



Results from the DYAMOND intercomparison of global storm-resolving models

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Global storm-resolving simulations are performed by an increasing number of modeling groups. DYAMOND (DYNamics of the Atmospheric general circulation Modeled On Non-hydrostatic Domains) is the first project to inter-compare how such models represent the multi-scale structure and their interactions in the atmosphere, with a particular focus on precipitation, clouds and large-scale circulations. Nine modeling groups run their models from the same initial conditions for a period of 40 days with prescribed time-varying sea-surface temperature.

The explicit representation of convection allows updrafts to dynamical interact with their environment. The resolved storm-scales interact with the meso-scale and impact the large-scale circulation. The hope from global storm-resolving climate models is, that some long-standing atmospheric model biases related to the representation of deep convection will simply disappear. If this hope is founded will be explore in the DYAMOND ensemble and where the new sources for differences in this class of simulations are lying.