BCAS OBSERVING HIGHLIGHTS for September 29 to October 13, 2025, a "bright Moon period"
Black Canyon Astronomical Society (BCAS), southwest-central Colorado, USA

DATES & TIMES (MDT) FOR REGIONAL EVENTS AND EYE-CATCHING HAPPENINGS IN THE SKY:
September 28-October 3, 3:00 to 5:35 AM: Preview the bright stars of winter under dark skies!
October 1, 7:00 PM on KVNF radio: "Song Birds Migrate at Night" - Kate Fedack/WSDSC
October 4, 12:46 to 2:16 AM: Watch shadows of both Io and Europa simultaneously cross Jupiter!
October 5-6, 10:29 PM to 12:34 AM: Watch Titan's shadow cross Saturn
October 5-6, 8 PM to 5 AM: The bright gibbous Moon passes north of Saturn
October 6, 6:30 to 7:00 PM: The full Moon rises in the east - does it look huge ("Moon illusion")?
October 9, 9:15 to 11:00 PM: The gibbous Moon occults bright stars in the Pleaides Star Cluster
October 10, 10:00 AM on KVNF radio: "Antigravity" - Michael Williams/BCAS
October 11, 2:40 to 4:52 AM: Watch shadows of both Io and Europa simultaneously cross Jupiter!
October 11-13, 8:00 to 9:50 PM: Explore the summer Milky Way under dark skies!
October 12-13, 11:10 to 1:00 PM: The waning Moon rises near Castor, Pollux, and Jupiter
October 14, 7:00 to 9:00 PM: BCAS meeting, Montrose and online

SUMMARY. During the September 29-October 13 "bright Moon period", look for the "Moon illusion" as a full "supermoon" rises on October 6, and then on October 9 watch the gibbous Moon occult bright stars in the Pleiades Star Cluster. From October 8 to 11, the waning, gibbous Moon rises unusually early over Colorado, due to its northerly position in our sky.

Using binoculars or telescopes, look for Comet C/2025 R2 (SWAN) as evening twilight fades, and try to spot Comet C/2025 A6 (Lemmon), as Comet Lemmon moves across the northern sky.

Although the Moon brightens the sky during much of this period, we can preview the bright stars of winter and the winter Milky way under dark skies from September 28 to October 3 between 3:00 to 5:35 AM MDT and then catch a last look at the summer Milky Way under dark skies from October 11 to 13 between 8:00 and 9:50 PM MDT.

Mars is rapidly disappearing into glaring, evening twilight, and you'll likely need binoculars or a telescope to spot the Red Planet. Mercury enters the evening sky around October 13. But it will be challenging to spot the Innermost Planet, because it's immersed in bright twilight, low in the west-southwestern sky. Saturn is well placed for observing through much of the night. By viewing through a telescope on the night of October 5-6, we can watch a transit of Titan and Titan's shadow across the Ringed Planet. This is the last transit of Titan's shadow until 2039. With binoculars or telescopes, it's possible to spot Neptune moving slowly through Constellation Pisces, about 3 degrees northeast of Saturn. Uranus is moving slowly through Constellation Taurus. Bright Jupiter now rises before 1 AM. On the morning of October 4 and 11, use a telescope to watch the shadows of Jupiter's moons Io and Europa transit the Giant Planet simultaneously! Venus, a brilliant "morning star", rises more than an hour and a half before the Sun, prior to the onset of morning twilight.

There are several active regions on the Earth-facing side of the Sun that may produce solar flares and coronal mass ejections. Coronal mass ejections can trigger auroras (aka northern lights), which could become visible from Colorado. Never risk looking toward the Sun without safe, specialized solar filters. You can monitor solar activity safely on the internet.

Look for predicted evening passes of the very bright International Space Station (ISS) from September 28 to October 2. And there are predicted predawn passes for the almost-as-bright Tiangong (Chinese) Space Station from October 7 to 13.

COMET C/2025 R2 (SWAN). TRY TO FIND THIS NEW COMET WITH BINOCULARS IN THE EVENING SKY.
C/2025 R2 (SWAN) may be a fine comet for viewing with binoculars during this period. On September

11, Vladimir Bezugly of Ukraine discovered Comet, C/2025 R/2 (SWAN), which was temporarily designated as SWAN25B. He discovered the new Comet on images from the Solar Wind Anisotropies Instrument (SWAN) on the SOHO satellite. Comet SWAN was closest to the Sun on September 12 (at 47 million miles), and it will be closest to Earth on October 21 (25 million miles distant). During September, Comet SWAN has been best seen from the southern hemisphere. But Comet SWAN gradually gets higher in the Western Slope's evening sky between September 29 and October 13. At between magnitude +5 and +7, Comet SWAN may be visible in binoculars against the glow of twilight from late September to mid-October. The Comet is moving eastward from Constellation Virgo, into Libra, and then Scorpius and Ophiuchus. On October 2 and 3, Comet SWAN will pass about 1 degree north of double star, Zubenelgenubi (aka Alpha Librae). Comet SWAN may be an interesting sight, but it's also possible that it may disintegrate and fade from view! It's been said that "comets are like cats: they have tails and can be unpredictable." Look for updates, photos, finder charts, and an ephemeris here…
https://www.space.com/stargazing/could-new-comet-c-2025-r2-swan-become-visible-to-the-naked-eye-in-october-heres-what-we-know
C/2025 R2 (SWAN) | astro.vanbuitenen.nl
http://www.aerith.net/comet/catalog/2025R2/2025R2.html
https://theskylive.com/c2025r2-info
https://en.wikipedia.org/wiki/C/2025_R2_(SWAN)
Please do your Comet SWAN, Mars, and Spica spotting after sunset. NEVER chance looking at the Sun without taking proper precautions. Serious eye damage can result.

C/2025 A6 (Lemmon) – AN EVEN BRIGHTER COMET IN THE NORTHERN SKY? Using binoculars or telescopes, look for Comet, C/2025 A6 (Lemmon) in the predawn sky until October 11, as it moves through Constellation Lynx into Ursa Major, and then from October 12 into late October in the early evening sky, moving through Constellations Ursa Major, Canes Venatici, Boötes, and Serpens. Currently at magnitude +7, Comet Lemmon may get brighter than magnitude +5 and become visible to our eyes unaided, as it moves closer to Earth (it's closest to Earth on October 20) and the Sun (it's closest to the Sun on November 8). C/2025 A6 was discovered by the Mount Lemmon Survey in southern Arizona. Look for updates, photos, finder charts, and an ephemeris here…
https://www.space.com/astronomy/comets/comet-c-2025-a6-lemmon-is-approaching-earth-will-it-become-visible-to-the-naked-eye
https://theskylive.com/c2025a6-info
C/2025 A6 (Lemmon) | astro.vanbuitenen.nl
http://www.aerith.net/comet/catalog/2025A6/2025A6.html

THE MOON. The Moon reaches **first quarter on the night of September 29-30** (exactly at 5:54 PM MDT on September 29). From October 1 to 5, watch the gibbous Moon wax. **The Moon is full on the night of October 6-7** (exactly full on October 6 at 9:47 PM MDT). Watch a full "supermoon" (1.5 days before perigee, aka its near point to Earth) rise in the east from about 6:30 to 7:00 PM MDT on October 6. Does the Moon look especially large to you? The September 6-7 full Moon is 224,000 miles distant, considerably closer than its average distance of 238,000 miles, making it appear a bit larger than usual. And the Moon illusion effect may make the Moon seem even larger when it's near the horizon (see discussion below). From October 8 to 12, the gibbous Moon wanes. From October 8 to 11, the waning gibbous Moon rises unusually early in Colorado, due to its northerly position in the sky. The early rising of a waning gibbous Moon is called either the "Harvest Moon effect" (typically in September or early October) or the "Hunters' Moon effect" (typically in October or early November). During this period, the waning gibbous Moon is several degrees north of the ecliptic (the apparent path of the Sun through the sky), much farther north than usual. This causes the waning Moon to rise very early: at 7:29 PM MDT on

October 8, 8:07 PM MDT on October 9, and 8:59 PM MDT on October 10. The Moon reaches **last quarter on October 13** (exactly at 12:13 PM MDT). On the night of October 5-6, the bright, waxing gibbous Moon passes several degrees north and east of Saturn. From western Colorado on October 9 between 9:15 and 11:00 PM MDT, the waning gibbous Moon occults several bright stars in the Pleiades Star Cluster (aka M45), including Electra (aka, 17 Tau), Celaeno (16 Tau), Maia (20 Tau), and Alcyone (Eta Tau). Disappearances occur along the bright leading edge of the eastward-moving Moon, and reappearances occur along the dark, trailing edge. On the night of October 12-13, the waning Moon, approaching last quarter, rises in central Gemini at around 11:10 PM MDT. After midnight, look for the waning Moon about 7 degrees south of Gemini's "twin stars", Castor and Pollux, and about 10 degrees west of the bright planet, Jupiter. NASA has published a stunning visualization of lunar phases for year 2025. Another fun site is NASA's daily Moon guide.

THE MOON ILLUSION. Is the "Moon illusion" really an illusion? Yes, and you can prove it by taking a photograph of the rising Moon and then taking another photo with the same equipment about 7 hours later, when the Moon is high in the sky. I did this on January 10-11, 2009, when the full Moon was about as close as it gets to Earth. The photos below are reproduced at the same scale. The lunar diameter measures 1.8% wider in the photo taken when the Moon was near zenith! This makes sense, because the Moon (219,000 miles distant from the Earth's center on January 10-11, 2009) was about 4,000 miles closer (Earth's radius), when near the zenith than when it was on the horizon: 4000/219,000 is 0.018 or 1.8%. But the Moon still looks larger to me when on the horizon, even after having measured the sizes of those lunar images!

MARS: DISAPPEARING INTO EVENING TWILIGHT. The Red Planet, shining at magnitude +1.5, now sets below the west-southwestern horizon at 8:05 PM MDT on September 29 and at 7:36 PM MDT on October 13. During this period, you will likely need binoculars or a telescope to spot Mars, as it moves deeper into glaring twilight before its solar conjunction on January 9. Mars will appear about 2 degrees from Mercury around October 19, but seeing this conjunction will likely require optical aid. After that, our next good chance to see Mars will be in late April or May 2026, when the Red Planet emerges from bright morning twilight. **Please do your Mars spotting after sunset. NEVER chance looking at the Sun without taking proper precautions. Serious eye damage can result.**

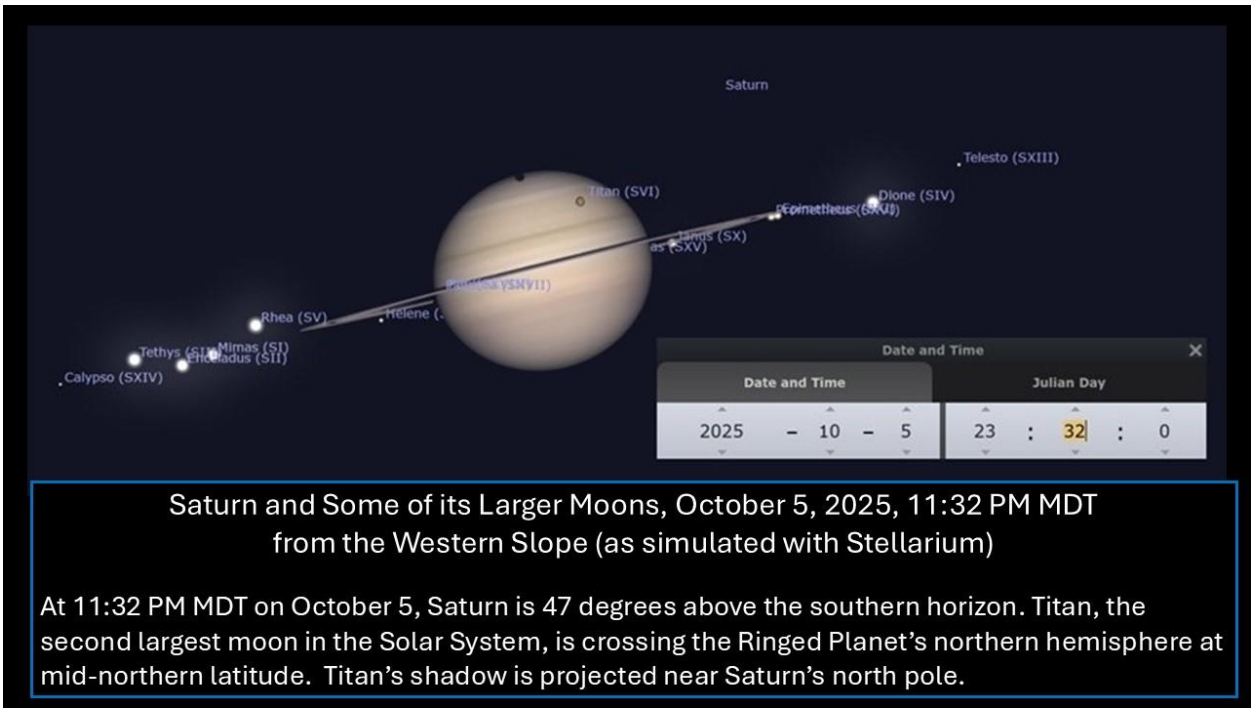
MERCURY BEGINS A CHALLENGING EVENING APPEARANCE ON OCTOBER 13. On October 13 at about 7:00 PM MDT, we may be able to spot Mercury, shining at magnitude -0.25, just 3 degrees above the west-southwestern horizon. The Sun will be only 6 degrees below the horizon at that time, and binoculars may be needed to spot the Innermost Planet in bright twilight. During mid to late October, Mercury is considerably farther south than the Sun in our sky, and that geometry is not favorable for spotting Mercury from Colorado's mid-northern latitudes. On October 13, Mercury is 117 million miles from Earth, and through telescopes its 84%-illuminated disk appears 5.4 arc seconds wide.

SATURN – WELL PLACED FOR VIEWING! Now visible for most of the night, the Ringed Planet rises above the eastern horizon in daylight, culminates 48 degrees above the southern horizon around midnight, and sets in the west at about 6:26 AM MDT on September 29 and 5:26 AM MDT October 13. During this period, Saturn fades slightly from magnitude +0.61, to +0.67, as its distance from Earth increases from 795 to 802 million miles. The 98%-illuminated, gibbous Moon will be passing about 3 to 4 degrees north of Saturn on the night of October 5-6. Through telescopes, Saturn's disk appears 19 arc seconds wide, and its rings span 45 arc seconds. During 2025, Saturn's thin rings (150,000 miles wide but only 1000 ft thick!) appear nearly "edge-on" from our perspective on Earth. Saturn's rings are not as striking as they have been in the past few years (and will be a few years from now). When seen nearly edge-on, the rings are dimmer, making it easier to spot some of Saturn's mid-sized moons, like Tethys, Dione, Rhea, and Enceladus. 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.

SEE SHADOW OF TITAN MOVE ACROSS SATURN: OCTOBER 5-6 – LAST CHANCE UNTIL 2039! Beginning in November 2024, the shadow of Saturn's moon Titan has moved across the Ringed Planet about every 16 days, and since April 29, 2025 these "shadow transits" (solar eclipses on Saturn!) have been visible in telescopes from the Western Slope. The transit on the night of October 5-6 is our last chance to see a transit of Titan's shadow until year 2039. And on October 5-6, we may be able to see both Titan's shadow and Titan itself moving across the Ringed Planet (see simulation, below)!

Titan is Saturn's largest moon, and the second largest moon in the Solar System. With a diameter of 3193 miles, Titan is larger than the Planet Mercury! From the Western Slope, the shadow transit on October 5-6 begins at about 10:29 PM MDT, as estimated from Stellarium. The Ringed Planet rises 47 degrees high in the south by the middle of the transit at 11:32 PM MDT (see chart below), when the shadow of Titan may be easiest to see. The shadow transit ends at about 12:34 AM MDT, as estimated from Stellarium. Titan's orbital period of Saturn is just 1.5 hours short of 16 Earth days, so transits have been occurring every 16 days. Spotting Titan's shadow on October 5-6 may be challenging. On October 5-6, Titan's shadow transits across Saturn's north polar region, and the contrast of the shadow with the darkened limb of Saturn may be very poor. Try to observe near mid-transit at 11:32 PM MDT, when Titan's whole shadow will be projected onto Saturn. Titan's shadow is large. But Saturn is on average about twice the distance of Jupiter. So, the size of Titan's shadow appears roughly the same size as the shadow of Jupiter's moon, Europa, which is considerably smaller than Titan.

Transit of Titan's shadow across Saturn					
Date UTC	**Date MDT**	**start MDT**	**middle MDT**	**end MDT**	**Saturn rises MDT**
10/6/2025	10/5-6/2025	10:29 PM	11:32 PM	12:34 AM	5Oct, 6:18 PM
transit times from Sky & Telescope and Stellarium (converted to MDT by author)					
times for local Saturn rise are from Stellarium					



Saturn and Some of its Larger Moons, October 5, 2025, 11:32 PM MDT
from the Western Slope (as simulated with Stellarium)

At 11:32 PM MDT on October 5, Saturn is 47 degrees above the southern horizon. Titan, the second largest moon in the Solar System, is crossing the Ringed Planet's northern hemisphere at mid-northern latitude. Titan's shadow is projected near Saturn's north pole.

NEPTUNE – NEAR SATURN. Not only can we see Saturn through most of the night during the September 29 to October 13 period, with telescopes or binoculars we can also spot Neptune, the 8th Planet. Neptune is currently shining at magnitude +7.7 in Constellation Pisces, about 3 degrees northeast of Saturn. You can use these links to find Neptune:
https://theskylive.com/neptune-info
Printable finder charts for Neptune - In-The-Sky.org
You may be able to spot Neptune with binoculars, but you will need a telescope to resolve its 2.4 arc second-wide disk. Can you detect Neptune's blueish tint? For spotting Neptune with binoculars, it may be best to wait until late October, when bright moonlight is absent. Neptune is 2.7 billion miles distant during this period.

URANUS. Rising in the east northeast at about 9:20 PM MDT on September 29 and 8:24 PM MDT on October 13, Uranus is moving slowly through Constellation Taurus, between the Hyades and Pleiades Star Clusters. Use these charts to find Uranus:
https://theskylive.com/uranus-info
https://in-the-sky.org/findercharts.php?obj=P8&year=2025&month=9&day=1
At magnitude +5.7, you can see the 7th Planet 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? The best times to view the 7th Planet may be between about 1 AM MDT and the start of morning

twilight, when Uranus is high in the sky. Avoid looking for Uranus on nights around October 10, when the bright Moon is nearby. Uranus is 1.75 billion miles distant during this period.

JUPITER AND ITS MOONS: RISING AFTER MIDNIGHT. Jupiter, moving against the stars of Constellation Gemini, rises at about 12:57 AM MDT on September 29 on 12:09 AM MDT on October 13. Between September 29 and October 13, the Giant Planet brightens from magnitude -2.11 to -2.19, as its distance from Earth decreases from 498 million to 478 million miles, and its apparent diameter increases from 36.8 to 38.3 arc seconds. For early risers, Jupiter is now easy to observe: On September 29 Jupiter rises higher than 50 degrees above the eastern horizon by 5:30 AM MDT, and Jupiter rises even higher in our sky on mornings thereafter. 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 Jupiter's large Galilean moons crossing the Giant Planet. These are total solar eclipses on Jupiter! Night owls/early risers can watch shadows of Io and Europa cross Jupiter simultaneously on October 4 between 12:46 AM and 2:16 AM MDT and again on October 11 between 2:40 and 4:52 AM MDT. 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. Unfortunately, there are no locally visible transits of Ganymede's shadow during this period. Due to their smaller diameters, the shadows of Callisto, Io, and Europa are smaller than Ganymede's shadow. But shadows of all 4 Galilean moons can be observed transiting Jupiter with telescopes having apertures as small as 3 inches. Transits of shadows 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.

October 4, 2025, 12:26 AM to 2:16 AM MDT, Europa's shadow crosses Jupiter (Locally, this event begins before Jupiter rises at about 12:40 AM MDT and ends with Jupiter 17 degrees high in the east northeast. **Between 12:46 AM and 2:16 AM MDT the shadows of both Io and Europa are projected onto Jupiter!**).

October 4, 2025, 12:46 AM to 3:04 AM MDT, Io's shadow crosses Jupiter (Locally this event begins just after Jupiter rises at 12:40 AM MDT and ends with Jupiter 26 degrees above the eastern horizon. **Between 12:46 AM and 2:16 AM MDT the shadows of both Io and Europa are projected onto Jupiter!**).

October 11, 2025, 2:04 AM to 4:52 AM MDT, Europa's shadow crosses Jupiter (Locally Jupiter is 19 to 51 degrees high in the east during this event. **Between 2:40 AM and 4:52 AM MDT the shadows of both Io and Europa are projected onto Jupiter!**)

October 11, 2025, 2:40 to 4:58 AM MDT, Io's shadow crosses Jupiter (Locally Jupiter is 26 to 53 degrees high in the east during this event. **Between 2:40 AM and 4:52 AM MDT the shadows of both Io and Europa are projected onto Jupiter!**).

VENUS – STILL A BRILLIANT "MORNING STAR"! Brilliant Venus rises in the east at about 5:08 AM MDT on September 29, and at 5:36 AM MDT on October 13, before the start of morning twilight. Morning-by-morning, Venus is rising later, its angular separation from the Sun continuing to decrease, as it moves southeast against the starry background. But our "Sister Planet" still rises more than an hour and a half before the Sun. Venus shines steadily at magnitude -3.91 during this period. While Venus' distance from Earth increases from 139 million to 145 million miles, its gibbous phase waxes from 91% to 93% illuminated, exactly compensating for the loss of brightness due to increasing distance. Between September 29 and October 13, Venus' apparent diameter shrinks from 11.1 to 10.7 arc seconds, as seen

through telescopes. **Please do your Venus spotting before sunrise. NEVER chance looking at the Sun without taking proper precautions. Serious eye damage can result.**

DON'T GIVE UP! KEEP WATCHING THE NORTHERN CROWN! Better late than never? Will there soon be a bright "new" star in Constellation Corona Borealis (the "Northern Crown"), at least briefly? During this period, Corona Borealis is about 40 degrees above the western horizon at end of evening twilight and, it sets below the northwestern horizon after 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 sometime in 2026. Then this "new star" may fade rapidly below naked-eye visibility in about a week. As of 6 AM MDT on September 28, T CrB had not yet erupted. Astronomer Jean Schneider of Paris Observatory states that eruptions are most likely every 228 days, a period corresponding with the orbital period of T CrB's red giant and white dwarf components. Schneider suggests that the eruption may be likely around November 10, 2025 or June 25, 2026. 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. The Sun has been very interesting lately, as solar active regions containing sunspots have unleashed numerous flares and coronal mass ejections (CMEs) of charged particles. There have been M-class (moderate) solar flares during recent weeks, and there have been CMEs that have triggered geomagnetic storms that caused auroras. As of 6 AM MDT on September 28, there are several active regions on the Earth-facing side of the Sun. We may experience more M- and possibly X-class (extreme) flares and powerful CMEs during the next two weeks. Airglow and SAR arcs also result from high solar activity, and these phenomena have been photographed and/or observed from Colorado. The best way to monitor sunspots, solar flares, CMEs, and other solar activity safely, and in "real time", is by using the internet. Check out the following sites (as of 9/28, images on SDO site are not updated, use SOHO site)…
https://sdo.gsfc.nasa.gov/data/
https://stereo.gsfc.nasa.gov/beacon/
http://halpha.nso.edu/
https://www.swpc.noaa.gov/
https://sohowww.nascom.nasa.gov/data/realtime-images.html
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"). Auroras are triggered by geomagnetic storms that derive from coronal mass ejections (CME) from active regions on the Sun. With continuing high solar activity, more geomagnetic storms may occur, and we may be able to see auroras, like those seen and photographed from the Western Slope earlier this year and last year. 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
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 seen and photographed auroras from Colorado earlier this year and last year. If we are lucky, we may see auroras from the Western Slope during this period. We can watch auroras in real-time from Yellowknife, Northwest Territories on an all-sky camera at the Canadian Space Agency's AuroraMax website. Like Colorado, Yellowknife is in

the Mountain Time Zone. An aurora webcam at the University of Alaska-Fairbanks is two hours behind the Mountain Time Zone…
https://www.youtube.com/watch?v=O52zDyxg5QI

EARTH SATELLITE HIGHLIGHTS. The following predictions are for western Colorado, specifically Montrose. Numerous Earth satellites are visible every clear night. Satellites are visible only when they reflect sunlight during twilight or nighttime hours. Brighter satellites have smaller magnitude numbers, and the brightest (e.g., the International and Chinese Tiangong Space Stations) may have negative magnitudes. These predictions are for selected passes of some bright and/or interesting satellites (as summarized from heavens-above.com). Satellite orbits change and these predictions may be inaccurate. This is especially true for the International Space Station (ISS) and the Tiangong Space Station, because they undergo frequent orbital changes. We do not show satellite predictions more than 5 days beyond the distribution date of the current "BCAS Observing Highlights" edition. For accurate predictions of the ISS, Tiangong, and other satellites, check heavens-above.com or other satellite prediction sites for updates on the nights you wish to observe. Be sure to set application(s) for your location and time zone. 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

Predictions below may be inaccurate. The heavens-above.com site has been down on September 28, 2025, and I've been unable to update predictions.

September 28, 2025. International Space Station (ISS). 7:36 to 7:39 to 7:42 PM MDT. 1st evening ISS pass of September 28. NW to NE to ESE. Max altitude 42 deg above NE, max magnitude -3.2 (Passing through Ursa Major-Big Dipper, Draco, Ursa Minor-near Polaris, Cassiopeia/Cepheus, Pegasus, and Pisces-near Saturn). **Predictions for the ISS are subject to change due to orbital adjustments. Check for updated predictions.**

September 28, 2025. International Space Station (ISS). 9:13 to 9:15 PM MDT. 2nd evening ISS pass of September 28. W to WSW. Disappears into Earth's shadow at max altitude 17 deg above WSW, max magnitude -1.1 (Passing through Boötes, Serpens and Ophiuchus). **Predictions for the ISS are subject to change due to orbital adjustments. Check for updated predictions.**

September 29, 2025. International Space Station (ISS). 8:24 to 8:27 to 8:28 PM MDT. WNW to SW to S. Max altitude 34 deg above SW, disappears into Earth's shadow 23 deg above S, max magnitude -2.4 (Passing through Boötes-near Arcturus, Serpens, Ophiuchus, Scutum, and Sagittarius). **Predictions for the ISS are subject to change due to orbital adjustments. Check for updated predictions.**

September 30, 2025. International Space Station (ISS). 7:34 to 7:38 to 7:41 PM MDT. NW to SW to SE. Max altitude 67 deg above SW, disappears into Earth's shadow 7 deg above SE, max magnitude -3.5 (Passing through Boötes, Corona Borealis, Hercules, Aquila, Capricornus, and Piscis Austrinis). **Predictions for the ISS are subject to change due to orbital adjustments. Check for updated predictions.**

October 1, 2025. International Space Station (ISS). 8:23 to 8:25 to 8:26 PM MDT. WSW to SW to SSW. Max altitude 12 deg above SW, max magnitude -0.8 (Passing through Boötes, Libra, Scorpius, Sagittarius, and Corona Australis). **Predictions for the ISS are subject to change due to orbital adjustments. Check for updated predictions.**

October 2, 2025. International Space Station (ISS). 7:33 to 7:36 to 7:38 PM MDT. W to SW to S. Max altitude 22 deg above SW, max magnitude -1.3 (Passing through Boötes, Libra, Ophiuchus/Scorpius, Sagittarius, and Corona Australis). **Predictions for the ISS are subject to change due to orbital adjustments. Check for updated predictions.**

There are no predicted passes for the very bright International Space Station (ISS) from October 3 to 13. But there are predicted predawn passes of the almost-as-bright Tiangong (Chinese) Space Station from October 7 to 13.

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 0 magnitude (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 -26.7 magnitude). Angular distances on the sky are usually cited in degrees of arc. 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

WESTERN SLOPE SKIES. Since 2011, KVNF Community Radio has aired Western Slope Skies (WSS), a biweekly astronomy feature, every two weeks on Friday mornings and on the following Wednesday evenings. On October 1 at 7:00 PM MDT, Kate Fedack of the Western Slope Dark Sky Coalition will explain why preserving dark skies is important for song birds during their semiannual migrations. Then on October 10 at 10:00 AM MDT, BCAS member Michael Williams will discuss "Antigravity."

HAPPY OBSERVING!