

19 September, 2001

## MODIS sensor Working Group (MsWG) Summary

**Attendance:** Bill Barnes, Bob Evans, Chris Moeller, Eric Vermote, Gary Toller, Roger Drake, Steve Platnick, Stuart Biggar, Suraiya Ahmad, Vince Salomonson, Wayne Esaias, Zhengming Wan, Joe Esposito, Vincent Chiang, Junqiang Sun

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### **Scheduled Items**

- **FM1 Status - Roger Drake**

All hot testing is done. Special test were done Sunday-Tuesday (09/16-18/2001) News is good. MODIS/FM1 is doing better than expected. No formatter errors have occurred.

Slip in schedule is on the order of 4 days -> complete testing in early October.

- B31/32 Gain Change:
  - Saturation temperature for side A is 341-342 °K, side B is a few degrees lower than side A.
  - B31 noise: 0.5 RMS, B32 noise: 0.8 RMS
  - Variation across the detectors of B31 and B32 is good, down from 15% to 2%.
- Baseline noise:
  - No effects of the spacecraft have been seen.
- Band 6:
  - Dead detector list for B6: 1,2,3,5,7,8,19 at 84°K (D3 is new) -> expected to be the same at 83°K
  - Band 5 is good but detector 1 is dead.
- Registration:
  - Scan direction: 5% change between warm and cold
  - Track direction: 10% change between warm and cold
  - No major shifts have been seen
- Mirror side 1 to mirror side 2 variation:
  - Currently looking at the data. Indications are that the instrument looks stable. Eg. B36 ~ 1dn
- Bill Merriman is shipping tapes of all available data to MCST this afternoon (PST)
- Band 23 currently looks stable. No further change.
- Bands 1 & 2: Currently looking at the data.
- ADC non-linearity test successful: Getting the differential non-linearity
  - Band 5 gain is set to pre-flight setting. Should be changed now to match current PFM setting. (S.P.)

- CPA resets: No greater susceptibility to resets. CPA resets do occur for abnormal configuration changes. Eg. Fast configuration change, etc.
- **PFM Formatter Resets - Roger Drake**  
 Charts (from Chad Salo 09/14/2001) show that the error rate has peaked at 3000 per hour then lowered to about 1000 per hour.  
 Roger asks if there is any effect on instrument performance? Bill replies we don't know.  
 Roger: We asked Joe Auchter if a high rate could be a problem. Several resets (3 or more) in a time frame of 100  $\mu$ s could have an impact but this rate (> 10,000 per hour) is well above the maximum rate which has been observed.  
 Temperature vs error rate indicates some correlations but would be surprised by this being a temperature effect. Data indicates there may be day/night effect, which may be due to radiation or power supply duty cycle. The average over long term oscillations implies no day/night effect but individual orbit peaks may imply a possible day/night effect.
- **Data Status Workshop – Salomonson**

Simpson at San Diego is not aware of the calibration work done at MCST. Would like to invite colleagues who are using the MODIS data to an MCST workshop to bring them up to date on the work that has been done by the MCST.

Bill will inform Jack about this on Thursday and he and I will discuss it.

### *Around the Table*

**Participant:** Chris: Test of two granules using Bside B5 coefficient for band 26 works well but some negative values occur. Comparing MODIS with ER2, the 11 and 12 micron numbers agree within a few tenths of a degree. B-side B29 remains an "outlier" 1\_K off of ER2 data. A-side 0.7\_K off of ER2 data (Z.W.)  
 MWIR: Numbers look good over ocean scene, essentially flat.

**Participant:** Bob Evans: Mirror side banding from hour to hour can go from small to large in Day 256 data  
 -> not stable. It could correlate to orbital events. (stray light, etc.). Will track spacecraft spatial changes (position). It could also vary day side/night side. Some groups of granules where all scans are ok and other groups where some scans are poor -> Possibly something impacts the electronics. Mirror side correlated noise (MSCN) mixed in with offsets could impact the electronics. This effect had not been seen on B-side in the ocean color bands.

**Participant:** Z. Wan: Analysis of Aside for this year and last year: Cannot rule out high cirrus clouds for difference between old/new Aside

**Participant:** Eric: Band 26 correction is working well. The correction should be used for cirrus clouds. MCST has received and processed some of the thermal leak test data and is awaiting the remainder.

**Participant:** Vince: MODIS is interpreting White House policy to mean that no image of New York, Washington, and Afghanistan are to be disseminated for days after/on 09/11/2001 but it is okay to release data

**Participant:** Suraiya: Reprocessing status: on Day 2000309; Forward processing status: on Day 2001257. August 19-23 and September 2-7 calibration data has been delivered to MCST.

**Participant:** K. Chiang  
Trending of L1A Band data looks stable on side A.

**Participant:** Wayne: sees stripes in Band 9 image sent by Bob that appear different than previously in some channels.

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Compiled by J. A. Esposito 19 September, 2001