

Minutes of the PT AEVUS Meeting in Offenbach on March 21st, 2019, 09:00 11.00

Participants: E. Bucchignani (CIRA), M. Milelli (ArpaP), J.-P. Schulz (DWD), A. Will (BTU), M. Varentsov (RHM), Inna Rozinkina (RHM), V. Garbero (ArpaP), Jean-Marie Bettems (MeteoSwiss & WG3bC) Verena Bessenbacher (ETHZ), Uli Schattler (DWD), Y. Levi (IMS) plus other participants.

TOP 1. Introduction

- E. Bucchignani welcomes the participants, gives an overview about the status of the PT and gives overview of the agenda.

TOP 2. Presentations

- M. Varentsov showed a number of representative cases for detailed verification studies, prepared the observational data for these cases (including the data for MTP-5 temperature profilers) and made a comparison between an older model version (5.0, default and tuned settings) vs recent 5.05_urb1 for two of these cases. He highlighted the presence of two important bugs: the additional heating in rural areas and inconsistent behavior of the skin temperature scheme.
- V. Garbero showed ARPAP results over a domain including Piedmont region using also the skin temperature scheme. The problems of inconsistency between simulations with TERRA_URB on and off in rural areas is still present, since the temperature is affected by switching on TERRA_URB also in rural areas.
- E. Bucchignani showed CIRA results over a domain including Campania region using also the skin temperature scheme. The temperature is affected by switching on TERRA_URB also in rural areas. Simulation with the skin layer temperature scheme decreases the amplitude of the diurnal cycle.

TOP 3. Open discussion about the following topics

- Designation of a code responsible (administrator): Jan- Peter Schulz has been designed as code owner.
- Definition of a proper strategy to solve the technical issues: some technical issues will be solved by U. Schattler and J-P. Schulz in the next two weeks. Probably the problem of heating in rural areas and skin temperature are connected. Debugging

will be performed over the version 5.5, since changes towards the 5.6 are not dramatic. E. Bucchignani/P.Mercogliano will contact Xavier Lapillone in order to port the version on GPU after that major problems are solved. A. Will strongly recommends the usage of OPEN MPI.

- Request of extension of PT AEVUS: All the participants agree about a PT extension until September 2019. E. Bucchignani will ask the task leader P. Mercogliano to make a request for the extension asap.
- New PT AEVUS2: a follow-up project will be drafted before the next COSMO GM (September 2019). It should be conceived in order to be focused on ICON-LAM.
- Possible cooperation with ECMWF: Gianpaolo Balsamo gave a keynote lecture during ICCARUS. He is interested in urban parameterizations, since ECMWF is also developing a (simple) urban parameterization. In particular, he is looking at ways of improving the key external parameters needed. All the participants agree in fostering this possible cooperation, in particular in order to improve the urban parameter map.
- The next PT AEVUS meeting will be at the Ghent University on May 24th 2019 and will be organized by Hendrik Wouters.

For more detailed information, the presentations are available at <http://www.cosmo-model.org/view/repository/wg3b/AEVUS> .