At Northrop Grumman, when it comes to designing space-based weather technologies, our goal has always been the same: to provide the most accurate, sophisticated and reliable systems available — delivered on time and on budget.

That’s why, for over 50 years, we’ve proudly added our name to more than 100 military- and civilian-use space-based systems.

Today, with ATMS, our Advanced Technology Microwave Sounder currently on-orbit on the Suomi National Polar-orbiting Partnership (SNPP) satellite, we’ve done it again. ATMS on SNPP has been exceeding on-orbit performance and ATMS for JPSS-1 has been on schedule and under cost.

**ATMS: Nothing Comes Close**

Combining the functionality of Advanced Microwave Sounding Unit-A (AMSU-A) and Advanced Microwave Sounding Unit-B/ Microwave Humidity Sounder (AMSU-B/MHS) instruments, ATMS was developed for the National Polar-orbiting Operational Environmental Satellite System, or NPOESS, and represents the next generation in microwave instruments.

Our ATMS technology provides a 22-channel microwave radiometer that scientists will use to create global temperature and moisture profiles. Meteorologists can then enter this data into weather forecasting models.

ATMS performance provides improved benefits relative to the current AMSU/MHS Suite:

- Three additional sounding channels
- Improved sensitivity and calibration accuracy
- Improved spatial resolution, sampling interval and swath width
- More stable temperature control
- Longer mission life
- Lower mass and power

The result

Improved temperature and humidity-sounding performance over past generations of microwave sounders that is versatile enough for both defense and commercial applications.
Eight hardware redundancy configurations
Four modes, including off/survival, safe hold, diagnostic and operational
Software upload capability
Built-in diagnostics capability
An Operational Mode that operates continuously without additional commands

Together, these features provide the most accurate global atmospheric temperature and humidity profiles available.

And it doesn’t stop there.

Northrop Grumman’s ongoing internal research and development activities to study ATMS capability enhancements for future programs include such features as:

- 229 GHz channels
- 118 GHz channels
- Upper air channels
- Four-point calibration
- Electronics upgrade with digital filtering

ATMS is the low-risk, low-cost, high-performance leader in weather and environmental systems monitoring.