General comments

The authors have addressed my previous comments. I have still a few (minor) comments (typos, wrong references, some clarification, ...).

I thus recommend this article for minor revision, so that it be published after the comments have been taken into account. As said in the previous review, it will be a valuable contribution to the litterature about statistical postprocessing of weather forecasts.

Specific comments

Hereafter, the passages quoted from the article are in italics, whereas my comments are in normal font.

1. *page 1, line 9: The potential application in a operational environment*
   Please change into "The potential application in an operational environment".

2. *page 3, line 28: Without loss of generality, we shall assume for simplicity that the system (1) is autonomous*
   How this hypothesis can be 'without loss of generality'? It seems rather a strong hypothesis to a non specialist of dynamic system like me. Please explain.

3. *page 12, line 6: the only non-zero coefficients are* $\theta_1^\star = 0, 2$
   Table 1 gives a value for $\theta_2^\star$. I guess the table is wrong, please correct.

4. *page 12, line 11: In particular the system possesses two distinct weather regimes, depicted in Fig. 2(b):*
   Fig 2 (a) and (b) are hard to read and hardly informative (no obvious structure appears in the scatterplots). I would suggest improving the readability or removing the subfigures. For the 2D scatterplot, maybe plotting isodensity lines for the model and the reality on the same subfigure would be more informative.

5. *page 12, line 13: In particular the system possesses two distinct weather regimes, depicted in Fig. 2(b): one characterised by a zonal circulation (see Fig. 2(c)), and another characterised by a blocking situation (see Fig. 2(d)).*
   I would say that the regimes are reversed in your figures: zonal circulation in Fig 2(d) and blocking situation in Fig 2(c).

6. *page 12, line 1: time evolution of the variable* ψ_4
   In Fig. 1 (b), the depicted variable is ψ_2, not ψ_4. Please correct.

7. *page 17, line 24: As it can be seen in Fig. 7,*
   Please change into "As it can be seen in Fig. 7 for the perturbations on θ_1,".

8. *page 17, line 30: The moments obtained by the response theory approach are used to compute new EVMOS postprocessing α and β*

   coefficients, thanks to the formulas (17) and (18).
   Shouldn't you refer to Eqs 28 and 29?

9. *page 17, line 31: These corrected coefficients are shown in Fig. 8 and in the panels (c) and (d) of Fig. 11.*
   Please change into "These corrected coefficients for variable θ_1 are shown in Fig. 8 for the experiment varying the Newtonian cooling coefficient and in the panels (c) and (d) of Fig. 11 for the experiment varying the friction coefficient.".

10. *page 18, line 7: In the panels (b) and (c) of Figs. 9 and 10, the mean and variance of the corrected forecasts is compared with those of the original models. Again, these corrections are efficient until 4 days for the postprocessing schemes*
    I don't see this: to me, the mean and variance of the post-processed forecasts for variable θ_1 seem almost perfect at all lead times. This is an apparent discrepancy with the conclusions drawn from Fig. 9: page 18, line 5, you rightfully notice from the evolution of the MSE with lead time that *the statistical postprocessing corrections are efficient until lead times of 4-5 days.*. It should be explained how the MSE for variable θ_1 can be improved only up to 4 days ahead while the first two moments are perfectly corrected at all lead times. Higher moments of variable θ_1 may explain, at least partially, this discrepancy, along with the temporality of the forecasts.

11. *page 18, line 12: the variance needed to compute the α and β*

    coefficients (see Eqs. (17) and (18)).
    Shouldn't you refer to Eqs 28 and 29?

12. *page 20, line 1: Figure 7. Histograms of the solutions of the equation (50) for the perturbation $\delta y(\tau)$*
    Please change into "Figure 7. Histograms of the solutions of the equation (50) for the perturbation $\delta y(\tau)$ (with $y = \theta_1$)".

13. *page 21, line 1: Figure 8. Coefficients α and β*

    of the postprocessing schemes
    Please change into "Figure 8. Coefficients α and β of the postprocessing schemes of variable θ_1".

14. *page 24, line 1: Fig 11*
    Please add missing captions a), b), c) and d) to the subfigures.

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