



WMO-CGMS Virtual Laboratory

Co-Chairs

Kathy-Ann Caesar and Volker Gärtner

Established by the World Meteorological Organization (WMO) and the Coordination Group for Meteorological Satellites (CGMS), the **Virtual Laboratory for Training and Education in Satellite Meteorology (VLab)** is a global network of specialized training centres and meteorological satellite operators working together to improve the utilisation of data and products from meteorological and environmental satellites. Eight satellite operators are involved: CMA, CONAE, EUMETSAT, INPE, JMA, KMA, NOAA and Roshydromet.



# WMO Global Survey on Use of Satellite Data 2012

- \* 217 responses from 96 countries
- \* Other operational agencies
- \* National meteorological and hydrological services
- \* Research and academia

# WMO Survey 2012: Training needs

**Table 11: Area where training is needed but not delivered for agencies (regional breakdown)**

NMHSs and other operational agencies

WMO Region	NMHSs and other operational agencies						
	Total responses	Equipment operation & maintenance	Image interpretation	Use of software tools	Product utilization and interpretation	Physical basis for remote sensing	Preparation for new generation satellites
RA I	32	11	7	15	14	14	17
RA II	27	5	3	8	6	7	13
RA III	10	4	5	6	7	4	6
RA IV	21	4	5	8	6	5	8
RA V	16	9	6	11	10	10	13
RA VI	53	13	9	16	15	14	19
All	159	46	35	64	58	54	76



# VLMG-6

São José dos Campos, Brazil  
8 – 11 October 2012



# VLab Network 2012



The process for integration of IMD is ongoing

# VLab Achievements

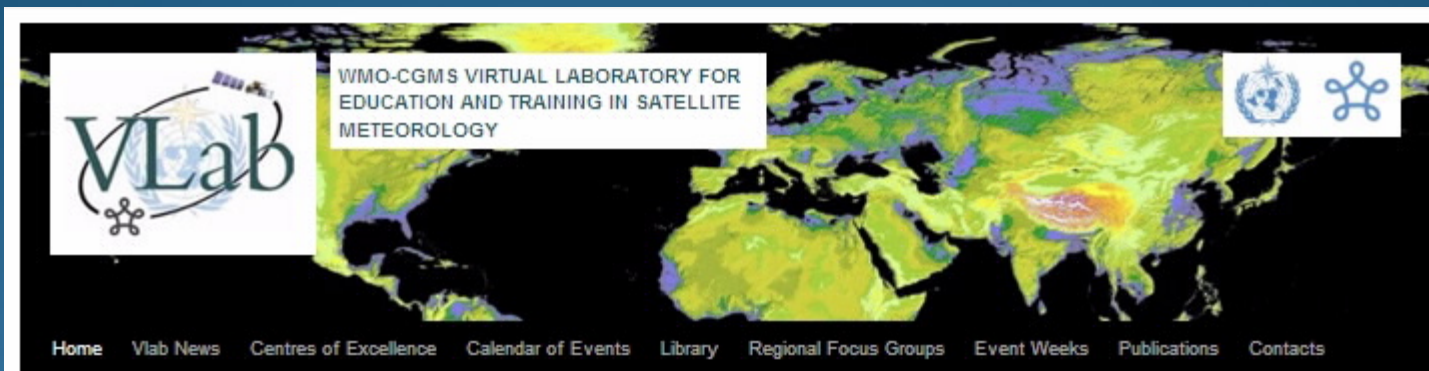
During the last year a lot of regular training activities were held by the partners And these can be found in the VLab training calendar. In addition a few points should be highlighted:

- New Centre of Excellence in Morocco
- VLMG-6 Meeting 8-11 October 2012, Brazil
- Regional Focus Group sessions (RFG) have been running for a number of years now at several Centres of Excellence
- Event Weeks are regularly conducted (e.g. Aviation, severe weather)
- A second RGB Workshop was held in September 2012

In addition to collaborations already established, VLab will jointly try to manage the dissemination of training material on the GEONETCast training channel together with the CEOS WGCapD.



# VLab Web Site 2012 - vlab.wmo.int

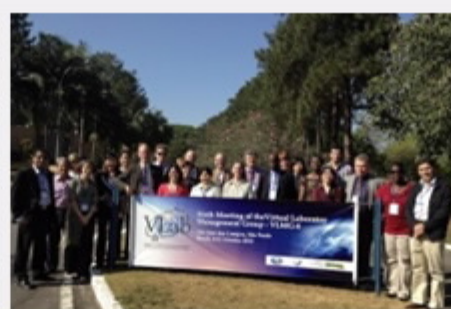


## Home

Established by the World Meteorological Organization (WMO) and the Coordination Group for Meteorological Satellites (CGMS), the **Virtual Laboratory for Training and Education in Satellite Meteorology (VLab)** is a global network of specialized training centres and meteorological satellite operators working together to improve the utilisation of data and products from meteorological and environmental satellites.

Eight satellite operators are involved: CMA, CONAE, EUMETSAT, INPE, JMA, KMA,

NOAA and ROSHYDROMET, and twelve training centres – called Centres of Excellence (CoEs) – located in Argentina (Buenos Aires and Cordoba), Australia (Melbourne), Barbados (Bridgetown), Brazil (Cachoeira Paulista), China (Beijing and Nanjing), Costa Rica (San Jose), Kenya (Nairobi), Niger (Niamey), Oman (Muscat), Republic of Korea (Jincheon), the



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## Recent News

- [Research fellowships on satellite applications \(EUMETSAT\)](#)
- [Caribbean Weather Discussion RFG – Next session 30 October at](#)

# Upcoming Vlab events

## Calendar of Events

This calendar of events shows the upcoming Training events, workshops, conferences and online sessions organised by VLab CoEs and Vlab collaborators.

Date	Title	Location	Initiative	CoE involv.	Type	Language	Attendance	Contact	Link
2012/10/02 - 2012/11/30	Forecasters meet aviation users II	Online	Eumetcal		Online course	English	Limited	<a href="#">Lisa Haga</a>	
2012/11/05 - 2012/11/09	Polar Satellites Week	Online	EUMeTrain		Event week	English	Open	<a href="#">Nuno Moreira</a>	
2012/11/07 - 2012/11/07	RFG of the Americas and the Caribbean	Online	VLab	Barbados, Costa Rica	RFG discussion	English	Open	<a href="#">Bernie Connell</a>	
2012/11/19 - 2012/11/30	ESAC-X-F	Niamey, Niger	EUMETSAT	Niger	Classroom course	French	By invitation	<a href="#">José Prieto</a>	
2012/11/27 - 2012/11/27	ePort Weather Briefing	Online	EUMeTrain		RFG discussion	English	Open	<a href="#">ePort briefing team</a>	
2012/12/03 - 2012/12/04	Meteorology and Health	Online	VLab	Brazil	Online course	Portuguese	Limited	<a href="#">Claudia Lucaccioni</a>	
2012/12/18 -	ePort Weather Briefing	Online	EUMeTrain		RFG discussion	English	Open	<a href="#">ePort briefing team</a>	

----and much more at: [vlab.wmo.int](http://vlab.wmo.int)



# VLab Moodle Site

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WMO-CGMS Virtual Laboratory  
for Education and Training in Satellite Meteorology

Learning and Teaching

[Sixth Meeting of the Virtual Laboratory Management Group - VLMG-6 - Brazil, 8-11 October 2012](#)

*This area is dedicated to all material related to the Sixth Meeting of the Virtual Laboratory Management Group.*

[Ensuring User Readiness for New Generation Satellites](#)

*This area is still under construction. The page will be dedicated to keep together all documentation we can gather regarding the preparation of users for the next generation of satellites.*

[VLMG Web Meetings](#)

[Virtual Laboratory Documents](#)

[VLab Gallery](#)

[Collaborative Area for Satellite Courses](#)

[WMO Doc 258 and Satellite Competencies](#)

[VLMG-5 meeting 12-14 July and seminar on training 15-16 July 2010 Beijing](#)

*This area keeps all the material related to the Fifth Meeting of the Virtual Laboratory Management Group.*

[Aviation Week](#)

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# VLab Event Weeks

## Precipitation Week in February 2013 - Agenda



COURSES

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Navigation

HOME > SITE PAGES > EUMETSAT PRECIPITATION WEEK

EUMETSAT Precipitation Week

## Precipitation Week 2013 Outline

Date: 4-8 February 2013

### I VISIR Precipitation Estimates

1. Nowcasting SAF: Convective Rainfall Rate (CRR) and Precipitating Clouds (PC) products  
(Cecilia Marcos, AEMET, Monday, 4 Feb 2013, 09 UTC)
2. Use of the Hydroestimator in South Africa  
(Estelle de Coning, SAWS, Monday, 4 Feb 2013, 14 UTC)
3. Detecting Warm Rain Clouds in Satellite Images  
(Daniel Rosenfeld, HUJ, Tuesday, 5 Feb 2013, 09 UTC)

### II Microwave Precipitation Estimates

1. Overview of Microwave Precipitation Products  
(Ralf Bennartz, UWI, Tuesday, 5 Feb 2013, 14 UTC)
2. Microwave Products and Applications overview  
(Sheldon Kusselsson, NOAA, Wednesday, 6 Feb 2012, 14 UTC)
3. Other Precipitation missions: TRMM / Megha-Tropiques / GPM  
(Remy Roca, LMD, Thursday, 7 Feb 2013, 09 UTC)

### III Multi-sensor Precipitation Estimates

1. The Multisensor Precipitation Estimate (MPE) Product  
(Thomas Heinemann, EUMETSAT, Thursday, 7 Feb 2013, 14 UTC)
2. Hydrology SAF Precipitation Products  
(Vincenzo Levizzani, Friday, 8 Feb 2013, 09 UTC)

# VLMG-6 Recommendations

- Satellite operators to provide regular, annual contributions into the WMO VLab Trust Fund to ensure the continuation of the post of the VLab TSO. (The same was also a recommendation at the 10th EUMETSAT User Forum in Africa, Addis Ababa, Ethiopia, 1-5 October 2012);
- CGMS to endorse the DMN Morocco Casablanca facility as a new CoE of the VLab sponsored by EUMETSAT.
- WMO in cooperation with the VLab co-chairs to continue facilitate the integration of ISRO and IMD into the VLab;
- Satellite operators and WMO to provide necessary resources for the translation of relevant training materials (websites, modules and related) into other WMO languages;



# VLMG-6 Recommendations

- Satellite operators and trainers to take note of the new “CBS Guideline for ensuring user readiness for new generation satellites” and plan appropriate projects to ensure user readiness;
- CGMS operators active in VLab to recall their commitments to the VLab, as per the agreed expectations defined in “Expectations from Satellite Operators”  
(available at <http://www.wmo-sat.info/vlab/governance-documents/>).
- CGMS and WMO to investigate the possibility to provide funding to the VLab CoEs in Argentina, Australia, Brazil and South Africa, to prepare conceptual models for the Southern Hemisphere. The conceptual models could follow the example of the SatManu prepared by ZAMG for the Northern Hemisphere;

# Note of Concern

During VLMG-6 each CoE had repeatedly mentioned that for the level of training activities required in its respective area of responsibility, the number of personnel available at their VLab CoEs is often below the limits necessary to meet the agreed expectations for CoEs.

In some cases, agreed support to CoEs by sponsoring satellite operators is insufficient.

# Widening the Scope of the VLab

VLMG-6 iterated that the opportunity should be used to widen the scope of VLab by addressing additional application areas for training.

**Emphasis will be given to conduct new training courses for climate, marine and land surface services.**

Furthermore, the cooperation with COSPAR (initiated in March 2012 through a VLab-COSPAR Memorandum of Understanding) and with the Brazilian universities operating EUMETCast stations, are to be pursued.

**Recommendation:** CGMS agencies and IOC/JCOMM to cooperate with the VLab to facilitate joint training events for marine forecasters and on coastal inundation.

# SUMMARY OF NOAA VIRTUAL LABORATORY (VLab) TRAINING ACTIVITIES

CGMS 40  
Plenary IV.1



# SUMMARY OF NOAA VIRTUAL LABORATORY (VLab) TRAINING ACTIVITIES

- \* **Update Webpages to Include the Virtual Laboratory (VLab) Logo**
  - \* NOAA coordinated with the COMET program to include the VLab logo with link to Vlab site on the Environmental Satellite Resource Center (ESRC) website
  - \* ESRC as a searchable, database-driven Website that provides easy access to a wide range of useful information and training materials on polar-orbiting and geostationary satellites
    - \* This site is an official resource of the [WMO Virtual Lab](#).
  - \* NOAA worked with the Cooperative Institute for Research in the Atmosphere (CIRA) to add the logo to two sites directly related to VLab activities:
    - \* CIRA Regional Focus Group web site ([rammb.cira.colostate.edu/visitview/focus.asp](http://rammb.cira.colostate.edu/visitview/focus.asp))
    - \* CIRA page on activities with WMO-CGMS Virtual Laboratory ([rammb.cira.colostate.edu/training/rmtc/](http://rammb.cira.colostate.edu/training/rmtc/))
- \* **Contribution Towards Funding of VLab Management Group (VLMG)**
  - \* NOAA provided funding for portions of travel costs for several members to attend the VLMG-6 meeting in Brazil in September 2012





# KMA's Training Activities

- \* CGMS-40 KMA-WP-03

# Training Program for Sri Lanka Officials

## ■ Backgrounds

In July 2012, NMSC/KMA completed the project that develops and establishes the COMS data reception/analysis system for Sri Lanka with assistance of KOICA (Korea International Cooperation Agency)

## ■ Goals of training

- To provide operation techniques of COMS MI data reception/analysis system
- To deepen understanding on COMS meteorological products and its utilization
- To strengthen the ability of supporting weather forecast with COMS MI data

## ■ Date/period

- Date/Period : (1<sup>st</sup>) Nov. 2011, (2<sup>nd</sup>) June 2012 / 4 weeks
- Venue : NMSC/KMA
- Number of Trainee : (1<sup>st</sup>) 7 persons / (2<sup>nd</sup>) 4 persons

## ■ Contents

- Status and Plans of Meteorological Satellite Development in Korea
- Data Processing of COMS Meteorological Imager (MI)
- Operation of COMS reception / analysis system
- Techniques and Tools of Satellite Image Analysis

# KMA - International Training Program

## ▪ Objectives

- Contribution to increase the use of COMS data for weather forecast
  - Contribution to reduction of meteorological disasters obtaining satellite related technique and application

## ▪ Contents

- COMS image data and products
  - COMS data processing system and utilization
  - COMS data service and user stations
  - COMS system, COMS program progress

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## Participants

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1<sup>st</sup> : Sep. 2 - 17, 2007 (13 participants/Asia-Pacific 13 countries)

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2<sup>nd</sup> : Sep. 18 - Oct. 9, 2008 (13 participants/12 countries)

- Date : 2012. 10. 4~6 (3 days) / NMSC, KMA
- Contents : WMO SP/VLab, NPP & Exercise, Real Time Weather Interpreting Satellite Imagery Exercise/Analysis, Satellite & their Orbit, COMS Data/Products(KMA), COMS Applications(Nowcasting/Tropical Storm), Rainfall(IPWG)\*, Data(CMA/ROSHYDROMET/JMA/EUMETSAT)\*
- Lecturers : James Purdom, Paul Menzel  
IPWG, CMA, ROHYDROMET, JMA, EUMETSAT, KMA

