

MAINTAINING JPSS PRODUCT QUALITY

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ABSTRACT:

The National Oceanic and Atmospheric Administration (NOAA) and National Aeronautics and Space Administration (NASA) are jointly acquiring the next-generation civilian weather and environmental satellite system: the Joint Polar Satellite System (JPSS). JPSS will replace the afternoon orbit component and ground processing system of the current Polar-orbiting Operational Environmental Satellites (POES) managed by the National Oceanic and Atmospheric Administration. The JPSS satellites carry a suite of sensors designed to collect meteorological, oceanographic, climatological, and solar-geophysical observations of the earth, atmosphere, and space. The ground processing system for JPSS is known as the Common Ground System (CGS), and provides command, control, and communications (C3) and data processing and product delivery.

The first satellite in the JPSS constellation, the Suomi National Polar-orbiting Partnership (S-NPP) satellite, was launched on 28 October 2011. CGS is currently processing and delivering Sensor and Environmental Data Records (SDRs and EDRs) for S-NPP. The EDRs for Suomi NPP are currently undergoing an extensive Calibration and Validation (Cal/Val) campaign. As Cal/Val changes migrate into the operational system, long term monitoring activities will begin to track product quality and stability. In conjunction with NOAA's Office of Satellite and Product Operations (OSPO) and the NASA JPSS Project Office, Raytheon is supporting this effort through the development and use of tools, techniques, and processes designed to detect changes in product quality, identify root causes, and rapidly implement changes to the operational system to bring suspect products back into specification.