

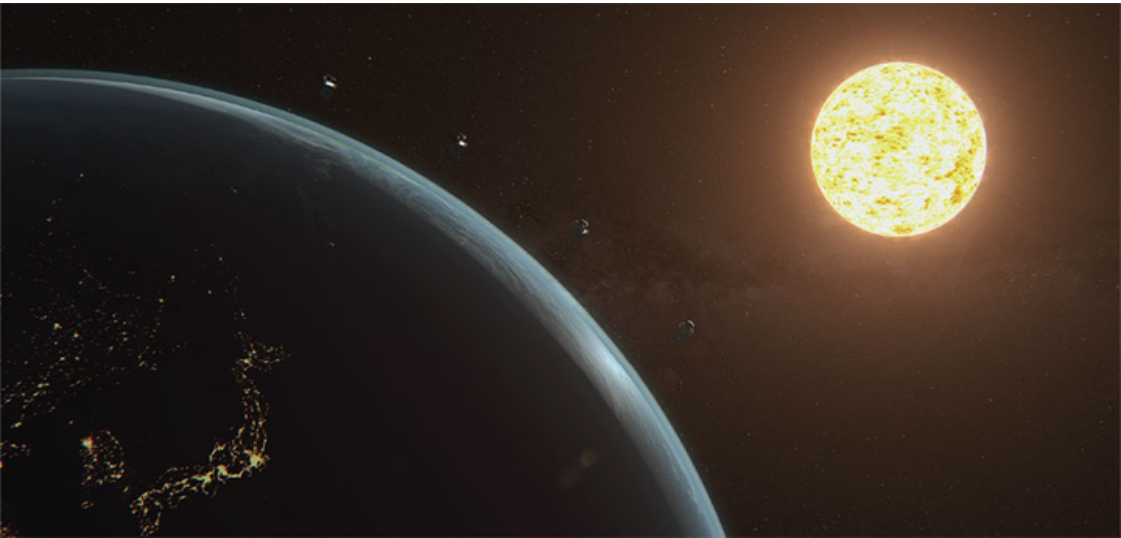
SKYWATCHER NEWSLETTER



LATEST NEWS

August brought us some amazing views of both deep partial solar and lunar eclipses. Thanks to the WAC What'sApp group for some wonderful images that have been shared. Check out several in this newsletter. Aurora season has officially started. They have been spotted from mid August so keep a watch as the skies are darkening as we approach the Autumnal Equinox.

Until next month ~SLK



NASA's PUNCH punches up space weather forecasts
- Science Magazine 9 Aug 2026 by RACHEL BERKOWITZ

Satellite quartet demonstrates record-breaking ability to predict solar explosions' arrivals at Earth
In the wee hours of 31 May 2025, billions of tons of charged particles erupted from the Sun and began to hurtle in our direction. Spacecraft tracked the liftoff of that huge burst of plasma, enabling U.S. officials to predict when the eruption would strike Earth, within a 12-hour window. But a new view of the Sun's roiling outer atmosphere could have enabled scientists to peg the solar storm's arrival time much more precisely—to within just half an hour.
That precision comes from PUNCH, a NASA mission keeping an eye on a part of space that's been a blind spot for space weather. Like a sensitive 3D camera whose field of view covers half the sky, it watches everything escaping the Sun's atmosphere and traveling toward us. "We can track space weather all the way across the inner Solar System," says Craig DeForest, the mission's principal investigator.

Traveling at an average of 1380 kilometers per second, the CME reached Earth after nearly 30 hours, causing a "G4" geomagnetic storm, severe enough to threaten infrastructure. Models using PUNCH observations could have pinpointed the arrival to between 5 and 5:30 a.m. Greenwich Mean Time on 1 June—enabling operators of satellites, electric utilities, and other systems to prepare 8 hours ahead of time. "We analyzed one event in a deliberately crude way and found this amazing result," DeForest says.
Now comes the heavy lifting: analyzing dozens of other CMEs that PUNCH has tracked to see how precisely its data could have forecast arrival times. If PUNCH performs well, its data could be used in other research models for space weather. "You have lots of models all trying to forecast the same thing, but you need data sets to validate which is correct," says Jamie Favors, who directs NASA's Space Weather Program.

LOCAL EVENTS

- 12 Sept - CCA - First autumnal Observation session this year for Cranborne Chase Astronomy Club is this coming Saturday. Meet at Win Green Car Park (SP7 0ES) from 21.00, as always weather permitting, of course.
- 16 Sept - FA - Volcanoes in the Solar System - Club Speaker Michael Barrett
- 1 Oct - SAS - Sheri Karl - Orbiting Solar Observatories
- 6 Oct - WAS - The Bob Mizon Memorial Lecture - Hugh Allen - Binary Stars - A history of making waves - AGM
- 15 Oct - SAS - Astronavigation - From Petroglyphs to Pulsars - Prof Nik Whitehead
- 21 Oct - FA - Left in Space - Guest Speaker Dr Lilian Hobbs
- 29 Oct - SAS - Astronavigation - From Petroglyphs to Pulsars - Prof Nik Whitehead
- 3 Nov - WAS - Norman Ben Jer - Lakota & Cheyenne Star Knowledge - Zoom only

COMING SOON
Stay Tuned

VISIT OUR WEBSITE FOR THE LATEST CLUB INFORMATION

NASA's PUNCH punches up space weather forecasts

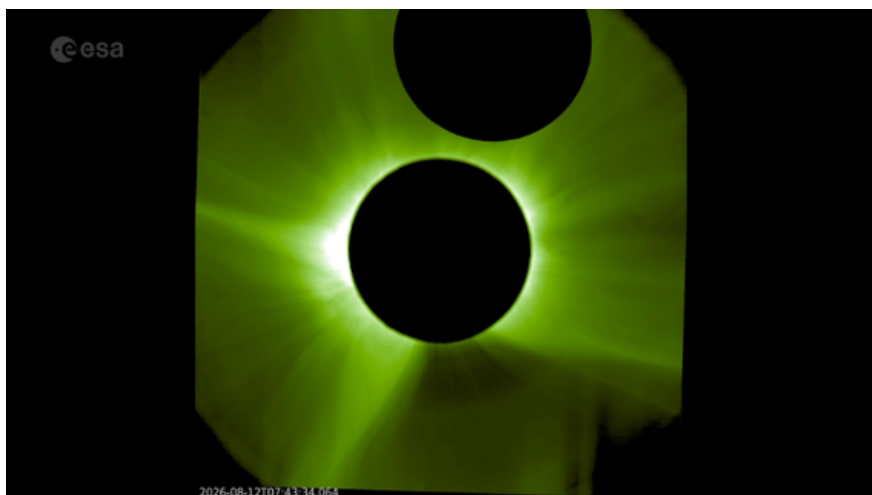
- Continued from page 1

Already, forecasters are testing a prototype product called QuickPUNCH to gauge how much a steady stream of rapid-turnaround images of slightly lower quality can improve CME arrival time predictions. Forecasters have a winning streak they want to sustain: In 2011, modeling advances allowed SWPC to shrink its prediction error for solar storm arrival time from 15 hours down to six, according to Daniel Baker, a space physicist at the University of Colorado Boulder. "If PUNCH can help give better information about CME size and shape," he adds, "I could imagine getting regular accuracy of 2 to 3 hours in arrival times."

It's not just arrival time that matters. The intensity of a geomagnetic storm depends partly on the orientation of the magnetic field embedded in the plasma. If that field's orientation is aligned with Earth's field, Upton says, the storm's effects will be far milder than if they're opposed. Where things stand today, "We don't really have that information until 30 to 40 minutes before it hits," Singer says. But by sensing both visible light and its polarization, PUNCH can capture the front of an approaching CME in 3D, allowing researchers to model the strength and orientation of the front's magnetic field hours before impact.

~The full article can be found at

https://www.sciencemaginedigital.org/sciencemagazine/library/item/06_august_2026/4356136/?Cust_No=03448789



Double eclipse for Proba-3

STCE Newsletter 10 Aug 2026 - 16 Aug 2026

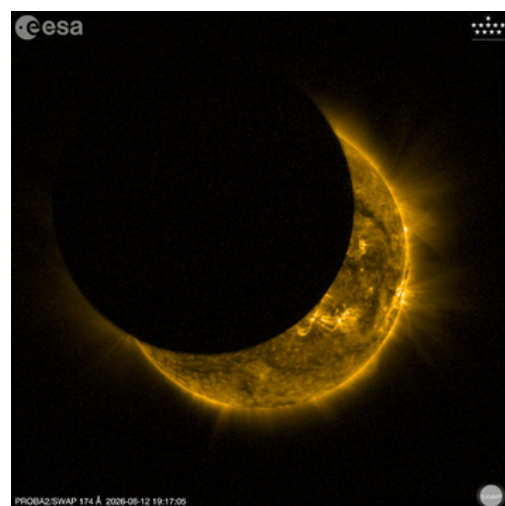
By now, you must have seen the amazing images of the total eclipse that occurred last week. However, did you know this total eclipse was also seen from space?

When a total eclipse occurs on Earth, solar imagers in space usually only observe a partial eclipse, due to a different alignment between the Sun, the Moon and the spacecraft. However, on August 12, the ASPIICS coronagraph onboard Proba-3 was in just the right place at the right time!

ASPIICS is used to seeing eclipses, as that is the exact purpose of the Proba-3 mission: use a second spacecraft to occult the solar disk and create an artificial eclipse on demand. However, on August 12, the Moon joined the fun: as the two Proba-3 spacecraft were already aligned for eclipse observations, the Moon slid in between the spacecraft and the Sun, creating double eclipse and an even larger shadow in the ASPIICS observations.

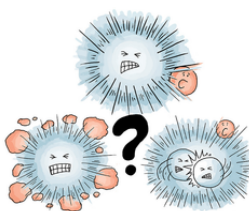
Because the Proba-3 spacecraft take their eclipse observations at a height of 60,000 km, they were closer to the Moon than Earth at the time of observation. And so this unique double eclipse took much longer than totality on ground: 8 min and 40 sec to be exact. Enjoy the

movie here:
https://www.esa.int/ESA_Multimedia/Videos/2026/08/A_double_eclipse_for_Proba-3



Above Right: The solar eclipse of August 12 was observed and recorded by LYRA (top) and SWAP (bottom). The irradiance plots above, corresponding to the two primary transits (out of a total of 3 passes) of PROBA2 through the occultation zone, illustrate the gradual reduction in irradiance across the four channels of LYRA's backup unit as the Moon passed in front of the Sun. The SWAP image captures the moment when the eclipse reached its maximum phase as seen from PROBA2, during the 3rd pass, with a coverage of 68%. More detailed explanations can be found on the PROBA2 website: <https://proba2.sidc.be/node/396>.

Find a SWAP movie of the event here: https://proba2.sidc.be/Events/2026-Aug-12-SolarEclipse/movies/swap_eclipse_2026_08_12_logos_lossless.mp4.



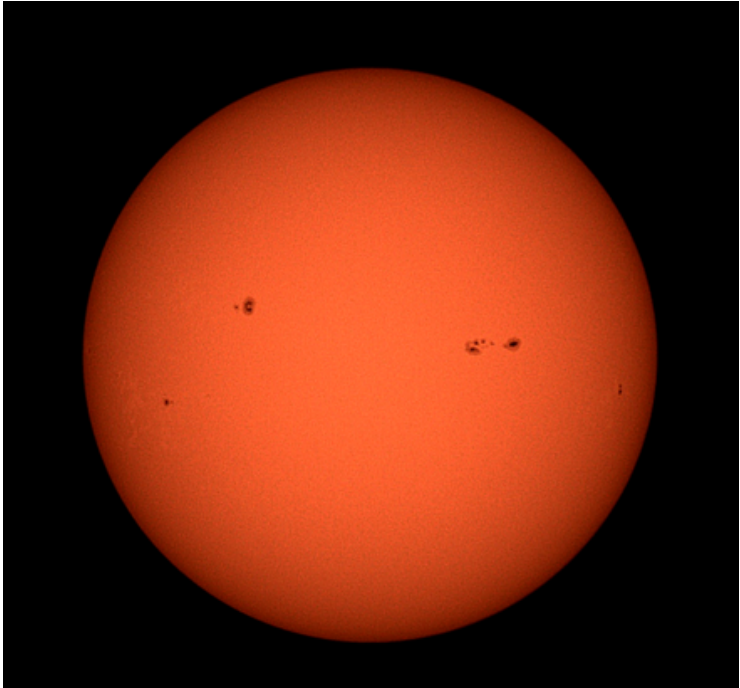
WAC Upcoming Events

9 OCT- LOUISE MCKENNA - ASTRO PHOTOGRAPHS (IN-PERSON AND ZOOM)

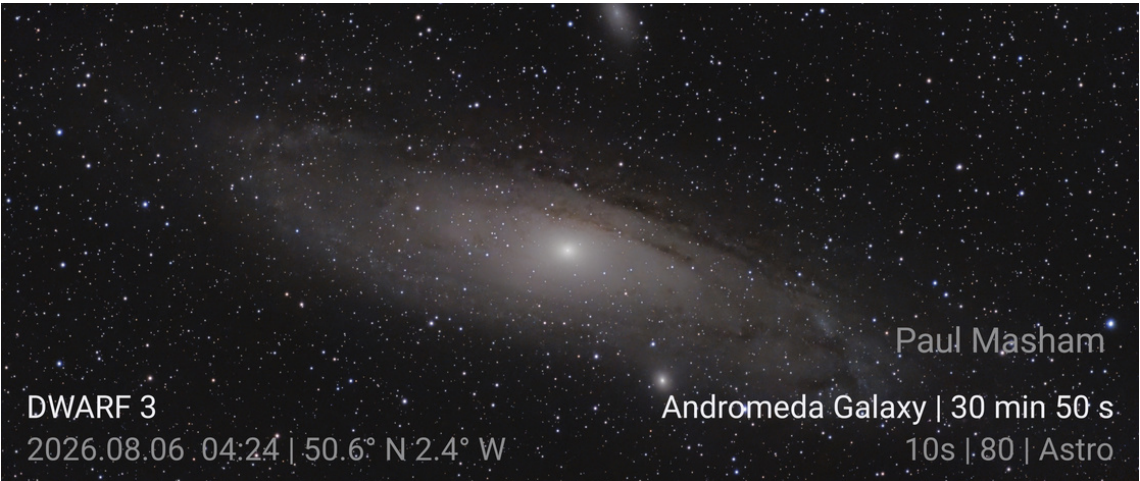
13 NOV - PAUL FELLOWS - SEARCHING FOR THE SUN'S SISTERS (IN-PERSON AND ZOOM)

11 DEC - GEOFF KIRBY - 70 YEARS OF STARGAZING (IN-PERSON AND ZOOM)

MEMBERS SECTION

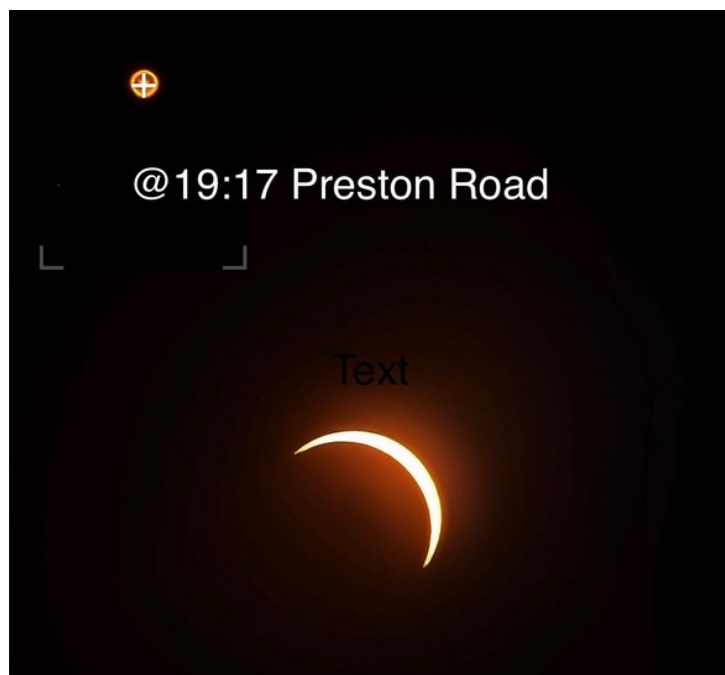
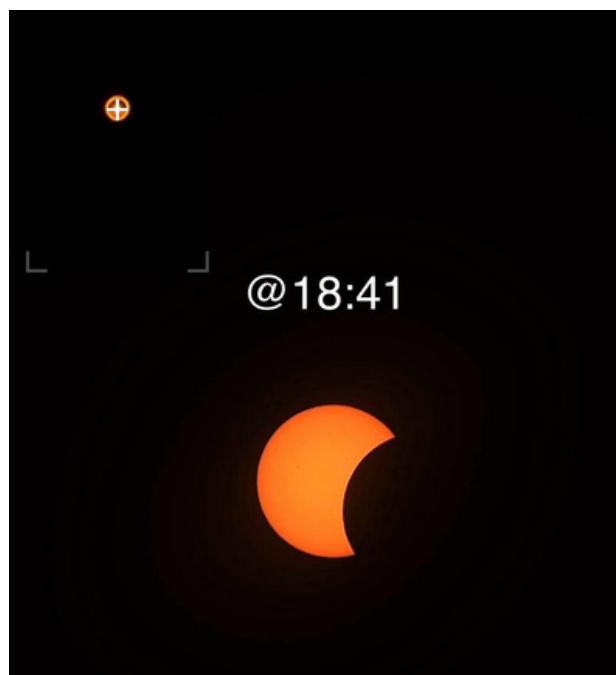


Images taken by Paul Masham using the smart scope DwarfLab Dwarf 3.



WEYMOUTH ASTRONOMY

12 Aug 2026 Partial Solar Eclipse



SOME LOVELY ECLIPSE IMAGES ABOVE FROM ANGELINA WITH A SEESTAR S30PRO.

BELOW LEFT IS ENNIO'S EXCELLENT WHITE LIGHT IMAGE OF THE ECLIPSE SHOWING THE TINY SUNSPOTS VISIBLE.

BELOW RIGHT SHOWS SARA'S EXCELLENT WHITE LIGHT IMAGE AND BAADER SOLAR FILM USING A SEESTAR S30 ALSO.



WEYMOUTH ASTRONOMY



Thursday, Jul. 16, 2026

THIS SOUNDS LIKE A REALLY BAD IDEA:

Since SpaceX began launching Starlink satellites in 2019, astronomers have grown increasingly concerned. It's almost impossible now to take a deep-sky image without satellite streaks in the background. The megaconstellation numbers nearly 11,000 functioning satellites, and SpaceX launched another 1,730 during the first half of 2026 alone.

Soon, Starlink may be the least of their worries.



An artist's concept of sunlight beamed down from orbit. Bats, fireflies, and other creatures of the night could find their darkness interrupted by roving spots of artificial sunlight

Last week, the FCC authorized Reflect Orbital Inc. to launch a huge space mirror named "Eärendil-1." From an orbit about 625 km high, it will cast a moving, 5-km-wide patch of light onto the Earth about as bright as a full Moon. Later, the company could combine beams from multiple satellites to create much brighter spotlights. Reflect Orbital wants to launch 50,000 more by 2035, selling sunlight-on-demand to solar farms, construction sites and search-and-rescue teams.

If Reflect Orbital's plan is realized, it could be calamitous not only for astronomy but also for the natural world as a whole. Nocturnal animals and night-blooming plants, tuned by evolution to the rhythm of day and night, would suddenly find their darkness interrupted by moving pools of redirected sunlight. Small favors? Reflect Orbital says the light will not be bright enough to start fires.

The FCC itself acknowledged some of these concerns, but noted in its order that optical astronomy and the environment lie largely outside its jurisdiction. They can only regulate the project's use of radio signals. For now, no US agency regulates how bright a satellite may shine.

The company's FCC application attracted more than 1,800 public comments, most of them sharply critical. Nevertheless, the launch of Eärendil-1 is now expected before the end of the year.

28 Aug 2026 Partial
Lunar Eclipse

ENNIO TOOK A WONDERFUL HORIZON IMAGE
OF THE PARTIAL LUNAR ECLIPSE SETTING ON
THE 28TH AUG. WHAT A FANTASTIC MONTH
FEATURING 2 AMAZING PARTIAL ECLIPSES.
HOPE YOU WERE ABLE TO WATCH TOO!



