

BCAS OBSERVING HIGHLIGHTS for October 3 to 18, 2026, a “dark Moon” period
Black Canyon Astronomical Society (BCAS), southwest-central Colorado, USA

DATES & TIMES (MDT) FOR REGIONAL EVENTS & EYE-CATCHING HAPPENINGS IN THE SKY:

October 2-13, 8 PM to 11 PM: Enjoy our late summer & fall constellations under dark, moonless skies!

October 2&3, 7:10 PM: Mercury (-0.1 mag.) 7°- 5° to right & above Venus (-4.7 mag.), low in WSW

October 3-4, all night long: Saturn (+0.3 mag.) opposite the Sun, highest in sky around 1 AM

October 5, 2 AM to 6:20 AM: 29%-illuminated, crescent Moon below reddish Mars (+1.0 mag.)

October 5, 3 AM to 6:15 AM: Crescent Moon occults stars in Beehive Star Cluster (use telescopes)

October 6, 2:20 AM to 3:15 AM: Moon occults Jupiter and its moons (best in binoculars or telescopes)

October 6, 3:30 AM to 7:10 AM: Ganymede’s shadow transits Jupiter (for telescopes)

October 8-18, 3 AM to 5:10 AM: Preview our winter stars under dark, moonless skies

October 9, 10:00 AM: [Western Slope Skies](#) on KVN radio

October 10, 7:30 PM to 10 PM: [Ridgway Star Party \(Ridgway Athletic Park\)](#) - weather permitting

October 10-12, 2:30 AM to 6 AM: Mars moves across Beehive Star Cluster (use binoculars)

October 12, 7:00 PM to 7:10 PM: thin crescent Moon with Mercury 4° above & to right (binoculars)

October 13, 7:00 PM to 8:00 PM: [BCAS meeting, Montrose and online](#)

October 14, 6:00 PM: [Western Slope Skies](#) on KVN radio

SUMMARY.

As our days shorten and nighttime hours lengthen, twilight ends earlier, night-by-night, allowing the stars of summer to linger in our dark, early fall sky. At 8:15 PM MDT, the central Milky Way in Sagittarius is still prominent in the south southwest, and you can trace the Milky Way across the zenith in Cygnus toward the northeastern horizon in Perseus. The Summer Triangle asterism (consisting of bright stars Vega, Altair, and Deneb) is just west of the zenith. The constellations of our fall sky are rising in the east, including Pegasus, Pisces, Andromeda, Aquarius, and Aries. October is also a great time to preview the bright stars of our winter sky before dawn, including reddish Betelgeuse and blue-white Rigel in Constellation Orion, yellowish Capella in Auriga, and brilliant Sirius, the night sky’s brightest star, in Canis Major.

Take a parting glance at Venus on October 2 or 3 around 7:10 PM MDT, before our “Sister Planet” descends into glaring twilight prior to its October 24 solar conjunction. With binoculars you might also glimpse fainter Mercury to the right and slightly above Venus. Saturn is opposite the Sun in our sky on October 4, and the Ringed Planet is visible all night long. Before dawn look for reddish Mars in Constellation Cancer and bright Jupiter between Mars and the eastern horizon. From October 10 to 12 from 2:30 AM to 6 AM MDT, use binoculars to watch Mars, as it moves across the famous Beehive Stars Cluster (aka M44). With binoculars or telescopes, we can also spot Neptune through much of the night, as the 8th Planet moves slowly amidst the stars of Pisces, and Uranus after about 11 PM, as the 7th Planet moves slowly through Constellation Taurus.

The Moon reaches last quarter on October 3, and from October 4 to 9, the crescent Moon wanes. The Moon is new on October 10. From October 12 to 17, watch the crescent Moon wax in the evening sky. The Moon reaches first quarter on October 18. Enjoy seeing earthshine, as it delicately illuminates the nightside of the crescent Moon, especially on mornings from October 5 to 8, and on evenings from October 12 to 15 (binoculars can provide eye-catching views!). A fun website for enjoying the Moon is [NASA’s daily Moon Guide](#).

There are eye-catching lunar occultations on the mornings of October 5 and 6. On October 5 between 3:00 and 6:15 AM MDT, the crescent Moon occults (moves in front of) three 6th and 7th magnitude stars (and many fainter stars) in the famous Beehive Star Cluster (aka M44). These occultations are best viewed through telescopes. Then on October 6 from about 2:25 AM to 3:11 AM

MDT, the Moon occults Jupiter and its four bright moons. The disappearance of Jupiter occurs before the Moon rises on the Western Slope, but the reappearances of Jupiter and its Galilean moons may be visible locally, low above the eastern horizon. The reappearances of Jupiter and its moons are probably best viewed through binoculars or telescopes. As a bonus, the shadow of Ganymede, the largest moon in the Solar System, transits Jupiter on October 6 from 3:30 AM to 7:10 AM MDT.

As of October 2, two active regions with sunspots are present on the Earth-facing side of the Sun. We may experience more M-class (moderate) and possibly X-class (extreme) flares and powerful coronal mass ejections (CMEs). It's possible that CMEs and flares from the Sun could trigger auroras and airglow that are visible from the Western Slope. [View the Sun safely and in "real-time" via the internet.](#) [Please do your planet spotting when the Sun is below the horizon. Never risk viewing the Sun without adequate eye protection, as serious eye damage can result.](#)

Numerous Earth satellites are visible every clear night. An evening pass of the bright International Space Station (ISS) is predicted for October 2, and predawn passes of the ISS are predicted on October 13 and from October 15 to 18. Predawn passes of the almost-as-bright, Chinese Tiangong Space Station (aka CSS TIANHE-1) are predicted from October 3 to 14. Find updated times for local passes of the space stations and other bright satellites at these links (be sure to set applications for your location and time zone, if required):

<https://www.heavens-above.com/>

<https://www.n2yo.com/passes/?s=25544>

<https://www.nasa.gov/spot-the-station/>

Note: The apparent brightness of sky objects is measured in "magnitude" units. Many bright stars are magnitude +1, while the faintest stars easily visible to unaided eyes under dark skies are magnitude +6. Some of the brightest stars are magnitude 0 (e.g., Vega, Arcturus), while the brightest sky objects have negative magnitudes (e.g., Sirius at -1.5, Jupiter at -2 to -3, Venus at -4 to -5, the full Moon at -12 to -13, and the Sun at -27 magnitude). Angular distances on the sky are usually cited in degrees of arc (often abbreviated as °). Helpful ways to estimate 1, 5, 10, 15, and 25 degrees of arc can be found here:

<https://www.timeanddate.com/astronomy/measuring-the-sky-by-hand.html>

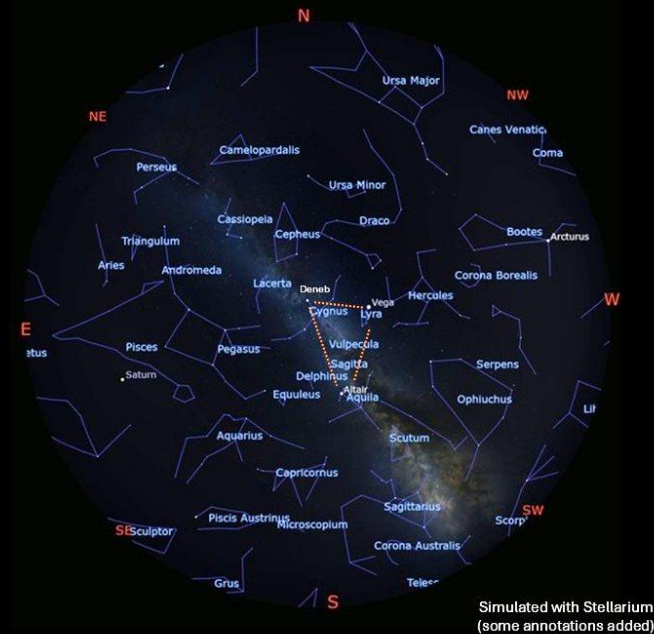
One degree can be subdivided into 60 arc minutes (abbreviated as '), and one arc minute is subdivided into 60 arc seconds (abbreviated as ").

OCTOBER'S DARK SKIES. As our days shorten and nighttime hours lengthen, twilight ends earlier, night-by-night, allowing the stars of summer to linger in our early fall sky. At 8:15 PM MDT, the central Milky Way in Sagittarius is still prominent in the south southwest, and you can trace the Milky Way across the zenith in Cygnus toward the northeastern horizon in Perseus. The Summer Triangle asterism (consisting of bright stars Vega, Altair, and Deneb) is just west of the zenith, and Saturn is rising in the east. Boötes with its bright red giant star, Arcturus, is descending toward the western horizon, as the constellations of our fall sky are rising in the east, including Pegasus, Pisces, Andromeda, Aquarius, and Aries.

October is also a great time to preview the bright stars of our winter sky before dawn. At 5:45 AM MDT, Orion with bright reddish Betelgeuse and blue-white Rigel, is "front and center." Before dawn from October 10 to 12, Mars shines against the stars of the famous Beehive Star Cluster (M44), an arresting sight in binoculars. Bright yellowish Capella in Constellation Auriga is nearly overhead, and other bright stars adorn the eastern sky, including Procyon in Canis Minor, Pollux in Gemini, Regulus in Leo, and the night sky's brightest star, Sirius in Canis Major, in addition to the bright planet, Jupiter, above the eastern horizon. To navigate, use your favorite planetarium app or charts on next page.

All-Sky View from Colorado's Western Slope for October 10, 2026, 8:15 PM MDT

This "dark Moon period" is a wonderful time to enjoy the skies above our Western Slope! The Milky Way spans the evening sky from Sagittarius in the south southwest, through Cygnus near the zenith, to Cassiopeia and Perseus in the northeast. Spring Constellation, Boötes, with the bright, reddish star, Arcturus, is descending toward the western horizon. Saturn is rising in the east. The Summer Triangle asterism (orange dashed lines), consisting of bright stars Vega, Altair, and Deneb, is just west of the zenith. Fall constellations Pegasus, Andromeda, Aquarius, Pisces, and Aries are gaining prominence in the east, as the Big Dipper descends toward the north northwest.



Simulated with Stellarium
(some annotations added)

All-Sky View from Colorado's Western Slope for October 11, 2026, 5:45 AM MDT

It's also a great time of rise early and preview the bright stars of our winter sky. Twilight has not yet started at 5:45 AM MDT. Our fall constellations, Pegasus, Andromeda and Pisces are descending toward the western horizon, as the bright stars of our winter constellations, Orion, Auriga, Gemini, and Canis Major, become "front and center." The star clouds of the outer reaches of our Milky Way galaxy are visible from Lacerta in the northwest through Perseus and Auriga near the zenith, into Monoceros and Canis Major in the south southeast. Saturn is low in the west, Mars appears near the center of the Beehive Star Cluster in Constellation Cancer, and bright Jupiter is between Mars and the eastern horizon.



Simulated with Stellarium
(Mars label added)

A CRESCENT MOON: WANING, THEN WAXING. The Moon reaches **last quarter on October 3** (exactly at 7:25 AM MDT), and from October 4 to 9, the crescent Moon wanes. The **Moon is new on October 10** (exactly new at 11:50 AM MDT). From October 12 to 17, watch the crescent Moon wax in the evening sky. **The Moon reaches first quarter on October 18** (exactly at 10:12 AM MDT).

On October 5 between about 3:00 AM MDT and 6:15 AM MDT, the 29%-illuminated, waning crescent Moon, just 4 degree below reddish Mars, occults (moves in front of) three 6th and 7th magnitude stars

(and many fainter stars) in the famous Beehive Star Cluster (M44), an interesting site in telescopes (see next item for details)! Then on October 6 from about 2:25 AM MDT to 3:11 AM MDT, the 20%-illuminated crescent Moon occults Jupiter and its Moons. Jupiter disappears behind the Moon before the Moon rises on the Western Slope, but Jupiter's reappearance from behind the Moon may be visible very low above the eastern horizon (see next item for details). On October 12 between 7:00 PM and 7:10 PM MDT, look toward an unobstructed west-southwestern horizon to spot the 6%-illuminated crescent Moon with Mercury (at magnitude +0.03) about 4 degrees slightly above and to the Moon's right (use binoculars). Enjoy seeing earthshine, as it delicately illuminates the nightside of the crescent Moon, especially on mornings from October 5 to 8, and on evenings from October 12 to 15 (binoculars can provide eye-catching views!). A fun website for enjoying the Moon is [NASA's daily Moon Guide](#). **Please do your crescent Moon spotting before sunrise and after sunset. NEVER chance looking at the Sun directly; serious eye damage can result.**

EYE-CATCHING LUNAR OCCULTATIONS: OCTOBER 5 (M44) AND OCTOBER 6 (JUPITER & its moons).

Beehive Star Cluster (M44), October 5. Before dawn on October 5, the 29%-illuminated, crescent Moon occults three 6th and 7th magnitude stars (and many fainter stars) in the famous Beehive Star Cluster (aka M44). These events may be interesting to view with telescopes! As the Moon moves eastward against the stars on Constellation Cancer, M44's stars disappear along the advancing, brightly illuminated side of the waning crescent Moon, and those stars reappear from behind the Moon's "dark side", which is faintly illuminated by earthshine. See the table below for approximate times of disappearances and reappearances for 3 of the brighter stars in M44 (times vary by several minutes, based on your location on the Western Slope). 39 Cancri and HIP 42673 are close binary stars: Can you detect this from "2-stage" reappearances of these stars?

<u>star</u>	<u>magnitude</u>	<u>disappearance</u>	<u>reappearance</u>	<u>notes</u>
39 Cancri	6.35	4:03 AM MDT	5:04 AM MDT	double star, look for 2-stage reappearance
40 Cancri	6.60	4:08 AM MDT	5:06 AM MDT	
HIP 42673	6.90	4:56 AM MDT	6:01 AM MDT	double star, look for 2-stage reappearance

Jupiter and its moons: October 6. Then on the following morning of October 6, the 20%-illuminated crescent Moon occults Jupiter and its four bright Galilean moons. The disappearances occur at around 2:25 AM MDT, before the Moon and Jupiter rise on the Western Slope (but these disappearances may be visible from locations farther east). However, the reappearances of Jupiter and its four brightest Moons may be visible at around 3:11 AM MDT from the Western Slope, when Jupiter is about 3 degrees above an unobstructed eastern horizon (the simulated view, below, is for a few minutes after the reappearances). Times of reappearances of Jupiter and its moons vary by a few minutes, depending on your location on the Western Slope. Unlike the instantaneous reappearances of stars, Jupiter will take about 60 seconds to emerge from behind the Moon, and Jupiter's moons will reappear over several seconds.

As a bonus for telescope viewers, the shadow of Ganymede, the largest moon in the Solar System, crosses Jupiter on October 6 from 3:30 AM to 7:10 AM MDT, shortly after Jupiter and its moons reappear from behind Earth's Moon (see item on Jupiter, pages 7 and 8 for more about this).

The Moon Occults Jupiter & its Moons: October 6, 2026

Disappearance:

2:25 +/- AM MDT

Jupiter at -5°

Invisible from
Western Slope

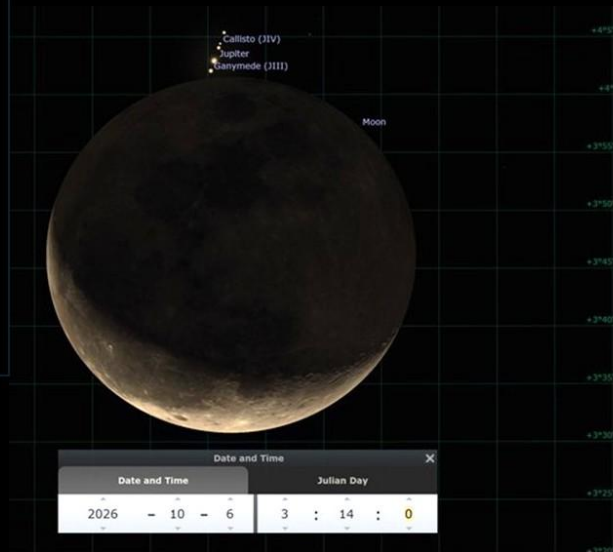
Reappearance:

3:11 +/- AM MDT

Jupiter $+3^\circ$

Low in east

Simulated with Stellarium
for western Colorado,
a few minutes after the
reappearances of Jupiter & its
bright moons



A LAST VIEW OF VENUS IN THE EVENING. Venus has been a dazzling evening star through late spring and summer, but the evenings of October 2 and 3 may be our last good chances to spot our “Sister Planet” in evening twilight before its October 24 [inferior solar conjunction](#). On October 2 at 7:10 PM MDT, find a place with an unobstructed west-southwestern horizon and look for Venus just 2 degrees above the horizon. Venus, at magnitude -4.74 , is bright, but its luster will be diminished in glaring twilight with the Sun only 4 degrees below the horizon. Using binoculars, you also may spot Mercury at magnitude -0.07 , about 5 degrees above the horizon and 7 degrees to the right and slightly above Venus. On October 3 at 7:10 PM MDT, Mercury is only 5 degrees to the right and above Venus (**make sure the Sun is below the horizon if you attempt to view Venus and Mercury!**). After October 3, Venus moves rapidly toward the Sun, disappearing from the evening sky. After its solar conjunction on October 24, Venus will reappear before dawn by the second week of November.

Through telescopes, Venus’ gibbous phase wanes from a 13%-illuminated crescent on October 2 to an even “skinnier”, 12%-illuminated crescent on October 3, as its distance from Earth decreases from 31.2 to 30.8 million miles, and its apparent diameter increases from 49.6 to 50.4 arc seconds. It’s possible to resolve Venus’ crescent even with binoculars on October 2 and 3. When at solar conjunction on October 24, our “Neighbor Planet” will be only 25 million miles distant from Earth, but essentially invisible in the Sun’s glare. That’s about as close as Venus (or any planet) can get to Earth. **Please do your Venus spotting after sunset. NEVER chance looking at the Sun without taking proper precautions. Serious eye damage can result.**

MERCURY: A CHALLENGE IN EVENING TWILIGHT. For us in the northern hemisphere, Mercury’s October appearance is the least favorable of its 2026 evening appearances, because Mercury is positioned south of the Sun and sets not long after the Sun sets. As a challenge, find a spot with an unobstructed west-southwestern horizon on October 2 and/or 3 and scan the horizon at 7:10 PM MDT (**make sure that the Sun has already set**). If sky is clear, you may see bright Venus shining through the twilight. Using binoculars, look for fainter Mercury (magnitude -0.07 on October 2, and -0.06 on October 3) about 5 degrees above the horizon and 7 degrees to the right and above Venus on October 2,

closing to about 5 degrees from Venus on October 3. Although Mercury's elongation from the Sun increases until October 14, Mercury is fading, and the Innermost Planet may not get easier to spot against glaring evening twilight. Through telescopes on October 2, Mercury's 5.9 arc second-wide, gibbous disk appears 75% illuminated. By October 18, the Innermost Planet appears as an 8.0 arc second wide, 40%-illuminated crescent, but it could be tough to spot at magnitude +0.16 in glaring twilight. During this period Mercury's distance from Earth decreases from 107 million miles on October 2 to 87 million miles on October 18. Mercury fades during this period, due to its waning phase. On October 12 between 7:00 PM and 7:10 PM MDT, look toward an unobstructed west-southwestern horizon and use binoculars to spot Mercury (at magnitude +0.03) about 4 degrees slightly above and to the right of the crescent Moon. **Please do your Mercury spotting after sunset. NEVER chance looking at the Sun without taking proper precautions. Serious eye damage can result.**

SATURN: ALL NIGHT LONG! Saturn is opposite the Sun in our sky on October 4, so the Ringed Planet is observable all night long. Saturn rises in the east at about 7:02 PM MDT on October 2 (just 12 minutes after sunset), and the Ringed Planet rises well before the Sun sets by October 18. During this period, Saturn fades slightly from magnitude +0.33 to +0.40, as its distance from Earth increases from 784 million to 787 million miles and the [opposition surge](#) effect wanes. Saturn is currently moving amidst the stars of the non-zodiacal Constellation, Cetus, confounding those astrologers! Saturn will remain in Constellation Cetus until February 22, 2027. How is this possible? It turns out that Saturn's orbit is inclined 2.49 degrees to Earth's orbit, and it's currently appearing more than 2 degrees south of the ecliptic, which is the apparent path of the Sun through the sky and along which the zodiacal constellations reside. The Sun never travels through Cetus. But several planets, including Mercury, Venus, and Saturn, occasionally move through Cetus, due to their relatively high orbital inclinations (of 7.01, 3.39 and 2.49 degrees, respectively).

Through telescopes, Saturn's disk appears 19.7 arc seconds wide, and its rings span 46 arc seconds. During early 2026, Saturn's thin rings (150,000 miles wide but only about 1000 ft thick!) appeared nearly "edge-on" from our perspective on Earth, rendering them almost invisible. Saturn's rings are now gradually appearing to "open" from Earth's perspective, and views of the rings are becoming more impressive. You can see Saturn's moons Tethys, Dione, Rhea, and Enceladus through small to mid-size telescopes, and Titan, Saturn's largest moon, is bright enough to see with just binoculars. You can follow the changing positions of Saturn's moons by using various planetarium apps.

NEPTUNE: THE 8th PLANET. Neptune was opposite the Sun in the sky ("at opposition") on September 25, and the 8th Planet is currently visible through most of the night. Neptune, moving slowly amidst the stars of Constellation Pisces, shines at magnitude +7.7, and we need a telescope or at least binoculars to see it. Through telescopes, Neptune's blueish disk appears only 2.4 arc seconds wide. Neptune is 2.69 billion miles from Earth during this period. You can use this link to find Neptune: <https://theskylive.com/neptune-info>

WILL A BRIGHT NOVA ("NEW" STAR) ERUPT IN CONSTELLATION CORONA BOREALIS? Will there be a bright "new" star in Constellation Corona Borealis sometime soon, if only briefly? Corona Borealis is more than 35 degrees above the western horizon as the sky darkens and remains visible in the west-northwestern sky until about 10:30 PM MDT. [T Coronae Borealis](#) (T CrB) is a recurrent nova that (based on past behavior) may rapidly increase in brightness 1500-fold (to second magnitude) to become the brightest star (or 2nd brightest star) in Corona Borealis between now and perhaps sometime next year. Then this "new" star may fade rapidly below naked-eye visibility in about a week. T CrB had not yet erupted, as of October 2 at 4 AM MDT. [Astronomer Jean Schneider predicted that an eruption is most](#)

[likely on or about June 25, 2026, or on February 8, 2027.](#) An eruption did not happen on June 25, but T CrB could erupt at any time! You can find additional info at these sites...

https://blogs.nasa.gov/Watch_the_Skies/2024/02/27/view-nova-explosion-new-star-in-northern-crown/

https://www.aanda.org/articles/aa/full_html/2023/12/aa48372-23/aa48372-23.html

URANUS. Uranus rises above the east-northeastern horizon at about 9:23 PM MDT on October 2 and 8:19 PM MDT on October 18. The 7th Planet is moving slowly against the stars of Constellation Taurus, between the Pleiades and Hyades Star Clusters.

At magnitude +5.6, you can see Uranus easily with binoculars, and perhaps even with eyes unaided when skies are dark. But you'll need a telescope to resolve Uranus' 3.8 arc second-wide disk and to detect color easily. Most people perceive Uranus as either blue or green. How does it appear to you? Uranus is 1.74 billion miles from Earth during this period. The best times to view the 7th Planet are between 1 AM MDT and the onset of bright twilight at about 6 AM MDT, when Uranus is 41 to 72 degrees above the horizon. You can use this link to find Uranus: <https://theskylive.com/uranus-info>.

MARS BEFORE DAWN. Mars brightens from magnitude +1.05 to +0.98, as it moves eastward in our predawn sky through Constellation Cancer. Mars shines amidst some widely arrayed, bright "winter" stars, including Pollux in Constellation Gemini, Betelgeuse in Orion, Capella in Auriga, and Aldebaran in Taurus (also note the bright Planet, Jupiter, and Leo's 1st magnitude star, Regulus, between Mars and the eastern horizon). You can distinguish reddish Mars from reddish stars, Betelgeuse and Aldebaran, by the fact that Mars typically does not scintillate (or "twinkle"). On October 2, Mars rises above the east-northeastern horizon at around 1:34 AM MDT, and by October 18, Mars rises at about 1:14 AM MDT. Mars is still on the far side of the Sun from our perspective; the Red Planet is 153 million miles distant on October 3 and 143 million miles distant on October 18. Through telescopes, Mars' reddish disk still appears small, increasing in apparent diameter from only 5.7 to 6.1 arc seconds during this period. On February 20, 2027, the Earth-Mars distance will be 63 million miles, the closest during the current Mars apparition, and Mars will appear much brighter (magnitude -1.3) and larger (14 arc seconds wide) than it appears now. **From October 10 through 12, Mars moves eastward against the stars of the famous Beehive Star Cluster (aka M44), appearing near the center of M44 on October 11. View this spectacle with binoculars between 2:30 AM and 6 AM MDT; the contrast of Mars' reddish color with the mostly blue-white stars of the Beehive Cluster could be striking!**

By 5:00 AM MDT, Mars is more than 35 degrees above the eastern horizon, and this may be a good time to start viewing the Red Planet through telescopes. Can you spot Mars' "north polar hood"? The polar hood consists of light-colored clouds covering all or part of Mars' northern polar ice cap. In coming months, these clouds may dissipate and the polar ice cap may shrink, as summer approaches in Mars' northern hemisphere. Various dark "albedo" features may also become visible as Earth draws nearer to Mars. You can use the [Mars Profiler from Sky & Telescope](#) as a guide to features visible on Mars for any date and time.

JUPITER BEFORE DAWN. Jupiter is the brightest object in the predawn sky, except for the Moon. Jupiter rises in the east at about 3:01 AM MDT on October 3 and at about 2:14 AM MDT on October 18. Between October 3 and 18, Jupiter brightens from magnitude -1.88 to -1.94, as its distance from Earth decreases from 548 million to 530 million miles, and its apparent diameter increases from 33.5 to 34.6 arc seconds. That's large enough to resolve with binoculars!

You can use a telescope or binoculars to spot Jupiter's four bright, "Galilean" moons, Io, Europa, Ganymede, and Callisto. Use a telescope to view shadows of these moons crossing the Giant Planet. These are total solar eclipses on Jupiter! Despite Jupiter's limited window of visibility before dawn,

shadow transits of all 4 of Jupiter's Galilean moons are observable from the Western Slope during this period! Many more of these "shadow transits" will become visible as Jupiter starts rising earlier in the coming weeks and months.

October 5, 2026, 12:52 AM to 3:48 AM MDT. Europa's shadow crosses Jupiter (Locally, this event begins well before Jupiter rises at about 2:54 AM MDT and ends with Jupiter 10 degrees above the eastern horizon). **After Jupiter rises at about 2:54 AM MDT to about 3:48 AM MDT, shadows of both Europa and Callisto are cast on Jupiter!**

October 5, 2026, 1:30 AM to 6:20 AM MDT. Callisto's shadow crosses Jupiter (Locally this event begins before Jupiter rises at about 2:54 AM MDT and ends in twilight with Jupiter 39 degrees above the eastern horizon and the Sun still 11 degrees below the horizon). **After Jupiter rises at about 2:54 AM MDT to about 3:48 AM MDT, shadows of both Europa and Callisto are cast on Jupiter!**

October 6, 2026, 3:30 AM to 7:10 AM MDT. Ganymede's shadow crosses Jupiter (Locally, this event begins with Jupiter only 7 degrees above the eastern horizon, just a few minutes after Jupiter has emerged from occultation by the crescent Moon -see item on page Nos. 4 and 5! And it ends in bright twilight just 5 minutes before sunrise with Jupiter 49 degrees above the horizon).

October 7, 2026, 3:58 AM to 6:18 AM MDT, Io's shadow crosses Jupiter (Locally, this event begins with Jupiter 13 degrees above the eastern horizon and ends with Jupiter 40 degrees high in the southeastern sky).

October 12, 2026, 3:28 AM to 6:24 AM MDT, Europa's shadow crosses Jupiter (Locally, this event begins with Jupiter 10 degrees above the eastern horizon and ends with Jupiter 44 degrees high in the southeast).

October 14, 2026, 5:52 AM to 8:10 AM MDT, Io's shadow crosses Jupiter (Locally, this event begins with Jupiter 39 degrees high in the southeast and ends after the Sun rises at about 7:19 AM MDT).

October 16, 2026, 12:20 AM to 2:40 AM MDT, Io's shadow crosses Jupiter (Locally, this event begins long before Jupiter rises and ends with Jupiter only 4 degrees above the eastern horizon).

THE SUN. As of October 2, two active regions with sunspots are present on the Earth-facing side of the Sun. There have been frequent M-class (moderate) solar flares during recent weeks, and there were X-class (extreme) flares on June 3, June 30, and July 4. More solar flares are possible during this period. Ultraviolet light from solar flares can cause a phenomenon called airglow. Striking greenish airglow has been [imaged by BCAS Member, Aaron Watson](#). Coronal mass ejections (CMEs) have triggered geomagnetic storms that caused auroras during past months, some of which were observed and photographed from the Western Slope. The best way to monitor sunspots, solar flares, CMEs, and other solar activity safely (in "real time") is by using the internet. To safely monitor the Sun, check out the following sites...

<https://sohowwww.nascom.nasa.gov/data/realtime-images.html>

<https://umbra.nascom.nasa.gov/newsite/images.html>

<https://sdo.gsfc.nasa.gov/data/>

<https://stereo-ssc.nascom.nasa.gov/>

<http://halph.nso.edu/>

<https://www.swpc.noaa.gov/>

<http://www.sidc.be/silso/ssngraphics>

Do not look at the Sun directly without [safe, specialized solar filters](#). Looking at the Sun can be very dangerous unless you take adequate precautions. Severe eye damage and even blindness can result.

AURORAS (aka “polar lights” or “northern lights”). We are still in an active part of the solar cycle, and there may be more geomagnetic storms that trigger auroras that could become visible from the Western Slope. Get predictions and updates for auroras, their intensity, and geographic extent from NOAA’s Space Weather Prediction Center:

<https://www.swpc.noaa.gov/products/aurora-viewline-tonight-and-tomorrow-night-experimental>

We often see auroras from the Western Slope when the [Planetary Kp Index](#) (a measure of magnetic disturbances around Earth) is above 5 or 6. You can find predicted Kp values for the next 72 hours at the following website (times are posted as Universal Time, UT; to convert to MDT, subtract 6 hours):

<https://www.swpc.noaa.gov/products/3-day-geomagnetic-forecast>

Auroras are most frequently seen from high latitudes, e.g., from Canada, Alaska, Iceland, northernmost Europe, southern New Zealand, and Antarctica. But many people have viewed and photographed auroras from the Western Slope in the past two years, including a spectacular aurora on November 11, 2025, another aurora on the evening of January 19 and [early morning of January 20, 2026](#), and an [“aurora burst” on March 13](#) (thanks to BCAS member Aaron Watson for posting some of his great aurora images!). [Aur glow](#) and [SAR arcs](#) also result from high solar activity, and these phenomena have been photographed and/or observed from Colorado. You can also watch aurora virtually from Yellowknife in the Northwest Territories on the [Canadian Space Agency’s Aurora Max](#) live feed (Yellowknife, like the Western Slope, is in the Mountain Time Zone).

EARTH SATELLITES. Numerous Earth satellites are visible every clear night. Satellites are visible only when they reflect sunlight during twilight or nighttime hours. We see satellites most often during late evening twilight and for an hour or so afterward, and before and during early morning twilight. The brightest satellites are the International Space Station (ISS) and Tiangong, the Chinese Space Station. Both space stations can appear brighter than any star in the sky, and at times even brighter than the Planet Jupiter. Predictions for space station passes can change quickly due to re-boosting and collision avoidance maneuvers, and it’s best to get predictions for passes within 24 hours of when you want to see the satellites.

An evening pass of the bright International Space Station (ISS) is predicted for October 2, and predawn passes of the ISS are predicted on October 13 and from October 15 to 18. Predawn passes of the almost-as-bright, Chinese Tiangong Space Station (aka CSS TIANHE-1) are predicted from October 3 to 14. Find updated times for local passes of the space stations and other bright satellites at these links (be sure to set applications for your location and time zone, if required):

<https://www.heavens-above.com/>

<https://www.n2yo.com/passes/?s=25544>

For ISS passes, you can use NASA’s “Spot the Station” app for mobile devices ...

<https://www.nasa.gov/spot-the-station/>

Starlink satellite “trains” can be striking sights for a few days after their launch. For predictions of SpaceX’s Starlink satellites, try using this site:

<https://findstarlink.com/#5431710;3>

HAPPY OBSERVING!