

SUMMARY OF THE FIFTH INTERNATIONAL WINDS WORKSHOP

The Fifth International Winds Workshop (IWW5) was held in Lorne, Australia from 28 February – 3 March 2000. The Workshop was organised jointly by the Co-operative Institute for Satellite Studies (CIMSS), EUMETSAT and the Bureau of Meteorology (BoM). BoM was responsible of the local arrangements providing an excellent venue and facilities.

The IWW5 was attended by 40 scientists from thirteen countries (Australia, China, Denmark, France, Germany, India, Japan, The Netherlands, Spain, Switzerland, Taiwan, United Kingdom and United States of America) and four international organisations (ECMWF, WMO, ESA and EUMETSAT). It is noteworthy that all satellite operators operationally producing Atmospheric Motion Vectors (AMVs) and most global NWP centres were present and that scientists from both the research and scientific community working in this field was also well represented.

The Winds Workshop provide an established forum for data providers, users and the science community to exchange experience and knowledge on the use and interpretation of the AMVs derived from multi-spectral satellite imagery data. It also provides an important way for the these communities to improve the use of the satellite data in NWP. The previous workshop (IWW4) maintained the high standard of the previous workshop and it was felt that the specific new achievements were; expansion of the winds user community, inauguration of high density winds, characterisation of the strengths (and weaknesses) of different Automatic Quality Control (AQC) procedures, demonstration of applications in nowcasting, comparisons of impact from direct assimilation of radiances vs. AMVs, expansion of the NWP impact studies, realisation of FGGE like data sets and the initiation of a dialogue with the community representing other kind of space borne instruments providing wind information. In the view of the success and importance of the previous workshops the expectation for the IWW5 were again high.

The Workshop was opened by Dr. M. Manton, Bureau of Meteorology (BoM, Australia) who pointed out the importance of the IWWs and encouraged the participants to use the opportunity of this workshop to further advance not only the extraction methodologies but also the use of the data. In a welcoming address from Dr. T. Mohr (EUMETSAT, Germany) presented by Dr. J. Schmetz underlined the importance of these meetings to the winds community pointing out the relevance of the participation of the user community. In this address also the importance of the workshops as a forum to interact with the Co-ordination Group for Meteorological Satellites was emphasised. Finally, in his opening address Dr. J. Le Marshall (BoM, Australia), re-iterated the importance of the derivation of AMVs from satellite imagery with a special focus on local weather prediction.

The Workshop proceeded with six plenary sessions. The first session on “Current Systems to Derive AMVs” gave in five papers an overview of the current status at the operational data extraction centres, high-lighting the latest improvements in extraction techniques and also the importance to converge the existing systems toward future new systems. Session two on “Verification and Objective Quality Analysis” contained seven papers showing the significance of continuous data monitoring as well as the importance to unify the reporting methodologies and AQC procedures. Session three on “Assimilation and Impact of AMVs in NWP” provided eight papers showing new evidence on the importance and usefulness of AMVs and other wind data derived with space borne instruments for different kind of weather patterns and different seasons. Session four “New Retrieval Systems” with five papers gave an overview of the future capabilities of the AMV retrieval schemes, not only depending on improved satellite data but also on improved methodologies. Session five on “New

Techniques” included four papers presenting ways to improve not only the derivation techniques for the future but the importance of rapid scans for Nowcasting as well as methodologies useful for limited areas. The sixth and final session on “New Space Borne Systems” included five papers that continued the dialog between the community representing the AMV derivation from imagery data from geostationary satellite and the community representing wind derivation with other space borne active and passive instruments. Of special interest is to note the importance of synergy between the different user communities in order to derive a homogeneous picture of the atmospheric flow.

Three working groups convened during the meeting. These were 1) Working Group on Methods (WG I), 2) Working Group on Utilisation (WG II) and 3) Working Group on Verification and Quality Indicators. The working groups continued the work started at the previous workshop (IWW4) to improve the derivation and utilisation of AMVs. They also incorporated the requests from CGMS 31 for analysis and recommendations.

The detailed reports of all six session and three working groups are provided separately on the following pages.

The Workshop concluded with a plenary session reflecting on the achievements of the workshop. It was felt that the high expectations of the workshop were met and that the workshops should be continued in their present form. The excellent local arrangements were specially noted with gratitude to D. Jasper and J. Le Marshall from BoM. The next Workshop will be again organised by the same scientific committee and it is planned for early 2002 in Madison, USA.

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