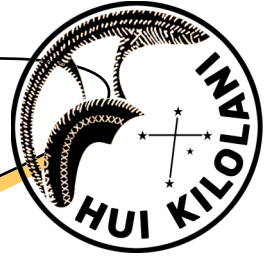


THE ASTRONEWS



Volume 75, Issue 11

November 2025

www.hawastsoc.org

A word from your editor by
Sapavith 'Ort' Vanapruch

Bill should be returning to the island by now. Hopefully, our classified section & more guest speakers will be available. We have a guest speaker lined up for November. His name is Larry Denneau from UH IFA. Please check Page 9 for more info. His talk will be around 45-60 minutes. Please prepare your photos to share if we have extra time.

The 2025 - 2026 school year is almost halfway through, the request for a school star party will continue to come in. There will also be other organizations like Boy Scouts or Girl Scouts requests that would come in. Your involvement will help with bringing in more club memberships and promoting the club.

We helped out Bishop Museum's Star Tonight on Friday, 10/17/2025. There was only 1 group attending The Stars Tonight. I was the only HAS member there. Weather was not quite cooperating this evening. We were able to show Saturn for a little while.

There was one school event in October. That was the Halemano Elementary School Star Party on Wednesday, 10/22/2025. 5 HAS members (Ed, Jim, Lelani, Ort & Peter) were there to help out. We had 4 telescopes and 2 binoculars set up to view night objects. Our main targets were Saturn (when it was not hiding in the clouds) and comet C/2025 A6 (Lemmon) (Photo to follow). The first and second groups were able to see both objects. However, when the 3rd group arrived, comet A6 has set. They could only

(Continued on page 11)

Inside this issue:

Club Information	2
President's Message	2
Observer's Notebook	3
Meeting Minutes	4
Event Calendar	5
NASA's Comet 3i/ATLAS	6
Meteor Log	7
Treasurer's Report	8
Vice President's Message	9

Upcoming Events:

- The next Board meeting is Sun., Nov. 2nd 3:30 PM. **(Zoom Meeting)**
- The next meeting is on Tue., Nov. 4th at the Bishop Museum at 7:30 PM. —**Hybrid (In person and Zoom) Meeting**
- Bishop Museum's planetarium show "Star Tonight!" is every 3rd Friday, 11/21/2025, of the month at 7:00 PM.

President's Message

November 2025

A young protoplanet has been imaged orbiting a star (WISPIT 2) about 437 light years from Earth. WISPIT 2b was imaged using the University of Arizona's MagAO-X extreme adaptive optics system on the Magellan 2 telescope at Las Campanas Observatory in Chile. The gas giant, 5 times Jupiter's mass, appears in a gap in the disc of gas and dust surrounding its host star and is still growing.

It is remarkable that we now have the ability to image exoplanets from the surface of the Earth. Our atmosphere will always be a problem no matter how good our technology gets, so we need to observe from outside it to optimize our results. Space telescopes have been a great leap forward in capability, but they are very expensive and don't approach the aperture of the largest ground-based telescopes. There is another alternative.

We are on the leading edge of a new age of lunar exploration. The number of robotic missions to the Moon has greatly increased in recent years, and NASA is planning to send humans back to the surface. The Chinese will not be far behind (perhaps even ahead). Permanent human habitation on the Moon will probably soon follow. This will open up many possibilities for astronomical observing.

With no atmosphere, a very stable surface, and 1/6 Earth's gravity, the Moon provides a platform where conventional telescopes could be built on a larger scale than on Earth and could operate continuously since no scattered light would impede daytime viewing. One major obstacle to overcome would be protection from lunar dust. It can be elevated electrostatically, so some precautions to protect the telescopes would be required.

Interferometry would be another possibility. This involves combining data from a distributed array of telescopes. It can achieve the resolution of a telescope with an aperture equal to the distance separating the components (although it wouldn't gather nearly as much light). A recent workshop sponsored by the Keck Institute for Space Studies at Caltech concluded that milli- to micro-arcsecond resolutions could be achieved from the Moon (or lunar orbit). Small demonstration missions could be carried out by available spacecraft, so exciting days may lie not too far in the future.

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THE ASTRONEWS is the monthly newsletter of the Hawaiian Astronomical Society. Some of the contents may be copyrighted. We request that authors and artists be given credit for their work. Contributions are welcome. Send them to the Editor via e-mail. The deadline is the last Wednesday of each month. We are not responsible for unsolicited artwork.

Observer's Notebook—November 2025 by Ort










Planets Close to the Moon Times are Hawaii Standard Time

- Nov 1, 23h, Moon 3.2° NNW of Saturn; 136° from Sun in evening sky; magnitudes -11.7 and 0.9
- Nov 2, 6h, Moon 2.51° NNW of Neptune; 139° from Sun in evening sky; magnitudes -11.8 and 7.8
- Nov 6, 6h, Moon 5.1° NNW of Uranus; 164° from Sun in morning sky; magnitudes -12.5 and 5.6
- Nov 10, 0h, Moon 3.8° NNE of Jupiter; 113° from Sun in morning sky; magnitudes -11.0 and -2.4
- Nov 18, 19h, Moon 5.4° SSW of Venus; 12° from Sun in morning sky; magnitudes -5.1 and -3.9
- Nov 19, 22h, Moon 5.3° SSW of Mercury; 5° and 1° from Sun in morning sky; magnitudes -4.3 and 6.1
- Nov 21, 2h, Moon 4.4° S of Mars; 14° and 13° from Sun in evening sky; magnitudes -5.3 and 1.4
- Nov 29, 7h, Moon 3.3° NNW of Saturn; 107° from Sun in evening sky; magnitudes -10.8 and 1.0
- Nov 29, 14h, Moon 2.66° NNW of Neptune; 111° from Sun in evening sky; magnitudes -10.9 and 7.9

Other Events of Interest Times are Hawaii Standard Time

- Nov 2, 1h, Moon, Saturn, and Neptune within circle of diameter 4.39°; about 137° from the Sun in the evening sky; magnitudes -12, 1, 8
- Nov 4, 14h, Southern Taurid meteors; ZHR 7; 1 day before Full Moon
- Nov 6, 5h, Moon, Uranus, and the Pleiades within circle of diameter 5.07°; about 164° from the Sun in the morning sky; magnitudes -12, 6, 3
- Nov 11, 14h, Northern Taurid meteors; ZHR 5; near Last Quarter Moon
- Nov 16, 14h, Leonid meteors; ZHR 10; 3 days before New Moon
- Nov 21, 0h, Moon, Mars, and Antares within circle of diameter 4.55°; about 13° from the Sun in the evening sky; magnitudes -5, 1, 1
- Nov 29, 10h, Moon, Saturn, and Neptune within circle of diameter 4.59°; about 109° from the Sun in the evening sky; magnitudes -11, 1, 8

Planets in November

<p> Mercury</p> <p>will soon pass in front of the Sun at inferior solar conjunction. From Honolulu, it is not observable – it will reach its highest point in the sky during daytime and is 2° below the horizon at dusk.</p>	<p> Venus</p> <p>will soon pass behind the Sun. From Honolulu, however, it is visible in the dawn sky, rising at 05:42 (HST) – 58 minutes before the Sun.</p>	<p> Mars</p> <p>will soon pass behind the Sun at solar conjunction. From Honolulu, it is not observable – it will reach its highest point in the sky during daytime and is no higher than 2° above the horizon at dusk.</p>
<p> Jupiter</p> <p>is currently visible as a morning object. From Honolulu, it is visible in the morning sky, becoming accessible around 22:40, when it reaches an altitude of 7° above your eastern horizon.</p>	<p> Saturn</p> <p>is currently an early evening object. From Honolulu, it is visible in the evening sky, becoming accessible around 18:19 (HST), 48° above your south-eastern horizon, as dusk fades to darkness.</p>	<p> Uranus</p> <p>is currently approaching opposition. From Honolulu, it is visible between 19:44 and 05:37. It will become accessible at around 19:44, when it rises to an altitude of 21° above your eastern horizon.</p>
<p> Neptune</p> <p>is currently an early evening object. From Honolulu, it is visible in the evening sky, becoming accessible around 18:43 (HST), 51° above your south-eastern horizon, as dusk fades to darkness.</p>	<p> Pluto (Dwarf Planet)</p> <p>will become visible at around 18:43 (HST), 39° above your south-western horizon, as dusk fades to darkness. It will then sink towards the horizon, setting at 22:30.</p>	<p> 1 Ceres (Asteroid)</p> <p>is visible in the evening sky, becoming accessible around 18:43 (HST), 40° above your south-eastern horizon, as dusk fades to darkness.</p>

October 7th 2025 7:30 PM (Bishop Museum Planetarium and Zoom Meeting)

Andy Stroble

It was reiterated that the gate at Dillingham/Kawaihapai Airfield now closes at 6:00pm rather than the summer 7:00 pm time.

President Chris moved to accept Minutes from the previous meetings, Sue Girard seconded, passed unanimously.

Discussion on renewing City park and State DOT permits. Mark will do Kahala again.

Joe shared an 11-hour astrophoto, done in collaboration with Michael Kinzer, of the Bubble Nebula, as well as shots of the Crescent, Pelican, and Wizard nebulae.

Ort announced our speaker for next month, Larry Denneau, whom he heard speak at Honolulu Science Café last month, speaking on 3I/ATLAS.

Tom Presented photos of the clubs table at Bishop Museum on Dino-nite

Treasurer Peter shared photos from his third Vaonis Vespera of NGC 7000 (North American Nebula) and the Pelican.

Tom led us through reports of a meteor in the West on October 2nd, AMS showed 31 reports. The object was rather slow, prompting speculation it was space junk rather than an actual meteor.

Steven shared recent work on imaging M16, the Eagle Nebula (14 hours!), Ort shared an image of Comet 2025 R2 SWAN. Shane presented shots of the Bowtie Nebula, the Helix, NGC 1535 (Cleopatra's Eye), and C2025 A6 Lemmon.

The assembled members viewed the YouTube video: Part 4 of PixInsight for Dummies "OSC Workflow" by Peter Zelinka. (https://www.youtube.com/watch?v=YcRltb_GcQ).

Meeting adjourned at 9:00 There were some 10 persons in person, and at least 7 unique non-local logins on zoom.

Faithfully submitted,
James Andy Stroble, Secretary.
Honolulu, Hawaii



Hubble Surveys Cloudy Cluster

This NASA/ESA Hubble Space Telescope image released on Sept. 12, 2025, features a cloudy starscape from an impressive star cluster. This scene is in the Large Magellanic Cloud, a dwarf galaxy situated about 160,000 light-years away in the constellations Dorado and Mensa.

@NASAHubble

Hawaiian Astronomical Society
Event Calendar

November 2025						
◀ Oct						Dec ▶
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
						1
2 BoD Meeting 3:30 PM Zoom	3	4 Election Day General Meeting Planetarium 7:30PM Hybrid	5  Full Moon 3:19AM Beaver Moon	6	7	8
9	10	11 Veterans Day  3rd Qtr 7:28PM	12	13	14	15 Club Star Party Dillingham Airfield CANCELLED
16	17	18	19  New Moon 8:47PM	20 	21 The Star Tonight Bishop Museum (1 show)	22 Public Star Party Dillingham Airfield CANCELLED
23	24	25	26	27 Thanksgiving Day  1st Qtr 8:58PM	28	29 Public Star Party Geiger/Kahala Sunset 5:48PM
30	Notes:					

<<Upcoming Star Parties>>

Public Party-Dillingham November 15 — CANCELLED
Club Party Dillingham November 22 — CANCELLED
Public Party Geiger/Kahala November 29 — 5:48 PM

Upcoming School Star Parties

Date	Time	Location

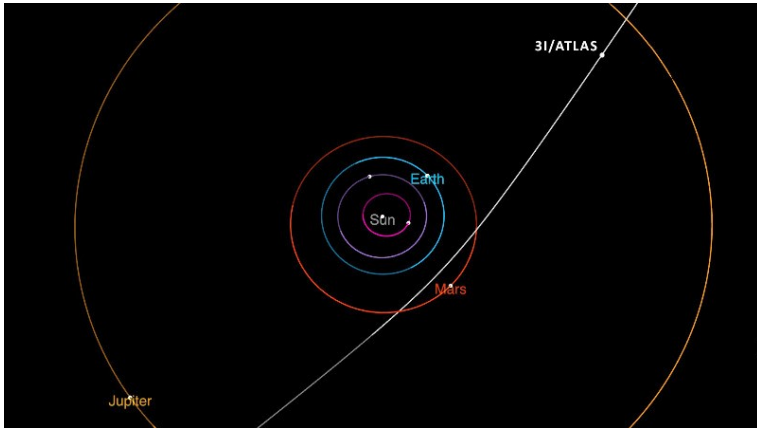


Overview

Comet 3i/ATLAS is the third known object from outside our solar system to be discovered passing through our celestial neighborhood. Astronomers have categorized this object as interstellar because of the hyperbolic shape of its orbital path. (It does not follow a closed orbital path about the Sun.) When the orbit of 3i/ATLAS is traced into the past, the comet clearly originates from outside our solar system.

Comet 3i/ATLAS poses no threat to Earth and will remain far away. The closest it will approach our planet is about 1.8 astronomical units (about 170 million miles, or 270 million kilometers). 3i/ATLAS will reach its closest point to the Sun around Oct. 30, 2025, at a distance of about 1.4 au (130 million miles, or 210 million kilometers) — just inside the orbit of Mars.

The interstellar comet's size and physical properties are being investigated by astronomers around the world. 3i/ATLAS should remain visible to ground-based telescopes through September 2025, after which it will pass too close to the Sun to observe. It will reappear on the other side of the Sun by early December 2025, allowing for renewed observations.



This diagram shows the trajectory of interstellar comet 3i/ATLAS as it passes through the solar system. It will make its closest approach to the Sun in October.

NASA/JPL-Caltech

Discovery

The NASA-funded ATLAS (Asteroid Terrestrial-impact Last Alert System) survey telescope in Rio Hurtado, Chile, first reported observations to the Minor Planet Center of comet 3i/ATLAS on July 1, 2025. Since the first report, observations made before the discovery were gathered from the archives of three different ATLAS telescopes around the world and Caltech's Zwicky Transient Facility at the Palomar Observatory in San Diego County, California. These "pre-discovery" observations extend back to June 14, 2025.

How this comet got its name: Comets are generally named for their discoverer(s), in this case the ATLAS survey team. The letter "i" is for "interstellar," indicating that this object came from outside our solar system. It's the third known interstellar object, hence the "3" in the name.

(Continued on page 10)

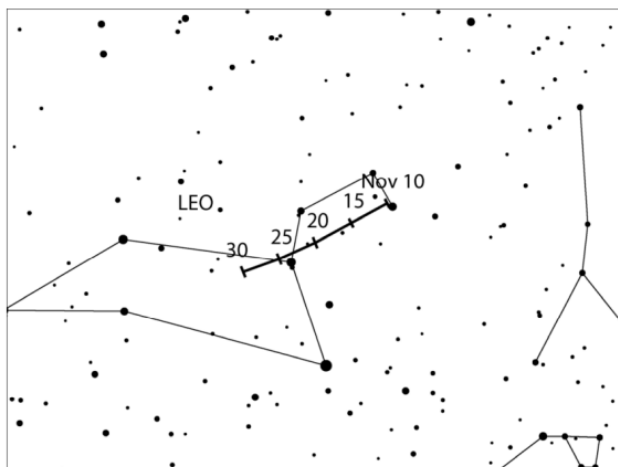
Meteor Log—November 2025

by Tom Giguere

The Northern Taurids (017 NTA), peak on Nov. 12th when the Moon is 53% illuminated, and are active from October 20th to December 10th when there is sometimes a notable increase in the fireball activity. The parent comet for this shower is comet 2P/Encke.

The Leonids (013 LEO) are best known for producing meteor storms approximately every 33 years. These outbursts of meteor activity are best seen when the parent object, comet 55P/Tempel-Tuttle, is near perihelion (closest approach to the sun). Since the comet has passed its aphelion and the next perihelion is not until 2031 the meteoroids we observe now are ahead of the comet. This year the waning old crescent moon will rise during the late morning hours and will not interfere substantially with this shower.

The Southern Taurids (002 STA) will be unobservable due to the full Moon on Nov. 5th.



Phases of the Moon (courtesy timeanddate.com)

First Quarter	Full Moon	Last Quarter	New Moon
November 27	November 5	November 11	November 19

Shower	Activity	Maximum		Radiant		V_{∞} km/s	r	ZHR
		Date	λ_{\odot}	α	δ			
Southern Taurids (002 STA)	Sep 10 - Nov 20	Nov 5	223°	52°	+15°	27	2.3	7
Northern Taurids (017 NTA)	Oct 20 - Dec 10	Nov 12	230°	58°	+22°	29	2.3	5
Leonids (013 LEO)	Nov 06 - Nov 30	Nov 17	235.27°	152°	+22°	71	2.5	10
α - Monocerotids (246 AMO)	Nov 15 - Nov 25	Nov 21	239.32°	117°	+01°	65	2.4	Var
Nov. Orionids (250 NOO)	Nov 13 - Dec 06	Nov 28	246°	91°	+16°	44	3.0	3

November '25 is the best month to observe the Leonids and α -Monocerotids! For more info: Tom Giguere, 808-782-1408, Thomas.giguere1@gmail.com. Meteor shower information, credit IMO.net and AMSmeteors.org

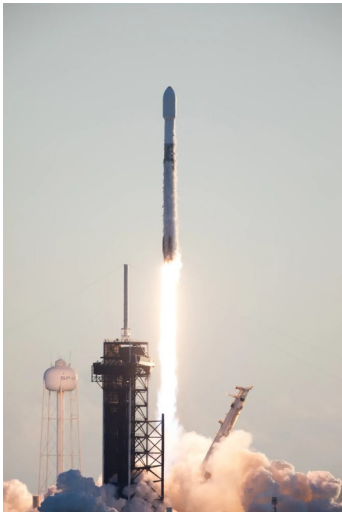
Cash Flow - 9/10/2025 to 10/9/2025

Beginning Balance	\$9,629.58
Money into selected accounts comes from	
Donation	\$32.00
Membership - Electronic	\$80.00
Membership - Family	\$12.00
Subscription - Astronomy	\$34.00
Total Money In	\$158.00
Money out of selected accounts goes to	
Total Money Out	
Difference	\$158.00
Ending Balance	\$9,787.58

Here are the financials up through October 9. Thanks to everyone who renewed, joined and donated.

Covid wastewater Oahu figures are not available due to the government shutdown.

Hang in there, and enjoy the sky.



3-in-1 Launch

A SpaceX Falcon 9 rocket lifts off from NASA's Kennedy Space Center in Florida on Sept. 24, 2025, carrying three missions that will investigate the Sun's influence across the solar system.

Image credit: NASA/Kim Shiflett

Message From Your Vice President November 2025

by Bill Barr

Sales of used equipment are suspended until winter. If there's something you're interested in, be sure to email and it will be held for you.

Larry Denneau

Institute for Astronomy, University of Hawai'i

Interstellar Object 31/ATLAS

7:30pm Tuesday November 4 @ Bishop Museum Planetarium. Talk begins @ 7:45pm.

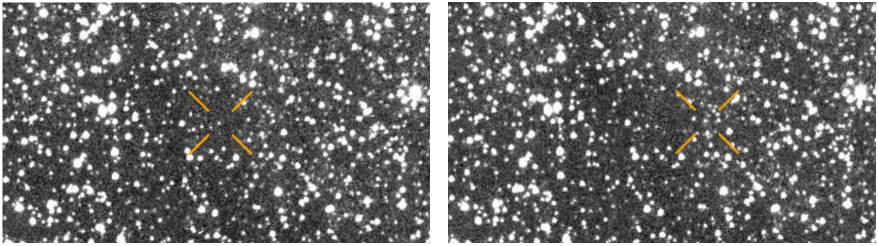


The UH-operated ATLAS telescope system scans the dark sky around the world each night to search for asteroids that might threaten the Earth. In the last year, ATLAS has made two notable discoveries: the interstellar comet 31/ATLAS, only the third discovered object to have an origin outside our solar system, and asteroid 2024 YR4, an object that has a 1 in 25 chance of hitting the Moon on Dec 22, 2032. In this talk, Larry will describe how ATLAS finds these objects, what we have learned about them so far, and what the future holds for these objects and the ATLAS system.

ATLAS CO-PI and senior software engineer Larry Denneau was the chief software architect of the Pan-STARRS moving object processing system (MOPS) and adapted it to ATLAS. MOPS is a software package that automatically identifies solar system objects (in particular hazardous asteroids) in the ATLAS and Pan-STARRS data streams. Larry has been poking at computer keyboards since the early 80s and received his B.S.E.E. from the University of Arizona, whereupon he quickly escaped academia. His software career has spanned projects ranging from surface metrology for the semiconductor industry, medical scheduling, geophysical instrumentation, and a dot-com Internet startup that actually turned a profit. Now back in academia, Larry received a Ph.D. in astrophysics from Queen's University Belfast and has enthusiastically joined the effort to protect the earth from dangerous asteroids.



(Continued from page 6) NASA's Comet 3i/ATLAS



This animation shows the observations of comet 3i/ATLAS when it was discovered on July 1, 2025. The NASA-funded ATLAS survey telescope in Chile first reported that the comet originated from interstellar space. ATLAS/University of Hawaii/NASA

NASA Assets Observing Comet 3i/ATLAS

NASA's Hubble Space Telescope captured this image of interstellar comet 3i/ATLAS on July 21, 2025, when the comet was 277 million miles from Earth. Hubble revealed a teardrop-shaped cocoon of dust coming off of the comet's solid, icy nucleus. Because Hubble was tracking the comet moving along a hyperbolic trajectory, the stationary background stars are streaked in the exposure. Hubble's continuing observations allow astronomers to more accurately estimate the size of the comet's nucleus. Observations as of Aug. 20, 2025, indicate that the upper limit on its diameter is 3.5 miles (5.6 kilometers), though it could be as small as 1,444 feet (440 meters) across.

NASA assets that are planning to gather observations of 3i/ATLAS include: Hubble, Webb, TESS, Swift, SPHEREx, Perseverance Mars rover, Mars Reconnaissance Orbiter, Curiosity rover, Europa Clipper, Lucy, Psyche, Parker Solar Probe, PUNCH, and ESA/NASA's SOHO and Juice.

Check back here for observations, schedules, or any additional NASA assets, as that information becomes available.



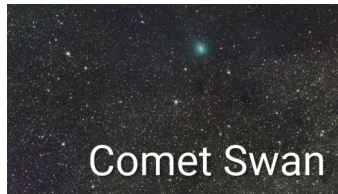
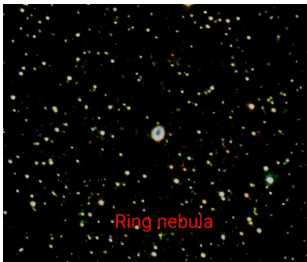
Hubble captured this image of the interstellar comet 3i/ATLAS on July 21, 2025, when the comet was 277 million miles from Earth. Hubble shows that the comet has a teardrop-shaped cocoon of dust coming off its solid, icy nucleus. Image: NASA, ESA, David Jewitt (UCLA); Image Processing: Joseph DePasquale (STScI)

(Continued from page 1) A word from your editor

see Saturn. Once everything was done, I turned my telescope to look at M31 (Andromeda Galaxy).



The Public Star Party at Dillingham Airfield on 10/11/2025 was not too bad. Gate was supposed to close at 6:00 PM, but it was not. Some guests were able to come in after 6:00 PM. Sky was pretty good. The club Star Party was also pretty good. Sue has some good photos of Ring Nebula (M57) & Comet SWAN



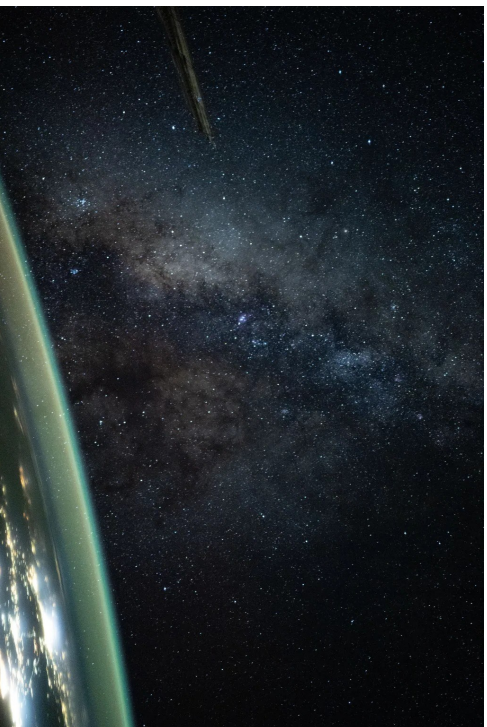
The Public star parties in-town were not too good. For Kahala, Sue said “It was just Andy and Hiroko and me at Kahala. It was pretty much cloudy. We got a very brief glimpse of the Moon as the sky darkened and a bit of Saturn but the clouds ruled! We left about 7:15 pm or so. No visitors either”. As for Geiger, Steve reported that “Had Tom, Peter and I at Geiger. Mostly cloudy. Moon did peek through. Had 1 person plus a girl scouts troop. So around 15 to 20 visitors were looking at the moon. Packed up around 8 PM.

HERE IS WHAT IT SAID WHEN I TRIED TO GRAB PHOTOS & ARTICLE FROM NASA WEBSITE

*** Due to the lapse in federal government funding, NASA is not updating this website. ***

Many members now use Electronically Assisted Astronomy (EAA) devices. So, if you are observing and able to capture any night sky object. You can share it in AstroNews by emailing it to me at astronews@hawastsoc.org with some detail. I will post it. I will be needing more of your photos & articles than ever to fill up the December Astronews.

**H.A.S.
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Milky Way Views

The Milky Way appears above Earth's bright greenish atmospheric glow in this Aug. 23, 2025, photograph from the International Space Station as it soared 261 miles above southern Iran at approximately 12:54 a.m. local time. The camera was configured for low light and long duration settings.

Image credit: NASA; JAXA