

Dear Authors,

Thank you very much for the revised version of the manuscript and for addressing my original concerns very satisfactorily.

I think the manuscript is now ready to be accepted and I do only have a few very minor remarks:

We would like to thank Reviewer 1 for the very constructive and insightful comments that helped to improve this manuscript a lot.

- in the equality  $Q=0$  I would suggest to use boldface on both sides of the equality

Thank you very much. We corrected this in Line 211 of the new version of the manuscript.

- in response to my comment #11 the first sentence of the new text does not seem to be correct. What do you mean by "... model meaning." ?

This was our mistake. The word "meaning" should have been removed. We removed that word from the revised version of the manuscript in Line 149.

- in relation to my original comment #16: what is the time step and the observation frequency?

Sorry for not fully answering this point. We modify the sentence starting on Line 207 as follows: "In practice, the Lorenz model is integrated using a Runge-Kutta 4 scheme with a time step  $dt=0.1$ , and the three components are observed and assimilated at every model time step."

Besides the above, I am very much in favour of accepting the manuscript for publication on GMD.