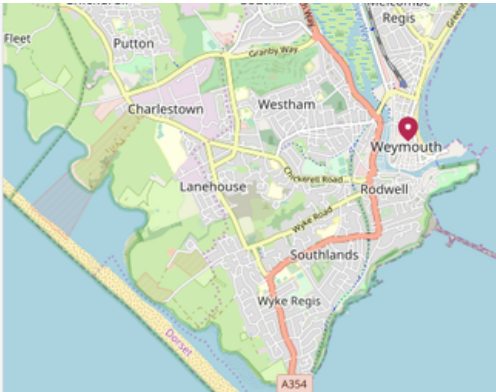


SKYWATCHER NEWSLETTER

**50°36'37.1"N,
2°27'13.1"W**
Partial solar eclipse
(93.43%)

✕

Obscuration	93.43%
Magnitude	0.9412
Duration	1h, 49m, 57s
<hr/>	
Partial begins	12 Aug, 18:18:40
Maximum	12 Aug, 19:15:13
Partial ends	12 Aug, 20:08:37
Times shown in local time (BST)	
<hr/>	
Weather	Not available for this location
Avg. Cloud Cover	82% (since 2000)



LATEST NEWS

Looking ahead to the 12 August, the UK will be in an amazing position to see the partial solar eclipse. The Dorset area should see over 90% of the sun covered which will be impressive indeed! Next month's Skywatcher will contain more information on the event. Fingers and toes crossed already for clear weather across all of the British Isles for this. If you are heading to the line of Totality, let me know!

Until next month ~SLK

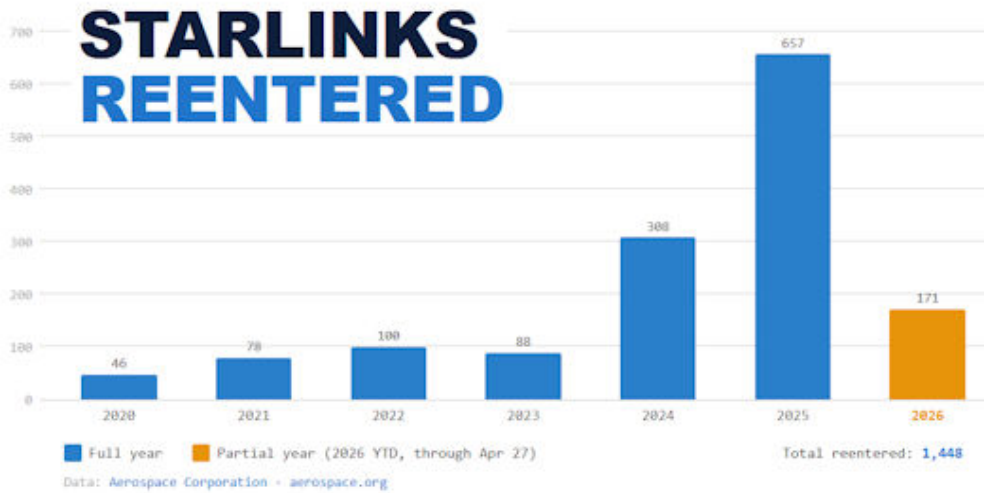


A GIANT ATMOSPHERIC CHEMISTRY EXPERIMENT by Dr. Tony Phillips

Every 16 hours, a Starlink satellite falls out of the sky. It's part of the SpaceX business model: Old obsolete satellites re-enter to make way for newer models. This may sound like a good way to keep Earth orbit from becoming too cluttered, but it comes with a cost. Every Starlink that burns up dumps about 30 kg of aluminum oxide into the upper atmosphere. That aluminum is not supposed to be there.

So far this year (April 28, 2026), 171 Starlinks have reentered, adding more than 5 metric tons (5,000 kg) of aluminum oxide to the stratosphere and mesosphere. How does this compare to natural sources?

The primary natural source is meteoroids -- the same "shooting stars" that streak across the night sky. As they burn up between roughly 75 and 110 km, they release a faint dusting of metals. Recent studies suggest that meteoroids disperse between 40,000 kg and 58,000 kg of Al₂O₃ into the atmosphere each year. Starlink in 2026 is on track to add between 26% and 39% of that natural total.



39% may not sound too bad, but consider the following: The size of the Starlink constellation is rapidly increasing, and SpaceX's competitors are racing to catch up. A full buildout of planned megaconstellations with corresponding re-entries could inject more than 360,000 kg of Al₂O₃ per year -- a 640% excess above natural meteoroids (Ferreira et al. 2024).

It all adds up to a giant uncontrolled experiment in atmospheric chemistry. Researchers already know that aluminum oxides can destroy ozone in a complex series of steps involving Al₂O₃, HCl, AlCl₃, sunlight, Cl, and O₃. Other side-effects may reveal themselves in time.



https://www.sciencemagazinedigital.org/sciencemagazine/library/item/09_april_2026/4336116/

LOCAL EVENTS

- 12 May - WAS - Prof. Nils Andersson – Gravitational Waves
- 20 May - FA - I am not an astronomer, but that's okay - is there a role for 'back yard' visual stargazing? - Kevin Quinn
- 10 June - FA - Quark Stars and Strange Matter - Paul Fellows (Cambridge Astronomical Society)
- 12 June - WAS - Dr. Matthew Bothwell – How far away are the stars? Climbing the cosmic distance ladder.
- 7 July - WAS - Dr. Meganne Christian – From Antarctica to Space
- 4 Aug - WAS - Social and Equipment Night with observing session if the sky is clear - No Zoom
- Wed, 12 Aug 2026, 17:00 - 21:00 Partial Eclipse of the Sun - FA - Abbots Well Carpark
A large partial eclipse of the Sun will be viewed this afternoon from Abbotswell Rd Car Park in the New Forest. At its maximum, the eclipse will be almost 96pc eclipsed.

VISIT OUR WEBSITE FOR THE LATEST CLUB INFORMATION

ASTRO-NEWS

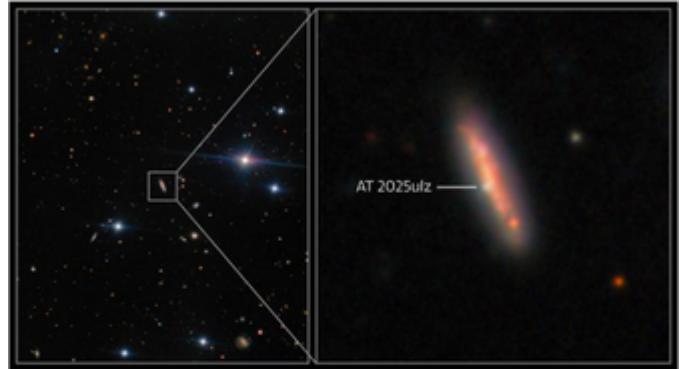


Astronomers may have found a strange new kind of cosmic explosion

A mysterious cosmic explosion has astronomers buzzing, as a strange event may hint at an entirely new kind of stellar cataclysm. After detecting ripples in space-time, scientists spotted a fast-fading red glow that initially looked like a rare kilonova...

ScienceDaily / 10:38 AM

<https://www.sciencedaily.com/releases/2026/04/260423031532.htm>

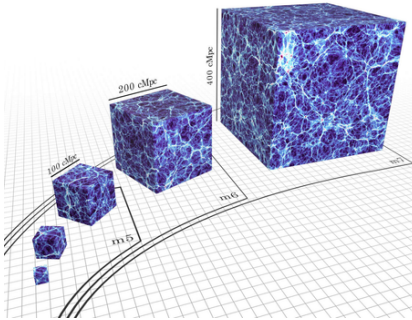
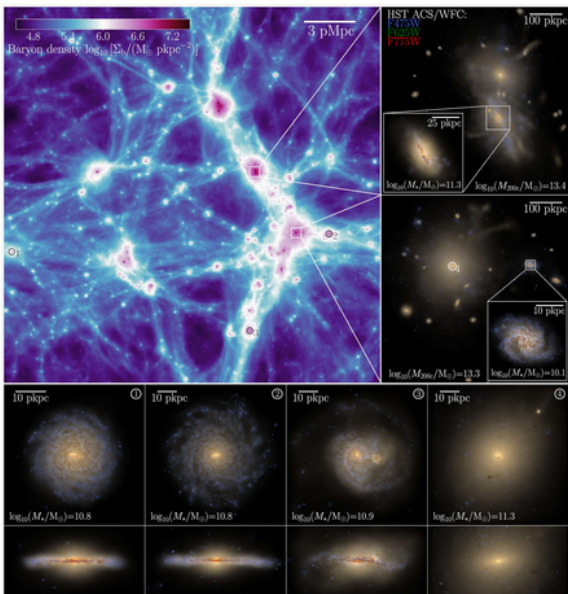


It's a kilonova! It's a supernova! It's a superkilonova?

Researchers from Carnegie Mellon University, Caltech, Ludwig Maximilian University of Munich and other institutions are working to understand what caused an unusual cosmic event on Aug. 18, 2025.

Carnegie Mellon News / Apr 8

<https://www.cmu.edu/mcs/news-events/2025/1222-superkilonova>

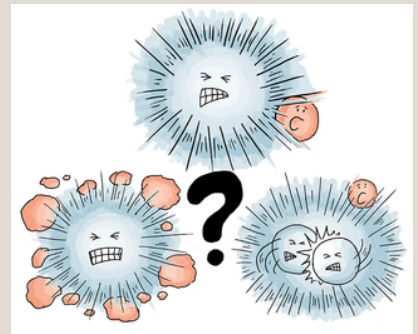


The COLIBRE project

The COLIBRE suite of hydrodynamical simulations model the formation and evolution of galaxies in representative volumes starting from cosmological initial conditions.

leidenuniv.nl

<https://colibre.strw.leidenuniv.nl>



WAC Upcoming Events

12 JUNE CHRIS CROWE - BLACK HOLES & EXPLODING STARS, THE COSMIC LIFE CYCLE (IN-PERSON AND ZOOM)

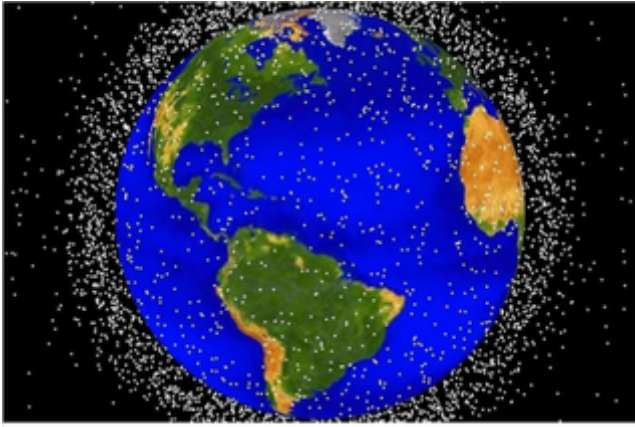
JULY - TBC

AUGUST - NO MEETING THIS MONTH
12 AUGUST - PARTIAL SOLAR ECLIPSE

11 SEPT - VICTORIA FAWCETT - OBSERVING THE BRIGHTEST OBJECTS IN THE UNIVERSE (IN-PERSON AND ZOOM)



WEYMOUTH ASTRONOMY



Seismometer networks could track space junk as it falls to Earth

Space debris—the thousands of pieces of human-made objects abandoned in Earth's orbit—pose a risk to humans when they fall to the ground. To locate possible crash sites, a Johns Hopkins University scientist ...

phys.org / Jan 23

<https://phys.org/news/2026-01-seismometer-networks-track-space-junk.html>

A Starlink satellite has a lifespan of approximately five years and SpaceX eventually hopes to have as many as 42,000 satellites in this so-called megaconstellation.

How many Starlink satellites are in orbit?

As of May. 5, 2026, there are currently 10,296 Starlink satellites in orbit, of which 10,280 are working, according to Astronomer Jonathan McDowell, who tracks the constellation on his website.

The current V2 Starlink satellite version weighs approximately 1,760 lbs (800 kilograms) at launch, almost three times heavier than the older generation satellites (weighing in at 573 lbs or 260 kg), according to Spaceflight Now.

Starlink satellites orbit approximately 342 miles (550 kilometers), above Earth and put on a spectacular show for observers as they move across the sky

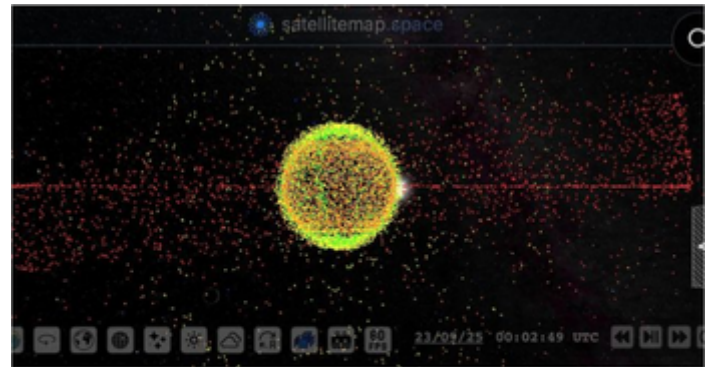


Starlink satellites: Facts, tracking and impact on astronomy

Are Starlink satellites a grand innovation or an astronomical menace?

Space / May 5

<https://www.space.com/spacex-starlink-satellites.html>

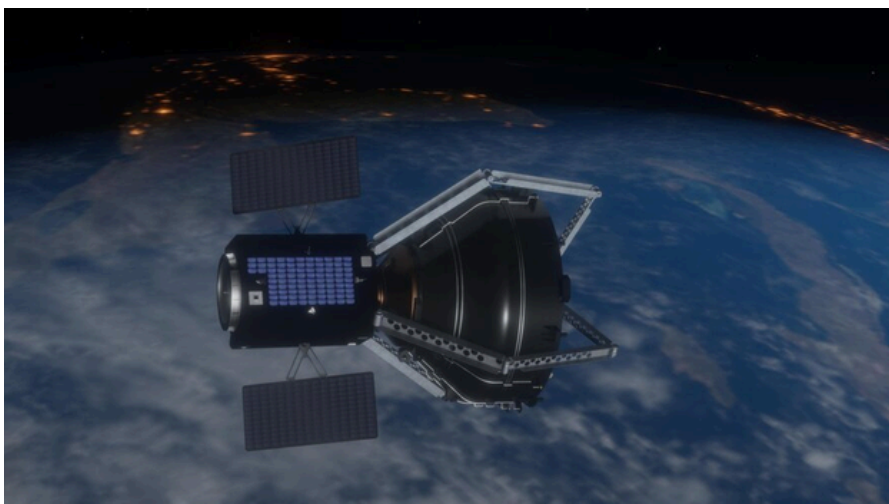


Satellite Tracker — Live Map of Starlink & 30,000+ Satellites

Track satellites in real-time on an interactive 3D map. See Starlink trains, space stations, rocket bodies, and satellite passes visible from your location.

SatelliteMap.space

<https://satellitemap.space/vis/constellation/starlink>



ClearSpace-1

ESA's 95 kg PROBA-1 satellite, launched in 2001, will be cleared away from its valuable low-Earth orbit to ensure it does not add to the space debris problem. The ClearSpace-1 mission will remove the PROBA-1 satellite from orbit as the first-ev...

esa.int

https://www.esa.int/Space_Safety/ClearSpace-1

Starlink Statistics

- Total Launched: 11,973
- In orbit: 10,392
- Updated: 04 May 2026
- Starlink Re-entries (2026)
 - January: 24
 - February: 54
 - March: 48
 - April: 51
 - May: 2 so far
- Updated: 04 May 2026
- Starlink Re-entries (yearly)
 - 2020 total: 46
 - 2021 total: 78
 - 2022 total: 100
 - 2023 total: 88
 - 2024 total: 308
 - 2025 total: 657
 - 2026 total: 178 so far
- Updated: 04 May 2026

WEYMOUTH ASTRONOMY

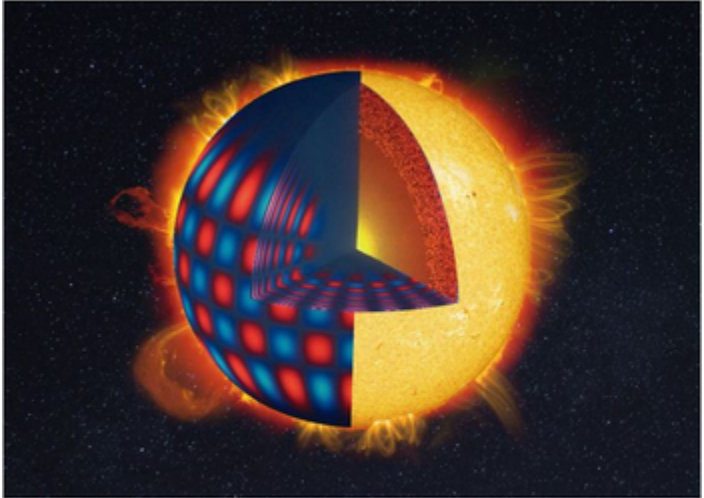


Russia launches 3 tons of cargo to the International Space Station from Kazakhstan (video)

Liftoff occurred Saturday (April 25) at 6:21 p.m. ET.

Space / Apr 25

<https://www.space.com/space-exploration/launches-spacecraft/progress-95-cargo-ship-launch-soyuz-international-space-station>



30 Years of GONG: The Enduring Legacy of the U.S. National Science Foundation National Solar Observatory Solar Monitoring Network

When the Global Oscillation Network Group (GONG) began operations in 1995, it was designed to run for just three years. Funded by the U.S.

AURA Astronomy / Feb 23

<https://www.aura-astronomy.org/blog/2026/01/28/30-years-of-gong-the-enduring-legacy-of-the-u-s-national-science-foundation-national-solar-observatory-solar-monitoring-network/>



NASA just released 12,000 photos from Artemis 2. Here are our top picks

You're going to want to clear the rest of your day.

Space / May 5

<https://www.space.com/space-exploration/artemis/nasa-just-released-12-000-photos-from-artemis-2-here-are-our-top-picks>

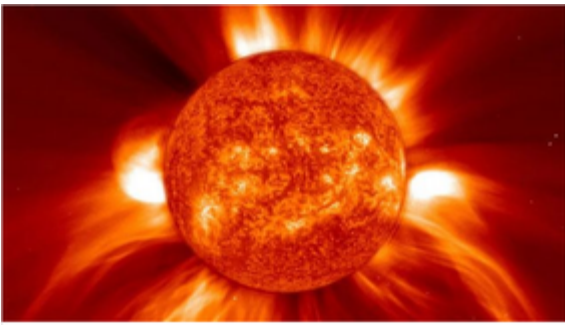


30 Years of GONG: The Enduring Legacy of the U.S. National Science Foundation National Solar Observatory Solar Monitoring Network - NSO...

Celebrating 30 years of continuous solar observations by the NSF-NOAA GONG, from the rise of heliophysics to space weather and more.

NSO / Jan 28

<https://nso.edu/blog/30-years-of-gong/>

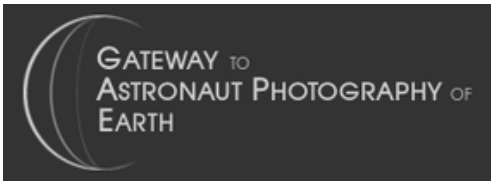


Solar activity makes space junk crash to Earth faster

"This observation is expected to be key for planning sustainable space operations in the future."

Space / 10:00 AM

<https://www.space.com/space-exploration/satellites/solar-activity-space-junk-crash-earth-faster>



NASA has uploaded the astronauts images to this repository. Worth a look!

<https://eol.jsc.nasa.gov>

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

Follow us on Bluesky skymaps.com/blsky/

Sky Calendar - May 2026

- 1 Full Moon at 17:24 UT.
- 4 Moon near Antares at 1h UT (morning sky). Occultation visible from Antarctica, Argentina, Chile and Bolivia.
- 4 Moon at apogee (farthest from Earth) at 22h UT (distance 405,839km; angular size 29.4").
- 6 Eta Aquarid meteor shower peaks. Most active for 7 days around this date. Associated with Comet Halley. Very fast, bright meteors, up to 50 per hour. Best seen from the tropics and southern hemisphere a few hours before dawn. In 2026 a waning gibbous Moon will adversely affect the visibility of this shower.
- 9 Last Quarter Moon at 21:13 UT.
- 13 Moon near Saturn at 18h UT (morning sky). Mag. 0.9.
- 14 Mercury at superior conjunction with the Sun at 14h UT (not visible). The innermost planet passes into the evening sky.
- 14 Moon near Mars at 22h UT (27° from Sun, evening sky). Mag. 1.2.
- 16 New Moon at 20:02 UT. Start of lunation 1279.
- 17 Moon at perigee (closest to Earth) at 13:45 UT (distance 358,075km; angular size 33.4").
- 19 Moon near Venus at 3h UT (evening sky). Mag. -4.0.
- 19 Moon, Venus and M35 within 3.7° circle at 5h UT (33° from Sun, evening sky). Mag. -4.0.
- 20 Moon near Jupiter at 15h UT (evening sky). Mag. -1.9.
- 21 Venus 0.76° N of M35 cluster at 1h UT (evening sky).
- 21 Moon near Beehive Cluster (M44) at 17h UT (evening sky).
- 21 Venus at northernmost declination (25.1°) at 18h UT.
- 23 Moon near Regulus at 5h UT (evening sky). Occultation visible from parts of Oceania.
- 23 First Quarter Moon at 11:11 UT.
- 27 Moon near Spica at 14h UT (evening sky).
- 31 Moon near Antares at 7h UT (midnight sky). Occultation visible from Chile, Argentina, eastern Australia and New Zealand.
- 31 Full Moon at 8:46 UT. A "Blue Moon" - the second Full Moon in a month.

More sky events and links at <http://Skymaps.com/skycalendar/>
All times in Universal Time (UT). (USA Eastern Daylight Time - UT - 4 hours.)

NORTHERN HEMISPHERE

MAY 2026

SKY MAP SHOWS HOW THE NIGHT SKY LOOKS

EARLY MAY 10 PM
LATE MAY 9 PM
SKY MAP DRAWN FOR A LATITUDE OF 40° NORTH AND IS SUITABLE FOR LATITUDES UP TO 15° NORTH OR SOUTH OF THIS

The Northern Cross is a prominent feature of the constellation Cygnus (The Swan). In mythology, the dragon (Draco) was slain by Hercules. He is depicted in the sky with his tail foot on the head. Vega is high in the southern sky. It is the largest zodiac constellation and the second largest bright star pattern in the sky. INSTRUCTIONS: THE SKY MAP SHOWS THE NIGHT SKY FROM HORIZON TO HORIZON. IT APPEARS ON CERTAIN DATES AND TIMES. THE CENTER OF THE MAP IS THE PART OF THE SKY DIRECTLY OVERHEAD AND THE OUTER CIRCLE IS THE HORIZON. CELESTIAL LONGITUDE (LHA) AND THE OUTER CIRCLE IS THE HORIZON. CELESTIAL LONGITUDE (LHA) AND THE OUTER CIRCLE IS THE HORIZON. CELESTIAL LONGITUDE (LHA) AND THE OUTER CIRCLE IS THE HORIZON. CELESTIAL LONGITUDE (LHA) AND THE OUTER CIRCLE IS THE HORIZON.

Use the Big Dipper (or Polaris) to help find Polaris. The North Star. Use ONLY HUNDREDS OF THE NEAREST STARS TO DRAW THE HORIZON. (The Great Bear). Use ONLY HUNDREDS OF THE NEAREST STARS TO DRAW THE HORIZON. (The Great Bear). Use ONLY HUNDREDS OF THE NEAREST STARS TO DRAW THE HORIZON. (The Great Bear).

W.WEYMOUTHASTRONOMY.CO.UK

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