International Polar Orbiter Processing Package (IPOPP)

Technology for real-time collection, processing, and distribution of Earth science data

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Overview

The IPOPP is a software package that will enable the Direct Broadcast (DB) user community to smoothly transition from the Earth Observing System (EOS) era to the National Polar-orbiting Operational Environmental Satellite System (NPOESS) era.

IPOPP will host government sanctioned NPOESS algorithms that will enable the DB community to process, visualize, and evaluate NPOESS Sensor and Environmental Data Records - starting with NPP mission.

IPOPP will be:

- Freely available
- Portable to Linux x86 platforms
- Efficient to run on modest hardware
- Simple to install and easy to use
- Able to ingest and process Direct Broadcast overpasses of arbitrary size
- Able to produce core and regional value-added EDR products

The IPOPP framework utilizes a Science Processing Algorithm (SPA) wrapping technique that supports multi-discipline and multi-mission algorithms from EOS, NPP, and NPOESS platforms.

The IPOPP serves as the bridge between user needs and mission objectives and it's technology development process stresses continuity and standardization.

IPOPP technologies enable real-time access to instrument data and derivative products from the Aqua and Terra missions and, in the future, the NPP and NPOESS missions.

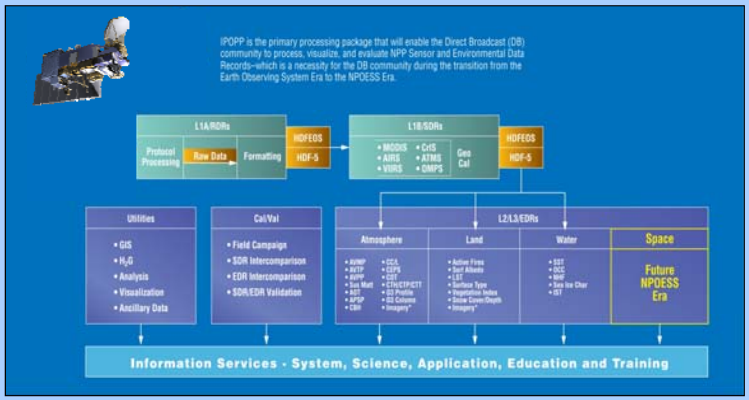
Partnership

NPOESS
Integrated Program Office

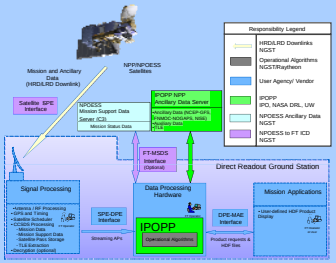
NASA
Direct Readout Laboratory

University of Wisconsin
Space Science Engineering Center, Cooperative Institute of Meteorological Satellite Studies

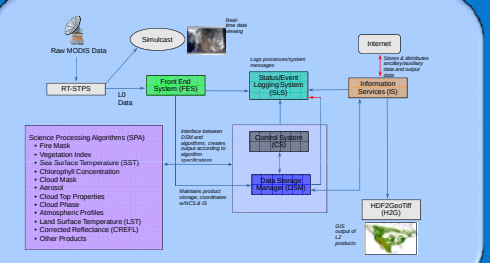
IPOPP ELEMENTS TERRA, AQUA, and NPP



NPP/NPOESS Direct Readout Architecture

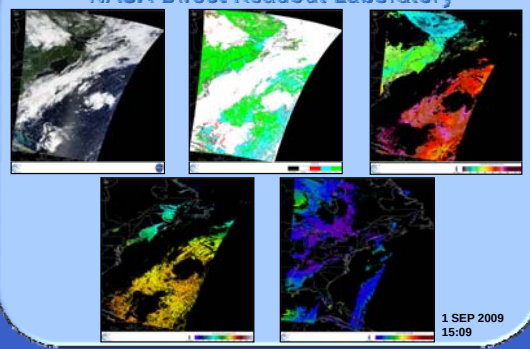


IPOPP Processing Configuration Alpha and Beta Test Versions



Real-time Quick look Visualization Tool

IPOPP EOS MODIS Products NASA Direct Readout Laboratory



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