I am glad the possibility of ensemble averaging of the flow was explored, as the conclusions from time averaging the FTLE field can be misleading in terms of assessing the persistence of an FTLE field. I believe that the result that FTLE are persistent, and that ensemble-averaging the flow is a good way to find persistent FTLE. I have a few minor suggestions and some comments on the ensemble averaging to detect FTLE. I will not require a new revision, but feel free to consider them as you see fit.

We would like to thank the reviewer for all the constructive criticism, interpretation of results, suggestions about phrasing, and for sharing various articles relevant for our study throughout the review process, all of which have improved the quality of our manuscript.

MINOR SUGGESTIONS
Lines correspond to the tracked-changes document.
I am not convinced by the description of FTLE in lines 131–136. I do not know about any assumption that separations would need to grow exponentially, although it is true that we seek separations that grow exponentially by taking the natural logarithm and thereby filtering out anything that did not grow exponentially. Also, FTLE does not find maximum separation rates; it gives you back all separation rates as a function of initial positions, from which you then need to search for maxima in the form of ridges.

We have made changes regarding the assumption that separation grows exponentially (new lines 123-24) and have also reworded the initial mention of maximum separation rates (lines 126-28).

On lines 362–363 I would change "but will not yield material convergence towards or divergence away from the FTLE ridge" for "but will not yield normal attraction towards or normal separation away from the FTLE ridge, which is what characterizes LCS"

This is a nice suggestion which we have included in the manuscript in lines 313-315.

497 OECS were introduced by Serra & Haller 2016

Serra & Haller 2016 has been cited in the OECS discussion (line 432).

ENSEMBLE AVERAGING COMMENTS
Lines 399–403: cLCS uses a type of ensemble averaging already, however the ensemble is not created from different models. Instead, each ensemble member is a distinct one-year simulation produced by the same model. For example, if a model simulation spans the years 1994–2012 then the first ensemble member is the simulation for 1994, the second member is 1995 and the last one is 2012. By averaging the ensemble members, a climatological velocity is obtained. This is a type of ensemble average that, very much like in your case, removes flow fluctuations that could hide the existence of persistent LCS. The second type of averaging in the cLCS process (the first one being the ensemble average that produces the climatological velocity) is the averaging of Cauchy-Green tensors, and as shown in the Supplementary Information of Duran et al 2018, this is not necessary, although it simplifies the visualization (see "Appendix C. A quantitative comparison between cLCSs and LCSs" in their Supplementary Information). This means that cLCS could be computed from any of the CG tensors without averaging them and the results would be very similar. This shows that

the fundamental step in finding cLCS is the ensemble averaging (computing the climatological velocity).
It was good to confirm that, in your study, time-averaging without ensemble averaging is misleading as it suggests that FTLE are less persistent than what they really are, and that ensemble averaging effectively identifies persistent FTLE. There are many studies that have come to similar conclusions using cLCS, an up-to-date list can be found at oceanresearch.xyz/clcs-ciam-users-worldwide/
In your study, we now see a consistent result but in a different setting, thus, I believe your work emphasizes the importance of ensemble averaging in the context of finding robust LCS/FTLE. I expect future research will follow this lead.

We appreciate the reviewers comments and clarifications about the cLCS method. The paragraph pertaining to cLCS (lines 339-350) has been revised to reflect some of these comments.