Max-Planck-Institut für Meteorologie

Max-Planck-Institute for Meteorology

ICON Modelling Framework

License Agreement

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represented by

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Preamble

In recent years The Deutscher Wetterdienst (DWD) and The Max Planck Institute for Meteorology (MPI-M) have jointly developed the comprehensive modelling framework ICON (ICOsahedral Nonhydrostatic) for numerical weather prediction, climate simulation and process studies (ICON modelling framework).

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Name: ICON modelling framework

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Short description: Non-hydrostatic numerical model for the simulation of the amosphere, the ocean and the surface/soil.

Access: The ICON-Software is accessible to the Licensee via a password protected server at MPI-M

The ICON modelling framework is built up from several components (e.g. model data) which can be configured to obtain different model configurations. Depending on the version of the ICON modelling framework, different model configurations are provided to the Licensee.

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The ICON-Software consists and makes use of components / configurations being jointly developed and provided by the MPI-M and the DWD (see Section 2.1) as well as various other third party components (see Section 2.2) as set out in detail in the following sections.

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The ICON modelling framework is built up from several components which can be configured to obtain different model configurations. The following configuration has been developed by the MPI-M and DWD as part of this license.

- Atmosphere: Dynamical core and physics packages
- Ocean: Dynamical core, physics package and ocean-biogeochemistry , wrapper for AWI-Sea-Ice model
- Land: physics packages and land biogeophysics and biogeochemistry.
- Grid generator
- MTIME
- Grid Tools by DWD
- CDI
- ESM Scripting Environment

2.2. Third party components

The ICON-Software makes use of the following third party components:

- AWI Sea Ice model (modified GNU GPL v2)
- ECMWF Routines (See appendices)
- YAC (GNU GPL V3)

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9. Appendices

Reference list:

- Crueger T. et al. (2018). ICON-A, the atmosphere component of the ICON Earth system model: II. Model evaluation. Journal of Advances in Modeling Earth Systems, 10. https://doi.org/10.1029/2017MS001233

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