SESSION II

VERIFICATION AND OBJECTIVE QUALITY ANALYSIS

Chairperson: Masami Tokuno

Session two covered verification and objective quality analysis of Atmospheric Motion Vectors (AMVs) and new winds from QuickScat.

The first presentation by François Lalaurette presented the integrated satellite wind monitoring report of the NWP SAF to enable the improvement of both derived satellite winds and their treatment within NWP models. Most signatures were found to be consistent when the comparison is made with respect to both NWP models, i.e., stronger low level winds in stratus area and lower high level winds in the jet stream. Participation from other NWP centres was called for.

The presentation by Ken Holmlund reported a development to try to combine the Quality Indicator scheme of EUMETSAT and the auto-editor/recursive filter analysis of CIMSS in order to derive an even better approach for AQC. The impact of the combined scheme during NORPEX-98 high-density wind fields derived with both GOES and GMS imagery data was better than of either scheme alone.

The paper by Simon Elliott presented an approach for parallel quality control of EUMETSAT wind products, with and without the use of forecast wind field, separately, with each wind. Wind vectors with both sets of quality control value are disseminated via GTS BUFR code.

François Lalaurette presented their monitoring of GOES, METEOSAT-7 and GMS-5 AMVs against model first guess and co-located platforms (Aircraft and Radiosonde). He showed that the GOES error signature differs from that of the other satellites due to the auto editor processing. An underestimation of satellite wind speeds was confirmed both with reference to the model and other in situ data.

Ad Stoffelen presented the methodology of assimilating QuickScat inverted winds in numerical weather prediction. He showed that the presented methodology is better than using radar cross-section although significant advances are still required.

P. N. Khanna presented recent improvements in the quality of INSAT derived CMWs by introducing their new scheme and their use in numerical model forecast. Improved data assimilation of CMWs in their Limited Area Model being run operationally at IMD shows positive impact on the Model forecast.

Garrett Campbell presented the results of combing existing stereo-height software from CIRA/CSU with the fully automated target extraction methodology developed at EUMETSAT. He showed that the results from the 5 km resolution IR observations are just as useful as the analysis of 2.5 km visible data. He also showed discrepancies for the derived heights for some optically very thin clouds as well as for some opaque clouds. These inconsistencies can used to improve both algorithms.

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