MODIS TECHNICAL TEAM MEETING

March 2, 1995

The MODIS Technical Team Meeting was chaired by Vince Salomonson. Present were Dorothy Hall, Harry Montgomery, David Herring, Rosemary Vail, John Bauernschub, Ed Masuoka, Barbara Putney, Al Fleig, Steve Ungar, Locke Stuart, Wayne Esaias, and Bill Barnes.

1.0 SCHEDULE OF EVENTS

March 20	EOS AM Quarterly Management Review for MODIS
April 5-7	MODLAND Workshop
April 11-13	EDC Land DAAC Advisory Panel
April 15	Quarterly Reports Due to Barbara Conboy
April 18-19	Science Software Integration andTest Workshop
April 28	Level 2 Software Integration Review
April 30 - May 1	CEOS Meeting -- Best Western Hotel, Lanham, MD
May 2	MODIS Calibration Working Group -- Marriott Hotel
May 3 - 5	MODIS Science Team Meeting -- Marriott Hotel, Beltsville

2.0 MINUTES OF THE MEETING

2.1 MODIS Project Reports

Bauernschub reported that SBRC is still troubleshooting the electronics problems in the MODIS engineering model (EM). He told the team that the main electronics module has been physically integrated into the mainframe. SBRC is still working on correcting the noise problem in the space viewing analog module. The timing problem has been solved. Bauernschub said that SBRC did reduce noise in some channels. SBRC hopes to begin system testing next week, and thermal vacuum testing by the end of March or early April.

Barnes told the team that funding for the NASA C130 aircraft is being attacked. If the ASTER, MISR, and MODIS teams value the C130's contributions, they should write letters to Bob Harriss, Chief Scientist for Mission to Planet Earth, to lobby for its continuance.

Salomonson asked if there exist metrics for integration and testing between the MODIS instrument and the EOS Platform teams. Barnes responded that such metrics are being devised--Ed Knight is currently working on the issue with Martin Marrietta.

Salomonson asked if progress is being made in discussions on the need for lunar views. Barnes said that a white paper on the subject is forthcoming, to which Hugh Kieffer is contributing. Costs will be included in the report. Salomonson

stated that a risk number must also be included in the report. A decision cannot be made on whether to perform a lunar view maneuver until the risk for the maneuver is given.

2.2 MCST Announcements

Montgomery announced that the Thermal Analysis Controller (TAC) is up and running at GSFC. The TAC, Montgomery explained, is the computer used to analyze SBRC's test data--it is MCST's window into SBRC's test program. Montgomery told the team that MCST now has polarization data and is preparing to run SBRC's calibration algorithm. Then, they will install the MCST algorithm, run the same data, and compare the results of the two algorithms.

Montgomery reported that MCST is preparing the first draft of its Software Requirements for Level 1B. This document will be distributed to the MODIS Science Team discipline group leaders around March 15 for review.

Montgomery reported the Calibration ATBD currently exists in viewgraph form and is now being converted to prose. When the conversion is complete the document will be made available via Mosaic on the World Wide Web (WWW).

2.3 SDST Reports

Masuoka reported that completing the MODIS Data Product Catalog is currently high on his list of things to do. This catalog will contain one-page overviews of all MODIS data products. He said that it is important for each team member to define their products at a detailed level and review the write-ups of the other MODIS products they plan to use as input in making their products.

Masuoka reported that there will be a half-day EOS AM Quarterly Mangement Review focusing on MODIS software development on March 20 from 1:30 to 5:30 p.m. in building 16 room N76.

2.3.1 Phased Archive of Data Products

The team discussed options for phasing in terms of what data products it plans to archive on day one after launch. Salomonson pointed out that it may be unrealistic to expect "operational" products immediately after launch; spacecraft checkout and in-orbit testing will probably delay "operational" products for a substantial period.

Fleig pointed out that you cannot make a product, even a research product, and not archive it. Everyone on the MODIS Science Team has told SDST that they want to make some version of their product(s) at launch. The distinction, Fleig said, is that these data are being validated; they are not validated data.

The Technical Team generally agreed that the topic of at-launch data production and archiving needs further discussion.

2.3.2 SWAMP adopts a Common set of Level 3 nested grids

Masuoka reported that SWAMP has adopted a nested ISSCP grid with resolutions of 140km, 70km, 35km, 18km, 9km, 4km, 2km, 1km, 500m and 250m for gridded Level 3 products to facilitate intercomparison between instruments. Tools will be developed by the ECS contractor for reading and writing data to the nested grids. An article will be written by the CERES and MODIS teams on the Level 3 grid in *The Earth Observer*, a GSFC-EOS newsletter.

2.3.3 MISR and MODIS data interchange grids

Dave Diner, MISR Team Leader, suggested at SWAMP that MODIS produce gridded radiances on the MISR SOM (Space Oblique Mercator) grid to faciliate data exchange between Level 2 MISR and MODIS BRDF and Albedo products. Masuoka responded that MODIS Level 2 products are not produced on a grid and that there are no plans to make a gridded product from Level 1B radiances. He suggested that MISR convert MODIS data to the SOM grid as needed for MISR processing and that MODIS would convert MISR L1b2 into the appropriate form needed for Alan Strahler's BRDF / Albedo calculations.

2.3.4 Digital Terrain Elevation Data (DTED)

Masuoka announced that a Memo of Understanding (MOU) between Defence Mapping Agency and the EROS Data Center (EDC), ASTER, MISR, and MODIS Teams is being negotiated to allow the teams access to 100m DTED data for development and testing of geolocation software and use in production of standard products in the DAACs.

2.3.4 Data Validation Issues

Barnes stated that Alan Strahler is establishing a working group to review EOS validation efforts and has asked each instrument team to designate a representative to be a member of the group. Barnes said he volunteered John Barker to represent MODIS.

Fleig announced that the Geolocation ATBD has been revised and sent back out to the MODIS Discipline Groups for peer review. Fleig plans to complete the second revision by April 15.

2.3.5 Data Processing Allocation

Salomonson observed that Bruce Barkstrom reported at SWAMP that MODIS will be allocated a substantial level of Gflops of computer processing capacity within EOSDIS. Masuoka pointed out, however, that the allocation includes MODIS' capacity for reprocessing, was based on vendor estimated GFLOPS and was the upper limit of the allocation including post-launch growth. In reviewing the minutes Masuoka noted that the number to use for at-launch was 3 GFLOPS of actual performance or 12 GFLOPS of vendor advertised performance.

2.3.6 Rapid View of Raw Data

Fleig reminded the team that EOSDIS decided earlier not to provide quick look data. Yesterday, however, they decided that they will provide rapid view of raw data. "Quick look" and "rapid view" are essentially the same thing. The difference is that providing rapid view data will be done not as a requirement, but as a "desirable" capability.

2.4 NOAA SSMI Data

Hall reported that the NOAA Special Sensor Microwave Imager (SSMI) data obtained from EDC are not very useful. Hall explained that in the images it is hard to distinguish snow from clouds and it is hard to register the data because there are no tie points. Hall is expecting EDC to send sample SSMI data registered on the EASE grid. With the sample, Hall stated, she should be able to register the data.

2.5 Ocean Group Reports

Esaias reported that the workshops in Miami were productive. The MODIS Ocean Group and the SeaWiFS Science Team both accomplished a lot. Esaias also stated that the Ocean Color Multi-Sensor Meeting got off to a good start. The group discussed ways of coordinating multiple missions, and is currently developing a plan for doing so.

3.0 ACTION ITEMS

1. *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.

3.1 Action Items Carried Forward

2. *Herring*: Present the final Agenda and Science Team Meeting logistics at the next Technical Team Meeting. [The Agenda is still being iterated 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.]

3.2 Closed Action Items

1. *Herring:* Invite Ricky Rood to attend the upcoming MODIS Science Team Meeting.