

# Tonight's Sky: February 2018

Your guide to constellations, deep-sky objects, planets, and events: Tonight's Sky.

Highlights of the February sky:

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.

Jupiter rises shortly after midnight, soon followed by Mars.

A small telescope will reveal the cloud bands of Jupiter, and the reddish hue of Mars.

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On February 15, the Moon passes across the upper part of the solar disk, producing a partial solar eclipse.

The eclipse will be visible only from southern South America and parts of Antarctica.

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