Ocean Overview

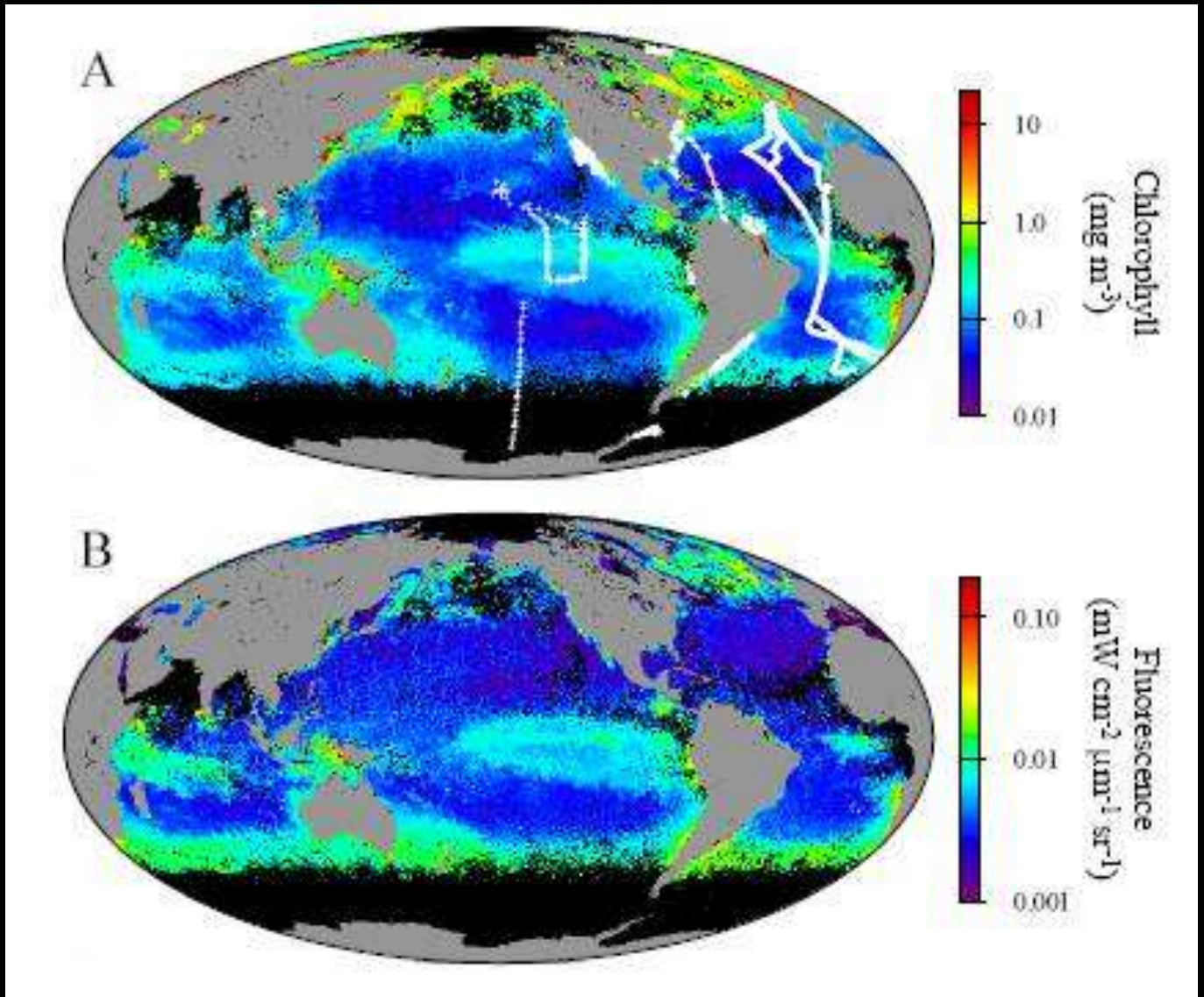
Chuck McClain - Ocean Color
Bob Evans - SST

NASA MODIS-VIIRS
Joint Science Team Meeting

May 14-16, 2008

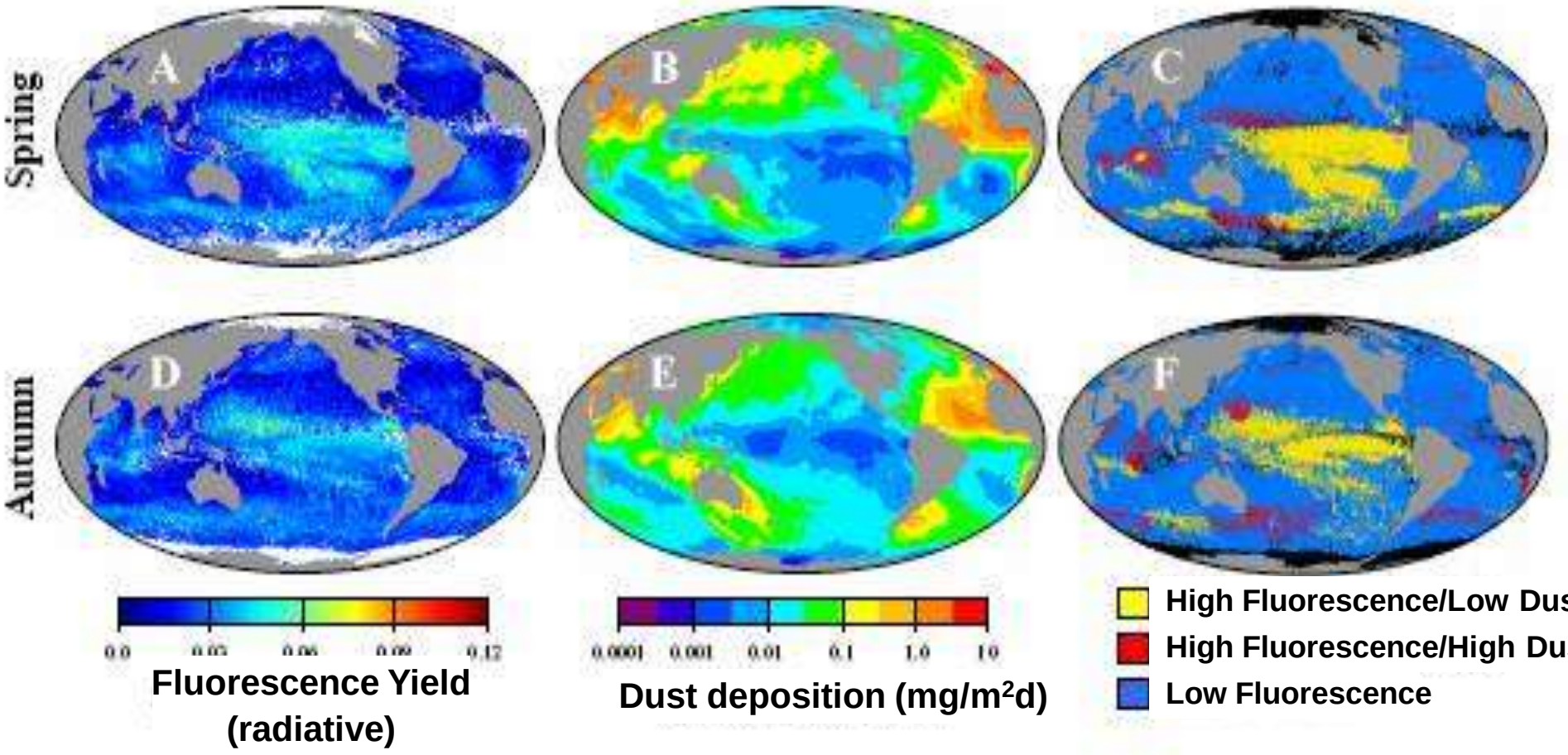
Science Highlights: FLH

Behrenfeld et al., in preparation



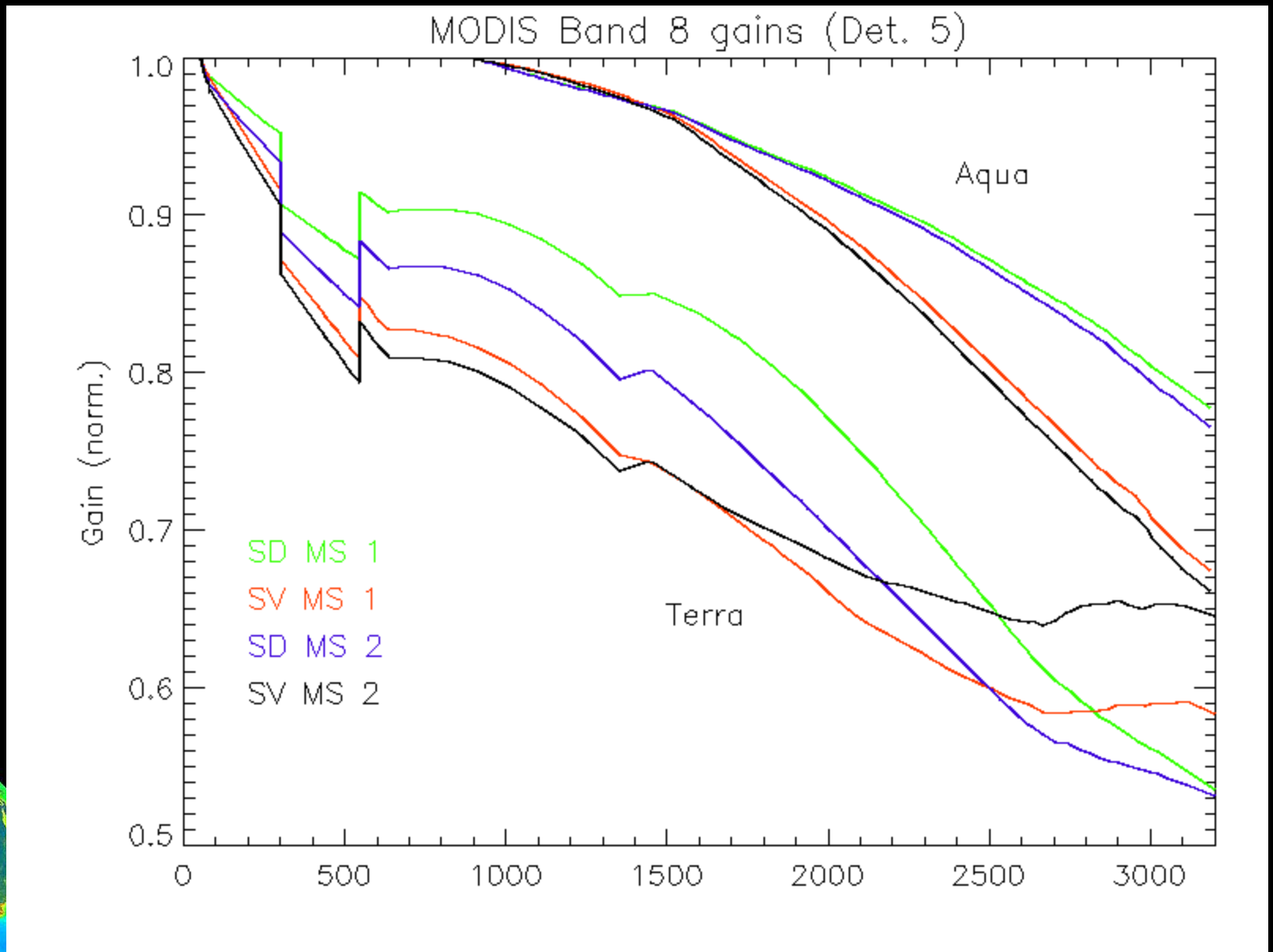
Science Highlights: FLH cont.

Behrenfeld et al., in preparation

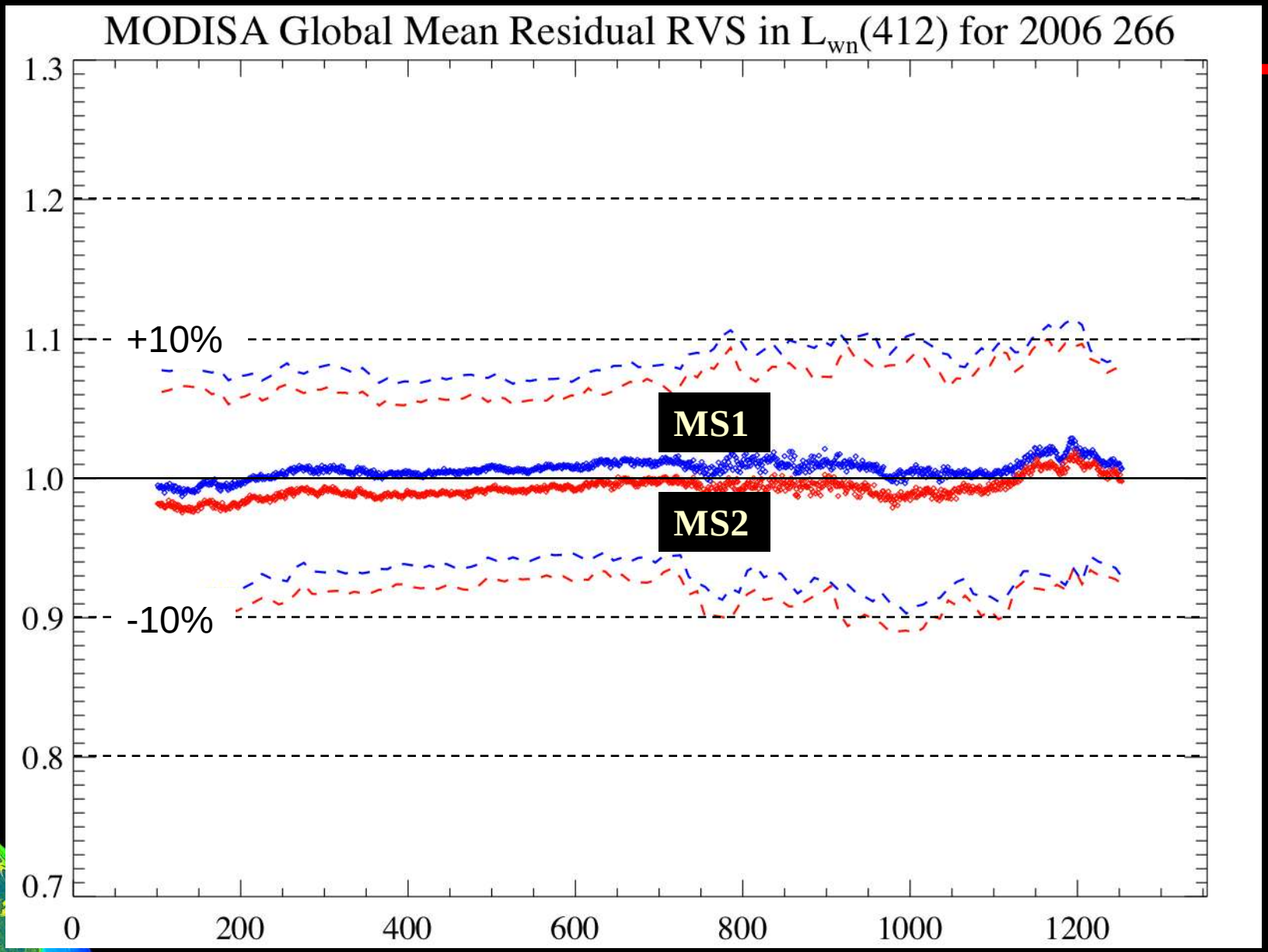


Fluorescence Yield: corrected for pigment packaging & nonphotochemical-quenching

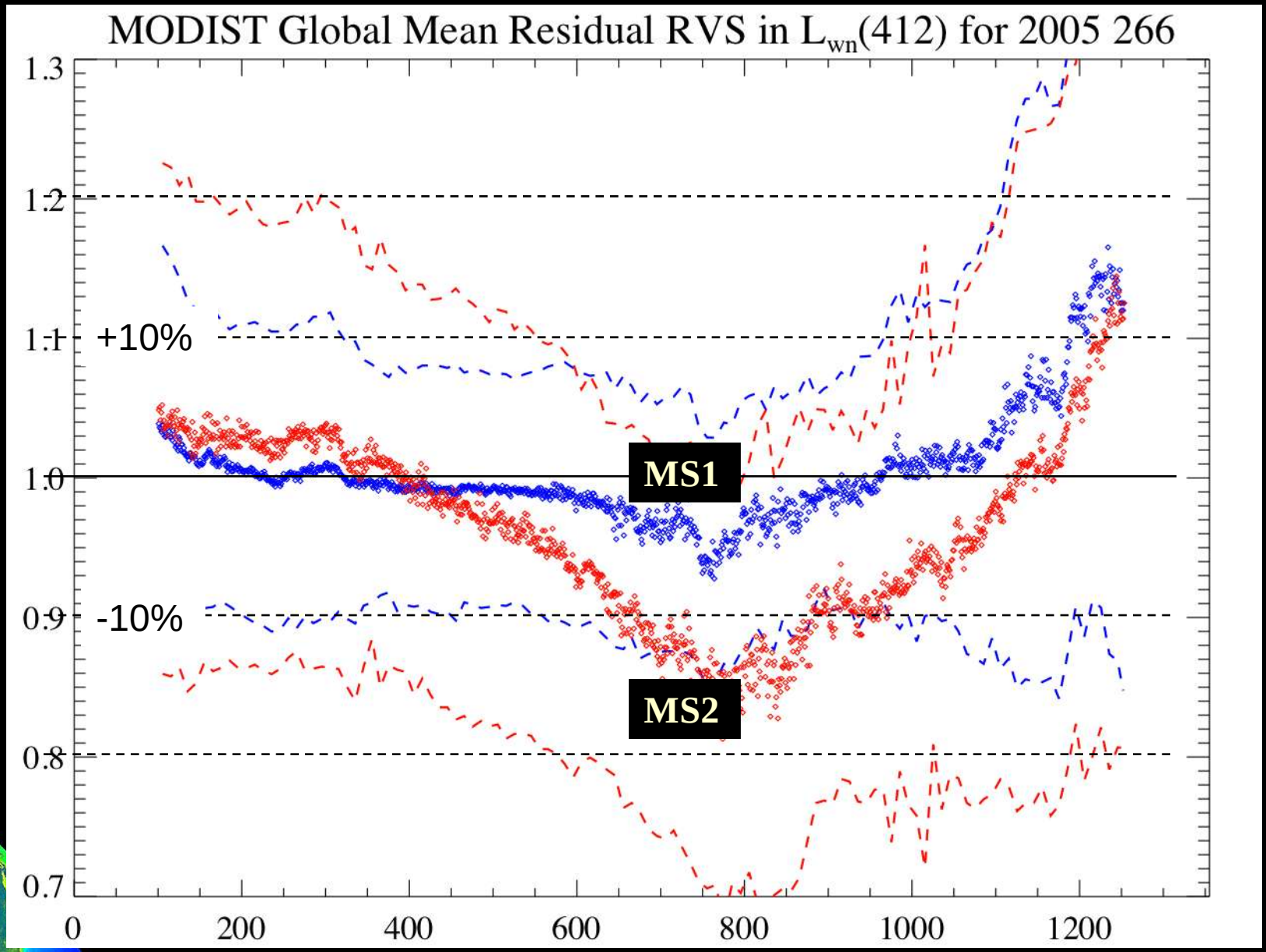
MODIS/Terra Analyses



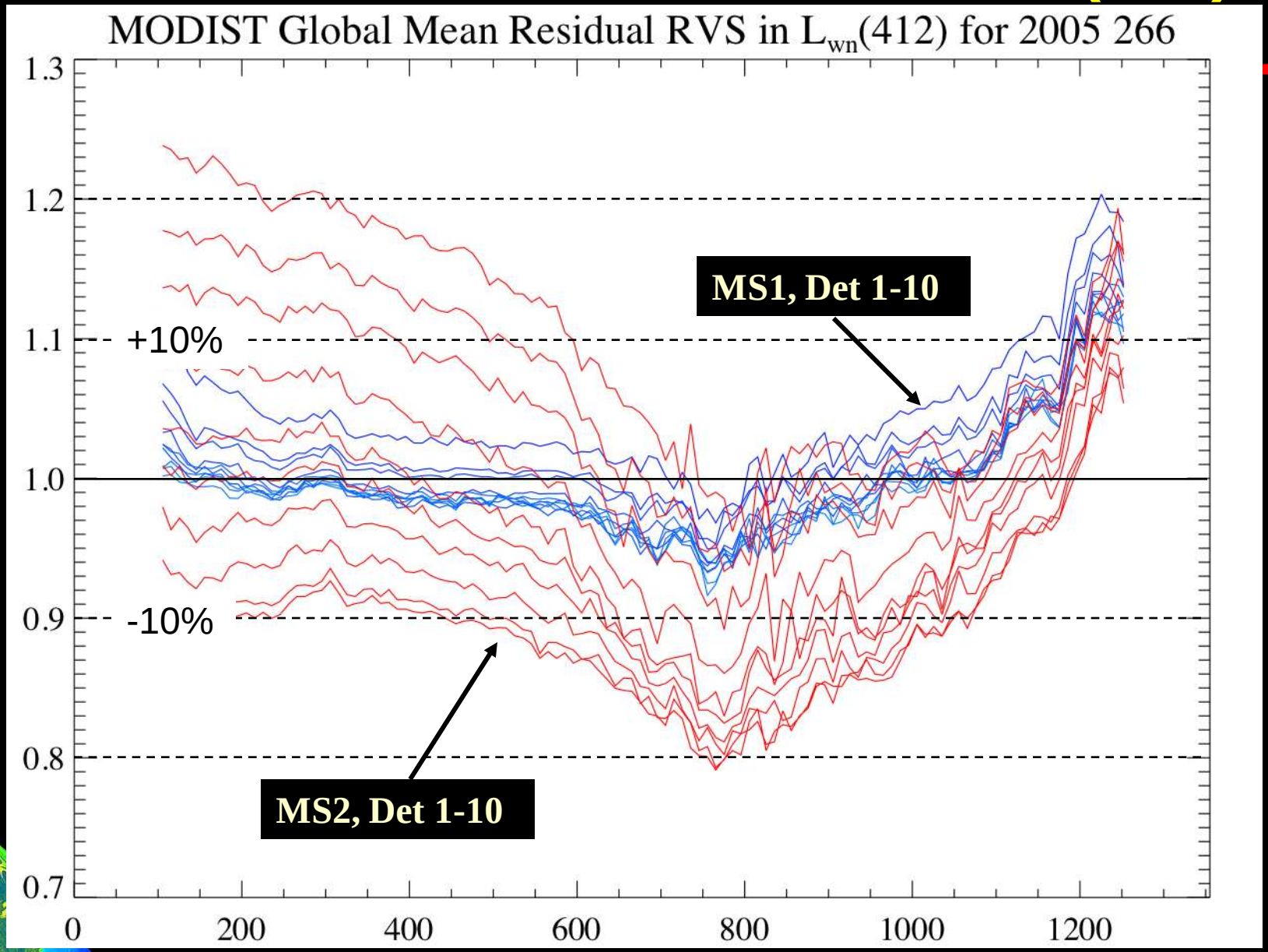
MODIS-Aqua Residual RVS - Lwn(412)



MODIS-Terra Residual RVS - Lwn(412)

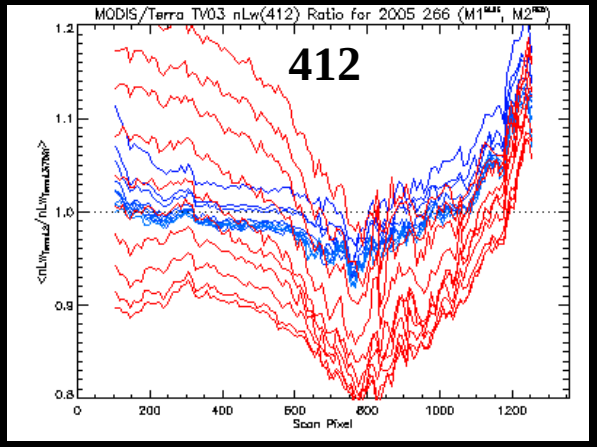


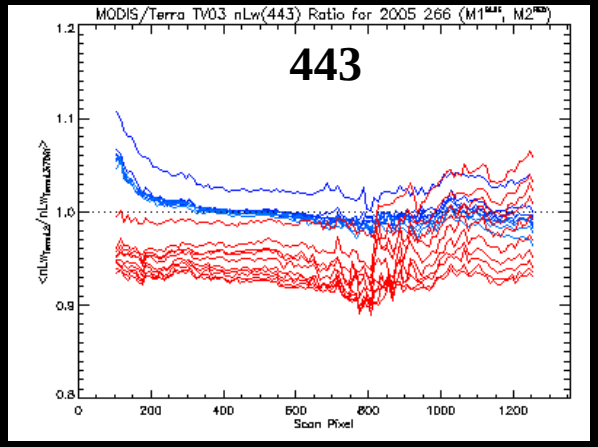
MODIS-Terra Residual RVS - Lwn(412)

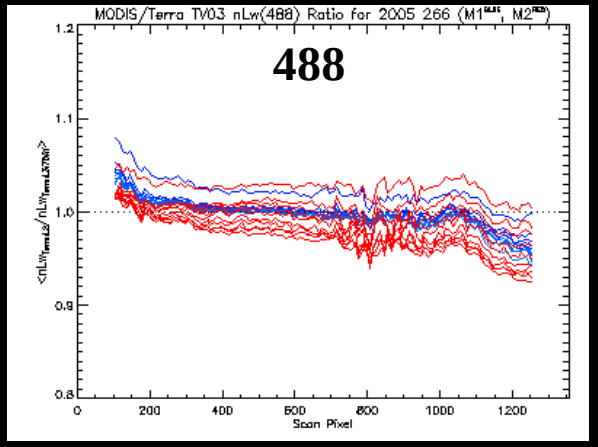


MODIS-Terra Residual RVS in nLw

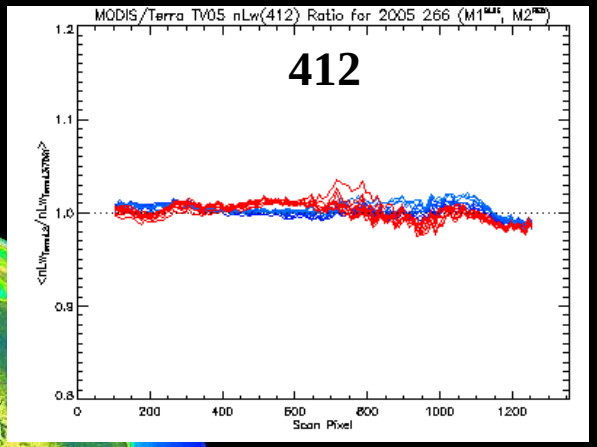
Before SeaWiFS-based Vicarious Characterization

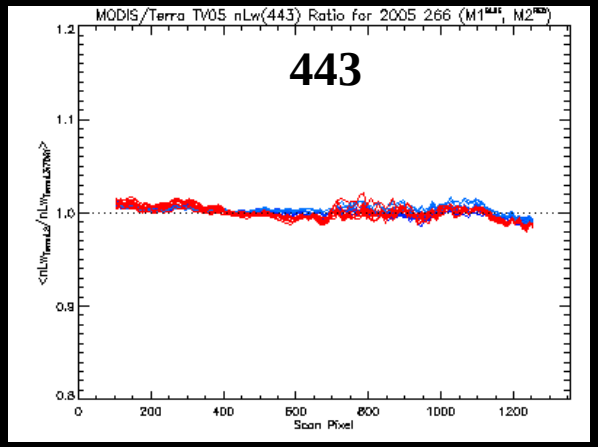


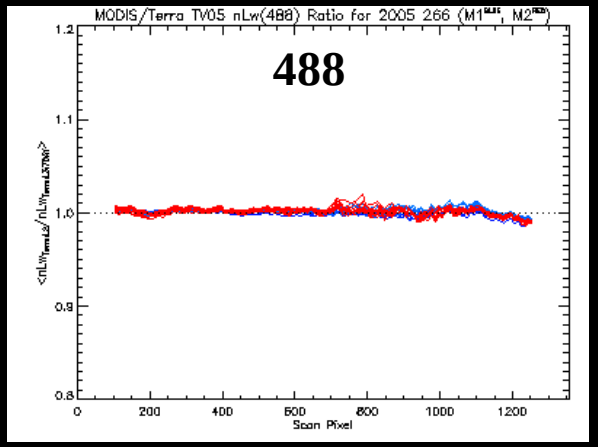




After SeaWiFS-based Vicarious Characterization







VIIRS Science Issues

List <u>not</u> in priority order:

- **VisNIR IFA Optical Crosstalk**
- **VisNIR ROIC Static Electronic Crosstalk**
- VisNIR Dynamic Crosstalk
- **LWIR/SMWIR Static Crosstalk &/or Ghosting**
- **Gain Switch Thresholds, Noise, & Linearity**
- **Stray Light Contamination**
- Reflective Band Uniformity
- Emissive Band Calibration
- **Relative Spectral Response (RSR)**
- **End-to-End (system level) Calibration**
- Sensor Stability (Temperature, SC voltage, EMI/EMC)
- **Response Versus Scan (RVS) Angle**
- **Characterization of Polarization Sensitivity**
- Ambient to T/V to On-orbit Spatial Performance

Delay in delivery of VIIRS FU-1 and launch for NPP (eight months)

Ocean community request for FU-1 IFA replacement risk assessment denied.

Items presently of particular interest to oceans.

OBPG Data Set & Mission Support Activities

- SeaWiFS
- MODIS/Aqua: Ocean Color & SST*
- MODIS/Terra: Ocean Color & SST*
- NPP/VIIRS: Ocean Color & SST
  - Sensor & EDR algorithm performance
  - **Launch in 2010**
- Aquarius (data system): **Launch in 2010**
- Historical data
  - CZCS
  - OCTS
- Sensor & mission concept development
  - Ocean Radiometer for Carbon Assessment (ORCA)

*Primarily data processing & distribution

Reprocessing of all OC data sets planned for this summer.

OceanColor Web

oceancolor.gsfc.nasa.gov

Consolidated data access, information, services and community feedback

Data Access

Data Production and Distribution Status

All systems nominal

NOTE: FTP connections must be made in PASSIVE mode

Level 1 and 2 Browser

Visually search the ocean color data archive and directly download and/or order data from single files to the entire mission. Extensive online HELP and tutorials available.

Level 3 Browser

Browse the entire Level 3 global ocean color data set for many parameters and time periods and download either JPEG images or digital data in HDF format. View time series plots of selected SeaWiFS parameters for selected regions of the globe.

Data Subscriptions

Request a subscription for Aqua data to be staged on an FTP site. You can check the status of an existing subscription. Requires a Support Services username and password.

Data by FTP

The Project maintains several FTP sites containing the most popular data products including the complete Level 3 data archive.

Giovanni

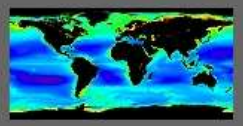
A GES DISC DAAC tool to provide users with an easy-to-use, Web-based interface for the visualization and analysis of the Earth Science data.

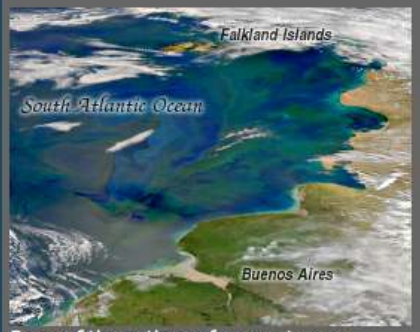
Ocean Color Web Feature

Recent topics and imagery of interest to the OceanColor community.

AQUA/SeaWiFS Merged Chlorophyll Data

The OBPG now produces a merged Level-3 chlorophyll product derived from SeaWiFS and MODIS/Aqua. The products are being created routinely for daily, 8-day, monthly, seasonal and annual time periods. Details about this new product can be found HERE





Some of the authors of a recent paper describing the timing of coccolithophore blooms in the South Atlantic Ocean off the coast of Argentina are once again at sea in this area endeavoring to improve our understanding of the phytoplankton communities that add so much color to these waters.

Click on the above 26 October 2006 MODIS image for a larger version or click here for the full-sized (98.6 megabyte) image.

Image Gallery
Ocean Color Distribution Statistics

Support Services

SeaDAS

A comprehensive image analysis package for the processing, display, analysis, and quality control of ocean color data.

SeaBASS

An archive of in situ data, both oceanographic and atmospheric, used for algorithm development and satellite validation.

Register for Support Services

Register for support services, including:

- SeaWiFS data access authorization
- Access to Near Real Time image support
- Request a new password or change email address
- Ocean Color Forum
- Ocean Color Mailing List

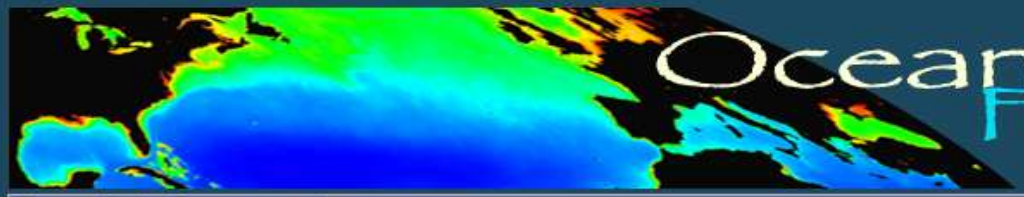
Support Services

- Overflight predictions
- Near real-time imagery and data for cruise support

Data Processing

The ODPS site contains information related to the ocean color data production system.

Employment Opportunities (IOCCG listings)



Ocean Color Forum - Welcome, gene

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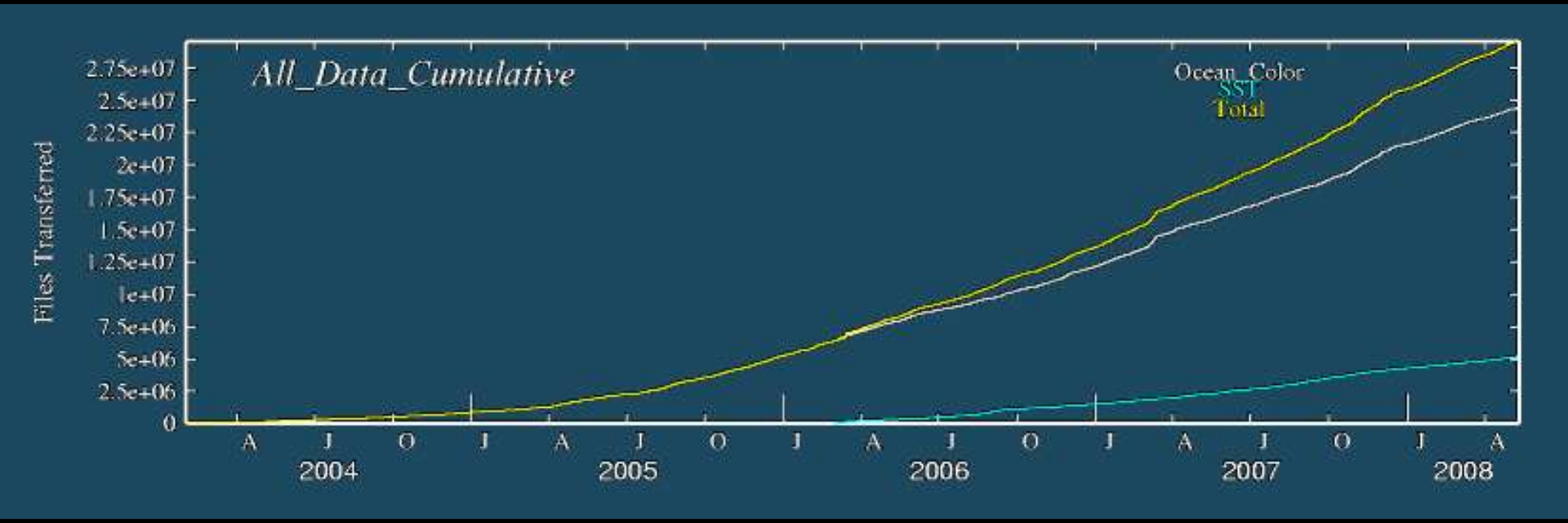
Forum

Mark Old | Mark Read | New Posts | Unread Posts | ToDo | Feeds | Info

	Announcements	Posts	Last Post
	Ocean Color Announcements	86	2008-04-08 13:03
	SeaDAS Announcements	53	2008-03-31 21:19
	Frequently Asked Questions	**Posts**	**Last Post**
	General Forum Information	8	2008-04-14 12:41
	SeaDAS FAQ	37	2008-04-21 22:58
	Data Products & Algorithms FAQ	29	2008-01-18 13:55
	Data Access FAQ	17	2008-04-03 16:10
	Products and Algorithms	**Posts**	**Last Post**
	Satellite Data Products & Algorithms	1925 (10 new)	2008-05-09 13:54
	Satellite Data Access	1104 (8 new)	2008-05-08 22:47
	Field Data	21	2007-07-23 12:19
	SeaDAS	**Posts**	**Last Post**
	SeaDAS General Questions	5718 (4 new)	2008-05-07 23:51
	MODIS Direct Broadcast Support	97	2008-03-31 21:27
	Non-SeaDAS Packages (e.g. MATLAB, ENVI, GIS, etc)	127	2008-05-02 18:06
	Ocean Color Features Discussion	**Posts**	**Last Post**
	Inherent Optical Properties Workshop	3	2008-05-06 13:36
	Madagascar Plumes	11	2007-04-26 14:02

Forum Go

Over 27 Million Files Served



MODIS Sea Surface Temperatures

Robert H. Evans & Peter J. Minnett

Meteorology & Physical Oceanography

Rosenstiel School of Marine and Atmospheric Science

University of Miami

Miami

Separate Presentation File