

Recent MODIS Land Applications

Ian Grant
EOC/CAR



CSIRO

Atmospheric Research

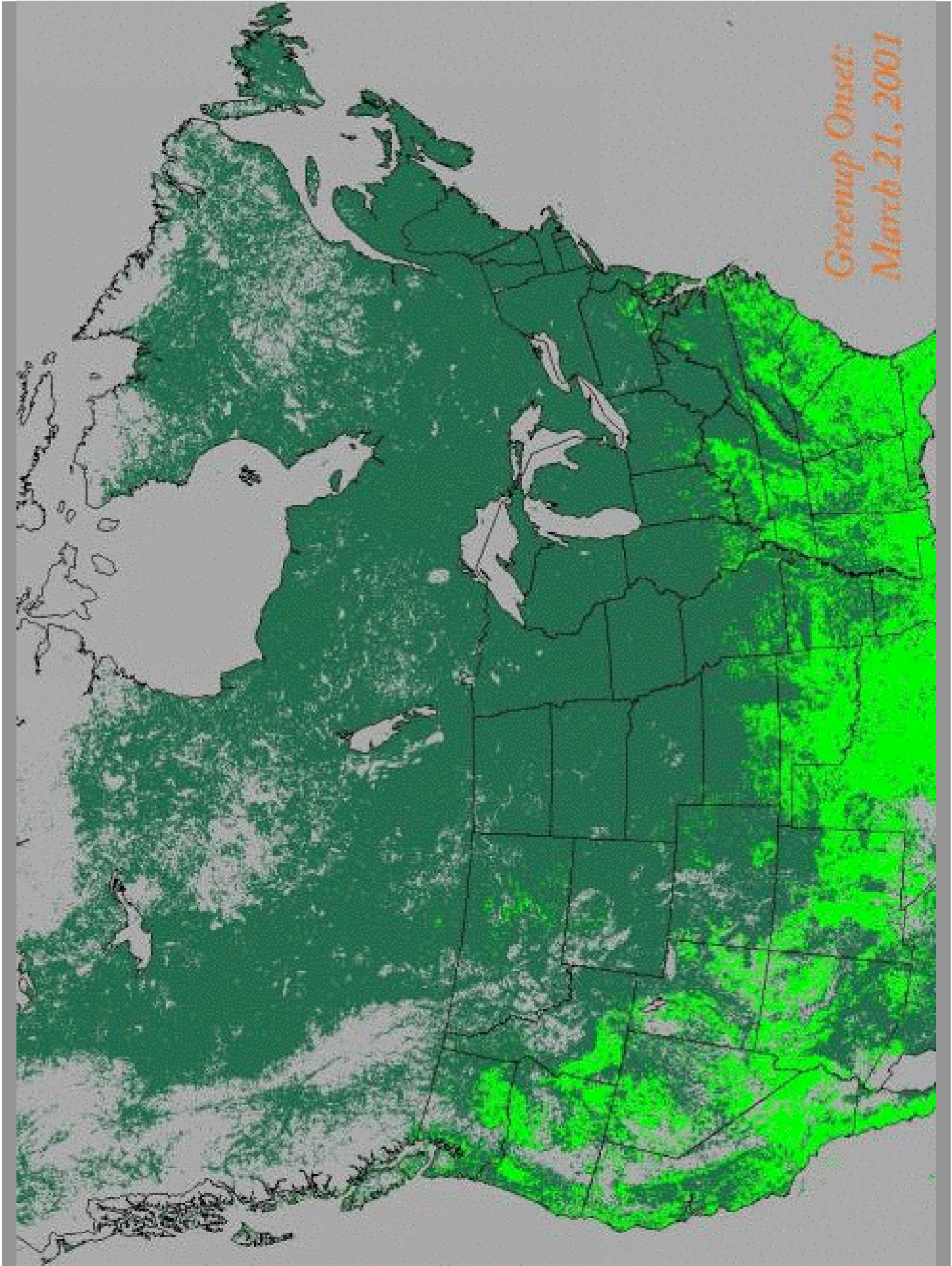
Phenology date product

- Zhang, Boston University
- Fit function to EVI

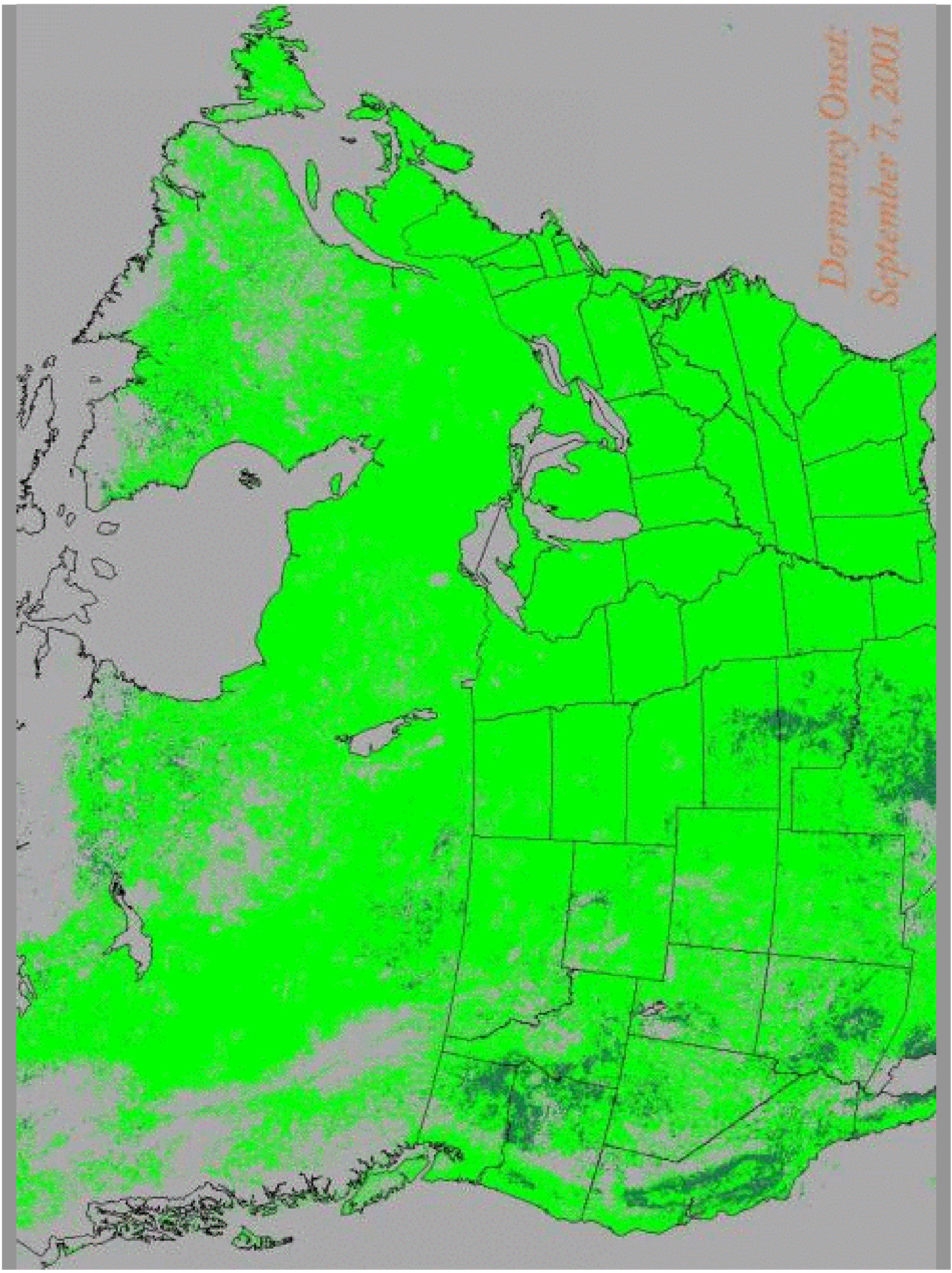
$$y(t) = \frac{c}{1 + e^{a+bt}} + d$$

- Dates from extremes of curvature

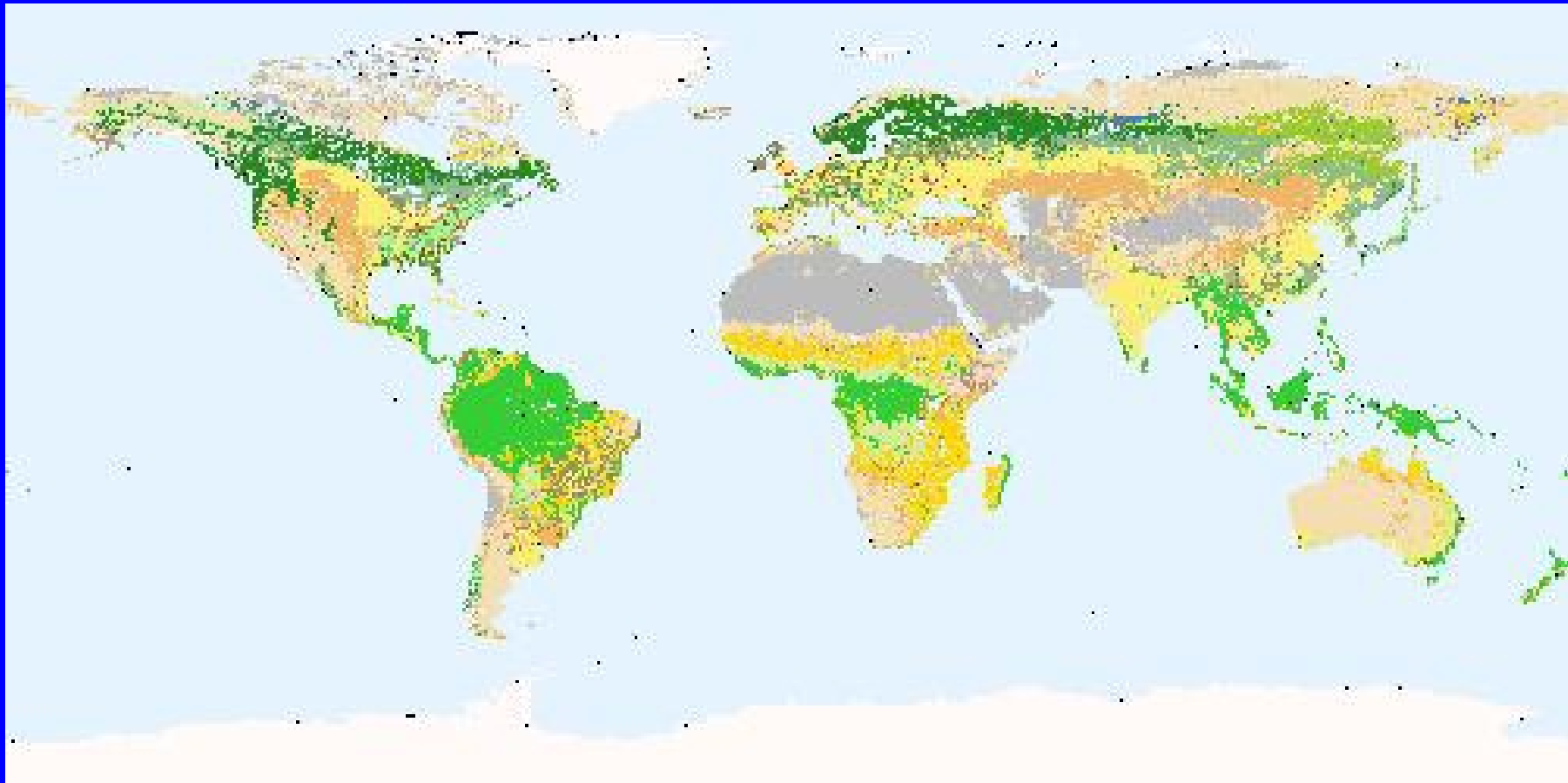
*Greenup Onset:
March 21, 2001*



*Dormancy Onset:
September 7, 2001*



NBAR-based land cover map



Other recent applications

- Coarse resolution products on simple grid
 - 0.05° , 0.25°
- Expectation approach to firescar detection
 - Roy (NASA/GSFC) and Lewis (UCL)
- Kalman filter for tracking change
 - Balance noise and expected temporal fluctuations
 - Roberts and Lewis (UCL)

MODIS Reprojection Tool

<http://edc.usgs.gov/programs/sddm/modisdist/index.shtml>

- Reprojects MODIS Level-2G, Level-3, and Level-4 land data products
- ~Dozen map projections

MODIS browse images

<http://modland.nascom.nasa.gov/browse/>

The screenshot shows a Netscape browser window titled "Global Browse Images for MODIS land products". The address bar contains the URL: <http://modland.nascom.nasa.gov/browse/?START=2000345&END=2000360&version=C38MOD09-on&MOD09A1-on>. The page content includes a "Product selection" section with date pickers for "Start date" (2000345) and "End date" (2000360), a "Submit selection" button, and radio buttons for "Collection 1" and "Collection 3". A list of product types is shown on the right, with checkboxes for MOD02, MOD09, MOD10_L2, MOD11, MOD14, MOD15, MOD29, MOD09A1, MOD13A2, MOD43R3, MOD43R4, and MOD43B1. Below the selection area is a "Click here for Julian Day Calendar" link and a small calendar icon. At the bottom, a table displays image thumbnails for "Daily Land Surface Reflectance Bands 1,4,3 (MOD09)" and "8-day Land Surface Reflectance Bands 1,4,3 (MOD09A1)".

Product selection
(Change start and end date - Use "latest" for latest data or leave blank for default dates - Check product boxes - Submit selection)

Start date: 2000345
End date: 2000360
(Format: YYYYDDD)

Submit selection

Product version:
 Collection 1
 Collection 3

[Click here for Julian Day Calendar](#)

- MOD02 (Top-of-the-atmosphere Radiance)
- MOD09 (Daily Surface Reflectance)
- MOD10_L2 (Snow Cover)
- MOD11 (Surface Temperature)
- MOD14 (Active Fire Detection)
- MOD15 (LAI/FPAR)
- MOD29 (Sea Ice)
- MOD09A1 (8-day Surface Reflectance)
- MOD13A2 (16-day Vegetation Index)
- MOD43R3 (16-day Shortwave Broadband White-Sky Albedo)
- MOD43R4 (16-day Nadir BRDF- Adjusted Reflectance)
- MOD43B1 (16-day BRDF Isotropic Parameter)

| Julian day | | Daily Land Surface Reflectance Bands 1,4,3 (MOD09) | 8-day Land Surface Reflectance Bands 1,4,3 (MOD09A1) |
|------------|-------|--|--|
| 2000 360 | 12/25 | | |
| 2000 359 | 12/24 | | |

MODIS browse images

<http://modland.nascom.nasa.gov/browse/>

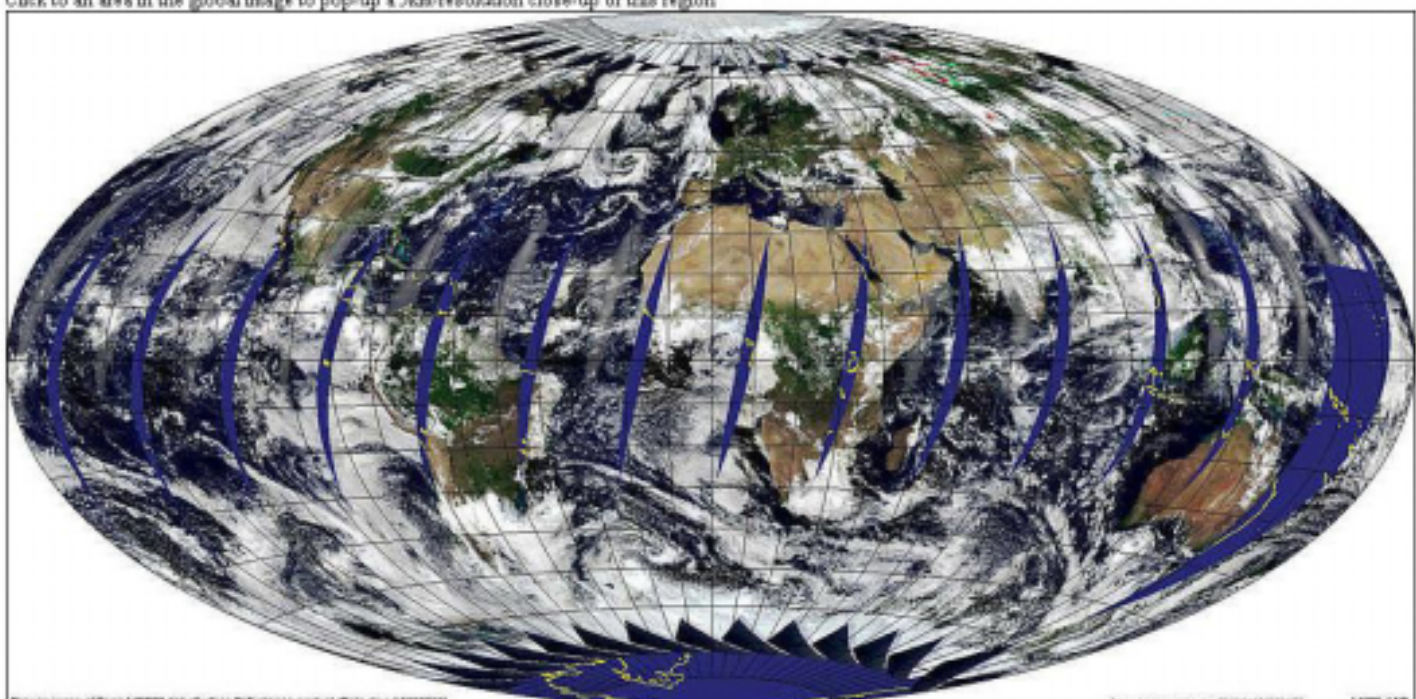
MOD09 - Day 2002/230 - Microsoft Internet Explorer

File Edit View Favorites Tools Help



Back Forward Stop Refresh Search Favorites History Mail Print Edit Messenger ICQ

Address <http://modland.nascom.nasa.gov/browse/single/?product=MOD09&version=C3&date=2002230> Go

Click to an area in the global image to pop-up a 5km-resolution close-up of this region



Previous image of this MODIS daily Surface Reflectance product (25m day 2002/230) View image metadata (2/24/02 08:57) MODLAND

← 1 day   1 day →


[Click here for Julian Day Calendar](#)

Collection 1
 Collection 3

[Multi-product layout](#) [2-day/16-day layout](#)

Submit Date

Daily products available for day 2002/230:



<http://modland.nascom.nasa.gov/browse/single/?product=MOD09&version=C3&date=2002230&tile=450x450+4054+2> Internet