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New climate models: The ICON modelling system

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ICON is a joint project of the Max Planck Institute for Meteorology and the German Weather Service with the goal to develop a new generation of general circulation models for the atmosphere and the ocean in a unified framework, for climate research and operational numerical weather prediction. These models solve the respective set of equations on icosahedral grids and share the technical infrastructure. The purpose of this poster is to give an overview of the goals of the ICON projects and to illustrate the ICON models developed, and to outline the equations and discretization methods used in the ICON GCMs for the atmosphere and the ocean. Further information will be presented on the software aspects relevant to HPC and on the testcases used to evaluate the models.