

# Tonight's Sky: 2017

## August

Your guide to constellations, deep-sky objects, planets, and events. Tonight's Sky, highlights of the August Sky.

### Evening Planets

Soon after sunset, look to the west to find Jupiter, king of planets.

Use a telescope to glimpse its cloud bands and some of its moons.

Saturn spends these August evenings perched in the southern sky.

Catch sight of its famous rings through a telescope.

### Constellations and Deep-Sky Objects

Stargazing on a hot August night reveals a multitude of wonders.

Lyra, the Small Harp, lies high in the late evening sky. Its main star is the great Vega, one of the brightest in the sky.

Look for Lyra by locating Vega and then the parallelogram of stars nearby.

Epsilon Lyrae, the bright star near Vega, is actually a wonderful quadruple-star system, known as the Double-Double.

In the parallelogram of Lyra lies the dramatic Ring Nebula. It is an expanding shell of glowing gas expelled by the dying star at its center.

The great constellation Cygnus, the Swan, flies high through the August night.

Using bright Vega as your guide star, look for the cross just to the east. Cygnus is also known as the Northern Cross.

Albireo, at the head of the Swan, is a showpiece for small telescopes. This spectacular pair of stars features contrasting colors of sapphire and golden topaz.

Deneb, the Swan's tail, is a supergiant star. If Deneb replaced the Sun in the center of our solar system, it would engulf Mercury and Venus.

On a clear night, hazy patches of nebulae can be seen by casually panning across the Cygnus area with binoculars.

The most prominent is the North America Nebula, an area of gas and dust illuminated by the nearby, brilliant star Deneb.

Cygnus also hosts several clusters of stars. The easiest to find are M29 and M39.

M29 is found near the center of the Northern Cross. When viewed in a small telescope, it resembles a small square.

Best seen in binoculars, M39 is a loosely bound cluster of about 30 stars, just to the north of Deneb.

Just south of Cygnus lies the small constellation Vulpecula, the Little Fox, first charted by Polish astronomer Johannes Hevelius in the 17<sup>th</sup> century.

Vulpecula hosts the Dumbbell Nebula, which can be seen as a faint smudge in binoculars. A small telescope reveals its double-lobed shape.

Aquila, the Eagle, was known to the ancient Greeks as the great bird of Zeus.

Altair, the brightest star in Aquila, is only 16 light-years from Earth.

The bright stars of the summer night sky, Vega, Altair, and Deneb, make up the Summer Triangle.

Use binoculars to look for the Coathanger, located halfway between Altair and Albireo. This remarkable little group of stars forms a familiar pattern from our point of view.

## **Morning Planets**

The appearance of Venus in the east announces that dawn is approaching.

Before the sky grows bright, catch a glimpse of Venus through a telescope.

## **Events**

Skywatchers in eastern Europe, Africa, Asia, and Australia will have the chance to see a partial lunar eclipse on August 7<sup>th</sup> and 8<sup>th</sup>, depending on their location.

The Moon will darken slightly as it passes through the edge of Earth's shadow.

The Perseid meteor shower is an always-anticipated feature of the August night sky.

Look for meteors during the early morning hours of August 12<sup>th</sup> and 13<sup>th</sup>.

Unfortunately, abundant moonlight will likely limit the show this year, allowing skywatchers to see only the brightest meteors.

On August 21<sup>st</sup>, a total solar eclipse will wow millions of skywatchers across the United States along a path stretching from Oregon to South Carolina.

A partial solar eclipse will also be visible throughout the continental U.S., Canada, Mexico, and Central America.

### **Ending**

The night sky is always a celestial showcase. Explore its wonders from your own backyard.