

NPP satellite successfully completes thermal vac testing

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The NASA National Polar-orbiting Operational Environmental Satellite System (NPOESS) Preparatory Project (NPP) climate and weather satellite has successfully passed all environmental testing with the recent completion of thermal vacuum testing at Ball Aerospace & Technologies Corp's production and test facility in Boulder, Colo.

The two months of testing verified that the NPP spacecraft is ready to operate in a space environment. In August, the [satellite](#) will be delivered to the Vandenberg Air Force Base in Lompoc, Calif., for final preparations for a planned Oct. 25 launch.

The NPP mission will help link the current generation of Earth-observing satellites called the Earth Observing System (EOS) to a next-generation of operational polar-orbiting environmental satellites called the Joint Polar Satellite System (JPSS), managed by the National Oceanic and Atmospheric Administration (NOAA). NPP data will also be used as input to numerical weather models until the JPSS system is deployed.

"I am very proud of the entire NPP satellite team for successfully conducting a very thorough and complex environmental test program. The satellite performed very well and the teamwork during thermal vacuum testing was outstanding," said Ken Schwer, NPP project manager at NASA's Goddard Space Flight Center, Greenbelt, Md.

Data from NPP will be used in a range of situations to address an array

of research questions. Climatologists will use the data to enhance their understanding of [climate](#) change, meteorologists to make more accurate live-saving weather forecasts and warnings, and emergency responders to monitor and react to natural disasters.

NPP contains a suite of five sensors that will retrieve key data products about Earth including, for example, measurements of cloud and vegetation cover, ice cover, ocean color, and sea and surface temperatures.

All of NPP's data products have some bearing on understanding global change and climate science. Four of the data products – especially measures of the vertical distribution of moisture and heat in the atmosphere – will help meteorologists improve weather forecasts. Two data products relate to ozone, the colorless gas that shields the planet from harmful ultraviolet radiation and has declined in abundance over Antarctica in the last few decades.

The five-instrument suite includes: the Visible/Infrared Imager Radiometer Suite (VIIRS); the Cross-track Infrared Sounder (CrIS); the Clouds and Earth Radiant Energy System (CERES); the Advanced Technology Microwave Sounder (ATMS); and the Ozone Mapping and Profiler Suite (OMPS). NPP's advanced visible, infrared, and microwave imagers and sounders will provide quality climate observations critical to the nation's civil and military users of operational satellite data. NPP's five advanced sensors are prototypes for the JPSS missions to follow.

In addition to completing environmental tests on the spacecraft, NPP engineers have completed key tests on a network of ground-based stations that will be used to retrieve and process data from NPP when the satellite reaches orbit.

"The ground system is nearly ready to support launch, satellite

commissioning and the risk reduction phase of the NPP mission," said Dan DeVito, JPSS Ground Project Manager, at NASA's Goddard Space Flight Center. "The team has really pulled together over the past year to prepare the Ground System for NPP."

NASA's Goddard Space Flight Center manages the NPP mission on behalf of the Earth Science Division of the Science Mission Directorate at [NASA](#) Headquarters, Washington. The JPSS program is providing the ground system for NPP. NOAA will provide operational support for the mission.

Provided by NASA's Goddard Space Flight Center

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