SESSION I

Current Systems to Derive Atmospheric Motion Vectors (AMVs)

Chairperson: Donald Hinsman

Session I included seven presentations on the current status and recent advances at the major centres involved with Atmospheric Motion Vector Processing. The session Chairman was D.E. Hinsman, Senior Scientific Officer for the WMO Satellite Activities Office. All major centres made at least one presentation. M. Tokuno described *Recent Advances to Experimental GMS Atmospheric Motion Vector Processing System at MSC/JMA*. He noted that JMA plans to adopt the automatic quality control schemes recommended at the Fifth International Winds Workshop. JMA has installed the EUMETSAT QI scheme and has been evaluating its AMVs. R.C. Bhatia informed the Workshop of the *Current Status of Quality of Operationally Derived INSAT-CMVs Quality, Details of Recent Improvements and Utilisation of Derived Products*. The recent changes included improved height assignment technique, better navigation of images, use of Limited Area Model forecast field in the quality control and minor bias adjustment of derived wind vectors based on statistical studies of error characteristics of CMVs with reference to the model generated forecast fields. K. Holmlund and J. Gustafsson presented papers that described the *Current Status of the EUMETSAT Operational and Future AMV Extraction Facilities* and *The EUMETSAT Reprocessing Chain: Status and Quality of Derived AMV Products*, respectively. With regard to the current operational extraction system, the authors presented the current status and quality of the operational wind products derived with multi-spectral imagery data in the visible, infrared and water vapour bands. With regard to reprocessing, the authors noted that EUMETSAT is supporting ECMWF's ERA-40 project by reprocessing satellite images from the pre-operational satellites Meteosat-2 and Meteosat-3, using present algorithms and systems. T. Johnson and M. Conner presented *Operational Considerations and Uses for Geostationary Satellite Derived Wind Vectors*. The authors noted that since 1999 the Air Force Weather Agency (AFWA) and the Fleet Numerical Meteorology and Oceanography Center (FNMOC) had cooperated with the University of Wisconsin-Cooperative Institute for Meteorological Satellite Studies (UW-CIMSS) in an effort to use geostationary satellite derived winds in an operational environment for forecasting and flight planning operations. J. Daniels informed the Workshop on the *Status and Development of Operational GOES Wind Products at NOAA/NESDIS*. The paper summarized work with rapid scan winds, 3.9 µm cloud-drift winds, clear-air water vapour winds, GOES-12 winds, and the encoding of the winds into BUFR. The final presentation by G. Dengel and C. Velden provided *an Update on UW-CIMSS Satwinds Derivation Research and Development* in particular information concerning the status of winds algorithm, its current users, planned development and projects.

The Workshop participants noted the tremendous advances made at the major centres since the Fifth International Winds Workshop. The participants also noted its previous discussions and recommendations had had a marked impact in helping to guide the advances made at the processing centres. Thus, it agreed that the Workshops not only served as an international forum for the exchange of information on research and operational processing, but also as a mechanism to develop international recommendations for research and operational processing improvements. Such recommendations could be used at the individual centres as well as by the satellite operators, as appropriate.

Donald Hinsman, Chairperson of Session I
World Meteorological Organization, Geneva