

IAAS Monthly Astronomy Newsletter June 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 KIØAR](#) - 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 0100 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.

**The [Colorado Astronomy Net](#) is now on YouTube!!
All are welcome to join us Tuesday evenings!**

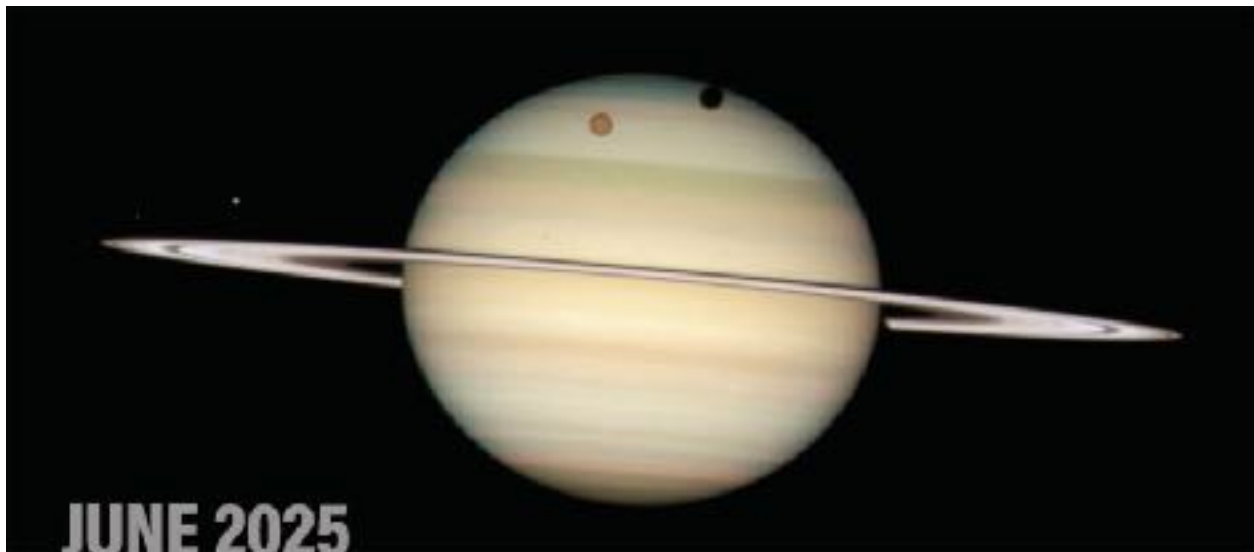
Obtain your Amateur Radio (Ham) License or your General Radio Operator's License (GROL)! Visit the [South Metro VE Team](#) website for more information. The South Metro VE Team provides test sessions by appointment only. Check the website for current information. All others interested in Amateur Radio,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



"Huge Titan and its shadow transit the disk of Saturn in this 2009 Hubble Space Telescope image. Also visible transiting with its shadow is Mimas, closer to the rings; Dione and Enceladus lie above the rings at left. Such shadow transits of Titan can occur around ring-plane crossings, such as the one in 2009 and earlier this year." Astronomy Magazine, June 2025, p. 28. - NASA, ESA, AND THE HUBBLE HERITAGE TEAM (STSCI/AURA); ACKNOWLEDGMENT: M.H. WONG (STSCI/UC BERKELEY) AND C. GO (PHILIPPINES)

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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 2nd.
- Full Moon occurs on the 11th.
- Last Quarter Moon occurs on the 18th.
- New Moon occurs on the 25th.

- The Moon is at [apogee](#) (251,999 miles from Earth) on the 8th.
- The Moon is at [perigee](#) (225,668 miles from Earth) on the 23rd.



Moon/Planet Pairs:

- The Moon passes 1.4° north of Mars on the 1st.
- The Moon passes 0.5° south of Spica on the 6th.
- Mercury passes 2° north of Jupiter on the 7th.
- The Moon passes 0.3° south of Antares on the 10th.
- The Moon passes 0.1° south of Pluto on the 14th.
- Mars passes 0.8° north of Regulus on the 16th.
- The Moon passes 3° north of Saturn on the 18th.
- The Moon passes 2° north of Neptune on the 18th.
- The Moon passes 7° north of Venus on the 22nd.
- Mercury passes 5° south of Pollux on the 22nd.
- The Moon passes 5° north of Uranus on the 22nd.
- The Moon passes 3° north of Mercury on the 27th.
- Saturn passes 1.0° south of Neptune on the 29th.
- The Moon passes 0.2° north of Mars on the 29th.

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 June

"The innermost planets straddle nighttime, with Mercury in the evening and the greatest western elongation of Venus in the morning. Jupiter joins Mercury in early twilight for a few evenings, both setting quickly. Distant Mars lingers with Leo after dark, as our own planet hustles along its orbit well ahead of the Red Planet. Saturn is visible in the early hours, as Neptune hangs nearby and is in conjunction with the ringed planet on the 29th. Uranus reappears in the morning sky before dawn." Astronomy Magazine, June 2025, p. 28.

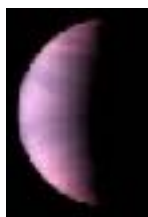
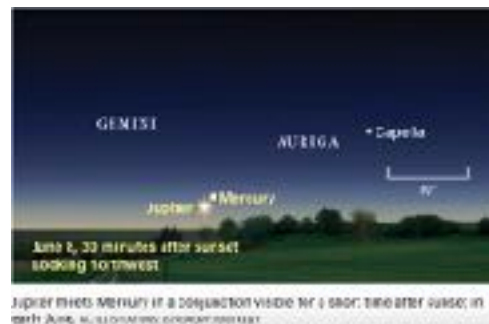


Mercury

Sets at 8:41 p.m. on the 1st and about 10:03 p.m. by month's end. Mercury is visible about 30 minutes after sunset just above the western horizon.

Mercury moves from the [constellation](#) of [Taurus](#) into [Cancer](#) shining at

[magnitude](#) 0.3 on the 30th.



Venus

Rises about 3:28 a.m. on the 1st and about 2:59 a.m. by month's end. Look for Venus to the east about an hour before sunrise. Venus moves from the constellation of [Pisces](#) into [Taurus](#) shining at magnitude -4.3 on the 15th.



Earth

Summer [solstice](#) occurs at 10:42 p.m. EDT on the 20th.



Mars

Sets at 12:53 a.m. on the 1st and about 11:34 p.m. by month's end. Look for Mars to the southwest in the evening. Mars is in the constellation of [Leo](#) shining at magnitude 1.4.



Jupiter

Is in [conjunction](#) with the Sun on the 24th. Jupiter sets at 9:35 p.m. on the 1st. After conjunction, Jupiter returns to the morning sky, rising about 5:16 a.m. by month's end. Jupiter is rapidly

approaching the western horizon as, so get out during the first two weeks of June to catch Jupiter before it sets. Jupiter moves from the constellation of [Taurus](#) into [Gemini](#) shining at magnitude -1.9.



Thanks to our current viewing angle, Titan's shadow is only Saturn this month, concurrent with a transit of Enceladus and its shadow. Although the latter two are closer, you may still likely see them as against the bright disk.



Saturn

Rises at 2:28 a.m. on the 1st and about 12:33 a.m. by month's end. Look for Saturn low to the east before sunrise. Saturn is in the constellation of [Pisces](#) shining at magnitude 1.1.



Uranus

Rises at about 4:52 a.m. on the 1st and about 2:59 a.m. by month's end. Look for Uranus to the east before sunrise, very low to the horizon. Uranus is in the constellation [Taurus](#) shining at magnitude 5.8.



Neptune

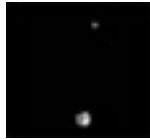
Rises at 2:27 a.m. on the 1st and about 12:33 a.m. by the month's end. Look for Neptune to the east following Saturn by just a couple of minutes all month. Neptune is in the constellation of [Pisces](#) shining at magnitude 7.8.

Dwarf Planets



Ceres

Rises at 3:13 a.m. on the 1st and about 1:39 a.m. by month's end. Ceres can be spotted low to the southeast before sunrise. Ceres is in the constellation of [Cetus](#) shining at magnitude 9.2.



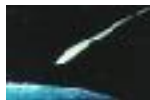
Pluto

Rises at 12:04 a.m. on the 1st and about 10:01 p.m. by month's end. Pluto can be spotted before sunrise to the south. Pluto is in the constellation of [Capricornus](#) shining at magnitude 15.2.

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

- **The Arietids Meteor Showers** - This is the strongest daylight [meteor shower](#) of the year. The duration extends from May 22 to July 2, with maximum activity occurring on June 8. The hourly rate is near 60 at maximum.
- **The June Lyrids** - This shower is active during June 10 to 21, producing predominantly blue and white meteors at a maximum hourly rate of 8 per hour on June 15. The average magnitude of this shower is near 3, while 32% of the meteors leave trains.
- **The Zeta Perseids** - This daylight shower occurs during May 20 to July 5. Maximum occurs on June 13. Radar surveys have revealed the activity of this shower to be near 40 per hour.
- **The June Boötids** - This shower is currently active during June 27 to July 5 and possesses a maximum of activity that falls on the 28th... The shower is notable in that its meteors are primarily faint, with an average magnitude near 5; however, bright meteors do occur regularly.

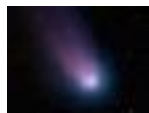
For more information about Meteor Showers, visit Gary Kronk's [Meteor Showers Online](#) web page.

[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 1](#) is still in the constellation of [Leo](#) this month, and may glow around 11th magnitude. Look for the comet during the last 2 weeks of the month when the Moon will not interfere with observing. An 8-inch telescope or better will be needed well away from city lights to spot this elusive object.



This month, we'll continue to track faint 21P, also known as Comet Schwassmann-Wachmann 1 -- and hope for an unexpected visitor. Keep an eye on [www.kelsoobservatory.com](#) for updates.

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](#).

Eclipses



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

Observational Opportunities

(from evening to morning)

- Look for 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)

- **Vesta** is in the constellation of [Virgo](#).
- **Pallas** is in the constellation of [Pegasus](#).
- **Hebe** is in the constellation of [Aquarius](#).

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



Vesta takes a compact, curving path in Virgo this month, tracked by M. and his Virginia.

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
2864-2025	2025-05-19 20:29 PDT	NV	Kenneth T	375753

[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.

M20 - The Triffid Nebula

Courtesy of Roy Murray (KI7PKL)

Image taken May 2025



"M20, The Triffid Nebula, is located in the constellation of Sagittarius, which puts it far to the south for many of us in the northern hemisphere, so it was a matter of catching it through the treetops. I imaged this a couple summers ago, but wasn't very happy with how it came out. But I revisited it, armed with two years more experience in processing, as well as some updated software having features that weren't available two years ago. (GraXpert, StarNet, and Siril). "

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](#)



Mars website mobile version is here!
Simply type
<http://mars.jpl.nasa.gov>
into your mobile browser.

Mars on the Go! NASA Be A Martian Mobile App

If you want the latest news as it happens, try out the "Be A Martian" app.

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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.



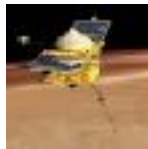
Laboratory for Atmospheric and Space Physics

"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.

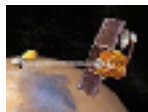


Mars Reconnaissance Orbiter Mission

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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