IAAS Monthly Astronomy Newsletter August 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.

"Venus (the brighter object at upper left) and Jupiter approach a twilight conjunction in late June 2015. The two planets meet in the morning sky this month." Astronomy Magazine, August 2025, p. 28. - Alan Dyer

In This Newsletter...

The Month At-A-Glance

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

The Moon

Phases:

- First Quarter Moon occurs on the 1st.
- Full Moon occurs on the 9th.
- Last Quarter Moon occurs on the 16th.
- New Moon occurs on the 23rd.
- First Quarter Moon occurs on the 31st.

- The Moon is at apogee (251,134 miles from Earth) on the 1st.
- The Moon is at perigee (229,465 miles from Earth) on the 14th.
- The Moon is at apogee (251,374 miles from Earth) on the 29th.

Moon/Planet Pairs:

- The Moon passes 0.6° south of Antares on the 3rd.
- Saturn passes 1.1° south of Neptune on the 6th.
- The Moon passes 0.009° north of Pluto on the 8th.
- Venus passes 0.9° south of Jupiter on the 12th.
- The Moon passes 4° north of Saturn on the 12th.
- The Moon passes 3° north of Neptune on the 12th.
- The Moon passes 5° north of Uranus on the 16th.
- The Moon passes 5° north of Jupiter on the 19th.
- The Moon passes 5° north of Venus on the 20th.
- Venus passes 7° south of Pollux on the 21st.
- The Moon passes 4° north of Mercury on the 21st.
- The Moon passes 3° south of Mars on the 26th.
- The Moon passes 1.2° south of Spica on the 27th.
- The Moon passes 0.7° south of Antares on the 31st.

For reference: The Full Moon subtends an angle of ~0.5°.

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.

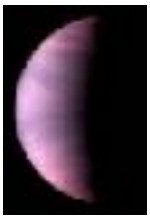
(Times are Mountain Time (MST/MDT) unless otherwise noted. Times will vary slightly depending on your location.)

Planetary Highlights for August

"The longer nights of August beckon with several treats this month. Saturn and Neptune undergo their second conjunction of the year, appearing together in a low-power telescope eyepiece. Telescopic observers also get two shadow transits of Titan across Saturn. Early risers enjoy a spectacular conjunction of the two brightest planets in the sky, Venus and Jupiter, on Aug. 12, the same day the Perseid meteor shower peaks." Astronomy Magazine, August 2025, p.28.

Mercury

Is stationary on the 10th. Mercury is at greatest western elongation (19°) on the 19th. Mercury rises at 6:09 a.m. on the 1st and about 5:30 a.m. by month's end. Mercury is visible about 30 minutes before sunrise just above the eastern horizon after the first week of the month. Mercury moves from the constellation of Cancer into Leo shining at magnitude 0.7 on the 15th.



Venus

Rises about 3:04 a.m. on the 1st and about 3:52 a.m. by month's end. Look for Venus to the southeast about an hour before sunrise. Venus moves from the constellation of Gemini into Cancer shining at magnitude -3.9 on the 15th.

By Aug. 31, Venus has moved into Cancer and rises together with M44 in the morning sky. Binoculars will show the pairing best.

Earth

N/A.

Mars

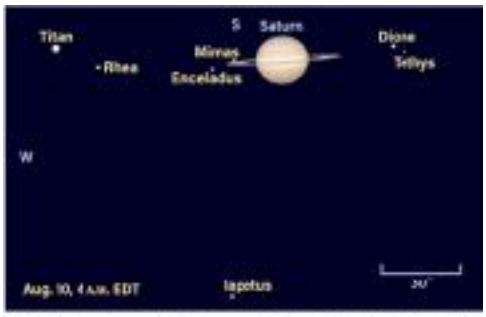
Sets at 10:15 p.m. on the 1st and about 8:58 p.m. by month's end. Look for Mars to the west in the evening. Mars is in the constellation of Virgo shining at magnitude 1.6.

Jupiter

Rises at 3:46 a.m. on the 1st and about 2:13 a.m. by month's end. Look for Jupiter to the southeast about an hour before sunrise. Jupiter is in the constellation of Gemini shining at magnitude -1.9.

Saturn

Rises at 10:28 p.m. on the 1st and about 8:22 p.m. by month's end. Look for Saturn low to the east late in the evening. Saturn is in the constellation of Pisces shining at magnitude 0.7.



Iapetus is visible north of Saturn overnight on Aug. 9/10 as it heads for western elongation. Saturn's other bright moons also cluster nearby; some will be easier to spot than others.

Uranus

Rises at about 1:01 a.m. on the 1st and about 8:20 p.m. by month's end. Look for Uranus to the south before sunrise. Uranus is in the constellation Taurus shining at magnitude 5.7.

Neptune

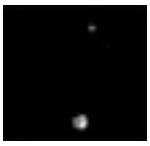
Rises at 10:24 p.m. on the 1st and about 10:24 p.m. by the month's end. Look for Neptune low to the east late in the evening leading Saturn by just a few of minutes all month. Neptune is in the constellation of Pisces shining at magnitude 7.7.

Saturn and Neptune undergo a conjunction Aug. 6. Neptune is only visible using a telescope or binoculars; both planets will appear together in a low-power telescope eyepiece.

Dwarf Planets

Ceres

Is stationary on the 15th. Ceres rises at 11:51 p.m. on the 1st and about 9:55 p.m. by month's end. Ceres can be spotted low to the south after midnight. Ceres is in the constellation of Cetus shining at magnitude 8.4.



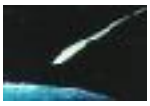
Pluto

Rises at 7:57 p.m. on the 1st and about 5:53 p.m. by month's end. The best time to spot Pluto is around midnight when it is highest in the sky to the south. Pluto is in the constellation of Capricornus shining at magnitude 15.1.

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 Northern Delta Aquarids** [meteor shower] extends from July 16 to September 10. Maximum occurs on August 13. The hourly rates reach a high of 10.

- **The Perseids** meteor shower is generally visible between July 23 and August 22. Maximum occurs during August 12/13. The hourly rate typically reaches 80, although some years have been as low as 4 and as high as 200. The meteors tend to be very fast, possess an average magnitude of 2.3 and leave persistent trains.

"A FULL MOON Aug. 9 significantly affects the visibility of Perseid meteors. By Aug. 12, the night of the Perseids' peak, the Moon rises around 10 P.M. local daylight time and remains up the rest of the night, just as the shower's radiant in Perseus is climbing higher in the sky.

But all is not lost the Perseid meteor shower carries some of the brightest meteors, which are always visible even with moonlight. You can improve the visibility of fainter meteors by traveling to higher altitudes (above 5,000 feet), where a thinner atmosphere reduces the scattered light of the Moon, rendering the sky darker. Even so, observed rates this year will be well below the advertised peak. Set your expectations at a dozen per hour.

The Perseids are active from July 17 through Aug. 24. The earlier part of the shower occurs under a dark Moon. On Aug. 1, for example, the First Quarter Moon sets around midnight. The radiant reaches a respectable 50° in altitude by 4 A.M. local daylight time. The moonless skies diminish by nearly an hour each day.

The Perseids are associated with Comet 109P/Swift-Tuttle, which last reached perihelion in 1992 and returns again in a century." Astronomy Magazine, August 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 C/2024 E1 (Wierzchoś) is passing through the constellation of Hercules this month shining around 12th magnitude, so a 10 inch scope or greater and dark skies will be needed to view it.

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

Asteroids

(From west to east)

- **Vesta** is in the constellation of Libra.
- **Pallas** is at opposition on the 7th in the constellation of Delphinus.
- **Julia** is at opposition on the 11th in the constellation of Capricornus.
- **Hebe** is at opposition on the 26th in the constellation of Aquarius.

Information about the Minor Planets can be found at the MinorPlanet.info web site.

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.

Event ID	Date/Time	Location	Observer	Link
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.

LBN 168 - The Tulip Nebula

Courtesy of Roy Murray (KI7PKL)

Image taken October 2024

"The Tulip Nebula is located in the star-rich constellation of Cygnus. Imaged in October 2024 with around 14 hours of exposures, and processed with Siril, GraXpert, and StarNet image processing software."

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.
Download on Mobile Devices
Android | iPhone | Windows Phone

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.

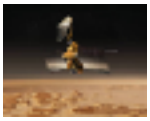
Laboratory for Atmospheric and Space Physics
"The Laboratory for Atmospheric and Space Physics (LASP) at the University of Colorado Boulder (CU) began in 1948, a decade before NASA. We are the world's only research institute to have sent instruments to all eight planets and Pluto.

LASP
Visit the LASP website for latest news and information.

MAVEN
Visit the MAVEN website for latest news and information.

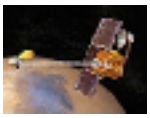
Mars 2020 - Perseverance
Visit the Mars 2020 (Perseverance) mission website for mission information and news updates.

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.
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- The latest version of the newsletter.

Keep looking UP!

73 from KIØAR
Created by Burness F. Ansell, III
Email

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JPL Solar System Ambassador, Colorado
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