



IWW14 Working Group Report

- WG2: Data Assimilation
 - Chaired by Iliana Genkova and James Cotton



CGMS High Level Priority Plan

HLPP 3.2.1

Establish commonality in the derivation of AMV products where appropriate (long-standing goal).

- Common QI from the 3rd AMV Inter-comparison
- NWP users appreciate the idea and will explore the Common QI
- We encourage AMV producers that it is provided along with current QI1 and QI2
- NWP centers support the AMV inter-comparison efforts and would like to see a number of case studies to be examined in addition to existing statistical evaluations



High Resolution Winds

CGMS HLPP 3.2.2

Continue research into improved derivation and assimilation of high resolution winds for use in high resolution data assimilation and nowcasting

- Potential recommendation for HRW producers to work within the NWP community - global and mesoscale domains, to determine optimal configurations.

Improve the assimilation of HRW

- Need to agree on optimal configuration for regional models
- Use of NWC SAF software
- **Action item:** MetOffice, DWD, MetNorway, to coordinate testing different target boxes, temporal step, etc through O-B statistics and impact studies, and report at next IWG; Preliminary results could be shared via general winds email list or NWP winds email list
- Consider extension of NWC SAF software capability to process polar data



Data Latency

**A45.02 to CGMS space agencies, IROWG, IPWG, IWWG, ICWG, ITWG:
CGMS**

International Science Working Groups and CGMS space agency members to formulate science questions, including the impact of data latency, in view of the 7th Impact Workshop in 2020 (ref. CGMS-45-WMO-WP-02) and provide these to Iriishojgaard@wmo.int

- Aim at zero latency for NWP (as fast as you can deliver)
- Observations at end of assimilation window have the most impact
- We propose US Polar winds product to improve its latency : 1) optimized processing schedule; 2) use two images instead of triplets



New BUFR template

Progress towards new template

- DWD, Environment Canada, MetOffice, ECMWF, NCEP reported progress on use of new BUFR template
- At the moment NESDIS plans on parallel (old and new BUFR) dissemination until April 2019. Some NWP centers are unlikely to have switched to using new BUFR in their operational systems

RECOMMENDATION to AMV producers: Provide heritage BUFR dissemination at least until July 2019

- NWP users aim the switch to new BUFR use to be completed by next IWG (provisional on AMV producers making available test data sets about 6 months prior to next IWWG)

IWW12.4 - IWWG community to agree a new standard BUFR template, which when rolled out should be adopted by all producers.



NWP SAF activities

DWD AMV-lidar height monitoring will be added to NWP SAF report

- Agreed this will be a useful addition - happy with monthly plots as currently planned

AMV Monitoring Analysis Report are useful

- NWP centers who do not have time to investigate features in more detail benefit from the report
- Producers: problem to find time to assist investigations, but can help focus their efforts.
- Some features (action item) are easy to fix (e.g. VIIRS square coverage) but most are more complex
- DWD AMV-lidar matchups will support case studies, e.g. Indian Ocean low level



Satellite/derivation changes

GOES-13 to GOES-16 transition

- Overlap proved to be NOT sufficient for NPW users to evaluate data and include in their operational chains. As a result most NWP centers have experienced 4 months (and counting) data gap in their DA systems.
- Impact studies are being conducted – Environment Canada, ECMWF, NCEP

Reinstate recommendation from IWW13

- Recommendation to AMV producers: To provide a 9-month overlap period when transitioning to a new generation of satellite and for major derivation changes
- For like-for-like satellite changes 3 month overlap period is still considered sufficient.
- Communication of upcoming changes - use IWWG list



Metop-A/B/C

“Tristar” configuration for tandem Metop-A/B/C is best for both AMV generation and to maximize ASCAT scatterometer coverage

3D winds

The group recognized the importance of 3D wind profiles and the new products planned e.g. from IASI

Preparations continue in readiness for Aeolus and all centres look forward to a successful launch and obtaining real data



Extended Abstracts and webpages

Important to maintain abstracts/proceedings

- Still useful as a lot of work would otherwise be unpublished or not citable
- Abstracts are useful record of progress made on AMVs over the years
- Iliana Genkova and John Le Marshall have offered help chase/collect

Website

- Suggest to add AMV publications tab and link to Aeolus publications on the ESA pages

How for NWP centers to informally share results/issues

- NWP co-chairs to consider suitable place e.g. IWWG NWP email, google group
- Lots of new data sets coming up



Workshop

- Appreciation for KMA's great job hosting the event and organizing the two tours
- Clash with scatterometer IOVWST meeting was unfortunate and we should try and avoid this happening in the future
- Thanks go to 14IWW co-chairs for a successful workshop

See you all in 2020 in the Netherlands!