky of the last views of deep sky objects.

We are far enough south to see all the objects in one night, but our poor skies (haze, humidity, and worst of all, light pollution) make this a very challenging thing to complete from The Villages. The best way to prepare is to familiarize yourself with the location and appearance of all the Messier objects in your scope ahead of time, and where your points of aim are for each object with your finder.



Messier 31, The Andromeda Galaxy, by member Will Collier. Includes M32 and M110 as well!

It's also possible to spread the effort over multiple nights, picking up objects missed on the first night as lunar lighting changes.

This year, New Moon falls on the 19th, giving many good nights for a Messier Marathon.

It's possible to start trying as early as the 14th-15th, in spite of the moon's light in the early morning.

Most events will be held on either the 20th-21st or 21st-22nd to take advantage of the weekend nights. The Texas and Arizona organized Messier Marathons will be using these dates.

Here in The Villages, any night you can get out and be out will work. There is even time for naps between some of the stages, you just have to be determined enough to get up again! Or, if

you prefer, schedule times over successive nights for a few hours each night to catch the objects in that window, so that you don't throw your sleep schedule completely out of whack for a week or more!

(I would like to recommend Don Machholz's book on The Messier Marathon, but his publishers are charging \$82 for the ebook. You can sometimes find the hardcopy used for about \$50. Side note, if you ever publish a book, don't work with Cambridge University Press. They did nothing to protect Don's book from piracy, while also pricing the book out of reach of many amateurs while paying Don a pittance of a royalty on sales.)

An online guide to the marathon can be found here: [Messier Marathon](#)

A good plan will catch the first objects right at sunset, be fairly busy until all the "before midnight objects" are caught, then provide about a 90 minute break while waiting for the "after midnight objects" to rise high enough to see well. There is usually a big of a crunch to find those last objects before sunrise, Messier 30 and 73 [Messier 73 is the only object I didn't get on my runs of 109 objects.--Mark]



Leo I, The Regulus Dwarf Galaxy by member Randy Gilbert. This object is notoriously difficult to see and to photograph. It is a dwarf spherical galaxy and believed to be one of the most distant satellite galaxies to the Milky Way.

Club Calendar

Special events by The Villages Astronomy Club

Events not hosted by The Villages Astronomy Club

Notable dates with no event planned.

February 2026

27-28 The Villages Outdoor Expo, 10a-3pm

March 2026

2 Space Academy 6:30pm, Observing Workshop
7pm, Truman Rec. Ctr. 2705 Canal St.

3 Total Lunar Eclipse (3:45-7am)

6 Exec Meeting, 11am Fishhawk Rec Center, 2318
Buttonwood Ln

8 DST BEGINS

17 General Meeting, Ron Cullum, The Life & Death of
Stars

18 EAA Mtg, Homestead Astronomy Park, 7:30pm

21 Fruitland Park Observing, 5pm, 300 Shiloh St.

Fruitland Park

21 Dade Battlefield Star Party, 8-10pm.

28 Astronomy Day Homestead Rec Center.

April 2026

3 Exec Meeting

6 Space Academy, Observing Workshop, Truman
Rec. Ctr. 2705 Canal St.

8 Lake Okahumpka Telescope Seminar Limited Event

15 Smart Scope Mtg., Homestead, 7:30pm

18 CEMEX Earth Day, event 10a-2pm, setup TBA
CEMEX Facility, 530 West Kings Highway, Center
Hill, FL 33514

18 Fruitland Park Observing, 5pm, 300 Shiloh St.
Fruitland Park

21 General Meeting, Ken Katta, *Exoplanets*

Club Calendar on the web:

<https://vlgastroclub.org/calendar/>



The Teddy Bear Nebula by member John Keller, who used a light pollution filter to help bring out the fine details of this nebula.

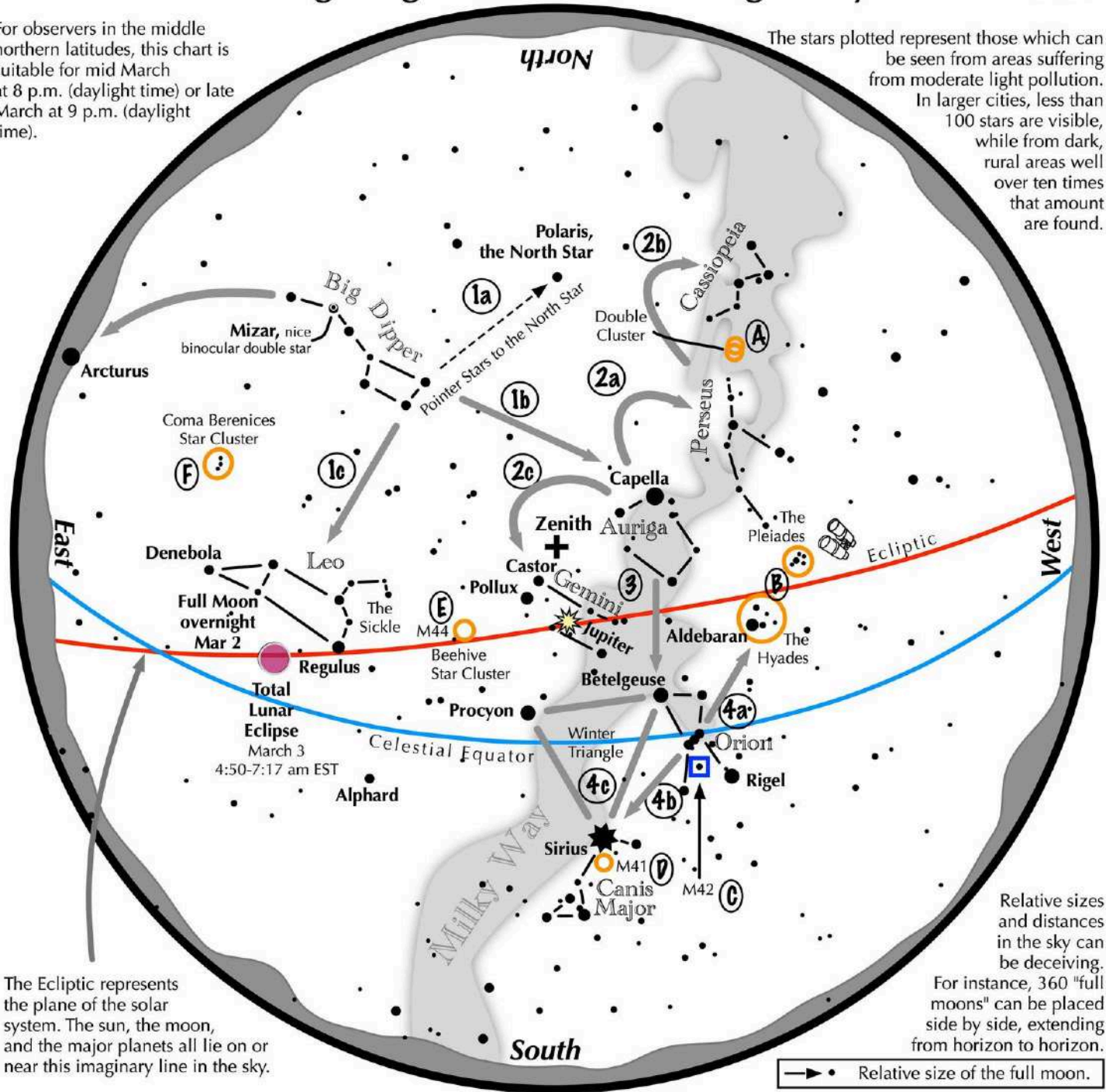
See the monthly star chart on following page:

Navigating the mid March Night Sky

2026

For observers in the middle northern latitudes, this chart is suitable for mid March at 8 p.m. (daylight time) or late March at 9 p.m. (daylight time).

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 March night sky: Simply start with what you know or with what you can easily find.

- 1 Above the northeast horizon rises the Big Dipper. Draw a line from its two end bowl stars upwards to the North Star. Its top bowl stars point west to Capella in Auriga, nearly overhead. Leo reclines below the Dipper's bowl.
- 2 From Capella jump northwestward along the Milky Way to Perseus, then to the "W" of Cassiopeia. Next jump southeastward from Capella to the twin stars of Castor and Pollux in Gemini.
- 3 Directly south of Capella stands the constellation of Orion with its three Belt Stars, its bright red star Betelgeuse, and its bright blue-white star Rigel.
- 4 Use Orion's three Belt stars to point northwest to the red star Aldebaran and the Hyades star cluster, then to the Pleiades star cluster. Travel southeast from the Belt stars to the brightest star in the night sky, Sirius. It is a member of the Winter Triangle.

Binocular Highlights

A: Between the "W" of Cassiopeia and Perseus lies the Double Cluster. **B:** Examine the stars of the Pleiades and Hyades, two naked eye star clusters. **C:** M42 in Orion is a star forming nebula. **D:** Look south of Sirius for the star cluster M41. **E:** M44, a star cluster barely visible to the naked eye, lies to the southeast of Pollux. **F:** Look high in the east for the loose star cluster of Coma Berenices.

