

# MODIS TECHNICAL TEAM MEETING

**February 10, 1995**

The MODIS Technical Team Meeting was chaired by Vince Salomonson. Present were Barbara Putney, Dorothy Hall, John Bauernschub, Locke Stuart, David Herring, Chris Justice, Steve Ungar, Bill Barnes, Ed Masuoka, Al Fleig, John Barker, Joann Harnden, and Wayne Esaias.

## **1.0 SCHEDULE OF EVENTS**

Feb. 13-17	PDR for EOSDIS Science Data Processing System Segment
Feb. 20	MODIS Ocean Discipline Group Meeting, in Miami, FL
Feb. 21 - 24	Workshop on international Calibration/Validation Efforts for EOS Ocean Color Sensors, in Miami, FL
Feb. 27-28	EOSDIS PDR Wrap-up of all Segments
March 1 - 2	SWAMP Meeting
March 10	MODIS Software Readiness Review
May 2	MODIS Calibration Working Group
May 3 - 5	MODIS Science Team Meeting

## **2.0 MINUTES OF THE MEETING**

### **2.1 MAST Reports**

Stuart presented a revised strawman agenda for the upcoming MODIS Science Team Meeting. It was generally agreed that on May 3 there will be a Plenary Session. On May 4 and part of May 5, the Team will meet in "roundtable" sessions to work on issues of concern. Each roundtable discussion will be led by a moderator and key, preselected panelists. Other interested persons will be allowed to "listen in" on roundtable sessions, but their participation will be kept to a minimum. This format was developed for the next Science Team Meeting to maximize the team's efficiency in working together on cross-disciplinary issues. The agenda is still being revised and will be distributed as soon as it is finalized.

### **2.2 Landsat to Launch into Same Orbit as EOS AM-1**

Stuart reported that Darryl Williams is interested in synchronizing the Landsat-7 orbit with that of EOS AM-1. Specifically, Williams would like for the Landsat platform to fly in the same path as EOS AM-1, but 30 minutes apart.

Barker asked if synchronization would impact the launch window for either platform. Stuart responded negatively.

Barker said there is a need to pay closer attention to band-to-band registration on Landsat because there may be similarities between it and MODIS.

## **2.2 MODIS Project Reports**

Bauernschub reported that Dick Weber is at SBRC conducting a detector audit. He told the team that a problem has arisen in the timing of the instrument. SBRC is now trying to locate the source of the timing problem. Barnes added that SBRC is devising a plan for systematically attacking the problem.

## **2.3 SDST Reports**

Masuoka announced that he will be on travel much of the next 3 weeks; he will attend the EOSDIS Preliminary Design Review (PDR), the Ocean Color Multi-sensor Workshop in Miami, and then the SWAMP Meeting. On March 10, he will attend the MODIS Software Readiness Review by Robert Price.

### 2.3.1 Hierarchical Data Format (HDF)

Salomonson asked if SDST plans to produce data products in HDF. Masuoka responded that originally SDST planned to develop an HDF structure for MODIS data, and to receive the Level 3 beta delivery from team members in January. Now SDST is developing a programming interface for the Science Team's algorithms which will allow them to integrate the beta code and incorporate a version of HDF that is compatible. Masuoka wants to ensure that the MODIS Team uses a consistent format for HDF so that the archive can retrieve data efficiently. So, in short, timing of beta delivery is currently an unresolved issue.

### 2.3.2 Beta Delivery Update

Salomonson asked if all Level 2 beta software has been submitted to SDST. Masuoka responded that SDST is currently missing the code for 13 of 43 parameters. Among those missing are Aerosol Size Distribution, Cloud Cover and Cloud Phase, Surface Reflectance, NDVI (Normalized Difference Vegetation Index) and MVI (MODIS Vegetation Index), and all of Steve Running's data products.

### 2.3.3 ATBD Status Update

Salomonson asked if all ATBD revisions have been submitted to SDST and made available to the team. Masuoka responded that so far 16 of 29 are available on the ltpwww server.

### 2.3.4 Level 3 Grid

Regarding the Level 3 Grid, Masuoka reported that Robert Wolfe is currently reviewing Bruce Wielicki's and Bob Evans' proposals for a MODIS grid to see if there is any common ground between the two. Masuoka stated that SDST will try to resolve the gridding issue with an approach that doesn't require a perfected Level 2 product at the time of beta delivery. {Ed, can you elaborate?}

### 2.3.5 Asynchronous Transfer Mode (ATM) Link

Masuoka reported that Justice and he met with Hugh Fuqua {sp?}, of Eros Data Center, to discuss the issues involved in sharing data via an ATM link.

According to Masuoka, if EDC has some Thematic Mapper scenes of interest to the MODIS Team, EDC will make them available to us at no charge.

### 2.3.6 Simulated Data

Salomonson asked for a status report on SDST's efforts to produce a simulated data set. Fleig responded that a schedule is now in place to produce simulated data for each element of the camera model.

### 2.3.7 Protoflight Model (PFM) Geometric Tests

Fleig asked when geometric tests for the PFM will be discussed. Barnes responded that these discussions will be held in April and May 1995, when test data for the EM are available.

Fleig said he wants to ensure that SDST has time to think about this issue prior to the Science Team Meeting. Fleig is interested in whether tests were conducted that will allow SDST to review band-to-band registration and geolocation accuracies. Specifically, SDST will want to know whether all test data are available for all angles, and precisely which measurements were taken.

Barnes pointed out that with regards to testing, SBRC will meet their specification and that's all. Characterizing the instrument beyond specifications would incur extra costs.

## **2.4 MODIS Simulated Data from NOAA**

Ungar reported that he now has MODIS simulated data, taken from a NOAA 36-channel data set for part of North America. The data were taken from the July 5 - 18, 1982, NOAA vegetation index and consist of 4-km ground truth cells. Ungar stated that the original images of TM and AVHRR were reduced to two classes—primary and secondary class pixels.

Ungar said he plans to build a library of such scenes; not for modeling, but for simulating the bowtie effect in MODIS.

## **3.0 ACTION ITEMS**

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

1. *Herring*: Invite Ricky Rood to attend the upcoming MODIS Science Team Meeting. [Invitations will be sent during the week of Feb. 12.]
2. *Herring*: Present the final Agenda and Science Team Meeting logistics at the next Technical Team Meeting. [The Agenda is still being iterated on by the Team.]
3. *Guenther*: Report the modeled results of the 1,000K source for SBRC's integration and alignment collimator to the Technical Team.
4. *Weber*: Work with SBRC to obtain MODIS test data. [Test data are forthcoming from SBRC.]

5. *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.]
6. *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.]

#### 4.0 ATTACHMENTS

**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@ltpmail.gsfc.nasa.gov](mailto:mheney@ltpmail.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