

15 August, 2001

## MODIS sensor Working Group (MsWG) Summary

**Attendance:** Bob Evans, Chris Moeller, Ed Zalewski, Gary Toller, Jack Xiong, Roger Drake, Steve Platnick, Suraiya Ahmad, Wayne Esaias, Zhengming Wan, Gwyn Fireman, Vincent Chiang, Junqiang Sun

**Correction for August 8:** Input for **Moeller** should read "...Is trying to determine whether Band 7 or Band 5 has more influence on Band 26 images".

### **Scheduled Items**

#### Side A Issues

- New LUT delivered to DAAC. The only change is a new Band 5 gain determined using Day 213 Solar Diffuser measurement. The new LUT will go into effect before the DAAC processes granules taken after the Day 212 Band 5 gain change.
- LUTs for L1B code versions 3.0.0 and 2.5.5 are available at [ftp://mcstweb/pub/LUTS\\_15Aug2001/](ftp://mcstweb/pub/LUTS_15Aug2001/). Be sure to read the file Terra\_LUT\_History.txt for a full description of the differences between the three LUTs in that directory.
- SWIR band thermal leak crosstalk parameters are being derived. At this time the SWIR band thermal leak correction is turned off in processing.
- Derivation of new electronic crosstalk parameters is expected to take another week.
- RSB m1 and mirror degradation trending shows recent Side A values compatible with Side B and early Side A values. TEB trending results will be presented next week.
- Evaluation of Band 5 gain change effects on percent saturation are on hold until L1B granules can be obtained for several orbits before and after the gain change.

#### Other Issues

- SMIR crosstalk correction results (from Side B) will be discussed offline with interested participants.  
**Action 0108-02: Send crosstalk charts to Platnick and Vermote.**
- SDSM modeling results have been sent to Jim Young; FM1 mitigation approach is to be determined.
- MCST has been reviewing FM1 spacecraft-level test plans with SBRS, and getting ready for analysis.
- A MODIS Science Team meeting will take place the last week of September, to include a calibration workshop on Sept. 24. MCST will tailor the agenda to the interests of the various disciplines, possibly emphasizing FM1 pre-flight analysis.

## ***Around the Table***

### **Drake:**

- TRW plans to close the vacuum chamber door and begin pumpdown next Tuesday for FM1 spacecraft-level tests. Two weeks later, the FPA temperature will have stabilized cold and MODIS testing will begin.
- The anomaly analysis team has concluded that the PFM Side B power supply shutdown was probably caused by a high-energy particle. PS-2 has likely suffered permanent damage, but Side B components are probably undamaged.
- One conclusion of the team is that the FM1 instrument should be warmed more so electronics resets will not be a problem when recovering from unforeseen shutdowns. Various modifications to survival heater operations are under consideration.

### **Vermote: (reported by Xiong)**

- Two Side A granules processed with recent Side A and Side B LUTs checked out; a third showed saturation in Band 5, channel 4. MCST confirmed that detector had been identified as noisy and as having out-of-family gain.
- Issue to consider: Do we still want to implement ITWK/VDET of 79/110? We are now operating at 79/190. MCST would need a two-orbit 79/110 test and to look at lunar data to determine if a VDET change would be of significant benefit.

### **Ahmad:**

- Now processing L1B Days 106 and 107.
- Level 2 processing is still on hold.
- Received new LUT; will implement before Day 212 is processed.
- The DAAC ordering pages are experiencing data order processing problems, under investigation. Until these are resolved, please order through EDG: <http://redhook.gsfc.nasa.gov/~imswww/hidden/imswelcome/>.
- MCST has priority in data orders, but will voluntarily limit orders to required calibration data.

### **Esaias:**

- Q: Has management indicated whether they will consider B-side load tests?
- A: No news has been heard.

### **Evans:**

- Received ephemeris files needed to produce Level 2 data for A/B side noise analysis. Currently processing, no results yet.
- Generating A-side granules. Daytime SST and water-leaving radiances look good with B-side crosstalk correction.
- B-side and early A-side Detector 1-10 trends are the same: about a 1% change in radiance from detector 1 to detector 10. All ocean color bands show the same detector-to-detector trends.

Moeller:

- ITWK/VDET setting of 79/190 is working very well. Should demonstrate an improvement using ITWK/VDET setting of 79/110 before making a permanent change to that setting.
- Looking at Band 5 and Band 7 contribution to Band 26 radiance. Close examination of March 31, 2001 imagery over the Midwest shows that Band 7 influence is much less than Band 5 influence, a conclusion opposite SRCA results. This apparent discrepancy will be considered in the offline meetings.

Wan:

Has not been able to collect field measurement coincident with and overflight; next opportunity is Friday.

Zalewski:

Reducing recently collected Railroad Valley data. Another vicarious calibration will be collected again next week, and at White Sands on Labor Day. Results will be presented at the Science Team Meeting.

*Compiled by G. Fireman 16 August, 2001*