

April 7, 2004

## MODIS sensor Working Group (MsWG) Summary

**Attendance:** Bill Barnes, Bob Barnes, Stuart Biggar, Vincent Chiang, Gene Eplee, Hector Erives, Bob Evans, Gerhard Meister, Chris Moeller, Vince Salomonson, Junqiang Sun, Gary Toller, Jack Xiong, Zhengming Wan, Joe Esposito,

---

### **Scheduled Items**

#### **Item 1 General Instrument Status (JX)**

Terra: Operating nominally

The header file time stamp is missing in some occasional telemetry for a few scans and then the telemetry resets to include the correct time stamp. SBRS was contacted about this and tracking of occurrences of these dropouts is being kept by MODIOT.

Aqua: Operating nominally

Wednesday, March 31, 2004 (2004091.1511) Aqua Inclination Adjustment Maneuver

#### **Item 2 MCST L1B/LUT Issues (JX)**

##### **Aqua & Terra**

LUTs (listed individually below) have been delivered to SeaWiFs/Oceans team and/or to the Miami team.

- a. Special test Aqua LUTs V4.3.1.4S (SeaWiFs) forwarded to Miami (03/22)
- b. Special test Aqua LUTs V4.3.1.4S2 for SeaWiFs (03/25)
- c. Special test Terra LUTs V4.3.0.5M for Miami (03/30)
- d. Regular Terra m1 update V4.3.0.6 for DAAC (04/02)
- e. Special test Aqua LUTs V4.3.1.5S for SeaWiFs (04/06)

MCST is currently preparing a new smoothed Aqua m1 LUT for the SeaWiFs/Oceans team.

##### **Aqua Pre-launch Calibrated RSR**

Ocean group wishes formal full spectral (In-band plus OOB) RSRs to be defined. JX and Jim Young (SBRS) have agreed to use the existing SpMA measurements to normalize the in-band and OOB RSRs in order to remove discontinuities at the spectral range boundaries of the combined full spectral RSRs. The formal RSRs for the 1km RSB bands (except for B26) will be delivered first. Later the remaining RSB bands will be added. The difference between the Terra and Aqua OOB RSRs is that for Aqua the middle detector RSR is used for the band rather than individual detector or band average RSRs.

CM) If you see a significant difference of the departure from detector to detector between Terra and Aqua, please let me know.

JX) Sure. Aqua data was originally sent by SBRS for the center detector (SBRS D5). Jim Young said it would take a large amount of effort to retrieve RSRs for the individual detectors.

VS) Why will you not be doing B26?

JX) We will do 1km B8-B19 now but note that B26 was looked at in more depth due to the OOB cross talk leak. Oceans do not use B26.

## **Around the Table**

### **Participant:** SeaWiFs/Oceans team and JX

- JX) The North-South differences have been greatly reduced after applying a 90° change in the polarization reference and a change of the polarization magnitude.
- GM) We still need to resolve the sign of the reference angle change.
- BE) Please send down the changes you are using (Action to SeaWiFs)

### **Participant:** Vince Salomonson

- VS) David Dynner is working on comparisons between MODIS and MISR for the ocean color bands. He has found difference.
- JX) I will contact David to resolve his issues.
- SB) How large are the differences they are worried about.
- JX) They look at ocean scenes and agree reasonably well. When they use B3 to look at ocean compared to land they find 2-4% differences. MODIS ocean response is small, there may be a sensitivity issue.
- SB) They are looking at oceans with an instrument (MISR) designed to also look at clouds (large dynamic range). Their telemetry contains 12 bit responses that are reduced to 7 bits. This may affect the comparison.
- JX) MODIS when looking at the moon and comparing B3 to B9 is less than 1%. Much less than the 4% the MISR team reports. You (SB) can look at the B3 to B9 ratio for MODIS to check consistency.
  
- VS) Some users reported that B6 striping was still visible.
- JX) We only correct for the SWIR “effective” OOB leak. The striping may be due to residual non-linear electronic cross talk. We cannot remove all the electronic cross talk.

### **Participant:** Chris Moeller

- CM) We are continuing to look at TEB granule boundary destriping. Get an improvement over mid IR bands (e.g. B22-23, B27-28), no change over 11 and 12 micron (B31-32), and not much change in the long wave CO<sub>2</sub>. We are looking forward to implementing this algorithm in the collection 5 data set.  
Also, we are working with Simon Hook on Terra/ER-2 night flights over Lake Tahoe.

### **Participant:** Zhengming Wan

- ZW) We had bad weather at the field site for the last 7 days.

### **Participant:** Stuart Biggar

- SB) We also had poor weather at our field site. We believe the field spectrometer may have an ultra-violet light leak and will recalibrate it to check. Summer rail-road valley observations are being planned.