

# MODIS TECHNICAL TEAM MEETING

**May 11, 1995**

The MODIS Technical Team Meeting was chaired by Vince Salomonson. Present were David Herring, Dorothy Hall, Dick Weber, Steve Ungar, John Bauernschub, Ed Masuoka, Wayne Esaias, Yoram Kaufman, Locke Stuart, Bill Barnes, Harry Montgomery, Joann Harnden, and Barbara Putney.

## **1.0 SCHEDULE OF EVENTS**

June 13 - 14	MODIS EM Test Review at SBRC [tentative]
Oct. 17	MODIS Calibration Working Group at GSFC [tentative]
Oct. 18 -20	MODIS Science Team Meeting at GSFC [tentative]

## **2.0 MINUTES OF THE MEETING**

### **2.1 MODIS Project Reports**

Weber announced that the MODIS engineering model (EM) has completed thermal vacuum testing and is now out of the thermal vacuum chamber.

He stated that Project is exploring the possibility of building a dummy scan cavity here at GSFC for outdoor solar diffuser and solar diffuser stability monitor (SDSM) tests at SBRC. SBRC would provide the screen and the SDSM.

Weber noted that consideration had been given to conducting diffuser tests in Arizona, but that the flight SDSM must not be taken away from SBRC because of contamination concerns. Weber said he is working with Lee Tessmer, SBRC, Bruce Guenther and Phil Slater on these ideas.

Weber stated that an issue coming out of the EM thermal vacuum testing is the high infrared background levels observed by the EM. This means that some EM detectors were saturated before light is shined in. He noted that SBRC used the electronics to subtract some of the charge to allow them to proceed with their tests, but that this is not a desirable approach for flight data. The cold shield may have been misaligned, adding background signal. Weber said SBRC has already proposed some fixes for these problems, including possibly operating the optics at a lower temperature.

#### 2.1.1 EM Test Review

Weber announced that the dates for the EM Test Review are June 13 and 14, to be held at SBRC. Weber stated that any of the MODIS Science Team members may attend; MODIS Project will invite the appropriate people from GSFC. Anyone planning to attend should contact Weber well in advance of the review at (301) 286-5992.

## **2.2 MODIS Synthetic Data**

Ungar reported that Jack Schols, a recent addition to SDST in the simulations area, plans to spend a week in San Diego working with the staff at Photon Research Associates (PRA) to gain expertise in the use and customization of the Simulations Toolkit.

Ungar showed some examples of digital elevation synthetic data that he has recently completed. He plans to meet weekly with Al Fleig to coordinate putting together global synthetic data sets.

## **2.3 SDST Reports**

Salomonson asked Harnden if she is taking the lead role in articulating the MODIS Level 2 grid strategy. She responded affirmatively. Harnden stated that there are three or four different gridding approaches currently being considered.

Masuoka reported that Michael King, EOS Senior Project Scientist, requested that 250 m and 500 m pixels of the Level 1B product be aggregated up to 1 km to help in the production of the MOD06 cloud product. Masuoka asked if there are any other Science Team members that also need this done. If so, Masuoka observed that this might be done as part of the Level 1B processing. However, if King is the only team member that needs the data aggregated up, then the aggregation should be done as part of King's cloud product algorithm.

### **2.3.1 MODIS Quality Assurance Plan**

Regarding the Quality Assurance Plan, Masuoka reported that it is needed soon by the ESDIS Project. He said that while SDST can develop the overall framework, it is up to Science Team members to describe the QA that they will do for each product. He feels that the plan should describe what kind of QA information each investigator will produce in their products and what kinds of QA fields they need in the products that their algorithms use as input. He assumes that the Ocean Discipline Group's products will use a common QA strategy and that Robert Wolfe is putting together an approach for MODLAND, which may also be used by the Atmosphere Group. Common strategies for QA with the MODIS discipline groups will make it easier for the users of these products to understand and use the QA information in the products.

Kaufman interjected that QA outputs depend upon the data user--he feels SDST needs to simplify the QA plan for MODIS data users. Esaias added that when you process data to Level 3 and lose track of what pixels went into which product, as well as losing track of what their quality was, there is a tendency to make that product for only one use. It is difficult then to make that product for more than one use.

## **2.4 Collaboration with GLI Team**

Salomonson told the team that he is preparing to send the MODIS Specifications to the GLI (Global Imager) Team. Specifically, they requested information on the point and control capabilities on the EOS Spacecraft. Salomonson said he feels it is a good idea to collaborate with the GLI instrument team.

### **2.5 Prototyping Activities**

Hall reported on a conversation she had recently with Karen Moe, of EOSDIS. Moe stated that prototyping activities will not be covered by the Goddard DAAC this year. Hall stated that the MODIS Team may write a two-page proposal for next fiscal year for prototyping.

### **2.6 Sun Scatterometer Network**

Kaufman reported that Diane Wickland, MODIS co-program scientist, has decided to continue funding the sun scatterometer network for at least one more fiscal year. Kaufman stated that additional funding needs to be secured to establish a Pacific sun scatterometer network. In general, Kaufman said, Brent Holben is underfunded for the current network he is maintaining.

### **2.7 MODIS Ocean Group Reports**

Esaias asked if the MODIS Science Team will be asked to converge on a common binning period. He feels any decisions made regarding binning should be based on interdisciplinary input because the decisions will affect the entire team.

Esaias reported that the most recent draft of the Multi-sensor Ocean Color Cal/Val Implementation plan will be available on MODARCH tomorrow. The document, along with its attached figures and tables is available via anonymous ftp from [modarch.gsfc.nasa.gov](ftp://modarch.gsfc.nasa.gov/pub/OCEAN-COLOR/MULTI-SENSOR-WKSHP) in the following directories: /pub/OCEAN-COLOR/MULTI-SENSOR-WKSHP.

### **2.8 MAST Reports**

Herring distributed a list of Action Items from the recent MODIS Science Team Meeting that require immediate attention.

## **3.0 ACTION ITEMS**

1. *MAST*: Begin preparing the Agenda for the next MODIS Science Team Meeting--begin planning topics for 2-hour roundtable discussions and team members to moderate them. Also, allow time for a 1- to 1.5-hour Discipline Group Splinter Session on the first day.

### **3.1 Action Items Carried Forward**

2. *Dave Diner & Ed Masuoka*: MODIS and MISR need to settle on a protocol(s) to deal with Level 1 and Level 2 data sets to be passed between the two teams to produce joint products. Report at the next SWAMP Meeting.

3. *Guenther*: Report the modeled results of the 1,000K source for SBRC's integration and alignment collimator to the Technical Team. [These data are forthcoming.]
4. *Fleig and Ungar*: Interact with the group leaders to develop a MODIS data simulation plan for review at the next Science Team Meeting. [Work on this item is still in progress. Simulated data are now available via FTP, and a white paper is forthcoming from Fleig.]

## 4.0 ATTACHMENTS

### Action Items to be Completed by End of June (?)

#### From the May 1995 MODIS Science Team Meeting

1. *Bob Evans, Robert Wolfe, Dave Diner, & Bruce Barkstrom*: discuss the gridding issue at the upcoming SWAMP Meeting. The MODIS Team concluded that it is probably better to work with a fine-resolution grid (~250 m) and collapse to coarser grid than to use a nested grid.
2. *Joann Harnden, Robert Wolfe, Steve Ungar, Alan Strahler*: Explore the Level 1 to 2 Grid (forward binning) more fully. It was concluded that the Level 1 and 2 gridded products could be very helpful in some cases, but further work/thought is needed.
3. *MODLAND*: Define a multi-day period for Level 3 data and forward this information to SDST.
4. *Bill Barnes?*: Continue requesting a full swath scan of deep space until an appropriate response is made.
5. *Bruce Guenther*: Forward the latest level 1B calibration algorithm to the Science Team for review.
6. *Yoram Kaufman?*: Work w/ NASA HQ to obtain the Brazilian president's signature on the SCAR-B MOU.
7. *Chris Justice?*: Work w/ MODIS Team and NASA HQ to securing funding for the maintenance of the sun photometer network and data system for FY 1996 & '97. Also, push for interagency coordination.
8. *Dennis Clark, Paul Menzel, & Michael King*: Discuss plans for flying airborne sensors over MOBY in early 1996. Include ASTER, and other interested instrument teams, in the discussions.