

Tonight's Sky: 2017

February

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

Evening Planets

Mars and Venus accompany each other in the west after sunset.

Use a telescope to search for features on Mars or the crescent phase of Venus.

Constellations and Deep-Sky Objects

The winter night sky, filled with brilliant stars, presents one of the best celestial views.

Orion, the Great Hunter of Greek mythology, dominates the winter sky. This constellation is among the easiest to recognize. It is full of young stars, dying stars, and many nebulae.

Betelgeuse, one of Orion's "shoulders," is a red supergiant star about 650 times bigger than the Sun. It shines with the brightness of tens of thousands of Suns.

Betelgeuse is near the end of its life. With the fuel at the star's core practically depleted, the core has contracted and heated, causing the outer gaseous layers of the star to swell.

Rigel, one of Orion's "knees," is a triple-star system made up of two smaller stars orbiting a blue supergiant. Rigel's blue supergiant star has a short lifespan.

Blue supergiant stars are much hotter than our Sun and use up their fuel quickly.

Orion's Belt is easy to spot. It is made up of three stars, Alnitak, Alnilam, and Mintaka.

From the left side of Orion's Belt, look down to the Great Orion Nebula. Although barely visible to the naked eye, it is the brightest diffuse gas cloud in the night sky. ("Nebula" is Latin for "cloud.") A small telescope unveils the details and grandeur of the nebula.

Embedded inside the Orion Nebula is the Trapezium, a group of hot young stars so brilliant they cause the surrounding gas to glow.

Canis Major, the Great Dog, is the faithful companion who follows in Orion's footsteps. Canis Major is dominated by the most brilliant star in the night sky, Sirius.

Sirius is actually a double system, containing a bright star and a much smaller and fainter companion. It is a mere 8.6 light-years away.

Scanning with binoculars just below Sirius will reveal a lovely cluster of stars called M41. It contains about 100 stars, including several red giants.

Stars in clusters like M41 were born together and are all about the same age.

Morning Planets

Jupiter ascends into the eastern sky around midnight and climbs high into the southeast during the early morning hours.

Aim a telescope at Jupiter to view its cloud bands and to see how many of its moons you can spot.

Saturn follows Jupiter into the southeast a few hours later.

Catch a glimpse of Saturn's rings through a telescope before the Sun comes up.

Special Events

Visible throughout most of the world, a penumbral lunar eclipse occurs in the late evening of February 10th or the early morning of February 11th, depending on the viewing location. The Moon will darken slightly as it passes through the outer edges of Earth's shadow.

On February 26th, parts of South America, Africa, and Antarctica will be treated to either a partial solar eclipse or an annular eclipse, when the Moon blocks all but the outer edge of the Sun, leaving a glowing “ring of fire.”

Ending

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