

# MODIS TECHNICAL TEAM MEETING

**January 11, 1995**

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

## **1.0 SCHEDULE OF EVENTS**

<b>Dec. 31</b>	<b>Revisions of ATBDs receiving a grade of C or D due to EOS Project Science Office</b>
<b>Jan. 15</b>	<b>Semi-annual reports due to Barbara Conboy</b>
<b>Feb. 20</b>	<b>MODIS Ocean Discipline Group Meeting, in Miami, FL</b>
<b>Feb. 21 - 24</b>	<b>Workshop on international Calibration/Validation Efforts for EOS Ocean Color Sensors, in Miami, FL</b>
<b>May 2</b>	<b>MODIS Calibration Working Group (tentative)</b>
<b>May 3 - 5</b>	<b>MODIS Science Team Meeting (tentative)</b>

## **2.0 MINUTES OF THE MEETING**

### **2.1 MODIS Project Reports**

Weber reported that many SBRC personnel did not report to work on Tuesday, Jan. 10 due to flooding conditions from excessive recent rainfall in the Santa Barbara area.

Weber announced that the pre-CDR (Critical Design Review) for the EOS AM-1 spacecraft is scheduled for the week of Jan. 16. Barnes asked if the EOS Program Office is still carrying spacecraft maneuvers as an open item. Weber responded that before the issue can be resolved, Chris Scolese, EOS AM Project Manager, wants endorsement by the Science Working Group.

Regarding Al Fleig's question on the availability of SBRC's TAC (Test Analysis Controller) software at last week's Technical Team Meeting, Weber stated that the software is scheduled to arrive at GSFC on Jan. 20.

#### 2.1.1 Optical Testing on the Engineering Model

Salomonson asked if SBRC's optical testing on the engineering model (EM) will give us new insights into the ghosting, stray light, crosstalk, and scattering problems in MODIS. Barnes responded affirmatively, that the tests will let us know the magnitude of the problems. SBRC is also modeling the problem, so hopefully their tests will validate their models. He noted, however, that they are not modeling crosstalk, which is an electronic problem.

Weber added that the EM has the original aft optics without the ghosting fixes. The protoflight model (PFM) will have redesigned optics to reduce the ghosting from the levels in the EM. Montgomery stated that we will not know whether the fixes to be implemented on the PFM will actually correct the ghosting problem until they are tested. Barnes stated that it is difficult to separate the different contributing factors (ghosting, stray light, scattering, and crosstalk).

### 2.1.2 Calibration of MODIS' Fire Bands

Barnes reminded the Team that at the Dec. 22, 1994, Technical Team Meeting, Kaufman had a question regarding MODIS calibration over high-temperature fires. Barnes said SBRC has a collimator that will test the MODIS blackbody up to 1,000K, so there is no problem.

## **2.2 MCST Reports**

Montgomery reported that Bruce Guenther held a 4-day review of the MODIS calibration systems at GSC.

Salomonson interjected that he feels that there is a calibration ATBD publication milestone that must be met by MCST. Salomonson noted that an opportunity for publication in a refereed journal is at hand—the *Journal of Atmospheric and Oceanic Technology* is planning a special issue on the calibration technologies used for each EOS AM instrument. All EOS AM instrument teams except MODIS have already submitted articles.

### 2.2.1 Article on MODIS Ground Calibration Efforts

Barnes announced that Phil Slater and Stuart Biggar have finished a draft article, entitled "Suggestions for Calibration Coefficient Generation," on how to combine MODIS' ground calibration efforts with the on orbit calibration. The article will appear in the special issue of the *Journal of Atmospheric and Oceanic Technology*.

## **2.3 ISCCP and EASE Grids**

Salomonson reported that he is going to visit the National Snow and Ice Data Center (NSIDC) to discuss gridding. He said they use the EASE- grid (Equal Area SSMI-Grid) is used for data from SSMI. Salomonson asked for more information on the ISCCP (International Satellite Cloud Climatology Project) grid to take with him to his meeting at the NSIDC.

Esaias said the SeaWiFS/MODIS Ocean Discipline Group is considering using a global 1-by-1 km grid for their data. He doesn't feel that there will be a problem converting from the ISCCP to the EASE grid, if they so desire, and suggested sources of information on the ISCCP grid.

## **2.4 MODIS Electronic Bulletin Board Proposed**

Kaufman suggested establishing an electronic MODIS bulletin board to help communicate issues or items of interest to the Team. For example, a bulletin board could include a calendar of upcoming events, a list of forthcoming

MODIS-related papers or articles, information on team meetings, deadlines for ATBD revisions, etc. Salomonson suggested that the World Wide Web (WWW) MODIS Home Page might include, possibly, a bulletin board, or that the MODIS Science Team Minutes might be published there. There was general concern that such a bulletin board must be regularly updated, if residing on the WWW. The whole idea will be examined carefully before proceeding.

## **2.5 New Discipline Group Meetings**

Esaias reported that Kaufman, Chris Justice, and he met recently to discuss Science Team issues. Meetings will be held monthly and will be followed by a meeting with the Team Leader, as required.

Esaias announced that good progress is being made in organizing the ocean color multi-sensor cross validation workshop, to be held the week of Feb. 20 in Miami. He noted that Ed Masuoka, Al Fleig, Eric Vermote, Yoram Kaufman, Bruce Guenther, and Michael King have all been asked to attend to represent their respective MODIS disciplines. Also, David Herring will attend to take minutes of the meetings and help develop a multi-sensor ocean color calibration/validation plan.

Esaias reported that the first draft of the Ocean Group's Productivity Algorithm Workshop Report is now being edited.

## **2.6 MAST Reports**

Stuart distributed a list of URLs (Universal Resource Locators) for EOS resources available on the WWW (see Attachment 1). He noted that the MODIS Home Page URL is not included on the list, but will be added.

Herring announced that an article on EOS—co-authored by Michael King, Dave Diner, and himself—was published in the January 1995 issue of *Optics & Photonics News*. He distributed copies of the article (see Attachment 2), which features discussions on MODIS and MISR.

Herring briefly discussed MAST's ongoing efforts to further develop the MODIS Home Page. He asked Weber if he wants a MODIS Project Page to be linked to the Home Page. Weber will discuss the issue further with Project and report back to Herring.

Herring reported that he plans to report at the next MODIS Technical Team Meeting on the strawman Agenda for the upcoming Science Team Meeting. He reminded the Team that the format for the next meeting will change to emphasize cross-disciplinary discussions and asked the Team to forward discussion topic suggestions to him as soon as possible. Submissions should also include suggestions for discussion moderators and key discussion panel members.

Herring reported that MAST is still searching for a site to hold the next Science Team Meeting. Meeting cost has become a major concern for MAST. He solicited and received suggestions for possible sites from the Team.

### 3.0 ACTION ITEMS

1. *Herring and Stuart*: Discuss the logistics and resources required to establish an electronic MODIS Bulletin Board on the WWW, or another dissemination vehicle.

#### 3.1 Action Items Carried Forward

2. *Weber*: Work with SBRC to obtain MODIS test data.
3. *Herring*: Interact with the MODIS Team to update the *EOS Reference Handbook*. [Work on this AI is nearly complete.]
4. *MODIS Team*: Determine how, given the MODIS bowtie effect, MODIS images will be produced at launch. [This may be a suitable topic for discussion at the next Science Team Meeting.]
5. *Fleig and Ungar*: Interact with the group leaders prior to developing a MODIS data simulation plan for review at the next Science Team Meeting. [Work on this item is still in progress.]

#### 3.2 Closed Action Items

3. *Guenther and Montgomery*: Evaluate the calibration accuracy for the high temperature channels. [SBRC has a collimator that can calibration the blackbody up to 1,000K.]

### 4.0 ATTACHMENTS

**NOTE: All attachments referenced below are maintained in MODARCH and are available for distribution upon request. Please contact David Herring, MAST Technical Manager, at (301) 286-9515, Code 920, NASA/Goddard Space Flight Center, Greenbelt, MD 20771 if you desire copies of any attachments.**

1. EOSDIS-Related World Wide Web Addresses, a memo from Bill North to Locke Stuart
2. "The Earth Observing System," by Michael D. King, David D. Herring, and David J. Diner

### 5.0 RECENT or FORTHCOMING MODIS DOCUMENTS

**Note: All recent MODIS documents are maintained in MODARCH. If you would like access to or information about MODARCH, please contact the MODARCH System Administrator, Michael Heney, at (301) 286-4044 or via e-mail at [mheney@ltpsun.gsfc.nasa.gov](mailto:mheney@ltpsun.gsfc.nasa.gov).**

1. Ocean Group's Productivity Algorithm Workshop Report, by MOCEAN.

2. **Suggestions for Calibration Coefficient Generation, by Phil Slater and Stuart Biggar**
3. **The Earth Observing System, by Michael D. King, David D. Herring, and David J. Diner**
4. **MODIS Level 1B Calibration ATBD, by MCST**
5. **Lunar Viewing Opportunities from the MODIS Space Viewport, by Brij Gambhir and Jack Shumaker**