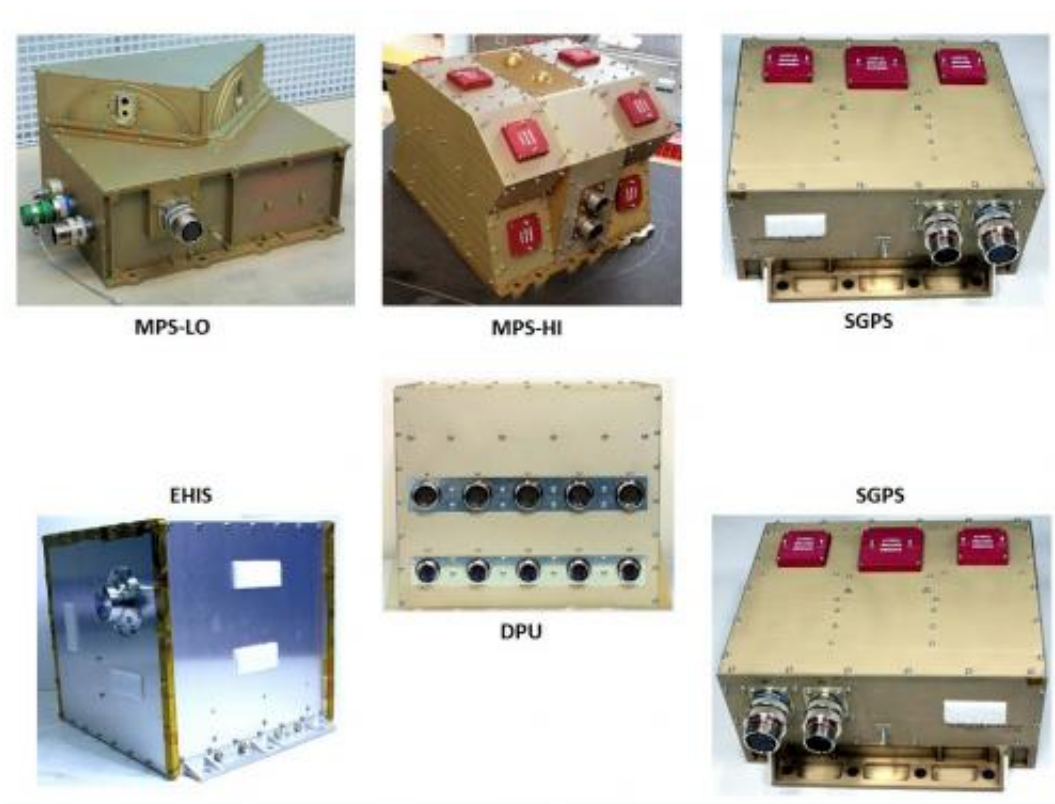


# Latest GOES-R instrument cleared for installation onto spacecraft

November 26 2013



Sensors from GOES-R's SEISS instrument work together. Clockwise: Magnetospheric Particle Sensor - Low Energy Range, Magnetospheric Particle Sensor - High Energy Range (MPS-HI), Solar and Galactic Proton Sensor, Data Processing Unit, and Energetic Heavy Ion Sensor. Credit: ATC

The latest advanced instrument that will fly on NOAA's next-generation Geostationary Operational Environmental Satellite – R known as GOES-

R spacecraft is completed and cleared for installation onto the satellite.

The Space Environment In-Situ Suite, or SEISS, is GOES-R's instrument for monitoring radiation hazards to astronauts and satellites. In addition, the information from SEISS - which is comprised of five sensors, can be used to warn of [space weather events](#) that could damage radio communication. Data from SEISS will be incorporated into the solar radiation storm portion of NOAA [space](#) weather scales, and other alerts and warnings and will improve energetic particle forecasts.

"This is an exciting time for GOES-R, as the instruments are meeting the milestones that put them on the path to integration with the [spacecraft](#)," said Greg Mandt, GOES-R System Program Director, at NASA's Goddard Space Flight Center in Greenbelt, Md. "SEISS is a critical instrument to ensure radiation hazards that impact satellites, radio communications and navigation systems are monitored."

SEISS will be shipped from its developer, Assurance Technology Corporation (ATC) in Carlisle, Mass. to the spacecraft developer, Lockheed Martin Space Systems Co. in Littleton, Colo., in early 2014 to be installed onto the first GOES-R spacecraft. Lockheed is building the spacecraft for the GOES-R series.

Other GOES-R instruments, including the Extreme X-Ray Irradiance Sensor (EXIS) and Advanced Baseline Imager (ABI) were completed this year and are also poised to be integrated onto the spacecraft.

The remaining GOES-R instruments to be delivered are:

- Geostationary Lightning Mapper, which will, for the first time, provide continuous surveillance of total lightning activity from geostationary orbit over the Western Hemisphere;
- Solar Ultraviolet Imager, a high-powered telescope that observes

the sun, monitoring for solar flares and other solar activity that could impact Earth by disrupting power utilities, communication, navigation systems and cause damage to orbiting satellites and the International Space Station;

- Magnetometer, which will provide measurements of the magnetic field surrounding Earth that protects the planet from charged particles released from the sun. These particles can be dangerous to spacecraft and human spaceflight. The geomagnetic field measurements will provide alerts and warnings to satellite operators and power utilities.

GOES-R's instruments will feature improved terrestrial and solar weather monitoring tools, and will provide near real time data to forecasters during severe weather events. The first satellite in the GOES-R Series is currently scheduled for launch in early 2016.

Provided by NASA's Goddard Space Flight Center

Citation: Latest GOES-R instrument cleared for installation onto spacecraft (2013, November 26) retrieved 19 May 2024 from

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