

High resolution simulations with ICON: lessons learned

Monday, 24 September 2018 10:30 (30 minutes)

A set of gems is making its round: the diamond simulations are aiming for gaining experiences in high resolution global modelling. The aim is to reach, in the beginning, 40 days of roughly 2.5 km grid size global simulations.

This type of simulations poses a couple of challenges: usable boundary conditions, output data size, output data handling, sustainable computer resource usage, and a serious amount of patience for everybody involved.

For setting up and initial debugging simulations of this kind tools have to be improved in their memory scalability. The range of applications starts from preprocessing tools, the respective data sets, the required visualization tools allowing gridpoint level access to data and new visualization algorithms.

We will present an overview of our solutions.

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Track Classification: 18th Workshop on high performance computing in meteorology