Interactive comment on “PDE-NetGen 1.0: from symbolic PDE representations of physical processes to trainable neural network representations” by Olivier Pannekoucke and Ronan Fablet

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We would like to thank the referee for his/her comments. To answer to some of his/her questions:

Q: The authors may include some information about the orders of accuracy available in their software
A: The finite difference used here computes an approximation of any derivative at the second order of consistency (i.e. the approximation is equal to the true derivative plus an error of order $O(dx^2)$). This will be made clearer in the revised version of the manuscript.

Q: Do authors intend to say that the choice of $a, b, c = (1, 3/4, -2)$ is not based on a ground truth
A: The closure is obtained when the local correlation function is approximated by a Gaussian correlation function. Hence, this relies on a theoretical ground but with an approximation for the correlation, so it is not the truth. An appendix has been prepared to explain this for the self-consistency of the manuscript.

We have a question concerning the comment (4):

On line 135 the authors intend to show that the solutions converge. The authors may consider supplementing the information with $dt$ of the time-integrator so that the error has a sense of scale.

It is not clear to us, we understand the referee wants the value of $dt$, is it what he/she wants? In our experiments, the value of $dt$ is set to 0.0016.

We start to prepare a revision of the manuscript considering his/her comments.