

21 March, 2001

## **MODIS sensor Working Group (MsWG) Summary**

Attendance: Bob Evans, Bruce Guenther, Eddie Kearns, Eric Vermote, Jack Xiong, Jim Young, Roger Drake, Steve Platnick, Stuart Biggar, Vince Salomonson, Wayne Esaias, Gwyn Fireman

Note: Starting with this discussion summary, Action Items will be listed with a tracking number, formatted as yymm-##, where ## is the sequence number within the given year and month.

### **Scheduled Items**

**Review data reprocessing requests to MCST**

**Safari: What does MCST need to do?**

Points Clarified:

- Processing will be for August – October 2000 data
- ITWK/VDET = 110/226, with limited periods at 79/110
- No data for days 218 – 232; instrument off after formatter reset
- Band 14h gain was changed day 256 to prevent saturation on SD screen closed radiance; no thermal band impact
- Gain changes were reapplied to all reflective bands sometime after formatter reset; may see steps in data
- RSB Changes:
  - New M1, M1, R\*
- SWIR thermal leak correction applies
- values for non-functional detector recorded as avg. of adjacent detectors
- TEB Changes:
  - PC crosstalk correction improved using lunar data

The Science Team agreed that it is acceptable to use a piecewise linear degradation strategy for SAFARI reprocessing even if non-optimal (difference from optimal expected to be <<1%). Processing may begin as soon as Wednesday, March 28.

Actions on MCST:

- 0103–10: Find out how aggregate data is flagged for dead detectors
- 0103–11: Implement piecewise linear RSB degradation strategy

**Follow up discussion on RSB degradation**

The MsWG expressed concern that SDSM detector 9 has greatest temperature dependence and largest SNR, and so may not be the best detector to use for normalization.

Actions on MCST:

- 0103–12: Try exponential, quadratic fits to SD/SDSM ratio.
  - 0103–13: Produce fit ratio plots normalized to SDSM detector 7 instead of 9.
  - 0103–14: Explore why SD and Sun View averages (normalized wrt D9) increase linearly with time.
  - 0103–15: Deliver RSB degradation coeffs with mirror side dependence to Miami.
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**Around the Table**

Vermote: Thanks Miami for polarization data. Asked about Band 5 SNR; Value is specified @ Ltyp, which is only 5% of dynamic range.

Platnick:

1. Preliminary investigation of SWIR striping using SRCA data in progress.
2. Asked about Band 5 gain change
  - MCST: performed day 68; SD measurements show gain change as expected but with ~0.25% subframe difference.
  - Action on MCST: 0103–16: Provide comparison of % saturation before, during, and after Band 5 gain change.
  - SBRS: Band 5 dn/L ratio shows that current Lsat is about 121, with DCR at 700 DN. If DCR were set to 400 DN, Lsat would be around 132.

Evans: Close to having functional SST algorithm for midwave bands.

Biggar: Planning Railroad Valley field measurements.

Drake:

- Will coordinate with MODIOT on LWIR focal plane sweeps.
- Conducting lab tests on SDSM mockup with square aperture to model yaw maneuver tests.

Xiong: Requests that Jim Young send comments on degradation ratioing approach; will send him source data.

*compiled by G. Fireman, 30 March, 2001*