

PRESS RELEASE AUGUST 2025






ASTRONOMICAL DIARY

PREPARED BY ASTRONOMICAL PUBLICATION AND PLANETARIUM UNIT, SPACE SCIENCE AND ASTRONOMY SECTION

ASTRONOMICAL EVENTS, AUGUST 2025

DATE	EVENT	TIME
02	Moon at Apogee (Distance = 404,090.282 km)	04:36 a.m.
10	Planetary Alignment of Saturn, Neptune, Uranus, Jupiter, Venus, and Mercury	---
12	Close approach of Venus and Jupiter	02:39 p.m.
12	Conjunction of Venus and Jupiter	04:00 p.m.
12	Close approach of the Waning Gibbous Moon and Saturn	08:01 p.m.
12	Conjunction of the Waning Gibbous Moon and Saturn	11:18 p.m.
12	Perseid meteor shower (ZHR = 150)	---
15	Moon at Perigee (Distance = 369,321.514 km)	01:59 a.m.
17	κ-Cygnid meteor shower (ZHR = 3)	---
19	Mercury at highest altitude in morning sky	---
19	Mercury at greatest elongation west	05:48 p.m.
20	Conjunction of the Waning Crescent Moon and Jupiter	05:04 a.m.
20	Close approach of the Waning Crescent Moon and Jupiter	06:23 a.m.
20	Conjunction of the Moon and Venus	06:50 p.m.
21	Mercury at dichotomy	06:19 p.m.
22	Conjunction of the Moon and Mercury	12:15 a.m.
26	Close approach of the Moon and Mars	09:59 p.m.
27	Conjunction of the Moon and Mars	12:41 a.m.
29	Moon at Apogee (Distance = 404,478.388 km)	11:34 p.m.

PHASES OF THE MOON

	First Quarter Aug 01 08:41 p.m.
	Full Moon Aug 09 03:55 p.m.
	Last Quarter Aug 16 01:12 p.m.
	New Moon Aug 23 02:06 p.m.
	First Quarter Aug 31 02:25 p.m.

RISE AND SET TIMES OF PLANETS

DATE	MERCURY		VENUS		MARS		JUPITER		SATURN	
	Rise	Set	Rise	Set	Rise	Set	Rise	Set	Rise	Set
Aug 01	05:41 am	06:11 pm	02:54 am	03:48 pm	09:00 am	09:07 pm	03:40 am	04:34 pm	09:23 pm	09:27 am*
Aug 11	04:41 am	05:19 pm	03:05 am	03:59 pm	08:45 am	08:48 pm	03:10 am	04:04 pm	08:43 pm	08:46 am*
Aug 21	04:25 am	05:08 pm	03:17 am	04:08 pm	08:32 am	08:29 pm	02:40 am	03:33 pm	08:02 pm	08:05 am*
Aug 31	04:52 am	05:29 pm	03:30 am	04:16 pm	08:19 am	08:10 pm	02:09 am	03:01 pm	07:21 pm	07:23 am*



PAGASA RADIO TELESCOPE ASTRONOMY PICTURE OF THE MONTH

In a major step for Philippine astronomy, the Philippine Atmospheric, Geophysical and Astronomical Services Administration (PAGASA) acquired and installed the country's first radio telescope in November 2018. Located at the Tanay Synoptic and Upper-Air Station in Rizal, this 5.3-meter dish is now used to monitor the Sun, observe planets, and study other cosmic radio sources.

Philippine Space Week, celebrated annually from August 8 to 14 under Proclamation No. 302 (s. 2023), aims to raise public awareness of space science and technology. In celebration of this year's Philippine Space Week, the Philippine Space Agency (PhilSA) is leading a nationwide telescope viewing activity, with PAGASA participating as one of its key partners.

Image credit: Mendoza, L.P.

Notes:

[1] All times displayed are in Philippine Standard Time (PhST);

[2] *following day

"tracking the sky...helping the country"

Science Garden Compound, Senator Miriam P. Defensor-Santiago Avenue
Brgy. Central, Quezon City, Metro Manila, Philippines

Telephone Number: 8-284-0800 loc 3015, 3016, 3017
Website: <https://bagong.pagasa.dost.gov.ph>

Stars and Constellations

August is a great time to stargaze at the fascinating constellations in both the Northern and Southern Hemispheres. Displayed in the north are the constellations **Lyra**, **Aquila**, and **Sagitta**, while lying in the south are **Scutum**, **Sagittarius**, **Corona Australis**, **Triangulum**, and **Pavo**. The prominent constellations are positioned directly overhead at 09:00 p.m. on 15 August 2025 as shown in Figure 1. [1]

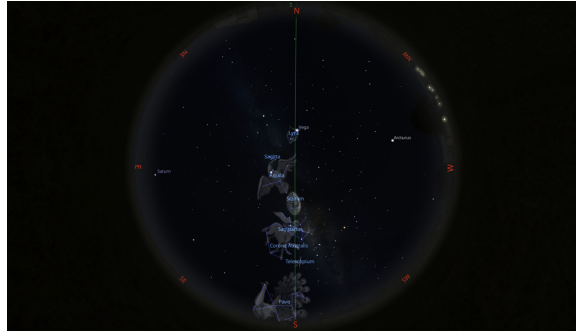


Figure 1: The view of the night sky featuring the prominent August constellations at 09:00 p.m. on 15 August 2025 using the Stellarium software.

A highlight for observers in the Northern Hemisphere is the **Summer Triangle** [Figure 2], a renowned asterism that serves as a great starting point for finding other constellations. The Summer Triangle is formed by stars Vega in Lyra, Altair in Aquila, and Deneb in Cygnus, with Cygnus being particularly outstanding in the subsequent month. [2]

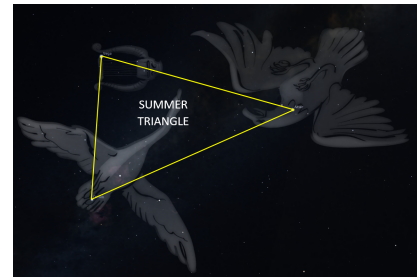


Figure 2: The Summer Triangle asterism

Lyra, the harp, is a small but easily recognizable constellation, renowned for its brightest star, Vega. With an apparent magnitude of 0.026, Vega ranks as the fifth-brightest star in the sky and shines 40 times brighter than the Sun. This white main-sequence star lies only 25 light-years from Earth. Another significant star in Lyra is Beta Lyrae, also known as Sheliak, an eclipsing binary star system. Lyra is home to several fascinating deep-sky objects that have become objects of interest for both amateur and professional astronomers. The Ring Nebula (M57) is one of the most well-known planetary nebulae, which is made up of ionized gas that was expelled by a star in its dying phase. Among the other noteworthy objects in the Lyra constellation is NGC 6745 [Figure 3a], an irregular galaxy formed by three galaxies that are in the process of merging. [2,3]

Aquila, or the eagle, is a prominent feature of the northern sky that lies along the celestial equator, making it visible from both hemispheres. It can be easily spotted by Altair, its brightest star and the twelfth (12th) in the sky, shining at magnitude 0.76. Located at a mere 16.73 light-years away, this white main-sequence star is among the closest stars visible to the human eye. Along with its interesting stars, the Aquila constellation also harbors a variety of compelling deep-sky features. The Phantom Streak Nebula (NGC 6741) [Figure 3b] glows faintly as a small disk in the vast expanse, barely visible to amateur telescopes. Nearby, the Glowing Eye Nebula (NGC 6751) captivates with its intricate shell structure and high level of ionization. Both are part of a group of planetary nebulae in Aquila, including the Snow Globe Nebula (NGC 6781) [Figure 3c]. [2,4]

Scutum is one of the smallest constellations, occupying 109 square degrees of the sky. Though it is not known for exceptionally bright stars, with Alpha Scuti, its brightest star, having an apparent magnitude of only 3.83, it does contain some notable stellar objects. Among them is the red supergiant UY Scuti, a massive star estimated to be 1,700 times the size of the Sun, considered as the largest ever identified. Scutum may be modest in size, but its placement within the Milky Way makes it rich in nebulae and star clusters. The constellation hosts the Wild Duck Cluster (Messier 11) [Figure 4a], an open cluster with an apparent magnitude of 5.8. Named for its resemblance to a flying flock of ducks, it is recognized as one of the densest, richest, and most massive open clusters in the sky. Beyond the captivating Wild Duck Cluster, Scutum is also home to NGC 6664 and Messier 26, both remarkable open clusters. These clusters offer further points of interest for observers exploring the constellation. [2,5]

Another small and faint constellation in the sky, **Corona Australis** is just slightly larger in area than Scutum. Known for its crown-like arc of stars, the constellation also houses a variety of intriguing astronomical objects of interest. The constellation's brightest star, Alpha Coronae Australis—also known as Meridiana—is a G-type

yellow-white giant with an apparent magnitude of 4.10. Alongside Beta, Gamma, Delta, and Epsilon Coronae Australis, it helps define the constellation's recognizable crown-like formation. Within Corona Australis lies the Corona Australis Molecular Cloud, a nearby region of active star formation characterized by a blend of bright and dark nebulae. This cloud contains a variety of reflection nebulae, notably NGC 6729 [Figure 4b], IC 4812 [Figure 4c], and NGC 6726/6727. [2,6]



Figure 3: The Northern Constellations



Figure 4: The Southern Constellations

Planetary Location

In August, **Mars** will be visible in the western sky after dusk, staying in view until it dives below the horizon. **Saturn** will rise in the east in the evening, adding its glow to the night sky. **Venus** and **Jupiter** can be seen, alongside Saturn, in the pre-dawn hours, but they will eventually be lost in the glare of the Sun. **Mercury** will be positioned low along the eastern horizon, with its best visibility towards the middle until the end of the month, before it becomes obscured by the brightness of the Sun. [1]

Beginning 10 August, the early morning sky will showcase a *planetary alignment* featuring **Saturn**, **Neptune**, **Uranus**, **Jupiter**, **Venus**, and **Mercury** [Figure 5]. Among them, Saturn, Jupiter, Venus, and Mercury will be readily visible to the naked eye, while Neptune and Uranus will require a modest telescope or high-powered binoculars for observation. [1]

Venus and **Jupiter** will pass very close to each other at 02:39 p.m. on 12 August, with only 51.6' separating them. At 04:00 p.m., they will align in the same right ascension, with Venus passing 51.6' to the south of Jupiter. Both will be located in Gemini, with Venus shining at magnitude -4.0 and Jupiter at magnitude -1.9. Though these events take place with the Sun's presence, the best time to view their close pairing will be at 05:00 a.m. [Figure 6]. [7,8,9]

At 08:01 p.m. on the same day, the **Waning Gibbous Moon** and **Saturn** will pass within 3°33' of one another, marking their appulse. Later, at 11:18 p.m., they will reach conjunction, with a separation of 4°03'. The exact timing of their conjunction will be visible in the night sky as depicted in Figure 7. [7,10,11]

Mercury will reach its *greatest elongation west*, on 19 August at 05:48 p.m., attaining a maximum angular separation of 18.6° from the Sun in its morning apparition. On the same day, it will also reach its highest altitude in the morning sky, shining with an apparent magnitude of -0.2. Two days later, at 06:19 p.m., Mercury will undergo *dichotomy*, entering its half-phase. [7,12,13,14]



Figure 5: The view of the night sky showing the planetary alignment of the six (6) planets – Saturn, Neptune, Uranus, Jupiter, Venus, and Mercury on 18 August at 05:00 a.m. using Stellarium.



Figure 6: The view of the eastern sky showing the close pairing of Venus and Jupiter on 12 August at 05:00 a.m. using Stellarium.



Figure 7: The view of the eastern sky showing the conjunction of the Waning Gibbous Moon and Saturn on 12 August at 11:18 p.m. using Stellarium.

On 20 August, the **Waning Crescent Moon** will align with **Jupiter** in the early morning sky, coming within $4^{\circ}46'$, marking their conjunction at 05:04 a.m., and drawing even closer—just $4^{\circ}42'$ apart—after about an hour. Later in the day at 06:50 p.m., the **Moon** will also be in conjunction with **Venus**, separated by $4^{\circ}52'$, but the two are already below the horizon at that exact moment. The trio—Moon, Jupiter, and Venus—will form a noticeable triangle in the eastern sky at 05:04 a.m. [Figure 8], also presenting the conjunction of Moon and Jupiter. These celestial bodies, shining behind the constellation Gemini, will appear brightly, with the Moon at magnitude -10.4 , Venus at -4.0 , and Jupiter at -2.0 . [7,15,16,17]



Figure 8: The view of the eastern sky showing the close encounter of the Moon, Jupiter and Venus on 20 August at 05:04 a.m. using Stellarium.

The **Moon** and **Mercury** will share the same right ascension at 12:15 a.m. on 22 August, with the Moon passing $3^{\circ}42'$ north of Mercury. While this alignment happens below the horizon, the pair can be seen lying low in the eastern sky from 05:00 a.m. [Figure 9] and remain visible briefly before fading into the Sun's glare. [7]



Figure 9: The view of the eastern sky showing the pairing of the Moon and Mercury on 22 August at 05:00 a.m. using Stellarium.



Figure 10: The view of the western sky showing the close pairing of the Moon and Mars on 26 August at 06:45 p.m. using Stellarium.

The **3-day-old Moon** and **Mars** will be in close proximity, on 26 August at 09:59 p.m., passing within $2^{\circ}27'$ of one another. On the following day at 12:41 a.m., they will be in conjunction, with the Moon positioned $2^{\circ}47'$ south of Mars. Both objects will be situated within the boundaries of the constellation Virgo, which will be below the horizon at the time of these events. The best time to view their close encounter will be from 06:45 p.m. on 26 August, as they remain visible until they set in the western sky. [18,19]

All the conjunctions and near approaches mentioned between the planet and the moon, or planet to planet, will be visible enough to fit within the field of view of a telescope and can also be viewed with the naked eye or using a pair of binoculars.

Meteor Shower

The **Perseid meteor shower**, one of the most anticipated annual events for skywatchers, is active from **17 July to 24 August**, with a strong peak occurring on **12 August**. Under dark skies, it is expected to generate about 150 meteors per hour during the peak. The Perseids originate from debris left by Comet 109P/Swift-Tuttle and appear to radiate from the constellation Perseus. Visibility of the shower begins at approximately 10:06 p.m. each night, when its radiant point rises above the eastern horizon, and continues until dawn begins around 05:16 a.m. The ideal time to observe the shower is around 05:00 a.m. to 06:00 a.m., when the radiant is positioned highest in the sky [Figure 11]. At the time of the shower's peak, the Moon will be in its last quarter phase in the constellation Pisces, causing considerable interference with meteor viewing. [20]



Figure 11: The view of the north-northwestern sky during the peak of the Perseid meteor shower on 12 August 2025 at 05:00 a.m. when the shower's radiant is represented by the green solid circle.



Figure 12: The view of the northern sky during the peak of the κ -Cygnid meteor shower on 17 August 2025 at 09:00 p.m., when the shower's radiant is represented by the green solid circle.

The κ -Cygnids is a subtle meteor shower active from 03-25 August, with its peak on 17 August. Radiating from the constellation Draco, the shower produces a modest 3 meteors per hour. The shower is visible each night from dusk until around 04:59 a.m., with the best displays expected around 09:00 p.m., when the radiant point is at its highest [Figure 12]. With the peak occurring close to the new moon, moonlight will have minimal impact on meteor observation. [21,22]

Meteor showers are observable through the naked eye, and no special equipment such as telescopes or binoculars is needed. Maximize the viewing experience by choosing a dark observation site away from the city lights under clear and moonless sky conditions.

Original signed:

Mr. MICHAEL S. BALA
OIC, RDTD

24 July 2025

For more information, call or email:

Ms. MA. ROSARIO C. RAMOS
Chief, SSAS-RDTD
PAGASA-DOST
Quezon City
Trunkline: 8284-0800 local 3015, 3016, 3017
Email address: astronomy@pagasa.dost.gov.ph

Calendar of Astronomical Events for August 2025

Table 1 shows a summary of the astronomical events for August 2025. All times displayed are in Philippines Standard Time (PhST).

Table 1: The summary of astronomical events for August 2025

Date	Event	Time
02	Moon at Apogee (Distance = 404,090.282 km)	04:36 a.m.
10	Planetary Alignment of Saturn, Neptune, Uranus, Jupiter, Venus, and Mercury	—
12	Close approach of Venus and Jupiter	02:39 p.m.
12	Conjunction of Venus and Jupiter	04:00 p.m.
12	Close approach of the Waning Gibbous Moon and Saturn	08:01 p.m.
12	Conjunction of the Waning Gibbous Moon and Saturn	11:18 p.m.
12	Perseid meteor shower (ZHR = 150)	—
15	Moon at Perigee (Distance = 369,321.514 km)	01:59 a.m.
17	κ -Cygnid meteor shower (ZHR = 3)	—
19	Mercury at highest altitude in morning sky	—
19	Mercury at greatest elongation west	05:48 p.m.
20	Conjunction of the Waning Crescent Moon and Jupiter	05:04 a.m.
20	Close approach of the Waning Crescent Moon and Jupiter	06:23 a.m.
20	Conjunction of the Moon and Venus	06:50 p.m.
21	Mercury at dichotomy	06:19 p.m.
22	Conjunction of the Moon and Mercury	12:15 a.m.
26	Close approach of the Moon and Mars	09:59 p.m.
27	Conjunction of the Moon and Mars	12:41 a.m.
29	Moon at Apogee (Distance = 404,478.388 km)	11:34 p.m.

References

- [1] PAGASA Special Publication No. 840; The Philippine Star Atlas 2019/Stellarium Software
- [2] C. Guide, “Constellations: A Guide to the Night Sky.” <https://www.constellation-guide.com/constellations-by-month/july-constellations/>, Last accessed on 2025-07-16, 2025.
- [3] Go Astronomy, “LYRA CONSTELLATION” <https://www.go-astronomy.com/constellations.php?Name=Lyra>, Last accessed on 2025-07-16, 2025.
- [4] Go Astronomy, “AQUILA CONSTELLATION” <https://www.go-astronomy.com/constellations.php?Name=Aquila>, Last accessed on 2025-07-16, 2025.
- [5] Go Astronomy, “SCUTUM CONSTELLATION” <https://www.go-astronomy.com/constellations.php?Name=Scutum>, Last accessed on 2025-07-16, 2025.
- [6] Go Astronomy, “CORONA AUSTRALIS CONSTELLATION” <https://www.go-astronomy.com/constellations.php?Name=Corona%20Australis>, Last accessed on 2025-07-16, 2025.
- [7] Multi-Interactive Computer Almanac (MICA), Last accessed on 2025-06-19, 2025.
- [8] D. Ford, “In-The-Sky.org Guide to the night sky: “Close approach of Venus and Jupiter”” https://in-the-sky.org/news.php?id=20250812_15_100, Last accessed on 2025-06-19, 2025.
- [9] D. Ford, “In-The-Sky.org Guide to the night sky: “Conjunction of Venus and Jupiter”” https://in-the-sky.org/news.php?id=20250812_20_100, Last accessed on 2025-07-16, 2025.
- [10] D. Ford, “In-The-Sky.org Guide to the night sky: “Close approach of the Moon and Saturn”” https://in-the-sky.org/news.php?id=20250812_15_101, Last accessed on 2025-07-16, 2025.
- [11] D. Ford, “In-The-Sky.org Guide to the night sky: “Conjunction of the Moon and Saturn”” https://in-the-sky.org/news.php?id=20250812_20_101, Last accessed on 2025-07-16, 2025.
- [12] D. Ford, “In-The-Sky.org Guide to the night sky: “Mercury at greatest elongation west”” https://in-the-sky.org/news.php?id=20250819_11_101, Last accessed on 2025-07-16, 2025.
- [13] D. Ford, “In-The-Sky.org Guide to the night sky: “Mercury at highest altitude in morning sky”” https://in-the-sky.org/news.php?id=20250819_11_100, Last accessed on 2025-07-16, 2025.
- [14] D. Ford, “In-The-Sky.org Guide to the night sky: “Mercury at dichotomy”” https://in-the-sky.org/news.php?id=20250821_11_100, Last accessed on 2025-07-16, 2025.
- [15] D. Ford, “In-The-Sky.org Guide to the night sky: “Conjunction of the Moon and Jupiter”” https://in-the-sky.org/news.php?id=20250819_20_100, Last accessed on 2025-07-16, 2025.
- [16] D. Ford, “In-The-Sky.org Guide to the night sky: “Close approach of the Moon and Jupiter”” https://in-the-sky.org/news.php?id=20250819_15_100, Last accessed on 2025-07-16, 2025.
- [17] D. Ford, “In-The-Sky.org Guide to the night sky: “Conjunction of the Moon and Venus”” https://in-the-sky.org/news.php?id=20250820_20_100, Last accessed on 2025-07-16, 2025.
- [18] D. Ford, “In-The-Sky.org Guide to the night sky: “Close approach of the Moon and Mars”” https://in-the-sky.org/news.php?id=20250826_15_100, Last accessed on 2025-07-16, 2025.
- [19] D. Ford, “In-The-Sky.org Guide to the night sky: “Conjunction of the Moon and Mars”” https://in-the-sky.org/news.php?id=20250826_20_100, Last accessed on 2025-07-16, 2025.
- [20] D. Ford, “In-The-Sky.org Guide to the night sky: “Perseid meteor shower 2025”” https://in-the-sky.org/news.php?id=20250812_10_100, Last accessed on 2025-07-16, 2025.
- [21] D. Ford, “In-The-Sky.org Guide to the night sky: “ κ -Cygnid meteor shower 2025”” https://in-the-sky.org/news.php?id=20250818_10_100, Last accessed on 2025-07-16, 2025.
- [22] IMO – International Meteor Observation “List of Meteor Showers for Observation Session” https://www.imo.net/members/imo_showers/working_shower_list, Last accessed on 2025-07-16, 2025.