L3HARRIS®
FAST. FORWARD.

NEAR EARTH ORBIT NETWORK (NEON) INFRARED (IR) SOUNDER

A New Era of Weather Forecasting

As extreme weather threatens lives and livelihoods around the world, L3Harris is committed to delivering next-generation global weather capabilities to forge a new era of preparedness.

THE JOINT POLAR SATELLITE SYSTEM (JPSS) AND NEON PROGRAM

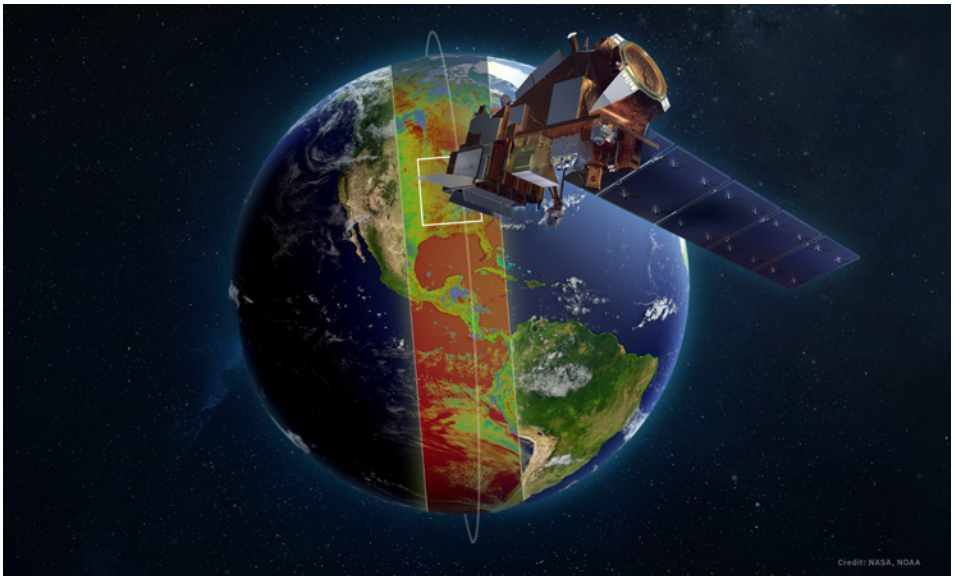
Low-Earth Orbit (LEO) weather satellites, like those operating within the National Oceanic and Atmospheric Administration's (NOAA) Joint Polar Satellite System (JPSS), are critical for weather forecasting, environmental observation, climate monitoring and public safety. These LEO satellites, also called polar-orbiting satellites, supply more than 80% of the data used in numerical weather prediction models.

NOAA's NEON program will develop future LEO satellites to supplement and eventually replace JPSS – ensuring the continuity, improvement and extension of global observations to keep pace with the evolving threat of extreme weather.

THE IMPORTANCE OF IR SOUNDING INSTRUMENTS

A sounder is one of the most important instruments on a weather satellite. It provides data about atmospheric moisture, temperature and pressure, which is critical to forecasting severe weather and studying the climate.

L3Harris' Cross-track Infrared Sounder (CrIS) is a key sensor on NOAA's JPSS spacecraft, providing weather data that not only helps us decide between an umbrella or sunscreen, but also alerts us to prepare for an upcoming storm. Every time you check the weather, you are relying on data provided by L3Harris' space-based imaging and sounding instruments and ground system technology – which we're continuing to advance to stay ahead of current and future weather threats.



BENEFITS

- Enhances data for numerical weather prediction models, leading to more accurate and reliable weather forecasts
- Increases preparedness and enables timely response to severe weather events to protect lives and property
- Helps predict the likelihood, intensity and path of severe storms, tornadoes, hurricanes, torrential rain events and fires
- Advances climate monitoring, allowing scientists and researchers to better understand climate change and its effects
- Monitors greenhouse gases and smoke transport

WHAT'S NEXT: THE FUTURE OF FORECASTING

Catastrophic weather events are becoming more frequent, destructive and widespread than ever before. As these threats intensify, advancing our ability to understand and better predict severe weather events is critical to protecting lives and property.

CONSTELLATIONS OF THE FUTURE: MULTIPLE ORBITS, ONE MISSION.

When it comes to staying ahead of extreme weather threats, harnessing the power of multiple satellites in low Earth orbit (LEO) and geostationary orbit (GEO) is critical.

From their position closer to Earth, LEO satellites observe the entire planet – providing global data on critical atmospheric conditions needed for long-range forecasts. The next-generation LEO approach will improve global data refresh times by leveraging commercial industry investments to launch constellations of small to medium-sized satellites.

GEO satellites, orbiting 22,236 miles above the equator at speeds equal to Earth's rotation, continuously monitor the same area. This allows for real-time decisions and short-term forecasts.

Together, these satellite constellations – with their unique vantage points and data refresh rates – help provide a complete picture of what is happening on Earth.

This multilayered approach is fundamental to a safer, more weather-ready world.

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A multilayered weather architecture requires a constellation of satellites in LEO and GEO – with different vantage points, refresh rates and instrumentation – working seamlessly with ground systems to deliver critical data. That's no easy feat. But, for over 60 years, L3Harris has been at the forefront of this mission – protecting people against extreme weather with advanced imaging, sounding and ground technology.

Our complete mission solutions streamline everything from sensor development, spacecraft procurement and systems integration, to launch services and ground support.

We provide the most advanced imagers and sounders in the world – from our proven on-orbit capabilities to our innovative solutions for the next generation of domestic and international weather architectures.

Our technology is designed to evolve and will continue to transform forecasting capabilities for decades to come. After all, reducing the time and cost it takes to deploy new instruments is critical to staying ahead of extreme weather.

Key Applications

Our advanced sounding technology is a leading source of life-saving imagery and data for:

- Weather forecasting
- Environmental observation
- Climate monitoring
- Disaster management
- Public safety
- Greenhouse gas monitoring

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L3Harris Technologies is the Trusted Disruptor for the global aerospace and defense industry. With customers' mission-critical needs always in mind, our more than 50,000 employees deliver end-to-end technology solutions connecting the space, air, land, sea and cyber domains.

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