

**Notice to Data Users:**  
**The documentation for this data set was provided solely by the Principal Investigator(s) and was not further developed, thoroughly reviewed, or edited by NSIDC. Thus, support for this data set may be limited.**

## **SMEX04 Terra MODIS Data**

Prepared by Andree Jacobson (UofA/TBRS/SWES) 8/01/2005  
<http://tbrs.arizona.edu/>

Citing these data:

Huete, Alfredo, and Andree Jacobson. 2009. *SMEX04 Terra MODIS Data*. Boulder, Colorado USA: National Snow and Ice Data Center. Digital media.

Products contained within this distribution:

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MOD09A1  
MOD09GHK  
MOD09GQK  
MOD09GST  
MOD09Q1  
MOD11A1  
MOD13A2  
MOD13C1  
MOD13Q1  
MOD15A2  
MOD43B3  
MOD43B4  
MODMGGAD  
MODPTHKM  
MODPTQKM

For more information, refer to:

[https://lpdaac.usgs.gov/lpdaac/products/modis\\_products\\_table](https://lpdaac.usgs.gov/lpdaac/products/modis_products_table)

All products are reprojected using the MODIS Reprojection Tool available at:

[https://lpdaac.usgs.gov/lpdaac/tools/modis\\_reprojection\\_tool](https://lpdaac.usgs.gov/lpdaac/tools/modis_reprojection_tool)

ENVI Header files are provided for each data granule. Please note that the map information in these files is provided in such a way that the upper left-hand corner coordinate represents \*THE CENTER\* of that pixel.

Projection information:

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SINUSOIDAL PROJECTION PARAMETERS (Original data):

Radius of Sphere:	6371007.181000 meters
Longitude of Center:	0.000000 degrees
False Easting:	0.000000 meters

False Northing: 0.000000 meters  
Datum: WGS84

UNIVERSAL TRANSVERSE MERCATOR (UTM) PROJECTION PARAMETERS:

Zone: 12  
Semi-Major Axis of Ellipsoid: 6378137.000000 meters  
Semi-Minor Axis of Ellipsoid: 6356752.314140 meters  
Scale Factor at C. Meridian: 0.999600  
Longitude of Central Meridian: -111.000000 degrees  
Datum: NAD83 - CONUS  
Resampling type: Nearest Neighbor

Pixel sizes for various spatial resolutions:

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250 m = 231.656358 meters ( 1603 lines x 1172 samples )  
500 m = 463.312717 meters ( 802 lines x 586 samples )  
1 km = 926.625433 meters ( 401 lines x 293 samples )

Input image spatial subset corners (lat, lon):

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UL: (32.69, -111.42)  
UR: (32.69, -108.63)  
LL: (29.36, -111.42)  
LR: (29.36, -108.63)

The spatial coverage in the files may vary slightly depending on the spatial resolution. However, each data granule has an ENVI header file that contains the proper dimensions for that particular granule.

Product specific projection information:

(Coordinates below are absolute corner points, not center-pixel corners)

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MOD09A1: output image corners (lat/lon):

UL: 32.707668419221 -111.438073618773  
UR: 32.684347005361 -108.542173664043  
LL: 29.354962997943 -111.422987452807  
LR: 29.334522729080 -108.626719714261

MOD09GHK: output image corners (lat/lon):

UL: 32.707668419221 -111.438073618773  
UR: 32.684347005361 -108.542173664043  
LL: 29.354962997943 -111.422987452807  
LR: 29.334522729080 -108.626719714261

MOD09GST: output image corners (lat/lon):

UL: 32.707668419221 -111.438073618773  
UR: 32.684347005361 -108.542173664043  
LL: 29.354962997943 -111.422987452807  
LR: 29.334522729080 -108.626719714261

MOD11A1: output image corners (lat/lon):

UL: 32.707668419221 -111.438073618773  
UR: 32.684347005356 -108.542173663784  
LL: 29.354962997643 -111.422987452806

LR: 29.334522728775 -108.626719714017

MOD09Q1: output image corners (lat/lon):  
UL: 32.707668419221 -111.438073618773  
UR: 32.684347005361 -108.542173664043  
LL: 29.357053752583 -111.422996090427  
LR: 29.336611746912 -108.626671304322

MOD13Q1: output image corners (lat/lon):  
UL: 32.707668419221 -111.438073618773  
UR: 32.684347005361 -108.542173664043  
LL: 29.357053752583 -111.422996090427  
LR: 29.336611746912 -108.626671304322

MOD15A2: output image corners (lat/lon):  
UL: 32.707668419221 -111.438073618773  
UR: 32.684347005361 -108.542173664043  
LL: 29.354962997943 -111.422987452807  
LR: 29.334522729080 -108.626719714261

MODMGGAD: output image corners (lat/lon):  
UL: 32.707668419221 -111.438073618773  
UR: 32.684347005361 -108.542173664043  
LL: 29.354962997943 -111.422987452807  
LR: 29.334522729080 -108.626719714261

MODPTHKM: output image corners (lat/lon):  
UL: 32.707668419221 -111.438073618773  
UR: 32.684347005361 -108.542173664043  
LL: 29.354962997943 -111.422987452807  
LR: 29.334522729080 -108.626719714261

MODPTQKM: output image corners (lat/lon):  
UL: 32.707668419221 -111.438073618773  
UR: 32.684347005361 -108.542173664043  
LL: 29.357053752583 -111.422996090427  
LR: 29.336611746912 -108.626671304322

MOD43B3: output image corners (lat/lon):  
UL: 32.707668419221 -111.438073618773  
UR: 32.684347005361 -108.542173664043  
LL: 29.354962997943 -111.422987452807  
LR: 29.334522729080 -108.626719714261

MOD43B4: output image corners (lat/lon):  
UL: 32.707668419221 -111.438073618773  
UR: 32.684347005361 -108.542173664043  
LL: 29.354962997943 -111.422987452807  
LR: 29.334522729080 -108.626719714261

MOD09GQK: output image corners (lat/lon):  
UL: 32.707668419221 -111.438073618773  
UR: 32.684347005361 -108.542173664043  
LL: 29.357053752583 -111.422996090427  
LR: 29.336611746912 -108.626671304322

MOD13A2: output image corners (lat/lon):

UL: 32.707668419221 -111.438073618773  
UR: 32.684347005361 -108.542173664043  
LL: 29.354962997943 -111.422987452807  
LR: 29.334522729080 -108.626719714261

MOD13C1: output image corners (lat/lon):  
UL: 32.707668419221 -111.438073618773  
UR: 32.684235302230 -108.536481750262  
LL: 29.348806908019 -111.422962025220  
LR: 29.328273870994 -108.621365976663

MOD13C1 Input projection info: GEO, WGS84