Information on data subsets of LTER Sites from the MODIS sensor of the Terra and Aqua satellites.

The MODIS Subset data provide summaries of selected MODIS Land Products for validation of models and remote sensing products and to characterize field sites. The fixed subsets are pixel values of land products for a 7-km x 7-km area centered on field site locations. Subsets from LTER sites as well as other projects are available from the NASA Distributed Active Archive Center at the Oak Ridge National Laboratory.

A description of the dataset at the ORNL DAAC is available at: [http://www.modis.ornl.gov/modis](http://www.modis.ornl.gov/modis)

Fixed subsets for LTER sites (select Network - LTER) is available at: [http://daac.ornl.gov/cgi-bin/MODIS/GR_col5_1/mod_viz.html](http://daac.ornl.gov/cgi-bin/MODIS/GR_col5_1/mod_viz.html)

An example of subset of data available:

<table>
<thead>
<tr>
<th>MODIS Product</th>
<th>Terra</th>
<th></th>
<th></th>
<th>Aqua</th>
<th></th>
<th></th>
<th>Terra and Aqua</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Visualiz</td>
<td>Data Download</td>
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<tr>
<td></td>
<td>Composite Period</td>
<td>Time Series</td>
<td></td>
<td>Composite Period</td>
<td>Time Series</td>
<td></td>
<td>Composite Period</td>
<td>Time Series</td>
<td></td>
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<td>Surface Reflectance (M*009A1)</td>
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<tr>
<td>Land Surface Temperature Land Emissivity (M*011A2)</td>
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<tr>
<td>Land Cover (1201)</td>
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<tr>
<td>Vegetation Indices (NDVI, EVI) (M*013A2)</td>
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<td>Leaf Area Index/Fraction of Photosynthetically Active Radiation (LAI/FPAR) (M*019A2)</td>
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<td>Gross Primary Production (GPP) Version 4.0 (M*017A2)</td>
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<tr>
<td>Gross Primary Production (GPP) Version 4.5 (M*017A2)</td>
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<tr>
<td>MODIS Terra BRDF and Calculated Albedo (MOD43B)</td>
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<tr>
<td>Reflectance Nadir BRDF-Adjusted (NBAR) (MOD43B4)</td>
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</tbody>
</table>
Example of NDVI time series from MODIS data:

<table>
<thead>
<tr>
<th>Site</th>
<th>USA, Harvard Forest, Massachusetts [ Lat: 42.537756, Lon: -72.171478 ]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quality Control Conditions</td>
<td>As Specified by Science Team</td>
</tr>
</tbody>
</table>

MOD13A2 / L_km_16_days_NDVI Collection 4 [ Scale factor = 0.0001, units = NDVI ]
The registered locations used for the fixed subsets: LTER Site Targets for MODIS subsets.

The following is a list of LTER site locations to be used for center locations of MODIS 7x7 km subset time series. The MODIS subsets can be selected from the ORNL DAAC web page at: http://www.modis.ornl.gov/modis/

1. AND - H.J. Andrews LTER AND1
   Site of AERONET Sunphotometer
   This site is in addition to the AND Flux tower site.
   http://www.fsl.orst.edu/lter/
   Primary Contact: Kari O'Connell,
   Andrews Experimental Forest P.O. Box 300
   Blue River, OR 97413 USA Phone: 541-822-6303 Fax: 541-822-6329

   Elevation  830m
   N +44.23889   W -122.22389

2. ARC - Arctic LTER - ARC1
   Toolik Lake Station, from 2004 GPS survey
   http://ecosystems.mbl.edu/ARC/
   Primary Contact: Debbie Scanlon - dscanlon@mbl.edu
   The Ecosystems Center
   Marine Biological Lab
   7 MBL St
   Woods Hole, MA 02543 USA Phone: 508 289 7496

   Elevation  760m
   N +68.62833  W -149.59333

3. BES - Baltimore Ecosystem Study - BES1
   Gwynns Falls Watershed - Primary Meteorological Station
   http://www.beslter.org/
   Primary Contact: Jennifer Sullivan
BNZ - Bonanza Creek LTER - BNZ1
These two sites are the primary LTER sites, and should be added in addition to the 3 “Bonanza Creek” sites already in the MODIS subset list.
BNZ Experimental Forest - AERONET sunphotometer site
http://www.lter.uaf.edu/default.cfm
Primary Contact: Jamie Hollingsworth
Boreal Ecology Cooperative Research Unit
901 S. Koyukuk Dr. Ste. 193
Fairbanks, AK 99775 Phone: 907.474.7470 Fax: 907.474-6251

BNZ - Bonanza Creek LTER - BNZ2
BNZ Caribou Poker Creek Watershed
Elevation 600m
N +65.16667 W -147.66667

5.
CCE California Current Ecosystem - CCE1
Open Ocean site, reflectance data would be very useful
http://cce.lternet.edu/
Primary Contact: Mark Ohman
Scripps Institution of Oceanography
University of California, San Diego
9500 Gilman Dr.
La Jolla, CA 92093 Phone: (858) 534-2754 Fax: (858) 534-2779

Elevation 0m
N +32.8736 W -120.2798
6. CDR Cedar Creek Natural History Area - CDR1
Research Station
http://www.cedarcreek.umn.edu/
Primary Contact: Nancy Larson
100 Ecology Building
1987 Upper Buford Circle
St. Paul, MN 55108 Phone: 612-625-5740 Fax: 612-624-6777

Elevation 270m
N +45.40093 W -93.20137

7. CAP - Central Arizona - Phoenix Urban LTER CAP
http://caplter.asu.edu/
Primary Contact: Shirley Stapleton
Center for Environmental Studies
Arizona State University
PO BOX 873211
Tempe, AZ 85287-3211 USA Phone: (480) 965-2975 Fax: (480) 965-8087

Elevation 360m
N +33.42700 W -111.93300

8.* CWT - Coweeta LTER - CWT1
Coweeta Site (already registered)
http://coweeta.ecology.uga.edu/
Primary Contact: Ted Gragson
University of Georgia Institute of Ecology
Athens, GA 30606-2202 USA Phone: 706.542.5691 Fax: 706.542.6040

Elevation 960m
N +35.05058 W -83.450065

9. FCE - Florida Coastal Everglades LTER - FCE1
http://fce.lternet.edu/
Primary Contact: Daniel Childers
Florida International University
Southeast Environmental Research Center
University Park, OE 148
Miami, FL 33199 U.S.A. Phone: (305) 348-6054

Elevation 1m
N +25.46821 W -80.85328

10.
GCE Georgia Coastal Ecosystems LTER - GCE1
Coastal tide flat
http://gce-lter.marsci.uga.edu/lter/
Primary Contact: Steven Pennings
Department of Marine Sciences
University of Georgia
Athens, GA 30602-3636 U.S.A. Phone: 706-542-5955 Fax: 706-542-5888

Elevation 2m
N +31.42700 W -81.37100

11.*
HFR - Harvard Forest LTER - HFR1
Harvard Forest Flux Tower site
http://harvardforest.fas.harvard.edu/
Primary Contact: Principal Investigator: David Foster
Harvard Forest P.O. Box 68
324 North Main Street
Petersham, MA 01366 USA Phone: (978) 724-3302 Fax: (978) 724-3595

Elevation 350m
N +42.53776 W -72.17148

12.
HBR - Hubbard Brook LTER - HBR1
http://hbr.lternet.edu/
Primary Contact: Timothy Fahey
Hubbard Brook - USDA Forest Service
Northeastern Research Station
234 Mirror Lake Road
Campton, NH 03223 Phone: 603-726-8902 Fax: 603-726-4851

Elevation 570m
N +43.93972 W -71.75139

13.*
JRN - Jornada Basin LTER - JRN1
Site already registered for MODIS Subsets
http://jornada-www.nmsu.edu/
Primary Contact: Information Mgr: Ken Ramsey
New Mexico State University
Department of Biology
Box 30001/MSC 3AF
Las Cruces, NM 88003-8001 USA Phone: (505) 646-7918 Fax: (505) 646-5665

Elevation 1400
N +32.590709 W -106.844602

14.
KBS - Kellogg Biological Station LTER - KBS1
Research location and site of AERONET sunphotometer
http://lter.kbs.msu.edu/
Primary Contact: Information Mgr: Sven Bohm
3700 East Gull Lake Drive
Hickory Corners, MI 49060 Kalamazoo Phone: (269) 671-2359 Fax: (269) 671-2351

Elevation 293m
N +42.41333 W -85.37194

15.*
Konza Prairie LTER - KNZ
Site is already registered for MODIS subsets at Flux tower and past AERONET location. There is also an AERONET location listed for EDC use and that sunphotometer is about 4km northwest of these coordinates.
http://www.konza.ksu.edu/
Primary Contact: John Blair
232 Ackert Hall
Konza LTER Program, Division of Biology
Kansas State University
Manhattan, KS 66506-0112 Phone: 785-532-7065 Fax: 785-532-6653
16.
Luquillo LTER - Luquillo Experimental Forest - LUQ1
http://luq.lternet.edu/
Primary Contact: Nicholas Brokaw
Natural Science Faculty U.P.R Rio Piedras
Institute for Tropical Ecosystem Studies
PO Box 23341
San Juan, PR 00931-3341 USA Phone: 787-764-0000X4940 Fax: (787) 772-1481

Elevation 400
N +18.32389 W -65.81750

17.
McMurdo Dry Valleys LTER - MCM1
Location of past installation of AERONET sunphotometer
http://huey.colorado.edu/LTER/
Primary Contact: William Lyons
MCM LTER Office
1560 30th Street
Institute for Arctic and Alpine Research
Campus Box 450
University of Colorado
Boulder, CO 80309-0450 USA Phone: 303-492-4639

Elevation 65m
S -77.625000 E +162.882780

18.
MCR Moorea Coral Reef LTER - MCR1
Coral Reef
http://mcr.lternet.edu/
Primary Contact: Andrew Brooks
Marine Science Institute
University of California
Santa Barbara, CA 93106-6150 Phone: 805 893-7670 Fax: 805 893-3777
19.*
NWT Niwot Ridge LTER - NWT1
This site is already registered as Niwot Ridge Forest for subsets at the two flux towers. The Niwot Saddle site is also registered for MODIS subset and should remain listed.
http://culter.colorado.edu/
Primary Contact: Mark Williams
1560 30th Street
UCB 450
Boulder, CO 80309 USA Phone: 303-492-4771 Fax: 303-492-6388

Elevation 3050
N +40.03288 W -105.54640

NWT Niwot Ridge LTER - NWT2
This site is already registered as Niwot Ridge Forest for subsets at the two flux towers.
Elevation 3050
N +40.032500  W -105.546944

20.
North Temperate Lakes LTER - NTL
The two research sites listed here should be added in addition to the flux tower site at Park Falls. The current location already registered for MODIS subsets (N46.0, W-89.600000) for NTL1 below is imprecise and should be replaced by the coordinates listed here.
NTL – NTL1 – North Temperate Lakes LTER, Trout Lake Station
Forest site with interspersed lakes
http://lter.limnology.wisc.edu/
Primary Contact: James Rusak
Center for Limnology
University of Wisconsin-Madison
680 N. Park St.
Madison, WI 53706 USA Phone: 608 262 3014 Fax: 608 265 2340
Elevation 260m  
N 46.01374 W -89.67969

NTL – NTL2 – North Temperate Lakes LTER, Madison Lakes, Yahara Watershed Wetland and agriculture site, northeast of Lake Mendota
Elevation 270m  
N 43.20850 W -89.35187

21. Palmer Station LTER - PAL1    Palmer Station Anvers Island  
http://pal.lternet.edu/  
Primary Contact: Helen Quinby  
Virginia Institute of Marine Science (VIMS)  
College of William and Mary  
Box 1346  
Gloucester Point, VA 23062-1346 Phone: (804) 684-7180 Fax: (804) 684-7293

Elevation 10m  
-64.700 -64.000

22. Plum Island Ecosystem LTER - PIE1  
http://ecosystems.mbl.edu/PIE/  
Primary Contact: Charles Hopkinson  
The Ecosystems Center  
Marine Biological Laboratory  
Woods Hole, MA 02543 Phone: 508-289-7688 Fax: 508-457-1548

Elevation 50m  
N + 42.75900 W -70.89100

23. Santa Barbara Coastal LTER - SBC1  
http://sbc.lternet.edu/  
Primary Contact: Jenifer Dugan  
Marine Science Institute  
University of California  
Santa Barbara, CA 93106 Phone: 805-893-2071

Elevation 350m
24.*
SEV Sevilleta LTER - SEV1
Location of research site “Mackenzie Flats” - Already Registered for MODIS subsets
http://sev.lternet.edu/
Primary Contact: Joslyn Garcia-Bustamante
Sevilleta LTER
Department of Biology MSC03 2020
1 University of New Mexico
Albuquerque, NM 87131-1091 U.S.A. Phone: (505) 277-6328 Fax: (505) 277-5355

Elevation 1610m
N +34.358688 W -106.669368
Bigfoot site also already registered.

25.
Shortgrass Steppe - SGS - SGS1
http://sgs.cnr.colostate.edu/
Primary Contact: Sallie Sprague
Dept. of Soil and Crop Sciences
College of Agricultural Sciences
Colorado State University
Fort Collins, CO 80523-1170 Phone: 970-491-2366 Fax: 970-491-2156

Elevation 1538m
N40.80784 W104.18793

26.*
VCR Virginia Coast Reserve LTER - VCR1
Site already registered for MODIS subsets
Virginia Coast Reserve LTER Flux tower site
http://www.vcrter.virginia.edu/
Primary Contact: Karen McGlathery
University of Virginia Department of Environmental Sciences
291 McCormick Road
P.O. Box 400123
Charlottesville, VA 22904-4123 Phone: 434-924-0558 Fax: 434-982-2137

Elevation 2
N +37.42005 W -75.70000

* Sites marked with an asterisk are already registered in the existing MODIS subset list and require no modification.

Notes:
These locations were compared to existing MODIS subset list (looking for duplicates, imprecise locations etc.). A number of LTER sites have additional subset sites for specific NASA projects. These locations are in addition to those listed here.

For coastal sites, primary meteorological stations or primary research sites sufficiently inland to prevent subsetting a partial land/water area were used here. The exception to this is the VCR flux tower site already registered. This VCR location - the flux tower - already registered for MODIS subsets will include water and is also subject to tides.

Many of the research site locations included here are the center location of high resolution "GFL" reconnaissance data for which LTER has been previously registered.

Locations for Palmer Station and McMurdo are included although MODIS data may not be generally available because of the high latitude. The MCR and CCE sites have also been included. Reflectance data would be quite useful for these sites although they probably don't fall under the purview of the ORNL DAAC...