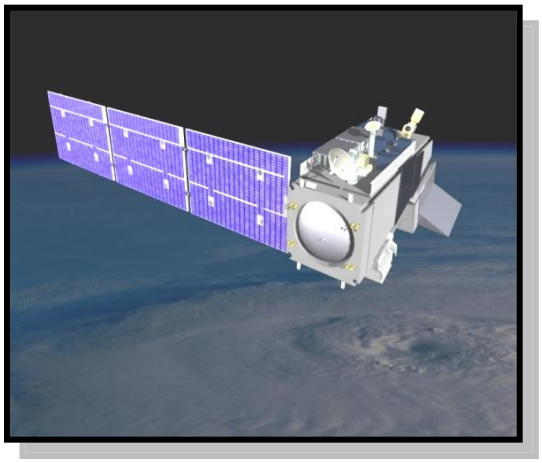
NPOESS Preparatory Project (NPP)

http://jointmission.gsfc.nasa.gov



Mission Objectives

For JPSS, NPP provides risk reduction with an opportunity to demonstrate and validate new instruments and processing algorithms, as well as to demonstrate and validate aspects of the JPSS command, control, communications and ground processing capabilities prior to the launch of the first JPSS spacecraft. Provides NASA with continuation of global change parameters after Earth Observing System (EOS) Terra and Aqua.

- **Atmospheric temperature and humidity sounding**
- **Sea surface temperature**
- **Land and ocean biological productivity**
- **Cloud and aerosol properties**

Mission Characteristics

Instruments:

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

Launch:	FY-2012
Orbit:	824 km polar sun-synch, 1330 ascending node
Launch Site:	Western Test Range
Mission Duration:	5 year/7.5 year consumables

NPP Contributions to JPSS

Instrument Risk Reduction - Early delivery/ instrument level test/system-level integration and test provides lessons learned and allows for any required modifications in time to support JPSS first launch readiness.

Ground System Risk Reduction

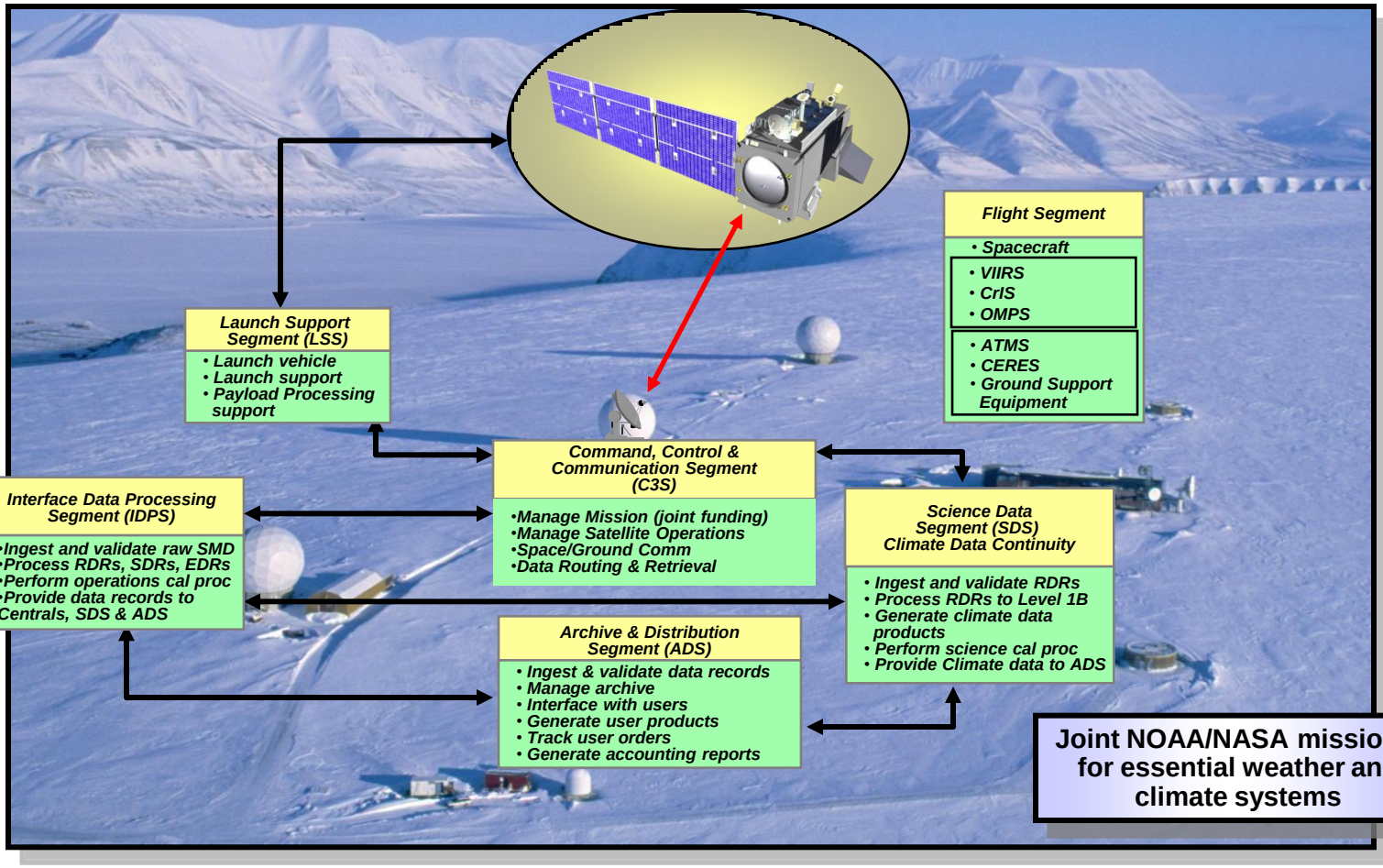
- **Early delivery and test of a subset of JPSS ground system elements**

Early User Evaluation of JPSS Data Products

- **Provides algorithms/instrument verification and opportunities for instrument calibration/ validation**
- **Allows for algorithm modification prior to JPSS first launch**

NPP/JPSS Program Information

NPP was initiated as risk reduction to and was under development as a portion of the National Polar-orbiting Operational Environmental Satellite System (NPOESS) until NPOESS was terminated on 30 September 2010. The polar-orbiting satellite system that will succeed NPOESS will be called the Joint Polar Satellite System (JPSS) and will be developed by NOAA with NASA performing duties as JPSS procurement agency. The termination decision assigned responsibility for the 1330 Local Time Ascending Node orbit to NOAA. NOAA and NASA will complete NPP as originally planned. NPP will carry five JPSS sensors (VIIRS, CrIS, ATMS, OMPS and CERES) and in addition to performing risk reduction for JPSS, it will be capable of fulfilling NOAA's need for an operational satellite, if required. NPP will use the Command, Control and Communications and Interface Data Processing Segments that were under development for NPOESS.



Joint NOAA/NASA mission for essential weather and climate systems

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