

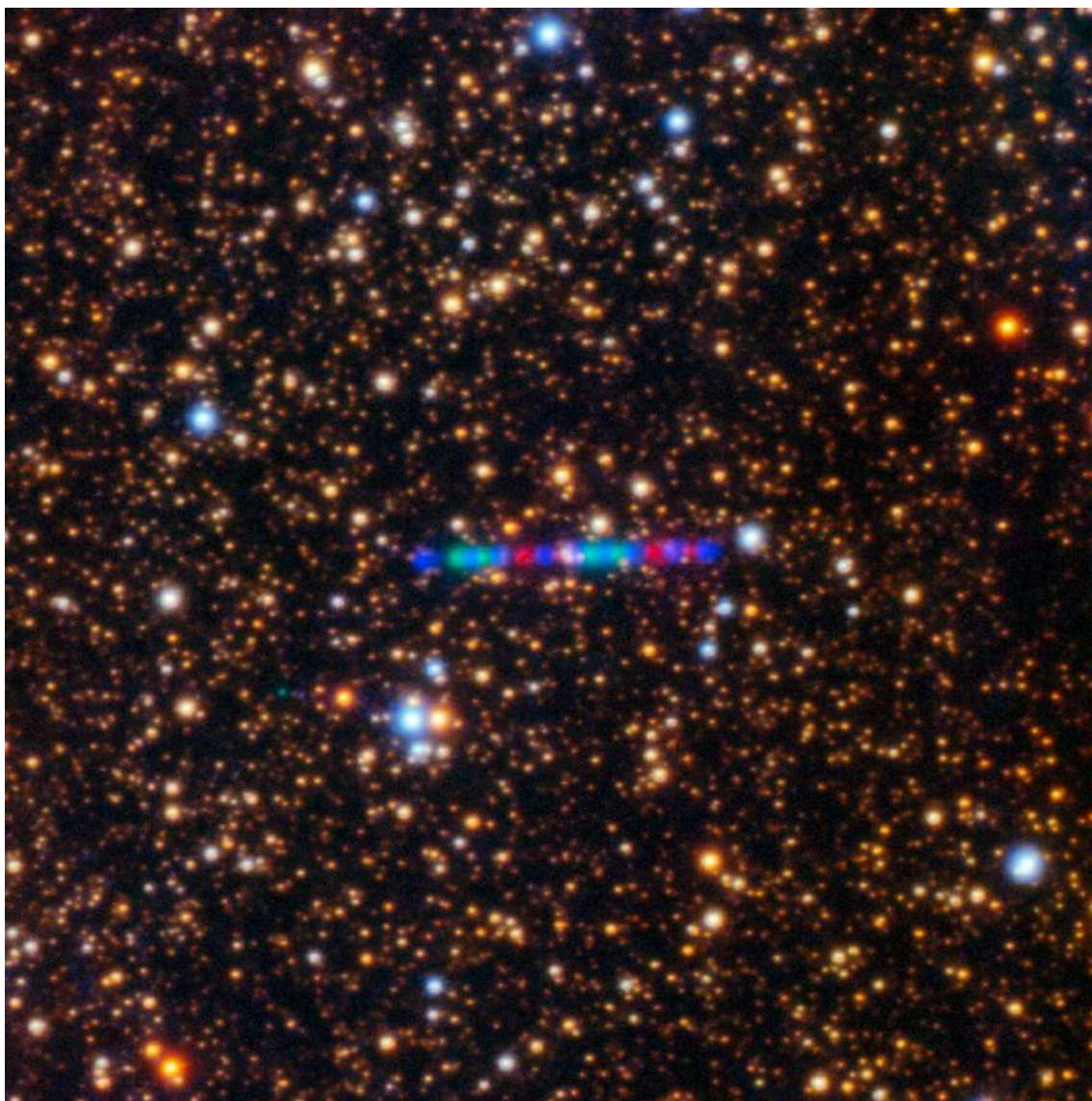


The Newsletter for Keene Amateur Astronomers

Vol. 2025 No. 9

September 2025

Interstellar Visitor Atlas 3I/ATLAS



Comet 3I/ATLAS streaks across a dense star field in this image captured by the Gemini North telescope's Gemini Multi-Object Spectrograph ([GMOS-N](#)). The left panel captures the comet's colorful trail as it moves through the Solar System. The image was composed of exposures taken through three filters, shown here as red, green, and blue. See a close-up image of the comet [here](#). Credit: International Gemini Observatory/NOIRLab/NSF/AURA/K. Meech (IfA/U. Hawaii) Image Processing: Jen Miller & Mahdi Zamani (NSF NOIRLab)

Read the latest about from Space.com about [Comet 3I/ATLAS here](#)

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Editor's Message

This month, Saturn will be taking center stage. It can be seen in the East in the early evening and followed as it progresses across the sky and found in the West before sunrise. This month Saturn will be at opposition and will be at its closest approach for the year. Its rings will barely be visible, tilted at just 2 degrees. It is also worth noting that Neptune will also be at opposition this month and can be found within a few degrees of Saturn.

Jupiter and Venus are still visible in the predawn sky. On the morning of September 19th, there will be a conjunction of the Crescent Moon, Venus, and Regulus. The Moon and Regulus will be separated by 1 degree with Venus between them.

This month is a great time to view the following deep sky objects:

- Messier 15, a globular cluster, which can be found near Enif in Pegasus with a pair of binoculars.
- Messier 27, The Dumbell Nebula, the best known planetary nebula in the Northern Hemisphere.
- NGC 7293, The Helix Nebula, another planetary nebula, located in the constellation Aquarius. This object is challenging and using low power and averted vision are recommended to best observe this object.
- M11. The Wild Duck Cluster can be found close to the tail feathers of Aquila the Eagle. The brightest stars of this cluster form a rough V-shape which gives it its name.

I am taking the month off from writing an article for our newsletter. I hope you take a moment to check out my [blog](#) of my expedition to Chile as part of the Astronomy in Chile Educator Ambassador Program.

Clear skies.

- Susan Rolke

Monthly Business Meeting

Our next meeting will take place at 7:00 pm on September 19th at Keene State College in the Student Young Building.

Observing is planned for the 20th at the observatory in Sullivan weather permitting.

Night Sky Network Online Webinar

Join the NASA [Night Sky Network](#) on Tuesday, September 16, at 9:00 PM for Secrets of the Sun: Developing New Ways to Observe Our Closest Star along with Becca Robinson, where they'll discuss how NASA's Multi-slit Solar Explorer (MUSE) could help us understand the Sun better.

Dr. Becca Robinson is a Sun scientist, stargazer, and the outreach lead for NASA's upcoming Multi-slit Solar Explorer (MUSE) mission. Becca received her BSc in Physics and BSc in Astrophysics from Michigan State University, her MSc in Geophysics from the University of Iceland, and her PhD in theoretical astrophysics from the University of Oslo.

Observing

To find out skywatching tips for this month, click on the following link to learn more.

Video: [What's Up September 2025 Sky Watching Tips from NASA](#)

You can find past pdfs of the Astronomical League charts [here](#). Turn the end of the Newsletter to see what is up this month.

NASA Night Sky Notes, September 2025



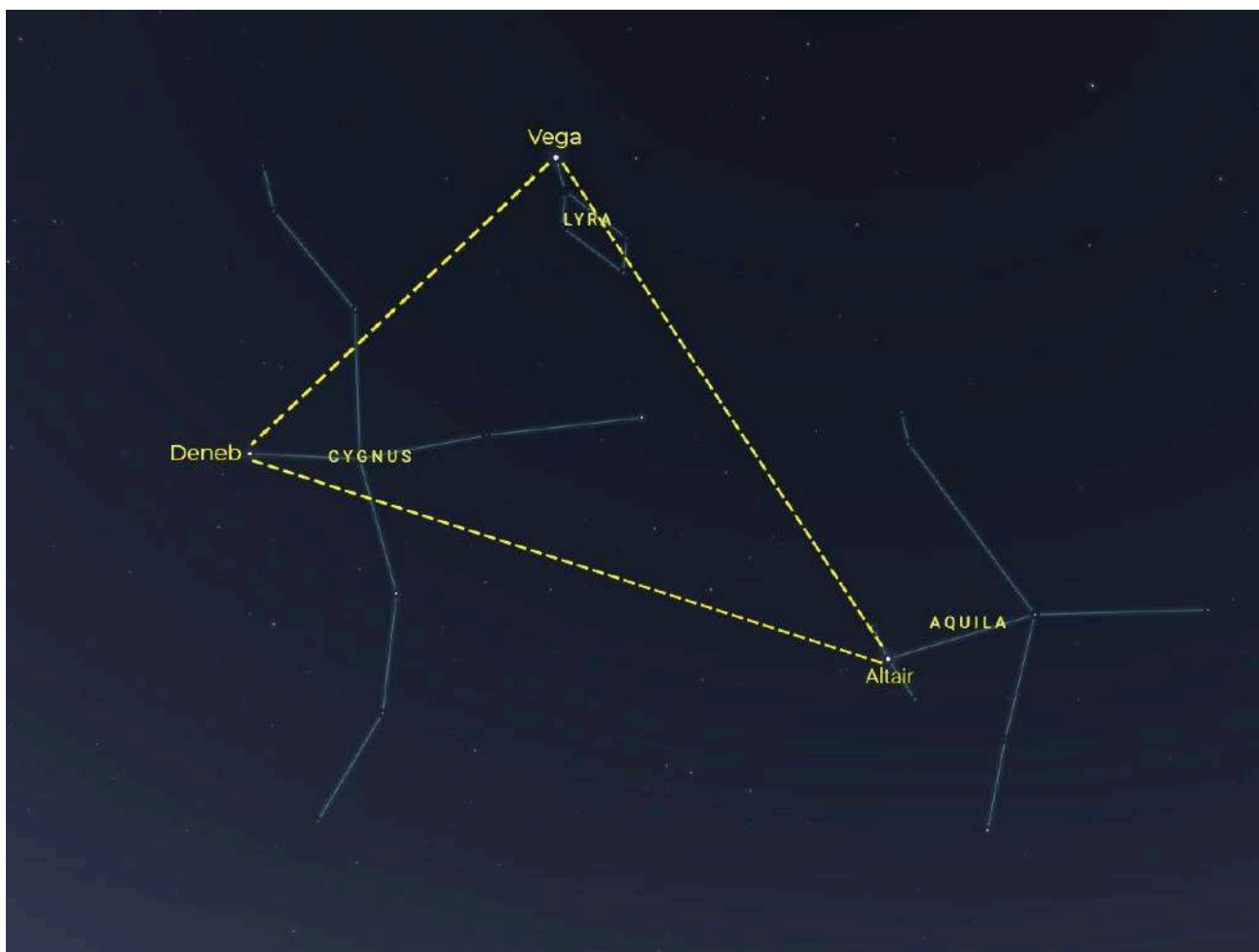
This article is distributed by NASA's Night Sky Network (NSN).

The NSN program supports astronomy clubs across the USA dedicated to astronomy outreach. Visit nightsky.jpl.nasa.gov to find local clubs, events, and more!

September's Night Sky Notes

Summer Triangle Corner: Altair

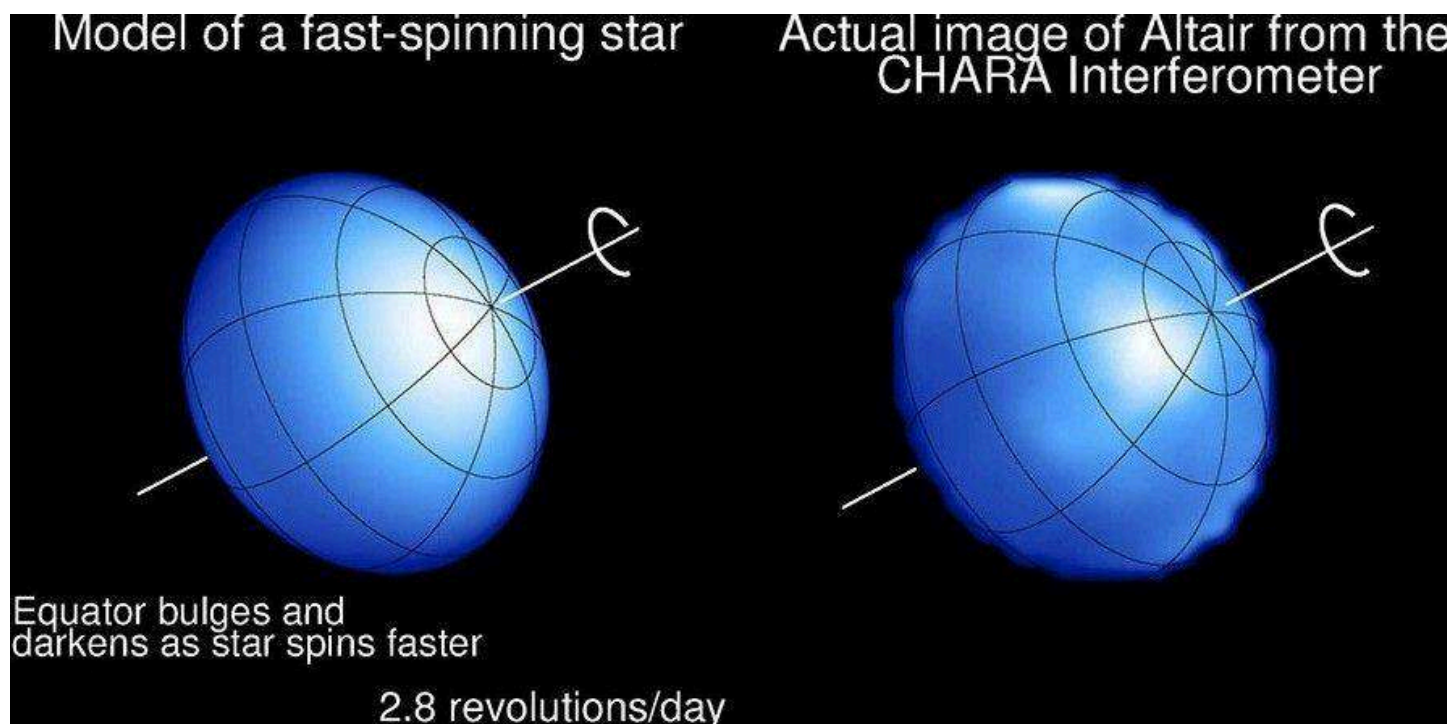
By Dave Prosper
Updated by Kat Troche



A map of the asterism known as the Summer Triangle. This asterism is made up of three stars: Vega in the Lyra constellation, Altair in the Aquila constellation, and Deneb in the Cygnus constellation. Credit: Stellarium Web

Altair is the last stop on our trip around the Summer Triangle! The last star in the asterism to rise for Northern Hemisphere observers before summer begins, brilliant Altair is high overhead at sunset at the end of the season in September. Altair might be the most unusual of the three stars of the Triangle, due to its great speed: this star spins so rapidly that it appears “squished.”

Altair is the brightest star in the constellation of Aquila, the Eagle. A very bright star, Altair holds a notable place in the mythologies of cultures around the world. As discussed [in a previous article](#), Altair represents the cowherd in the ancient tale “Cowherd and the Weaver Girl.” While described as part of an eagle by ancient peoples around the Mediterranean, it was also seen as part of an eagle by the Koori people in Australia. They saw the star itself as representing a wedge-tailed eagle, and two nearby stars as his wives, a pair of black swans. More recently, one of the first home computers was named after the star: the Altair 8800.



A rapidly spinning star darkens and exhibits a bulge at the equator, as shown by the model at left. At right, an actual CHARA interferometer image of the star Altair. Credit: NASA/NSF/Center for High Angular Resolution Astronomy/Zina Deretsky

Altair’s rapid spinning was first detected in the 1960s. The close observations that followed tested the limits of technology available to astronomers, eventually resulting in direct images of the star’s shape and surface by using a technique called *interferometry*, which combines the light from two or more instruments to produce a single image. Predictions about how the surface of a rapidly spinning massive star would appear held true to the observations; models predicted a squashed, almost “pumpkin-like” shape instead of a round sphere, along with a dimming effect along the widened equator, and [the observations confirmed this!](#)

This equatorial dimming is due to a phenomenon called *gravity darkening*. Altair is wider at the equator than it is at the poles due to centrifugal force, resulting in the star’s mass bulging outwards at the equator. This results in the denser poles of the star being hotter and brighter, and the less dense equator being cooler and therefore dimmer. This doesn’t mean that the equator of Altair or other rapidly spinning stars are actually dark, but rather that the equator is dark in comparison to the poles; this is similar in a sense to sunspots. If you were to observe a sunspot on its own, it would appear blindingly bright, but it is cooler than the surrounding plasma in the Sun and so appears dark in contrast.

As summer winds down, you can still take a Trip Around the Summer Triangle with this activity from the Night Sky Network. Mark some of the sights in and around the Summer Triangle at: bit.ly/TriangleTrip.

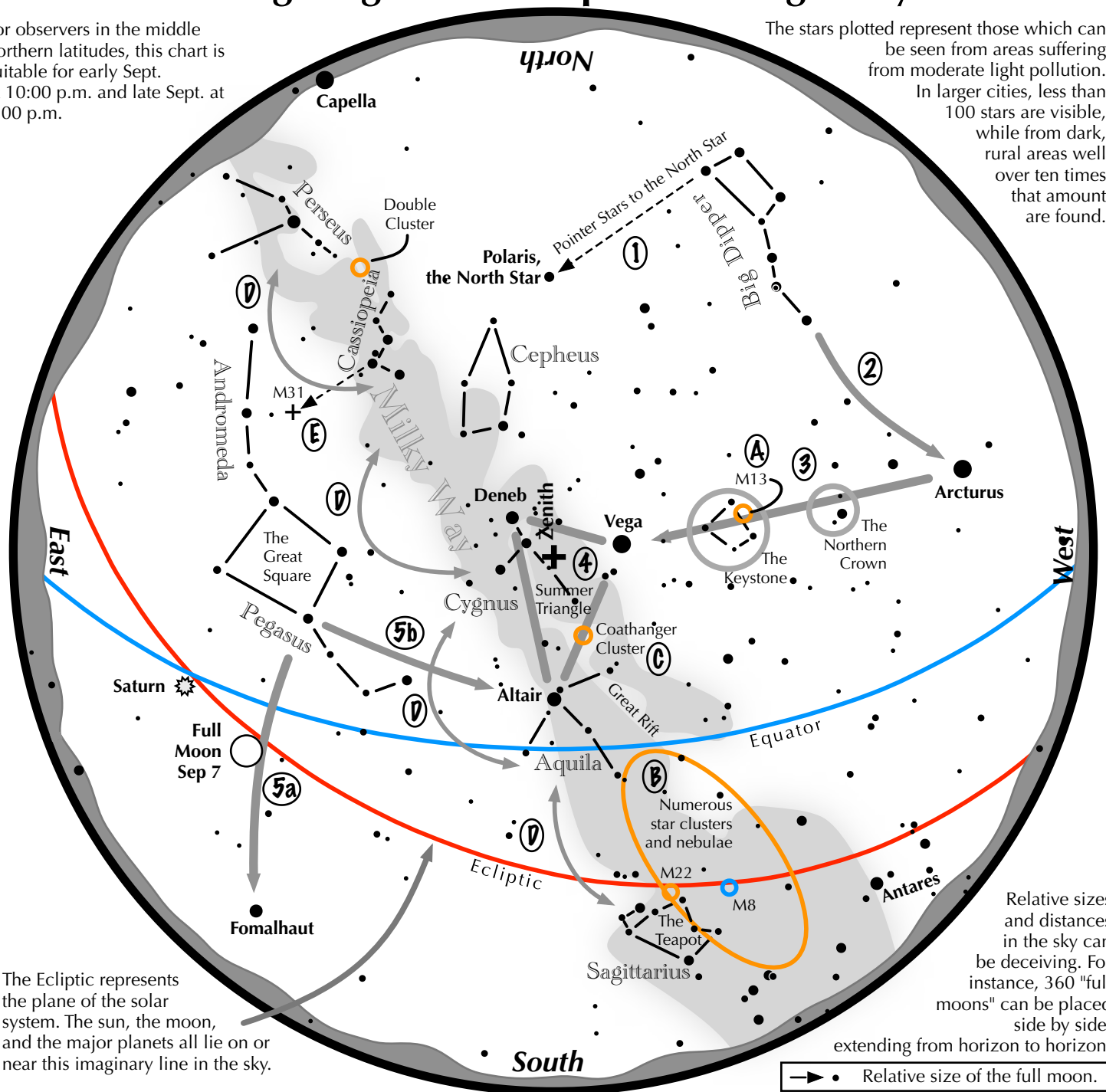
Originally posted by Dave Prosper: August 2020

Last Updated by Kat Troche: July 2025

Navigating the mid September Night Sky

For observers in the middle northern latitudes, this chart is suitable for early Sept. at 10:00 p.m. and late Sept. at 9:00 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 mid September night sky: Simply start with what you know or with what you can easily find.

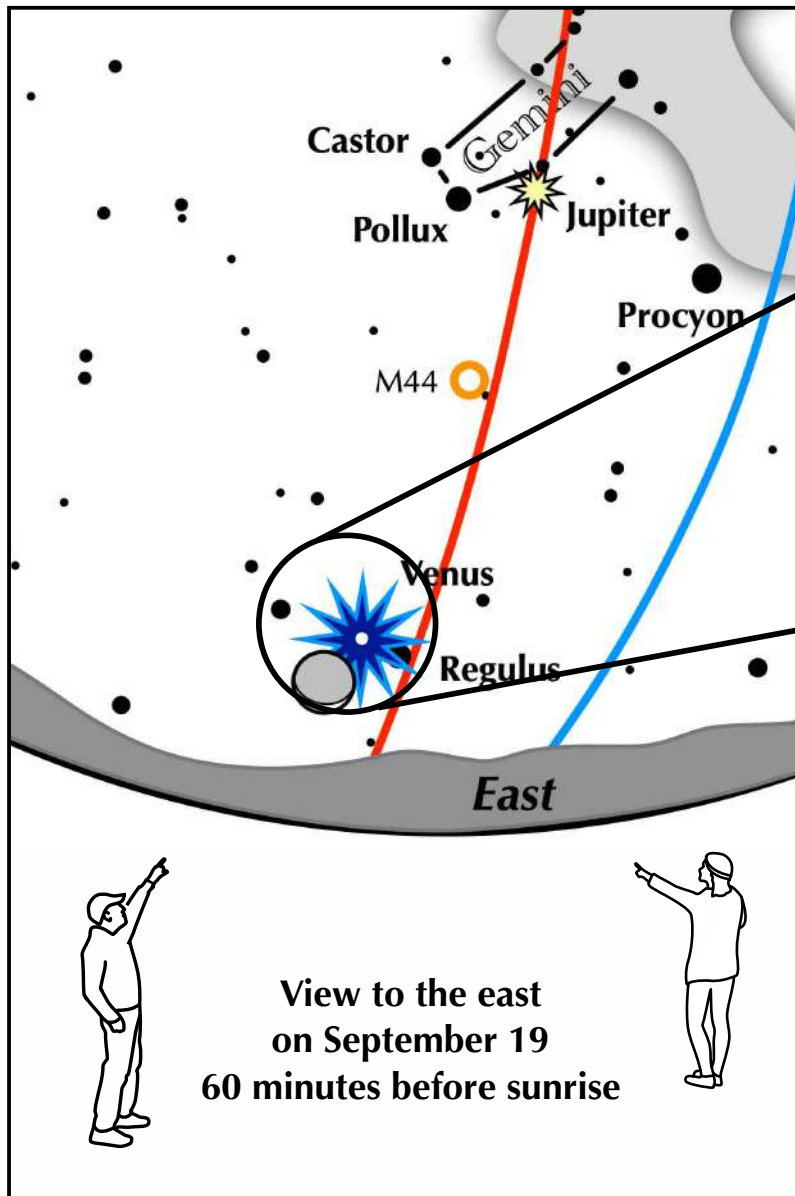
- 1 Extend a line north from the two stars at the tip of the Big Dipper's bowl. It passes by Polaris, the North Star.
- 2 Follow the arc of the Dipper's handle. It intersects Arcturus, the brightest star in the September evening sky.
- 3 Nearly overhead shines a star of similar brightness as Arcturus, 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 The stars of the summer triangle, Vega, Altair, and Deneb, shine overhead.
- 5 The westernmost two stars of the Great Square, which lies high in the east, point south to Fomalhaut. The southernmost two stars point west to Altair.

Binocular Highlights

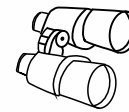
- A:** On the western side of the Keystone glows the Great Hercules Cluster.
- B:** Between the bright stars Antares and Altair, hides an area containing many star clusters and nebulae.
- C:** 40% of the way between Altair and Vega, twinkles the "Coathanger," a group of stars outlining a coathanger.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



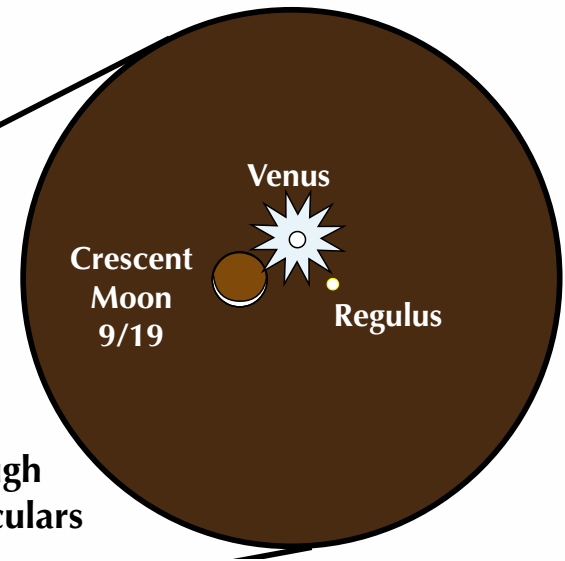
If you can see only one celestial event in the morning this September,
see this one!



**View to the east
on September 19
60 minutes before sunrise**



**View
through
binoculars**



Crescent moon meets brilliant Venus and the star Regulus

On the morning of September 19, the crescent moon, full with earthshine, joins brilliant Venus and the brightest star in Leo, Regulus, for a dramatic sight. Look low in the east-northeast 60 minutes before sunrise.

Be sure to use binoculars to cleanly separate this celestial trio!

Above them all shines bright Jupiter, itself forming an attractive isosceles triangle with the twin stars of Gemini, Castor and Pollux. To their lower right shines the bright star Procyon.





Navigating the mid Autumn Night Sky: Great Square Guide



Befriend these four stars, slightly dimmer than those of the more famous Big Dipper, and they'll guide you on a tour of the Autumn sky.

