BCAS OBSERVING HIGHLIGHTS for April 23 to May 9, 2026, a "bright Moon period"
Black Canyon Astronomical Society (BCAS), southwest-central Colorado, USA

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

April 22-23, 8:30 PM to 1 AM: Almost-1st quarter Moon above Planet Jupiter in southwest & west
April 22-25, 3:30 AM to 4:45 AM: Enjoy our spring & summer stars under a dark, moonless sky
April 23, 5:45 to 6:00 AM: Spot Mercury, Saturn, and Mars low above eastern horizon (for binoculars)
April 23, 9:00 to 9:30 PM: Venus 5° below & left from Pleiades and 1° above & to right of Uranus
April 24, 10:00 AM: Western Slope Skies on KVNF radio
April 25, about 5:35 PM: Gibbous Moon occults bright star, Regulus, in daylight (for telescopes)
April 25, about 6:55 PM: Regulus reappears from behind the Moon in daylight (for telescopes)
April 25-26, 8 PM to 3:30 AM: Waxing gibbous Moon moves east of Regulus
April 29, 6:00 PM: Western Slope Skies on KVNF radio
April 29-30, 8 PM to 5 AM: Nearly full, gibbous Moon south of Spica in Constellation Virgo
May 1, 8:35 PM to 9:10 PM: Full Moon rises in east southeast
May 5-9, 9:50 PM to midnight: Enjoy our spring stars under a dark, moonless sky
May 3, 10:40 PM to 11:15 PM: Waning, gibbous Moon rises below reddish Antares in Scorpius
May 6, 4 AM to 5 AM: Eta Aquariid Meteor Shower peaks with interference from bright moonlight
May 8, 10:00 AM: Western Slope Skies on KVNF radio

SUMMARY. The Moon reaches first quarter on the night of April 23-24. From April 25 to 30, watch the gibbous Moon wax. The Moon is full on May 1. From May 2 to May 8, the gibbous Moon wanes, and the Moon reaches last quarter on May 9. On May 1 between 8:35 PM and 9:10 PM MDT, watch the full Moon rise in the east southeast. Does it appear smaller than usual? Probably not. Even though the full Moon on May 1 is more distant than the average full Moon (250,200 miles Vs. 238,000 miles) and does appear about 5% less wide than usual, many of us will perceive the rising Moon as very large due to the Moon illusion effect.

Venus is a brilliant evening star, appearing in the west shortly after sunset, and setting more than 2 hours after the Sun. On April 23, use a telescope to spot Uranus about 1 degree below and left from Venus; their contrasting colors could be interesting. Jupiter is more than 35 degrees high in the southwest as darkness falls, and the Giant Planet remains visible until after midnight. On April 23 around 5:50 AM MDT, challenge yourself to spot Mercury, Saturn, and Mars with binoculars, very low to the eastern horizon. Mercury will soon disappear into glaring morning twilight, but Saturn and Mars will be rising earlier, becoming increasingly prominent in coming weeks and months. Neptune, the 8th Planet, is also emerging from morning twilight, but you need a telescope to spot it.

As of April 22, there are several 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. Find times for local passes of bright satellites, including the International Space Station and Tiangong, the Chinese Space Station, at these links...
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 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 (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 MOON. Moon reaches first quarter on the night of April 23-24 (exactly at 8:32 PM MDT on April 23). From April 25 to 30, watch the gibbous Moon wax. **The Moon is full on May 1** (exactly full at 11:23 AM MDT). From May 2 to May 8, the gibbous Moon wanes. The Moon reaches **last quarter on May 9** (exactly at 3:10 PM MDT). On May 1 between 8:35 and 9:10 PM MDT, watch the full Moon rise in the east southeast. Does this full Moon seem smaller than usual? Maybe, but maybe not! Even though the full Moon on May 1 is more distant than the average full Moon (250,200 miles Vs. 238,000 miles) and does appear about 5% less wide than usual, many of us will perceive the rising Moon as very large due to the Moon illusion effect.

On the night of April 22-23 from 8:30 PM to 1 AM MDT, look for a "fat" crescent Moon (just one day shy of first quarter) above the bright Planet Jupiter. Locally, on April 25 between about 5:35 PM and 6:55 PM MDT, the waxing, gibbous Moon occults (passes in front of) the first-magnitude star, Regulus. Although this event occurs in daylight for the Mountain Time Zone, we may be able to see it from Colorado in telescopes. Regulus' disappearance occurs on the dark, leading edge of the Moon at around 5:35 PM MDT, as Earth's natural satellite moves eastward against the stars. Regulus then reappears above the bright, trailing edge of the Moon at about 6:55 PM MDT. These times (for western Colorado) vary by a few minutes based on your exact location. After the Sun sets on April 25 at around 7:56 PM MDT, you can use binoculars to watch the waxing, gibbous Moon gradually move to the east of Regulus until it sets after 3:30 AM MDT. On the night of April 29-30, the nearly full, gibbous Moon passes a few degrees south of the first-magnitude star, Spica, in Constellation Virgo. On May 3 from 10:40 PM to 11:15 PM MDT, watch the waning, 94%-illuminated, gibbous Moon rise below the reddish star, Antares, in Constellation Scorpius. A fun website for enjoying the Moon is NASA's daily Moon Guide.

VENUS: A STRIKING "EVENING STAR." Venus, shining brightly at magnitude -3.9, is becoming even more prominent in the western evening sky, as its angular distance from the Sun increases. You can spot Earth's "Sister Planet" in the west shortly after sunset, and Venus remains visible for more than two hours afterward. Venus sets well after twilight's end at about 10:05 PM MDT on April 23 and 10:41 PM MDT on May 9. Venus is 137 million miles distant on April 22 and 129 million miles distant on May 9. Through telescopes, Venus' gibbous phase wanes from 90% illuminated on April 22 to 86% illuminated on May 9, as its distance from Earth decreases, and its apparent diameter increases from 11.3 to 12.0 arc seconds. Venus will remain a dazzling "evening star" through the spring and summer months of 2026. On April 23, Venus appears about 1 degree above and to the right of fainter Uranus (use a telescope or binoculars to spot Uranus) and about 5 degrees below and the left of the Pleiades Star Cluster (aka M45 or "The Seven Sisters"). **Please do your Venus spotting after sunset. NEVER chance looking at the Sun without taking proper precautions. Serious eye damage can result.**

URANUS. As the sky darkens, Uranus is less than 20 degrees high in the west northwest on April 22 and near the horizon by May 9. This period will be our last chance to see Uranus in the evening until fall. On April 23, Uranus appears about 1 degree below and left from brilliant Venus. You will likely need a telescope, or at least binoculars, to spot Uranus. Even with a telescope, resolving Uranus' 3.5 arc second-wide disk may be challenging when the 7th Planet is so low in the sky. Can you detect the color

of Uranus? Uranus typically appears blue or green to many people, and it may contrast sharply with Venus, which looks "pure white" to most of us. The 7th Planet sets in the west northwest at about 10:08 PM MDT on April 22 and at 9:06 PM MDT (in bright twilight) on May 9. Uranus is moving slowly against the stars of Constellation Taurus, about 6 degrees south of the Pleiades Star Cluster. Use this link to find Uranus: https://theskylive.com/uranus-info
Uranus is 1.90 billion miles from Earth during this period. **Please do your Uranus 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 Gemini, is more than 35 degrees high in the southwest as darkness falls. Jupiter sets in the west northwest at around 1:45 AM MDT on April 22 and 12:48 AM MDT on May 9. Between April 22 and May 9, the Giant Planet fades slightly from magnitude -2.1 to -2.0, as its distance from Earth increases from 504 million to 527 million miles, and its apparent diameter decreases from 36.4 to 34.8 arc seconds. That's still large enough for resolving Jupiter's disk with binoculars! On the night of April 22-23 from 8:30 PM to 1 AM MDT, look for Jupiter just below a "fat" crescent Moon (one day shy of first quarter).

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. Unfortunately, only three transits, all of Io's shadow, are visible from western Colorado during this period. 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.

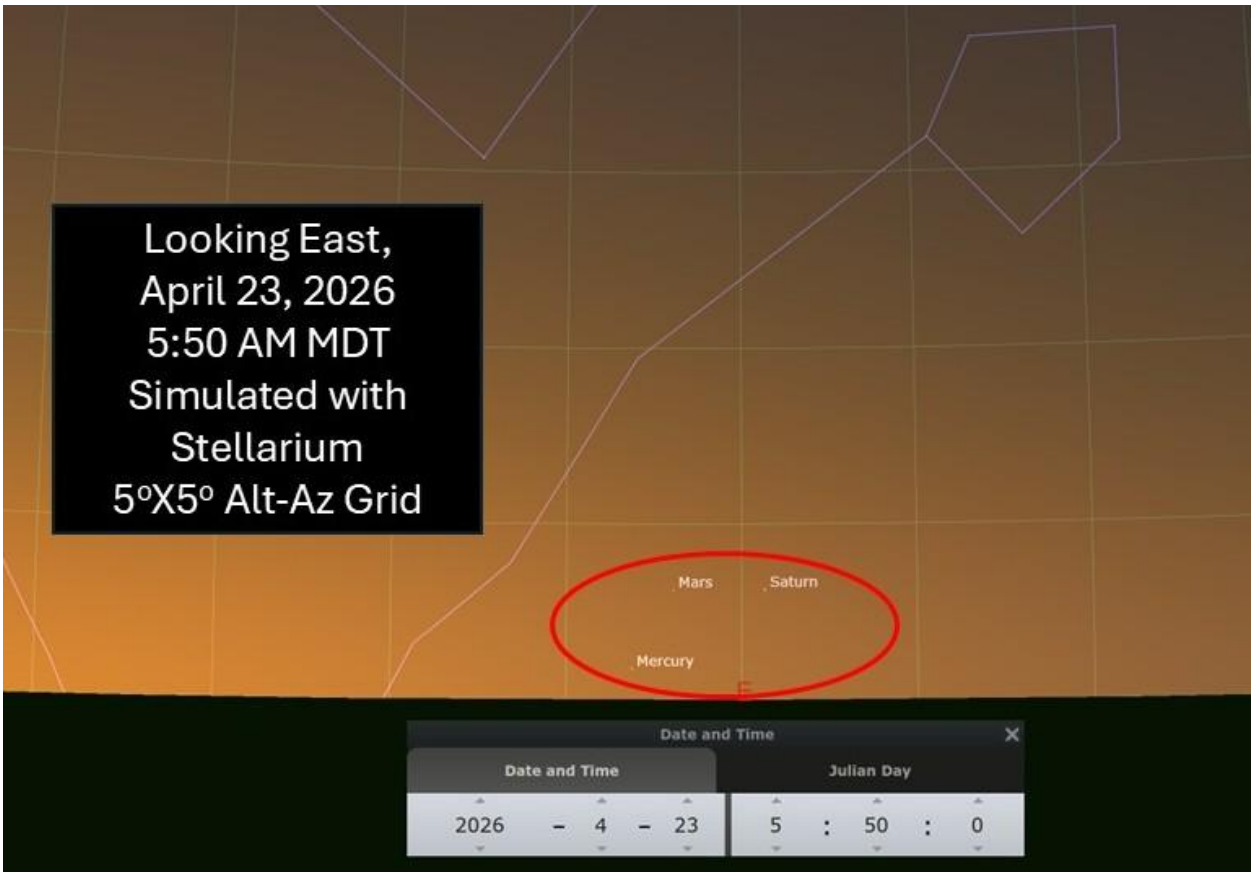
April 23, 2026, 7:06 PM to 9:28 PM MDT, Io's shadow crosses Jupiter (Locally, this event begins in daylight with Jupiter 71 degrees high in the southwest and ends after dark with Jupiter 47 degrees high in the west).

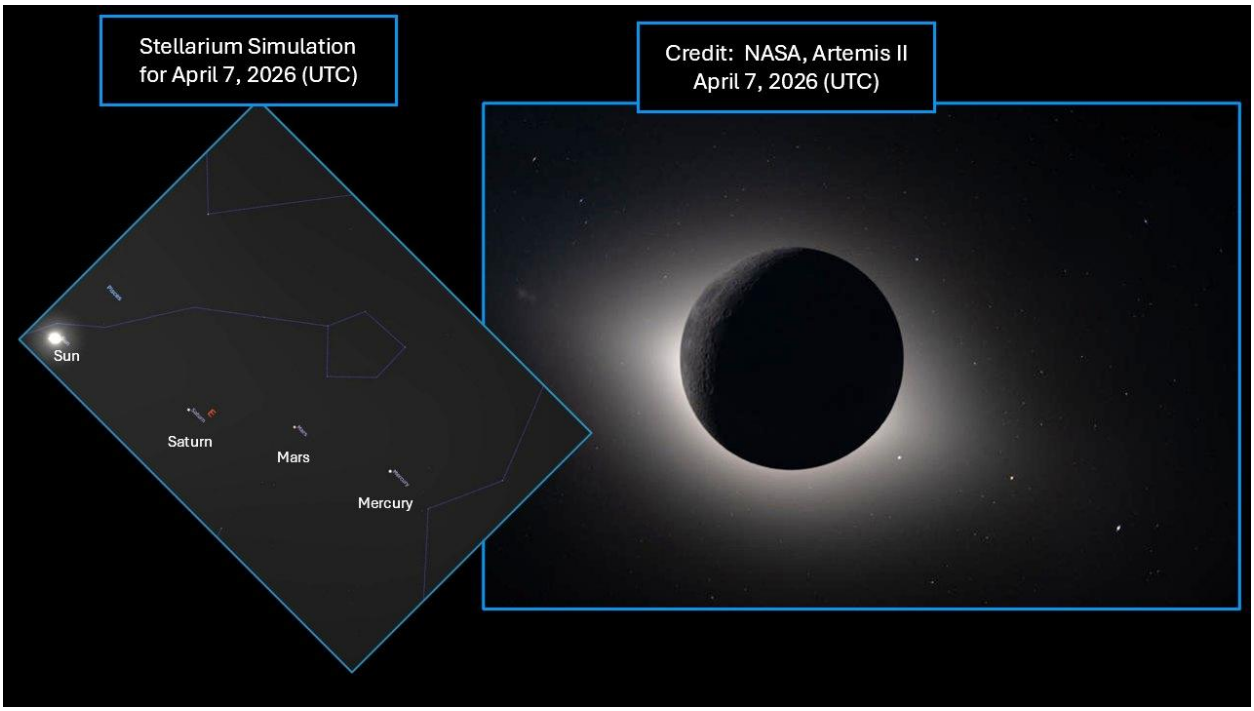
April 30, 2026, 9:02 PM to 11:22 PM MDT, Io's shadow crosses Jupiter (Locally, this event begins with Jupiter 48 degrees high in the west and ends with Jupiter 21 degrees above the west-northwestern horizon).

May 7-8, 2026, 10:58 PM to 1:18 AM MDT, Io's shadow crosses Jupiter (Locally, this event begins with Jupiter 21 degrees high in the west and ends at 1:18 AM MDT, after Jupiter sets at about 12:53 AM MDT).

MERCURY DISAPPEARING INTO MORNING TWILIGHT. On April 23 between about 5:45 AM and 6:00 AM MDT, look for Mercury, shining at magnitude -0.3 through bright twilight, low to the eastern horizon. You'll likely need an unobstructed eastern horizon and probably binoculars to spot the Innermost Planet. You also may be able to spot fainter Mars and Saturn above and to the right of Mercury. On April 20, the three planets formed a tight grouping, and on the morning of April 23 the three planets still appear within 5 degrees each other (see diagram below). On April 7 from 1:35 to 2:32 UTC (7:35 PM to 8:32 PM MDT on April 6), the Artemis II astronauts got to see this trio of planets before most of us, when the Moon totally eclipsed the Sun from their perspective beyond the lunar far side (see 2nd illustration below, which includes a NASA photo from Artemis II)! Mercury is 108 million miles

distant on April 23. After April 23, Mercury descends into even brighter morning twilight, becoming invisible, as its angular distance from the Sun decreases, prior to its superior solar conjunction on May 14. Mercury will reappear in the evening sky during June. Through telescopes on April 23, Mercury's 5.8 arc second-wide, gibbous disk is 76% illuminated. **Please do your Mercury spotting before sunrise. NEVER chance looking at the Sun without taking proper precautions. Serious eye damage can result.**





SATURN EMERGES FROM BRIGHT MORNING TWILIGHT. On the morning of April 23 from 5:45 AM to 6:00 AM MDT, look for Saturn low to the eastern horizon in bright twilight. Saturn is still within 5 degrees of brighter Mercury and fainter Mars (see chart for April 23, above), but you may need binoculars to spot this trio of planets. By May 9, Saturn rises higher in less glaring twilight, and at about 5:10 AM MDT you can spot the Ringed Planet 7 degrees above the eastern horizon. Saturn shines at magnitude +0.9 during this period. Saturn's distance from Earth decreases from 965 million miles on April 23 to 952 million miles on May 9. Though telescopes, Saturn appears 16 arc seconds wide, and its rings span 38 arc seconds. We are now viewing Saturn's ring system at a higher angle than we did last year, when they appeared nearly "edge-on." Saturn's rings will look increasingly impressive over the coming months. **Please do your Saturn spotting before sunrise. NEVER chance looking at the Sun without taking proper precautions. Serious eye damage can result.**

MARS: LOW IN THE EAST BEFORE DAWN. With binoculars, it's now possible to see Mars low to the eastern horizon in morning twilight. Since last fall, Mars has been mostly invisible, passing very near the Sun in our sky (having been in conjunction with the Sun on January 9). In our faster orbit, we on Earth are gradually catching up with the Red Planet, and Mars will slowly move out of the predawn glare in coming weeks. Find a place with an unobstructed eastern horizon, and on April 23 between 5:40 AM and 6:00 AM MDT look for Mars, shining at magnitude +1.3, just a few degrees above that horizon (binoculars may help, see chart above for April 23). By May 9 between 5:15 AM and 5:20 AM MDT, Mars, having brightened slightly to magnitude +1.2, may get a bit easier to spot about 3 degrees above the horizon in less glaring twilight. Mars is still on the far side of the Sun from our perspective on Earth; the Red Planet is 210 million miles distant on April 23 and 207 million miles distant on May 9. On February 20, 2027, the Earth-Mars distance will be 63 million miles, the closest during the current Mars apparition. Through telescopes, Mars' reddish disk appears only 4.2 arc second wide during this period. On the morning of April 23 between about 5:45 AM to 6:00 AM MDT, use binoculars to spot brighter Mercury below Mars, and Saturn to the right of Mars. **Please do your Mars spotting before sunrise.**

NEVER chance looking at the Sun without taking proper precautions. Serious eye damage can result.

NEPTUNE. Along with Mars and Saturn, the 8th Planet, Neptune, is also emerging from the glare of morning twilight. By May 9 at around 5:00 AM MDT, you may be able to spot 8th magnitude Neptune with a telescope, about 7 degrees above and to the right of Saturn. Neptune's blueish disk appears only 2.2 arc seconds wide. Neptune is 2.84 billion miles distant from Earth on May 9. 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.

MAY 6: ETA AQUARIID METEORS HINDERED BY BRIGHT MOONLIGHT. This year the Eta Aquariid Meteor Shower is predicted to peak on the morning of May 6, but meteor watching will be hindered by a bright, gibbous Moon. You might look for a few Eta Aquariid Meteors between 4 AM and 5 AM MDT on the morning of May 6, or, if it's cloudy, a morning or two before and/or after May 6. Eta Aquariid Meteors consist of icy and rocky debris from that famous visitor to the inner Solar System, Halley's Comet (1P/Halley).

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 10 degrees above the east-northeastern horizon as the evening sky darkens, more than 70 degrees high in the south around 2 AM MDT, and it remains more than 50 degrees high in the southwest as morning twilight brightens the sky after about 5 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 later this year. Then this "new" star may fade rapidly below naked-eye visibility in about a week. As of 5 AM MDT on April 22, 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. But an eruption could happen 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 April 22, there are several sunspot groups on the Earth-facing side of the Sun. There have been M-class (moderate) solar flares during recent weeks, and there was an X-class (extreme) flare on March 30. More solar flares may occur 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://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 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!). Until about May 1, 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. 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 afterwards, 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, and it's best to get predictions for passes within 24 hours of when you want to see the satellites. In low Earth orbit, both the ISS and Tiangong are subject to atmospheric drag, and they undergo frequent re-boosting. Re-boosting slightly slows orbital speed, resulting in later passes. Also, both space stations frequently alter their orbits to avoid collisions with other satellites and space debris. Some popular sites for predicting local passes of space stations (and other satellites) are the following (be sure to set applications to 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!