

KMA'S ACTIVITY TO PROMOTE UTILIZATION OF SATELLITE DATA

This paper provides the update of the project for development of COMS data receiving/analysis system in Sri Lanka. Additionally KMA will expand support to Asia-Pacific countries with weather analysis system as well as COMS data receiving system.

This document is to summarize the WMO-KMA RA II Pilot Project VLab High Profile Training Event to be held from 4 to 6 October, 2012, in Jincheon, Korea.

KMA's activity to promote utilization satellite data

1. Invitation of Sri Lanka officials for analysis of COMS data and system operation

NMSC/KMA had a training course that is Invitation of Sri Lanka 11 officials for analysis of COMS (Communication, Ocean, and Meteorological Satellite) data and system operation to reduce meteorological disaster of Sri Lanka and provided techniques of the COMS data for 4 weeks (1st In November 2011, 2nd In June 2012).

In July 2012 NMSC/KMA completed the project that develops and establishes the COMS data reception/analysis system through official development assistance of KOICA (Korea International Cooperation Agency) support. This system is developed to strengthen the ability of minimizing meteorological disaster of Sri Lanka and to improve forecasting infrastructure and weather monitoring function by receiving satellite data directly.

The training course was proceeded in two parts, which was 'Interpretation and analysis of COMS data' and 'System installation and operation' and consisted of 4 sessions.

- 4 sessions: Development Plans of Meteorological Satellite, Processing of COMS Meteorological Imager (MI) data, Operation of COMS reception / analysis system, Interpretation of Satellite images and Supporting Weather forecasting

Also, the trainees visited Korea Aerospace Research Institute (KARI) and Korea Meteorological Administration (KMA) headquarter to promote understanding of satellite development and experienced various advanced industrial facilities and Korean culture during the training period. Through this training course, the trainees could have a deeper understanding on the utilization of COMS data and the operation of the COMS reception/analysis system installed in Sri Lanka.

As the 7th meteorological satellite operating country, Korea will consolidate the foundation of meteorological satellite and contribute to international communities by providing COMS data, image processing systems and technologies to other user countries that have poor infrastructure and economic conditions.



Figure 1. 1st training course and 2nd training course

2. WMO-KMA RA II Pilot Project VLab High Profile Training Event

2.1 Introduction

The Korea Meteorological Administration (KMA) and WMO co-organized a high profile regional training event designed specifically for satellite data users in RA II. This event, held on 4-6 October 2012 at KMA's Jincheon Satellite Facility, was consisted of a series of lectures, including by Virtual Laboratory Centres of Excellence (CoE), and working sessions to express its needs for training in the access and use of satellite data.

2.2 Training Event Topics

- The WMO Space Program, WMO Virtual Laboratory (VLab) function and benefits, and basic satellite orbits and applications areas
- CMA, JMA and KMA satellite status and plans, including a focus on data and product availability and access
- Lecture on satellite data utilization topic from Beijing and Nanjing, Melbourne, IPWG and Jincheon, and regional interest such as tropical storms and hurricanes

- Lecture and exercise on choosing satellite spectral bands and their applications for land, ocean and atmospheric applications
- Lecture on application of satellite data for analysing and nowcasting convection

2.3 Summary of the VLab Training Event

The WMO-KMA RA II Pilot Project High Profile Training Event was held 2 ½ days from 4-6 October on Nation Meteorological Satellite Center (NMSC) at Jincheon, Korea. The training event was closely associated with the RA II Pilot Project with 15 participants from 11 nations in RA II and 5 people from NMSC

There were lectures given by Dr. James Purdom (Special Advisor to WMO on Integrated Observing Systems & CIRA, Colorado St. University), Dr. Paul Menzel (CIMSS, University of Wisconsin) and Professors from the Jincheon facility. Other VLab centers, CMA, JMA, EUMETSAT and IPWG participated in a virtual capacity and focus on demonstrations of access to products and ensuing real-time satellite data “map” discussions. The syllabus is below:

● Day 1

- The WMO Space Program / Virtual Lab
- Satellite and their orbits
- Interpreting Satellite Imagery
 - Spectral bands and their applications and understanding radiative transfer
- Analysis of multispectral data and NPP exercise
- Real Time Weather Exercise and Analysis

● Day 2

- Rainfall; International Precipitation Working Group Activities: *via Internet*
- Interpreting Satellite Imagery
 - The Development and evolution of deep convection
- VLab Presentations: Data and Products
 - ROSHYDROMET, KMA
 - CMA, JMA, EUMETSAT: *via Internet*
- Real Time Weather Exercise and Analysis

● Day 3

- Analysis of multispectral data and NPP exercise
- COMS Nowcasting Application
- Tropical storms Analysis
- Real Time Weather Exercise and Analysis



Figure 2. WMO-KMA RA II Pilot Project VLab High Profile Training Event