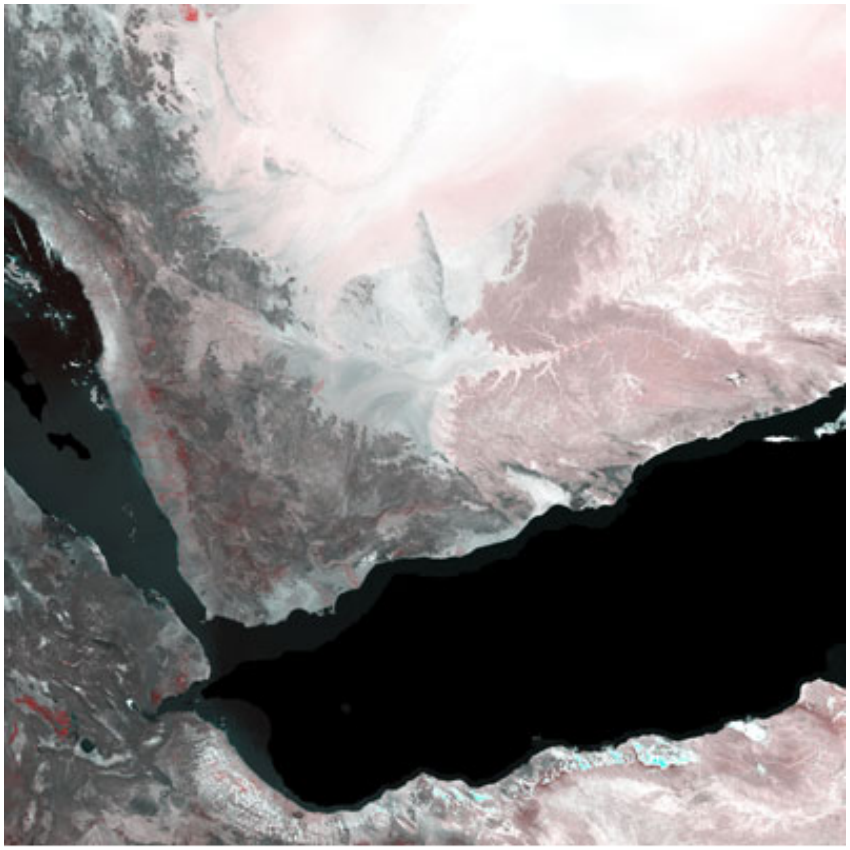
EDG Data Set Name
MODIS/Aqua Surface Reflectance Daily L2G Global 250m SIN Grid

Granule Shortname
MYD09GQK

Version	Acquisition Range	Science Quality Status
V003	March 6 2003 (2003065) - February 1 2004 (2004032)	Provisional
V004	July 4 2002 (2002185)	Provisional

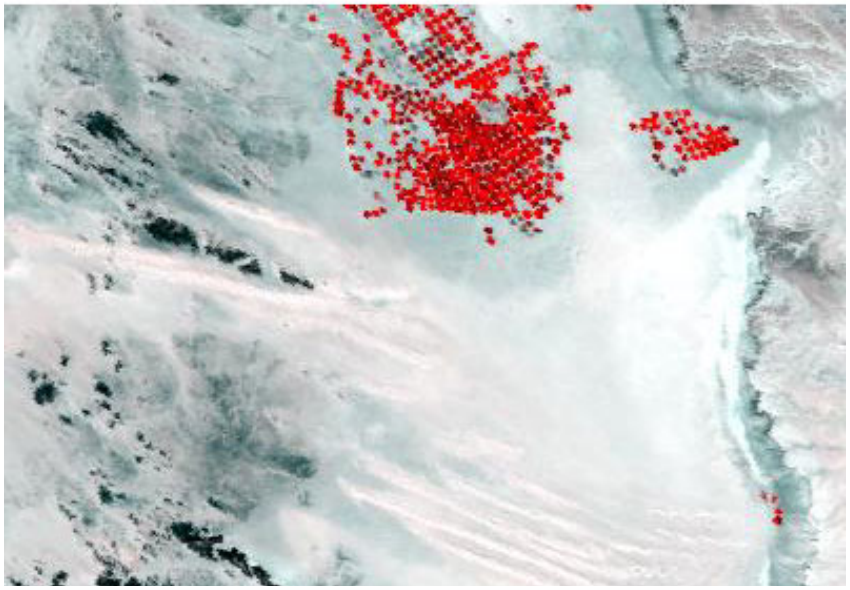
Data Set Characteristics
Area = ~ 10° x 10° lat/long
Image Dimensions = 2 (4800x4800 row/column)
Average File Size = 196 MB
Resolution = 250 meters
Projection = Sinusoidal
Data Format = HDF-EOS
Science Data Sets (SDSs) = 5

Product Description
MODIS 250 m Surface Reflectance is a two-band product computed from the MODIS Level 1B land bands 1 and 2 (centered at 648 nm and 858 nm, respectively). The product is an estimate of the surface spectral reflectance for each band as it would be measured at ground level if there were no atmospheric scattering or absorption. A correction scheme reducing the effects of atmospheric gases, aerosols, and thin cirrus clouds is applied to all pixels passing Level 1B quality control.



The MODIS/Aqua Surface Reflectance Daily L2G Global 250m SIN Grid product (MYD09GQK) shown above is a false-color image derived from the 250m data in Bands 1 and 2. Data from Bands 3-7 (500m resolution) are not included in this product.

MYD09GQK is processed globally every day using Level 2G 250m Pointer Files (MYDPTQKM) to place Level 2 Surface Reflectance (MYD09) on a geographic grid. Quality assurance data for the MYD09GQK product is provided at three different levels: for the individual pixel, for each band, and for the whole file.



The images at right display MYD09GQK using a Band 2-1-1 (band 2: 841-876 nm, band 1: 620-670 nm) combination. The data were acquired on February 13, 2004 over the Arabian Peninsula at the crux of the Red and Arabian Seas.

The top right image includes all of tile h22v07, and the bottom right includes only a subset of a prevalent agricultural area in the uppermost portion of the tile. These irrigation circles in southern Saudi Arabia sit at the foot of the Jabal al Hijaz, spreading towards open desert.

NOTE: These products are provisional, meaning that product quality may not be optimal. Incremental product improvements are still occurring, and users are urged to contact MODIS Science Team representatives prior to use of the data in publications. These data are likely to be replaced when the validated product becomes available.

SDS	Units	Data Type	Fill Value	Valid Range	Divide by Scale Factor
250m Surface Reflectance Band 1 (620-670 nm)	Reflectance	16-bit signed integer	-28672	-100 - 16000	10000
250m Surface Reflectance Band 2 (841-876 nm)	Reflectance	16-bit signed integer	-28672	-100 - 16000	10000
*250m Reflectance Band Quality	Bit field	16-bit unsigned integer	2995	0	na
Orbit and coverage	Bit field	8-bit unsigned integer	15	0 - 255	na
Number of Observations	na	8-bit signed integer	-1	0 - 127	na

***Quality Control Bit Index:**
Bits are numbered from LSB (right) to MSB (left)

0-1 MODLAND QA bits;	corrected product produced at 00 -- ideal quality all bands 01 -- less than ideal quality some or all bands corrected product not produced due to 10 -- cloud effects all bands 11 -- other reasons some or all bands may be fill value [Note that a value of (11) overrides a value of (01)].
2-5	band 1 data quality, four bit range; 0 = highest quality 8 = dead detector; data interpolated in L1B 9 = solar zenith >= 86 degrees 10 = solar zenith >= 85 and > 86 degrees 11 = missing input 12 = internal constant used in place of climatological data for at least one atmospheric constant 13 = correction out of bounds, pixel constrained to extreme allowable value 14 = L1B data faulty 15 = not processed due to deep ocean or clouds
6-9	band 2 data quality, four bit range; SAME AS ABOVE
10-13	band 3 data quality, four bit range; SAME AS ABOVE

14-17	band 4 data quality, four bit range; SAME AS ABOVE
18-21	band 5 data quality, four bit range; SAME AS ABOVE
22-25	band 6 data quality, four bit range; SAME AS ABOVE
26-29	band 7 data quality, four bit range; SAME AS ABOVE
30	atmospheric correction performed; 1 -- yes 0 -- no
31	adjacency correction performed; 1 -- yes 0 -- no

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Retrieve the MYD09GQKv4 MODIS product through the LP DAAC Data Pool
Via Search Tool: http://e0dps01u.ecs.nasa.gov:22000/OPS/drill?attrib=esdt&esdt=MYD09GQK.4&group=MOLA
Via FTP Directory: ftp://e0dps01u.ecs.nasa.gov/MOLA/MYD09GQK.004/

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

EOS Data Gateway Search Tips

Source:	Aqua
Sensor:	MODIS
Dataset:	MODIS/Aqua Surface Reflectance Daily L2G Global 250m 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 2004-02-01 (V003); 2002-07-04 to present (V004)

Product Information

Product Description
(http://modis-land.gsfc.nasa.gov/products/products.asp?ProdFamID=2)

User Guide
(http://modis-land.gsfc.nasa.gov/mod09/html/guide.htm)

Algorithm Theoretical Basis Document(ATBD)
(http://modis.gsfc.nasa.gov/data/atbd/land_atbd.html)

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

EOS Data Products Handbook Volume 2 (2000)
(http://eospso.gsfc.nasa.gov/eos_homepage/for_scientists/data_products/vol2.php)

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