

**NOTES FROM THE FIFTH FORMAL COORDINATED ENERGY AND WATER-CYCLE OBSERVATIONS
PROJECT (CEOP) TELECONFERENCE SATELLITE DATA ISSUES HELD ON
30 JULY 2009
FIRST DRAFT, 31 July 2009**

1. INTRODUCTION

The Fifth CEOP Satellite Data Teleconference took place on Thursday 30 July 2009 at 13:00 UTC. This call had been rescheduled from 12 May 2009. The issues that were brought up and discussed on the subject conference call included:

- (i) The 3rd CEOP Annual Meeting in Melbourne, Australia, 19 – 21 August 2009;
- (ii) Status of the CEOP satellite data archive and the CEOP Satellite Data Gateway;
- (iii) Centralized Data Archive;
- (iv) Satellite data providers' reports.

Participants

The participants were:

Toshio Koike	Japan, CEOP Co-Chair & Satellite Data WG Chair
Kazuo Umezawa	Japan, JAXA
Kenji Taniguchi	Japan, JAXA
Gang Ye	USA, NASA MODIS Team
Bruce Vollmer	USA, NASA AIRS data
Michael Theobald	USA, NASA AIRS Team
Steve Williams	USA, CEOP Data Management
Sam Benedict	USA; CEOP International Coordination Function

Drs Christopher Lynnes (Representing NASA AIRS team), John Bates (Representing NOAA NESDIS), Satoko Miura (Representing JAXA), and Yoshiyuki Kudo (JAXA/RESTEC); Einar-Arne Herland (Representing ESA Earth Science Division), Michael Teague (Representing, NASA MODIS Team), and Ed Kearns (Representing NOAA NESDIS) were not available for this call.

2. NEXT CONFERENCE CALL

The timing of this call negated the need to hold the **6th CEOP International Satellite Data Teleconference**, which was proposed to take place on **Wednesday 12 August 2009**. The next call which, will be designated the **7th CEOP International Satellite Data Teleconference will be held on Wednesday 11 November 2007 as scheduled (see revised, Rev-4, call calendar attached)**. **Benedict** has the **action (A1)** to inform the group of the details of the next call nearer to the time of the call and to coordinate the origination of the call through the WebEx service.

3. SATELLITE DATA GROUP GENERAL ISSUES

3.1 Opening

Benedict welcomed everyone on the call and introduced the call agenda. Koike also welcomed the group and emphasized again the importance of the Satellite data to the overall success of CEOP.

3.2 The 3rd CEOP Annual Meeting in Melbourne, Australia, 19 – 21 August 2009

Benedict reiterated that the next, **3rd CEOP Annual Meeting** would be held in Melbourne, Australia, 19 – 21 August 2009. Invitations have been sent out to the entire CEOP Community. The venue for the CEOP meeting will be the Head Office of the Bureau of Meteorology (BoM) at Melbourne, Australia. **All the participants on the call** were encouraged to put the meeting dates on their calendars and to advise the CEOP Coordination Office at the University of Tokyo in care of Ms. Akiko Goda (goda@hydra.t.utokyo.ac.jp) with copies to Sam Benedict (sam.benedict@gewex.org) and the International GEWEX Project Office (gewex@gewex.org) of their plans to attend by **1 August 2009**. The participants were reminded that the CEOP meeting would precede the GEWEX and iLEAPS science conferences.

3.3 CEOP Satellite Data Gateway

(3.3a) The CEOP Satellite Data Gateway has been opened since June 2008 and since that time, registered have been able to download satellite data available in the CEOP Satellite Data Archive administered jointly by the University of Tokyo and JAXA. The University of Tokyo IT team is responsible for the database management and making the data accessible through the Gateway. The Gateway is available at: <http://monsoon.t.u-tokyo.ac.jp/ceop2/satellite/> and the link has been added to the main CEOP Data Management Page (<http://www.eol.ucar.edu/projects/ceop/dm/>).

(3.3b) The group was reminded by **Taniguchi** that the system would include the data of all the CEOP 52 reference site when these are available and also the data provided through the GEOSS Asian Water Cycle Initiative (AWCI) that includes streamflow information of a number of basins in Asian countries that participate in the AWCI activities. These data will be fully available for the CEOP community and other users as agreed by the AWCI country representatives. CEOP satellite as well as in-situ and model output data are also accessible through the CEOP Centralized Data Integration System that offers multiple tools for data visualization and analysis. The System is available at: http://monsoon.t.u-tokyo.ac.jp/ceop-dc/ceop-dc_top.htm.

3.4 Reference site data

Williams reminded the group that reference site data submission has been reactivated and data from both old and new in-situ data sites have been already received at the NCAR archive. All the data are available through download at the Data Management website at: http://data.eol.ucar.edu/master_list/?project=CEOP/EOP-3/4.

3.5 JAXA CEOS/WGISS Test Facilities (WTF) for CEOP (Yoshiyuki Kudo – in writing)

The group was advised that no change had been made in regard to the WTF since the last call. No new data, including any newly submitted satellite data, will be accessible through the JAXA system until specific menus and links are added to the system. New funding for this effort are still being sought.

4. THE SATELLITE DATA ARCHIVE STATUS AND AGENCY REPORTS

4.1 The CEOP Satellite Data Archive Status

(4.1a) Data currently available through the CEOP Satellite Data Gateway in the three subsets (global, monsoon regions, and reference sites) are available at the Gateway site at: <http://monsoon.t.u-tokyo.ac.jp/ceop2/satellite/docs/eop1.pdf> for the CEOP 1 EOP-1 datasets and <http://monsoon.t.u-tokyo.ac.jp/ceop2/satellite/docs/eop3-4.pdf> for the CEOP 1 EOP-3, EOP-4 datasets.

(4.1b) **Koike and the UT group** have ongoing **action (A2)** to periodically prepare “data metrics” describing the available data and including statistics of usage and make this available to users/providers.

4.2 JAXA report (Umezawa/Taniguchi)

(4.2a) Generation of the 2008 JAXA's products including: Aqua/AMSR-E, TRMM/PR, TMI, DMSP/SSM-I re-sampled on three scales (52 reference sites, 5 monsoon areas and entire area of the Earth) and ALOS products on the 15 prioritized areas including 11 CEOP sites and 4 Asian Water Cycle Initiative (AWCI) river basins (<http://monsoon.t.u-tokyo.ac.jp/AWCI/>), has continued to progress. One problem in terms of data continuity was the TRMM PR instrument anomaly on May 29, 2009 that caused a data outage. **Umezawa** noted that JAXA is following the issue and in the meantime is continuing to process data from other instruments in accordance with the priority list provided by **Koike**.

(4.2b) In addition, JAXA continues work on generation of Terra/MODIS products for CEOP Phase 1 (EOP-4) in cooperation with the NASA MODIS team. **Umezawa** reported that 80% of all of the Phase 1 EOP-4 period data generated by the NASA MODIS team had been successfully downloaded by JAXA, and that 70% of that had been processed by JAXA for CEOP.

(4.2c) **Umezawa** emphasized that the with the success so far in downloading the data from NASA and processing it for CEOP it had been shown that the process of running all of the processes of download, re-sampling and re-formatting in parallel was succeeding and that, as had been determined earlier, there was no need to use a physical disc for data transfer.

4.3 NASA MODIS team report (Gang Ye)

(4.3 a) **Teague** was not on the call but **Gang Ye**, acknowledged the excellent work the JAXA team has accomplished in preparation for the MODIS data transfer and processing into the CEOP format datasets. **Gang Ye** reported that the NASA Team had completed production of the first period (2003/10/1-2004/12/31) in the first week of June 2009 and had just begun generation of the second period (2002/10/1-2003/9/30). Actual transfer of data under the current scheme of data processing and transfer to JAXA and the production by JAXA of the CEOP priority products had been shown to be sufficient to meet all expectations and concurred that there had not been a need to supplement the process by handling of physical discs.

(4.3b) The point was made that with the start of the second period of processing and with data still remaining on the discs at NASA from the first period processing that has not been downloaded yet there is a possibility that disc space at NASA could be limited as processing of period 2 progresses. **Umezawa** accepted **action A3** to advise NASA, by mid-August, as to how much data has been downloaded and how processing is progressing so that NASA can perform a disc cleanup, in due course, to ensure sufficient space is available going forward with the period 2 processing.

(4.3c) A question was raised concerning the lat/lon coordinates for CEOP Reference Site Mt. Bigelow. It was determined that there is a difference between lat/lon information of Mt. Bigelow provided by UCAR and University of Tokyo (UT) as follows:

- (i) UCAR: 22 Mt. Bigelow 32.420N 110.730W
- (ii) UT: 22 Mount Bigelow 37.120N 110.930W.

Williams confirmed that the UCAR location is correct and that there was no clear explanation for the discrepancy between the two points. None-the-less it was determined to be too significant a difference to be left without being corrected. A subsequent investigation and email discussion led to the following conclusion with regard to processing of data for Mt Bigelow:

NASA processing should proceed as it has with the UCAR site location having been used in the processing of the first period (2003/10/1-2004/12/31) and also with the UCAR location now set in for the processing of the second period (2002/10/1-2003/9/30). **JAXA/Umezawa** will have to work with **UT/Koike** to decide if they wish to make any adjustment in terms of subsets that they may have processed using the UT location.

It was subsequently reconfirmed that:

1. NASA has processed period 1 and will continue processing period 2 with the correct UCAR location for MT Bigelow. All the NASA data are, therefore, correct.
2. NASA should continue with its processing using the UCAR location for Mt Bigelow and NOT be required to do any reprocessing of any of the Mt Bigelow data.
3. JAXA and UT will decide how to deal with the data already processed by JAXA using the UT location for Mt Bigelow.

4.4 NASA AIRS team report (Mike Theobald)

Theobald had previously noted that the work on level 2 products had been completed and that generation of the monsoon subsets was planned to start soon. A series of issues had come up that needed further clarification before work on the monsoon subsets could begin. The issues were sent by email and it was hoped a response could be provided by Koike before mid-June. Due to other matters a response to these points was delayed until the time of the call.

During the call the statements were discussed and replies from Koike were noted. The outcome of this discussion is that the NASA AIRS Team intends to proceed with the CEOP AIRS monsoonal region subset algorithm based on the following following implementation decisions;

1. It was agreed that a geographic grid of half-degree resolution will be applied.
2. One file for each calendar day in the CEOP period for each specified monsoonal region will be produced. However, the AIRS team will supply metadata using the existing specification unless **Koike/Umezawa**

complete **action (A4)** to provide an updated metadata specification, which is preferable to the existing scheme. If the updated specification is not made available by 7 August 2009, it is likely, the AIRS Team will proceed with the existing specification, and back-fill the metadata once the new specification is provided.

3. Multiple observations on the same day of the same grid point will be averaged together using a simple average.

4. It was tentatively agreed that only those parameters from the the AIRS L2 standard product and the AIRS L2 support product will be included. The L1 radiances will specifically NOT be included in this subset. Koike noted that it was important to revisit this decision in the future. **Koike/Theobold** have **action (A4a)** to discuss this matter further at the time of the next conference call.

4.5 NOAA report (Ed Kearns)

Kearns was not available for this call, however, it had earlier been established that they were anticipating further specification of data requirements from CEOP and thus they were not currently undertaking any steps in the CEOP data preparation. Nevertheless, they plan to be involved in the process and participate in these calls.

Koike had earlier noted that he was aware of the need to review the NOAA data requirements and to communicate with the NOAA team possibilities of the NOAA data provision. **Koike** and **the UT group** will undertake this **action (A5)** in the near future.

4.6 ESA report (Einar-Arne Herland)

Herland was not on the call, however he had, previously, reiterated in writing that the CEOP requirements submitted to ESA had been approved and processed into the required formats and the data was available for competent person(s) to order and receive them. The detailed information on where and how to order the data has already been sent to Toshio Koike. ESA also provides a number of tools for further processing the data and the UT/JAXA group should contact the ESA data "helpdesk" about the capabilities of these tools regarding the metadata generation. **UT group and Koike** has **action (A6)** to try to order the data and check the ESA tools according to the instructions given in the said email.

In this context, **Koike** mentioned that a new expert on the SAR data had joined the UT group and he would be responsible for the above action to download the required ENVISAT data from the ESA site as soon as possible.

5. OTHER CEOP ISSUES

5.1 Meetings

(5.1a) The next **3rd CEOP Annual Meeting** will be held in **Melbourne, Australia, from 19 through 21 August 2009** in conjunction with the GEWEX/iLEAPS science conferences that will take place in Melbourne, 24 – 28 August 2009 (http://www.gewex.org/2009gewex_ileaps_conf.html). Further details of the CEOP meeting will be provided in due course.

(5.1b) The 6th International Scientific Conference on GEWEX and the 2nd iLEAPS Science Conference will be held in Melbourne, Australia, 24 – 28 August 2009. The conference website is available at: http://www.gewex.org/2009gewex_ileaps_conf.html. Abstracts for all sessions can be submitted on-line through the meeting website. The final extended deadline for abstract submission has passed.

6. CLOSING

Koike acknowledged the participants for attending the calls and providing their valuable contributions, comments and suggestions. The call was adjourned.