

## **PREPARATION FOR THE 9TH INTERNATIONAL WINDS WORKSHOP**

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The paper reports on the status of pertinent actions from the 8<sup>th</sup> International Winds Workshop, which took place from 24 - 28 April 2006 in Beijing, and the relevant actions and recommendations from CGMS 34.

CGMS 35 is invited to:

- i) support to the next IWWG meeting by approving participation of scientists and operational staff working on the utilisation and derivation of satellite winds,
- ii) providing some support to travel of relevant people from the research community,
- iii) advise on topics to be addressed at the 9<sup>th</sup> IWWG in the light of the actions and recommendations from CGMS 34 that are currently pursued

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### **1 INTRODUCTION**

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### **2 THE 9<sup>th</sup> INTERNATIONAL WINDS WORKSHOP (IWW 9)**

The 9<sup>th</sup> International Winds Workshop (IWW 9) will take place in the Washington DC, USA area during April 2008. The National Environmental Satellite Data and Information Service (NESDIS) of NOAA will host the Workshop and the local organiser is Jaime Daniels. The workshop is being co-organised by NESDIS, EUMETSAT and CIMSS, and is co-sponsored by the World Meteorological Organization (WMO), EUMETSAT, and NESDIS.

The Workshop is an opportunity to present advances and new ideas in this specialised field. We therefore encourage participation from all organisations operating meteorological satellites, as well as from data users and the science community. Presentations on operational and experimental wind retrievals from satellite imagery and their use for Numerical Weather Prediction, nowcasting or in climatological applications are welcome. In addition, research work on wind retrievals from active and passive microwave instruments is encouraged.

The Meeting is being organised by a joint Scientific Programme Committee: Mr. J. Daniels (NESDIS), Dr. D. Hinsman (WMO), Mr C. Velden (CIMSS/Co-Chair) and Dr. K. Holmlund (EUMETSAT/Co-Chair).

CGMS members are encouraged to approve the participation of their staff and to support participation of researchers by providing travel support and advertising IWW 9.

### **3 STATUS OF ACTIONS FROM CGMS 34**

The following recalls actions and recommendations and provides an update on status to the extent known to the rapporteur from IWWG to CGMS. Updates from other CGMS partners are welcomed during the session of Working Group II at CGMS35.

a) Recommendation 34.14: There should be a comparison of standard methods for the height assignment of AMVs with the new measurements from instruments on the A-Train (e.g. with the cloud lidar). Deadline: CGMS-35

At EUMETSAT an external study is being pursued that compares cloud heights from the Cloud-Aerosol Lidar and Infrared Pathfinder Satellite Observation (CALIPSO) satellite with cloud heights from Meteosat Second Generation using the operational multi-spectral IR height assignment methods.

b) Recommendation 34.15: There should be a comparison of the operational algorithms of all satellite wind producers for the height assignment of AMVs from clouds using a common data set from SEVIRI on MSG, and the same ancillary data. Deadline: CGMS-35

This recommendation is currently pursued by various CGMS agencies where scientists from CIMSS in Madison, Wisconsin have taken the lead in the intercomparison and EUMETSAT has provided the data.

c) Recommendation 34.16: An experiment should be performed to apply operational AMV retrieval algorithms to simulated images from high resolution NWP fields. Deadline: CGMS-35

This recommendation is currently being pursued by scientists from CIMSS, as part of GOES-R risk reduction activities in cooperation with ECMWF which provided the high resolution NWP fields (about 10 km). A poster was presented at the recent AMS/EUMETSAT joint satellite conference. It is also being addressed at EUMETSAT.

d) Recommendation 34.17: Considering the positive impact on re-analyses of re-processed AMVs it is recommended to complete the global reprocessing by including all geostationary satellites. Deadline: CGMS-35

This recommendation has been re-iterated in various fora, notably at the GCOS/AOPC. It is noted that both JMA and EUMETSAT have conducted a re-processing of AMVs from geostationary satellites in support of re-analyses. NOAA/NESDIS reported recently on a 20 year reprocessing of AMVs from AVHRR (at joint EUMETSAT – AMS Satellite Conference in Amsterdam in September 2007).

e) Action 34.20: NESDIS is invited to provide a paper to CGMS-35 on progress in novel studies on the height allocation of AMVs to layers. Deadline: CGMS-35

Paper has been provided and reveals some very interesting preliminary results, which were also presented at the recent joint EUMETSAT Meteorological Satellite Conference and the 15<sup>th</sup> American Meteorological Society (AMS) Satellite and Oceanography Conference.

f) Action 34.21: CGMS members operating imaging instruments on polar orbiters should consider producing AMV wind products over the poles and report to CGMS-35 on the investigations. Deadline: CGMS-35

NOAA/NESDIS jointly with CIMSS do produce such a product operationally from both MODIS as well as AVHRR instruments. EUMETSAT will also produce AMVs from AVHRR on Metop. The EUMETSAT work is conducted in close cooperation with NESDIS/CIMSS at the University of Wisconsin in Madison.

e) Action 34.22: All CGMS members producing AMV products to report on the use of the standard CGMS AMV statistics with a paper to CGMS 35. The paper should also present the co-location criteria currently in use. Deadline: CGMS-35 (feedback from 2 co-chairs)

The background to this action is that all CGMS Satellite Operators deriving winds from their geostationary satellites regularly provide monthly statistics for the comparison of Atmospheric Motion Vectors with collocated radiosondes. The following quantities are reported: mean speeds, mean speed difference (bias), mean vector difference, rms difference, normalised rms, number of collocations. In principle those statistics should be available through a WMO server, however this appears to be no longer the case. However, the standard CGMS statistics are made available through the regular mailing by the individual satellite operators.

The CGMS statistics had been introduced in the 1980's as the means of coordinated quality checking of AMVs. More recently the regular monitoring of AMVs at NWP centres became the main judge upon the quality and progress of AMVs. For instance, the NWP SAF uses NWP monitoring as their primary tool for evaluating AMV data quality. However, monthly "CGMS statistics" are produced too and are considered valuable for quick comparisons. While it is suggested that the standard CGMS wind statistics should be continued as an important and independent alternative to the NWP monitoring, it appears sensible to review the CGMS statistics and to ask CGMS satellite wind producers to report on:

- their wind statistic methods and provide any update if necessary
- their own use of their wind statistics
- their use of wind statistics from other satellite operators

The above action will be addressed by all satellite operators producing AMVs. Pertinent papers will be discussed in WG II at CGMS 35.

#### **4 OTHER TOPICS**

A new Web site for the International Winds Working Group has been developed by researchers at the Cooperative Institute for Meteorological Satellite Studies (I. Genkova and C. Velden). The url is:

<http://cimss.ssec.wisc.edu/iwwg/iwwg.html>

A new IWWG email list server has been set up by CIMSS. This list server replaces the WMO hosted server, which had become corrupted by frequent spam messages. The new (protected) email address is:

[iwwg@ssec.wisc.edu](mailto:iwwg@ssec.wisc.edu)

It is planned that the two Co-Chairs (C. Velden and K. Holmlund) will hand-over the chairmanship at the IWW 9. Two good candidates have already been approached and are willing to take over this task.

#### **5 CONCLUDING REMARKS**

CGMS 35 is invited to:

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- ii) providing some support to travel of relevant people from the research community,
- iii) advise on topics to be addressed at the 9<sup>th</sup> IWWG in the light of the actions and recommendations from CGMS 34 that are currently pursued