March 19, 2003

MODIS sensor Working Group (MsWG) Summary

Attendance: Bill Barnes, Bob Barnes, Vincent Chiang, Bob Evans, Timothy Gubbels, Gerhard Meister, Chris Moeller, Vince Salomonson, Junqiang Sun, Gary Toller, Jack Xiong, Zhengming Wan, Joe Esposito

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Scheduled Items

Item 1 Instrument Status

JX) Aqua and Terra are both working fine. No anomalies except for the SRCA 10W lamp issue previously identified in Aqua MODIS.
All four-10W lamps have been tested and we are waiting for the data. The data is slow in coming from the DAAC due to MCST using "sneaker net" while waiting for 100Mb hard lines to be installed at new site.

Item 2 SD Calibration Issue

JX) The Terra 2-day calibration, continuous SD door open, screen closed, for 30 orbits, has been analyzed. This test is to determine the variation of m1 from orbit to orbit and impact of the SD screen. The variation of m1 for B8 is 0.6-0.7% where B8 shows the largest variation of all bands. B10 has one detector with variation as large as B8. All other bands m1 variation is smaller. The variation looks like it is band (wavelength) dependent.

BE) A 0.5% variation produces a 5% variation in the water leaving radiance product. We should look into data filtering to reduce this effect.

JX) MCST currently use measured m1. Terra LUT is delivered bi-weekly, Aqua m1 measured weekly, LUT delivered monthly or sooner if needed.

BE) This strategy should be continued.

Item 2 Aqua Calibration and L1B validation Issues

SWIR

JX) Like Terra, the Aqua SWIR OOB correction is using B28. MCST will look into other sender bands. MCST will resolve this with Chris Moeller and Eric later today

SMIR

JX) MCST is also looking at some of the MWIR bands in order to find the best sender for de-striping B23, 24, and 25. Striping is seen in the 1km product. Wisconsin uses 5 by 5 km images, thus the striping in 1 by 1 km images is greatly reduced in the 5 by 5 km aggregated images.

JX) MCST will freeze the Aqua L1B algorithm and code on May 4. No changes will be made after April 24 considering the SDST testing time. This will help some science product's validation by the first year anniversary of opening the Aqua NADIR.

BE) Miami uses B23 pixel-by-pixel. There is a tendency for a couple of detectors to float around the neighbors.

JX) The striping is only seen in uniform scenes. Detector 10 (or D1) tends to stand out.

GT) The de-striping algorithm will increase the linear processing time by about 5%.

Item 3 DSM

VS) Are we now ready for the DSM 1 week from today?

JX) Yes, DSM on March 26 to get RVS for MWIR and LWIR. MCST will use "sneaker net" to get the data from the DAAC and finish a first round data quality check within 5 days. Due to Wednesday (weekly) DAAC downtime MCST will coordinate with the DAAC to coordinate DSM and downtime.

Around the Table

Participant: Bob Barnes – DSM SeaWifs orbit is being loaded as we speak.

Participant: Chris Moeller – Just back from field campaign. We have collected a large amount of data. We have evaluated the Terra B26 results and find them to look good. Will work on finding the best sender for Aqua and derive coefficients. Will meet the April 24 deadline.

Participant: Timothy Gubbels – MCST is almost finished adjusting to the new facility.
The "sneaker net" is working well.
Computer room cooling problem is currently under repair.
The high-speed line will not be ready by the DSM but "sneaker net" will be adequate for data transfer by tape from the DAAC.

Participant: Bob Evans – Miami calibration of the visible bands: best sequence ever. See evidence of mirror side dependent polarization. We can look at the detector-by-detector polarization as a function of AOI. Detectors 1 and 2 are high by ~ 2% in the water leaving radiance. Impact is big for product users.

Next MsWG meeting April 2, 2003