February 20, 2002

MODIS sensor Working Group (MsWG) Summary

Attendance: Suraiya Ahmad, Bill Barnes, Vincent Chang, Roger Drake, Wayne Esaias, Bob Evans, Eddie Kearns, Chris Moeller, Junqiang Sun, Gary Toller, Jack Xiong, Eric Vermote, Zhengming Wan, Joe Esposito

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Scheduled Items

Item 1. Discussion on Terra Data Reprocess

(JX) MCST has delivered first versions of L1B code and pre-launch LUTs for Aqua. Updates of the code and LUTs for Aqua and Terra have been discussed. Oceans/Miami input is needed before some actions can be taken.
At present Terra is stable.

(BB) Bob Evans must be shown the flattened m1 trend to discuss what to do about the m1 LUT after the flattening.

(WE) What are the planned changes?

(BB) MCST will send new m1 LUTs to Miami for discussion about what to do for the reprocessing

(JX) Code changes will only be needed for time dependent RVS and B26 stripping.

(WE) when is the due date for Terra reprocessing.

(BB) Uncertain, possibly August or September for October reprocessing to start.

(JX) MCST will need approximately 3 weeks to make and test the code changes and LUTs.

(BB) Oceans should be done by October. Expectation is to do code and LUT changes in July for both forward and re-processing.

(JX) LIB for Aqua was delivered with new LUT structure to correct for saturation during BB warmup/cooldown cycle.

(WE) We will need to address the LUT structure change between Terra and Aqua in our analysis code. We will need a new set of LUTs.
Another issue to address is the EOS requirement that code exists for taking L1A into L1B, into L2, etc. Do we need two versions of L1B product? We will need to produce L2 from both versions of L1B product.

(JX) Oceans creates their LUTs based on the current L1B. We can deliver the changes in 3 weeks but the new L1B may not be consistent with Oceans.

(WE) We may have to ask for a waiver of the EOS requirement.

(BE) Our results are consistent in both the Northern and Southern Hemispheres during November 2001 – January 2002. However, the Southern Hemisphere is not consistent during June 2001. Can we get better polarization information from MCST or SBRS?

(JX) MCST cannot derive polarization changes from the data we have. We could try to tweak the polarization value but it would be better if Miami does the tweaking of polarization in its correction LUT. We see RVS changes as a function of time and AOI.

(BB) RVS changes are not in the dichroic. Polarization goes down with wavelength.

(EV) I have though that wavelength change is due to the dichroic.

(RD) Scan mirror changes cause this.
(EV) Atmospheric polarization is changed as a function of angle
(BE) Polarization is different in the June Southern Hemisphere. Modeling requires knowledge of the changes in the instrument characteristics. The polarization values we currently use are fixed (from pre-launch measurement).
(JX) Run L1B with new RVS correction and look at the same place at two epochs 1 year apart.
(BE) January 2001 and 2002 are all consistent but the problem exists during June in the Southern Hemisphere.
(BB) We need a rough schedule in order to discuss the changes to the L1B code and LUTs.
(JX) MCST will set a rough timeline. We have one more chance to update L1B code and LUTs for Aqua. We also need to discuss changes for forward processing of Terra.

Item 2. Update on Band 5 effect on Band 26

(CM) The handout chart shows an update of B5 on B26. The underlying message of the 3 days plotted in the chart is that they are all in family. Adding more date may increase the spread thus increasing the uncertainty.

My approach is to take the average, ~0.03 ± 0.004.

Does MCST or SBRS recall which MWIR band has the most Xtalk influence on B26.

(JX) Did you look at Aside and other channels?
(BB) Why don't you use a linear fit to the chart data rather than an average since it changes with water vapor?
(RD) 79/110 (Bside) has no indication of significant MWIR Xtalk into B26. Did you look at B7? It would be hard to assign any meaning to Xtalk from the MWIR but B7 shows a major response.
(CM) The out-of-band shoulder in B26 over B5 guided the analysis.
(BE) Have you looked at (frame?) lag to see if this is a spatial effect.
(CM) You would readily see this in the bands but ghost images of coastlines do not show up.

Around the Table

Participant: Zhengming Wan – For reprocessing, make an arrangement for QA to check the products.
(BB) Produce new L1B before going fully into forward and reprocessing.
(JX) Have the DAAC hold this data separate for limited use.
(WE) MCST should QA L1B.

Participant: Eric Vermote - We should agree on the change to B3 in m_1.
(BB) We will make a recommendation to Vince tomorrow to change the m1 LUT for B3.
Action – MCST will create and deliver new m_1 LUTs with only the B3 change.

Participant: Bill Barnes – Next MsWG meeting on 02/27/2002 but no meeting on 03/06/2002.

Participant: Jack Xiong - MCST will put together a rough schedule for L1B code and LUT changes.
Action to MCST