

Frequently Asked Questions

Do I need to pay for the imagery and data?

All NRT data and imagery are freely available. Registration is required to download data, <https://earthdata.nasa.gov/urs/register>.

Do I need special software to use the imagery?

Imagery can be viewed using Worldview, <https://earthdata.nasa.gov/worldview>. Imagery can also be downloaded as JPG, PNG, KMZ or GeoTIFF images and used in reports or blogs. Alternatively, you can pull imagery in to your own GIS or web mapping application using the Global Imagery Browse Services (GIBS), <https://earthdata.nasa.gov/gibs>.

Can I get the underlying data I see in Worldview?

NRT data files are available for download and analysis. Users can:

- Visually search and download data using Worldview <https://earthdata.nasa.gov/worldview>
- Search and download data in ECHO Reverb - <https://earthdata.nasa.gov/reverb>
- Download HDF data via FTP or HTTPS - <https://earthdata.nasa.gov/lance>

Can I use the imagery in my reports/analyses?

We request the use of the following acknowledgement: "We acknowledge the use of data products or imagery from the Land Atmosphere Near-real time Capability for EOS (LANCE) system operated by the NASA/GSFC/Earth Science Data and Information System (ESDIS) with funding provided by NASA/HQ".

How does NRT data compare to the standard products?

NRT data is processed with less accurate ancillary data to make it available to users within 3 hours of observation. The main difference is in geolocation due to the use of predictive rather than definitive satellite orbit information. We encourage researchers to utilize the science quality/standard data product for research.

LANCE Services and Products

		LANCE Service	NRT Product
Data	Download Data	FTP / HTTPS File Distribution	HDF data files
		FIRMS FTP/HTTPS	MODIS active fire data. File formats: TXT, SHP, KML
	Worldview	Download HDF data files via ECHO	
Data via subscription	HDF	HDF data files	
	FIRMS Fire Email Alerts	MODIS-derived hotspot/active fire location coordinates with optional map (Format: NRT, daily or weekly alerts with CSV file)	
Visualize	Rapid Response Imagery	Subsets	GIS-ready satellite data. MODIS Geo-referenced, geographically subsetted images
		MODIS NRT (Orbit Swath) images	Swath images for each five-minute interval for MODIS data
		Gallery images	Geo-referenced MODIS imagery for interesting events and phenomena in GIS compatible format
	All LANCE Imagery	Worldview	Imagery from AIRS, MLS, MODIS and OMI. Image subsets as JPEG, PNG, GeoTIFF and KMZ
		GIBS	Imagery via standard services e.g. Web Map Tile Services (WMTS), and KML
	MODIS fire data	FIRMS Web Fire Mapper	Interactive global web map service for MODIS hotspot/active fire data

The Land Atmosphere Near Real-Time Capability for EOS (LANCE) is part of NASA's Earth Observing System Data and Information System (EOSDIS).

Questions?

support@earthdata.nasa.gov



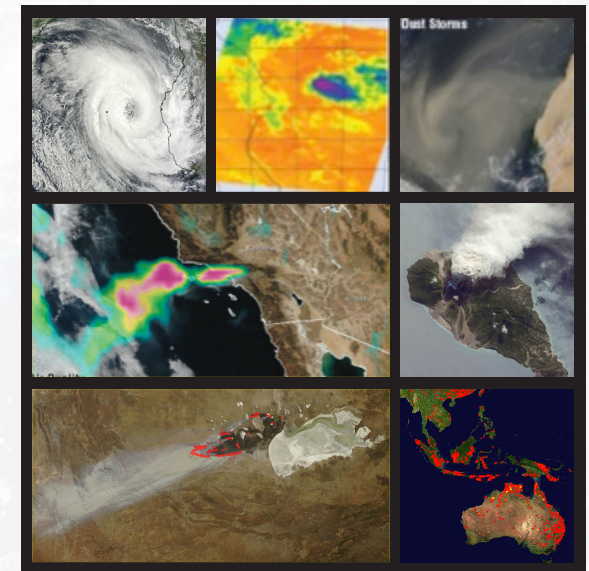
<https://earthdata.nasa.gov/lance>

National Aeronautics and Space Administration



Near Real-Time Imagery and Data

Land Atmosphere Near Real-Time Capability for EOS (LANCE)

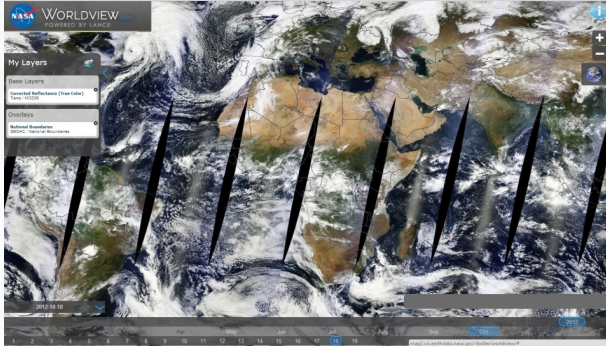


Near Real-Time (NRT) products are available from the MODIS, OMI, AIRS, and MLS instruments on board NASA's Earth Observing System (EOS) satellites, Terra, Aqua and Aura within 3 hours of satellite observation.

www.nasa.gov

LANCE Near Real-Time Services

Tools for viewing near real-time imagery

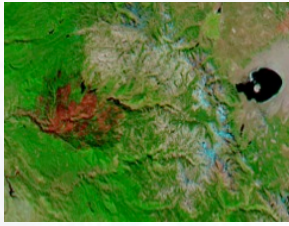


Worldview

Interactively browse and download full resolution imagery for 100 visualized parameters in geographic and polar projections, <https://earthdata.nasa.gov/worldview>.

Global Imagery Browse Service (GIBS)

Integrate full resolution imagery in your own GIS application or mapping library by accessing the GIBS' Web Map Tile Service (WMTS) and KML generation services. <https://earthdata.nasa.gov/gibs>

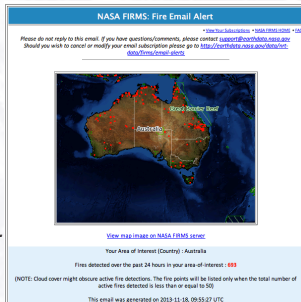


Rapid Response

View and download MODIS images for a large number of user-specified, geographically subsetted images in GIS-compatible format, <https://earthdata.nasa.gov/lance/rapid-response>.

Fire Information for Resource Management System

Subscribe to MODIS fire email alerts for your area of interest as well as view and download fire data in GIS compatible formats, <https://earthdata.nasa.gov/firms>.



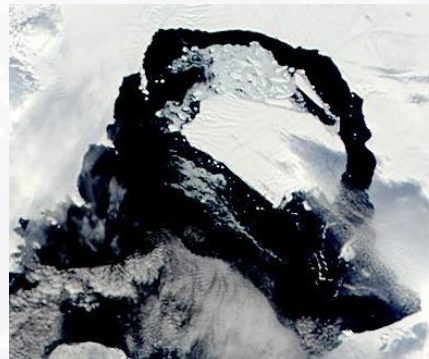
LANCE Near Real-Time Products

Instrument	Product Categories	Average Latency
AIRS	Radiances, Temperature and Moisture Profiles, Precipitation, Dust, Clouds and Trace Gases	75 – 140 minutes
MLS	Ozone, Temperature, Carbon Monoxide, Water Vapor, Nitric Acid, Nitrous Oxide, Sulfur Dioxide	75 – 140 minutes
MODIS	Radiances, Cloud/Aerosols, Water Vapor, Fire, Snow Cover, Sea Ice, Land Surface Reflectance, Land Surface Temperature	60-125 minutes*
OMI	Ozone, Sulfur Dioxide, Aerosols, Cloud Top Pressure	100 -165 minutes**

*Latency excludes daily Land Surface Reflectance

** Latency excludes Level 3 products

- **AIRS** - Atmospheric Infrared Sounder (Aqua)
- **MLS** - Microwave Limb Sounder (Aura)
- **MODIS** - Moderate Resolution Imaging Spectroradiometer (Terra and Aqua)
- **OMI** - Ozone Monitoring Instrument (Aura)

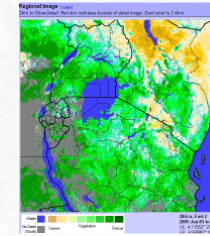


Iceberg from Pine Island Glacier, Antarctica. Pictured on 17th November 2013 from MODIS (Aqua satellite)

Use of LANCE Near Real-Time Products

LANCE data and imagery are used for monitoring and analyzing a wide range of natural and man-made phenomena, including the following examples:

Global Agricultural Monitoring



MODIS Normalized Difference Vegetation Index (NDVI) data is useful for monitoring vegetation, crop development and condition during the growing season at national to global scales. NRT data have been integrated into the Global Agricultural Monitoring (GLAM) system and NDVI composites are provided to the the USDA Foreign Agricultural Service (FAS) and the international agricultural community within 24 hours of the last day of composite.

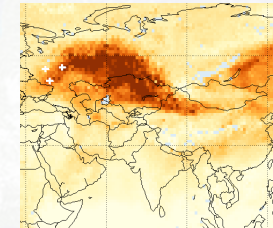
MODIS data for Monitoring Sea Ice Conditions



Image Credit: National Science Foundation, Division of Polar Programs

MODIS imagery is routinely used to get the latest ice conditions to ships, icebreakers and research vessels in the Antarctic to help them safely plot their course through icy waters.

Air Quality



NRT imagery from MODIS and AIRS are used to track the propagation of toxic gases like Carbon Monoxide (CO) from massive fires (e.g. Russia in the summer of 2010).

OMI data for Volcano Monitoring

OMI Sulfur Dioxide (SO₂) and Aerosol Index products are used to monitor volcanic clouds and detect pre-eruptive volcanic degassing globally. This information is used provide advisories to airlines for their operational decisions and to support the US Federal Aviation Administration (FAA) goal of a safe and efficient national air space.