

IAAS Monthly Astronomy Newsletter April 2025



The International Association for Astronomical Studies provides this newsletter as a service for interested persons worldwide.

This newsletter is published on the World Wide Web at [The Home of K1ØAR](#) - and is received nationally and internationally. Download the [PDF](#) formatted version of the newsletter.



An Open Invitation - For amateur radio operators and scanner enthusiasts around the world, please join the Colorado Astronomy Net on the [Rocky Mountain Radio League's K1DUN](#) repeater on **449.450 MHz** or other digital and analog repeaters, Allstar nodes, Echolinks, DMR and internet links connected to the [SKYHUBLINK](#) system. The net meets on Tuesday nights at 7 P.M. Mountain Time (US) (Wednesday at 0200 GMT). Connecting to the SkyHubLink system has expanded our coverage in the U.S., Canada and internationally. All Amateur radio operators worldwide are welcome. Anyone may listen to the net. The RMRL provides a "[Live Audio Feed](#)" using Broadcastify.

Obtain your Amateur Radio (Ham) License or your General Radio Operator's License (GROL)! Visit the [South Metro VE Team](#) website for more information. The South Metro VE Team provides test sessions by appointment only. Check the website for current information. All others interested in Amateur Radio, check out the [Amateur Radio Relay League](#) website to find out more information about becoming an Amateur Radio operator.

The [Colorado Astronomy Net](#) and the [IAAS](#) are on Facebook page. Be sure to "Like" us.

Donate to the [IAAS](#)!
Your contributions are tax deductible.
Thank you for your support!



Excerpts from JPL mission updates are provided as a public service as part of the [JPL Solar System Ambassador / NASA Outreach](#) program.



"Two Lyrid meteors streak away from the shower's radiant in this 2023 photo. Also visible is a dim aurora to the northeast." Astronomy Magazine, April 2025, p. 28. - Alan Dyer

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The [Month At-A-Glance](#)

The current month's calendar displaying the daily astronomical events.

The Moon

Phases:

- First Quarter Moon occurs on the 4th.
- Full Moon occurs on the 12th.
- Last Quarter Moon occurs on the 20th.
- New Moon occurs on the 27th.

- The Moon is at [apogee](#) (252,460 miles from Earth) on the 13th.
- The Moon is at [perigee](#) (221,903 miles from Earth) on the 27th.

Moon/Planet Pairs:

- The Moon passes 5° north of Uranus on the 1st.
- The Moon passes 6° north of Jupiter on the 2nd.
- Mars passes 4° south of Pollux on the 2nd.
- The Moon passes 2° north of Mars on the 5th.
- The Moon passes 0.3° south of Spica on the 12th.
- Mercury passes 0.7° south of Neptune on the 16th.
- The Moon passes 0.4° south of Antares on the 16th.
- The Moon passes 0.7° south of Pluto on the 21st.
- The Moon passes 2° south of Venus on the 24th.
- The Moon passes 2° north of Saturn on the 24th.
- The Moon passes 1.9° north of Neptune on the 25th.
- The Moon passes 4° north of Mercury on the 25th.
- The Moon passes 5° north of Uranus on the 28th.
- Venus passes 4° north of Saturn on the 28th.
- The Moon passes 5° north of Jupiter on the 30th.

For reference: The Full Moon subtends an angle of $\sim 0.5^\circ$.



[Calendar of All Astronomical Events 2025](#)

[Weekly Rocket Report](#)

Courtesy of "The Rocketman" Ed W6RDZ
Updated Weekly on Tuesday evenings
prior to the Colorado Astronomy Net

The Planets & Dwarf Planets

[Planetary Reports](#) are generated by "[TheSkyX](#)" software. These reports provide predicted data for the planets on the first of each month for the current year. The rise and set times for the Sun and the Moon for each day of the month as well as meteor shower radiants are also included in the reports. These reports have been optimized for the Denver, Colorado location, however, the times will be approximate for other locations on Earth.

(Times are Mountain Time (MST/MDT) unless otherwise noted. Times will vary slightly depending on your location.)

Planetary Highlights for April

"The planets offer exciting views in April. Jupiter is a brilliant object in the evening sky, although the observing window narrows as the Sun sets later each day. Mars is past its best, but remains bright and high in the sky. Mercury, Venus, and Saturn make an early-morning appearance before sunrise. And a special treat is the annual Lyrid meteor shower, which peaks in the month's third week." Astronomy Magazine, April 2025, p. 28.



Mercury

Is [stationary](#) on the 6th. Mercury is at greatest western [elongation](#) (27°) on the 21st. Mercury rises at 6:06 a.m. on the 1st and about 5:10 a.m. by month's end. Mercury is visible about 30 minutes before sunrise just above the eastern horizon. Mercury is in the [constellation](#) of [Pisces](#) shining at [magnitude](#) 0.1 on the 30th.



Venus

Is [stationary](#) on the 10th. Venus is at greatest brilliancy (magnitude -4.8) on the 27th. Venus rises about 5:37 a.m. on the 1st and about 4:15 a.m. by month's end. Look for Venus to the east about before sunrise. Venus is in the constellation of [Pisces](#) shining at magnitude -4.7 on the 30th.



Let Venus guide the way to Mercury and Saturn, standing side by side in the early-morning sky April 12. ALL ILLUSTRATIONS: ASTRONOMY PHOTO NEWS



Earth

N/A.



Mars

Sets at 3:35 a.m. on the 1st and about 2:13 a.m. by month's end. Mars is at [aphelion](#) (154.9 million miles from the Sun) on the 16th. Look for Mars to the south-southwest in the evening. Mars moves from the constellation of [Gemini](#) into [Cancer](#) shining at magnitude 0.7.



By the end of April, Mars is just 2" north-west of M41, the Beehive Cluster.



Jupiter

Sets at 12:44 a.m. on the 1st and about 11:07 p.m. by month's end. Jupiter is easy to spot to the southwest in the evening sky. Jupiter is in the constellation of [Taurus](#) shining at magnitude -2.0.



This chart shows the location of Ganymede just as it is about to start disappearing into Jupiter's long, dark shadow. Callisto lies outside this field of view, farther to the west.



Saturn

Rises at 6:13 a.m. on the 1st and about 4:23 a.m. by month's end. Look for Saturn very low to the east before sunrise. Saturn moves from the constellation of [Aquarius](#) into [Pisces](#) shining at magnitude 1.2.



Uranus

Sets at 10:56 p.m. on the 1st and about 9:05 p.m. by month's end. Look for Uranus to the southwest soon after sunset. Uranus is in the constellation [Taurus](#) shining at magnitude 5.8.



Neptune

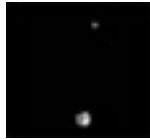
Rises at 6:23 a.m. on the 1st and about 4:27 a.m. by the month's end. Look for Neptune to the east following Saturn by just a few minutes all month. Neptune is in the constellation of [Pisces](#) shining at magnitude 7.8.

Dwarf Planets



Ceres

Rises at 6:17 a.m. on the 1st and about 4:48 a.m. by month's end. Ceres is lost in the morning twilight glow until the end of the month. Ceres is in the constellation of [Aquarius](#) shining at magnitude 9.3.



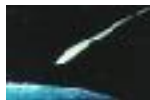
Pluto

Rises at 4:04 a.m. on the 1st and about 2:07 a.m. by month's end. Pluto can be spotted before sunrise to the east. Pluto is in the constellation of [Capricornus](#) shining at magnitude 15.3.

As always, good luck at spotting Neptune, Ceres and Pluto, a large telescope and dark skies will be needed.

Constellation information provided by [Go Astronomy](#).

Astronomical Events



Meteor Showers

- "SKIES WILL BE DARK for the annual Lyrid [meteors](#), which are active from April 14 to 30. On the day of the peak, April 22, there's a waning crescent Moon that doesn't rise until nearly 4 A.M. The radiant of the shower, near Vega in Lyra the Lyre, is already 30° high by midnight, offering many hours to catch the fleeting meteors as they skip into Earth's atmosphere and burn up.

An older meteor shower, the Lyrids are associated with the 416-year orbit of Comet C/1861 G1 (Thatcher). Its debris has spread out with time, reducing the hourly rate to modest amounts. The Lyrids are expected to produce about 20 meteors per hour once the radiant is nearly overhead, which occurs in the hour before dawn. Expect lower rates in the earlier-morning hours." Astronomy Magazine, April 2025, p. 29.



For more information about Meteor Showers, visit Gary Kronk's [Meteor Showers Online](#) web page.

[Meteor Shower Radiant Report](#)

[Meteor Scatter](#) (or Meteor burst communications) -- "is a radio [propagation mode](#) that exploits the [ionized](#) trails of [meteors](#) during [atmospheric entry](#) to establish brief communications paths between [radio stations](#) up to 2,250 kilometres (1,400 mi) apart." Tune your shortwave or your HF amateur radio to 54.310 MHz USB CW and see if you

can hear any pings. Try other frequencies as well... 6m FT8 digital - 50.313 Mhz & 50.276 Mhz, JP-65 digital mode and the carrier frequencies of the lower VHF bands for TV channels 2, 3 & 4.

[Meteor Rx How-To](#) by Terry Bullett (WØASP).

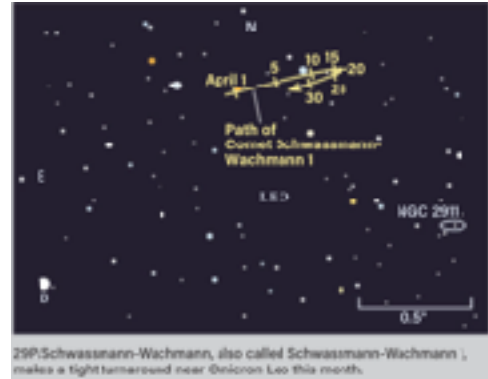


Comets

- [Comet 29P/Schwassmann-Wachmann](#) is in the constellation of [Leo](#) this month, shining at 11th magnitude. An 8-inch telescope or better will be needed to spot this elusive object.

For information, orbital elements and ephemerides on observable comets visit [Observable Comets](#).

For more information about Comets, check out Gary Kronk's 6-volume series of books on [Cometography](#).



29P/Schwassmann-Wachmann, also called Schwassmann-Wachmann 1, makes a tight turnaround near Orion Leo this month.

Eclipses



- No [solar eclipse](#) activity this month.
- No [lunar eclipse](#) activity this month.

Observational Opportunities

(from evening to morning)

- Look for Uranus, Jupiter and Mars in the evening to the west.
- Look for Pluto, Ceres, Saturn, Mercury, Venus and Neptune in the morning to the east.

Asteroids

(From west to east)

- **Flora** is in the constellation of [Leo](#).
- **Vesta** is in the constellation of [Libra](#).

Information about the Minor Planets can be found at the [MinorPlanet.info](#) web site.



Also in Leo this month, Flora is located near the Lion's back end, with several galaxies nearby.

Occultations



Information on various [occultations](#) can be found at the [International Occultation Timing Association's \(IOTA\)](#) web site.

Member Meteor Sightings

In this section I will post meteor, fireball, etc sightings that have been published on the [American Meteor Society](#)'s web site. I want to make this an active section of the web pages and newsletter and would like to publish the links to member sightings. If you have any published sightings, please provide me with the links and I will post them here for all to enjoy.

<u>Event ID</u>	<u>Date/Time</u>	<u>Location</u>	<u>Observer</u>	<u>Link</u>
3871-2015	2015-11-13 01:55 MST	CO	Charles N	3871a
3587-2015	2015-11-22 17:38 MST	CO	Kevin S	3587aw
3829-2015	2015-12-05 18:06 MST	CO	Burness A	3829a
986-2020	2020-02-21 22:20 MST	CO	Lukas S	986
3716-2020	2020-07-24 23:22 MDT	CO	Lukas S	3716
4774-2021	2021-08-13 21:57 MDT	UT	Lukas S	4774
7044-2021	2021-10-28 20:37 MDT	CO	Burness A	249058
6763-2022	2022-10-06 05:56 CDT	OK	Mike C	6763
5300-2023	2023-09-11 22:04 MDT	CO	Lukas S	5300
578-2024	2024-01-28 23:05 MST	CO	Lukas S	578

[Subscriber Gallery](#)

I have created a web page containing images taken and submitted by subscribers (or special images) to the email newsletter, check-ins to the Colorado Astronomy Net and readers of the online newsletter and some of my own images. Anyone wishing to submit their images to the gallery, please send me an email. The images must be taken by the submitter and be astronomy related. Please include a description and your information so that I can give proper credit to your work. I will post the most recent submissions here.

Lunar Eclipse March 14, 2025

Courtesy of Bryan Gunsher (K6SKI)

Images taken March 2025



A lunar eclipse occurs when the Earth passes between the Sun and the Moon, casting a shadow of the Earth onto the Moon, which can only happen during a full moon.



Planetary/Lunar Exploration Missions

(Excerpts from recent mission updates)



JPL Latest News

The Latest from Space

[The Origin of JPL](#) (a Youtube video-1 Hour 29 minutes).



James Webb Space Telescope

Information on the James Webb Space Telescope mission is available at [The James Webb Space Telescope](#) website.

The public can follow the mission on [Facebook](#), [Twitter](#) and [YouTube](#).



Juno

Information on the Juno mission is available at [Juno](#) and [Mission Juno](#). Images from NASA's [JunoCam](#).

The public can follow the mission on [Facebook](#) and [Twitter](#).



TESS

Information on the TESS mission can be found on the [Latest Tess News](#) page.

[Past, Present, Future and Proposed JPL Missions](#)

For special JPL programs and presentations in your area visit the [JPL Solar System Ambassador](#) web site.

Mars Missions

[Be A Martian](#)



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<http://mars.jpl.nasa.gov>
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JMARS

[JMARS](#) is an acronym that stands for Java Mission-planning and Analysis for Remote Sensing. It is a geospatial information system (GIS) developed by ASU's Mars Space Flight Facility to provide mission planning and data-analysis tools to NASA's orbiters, instrument team members, students of all ages, and the general public.



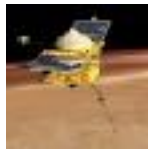
Laboratory for Atmospheric and Space Physics

"The Laboratory for Atmospheric and Space Physics (LASP) at the University of Colorado Boulder (CU) began in 1948, a decade before NASA. We are the world's only research institute to have sent instruments to all eight planets and Pluto.



LASP

Visit the [LASP](#) website for latest news and information.



MAVEN

Visit the [MAVEN](#) website for latest news and information.



Mars 2020 - Perseverance

Visit the [Mars 2020 \(Perseverance\)](#) mission website for mission information and news updates.



Mars Science Laboratory - Curiosity

Visit the [Mars Science Laboratory](#) website for mission information and news updates.

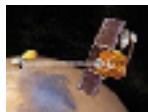


Mars Reconnaissance Orbiter Mission

Mars Reconnaissance Orbiter HIRISE Images

View all of the archived [HiRISE](#) images.

More information about the [MRO](#) mission is available online.



Mars Odyssey Orbiter

Daily Mars Odyssey THEMIS Images

Thermal Emission Imaging System ([THEMIS](#)) web site.

Visit the [Mars Odyssey Mission](#) website for mission information and news updates.

Mars Missions Status

New Mars missions are being planned to include several new rover and sample collection missions. Check out the [NASA Mars Exploration](#) web page.

[Astronomy Links and Other Space News](#)

(If you have a link you would like to recommend to our readers, please feel free to submit it.)

[Colorado Astronomy Links](#)

[Radio Astronomy Links](#)

[More Astronomy Links](#)

Acknowledgments and References

Much of the information in this newsletter is from "Astronomy Magazine" (Kalmbach Publishing), JPL mission status reports, "Meteor Showers - A Descriptive Catalog" by Gary W. Kronk and other astronomical sources that I have stashed on my book shelves.

The author will accept any suggestions, constructive criticisms, and corrections. Please feel free to send me any new links or articles to share as well. I will try to accommodate any reasonable requests. Please feel free to send questions, comments, criticisms, or donations to the email address listed below. Enjoy!

Subscription Information

- Email Newsletter [archives](#).
- [Full documentation](#) of the online administration system.
- The latest version of the [newsletter](#).

Keep looking UP!

73 from KIØAR

Created by Burness F. Ansell, III

[Email](#)

COO, Director of Aerospace Technologies, IAAS

JPL Solar System Ambassador, Colorado

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