

# MODIS TECHNICAL TEAM MEETING

**December 7, 1995**

The MODIS Technical Team Meeting was chaired by Vince Salomonson. Present were Ken Anderson, Bruce Guenther, Bob Murphy, Harry Montgomery, Steve Wharton, Bill Barnes, David Herring, Dorothy Hall, Ed Masuoka, Yoram Kaufman, and Al Fleig.

## **1.0 SCHEDULE OF EVENTS**

Dec. 12	MODIS Quarterly Management Review at SBRC
Dec. 15	SDST Requirements Review for Level 1 Processing and Geolocation, at GSFC
Dec. 18	Level 1B software CDR at GSFC
Dec. 19 - 20	Calibration 1995 ATBD peer review at GSFC
Jan. 15, 1996	Semi-Annual Reports due
May 1 - 3, 1996	MODIS Science Team Meeting (tentative)
May 16 - 17, 1996	MODLAND-SDST Workshop at GSFC

## **2.0 MINUTES OF THE MEETING**

### **2.1 MODIS Project Reports**

Anderson reported that the MODIS Quarterly Management Review will be held Dec. 12 at SBRC.

Anderson stated that regarding the problems reported last week in the MODIS Protoflight Model (PFM) connectors, SBRC now thinks the 128-pin connectors are okay. SBRC feels that it can repair the 184-pin connectors, but there is some risk involved as the connectors are already attached to the boards and soldered into place.

Anderson reported that the PFM lenses are currently being rebonded to ensure that they are stable enough. This is a protective measure being taken by SBRC after some lenses on the Engineering Model (EM) came loose during vibration testing.

#### 2.1.1 MODIS Solar Reflectance Test

Salomonson asked for clarification on the issues with regard to placing MODIS in a less than clean room environment for conducting solar reflectance tests. Barnes explained that Guenther wants to make sure that the MODIS instrument maintains a Contamination Level 300 or better. Level 200 would be more desirable, but for the sensor that is not realistic. If the instrument became

contaminated beyond a Level 300, then it would rapidly become more difficult to characterize and calibrate.

### 2.1.2 Band 26 Specifications

Barnes reported that Tom Pagano, of SBRC, requested a slight relaxation of specifications on Band 26 for the MODIS Flight 1 and Flight 2 models. Kaufman consented to the request, as this band affects his data products primarily.

## **2.2 MCST Reports**

Guenther announced that the calibration group audit held at the University of Miami last week went well. There were representatives at that audit from the Ocean Discipline Group only; Guenther had hoped the other discipline groups would send representatives. MCST's audit activities resume next week.

Guenther noted that the Ocean Group feels that not enough resources are being spent on developing the MODIS reflectance product. To clarify, they felt that it is best to do both products thoroughly. However, if there are not enough resources to do both, they believe the reflectance product is more valuable and must be done.

### 2.2.1 Comparing MODIS to GOES

Montgomery reminded the team that there has been some concern that MODIS will have a problem similar to that of GOES: scan mirror reflectance inconsistencies as a function of scan angle. But as it turns out, MODIS's scan mirror will be much better than that of GOES so that ground calibration of the thermal infrared bands should still be valid and accurate.

Salomonson asked if lunar view maneuvers are still being developed. Barnes responded affirmatively. The MISR Team has issued a set of requirements and MODIS Project is working to see if MODIS can accommodate MISR's requested maneuvers. Jim Butler, EOS calibration scientist, will address this issue in a forthcoming white paper. Montgomery added that we simply cannot do thermal calibration near specification without spacecraft maneuvers.

## **2.3 SDST Reports**

Masuoka reported that he is attending the regular modeling meetings held every week at Hughes to discuss modeling Level 3 processes. Masuoka said that Hughes thought there was some savings in rolling up the granules in processing. However, they found out that ECS (EOSDIS Core System) will put a buffer between the tape archive and its saving disk in order to have flexibility in packaging the Level 2 products.

Barnes asked if the granules will get smaller. Masuoka replied negatively, they will stay at 100 scan lines.

Masuoka announced that SDST will hold an internal Requirements Review for Level 1 Processing and Geolocation on Dec. 15.

### 2.3.1 Metadata Issues

Fleig told the team that metadata is an issue being widely discussed among the EOS instrument teams. The question has been raised whether SDST can learn to provide metadata given some parameters from ECS. There are some principal investigators that care intensely about metadata. The MODIS Science Team must decide whether it is interested in metadata; and, if so, what proactive approach should be taken?

Masuoka asked Fleig to distill the questions and concerns about metadata into a list, and prepare a strawman for resolving the issues.

### 2.3.2 Version 1 Software Testing

Fleig said discussions with ECS are underway regarding testing MODIS software in the Version 1 timeframe. His original question is will we know 6 months before launch whether our software works with the ECS? He received e-mail from ESDIS stating that they are ready to discuss this question.

### 2.3.3 Beta Software Testing

Fleig stated that SDST needs input from each Science Team member generating a data product explaining what is a reasonable scenario for testing the operation of his or her product(s). In other words, what things do the team members want to test as if their algorithms were running in production mode?

Masuoka added that SDST will review the materials already submitted from each team member and if this information hasn't already been submitted, then SDST will send out e-mails requesting test operation scenarios.

Salomonson asked if a day has been defined. Masuoka responded that this issue is still unresolved. Additionally, a Level 3 global grid still has not yet been established.

## **2.4 Atmosphere Group Concerns**

Kaufman asked if discussions of options for a MODIS-light are still ongoing. He feels that every 10 years technology will improve so that NASA will get more for its money. Perhaps we should consider adding additional channels to MODIS. Salomonson responded that each Science Team member will have an opportunity to make suggestions when the MODIS Light report is distributed for review.

Another issue, according to Kaufman, is time resolution. He noted that EOS doesn't include a geostationary satellite. Perhaps EOS Project should consider integrating the GOES data set into the EOS system. Or, perhaps we should consider flying a better GOES in the future with more channels. Salomonson

reiterated the statement that whatever we do for a future MODIS, we must continue the current data set.

### **2.5 GSFC DAAC Reports**

Wharton reported that his office is currently working on proposals for the distribution of MODIS test data. He pointed out that people are asking for DAAC holdings in terms of getting access to certain parameters. Wharton hopes the DAAC will be able to share those data soon. Additionally, people want customized data subsets so that they can zoom in on data they are particularly interested in. The DAAC is striving to support this function.

Wharton announced that the next version of the Data Product Reference Handbook is out. He would like the EOS instrument teams to review this second version and return any comments to him by Dec. 15. The final version will be sent out in March 1996.

### **2.6 MAST Reports**

Herring reported that the first draft of the minutes from the informal MODIS Science Interest Group discussions is finished as is being sent around for review. Also, those handouts and attachments that were submitted electronically are already available on the MODIS Home Page. Those submitted in hardcopy format will take a little longer to process.

## **3.0 ACTION ITEMS**

1. *Fleig*: distill the questions and concerns about metadata into a list and prepare a strawman for resolving the concerns.

### **3.1 Closed Action Items**

1. *Conboy*: Obtain and distribute the latest detailed EOS Calendar of Events.