

EGU2020-18958

<https://doi.org/10.5194/egusphere-egu2020-18958>

EGU General Assembly 2020

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Intercomparison of global storm resolving (coupled) climate models

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The DYAMOND (DYnamics of the Atmospheric general circulation Modeled On Non-hydrostatic Domains) project is an intercomparison project for global storm resolving models with horizontal resolutions < 5km. In Phase 0, nine models participated in simulating a 40 day period from August 2016 on. Now, Phase 0 of DYAMOND will be complemented by a boreal winter period and atmosphere-ocean coupled models with the goal to: (i) compare the representation of the Madden-Julian-Oscillation in this class of models; (ii) investigate the effect of the atmosphere-ocean coupling at storm and ocean-eddy resolving scales on convection and the general circulation; and (iii) link to the EUREC4A campaign, which targets meso-scale convection patterns and the coupling to the upper ocean processes. First results from the intercomparison of this new class of climate models will be presented, giving an outlook to the future of climate modelling.

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