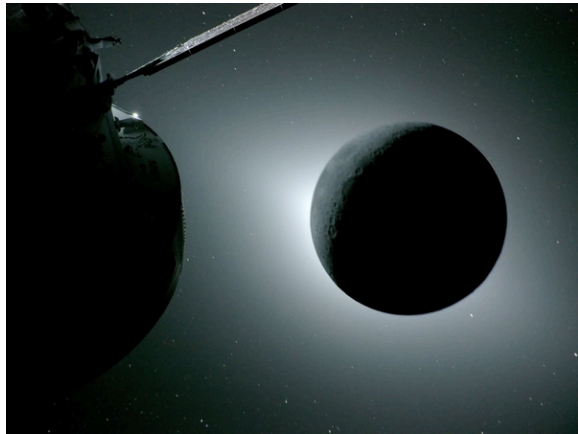


## SKYWATCHER NEWSLETTER



## LATEST NEWS

The eclipse seen by the Artemis II Mission, I cannot stop looking at. What an amazing alignment to capture and share with humanity. Having waited over half a century for humans to return to lunar orbit, this mission has meant so much to me as with the rest of the world. I hope you have been able to follow and enjoy each monumental step in this groundbreaking mission. More stories on links can be found in the Newsletter.

Until next month ~SLK

### Mars mission aims for nuclear propulsion—on a tight deadline

In Section News | Space 9 April 2026

Fission-powered space flight, a 60-year dream, would supercharge Solar System exploration

HANNAH RICHTER

Science  
MAGAZINE

Last week, at an event dubbed Ignition, NASA Administrator Jared Isaacman shocked the planetary science community when he announced a December 2028 mission to Mars. It wasn't simply because of its ambitious timeline, but because the spacecraft would carry a fission reactor—the first test of space nuclear propulsion in more than 60 years.

"I confess I was more than a little surprised," says Vicky Hamilton, a planetary scientist at the Southwest Research Institute. "A lot of folks at NASA don't even understand all the details of what's going on."

The mission would deploy three helicopters to Mars's surface to scout for ice and future human landing sites. But the hubbub surrounds their ferry: a spacecraft called Space Reactor-1 (SR-1) Freedom, which will use nuclear electric propulsion to power its interplanetary journey. Offering higher speeds from far less fuel than standard rockets, the technology could unlock exploration of the outer Solar System and enable human space settlements closer by. But although it's backed by research and an eager industrial base, engineers and scientists say launching such a system in 2028—the next launch window for Mars—will be fraught with technical and regulatory problems.

Nearly all of today's space missions rely on chemical rockets, which require vast quantities of heavy fuel and are comparatively slow. Instead, nuclear electric propulsion (NEP) relies on fission to generate heat, which gets converted to electricity via a gas turbine. This power, in turn, ionizes a gas propellant into a plasma that shoots continuously out of thrusters. Just tens of kilograms of uranium-235 fuel and thousands of kilograms of propellant can be enough for an interplanetary journey.

NEP cannot push a spacecraft into orbit; conventional boosters will be needed for launch. But it promises a slow, steady buildup of speed, which can slash a spacecraft's transit time. Future reactors far bigger than SR-1 Freedom's could send a crewed mission to Mars in as little as 2 or 3 months, compared with 9 months with chemical rockets, limiting astronauts' radiation exposure. Journeying to the outer Solar System could take just 2 to 3 years. Onboard fission also means plenty of power for a spacecraft's onboard systems, without relying on the feeble sunlight near Jupiter and beyond. And fission will be a key power source for eventual Moon bases, a priority of President Donald Trump's administration. ~Read the rest of the article at:

[https://www.sciencemagazinedigital.org/sciencemagazine/library/item/09\\_april\\_2026/4336116/](https://www.sciencemagazinedigital.org/sciencemagazine/library/item/09_april_2026/4336116/)



NASA aims to design, build, and launch its newly announced Space Reactor-1 Freedom spacecraft in less than 3 years. IMAGE: NASA

### LOCAL EVENTS

15 Apr - FA - The Vera Rubin Observatory - Mark Hardaker

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 96% eclipsed.

VISIT OUR WEBSITE FOR THE LATEST CLUB INFORMATION

## ASTRO-NEWS

### 1. Proba-3's Coronagraph is alive!

A month after an anomaly onboard the Proba-3 mission caused ground control to lose contact with the Coronagraph spacecraft, the mission team shares great news: the spacecraft has phoned home, re-establishing the lost connection.

More info from ESA here: [https://www.esa.int/Enabling\\_Support/Space\\_Engineering\\_Technology/Proba-3\\_s\\_Coronagraph\\_is\\_alive#mtdynmkt\\_trackingcontext=4f15eff4-6b94-4f92-a46a-a7fd9490200](https://www.esa.int/Enabling_Support/Space_Engineering_Technology/Proba-3_s_Coronagraph_is_alive#mtdynmkt_trackingcontext=4f15eff4-6b94-4f92-a46a-a7fd9490200)



STCE Newsletter 9 Mar 2026 - 15 Mar 2026



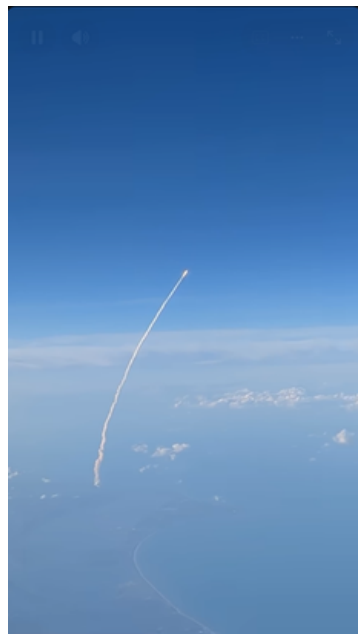
### SLS

The Artemis-1 (formerly known as Exploration Mission 1), is an uncrewed test flight for NASA's Artemis Program, that will enable human exploration to the Moon and Mars. It w...

[AXM Paper Space Scale Models.com](http://AXM Paper Space Scale Models.com)



<https://issinfo.net/artemis>



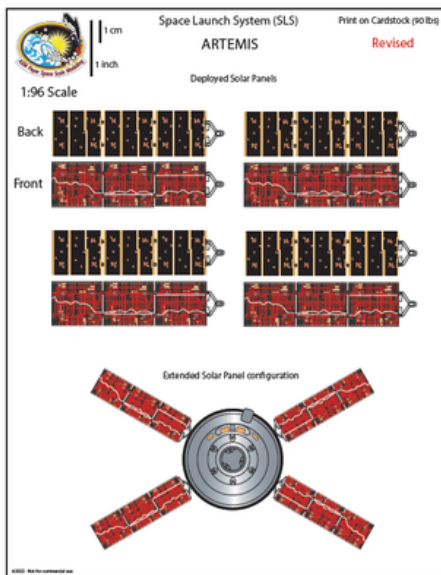
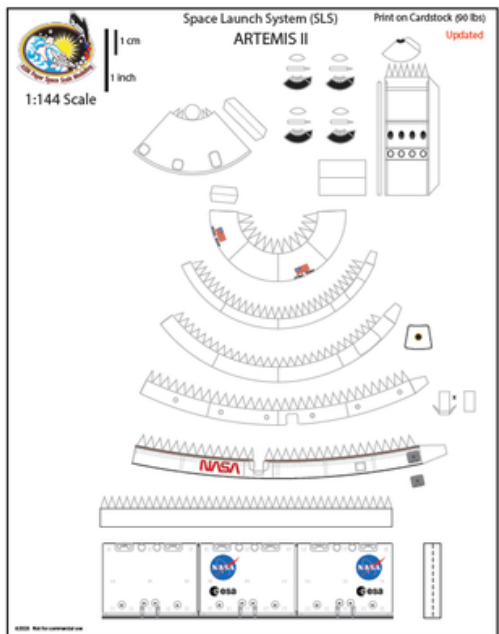
Artemis 2 Launch View From American Airlines Flight || ViralHog

[https://www.youtube.com/shorts/MgM\\_pSRdZGQ](https://www.youtube.com/shorts/MgM_pSRdZGQ)

### Science Magazine - First science from private Moon lander challenges picture of lunar volcanism

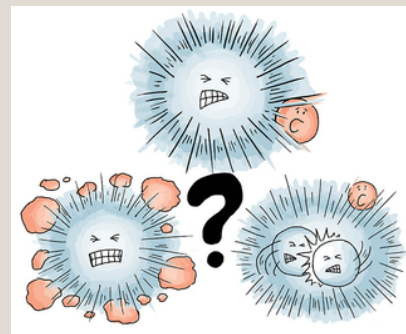
Just over 1 year ago, the Blue Ghost robotic lander, built by Firefly Aerospace, sent back the last bits of data from its ...

[sciencemaginedigital.org](http://sciencemaginedigital.org)



For all of you model makers, this could be a great project to share with multi-generations!

<https://axmpaperspacescalemodels.com/index.php/sls/>



### WAC Upcoming Events

8 MAY - AGM FOLLOWED BY JENI MILLARD - TBC (IN-PERSON ONLY)

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

JULY - TBC

AUGUST - NO MEETING THIS MONTH

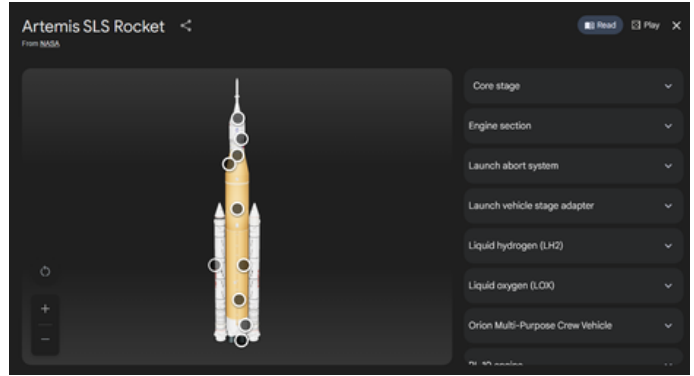
MORE TO COME IN 2026!

# WEYMOUTH ASTRONOMY

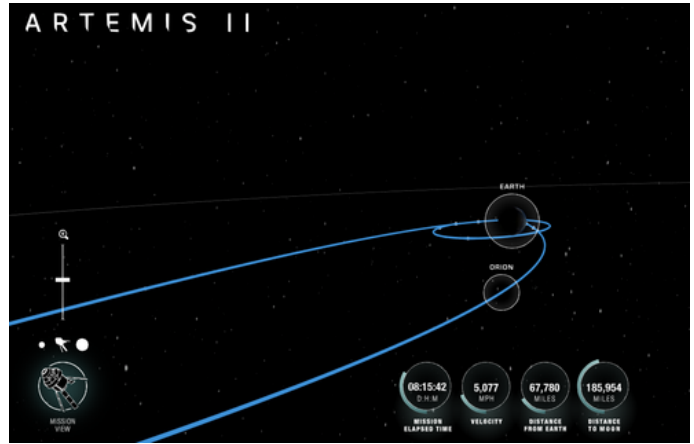


## Special section on the Artemis II Mission

The Artemis II Mission is scheduled to return the 10 April. This will indeed be a monumental return of an amazing mission. Here are a selection of some key photos and articles on this monumental event.



<https://share.google/su4Rj3DJi24EGhKoG>



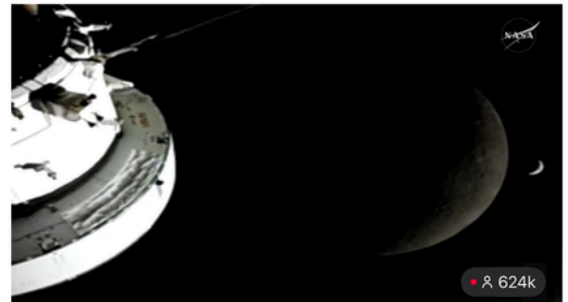
<https://www.nasa.gov/missions/artemis-ii/arrow/>

### NASA's Artemis II Crew Beams Official Moon Flyby Photos to Earth

Editor's note: Some photo captions were updated on April 8, 2026, to reflect ongoing scientific observations and discussion about the images.

NASA / Apr 7

<https://www.nasa.gov/news-release/nasas-artemis-ii-crew-beams-official-moon-flyby-photos-to-earth/>



### Artemis II Lunar Flyby

The first flyby images of the Moon captured by NASA's Artemis II astronauts during their historic test flight reveal regions no human has ever seen before—including a rare in-space solar eclipse.

NASA / Apr 7

<https://www.nasa.gov/gallery/lunar-flyby/>



At Fairwood in the early hours of 8 Apr. Chris Bowden took this lunar image for posterity at the time Artemis reappeared from the far side!



**Light pollution has brightened Earth by 16% since 2014, satellites find**  
But some regions are dimming due to energy-saving policies, wars and disasters.

**S** Space / 12:00 PM

<https://www.space.com/astronomy/earth/light-pollution-has-brightened-earth-by-16-percent-since-2014-satellites-find>



**Large Hadron Collider gives scientists their best look yet at conditions right after the Big Bang**

"This is the first time we have observed, for a large interval in momentum and for multiple species, this flow pattern in a subset of proton collisions in which an unusually large number of particles are produced."

**S** Space / Apr 8

<https://www.space.com/science/particle-physics/large-hadron-collider-gives-scientists-their-best-look-yet-at-conditions-right-after-the-big-bang>

<https://www.space.com/space-exploration/artemis/all-eyes-on-orions-heat-shield-artemis-2-astronauts-will-hit-earths-atmosphere-at-a-record-breaking-25-000-mph-on-april-10>



An artist's impression of the Orion capsule streaking through the atmosphere. (Image credit: NASA)

## All eyes on Orion's heat shield: Artemis 2 astronauts will hit Earth's atmosphere at nearly 24,000 mph on April 10

By Keith Cooper

Here's how the moon explorers' Orion capsule will survive the fiery, harrowing trip.

Now that NASA Artemis 2 mission has rounded the moon, taking astronauts Reid Wiseman, Victor Glover, Christina Koch and Jeremy Hansen farther from the Earth than any astronauts before them, the journey home is underway. What awaits them when they reenter Earth's atmosphere?

The final 100 or so miles of their 695,081-mile (1,118,624 kilometers) journey are potentially the most dangerous. At about 75 miles (120 km) above Earth, Artemis 2's Orion capsule will enter our atmosphere at an estimated 23,840 mph (38,367 kph). That's fast enough to fly from New York to Tokyo in less than 20 minutes, were the capsule heading in that direction. Instead, it will be on target for a splashdown Friday evening (April 10), in the Pacific Ocean off the coast of San Diego.

Link to full article found (left).

