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Nonlinear Processes in Geophysics
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Interactive comment on "Data assimilation as a deep learning tool to infer ODE representations of dynamical models" *by* Marc Bocquet et al.

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Following the reviews of the two referees, I first add an editing suggestion. In many places in Section 4 (for instance, p. 17, l. 14), the authors mention the number K of observation times in their numerical experiments. It would to useful to say to how many Lyapunov times this corresponds (the information is available in the paper for the reader to find out by himself, but an explicit mention would be useful).

At a more fundamental level, could it be possible to mention and discuss, if only briefly, the question of how to combine the approach proposed by the authors with an already known dynamical model ? That would naturally come through an a priori term – ln p(A) in Eq. (17). But how would p(A) be known ? And can we at this stage expect a

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significant improvement of an existing model (used, for instance, for any kind of meteorological prediction) through the learning approach presented in the paper ?

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