



JPSS

Joint Polar Satellite System

The Joint Polar Satellite System (JPSS) is the nation's next generation polar-orbiting operational environmental satellite system. JPSS is a collaborative program between the National Oceanic and Atmospheric Administration (NOAA) and the National Aeronautics and Space Administration (NASA).

Satellites in the JPSS constellation gather global measurements of atmospheric, terrestrial and oceanic conditions. JPSS delivers key observations for the nation's essential products and services, including forecasting severe weather days in

advance and assessing environmental hazards such as droughts, forest fires, and poor air quality. Data and imagery obtained from satellites in the JPSS constellation is designed to increase timeliness and accuracy of public forecasts and reduce the potential loss of human life and property.

SPACECRAFT

Building on the success of Suomi NPP and JPSS-1 in the JPSS series, the JPSS-2, JPSS-3 and JPSS-4 spacecraft will provide operational continuity of satellite-based observations with highly sensitive instruments and a versatile ground system that controls the satellite, processes the mission data and provides information to users around the

globe. Northrop Grumman is responsible for the design, production and integration of JPSS-2, JPSS-3 and JPSS-4 spacecraft, full satellite environmental testing, and support to launch/early on-orbit checkout. The spacecraft design is derived from Northrop Grumman's proven LEOStar-3™ bus used for NASA's Landsat-8, Landsat-9 and ICESat-2 Earth science satellites as well as for commercial imaging and defense missions.

CUSTOMER

- National Oceanic and Atmospheric Administration (NOAA)
- National Aeronautics and Space Administration (NASA)



JPSS

INSTRUMENTS

ADVANCED TECHNOLOGY MICROWAVE SOUNDER (ATMS)

Northrop Grumman Space Systems, Azusa, CA

CROSS-TRACK INFRARED SOUNDER (CRIS)

L3Harris, Fort Wayne, IN

OZONE MAPPING PROFILER SUITE (OMPS)

Ball Aerospace and Technologies Corporation, Boulder, CO

VISIBLE INFRARED IMAGING RADIOMETER SUITE (VIIRS)

Raytheon Intelligence and Space, El Segundo, CA

MISSION PARTNERS

NASA GODDARD SPACE FLIGHT CENTER

Procuring agency, customer program management, instrument procurement, system integration.

NOAA

Mission program management, mission operations.

NORTHROP GRUMMAN

Spacecraft prime contractor and integrator; responsible for spacecraft design and manufacture, instrument integration, launch vehicle integration support, with launch and early on-orbit checkout support.

PERFORMANCE DATA

SPACECRAFT

LAUNCH MASS

NTE 3,198 kg

REDUNDANCY

Fully redundant with cross-strapping

SOLAR ARRAYS

Deployable 5 panel, GaAs cells, ~4,000 watts EOL

STABILIZATION

3-axis, zero momentum bias, nadir pointing

POINTING

0.13 deg arcsec control, 0.02 deg arcsec knowledge

COMMUNICATIONS

Ka-Band Mission, X-Band Mission and S-band Command & Telemetry

ORBIT

Sun-synchronous Polar 824km with a 1330 Local Time Ascending Node Crossing

MISSION LIFE

Class B mission (NPR 8705.4) with a 7-year mission life, including controlled de-orbit

LAUNCH

LAUNCH VEHICLE

ULA Atlas-V (JPSS-2), TBD (JPSS-3, JPSS-4)

LAUNCH SITE

Vandenberg Space Force Base, CA

DATE

JPSS-2 November 2022, JPSS-3 in 2024, JPSS-4 in 2026