February Tonight’s Sky

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Constellations

The brightly starred winter sky beckons on clear, cold nights.

Orion, the hunter of Greek mythology, dominates the heavens with a bright belt of three stars.

The hunter’s shoulder is marked by the red supergiant Betelgeuse, a massive star nearing the end of its life.

Betelgeuse is roughly 1,000 times the size of our sun.

An image from NASA’s Hubble Space Telescope shows its huge atmosphere with an enormous, mysterious spot, glowing brightly in ultraviolet light.

Hubble’s sharp vision allows astronomers to monitor features of the star’s atmosphere and better understand how it changes over time.

Marking Orion’s foot is another bright, hot supergiant: blue-white Rigel.

Massive stars like Rigel lead short, brilliant lives.

Below Orion’s shining belt lies the Orion Nebula, a hazy spot to the naked eye.

A small telescope reveals it to be a diffuse, glowing cloud in space, illuminated by the energy of bright, hot stars in its center.

NASA’s Hubble and Spitzer space telescopes reveal the nebula in festoons of glowing gas and dust sculpted by the stellar winds of central bright stars.

The Orion Nebula is an immense stellar nursery, filled with hot young stars that glow brightly in X-ray light detected by NASA’s Chandra X-ray Observatory.

Follow the belt of Orion down and left to find blue-white Sirius, the brightest star in the night sky.

Sirius lies in the constellation Canis Major, the Great Dog and companion to Orion.

Sirius is also one of the nearest stars—just 8.6 light-years away—and has a faint white dwarf companion star.

Just below Sirius lies a star cluster called M41.

It is easily seen with a pair of binoculars as a scattered twinkling. M41 consists of about 100 stars that formed together from a giant cloud of gas and dust.
Above and left of Sirius is another bright star, a yellowish giant named Procyon.

Procyon is part of the constellation Canis Minor, the smaller dog and Orion’s second companion.

Procyon, Sirius, and Betelgeuse form a geometrical pattern called the Winter Triangle.

Let the Winter Triangle be your guide to the glories of the winter sky.

Celestial wonders await you in tonight’s sky.