

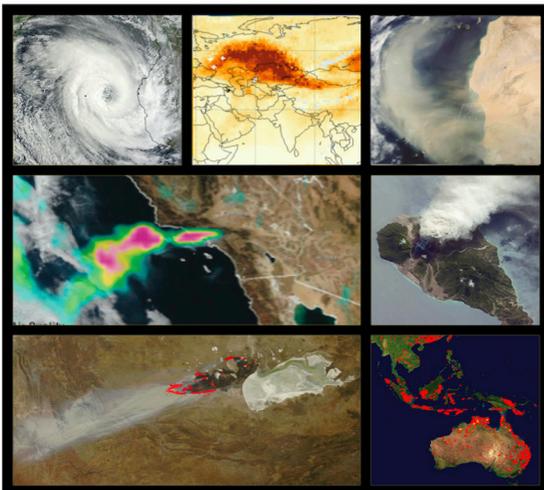


DATA & APPLICATIONS ONLINE

LANCE - Land, Atmosphere Near real-time Capability for EOS

Overview

NASA's Land, Atmosphere Near real-time Capability for EOS (LANCE) provides near real-time (NRT) data and imagery from 12 satellite instruments. LANCE products include near real-time (latency of 1-3 hours) and expedited latency of 1-4 days. This capability supports users interested in monitoring a wide variety of natural and human-created phenomena using NRT data and imagery made available much quicker than routine processing allows. LANCE products are used for monitoring fires, dust storms, hurricanes, air quality, sea ice, vegetation and crop development and volcanic eruptions.



Key Features

- Most data are available through LANCE within 3 hours of satellite observation. ICESat-2 expedited products are available within 3 days of satellite observation rather than the average of 45 days for standard ICESat-2 science data products.
- LANCE NRT imagery products are available through NASA's Global Imagery Browse Services (GIBS) and Worldview.
- Active fire/hotspot data, and imagery - including Harmonized Landsat Sentinel-2 (HLS) true-color and false-color composites - are available through NASA's Fire Information for Resource Management System (FIRMS).

| Instrument | Platform | Product Categories |
|---|---------------------|---|
| Atmospheric Infrared Sounder (AIRS) | Aqua | Radiances, Temperature, Moisture Profiles, Precipitation, Dust, Clouds and Trace Gases |
| Advanced Microwave Scanning Radiometer 2 (AMSR2) | JAXA GCOM-W1 | Precipitation, Ocean Wind Speed, Columnar Cloud Liquid Water/ Vapor, Snow Water Equivalent, Sea Ice Concentration, Brightness Temperature, Soil Moisture |
| Lightning Imaging Sensor (LIS) | ISS | Lightning, Atmospheric Electricity, Weather Events |
| Advanced Topographic Laser Altimeter System (ATLAS) | ICESat-2 | Sea Ice Height, Land and Vegetation Height, Sea Ice Freeboard, Inland Surface Water Height, Atmosphere Cloud Layer Characteristics |
| Multi-angle Imaging SpectroRadiometer (MISR) | Terra | Cloud motion vectors (Winds), Radiances |
| Microwave Limb Sounder (MLS) | Aura | Ozone, Temperature, Carbon Monoxide (CO), Water Vapor, Nitric Acid, Nitrous Oxide (N2O), Sulfur Dioxide (SO2) |
| Moderate Resolution Imaging Spectroradiometer (MODIS) | Terra / Aqua | Radiances, Clouds/Aerosols, Water Vapor, 1km Active Fire, Snow Cover, Sea Ice, Land Surface Reflectance, Land Surface Temperature, Flood |
| Measurement of Pollution in the Troposphere (MOPITT) | Terra | Total column carbon monoxide (CO) retrieved from thermal infrared radiances |
| Ozone Mapping and Profiler Suite (OMPS) | Suomi NPP | Total Column Ozone and Aerosol Index, Sulfur Dioxide, Ozone Profile |
| Ozone Monitoring Instrument (OMI) | Aura | Ozone, Sulfur Dioxide, Aerosols, Cloud Top Pressure |
| Soil Moisture Active Passive (SMAP) satellite | SMAP | Brightness Temperature, Soil moisture |
| Visible Infrared Imaging Radiometer Suite (VIIRS) | Suomi NPP / NOAA-20 | 375 m Active Fire, Corrected Reflectance Imagery, Land Surface Reflectance, Snow, Land Surface Temperature, Sea Ice, Ice Surface Temperature, BRDF, Albedo, Cloud Mask, Deep Blue and Dark Target Aerosol, Nighttime Lights |

For more information and links to data: <https://earthdata.nasa.gov/lance>



LANCE is a component of the NASA Earth Observing System Data and Information System (EOSDIS).



NASA's Earth Observing System Data and Information System (EOSDIS) provides end-to-end capabilities for managing NASA's Earth science data as part of NASA's Earth Science Data Systems Program.