

AstroGuy Podcast

August 2026 Observing Guide

Best Observing Windows

Lunar Feature of the Month: Aristillus and Autolycus are best around August 20-23, when the Moon is just past first quarter.

Deep-sky targets: Aim for the darker nights around New Moon, roughly August 6-17. Cygnus rides high for mid-northern observers and is loaded with lots of fun targets.

Planet highlights: Venus dominates the evening sky. Mercury is a morning challenge early in the month. Watch for Moon pairings with Mercury, Mars, Venus, and Saturn, plus the difficult Mercury-Jupiter dawn pairing on August 15.

Perseid meteor shower: Peak night is August 12-13, with New Moon on August 12, so moonlight will not interfere. ZHR is about 100 under ideal conditions, but actual counts are usually lower. Bring a reclining chair, beverages, snacks, and a warm layer for the cool late-night hours.

Eclipse highlights: A total solar eclipse occurs on August 12 along a narrow path through Greenland, Iceland, northern Russia, the Atlantic Ocean, Spain, and a small part of Portugal. The deep partial lunar eclipse on August 27-28 is well placed for observers in the Americas.

August 2026 Moon Phase Calendar

August 2026 Moon Phase Calendar						
All phase times shown in Eastern Time. Daily icons approximate the Moon's phase for each calendar day at noon ET.						
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
						1  Waning Gibbous
2  Waning Gibbous	3  Waning Gibbous	4  Waning Gibbous	5  Third Quarter	6  Waning Crescent	7  Waning Crescent	8  Waning Crescent
9  Waning Crescent	10  Waning Crescent	11  Waning Crescent	12  New Moon	13  Waxing Crescent	14  Waxing Crescent	15  Waxing Crescent
16  Waxing Crescent	17  Waxing Crescent	18  Waxing Crescent	19  First Quarter	20  Waxing Gibbous	21  Waxing Gibbous	22  Waxing Gibbous
23  Waxing Gibbous	24  Waxing Gibbous	25  Waxing Gibbous	26  Waxing Gibbous	27  Waxing Gibbous	28  Full Moon	29  Waning Gibbous
30  Waning Gibbous	31  Waning Gibbous					

Exact Major Phase Times

- * Last Quarter: August 5, 2026, 10:21 pm ET
- * New Moon: August 12, 2026, 1:36 pm ET
- * First Quarter: August 19, 2026, 10:46 pm ET
- * Full Moon: August 28, 2026, 12:18 am ET

Observing Notes

- * Best dark-sky window: roughly August 6-17
- * Perseids peak around August 12-13, with little Moon interference
- * Best LFO window: around August 19-23, near first quarter
- * Deep partial lunar eclipse: night of August 27-28

Moon phases: Timeanddate. Daily icons are calculated for each calendar day at noon ET.

August 2026 Planetary Data

Representative mid-month values for planning. Low twilight objects should be verified with a current chart or app.

Planet	Best visibility	Constellation	Mag.	Diameter (arcseconds)	Guide note
Mercury	Early Aug. pre-dawn	Gemini / Cancer	~+0.1	~7.6"	Greatest western elongation Aug. 2; Moon nearby Aug. 11; very low.
Venus	Evening twilight	Virgo	~-4.4	~24"	Greatest eastern elongation Aug. 15; crescent Moon nearby Aug. 16.
Mars	Morning	Gemini	~+1.6	~4"	Small and not at its best; Moon nearby Aug. 9.
Jupiter	Low pre-dawn	Cancer	~-1.8	~32"	Low in dawn twilight; close to Mercury Aug. 15.
Saturn	Late night / morning	Pisces	~+0.7	~18"	Improving; Moon nearby Aug. 4 and Aug. 31; rings shallow.
Uranus	Morning telescope/binocular target	Taurus	~+5.8	~3.5"	Faint, star-like; use a chart or app.
Neptune	Morning telescope target	Pisces	~+7.7	~2.3"	Dim and challenging; needs a chart or app.

Quick Target List

Cygnus targets for this episode.

Object	Type	Constellation	Magnitude	Size / Separation	Distance	Best Approach
Albireo	Visual double star	Cygnus	~3.1 / ~5.1	~34 arcsec	~430 ly	Small telescope
M29	Open cluster	Cygnus	~7.1	~7-10 arcmin	~4,000-5,000 ly	Low power near Sadr
M39	Open cluster	Cygnus	~4.6	~20-30 arcmin	~1,000 ly	Binoculars or low power
NGC 7000, North America Nebula	Emission nebula	Cygnus	~5.0	~120 x 100 arcmin	~1,800 ly	Dark sky; wide field; filter/imaging
IC 5070, Pelican Nebula	Emission nebula	Cygnus	~8	~60 x 50 arcmin	~1,800 ly	Wide-field imaging
NGC 6888, Crescent Nebula	Emission nebula	Cygnus	~7.4	~18 x 12 arcmin	~5,000 ly	Nebula filter; imaging
Veil Nebula / Cygnus Loop	Supernova remnant	Cygnus	~7 integrated	Several degrees	~2,600 ly	Low power; OIII filter
IC 5146, Cocoon Nebula	Emission/reflection nebula	Cygnus	~7.2	~12 arcmin; B168 lane	~3,300 ly	Dark sky; filter/imaging

August Eclipse and Meteor Notes

Event	Planning note
Solar eclipse, Aug. 12	Totality crosses Greenland, Iceland, northern Russia, the Atlantic Ocean, Spain, and a small part of Portugal. For most viewers, use NASA maps or livestreams. Proper solar filters are required for all partial phases.
Lunar eclipse, Aug. 27-28	Deep partial eclipse. Umbral magnitude 0.93187, or 93.187% of the Moon's diameter in Earth's umbra at greatest eclipse. EDT contacts: P1 9:23 PM, U1 10:33 PM, greatest 12:12 AM, U4 1:52 AM, P4 3:01 AM.
Perseids, Aug. 12-13	New Moon conditions. Best after midnight into pre-dawn. Use a wide-open sky, away from bright lights and give your eyes time to adapt to the dark.

Object Notes and Finder Tips

Aristillus and Autolycus, Lunar craters

Lunar craters | Moon

Size	Aristillus ~55 km across; Autolycus ~40 km across
Best observing window	Around August 20-24, near first quarter
Location	Eastern Mare Imbrium, near Archimedes
Best approach	Low power to locate; then increase magnification for crater detail

Description / where to look: Start with Mare Imbrium, the large dark basin in the northern half of the Moon. Find Archimedes near one side of the basin. Aristillus is northeast of Archimedes, and Autolycus is just south of Aristillus.

What to notice: Aristillus is larger and has central peaks and terraced walls. Autolycus is smaller and lacks the same central peak structure. Compare the rims, floors, and shadows while the terminator is nearby.

Albireo

Visual double star | Cygnus

Magnitude	~3.1 primary; ~5.1 companion
Separation	~34 arcsec
Distance	~430 light-years
Best approach	Small telescope; low to moderate power

Star hop: Use the Northern Cross. Deneb marks the tail of Cygnus, Sadr is near the middle, and Albireo marks the head of the Swan.

What to notice: The color contrast is the attraction. Most observers describe the pair as gold and blue, and it is one of the prettiest double stars in the sky.

[Albireo Finder Chart](#)

M29

Open cluster | Cygnus

Magnitude	~7.1
Size	~7-10 arcmin
Distance	~4,000-5,000 light-years
Best approach	Low power near Sadr

Star hop: Start at Sadr, Gamma Cygni, near the middle of the Northern Cross. M29 sits close by in the rich Milky Way starfield.

What to notice: In a 70mm refractor, the brightest stars stand out against the dense background. In larger scopes under dark skies, dozens of stars can be resolved.

[M29 Finder Chart](#)

M39

Open cluster | Cygnus

Magnitude	~4.6
Size	~20-30 arcmin
Distance	~1,000 light-years
Best approach	Binoculars or low-power wide field

Star hop: Move up toward Deneb and look east-northeast of the bright tail star of Cygnus. Use binoculars or a finder chart to confirm the field.

What to notice: M39 is larger and looser than M29. It stands out best as a bright, scattered group of stars in binoculars or a wide-field scope.

[M39 Finder Chart](#)

NGC 7000, the North America Nebula

Emission nebula | Cygnus

Magnitude	~5.0 integrated
Size	~120 x 100 arcmin
Distance	~1,800 light-years
Best approach	Dark sky; wide field; filter or imaging

Star hop: Look near Deneb. The nebula is large, so use low power and a wide field. The Gulf of Mexico region is often the easiest shape to recognize in images.

What to notice: Visually, this can be challenging because its light is spread over a wide area. In images, the North America shape and dark dust lanes stand out.

[NGC 7000 Finder Chart](#)

IC 5070, the Pelican Nebula

Emission nebula | Cygnus

Magnitude	~8
Size	~60 x 50 arcmin
Distance	~1,800 light-years
Best approach	Wide-field imaging; dark sky helps

Star hop: The Pelican sits right next to the North America Nebula near Deneb. Treat the two as one wide-field region.

What to notice: The dark lane between the North America and Pelican Nebulae helps create the shapes we recognize. The dark dust is shaping what we see.

[See the NGC 7000 Finder](#)

NGC 6888, the Crescent Nebula

Emission nebula | Cygnus

Magnitude	~7.4
Size	~18 x 12 arcmin
Distance	~5,000 light-years
Best approach	Nebula filter; imaging target

Star hop: From Sadr, move into the surrounding rich Cygnus Milky Way. A detailed chart or app helps because the area is packed with stars.

What to notice: In an 8-inch Dob at low power, the brighter parts can be faintly visible. A nebula filter helps reveal a boomerang-like glow; imaging shows much more detail.

[NGC 6888 Finder Chart](#)

Veil Nebula / Cygnus Loop

Supernova remnant | Cygnus

Magnitude	~7 integrated
Size	Several degrees
Distance	~2,600 light-years
Best approach	Low power; OIII filter; dark sky

Star hop: Look for the Western Veil near 52 Cygni. The Eastern Veil lies across the loop, with Pickering's Triangle between them.

What to notice: The Veil is easier visually than the Crescent under good conditions. With an OIII filter and dark skies, the long arcs of nebulosity can be stunning.

[Veil Nebula Finder Chart](#)

IC 5146, the Cocoon Nebula

Emission/reflection nebula and dark nebula | Cygnus

Magnitude	~7.2
Size	~12 arcmin nebula; B168 lane
Distance	~3,300 light-years
Best approach	Dark sky; filter or imaging

Star hop: Work from the eastern side of Cygnus toward the dark lane Barnard 168. In wide-field images, the dark lane appears to lead into the Cocoon.

What to notice: From suburban skies, the Cocoon is better for imaging than visual observing. Under dark skies, the nebula can be seen with an 8-inch scope, and a nebula filter can help.

[Cocoon Nebula Finder Chart](#)

Quick Field Tips

- Use low power for M39, NGC 7000, the Pelican Nebula, and the Veil Nebula.
- Use a nebula or OIII filter for the Crescent and the Veil.
- For the North America and Pelican Nebulae, dark skies and wide fields matter more than high magnification.
- For Aristillus and Autolycus, observe around August 20-24, or return on multiple nights to see how the lighting changes.
- For the lunar eclipse, the partial phase runs from about 10:33 PM EDT on August 27 to 1:52 AM EDT on August 28, with greatest eclipse around 12:12 AM EDT.
- For the Perseids, skip the telescope. Use a reclining chair, face a wide-open part of the sky, and give your eyes time to dark adapt. Bring drinks, snacks, and a warm layer.

Notes

Moon phases: Times and dates, shown in Eastern Time. Daily icons approximate the Moon's phase for each calendar day.

Lunar eclipse: Umbral magnitude 0.93187; partial duration about 3h 18m 48s.

Solar eclipse: NASA Science page for the August 12, 2026 total solar eclipse.

Planning note: Use a current planetarium app for exact local altitude, timing, and horizon clearance before observing.

Source links: [NASA solar eclipse](#) | [EclipseWise lunar eclipse](#)