



# ORNL DAAC News

SUMMER 2005

The ORNL Distributed Active Archive Center (DAAC) is a NASA-sponsored source for biogeochemical and ecological data useful in environmental research. The ORNL DAAC currently archives and distributes more than 760 data sets categorized as Field Campaign, Land Validation, or Regional and Global Data.

Please visit us on-line at <http://daac.ornl.gov> for a comprehensive description of data, services, and tools available from the ORNL DAAC. Archived news can be found at <http://daac.ornl.gov/news.shtml>.



OAK RIDGE  
NATIONAL  
LABORATORY

MANAGED BY UT-BATTELLE FOR  
THE DEPARTMENT OF ENERGY

## INTRODUCTION

The Oak Ridge National Laboratory (ORNL) Distributed Active Archive Center (DAAC) is pleased to present this first installment of the ORNL DAAC Newsletter. We plan to include in this semiannual newsletter announcements of new data sets and services being offered to the public as well as news of other happenings and events. We welcome feedback. Send comments and suggestions to [ornldaac@ornl.gov](mailto:ornldaac@ornl.gov).

## New Data

During the past six months the ORNL DAAC has released 35 new data sets:

- 29 SAFARI 2000 (S2K) data sets,
- 2 Vegetation/Ecosystem Modeling and Analysis Project (VEMAP) data sets, and
- 4 BigFoot data sets.

The S2K project was an international science initiative to study the linkages between land and atmosphere processes in the southern African region. SAFARI 2000 examined the relationship of biogenic, pyrogenic, and anthropogenic emissions and the consequences of their deposition to the functioning of the biogeophysical and biogeochemical systems of southern Africa.

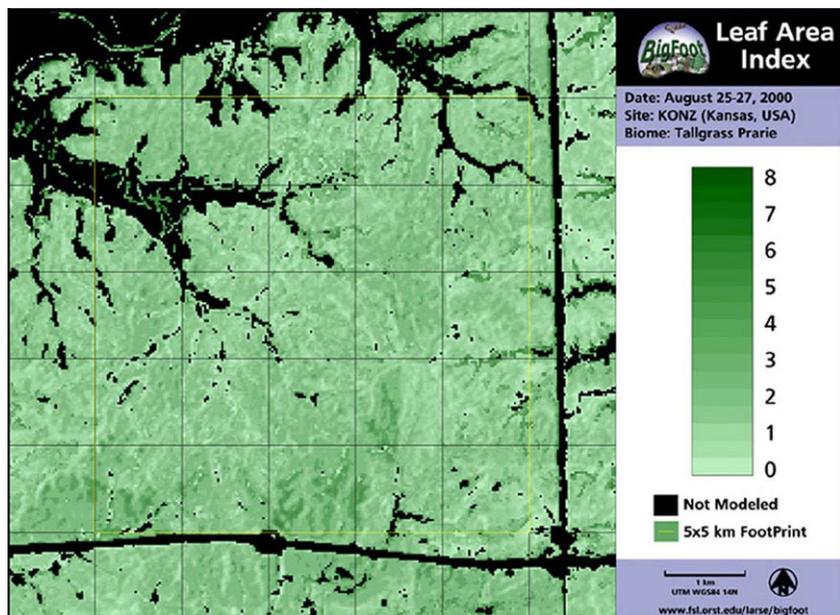


Fire clearing out Miombo understory in Zambia, southern Africa. (Courtesy of Dr. Robert Yokelson, University of Montana)

Please visit our S2K web page at <http://daac.ornl.gov/S2K/safari.html>.

(continued)

## New Data *(continued)*



Leaf area index for the Konza Prairie.  
(Courtesy of Oregon State University)

can be found on our VEMAP web page at <http://daac.ornl.gov/VEMAP/vemap.html>.

The ORNL DAAC also made available four data sets from the BigFoot project. The overall goal of BigFoot was to support the validation of land products from the Moderate Resolution Imaging Spectrometer (MODIS) onboard NASA's Earth Observing System (EOS) satellite Terra. Reflectance data from MODIS were used to produce several science products including land cover, leaf area index (LAI), and net primary production (NPP).

To validate these products, BigFoot combined ground measurements, additional high-resolution remote-sensing data, and

ecosystem process models at nine flux tower sites representing different biomes. These data can be used to evaluate the effects of the spatial and temporal patterns of ecosystem characteristics on MODIS products.

Please check out our BigFoot web page at [http://daac.ornl.gov/BIGFOOT\\_VAL/bigfoot.html](http://daac.ornl.gov/BIGFOOT_VAL/bigfoot.html).

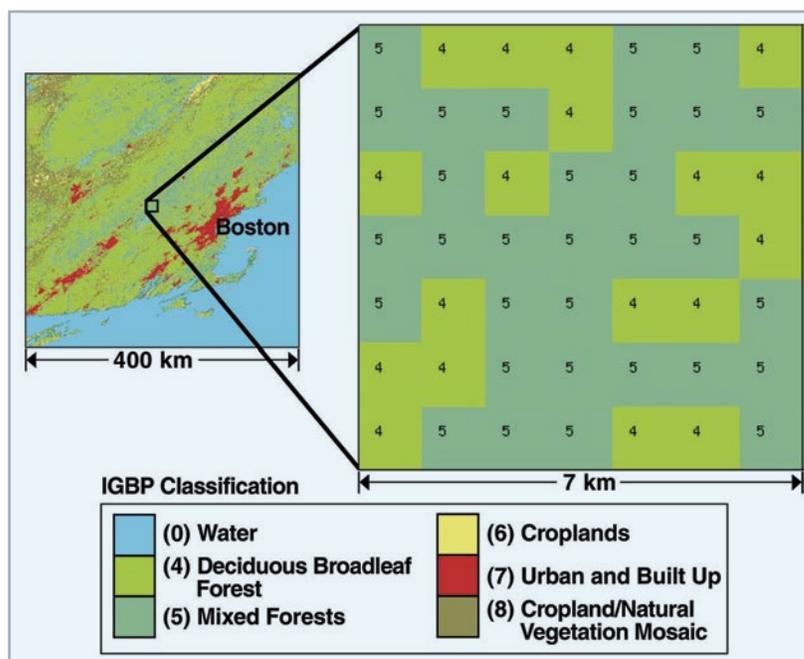
This year the ORNL DAAC also began distributing two additional VEMAP data sets. VEMAP was a multi-institutional, international effort addressing the response of biogeography and biogeochemistry to environmental variability in climate and other drivers in both space and time domains. More information

## Data Visualization

The ORNL DAAC offers a new visualization tool for the Moderate Resolution Imaging Spectrometer (MODIS) ASCII Subsets. The goal of the MODIS ASCII Subsets activity is to prepare summaries of selected MODIS land products for the community to use for validation in conjunction with FLUXNET and other field data.

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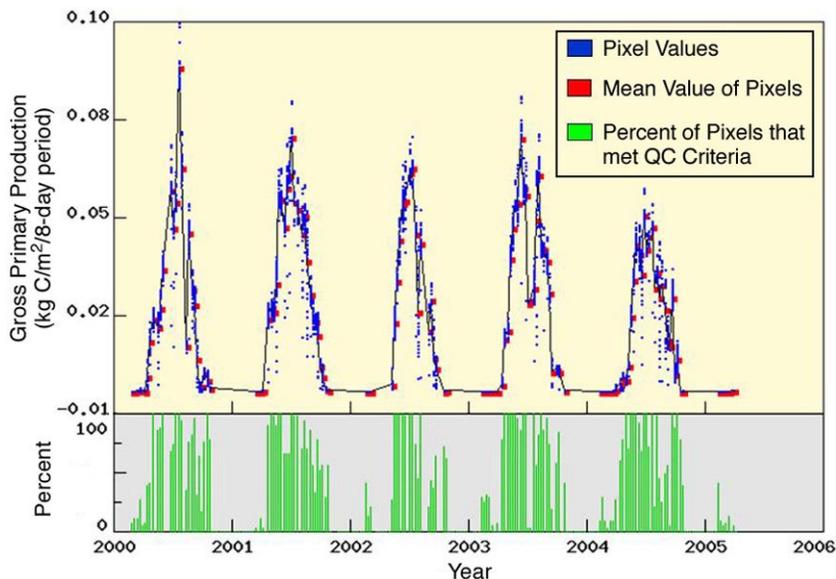
Land cover map, Harvard Forest site, central Massachusetts, U.S.A., showing IGBP classification from MODIS.



## Visualization (continued)

The MODIS ASCII Subsets files are associated with validation or FLUXNET field sites and represent data derived from several MODIS land products. Each individual file represents one field site and one MODIS product for the entire period of MODIS data collection (2000–present). These files contain comma-delimited rows of parameter values (image bands) for each pixel in a 7x7-km area centered on a flux tower or field site. Users can select a land product (e.g., surface reflectance, leaf area index, land surface temperature) for particular sites of interest using the new MODIS ASCII Subsets visualization tool. Users may choose images composited over 8 or 16 days or one year or times series displays for individual sites.

To learn more, please visit our MODIS ASCII Subsets web site at <http://www.modis.ornl.gov/modis/index.cfm>.



MODIS time series of gross primary production for the Northern Old Black Spruce site in Manitoba, Canada.



Newly redesigned DAAC web site.

## Redesigned Web site

The DAAC introduced its new web site in December 2004. The new site is the product of a new layout design, incorporation of cascading style sheet (CSS) technology, reorganized content as well as new content, and deployment of a new system infrastructure. The redesign includes

- text displayed in columns,
- a navigation menu for all the main pages,
- a distinctive banner graphic,
- a quick data search,
- site user function buttons for checking user information and order status, and
- news and related information columns.

The new system infrastructure starts from the ground up with new hardware.

## New FLUXNET site

micrometeorological tower sites. The flux tower sites use eddy covariance methods to measure the exchanges of carbon dioxide (CO<sub>2</sub>), water vapor, and energy between terrestrial ecosystems and the atmosphere.

At present, over 300 tower sites are operating on a long-term and continuous basis.



[About FLUXNET](#) | [Program Information](#) | [Obtain Data](#) | [Submit Data](#) | [Resources](#) | [Regional Websites](#) | [Contact Us](#)

### FLUXNET

FLUXNET, a "network of regional networks," coordinates regional and global analysis of observations from micrometeorological tower sites. The flux tower sites use eddy covariance methods to measure the exchanges of carbon dioxide (CO<sub>2</sub>), water vapor, and energy between terrestrial ecosystems and the atmosphere.

At present, over 250 tower sites are operating on a long-term and continuous basis. Researchers also collect data on site vegetation, soil, hydrologic, and meteorological characteristics at the tower sites. To search for flux or site characteristics data, choose "Obtain Data" from the menu above.

*New FLUXNET web site.*

The ORNL DAAC now offers a totally redesigned FLUXNET web site <http://www.fluxnet.ornl.gov/fluxnet/>. FLUXNET is a "network of regional networks" that coordinates regional and global analysis of observations from mi-

## ACCESSING ORNL DAAC DATA

Web-based interface:

<http://daac.ornl.gov/>

Anonymous FTP browsing:

<ftp://daac.ornl.gov/data/>

EOSDIS Data Gateway: search all DAACs at <http://eos.nasa.gov/ims/welcome>

User Services Office: [ornldaac@ornl.gov](mailto:ornldaac@ornl.gov)

All data from the DAAC are free and are available electronically or on CD-ROM or DVD.

ORNL Distributed Active Archive Center  
P.O. Box 2008, MS 6407  
Oak Ridge National Laboratory  
Oak Ridge, TN 37831-6407

