



VLab Newsletter

What Is On?

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Russian meteorologists go online and launch the Russian Regional Focus Group, the first online focus group in Russian language in the subject of meteorology.

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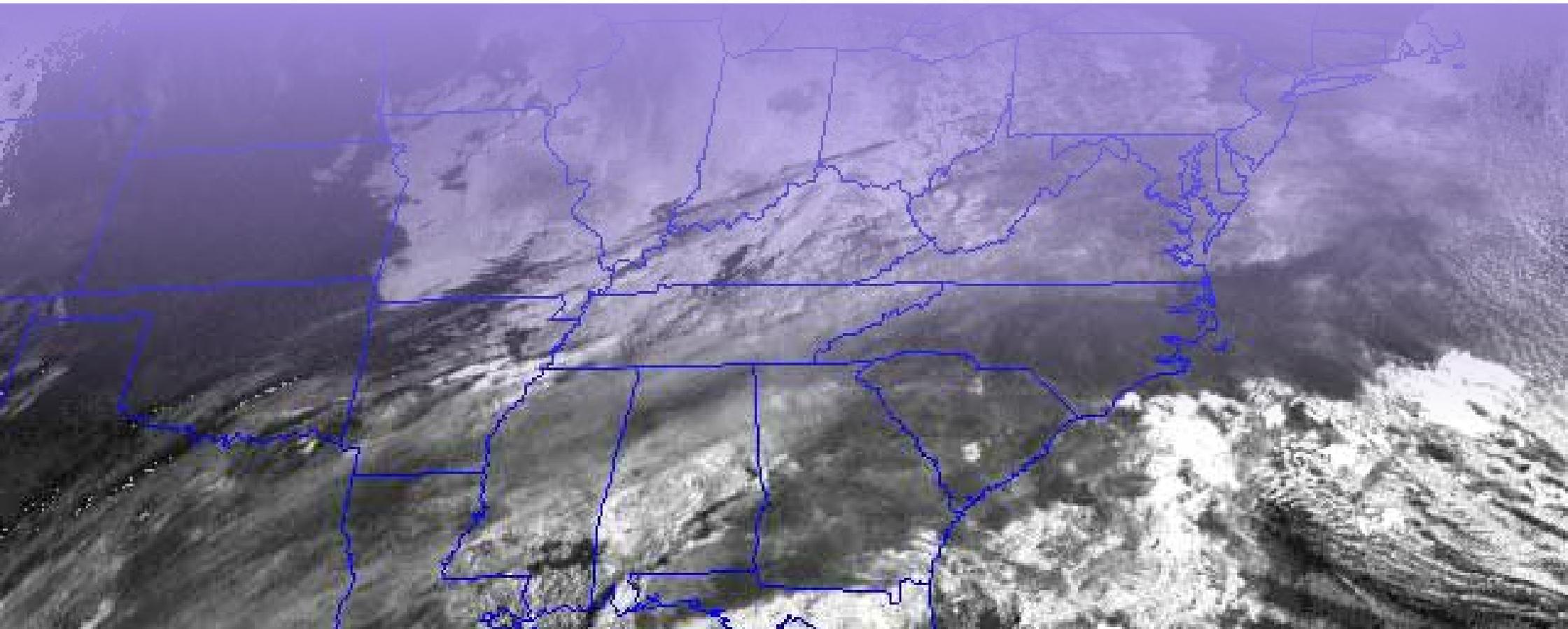
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International Training Courses at VLab CoE Beijing in September and October 2013

China Meteorological Administration (CMA) is sponsoring two new international training courses in the next few months: Application of Meteorological Satellite Products – 3 to 13 September 2013, and Regional Climate Prediction and Drought Monitoring and Warning – 15 to 25 October 2013. Courses will be held at the Regional Training Centre Beijing (RTC-Beijing).

The course on Application of Meteorological Satellite Products is targeted to meteorologists working with satellite meteorology and related fields in developing countries. It is designed to include aspects of the latest developments in the application of meteorological satellite products, scientific research and management. Applications to participate in the course must be submitted to reach RTC-Beijing no later than 20 August 2013.

The Regional Climate Prediction Drought Monitoring course is designed to attend the needs of meteorologists engaged in operational work or research on climate analysis and prediction, especially those working in developing countries. Trainees should expect

learning new techniques of diagnosis and attribution on extreme climate events (especially drought events) and improve their climate prediction skills. Applications to participate in this course must be submitted to reach RTC-Beijing no later than the 1st of October 2013.

Both courses will have English as the official language and trainees shall take part in lectures, laboratory practices, group discussions, individual presentations and much more.

Tuition is free for all the accepted participants that receive the endorsed Admission Notices by RTC-Beijing. Additionally, RTC-Beijing will provide local support (including accommodation, meals, and pocket money) to the accepted participants from developing countries.

For full information about the courses' content and the application process, please see <http://edu.cma.gov.cn/cmatac/index.php> or contact intcmatac@cma.gov.cn

*Submitted by CHEN Jinyang,
Manager for International Training CMATC
VLab CoE Beijing*



Trainees in past international courses at RTC-Beijing.

Satellite Direct Readout Events

During 2013, the VLab is organising a series of online events about the direct readout capabilities of polar orbiting systems. The idea is that each satellite operator that operates polar orbiting systems with a direct readout capability could present two online sessions in consecutive days to present: (1) the main scientific aspects of the satellite instruments and (2) the direct readout system and particularly the local processing software.

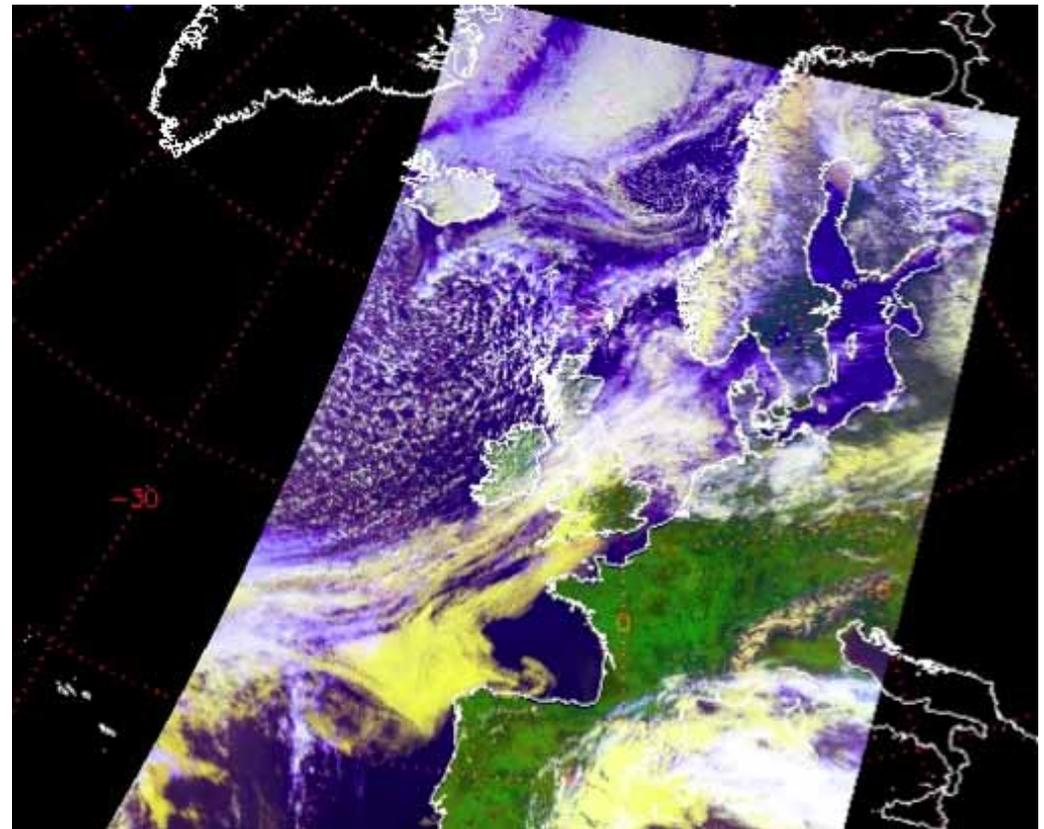
EUMETSAT started this series of events by presenting two sessions about the EPS/Metop (7 and 8 May 2013). The first session was presented by Dieter Klaes from EUMETSAT, who talked about the science of EUMETSAT Polar System (EPS). Second session had Nigel Atkinson from the UK Met Office, presenting about the EPS Direct Readout and Processing Tools. Both sessions were recorded and are available to watch from the VLab central website at <http://www.wmo-sat.info/vlab/satellite-direct-readout/>

The next couple of sessions of the Satellite Direct Readout Events will be about the Suomi NPP satellite. Colleagues from NOAA and Uni-

versity of Wisconsin will be presenting about NPP Science and the Community Satellite Processing Package (CSPP). Dates for these sessions are still to be confirmed and as usual, participants are asked to register in advance. The link to registration will be soon available at the VLab Calendar of Events at <http://www.wmo-sat.info/vlab/calendar-of-events/>

Future sessions of the Satellite Direct Readout Events may also include online lectures on the FY3 (China) and the Meteor-M (Russian Federation) product suites. Dates for all these events will be advertised in the VLab Online Calendar of Events. Participation in these online sessions is free of charge and open to all regions.

Lu Veeck, VLab TSO



Metop-B AVHRR from Exeter, 25/04/2013.

Marine Forecasting Course

EUMeTrain, EUMETSAT and EUMETCAL are jointly organising an online course on the topic of Marine Forecasting.



The course is mainly targeted to operational marine weather forecasters, but it is also open to all with interest and basic competence in marine meteorology. The main goal of the course is to train forecasters to improve the quality of marine forecasting and nowcasting through a better use of satellite data and models.

Main topics to be covered include the use of scatterometers and altimeters for measurements of wind and waves, ocean and wave models, sea ice detection and products, fog, ship routing, hurricanes, extra-tropical cyclones, rapid cyclogenesis, and polar lows.

Instruction will be provided online by a team of marine weather forecasters and product developers from several European meteorological services and also from the European Centre for Medium-Range Weather Forecasts (ECMWF), NOAA and Environment Canada. Certificates will be provided to trainees who achieve a minimum of 80% in participation and course assessments.

The course is five weeks long, starting on the 28th of October 2013. Application to participate in this course is now closed, but recorded sessions will be available. For additional information, please see http://www.eumetrain.org/courses/marine_forecasting_2013.html

Submitted by the EUMeTrain Team

EUMETSAT Precipitation Week 2013

In the context of VLab, EUMETSAT organised an Event Week to highlight the importance of satellite data for monitoring precipitation. This training week consisted of eight online sessions dealing with the monitoring of precipitation from space.

Three main topics were considered: VIS/IR Precipitation Estimates, Microwave Precipitation Estimates and Multi-sensor Precipitation Estimates.

Lecturers from eight institutions collaborated in this event to present the following sessions:

- > Cecilia Marcos, AEMET - Nowcasting SAF: Convective Rainfall Rate (CRR) and Precipitating Clouds (PC) products;
- > Estelle de Coning, SAWS - Use of the Hydroestimator in South Africa;
- > Daniel Rosenfeld, HUJ - Detecting the formation of various precipitation types in clouds;
- > Ralf Bennartz, UWI - Overview of Microwave Precipitation Products;
- > Sheldon Kusselsson, NOAA - Microwave Products and Applications Overview for Precipitation Analysis and Forecasts;
- > Remy Roca, LMD – Other Precipitation missions: TRMM/Megha-Tropiques/GPM;
- > Thomas Heinemann, EUMETSAT - The Multisensor Precipitation Estimate (MPE) Product;
- > Vincenzo Levizzani, ISAC-CNR - Hydrology SAF Precipitation Products.

Around 300-400 people, from 150 different locations, attended the live sessions. Altogether 33 countries were involved in this training event. This has been the largest live online training event organised by EUMETSAT.

The conferencing system Sabameeting was used and coped well with the high number of attendees (max number of concomitant users at one time was 86). Feedback received

from participants was very positive and indicated interest in participating in future events following a similar format.

The live sessions were recorded and the webcasts are available in the EUMETSAT Training Zone at <http://training.eumetsat.int/mod/page/view.php?id=4417>

Submitted by EUMETSAT Team

Satellite Data Requirements - Are the stars getting aligned for RA III and RA IV?

It feels as if some of the stars have started to align the past 6 months relating to Satellite Data Requirements, at least for RA III and RA IV. As trainers we are more than well aware that we can do all the training we want on imagery and products, but the user needs to have access to the imagery and products to realize the potential of both. Results from the 2012 WMO survey on the use of satellite data were recently released (http://www.wmo.int/pages/prog/sat/documents/SAT-PUB_SP-9-Survey-Report-2012.pdf) and indeed it documents that there still is a need in many countries for reliable and inexpensive access to satellite imagery and products.

In April, three consecutive events have included discussions and drafted some recommendations around these issues:

- › WMO-NOAA Train the Trainer Workshop, 6-7 April 2013 - focused on GEONETCast (10 page summary: http://www.wmo.int/pages/prog/sat/documents/SAT-GEN_WMO-NOAA-TtTEvent2013-SummaryReport.pdf);
- › Preparatory meeting of the Coordination

Group on Satellite Data Requirements for RAIII and RAIV, 8 April 2013 (10 page report: http://www.wmo.int/pages/prog/sat/documents/RA-3-4-SDR-Prep_Final-Report.pdf);

- › The NOAA Satellite Conference, 8-12 April 2013 (summary slides - see the last 5 slides (19-23) for the key recommendations and questions: [http://satelliteconferences.noaa.gov/2013/docs/Friday,%20April%202012,%202013/5.3_NSC_Conference%20Summary%20\(Griffin\).pptx](http://satelliteconferences.noaa.gov/2013/docs/Friday,%20April%202012,%202013/5.3_NSC_Conference%20Summary%20(Griffin).pptx)).

Some important recommendations included: "Provide regular virtual meetings with the regions to improve training for new satellite data", and also "Encourage more participation of Vlab, COMET, Regional Focus Group, CoE in RAs". Discussions and comments that came out of these events were very encouraging. Comments such as "User input is very important" and "Yes we'll consider that suggestion", were often heard.

*Submitted by Bernie Connell
Cooperative Institute for Research in the
Atmosphere – CIRA*



Participants of the WMO/NOAA Train the Trainer Workshop, 6-7 April 2013, US National Center for Weather and Climate Prediction (NCWCP), College Park MD, USA.

“Advanced applications of remote sensing in marine forecasting and Nowcasting”

20-24 May 2013, Casablanca, Morocco

As a first training action since its establishment, the Centre of Excellence of Casablanca (CoE), hosted by the National Meteorological Directorate of Morocco, has organized, in partnership with Eumetsat, a capacity building workshop on Satellite Meteorology from 20 to 24 May 2013.

Faithful to its positioning focused on “advanced remote sensing applications”, and in synergy with the center of Niamey, the modules taught during the CoE Casablanca workshop were focused on the advanced applications of remote sensing in marine forecasting and Nowcasting. A module on online training tools (SABA, MOODLE) with practical sessions enabled participants to manipulate these tools so they can use it and share it with their colleagues once they return home seeking for online training proficiency objectives of the VLab.

More than twenty students, from ten countries of North Africa and French speaking western Africa countries, attended this workshop; with the participation of more than 7 experts in remote sensing and Marine fore-

casting from Morocco, in addition to EUMETSAT and EAMAC experts.

Furthermore, the 2013-2014's Action Plan of CoE Casablanca was presented by Mr. N. Filali B. (main point of contact for CoE Casablanca) during the opening session. The preliminary results of the online survey on “priority training needs of the region and the logic of intervention the CoE” were also presented.

*Submitted by Noureddine Filali
CoE Casablanca*



Group Photo in the front of DMN, Casablanca.



Opening session.



Certificate delivery and closing session.

The Power of the VLab beyond Satellites

The WMO Virtual Laboratory (VLab) this year ventured into assisting the Aeronautical Meteorological community in addressing the issues of WMO Quality Management Systems in aeronautical operations, and the aeronautical personnel competencies. The Virtual Round Table Events mirrored previous VLab online events with two fundamental differences: firstly it covered a topic that was not directly related to satellite technology, and secondly it was presented in multiple languages.

The VLab Centres of Excellence (CoEs) are largely related to or responsible for providing training in Aeronautical Meteorology and as such are at the forefront of WMO's efforts to introduce the Competence Requirements for Aeronautical Meteorological Personnel. The Virtual Lab Management Group (VLMG) in their meeting in São José dos Campos, Brazil in 2012, conceptualized the idea to provide the basic information on Aeronautical Competences in a virtual format and to do so in the WMO official languages. This was in an effort to answer the many concerns of operational personnel who still had questions and to aid in getting the right messages out there.

With the blessing of WMO, which provided information and translation support, the project quickly bloomed into a one that has been presented online in four of the WMO official languages. Thus far, the VRT has been presented in English, Spanish, French and Russian, and has been viewed in 73 countries worldwide. There were over 300 logins into the four events.



Map showing all countries that participated in the Aviation Virtual Round Table so far.

The VLab CoEs were very involved in the process by providing revision of translated material and presenters for the sessions. The original English presentation was put together and presented by Adanna Robertson-Quimby and Kathy-Ann Caesar, both from the Caribbean Institute for Meteorology and Hydrology (CIMH – VLab CoE Barbados). This was closely followed by the Spanish version presented by Vilma Castro from VLab CoE Costa Rica; and the French version presented by Hamidou Hama from EAMAC – VLab CoE Niger, both in April. The presentation in Russian was capably done by Kate Chumak from Aviamettelecom-St Petersburg, in collaboration with VLab CoE Russian Federation.

The response was excellent. Over 95% of the attendees found the presentation help-

ful and 85% indicated that the presentations clarified the questions they had on the issue of WMO competences in Aeronautical Meteorology and QMS. Additionally, attendees also expressed interest in participating on follow up sessions in the same theme. There was also a positive feedback for WMO, on the status of readiness of the worldwide Aeronautical Services in terms of QMS.

Some of the feedback received from participants included:

- › Most of the information was new to me, as I have only begun this process and came across the round table information the day before the event.
- › The presentation clarified some questions, but I will have many more.

- › I however appreciate the emphasis of the Competence Requirements for Aero Met personnel and timelines set for implementation.
- › That the AMO does not necessarily need a qualification certificate only documented competency standard.
- › A very useful, well done presentation that I could utilize when delivering this information further in neighboring organizations.

VLab is still seeking assistant to help translating and presenting the VRT in the final two remaining official WMO languages, i.e. Arabic and Chinese; and is seeking further aid from our CoEs in these regions. But the possibilities go beyond these languages and already INPE - VLab CoE Brazil has offered to attempt the VRT in Portuguese.

The VRT is again another example of the power of VLab and how this Programme can expand beyond its original mandate to provide education in satellite meteorology and products.

I must thank all the presenters, Adanna, Vilma, Hamidou and Kate. Jeff Wilson, WMO director of Education and Training, Ian Lisk Chairman of CAeM, and Herbert Puempel WMO liaison with ICAO, for their advice and invaluable input. Finally boundless thank to Luciane Veeck and Maja Kuna for their very hard work to bring this presentation to life.

*Submitted by Kathy-Ann Caesar
CoE Barbados*

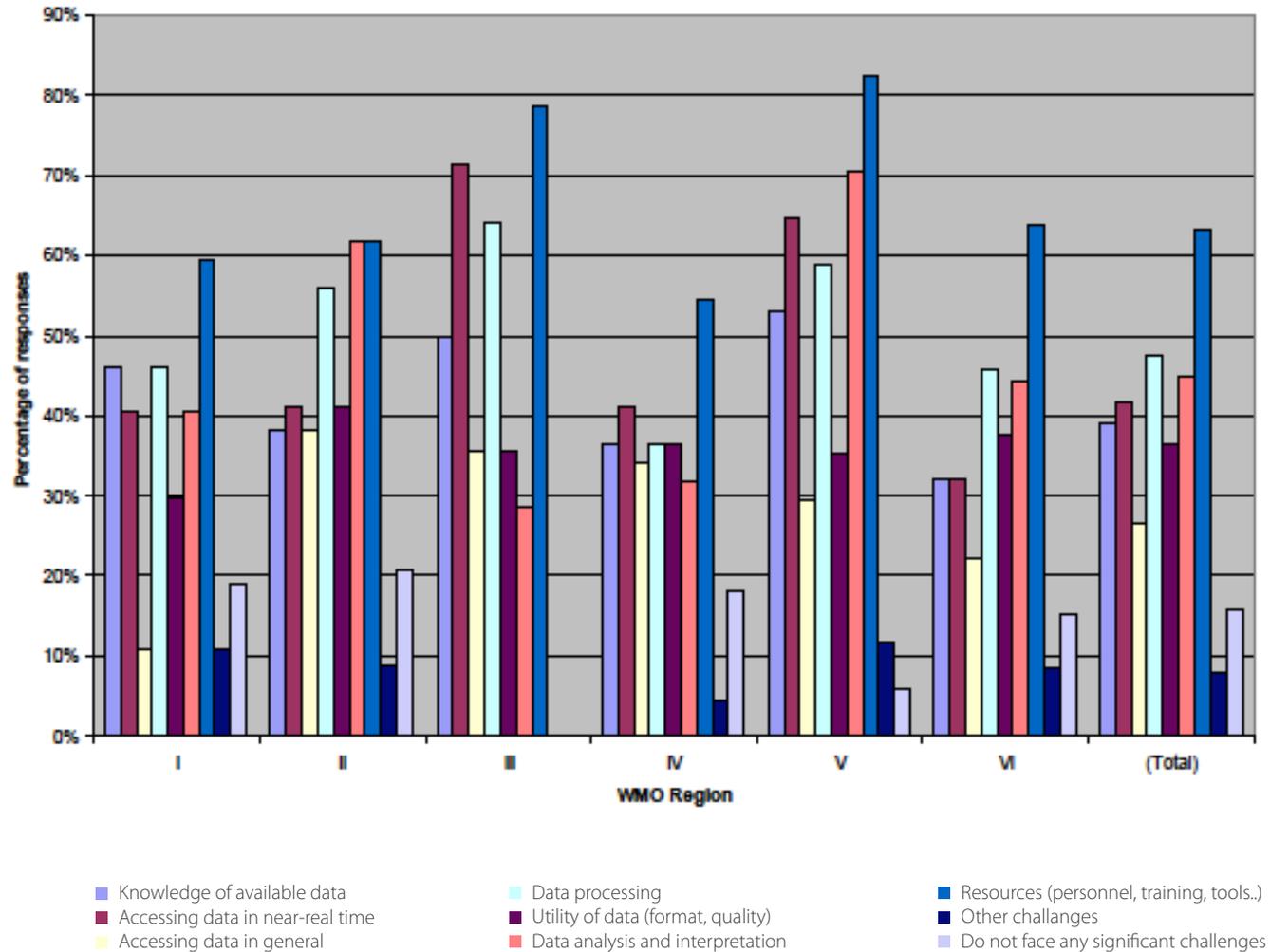


WMO 2012 Survey on the Use of Satellite Data – How can training better support users?

From May to September 2012, WMO conducted the WMO 2012 Survey on the Use of Satellite Data. The overall aim of the survey was to obtain updated user feedback, including limiting factors and difficulties faced by users, in order to take remedial action (e.g., enhanced training) in support of a broad range of satellite users of relevance to all WMO and co-sponsored Programmes. The results of the survey were published in May 2013 (http://www.wmo.int/pages/prog/sat/documents/SAT-PUB_SP-9-Survey-Report-2012.pdf) and highlighted important challenges and training needs faced by users.

Resource issues (e.g., adequate personnel, training, tools, and equipment) were reported as a dominant source of concern (63%), followed by challenges in the capacity to process data (48%), and the ability to analyse and interpret satellite data (45% - Figure 1). Access to data in near real time (NRT) and in general remains a concern albeit less frequently indicated, with 42% of all having challenges in NRT access, and 27% indicating general access to data as a concern.

Despite many information sources available, knowledge about available satellite data also remains an issue in many countries, with 39% of respondents indicating this as a challenge. The utility of data that is available also poses problems for a sizeable number of users: for 36% this is a point of concern. Other challenges identified by respondents also include sharing of data and products protected by licenses, connectivity / bandwidth to remote sites, data quality assur-



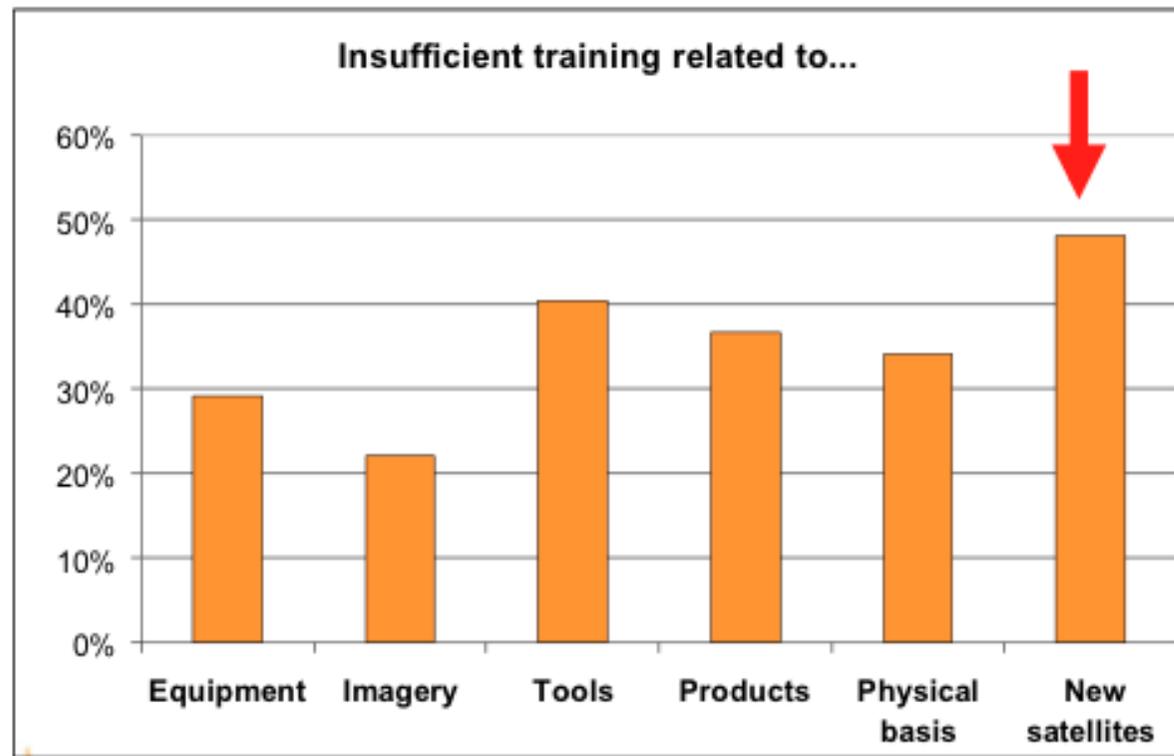
Challenges in the use of satellite data (from WMO 2012 Survey on the Use of Satellite Data).

ance (for generation of climate data records, for example) and uncertainty over planning of future satellites.

Regarding to training, a strong overall need for training was expressed throughout all Regions, in particular by NMHSs and other operational governmental agencies. In all Regions, training was said to be focused on image interpretation, followed by building capacity in the use of satellite-based products. On the other hand, the largest shortfall in training was apparent in the preparation of users for the new generation of satellites, followed by training in the use of software tools, and product utilization and interpretation (Figure 2).

The VLab Management Group (VLMG) is inviting all trainers to analyse the WMO 2012 Survey results, particularly the challenges (section 7) and the training (section 8) sections. Appendix B, which contains Region-based details on meteorological/geophysical products currently used, planned or desired by Members; is also an important and up to date resource to be consulted when planning new training. VLab members will be discussing the identified training challenges within the next months and VLMG plans to have a structured response to the challenges highlighted in the Survey by the end of 2013.

Lu Veeck, VLab TSO



Training needs (data from WMO 2012 Survey on the Use of Satellite Data).



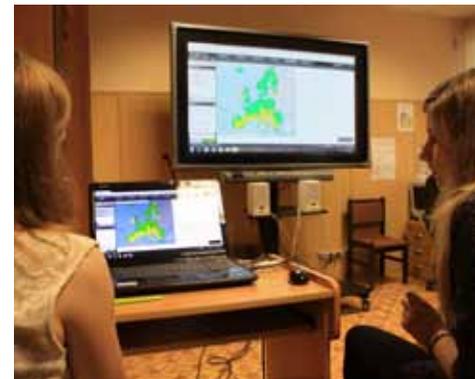
Russian meteorologists go online

A number of very positive developments took place in Russia since the last VLab newsletter has been published. Firstly, the face-to-face training event "Using Satellite Products in Meteorology and Oceanography" has been organized jointly by the Roshydromet Advanced Training Institute, the Russian State Hydrometeorological University (VLab CoEs in Russia) and hosted by Immanuel Kant Baltic Federal University (BFU) in Kaliningrad on April 1-6, 2013. The working language for the course was Russian, and the BFU provided interpretation for English-speaking presenters. EUMETSAT took active part in the event, contributing with lecturers and sponsoring two participants. The course was attended by more than 20 participants from Kaliningrad, Moscow, Perm, Rostov-on-Don and St Petersburg (Russia), Estonia and Uzbekistan.

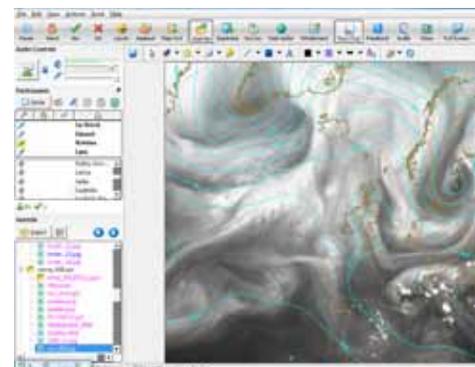
It was there when Russian specialists were introduced to the VLab RFG concept, and some off-class discussions led them to think of organizing a similar event in Russian language. But would Russian meteorologists be ready to use the web-conferencing system? The answer was given when VLab initiated the se-

quence of Virtual Round Table Events on WMO Aeronautical Meteorological Competences, including the discussion in Russian. The event was very well accepted by Russian forecasters who were happy to get support from WMO and share their opinion on the issue. Coordinated by Ms Chumak from Aviamettelecom-St Petersburg, the event took place online on June 5 and had 37 connections from 4 countries.

Following the success of the first online meeting, Russian CoE has teamed up with specialists from Aviamettelecom and EUMETSAT to organize the first Russian RFG meeting, which took place on 12 July 2013 and had more than 60 connections from all over Russia. In the post-event questionnaire, many participants reported they attended the session in the class, so overall participation is estimated to be around 100! The first Russian RFG session, led by Ms Nikitina from Aviamettelecom branch in Rostov-on-Don, introduced the RFG concept to a wider audience of Russian meteorologists. Mr Podgaiskii (RSHU) has contributed with an overview of VLab activities, and Ms Petraityte (EUMETSAT) presented in very decent Russian the recent weather briefing she led for Euro-



Participants attending the Russian RFG from ATI Roshydromet, Moscow Region.



Screenshot of Russian RFG 12 July 2013.



Ms. Nikitina leading the first Russian RFG session from her office.

pean RFG. The session was concluded by Ms Nikitina with presentation on meteorological support to Universiade in Kazan. The organizers are still receiving feedback from the event, which is in general very positive, and have already some requests for further discussion topics. We hope it will not take long for the next Russian RFG sessions to be announced on the VLab website!

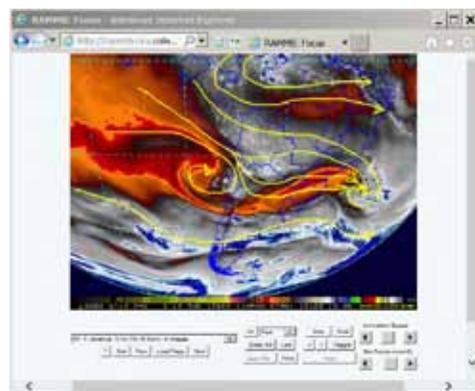
*Submitted by Eduard Podgaiskii (RSHU)
CoE Russian Federation*

VISITview Teletraining and real-time collaboration

VISITview (<http://www.ssec.wisc.edu/visitview/>) is a teletraining and real-time collaboration tool that was developed for the United States (US) National Weather Service (NWS) training program in 1998. This was before there was GoToWebinar, Saba Centra, Elluminate, or Webex. This tool provides a "slideshow" format that allows image animations, zooming, blackboard capabilities, imagery annotations (Figure 1), and also connects one or more instructors to many trainees via the internet.

Now, 15 years after its creation, VISITview is still very much used. The main reason for this is VISITview makes very efficient use of internet bandwidth, and we have not yet found a suitable substitute among the commercial packages currently available.

VISITview was initially designed to allow a complete lecture to be downloaded onto a remote computer before the actual training session takes place. This approach uses very little bandwidth during the training session, as all participants already have the material in their own computers. It is also possible to record voice and all imagery annotations made by the instructor, and use a synchronized playback to trainees.



VISIT blackboard showing annotated imagery.

Further development of VISITview added the real-time capability to online training sessions. When this capability is used, the imagery resides on the server and it is downloaded only when requested for viewing. This approach requires a little more bandwidth during the session. Nevertheless, it is possible to monitor how long it takes for the imagery to be downloaded by each participant (Figure 2), so the trainer can adjust the discussion to make sure everyone is viewing the same imagery at the same time. Most of the imagery viewed during the session is automatically generated for a webpage, so there is minimal preparation time needed for a VISITview session.



VISIT imagery download status.

In both approaches, the downloadable lecture and the real-time lecture, students and teachers are connected to a single server during the period of the VISITview session. This means other features are available in the session too, like the text chat for example. The controls during the session are transmitted through the server to individual participants and allow the trainer to advance pages, point out features of interest, and draw on the imagery.

One feature that is not included in VISITview is voice communication between participants. The US NWS uses a telephone line for voice communication in their training sessions.

A different choice is made by the Americas and Caribbean Regional Focus Group, which uses voice over the Internet protocol (VOIP) from GoToWebinar. To see how smoothly the co-use of VISITview and voice software works, join one of our monthly focus group sessions or listen to a recording at <http://rammb.cira.colostate.edu/training/rmtc/focusgroup.asp>

Oh, by the way, did I mention that VISITview is freely available to anyone who would like to use it?

For more information about VISITview, please have a look at <http://www.ssec.wisc.edu/visitview/> The VISITview Home Page also includes tutorials explaining step by step how to create your own lessons, recordings, overlays and much more.

*Submitted by Bernie Connell
Cooperative Institute for Research in the Atmosphere – CIRA*

VISIT

**VLab Regional Focus Groups
– when is the next session?**

VLab Regional Focus Group (RFG) sessions have been getting more popular, with two new groups starting this Summer: the RFG Casablanca and the Russian RFG.

For those not familiar with the RFG concept, they are online sessions organised by VLab CoEs, where participants (e.g. students, trainers, researchers, practitioners) get together on a regular basis to discuss a chosen topic on satellite imagery and products. Topics are usually presented by a trainer and then discussed with the participants who have the opportunity to ask questions and add comments. The choice of language used depends on the group, with actual VLab RFGs holding discussions in English, Spanish, French and Russian. VLab RFG sessions are opened to anyone interested in satellite meteorology.

Similarly to these, the EUMeTrain Group runs the “ePort Weather Briefing” on a monthly basis. These sessions have the collaboration of meteorologists from a variety of European NMSs, who present and moderate the weather discussions in English.

Dates and links to attend the VLab RFG and the e-Port Weather Briefing sessions can be found in the VLab Calendar of Events at <http://www.wmo-sat.info/vlab/calendar-of-events/>. The calendar is updated on a regular basis, so using the RSS feed may be more efficient to keep up to date with the RFG bookings.

Another option is to be part of the VLab mailing list, as alerts are sent to the list every time a RFG session is booked. If you would like to receive RFG and other VLab news via email,

please send your contact details to the VLab technical support officer using the contact form at <http://www.wmo-sat.info/vlab/contacts/>

Lu Veeck, VLab TSO

NWC SAF



EUMeTrain is going to organise an event week on products of the NWC-SAF from 18th to 22nd November 2013. The event will comprise 9 on-line sessions on topics such as the nowcasting products based on MSG and PPS satellites, precipitation and wind products. Each session will consist of 2 parts: first an overview on the product from the developer side, and the second part will show some typical applications of the data from the users side. A detailed schedule is already available at http://www.eumetrain.org/events/nwcsaf_2013.html

Registration will open in October, so keep your eyes on the VLab Online Calendar of Events for the link.

Submitted by the EUMeTrain Team

This Issue Contributors

Bernie Connell | CHEN Jinyang | Eduard Podgaiskii | Ivan Smiljanic | Kathy-Ann Caesar | Luciane Veeck | Maja Kuna | Nouredine Filali

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The VLab Newsletter is published semiannually. Its purpose is to highlight training events organised by VLab members and partners, and also to make the wider meteorological community aware of VLab activities and resources. Most articles are written by VLab colleagues. Article contributions to future editions are welcome and should be sent directly to the editor. The VLab Newsletter is made available online only. Any questions and comments about the content or distribution of the newsletter should be sent to the editor. Editor: Lu Veeck luveeck@googlemail.com