

BCAS OBSERVING HIGHLIGHTS for September 4 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:

September 3-14, 9:10 PM to 11:00 PM: Enjoy our “summer” Milky Way under dark, moonless skies
September 6, 2:30 AM to 6 AM: Crescent Moon about 5° above reddish Mars
September 7, around 5:45 AM: Crescent Moon between Mars and bright Jupiter
September 8, around 5:45 AM: Skinny, crescent Moon 3° above bright Jupiter (great in binoculars!)
September 8, around 1:04 PM: Crescent Moon partly occults or just misses Jupiter in daylight
September 9-18, 3 AM to 5:10 AM: Enjoy our fall and early winter stars under dark, moonless skies
September 11, 10:00 AM: [Western Slope Skies](#) on KVNF radio
September 11, 2 PM to 4 PM, 9 to 10:30 PM, [AstroFest](#), Black Canyon of the Gunnison N.P. (S. Rim)
September 12, 6:15 PM to 10:00 PM, [AstroFest](#), Curecanti N.R.A. (Elk Creek Campground)
September 13, 7:45 PM to 8:00 PM: Crescent Moon 6° below and to the right of brilliant Venus
September 14, 7:45 PM to 8:00 PM: Crescent Moon 7° to left and above brilliant Venus
September 16, 6:00 PM: [Western Slope Skies](#) on KVNF radio

SUMMARY.

September 3 through 18 is a wonderful time for enjoying the dark skies above our Western Slope! During the evenings, the bright star clouds of our Milky Way Galaxy span the sky from the south southwest to the northeast. The “summer triangle” asterism, consisting of bright stars Vega, Altair, and Deneb, is near the zenith, and our fall constellations are rising in the east. Go out before morning twilight at around 5 AM and preview our bright winter stars as they rise in the east. Some of the brightest stars in the sky are prominent before dawn, including reddish Betelgeuse and blue-white Rigel in Constellation Orion, Pollux in Gemini, Capella in Auriga, Procyon in Canis Minor, Aldebaran in Taurus, in addition to the night sky’s brightest star, Sirius, in Canis Major.

Venus is brilliant in the southwest during evening twilight, and Saturn rises in the east by 9 PM MDT. Before dawn, we can view Mars in Constellation Gemini and bright Jupiter above the eastern horizon. With binoculars or telescopes, we can observe Neptune in constellation Pisces from about 10:20 PM through 5 AM MDT and Uranus in Constellation Taurus between about 1 AM and 5 AM MDT.

The Moon reaches last quarter on the night of September 3-4, and from September 5 to 9, the crescent Moon wanes. The Moon is new on September 10. From September 12 to 17, watch the crescent Moon wax in the evening sky. The Moon reaches first quarter on September 18. Enjoy seeing earthshine delicately illuminate the nightside of the crescent Moon, especially on mornings from September 6 to 9, and on evenings from September 13 to 15 (binoculars can provide eye-catching views!). A fun website for enjoying the Moon is [NASA’s daily Moon Guide](#).

As of September 3, two active regions with sunspots have rotated onto 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 (or at least blocked from your view by a solid object). Never risk viewing the Sun without adequate eye protection, as serious eye damage can result.

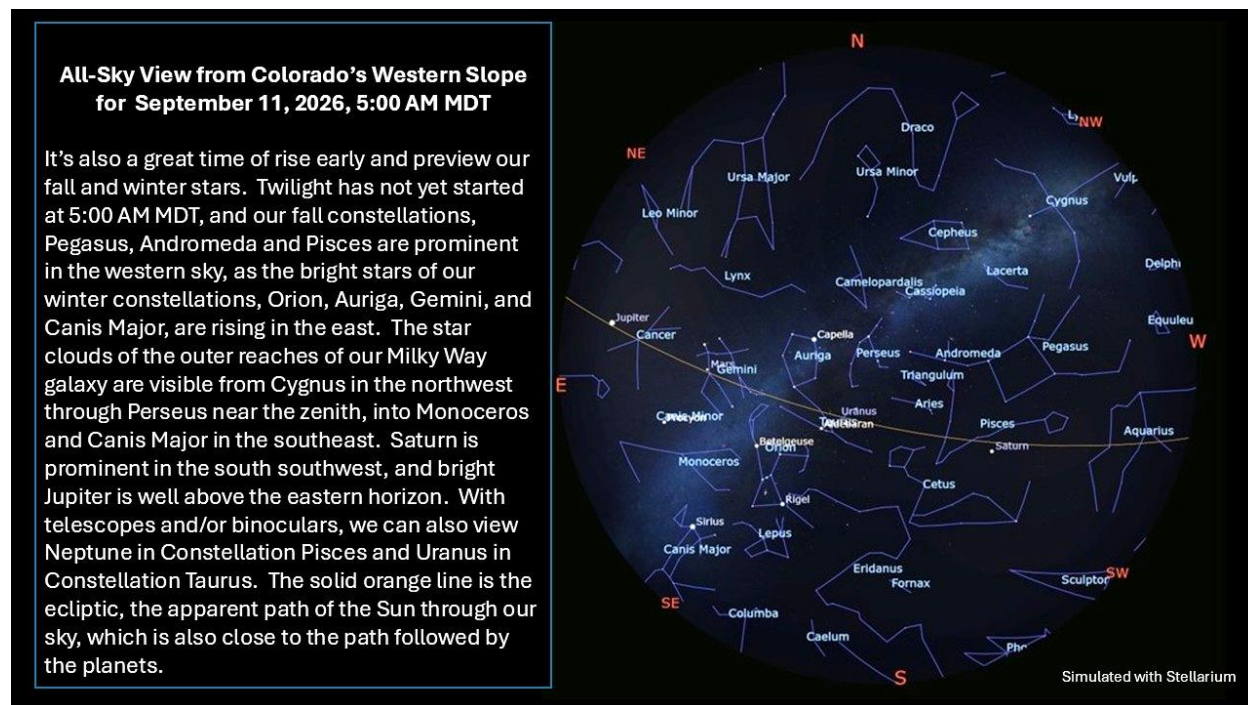
Numerous Earth satellites are visible every clear night. Predawn passes of the bright International Space Station (ISS) are predicted from September 4 to 6, and evening ISS passes are predicted for September 6 through 18. Evening passes of the almost-as-bright, Chinese Tiangong Space Station (aka CSS TIANHE-1) are predicted for September 3 to 13 and September 15.

<https://www.heavens-above.com/>
<https://www.n2yo.com/passes/?s=25544>
<https://www.nasa.gov/spot-the-station/>

ENJOY OUR DARK SEPTEMBER SKY! September is a favorite time of year for enjoying the dark skies above our Western Slope. Use a planetarium app or the charts below to help navigate. During the evenings, the bright star clouds of our Milky Way Galaxy span the sky from the south southwest to the northeast. The “summer triangle” asterism, consisting of bright stars Vega, Altair, and Deneb, is near the zenith. And our fall constellations are rising in the east, as is the Planet Saturn. Brilliant Venus is prominent in evening twilight, setting about an hour after the Sun.

At around 5 AM preview our bright winter stars, which are rising in the east. Some of the brightest stars in the sky are prominent, including reddish Betelgeuse and blue-white Rigel in Constellation Orion, Pollux in Gemini, Procyon in Canis Minor, Capella in Auriga, and Aldebaran in Taurus, in addition to the night sky's brightest star, Sirius in Canis Major. Mars is prominent amidst the stars of Gemini, and bright

Jupiter rises in the east well before 5 AM. Saturn is still high in the south southwest. With binoculars or telescopes, we can view Neptune in Constellation Pisces and Uranus in Constellation Taurus.



BLACK CANYON REGIONAL ASTROFEST, SEPTEMBER 11 and 12! A great way to enjoy our dark September sky is to join National Park Rangers and BCAS members at the Black Canyon Regional AstroFest! AstroFest is being held at Black Canyon of the Gunnison National Park, South Rim Visitor Center on September 11 from 2:00 PM to 10:30 PM MDT and at Curecanti National Recreation Area, Elk Creek Campground on September 12 from 6:15 PM to 10:00 PM MDT. Activities are offered for entire families. See this link for more information: <https://www.nps.gov/blca/planyourvisit/astrofest.htm>

A CRESCENT MOON: WANING, THEN WAXING. The Moon reaches **last quarter on the night of September 3-4** (exactly at 1:51 AM MDT, on September 4), and from September 5 to 9, the crescent Moon wanes. The **Moon is new on September 10** (exactly new at 9:27 PM MDT). From September 12 to 17, watch the crescent Moon wax in the evening sky. **The Moon reaches first quarter on September 18** (exactly at 2:44 PM MDT).

On September 6 from (from about 2:30 AM to 6 AM MDT), spot the 26% illuminated crescent Moon about 5 degrees above reddish Mars. On September 7 at around 5:45 AM MDT, the 16%-illuminated lunar crescent is between Mars and bright Jupiter, and on September 8, the crescent Moon (only 8% illuminated) is about 3 degrees above Jupiter. For our region, the Moon will appear to approach Jupiter during daylight hours and partially occult (or narrowly miss occulting) the Giant Planet at around 1:04 PM MDT (see item below, p 7). On the evening of September 13 between 7:45 PM and 8:00 PM MDT, look for the 10%-illuminated, waxing crescent Moon about 6 degrees below and to the right of brilliant Venus – likely a spectacular sight in binoculars! On September 14, the 16%-illuminated lunar crescent is about 7 degrees to the left and above Venus. Enjoy seeing earthshine delicately illuminate the nightside of the crescent Moon, especially on mornings from September 6 to 9, and on evenings from September 13 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.**

If you observe the Moon's September 8, daylight encounter with Jupiter, block the Sun behind a solid object. NEVER chance looking at the Sun directly; serious eye damage can result.

VENUS: BRILLIANT, BUT GETTING LOWER IN SOUTHWESTERN, EVENING TWILIGHT. Venus has been a dazzling evening star through late spring and midsummer, but the minutes for observing our "Sister Planet" in evening twilight are rapidly diminishing. Venus is still brilliant, but evening-by-evening, our "Sister Planet" appears lower in our southwestern sky. During this period, Venus brightens from magnitude -4.67 to -4.79, as it moves through Constellation Virgo. You can spot Venus less than 15 degrees above the southwestern horizon shortly after sunset, and it remains visible for about an hour afterward. Venus sets in the west southwest after twilight's end at about 9:06 PM MDT on September 3 and at about 8:18 PM MDT on September 19. Venus' angular separation from the Sun is now decreasing, and there's still a strong southward component in Venus' motion. These circumstances cause Venus to set earlier night-by-night, as seen from Colorado's mid-northern latitudes. By early October Venus will disappear into glaring evening twilight. Venus will be at [inferior solar conjunction](#) on October 24, 2026 and will reappear in our predawn sky by the second week of November.

Through telescopes, Venus' gibbous phase wanes from a 37%-illuminated crescent on September 3 to a "skinnier", 26%-illuminated crescent on September 18, as its distance from Earth decreases from 49 million to 39 million miles, and its apparent diameter increases from 31.4 to 39.5 arc seconds. **Please do your Venus spotting after sunset. NEVER chance looking at the Sun without taking proper precautions. Serious eye damage can result.**

SATURN: RISES IN THE EVENING NOW! Saturn rises in the east at about 9:00 PM MDT on September 3 and 7:59 PM MDT on September 18. During this period, the Ringed Planet brightens from magnitude +0.46 to +0.40, as its distance from Earth decreases from 797 million to 787 million miles. Saturn has been moving amidst the stars of Constellation Pisces, but on September 6 Saturn enters Cetus, a non-zodiacal Constellation, thus confounding those astrologers! 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 Mercury, Venus, and Saturn occasionally do 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 19.5 arc seconds wide, and its rings span 45 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. Through telescopes, it's best to view Saturn after it rises more than 20 degrees above the eastern horizon; that's after about 10:45 PM MDT on September 3 and after about 9:45 PM MDT by September 18.

NEPTUNE: NEARLY ALL NIGHT LONG. Neptune, at magnitude +7.7, is moving slowly amidst the stars of Constellation Pisces. The 8th Planet rises in the east at about 8:34 PM MDT on September 3 and 7:34 PM MDT on September 18, but we need a telescope, or at least binoculars, to see it. Telescopic views of Neptune may be best after about 10:20 PM MDT, when the 8th Planet rises more than 20 degrees above the east-southeastern horizon. Through telescopes, Neptune's blueish disk appears only 2.4 arc seconds wide. Neptune is 2.69 billion miles from Earth during this period. On September 3, Neptune appears less than 2 arc minutes from the +8.6-magnitude star, HIP 1127. Can you see a color contrast between

blueish (?) Neptune and this star, which may appear white? 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 40 degrees above the western horizon as the sky darkens and remains visible in the west-northwestern sky until about 11 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 September 3 at 3 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 11:21 PM MDT on September 3 and 10:22 PM MDT on September 18. The 7th Planet is moving slowly against the stars of Constellation Taurus, between the Pleiades and Hyades Star Clusters.

At magnitude +5.7, 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’ 3.7 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 1.78 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 5 AM MDT, when Uranus rises from 23 to 67 degrees above the eastern horizon. You can use this link to find Uranus:
<https://theskylive.com/uranus-info>.

MARS BEFORE DAWN. Mars brightens from magnitude +1.20 to +1.13, as it moves eastward in our predawn sky through Constellation Gemini, amidst some widely arrayed, bright “winter” stars, including Pollux in Gemini, Betelgeuse in Orion, Capella in Auriga, and Aldebaran in Taurus. You can distinguish Mars from these stars by the fact that it typically does not scintillate (or “twinkle”). On September 4, Mars rises above the east-northeastern horizon at around 2:02 AM MDT. By August 19, Mars rises a bit earlier, at about 1:48 AM MDT. Mars is still on the far side of the Sun from our perspective; the Red Planet is 170 million miles distant on September 4 and 162 million miles distant on September 18. Through telescopes, Mars’ reddish disk still appears small, increasing in apparent diameter from only 5.1 to 5.4 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.

By 5:30 AM MDT, Mars is more than 40 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”, which consists of light-colored clouds covering all or part of Mars’ northern polar ice cap? In the 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 rises in the east at about 4:25 AM MDT on September 4 and at about 3:45 AM MDT on September 18. Between September 4 and 18, Jupiter brightens slightly from magnitude -1.81 to -1.84, as its distance from Earth decreases from 574 million to 563 million miles, and its apparent diameter increases from 31.9 to 32.6 arc seconds. That's large enough for resolving Jupiter's disk 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! Due to Jupiter's brief "observing window" in our current predawn sky, only 3 "shadow transits" (2 of Europa's shadow, 1 of Io's shadow) are observable from the Western Slope during this period. More of these shadow "transits" will become visible as Jupiter starts rising earlier in the coming weeks and months.

September 10, 2026, 3:50 AM to 6:46 AM MDT. Europa's shadow crosses Jupiter (Locally, this event begins a bit before Jupiter rises at about 4:08 AM MDT and ends in glaring twilight just before sunrise with Jupiter 30 degrees above the eastern horizon and the Sun just 1 degree below the horizon).

September 14, 2026, 3:50 AM to 6:08 AM MDT. Io's shadow crosses Jupiter (Locally this event begins just before Jupiter rises at about 3:57 AM MDT and ends during twilight with Jupiter 25 degrees above the eastern horizon and the Sun still 9 degrees below the horizon).

September 17, 2026, 6:26 AM to 9:20 AM MDT. Europa's shadow crosses Jupiter (Locally, this event begins in bright twilight with Jupiter 30 degrees above the eastern horizon and the Sun only 6 degrees below the horizon. This event ends in daylight).

THE SUN. As of September 3, two active regions with sunspots have rotated onto the Earth-facing side of the Sun (update). 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 likely 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://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://halpha.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:

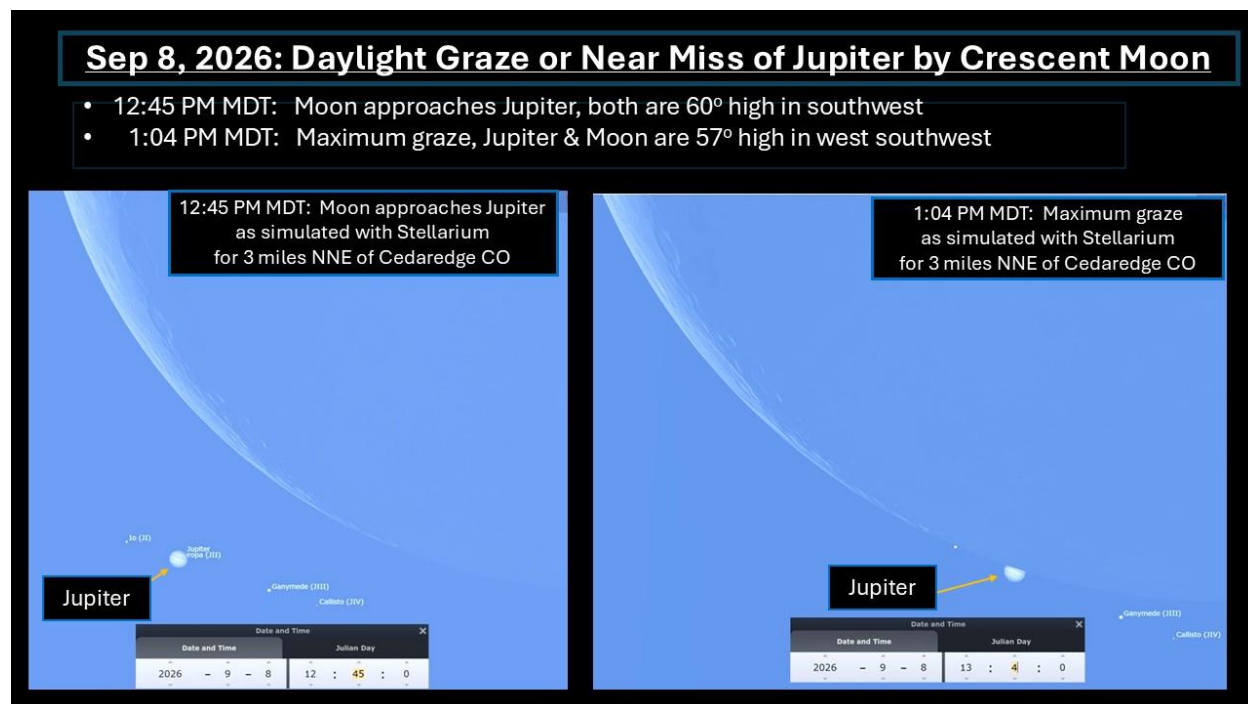
<https://www.swpc.noaa.gov/products/aurora-viewline-tonight-and-tomorrow-night-experimental>

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!). [Airglow](#) 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).

THE CRESCENT MOON ENCOUNTERS JUPITER IN DAYLIGHT: SEPTEMBER 8, AROUND 1:04 PM MDT. In the early afternoon of September 8, the waning crescent Moon (only 7% illuminated) will encounter Jupiter with the Sun high in the sky. [This event](#) may be observable in telescopes from the Western Slope, although it will be challenging. From a location northeast of Cedaredge (107° 54' 7.93" W, 38° 56' 23.9" N), the Moon will partially occult (or “graze”) Jupiter at around 1:04 PM MDT. From just northeast of this location, the moon completely occults Jupiter, but only for a few minutes. From just southwest of this location, the Moon may narrowly miss occulting Jupiter. Use your favorite planetarium app to get more precise predictions for this event for your location. At 1:04 PM MDT, the Moon is about 57 degrees high in the southwestern sky, and the Sun will be about 56 degrees high in the south. **To safely observe this event, block the Sun by a building or some other solid obstruction.** This could be a “practice run” for observing the predawn occultation of Jupiter by the Moon on October 6, 2026! **Never chance looking toward the Sun directly. Looking at the Sun without adequate filtration can be very dangerous. Severe eye damage and even blindness can result.**



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.

Predawn passes of the bright International Space Station (ISS) are predicted from September 4 to 6, and evening ISS passes are predicted for September 6 through 18. Evening passes of the almost-as-bright, Chinese Tiangong Space Station (aka CSS TIANHE-1) are predicted for September 3 to 13 and September 15. 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!