1. Evaluating the performance of SURFEXv5 as a new land surface scheme for the ALADINcy36 and ALARO-0 models

A paper is now published in GMD: Hamdi, R., Degrauwe, D., Duerinckx, A., Cedilnik, J., Costa, V., Dalkilic, T., Essaouini, K., Jerczynki, M., Kocaman, F., Kullmann, L., Mahfouf, J.-F., Meier, F., Sassi, M., Schneider, S., Váňa, F., and Termonia, P.: Evaluating the performance of SURFEXv5 as a new land surface scheme for the ALADINcy36 and ALARO-0 models, Geosci. Model Dev., 7, 23-39, doi:10.5194/gmd-7-23-2014, 2014.

2. Testing the EKF data assimilation scheme

Some "microscopic" oscillations are detected when preparing the forcing files for the offline run with SURFEX, these oscillations are very small but they do affect the computation of the Jacobian matrix for the EKF. Some solutions are under investigation.

3. Evaluating the performance of SURFEXV7.2 within cycle CY38T1

* Test with ALADIN over Morocco for January and July 2012.
* Test with ALARO over LACE domain during a Flat rate stay in Prague December 2013.

To run ALARO (using the pTKE scheme) with SURFEX the issue of the exchange coefficient should be solved. The solution that was proposed for CY36T1 is now introduced in this new cycle interfacing the average drag coefficient PCD calculated from SURFEX and to initialize its value for the first time step. This solution will be available for the next version of SURFEX V8.

4. Future work

Investigating the oscillation problem.
Coupling between the new turbulent scheme of ALARO named TOUCANS and SURFEX.
Introducing the STAEKF within the SODA platform.