MODIS LAND PRODUCT

MODIS land discipline team
Collection 5 Workshop

Jeff Morisette, Jaime Nickeson, Sebastien Garrigues
jeff.morisette@nasa.gov, (301) 614-5498

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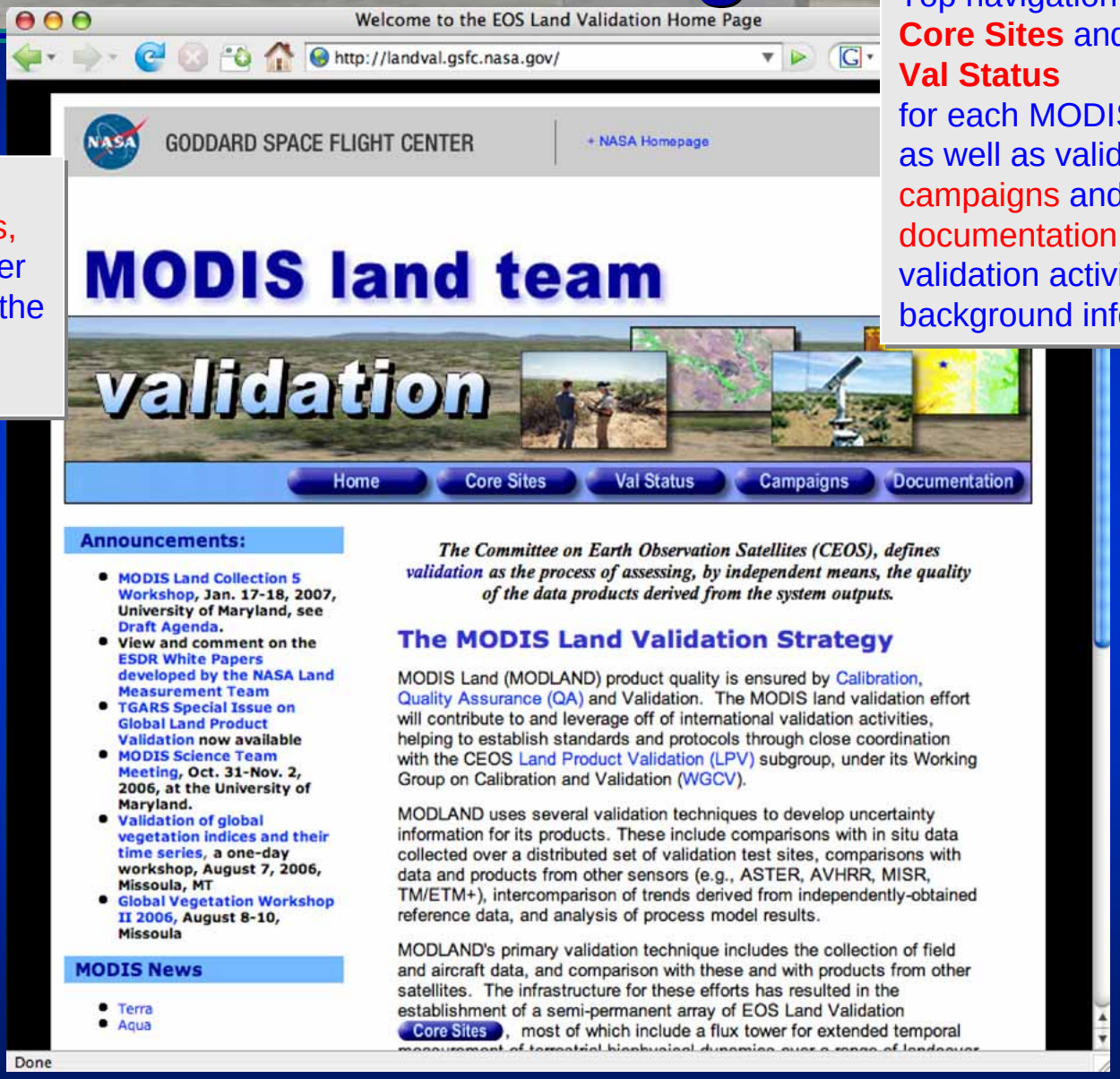
University of Maryland University College
College Park, Maryland

MODIS Validation Page

Left Sidebar
Announcements, MODIS and other EOS news and the MODIS web organigram

Top navigation bar links to **Core Sites** and **Val Status** for each MODIS product as well as validation field campaigns and documentation of past validation activities and background information



web curator: Jaime Nickeson

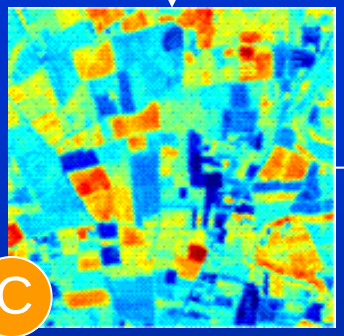
Validation Framework

Field data

High resolution imagery

Transfer function

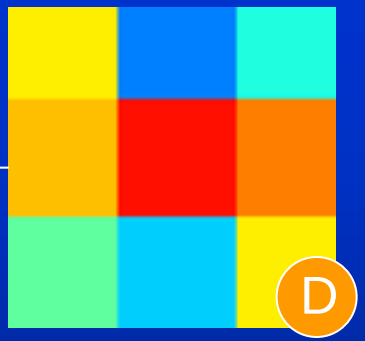
T



High resolution "Product"

Aggregate & Relate

R

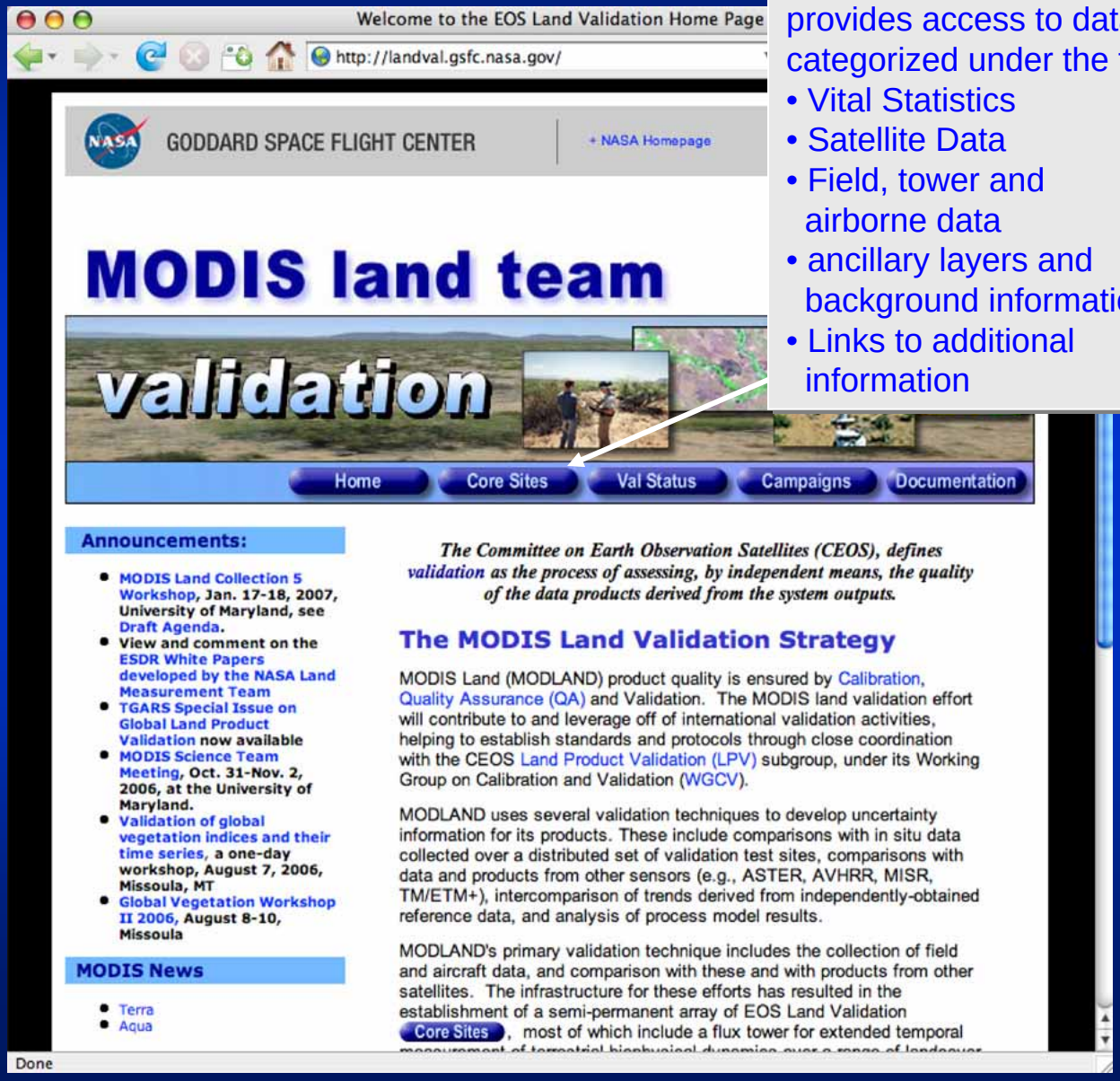


Moderate resolution "Product"

Accuracy Assessment

for one product, at one site, at one point in time

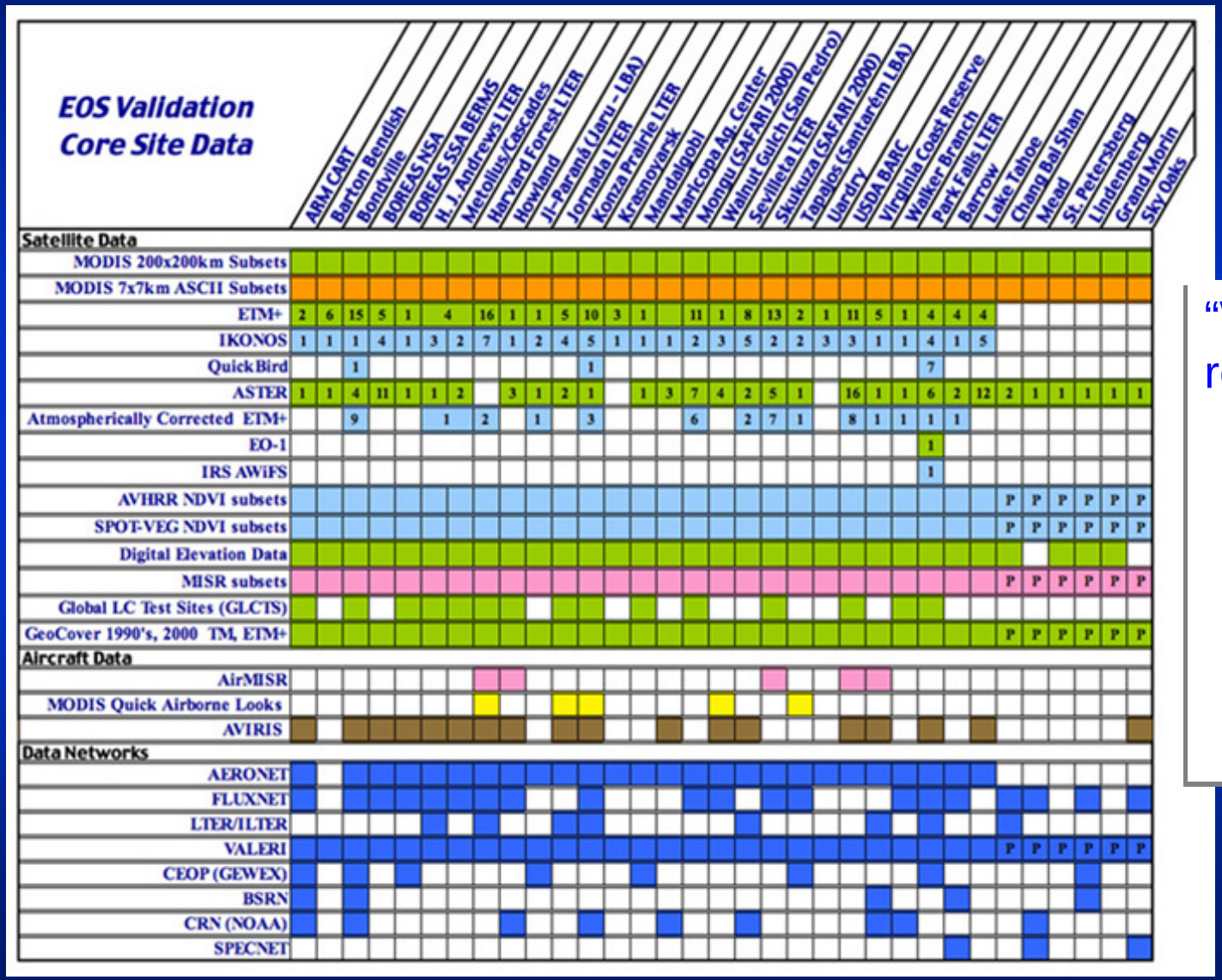
MODIS Validation Page



Core Site data
provides access to data and information categorized under the following groupings:

- Vital Statistics
- Satellite Data
- Field, tower and airborne data
- ancillary layers and background information
- Links to additional information

EOS Land Validation Core Sites

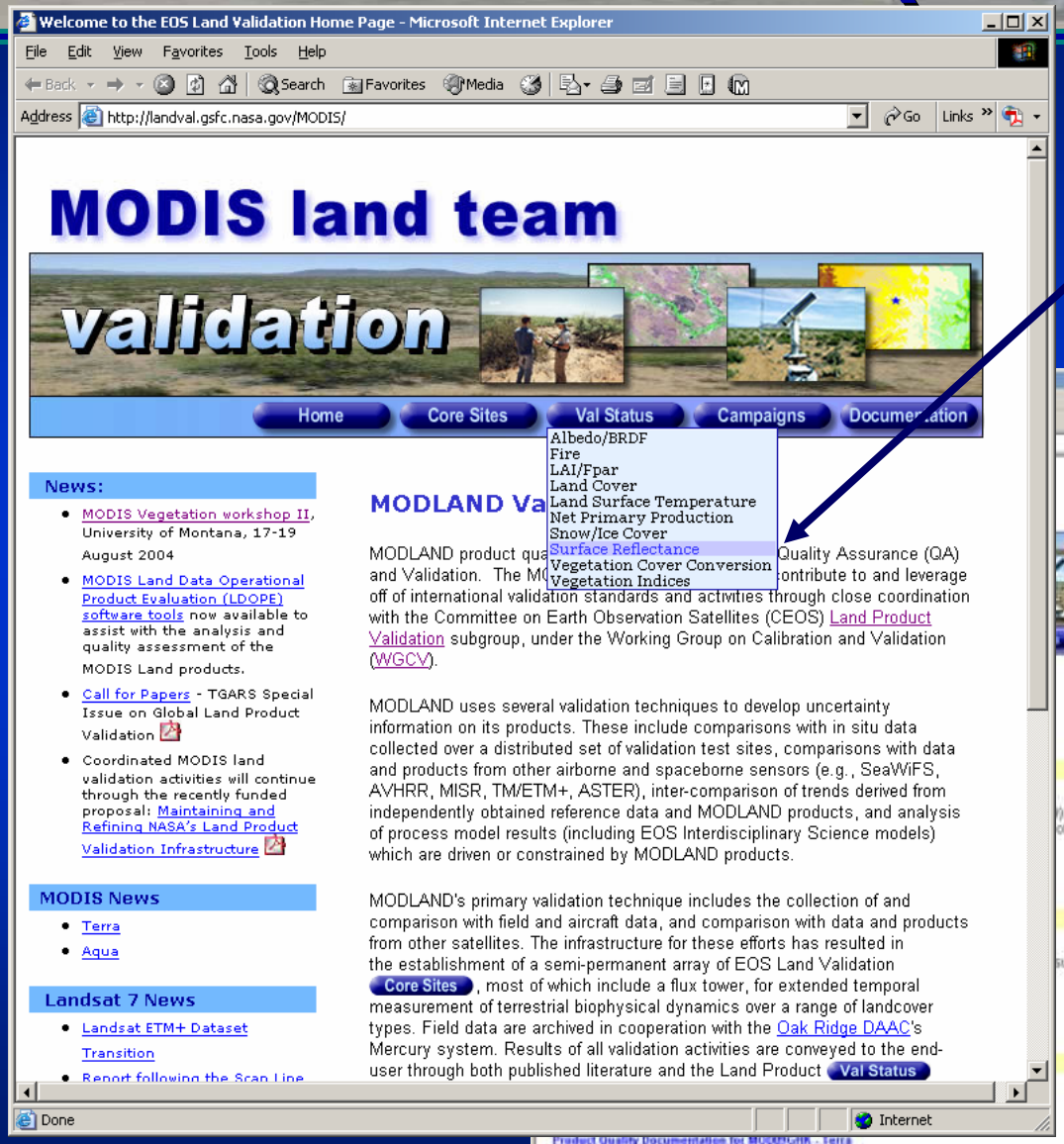


"What a fantastic resource!"

Michael Hill
SDSU
looking at the combined MODIS and MISR data for structural parameters

Update forthcoming in AGU's "EOS Transactions"

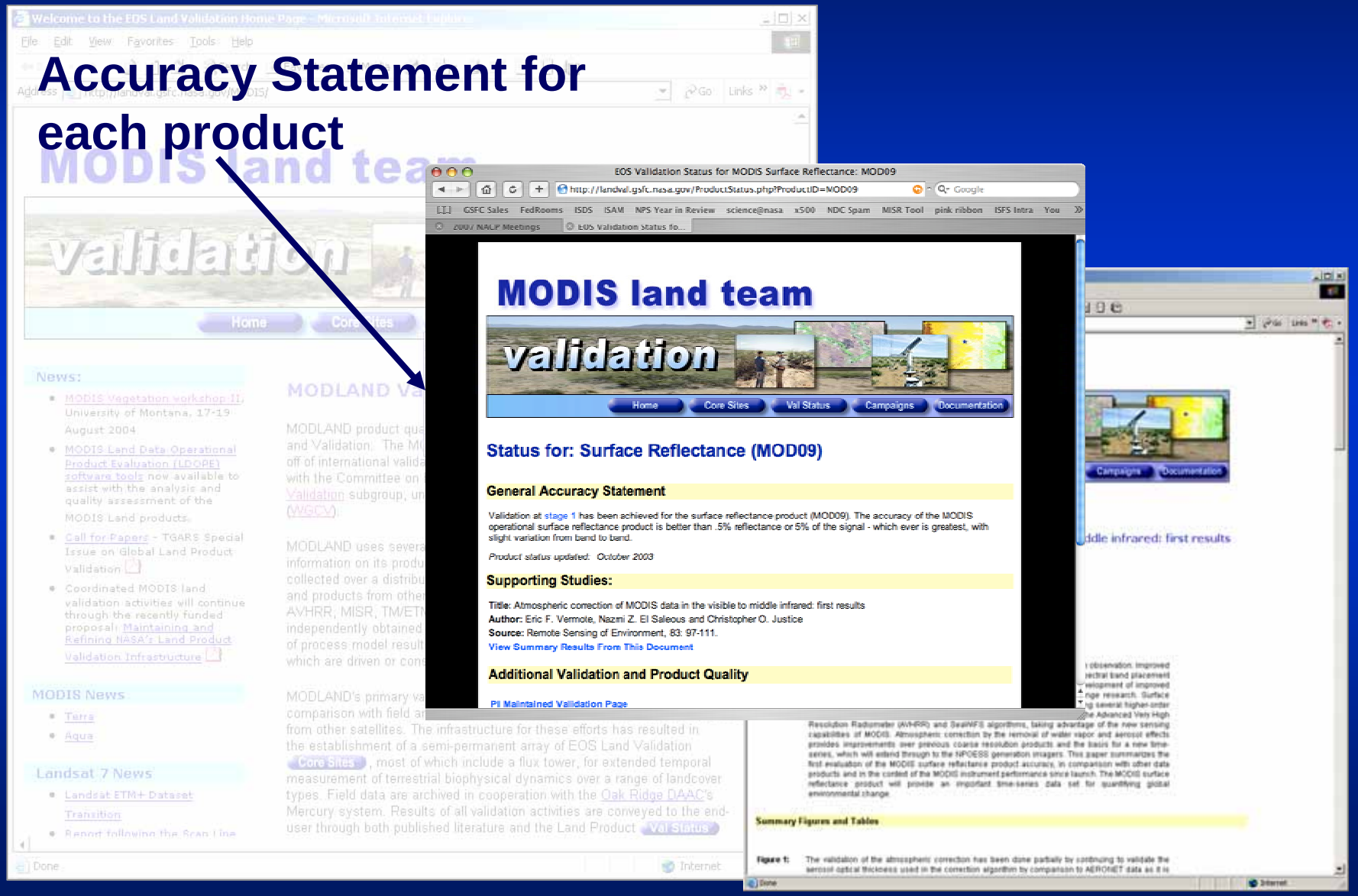
Validation Status (1 of 3)



Product "pick-list"

Val Status (2 of 3)

Accuracy Statement for each product



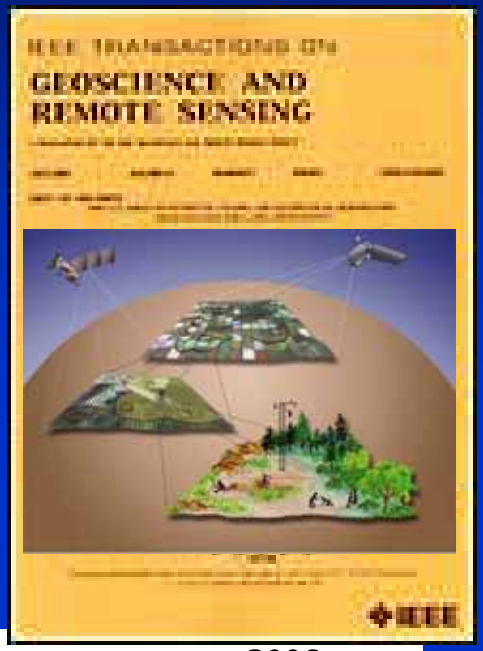
Val Status (3 of 3)

Support material for each Accuracy Statement

- updated by product PI and validation community

LPV "Special Issue" of IEEE TGRS

- Special Issue: describing the state of the art research on both protocol and results for validation and accuracy assessment of global land products
  (Morisette, Baret, and Liang guest editors)
- Three "framework" papers
  19 "validation results" and
  four "user response" papers - an attempt to solicit "user feedback".



	2004									2005												2006				
	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	N	D	J	F	M		
Announcement																										
Validation papers				submissions						reviews				revisions			review			final/profs						
User perspective papers							submissions							reviews			revisions				final/profs					
Publication date																								March 2006 ->		

July 2006

Morisette, J.T., F. Baret, S. Liang, 2006. Special issue on Global Land Product Validation, *IEEE TGARS* 44(7) 1695-1697.

MODIS/CEOS validation "hierarchy"

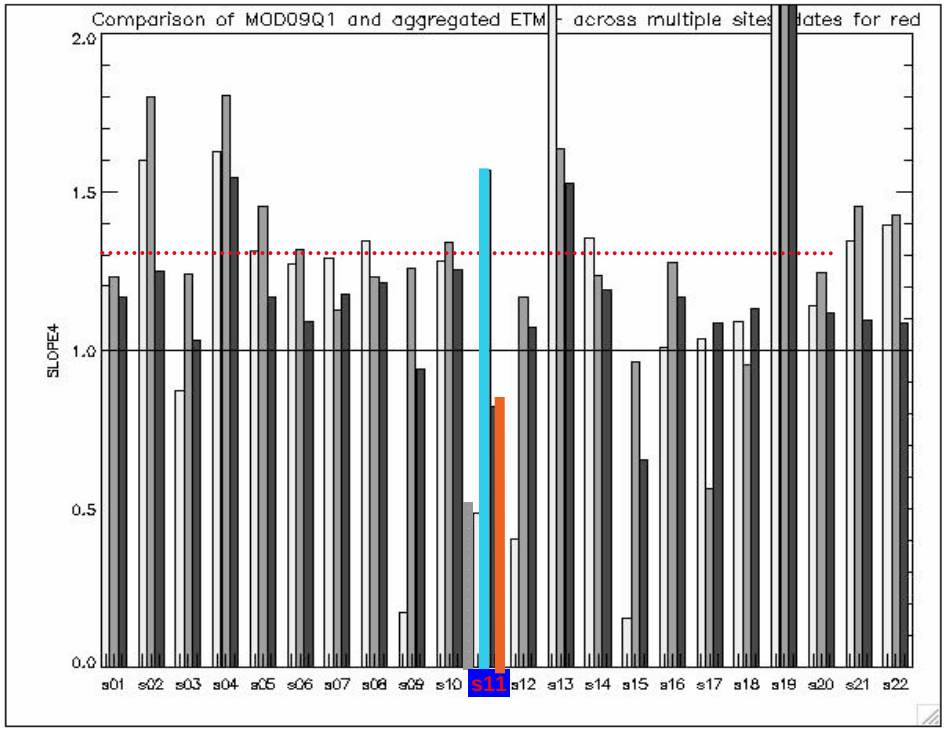
- **Stage 1 Validation**: Product accuracy has been estimated using a small number of independent measurements obtained from selected locations and time periods and ground-truth/field program efforts.
- **Stage 2 Validation:** Product accuracy has been assessed over a widely distributed set of locations and time periods via several ground-truth and validation efforts.
- **Stage 3 Validation**: Product accuracy has been assessed, and the uncertainties in the product well-established via independent measurements made in a systematic and statistically robust way that represents global conditions.

Morisette, J.T., F. Baret, S. Liang, 2006. Special issue on Global Land Product Validation, *IEEE TGARS* 44(7) 1695-1697.

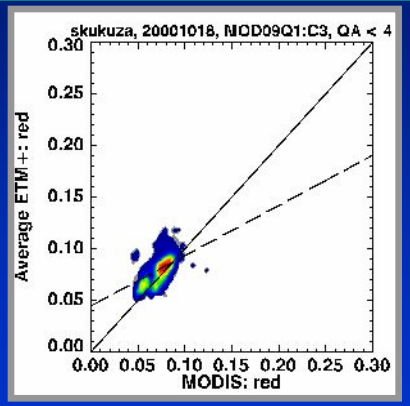
“Axis-swapping”

Evaluating MODIS Products from Collections 3, 4 and 5
Comparisons with Coincident ETM+ Data

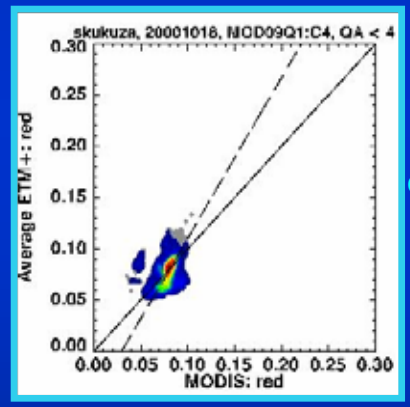
Product: MOD09Q1_ETM with a QA threshold of 4
Parameter: Fitted slope



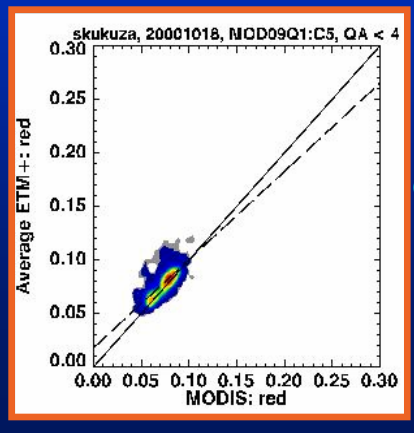
s01 - Ji-Parana, 11 Aug 2001
s02 - Bondvill, 15 May 2001
s03 - Harvard, 5 Sep 2001
s04 - Harvard, 28 Jul 2001
s05 - Konza, 9 May 2001
s06 - Konza, 13 Aug 2001
s07 - Mongu, 31 Jul 2000
s08 - Mongu, 1 Sep 2000
s09 - Parkfall, 25 Sep 2001
s10 - Skukuza, 31 Aug 2000
s11 - Skukuza, 18 Oct 2000
s12 - Skukuza, 28 Apr 2001
s13 - Skukuza, 18 Aug 2001
s14 - Skukuza, 3 Sep 2001
s15 - Tapajos, 30 Jul 2001
s16 - Usdaars, 3 Nov 2000
s17 - Usdaars, 22 Jan 2001
s18 - Usdaars, 7 Feb 2001
s19 - Usdaars, 23 Feb 2001
s20 - Usdaars, 28 Apr 2001
s21 - Usdaars, 2 Aug 2001
s22 - Walkerbr, 1 Oct 2001



collection 3



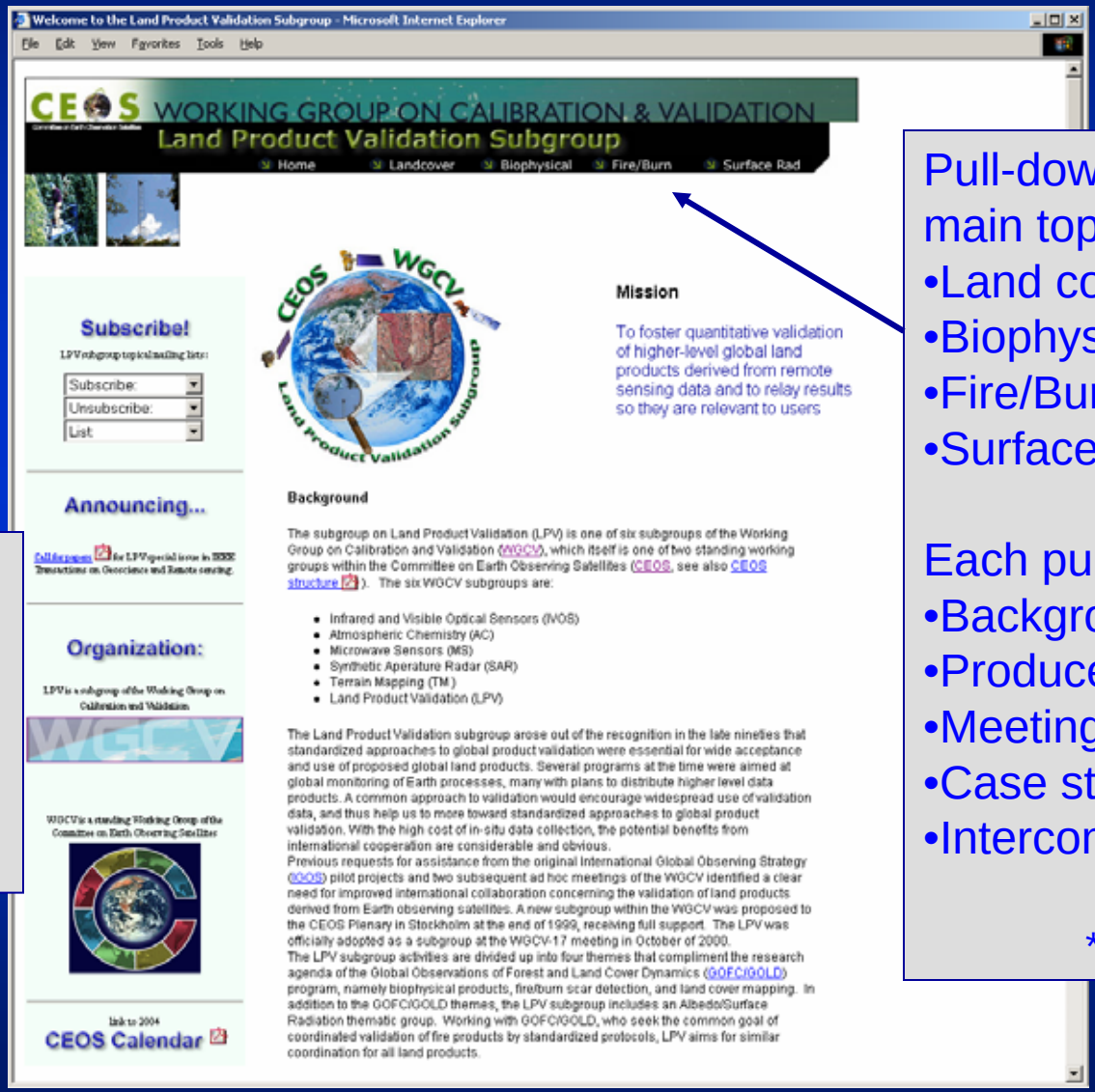
collection 4



collection 5

http:landval.gsfc.nasa.gov/LPVS

Matches WGCV page layout and graphic



Pull-down menu for main topical areas:
- Land cover
- Biophysical
- Fire/Burn
- Surface Radiation

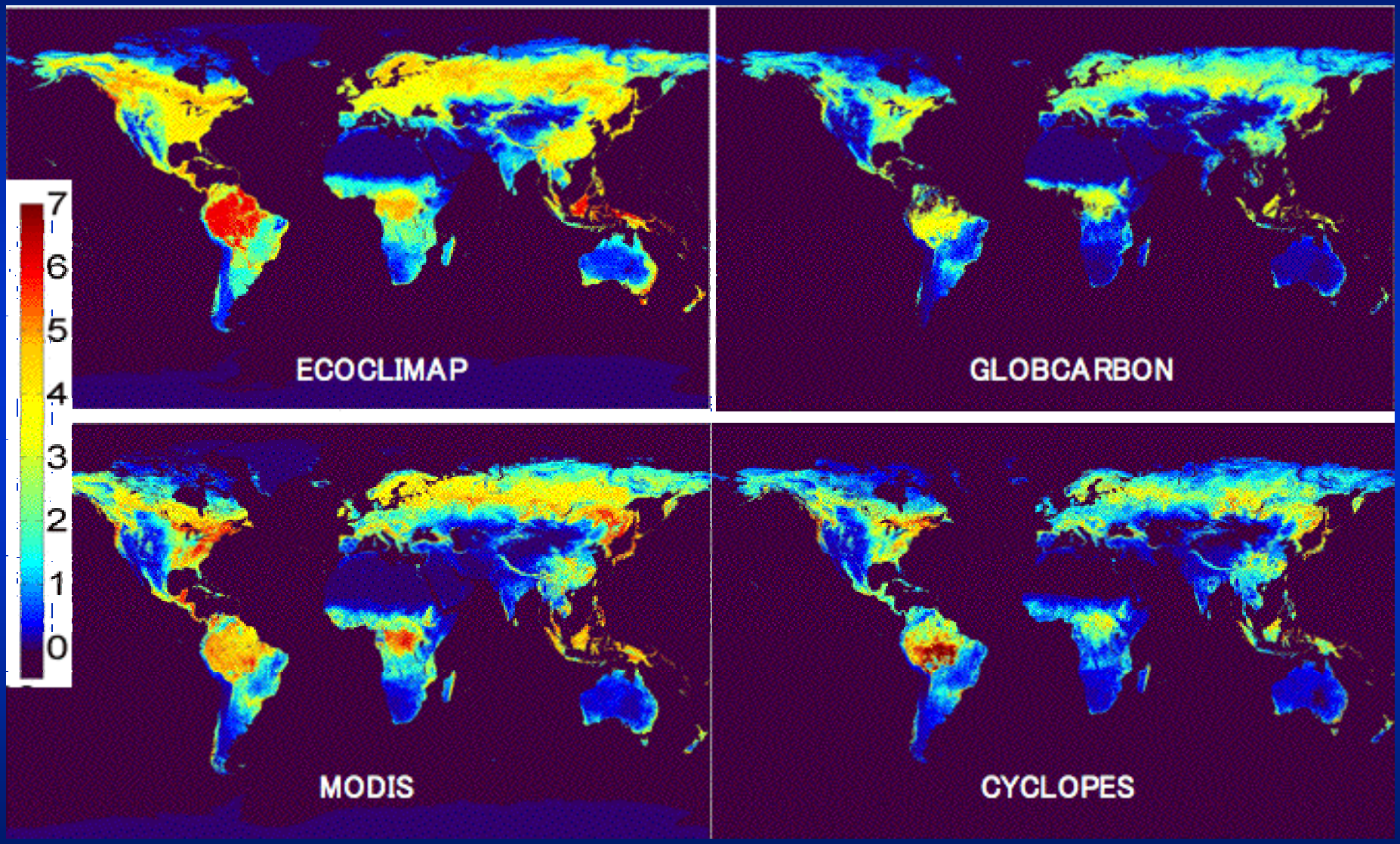
Each pull-down lists:
- Background
- Producers *
- Meetings
- Case studies
- Intercomparisons

* input needed

Quick links to:
- Listserves
- Announments
- WGCV
- CEOS and
- CEOS calendar

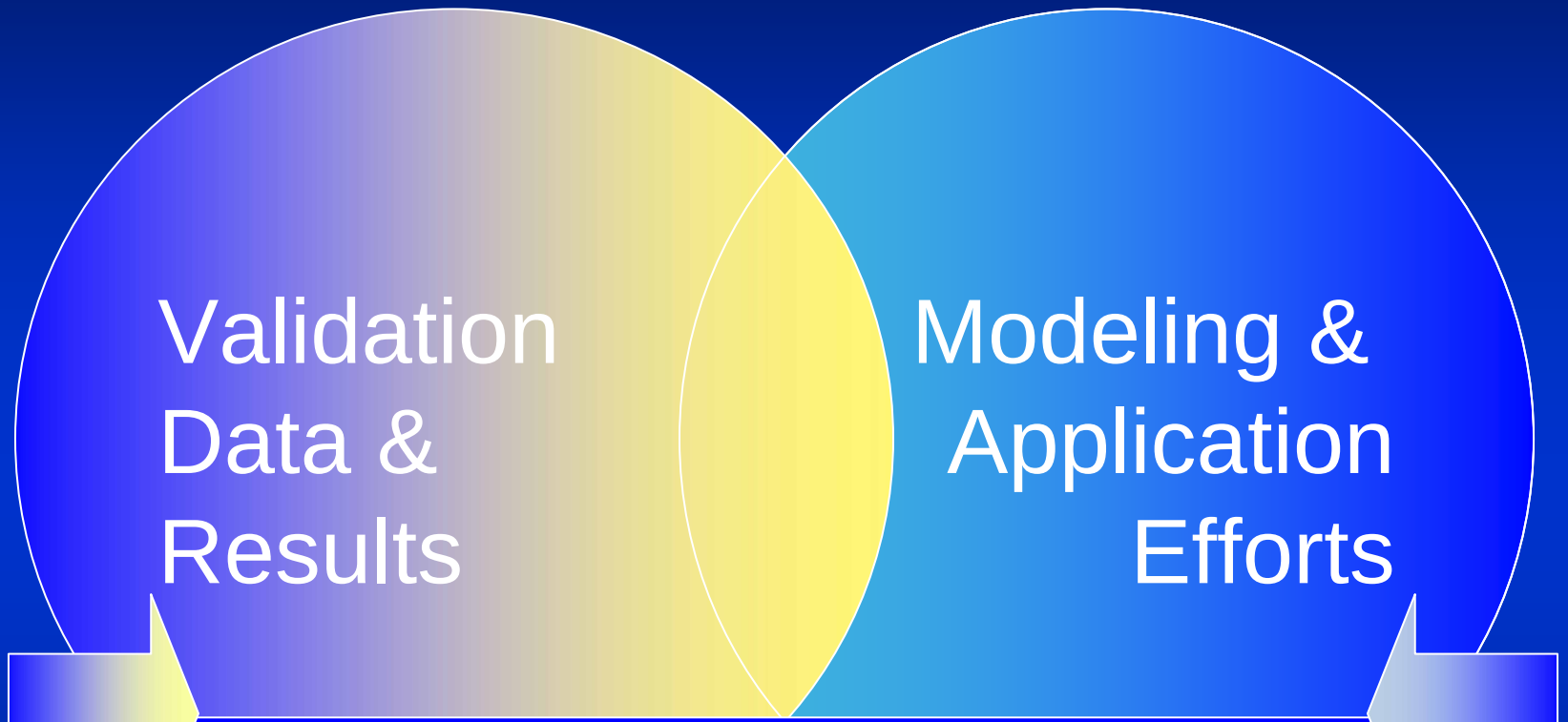
web curator: Jaime Nickeson

LAI Intercomparison



Lead: Sebastien Garrigues

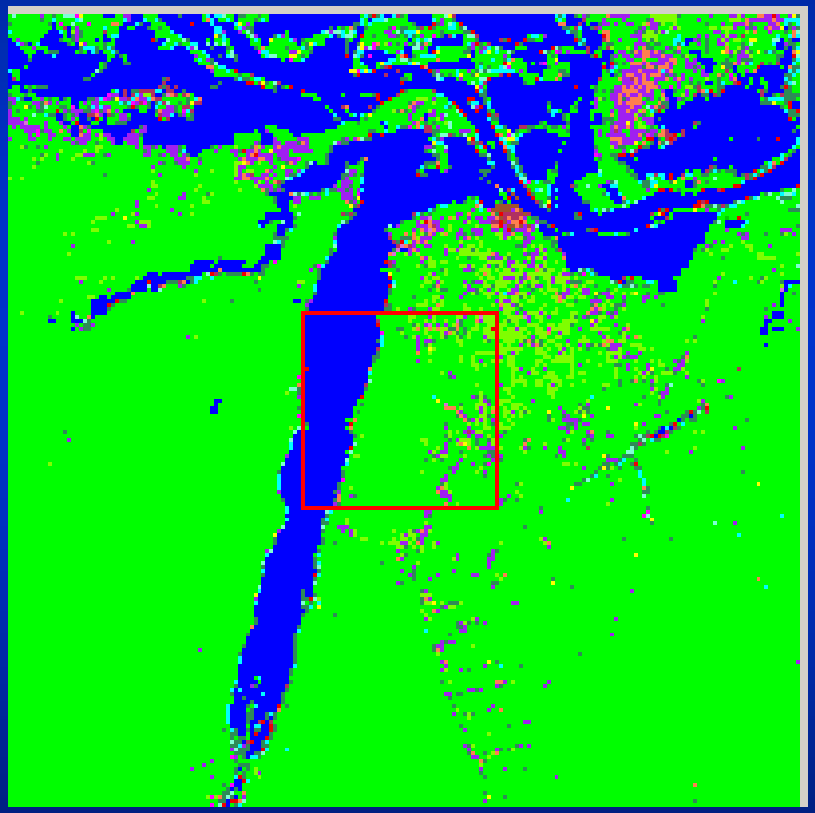
Future Directions



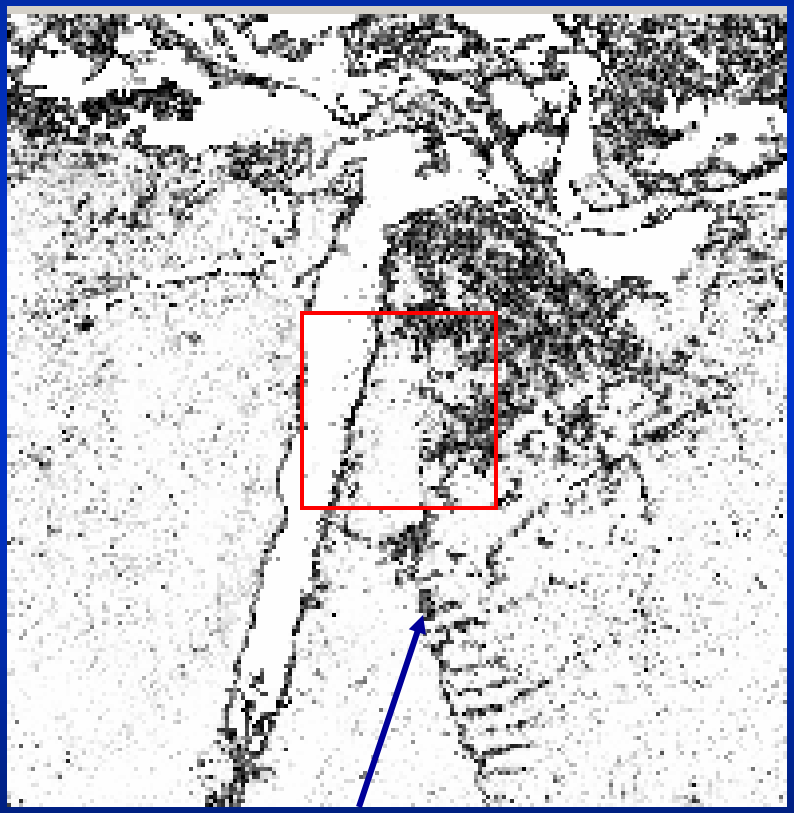
We can now start to build a better understanding of how land product accuracy impacts climate modeling output.

Accuracy/Confidence Layers

MODIS land cover
(collection 4)



Associated Confidence layer
(lighter = more confidence)



Note lower confidence in deforestation areas

MODIS Land cover product (MOD12Q1)

Thank you

Jeff Morisette
301-614-5498
jeff.morisette@nasa.gov