

# ASCII Subsets of MODIS Land Products for Selected Sites



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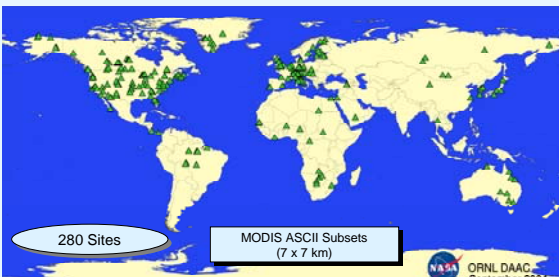
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## Introduction

We have prepared subsets of selected MODIS Land Products for the community to use for validation of models and remote sensing products and to characterize field sites. The MODIS (Moderate Resolution Imaging Spectroradiometer) sensor is onboard the Aqua and Terra satellites.

<http://www.modis.ornl.gov/modis/>

## Background



MODIS Products
Surface Reflectance
Surface Temperature
Land Cover
NDVI / EVI
LAI / fPAR
Net Photosynthesis
Annual NPP
Albedo
Reflectance – BRDF Adjusted

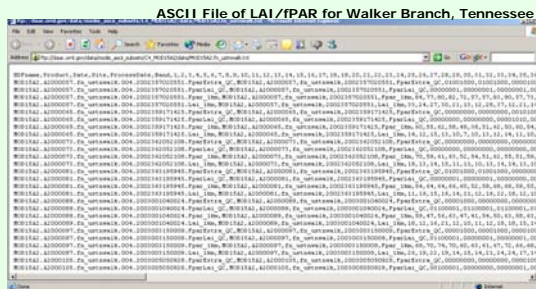
Sites include flux tower sites, Baseline Surface Radiation Network (BSRN) sites, and sites participating in NASA's validation program

- Terra MODIS Collection 4 / 4.5 and Aqua MODIS Collection 4; Sinusoidal Projection
- Data from 2000 to present; 8-day, 16-day, or annual composite periods
- Sites chosen because of a willingness to share *in situ* site data (*quid pro quo*)
- Documentation provided for ASCII subsets and links to full documentation at MODIS Web sites

## Processing

- Subsetted data received in HDF-EOS format and Sinusoidal Projection from MODIS processing stream
- Data reformatted, using the MODIS Rejection Tool and custom Perl code, from HDF-EOS image into ASCII values
- File created for each site / product combination containing values and QA flags for individual pixels
  - Files expand as additional data are collected
- ASCII file posted on DAAC's ftp site
- User selects sites and specific products from Web Map Server or picklist
- User Statistics:

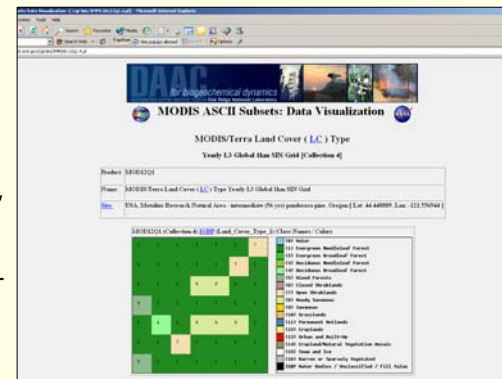
	CY 2003	CY 2004
Users	278	452
Files Downloaded	15,677	70,922



## Visualization of MODIS ASCII Subsets: On-Line Tool

Prepared using Perl code and Perl graphics library

### MODIS Land Cover Product



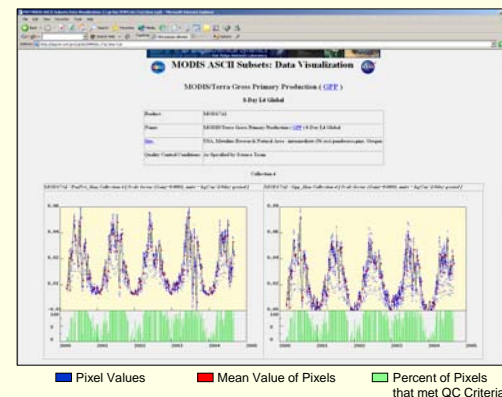
Grids for single date for any Terra or Aqua MODIS Land Product

- Example is a 7x7 km grid of land cover for a user-selected site
- IGBP Classification shown, other classifications available
- Sites selected from picklist or Web Map Server
- User selects dates of interest (8- or 16-day or annual composite period)

Time-series graphs of 8- and 16-day products from 2000 to present for a site

- Example is net photosynthesis and gross primary production
- Green bars are percentage of pixels that meet quality criteria, blue dots are acceptable values for individual pixels and red dots are the average of acceptable values

### MODIS GPP Product



<http://www.daac.ornl.gov/MODIS/GRAPHICS>

## Future Plans

- Continue to offer subsets of MODIS Land Products from Terra and Aqua
- Add Continuous Vegetation Field subsets
- Evaluate current sites and seek additional sites for future processing / reprocessing (e.g., Collection 5)
- Create tool for subsetting MODIS Land Products for any user selected location and area, up to 200x200 km

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