

## ***Interactive comment on “ConvectiveFoam1.0: development and benchmarking of a infinite-Pr number solver” by Sara Lenzi et al.***

### **Anonymous Referee #2**

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This manuscript describes a numerical solver for convection at very large Prandtl numbers based on OpenFOAM platform. The development of a parallel code for convection problems (both in 2D and 3D) on open source platform is important for the numerical research in geophysical convection and I think that the present manuscript deserve publication. The main limitation of the manuscript is that, in the present version, it is more a technical report than a scientific paper. Most of the manuscript is devoted to technical details which are not really relevant for future use of the code. My suggestion is to move most of these discussions into appendices and leave in the article the main features of the code only. Moreover, for a publication in GMD I would like to see more discussions of the results presented in Sections 4.2 and 4.3 with physical interpretations. Section 2 should also be improved. The last term in (2a) disappears in (3a). In

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any case, why rotation is introduced if in (4) it is not present?

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Interactive comment on Geosci. Model Dev. Discuss., <https://doi.org/10.5194/gmd-2020-28>, 2020.

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