The authors have achieved a great job with this revised version. The presentation, the notations, the model assumption (typically approximation (27): neglecting Q in P^m computation), the mathematical and intuitive arguments which support this model are much clearer. There are no more ambiguities. The authors have answered all the questions of my review report. In particular, I thank the author for the reference to the work of Nicolis, which seems particularly relevant.

Yet, since I now well understood the main assumptions of the draft model, it raises other questions (or rather, it makes me reformulate some of my previous questions).

1) Mainly, I wonder what is the validity of the approximation (27). Actually, it may be a more severe assumption than assuming the decorrelation between model error and analysis error. I understand that all your methodology is built on top of this assumption (27); that relaxing this assumption has to be left for future works. And in my opinion, even if approximation (27) is debatable, this should not prevent your work to be publishable.
   But, at least, you could check, in your numerical test case, the order of magnitude of the 3 terms of equation (21) : P^m (the "true" one, ie not the one approximated from (27)), Π^m and Q. You may focus on the matrix trace (mean of variances).
   For instance, problems could appear if $P^m \sim Q \gg \Pi^m$ (when e.g. the already-discussed case $\epsilon^a \ll 1$) or if $P^m \ll \Pi^m \sim Q$. Indeed, Π^m could be negative (even though it is probably positive in your diffusive example) in some cases and may balance Q in (27).
   At page 15 (around line 45), orders of magnitude are compared, but it seems to me that no value is discussed for the "true" model error variance.
2) I do not understand the terminology "flow-dependent part of P^m" for Π^m and "climatological part /bias of P^m" for Q. It seems to me that both terms are flow-dependent, isn't it? Is the bias terminology come from the type of $\epsilon_{q+1}^m(\chi^a)$ expression which depends on χ^t ? $\left(\epsilon_{q+1}^m(\chi^a) \approx \int_{t_q}^{t_{q+1}} [(v - U) \cdot \nabla - \kappa\Delta]\, \chi^a \, dt\right)$
   But then, the same description/ terminology could be used for $\epsilon_{q+1}^m(\chi^t)$ and thus P^m because the $\epsilon_{q+1}^m(\chi^t)$ expression is similar. And P^m is the initial quantity of interest.

Typo and small corrections:

- Fig 1 : the « red » looks more like a salmon
- ^m is a the wrong place in equation 6
- Page 5, line 23, (2.1) => (21)
- Equation 47a, V => V^p