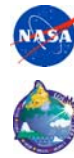




MODIS Land Collection 5 Products



Robert Wolfe
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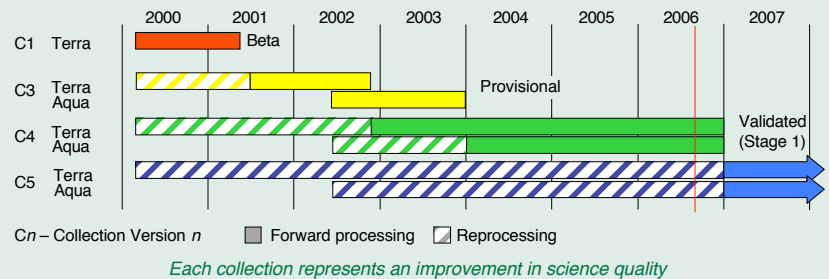


MODIS Science Team Meeting
 Oct. 30, Nov. 1-2, 2006 College Park, MD
<http://modis-land.gsfc.nasa.gov/>

MODIS Land Collection 5 Changes

- Used improved Land/Water mask and new Land Cover map based on 3 years of Collection 4 data
- Refined surface reflectance by adopting a dynamic aerosol model in atmospheric correction and implementing BRDF coupling and adjacency effect correction schemes
- Improved quality of the Land Surface Temperature by revising the day/night algorithm and improving the detection and filtering of cloud contaminated observations
- Increased resolution of BRDF/Albedo products to 500m
- Improved ancillary data interpolation to remove artifacts in the NPP product
- Refined LAI/FPAR LUTs to improve numerical accuracy of the radiative transfer simulations
- Added fractional snow algorithm in the snow product
- Burned area product added
- Also: Improved instrument calibration and geolocation accuracy.

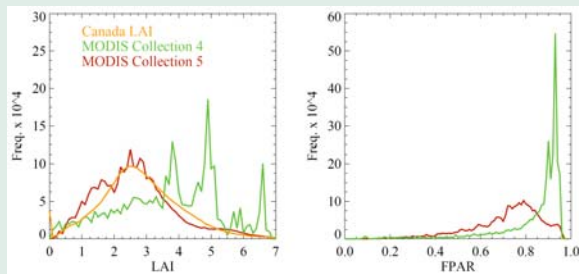
MODIS Land Collections



LAI/FPAR

Collection 5 has refined Lookup Tables (LUTs) for all biomes to improve numerical accuracy of radiative transfer simulations and to better match simulated reflectances and MODIS observations.

Examples of resulting improvements are a reduction in over-stimulation of LAI and FPAR for needle leaf forest (below) and an increase in the rate of best quality retrievals.



Comparison of Collection 4, Collection 5 and CCRS (Canadian Center of Remote Sensing) LAI and FPAR over Canada. MODIS data are for data-days 201-208, 2003

(Source: Nikolay Shabanov, BU)

Surface Reflectance

The Collection 5 surface reflectance algorithm retrieves the aerosol model along with the aerosol optical thickness.

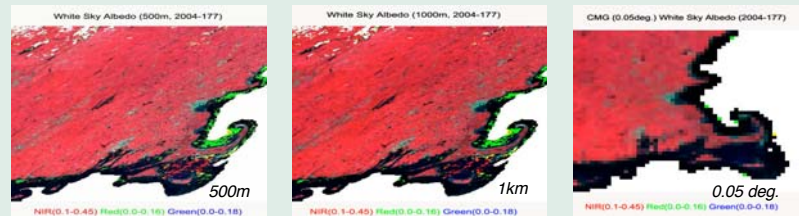
This leads to less overcorrection in the surface reflectance product as illustrated in this example.



(Source: Eric Vermote, UMD)

BRDF/Albedo

The Collection 5 BRDF/Albedo product will be produced at a resolution of 500m which provides better spatial detail and will allow the production of a global Land Cover at 500m.



Collection 5 White Sky Albedo products in New England area at different resolutions (Source: Crystal Schaaf, BU)

MODIS Land Collection 5 Workshop

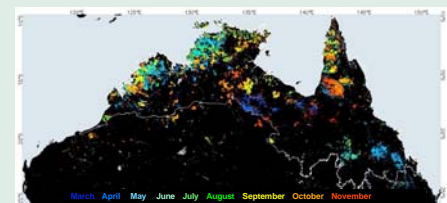
This workshop will provide an in-depth look at the Collection 5 changes to the MODIS Land products, MODAPS production status and reprocessing schedule and QA status. The workshop will provide an opportunity for feedback from the user community on MODIS land products and access and discussion of future land product plans. The workshop will consist of presentations, tutorials and discussion.

January 17 – 18, 2007, UMD, University College Inn and Conference Center
 For more information contact: Regina Oglesby at roglesby@umd.edu

Burned Area

Collection 5 includes a monthly burned area product produced at 500m from Terra and Aqua.

Burned Area 2003 dry season in Australia (March-November)



(Source: David Roy, SD State)