

## **Answers to comments received 20-Mar-2024**

We would like to thank the reviewers and Heini Wernli very much for their helpful comments. In the following we will answer the last comments we received. Our answers are given in blue, the reviewer's and editor's comments are bold, black and cursive. Texts starting with AR (AC) are the author's responses (author's changes). Note that we exchanged Figure 1 with a Latex-Table.

### **Answers to Heini Wernli's comments (abbreviated by HWC):**

**HWC: L3: why "clusters" (plural), it seems that you worked on one HPC cluster?**

AR: Thanks

AC: We changed it to cluster (singular)

**HWC: I would find it interesting to have a little bit more information about "Bonna": is this a CPU or GPU machine? Is it really HPC or rather a large Linux cluster? Maybe you can add somewhere a few specifics, or add a link to a webpage that describes the cluster.**

AR: Bonna is a Massively Parallel Processor (MPP) cluster that has been available to scientists at the University of Bonn since 2019. Bonna has 70 MPP Nodes, each featuring dual Intel Xeon Gold 6130 processors running at 2.10GHz, with 16 cores and 16 threads per CPU, with a total of 2,240 cores, total RAM of 13.1 TB and a scratch storage of 428 TB. The operating system is CentOS Linux and the batch system is Slurm. More specifics can be found here:

<https://www.hpc.uni-bonn.de/en/systems/bonna> (last access: 21-Mar-2024).

AC: We added the following sentence to section 1: "Bonna is a Massively Parallel Processor (MPP) cluster with 70 nodes, each with dual Intel Xeon Gold 6130 CPU processors which operates on CentOS Linux with a Slurm batch system."

**HWC: L181: why "??"**

AR: Thanks.

AC: We added the correct label to the section in the supplementary material.

**HWC: L182: not sure that I understand: does the understanding help the visualisation or the other way round?**

AR: It was meant the other way around: "understanding through visualization".

AC: We changed the sentence to: "Data visualization helped to deepen the understanding of convective processes."

**HWC: L187: This sentence is repetition from a few lines above**

AC: We deleted the sentence in line 187 and added a reference to the first sentence of the conclusion.

**HWC: you have three different spellings of "Slurm", please decide for one!**

AR: Thanks.

AC: We decided to use "Slurm" throughout the paper.

## **Answers to the Comments of Reviewer #1 (abbreviated with RC1)**

**RC1: Line 70: Change "10 days period" to "10-day period"**

Done.

**RC1: Line 74: "how to get started and consecutively evolve the abilities" is grammatically awkward; recommend something like "how to get started and continuously improve their modeling skills"**

AR: Thanks.

AC: We revised the sentence as follows: Participants learned not only the basics of how to work with a numerical model but also how to get started and continuously improve their modeling skills.

**RC1: Line 81: "course contents were" should "course content was"**

AC: We changed it to "course content was".

**RC1: Line 83 and elsewhere: "google" should be "Google" since it is a company**

AC: Done. Thanks!

**RC1: Line 105: Remove the comma after "Note"**

AC: Done.

**RC1: Lines 125 to 127: Change "In order to see whether the corresponding goals were meaningful 125 on the one hand and also acquired during the course period on the other hand" to something like "To see whether these learning goals were both meaningful to and achieved by the participants..."**

AC: Thanks, we revised the sentence according to your suggestion.

**RC1: Line 142 and elsewhere (e.g., Line 180): Modify "significantly" to "substantially"...use of "significant" implies the result was statistically significant, which isn't possible with the data you have**

AC: Thanks, we changed it to substantially and substantial in line 180.

**RC1: Line 181: Remove double question marks**

AC: Thanks, we removed the double question marks and added the correct reference to the section in the supplementary material.