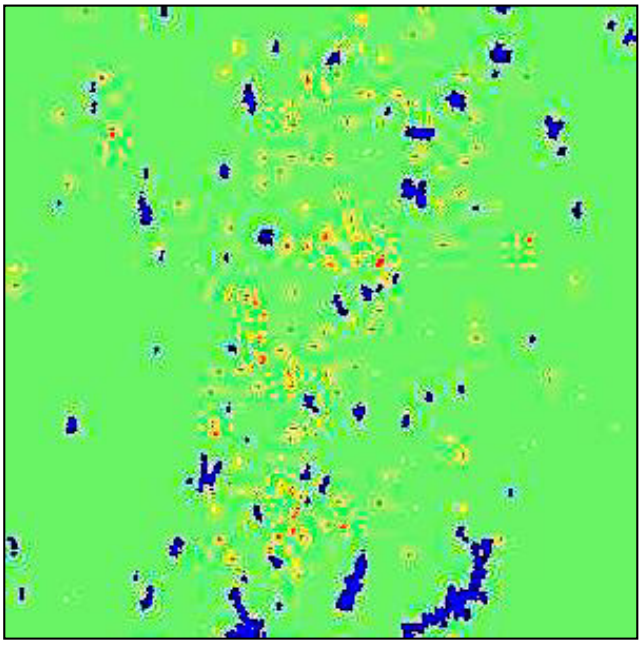
EDG Data Set Name
MODIS/Aqua Thermal Anomalies/Fire 5-Min L2 Swath 1km

Granule Shortname
MYD14

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

Data Set Characteristics
Area = ~2330 X 2000 km
Size = 2 (~2030 X 1354 row/column)
Average File Size = 0.4 MB
Resolution = 1 kilometer
Projection = None (swath data)
Data Type Fire Mask = 8-bit unsigned
Data Format = HDF-EOS
Science Data Sets (SDSs) = 22

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 2 Thermal Anomalies/Fire product, MYD14. It has been spatially subsetted to emphasize fire pixels, which are classified according to the table below. The data was acquired on April 11, 2003 over eastern Kansas and Oklahoma, where extensive agricultural burning was taking place.

Product Description
The Level 2 MODIS/Aqua Thermal Anomalies/Fire product (MYD14) is the most basic level of MODIS fire data in which active fires and other thermal anomalies, such as volcanoes, are identified. It is used to generate all of the higher-level fire products. The image shown above is a swath of Level 2 fire data. The image has been pseudo-colored for illustrative purposes. Fire detection is performed using the MODIS 4 and 11 micrometer brightness temperatures. The fire detection strategy is based on absolute detection of the fire, if the fire is strong enough, and on detection relative to the background to account for variability of the surface temperature and reflection by sunlight. Numerous tests are employed to reject typical false alarm sources such as sun glint and unmasked coastline.

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
Fire mask	Bit	8-bit unsigned integer	0	0 - 9
Algorithm QA	Bit	32-bit unsigned integer	na	na
Granule line of fire pixel	na	16-bit signed integer	na	0 - ~2030
Granule sample of fire pixel	na	16-bit signed integer	na	0 - 1354
Latitude of fire pixel	Degree	32-bit floating point	na	-90.0 – 90.0
Longitude of fire pixel	Degree	32-bit floating point	na	-180.0 – 180.0
Channel 2 reflectance of fire pixel	Reflectance	32-bit floating point	-1	0 – 120
Channel 21/22 brightness temperature of fire pixel	Kelvins	32-bit floating point	0	na
Channel 31 brightness temperature of fire pixel	Kelvins	32-bit floating point	0	na
Channel 21/22 brightness temperature of background	Kelvins	32-bit floating point	0	na
Channel 31 brightness temperature of background	Kelvins	32-bit floating point	0	na
Mean background brightness temperature difference	Kelvins	32-bit floating point	0	na
Background channel 21/22 brightness temperature mean absolute deviation	Kelvins	32-bit floating point	0	na
Background channel 31 brightness temperature mean absolute deviation	Kelvins	32-bit floating point	0	na
Background brightness temperature difference mean absolute deviation	Kelvins	32-bit floating point	0	na
Total radiative power	Megawatts	32-bit floating point	0	na
Number of adjacent cloud pixels	na	8-bit unsigned integer	na	0 -8
Number of adjacent water pixels	na	8-bit unsigned integer	na	0 - 8
Background window size	na	8-bit unsigned integer	na	0 - 21
Number of valid background pixels	na	16-bit signed integer	na	0 - 438
Detection confidence	Percent	8-bit unsigned integer	na	0 -100
Climate Modeling Grid information	na	16-bit unsigned integer	na	na

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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 5-Min L2 Swath 1km
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

LP DAAC User Services
U.S. Geological Survey
EROS Data Center
47914 252nd Street
Sioux Falls, SD 57198-0001
Phone: 605-594-6116
Toll Free: 866-573-3222
866-LPE-DAAC
Fax: 605-594-6963
Email: edc@eos.nasa.gov
Web: http://edcdaac.usgs.gov

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