SKYWATCHER NEWSLETTER

https://sidc.be/article/single-event-upset

Spaceweather.com
5 Jan 2026

(Tiangong)
Chinese Space Station
12-02-22

International Space Station
04-02-22

Philip Smith

LATEST NEWS

Happy New Year! I hope this finds you all healthy and well.

You may have read about Airbus issuing an emergency global recall of around 6000 of its A320-family aircraft in late November due to a 'single-upset event'. This is indeed an interesting failure which was attributed to radiation-induced "Single Event Upsets" (SEUs) in micro-electronics. Not caused by space weather on this occasion but likely due to a high energy cosmic ray.   More on this can be found in the article link (left).

On a lighter note, BBC Sky at Night shared some of the best astrophotography images of 2025.   Have a look at https://www.skyatnightmagazine.com/astrophotography/best-images-2025.

Looking ahead to sky events in 2026, if you have an Android phone, the app 'Sky Tonight' has a great calendar feature to let you know the upcoming events including occultations and conjunctions for the amateur observer. If someone can recommend an equivalent app for the iphone, let me know!

Until next month Happy Holidays to All of the WAC and Best wishes for 2026! ~SLK

For comparison, here are the original photos. "The transformation was amazing," says Smith. "But is it real?"

THE PERILS OF AI-ASSISTED PHOTOGRAPHY: Philip Smith of Manorville, New York, is a longtime photographer of space stations--both Chinese and ISS. His high-resolution images are among the best amateur astronomers capture from Earth. Last week, he decided to try something new.
"I used the free test option of an AI software called Repairit from Wondershare," says Smith. "I then selected the tool option called Remove Scratches and Colorize, and let it do its thing." It did a lot more than remove scratches:

Two world-class photographers, Thierry Legault and Damian Peach, contacted Smith to weigh in.
"Philip, there is no miracle. Those 'images' show details that you have not recorded," cautioned Legault. "The AI application uses closeups of the stations taken from space and/or 3D models, [and combines them with your photos]."
Peach agreed: "The AI result looks extremely convincing. Sadly, this kind of 'photography' will be easy to produce, and 99% of people will not be able to tell that this was not actually taken by the observer."
"Clearly, AI software can produce misleading structures," says Smith. "It was interesting to see how it interpreted my original monochromatic image and gave it false color and shapes. I hope you like the fact that I took the time to share my test results."
We do, indeed. Thank you, Philip! And, to everyone else, beware AI.

LOCAL EVENTS

21 Jan - FA - Astronomers' Tools, Choosing the right telescope - David Arditti

22 Jan - SAS meeting and talk by Philip Wallace

3 Feb - WAS - Adrien Richardson – Installing and Operating Observatories in Remote Locations

19 Feb - SAS - Paul Howat - Photographing the Milky Way

25 Feb - FA - Torn Protoplanetary Discs - when planet formation gets messy - Alison Gray

3 Mar - WAS - Keith Wright – Apollo Lunar Surface Science – A personal Perspective

5 Mar - SAS - The Life and Death of a Space Station - Nick Lewis

MORE TO COME IN 2026!

VISIT OUR WEBSITE FOR THE LATEST CLUB INFORMATION
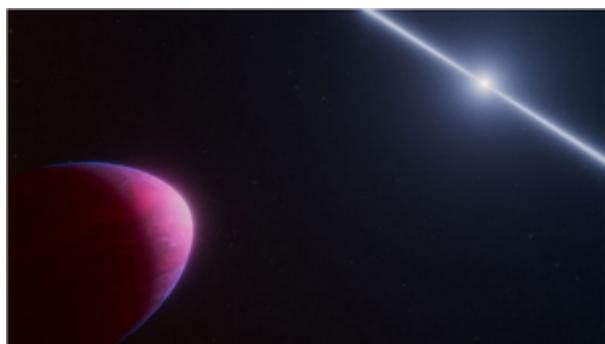
"What the Heck Is This?" – Astronomers Discover Entirely New Type of Exoplanet With Bizarre Atmosphere

Astronomers have discovered a carbon-rich exoplanet with a bizarre atmosphere and shape, orbiting a neutron star under extreme conditions that challenge current models of planetary formation. Scientists working with NASA's James Webb Spac...

SciTechDaily / Dec 23, 2025

https://tinyurl.com/d2b9p5d4
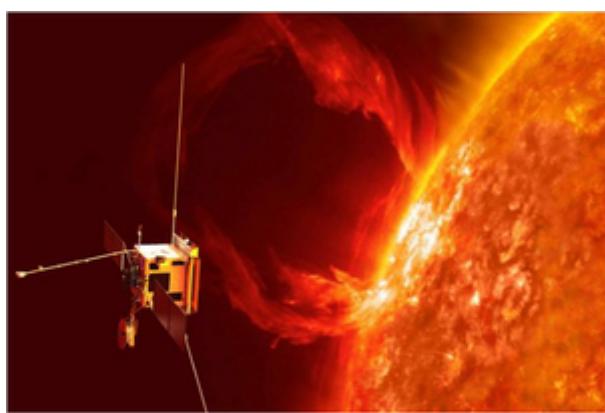
Active solar region observed for record 94 days

In May 2024, the strongest solar storm in twenty years raged. An international team led by ETH Zurich observed it. Their findings are now helping to improve space weather forecasts.

phys.org / Jan 5

https://phys.org/news/2026-01-solar-region-days.html
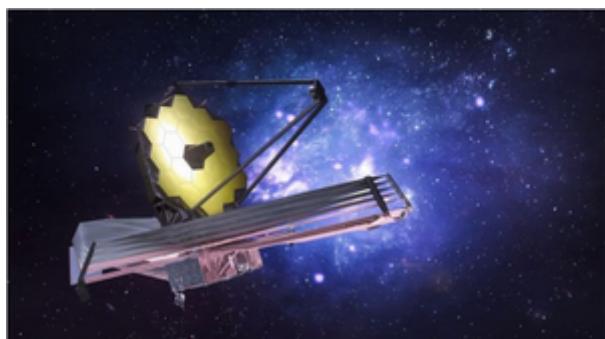
Science history: James Webb Space Telescope launches — and promptly cracks our view of the universe — Dec. 25, 2021

The James Webb Space Telescope blasted off from a launchpad in French Guiana in 2021, before reaching a spot in orbit a million miles away. It soon began breaking cosmology.

Live Science / Dec 25, 2025

https://tinyurl.com/jtxnxawz

An Alignment of Planets
Early January 2026
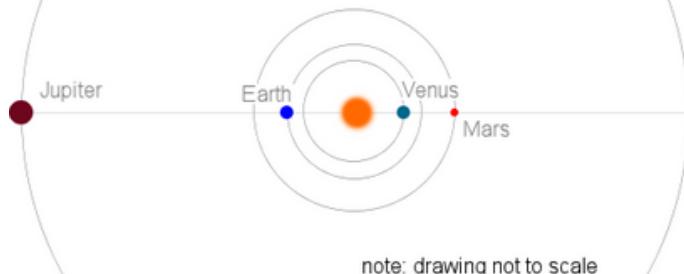
note: drawing not to scale

PLANETARY ALIGNMENTS AND THE SOLAR CYCLE: This week, Jupiter and Venus are on opposite sides of the sun. To some researchers, this geometry is more than a celestial coincidence. A small but persistent body of research suggests that planetary alignments help regulate solar activity.

This is a controversial topic. Some researchers, like Stefani, have focused their careers on it, while others are vehemently opposed. The idea refuses to go away mainly because Jupiter, Venus, and Earth form repeating alignment patterns with a characteristic period near 11 years, similar to the average length of the sunspot cycle. Coincidence--or something more?

Mainstream solar physics holds that the tides of Venus and Jupiter are too weak to affect solar activity. Jupiter's tides on Earth are a million times weaker than the Moon's tides, and Venus's tides are even weaker than Jupiter's. How could these absurdly small forces affect the sun?

But Stefani has a prediction: "The present alignment is happening only 40 to 60 days before the expected peak of a Quasi-Biennial Oscillation. If the alignment excites magneto-Rossby waves as our model predicts, we might expect a higher probability of strong solar activity 40 to 60 days from now." That's science. Stay tuned for a follow-up story in two months.

Read the full article on Spacewather.com

https://spaceweather.com/archive.php?view=1&day=07&month=01&year=2026
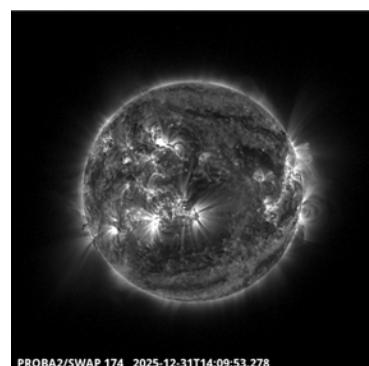
PROBA2/SWAP 174 2025-12-31T14:09:53.278

The largest flare of the final week of 2025 was an M7.1, and it was observed by SWAP (image above). The flare peaked on 2025-Dec-31 at 13:51 UT and occurred on the North-East part of the solar disk, originating from active region NOAA4324.

Find a SWAP movie of the event here: https://proba2.sidc.be/swap/movies/20251231_swap_movie.mp4
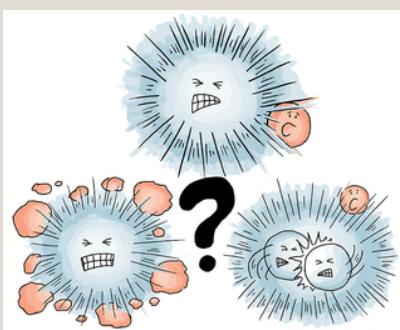
WAC Upcoming Events

13 FEB - WHY ARE THERE NO GREEN STARS - PAUL MONEY

13 MAR - TOURING THE UNIVERSE FROM A BACK GARDEN - CHRIS LEE

10 APR - TRANSIT OF VENUS FROM HORROCKS IN 1639 TO 2012 - GRAHAM MCLOUGHLIN

MORE TO COME IN 2026!
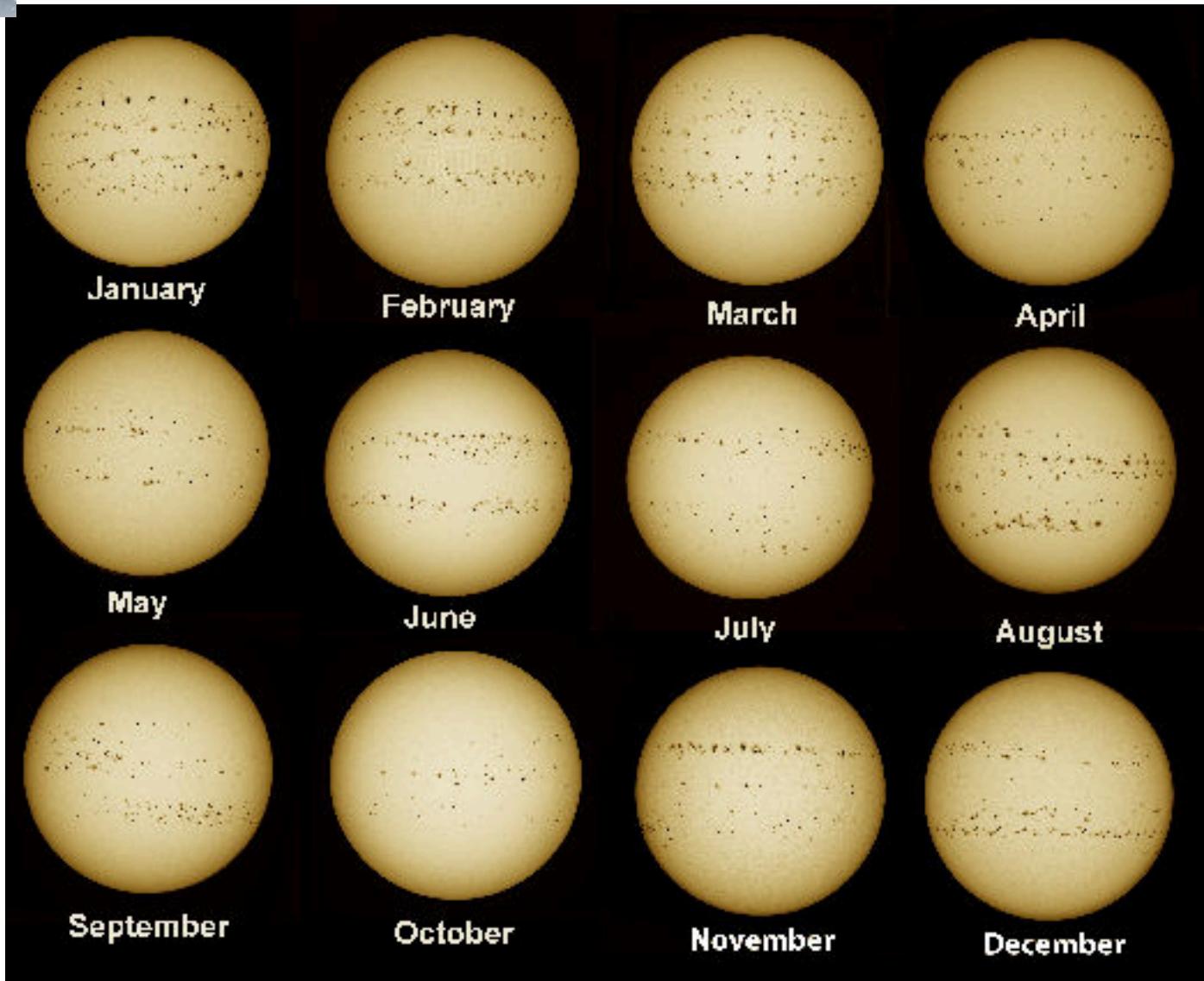
AN ENTIRE YEAR OF SUNSPOTS: This is sunspot dedication. Every day in 2025 (clouds permitting), Warren Spreng of Mason, Ohio, pointed his filtered Seestar 50 telescope at the sun and took a picture. "I then layered each day's image over the previous day's to build a composite of the disk with all the sunspots for that month," Spreng explains.
This is the result of every sunspot in 2025:

Spreng's archive shows at a glance that Solar Cycle 25 is far from over. Every month in 2025 brought numerous large sunspots on both sides of the sun's equator. As 2026 begins, the monthly-averaged sunspot number remains comfortably above 100.

Solar cycle predictions from NOAA suggest that the sunspot number should remain about this high throughout most of 2026 with a slow decline toward Solar Minimum underway by the end of the year. Between now and then, space weather will continue to storm. Stay tuned!
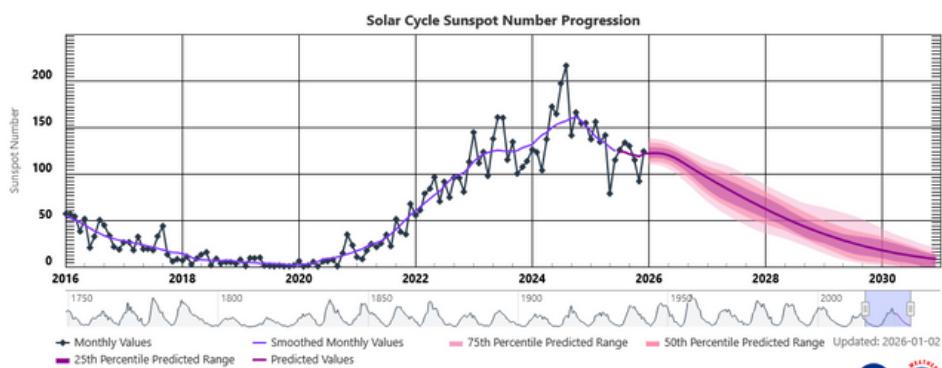
WAC Members Corner
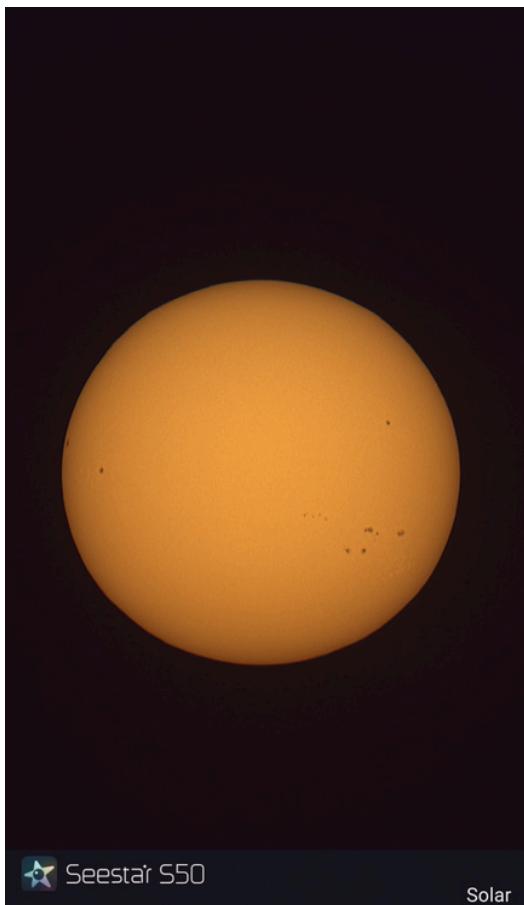
Many thanks to Sara who brought in the astronomical new year with a fantastic image of the moon at 00:00 on 1 Jan 2026! Hope we have more great images coming!

The snow showers have scuppered most attempts at imaging so far this year up north. Finally managed a quick 10min session on the 4th through double glazing to get these images with the sun at 3.8 degrees above the horizon as viewed from the second floor. Unfortunately this put the view in the flight path of the local birds! ~ SLK

WEYMOUTH ASTRONOMY

Skymaps.com—Feel free to download the full article directly each month.

The Evening Sky Map

FREE* EACH MONTH FOR YOU TO EXPLORE, LEARN & ENJOY THE NIGHT SKY

WWW.SKYMAPS.COM

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Sky Calendar – January 2026

1 Moon at perigee (closest to Earth) at 21:39 UT (distance 360,348km; angular size 33.2').

3 Full Moon at 10:03 UT.

3 Earth at Perihelion (closest to Sun) at 17h UT. The Sun-Earth distance is 0.983302 a.u. (147.1 million kilometers).

3 Quadrantid Meteor Shower peaks at 21h UT. Active between December 28 and January 12. Expect up to 25 meteors per hour under dark skies. Radiant is in northern Boötes. Northern hemisphere only. Moonlight interferes.

4 Moon near Jupiter at 0h UT (morning sky). Mag. –2.7.

6 Venus at superior conjunction with the Sun at 16h UT (not visible). The brightest planet passes into the evening sky.

6 Moon near Regulus at 18h UT (morning sky).

9 Mars at conjunction with the Sun at 12h UT. Mars passes into the morning sky.

10 Jupiter at opposition at 9h UT. This is the best time to view the largest planet in the Solar System. Mag. –2.7.

10 Last Quarter Moon at 15:48 UT.

11 Moon near Spica at 0h UT (morning sky).

13 Moon at apogee (farthest from Earth) at 21h UT (distance 405,438km; angular size 29.5').

14 Moon near Antares at 21h UT (morning sky).

18 New Moon at 19:52 UT. Start of lunation 1275.

21 Mercury at superior conjunction with the Sun at 16h UT (not visible). The innermost planet passes into the evening sky.

23 Moon near Saturn at 10h UT (evening sky). Mag. 1.2.

26 First Quarter Moon at 4:47 UT.

27 Moon near the Pleiades at 22h UT (evening sky).

29 Moon at perigee (closest to Earth) at 21:46 UT (distance 365,871km; angular size 32.7').

31 Moon near Jupiter at 4h UT (evening sky). Mag. –2.6.

More sky events and links at http://Skymaps.com/skycalendar/

All times in Universal Time (UT). (USA Eastern Standard Time – UT – 5 hours.)

⭐ **Support The Evening Sky Map** ⭐
• Helping curious minds to explore the night sky since January 2000 •
Recommended Products for Sky Watchers: skymaps.com/store/
All sales support the production of this free resource. Thank you.

NORTHERN HEMISPHERE
JANUARY 2026

SKY MAP SHOWS HOW
THE NIGHT SKY LOOKS

EARLY JAN   8 PM
LATE JAN   7 PM

Symbols

Galaxy	⬭
Double Star	•
Variable Star	⊛
Diffuse Nebula	▢
Planetary Nebula	✧
Open Star Cluster	⬚
Globular Star Cluster	⊕

Star Magnitudes

● ● ● ● • · · · ·
-1 0 1 2 3 4

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