Comparing ICON model output with reanalysis data

Reanalysis products form a prominent reference base for GCM simulations since they provide a consistent 3-dimensional state of the atmosphere based on observations. However, when comparing ICON model output, which is provided on sigma-height levels, with reanalysis products, which is mostly provided on sigma-pressure levels, one can step into several pitfalls. Most of these pitfalls originate out of the transformation of the vertical coordinate system. In the slides given below, which were presented in the AES seminar on the 13.12.2021, some of those pitfalls are described based on a comparison of ICON output with ERA5 reanalysis data. Nevertheless, the issues regarding the transformation of the vertical coordinate system and the transformation of vertical velocity basically apply to all model data provided on sigma-pressure levels, including most reanalysis products.

In case of questions, please contact Henning Franke: henning.franke@mpimet.mpg.de

Please find the slides here: franke_aes_seminar_20211213_v2.pdf

From:
https://wiki.mpimet.mpg.de/ - **MPI Wiki**

Permanent link:
https://wiki.mpimet.mpg.de/doku.php?id=analysis:pot_pourri:comparing_icon_model_output_with_reanalysis_data:start

Last update: **2024/03/22 15:33**