

Dear reviewers,

Thank you very much for your referee comments^{1,2} on our article, which have helped us to improve the article in the way already described on our earlier author comments^{3,4}.

Additionally we have rephrased the text slightly in several places in order to make the text easier to read, and to add more clarity. In this process a listing has been added, a table has been augmented, and two figures have been redrawn. Additionally we have updated the assets. The details for these changes are given below. The conclusions remained unchanged.

A pdf file (generated by latexdiff) of the differences between the current manuscript and the initial manuscript published in EGU sphere⁵ is attached.

Listings

The new Listing 8 shows in brief the dynamics physics interface structure, indicating where ACC directives occur for parallelization on GPUs, and where OMP parallelization is used for CPUs.

Tables

Table 3 has been augmented with a new column `n_gpp` showing the number of grid points per MPI process, in order to show how this differs from the blocking length `nproma`.

Figures

Figure 2 shows an additional dependence of the tracer advection scheme on the dynamics, which was missing in the earlier version of this figure.

Figure 4 is redrawn with a new y-axis scale in panel (a) that resolves better small values.

Assets

The assets have been updated with a revised “data_v2.ods” spread sheet, which now includes a new sheet “PizDaintR2B4Speedup” for the data and panels off Figure 4. The README file is updated accordingly, and the descriptions of some of the data sheets has been improved. The new version 2.0 of the assets can be accessed under the persistent DOI: <https://doi.org/10.17617/3.5CYUFN>.

References:

1. <https://doi.org/10.5194/egusphere-2022-152-RC1>
2. <https://doi.org/10.5194/egusphere-2022-152-RC2>
3. <https://doi.org/10.5194/egusphere-2022-152-AC1>
4. <https://doi.org/10.5194/egusphere-2022-152-AC2>
5. <https://doi.org/10.5194/egusphere-2022-152>