Geoscientific
Model Development

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Discussions

Interactive comment on "Replicability of the EC-Earth3 Earth System Model under a change in computing environment" *by* François Massonnet et al.

Anonymous Referee #2

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This paper reviews and develop a protocol to assess the replicability of the EC-Earth Most Earth System Models (ESMs), specifically running two different versions of EC-Earth ESM under two different HPC environments.

Even though the work is very much aimed to EC-Earth3, and takes some assumptions about (generalistic) climate simulations, it reaches its goal of developing an argument about reproducibility. Given this, I just have some minor comments:

C1

1 Specific Comments:

- P2, l22: "influence the outcome of the model". Could you please provide a reference justifying this statement?

- P6, l22: One suggestion: a simple diagram with the different steps of the protocol would support the paper readability and give the reader a quick overview.

- P7, l1: Mentioning "false positive" and "false negative" will improve readability when talking about error types.

- P7, l17: "large amount of output". For more context, could you please specify the size of these outputs?

- P13, l1: Missing "t".

Interactive comment on Geosci. Model Dev. Discuss., https://doi.org/10.5194/gmd-2019-91, 2019.