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 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 Electronics Systems, Azusa, CA

CROSS-TRACK INFRARED SOUNDER (CRIS)
Harris Corporation (Exelis), Fort Wayne, IN

OZONE MAPPING PROFILER SUITE (OMPS)
Ball Aerospace and Technologies Corporation, Boulder, CO

RADIATION BUDGET INSTRUMENT (RBI)
Harris Corporation (Exelis), Fort Wayne, IN

VISIBLE INFRARED IMAGING RADIOMETER SUITE (VIIRS)
Raytheon Space and Airborne Systems, 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 2,930 kg

REDUNDANCY
Fully redundant with cross-strapping

SOLAR ARRAYS
Deployable 5 panel, GaAs cells, 4,450 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
TBD (either ATLAS-V, Falcon 9 or Delta IV)

LAUNCH SITE
Vandenberg Air Force Base, CA

DATE
JPSS-2 in 2021, JPSS-3 in 2023, JPSS-4 in 2026