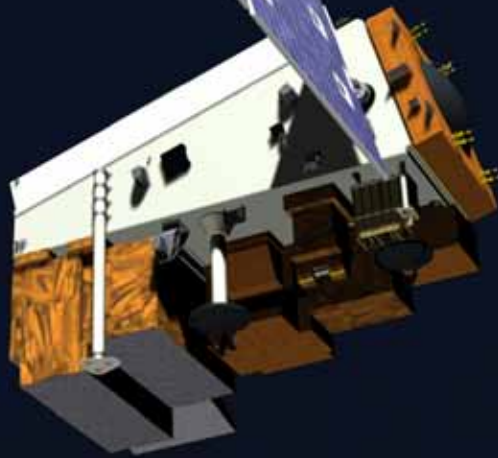


NPP Mission



NPP Snapshot:

- Provides continuity of operational weather data
- 7-year design life/ 5-year mission life
- Dual data capable spacecraft (1394/1553)
- Five instruments with manifest flexibility

The NPP mission will continue critical weather and climate measurements and reduce risk for the next generation meteorological satellite system, by flying a suite of new, advanced-technology remote sensing instruments. The measurements taken by NPP will provide critical data to support operational weather forecasting, as well as long-term climate research.



**Ball Aerospace
& Technologies Corp.**

The Mission

NPP will perform atmospheric temperature and moisture sounding, cloud imaging, sea surface temperature measurements, as well as measurements of ozone, land and ocean biological productivity, aerosol concentrations, and climate system radiation balance.

Data from NPP will be distributed to meteorologists at NOAA and the U.S. Department of Defense, as well as to climate researchers around the globe. Many of NPP's measurements continue long-term climate data records from existing Earth-observing missions such as Aqua, Terra and Aura.

NPP's five-year mission life will help to bridge critical weather data collection requirements until the Joint Polar Satellite System is launched in 2015.

Our Role

Under contract to NASA's Goddard Space Flight Center, Ball Aerospace designed and built the spacecraft bus, and is responsible for integrating the instruments and for performing satellite-level testing and launch support. The bus was completed in 2005, and has since undergone extensive risk reduction testing. All five instruments have been integrated to the spacecraft. The mission is slated to launch in October 2011.

Ball Configurable Platform 2000 (BCP 2000)

The NPP spacecraft bus is the eighth of 11 spacecraft built on the same BCP 2000 core architecture. In all, this architecture has more than 50 years of successful on-orbit operations. The BCP 2000 was designed to accommodate a wide variety of Earth-observing payloads that require precision pointing control, flexible high-data throughput



The NPP spacecraft design has been used on several remote-sensing satellites.



The NPP spacecraft is a modified BCP 2000 bus, shown here being transported to its workstand.

and downlinks, and controlled re-entry. The NPP spacecraft incorporates both MIL-STD-1553 and IEEE 1394 (FireWire) data networks to support the payload suite.

NPP Instruments

The five instruments manifested for flight on the NPP spacecraft trace their heritage to instruments on NASA's Terra, Aqua and Aura missions, on NOAA's Polar Operational Environmental Satellite (POES) spacecraft, and on DoD's Defense Meteorological Satellite Program (DMSP). The five instruments are:

- The Visible/Infrared Imager Radiometer Suite (VIIRS)
- The Cross-track Infrared Sounder (CrIS)
- The Advanced Technology Microwave Sounder (ATMS)
- The Ozone Mapping and Profiler Suite (OMPS)
- The Clouds and the Earth Radiant Energy System (CERES)

OMPS

The Ball Aerospace-built OMPS instrument continues Ball's history of building ozone measuring instruments, including the successful series of SBUV instruments. OMPS incorporates an advanced nadir-viewing sensor and a highly innovative limb-viewing sensor. OMPS will continue the long-term continuous data record of ozone measurements from space.