

VILLAGES STAR

Newsletter of The Villages Astronomy Club

Volume 7, Number 6

June 2026

Club Website:

<http://vlgastroclub.org/>

Facebook:

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



UPCOMING EVENTS

Space Academy, June 1st, 6:30pm

Truman Rec Ctr, 2705 Canal St.

Join us as Space Academy, where we talk about the basics of space, astronomy, and astrophysics. We cover recent events in astronomy research and space exploration.

Observers Workshop, June 1st, 8pm, Truman Rec Ctr, 2705 Canal St.

The June Observers' Workshop is likely to be inside the recreation center, after Space Academy, unless we get surprised by nice weather and clear skies, in which case we will move out to the Picnic Pavilion to enjoy a rare starry summer evening.

Join us for assistance with telescopes, observing, or Astronomical League programs.

Executive Directors' Meeting, June 5th, 11am-12pm, Fishhawk Rec Center, 2318 Buttonwood Run

All members welcome to our monthly planning meeting. This month we'll be reviewing March's Astronomy Day, and planning for April's Earth Day at CEMEX.

Smart Scope Meetings are in abeyance through the summer. Join us when they restart in September, we are looking at changes to allow for

more and better smart scope meetings in 2027!



M8, The Lagoon Nebula, imaged by member Randy Gilbert via remote telescope. 20 minutes of 30s exposures.

Fruitland Park Astronomy Group, June 20th, 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.

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

General Meeting, June 16th, 6:30pm:
Mark Graybill, “The New Artemis Moon Program”, SeaBreeze Rec Ctr, 2384 Buena Vista Blvd.

NOTE LOCATION CHANGE!

Join us for a presentation on the changes recently made to the Artemis Moon Program. The flight rate and objectives for the previously leisurely pace of Artemis have been changed to accelerate the program, reach the Moon sooner and more inexpensively, and to build infrastructure for a permanent human presence on the Moon.

Announced initially in NASA Administrator Jared Isaacman’s Ignition event, learn the latest news and the work that is to be performed in order to conduct the mission as it is now laid out.

Former aerospace engineer Mark Graybill, who worked on the SLS and Orion programs will give a look at where the space program is going over the next several years, and the challenges it faces.

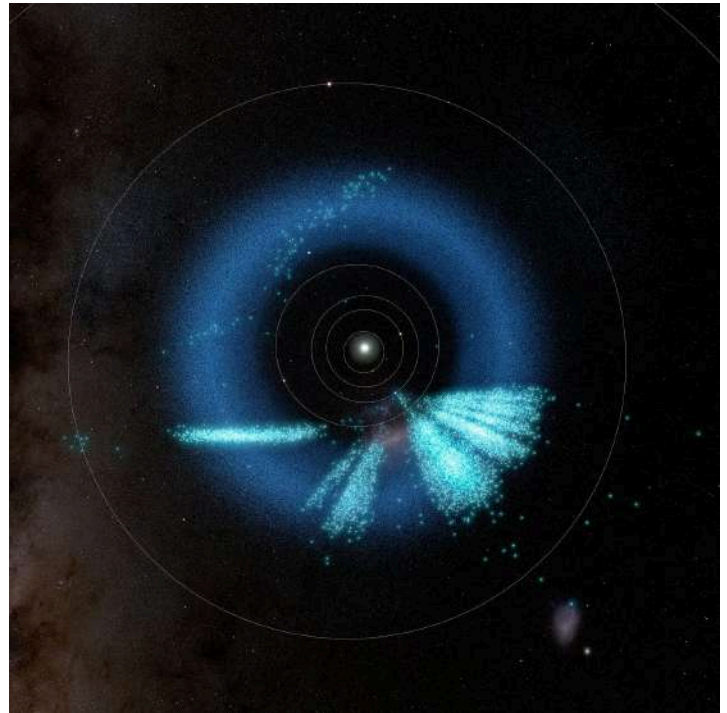
See Calendar at End of Newsletter, before star chart.

Club Calendar Online:

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

NEWS

Vera C Rubin Observatory Discovers 11,000 New Asteroids During Tests



New groups of asteroids discovered shown in light blue against the asteroid belt. The line at lower left shows 1,500 asteroids discovered during a test run in January. To the right, additional groups of asteroids located since.

The new Vera C Rubin Observatory is into its late testing and commissioning phase of operations, and has already discovered over 11,000 new asteroids as it prepares to go into full service.

The asteroids were discovered using its early optimization surveys and have been confirmed through the IAU’s Minor Planets Center, which obtains separate confirmation observations when new discoveries are reported.

The massive number of discoveries gives



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
	Burt Salk
	Tommy Kehne

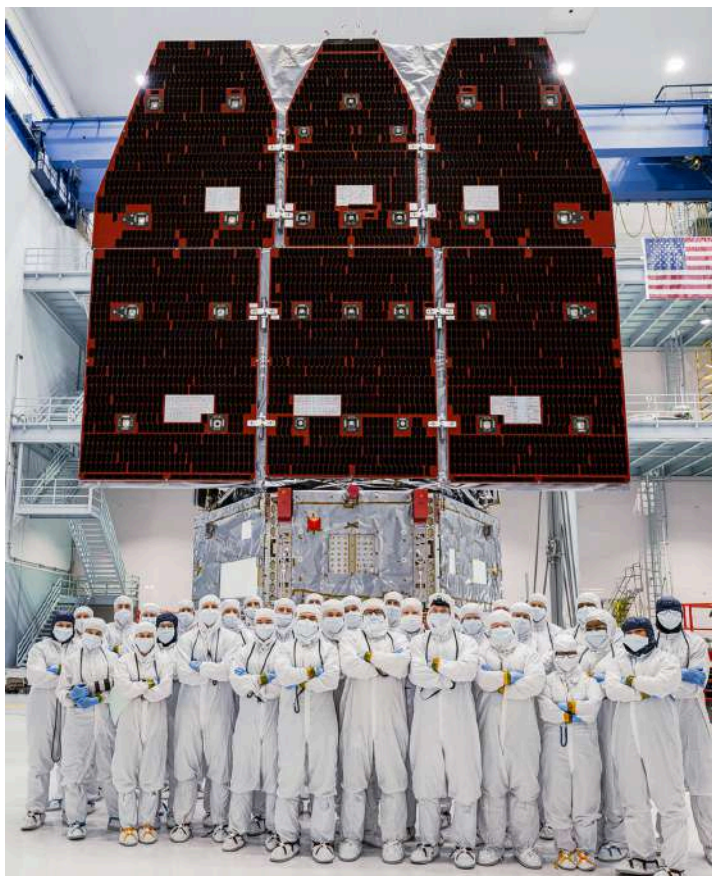
Newsletter Contact: saundby@gmail.com

us a preview of how transformative the Vera C Rubin Observatory will be for solar system observations and science, which has been largely relegated to small institutions and astronomers for the main body of work over the past few decades, with leading edge instruments only being used for a few dramatic discoveries or follow-up observations.

Only a fraction of the main asteroid belt has been observed to date, and more yet remains to be discovered further out, among the Centaurs and other streams of small bodies through the solar system. The mass of new data will give us a new picture of the dynamics of our solar system.

Full Article: [Early Data from NSF-DOE Vera C. Rubin Observatory Reveals Over 11,000 New Asteroids](#)

Nancy Grace Roman Space Telescope Ready For Launch in September



The new space telescope, named for Nancy Grace Roman, a key figure in the Hubble telescope's design and success and former NASA

Chief Astronomer,, is now fully assembled and is being readied for launch in September.

It will be launched on board a Falcon Heavy rocket later this year, ahead of schedule and under budget. It will be placed in an Earth-Sun L2 orbit, orbiting the Lagrange Point behind the Earth from the Sun's perspective. The points of gravitational equilibrium form a gravitational "well" that can be orbited as if there were a massive object there.

The Roman Space Telescope is a Hubble-sized telescope, designed for studies of dark energy, dark matter, and Exoplanets. It will complement JWST in the infrared spectrum, while extending its wide field view to over 200x that of Hubble to give better images of context for wide field observations of star clouds, our galaxy's structure, and other points of interest that required large mosaics with earlier telescopes.

NASA Site: [Roman - NASA Science](#)

Hubble Performs Galactic Bulge Survey

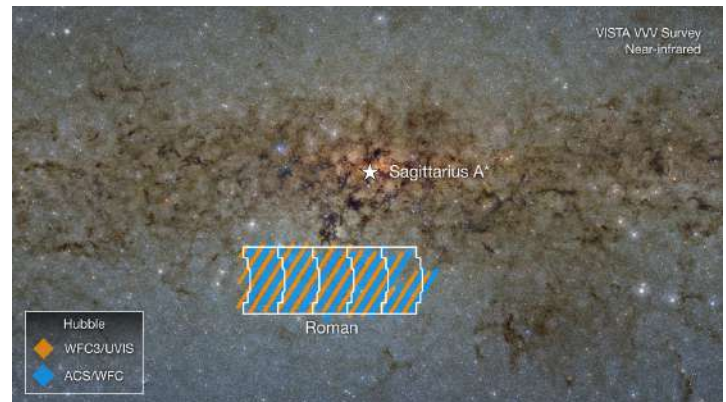


Image showing Hubble survey (colored stripes) relative to the future Roman survey (white image boundaries). Hubble has a much narrower field of view than Roman, so it takes many passes of imagery to cover the same area as a single Roman image.

The Hubble Space Telescope is preparing the way for the upcoming Roman Space Telescope by performing a close survey of the stars in our galaxy's core, known as the Galactic Bulge.

The Roman telescope will be studying “microlensing” events in our galactic core to study the movements of the stars there, map the mass distribution of the core, and otherwise understand its structure. Microlensing is a form of gravitational lensing as is seen with galaxies in the distant universe acting as lenses for even more distant galaxies by the effect the galaxy’s gravity has on the light of the farther galaxies. In microlensing, we are observing the same effect, but at a much smaller scale, with the mass of a star deflecting the light of farther stars.

The light of two stars interacting can be difficult to disentangle. Hubble is gathering data on the positions of stars in the galactic core that it can see now so that there is a series of images that can be used to track the movements of stars that will be seen later using the Roman telescope to tell which is in front and which behind. This will allow Roman’s results to be interpreted faster, and with a longer range of time from which to measure the relative movements of the many stars in the galactic core.

Full article: [Hubble Survey Sets Up Roman’s Future Look Near Milky Way’s Center | STScI](#)

Artemis II Astronaut Photography Site



NASA has posted a gallery of astronaut photography from the Artemis II mission. See the hand-taken photographs they took!

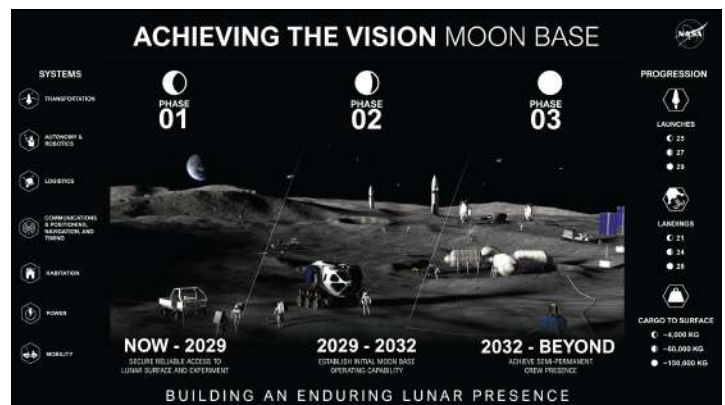
[Artemis II Collections](#)

NASA Launches Moonbase Website

On May 26th, NASA launched a dedicated Moonbase website covering the details of NASA’s work to establish the Moon base and all of its supporting logistics. From communications to site preparation, through both robotic and human crew missions, it documents the work toward the permanent occupation of the Moon that started with the April 1st launch of Artemis II.

[Moon Base - NASA](#)

Launched in concert with NASA’s Moon Base press conference, it provides the public a view into today’s activity toward building the Moon Base. It includes video of the Moon Base conference, and active map of NASA’s Commercial Lunar Payload Services missions on and orbiting the Moon, and information on how the U.S. is building on the 80 hours of lunar surface operations from Apollo to build on what worked and improved what needs to be improved to allow humans to build permanent habitation on the Moon.



The 3 Phase Lunar Base Plan. NASA image.

NASA announced that the Lunar Terrain Vehicles, rovers that can operate autonomously, or under remote control, or under direct control of onboard astronauts, will initially be delivered by Blue Origin’s Mark I lander to the surface of the Moon. They will be used for prospecting, science, and as transports for astronauts and equipment up to 125 miles (200km) from their landing site at up to 6mph (10kph). Astrolab will build the first LTV, with other vendor’s vehicles arriving later.

IN THE SKY THIS MONTH

Also refer to the sky map on the last page.

See Venus Disappear in Broad Daylight!

On June 17th, the Moon will occult planet Venus in the afternoon. The Moon will be a thin crescent on that date, 14% illuminated. Venus will be visible in binoculars or a telescope, if the sky is clear. Venus will be covered by the dark edge of the Moon, then re-emerge a bit over an hour later from the other side of the Moon.

If you do go out to observe this daytime event, be careful not to look at the Sun! Whether through binoculars or a telescope, looking directly at the Sun will damage your eyes!

You can see the Moon by eye, even in daytime. Look at the crescent shape, the dark side will be invisible in the daytime sky. But by inferring where the dark area is, sweep the sky near the Moon with binoculars to find Venus. It will be the only “star” you can see, as the background stars are all very much dimmer.



Moon Crescent and Venus on June 17th. Image via Stellarium.

At a time from 3:50-3:52pm ET, Venus will appear to blink out--disappear! It will be covered by the unilluminated edge of the Moon (lower edge), which won't be directly visible. Then, between 5:07 and 5:10pm ET, Venus will reappear from the lit side of the Moon.



THE MOON

Full Moon, May 31st

Last Quarter, June 8th

New Moon, June 14th

1st Quarter, June 21st

Full Moon, June 29th

THE PLANETS

June 1, 2026

Planet	Rise	Transit	Set
Mercury	6:30 am	1:30 pm	8:30 pm
Venus	8:20 am	3:50 pm	11:20 pm
Mars	4:10 am	10:50 am	5:30 pm
Jupiter	9:10 am	4:10 pm	11:10 pm
Saturn	3:10 am	9:20 am	3:30 pm

June 15, 2026

Planet	Rise	Transit	Set
Mercury	7:50 am	2:50 pm	9:50 pm
Venus	8:40 am	4:10 pm	11:40 pm
Mars	3:40 am	10:20 am	5:00 pm
Jupiter	8:30 am	3:30 pm	10:30 pm
Saturn	2:40 am	8:50 am	3:00 pm

June 30, 2026

Planet	Rise	Transit	Set
Mercury	8:40 am	3:40 pm	10:40 pm
Venus	9:00 am	4:30 pm	12:00 am
Mars	3:10 am	9:50 am	4:30 pm
Jupiter	7:50 am	2:50 pm	9:50 pm
Saturn	2:10 am	8:20 am	2:30 pm

Jupiter/Venus Conjunction June 8-9th

Our two bright evening planets, **Jupiter** and **Venus** will be only about 1.6 degrees apart on the night of June 8th-9th. This is within a wide angle view from a telescope, or easily seen in the much wider view of binoculars. The distance is about 3 times the width of the full Moon, or about the same as the tip of your pinkie held at arm's length.

The show will be on all night, so let's hope for clear skies that night!

Jupiter ends its evening show for 2026 this month as it descends toward the Sun. It will be visible in the west after sunset until month end, when it is lost in the Sun's glare. Later this year it will re-emerge in the morning before sunrise.

Starting in Mid-May, it will descend toward Venus as that planet rises away from the Sun. The two will get ever closer together until their conjunction on the evening of June 8th-9th. After that, they will slowly separate, with Jupiter moving lower in the sky each night until it leaves the evening sky at the end of the month.

Jupiter observing information:

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

Venus moves closer to Jupiter with each evening until the 8th-9th, when it will pass only 1.6 degrees from Jupiter shortly after midnight in the early morning of the 9th. At that time it will be 78% illuminated, looking almost full.

Afterward, it will continue to rise in our sky as Jupiter descends, brightening slightly from magnitude -4.0 to -4.1 even as its illumination decreases from 80% on the 1st to 69% on the 30th.

Venus online finder chart:

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

Mercury is in our evening sky this month, low and close to the Sun. It will start at a bright -0.6 magnitude on the first, but dim rapidly to +2.2 at month's end. On June 24th, it will be 3.7 degrees from Jupiter in the sunset glare. Wait until the Sun is fully set, then view with binoculars with a clear western horizon to see the two together.

Mercury will be at greatest elongation (farthest from the Sun) on the evening of June 7th. Any time within a few days of that will be the best time to get a look at Mercury. Binoculars provide a fine view, telescopes can see it too, but won't show significant detail beyond its changing

phases, which will go from gibbous on the 1st to half illuminated on the 11th, to a crescent that will grow larger as the planet comes closer to Earth through the end of the month. Mercury starts the month at 6.1 arcsec across, and grows to almost 11 arcsec by month's end, showing a nice crescent phase at magnifications of about 75x or more.

Mercury online viewing chart:

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

Mars rises earlier and earlier in the morning sky this month, hours before sunrise. Still very remote, it will be only a bit over 4 arcsec across through June. Magnifications of 100x or more will show the polar cap, and possibly large high contrast features such as Syrtis Major. The north polar cap will be facing Earth, and will be shrinking due to it being the late spring/early summer season in Mars' northern hemisphere. A light blue filter will help visibility of the polar cap, and red or orange filters will help bring out dark features on Mars, while a light yellow or yellow color filter will tend to brighten light areas like Arabia Terra.

Observing information for Mars:

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

Saturn is in this month's morning sky, crossing into the late evening sky at month's end. At about 17 arcsec this month, growing slightly larger through the month, it shows surface detail well, and its rings will be about twice that size. The angle of the rings is becoming better with each passing month since their edge-on apparition last winter. Since the best way to get clear skies for viewing this time of year is to rise early, Saturn will be a great reward for doing so.

Saturn finder chart:

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

Club Calendar

Special events by The Villages Astronomy Club

Events not hosted by The Villages Astronomy Club

Notable dates with no event planned.

June 2026

1 Space Academy, Observing Workshop (Inside after Space Academy), Truman Rec. Ctr. 2705 Canal St.

5 Astro Exec Meeting, 11am, Fishhawk Rec Ctr, 2318 Buttonwood Ln.

6 Camp Geneva community star party (public)

24 Camp Villages, Blanchard Recreation Center, 1512 Craig Court, setup 8:00 AM, Event 9:00-10:00AM

16 General Meeting, **SeaBreeze Rec Ctr, Mark Graybill, "The New Artemis Moon Program"**

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

No EAA Meeting

July 2026

3 Astro Exec Meeting, 11am, Fishhawk Rec Ctr, 2318 Buttonwood Ln.

6 Space Academy, Observing Workshop (Inside after Space Academy), Truman Rec. Ctr. 2705 Canal St.

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

21 General Meeting: **Your Astronomy Interests Roundtable**

22, Wed Camp Villages, Blanchard Recreation Center, 1512 Craig Court, setup 8:00 AM, Event 9:00-10:00AM

No EAA Meeting Planned

August 2026

3 Space Academy, Observing Workshop (Inside after Space Academy), Truman Rec. Ctr. 2705 Canal St.

7 Astro Exec Meeting, 11am, Fishhawk Rec Ctr, 2318 Buttonwood Ln.

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

18 General Meeting: **Resources Roundtable**

No EAA Meeting Planned

Club Calendar on the web:

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



The Hercules Cluster, M13, by member Bill Hillman.

Photographers, Fire Up Your "Darkrooms"!

While this time of year is difficult for observing and photography, it's a great time to do processing on your images. Let's see your reprocessed and more deeply stacked images in our Facebook group, where I go to get images for the newsletter.

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

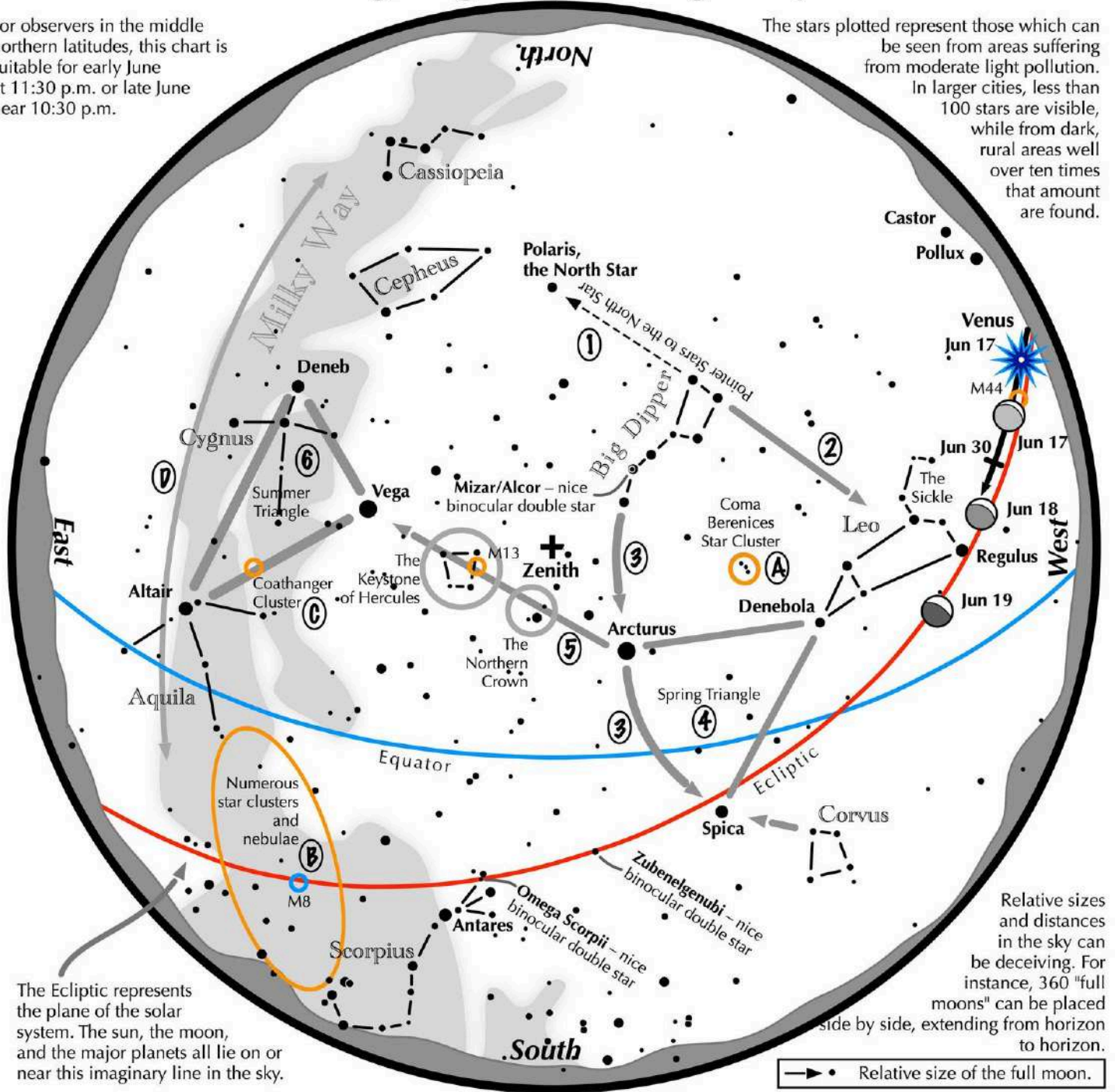
See the monthly star chart on following page:

Navigating the June Night Sky

2026

For observers in the middle northern latitudes, this chart is suitable for early June at 11:30 p.m. or late June near 10:30 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 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.



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