EDG Data Set Name

MODIS/Aqua Thermal Anomalies/Fire Daily L3 Global 1km SIN Grid

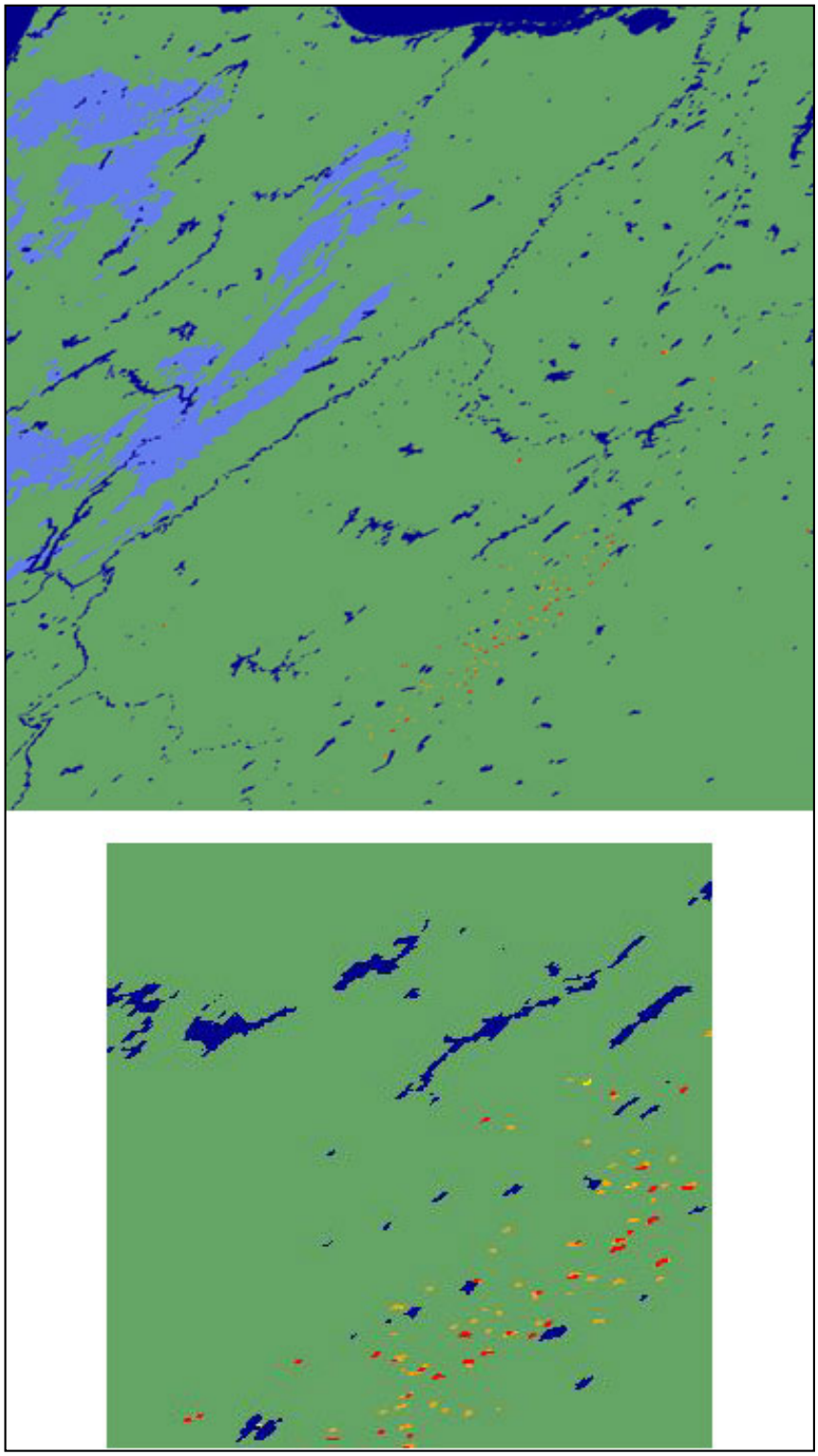
Granule Shortname

MYD14A1

Version	Acquisition Range	Science Quality Status
V003	March 6 2003 (2003065)	Provisional

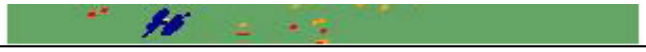
Data Set Characteristics
Area = ~ 10° x 10° lat/long
Image Dimensions = 3 (1200X1200X8 row/column/day)
Average File Size = 55 MB
Resolution = 1 kilometer
Projection = Sinusoidal
Data Type Fire Mask = 8-bit unsigned integer
Data Format = HDF-EOS
Science Data Sets (SDSs) = 2

Pixel Value	Classes	Color
0	missing input data	Black
1	not processed (obsolete)	Black
2	not processed (obsolete)	Black
3	water	Dk Blue
4	cloud	Lt Blue
5	non-fire	Green
6	unknown	Purple
7	fire (low-confidence)	Yellow
8	fire (nominal-confidence)	Orange
9	fire (high-confidence)	Red



The image shown is an example of the Level 3 Daily Thermal Anomalies/Fire product, MYD14A1. The lower image has been spatially subsetted to emphasize fire pixels, which are classified according to the table below. The data was acquired on April 10, 2003 over eastern Kansas and Oklahoma, where extensive agricultural burning was taking place.

Product Description



MYD14A1 is one of MODIS' 3-D data products. In addition to X- and Y-dimensions, Level 3 Daily fire products include 8 separate days of data detailing pixels according to their level of confidence as fires. The Fire Mask contains eight, band (day) sequential, 1200 x 1200 images of fire data representing consecutive days of data collection. The images above have been pseudo-colored to display one of the eight days of fire data in a granule of MYD14A1.

The Aqua MODIS instrument acquires data twice daily (2:30 pm and 2:30 am), as does the Terra MODIS (10:30 am and 10:30 pm). These four daily MODIS observations will advance global fire monitoring with 1 km resolution fire channels centered at the 4 and 11 micrometer wavelengths. MODIS data will also be used to monitor burn scars, vegetation type and condition, smoke aerosols, water vapor and clouds for overall monitoring of the fire process and its effects on ecosystems, the atmosphere, and climate. A data base of active fire products will be generated and archived at 1 km resolution and summarized on a grid of 10 km and 0.5° latitude/longitude at daily, 8-day, and monthly intervals. It includes the fire occurrence and location, the rate of emission of thermal energy from the fire and a rough estimate of the smoldering/flaming ratio. This information will be used in monitoring the spatial and temporal distribution of fires in different ecosystems, detecting changes in fire distribution and identifying new fire frontiers, wild fires, and changes in the frequency of the fires or their relative strength.

NOTE: These products are validated, meaning that product uncertainties are well defined over a range of representative conditions. Although there may be later improved versions, these data are ready for use in scientific publications.

SDS	Units	Data Type	Fill Value	Valid Range
algorithm QA of most confident detected fire	Bit	32-bit unsigned integer	3	0
most confident detected fire Day 1	Bit	8-bit unsigned integer	0	0 - 9
Day 2	Bit	8-bit unsigned integer	0	0 - 9
Day 3	Bit	8-bit unsigned integer	0	0 - 9
Day 4	Bit	8-bit unsigned integer	0	0 - 9
Day 5	Bit	8-bit unsigned integer	0	0 - 9
Day 6	Bit	8-bit unsigned integer	0	0 - 9
Day 7	Bit	8-bit unsigned integer	0	0 - 9
Day 8	Bit	8-bit unsigned integer	0	0 - 9

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Order Data through the EOS Data Gateway
(http://edcimswww.cr.usgs.gov/pub/imswelcome/)

EOS Data Gateway Search Tips

Data Center:	EDC-ECS
Sensor:	MODIS
Dataset:	MODIS/Aqua Thermal Anomalies/Fire Daily L3 Global 1km SIN Grid
Spatial:	HORIZONTALTILENUMBER Max/Min VERTICALTILENUMBER Max/Min
Geographic Extent:	Type Lat/Long Range or Draw on Map
Temporal Extent:	2003-03-06 to present

Retrieve Data through the LP DAAC Data Pool
(http://LPDAAC.usgs.gov/tutorial/datapool.html)

Product Information

Product Description
(http://modis-fire.gsfc.nasa.gov/)

User Guide
(http://modis-fire.gsfc.nasa.gov/products/usersguide.asp)

Algorithm Theoretical Basis Document (ATBD)
(http://eospso.gsfc.nasa.gov/eos_homepage/for_scientists/atbd/viewInstrument.php?instrument=MODIS)

MODIS Standard Data Products Catalog
(http://modis.gsfc.nasa.gov/data/dataprod/descchart.html)

EOS Data Products Handbook Volume 1 (2000)
(http://eospso.gsfc.nasa.gov/eos_homepage/misc_html/data_prod.html)

Contact Information

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