

2025: The View from NOAA Satellites

December 22, 2025

It was a busy – and successful – year for NOAA's Satellite and Information Service. We celebrated 50 years of NOAA's GOES satellites in 2025. The last of our GOES-R Series satellites, GOES-19, became operational in April. And we launched our groundbreaking SWFO-L1 space weather observatory, which is now making its way to an orbit one million miles from Earth.

Closer to home, NOAA satellites were continually watching our world from their lofty perspective in space, capturing the beauty and extremes that unfolded around our dynamic planet over the course of the year.

They served as our sentinels in the sky as devastating wildfire swept across the landscape, record-setting hurricanes churned up the Atlantic, and dazzling auroras danced in our night sky. They tracked blinding dust storms and spotted restless volcanoes spewing smoke and magma. Our satellites even monitored the sun – and caught a passing glimpse of the moon – during our cosmic journey through the solar system this year.

Check out the following link for some of the most compelling images from 2025, presented in chronological order, as seen from NOAA's GOES and JPSS satellites. [2025: The View from NOAA Satellites | NESDIS | National Environmental Satellite, Data, and Information Service](#)

SWFO-L1, Renamed SOLAR-1, Reaches Final Destination One Million Miles from Earth

January 27, 2026

On January 23, 2026, [NOAA's Space Weather Follow On – Lagrange 1](#) (SWFO-L1) observatory executed its final engine burn, successfully entering its final orbital position at [Lagrange point 1](#). Located roughly one million miles from Earth, this unique vantage point allows the satellite to continuously monitor the sun and space weather before it reaches our planet. The observatory has now been officially renamed to Space weather Observations at L1 to Advance Readiness–1 (SOLAR-1).

“SOLAR-1, America's first satellite designed exclusively for continuous, operational space weather observations, represents a major advancement in our defense against solar storms,” said Greg Marlow, Director of NOAA's Office of Space Weather Observations (SWO). “This milestone highlights NOAA's commitment to building a space weather–ready nation.”

SOLAR-1 will allow SWO to provide users with state-of-the-art data for their timely and accurate forecasts, warnings and alerts. “NOAA space weather observation programs are proud to provide trusted space weather data to safeguard society,” emphasized Richard Ullman, Deputy Director of NOAA's SWO. “We are committed to monitoring space weather events to protect critical missions, including [NASA's Artemis](#).”

“The SOLAR-1 spacecraft is going to be an impressive new tool in our arsenal for space weather monitoring and prediction—not only for our nation, but the entire world—because space weather is a global concern,” said Shawn Dahl, Service Coordinator at NOAA's Space Weather Prediction Center (SWPC).

“Everyone from farmers in the field to crucial system operators and even soldiers in battle can be dramatically affected by space weather events,” Dahl added. “With SOLAR-1, we at SWPC are going to be able to do an even better job of safeguarding society with actionable space weather information.”

SWFO-L1 launched on September 24, 2025, at 7:30 a.m. EDT, lifting off from Launch Complex 39A at NASA's Kennedy Space Center in Florida, aboard a SpaceX Falcon 9 rocket. The launch was managed by NASA's Launch Services Program, based at Kennedy Space Center. (Picture Below)



Following a comprehensive checkout and validation of its instruments, SOLAR-1 is expected to begin operational service in the spring of 2026.