# IWW13 Charge to Working Groups

Plenary Discussion topics on Friday

- intercomparison
- update to OSCAR wind requirements

# 3rd AMV Inter-comparison Study

## *WG1 to work*

- For the 3rd AMV inter-comparison study it is proposed to use an image triplet from JMA's Himawari-8/AHI, the first of the next generation series of geostationary imagers with higher spatial resolution, higher temporal resolution, and more spectral channels.
  - The new spectral channels will bear new information on cloud microphysics
  - The higher temporal resolution will be useful to better understand the characteristics of the tracked cloud.
  - IWWG will select image triplets from H-8/AHI golden day (August 19, 2015) data that the ICWG intends to use for its next cloud inter-comparison study
    - Cloud products well studied and characterized by ICWG members
    - Two typhoons with a multitude of different cloud regimes
    - CALIPSO data/products, collocated to H-8/AHI data, are available for validation

**Discuss**

- ❑ **Use of image triplets with 10 minute and 2.5 minute temporal resolution**
- ❑ **Which bands to use in experiments**
- ❑ **Algorithm configurations to use in each experiment (prescribed vs. that used by each satellite operator)**
- ❑ **What else should be done? Identify specific scenes to look at and study?**
- ❑ **How do we engage the ICWG as part of this?**
- ❑ **Lessons learned from 2nd AMV intercomparison study?**

# IWW13 Charge to Working Groups

## AMV derivation

- to average component winds or not?
- settings for high resolution winds
- QI formulation for synoptic vs meso AMVs
- backwards compatibility of software
- ideas for collaboration with ICWG community
- use of IWWG wiki to share e.g. Details of QI, height assignment approaches etc.
- consistency of products
- modular approach
- ideas for information on accuracy of tracking step
- Stereo heights...(MISR follow-on)

# IWW13 Charge to Working Groups

## Winds in NWP

- investigating use of new quality information
- Opportunities to improve QC and assignment of observation errors to AMVs
- use of high resolution winds
  - What are NWP requirements to improve high impact weather forecasts?
  - Nowcasting needs, benefits
  - Discuss issues, limitations, challenges? How to resolve, mitigate? What Further work needed?
  - Correlated errors (spatial & temporal)
  - Layer obs operator
  - Situation dependent errors
  - Thinning/superobbing
- recommendations on notification and overlap for changes (new satellites / derivation / BUFR)
- experiences with new datasets – anything to discuss/investigate further....

# IWW13 Charge to Working Groups

Investigating sources of error

- use of lidar cloud top heights
- simulated imagery studies
- NWP SAF-type investigations
- Dataset intercomparisons
- comparisons to stereo heights
- other ideas?

# IWW13 Charge to Working Groups

## Hyperspectral winds

- winds vs radiance assimilation
- derivation approaches....
- Consider support for missions aimed at meeting need for 4D winds (DWL, etc)

# IWW13 Charge to Working Groups

Winds in climate

- gaps in reprocessed datasets
- any climate investigations ongoing using satellite-derived wind data?

# *Establish commonality in the derivation of satellite products*

## *WG1 to work*

1. **CGMS High level priority plan 2014-2018**
   **-> consistent products (WG1)**

   *3.2 Establish commonality in the derivation of satellite products for global users where appropriate (e.g. through sharing of prototype algorithms);*

   *3.2.1 Infer guidance from the ongoing intercomparison of AMV products for the future developments towards consistent AMV products. Consider in the guidance the future perspective of having the geostationary ring populated with 16-channel imagers.*

   – not necessarily same products (friendly competition is beneficial)
   – continue sharing of code, intercomparisons and discussion
   – strive towards more commonality – similar approaches based on same science

# IWW13 Charge to Working Groups

Use of NWC SAF software

- how being used...
- how it could be used
- Any feedback / suggestions

# IWW13 Charge to Working Groups

## NWP SAF and OSI SAF

- any feedback on winds monitoring and analysis reports
- any feedback on scatterometer software or products

# IWW13 Charge to Working Groups

Use of IWWG wiki

- BUFR / NetCDF details
- Links to algorithm information, general, QI formulation, height assignment.....
- HR winds

# IWW13 Charge to Working Groups

## Feedback on IWW13