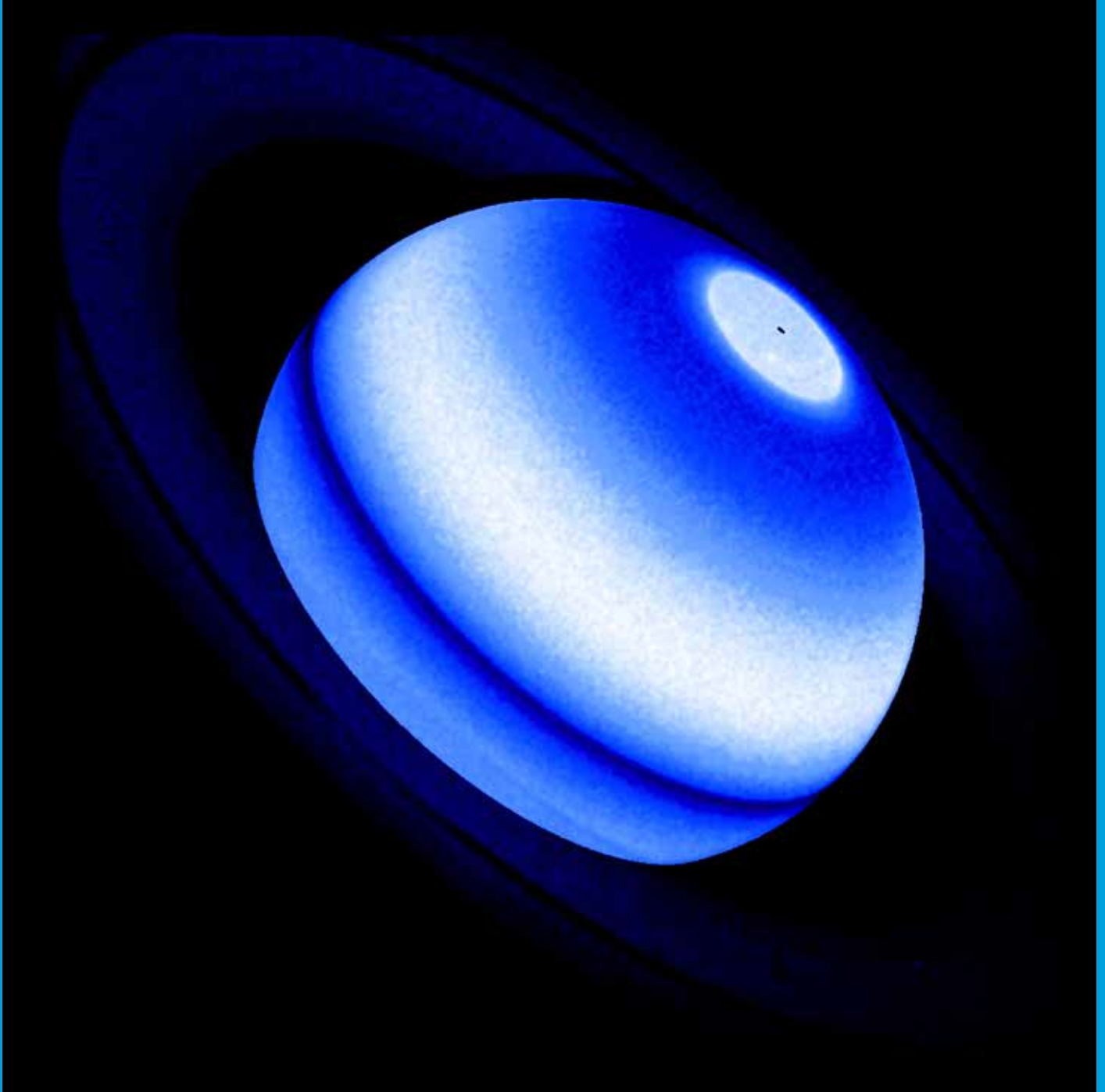


Volume 46.4

April 2026

Desert Sky Observer

Antelope Valley Astronomy Club



Desert Sky Observer

www.avastronomyclub.org

April 2026

Upcoming Events

April 10: Club Meeting
April 18: DSSP @ Chuchupate
April 24: College of the Canyon Star Party 6:30pm-10pm
April 25: Moonwalk @ PDW 8:00PM

Every clear night: Personal Star Party

May 8: Club Meeting
May 9: Moonwalk @ PDW 8:00PM
May 16: DSSP @ Chuchupate
June 6: Moonwalk @ PDW 8:30PM
June 12: Club Meeting
June 13: DSSP @ Chuchupate
June 20: Lunar Club @ PDW

Board Members

President: Phil Wriedt (661) 917-4874
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Vice-President: Vacant
vice-president@avastronomyclub.org

Secretary: Rose Moore (661) 972-1953
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Treasurer: Rod Girard (661) 803-7838
treasurer@avastronomyclub.org

Director of Community Development:
Christian Amaya (661) 972-0091
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Appointed Positions

Lunar Club:

Matt Leone (661) 713-1894

Equipment & Library: vacant
library@avastronomyclub.org

Club Historian: vacant
history@avastronomyclub.org

Webmaster: Steve Trotta (661) 269-5428
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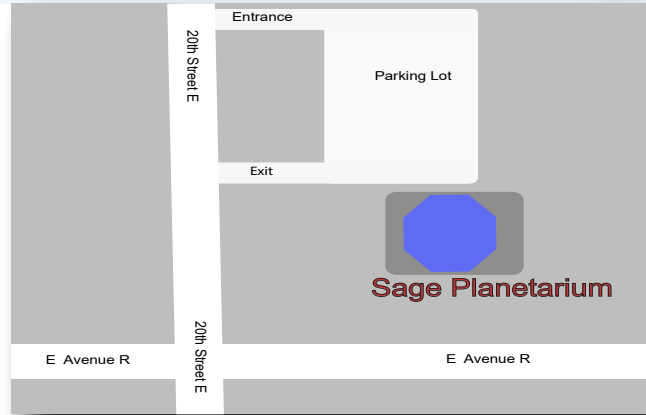
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AVAC Calendar



Monthly Meetings

Monthly meetings are held at the **S.A.G.E. Planetarium** in Palmdale, the second Friday of each month except December. The meeting location is at the northeast corner of Avenue R and 20th Street East. Meetings start at 7 p.m. and are open to the public. Please note that food and drink are not allowed in the planetarium.

Membership

Membership in the Antelope Valley Astronomy Club is open to any individual or family.

The Club has three categories of membership.

- Family membership at \$30.00 per year.
- Individual membership at \$25.00 per year.
- Junior membership at \$15.00 per year.

Membership entitles you to ...

- The Desert Sky Observer -- monthly newsletter
- The AVAC Membership Manual.
- To borrow club equipment, books, videos, and other items.

AVAC

PO Box 8545

Lancaster, CA 93539-8545

Visit the Antelope Valley Astronomy Club website at www.avastronomyclub.org/
www.instagram.com/av_astronomyclub



www.avastronomyclub.org

The Antelope Valley Astronomy Club, Inc. is a
26 USC §501(c)(3) California Non-Profit Corporation.

President's Message

By Phil Wriedt

Welcome everyone,

The next event will be the Club Meeting. Rod will deliver a presentation on a thought provoking, but yet undisclosed topic. Come see what insights Rod has.

Our next Dark Sky Star Party, will be on April 18 at Chuchupate. (See maps on page 10) This will be our next best opportunity to do a Messier Marathon. Our last try in March at Red Rock Canyon was plagued, by my estimate, 95% cloud cover. Let's face it, it's going to be in April. What are the chances of rain or clouds could interfere? Be prepared for anything. Watch for the emails or for the text message to know what's happening.

On the 24th we have a Star Party at the College of the Canyons. On the 25th we have a Moonwalk at the Prime Desert Woodland park. Both star parties need members with telescopes. Star Parties like these are the most effective way to interact with the general public; this is one way to get new members and introduce astronomy to the kids and parents that come.

The Total Lunar eclipse on the morning March 3 was a disappointment for Club participation.... not a single member showed up to help Jeremy. Granted, totality didn't happen till after 3 AM. On August 27th an almost total eclipse will start about 7PM, so maybe we can get a larger turnout.

Please come to the meetings, come to the events, join the crowd! The more the merrier!

Stay Warm, or Cool, and Keep Looking Up,

Phil

On The Cover

The planet Saturn is easily recognizable for its opulent ring system that can easily be seen through a small telescope. Astronomers have now found that the rings are not as placid as they look: a rain of icy particles is affecting the giant planet's weather. It took observations of Saturn from the ESA/NASA Hubble Space Telescope and the retired NASA/ESA/ASI Cassini probe, in addition to the Voyager 1 and 2 spacecraft and the retired International Ultraviolet Explorer mission, to pull it all together.

The telltale evidence is an excess of ultraviolet radiation, seen as a spectral line of hot hydrogen in Saturn's atmosphere. The most feasible explanation is heating caused by icy ring particles raining down onto Saturn's atmosphere. This rain could be due to the impact of micrometeorites, solar wind particle bombardment, solar ultraviolet radiation, or electromagnetic forces picking up electrically charged dust.

A new study pulled together archival ultraviolet-light (UV) observations from four space missions that studied Saturn. This included observations from the two Voyager probes that flew by Saturn in the 1980s and measured the UV excess — at the time, astronomers dismissed the measurements as noise in the detectors. The Cassini mission, which arrived at Saturn in 2004, also collected UV data on the atmosphere over several years, and additional data came from the International Ultraviolet Explorer, launched in 1978, and from Hubble.

From the Secretary

By Rose Moore

Members,

April is here and the club has a few events planned. Starting off with our club meeting on April 10th at 7pm. Our Treasurer Rod will be doing a presentation, topic to be announced soon. Please come to the meeting to support your club!

On Saturday April 18th, we will have a dark sky star party at Chuchupate, you may arrive any time; weather permitting. Try to arrive during daylight as there are other astronomers that come up to Chuchupate, and do astrophotography. More information will be sent in an email a few days before the event.

College of the Canyons Spring Star Party will be on Friday April 24th, 6:30pm-10pm. We will need members with telescopes to help at this event. Admission is free if you want to come out and just enjoy some of the presentations, get some snacks at the food truck, or enjoy their guest speaker. The speaker will be Teresa Ciardi, Professor, Astronomy & Physical Science, CoC. Professor Ciardi will present "The Life of a Star: From Birth to End". Learn the story of how a star is born, what different stars do while they shine, and how the different stars end - there are many different endings, white dwarfs, supernovae, black holes, etc. Ms Ciardi is also the Aerospace and Science Team's faculty advisor, which won a large grant in July 2024 to support its suborbital rocket program. Further email will be sent as we get into mid April!

We have a Prime Desert Moon Walk on Saturday April 25th, starting at 8pm. We will need members with telescopes to help out at this event. Weather permitting. Further info to follow.

Coming up in May is (hopefully) a speaker from NASA; in June our speaker will be a former speaker Naveen Vetcha, who will speak on 'Star Lore from India'; in July we have speaker Daniel Mounsey, from Woodland Hills Telescope and Camera.

Please come out and support your club at one or some of the events. We can't do this without you!

Clear skies, Rose

On The Cover. . . Continued

But the lingering question was whether all the data could be illusory, or instead reflected a true phenomenon on Saturn. The key to assembling the jigsaw puzzle came in the decision to use measurements from Hubble's Space Telescope Imaging Spectrograph (STIS). Its precision observations of Saturn were used to calibrate the archival UV data from all four other space missions. Four decades of UV data cover multiple solar cycles and help astronomers study the Sun's seasonal effects on Saturn.

By bringing all the diverse data together and calibrating it, it was determined that there is no seasonal difference to the level of UV radiation. The unexpected interaction between the rings and the upper atmosphere is now being investigated in depth, to define new diagnostic tools for estimating if distant exoplanets have extended, Saturn-like ring systems.

These results are featured in the paper published on 30 March 2023 in the Planetary Science Journal.

[Image description: A close-up image of the planet Saturn in ultraviolet light. The planet is coloured in shades of blue. It is tilted at a forty-five degree angle, and inclined towards the viewer so that its rings are visible; they are only slightly brighter than the black background.]

Credit: ESA/Hubble, NASA & L. Ben-Jaffel

Bortle Dark-Sky Scale Tom Koonce, AVAC

As amateur astronomers in the High Desert, we are blessed with some of the best visibility in Southern California, but “dark” is a relative term. To help amateur astronomers speak the same language, we use the Bortle Dark-Sky Scale to rate how good the skies are.

Created by John E. Bortle in 2001, this nine-level scale quantifies how much light pollution is eating away at your view. It’s more than just a number; it’s a guide to what you can actually expect to see through your telescope or binocular eyepiece.

The Bortle scale is like a countdown to clarity, the higher the number, the more light pollution you’re fighting and the lower the number, the better the skies are for observing deep sky objects.

- **Class 9 (Inner-City Sky):** This is the heart of downtown Los Angeles. The sky is a bright orange-gray, and you can only see the Moon and a few bright planets. Even the brightest constellations are washed out.

- **Class 6–7 (Suburban Transition):** Common in the more developed parts of Palmdale and Lancaster. You can see the “Big Seven” stars of the Big Dipper, but the Milky Way is essentially invisible.

- **Class 4 (Rural/Suburban Transition):** This is the sweet spot for many High Desert backyard observers on the outskirts of town. The Milky Way is visible but lacks fine detail, and light domes from the city are obvious on the horizon.

- **Class 1 (Pristine Dark Sky):** The holy grail. The Milky Way is so bright it can cast faint shadows on the ground.

Living in the Antelope Valley, we have a front-row seat to the transition from urban glow to deep-space clarity. Here is how our local “neighborhood” stacks up:

- **The Backyard Test (Bortle 5-6):** If you’re observing from a suburban lot near AV College, you’re likely in a Bortle 5 or 6. You’ll need filters for nebulae, but planetary viewing remains excellent.

- **Saddleback Butte State Park (Bortle 4):** Just a short drive east of Lancaster, the skies open up significantly. Here, the Milky Way begins to show its structure, though the western horizon still glows with the combined light of the AV and the LA Basin.

- **Mt. Pinos (Bortle 3-4):** A legendary pilgrimage for SoCal astronomers, the Nordic Base parking lot at Mt. Pinos sits at 8,300 feet. While it shares a similar Bortle rating to our desert floor, the altitude is the game-changer. By getting above a huge chunk of the atmosphere’s “soup,” the transparency is incredible. You’ll see a distinct light dome from LA to the south, but the overhead clarity is world-class.

- **Red Rock Canyon State Park (Bortle 3):** Heading north on the 14, you hit a “rural” sky. The “Great Rift” in the Milky Way becomes starkly visible to the naked eye, and the sky feels “heavy” with stars.

- **Death Valley National Park (Bortle 1-2):** For the ultimate experience, this is the gold standard within striking distance. In a true Class 1 sky, the stars are so dense that familiar constellations actually become harder to find because they are buried in a sea of “extra” stars.

Knowing your Bortle number helps you plan your night. If you’re in a Bortle 6, stay focused on double stars and planets. If you’re hauling your gear up to Mt. Pinos or out to Death Valley, that’s the time to hunt those faint, fuzzy galaxies.

Next time you head out, check a tool like the Light Pollution Map (<https://www.lightpollutionmap.info/>) to see your specific site’s rating. Whether you’re dodging streetlights in town or chasing the darkness in the desert, knowing the scale helps you make the most of your observing.

News from around the Net

A Galaxy Next Door Is Transforming, And Astronomers Can See It Happening

The Small Magellanic Cloud (SMC) is one of the Milky Way's closest galactic neighbors—a small, gas-rich galaxy visible to the naked eye from the southern hemisphere, and bound to our galaxy by gravity, alongside its companion, the Large Magellanic Cloud (LMC). All three galaxies have been interacting for hundreds of millions of years. The SMC is also one of the most studied galaxies in the sky. Astronomers have catalogued its stars, mapped its gas and tracked its motion for more than half a century. Yet a basic question about it has remained. The galaxy's stars do not orbit around its center the way stars in most galaxies do, and it has been challenging to explain why. . . . (continued at <https://phys.org/news/2026-03-galaxy-door-astronomers.html>)



Brown Dwarfs Dance Unexpected Tango

Two brown dwarfs are whipping around each other in a tight tango — an unexpected dance for objects that are not-quite-stars and not-quite-planets. Astronomers have spotted two brown dwarfs in a close binary pair, with one stealing gas from the other. The discovery, made in data from the Zwicky Transient Facility (ZTF), marks the first time astronomers have observed this behavior in brown dwarfs. Brown dwarfs straddle the borderline between planets and stars — they're often called “failed” stars. . . . (continued at <https://skyandtelescope.org/astronomy-news/brown-dwarfs-dance-unexpected-tango/>)



Direct Confirmation Of Two Baby Planets Forming Around A Young Sun-like Star

As the number of exoplanet detections has breached 6,000 and continues to grow, scientists are finding a wide variety of different solar system architectures. Critical to understanding how these architectures take shape is finding young planets forming around very young stars. In 2025 a team of astronomers announced the discovery of a planet about 5 times more massive than Jupiter around a star that's very much a younger version of our Sun. The star is called WISPIT 2, is about 437 light-years away, and has around 1.08 solar masses. . . . (continued at <https://www.universetoday.com/articles/direct-confirmation-of-two-baby-planets-forming-around-a-young-sun-like-star>)



The Coming Age Of Space Stations

The *International Space Station* (ISS), which has been continuously occupied for 26 years, is approaching retirement. By 2030, all participating space agencies will bring their astronauts home for the last time, and the station will be maneuvered so it burns up in Earth's atmosphere. The legacy of this station is unmatched, and its successors (of which several are planned) will have extremely big shoes to fill. Nevertheless, there's no shortage of space programs and commercial interests looking to place new space stations in orbit. Some space agencies, such as NASA and the Indian Space Research Organization (ISRO), hope to deploy new stations. At the same time, China aims to expand its existing Tiangong station to double its current size while Roscosmos recently announced (continued at <https://www.universetoday.com/articles/the-coming-age-of-space-stations>)



Sun May Have Escaped Milky Way's Crowded Core Billions Of Years Ago

Using a vast catalog of Sun-like stars built by ESA's Gaia mission, astronomers have found strong evidence that our home star traveled outward with thousands of stellar counterparts roughly 4 to 6 billion years ago, offering new clues to the formation of the Milky Way's central bar. “While archaeology on Earth studies the human past, galactic archaeology traces the vast journey of stars and galaxies,” said Tokyo Metropolitan University astronomer Daisuke Taniguchi and colleagues. “For example, we know that our Sun was born around 4.6 billion years ago, more than 10,000 light-years closer to the center of the Milky Way than we are today.” “While studies of the composition of stars support this theory, this has long proven a conundrum to scientists.” (continued at <https://www.sci.news/astronomy/sun-migration-14621.html>)



Space News

News from around the Net

Artificial Intelligence Uncovers More Than 100 New Worlds In NASA Data

An artificial intelligence tool developed at the University of Warwick has uncovered a rich haul of previously hidden exoplanets in data from NASA's Transiting Exoplanet Survey Satellite (TESS), validating more than 100 worlds and identifying thousands more candidates. The new system, called RAVEN (RAnking and Validation of ExoplaNets), was applied to observations of more than 2.2 million stars collected during the first four years of the TESS mission. By combining automated detection, machine learning and statistical validation into a single pipeline, . . . (continued at <https://astronomy.com/2026/03/25/artificial-intelligence-uncovers-more-than-100-new-worlds-in-nasa-data/>)



XRISM Clocks Hot Wind Of Galaxy M82 At 2 Million Mph

For the first time, astronomers have directly measured the speed of superheated gas billowing from a cauldron of stellar activity at the heart of M82, a nearby galaxy undergoing an extraordinary burst of star formation. The material is moving more than 2 million miles (over 3 million kilometers) per hour and appears to be the primary force driving a cooler, well-studied, galaxy-scale wind. Researchers made the calculations using data from the Resolve instrument aboard the XRISM (X-ray Imaging and Spectroscopy Mission) spacecraft. . . . (continued at <https://phys.org/news/2026-03-xrism-clocks-hot-galaxy-m82.html>)



Rubin Observatory Detects Record-Breaking Asteroids

The Rubin Observatory is making new discoveries — and generating new puzzles — even before its scientific mission begins. In a set of images gathered as part of an engineering test of its Legacy Survey of Space and Time (LSST) Camera, astronomers have found two main-belt asteroids, each nearly a kilometer across, that rotate once every two minutes. A few such fast spinners have been discovered among the near-Earth object population before, but Rubin's discoveries are much larger and more distant. Dmitrii Vavilov (University of Washington) presented Rubin's asteroid discoveries at the 57th Lunar and Planetary Science Conference in The Woodlands, Texas on March 16th. . . . (continued at <https://skyandtelescope.org/astronomy-news/rubin-observatory-detects-record-breaking-asteroids/>)



What Are Transparency And Seeing?

As close as we astronomers love to feel to space, one thing stands between us and the outer reaches: Earth's atmosphere. More than 60 miles (97 kilometers) of gases separate us from the cosmos, and it has an effect on our ability to photograph and observe. Astronomers speak of two measures of atmospheric quality: transparency and seeing. Astronomical League observing programs often require you to record estimates of those conditions. So what are they? . . . (continued at <https://www.astronomy.com/observing/what-are-transparency-and-seeing/>)



NASA Launches Twin Spacecraft To Solve The Mystery Of Mars' Lost Atmosphere

Mars looks very different today than it did billions of years ago. Scientists believe the planet once had flowing water, a thicker atmosphere, and a much warmer climate. Now the Red Planet is frigid, dry, and surrounded by only a thin layer of air. Researchers think the biggest reason for this transformation is the solar wind. This steady stream of charged particles flowing outward from the Sun has gradually eroded Mars' atmosphere over billions of years. As the atmosphere thinned, the planet cooled and much of its surface water disappeared. . . . (continued at <https://www.sciencedaily.com/releases/2026/03/260314030452.htm>)



Hubble Unexpectedly Catches Comet Breaking Up

[weic2606](#) — [Science Release](#) 18 March 2026

Comet K1, whose full name is Comet C/2025 K1 (ATLAS), had just passed its closest approach to the Sun and was heading out of the Solar System. Though it had been intact just days before, K1 fragmented into at least four



pieces while the NASA/ESA Hubble Space Telescope was watching. The odds of that happening while Hubble viewed the comet are extraordinarily miniscule.

Comet K1, whose full name is Comet C/2025 K1 (ATLAS) — not to be confused with interstellar comet 3I/ATLAS — was not the original target of a recent Hubble study. The findings were published today in the journal *Icarus*.

“Sometimes the best science happens by accident,” said co-investigator John Noonan, a research professor in the Department of Physics at Auburn University in Alabama in the United States. *“This comet got observed because our original comet was not viewable due to some new technical constraints after we won our proposal. We had to find a new target — and right when we observed it, it happened to break apart, which is the slimmest of slim chances.”*

Noonan didn't know K1 was fragmenting until he viewed the images the day after Hubble took them. *“While I was taking an initial look at the data, I saw that there were four comets in those images when we only proposed to look at one,”* said Noonan. *“So we knew this was something really, really special.”*

This is an experiment the researchers always wanted to do with Hubble. They had proposed many Hubble observations to catch a [comet](#) breaking up. Unfortunately, these are very difficult to schedule, and they were never successful.

“The irony is now we're just studying a regular comet and it crumbles in front of our eyes,” said principal investigator Dennis Bodewits, also a professor in Auburn University's Department of Physics.

“Comets are leftovers of the era of Solar System formation, so they're made of ‘old stuff’—the primordial materials that made our Solar System,” explained Bodewits. *“But they are not pristine—they've been heated, they've been irradiated by the Sun and by cosmic rays. So, when looking at a comet's composition, the question that we always have is, ‘Is this a primitive property or is this due to evolution?’ By cracking open a comet, you can see the ancient material that has not been processed.”*

Hubble caught K1 fragmenting into at least four pieces, each with a distinct coma, the fuzzy envelope of gas and dust that surrounds a comet's icy nucleus. Hubble cleanly resolved the fragments, but to ground-based telescopes, at the time they only appeared as barely distinguishable blobs.

Hubble's images were taken just a month after K1's closest approach to the Sun, called perihelion. The comet's perihelion was inside Mercury's orbit, about one-third the distance of the Earth from the Sun. During perihelion, a comet experiences its most intense heating and maximum stress. Just past perihelion is when some long-period comets like K1 tend to fall apart.

Before it fragmented, K1 was likely a bit larger than an average comet, probably around 8 kilometres across. The team estimates the comet began to disintegrate eight days before Hubble viewed it. Hubble took three 20-second images, one on each day from 8 November through 10 November 2025. As it watched the comet, one of K1's smaller pieces also broke up.

Because Hubble's sharp vision can distinguish extremely fine details, the team could trace the history of the fragments back to when they were one piece. That allowed them to reconstruct the timeline. But in doing so, they uncovered a mystery: Why was there a delay between when the comet broke up and when bright outbursts were seen from the ground? When the comet fragmented and exposed fresh ice, why didn't it brighten almost instantaneously?

The team has some theories. Most of a comet's brightness is sunlight reflected off of dust grains. But when a comet cracks open, it reveals pure ice. Maybe a layer of dry dust needs to form over the pure ice and then blow off. Or maybe heat needs to get below the surface, build up pressure, and then eject an expanding shell of dust.

"Never before has Hubble caught a fragmenting comet this close to when it actually fell apart. Most of the time, it's a few weeks to a month later. And in this case, we were able to see it just days after," said Noonan. *"This is telling us something very important about the physics of what's happening at the comet's surface. We may be seeing the timescale it takes to form a substantial dust layer that can then be ejected by the gas."*

The team is looking forward to finishing the analysis of the gases to come from the comet. Already, ground-based analysis shows that K1 is chemically very strange — it is significantly depleted in carbon, compared with other comets. Spectroscopic analysis from Hubble's STIS ([Space Telescope Imaging Spectrograph](#)) and COS ([Cosmic Origins Spectrograph](#)) instruments is likely to reveal much more about the composition of K1 and the very origins of our Solar System.

The comet K1 is now a collection of fragments about 400 million kilometers from Earth. Located in the constellation Pisces, it is heading out of the Solar System, not likely to ever return. Astronomers see that long-period comets such as K1 are more likely to fragment than their short-period cousins, such as 67P/Churyumov-Gerasimenko that was visited by ESA's [Rosetta mission](#), but it is not known why. Launching towards the end of the decade, ESA's [Comet Interceptor](#) will be the first mission to visit a long-period comet. *"Hubble's chance observation of K1 will help us understand why some long-period comets split apart and give us a first view of their interiors,"* said co-author Prof. Colin Snodgrass of the University of Edinburgh in Scotland and an Interdisciplinary Scientist for the Comet Interceptor mission. *"These new results will complement the detailed view of a long-period comet that we will obtain from Comet Interceptor, as well as helping astronomers to select the mission's target."*

More information

The Hubble Space Telescope is a project of international cooperation between ESA and NASA.
Image Credit: NASA, ESA, D. Bodewits (Auburn). Image processing: J. DePasquale (STScI)

Links

- [Release on NASA website](#)
- [Release on ESA website](#)
- [Science paper](#)

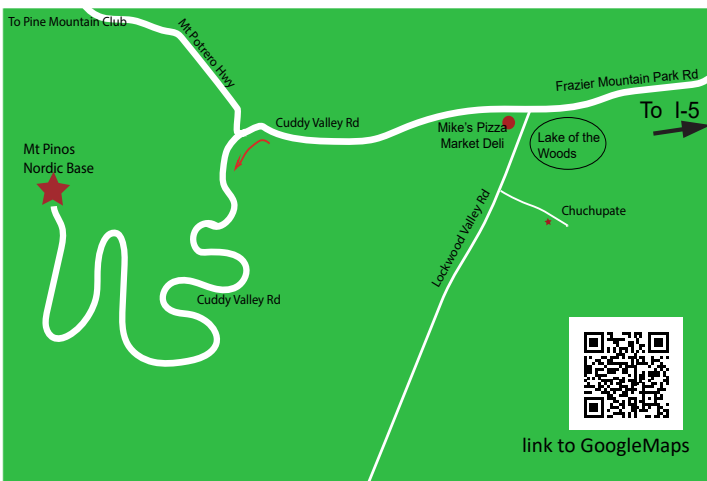
Contacts

Bethany Downer
ESA/Hubble Chief Science Communications Officer
Email: Bethany.Downer@esahubble.org

Dark Sky Observing Sites

The **Chuchupate** parking lot is a half a mile beyond the Mt Pinos ranger station (on some maps The Chuchupate Ranger Sta.), the parking lot is also called Frazier Mountain trailhead.

To get there, take the Frazier Mountain Park RD east about 7 miles from I-5, to Lake Of The Woods, Turn left on Lockwood Valley Rd. (If you see Mike’s Pizza on your left you missed the turn) In less than a mile there is a road to the left, go past the ranger station, the parking lot is on the right. The Club gathers in the upper end of the lot. The Elevation is 5430 feet. There is a vault toilet. (link to GoogleMaps) [RX3R+3F, Frazier Park, CA 93225](#)



Mt Pinos is a parking lot at 8350 feet for the “Mt Pinos Nordic Base.” There is a vault toilet 300 yds to the east in the Chula Vista campground.

To get there: From I-5, get off at Frazier Mountain Park Rd and drive west about 7 miles to Mike’s Pizza/Market Deli at Lockwood Valley Rd. Keep on the main roadway (don’t turn left to go to Chuchupate). Continue past Mike’s Pizza on Cuddy Valley Rd (the road’s new name) about 5 miles. Continue straight (do not turn right on to Mil Potrero Hwy) for another 8 1/2 miles to the parking area.

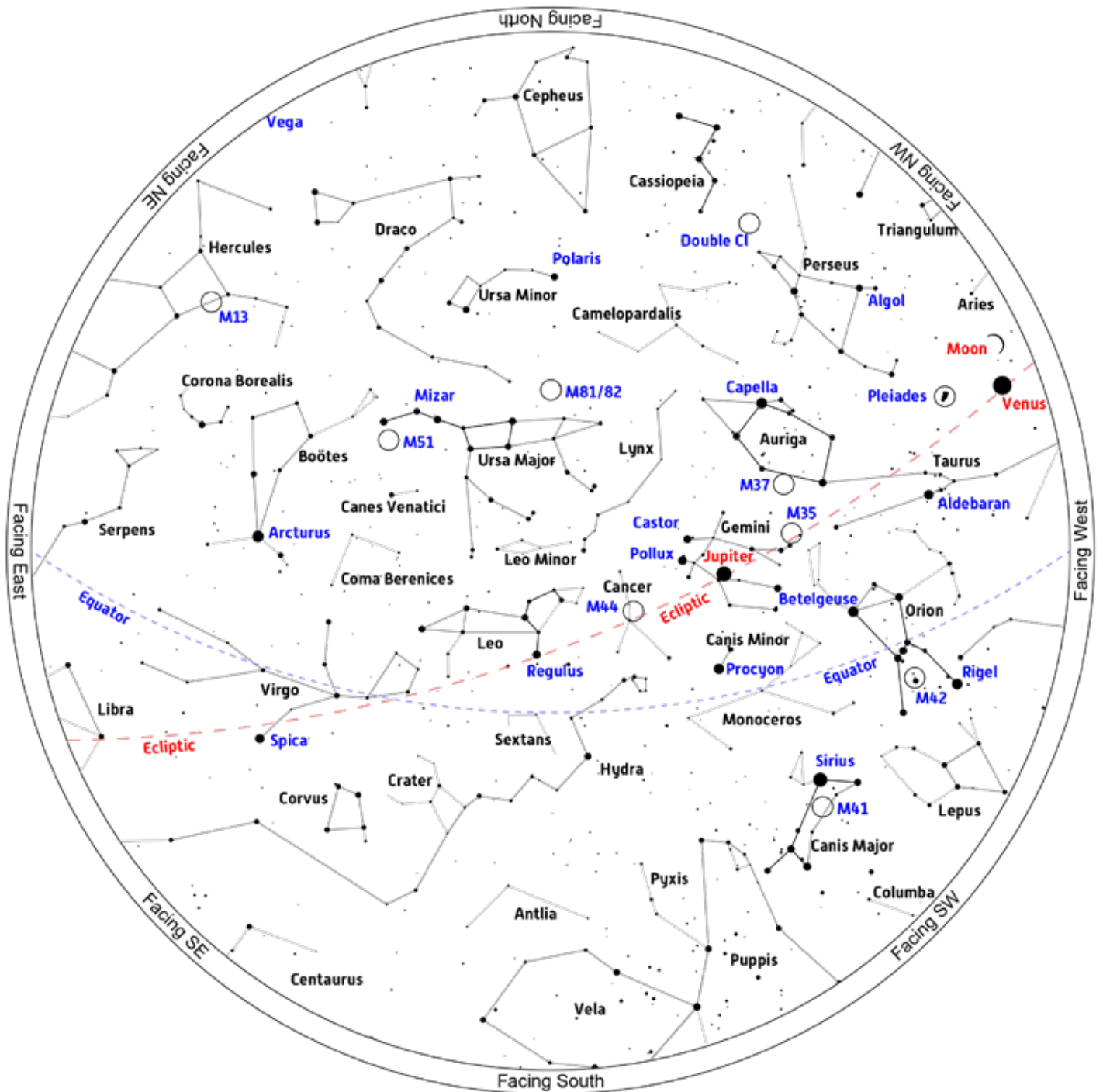
[RV7F+FF Frazier Park, California](#) (link to GoogleMaps)

The Red Cliffs Natural Area is part of **Red Rock Canyon State Park** is a day use area and is not for use by the public after dark. The Club gets a special permit for a star party and pays a fee.

To get there: Take the CA-14 north 25 miles past Mojave. You will see giant red cliffs on the right side and a small sign that says “Red Cliffs Natural Area” and a dirt road. (If you see the large sign for the Ricardo campground, you drove a mile too far). Follow the road to the large parking lot (that hasn’t been graded in a long time). Elevation is 2410 feet. There is a vault toilet. . . . (link to GoogleMaps). [926F+X5 Ricardo, California](#)



Sky Chart



Location: Palmdale, CA 93551
Latitude: 34° 36' N, longitude: 118° 11' W
Time: 2026 April 18, 21:00 (UTC -07:00)

Powered by: Heavens-Above.com

Solar System Summary

The **Sun** starts the month in the middle of Pisces ending the month in southern Aries.

The Planets

Mercury on the morning of the 3rd GWE is achieved and thereafter begins its fall back toward the Sun. On the 20th Mars(at mag 1.2), Saturn(0.8), Mercury(-0.7) and Neptune(7.9) are in conjunction just 22° west of the rising Sun.

Venus, in the evening twilight, starts the month on the edge Aquarius, moving normally across Pisces and at the end of the month crossing into Aries. On the 7th, passes by Saturn and Neptune.

Mars spends the month, in the morning twilight, moving normally from Aquarius into Pisces, at mag 1.2. On the 20th Mars, Saturn, Mercury and Neptune are within a 5° circle

Jupiter still in Gemini, moving in normal motion, at mag -2.3. On the 22nd the 38% waxing Moon, near zenith, passes by less than 4° north.

Saturn still moving in normal motion in southern Pisces and by the end of the month is in a NW corner of Cetus at mag 0.8.

Uranus in normal motion, at mag 5.8 and passes between the Pleiades and the Hyades over the next 6 months. On the 23rd Venus passes by less than 1° north.

Neptune in normal motion in southern Pisces at mag 7.9. On the 12th Mars passes less than 1/3° north. On the 17th Mercury passes 1 1/3° south.

Dwarf Planets

134340 Pluto still moving normally in western Capricorn, at mag 14.4, in the early morning.

1 Ceres spends the month in normal motion moving from the northern edge of Cetus, 4 1/2° south of Venus, then into southern Aries, at mag 9.0.

2 Pallas in the morning twilight moving normally in southern Pisces, and at the end of the month, is at magnitude 10.2.

3 Juno continues moving normally in southern Aquila at mag 10.7.

4 Vesta moves in normal motion, at mag 8, still in central Aquarius.

Moon Phases



First Qtr Apr 23 Full Apr 1 Third Qtr Apr 9 New Apr 17

Sun and Moon Rise and Set*

Date	Moonrise	Moonset	Sunrise	Sunset
4/1/2026	19:13	06:15	06:39	19:14
4/5/2026	23:14	08:13	06:34	19:17
4/10/2026	02:35	12:26	06:27	19:21
4/15/2026	05:08	17:47	06:20	19:25
4/20/2026	08:23	23:53	06:14	19:26
4/25/2026	14:01	03:00	06:08	19:32
4/30/2026	19:04	05:11	06:03	19:36

Planet Data*

April 1

	Rise	Transit	Set	Mag	Phase%
Mercury	05:35	11:17	16:59	0.4	47.3
Venus	07:38	14:14	20:52	-3.9	93.6
Mars	05:58	11:51	17:44	1.2	98.6
Jupiter	12:10	19:20	02:34	-2.3	99.0
Saturn	06:34	12:36	18:39	0.9	100.

April 15

	Rise	Transit	Set	Mag	Phase%
Mercury	05:27	11:24	17:32	-0.02	66.9
Venus	07:32	14:26	21:21	-3.9	94.1
Mars	05:31	11:36	17:41	1.2	98.2
Jupiter	11:21	18:30	01:43	-2.2	99.1
52Saturn	05:43	11:48	17:52	0.9	99.9

April 30

	Rise	Transit	Set	Mag	Phase%
Mercury	05:30	11:56	18:22	-0.8	86.9
Venus	07:33	14:42	21:53	-3.9	87.9
Mars	05:01	11:19	17:37	1.2	97.7
Jupiter	10:31	17:39	00:48	-2.1	99.2
Saturn	04:49	10:55	17:01	0.9	99.9

*Sun, Moon and Planetary date based on Quartz Hill, CA
*All time mentioned are local and approximate.

Suggested Observing List

The list below contains objects that will be visible on the night of the AVAC Deep Sky Star Party or the Saturday nearest the New Moon, in this case April 18, 2026. The list is sorted by the transit time of the object.

ID	Common Name	Type	Const	RA	Dec	Mag	Rise	Transit	Set
M76	Little Dumbbell Nebula	P Neb	Per	01h 42m 18s	+51°34.2'	12.0	02:39	12:50	23:02
NGC651	Apple Core Nebula	P Neb	Per	01h 42m 21s	+51°34.1'	12.2	02:39	12:51	23:02
IC1805	Heart Nebula	Open	Cas	02h 32m 47s	+61°27.6'	6.5	Circ	13:41	Circ
IC1848	Soul Nebula	Open	Cas	02h 51m 18s	+60°24.4'	6.5	Circ	13:59	Circ
NGC1156		Galaxy	Ari	02h 59m 42s	+25°14.2'	11.7	06:49	14:08	21:27
NGC1175		Galaxy	Per	03h 04m 32s	+42°20.3'	12.8	05:32	14:13	22:54
Barnard1		DkNeb	Per	03h 32m 57s	+31°09.0'		06:59	14:41	22:23
Barnard2		DkNeb	Per	03h 33m 31s	+32°19.0'		06:54	14:42	22:29
Barnard3		DkNeb	Per	03h 40m 01s	+31°58.0'		07:02	14:48	22:34
NGC1407		Galaxy	Eri	03h 40m 12s	-18°34.8'	9.8	09:39	14:48	19:58
IC347		Galaxy	Eri	03h 42m 32s	-04°17.9'	13.0	09:00	14:51	20:42
IC348		Open	Per	03h 44m 34s	+32°09.7'	7.3	07:06	14:53	22:39
M45	Pleiades	Open	Tau	03h 47m 30s	+24°07.0'	1.6	07:40	14:56	22:11
Barnard5		DkNeb	Per	03h 47m 53s	+32°53.0'		07:06	14:56	22:46
NGC1461		Galaxy	Eri	03h 48m 27s	-16°23.5'	11.7	09:41	14:57	20:13
IC353		Neb	Tau	03h 53m 00s	+25°48.0'		07:40	15:01	22:22
IC2003		P Neb	Per	03h 56m 22s	+33°52.5'	13.0	07:10	15:05	22:59
NGC1499	California Nebula	Neb	Per	04h 03m 14s	+36°22.0'		07:05	15:11	23:18
NGC1496		Open	Per	04h 04m 32s	+52°39.7'	10.0	04:42	15:13	01:44
NGC1502		Open	Cam	04h 07m 50s	+62°19.8'	5.7	Circ	15:16	Circ
IC360		Neb	Tau	04h 09m 00s	+26°06.0'		07:55	15:17	22:40
NGC1514	Crystal Ball Nebula	P Neb	Tau	04h 09m 17s	+30°46.5'	10.0	07:37	15:17	22:58
NGC1513		Open	Per	04h 09m 57s	+49°30.8'	8.4	05:35	15:18	01:02
IC359		Neb	Tau	04h 12m 28s	+27°42.1'		07:52	15:21	22:49
NGC1535		P Neb	Eri	04h 14m 16s	-12°44.3'	10.0	09:56	15:22	20:49
Barnard10		DkNeb	Tau	04h 18m 41s	+28°16.0'		07:56	15:27	22:57
NGC1545		Open	Per	04h 20m 57s	+50°15.2'	6.2	05:37	15:29	01:22
NGC1569		Galaxy	Cam	04h 30m 49s	+64°50.8'	11.2	Circ	15:39	Circ
Barnard18		DkNeb	Tau	04h 31m 13s	+24°21.0'		08:23	15:39	22:55
NGC1582		Open	Per	04h 31m 53s	+43°49.0'	7.0	06:49	15:40	00:31
NGC1560		Galaxy	Cam	04h 32m 48s	+71°52.7'	11.5	Circ	15:41	Circ
Barnard19		DkNeb	Tau	04h 33m 00s	+26°16.0'		08:18	15:41	23:04
Barnard20		DkNeb	Per	04h 37m 04s	+50°58.0'		05:43	15:45	01:48
Barnard22	B22	DkNeb	Tau	04h 38m 00s	+26°03.0'		08:24	15:46	23:08
Barnard14	B14	DkNeb	Tau	04h 39m 59s	+25°44.0'		08:27	15:48	23:09

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ID	Common Name	Type	Const	RA	Dec	Mag	Rise	Transit	Set
IC2087		Neb	Tau	04h 40m 00s	+25°44.5'		08:27	15:48	23:09
Barnard23		DkNeb	Tau	04h 40m 33s	+29°52.0'		08:12	15:49	23:26
NGC1624		Open	Per	04h 40m 36s	+50°27.6'	10.4	05:53	15:49	01:44
NGC1640		Galaxy	Eri	04h 42m 14s	-20°26.0'	11.7	10:47	15:50	20:54
NGC1647		Open	Tau	04h 45m 55s	+19°06.8'	6.4	08:56	15:54	22:52
IC2118	Witch Head Nebula	Neb	Eri	05h 04m 54s	-07°15.0'		10:30	16:13	21:56
NGC1851	C73	Globular	Col	05h 14m 06s	-40°03.0'	7.3	12:40	16:22	20:05
IC405	Flaming Star Nebula	Neb	Aur	05h 16m 29s	+34°21.3'		08:28	16:25	00:21
M79	NGC1904	Globular	Lep	05h 24m 11s	-24°31.4'	8.5	11:43	16:32	21:22
M38	Starfish Cluster	Open	Aur	05h 28m 40s	+35°50.8'	7.0	08:33	16:37	00:41
M1	Crab Nebula	SNR	Tau	05h 34m 32s	+22°00.8'	8.4	09:35	16:43	23:51
M42	Great Orion Nebula	Open+D Neb	Ori	05h 35m 16s	-05°23.4'	4.0	10:56	16:43	22:31
M43	De Mairan's Nebula	D Neb	Ori	05h 35m 31s	-05°16.0'	9.0	10:56	16:44	22:32
M36	Pinwheel Cluster	Open	Aur	05h 36m 18s	+34°08.3'	6.5	08:49	16:44	00:40
M78	NGC2068	D Neb	Ori	05h 46m 45s	+00°04.8'	8.0	10:52	16:55	22:58
M37	Salt-and-pepper Cluster	Open	Aur	05h 52m 18s	+32°33.2'	6.0	09:12	17:00	00:49
M35	NGC2168	Open	Gem	06h 09m 00s	+24°21.0'	5.5	10:01	17:17	00:33
M41	Little Beehive	Open	CMa	06h 46m 01s	-20°45.3'	5.0	12:52	17:54	22:57
M50	Heart-shaped Cluster	Open	Mon	07h 02m 42s	-08°23.0'	7.0	12:31	18:11	23:50
M47	NGC2422	Open	Pup	07h 36m 35s	-14°29.0'	4.5	13:23	18:45	00:07
M46	NGC2437	Open	Pup	07h 41m 46s	-14°48.6'	6.5	13:29	18:50	00:11
M93	NGC2447	Open	Pup	07h 44m 30s	-23°51.4'	6.5	14:01	18:53	23:45
M48	NGC2548	Open	Hya	08h 13m 43s	-05°45.0'	5.5	13:35	19:22	01:09
M44	Beehive Cluster	Open	Cnc	08h 40m 24s	+19°40.0'	4.0	12:48	19:49	02:49
M67	King Cobra	Open	Cnc	08h 51m 18s	+11°48.0'	7.5	13:23	19:59	02:35
M81	Bode's Galaxy	Galaxy	UMa	09h 55m 33s	+69°03.9'	7.8	Circ	21:04	Circ
M82	Cigar Galaxy	Galaxy	UMa	09h 55m 53s	+69°40.8'	9.2	Circ	21:04	Circ
M95	NGC3351	Galaxy	Leo	10h 43m 58s	+11°42.2'	10.6	15:16	21:52	04:28
M96	NGC3368	Galaxy	Leo	10h 46m 46s	+11°49.2'	10.1	15:19	21:55	04:31
M105	NGC3379	Galaxy	Leo	10h 47m 50s	+12°34.9'	10.5	15:18	21:56	04:34
M108	NGC3556	Galaxy	UMa	11h 11m 31s	+55°40.4'	10.6	Circ	22:20	Circ
M97	Owl Nebula	P Neb	UMa	11h 14m 48s	+55°01.1'	12.0	Circ	22:23	Circ
M65	Leo Triplet	Galaxy	Leo	11h 18m 56s	+13°05.5'	10.1	15:47	22:27	05:07
M66	Leo Triplet	Galaxy	Leo	11h 20m 15s	+12°59.4'	9.7	15:49	22:28	05:08
M109	NGC3992	Galaxy	UMa	11h 57m 36s	+53°22.4'	10.6	12:19	23:06	09:52
M98	NGC4192	Galaxy	Com	12h 13m 48s	+14°54.0'	10.9	16:37	23:22	06:07
M99	Virgo Cluster Pinwheel	Galaxy	Com	12h 18m 50s	+14°25.0'	10.4	16:43	23:27	06:11
M106	NGC4258	Galaxy	CVn	12h 18m 58s	+47°18.2'	9.1	14:07	23:27	08:47

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ID	Common Name	Type	Const	RA	Dec	Mag	Rise	Transit	Set
M61	Swelling Spiral	Galaxy	Vir	12h 21m 55s	+04°28.3'	10.1	17:15	23:30	05:45
M40	Winnecke 4	Dbl+Asterism	UMa	12h 22m 12s	+58°05.0'	8.7	Circ	23:30	Circ
M100	Mirror of M99	Galaxy	Com	12h 22m 55s	+15°49.3'	10.1	16:43	23:31	06:19
M84	NGC4374	Galaxy	Vir	12h 25m 04s	+12°53.2'	10.2	16:54	23:33	06:12
M85	NGC4382	Galaxy	Com	12h 25m 24s	+18°11.4'	10.0	16:38	23:34	06:29
M86	NGC4406	Galaxy	Vir	12h 26m 12s	+12°56.7'	9.9	16:55	23:34	06:14
M49	NGC4472	Galaxy	Vir	12h 29m 47s	+08°00.0'	9.3	17:13	23:38	06:03
M87	Smoking Gun	Galaxy	Vir	12h 30m 49s	+12°23.4'	9.6	17:01	23:39	06:17
M88	NGC4501	Galaxy	Com	12h 31m 59s	+14°25.2'	10.2	16:56	23:40	06:24
M91	Missing Messier Object	Galaxy	Com	12h 35m 27s	+14°29.7'	10.9	17:00	23:44	06:28
M89	NGC4552	Galaxy	Vir	12h 35m 40s	+12°33.3'	10.9	17:06	23:44	06:22
M90	NGC4569	Galaxy	Vir	12h 36m 50s	+13°09.7'	10.2	17:05	23:45	06:25
M58	NGC4579	Galaxy	Vir	12h 37m 44s	+11°49.1'	10.4	17:10	23:46	06:22
M68	NGC4590	Globular	Hya	12h 39m 28s	-26°44.5'	9.0	19:06	23:48	04:29
M104	Sombrero Galaxy	Galaxy	Vir	12h 39m 59s	-11°37.3'	9.2	18:18	23:48	05:18
M59	NGC4621	Galaxy	Vir	12h 42m 02s	+11°38.7'	10.7	17:15	23:50	06:26
M60	NGC4649	Galaxy	Vir	12h 43m 40s	+11°33.1'	9.8	17:17	23:52	06:27
M94	Croc's Eye Galaxy	Galaxy	CVn	12h 50m 53s	+41°07.1'	8.9	15:26	23:59	08:32
M64	Black Eye Galaxy	Galaxy	Com	12h 56m 44s	+21°41.0'	9.3	16:58	00:05	07:12
M53	NGC5024	Globular	Com	13h 12m 55s	+18°10.1'	8.5	17:26	00:21	07:16
M63	Sunflower Galaxy	Galaxy	CVn	13h 15m 49s	+42°01.7'	9.3	15:45	00:24	09:03
NGC5139	Omega Centauri	Globular	Cen	13h 26m 48s	-47°29.0'	3.6	21:44	00:35	03:26
NGC5169		Galaxy	CVn	13h 28m 10s	+46°40.3'	14.0	15:22	00:36	09:51
NGC5204		Galaxy	UMa	13h 29m 36s	+58°25.1'	11.3	Circ	00:38	Circ
M51	Whirlpool Galaxy	Galaxy	CVn	13h 29m 52s	+47°11.7'	8.9	15:19	00:38	09:57
Arp85	M51B	Galaxy	CVn	13h 29m 58s	+47°16.0'	9.6	15:18	00:38	09:58
NGC5182		Galaxy	Hya	13h 30m 41s	-28°09.0'	13.0	20:02	00:39	05:15
NGC5214		Galaxy	CVn	13h 32m 49s	+41°52.3'	14.0	16:03	00:41	09:19
M83	Southern Pinwheel Galaxy	Galaxy	Hya	13h 37m 00s	-29°51.8'	8.0	20:15	00:45	05:15
HR5144	1 Boo	Triple	Boo	13h 40m 40s	+19°57.3'	5.8	17:48	00:49	07:50
NGC5283		Galaxy	Dra	13h 41m 06s	+67°40.3'	14.0	Circ	00:49	Circ
M3	NGC5272	Globular	CVn	13h 42m 11s	+28°22.5'	7.0	17:19	00:50	08:21
NGC5286	C84	Globular	Cen	13h 46m 24s	-51°22.0'	7.6	22:45	00:55	03:04
NGC5292		Galaxy	Cen	13h 47m 40s	-30°56.4'	14.0	20:30	00:56	05:22
NGC5356		Galaxy	Vir	13h 54m 59s	+05°20.0'	14.0	18:46	01:03	07:21
NGC5363		Galaxy	Vir	13h 56m 07s	+05°15.2'	10.2	18:47	01:04	07:22
NGC5447	III-787	Neb	UMa	14h 02m 29s	+54°16.3'		13:56	01:11	12:26
M101	Pinwheel Galaxy	Galaxy	UMa	14h 03m 13s	+54°20.9'	8.2	13:53	01:11	12:30

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ID	Common Name	Type	Const	RA	Dec	Mag	Rise	Transit	Set
NGC5461	III-788	Neb	UMa	14h 03m 42s	+54°19.0'		13:55	01:12	12:29
NGC5485		Galaxy	UMa	14h 07m 11s	+55°00.0'	11.5	Circ	01:15	Circ
NGC5460		Open	Cen	14h 07m 27s	-48°20.6'	5.6	22:33	01:16	03:58
NGC5500		Galaxy	Boo	14h 10m 15s	+48°32.7'	14.0	15:46	01:18	10:51
IC991		Galaxy	Vir	14h 17m 48s	-13°52.3'	13.0	20:02	01:26	06:50
HR5362	SAO224838	DbI	Lup	14h 20m 10s	-43°03.5'	5.6	22:04	01:28	04:52
IC4406	Retina Nebula	P Neb	Lup	14h 22m 26s	-44°09.0'	11.0	22:14	01:31	04:47
HR5409	HD126868	Triple	Vir	14h 28m 12s	-02°13.6'	4.8	19:40	01:36	07:33
NGC5669		Galaxy	Boo	14h 32m 44s	+09°53.4'	12.0	19:10	01:41	08:11
NGC5689		Galaxy	Boo	14h 35m 30s	+48°44.5'	11.9	16:09	01:44	11:18
M102	Spindle Galaxy (duplicate of M101?)	Galaxy	Dra	15h 06m 30s	+55°45.7'	10.8	Circ	02:15	Circ
NGC5875		Galaxy	Boo	15h 09m 13s	+52°31.6'	13.0	15:49	02:17	12:46
NGC5907	Splinter Galaxy	Galaxy	Dra	15h 15m 54s	+56°19.7'	11.4	Circ	02:24	Circ
NGC5882		P Neb	Lup	15h 16m 50s	-45°38.9'	11.0	23:19	02:25	05:31
NGC5897		Globular	Lib	15h 17m 24s	-21°00.6'	8.6	21:24	02:26	07:27
M5	NGC5904	Globular	Ser	15h 18m 33s	+02°04.9'	7.0	20:18	02:27	08:35
Barnard228	B228	DkNeb	Lup	15h 44m 00s	-34°30.0'		22:42	02:52	07:03
IC4593	White Eyed Pea	P Neb	Her	16h 11m 44s	+12°04.3'	11.0	20:43	03:20	09:57
IC4592	Jabbah	Neb	Sco	16h 11m 59s	-19°27.4'		22:14	03:20	08:27
M80	NGC6093	Globular	Sco	16h 17m 03s	-22°58.5'	8.5	22:30	03:25	08:20
IC4601		Neb	Sco	16h 20m 18s	-20°04.9'		22:24	03:28	08:33
Abell38		P Neb	Sco	16h 23m 17s	-31°44.9'	11.7	23:09	03:31	07:54
M4	Cat's Eye, NGC6121	Globular	Sco	16h 23m 35s	-26°31.5'	7.5	22:49	03:32	08:14
IC4603	Rho Ophiuchi Complex	Neb	Oph	16h 25m 24s	-24°28.0'		22:44	03:34	08:23
IC4604	Rho Ophiuchi Complex	Neb	Oph	16h 25m 33s	-23°26.5'		22:40	03:34	08:27
NGC6124	C75	Open	Sco	16h 25m 36s	-40°40.0'	5.8	23:55	03:34	07:13
Abell39		P Neb	Her	16h 27m 33s	+27°54.5'	12.9	20:07	03:36	11:05
IC4605		Neb	Sco	16h 30m 12s	-25°06.8'		22:51	03:38	08:26

And - Andromeda
Ant - Antlia
Aps - Apus
Aql - Aquila
Aqr - Aquarius
Ara - Ara
Ari - Aries
Aur - Auriga
Boo - Bootes
Cae - Caelum
Cam - Camelopardis
Cap - Capricornus
Car - Carina
Cas - Cassiopeia
Cen - Centaurus
Cep - Cepheus
Cet - Cetus
Cha - Chamaeleon

Cir - Circinus
CMa - Canis Major
CMi - Canis Minor
Cnc - Cancer
Col - Columba
Com - Coma Berenices
CrA - Corona Australis
CrB - Corona Borealis
Crt - Crater
Cru - Crux
Crv - Corvus
CVn - Canes Venatici
Cyg - Cygnus
Del - Delphinus
Dor - Dorado
Dra - Draco
Equ - Equuleus
Eri - Eridanus

For - Fornax
Gem - Gemini
Gru - Grus
Her - Hercules
Hor - Horologium
Hya - Hydra
Hyi - Hydrus
Ind - Indus
Lac - Lacerta
Leo - Leo
Lep - Lepus
Lib - Libra
LMi - Leo Minor
Lup - Lupus
Lyn - Lynx
Lyr - Lyra
Men - Mensa
Mic - Microscopium

Mon - Monoceros
Mus - Musca
Nor - Norma
Oct - Octans
Oph - Ophiuchus
Ori - Orion
Pav - Pavo
Peg - Pegasus
Per - Perseus
Phe - Phoenix
Pic - Pictor
PsA - Pisces Austrinus
Psc - Pisces
Pup - Puppis
Pyx - Pyxis
Ret - Reticulum
Scl - Sculptor
Sco - Scorpius

Sct - Scutum
Ser - Serpens
Sex - Sextans
Sge - Sagitta
Sgr - Sagittarius
Tau - Taurus
Tel - Telescopium
TrA - Triangulum Australe
Tri - Triangulum
Tuc - Tucana
UMa - Ursa Major
UMi - Ursa Minor
Vel - Vela
Vir - Virgo
Vol - Volans
Vul - Vulpecula

Greek Alphabet

α - alpha ν - nu
β - beta ξ - xi
γ - gamma ο - omicron
δ - delta π - pi
ε - epsilon ρ - rho
ζ - zeta σ - sigma
η - eta τ - tau
θ - theta υ - upsilon
ι - iota φ - phi
κ - kappa χ - chi
λ - lambda ψ - psi
μ - mu ω - omega

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