

Sky highlights for November 2025

At dusk on November 1, the bright first-magnitude “star” in ESE to SE about 4° (*) lower left of the 83-percent waxing gibbous **Moon** is actually **Saturn**. Binoculars or a telescope will reveal impressive details in the surface features along the Moon’s terminator, or day-night boundary, where sunrise is taking place. Look again the next evening, Nov. 2, when the terminator will have moved about 12° or 1/30 of the way around the Moon’s sphere, and additional moonscape will have emerged into sunlight. Saturn will appear 11° to Moon’s upper right.

(*): Angular distances from Moon throughout this article are as seen from western U.S.

Point your telescope toward Saturn in early November, and you will see **the rings** tipped less than 0.6° from edge-on, giving an appearance of a ball of yarn pierced by a needle. Later this month, during Nov. 21-26, the rings will appear only 0.37° from edgewise, the closest to an exact edge-on view we’ll get until 2038-39, when the ring plane will sweep across Earth’s orbit and present an edge-on view, once toward the Sun, during Saturn’s northern spring equinox, and three times for observers on Earth. On the latter trio of occasions, the rings will disappear entirely! About midway in time between now and then, in 2032, the rings will tip nearly 27° from edge-on, presenting a different, spectacular view of the southern face of the rings, around the date of Saturn’s northern winter solstice. Be sure to arrange a telescopic visit to Saturn at least

once each year, to check on the ringed planet’s progress through its 29.5-year cycle of seasons.

When the rings are close to edgewise, they appear less bright, presenting a fine opportunity to observe Saturn’s moons. The brightest, **Titan** in its 16-day orbit, appears farthest east of the planet on Nov. 2 and 18, and farthest west on Nov. 10 and 26. At such times, Titan appears four ring-lengths from the nearer ring edge.

The other bright objects at dusk are two zero-magnitude stars, golden **Arcturus** low in WNW, visible only early in month, and blue-white **Vega**, nearly 60° higher; and the first-mag. stars **Altair** and **Deneb** completing the *Summer Triangle* with Vega; **Fomalhaut**, mouth of the Southern Fish, within 30° lower right of Saturn; and **Antares**, very low in southwest.

To catch Antares in November, use binoculars and look *very early* in month. It drops lower each evening, on its way to conjunction with Sun on Dec. 1. **Mercury**, 7° to lower right of Antares on Nov. 1, and faint **Mars**, within 6° lower right of Mercury, are even greater challenges. The three bodies will be equally spaced at 4° on Nov. 8, as Mercury begins retrograde and stops short, to lower right of Antares. However, Mercury fades in following days, reaching *inferior conjunction with Sun* on Nov. 20. Mars will pass 1.2° N (upper right) of Mercury on Nov. 12 and 4.0° N of Antares on Nov. 17-18, but these events are not observable. Your next chances to actually *see* a conjunction of Mars with Antares “the rival of Mars” will occur on the evenings of Oct. 29, 2027; Oct. 7, 2029; and Sept. 10, 2031, each pairing higher in the sky and closer to each other

than the preceding; and in the morning sky in Feb. 2033, and in January in 2035 and 2037.

Other bright stars becoming noticeable during evening twilight in November are zero-magnitude **Capella**, the “Mother Goat” star, already risen in far NE at mid-twilight even at the start of November, and red-orange first-magnitude **Aldebaran**, eye of Taurus, the Bull, rising to the lower right of Capella, and 14° below the **Pleiades, or Seven Sisters star cluster**. Stars appear in the same places four minutes earlier each night owing to the Earth’s revolution around the Sun, and by December 1, Aldebaran will be at *opposition*, rising around sunset and visible all night. The Pleiades reach opposition ten days earlier, on Nov. 21, on the same date as Uranus.

Using binoculars, look to the right of Capella for a compact isosceles triangle of stars, the **Kids**, or baby goats. Look within the same field of view as Aldebaran for the **Hyades star cluster**, completing a letter “V” with that bright star to form the head of Taurus. Aim your binoculars higher for the spectacular, compact Pleiades cluster, which looks like a compact, short-handled dipper. The planet **Uranus** is easily visible in binoculars within 4°-5° south of the Pleiades. Get **Robert D. Miller’s online finder charts** showing the slow retrograde motions of 5.6-mag. Uranus near the Pleiades, and fainter, more challenging 7.8-mag. **Neptune**, 4.2° to 4.4° from Saturn this month and near the asterism of *the Turtle*, at <https://abramsplanetarium.org/msta/>

Be aware that when a bright Moon is nearby, it is not a good night for observing faint objects near the Moon. At the end of

evening twilight, Saturn and faint Neptune will appear near the 84-percent waxing Moon on Nov. 1 and 91-percent Moon on Nov. 2. Full Moon, the closest of 2025, occurs on Nov. 5, at 5:19 a.m. PST/8:19 a.m. EST. The Pleiades star cluster will appear 8° lower left of a 99-percent waning Moon on Nov. 5, and 7° upper right of a 96-percent Moon on Nov. 6. By two hours after sunset on Nov. 6, Aldebaran will have risen 10° lower right of the Moon. Wait until the Moon moves on, or rises later, for the best view of these objects and their surrounding fields.

You will not have long to wait! On the date of Full Moon, Nov. 5, the **“Supermoon”** will rise around sunset, and then moonrise occurs later on each successive evening. On the next four evenings, Nov. 6-9, moonrise will still be fascinating to watch, as it will clear the horizon at a point farther north than the Sun ever does, even on the date of the summer solstice, June 21. **The northernmost Moon of the current lunar month** rises after nightfall on Nov. 7, climbs highest in the sky in the early hours of Nov. 8, and sets far north of west, in daylight about four hours after sunrise, on Nov. 8, as listed here:

Moonrise, Nov. 7	Moon highest, Nov. 8
Moonset, Nov. 8	

Palm Springs, CA:

6:37 p.m., 35° N of E	2:21 a.m., 84° up in S
10:06 a.m., 35° N of W	

Reno, NV

6:29 p.m., 38° N of E	2:35 a.m., 80° up in S
10:41 a.m., 38° N of W	

East Lansing, MI:

6:48 p.m., 40° N of E	3:07 a.m., 75° up in S
11:28 a.m., 40° N of W	

If you go outside to look when the Moon is highest in the sky on the early morning of Nov. 8, you will catch it as it passes just south of overhead, some 5° higher than the greatest altitude attained by the summer solstice midday Sun. **The Moon** will be surrounded by a ring of brilliant objects. Steady, yellow-white **Jupiter**, shining at mag. -2.4, is the brightest, 28° to the Moon's ESE. Blue-white twinkling **Sirius**, of mag. -1.4, ranks next in brightness, and is nearly twice as far to the Moon's SSE. The zero-mag. star **Capella** is NNW of Moon, far enough to pass north of overhead.

Going clockwise around the oval beginning with Jupiter, we encounter the "Twin" stars of Gemini, **Pollux and Castor** 4.5° apart; and next Capella; and then down to **Aldebaran**, 20° lower right of the Moon; and next 26° lower left to **Rigel**, Orion's foot; and then on to Sirius. Just east of a line back to

our starting point, Jupiter, we encounter **Procyon**, the brightest star in the constellation Canis Minor, the Little Dog. The reddest of the stars of first-magnitude or brighter, the supergiant **Betelgeuse**, lies inside the oval of stars. **Regulus**, heart of Leo, the Lion, lies well outside the oval, in the eastern sky 35° east of Jupiter.

The star Sirius will reach its highest point in south about an hour after the Moon does so on the morning of Nov. 8. [Sky watchers in the Coachella Valley can watch for **Canopus**, at mag. -0.7 the second brightest star, passing directly south only 3°-4° above the horizon 22 minutes before the bright star Sirius passes its high point, 40° up.]

The entire ring of stars, the *Winter Hexagon* described above, can be observed at a wide range of times of night through November. Look for it in the eastern sky, by around 11 p.m. local time on Nov. 2, backing to 9 p.m. by month's end. (For mid-Michigan, before midnight EST on Nov. 2 backing to 10 p.m. by Nov. 30.) The "before the Dog" star Procyon and the Dog star Sirius, are the last of its stars to rise. The entire assemblage can be followed through the rest of the night, crossing through the south and overhead, and then sinking lower in the western sky in morning twilight as the month progresses. In the western sky, Jupiter, Pollux, and Castor will lie at the top, while Rigel will be lowest of the gathering.

Even brighter than Jupiter is **Venus** of mag. -3.9 , but the inner planet is heading toward *superior conjunction* on the far side of the Sun in early January, so look soon! At the start of November, Venus is still easy to spot, very low in E to ESE about an hour before sunrise. The *Big Dipper* is then standing on its handle in NE. On Nov. 2, follow the arc of its handle to **Arcturus** low in ENE, and on further to Venus with first-mag. **Spica** 3.5° to the planet's lower right. Each morning at the same stage of twilight, Spica climbs higher, but Venus drops a little lower, shifting its rising time into brighter twilight. On what morning will you last spot Venus and Jupiter simultaneously?

Follow the **waning Moon** in morning twilight daily for two weeks, beginning with the Full Moon of Wed. Nov. 5 and continuing through Nov. 18. For three mornings, see the Moon appear in Taurus: closely west of the Pleiades on Nov. 6; widely N of Aldebaran on Nov. 7; and east of **Elnath**, tip of the Bull's northern horn on Nov. 8.

On Sunday morning, Nov. 9, Castor, Pollux, and Jupiter, 9° , 11° , and 13° from the Moon, form an arc east of the 78-percent waning gibbous Moon. On Nov. 10, the 68-percent Moon is 4° - 5° from Jupiter and Pollux, and 9° from Castor, while Venus will be 10° lower left of Spica. On Nov. 11, the Moon is nearly halfway from Jupiter toward Regulus. On mornings of Nov. 11 and 12, Jupiter-Pollux-Castor come closest to lying in a straight line. However, Jupiter is beginning to retrograde, going nearly 10° west in the next four months, and pull back away from the extended Castor to Pollux line. Also, notice that Jupiter is now slightly east of the line joining Pollux to Procyon. As Jupiter

retrogrades, it will cross that line in early December and move inside the Winter Hexagon.

On Nov. 12, the 47-percent Moon, just past Last Quarter phase, will be within 6° west of Regulus. On the next morning, Nov. 13, the 37-percent crescent will appear 7° east of the star.

On night of Nov. 16-17, in late evening when Jupiter and Saturn are both nearly 30° up -- Jupiter in E and Saturn in WSW -- the two giants are nearly 120° apart, in "*trine*" (more on that later). They will not appear this far apart again until morning of Aug. 31, 2026 and will spread farther apart until their next maximum separation, on Dec. 11, 2026. On five occasions in 2029-31, they will be nearly 180° apart, and for extended periods it will be impossible to see both planets above the horizon simultaneously.

In the predawn darkness hours on their peak date of Monday, Nov. 17, **Leonid meteors** are expected to increase in number as their radiant in Leo rises higher in the sky between midnight until first light of dawn. Meteors can light up anywhere in the sky, but the trails of shower members, extended backward, will seem to radiate from a spot within the *Sickle of Leo*.

Also on Monday, Nov. 17, within an hour before sunup, Spica will appear within 3° upper left of the 7-percent waning crescent Moon in ESE. Watch for Venus rising 17° to Moon's lower left. On Tues. Nov. 18, the last old crescent Moon, 3 percent illuminated, appears 15° lower left of Spica. Watch for Venus rising 8° to Moon's lower left.

On the morning of Nov. 22, Spaceship Earth is carrying us in the direction of Regulus, and we will overtake Jupiter in coming weeks, causing that planet to drop lower in the western predawn sky, while fast-moving Mercury, overtaking us, will pop up above the eastern horizon to become a fine morning “star” before month’s end.

New Moon occurs on Wed. Nov. 19 at 10:47 p.m. PST. Uranus and the Pleiades are both at *opposition* to the Sun on Nov. 20. On Nov. 21, 25 minutes after sunset from southern California, a 3-percent crescent Moon might be visible with binoculars in a very clear sky, only 3 degrees up in SW. On Saturday Nov. 22, an hour after sunset, a much easier 7-percent, southernmost crescent Moon would be visible very low in SW, near the tip of the spout of the Teapot of Sagittarius. On the next evening, Nov. 23, the 13-percent crescent will appear in the Teapot’s handle. On Nov. 27, a 48-percent, nearly *First Quarter Moon* will appear well up in southern sky 22° lower right of Saturn an hour after sunset. On Nov. 28, Saturn appears 9° left of a 58-percent waxing gibbous Moon. On Nov. 29, Saturn appears 6° lower right of a 69-percent Moon. On the last evening of November, the 79-percent Moon appears 20° left of Saturn.

Back to the morning sky for a *planetary aspect* of interest to astrologers, and a speedy brightening Mercury retrograding into the morning sky. At mid-twilight on Nov. 26, Venus, just rising in ESE, is in “*trine*” with Jupiter well up in western sky, meaning they are one-third of a circle, or 120°, apart. Can you spot **Mercury**, of mag. +1.4 and 3.3° above Venus? Moving away from *inferior conjunction*, Mercury brightens rapidly and moves higher each morning. On Nov. 27, it will glow at mag.

+1.0 five degrees above and slightly right of Venus. On Nov. 28, Mercury at mag. +0.6 will be 6.5° upper right of Venus. Mercury (mag. +0.3) ends retrograde on Nov. 29, while 5.7° lower left of 3rd-mag. **Alpha in Libra** and 27° lower left of Spica. Mercury is also 8° upper right of rising Venus, but that planet is no longer useful as a reference since it rises in brighter twilight each morning. Mercury at mag. +0.1 on Nov. 30 is bright enough to be found on its own. By end of the first week of December, in this very favorable apparition for observers at mid-northern latitudes, Mercury will brighten to mag. –0.5 and attain its highest position in twilight for the year.