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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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First Coordinating Group Meeting for the RA II Pilot Project

The First Coordinating Group Meeting for the Regional Association II (RA II) Pilot Project to Develop Support for National Meteorological and Hydrological Services (NMHSs) in Satellite Data, Products and Training (RA2PPSat) was held from 21 to 22 February, 2011 at the Headquarters of the Japan Meteorological Agency (JMA) in Tokyo, Japan. In attendance were representatives from six meteorological satellite operators and from eight satellite data user NMHSs and from the World Meteorological Organization (WMO) Space Programme and WMO Regional Office for Asia. The objective of the meeting was to exchange information on meteorological satellites over WMO RA-II, and to contribute to

capacity-building as a kind of self-help effort for NMHSs in RA II, and also to help developing countries in particular to gain access to and fully utilize existing satellite products for the mitigation and prevention of disasters. It is included:

- 1) identification for the requirements of NMHSs in developing countries (and in particular least-developed countries in the region) regarding satellite imagery, data and products in support of their weather services, including forecasts and warnings;
- 2) development of a brief and effective action plan, taking into account relevant existing activities, for consortium members and recipient members;
- 3) facilitation of communication among centers wishing to develop the required products and recipient members;

- 4) organization of assistance to recipient members in accessing and utilizing available satellite imagery, data and products as a first priority through training; and
- 5) monitoring of project progress.

Participants confirmed on this meeting that the Pilot Project Newsletter published in the first-phase was highly useful and beneficial for satellite products users as the meaning to share the information on satellite imagery, data, products (including application products) and training information. They also agreed to summarize their presentations on this meeting and publish them in the Pilot Project Newsletter of the second-phase as special edition.

The meeting noted the RA II Pilot Project questionnaire will be implemented by JMA in the second-phase to know the status of utilization of the satellite data among NMHSs Members on RA II. Participants agreed with the following plan that JMA will implement the questionnaire through the WMO Space Programme website's RA II Pilot Project web pages after settling the items on the questionnaire with Coordinating Group

Members.

Participants agreed that JMA intend to produce a one-stop portal site for the Pilot Project web pages on the WMO Space Programme in order to facilitate access to satellite data and products. The pages will include information on access to satellite imagery, data, products and training information. The information is provided by satellite operators, and will be checked by Coordinating Group Members to see if it meets their needs.

Participants shared the understanding that cultivating the human resources is of the essence to drive the utilization on satellite products. They confirmed to share the information on materials and schedule of trainings or events through the websites of satellite operators. They also agreed to keep considering the alignment of Pilot Project activities with VLab activities, which WMO and Coordination Group for Meteorological Satellites are promoting.

(Keiko YAMAMOTO, JMA)



(Back row) Chi Kuen So, Do Thanh Tuan, Humaid Al Badi, Muhammad Aslam, Sergey Klimov, Ali Shareef, Volker Gaertner, Oleg Pokrovsky, Ashok Kumar Sharma, Fang Xiang, Tomoo Ohno, Hakaru Mizuno (Front row) Satoshi Harada, Tsutomu Jomura, Dohyeong Kim, Kuniyuki Shida, Yuji Kano, Jerome Lafeuille, Bin Chann Mony, Makhbuba Kasymova, Toshiyuki Kurino

Successful Commissioning of COMS

The operational meteorological mission of COMS (Communication, Ocean and Meteorological Satellite), the first geostationary weather satellite of Korea, has started from 00UTC on 1st April 2011. The mission includes image acquisition, pre-processing, real time broadcasting through COMS, and various post-processing and dissemination. For the image acquisition, we rely on the MI (Meteorological Imager) which similar to the MTSAT-2 of Japan and GOES series of USA. The 5 channels and their spatial resolutions are shown in Table 1.

Table 1 COMS Channel

Channel	Wavelength (μm)	Spatial Resolution (km)
VIS	0.675	1 x 1
SWIR	3.75	4 x 4
WV	6.75	4 x 4
IR1	10.8	4 x 4
IR2	12.0	4 x 4

VIS : Visible SWIR : Shortwave Infrared
 WV : Water Vapor IR : Infrared

The observation schedule of MI is specifically chosen to acquire imagery of an extended northern hemisphere (ENH) area for every 15 minutes, while producing the full disk (FD) image for every 3 hour (see Fig. 1 for the

observation schedule and for the coverage of ENH and FD).

The acquired raw data are pre-processed at ground and sent back to COMS to be broadcasted in the form of HRIT (High Resolution Image Transmission) and LRIT (Low Resolution Image Transmission). Thus, anybody with a proper receiving station can utilize the COMS data for their own purpose. For the specific information for the receiving station, please contact with Jaedong Jang (jaedongjang@kma.go.kr).

COMS data is also available through NMSC (National Meteorological Satellite Center) / KMA (Korea Meteorological Administration) homepage (Fig. 2)

(<http://nmssc.kma.go.kr/jsp/homepage/eng/main.do>). The internet services provide graphic images for public and image data for registered users.

Besides the MI data, GOCI (Geostationary Ocean Color Imager), a sensor for ocean observation on COMS, images are also available via LRIT with a frequency of 24 times a day (8 times measurements per day and 3 products per measurement such as true color images, chlorophyll concentration, and concentration of suspended solids).

(Jaedong Jang, KMA)

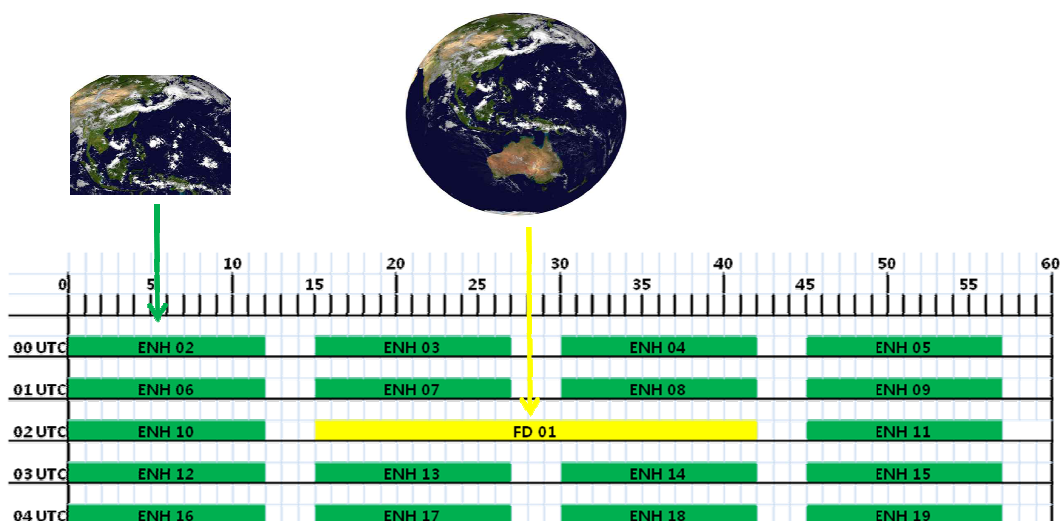


Fig. 1 The COMS MI observation modes and schedule



Fig. 2 NMSC website

Status of COMS Products Service

The CMDPS (COMS Meteorological Data Processing System) is technology indigenous data processing system to derive level 2 products from the level 1B data. The development project, which started in 2003, brought together 11 experts from 9 universities for a partnership between the industry, the academia, and the research community.

CMDPS provides 16 baseline products (Fig. 3) including information on Asian dust, sea surface temperature and land surface temperature over the East Asian region. These products will help improve day to day weather forecasting and the performance of NWP models for weather analysis and forecast.

Initial operational test of CMDPS was performed with procedure in accordance with COMS IOT (In-Orbit Test) schedule. The CMDPS performance test to evaluate accuracy for each product has been fulfilled by individual functional test whether CMDPS is reliably operated in coincide with the functions designed. These tests include calibration of each product, modification of boundary value

of algorithm and adjustment factor.

Asian dust, fog, atmospheric motion vector, cloud detection, cloud top temperature/height, and cloud analysis (cloud amount, cloud type and cloud phase) have been started the public service on April 1, 2011. Also the rest of the products will be served by its schedule (Table 2). All COMS products are available through KMA/NMSC web site (www.kma.go.kr or nmsc.kma.go.kr).

These level 2 products including cloud detection/analysis, fog, rainfall intensity, insolation, sea surface temperature, Asian dust can contribute improvement of forecast accuracy to weather forecast.

In the long term, they will be used in the analysis and prediction of climate change around the Korean Peninsula and the Asia region. (In)direct technology transfer and information exchange in this area are expected to enable enhanced international cooperation environmental issues.

(Sung-Rae Chung, KMA)

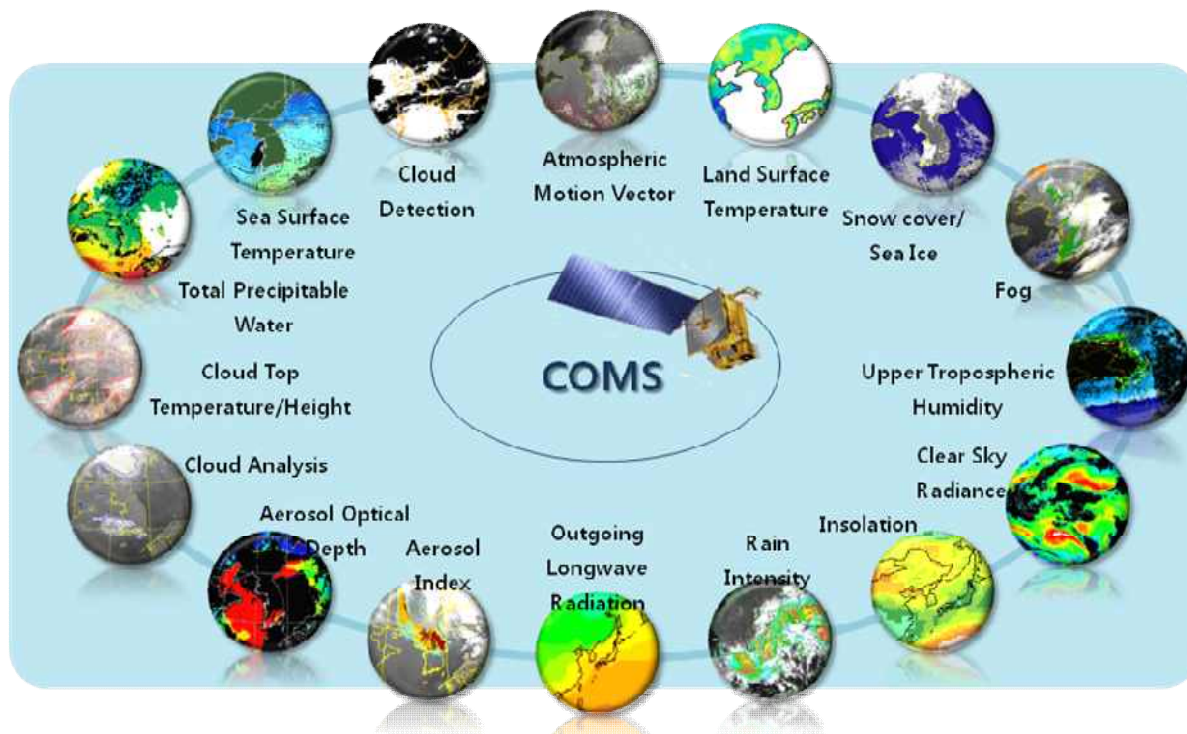


Fig. 3 COMS meteorological products

Table 2 Schedule of COMS products public service

Date	Products
April 2011	Aerosol index, Fog, Atmospheric motion vector, Cloud detection, and Cloud analysis (cloud top temperature/height, cloud amount, cloud type and cloud phase)
June 2011	Rain intensity, Sea surface temperature, Total precipitable water, Upper tropospheric humidity
November 2011	Insolation, Snow cover/Sea ice, Outgoing longwave radiation, land surface temperature, aerosol optical depth, clear sky radiance

Members of the Coordinating Group

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EUMETSAT

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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