ISSI International Team "Land Data Assimilation: Making sense of hydrological cycle observations"

Agenda, Meeting 1, 2-4 February 2010, Bern, Switzerland

Attendance: William Lahoz, Tove Svendby (NILU, Norway); Yann Kerr (SMOS; U. Toulouse, France); Pavel Sakov (NERSC, Norway); Valentijn Pauwels (U. Ghent, Belgium); Olivier Talagrand (LMD, France); Paul Houser (CREW/GMU, USA); Gabriëlle De Lannoy (CREW/GMU, USA & U. Ghent, Belgium); Jean-François Mahfouf (Météo-France, France); Nils Gustafsson (Met.no, Norway & SMHI, Sweden); Chris Schmullius (U. Jena, Germany); Jörg Schwinger (U. Köln, Germany); Kari Luojus (FMI, Finland); Lennart Bengtsson (ISSI); Michael Berger (ESA).

Day 1 (2 Feb): Focus on SMOS data

Arrival 9.00-9.30 am

9.30-9.45 am: Introduction to ISSI (M. Falanga)

9.45-10.00 am: Introduction to the ISSI International Team and goals (W. Lahoz)

10.00-10.15 am: Introduction of team members (All)

Format: a 20 minute presentation by the Lead followed by a discussion

10.15-11.15 am: SMOS status and capabilities (Y. Kerr)

11.15-11.30 am: Break

11.30 am – 12.30 pm: Access to SMOS data (simulated and/or actual) (Y. Kerr)

12.30-1.30 pm: Lunch

1.30-2.30 pm: Cal-val activities for SMOS data (Y. Kerr)

2.30-3.30 pm: Type of SMOS data for possible use in assimilation (radiances, derived products) (Y. Kerr)

3.30-3.45 pm: Break

3.45-4.45 pm: Links between the atmosphere, land and biosphere, link to climate (C. Schmullius)

4.45-5.15 pm: Discussion of SMOS data assimilation activities within the ISSI partners, including collaborations, visits, proposals (more discussion on these issues at the end of day 3)

5.15 pm: End of day 1, ISSI reception, back to hotel and evening meal

Day 2 (3 Feb): Focus on questions to be addressed to fulfill SMOS potential using data assimilation (see proposal)

9.15 – 9.30 am: Aims of discussion (W. Lahoz)

Format: a 20 minute presentation by the Lead followed by a discussion

9.30 – 10.30 am: What type of observations do we assimilate: retrievals, radiances, thinning (Lead, P. Houser)

10.30-11.00 am: Break

11.00 am -12.00 noon: What are the observation errors: Gaussianity, bias (Lead, V. Pauwels)

12.00 noon-1.00 pm: Lunch

1.00 – 2.00 pm: What models do we use, coupled, uncoupled, link to NWP (Lead, J.-F. Mahfouf)

2.00-3.00 pm: Developments in assimilation theory, variational methods, ensemble methods, hybrid methods, with reference to the land (Lead O. Talagrand)

3.30-3.30 pm: Break

3.30-4.30 pm: What are the model and analysis errors, and how to represent them and evaluate them (Lead, O. Talagrand)

4.30-5.00 pm: Wrap-up (W.A. Lahoz)

5.00 pm: End of day 2, back to hotel and evening meal

Day 3 (4 Feb): Focus on a forward look: developments in land data assimilation, collaborations and future work for project partners

9.15-9.30 am: Aims of day's discussion (W. Lahoz)

Format: a 20 minute presentation by the Lead followed by a discussion

9.30-10.30 am: Use of hydrological cycle observations (satellite, in situ, GlobSNOW; validation) for, e.g., cal-val, assimilation, testing models (Lead, J.-F. Mahfouf)

10.30-11.00 am: Break

11.00 am – 12.00 noon: What assimilation algorithms do we use, e.g., hybrid ensemble methods (Lead, P. Sakov)

12.00 – 1.30 pm: Lunch

1.30 – 2.30 pm: Developments in land surface models, focus on soil moisture and snow; weaknesses (Lead, P. Houser)

2.30 – 3.00 pm: Break

3.00-4.00 pm: Future work: collaborations, networking, papers (review, other), proposals (national funding, EU funding, ESA-CCI calls, other calls), workshops (ISSI), summer schools (Svalbard, elsewhere) (Lead, W.A. Lahoz)

4.00-4.30 pm: Wrap-up and suggestions for next meeting (Lead, W.A. Lahoz)

4.30 pm: End of day 3, back to hotel and evening meal, or journey home