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comment

Interactive comment on "Simulation of the Performance and Scalability of MPI Communications of Atmospheric Models running on Exascale Supercomputers" *by* Yongjun Zheng and Philippe Marguinaud

Anonymous Referee #1

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The authors have made appropriate modifications to the paper and discussed what they have changed and what they have not in their reply. The main issue was the legibility of the figures which has now been improved in this revision. There are some minor typographical errors in the new section on likely node architectures of future systems. Page 29, line 639 "futures"–> "future. Line 645, the "A" is capitalised in the middle of a sentence. Line 651 "mitigated even eliminated if" –> "mitigated or even eliminated, if", this sentence then somewhat loses its way, I think it should be something like "network interfaces added". These errors should be addressed, but they should not

require subsequent review.

The paper reports on the simulation of scaling of three important algorithms for weather and climate codes to a very large degree of parallelism. The methods used are well described and sufficiently robust to support the conclusions. Where the are limitations to the methods the authors have appropriately drawn attention to them. This is a very relevant paper which is likely to be of interest to the community which advances the knowledge of the performance of algorithms on future super-computer architectures. As such, it is an important work for model developers and should now be published.

Interactive comment