DATA & APPLICATIONS ONLINE

FIRMS - Fire Information For Resource Management System

FIRMS Fire Map Viewer displaying wildfire activity (in orange) in southern Turkey as detected by NASA's MODIS[1] instrument on July 29, 2021. The true-color Terra MODIS composite imagery acquired simultaneously shows smoke plumes from the fires moving southwards over the eastern Mediterranean Sea. View image: https://go.nasa.gov/3LiRdnG

Overview

NASA's Fire Information for Resource Management (FIRMS) enables access to global near real-time (NRT) satellite imagery, active fire detections and other data from multiple satellites. FIRMS combines value-added data products to provide critical information to wildfire management organizations and impacted individuals.

Key Features

- Global active fire/hotspots data and imagery from MODIS and VIIRS[2]
- Landsat active fire data for the US and Canada added Fall 2022
- Provisional geostationary active fire data added Fall 2022
- Enhanced interactive tools to visualize satellite imagery, active fire detections, and other NASA products
- Customized maps for viewing and sharing
- Active fire detection data in multiple GIS formats and WMS, WMS-T and WFS web services
- Downloadable historical data in GIS formats
- Automated detection alert system for user-defined areas of interest
- Dynamically generated Harmonized Landsat Sentinel-2 (HLS) imagery (both true-color and false-color composites available)

[1] MODIS (Moderate Resolution Imaging Spectroradiometer)

[2] VIIRS (Visible Infrared Imaging Radiometer Suite)

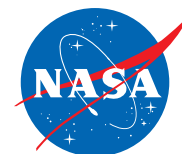Image Credit: Licensed photo by Alizada Studios/AdobeStock.

Explore FIRMS

About FIRMS: https://earthdata.nasa.gov/firms

FIRMS Fire Map: https://firms.modaps.eosdis.nasa.gov/map

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

Active Fire Data and Imagery available from FIRMS Global

Product	Sensor (Platform)	Source	Spatial Resolution	Latency[4] (Coverage)
Polar Orbiting Active Fire Detections	MODIS (Terra/Aqua)	NASA LANCE	1km	<3 hours (Global)
	VIIRS (Suomi NPP/NOAA-20)		375m	<3 hours (Global)
	MODIS (Terra/Aqua)	SSEC Univ of Wisconsin	1km	<1-30 mins (US-Canada)
	VIIRS (Suomi NPP/NOAA-20)		375m	<1-30 mins (US-Canada)
	OLI (Landsat 8 & 9)	USGS EROS	30m	30-60 mins (US-Canada)
Provisional Geostationary Active Fire Detections	ABI (GOES-16 & 17)[1]	NOAA	2km sub-satellite[2]	~20-30 mins (Americas)
	ABI (GOES-16 & 17)[3]	IPMA / CAMS	2km sub-satellite[2]	~20-30 mins (Americas)
	SEVIRI (Meteosat 9 & 11)[3]	EUMETSAT / LSA SAF	3km sub-satellite[2]	~30 mins (Europe-Africa-India)
	AHI (Himawari-8)[3]	IPMA / CAMS	2km sub-satellite[2]	~30 mins (Australia-Asia)
True/False Color Composite Imagery	ABI (GOES-16 & 17)	NASA GIBS	1km	40 min (Americas)
	MODIS (Terra/Aqua)		250m	<3 hours (Global)
	VIIRS (Suomi NPP/NOAA-20)		250m	<3 hours (Global)
	OLI (Landsat 8 & 9)	NASA IMPACT / HLS	30m	2-4 days (Global)
	MSI (Sentinel 2A & 2B)		30m	2-4 days (Global)
Aerosol Index	OMPS (Suomi NPP)	NASA LANCE / GIBS	~50km	<3 hours (Global)
Aerosol Index PyroCumuloNimbus			~50km	<3 hours (Global)
Burned Area	MODIS (Terra/Aqua)	NASA	500m	~3 months (Global)

[1] FDC (Fire / Hot Spot Characterization)

[2] The pixel size systematically grows from sub-satellite towards the edge of the disk

[3] FRPPIXEL (Fire Radiative Power)

[4] Latency refers to the estimated time from satellite observation to availability in FIRMS