

BCAS OBSERVING HIGHLIGHTS for June 8 to 21, 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:

June 7-16, 10:40 PM to 2 AM: Enjoy our late spring & summer stars under a dark, moonless sky
June 7-11, 9:10 PM to 10 PM: Venus/Jupiter <3° apart in west northwest! Mercury 15° below/right
June 9, 7:00 to 8:00 PM: [BCAS meeting](#), online only-via Zoom, “Astronomy in Mesoamerica”
June 9, 8:37 PM (sunset) to 9:14 PM: Shadows of both Callisto & Europa cross Jupiter (use telescopes)
June 10, 3:00 AM to 4:45 AM: Crescent Moon 4° above & left from Saturn in eastern sky
June 10, 6:00 PM: [Western Slope Skies](#) on KVN radio
June 12, 4:25 AM to 4:45 AM: Mars 6° below crescent Moon in east northeast
June 13 to 21, 2:00 AM to 3:45 AM: View our late summer & fall stars under a dark, moonless sky
June 13, 4:25 AM to 4:40 AM: Moon 1° south of Pleiades Star Cluster, low in east northeast
June 15, 9:25 PM to 9:40 PM: Thin crescent Moon <5° above west-northwestern horizon (binoculars)
June 16, 9:30 PM to 10:15 PM: Crescent Moon, Jupiter, & Mercury form triangle in west northwest
June 17, 12:52+/- PM to 2:12+/- PM: Crescent Moon occults Venus during daylight
June 17, 9 PM to 11 PM: Crescent Moon about 4° east of Venus & 1° to 2° east of Beehive Star Cluster
June 19, 10:00 AM: [Western Slope Skies](#) on KVN radio
June 19, 9:45 to 10:35 PM: Venus in west northwest, 1° above Beehive Star Cluster (for binoculars)
June 21, 2:24 AM: June Solstice, our longest day & shortest night; astronomical summer begins
June 21, 4:05 AM to 4:40 AM: Mars 7° south of Pleiades Star Cluster

SUMMARY. Wow! There’s a lot happening in our June skies on the Western Slope! From June 7 to 16, enjoy seeing the Milky Way rise during dark, moonless evenings. From June 7 to 11 between 9:10 PM to 10 PM MDT, brilliant Venus and Jupiter, currently the two brightest planets, appear less than 3 degrees apart above the west-northwestern horizon, with fainter Mercury about 15 degrees below and to the right of the brilliant Venus/Jupiter duo. Then on June 16, the crescent Moon joins the Venus/Jupiter/Mercury grouping. Early risers can spot Saturn and Mars before dawn, and, with telescopes or binoculars, the 8th Planet, Neptune. From June 13 to 21 between 2:00 AM and 3:45 AM MDT under dark, moonless skies, early birds can preview the stars and constellations of autumn.

The Moon reaches last quarter on June 8, and from June 9 to 13, the crescent Moon wanes. The Moon is new on June 14. From June 15 to June 20, watch the crescent Moon wax in the evening sky. The Moon reaches first quarter on June 21. Enjoy seeing earthshine delicately illuminate the nightside of the crescent Moon, especially on mornings from June 10 to 13, and on evenings from June 16 to 19 (binoculars can provide eye-catching views!).

As of June 7, there are many active regions 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 from the Sun could trigger auroras 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.

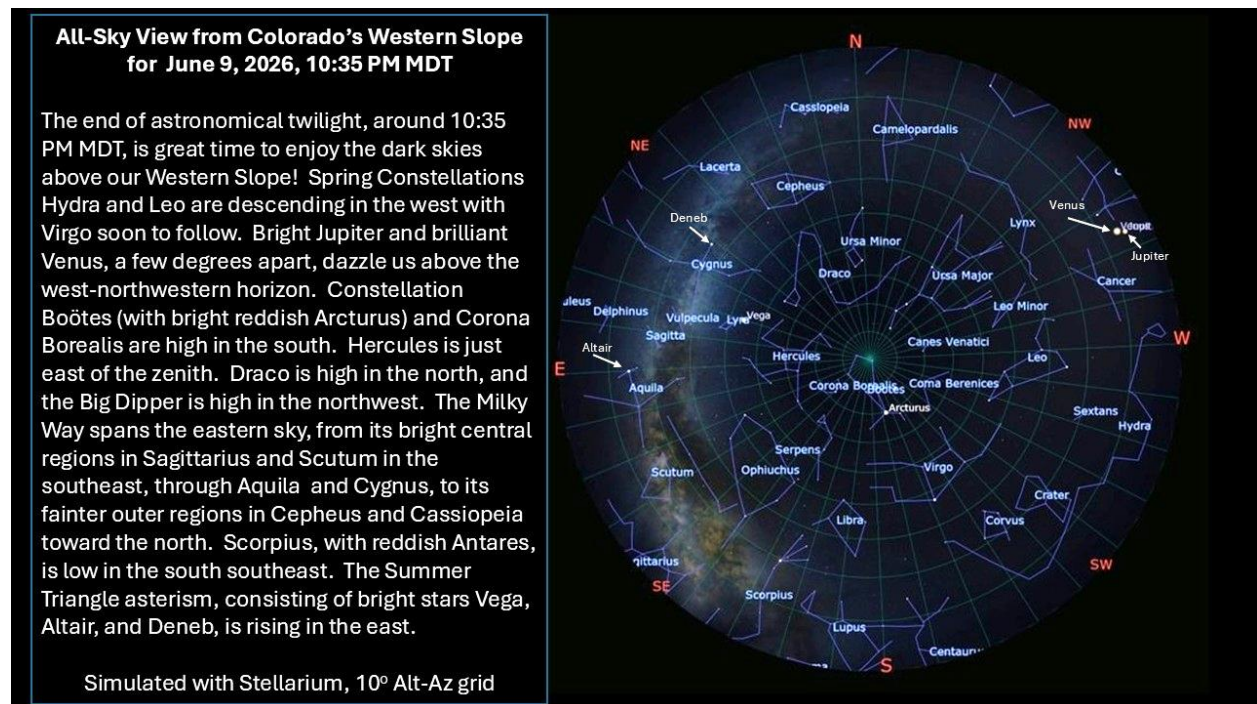
Numerous Earth satellites are visible every clear evening and morning. Predawn passes of the International Space Station (ISS) are predicted for June 17 and from June 19 to 21 and for the Tiangong (Chinese) Space Station on June 21 (subject to change). Find times for local passes of bright satellites at these links (be sure to set applications for your location and time zone):

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

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

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 “^o”). 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>

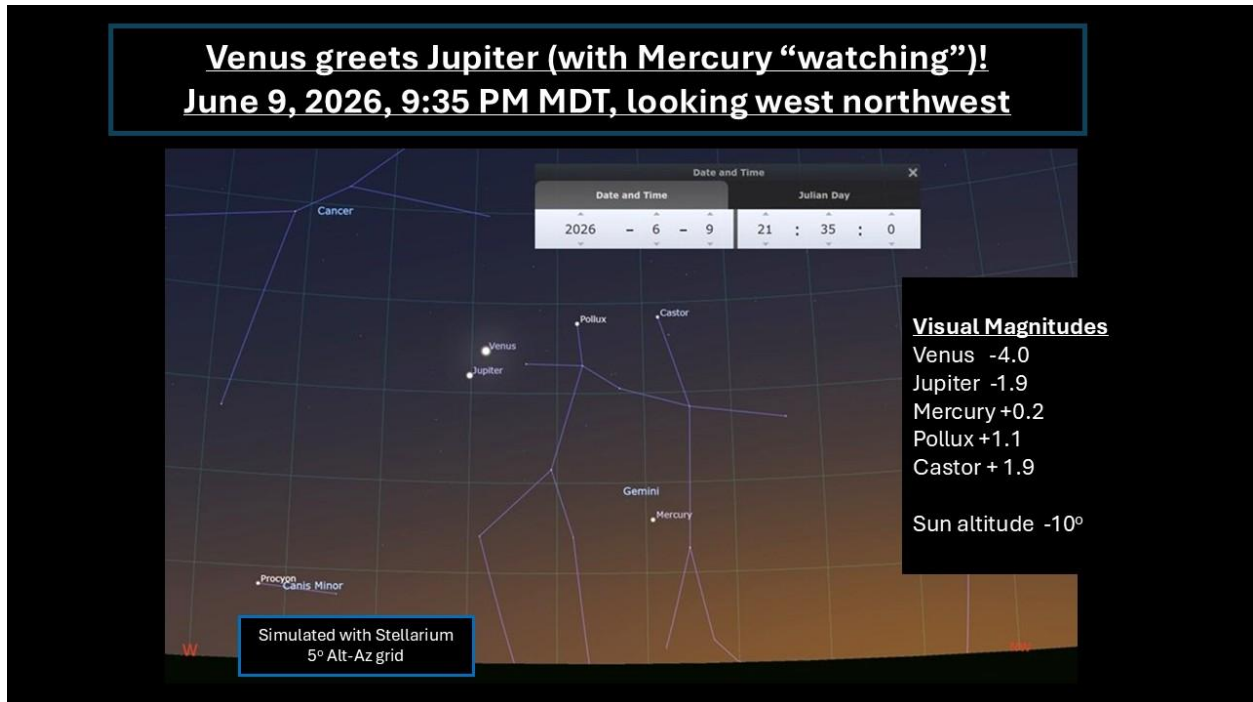
THE MILKY WAY RISES UNDER MOONLESS SKIES, JUNE 7 TO 16. Although nights are short, June is often our driest month on the Western Slope, affording us great views of a rising Milky Way and other stunning sights in our late spring to early summer sky. Use a planetarium app or the chart below to navigate our June evening sky.



VENUS: THAT BRILLIANT “EVENING STAR”! Dazzling Venus shines at magnitude -4.0 in the west northwest during this period, as it moves southeastward from Constellation Gemini into Constellation Cancer. From June 7 to 11 our brilliant “Sister Planet” is within 3 degrees of Jupiter. Venus, the brightest planet, is now more than 7 times brighter than Jupiter, which is almost always the second brightest planet. You can spot Venus more than 20 degrees high in the west shortly after sunset in bright twilight, and our “Sister Planet” remains visible for more than two hours afterward. Venus sets in the west northwest well after twilight’s end at about 11:14 PM MDT during this period. Venus’ angular separation from the Sun is still increasing, but there’s a southward component in its mostly eastward motion near the ecliptic. These circumstances cause Venus to set at about the same time each evening during this period as seen from the Western Slope.

Through telescopes, Venus’ gibbous phase wanes from 77% illuminated on June 7 to 72% illuminated on June 21, as its distance from Earth decreases from 112 million to 103 million miles, and its apparent diameter increases from 13.9 to 15.1 arc seconds. Venus will remain a dazzling “evening star” through

the summer of 2026. On the evenings of June 7, 8, and 9 look for brilliant Venus and Jupiter only about 2 degrees apart (a dazzling sight, especially in binoculars!) with fainter Mercury nearer the horizon, below and to the right (see chart, below). On June 19, Venus appears about 1 degree above the Beehive Star Cluster (try viewing with binoculars). **Please do your Venus spotting after sunset. NEVER chance looking at the Sun without taking proper precautions. Serious eye damage can result.**



MERCURY AS AN “EVENING STAR”! For most of June, we in Earth’s northern hemisphere enjoy Mercury’s best evening appearance of 2026. On June 7 and 8, Mercury, shining relatively brightly at magnitude 0, is more than 10 degrees above the west-northwestern horizon at the end of bright civil twilight and is still more than 5 degrees above that horizon at the end of less glaring, nautical twilight. On June 15 Mercury is at its greatest angular distance east of the Sun. After June 15, Mercury descends into brighter twilight, as the Innermost Planet fades from magnitude +0.5 on June 15 to magnitude +1.0 on June 21. Mercury’s distance from Earth decreases from 90 million miles on June 7 to 67 million miles on June 21, as Mercury’s phase (as seen through telescopes) wanes from a 54%-illuminated, 7.0 arc second-wide, gibbous disk on June 7 to a 27%-illuminated, 9.3 arc second-wide crescent on June 21. **Please do your Mercury spotting after sunset. NEVER chance looking at the Sun without taking proper precautions. Serious eye damage can result.**

JUPITER AND ITS LARGE MOONS. Bright Jupiter, moving against the stars of eastern Gemini, night-by-night, gets lower in the west as the sky darkens. Jupiter sets in the west northwest at around 11:10 PM MDT on June 8 and by 10:26 PM MDT on June 21, before the end of astronomical twilight. Between June 7 and 21, the Giant Planet fades slightly from magnitude -1.86 to -1.82, as its distance from Earth increases from 560 million to 572 million miles, and its apparent diameter decreases from 32.7 to 32.0 arc seconds. That’s still large enough for resolving Jupiter’s disk with binoculars. On the evenings of June 7 through 14, Jupiter appears within 5 degrees of brilliant Venus, and on June 7, 8, and 9 these two bright planets are only about 2 degrees apart!

Use a telescope or binoculars to spot Jupiter's four bright "Galilean" moons. You can identify them by their changing positions and referring to various planetarium apps. Use a telescope to view shadows of the Galilean moons crossing the Giant Planet. These are total solar eclipses on Jupiter! Ganymede, the largest moon in the Solar System, casts the largest shadow of Jupiter's moons, and its shadow is usually the easiest to spot. Shadows of all 4 Galilean moons can be observed transiting Jupiter with telescopes having apertures as small as 3 inches. Shadow transits of Io and Europa occur frequently, because Io orbits Jupiter every 1.8 Earth days, and Europa every 3.6 days. Ganymede and Callisto have longer orbital periods (around Jupiter), 7.2 and 16.7 Earth days, respectively, so their shadows cross Jupiter less frequently. **On June 9, there's a rare double transit of shadows of both Callisto and Europa that is visible from just after sunset at about 8:37 PM MDT until 9:14 PM MDT (when the Sun is 7 degrees below the horizon). Please do your Jupiter spotting after sunset. NEVER chance looking at the Sun without taking proper precautions. Serious eye damage can result.**

June 8, 2026, 7:38 PM to 9:56 PM MDT, Io's shadow crosses Jupiter (Locally, this event begins in daylight with Jupiter 39 degrees above the western horizon and ends during astronomical twilight with Jupiter 13 degrees high in the west northwest).

June 9, 2026, 6:22 to 9:14 PM MDT, Europa's shadow crosses Jupiter (Locally, this event begins in daylight with Jupiter 53 degrees high in the west and ends during nautical twilight, when the Sun is 7 degrees below the horizon and Jupiter is 20 degrees above the west-northwestern horizon).

June 9-10, 2026, 7:34 PM to 12:02 AM MDT, Callisto's shadow crosses Jupiter (Locally, this event begins in daylight with Jupiter 39 degrees high in the west and ends after Jupiter sets).

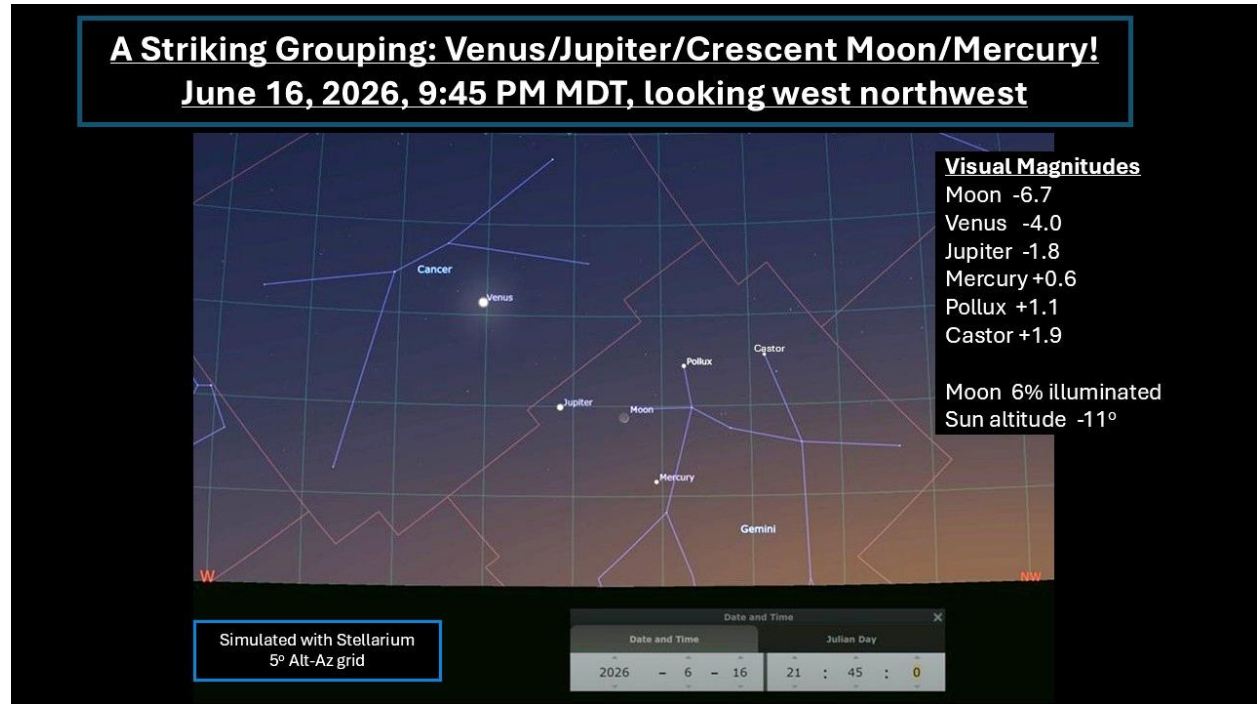
June 15, 2026, 9:32 PM to 11:52 PM MDT, Io's shadow crosses Jupiter (Locally, this event begins in nautical twilight when the Sun is 9 degrees below the horizon and Jupiter is 13 degrees high in the west northwest, and it ends after Jupiter sets).

June 16, 2026, 8:56 PM to 11:48 PM MDT, Europa's shadow crosses Jupiter (Locally, this event begins in bright civil twilight when the Sun is 4 degrees below the horizon and Jupiter is 19 degrees high in the west northwest and ends after Jupiter sets).

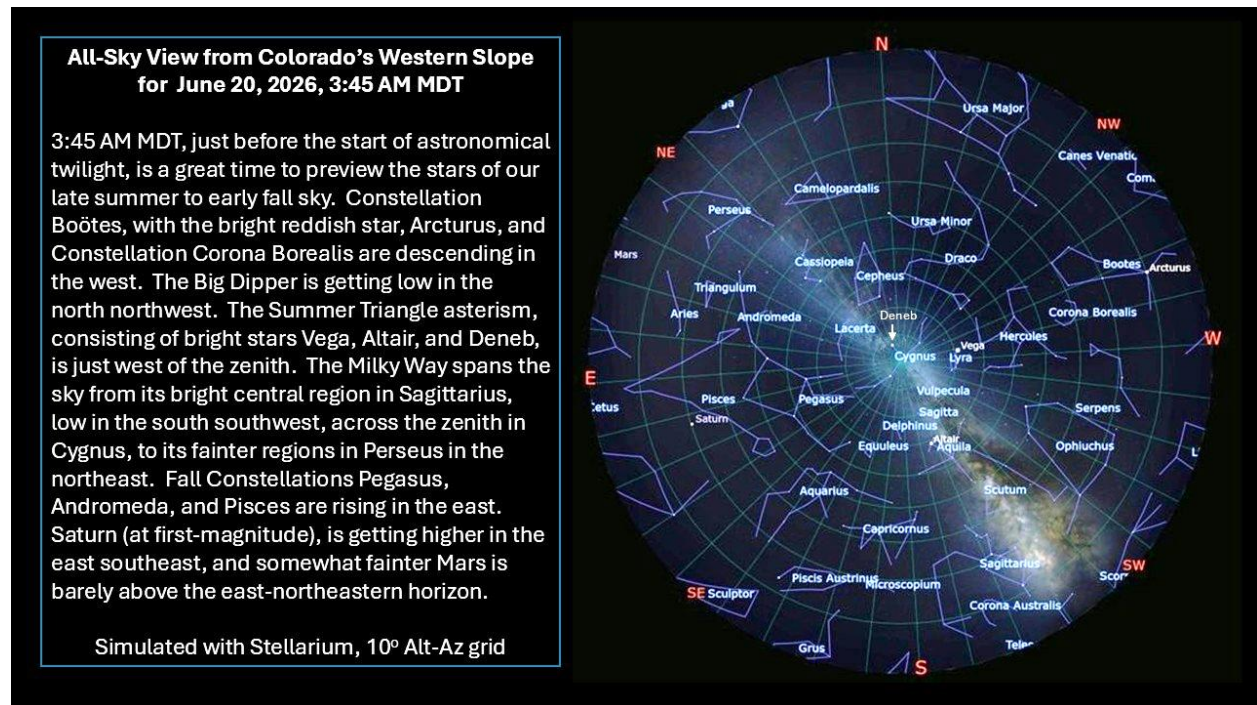
THE MOON. The Moon reaches **last quarter on June 8** (exactly at 3:00 AM MDT), and from June 9 to 13, the crescent Moon wanes. The **Moon is new on June 14** (exactly new at 8:54 PM MDT). From June 15 to June 20, watch the crescent Moon wax in the evening sky. **The Moon reaches first quarter on June 21** (exactly at 3:55 PM MDT).

On June 10 from 3:00 to 4:45 AM MDT, look east to see the 29%-illuminated, crescent Moon about 4 degrees above and left from first-magnitude Saturn. On June 12 between about 4:25 and 4:45 AM MDT, early risers can see Mars about 6 degrees below the 11%-illuminated, crescent Moon. On June 13 from 4:25 to 4:40 AM MDT look for the Moon 1° south of the Pleiades Star Cluster (try using binoculars). On June 15 from about 9:25 to 9:40 PM MDT, try to spot a "skinny" (only 1.6% illuminated!) crescent Moon as it descends from 5 to 2 degrees toward the west-northwestern horizon (binoculars will help). On June 16 between about 9:30 and 10:00 PM MDT, the 6%-illuminated lunar crescent is midway between Jupiter and Mercury (see chart below). Then on the evening of June 17, the 13%-illuminated crescent Moon is about 4 degrees east of brilliant Venus and just 1 degree east of the famous Beehive Star Cluster (aka M44) in Constellation Cancer (use binoculars for a stunning view!). Enjoy seeing earthshine delicately illuminate the nightside of the crescent Moon, especially on mornings from June 10 to 13, and on evenings from June 16 to 19 (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.



ENJOY A DARK PREDAWN SKY, JUNE 13 to 21. At around 3:45 AM MDT the Milky Way extends from the southwest to the northeast, crossing the zenith. Saturn, followed by Mars, is rising in the east, as are the constellations of early fall. Use a planetarium app or the chart below to navigate.



SATURN BEFORE DAWN. Saturn is now rising in the east before the onset of morning twilight, at about 2:43 AM MDT on June 8 and 1:55 AM MDT on June 21. During this period, Saturn brightens from magnitude +0.9 to +0.8, as its distance from Earth decreases from 916 million to 897 million miles. Through telescopes, Saturn's disk appears 17 arc seconds wide, and its rings span 40 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. 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. Saturn will be well placed for evening viewing by late summer and fall. **Please do your Saturn spotting before sunrise. NEVER chance looking at the Sun without taking proper precautions. Serious eye damage can result.**

MARS IN MORNING TWILIGHT. Mars, at magnitude +1.3, is getting easier to spot before dawn. On June 8 Mars rises in the east northeast at around 4:03 AM MDT (with the Sun 16 degrees below the horizon), and by June 21 Mars rises at 3:40 AM MDT, just before the start of astronomical twilight. Mars is still on the far side of the Sun from our perspective; the Red Planet is 201.4 million miles distant on June 8 and 198.4 million miles distant on June 21. Through telescopes, Mars' reddish disk still appears tiny, about 4.4 arc seconds wide 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. On the morning of June 21 from about 4:05 AM to 4:40 AM MDT, early risers can spot Mars about 7 degrees to the right of the Pleiades Star Cluster (M45). **Please do your Mars spotting before sunrise. NEVER chance looking at the Sun without taking proper precautions. Serious eye damage can result.**

NEPTUNE BEFORE DAWN. The 8th Planet, Neptune, at magnitude of +7.8, is also visible before dawn, but we need a telescope, or at least binoculars, to see it. On June 8, Neptune is more than 20 degrees above the east-southeastern horizon by 4:05 AM MDT, before nautical twilight begins at 4:34 AM MDT. Neptune's blueish disk appears only 2.3 arc seconds wide. Neptune is 2.8 billion miles from Earth during this period. You can use this link to find Neptune: <https://theskylive.com/neptune-info>
Please do your Neptune spotting before sunrise. NEVER chance looking at the Sun without taking proper precautions. Serious eye damage can result.

DAYLIGHT OCCULTATION OF VENUS BY THE MOON: JUNE 17. On June 17, the waxing crescent Moon occults (moves in front of) Venus in daylight during the early afternoon. **This event will be best viewed with telescopes and binoculars, but we must take extreme care not to look toward the Sun. Looking at the Sun without adequate eye protection can result in serious eye damage.** From the Western Slope, Venus will disappear behind the dark, leading edge of the Moon at around 12:52 PM MDT and reappear from behind the sun-lit trailing edge of the Moon at about 2:12 PM MDT. Times vary by several minutes based on your location in western Colorado. Venus will be about 46 degrees high in the east at its disappearance and 61 degrees high in the east southeast at its reappearance. To observe this event, find a location shaded from the Sun, and scan about halfway up the eastern sky with binoculars just after noon. If sky transparency is good, both Venus and the lunar crescent may both be visible (Venus may be easier to spot than the Moon). The darkened, leading edge of the Moon will be invisible in daylight, and Venus' disappearance behind the darkened edge of the Moon at around 12:52+/- PM

MDT will be gradual, taking about 30 seconds. Venus' reappearance from behind the bright trailing edge of the Moon at about 2:12+/- PM MDT will also be gradual, taking about 30 seconds.

June 17: Daylight Occultation of Venus by Crescent Moon

- 12:52 +/- PM MDT Disappearance, with Venus 46° high in east
- 2:12 +/- PM MDT Reappearance, with Venus 61° high in southeast

Simulated with Stellarium
for western Colorado

WILL A BRIGHT NOVA (“NEW” STAR) APPEAR SOON? Will there be a bright “new” star in Constellation Corona Borealis sometime soon, if only briefly? Corona Borealis is more than 60 degrees above the southeastern horizon as the sky darkens, about 70 degrees high in the south between 10 PM MDT and 1 AM MDT, and it remains more than 20 degrees above the west-northwestern horizon, as morning twilight brightens the sky after about 4:30 AM 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 early next year. Then this “new” star may fade rapidly below naked-eye visibility in about a week. As of 5 AM MDT on June 7, T CrB had not yet erupted. [Astronomer Jean Schneider predicted that an eruption is most likely on or about June 25, 2026, or on February 8, 2027.](#) We are nearing one of Schneider’s predicted eruption times! 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

THE SUN. As of June 7, there are many sunspot groups 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 March 30, April 24 (two X-class flares), and June 3. More solar flares are likely during this period. Also, coronal mass ejections (CMEs) have triggered geomagnetic storms that caused auroras during the past few 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://sohowww.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://halphi.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 this site (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!). [Airglow](#) and [SAR arcs](#) also result from high solar activity, and these phenomena have been photographed and/or observed from Colorado.

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. From May through July, Earth’s northern hemisphere is tilted toward the Sun, and from Colorado it’s possible to see satellites in the northern sky through much of the night. 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.

Predawn passes of the International Space Station (ISS) are predicted for June 17 and from June 19 to 21 and for the Tiangong Space Station on June 21 (subject to change). Find times for local passes of bright satellites at these links (be sure to set applications for your location and time zone):

<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!