November 7, 2001

MODIS sensor Working Group (MsWG) Summary

Attendance: Bill Barnes Niazeng Che, Roger Drake, Bob Evans, Chris Moeller, Steve Platnick, Vince Salomonson, Junqiang Sun, Gary Toller, Eric Vermote, Jim Young, Zhengming Wan, Joe Esposito

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Scheduled Items

- **FM1 Status (Roger Drake)**

  Completed FM1 CPA baseline test with the three board set. Nominal performance at room temperature.

  Low temperature tests with flight software are in progress to see if resets occur at the board level.

  (BB) What is the projected schedule?

  (RD) Full instrument must arrive at TRW by 12/13-14/2001 unless changes are to be made.

- **FM1 Xtalk Assessment [SpMA vs. SRCA] (Roger Drake)**

  SBRS SpMA test: mirror stationary (aligned to a given band), illumination with spectral light centered on band and on/off by a chopper. For a single SWMIR Band both spectral and radiometric data is recorded.

  TRW SRCA test: slit with broadband light and phase delay, mirror rotates. TRW SRCA data is analyzed at SBRS.

  SpMA Xtalk dn is scaled for comparison with SRCA. The Xtalk seen from SpMA test is smaller than that from SRCA. The analysis suggests that more than 80% of the Xtalk is not from electronic Xtalk implying it is from optical Xtalk.

  TV3 IAC with 0.1 IFOV slit stepped across the focal plane is under analysis. Preliminary results are that the optical Xtalk response is comparable to the SRCA values. This indicates that the Xtalk is almost purely optical Xtalk (5.3 μm leak).

  (EV) Which channel is used in the table you have provided?

  (RD) The detector with maximum Xtalk response is used.

  (SP) Could you use SpMA test runs with the slit wide open for a wide field test to compare with the SRCA?

  (RD) Would be good for comparison but we don't have the data. With the acquired data, the SRCA is consistent with the IAC implying minimal electronic Xtalk

  (BB) Minimal subframe differences also indicate very little electronic Xtalk.

  (EV) Would like to see plots which show the subframe difference for FM1 and PFM (NC to send plots)

SD/SDSM calibration activities (Bill Barnes)

Currently SD/SDSM calibrations are one per week. Plan one per two weeks starting from either December 1 or January 1. This was expected in order to reduce SD degradation and increase the life of the solar diffuser door (SDD). The maximum number of SDD opening (motor usage) is a fixed value and thus motor usage is a consumable quantity.

(VS) What about the doors and ports during the Leonid meteorite shower?

(BB) They will be left open

Revisions to minutes of 10-24-2001

In ***Around the Table*** Chris Moeller states: ".... to be temperature dependence in B27 det 6 PO and B29."

It should state:".... to be scene temperature dependence in B27 and B29 detector striping. Detector normalization in B27 det 6 PO likely will not be effective due to high noise level of this channel."

Submitted by CM

Around the Table

Participant: Bob Evans

Miami is working on recalibration of the 3 time segments. Analyzing data for several Bside dates in order to calibrate with Hawaii insitu data. Hawaii granules look good so far.

(VS) Wayne noted that Ocean Productivity trends are now in line with SeaWifs for day 2001090.

Participant: Eric Vermote

The code change for the Earth-Sun distance correction is presently being performed.

Preliminary result for granules in the range 2001090 to 2001150 indicates improvement.

Participant: Bill Barnes

An L1B algorithm session is being planned for the ST meeting. Plan to go over the RSB and TEB algorithm with special attention to changes since last presented. The presentation is planned for Monday morning of the ST meetings with the MCST calibration workshop in the afternoon. If needed, a change of day or additional time can be set for Thursday.

Participant: Vince Salomonson

Validation of L1 is up to the science team. We will inform the ST that the L1 product is considered validated at the ST meeting. If no objections within one week then L1 is validated.

What is the outcome of Wayne Esaias' request for 0.1% precision?

(BB) The 0.1% precision is not feasible for the Ocean Color Bands due to basic SNR level considerations.

Participant: Gary Toller

We have updated the QA look up tables for L1B for noisy and out-of-family detectors on Aside. The uncertainty for the aggregate product does not look at the QA flags except for dead detectors.

(SP) The net uncertainty of the aggregate is larger for noisy or out-of-family detectors are included. What is done if the detector is too noisy?

(GT) Only detectors flagged as dead are not used in the aggregate uncertainty; otherwise the uncertainty indices of the detector at the highest spatial resolution are used to obtain the uncertainty in the aggregate.

(SP) The noise vs Ltyp over clouds, land, Water, etc., should be analyzed.

Participant: Chris Moeller

Wisconsin is reviewing global data sets for TEB detector normalization. Apparent scene temperature dependence exists in the striping for these bands.

Wisconsin is also determining a TEB mirror side normalization for use in our own science products.

The striping correction to B26 using B5 is being tested in the MODIS Cloud Mask. We're optimistic that it will work well.

Participant: Zhengming Wan

We have placed an October 18 data order. We are also comparing old and new Aside data.