

Reviewer 2:

The authors improved the manuscript substantially. It now is more complete and consistent in itself. I thank them for carefully addressing my comments in the first round. Though I'm still willing to see the maps of ssh increments at least for one assimilation cycle, in the lack of localization and assimilating only coastal observations. I couldn't find them in the revised version even though I asked for it. I suggest a major revision only to see the figure before acceptance. Thanks.

We thank the Reviewer for the time dedicated to improving our paper. Actually, we forgot the question about the analysis increments. Now, we made a new figure (n. 13), which shows the spatial distribution of the increments of the ensemble mean of the analysis with respect to the background. The map, as suggested, is the average of a daily assimilation cycle (24-time steps). The result is interesting and is discussed in the lines 391-398.

We also went through the paper, improving English and fluency and eliminating some redundancies.