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RA II Pilot Project Newsletter

DEVELOPING SUPPORT FOR NATIONAL METEOROLOGICAL AND
HYDROLOGICAL SERVICES IN SATELLITE DATA, PRODUCTS AND TRAINING

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2011 JICA Training Program at JMA

The Group Training Course for Reinforcement of Meteorological Services has been provided every year at the Japan Meteorological Agency (JMA) with the support of the Japan International Cooperation Agency (JICA) since 1973. A total of 285 people from 72 countries had participated in the course as of 2010.

(<http://www.jica.go.jp/english/index.html>)

This year, the training was provided from September 20 to December 16 with the participation of eight people from seven countries: Uganda, Lao People's Democratic

Republic, Samoa, Jordan, Mozambique, Kenya and Myanmar.

The training program mainly consisted of lectures related to meteorological services such as observation techniques, the basis of numerical weather prediction and its application, methods for tropical cyclone analysis, and climatology considerations including climate analysis and forecasting.

The training program also includes lectures related to meteorological satellite observation and its applications, and a one-week session for this was held from October 13 at the Meteorological Satellite Center (MSC) located in Kiyose City, Tokyo. The participants were

initially given an outline of meteorological satellite services and space-based remote sensing techniques. As the trainees were not familiar with satellites, they first learned basic related concepts such as the difference between geostationary and polar-orbiting satellites and studied the various types of sensors that observe the earth. Then, lectures were given on numerical techniques for satellite data analysis, including the determination of cloud types, rain rates and sea surface temperatures. The classes prompted a variety of questions and active discussions, with participants showing particular interest in the use of images of split window channels (10.8 microns and 12.0 microns) to estimate the distributions of aerosols/ice clouds and the volume of low-level water vapor.

During the session at MSC, the trainees

went on a one-day field trip to Hatoyama Town in Saitama, where there are two ground stations: the Climate Data Assimilation System (CDAS) station that operates JMA's MTSAT meteorological satellites, and the Earth Observation Center (EOC) that operates the earth-observing satellites of the Japan Aerospace Exploration Agency (JAXA). They visited the operation rooms serving these satellites and viewed the large antennas used to communicate with them.

After the session at MSC, there was a two-week period of lectures at JMA Headquarters on manual techniques for the analysis of MTSAT images. During this time, participants learned how to analyze clouds, atmospheric phenomena and tropical cyclones from satellite images.

(Yoshihiko TAHARA, JMA)

Students with the Director-General of MSC and other MSC staffs



Lectures at MSC



International Training Program of Analysis of COMS data in 2012

Analysis of COMS data, the training

program at KMA, will be provided from September 2 to September 22, 2012 with 20 participations from the Asian-Pacific 14 countries within the coverage of COMS

observation.

The objectives of the training program are to introduce COMS (Communication, Ocean and Meteorological Satellite) program, observation schedule and data distribution policy and to enhance understanding on the meteorological satellite products for better meteorological analysis and forecasting.

The contents of the training program will consist of several sections; 1) Lectures, 2) Practical Exercise, Group Discussion and Presentation, 3) Presentation of country reports and discussion and 4) Field trip and study tours. Most sections will be conducted in NMSC(National Meteorological Satellite Center) included in KMA, located in Gwanhyewon-myeon, Jincheon-gun, Chungcheongbuk-do, Republic of Korea.

In the lectures, participants will be learned about the characteristics of COMS MI (Meteorological Imager) and observation principle, outline of the COMS data operating system and dissemination strategy, satellite image analysis and its application for daily weather forecasting, center of typhoon and intensity analysis using satellite data and application of satellite data for various parts such as climate, hydrology and energy.

For improving abilities of analysis and applications, Practical Exercise, Group Discussion and Presentation for application of satellite image for weather forecasting and center of typhoon analysis by Dvorak method will be provided to participants.

There are also current status and development plan of satellite data acquisition and analysis in their NMSs (National Meteorological Services) and discussion on the cooperation among the participant countries in presentation of country reports and discussion section.

During the training program, participants will have field trip and study tours to KMA affiliates and Satellite-related organizations.

The 39th Coordination Group of Meteorological Satellite (CGMS) meeting

The 39th meeting of the Coordination Group for Meteorological Satellites (CGMS-39) was held in St. Petersburg, Russia, hosted by ROSHYDROMET/ROSCOSMOS from 3 to 7 October, 2011. In attendance were representatives from operators of geostationary and polar orbiting meteorological satellites and from the World Meteorological Organization (WMO), including CMA/CNSA (China), KMA (Korea), IMD/ISRO (India), JMA/JAXA (Japan), and ROSHYDROMET (Russia) from the area of WMO Regional Association II (RA-II).

The objective of the meeting was to exchange information on meteorological satellites over a wide area. First, the attendees were divided into four working group sessions (WGs) to discuss technical and special issues; WG-I for telecommunications, WG-II for satellite products, WG-III for contingency planning and WG-IV for global data dissemination. After the working-group discussion, a plenary session was held to review the current status and future plans for satellite systems, reports from the working groups and user support activities. Below are summaries of the individual reports related to meteorological satellite users in Asia.

KMA introduced its first geostationary satellite, COMS, which carries two earth-observing payloads: Meteorological Imager with a visible and 4 infrared channels, and Ocean Color Imager with 8 visible channels. COMS was successfully launched in June 2010 and declared operational since 1 April, 2011 at 128.2°E. KMA is producing 16 meteorological parameters including cloud analysis, fog, Asian dust, atmospheric motion vector, and ocean variables from raw data in support of various applications such as nowcasting, numerical weather prediction models, climate monitoring and so on. Among them, 10 COMS meteorological products are now distributing to users, and the remaining 6 products (e.g. land surface temperature, sea ice/snow cover) will be distributed by the end of 2011. CGMS

members welcomed the addition of a wide range of geostationary products from KMA COMS to the suite of products available to users.

JMA introduced contributions to the WMO CBS Severe Weather Forecasting Demonstration Project (SWFDP) in RA-II and the Severe Weather Forecasting and Disaster Risk Reduction Demonstration Project (SWFDDP) in RA-V. JMA provides real-time MTSAT imagery for various areas of RA-II via the JMA/MSM website. This allows individuals and national weather service providers in these regions to see satellite images of cloud directly on the Internet without the need for a particular image-viewing system. In addition to this image service, JMA/MSM began posting a new satellite product called Imagery with Heavy Rainfall Potential Areas on its website in March 2011 to support the SWFDDP in RA-V. The product shows areas analyzed to be raining heavily over 20 mm/hr from MTSAT imagery. JMA/MSM will provide the similar product to support the SWFDP in RA-II.

ROSHYDROMET/ROSCOSMOS reported on the new geostationary meteorological satellite "Electro-L1" that was successfully launched on 20 January 2011. The satellite is about to finish its commissioning phase at 76°E. WMO welcomed this new programme and congratulated ROSC/ROSH on a successful launch. WMO expressed the hope that this programme would soon be integrated into the global space-based inter-calibration system (GSICS).

On behalf of the RA-II Pilot Project, JMA and KMA reported on the accomplishments of the second phase, and also details of the action plan for the third phase.

At the close of CGMS-39, CGMS was pleased to accept an offer from WMO to host CGMS-40 in Switzerland next year, 5-9 November 2012.

(<http://www.cgms-info.org/publications>)

(Toshiyuki KURINO, JMA and Dohyeong KIM, KMA)



The Second Asia/Oceania Meteorological Satellite Users' Conference

The Second Asia/Oceania Meteorological

Satellite Users' Conference (AOMSUC-2) was held in Tokyo, Japan, from 6 – 9 December, 2011. The event was hosted and sponsored by the Japan Meteorological Agency (JMA), and

was co-sponsored by the China Meteorological Administration (CMA), the Korea Meteorological Administration (KMA), the Australian Bureau of Meteorology (BOM), the Group on Earth Observations (GEO) and the World Meteorological Organization (WMO). The conference was opened by Mr. Jin Matsubara, Japan's Senior Vice-Minister of Land, Infrastructure, Transport and Tourism (MLIT), followed by remarks from Dr. Mitsuhiro Hatori, Director-General of JMA and the conference host, and words from the co-sponsors. All opening speakers recognized the importance of the conference, the need for cooperation at all levels and the potential for improved satellite data utilization, and all expressed high expectations for the outcomes of the event. This four-day gathering was attended by over 160 people, including students, scientists, users and satellite operators.

The conference featured a mix of high-quality oral and poster presentations, and covered topics including current/future operational and research satellite observational capabilities relevant to the Asia-Oceania region, data sharing and utilization, science activities and applications, and education/training opportunities. The content and clarity of the event's scientific presentations promoted useful discussion and furthered information exchange based on the following eight sessions:

- Session 1: Current and future satellite programs and systems
- Session 2: Facilitation of satellite data access and utilization
- Session 3: Satellite data application for atmosphere, ocean and land
- Session 4: Earth observation satellite
- Session 5: The GEOSS Asian Water Cycle Initiative (AWCI)
- Session 6: Severe weather and precipitation
- Session 7: Application of satellite data to numerical weather prediction
- Session 8: Climate monitoring from space

The presentations given highlighted the

value of satellite products in daily forecasting, in disaster mitigation activities such as those relating to heavy rainfall, in assessing the characteristics of oceans and land, in tracking greenhouse gases and other atmospheric constituents, and in environmental monitoring with respect to ecosystem sustainability and management. Especially large fluctuations of the water cycle in the Asia-Oceania region threaten the security of water supply as well as endangering the reliability of services relating to food, energy, health and the ecosystem. To address these issues, nations first need to share comprehensive and accurate data and information, then implement various measures to deal with threats and prepare for disasters before they strike. With timely support, society can make sound decisions and establish safety networks beyond national borders. The conference participants agreed to maintain end-to-end cooperation and to continue with the challenge of monitoring weather and climate variability/change using satellite-based products.

The satellite operators present appreciated the user feedback given on related activities and plans (such as those to provide opportunities for regional coordination in data and product exchange) and on improvements in the field of satellite data utilization. It was recognized that these improvements stemmed from careful characterization and calibration of sensor data, timely adjustment of the algorithms used to develop products, and validation of the accuracy of such products. The conference highlighted that sharing information on current satellite systems and future plans was essential for: 1) realizing the vast potential of the meteorological and environmental satellites serving the Asia-Oceania region; 2) providing essential information to better satisfy diverse needs with focus on a variety of societal benefit areas; and 3) establishing pathways for coordinated application-related activities throughout the Asia-Oceania region. This further emphasized the importance of user feedback for satellite operators regarding their services, regional

coordination, and exchanges of ideas to improve satellite data utilization.

KMA's offer to host the third Asia/Oceania Meteorological Satellite Users' Conference in the fall of 2012 as joint with the second Coordination Group meeting of RA II Pilot Project was favorably received. The attendees also appreciated BOM's efforts in planning to host the fourth conference in 2013, which

would underline the importance of the relationship between satellite operators in the region and users in Oceania.

<http://mscweb.kishou.go.jp/second/index.htm>

(Keiko YAMAMOTO, JMA)



RA II Pilot Project Web Questionnaire

In the First Coordinating Group Meeting for the Pilot Project that was held in Tokyo, it is agreed to conduct a survey in the form of a questionnaire as in the third-phase action plan of the RA II Pilot Project.

This questionnaire is distributed to all RA-II Members as extracting complementary information after WMO's Questionnaire. It is focused on being able to monitor the availability and use of existing satellite data and products, and to identify any associated difficulties or limiting factors in RA-II Members. The responses to the questionnaire are analyzed by RA-II Pilot Project Coordinating Group in cooperation with the WMO Space Programme Office. The results are used to initiate activities aimed at maximizing access

to and use of existing satellite data in RA-II Members.

The questionnaire has four sections covering the following subjects:

- Section 1: The way in which satellite data and products are accessed by your Organization;
- Section 2: The way in which satellite data and products are used in your Organization;
- Section 3: Geophysical parameters retrieved from satellite data that are important or potentially important for your Organization;
- Section 4: The involvement of your Organization in education and training in satellite meteorology or oceanography.

The survey will be done on the WMO RA II Pilot Project web pages (<http://www.wmo.int/himawari/login.php>) with a computerized answer sheet by sharing of questionnaire results in the RA II Members through the WMO web pages.

For conducting the WMO RA II Pilot Project Questionnaire, please provide JMA with information about the contact point for the questionnaire survey so that I can send the exact user ID and password for the

Questionnaire system to the exact contact person.

For people who already have the user ID and password, please answer the questionnaire.

The result will be opened in April 2012, and your prompt reply will be very much appreciated. Thank you for your cooperation.

(Keiko YAMAMOTO, JMA)

RA II Pilot Project Web Questionnaire

URL of RA II Pilot Project Web Questionnaire page is as follows.

<http://www.wmo.int/himawari/login.php>

You can also visit there from RA II Pilot Project webpage.

http://www.wmo.int/pages/prog/sat/ra2pilotproject-intro_en.php

How to answer the questionnaire? -> Please see the followings

Step 1: Enter the credentials

When you visit the Questionnaire page, there pops up certification window.

<- It says
"Please enter UID and Password"

Please enter the following Credential UID and Password.

Credential UID: **form**

Credential Password: **himawmo**

Step 2: Enter your UID and Password

After you enter the Credential UID and Password, there shows up login window of the Questionnaire system. Please enter your UID and Password and click "Login" button. (your UID and Password are also attached with this file)

Questionnaire on the availability and use of satellite data and products

User id

Password

Please enter your UID and Password and click "Login" button.

Step 2: Enter your UID and Password

When you enter the Questionnaire system, "Attention" window pops up. Please remember to push "Logout" button on upper right when you go out the Questionnaire system. If you go out of the system without clicking "Logout" button, you cannot login again for 15 minutes.

The screenshot shows the main interface of the Questionnaire system. At the top left, it says "Welcome! RA". At the top right, it shows "Login Date : 2011/10/27 02:41:00 UTC" and a "Logout" button. Below this is a "Menu" section with a blue header bar. The menu items are:

- Inquiries of data usage from Himawari satellite. Please click "Entry" button to answer Inquiries. (with an "Entry" button)
- Please click "Confirm" button to check your answer. (with a "Confirm" button)
- Please click "Result" button to confirm the current r... (with a "Result" button)

An "Attention" dialog box is overlaid on the interface, containing the text: "Attention: Logout before closing the window or Your UserID is locked up to 15 min" and an "OK" button.

Step 3: Click "Enter" to answer the Questionnaire

On the Menu window,
please click "Entry" button to answer the Questionnaire.

Welcome! RA Login Date : 2011/10/27 02:41:00 UTC [Logout](#)

Menu

Inquiries of data usage from Himawari satellite Please click "Entry" button to answer Inquiries.	Entry
Please click "Confirm" button to check your answer.	Confirm
Please click "Result" button to confirm the current result of Inquiries.	Result

Please click "Entry" button
to answer the Questionnaire

* If you already submitted your answers successfully,
please click "Confirm" button to check or re-answer.

Step 4: Answer the Questionnaire and click "Submit"

There are 17 Questions. It's necessary to answer Q1.
Please answer as many questions as you can and click "Submit" button.
You can use "Temporary save" button to save your answer to take some time.
"Reset" button make answers what they were when you last saved.

Welcome! RA Login Date : 2011/10/27 02:41:00 UTC [Logout](#)

[Back to Menu](#)

Please answer following inquiries.

It is mandatory to answer the inquiries with "*".

INTRODUCTORY NOTE

This questionnaire is distributed to all WMO Members every two years. Its purpose is to monitor the availability and use of existing satellite data and products and to identify any associated difficulties or limiting factors. In addition it invites WMO Members to identify needs for new or improved satellite data and products. This edition of the questionnaire covers the two-year period 2008-2009. The responses to the questionnaire are analyzed by the WMO Space Programme Office and the results are used to initiate activities aimed at maximising access to and use of existing satellite data and also to improve the quality of the data.

Other(s) (Name of meteorological organization)

[Temporary save](#)

You can find
"Temporary save" buttons
on each question.

Q17

Please use this section to describe any references to Other(s) in the questions above and also to comment on the questionnaire itself and provide any suggestions on how it could be improved.

[Temporary save](#)

"Submit"
"Temporary save"
"Reset"
buttons are on the bottom.

[Submit](#)

[Temporary save](#)

[Reset](#)

Step 5: Check your answers and click "Submit"

After clicking "Submit" button, confirmation window shows up.
Please check your answers and click "Submit" button one more time.
If you want to change your answers, click "Alter" button.

SECTION 1 – ACCESS TO SATELLITE DATA AND PRODUCTS

Q1*
Does your Organization routinely obtain satellite data and products from any source?

Yes

If you answered Yes to Question 1 please jump directly to Question 4.
If you answered No to Question 1 please proceed with Question 2.

Q2

through website of meteorological organization
others

Q17
Please use this section to describe any references to Other(s) in the questions above
and also to comment on the questionnaire itself and provide any suggestions on how it could be improved.

Now testing...
"Ma'am, I'm Adam."

**Please check your answers
and click "Submit" button.**

Step 6: Done!

You will be out from the Questionnaire system automatically
if the submission is successfully done.
After the submission, you can login and change your answers anytime you want
by clicking "Confirm" button on Menu window.
You can also check other members' answers by clicking "Result" button.

**If you automatically logout
and see this login window,
submission was successful.**

Questionnaire on the availability and use of satellite data and products

User id

Password

Welcome! RA Login Date : 2011/10/28 04:39:57 UTC

Menu

Inquiries of data usage from Himawari satellite
Please click "Entry" button to answer inquiries.

Please click "Confirm" button to check your answer.

Please click "Result" button to confirm the current result of inquiries.

**After the submission,
"confirm" button on Menu window
is available to change answers**

**Click "Result" button
and you can see
other members' answers**

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From the Co-editors

The co-editors invite contributions to the newsletter. Although it is assumed that the major contributors for the time being will be satellite operators, we also welcome articles (short contributions of less than a page are fine) from all RA II Members, regardless of whether they are registered with the WMO Secretariat as members of the Pilot Project Coordinating Group. We look forward to receiving your contributions to the newsletter.

(Toshiyuki KURINO, JMA, and Dohyeong KIM, KMA)

RA II Pilot Project Mailing Lists

Two mailing lists for discussion on the pilot project will soon be set up using the Google Groups service, and will be implemented either through the Google Groups web interface or by e-mail.

One list is for Pilot Project Coordinating Group members who are already registered with the WMO's Regional Office for Asia and the South-West Pacific.

Group name: ra2pp_sat_cg

Group home page:

http://groups.google.com/group/ra2pp_sat_cg

Group email address:

ra2pp_sat_cg@googlegroups.com

The other list is for RA II Members in general.

Group name: ra2pp_sat

Group home page:

http://groups.google.com/group/ra2pp_sat

Group email address:

ra2pp_sat@googlegroups.com

RA II Pilot Project Home Page

<http://www.wmo.int/pages/prog/sat/RAII-PilotProject.html>

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