

# 2016-11-03 WG3 meeting in Granada (Spain)

## Meeting agenda:

10:00-10:30 Present state of WG 3 tasks and reports of past WG3 meetings in this grant period with discussion: J. Helmert and A. Sensoy

10:30-11:00 Evaluation of the WG3 questionnaire: J. Helmert

11:00-11:30 Snow observation issues - Zero snow depth reports, exchange of national snow obs: All

- Presentation: Recommendation on International Exchange of Snow Data, for the WMO CBS-16 session: S. Pullen
- Presentation: Snow depth observations availability and snow DA OSEs results: P. de Rosnay
- Presentation: Statistics on snow reporting practice in Europe: M. Lange

11:30-12:00 Presentation on the community snow model and numerical simulations of the microwave emission of snow packs with discussion: Gh. Picard

12:00-12:30 *Break*

12:30-12:45 Review of snow models, hydrological models, and DA systems: All

- Presentation: Mailing list for the international land DA community: S. Pullen

12:45-13:00 WG contributions to workshops next year: Remote Sensing (Bern), Melting snow and ice data (Reykjavik), Snow data assimilation (Offenbach)

13:00-13:30 Discussion of tasks for next grant periods: All

13:30-14:00 Contributions from WG3 members (detailed agenda below) and final discussion - consider objectives of the COST ES1404

- Advance the application of snow data assimilation in European NWP and hydrological models and show its benefit for weather and hydrological forecasting as well as other applications.
- Establish a validation strategy for NWP, hydrological and climate models against snow observations and advance its implementation within the European modeling communities.

## Detailed agenda for presentations:

11:00-11:10 Presentation: Recommendation on International Exchange of Snow Data, for the WMO CBS-16 session: S. Pullen

11:10-11:20 Presentation: Snow depth observations availability and snow DA OSEs results: P. de Rosnay

11:20-11:30 Presentation: Statistics on snow reporting practice in Europe: M. Lange

12:30-12:35 Presentation: Mailing list for the international land DA community: S. Pullen

13:30-13:45 Presentation of the SnowHow-Project: Th. Skaugen

Poster: Visual and Statistical Analysis of Snow Cover and application in NWP and hydrological models: E. Shevina

## Useful links to tables of the EWGLAM/SRNWP Expert team on surface processes:

DA: <http://www.cnrm-game-meteo.fr/aladin/spip.php?article179&lang=en>

Model: <http://www.cnrm-game-meteo.fr/aladin/spip.php?article181&lang=en>

## Minutes from the meeting:

- Review of snow model properties: first internal in COST, later for external snow models, synergies with SRNWP (<http://www.cnrm-game-meteo.fr/aladin/spip.php?article181&lang=en>) - Responsibility: J. Helmert (*Snow model comparison*)
- Review of hydrological models: first internal in COST, later for external hydr. models - Responsibility: A. Sensoy (*Hydrological model comparison*)
- Next phase of the WG3 work focuses on improving snow data assimilation: Further discussion about objectives at DA workshop in Offenbach; Connection with SRNWP ( <http://www.cnrm-game-meteo.fr/aladin/spip.php?article179&lang=en> and *Snow DA-system comparison*)
- Ongoing evaluation of the (still open) questionnaire: Publication is useful, check agreement of authorship of contributors
  - Possible whitepaper about the results of the reviews and questionnaire

- Zero snow depth: Recommendations: Reporting of snow depth and snow cover in all regions that experience snow.  
Reporting of zero snow depth capable of doing so four times a day (best case). Reporting of snow depth on the GTS. Problem, regional guidelines sometimes inconsistent with CBS guidelines.
- GTS reports of snow depth at different times of the day show the problems with inconsistent zero snow depth reports and missing observations in year to year comparisons.
- Reporting gaps for snow obs over GTS in several areas such as USA and China. Progress in Europe for Bulgaria. Observing system experiment results show that the combination of data (SYNOP over GTS, national networks and IMS snow cover) call contribute to improve NWP forecasts.
- New mailing list for the land surface DA community [land-surface-da@metoffice.gov.uk](mailto:land-surface-da@metoffice.gov.uk) - Please subscribe by sending an e-mail to [major.domo@metoffice.gov.uk](mailto:major.domo@metoffice.gov.uk) with body "subscribe land-surface-da"
- SMRT active/passive microwave model from an ESA initiative as an modular flexible system written in python. SMRT includes several MW emission models and is therefore useful for intercomparison. Code release is in Spring 2017.

SMRT Tutorial workshop in 2017 as support action of the WG3 - demand for funding of 10 colleagues

Community snow model as result of an EGU2016 splinter session. Aim is to easy implement new processes with modular and flexible (python?) code including state-of-the-art parameterizations. Roadmap of this development goes beyond the COST action but WG3 could help to distribute information about this initiative.

- National SnowHow project in Norway - improved snow modelling for hydrological applications using more physical processes in the model and observations.
- Participation to next meetings: EARSL (one colleague) and DA workshop in Offenbach (invitation follows soon)
- Discussion about the revision of the WG3 objective of 'finding new method for combining observations'. P. de Rosnay: depending on the objectives it might be more about improving our observation usage. For some applications it is more relevant to develop a priori data fusion (e.g. to produce snow products), for others applications (eg NWP) it is more relevant to assimilate satellite and in situ products in the same DA system.

This issue will be discussed in more detail during the DA workshop in Offenbach.