Enhancements to NASA's Land Atmosphere Near real-time Capability for EOS (LANCE):

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Abstract
NASA's Land, Atmosphere Near real-time Capability for EOS (LANCE) supports application users interested in monitoring a wide variety of natural and man-made phenomena. Near-Time (NRT) data and imagery from the AIRS, AMSR2, MISR, MLS, MODIS, OMPS, OMI, and VIIRS instruments are available much quicker than routine processing allows. Most data products are available within 3 hours of satellite observation. NRT imagery are generally available 3-5 hours after observation. This article describes the LANCE enhancements made to the LANCE over the last year. These enhancements include the addition of NRT products from AMSR2, MISR, OMPS and VIIRS. In addition, the selection of LANCE NRT imagery that can be interactively viewed through WorldView and the Global Imagery Browse Services (GIBS) has been expanded. Next year, data from the MOPITT will be added to the LANCE. For more information visit: https://earthdata.nasa.gov/lance

What's new in LANCE?
LANCE provides global imagery and data for Near Real-Time Applications from AIRS, AMSR2, MISR, MLS, MODIS, OMI, OMPS and VIIRS

What is LANCE?
LANCE provides data and imagery in support of applications such as: Air Quality - Dust storms – Fires – Vegetation for agricultural monitoring – Floods – Ash plumes – Drought – Smoke plumes – Sea ice for shipping - Severe Storms

LANCE was established in 2009, building on the success of MODIS Rapid Response. LANCE is a component of EOSDIS, NASA’s Earth Observing System Data and Information System. It is a virtual system that leverages existing science led processing and data centers.

LANCE NRT Products

NRT Level 2 MISR Winds products are now available through LANCE. MISR NRT Winds will be used to improve numerical weather prediction. These products include L1B2 imagery, cloud tracked winds, and will include aerosol properties.

OMPS
Data from the Ozone Measuring and Profiler Suite (OMPS) aboard the Suomi National Polar-orbiting Partnership (Suomi NPP) are the newest NRT products to be made available through LANCE. The specific products are:
- NMTO3: OMPS Nadir Mapper Total Column Ozone and Aerosol Index
- NMTO2: OMPS Nadir Mapper Near Time Sulfur Dioxide
- NPBXOS2: L2 - OMPS Nadir Profiler Ozone Profile

All three products will provide continuity from OMI

MISR
MISR image of Typhoon nepartak captured on July 7, 2016, upon which the red lines have been superimposed. The image shows that借助mapping capability which is a great way to demonstrate and share dynamic processes captured by the satellites.

While LANCE OMPS near real-time products do not have the extensive processing required for use in scientific research, they are valuable tools for monitoring the health of the ozone layer, evaluating ultraviolet (UV) radiation intensity, and determining power outages caused by the flooding on August 15, 2016. The bottom-right image shows a normal night, the bottom-right was taken the night of the flood.

Accessing LANCE Data and Imagery
All LANCE data can be downloaded via FTP and/or HTTPS using links provided from https://earthdata.nasa.gov/lance.

For More Information:
LANCE: http://earthdata.nasa.gov/lance
Contact Information: support@earthdata.nasa.gov