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# IWWG 12

***WG2: Data Assimilation***

***Chairs: James Cotton and Niels Bormann***



# Introduction of GOES-R algorithm for current GOES AMVs

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- NESDIS will apply GOES-R algorithm to current GOES operationally.
- Tracking and height assignment changes.
- Plans for long overlap period appreciated by the group (Oct 2014 – July 2015).

**Recommendation to NESDIS: To initially disseminate current GOES AMVs derived with the nested tracking algorithm in the old BUFR sequence in order not to delay the parallel dissemination.**

**Action on Sharon Nebuda: To make available results of the evaluation of the AMVs derived with the GOES-R algorithm through the NWP WG email list.**



# GOES-R algorithm and better error characterisation

- **GOES-R algorithm offers new options for quality control and error characterisation, from nested tracking as well as use of new height assignment algorithm. → [Sharon Nebuda's report](#)**

**Action on NESDIS: To make an offline test dataset of SEVIRI AMVs processed with the GOES-R algorithm available in ASCII, including all available meta-data (from nested tracking and with information on cloud parameters), covering several months within the past year (two seasons).**

**Recommendation on NWP centres: To evaluate the meta-data available from the GOES-R algorithm for QC and AMV error characterisation.**

**Recommendation on all winds producers: To make available further information characterising the AMV derivation for enhanced QC and error characterisation (e.g., information on the correlation surface, contrast, etc).**



# Representative level/layer for AMVs

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- **Several studies reported benefits from re-assigning the AMVs or using layer averaging.**
- **No generally applicable methodology established yet.**
- **Height attribution is affected by uncertainties/biases in cloud top pressure estimation as well as “representative level/layer” concept.**

**Recommendation to NWP centres: To further investigate what is the most representative layer/pressure for AMVs, using available data sources (incl. lidar, stereo heights, simulation studies, etc).**

**Recommendation to the Winds Working Group: To use the intercomparison dataset and the collocated lidar/AMV dataset to investigate in greater detail height assignment issues, in particular in the tropical region.**



# MISR winds

- The group strongly acknowledged the progress made regarding the provision of a MISR test dataset, and the preparations for the NRT data dissemination.

**Recommendation to JPL/NASA: To make the NRT MISR winds available on the GTS.**

**Recommendation on NWP centres: To make routine monitoring statistics for the NRT MISR winds publically available online.**

**Action on centres working with MISR winds: To share results and experiences through the NWP WG email list.**



# Other AMV topics

## New BUFR sequence:

- NWP WG members do not require information on the forecast data used in the processing (e.g., wind shear).

## Reprocessed AMVs:

- Group appreciated the progress in the provision of reprocessed data.
- Consultation with re-analysis groups required whether reprocessing with two algorithms (“own” and common algorithm) is desirable.

## Motion information from geostationary hyperspectral IR:

- CIMSS will produce winds derived from AIRS retrievals.
- Otherwise, the group is not aware of any on-going studies in this area.
  - Open question: Radiance assimilation vs using AMVs derived from humidity retrievals.



# Scatterometer activities

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- **Scatterometer issues were discussed in a separate meeting, proposing further work on:**
  - **How to address timing issues and ambiguity removal during 3DVAR assimilation.**
  - **Evaluation of scale representation.**
  - **Evaluation of speed calibration.**
- **Good attendance from scatterometer community noted – IWWG seen as complementary activity to International Ocean Vector Winds Science Team.**

**Recommendation to relevant CGMS agencies: to make HY-2A and RapidScat scatterometer data available to the international community in NRT.**



# Aeolus

- **A level 2 processor is being developed by ECMWF and available to interested centres.**
- **Several centres have plans to use the level 2 processor in their systems.**
- **NRT level 2 data may get produced by KNMI.**

**Action on NWP centres: To provide feedback on plans to process the level 1B data locally, and to communicate format requirements to Anne-Grete Straume-Lindner (ESA). ESA format vs BUFR.**





# Workshop feedback

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- **It has been good!**
- **Poster and discussion sessions are appreciated.**
  - **Need to make sure recommendations arising from discussions are included in the Workshop report.**

**Suggestion to provide posters as hand-outs and make electronic versions available on the IWWG web-site.**

**Participation from cloud retrieval community was considered very useful and should be continued.**