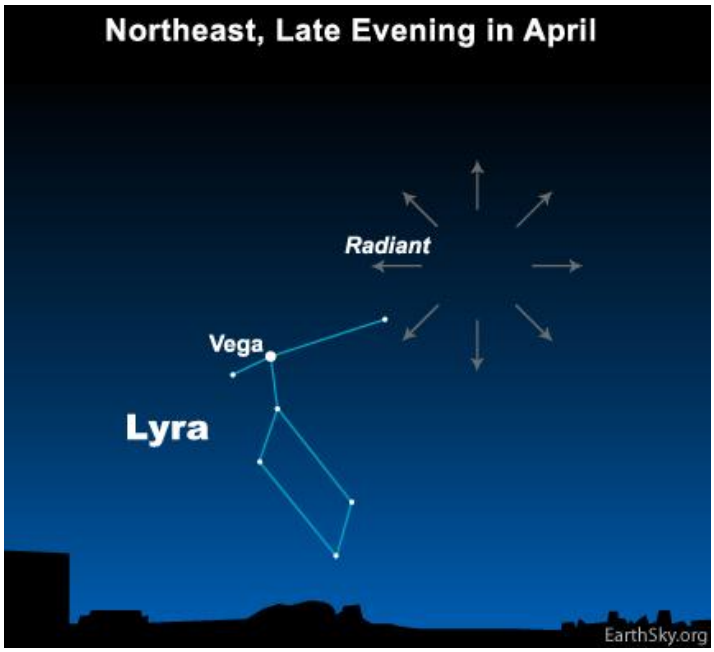
Education & Public Outreach
April 2026, Part 1

April Special Events:



Finally, we have a meteor shower this month, the Lyrid meteor shower that appears to radiate from Lyra, the Lyre. Things do not change from year-to-year, other than occasional predicted outbursts (meteor storms) and the phase of the Moon, so here is what I wrote last year, updated:

The Lyrid meteor shower can be observed for more than a week starting in mid-April (in late evening) through April 30. The shower is one of the oldest meteor showers with an outburst that was recorded in 687 BC. Outbursts occur about every 60 years. There have been more recent recorded outbursts in 1803 and 1922, so we should have a "normal" shower of about 20 meteors per hour at its peak before dawn on April 22. The best time to observe is around 4:00 a.m. (or a little earlier) on April 22 local time (1:00 a.m. in Arizona and Hawaii). The waxing crescent Moon sets around 1 a.m. (DST), should not affect any observations. The shower is related to Comet Thatcher, a short period comet with an orbital period of 415 years that was discovered in 1861.

A Picture and Comet MAPS Update:

Thanks, again, to my friend Tim Hunter. On the evening of March 25, he used his 11-inch telescope to obtain an image of comet C/2026 A1 (MAPS) when it was 3 degrees above the horizon.

There is nothing new to report on the comet. It is getting closer to the Sun and will reach perihelion on April 4. If it survives, we may be able to see it in our evening sky a few days later.

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Astronomy in the News

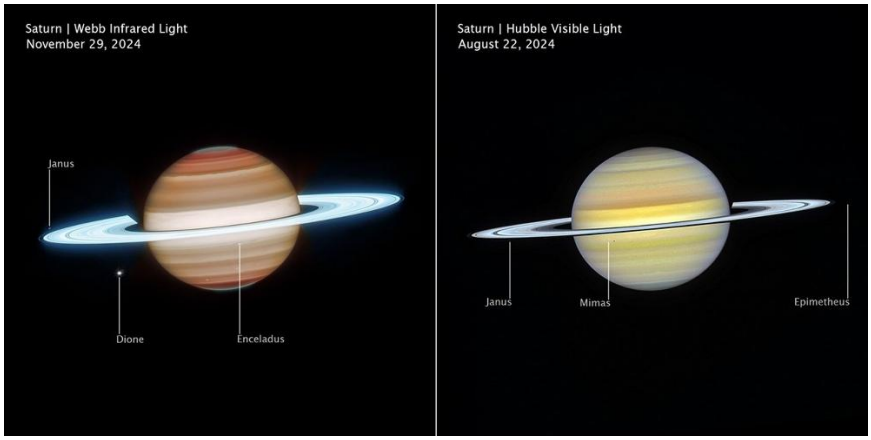
HST, Comet Reverses Rotation:

41P/Tuttle–Giacobini–Kresák is a Jupiter-Family Comet (a comet that is in orbital resonance with Jupiter). It presently has an orbital period of 5.43 years but was once a long period comet that most likely originated in the Kuiper belt. At some point, it came close enough to Jupiter for Jupiter to essentially capture it into its present orbit. The comet was originally discovered in 1858, rediscovered in 1907, and then again in1951. It is not a large comet, about a kilometer in diameter (0.6 miles) and is known to flare at times, so it is possible that it was not seen during periods of low activity. In 2006, it was predicted to get to magnitude 14, but flared to magnitude 4, 10,000 brighter than predicted. The researcher in the article linked to below went back and analyzed the 2017 observations made by HST. The HST observations combined with other observations from late 2016 until April 2017 show that the rotation rate slowed down near the comet's closest approach to the Sun and then eventually sped up again. The author concludes that torques from the comet's outgassing slowed the comet down and reversed its direction of rotation.

https://science.nasa.gov/missions/hubble/nasas-hubble-detects-first-ever-spin-reversal-of-tiny-comet/

JWST and HST, New Images of Saturn:

On Earth, the equinox, when the Sun is overhead at the Equator, occurred on March 20-21, and occurs twice each year (an orbit around the Sun). Equinoxes on Saturn are less frequent since a "year" on Saturn is 29.45 Earth years. The last Saturn equinox was on May 6, 2025. This is when the Sun "sees" the rings edge on. From the perspective of the Earth, we saw the rings edge on in March (Saturn "behind" the Sun) and November of last year. We see it twice because of the tilt of our orbit relative to Saturn's orbit around the Sun. The rings will be at their widest in 2032. The images on the right were taken by Webb and by HST, as Saturn approached the equinox, Spring on Saturn as it moves from northern Summer to southern Summer. HST has been monitoring Saturn for the last ten years, watching how Saturn's cloud patterns change seasonally. As the articles mention, HST sees the cloud tops in visible light, while Webb, viewing at multiple infrared wavelengths, sees higher in the atmosphere to below the cloud layers, depending on the wavelength.

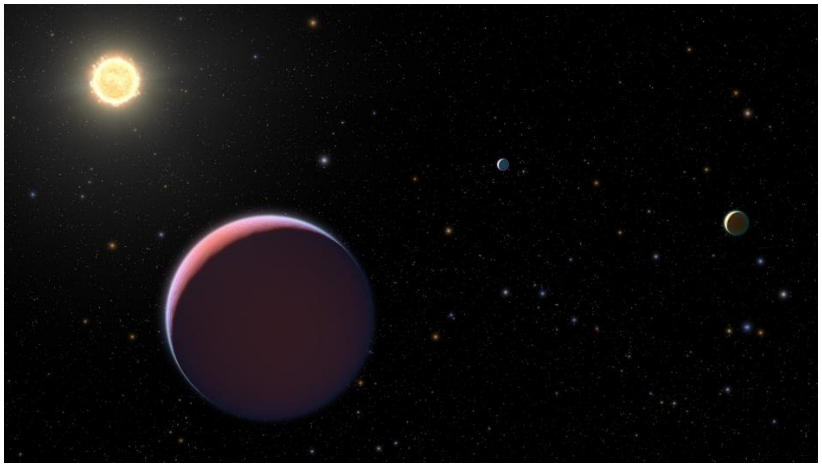


"Side-by-side views of Saturn from NASA's James Webb Space Telescope (left) and Hubble Space Telescope (right) reveal the planet in infrared and visible light. Hubble highlights subtle cloud banding and color variations, while Webb's infrared vision probes different atmospheric layers, bringing out storms, waves, and glowing ring structures in striking detail." Image: NASA, ESA, CSA, STScI, Amy Simon (NASA-GSFC), Michael Wong (UC Berkeley); Image Processing: Joseph DePasquale (STScI)

https://www.space.com/astronomy/saturn/incredible-new-nasa-images-reveal-saturn-in-a-new-light-and-its-all-thanks-to-a-telescope-team-up-from-webb-and-hubble

https://science.nasa.gov/missions/webb/nasa-webb-hubble-share-most-comprehensive-view-of-saturn-to-date/

JWST, Low Density Exoplanets:



"An artist's impression of the Kepler-51 system. (Image credit: NASA/ESA/L. Hustak, J. Olmsted, D. Player and F. Summers (STScI))"

First, some background. Kepler 51 is a Sun-like star that is a little smaller and little less massive than our Sun. It is about 2,600 light-years from us. It is orbited by four exoplanets. On the right is an artist's impression. I usually try to avoid these as they tend to be artistically pretty and scientifically inaccurate (scale, so the exoplanets would probably be no more than bright dots). The inner three exoplanets were discovered by the transit method, giving size, and their masses were determined by transit timing variations, the gravitational interactions of the exoplanets that change the exact times of transits. All three were discovered more than 10 years ago. However, more detailed analysis of the transit timings revealed, in 2024, the existence of a fourth exoplanet. Its orbital period and mass can be estimated, but little else is known about it. The three inner exoplanets orbit within 0.5 AU of their star (Venus is 0.7 AU from the Sun). Their diameters are from 6 to 9 times that of Earth (Saturn is 9 times), and their masses are from 4 to 6 times the mass of Earth. Since we know the diameters (and so volumes) and we know their masses, we can calculate their densities. For context, Jupiter has a density of 1.3 g/cm^3 and Saturn has a density of 0.7 g/cm^3 (300 and 75 times the mass of the Earth, respectively). Both are gas giants, but Saturn would "float on water." This (floating on water) is also true for the three inner exoplanets. However, Kepler-51b, c, and d have densities ranging from 0.14 to 0.04 g/cm^3. These are some of the lowest known exoplanet densities.

Now that we have some (too much) background, JWST tried to learn more about Kepler-51d, the most distant (0,5 AU), the largest (Saturn-sized), but at 6 times the mass of the Earth, the least dense of the inner exoplanets. Astronomers can probe the atmosphere of an exoplanet by looking at the light that passes through its atmosphere as it transits the star. However, HST found a featureless spectrum for Kepler-51d. This implies a high haze photochemical haze layer (what people in LA would call smog). The researchers who made the HST observations back in 2020 were able to make observations of a full transit of Kepler-51d in 2023. They used Webb to measure the transmitted light from the exoplanet atmosphere from 0.6 to 5.3 microns. While Webb can see structure in the atmosphere of Saturn (different depths in the atmosphere), the transmission spectrum of Kepler-51d was featureless. This has been interpreted to imply that the haze layer was too thick for even Webb to penetrate.

One final note, I have reported on this observation before (December 2024) because the event was predicted to be 8.5 hours long and the researchers were given enough JWST (Webb) time to have a 3-hour baseline before the event. However, the event started two hours earlier than predicted. This transit timing discrepancy led to the discovery of Kepler-51e.

https://www.space.com/astronomy/exoplanets/these-cotton-candy-exoplanets-hide-behind-a-haze-even-the-james-webb-space-telescope-cant-penetrate

April Night Sky

Sky Stories:

Last month, the Constellation of the Month was Canis Major. The following is more appropriate for July or August, but it is sort of appropriate for this year and last month. I apologize to those of you who have gone through unusually cold weather. In the last month (since the end of February) we have had 11 record high temperatures and several near records. Only one day was below normal, by one degree. Last year, the first 100 degree day was April 11, beating the old record by eight days. This year, the first 100 degree day was March 19, the last day of Winter! While Canis Major is still in the sky let's look forward to the Dog Days of Summer, now that we have had the dog days of Spring. I am taking some of this from Wikipedia, not original sources.

Officially, the Dog Days are now July 3 to August 11, some of the hottest days of the year in the Northern Hemisphere. These are tied to, as you may know, the star Sirius, the Dog Star. I think this period is centered around the time when the Sun and Sirius rise at the same time. Its written history goes back nearly 3,000 years to Homer's *Iliad.* In this quote, Achilles is approaching Troy during the Trojan War:

> Priam saw him first, with his old man's eyes,
> A single point of light on Troy's dusty plain.
> *Sirius rises late in the dark, liquid sky*
> *On summer nights, star of stars*,
> *Orion's Dog they call it, brightest*
> *Of all, but an evil portent, bringing heat*
> *And fevers to suffering humanity*.
> Achilles' bronze gleamed like this as he ran.

This was a time when it was believed that our destinies were foretold by the Sun, stars, planets, the signs of the Zodiac. The Dog Days are related to the return of Sirius to the night sky. This is the heliacal rising of Sirius, when a star or planet first becomes visible in the bright dawn.

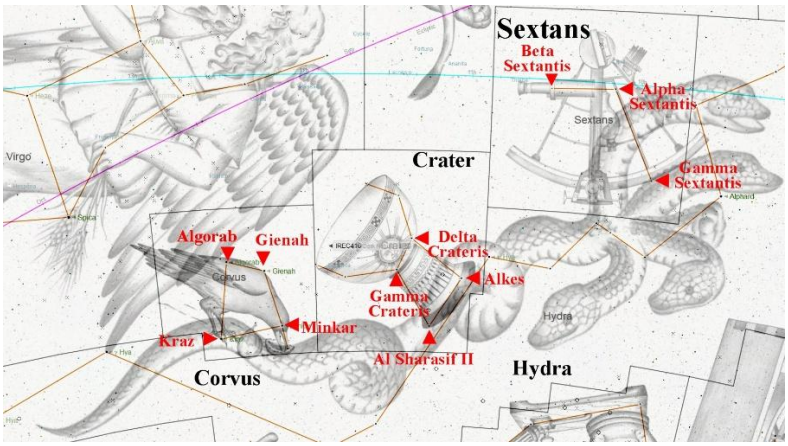
The return to the night sky of Sirius was also important to the Egyptians. Sirius was known as Sopdet. The return of Sopdet to the morning sky preceded the start of the annual flooding of the Nile Valley, critical to Egypt's agriculture.

I am sure that there are other good sources for learning about the history of the Dog Days of Summer, but, the Wikipedia site is fair comprehensive and includes several other examples

https://en.wikipedia.org/wiki/Dog_days

A personal note: When we went to the VATT in February, we could not open the first night because of the ice and snow on the dome. Less than four weeks later, on the run where I took the pictures below, it never got below 55°F in the middle of the night.

Constellations of the Month, Corvus, Crater, and Sextants:



These constellations were Constellations of the Month nearly five years ago. I am repeating them here with some updated material and new images. The three featured constellations are Corvus (the Crow, though some call it a raven), Crater (the Cup), and Sextants (the Sextant). The Starry Night image on the right shows the usual stick figures. I have included illustrations of the constellations.

Corvus was one of second century astronomer Ptolemy's 48 constellations and dates back to at least 1,100 BCE where it is depicted as a raven sitting on the back of Hydra, the Water Snake. Crater was also one of Ptolemy's 48 constellations. Sextans is a fairly recent constellation, introduced by Johannes Hevelius in 1687, named for the astronomical instrument, the

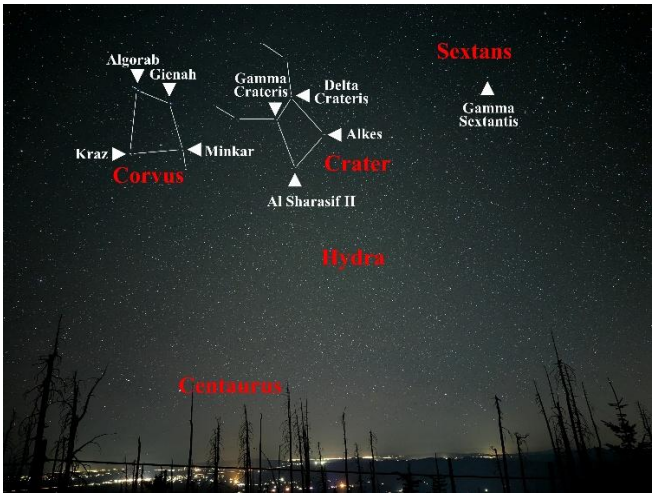
sextant (a sixth of a circle, 60 degrees, used to measure the angular distances between stars). The image on the right is from Wikipedia. It is interesting that the article about the sextant talks about the instrument being developed in the 18th century, given the fact that Hevelius created the constellation in the 17th century! The article does mention that only more recently (1922) a reference was found that dates back to 17th century Newton. However, the article seems to ignore the creation of the constellation and the instrument it was named after.

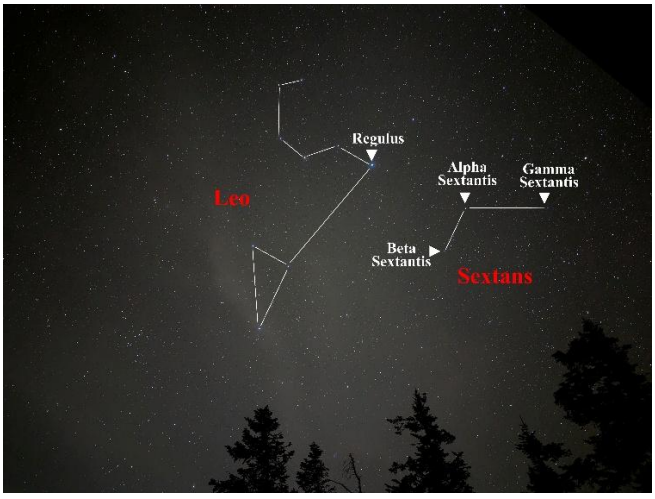
Corvus has three stars between magnitudes 2.0 and 2.99, one star between magnitudes 3.0 and 3.99, and an additional two stars between 4.0 and 4.99. Crater has one star between magnitudes 3.0 and 3.99 and an additional six stars between magnitudes 4.0 and 4.99. Sextans has one star between magnitudes 4.0 and 4.99.

Corvus' brightest star is Gienah at magnitude 2.6. Gienah is B8 III (blue-white) giant star that is no longer burning hydrogen in its core, with a temperature (visible surface) of about 12,000 K. It is 300 times as luminous as the Sun with a mass about 4.2 times that of the Sun and a diameter of about 4 times that of the Sun. It is about 150 light-years from us and is estimated to be about 160 million years old. Gienah has a stellar companion a K or M star with a mass about 0.8 times that of the Sun orbiting about 50 AU from the primary star.

Crater's brightest star is Delta Crateris at magnitude 3.6. Delta is a K0 III (orange) giant star (a red clump star) that is no longer burning hydrogen in its core, with a temperature (visible surface) of 4,500 K. It is about 150 times as luminous as the Sun with a mass about 1.5 times that of the Sun and a diameter of about 20 times that of the Sun. It is about 190 light-years from us and is estimated to be about 2.9 billion years old.

Sextans' brightest star is Gamma Sextantis at magnitude 5.0. It is actually a binary star system with one star at magnitude 5.6 and the other at magnitude 6.0. One star is an A1 V (white) star and the other is an A4 V (white) star. Both are giant stars but still on the Main Sequence (burning hydrogen in their cores) with temperatures (at their surfaces) of about 10,000 K. The brightest of the two has is about 70 as luminous as the Sun with a mass about 2.6 times that of the Sun and a diameter of about 3.2 times that of the Sun. The stars are about 280 light-years from us and are estimated to be about 400 million years old.





These images were taken while I was on Mt. Graham. The one on the left was taken on March 20, a little after midnight, looking south. The one on the right was taken about four hours earlier, looking east. I tried to get all three constellations in one image, but these were taken outside the VATT, at the same time we were observing asteroids, so I did not have much chance to check what I had taken. I will try to do better on our next run when I plan to highlight Hydra.

Telescope, Binocular, and Camera Targets:
Jupiter and its four Galilean moons are evening objects. In mid-April, Jupiter is still high in the southwest when the sky gets dark. This is a good time to see Jupiter's moon. Here is an interactive site that will let you see the positions of the moons on any night:

https://skyandtelescope.org/wp-content/plugins/observing-tools/jupiter_moons/jupiter.html

Venus is bright in the evening sky after sunset, getting higher in the sky through April. The crescent Moon will be near Venus on April 18 and 19. I will remind you of the sites that can assist you planning your nights under the sky. They usually come out either weekly or monthly:

https://www.astronomy.com/tags/sky-this-week/

https://skyandtelescope.org/ There is a link to the sky this week

https://www.planetary.org/night-sky/night-sky-what-to-see-this-month

Moon and Planets:
Full Moon, the Pink Moon, was on April 1. Last Quarter Moon is on April 9. New Moon is on April 17. Last Quarter Moon is on April 23. The next Full Moon, the Full Corn Planting Moon or the Milk Moon will be on May 1.

From Timeanddate.com:
"The Full Moon in April is named the Pink Moon after the pink flowers that bloom in spring. Other names are Breaking Ice Moon, Budding Moon, Awakening Moon, Egg Moon, and Paschal Moon.

"The Pink Moon in April gets its name from pink wildflowers that bloom in the early spring. It is thought that the name comes from the brightly-colored pink phlox wildflowers that are native to North America and that often bloom around the time of April's Full Moon.

"The Native American names refer to the spring thaw and the signs of new growth each year—including names like the Breaking Ice Moon and The Moon of the Red Grass Appearing.

"Common names in Europe also refer to the budding and birth of spring: with grass sprouting, birds laying eggs, and people planting seeds. The Celts had names like Budding Moon, New Shoots Moon, Seed Moon, and Growing Moon. A Neo-Pagan name is Awakening Moon.

"The Anglo-Saxons called it Egg Moon, which is often referenced as a possible reason for the emergence of the modern Easter Bunny laying Easter eggs."

"The Paschal Moon is the first Full Moon on or after March 21 and is used to determine the date of Easter.

"In some years, the Paschal Moon is the Pink Moon [as it is this year]; in others, it's the Worm Moon (Full Moon in March). The dates for the Paschal Moon range from March 21 to April 18."

This year, Easter is on April 5, two weeks earlier than last year.

From Space.com:
"The grass pink or wild ground phlox is one of the earliest widespread flowers of the spring. Other names were the Full Sprouting Grass Moon, the Egg Moon, and —among coastal tribes — the Full Fish Moon, when the shad [American shad is a migratory fish native to the Atlantic coast] came upstream to spawn. This is also the Paschal Full Moon; the first full Moon of the spring season. The first Sunday following the Paschal Moon is Easter Sunday, which indeed will be observed four days later, on Sunday, April 5."

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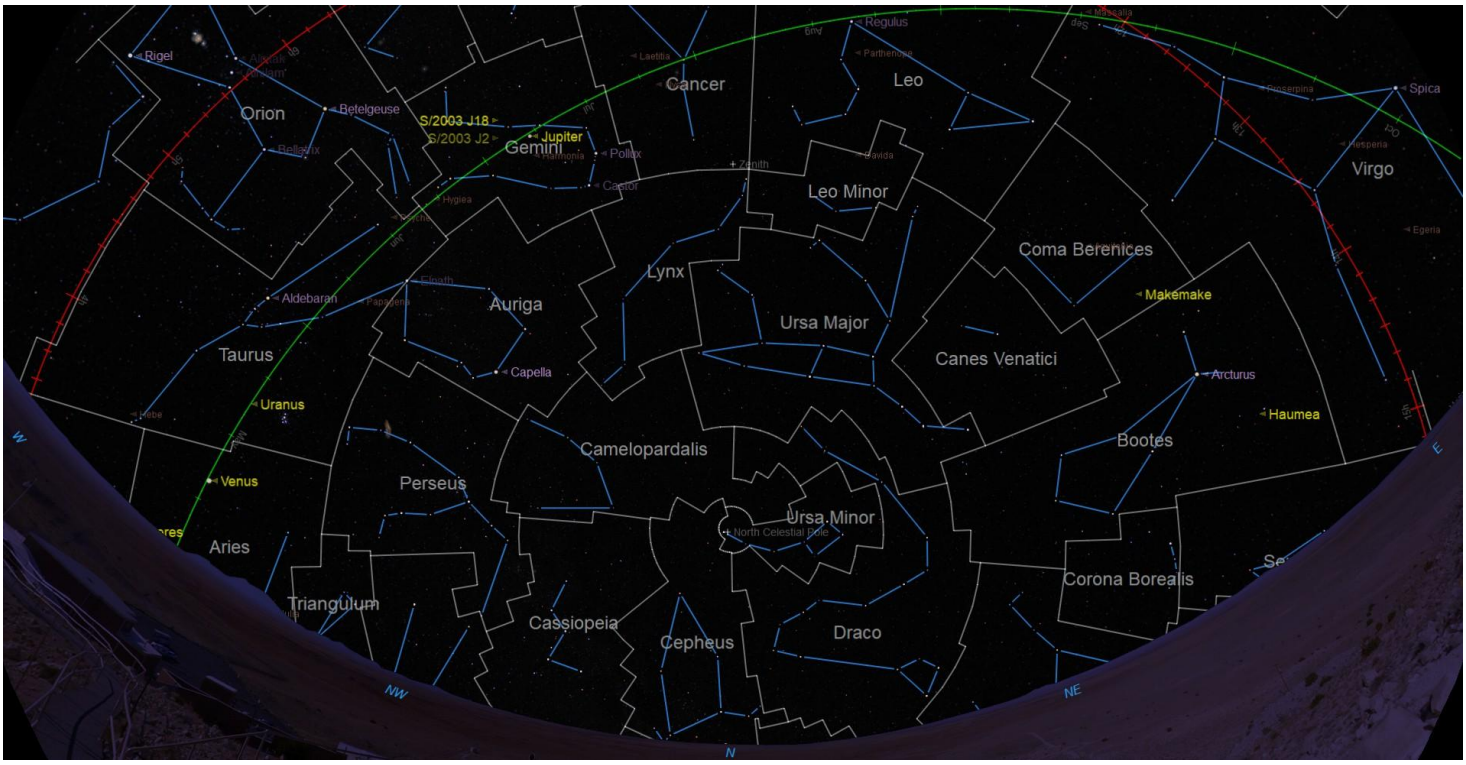
The Moon is at perigee (361,633 km [224,708 miles] from Earth) on April 18 (MST and DST on the West Coast, April 19 for most of the nation). The Moon is at apogee (404,970 km [251,637 miles] from the Earth) on April 7.

On April 15, the waning crescent Moon passes 5 degrees north of Mercury, then two hours later, 4 degrees north of Neptune, and then four hours later, 4 degrees north of Mars. On April 16, the waning crescent Moon passes 5 degrees north of Saturn (late on April 15 on the West Coast and Arizona). On April 19, the waxing crescent Moon passes 5 degrees north of Venus, and later that day 5 degrees north of Uranus. On April 22, the nearly First Quarter Moon passes 4 degrees north of Jupiter.

Early Evening Sky Viewing:

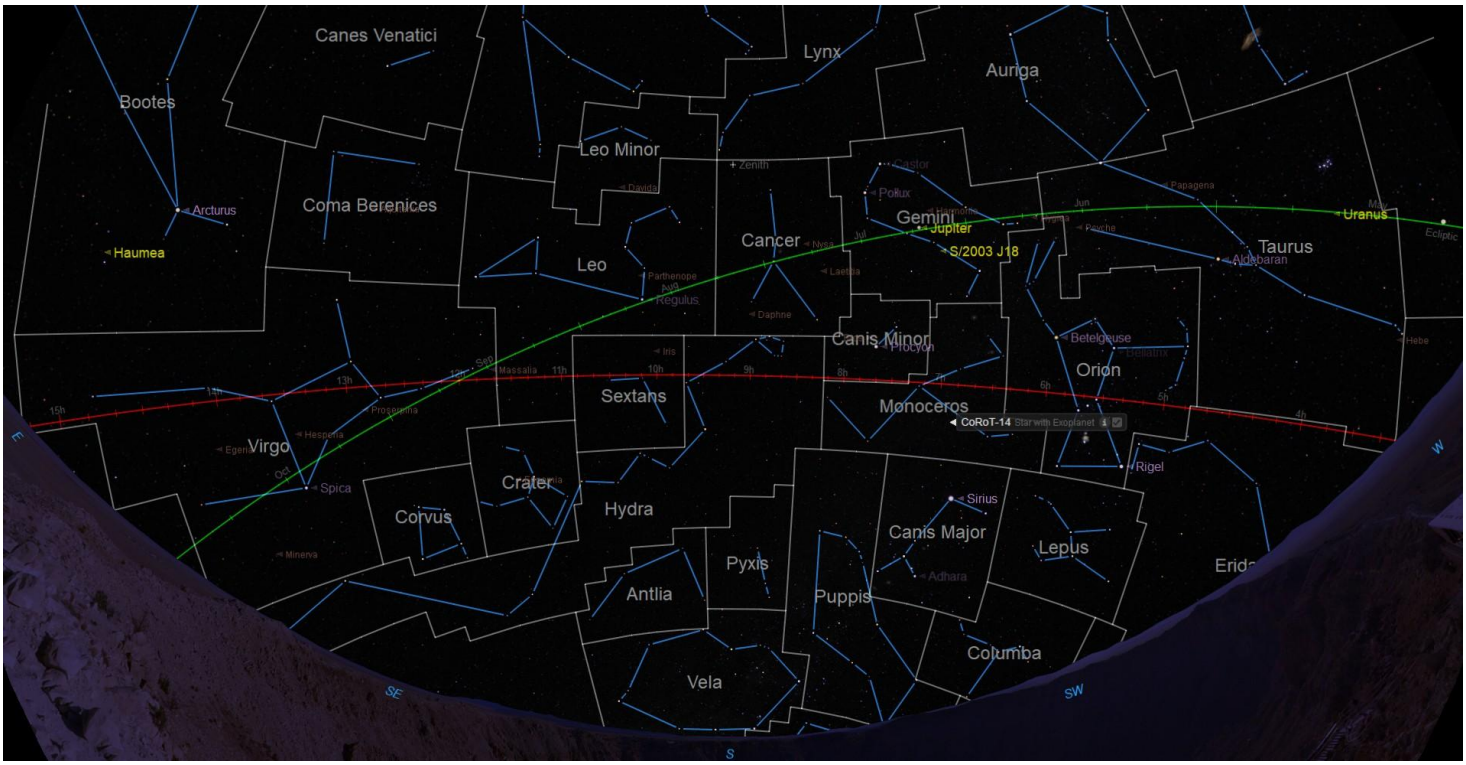
All times in this paragraph are for Tucson (Standard Time), so, since the rest of the country is now on Daylight Saving Time, we are now in the same zone as California. Any other differences will be related only to your latitude and location in your time zone. In Tucson, on the evening of April 15, 2026, sunset is at 6:53 p.m. (22 minutes later than on March 15), Civil Twilight is at 7:18 p.m. (22 minutes later), Nautical Twilight is at 7:48 p.m. (24 minutes later), and Astronomical Twilight is at 8:19 p.m. (26 minute later). You may see a few of the brightest stars and planets after Civil Twilight. You start seeing fainter stars and planets by around Nautical Twilight and the sky is darkest by Astronomical Twilight. The length of the day in Tucson is 12 hours and 59 minutes on April 15 (61 minutes longer than on March 15). **Times will also vary depending on where you are in your time zone and your latitude. In New York, sunset is at 7:35 p.m. on April 15 (33 than on March 15). The length of the day in New York is 13 hours 18 minutes on April 15 (82 minutes longer than on March 15).**



April 15, 2026, looking North at 9:00 p.m. DST (an hour earlier in Arizona and Hawaii). The + marks the Zenith (overhead). This is between Nautical Twilight and Astronomical Twilight, so the sky is dark. The red line is the celestial equator, the projection of Earth's equator onto the sky and the green line is the ecliptic, the path of the Sun through the sky.

Looking North at about 9:00 p.m. (8:00 p.m. in Arizona and Hawaii) in mid-April, many of the constellations that were low in the West last month have set or are setting as the constellations and their stars rise earlier/set earlier. The Sun is setting later (and rising earlier), so the nights are getting shorter. Do not forget that most of you are on Daylight Saving Time, so times have been corrected for you to take that into account. Cassiopea (the Queen) and Cepheus (the King) are circumpolar constellations and are low in the north/northwest. If one is far enough north and have a clear horizon, these constellations will not set. Low in the northwest, the last of Andromeda (the daughter of Cassiopea and Perseus), Triangulum (the Triangle), and Aries (the Ram) are setting. Venus is now in Aries. Eridanus (the River) has mostly set in the west. Low in the northwest/west, between Cassiopeia and Eridanus are Perseus (the Hero, who rescued Andromeda from Cetus, the Sea Monster) and Taurus (the Bull), with Uranus.

Higher in the northwest and west are Camelopardalis (the Giraffe), Auriga (the Charioteer), Orion (the Hunter), probably best looking south, and Gemini (the twins), with Jupiter. Just west of north is Lynx (the Lynx). Above Lynx is Cancer (the Crab), again probably best seen looking south. Low in the northwest is Draco (the Dragon). East of Polaris, the North Star, is Ursa Minor (the Lessor Bear). Above these and just east of due north are Ursa Major (the Great Bear), on his back, Leo Minor (the Lesser Lion), and Leo (the Lion), on his back and probably better seen looking south. East (right) of Ursa Major and Leo Minor are Canes Venatici (the Hunting Dogs of Boötes) and Coma Berenices (Berenice's Hair). Below Canes Venatici is Boötes (the Herdsman or Plowman) and below Boötes is Corona Borealis (the Northern Crown). North of Corona Borealis is a little of Hercules (the Hero) and to the east of Corona Borealis, Serpens Caput East of Boötes is Virgo (the Maiden).



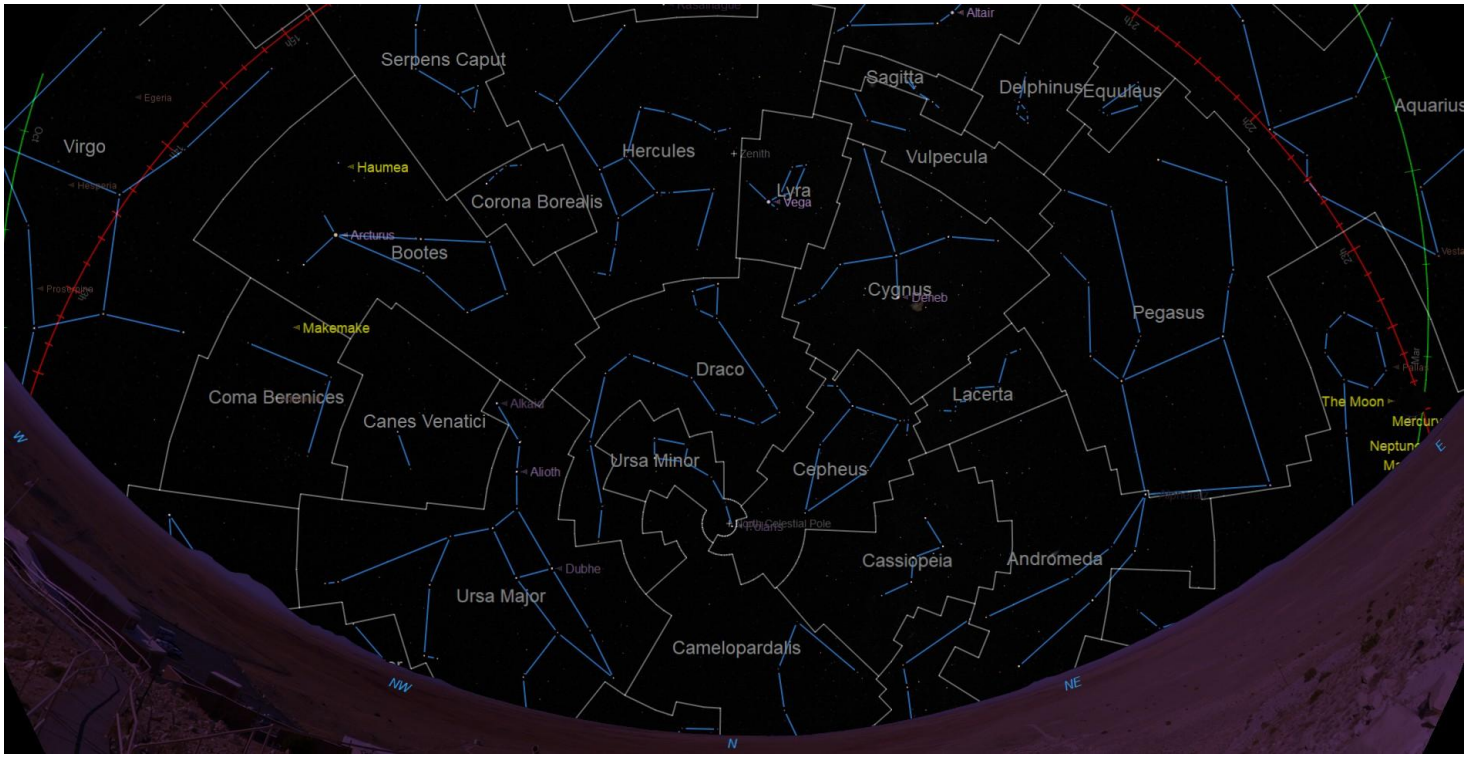
April 15, 2026, looking South at 9:00 p.m. DST. The + marks the Zenith (overhead).

Describing constellations not discussed above, looking South, at 9:00 p.m., by mid-April, we have lost a few of the constellations that were very low in the south/southwest. Low in the southwest are Puppis (the Stern of Jason's ship, the Argo), Columba (the Dove), and Lepus (the Hare). Above Columba and Puppis are Canis Major (the Greater Dog), Monoceros (the Unicorn), and Canis Minor (the Lessor Dog). Cancer, Gemini, and Orion were mentioned above. Due south are Vela (the Sails) and Pyxis (the Mariner's Compass). Antlia (the Pump) is just east of Pyxis. Stretching from due south to below the horizon in the southeast is the very long constellation Hydra (the Serpent). It is the largest and longest constellation. Above Hydra are the three Constellations of the Month, Corvus (the Crow), Crater (the Cup), and Sextans (the Astronomical Sextant).

Early Morning Sky Viewing:

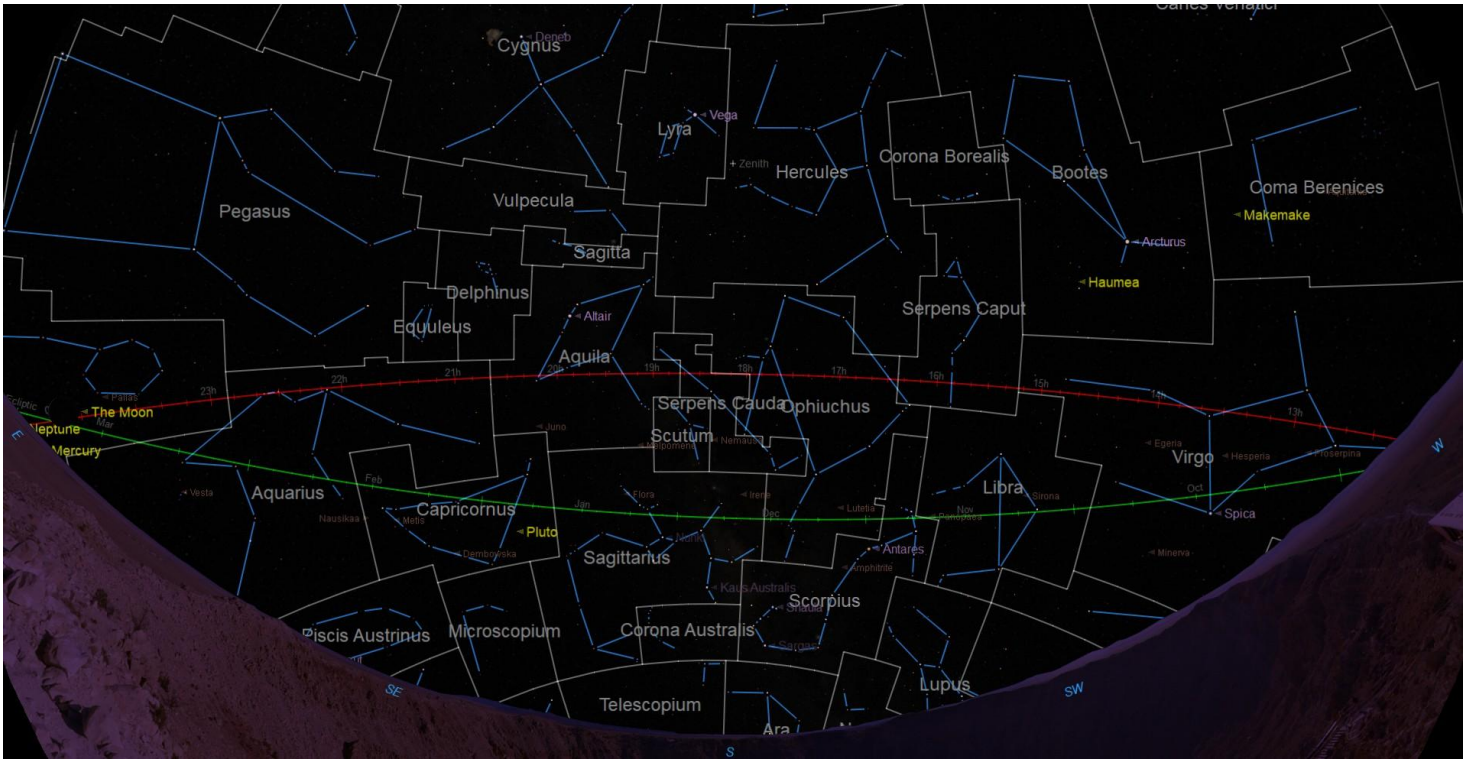
All times in this paragraph are for Tucson (Standard Time), so, since the rest of the country is now on Daylight Saving Time, we are now in the same zone as California. Any other differences will be related only to your latitude and location in your time zone. In Tucson, on April 15, in the morning, Astronomical Twilight is at 4:28 a.m. (44 minutes earlier than on March 15), Nautical Twilight is at 4:59 a.m. (41 minutes earlier), Civil Twilight is at 5:29 a.m. (40 minutes earlier), and sunrise is at 5:53 a.m. (40 minutes earlier). You start losing your fainter stars by around Nautical Twilight and lose all but the very brightest stars and planets before Civil Twilight. Times will also vary depending on where you are in your time zone and your latitude. Times will also vary depending on where you are in your time zone and your latitude. **Times will also vary**

depending on where you are in your time zone and your latitude. In New York, sunrise is at 6:17 a.m. on April 15 (50 minutes earlier than on March 15).



April 15, 2026, looking North at 6:00 a.m. DST (an hour earlier in Arizona and Hawaii). The + marks the Zenith (overhead). This is at Nautical Twilight, so the sky is still fairly dark.

Looking North at 6:00 a.m. DST in mid-April, the constellations that are just rising in the evening are the ones that are setting in the west and northwest before dawn. The constellations that are in the east before dawn were evening constellations one or two months ago (if they are not circumpolar). We have "lost" (have already set at this time) a number of morning constellations as the season progresses. These are now evening constellations! Setting in the west is Virgo (the Maiden). Northwest of Virgo and low in the northwest are Canes Venatici (the Hunting Dogs) and Coma Berenices (Berenice's Hair). Ursa Major (the Great Bear), on his tail, is circumpolar and may not set for those of you far enough north with a clear horizon. Above Canes Venatici are Boötes (the Herdsman), Corona Borealis (the Northern Crown), and Hercules (the Hero). Above Hercules is some of Serpens Caput (the Serpent's Head). Due north, below Polaris, is another circumpolar constellation, Camelopardalis (the Giraffe), on its feet. Above Camelopardalis, to the west and above Polaris, are Draco (the Dragon) and Ursa Minor (the Little Bear). Above Draco and east of due north are Lyra (the Lyre) and Cygnus (the Swan), two of the three constellations that make up the Summer Triangle. To the right, east of Polaris and below Cygnus are Cepheus (the King) and Cassiopeia (the Queen).To their right are Lacerta (the Lizard) and Andromeda (the daughter of Cassiopea and Perseus). Connected to Andromeda is Pegasus (the Winged Horse). Above Pegasus and east of Cygnus are Equuleus (the Little Horse), Delphinus (the Dolphin), Vulpecula (the Little Fox), and Sagitta (the Arrow). Just rising in the east are Pisces (the Fishes), with Mercury, Neptune, and Mars, and Aquarius (the Water-Bearer).



April 15, 2026 looking South at 6:00 a.m. DST. The + marks the Zenith (overhead).

Looking South in mid-April at 6:00 a.m., for the constellations that are not mentioned looking North, there are constellations that are low in the south and low on the horizon, so they may not be visible for those in the northern US. Setting low in the south/southwest are Norma (the Carpenter's Square) and Lupus (the Wolf). Almost due south are Telescopium (the Telescope) and Ara (the Alter). These may not be visible to those of you in the northern part of the US. Above these and just west of due south are Scorpius (the Scorpion) and Libra (the Scales). East of Scorpius are Corona Australis (the Southern Crown) and Sagittarius (the Archer). Above these constellations is Ophiuchus (the Serpent-Bearer). On either side of Ophiuchus are Serpens Caput (the Serpent's Head) and Serpens Cauda (the Serpent's Tail). Above Sagittarius is Scutum (the Shield). East of Sagittarius is Capricornus (the Horned Goat). Just south of Capricornus is Microscopium (the Microscope). Below Aquarius and just rising is Piscis Austrinus (the Southern Fish).

Where are the Planets?

Several planets have transitioned to early morning planets, but still difficult to see.

Mercury is at greatest western elongation on April 3, rising and hour before sunrise and at magnitude 0.3. It is moving to the far side of the Sun but brightens to magnitude 0.0 by April 15 as we see more of its illuminated face. The Moon, less than 2 days before New Moon, passes by Mercury during the day of April 16, passing **Neptune, Mars, and Saturn** over the next 11 hours. All of these are during the day or before the planets rise. On April 19-20, swift Mercury passes all of these planets, with Mercury, Mars, and Saturn clustering together on the morning of April 20. All but Mercury may be too faint to see, even with binoculars as they are closest on April 20, but only 2 degrees above the eastern horizon 30 minutes before sunrise.

Venus was at superior conjunction on January 6 and is moving higher in the evening sky. Venus starts out in Ares and is at magnitude -3.9 on April 1. Venus moves into Taurus around April 19. On April 23, Venus passes between Uranus and the Pleiades and is about 0.8 degrees from Uranus that night. By the end of the month, Venus is still in Taurus and still at magnitude -3.9. month. The waxing crescent Moon passes Venus early on the morning of April 19, so it is best viewed earlier in the evening or the next evening when the Moon hss just passed Uranus and the Pleiades.

Jupiter is in Gemini all month and is visible all night, setting after midnight. Jupiter starts out the month at magnitude -2.2 and ends the month at magnitude -2.0. The First Quarter Moon passes close to Jupiter on April 22.

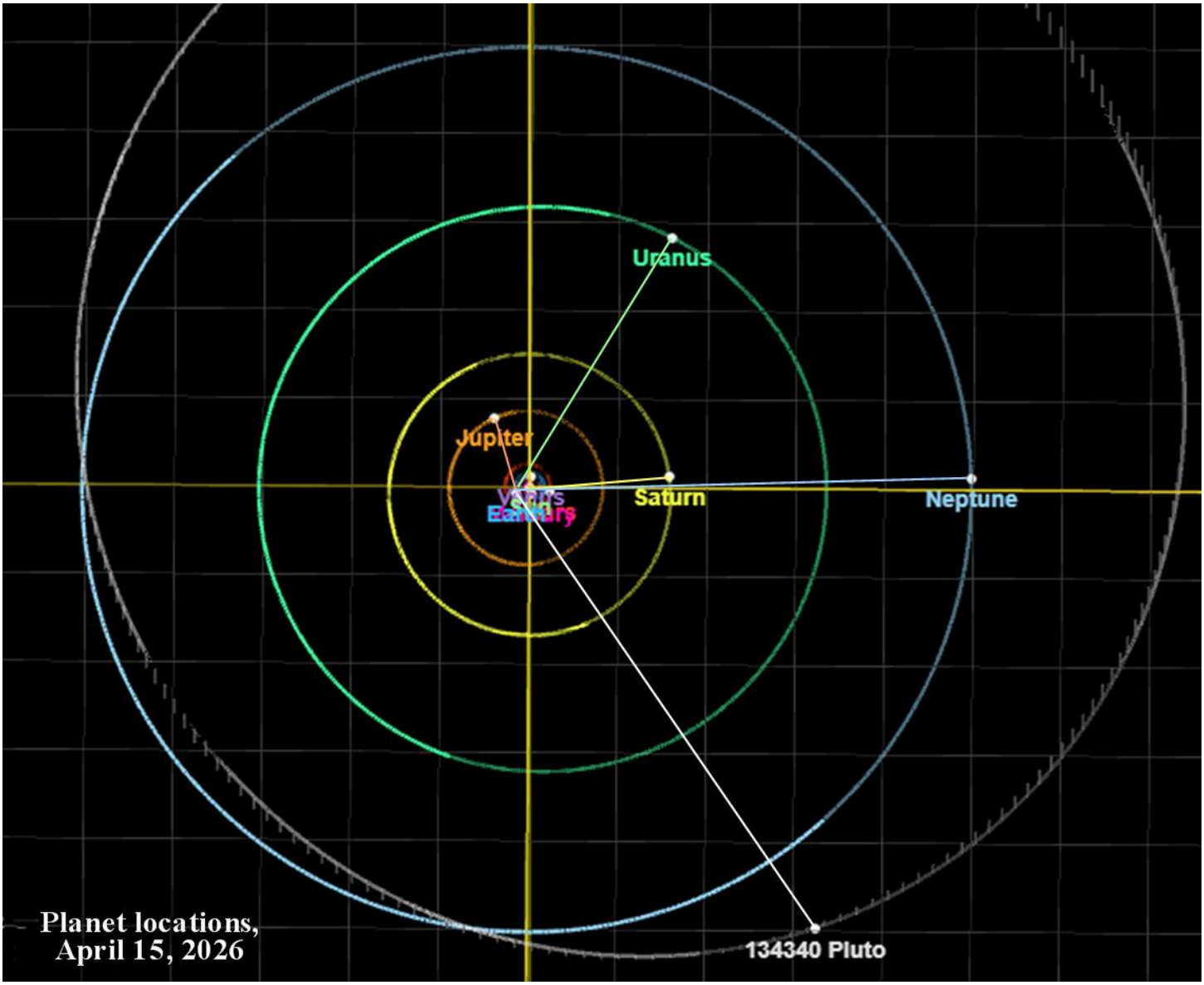
Uranus is in Taurus all month, about 5.5 degrees away from the Pleiades. It fades from about magnitude 5.7 to magnitude 5.8 during the month. The waxing crescent Moon passes by Uranus on April 19.

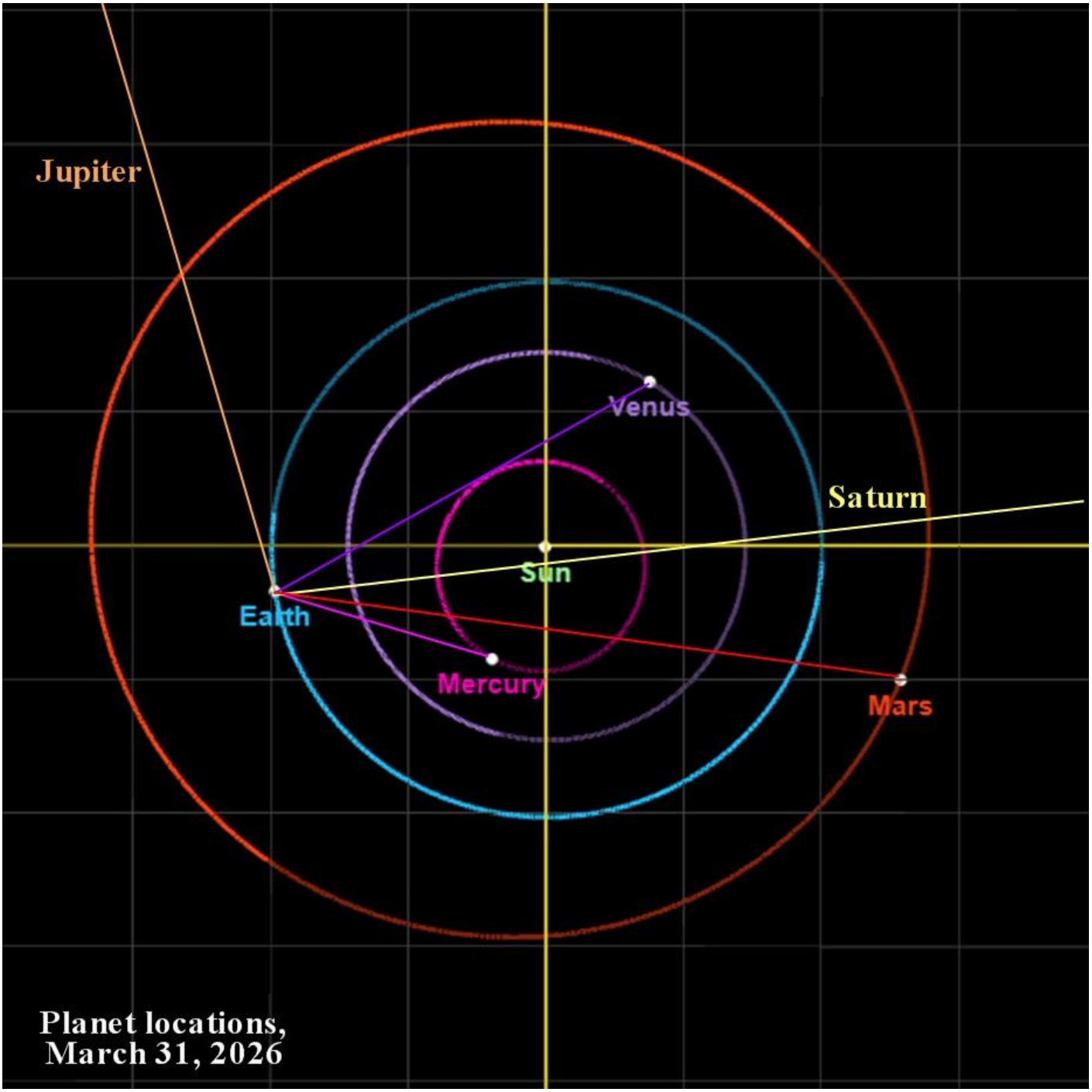
Connecting with the (Human) Orrery

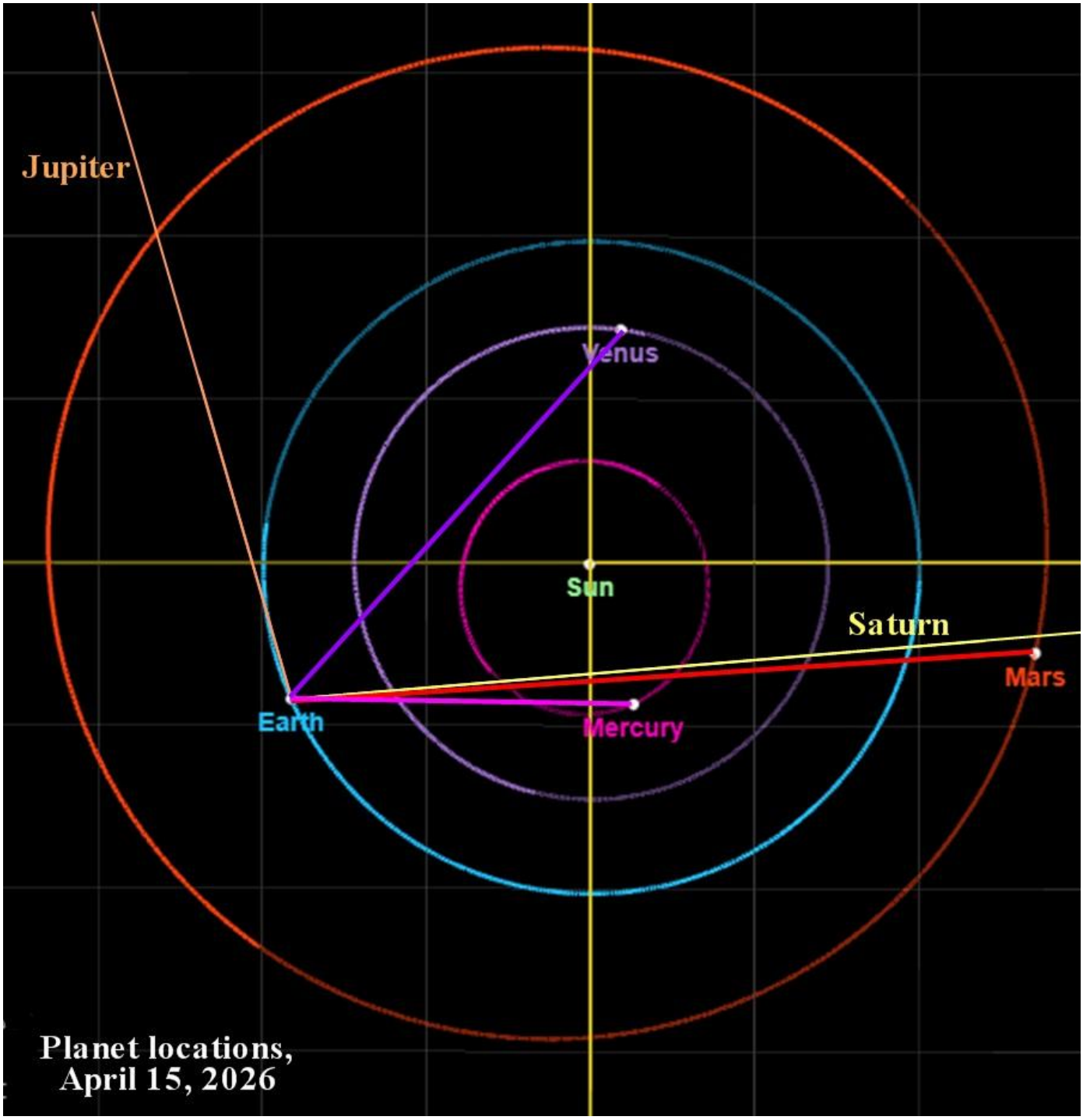
A note from Larry: In 2009, I got the idea of the Human Orrery (and Tabletop Orrery) from an article about a Human Orrery at the Armagh Observatory (https://armagh.space/planetarium/attractions/human-orrery). Theirs is more elaborate and a little more accurate (uses elliptical orbits) than the portable and tabletop one we developed in collaboration with the Girl Scouts of Southern Arizona. This month, I am trying an experiment. I am using the orbital positions from one of the sites I use for looking at the orbits of Near-Earth Asteroids, the JPL Small-Body Database Lookup. Using this gives me the opportunity to show the positions at the beginning, middle, and end of the month and the Orrery has more accurate positions for the planets (I can even show the orbits of individual asteroids and comets.

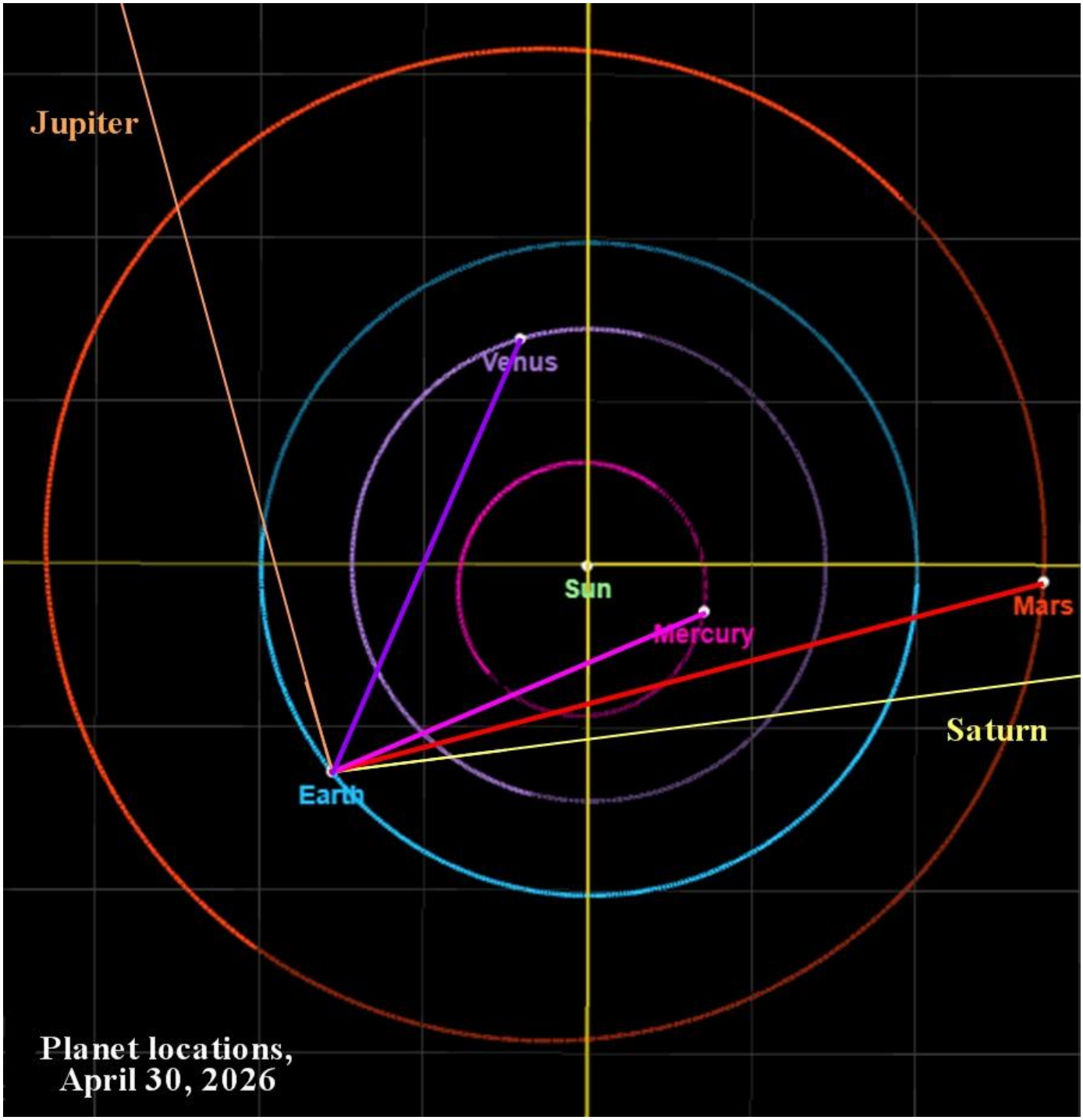
Using the Orrery, it is easy to model the positions of the planets relative to each other and to the Sun. The scale for the Inner Solar System is now about 1.65 cm = 1 AU (was 1.5 cm). The first image is for the entire Solar System, including Pluto, on April 15, 2026. The next three images are for the Inner Solar System on March 31, April 15, and April 30, 2026.

Using the Orrery dated April 15, the third image below, if you are on the Earth, as you (the Earth) rotate in a counterclockwise direction (to your left), just after the Sun sets (over your left shoulder as you stand on the Earth), you will first come to **Venus**. It is higher in the sky than last month, and it is setting about 2 hours after sunset (in Tucson). If you look farther to your left, you can see **Jupiter** high in the southwest. At midnight, the Sun is at your back and Jupiter is now low in the southwest. Continuing to rotate to your left, just before sunrise, **Mercury**, **Mars, and Saturn** will be rising. Mars and Saturn will probably be too faint to be seen on the 15th. If you look at the last image, you will see that, by the end of the month, Mercury is now closer to the Sun than either Saturn or Mars.


Uranus
Jupiter
Saturn
Neptune
Planet locations,
April 15, 2026
134340 Pluto


Jupiter
Venus
Saturn
Sun
Earth
Mercury
Mars
Planet locations,
March 31, 2026


Jupiter
Venus
Sun
Saturn
Mars
Earth
Mercury
Planet locations,
April 15, 2026


Jupiter
Venus
Sun
Mercury
Mars
Saturn
Earth
Planet locations,
April 30, 2026