COMPARISON OF OPERATIONAL AMV ALGORITHMS USING THE SAME MSG AND ANCILLARY DATA

In response to CGMS recommendation 34.15

The purpose of this paper is to report the current status of the CGMS recommendation 34.15 at EUMETSAT. The recommendation reads: 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.

**Comparison of operational AMV algorithms using the same
MSG and ancillary data**

1 INTRODUCTION

The purpose of this paper is to report the current status of the CGMS recommendation 34.15 at EUMETSAT. The recommendation reads: 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.

2 DESCRIPTION OF THE STUDY OBJECTIVE

The main objective of this study is to compare 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. It has been decided at the last International Winds Workshop in April 2006 that CIMSS and NESDIS shall get the output files from all the participants and do the comparisons. The role of EUMETSAT is limited to initiate this action together with NOAA NESDIS and CIMSS and to provide the MSG data set. Then EUMETSAT provides the output data from the EUMETSAT operational algorithm to CIMSS, like other participants.

After several iterations, it has been decided to split the study in two different phases.

In the first step, the participants shall apply their complete AMV algorithm to the triplet of SEVIRI images using the ECMWF as ancillary data. That means they should use their own tracking scheme to detect AMVs. The AMVs extraction is done from the VIS(0.8µm), IR(10.8µm), IR(13.4µm), WV(6.2µm) and WV(7.3µm) spectral bands, at first using the usual participant's forecast profile and next, using the ECMWF forecast model data as provided by EUMETSAT.

In a second step, all the participants shall apply their height assignment algorithms exactly the same target areas (same location, same target box size, etc.). The exact location of the AMVs should be provided by EUMETSAT.

Only the first step is described in the present paper.

3 CURRENT STATUS

EUMETSAT has selected a triplet of images coinciding in time with a CALIPSO's overpass. The images and the corresponding forecast model data (profiles) are made available from an anonymous ftp: ftp://ftp.eumetsat.int/pub/OPS/out/AMV/

The date for the AMV derivation is: 18 August 2006, from 12:00 to 13:00 UTC.

Participants shall use the 12:15 UTC image for AMV height assignment.
Image radiance files are available both in native format and also in HRIT format, in order to accommodate a specific request from JMA.

In addition to EUMETSAT, CIMSS, NESDIS, JMA, KMA, CPTEC and SAFNWC (HRVis winds only) intended to participate in this CGMS action.

EUMETSAT provided to CIMSS the AMV results extracted in the Vis0.8, WV6.2, WV7.3, IR 10.8 and HRVis channels, respectively, using the operational environment.